FCC RF TEST REPORT

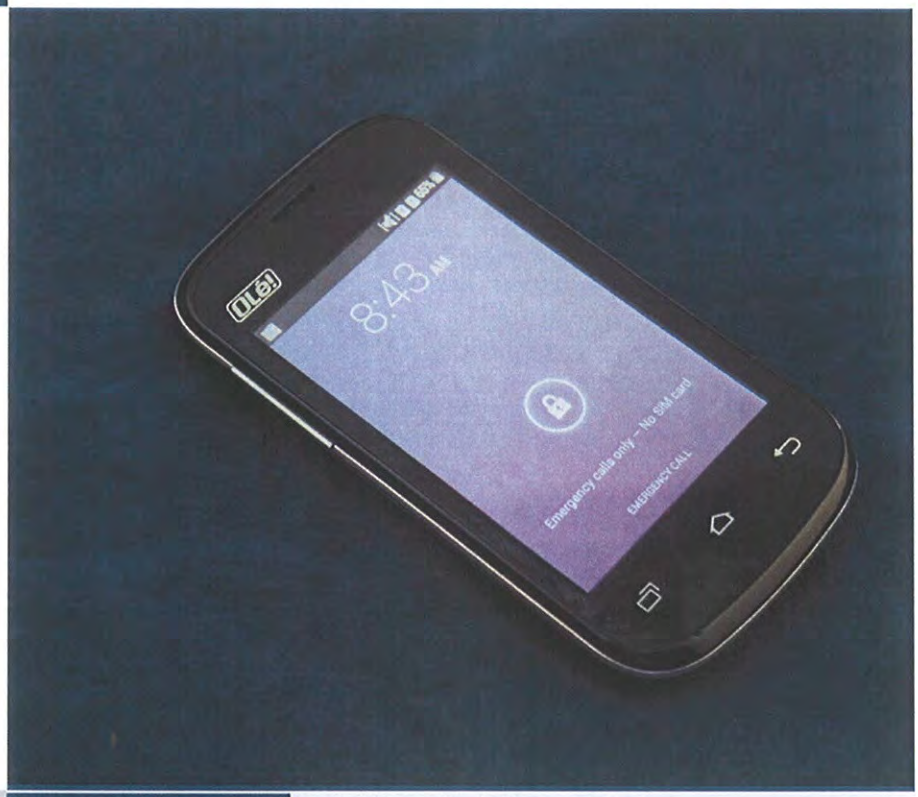
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

Mobile Phone

ISSUED TO
ShenZhen Hipad Telecommunication Technology Co., LTD.

Room 502-503, Unit 3,Building C, Kexing Science Park, Keyuan Road, Hi-tech industrial Park, NanShan District, Shenzhen, GuangDong, China



Report No.:	BL-SZ1490065-603
EUT Type:	Moblie Phone
Model Name:	MK5022, MK5022-CA, MK5022-MX
Brand Name:	N/A
Test Standard:	47 CFR Part 2 47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
FCC ID:	2ABOU5022
Test conclusion:	PASS
Test Date:	Sep 17, 2014 ~ Sep 26, 2014
Date of Issue:	Oct 8, 2014

Prepared by: Zhang Yanqing
(Reporting Specialist)
Date: Oct 8, 2014

Approved by: Wei Yanchun
(Chief Engineer)
Date: Oct 8. 2014

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Revision History

Version	Issue Date	Revisions
Rev. 01	Oct 8, 2014	Initial Issue

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province,P. R. China
Phone Number	+86 755 6683 3402
Fax Number	+86 755 6182 4271

1.1 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province,P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625. The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.2 Test Environment Condition

Ambient Temperature	15 to 35℃
Ambient Relative Humidity	30 to 60%
Ambient Pressure	86 to106 kPa

1.3 Announce

(1) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

(2) The test report is invalid if there is any evidence and/or falsification.

(3) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

(4) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.

(5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant

Applicant	ShenZhen Hipad Telecommunication Technology Co., LTD.
Address	Room 502-503, Unit 3,Building C, Kexing Science Park, Keyuan Road, Hi-tech industrial Park, NanShan District, Shenzhen, GuangDong, China

2.2 Manufacturer

Manufacturer	ShenZhen Hipad Telecommunication Technology Co., LTD.
Address	Room 502-503, Unit 3,Building C, Kexing Science Park, Keyuan Road, Hi-tech industrial Park, NanShan District, Shenzhen, GuangDong, China

2.3 General Description for Equipment under Test (EUT)

EUT Type	Mobile Phone
The Under Test Model Name	MK5022
Series Model Name	MK5022, MK5022-CA, MK5022-MX
Description of Model Name differentiation	The equipment model MK5022 and MK5022-CA, MK5022-MX are mobile phone, the electrical parameters and internal structure of circuit are same, only the model name is different.
Hardware Version	WS4050_V1.2
Software Version	N/A
Network and Wireless connectivity	GSM, WCDMA
About the Product	The equipment is Mobile Phone, intended for used with information technology equipment.

2.4 Technical Information

Frequency Bands	GSM 850/1900, WCDMA 850/1900
Modulation Type	GSM: GMSK GPRS: GMSK EGPRS: 8PSK WCDMA: QPSK
Tx Frequency Range	GSM 850: 824.20 - 848.80MHz (at intervals of 200kHz); GSM 1900: 1850.20 - 1909.80MHz (at intervals of 200kHz); WCDMA 850: 826.4 - 846.6MHz (at intervals of 200kHz) WCDMA 1900: 1852.4 -1907.6MHz(at intervals of 200kHz)
Rx Frequency Range	GSM850: 869.20 - 893.80MHz (at intervals of 200kHz) GSM 1900: 1930.20 - 1989.80MHz (at intervals of 200kHz) WCDMA 850: 871.4 - 891.6MHz (at intervals of 200kHz) WCDMA 1900: 1932.4 - 1987.6MHz (at intervals of 200kHz)
Power Class	GSM 850: 4 GSM 1900: 1 WCDMA 850: 3 WCDMA 1900 :3
Multislot Class	GPRS:12, EGPRS: 12

Note: The above EUT information in section 2.3 and 2.4 was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	KingerPower
	Model No	29.B0628000008
	Serial No	N/A
	Capacitance	1100 mAh
	Rated Voltage	3.7V
	Extreme Voltage	Low: 3.5V / High:4.2V
Ancillary Equipment 2	Brand Name	AOHAI
	Model No	A75-500550-US
	Serial No	N/A
	Rated Input	AC 100V~240V, 150mA, 36W, 50/60Hz
	Rated Output	DC 5V, 550mA, 2.75W
Ancillary Equipment 3	USB Cable	
Ancillary Equipment 4	Earphone	

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2 (10–1–09 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10–1–09 Edition)	Public Mobile Services
3	47 CFR Part 24 (10–1–09 Edition)	Personal Communications Services
4	TIA/EIA 603.D-2010	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Conducted RF Output Power	2.1046	ANNEX A.1	PASS
2	Peak to average radio	22.234(d)	ANNEX A.2	PASS
3	Occupied Bandwidth	2.1049	ANNEX A.2	PASS
4	Frequency Stability	2.1055 22.355 24.235	ANNEX A.3	PASS
5	Conducted Out of Band Emissions	2.1051 2.1057 22.917 24.238	ANNEX A.4	PASS
6	Band Edge	2.1051 2.1057 22.917 24.238	ANNEX A.5	PASS
7	Transmitter Radiated Power (EIPR/ERP)	22.913 24.232	ANNEX A.6	PASS
8	Radiated Out of Band Emissions	2.1053 2.1057 22.917 24.238	ANNEX A.7	PASS

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity (%)	30 - 60
Atmospheric Pressure (kPa)	86 - 106
Temperature(℃)	15 - 35

4.2 Test Equipment List

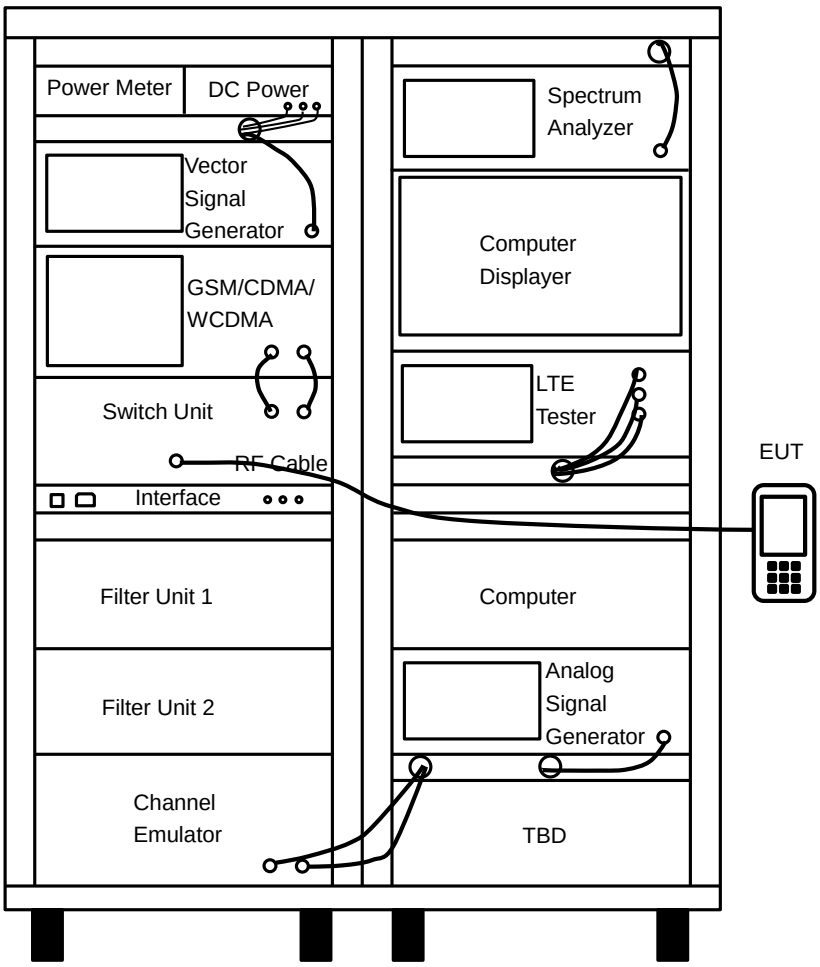
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2014.07.07	2015.07.06
Spectrum Analyzer	ROHDE&SCHWARZ	FSL3	103640/003	2014.07.07	2015.07.06
Power Splitter	KMW	DCPD-LDC	1305003215	2014.07.07	2015.07.06
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2014.07.07	2015.07.06
Attenuator (20dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2014.07.07	2015.07.06
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2014.07.07	2015.07.06
Test Antenna-Loop(9kHz-30MHz)	SCHWARZBECK	FMZB 1519	1519-037	2013.07.03	2015.07.02
Test Antenna-Bi-Log(30MHz-3GHz)	SCHWARZBECK	VULB 9163	9163-624	2013.07.02	2015.07.01
Test Antenna-Horn(1-18GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2013.07.02	2015.07.01
Test Antenna-Horn(15-26.5GHz)	SCHWARZBECK	BBHA 9170	9170-305	2013.07.02	2015.07.01
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2014.10.07	2015.10.06

4.3 Test Configurations

Test Configurations (TC) NO.	Description	
	Signal Description	Operating Frequency
Transmitter		
TC01	GMSK modulation, GSM 850	Ch No. 128/ 824.2MHz
TC02	GMSK modulation, GSM 850	Ch No. 190/ 836.6MHz
TC03	GMSK modulation, GSM 850	Ch No. 251/ 848.8MHz
TC04	GMSK modulation, GSM 1900	Ch No. 512/ 1850.2MHz
TC05	GMSK modulation, GSM 1900	Ch No. 661/ 1880.0MHz
TC06	GMSK modulation, GSM 1900	Ch No. 810/ 1909.8MHz
TC07	GMSK modulation, GPRS 850	Ch No. 128/ 824.2MHz
TC08	GMSK modulation, GPRS 850	Ch No. 190/ 836.6MHz
TC09	GMSK modulation, GPRS 850	Ch No. 251/ 848.8MHz
TC10	GMSK modulation, GPRS 1900	Ch No. 512/ 1850.2MHz
TC11	GMSK modulation, GPRS 1900	Ch No. 661/ 1880.0MHz
TC12	GMSK modulation, GPRS 1900	Ch No. 810/ 1909.8MHz
TC13	8PSK modulation, EGPRS 850	Ch No. 128/ 824.2MHz
TC14	8PSK modulation, EGPRS 850	Ch No. 190/ 836.6MHz
TC15	8PSK modulation, EGPRS 850	Ch No. 251/ 848.8MHz
TC16	8PSK modulation, EGPRS 1900	Ch No. 512/ 1850.2MHz
TC17	8PSK modulation, EGPRS 1900	Ch No. 661/ 1880.0MHz
TC18	8PSK modulation, EGPRS 1900	Ch No. 810/ 1909.8MHz
TC19	QPSK Modulation, WCDMA 850	Ch No. 4132/ 826.4MHz
TC20	QPSK Modulation, WCDMA 850	Ch No. 4183/ 836.6MHz
TC21	QPSK Modulation, WCDMA 850	Ch No. 4233/ 846.6MHz
TC22	QPSK Modulation, WCDMA 1900	Ch No. 9262/ 1852.4MHz
TC23	QPSK Modulation, WCDMA 1900	Ch No. 9401/ 1880.2MHz
TC24	QPSK Modulation, WCDMA 1900	Ch No. 9538/ 1907.6MHz

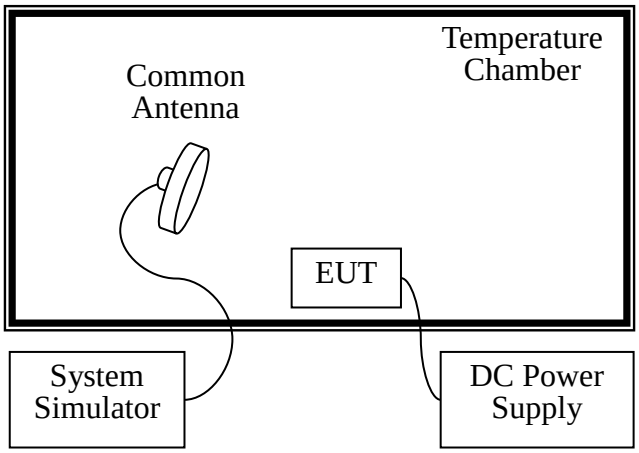
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



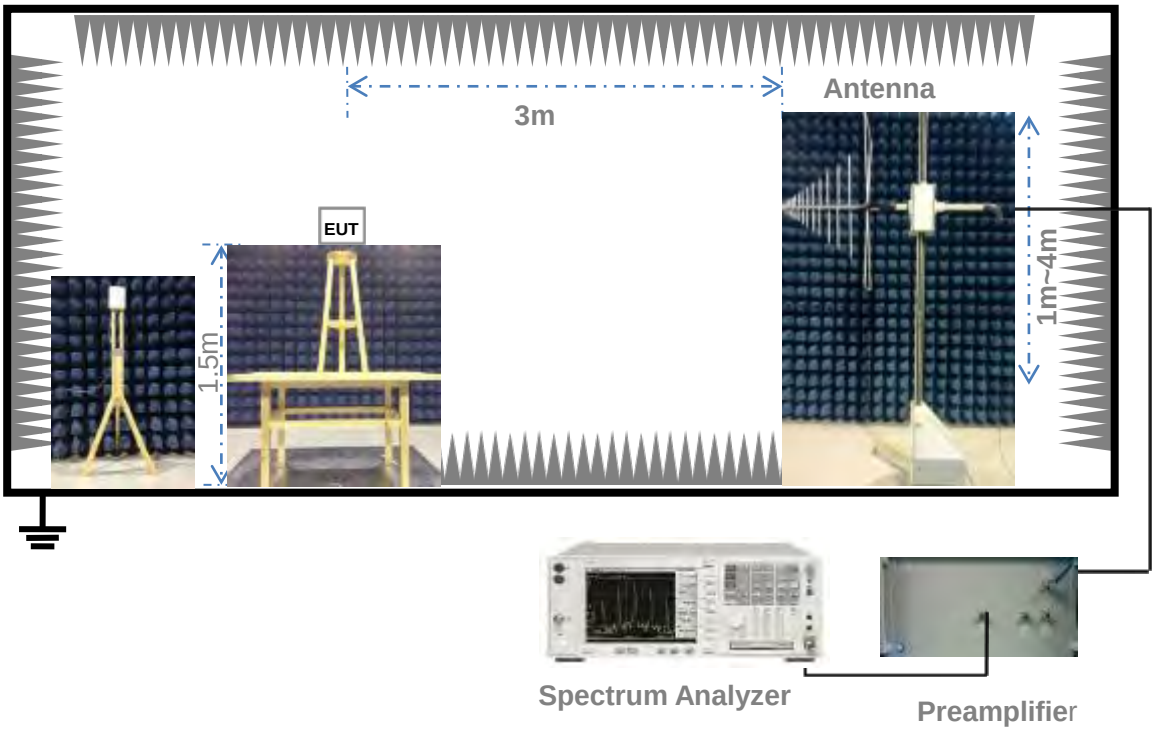
(Diagram 1)

4.4.2 For Frequency Stability Test



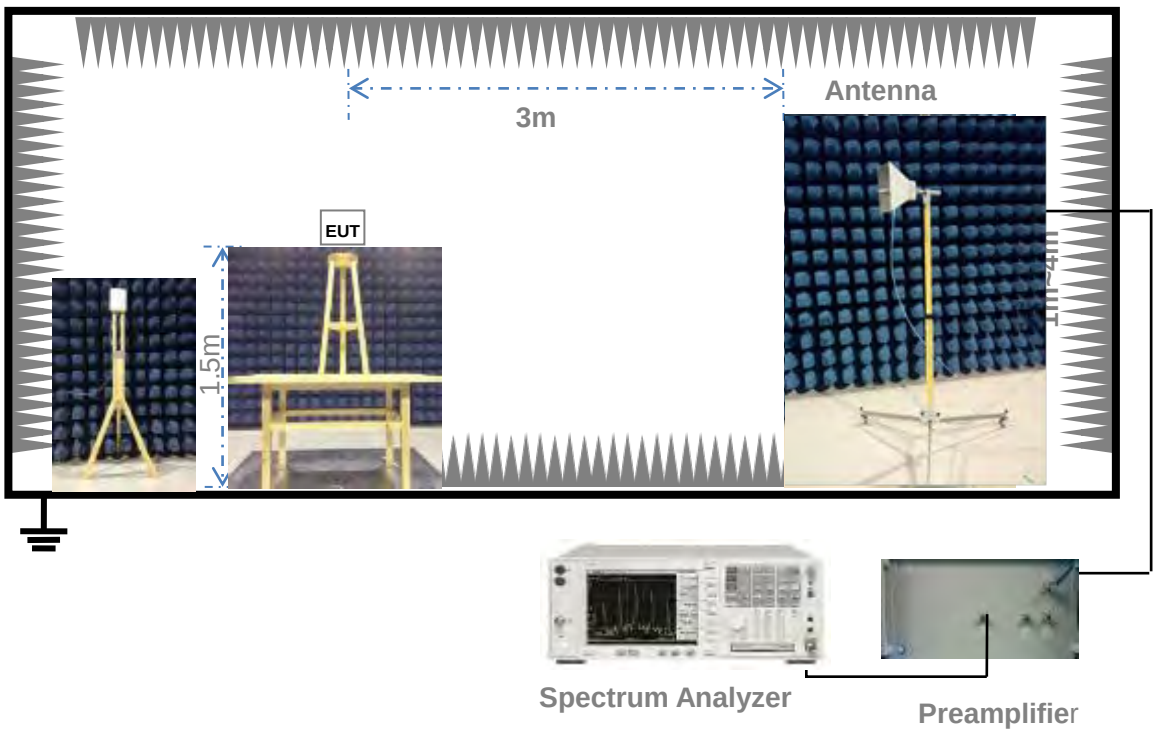
(Diagram 2)

4.4.3 For Radiated Test (30MHz-1GHz)



(Diagram 3)

4.4.4 For Radiated Test (Above 1GHz)



(Diagram 4)

4.5 Test Conditions

Test Case	Test Conditions		
	Test Env.	Test Setup Note 1	Test Configuration Note 2
Conducted RF Output Power	NTNV	Test Setup 1	TC01~TC24
Peak to average radio	NTNV	Test Setup 1	TC04~TC06, TC16~TC18, TC22~TC24
Occupied Bandwidth	NTNV	Test Setup 1	TC01~TC24
Frequency Stability	NTNV	Test Setup 2	TC01~TC24
Conducted Out of Band Emissions	NTNV	Test Setup 1	TC01~TC24
Band Edge	NTNV	Test Setup 1	TC01, TC03, TC04, TC06, TC07, TC09, TC10, TC12, TC13, TC15, TC16, TC18, TC19, TC21, TC22, TC24
Transmitter Radiated Power (EIPR/ERP)	NTNV	Test Setup 3 Test Setup 4	TC01~TC24
Radiated Out of Band Emissions	NTNV	Test Setup 3 Test Setup 4	TC01~TC24
Note: 1. Please refer to section 4.4 for test setup details. 2. Please refer to section 4.3 for test setup details.			

5 TEST ITEMS

5.1 Conducted RF Output Power

5.1.1 Test Limit

FCC §2.1046 (a)

For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033 (c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

5.1.2 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

FCC PART 22

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. For GSM modulated, set the TCH number to 128 as the low channel, and for WCDMA modulated, set the TCH number to 4132 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 190 as the middle channel for GSM modulated, and Set the TCH number to 4175 as the middle channel for WCDMA modulated, then repeat step 3.
5. Set the TCH number to 251 as the high channel for GSM modulated, and Set the TCH number to 4233 as the middle channel for WCDMA modulated, then repeat step 3.

FCC PART 24

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 512 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 661 as the middle channel, then repeat step 3.
5. Set the TCH number to 810 as the high channel, then repeat step 3.

5.2 Peak to average radio

5.2.1 Limit

FCC § 2.1049 & 24.232

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 using a signal corresponding to the highest PAPR during periods of continuous transmission.

5.2.2 Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

Test procedures:

A .For GSM/EGPRS operating mode:

a. Set RBW=1MHz, VBW=1MHz, peak detector in spectrum analyzer.

b. Set EUT in maximum output power, and triggered the bust signal.

c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average radio.

B. For UMTS operating mode:

a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.

b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

5.3 Occupied Bandwidth

5.3.1 Limit

FCC § 2.1049

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth

5.3.2 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

FCC PART 22

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
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4. Set the TCH number to 190 as the middle channel for GSM modulated, and Set the TCH number to 4175 as the middle channel for WCDMA modulated, then repeat step 3.
5. Set the TCH number to 251 as the high channel for GSM modulated, and Set the TCH number to 4233 as the middle channel for WCDMA modulated, then repeat step 3.

FCC PART 24

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 512 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 661 as the middle channel, then repeat step 3.
5. Set the TCH number to 810 as the high channel, then repeat step 3.

5.4 Frequency Stability

5.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235

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

The test conditions are:

(a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.

(b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

5.4.2 Test Procedure

1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.

5.5 Conducted Out of Band Emissions

5.5.1 Limit

FCC §22.917(a) & 24.238(a)

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. This calculated to be -13dBm.

5.5.2 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

FCC PART 22

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. For GSM modulated, set the TCH number to 128 as the low channel, and for WCDMA modulated, set the TCH number to 4132 as the low channel.
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5. Set the TCH number to 251 as the high channel for GSM modulated, and Set the TCH number to 4233 as the middle channel for WCDMA modulated, then repeat step 3.

FCC PART 24

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 512 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 661 as the middle channel, then repeat step 3.
5. Set the TCH number to 810 as the high channel, then repeat step 3.

5.6 Band Edge

5.6.1 Limit

FCC § 22.917(b) & 24.238(b)

In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

5.6.2 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

FCC PART 22

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
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4. Set the TCH number to 190 as the middle channel, then repeat step 3.
5. Set the TCH number to 251 as the high channel, then repeat step 3.

FCC PART 24

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 512 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 661 as the middle channel, then repeat step 3.
5. Set the TCH number to 810 as the high channel, then repeat step 3.

5.7 Transmitter Radiated Power (EIRP/ERP)

5.7.1 Limit

FCC §22.913 & 24.232

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts, and FCC section 24.232, the broadband PCS mobile station is limited to 2Watts e.i.r.p. peak power.

5.7.2 Test Procedure

The EUT, which is powered by the Battery charged with the AC Adapter, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna.

The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. GSM850MHz band Power Control Level (PCL) = 5/19 and Power Class = 4, GSM1900MHz band Power Control Level (PCL) = 0/15 and Power Class = 1), and only the test result of the maximum output power was recorded.

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

ASUBST = PSUBST_TX - PSUBST_RX - LSUBST_CABLES + GSUBST_TX_ANT

ATOT = LCABLES + ASUBST

Where ASUBST is the final substitution correction including receive antenna gain.

PSUBST_TX is signal generator level,

PSUBST_RX is receiver level,

LSUBST_CABLES is cable losses including TX cable,

GSUBST_TX_ANT is substitution antenna gain.

ATOT is total correction factor including cable loss and substitution correction

During the test, the data of ATOT was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of ATOT.

5.8 Radiated Out of Band Emissions

5.8.1 Limit

FCC § 22.917(a) & 24.238(a)

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. This calculated to be -13dBm.

5.8.2 Test Procedure

See section 5.6.2 of this report.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

ANNEX A TEST RESULT

A.1 Conducted RF Output Power

GSM Mode Test Data

Band	Channel	Frequency (MHz)	Measured Output Power (dBm)	Limit (dBm)	Verdict
GSM 850	128	824.2	31.46	35	PASS
	190	836.6	31.52		PASS
	251	848.8	31.54		PASS
GSM 1900	512	1850.2	28.63	32	PASS
	661	1880.0	28.48		PASS
	810	1909.8	28.44		PASS
GPRS 850	128	824.2	31.47	35	PASS
	190	836.6	31.54		PASS
	251	848.8	31.55		PASS
GPRS 1900	512	1850.2	28.57	32	PASS
	661	1880.0	28.45		PASS
	810	1909.8	28.41		PASS
EGPRS 850	128	824.2	29.79	35	PASS
	190	836.6	29.97		PASS
	251	848.8	29.53		PASS
EGPRS 1900	512	1850.2	29.24	32	PASS
	661	1880.0	28.89		PASS
	810	1909.8	28.94		PASS

NOTE: For the GPRS and EGPRS mode, all the slots were tested and just the worst data was record in this table.

GPRS Conducted output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GPRS 850	128	824.2	31.47	30.20	28.24	26.09
	190	836.6	31.54	30.29	28.37	26.21
	251	848.8	31.55	30.36	28.44	26.31
GPRS 1900	512	1850.2	28.57	27.07	25.45	23.28
	661	1880.0	28.45	27.00	25.43	23.17
	810	1909.8	28.41	27.02	25.51	23.40

EGPRS Conducted output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
EGPRS 850	128	824.2	29.79	29.46	28.15	26.10
	190	836.6	29.97	29.55	28.49	26.29
	251	848.8	29.53	29.37	28.03	26.00
EGPRS 1900	512	1850.2	29.24	28.98	27.85	25.96
	661	1880.0	28.89	28.81	27.41	25.26
	810	1909.8	28.94	28.76	27.39	25.18

WCDMA Mode Test data:

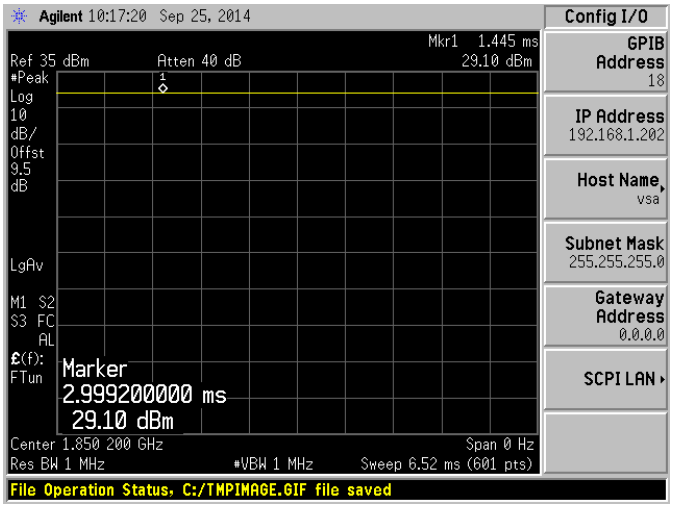
Band	Channel	Frequency (MHz)	Output Power(dBm)
WCDMA 850	4132	826.4	22.62
	4183	835	22.78
	4233	846.6	22.75
WCDMA 1900	9262	1852.4	23.54
	9401	1880.2	23.62
	9538	1907.6	23.56

A.2 Peak to Average Radio

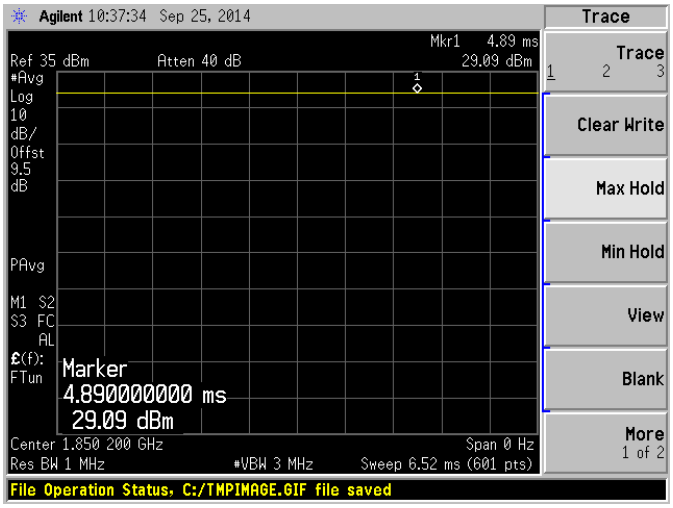
Band	Channel	Frequency (MHz)	Peak to Average radio	Limit	Verdict
			dBm	dBm	
GSM 1900MHz	512	1850.2	0.01	13	PASS
	661	1880.0	0.01		PASS
	810	1909.8	0.01		PASS
EGPRS 1900MHz	512	1850.2	0.03	13	PASS
	661	1880.0	0.02		PASS
	810	1909.8	0.01		PASS
WCDMA 1900MHz	9262	1852.4	1.59	13	PASS
	9401	1880.2	1.53		PASS
	9538	1907.6	1.53		PASS

