



TEST REPORT

Report Number. : 13571601-E7V4

Applicant : APPLE, INC
1 APPLE PARKWAY
CUPERTINO, CA 95014, U.S.A.

Model : A2483

Brand : APPLE

FCC ID : BCG-E4000A

IC : 579C-E4000A

EUT Description : SMARTPHONE

Test Standard(s) : FCC CFR47 PART 22H, 24E, 27L, AND 90S
ISED RSS-GEN ISSUE 5, RSS-132 ISSUE 3, RSS-133
ISSUE 6, AND RSS-139 ISSUE 3

Date Of Issue:
AUGUST 04, 2021

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Cert. #0751.05

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	6/30/2021	Initial Review	Tony Li
V2	7/12/2021	Addressed TCB Questions	Mengistu Mekuria
V3	7/27/2021	Addressed TCB Feedback Section 1, 3	Elizabeth Lopez
V4	8/04/2021	Addressed TCB Feedback For Section 6.1, 6.5, and 10. Updated 6.5 to clarify that conducted tests were selected based on worst case conducted power.	John Thompson

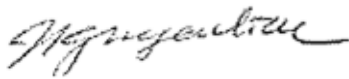
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1. ATTESTATION OF TEST RESULTS

Applicant Name and Address	APPLE, INC 1 APPLE PARKWAY CUPERTINO, CA 95014, U.S.A.	
Model	A2483	
Brand	APPLE	
FCC ID	BCG-E4000A	
IC	579C-E4000A	
EUT Description	SMARTPHONE	
Serial Number	C070514009F0G492 (Conducted), HXKPFHXHK2 (Radiated)	
Sample Receipt Date	MARCH 05, 2021	
Date Tested	MARCH 08, 2021 to JUNE 26, 2021	
Applicable Standards	FCC CFR47 PART 22H, 24E, 27L, AND 90S ISED RSS-GEN ISSUE 5, RSS-132 ISSUE 3, RSS-133 ISSUE 6, AND RSS-139 ISSUE 3	
Test Results	COMPLIES	
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.		
Approved & Released By:	Reviewed By:	Prepared By:
		
Dan Corona Operations Leader UL Verification Services Inc.	Lieu Nguyen Project Engineer UL Vérification Services Inc.	Tony Li Test Engineer UL Verification Services Inc.

2. SUMMARY OF TEST RESULTS

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

Requirement Description	Requirement Clause Number (FCC)	Requirement Clause Number (ISED)	Result	Remarks
RF Conducted Output Power	2.1046, 90.635 (b)	-	Complies	
Effective Radiated Power	22.913 (a)(5)	-	Complies	
Equivalent Isotropic Radiated power	24.232 (c), 27.50 (d) (4)	RSS132§5.4 RSS133§6.4 & SRSP-510, 5.1.2 RSS139§6.5	Complies	
Occupied Bandwidth	2.1049	RSS132 RSS133§2.3 RSS139 RSS-GEN§6.7	Complies	
Band Edge and Emission Mask	2.1051, 22.917 (a), 24.238 (a), 27.53 (h), 90.691(a)	RSS132§5.5 RSS133§6.5 RSS139§6.6	Complies	
Out of Band Emissions	2.1051, 22.917 (a), 24.238 (a), 27.53 (h), 90.691 (a)	RSS132§5.5 RSS133§6.5 RSS139§6.6	Complies	
Frequency Stability	2.1055, 22.355, 24.235, 27.54, 90.213	RSS132§5.3 RSS133§6.3 RSS139§6.4	Complies	
Peak-to-Average Ratio	22.913 (d), 24.232 (d), 27.50 (d) (5)	RSS132§5.4 RSS133§6.4 RSS139§6.5	Complies	
Field Strength of Spurious Radiation	2.1053, 22.917 (a), 24.238 (a), 27.53 (h), 90.691 (a)	RSS132§5.5 RSS133§6.5 RSS139§6.6	Complies	

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with the following:

- ANSI C63.26:2015
- FCC CFR 47 Part 2, Part 22, Part 24, Part 27 and Part 90
- [FCC KDB 971168 D01 v03r01](#): Power Meas License Digital Systems
- [FCC KDB 971168 D02 v02r01](#): Misc Rev Approv License Devices
- [FCC KDB 412172 D01 v01r01](#): Determining ERP and EIRP
- ISED RSS-GEN Issue 5, RSS-132 Issue 3, RSS-133 Issue 6, RSS-139 Issue 3

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☒	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	208313
☒	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	208313
☒	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	208313

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB
Occupied Channel Bandwidth	±1.22 %
Temperature	±2.26%
Supply voltages	±0.57 %
Time	±3.39 %

Uncertainty figures are valid to a confidence level of 95%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

$$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$$

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G, CDMA, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, Ultra-Wideband, GPS, and NFC. All models support at least one UICC based SIM. The second SIM is either an UICC based p-SIM (physical SIM) or e-SIM (electronic SIM). The device supports a built-in inductive charging transmitter and receiver. The rechargeable battery is not user accessible.

Test was performed on the parent model and is used to support the application for the parent and variant identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

CDMA BC10 band is supported in USA only.

6.2. MAXIMUM OUTPUT POWER

EIRP/ERP TEST PROCEDURE

ANSI C63.26:2015
KDB 971168 D01 Section 5.6

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted and ERP/EIRP output powers as follows:

GSM MODES

RSS 132 850MHz (Ant 1)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
824.2-848.8	GPRS	33.50	-4.80	11.5	28.70	0.741	248.77	249KGXW
	EGPRS	28.00			23.20	0.209	237.32	237KG7W
Part 22 850MHz (Ant 1)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	ERP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
824.2-848.8	GPRS	33.50	-4.80	7.0	26.55	0.452	248.77	249KGXW
	EGPRS	28.00			21.05	0.127	237.32	237KG7W
Part 24 / RSS 133 1900MHz (Ant 3)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1850.2-1909.8	GPRS	31.50	0.00	2.0	31.50	1.413	240.18	240KGXW
	EGPRS	26.41			26.41	0.438	247.12	247KG7W

CDMA MODES

Part 90 BC10 (Ant 1)									
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Conducted (Average) (W)	Antenna Gain (dBi)	Conducted Limit (W)	ERP		99% BW (kHz)	Emission Designator
						(dBm)	(W)		
817.25-822.75	1xRTT	25.7	0.37	-4.80	100.0	-6.58	0.000	1281.9	1M28F9W
	1xEV-DO Rev A	25.7	0.37			-6.58	0.000	1272.7	1M27F9W
RSS 132 BC0 (Ant 1)									
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	EIRP Limit (W)	EIRP		99% BW (kHz)	Emission Designator	
					(dBm)	(W)			
824.7-848.31	1xRTT	23.50	-4.80	11.5	18.70	0.074	1277.8	1M28F9W	
	1xEV-DO Rev A	23.50			18.70	0.074	1271.0	1M27F9W	
Part 22 BC0 (Ant 1)									
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	ERP Limit (W)	ERP		99% BW (kHz)	Emission Designator	
					(dBm)	(W)			
824.7-848.31	1xRTT	23.50	-4.80	7.0	16.55	0.045	1277.8	1M28F9W	
	1xEV-DO Rev A	23.50			16.55	0.045	1271.0	1M27F9W	
Part 24 / RSS 133 BC1 (Ant 1)									
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	EIRP Limit (W)	EIRP		99% BW (kHz)	Emission Designator	
					(dBm)	(W)			
1851.25-1908.75	1xRTT	25.70	-4.10	2.0	21.60	0.145	1279.8	1M28F9W	
	1xEV-DO Rev A	25.70			21.60	0.145	1274.5	1M27F9W	

WCDMA MODE

RSS 132 Band 5 (Ant 1)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
826.4-846.6	REL 99	25.70	-4.80	11.5	20.90	0.123	4140.6	4M14F9W
	HSDPA	24.71			19.91	0.098	4156.0	4M16F9W
Part 22 Band 5 (Ant 1)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	ERP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
826.4-846.6	REL 99	25.70	-4.80	7.0	18.75	0.075	4140.6	4M14F9W
	HSDPA	24.71			17.76	0.060	4156.0	4M16F9W
Part 24 / RSS 133 Band 2 (Ant 3)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1852.4-1907.6	REL 99	25.20	0.00	2.0	25.20	0.331	4144.9	4M14F9W
	HSDPA	24.18			24.18	0.262	4153.2	4M15F9W
Part 27 / RSS 139 Band 4 (Ant 3)								
Frequency range (MHz)	Modulation	Conducted (Average) (dBm)	Antenna Gain (dBi)	Limit (W)	EIRP		99% BW (kHz)	Emission Designator
					(dBm)	(W)		
1712.4-1752.6	REL 99	25.20	-1.70	1.0	23.50	0.224	4147.4	4M15F9W
	HSDPA	24.23			22.53	0.179	4150.1	4M15F9W

6.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was version 0.21.02-1.

6.4. MAXIMUM ANTENNA GAIN

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	ANT 3 Antenna Gain (dBi)	ANT 4 Antenna Gain (dBi)
BC10 816 – 824MHz	-4.8	-6.2		
GSM850, BC0, WCDMA 5 824 – 849MHz	-4.8	-6.2		
GSM1900, BC1, WCDMA 2 1850 – 1910 MHz	-4.1	-2.6	0.0	-0.4
WCDMA 4 1710 – 1755 MHz	-2.4	-5.1	-1.7	-3.2

6.5. WORST-CASE CONFIGURATION AND MODE

The EUT was investigated in three orthogonal orientations X/Y/Z on all ANT 1, ANT2, ANT3, and ANT 4 antennas to determine the worst case orientation. The following table exhibits the worst case orientation for different frequency bands. The full tests of the EUT have made upon the orientations that shown in the table below.

Frequency Bands	ANT1	ANT2	ANT3	ANT4
663 – 849 MHz	X	X	N/A	N/A
1710 – 1915 MHz	X	X	X	Y

Based on average conducted output power measurement investigations. The worst-case antenna port is Ant1 with the highest power. Therefore, Ant 1 was used to perform all conducted tests.

The worst-case scenario for all measurements as followed:

- GSM GPRS
- GSM EGPRS
- CDMA 2000 1xRTT
- CDMA 2000 1xEV-DO REV. A
- WCDMA REL 99
- WCDMA HSDPA

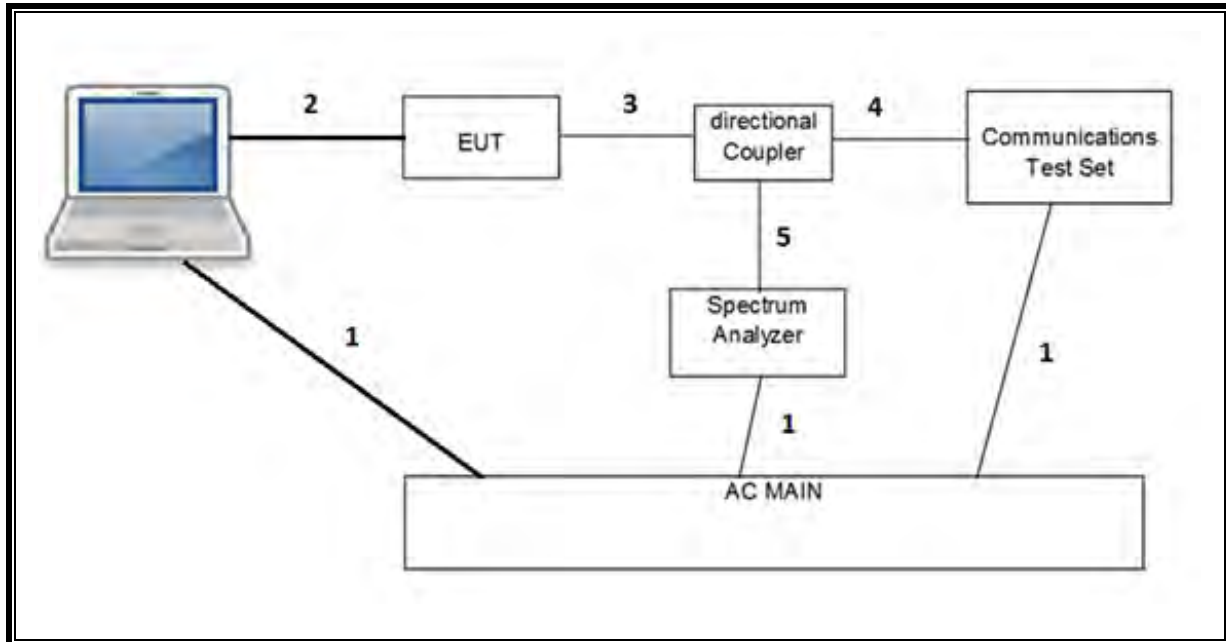
Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. There were no emissions found with less than 20dB of margin from 9kHz to 1GHz.

For simultaneous transmission of multiple channels in the 2.4GHz/5GH WLAN, UWB, and Cellular bands, tests were conducted for various configurations having the highest power, least separation in frequencies and widest operation bandwidths. No noticeable new emission was found.

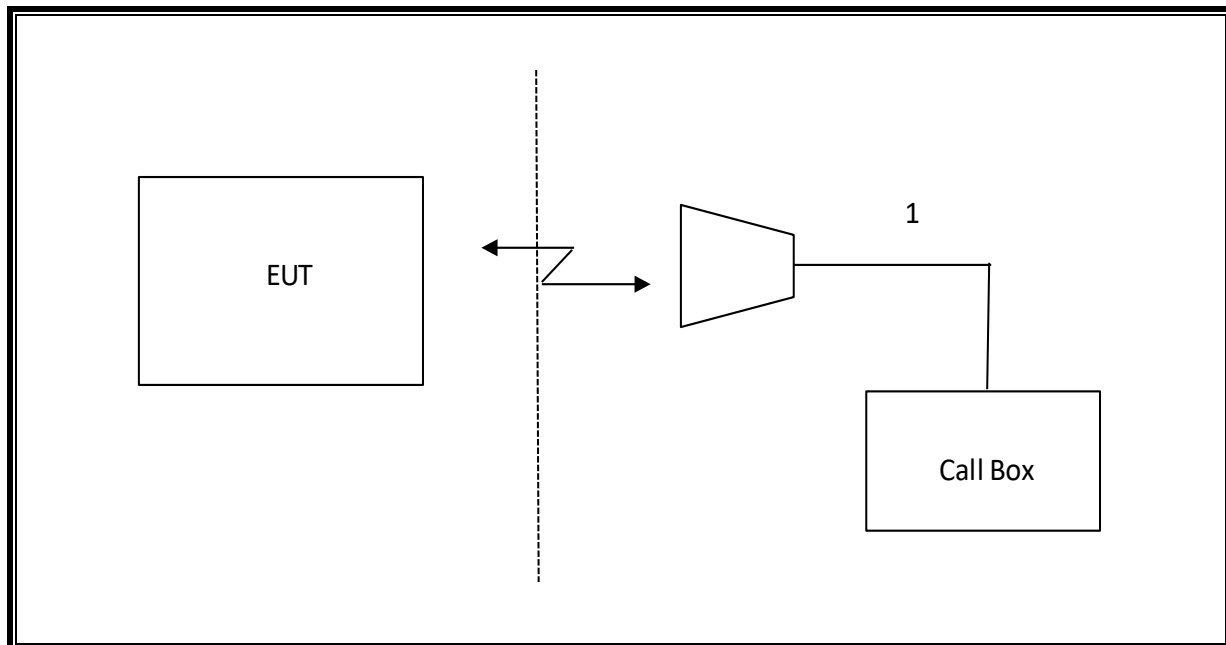
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description		Manufacturer	Model	Serial Number		FCC ID/ DoC
Laptop		A1398	C02PM012G3QD	QDS-BRCM1069		A1398
AC/DC adapter		PA-1450-BA1	B123	N/A		PA-1450-BA1
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	3	US 115V	Un-shielded	2.0	N/A
2	USB	1	DC	Un-shielded	1.0	N/A
3	RF In/Out	1	EUT	Un-shielded	0.6	N/A
4	RF In/Out	1	Communication Test Set	Un-shielded	1.2	N/A
5	RF In/Out	1	Barrel	N/A	N/A	N/A
I/O CABLES (RF RADIATED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF In/Out	1	Antenna	Un-shielded	5.0	N/A

CONDUCTED SETUP



RADIATED SETUP



7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Power Meter, P-series single channel	Keysight Technologies Inc.	N1912A	T1245	01/21/2022
Power Sensor, P-series 50MHz to 18GHz	Keysight Technologies Inc.	N1921A	T1226	02/19/2022
Wideband Radio Communications Tester	Rohde & Schwarz (Koeln) GmbH & Co. KG	CMW500	T964	02/21/2022
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc.	N9030A	T905	01/28/2022
Directional Coupler	KRYTAR	152613	T1536	09/16/2021
Wideband Communication Test Set, Call Box	Rohde & Schwarz (Koeln) GmbH & Co. KG	CMW500	T703	Connection Purposes Only
Antenna, Horn 1-12GHz	L3 Narda	PNR 1-12-440EM-NF	PRE0181258	Connection Purposes Only
Antenna, Horn 1-18GHz	ETS-Lindgren (Cedar Park, Texas)	3117	200785	09/25/2021
Rf Amplifier 1-18GHz, 45dB Min	AMPLICAL	AMP0.1G18-47-20	172124	12/09/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	201502	09/17/2021
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	202329	10/27/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	202992	11/22/2021
Filter, HPF 1GHz 18GHz Max	MICRO-TRONICS	HPM50115	172701	12/02/2021
Filter, 2.7 to 18GHz High Pass	MICROWAVE CIRCUITS	H2G518G6	T772	01/22/2022
ANTENNA, HORN	ARA	SWH-28	T125	*04/17/2021
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Keysight Technologies Inc	8449B	T404	*04/08/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T1454	01/27/2022
Antenna, Active Loop 9KHz to 30MHz	ETS-Lindgren (Cedar Park, Texas)	6502	T1616	12/02/2021
UL AUTOMATION SOFTWARE				
CLT Software	UL	UL RF	Ver 3.1.4 April 13, 2021	
Power Measurement Software	UL	UL RF	Ver 2.9.4 April 1, 2021	
Radiated test software	UL	UL RF	Ver 9.5 February 2, 2021	

NOTES:

* Testing is completed before equipment expiration date.

8. RF OUTPUT POWER VERIFICATION

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

EUT includes different power levels for head use configuration and body use configuration and the below tables contain the highest of all configurations average conducted output powers as follows:

8.1. GSM

Using CMW500 Communication Test Set

Function: Menu select > GSM Mobile Station > GSM 850/900/1800/1900

Press **Connection control** to choose the different menus

Press **RESET** > choose all to reset all settings

Connection	Press Signal Off to turn off the signal and change settings Network Support > GSM+GPRS or GSM+EGPRS Main Service > Packet Data Service selection > Test Mode A – Auto Slot Config. off	
MS Signal	Press Slot Config bottom on the right twice to select and change the number of time slots and power setting > Slot configuration > Uplink/Gamma > 33 dBm for GPRS 850/900 > 27 dBm for EGPRS 850/900 > 30 dBm for GPRS1800/1900 > 26 dBm for EGPRS1800/1900	
BS Signal	Enter the same channel number for TCH channel (test channel) and BCCH channel Frequency Offset > + 0 Hz Mode > BCCH and TCH BCCH Level > -85 dBm (May need to adjust if link is not stable) BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel] Channel Type > Off P0> 4 dB Slot Config > Unchanged (if already set under MS Signal) TCH > choose desired test channel Hopping > Off Main Timeslot > 3 (Default)	
Network	Coding Scheme >	CS 1 (GPRS) and MCS5 (EGPRS)
	Bit Stream >	2E9-1PSR Bit Pattern
AF/RF	Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input	
Connection	Press Signal On to turn on the signal and change settings	

RESULT

8.1.1. GSM 850

Test Engineer ID:	19431	Test Date:	3/8/2021
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Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
					ANT 1	ANT 2
GPRS (GMSK)	CS1	1	128	824.2	33.30	31.48
			190	836.6	33.50	31.91
			251	848.8	33.22	31.75
		2	128	824.2	32.11	30.78
			190	836.6	32.40	31.00
			251	848.8	32.01	30.82
EGPRS (8PSK)	MCS5	1	128	824.2	27.75	26.11
			190	836.6	28.00	26.40
			251	848.8	27.78	26.15
		2	128	824.2	26.76	25.14
			190	836.6	26.95	25.44
			251	848.8	26.80	25.18

8.1.2. GSM 1900

Test Engineer ID:	19431	Test Date:	3/8/2021
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Mode	Coding Scheme	Time Slots	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)			
					ANT 1	ANT 2	ANT 3	ANT 4
GPRS (GMSK)	CS1	1	512	1850.2	31.85	29.00	31.50	29.00
			661	1880	32.00	29.50	31.40	28.75
			810	1909.8	31.63	29.24	31.02	28.47
		2	512	1850.2	30.78	27.93	30.48	27.94
			661	1880	30.99	28.46	30.39	27.78
			810	1909.8	30.64	28.21	30.02	27.50
EGPRS (8PSK)	MCS5	1	512	1850.2	26.60	24.19	26.36	23.82
			661	1880	26.93	24.48	26.41	23.92
			810	1909.8	26.62	24.34	26.05	23.82
		2	512	1850.2	25.64	23.17	25.29	22.84
			661	1880	25.90	23.42	25.41	23.00
			810	1909.8	25.69	23.23	25.05	22.95

8.2. CDMA

Maximum output power is verified on the Low, Middle and High channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E for 1xRTT, section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rel. 0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A

1xRTT

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobile Test	B.15.18, L

- Protocol Rev > 6 (IS-2000-0)
- System ID: 18; NID: 65535, Reg. Ch. #: 610 for Cell, 600 for PCS & 450 for AWS
- Radio Config (RC) > RC1 or RC3
- Service Option (SO) Setup > SO55 or SO32
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

1xEV-DO - Release 0 (REL 0)

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 > Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -105.5 dBm/1.23 MHz
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > RTAP
 - RTAP Rate > 153.6 kbps
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
 - Access Network Info > Cell Parameters > Sector ID > 00000000 : 00000000 : 00000000 : 00000000 > Subnet Mask > 0
 - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
 - Cell Power > -105.5 dBm/1.23 MHz
 - Cell Band > (Select US Cellular or US PCS)
 - Channel > (Enter channel number)
 - Application Config > Enhanced Test Application Protocol > FTAP (default)
 - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
 - Rvs Power Ctrl > Active bits
 - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

1xEV-DO - Revision A (REV A)

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	A.09.13

EVDO Rev. A – RETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
 - PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters
 - Sector ID > 00000000: 00000000: 00000000: 00000000
 - Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
 - ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Rev. A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
 - PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000: 00000000: 00000000: 00000000
 - Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots
 - ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

1x Advanced Setup Procedures used to establish the test signals

Call box setup procedure

- Protocol Rev > 6 (IS-2000-0)
- System ID: 331; NID: 65535, Reg. Ch. #.:
- Radio Config (RC) > Fwd11,Rvs8
- Service Option (SO) Setup > SO75 (Loopback)
- Traffic Data Rate > Full
- Rvs Power Ctrl > All Up bits (Maximum TxPout)
- Reverse Power Control Mode: 00-200 to 400 bps
- Smart blanking was disabled.

1xEV-DO Rev. B Setup Procedures used to establish the test signals

Call box setup procedure

- CMW 500 Signal Generator > 1xEV-DO Taskbar Enable
- CMW 500 1xEV-DO Signaling Configuration Window >
- 1xEV-DO Signaling On Window:
 - Under Access Network Control:
 - Band Class: BC0: US Cellular
 - RF Channel: 31
 - 1xEV-DO Power: -70 dBm
 - Release B
- 1xEV-DO Signaling Configuration Window
 - Under RF Frequency Band / Channel: Enter Ch. Frequency
 - Under Carrier Configuration: RF Frequency

For Two Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	31	0
Carrier [1]	1013	982

➤ Under Carrier Configuration: RF Pilot

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
	CA/S1	✓	✓

For Three Carriers: Low Channel (1013)

	<u>RF Channel</u>	<u>RF Channel Offset</u>
Carrier [0]	72	0
Carrier [1]	31	-41
Carrier [2]	1013	941

➤ Under Carrier Configuration: RF Pilot

	<u>Carrier Sector</u>	<u>Active on AN</u>	<u>Assigned to AT</u>
Pilot [0]	C0/S0	✓	✓
Pilot [1]	C1/S1	✓	✓
Pilot [2]	C2/S2	✓	✓

- Rvs Power Ctrl > All Up bits (to get the maximum power)

RESULT

8.2.1. CDMA BC10

Test Engineer ID:		19431		Test Date:		4/29/2021		
Band	Mode	Radio Configuration (RC)	Service Option (SO)	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)		
						ANT 1	ANT 2	
BC10 (800MHz)	1xRTT	RC1	2 (Loopback)	450	817.25	25.53	24.61	
				560	820.00	25.55	24.61	
				670	822.75	25.52	24.61	
			55 (Loopback)	450	817.25	25.54	24.66	
				560	820.00	25.58	24.62	
				670	822.75	25.56	24.58	
		RC2	9 (Loopback)	450	817.25	25.60	24.61	
				560	820.00	25.59	24.64	
				670	822.75	25.58	24.56	
			55 (Loopback)	450	817.25	25.63	24.56	
				560	820.00	25.53	24.66	
				670	822.75	25.56	24.62	
		RC3	2 (Loopback)	450	817.25	25.60	24.58	
				560	820.00	25.54	24.59	
				670	822.75	25.52	24.59	
			55 (Loopback)	450	817.25	25.67	24.59	
				560	820.00	25.58	24.58	
				670	822.75	25.57	24.57	
			32 (+ F-SCH)	450	817.25	25.58	24.56	
				560	820.00	25.55	24.57	
				670	822.75	25.54	24.58	
			32 (+ SCH)	450	817.25	25.65	24.57	
				560	820.00	25.56	24.59	
				670	822.75	25.58	24.58	
		RC4	2 (Loopback)	450	817.25	25.59	24.65	
				560	820.00	25.63	24.56	
				670	822.75	25.56	24.56	
			55 (Loopback)	450	817.25	25.63	24.57	
				560	820.00	25.63	24.58	
				670	822.75	25.56	24.62	
			32 (+ F-SCH)	450	817.25	25.60	24.66	
				560	820.00	25.65	24.58	
				670	822.75	25.57	24.55	
			32 (+ SCH)	450	817.25	25.62	24.55	
				560	820.00	25.64	24.59	
				670	822.75	25.58	24.60	
		RC5	9 (Loopback)	450	817.25	25.70	24.66	
				560	820.00	25.65	24.70	
				670	822.75	25.55	24.62	
			55 (Loopback)	450	817.25	25.58	24.58	
				560	820.00	25.57	24.61	
				670	822.75	25.53	24.65	
	1xAdvanced	RC11	2 (Loopback)	450	817.25	25.05	24.07	
				560	820.00	25.02	24.07	
				670	822.75	25.04	24.03	
			75 (Loopback)	450	817.25	25.00	23.97	
				560	820.00	25.07	24.07	
				670	822.75	24.93	24.02	
			32 (+ F-SCH)	450	817.25	25.07	24.10	
				560	820.00	25.04	24.09	
				670	822.75	25.03	24.08	
			32 (+ SCH)	450	817.25	25.03	24.04	
				560	820.00	25.09	24.08	
				670	822.75	25.02	24.08	
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK)	RTAP Rate: 153.6 kbps	450	817.25	25.51	24.68	
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK		560	820.00	25.46	24.70	
				670	822.75	25.45	24.63	
		RETAP: 4096		450	817.25	25.70	24.65	
				560	820.00	25.55	24.53	
				670	822.75	25.48	24.64	

8.2.2. CDMA BC0

Test Engineer ID:	19431	Test Date:	4/29/2021
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Band	Mode	Radio Configuration (RC)	Service Option (SO)	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
						ANT 1	ANT 2
BC0 (850MHz)	1xRTT	RC1	2 (Loopback)	1013	824.70	23.34	22.99
				384	836.52	23.25	22.89
				777	848.31	23.27	22.94
			55 (Loopback)	1013	824.70	23.45	22.99
				384	836.52	23.30	22.92
				777	848.31	23.33	22.85
		RC2	9 (Loopback)	1013	824.70	23.50	23.00
				384	836.52	23.41	22.88
				777	848.31	23.31	22.85
			55 (Loopback)	1013	824.70	23.38	22.99
				384	836.52	23.37	22.95
				777	848.31	23.32	22.97
		RC3	2 (Loopback)	1013	824.70	23.45	22.91
				384	836.52	23.36	22.90
				777	848.31	23.37	22.86
			55 (Loopback)	1013	824.70	23.40	22.93
				384	836.52	23.37	22.90
				777	848.31	23.41	22.85
			32 (+ F-SCH)	1013	824.70	23.42	22.89
				384	836.52	23.38	22.91
				777	848.31	23.38	22.87
			32 (+ SCH)	1013	824.70	23.42	22.95
				384	836.52	23.41	22.88
				777	848.31	23.40	22.90
		RC4	2 (Loopback)	1013	824.70	23.45	22.97
				384	836.52	23.35	22.91
				777	848.31	23.39	22.89
			55 (Loopback)	1013	824.70	23.41	22.93
				384	836.52	23.35	22.92
				777	848.31	23.39	22.88
			32 (+ F-SCH)	1013	824.70	23.42	22.94
				384	836.52	23.37	22.94
				777	848.31	23.38	22.91
			32 (+ SCH)	1013	824.70	23.40	22.92
				384	836.52	23.37	22.89
				777	848.31	23.41	22.91
		RC5	9 (Loopback)	1013	824.70	23.43	22.97
				384	836.52	23.34	22.94
				777	848.31	23.36	22.83
			55 (Loopback)	1013	824.70	23.36	23.00
				384	836.52	23.32	22.92
				777	848.31	23.36	22.86
	1xAdvanced	RC11	2 (Loopback)	1013	824.70	22.68	22.27
				384	836.52	22.53	22.22
				777	848.31	22.64	22.21
			75 (Loopback)	1013	824.70	22.66	22.17
				384	836.52	22.54	22.24
				777	848.31	22.59	22.22
			32 (+ F-SCH)	1013	824.70	22.74	22.35
				384	836.52	22.60	22.24
				777	848.31	22.69	22.22
			32 (+ SCH)	1013	824.70	22.70	22.20
				384	836.52	22.65	22.27
				777	848.31	22.67	22.26
	1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK)	RTAP Rate: 153.6 kbps	1013	824.70	23.34	23.00
				384	836.52	23.37	22.90
				777	848.31	23.30	22.83
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK	RETAP: 4096	1013	824.70	23.50	22.81
				384	836.52	23.25	22.92
				777	848.31	23.06	22.79

8.2.3. CDMA BC1

Test Engineer ID:	19431	Test Date:	4/29/2021
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Band	Mode	Radio Configuration (RC)	Service Option (SO)	Ch No.	Freq. (MHz)	Conducted Average Power (dBm)	
						ANT 1	ANT 2
BC1 (1900MHz)	1xRTT	RC1	2 (Loopback)	25	1851.25	25.66	23.60
				600	1880.00	25.37	23.57
				1175	1908.75	25.57	23.56
			55 (Loopback)	25	1851.25	25.67	23.57
				600	1880.00	25.60	23.54
				1175	1908.75	25.64	23.62
		RC2	9 (Loopback)	25	1851.25	25.70	23.66
				600	1880.00	25.61	23.57
				1175	1908.75	25.59	23.59
			55 (Loopback)	25	1851.25	25.62	23.64
				600	1880.00	25.61	23.55
				1175	1908.75	25.58	23.70
		RC3	2 (Loopback)	25	1851.25	25.64	23.63
				600	1880.00	25.57	23.60
				1175	1908.75	25.61	23.63
			55 (Loopback)	25	1851.25	25.61	23.60
				600	1880.00	25.63	23.62
				1175	1908.75	25.58	23.66
			32 (+ F-SCH)	25	1851.25	25.61	23.61
				600	1880.00	25.59	23.61
				1175	1908.75	25.59	23.60
			32 (+ SCH)	25	1851.25	25.61	23.62
				600	1880.00	25.62	23.59
				1175	1908.75	25.60	23.67
		RC4	2 (Loopback)	25	1851.25	25.61	23.64
				600	1880.00	25.60	23.62
				1175	1908.75	25.62	23.57
			55 (Loopback)	25	1851.25	25.65	23.61
				600	1880.00	25.60	23.63
				1175	1908.75	25.60	23.58
			32 (+ F-SCH)	25	1851.25	25.63	23.62
				600	1880.00	25.59	23.63
				1175	1908.75	25.63	23.59
			32 (+ SCH)	25	1851.25	25.62	23.62
				600	1880.00	25.61	23.61
				1175	1908.75	25.62	23.60
		RC5	9 (Loopback)	25	1851.25	25.61	23.67
				600	1880.00	25.61	23.64
				1175	1908.75	25.61	23.61
			55 (Loopback)	25	1851.25	25.65	23.63
				600	1880.00	25.63	23.62
				1175	1908.75	25.58	23.62
	1xAdvanced	RC11	2 (Loopback)	25	1851.25	24.97	22.97
				600	1880.00	25.03	23.00
				1175	1908.75	24.94	23.05
			75 (Loopback)	25	1851.25	24.90	23.10
				600	1880.00	24.99	23.12
				1175	1908.75	24.96	23.06
			32 (+ F-SCH)	25	1851.25	24.94	23.07
				600	1880.00	25.00	23.08
				1175	1908.75	24.96	23.07
			32 (+ SCH)	25	1851.25	24.92	23.12
				600	1880.00	24.98	23.11
				1175	1908.75	24.99	23.36
		1xEVDO Rel. 0	FTAP Rate: 307.2 kbps(2 slot, QPSK)	25	1851.25	25.56	23.49
				600	1880	25.47	23.49
				1175	1908.75	25.54	23.70
	1xEVDO Rev. A	FETAP: 307.2k, QPSK/ ACK	RETAP: 4096	25	1851.25	25.58	23.60
				600	1880	25.70	23.67
				1175	1908.75	25.44	23.62

8.3. WCDMA

TEST PROCEDURE

The transmitter output was connected to the input terminal of Directional Coupler via calibrated coaxial cable. The output coupling terminal of the Directional Coupler was directly connected to a spectrum analyzer while the output through terminal connected to the communication test set via calibrated coaxial cable.

