

FCC RF TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
smart phone

ISSUED TO
Shenzhen Huadoo Bright Group Limited

Room 13E, jinsong Buiding, Tai ran 4th Rood, chegong miao, Futian
Distrct, Shenzhen



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Date: Dec 31, 2014

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Date: Dec 31, 2014



Report No.: BL-SZ14C0012-604
EUT Type: smart phone
Model Name: Huadoo V4
Brand Name: Huadoo
Test Standard: 47 CFR Part 2
47 CFR Part 22 Subpart H
47 CFR Part 24 Subpart E
FCC ID: 2ACXS-V4

Test conclusion: PASS
Test Date: Nov 25 2014 ~ Dec 28, 2014
Date of Issue: Dec 31, 2014

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions</u>
<u>Rev. 01</u>	<u>Dec 31, 2014</u>	<u>Initial Issue</u>

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 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

1.2 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

1.3 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 Huadoo Bright Group Limited
Address	Room 13E, jinsong Buiding, Tai ran 4th Rood, chegong miao, Futian Distrct, Shenzhen

2.2 Manufacturer

Manufacturer	Shenzhen Huadoo Bright Group Limited
Address	Room 13E, jinsong Buiding, Tai ran 4th Rood, chegong miao, Futian Distrct, Shenzhen

2.3 General Description for Equipment under Test (EUT)

EUT Type	smart phone
Model Name	Huadoo V4
Series Model Name	MOLY.WR8.W1315.MD.MG.MP.V39
Hardware Version	V4_overseas_V5_20141105
Software Version	smart phone
Network and Wireless connectivity	2G Network GSM 850/900/1800/1900, GPRS, EDEG 3G Network WCDMA Band 1/Band 2/Band 5 WIFI Bluetooth
About the Product	The equipment is smart phone, intended for used with information technology equipment, Only GSM/GPRS/EGPRS/WCDMA modes was tested in this report.

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
Antenna Type	PIFA Antenna
Antenna Gain	GSM 850: 0.82dBi, GSM1900: 1.58dBi WCDMA850: 0.23dBi, WCDMA1900: 1.24dBi

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	N/A
	Model No	V4
	Serial No	N/A
	Capacitance	3600mAh
	Rated Voltage	3.7V
	Extreme Voltage	Low: 3.3V / High:4.2V
Ancillary Equipment 2	Charger	
	Brand Name	N/A
	Model No	HJ-0501000
	Serial No	N/A
	Rated Input	~ 100-240V, 0.15A, 50/60Hz
	Rated Output	= 5V, 1000mA
Ancillary Equipment 3	Earphone	
	Length	1.0m
Ancillary Equipment 4	USB Data Cable	
	Length	1.0m

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2 (10–1–13 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10–1–13 Edition)	Public Mobile Services
3	47 CFR Part 24 (10–1–13 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 27.53	ANNEX A.2	PASS
4	Frequency Stability	2.1055 22.355 24.235 27.54	ANNEX A.3	PASS
5	Conducted Out of Band Emissions	2.1051 2.1057 22.917 24.238 27.53	ANNEX A.4	PASS
6	Band Edge	2.1051 2.1057 22.917 24.238 27.53	ANNEX A.5	PASS
7	Transmitter Radiated Power (EIPR/ERP)	22.913 24.232 27.50	ANNEX A.6	PASS
8	Radiated Out of Band Emissions	2.1053 2.1057 22.917 24.238 27.53	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 (%)	45 - 55
Atmospheric Pressure (kPa)	100 - 102
Temperature(°C)	23 - 25

4.2 Test Equipment List

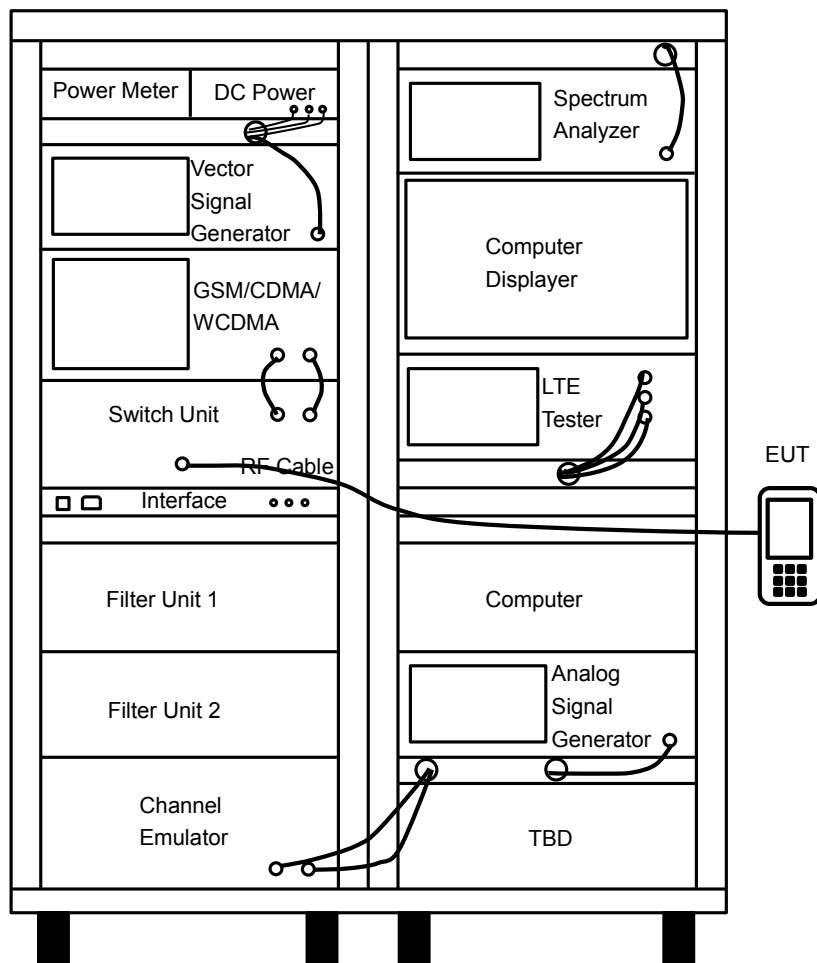
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2014.07.07	2015.07.06
Spectrum Analyzer	ROHDE&SCHWARZ	FSL3	103640/003	2014.07.07	2015.07.06
Power Splitter	KMW	DCPD-LDC	1305003215	2014.07.07	2015.07.06
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2014.07.07	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-3G Hz)	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. 9400/ 1880.0MHz
TC24	QPSK Modulation, WCDMA 1900	Ch No. 9538/ 1907.6MHz

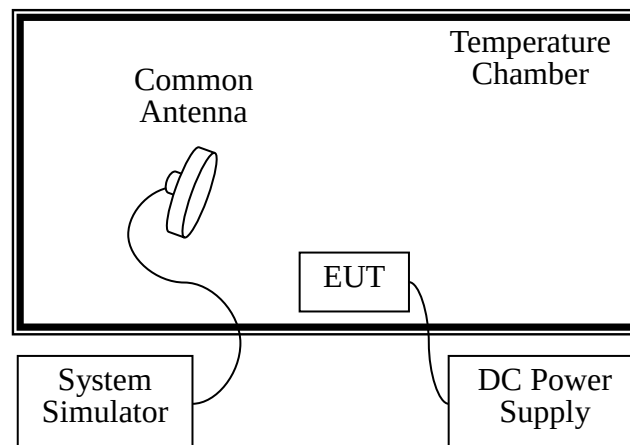
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



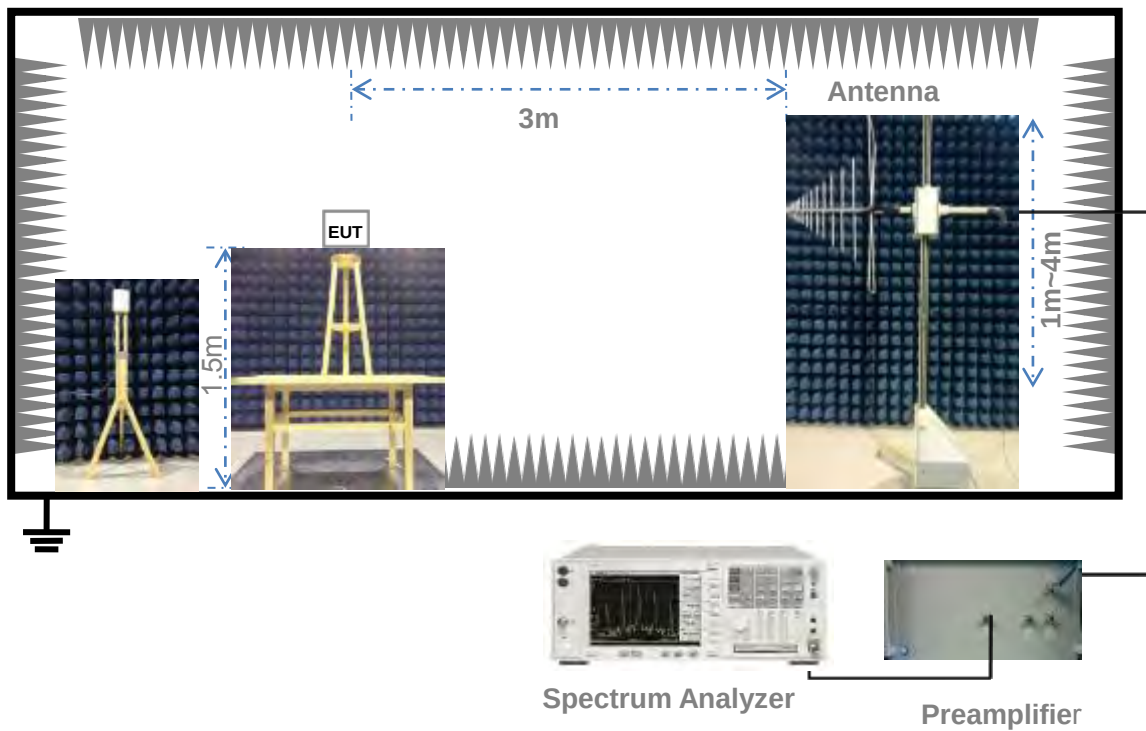
(Diagram 1)

4.4.2 For Frequency Stability Test



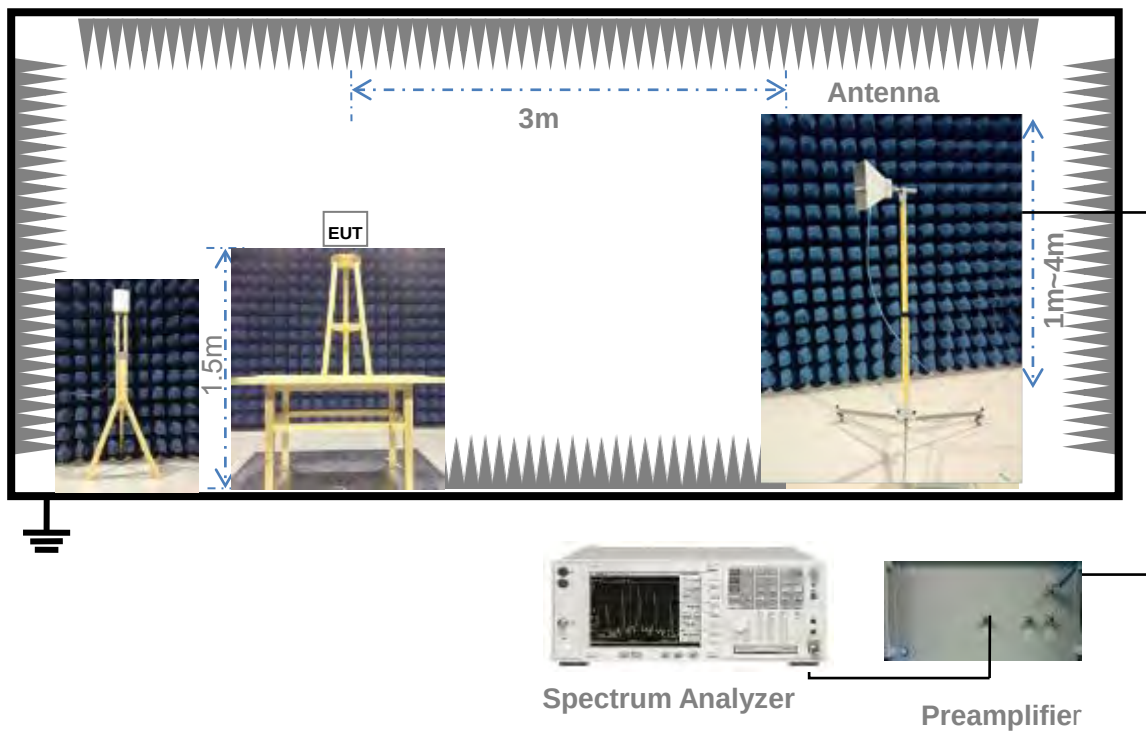
(Diagram 2)

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 ratio	NTNV	Test Setup 1	TC04~TC06, TC10~TC12, TC16~TC18
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.

1. The RF output of the transmitter was connected to the input of the Mobile Communication Test Unit through sufficient attenuation.
2. The mobile was set up for the max, Output power with pseudo random data modulation.

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 ratio

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.

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The resolution bandwidth of the spectrum analyzer was set.

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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
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.

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

§ 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

TABLE C-1—FREQUENCY TOLERANCE FOR TRANSMITTERS IN THE PUBLIC MOBILE SERVICES

Frequency range (MHz)	Base, fixed (ppm)	Mobile >3 watts (ppm)	Mobile ≤3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

& 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.

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

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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
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.

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The center of the spectrum analyzer was set to block edge frequency.

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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
2. The low, middle and the high channels are selected to perform tests respectively. Set the TCH number to 128 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, 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): $RBW=VBW=1\text{MHz}$, for CDMA modulated signal: $RBW=VBW=3\text{MHz}$.
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	32.20	35	PASS
	190	836.6	32.24		PASS
	251	848.8	32.27		PASS
GSM 1900	512	1850.2	28.93	32	PASS
	661	1880.0	29.02		PASS
	810	1909.8	29.21		PASS
GPRS 850	128	824.2	32.14	35	PASS
	190	836.6	32.18		PASS
	251	848.8	32.21		PASS
GPRS 1900	512	1850.2	28.91	32	PASS
	661	1880.0	28.98		PASS
	810	1909.8	29.16		PASS
EGPRS 850	128	824.2	30.07	35	PASS
	190	836.6	29.46		PASS
	251	848.8	29.18		PASS
EGPRS 1900	512	1850.2	27.63	32	PASS
	661	1880.0	27.15		PASS
	810	1909.8	26.79		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	32.14	31.28	29.30	27.34
	190	836.6	32.18	31.32	29.31	27.35
	251	848.8	32.21	31.36	29.33	27.35
GPRS 1900	512	1850.2	28.91	27.77	25.64	23.59
	661	1880.0	28.98	27.92	25.97	24.02
	810	1909.8	29.16	28.07	26.34	24.51

EGPRS Conducted output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
EGPRS 850	128	824.2	30.07	29.19	27.30	26.11
	190	836.6	29.46	28.59	26.51	25.44
	251	848.8	29.18	28.21	26.24	25.09
EGPRS 1900	512	1850.2	27.63	26.79	24.73	23.55
	661	1880.0	27.15	26.26	24.11	23.13
	810	1909.8	26.79	25.62	23.72	22.80

WCDMA Mode Test data:

Band	Channel	Frequency (MHz)	Output Power(dBm)
WCDMA 850	4132	826.4	22.13
	4183	836.6	22.26
	4233	846.6	22.12
WCDMA 1900	9262	1852.4	21.88
	9400	1880.0	22.07
	9538	1907.6	21.71

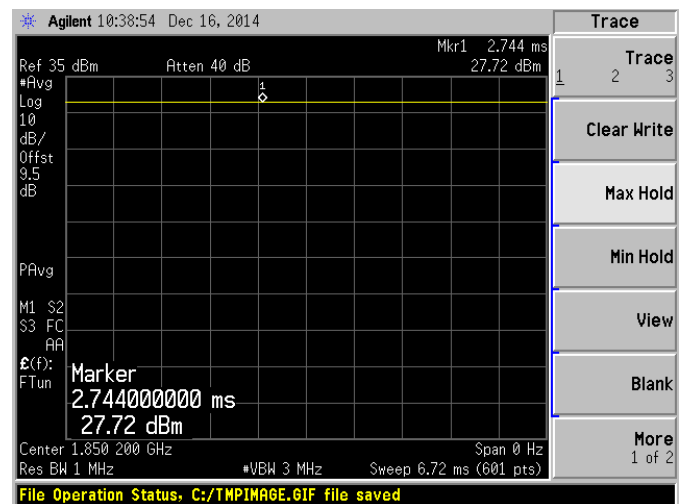
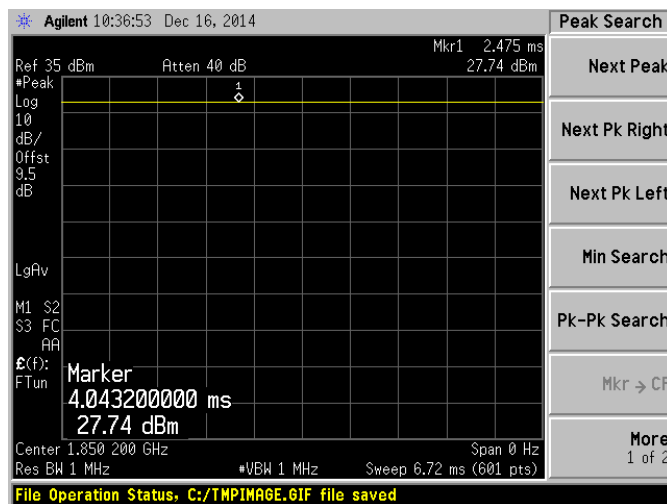
A.2 Peak to Average Radio

Band	Channel	Frequency (MHz)	Peak to Average radio	Limit	Verdict
			dBm	dBm	
GSM 1900MHz	512	1850.2	0.02	13	PASS
	661	1880.0	0.01		PASS
	810	1909.8	0.02		PASS
EGPRS 1900MHz	512	1850.2	0.01	13	PASS
	661	1880.0	0.02		PASS
	810	1909.8	0.03		PASS
WCDMA 1900MHz	9262	1852.4	1.82	13	PASS
	9400	1880.0	1.57		PASS
	9538	1907.6	1.71		PASS

Test plots

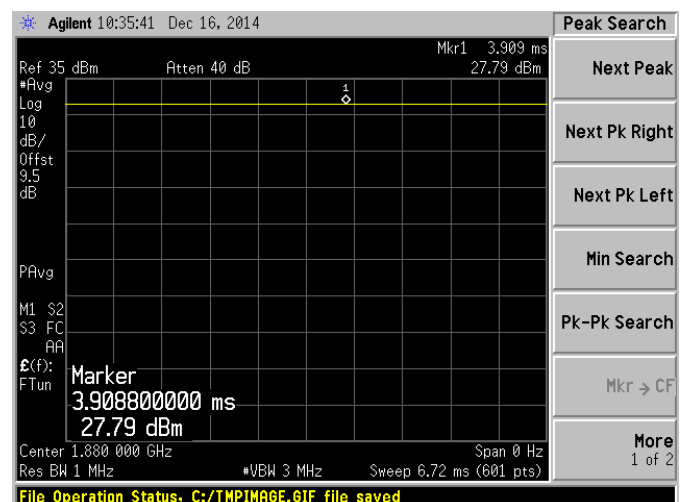
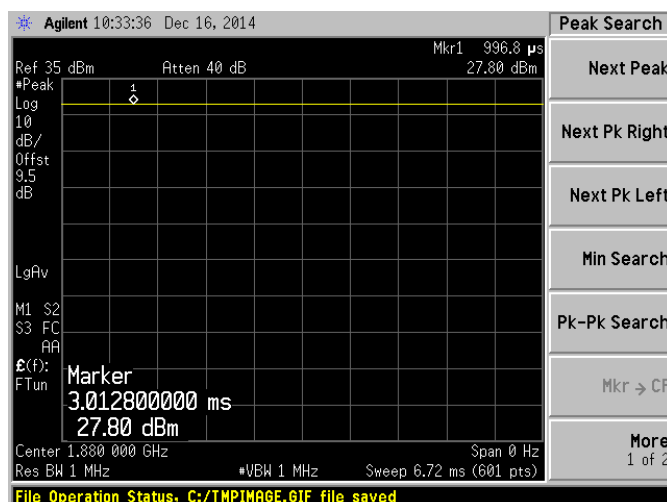
GSM 1900MHz CHANNEL 512 PEAK POWER

GSM 1900MHz CHANNEL 512 AV POWER



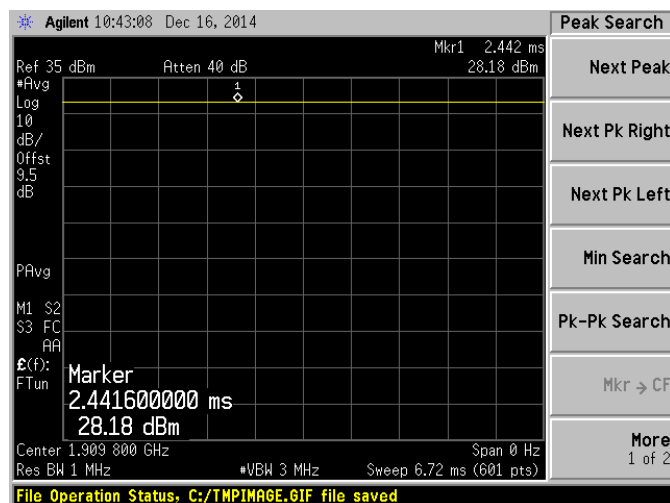
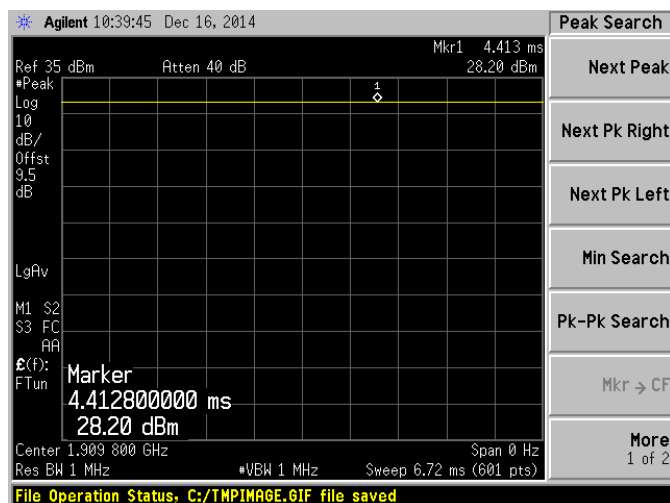
GSM 1900MHz CHANNEL 661 PEAK POWER

GSM 1900MHz CHANNEL 661 AV POWER



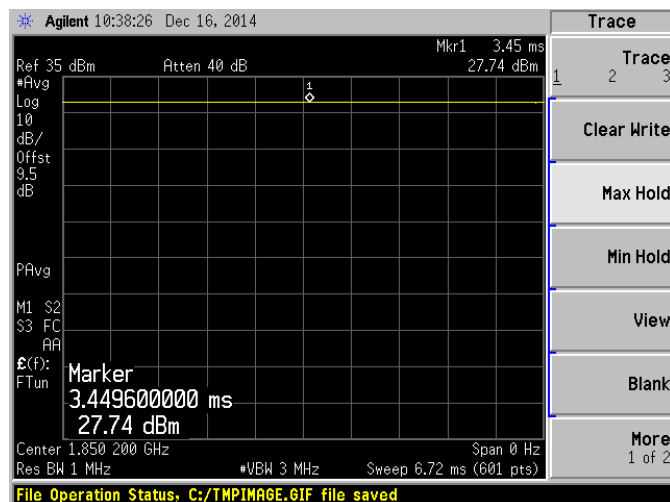
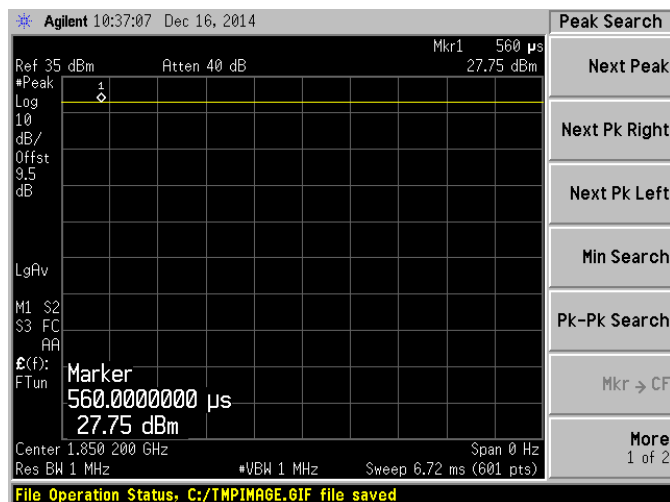
GSM 1900MHz CHANNEL 810 PEAK POWER

GSM 1900MHz CHANNEL 810 AV POWER



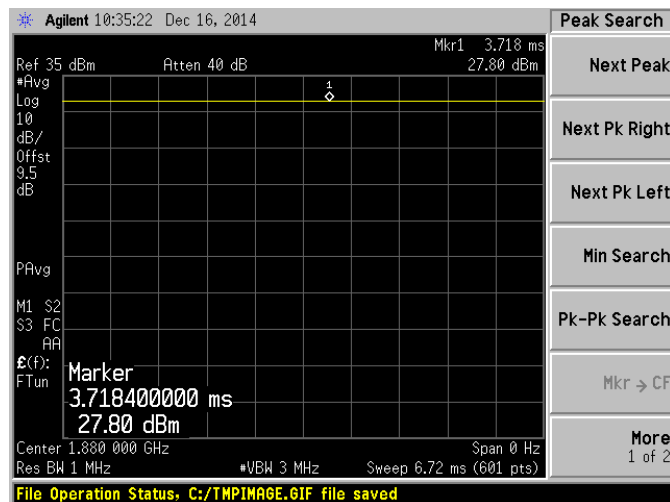
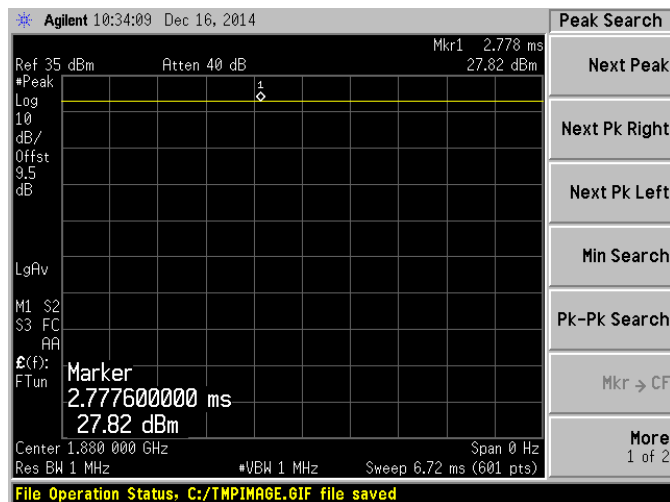
EGPRS 1900MHz CHANNEL 512 PEAK POWER

EGPRS 1900MHz CHANNEL 512 AV POWER



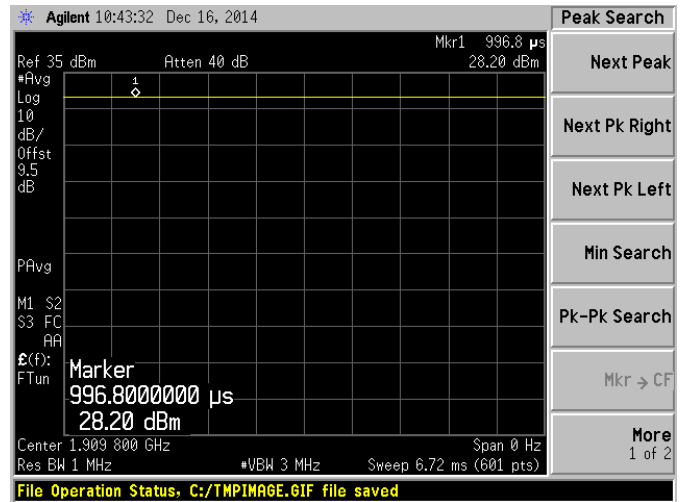
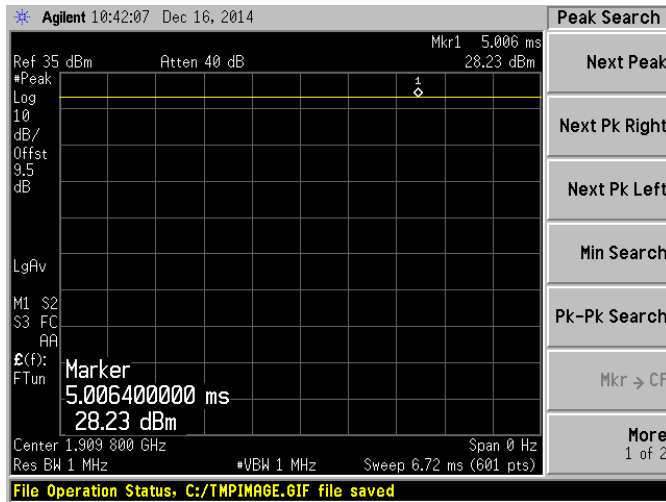
EGPRS 1900MHz CHANNEL 661 PEAK POWER

EGPRS 1900MHz CHANNEL 661 AV POWER



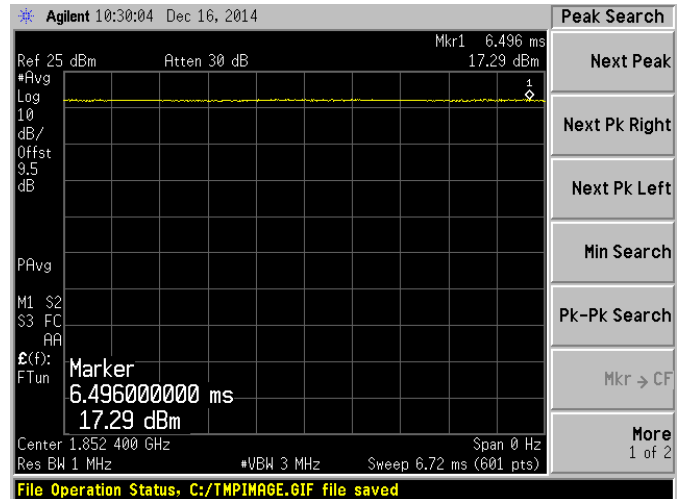
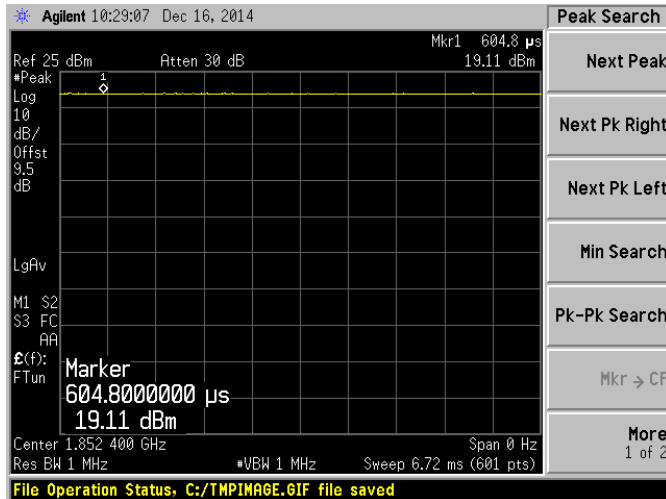
EGPRS 1900MHz CHANNEL 810 PEAK POWER

EGPRS 1900MHz CHANNEL 810 AV POWER



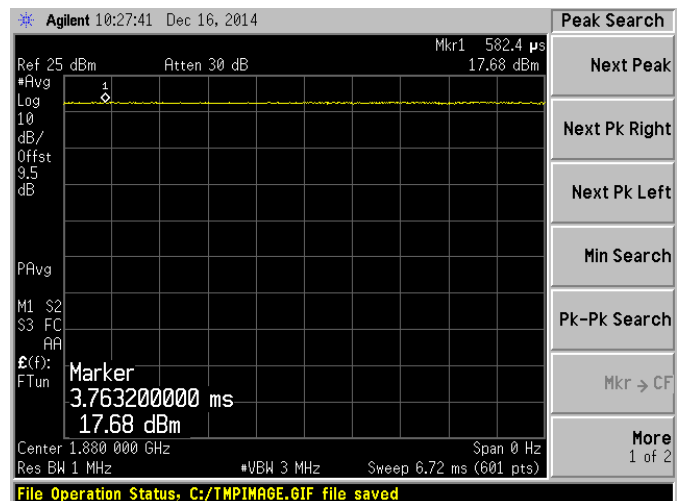
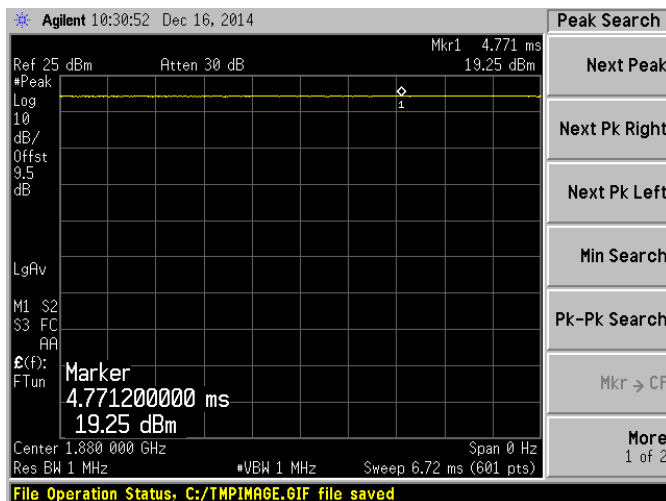
WCDMA 1900MHz CHANNEL 9262 PEAK POWER