Test plots

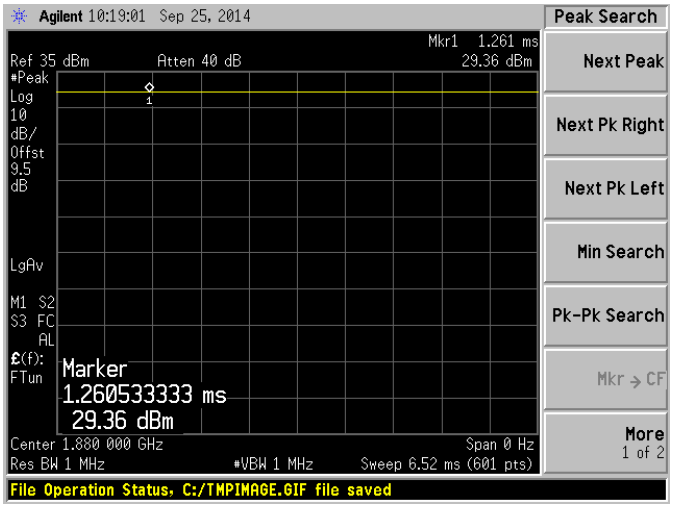
GSM 1900MHz CHANNEL 512 PEAK POWER



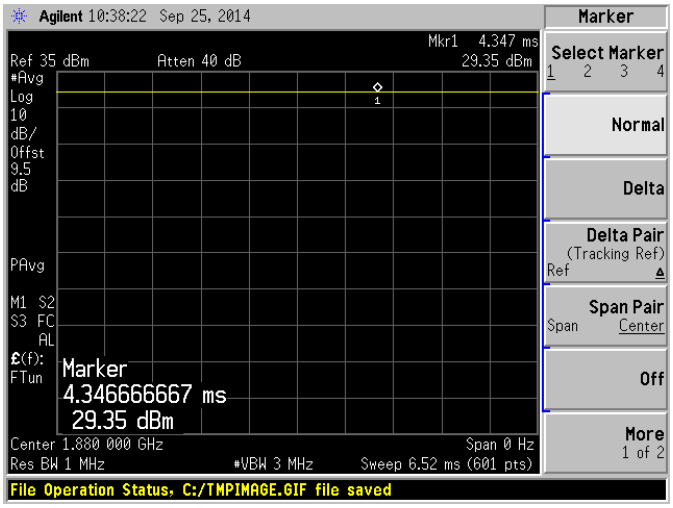
GSM 1900MHz CHANNEL 512 AV POWER



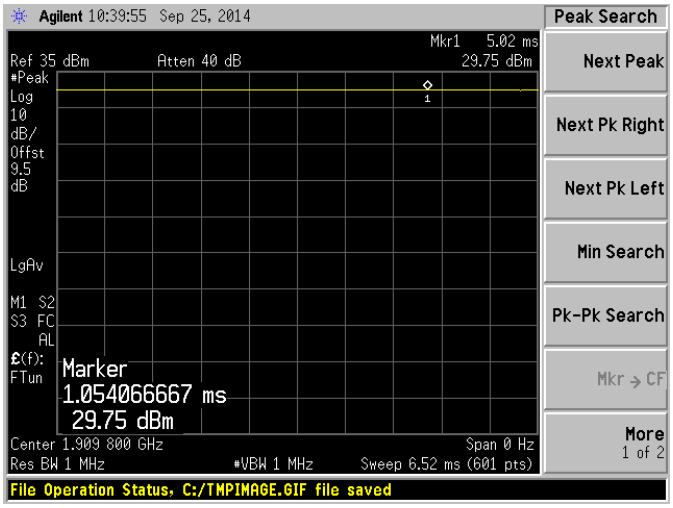
GSM 1900MHz CHANNEL 661 PEAK POWER



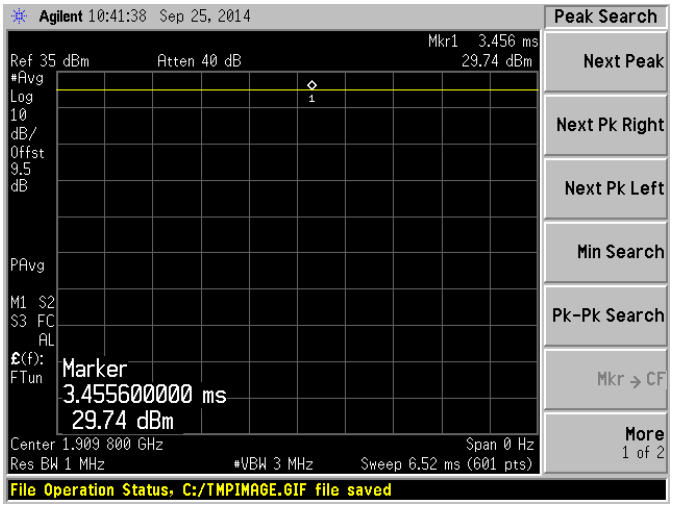
GSM 1900MHz CHANNEL 661 AV POWER



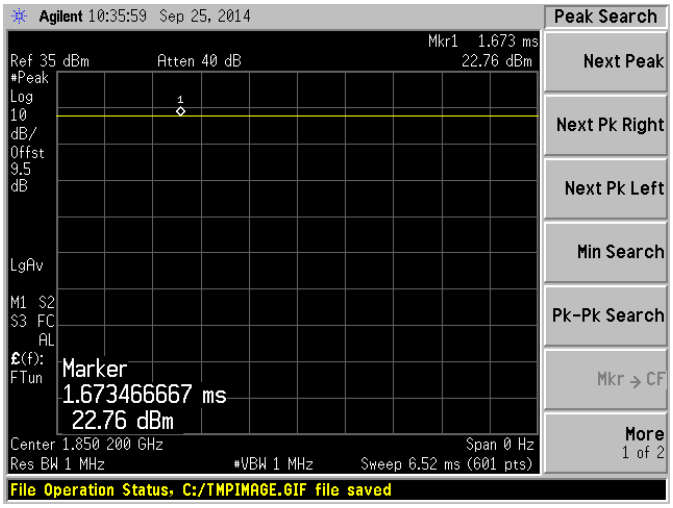
GSM 1900MHz CHANNEL 810 PEAK POWER



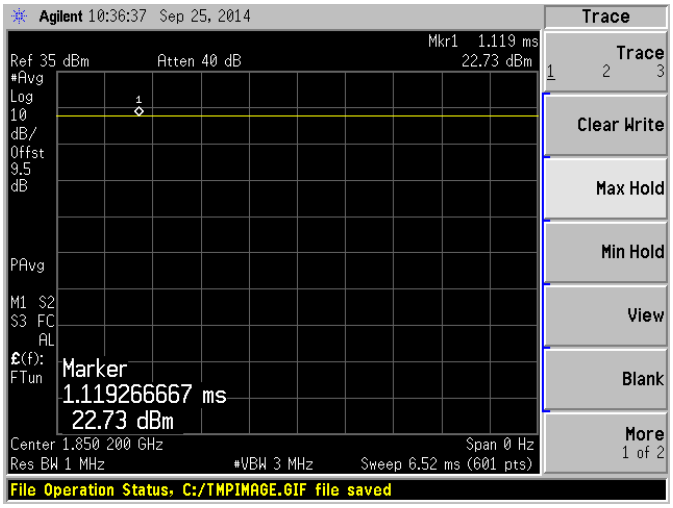
GSM 1900MHz CHANNEL 810 AV POWER



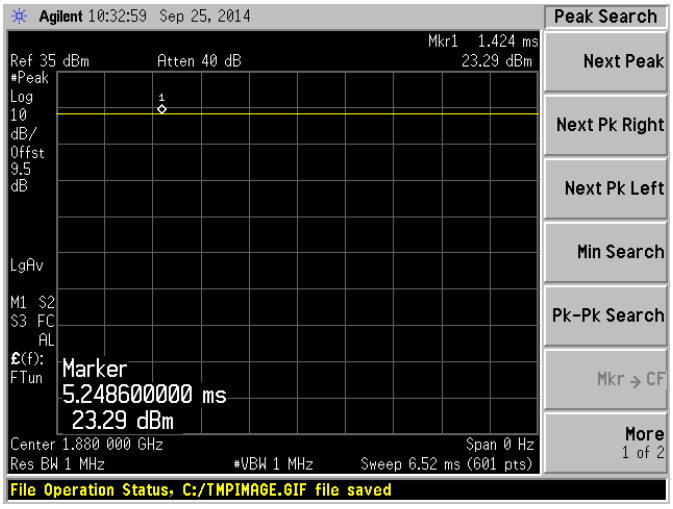
EGPRS 1900MHz CHANNEL 512 PEAK POWER



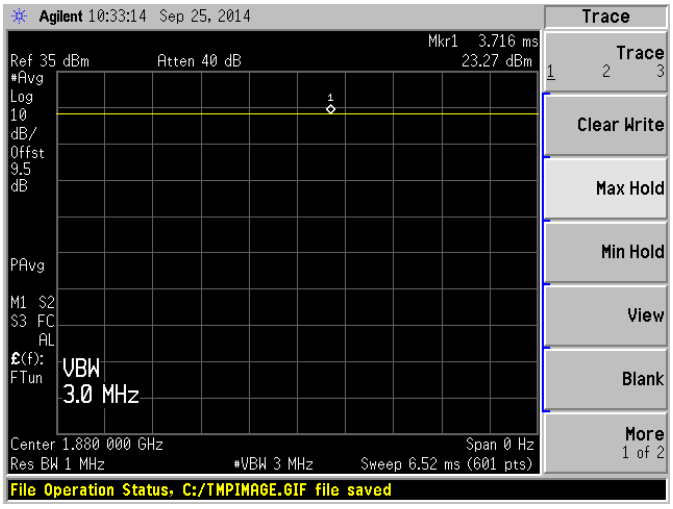
EGPRS 1900MHz CHANNEL 512 AV POWER



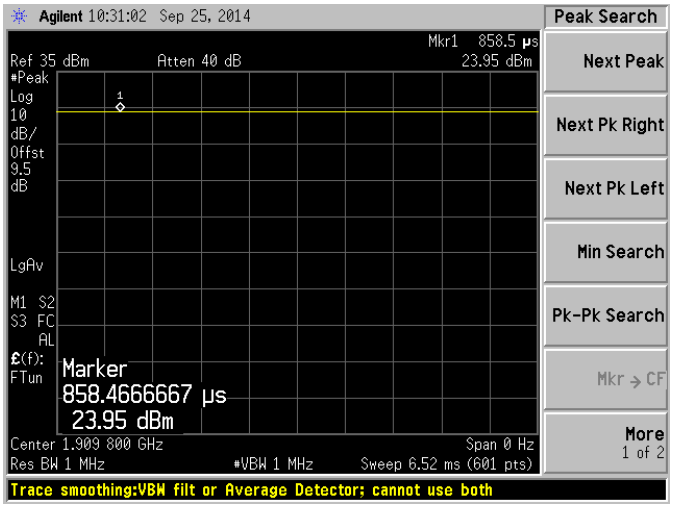
EGPRS 1900MHz CHANNEL 661 PEAK POWER



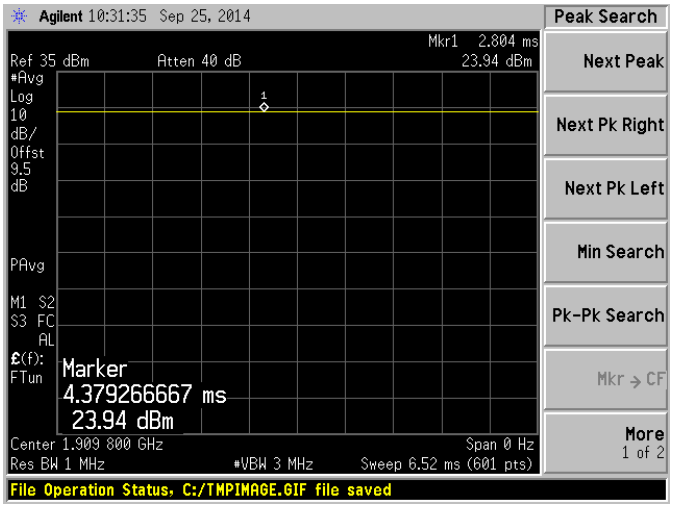
EGPRS 1900MHz CHANNEL 661 AV POWER



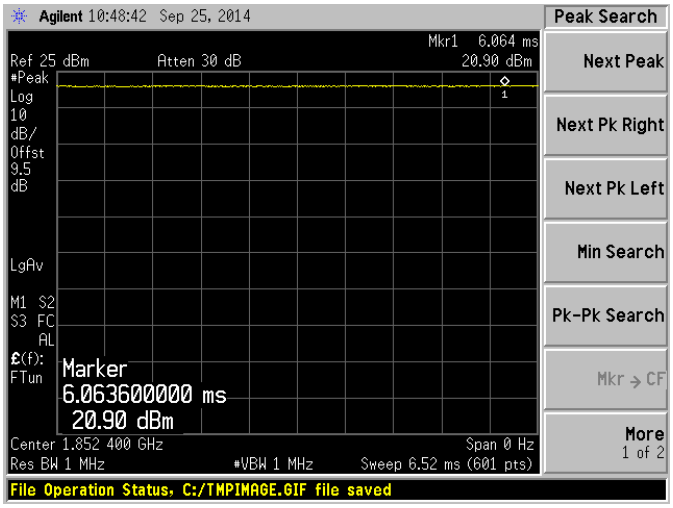
EGPRS 1900MHz CHANNEL 810 PEAK POWER



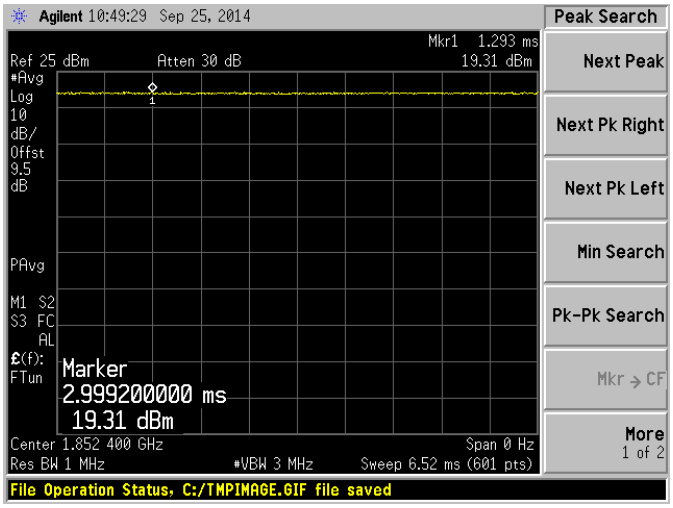
EGPRS 1900MHz CHANNEL 810 AV POWER



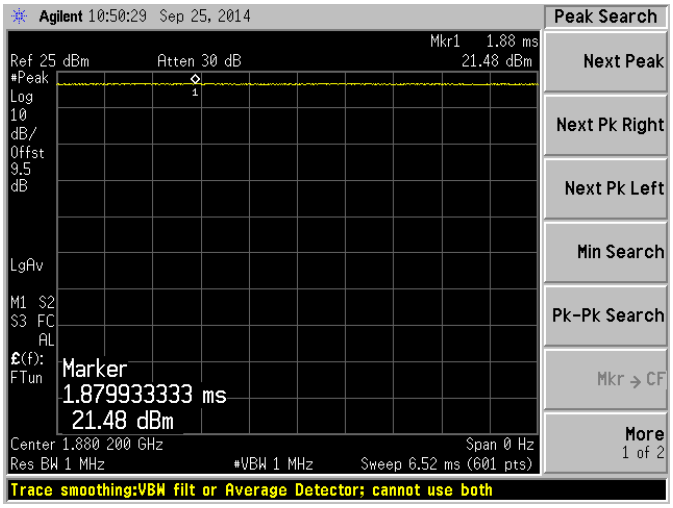
WCDMA 1900MHz CHANNEL 9262 PEAK POWER



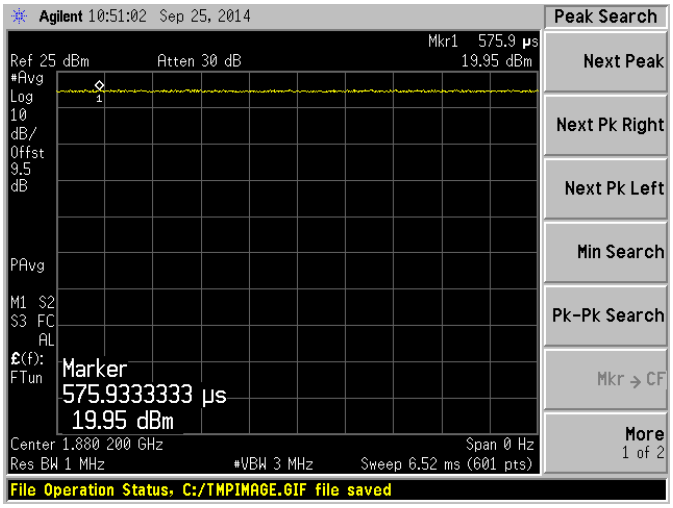
WCDMA 1900MHz CHANNEL 9262 AV POWER



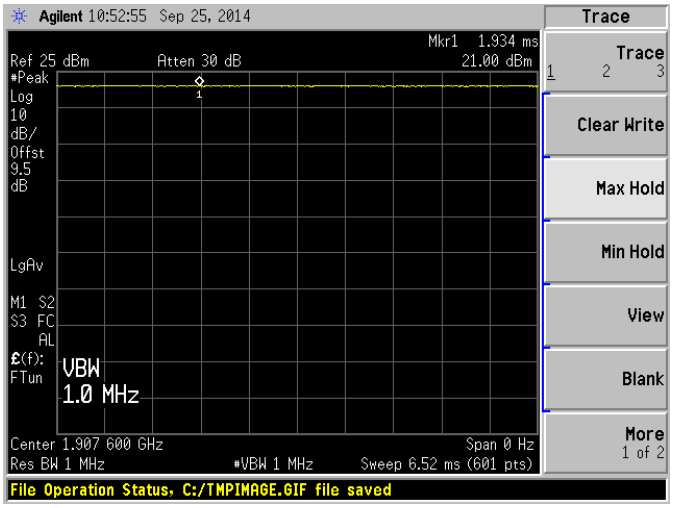
WCDMA 1900MHz CHANNEL 9401 PEAK POWER



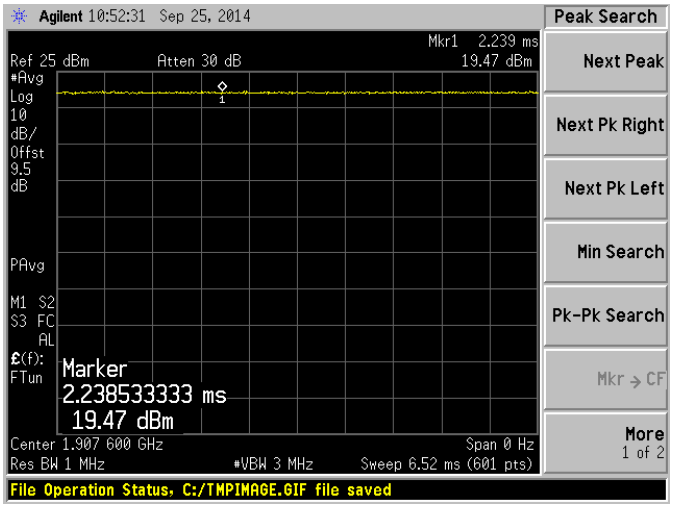
WCDMA 1900MHz CHANNEL 9401 AV POWER



WCDMA 1900MHz CHANNEL 9538 PEAK POWER



WCDMA 1900MHz CHANNEL 9538 AV POWER



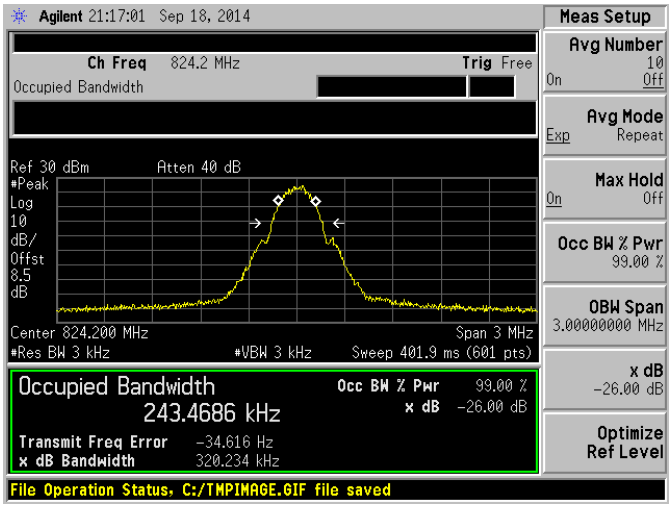
A.3 Occupied Bandwidth

Test Data

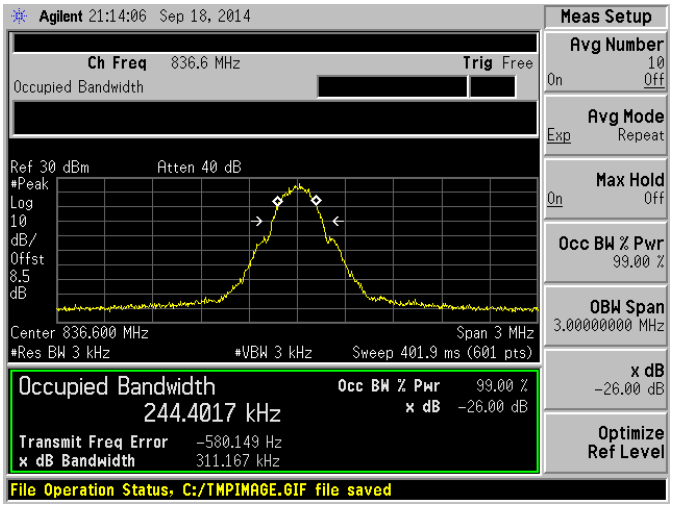
Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth	Measured -26dB Occupied Bandwidth
GSM 850MHz	128	824.2	243.4686 kHz	320.234 kHz
	190	836.6	244.4017 kHz	311.167 kHz
	251	848.8	246.6901 kHz	317.236 kHz
GSM 1900MHz	512	1850.2	247.5004 kHz	319.556 kHz
	661	1880.0	247.3980 kHz	318.815 kHz
	810	1909.8	243.9520 kHz	317.141 kHz
GPRS 850MHz	128	824.2	244.3568 kHz	318.395 kHz
	190	836.6	240.1631 kHz	308.914 kHz
	251	848.8	245.8580 kHz	313.167 kHz
GPRS 1900MHz	512	1850.2	241.4527 kHz	316.155 kHz
	661	1880.0	248.2276 kHz	317.252 kHz
	810	1909.8	244.6008 kHz	312.733 kHz
EGPRS 850MHz	128	824.2	244.8844 kHz	316.202 kHz
	190	836.6	247.7111 kHz	323.378 kHz
	251	848.8	243.1627 kHz	318.298 kHz
EGPRS 1900MHz	512	1850.2	243.0629 kHz	311.823 kHz
	661	1880.0	244.2227 kHz	318.202 kHz
	810	1909.8	245.8278 kHz	320.184 kHz
WCDMA 850	4132	826.4	4.0853 MHz	4.633 MHz
	4183	836.6	4.0728 MHz	4.627 MHz
	4233	846.6	4.0919 MHz	4.664 MHz
WCDMA 1900	9262	1852.4	4.1169 MHz	4.727 MHz
	9401	1880.2	4.1290 MHz	4.703 MHz
	9538	1907.6	4.1334 MHz	4.776 MHz