The output power was measured with the spectrum analyzer at the low, middle and high channel in each band.

- Set the spectrum analyzer span wide enough or greater than the modulated signal BW.
- Set a spectrum analyzer at peak detection mode with VBW $\geq$ RBW $\geq$ 26dB BW, typically 5MHz.
- Set a marker to point the corresponding peak value.

REL 99

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 specification. The DUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7).

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 2
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c/β_d	8/15

HSDPA REL 5

The following 4 Sub-tests were completed according to Release 5 procedures in table C.10.1.4 of 3GPP TS 34.121-1. A summary of these settings are illustrated below:

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

HSPA REL 6 (HSDPA & HSUPA)

The following 5 Sub-tests were completed according to Release 6 procedures in table C.11.1.3 of 3GPP TS 34.121-1. A summary of these settings are illustrated below:

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 4) (Note 5)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2) (Note 6)	AG Index (Note 5)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15	0	-	-	5/15	5/15	47/15	4	1	1.0	0.0	12	67

Note 1: For sub-test 1 to 4, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. For sub-test 5, Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 5/15$ with $\beta_{hs} = 5/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 5: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 6: For subtests 2, 3 and 4, UE may perform E-DPDCH power scaling at max power which could results in slightly smaller MPR values.

DUAL CARRIER HSDPA (DC-HSDPA (REL 8, CAT 24)

The following 4 Sub-tests for DC-HSDPA were completed according to Release 8 procedures in table C08.1.12 of 3GPP TS 34.121-1. A summary of subtest settings are illustrated below:

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.

Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

HSPA+ REL 7

The following 1 Sub-test was completed according to Release 7 procedures in table C.11.1.4 of 3GPP TS34.121. A summary of these settings are illustrated below:

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note 3)	β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105
Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$. Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0). Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default. Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value. Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.											

RESULT

8.3.1. WCDMA BAND 5

Test Engineer ID:	19431	Test Date:	3/8/2021
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)	
						ANT 1	ANT 2
W-CDMA Band 5 (850MHz)	Rel 99	RMC, 12.2 kbps	4132	826.4	N/A	25.70	24.70
			4183	836.6	N/A	25.62	24.65
			4233	846.6	N/A	25.60	24.63
	HSDPA	Subtest 1	4132	826.4	0	24.69	23.69
			4183	836.6	0	24.64	23.63
			4233	846.6	0	24.59	23.59
		Subtest 2	4132	826.4	0	24.70	23.68
			4183	836.6	0	24.64	23.63
			4233	846.6	0	24.56	23.59
		Subtest 3	4132	826.4	0.5	24.17	23.18
			4183	836.6	0.5	24.14	23.10
			4233	846.6	0.5	24.09	23.12
		Subtest 4	4132	826.4	0.5	24.20	23.17
			4183	836.6	0.5	24.16	23.13
			4233	846.6	0.5	24.09	23.10
	HSPA (HSDPA & HSUPA)	Subtest 1	4132	826.4	0	24.71	23.69
			4183	836.6	0	24.65	23.65
			4233	846.6	0	24.60	23.65
		Subtest 2	4132	826.4	2	22.72	21.69
			4183	836.6	2	22.64	21.66
			4233	846.6	2	22.60	21.62
		Subtest 3	4132	826.4	1	23.70	11.75
			4183	836.6	1	23.65	22.66
			4233	846.6	1	23.58	22.63
		Subtest 4	4132	826.4	2	22.72	21.71
			4183	836.6	2	22.64	21.67
			4233	846.6	2	22.59	21.65
		Subtest 5	4132	826.4	0	24.23	23.24
			4183	836.6	0	24.15	23.23
			4233	846.6	0	24.13	23.19
	DC-HSDPA	Subtest 1	4132	826.4	0	24.67	23.72
			4183	836.6	0	24.49	23.64
			4233	846.6	0	24.55	23.59
		Subtest 2	4132	826.4	0	24.69	23.70
			4183	836.6	0	24.62	23.64
			4233	846.6	0	24.59	23.59
		Subtest 3	4132	826.4	0.5	24.20	23.21
			4183	836.6	0.5	24.11	23.16
			4233	846.6	0.5	24.07	23.11
		Subtest 4	4132	826.4	0.5	24.19	23.18
			4183	836.6	0.5	24.13	23.13
			4233	846.6	0.5	24.08	23.10

8.3.2. WCDMA BAND 2

Test Engineer ID:	19431	Test Date:	3/8/2021
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)			
						ANT 1	ANT 2	ANT 3	ANT 4
W-CDMA Band 2 (1900MHz)	Rel 99	RMC, 12.2 kbps	9262	1852.4	N/A	25.61	23.66	25.13	23.70
			9400	1880.0	N/A	25.63	23.70	25.20	23.70
			9538	1907.6	N/A	25.70	23.65	25.12	23.70
	HSDPA	Subtest 1	9262	1852.4	0	24.62	22.72	24.11	22.70
			9400	1880.0	0	24.64	22.68	24.13	22.70
			9538	1907.6	0	24.66	22.62	24.12	22.71
		Subtest 2	9262	1852.4	0	24.64	22.71	24.12	22.71
			9400	1880.0	0	24.63	22.68	24.17	22.74
			9538	1907.6	0	24.66	22.62	24.12	22.70
		Subtest 3	9262	1852.4	0.5	24.15	22.18	23.61	22.22
			9400	1880.0	0.5	23.97	22.18	23.66	22.23
			9538	1907.6	0.5	24.13	22.12	23.63	22.25
		Subtest 4	9262	1852.4	0.5	24.13	22.19	23.65	22.22
			9400	1880.0	0.5	24.12	22.17	23.66	22.22
			9538	1907.6	0.5	24.16	22.11	23.62	22.21
	HSPA (HSDPA & HSUPA)	Subtest 1	9262	1852.4	0	24.63	22.71	24.12	22.71
			9400	1880.0	0	24.67	22.69	24.17	22.76
			9538	1907.6	0	24.66	22.63	24.14	22.74
		Subtest 2	9262	1852.4	2	22.66	20.69	22.13	20.76
			9400	1880.0	2	22.63	20.63	22.13	20.71
			9538	1907.6	2	22.63	20.58	22.12	20.71
		Subtest 3	9262	1852.4	1	23.64	21.68	23.13	21.74
			9400	1880.0	1	23.61	21.61	23.15	21.71
			9538	1907.6	1	23.62	21.57	23.12	21.71
		Subtest 4	9262	1852.4	2	22.64	20.69	22.11	20.71
			9400	1880.0	2	22.64	20.68	22.17	20.76
			9538	1907.6	2	22.71	20.62	22.17	20.75
		Subtest 5	9262	1852.4	0	24.21	22.24	23.69	22.28
			9400	1880.0	0	24.21	22.24	23.74	22.29
			9538	1907.6	0	24.27	22.18	23.72	22.31
	DC-HSDPA	Subtest 1	9262	1852.4	0	24.69	22.69	24.15	22.75
			9400	1880.0	0	24.66	22.67	24.18	22.75
			9538	1907.6	0	24.70	22.61	24.15	22.73
		Subtest 2	9262	1852.4	0	24.67	22.70	24.14	22.74
			9400	1880.0	0	24.67	22.65	24.18	22.74
			9538	1907.6	0	24.66	22.60	24.13	22.72
		Subtest 3	9262	1852.4	0.5	24.18	22.20	23.65	22.24
			9400	1880.0	0.5	24.17	22.17	23.69	22.24
			9538	1907.6	0.5	24.17	22.10	23.64	22.23
		Subtest 4	9262	1852.4	0.5	24.18	22.21	23.59	22.24
			9400	1880.0	0.5	24.17	22.17	23.66	22.24
			9538	1907.6	0.5	24.18	22.10	23.66	22.26

8.3.3. WCDMA BAND 4

Test Engineer ID:	19431	Test Date:	3/8/2021
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Band	Mode		UL Ch No.	Freq. (MHz)	MPR (dB)	Conducted Average Power (dBm)			
						ANT 1	ANT 2	ANT 3	ANT 4
W-CDMA Band 4 (1700MHz)	Rel 99	RMC, 12.2 kbps	1312	1712.4	N/A	25.70	23.70	25.20	23.67
			1413	1732.6	N/A	25.60	23.62	25.14	23.67
			1513	1752.6	N/A	25.63	23.65	25.14	23.70
	HSDPA	Subtest 1	1312	1712.4	0	24.68	22.71	24.19	22.76
			1413	1732.6	0	24.60	22.62	24.13	22.76
			1513	1752.6	0	24.61	22.65	24.15	22.76
		Subtest 2	1312	1712.4	0	24.68	22.70	24.15	22.73
			1413	1732.6	0	24.60	22.60	24.13	22.74
			1513	1752.6	0	24.61	22.62	24.13	22.75
		Subtest 3	1312	1712.4	0.5	24.18	22.18	23.69	22.24
			1413	1732.6	0.5	24.11	22.12	23.63	22.25
			1513	1752.6	0.5	24.08	22.14	23.66	22.27
		Subtest 4	1312	1712.4	0.5	24.20	22.18	23.61	22.22
			1413	1732.6	0.5	24.12	22.09	23.64	22.25
			1513	1752.6	0.5	24.12	22.10	23.66	22.22
	HSPA (HSDPA & HSUPA)	Subtest 1	1312	1712.4	0	24.63	22.66	24.20	22.74
			1413	1732.6	0	24.60	22.61	24.16	22.77
			1513	1752.6	0	24.60	22.66	24.15	22.80
		Subtest 2	1312	1712.4	2	22.66	20.67	22.20	20.74
			1413	1732.6	2	22.62	20.61	22.16	20.75
			1513	1752.6	2	22.59	20.64	22.15	20.76
		Subtest 3	1312	1712.4	1	23.68	21.64	11.57	11.70
			1413	1732.6	1	23.59	21.63	23.15	21.73
			1513	1752.6	1	23.57	21.63	23.13	21.78
		Subtest 4	1312	1712.4	2	22.68	20.68	22.21	20.74
			1413	1732.6	2	22.60	20.63	22.18	20.79
			1513	1752.6	2	22.63	20.64	22.16	20.80
		Subtest 5	1312	1712.4	0	24.23	22.24	23.74	22.30
			1413	1732.6	0	24.19	22.13	23.72	22.30
			1513	1752.6	0	24.20	22.21	23.73	22.37
	DC-HSDPA	Subtest 1	1312	1712.4	0	24.75	22.71	24.23	22.77
			1413	1732.6	0	24.62	22.61	24.17	22.75
			1513	1752.6	0	24.62	22.64	24.15	22.78
		Subtest 2	1312	1712.4	0	24.70	22.71	24.17	22.74
			1413	1732.6	0	24.59	22.61	24.11	22.70
			1513	1752.6	0	24.61	22.60	24.13	22.74
		Subtest 3	1312	1712.4	0.5	24.20	22.20	23.64	22.25
			1413	1732.6	0.5	24.12	22.11	23.62	22.25
			1513	1752.6	0.5	24.12	22.13	23.63	22.26
		Subtest 4	1312	1712.4	0.5	24.20	22.18	23.64	22.24
			1413	1732.6	0.5	24.13	22.11	23.64	22.26
			1513	1752.6	0.5	24.15	22.11	23.63	22.27

9. CONDUCTED TEST RESULTS

9.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049
ISED: RSS132; RSS133§2.3; RSS139

LIMITS

For reporting purposes only.

TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the middle channel in each band. The 99% and -26dB bandwidths was also measured and recorded.

RESULTS

There is no limit required and power is the same for low, middle and high channel; therefore, only middle channel was tested.

GSM

Band	Modulation	Channel	f(MHz)	99% BW (KHz)	-26dB BW (KHz)
850	GPRS	190	836.6	248.77	320.20
	EGPRS			237.32	302.90
1900	GPRS	661	1880.0	240.18	310.70
	EGPRS			247.12	311.30

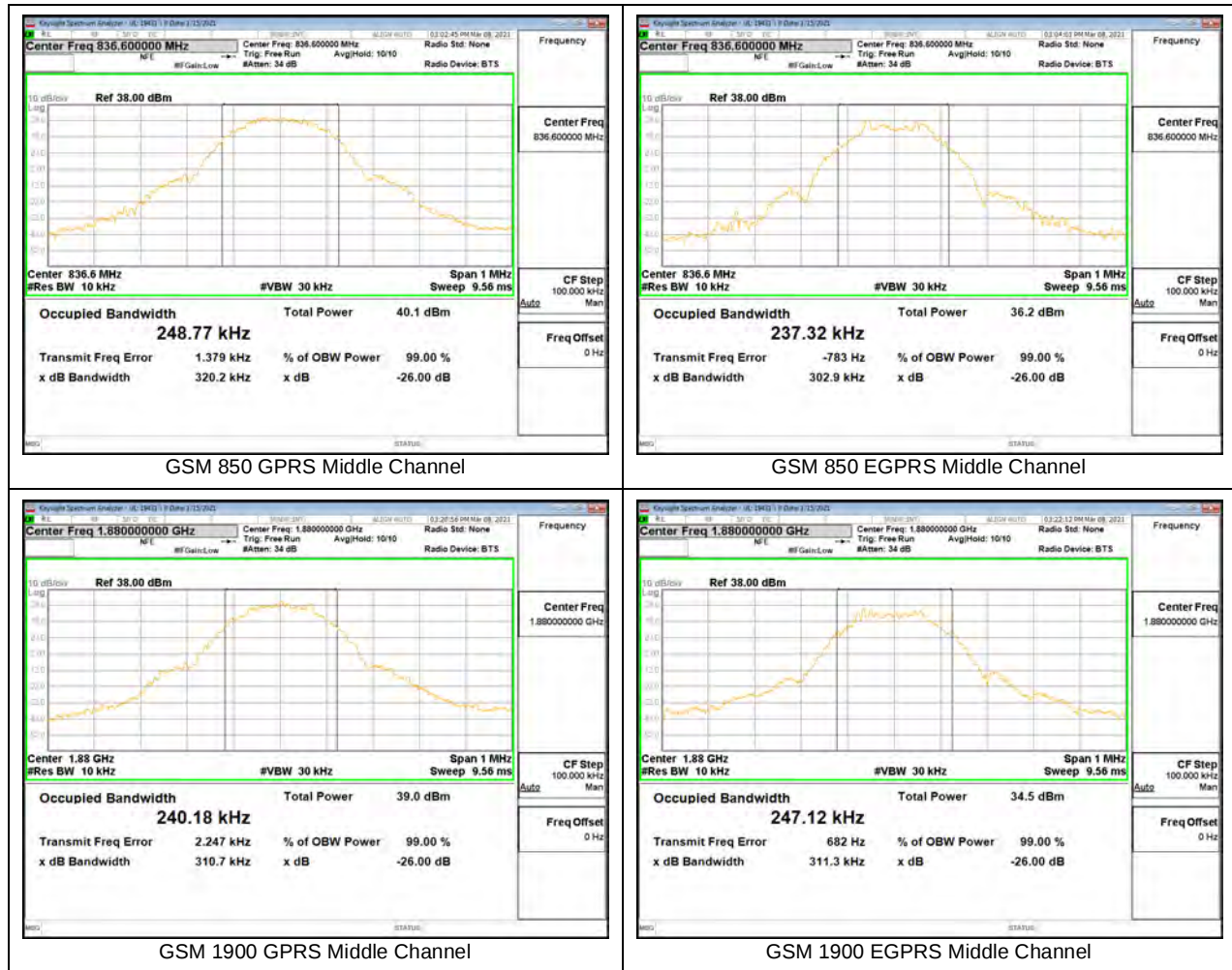
CDMA

Band	Modulation	Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
BC10	1xRTT	560	820.0	1.2819	1.433
	1xEV-DO Rev A			1.2727	1.424
BC0	1xRTT	384	836.5	1.2778	1.427
	1xEV-DO Rev A			1.2710	1.424
BC1	1xRTT	600	1880.0	1.2798	1.434
	1xEV-DO Rev A			1.2745	1.418

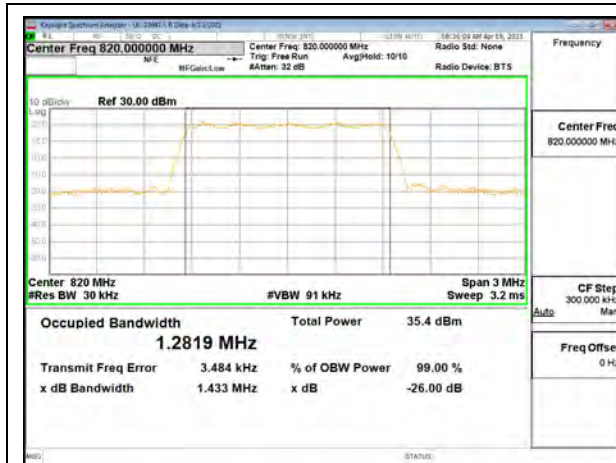
WCDMA

Band	Modulation	Channel	f(MHz)	99% BW (MHz)	-26dB BW (MHz)
BAND 5	REL 99	4408	836.6	4.1406	4.7110
	HSDPA			4.1560	4.6960
BAND 2	REL 99	9800	1880.0	4.1449	4.7050
	HSDPA			4.1532	4.7100
BAND 4	REL 99	1638	1732.6	4.1474	4.6890
	HSDPA			4.1501	4.6950

9.1.1. GSM



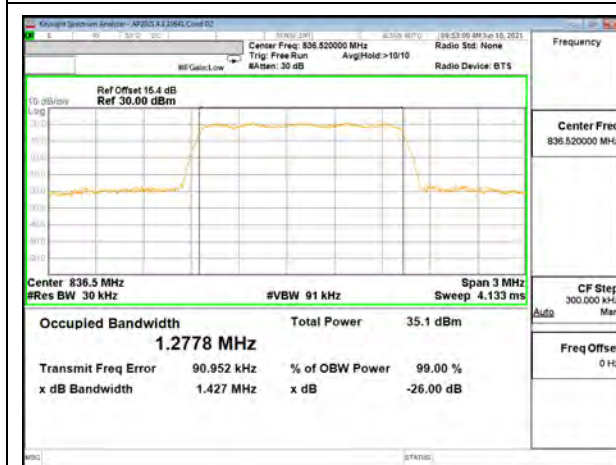
9.1.2. CDMA



CDMA BC10 1xRTT Middle Channel



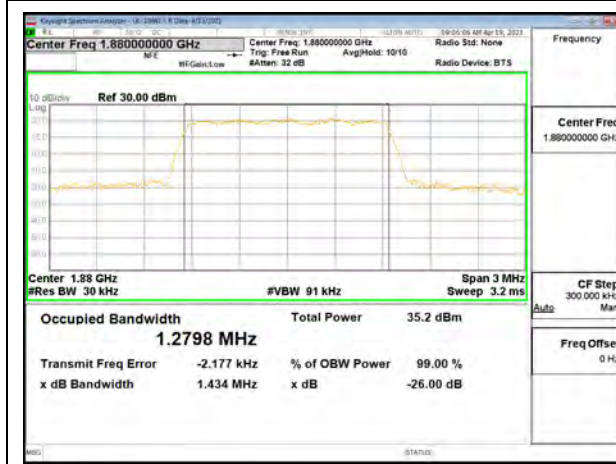
CDMA BC10 1xEV-DO Rev A Middle Channel



CDMA BC0 1xRTT Middle Channel



CDMA BC0 1xEV-DO Rev A Middle Channel

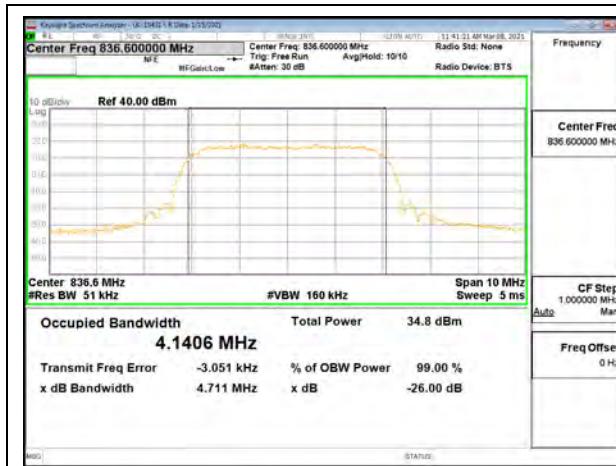


CDMA BC1 1xRTT Middle Channel

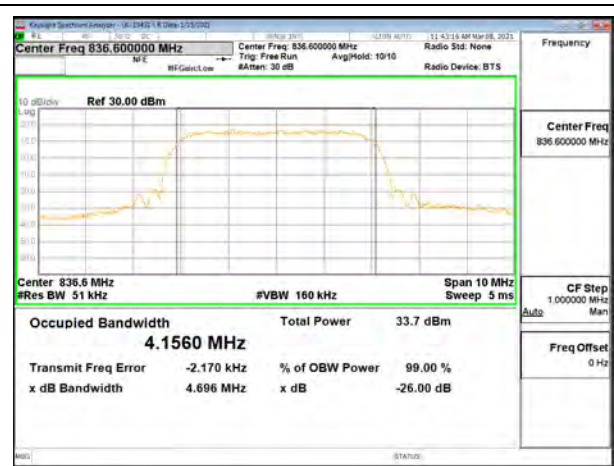


CDMA BC1 1xEV-DO Rev A Middle Channel

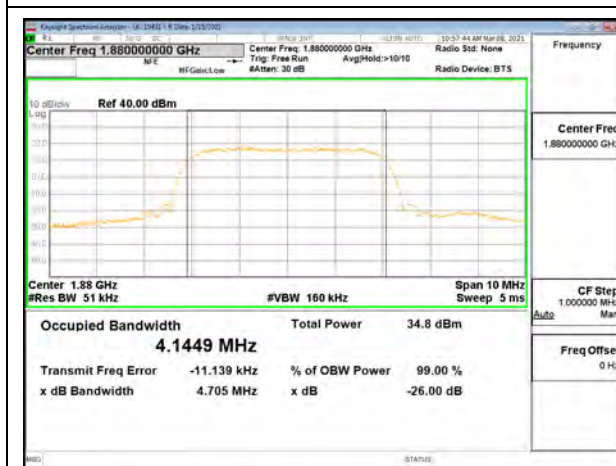
9.1.3. WCDMA



WCDMA Band 5 Rel 99 Middle Channel



WCDMA Band 5 HSDPA Middle Channel



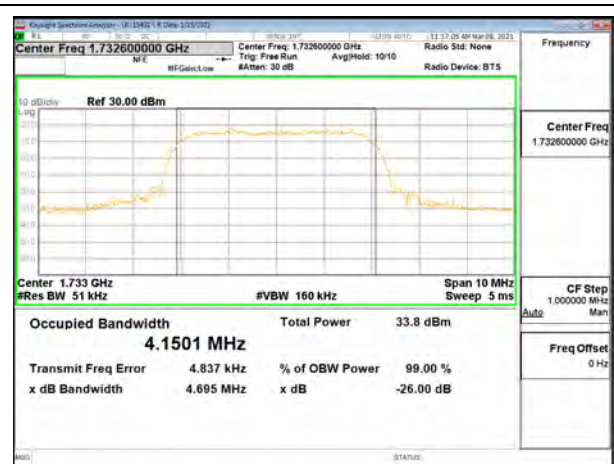
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Middle Channel



WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Middle Channel

9.2. BAND EDGE AND EMISSION MASK

LIMITS

FCC: §22.917(a), §24.238, §27.53 (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

FCC: §90.691 Emission mask requirements for EA-based systems.

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

RSS132§5.5

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

- (i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).
- (ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

RSS133§6.5.1

Equipment shall comply with the limits in (i) and (ii) below.