WCDMA 1900MHz CHANNEL 9262 AV POWER



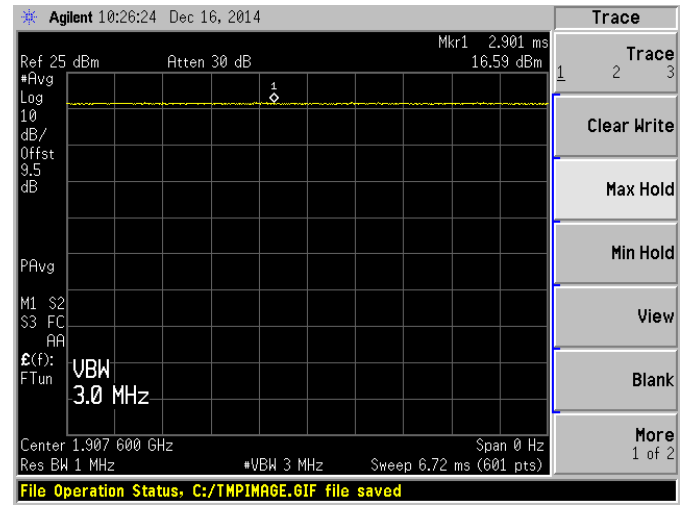
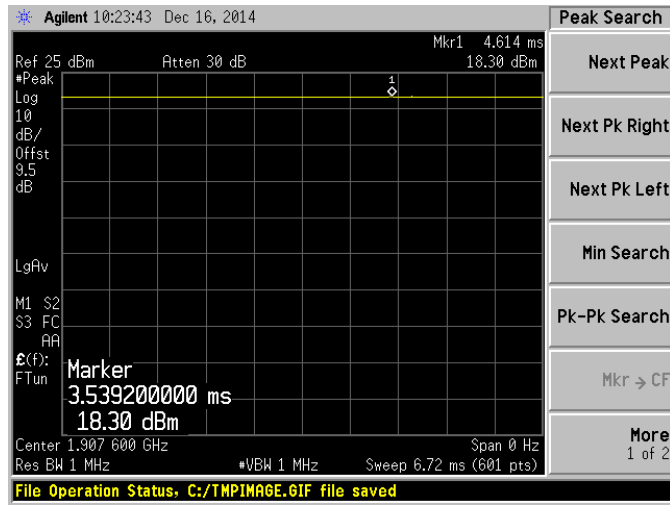
WCDMA 1900MHz CHANNEL 9400 PEAK POWER

WCDMA 1900MHz CHANNEL 9400 AV POWER



WCDMA 1900MHz CHANNEL 9538 PEAK POWER

WCDMA 1900MHz CHANNEL 9538 AV POWER



A.3 Occupied Bandwidth

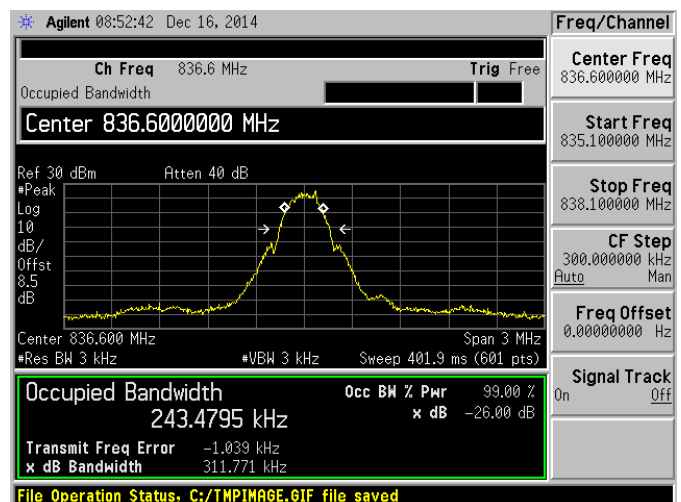
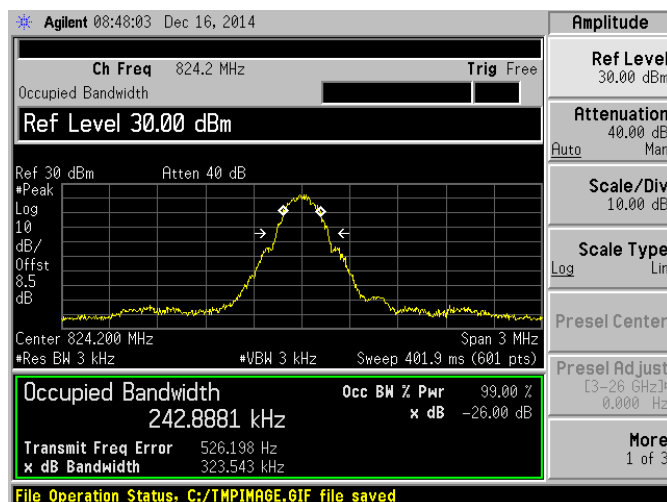
Test Data

Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth	Measured -26dB Occupied Bandwidth
GSM 850MHz	128	824.2	242.8881 kHz	323.543 kHz
	190	836.6	243.4795 kHz	311.771 kHz
	251	848.8	241.0786 kHz	307.885 kHz
GSM 1900MHz	512	1850.2	245.3028 kHz	321.998 kHz
	661	1880.0	247.0141 kHz	317.045 kHz
	810	1909.8	244.5071 kHz	318.005 kHz
GPRS 850MHz	128	824.2	245.2931 kHz	309.244 kHz
	190	836.6	243.9171 kHz	311.753 kHz
	251	848.8	248.2778 kHz	315.103 kHz
GPRS 1900MHz	512	1850.2	246.6134 kHz	317.761 kHz
	661	1880.0	247.875 kHz	316.875 kHz
	810	1909.8	246.3289 kHz	320.581 kHz
EGPRS 850MHz	128	824.2	248.7059 kHz	315.663 kHz
	190	836.6	242.2137 kHz	307.931 kHz
	251	848.8	243.6829 kHz	310.203 kHz
EGPRS 1900MHz	512	1850.2	244.3939 kHz	312.311 kHz
	661	1880.0	245.8022 kHz	318.639 kHz
	810	1909.8	250.4524 kHz	318.135 kHz
WCDMA 850	4132	826.4	4.1532 MHz	4.648 MHz
	4183	836.6	4.1439 MHz	4.661 MHz
	4233	846.6	4.1498 MHz	4.643 MHz
WCDMA 1900	9262	1852.4	4.1930 MHz	4.734 MHz
	9400	1880.0	4.1636 MHz	4.662 MHz
	9538	1907.6	4.2624 MHz	6.475 MHz

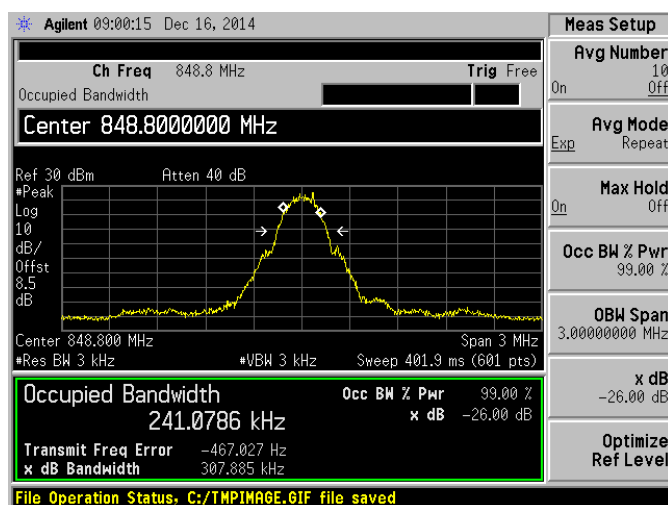
Test plots

GSM 850MHz CHANNEL 128

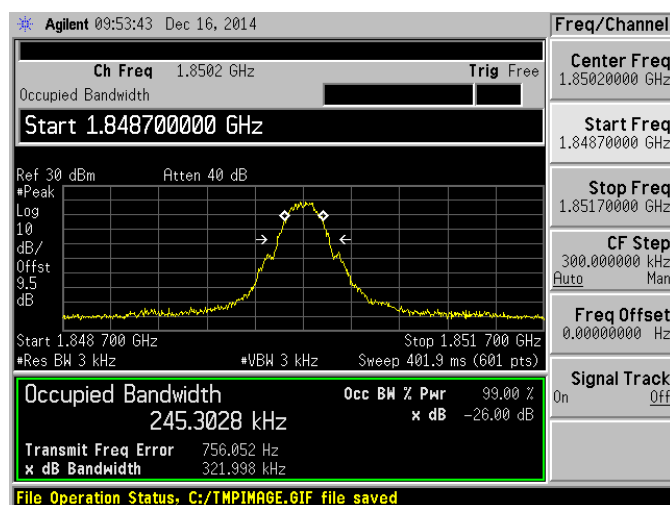
GSM 850MHz CHANNEL 190



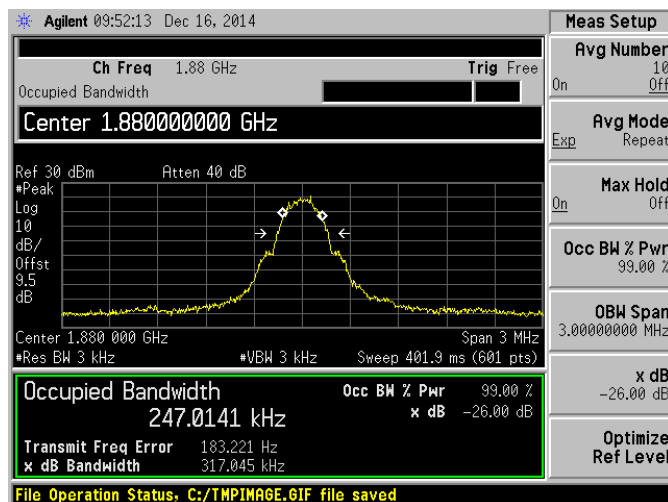
GSM 850MHz CHANNEL 251



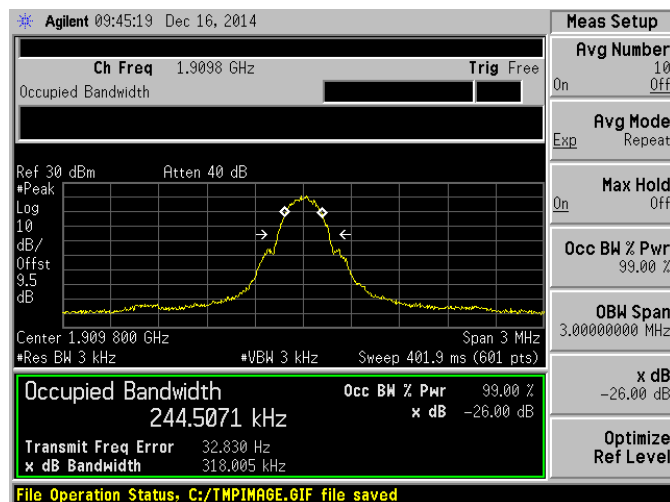
GSM 1900MHz CHANNEL 512



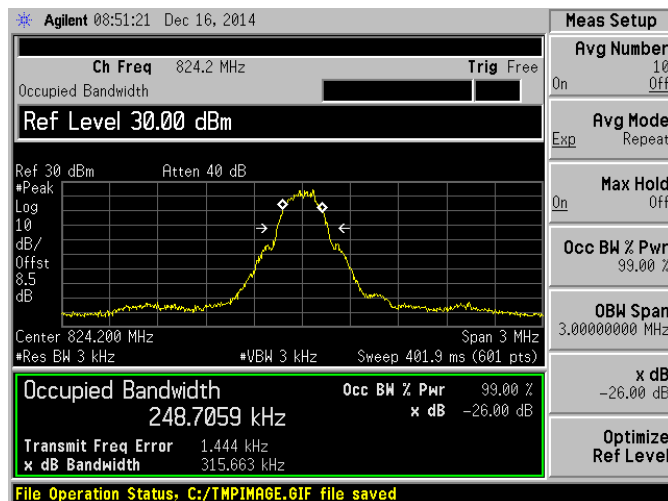
GSM 1900MHz CHANNEL 661



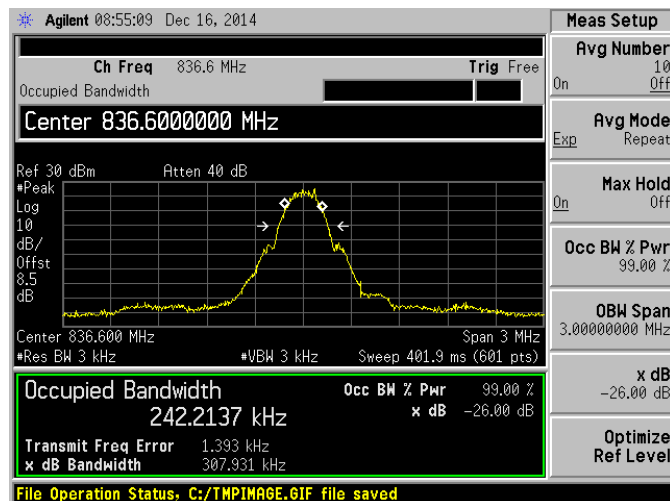
GSM 1900MHz CHANNEL 810



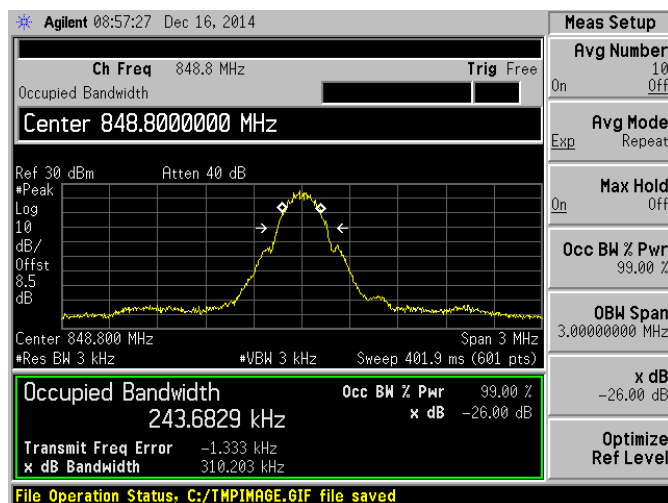
GPRS 850MHz CHANNEL 128



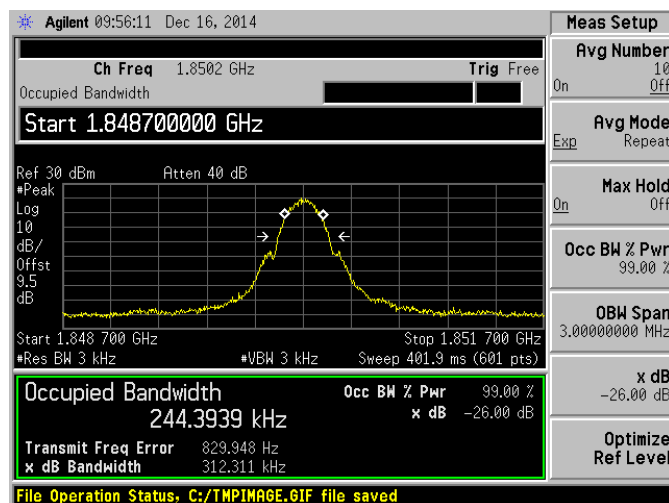
GPRS 850MHz CHANNEL 190



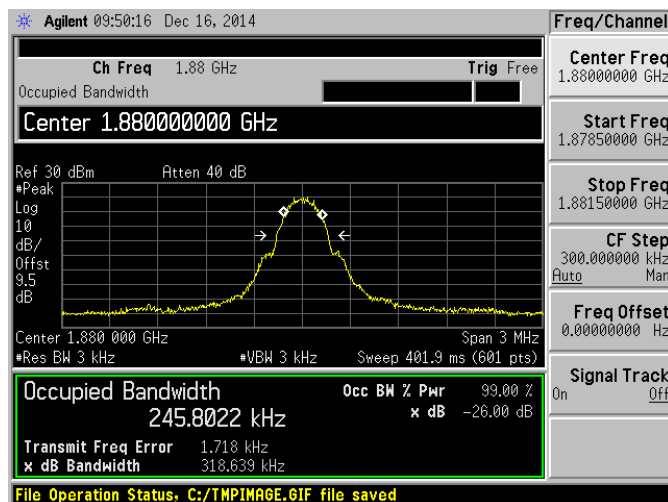
GPRS 850MHz CHANNEL 251



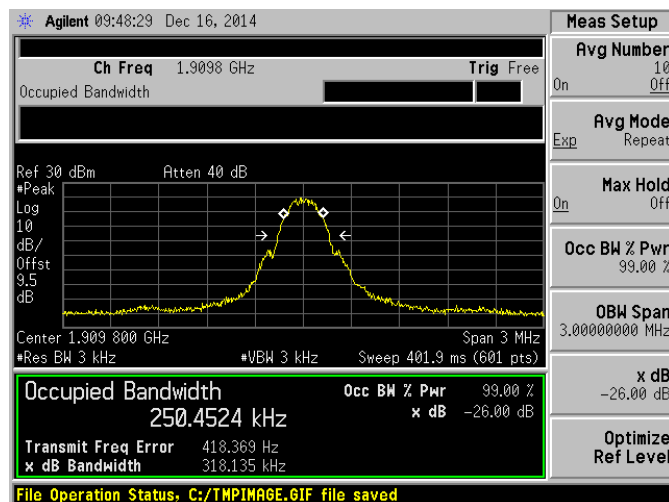
GPRS 1900MHz CHANNEL 512



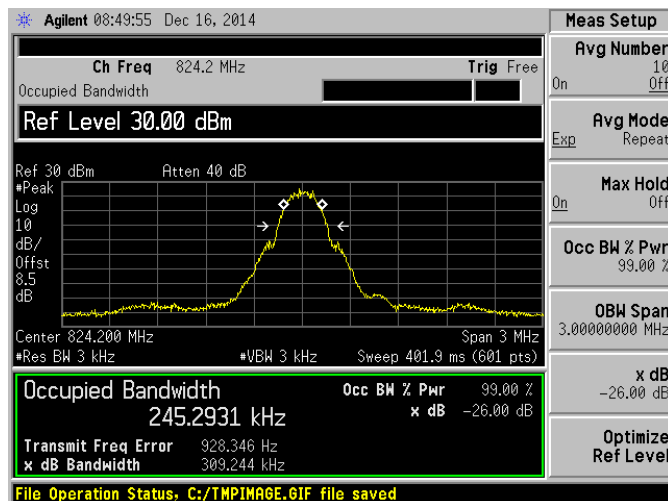
GPRS 1900MHz CHANNEL 661



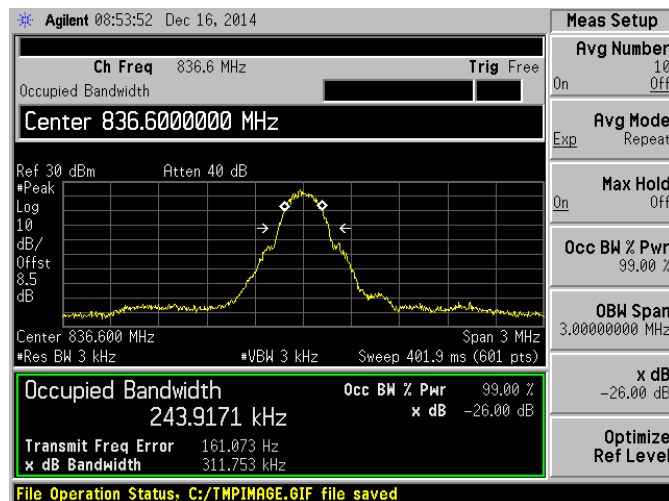
GPRS 1900MHz CHANNEL 810



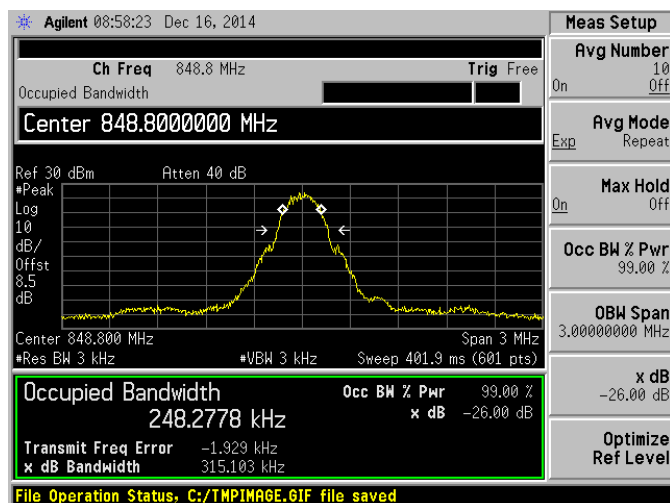
EGPRS 850MHz CHANNEL 128



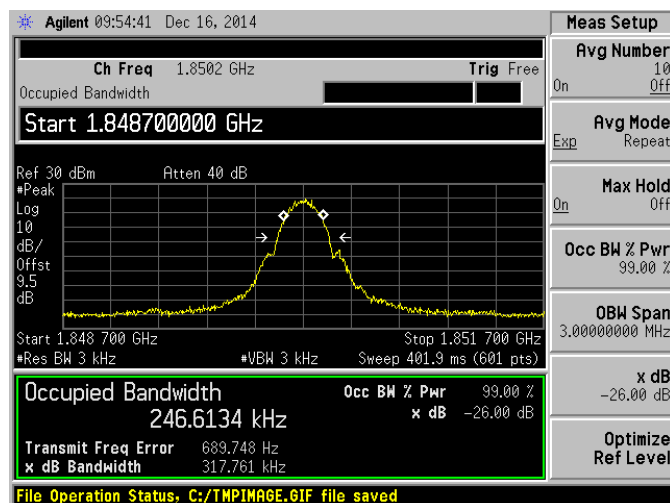
EGPRS 850MHz CHANNEL 190



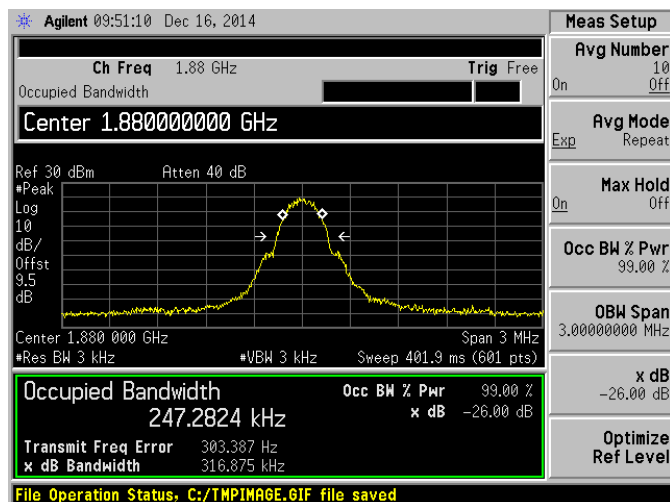
EGPRS 850MHz CHANNEL 251



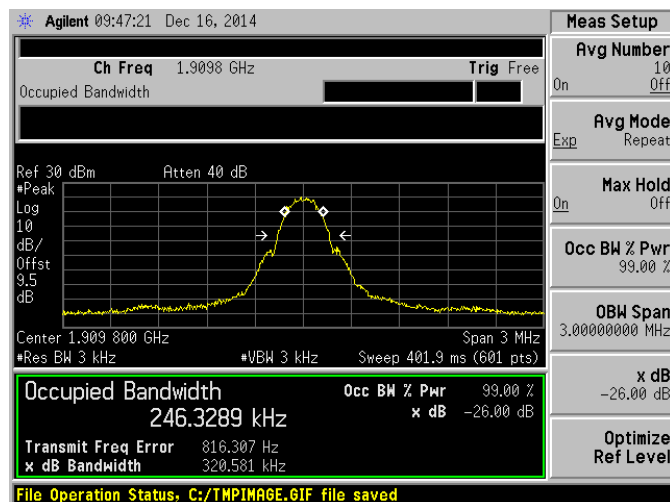
EGPRS 1900MHz CHANNEL 512



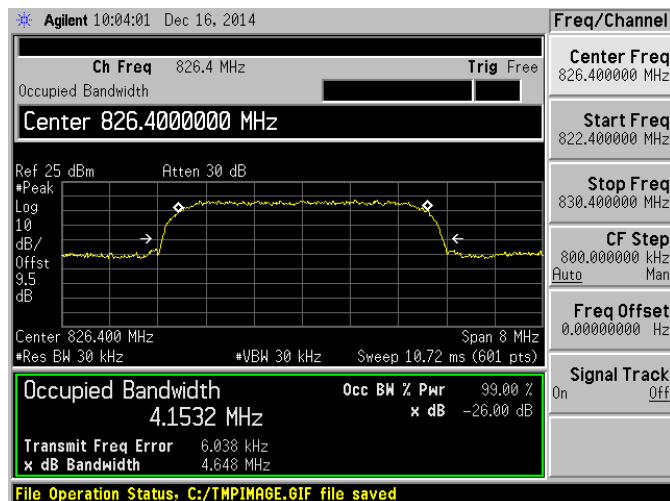
EGPRS 1900MHz CHANNEL 661



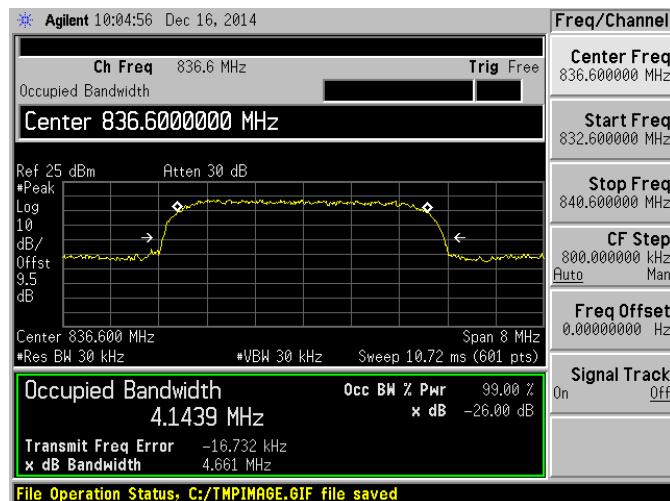
EGPRS 1900MHz CHANNEL 810



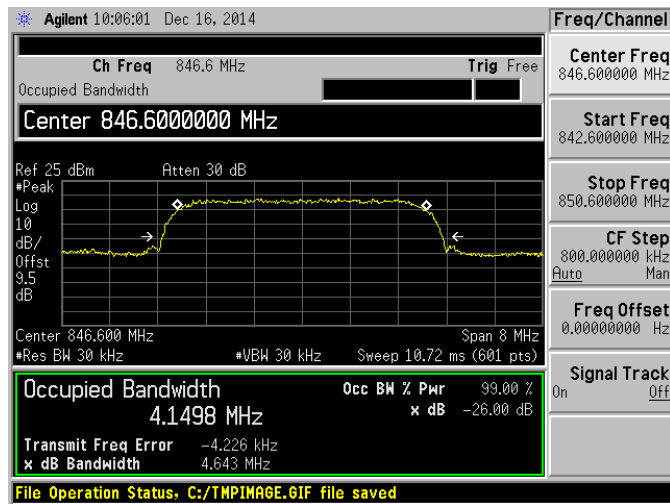
WCDMA 850MHz CHANNEL 4132



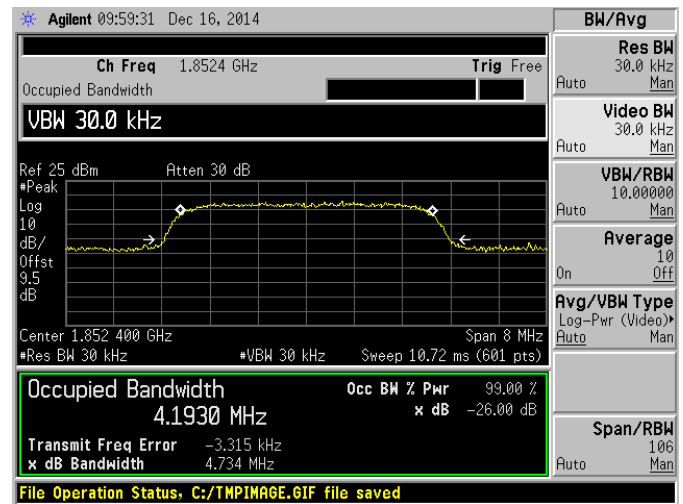
WCDMA 850MHz CHANNEL 4183



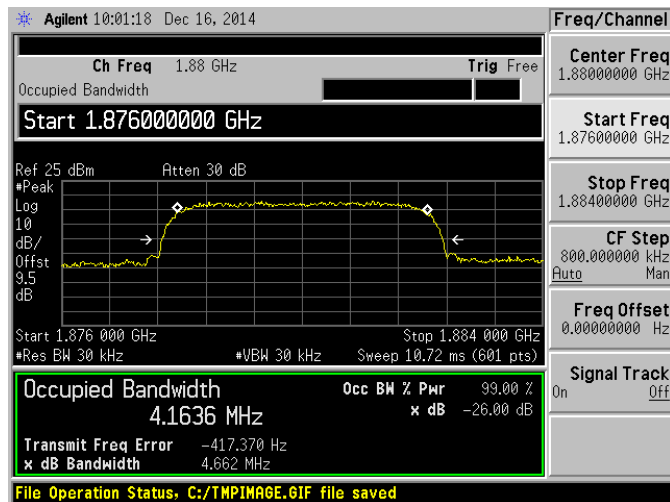
WCDMA 850MHz CHANNEL 4233



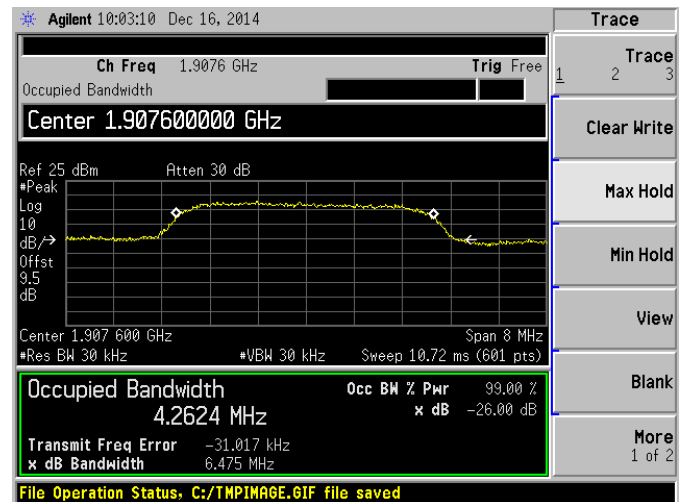
WCDMA 1700MHz CHANNEL 1312



WCDMA 1700MHz CHANNEL 1413



WCDMA 1700MHz CHANNEL 1513



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	-10.60	±2060.5	-2.71	±2091.5	16.69	±2122	PASS
	-20	10.42		5.34		6.04		
	-10	-3.46		3.30		11.33		
	0	13.13		-8.38		4.25		
	+10	0.69		-8.94		1.70		
	+20	8.67		3.05		0.45		
	+30	15.59		16.71		5.64		
	+40	3.97		6.31		-8.49		
	+50	-5.81		-3.02		-10.47		
4.2	+25	-6.71		0.82		4.43		
3.3	+25	4.71		10.98		-9.79		

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		
3.3	+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		
3.3	+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		
3.3	+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	-11.37	±2060.5	16.52	±2091.5	4.21	±2122	PASS
	-20	25.34		39.74		-6.77		
	-10	7.07		29.21		7.35		
	0	2.51		11.20		-11.20		
	+10	12.69		42.22		8.74		
	+20	22.70		23.45		10.75		
	+30	1.85		27.13		-9.44		
	+40	-7.93		-15.60		17.64		
	+50	-2.98		-17.11		-12.24		
4.2	+25	14.83		-11.48		7.54		
3.3	+25	19.32		18.41		7.84		

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	-0.46	±4700.0	2.47	±4774.5	PASS
	-20	9.44		2.79		10.18		
	-10	6.69		0.25		6.54		
	0	3.27		0.97		-6.18		
	+10	-6.31		-0.50		0.45		
	+20	-0.46		4.30		-3.78		
	+30	0.78		-4.20		10.38		
	+40	-2.08		-5.95		7.41		
	+50	5.71		-2.49		7.15		
4.2	+25	8.58		10.61		-2.15		
3.3	+25	1.29		9.35		9.53		

WCDMA 850MHz Band:

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 4123 (826.4MHz)		Channel = 4183 (836.6MHz)		Channel = 4233 (846.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	73.22	±2066	1.31	±2091.5	91.33	±2166.5	PASS
	-20	94.63		64.25		64.18		
	-10	14.52		14.06		91.40		
	0	64.87		83.44		9.42		
	+10	11.69		23.36		0.08		
	+20	28.65		85.07		20.40		
	+30	65.45		78.14		5.49		
	+40	76.92		76.35		16.75		
	+50	7.15		57.93		4.40		
4.2	+25	57.82		42.07		89.09		
3.3	+25	15.84		26.08		56.26		

WCDMA 1900MHz Band:

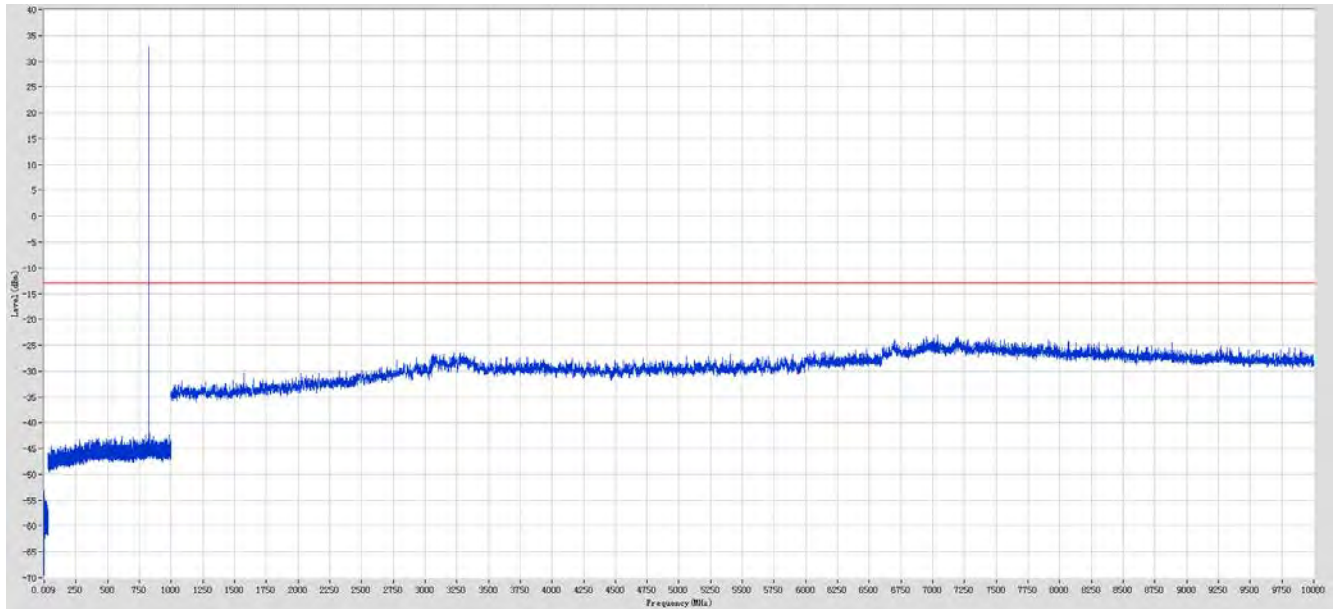
Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	Channel = 9262 (1852.4MHz)		Channel = 9400 (1880MHz)		Channel = 9538 (1907.6MHz)		
		Hz	Limits	Hz	Limits	Hz	Limits	
3.7	-30	33.26	±4631	15.73	±4700	52.17	±4769	PASS
	-20	42.12		-8.20		28.14		
	-10	-0.56		43.40		33.27		
	0	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		
3.3	+25	6.44		17.60		14.12		

A.5 Conducted Out of Band Emissions

Note: GSM and GPRS, EGPRS modes have been verified, Only the worst data with different data bandwidth show here.