Test plots

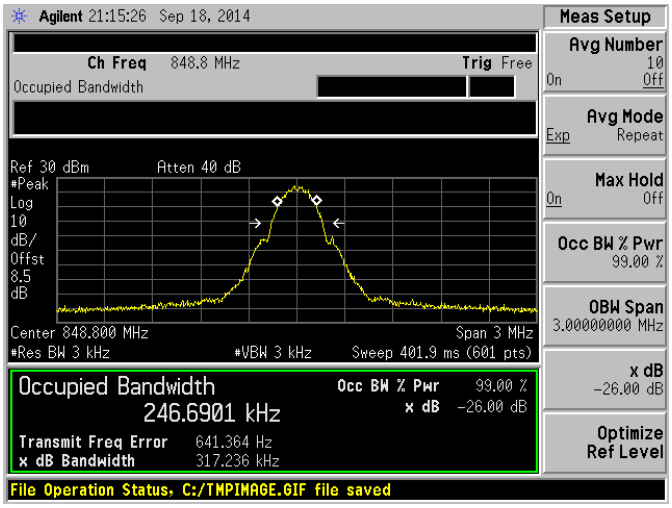
GSM 850MHz CHANNEL 128



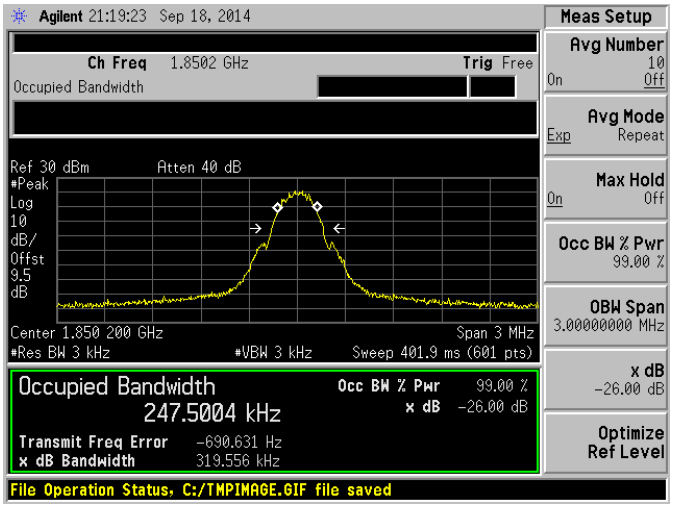
GSM 850MHz CHANNEL 190



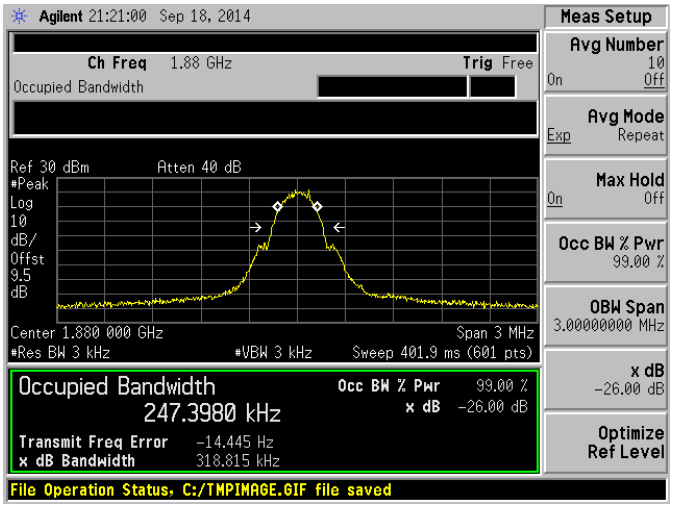
GSM 850MHz CHANNEL 251



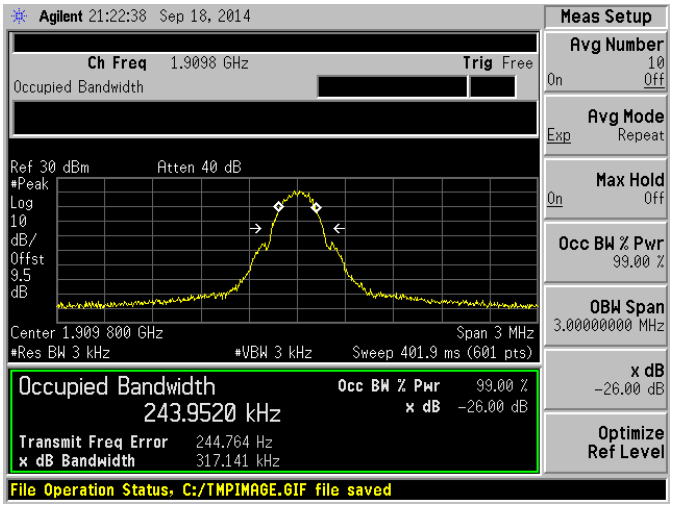
GSM 1900MHz CHANNEL 512



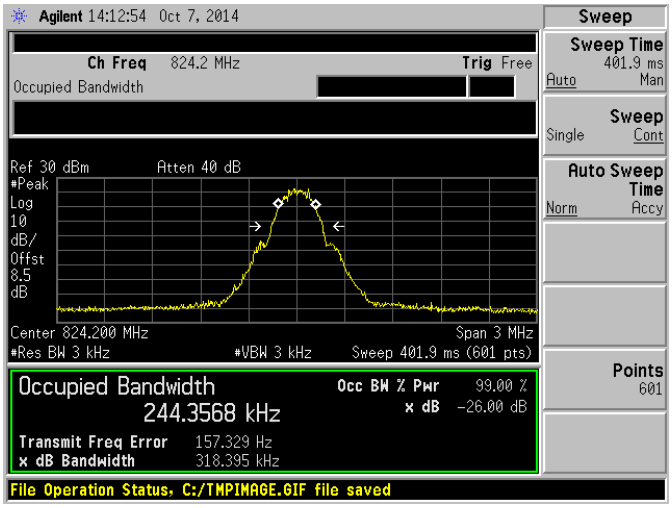
GSM 1900MHz CHANNEL 661



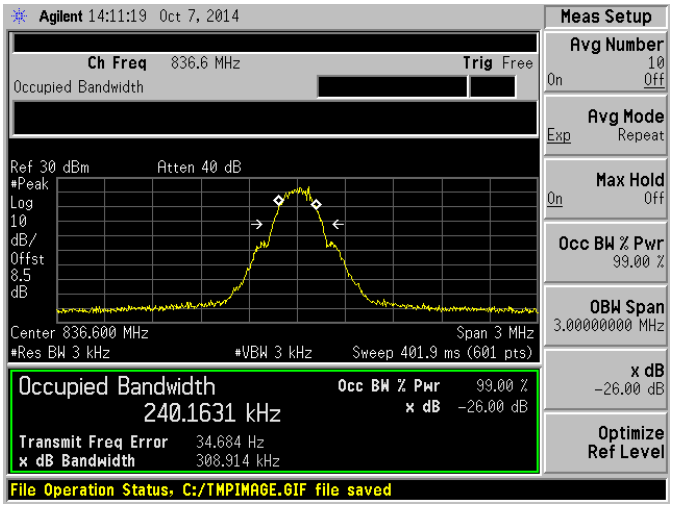
GSM 1900MHz CHANNEL 810



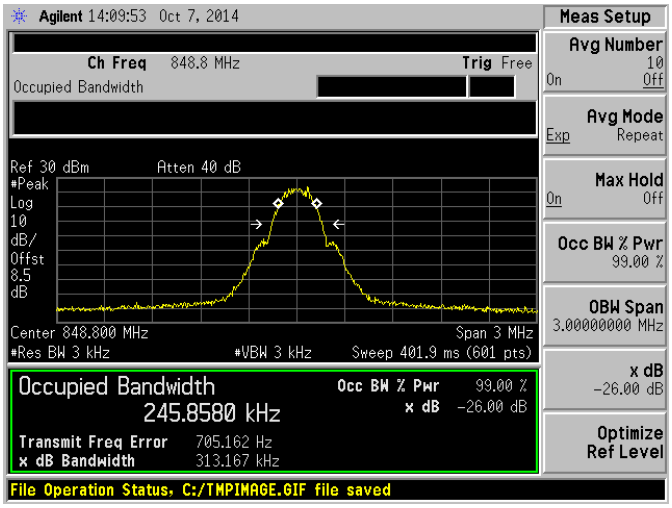
GPRS 850MHz CHANNEL 128



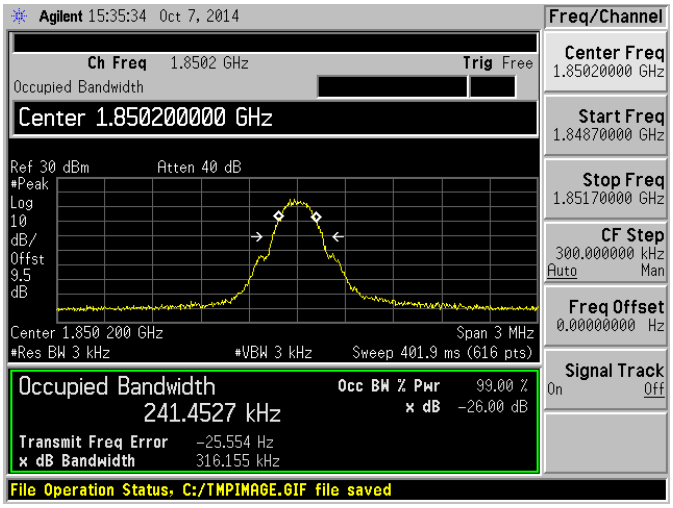
GPRS 850MHz CHANNEL 190



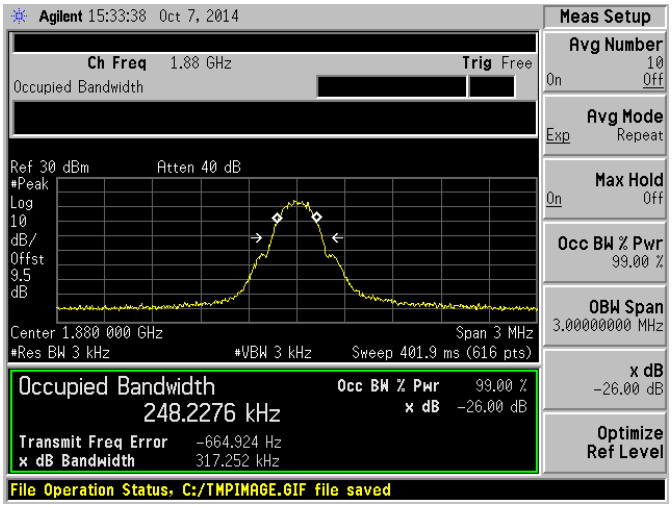
GPRS 850MHz CHANNEL 251



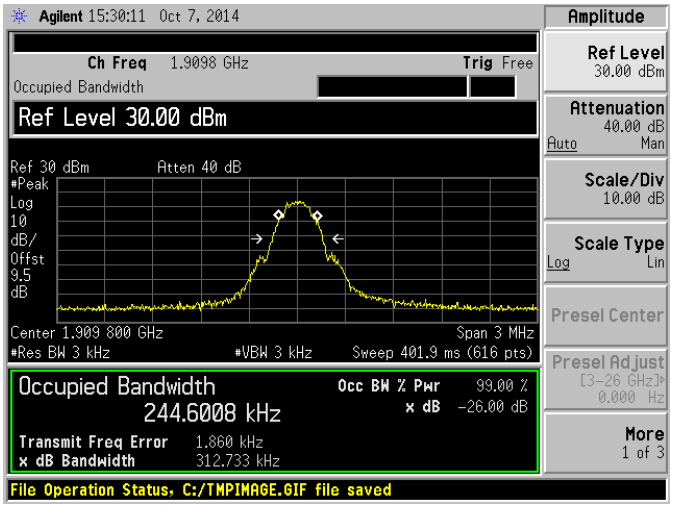
GPRS 1900MHz CHANNEL 512



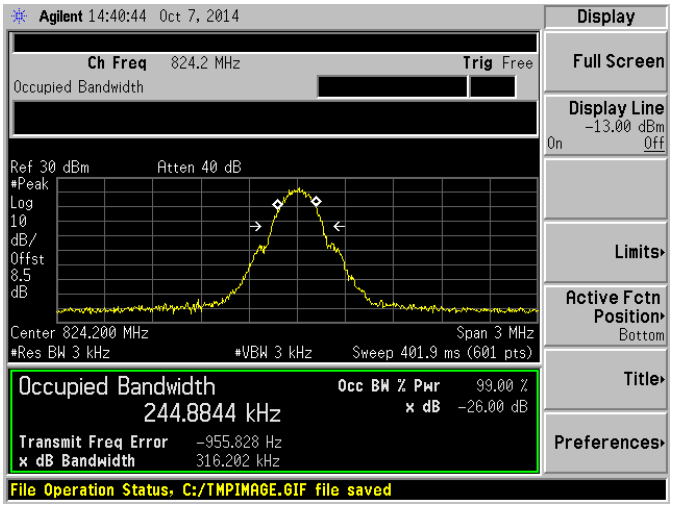
GPRS 1900MHz CHANNEL 661



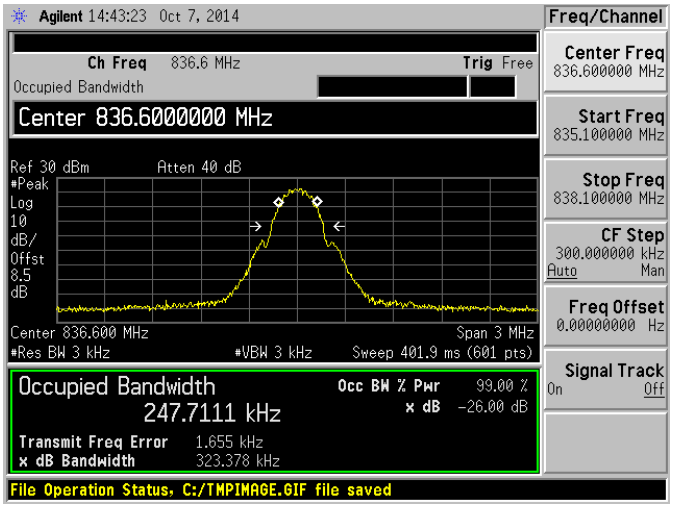
GPRS 1900MHz CHANNEL 810



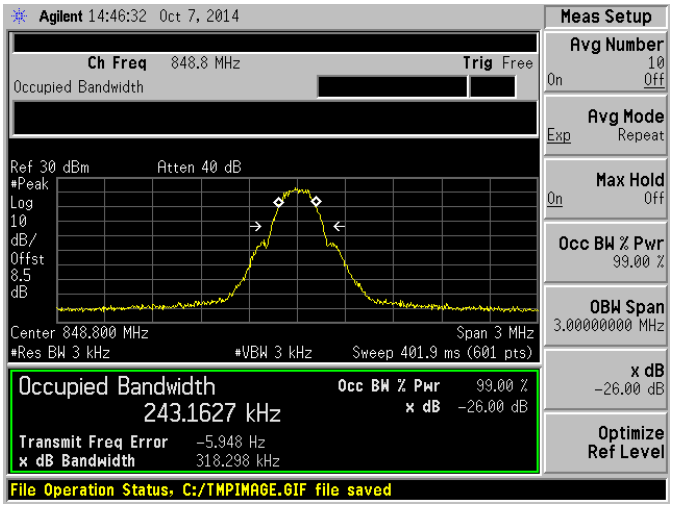
EGPRS 850MHz CHANNEL 128



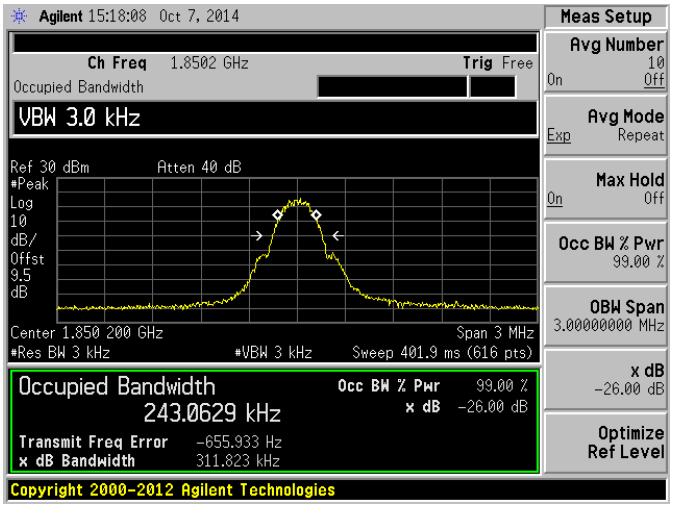
EGPRS 850MHz CHANNEL 190



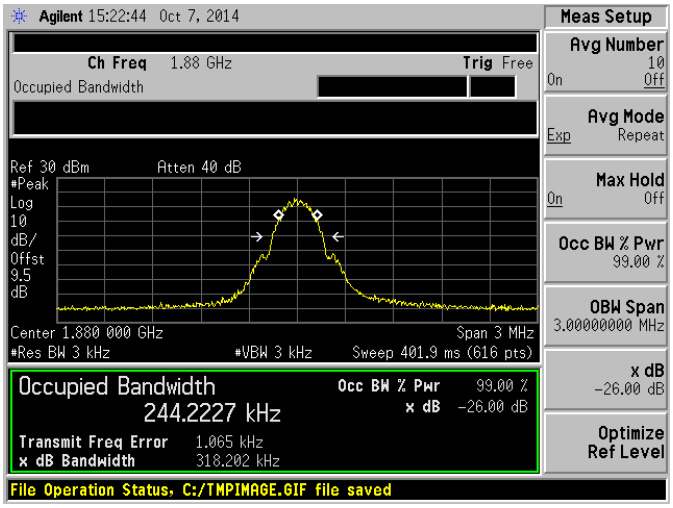
EGPRS 850MHz CHANNEL 251



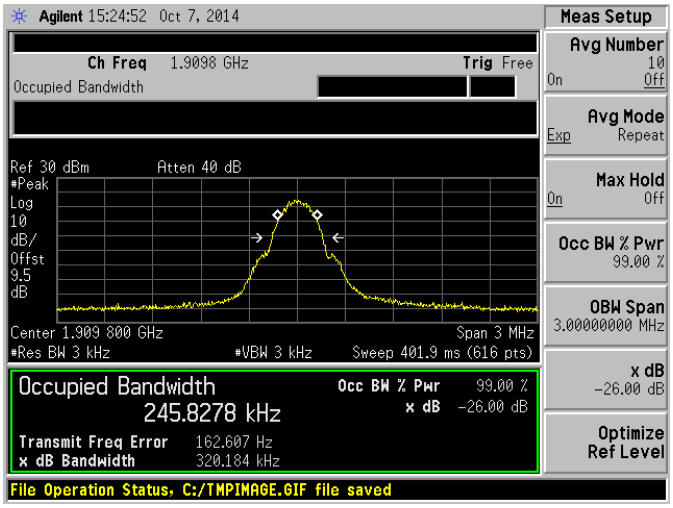
EGPRS 1900MHz CHANNEL 512



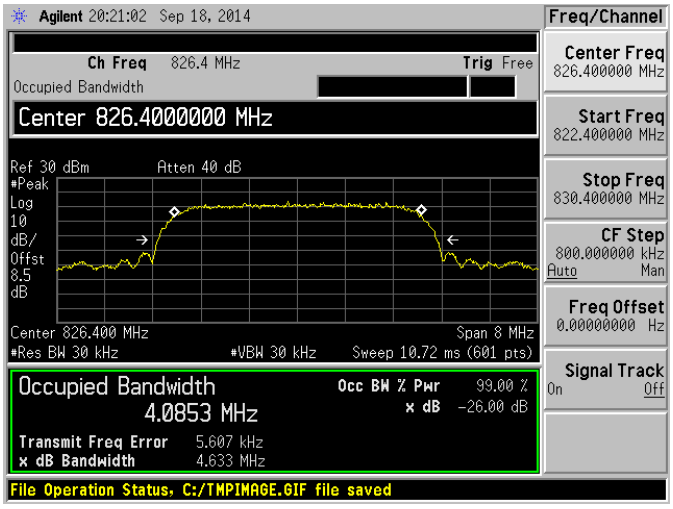
EGPRS 1900MHz CHANNEL 661



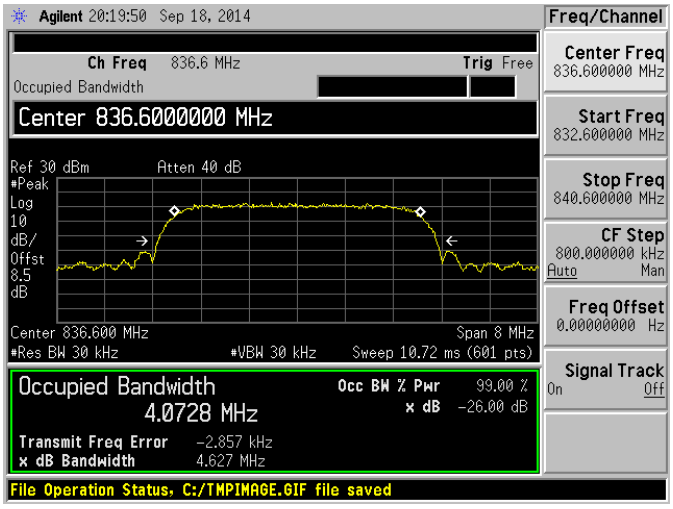
EGPRS 1900MHz CHANNEL 810



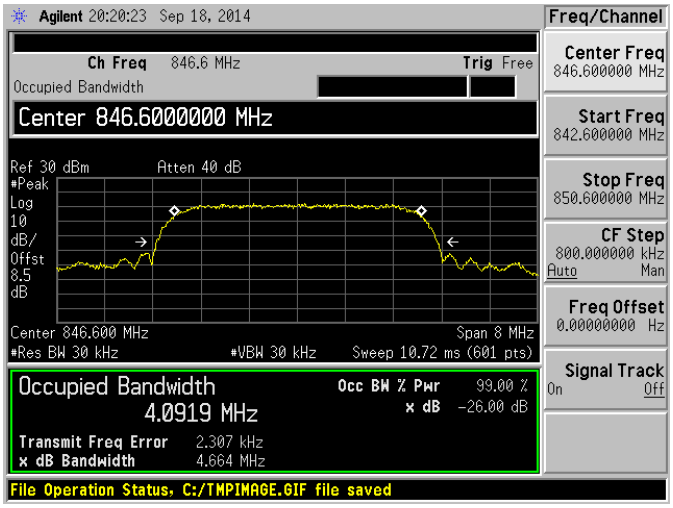
WCDMA 850MHz CHANNEL 4132



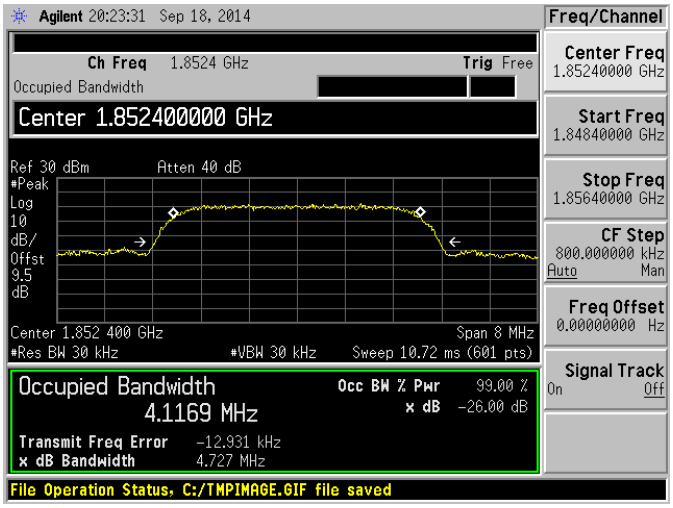
WCDMA 850MHz CHANNEL 4183



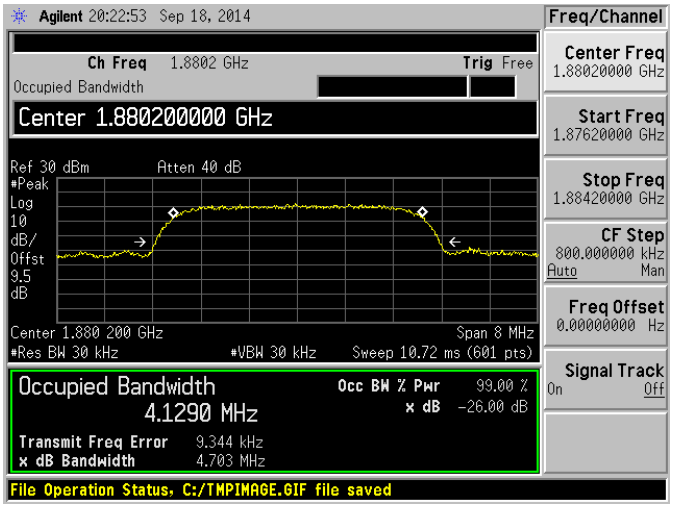
WCDMA 850MHz CHANNEL 4233



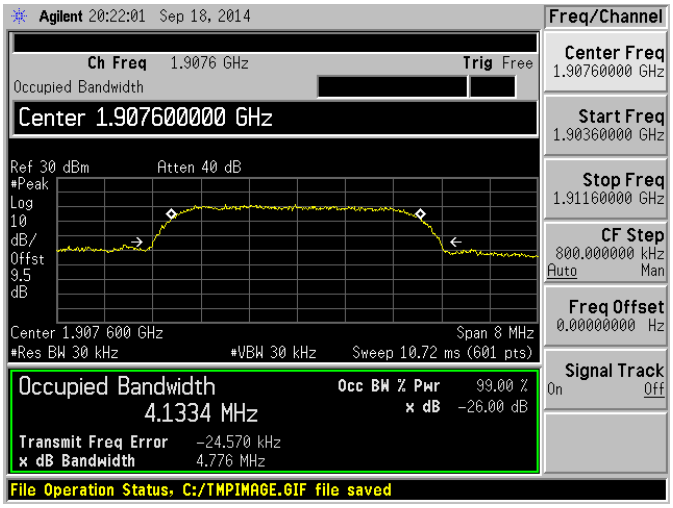
WCDMA 1900MHz CHANNEL 9262



WCDMA 1900MHz CHANNEL 9401



WCDMA 1900MHz CHANNEL 9538



A.4 Frequency Stability

GSM 850MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	-2.38	±2060.5	-4.87	±2091.5	5.05	±2122	PASS
	-20	-7.98		0.27		7.49		
	-10	1.14		8.80		0.19		
	0	-1.39		4.09		34.30		
	+10	5.47		4.26		45.99		
	+20	-7.61		-6.13		-16.51		
	+30	6.09		-9.91		19.46		
	+40	5.49		6.44		-6.80		
	+50	10.19		6.52		7.58		
4.2	+25	8.71		8.07		3.11		
3.5	+25	-8.32		9.78		-4.93		

GSM 1900MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	11.92	±4625.5	24.92	±4700.0	21.11	±4774.5	PASS
	-20	24.62		12.71		38.58		
	-10	32.37		23.70		17.26		
	0	30.69		5.27		0.66		
	+10	8.86		31.86		40.46		
	+20	13.41		28.54		33.32		
	+30	-0.42		33.45		19.58		
	+40	7.22		24.87		38.57		
	+50	40.19		27.16		-1.35		
4.2	+25	27.54		41.06		-1.58		
3.5	+25	40.56		1.29		11.09		

GPRS 850MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	20.79	±2060.5	46.68	±2091.5	22.69	±2122	PASS
	-20	44.54		28.10		2.39		
	-10	10.45		-4.27		64.53		
	0	10.88		36.69		12.66		
	+10	54.76		13.61		50.37		
	+20	2.46		12.15		-5.39		
	+30	27.07		23.94		35.13		
	+40	-8.66		13.56		-0.53		
	+50	14.23		47.64		37.40		
4.2	+25	63.35		52.86		31.75		
3.5	+25	35.82		3.68		58.60		

GPRS 1900MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	2.93	±4625.5	8.88	±4700.0	7.05	±4774.5	PASS
	-20	6.08		8.65		-8.96		
	-10	1.27		-0.16		1.81		
	0	-8.13		-3.43		-5.72		
	+10	16.06		0.18		2.43		
	+20	-1.70		-16.88		-4.76		
	+30	-13.17		4.93		-12.63		
	+40	-11.06		-4.84		-14.65		
	+50	3.57		6.62		-2.60		
4.2	+25	-3.25		-6.22		6.56		
3.5	+25	-10.53		-16.46		13.05		

EGPRS 850MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 128 (824.2MHz)		Channel = 190 (836.6MHz)		Channel = 251 (848.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	54.22	±2060.5	23.41	±2091.5	7.86	±2122	PASS
	-20	42.78		37.93		29.51		
	-10	47.18		58.18		-7.86		
	0	0.81		-4.56		-9.17		
	+10	37.41		76.18		7.31		
	+20	18.65		69.90		31.29		
	+30	7.86		66.07		-7.54		
	+40	-1.46		76.85		64.57		
	+50	63.59		79.91		8.53		
4.2	+25	48.45		44.99		77.46		
3.5	+25	25.64		-8.66		68.75		

EGPRS 1900MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 512 (1850.2MHz)		Channel = 661 (1880.0MHz)		Channel = 810 (1909.8MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	3.89	±4625.5	2.47	±4700.0	16.98	±4774.5	PASS
	-20	9.44		10.18		3.48		
	-10	6.69		6.54		2.16		
	0	3.27		-6.18		1.50		
	+10	-6.31		0.45		-7.10		
	+20	-0.46		-3.78		0.02		
	+30	0.78		10.38		9.98		
	+40	-2.08		7.41		0.23		
	+50	5.71		7.15		4.87		
4.2	+25	8.58		-2.15		0.38		
3.5	+25	1.29		9.53		-0.76		

WCDMA 850MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	7.01	±2060.5	-11.03	±2091.5	21.02	±2122	PASS
	-20	-13.74		-2.06		43.08		
	-10	28.59		12.88		20.65		
	0	-5.09		-21.75		-3.32		
	+10	50.44		-18.76		42.75		
	+20	-16.77		32.54		-2.32		
	+30	47.36		-18.89		23.12		
	+40	15.51		44.49		11.33		
	+50	41.05		40.72		-17.55		
4.2	+25	21.79		16.15		38.10		
3.5	+25	10.20		52.34		-12.06		

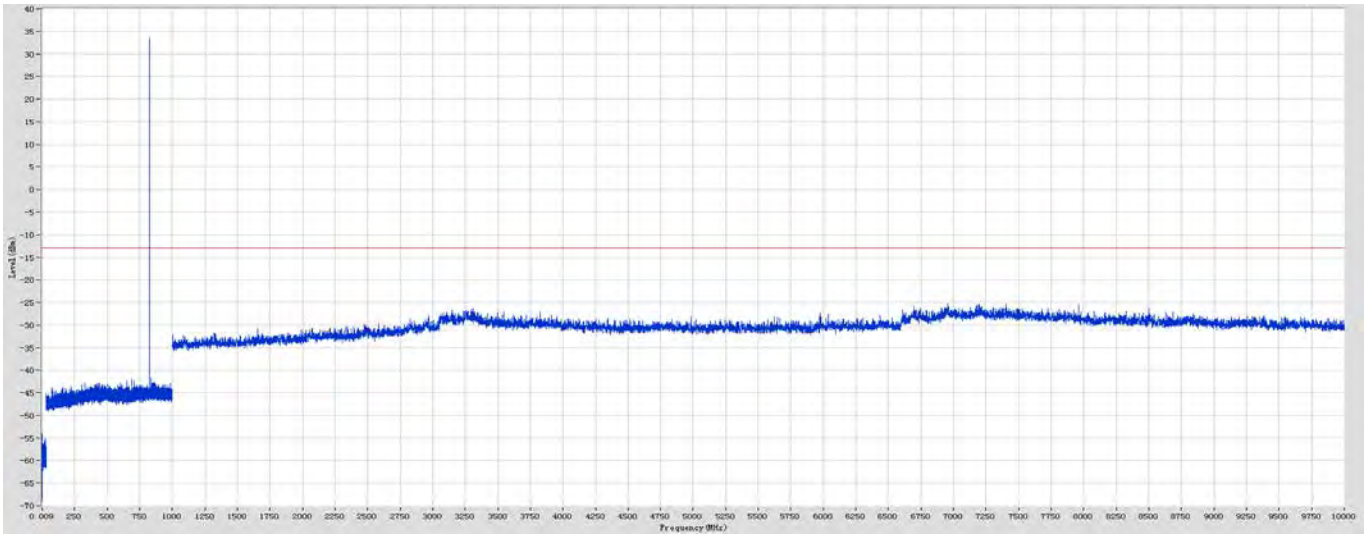
WCDMA 1900MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4175 (835MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	33.26	±4625.5	15.73	±4700.0	52.17	±4774.5	PASS
	-20	42.12		-8.20		28.14		
	-10	-0.56		43.40		33.27		
	0	8.20		-13.79		24.72		
	+10	-13.04		28.82		1.91		
	+20	-14.56		25.83		19.59		
	+30	21.86		41.20		48.08		
	+40	-5.39		-10.03		31.98		
	+50	38.99		2.69		41.83		
4.2	+25	36.56		7.29		22.23		
3.5	+25	6.44		17.60		14.12		

A.5 Conducted Out of Band Emissions

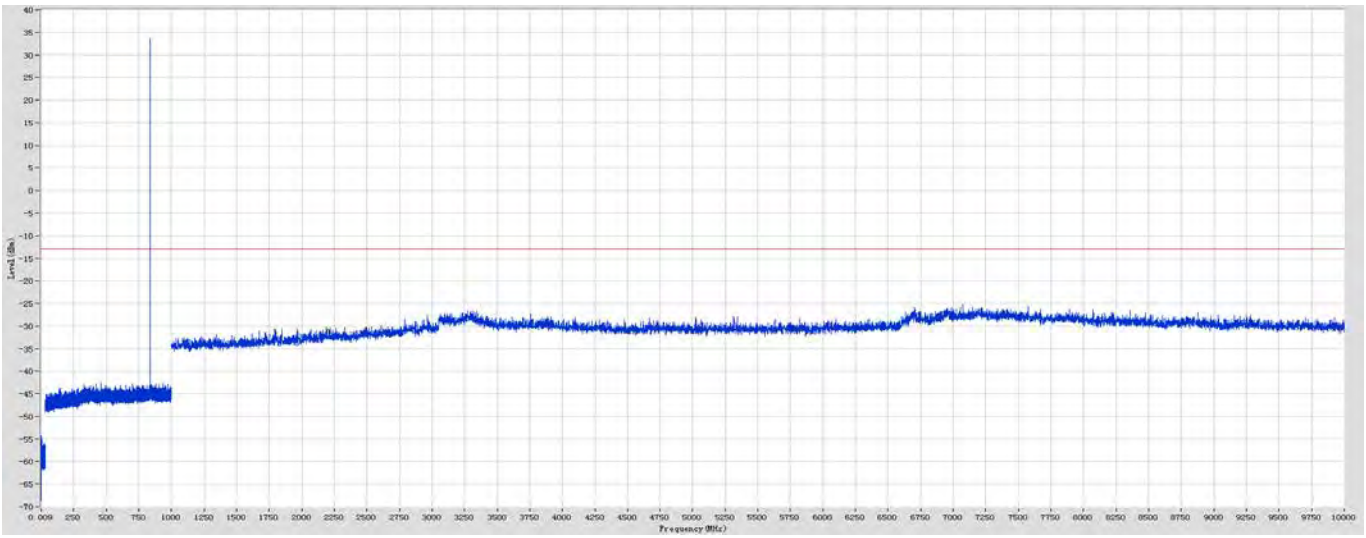
Test Data

GSM 850MHz CHANNEL 128



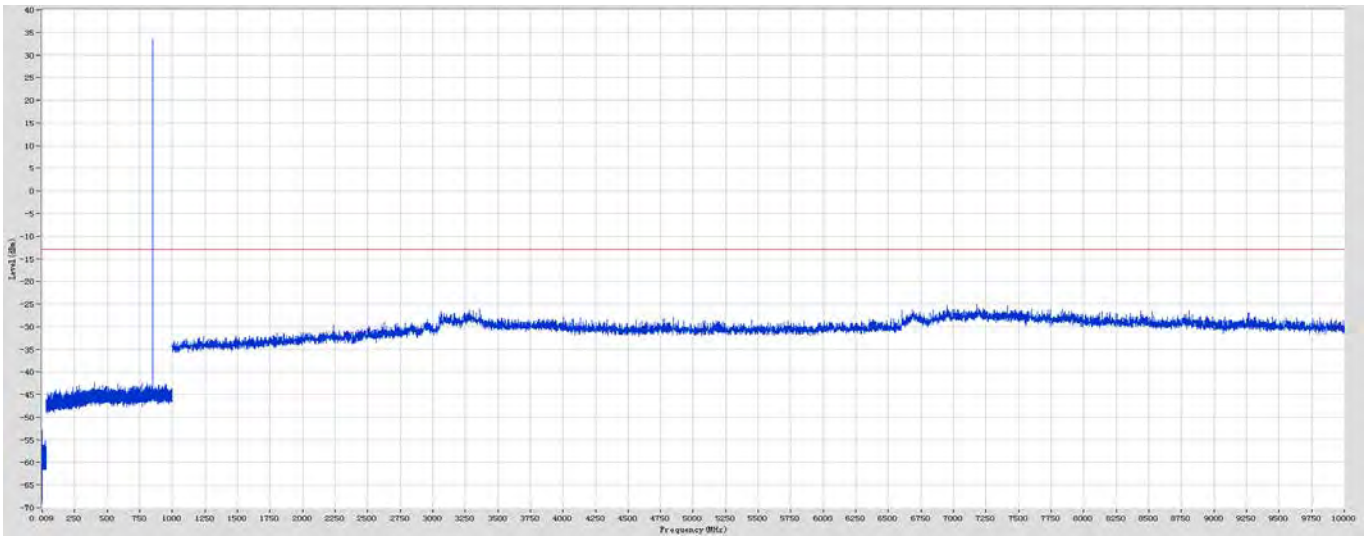
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	435.59	-42.97	-13	29.97	PASS
500	1000	0.1	Peak	824.16	33.56	N/A	N/A	N/A
1000	10000	1	Peak	6954.727	-25.24	-13	12.24	PASS

GSM 850MHz CHANNEL 190



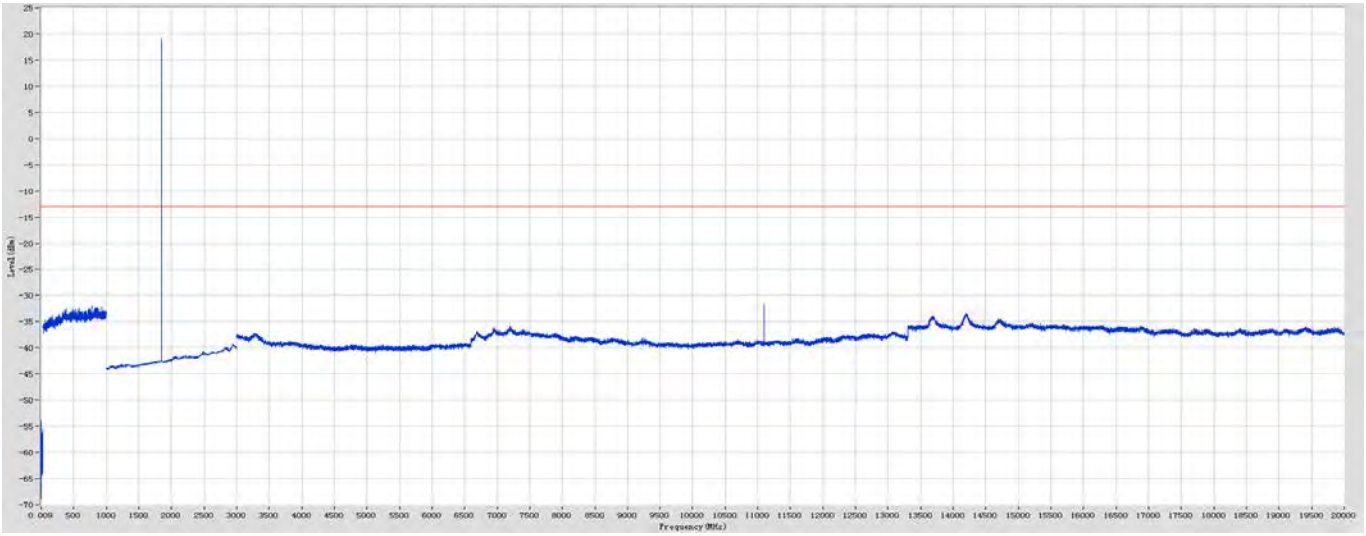
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	459.09	-42.56	-13.00	29.56	PASS
500	1000	0.1	Peak	836.57	33.78	N/A	N/A	N/A
1000	10000	1	Peak	7076.74	-25.26	-13.00	12.26	PASS

GSM 850MHz CHANNEL 251



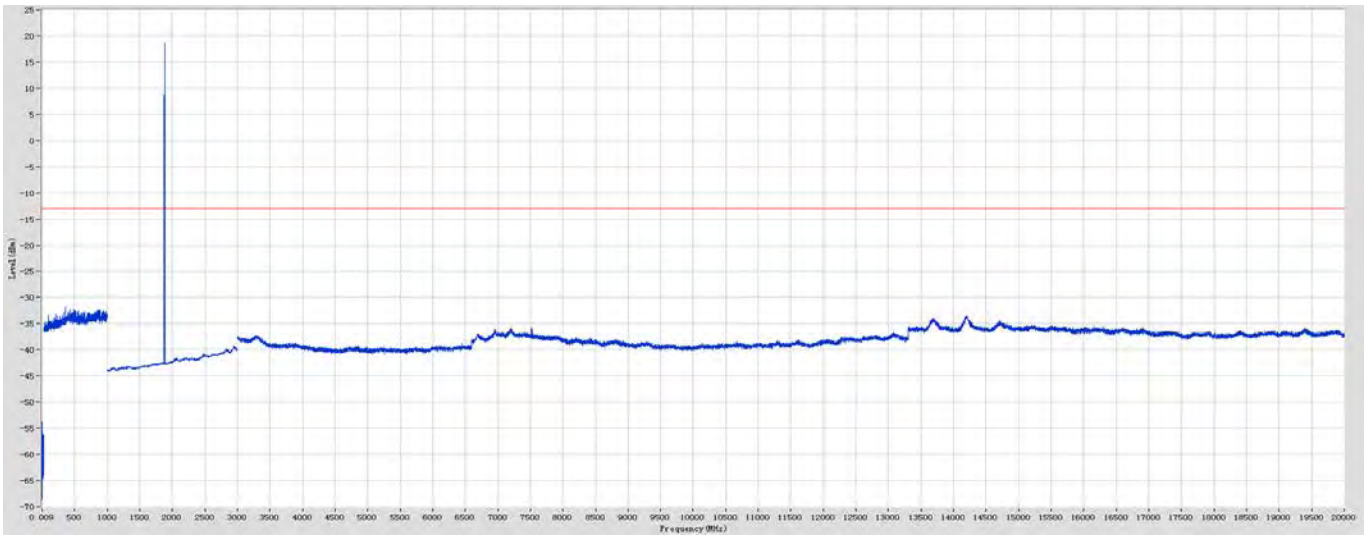
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	334.66	-42.86	-13	29.86	PASS
500	1000	0.1	Peak	848.77	33.48	N/A	N/A	N/A
1000	10000	1	Peak	7190.76	-24.86	-13	11.86	PASS

