

Report No.: ER/2014/B0009 Issue Date: Jan. 09, 2015

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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E and PART 27 SUBPART C REQUIREMENT

OF

Mobile Phone Product Name:

Sony **Brand Name:**

PM-0850-BV Type No.:

Model Difference: N/A

PY7-PM0850 FCC ID:

ER/2014/B0009 **Report No.:**

Issue Date: Jan. 09, 2015

FCC Rule Part: 2,22H & 24E & 27C

Prepared for: **Sony Mobile Communications AB**

Nya Vattentornet 22188 Lund/Sweden

Prepared by: SGS Taiwan Ltd.

Electronics & Communication Laboratory

No.134, Wu Kung Road, New Taipei Industrial Park, Wuku

District, New Taipei City, Taiwan 24803

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VERIFICATION OF COMPLIANCE

Applicant: Sony Mobile Communications AB

Nya Vattentornet 22188 Lund/Sweden

Product Name: Mobile Phone

Brand Name: Sony

Type No.: PM-0850-BV

Model Difference: N/A

FCC ID: PY7-PM0850

File Number: ER/2014/B0009

Date of test: Nov. 06, 2014 ~ Dec. 01, 2014

Date of EUT Received: Nov. 06, 2014

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C-2004 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule PART 22 subpart H, PART 24 subpart E, PART 27 subpart C.

The test results of this report relate only to the tested sample identified in this report.

Test By:	Marcus Tseng	Date:	Jan. 09, 2015
Prepared By:	Marcus Tseng / Engineer Tiffang Kao	Date:	Jan. 09, 2015
Approved By:	Tiffany Kao / Clerk Jim Chang / Supervisor	Date:	Jan. 09, 2015

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Revision History

Report Number	Revision	Description	Issue Date
ER/2014/B0009	Rev.00	Initial creation of document	Dec. 02, 2014
ER/2014/B0009	Rev.01	Updated HW, SW, and internal photo	Jan. 09, 2015

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1. GENERAL PRODUCT INFORMATION

1.1. Product Description

General:

Product Name:	Mobile Phone		
Brand Name:	Sony		
Type No.:	PM-0850-	BV	
Model Difference:	N/A		
Data Cable (USB):		: EC450, Supplier: K-one AI-0700, Length: 100 cm	
Simple Hands-Free (SHF-White):	Model No.: MH410c, Supplier: Foster Electric Type No.: AG-1100		
Car Charger:	Model No.: AN400, Supplier: Salcomp Type No.: CAA-0003013		
BT PHF:	Model No.: SBH20, Supplier: Sony Type No.: RD-0010 coupling with Simple Hands Free (Model No.: MH755, Supplier: BALDA, Type No.: AG-0503)		
Hardware Version:	A		
Software Version:	25.0.A.0.33		
	3.8Vdc		
Power Supply:	Battery:	Model No.: LIS1574ERPC, Supplier: Sony Type No.: N/A	
	Adapter:	Model No.: EP800, Supplier: Salcomp Type No.: CAA-0002016-US	

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Bluetooth BR+EDR:

Bluetooth Version:	V4.1 dual mode + HS
Channel number:	79 channels
Modulation type:	Frequency Hopping Spread Spectrum
Transmit Power:	5.38dBm
Frequency Range:	2.402GHz – 2.480GHz
Dwell Time:	<= 0.4s
Antenna Designation:	PIFA Antenna, Gain: 2.52dBi

Bluetooth Low Energy:

Frequency Range:	2402 – 2480MHz
Bluetooth Version:	V4.1 dual mode + HS
Channel number:	40 channels
Modulation type:	GFSK
Transmit Power:	-1.49dBm (Peak)
Antenna Designation:	PIFA Antenna, Gain: 2.52dBi

NFC:

	•
Operating Frequency	13.56MHz
Transmit Power	< 123dBuV/m at 3m.
Number of Channels	1
Antenna Type	Loop Antenna
Modulation Type	ASK, BPSK

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WLAN 2.4GHz:

Wi-Fi	Frequency Range	Channels	Rated Power	Modulation Technology		
11b/g	2412-2462	11	b: 18.87dBm g: 22.66dBm	DSSS, OFDM		
11n	HT20 2412-2462	11	HT20: 21.09dBm	OFDM		
11n	HT40 2422-2452	7	HT40: 22.22dBm	OFDM		
Antenna Designation:		PIFA Antenna, Gain: 2.52dBi				
Modulation type:		CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM				
Transition Rate:		802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 72.2Mbps 802.11 n_40MHz: 13.5 –135Mbps				

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WLAN 5GHz:

Wi-Fi	Frequency Range	Channels	Avg. Power	Modulation Technology
11a	5150~5250	4	13.96dBm	OFDM
	5250~5350	4	13.99dBm	
	5470~5725	8	13.96dBm	
	5725-5850	5	13.79dBm	
11n	HT20 5150~5250	4	HT20: 12.99dBm	OFDM
	HT20 5250~5350	4	HT20: 12.95dBm	
	HT20 5470~5725	8	HT20: 12.99dBm	
	HT20 5725-5850	5	HT20: 12.79dBm	
11n	HT40 5150~5250	2	HT40: 11.95dBm	OFDM
	HT40 5250~5350	2	HT40: 11.93dBm	
	HT40 5470~5725	3	HT40: 11.96dBm	
	HT40 5725-5850	2	HT40: 11.98dBm	
Antenna Designation	PIFA Antenna, 5GHz Gain: -0.54dBi (5150MHz-5250MHz) 5GHz Gain: -0.89dBi (5250MHz-5350MHz) 5GHz Gain: -0.34dBi (5470MHz-5725MHz) 5GHz Gain: -0.19dBi (5725MHz-5850MHz)			
Modulation type	64QAM, 16QAM, QPSK, BPSK for OFDM			
Transition Rate:	802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 65.0Mbps 802.11 n_40MHz: 13.5 – 135.0Mbps			

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GSM / WCDMA/ LTE:

	Operating Frequency		Rated Power
	GSM/GPRS 850, Class 12	824.2 MHz– 848.8 MHz	33dBm
	EDGE 850, Class 12	824.2 MHz– 848.8 MHz	27dBm
	GSM/GPRS 1900, Class 12	1850.2MHz – 1909.8MHz	30dBm
	EDGE 1900, Class 12	1850.2MHz – 1909.8MHz	26dBm
	WCDMA/HSUPA/HSDPA /HSPA+ Band II	1852.4MHz – 1907.6MHz	24dBm
	WCDMA/HSUPA/HSDPA /HSPA+ Band V	826.4MHz - 846.6MHz	24dBm
	1.4MHz BW LTE-Band 2	1850.7MHz- 1909.3MHz	23dBm
	3MHz BW LTE-Band 2	1851.5MHz – 1908.5MHz	23dBm
Cellular Phone	5MHz BW LTE-Band 2	1852.5MHz – 1907.5MHz	23dBm
Standards Frequency Range and Power	10MHz BW LTE-Band 2	1855.0MHz – 1905.0MHz	23dBm
	15MHz BW LTE-Band 2	1857.5MHz – 1902.5MHz	23dBm
	20MHz BW LTE-Band 2	1860.0MHz – 1900.0MHz	23dBm
	1.4MHz BW LTE-Band 5	824.7MHz – 848.3MHz	23dBm
	3MHz BW LTE-Band 5	825.5MHz – 847.5MHz	23dBm
	5MHz BW LTE-Band 5	826.5MHz – 846.5MHz	23dBm
	10MHz BW LTE-Band 5	829.0MHz – 844.0MHz	23dBm
	5MHz BW LTE-Band 7	2502.5MHz – 2567.5MHz	23dBm
	10MHz BW LTE-Band 7	2505.0MHz –2565.0MHz	23dBm
	15MHz BW LTE-Band 7	2507.5MHz –2562.5MHz	23dBm
	20MHz BW LTE-Band 7	2510.0MHz –2560.0MHz	23dBm

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GSM 850: 250KGXW, GSM 1900: 248KGXW GPRS 850: 250KGXW, GPRS 1900: 247KGXW EDGE 850: 250KG7W, EDGE 1900: 253KG7W WCDMA Band II: 4M23F9W, WCDMA Band V: 4M23F9W HSDPA Band II: 4M20F9W, HSDPA Band V: 4M22F9W HSUPA Band II: 4M21F9W, HSUPA Band V: 4M22F9W 1.4MHz BW LTE-Band 2 QPSK:1M10G7D 1.4MHz BW LTE-Band 2 16QAM: 1M10D7W 3MHz BW LTE-Band 2 QPSK: 2M71G7D 3MHz BW LTE-Band 2 16QAM: 2M71D7W 5MHz BW LTE-Band 2 QPSK: 4M55G7D 5MHz BW LTE-Band 2 16QAM: 4M53D7W 10MHz BW LTE-Band 2 QPSK: 8M98G7D 10MHz BW LTE-Band 2 16QAM: 8M99D7W 15MHz BW LTE-Band 2 QPSK: 13M53G7D Type of Emission: 15MHz BW LTE-Band 2 16QAM: 13M52D7W 20MHz BW LTE-Band 2 QPSK: 18M00G7D 20MHz BW LTE-Band 2 16QAM: 18M00D7W 1.4MHz BW LTE-Band 5 QPSK:1M10G7D 1.4MHz BW LTE-Band 5 16QAM: 1M10D7W 3MHz BW LTE-Band 5 QPSK: 2M70G7D 3MHz BW LTE-Band 5 16QAM: 2M71D7W 5MHz BW LTE-Band 5 QPSK: 4M54G7D 5MHz BW LTE-Band 5 16OAM: 4M53D7W 10MHz BW LTE-Band 5 QPSK: 9M03G7D 10MHz BW LTE-Band 5 16QAM: 9M05D7W 5MHz BW LTE-Band 7 OPSK: 4M53G7D 5MHz BW LTE-Band 7 16QAM: 4M53D7W 10MHz BW LTE-Band 7 QPSK: 9M23G7D 10MHz BW LTE-Band 7 16QAM: 9M22D7W 15MHz BW LTE-Band 7 QPSK: 13M93G7D 15MHz BW LTE-Band 7 16QAM: 13M95D7W 20MHz BW LTE-Band 7 QPSK: 18M72G7D 20MHz BW LTE-Band 7 16QAM: 18M70D7W IMEI: 00440245353087

This test report applies for 850 /1900 GSM/GPRS/EDGE, WCDMA / HSDPA / HSUPA Band II/V and LTE Band 2, Band 5 and Band 7. The spread of uplink in HSPA+ supports only up to 42.2 Mbps.

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Final Amplifier Voltage and Current Information:

Test Mode	DC voltage (V)	DC current (mA)
GSM 850	3.8	377
GSM 1900	3.8	365
GPRS 850	3.8	345
GPRS 1900	3.8	288
EDGE 850	3.8	213
EDGE 1900	3.8	219
WCDMA B2	3.8	677
WCDMA B5	3.8	559
HSUPA B2	3.8	609
HSUPA B5	3.8	514
HSDPA B2	3.8	608
HSDPA B5	3.8	509

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3.8 Vdc 3.8 Vdc 3.8 Vdc	838 758
	758
3.8 Vdc	ļ
	826
3.8 Vdc	763
3.8 Vdc	833
3.8 Vdc	759
3.8 Vdc	842
3.8 Vdc	762
3.8 Vdc	841
3.8 Vdc	758
3.8 Vdc	839
3.8 Vdc	760
3.8 Vdc	733
3.8 Vdc	685
3.8 Vdc	726
3.8 Vdc	681
3.8 Vdc	727
3.8 Vdc	678
3.8 Vdc	792
3.8 Vdc	740
	3.8 Vdc

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LTE Band 7_5M QPSK	3.8 Vdc	723
LTE Band 7_5M 16QAM	3.8 Vdc	678
LTE Band 7_10M QPSK	3.8 Vdc	723
LTE Band 7_10M 16QAM	3.8 Vdc	689
LTE Band 7_15M QPSK	3.8 Vdc	736
LTE Band 7_15M 16QAM	3.8 Vdc	701
LTE Band 7_20M QPSK	3.8 Vdc	746
LTE Band 7_20M 16QAM	3.8 Vdc	699

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1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID:** <u>**PY7-PM0850**</u> filing to comply with Section Part 22 subpart H, Part 24 subpart E and Part27 subpart C of the FCC CFR 47 Rules.

1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures document of TIA/EIA 603C and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

TS 151 010-1 is used to set, and measure the output power.

The Output power Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, WCDMA / HSPA) was used for EUT and Base station setting.

KDB971168 D01 Power Meas license Digital System v01 as the supplemental guideline to conduct the measurement, including Peak to Power Average Ratio, Average Power over the fundamental signal BW (EIRP/ERP) and Signal Bandwidth.

1.4. Test Facility

The measurement facilities used to collect the 3m Radiated Emission and AC power line conducted data are located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan which are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2009 & ANSI C63.10:2009. FCC Registration Numbers are: 990257, Canada Registration Number: 4620A-4.

The 10 m Open Area Test Sites located on the address of SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan Township, Taoyuan County, Taiwan, which is constructed and calibrated to meet the CISPR 22/EN 55022 requirements. SGS Site No. 1(3 &10 meters) and FCC Registration Number: 455997.

All equipment is calibrated externally and traceable to SI (International System of Unit).

1.5. Special Accessories

No special accessories were used during testing.

1.6. Equipment Modifications

There were no modifications incorporated into the EUT.

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2. SYSTEM TEST CONFIGURATION

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

2.3. Test Procedure

2.3.1 Conducted Measurement at Antenna Port:

According to measurement procured TIA/EIA 603C, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

2.3.2 Radiated Emissions (ERP/EIRP):

According to measurement procured TIA/EIA 603C, The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13 of ANSI C63.4:2009 & ANSI C63.10:2009.

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2.4. Measurement Equipment Used:

Conducted Emission (measured at antenna port) Test Site						
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.	
TYPE		NUMBER	NUMBER	CAL.		
Spectrum Analyzer	Agilent	E4446A	MY51100003	05/19/2014	05/18/2015	
Spectrum Analyzer	Agilent	E4440A	US41160416	03/08/2014	03/07/2015	
Radio Communication Analyzer	R & S	CMU200	116097	03/11/2014	03/10/2015	
Radio Communication Analyzer	Anritsu	MT8820C	6200995019	10/08/2014	10/09/2015	
Temperature Chamber	TERCHY	MHG-120LF	911009	05/07/2014	05/06/2015	
DC Block	Mini-Circuits	BLK-18-S+	1	02/27/2014	02/26/2015	
Attenuator	Mini-Circuit	BW-S10W2+	002	02/27/2014	02/26/2015	
Splitter	Agilent	11636B	N/A	02/27/2014	02/26/2015	
DC Power Supply	Agilent	E3640A	MY52410006	11/10/2014	11/09/2015	

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ERP, EIRP MEASUREMENT EQUIPMENT List 966 Chamber					
EQUIPMENT TYPE	MFR	MODEL	SERIAL	LAST CAL.	CAL DUE.
		NUMBER	NUMBER		
Spectrum Analyzer	Agilent	E4446A	MY51100003	05/19/2014	05/18/2015
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	01/20/2014	01/19/2015
Spectrum Analyzer	R&S	FSV-30	101398	10/07/2014	10/06/2015
Bilog Antenna	SCHWAZBECK	VULB9168	378	01/02/2014	01/01/2015
Bilog Antenna	SCHWAZBECK	VULB9160	3158	10/31/2014	10/30/2015
Horn antenna	ETS.LINDGREN	3117	123995	05/19/2014	05/18/2015
Horn antenna	ETS.LINDGREN	3117	123991	01/20/2014	01/19/2015
Horn Antenna	Schwarzbeck	BBHA9170	184	01/23/2014	01/22/2015
Horn Antenna	Schwarzbeck	BBHA9170	185	07/29/2014	07/28/2015
Network Analyze	Anritsu	MS4644A	1216312	05/24/2014	05/23/2015
Signal Generator	Agilent	E4438C	MY45093613	08/06/2014	08/05/2015
Pre-Amplifier	Agilent	8447D	1937A02834	01/03/2014	01/02/2015
Pre-Amplifier	Agilent	8449B	3008A00578	01/03/2014	01/02/2015
Pre-Amplifier	EMC Instruments Corp.	EMC184045	980135	01/24/2014	01/23/2015
Attenuator	Mini-Circuit	BW-S10W2+	004	02/27/2014	02/26/2015
Radio Communication Analyzer	R & S	CMU200	116097	03/11/2014	03/10/2015
Radio Communication Analyzer	Anritsu	MT8820C	6200995019	10/08/2014	10/09/2015
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	966_Tx	10m	01/03/2014	01/02/2015
Low Loss Cable	HUBER+SUHNER	966_Rx	3m	01/03/2014	01/02/2015
Filter 800-1000	Micro-Tronics	EWT	M2	02/27/2014	02/26/2015
Filter 1800-2000	Micro-Tronics	EWT	M2	02/27/2014	02/26/2015
Filter 1700-1800	Micro-Tronics	BRC15751	001	02/27/2014	02/26/2015
1GHz High Pass Filter	Micro-Tronics	HPM50108	32	02/27/2014	02/26/2015
2GHz High Pass Filter	Micro-Tronics	HPM50110	36	02/27/2014	02/26/2015
3m Site NSA	SGS	966 chamber	N/A	07/15/2014	07/14/2015

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Configuration of Tested System 2.5.

Fig. 2-1 Configuration of Tested System (Fixed Channel-Conducted)

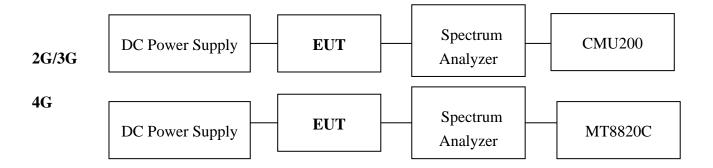


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

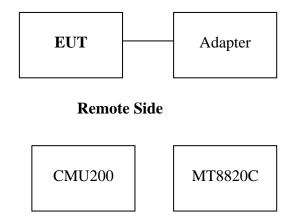


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Universal Radio Com- munication Tester	R&S	CMU200	102189	shielded	Un-shielded
2.	Universal Radio Com- munication Tester	Anritsu	MT8820C	6200307563	shielded	Un-shielded
3.	DC Power Supply	HP	E3640A	MY40005907	shielded	Un-shielded

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3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
\$2.1046(a) \$22.913(a)(2) \$24.232(c) \$27.50(h)(2)	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% Occupied Bandwidth	Compliant
\$2.1051 \$22.917(a) \$24.238(a) \$27.53(g) \$27.50(c)(5) \$27.53(h) \$27.53(m)(4)	Out of Band Emissions at Antenna Terminals and Band Edge	Compliant
\$2.1053 \$22.917(a) \$24.238(a) \$27.50(c)(5) \$27.53(g) \$27.53(h) \$27.53(m)(4)	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.53(d) (5)	Peak to Average Ratio	Compliant
\$2.1055(a)(1) \$22.355 \$24.235 \$27.54	Frequency Stability vs. Temperature	Compliant
\$2.1055(d)(1) \$22.355 \$24.235 \$27.54	Frequency Stability vs. Voltage	Compliant

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Max ERP/EIRP measurement result:

	dBm		W
GSM 850 Band	25.65	ERP	0.367
GSM 1900 Band	26.94	EIRP	0.494
GPRS 850 Band	24.97	ERP	0.314
GPRS 1900 Band	23.79	EIRP	0.239
EDGE 850 Band	23.65	ERP	0.232
EDGE 1900 Band	22.86	EIRP	0.193
WCDMA Band II	26.37	EIRP	0.434
WCDMA Band V	20.79	ERP	0.120
HSDPA Band II	25.40	EIRP	0.347
HSDPA Band V	20.37	ERP	0.109
HSUPA Band II	25.44	EIRP	0.350
HSUPA Band V	20.36	ERP	0.109
LTE Band 2/1.4MMz /QPSK RB 1 Offset 0	25.33	EIRP	0.341
LTE Band 2/1.4MMz /QPSK RB 1 Offset 5	25.60	EIRP	0.363
LTE Band 2/1.4MMz /16QAM RB 1 Offset 0	26.05	EIRP	0.403
LTE Band 2/1.4MMz /16QAM RB 1 Offset 5	26.08	EIRP	0.406
LTE Band 2/3MMz /QPSK RB 1 Offset 0	25.38	EIRP	0.345
LTE Band 2/3MMz /QPSK RB 1 Offset 14	25.17	EIRP	0.329
LTE Band 2/3MMz /16QAM RB 1 Offset 0	25.87	EIRP	0.386
LTE Band 2/3MMz /16QAM RB 1 Offset 14	25.59	EIRP	0.362
LTE Band 2/5MMz /QPSK RB 1 Offset 0	25.13	EIRP	0.326
LTE Band 2/5MMz /QPSK RB 1 Offset 24	25.17	EIRP	0.329
LTE Band 2/5MMz /16QAM RB 1 Offset 0	25.34	EIRP	0.342
LTE Band 2/5MMz /16QAM RB 1 Offset 24	25.37	EIRP	0.344
LTE Band 2/10MMz /QPSK RB 1 Offset 0	24.14	EIRP	0.259
LTE Band 2/10MMz /QPSK RB 1 Offset 49	24.02	EIRP	0.252
LTE Band 2/10MMz /16QAM RB 1 Offset 0	24.53	EIRP	0.284
LTE Band 2/10MMz /16QAM RB 1 Offset 49	24.69	EIRP	0.294
LTE Band 2/15MMz /QPSK RB 1 Offset 0	24.20	EIRP	0.263
LTE Band 2/15MMz /QPSK RB 1 Offset 74	25.07	EIRP	0.321
LTE Band 2/15MMz /16QAM RB 1 Offset 0	25.65	EIRP	0.367
LTE Band 2/15MMz /16QAM RB 1 Offset 74	25.84	EIRP	0.384
LTE Band 2/20MMz /QPSK RB 1 Offset 0	24.29	EIRP	0.269
LTE Band 2/20MMz /QPSK RB 1 Offset 99	24.51	EIRP	0.282
LTE Band 2/20MMz /16QAM RB 1 Offset 0	25.40	EIRP	0.347
LTE Band 2/20MMz /16QAM RB 1 Offset 99	25.25	EIRP	0.335

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	dBm		W
LTE Band 5/1.4MMz /QPSK RB 1 Offset 0	23.28	ERP	0.213
LTE Band 5/1.4MMz /QPSK RB 1 Offset 5	23.14	ERP	0.206
LTE Band 5/1.4MMz /16QAM RB 1 Offset 0	23.82	ERP	0.241
LTE Band 5/1.4MMz /16QAM RB 1 Offset 5	23.67	ERP	0.233
LTE Band 5/3MMz /QPSK RB 1 Offset 0	22.52	ERP	0.179
LTE Band 5/3MMz /QPSK RB 1 Offset 14	21.65	ERP	0.146
LTE Band 5/3MMz /16QAM RB 1 Offset 0	22.94	ERP	0.197
LTE Band 5/3MMz /16QAM RB 1 Offset 14	22.09	ERP	0.162
LTE Band 5/5MMz /QPSK RB 1 Offset 0	22.68	ERP	0.185
LTE Band 5/5MMz /QPSK RB 1 Offset 24	22.51	ERP	0.178
LTE Band 5/5MMz /16QAM RB 1 Offset 0	23.24	ERP	0.211
LTE Band 5/5MMz /16QAM RB 1 Offset 24	22.86	ERP	0.193
LTE Band 5/10MMz /QPSK RB 1 Offset 0	22.61	ERP	0.182
LTE Band 5/10MMz /QPSK RB 1 Offset 49	23.22	ERP	0.210
LTE Band 5/10MMz /16QAM RB 1 Offset 0	23.39	ERP	0.218
LTE Band 5/10MMz /16QAM RB 1 Offset 49	23.43	ERP	0.220

	dBm		W
LTE Band 7/5MMz /QPSK RB 1 Offset 0	26.10	EIRP	0.407
LTE Band 7/5MMz /QPSK RB 1 Offset 24	26.16	EIRP	0.413
LTE Band 7/5MMz /16QAM RB 1 Offset 0	26.55	EIRP	0.452
LTE Band 7/5MMz /16QAM RB 1 Offset 24	26.53	EIRP	0.450
LTE Band 7/10MMz /QPSK RB 1 Offset 0	24.82	EIRP	0.303
LTE Band 7/10MMz /QPSK RB 1 Offset 49	25.38	EIRP	0.345
LTE Band 7/10MMz /16QAM RB 1 Offset 0	25.48	EIRP	0.353
LTE Band 7/10MMz /16QAM RB 1 Offset 49	26.14	EIRP	0.411
LTE Band 7/15MMz /QPSK RB 1 Offset 0	24.94	EIRP	0.312
LTE Band 7/15MMz /QPSK RB 1 Offset 74	25.10	EIRP	0.324
LTE Band 7/15MMz /16QAM RB 1 Offset 0	25.56	EIRP	0.360
LTE Band 7/15MMz /16QAM RB 1 Offset 74	25.84	EIRP	0.384
LTE Band 7/20MMz /QPSK RB 1 Offset 0	24.95	EIRP	0.313
LTE Band 7/20MMz /QPSK RB 1 Offset 99	24.98	EIRP	0.315
LTE Band 7/20MMz /16QAM RB 1 Offset 0	25.66	EIRP	0.368
LTE Band 7/20MMz /16QAM RB 1 Offset 99	25.72	EIRP	0.373

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4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

EUT was staying in continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing.

The list of channel selected to conduct the measurements

GSM/GPRS/EDGE 850:

Channel Low: AFRCN 128 at 824.2MHz, Channel Mid: AFRCN 190 at 836.6MHz, Channel High: AFRCN 251 at 848.8MHz.

GSM/GPRS/EDGE 1900:

Channel Low: AFRCN 512 at 1850.2MHz, Channel Mid: AFRCN 661 at 1880.0MHz, Channel High AFRCN 810 at 1909.8MHz

WCDMA/HSPA BII:

Channel Low: UAFRCN 9262 at 1852.4MHz, Channel Mid: UAFRCN 9400 at 1880.0MHz, Channel High: UAFRCN 9538 at 1907.6MHz.

WCDMA/HSPA BV:

Channel Low: UAFRCN 4132 at 826.4MHz, Channel Mid: UAFRCN 4183 at 836.6MHz, Channel High: UAFRCN 4233 at 846.6MHz.

LTE B2:

Test Frequency	Bandwidth	Channel Number	Frequency of Uplink
	[MHz]		[Mhz]
Low	1.4	18607	1850.7
	3	18615	1851.5
	5	18625	1852.5
	10	18650	1855
	15	18675	1857.5
	20	18700	1860
Middle	1.4/3/5/10	18900	1880
	15/20		
High	1.4	19193	1909.3
	3	19185	1908.5
	5	19175	1907.5
	10	19150	1905
	15	19125	1902.5
	20	19100	1900

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LTE B5:

Test Frequency	Bandwidth	Channel Number	Frequency of Uplink
	[MHz]		[Mhz]
Low	1.4	20407	824.7
	3	20415	825.5
	5	20425	826.5
	10	20450	829
Middle	1.4/3/5/10	20525	836.5
High	1.4	20643	848.3
	3	20635	847.5
	5	20625	846.5
	10	20600	844

LTE B7:

Test Frequency	Bandwidth	Channel Number	Frequency of Uplink
	[MHz]		[MHz]
Low	5	20775	2502.5
	10	20800	2505
	15	20825	2507.5
	20	20850	2510
Middle	5/10	21100	2535
	15/20		
High	5	21425	2567.5
	10	21400	2565
	15	21375	2562.5
	20	21350	2560

The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for GSM/GPRS/EDGE, WCDMA/HSPA Band II / V, and LTE Band 2, Band 5 and Band 7 with power adaptor. The worst-case of H position for GSM 850/WCDMA Band V and LTE Band 2/5, E2 position for GSM 1900/WCDMA Band II and LTE Band 7 were reported.

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The evaluation of Test Mode as configured in UE presented on the Test Report:

GSM/GPRS/WCDMA/HSPA:

Radiated Spurious Emission

The Measurement Data of field strength of spurious emission with respect to supported configuration of given application (Transmission Band, Modulation Scheme, Resource Block) have been pre-scanned, and the result that yields in the highest emission close to the limit are presented on the test report.

GSM, WCDMA is the worst-case found in the pre-scanned measurement, and only data that yields the worst case is revealed on the test report.

LTE:

Radiated Spurious Emission

The Measurement Data of field strength of spurious emission with respect to supported configuration of given application (Transmission Band, Modulation Scheme, Resource Block) have been pre-scanned, and the result that yields in the highest emission close to the limit are presented on the test report.

Out of Band Emission at Antenna Terminal, Bandedge and Mask

In comparison among all Out of Band Emission at Antenna Terminal and Bandedge in the variety of combination on LTE band 2/5 & 7, respectively, It's revealed to generate the highest emission while RB size = 1 with offset 0 (CSE) and RB size = 1 with offset of both extremity for all supported transmission bandwidth of all supported frequency band (Bandedge). RB size = 1with offset of both extremity for all supported transmission bandwidth and RB number = full of all supported frequency band (Mask) Be aware of that only data measurement that yields the worst measurement with supported modulation scheme (QPSK, 16QAM), QPSK – the worst, is shown on the corresponding section.

Peak to Average Ratio

For Peak to Average Ratio test, all combination (RB arrangement with different modulation scheme) has been evaluated, the data with the following configuration: RB number = full and modulation = 16QAM is revealed to generate the worst case result.

Only data that generates the worst-case result is shown on the report.

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5. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty		
RF Power Output	+/- 1.42 dB		
ERP/ EIRP measurement	Vertical Polarization = +/- 4.74dB Horizontal Polarization =+/- 4.62dB		
99% Occupied Bandwidth	+/- 123.36 Hz		
Out of Band Emissions at Antenna	+/- 1.55 dB		
Terminals and Band Edge			
Peak to Average Ratio	+/- 1.55 dB		
Frequency Stability vs. Temperature	+/- 123.36 Hz		
Frequency Stability vs. Voltage	+/- 123.36 Hz		
Temperature	+/- 0.8 °C		
Humidity	+/- 4.7 %		
DC / AC Power Source	DC= +/- 1%, AC=+/- 0.2%		

Radiated Spurious Emission:

	30MHz - 180MHz: +/- 3.37dB				
Measurement uncertainty	180MHz -417MHz: +/- 3.19dB				
(Polarization : Vertical)	0.417GHz-1GHz: +/- 3.19dB				
	1GHz - 18GHz: +/- 4.04dB				
	18GHz - 40GHz: +/- 4.04dB				

	30MHz - 167MHz: +/- 4.22dB
Measurement uncertainty	167MHz -500MHz: +/- 3.44dB
(Polarization : Horizontal)	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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6. RF POWER OUTPUT MEASUREMENT

6.1. Standard Applicable:

According to FCC §2.1046.

3GPP Power limitation for HSDPA and HSUPA

Maximum Output Powers for HSDPA

Sub-test in ta-	Power	Class 3	Power Class 4		
ble C.10.1.4	Power Tol (dBm) (dB)		Power (dBm)	Tol (dB)	
1	+24	+1.7/-3.7	+21	+2.7/-2.7	
2	+24	+1.7/-3.7	+21	+2.7/-2.7	
3	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7	
4	+23.5	+2.2/-3.7	+20.5	+3.2/-2.7	

Maximum Output Powers for HSUPA

Sub-test in table	Power (Class 3	Power Class 4		
C.11.1.3	Power (dBm)	Tol (dB)	Power (dBm)	Tol (dB)	
1	+24	+1.7/-6.7	+21	+2.7/-5.7	
2	+22	+3.7/-5.2	+19	+4.7/-4.2	
3	+23	+2.7/-5.2	+20	+3.7/-4.2	
4	+22	+3.7/-5.2	+19	+4.7/-4.2	
5	+24	+1.7/-6.7	+21	+2.7/-5.7	

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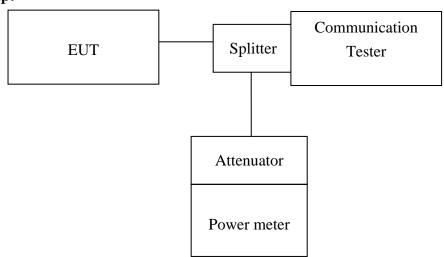
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6.2. Test Set-up:



Note: Measurement setup for testing on Antenna connector

6.3. Measurement Procedure:

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. TS 151 010-1 is reference to conduct the test measurement of output power.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCDMA/HSPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing, and KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results

Necessary Communication complying with 24.232 (c) and 27.5(d)(4)

Set MT8852C (base-station simulator) MS Signal with packet data submenu; SLOT Configuration Set appropriate level to verify if or not power on mobile station's link with simulator still exists.

6.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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6.5. Measurement Result:

6.5.1. RF Conducted Output Power

6.5.1.1.: GSM/GPRS/EDGE (GMSK; 8-PSK)

Result:

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Averager Burst Power (dBm)
	824.2	128	32.60	32.40
GSM 850	836.6	190	32.70	32.50
	848.8	251	32.80	32.50

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Averager Burst Power (dBm)
	1850.2	512	29.70	29.60
GSM 1900	1880.0	661	29.70	29.50
	1909.8	810	30.00	29.80

EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 1UP) Class 8 (dBm)	Average Burst Power (4DN 1UP) Class 8 (dBm)	Peak Power (4DN 2UP) Class 10 (dBm)	Average Burst Power (4DN 2UP) Class 10 (dBm)
	824.2	128	32.50	32.40	29.20	29.10
GPRS 850	836.6	190	32.60	32.50	29.40	29.20
	848.8	251	32.70	32.50	29.60	29.50

EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 3UP) Class 12 (dBm)	Average Burst Power (4DN 3UP) Class 12 (dBm)	Peak Power (4DN 4UP) Class 12 (dBm)	Average Burst Power (4DN 4UP) Class 12 (dBm)
	824.2	128	27.80	27.60	26.90	26.80
GPRS 850	836.6	190	27.80	27.10	27.10	26.90
	848.8	251	28.70	27.90	27.10	27.00

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EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 1UP) Class 8 (dBm)	Average Burst Power (4DN 1UP) Class 8 (dBm)	Peak Power (4DN 2UP) Class 10 (dBm)	Average Burst Power (4DN 2UP) Class 10 (dBm)
GPRS 1900	1850.2	512	29.70	29.50	26.40	26.20
	1880.0	661	29.70	29.50	26.30	26.10
	1909.8	810	30.00	29.80	26.60	26.50

EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 3UP) Class 12 (dBm)	Average Burst Power (4DN 3UP) Class 12 (dBm)	Peak Power (4DN 4UP) Class 12 (dBm)	Average Burst Power (4DN 4UP) Class 12 (dBm)
	1850.2	512	24.60	24.40	24.00	23.90
GPRS 1900	1880.0	661	24.50	24.30	23.90	23.80
	1909.8	810	24.80	24.70	24.30	24.10

EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 1UP) Class 8 (dBm)	Average Burst Power (4DN 1UP) Class 8 (dBm)	Peak Power (4DN 2UP) Class 10 (dBm)	Average Burst Power (4DN 2UP) Class 10 (dBm)
	824.2	128	30.10	27.50	27.70	24.60
EDGE 850	836.6	190	30.80	27.60	27.80	24.60
	848.8	251	30.80	27.70	27.70	24.60

EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 3UP) Class 12 (dBm)	Average Burst Power (4DN 3UP) Class 12 (dBm)	Peak Power (4DN 4UP) Class 12 (dBm)	Average Burst Power (4DN 4UP) Class 12 (dBm)
	824.2	128	26.20	23.10	27.50	24.40
EDGE 850	836.6	190	26.20	23.20	27.60	24.40
	848.8	251	26.40	23.30	27.80	24.60

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EUT Mode	Frequency (MHz)	СН	Peak Power (4DN 1UP) Class 8 (dBm)	Average Burst Power (4DN 1UP) Class 8 (dBm)	Peak Power (1DN 2UP) Class 10 (dBm)	Average Burst Power (1DN 2UP) Class 10 (dBm)
	1850.2	512	29.90	26.90	26.90	23.80
EDGE 1900	1880.0	661	29.60	26.80	26.90	23.80
	1909.8	810	29.90	26.90	27.30	24.20

EUT Mode	Frequency (MHz)	СН	Peak Power (1DN 3UP) Class 12 (dBm)	Average Burst Power (1DN 3UP) Class 12 (dBm)	Peak Power (1DN 4UP) Class 12 (dBm)	Average Burst Power (1DN 4UP) Class 12 (dBm)
EDGE 1900	1850.2	512	26.00	22.80	25.00	21.80
	1880.0	661	26.00	22.80	24.90	21.80
	1909.8	810	26.30	23.10	25.20	22.10

Cable loss offset Low Band: 0.5dB Cable loss offset High Band: 0.85dB

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6.5.1.2.: WCDMA mode

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

Results:

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
****	1852.4	9262	26.58	23.76
WCDMA Band II	1880.0	9400	26.75	23.73
Dana II	1907.6	9538	26.76	23.97

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
****	826.4	4132	27.33	24.00
WCDMA Band V	836.6	4183	27.25	23.97
Build V	846.6	4233	27.07	23.83

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
	` ,	0262	, ,	` ,
HSDPA	1852.4	9262	26.24	22.79
Band II	1880.0	9400	26.28	22.69
2	1907.6	9538	26.41	22.98

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
	826.4	4132	26.55	22.97
HSDPA Band V	836.6	4183	26.65	22.92
Build V	846.6	4233	26.45	22.65

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EUT Mode	Frequency	СН	Peak Power		
	(MHz)		(dBm)	(dBm)	
HATTE !	1852.4	9262	26.26	22.79	
HSUPA Band II	1880.0	9400	26.28	22.74	
Build II	1907.6	9538	26.46	22.99	

EUT Mode	Frequency (MHz)	СН	Peak Power (dBm)	Avg. Power (dBm)
	826.4	4132	26.54	22.96
HSUPA Band V	836.6	4183	26.66	22.94
Dana v	846.6	4233	26.49	22.66

Note: The results above reflect max power with all up bits.

Cable loss offset Low Band: 0.5dB Cable loss offset High Band: 0.85dB

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6.5.1.3: MPR Table LTE Band 2_1.4MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.23
		40.50	4070 -	1	5	23.32
		18607	1850.7	3	2	23.34
				6	0	22.35
				1	0	23.34
				1	5	23.33
1.4	QPSK	18900	1880.0	3	2	23.35
				6	0	22.35
		19193	1909.3	1	0	23.63
				1	5	23.64
				3	3	23.67
				6	0	22.67
				1	0	22.46
		10607	1050.7	1	5	22.43
		18607	1850.7	3	2	22.30
				6	0	21.46
				1	0	22.54
1.4	160414	10000	1000.0	1	5	22.50
1.4	16 QAM	18900	1880.0	3	3	22.36
				6	0	21.48
				1	0	22.69
		19193	1000.2	1	5	22.61
			1909.3	3	2	22.54
				6	0	21.72

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LTE Band 2_3MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.23
		10615	10515	1	14	23.27
		18615	1851.5	8	4	22.36
				15	0	22.37
				1	0	23.37
3	QPSK	18900	1880.0	1	14	23.33
3	QPSK	18900	1880.0	8	4	22.37
				15	0	22.36
				1	0	23.61
		19185	1908.5	1	14	23.56
				8	4	22.64
				15	0	22.63
			1851.5	1	0	22.34
		18615		1	14	22.33
		18015		8	4	21.51
				15	0	21.45
				1	0	22.38
3	16 OAM	18900	1880.0	1	14	22.35
3	16 QAM	10900	1000.0	8	4	21.52
				15	0	21.48
				1	0	22.59
		19185	1908.5	1	14	22.49
			1700.3	8	4	21.76
				15	0	21.69

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LTE Band 2_5MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.40
		10605	1050.5	1	24	23.31
		18625	1852.5	12	6	22.41
				25	0	22.38
				1	0	23.39
5	ODCK	18900	1880.0	1	24	23.35
3	QPSK	18900	1880.0	12	6	22.42
				25	0	22.40
				1	0	23.70
		19175	1907.5	1	24	23.59
				12	6	22.69
				25	0	22.65
			1852.5	1	0	22.64
		18625		1	24	22.60
				12	6	21.39
				25	0	21.32
				1	0	22.71
5	16 OAM	18900	1880.0	1	24	22.66
3	16 QAM	10900	1000.0	12	6	21.41
				25	0	21.34
				1	0	22.88
		19175	1907.5	1	24	22.88
			1907.3	12	6	21.63
				25	0	21.56

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LTE Band 2_10MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.44
		18650	1955.0	1	49	23.36
			1855.0	25	12	22.37
				50	0	22.44
				1	0	23.50
10	ODCK	19000	1000.0	1	49	23.37
10	QPSK	18900	1880.0	25	12	22.40
				50	0	22.46
		19150	1905.0	1	0	23.65
				1	49	23.66
				25	12	22.64
				50	0	22.67
		18650	1855.0	1	0	22.48
				1	49	22.42
				25	12	21.43
				50	0	21.39
				1	0	22.53
10	16 OAM	18900	1880.0	1	49	22.77
10	16 QAM	10900	1000.0	25	12	21.44
				50	0	21.42
		19150		1	0	22.97
			1005.0	1	49	22.93
			1905.0	25	12	21.60
				50	0	21.67

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LTE Band 2_15MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.44
		10775	1057.5	1	74	23.28
		18675	1857.5	36	19	22.48
				75	0	22.46
				1	0	23.42
1.5	ODCK	19000	1000.0	1	74	23.34
15	QPSK	18900	1880.0	36	19	22.47
				75	0	22.49
		19125	1902.5	1	0	23.48
				1	74	23.53
				36	19	22.69
				75	0	22.68
		18675	1857.5	1	0	22.33
				1	74	22.24
				36	19	21.45
				75	0	21.44
				1	0	22.39
15	16 OAM	18900	1880.0	1	74	22.27
15	16 QAM	18900	1880.0	36	19	21.45
				75	0	21.46
				1	0	22.35
		19125	1002.5	1	74	22.42
			1902.5	36	19	21.67
				75	0	21.64

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LTE Band 2_20MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.42
		18700	1960.0	1	99	23.25
			1860.0	50	25	22.42
				100	0	22.41
				1	0	23.42
20	ODCK	10000	1000.0	1	99	23.33
20	QPSK	18900	1880.0	50	25	22.42
				100	0	22.43
		19100	1900.0	1	0	23.45
				1	99	23.57
			1900.0	50	25	22.60
				100	0	22.61
		18700	1860.0	1	0	22.57
				1	99	22.45
				50	25	21.39
				100	0	21.38
				1	0	22.62
20	16 OAM	18900	1880.0	1	99	22.49
20	16 QAM	10900	1000.0	50	25	21.39
				100	0	21.44
		19100		1	0	22.50
			1000.0	1	99	22.57
			1900.0	50	25	21.55
				100	0	21.69

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LTE Band 5_1.4MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.33
		20.407	004.7	1	5	23.21
		20407	824.7	3	2	23.36
				6	0	22.39
				1	0	23.18
1.4	ODGIZ	20525	0265	1	5	23.14
1.4	QPSK	20525	836.5	3	2	23.32
				6	0	22.34
		20643	848.3	1	0	23.22
				1	5	23.21
				3	3	23.29
				6	0	22.32
		20407	824.7	1	0	22.59
				1	5	22.50
				3	2	22.49
				6	0	21.57
				1	0	22.45
1.4	16 OAM	20525	836.5	1	5	22.44
1.4	16 QAM	20323	830.3	3	3	22.43
				6	0	21.37
				1	0	22.36
		20643	040.2	1	5	22.32
			848.3	3	2	22.20
				6	0	21.38

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LTE Band 5_3MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.31
		20415	925.5	1	14	23.27
			825.5	8	4	22.44
				15	0	22.37
				1	0	23.25
3	ODCK	20525	836.5	1	14	23.26
3	QPSK	20525	830.3	8	4	22.36
				15	0	22.34
		20636	847.5	1	0	23.17
				1	14	23.12
				8	4	22.39
				15	0	22.38
		20415	825.5	1	0	22.84
				1	14	22.73
				8	4	21.51
				15	0	21.32
				1	0	22.70
2	16 O A M	20525	836.5	1	14	22.71
3	16 QAM	20525	830.3	8	4	21.50
				15	0	21.33
				1	0	22.58
		20635	047.5	1	14	22.56
			847.5	8	4	21.39
				15	0	21.41

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LTE Band 5_5MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.32
		20425	826.5	1	24	23.34
		20425	820.3	12	6	22.45
				25	0	22.40
				1	0	23.35
5	ODCV	20525	836.5	1	24	23.31
3	QPSK	20525	830.3	12	6	22.41
				25	0	22.36
		20625	846.5	1	0	23.32
				1	24	23.27
				12	6	22.40
				25	0	22.31
		20425	826.5	1	0	22.99
				1	24	22.88
				12	6	21.49
				25	0	21.37
				1	0	22.86
5	16 OAM	20525	836.5	1	24	22.88
3	16 QAM	20323	830.3	12	6	21.52
				25	0	21.36
		20625		1	0	22.89
			216.5	1	24	22.80
			846.5	12	6	21.49
				25	0	21.35

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LTE Band 5_10MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	23.40
		20450	020.0	1	49	23.29
		20450	829.0	25	12	22.38
				50	0	22.36
				1	0	23.32
10	ODCK	20525	9265	1	49	23.27
10	QPSK	20525	836.5	25	12	22.39
				50	0	22.33
		20600	844.0	1	0	23.42
				1	49	23.25
			844.0	25	12	22.30
				50	0	22.28
		20450	829	1	0	22.44
				1	49	22.27
				25	12	21.38
				50	0	21.42
				1	0	22.29
10	16 OAM	20525	836.5	1	49	22.60
10	16 QAM	20323	830.3	25	12	21.46
				50	0	21.34
				1	0	22.62
		20600	9440	1	49	22.51
		20600	844.0	25	12	21.44
				50	0	21.30

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LTE Band 7_5MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	22.11
		20775	2502.5	1	24	22.02
			2502.5	12	6	21.13
				25	0	21.07
				1	0	22.30
5	QPSK	21100	2535.0	1	24	22.23
3	QPSK	21100	2333.0	12	6	21.31
				25	0	21.31
		21425		1	0	22.11
			2567.5	1	24	22.05
				12	6	21.29
				25	0	21.25
		20775	2502.5	1	0	21.39
				1	24	21.41
				12	6	20.17
				25	0	20.06
				1	0	21.50
5	16 QAM	21100	2535.0	1	24	21.44
3	10 QAWI	21100	2333.0	12	6	20.32
				25	0	20.36
		21425		1	0	21.42
			2567.5	1	24	21.39
			2567.5	12	6	20.20
				25	0	20.31

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LTE Band 7_10MHz

BW			Frequency	RB	RB	Conducted
(MHz)	Modulation	Channel	(MHz)	Size	Offset	power
(IVIIIZ)			(IVIIIZ)	Size	Offset	(dBm)
				1	0	22.28
		20800	2505.0	1	49	22.25
			2303.0	25	12	21.22
				50	0	21.32
				1	0	22.29
10	ODCK	21100	2535.0	1	49	22.23
10	QPSK	21100	2555.0	25	12	21.29
				50	0	21.35
		21400		1	0	22.30
			2565.0	1	49	22.24
			2565.0	25	12	21.21
				50	0	21.23
		20800	2505.0	1	0	21.66
				1	49	21.64
				25	12	20.26
				50	0	20.23
				1	0	21.79
10	16041	21100	2525.0	1	49	21.76
10	16 QAM	21100	2535.0	25	12	20.25
				50	0	20.35
		21400		1	0	21.63
			25.65.0	1	49	21.73
			2565.0	25	12	20.19
				50	0	20.35

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LTE Band 7_15MHz

BW (MHz)	Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Conducted power (dBm)
				1	0	22.27
		20850	2507.5	1	74	22.21
			2507.5	36	19	21.37
				75	0	21.32
				1	0	22.28
15	ODCK	21100	2535.0	1	74	22.28
	QPSK	21100	2333.0	36	19	21.38
				75	0	21.41
		21375	2562.5	1	0	22.25
				1	74	22.40
				36	19	21.35
				75	0	21.45
		20850	2507.5	1	0	21.17
				1	74	21.43
				36	19	20.37
				75	0	20.30
				1	0	21.48
15	16 OAM	21100	2535.0	1	74	21.57
13	16 QAM	21100	2333.0	36	19	20.45
				75	0	20.34
		21375		1	0	21.45
			2562.5	1	74	21.56
			2562.5	36	19	20.37
				75	0	20.42

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LTE Band 7_20MHz

BW			Frequency	RB	RB	Conducted
(MHz)	Modulation	Channel	(MHz)	Size	Offset	power
(IVIIIZ)			(IVIIIZ)	Size	Oliset	(dBm)
				1	0	22.26
		20850	2510.0	1	99	22.26
			2310.0	50	25	21.34
				100	0	21.33
				1	0	22.27
20	ODCK	21100	2535.0	1	99	22.26
20	QPSK	21100	2333.0	50	25	21.39
				100	0	21.41
		21350	2560.0	1	0	22.34
				1	99	22.37
				50	25	21.36
				100	0	21.38
		20850	2510.0	1	0	21.40
				1	99	21.32
				50	25	20.28
				100	0	20.30
				1	0	21.44
20	16041	21100	2525.0	1	99	21.46
20	16 QAM	21100	2535.0	50	25	20.34
				100	0	20.36
		21350		1	0	21.41
			25.00.0	1	99	21.33
			2560.0	50	25	20.29
				100	0	20.35

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6.5.1.4:HSDPA Release 6 mode

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing.

HSDPA SUB-TEST Setting

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	$eta_{ m c}$	$eta_{ m d}$	$eta_{ m d} (SF)$	β_c/β_d	β _{HS} (Note1, Note 2)	CM (dB) (<i>Note 3</i>)	MPR (dB) (Note 3)	RMC (Kbps)
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

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Results:

Mode	Sub-test	Avg.	Power (d	Bm)	Power Class 3 Limita-	Comments	
		9262	9400	9538	tion (dBm)		
1		23.98	23.98	24.16	20.3dBm – 25.7dBm	Pass	
HSDPA	2	23.69	23.62	23.84	20.3dBm – 25.7dBm	Pass	
(B2)	3	23.52	23.50	23.67	19.8dBm – 25.7dBm	Pass	
	4	23.57	23.54	23.73	19.8dBm – 25.7dBm	Pass	

Mode	Sub-test	Avg.	Power (d) Channel	Bm)	Power Class 3 Limita-	Comments	
		4132	4183	4233	tion (dBm)		
	1	24.22 24.22 24.02		20.3dBm – 25.7dBm	Pass		
HSDPA	2	23.93	23.86	23.70	20.3dBm – 25.7dBm	Pass	
(B5)	(B5) 3 23.		23.74	23.53	19.8dBm – 25.7dBm	Pass	
	4	23.81	23.78	23.59	19.8dBm – 25.7dBm	Pass	

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6.5.1.4.: HSPA (HSDPA & HSUPA) Release 6 mode

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

HSPA SUB-TEST Setting

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub- test	$eta_{ m c}$	$eta_{ m d}$	β _d (SF)	β_c/β_d	$eta_{ m HS}$	$eta_{ m ec}$	$eta_{ m ed}$	β _{ed} (SF)	β _{ed} (Codes)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps)
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	β _{ed} 1: 47/15 β _{ed} 2: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

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Results:

Buits.						
Mode	Sub-test	Avg.	Power (di	Bm)	Power Class 3 Limita-	Comments
		9262	9400	9538	tion (dBm)	
	1	23.72	23.66	23.88	18.8dBm – 25.7dBm	Pass
	2	21.78	21.74	21.92	16.8dBm – 25.7dBm	Pass
HSUPA(B2)	3	22.69	22.72	22.91	17.8dBm – 25.7dBm	Pass
	4	21.83	21.80	22.00	16.8dBm – 25.7dBm	Pass
	5	23.58	23.49	23.77	18.8dBm – 25.7dBm	Pass

Mode	Sub-test	Avg. Power (dBm) Channel		Power Class 3 Limita-	Comments	
		4132	4183	4233	tion (dBm)	
	1	23.96	23.90	23.74	18.8dBm – 25.7dBm	Pass
	2	22.02	21.98	21.78	16.8dBm – 25.7dBm	Pass
HSUPA(B5)	3	22.93	22.96	22.77	17.8dBm – 25.7dBm	Pass
	4	22.07	22.04	21.86	16.8dBm – 25.7dBm	Pass
	5	23.82	23.73	23.63	18.8dBm – 25.7dBm	Pass

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6.5.2. Minimum Communications Power Measurement

PCS 1900 band

PCL	0	1	2	3	4	5	6	7	8
Output power (dBm)	29.5	28.1	25.9	23.9	22	20.1	18.1	16	14.2

PCL	9	10	11	12	13	14	15
Output power (dBm)	12.1	10.1	8.2	6.1	4	2	0.2

Note: The EUT output power was controlled by simulator. Set Communication Tester CMU200 PCL as above, and get the mobile phone output power reading.

WCDMA/HSDPA/HSUPA band II, V

The EUT output power was controlled by simulator. Set Communication Tester CMU200 function key "UE Power Control" and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm. Then record the read (see page 15 for measurement data). The min. power was measures by a function key "minimum power" then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

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7. ERP, EIRP MEASUREMENT

7.1. Standard Applicable:

According to FCC §2.1046

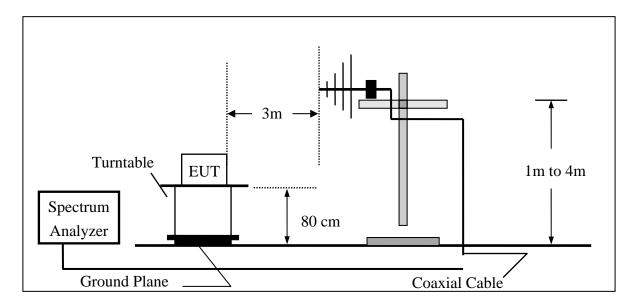
FCC 22.913(a) Mobile station is limited to 7W ERP.

FCC 24.232(b) Mobile station is limited to 2W EIRP.

FCC 27, 50(h)(2) Mobile and other user stations. Mobile stations are limited to 2 W EIRP

7.2. Test SET-UP (Block Diagram of Configuration):

(A) Radiated Power Test Set-Up, Frequency Below 1000MHz



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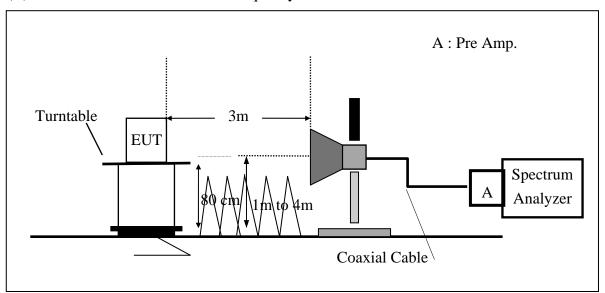
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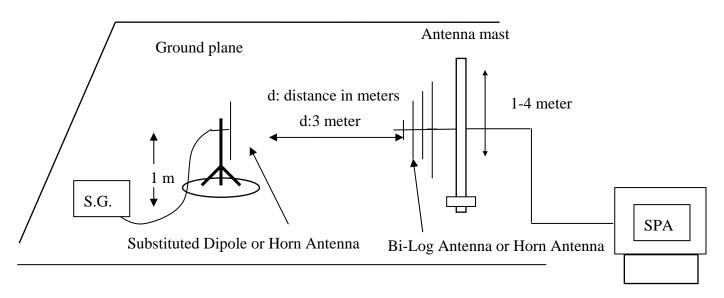
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(B) Radiated Power Test Set-UP Frequency Over 1 GHz



(C) Substituted Method Test Set-UP



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7.3. Measurement Procedure:

The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824.2 –848.80MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as fol-

EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

EIRP in frequency band 2510 – 2560MHz were measured using a substitution method. The EUT was replaced by a horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) - Cable Loss (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable Loss (dB)

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Spectrum setting:

1. Detector = Peak, marker the highest value of the detector by maximum hold, set RBW wide enough to capture the entire signal of emission, and VBW > =3xRBW. Or.