- (i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).
- (ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

RSS139§6.6

- (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.
- (ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

TEST PROCEDURE

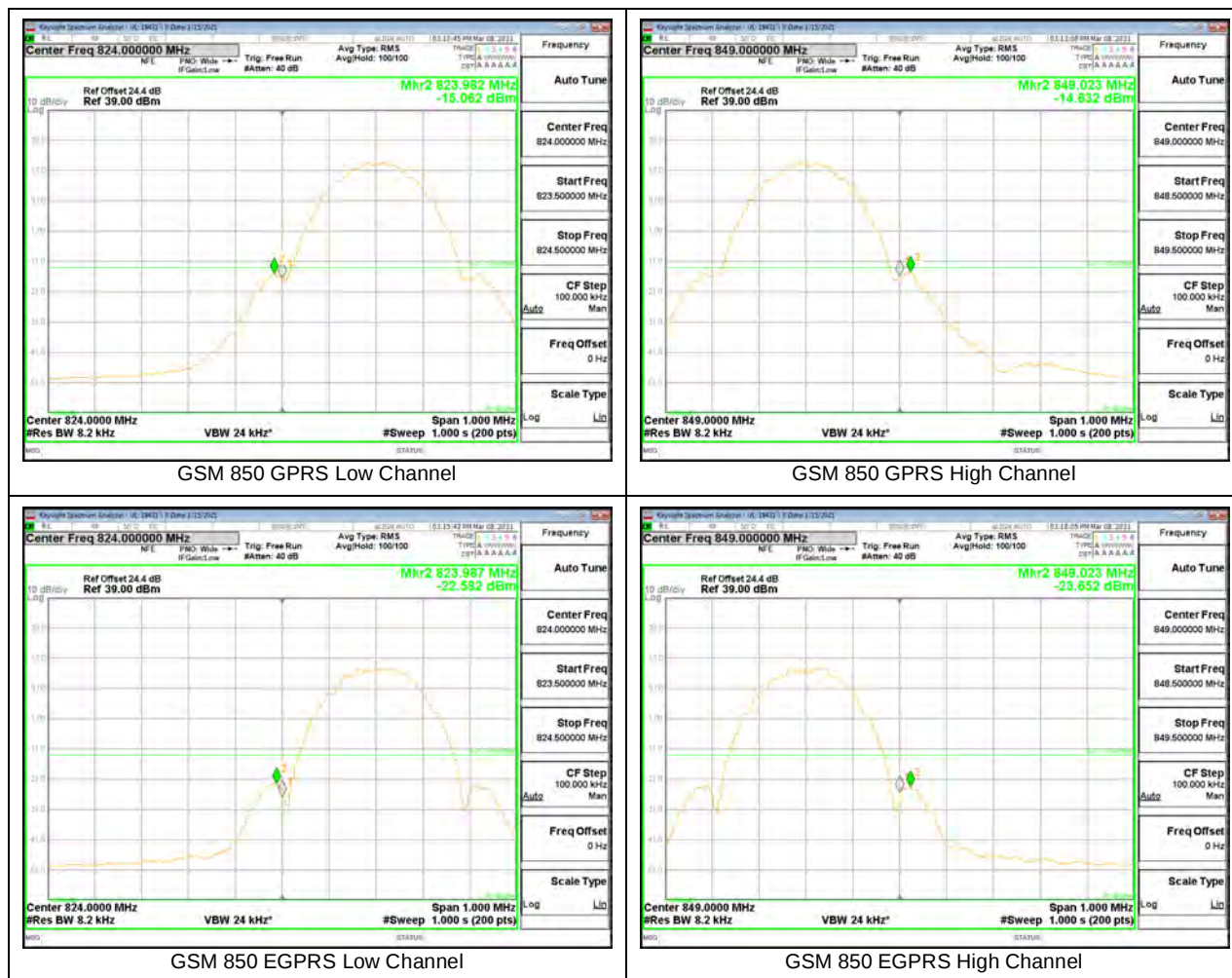
The transmitter output was connected to a R&S CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

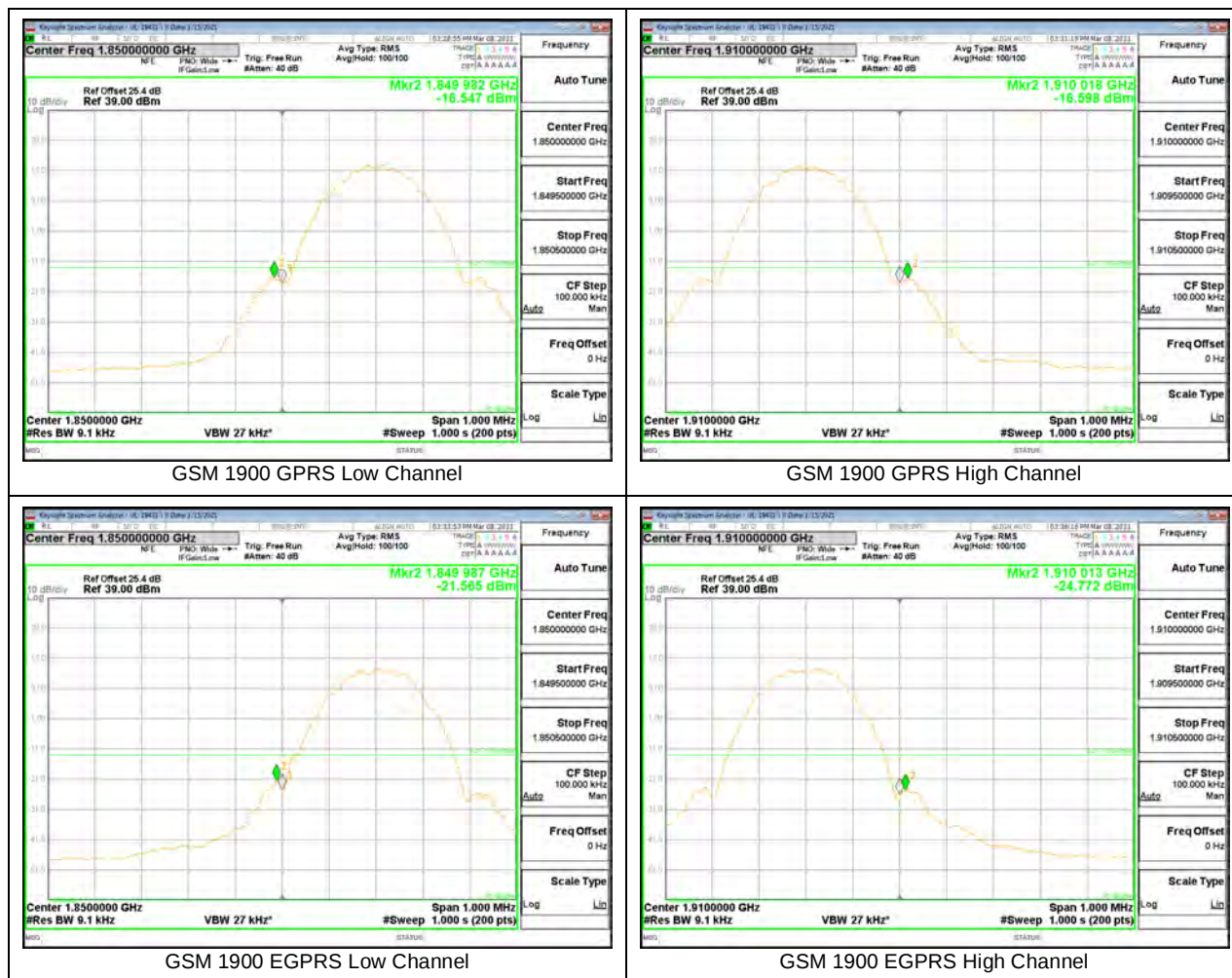
- Set the spectrum analyzer span to include the block edge frequency.
- Set a marker to point the corresponding band edge frequency in each test case.
- Set display line at -13 dBm
- Set resolution bandwidth to at least 1% of emission bandwidth.

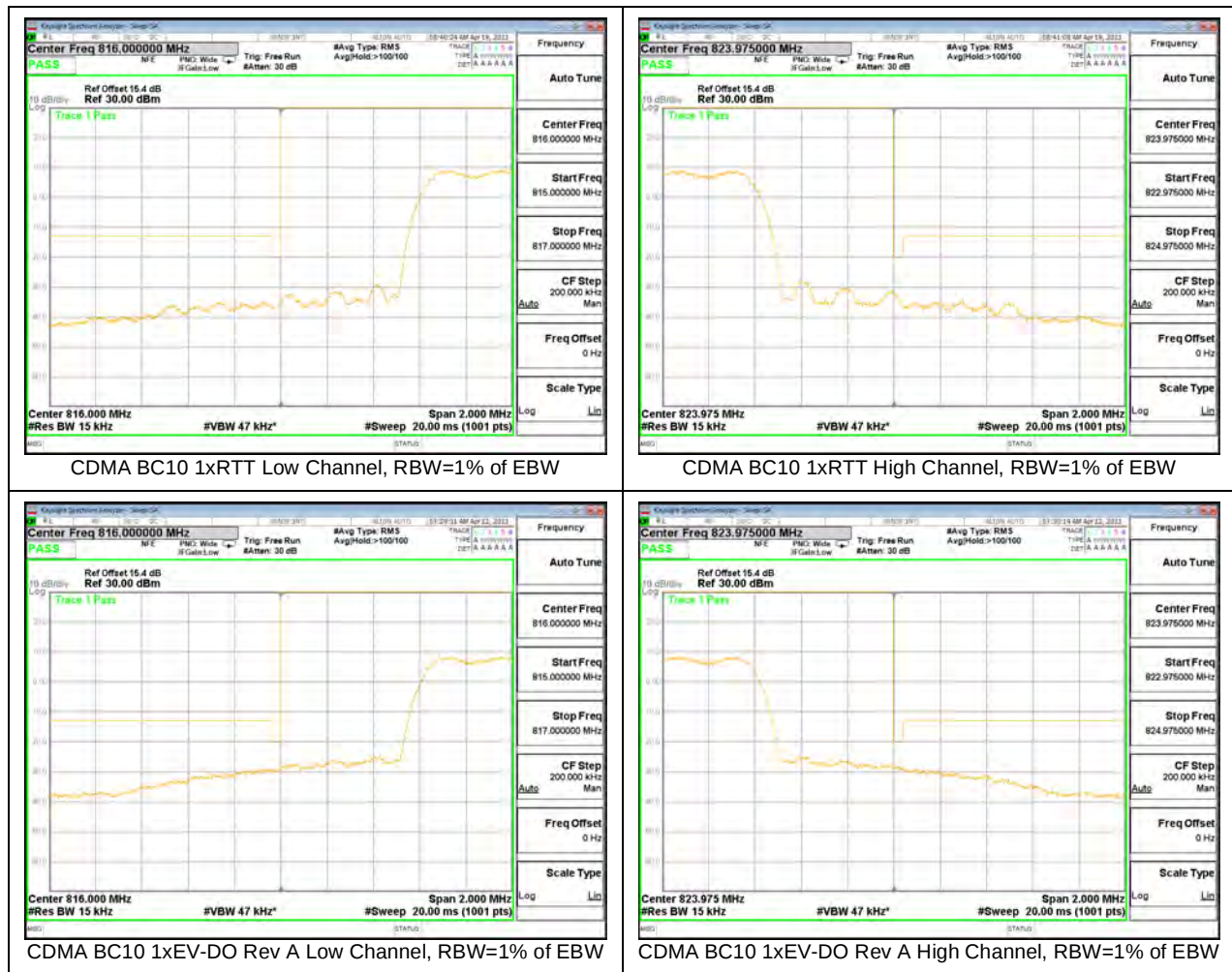
RESULTS

9.2.1. GSM 850

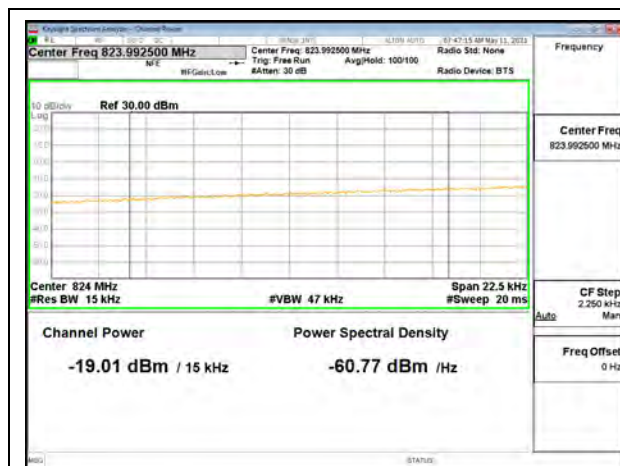


9.2.2. GSM 1900





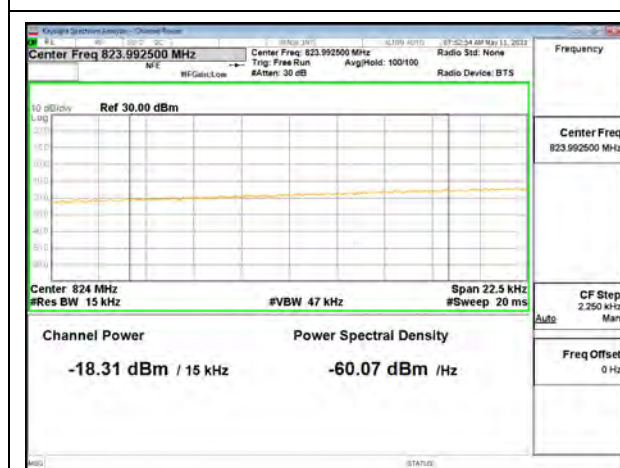
9.2.4. CDMA BC0



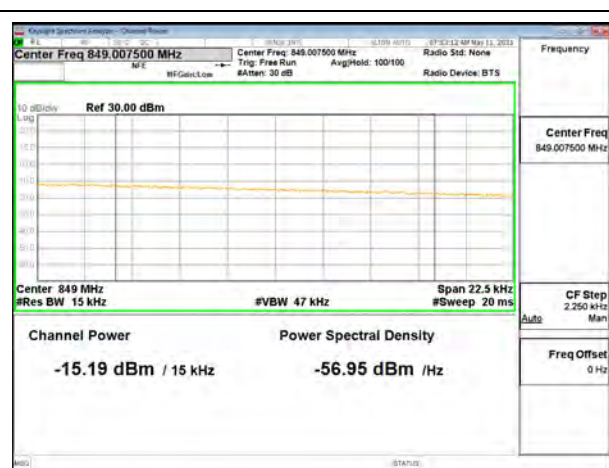
CDMA BC0 1xRTT Low Channel



CDMA BC0 1xRTT High Channel

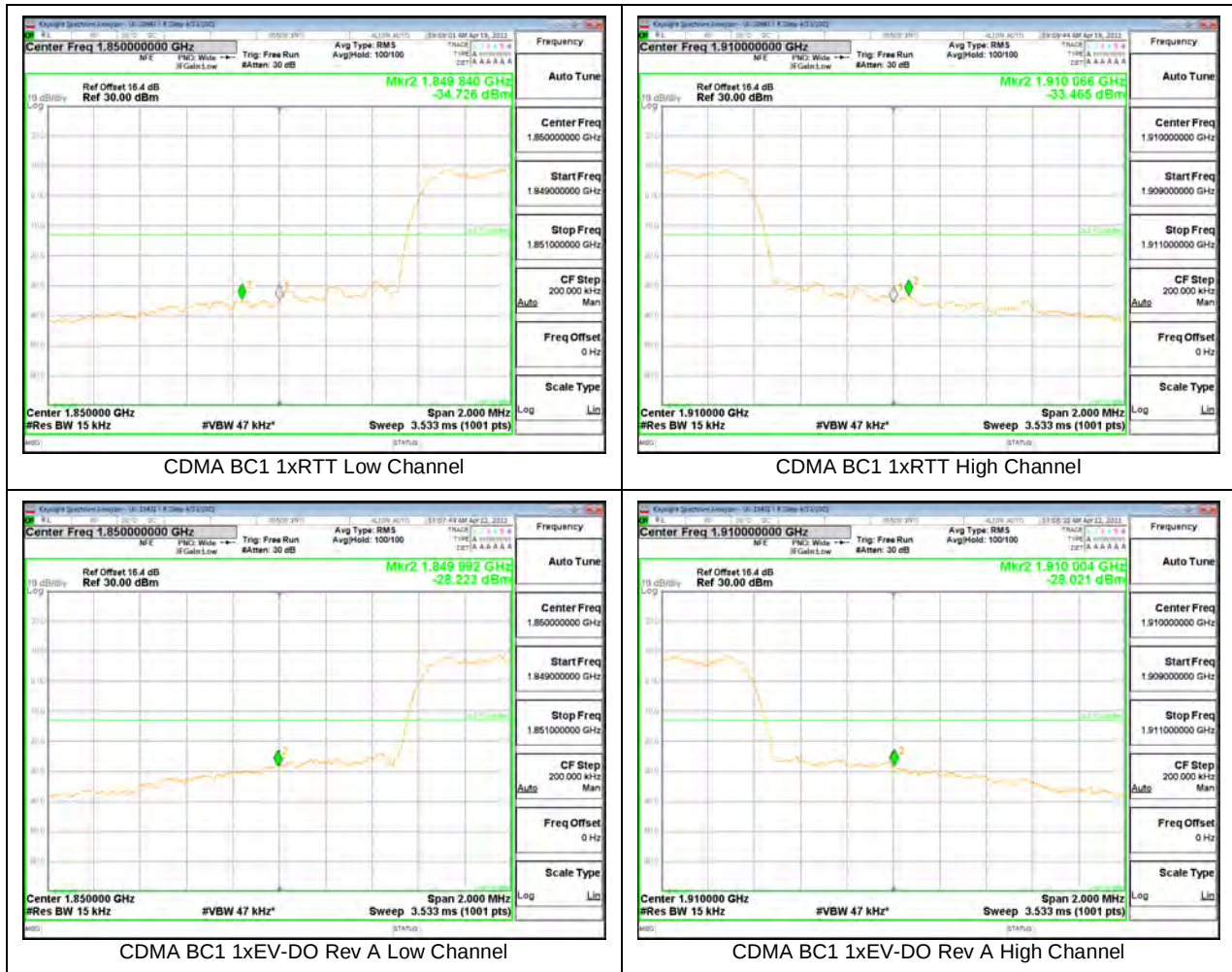


CDMA BC0 1xEV-DO Rev A Low Channel

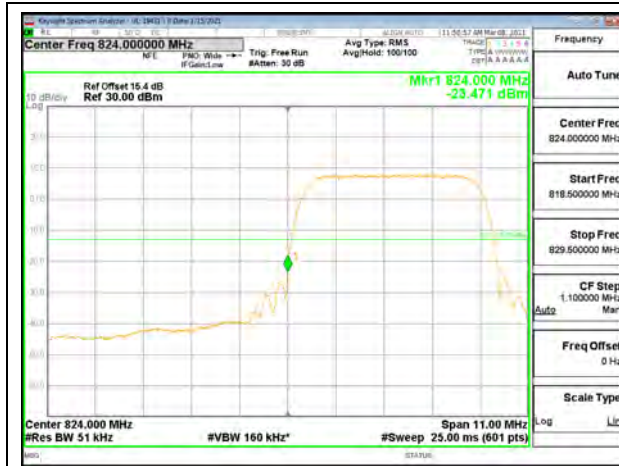


CDMA BC0 1xEV-DO Rev A High Channel

9.2.5. CDMA BC1



9.2.6. WCDMA BAND 5



WCDMA Band 5 Rel 99 Low Channel



WCDMA Band 5 Rel 99 High Channel



WCDMA Band 5 HSDPA Low Channel



WCDMA Band 5 HSDPA High Channel

9.2.7. WCDMA BAND 2



WCDMA Band 2 Rel 99 Low Channel



WCDMA Band 2 Rel 99 High Channel

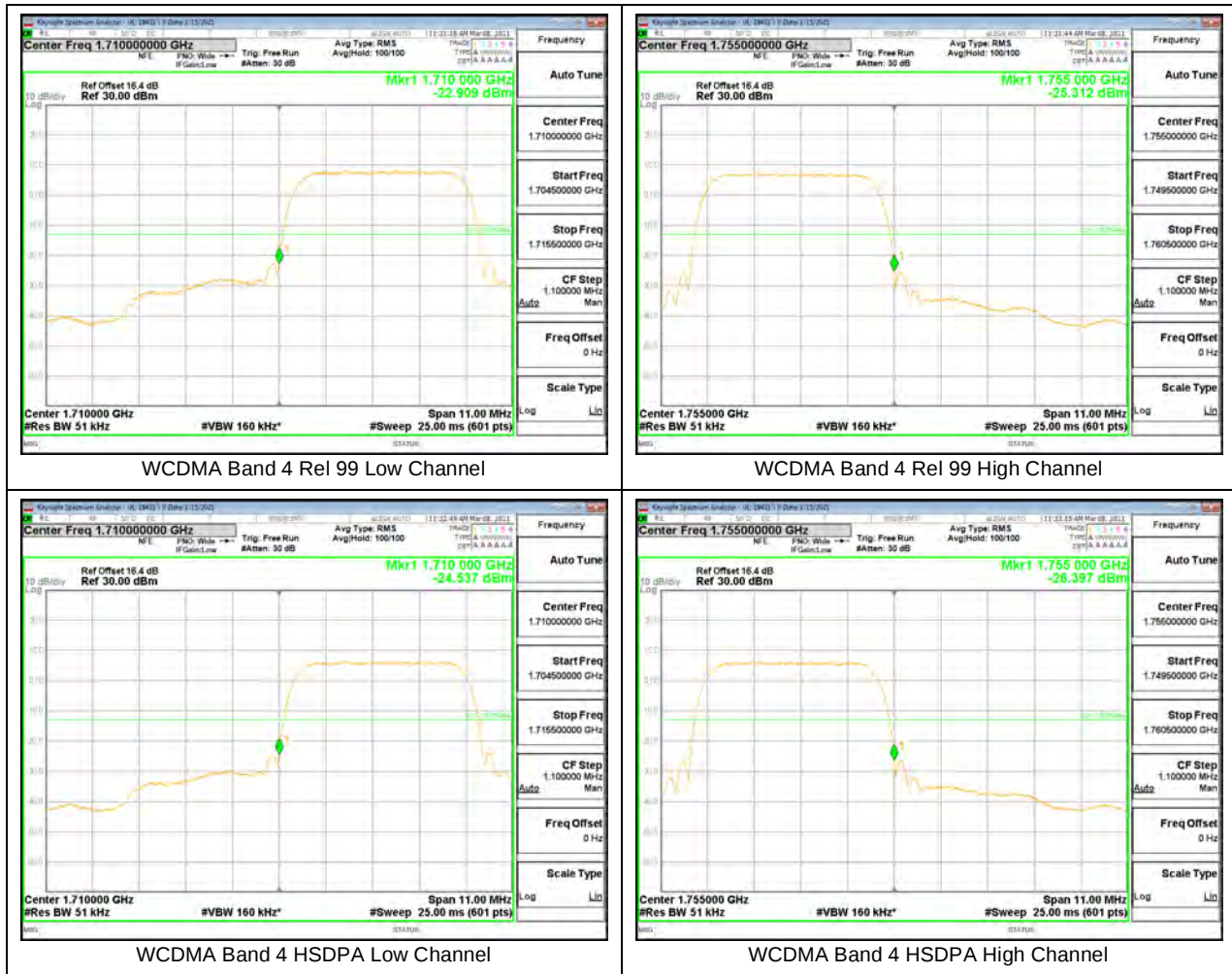


WCDMA Band 2 HSDPA Low Channel



WCDMA Band 2 HSDPA High Channel

9.2.8. WCDMA BAND 4



9.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.917, §24.238, §27.53 and §90.691
ISED: RSS132§5.5; RSS133§6.5 and RSS139§6.6

LIMITS

FCC: §22.917(a), §24.238, §27.53 (h), §90.691

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

RSS132§5.5, RSS133§6.5.1, RSS139§6.6

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

TEST PROCEDURE

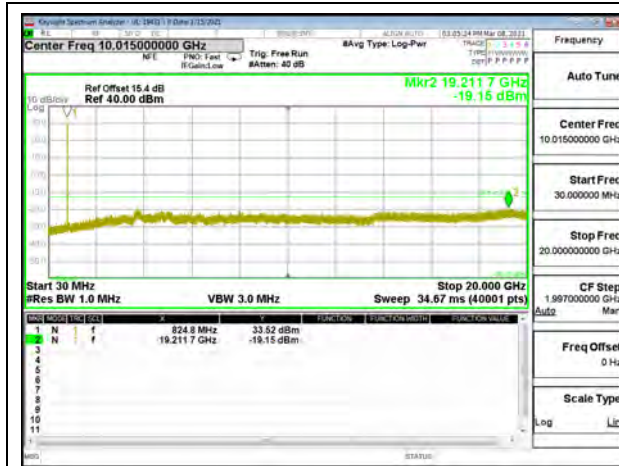
The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

For each out of band emissions measurement:

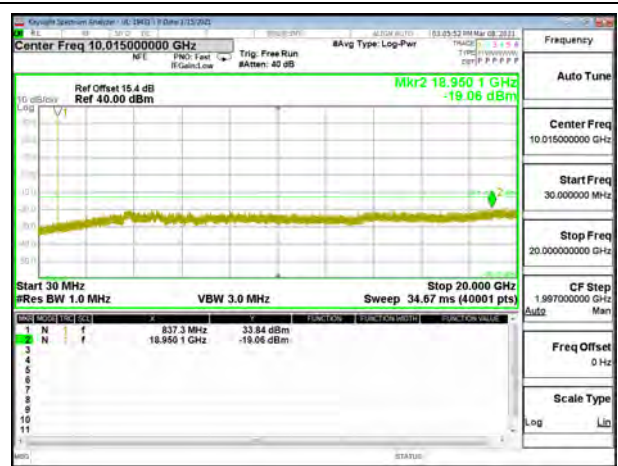
- Set display line at -13 dBm
- Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz.
(NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

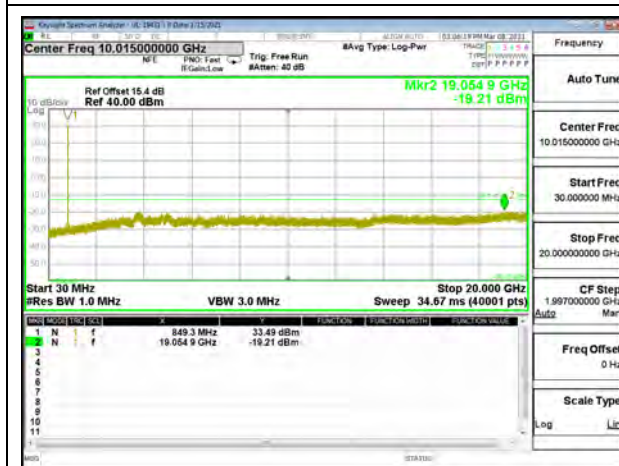
9.3.1. GSM 850



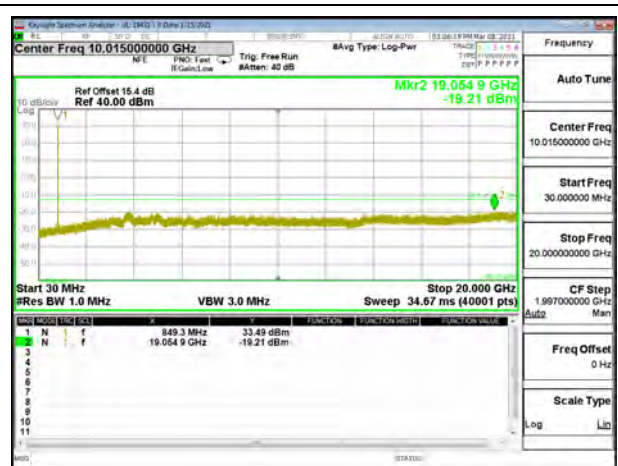
GSM 850 GPRS Low Channel



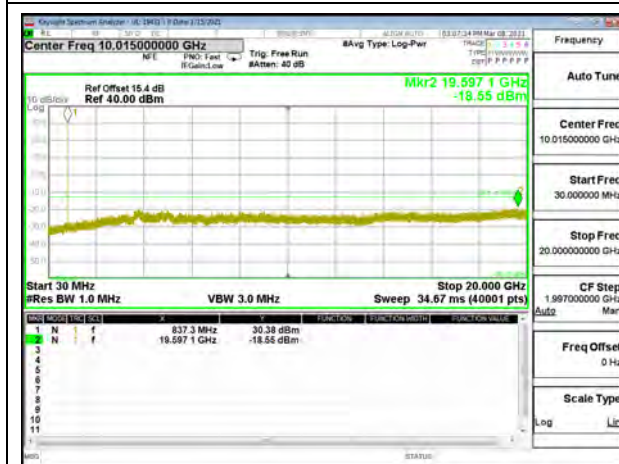
GSM 850 EGPRS Low Channel



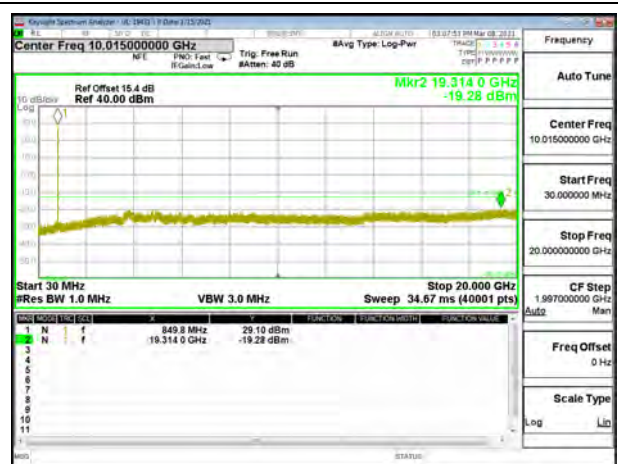
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