GSM 1900MHz CHANNEL 512



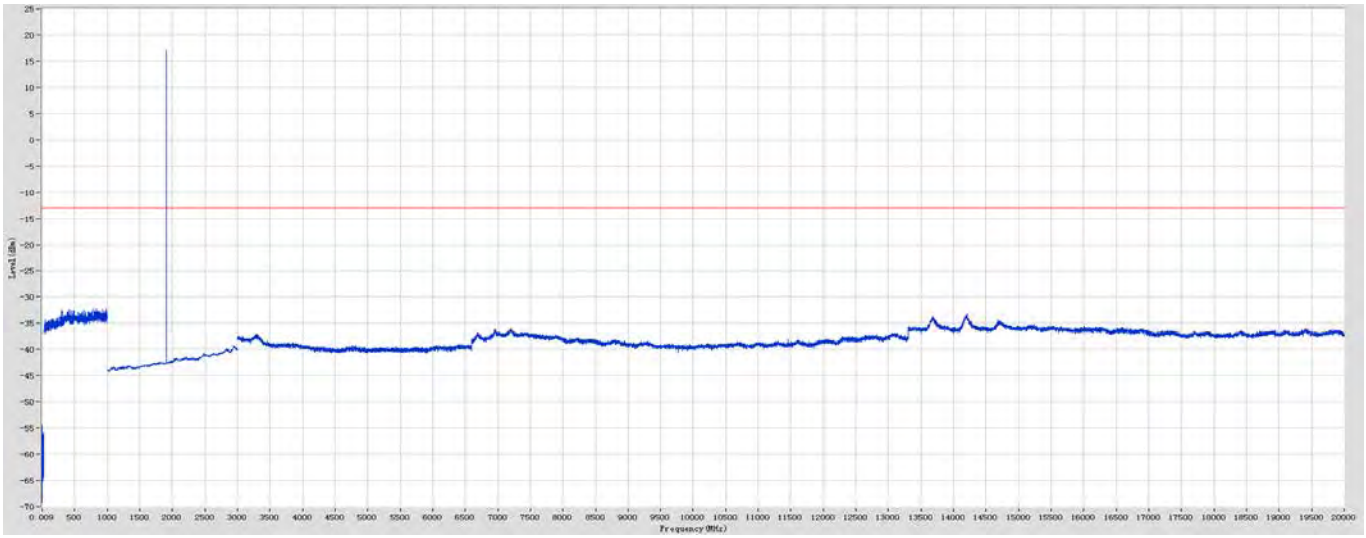
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	783.78	-31.94	-13	18.94	PASS
1000	3000	1	Peak	1850.43	19.03	N/A	N/A	N/A
3000	20000	1	Peak	11100.99	-31.62	-13	18.62	PASS

GSM 1900MHz CHANNEL 661



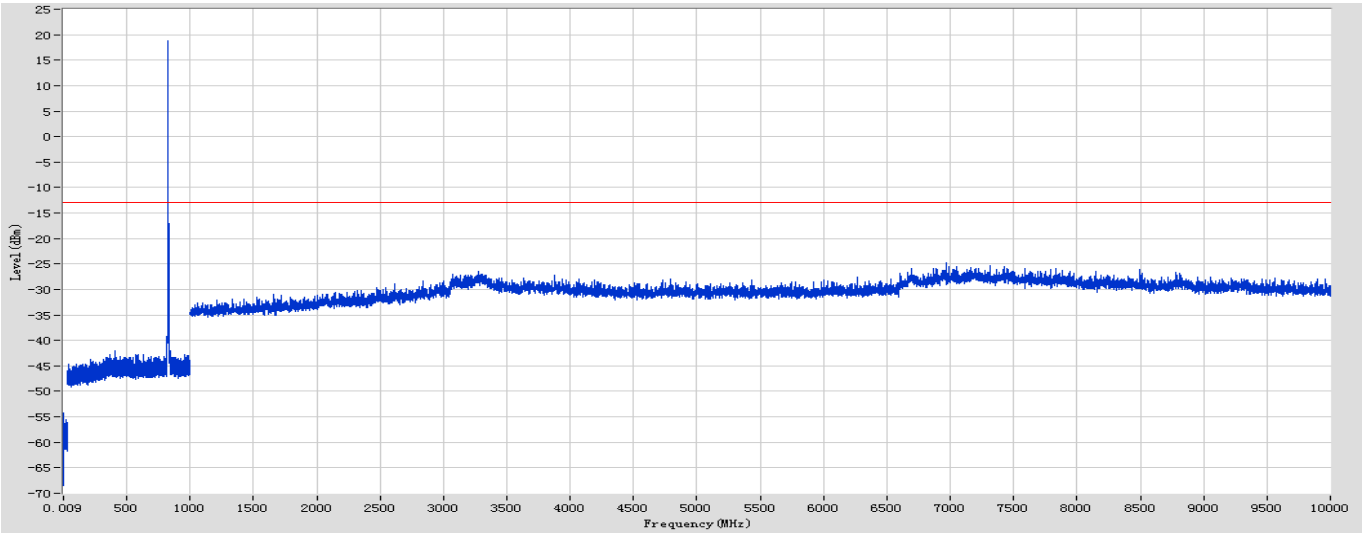
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	364.34	-31.75	-13	18.75	PASS
1000	3000	1	Peak	1880.54	18.54	N/A	N/A	N/A
3000	20000	1	Peak	14194.37	-33.46	-13	20.46	PASS

GSM 1900MHz CHANNEL 810



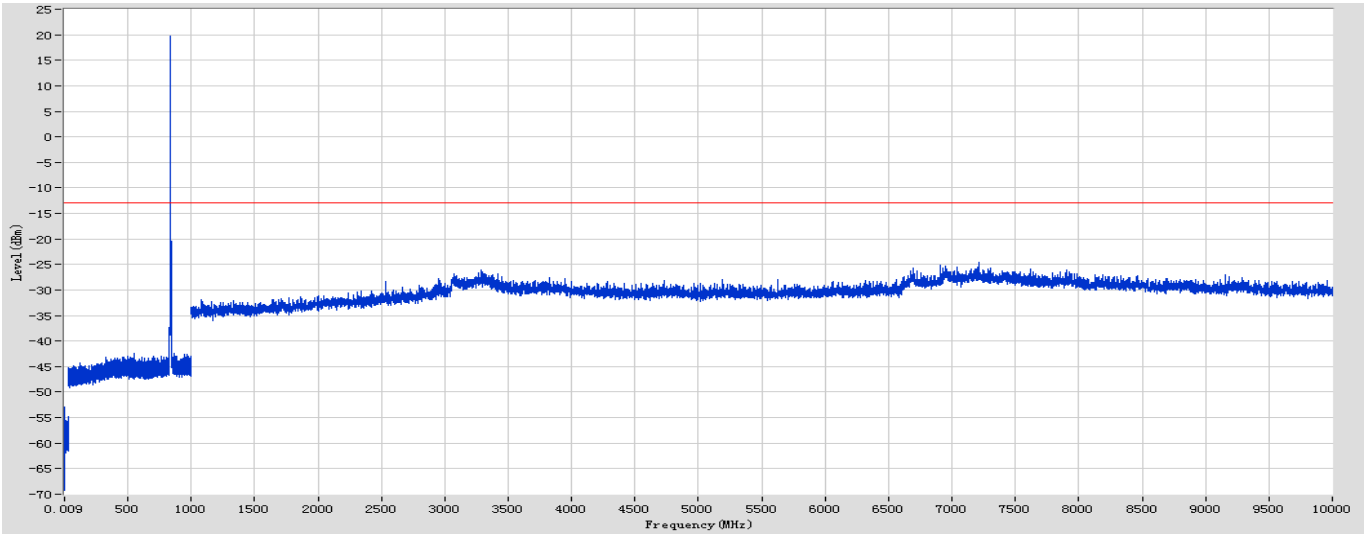
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	792.79	-32.13	-13	19.13	PASS
1000	3000	1	Peak	1910.46	17.14	N/A	N/A	N/A
3000	20000	1	Peak	14203.37	-33.26	-13	20.26	PASS

WCDMA 850MHz CHANNEL 4132



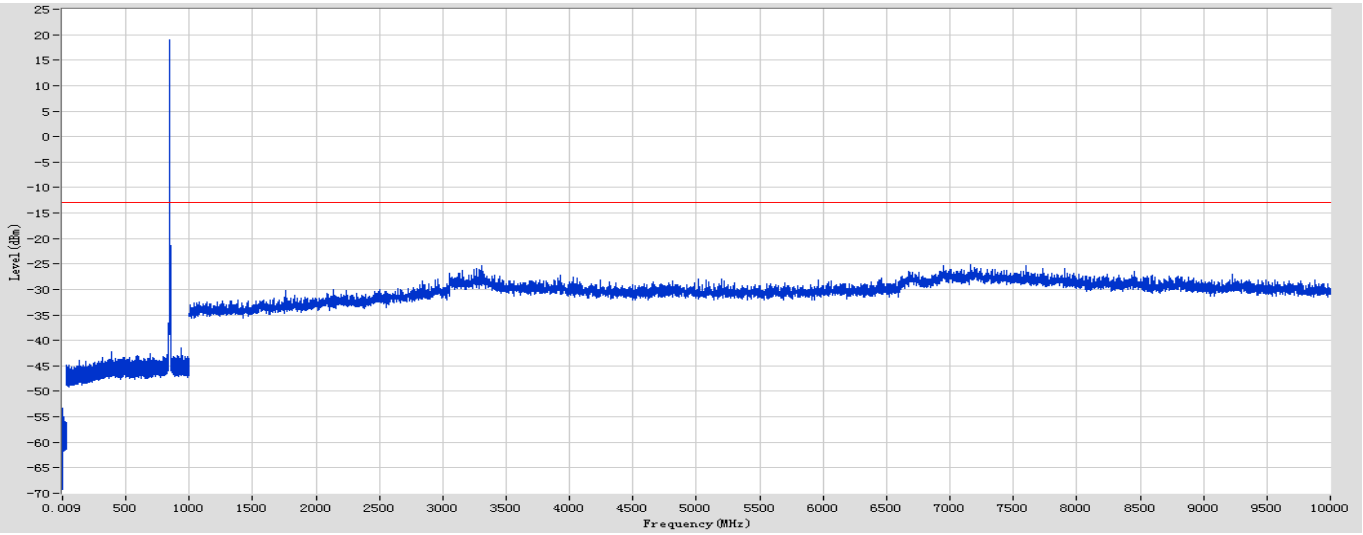
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	408.98	-42.11	-13	29.11	PASS
500	1000	0.1	Peak	827.77	18.78	N/A	N/A	N/A
1000	10000	1	Peak	6966.73	-24.80	-13	11.80	PASS

WCDMA 850MHz CHANNEL 4183



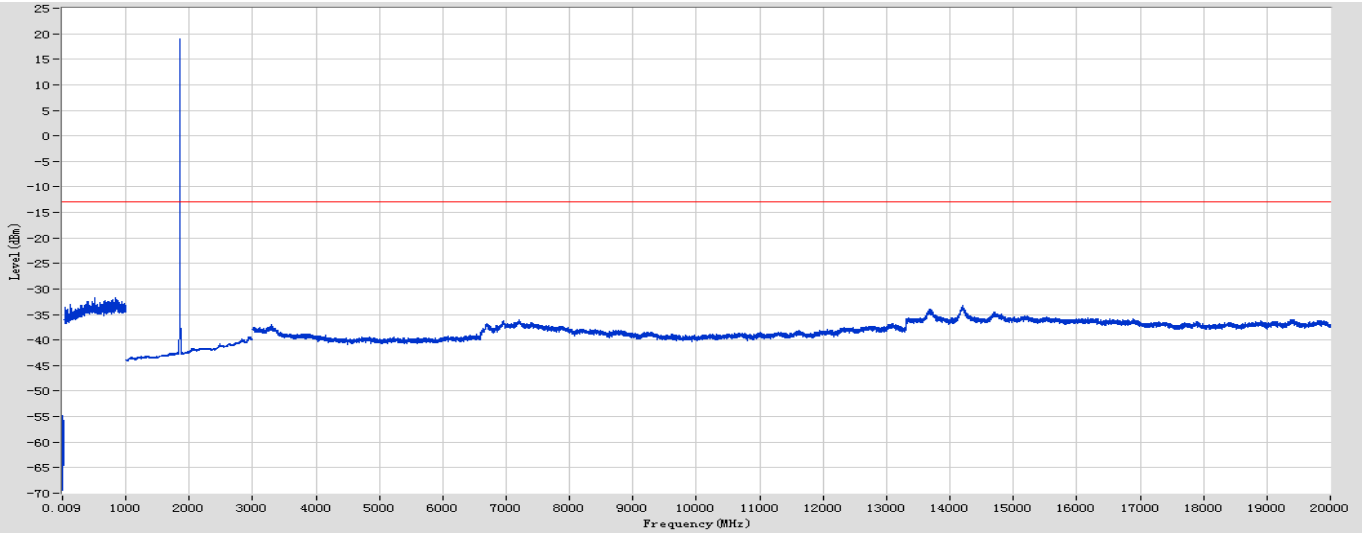
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	493.50	-42.91	-13	29.91	PASS
500	1000	0.1	Peak	837.17	19.75	N/A	N/A	N/A
1000	10000	1	Peak	7212.76	-24.48	-13	11.48	PASS

WCDMA 850MHz CHANNEL 4233



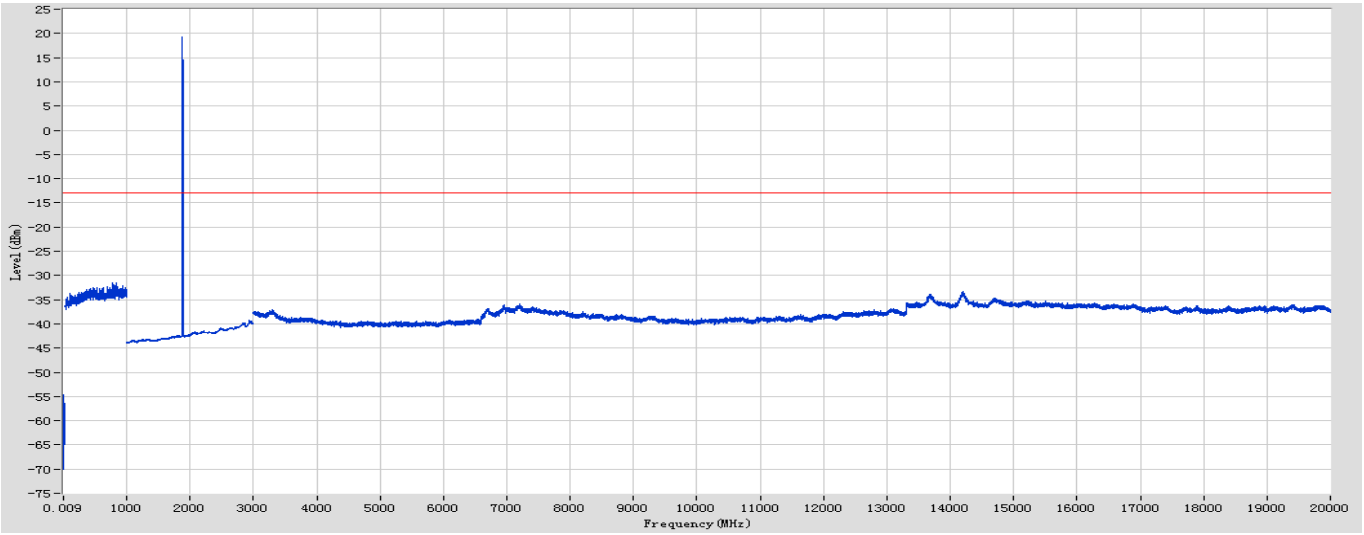
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	386.08	-42.25	-13	29.25	PASS
500	1000	0.1	Peak	846.97	18.99	N/A	N/A	N/A
1000	10000	1	Peak	7156.75	-25.21	-13	12.21	PASS

WCDMA 1900MHz CHANNEL 9262



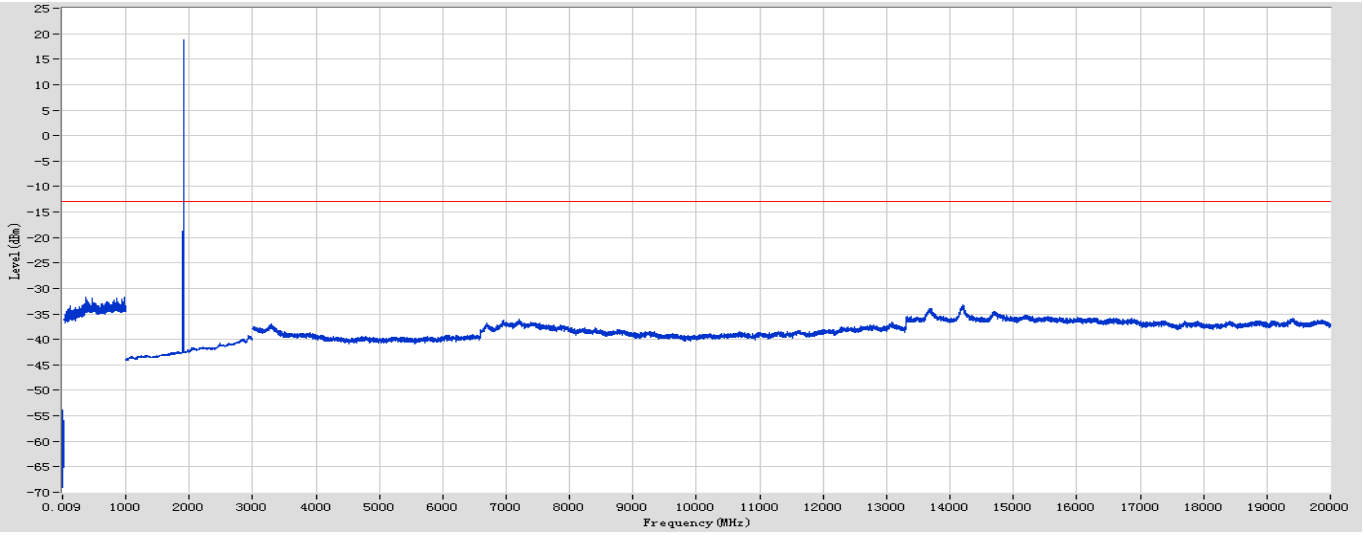
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	836.83	-31.63	-13	18.63	PASS
1000	3000	0.1	Peak	1852.43	19.03	N/A	N/A	N/A
3000	20000	1	Peak	14203.37	-33.22	-13	20.22	PASS

WCDMA 1900MHz CHANNEL 9401



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	838.83	-31.55	-13	18.55	PASS
1000	3000	0.1	Peak	1880.44	19.27	N/A	N/A	N/A
3000	10000	1	Peak	14196.37	-33.29	-13	20.29	PASS

WCDMA 1900MHz CHANNEL 9538



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	367.35	-31.66	-13	18.66	PASS
1000	3000	0.1	Peak	1907.45	18.88	N/A	N/A	N/A
3000	10000	1	Peak	14207.37	-33.29	-13	20.29	PASS

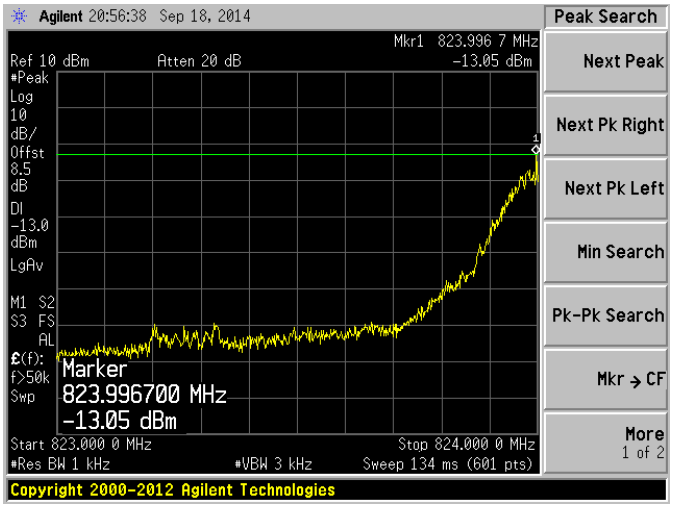
A.6 Band Edge

Test Data

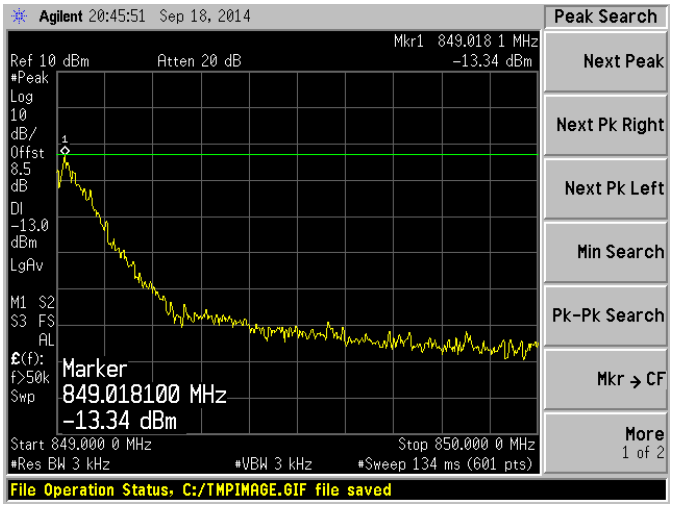
Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Limit (dBm)	Verdict
GSM 850	128	824.2	-13.05	-13	PASS
	251	848.8	-13.34		PASS
GSM 1900	512	1850.2	-13.15	-13	PASS
	810	1909.8	-14.18		PASS
GPRS 850	128	824.2	-13.53	-13	PASS
	251	848.8	-13.54		PASS
GPRS 1900	512	1850.2	-21.78	-13	PASS
	810	1909.8	-22.20		PASS
EGPRS 850	128	824.2	-14.03	-13	PASS
	251	848.8	-14.35		PASS
EGPRS 1900	512	1850.2	-20.84	-13	PASS
	810	1909.8	-22.73		PASS
WCDMA 850	4132	826.4	-20.16	-13	PASS
	4233	846.6	-20.85		PASS
WCDMA 1900	9262	1852.4	-16.12	-13	PASS
	9538	1907.6	-14.80		PASS

Test Plots

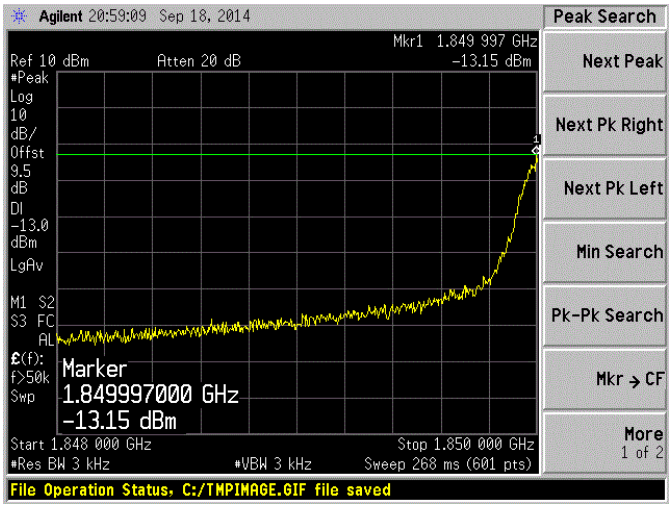
GSM 850MHz CHANNEL 128



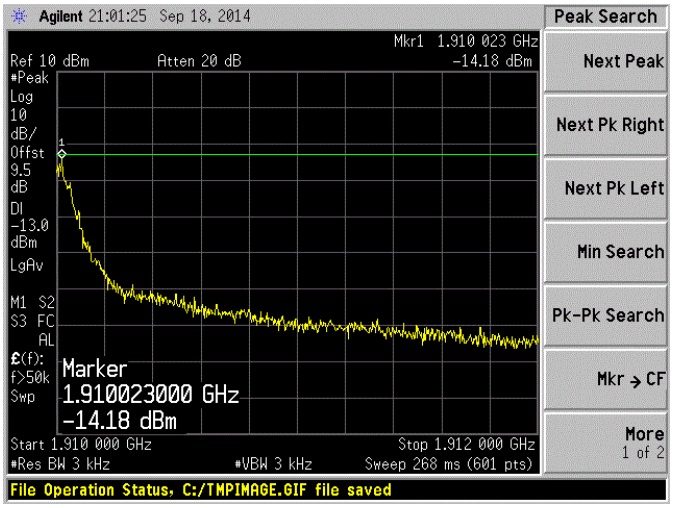
GSM 850MHz CHANNEL 251



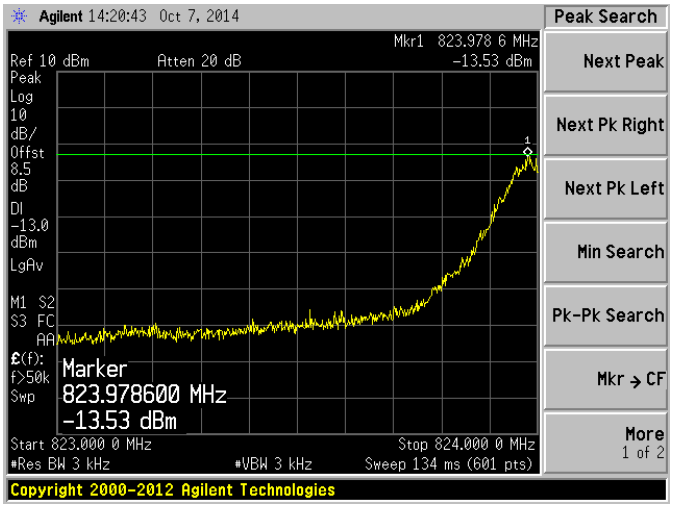
GSM 1900MHz CHANNEL 512



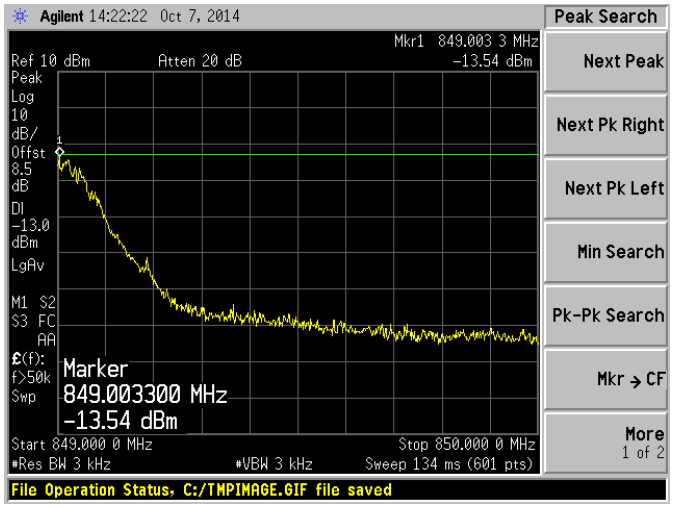
GSM 1900MHz CHANNEL 810



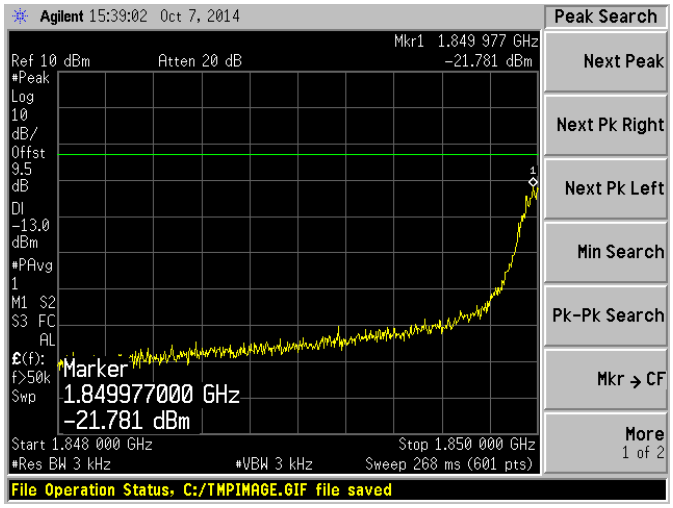
GPRS 850MHz CHANNEL 128



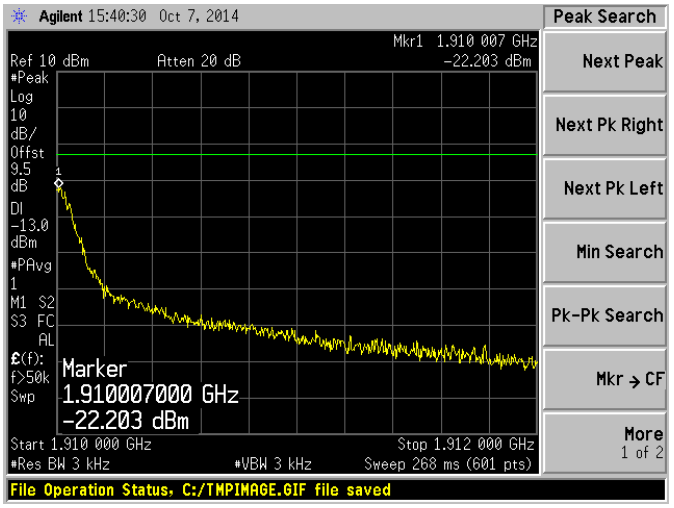
GPRS 850MHz CHANNEL 251



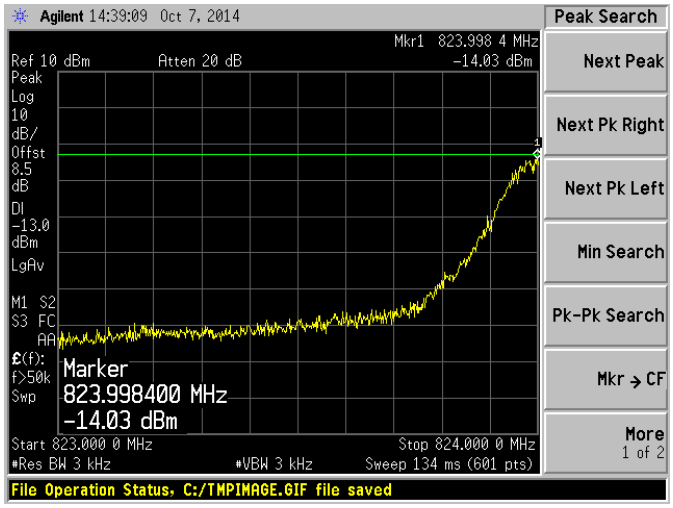
GPRS1900MHz CHANNEL 512



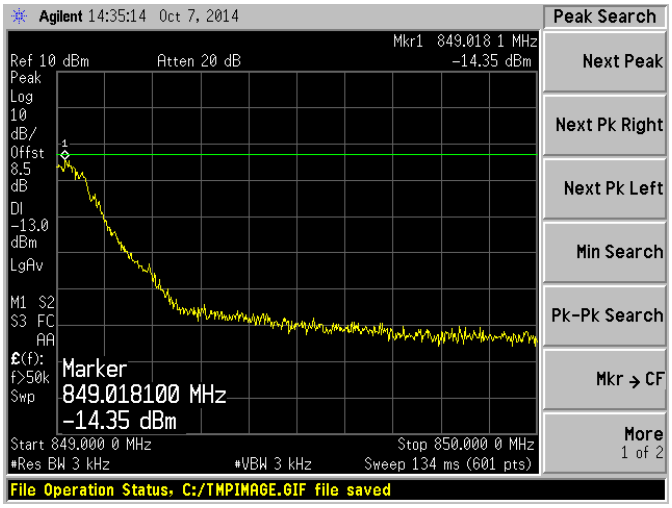
GPRS 1900MHz CHANNEL 810



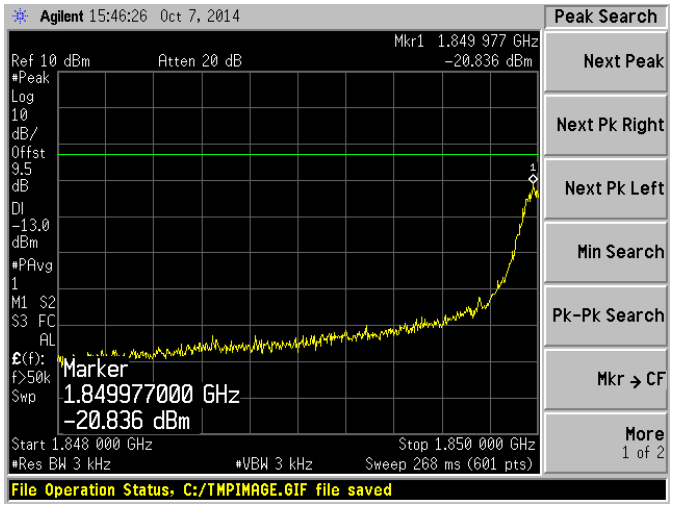
EGPRS 850MHz CHANNEL 128



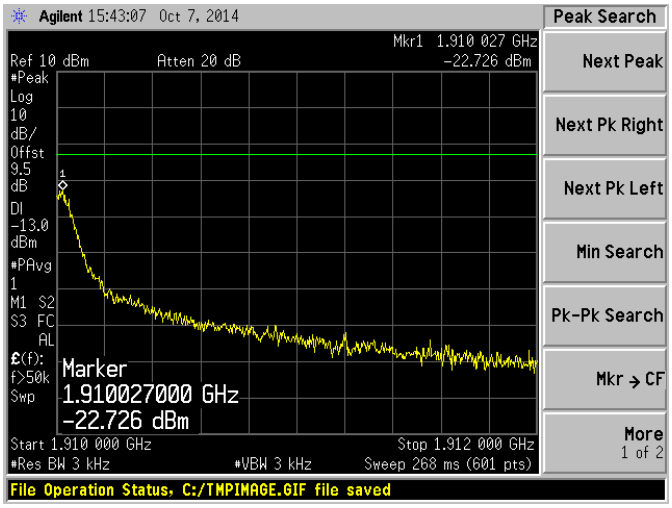
EGPRS 850MHz CHANNEL 251



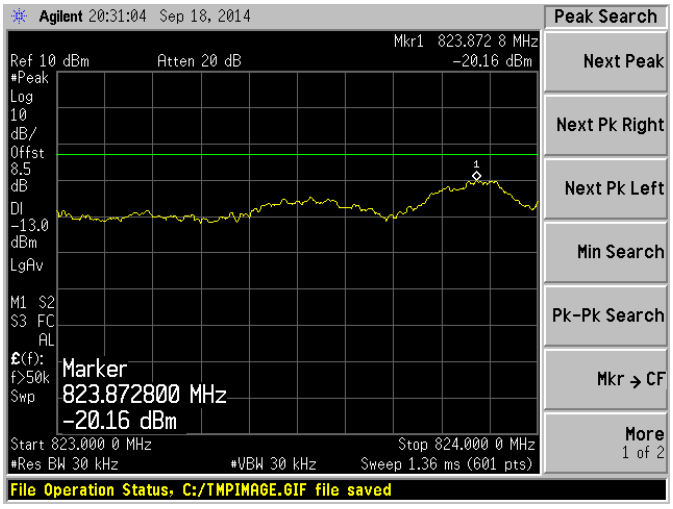
EGPRS 850MHz CHANNEL 512



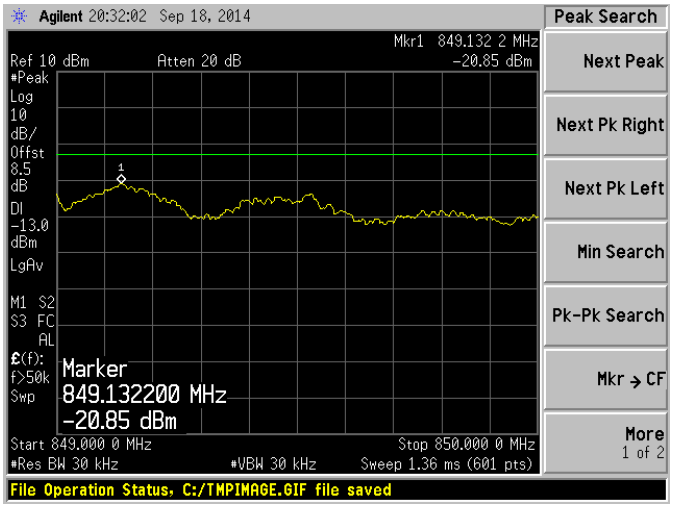
EGPRS 850MHz CHANNEL 810



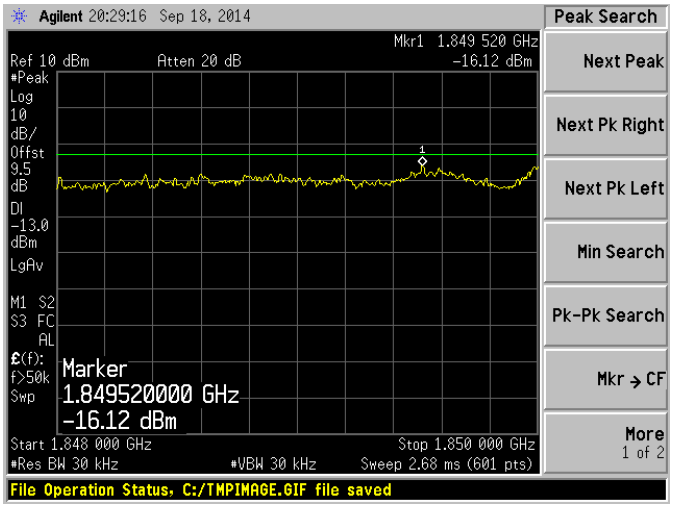
WCDMA 850MHz CHANNEL 4132



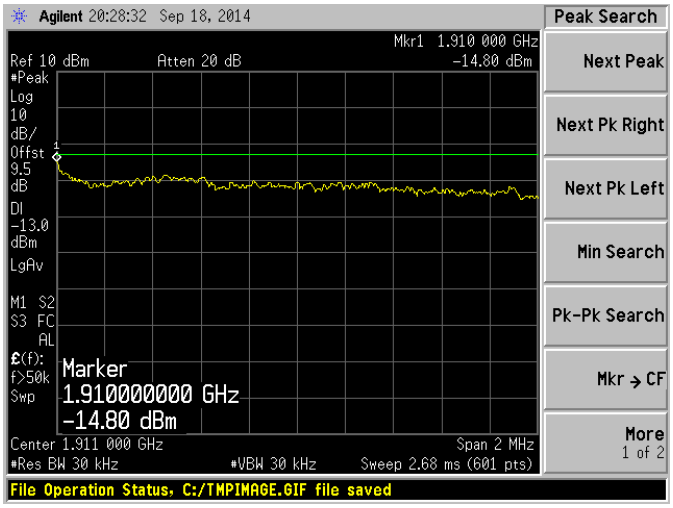
WCDMA 850MHz CHANNEL 4233



WCDMA 1900MHz CHANNEL 9262



WCDMA 1900MHz CHANNEL 9538



A.7 Transmitter Radiated Power (EIRP/ERP)