2. KDB 971168 D01 Power Meas License Digital Systems v01 is adopted, and the procedure as lists under item 4, Measurement of the Average Power over the Fundamental Signal Bandwidth, is followed to set correspondingly for the acquisition of proper measurement data.

Set frequency = nominal signal center frequency;

Set span = $2 \times \text{occupied BW}$;

Set RBW $\approx 1 \sim 5\%$ of the span, not to exceed 1 MHz

Set $VBW = 3 \times RBW$;

Select average power (RMS) detector

Set sweep time and number of measurement points to achieve a minimum of 1 millisecond/pt integration time (ex. Point = 601points, then sweet time = $601*10^{-3} = 6$ s.

Activate trace averaging routine over a minimum of 10 sweeps;

Activate marker/span pair and set span = signal or channel bandwidth;

Activate the band/interval power marker function;

Record the band power level;

Record adjusted value as the average signal power level. Then activate the occupied bandwidth measurement function.

The proper adjustment due to limitation of spectrum capability is given compensated to spectrum with conversion factor of 10*log (TBW/RBW), where TBW is the transmission of UE exceeding the maximum BW UE can extends, and RBW is the resolution BW in UE.

7.4. Measurement Equipment Used:

Refer to section 2.4 in this report

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7.5. Measurement Result: (Peak) –using option of peak measurement

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	824.2	128	V	24.49	3.75	-3.03	25.22	38.45
	624.2	128	Н	15.47	3.75	-3.03	16.19	38.45
GCM 950	926.6	190	V	24.96	3.76	-3.07	25.65	38.45
GSM 850	836.6	190	Н	18.92	3.76	-3.07	19.61	38.45
	010 0	251	V	24.97	3.77	-3.11	25.63	38.45
	848.8	251	Н	19.53	3.77	-3.11	20.19	38.45

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	924.2	128	V	23.52	3.75	-3.03	24.25	38.45
	824.2	128	Н	14.96	3.75	-3.03	15.68	38.45
CDDC 950	9266	190	V	24.27	3.76	-3.07	24.97	38.45
GPRS 850 836.6 848.8	650.0	190	Н	17.60	3.76	-3.07	18.30	38.45
	9199	251	V	24.11	3.77	-3.11	24.77	38.45
	040.0	231	Н	19.09	3.77	-3.11	19.75	38.45

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	824.2	128	V	22.64	3.75	-3.03	23.36	38.45
	824.2	128	Н	13.91	3.75	-3.03	14.64	38.45
EDGE 950	926.6	190	V	22.53	3.76	-3.07	23.22	38.45
EDGE 850 836.6 848.8	190	Н	15.22	3.76	-3.07	15.91	38.45	
	010 0	251	V	22.99	3.77	-3.11	23.65	38.45
	040.0	251	Н	17.29	3.77	-3.11	17.95	38.45

(1) The RBW, VBW of SPA for frequency RBW=300 KHz, VBW=1MHz Remark:

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	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1850.2	512	V	21.22	5.22	-4.67	21.77	33.01
	1630.2	312	Н	26.09	5.22	-4.67	26.65	33.01
GSM 1000	1880.0	661	V	21.76	5.16	-4.70	22.21	33.01
GSM 1900	1000.0	001	Н	26.09	5.16	-4.70	26.54	33.01
	1909.8	810	V	21.79	5.09	-4.74	22.14	33.01
	1909.8	610	Н	26.58	5.09	-4.74	26.94	dBm 33.01 33.01 33.01 33.01

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1850.2	512	V	15.72	5.22	-4.67	16.28	33.01
	1830.2	312	Н	23.06	5.22	-4.67	23.61	33.01
CDDC 1000	1880.0	661	V	15.49	5.16	-4.70	15.94	33.01
GPRS 1900	1000.0	661	Н	22.03	5.16	-4.70	70 15.94	33.01
	1909.8	810	V	16.20	5.09	-4.74	16.55	33.01
	1909.8	610	Н	23.44	5.09	-4.74	23.79	dBm 33.01 33.01 33.01 33.01

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1850.2	512	V	21.25	5.22	-4.67	21.81	33.01
	1830.2	312	Н	22.09	5.22	-4.67	22.65	33.01
EDGE 1000	1880.0	661	V	20.93	5.16	-4.70	21.38	33.01
EDGE 1900	1880.0	001	Н	21.93	5.16	-4.70	22.38	33.01
	1000.9	910	V	21.45	5.09	-4.74	21.80	33.01
	1909.8	810	Н	22.51	5.09	-4.74	22.86	33.01

Remark:

The RBW, VBW of SPA for frequency RBW=300K, VBW=1MHz (1)

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	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1852.4	9262	V	17.30	5.22	-4.67	17.85	33.01
	1832.4	9202	Н	25.83	5.22	-4.67	26.37	33.01
WCDMA D2	1880.0	9400	V	17.74	5.16	-4.70	18.20	33.01
WCDMA B2	1000.0	9400	Н	23.62	5.16	-4.70	24.08	33.01
	1907.6	9538	V	18.25	5.10	-4.74	18.61	33.01
	1907.0	9336	Н	24.71	5.10	-4.74	25.07	33.01

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1050 4	0262	V	16.70	5.22	-4.67	17.25	33.01
	1852.4	9262	Н	24.86	5.22	-4.67	25.40	33.01
HSDPA B2	1880.0	9400	V	18.16	5.16	-4.70	18.62	33.01
порра ва	1880.0	9400	Н	23.81	5.16	-4.70	24.26	33.01
	1907.6	9538	V	18.45	5.10	-4.74	18.81	33.01
	1907.0	9338	Н	24.81	5.10	-4.74	25.17	33.01

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1852.4	9262	V	17.63	5.22	-4.67	18.18	33.01
	1832.4	9202	Н	24.89	5.22	-4.67	25.44	33.01
HCHDA D2	1880.0	9400	V	16.33	5.16	-4.70	16.78	33.01
HSUPA B2	1000.0	9400	Н	23.73	5.16	-4.70	24.19	33.01
	1007.6	9538	V	18.40	5.10	-4.74	18.76	33.01
	1907.6	9336	Н	24.84	5.10	-4.74	25.21	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 5MHz, VBW= 8MHz

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	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	926.4	4132	V	20.07	3.76	-3.04	20.79	38.45
	826.4	4132	Н	11.40	3.76	-3.04	12.12	38.45
WCDMA D5	9266	4183	V	19.00	3.76	-3.07	19.70	38.45
WCDMA B5	836.6	4183	Н	12.37	3.76	-3.07	13.07	38.45
	846.6	4233	V	19.97	3.77	-3.09	20.64	38.45
	040.0	4233	Н	13.64	3.77	-3.09	14.31	38.45

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	826.4	4132	V	19.41	3.76	-3.03	20.13	38.45
	820.4	4132	Н	11.17	3.76	-3.04	11.89	38.45
LICDDA DE	926.6	4102	V	18.76	3.76	-3.07	19.46	38.45
HSDPA B5	836.6 418	4183	Н	12.06	3.76	-3.07	12.76	38.45
	946.6	4233	V	19.69	3.77	-3.10	20.37	38.45
	846.6	4233	Н	13.43	3.77	-3.10	14.10	38.45

	EUT				Measur	ement		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	826.4	4132	V	19.64	3.76	-3.03	20.36	38.45
	820.4	4132	Н	10.77	3.76	-3.03	11.49	38.45
HSUPA B5	836.6	4183	V	18.64	3.76	-3.07	19.34	38.45
nsura bs	650.0	4163	Н	11.55	3.76	-3.07	12.24	38.45
	916.6	1222	V	19.26	3.77	-3.09	19.93	38.45
	846.6	4233	Н	13.18	3.77	-3.09	13.85	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 5MHz, VBW= 8MHz

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BAND 2 / BW: 1.4M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
BAND 2			V	24.77	5.22	-4.67	25.33	33.01
	1850.7	18607	Н	18.14	5.22	-4.67	18.69	33.01
BW: 1.4M	1880.0	18900	V	24.80	5.16	-4.70	25.26	33.01
QPSK RB: 1,0	1880.0	18900	Н	21.91	5.16	-4.70	22.37	33.01
	1000.2	1000.2 10102	V	22.65	5.10	-4.74	23.00	33.01
	1909.3	19193	Н	18.96	5.10	-4.74	19.32	33.01

BAND 2 / BW: 1.4M / QPSK / RB: 1,5

	EUT			N	Measurem	ent				
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit		
	MHz		V/H	dBm	dBi	dB	dBm	dBm		
BAND 2			V	24.88	5.22	-4.67	25.44	33.01		
	1850.7	18607	Н	18.51	5.22	-4.67	19.06	33.01		
BW: 1.4M	1000.0	10000	V	25.14	5.16	-4.70	25.60	33.01		
QPSK	1880.0	18900	Н	19.46	5.16	-4.70	19.91	33.01		
RB: 1,5	1000.2	10103 -	V	22.40	5.09	-4.74	22.75	33.01		
	1909.3	1909.3	1909.3	1909.3 19193	Н	19.02	5.09	-4.74	19.38	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 1.4M / 16QAM / RB: 1,0

	EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit		
	MHz		V/H	dBm	dBi	dB	dBm	dBm		
BAND 2	10707	40.50	V	25.00	5.22	-4.67	25.55	33.01		
	1850.7	18607	Н	18.29	5.22	-4.67	18.84	33.01		
BW: 1.4M	1880.0	18900	V	25.59	5.16	-4.70	26.05	33.01		
16QAM RB: 1,0	1880.0	10900	Н	20.00	5.16	-4.70	20.45	33.01		
	1909.3 1	19193	V	22.93	5.10	-4.74	23.29	33.01		
	1909.3	19193	Н	19.41	5.09	-4.74	19.77	33.01		

BAND 2 / BW: 1.4M / 16QAM / RB: 1,5

	EUT			N	Measurem	ent				
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit		
	MHz		V/H	dBm	dBi	dB	dBm	dBm		
			V	25.11	5.22	-4.67	25.66	33.01		
BAND 2	1850.7	18607	Н	18.60	5.22	-4.67	19.16	33.01		
BW: 1.4M	1880.0	18900 -	V	25.63	5.16	-4.70	26.08	33.01		
16QAM	1880.0		Н	19.99	5.16	-4.70	20.45	33.01		
RB: 1,5	1000.2		V	22.74	5.09	-4.74	23.10	33.01		
	1909.3	1909.3	1909.3	19193	Н	19.12	5.09	-4.74	19.47	33.01

Remark:

The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz (1)

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BAND 2 / BW: 3M / QPSK / RB: 1,0

	EUT		Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
			V	24.43	5.23	-4.67	24.98	33.01	
BAND 2	1851.5	18615	Н	18.09	5.22	-4.67	18.64	33.01	
BW: 3M	1880.0	18900	V	24.92	5.16	-4.70	25.38	33.01	
QPSK RB: 1,0	1880.0	18900	Н	18.53	5.16	-4.70	18.99	33.01	
	1009.5	19185	V	23.46	5.10	-4.74	23.82	33.01	
	1908.5	19103	Н	18.89	5.10	-4.74	19.25	33.01	

BAND 2 / BW: 3M / QPSK / RB: 1,14

]	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	1051.5	10615	V	24.62	5.22	-4.67	25.17	33.01
BAND 2	1851.5	18615	Н	18.11	5.22	-4.67	18.66	33.01
BW: 3M	1880.0	18000	V	24.63	5.16	-4.71	25.08	33.01
QPSK	1880.0	18900	Н	17.92	5.16	-4.71	18.37	33.01
RB: 1,14	1908.5 19185	V	22.85	5.09	-4.74	23.21	33.01	
		19183	Н	17.45	5.09	-4.74	17.81	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 3M / 16QAM / RB: 1,0

	EUT			Ŋ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.92	5.22	-4.67	25.48	33.01
BAND 2	1851.5	18615	Н	18.45	5.22	-4.67	19.01	33.01
BW: 3M	1880.0	18900	V	25.41	5.16	-4.70	25.87	33.01
16QAM RB: 1,0	1880.0	18900	Н	19.03	5.16	-4.70	19.49	33.01
	1908.5	1000 5 10105	V	23.83	5.10	-4.74	24.19	33.01
	1908.3	19185	Н	19.34	5.10	-4.74	19.71	33.01

BAND 2 / BW: 3M / 16QAM / RB: 1,14

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	25.04	5.22	-4.67	25.59	33.01
BAND 2	1851.5	18615	Н	18.52	5.22	-4.67	19.07	33.01
BW: 3M	1000.0	10000	V	25.13	5.16	-4.70	25.58	33.01
16QAM	1880.0	18900	Н	18.33	5.16	-4.70	18.78	33.01
RB: 1,14	1908.5	19185 —	V	23.22	5.09	-4.74	23.57	33.01
	1908.5		Н	17.86	5.09	-4.74	18.22	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 5M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.57	5.22	-4.67	25.12	33.01
BAND 2	1852.5	18625	Н	17.97	5.22	-4.67	18.53	33.01
BW: 5M			V	24.67	5.16	-4.70	25.13	33.01
QPSK	1880.0	18900	Н	19.11	5.16	-4.70	19.58	33.01
RB: 1,0	1007.5		V	23.33	5.10	-4.73	23.70	33.01
,	1907.5	19175	Н	19.65	5.10	-4.73	20.02	33.01

BAND 2 / BW: 5M / QPSK / RB: 1,24

]	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.63	5.22	-4.67	25.17	33.01
BAND 2	1852.5	18625	Н	17.68	5.22	-4.67	18.23	33.01
BW: 5M	1000	18900	V	24.26	5.15	-4.71	24.71	33.01
QPSK	1880.0		Н	18.14	5.15	-4.71	18.59	33.01
RB: 1,24	,		V	22.15	5.09	-4.74	22.50	33.01
	1907.5	1907.5 19175	Н	17.21	5.09	-4.74	17.56	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 5M / 16QAM / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.70	5.22	-4.67	25.26	33.01
BAND 2	1852.5	18625	Н	18.04	5.22	-4.67	18.59	33.01
BW: 5M			V	24.88	5.16	-4.70	25.34	33.01
16QAM	1880.0 1890	18900	Н	19.33	5.16	-4.70	19.79	33.01
RB: 1.0			V	23.53	5.10	-4.73	23.90	33.01
·	1907.5	19175	Н	20.02	5.10	-4.73	20.39	33.01

BAND 2 / BW: 5M / 16QAM / RB: 1,24

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.83	5.21	-4.68	25.37	33.01
BAND 2	1852.5	18625	Н	18.28	5.22	-4.67	18.83	33.01
BW: 5M			V	24.49	5.16	-4.71	24.94	33.01
16QAM	1880.0	18900	Н	18.31	5.15	-4.71	18.76	33.01
RB: 1,24			V	22.45	5.10	-4.74	22.81	33.01
	1907.5	19175	Н	18.03	5.09	-4.74	18.39	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 10M / QPSK / RB: 1,0

:	EUT			Ŋ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	23.58	5.22	-4.67	24.14	33.01
BAND 2	1855.0	18650	Н	17.86	5.22	-4.67	18.41	33.01
BW: 10M			V	23.21	5.17	-4.70	23.68	33.01
QPSK	QPSK 1880.0 189	18900	Н	19.05	5.17	-4.70	19.52	33.01
RB: 1,0			V	21.86	5.11	-4.73	22.25	33.01
·	1905.0	5.0 19150	Н	18.08	5.11	-4.73	18.47	33.01

BAND 2 / BW: 10M / QPSK / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	23.49	5.21	-4.68	24.02	33.01
DAND 2	1855.0	18650	Н	18.90	5.20	-4.68	19.42	33.01
BAND 2			V	22.64	5.15	-4.71	23.08	33.01
BW: 10M	1880.0	18900	Н	18.69	5.15	-4.71	19.13	33.01
QPSK		19150	V	21.54	5.09	-4.74	21.90	33.01
RB: 1,49	1905.0		Н	18.61	5.09	-4.74	18.97	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 10M /16QAM / RB: 1,0

:	EUT			Ŋ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	23.98	5.22	-4.67	24.53	33.01
BAND 2	1855.0	18650	Н	18.43	5.22	-4.67	18.99	33.01
BW: 10M			V	23.95	5.17	-4.70	24.42	33.01
16QAM	1880.0	18900	Н	19.83	5.17	-4.70	20.30	33.01
RB: 1,0	1005.0		V	22.56	5.11	-4.73	22.95	33.01
·	1905.0	19150	Н	18.74	5.11	-4.73	19.13	33.01

BAND 2 / BW: 10M / 16QAM / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	24.17	5.20	-4.68	24.69	33.01
BAND 2	1855.0	18650	Н	19.62	5.20	-4.68	20.14	33.01
BW: 10M			V	23.31	5.15	-4.71	23.76	33.01
16QAM	1880.0	18900	Н	19.38	5.15	-4.71	19.83	33.01
RB: 1,49		19150	V	22.08	5.09	-4.74	22.43	33.01
Í	1905.0		Н	19.15	5.10	-4.74	19.50	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 15M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	23.59	5.22	-4.67	24.15	33.01
BAND 2	1857.5	18675	Н	17.98	5.22	-4.67	18.54	33.01
BW: 15M			V	23.72	5.18	-4.70	24.20	33.01
QPSK	1880 0	18900	Н	18.90	5.17	-4.70	19.37	33.01
RB: 1.0			V	21.93	5.12	-4.72	22.33	33.01
,	1902.5	19125	Н	17.33	5.12	-4.72	17.73	33.01

BAND 2 / BW: 15M / QPSK / RB: 1,74

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
			V	24.56	5.19	-4.69	25.07	33.01	
BAND 2	1857.5	18675	Н	17.48	5.19	-4.69	17.99	33.01	
BW: 15M	1000		V	22.59	5.15	-4.71	23.02	33.01	
QPSK	1880.0	18900	Н	17.88	5.14	-4.71	18.31	33.01	
RB: 1,74			V	21.68	5.09	-4.74	22.04	33.01	
	1902.5	19125	Н	18.11	5.09	-4.74	18.46	33.01	

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 15M /16QAM / RB: 1,0

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
		18675	V	23.95	5.22	-4.67	24.51	33.01	
BAND 2	1857.5		Н	17.76	5.22	-4.67	18.31	33.01	
BW: 15M			V	25.17	5.17	-4.70	25.65	33.01	
16QAM RB: 1,0	1880.0	18900	Н	19.19	5.17	-4.70	19.67	33.01	
			V	21.88	5.13	-4.72	22.29	33.01	
	1902.5	19125	Н	17.54	5.12	-4.72	17.94	33.01	

BAND 2 / BW: 15M / 16QAM / RB: 1,74

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
	D 2 15M AM 1,74	18675	V	25.33	5.19	-4.69	25.84	33.01	
BAND 2			Н	18.25	5.19	-4.69	18.75	33.01	
BW: 15M		18900	V	23.59	5.14	-4.71	24.02	33.01	
16QAM			Н	18.00	5.14	-4.71	18.43	33.01	
RB: 1,74		19125	V	21.72	5.09	-4.74	22.08	33.01	
	1902.5		Н	18.91	5.10	-4.74	19.26	33.01	

Remark:

The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz (1)

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BAND 2 / BW: 20M / QPSK / RB: 1,0

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
			V	23.66	5.22	-4.67	24.22	33.01	
BAND 2	1860.0	18700	Н	18.20	5.22	-4.67	18.75	33.01	
BW: 20M			V	23.81	5.18	-4.69	24.29	33.01	
QPSK	1880.0	18900	Н	19.72	5.18	-4.69	20.21	33.01	
RB: 1,0	1000		V	22.77	5.14	-4.72	23.19	33.01	
·	1900.0	19100	Н	19.67	5.14	-4.72	20.09	33.01	

BAND 2 / BW: 20M / QPSK / RB: 1,99

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
			V	24.02	5.18	-4.69	24.51	33.01	
BAND 2	1860.0	18700	Н	19.71	5.18	-4.69	20.20	33.01	
BW: 20M			V	22.11	5.14	-4.71	22.53	33.01	
QPSK	1880.0	18900	Н	19.77	5.14	-4.72	20.20	33.01	
RB: 1,99			V	22.44	5.10	-4.74	22.80	33.01	
ĺ	1900.0	19100	Н	19.81	5.10	-4.74	20.17	33.01	

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 2 / BW: 20M /16QAM / RB: 1,0

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
		18700	V	24.21	5.22	-4.67	24.76	33.01	
BAND 2	1860.0		Н	18.39	5.22	-4.67	18.94	33.01	
BW: 20M			V	24.91	5.18	-4.69	25.40	33.01	
16QAM	16QAM RB: 1,0	18900	Н	19.93	5.18	-4.69	20.42	33.01	
RB: 1,0			V	23.02	5.13	-4.72	23.44	33.01	
,	1900.0	19100	Н	19.80	5.13	-4.72	20.22	33.01	

BAND 2 / BW: 20M / 16QAM / RB: 1,99

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
			V	24.76	5.18	-4.69	25.25	33.01	
BAND 2	1860.0	18700	Н	19.91	5.19	-4.69	20.40	33.01	
BW: 20M	1000		V	23.23	5.14	-4.71	23.66	33.01	
16QAM	1880.0	18900	Н	19.94	5.14	-4.71	20.36	33.01	
RB: 1,99			V	22.52	5.10	-4.74	22.88	33.01	
	1900.0	19100	Н	20.05	5.09	-4.74	20.41	33.01	

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 5 / BW: 1.4M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.56	3.75	-3.03	23.28	38.45
BAND 5	824.7	20407	Н	14.17	3.75	-3.03	14.90	38.45
BW: 1.4M	836.5	20525	V	21.54	3.76	-3.06	22.24	38.45
QPSK	830.3	20525	Н	14.62	3.76	-3.06	15.32	38.45
RB: 1,0	040.2	20642	V	21.37	3.77	-3.10	22.03	38.45
	848.3	20643	Н	14.75	3.77	-3.10	15.42	38.45

BAND 5 / BW: 1.4M / QPSK / RB: 1,5

-	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.42	3.76	-3.03	23.14	38.45
BAND 5	824.7	20407	Н	14.20	3.76	-3.03	14.93	38.45
BW: 1.4M	926.5	20525	V	21.31	3.76	-3.07	22.01	38.45
QPSK	836.5	20525	Н	14.64	3.76	-3.07	15.33	38.45
RB: 1,5	848 3 20	20642	V	21.32	3.77	-3.10	21.99	38.45
	048.3	848.3 20643	Н	14.68	3.77	-3.11	15.34	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 5 / BW: 1.4M / 16QAM / RB: 1,0

:	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	2245	20.40	V	23.09	3.75	-3.03	23.82	38.45
BAND 5	824.7	20407	Н	14.71	3.75	-3.03	15.44	38.45
BW: 1.4M	836.5	20525	V	21.90	3.76	-3.06	22.60	38.45
16QAM	16QAM 836.5	20323	Н	15.13	3.76	-3.06	15.83	38.45
RB: 1,0 848.3	949.2	20643	V	21.76	3.77	-3.10	22.43	38.45
	040.3	20043	Н	15.15	3.77	-3.10	15.82	38.45

BAND 5 / BW: 1.4M / 16QAM / RB: 1,5

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.94	3.75	-3.03	23.67	38.45
BAND 5	824.7	20407	Н	14.74	3.76	-3.03	15.46	38.45
BW: 1.4M	926.5	20525	V	22.10	3.76	-3.07	22.79	38.45
16QAM	830.3	836.5 20525 - 848.3 20643 -	Н	15.42	3.76	-3.07	16.11	38.45
RB: 1,5	040.2		V	21.90	3.77	-3.10	22.56	38.45
•	848.3	20043	Н	15.30	3.77	-3.10	15.97	38.45

Remark:

The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz (1)

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台灣檢驗科技股份有限公司

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BAND 5 / BW: 3M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	007.7	20417	V	21.80	3.76	-3.03	22.52	38.45
BAND 5	825.5	20415	Н	14.44	3.75	-3.03	15.17	38.45
BW: 3M	836.5	20525	V	20.47	3.76	-3.06	21.17	38.45
QPSK RB: 1,0	830.3	20323	Н	12.78	3.76	-3.06	13.48	38.45
	847.5	20635	V	20.66	3.77	-3.10	21.33	38.45
	647.3	20033	Н	13.90	3.77	-3.10	14.56	38.45

BAND 5 / BW: 3M / QPSK / RB: 1,14

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	20.81	3.76	-3.03	21.53	38.45
BAND 5	825.5	20415	Н	13.68	3.76	-3.03	14.40	38.45
BW: 3M	926.5	20525	V	20.96	3.76	-3.07	21.65	38.45
QPSK	830.3	836.5 20525 – 847.5 20635 –	Н	13.11	3.76	-3.07	13.81	38.45
RB: 1,14	047.5		V	20.40	3.77	-3.11	21.07	38.45
•	847.3		Н	14.11	3.77	-3.10	14.77	38.45

Remark:

The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz (1)

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BAND 5 / BW: 3M / 16QAM / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.22	3.75	-3.03	22.94	38.45
BAND 5	825.5	20415	Н	14.81	3.76	-3.03	15.53	38.45
BW: 3M	836.5	20525	V	20.51	3.76	-3.06	21.21	38.45
16QAM RB: 1,0	830.3	20323	Н	13.34	3.76	-3.06	14.04	38.45
	847.5	20635	V	20.88	3.77	-3.10	21.55	38.45
	647.3	20033	Н	14.46	3.77	-3.10	15.13	38.45

BAND 5 / BW: 3M / 16QAM / RB: 1,14

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	21.37	3.76	-3.03	22.09	38.45
BAND 5	825.5	20415	Н	14.08	3.76	-3.04	14.80	38.45
BW: 3M	9265	20525	V	21.03	3.76	-3.07	21.72	38.45
16QAM	836.5	20525	Н	14.01	3.76	-3.07	14.70	38.45
RB: 1,14	847.5	20635	V	20.95	3.77	-3.11	21.61	38.45
,	047.3	20033	Н	14.78	3.77	-3.11	15.44	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 5 / BW: 5M / QPSK / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	21.96	3.75	-3.03	22.68	38.45
BAND 5	826.5	20425	Н	14.34	3.76	-3.03	15.07	38.45
BW: 5M	836.5	20525	V	20.08	3.76	-3.06	20.78	38.45
QPSK RB: 1,0	830.3	20323	Н	12.54	3.76	-3.06	13.24	38.45
	846.5	20625	V	21.86	3.77	-3.09	22.53	38.45
	640.3	20023	Н	15.48	3.76	-3.09	16.15	38.45

BAND 5 / BW: 5M / QPSK / RB: 1,24

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	20.41	3.76	-3.04	21.12	38.45
BAND 5	826.5	20425	Н	12.95	3.76	-3.04	13.67	38.45
BW: 5M	926.5	20525	V	21.82	3.76	-3.07	22.51	38.45
QPSK	836.5	20525	Н	13.79	3.76	-3.07	14.48	38.45
RB: 1,24	846.5 20625	V	19.95	3.77	-3.10	20.61	38.45	
	640.3	5 20625	Н	15.27	3.77	-3.10	15.93	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 5 / BW: 5M / 16QAM / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.52	3.75	-3.03	23.24	38.45
BAND 5	826.5	20425	Н	15.01	3.76	-3.03	15.74	38.45
BW: 5M	836.5	20525	V	21.25	3.76	-3.06	21.96	38.45
16QAM RB: 1,0	630.3	20323	Н	13.63	3.76	-3.06	14.33	38.45
	846.5	20625	V	21.71	3.77	-3.09	22.38	38.45
	040.3	20023	Н	15.63	3.77	-3.09	16.31	38.45

BAND 5 / BW: 5M / 16QAM / RB: 1,24

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	22.5	20.42.7	V	20.98	3.76	-3.04	21.70	38.45
BAND 5	826.5	20425	Н	13.52	3.76	-3.04	14.23	38.45
BW: 5M	836.5	20525	V	22.18	3.76	-3.07	22.86	38.45
16QAM RB: 1,24	830.3	20323	Н	14.95	3.76	-3.07	15.64	38.45
	846.5	20625	V	20.63	3.77	-3.10	21.30	38.45
	040.3	20023	Н	15.21	3.77	-3.10	15.87	38.45

Remark:

The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz (1)

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BAND 5 / BW: 10M / QPSK / RB: 1,0

	EUT			Ŋ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	21.88	3.75	-3.03	22.61	38.45
BAND 5	829.0	20450	Н	15.06	3.76	-3.03	15.79	38.45
BW: 10M	926.5	20525	V	20.78	3.76	-3.05	21.48	38.45
QPSK	836.5	20525	Н	12.95	3.76	-3.05	13.66	38.45
RB: 1,0	944.0	20600	V	21.36	3.76	-3.08	22.05	38.45
·	044.0	844.0 20600	Н	14.03	3.76	-3.08	14.72	38.45

BAND 5 / BW: 10M / QPSK / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	20.57	3.76	-3.06	21.27	38.45
BAND 5	829.0	20450	Н	12.85	3.76	-3.06	13.55	38.45
BW: 10M	926.5	20525	V	22.54	3.76	-3.08	23.22	38.45
QPSK	836.5	20525	Н	14.33	3.76	-3.08	15.01	38.45
RB: 1,49	844.0	20600	V	19.69	3.77	-3.10	20.35	38.45
,	044.0	20000	Н	13.39	3.77	-3.10	14.05	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 5 / BW: 10M /16QAM / RB: 1,0

:	EUT			ľ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
			V	22.67	3.75	-3.03	23.39	38.45
BAND 5	829.0	20450	Н	15.49	3.76	-3.03	16.22	38.45
BW: 10M	9265	20525	V	21.02	3.76	-3.05	21.73	38.45
16QAM	830.3	836.5 20525	Н	13.69	3.76	-3.05	14.40	38.45
RB: 1,0	•	20600	V	22.17	3.76	-3.08	22.86	38.45
·	044.0	4.0 20600	Н	14.79	3.76	-3.08	15.47	38.45

BAND 5 / BW: 10M / 16QAM / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	ERP	Limit
	MHz		V/H	dBm	dBd	dB	dBm	dBm
	22.2	V	20.85	3.76	-3.06	21.55	38.45	
BAND 5	829.0	20450	Н	13.78	3.76	-3.06	14.48	38.45
BW: 10M	926.5	20525	V	22.75	3.76	-3.08	23.43	38.45
16QAM	836.5	20525	Н	15.16	3.76	-3.08	15.84	38.45
RB: 1,49	944.0	20600 -	V	20.43	3.77	-3.10	21.09	38.45
,	844.0		Н	14.18	3.77	-3.10	14.84	38.45

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 5M / QPSK / RB: 1,0

	EUT			ľ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	16.38	6.40	-5.48	17.30	33.01
BAND 7	2502.5	20775	Н	23.86	6.40	-5.48	24.78	33.01
BW: 5M	2525.0	21100	V	18.26	6.48	-5.52	19.22	33.01
QPSK RB: 1,0	2535.0	21100	Н	25.14	6.49	-5.52	26.10	33.01
	2567.5	21425	V	18.28	6.57	-5.57	19.28	33.01
	2307.3	21423	Н	23.19	6.57	-5.57	24.20	33.01

BAND 7 / BW: 5M / QPSK / RB: 1,24

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	16.20	6.41	-5.49	17.12	33.01
BAND 7	2502.5	20775	Н	24.26	6.41	-5.49	25.19	33.01
BW: 5M	2535.0	21100	V	17.71	6.50	-5.53	18.67	33.01
QPSK	2333.0	.0 21100	Н	25.20	6.50	-5.53	26.16	33.01
RB: 1,24		21425	V	16.93	6.58	-5.57	17.94	33.01
		21423	Н	23.18	6.58	-5.57	24.19	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 5M / 16QAM / RB: 1,0

:	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	16.93	6.40	-5.48	17.85	33.01
BAND 7	2502.5	20775	Н	24.37	6.40	-5.48	25.29	33.01
BW: 5M	2535.0	21100	V	18.66	6.48	-5.52	19.62	33.01
16QAM RB: 1,0	2333.0	21100	Н	25.59	6.48	-5.52	26.55	33.01
	2567.5	21425	V	18.63	6.57	-5.57	19.64	33.01
	2307.5	21425	Н	23.50	6.57	-5.57	24.50	33.01

BAND 7 / BW: 5M / 16QAM / RB: 1,24

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	16.78	6.41	-5.49	17.71	33.01
BAND 7	2502.5	20775	Н	24.82	6.41	-5.49	25.75	33.01
BW: 5M	2535.0	21100	V	18.15	6.50	-5.53	19.12	33.01
16QAM	2333.0	21100	Н	25.56	6.50	-5.53	26.53	33.01
RB: 1,24	2567.5	2567.5 21425 -	V	17.35	6.58	-5.57	18.36	33.01
	2307.3		Н	23.66	6.58	-5.57	24.67	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 10M / QPSK / RB: 1,0

	EUT			ľ	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2505.0	V	16.39	6.40	-5.48	17.31	33.01	
BAND 7	2505.0	20800	Н	23.90	6.40	-5.48	24.82	33.01
BW: 10M	2525.0	21100	V	17.86	6.48	-5.52	18.82	33.01
QPSK	2535.0	21100	Н	23.71	6.48	-5.52	24.67	33.01
RB: 1,0	2565.0	21400	V	17.61	6.56	-5.56	18.60	33.01
	2565.0		Н	22.63	6.56	-5.56	23.63	33.01

BAND 7 / BW: 10M / QPSK / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	16.84	6.42	-5.49	17.77	33.01
BAND 7	2505.0	20800	Н	24.45	6.42	-5.49	25.38	33.01
BW: 10M	2525.0	21100	V	17.38	6.50	-5.53	18.35	33.01
QPSK	2535.0	21100	Н	23.92	6.50	-5.53	24.89	33.01
RB: 1,49	2565.0	21400	V	17.11	6.58	-5.57	18.12	33.01
	2565.0	21400	Н	23.31	6.58	-5.57	24.32	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 10M / 16QAM / RB: 1,0

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	17.06	6.40	-5.48	17.98	33.01
BAND 7	2505.0	20800	Н	24.56	6.40	-5.48	25.48	33.01
BW: 10M	2535.0	21100	V	18.51	6.48	-5.52	19.47	33.01
16QAM RB: 1,0	2333.0	21100	Н	24.35	6.48	-5.52	25.31	33.01
	2565.0	21400	V	18.12	6.56	-5.56	19.12	33.01
	2565.0	21400	Н	23.17	6.56	-5.56	24.16	33.01

BAND 7 / BW: 10M / 16QAM / RB: 1,49

	EUT			N	Measurem	ent		
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
			V	17.65	6.42	-5.49	18.58	33.01
BAND 7	2505.0	20800	Н	25.21	6.42	-5.49	26.14	33.01
BW: 10M	2525.0	21100	V	18.09	6.50	-5.53	19.06	33.01
16QAM	2535.0	21100	Н	24.67	6.50	-5.53	25.64	33.01
RB: 1,49	2565.0	0 21400 -	V	17.68	6.58	-5.57	18.69	33.01
	2565.0		Н	23.84	6.58	-5.57	24.85	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 15M / QPSK / RB: 1,0

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2507.5	20925	V	14.75	6.40	-5.48	15.67	33.01
BAND 7	2507.5 20825	20825	Н	24.02	6.40	-5.48	24.94	33.01
BW: 15M	2535.0	21100	V	17.41	6.47	-5.52	18.37	33.01
QPSK	2333.0	21100	Н	23.68	6.47	-5.52	24.63	33.01
RB: 1,0	2562.5	2562.5 21375	V	16.75	6.54	-5.55	17.74	33.01
	2302.5	213/3	Н	23.13	6.54	-5.55	24.12	33.01

BAND 7 / BW: 15M / QPSK / RB: 1,74

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2507.5	20025	V	16.99	6.44	-5.50	17.93	33.01
BAND 7	2307.3	20825	Н	24.16	6.44	-5.50	25.10	33.01
BW: 15M	2535.0	21100	V	16.95	6.51	-5.54	17.92	33.01
QPSK	2333.0	21100	Н	24.09	6.51	-5.54	25.06	33.01
RB: 1,74	2562.5	21375	V	17.17	6.58	-5.57	18.18	33.01
	2302.3	213/3	Н	23.31	6.58	-5.57	24.31	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 15M / 16QAM / RB: 1,0

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2507.5	2507.5 20825	V	15.18	6.40	-5.48	16.10	33.01
BAND 7	2507.5		20823	Н	24.64	6.40	-5.48	25.56
BW: 15M	2535.0	21100	V	17.96	6.47	-5.52	18.91	33.01
16QAM	2333.0	21100	Н	24.30	6.47	-5.52	25.25	33.01
RB: 1,0	2562.5	2562.5	V	17.38	6.54	-5.55	18.37	33.01
	2562.5	21375	Н	23.73	6.54	-5.55	24.72	33.01

BAND 7 / BW: 15M / 16QAM / RB: 1,74

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2507.5	2507.5	V	17.75	6.44	-5.50	18.69	33.01
BAND 7	2307.3	20825	Н	24.90	6.44	-5.50	25.84	33.01
BW: 15M	2535.0	21100	V	17.64	6.51	-5.54	18.61	33.01
16QAM	2333.0	21100	Н	24.79	6.51	-5.54	25.76	33.01
RB: 1,74	2562.5	562.5 21275	V	17.75	6.58	-5.57	18.76	33.01
,	2302.3	21375	Н	23.87	6.58	-5.57	24.87	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 20M / QPSK / RB: 1,0

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2510.0	20050	V	15.49	6.40	-5.48	16.41	33.01
BAND 7	2510.0	20850	Н	24.02	6.40	-5.48	24.95	33.01
BW: 20M	2525.0	2535.0 21100	V	16.69	6.47	-5.52	17.64	33.01
QPSK	2333.0		Н	23.88	6.47	-5.51	24.83	33.01
RB: 1,0	2560.0 213	21250	V	17.50	6.53	-5.55	18.48	33.01
	2300.0	21350	Н	23.41	6.53	-5.55	24.39	33.01

BAND 7 / BW: 20M / QPSK / RB: 1,99

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2510.0	2510.0	V	17.23	6.45	-5.50	18.18	33.01
BAND 7		20850	Н	23.91	6.45	-5.50	24.86	33.01
BW: 20M	2535.0	21100	V	16.44	6.51	-5.54	17.41	33.01
QPSK	2333.0	21100	Н	24.00	6.51	-5.54	24.98	33.01
RB: 1,99	2560.0	21350	V	17.34	6.58	-5.57	18.35	33.01
	2300.0	21330	Н	23.34	6.58	-5.57	24.35	33.01

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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BAND 7 / BW: 20M /16QAM / RB: 1,0

EUT			Measurement					
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit
	MHz		V/H	dBm	dBi	dB	dBm	dBm
	2510.0	2510.0 20850	V	16.19	6.40	-5.48	17.11	33.01
BAND 7	2510.0		Н	24.74	6.40	-5.48	25.66	33.01
BW: 20M	2535.0	21100	V	17.32	6.47	-5.51	18.27	33.01
16QAM	2333.0	21100	Н	24.46	6.47	-5.51	25.41	33.01
RB: 1,0	2560.0	21250	V	18.23	6.53	-5.55	19.21	33.01
	2300.0	21350	Н	24.13	6.53	-5.55	25.11	33.01

BAND 7 / BW: 20M / 16QAM / RB: 1,99

EUT			Measurement						
Operation Band	Fundamental Frequency	СН	Antenna Pol.	S.G. Output	Antenna Gain	Cable Loss	EIRP	Limit	
	MHz		V/H	dBm	dBi	dB	dBm	dBm	
	2510.0	20850	V	18.02	6.45	-5.51	18.97	33.01	
BAND 7	2310.0	20830	Н	24.62	6.45	-5.50	25.56	33.01	
BW: 20M	2535.0	21100	V	17.22	6.51	-5.54	18.19	33.01	
16QAM	2333.0	55.0	Н	24.74	6.51	-5.54	25.72	33.01	
RB: 1,99	2560.0	21250	V	17.93	6.58	-5.57	18.94	33.01	
,	2560.0	21350	Н	23.98	6.58	-5.57	24.98	33.01	

Remark:

(1) The RBW, VBW of SPA for frequency RBW= 8MHz, VBW= 8MHz

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OCCUPIED BANDWIDTH MEASUREMENT

8.1. Standard Applicable:

According to §FCC 2.1049 (99%)

8.2. Test Set-up:

Refer to section 6.2 in this report

8.3. Measurement Procedure:

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW= 3 times RBW, -20dBc display line was placed on the screen (or 20dB bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace. Then set RBW to 99% bandwidth, RBW= 1%, VBW= 3 RBW, with span > 2 * Signal BW, set % Power = 99%.

NOTE: For the plot of bandwidth measurement, the marker of the 99% bandwidth is diamond-shape while the marker of the 20dB BW is arrow-mark

8.4. Measurement Equipment Used:

Refer to section 2.4 in this report

8.5. Measurement Result:

Refer to next pages.

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99% Bandwidth

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
	824.20	128	0.246
GSM 850	836.60	190	0.250
	848.80	251	0.248

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
GSM 1900	1850.20	512	0.241
	1880.00	661	0.246
	1909.80	810	0.248

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)		
	824.20	128	0.245		
GPRS 850	836.60	190	0.250		
	848.80	251	0.246		

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)	
GPRS 1900	1850.20	512	0.244	
	1880.00	661	0.246	
	1909.80	810	0.247	

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
EDGE 850	824.20	128	0.249
	836.60	190	0.249
	848.80	251	0.250

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
EDGE 1900	1850.20	512	0.253
	1880.00	661	0.248
	1909.80	810	0.249

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
WCDMA II	1852.40	9262	4.2083
	1880.00	9400	4.2007
	1907.60	9538	4.2280

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
WCDMA V	826.40	4132	4.2094
	836.00	4183	4.2291
	846.60	4233	4.1639

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
HSDPA II	1852.40	9262	4.1993
	1880.00	9400	4.1799
	1907.60	9538	4.1773

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
HSDPA V	826.40	4132	4.1844
	836.60	4183	4.2249
	846.60	4233	4.1786

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
HSUPA II	1852.40	9262	4.2140
	1880.00	9400	4.2052
	1907.60	9538	4.1928

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
HSUPA V	826.40	4132	4.1863
	836.60	4183	4.2240
	846.60	4233	4.1827

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
1.4MHz BW	1850.7	18607	1.0969
LTE-Band 2 (QPSK	1880.0	18900	1.0975
RB Number: 6 Offset: 0)	1909.3	19193	1.1015

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
1.4MHz BW	1850.7	18607	1.0908
LTE-Band 2 (16QAM	1880.0	18900	1.0961
RB Number: 6 Offset: 0)	1909.3	19193	1.0971

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
3MHz BW	1851.5	18615	2.7037
LTE-Band 2 (QPSK	1880.0	18900	2.6975
RB Number: 15 Offset: 0)	1908.5	19185	2.7106

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
3MHz BW	1851.5	18615	2.7114
LTE-Band 2 (16QAM	1880.0	18900	2.6987
RB Number: 15 Offset: 0)	1908.5	19185	2.7018

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	1852.5	18625	4.5094
LTE-Band 2 (QPSK	1880.0	18900	4.5140
RB Number: 25 Offset: 0)	1907.5	19175	4.5464

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	1852.5	18625	4.5307
LTE-Band 2 (16QAM	1880.0	18900	4.5151
RB Number: 25 Offset: 0)	1907.5	19175	4.5221

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	1855.0	18650	8.9755
LTE-Band 2 (QPSK	1880.0	18900	8.9525
RB Number: 50 Offset: 0)	1905.0	19150	8.9726

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	1855.0	18650	8.9894
LTE-Band 2 (16QAM	1880.0	18900	8.9727
RB Number: 50 Offset: 0)	1905.0	19150	8.9811

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
15MHz BW	1857.5	18675	13.4261
LTE-Band 2 (QPSK	1880.0	18900	13.4587
RB Number: 75 Offset: 0)	1902.5	19125	13.5287

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
15MHz BW	1857.5	18675	13.4678
LTE-Band 2 (16QAM	1880.0	18900	13.4846
RB Number: 75 Offset: 0)	1902.5	19125	13.5199

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
20MHz BW	1860.0	18700	17.9566
LTE-Band 2 (QPSK	1880.0	18900	17.8732
RB Number: 100 Offset: 0)	1900.0	19100	17.9996

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
20MHz BW	1860.0	18700	17.9593
LTE-Band 2 (16QAM	1880.0	18900	17.8782
RB Number: 100 Offset: 0)	1900.0	19100	18.0021

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
1.4MHz BW	824.7	20407	1.0915
LTE-Band 5 (QPSK	836.5	20525	1.0987
RB Number: 6 Offset: 0)	848.3	20643	1.0894

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
1.4MHz BW	824.7	20407	1.0904
LTE-Band 5 (16QAM	836.5	20525	1.0957
RB Number: 6 Offset: 0)	848.3	20643	1.1008

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
3MHz BW	825.5	20415	2.6988
LTE-Band 5 (QPSK	836.5	20525	2.7037
RB Number: 15 Offset: 0)	847.5	20635	2.7014

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
3MHz BW	825.5	20415	2.6862
LTE-Band 5 (16QAM	836.5	20525	2.6946
RB Number: 15 Offset: 0)	847.5	20635	2.7061

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	826.5	20425	4.5063
LTE-Band 5 (QPSK	836.5	20525	4.5331
RB Number: 25 Offset: 0)	846.5	20625	4.5363

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	826.5	20425	4.5102
LTE-Band 5 (16QAM	836.5	20525	4.5253
RB Number: 25 Offset: 0)	846.5	20625	4.5083

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	829.0	20450	8.9646
LTE-Band 5 (QPSK	836.5	20525	9.0276
RB Number: 50 Offset: 0)	844.0	20600	8.9647

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	829.0	20450	8.9726
LTE-Band 5 (16QAM	836.5	20525	9.0520
RB Number: 50 Offset: 0)	844.0	20600	8.9538

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	2502.5	20775	4.5275
LTE-Band 7 (QPSK	2535.0	21100	4.5180
RB Number: 25 Offset: 0)	2567.5	21425	4.5315

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
5MHz BW	2502.5	20775	4.5297
LTE-Band 7 (16QAM	2535.0	21100	4.5251
RB Number: 25 Offset: 0)	2567.5	21425	4.5166

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	2505.0	20800	8.9865
LTE-Band 7 (QPSK	2535.0	21100	8.9737
RB Number: 50 Offset: 0)	2565.0	21400	9.2293

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
10MHz BW	2505.0	20800	8.9695
LTE-Band 7 (16QAM	2535.0	21100	8.9808
RB Number: 50 Offset: 0)	2565.0	21400	9.2205

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EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
15MHz BW	2507.5	20825	13.5069
LTE-Band 7 (QPSK	2535.0	21100	13.4434
RB Number: 75 Offset: 0)	2562.5	21375	13.9321

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
15MHz BW	2507.5	20825	13.4821
LTE-Band 7 (16QAM	2535.0	21100	13.5185
RB Number: 75 Offset: 0)	2562.5	21375	13.9495

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
20MHz BW	2510.0	20850	17.9288
LTE-Band 7 (QPSK	2535.0	21100	17.9123
RB Number: 100 Offset: 0)	2560.0	21350	18.7210

EUT Mode	Frequency (MHz)	СН	99% Bandwidth (MHz)
20MHz BW	2510.0	20850	17.9052
LTE-Band 7 (16QAM	2535.0	21100	17.9647
RB Number: 100 Offset: 0)	2560.0	21350	18.6992

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99% Bandwidth Test Data

Figure 8-1: GSM 850 Channel Low

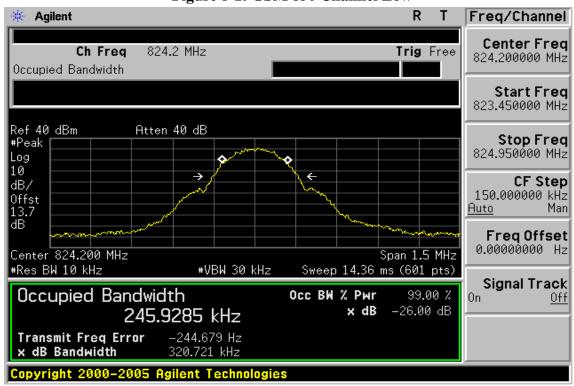


Figure 8-2: GSM 850 Channel Mid



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Figure 8-3: GSM 850 Channel High

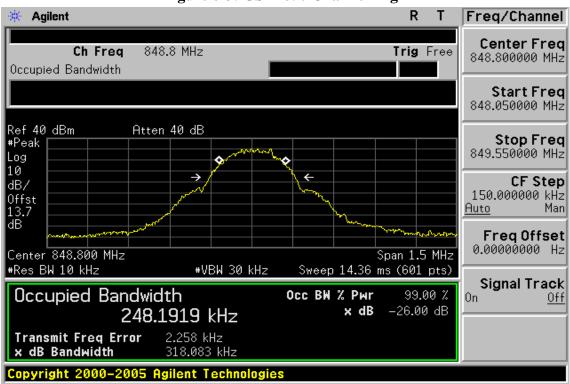
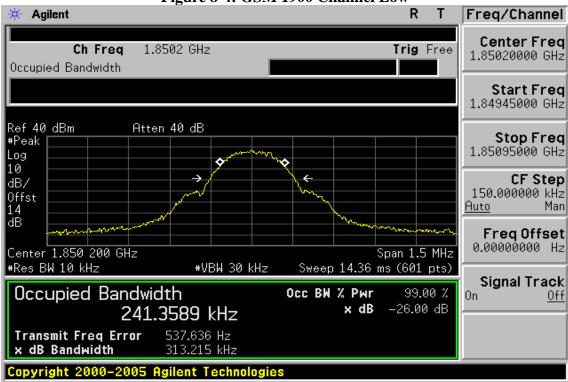


Figure 8-4: GSM 1900 Channel Low



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Figure 8-5: GSM 1900 Channel Mid

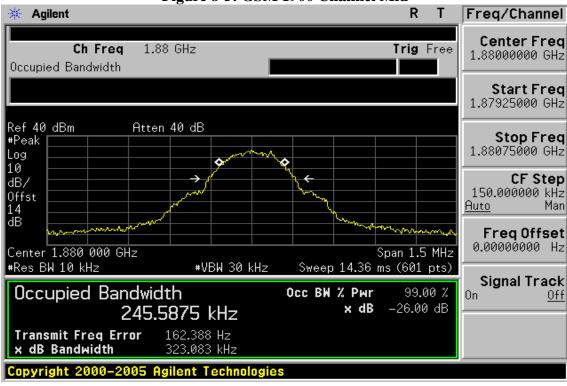
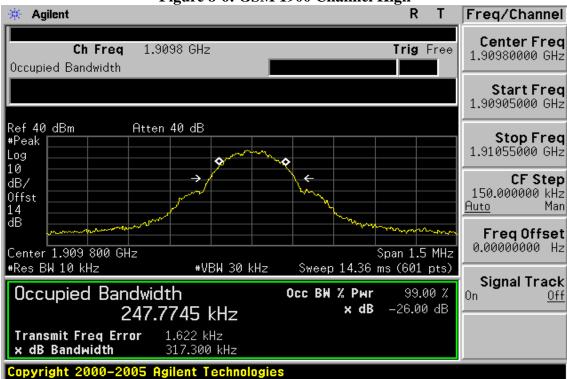


Figure 8-6: GSM 1900 Channel High



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Figure 8-7: GPRS 850 Channel Low

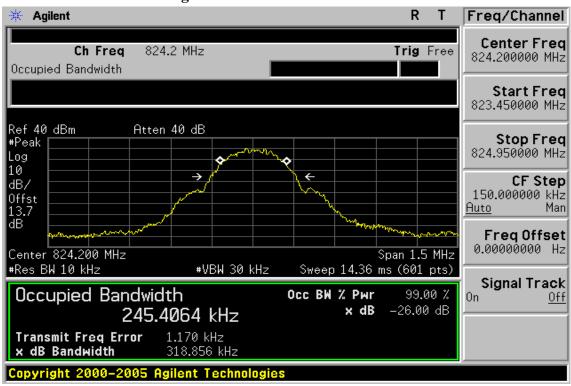
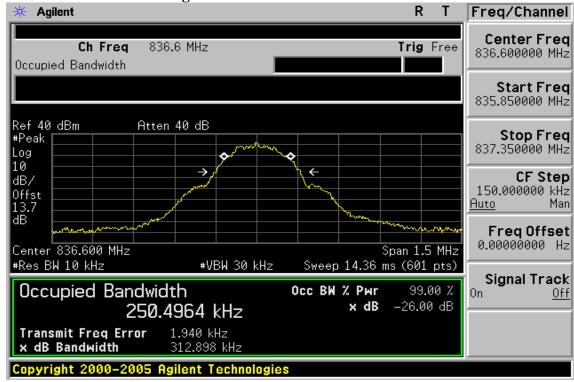


Figure 8-8: GPRS 850 Channel Mid



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Figure 8-9: GPRS 850 Channel High

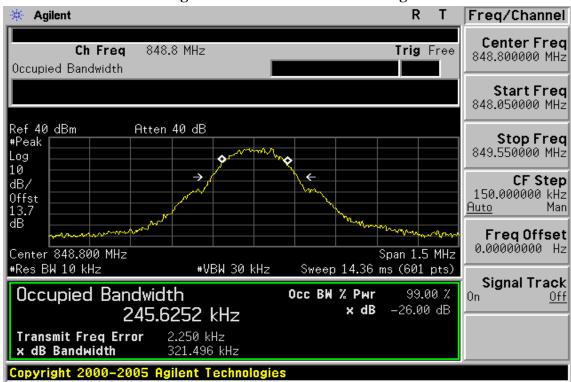
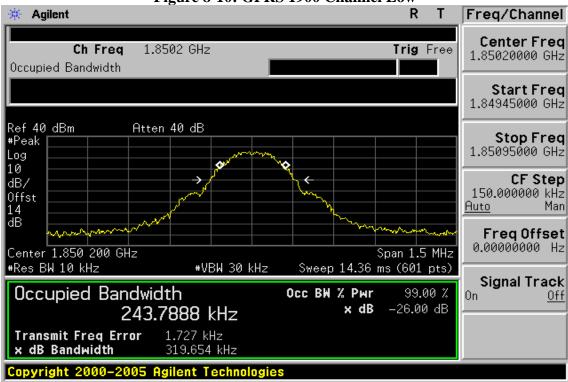