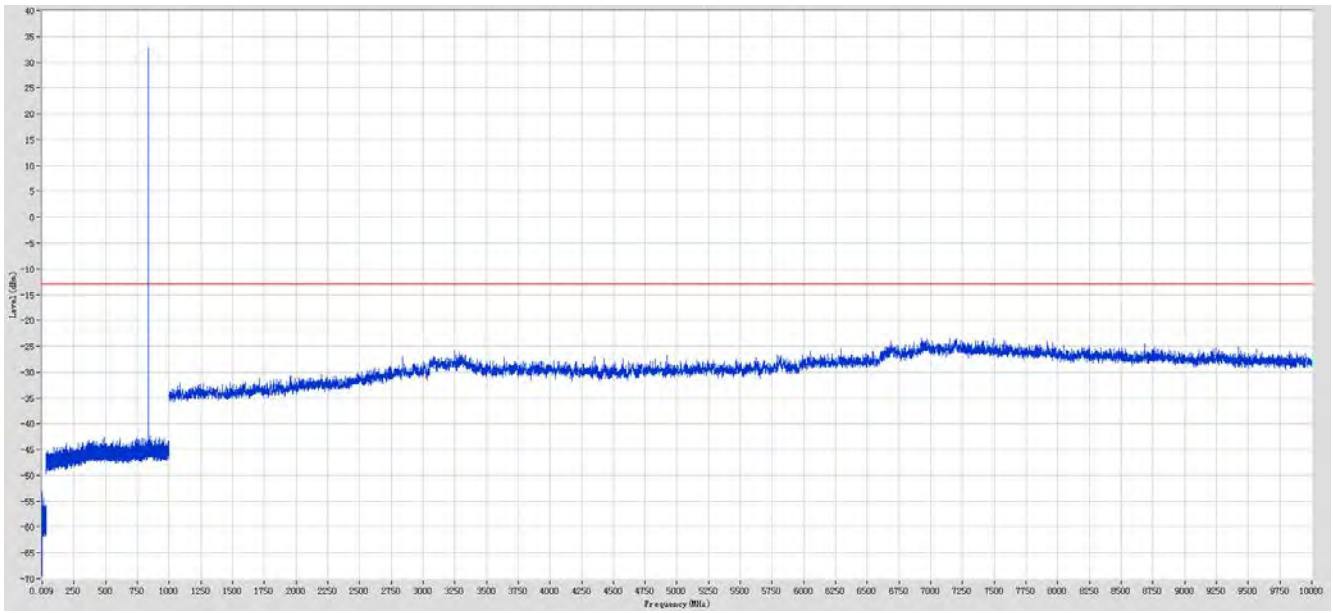
Test Data

GSM 850MHz CHANNEL 128



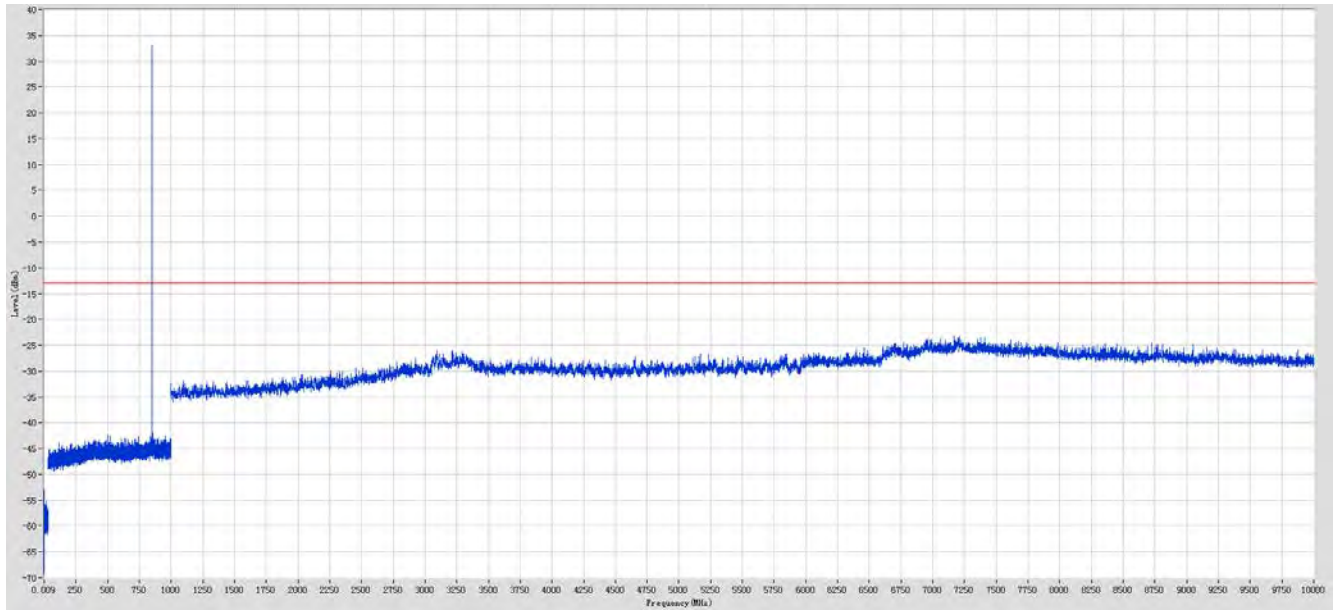
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.00947	-56.497	-13	43.497	Pass
0.15	30	0.01	Peak	0.250034	-53.199	-13	40.199	Pass
30	500	0.1	Peak	427.2845	-42.995	-13	29.995	Pass
500	1000	0.1	Peak	824.2649	32.768	N/A	N/A	N/A
1000	10000	1	Peak	7033.737	-22.9835	-13	9.9835	Pass

GSM 850MHz CHANNEL 190



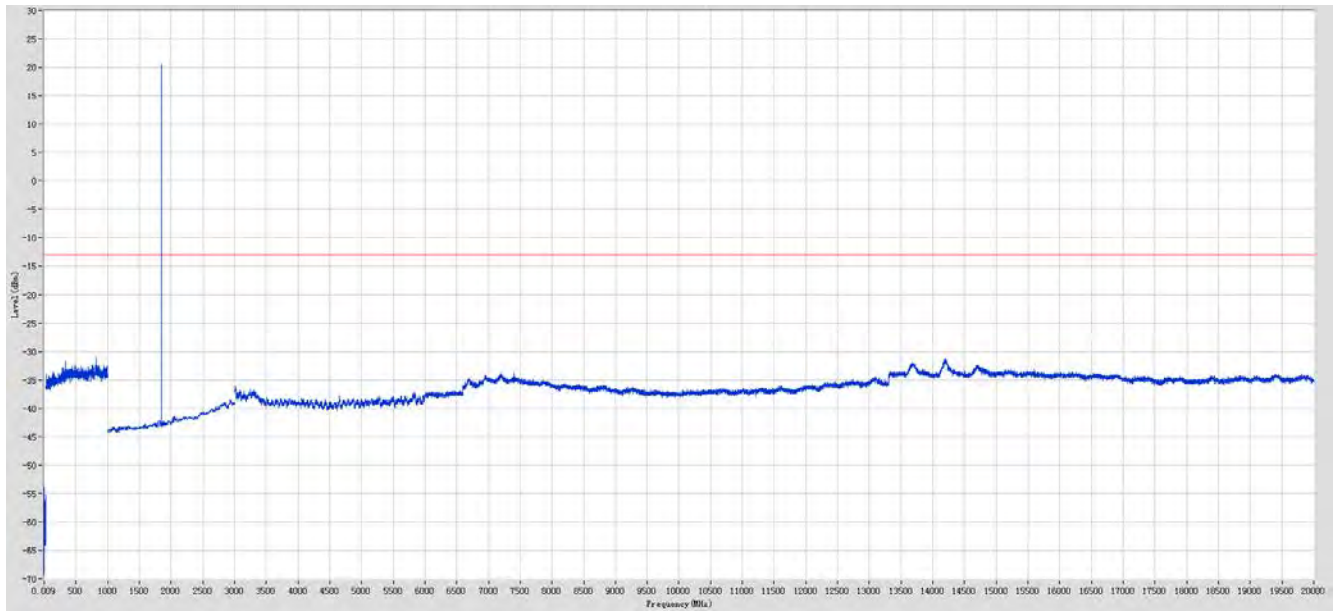
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.01323	-57.4771	-13	44.47714	Pass
0.15	30	0.01	Peak	0.160003	-53.4381	-13	40.43809	Pass
30	500	0.1	Peak	490.798	-42.6643	-13	29.6643	Pass
500	1000	0.1	Peak	836.6673	32.768	N/A	N/A	N/A
1000	10000	1	Peak	6923.723	-23.5315	-13	10.53152	Pass

GSM 850MHz CHANNEL 251



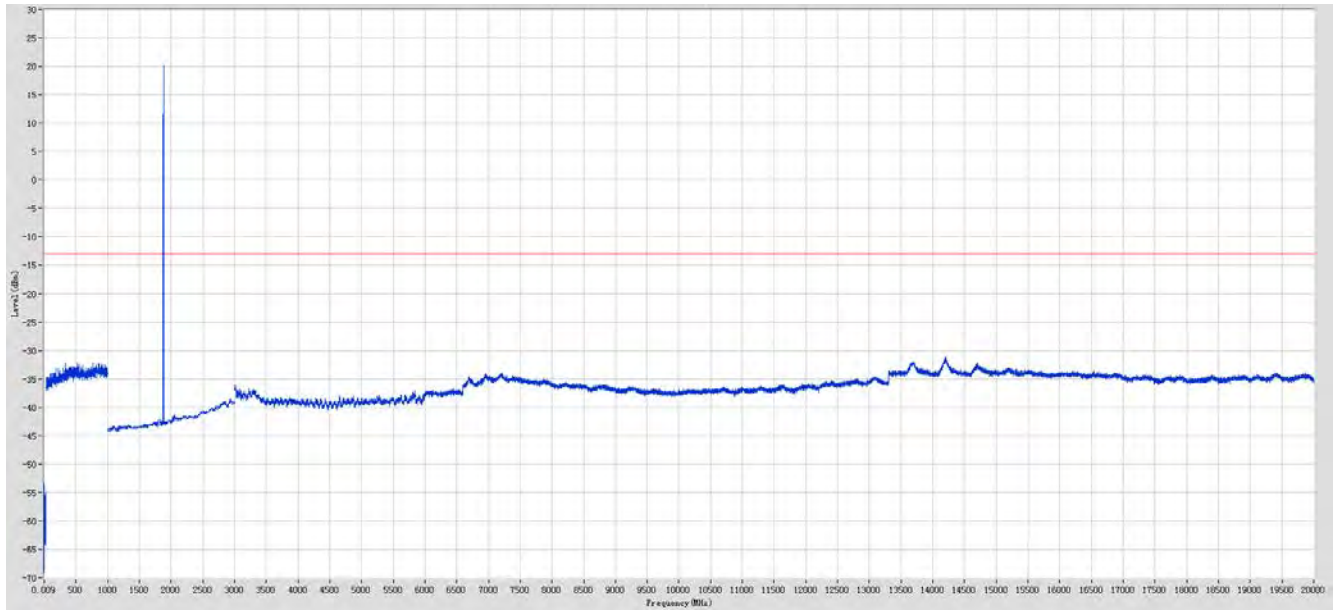
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.011585	-55.555	-13	42.555	Pass
0.15	30	0.01	Peak	0.33006	-53.0118	-13	40.01182	Pass
30	500	0.1	Peak	499.1998	-42.4377	-13	29.43769	Pass
500	1000	0.1	Peak	848.8698	33.0179	N/A	N/A	N/A
1000	10000	1	Peak	7167.753	-23.2335	-13	10.23352	Pass

GSM 1900MHz CHANNEL 512



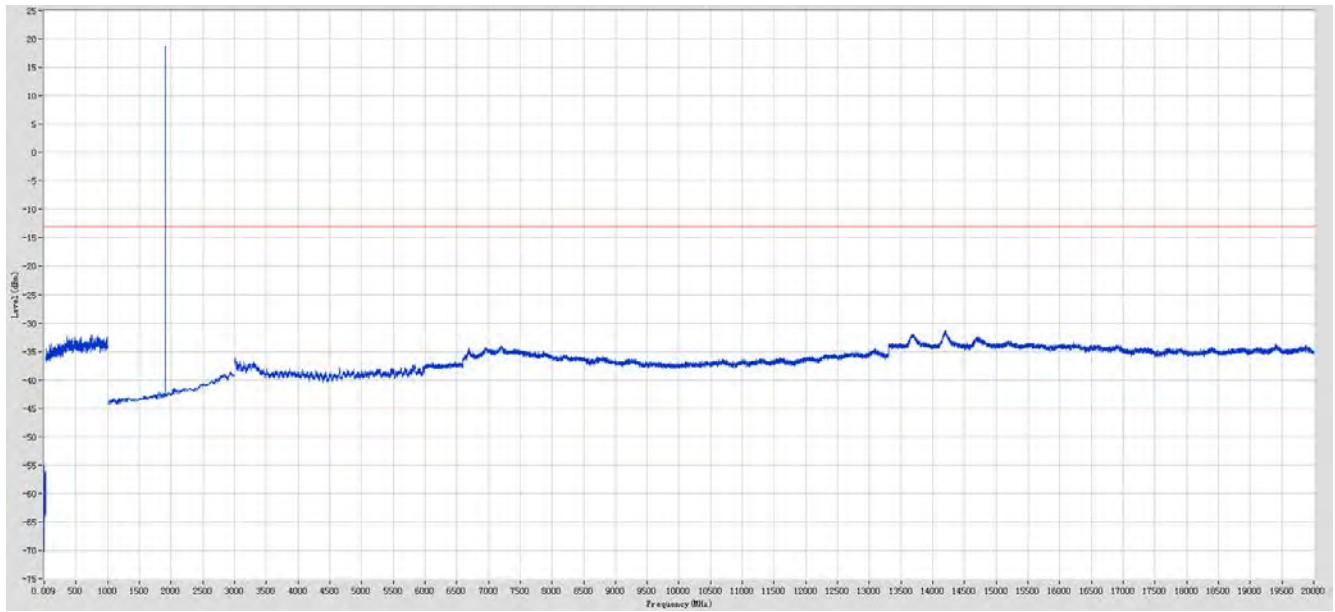
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.00947	-55.9691	-13	42.96911	Pass
0.15	30	0.01	Peak	0.290047	-53.9008	-13	40.90083	Pass
30	1000	1	Peak	812.807	-31.1187	-13	18.11866	Pass
1000	3000	1	RMS	1850.425	20.40998	N/A	N/A	N/A
3000	20000	1	RMS	14205.37	-31.3985	-13	18.39851	Pass

GSM 1900MHz CHANNEL 661



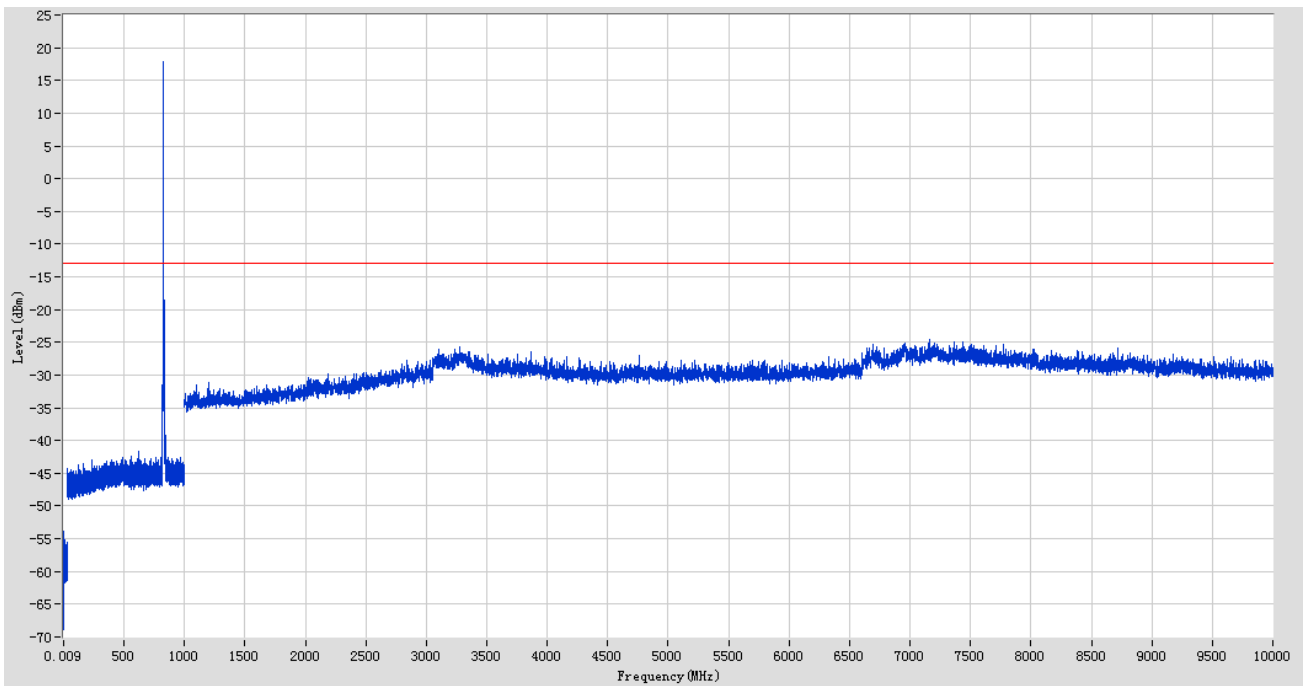
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.011585	-56.917	-13	43.917	Pass
0.15	30	0.01	Peak	0.310054	-53.3053	-13	40.30533	Pass
30	1000	1	Peak	769.7626	-32.0962	-13	19.09622	Pass
1000	3000	1	RMS	1879.44	20.21823	N/A	N/A	N/A
3000	20000	1	RMS	14197.37	-31.2165	-13	18.21651	Pass

GSM 1900MHz CHANNEL 810



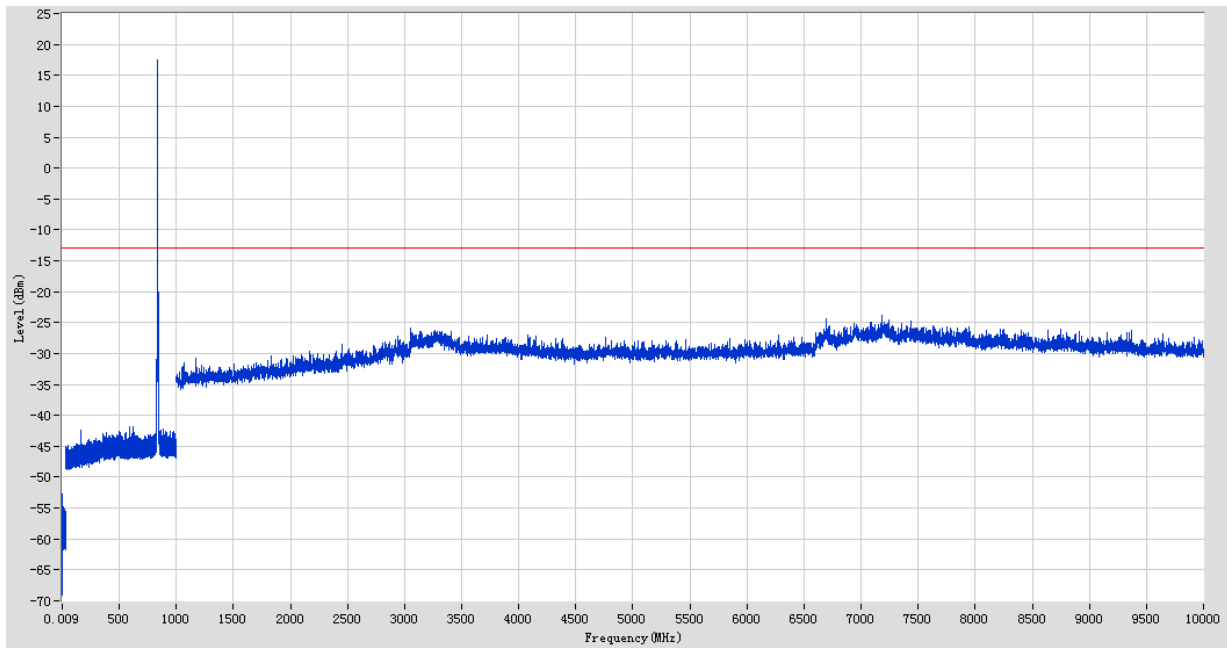
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.009705	-56.589	-13	43.58899	Pass
0.15	30	0.01	Peak	0.400084	-54.9771	-13	41.97707	Pass
30	1000	1	Peak	738.7307	-32.1391	-13	19.1391	Pass
1000	3000	1	RMS	1910.455	18.73179	N/A	N/A	N/A
3000	20000	1	RMS	14200.37	-31.2795	-13	18.27951	Pass

WCDMA 850MHz CHANNEL 4132



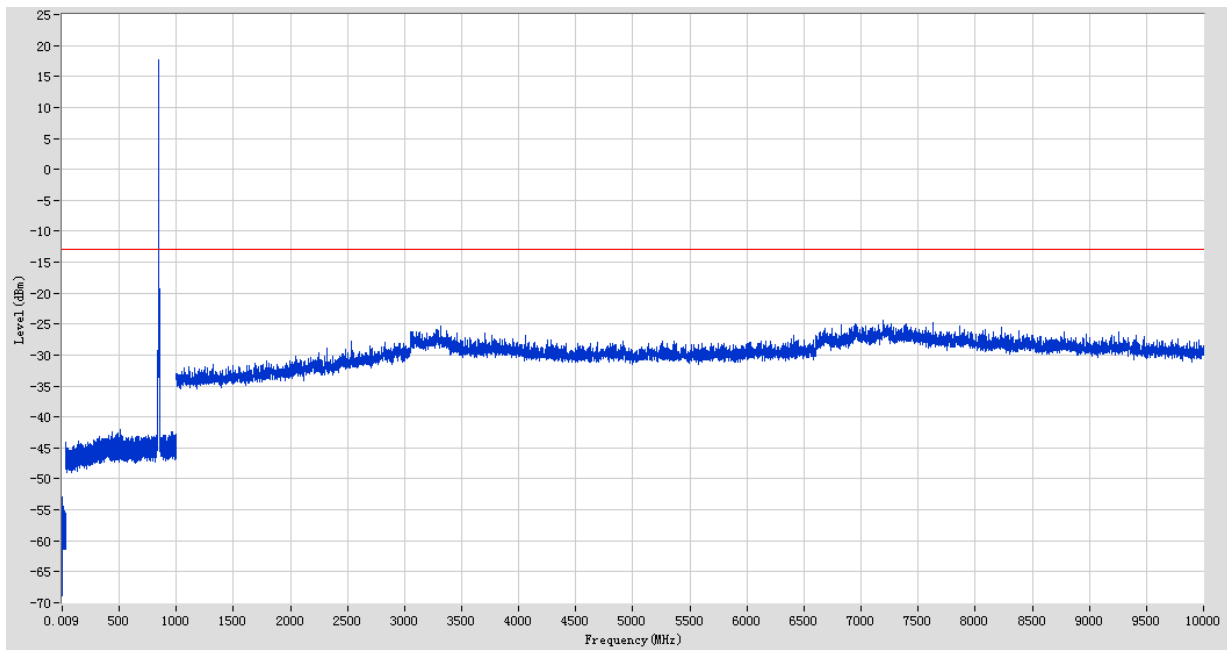
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.015345	-57.1477	-13	44.14775	Pass
0.15	30	0.01	Peak	0.15	-53.8441	-13	40.84407	Pass
30	500	0.1	Peak	485.3969	-42.6338	-13	29.63381	Pass
500	1000	0.1	Peak	825.6651	17.82214	N/A	N/A	N/A
1000	10000	1	Peak	7156.752	-24.644	-13	11.644	Pass

WCDMA 850MHz CHANNEL 4183



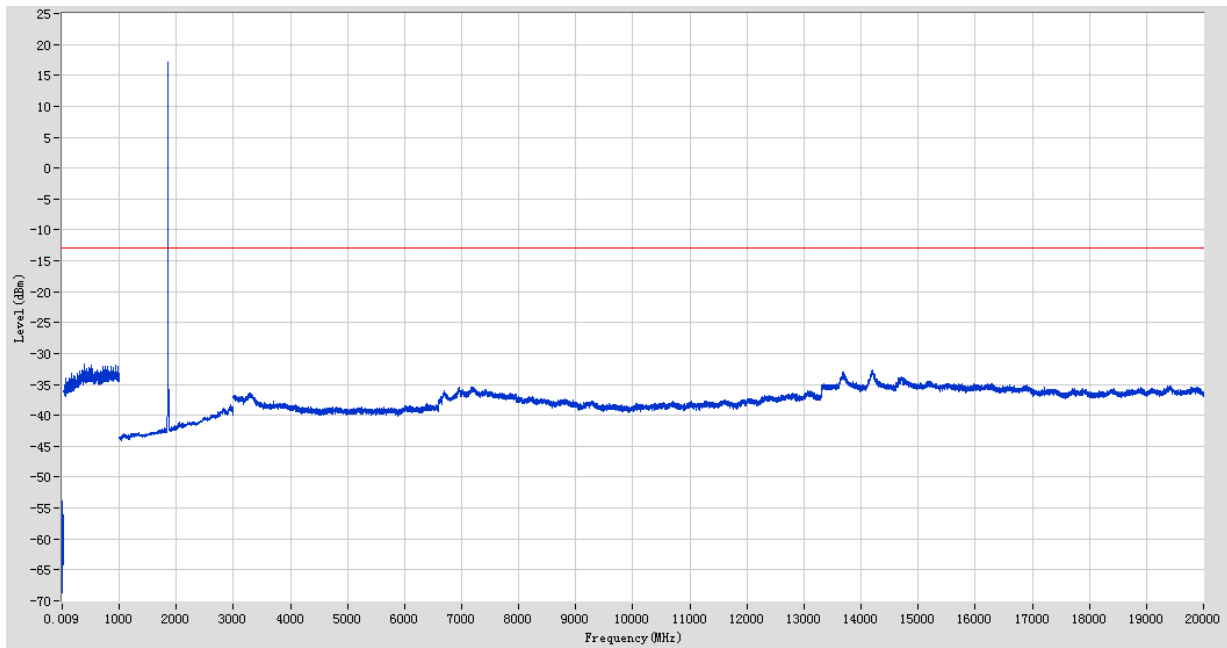
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.009235	-55.7828	-13	42.78277	Pass
0.15	30	0.01	Peak	0.200017	-52.7218	-13	39.72179	Pass
30	500	0.1	Peak	160.8278	-42.4929	-13	29.49295	Pass
500	1000	0.1	Peak	836.8674	17.53386	N/A	N/A	N/A
1000	10000	1	Peak	7183.755	-23.855	-13	10.855	Pass

WCDMA 850MHz CHANNEL 4233



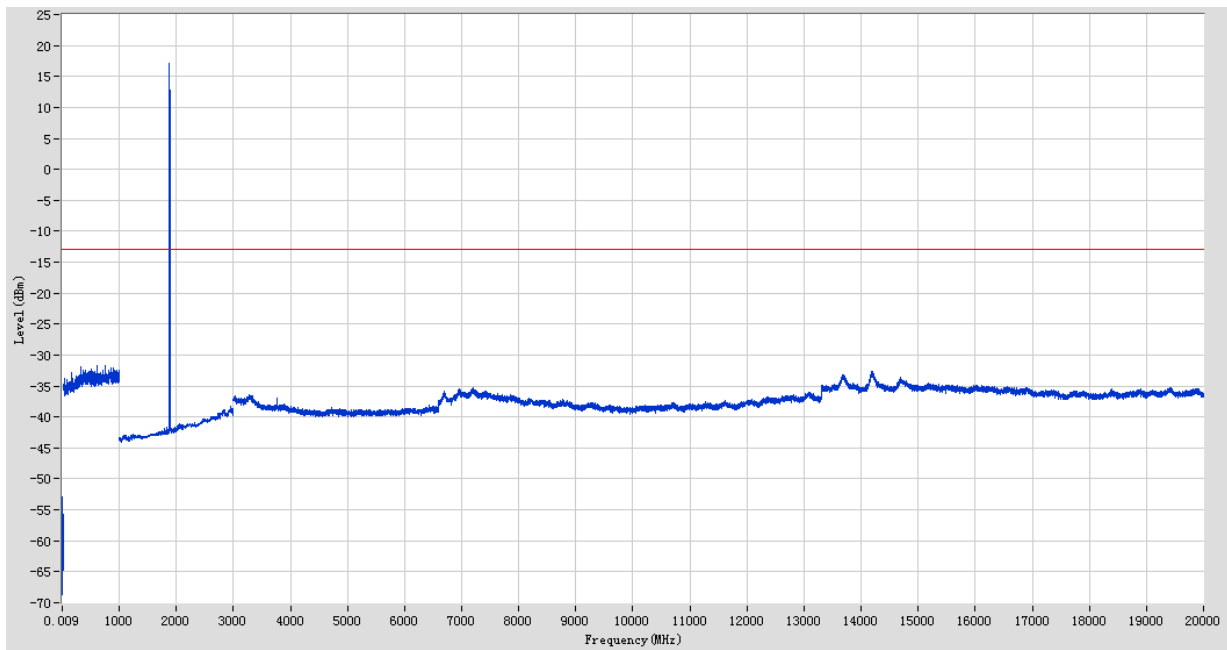
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.0137	-55.8314	-13	42.83137	Pass
0.15	30	0.01	Peak	0.160003	-52.8952	-13	39.89521	Pass
30	500	0.1	Peak	434.386	-42.4669	-13	29.46685	Pass
500	1000	0.1	Peak	847.8696	17.64212	N/A	N/A	N/A
1000	10000	1	Peak	7195.756	-24.463	-13	11.463	Pass

WCDMA 1900MHz CHANNEL 9262



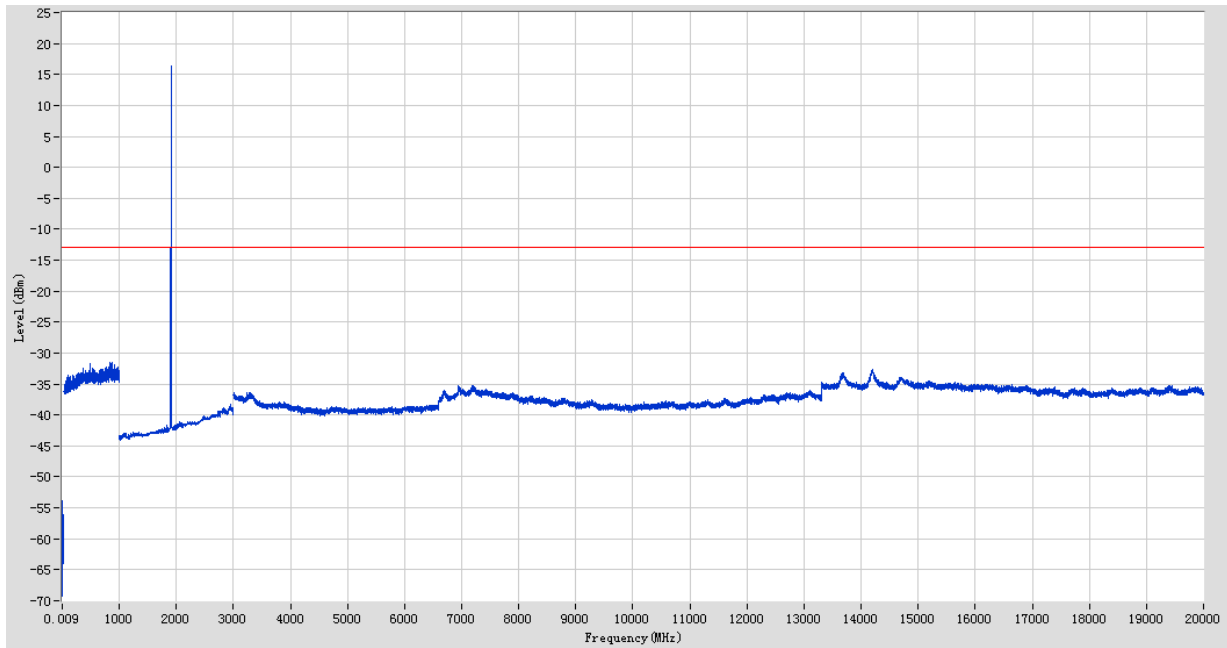
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.01088	-56.2981	-13	43.29815	Pass
0.15	30	0.01	Peak	0.15	-53.8461	-13	40.84607	Pass
30	1000	1	Peak	389.3705	-31.6461	-13	18.64605	Pass
1000	3000	1	RMS	1852.426	17.15436	N/A	N/A	N/A
3000	20000	1	RMS	14211.37	-32.624	-13	19.624	Pass