Minimum RF power: GSM850 5.36dBm, GSM 1900 -0.78dBm，WCDMA 850 -1.29dBm, WCDMA 1900 -0.55dBm.

Test Data

GSM Mode Test data:

Band	Channel	Frequency (MHz)	PCL	Measured ERP				Limit		Verdict
				SA Read Value dBm	Correction Factor(dB)	ERP (dBm)	ERP (W)	dBm	W	
GSM 850	128	824.20	5	-10.67	41	30.33	1.08	38.5	7	PASS
	190	836.60	5	-10.36	41	30.64	1.16			PASS
	251	848.80	5	-10.19	41	30.81	1.21			PASS
GPRS 850	128	824.20	5	-10.55	41	30.45	1.11	38.5	7	PASS
	190	836.60	5	-11.95	41	29.05	0.80			PASS
	251	848.80	5	-14.18	41	26.82	0.48			PASS
EGPRS 850	128	824.20	5	-10.86	41	30.14	1.03	38.5	7	PASS
	190	836.60	5	-12.20	41	28.80	0.76			PASS
	251	848.80	5	-14.15	41	26.85	0.48			PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP				Limit		Verdict
				SA Read Value (dBm)	Correction Factor(dB)	EIRP (dBm)	EIRP (W)	dBm	W	
GSM 1900	512	1850.2	0	-17.00	43	26.00	0.40	33	2	PASS
	661	1880.0	0	-17.20	43	25.80	0.38			PASS
	810	1909.8	0	-15.91	43	27.09	0.51			PASS
GPRS 1900	512	1850.2	0	-17.22	43	25.78	0.38	33	2	PASS
	661	1880.0	0	-17.90	43	25.1	0.32			PASS
	810	1909.8	0	-16.42	43	26.58	0.45			PASS
EGPRS 1900	512	1850.2	0	-20.41	43	22.59	0.18	33	2	PASS
	661	1880.0	0	-20.42	43	22.58	0.18			PASS
	810	1909.8	0	-19.34	43	23.66	0.23			PASS

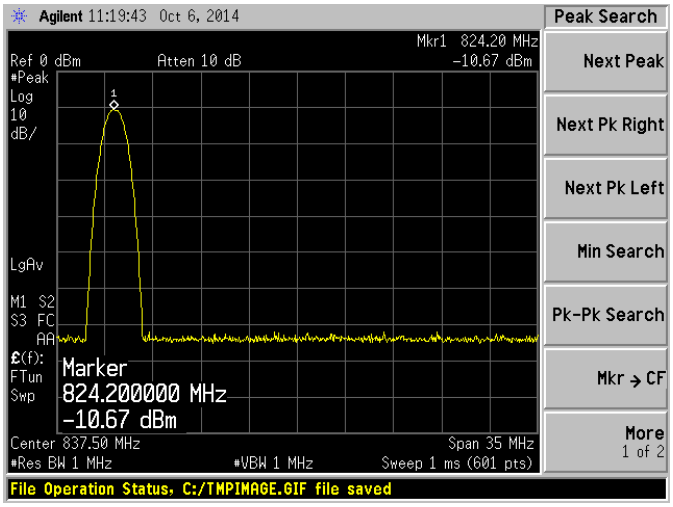
WCDMA Mode Test data:

Band	Channel	Frequency (MHz)	Measured ERP				Limit		Verdict
			SA Read Value (dBm)	Correction Factor(dB)	ERP (dBm)	ERP (W)	dBm	W	
WCDMA 850	4132	826.4	-17.83	41	23.17	0.21	38.5	7	PASS
	4183	836.6	-18.82	41	22.18	0.17			PASS
	4233	846.6	-18.42	41	22.58	0.18			PASS

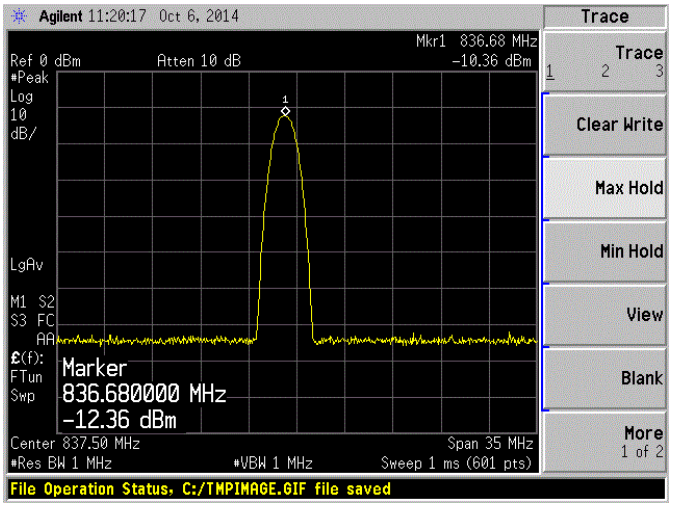
Band	Channel	Frequency (MHz)	Measured EIRP				Limit		Verdict
			SA Read Value (dBm)	Correction Factor(dB)	EIRP (dBm)	EIRP (W)	dBm	W	
WCDMA 1900	9262	1852.4	-21.40	43	21.6	0.14	33	2	PASS
	9401	1880.2	-21.66	43	21.34	0.14			PASS
	9538	1907.6	-20.20	43	22.8	0.19			PASS