Figure 8-10: GPRS 1900 Channel Low



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Figure 8-11: GPRS 1900 Channel Mid

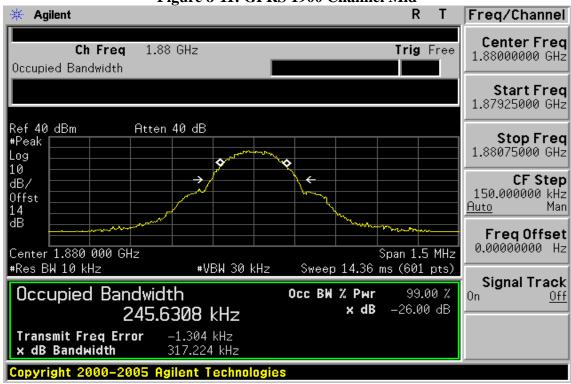
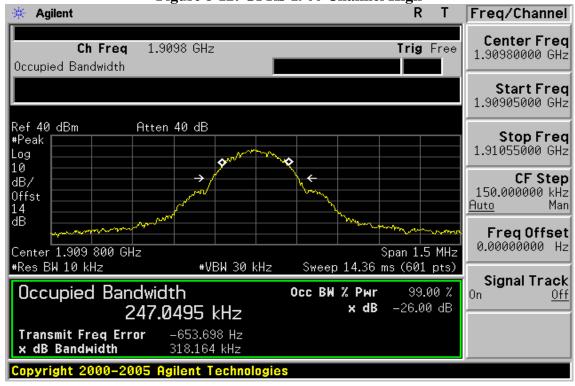


Figure 8-12: GPRS 1900 Channel High



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Figure 8-13: EDGE 850 Channel Low

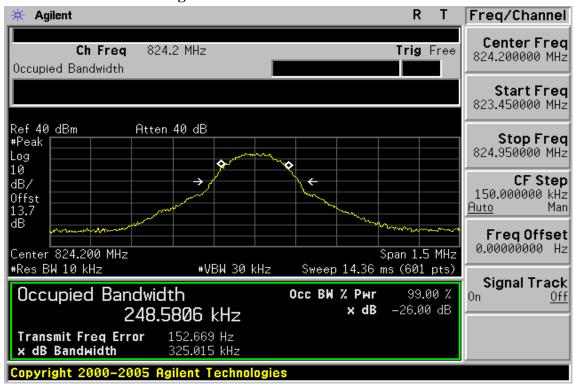
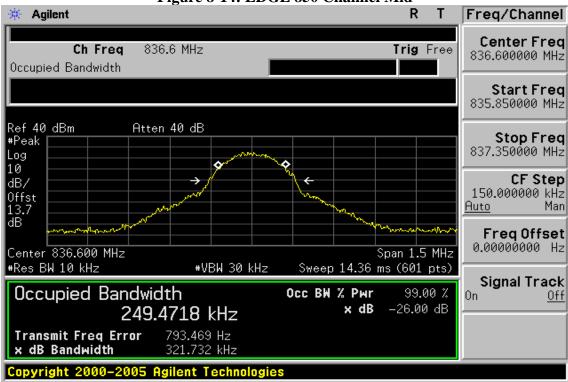


Figure 8-14: EDGE 850 Channel Mid



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GPRS Figure 8-15: EDGE 850 Channel High

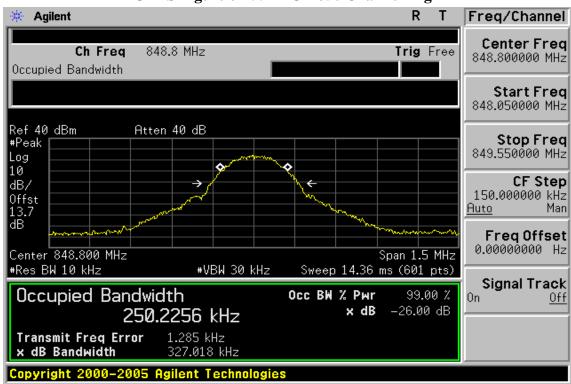
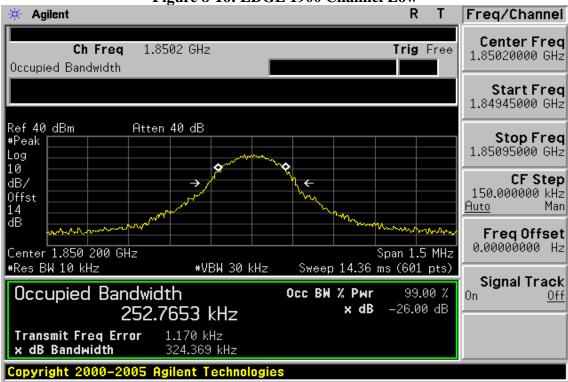


Figure 8-16: EDGE 1900 Channel Low



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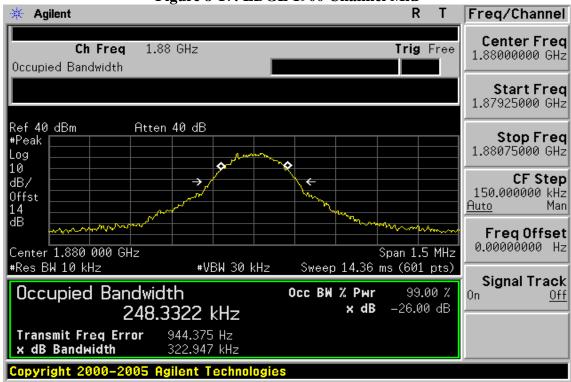
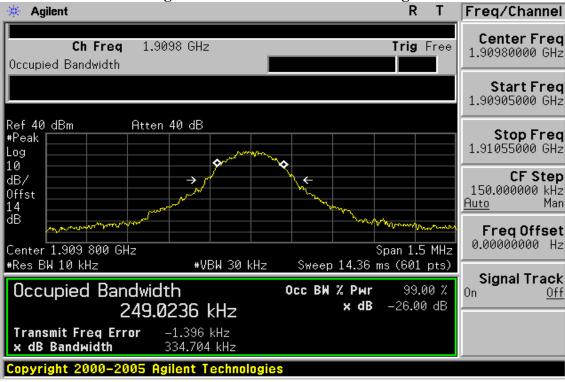


Figure 8-18: EDGE 1900 Channel High



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Figure 8-19: WCDMA II Channel Low

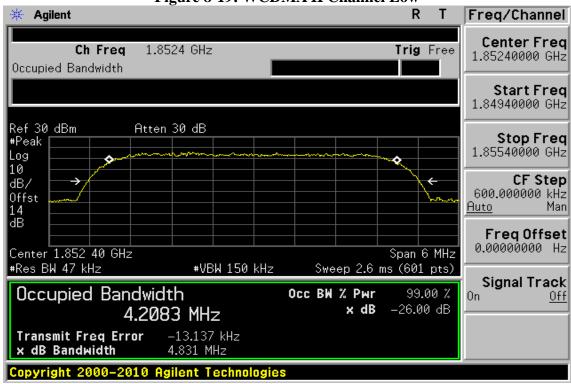
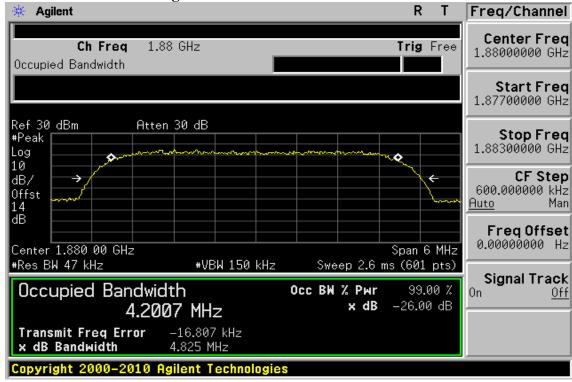


Figure 8-20: WCDMA II Channel Mid



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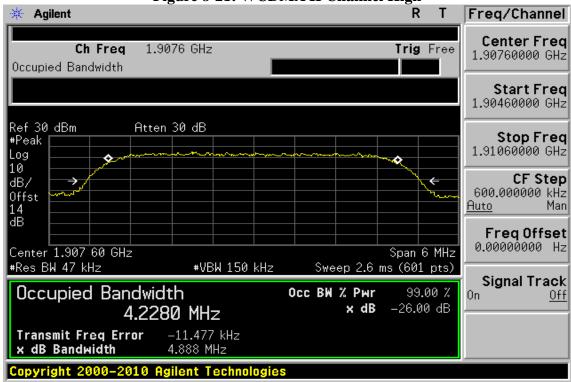
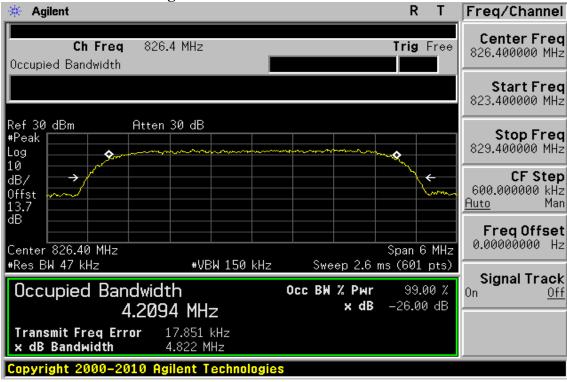


Figure 8-22: WCDMA V Channel Low



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Figure 8-23: WCDMA V Channel Mid

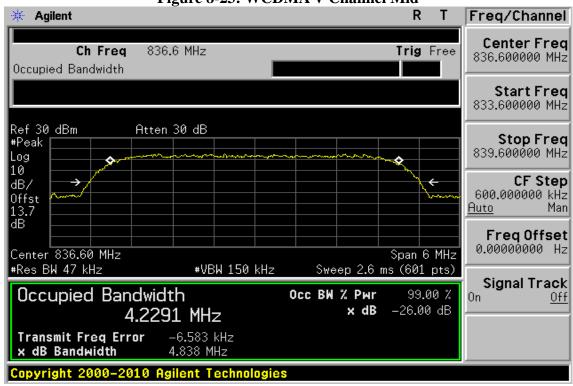
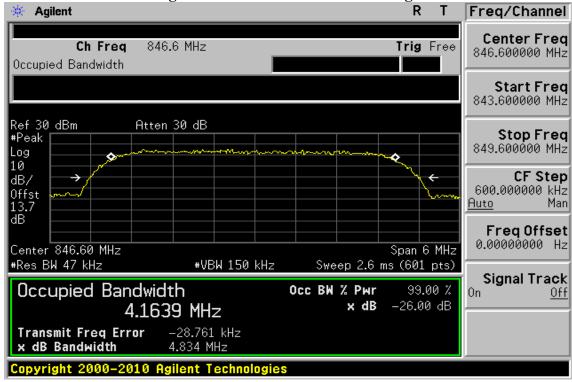


Figure 8-24: WCDMA V Channel High



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Figure 8-25: HSDPA II Channel Low

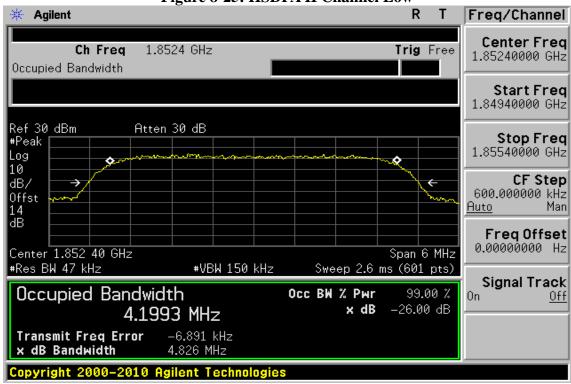
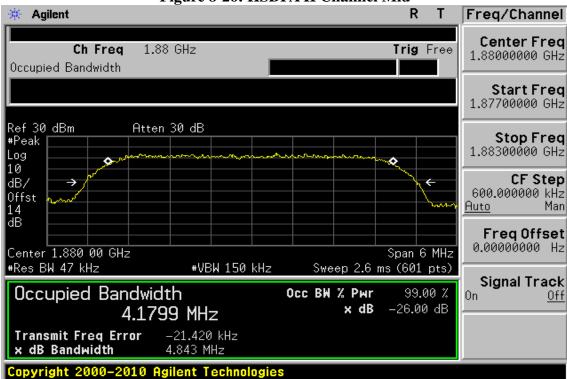


Figure 8-26: HSDPA II Channel Mid



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Figure 8-27: HSDPA II Channel High

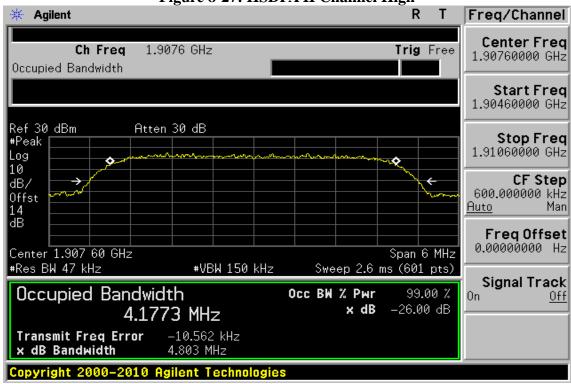
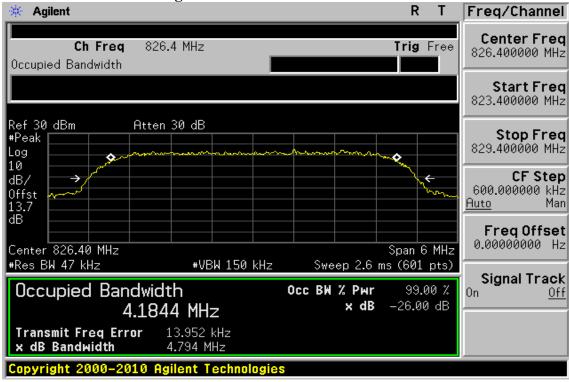


Figure 8-28: HSDPA V Channel Low



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Figure 8-29: HSDPA V Channel Mid

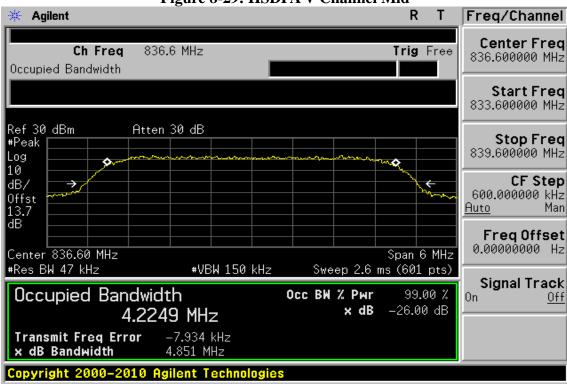
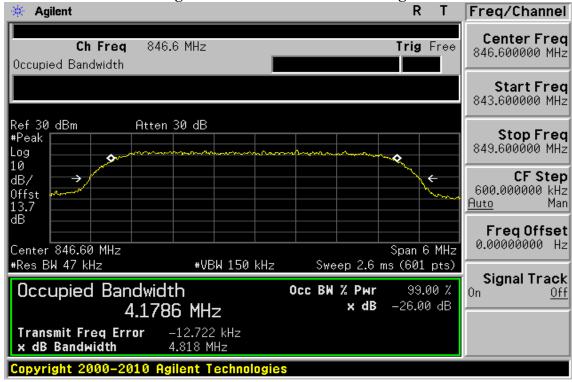


Figure 8-30: HSDPA V Channel High



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Figure 8-31: HSUPA II Channel Low

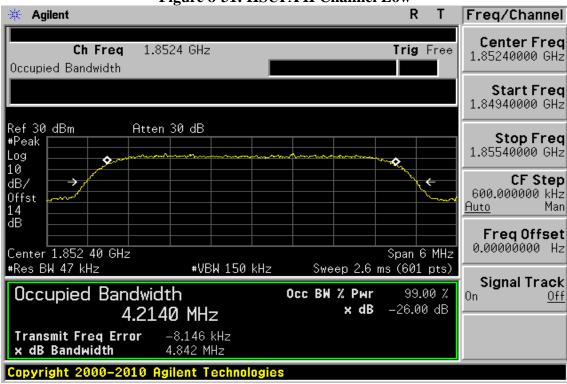
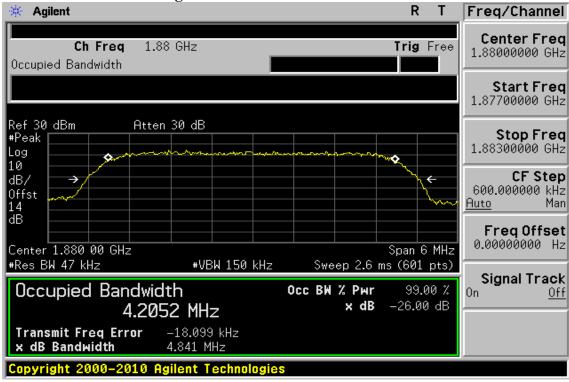


Figure 8-32: HSUPA II Channel Mid



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Figure 8-33: HSUPA II Channel High

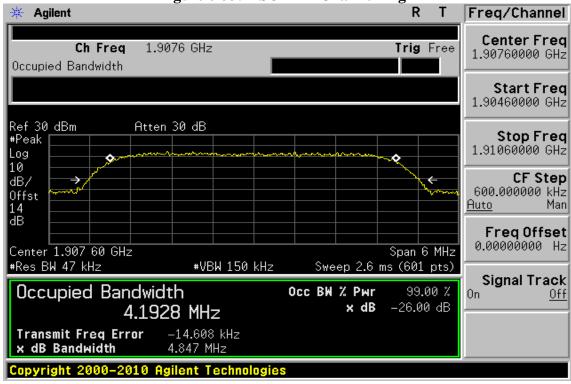


Figure 8-34: HSUPA V Channel Low



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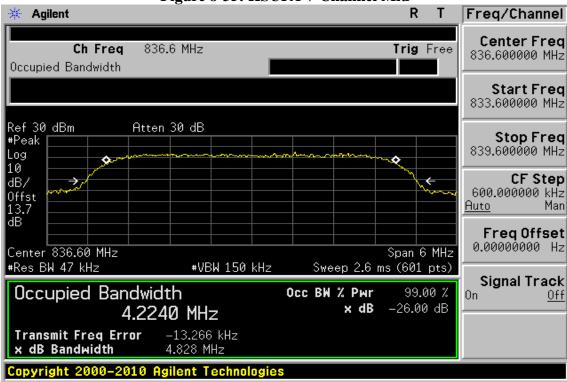
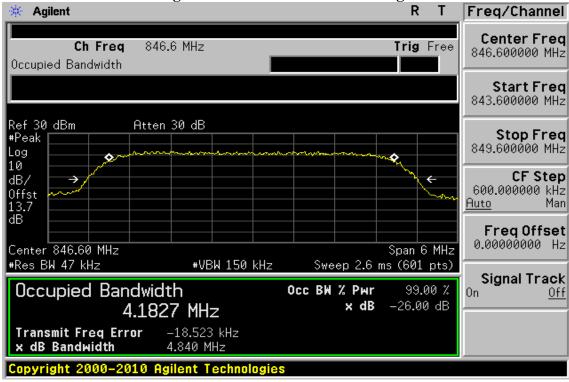


Figure 8-36: HSUPA V Channel High



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Figure 8-37: 1.4MHz BW LTE-Band 2(QPSK RB Number: 6 Offset: 0) Channel Low

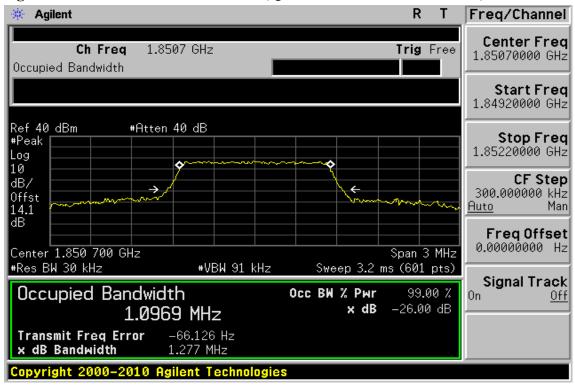
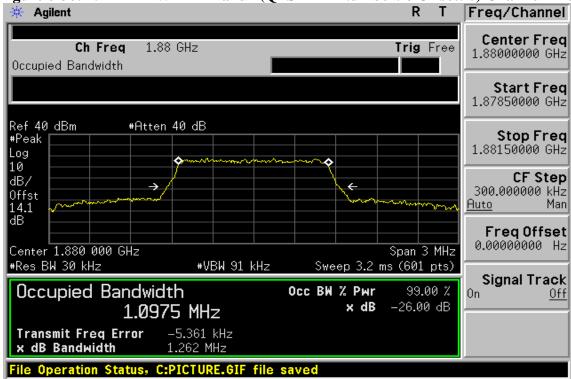


Figure 8-38: 1.4MHz BW LTE-Band 2(QPSK RB Number: 6 Offset: 0) Channel Mid



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Figure 8-39: 1.4MHz BW LTE-Band 2(QPSK RB Number: 6 Offset: 0) Channel High

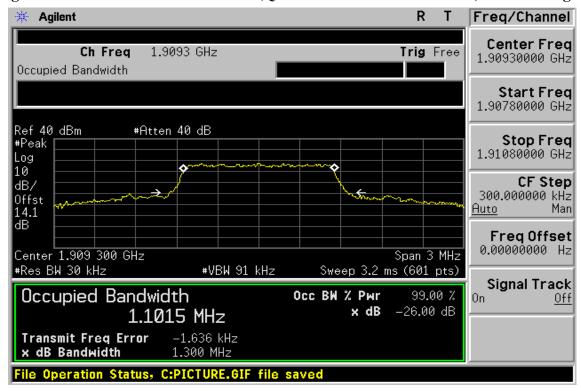
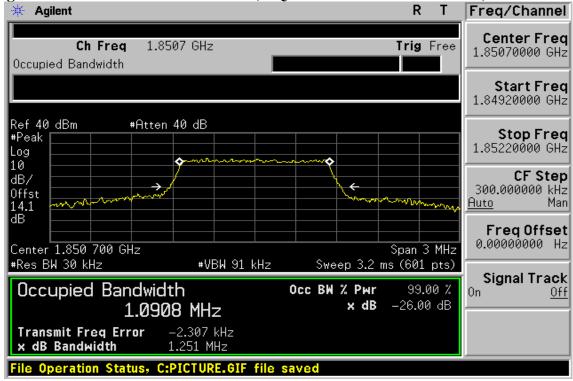


Figure 8-40: 1.4MHz BW LTE-Band 2(16QAM RB Number: 6 Offset: 0) Channel Low



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Figure 8-41: 1.4MHz BW LTE-Band 2(16QAM RB Number: 6 Offset: 0) Channel Mid

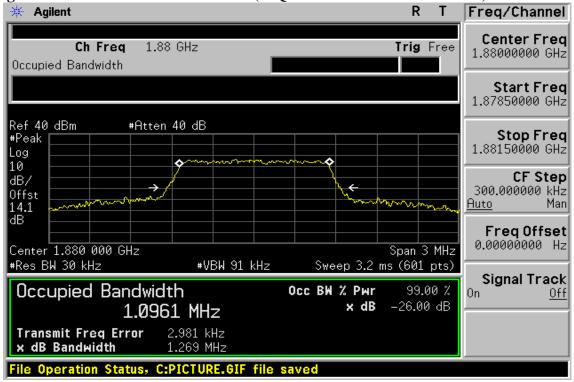
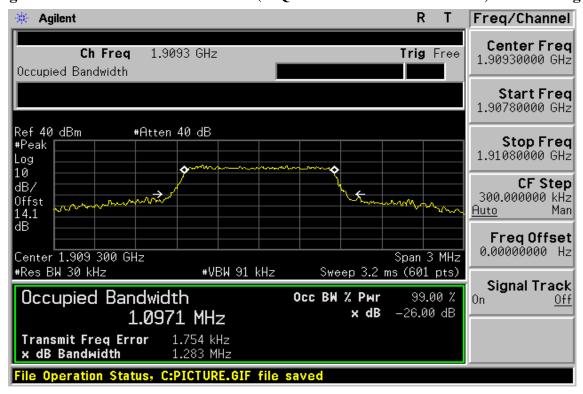


Figure 8-42: 1.4MHz BW LTE-Band 2(16QAM RB Number: 6 Offset: 0) Channel High



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Figure 8-43: 3MHz BW LTE-Band 2(QPSK RB Number: 15 Offset: 0) Channel Low

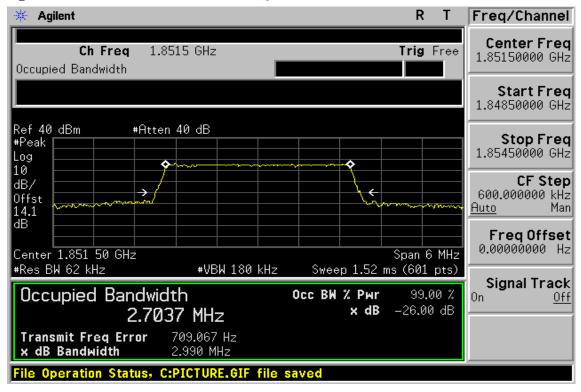
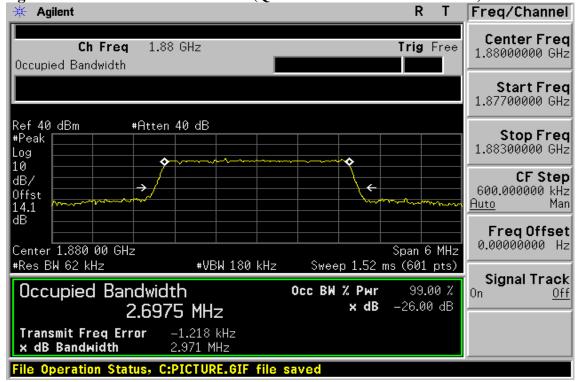


Figure 8-44: 3MHz BW LTE-Band 2(QPSK RB Number: 15 Offset: 0) Channel Mid



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Figure 8-45: 3MHz BW LTE-Band 2(QPSK RB Number: 15 Offset: 0) Channel High

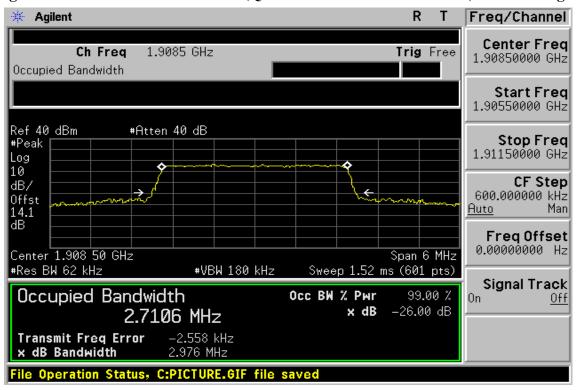
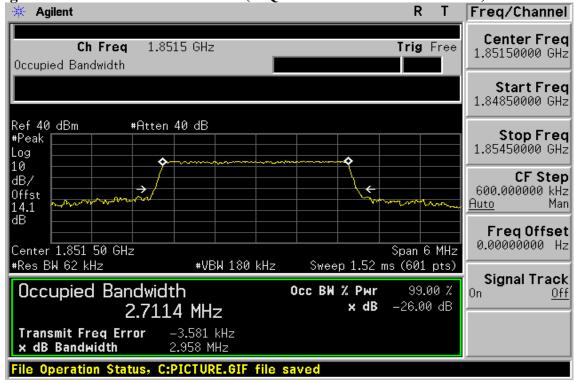


Figure 8-46: 3MHz BW LTE-Band 2(16QAM RB Number: 15 Offset: 0) Channel Low



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Figure 8-47: 3MHz BW LTE-Band 2(16QAM RB Number: 15 Offset: 0) Channel Mid

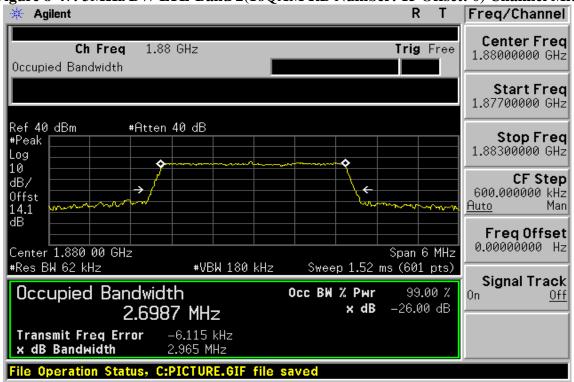
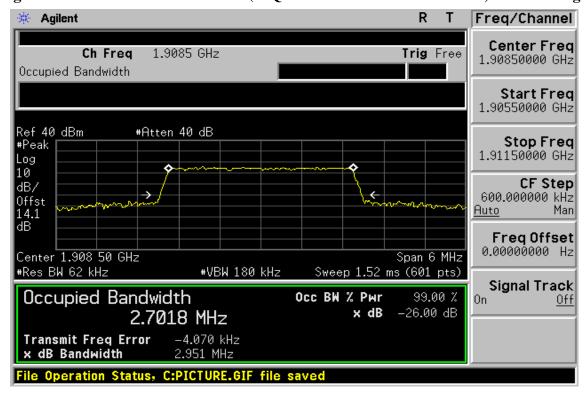


Figure 8-48: 3MHz BW LTE-Band 2(16QAM RB Number: 15 Offset: 0) Channel High



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Figure 8-49: 5MHz BW LTE-Band 2(QPSK RB Number: 25 Offset: 0) Channel Low

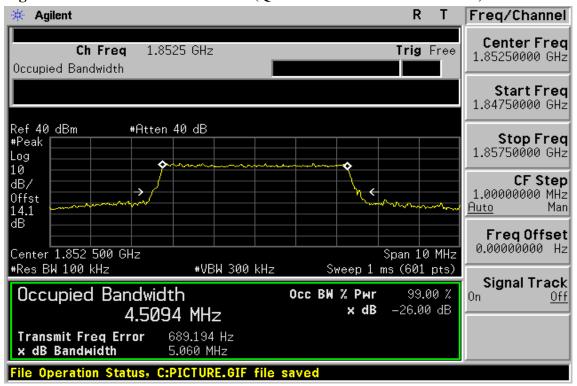
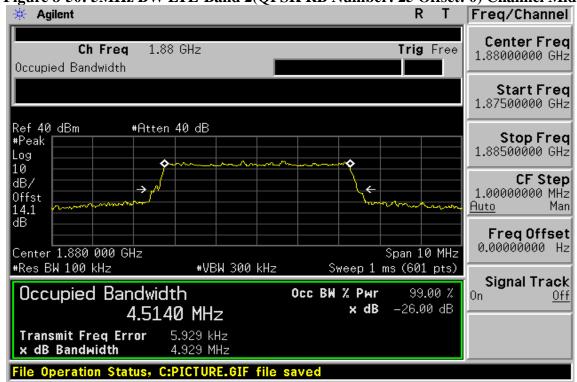


Figure 8-50: 5MHz BW LTE-Band 2(QPSK RB Number: 25 Offset: 0) Channel Mid



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Figure 8-51: 5MHz BW LTE-Band 2(QPSK RB Number: 25 Offset: 0) Channel High

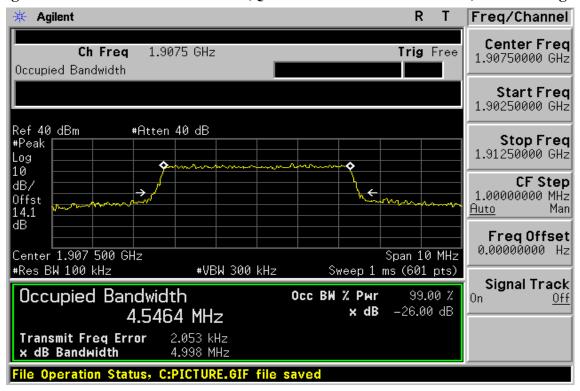
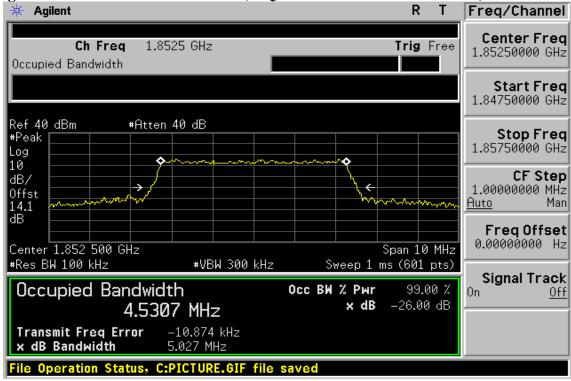


Figure 8-52: 5MHz BW LTE-Band 2(16QAM RB Number: 25 Offset: 0) Channel Low



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Figure 8-53: 5MHz BW LTE-Band 2(16QAM RB Number: 25 Offset: 0) Channel Mid

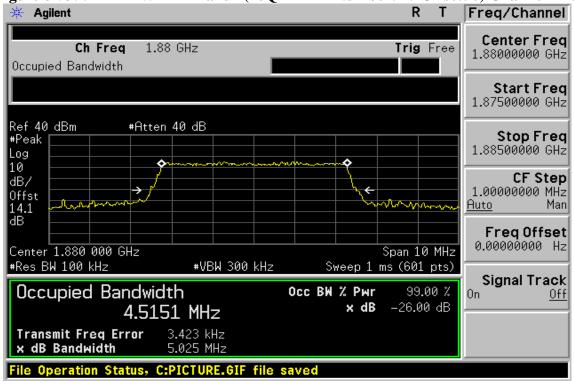
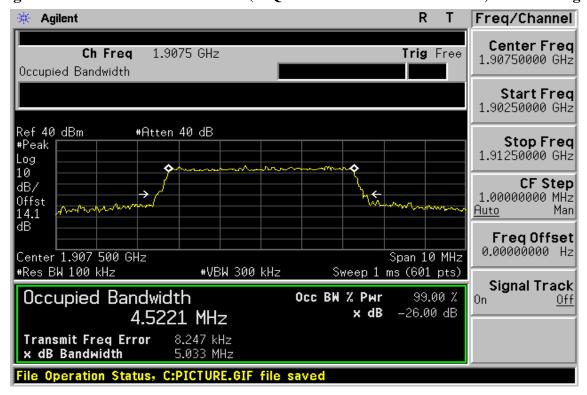


Figure 8-54: 5MHz BW LTE-Band 2(16QAM RB Number: 25 Offset: 0) Channel High



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Figure 8-55: 10MHz BW LTE-Band 2(QPSK RB Number: 50 Offset: 0) Channel Low

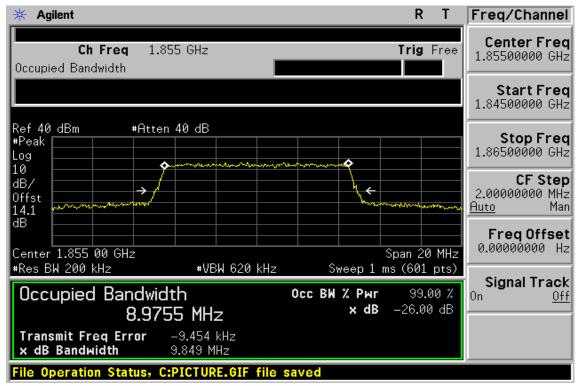
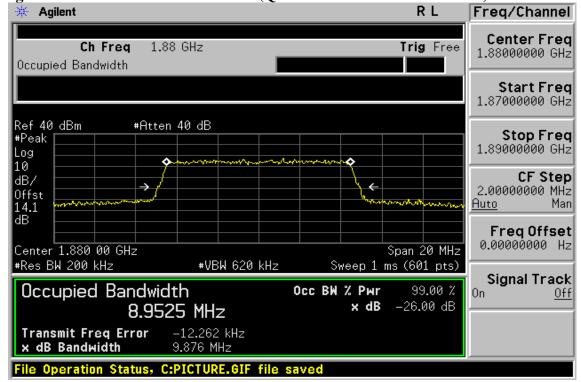


Figure 8-56: 10MHz BW LTE-Band 2(QPSK RB Number: 50 Offset: 0) Channel Mid



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Figure 8-57: 10MHz BW LTE-Band 2 (QPSK RB Number: 50 Offset: 0) Channel High

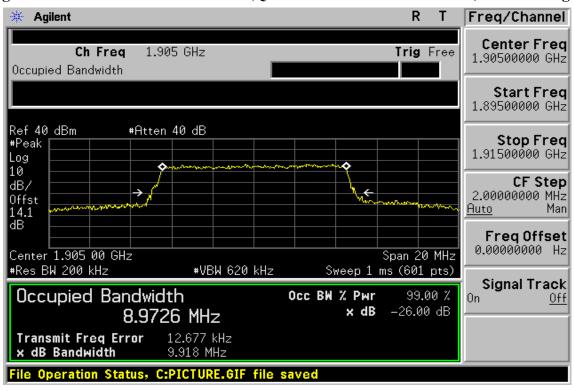
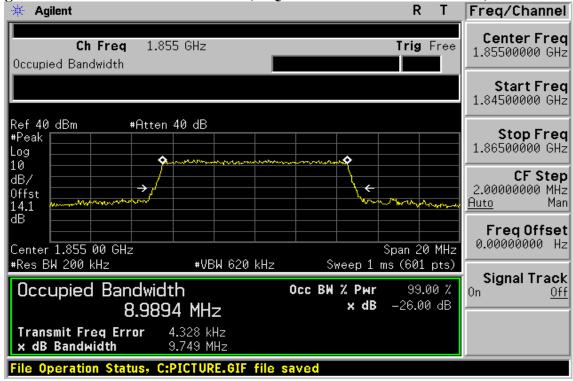


Figure 8-58: 10MHz BW LTE-Band 2(16QAM RB Number: 50 Offset: 0) Channel Low



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Figure 8-59: 10MHz BW LTE-Band 2(16QAM RB Number: 50 Offset: 0) Channel Mid

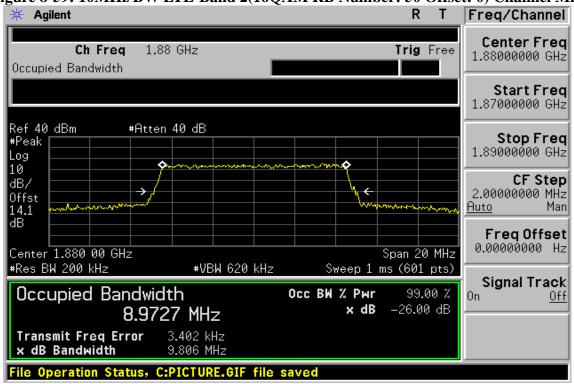
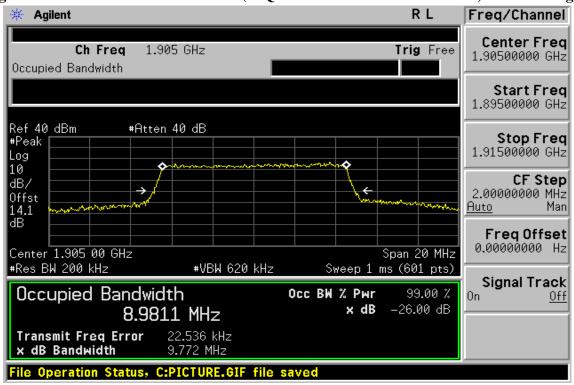


Figure 8-60: 10MHz BW LTE-Band 2(16QAM RB Number: 50 Offset: 0) Channel High



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Figure 8-61: 15MHz BW LTE-Band 2(QPSK RB Number: 75 Offset: 0) Channel Low

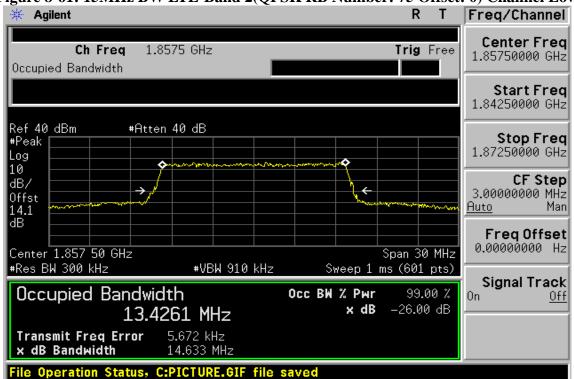
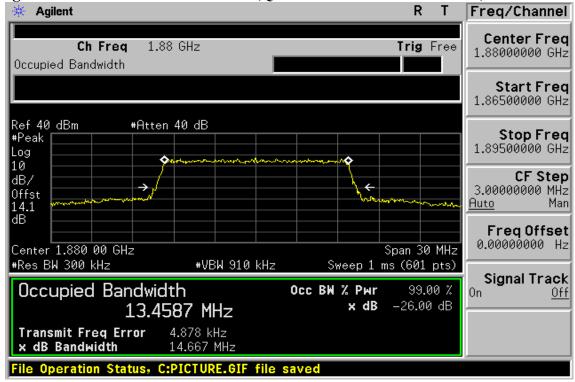


Figure 8-62: 15MHz BW LTE-Band 2(QPSK RB Number: 75 Offset: 0) Channel Mid



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Figure 8-63: 15MHz BW LTE-Band 2(QPSK RB Number: 75 Offset: 0) Channel High

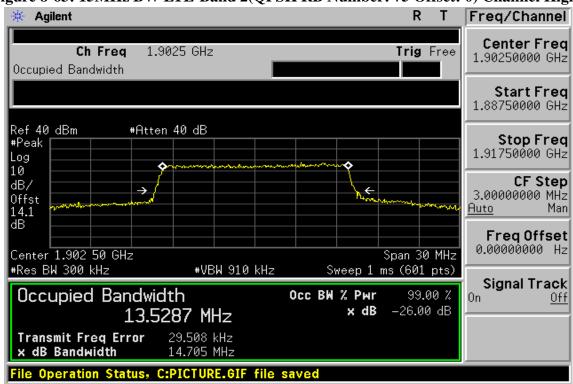
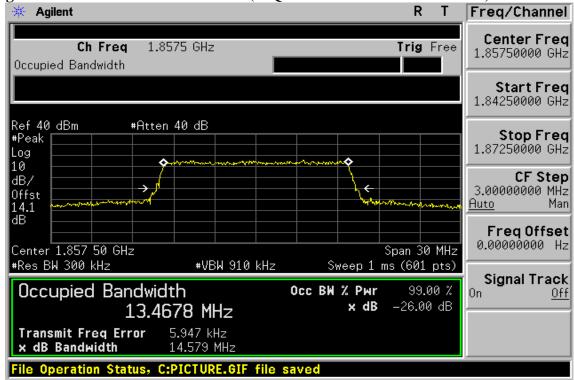


Figure 8-64: 15MHz BW LTE-Band 2(16QAM RB Number: 75 Offset: 0) Channel Low



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Figure 8-65: 15MHz BW LTE-Band 2(16QAM RB Number: 75 Offset: 0) Channel Mid

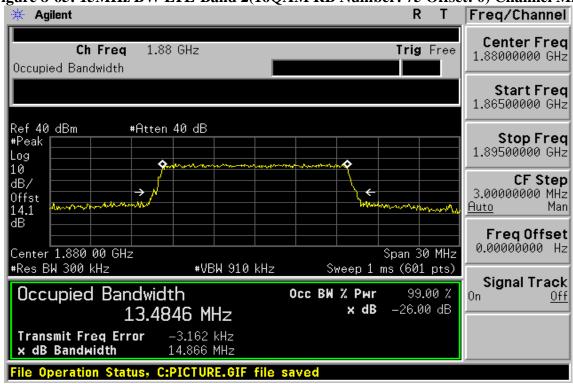
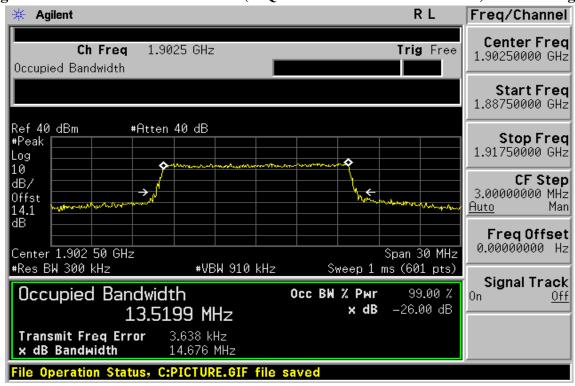


Figure 8-66: 15MHz BW LTE-Band 2(16QAM RB Number: 75 Offset: 0) Channel High



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Figure 8-67: 20MHz BW LTE-Band 2(OPSK RB Number: 100 Offset: 0) Channel Low

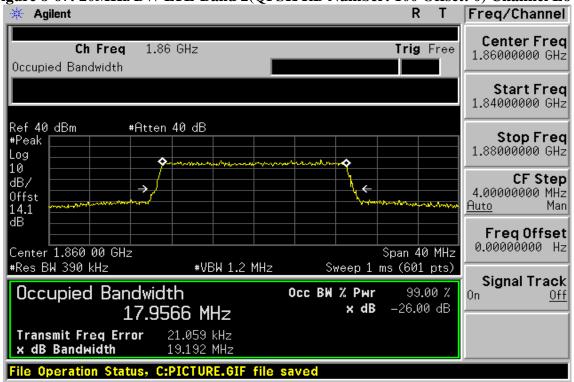
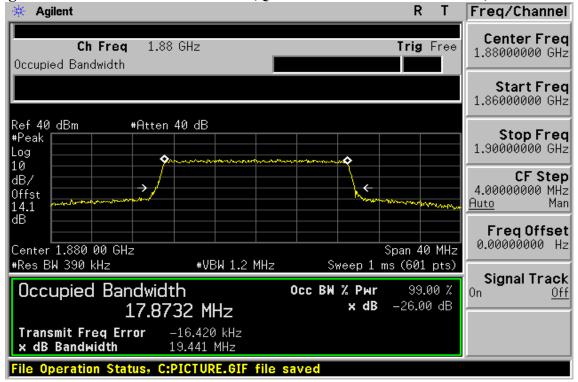


Figure 8-68: 20MHz BW LTE-Band 2(QPSK RB Number: 100 Offset: 0) Channel Mid



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Figure 8-69: 20MHz BW LTE-Band 2(QPSK RB Number: 100 Offset: 0) Channel High

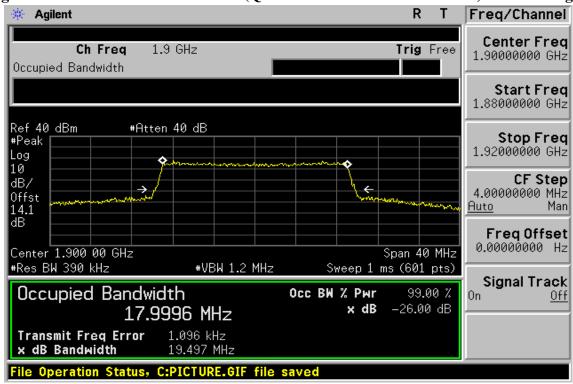
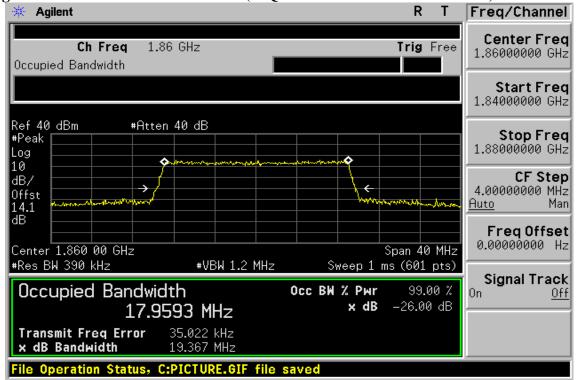


Figure 8-70: 20MHz BW LTE-Band 2(16QAM RB Number: 100 Offset: 0) Channel Low



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Figure 8-71: 20MHz BW LTE-Band 2(16QAM RB Number: 100 Offset: 0) Channel Mid

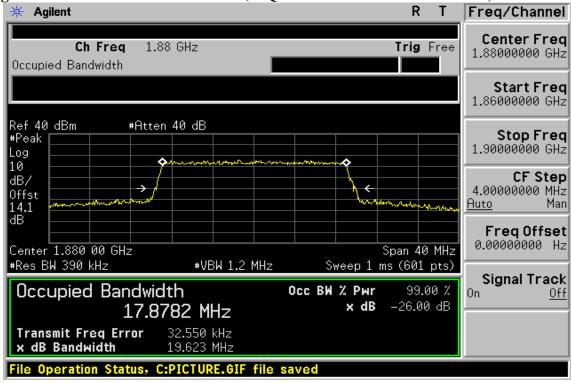
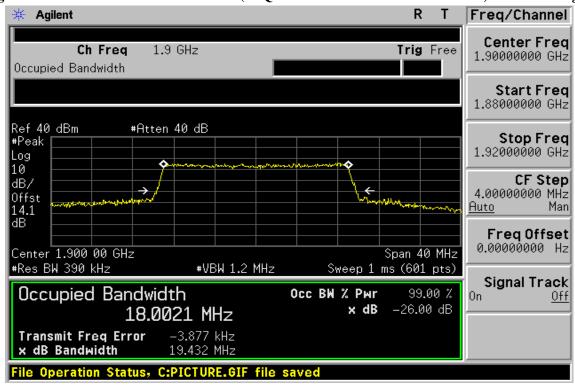


Figure 8-72: 20MHz BW LTE-Band 2(16QAM RB Number: 100 Offset: 0) Channel High



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Figure 8-73: 1.4MHz BW LTE-Band 5(QPSK RB Number: 6 Offset: 0) Channel Low

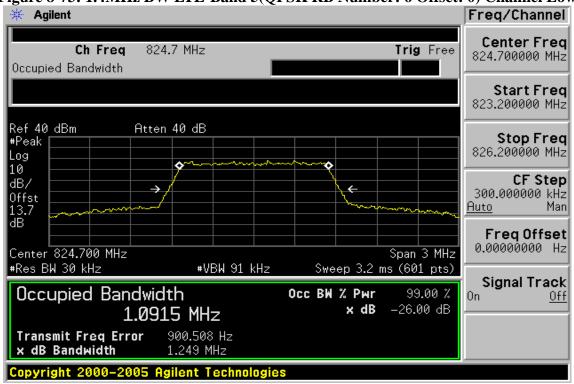
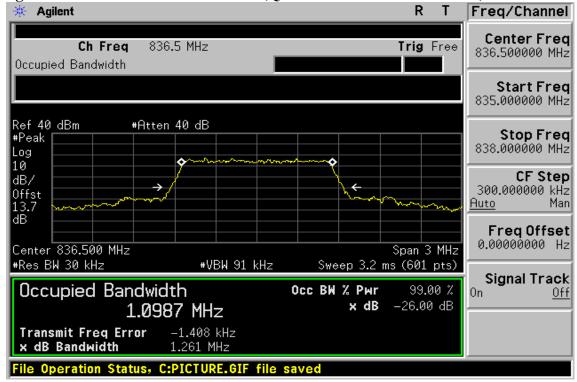


Figure 8-74: 1.4MHz BW LTE-Band 5(QPSK RB Number: 6 Offset: 0) Channel Mid



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Figure 8-75: 1.4MHz BW LTE-Band 5(QPSK RB Number: 6 Offset: 0) Channel High

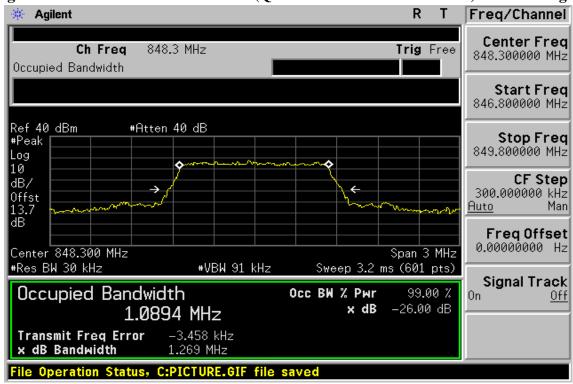
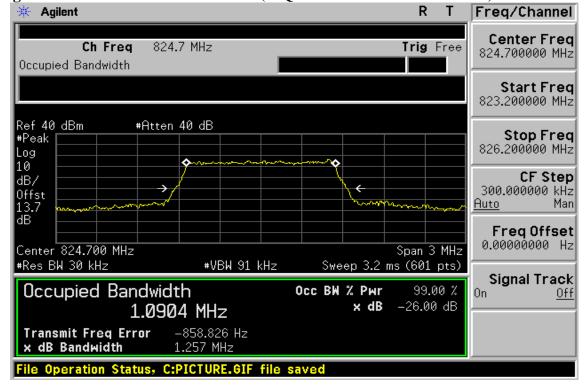


Figure 8-76: 1.4MHz BW LTE-Band 5(16QAM RB Number: 6 Offset: 0) Channel Low



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Figure 8-77: 1.4MHz BW LTE-Band 5(16QAM RB Number: 6 Offset: 0) Channel Mid

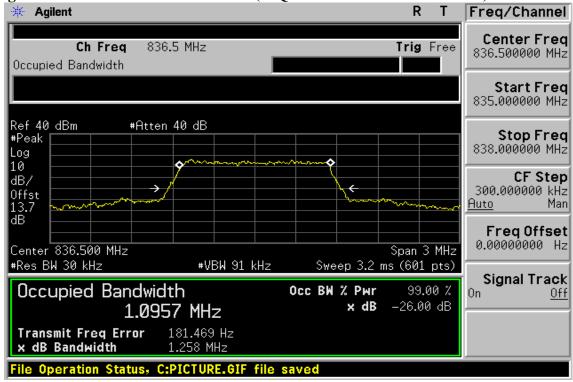
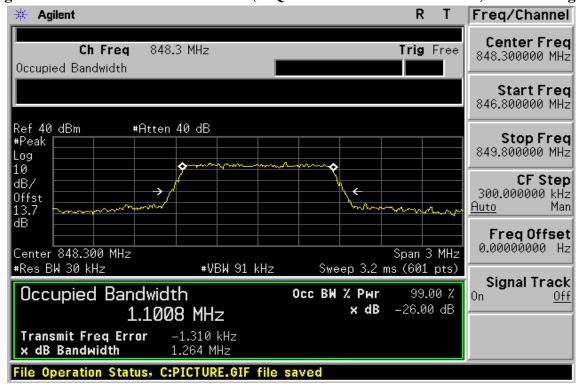


Figure 8-78: 1.4MHz BW LTE-Band 5(16QAM RB Number: 6 Offset: 0) Channel High



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Figure 8-79: 3MHz BW LTE-Band 5(QPSK RB Number: 15 Offset: 0) Channel Low