WCDMA 1900MHz CHANNEL 9400



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.00947	-56.7035	-13	43.70354	Pass
0.15	30	0.01	Peak	0.460104	-52.9765	-13	39.97651	Pass
30	1000	1	Peak	758.7513	-31.6111	-13	18.61109	Pass
1000	3000	1	RMS	1880.44	17.1315	N/A	N/A	N/A
3000	20000	1	RMS	14200.37	-32.643	-13	19.643	Pass

WCDMA 1900MHz CHANNEL 9538



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
0.009	0.15	0.001	Peak	0.011585	-56.6505	-13	43.65045	Pass
0.15	30	0.01	Peak	0.170007	-53.8674	-13	40.86736	Pass
30	1000	1	Peak	842.838	-31.461	-13	18.46102	Pass
1000	3000	1	RMS	1906.453	16.31605	N/A	N/A	N/A
3000	20000	1	RMS	14203.37	-32.629	-13	19.629	Pass

A.6 Band Edge

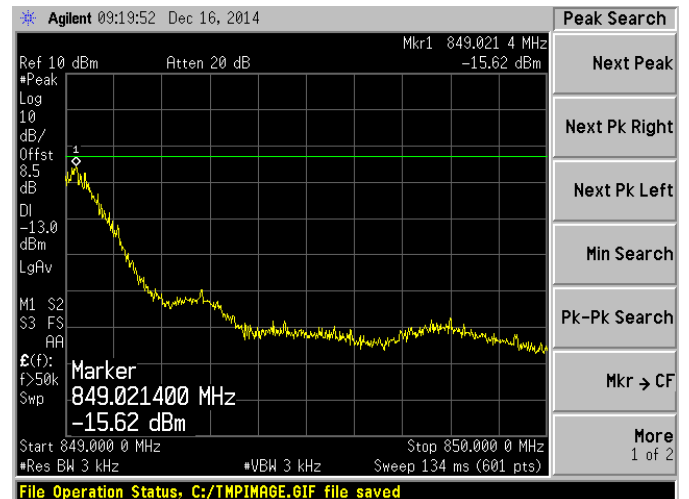
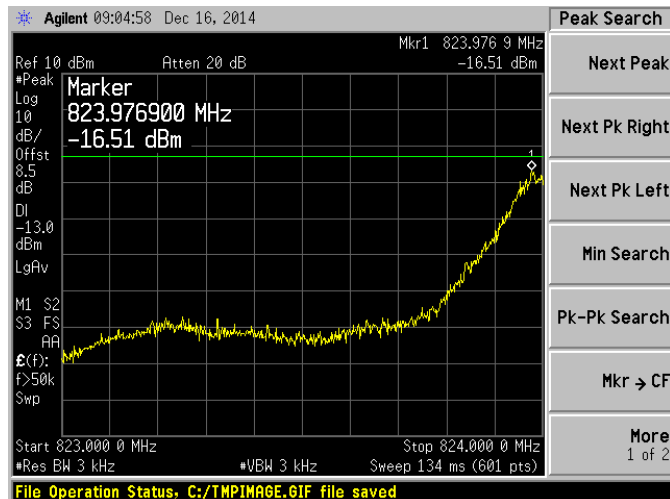
Test Data

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Limit (dBm)	Verdict
GSM 850	128	824.2	-16.51	-13	PASS
	251	848.8	-15.62		PASS
GSM 1900	512	1850.2	-16.50	-13	PASS
	810	1909.8	-16.21		PASS
GPRS 850	128	824.2	-15.53	-13	PASS
	251	848.8	-15.17		PASS
GPRS 1900	512	1850.2	-15.57	-13	PASS
	810	1909.8	-15.97		PASS
EGPRS 850	128	824.2	-14.37	-13	PASS
	251	848.8	-15.90		PASS
EGPRS 1900	512	1850.2	-15.83	-13	PASS
	810	1909.8	-14.67		PASS
WCDMA 850	4132	826.4	-21.16	-13	PASS
	4233	846.6	-19.56		PASS
WCDMA 1900	9262	1852.4	-14.64	-13	PASS
	9538	1907.6	-13.86		PASS

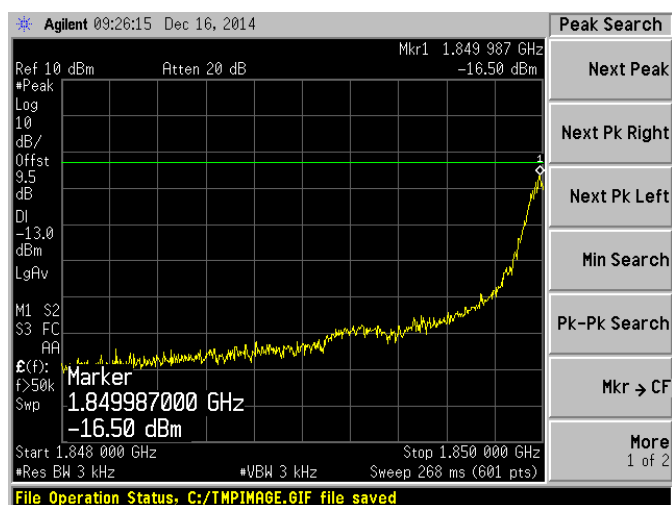
Test Plots

GSM 850MHz CHANNEL 128

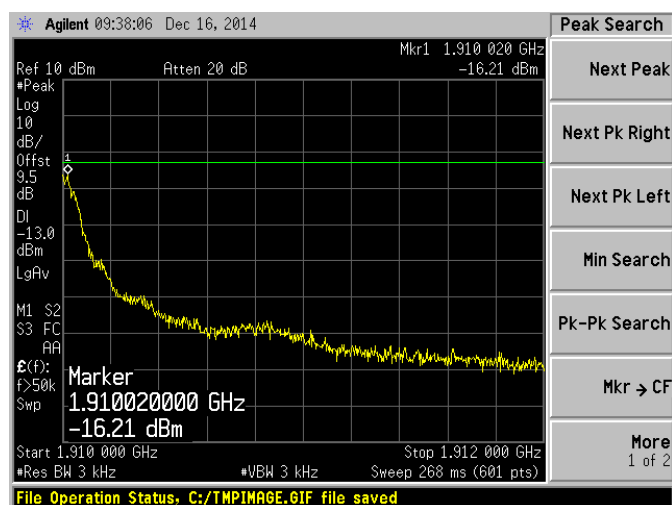
GSM 850MHz CHANNEL 251



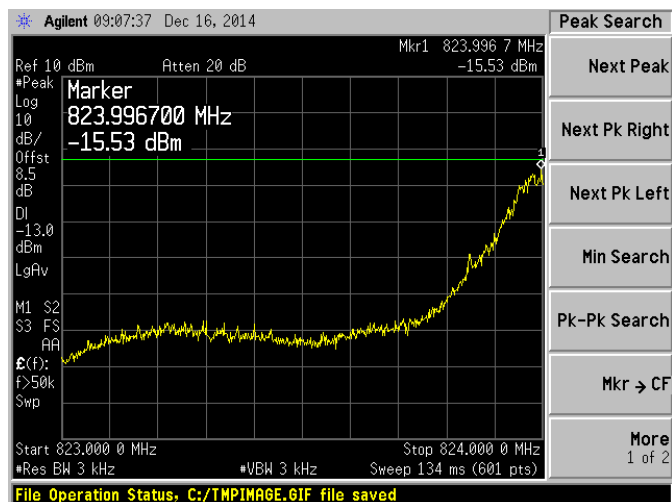
GSM 1900MHz CHANNEL 512



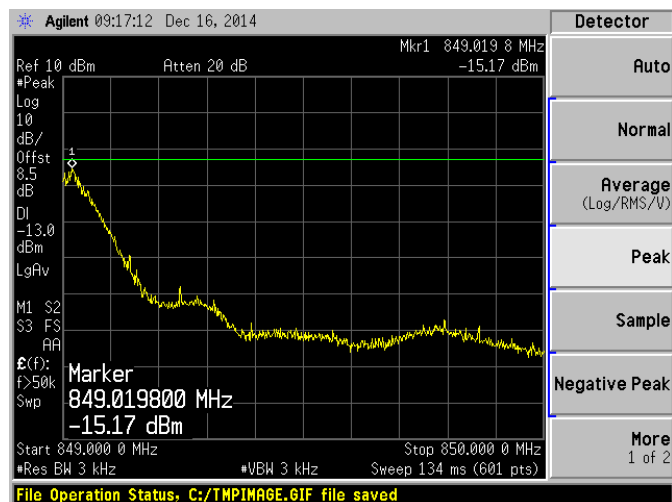
GSM 1900MHz CHANNEL 810



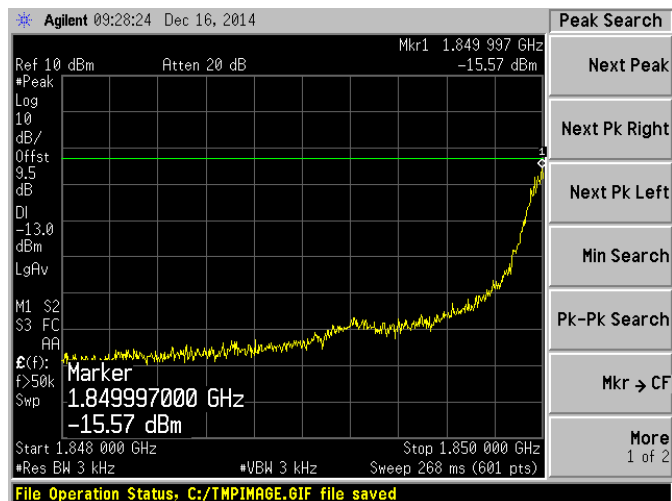
GPRS 850MHz CHANNEL 128



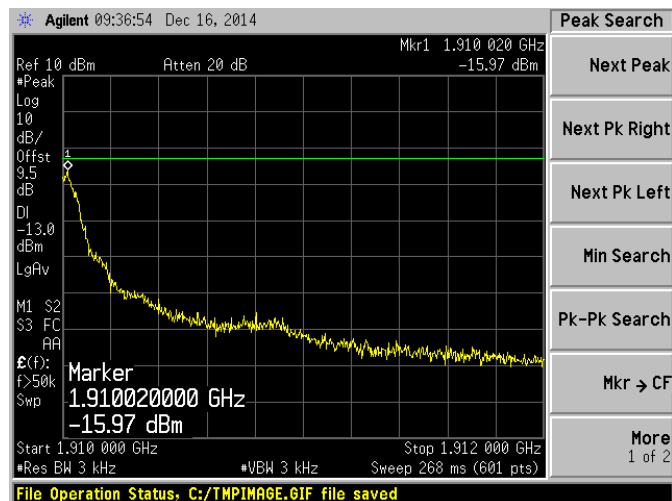
GPRS 850MHz CHANNEL 251



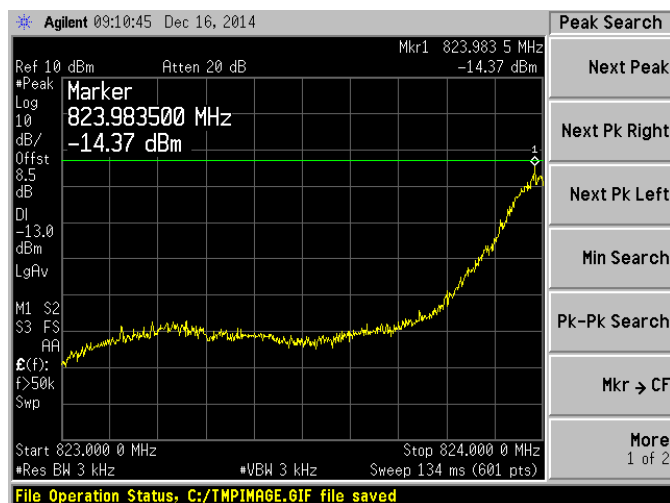
GPRS 1900MHz CHANNEL 512



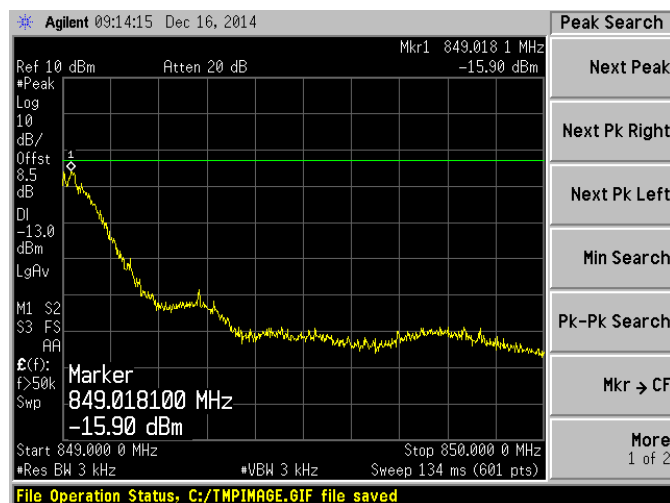
GPRS 1900MHz CHANNEL 810



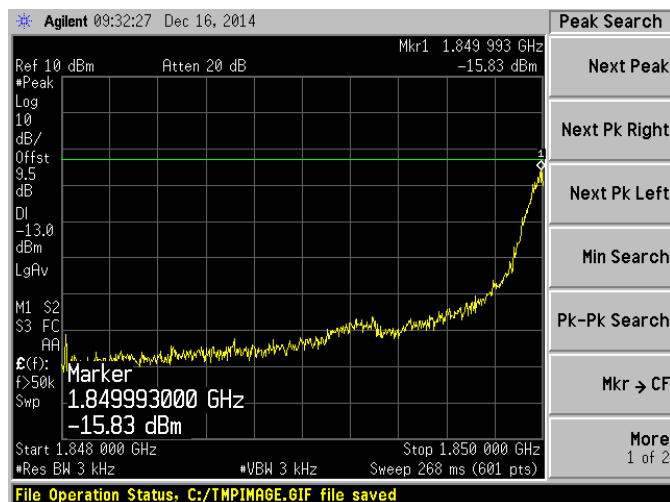
EGPRS 850MHz CHANNEL 128



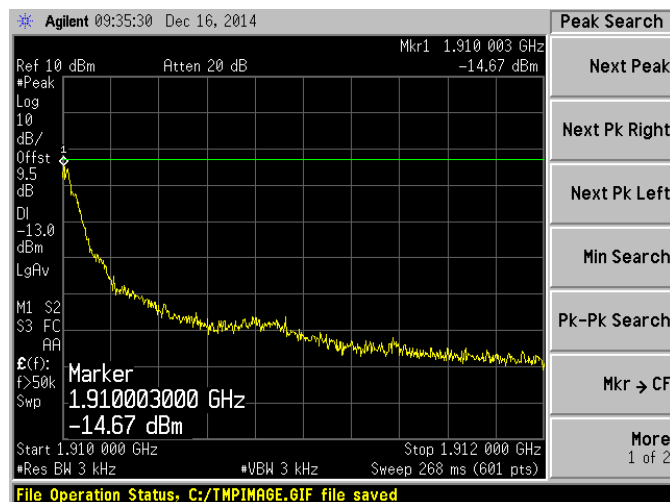
EGPRS 850MHz CHANNEL 251



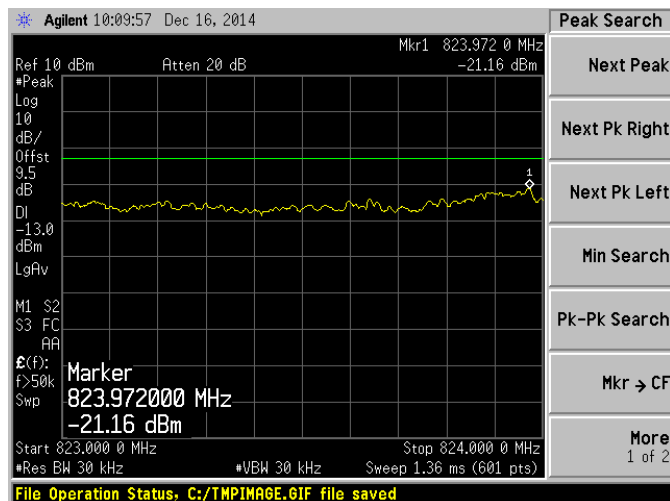
EGPRS 1900MHz CHANNEL 512



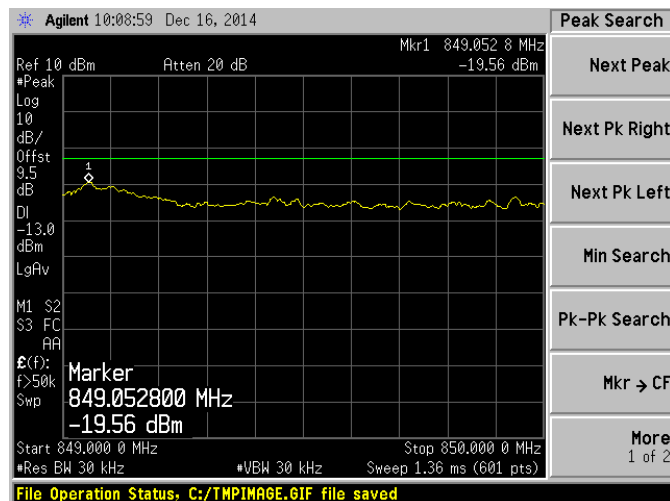
EGPRS 1900MHz CHANNEL 810



WCDMA 850MHz CHANNEL 4132

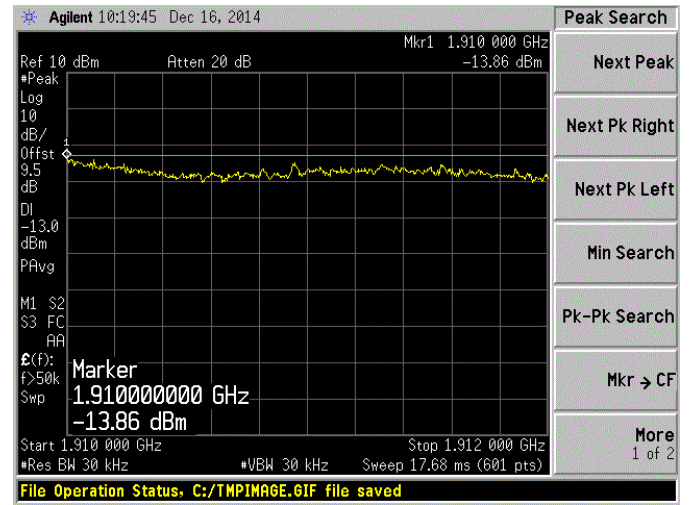
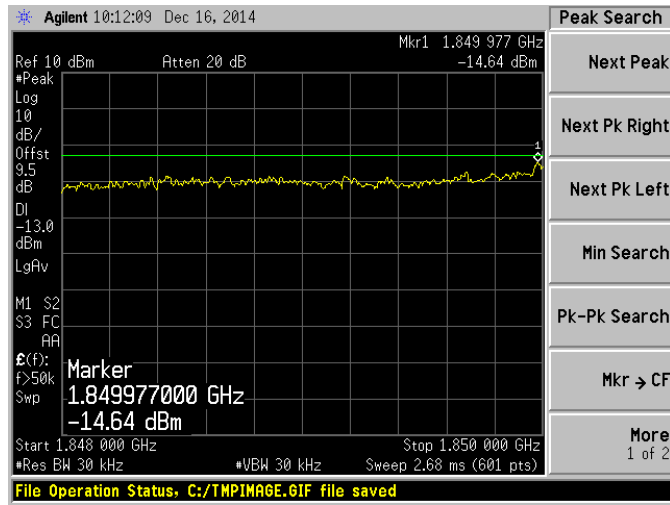


WCDMA 850MHz CHANNEL 4233



WCDMA 1900MHz CHANNEL 9262

WCDMA 1900MHz CHANNEL 9538



A.7 Transmitter Radiated Power (EIRP/ERP)

Minimum RF power: GSM850 5.16dBm, GSM 1900 -0.56dBm, WCDMA 850 -1.41dBm, WCDMA 1700 -0.26dBm.

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	-9.45	41	31.55	1.43	38.5	7	PASS
	190	836.60	5	-9.83	41	31.17	1.31			PASS
	251	848.80	5	-9.55	41	31.45	1.40			PASS
GPRS 850	128	824.20	5	-9.10	41	31.9	1.55	38.5	7	PASS
	190	836.60	5	-8.38	41	32.62	1.83			PASS
	251	848.80	5	-7.97	41	33.03	2.01			PASS
EGPRS 850	128	824.20	5	-8.46	41	32.54	1.79	38.5	7	PASS
	190	836.60	5	-8.17	41	32.83	1.92			PASS
	251	848.80	5	-8.32	41	32.68	1.85			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	-16.28	43	26.72	0.47	33	2	PASS
	661	1880.0	0	-15.24	43	27.76	0.60			PASS
	810	1909.8	0	-15.36	43	27.64	0.58			PASS
GPRS 1900	512	1850.2	0	-16.21	43	26.79	0.48	33	2	PASS
	661	1880.0	0	-15.19	43	27.81	0.60			PASS
	810	1909.8	0	-15.21	43	27.79	0.60			PASS
EGPRS 1900	512	1850.2	0	-15.49	43	27.51	0.56	33	2	PASS
	661	1880.0	0	-15.17	43	27.83	0.61			PASS
	810	1909.8	0	-15.20	43	27.8	0.60			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	-18.64	41	22.36	0.17	38.5	7	PASS
	4183	836.6	-18.15	41	22.85	0.19			PASS
	4233	846.6	-18.66	41	22.34	0.17			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	-22.57	43	20.43	0.11	33	2	PASS
	9401	1880.2	-22.25	43	20.75	0.12			PASS
	9538	1907.6	-22.09	43	20.91	0.12			PASS

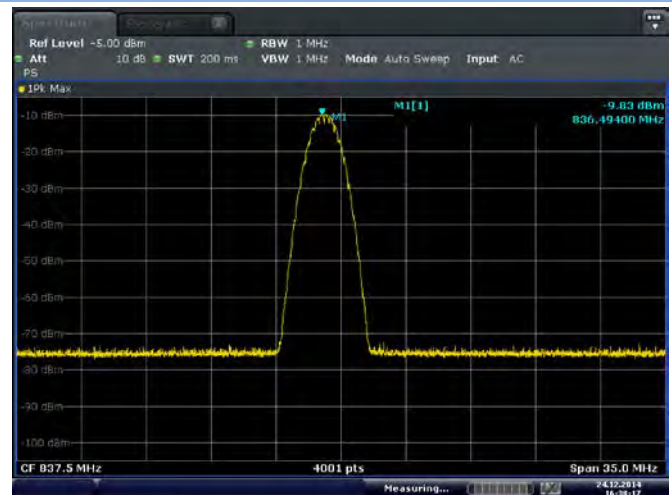
Test Plots

GSM 850MHz CHANNEL 128



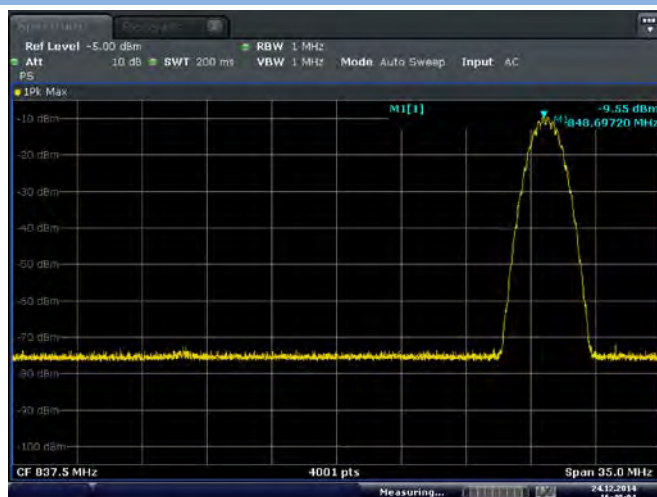
Date: 24.DEC.2014 16:16:22

GSM 850MHz CHANNEL 190



Date: 24.DEC.2014 16:18:17

GSM 850MHz CHANNEL 251



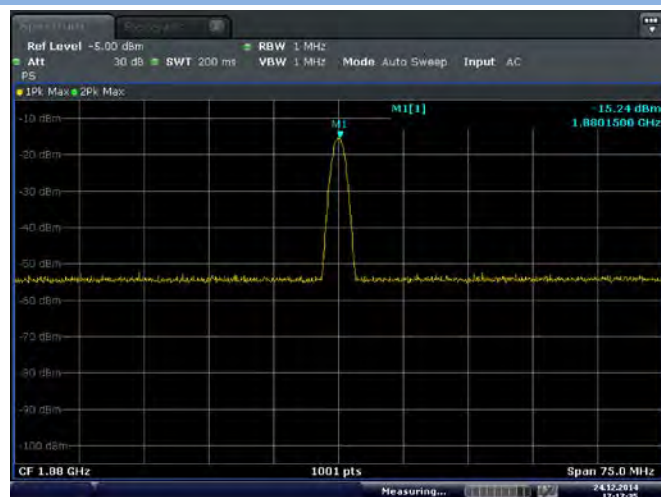
Date: 24.DEC.2014 16:40:03

GSM 1900MHz CHANNEL 512



Date: 24.DEC.2014 17:19:38

GSM 1900MHz CHANNEL 661



Date: 24.DEC.2014 17:17:04

GSM 1900MHz CHANNEL 810



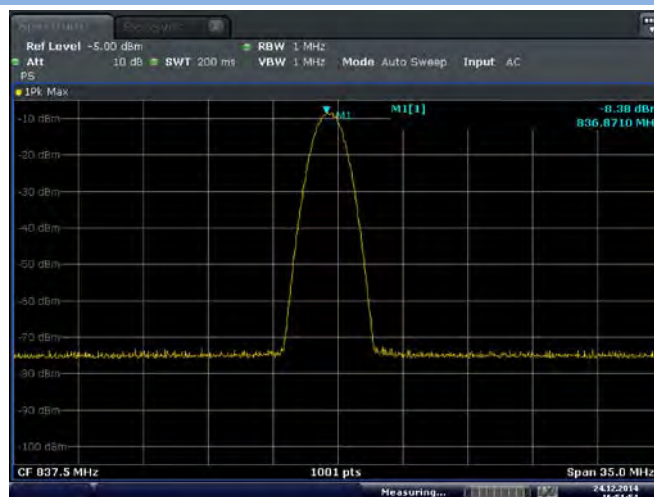
Date: 24.DEC.2014 17:14:17

GPRS 850MHz CHANNEL 128



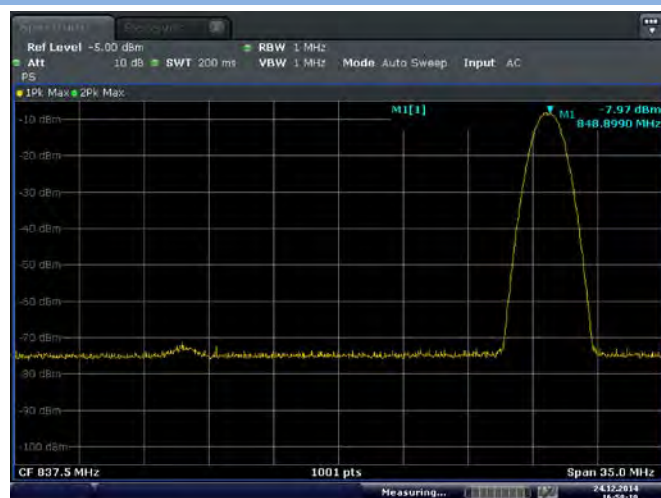
Date: 24.DEC.2014 16:53:39

GPRS 850MHz CHANNEL 190



Date: 24.DEC.2014 16:51:53

GPRS 850MHz CHANNEL 251



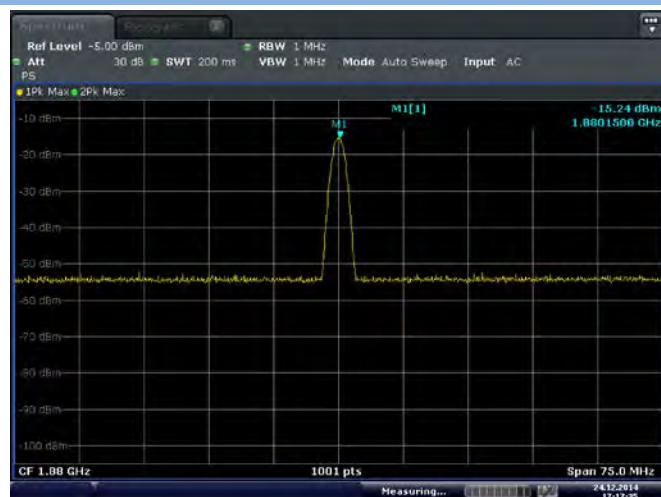
Date: 24.DEC.2014 16:58:19

GPRS 1900MHz CHANNEL 512



Date: 24.DEC.2014 17:19:44

GPRS 1900MHz CHANNEL 661



Date: 24.DEC.2014 17:17:05

GPRS 1900MHz CHANNEL 810



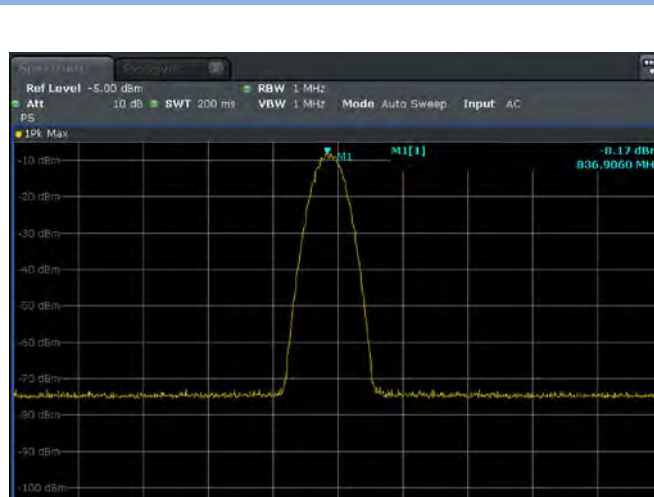
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EGPRS 850MHz CHANNEL 128



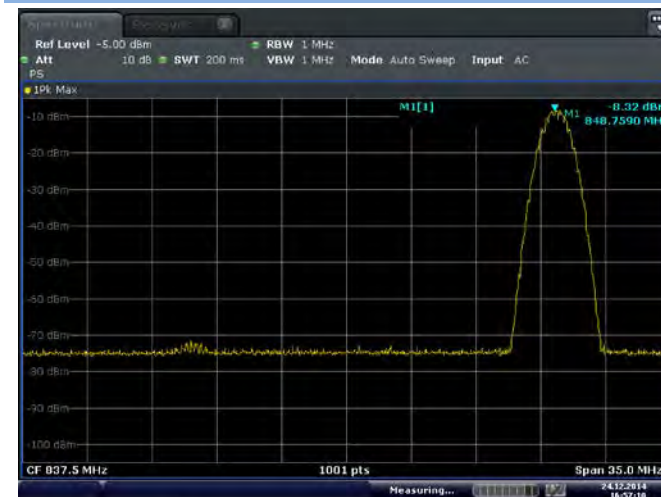
Date: 24.DEC.2014 16:55:08

EGPRS 850MHz CHANNEL 190



Date: 24.DEC.2014 16:49:03

EGPRS 850MHz CHANNEL 251



Date: 24.DEC.2014 16:57:10

EGPRS 1900MHz CHANNEL 512



Date: 24.DEC.2014 17:08:05

EGPRS 1900MHz CHANNEL 661



Date: 24.DEC.2014 17:11:06

EGPRS 1900MHz CHANNEL 810



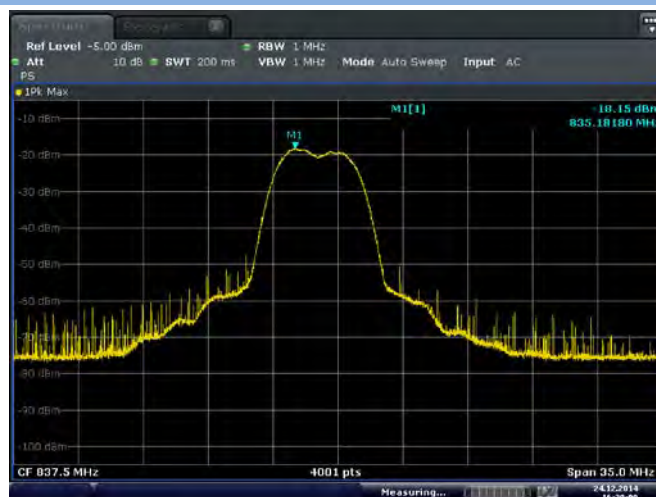
Date: 24.DEC.2014 17:12:18

WCDMA 850MHz CHANNEL 4132



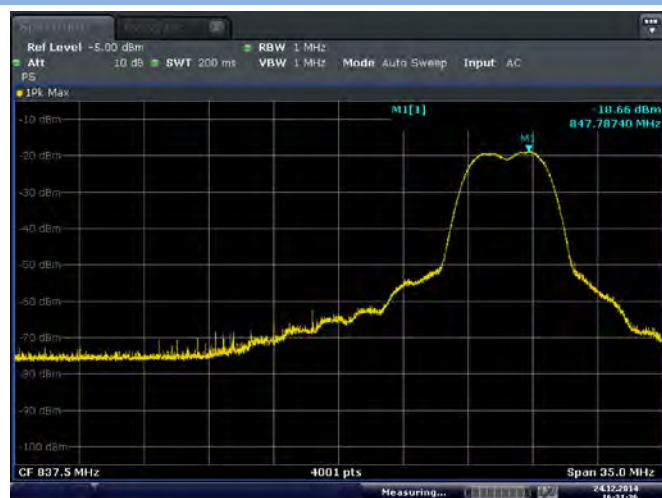
Date: 24.DEC.2014 16:27:01

WCDMA 850MHz CHANNEL 4183



Date: 24.DEC.2014 16:30:00

WCDMA 850MHz CHANNEL 4233



Date: 24.DEC.2014 16:51:26

WCDMA 1900MHz CHANNEL 9262



Date: 24.DEC.2014 17:23:24

WCDMA 1900MHz CHANNEL 9400



Date: 24 DEC 2014 17:25:58

WCDMA 1900MHz CHANNEL 9538



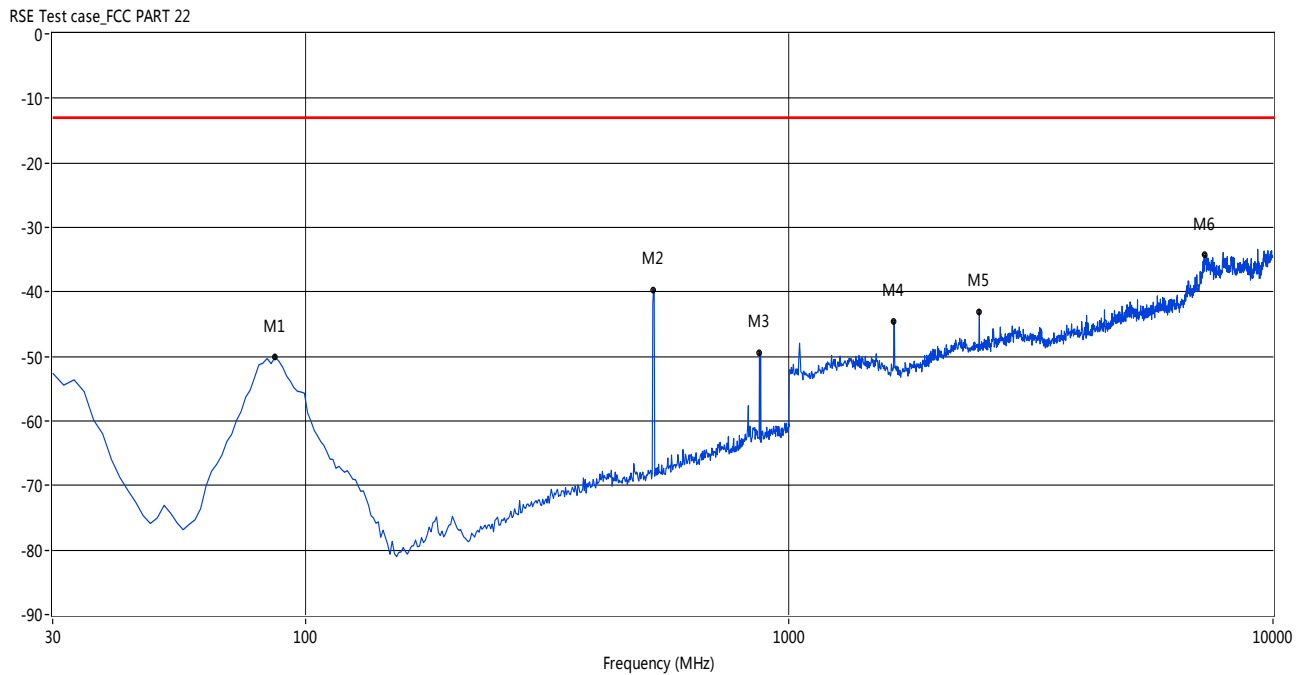
Date: 24 DEC 2014 17:27:27

A.8 Radiated Out of Band Emissions

Note: GSM and GPRS, EGPRS modes have been verified, only the worst data with different data bandwidth show here.