Test Plots

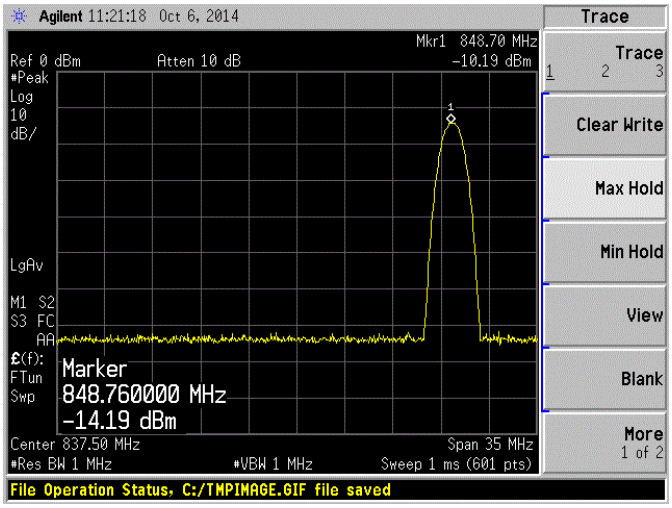
GSM 850MHz CHANNEL 128



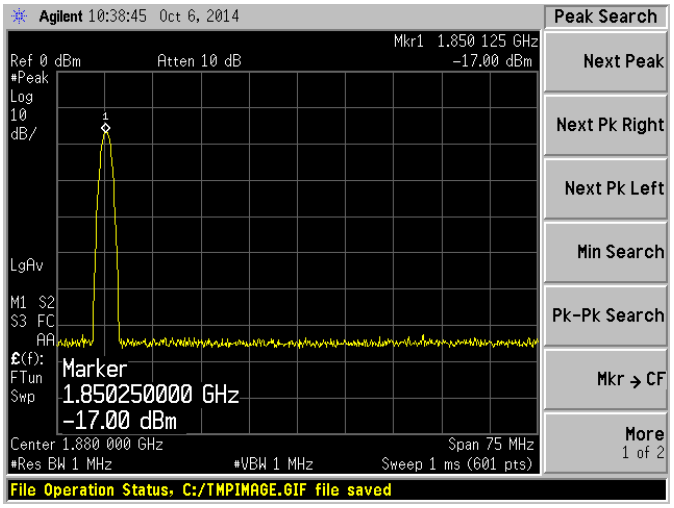
GSM 850MHz CHANNEL 190



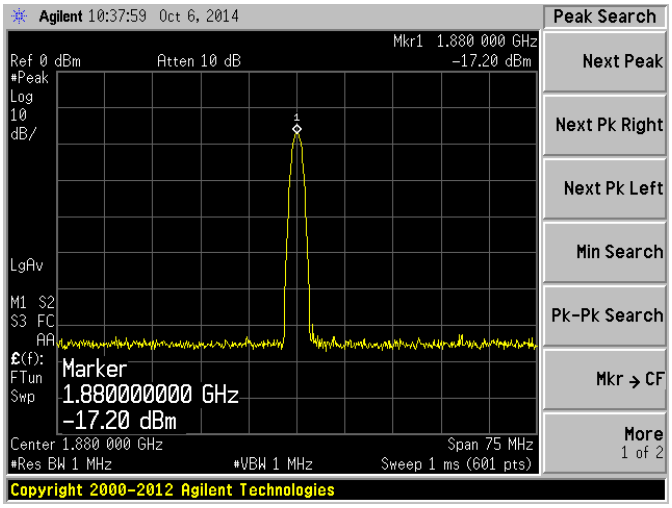
GSM 850MHz CHANNEL 251



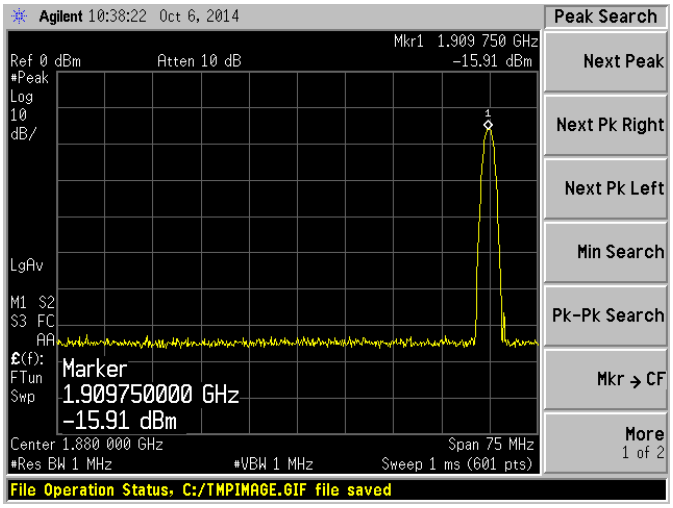
GSM 1900MHz CHANNEL 512



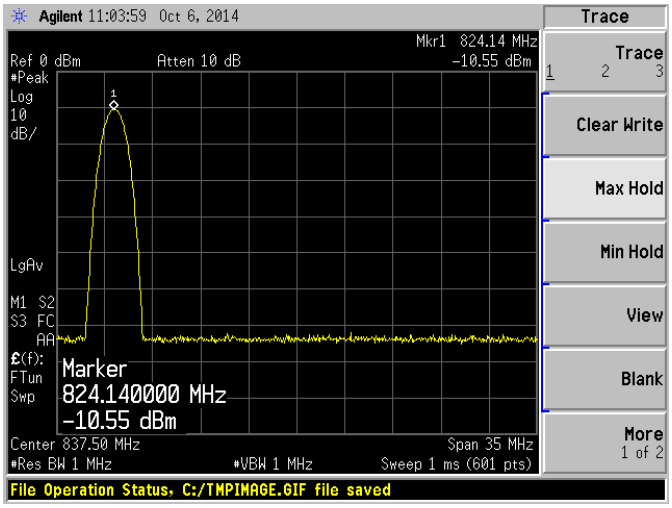
GSM 1900MHz CHANNEL 661



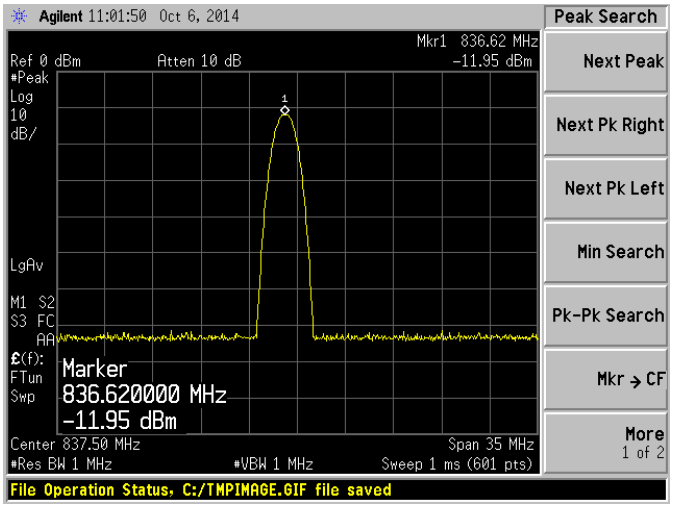
GSM 1900MHz CHANNEL 810



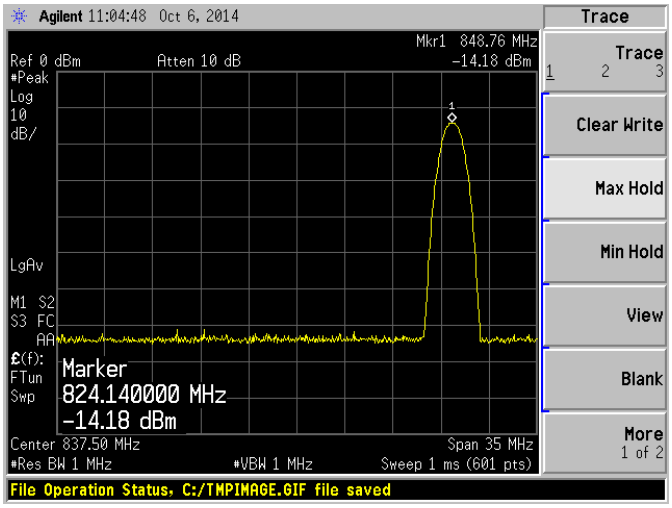
GPRS 850MHz CHANNEL 128



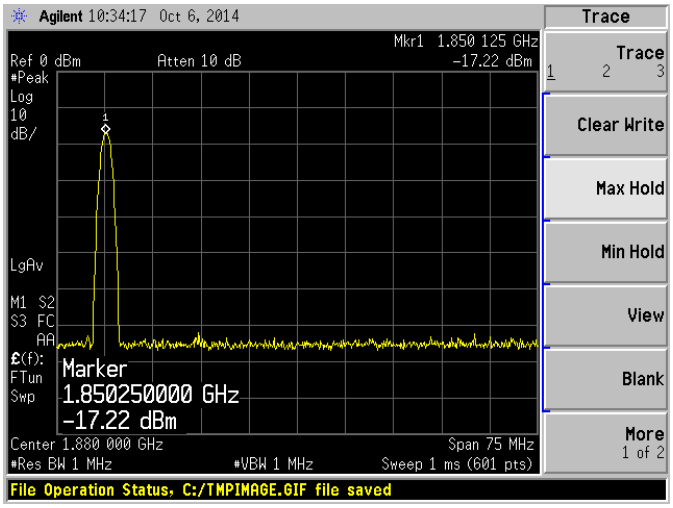
GPRS 850MHz CHANNEL 190



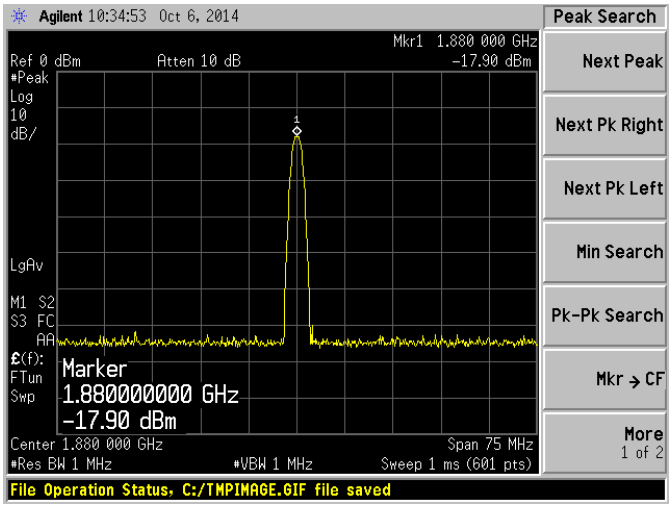
GPRS 850MHz CHANNEL 251



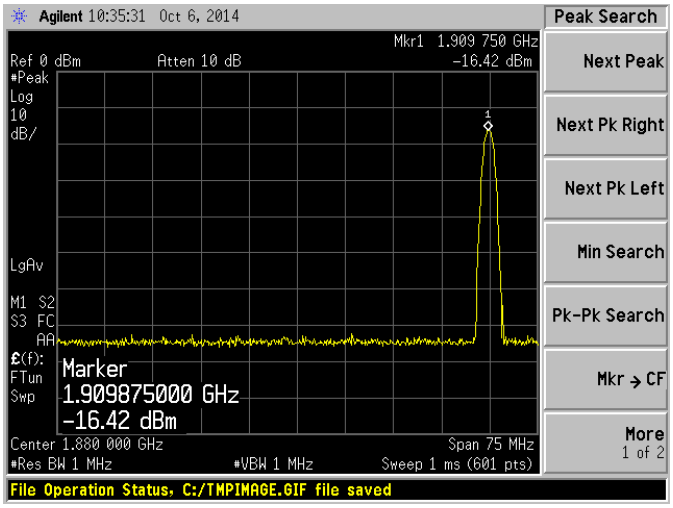
GPRS 1900MHz CHANNEL 512



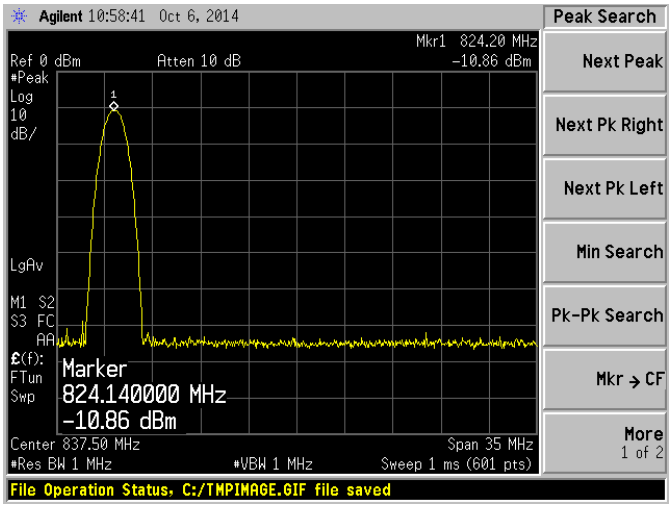
GPRS 1900MHz CHANNEL 661



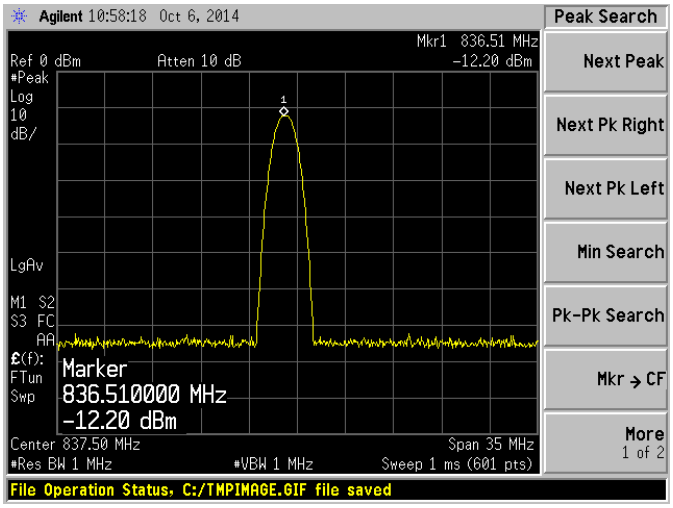
GPRS 1900MHz CHANNEL 810



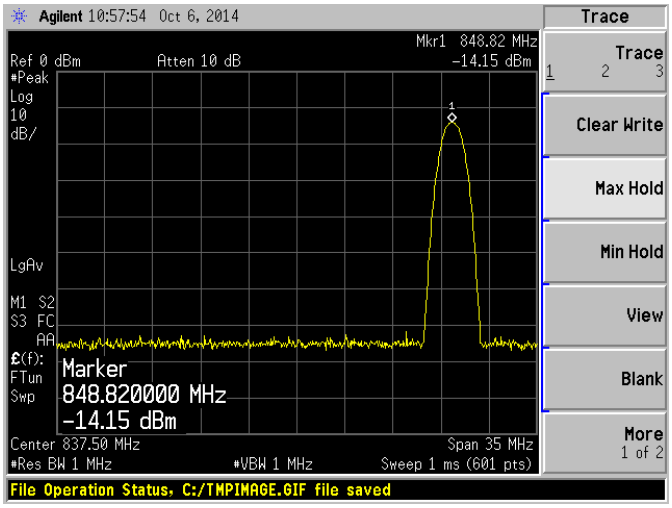
EGPRS 850MHz CHANNEL 128



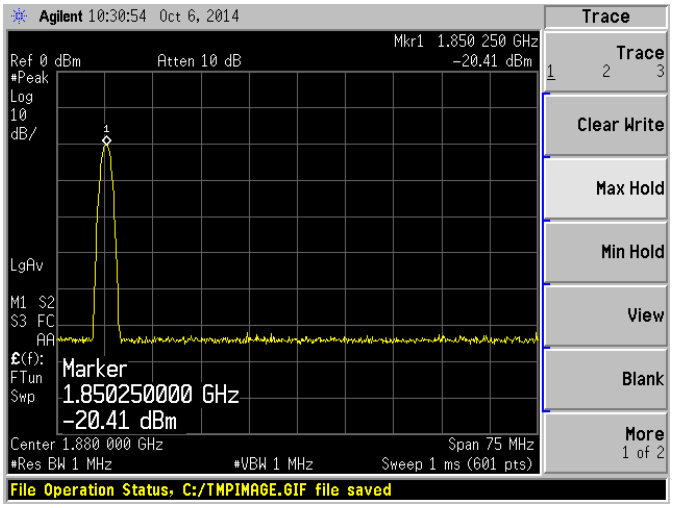
EGPRS 850MHz CHANNEL 190



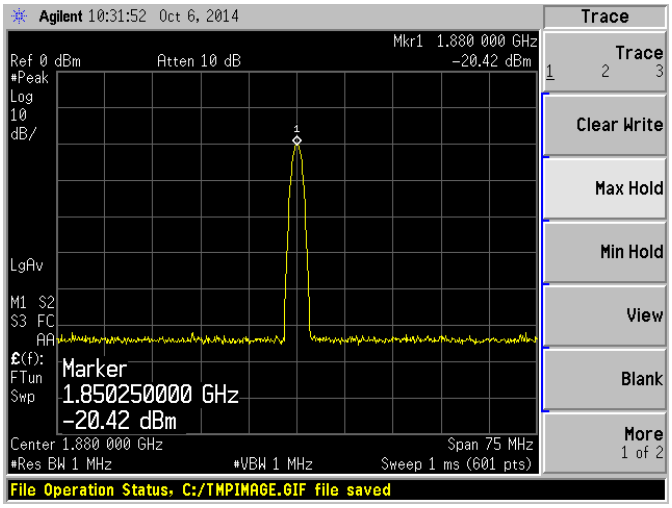
EGPRS 850MHz CHANNEL 251



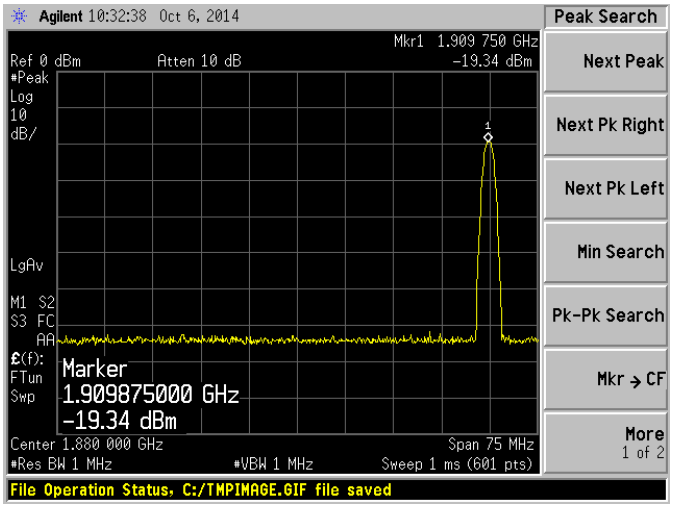
EGPRS 1900MHz CHANNEL 512



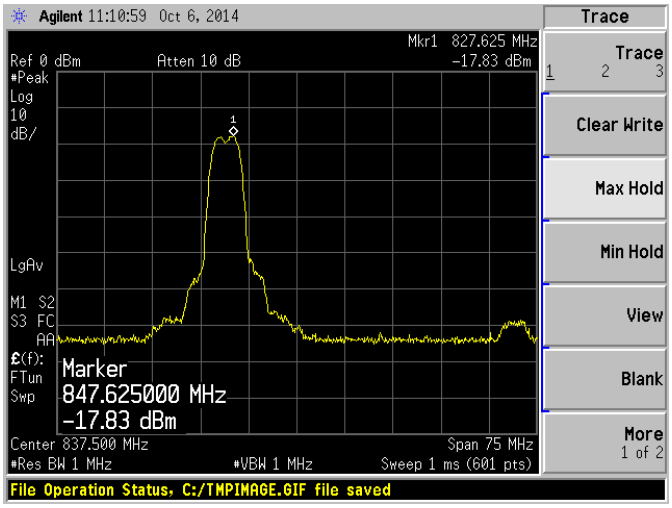
EGPRS 1900MHz CHANNEL 661



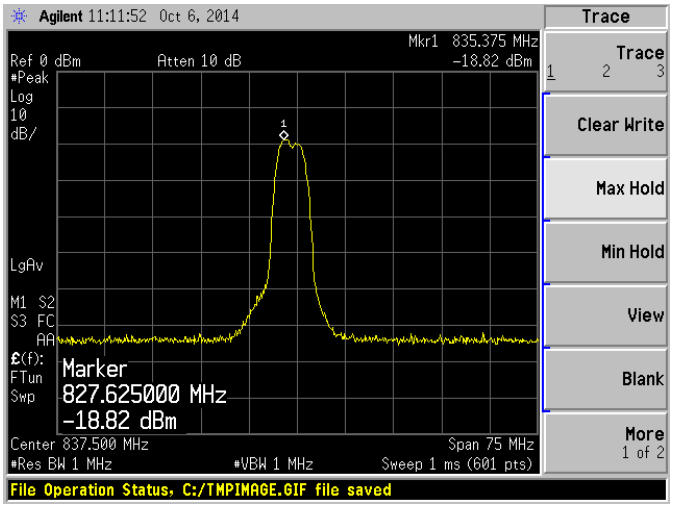
EGPRS 1900MHz CHANNEL 810



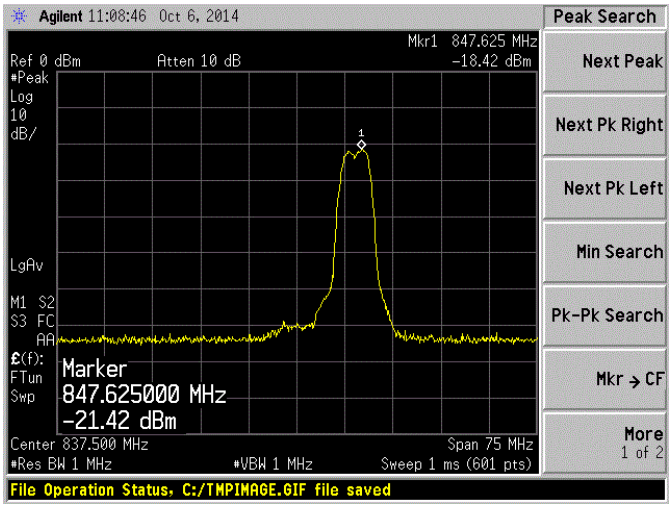
WCDMA 850MHz CHANNEL 4132



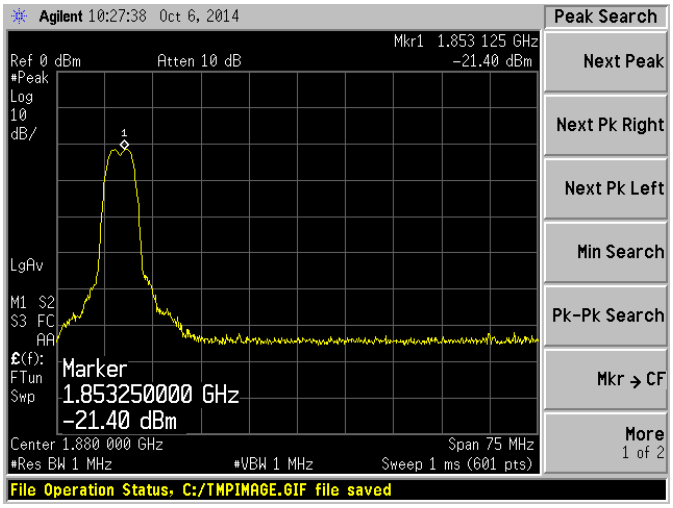
WCDMA 850MHz CHANNEL 4183



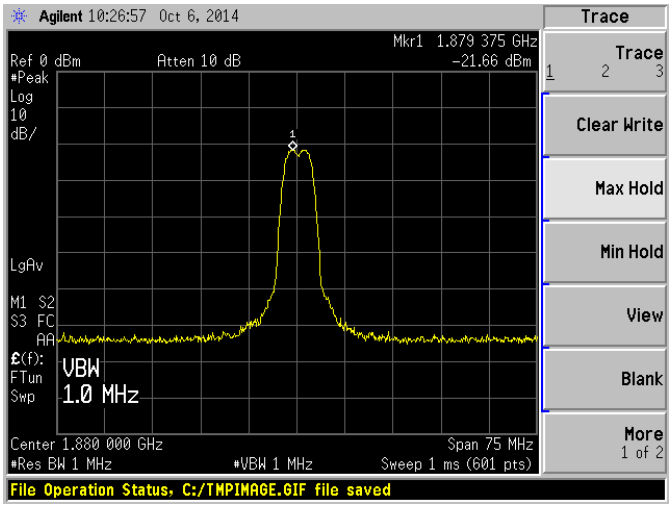
WCDMA 850MHz CHANNEL 4233



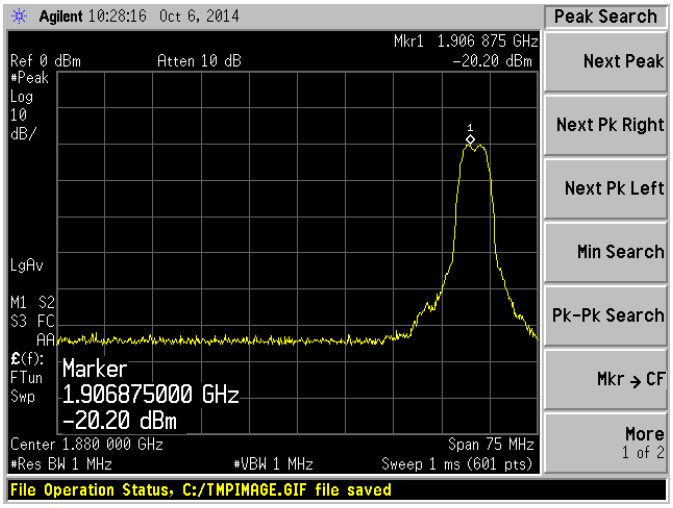
WCDMA 1900MHz CHANNEL 9262



WCDMA 1900MHz CHANNEL 9401



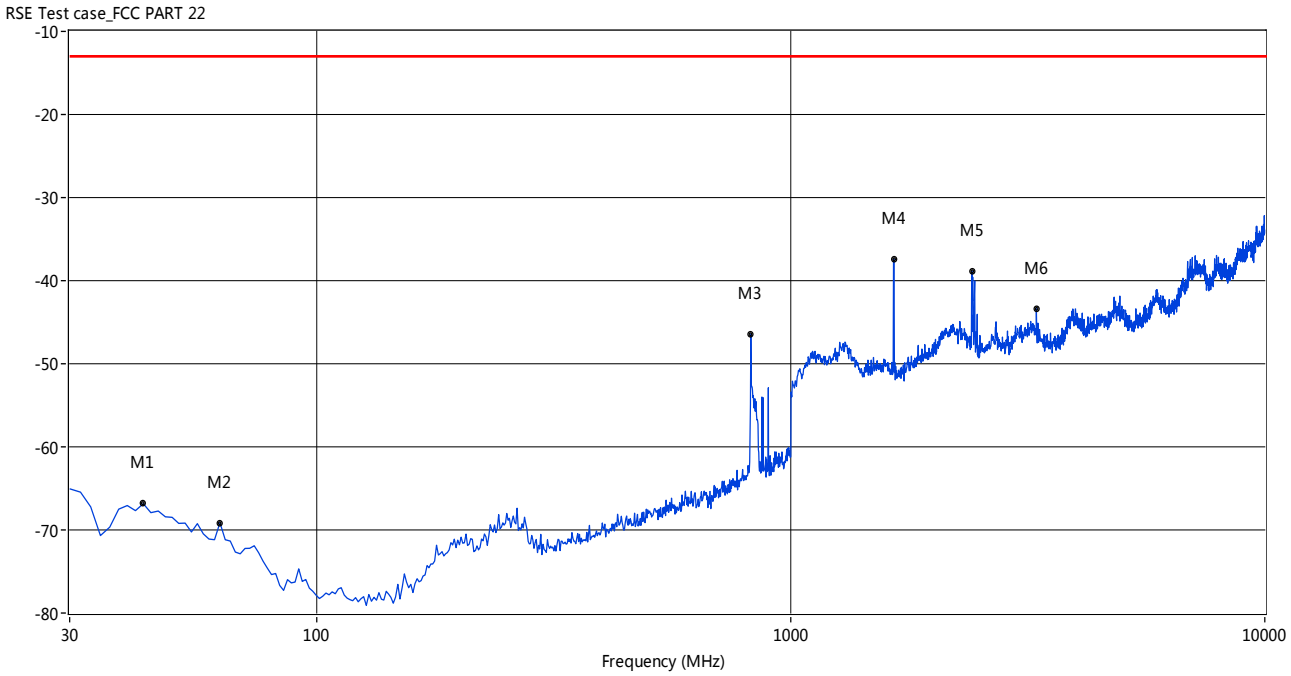
WCDMA 1900MHz CHANNEL 9538



A.8 Radiated Out of Band Emissions

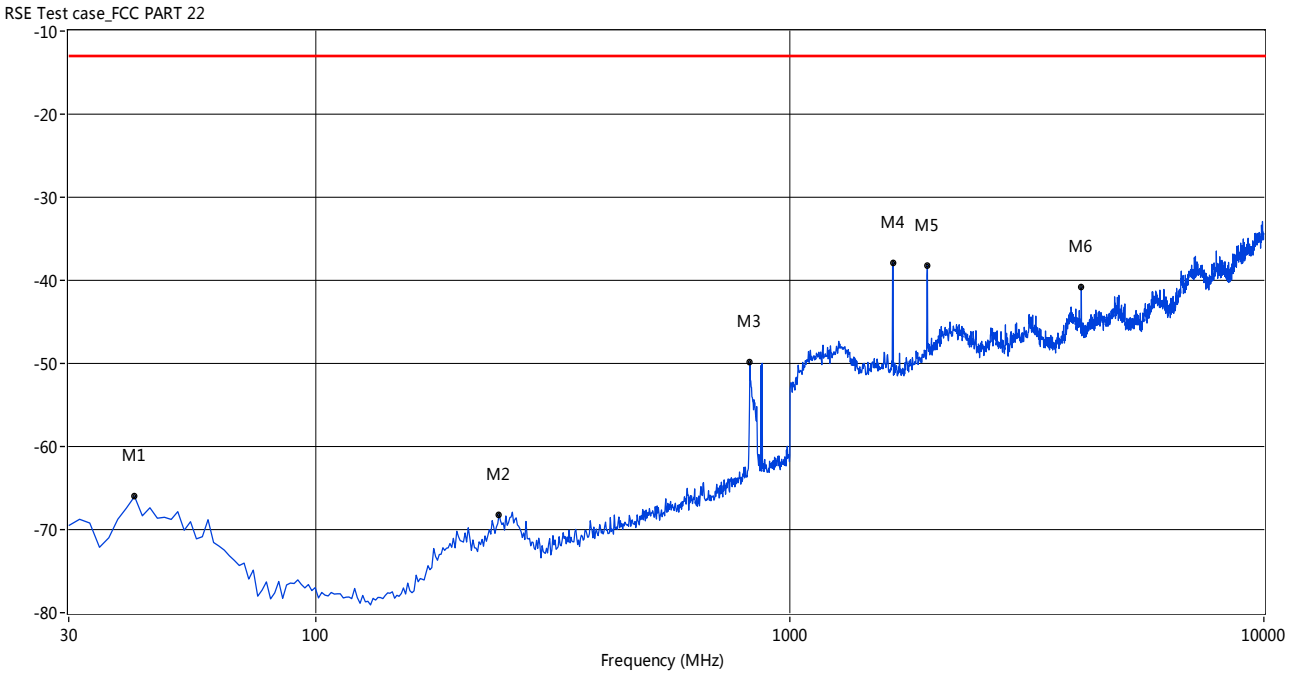
Test Data

GSM 850MHz CHANNEL 128, ANT V



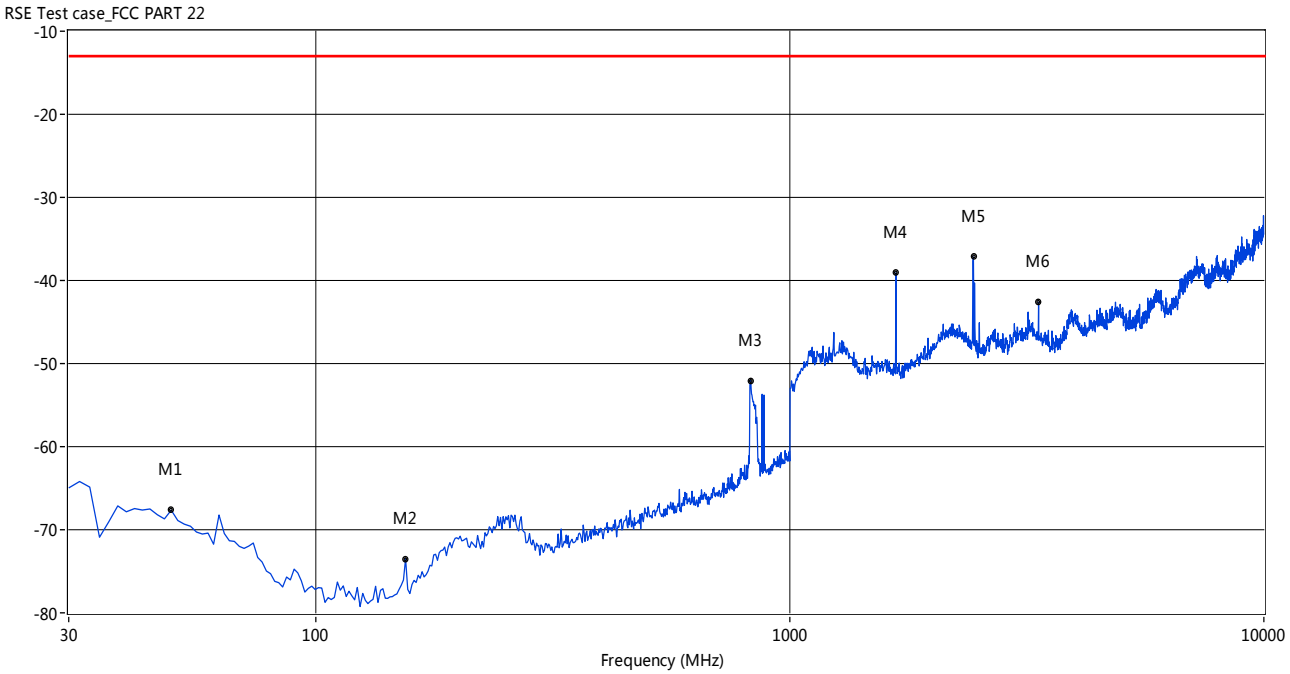
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
42.91	-66.85	-0.85	-13.0	53.85	64.10	Vertical	PASS
62.28	-69.12	-4.97	-13.0	56.12	318.30	Vertical	PASS
822.46	-46.43	16.39	-13.0	33.43	163.90	Vertical	PASS
1645.59	-37.46	10.96	-13.0	24.46	185.50	Vertical	PASS
2407.65	-38.83	14.77	-13.0	25.83	307.80	Vertical	PASS
3294.51	-43.38	21.56	-13.0	30.38	327.50	Vertical	PASS

GSM 850MHz CHANNEL 128, ANT H



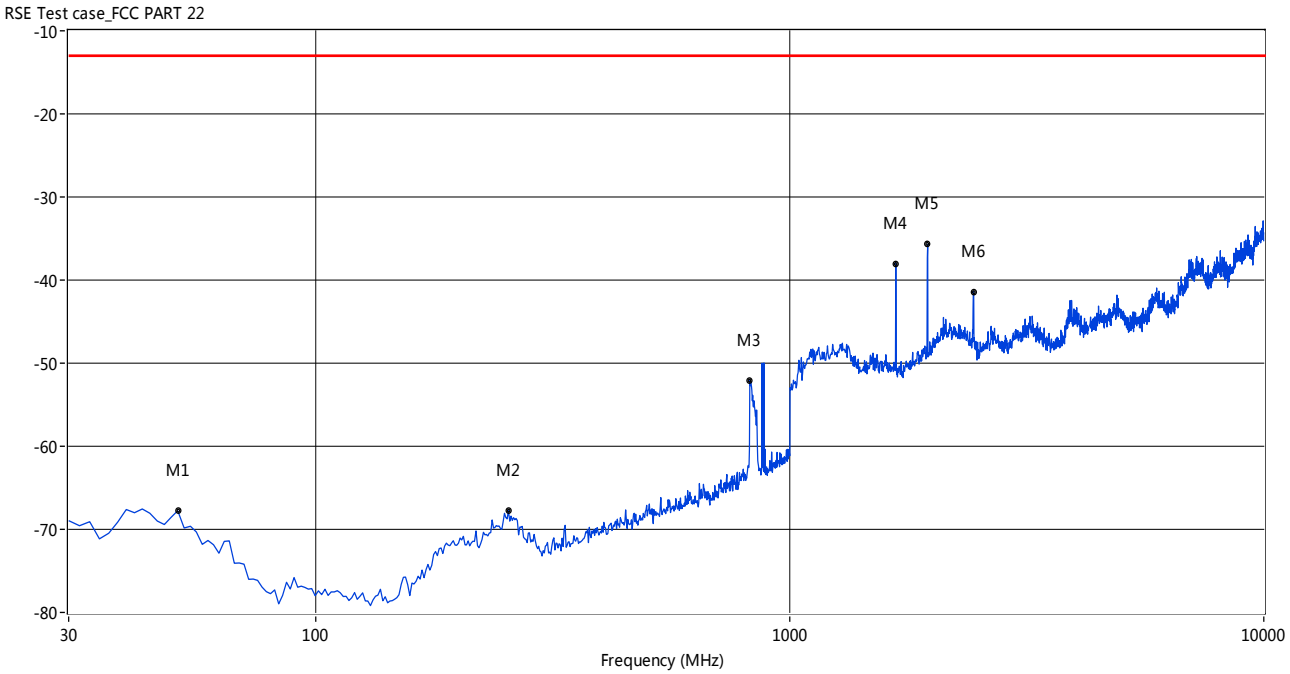
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
41.30	-66.02	-0.83	-13.0	53.02	235.10	Horizontal	PASS
243.04	-68.15	-2.59	-13.0	55.15	85.40	Horizontal	PASS
822.46	-49.82	16.39	-13.0	36.82	279.50	Horizontal	PASS
1648.92	-37.87	10.88	-13.0	24.87	15.20	Horizontal	PASS
1948.42	-38.17	13.22	-13.0	25.17	57.80	Horizontal	PASS
4118.14	-40.80	23.86	-13.0	27.80	359.50	Horizontal	PASS

GSM 850MHz CHANNEL 190, ANT V



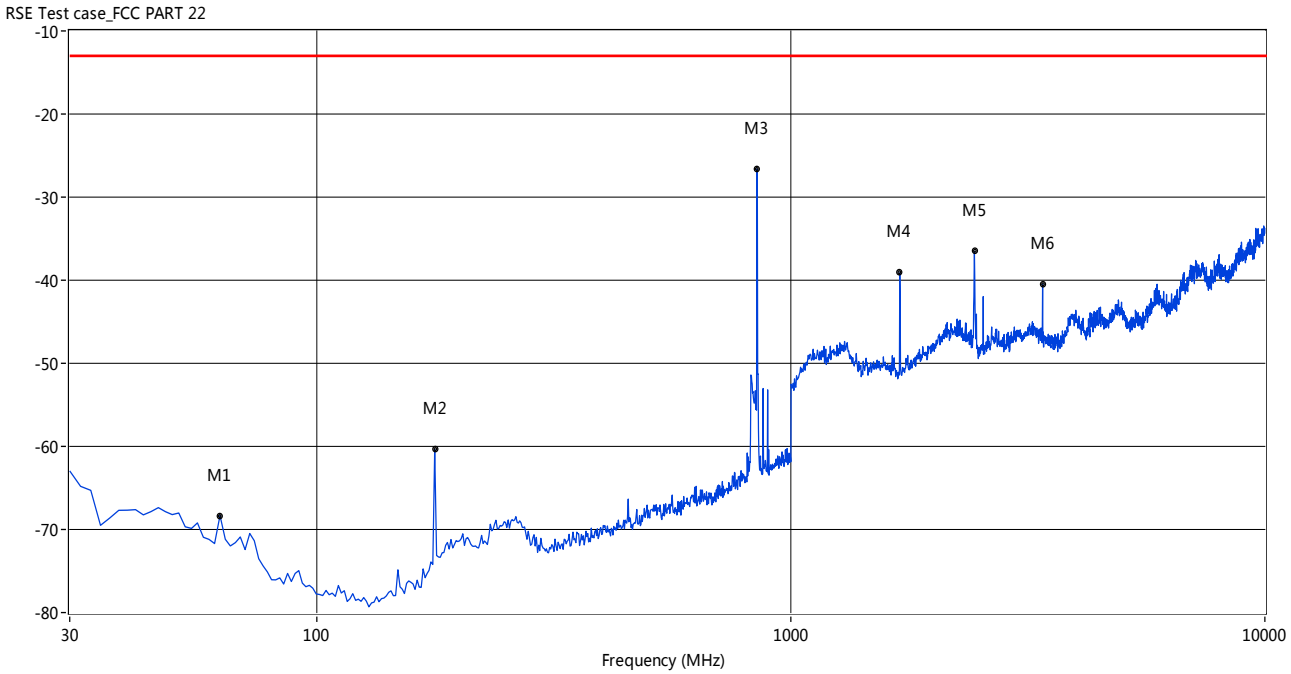
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
49.37	-67.64	-1.35	-13.0	54.64	73.50	Vertical	PASS
154.28	-73.49	-10.55	-13.0	60.49	359.60	Vertical	PASS
824.08	-52.03	16.10	-13.0	39.03	68.70	Vertical	PASS
1672.21	-39.08	10.80	-13.0	26.08	191.20	Vertical	PASS
2437.60	-37.17	14.38	-13.0	24.17	185.20	Vertical	PASS
3344.43	-42.64	21.58	-13.0	29.64	192.30	Vertical	PASS

GSM 850MHz CHANNEL 190, ANT H



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	EUT	Verdict
50.98	-67.77	-1.69	-13.0	54.77	139.60	Horizontal	Vertical	PASS
254.34	-67.75	-1.87	-13.0	54.75	159.60	Horizontal	Vertical	PASS
822.46	-52.07	16.39	-13.0	39.07	65.20	Horizontal	Vertical	PASS
1672.21	-38.02	10.80	-13.0	25.02	21.10	Horizontal	Vertical	PASS
1951.75	-35.69	13.30	-13.0	22.69	-0.60	Horizontal	Vertical	PASS
2437.60	-41.40	14.38	-13.0	28.40	312.50	Horizontal	Vertical	PASS

GSM 850MHz CHANNEL 251, ANT V

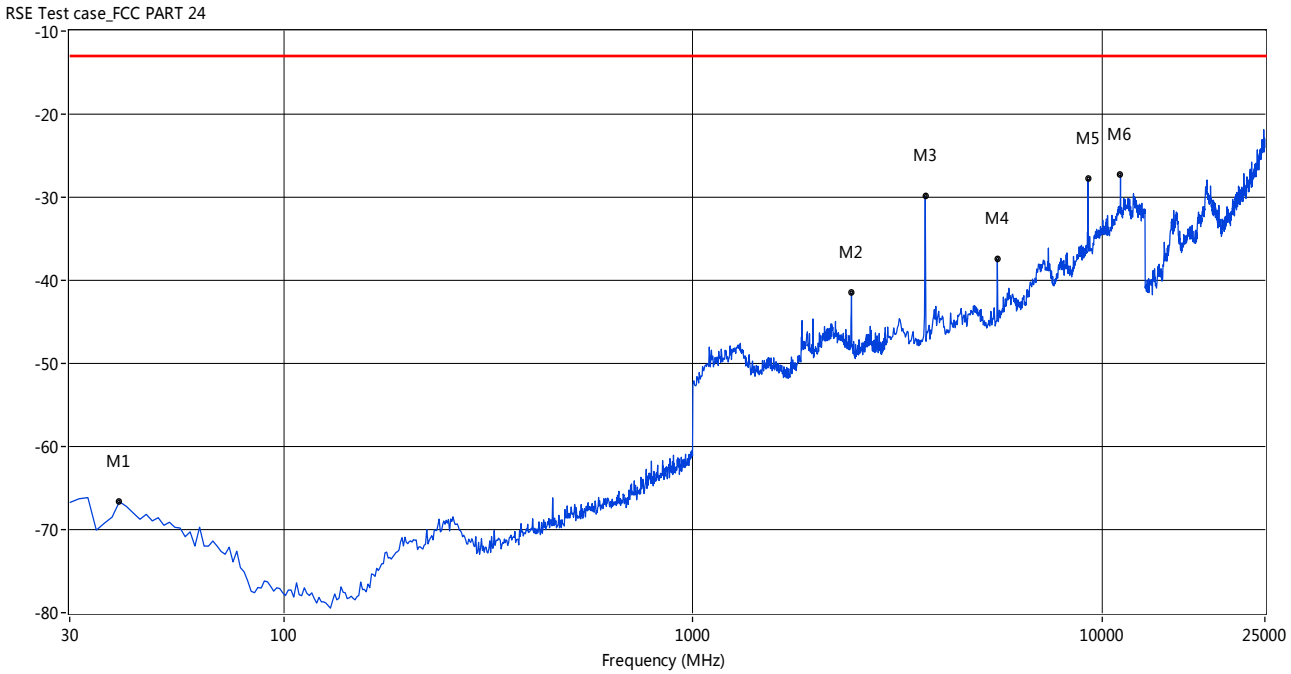


Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
62.28	-68.32	-4.97	-13.0	55.32	334.30	Vertical	PASS
176.87	-60.35	-6.48	-13.0	47.35	3.40	Vertical	PASS
846.67	-26.59	11.95	-13.0	13.59	176.00	Vertical	PASS
1695.51	-39.11	10.96	-13.0	26.11	187.50	Vertical	PASS
2437.60	-36.52	14.38	-13.0	23.52	290.90	Vertical	PASS
3394.34	-40.47	21.68	-13.0	27.47	325.00	Vertical	PASS

GSM 850MHz CHANNEL 251, ANT H

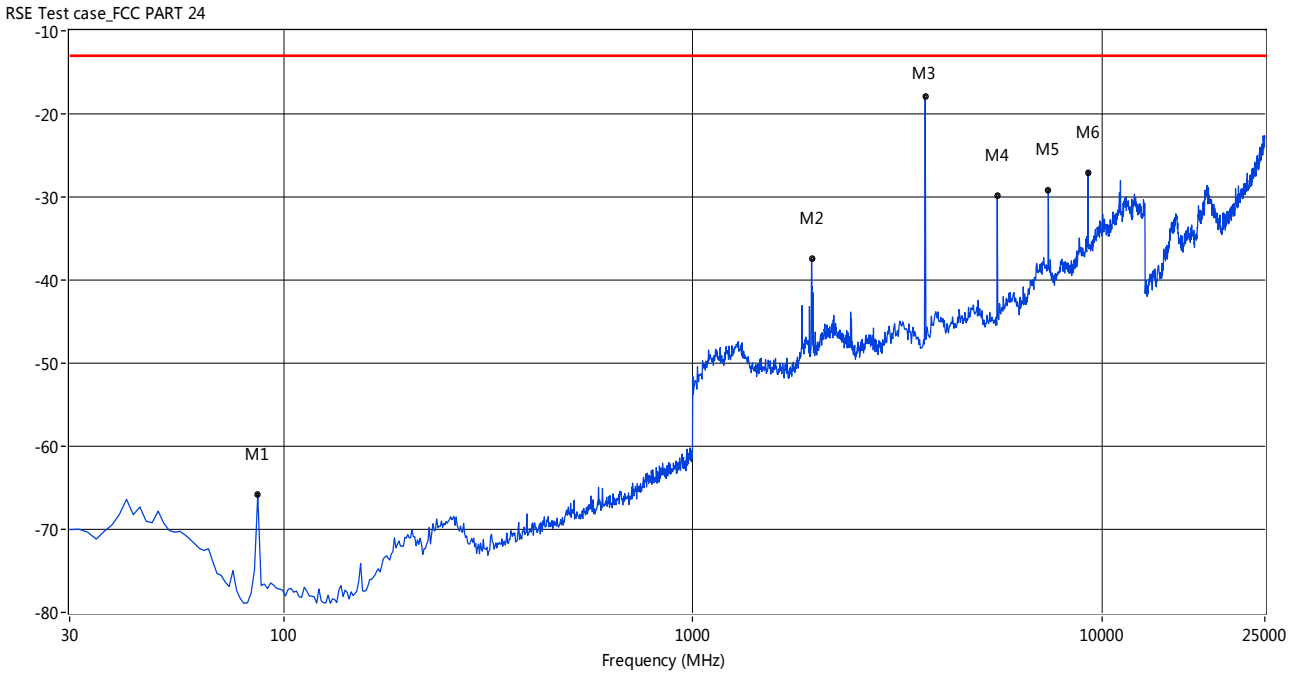
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
91.33	-76.00	-9.13	-13.0	63.00	33.50	Horizontal	PASS
435.11	-66.64	-2.11	-13.0	53.64	352.00	Horizontal	PASS
846.67	-31.26	11.95	-13.0	18.26	308.50	Horizontal	PASS
1695.51	-39.79	10.96	-13.0	26.79	26.60	Horizontal	PASS
4242.93	-41.93	24.10	-13.0	28.93	81.20	Horizontal	PASS
5920.13	-39.34	28.65	-13.0	26.34	95.70	Horizontal	PASS

GSM 1900MHz CHANNEL 512, ANT V



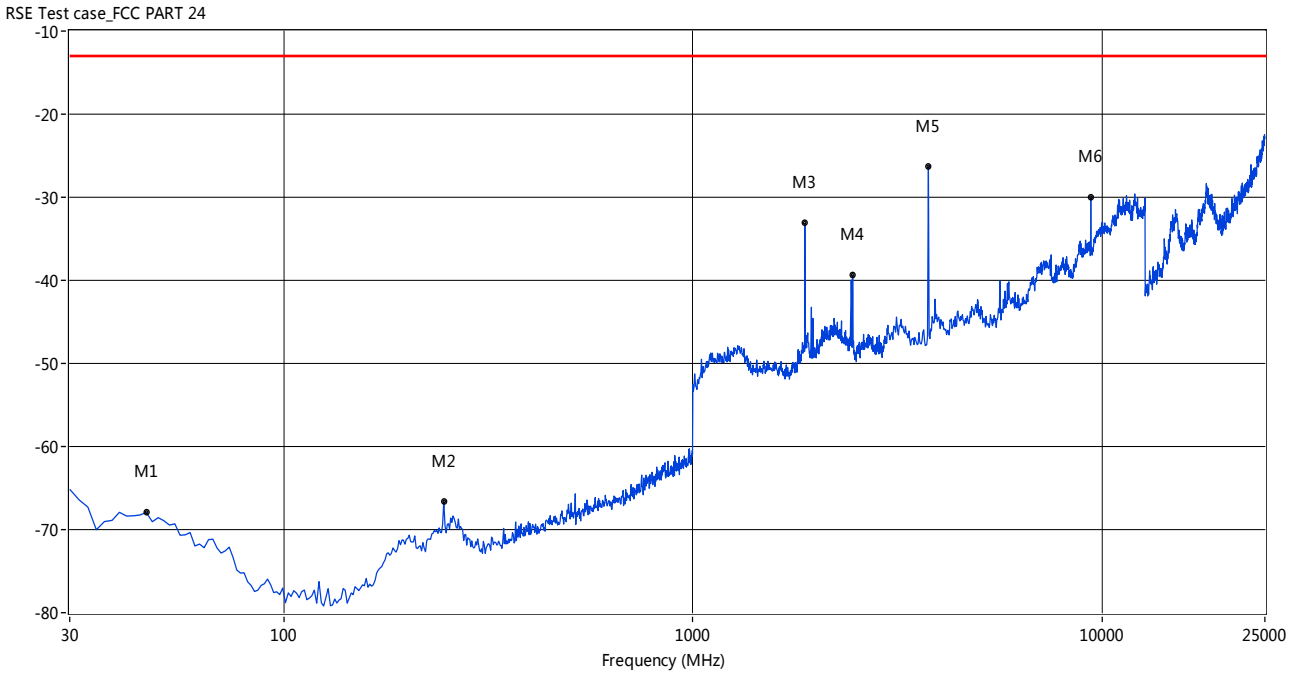
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
39.68	-66.64	-1.23	-13.0	53.64	82.00	Vertical	PASS
2440.93	-41.53	14.69	-13.0	28.53	312.30	Vertical	PASS
3697.59	-29.87	21.83	-13.0	16.87	147.60	Vertical	PASS
5547.00	-37.48	25.71	-13.0	24.48	126.80	Vertical	PASS
9245.84	-27.82	33.84	-13.0	14.82	65.00	Vertical	PASS
11095.26	-27.31	38.19	-13.0	14.31	147.60	Vertical	PASS

GSM 1900MHz CHANNEL 512, ANT H



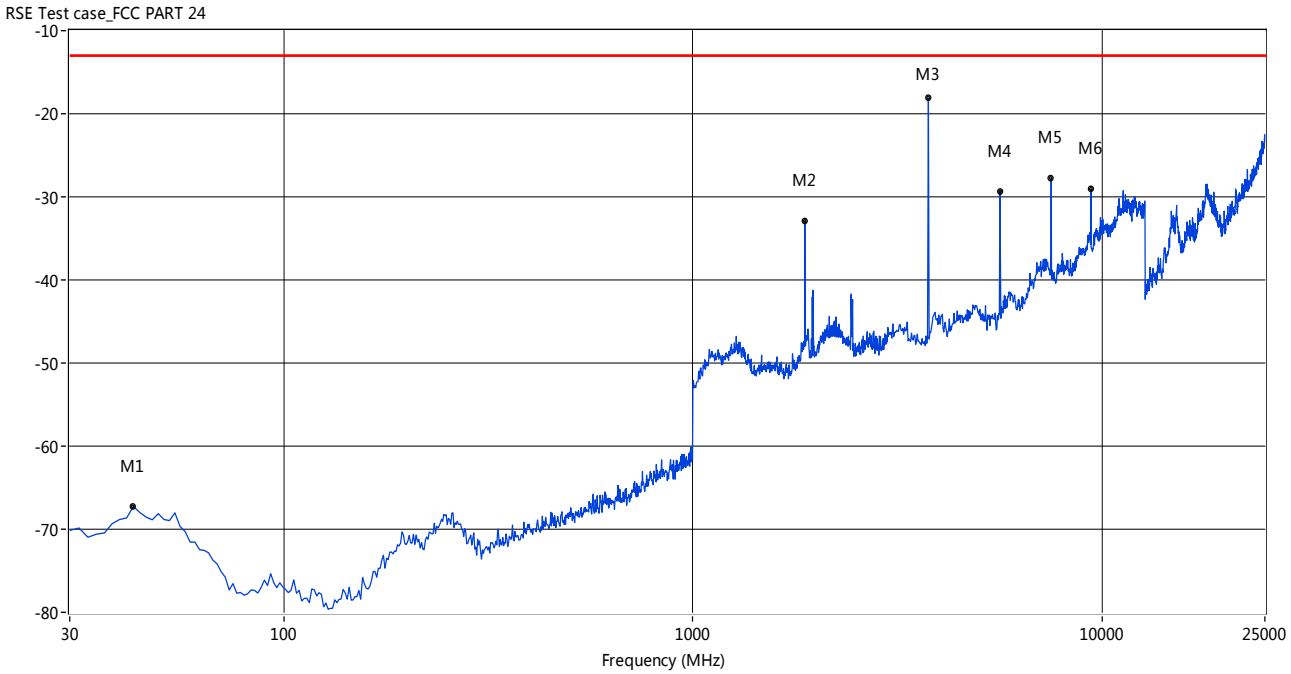
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-65.84	-10.03	-13.0	52.84	303.50	Horizontal	PASS
1951.75	-37.45	13.43	-13.0	24.45	330.30	Horizontal	PASS
3697.59	-17.97	21.83	-13.0	4.97	173.90	Horizontal	PASS
5547.00	-29.91	25.71	-13.0	16.91	122.80	Horizontal	PASS
7396.42	-29.14	29.83	-13.0	16.14	168.70	Horizontal	PASS
9245.84	-27.03	33.84	-13.0	14.03	3.20	Horizontal	PASS