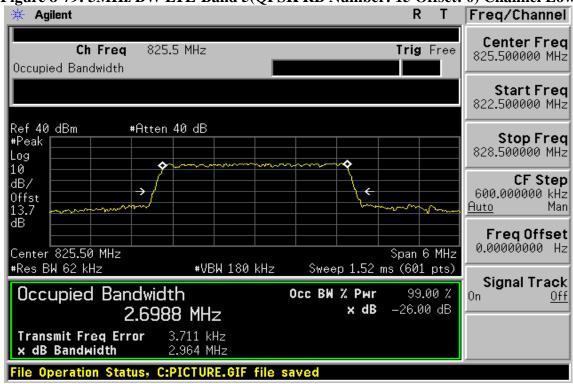
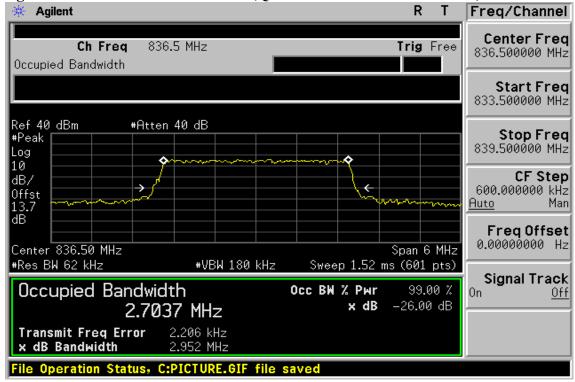


Figure 8-80: 3MHz BW LTE-Band 5(QPSK RB Number: 15 Offset: 0) Channel Mid



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Figure 8-81: 3MHz BW LTE-Band 5(QPSK RB Number: 15 Offset: 0) Channel High

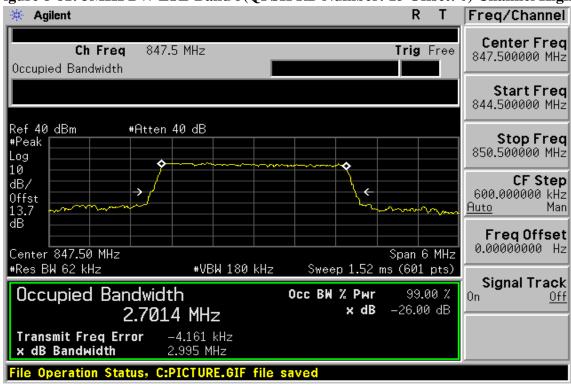
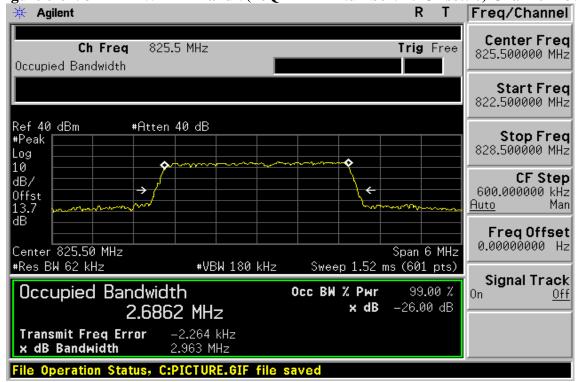


Figure 8-82: 3MHz BW LTE-Band 5(16QAM RB Number: 15 Offset: 0) Channel Low



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Figure 8-83: 3MHz BW LTE-Band 5(16QAM RB Number: 15 Offset: 0) Channel Mid

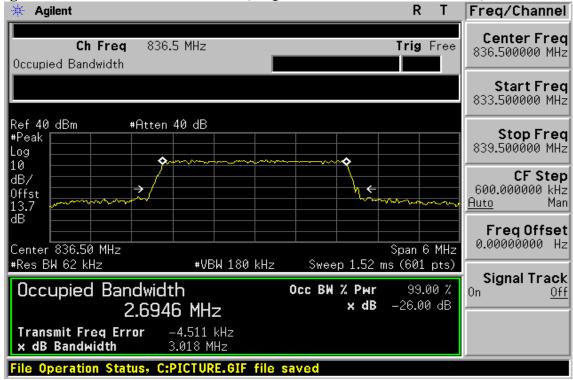
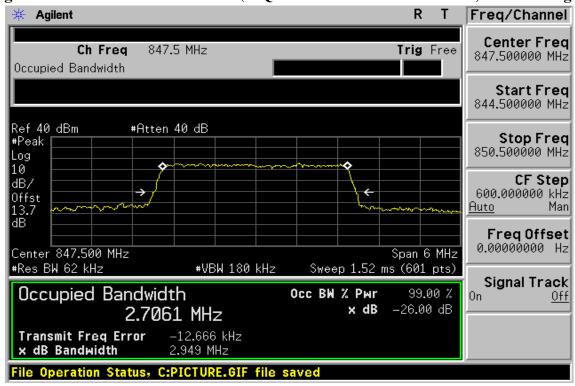


Figure 8-84: 3MHz BW LTE-Band 5(16QAM RB Number: 15 Offset: 0) Channel High



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Figure 8-85: 5MHz BW LTE-Band 5(QPSK RB Number: 25 Offset: 0) Channel Low

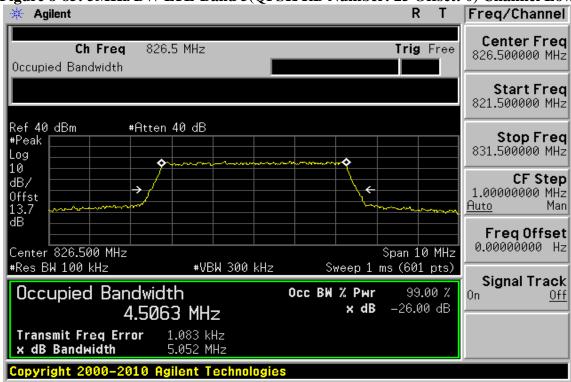
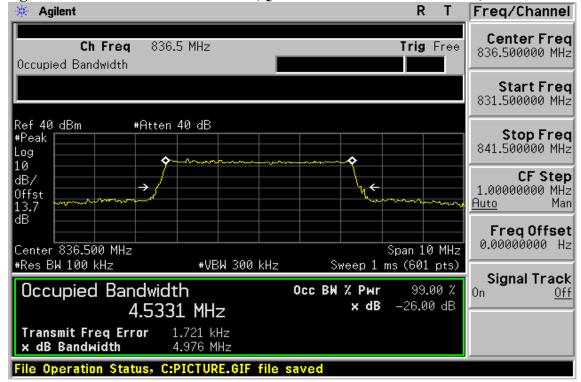


Figure 8-86: 5MHz BW LTE-Band 5(QPSK RB Number: 25 Offset: 0) Channel Mid



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Figure 8-87: 5MHz BW LTE-Band 5(QPSK RB Number: 25 Offset: 0) Channel High

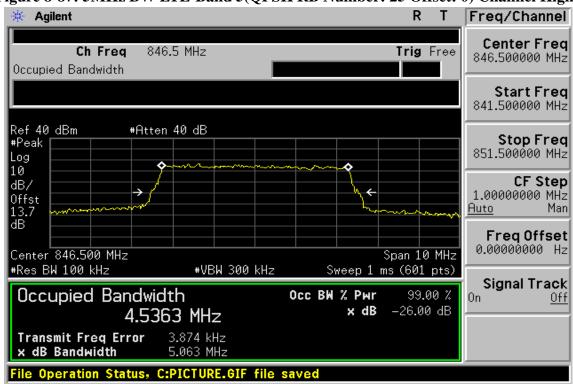
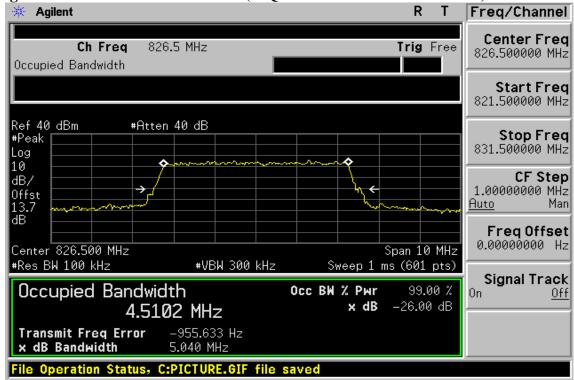


Figure 8-88: 5MHz BW LTE-Band 5(16QAM RB Number: 25 Offset: 0) Channel Low



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Figure 8-89: 5MHz BW LTE-Band 5(16QAM RB Number: 25 Offset: 0) Channel Mid

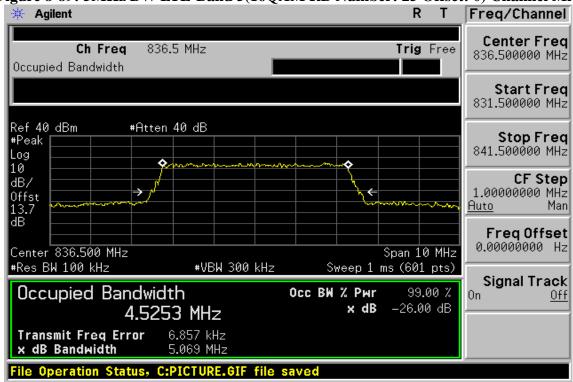
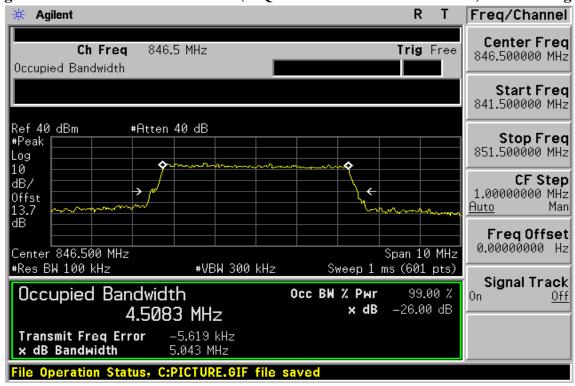


Figure 8-90: 5MHz BW LTE-Band 5(16QAM RB Number: 25 Offset: 0) Channel High



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Figure 8-91: 10MHz BW LTE-Band 5(QPSK RB Number: 50 Offset: 0) Channel Low

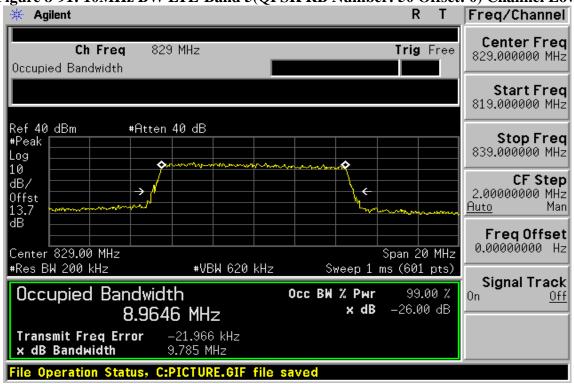
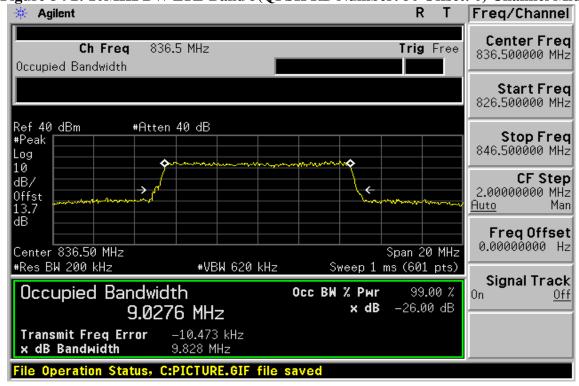


Figure 8-92: 10MHz BW LTE-Band 5(QPSK RB Number: 50 Offset: 0) Channel Mid



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Figure 8-93: 10MHz BW LTE-Band 5(QPSK RB Number: 50 Offset: 0) Channel High

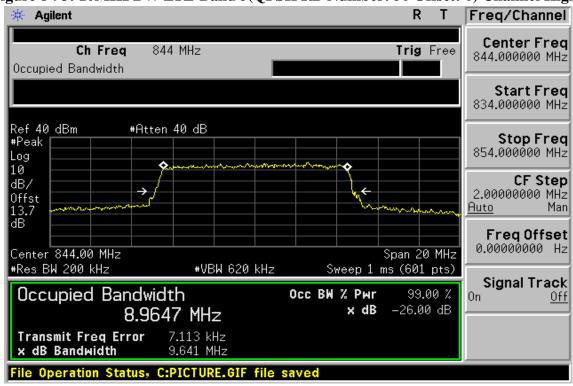
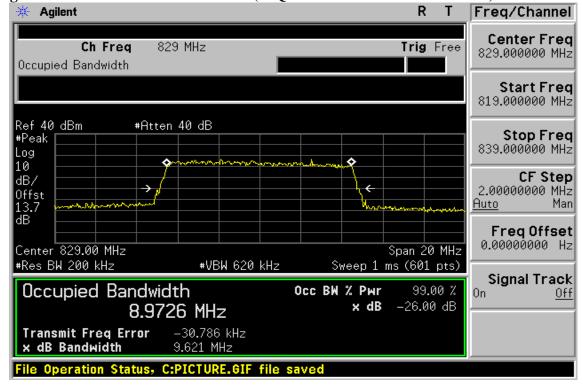


Figure 8-94: 10MHz BW LTE-Band 5(16QAM RB Number: 50 Offset: 0) Channel Low



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Figure 8-95: 10MHz BW LTE-Band 5(16QAM RB Number: 50 Offset: 0) Channel Mid

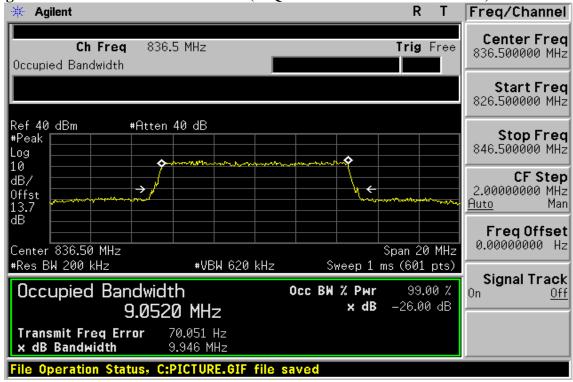
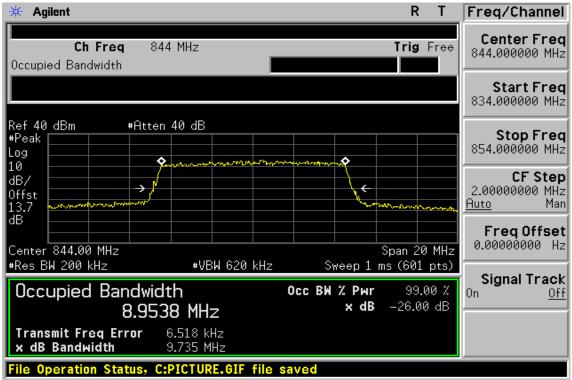


Figure 8-96: 10MHz BW LTE-Band 5(16QAM RB Number: 50 Offset: 0) Channel High



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Figure 8-97: 5MHz BW LTE-Band 7(QPSK RB Number: 25 Offset: 0) Channel Low

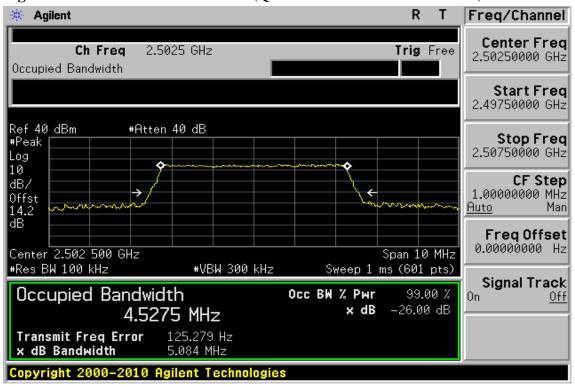
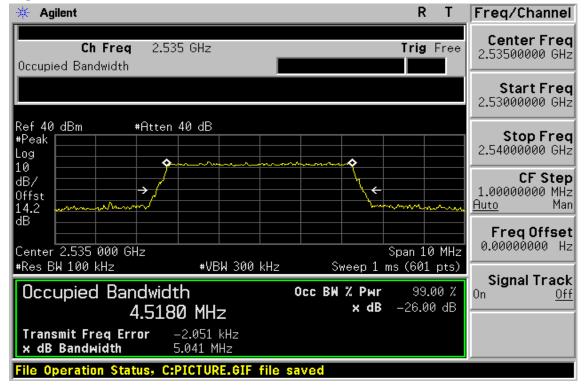


Figure 8-98: 5MHz BW LTE-Band 7(QPSK RB Number: 25 Offset: 0) Channel Mid



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Figure 8-99: 5MHz BW LTE-Band 7(OPSK RB Number: 25 Offset: 0) Channel High

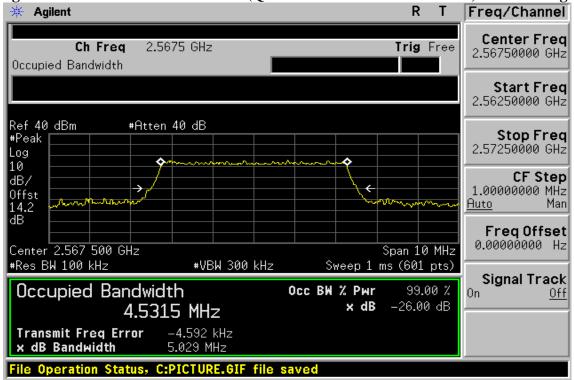
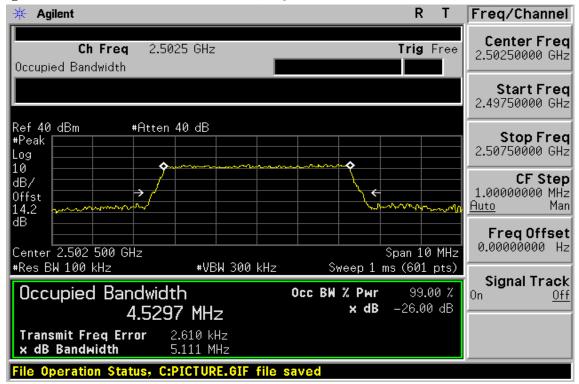


Figure 8-100: 5MHz BW LTE-Band 7(16QAM RB Number: 25 Offset: 0) Channel Low



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Figure 8-101: 5MHz BW LTE-Band 7(16QAM RB Number: 25 Offset: 0) Channel Mid

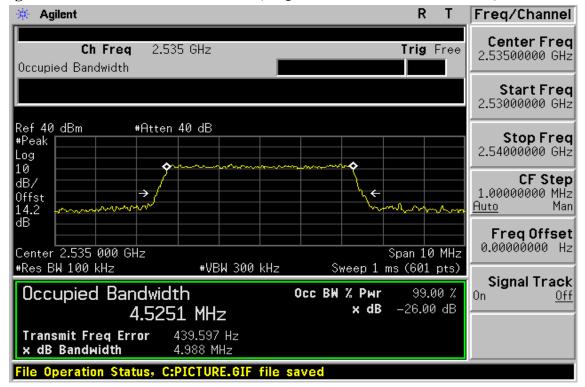
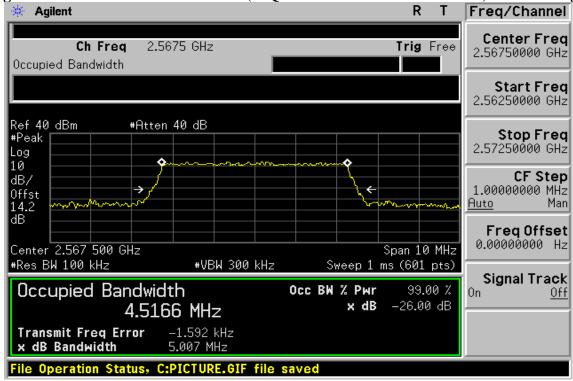


Figure 8-102: 5MHz BW LTE-Band 7(16QAM RB Number: 25 Offset: 0) Channel High



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Figure 8-103: 10MHz BW LTE-Band 7 (QPSK RB Number: 50 Offset: 0) Channel Low

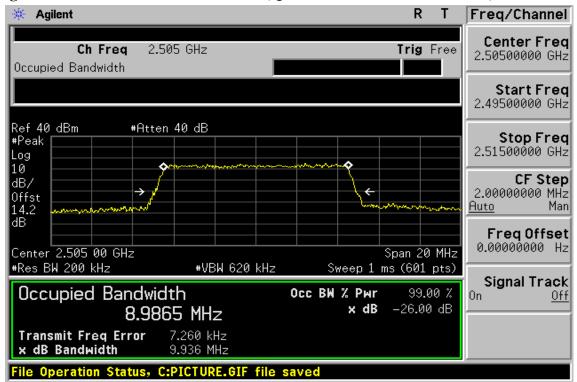
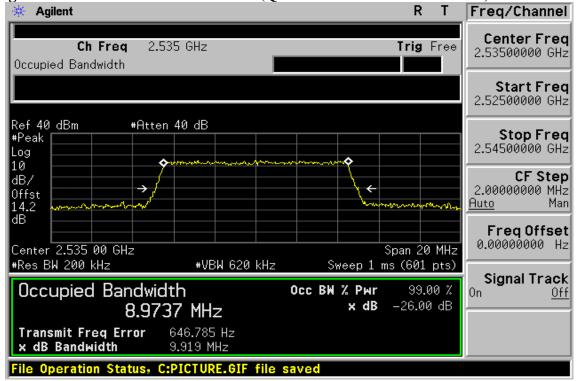


Figure 8-104: 10MHz BW LTE-Band 7(QPSK RB Number: 50 Offset: 0) Channel Mid



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Figure 8-105: 10MHz BW LTE-Band 7(QPSK RB Number: 50 Offset: 0) Channel High

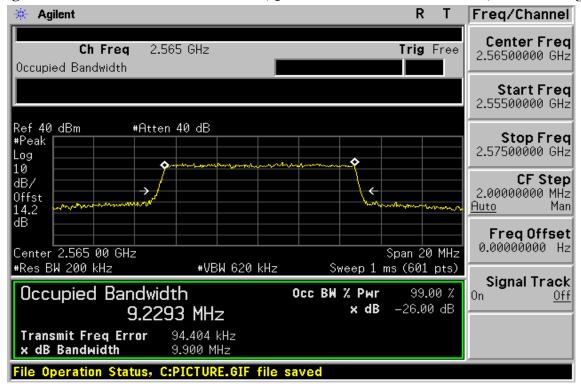
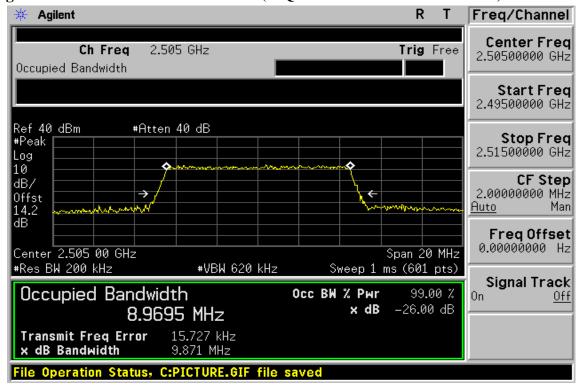


Figure 8-106: 10MHz BW LTE-Band 7 (16QAM RB Number: 50 Offset: 0) Channel Low



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Figure 8-107: 10MHz BW LTE-Band 7(16QAM RB Number: 50 Offset: 0) Channel Mid

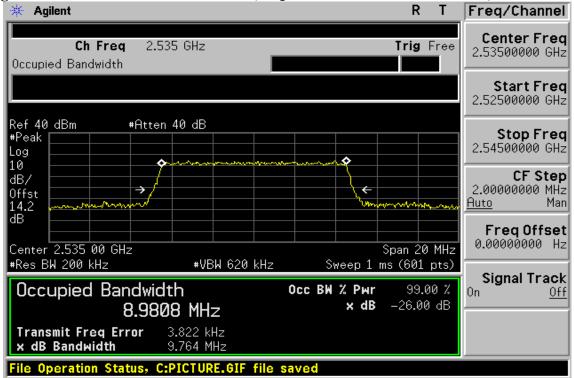
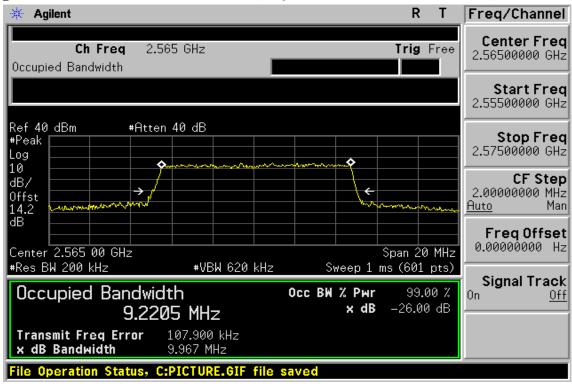


Figure 8-108: 10MHz BW LTE-Band 7(16QAM RB Number: 50 Offset: 0) Channel High



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Figure 8-109: 15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Low

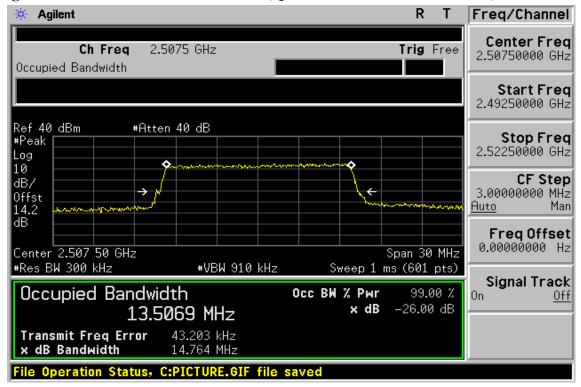


Figure 8-110: 15MHz BW LTE-Band 7(QPSK RB Number: 75 Offset: 0) Channel Mid



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Figure 8-111: 15MHz BW LTE-Band 7(OPSK RB Number: 75 Offset: 0) Channel High

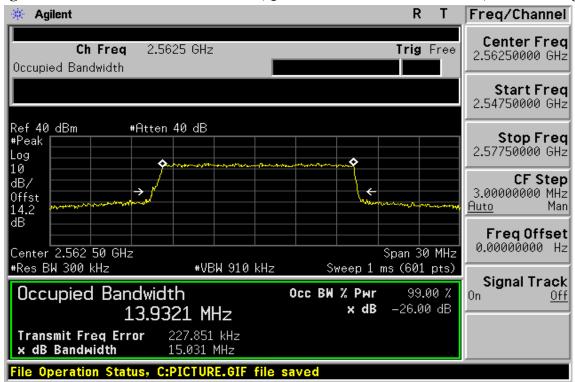
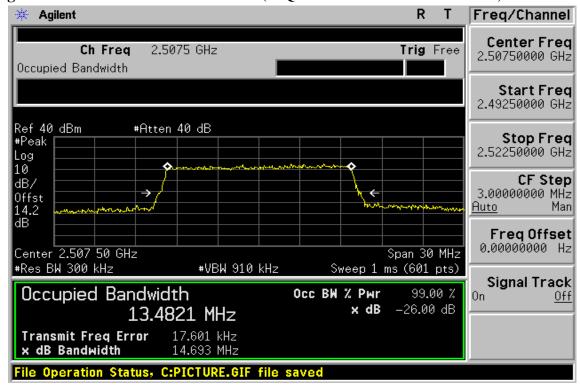


Figure 8-112: 15MHz BW LTE-Band 7 (16QAM RB Number: 75 Offset: 0) Channel Low



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Figure 8-113: 15MHz BW LTE-Band 7(16QAM RB Number: 75 Offset: 0) Channel Mid

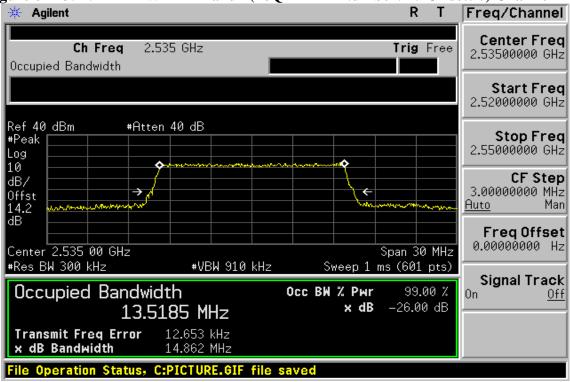
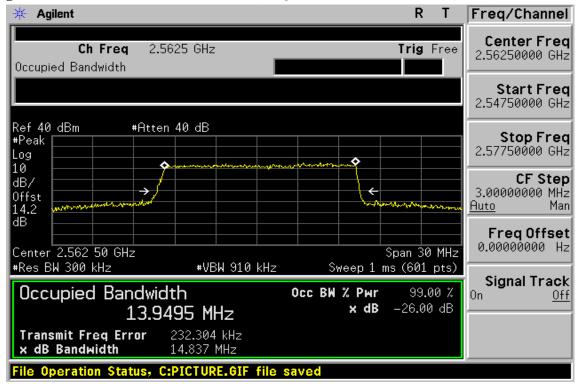


Figure 8-114: 15MHz BW LTE-Band 7(16QAM RB Number: 75 Offset: 0) Channel High



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Figure 8-115: 20MHz BW LTE-Band 7 (QPSK RB Number: 100 Offset: 0) Channel Low

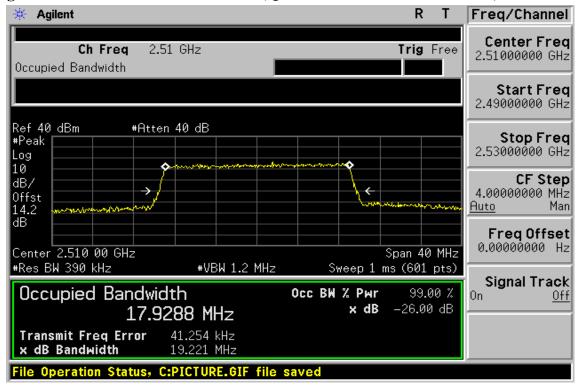
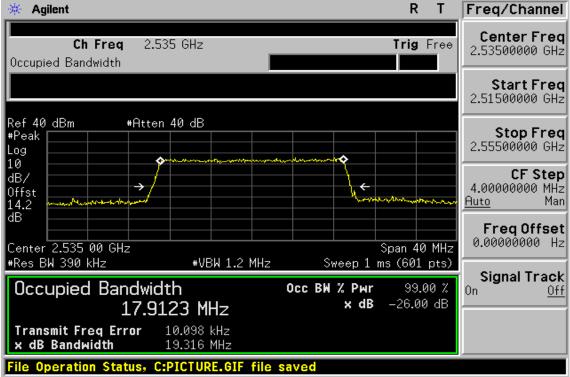


Figure 8-116: 20MHz BW LTE-Band 7(QPSK RB Number: 100 Offset: 0) Channel Mid



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Figure 8-117: 20MHz BW LTE-Band 7(OPSK RB Number: 100 Offset: 0) Channel High

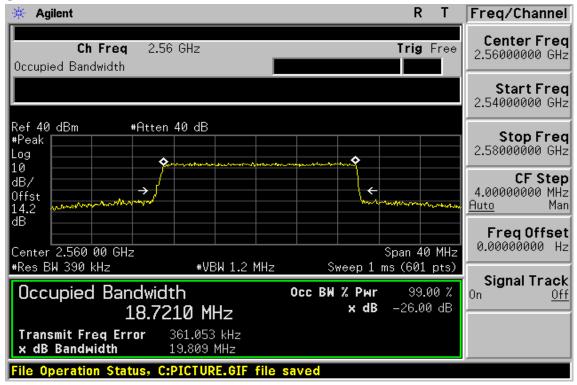
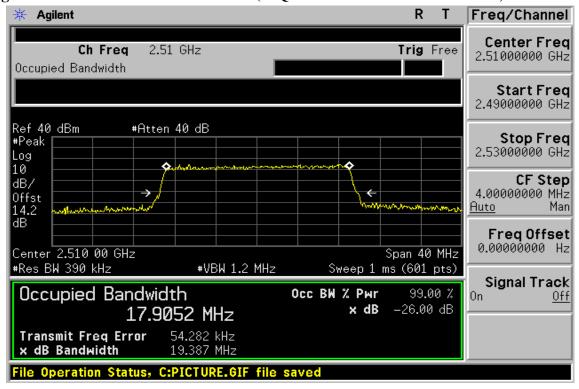


Figure 8-118: 20MHz BW LTE-Band 7 (16QAM RB Number: 100 Offset: 0) Channel Low



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Figure 8-119: 20MHz BW LTE-Band 7(16QAM RB Number: 100 Offset: 0) Channel Mid

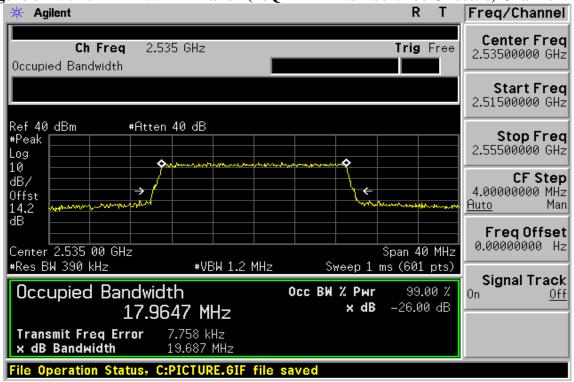
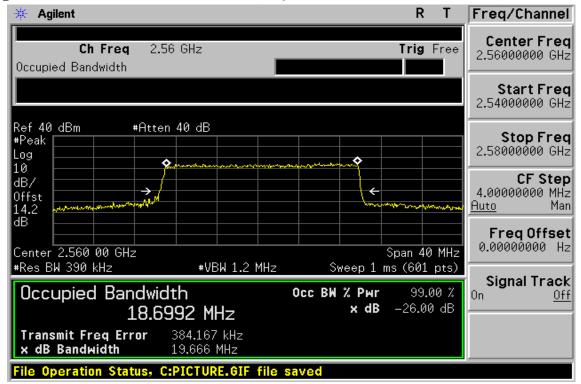


Figure 8-120: 20MHz BW LTE-Band 7(16QAM RB Number: 100 Offset: 0) Channel High



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OUT OF BAND EMISSION AT ANTENNA TERMINALS

9.1. Standard Applicable:

According to FCC §2.1051.

FCC §22.917(a), §24.238(a), §27.53(g)(h) the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than 43 + 10 log (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm). §27.53 (m) (4) shall not be less than 55 +10log(mean output power in watt) dBc below the mean power output outside a license's frequency block (-25dBm).

100KHz Bandedge:

FCC §27.53(g)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

FCC §27.53(h)

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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FCC §27.53(m) (4) (6)

For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in § 27.53(m)(6). In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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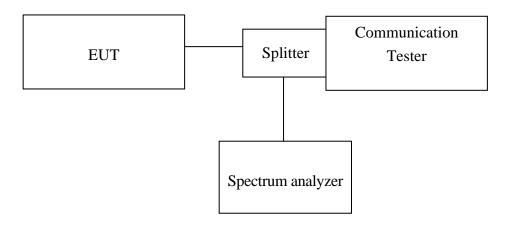


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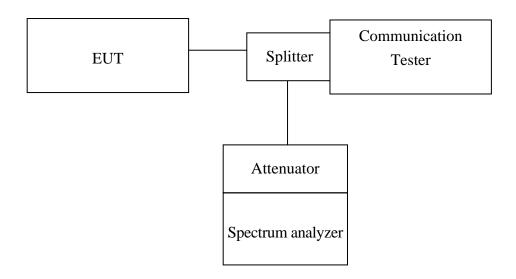
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9.2. Test SET-UP:

Out of band emission



Band Edge



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9.3. Measurement Procedure:

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10 th harmonic. Limit = -13dBm.

Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

- h) For operations in the 1710–1755 MHz and 2110–2155 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB. Limit, -13dBm
- (1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. Limit, -13dBm

Conducted Emission:

- 1. To connect Antenna Port of EUT to Spectrum.
- Set RBW = 1MHz & VBW = 1MHz on Spectrum.
- Sweep the frequency to determine spurious emission as seen on spectrum from span of 30 to 1G, 3、 1G to 2.5G, 2.5G to 7.5G, 7.5G to 10G, 10G to 15G and 15G to 20GHz
- Via Software, combine 6 spans of frequency range into one plot

9.4. Measurement Equipment Used:

Refer to section 2.4 in this report

9.5. Measurement Result:

Refer to next pages.

NOTE: the occurrence of the spike on the conducted emission is the signal of the fundamental emission.

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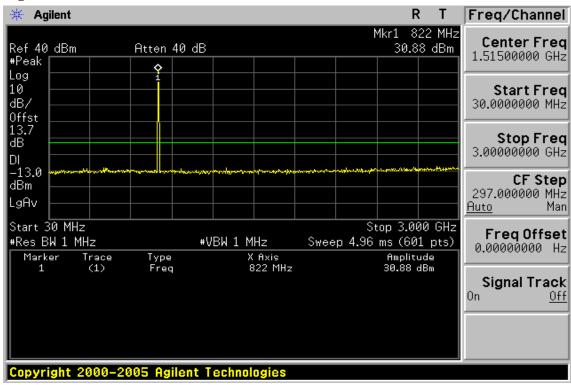
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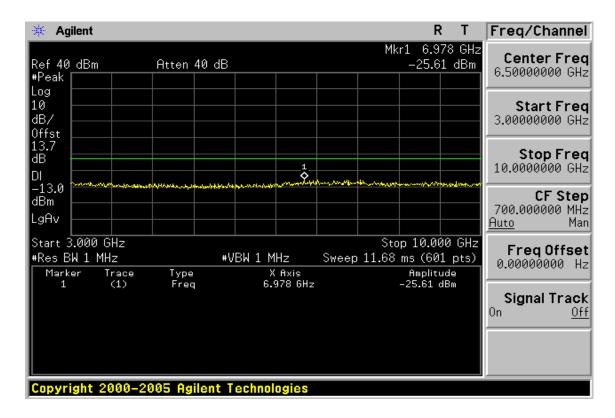
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Figure 9-1: Out of Band emission at antenna terminals – GSM 850 Channel Lowest





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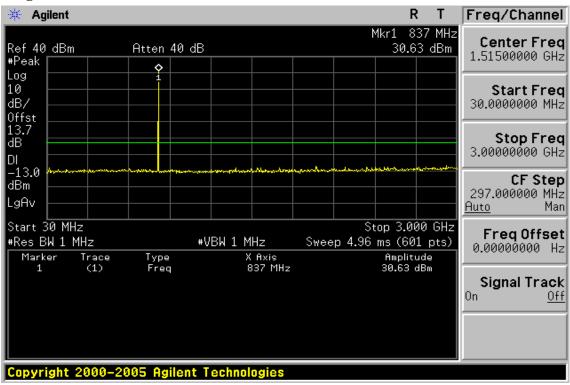
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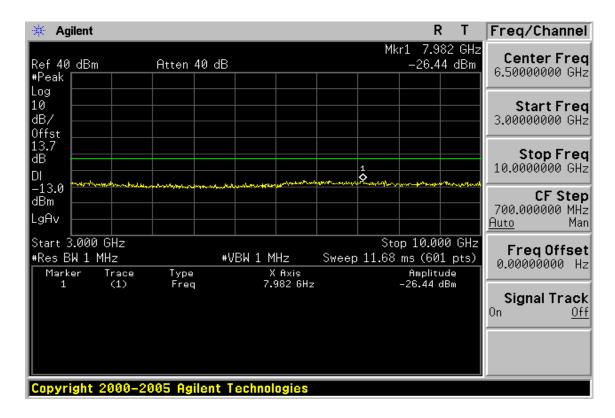
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Figure 9-2: Out of Band emission at antenna terminals – GSM 850 Channel Mid





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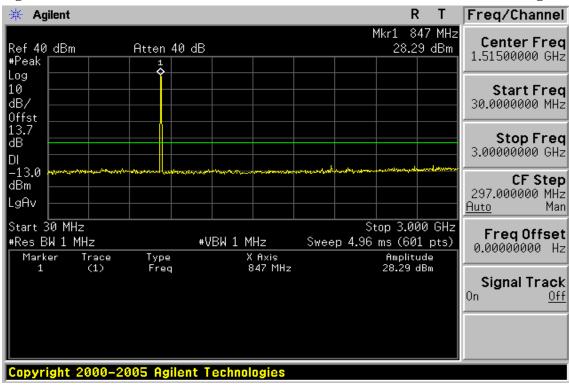
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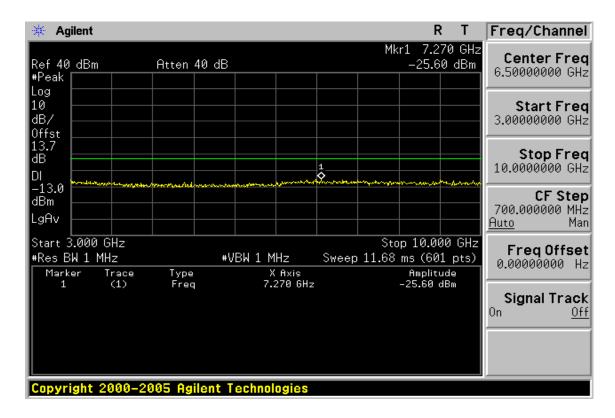
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Figure 9-3: Out of Band emission at antenna terminals – GSM 850 Channel Highest





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Out of Band emission at antenna terminals – GSM 850

Fundamental Frequency :824.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1648.40	Н		-13.00	
2472.60	Н		-13.00	
3296.80	Н		-13.00	
4121.00	Н		-13.00	
4945.20	Н		-13.00	
5769.40	Н		-13.00	
6593.60	Н		-13.00	
6978.00	S	-25.61	-13.00	12.61
7417.80	Н		-13.00	
8242.00	Н		-13.00	
= : = .00				

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	Н		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
7529.40	Н		-13.00	
7982.00	S	-26.44	-13.00	13.44
8366.00	Н		-13.00	

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"---": denotes Noise Floor.

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Fundamental Frequency :848.8MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1697.60	Н		-13.00	
2546.40	Н		-13.00	
3395.20	Н		-13.00	
4244.00	Н		-13.00	
5092.80	Н		-13.00	
5941.60	Н		-13.00	
6790.40	Н		-13.00	
7270.00	S	-25.6	-13.00	12.60
7639.20	Н		-13.00	
8488.00	Н		-13.00	

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"---": denotes Noise Floor.

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Figure 9-4: Band edge emission at antenna terminals – GSM 850 Channel Lowest



Figure 9-5: Band edge emission at antenna terminals – GSM 850 Channel Highest



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Band edge emission at antenna terminals - GSM 850 Low & High

Test Mode **GSM 850** Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
	0.1	1.00	
823.980	-27.84	-13.00	14.84
849.922	-24.196	-13.00	11.20

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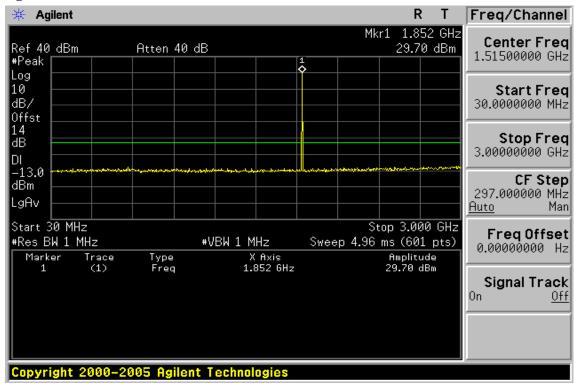
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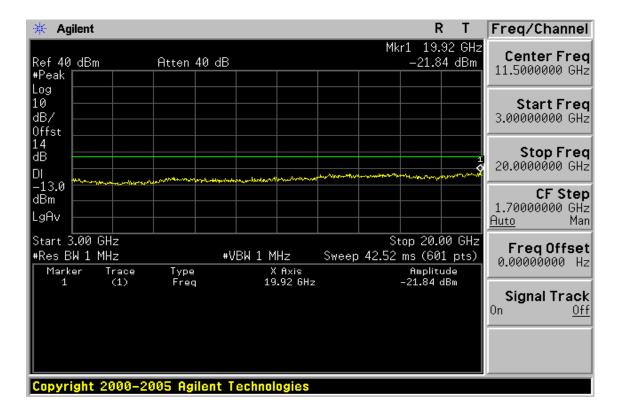
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Figure 9-6: Out of Band emission at antenna terminals – GSM 1900 Channel Lowest





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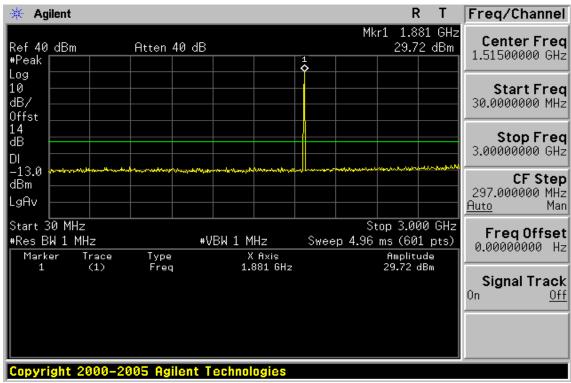
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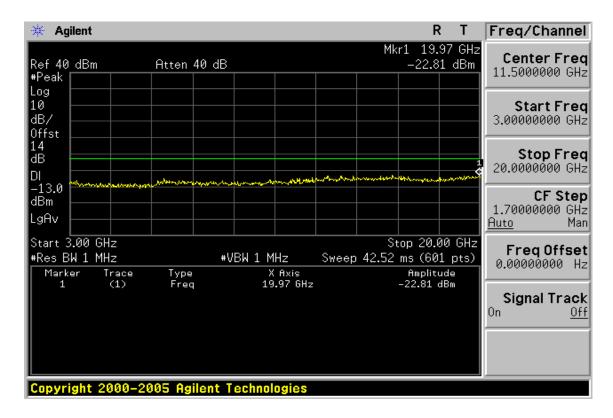
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Figure 9-7: Out of Band emission at antenna terminals – GSM 1900 Channel Mid





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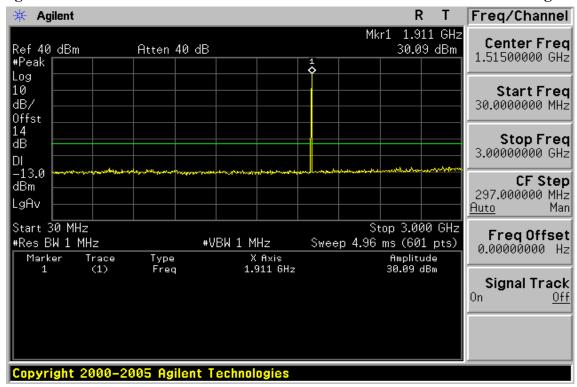
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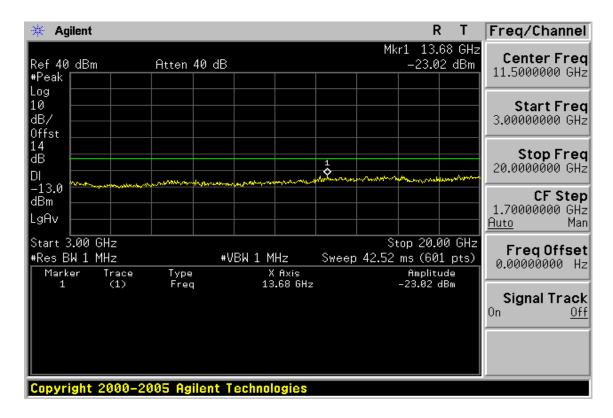
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Figure 9-8: Out of Band emission at antenna terminals – GSM 1900 Channel Highest





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Out of Band emission at antenna terminals - GSM 1900

Fundamental Frequency :1850.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3700.40	Н		-13.00	
5550.60	Н		-13.00	
7400.80	Н		-13.00	
9251.00	Н		-13.00	
11101.20	Н		-13.00	
12951.40	Н		-13.00	
14801.60	Н		-13.00	
16651.80	Н		-13.00	
18502.00	Н		-13.00	
19920.00	S	-21.84	-13.00	8.84

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
19970.00	S	-22.81	-13.00	9.81

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

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Fundamental Frequency :1909.8 MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3819.60	Н		-13.00	
5729.40	Н		-13.00	
7639.20	Н		-13.00	
9549.00	Н		-13.00	
11458.80	Н		-13.00	
13368.60	Н		-13.00	
13680.00	S	-23.02	-13.00	10.02
15278.40	Н		-13.00	
17188.20	Н		-13.00	
19098.00	Н		-13.00	
17070.00	_			

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Figure 9-9: Band edge emission at antenna terminals – GSM 1900 Channel Lowest

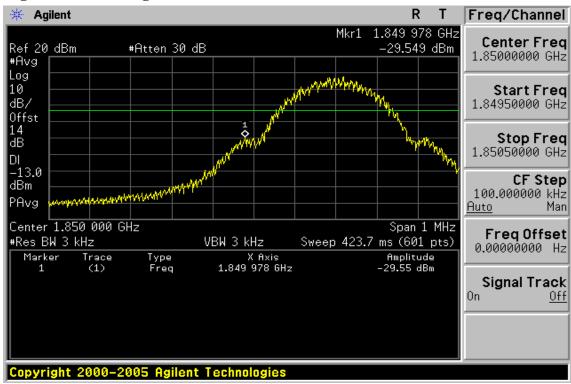
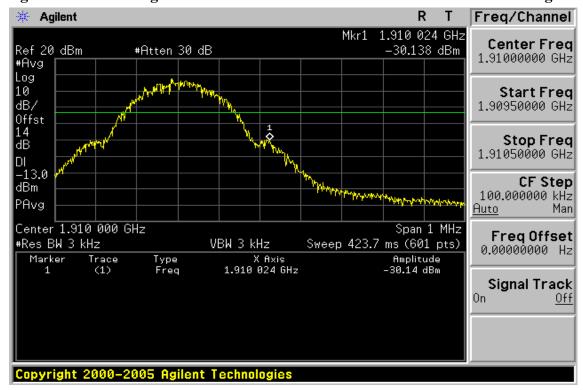


Figure 9-10: Band edge emission at antenna terminals – GSM 1900 Channel Highest



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Band edge emission at antenna terminals - GSM 1900 Low & High

Engineer Test Mode GSM 1900 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1849.978	-29.55	-13.00	16.55
1910.024	-30.14	-13.00	17.14

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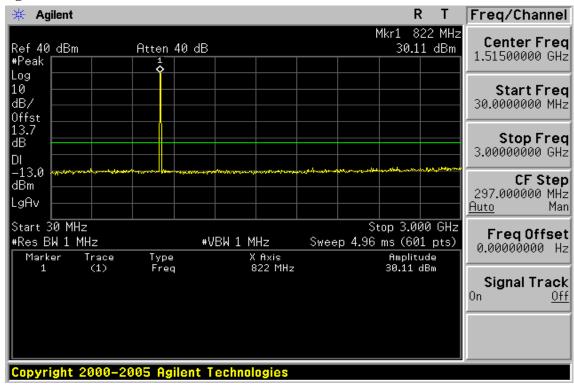
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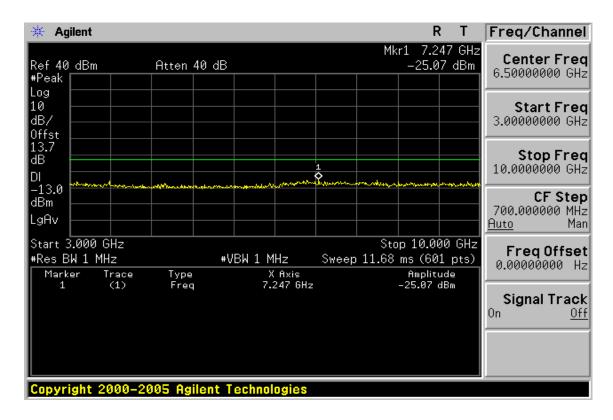
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Figure 9-11: Out of Band emission at antenna terminals – GPRS850 Channel Lowest





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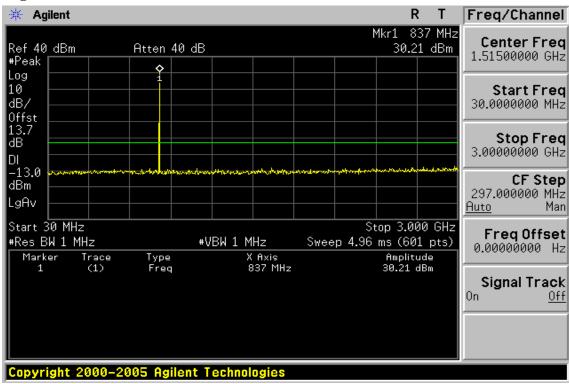
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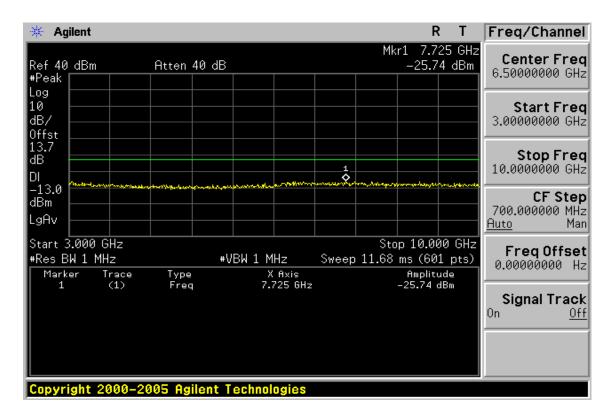
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Figure 9-12: Out of Band emission at antenna terminals – GPRS 850 Channel Mid





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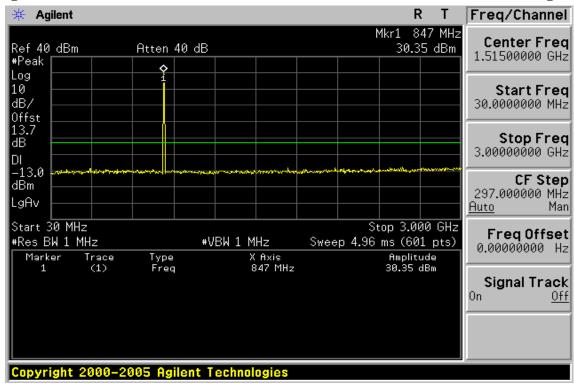
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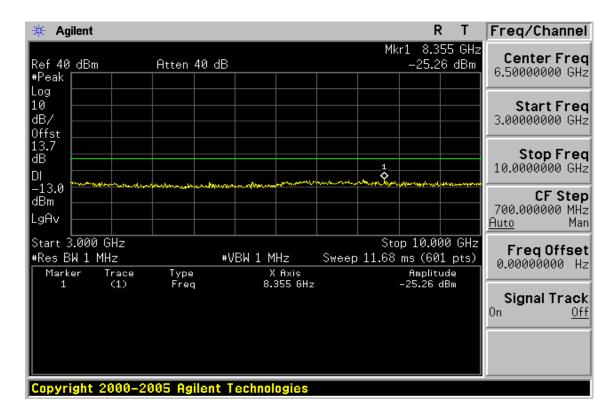
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Figure 9-13: Out of Band emission at antenna terminals – GPRS 850 Channel Highest





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Out of Band emission at antenna terminals - GPRS 850

Fundamental Frequency :824.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1648.40	Н		-13.00	
2472.60	Н		-13.00	
3296.80	Н		-13.00	
4121.00	Н		-13.00	
4945.20	Н		-13.00	
5769.40	Н		-13.00	
6593.60	Н		-13.00	
7247.00	S	-25.07	-13.00	12.07
7417.80	Н		-13.00	
8242.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	Н		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
7529.40	Н		-13.00	
7725.00	S	-25.74	-13.00	12.74
8366.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :848.8MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1697.60	Н		-13.00	
2546.40	Н		-13.00	
3395.20	Н		-13.00	
4244.00	Н		-13.00	
5092.80	Н		-13.00	
5941.60	Н		-13.00	
6790.40	Н		-13.00	
7639.20	Н		-13.00	
8355.00	S	-25.26	-13.00	12.26
8488.00	Н		-13.00	