Test Data

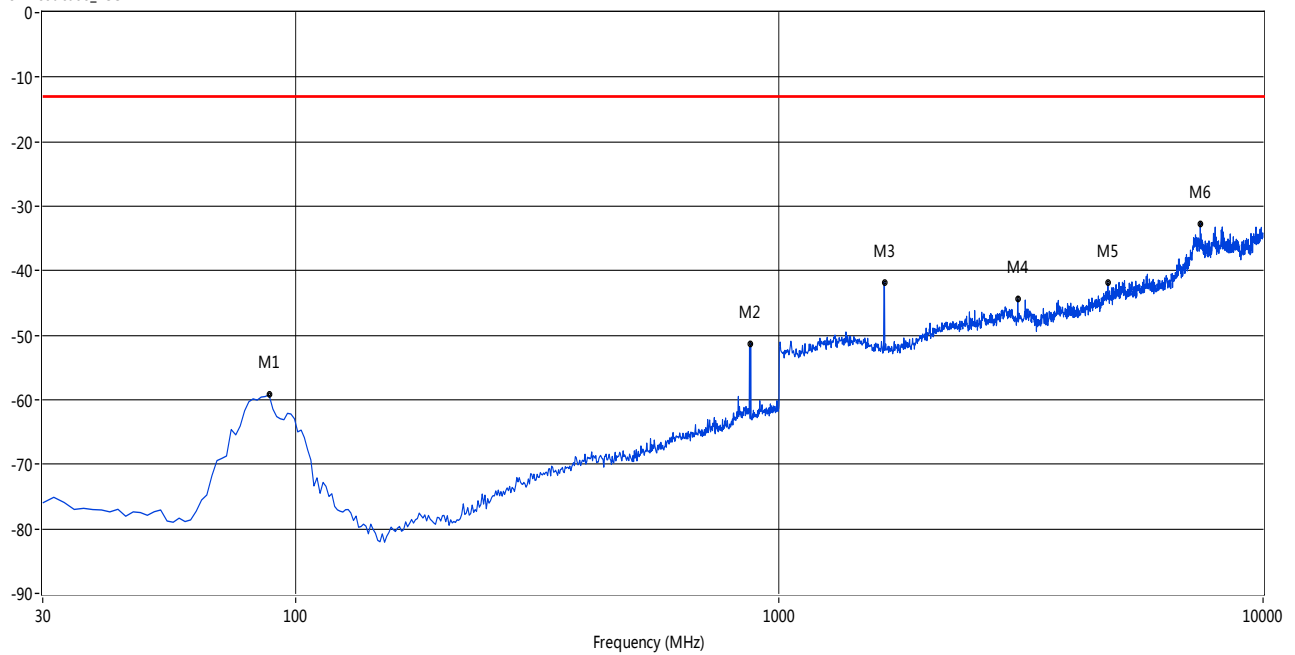
GSM 850MHz CHANNEL 128, ANT V



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-50.12	-3.19	-13.0	37.12	103.40	Vertical	PASS
523.88	-39.72	-1.32	-13.0	26.72	221.30	Vertical	PASS
867.65	-49.38	5.10	-13.0	36.38	54.50	Vertical	PASS
1645.59	-44.60	8.49	-13.0	31.60	325.60	Vertical	PASS
2470.88	-43.02	12.38	-13.0	30.02	335.60	Vertical	PASS
7237.94	-34.24	32.75	-13.0	21.24	160.10	Vertical	PASS

GSM 850MHz CHANNEL 128, ANT H

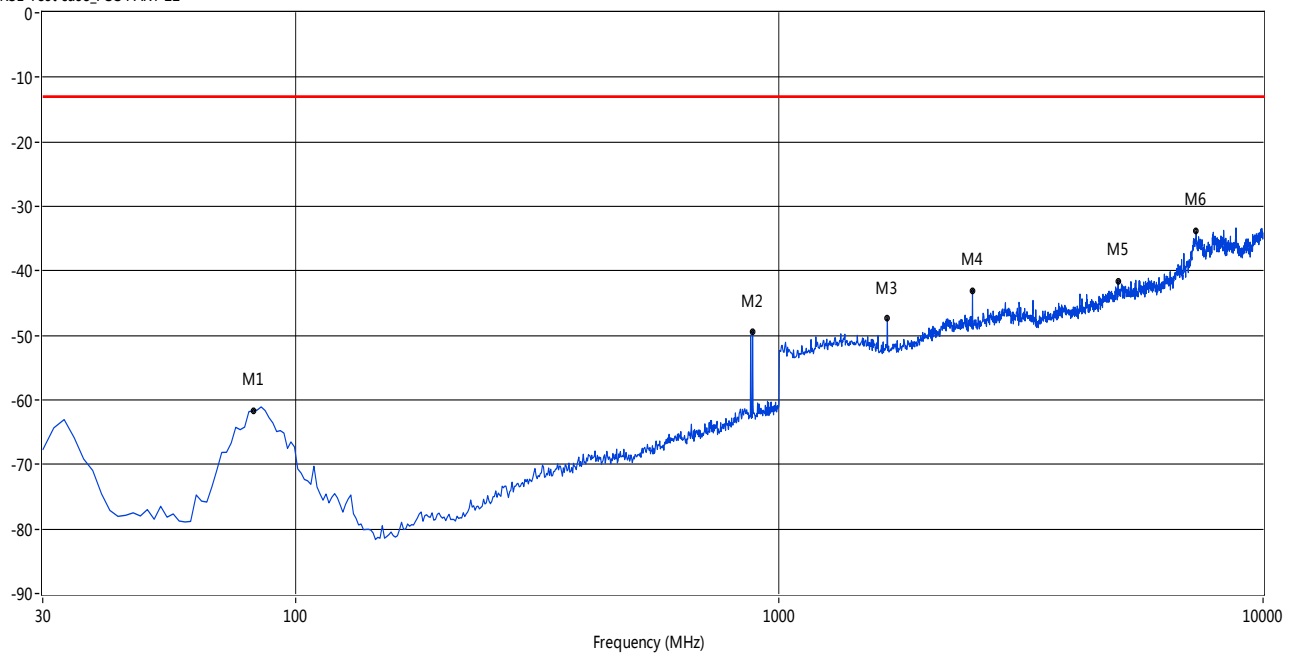
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-59.23	-2.67	-13.0	46.23	332.90	Horizontal	PASS
872.50	-51.24	5.03	-13.0	38.24	265.10	Horizontal	PASS
1648.92	-41.73	8.41	-13.0	28.73	189.10	Horizontal	PASS
3109.82	-44.34	21.23	-13.0	31.34	142.80	Horizontal	PASS
4777.04	-41.85	25.72	-13.0	28.85	194.80	Horizontal	PASS
7417.64	-32.70	32.44	-13.0	19.70	350.10	Horizontal	PASS

GSM 850MHz CHANNEL 190, ANT V

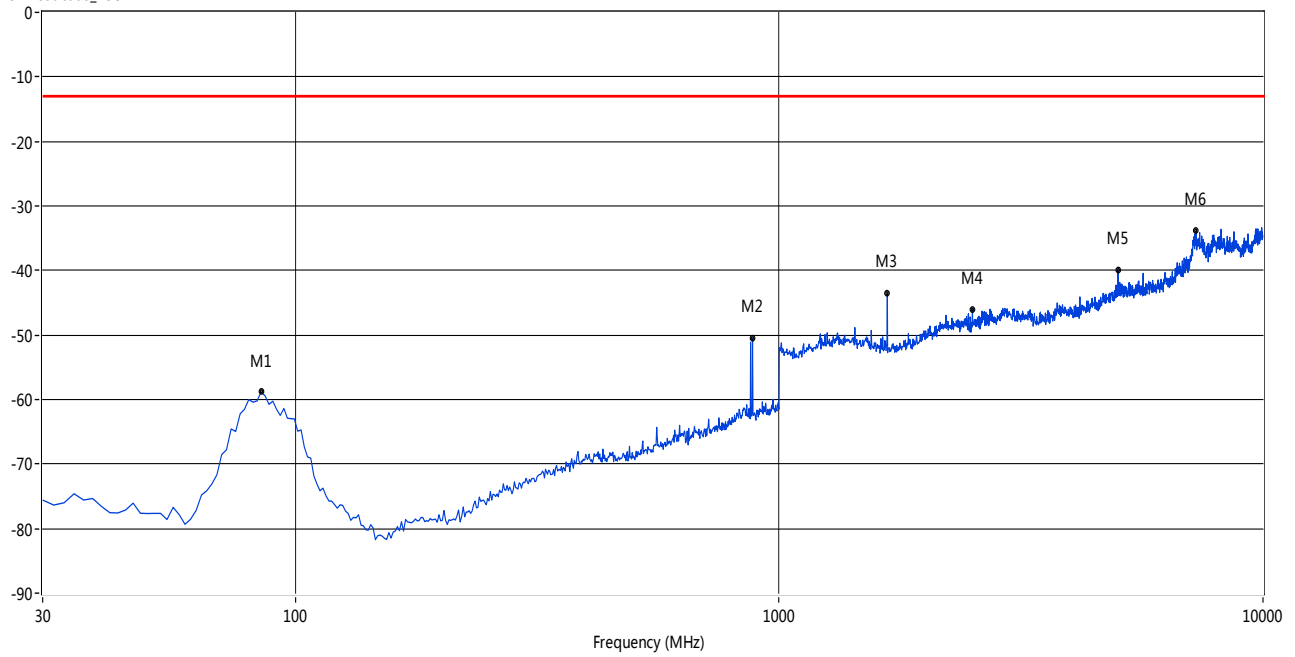
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-60.05	-4.88	-13.0	47.05	338.40	Vertical	PASS
880.57	-49.33	5.28	-13.0	36.33	127.10	Vertical	PASS
1672.21	-47.37	8.46	-13.0	34.37	320.80	Vertical	PASS
2507.49	-43.00	12.69	-13.0	30.00	326.00	Vertical	PASS
5016.64	-41.57	26.85	-13.0	28.57	289.50	Vertical	PASS
7271.22	-33.90	33.38	-13.0	20.90	67.00	Vertical	PASS

GSM 850MHz CHANNEL 190, ANT H

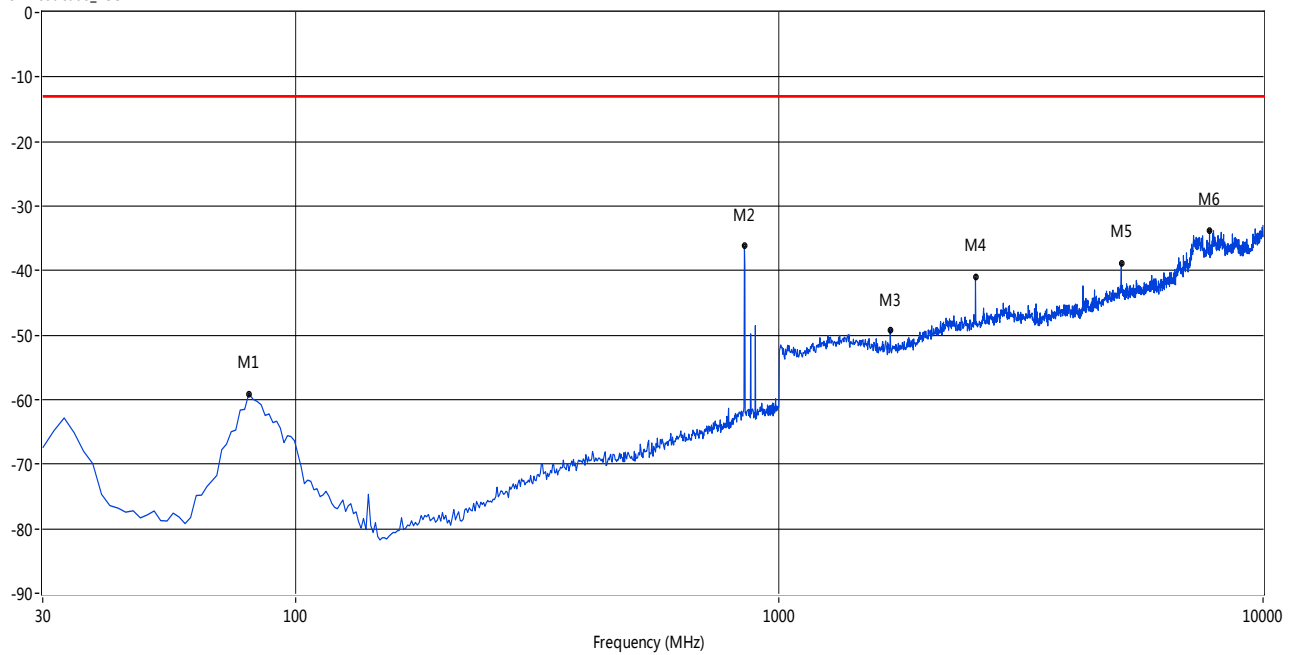
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
84.88	-58.80	-3.75	-13.0	45.80	148.70	Horizontal	PASS
880.57	-50.52	5.28	-13.0	37.52	94.60	Horizontal	PASS
1672.21	-43.54	8.46	-13.0	30.54	187.80	Horizontal	PASS
2507.49	-46.03	12.68	-13.0	33.03	163.80	Horizontal	PASS
5016.64	-39.90	26.85	-13.0	26.90	360.00	Horizontal	PASS
7277.87	-33.77	32.91	-13.0	20.77	3.00	Horizontal	PASS

GSM 850MHz CHANNEL 251, ANT V

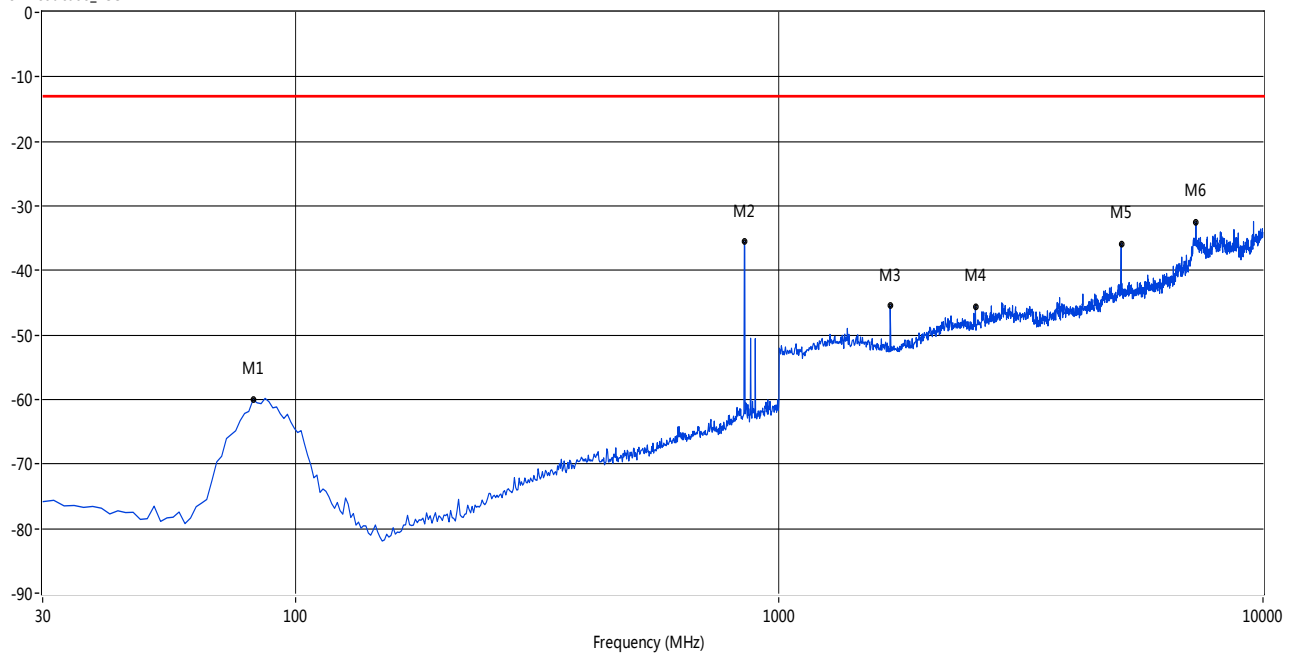
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
80.03	-59.06	-5.35	-13.0	46.06	112.70	Vertical	PASS
846.67	-35.55	5.56	-13.0	22.55	4.10	Vertical	PASS
1695.51	-45.46	8.38	-13.0	32.46	164.90	Vertical	PASS
2544.09	-45.60	12.70	-13.0	32.60	209.00	Vertical	PASS
5091.51	-35.85	27.01	-13.0	22.85	12.60	Vertical	PASS
7750.42	-33.70	31.94	-13.0	20.70	118.50	Vertical	PASS

GSM 850MHz CHANNEL 251, ANT H

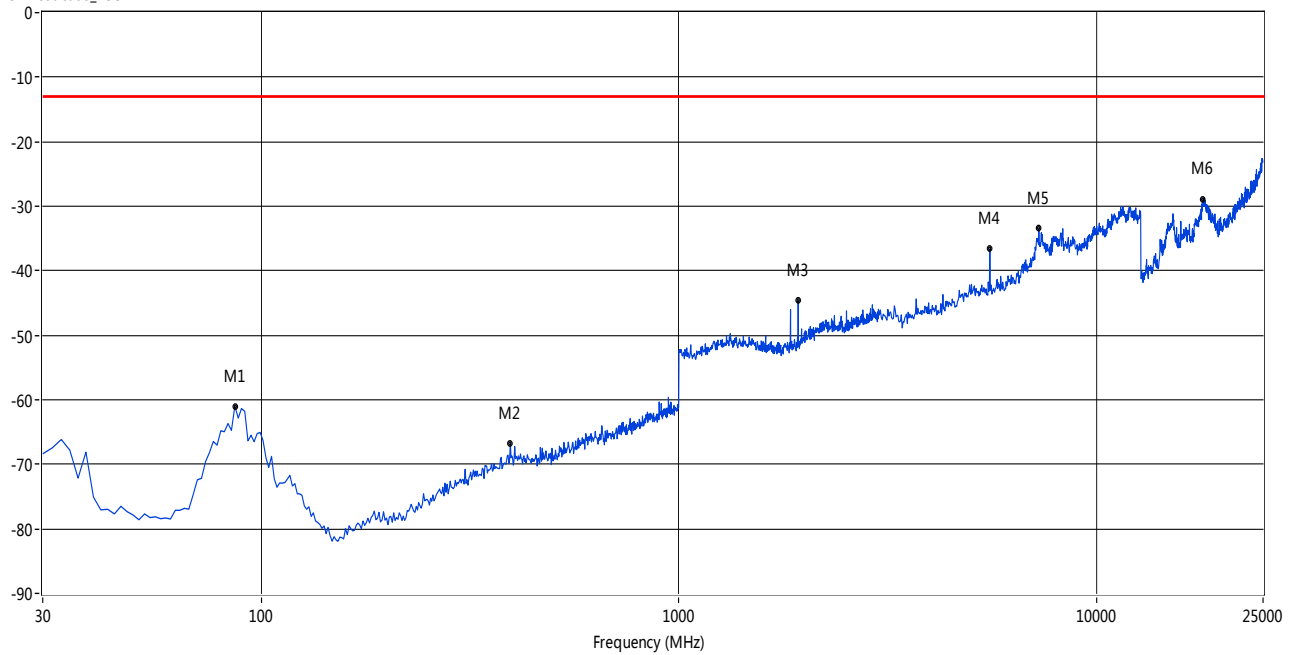
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-60.05	-4.88	-13.0	47.05	338.40	Horizontal	PASS
846.67	-35.55	5.56	-13.0	22.55	4.10	Horizontal	PASS
1695.51	-45.46	8.38	-13.0	32.46	164.90	Horizontal	PASS
2544.09	-45.60	12.70	-13.0	32.60	209.00	Horizontal	PASS
5091.51	-35.85	27.01	-13.0	22.85	12.60	Horizontal	PASS
7264.56	-32.49	33.50	-13.0	19.49	11.40	Horizontal	PASS

GSM 1900MHz CHANNEL 512, ANT V

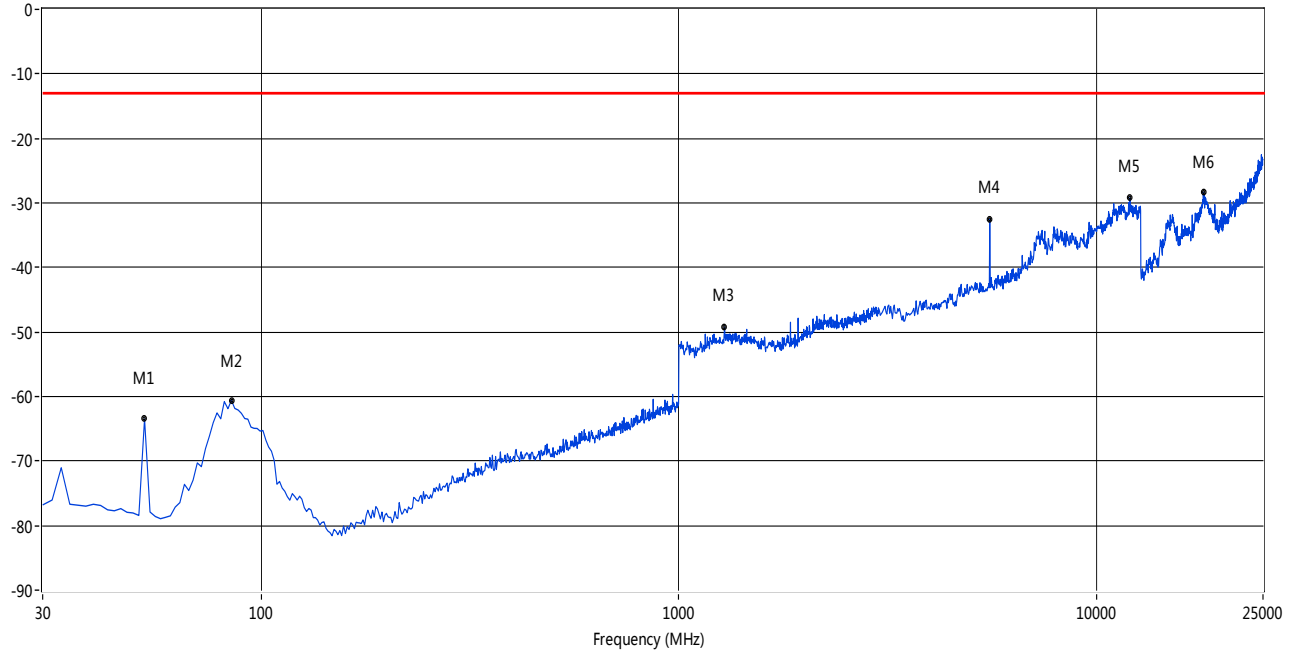
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-60.99	-3.29	-13.0	47.99	90.00	Vertical	PASS
394.76	-66.68	-2.73	-13.0	53.68	360.00	Vertical	PASS
1928.45	-44.63	9.67	-13.0	31.63	267.10	Vertical	PASS
5547.00	-36.60	27.37	-13.0	23.60	74.10	Vertical	PASS
7266.64	-33.43	33.51	-13.0	20.43	38.10	Vertical	PASS
17967.97	-28.88	39.28	-13.0	15.88	356.40	Vertical	PASS

GSM 1900MHz CHANNEL 512, ANT H

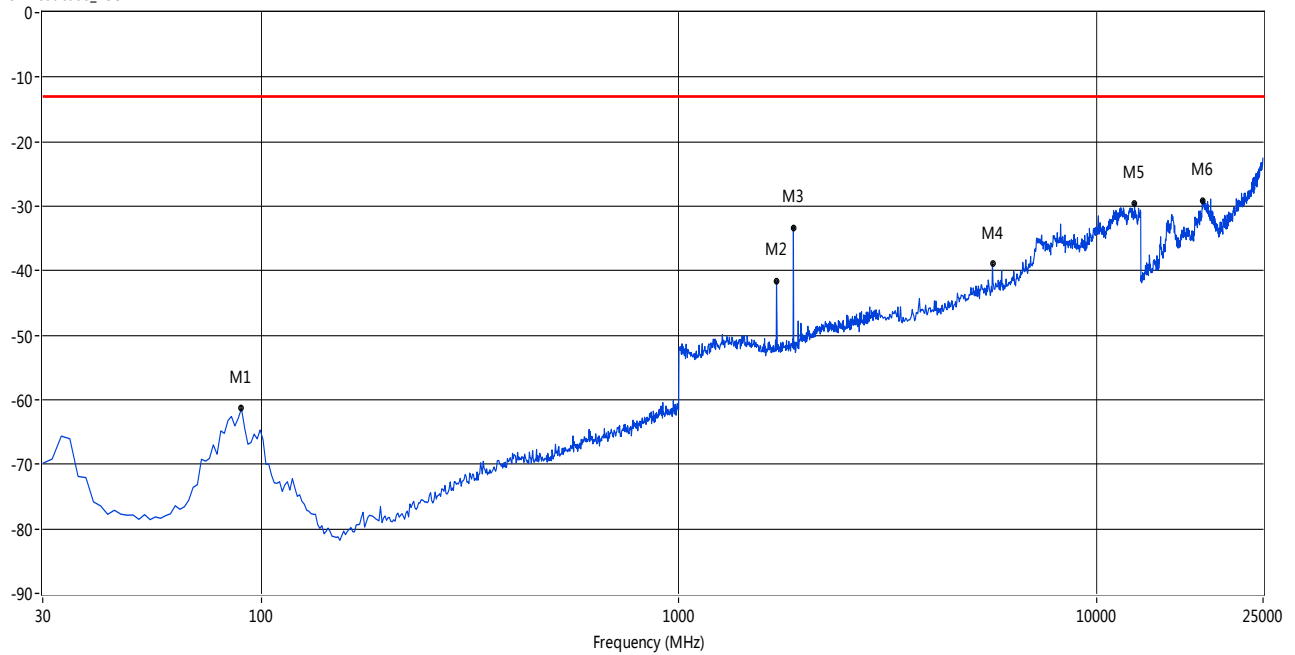
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
52.60	-63.46	-11.17	-13.0	50.46	0.30	Horizontal	PASS
84.88	-60.58	-3.80	-13.0	47.58	359.30	Horizontal	PASS
1286.19	-49.23	8.12	-13.0	36.23	223.10	Horizontal	PASS
5547.00	-32.49	27.37	-13.0	19.49	353.70	Horizontal	PASS
12003.74	-29.19	38.88	-13.0	16.19	55.10	Horizontal	PASS
17988.35	-28.35	39.52	-13.0	15.35	360.30	Horizontal	PASS

GSM 1900MHz CHANNEL 661, ANT V

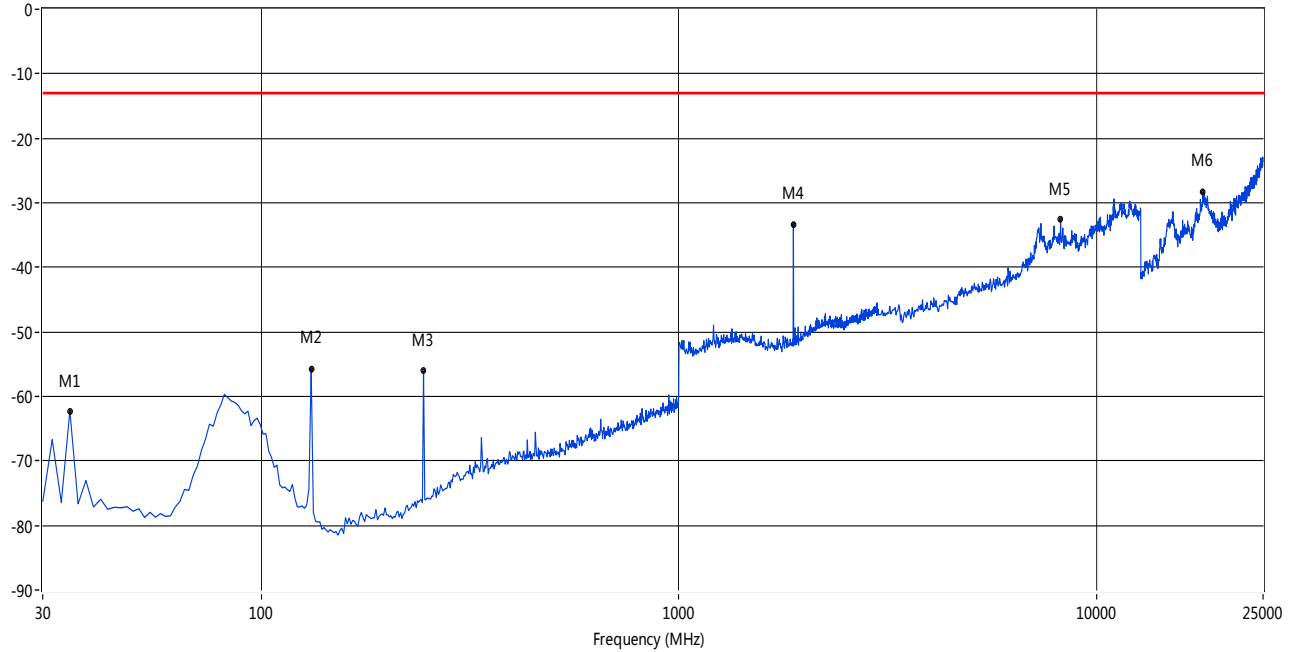
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
89.72	-61.35	-2.32	-13.0	48.35	123.80	Vertical	PASS
1712.15	-41.62	8.40	-13.0	28.62	281.30	Vertical	PASS
1878.54	-33.29	9.24	-13.0	20.29	310.90	Vertical	PASS
5628.12	-38.87	27.21	-13.0	25.87	352.10	Vertical	PASS
12311.98	-29.50	37.78	-13.0	16.50	119.30	Vertical	PASS
17927.20	-29.10	38.81	-13.0	16.10	347.80	Vertical	PASS