GSM 1900MHz CHANNEL 661, ANT V



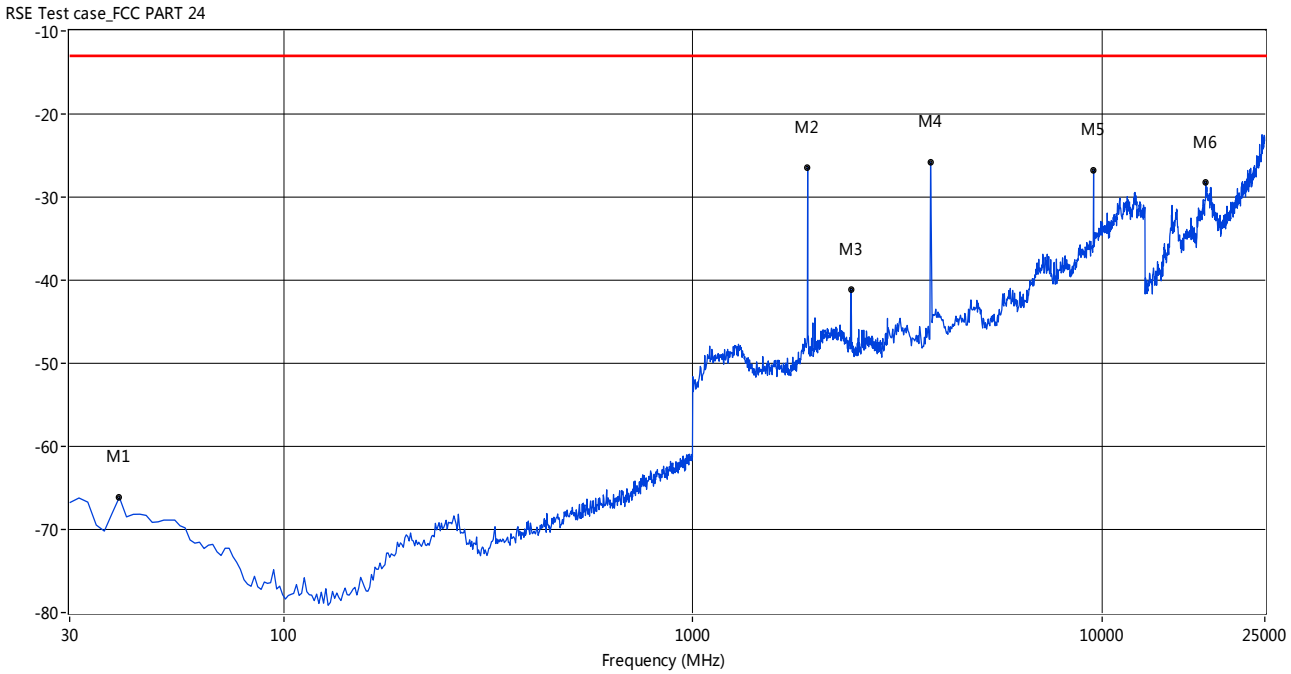
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
46.14	-67.94	-1.10	-13.0	54.94	120.60	Vertical	PASS
246.27	-66.62	-2.40	-13.0	53.62	4.80	Vertical	PASS
1878.54	-33.13	14.31	-13.0	20.13	268.80	Vertical	PASS
2457.57	-39.40	14.40	-13.0	26.40	123.10	Vertical	PASS
3762.48	-26.31	22.36	-13.0	13.31	360.20	Vertical	PASS
9391.85	-30.00	33.68	-13.0	17.00	40.40	Vertical	PASS

GSM 1900MHz CHANNEL 661, ANT H



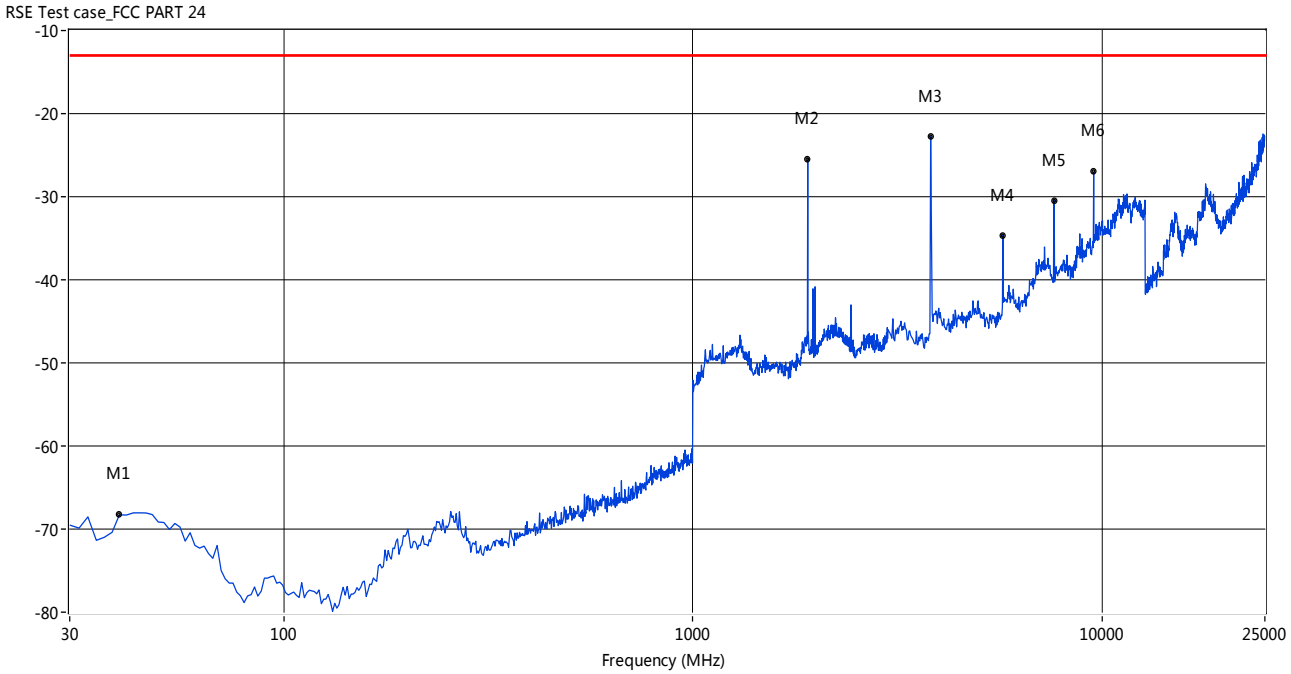
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
42.91	-67.26	-0.95	-13.0	54.26	264.40	Horizontal	PASS
1878.54	-32.94	14.31	-13.0	19.94	136.40	Horizontal	PASS
3762.48	-18.13	22.36	-13.0	5.13	153.10	Horizontal	PASS
5628.12	-29.28	26.56	-13.0	16.28	122.40	Horizontal	PASS
7509.98	-27.75	28.93	-13.0	14.75	163.50	Horizontal	PASS
9391.85	-29.09	33.68	-13.0	16.09	1.90	Horizontal	PASS

GSM 1900MHz CHANNEL 810 , ANT V



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
39.68	-66.12	-1.23	-13.0	53.12	303.10	Vertical	PASS
1908.49	-26.41	14.97	-13.0	13.41	265.20	Vertical	PASS
2434.28	-41.12	14.59	-13.0	28.12	247.40	Vertical	PASS
3811.15	-25.84	22.78	-13.0	12.84	359.40	Vertical	PASS
9537.85	-26.75	34.65	-13.0	13.75	51.20	Vertical	PASS
17927.20	-28.20	38.81	-13.0	15.20	294.40	Vertical	PASS

GSM 1900MHz CHANNEL 810 , ANT H



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
39.68	-68.30	-1.23	-13.0	55.30	165.60	Horizontal	PASS
1908.49	-25.42	14.97	-13.0	12.42	215.00	Horizontal	PASS
3811.15	-22.74	22.78	-13.0	9.74	132.10	Horizontal	PASS
5725.46	-34.64	26.70	-13.0	21.64	142.50	Horizontal	PASS
7639.77	-30.41	28.57	-13.0	17.41	173.60	Horizontal	PASS
9537.85	-27.01	34.65	-13.0	14.01	106.60	Horizontal	PASS

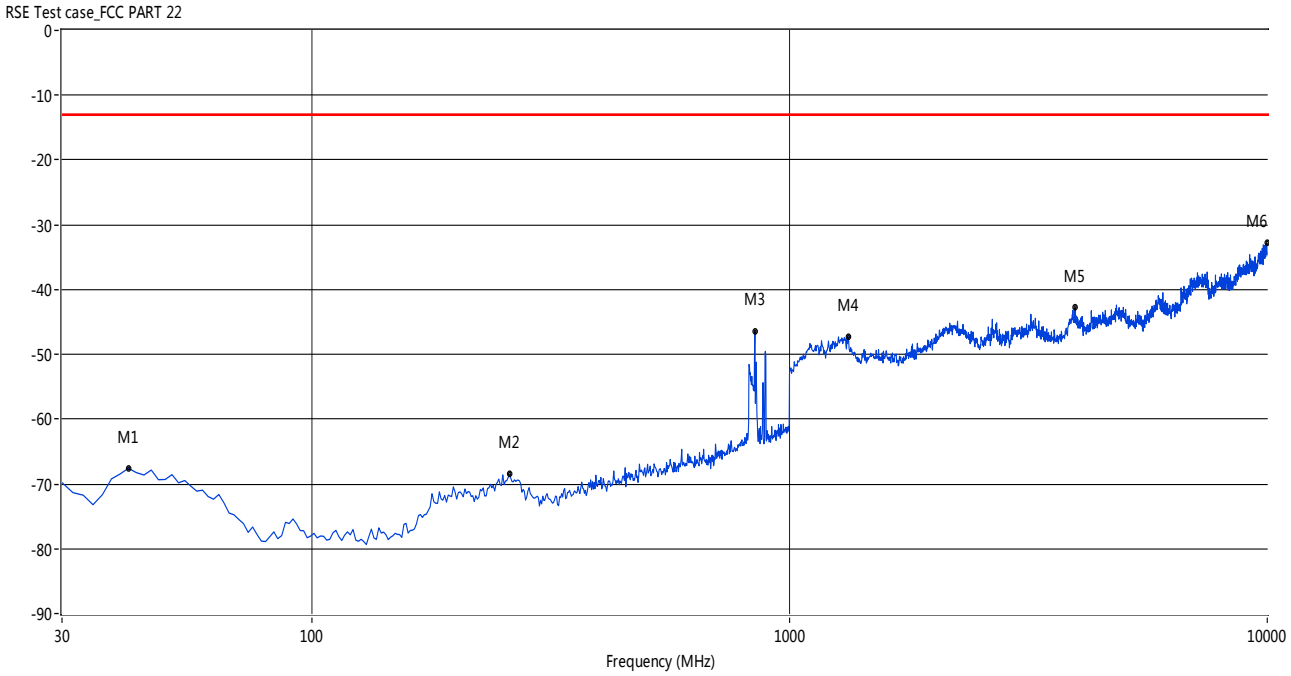
WCDMA 850MHz CHANNEL 4132, ANT V

Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
47.75	-67.69	-1.17	-13.0	54.69	175.40	Vertical	PASS
820.85	-43.78	7.86	-13.0	30.78	-0.00	Vertical	PASS
1292.85	-46.70	13.13	-13.0	33.70	38.80	Vertical	PASS
2321.13	-44.88	15.72	-13.0	31.88	117.60	Vertical	PASS
7211.31	-35.98	29.54	-13.0	22.98	0.20	Vertical	PASS
9880.20	-32.60	36.07	-13.0	19.60	39.90	Vertical	PASS

WCDMA 850MHz CHANNEL 4132, ANT H

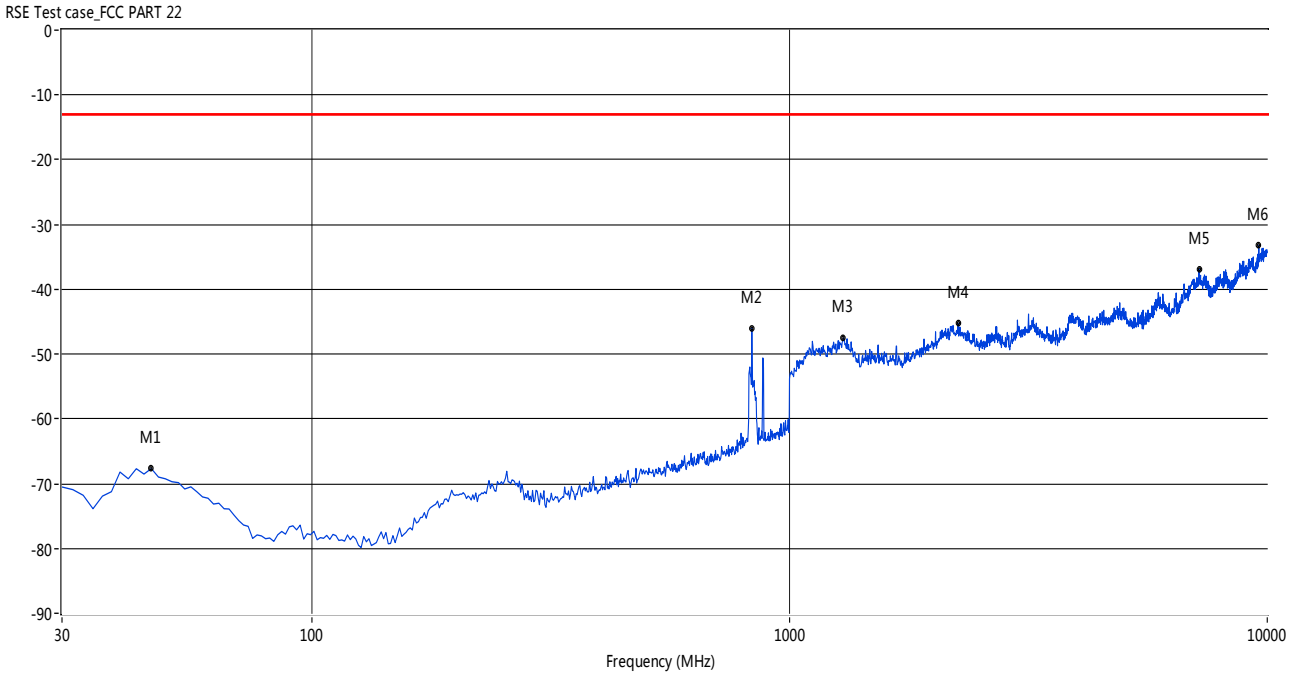
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
52.60	-67.62	-2.13	-13.0	54.62	165.10	Horizontal	PASS
820.85	-31.92	7.86	-13.0	18.92	53.40	Horizontal	PASS
1296.17	-47.05	13.30	-13.0	34.05	169.40	Horizontal	PASS
1648.92	-46.30	10.88	-13.0	33.30	82.40	Horizontal	PASS
7211.31	-36.98	29.54	-13.0	23.98	176.70	Horizontal	PASS
9806.99	-32.93	35.76	-13.0	19.93	30.60	Horizontal	PASS

WCDMA 850MHz CHANNEL 4183, ANT V



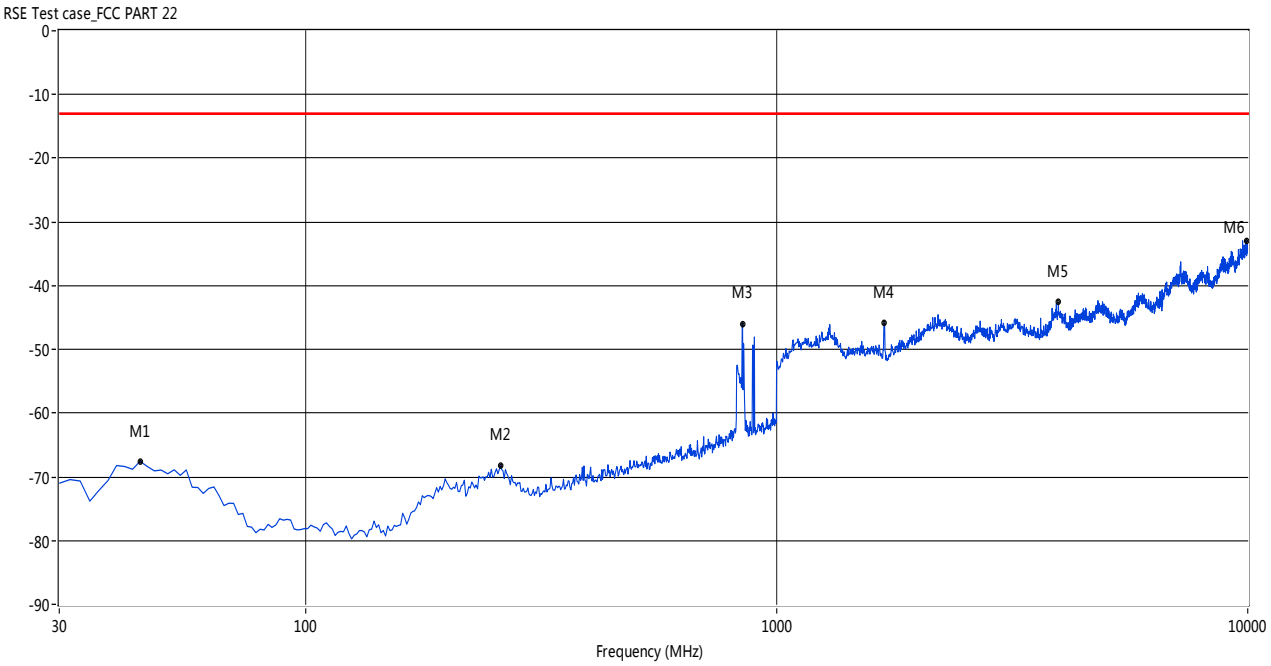
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
41.30	-67.59	-0.83	-13.0	54.59	52.00	Vertical	PASS
259.18	-68.52	-1.54	-13.0	55.52	359.70	Vertical	PASS
846.67	-46.37	11.95	-13.0	33.37	337.50	Vertical	PASS
1326.12	-47.26	12.53	-13.0	34.26	204.20	Vertical	PASS
3963.39	-42.76	24.57	-13.0	29.76	175.50	Vertical	PASS
9973.38	-32.86	36.46	-13.0	19.86	106.00	Vertical	PASS

WCDMA 850MHz CHANNEL 4183, ANT H



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
46.14	-67.67	-1.08	-13.0	54.67	225.50	Horizontal	PASS
833.76	-45.96	14.32	-13.0	32.96	79.20	Horizontal	PASS
1296.17	-47.49	13.30	-13.0	34.49	235.70	Horizontal	PASS
2251.25	-45.25	15.72	-13.0	32.25	75.80	Horizontal	PASS
7198.00	-36.84	29.52	-13.0	23.84	0.70	Horizontal	PASS
9600.67	-33.24	35.32	-13.0	20.24	355.60	Horizontal	PASS

WCDMA 850MHz CHANNEL 4233, ANT V

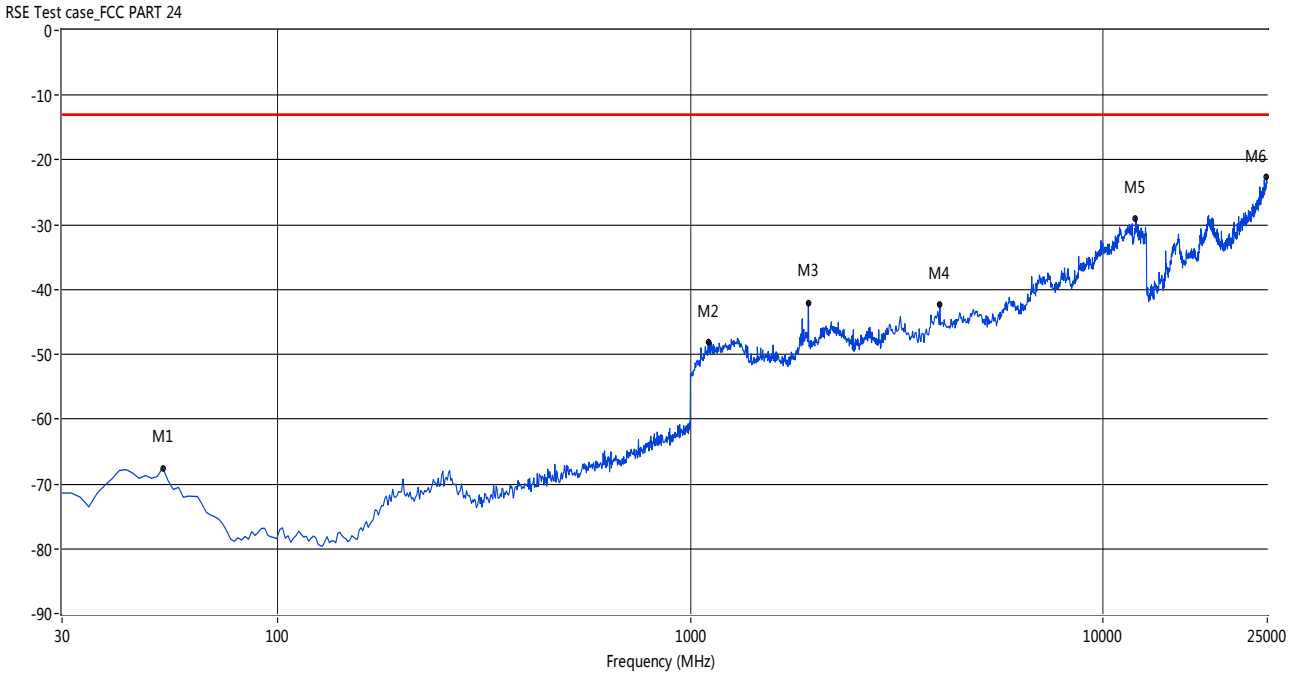


Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
44.53	-67.57	-0.91	-13.0	54.57	115.40	Vertical	PASS
845.06	-45.84	12.25	-13.0	32.84	342.30	Vertical	PASS
1692.18	-45.83	10.89	-13.0	32.83	213.00	Vertical	PASS
3963.39	-42.56	24.57	-13.0	29.56	279.20	Vertical	PASS
7204.66	-36.24	29.53	-13.0	23.24	332.90	Vertical	PASS
9920.13	-32.89	36.23	-13.0	19.89	219.10	Vertical	PASS

WCDMA 850MHz CHANNEL 4233, ANT H

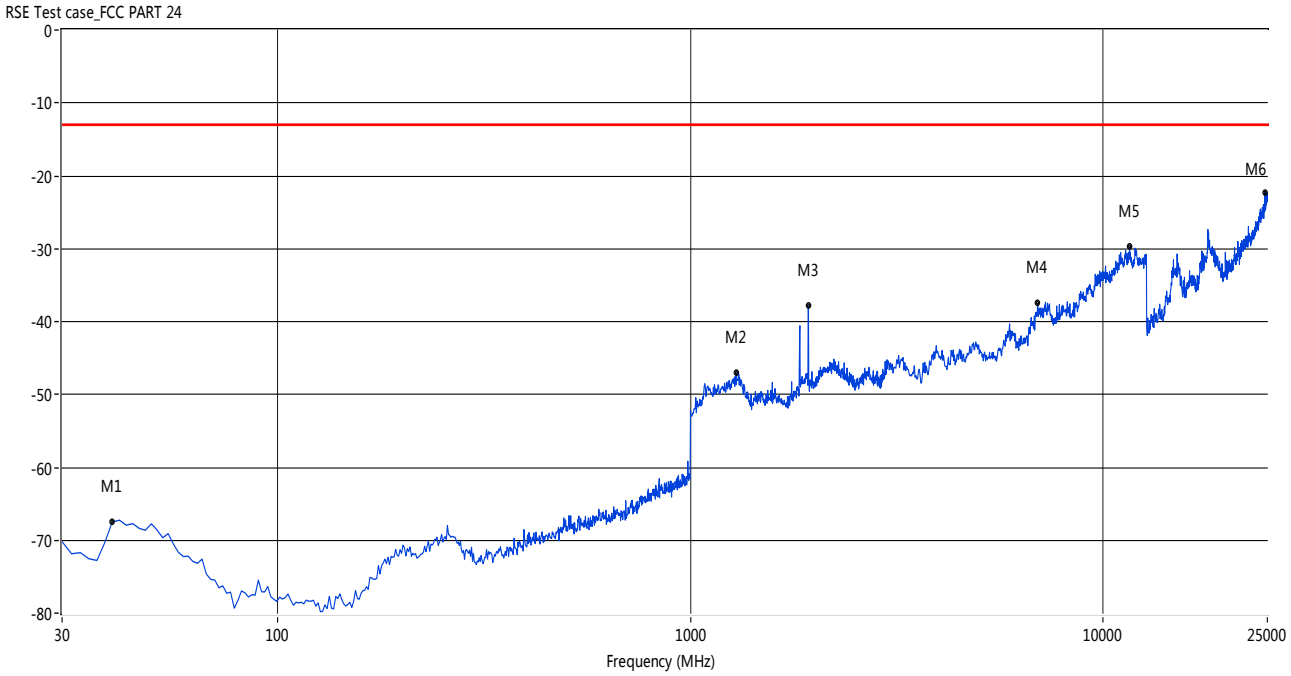
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
46.14	-69.54	-1.08	-13.0	56.54	40.90	Horizontal	PASS
846.67	-40.53	11.95	-13.0	27.53	80.90	Horizontal	PASS
1688.85	-46.82	10.89	-13.0	33.82	223.40	Horizontal	PASS
3983.36	-42.89	24.88	-13.0	29.89	19.70	Horizontal	PASS
7304.49	-36.68	29.68	-13.0	23.68	3.40	Horizontal	PASS
9886.86	-32.88	36.09	-13.0	19.88	2.10	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9262, ANT V



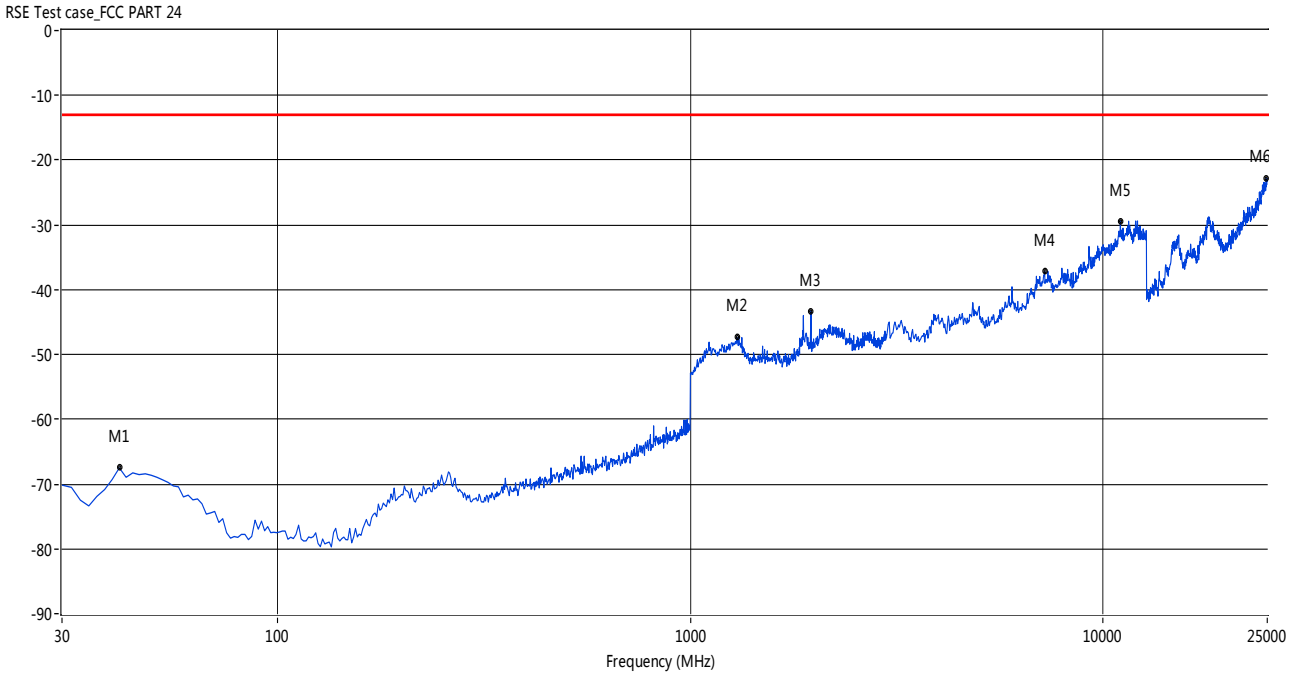
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
52.60	-67.52	-2.16	-13.0	54.52	358.80	Vertical	PASS
1103.16	-48.11	11.93	-13.0	35.11	193.50	Vertical	PASS
1931.78	-42.01	13.37	-13.0	29.01	212.00	Vertical	PASS
4022.05	-42.25	24.40	-13.0	29.25	-0.00	Vertical	PASS
11987.52	-29.01	38.84	-13.0	16.01	300.70	Vertical	PASS
24898.09	-22.61	42.69	-13.0	9.61	137.50	Vertical	PASS

WCDMA 1900MHz CHANNEL 9262, ANT H



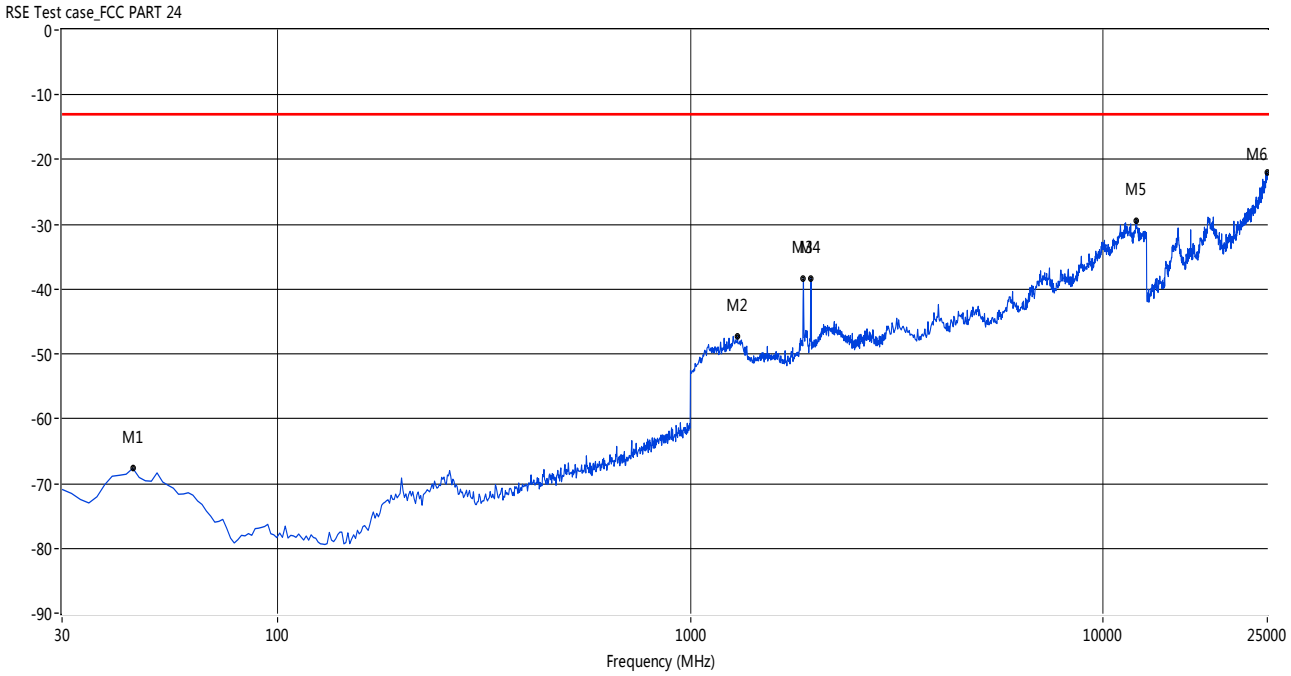
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
39.68	-67.50	-1.23	-13.0	54.50	232.10	Horizontal	PASS
1292.85	-47.05	13.18	-13.0	34.05	88.30	Horizontal	PASS
1928.45	-37.82	13.46	-13.0	24.82	350.20	Horizontal	PASS
6942.18	-37.50	29.04	-13.0	24.50	354.90	Horizontal	PASS
11598.17	-29.75	38.52	-13.0	16.75	-0.00	Horizontal	PASS
24673.88	-22.25	42.36	-13.0	9.25	348.60	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9401, ANT V