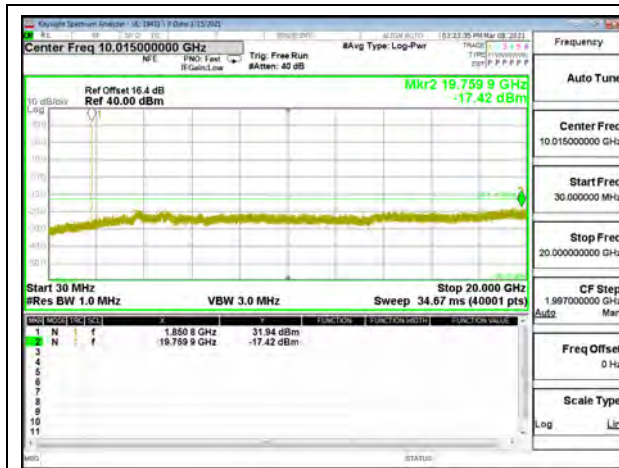


GSM 850 GPRS High Channel

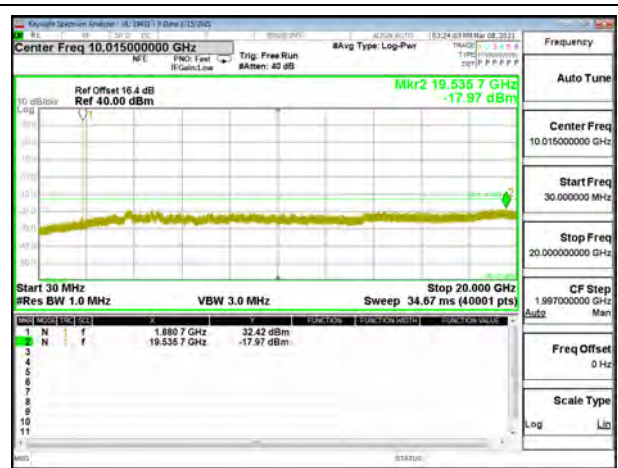


GSM 850 EGPRS High Channel

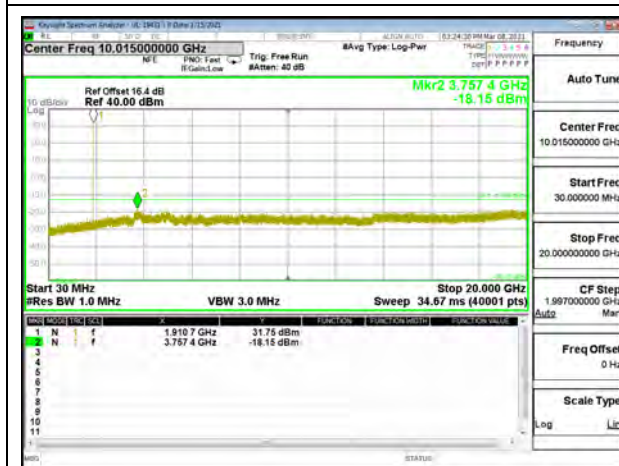
9.3.2. GSM 1900



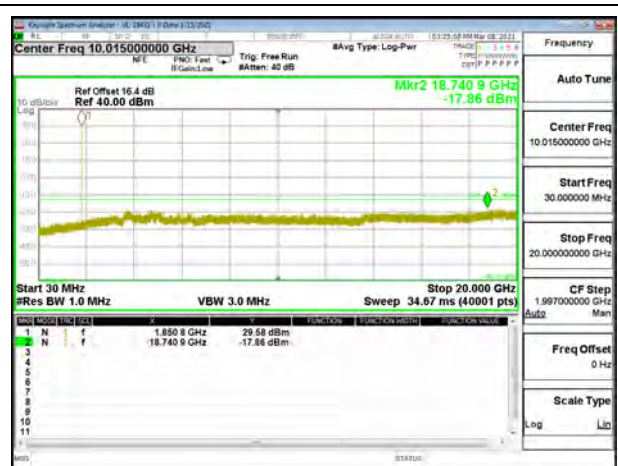
GSM 1900 GPRS Low Channel



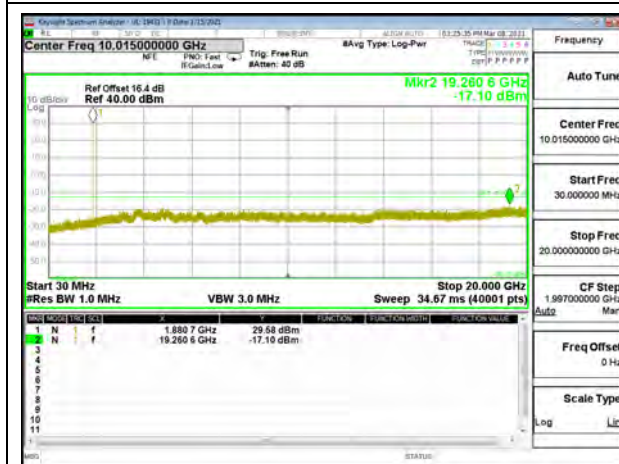
GSM 1900 EGPRS Low Channel



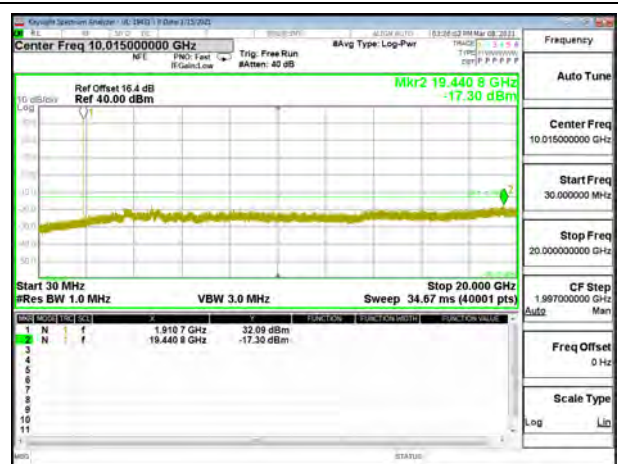
GSM 1900 GPRS Middle Channel



GSM 1900 EGPRS Middle Channel



GSM 1900 GPRS High Channel

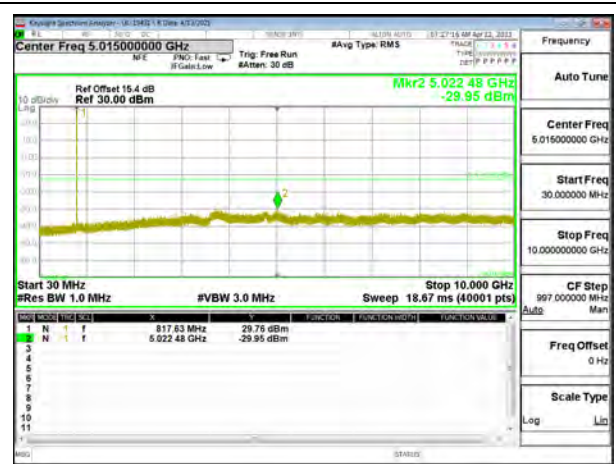


GSM 1900 EGPRS High Channel

9.3.3. CDMA BC10



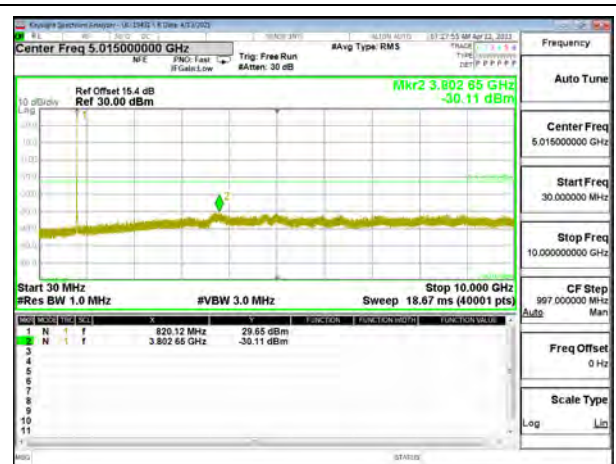
CDMA BC10 1xRTT Low Channel



CDMA BC10 1xEV-DO Rev A Low Channel



CDMA BC10 1xRTT Middle Channel



CDMA BC10 1xEV-DO Rev A Middle Channel



CDMA BC10 1xRTT High Channel

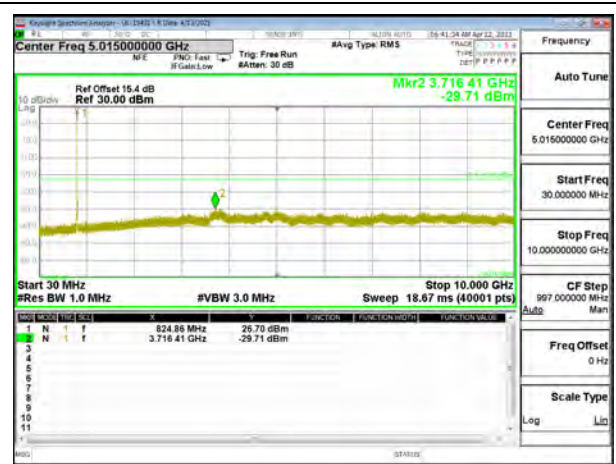


CDMA BC10 1xEV-DO Rev A High Channel

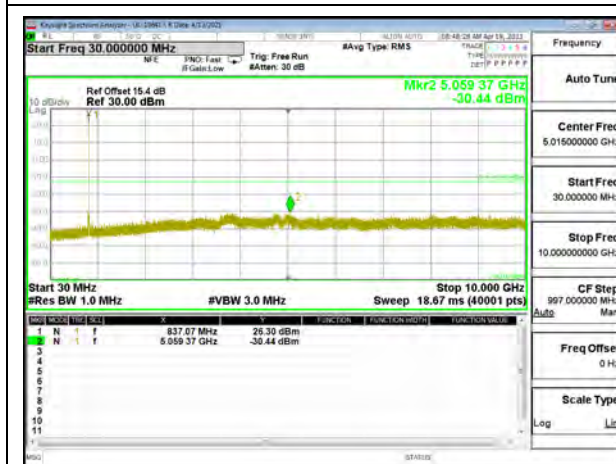
9.3.4. CDMA BC0



CDMA BC0 1xRTT Low Channel



CDMA BC0 1xEV-DO Rev A Low Channel



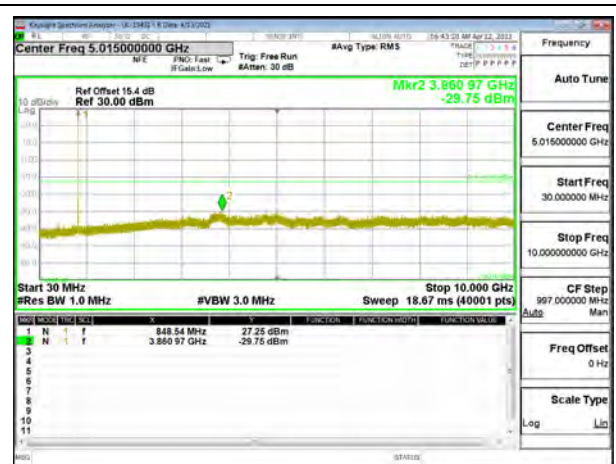
CDMA BC0 1xRTT Middle Channel



CDMA BC0 1xEV-DO Rev A Middle Channel

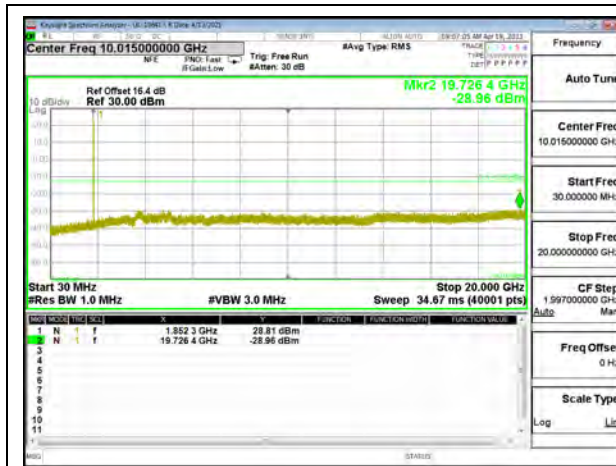


CDMA BC0 1xRTT High Channel

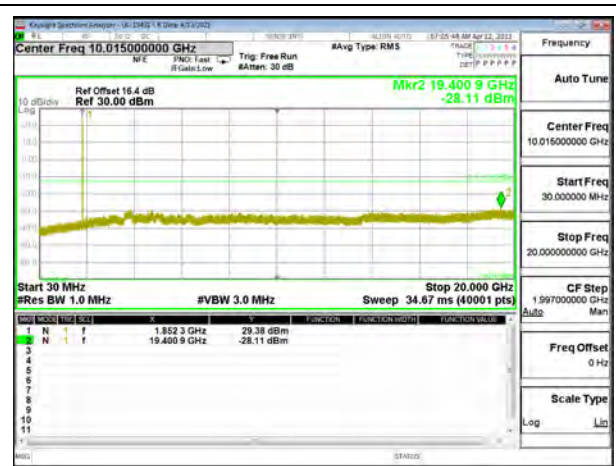


CDMA BC0 1xEV-DO Rev A High Channel

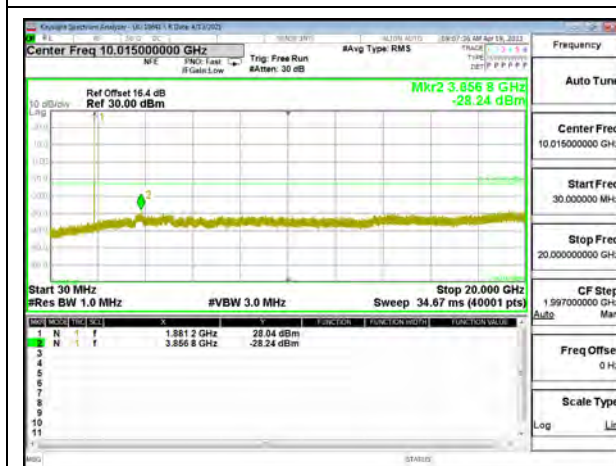
9.3.5. CDMA BC1



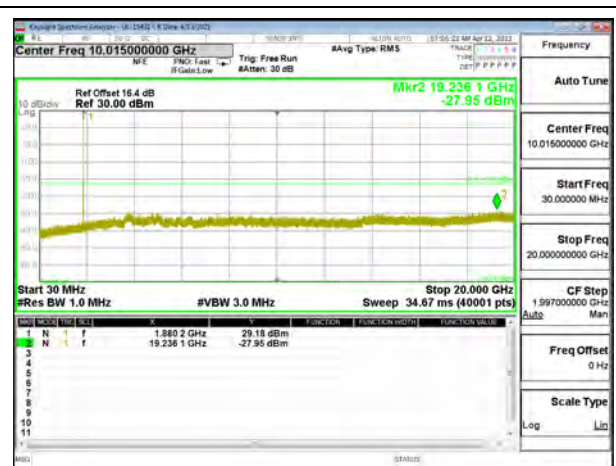
CDMA BC1 1xRTT Low Channel



CDMA BC1 1xEV-DO Rev A Low Channel



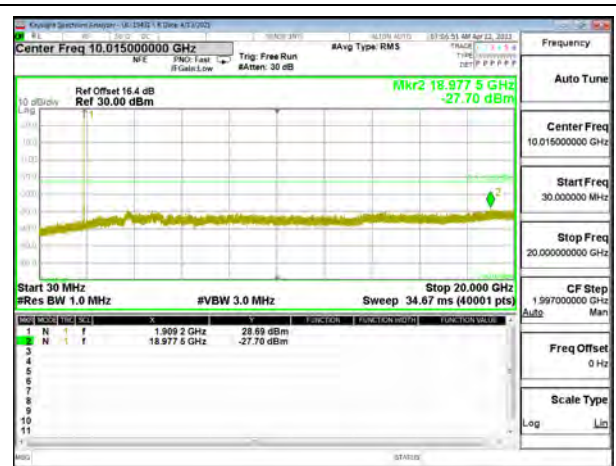
CDMA BC1 1xRTT Middle Channel



CDMA BC1 1xEV-DO Rev A Middle Channel

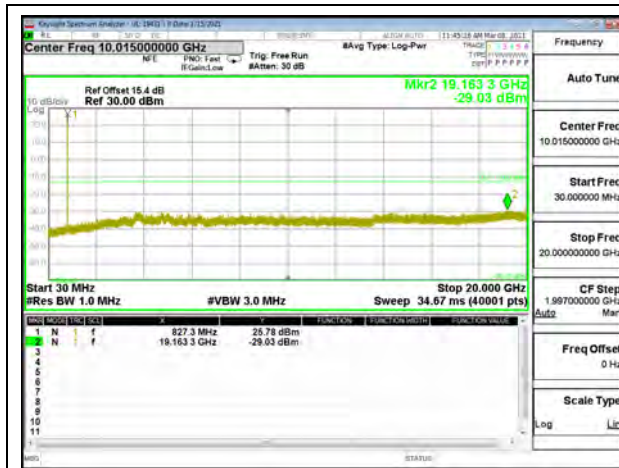


CDMA BC1 1xRTT High Channel

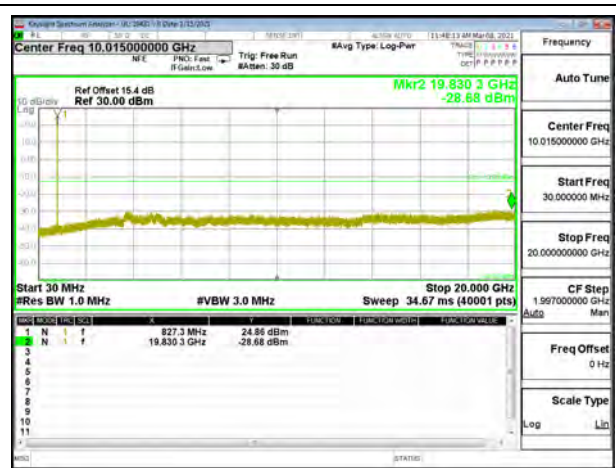


CDMA BC1 1xEV-DO Rev A High Channel

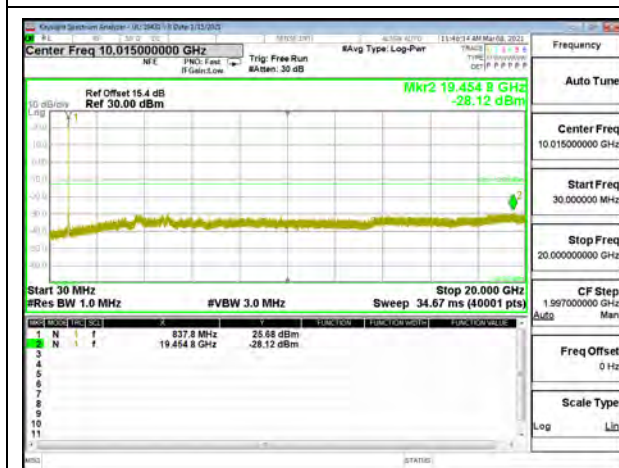
9.3.6. WCDMA BAND 5



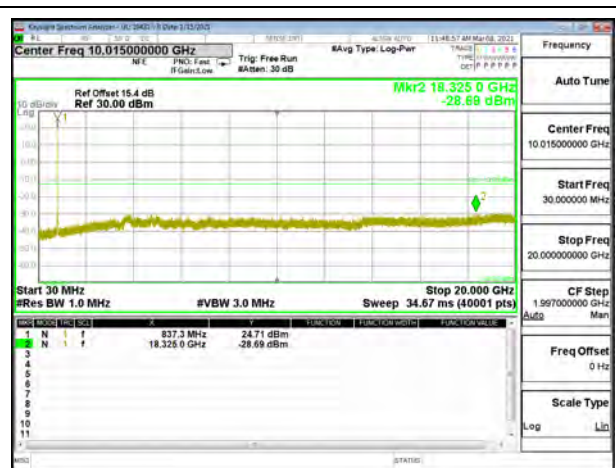
WCDMA Band 5 Rel 99 Low Channel



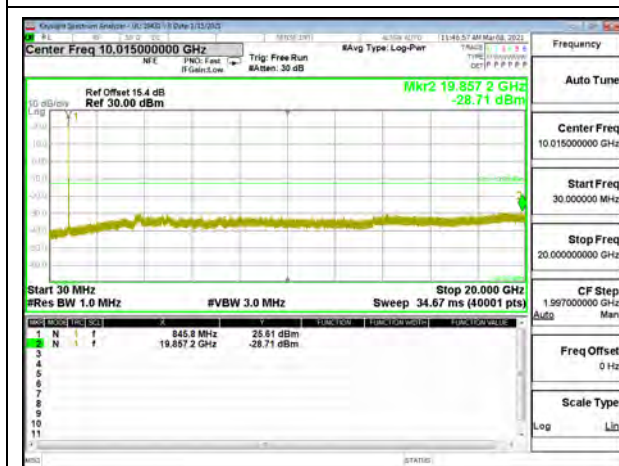
WCDMA Band 5 HSDPA Low Channel



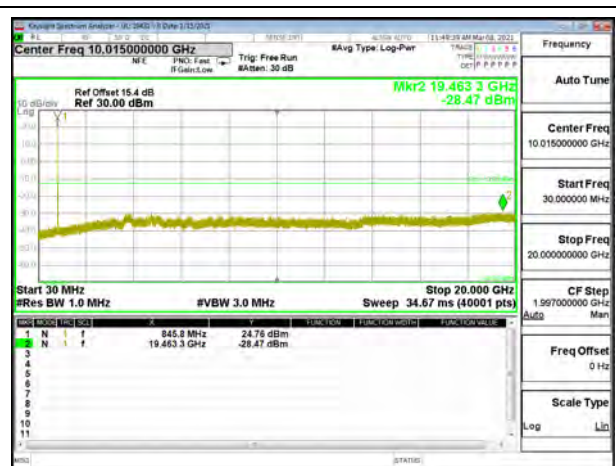
WCDMA Band 5 Rel 99 Mid Channel



WCDMA Band 5 HSDPA Mid Channel

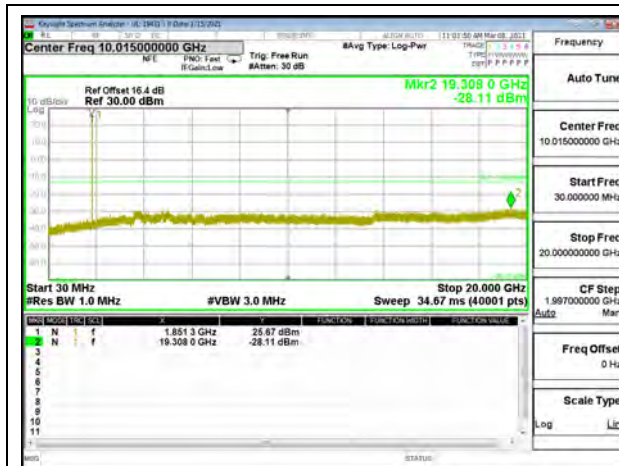


WCDMA Band 5 Rel 99 High Channel

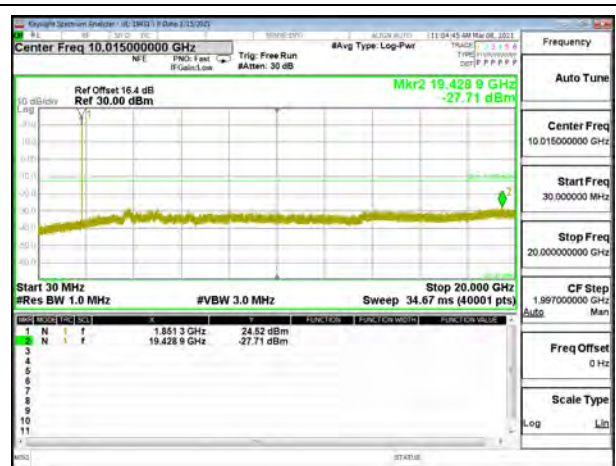


WCDMA Band 5 HSDPA High Channel

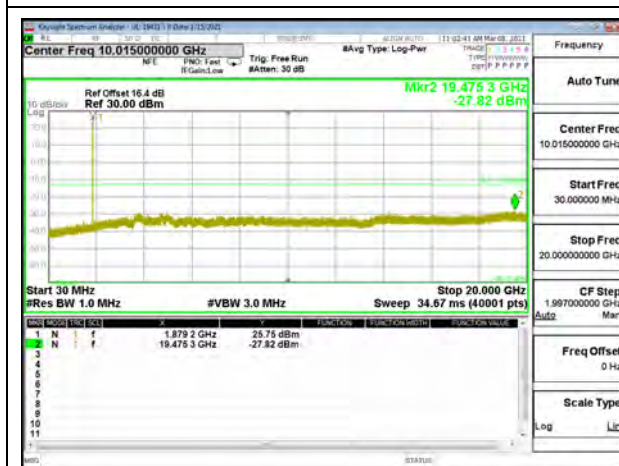
9.3.7. WCDMA BAND 2



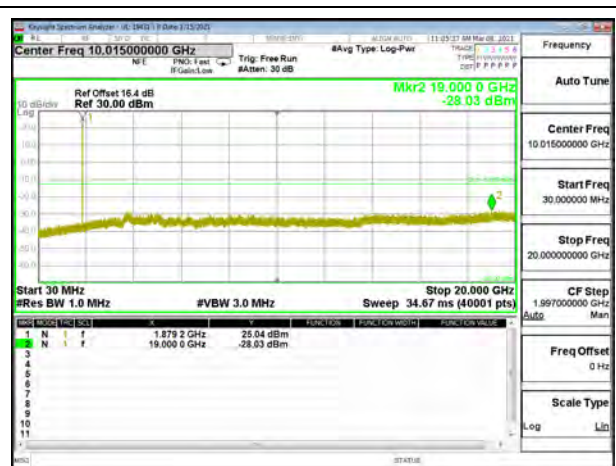
WCDMA Band 2 Rel 99 Low Channel



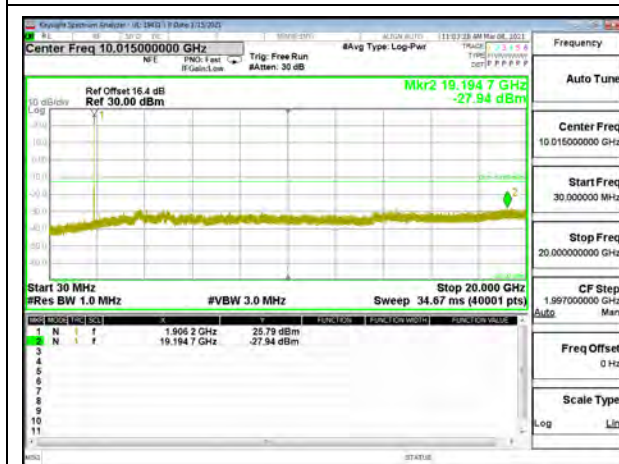
WCDMA Band 2 HSDPA Low Channel



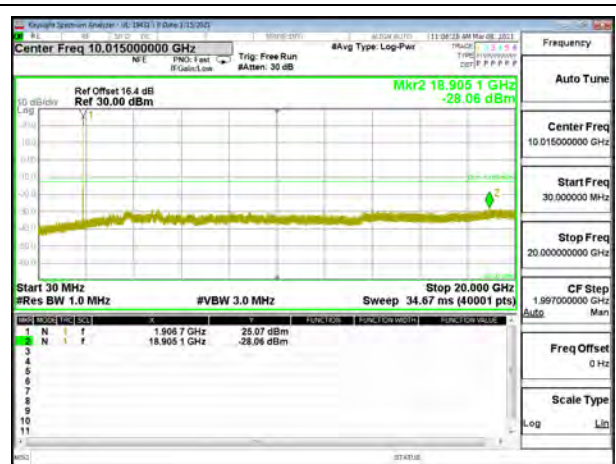
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Mid Channel

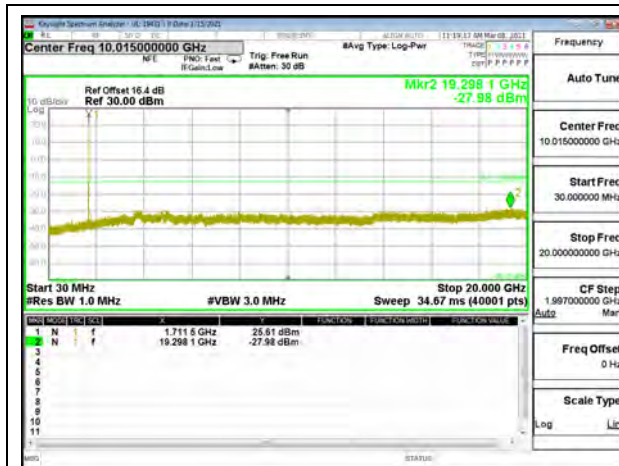


WCDMA Band 2 Rel 99 High Channel

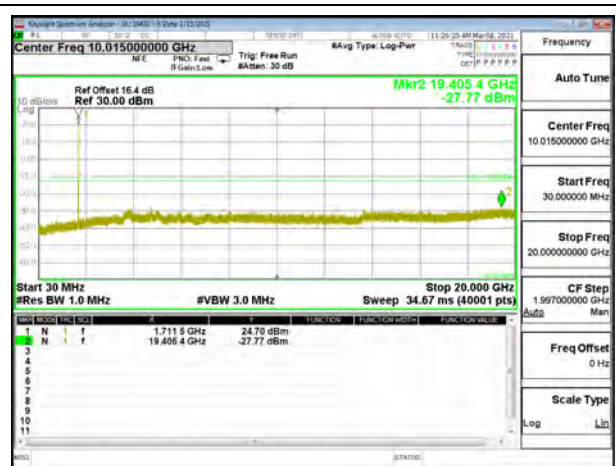


WCDMA Band 2 HSDPA High Channel

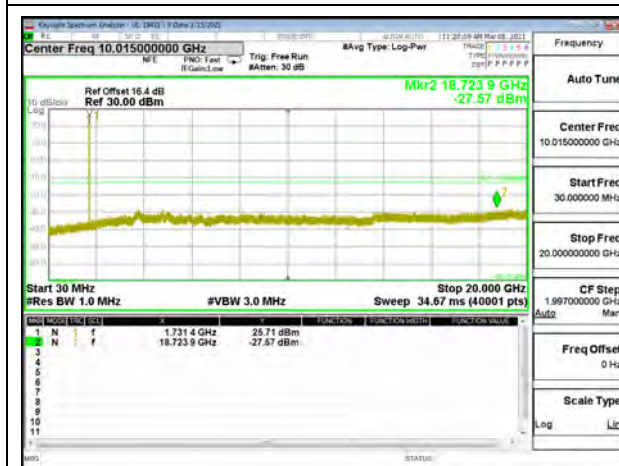
9.3.8. WCDMA BAND 4



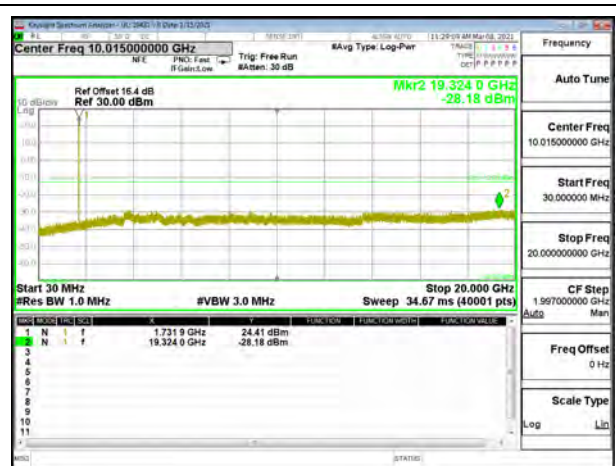
WCDMA Band 4 Rel 99 Low Channel



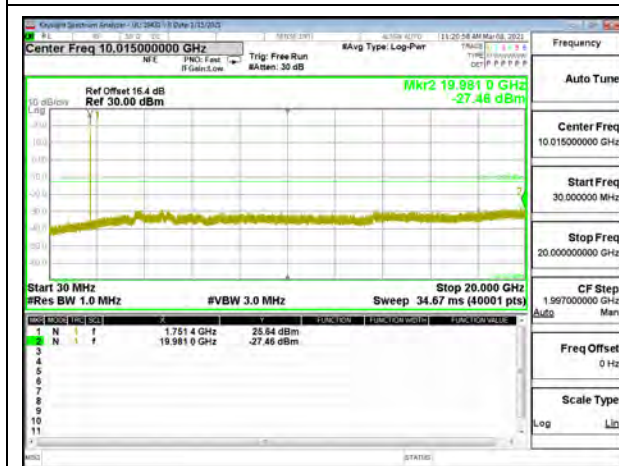
WCDMA Band 4 HSDPA Low Channel



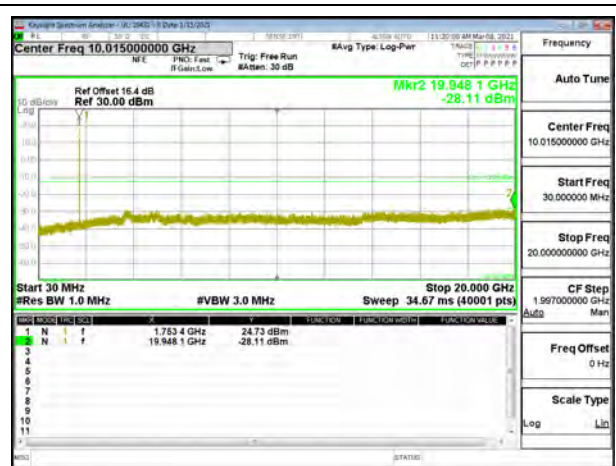
WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Mid Channel



WCDMA Band 4 Rel 99 High Channel



WCDMA Band 4 HSDPA High Channel

9.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54 and §90.213
ISED: RSS132§5.3; RSS133§6.3 and RSS139§6.4

LIMITS

FCC §22.355, §90.213

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

FCC §24.235 & §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

RSS132§5.3

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 SRSP for mobile stations and ± 1.5 ppm for base stations.

