

FCC RF TEST REPORT

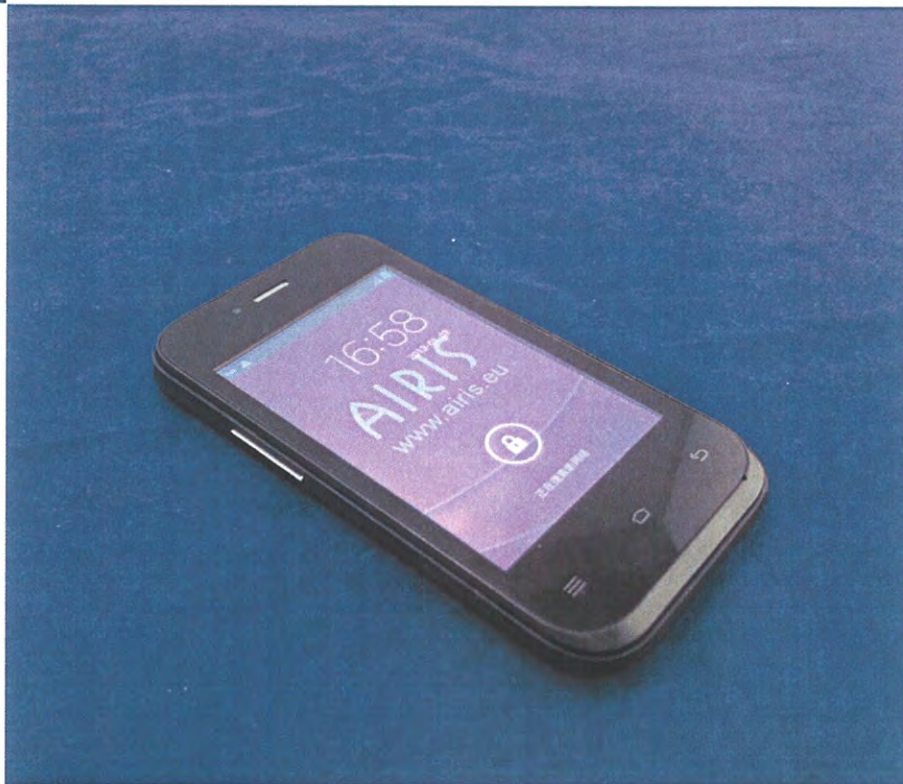
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Smart Phone

ISSUED TO
Infinity System S.L.

Crtra A-2, Km 48.5, Pol. Ind. De Cabanillas, Parcela 12B, 19171,
Guadalajara, Spain.



Prepared by:

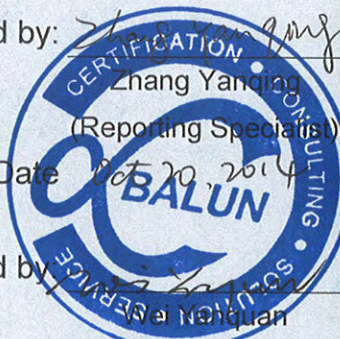
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Date *Oct 20, 2014*

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(Chief Engineer)

Date *Oct 20, 2014*



Report No.: BL-SZ1490136-603

EUT Type: Smart Phone

Model Name: TM36DM

Brand Name: AIRIS

Test Standard: 47 CFR Part 2

47 CFR Part 22 Subpart H

47 CFR Part 24 Subpart E

FCC ID: 2AC99-TM36DM

Test conclusion: PASS

Test Date: Sep 30, 2014 ~ Oct 17, 2014

Date of Issue: Oct 20, 2014

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions</u>
<u>Rev. 01</u>	<u>Oct 20, 2014</u>	<u>Initial Issue</u>

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

C.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

1.1 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	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>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.</p> <p>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.</p>
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°C
Ambient Relative Humidity	30 to 60%
Ambient Pressure	86 to 106 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	Infinity System S.L.
Address	Crtra A-2, Km 48.5, Pol. Ind. De Cabanillas, Parcela 12B, 19171, Guadalajara, Spain.

2.2 Manufacturer

Manufacturer	REVO TECHNOLOGY (HK) LIMITED
Address	Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, HK

2.3 General Description for Equipment under Test (EUT)

EUT Type	Smart Phone
Model Name	TM36DM
Hardware Version	HCT-C3MB-A2
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 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

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	AIRIS
	Model No	T36DMBA
	Serial No	(N/A. marked #1 by test site)
	Capacitance	1250mAh
	Rated Voltage	3.7V
	Extreme Voltage	Low: 3.5V / High:4.2V
Ancillary Equipment 2	Charger	
	Brand Name	AIRIS
	Model No	T36DMCH
	Serial No	(N/A. marked #1 by test site)
	Rated Input	~100-240V, 50/60Hz, 200mA
	Rated Output	= 5V, 500mA
Ancillary Equipment 3	Earphone	
Ancillary Equipment 4	USB Cable	