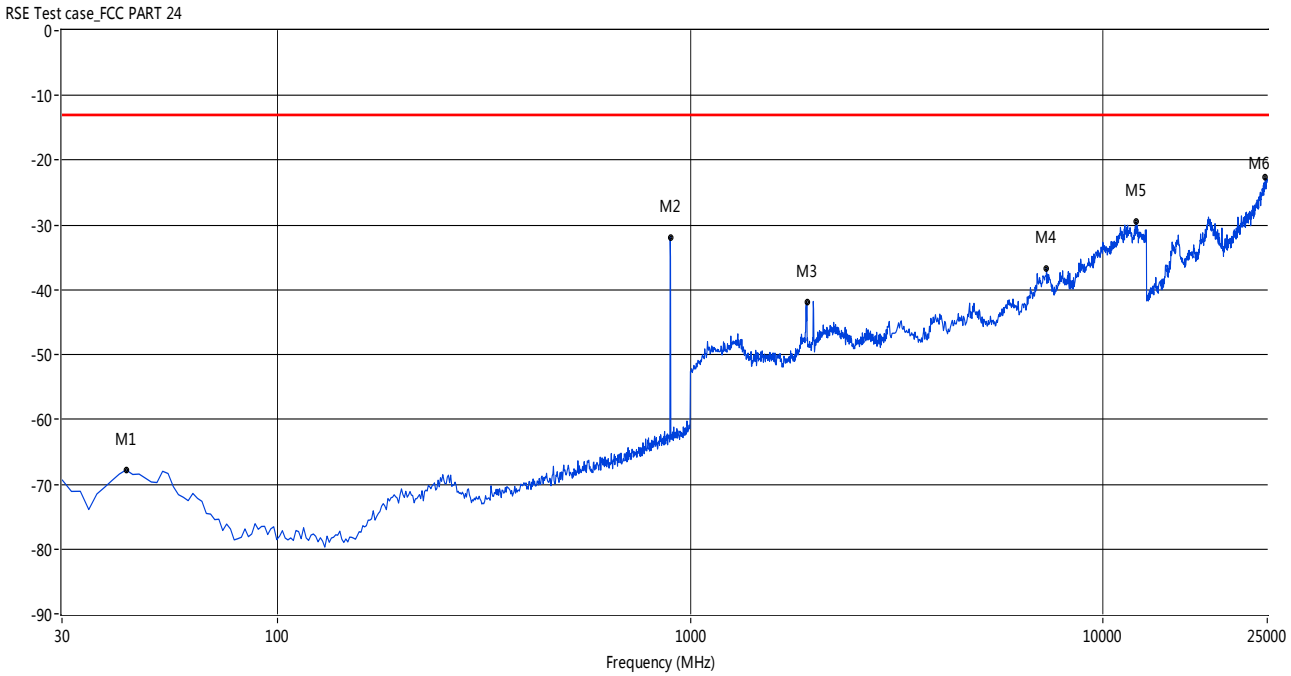
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
41.30	-67.50	-0.87	-13.0	54.50	244.30	Vertical	PASS
1296.17	-47.34	13.28	-13.0	34.34	9.90	Vertical	PASS
1958.40	-43.35	13.47	-13.0	30.35	218.20	Vertical	PASS
7217.97	-37.16	29.55	-13.0	24.16	102.10	Vertical	PASS
11014.14	-29.42	38.51	-13.0	16.42	222.20	Vertical	PASS
24857.32	-22.75	42.63	-13.0	9.75	126.90	Vertical	PASS

WCDMA 1900MHz CHANNEL 9401, ANT H



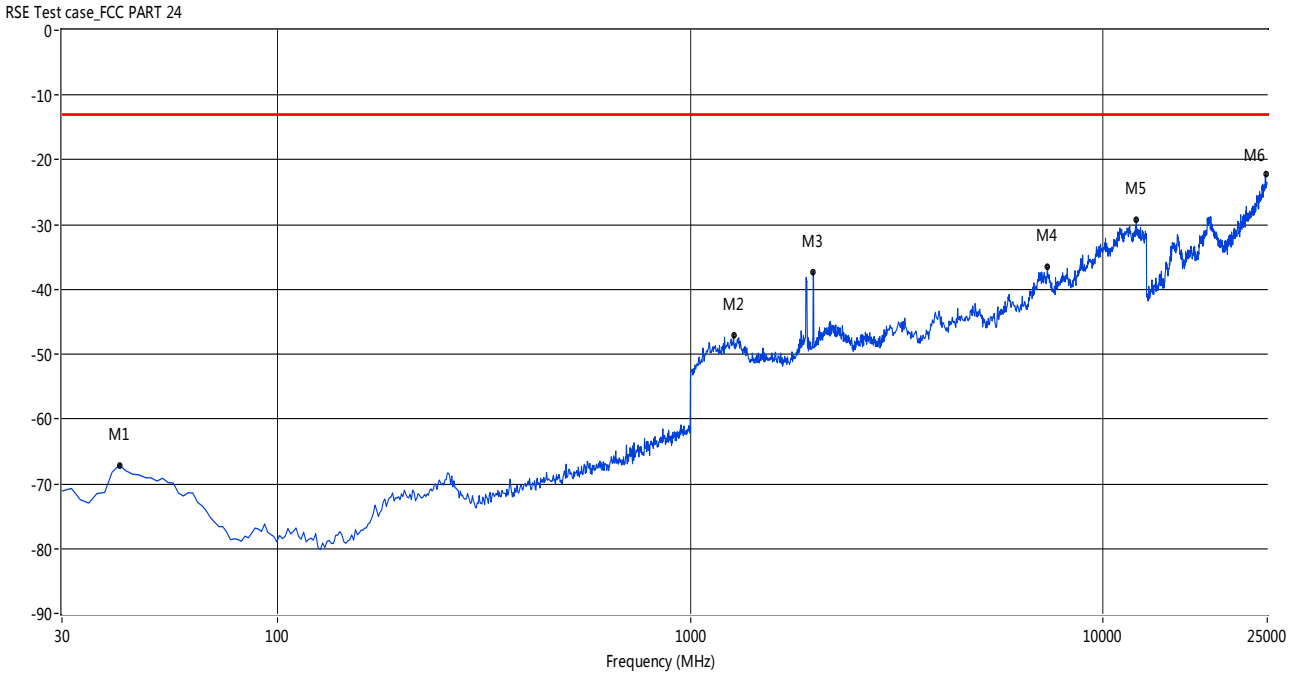
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
44.53	-67.64	-0.94	-13.0	54.64	359.70	Horizontal	PASS
1299.50	-47.21	13.37	-13.0	34.21	39.80	Horizontal	PASS
1878.54	-38.41	14.31	-13.0	25.41	101.70	Horizontal	PASS
1958.40	-38.36	13.47	-13.0	25.36	58.20	Horizontal	PASS
12052.41	-29.39	38.68	-13.0	16.39	232.10	Horizontal	PASS
24938.85	-21.90	42.76	-13.0	8.90	158.90	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9538, ANT V



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
42.91	-67.80	-0.95	-13.0	54.80	134.90	Vertical	PASS
893.48	-31.86	5.81	-13.0	18.86	79.50	Vertical	PASS
1915.14	-41.98	15.10	-13.0	28.98	262.80	Vertical	PASS
7299.08	-36.64	29.67	-13.0	23.64	240.90	Vertical	PASS
12036.19	-29.50	38.74	-13.0	16.50	309.90	Vertical	PASS
24735.02	-22.69	42.45	-13.0	9.69	329.20	Vertical	PASS

WCDMA 1900MHz CHANNEL 9538, ANT H

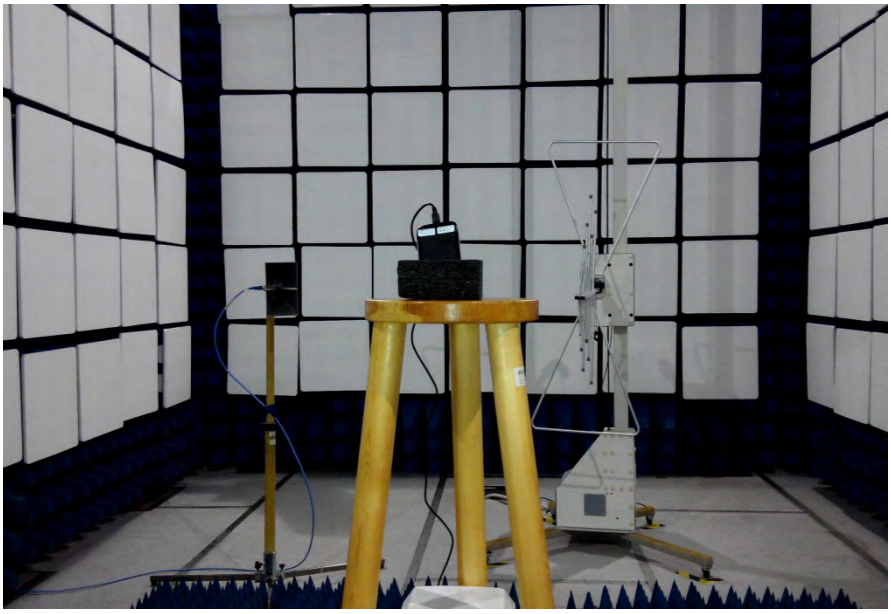


Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
41.30	-67.14	-0.87	-13.0	54.14	359.20	Horizontal	PASS
1272.88	-47.03	13.07	-13.0	34.03	125.60	Horizontal	PASS
1985.02	-37.25	13.56	-13.0	24.25	45.70	Horizontal	PASS
7331.53	-36.57	29.72	-13.0	23.57	321.20	Horizontal	PASS
12036.19	-29.28	38.74	-13.0	16.28	240.10	Horizontal	PASS
24775.79	-22.27	42.51	-13.0	9.27	326.20	Horizontal	PASS

ANNEX B TEST SETUP PHOTOS

B.1. Conducted Test Photo

B.2. Radiated Test Photo



ANNEX C TEST SETUP PHOTOS

C.1 Appearance of the EUT

THE FRONT OF EUT

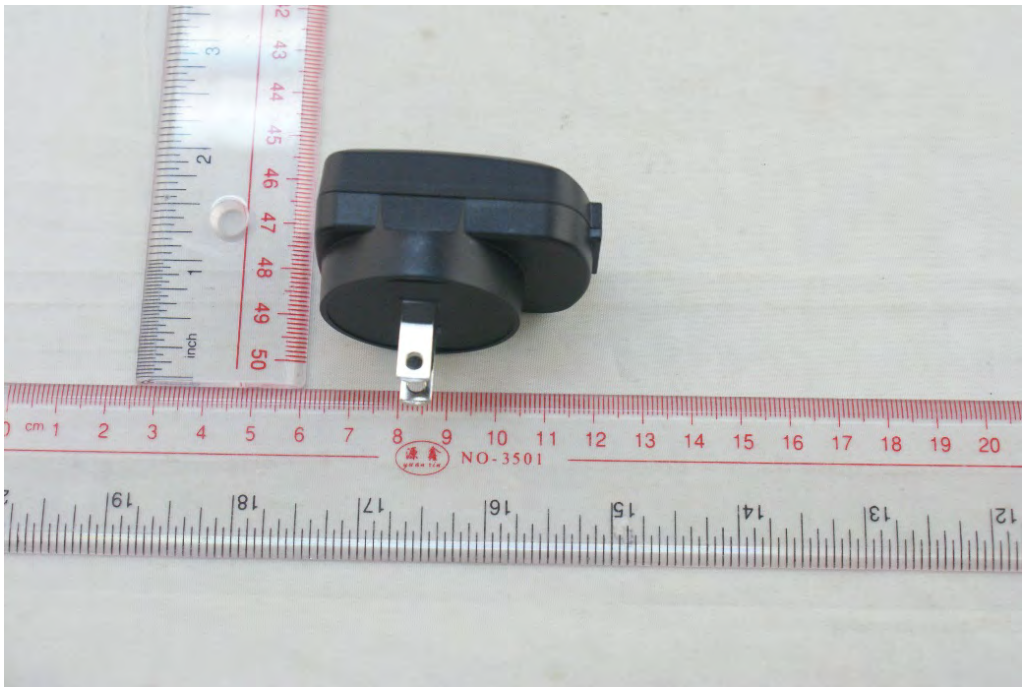
THE BACK OF EUT

THE LEFT OF EUT

THE RIGHT OF EUT

THE UP OF EUT

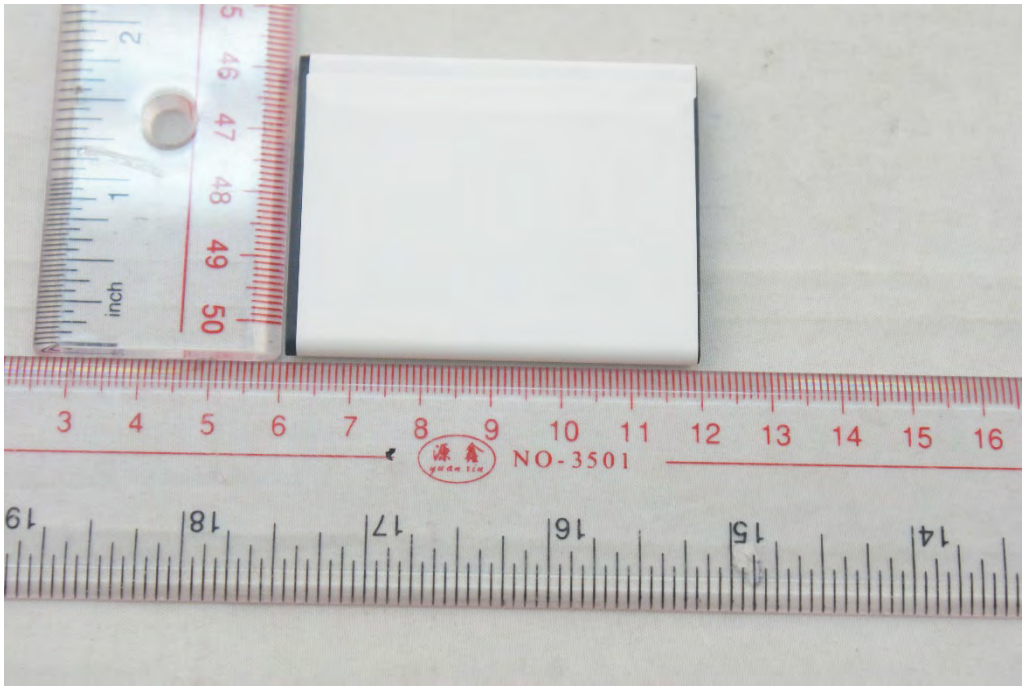
THE DOWN OF EUT



CHARGER

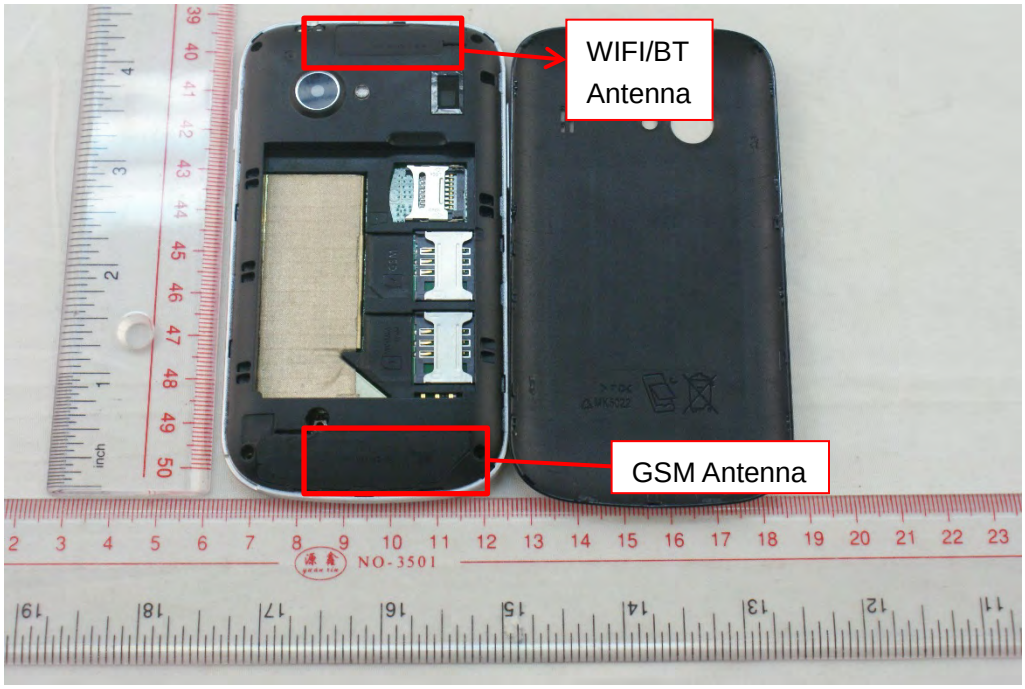
DATA CABLE

HEADPHONE CABLE

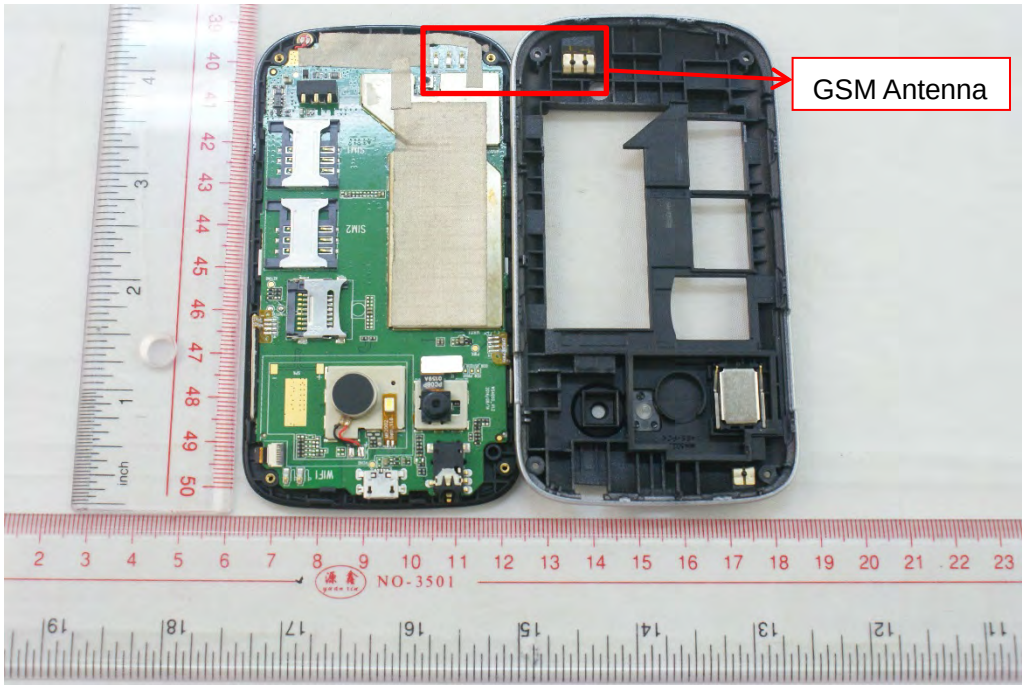


CHARGER

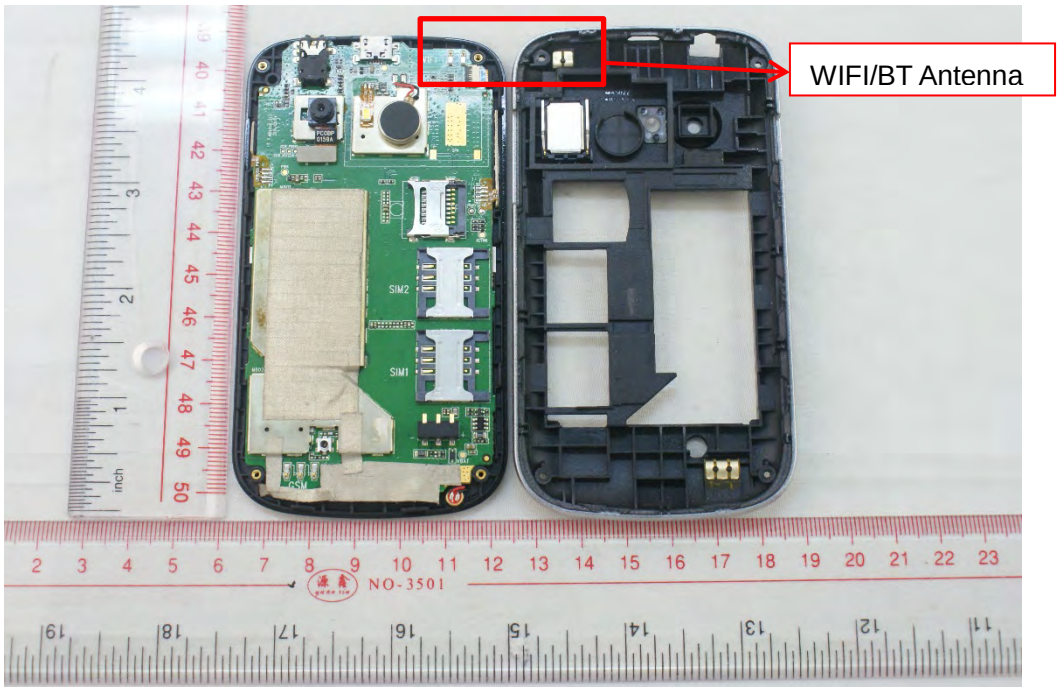
C.2 Inside of the EUT



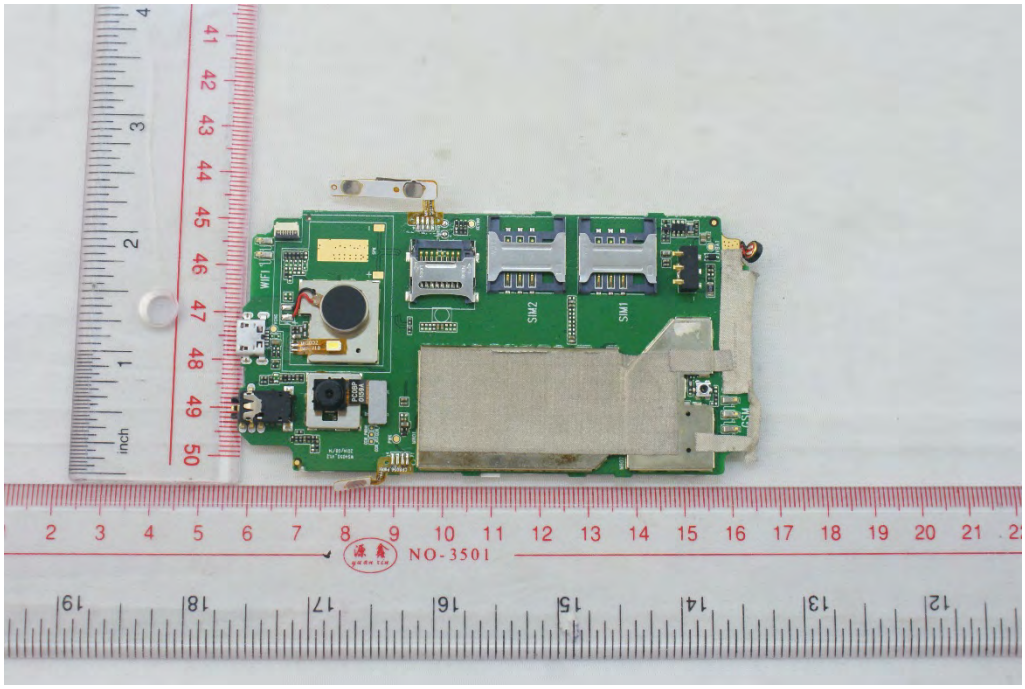
EUT UNCOVER VIEW 1



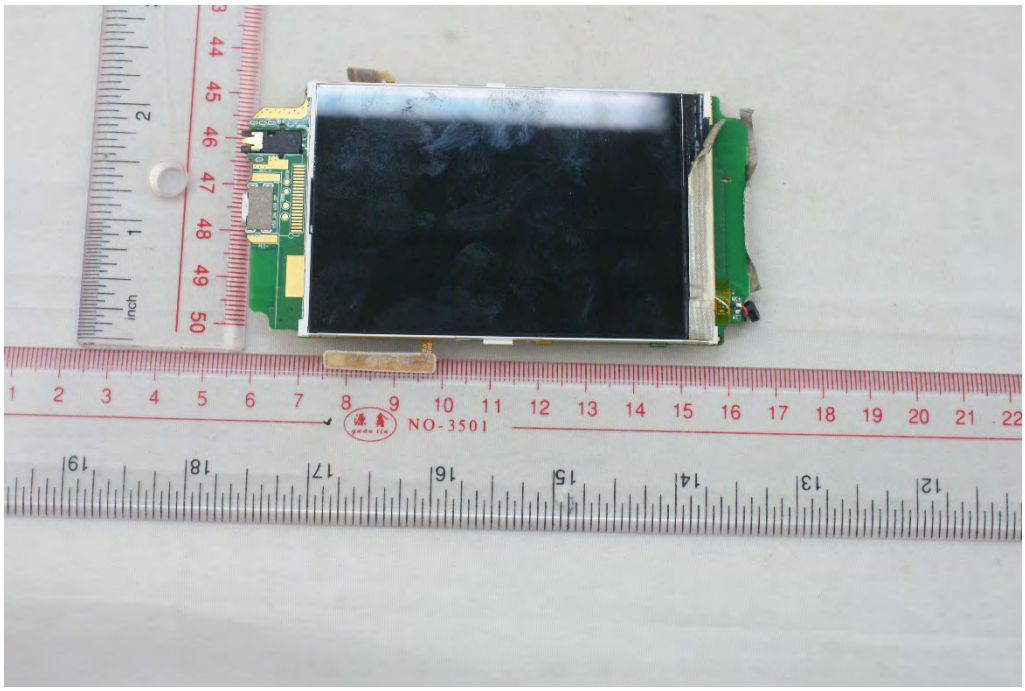
EUT UNCOVER VIEW 2



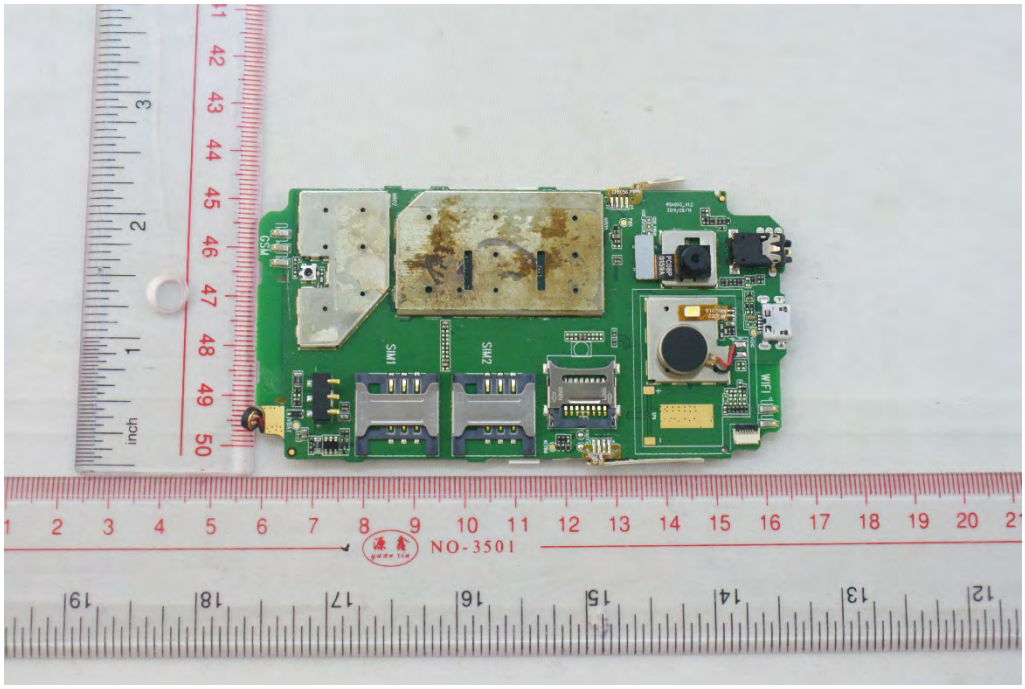
EUT UNCOVER VIEW 3



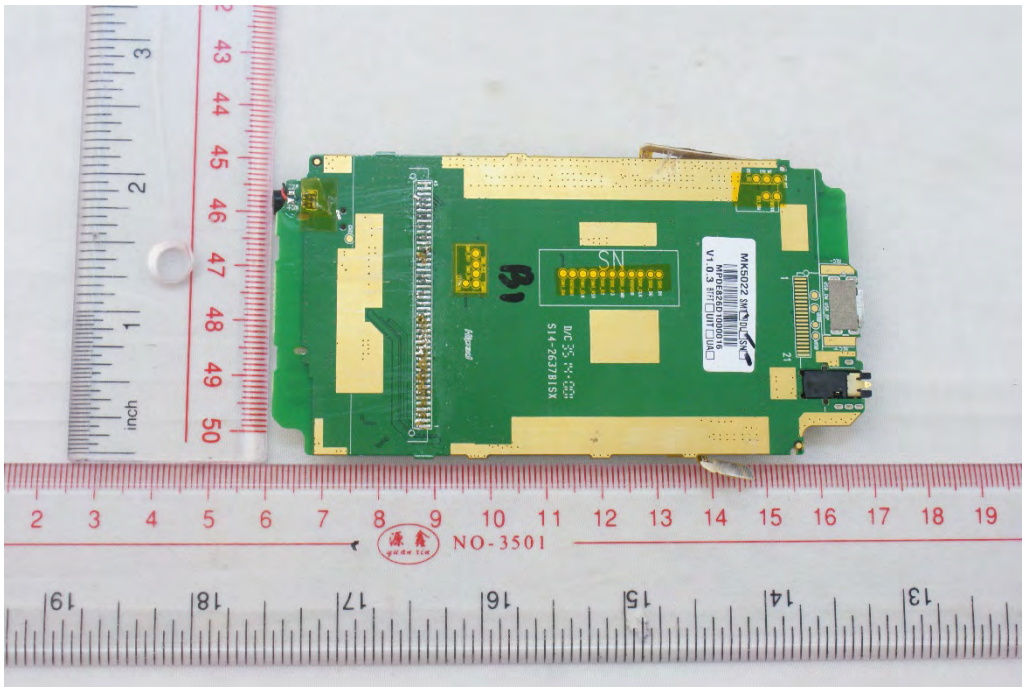
MAIN BOARD TOP VIEW 1



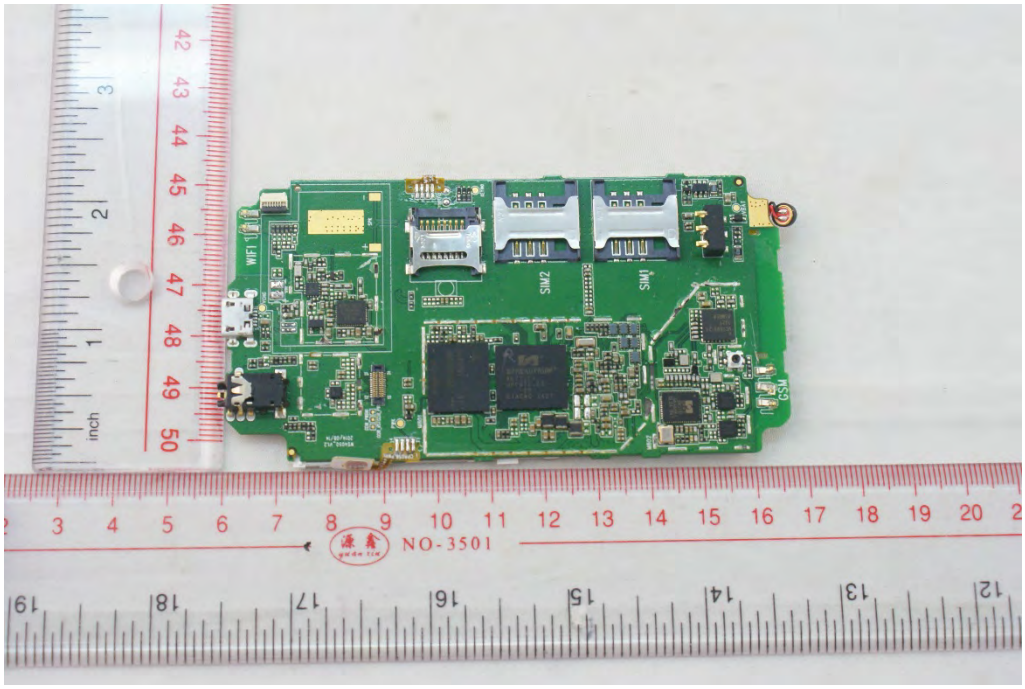
MAIN BOARD BACK VIEW 1



MAIN BOARD TOP VIEW 2



MAIN BOARD BACK VIEW 2



MAIN BOARD TOP VIEW 3

--END OF REPORT--