GSM 1900MHz CHANNEL 661, ANT H

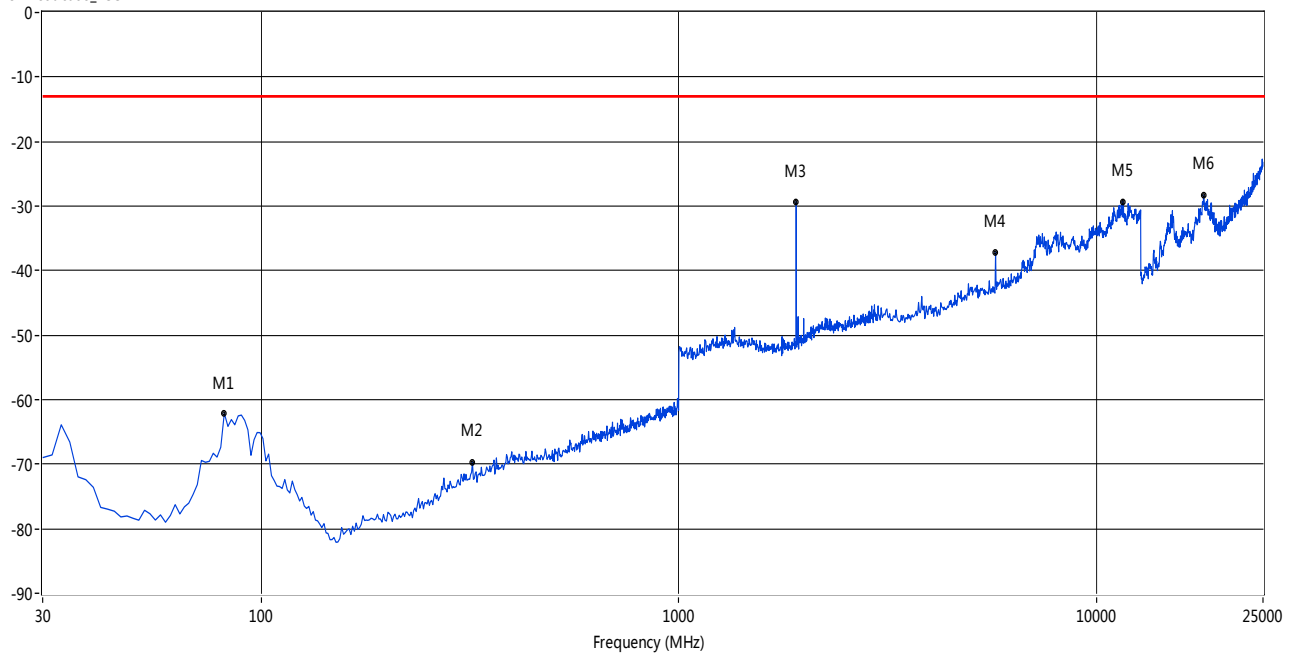
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
34.84	-62.25	-9.87	-13.0	49.25	0.60	Horizontal	PASS
131.68	-55.72	-11.74	-13.0	42.72	0.60	Horizontal	PASS
244.66	-56.07	-9.09	-13.0	43.07	0.60	Horizontal	PASS
1878.54	-33.39	9.24	-13.0	20.39	168.70	Horizontal	PASS
8191.35	-32.63	34.74	-13.0	19.63	137.10	Horizontal	PASS
17967.97	-28.30	39.28	-13.0	15.30	297.40	Horizontal	PASS

GSM 1900MHz CHANNEL 810 , ANT V

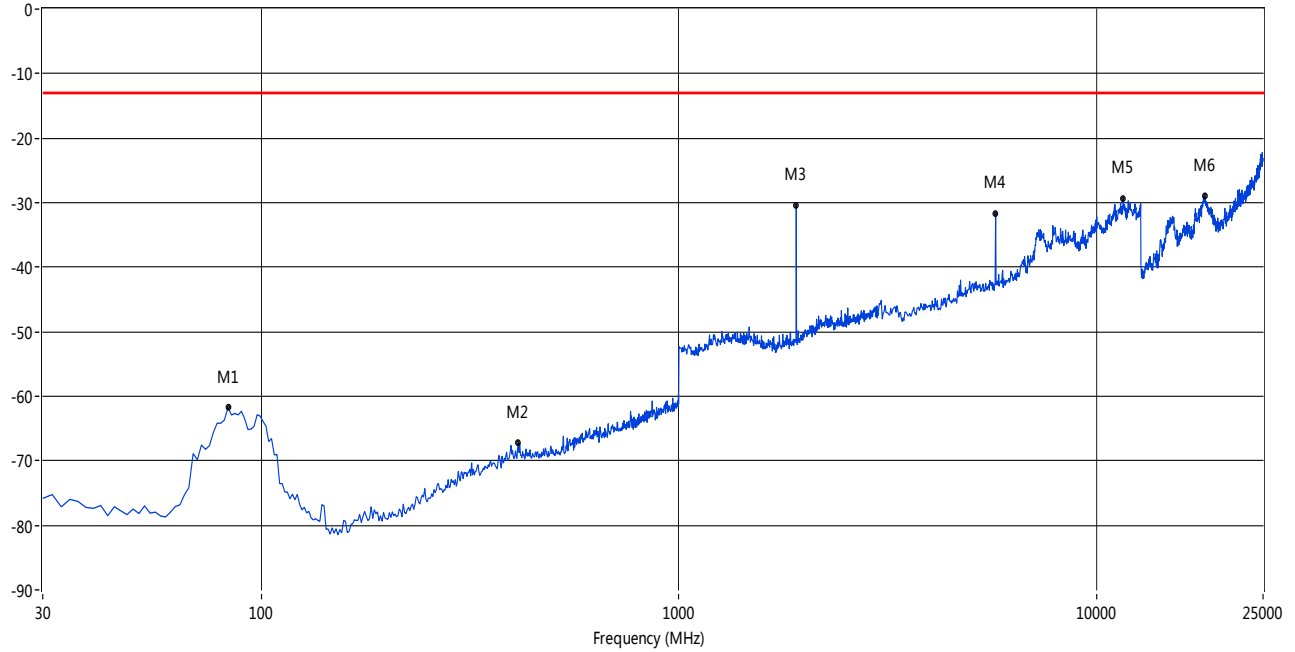
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-62.12	-4.89	-13.0	49.12	87.90	Vertical	PASS
320.52	-69.69	-5.09	-13.0	56.69	184.30	Vertical	PASS
1908.49	-29.31	9.42	-13.0	16.31	312.90	Vertical	PASS
5725.46	-37.20	27.32	-13.0	24.20	339.60	Vertical	PASS
11533.28	-29.28	38.67	-13.0	16.28	165.80	Vertical	PASS
18029.12	-28.35	39.54	-13.0	15.35	359.50	Vertical	PASS

GSM 1900MHz CHANNEL 810 , ANT H

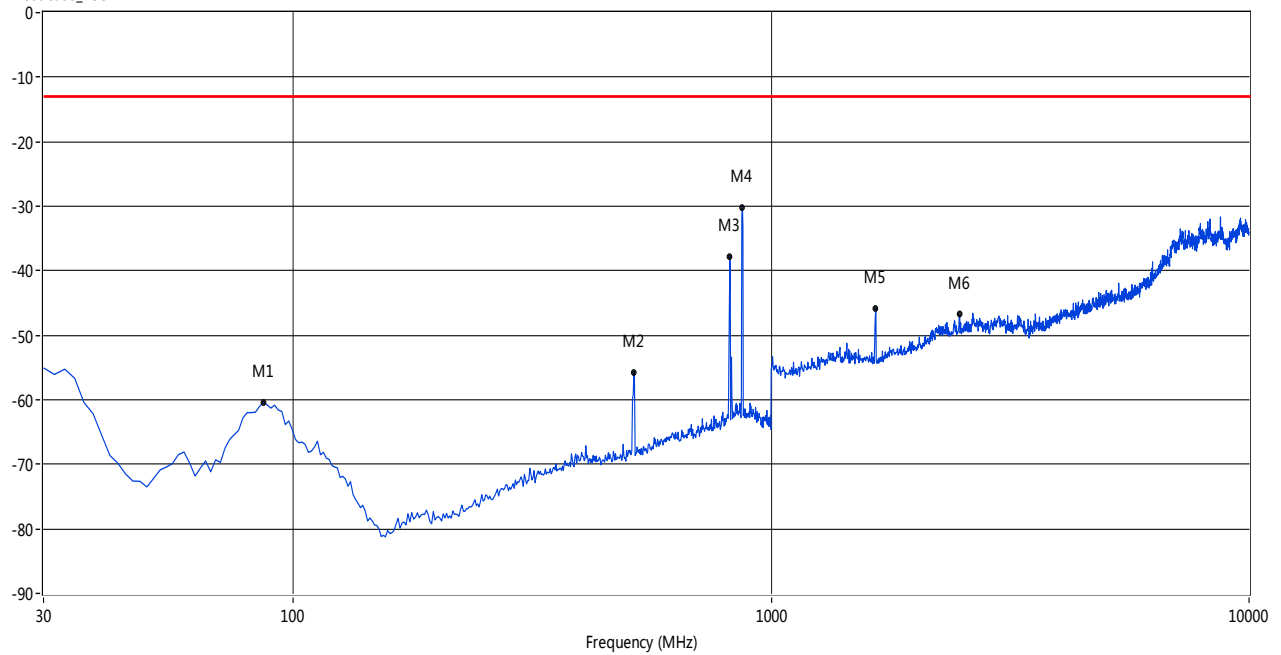
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
83.26	-61.74	-4.33	-13.0	48.74	173.60	Horizontal	PASS
412.51	-67.23	-2.38	-13.0	54.23	1.40	Horizontal	PASS
1908.49	-30.34	9.42	-13.0	17.34	286.40	Horizontal	PASS
5725.46	-31.72	27.32	-13.0	18.72	24.00	Horizontal	PASS
11565.72	-29.34	38.59	-13.0	16.34	356.80	Horizontal	PASS
18110.65	-28.99	39.23	-13.0	15.99	212.40	Horizontal	PASS

WCDMA 850MHz CHANNEL 4132, ANT V

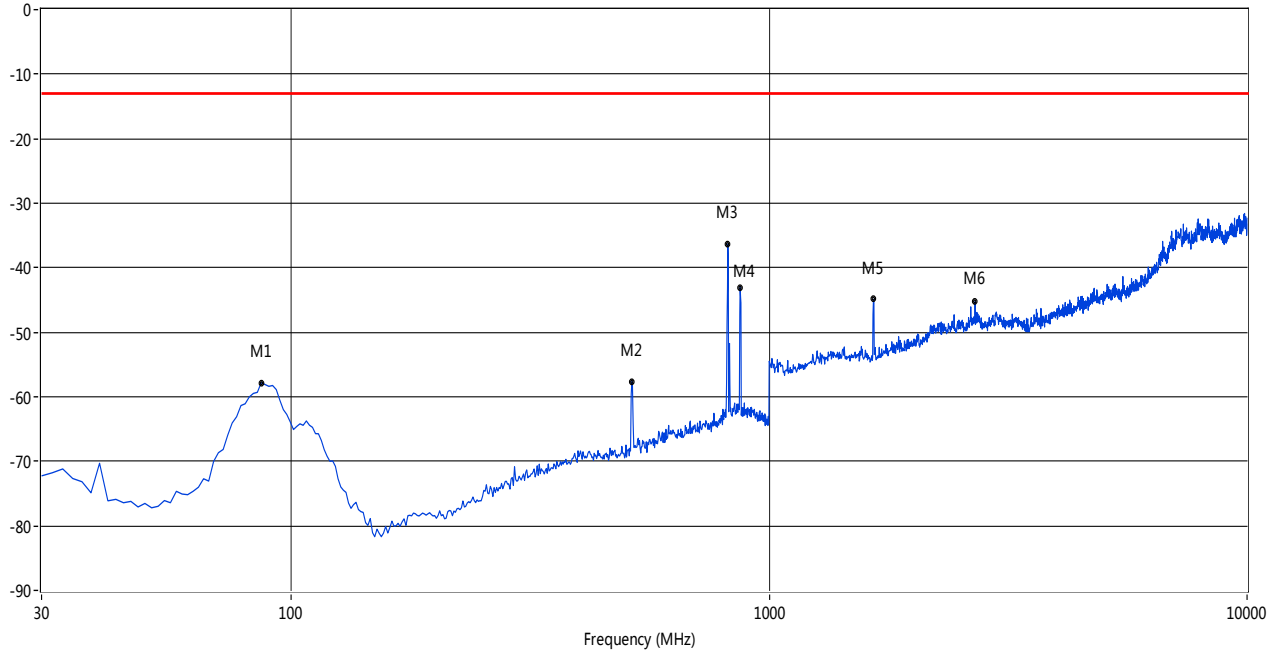
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-60.42	-3.19	-13.0	47.42	98.20	Vertical	PASS
515.81	-55.74	-1.58	-13.0	42.74	75.60	Vertical	PASS
819.23	-37.75	5.08	-13.0	24.75	171.90	Vertical	PASS
869.27	-30.18	5.07	-13.0	17.18	231.50	Vertical	PASS
1655.57	-45.77	7.07	-13.0	32.77	302.10	Vertical	PASS
2474.21	-46.74	11.66	-13.0	33.74	75.20	Vertical	PASS

WCDMA 850MHz CHANNEL 4132, ANT H

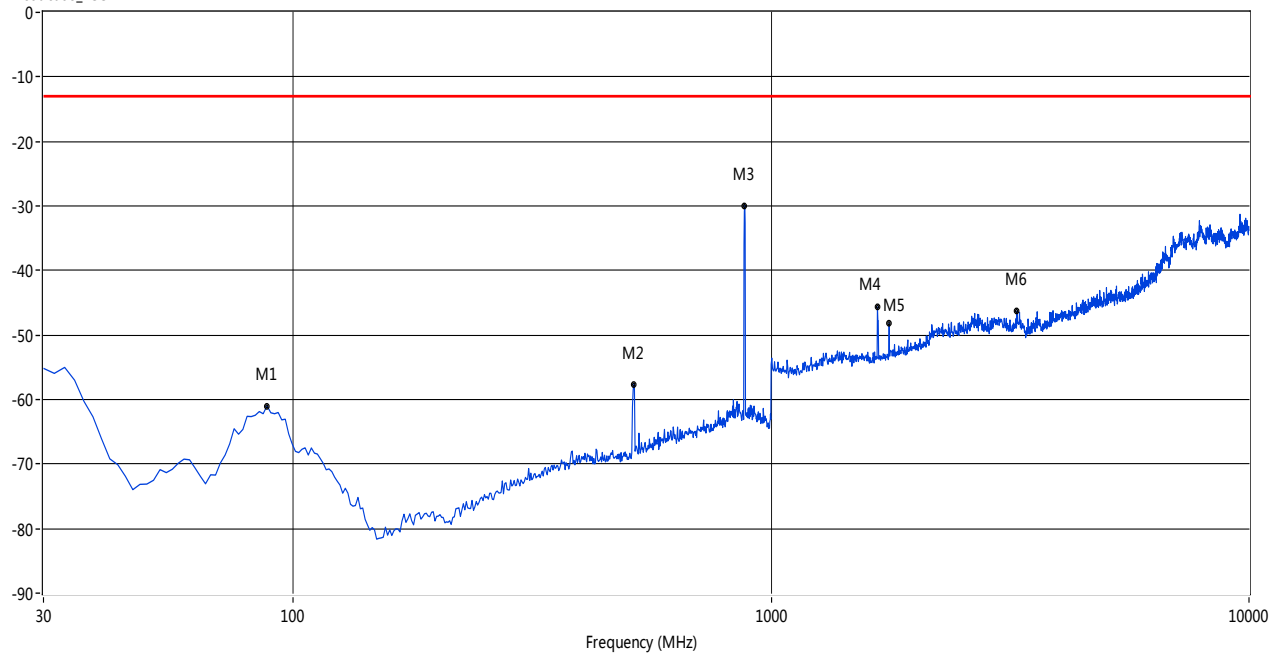
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-57.80	-3.19	-13.0	44.80	337.50	Horizontal	PASS
515.81	-57.63	-1.58	-13.0	44.63	17.90	Horizontal	PASS
819.23	-36.32	5.08	-13.0	23.32	359.70	Horizontal	PASS
869.27	-43.01	5.07	-13.0	30.01	123.00	Horizontal	PASS
1655.57	-44.88	7.07	-13.0	31.88	163.60	Horizontal	PASS
2697.17	-45.23	13.43	-13.0	32.23	158.40	Horizontal	PASS

WCDMA 850MHz CHANNEL 4183, ANT V

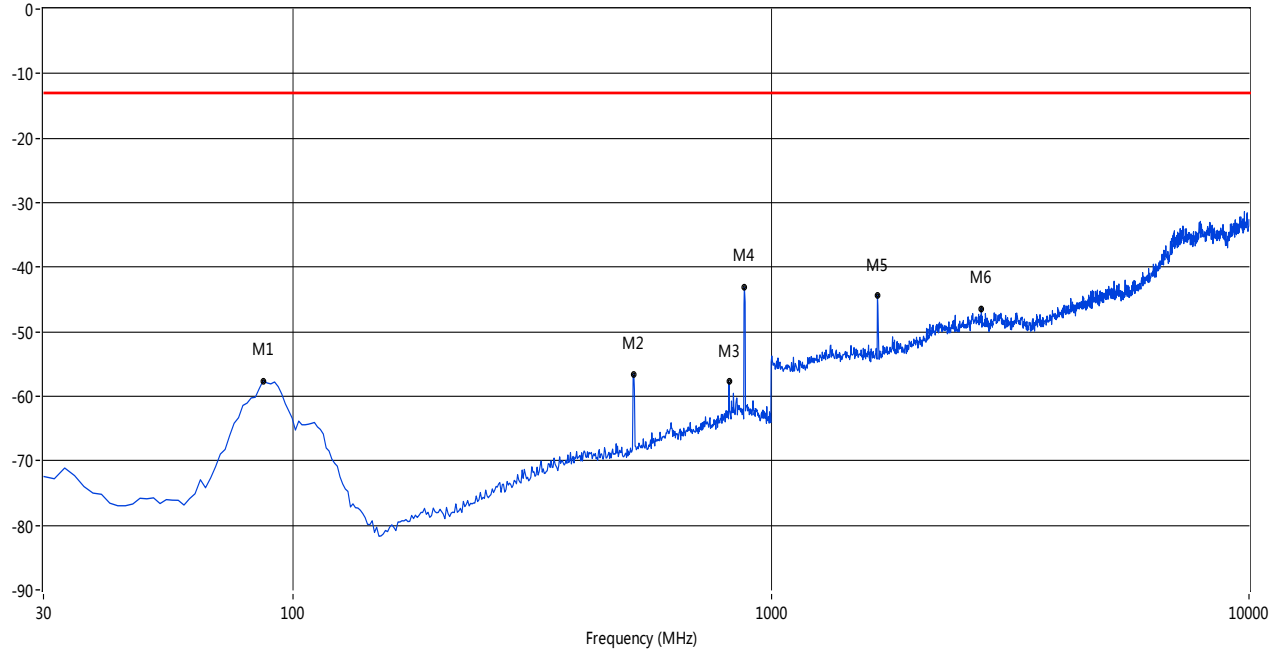
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-60.98	-2.67	-13.0	47.98	84.20	Vertical	PASS
515.81	-57.63	-1.58	-13.0	44.63	88.60	Vertical	PASS
880.57	-29.93	5.28	-13.0	16.93	166.40	Vertical	PASS
1668.89	-45.66	7.09	-13.0	32.66	300.40	Vertical	PASS
1765.39	-48.18	7.71	-13.0	35.18	359.30	Vertical	PASS
3269.55	-46.27	19.72	-13.0	33.27	351.10	Vertical	PASS

WCDMA 850MHz CHANNEL 4183, ANT H

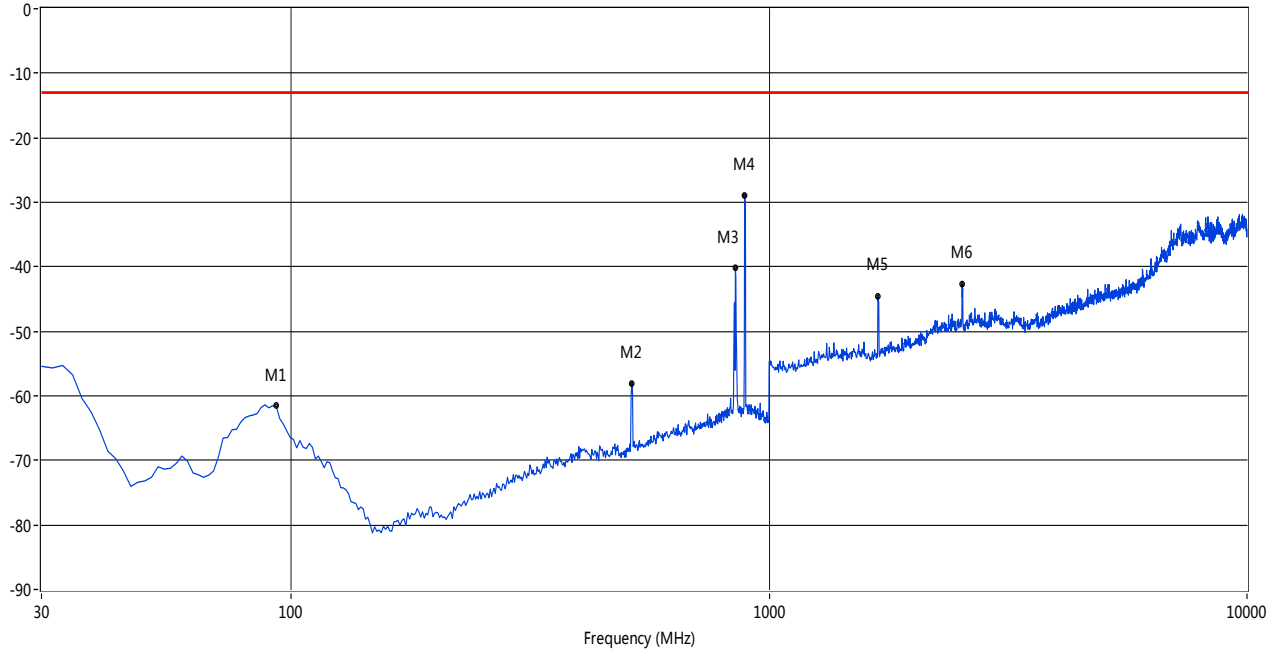
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
86.49	-57.58	-3.19	-13.0	44.58	0.00	Horizontal	PASS
515.81	-56.62	-1.58	-13.0	43.62	13.10	Horizontal	PASS
816.01	-57.75	4.75	-13.0	44.75	5.80	Horizontal	PASS
878.95	-43.14	5.35	-13.0	30.14	292.30	Horizontal	PASS
1668.89	-44.30	7.09	-13.0	31.30	159.00	Horizontal	PASS
2753.74	-46.38	13.33	-13.0	33.38	40.00	Horizontal	PASS

WCDMA 850MHz CHANNEL 4233, ANT V

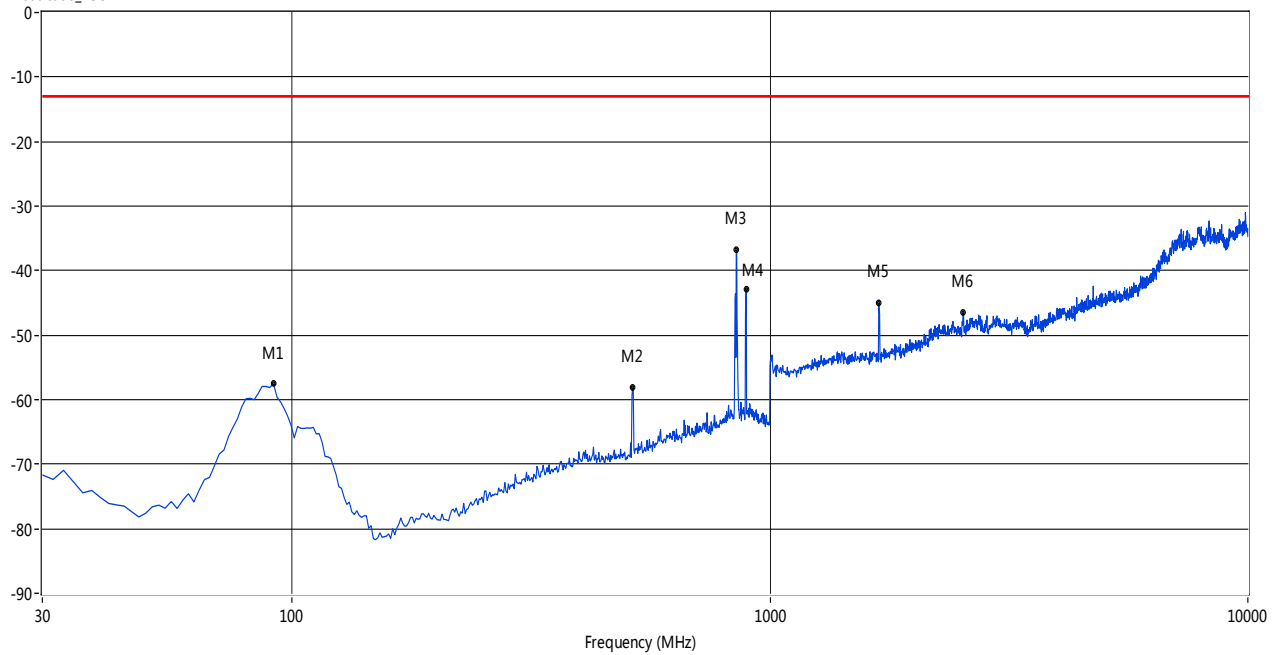
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
92.95	-61.58	-2.75	-13.0	48.58	75.20	Vertical	PASS
515.81	-58.02	-1.58	-13.0	45.02	84.60	Vertical	PASS
849.90	-40.15	5.62	-13.0	27.15	70.80	Vertical	PASS
888.64	-28.90	5.46	-13.0	15.90	241.00	Vertical	PASS
1688.85	-44.60	6.97	-13.0	31.60	305.80	Vertical	PASS
2534.11	-42.65	12.25	-13.0	29.65	345.10	Vertical	PASS

WCDMA 850MHz CHANNEL 4233, ANT H

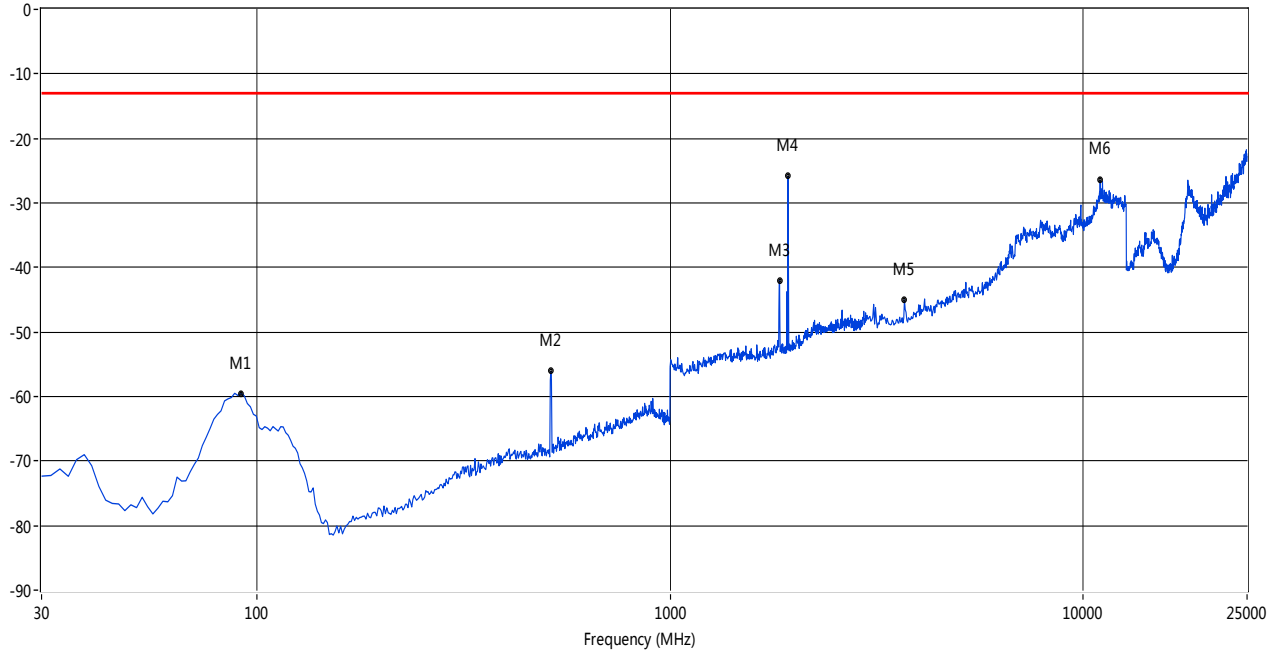
RSE Test case_FCC PART 22



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
91.33	-57.53	-2.30	-13.0	44.53	327.80	Horizontal	PASS
515.81	-58.06	-1.58	-13.0	45.06	17.80	Horizontal	PASS
851.51	-36.78	5.64	-13.0	23.78	350.60	Horizontal	PASS
891.86	-42.84	5.54	-13.0	29.84	121.70	Horizontal	PASS
1688.85	-45.00	6.97	-13.0	32.00	186.00	Horizontal	PASS
2534.11	-46.49	12.25	-13.0	33.49	200.80	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9262, ANT V

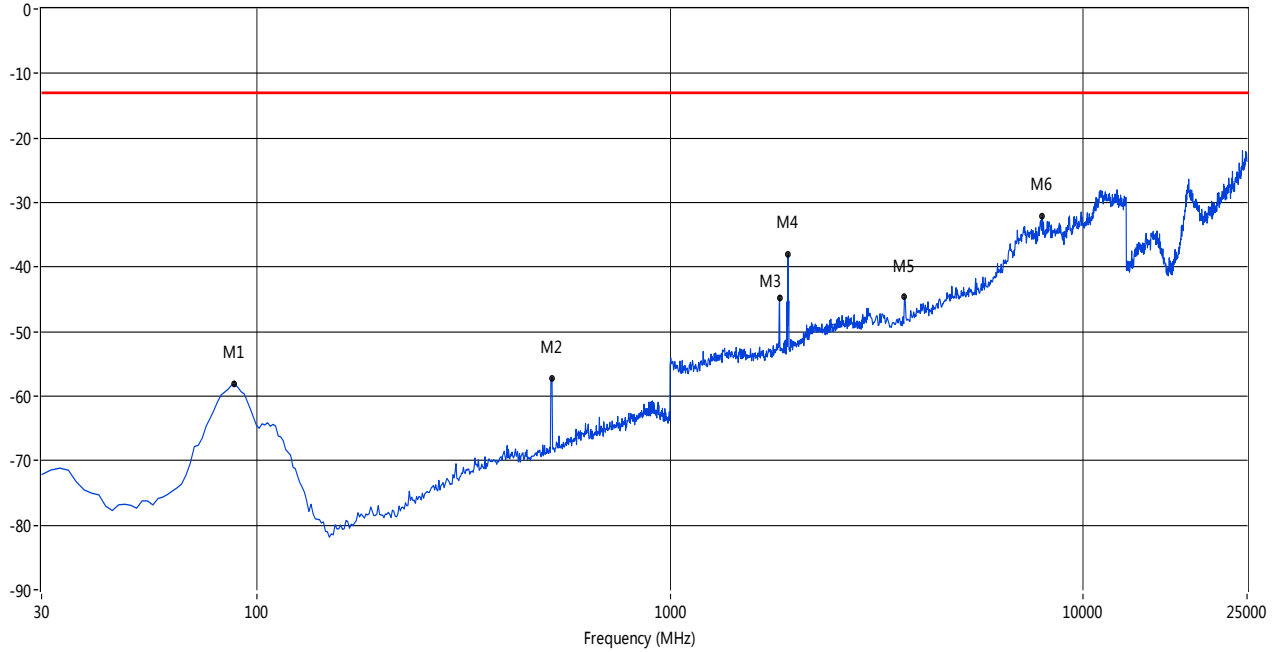
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
91.33	-59.51	-2.49	-13.0	46.51	318.00	Vertical	PASS
514.19	-56.09	-1.68	-13.0	43.09	92.40	Vertical	PASS
1841.93	-41.97	8.07	-13.0	28.97	36.50	Vertical	PASS
1931.78	-25.83	8.34	-13.0	12.83	188.60	Vertical	PASS
3697.59	-45.01	20.66	-13.0	32.01	215.80	Vertical	PASS
11014.14	-26.49	41.11	-13.0	13.49	18.60	Vertical	PASS