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Figure 9-14: Band edge emission at antenna terminals – GPRS 850 Channel Lowest

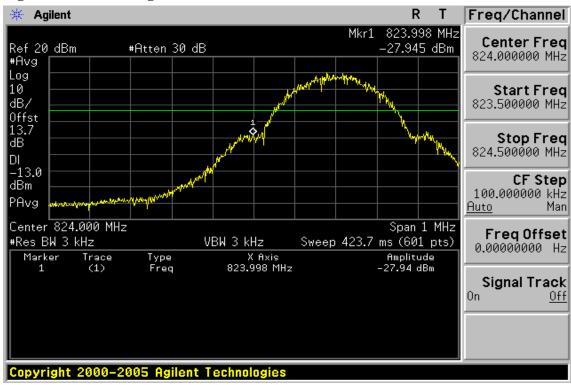


Figure 9-15: Band edge emission at antenna terminals – GPRS 850 Channel Highest



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Band edge emission at antenna terminals - GPRS 850 Low & High

Engineer Test Mode **GPRS** 850 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
823.900	-27.94	-13.00	14.94
849.029	-26.49	-13.00	13.49

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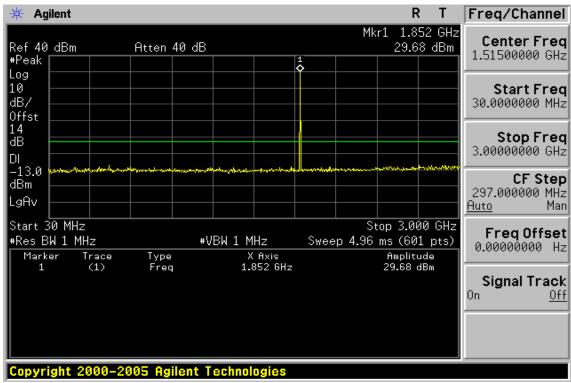
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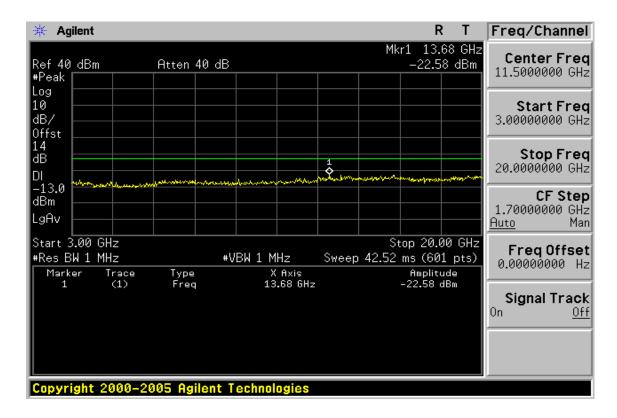
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Figure 9-16: Out of Band emission at antenna terminals – GPRS 1900 Channel Lowest





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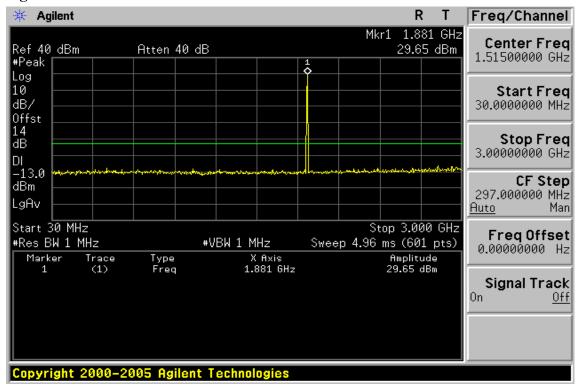
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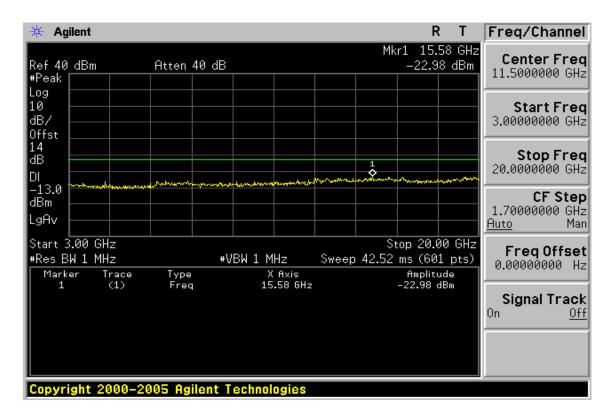
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Figure 9-17: Out of Band emission at antenna terminals – GPRS 1900 Channel Mid





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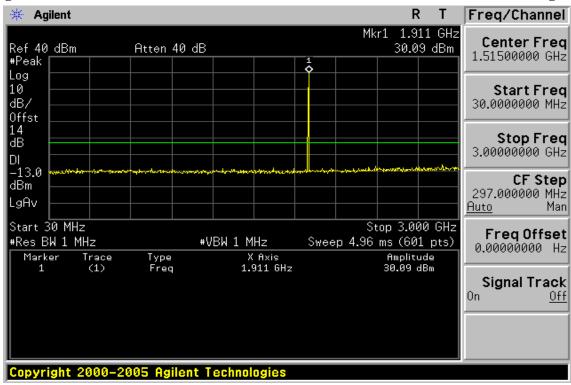
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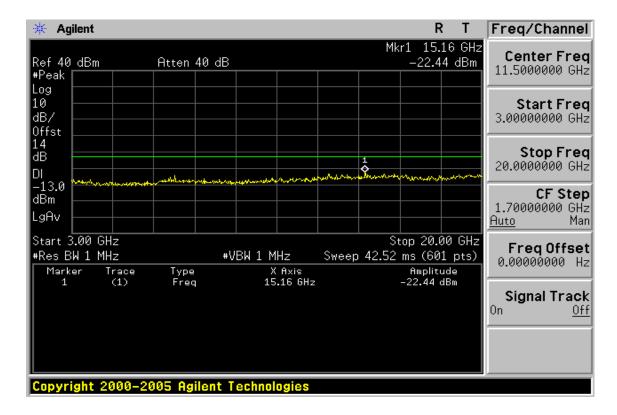
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Figure 9-18: Out of Band emission at antenna terminals – GPRS 1900 Channel Highest





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Out of Band emission at antenna terminals - GPRS 1900

Fundamental Frequency :1850.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3700.40	Н		-13.00	
5550.60	Н		-13.00	
7400.80	Н		-13.00	
9251.00	Н		-13.00	
11101.20	Н		-13.00	
12951.40	Н		-13.00	
13680.00	S	-22.58	-13.00	9.58
14801.60	Н		-13.00	
16651.80	Н		-13.00	
18502.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
15580.00	S	-22.98	-13.00	9.98
16920.00	Н		-13.00	
18800.00	Н		-13.00	
10000.00				

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Fundamental Frequency :1909.8 MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3819.60	Н		-13.00	
5729.40	Н		-13.00	
7639.20	Н		-13.00	
9549.00	Н		-13.00	
11458.80	Н		-13.00	
13368.60	Н		-13.00	
15160.00	S	-22.44	-13.00	9.44
15278.40	Н		-13.00	
17188.20	Н		-13.00	
19098.00	Н		-13.00	
17070.00				

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Figure 9-19: Band edge emission at antenna terminals – GPRS 1900 Channel Lowest

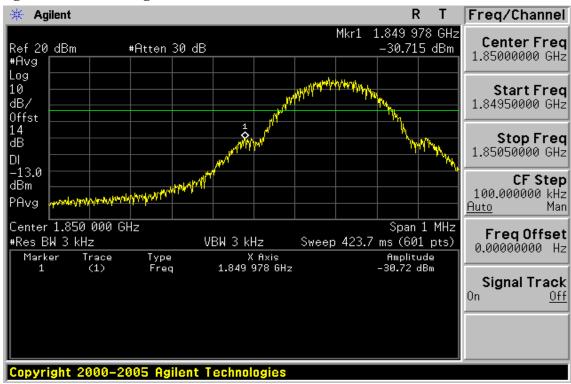
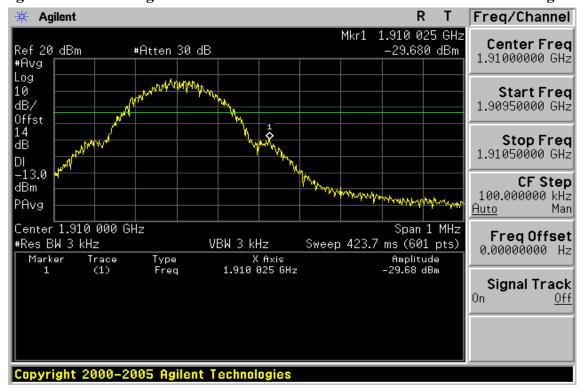


Figure 9-20: Band edge emission at antenna terminals – GPRS 1900 Channel Highest



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Band edge emission at antenna terminals - GPRS 1900 Low & High

Test Mode **GPRS** 1900 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1849.978	-30.72	-13.00	17.72
1910.025	-29.68	-13.00	16.68

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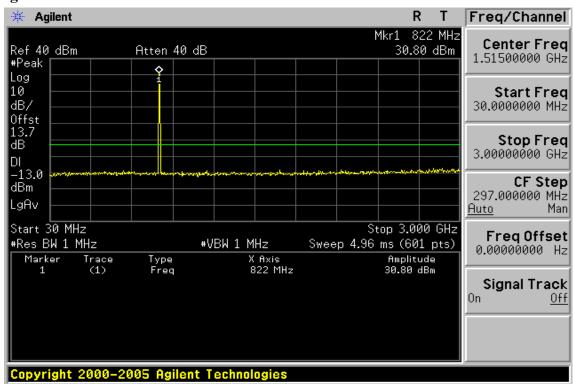
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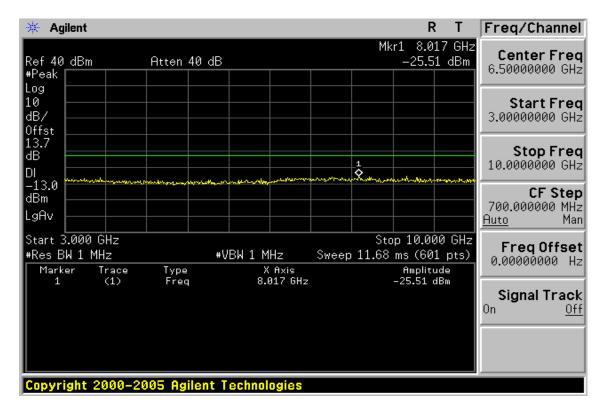
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Figure 9-21: Out of Band emission at antenna terminals – EDGE 850 Channel Lowest





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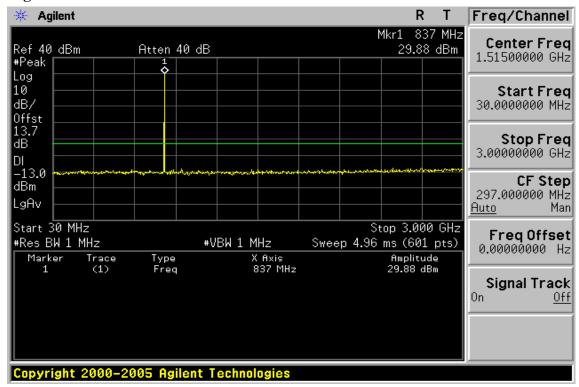
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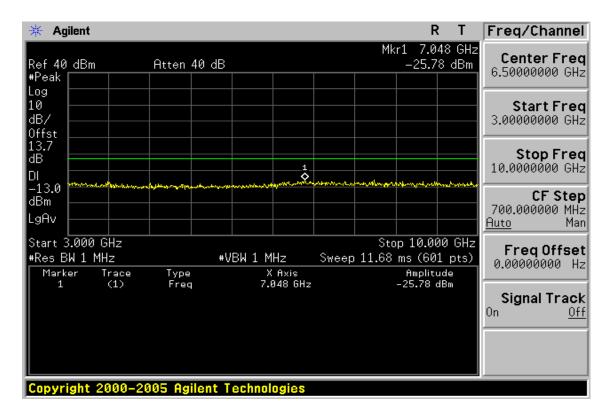
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Figure 9-22: Out of Band emission at antenna terminals – EDGE 850 Channel Mid





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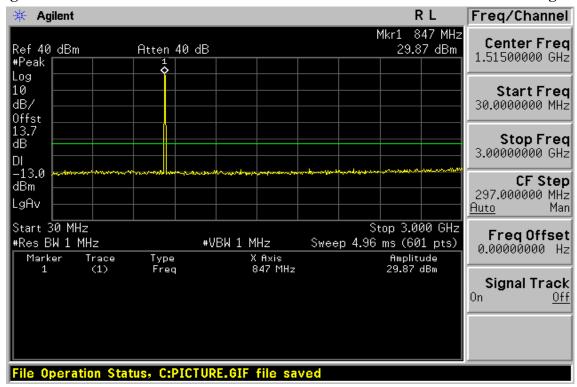
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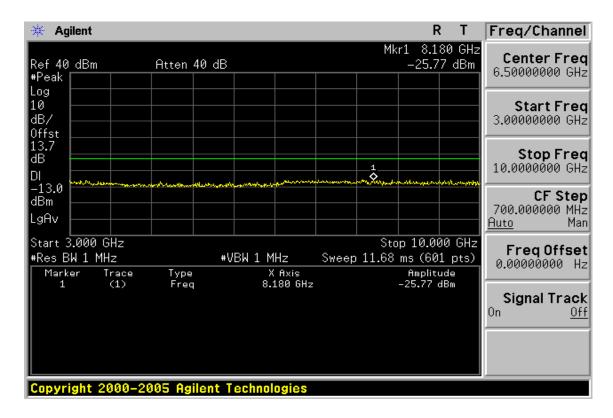
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Figure 9-23: Out of Band emission at antenna terminals – EDGE 850 Channel Highest





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Out of Band emission at antenna terminals – EDGE 850

Fundamental Frequency :824.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1648.40	Н		-13.00	
2472.60	Н		-13.00	
3296.80	Н		-13.00	
4121.00	Н		-13.00	
4945.20	Н		-13.00	
5769.40	H		-13.00	
6593.60	Н		-13.00	
7417.80	H		-13.00	
8017.00	S	25.51	-13.00	-38.51
8242.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	Н		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
7048.00	S	-25.78	-13.00	12.78
7529.40	Н		-13.00	
8366.00	Н		-13.00	

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Fundamental Frequency :848.8MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1697.60	Н		-13.00	
2546.40	Н		-13.00	
3395.20	Н		-13.00	
4244.00	Н		-13.00	
5092.80	Н		-13.00	
5941.60	Н		-13.00	
6790.40	Н		-13.00	
7639.20	Н		-13.00	
8180.00	S	-25.77	-13.00	12.77
8488.00	Н		-13.00	

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Figure 9-24: Band edge emission at antenna terminals – EDGE 850 Channel Lowest



Figure 9-25: Band edge emission at antenna terminals – EDGE 850 Channel Highest



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Band edge emission at antenna terminals – EDGE 850 Low & High

Engineer Test Mode **EDGE 850** :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
823.990	-33.00	-13.00	20.00
849.007	-33.83	-13.00	20.83

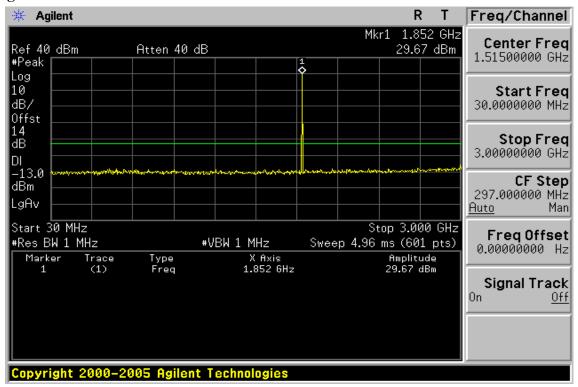
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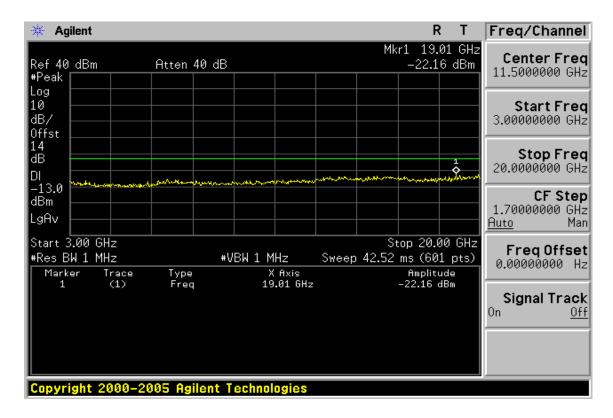
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Figure 9-26: Out of Band emission at antenna terminals – EDGE 1900 Channel Lowest





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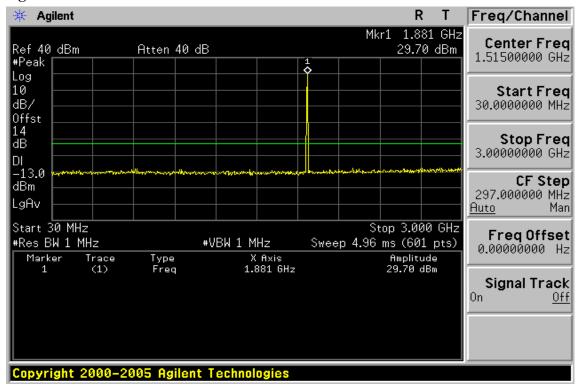
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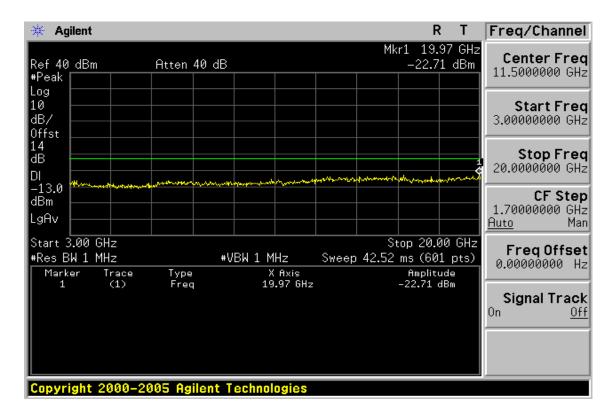
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Figure 9-27: Out of Band emission at antenna terminals – EDGE 1900 Channel Mid





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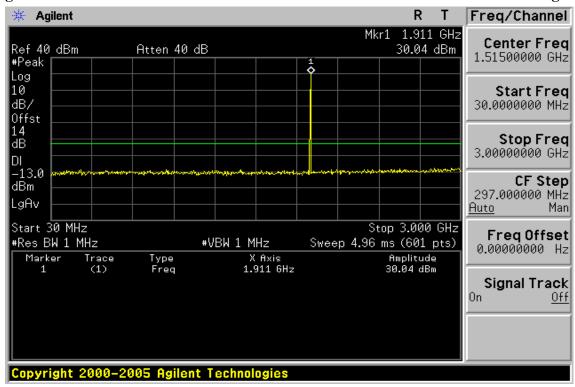
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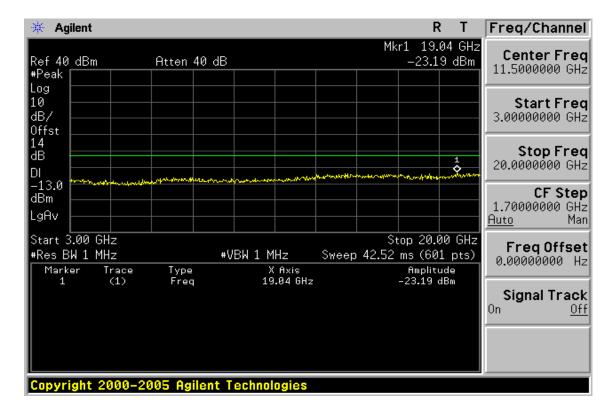
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Figure 9-28: Out of Band emission at antenna terminals – EDGE 1900 Channel Highest





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Out of Band emission at antenna terminals - EDGE 1900

Fundamental Frequency :1850.2 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3700.40	Н		-13.00	
5550.60	Н		-13.00	
7400.80	Н		-13.00	
9251.00	Н		-13.00	
11101.20	Н		-13.00	
12951.40	Н		-13.00	
14801.60	Н		-13.00	
16651.80	Н		-13.00	
18502.00	Н		-13.00	
19010.00	S	-22.16	-13.00	9.16

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
19970.00	S	-22.71	-13.00	9.71

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Fundamental Frequency :1909.8 MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
				-
<30	S		-13.00	
30-1000	S		-13.00	
3819.60	Н		-13.00	
5729.40	Н		-13.00	
7639.20	Н		-13.00	
9549.00	Н		-13.00	
11458.80	Н		-13.00	
13368.60	Н		-13.00	
15278.40	Н		-13.00	
17188.20	Н		-13.00	
19040.00	S	-23.19	-13.00	10.19
19098.00	Н		-13.00	

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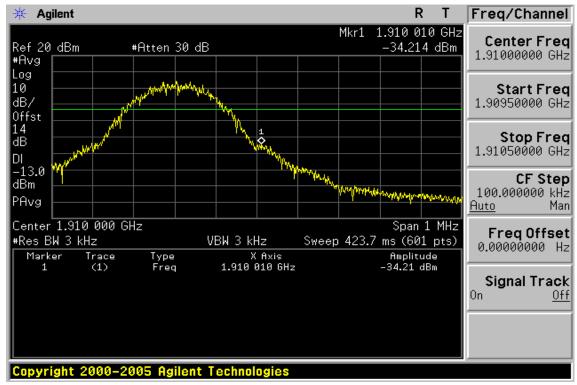


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Figure 9-29: Band edge emission at antenna terminals – EDGE 1900 Channel Lowest



Figure 9-30: Band edge emission at antenna terminals – EDGE 1900 Channel Highest



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Band edge emission at antenna terminals - EDGE 1900 Low & High

Test Mode EDGE 1900: Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1849.976	-34.68	-13.00	21.68
1910.010	-34.21	-13.00	21.21

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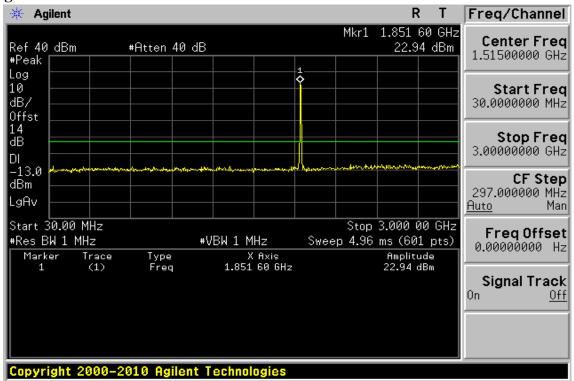
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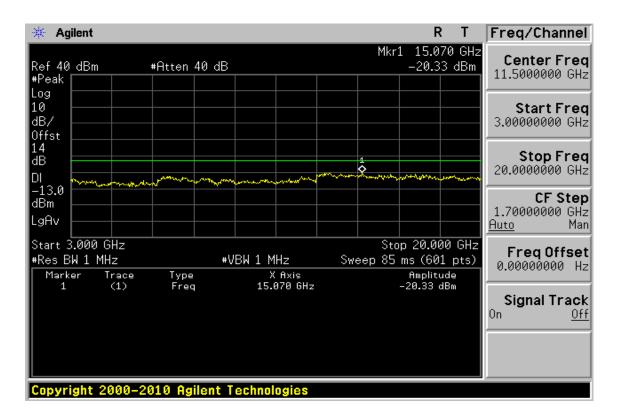
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Figure 9-31: Out of Band emission at antenna terminals – WCDMA II Channel Lowest





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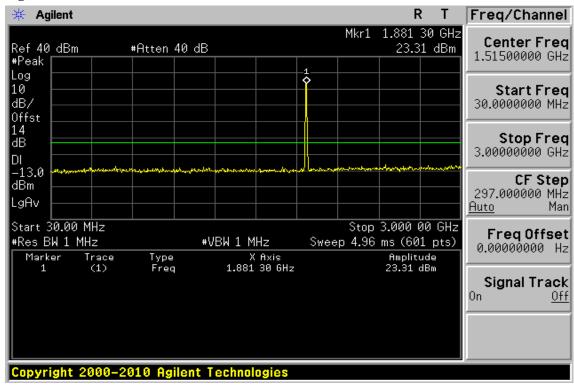
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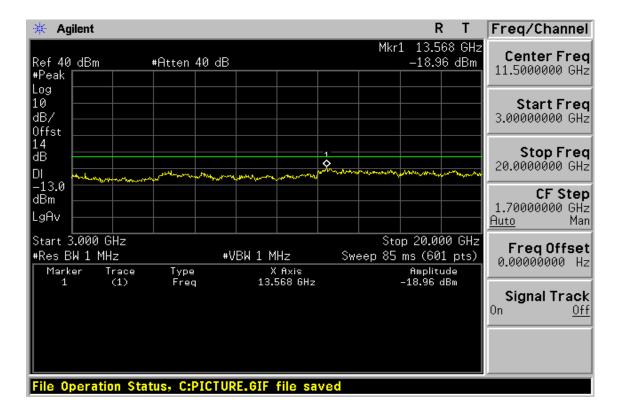
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Figure 9-32: Out of Band emission at antenna terminals – WCDMA II Channel Mid





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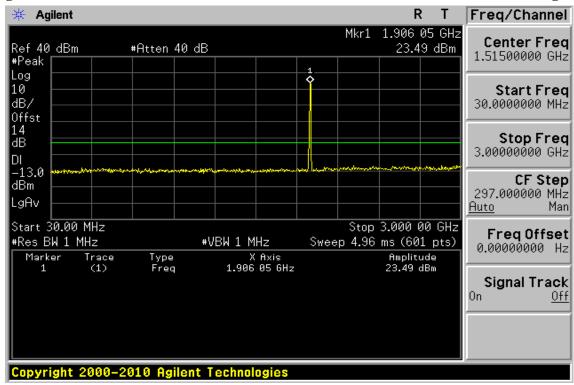
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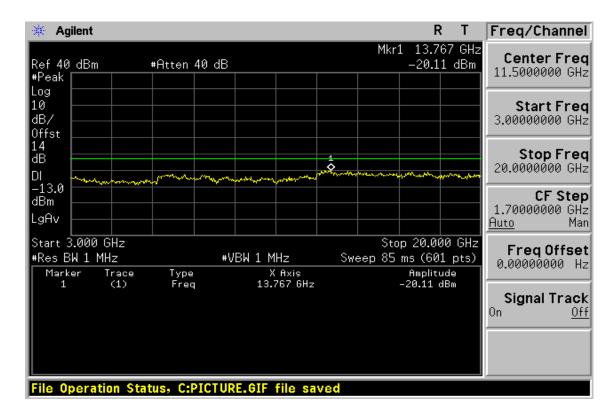
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Figure 9-33: Out of Band emission at antenna terminals – WCDMA II Channel Highest





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Out of Band emission at antenna terminals - WCDMA II

Fundamental Frequency :1852.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3704.80	Н		-13.00	
5557.20	Н		-13.00	
7409.60	Н		-13.00	
9262.00	Н		-13.00	
11114.40	Н		-13.00	
12966.80	Н		-13.00	
14819.20	Н		-13.00	
15070.00	S	-20.33	-13.00	7.33
16671.60	Н		-13.00	
18524.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
13568.00	S	-18.96	-13.00	5.96
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	

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Fundamental Frequency :1907.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3815.20	Н		-13.00	
5722.80	Н		-13.00	
7630.40	Н		-13.00	
9538.00	Н		-13.00	
11445.60	Н		-13.00	
13353.20	Н		-13.00	
13767.00	S	-20.11	-13.00	7.11
15260.80	Н		-13.00	
17168.40	Н		-13.00	
19076.00	Н		-13.00	

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Figure 9-34: Band edge emission at antenna terminals – WCDMA II Channel Lowest

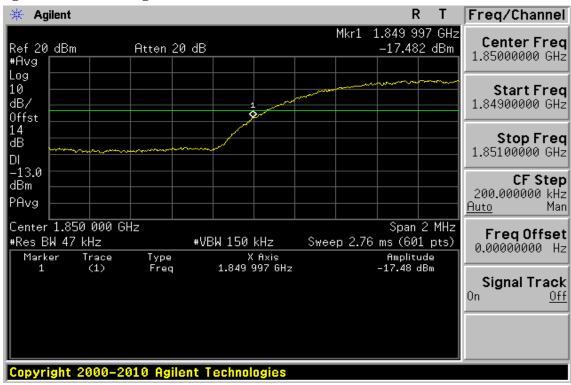


Figure 9-35: Band edge emission at antenna terminals – WCDMA II Channel Highest



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Band edge emission at antenna terminals - WCDMA II Low & High

Test Mode WCDMA II Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1849.997	-17.48	-13.00	4.48
1910.003	-17.78	-13.00	4.78

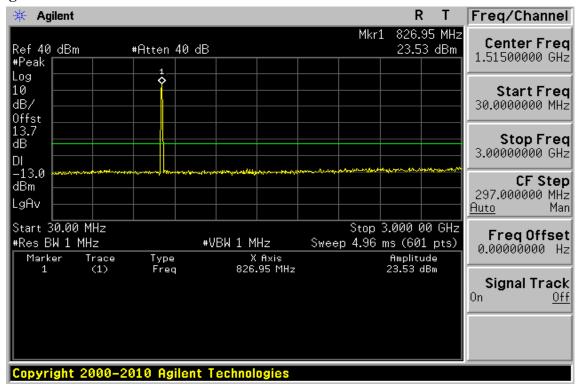
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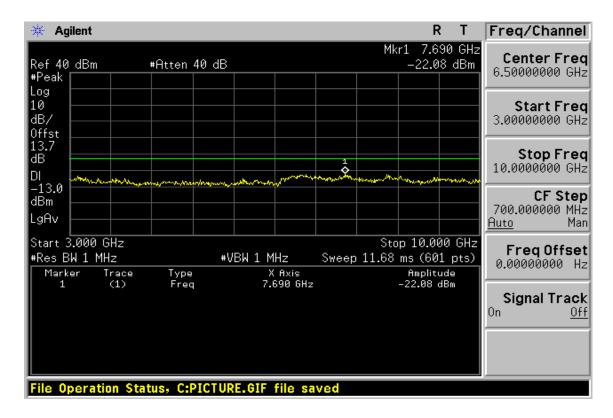
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Figure 9-36: Out of Band emission at antenna terminals – WCDMA V Channel Lowest





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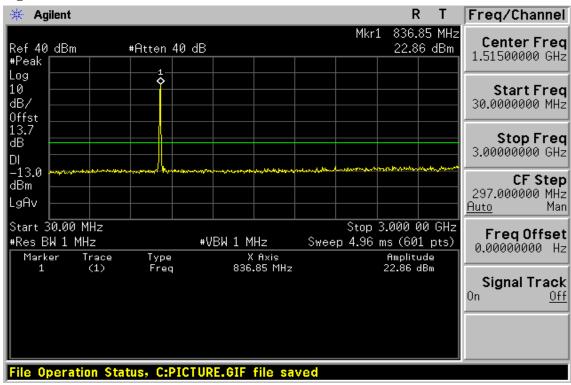
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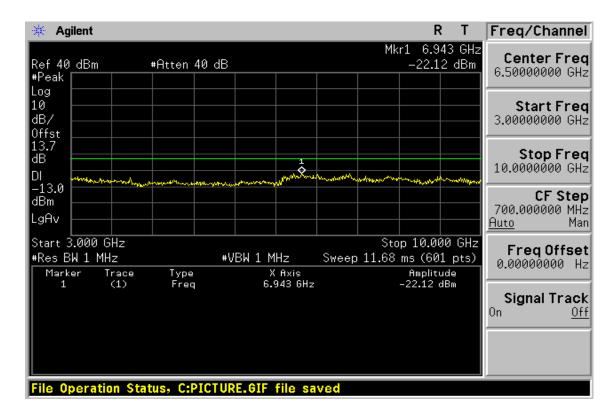
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Figure 9-37: Out of Band emission at antenna terminals – WCDMA V Channel Mid





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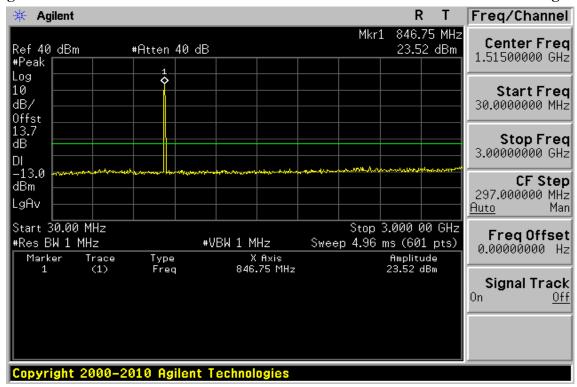
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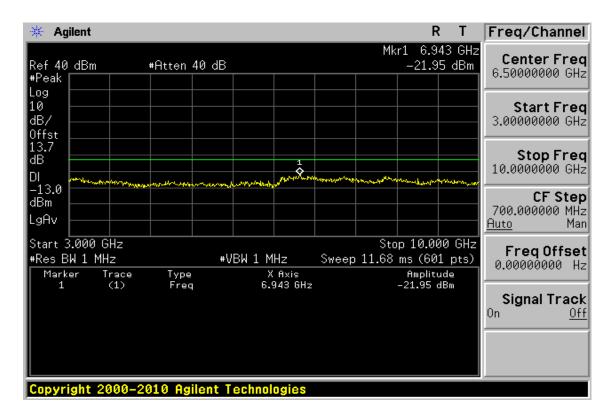
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Figure 9-38: Out of Band emission at antenna terminals – WCDMA V Channel Highest





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Out of Band emission at antenna terminals - WCDMA V

Fundamental Frequency :826.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1652.80	H		-13.00	
2479.20	Н		-13.00	
3305.60	H		-13.00	
4132.00	Н		-13.00	
4958.40	Н		-13.00	
5784.80	Н		-13.00	
6611.20	Н		-13.00	
7437.60	Н		-13.00	
7690.00	S	-22.08	-13.00	9.08
8264.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	H		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
6943.00	S	-22.12	-13.00	9.12
7529.40	Н		-13.00	
8366.00	Н		-13.00	

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Fundamental Frequency :846.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1693.20	Н		-13.00	
2539.80	Н		-13.00	
3386.40	Н		-13.00	
4233.00	Н		-13.00	
5079.60	Н		-13.00	
5926.20	Н		-13.00	
6772.80	Н		-13.00	
6943.00	S	-21.95	-13.00	8.95
7619.40	Н		-13.00	
8466.00	Н		-13.00	

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Figure 9-39: Band edge emission at antenna terminals – WCDMA V Channel Lowest

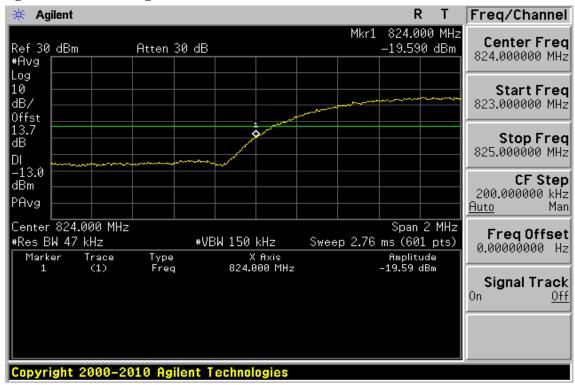
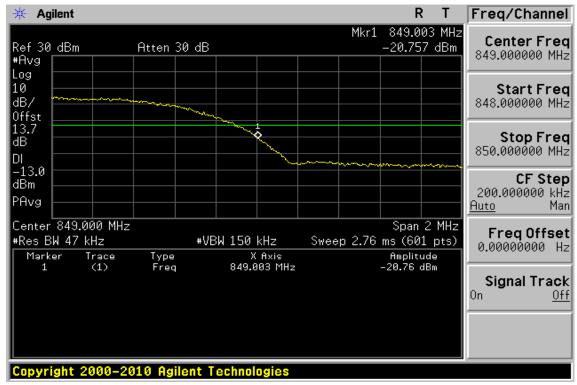


Figure 9-40: Band edge emission at antenna terminals – WCDMA V Channel Highest



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Band edge emission at antenna terminals - WCDMA V Low & High

Test Mode WCDMA V Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
	40.70	12.00	
824.000	-19.59	-13.00	6.59
849.003	-20.76	-13.00	7.76

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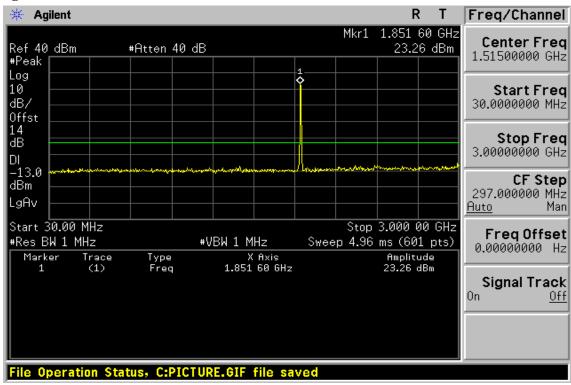
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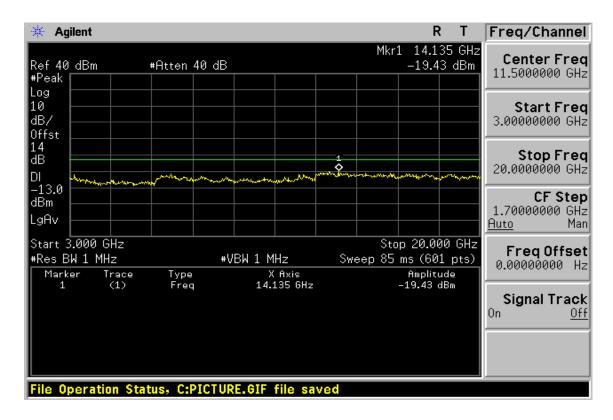
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Figure 9-41: Out of Band emission at antenna terminals – HSDPA II Channel Lowest





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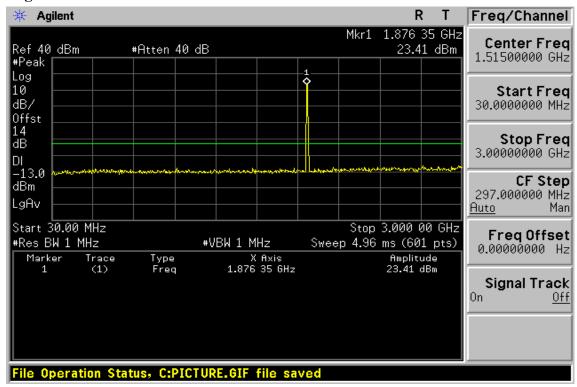
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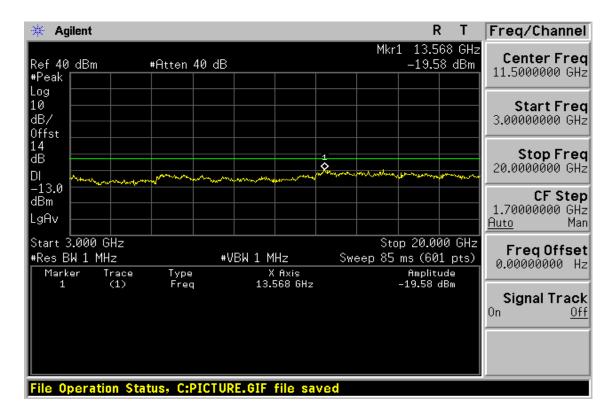
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Figure 9-42: Out of Band emission at antenna terminals – HSDPA II Channel Mid





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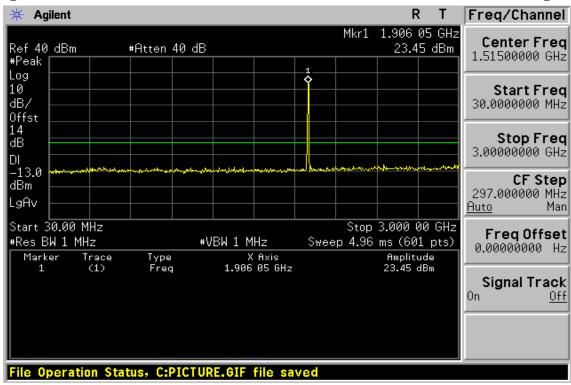
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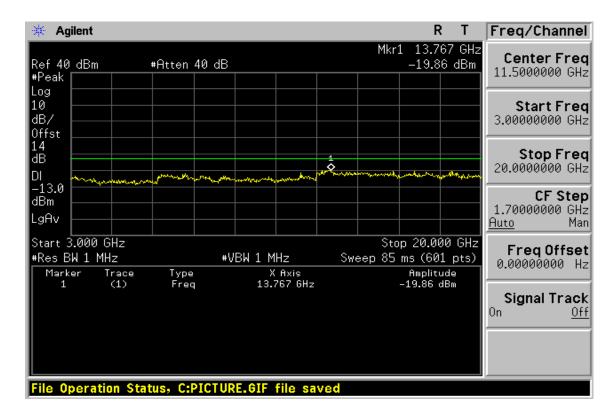
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Figure 9-43: Out of Band emission at antenna terminals – HSDPA II Channel Highest





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Out of Band emission at antenna terminals - HSDPA II

Fundamental Frequency :1852.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3704.80	Н		-13.00	
5557.20	Н		-13.00	
7409.60	Н		-13.00	
9262.00	Н		-13.00	
11114.40	Н		-13.00	
12966.80	Н		-13.00	
14135.00	S	-19.43	-13.00	6.43
14819.20	Н		-13.00	
16671.60	Н		-13.00	
18524.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	H		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
13568.00	S	-19.58	-13.00	6.58
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	

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Fundamental Frequency :1907.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3815.20	Н		-13.00	
5722.80	Н		-13.00	
7630.40	Н		-13.00	
9538.00	Н		-13.00	
11445.60	Н		-13.00	
13353.20	Н		-13.00	
13767.00	S	-19.86	-13.00	6.86
15260.80	Н		-13.00	
17168.40	Н		-13.00	
19076.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

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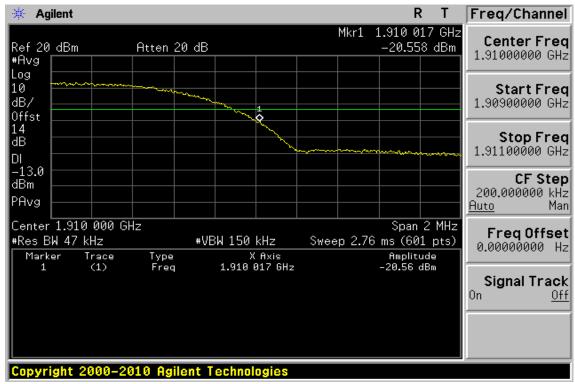


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Figure 9-44: Band edge emission at antenna terminals – HSDPA II Channel Lowest



Figure 9-45: Band edge emission at antenna terminals – HSDPA II Channel Highest



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Band edge emission at antenna terminals - HSDPA II Low & High

Engineer Test Mode HSDPA II :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1849.997	-19.97	-13.00	6.97
1910.017	-20.56	-13.00	7.56

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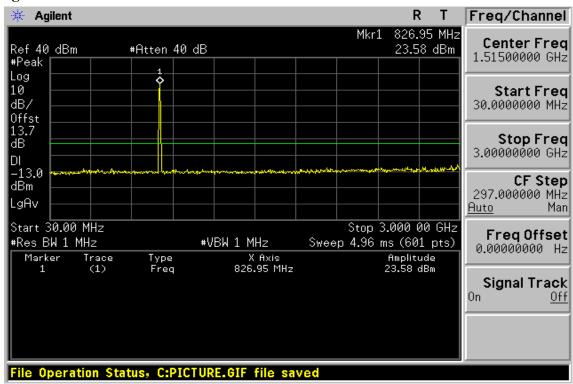
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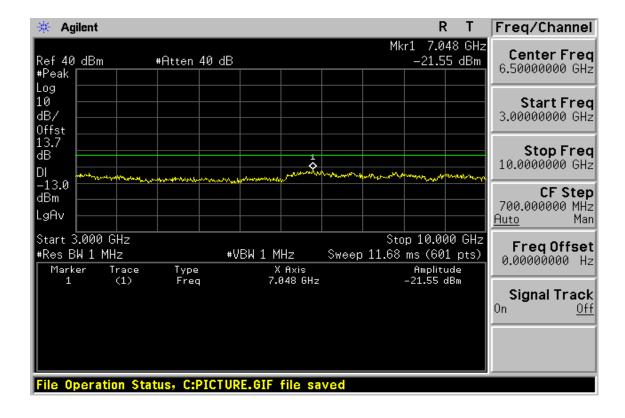
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Figure 9-46: Out of Band emission at antenna terminals – HSDPA V Channel Lowest





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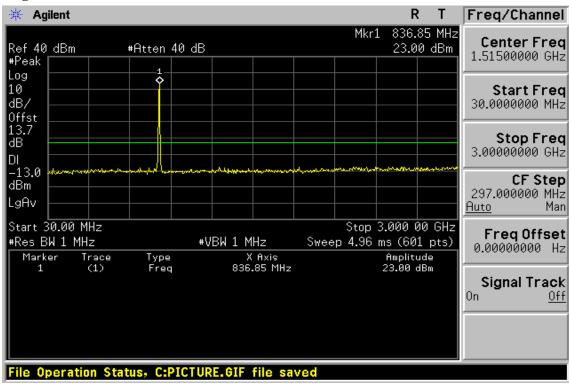
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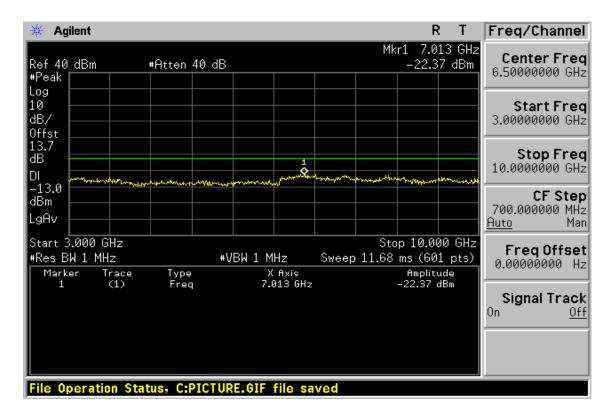
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Figure 9-47: Out of Band emission at antenna terminals – HSDPA V Channel Mid





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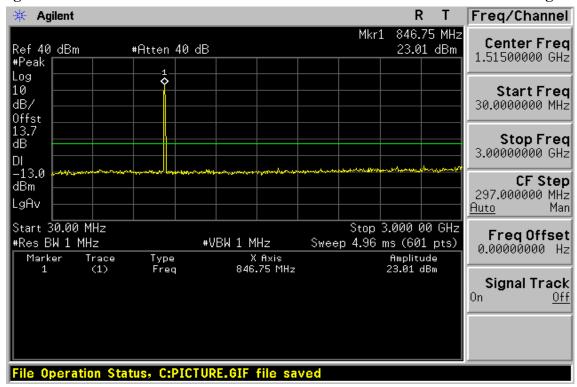
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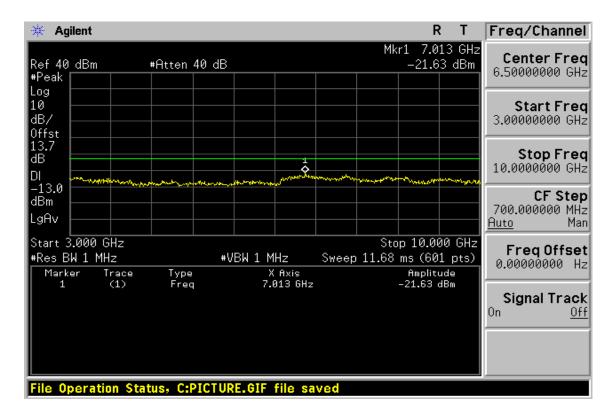
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Figure 9-48: Out of Band emission at antenna terminals – HSDPA V Channel Highest





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Out of Band emission at antenna terminals - HSDPA V

Fundamental Frequency :826.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1652.80	Н		-13.00	
2479.20	Н		-13.00	
3305.60	Н		-13.00	
4132.00	Н		-13.00	
4958.40	Н		-13.00	
5784.80	Н		-13.00	
6611.20	Н		-13.00	
7048.00	S	-21.55	-13.00	8.55
7437.60	Н		-13.00	
8264.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	H		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
7013.00	S	-22.37	-13.00	9.37
7529.40	Н		-13.00	
8366.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :846.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1693.20	Н		-13.00	
2539.80	Н		-13.00	
3386.40	Н		-13.00	
4233.00	Н		-13.00	
5079.60	Н		-13.00	
5926.20	Н		-13.00	
6772.80	Н		-13.00	
7013.00	S	-21.63	-13.00	8.63
7619.40	Н		-13.00	
8466.00	Н		-13.00	

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Figure 9-49: Band edge emission at antenna terminals – HSDPA V Channel Lowest

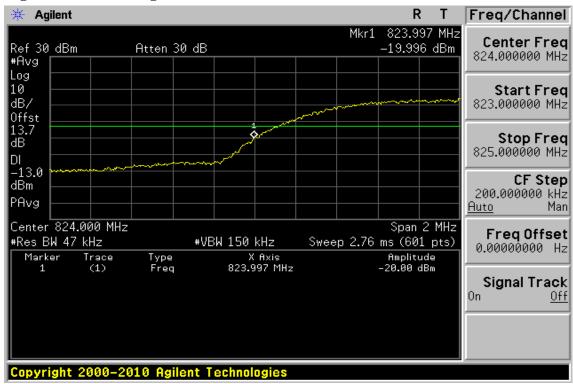
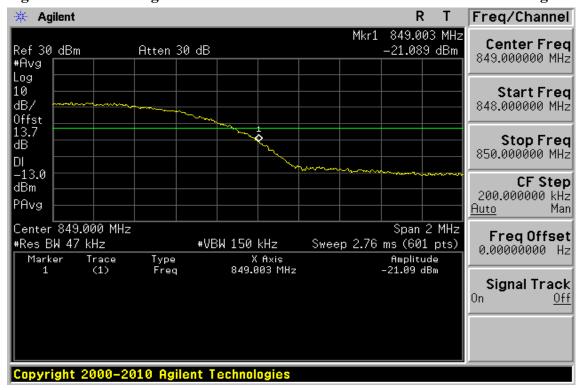


Figure 9-50: Band edge emission at antenna terminals – HSDPA V Channel Highest



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Band edge emission at antenna terminals - HSDPA V Low & High

Test Mode HSDPA V Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
823.997	-20.00	-13.00	7.00
849.003	-21.09	-13.00	8.09

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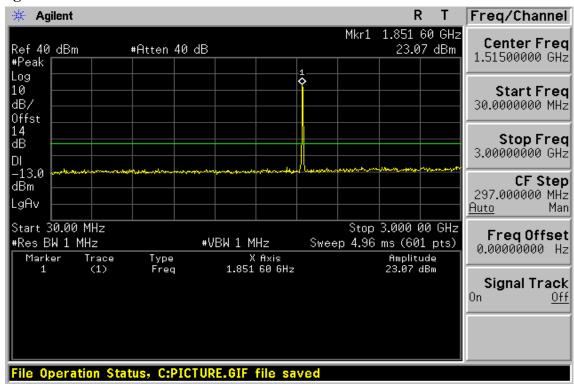
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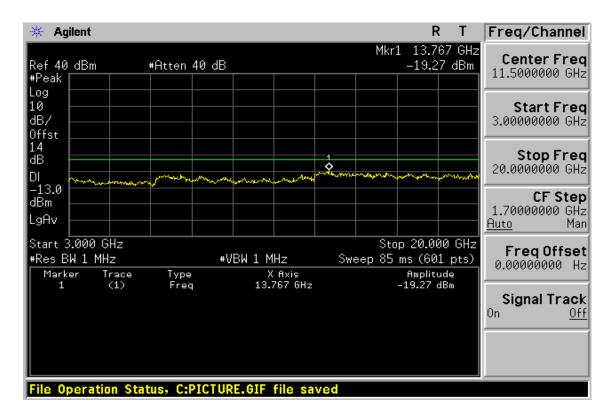
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Figure 9-51: Out of Band emission at antenna terminals – HSUPA II Channel Lowest





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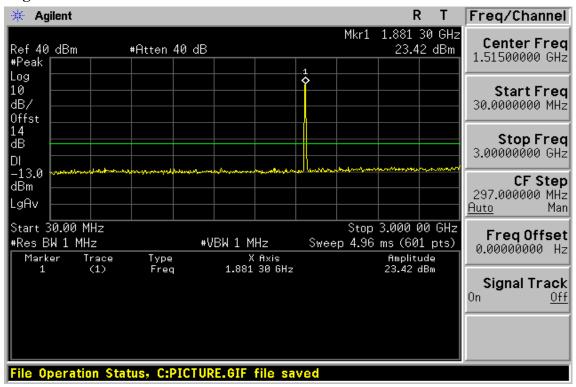
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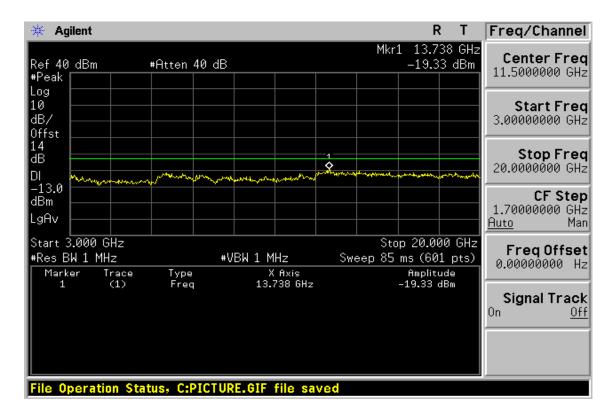
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Figure 9-52: Out of Band emission at antenna terminals – HSUPA II Channel Mid





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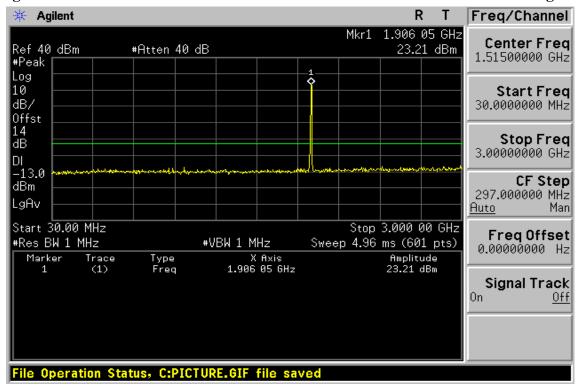
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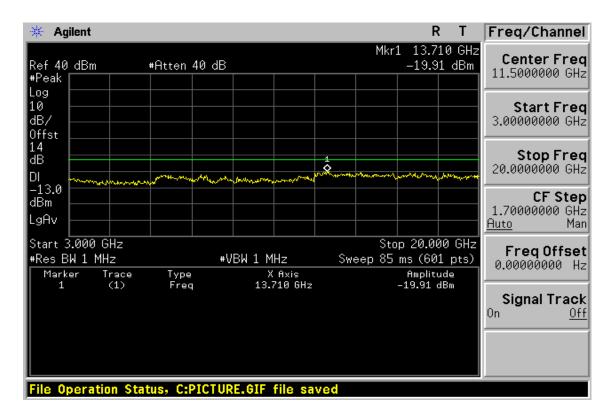
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Figure 9-53: Out of Band emission at antenna terminals – HSUPA II Channel Highest





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Out of Band emission at antenna terminals - HSUPA II

Fundamental Frequency :1852.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3704.80	Н		-13.00	
5557.20	Н		-13.00	
7409.60	Н		-13.00	
9262.00	Н		-13.00	
11114.40	Н		-13.00	
12966.80	Н		-13.00	
13767.00	S	-19.27	-13.00	6.27
14819.20	Н		-13.00	
16671.60	Н		-13.00	
18524.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
13738.00	S	-19.33	-13.00	6.33
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	

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Fundamental Frequency :1907.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3815.20	Н		-13.00	
5722.80	Н		-13.00	
7630.40	Н		-13.00	
9538.00	Н		-13.00	
11445.60	Н		-13.00	
13353.20	Н		-13.00	
13710.00	S	-19.91	-13.00	6.91
15260.80	Н		-13.00	
17168.40	Н		-13.00	
19076.00	Н		-13.00	

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Figure 9-54: Band edge emission at antenna terminals – HSUPA II Channel Lowest

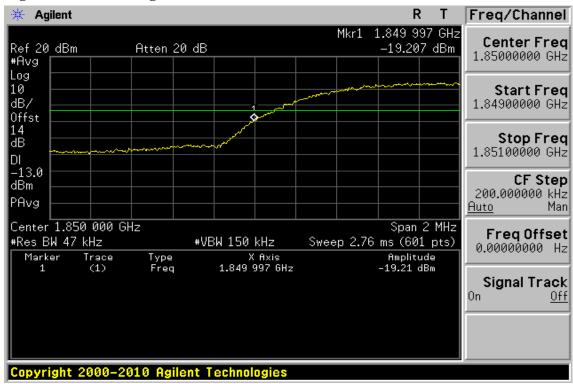


Figure 9-55: Band edge emission at antenna terminals – HSUPA II Channel Highest



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Band edge emission at antenna terminals - HSUPA II Low & High

Engineer Test Mode **HSUPA II** :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1940 007	-19.21	-13.00	6.21
1849.997 1910.003	-19.21 -19.65	-13.00	6.65

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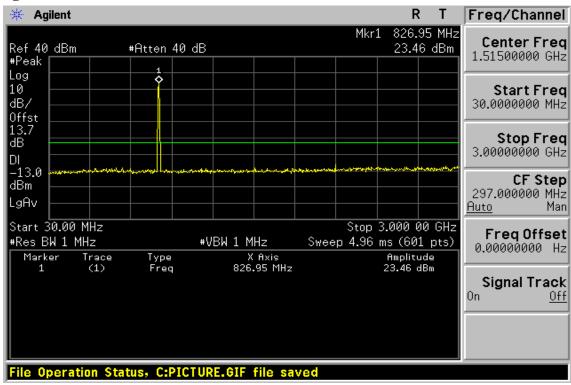
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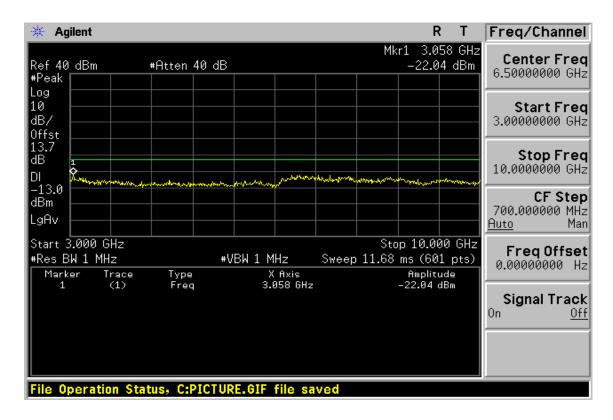
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Figure 9-56: Out of Band emission at antenna terminals – HSUPA V Channel Lowest





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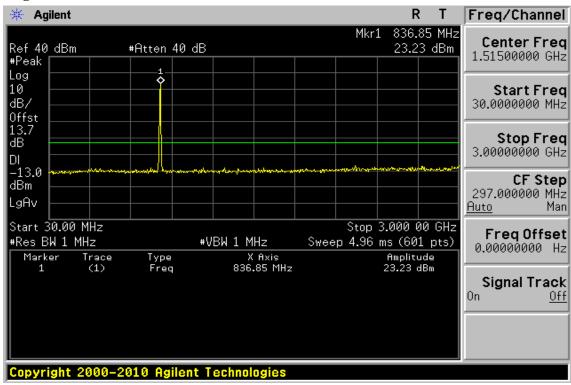
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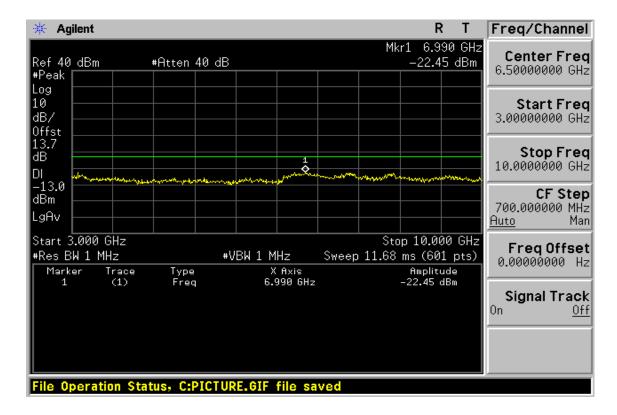
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Figure 9-57: Out of Band emission at antenna terminals – HSUPA V Channel Mid





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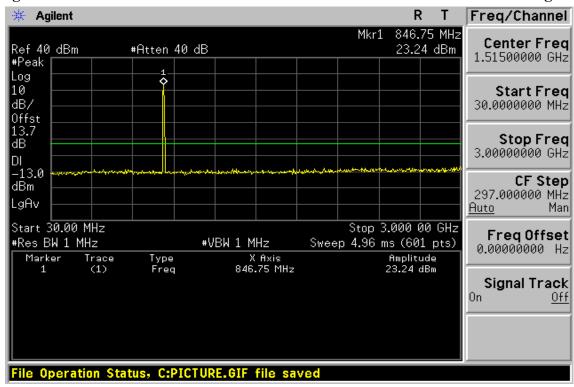
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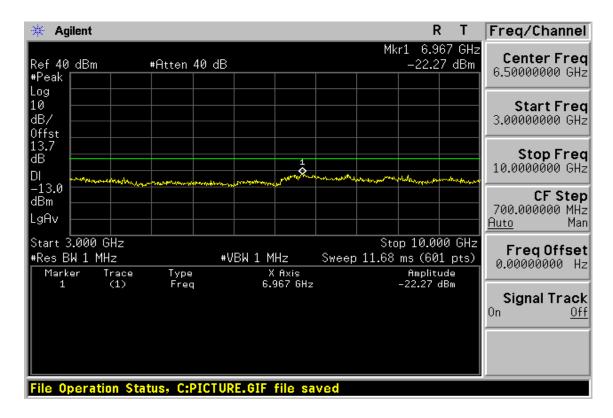
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Figure 9-58: Out of Band emission at antenna terminals – HSUPA V Channel Highest





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Out of Band emission at antenna terminals - HSUPA V

Fundamental Frequency :826.4 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1652.80	Н		-13.00	
2479.20	Н		-13.00	
3058.00	S	-22.04	-13.00	9.04
3305.60	Н		-13.00	
4132.00	Н		-13.00	
4958.40	Н		-13.00	
5784.80	Н		-13.00	
6611.20	Н		-13.00	
7437.60	Н		-13.00	
8264.00	Н		-13.00	

Note: "H": denotes Harmonic Frequency. "S": denotes Spurious Frequency.