In lieu of meeting the above stability values, the test report may show that the frequency stability is sufficient to ensure that the occupied bandwidth stays within each of the sub-bands (see Section 5.1) when tested to the temperature and supply voltage variations specified in RSS-Gen.

RSS133§6.3

The carrier frequency shall not depart from the reference frequency, in excess of ± 2.5 ppm for mobile stations and ± 1.0 ppm for base stations.

In lieu of meeting the above stability values, the test report may show that the frequency stability is sufficient to ensure that the emission bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

RSS139§6.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30°C to $+50^{\circ}\text{C}$
- Voltage = (85% - 115%)
Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
End Voltage, 3.2VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

9.4.1. GSM

Test Engineer ID:	38602	Test Date:	4/30/2021
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GPRS 850

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.0573	848.9381		
Extreme (50C)		824.0573	848.9381	15.9	0.019
Extreme (40C)		824.0573	848.9381	13.4	0.016
Extreme (30C)		824.0573	848.9381	16.6	0.020
Extreme (10C)		824.0573	848.9381	15.2	0.018
Extreme (0C)		824.0573	848.9381	16.6	0.020
Extreme (-10C)		824.0573	848.9381	14.1	0.017
Extreme (-20C)		824.0573	848.9381	13.3	0.016
Extreme (-30C)		824.0573	848.9381	16.2	0.019
20C	15%	824.0573	848.9381	13.8	0.016
	-15%	824.0573	848.9381	12.5	0.015
	End Point	824.0573	848.9381	17.1	0.020

Test Engineer ID:	38602	Test Date:	5/3/2021
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GPRS 1900

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1850.0658	1909.9332		
Extreme (50C)		1850.0658	1909.9332	23.1	0.012
Extreme (40C)		1850.0658	1909.9332	22.6	0.012
Extreme (30C)		1850.0658	1909.9332	24.7	0.013
Extreme (10C)		1850.0658	1909.9332	23.3	0.012
Extreme (0C)		1850.0658	1909.9332	24.2	0.013
Extreme (-10C)		1850.0658	1909.9332	26.4	0.014
Extreme (-20C)		1850.0658	1909.9332	27.7	0.015
Extreme (-30C)		1850.0658	1909.9332	23.3	0.012
20C	15%	1850.0658	1909.9332	19.7	0.010
	-15%	1850.0658	1909.9332	21.3	0.011
	End Point	1850.0658	1909.9332	24.1	0.013

9.4.2. CDMA

Test Engineer ID:	38602	Test Date:	5/4/2021
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CDMA 1xRTT BC10

Limit		816	824	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	816.5602	823.4408		
Extreme (50C)		816.5602	823.4408	2.9	0.004
Extreme (40C)		816.5602	823.4408	2.1	0.003
Extreme (30C)		816.5602	823.4408	3.7	0.005
Extreme (10C)		816.5602	823.4408	2.1	0.003
Extreme (0C)		816.5602	823.4408	3.5	0.004
Extreme (-10C)		816.5602	823.4408	5.7	0.007
Extreme (-20C)		816.5602	823.4408	-7.6	-0.009
Extreme (-30C)		816.5602	823.4408	6.8	0.008
20C	15%	816.5602	823.4408	2.9	0.004
	-15%	816.5602	823.4408	2.2	0.003
	End Point	816.5602	823.4408	3.5	0.004

CDMA 1xRTT BC0

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.0140	848.9963		
Extreme (50C)		824.0140	848.9963	-3.7	-0.004
Extreme (40C)		824.0140	848.9963	-3.1	-0.004
Extreme (30C)		824.0140	848.9963	-2.2	-0.003
Extreme (10C)		824.0140	848.9963	-3.6	-0.004
Extreme (0C)		824.0140	848.9963	2.4	0.003
Extreme (-10C)		824.0140	848.9963	3.6	0.004
Extreme (-20C)		824.0140	848.9963	-3.1	-0.004
Extreme (-30C)		824.0140	848.9963	4.8	0.006
20C	15%	824.0140	848.9963	1.2	0.001
	-15%	824.0140	848.9963	-3.3	-0.004
	End Point	824.0140	848.9963	5.2	0.006

CDMA 1xRTT BC1

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.5603	1909.4400		
Extreme (50C)		1850.5603	1909.4400	10.9	0.006
Extreme (40C)		1850.5603	1909.4400	10.6	0.006
Extreme (30C)		1850.5603	1909.4400	11.4	0.006
Extreme (10C)		1850.5603	1909.4400	12.0	0.006
Extreme (0C)		1850.5603	1909.4400	14.2	0.008
Extreme (-10C)		1850.5603	1909.4400	12.5	0.007
Extreme (-20C)		1850.5603	1909.4400	10.2	0.005
Extreme (-30C)		1850.5603	1909.4400	16.9	0.009
20C	15%	1850.5603	1909.4400	11.5	0.006
	-15%	1850.5603	1909.4400	12.6	0.007
	End Point	1850.5603	1909.4400	17.1	0.009

9.4.3. WCDMA

Test Engineer ID:	38602	Test Date:	5/3/2021
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WCDMA REL 99 BAND 5

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.1025	848.8891		
Extreme (50C)		824.1025	848.8891	-0.6	-0.001
Extreme (40C)		824.1025	848.8891	-0.7	-0.001
Extreme (30C)		824.1025	848.8891	-0.5	-0.001
Extreme (10C)		824.1025	848.8891	0.1	0.000
Extreme (0C)		824.1025	848.8891	0.5	0.001
Extreme (-10C)		824.1025	848.8891	0.4	0.000
Extreme (-20C)		824.1025	848.8891	0.5	0.001
Extreme (-30C)		824.1025	848.8891	0.4	0.001
20C	15%	824.1025	848.8891	-0.5	-0.001
	-15%	824.1025	848.8891	-0.2	0.000
	End Point	824.1025	848.8891	0.5	0.001

WCDMA REL 99 BAND 2

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1850.0841	1909.8891		
Extreme (50C)		1850.0841	1909.8891	11.5	0.006
Extreme (40C)		1850.0841	1909.8891	10.5	0.006
Extreme (30C)		1850.0841	1909.8891	11.1	0.006
Extreme (10C)		1850.0841	1909.8891	13.6	0.007
Extreme (0C)		1850.0841	1909.8891	12.5	0.007
Extreme (-10C)		1850.0841	1909.8891	13.1	0.007
Extreme (-20C)		1850.0841	1909.8891	13.3	0.007
Extreme (-30C)		1850.0841	1909.8891	12.9	0.007
20C	15%	1850.0841	1909.8891	11.2	0.006
	-15%	1850.0841	1909.8891	11.8	0.006
	End Point	1850.0841	1909.8891	13.0	0.007

WCDMA REL 99 BAND 4

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm	F high @ -13dBm		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1710.1075	1754.8908		
Extreme (50C)		1710.1075	1754.8908	-13.1	-0.008
Extreme (40C)		1710.1075	1754.8908	-12.7	-0.007
Extreme (30C)		1710.1075	1754.8908	-12.4	-0.007
Extreme (10C)		1710.1075	1754.8908	-11.5	-0.007
Extreme (0C)		1710.1075	1754.8908	-11.2	-0.006
Extreme (-10C)		1710.1075	1754.8908	-10.8	-0.006
Extreme (-20C)		1710.1075	1754.8908	-10.5	-0.006
Extreme (-30C)		1710.1075	1754.8908	-11.0	-0.006
20C	15%	1710.1075	1754.8908	-12.2	-0.007
	-15%	1710.1075	1754.8908	-11.1	-0.006
	End Point	1710.1075	1754.8908	-11.7	-0.007

9.5. PEAK-TO-AVERAGE POWER RATIO

LIMIT

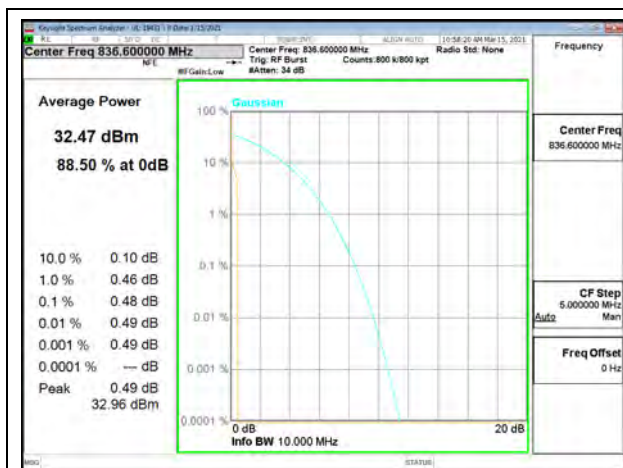
In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

RESULT

Ant 1 was used to measure as the worst case. The results from all CCDF plots are passed with 13dB peak-to-average power ratio criteria.

Test Engineer ID:	19431	Test Date:	3/15/2021
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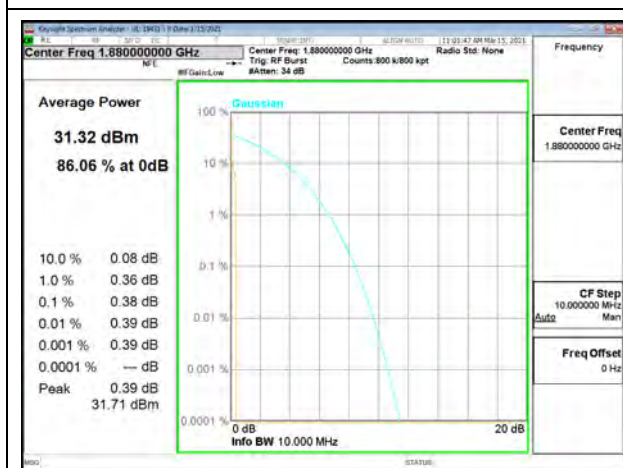
9.5.1. GSM



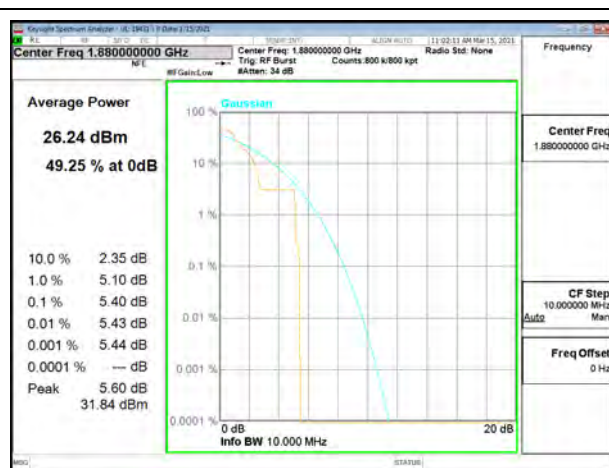
GSM 850 GPRS Middle Channel



GSM 850 EGPRS Middle Channel

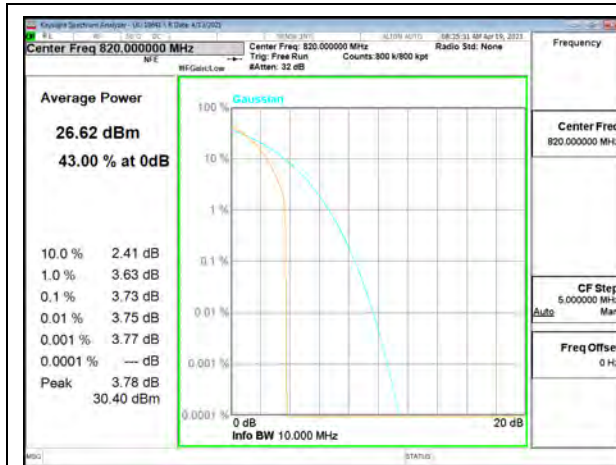


GSM 1900 GPRS Middle Channel



GSM 1900 EGPRS Middle Channel

9.5.2. CDMA



CDMA BC10 1xRTT Middle Channel



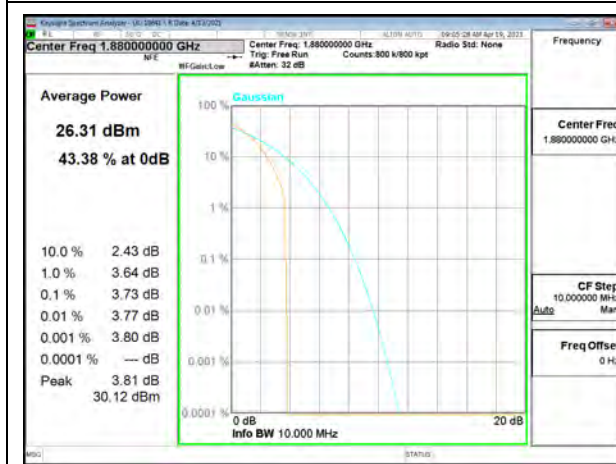
CDMA BC10 1xEV-DO Rev A Middle Channel



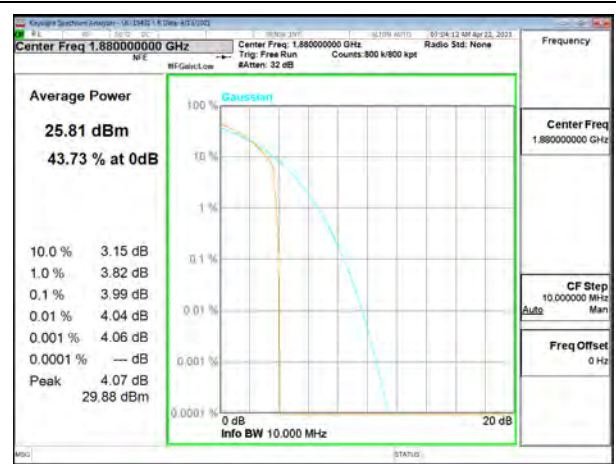
CDMA BC0 1xRTT Middle Channel



CDMA BC0 1xEV-DO Rev A Middle Channel



CDMA BC1 1xRTT Middle Channel

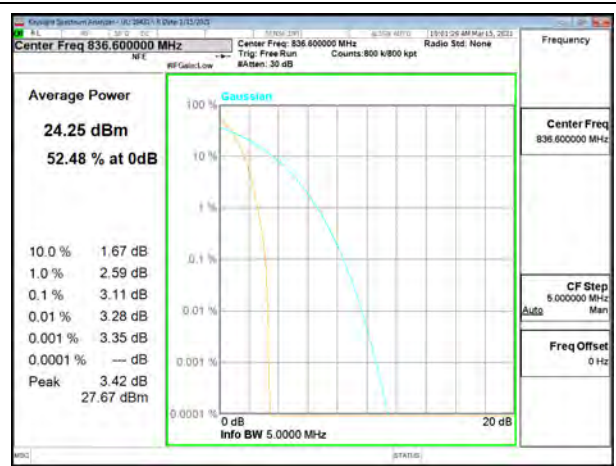


CDMA BC1 1xEV-DO Rev A Middle Channel

9.5.3. WCDMA



WCDMA Band 5 Rel 99 Middle Channel



WCDMA Band 5 HSDPA Middle Channel



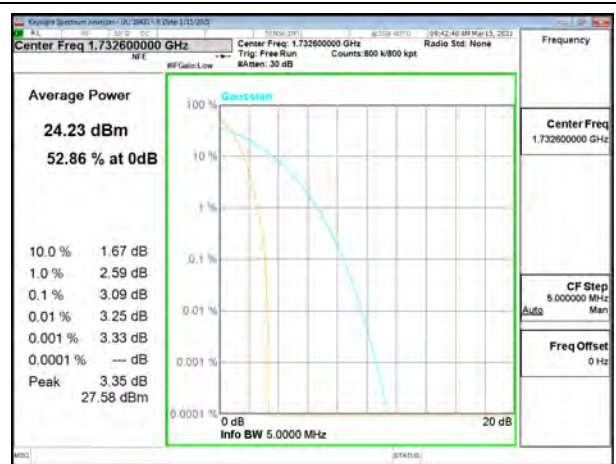
WCDMA Band 2 Rel 99 Middle Channel



WCDMA Band 2 HSDPA Middle Channel



WCDMA Band 4 Rel 99 Middle Channel



WCDMA Band 4 HSDPA Middle Channel

10. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, We measure the radiated emissions directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

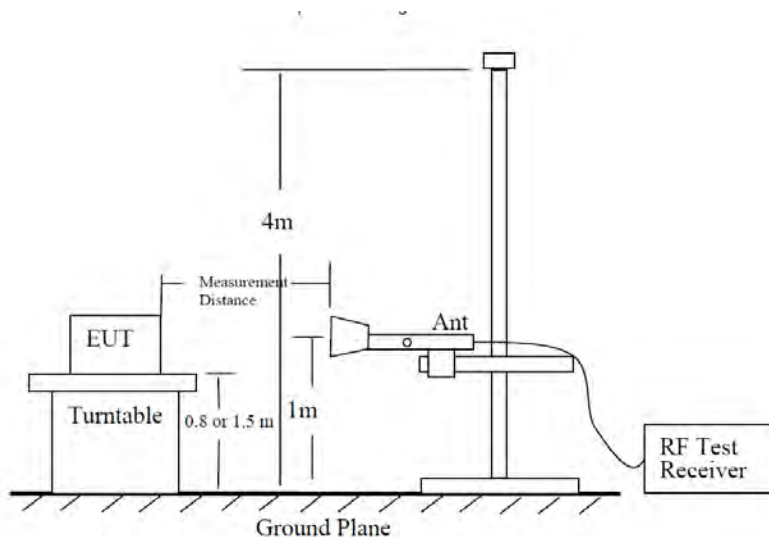


Figure 6—Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$.
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

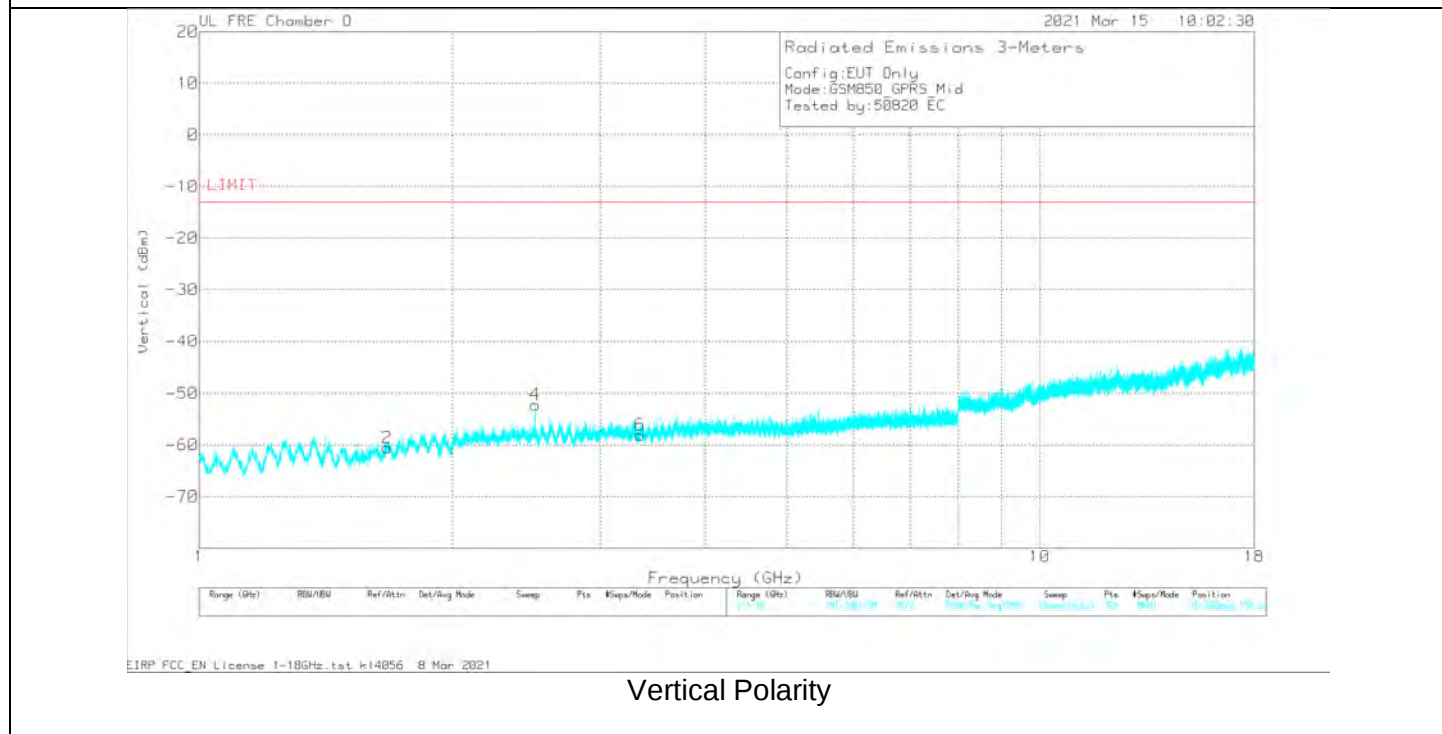
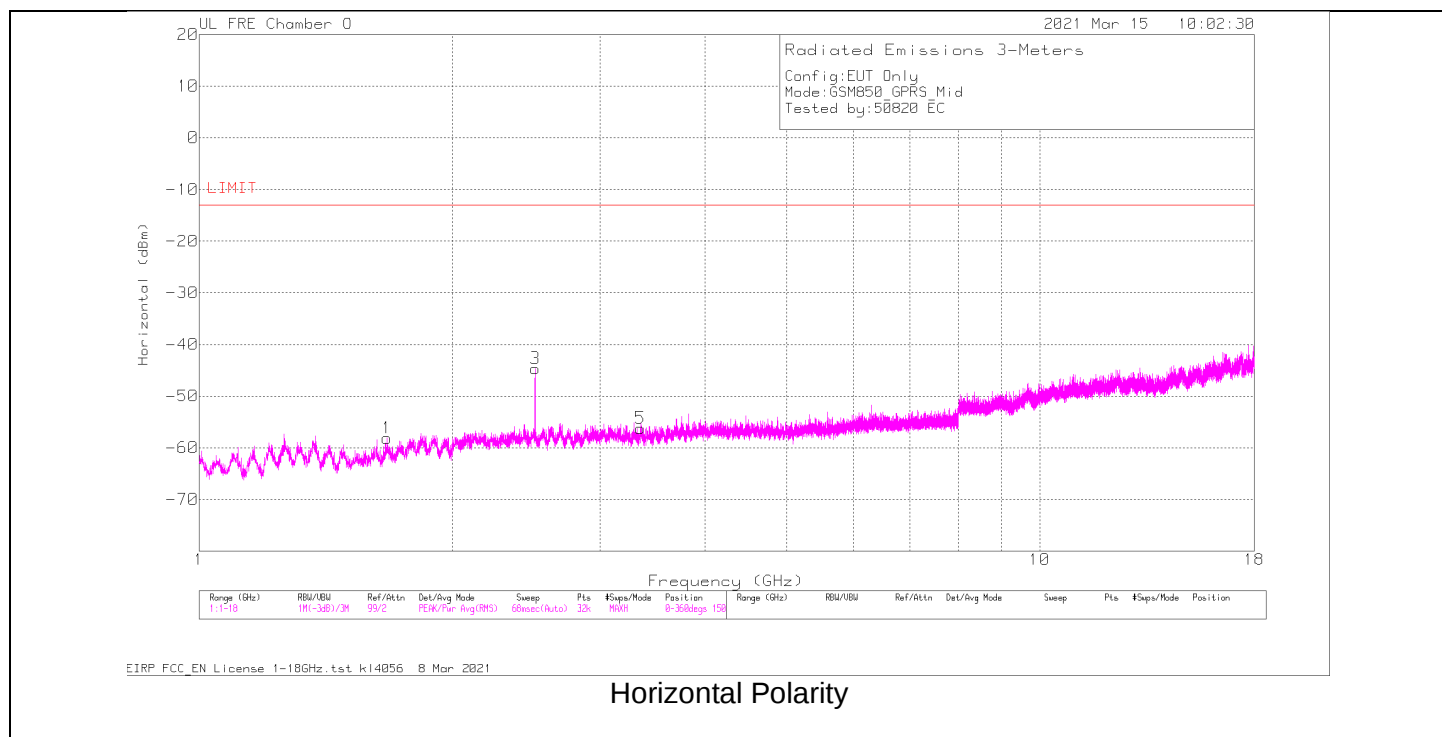
So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

Note that: we do confidence check to our chambers every day to see if any degradation from expected/normal reading reference data. Also we do ambient check to all our chambers every month.

Example Plot



Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
1.67325	56.55	Pk	29.1	-46	.6	-95.2	-54.95	-13	-41.95	H
3.34763	54.03	Pk	32.7	-43.6	.5	-95.2	-51.57	-13	-38.57	H
2.5099	68.09	Pk	32.1	-45.4	.7	-95.2	-39.71	-13	-26.71	H
1.68026	40.4	Pk	24.9	-30.4	.6	-95.2	-59.7	-13	-46.7	V
2.52234	39.65	Pk	29.2	-29.4	.7	-95.2	-55.05	-13	-42.05	V
3.36563	37.96	Pk	31	-28	.5	-95.2	-53.74	-13	-40.74	V

Pk - Peak detector

EIRP FCC_EN License 1-18GHz.tst jt10646 15 Jun 2020
Rev 9.5 06 Mar 2020

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691.
ISED: RSS132§5.5; RSS133§6.5 and RSS139§6.6

LIMIT

FCC: §22.917(a), §24.238(a), §27.53 (h), §90.691

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

RSS132§5.5

Mobile and base station equipment shall comply with the limits in (i) and (ii) below.

- (i) In the first 1.0 MHz band immediately outside and adjacent to each of the sub-bands specified in Section 5.1, the power of emissions per any 1% of the occupied bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).
- (ii) After the first 1.0 MHz immediately outside and adjacent to each of the sub-bands, the power of emissions in any 100 kHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the occupied bandwidth, power integration over 100 kHz is required.

RSS133§6.5.1

Equipment shall comply with the limits in (i) and (ii) below.

- (i) In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts).
- (ii) After the first 1.0 MHz, the emission power in any 1 MHz bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least $43 + 10 \log_{10} p$ (watts). If the measurement is performed using 1% of the emission bandwidth, power integration over 1.0 MHz is required.

RSS139§6.6

- (i) In the first 1.0 MHz bands immediately outside and adjacent to the equipment's smallest operating frequency block, Footnote 2 which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.
- (ii) After the first 1.0 MHz outside the equipment's smallest operating frequency block, which can contain the equipment's occupied bandwidth, the emission power in any 1 MHz bandwidth shall be attenuated below the transmitter output power P (in dBW) by at least $43 + 10 \log_{10} p$ (watts) dB.