WCDMA 1900MHz CHANNEL 9262, ANT H

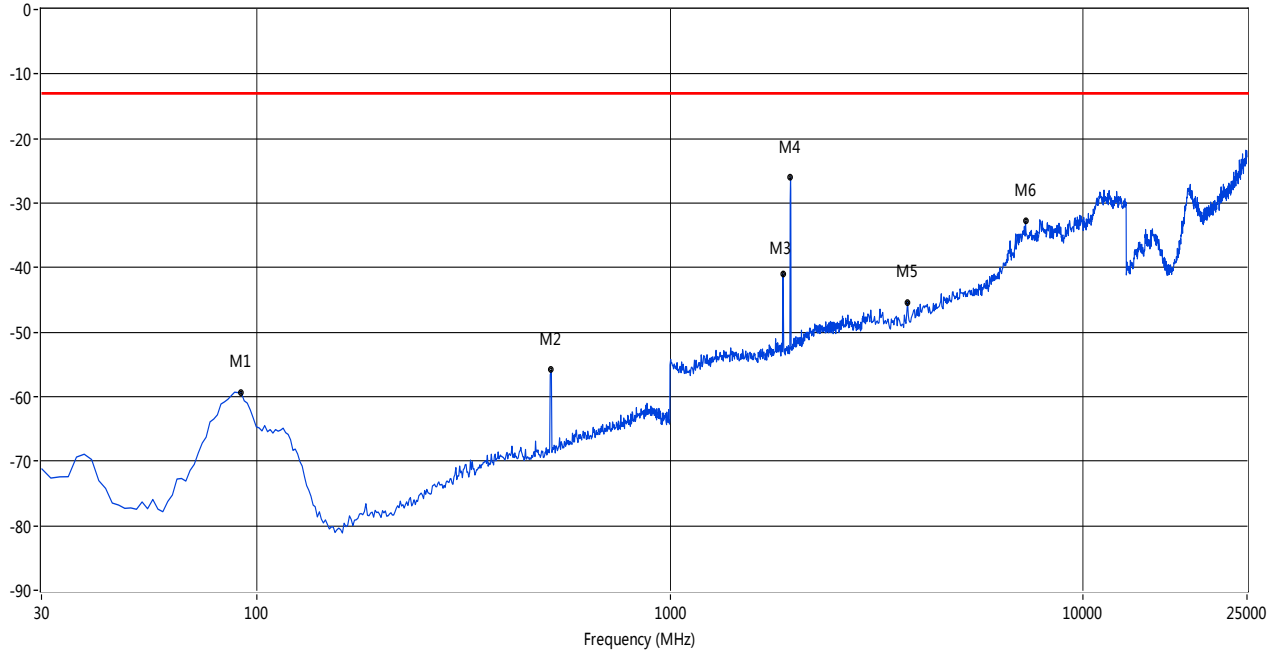
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-58.12	-2.80	-13.0	45.12	358.10	Horizontal	PASS
517.42	-57.15	-1.68	-13.0	44.15	13.80	Horizontal	PASS
1841.93	-44.80	8.07	-13.0	31.80	194.10	Horizontal	PASS
1931.78	-38.04	8.34	-13.0	25.04	61.80	Horizontal	PASS
3697.59	-44.61	20.66	-13.0	31.61	316.80	Horizontal	PASS
7980.45	-32.10	35.19	-13.0	19.10	124.20	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9400, ANT V

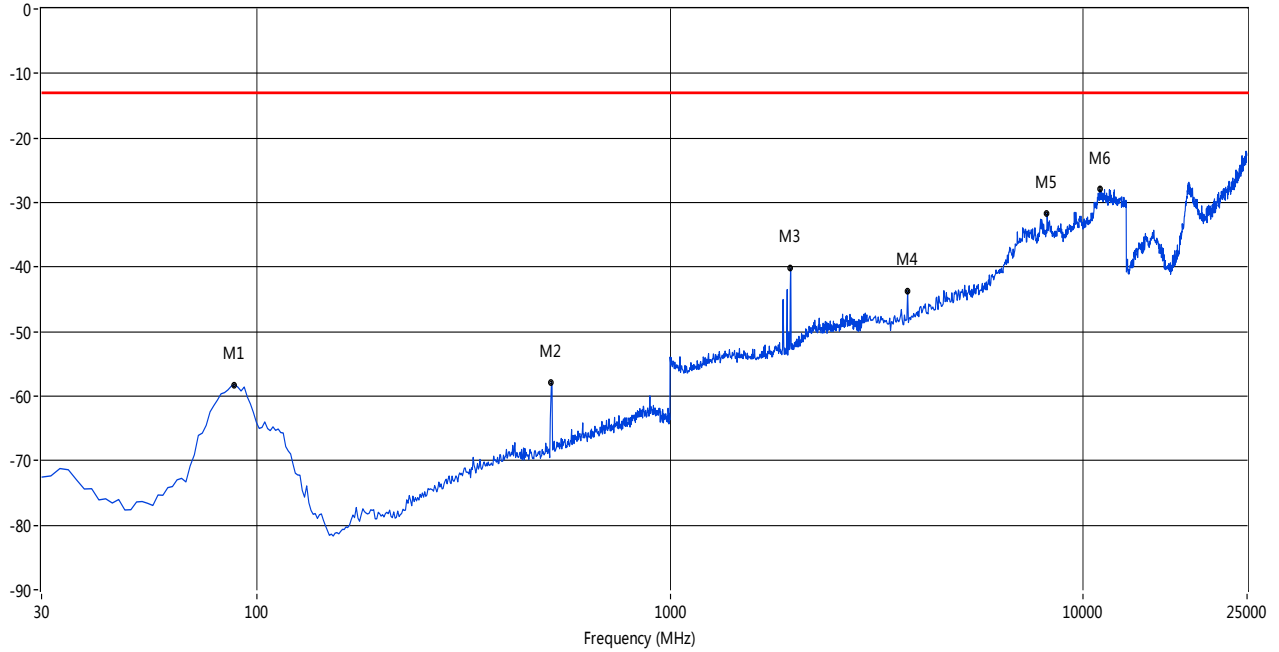
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
91.33	-59.27	-2.49	-13.0	46.27	331.50	Vertical	PASS
515.81	-55.87	-1.72	-13.0	42.87	95.90	Vertical	PASS
1878.54	-40.97	8.10	-13.0	27.97	27.00	Vertical	PASS
1958.40	-26.04	8.53	-13.0	13.04	191.90	Vertical	PASS
3762.48	-45.35	20.78	-13.0	32.35	220.60	Vertical	PASS
7266.64	-32.84	33.82	-13.0	19.84	0.80	Vertical	PASS

WCDMA 1900MHz CHANNEL 9400, ANT H

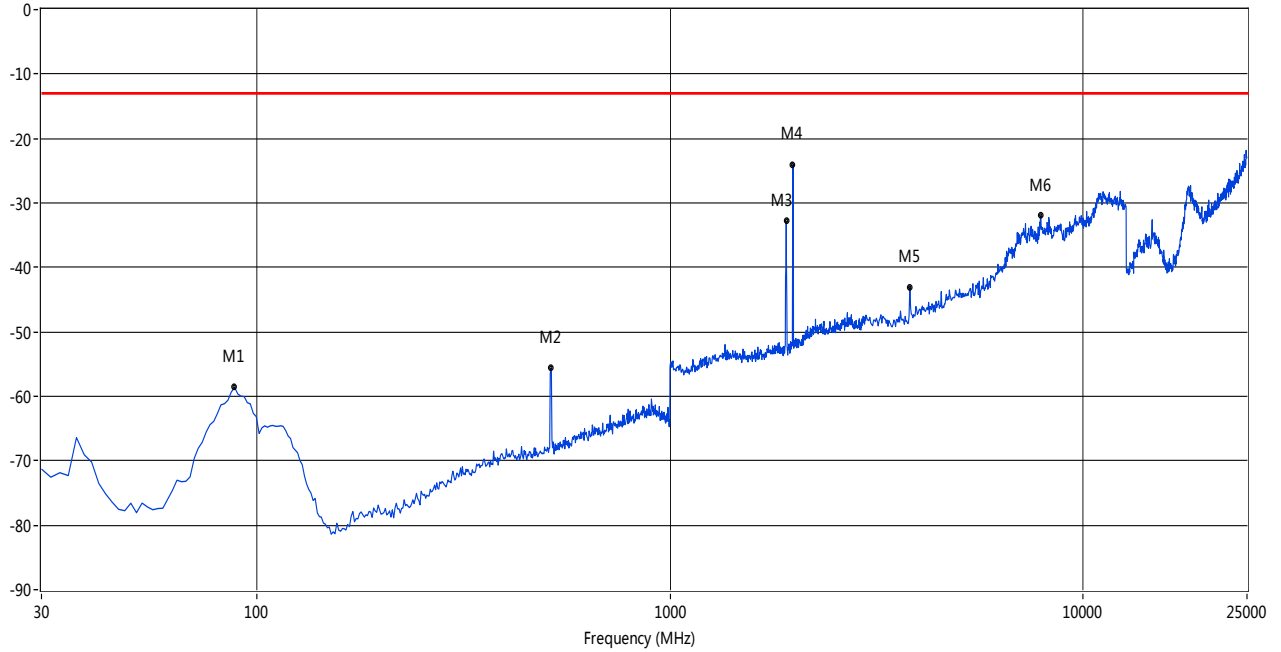
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-58.22	-2.80	-13.0	45.22	337.60	Horizontal	PASS
515.81	-57.86	-1.72	-13.0	44.86	29.20	Horizontal	PASS
1958.40	-40.20	8.53	-13.0	27.20	19.60	Horizontal	PASS
3762.48	-43.73	20.78	-13.0	30.73	293.50	Horizontal	PASS
8191.35	-31.64	36.02	-13.0	18.64	71.30	Horizontal	PASS
10997.92	-27.97	41.12	-13.0	14.97	136.50	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9538, ANT V

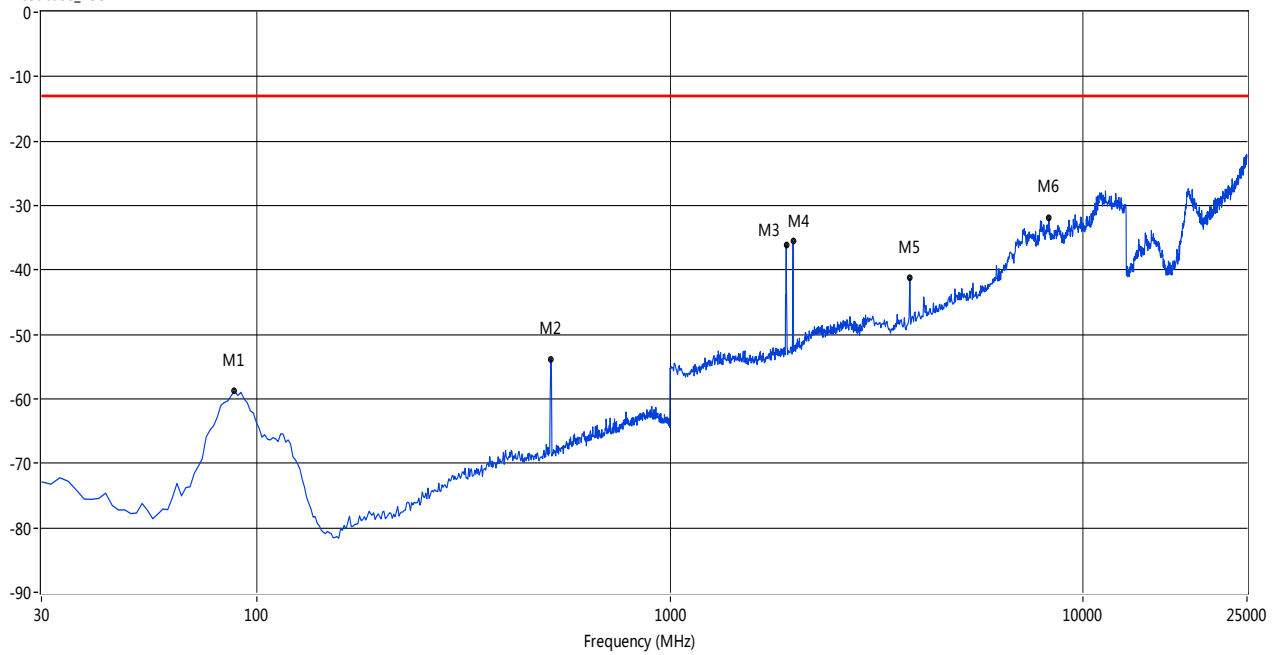
RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-58.60	-2.80	-13.0	45.60	346.00	Vertical	PASS
514.19	-55.63	-1.68	-13.0	42.63	77.90	Vertical	PASS
1911.81	-32.82	8.20	-13.0	19.82	32.00	Vertical	PASS
1985.02	-24.07	8.67	-13.0	11.07	111.10	Vertical	PASS
3811.15	-43.04	20.93	-13.0	30.04	285.70	Vertical	PASS
7915.56	-31.97	34.96	-13.0	18.97	78.90	Vertical	PASS

WCDMA 1900MHz CHANNEL 9538, ANT H

RSE Test case_FCC PART 24



Frequency (MHz)	Result (dBm)	Factor (dB)	PK Limit (dBm)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-58.81	-2.80	-13.0	45.81	349.60	Horizontal	PASS
514.19	-53.86	-1.68	-13.0	40.86	41.40	Horizontal	PASS
1911.81	-36.11	8.20	-13.0	23.11	182.70	Horizontal	PASS
1988.35	-35.55	8.67	-13.0	22.55	117.80	Horizontal	PASS
3811.15	-41.27	20.93	-13.0	28.27	287.20	Horizontal	PASS
8272.46	-31.89	35.84	-13.0	18.89	158.10	Horizontal	PASS