"---": denotes Noise Floor.

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Fundamental Frequency :836.6 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.20	Н		-13.00	
2509.80	Н		-13.00	
3346.40	Н		-13.00	
4183.00	Н		-13.00	
5019.60	Н		-13.00	
5856.20	Н		-13.00	
6692.80	Н		-13.00	
6990.00	S	-22.45	-13.00	9.45
7529.40	Н		-13.00	
8366.00	Н		-13.00	
0200.00				

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"---": denotes Noise Floor.

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Fundamental Frequency :846.6MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1693.20	Н		-13.00	
2539.80	Н		-13.00	
3386.40	Н		-13.00	
4233.00	Н		-13.00	
5079.60	Н		-13.00	
5926.20	Н		-13.00	
6772.80	Н		-13.00	
6967.00	S	-22.27	-13.00	9.27
7619.40	Н		-13.00	
8466.00	Н		-13.00	

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"---": denotes Noise Floor.

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Figure 9-59: Band edge emission at antenna terminals – HSUPA V Channel Lowest

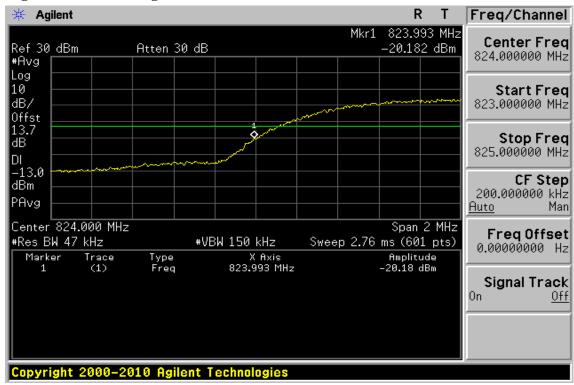
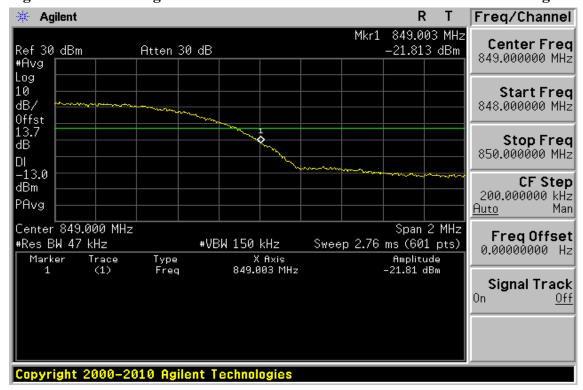


Figure 9-60: Band edge emission at antenna terminals – HSUPA V Channel Highest



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Band edge emission at antenna terminals - HSUPA V Low & High

Test Mode HSUPA V Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
823.993	-20.18	-13.00	7.18
849.003	-21.81	-13.00	8.81

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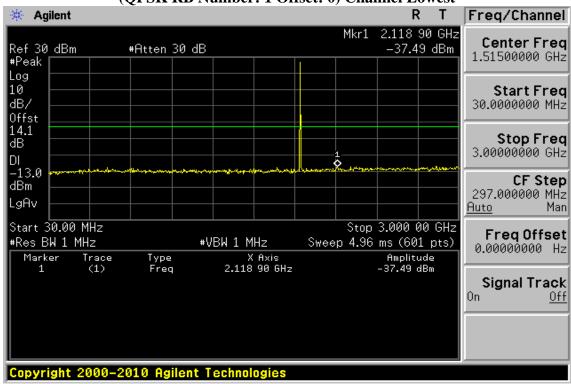
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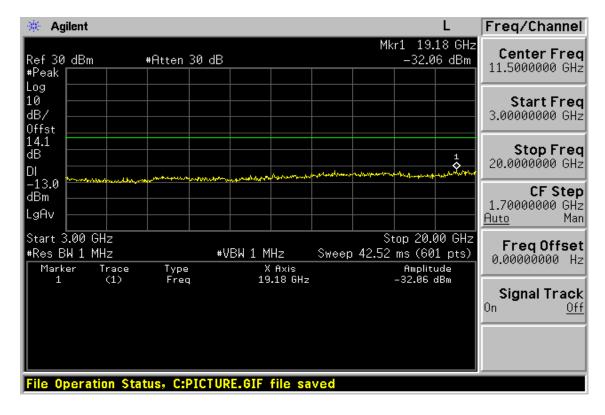
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Figure 9-61: Out of Band emission at antenna terminals–1.4MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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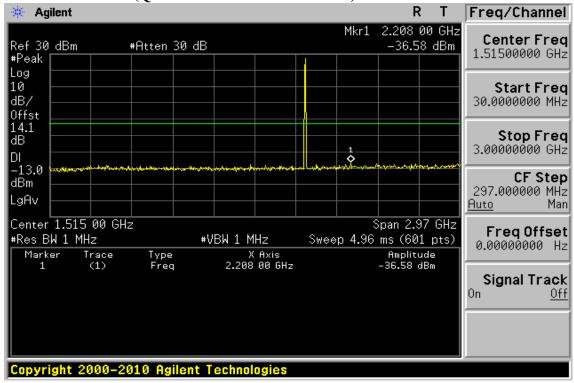
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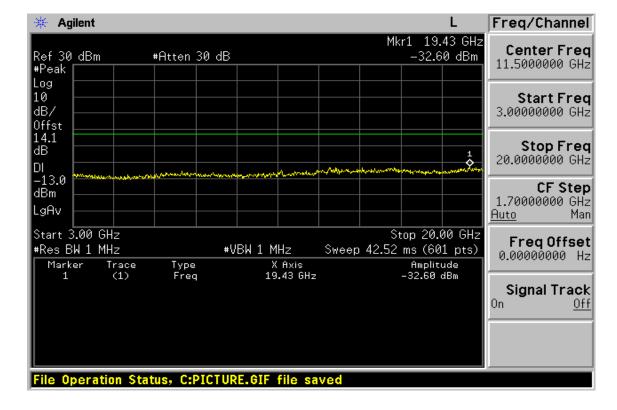
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Figure 9-62: Out of Band emission at antenna terminals –1.4MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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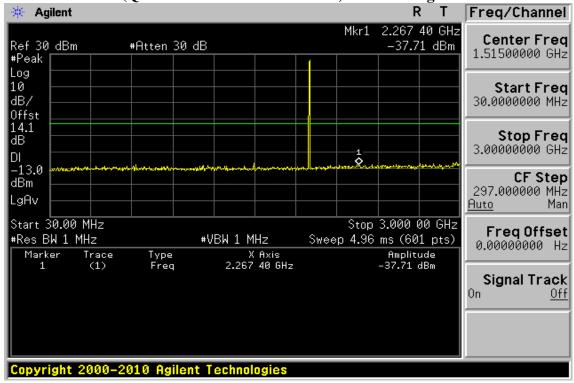
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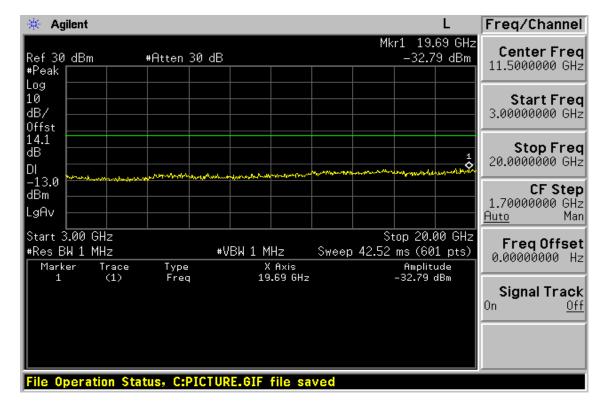
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Figure 9-63: Out of Band emission at antenna terminals–1.4MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals -1.4MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1850.7MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3701.40	H		-13.00	
5552.10	Н		-13.00	
7402.80	Н		-13.00	
9253.50	Н		-13.00	
11104.20	Н		-13.00	
12954.90	Н		-13.00	
14805.60	Н		-13.00	
16656.30	Н		-13.00	
18507.00	Н		-13.00	
19180.00	S	-32.06	-13.00	19.06

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
19430.00	S	-32.60	-13.00	19.60

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Fundamental Frequency :1909.3MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3818.60	Н		-13.00	
5727.90	Н		-13.00	
7637.20	Н		-13.00	
9546.50	Н		-13.00	
11455.80	Н		-13.00	
13365.10	Н		-13.00	
15274.40	Н		-13.00	
17183.70	Н		-13.00	
19093.00	Н		-13.00	
19690.00	S	-32.79	-13.00	19.79

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Figure 9-64: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest

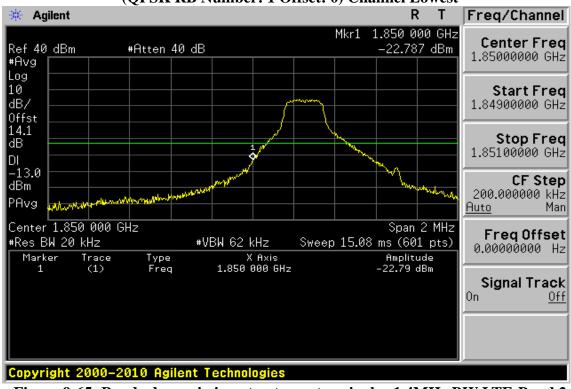
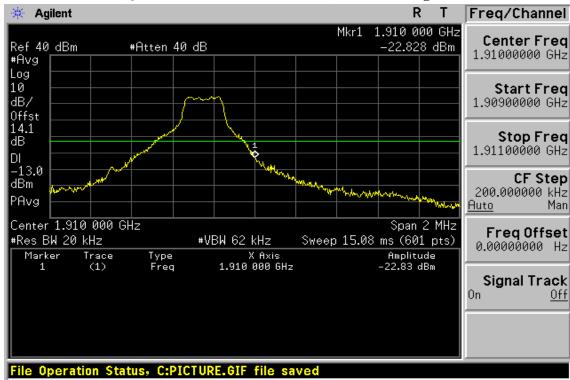


Figure 9-65: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 5) Channel Highest



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Band edge emission at antenna terminals -1.4MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 5)

Test Mode 1.4MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-22.79	-13.00	9.79
1910.000	-22.83	-13.00	9.83

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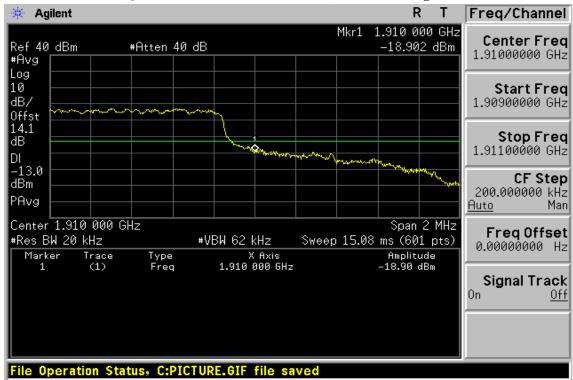


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Figure 9-66: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 2 (QPSK RB Number: 6 Offset: 0) Channel Lowest



Figure 9-67: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 2 (QPSK RB Number: 6 Offset: 0) Channel Highest



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Band edge emission at antenna terminals -1.4MHz BW LTE-Band 2

(QPSK RB Number: 6 Offset: 0) (QPSK RB Number: 6 Offset: 0)

Test Mode 1.4MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-22.17	-13.00	9.17
1910.000	-18.90	-13.00	5.90

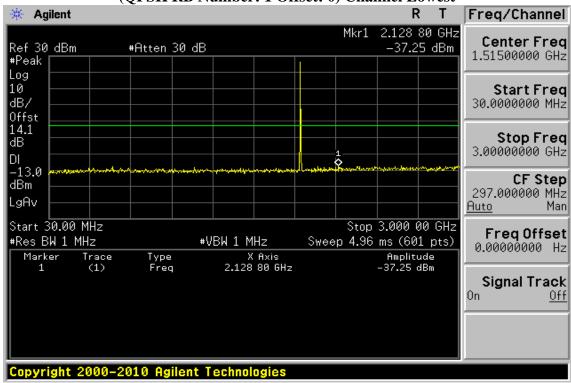
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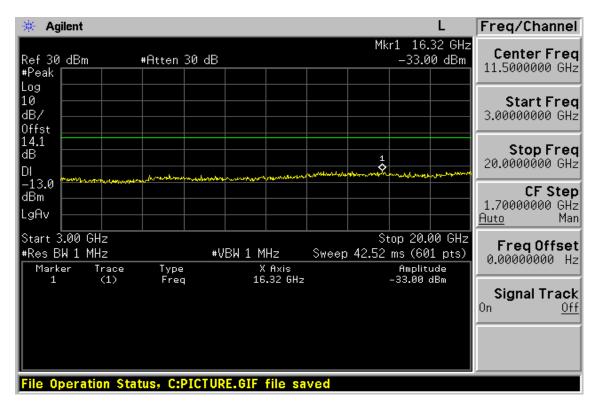
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Figure 9-68: Out of Band emission at antenna terminals–3MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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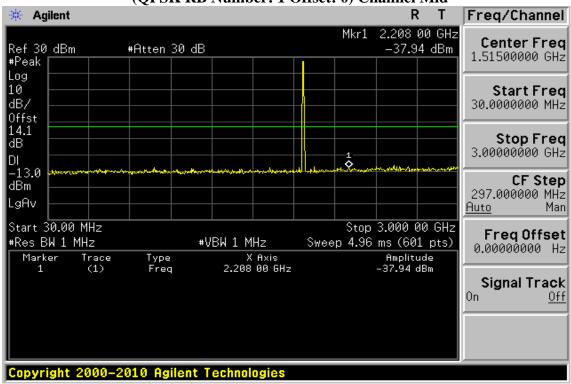
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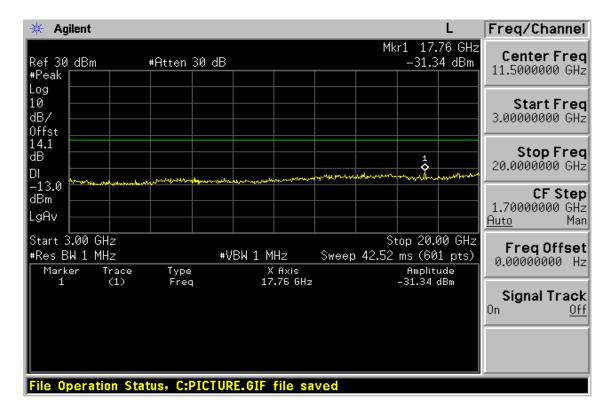
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Figure 9-69: Out of Band emission at antenna terminals –3MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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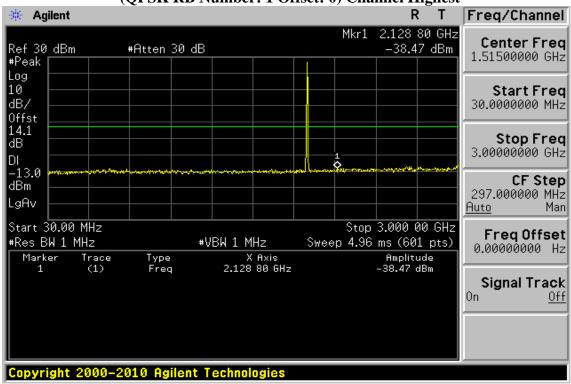
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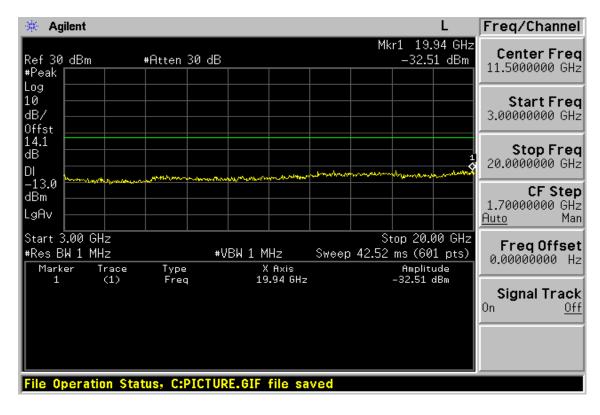
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Figure 9-70: Out of Band emission at antenna terminals–3MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –3MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1851.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3703.00	H		-13.00	
5554.50	H		-13.00	
7406.00	H		-13.00	
9257.50	Н		-13.00	
11109.00	H		-13.00	
12960.50	Н		-13.00	
14812.00	Н		-13.00	
16320.00	S	-33.00	-13.00	20.00
16663.50	Н		-13.00	
18515.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
17760.00	S	-31.34	-13.00	18.34
18800.00	Н		-13.00	
10000.00				

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"---": denotes Noise Floor.

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Fundamental Frequency :1908.5MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3817.00	Н		-13.00	
5725.50	Н		-13.00	
7634.00	Н		-13.00	
9542.50	Н		-13.00	
11451.00	Н		-13.00	
13359.50	Н		-13.00	
15268.00	Н		-13.00	
17176.50	Н		-13.00	
19085.00	Н		-13.00	
19940.00	S	-32.51	-13.00	19.51

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-71: Band edge emission at antenna terminals –3MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest

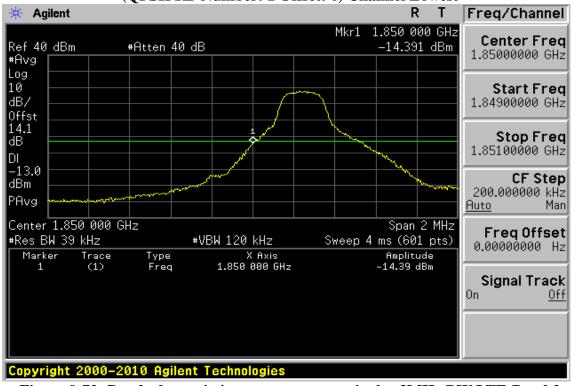
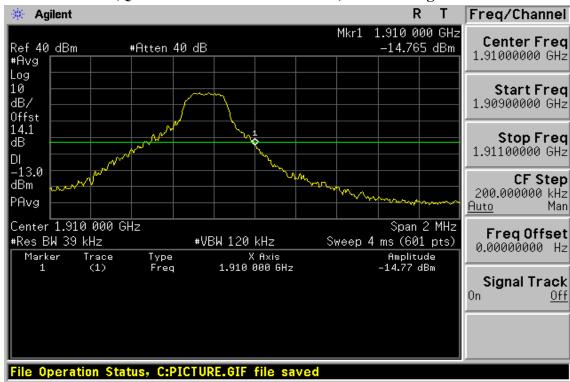


Figure 9-72: Band edge emission at antenna terminals –3MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 14) Channel Highest



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Band edge emission at antenna terminals -3MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 14)

Test Mode 3MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-14.39	-13.00	1.39
1910.000	-14.77	-13.00	1.77

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Figure 9-73: Band edge emission at antenna terminals –3MHz BW LTE-Band 2 (QPSK RB Number: 15 Offset: 0) Channel Lowest

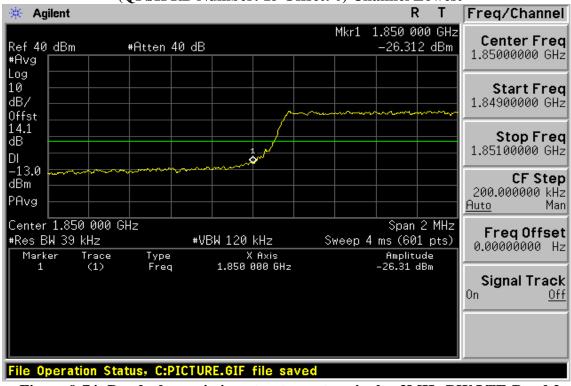
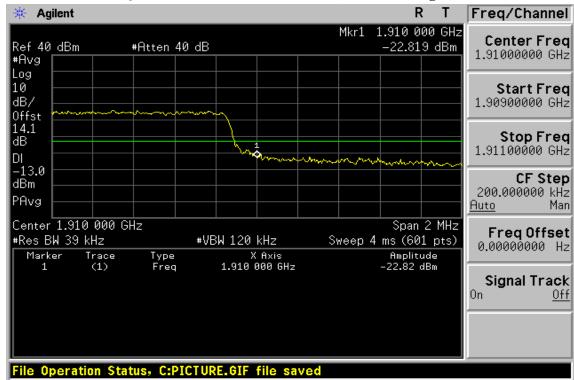


Figure 9-74: Band edge emission at antenna terminals –3MHz BW LTE-Band 2 (QPSK RB Number: 15 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –3MHz BW LTE-Band 2

(QPSK RB Number: 15 Offset: 0)

Test Mode 3MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-26.31	-13.00	13.31
1910.000	-22.82	-13.00	9.82

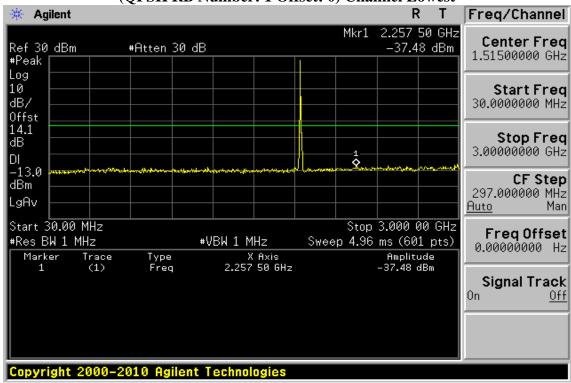
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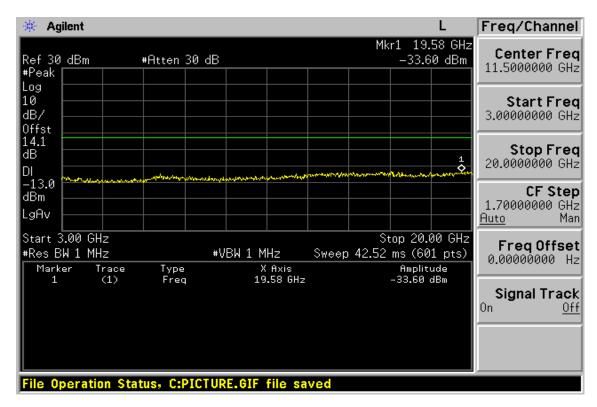
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Figure 9-75: Out of Band emission at antenna terminals-5MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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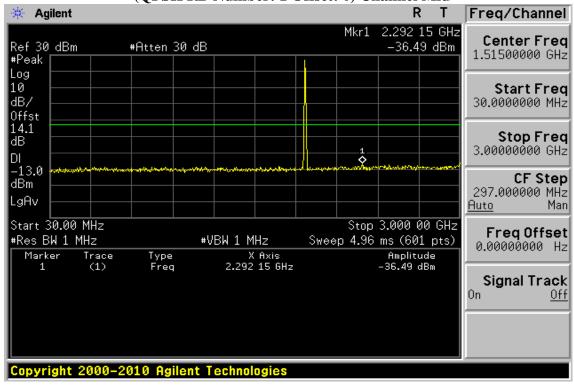
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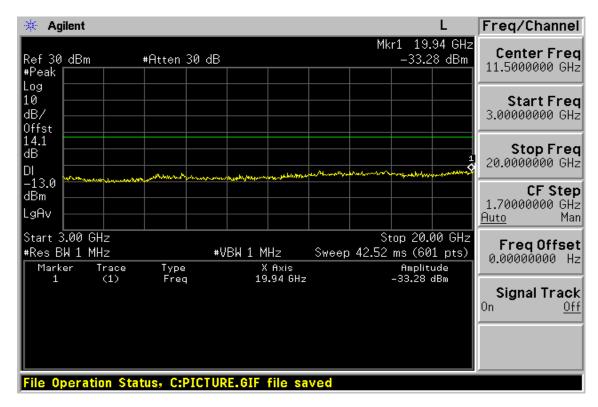
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Figure 9-76: Out of Band emission at antenna terminals –5MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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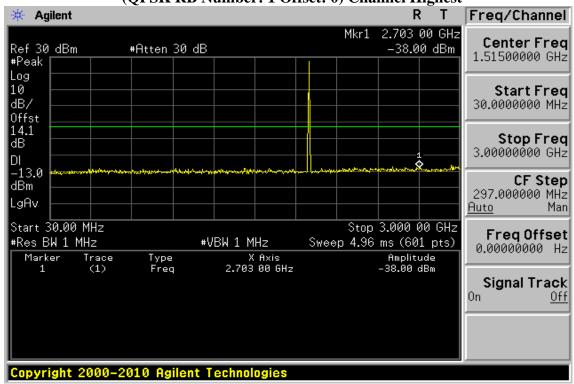
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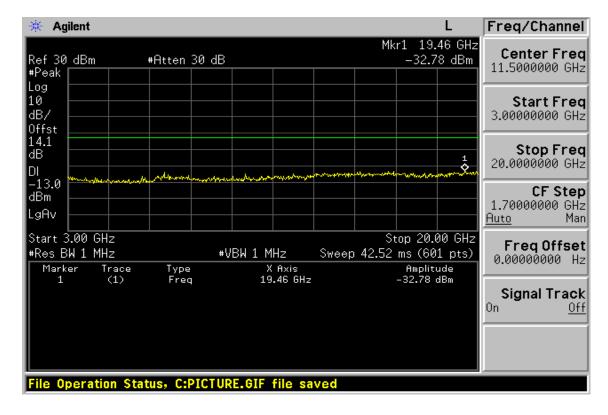
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Figure 9-77: Out of Band emission at antenna terminals-5MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –5MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1852.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3705.00	H		-13.00	
5557.50	H		-13.00	
7410.00	H		-13.00	
9262.50	Н		-13.00	
11115.00	Н		-13.00	
12967.50	Н		-13.00	
14820.00	Н		-13.00	
16672.50	Н		-13.00	
18525.00	Н		-13.00	
19580.00	S	-33.60	-13.00	20.60

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	H		-13.00	
7520.00	H		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
19940.00	S	-33.28	-13.00	20.28

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1907.5MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3815.00	Н		-13.00	
5722.50	Н		-13.00	
7630.00	Н		-13.00	
9537.50	Н		-13.00	
11445.00	Н		-13.00	
13352.50	Н		-13.00	
15260.00	Н		-13.00	
17167.50	Н		-13.00	
19075.00	Н		-13.00	
19460.00	S	-32.78	-13.00	19.78

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-78: Band edge emission at antenna terminals –5MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest

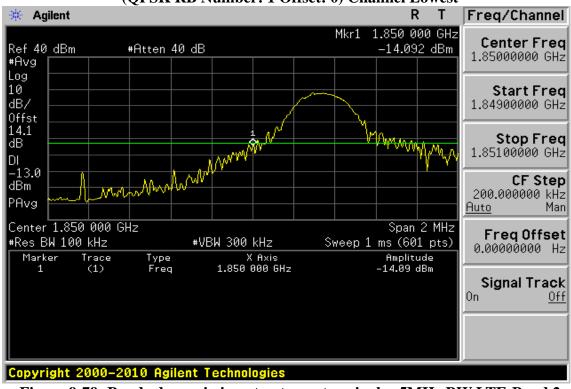
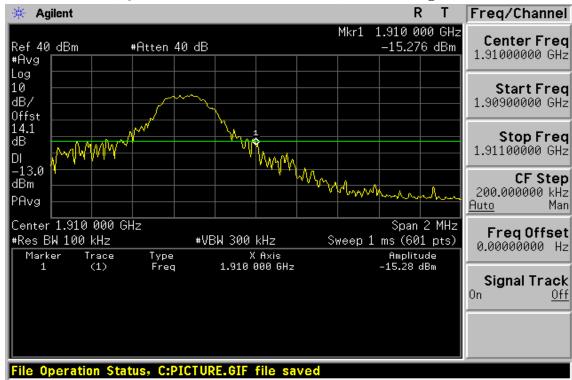


Figure 9-79: Band edge emission at antenna terminals –5MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 24) Channel Highest



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Band edge emission at antenna terminals -5MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 24)

Test Mode 5MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1050,000	-14.09	-13.00	1.09
1850.000 1910.000	-14.09	-13.00	2.28

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Figure 9-80: Band edge emission at antenna terminals –5MHz BW LTE-Band 2 (QPSK RB Number: 25 Offset: 0) Channel Lowest

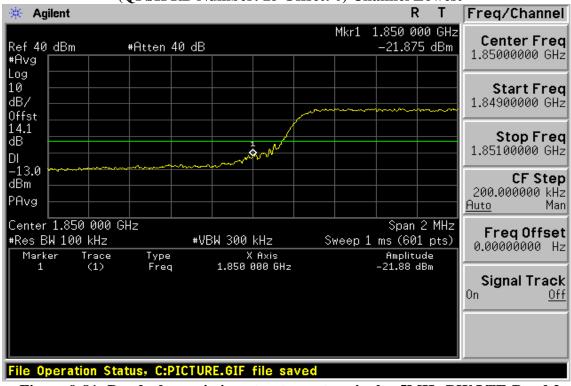
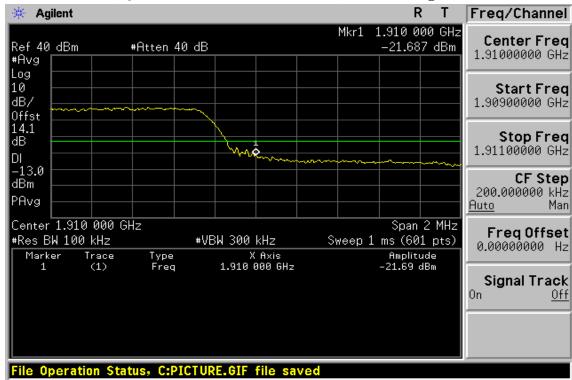


Figure 9-81: Band edge emission at antenna terminals –5MHz BW LTE-Band 2 (QPSK RB Number: 25 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –5MHz BW LTE-Band 2

(QPSK RB Number: 25 Offset: 0)

Test Mode 5MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-21.88	-13.00	8.88
1910.000	-21.69	-13.00	8.69

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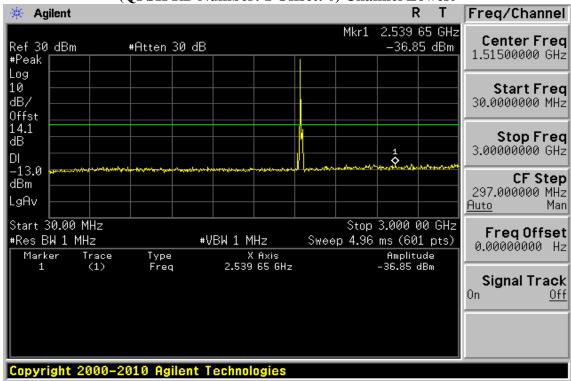
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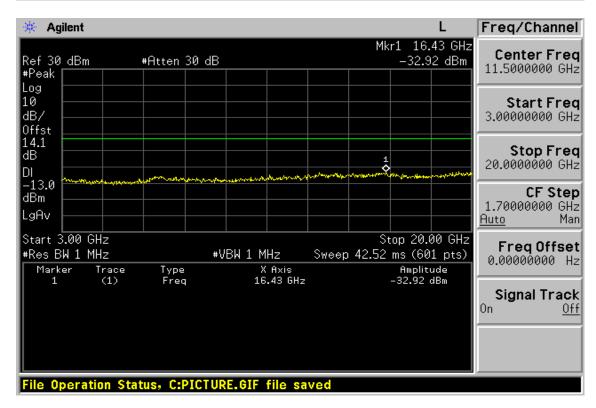
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Figure 9-82: Out of Band emission at antenna terminals—10MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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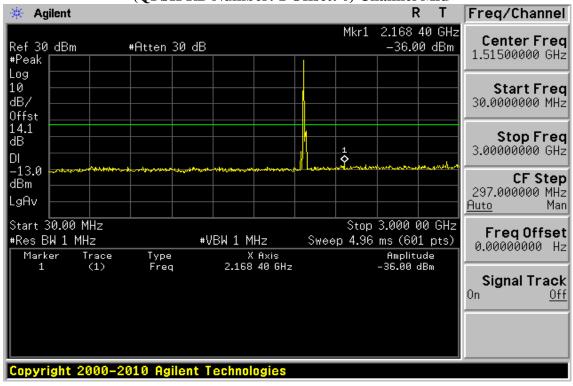
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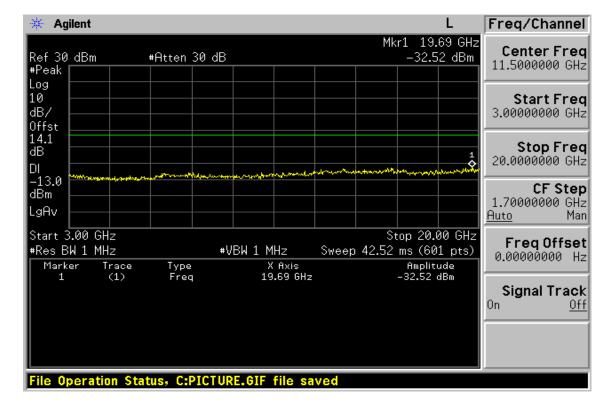
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Figure 9-83: Out of Band emission at antenna terminals –10MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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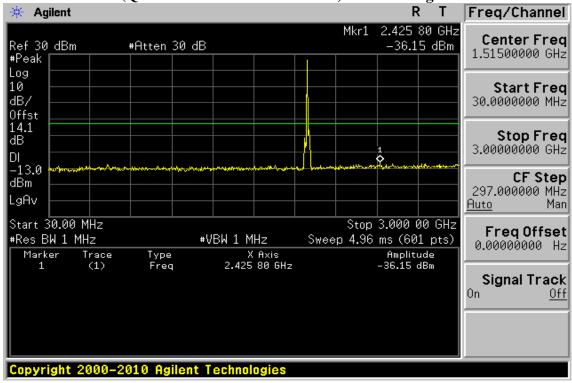
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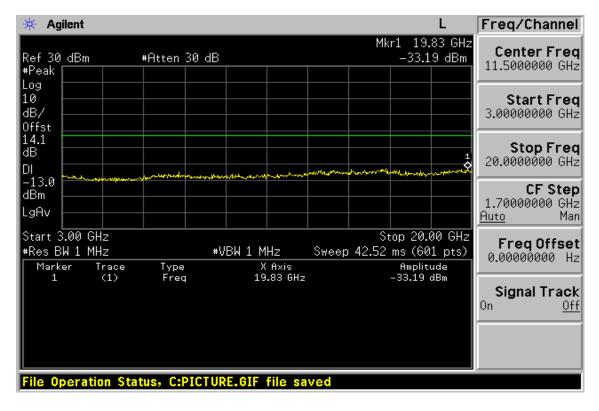
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Figure 9-84: Out of Band emission at antenna terminals—10MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals -10MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1855.0 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3710.00	H		-13.00	
5565.00	Н		-13.00	
7420.00	H		-13.00	
9275.00	Н		-13.00	
11130.00	Н		-13.00	
12985.00	Н		-13.00	
14840.00	Н		-13.00	
16430.00	S	-32.92	-13.00	19.92
16695.00	Н		-13.00	
18550.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0 MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
19690.00	S	-32.52	-13.00	19.52

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1905.0MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3810.00	Н		-13.00	
5715.00	Н		-13.00	
7620.00	Н		-13.00	
9525.00	Н		-13.00	
11430.00	Н		-13.00	
13335.00	Н		-13.00	
15240.00	Н		-13.00	
17145.00	Н		-13.00	
19050.00	Н		-13.00	
19830.00	S	-33.19	-13.00	20.19

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Fus Freque

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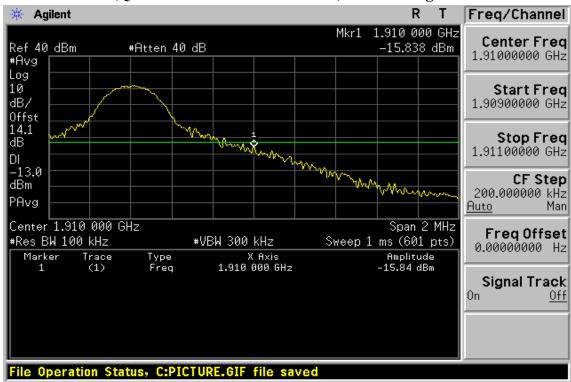


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Figure 9-85: Band edge emission at antenna terminals –10MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest



Figure 9-86: Band edge emission at antenna terminals –10MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 49) Channel Highest



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Band edge emission at antenna terminals -10 MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 49)

Test Mode 10MHz BW LTE-Band 2 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-16.88	-13.00	3.88
1910.000	-15.84	-13.00	2.84

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Figure 9-87: Band edge emission at antenna terminals –10MHz BW LTE-Band 2 (QPSK RB Number: 50 Offset: 0) Channel Lowest

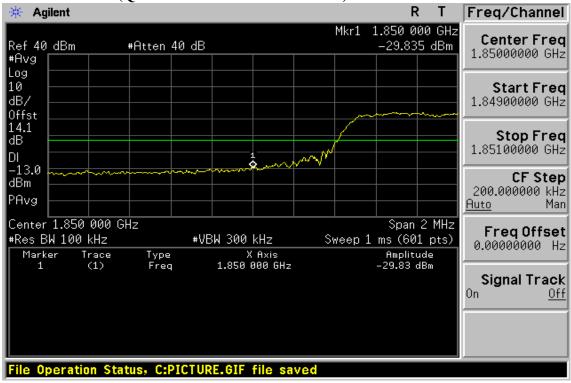
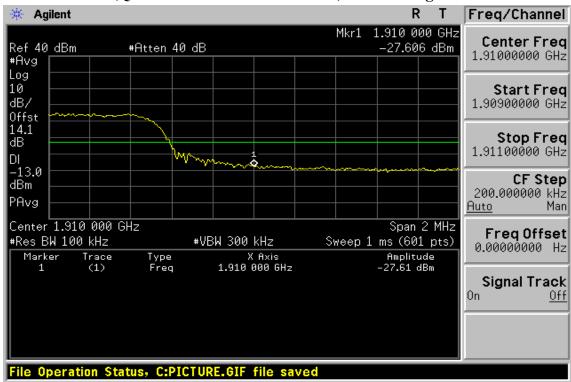


Figure 9-88: Band edge emission at antenna terminals –10MHz BW LTE-Band 2 (QPSK RB Number: 50 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –10MHz BW LTE-Band 2

(QPSK RB Number: 50 Offset: 0)

Test Mode 10MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-29.83	-13.00	16.83
1910.000	-27.61	-13.00	14.61

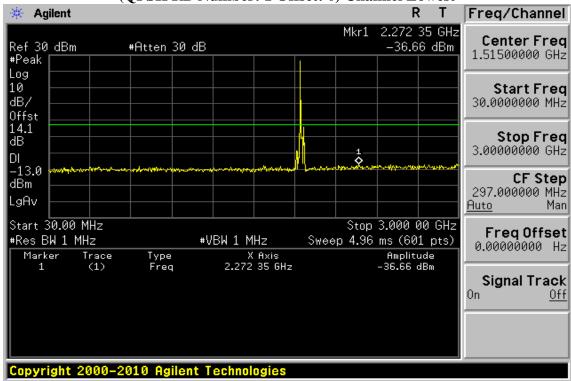
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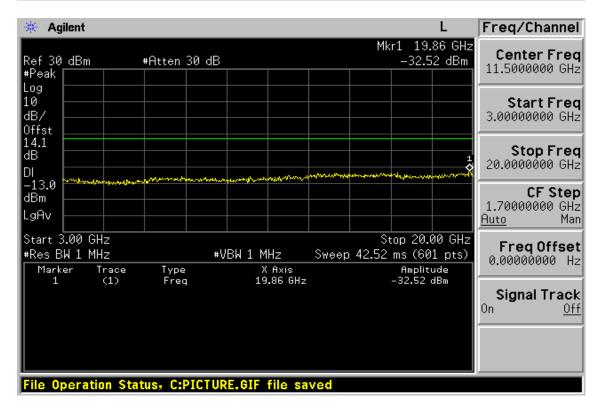
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Figure 9-89: Out of Band emission at antenna terminals—15MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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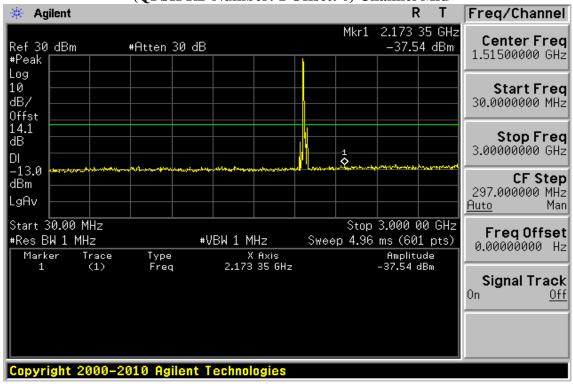
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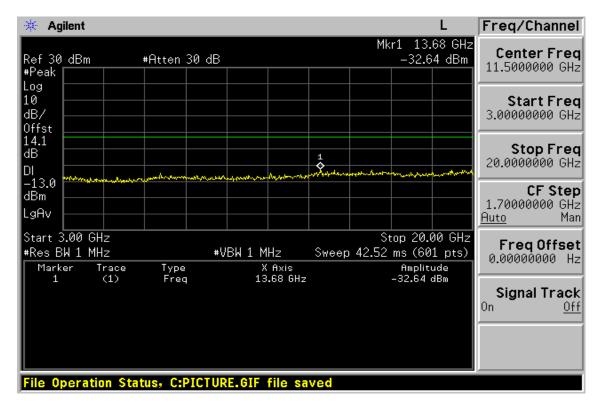
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Figure 9-90: Out of Band emission at antenna terminals –15MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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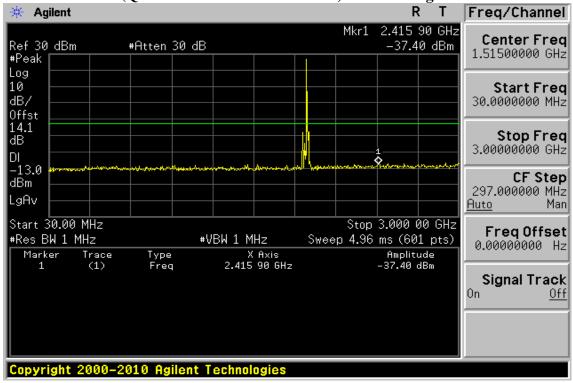
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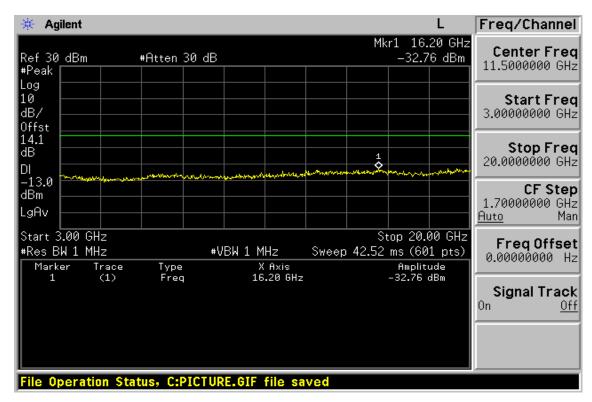
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Figure 9-91: Out of Band emission at antenna terminals—15MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –15MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1857.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3715.00	Н		-13.00	
5572.50	Н		-13.00	
7430.00	Н		-13.00	
9287.50	Н		-13.00	
11145.00	Н		-13.00	
13002.50	Н		-13.00	
14860.00	Н		-13.00	
16717.50	Н		-13.00	
18575.00	Н		-13.00	
19860.00	S	-32.52	-13.00	19.52

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	Н		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
13680.00	S	-32.64	-13.00	19.64
15040.00	Н		-13.00	
16920.00	Н		-13.00	
18800.00	Н		-13.00	
10000.00				

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1902.5MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3805.00	Н		-13.00	
5707.50	Н		-13.00	
7610.00	Н		-13.00	
9512.50	Н		-13.00	
11415.00	H		-13.00	
13317.50	Н		-13.00	
15220.00	H		-13.00	
16200.00	S	-32.76	-13.00	19.76
17122.50	Н		-13.00	
19025.00	Н		-13.00	

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Figure 9-92: Band edge emission at antenna terminals –15MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest

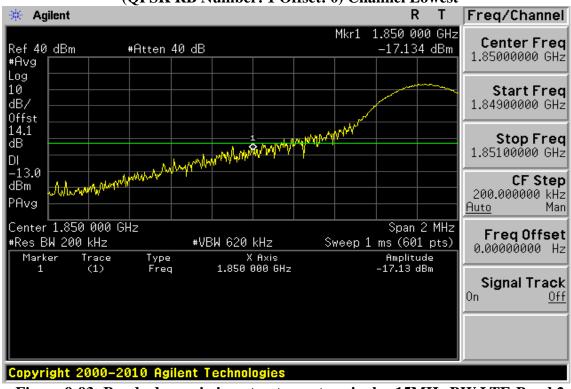
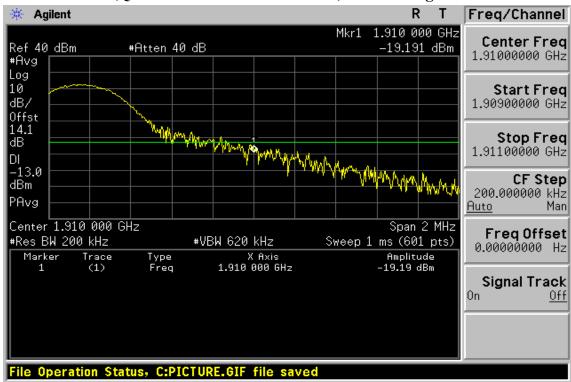


Figure 9-93: Band edge emission at antenna terminals –15MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 74) Channel Highest



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Band edge emission at antenna terminals –15MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 74)

Test Mode 15MHz BW LTE-Band 2 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-17.13	-13.00	4.13
1910.000	-19.19	-13.00	6.19

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Figure 9-94: Band edge emission at antenna terminals –15MHz BW LTE-Band 2 (QPSK RB Number: 75 Offset: 0) Channel Lowest

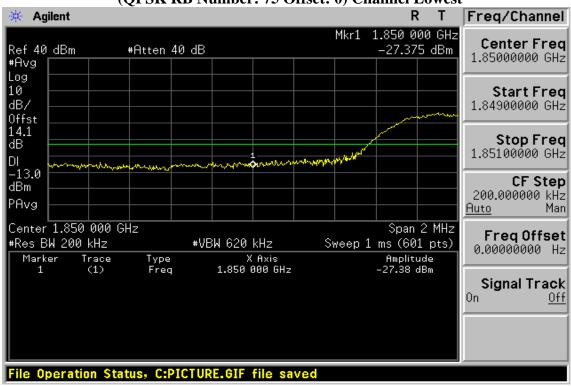
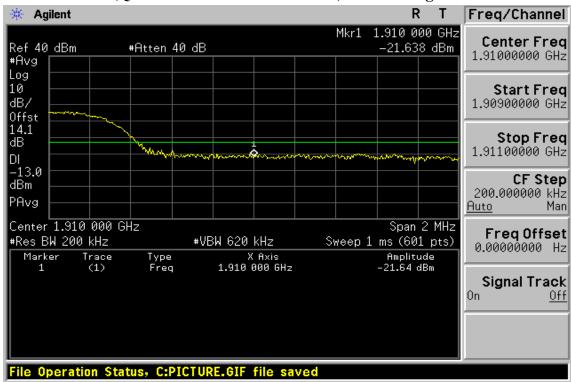