TEST PROCEDURE

KDB 971168 D01

RESULTS

10.1.1. GSM 850

GPRS MODE

Project #:	13571601
Date:	3/15 – 4/16/2021
Test Engineer:	50820 EC, 12941 GM
Configuration:	EUT Only
Mode:	GPRS 850
Chamber #:	Chamber O, Chamber Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021383 1 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2 MHz										
1.64826	52.92	Pk	28.4	-45.1	.7	-95.2	-58.28	-13	-45.28	H
1.64852	52.71	Pk	28.4	-45.1	.7	-95.2	-58.49	-13	-45.49	V
2.47241	56.68	Pk	32.4	-44.4	.5	-95.2	-50.02	-13	-37.02	V
2.47279	53.34	Pk	32.4	-44.4	.5	-95.2	-53.36	-13	-40.36	H
3.29283	41.29	Pk	32.5	-42.5	.8	-95.2	-63.11	-13	-50.11	H
3.29346	42.04	Pk	32.5	-42.5	.8	-95.2	-62.36	-13	-49.36	V
Mid Channel, 836.6 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1-18GHz PRE0182588	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
1.67325	56.55	Pk	29.1	-46	.6	-95.2	-54.95	-13	-41.95	H
3.34763	54.03	Pk	32.7	-43.6	.5	-95.2	-51.57	-13	-38.57	H
2.5099	68.09	Pk	32.1	-45.4	.7	-95.2	-39.71	-13	-26.71	H
1.68026	40.4	Pk	24.9	-30.4	.6	-95.2	-59.7	-13	-46.7	V
2.52234	39.65	Pk	29.2	-29.4	.7	-95.2	-55.05	-13	-42.05	V
3.36563	37.96	Pk	31	-28	.5	-95.2	-53.74	-13	-40.74	V
High Channel, 848.8 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021383 1 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.69747	57.7	Pk	28.5	-45	0.6	-95.2	-53.4	-13	-40.4	H
1.69759	52.27	Pk	28.5	-45	0.6	-95.2	-58.83	-13	-45.83	V
2.5462	46.12	Pk	32.1	-44.2	0.6	-95.2	-60.58	-13	-47.58	V
2.54659	54.9	Pk	32.1	-44.2	0.6	-95.2	-51.8	-13	-38.8	H
3.39127	40.72	Pk	32.5	-42.2	0.6	-95.2	-63.58	-13	-50.58	H
3.39363	41.41	Pk	32.5	-42.2	0.6	-95.2	-62.89	-13	-49.89	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/15 - 4/16/2021
Test Engineer:	50820 EC, 12491 GM
Configuration:	EUT Only
Mode:	EGPRS 850
Chamber #:	Chamber O, Chamber Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021383 1 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2 MHz										
1.64831	56.31	Pk	28.4	-45.1	.7	-95.2	-54.89	-13	-41.89	H
1.64978	53.11	Pk	28.4	-45.1	.8	-95.2	-57.99	-13	-44.99	V
2.47209	53.04	Pk	32.4	-44.4	.5	-95.2	-53.66	-13	-40.66	V
2.47258	59.32	Pk	32.4	-44.4	.5	-95.2	-47.38	-13	-34.38	H
3.29538	50.11	Pk	32.5	-42.5	.8	-95.2	-54.29	-13	-41.29	H
3.29684	49.73	Pk	32.5	-42.4	.8	-95.2	-54.57	-13	-41.57	V
Mid Channel, 836.6 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1-18GHz PRE018258 8	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
1.67855	56.42	Pk	29.1	-45.9	.6	-95.2	-54.98	-13	-41.98	H
2.50986	67.12	Pk	32.1	-45.4	.7	-95.2	-40.68	-13	-27.68	H
3.34718	53.49	Pk	32.7	-43.6	.5	-95.2	-52.11	-13	-39.11	H
1.6755	57.02	Pk	29.1	-46	.6	-95.2	-54.48	-13	-41.48	V
2.50955	61.14	Pk	32.1	-45.4	.7	-95.2	-46.66	-13	-33.66	V
3.34579	53.02	Pk	32.7	-43.6	.5	-95.2	-52.58	-13	-39.58	V
High Channel, 848.8 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE021383 1 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.69746	54.12	Pk	28.5	-45	0.6	-95.2	-56.98	-13	-43.98	V
1.69773	52.61	Pk	28.5	-45	0.6	-95.2	-58.49	-13	-45.49	H
2.54618	59.74	Pk	32.1	-44.2	0.6	-95.2	-46.96	-13	-33.96	H
2.5462	52.19	Pk	32.1	-44.2	0.6	-95.2	-54.51	-13	-41.51	V
3.39315	40.93	Pk	32.5	-42.2	0.6	-95.2	-63.37	-13	-50.37	H
3.4001	40.54	Pk	32.5	-42	0.6	-95.2	-63.56	-13	-50.56	V

Pk - Peak detector

10.1.2. GSM 1900

GPRS MODE

Project #:	13571601
Date:	3/15-4/5/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.70051	48.45	Pk	33.5	-31.1	1	-95.2	-43.35	-13	-30.35	H
5.55014	41.73	Pk	34.5	-29.7	1	-95.2	-47.67	-13	-34.67	H
9.25113	38.92	Pk	36.3	-25.7	1	-95.2	-44.68	-13	-31.68	H
3.70049	46.04	Pk	33.5	-31.2	1	-95.2	-45.86	-13	-32.86	V
5.55064	42.85	Pk	34.5	-30	1	-95.2	-46.85	-13	-33.85	V
9.24892	37	Pk	36.3	-25.9	1	-95.2	-46.8	-13	-33.8	V
Mid Channel, 1880MHz										
3.75986	56.33	Pk	33.5	-42.8	1	-95.2	-47.17	-13	-34.17	H
5.63983	51.79	Pk	34.6	-41.5	1	-95.2	-49.31	-13	-36.31	H
7.52124	49.15	Pk	35.7	-39.3	1	-95.2	-48.65	-13	-35.65	H
3.76024	53.6	Pk	33.5	-42.8	1	-95.2	-49.9	-13	-36.9	V
5.63902	50.41	Pk	34.6	-41.5	1	-95.2	-50.69	-13	-37.69	V
7.52018	49.1	Pk	35.7	-39.4	1	-95.2	-48.8	-13	-35.8	V
High Channel, 1909.8MHz										
3.81976	45.1	Pk	33.5	-31.7	1	-95.2	-47.3	-13	-34.3	H
5.72931	44.09	Pk	34.6	-29.2	1	-95.2	-44.71	-13	-31.71	H
7.63999	37.46	Pk	35.8	-26.8	1	-95.2	-47.74	-13	-34.74	H
3.81834	40.15	Pk	33.5	-31.4	1	-95.2	-51.95	-13	-38.95	V
5.72917	43.54	Pk	34.6	-29.3	1	-95.2	-45.36	-13	-32.36	V
7.6404	36.94	Pk	35.9	-27	1	-95.2	-48.36	-13	-35.36	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/15-4/5/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.70058	47.78	Pk	33.5	-31.1	1	-95.2	-44.02	-13	-31.02	H
5.55027	38.53	Pk	34.5	-29.7	1	-95.2	-50.87	-13	-37.87	H
7.40182	37.88	Pk	35.8	-27.4	1	-95.2	-47.92	-13	-34.92	H
3.7006	43.83	Pk	33.5	-31.2	1	-95.2	-48.07	-13	-35.07	V
5.55041	40.8	Pk	34.5	-29.9	1	-95.2	-48.8	-13	-35.8	V
7.40136	37.6	Pk	35.8	-27.6	1	-95.2	-48.4	-13	-35.4	V
Mid Channel, 1880MHz										
3.76014	55.41	Pk	33.5	-42.8	1	-95.2	-48.09	-13	-35.09	H
5.64096	50.65	Pk	34.6	-41.5	1	-95.2	-50.45	-13	-37.45	H
7.52213	49.2	Pk	35.7	-39.3	1	-95.2	-48.6	-13	-35.6	H
3.76177	51.95	Pk	33.5	-42.8	1	-95.2	-51.55	-13	-38.55	V
5.64105	50.43	Pk	34.6	-41.5	1	-95.2	-50.67	-13	-37.67	V
7.52033	49.19	Pk	35.7	-39.4	1	-95.2	-48.71	-13	-35.71	V
High Channel, 1909.8MHz										
3.81952	41.64	Pk	33.5	-31.7	1	-95.2	-50.76	-13	-37.76	H
5.7294	42.11	Pk	34.6	-29.2	1	-95.2	-46.69	-13	-33.69	H
7.63944	36.3	Pk	35.9	-26.8	1	-95.2	-48.8	-13	-35.8	H
3.82149	41.17	Pk	33.5	-31.4	1	-95.2	-50.93	-13	-37.93	V
5.7296	38.85	Pk	34.7	-29.3	1	-95.2	-49.95	-13	-36.95	V
7.64048	36.35	Pk	35.9	-27	1	-95.2	-48.95	-13	-35.95	V

Pk - Peak detector

10.1.3. CDMA BC10

1xRTT MODE

Date:	5/4/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC10
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 817.25MHz										
3.2737	36.71	Pk	31.3	-25.5	.7	-95.2	-51.99	-13	-38.99	H
1.63527	38.43	Pk	25	-27.8	.7	-95.2	-58.87	-13	-45.87	H
2.45194	38.98	Pk	28.8	-26.7	.5	-95.2	-53.62	-13	-40.62	H
1.63421	38.26	Pk	25	-27.8	.7	-95.2	-59.04	-13	-46.04	V
2.45073	37.88	Pk	28.8	-26.7	.5	-95.2	-54.72	-13	-41.72	V
3.27012	36.53	Pk	31.3	-25.5	.7	-95.2	-52.17	-13	-39.17	V
Mid Channel, 820MHz										
1.64164	43.78	Pk	25	-27.8	.7	-95.2	-53.52	-13	-40.52	V
1.64222	46.02	Pk	25	-27.8	.7	-95.2	-51.28	-13	-38.28	H
2.46221	45.99	Pk	28.9	-26.6	.5	-95.2	-46.41	-13	-33.41	V
2.46379	51.22	Pk	28.9	-26.6	.5	-95.2	-41.18	-13	-28.18	H
3.27693	37.52	Pk	31.3	-25.3	.8	-95.2	-50.88	-13	-37.88	H
3.28359	36.98	Pk	31.3	-25.4	.8	-95.2	-51.52	-13	-38.52	V
High Channel, 822.75MHz										
1.64646	38.85	Pk	24.9	-27.8	.7	-95.2	-58.55	-13	-45.55	V
1.64981	38.14	Pk	24.9	-27.8	.8	-95.2	-59.16	-13	-46.16	H
2.46911	38.27	Pk	28.9	-26.7	.5	-95.2	-54.23	-13	-41.23	H
2.47031	38.31	Pk	29	-26.7	.5	-95.2	-54.09	-13	-41.09	V
3.28966	37.37	Pk	31.2	-25.4	.8	-95.2	-51.23	-13	-38.23	H
3.29319	37.25	Pk	31.2	-25.4	.8	-95.2	-51.35	-13	-38.35	V

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/5/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC10
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 817.25MHz										
1.63389	38.67	Pk	25	-27.8	.7	-95.2	-58.63	-13	-45.63	V
1.63433	37.99	Pk	25	-27.8	.7	-95.2	-59.31	-13	-46.31	H
2.45107	38.09	Pk	28.8	-26.7	.5	-95.2	-54.51	-13	-41.51	V
2.45341	37.49	Pk	28.8	-26.7	.5	-95.2	-55.11	-13	-42.11	H
3.26846	36.42	Pk	31.3	-25.5	.6	-95.2	-52.38	-13	-39.38	H
3.2689	37.51	Pk	31.3	-25.5	.6	-95.2	-51.29	-13	-38.29	V
Mid Channel, 820MHz										
1.64126	39.12	Pk	25	-27.8	.7	-95.2	-58.18	-13	-45.18	V
1.64129	39.09	Pk	25	-27.8	.7	-95.2	-58.21	-13	-45.21	H
2.45855	36.55	Pk	28.9	-26.6	.5	-95.2	-55.85	-13	-42.85	H
2.46185	39.02	Pk	28.9	-26.6	.5	-95.2	-53.38	-13	-40.38	V
3.27859	37.38	Pk	31.4	-25.3	.8	-95.2	-50.92	-13	-37.92	H
3.27925	37.14	Pk	31.4	-25.3	.8	-95.2	-51.16	-13	-38.16	V
High Channel, 822.75MHz										
1.64319	38.81	Pk	25	-27.8	.7	-95.2	-58.49	-13	-45.49	V
1.64326	39.17	Pk	25	-27.8	.7	-95.2	-58.13	-13	-45.13	H
2.46625	37.06	Pk	28.9	-26.7	.5	-95.2	-55.44	-13	-42.44	H
2.46842	39.06	Pk	28.9	-26.7	.5	-95.2	-53.44	-13	-40.44	V
3.29091	37.32	Pk	31.2	-25.4	.8	-95.2	-51.28	-13	-38.28	H
3.29144	37.16	Pk	31.2	-25.4	.8	-95.2	-51.44	-13	-38.44	V

10.1.4. CDMA BC0

1xRTT MODE

Project #:	13571601
Date:	5/4/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC0
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.7MHz										
1.64883	45.37	Pk	24.9	-27.8	.8	-95.2	-51.93	-13	-38.93	H
1.6499	40.75	Pk	24.9	-27.8	.8	-95.2	-56.55	-13	-43.55	V
2.47338	48.64	Pk	29	-26.6	.5	-95.2	-43.66	-13	-30.66	V
2.47349	51.56	Pk	29	-26.6	.5	-95.2	-40.74	-13	-27.74	H
3.29635	37.33	Pk	31.2	-25.4	.8	-95.2	-51.27	-13	-38.27	V
3.29852	36.72	Pk	31.2	-25.5	.8	-95.2	-51.98	-13	-38.98	H
Mid Channel, 836.52MHz										
1.67289	44.83	Pk	25	-27.8	.7	-95.2	-52.47	-13	-39.47	H
1.6729	40.29	Pk	25	-27.8	.7	-95.2	-57.01	-13	-44.01	V
2.50955	41.5	Pk	29.1	-26.6	.7	-95.2	-50.5	-13	-37.5	V
2.51071	49.04	Pk	29.1	-26.6	.7	-95.2	-42.96	-13	-29.96	H
3.34597	37.45	Pk	30.9	-25.6	.6	-95.2	-51.85	-13	-38.85	H
3.34721	38.21	Pk	31	-25.6	.6	-95.2	-50.99	-13	-37.99	V
High Channel, 848.31MHz										
1.69495	38.58	Pk	25	-27.6	.7	-95.2	-58.52	-13	-45.52	V
1.69745	43.29	Pk	25	-27.6	.7	-95.2	-53.81	-13	-40.81	H
2.54432	39.91	Pk	29.2	-26.6	.7	-95.2	-51.99	-13	-38.99	V
2.54524	46.84	Pk	29.2	-26.6	.7	-95.2	-45.06	-13	-32.06	H
3.39648	37.52	Pk	30.8	-25.5	.6	-95.2	-51.78	-13	-38.78	V
3.399	37.27	Pk	30.8	-25.5	.6	-95.2	-52.03	-13	-39.03	H

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/5/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC0
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.7MHz										
1.64834	39.59	Pk	24.9	-27.8	.8	-95.2	-57.71	-13	-44.71	H
1.64905	38.43	Pk	24.9	-27.8	.8	-95.2	-58.87	-13	-45.87	V
2.47337	40.11	Pk	29	-26.6	.5	-95.2	-52.19	-13	-39.19	H
2.4753	38.38	Pk	29	-26.6	.5	-95.2	-53.92	-13	-40.92	V
3.29846	36.71	Pk	31.2	-25.5	.8	-95.2	-51.99	-13	-38.99	H
3.29939	37.01	Pk	31.1	-25.5	.8	-95.2	-51.79	-13	-38.79	V
Mid Channel, 836.52MHz										
1.67343	37.96	Pk	25	-27.8	.7	-95.2	-59.34	-13	-46.34	H
1.67644	38.92	Pk	25	-27.8	.7	-95.2	-58.38	-13	-45.38	V
2.51382	36.73	Pk	29.1	-26.6	.7	-95.2	-55.27	-13	-42.27	V
2.51546	39.08	Pk	29.2	-26.5	.7	-95.2	-52.72	-13	-39.72	H
3.34772	37.57	Pk	31	-25.6	.6	-95.2	-51.63	-13	-38.63	H
3.34775	37.28	Pk	31	-25.6	.6	-95.2	-51.92	-13	-38.92	V
High Channel, 848.31MHz										
1.69696	39.44	Pk	25	-27.6	.7	-95.2	-57.66	-13	-44.66	V
1.69705	38.74	Pk	25	-27.6	.7	-95.2	-58.36	-13	-45.36	H
2.54455	38.63	Pk	29.2	-26.6	.7	-95.2	-53.27	-13	-40.27	H
2.54644	37.89	Pk	29.3	-26.6	.7	-95.2	-53.91	-13	-40.91	V
3.3914	36.96	Pk	30.7	-25.6	.6	-95.2	-52.54	-13	-39.54	V
3.39428	36.71	Pk	30.7	-25.5	.6	-95.2	-52.69	-13	-39.69	H

10.1.5. CDMA BC1

1xRTT MODE

Project #:	13571601
Date:	5/4/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC1
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AT T962 (dB/m)	Amp/Cbl (dB)	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1851.25MHz									
3.70121	37.75	Pk	30.3	-24.6	-95.2	-51.75	-13	-38.75	V
3.70236	37.55	Pk	30.3	-24.6	-95.2	-51.95	-13	-38.95	H
5.55508	36.88	Pk	33.3	-23.3	-95.2	-48.32	-13	-35.32	V
5.55576	36.98	Pk	33.2	-23.3	-95.2	-48.32	-13	-35.32	H
7.40557	34.93	Pk	36.9	-21	-95.2	-44.37	-13	-31.37	V
7.40708	35.53	Pk	36.8	-21.1	-95.2	-43.97	-13	-30.97	H
Mid Channel, 1880MHz									
3.75898	37.3	Pk	30.6	-24.8	-95.2	-52.1	-13	-39.1	H
3.76058	37.07	Pk	30.7	-24.9	-95.2	-52.33	-13	-39.33	V
5.63976	35.85	Pk	33.1	-22.3	-95.2	-48.55	-13	-35.55	H
5.64013	35.52	Pk	33.1	-22.2	-95.2	-48.78	-13	-35.78	V
7.51895	35.14	Pk	36.7	-20.4	-95.2	-43.76	-13	-30.76	V
7.52027	34.73	Pk	36.7	-20.4	-95.2	-44.17	-13	-31.17	H
High Channel, 1908.75MHz									
3.81613	37.85	Pk	31	-24.6	-95.2	-50.95	-13	-37.95	H
3.8195	37.73	Pk	30.9	-24.7	-95.2	-51.27	-13	-38.27	V
5.72571	36.03	Pk	33	-21.7	-95.2	-47.87	-13	-34.87	H
5.72676	36.6	Pk	33	-21.7	-95.2	-47.3	-13	-34.3	V
7.52501	34.6	Pk	36.8	-20.6	-95.2	-44.4	-13	-31.4	V
7.52586	35	Pk	36.8	-20.6	-95.2	-44.0	-13	-31.0	H

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/5/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC1
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AT T962 (dB/m)	Amp/Cbl (dB)	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1851.25MHz									
3.70223	38.15	Pk	30.3	-24.6	-95.2	-51.35	-13	-38.35	H
3.70226	37.81	Pk	30.3	-24.6	-95.2	-51.69	-13	-38.69	V
5.55428	36.73	Pk	33.3	-23.3	-95.2	-48.47	-13	-35.47	H
5.55582	37.16	Pk	33.2	-23.3	-95.2	-48.14	-13	-35.14	V
7.40502	35.03	Pk	36.9	-21	-95.2	-44.27	-13	-31.27	V
7.40566	35.22	Pk	36.9	-21	-95.2	-44.08	-13	-31.08	H
Mid Channel, 1880MHz									
3.75862	37.35	Pk	30.6	-24.8	-95.2	-52.05	-13	-39.05	H
3.7601	37.52	Pk	30.6	-24.9	-95.2	-51.98	-13	-38.98	V
5.63804	35.33	Pk	33.1	-22.3	-95.2	-49.07	-13	-36.07	V
5.63954	35.62	Pk	33.1	-22.3	-95.2	-48.78	-13	-35.78	H
7.5186	35.14	Pk	36.7	-20.4	-95.2	-43.76	-13	-30.76	H
7.52159	35.56	Pk	36.7	-20.4	-95.2	-43.34	-13	-30.34	V
High Channel, 1908.75MHz									
3.71757	37.79	Pk	30.4	-24.9	-95.2	-51.91	-13	-38.91	V
3.71954	37.22	Pk	30.4	-24.9	-95.2	-52.48	-13	-39.48	H
5.72515	36.06	Pk	33	-21.7	-95.2	-47.84	-13	-34.84	V
5.72748	36.48	Pk	33	-21.7	-95.2	-47.42	-13	-34.42	H
7.6333	35.46	Pk	36.9	-21.1	-95.2	-43.94	-13	-30.94	H
7.63577	35.81	Pk	36.9	-21.2	-95.2	-43.69	-13	-30.69	V

10.1.6. WCDMA BAND 5

REL 99 MODE

Project #:	13571601
Date:	4/21/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 5
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz										
1.64879	56.54	Pk	28.5	-46	.7	-95.2	-55.46	-13	-42.46	H
1.65198	56.51	Pk	28.6	-46	.8	-95.2	-55.29	-13	-42.29	V
2.48182	57.53	Pk	32.1	-45.3	.5	-95.2	-50.37	-13	-37.37	H
2.48296	59.9	Pk	32.1	-45.3	.5	-95.2	-48.0	-13	-35.0	V
3.30375	52.99	Pk	32.6	-43.7	.7	-95.2	-52.61	-13	-39.61	V
3.30629	53.32	Pk	32.6	-43.6	.7	-95.2	-52.18	-13	-39.18	H
Mid Channel, 836.6MHz										
1.65244	56.21	Pk	28.6	-46	.8	-95.2	-55.59	-13	-42.59	V
1.65302	56.41	Pk	28.6	-46	.8	-95.2	-55.39	-13	-42.39	H
2.51234	61.89	Pk	32.1	-45.4	.7	-95.2	-45.91	-13	-32.91	H
2.51352	58.86	Pk	32.1	-45.4	.7	-95.2	-48.94	-13	-35.94	V
3.33587	53.14	Pk	32.7	-43.6	.5	-95.2	-52.46	-13	-39.46	V
3.33842	53.11	Pk	32.7	-43.6	.5	-95.2	-52.49	-13	-39.49	H
High Channel, 846.6MHz										
1.63758	55.96	Pk	28.4	-46	.7	-95.2	-56.14	-13	-43.14	V
1.63896	56.18	Pk	28.4	-46	.7	-95.2	-55.92	-13	-42.92	H
2.53717	57.65	Pk	32.3	-45.2	.7	-95.2	-49.75	-13	-36.75	V
2.54212	57.87	Pk	32.3	-45.2	.6	-95.2	-49.63	-13	-36.63	H
3.38544	52.42	Pk	32.7	-43.5	.6	-95.2	-52.98	-13	-39.98	H
3.38591	52.69	Pk	32.7	-43.5	.6	-95.2	-52.71	-13	-39.71	V

HSDPA MODE

Project #:	13571601
Date:	4/21/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 5
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz										
1.65139	56.86	Pk	28.6	-46	.8	-95.2	-54.94	-13	-41.94	H
1.65446	56.49	Pk	28.6	-46	.8	-95.2	-55.31	-13	-42.31	V
2.47572	58.41	Pk	32.1	-45.3	.5	-95.2	-49.49	-13	-36.49	V
2.47666	59.19	Pk	32.1	-45.3	.5	-95.2	-48.71	-13	-35.71	H
3.30476	52.94	Pk	32.6	-43.6	.7	-95.2	-52.56	-13	-39.56	H
3.30541	53.39	Pk	32.6	-43.6	.7	-95.2	-52.11	-13	-39.11	V
Mid Channel, 836.6MHz										
1.67142	55.36	Pk	29.1	-46	.7	-95.2	-56.04	-13	-43.04	H
1.67237	54.95	Pk	29.1	-46	.7	-95.2	-56.45	-13	-43.45	V
2.5068	55.53	Pk	32.1	-45.4	.7	-95.2	-52.27	-13	-39.27	H
2.51312	60.52	Pk	32.1	-45.4	.7	-95.2	-47.28	-13	-34.28	V
3.34661	53.64	Pk	32.7	-43.6	.5	-95.2	-51.96	-13	-38.96	H
3.34686	52.72	Pk	32.7	-43.6	.5	-95.2	-52.88	-13	-39.88	V
High Channel, 846.6MHz										
1.63862	56.3	Pk	28.4	-46	.7	-95.2	-55.8	-13	-42.8	H
1.64107	56.59	Pk	28.4	-46	.7	-95.2	-55.51	-13	-42.51	V
2.53705	56.41	Pk	32.3	-45.2	.7	-95.2	-50.99	-13	-37.99	H
2.54292	56.5	Pk	32.3	-45.2	.6	-95.2	-51.0	-13	-38.0	V
3.38506	53	Pk	32.7	-43.5	.6	-95.2	-52.4	-13	-39.4	H
3.38791	52.74	Pk	32.7	-43.4	.6	-95.2	-52.56	-13	-39.56	V

10.1.7. WCDMA BAND 2

REL 99 MODE

Project #:	13571601
Date:	4/14/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70509	53.11	Pk	33.5	-43	.7	-95.2	-50.89	-13	-37.89	H
5.55751	50.55	Pk	34.4	-41.7	.6	-95.2	-51.35	-13	-38.35	H
7.41161	49.62	Pk	35.7	-39.6	.4	-95.2	-49.08	-13	-36.08	H
3.70361	52.17	Pk	33.5	-43	.7	-95.2	-51.83	-13	-38.83	V
5.55582	50.83	Pk	34.4	-41.7	.6	-95.2	-51.07	-13	-38.07	V
7.41068	49.4	Pk	35.7	-39.6	.4	-95.2	-49.3	-13	-36.3	V
Mid Channel, 1880MHz										
3.76075	52.45	Pk	33.5	-42.8	.6	-95.2	-51.45	-13	-38.45	H
5.64182	50.82	Pk	34.7	-41.4	.6	-95.2	-50.48	-13	-37.48	H
7.51975	48.8	Pk	35.7	-39.4	.4	-95.2	-49.7	-13	-36.7	H
3.75919	52.07	Pk	33.5	-42.8	.6	-95.2	-51.83	-13	-38.83	V
5.64024	50.33	Pk	34.6	-41.5	.6	-95.2	-51.17	-13	-38.17	V
7.52161	48.48	Pk	35.7	-39.3	.4	-95.2	-49.92	-13	-36.92	V
High Channel, 1907.6MHz										
3.81556	52.46	Pk	33.5	-42.9	.6	-95.2	-51.54	-13	-38.54	H
5.72484	56.15	Pk	34.6	-41.3	.6	-95.2	-45.15	-13	-32.15	H
7.63221	48.13	Pk	35.9	-39.1	.4	-95.2	-49.87	-13	-36.87	H
3.81355	52.58	Pk	33.5	-42.9	.6	-95.2	-51.42	-13	-38.42	V
5.72122	50.27	Pk	34.7	-41.2	.6	-95.2	-50.83	-13	-37.83	V
7.62882	48.65	Pk	35.9	-39.2	.4	-95.2	-49.45	-13	-36.45	V

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/20/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70579	52.21	Pk	33.5	-43	.7	-95.2	-51.79	-13	-38.79	H
3.70645	53.23	Pk	33.5	-43	.7	-95.2	-50.77	-13	-37.77	V
5.55795	50.82	Pk	34.4	-41.7	.6	-95.2	-51.08	-13	-38.08	V
5.55824	50.83	Pk	34.4	-41.7	.6	-95.2	-51.07	-13	-38.07	H
7.40796	49.44	Pk	35.7	-39.7	.4	-95.2	-49.36	-13	-36.36	H
7.40912	49.66	Pk	35.7	-39.7	.4	-95.2	-49.14	-13	-36.14	V
Mid Channel, 1880MHz										
3.75866	52.55	Pk	33.5	-42.8	.6	-95.2	-51.35	-13	-38.35	V
3.7591	52.33	Pk	33.5	-42.8	.6	-95.2	-51.57	-13	-38.57	H
5.63946	50.71	Pk	34.6	-41.5	.6	-95.2	-50.79	-13	-37.79	H
5.64152	50.29	Pk	34.6	-41.4	.6	-95.2	-51.11	-13	-38.11	V
7.51975	48.9	Pk	35.7	-39.4	.4	-95.2	-49.6	-13	-36.6	V
7.52104	48.76	Pk	35.7	-39.3	.4	-95.2	-49.64	-13	-36.64	H
High Channel, 1907.6MHz										
3.81378	52.94	Pk	33.5	-42.9	.6	-95.2	-51.06	-13	-38.06	V
3.81388	52.47	Pk	33.5	-42.9	.6	-95.2	-51.53	-13	-38.53	H
5.72099	50.87	Pk	34.7	-41.2	.6	-95.2	-50.23	-13	-37.23	H
5.72178	51.05	Pk	34.7	-41.2	.6	-95.2	-50.05	-13	-37.05	V
7.62985	48.06	Pk	35.9	-39.2	.4	-95.2	-50.04	-13	-37.04	H
7.63117	48.34	Pk	35.9	-39.1	.4	-95.2	-49.66	-13	-36.66	V

10.1.8. WCDMA BAND 4

REL 99 MODE

Project #:	13571601
Date:	4/15/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.4244	53.61	Pk	32.7	-43.4	.8	-95.2	-51.49	-13	-38.49	H
3.42634	53.2	Pk	32.7	-43.4	.8	-95.2	-51.9	-13	-38.9	V
5.13586	52.1	Pk	34.1	-42.7	.5	-95.2	-51.2	-13	-38.2	H
5.13756	52.14	Pk	34.2	-42.7	.5	-95.2	-51.06	-13	-38.06	V
6.85091	49.91	Pk	35.7	-40.4	.5	-95.2	-49.49	-13	-36.49	H
6.85131	49.33	Pk	35.7	-40.4	.5	-95.2	-50.07	-13	-37.07	V
Mid Channel, 1732.6										
3.46412	52.59	Pk	32.8	-43.4	.6	-95.2	-52.61	-13	-39.61	H
3.46619	52.81	Pk	32.8	-43.3	.6	-95.2	-52.29	-13	-39.29	V
5.19954	51.78	Pk	34.3	-42.5	.5	-95.2	-51.12	-13	-38.12	V
5.19962	52.29	Pk	34.3	-42.5	.5	-95.2	-50.61	-13	-37.61	H
6.92969	49.73	Pk	35.7	-40.4	.4	-95.2	-49.77	-13	-36.77	V
6.93187	49.53	Pk	35.7	-40.5	.4	-95.2	-50.07	-13	-37.07	H
High Channel, 1752.6										
3.50464	53.12	Pk	32.7	-43.3	.8	-95.2	-51.88	-13	-38.88	H
3.505	52.77	Pk	32.7	-43.2	.8	-95.2	-52.13	-13	-39.13	V
5.25507	52.53	Pk	34.4	-42.5	.7	-95.2	-50.07	-13	-37.07	V
5.25654	51.78	Pk	34.4	-42.5	.7	-95.2	-50.82	-13	-37.82	H
7.01075	49.23	Pk	35.8	-40.3	.5	-95.2	-49.97	-13	-36.97	V
7.01087	50.04	Pk	35.8	-40.3	.4	-95.2	-49.26	-13	-36.26	H

HSDPA MODE

Project #:	13571601
Date:	4/15/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42296	52.8	Pk	32.7	-43.4	.8	-95.2	-52.3	-13	-39.3	H
3.42572	53.15	Pk	32.7	-43.4	.8	-95.2	-51.95	-13	-38.95	V
5.13555	53.02	Pk	34.1	-42.7	.5	-95.2	-50.28	-13	-37.28	H
5.13579	51.85	Pk	34.1	-42.7	.5	-95.2	-51.45	-13	-38.45	V
6.84863	49.72	Pk	35.7	-40.3	.5	-95.2	-49.58	-13	-36.58	H
6.85143	49.21	Pk	35.7	-40.4	.5	-95.2	-50.19	-13	-37.19	V
Mid Channel, 1732.6										
3.46571	53.45	Pk	32.8	-43.3	.6	-95.2	-51.65	-13	-38.65	V
3.46723	52.66	Pk	32.8	-43.4	.6	-95.2	-52.54	-13	-39.54	H
5.1961	51.33	Pk	34.3	-42.6	.5	-95.2	-51.67	-13	-38.67	H
5.19736	52.29	Pk	34.3	-42.5	.5	-95.2	-50.61	-13	-37.61	V
6.93047	49.5	Pk	35.7	-40.4	.4	-95.2	-50.0	-13	-37.0	H
6.9306	49.49	Pk	35.7	-40.4	.4	-95.2	-50.01	-13	-37.01	V
High Channel, 1752.6										
3.5044	52.98	Pk	32.7	-43.3	.8	-95.2	-52.02	-13	-39.02	H
3.50593	53.4	Pk	32.7	-43.2	.8	-95.2	-51.5	-13	-38.5	V
5.25627	52.17	Pk	34.4	-42.5	.7	-95.2	-50.43	-13	-37.43	V
5.25716	51.82	Pk	34.4	-42.4	.7	-95.2	-50.68	-13	-37.68	H
7.00904	49.54	Pk	35.8	-40.3	.5	-95.2	-49.66	-13	-36.66	H
7.01116	49.82	Pk	35.8	-40.3	.4	-95.2	-49.48	-13	-36.48	V