ANNEX B TEST SETUP PHOTOS

B.1. Conducted Test Photo



B.2. Radiated Test Photo

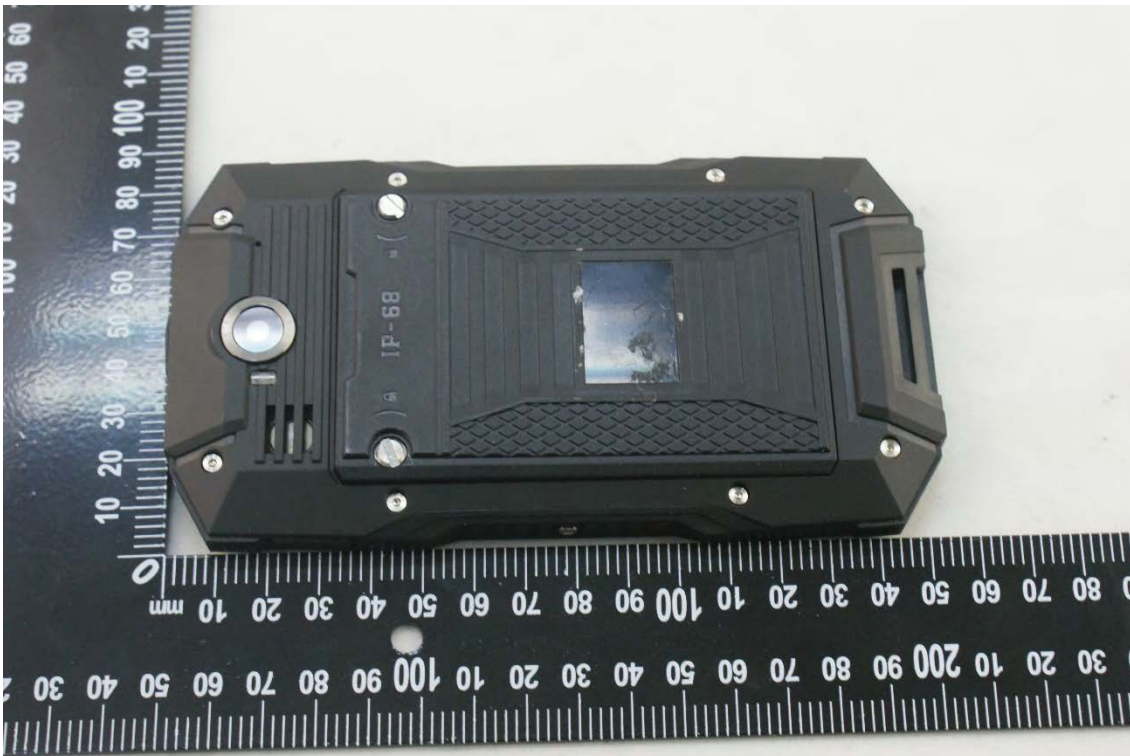


ANNEX C TEST SETUP PHOTOS

C.1 Appearance of the EUT



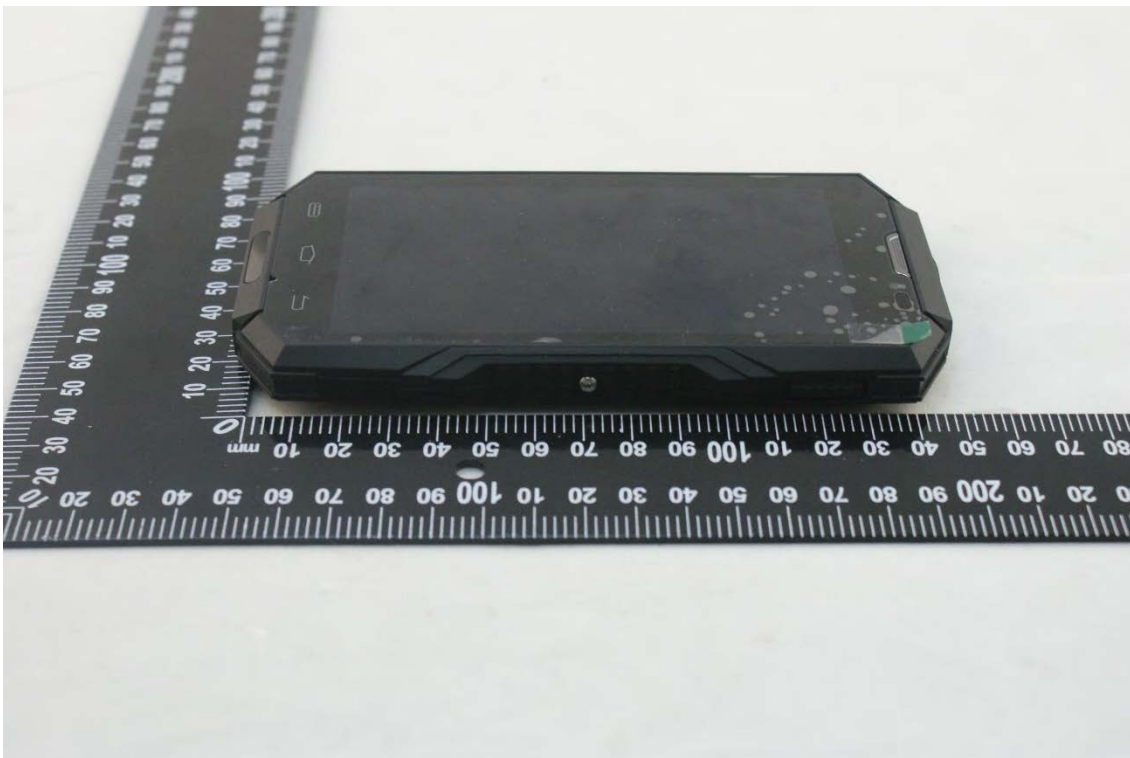
THE FRONT OF EUT



THE BACK OF EUT



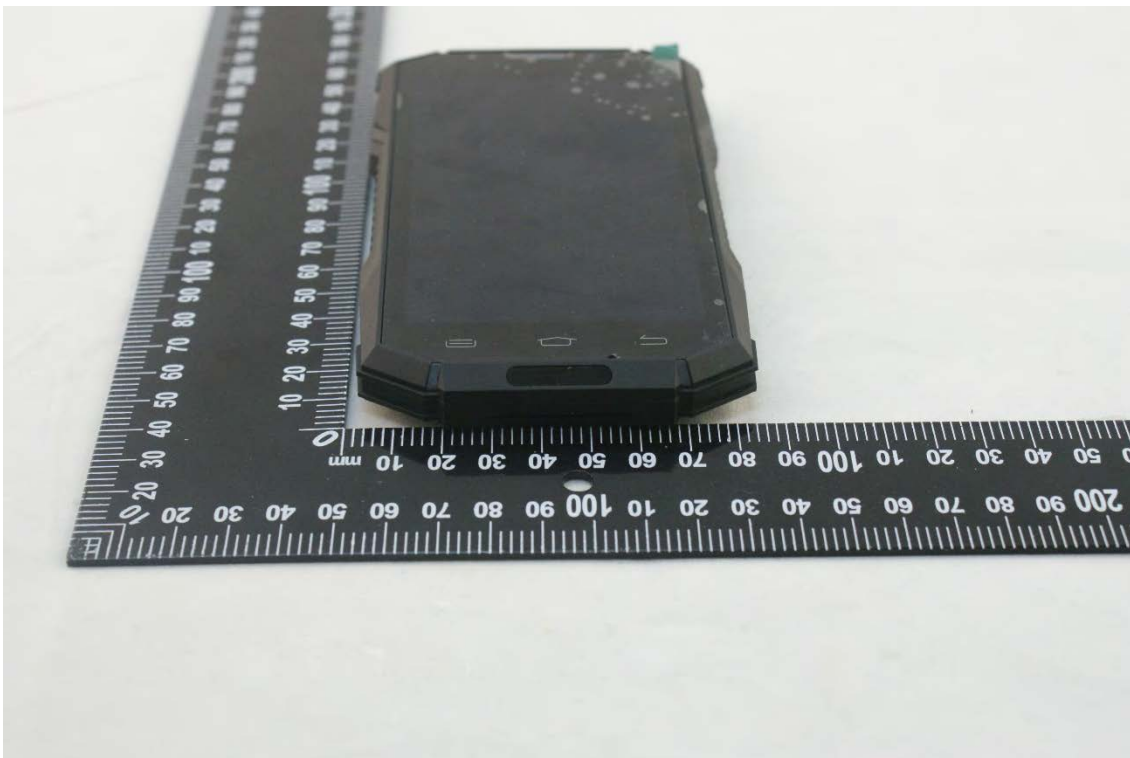
THE LEFT OF EUT



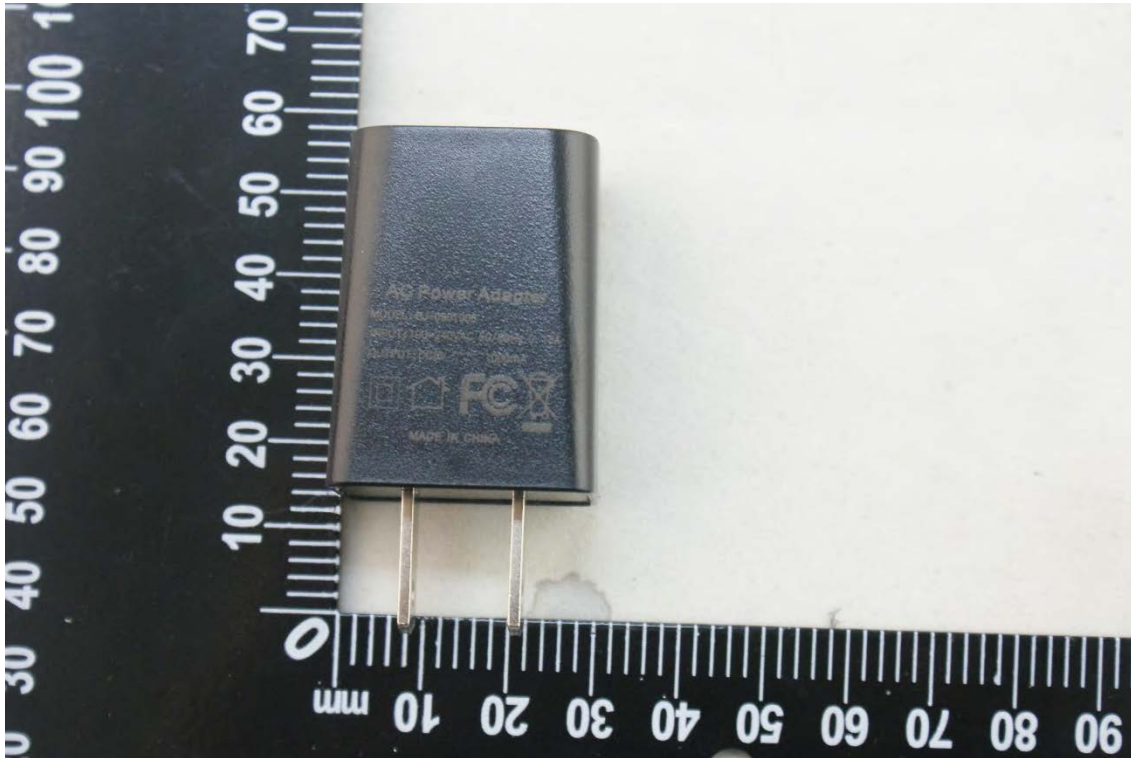
THE RIGHT OF EUT



THE UP OF EUT



THE DOWN OF EUT



CHARGER

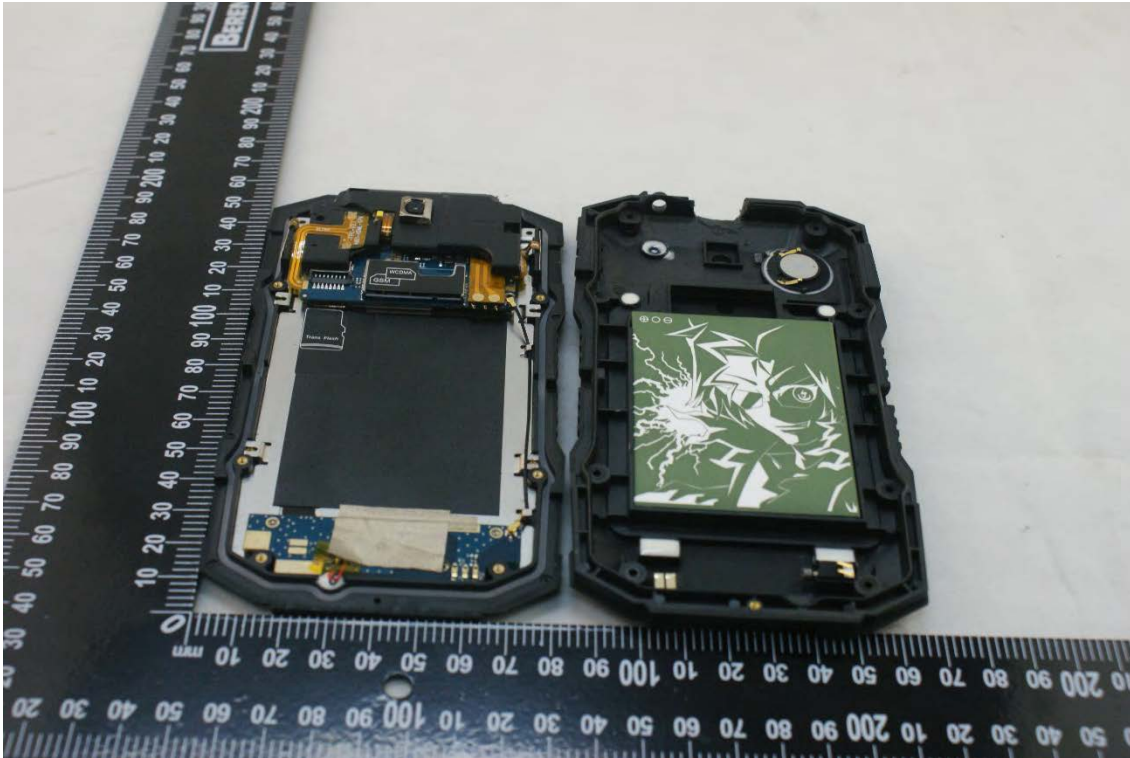


USB CABLE

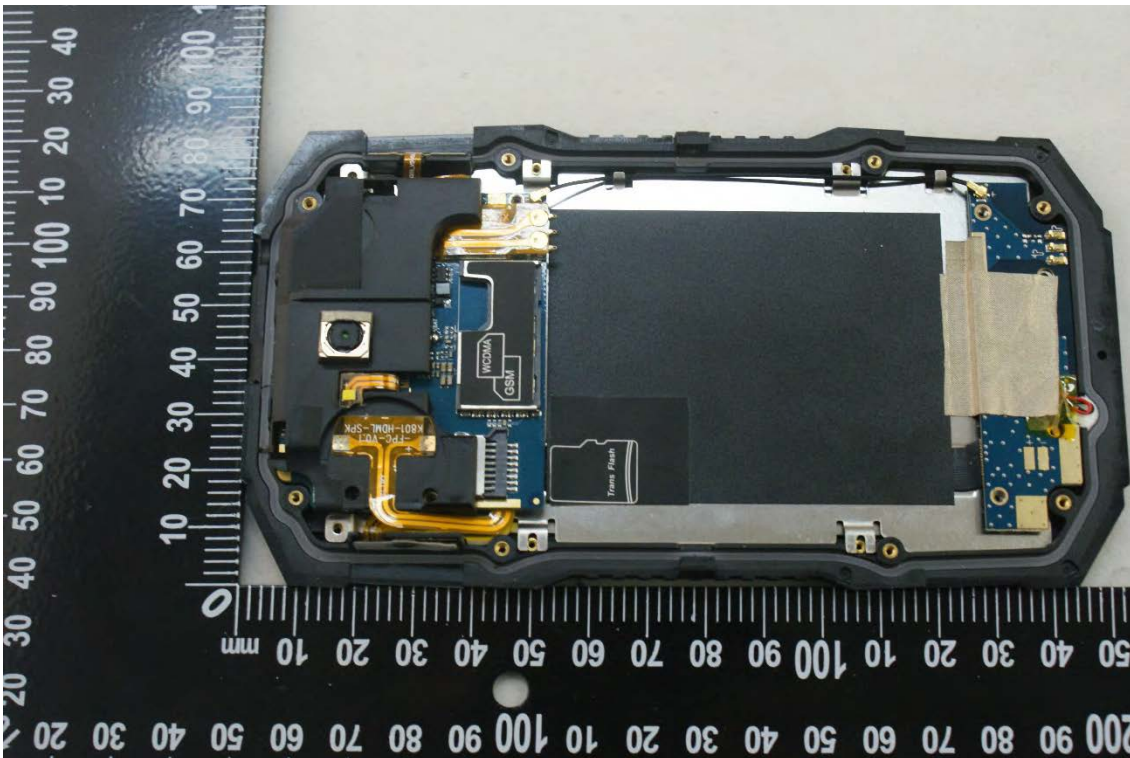


EARPHONE

C.2 Inside of the EUT



EUT UNCOVER VIEW 1



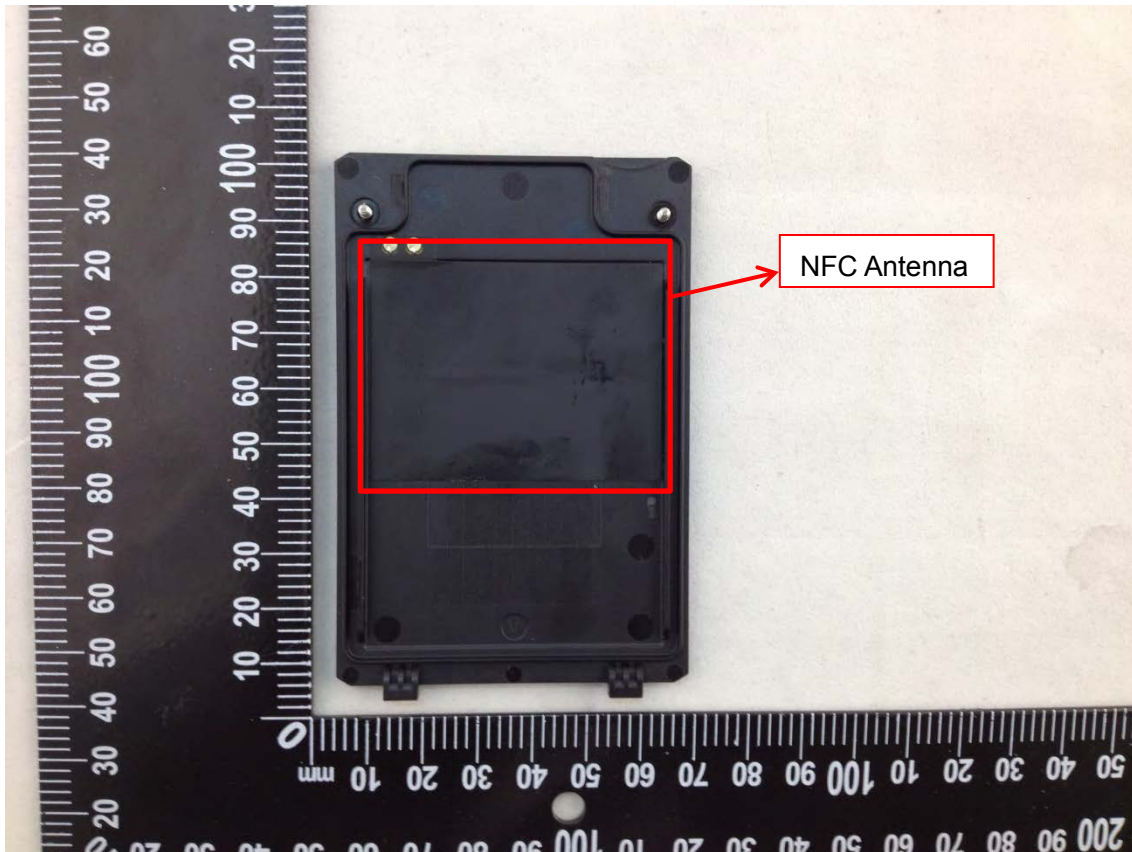
EUT UNCOVER VIEW 2



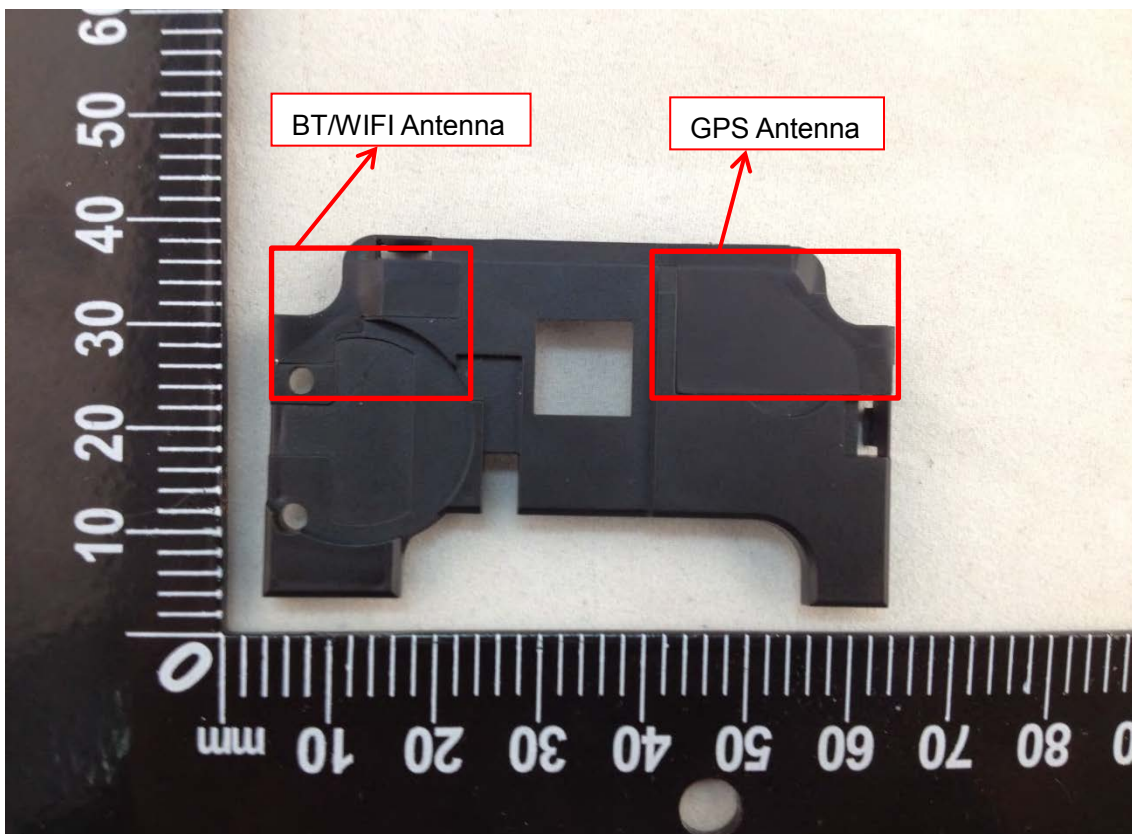
EUT UNCOVER VIEW 3



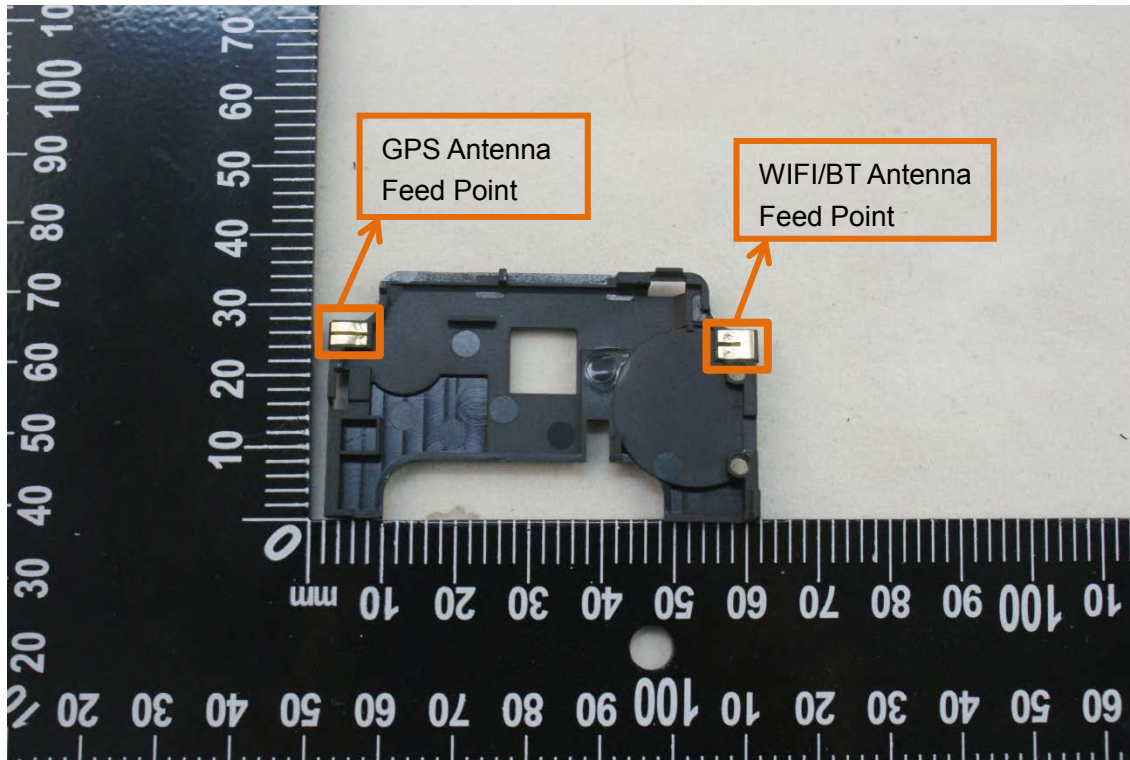
EUT UNCOVER VIEW 4



EUT UNCOVER VIEW 5



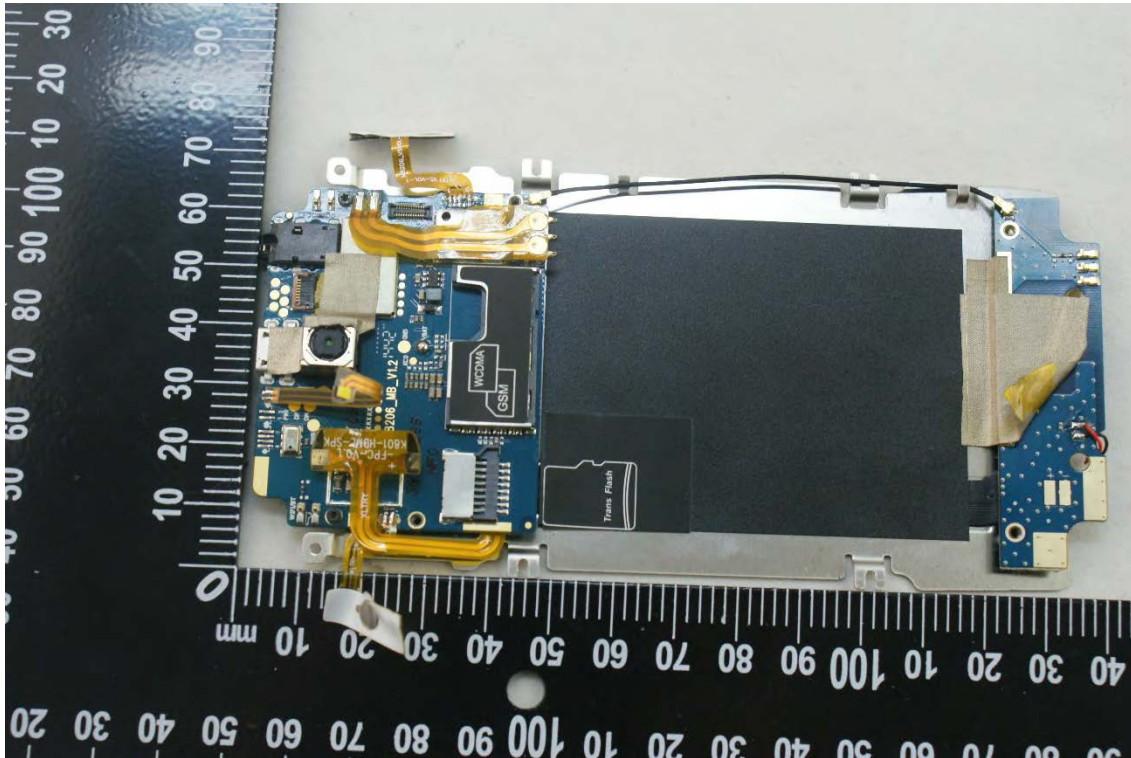
EUT UNCOVER VIEW 6



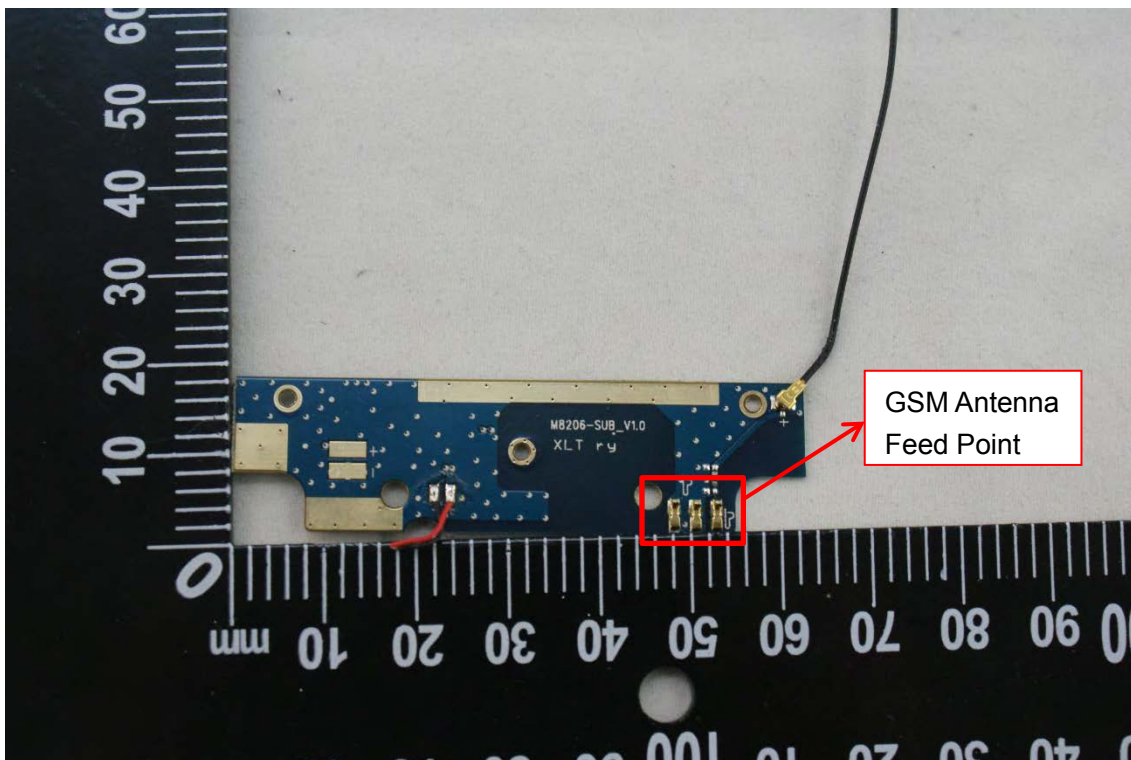
EUT UNCOVER VIEW 7



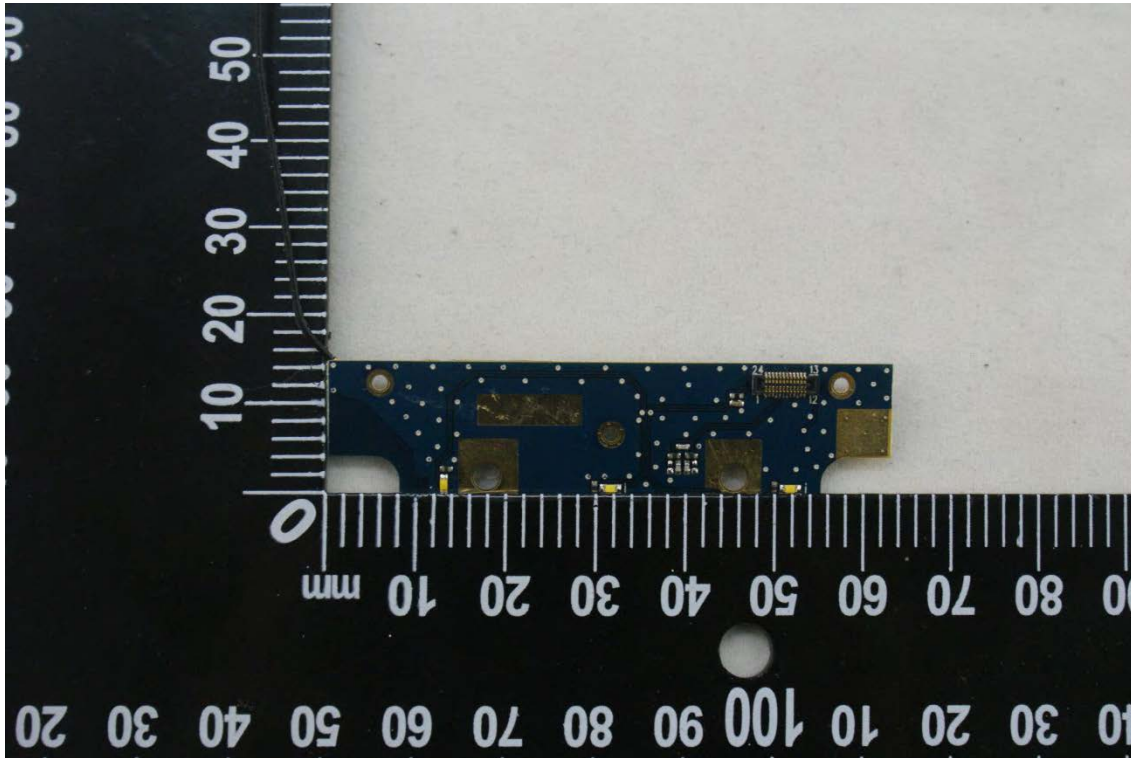
BATTERY



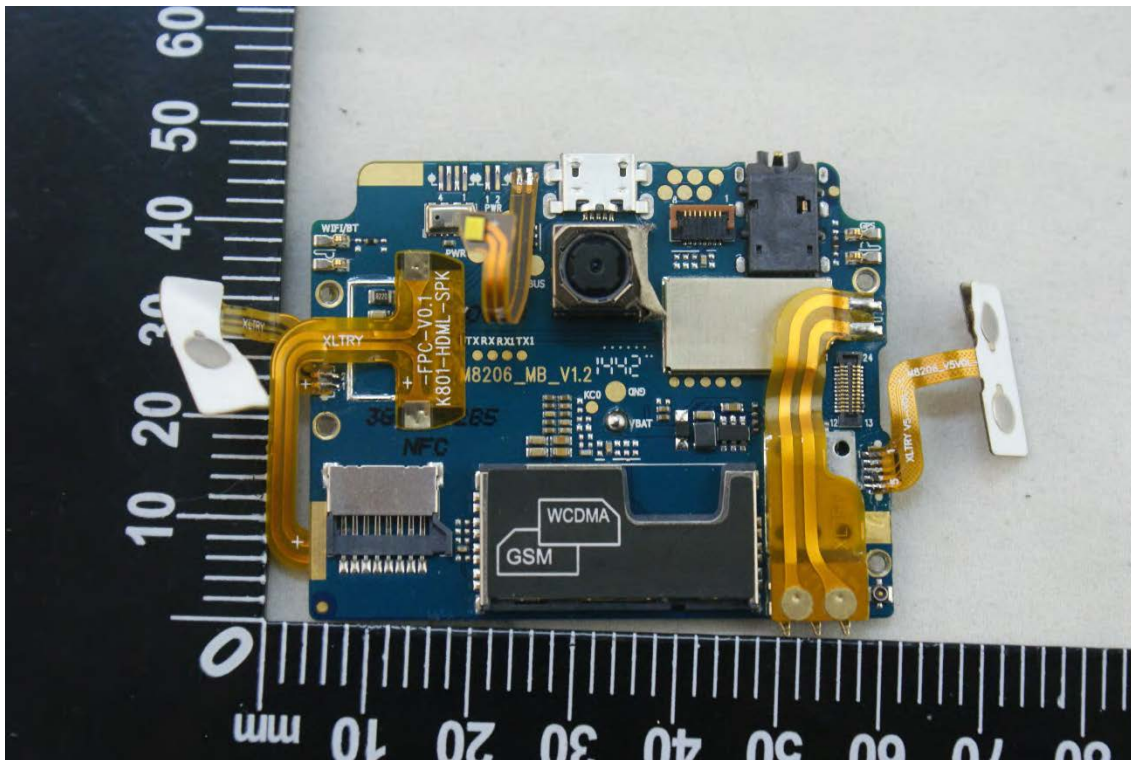
MAIN BOARD TOP VIEW 1



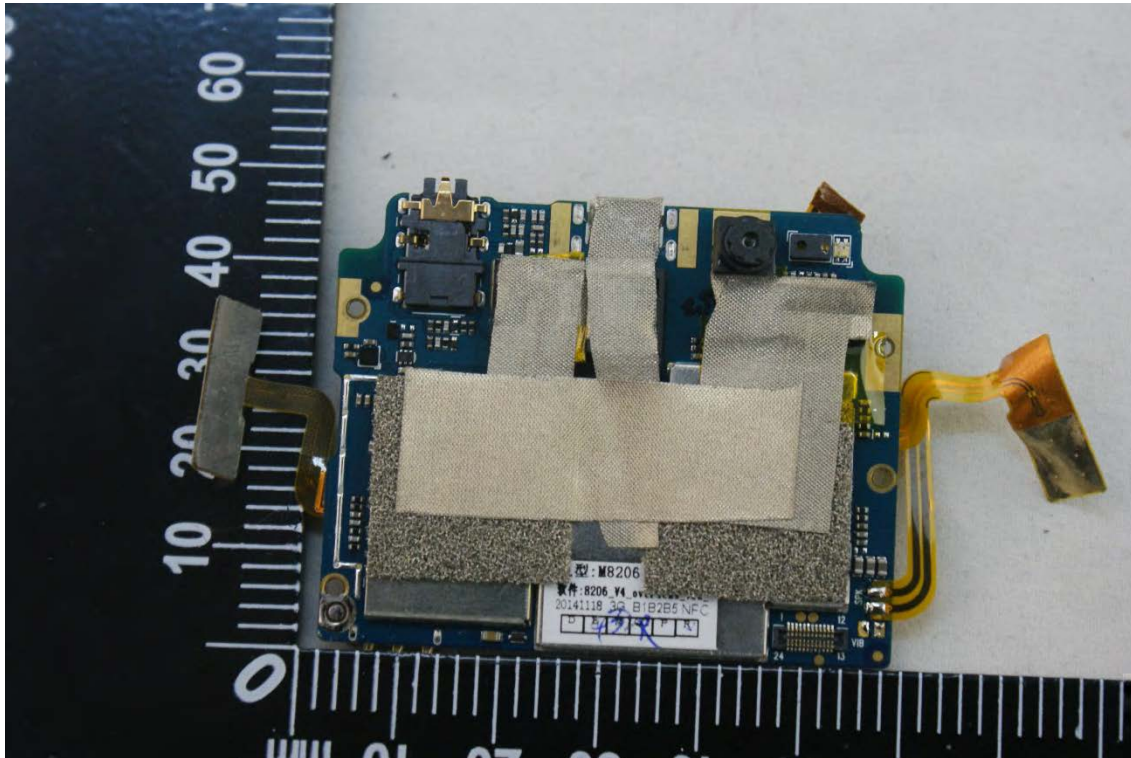
MAIN BOARD TOP VIEW 2



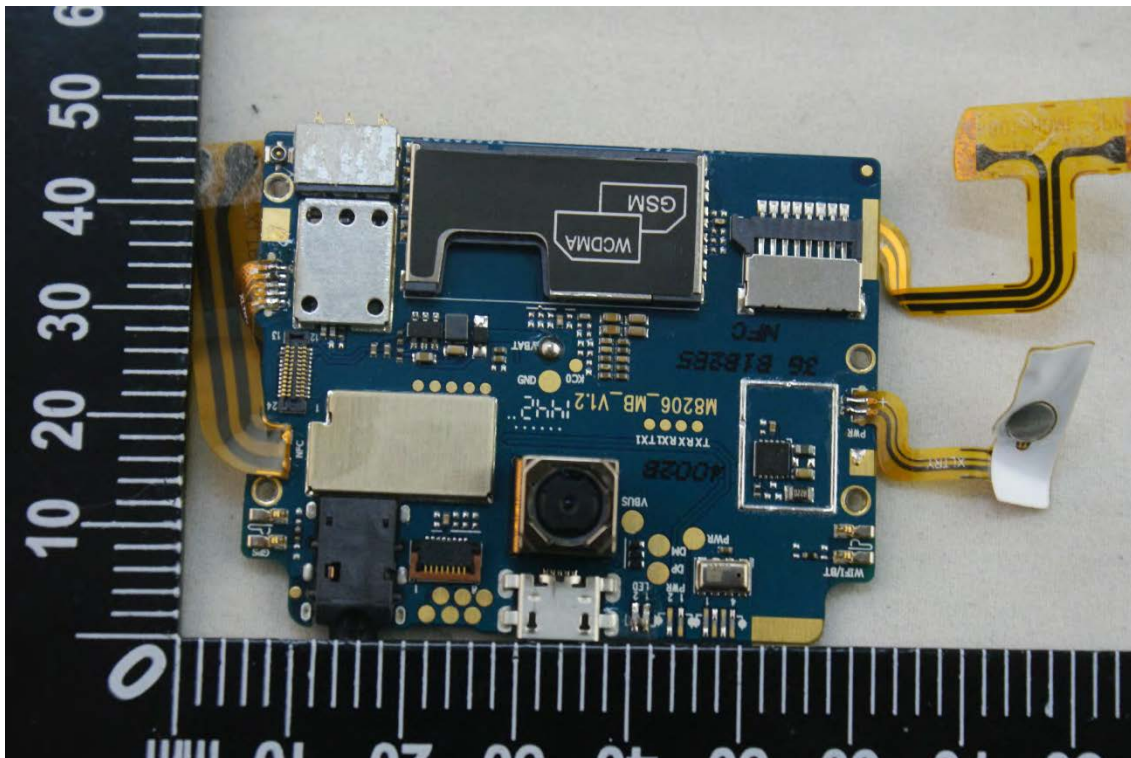
MAIN BOARD BACK VIEW 2



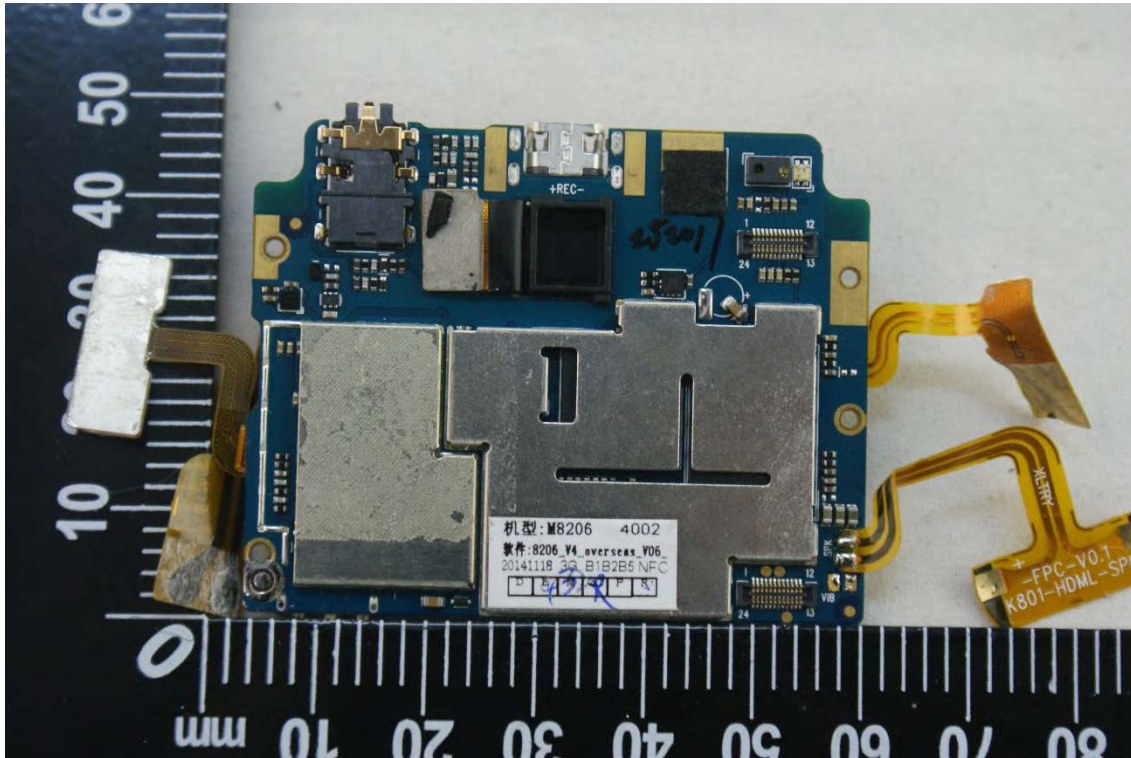
MAIN BOARD TOP VIEW 3



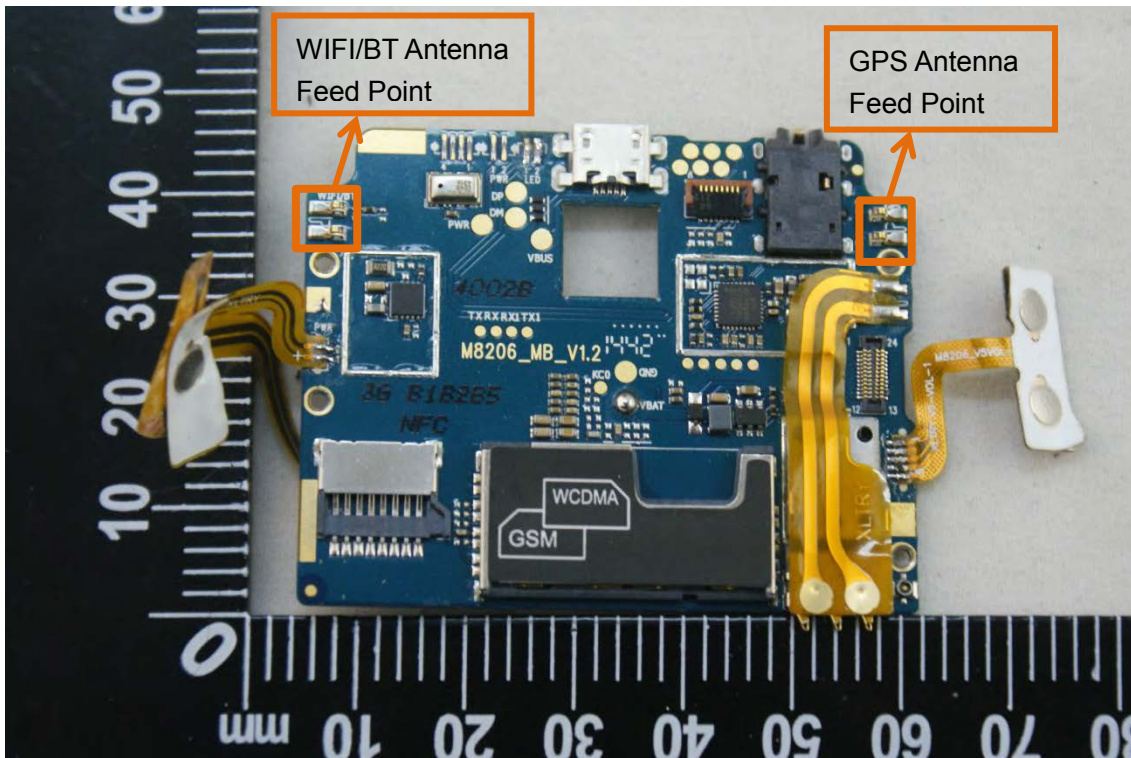
MAIN BOARD BACK VIEW 3



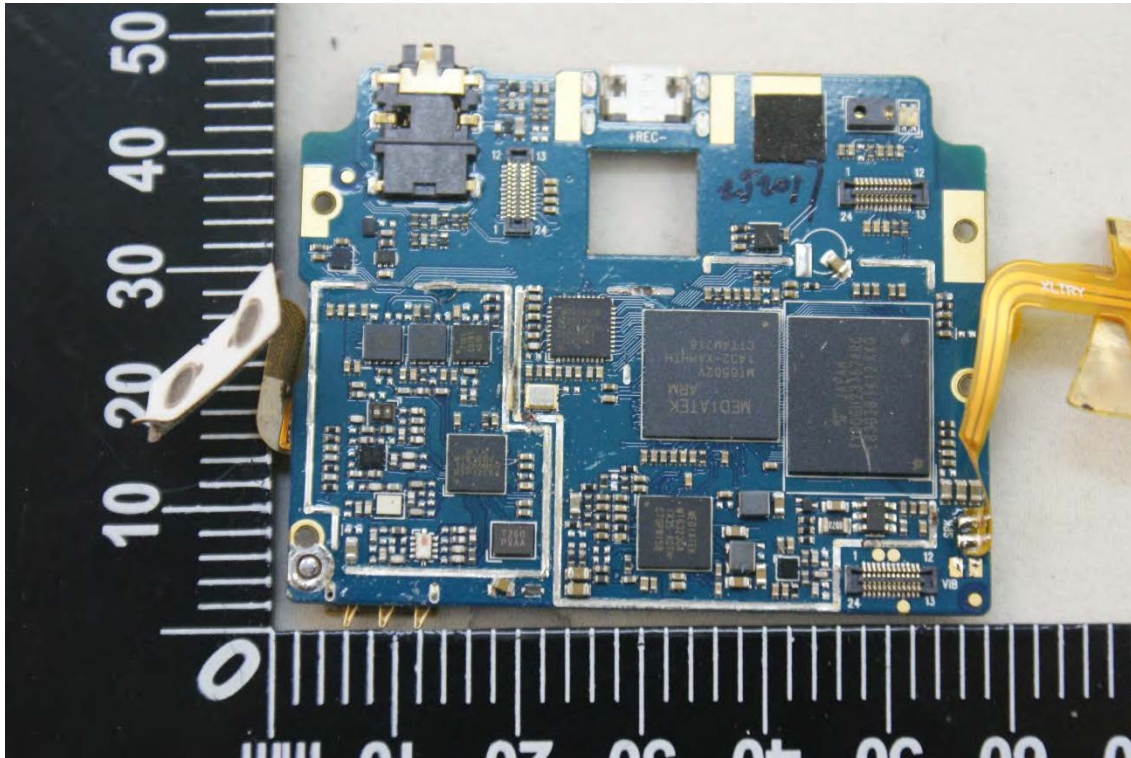
MAIN BOARD TOP VIEW 4



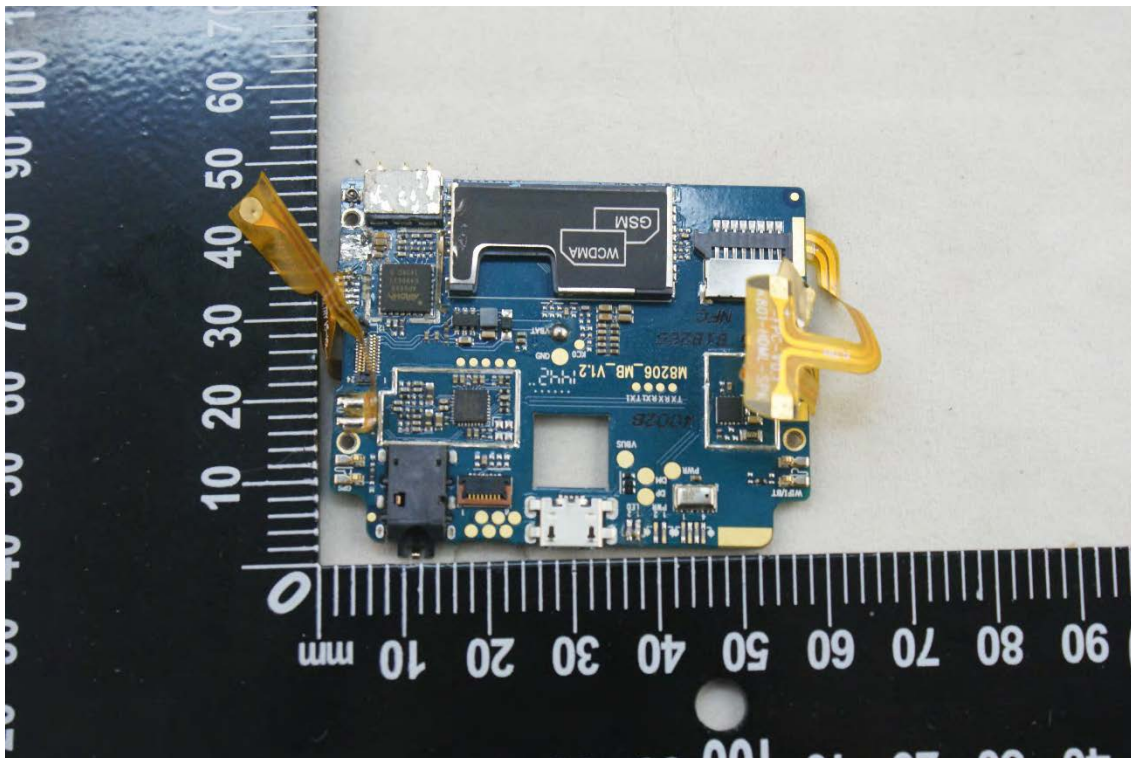
MAIN BOARD BACK VIEW 4



MAIN BOARD TOP VIEW 5



MAIN BOARD BACK VIEW 5



MAIN BOARD TOP VIEW 6

--END OF REPORT--