Figure 9-95: Band edge emission at antenna terminals –15MHz BW LTE-Band 2 (QPSK RB Number: 75 Offset: 0) Channel Highest



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Band edge emission at antenna terminals 15MHz BW LTE-Band 2 (QPSK RB Number: 75 Offset: 0)

Test Mode 15MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
	27.20	12.00	14.20
1850.000	-27.38	-13.00	14.38
1910.000	-21.64	-13.00	8.64

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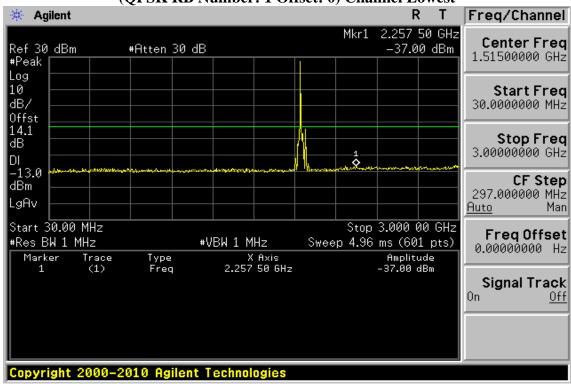
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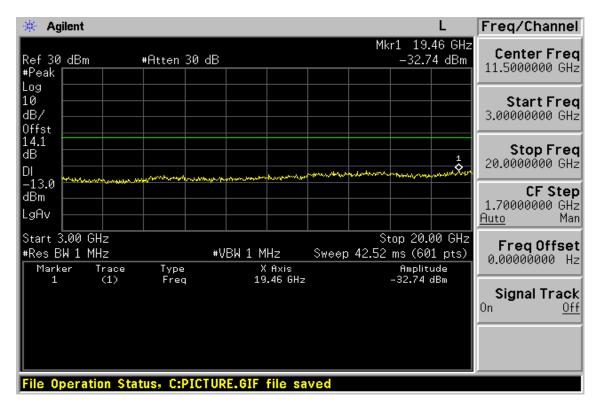
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Figure 9-96: Out of Band emission at antenna terminals-20MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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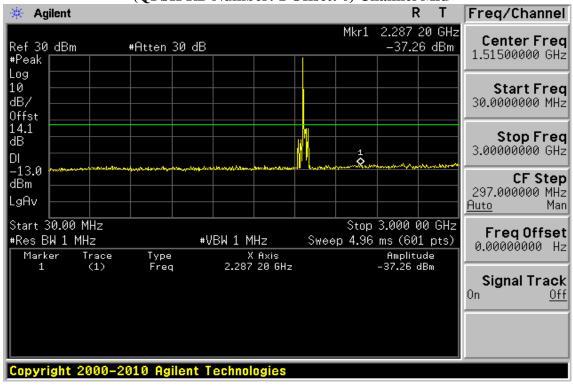
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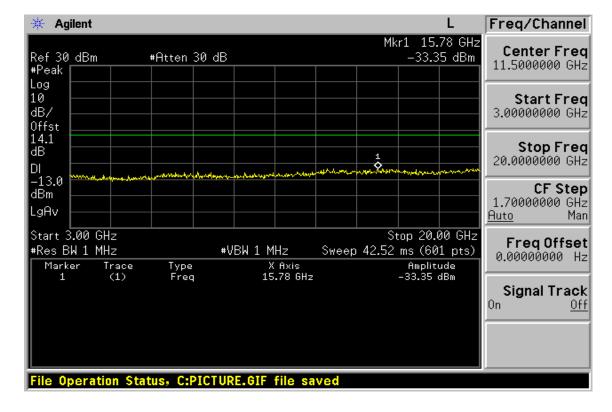
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Figure 9-97: Out of Band emission at antenna terminals –20MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Mid





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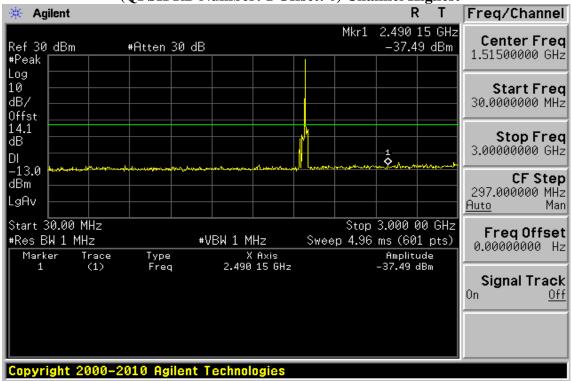
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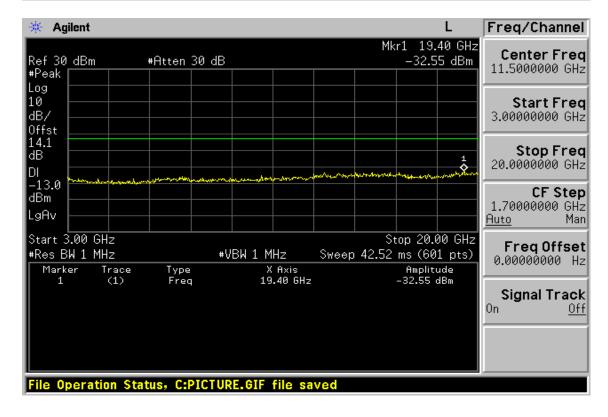
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Figure 9-98: Out of Band emission at antenna terminals-20MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals -20MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :1860.0MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3720.00	H		-13.00	
5580.00	Н		-13.00	
7440.00	Н		-13.00	
9300.00	Н		-13.00	
11160.00	Н		-13.00	
13020.00	Н		-13.00	
14880.00	Н		-13.00	
16740.00	Н		-13.00	
18600.00	Н		-13.00	
19460.00	S	-32.74	-13.00	19.74

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :1880.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
3760.00	H		-13.00	
5640.00	Н		-13.00	
7520.00	Н		-13.00	
9400.00	Н		-13.00	
11280.00	Н		-13.00	
13160.00	Н		-13.00	
15040.00	Н		-13.00	
15780.00	S	-33.35	-13.00	20.35
16920.00	Н		-13.00	
18800.00	Н		-13.00	
10000.00				

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Fundamental Frequency :1900.0MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
3800.00	Н		-13.00	
5700.00	Н		-13.00	
7600.00	Н		-13.00	
9500.00	Н		-13.00	
11400.00	Н		-13.00	
13300.00	Н		-13.00	
15200.00	Н		-13.00	
17100.00	Н		-13.00	
19000.00	Н		-13.00	
19400.00	S	-32.55	-13.00	19.55

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-99: Band edge emission at antenna terminals -20MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 0) Channel Lowest

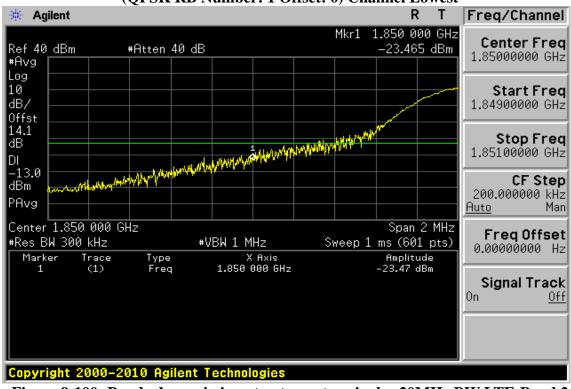
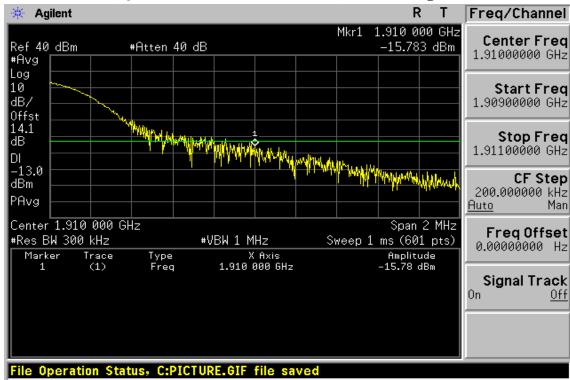


Figure 9-100: Band edge emission at antenna terminals –20MHz BW LTE-Band 2 (QPSK RB Number: 1 Offset: 99) Channel Highest



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Band edge emission at antenna terminals -20 MHz BW LTE-Band 2

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 99)

Test Mode 15MHz BW LTE-Band 4 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-23.47	-13.00	10.47
1910.000	-15.78	-13.00	2.78

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Figure 9-101: Band edge emission at antenna terminals –20MHz BW LTE-Band 2 (QPSK RB Number: 100 Offset: 0) Channel Lowest

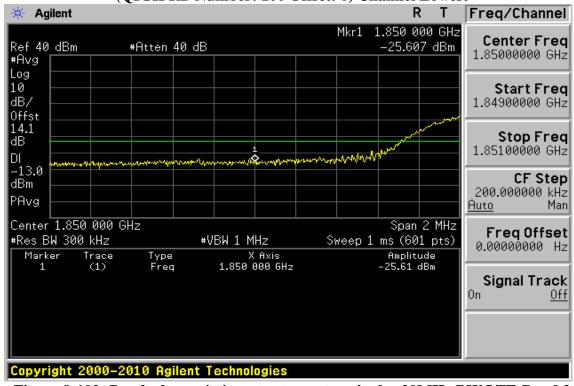
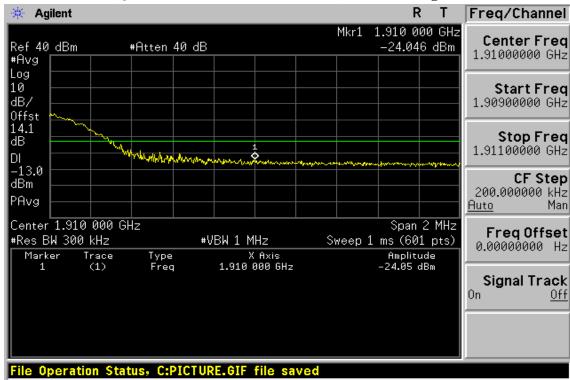


Figure 9-102: Band edge emission at antenna terminals –20MHz BW LTE-Band 2 (QPSK RB Number: 100 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –20MHz BW LTE-Band 2

(QPSK RB Number: 100 Offset: 0)

Test Mode 20MHz BW LTE-Band 2 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
1850.000	-25.61	-13.00	12.61
1910.000	-24.05	-13.00	11.05

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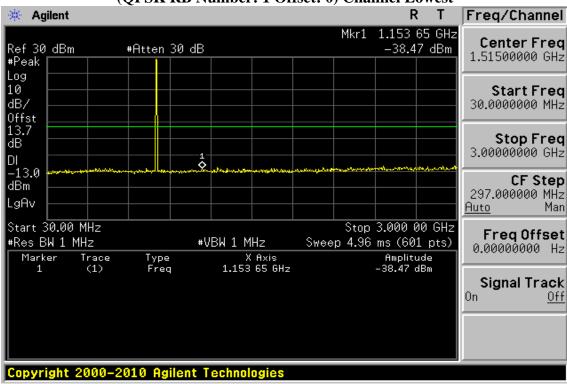
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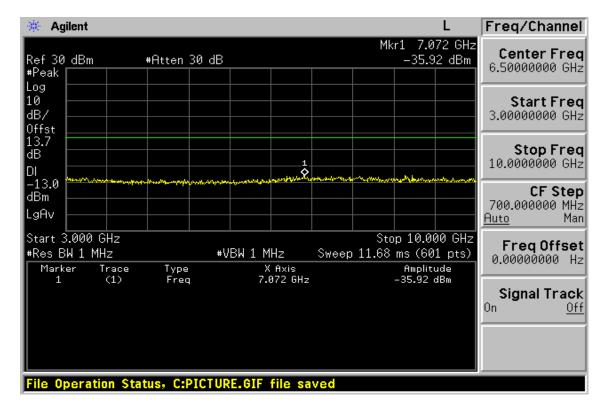
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Figure 9-103: Out of Band emission at antenna terminals—1.4MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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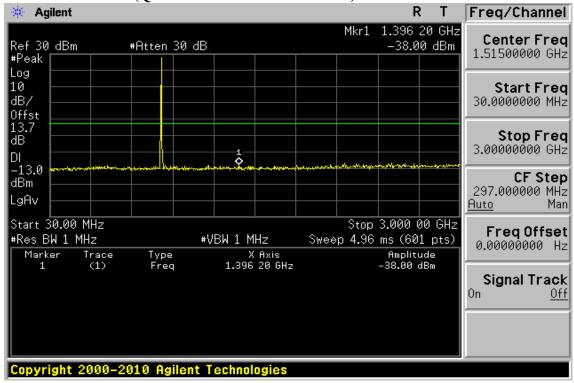
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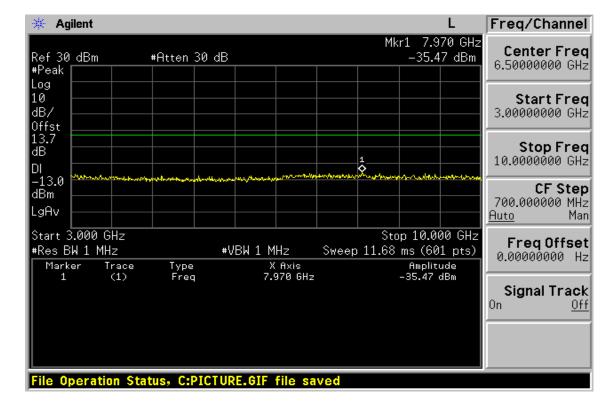
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Figure 9-104: Out of Band emission at antenna terminals –1.4MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Mid





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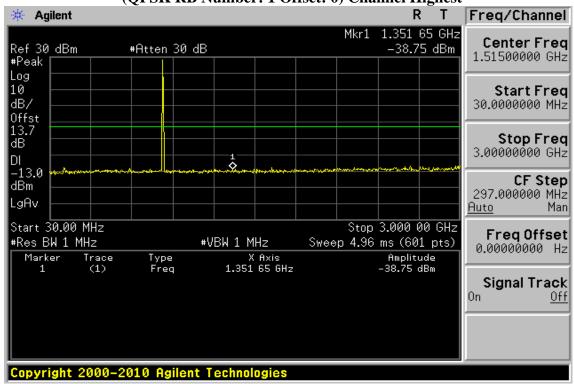
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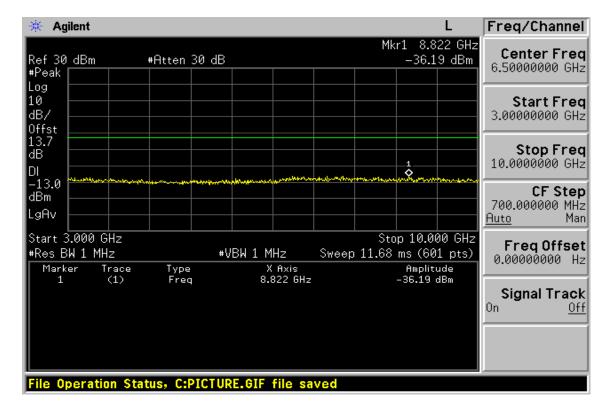
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Figure 9-105: Out of Band emission at antenna terminals—1.4MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals -1.4MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :824.7MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1649.40	Н		-13.00	
2474.10	Н		-13.00	
3298.80	Н		-13.00	
4123.50	Н		-13.00	
4948.20	Н		-13.00	
5772.90	Н		-13.00	
6597.60	Н		-13.00	
7072.00	S	-35.92	-13.00	22.92
7422.30	Н		-13.00	
8247.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :836.5MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.00	Н		-13.00	
2509.50	H		-13.00	
3346.00	H		-13.00	
4182.50	Н		-13.00	
5019.00	Н		-13.00	
5855.50	Н		-13.00	
6692.00	Н		-13.00	
7528.50	Н		-13.00	
7970.00	S	-35.47	-13.00	22.47
8365.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :848.3MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1696.60	Н		-13.00	
2544.90	Н		-13.00	
3393.20	Н		-13.00	
4241.50	Н		-13.00	
5089.80	Н		-13.00	
5938.10	Н		-13.00	
6786.40	Н		-13.00	
7634.70	Н		-13.00	
8483.00	Н		-13.00	
8822.00	S	-36.19	-13.00	23.19

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: """notes Spurious Frequreque

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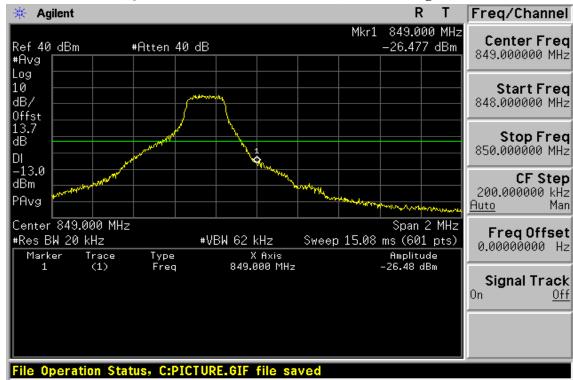


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Figure 9-106: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest



Figure 9-107: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 5) Channel Highest



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Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 5)

Test Mode 1.4MHz BW LTE-Band 5 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-20.75	-13.00	7.75
849.000	-26.48	-13.00	13.48

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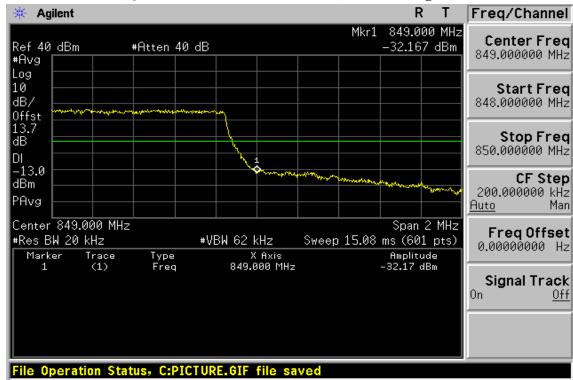


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Figure 9-108: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5 (QPSK RB Number: 6 Offset: 0) Channel Lowest



Figure 9-109: Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5 (QPSK RB Number: 6 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –1.4MHz BW LTE-Band 5

(QPSK RB Number: 6 Offset: 0)

Test Mode 1.4MHz BW LTE-Band 5 :Nick Engineer

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-31.82	-13.00	18.82
849.000	-32.17	-13.00	19.17

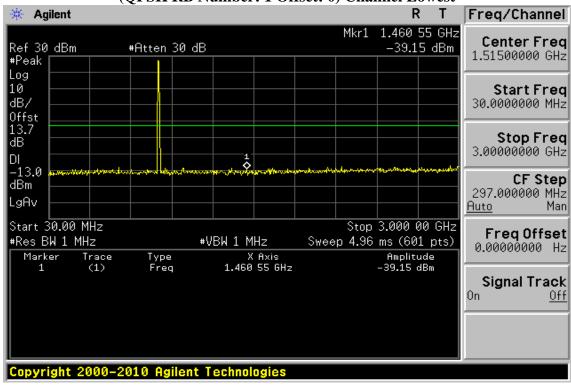
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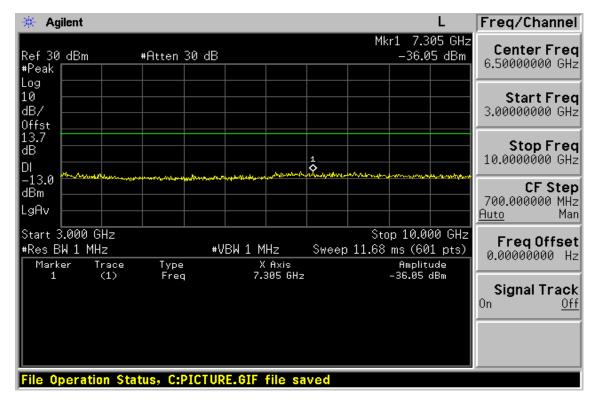
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Figure 9-110: Out of Band emission at antenna terminals-3MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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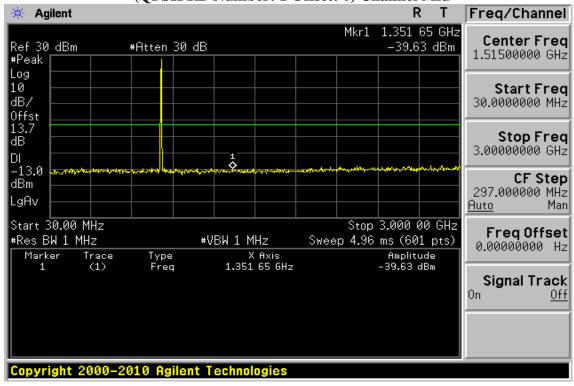
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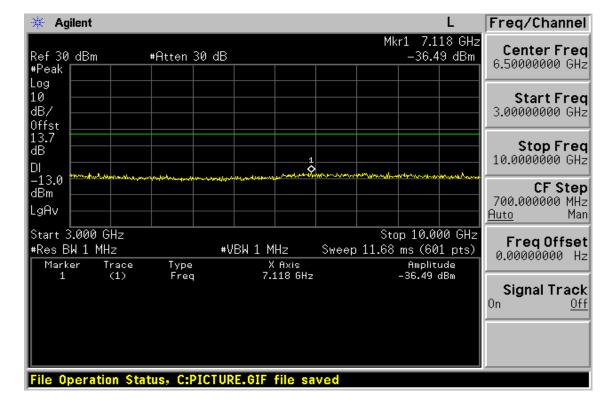
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Figure 9-111: Out of Band emission at antenna terminals –3MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Mid





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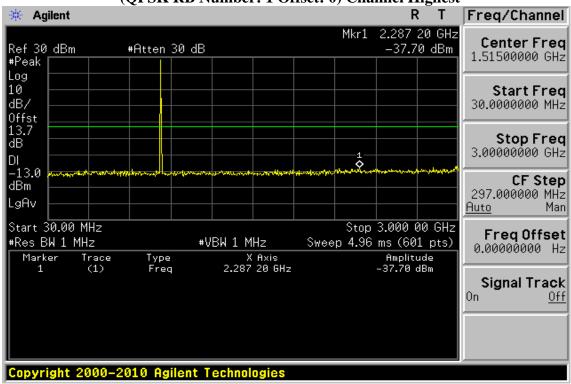
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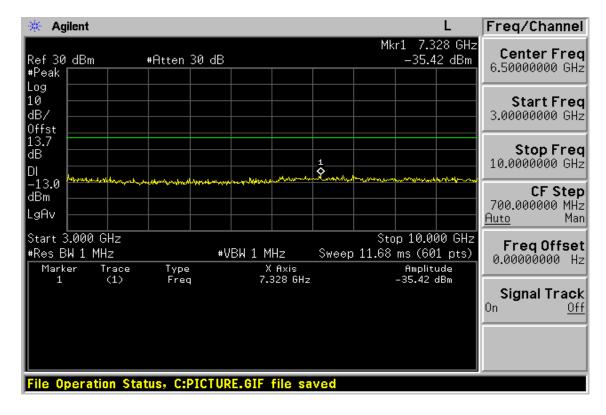
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Figure 9-112: Out of Band emission at antenna terminals-3MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –3MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :825.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1651.00	Н		-13.00	
2476.50	Н		-13.00	
3302.00	Н		-13.00	
4127.50	Н		-13.00	
4953.00	Н		-13.00	
5778.50	Н		-13.00	
6604.00	Н		-13.00	
7305.00	S	-36.05	-13.00	23.05
7429.50	Н		-13.00	
8255.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :836.5MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.00	Н		-13.00	
2509.50	Н		-13.00	
3346.00	Н		-13.00	
4182.50	Н		-13.00	
5019.00	Н		-13.00	
5855.50	Н		-13.00	
6692.00	Н		-13.00	
7118.00	S	-36.49	-13.00	23.49
7528.50	Н		-13.00	
8365.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency Operation Mode	:847.5MHz :TX High	Engine	eer	:Nick
<30	S		-13.00	
30-1000	S		-13.00	
1695.00	Н		-13.00	
2542.50	Н		-13.00	
3390.00	Н		-13.00	
4237.50	Н		-13.00	
5085.00	Н		-13.00	
5932.50	Н		-13.00	
6780.00	Н		-13.00	
7328.00	S	-35.42	-13.00	22.42
7627.50	Н		-13.00	
8475.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-113: Band edge emission at antenna terminals –3MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest

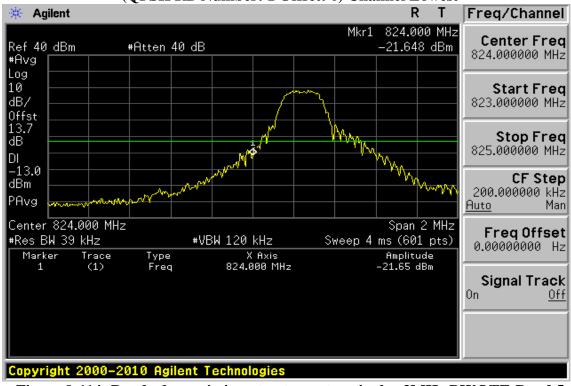
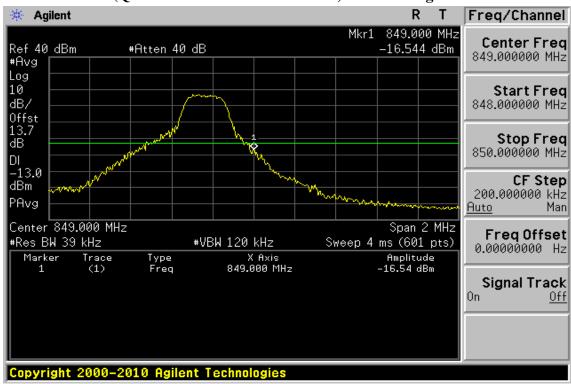


Figure 9-114: Band edge emission at antenna terminals –3MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 14) Channel Highest



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Band edge emission at antenna terminals -3MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 14)

Test Mode 3MHz BW LTE-Band 5 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-21.65	-13.00	8.65
849.000	-16.54	-13.00	3.54

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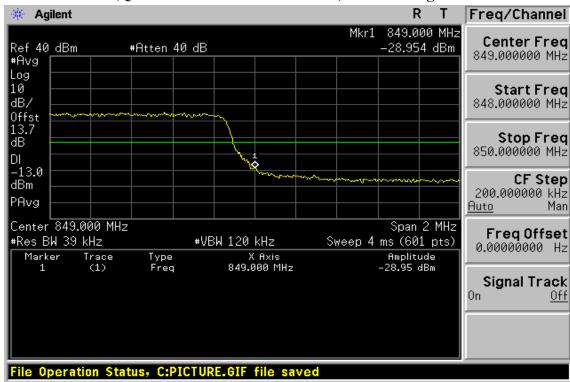


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Figure 9-115: Band edge emission at antenna terminals –3MHz BW LTE-Band 5 (QPSK RB Number: 15 Offset: 0) Channel Lowest



Figure 9-116: Band edge emission at antenna terminals –3MHz BW LTE-Band 5 (QPSK RB Number: 15 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –3MHz BW LTE-Band 5

(QPSK RB Number: 15 Offset: 0)

Test Mode 3MHz BW LTE-Band 5 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-31.08	-13.00	18.08
849.000	-28.95	-13.00	15.95

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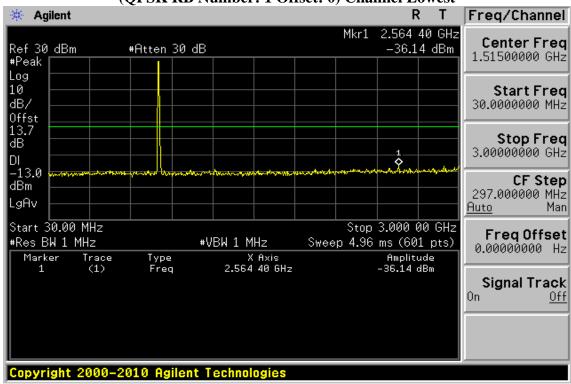
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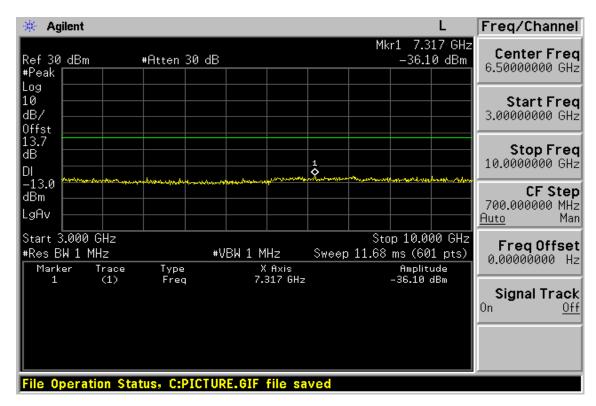
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Figure 9-117: Out of Band emission at antenna terminals-5MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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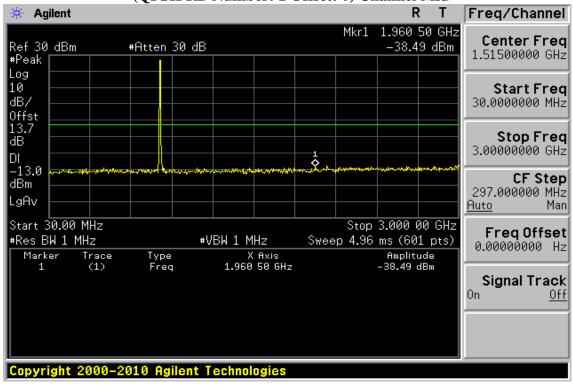
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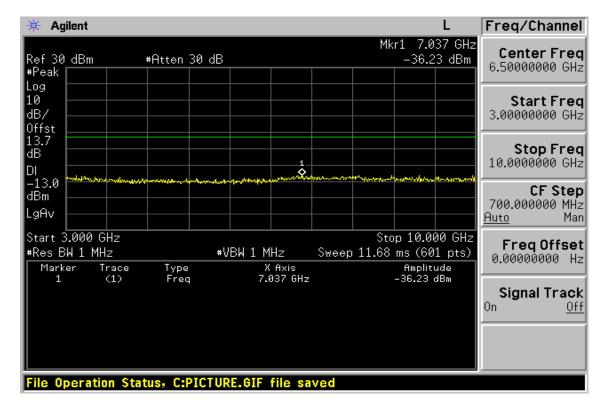
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Figure 9-118: Out of Band emission at antenna terminals –5MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Mid





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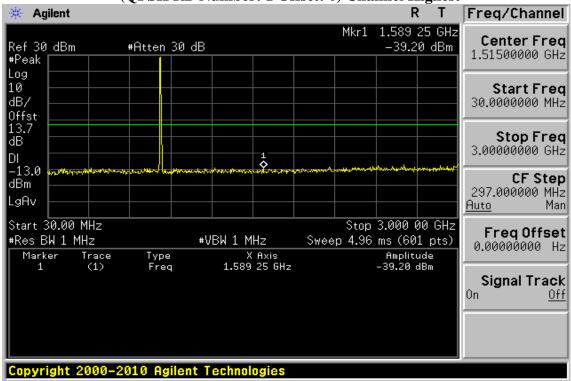
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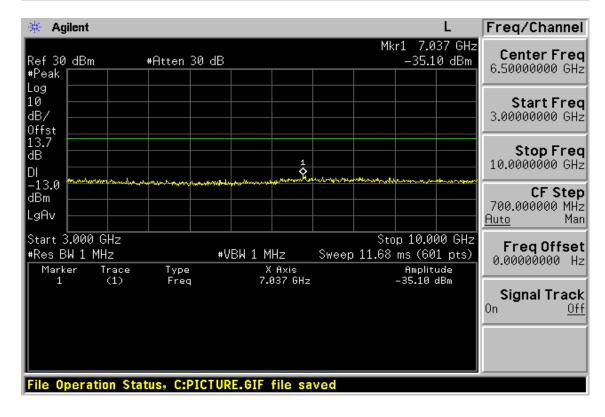
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Figure 9-119: Out of Band emission at antenna terminals-5MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals -5MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :826.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1653.00	Н		-13.00	
2479.50	Н		-13.00	
3306.00	Н		-13.00	
4132.50	Н		-13.00	
4959.00	Н		-13.00	
5785.50	Н		-13.00	
6612.00	Н		-13.00	
7313.00	S	-36.1	-13.00	23.10
7438.50	Н		-13.00	
8265.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :836.5MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1673.00	Н		-13.00	
2509.50	Н		-13.00	
3346.00	Н		-13.00	
4182.50	Н		-13.00	
5019.00	Н		-13.00	
5855.50	Н		-13.00	
6692.00	Н		-13.00	
7037.00	S	-36.23	-13.00	23.23
7528.50	Н		-13.00	
8365.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :846.5MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1693.00	Н		-13.00	
2539.50	Н		-13.00	
3386.00	Н		-13.00	
4232.50	Н		-13.00	
5079.00	Н		-13.00	
5925.50	Н		-13.00	
6772.00	Н		-13.00	
7037.00	S	-35.1	-13.00	22.10
7618.50	Н		-13.00	
8465.00	Н		-13.00	
0.00.00				

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-120: Band edge emission at antenna terminals –5MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest

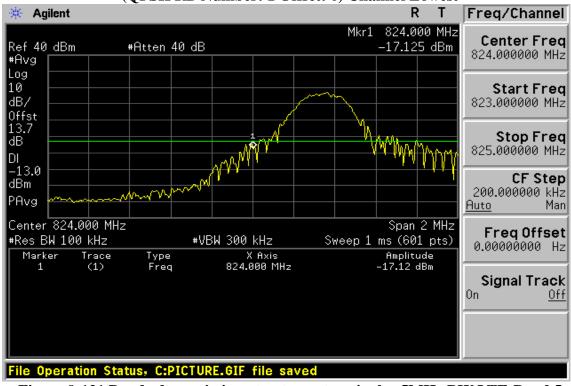
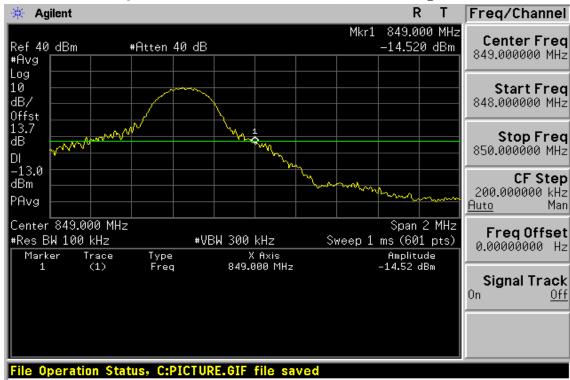


Figure 9-121 Band edge emission at antenna terminals –5MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 24) Channel Highest



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Band edge emission at antenna terminals -5 MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 24)

Test Mode 5MHz BW LTE-Band 5 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-17.12	-13.00	4.12
849.000	-14.52	-13.00	1.52

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Figure 9-122: Band edge emission at antenna terminals –5MHz BW LTE-Band 5 (QPSK RB Number: 25 Offset: 0) Channel Lowest

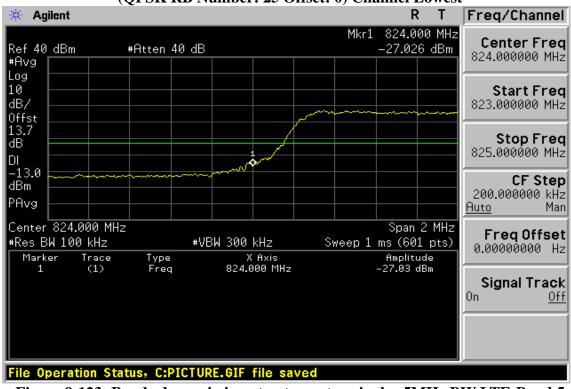
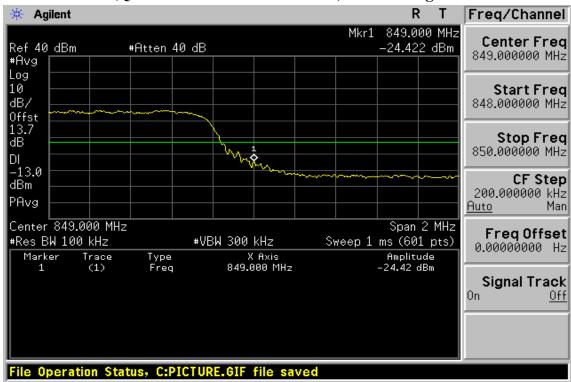


Figure 9-123: Band edge emission at antenna terminals –5MHz BW LTE-Band 5 (QPSK RB Number: 25 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –5MHz BW LTE-Band 5

(QPSK RB Number: 25 Offset: 0)

Test Mode 5MHz BW LTE-Band 5 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-27.03	-13.00	14.03
849.000	-24.42	-13.00	11.42

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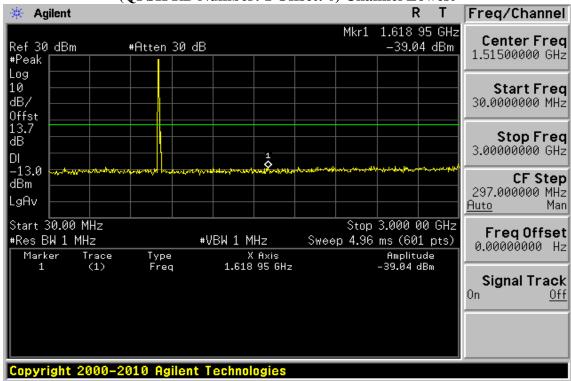
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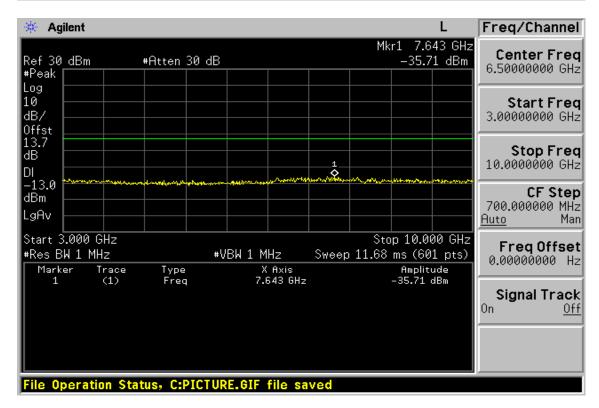
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Figure 9-124: Out of Band emission at antenna terminals-10MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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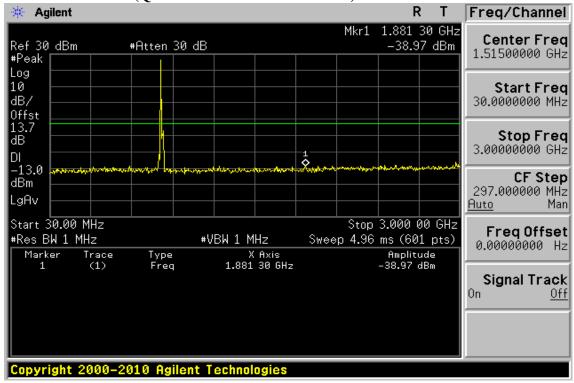
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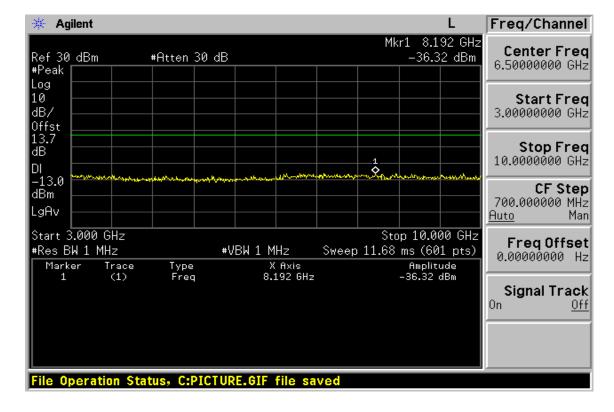
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Figure 9-125: Out of Band emission at antenna terminals –10MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Mid





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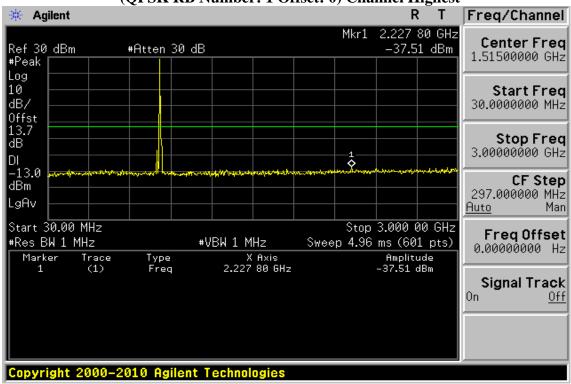
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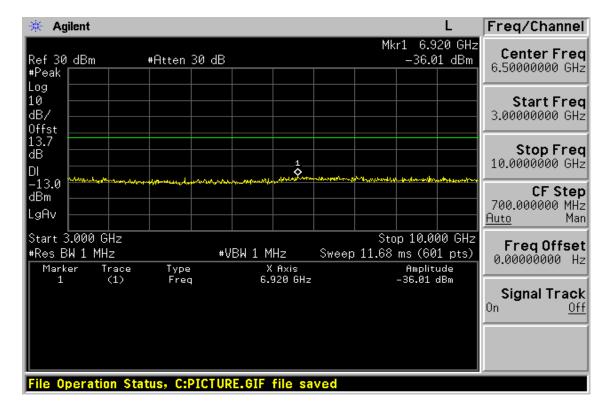
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Figure 9-126: Out of Band emission at antenna terminals-10MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –10MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :829.0MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1658.00	Н		-13.00	
2487.00	Н		-13.00	
3316.00	Н		-13.00	
4145.00	Н		-13.00	
4974.00	Н		-13.00	
5803.00	Н		-13.00	
6632.00	Н		-13.00	
7461.00	Н		-13.00	
7643.00	S	-35.71	-13.00	22.71
8290.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :836.5MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
1673.00	Н		-13.00	
2509.50	Н		-13.00	
3346.00	Н		-13.00	
4182.50	Н		-13.00	
5019.00	Н		-13.00	
5855.50	Н		-13.00	
6692.00	Н		-13.00	
7528.50	Н		-13.00	
8192.00	S	-36.32	-13.00	23.32
8365.00	Н		-13.00	
22 22.00				

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"---": denotes Noise Floor.

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Fundamental Frequency :844MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
< 30	S		-13.00	
30-1000	S		-13.00	
1688.00	Н		-13.00	
2532.00	Н		-13.00	
3376.00	Н		-13.00	
4220.00	Н		-13.00	
5064.00	Н		-13.00	
5908.00	Н		-13.00	
6752.00	Н		-13.00	
6920.00	S	-35.01	-13.00	22.01
7596.00	Н		-13.00	
8440.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-127: Band edge emission at antenna terminals –10MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 0) Channel Lowest

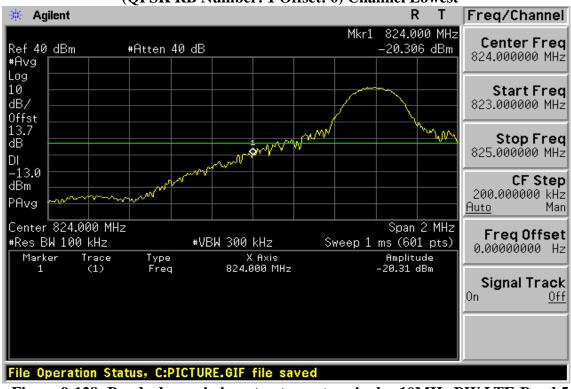
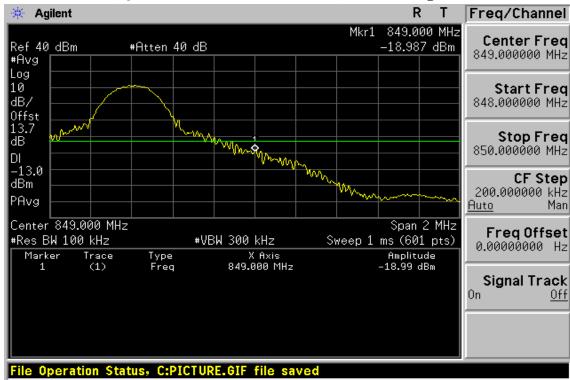


Figure 9-128: Band edge emission at antenna terminals –10MHz BW LTE-Band 5 (QPSK RB Number: 1 Offset: 49) Channel Highest



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Band edge emission at antenna terminals -10 MHz BW LTE-Band 5

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 49)

Test Mode 10MHz BW LTE-Band 5 :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-20.31	-13.00	7.31
849.000	-18.99	-13.00	5.99

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Figure 9-129: Band edge emission at antenna terminals –10MHz BW LTE-Band 5 (QPSK RB Number: 50 Offset: 0) Channel Lowest

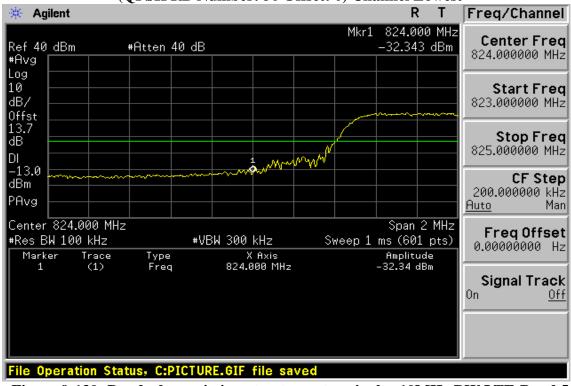
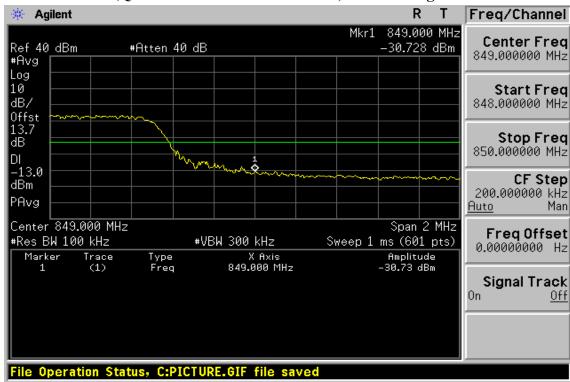


Figure 9-130: Band edge emission at antenna terminals –10MHz BW LTE-Band 5 (QPSK RB Number: 50 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –10MHz BW LTE-Band 5

(QPSK RB Number: 50 Offset: 0)

Test Mode 10MHz BW LTE-Band 5 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
824.000	-32.34	-13.00	19.34
849.000	-30.73	-13.00	17.73

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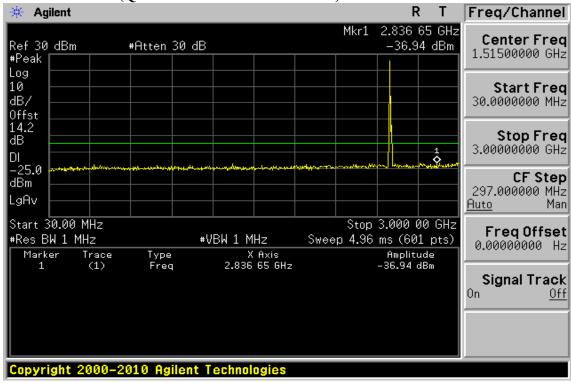
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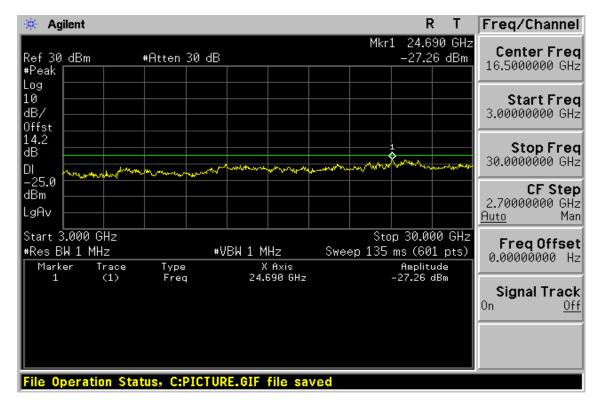
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Figure 9-131: Out of Band emission at antenna terminals–5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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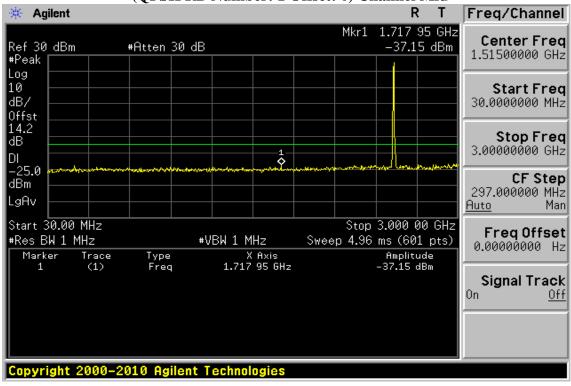
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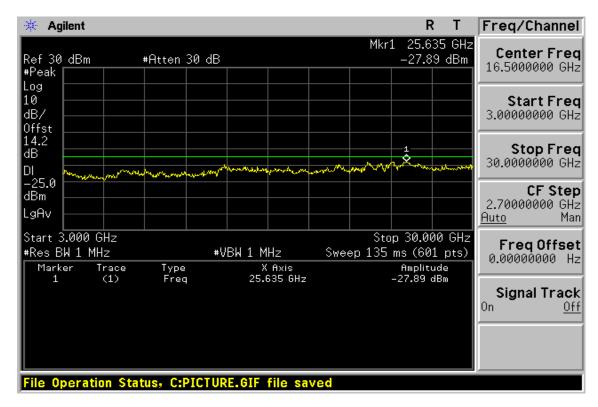
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Figure 9-132: Out of Band emission at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid





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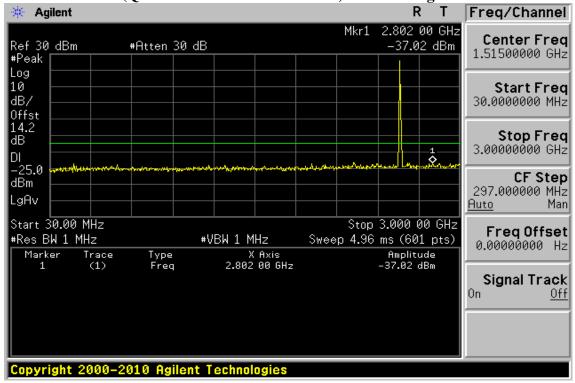
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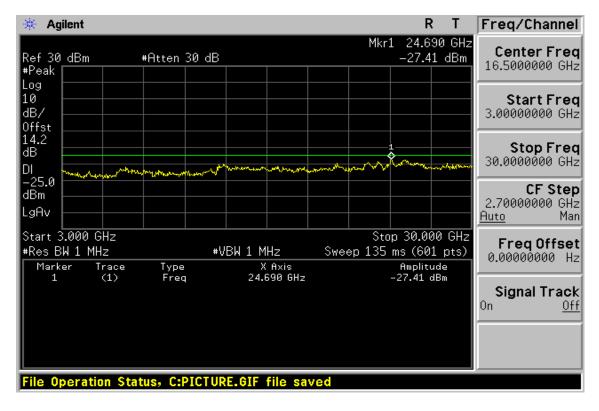
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Figure 9-133: Out of Band emission at antenna terminals–5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –5MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :2502.5 MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5005.00	Н		-13.00	
7507.50	Н		-13.00	
10010.00	Н		-13.00	
12512.50	Н		-13.00	
15015.00	Н		-13.00	
17517.50	Н		-13.00	
20020.00	Н		-13.00	
22522.50	Н		-13.00	
24690.00	S	-27.26	-13.00	14.26
25025.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2535.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5070.00	Н		-13.00	
7605.00	Н		-13.00	
10140.00	Н		-13.00	
12675.00	Н		-13.00	
15210.00	Н		-13.00	
17745.00	Н		-13.00	
20280.00	Н		-13.00	
22815.00	Н		-13.00	
25350.00	Н		-13.00	
25635.00	S	-27.89	-13.00	14.89

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2567.5MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5135.00	Н		-13.00	
7702.50	Н		-13.00	
10270.00	Н		-13.00	
12837.50	Н		-13.00	
15405.00	Н		-13.00	
17972.50	Н		-13.00	
20540.00	Н		-13.00	
23107.50	Н		-13.00	
25675.00	Н		-13.00	
24690.00	S	-27.41	-13.00	14.41

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-134: Band edge emission at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

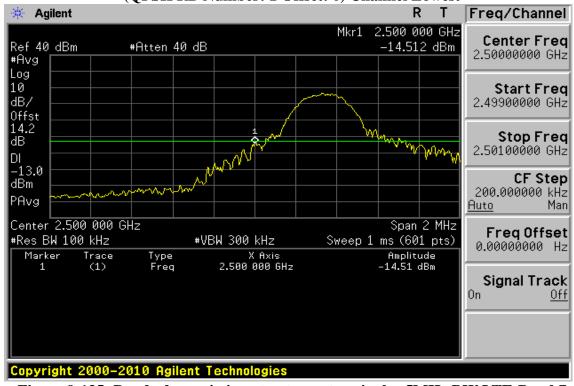
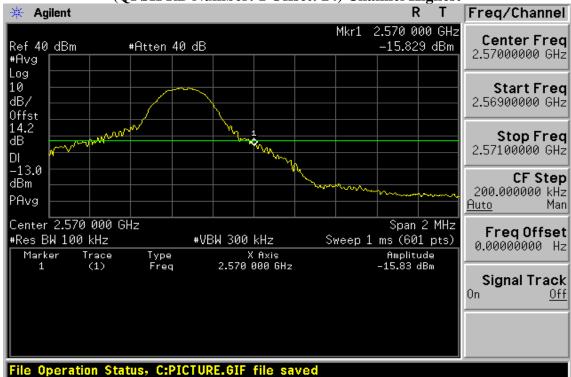


Figure 9-135: Band edge emission at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 24) Channel Highest



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Band edge emission at antenna terminals –5MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 24)

Test Mode 5MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2500.000	-14.51	-13.00	1.51
2570.000	-15.83	-13.00	2.83

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Figure 9-136: Band edge emission at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 25 Offset: 0) Channel Lowest

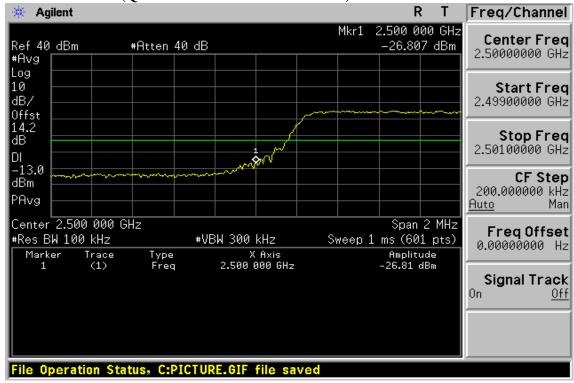


Figure 9-137: Band edge emission at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 25 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –5MHz BW LTE-Band 7

(QPSK RB Number: 25 Offset: 0)