10.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 2

10.2.1. GSM 850

GPRS MODE

Project #:	13571601
Date:	3/16- 4/19/2021
Test Engineer:	50820 EC, 12491 GM
Configuration:	EUT Only
Mode:	GPRS 850
Chamber #:	Chamber O, Chamber Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2 MHz										
1.6488	52.76	Pk	28.4	-45.1	.7	-95.2	-58.44	-13	-45.44	H
1.64929	51.81	Pk	28.4	-45.1	.8	-95.2	-59.29	-13	-46.29	V
2.47209	50.28	Pk	32.4	-44.4	.5	-95.2	-56.42	-13	-43.42	H
2.47209	51.06	Pk	32.4	-44.4	.5	-95.2	-55.64	-13	-42.64	V
3.29831	49.83	Pk	32.5	-42.4	.8	-95.2	-54.47	-13	-41.47	H
3.29831	49.21	Pk	32.5	-42.4	.8	-95.2	-55.09	-13	-42.09	V
Mid Channel, 836.6 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1-18GHz PRE0182588	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
1.67353	57.38	Pk	29.1	-46	.6	-95.2	-54.12	-13	-41.12	H
2.50975	62.17	Pk	32.1	-45.4	.7	-95.2	-45.63	-13	-32.63	H
3.37176	53.94	Pk	32.8	-43.5	.5	-95.2	-51.46	-13	-38.46	H
1.67321	58.53	Pk	29.1	-46	.6	-95.2	-52.97	-13	-39.97	V
2.50949	64.68	Pk	32.1	-45.4	.7	-95.2	-43.12	-13	-30.12	V
3.35919	53.53	Pk	32.7	-43.6	.5	-95.2	-52.07	-13	-39.07	V
High Channel, 848.8 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.69746	56.48	Pk	28.5	-45	0.6	-95.2	-54.62	-13	-41.62	H
1.69774	54.05	Pk	28.5	-45	0.6	-95.2	-57.05	-13	-44.05	V
2.54612	43.4	Pk	32.1	-44.2	0.6	-95.2	-63.3	-13	-50.3	H
2.54844	43.06	Pk	32.1	-44.2	0.6	-95.2	-63.64	-13	-50.64	V
3.39181	40.52	Pk	32.5	-42.2	0.6	-95.2	-63.78	-13	-50.78	H
3.39764	40.68	Pk	32.5	-42.1	0.6	-95.2	-63.52	-13	-50.52	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/16 – 4/19/2021
Test Engineer:	50820 EC, 12491 GM
Configuration:	EUT Only
Mode:	EGPRS 850
Chamber #:	Chamber O, Chamber Q

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.2 MHz										
1.64845	44.53	Pk	28.4	-45.1	.7	-95.2	-66.67	-13	-53.67	V
1.64991	44.47	Pk	28.4	-45.1	.8	-95.2	-66.63	-13	-53.63	H
2.47214	43.96	Pk	32.4	-44.4	.5	-95.2	-62.74	-13	-49.74	V
2.47353	42.89	Pk	32.4	-44.4	.5	-95.2	-63.81	-13	-50.81	H
3.29588	42.97	Pk	32.5	-42.4	.8	-95.2	-61.33	-13	-48.33	H
3.29683	41.85	Pk	32.5	-42.4	.8	-95.2	-62.45	-13	-49.45	V
Mid Channel, 836.6 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1-18GHz PRE0182588	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
1.67347	57.53	Pk	29.1	-46	0.6	-95.2	-53.97	-13	-40.97	H
2.50966	64.66	Pk	32.1	-45.4	0.7	-95.2	-43.14	-13	-30.14	H
3.34639	52.99	Pk	32.7	-43.6	0.5	-95.2	-52.61	-13	-39.61	H
1.67338	57.61	Pk	29.1	-46	0.6	-95.2	-53.89	-13	-40.89	V
2.50995	64.87	Pk	32.1	-45.4	0.7	-95.2	-42.93	-13	-29.93	V
3.34662	53.87	Pk	32.7	-43.6	0.5	-95.2	-51.73	-13	-38.73	V
High Channel, 848.8 MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213831 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.6976	44.12	Pk	28.5	-45	0.6	-95.2	-66.98	-13	-53.98	V
1.69768	46.03	Pk	28.5	-45	0.6	-95.2	-65.07	-13	-52.07	H
2.54292	42.86	Pk	32.1	-44.2	0.6	-95.2	-63.84	-13	-50.84	V
2.54871	43.82	Pk	32.1	-44.2	0.6	-95.2	-62.88	-13	-49.88	H
3.39587	40.71	Pk	32.5	-42.1	0.6	-95.2	-63.49	-13	-50.49	H
3.39757	40.62	Pk	32.5	-42.1	0.6	-95.2	-63.58	-13	-50.58	V

Pk - Peak detector

10.2.2. GSM 1900

GPRS MODE

Project #:	13571601
Date:	3/16/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.69951	52.99	Pk	33.5	-42.1	1	-95.2	-49.81	-13	-36.81	H
5.55079	52.78	Pk	34.5	-40.7	1	-95.2	-47.62	-13	-34.62	H
8.08855	48.92	Pk	35.8	-37.3	1	-95.2	-46.78	-13	-33.78	H
3.69934	53.34	Pk	33.5	-42.1	1	-95.2	-49.46	-13	-36.46	V
5.5485	51.02	Pk	34.4	-40.7	1	-95.2	-49.48	-13	-36.48	V
7.4023	49.55	Pk	35.8	-38.6	1	-95.2	-47.45	-13	-34.45	V
Mid Channel, 1880MHz										
3.75954	53.01	Pk	33.5	-42.8	1	-95.2	-50.49	-13	-37.49	H
5.64007	53.02	Pk	34.6	-41.5	1	-95.2	-48.08	-13	-35.08	H
7.52068	48.97	Pk	35.7	-39.3	1	-95.2	-48.83	-13	-35.83	H
3.76004	53.63	Pk	33.5	-42.8	1	-95.2	-49.87	-13	-36.87	V
5.63992	51.9	Pk	34.6	-41.5	1	-95.2	-49.2	-13	-36.2	V
7.52013	48.95	Pk	35.7	-39.4	1	-95.2	-48.95	-13	-35.95	V
High Channel, 1909.8MHz										
3.81977	53.65	Pk	33.5	-41.9	1	-95.2	-48.95	-13	-35.95	H
5.72899	51.17	Pk	34.6	-40	1	-95.2	-48.43	-13	-35.43	H
7.63772	48.74	Pk	35.8	-38.1	1	-95.2	-47.76	-13	-34.76	H
3.82107	52.56	Pk	33.5	-41.9	1	-95.2	-50.04	-13	-37.04	V
5.72784	50.65	Pk	34.6	-40	1	-95.2	-48.95	-13	-35.95	V
7.64073	48.08	Pk	35.9	-38.1	1	-95.2	-48.32	-13	-35.32	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/16/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.70194	41.3	Pk	33.5	-31.1	1	-95.2	-50.5	-13	-37.5	H
5.55205	39.07	Pk	34.4	-29.8	1	-95.2	-50.53	-13	-37.53	H
7.4007	37.81	Pk	35.8	-27.4	1	-95.2	-47.99	-13	-34.99	H
3.69888	40.83	Pk	33.5	-31.2	1	-95.2	-51.07	-13	-38.07	V
5.54907	39.17	Pk	34.4	-29.9	1	-95.2	-50.53	-13	-37.53	V
7.40035	38.03	Pk	35.7	-27.6	1	-95.2	-48.07	-13	-35.07	V
Mid Channel, 1880MHz										
3.75851	51.54	Pk	33.5	-42.8	1	-95.2	-51.96	-13	-38.96	H
5.63913	50.72	Pk	34.6	-41.5	1	-95.2	-50.38	-13	-37.38	H
7.51864	49.37	Pk	35.7	-39.4	1	-95.2	-48.53	-13	-35.53	H
3.7579	52.22	Pk	33.5	-42.8	1	-95.2	-51.28	-13	-38.28	V
5.63854	51.69	Pk	34.6	-41.5	1	-95.2	-49.41	-13	-36.41	V
7.52269	48.73	Pk	35.7	-39.3	1	-95.2	-49.07	-13	-36.07	V
High Channel, 1909.8MHz										
3.81828	52.68	Pk	33.5	-41.9	1	-95.2	-49.92	-13	-36.92	H
5.73073	50.25	Pk	34.7	-40.1	1	-95.2	-49.35	-13	-36.35	H
7.64133	48.56	Pk	35.9	-38.1	1	-95.2	-47.84	-13	-34.84	H
3.81814	52.06	Pk	33.5	-41.9	1	-95.2	-50.54	-13	-37.54	V
5.72894	50.46	Pk	34.6	-40	1	-95.2	-49.14	-13	-36.14	V
7.63809	48.51	Pk	35.8	-38.1	1	-95.2	-47.99	-13	-34.99	V

Pk - Peak detector

10.2.3. CDMA BC10

1xRTT MODE

Project #:	13571601
Date:	5/6/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC10
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 817.25MHz										
1.6325	39.27	Pk	25	-27.9	.7	-95.2	-58.13	-13	-45.13	H
1.63401	38.91	Pk	25	-27.8	.7	-95.2	-58.39	-13	-45.39	V
2.4507	36.89	Pk	28.8	-26.7	.5	-95.2	-55.71	-13	-42.71	H
2.45325	38.4	Pk	28.8	-26.7	.5	-95.2	-54.2	-13	-41.2	V
3.26715	36.84	Pk	31.4	-25.5	.6	-95.2	-51.86	-13	-38.86	H
3.26776	37.63	Pk	31.4	-25.5	.6	-95.2	-51.07	-13	-38.07	V
Mid Channel, 820MHz										
1.64036	39.5	Pk	25	-27.8	.7	-95.2	-57.8	-13	-44.8	H
1.64231	39.35	Pk	25	-27.8	.7	-95.2	-57.95	-13	-44.95	V
2.4597	36.75	Pk	28.9	-26.6	.5	-95.2	-55.65	-13	-42.65	V
2.46213	37.78	Pk	28.9	-26.6	.5	-95.2	-54.62	-13	-41.62	H
3.28211	37.58	Pk	31.3	-25.4	.8	-95.2	-50.92	-13	-37.92	V
3.28223	39.15	Pk	31.3	-25.4	.8	-95.2	-49.35	-13	-36.35	H
High Channel, 822.75MHz										
1.64754	38.57	Pk	24.9	-27.8	.8	-95.2	-58.73	-13	-45.73	H
1.64786	38.74	Pk	24.9	-27.8	.8	-95.2	-58.56	-13	-45.56	V
2.46719	37.63	Pk	28.9	-26.7	.5	-95.2	-54.87	-13	-41.87	V
2.46839	38.42	Pk	28.9	-26.7	.5	-95.2	-54.08	-13	-41.08	H
3.2901	36.95	Pk	31.2	-25.4	.8	-95.2	-51.65	-13	-38.65	H
3.29127	37.25	Pk	31.2	-25.4	.8	-95.2	-51.35	-13	-38.35	V

Pk - Peak detector

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/7/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC10
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 817.25MHz										
1.63227	37.62	Pk	25	-27.9	.7	-95.2	-59.78	-13	-46.78	V
1.63307	37.93	Pk	25	-27.9	.7	-95.2	-59.47	-13	-46.47	H
2.45025	36.44	Pk	28.8	-26.7	.5	-95.2	-56.16	-13	-43.16	V
2.45227	36.66	Pk	28.8	-26.7	.5	-95.2	-55.94	-13	-42.94	H
3.26849	36.41	Pk	31.3	-25.5	.6	-95.2	-52.39	-13	-39.39	V
3.27126	37.73	Pk	31.3	-25.5	.7	-95.2	-50.97	-13	-37.97	H
Mid Channel, 820MHz										
1.64121	38.23	Pk	25	-27.8	.7	-95.2	-59.07	-13	-46.07	H
1.64202	37.9	Pk	25	-27.8	.7	-95.2	-59.4	-13	-46.4	V
2.46235	36.96	Pk	28.9	-26.6	.5	-95.2	-55.44	-13	-42.44	H
2.46257	36.97	Pk	28.9	-26.6	.5	-95.2	-55.43	-13	-42.43	V
3.27938	36.77	Pk	31.4	-25.3	.8	-95.2	-51.53	-13	-38.53	V
3.28037	36.27	Pk	31.4	-25.3	.8	-95.2	-52.03	-13	-39.03	H
High Channel, 822.75MHz										
1.64625	37.91	Pk	24.9	-27.8	.7	-95.2	-59.49	-13	-46.49	H
1.64665	38.27	Pk	24.9	-27.8	.7	-95.2	-59.13	-13	-46.13	V
2.46769	36.48	Pk	28.9	-26.7	.5	-95.2	-56.02	-13	-43.02	H
2.46779	37.48	Pk	28.9	-26.7	.5	-95.2	-55.02	-13	-42.02	V
3.28975	37.18	Pk	31.2	-25.4	.8	-95.2	-51.42	-13	-38.42	H
3.29025	36.61	Pk	31.2	-25.4	.8	-95.2	-51.99	-13	-38.99	V

Pk - Peak detector

10.2.4. CDMA BC0

1xRTT MODE

Project #:	13571601
Date:	5/6/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC0
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.7MHz										
1.64867	38.04	Pk	24.9	-27.8	.8	-95.2	-59.26	-13	-46.26	H
1.64935	38.77	Pk	24.9	-27.8	.8	-95.2	-58.53	-13	-45.53	V
2.47381	37.89	Pk	29	-26.6	.5	-95.2	-54.41	-13	-41.41	V
2.47392	37.99	Pk	29	-26.6	.5	-95.2	-54.31	-13	-41.31	H
3.29729	36.55	Pk	31.2	-25.4	.8	-95.2	-52.05	-13	-39.05	H
3.29887	36.24	Pk	31.2	-25.5	.8	-95.2	-52.46	-13	-39.46	V
Mid Channel, 836.52MHz										
1.67223	38.76	Pk	25	-27.8	.7	-95.2	-58.54	-13	-45.54	H
1.67458	38.35	Pk	25	-27.8	.7	-95.2	-58.95	-13	-45.95	V
2.50998	37.01	Pk	29.1	-26.6	.7	-95.2	-54.99	-13	-41.99	H
2.51018	37.88	Pk	29.1	-26.6	.7	-95.2	-54.12	-13	-41.12	V
3.34434	37.07	Pk	31	-25.6	.6	-95.2	-52.13	-13	-39.13	V
3.34487	36.83	Pk	31	-25.6	.6	-95.2	-52.37	-13	-39.37	H
High Channel, 848.31MHz										
1.6952	38.61	Pk	25	-27.6	.7	-95.2	-58.49	-13	-45.49	V
1.69795	38.39	Pk	25.1	-27.7	.7	-95.2	-58.71	-13	-45.71	H
2.54394	38.15	Pk	29.2	-26.6	.7	-95.2	-53.75	-13	-40.75	V
2.54407	37.88	Pk	29.2	-26.6	.7	-95.2	-54.02	-13	-41.02	H
3.39231	37.17	Pk	30.7	-25.6	.6	-95.2	-52.33	-13	-39.33	H
3.39366	36.66	Pk	30.7	-25.5	.6	-95.2	-52.74	-13	-39.74	V

Pk - Peak detector

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/7/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC0
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T962 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 824.7MHz										
1.64938	37.88	Pk	24.9	-27.8	.8	-95.2	-59.42	-13	-46.42	V
1.65053	37.84	Pk	24.9	-27.8	.8	-95.2	-59.46	-13	-46.46	H
2.47385	37.53	Pk	29	-26.6	.5	-95.2	-54.77	-13	-41.77	H
2.47483	37.18	Pk	29	-26.6	.5	-95.2	-55.12	-13	-42.12	V
3.30036	36.35	Pk	31.1	-25.6	.8	-95.2	-52.55	-13	-39.55	V
3.30057	37.53	Pk	31.1	-25.6	.8	-95.2	-51.37	-13	-38.37	H
Mid Channel, 836.52MHz										
1.67165	36.66	Pk	25	-27.8	.7	-95.2	-60.64	-13	-47.64	H
1.67284	37.22	Pk	25	-27.8	.7	-95.2	-60.08	-13	-47.08	V
2.50819	35.91	Pk	29.1	-26.5	.7	-95.2	-55.99	-13	-42.99	V
2.50822	36.5	Pk	29.1	-26.5	.7	-95.2	-55.4	-13	-42.4	H
3.34577	36.79	Pk	30.9	-25.6	.6	-95.2	-52.51	-13	-39.51	H
3.34742	36.33	Pk	31	-25.6	.6	-95.2	-52.87	-13	-39.87	V
High Channel, 848.31MHz										
1.69553	37.61	Pk	25	-27.6	.7	-95.2	-59.49	-13	-46.49	H
1.69592	38.04	Pk	25	-27.6	.7	-95.2	-59.06	-13	-46.06	V
2.54388	38.2	Pk	29.2	-26.6	.7	-95.2	-53.7	-13	-40.7	H
2.54481	36.9	Pk	29.2	-26.6	.7	-95.2	-55.0	-13	-42.0	V
3.3941	37.31	Pk	30.7	-25.5	.6	-95.2	-52.09	-13	-39.09	H
3.39504	37.06	Pk	30.7	-25.5	.6	-95.2	-52.34	-13	-39.34	V

Pk - Peak detector

10.2.5. CDMA BC1

1xRTT MODE

Project #:	13571601
Date:	5/6/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xRTT BC1
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AT T962 (dB/m)	Amp/Cbl (dB)	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1851.25MHz									
3.7617	37.8	Pk	30.7	-24.9	-95.2	-51.6	-13	-38.6	V
3.76261	37.66	Pk	30.7	-24.9	-95.2	-51.74	-13	-38.74	H
5.63814	35.79	Pk	33.1	-22.3	-95.2	-48.61	-13	-35.61	V
5.63885	35.11	Pk	33.1	-22.3	-95.2	-49.29	-13	-36.29	H
7.51894	34.83	Pk	36.7	-20.4	-95.2	-44.07	-13	-31.07	V
7.52022	34.83	Pk	36.7	-20.4	-95.2	-44.07	-13	-31.07	H
Mid Channel, 1880MHz									
3.7617	37.8	Pk	30.7	-24.9	-95.2	-51.6	-13	-38.6	V
3.76261	37.66	Pk	30.7	-24.9	-95.2	-51.74	-13	-38.74	H
5.63814	35.79	Pk	33.1	-22.3	-95.2	-48.61	-13	-35.61	V
5.63885	35.11	Pk	33.1	-22.3	-95.2	-49.29	-13	-36.29	H
7.51894	34.83	Pk	36.7	-20.4	-95.2	-44.07	-13	-31.07	V
7.52022	34.83	Pk	36.7	-20.4	-95.2	-44.07	-13	-31.07	H
High Channel, 1908.75MHz									
3.81574	37.64	Pk	31	-24.6	-95.2	-51.16	-13	-38.16	H
3.81575	38.11	Pk	31	-24.6	-95.2	-50.69	-13	-37.69	V
5.72444	35.7	Pk	33	-21.7	-95.2	-48.2	-13	-35.2	H
5.72473	36.49	Pk	33	-21.7	-95.2	-47.41	-13	-34.41	V
7.635	35.29	Pk	36.9	-21.2	-95.2	-44.21	-13	-31.21	V
7.63685	35.3	Pk	36.9	-21.2	-95.2	-44.2	-13	-31.2	H

Pk - Peak detector

1xEV-DO REV A MODE

Project #:	13571601
Date:	5/7/2021
Test Engineer:	45258
Configuration:	EUT Only
Mode:	1xEV-DO REV A BC1
Chamber #:	Chamber B

Frequency (GHz)	Meter Reading (dBuV)	Det	AT T962 (dB/m)	Amp/Cbl (dB)	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1851.25MHz									
3.70236	38.23	Pk	30.3	-24.6	-95.2	-51.27	-13	-38.27	H
3.70378	37.92	Pk	30.3	-24.6	-95.2	-51.58	-13	-38.58	V
5.55319	36.92	Pk	33.3	-23.3	-95.2	-48.28	-13	-35.28	H
5.55423	36.75	Pk	33.3	-23.3	-95.2	-48.45	-13	-35.45	V
7.40481	35.53	Pk	36.9	-21	-95.2	-43.77	-13	-30.77	V
7.40543	34.19	Pk	36.9	-21	-95.2	-45.11	-13	-32.11	H
Mid Channel, 1880MHz									
3.75857	38.43	Pk	30.6	-24.8	-95.2	-50.97	-13	-37.97	H
3.76179	38.68	Pk	30.7	-24.9	-95.2	-50.72	-13	-37.72	V
5.63902	36.2	Pk	33.1	-22.3	-95.2	-48.2	-13	-35.2	H
5.64092	36.3	Pk	33.1	-22.2	-95.2	-48.0	-13	-35.0	V
7.51918	34.71	Pk	36.7	-20.4	-95.2	-44.19	-13	-31.19	V
7.522	34.64	Pk	36.7	-20.5	-95.2	-44.36	-13	-31.36	H
High Channel, 1908.75MHz									
3.81597	37.34	Pk	31	-24.6	-95.2	-51.46	-13	-38.46	V
3.81755	37.85	Pk	30.9	-24.6	-95.2	-51.05	-13	-38.05	H
5.72588	34.89	Pk	33	-21.7	-95.2	-49.01	-13	-36.01	V
5.7261	35.14	Pk	33	-21.7	-95.2	-48.76	-13	-35.76	H
7.63441	34.49	Pk	36.9	-21.2	-95.2	-45.01	-13	-32.01	H
7.63737	34.85	Pk	36.9	-21.2	-95.2	-44.65	-13	-31.65	V

Pk - Peak detector

10.2.6. WCDMA BAND 5

REL 99 MODE

Project #:	13571601
Date:	4/15 – 6/26/2021
Test Engineer:	12491 GM
Configuration:	EUT Only
Mode:	REL 99 Band 5
Chamber #:	Chamber Q, R

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213973 (dB/m)	Amp/Cbl (dB)	HPF 1.2GHz 172654 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz										
1.64837	55.86	Pk	28.8	-45.6	.7	-95.2	-55.44	-13	-42.44	V
1.65246	55.83	Pk	28.8	-45.6	.7	-95.2	-55.47	-13	-42.47	H
2.47953	55.6	Pk	32.4	-45.3	.5	-95.2	-52.0	-13	-39.0	H
2.48316	55.1	Pk	32.5	-45.2	.5	-95.2	-52.3	-13	-39.3	V
3.30857	51.23	Pk	32.4	-41.7	.5	-95.2	-52.77	-13	-39.77	H
3.30914	51.4	Pk	32.4	-41.7	.5	-95.2	-52.6	-13	-39.6	V
Mid Channel, 836.6MHz										
1.67545	59.43	Pk	28.9	-45.5	.7	-95.2	-51.67	-13	-38.67	V
1.67621	55.8	Pk	28.9	-45.5	.7	-95.2	-55.3	-13	-42.3	H
2.50693	56.47	Pk	32.6	-45.1	.5	-95.2	-50.73	-13	-37.73	H
2.51137	55.84	Pk	32.6	-45.1	.5	-95.2	-51.36	-13	-38.36	V
3.32887	51.34	Pk	32.3	-41.6	.5	-95.2	-52.66	-13	-39.66	H
3.33238	51.49	Pk	32.4	-41.7	.5	-95.2	-52.51	-13	-39.51	V
High Channel, 846.6MHz										
1.68853	55.53	Pk	29.1	-45.5	.7	-95.2	-55.37	-13	-42.37	V
1.69243	55.86	Pk	29.1	-45.5	.6	-95.2	-55.14	-13	-42.14	H
2.54045	55.24	Pk	32.6	-45	.6	-95.2	-51.76	-13	-38.76	H
2.5407	54.59	Pk	32.6	-45	.6	-95.2	-52.41	-13	-39.41	V
3.38938	50.99	Pk	32.6	-41.6	.5	-95.2	-52.71	-13	-39.71	H
3.39233	50.9	Pk	32.6	-41.6	.5	-95.2	-52.8	-13	-39.8	V

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/21 - 6/26/2021
Test Engineer:	12491 GM, 50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 5
Chamber #:	Chamber O, Chamber

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213973	Amp/Cbl (dB)	HPF 1.2GHz 172654 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 826.4MHz										
1.65403	55.54	Pk	28.8	-45.6	.7	-95.2	-55.76	-13	-42.76	V
1.65702	55.37	Pk	28.8	-45.5	.7	-95.2	-55.83	-13	-42.83	H
2.48218	56.88	Pk	32.5	-45.2	.5	-95.2	-50.52	-13	-37.52	H
2.48288	55.25	Pk	32.5	-45.2	.5	-95.2	-52.15	-13	-39.15	V
3.30315	51.05	Pk	32.4	-41.6	.5	-95.2	-52.85	-13	-39.85	H
3.30466	51.82	Pk	32.4	-41.6	.5	-95.2	-52.08	-13	-39.08	V
Mid Channel, 836.6MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.67152	54.56	Pk	29.1	-46	.7	-95.2	-56.84	-13	-43.84	H
1.67157	54.85	Pk	29.1	-46	.7	-95.2	-56.55	-13	-43.55	V
2.50649	57.4	Pk	32.1	-45.4	.7	-95.2	-50.4	-13	-37.4	H
2.50694	55.89	Pk	32.1	-45.4	.7	-95.2	-51.91	-13	-38.91	V
3.34448	53.26	Pk	32.7	-43.6	.5	-95.2	-52.34	-13	-39.34	V
3.34732	49.62	Pk	32.7	-43.6	.5	-95.2	-55.98	-13	-42.98	H
High Channel, 846.6MHz										
Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 1.2GHz T1737 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
1.6913	55.65	Pk	29.1	-45.9	.7	-95.2	-55.65	-13	-42.65	V
1.69465	55.83	Pk	29	-46	.7	-95.2	-55.67	-13	-42.67	H
2.53651	56.6	Pk	32.3	-45.2	.7	-95.2	-50.8	-13	-37.8	V
2.53723	60.29	Pk	32.3	-45.2	.7	-95.2	-47.11	-13	-34.11	H
3.38518	52.91	Pk	32.7	-43.5	.6	-95.2	-52.49	-13	-39.49	H
3.38591	52.45	Pk	32.7	-43.5	.6	-95.2	-52.95	-13	-39.95	V

Pk - Peak detector

10.2.7. WCDMA BAND 2

REL 99 MODE

Project #:	13571601
Date:	4/15-4/16/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70602	52.7	Pk	33.5	-43	.7	-95.2	-51.3	-13	-38.3	V
3.70633	53.23	Pk	33.5	-43	.7	-95.2	-50.77	-13	-37.77	H
5.55619	51.08	Pk	34.4	-41.7	.6	-95.2	-50.82	-13	-37.82	H
5.55629	51.54	Pk	34.4	-41.7	.6	-95.2	-50.36	-13	-37.36	V
7.40794	50.13	Pk	35.7	-39.7	.4	-95.2	-48.67	-13	-35.67	H
7.40965	49.45	Pk	35.7	-39.7	.4	-95.2	-49.35	-13	-36.35	V
Mid Channel, 1880MHz										
3.75899	52.44	Pk	33.5	-42.8	.6	-95.2	-51.46	-13	-38.46	V
3.76179	52.4	Pk	33.5	-42.8	.6	-95.2	-51.5	-13	-38.5	H
5.6386	51.62	Pk	34.6	-41.5	.6	-95.2	-49.88	-13	-36.88	H
5.63862	51.59	Pk	34.6	-41.5	.6	-95.2	-49.91	-13	-36.91	V
7.52068	49.04	Pk	35.7	-39.3	.4	-95.2	-49.36	-13	-36.36	V
7.52182	48.4	Pk	35.7	-39.3	.4	-95.2	-50.0	-13	-37.0	H
High Channel, 1907.6MHz										
3.81464	52.39	Pk	33.5	-42.9	.6	-95.2	-51.61	-13	-38.61	H
3.8152	52.4	Pk	33.5	-42.9	.6	-95.2	-51.6	-13	-38.6	V
5.72242	50.9	Pk	34.7	-41.3	.6	-95.2	-50.3	-13	-37.3	H
5.72333	50.84	Pk	34.7	-41.3	.6	-95.2	-50.36	-13	-37.36	V
7.62928	48.19	Pk	35.9	-39.2	.4	-95.2	-49.91	-13	-36.91	V
7.63083	49.47	Pk	35.9	-39.2	.4	-95.2	-48.63	-13	-35.63	H

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/22/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70429	52.38	Pk	33.5	-43	.7	-95.2	-51.62	-13	-38.62	V
3.7058	52.73	Pk	33.5	-43	.7	-95.2	-51.27	-13	-38.27	H
5.5561	50.79	Pk	34.4	-41.7	.6	-95.2	-51.11	-13	-38.11	V
5.55826	50.78	Pk	34.4	-41.7	.6	-95.2	-51.12	-13	-38.12	H
7.41013	49.38	Pk	35.7	-39.7	.4	-95.2	-49.42	-13	-36.42	V
7.41033	49.52	Pk	35.7	-39.7	.4	-95.2	-49.28	-13	-36.28	H
Mid Channel, 1880MHz										
3.75905	52.58	Pk	33.5	-42.8	.6	-95.2	-51.32	-13	-38.32	H
3.76013	52.16	Pk	33.5	-42.8	.6	-95.2	-51.74	-13	-38.74	V
5.63879	50.43	Pk	34.6	-41.5	.6	-95.2	-51.07	-13	-38.07	H
5.63888	50.43	Pk	34.6	-41.5	.6	-95.2	-51.07	-13	-38.07	V
7.51923	48.52	Pk	35.7	-39.4	.4	-95.2	-49.98	-13	-36.98	V
7.5224	49.14	Pk	35.7	-39.3	.4	-95.2	-49.26	-13	-36.26	H
High Channel, 1907.6MHz										
3.81304	52.87	Pk	33.5	-42.9	.6	-95.2	-51.13	-13	-38.13	H
3.81384	53.12	Pk	33.5	-42.9	.6	-95.2	-50.88	-13	-37.88	V
5.72183	50.47	Pk	34.7	-41.2	.6	-95.2	-50.63	-13	-37.63	V
5.72204	50.96	Pk	34.7	-41.3	.6	-95.2	-50.24	-13	-37.24	H
7.62948	49.32	Pk	35.9	-39.2	.4	-95.2	-48.78	-13	-35.78	V
7.63233	49.04	Pk	35.8	-39.1	.4	-95.2	-49.06	-13	-36.06	H