Test Mode 5MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2500.000	-26.81	-13.00	13.81
2570.000	-26.82	-13.00	13.82

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Figure 9-138: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

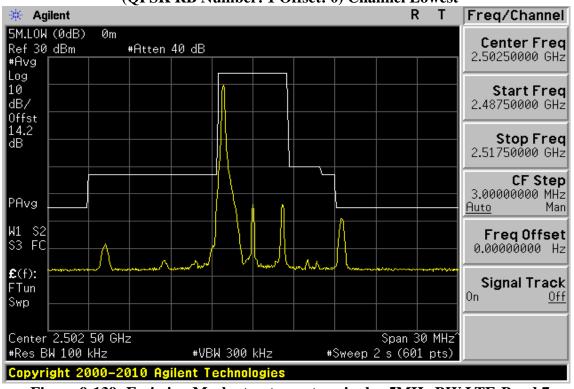
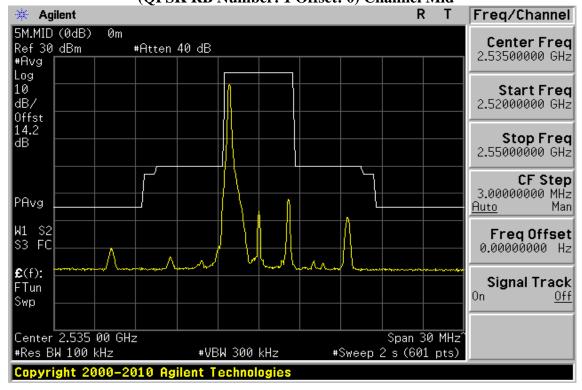


Figure 9-139: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid



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Figure 9-140: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest

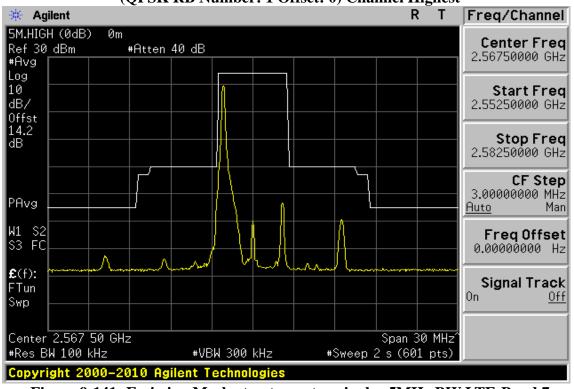
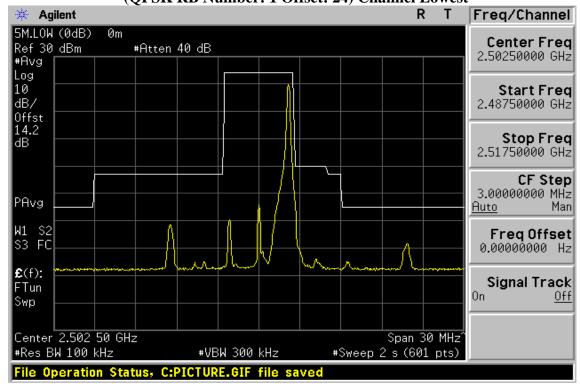


Figure 9-141: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 24) Channel Lowest



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Figure 9-142: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 24) Channel Mid

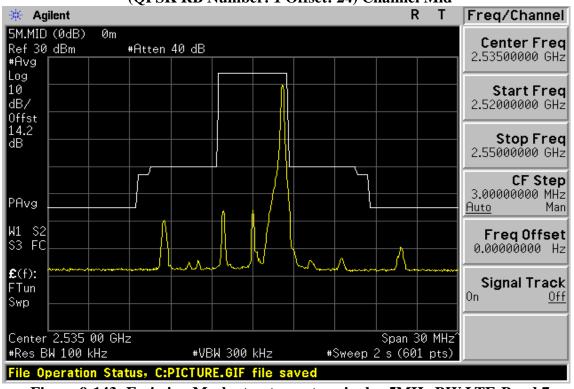
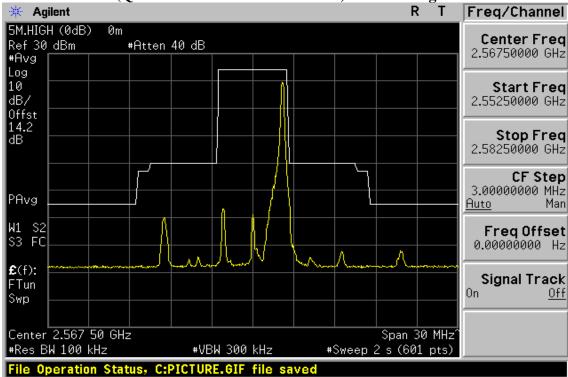


Figure 9-143: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 24) Channel Highest



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Figure 9-144: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 25 Offset: 0) Channel Lowest

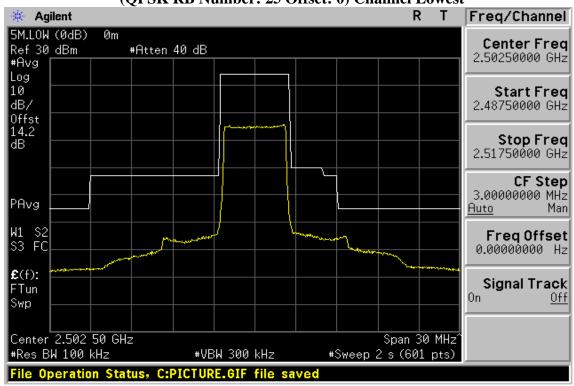
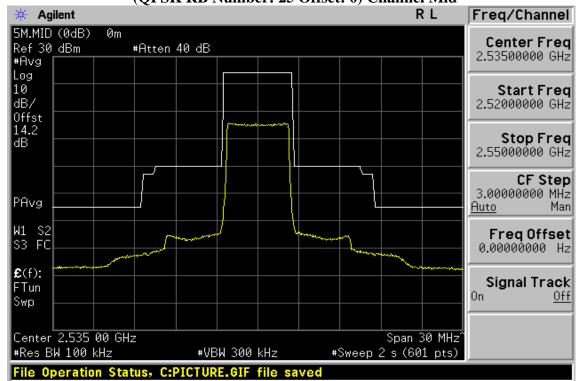


Figure 9-145: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 25 Offset: 0) Channel Mid



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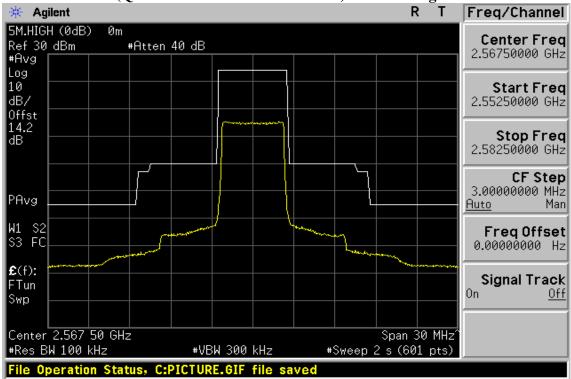
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Figure 9-146: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 25 Offset: 0) Channel Highest



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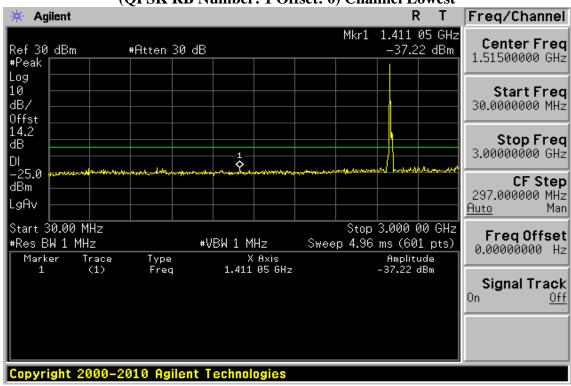
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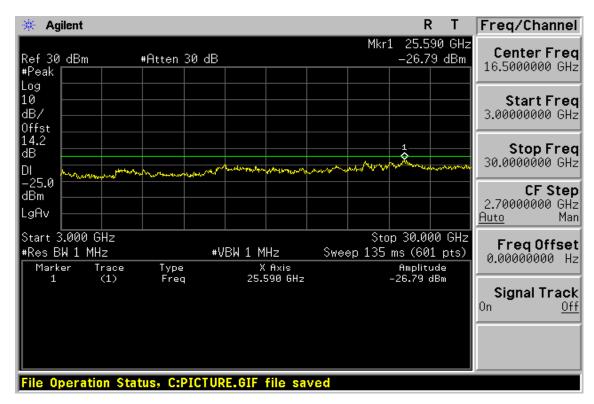
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Figure 9-147: Out of Band emission at antenna terminals–10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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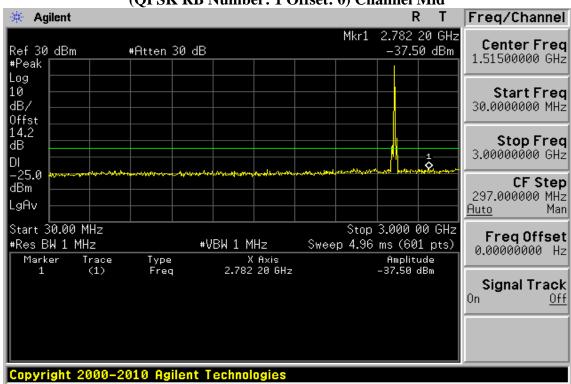
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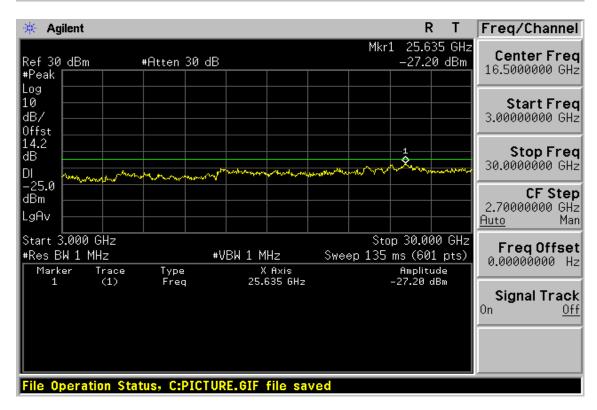
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Figure 9-148: Out of Band emission at antenna terminals—10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid





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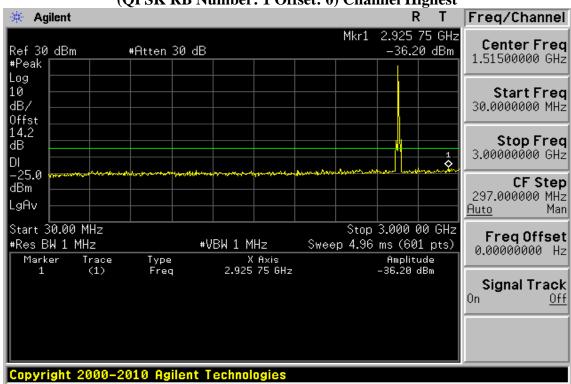
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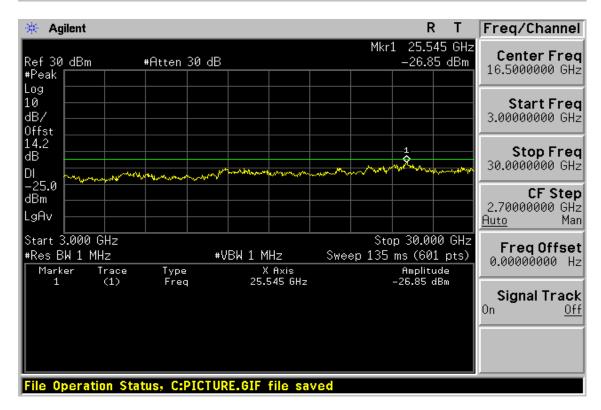
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Figure 9-149: Out of Band emission at antenna terminals-10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –10MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :2505.0MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5010.00	H		-13.00	
7515.00	Н		-13.00	
10020.00	H		-13.00	
12525.00	H		-13.00	
15030.00	H		-13.00	
17535.00	H		-13.00	
20040.00	Н		-13.00	
22545.00	Н		-13.00	
25050.00	Н		-13.00	
25590.00	S	-26.79	-13.00	13.79

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2535.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5070.00	Н		-13.00	
7605.00	Н		-13.00	
10140.00	Н		-13.00	
12675.00	Н		-13.00	
15210.00	Н		-13.00	
17745.00	Н		-13.00	
20280.00	Н		-13.00	
22815.00	Н		-13.00	
25350.00	Н		-13.00	
25635.00	S	-27.2	-13.00	14.20

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

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Fundamental Frequency :2565.0MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5130.00	Н		-13.00	
7695.00	Н		-13.00	
10260.00	Н		-13.00	
12825.00	Н		-13.00	
15390.00	Н		-13.00	
17955.00	Н		-13.00	
20520.00	Н		-13.00	
23085.00	Н		-13.00	
25545.00	S	-26.85	-13.00	13.85
25650.00	Н		-13.00	

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Figure 9-150: Band edge emission at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest



Figure 9-151: Band edge emission at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 49) Channel Highest



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Band edge emission at antenna terminals -10MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 49)

Test Mode 10MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2499.970	-18.58	-13.00	5.58
2570.023	-19.97	-13.00	6.97

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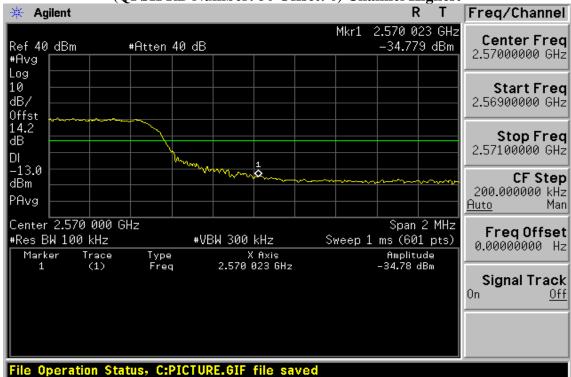


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Figure 9-152: Band edge emission at antenna terminals –10MHz BW LTE-Band 7 (OPSK RB Number: 50 Offset: 0) Channel Lowest



Figure 9-153: Band edge emission at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 50 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –10MHz BW LTE-Band 7

(QPSK RB Number: 50 Offset: 0)

Test Mode 10MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2499.977	-32.77	-13.00	19.77
2570.023	-34.78	-13.00	21.78

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Figure 9-154: Emission Mask at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

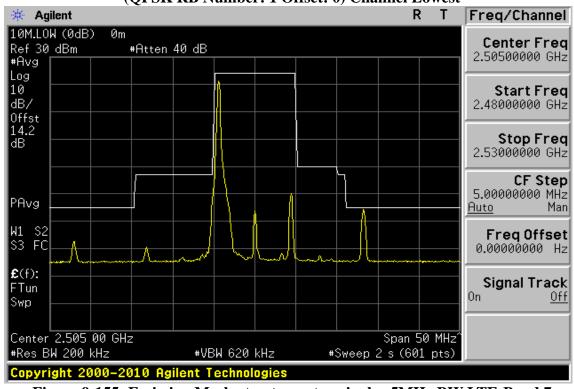
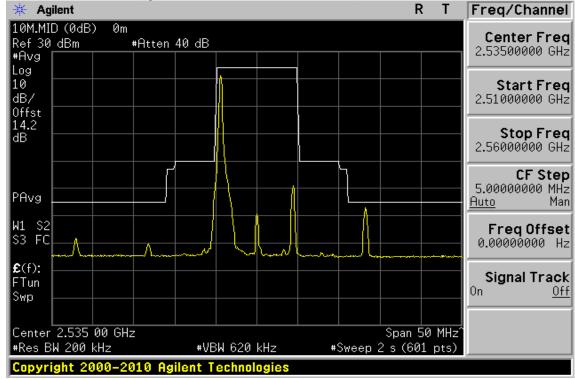


Figure 9-155: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid



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Figure 9-156: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest

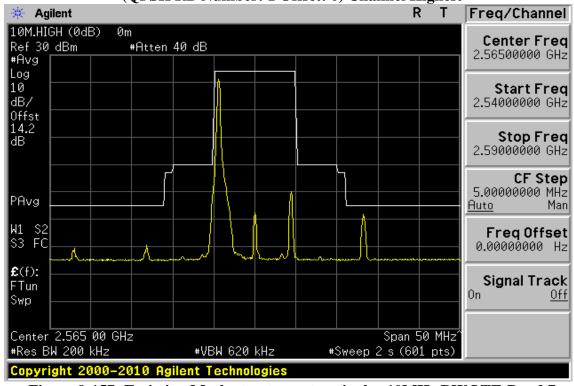
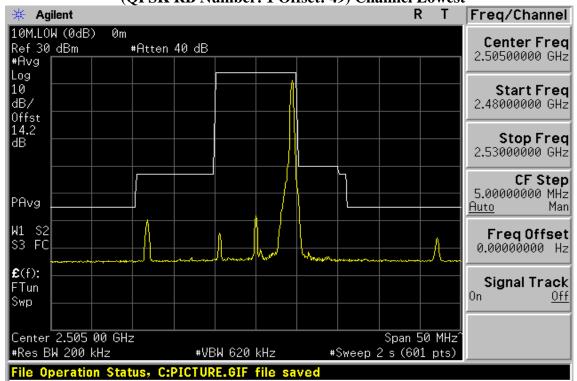


Figure 9-157: Emission Mask at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 49) Channel Lowest



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Figure 9-158: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (OPSK RB Number: 1 Offset: 49) Channel Mid

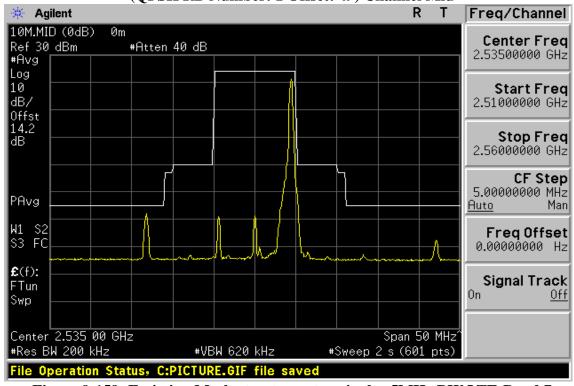
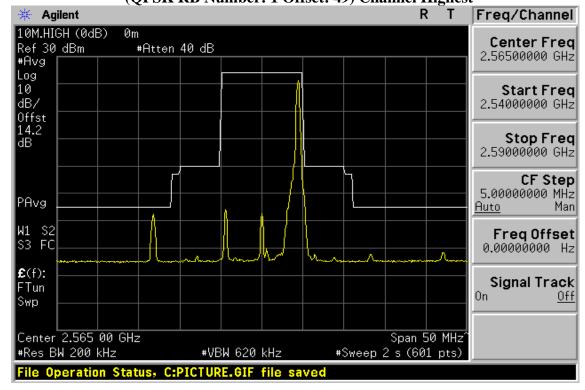


Figure 9-159: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 49) Channel Highest



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Figure 9-160: Emission Mask at antenna terminals –10MHz BW LTE-Band 7 (QPSK RB Number: 50 Offset: 0) Channel Lowest

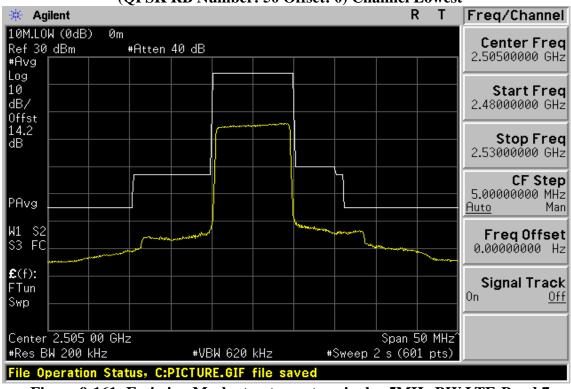
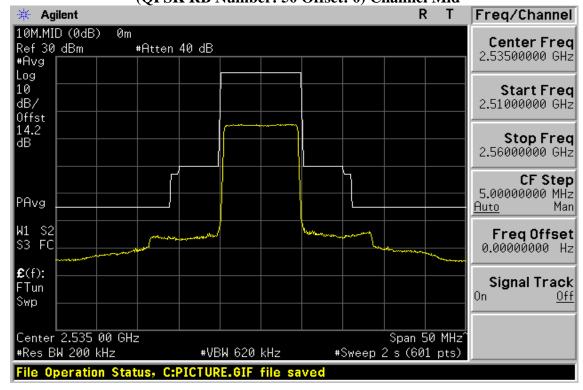


Figure 9-161: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 50 Offset: 0) Channel Mid



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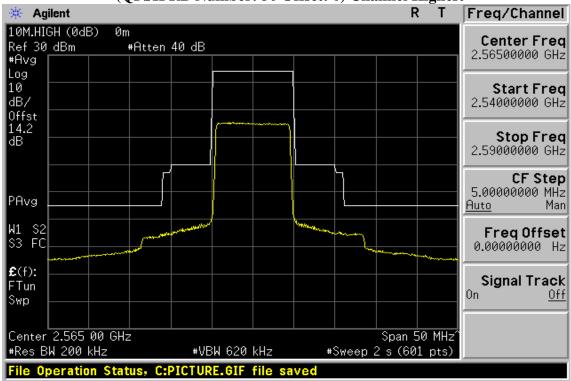
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Figure 9-162: Emission Mask at antenna terminals –5MHz BW LTE-Band 7 (QPSK RB Number: 50 Offset: 0) Channel Highest



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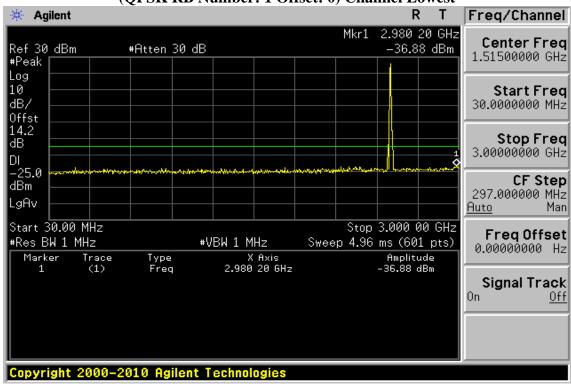
f (886-2) 2298-0488

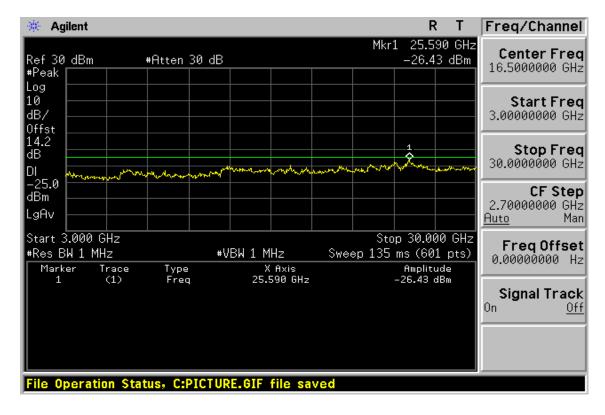
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Figure 9-163: Out of Band emission at antenna terminals–15MHz BW LTE-Band 7 (OPSK RB Number: 1 Offset: 0) Channel Lowest





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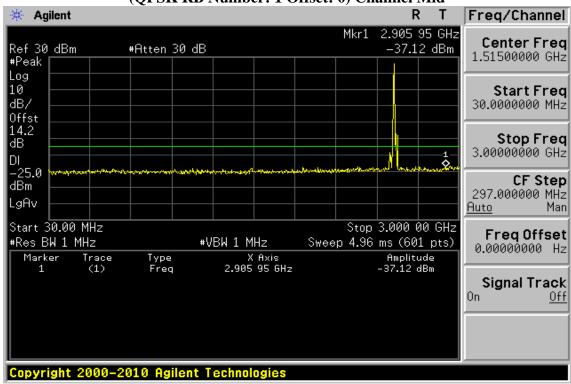
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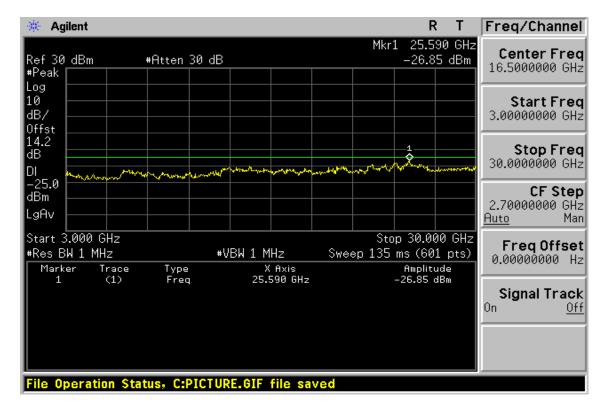
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Figure 9-164: Out of Band emission at antenna terminals—15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid





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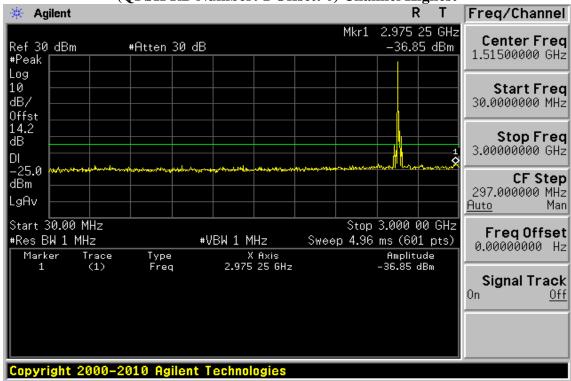
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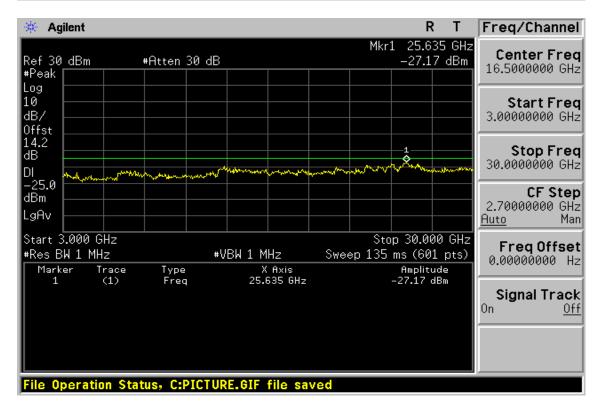
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Figure 9-165: Out of Band emission at antenna terminals—15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –15MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :2507.5MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5015.00	Н		-13.00	
7522.50	Н		-13.00	
10030.00	Н		-13.00	
12537.50	Н		-13.00	
15045.00	Н		-13.00	
17552.50	Н		-13.00	
20060.00	Н		-13.00	
22567.50	Н		-13.00	
25075.00	Н		-13.00	
25590.00	S	-26.43	-13.00	13.43

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2535.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5070.00	Н		-13.00	
7605.00	Н		-13.00	
10140.00	Н		-13.00	
12675.00	Н		-13.00	
15210.00	Н		-13.00	
17745.00	Н		-13.00	
20280.00	Н		-13.00	
22815.00	Н		-13.00	
25350.00	Н		-13.00	
25590.00	S	-26.85	-13.00	13.85

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Fundamental Frequency :2562.5MHz Engineer :Nick Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5125.00	Н		-13.00	
7687.50	Н		-13.00	
10250.00	Н		-13.00	
12812.50	Н		-13.00	
15375.00	Н		-13.00	
17937.50	Н		-13.00	
20500.00	Н		-13.00	
23062.50	Н		-13.00	
25625.00	Н		-13.00	
25635.00	S	-27.17	-13.00	14.17

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Figure 9-166: Band edge emission at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

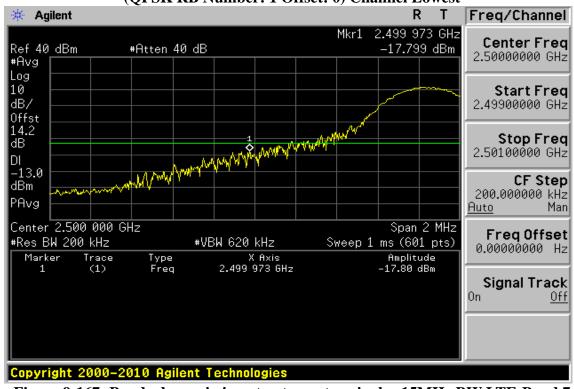
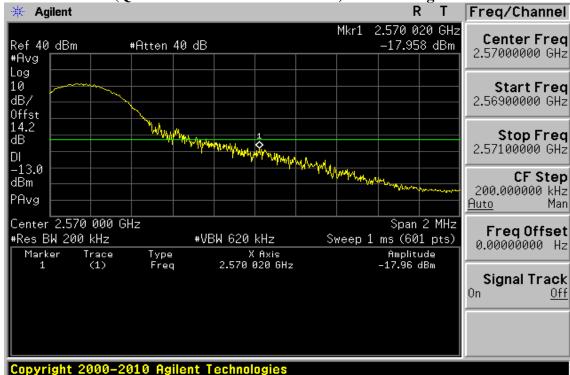


Figure 9-167: Band edge emission at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 74) Channel Highest



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Band edge emission at antenna terminals –15MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 74)

Test Mode 15MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2499.973	-17.80	-13.00	4.80
2570.020	-17.96	-13.00	4.96

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Figure 9-168: Band edge emission at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Lowest

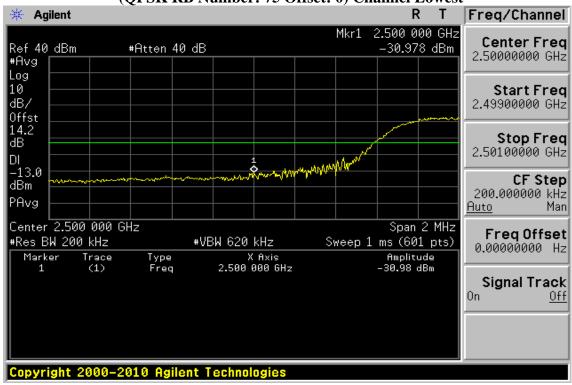
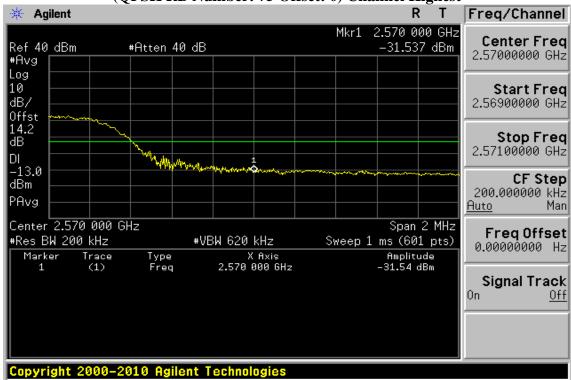


Figure 9-169: Band edge emission at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Highest



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Band edge emission at antenna terminals –15MHz BW LTE-Band 7

(QPSK RB Number: 75 Offset: 0)

Test Mode 15MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2500.000	-30.98	-13.00	17.98
2570.000	-31.54	-13.00	18.54

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Figure 9-170: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

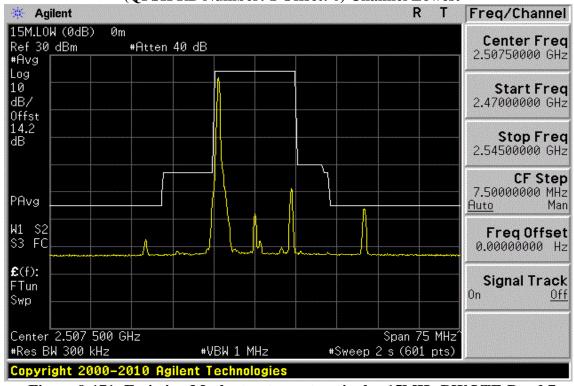
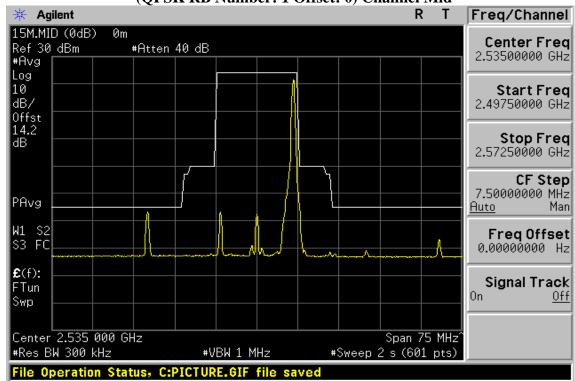


Figure 9-171: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid



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Figure 9-172: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest

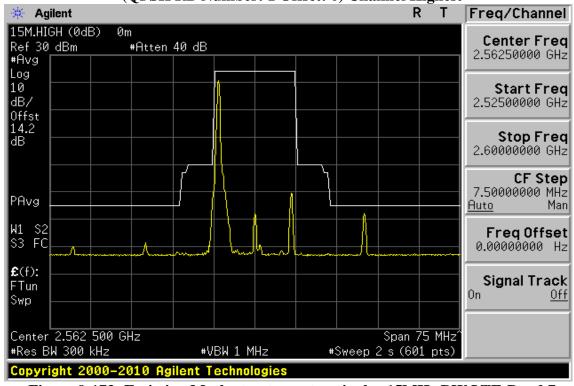
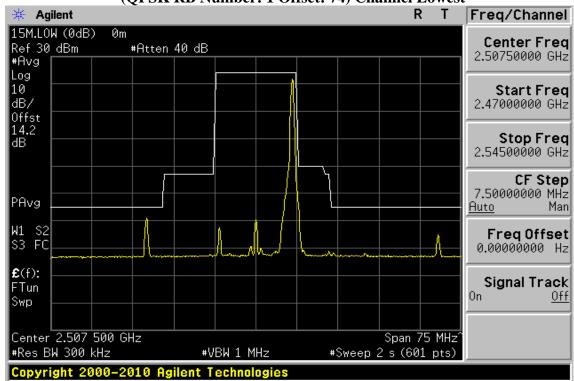


Figure 9-173: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 74) Channel Lowest



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Figure 9-174: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 74) Channel Mid

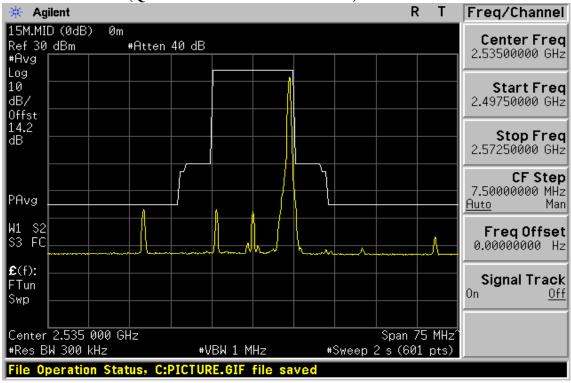
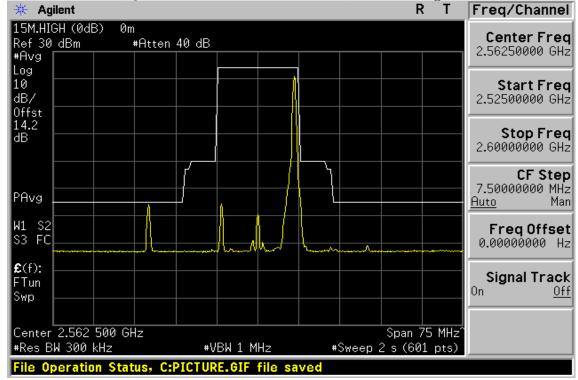


Figure 9-175: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 74) Channel Highest



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Figure 9-176: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Lowest

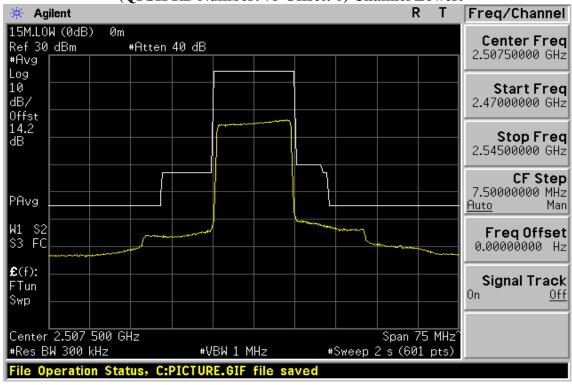
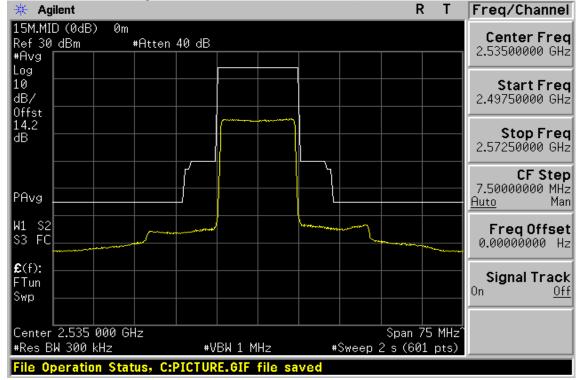


Figure 9-177: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Mid



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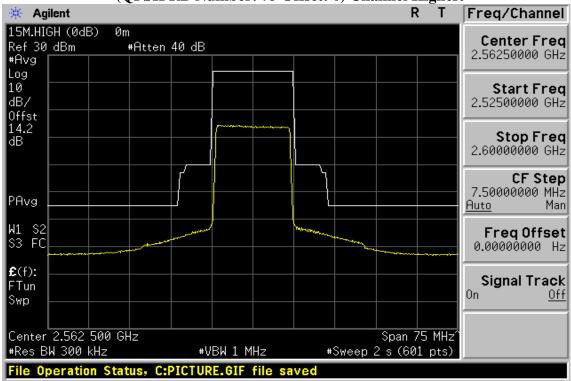
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Figure 9-178: Emission Mask at antenna terminals –15MHz BW LTE-Band 7 (QPSK RB Number: 75 Offset: 0) Channel Highest



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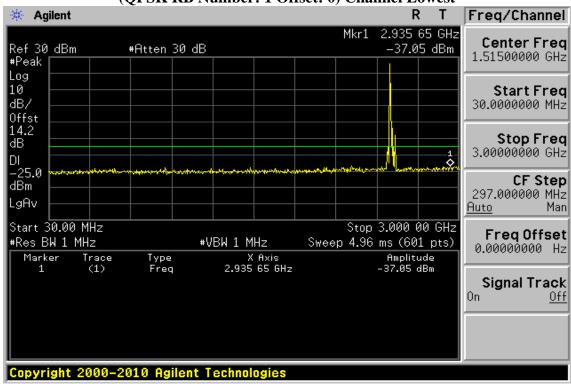
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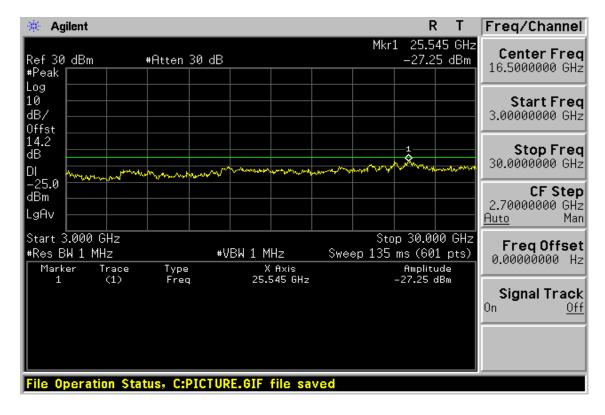
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Figure 9-179: Out of Band emission at antenna terminals-20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest





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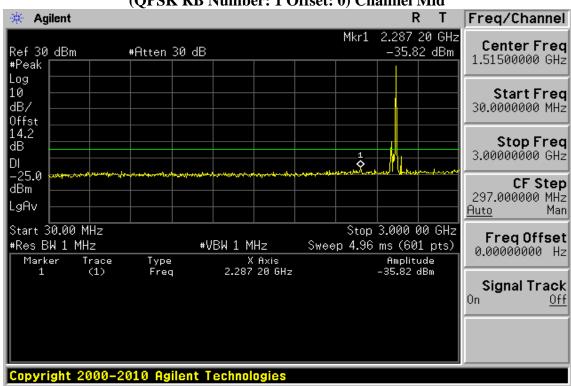
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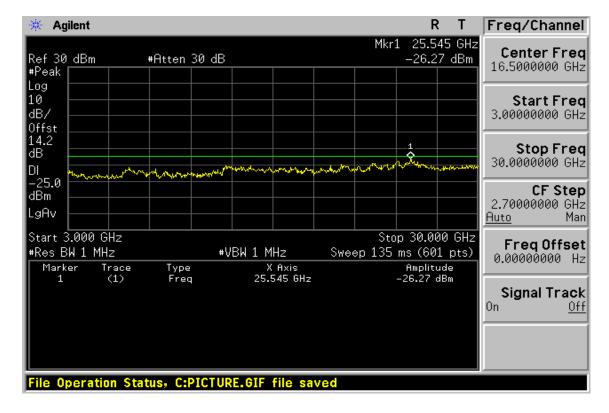
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Figure 9-180: Out of Band emission at antenna terminals-20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid





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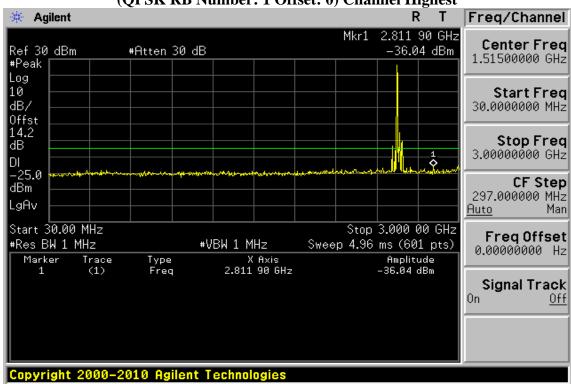
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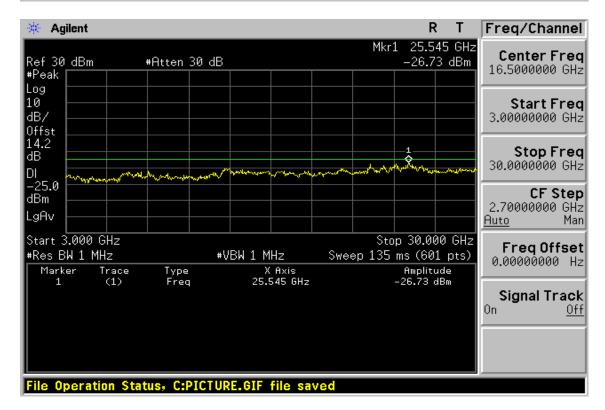
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Figure 9-181: Out of Band emission at antenna terminals-20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest





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Out of Band emission at antenna terminals –20MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0)

Fundamental Frequency :2510.0MHz Engineer :Nick

Operation Mode :TX Low

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5020.00	Н		-13.00	
7530.00	Н		-13.00	
10040.00	Н		-13.00	
12550.00	Н		-13.00	
15060.00	Н		-13.00	
17570.00	Н		-13.00	
20080.00	Н		-13.00	
22590.00	Н		-13.00	
25100.00	Н		-13.00	
25545.00	S	-27.25	-13.00	14.25

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2535.0MHz Engineer :Nick

Operation Mode :TX Mid

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5070.00	Н		-13.00	
7605.00	Н		-13.00	
10140.00	Н		-13.00	
12675.00	Н		-13.00	
15210.00	Н		-13.00	
17745.00	Н		-13.00	
20280.00	Н		-13.00	
22815.00	Н		-13.00	
25350.00	Н		-13.00	
25545.00	S	-26.27	-13.00	13.27
=== .0.00				

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note:

"---": denotes Noise Floor.

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Fundamental Frequency :2560.0MHz Engineer :Nick

Operation Mode :TX High

Freq. (MHz)	Note F/H/E/S	Reading dBm	Limit dBm	Safe Margin dB
<30	S		-13.00	
30-1000	S		-13.00	
5120.00	H		-13.00	
7680.00	H		-13.00	
10240.00	H		-13.00	
12800.00	H		-13.00	
15360.00	Н		-13.00	
17920.00	Н		-13.00	
20480.00	Н		-13.00	
23040.00	Н		-13.00	
25545.00	S	-26.73	-13.00	13.73
25600.00	Н		-13.00	

"H": denotes Harmonic Frequency. "S": denotes Spurious Frequency. Note: ""notes Spurious Frequency.

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Figure 9-182: Band edge emission at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

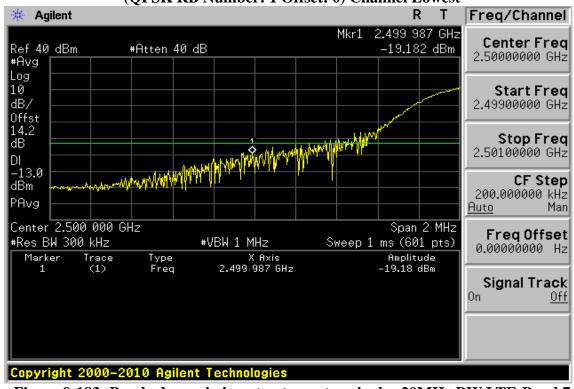
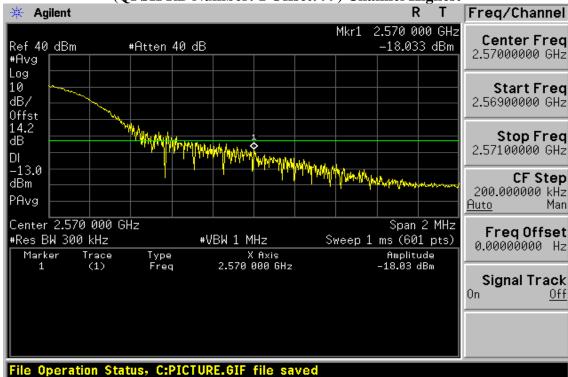


Figure 9-183: Band edge emission at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 99) Channel Highest



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Band edge emission at antenna terminals -20MHz BW LTE-Band 7

(QPSK RB Number: 1 Offset: 0) (QPSK RB Number: 1 Offset: 99)

Test Mode 20MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2499.987	-19.18	-13.00	6.18
2570.000	-18.03	-13.00	5.03

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Figure 9-184: Band edge emission at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 100 Offset: 0) Channel Lowest

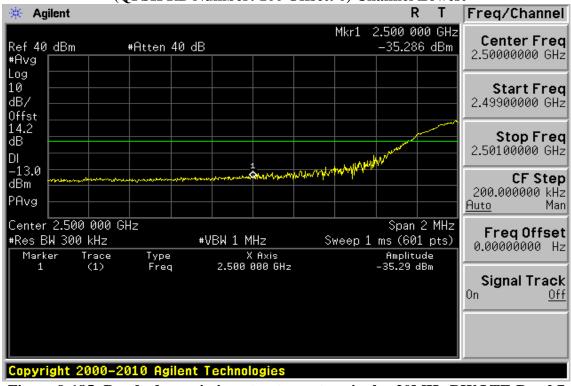
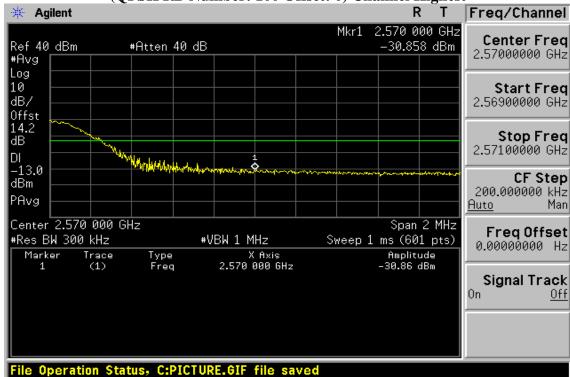


Figure 9-185: Band edge emission at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 100 Offset: 0) Channel Highest



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Band edge emission at antenna terminals -20MHz BW LTE-Band 7

(QPSK RB Number: 100 Offset: 0)

Test Mode 20MHz BW LTE-Band 7 Engineer :Nick

Freq. MHz	Reading dBm	Limit dBm	Safe Margin dB
2500.000	-35.29	-13.00	22.29
2570.000	-30.86	-13.00	17.86

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Figure 9-186: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Lowest

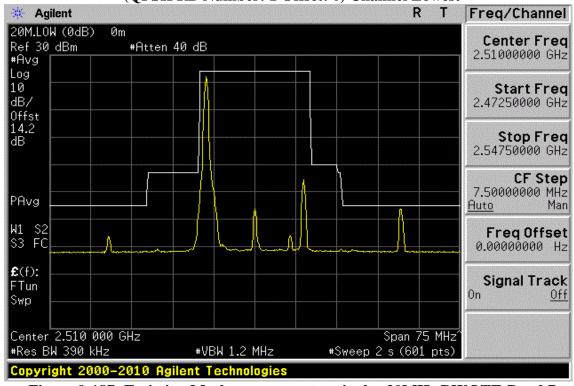
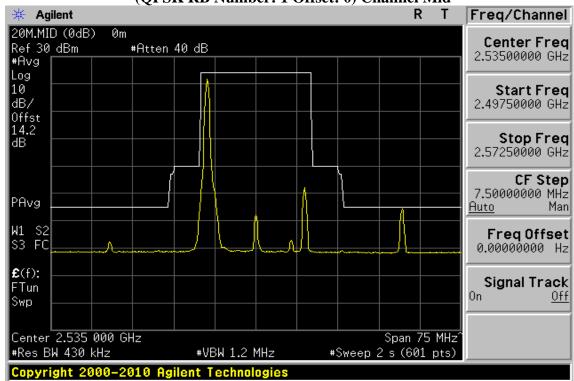


Figure 9-187: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Mid



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Figure 9-188: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 0) Channel Highest

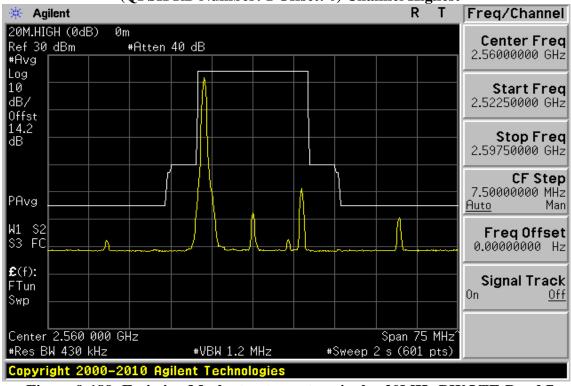
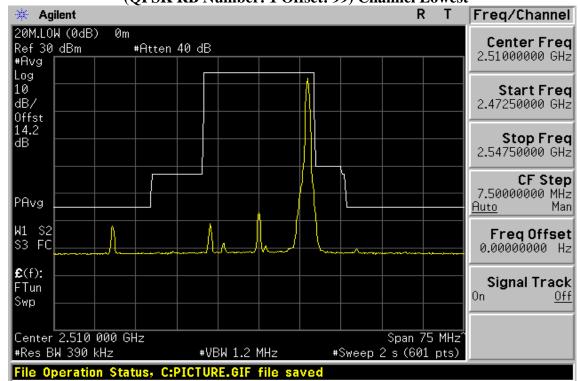


Figure 9-189: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 99) Channel Lowest



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Figure 9-190: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 99) Channel Mid

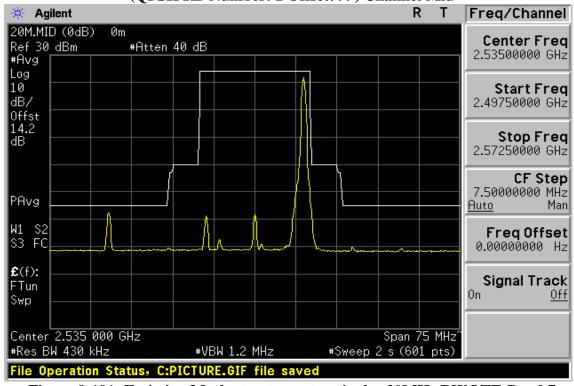
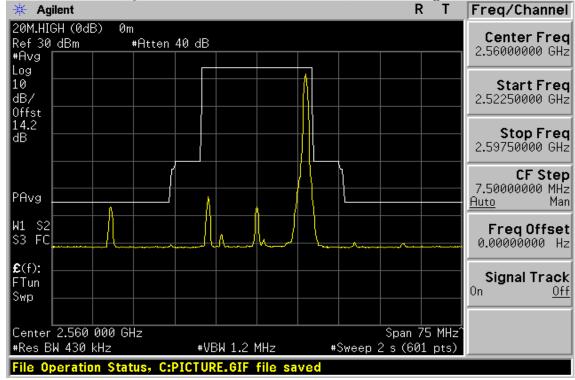


Figure 9-191: Emission Mask at antenna terminals -20MHz BW LTE-Band 7 (QPSK RB Number: 1 Offset: 99) Channel Highest



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Figure 9-192: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (OPSK RB Number: 100 Offset: 0) Channel Lowest

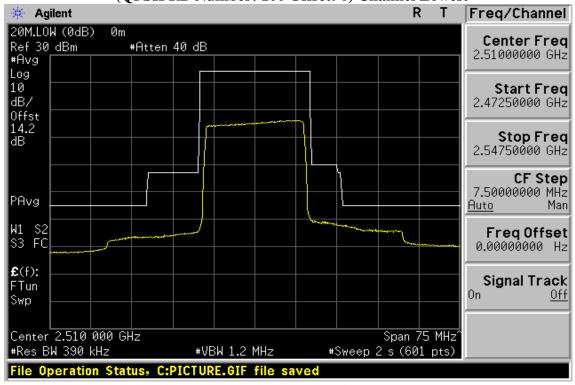
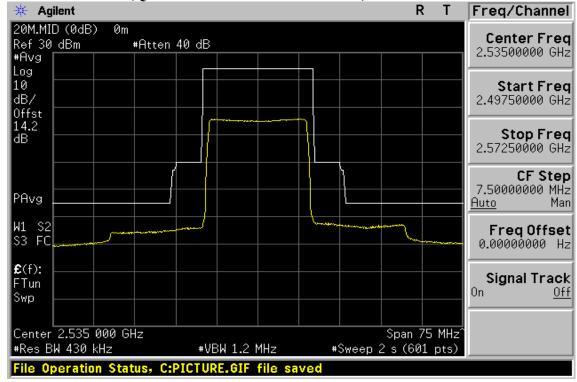


Figure 9-193: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 100 Offset: 0) Channel Mid



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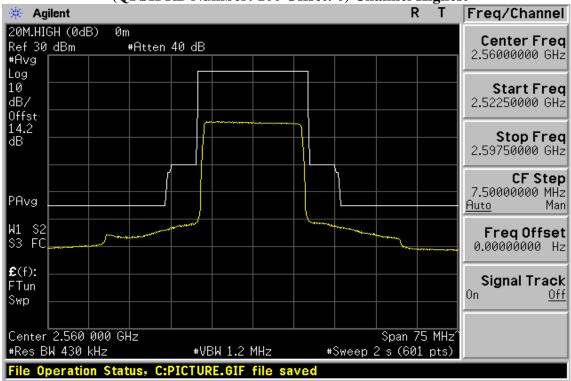
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Figure 9-194: Emission Mask at antenna terminals –20MHz BW LTE-Band 7 (QPSK RB Number: 100 Offset: 0) Channel Highest



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