Pk - Peak detector

10.2.8. WCDMA BAND 4

REL 99 MODE

Project #:	13571601
Date:	4/15/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42341	53.62	Pk	32.7	-43.4	.8	-95.2	-51.48	-13	-38.48	V
3.42424	53.71	Pk	32.7	-43.4	.8	-95.2	-51.39	-13	-38.39	H
5.1364	53.12	Pk	34.2	-42.7	.5	-95.2	-50.08	-13	-37.08	H
5.13715	52.31	Pk	34.2	-42.7	.5	-95.2	-50.89	-13	-37.89	V
6.85067	49.92	Pk	35.7	-40.4	.5	-95.2	-49.48	-13	-36.48	H
6.85096	49.4	Pk	35.7	-40.4	.5	-95.2	-50.0	-13	-37.0	V
Mid Channel, 1732.6										
3.46373	52.04	Pk	32.8	-43.3	.6	-95.2	-53.06	-13	-40.06	V
3.46427	52.49	Pk	32.8	-43.3	.6	-95.2	-52.61	-13	-39.61	H
5.19695	51.93	Pk	34.3	-42.5	.5	-95.2	-50.97	-13	-37.97	H
5.19787	52.05	Pk	34.3	-42.5	.5	-95.2	-50.85	-13	-37.85	V
6.92926	49.54	Pk	35.7	-40.4	.4	-95.2	-49.96	-13	-36.96	V
6.93108	49.39	Pk	35.7	-40.4	.4	-95.2	-50.11	-13	-37.11	H
High Channel, 1752.6										
3.50439	53.73	Pk	32.7	-43.3	.8	-95.2	-51.27	-13	-38.27	H
3.50708	53.06	Pk	32.7	-43.2	.8	-95.2	-51.84	-13	-38.84	V
5.25795	51.88	Pk	34.4	-42.4	.7	-95.2	-50.62	-13	-37.62	H
5.25867	51.88	Pk	34.4	-42.4	.7	-95.2	-50.62	-13	-37.62	V
7.01133	49.35	Pk	35.8	-40.3	.4	-95.2	-49.95	-13	-36.95	V
7.01155	50.58	Pk	35.8	-40.3	.4	-95.2	-48.72	-13	-35.72	H

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/22/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1712.4									
3.4227	53.35	Pk	32.7	-42.3	-95.2	-51.45	-13	-38.45	V
3.42309	53.44	Pk	32.7	-42.3	-95.2	-51.36	-13	-38.36	H
5.13625	51.56	Pk	34.2	-41.8	-95.2	-51.24	-13	-38.24	V
5.13768	52.52	Pk	34.2	-41.8	-95.2	-50.28	-13	-37.28	H
6.84832	49.71	Pk	35.6	-39.6	-95.2	-49.49	-13	-36.49	V
6.84865	49.71	Pk	35.7	-39.6	-95.2	-49.39	-13	-36.39	H
Mid Channel, 1732.6									
3.46391	52.85	Pk	32.8	-42.1	-95.2	-51.65	-13	-38.65	V
3.46653	53.19	Pk	32.8	-42.1	-95.2	-51.31	-13	-38.31	H
5.19646	52.5	Pk	34.3	-41.8	-95.2	-50.2	-13	-37.2	H
5.19671	54.23	Pk	34.3	-41.8	-95.2	-48.47	-13	-35.47	V
6.93114	49.64	Pk	35.7	-39.6	-95.2	-49.46	-13	-36.46	H
6.93148	49.56	Pk	35.7	-39.6	-95.2	-49.54	-13	-36.54	V
High Channel, 1752.6									
3.50372	52.64	Pk	32.7	-42.1	-95.2	-51.96	-13	-38.96	V
3.50475	52.92	Pk	32.7	-42.1	-95.2	-51.68	-13	-38.68	H
5.25731	52.32	Pk	34.4	-41.3	-95.2	-49.78	-13	-36.78	H
5.25768	51.96	Pk	34.4	-41.3	-95.2	-50.14	-13	-37.14	V
7.01043	49.55	Pk	35.8	-39.5	-95.2	-49.35	-13	-36.35	H
7.01061	49.74	Pk	35.8	-39.5	-95.2	-49.16	-13	-36.16	V

Pk - Peak detector

10.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 3

10.3.1. GSM 1900

GPRS MODE

Project #:	13571601
Date:	4/1-4/5/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	GPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.70052	46.16	Pk	33.5	-31.1	1	-95.2	-45.64	-13	-32.64	H
5.55092	42.59	Pk	34.5	-29.7	1	-95.2	-46.81	-13	-33.81	H
7.40144	37.38	Pk	35.8	-27.4	1	-95.2	-48.42	-13	-35.42	H
3.7006	44.19	Pk	33.5	-31.2	1	-95.2	-47.71	-13	-34.71	V
5.55064	44.51	Pk	34.5	-30	1	-95.2	-45.19	-13	-32.19	V
7.40203	37.33	Pk	35.8	-27.7	1	-95.2	-48.77	-13	-35.77	V
Mid Channel, 1880MHz										
3.75995	43.21	Pk	33.5	-31.1	1	-95.2	-48.59	-13	-35.59	H
5.64025	39.02	Pk	34.6	-29.2	1	-95.2	-49.78	-13	-36.78	H
7.52165	36.54	Pk	35.7	-27.3	1	-95.2	-49.26	-13	-36.26	H
3.75922	40.25	Pk	33.5	-31.1	1	-95.2	-51.55	-13	-38.55	V
5.63941	39.61	Pk	34.6	-29.2	1	-95.2	-49.19	-13	-36.19	V
7.52109	36.75	Pk	35.7	-27.5	1	-95.2	-49.25	-13	-36.25	V
High Channel, 1909.8MHz										
3.81944	41.26	Pk	33.5	-31.7	1	-95.2	-51.14	-13	-38.14	H
5.72856	38.65	Pk	34.6	-29.2	1	-95.2	-50.15	-13	-37.15	H
7.6415	36.26	Pk	35.9	-26.8	1	-95.2	-48.84	-13	-35.84	H
3.82118	40.5	Pk	33.5	-31.4	1	-95.2	-51.6	-13	-38.6	V
5.72947	39.99	Pk	34.6	-29.3	1	-95.2	-48.91	-13	-35.91	V
7.64054	36.55	Pk	35.9	-27	1	-95.2	-48.75	-13	-35.75	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/31/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.69898	41.01	Pk	33.5	-31.1	1	-95.2	-50.79	-13	-37.79	H
5.55035	39.39	Pk	34.5	-29.7	1	-95.2	-50.01	-13	-37.01	H
7.40049	37.83	Pk	35.8	-27.4	1	-95.2	-47.97	-13	-34.97	H
3.69964	41.1	Pk	33.5	-31.2	1	-95.2	-50.8	-13	-37.8	V
5.55108	38.98	Pk	34.4	-30	1	-95.2	-50.82	-13	-37.82	V
7.40137	37.52	Pk	35.8	-27.6	1	-95.2	-48.48	-13	-35.48	V
Mid Channel, 1880MHz										
3.75914	40.72	Pk	33.5	-31.1	1	-95.2	-51.08	-13	-38.08	H
5.63795	38.85	Pk	34.5	-29.1	1	-95.2	-49.95	-13	-36.95	H
7.52102	36.75	Pk	35.7	-27.2	1	-95.2	-48.95	-13	-35.95	H
3.75879	41.11	Pk	33.5	-31.1	1	-95.2	-50.69	-13	-37.69	V
5.63986	38.6	Pk	34.6	-29.2	1	-95.2	-50.2	-13	-37.2	V
7.51952	36.84	Pk	35.7	-27.6	1	-95.2	-49.26	-13	-36.26	V
High Channel, 1909.8MHz										
3.81946	41.05	Pk	33.5	-31.78	1	-95.2	-51.43	-13	-38.43	H
5.73136	38.6	Pk	34.7	-29.2	1	-95.2	-50.1	-13	-37.1	H
7.63976	36.72	Pk	35.8	-26.8	1	-95.2	-48.48	-13	-35.48	H
3.8192	40.7	Pk	33.5	-31.4	1	-95.2	-51.4	-13	-38.4	V
5.72979	39.2	Pk	34.7	-29.3	1	-95.2	-49.6	-13	-36.6	V
7.64105	36.82	Pk	35.9	-27	1	-95.2	-48.48	-13	-35.48	V

Pk - Peak detector

10.3.2. WCDMA BAND 2

REL 99 MODE

Project #:	13571601
Date:	4/16/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70425	52.64	Pk	33.5	-43	.7	-95.2	-51.36	-13	-38.36	V
3.70429	52.53	Pk	33.5	-43	.7	-95.2	-51.47	-13	-38.47	H
5.55588	51.07	Pk	34.4	-41.7	.6	-95.2	-50.83	-13	-37.83	H
5.55651	50.82	Pk	34.4	-41.7	.6	-95.2	-51.08	-13	-38.08	V
7.40796	49.55	Pk	35.7	-39.7	.4	-95.2	-49.25	-13	-36.25	H
7.40984	49.5	Pk	35.7	-39.7	.4	-95.2	-49.3	-13	-36.3	V
Mid Channel, 1880MHz										
3.75823	51.97	Pk	33.5	-42.8	.6	-95.2	-51.93	-13	-38.93	V
3.75922	52.35	Pk	33.5	-42.8	.6	-95.2	-51.55	-13	-38.55	H
5.63839	50	Pk	34.6	-41.5	.6	-95.2	-51.5	-13	-38.5	V
5.64136	50.78	Pk	34.6	-41.4	.6	-95.2	-50.62	-13	-37.62	H
7.51869	49.17	Pk	35.7	-39.4	.4	-95.2	-49.33	-13	-36.33	H
7.52122	48.21	Pk	35.7	-39.3	.4	-95.2	-50.19	-13	-37.19	V
High Channel, 1907.6MHz										
3.81599	53.06	Pk	33.5	-42.9	.6	-95.2	-50.94	-13	-37.94	V
3.81623	52.32	Pk	33.5	-42.9	.6	-95.2	-51.68	-13	-38.68	H
5.72121	51.11	Pk	34.7	-41.2	.6	-95.2	-49.99	-13	-36.99	H
5.72495	50.55	Pk	34.6	-41.3	.6	-95.2	-50.75	-13	-37.75	V
7.62941	48.55	Pk	35.9	-39.2	.4	-95.2	-49.55	-13	-36.55	H
7.62966	49.39	Pk	35.9	-39.2	.4	-95.2	-48.71	-13	-35.71	V

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/26/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.7037	52.21	Pk	33.5	-43	.7	-95.2	-51.79	-13	-38.79	H
3.70445	52.65	Pk	33.5	-43	.7	-95.2	-51.35	-13	-38.35	V
5.55718	51.08	Pk	34.4	-41.7	.6	-95.2	-50.82	-13	-37.82	H
5.5587	50.45	Pk	34.4	-41.7	.6	-95.2	-51.45	-13	-38.45	V
7.41036	49.83	Pk	35.7	-39.6	.4	-95.2	-48.87	-13	-35.87	H
7.41128	49.35	Pk	35.7	-39.6	.4	-95.2	-49.35	-13	-36.35	V
Mid Channel, 1880MHz										
3.75888	52.53	Pk	33.5	-42.8	.6	-95.2	-51.37	-13	-38.37	V
3.76185	52	Pk	33.5	-42.8	.6	-95.2	-51.9	-13	-38.9	H
5.63921	50.18	Pk	34.6	-41.5	.6	-95.2	-51.32	-13	-38.32	H
5.63984	50.67	Pk	34.6	-41.5	.6	-95.2	-50.83	-13	-37.83	V
7.51915	48.68	Pk	35.7	-39.4	.4	-95.2	-49.82	-13	-36.82	V
7.52167	48.54	Pk	35.7	-39.3	.4	-95.2	-49.86	-13	-36.86	H
High Channel, 1907.6MHz										
3.81407	52.72	Pk	33.5	-42.9	.6	-95.2	-51.28	-13	-38.28	H
3.81454	52.83	Pk	33.5	-42.9	.6	-95.2	-51.17	-13	-38.17	V
5.72201	50.8	Pk	34.7	-41.3	.6	-95.2	-50.4	-13	-37.4	H
5.72474	50.82	Pk	34.6	-41.3	.6	-95.2	-50.48	-13	-37.48	V
7.62996	48.56	Pk	35.9	-39.2	.4	-95.2	-49.54	-13	-36.54	V
7.63246	48.28	Pk	35.8	-39.1	.4	-95.2	-49.82	-13	-36.82	H

Pk - Peak detector

10.3.3. WCDMA BAND 4

REL 99 MODE

Project #:	13571601
Date:	4/16/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42278	53.12	Pk	32.7	-43.4	.8	-95.2	-51.98	-13	-38.98	H
3.4247	53	Pk	32.7	-43.4	.8	-95.2	-52.1	-13	-39.1	V
5.13694	53.34	Pk	34.2	-42.7	.5	-95.2	-49.86	-13	-36.86	V
5.13782	52.59	Pk	34.2	-42.7	.5	-95.2	-50.61	-13	-37.61	H
6.84827	49.57	Pk	35.6	-40.3	.5	-95.2	-49.83	-13	-36.83	V
6.84902	49.79	Pk	35.7	-40.4	.5	-95.2	-49.61	-13	-36.61	H
Mid Channel, 1732.6										
3.46409	52.69	Pk	32.8	-43.4	.6	-95.2	-52.51	-13	-39.51	V
3.46603	52.8	Pk	32.8	-43.3	.6	-95.2	-52.3	-13	-39.3	H
5.19845	52	Pk	34.3	-42.5	.5	-95.2	-50.9	-13	-37.9	H
5.19897	52.13	Pk	34.3	-42.5	.5	-95.2	-50.77	-13	-37.77	V
6.92917	49.88	Pk	35.7	-40.4	.4	-95.2	-49.62	-13	-36.62	V
6.93089	49.5	Pk	35.7	-40.4	.4	-95.2	-50.0	-13	-37.0	H
High Channel, 1752.6										
3.50404	53.79	Pk	32.7	-43.3	.8	-95.2	-51.21	-13	-38.21	V
3.50445	53.55	Pk	32.7	-43.3	.8	-95.2	-51.45	-13	-38.45	H
5.25938	51.85	Pk	34.4	-42.4	.7	-95.2	-50.65	-13	-37.65	V
5.25949	51.96	Pk	34.4	-42.5	.7	-95.2	-50.64	-13	-37.64	H
7.01054	49.4	Pk	35.8	-40.3	.5	-95.2	-49.8	-13	-36.8	H
7.01103	49.26	Pk	35.8	-40.3	.4	-95.2	-50.04	-13	-37.04	V

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/26/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42375	53.27	Pk	32.7	-43.4	.8	-95.2	-51.83	-13	-38.83	V
3.42435	53.32	Pk	32.7	-43.4	.8	-95.2	-51.78	-13	-38.78	H
5.13826	52.01	Pk	34.2	-42.7	.5	-95.2	-51.19	-13	-38.19	H
5.13885	52.4	Pk	34.2	-42.7	.5	-95.2	-50.8	-13	-37.8	V
6.848	49.3	Pk	35.6	-40.3	.5	-95.2	-50.1	-13	-37.1	H
6.85022	49.2	Pk	35.6	-40.4	.5	-95.2	-50.3	-13	-37.3	V
Mid Channel, 1732.6										
3.46522	52.47	Pk	32.8	-43.3	.6	-95.2	-52.63	-13	-39.63	V
3.46691	52.09	Pk	32.8	-43.4	.6	-95.2	-53.11	-13	-40.11	H
5.19694	51.9	Pk	34.3	-42.5	.5	-95.2	-51	-13	-38	H
5.19765	51.75	Pk	34.3	-42.5	.5	-95.2	-51.15	-13	-38.15	V
6.9289	49.97	Pk	35.7	-40.4	.4	-95.2	-49.53	-13	-36.53	H
6.93037	49.52	Pk	35.7	-40.4	.4	-95.2	-49.98	-13	-36.98	V
High Channel, 1752.6										
3.50418	52.79	Pk	32.7	-43.3	.8	-95.2	-52.21	-13	-39.21	H
3.50529	52.97	Pk	32.7	-43.2	.8	-95.2	-51.93	-13	-38.93	V
5.25682	51.8	Pk	34.4	-42.4	.7	-95.2	-50.7	-13	-37.7	V
5.2598	51.72	Pk	34.4	-42.5	.7	-95.2	-50.88	-13	-37.88	H
7.01491	49.56	Pk	35.7	-40.3	.4	-95.2	-49.84	-13	-36.84	H
7.01657	49.36	Pk	35.7	-40.3	.4	-95.2	-50.04	-13	-37.04	V

Pk - Peak detector

10.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 4

10.4.1. GSM 1900

GPRS MODE

Project #:	13571601
Date:	3/30-3/31/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	GRPS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.6998	40.65	Pk	33.5	-31.1	1	-95.2	-51.15	-13	-38.15	H
5.5507	41.03	Pk	34.5	-29.7	1	-95.2	-48.37	-13	-35.37	H
7.40098	38.41	Pk	35.8	-27.4	1	-95.2	-47.39	-13	-34.39	H
3.70002	40.73	Pk	33.5	-31.2	1	-95.2	-51.17	-13	-38.17	V
5.55071	39.28	Pk	34.5	-30	1	-95.2	-50.42	-13	-37.42	V
7.39982	37.84	Pk	35.7	-27.6	1	-95.2	-48.26	-13	-35.26	V
Mid Channel, 1880MHz										
3.76109	40.74	Pk	33.5	-31.1	1	-95.2	-51.06	-13	-38.06	H
5.64017	40.53	Pk	34.6	-29.2	1	-95.2	-48.27	-13	-35.27	H
7.51971	36.65	Pk	35.7	-27.3	1	-95.2	-49.15	-13	-36.15	H
3.75936	40.4	Pk	33.5	-31.1	1	-95.2	-51.4	-13	-38.4	V
5.64033	39.32	Pk	34.6	-29.2	1	-95.2	-49.48	-13	-36.48	V
7.52099	37	Pk	35.7	-27.5	1	-95.2	-49.0	-13	-36.0	V
High Channel, 1909.8MHz										
3.81973	42.14	Pk	33.5	-31.7	1	-95.2	-50.26	-13	-37.26	H
5.73071	38.73	Pk	34.7	-29.2	1	-95.2	-49.97	-13	-36.97	H
7.64089	36.59	Pk	35.9	-26.8	1	-95.2	-48.51	-13	-35.51	H
3.81819	40.25	Pk	33.5	-31.4	1	-95.2	-51.85	-13	-38.85	V
5.73023	38.84	Pk	34.7	-29.3	1	-95.2	-49.96	-13	-36.96	V
7.64005	36.54	Pk	35.8	-27	1	-95.2	-48.86	-13	-35.86	V

Pk - Peak detector

EGPRS MODE

Project #:	13571601
Date:	3/31/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	EGPRS 1900
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	LIMIT	Margin (dB)	Polarity
Low Channel, 1850.2MHz										
3.70046	40.69	Pk	33.5	-31.1	1	-95.2	-51.11	-13	-38.11	H
5.5502	38.79	Pk	34.5	-29.7	1	-95.2	-50.61	-13	-37.61	H
7.401	37.52	Pk	35.8	-27.4	1	-95.2	-48.28	-13	-35.28	H
3.69946	40.58	Pk	33.5	-31.2	1	-95.2	-51.32	-13	-38.32	V
5.55202	39.39	Pk	34.4	-30	1	-95.2	-50.41	-13	-37.41	V
7.40266	37.71	Pk	35.8	-27.7	1	-95.2	-48.39	-13	-35.39	V
Mid Channel, 1880MHz										
3.75854	40.72	Pk	33.5	-31.1	1	-95.2	-51.08	-13	-38.08	H
5.63991	39.88	Pk	34.6	-29.2	1	-95.2	-48.92	-13	-35.92	H
7.52186	37.03	Pk	35.7	-27.3	1	-95.2	-48.77	-13	-35.77	H
3.76109	40.73	Pk	33.5	-31	1	-95.2	-50.97	-13	-37.97	V
5.63916	38.91	Pk	34.6	-29.2	1	-95.2	-49.89	-13	-36.89	V
7.52036	37.2	Pk	35.7	-27.6	1	-95.2	-48.9	-13	-35.9	V
High Channel, 1909.8MHz										
3.8194	41.33	Pk	33.5	-31.7	1	-95.2	-51.07	-13	-38.07	H
5.72806	38.88	Pk	34.6	-29.2	1	-95.2	-49.92	-13	-36.92	H
7.63892	36.34	Pk	35.9	-26.8	1	-95.2	-48.76	-13	-35.76	H
3.81848	40.43	Pk	33.5	-31.4	1	-95.2	-51.67	-13	-38.67	V
5.72832	39.3	Pk	34.6	-29.3	1	-95.2	-49.6	-13	-36.6	V
7.63711	36.24	Pk	35.8	-27.1	1	-95.2	-49.26	-13	-36.26	V

Pk - Peak detector

10.4.2. WCDMA BAND 2

REL 99 MODE

Project #:	13571601
Date:	4/19/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70311	51.94	Pk	33.5	-43	.7	-95.2	-52.06	-13	-39.06	H
3.70499	52.42	Pk	33.5	-43	.7	-95.2	-51.58	-13	-38.58	V
5.55612	50.75	Pk	34.4	-41.7	.6	-95.2	-51.15	-13	-38.15	H
5.55739	51.45	Pk	34.4	-41.7	.6	-95.2	-50.45	-13	-37.45	V
7.40901	49.86	Pk	35.7	-39.7	.4	-95.2	-48.94	-13	-35.94	H
7.41086	49.3	Pk	35.7	-39.6	.4	-95.2	-49.4	-13	-36.4	V
Mid Channel, 1880MHz										
3.75825	52.4	Pk	33.5	-42.8	.6	-95.2	-51.5	-13	-38.5	V
3.76122	53.34	Pk	33.5	-42.8	.6	-95.2	-50.56	-13	-37.56	H
5.63858	55.54	Pk	34.6	-41.5	.6	-95.2	-45.96	-13	-32.96	H
5.64043	50.77	Pk	34.6	-41.5	.6	-95.2	-50.73	-13	-37.73	V
7.51857	48.8	Pk	35.7	-39.4	.4	-95.2	-49.7	-13	-36.7	H
7.51955	49.42	Pk	35.7	-39.4	.4	-95.2	-49.08	-13	-36.08	V
High Channel, 1907.6MHz										
3.81412	52.81	Pk	33.5	-42.9	.6	-95.2	-51.19	-13	-38.19	V
3.81609	52.48	Pk	33.5	-42.9	.6	-95.2	-51.52	-13	-38.52	H
5.72192	52.2	Pk	34.7	-41.2	.6	-95.2	-48.9	-13	-35.9	V
5.72194	55.06	Pk	34.7	-41.3	.6	-95.2	-46.14	-13	-33.14	H
7.63085	48.37	Pk	35.9	-39.2	.4	-95.2	-49.73	-13	-36.73	H
7.63177	48.21	Pk	35.9	-39.1	.4	-95.2	-49.79	-13	-36.79	V

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/27/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 2
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1852.4MHz										
3.70392	52.97	Pk	33.5	-43	.7	-95.2	-51.03	-13	-38.03	V
3.70473	52.87	Pk	33.5	-43	.7	-95.2	-51.13	-13	-38.13	H
5.55558	50.68	Pk	34.4	-41.7	.6	-95.2	-51.22	-13	-38.22	V
5.556	51	Pk	34.4	-41.7	.6	-95.2	-50.9	-13	-37.9	H
7.40816	49.76	Pk	35.7	-39.7	.4	-95.2	-49.04	-13	-36.04	V
7.40978	49.14	Pk	35.7	-39.7	.4	-95.2	-49.66	-13	-36.66	H
Mid Channel, 1880MHz										
3.7608	52.32	Pk	33.5	-42.8	.6	-95.2	-51.58	-13	-38.58	V
3.76179	52.74	Pk	33.5	-42.8	.6	-95.2	-51.16	-13	-38.16	H
5.63922	51.44	Pk	34.6	-41.5	.6	-95.2	-50.06	-13	-37.06	V
5.6408	50.9	Pk	34.6	-41.5	.6	-95.2	-50.6	-13	-37.6	H
7.51866	48.69	Pk	35.7	-39.4	.4	-95.2	-49.81	-13	-36.81	H
7.51982	49.07	Pk	35.7	-39.4	.4	-95.2	-49.43	-13	-36.43	V
High Channel, 1907.6MHz										
3.81445	52.71	Pk	33.5	-42.9	.6	-95.2	-51.29	-13	-38.29	V
3.81594	52.54	Pk	33.5	-42.9	.6	-95.2	-51.46	-13	-38.46	H
5.72192	50.65	Pk	34.7	-41.2	.6	-95.2	-50.45	-13	-37.45	H
5.72311	50.45	Pk	34.7	-41.3	.6	-95.2	-50.75	-13	-37.75	V
7.63153	48.92	Pk	35.9	-39.1	.4	-95.2	-49.08	-13	-36.08	H
7.63213	48.09	Pk	35.9	-39.1	.4	-95.2	-49.91	-13	-36.91	V

Pk - Peak detector

10.4.3. WCDMA BAND 4

REL 99 MODE

Project #:	13571601
Date:	4/19/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	REL 99 Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42311	52.86	Pk	32.7	-43.4	.8	-95.2	-52.24	-13	-39.24	V
3.42452	53.55	Pk	32.7	-43.4	.8	-95.2	-51.55	-13	-38.55	H
5.136	51.95	Pk	34.1	-42.7	.5	-95.2	-51.35	-13	-38.35	V
5.13674	52.23	Pk	34.2	-42.7	.5	-95.2	-50.97	-13	-37.97	H
6.84822	50.72	Pk	35.6	-40.3	.5	-95.2	-48.68	-13	-35.68	V
6.84897	49.74	Pk	35.7	-40.4	.5	-95.2	-49.66	-13	-36.66	H
Mid Channel, 1732.6										
3.46509	53.55	Pk	32.8	-43.3	.6	-95.2	-51.55	-13	-38.55	V
3.46619	52.51	Pk	32.8	-43.3	.6	-95.2	-52.59	-13	-39.59	H
5.19968	52.06	Pk	34.3	-42.5	.5	-95.2	-50.84	-13	-37.84	H
5.19969	52.37	Pk	34.3	-42.5	.5	-95.2	-50.53	-13	-37.53	V
6.93208	49.89	Pk	35.7	-40.5	.4	-95.2	-49.71	-13	-36.71	H
6.93213	49.24	Pk	35.7	-40.5	.4	-95.2	-50.36	-13	-37.36	V
High Channel, 1752.6										
3.50429	52.84	Pk	32.7	-43.3	.8	-95.2	-52.16	-13	-39.16	H
3.50498	53.01	Pk	32.7	-43.2	.8	-95.2	-51.89	-13	-38.89	V
5.25847	51.83	Pk	34.4	-42.4	.7	-95.2	-50.67	-13	-37.67	V
5.25959	52.51	Pk	34.4	-42.5	.7	-95.2	-50.09	-13	-37.09	H
7.00996	49.88	Pk	35.8	-40.3	.5	-95.2	-49.32	-13	-36.32	V
7.01055	49.84	Pk	35.8	-40.3	.5	-95.2	-49.36	-13	-36.36	H

Pk - Peak detector

HSDPA MODE

Project #:	13571601
Date:	4/27/2021
Test Engineer:	50820 EC
Configuration:	EUT Only
Mode:	HSDPA Band 4
Chamber #:	Chamber O

Frequency (GHz)	Meter Reading (dBuV)	Det	AF PRE0213832	Amp/Cbl (dB)	HPF 2.7GHz T772 1-18GHz	EIRP CF at 3meters	Corrected Reading (dBm)	Limit	Margin (dB)	Polarity
Low Channel, 1712.4										
3.42362	53.39	Pk	32.7	-43.4	.8	-95.2	-51.71	-13	-38.71	H
3.42456	53.02	Pk	32.7	-43.4	.8	-95.2	-52.08	-13	-39.08	V
5.13764	52.01	Pk	34.2	-42.7	.5	-95.2	-51.19	-13	-38.19	V
5.13866	52.1	Pk	34.2	-42.7	.5	-95.2	-51.1	-13	-38.1	H
6.84846	49.08	Pk	35.7	-40.3	.5	-95.2	-50.22	-13	-37.22	H
6.84896	49.71	Pk	35.7	-40.4	.5	-95.2	-49.69	-13	-36.69	V
Mid Channel, 1732.6										
3.46371	52.27	Pk	32.8	-43.3	.6	-95.2	-52.83	-13	-39.83	V
3.46459	52.51	Pk	32.8	-43.3	.6	-95.2	-52.59	-13	-39.59	H
5.19602	52.1	Pk	34.3	-42.6	.5	-95.2	-50.9	-13	-37.9	H
5.19753	51.42	Pk	34.3	-42.5	.5	-95.2	-51.48	-13	-38.48	V
6.92989	49.33	Pk	35.7	-40.4	.4	-95.2	-50.17	-13	-37.17	V
6.93057	49.89	Pk	35.7	-40.4	.4	-95.2	-49.61	-13	-36.61	H
High Channel, 1752.6										
3.50499	54.1	Pk	32.7	-43.2	.8	-95.2	-50.8	-13	-37.8	V
3.5055	53.71	Pk	32.7	-43.2	.8	-95.2	-51.19	-13	-38.19	H
5.25726	51.54	Pk	34.4	-42.4	.7	-95.2	-50.96	-13	-37.96	V
5.25841	52.33	Pk	34.4	-42.4	.7	-95.2	-50.17	-13	-37.17	H
7.01002	49.63	Pk	35.8	-40.3	.5	-95.2	-49.57	-13	-36.57	H
7.01133	49.07	Pk	35.8	-40.3	.4	-95.2	-50.23	-13	-37.23	V

Pk - Peak detector

11. SETUP PHOTOS

Please refer to 13571601-EP1V1 for setup photos

END OF REPORT