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2 (5–25–14 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (8–20–14 Edition)	Public Mobile Services
3	47 CFR Part 24 (9–20–14 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 ratio	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(°C)	15 - 35

4.2 Test Equipment List

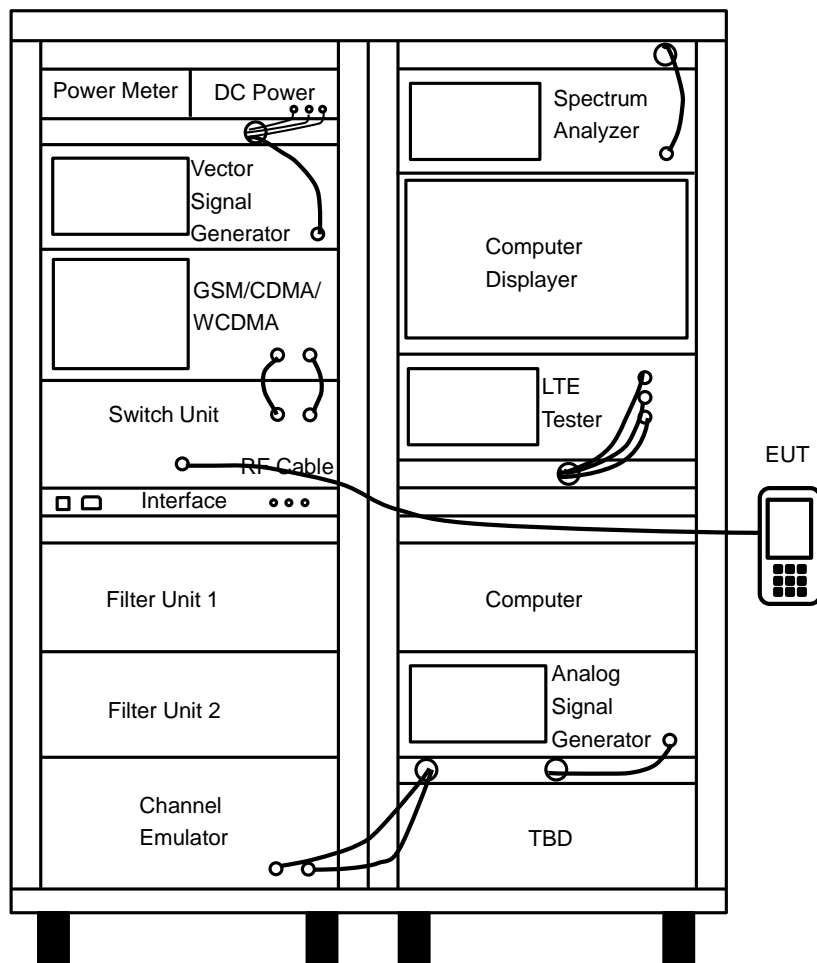
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2014.07.07	2015.07.06
Spectrum Analyzer	ROHDE&SCHWARZ	FSL3	103640/003	2014.07.07	2015.07.06
Power Splitter	KMW	DCPD-LDC	1305003215	2014.07.07	2015.07.06
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2014.07.07	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-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	QPSK Modulation, WCDMA 850	Ch No. 4132/ 826.4MHz
TC14	QPSK Modulation, WCDMA 850	Ch No. 4183/ 836.6MHz
TC15	QPSK Modulation, WCDMA 850	Ch No. 4233/ 846.6MHz
TC16	QPSK Modulation, WCDMA 1900	Ch No. 9262/ 1852.4MHz
TC17	QPSK Modulation, WCDMA 1900	Ch No. 9401/ 1880.2MHz
TC18	QPSK Modulation, WCDMA 1900	Ch No. 9538/ 1907.6MHz

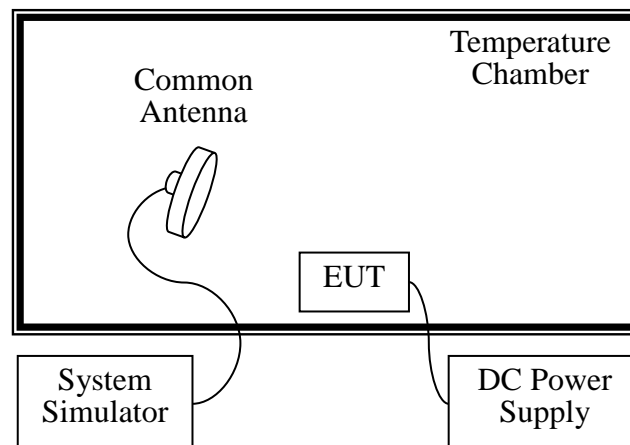
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



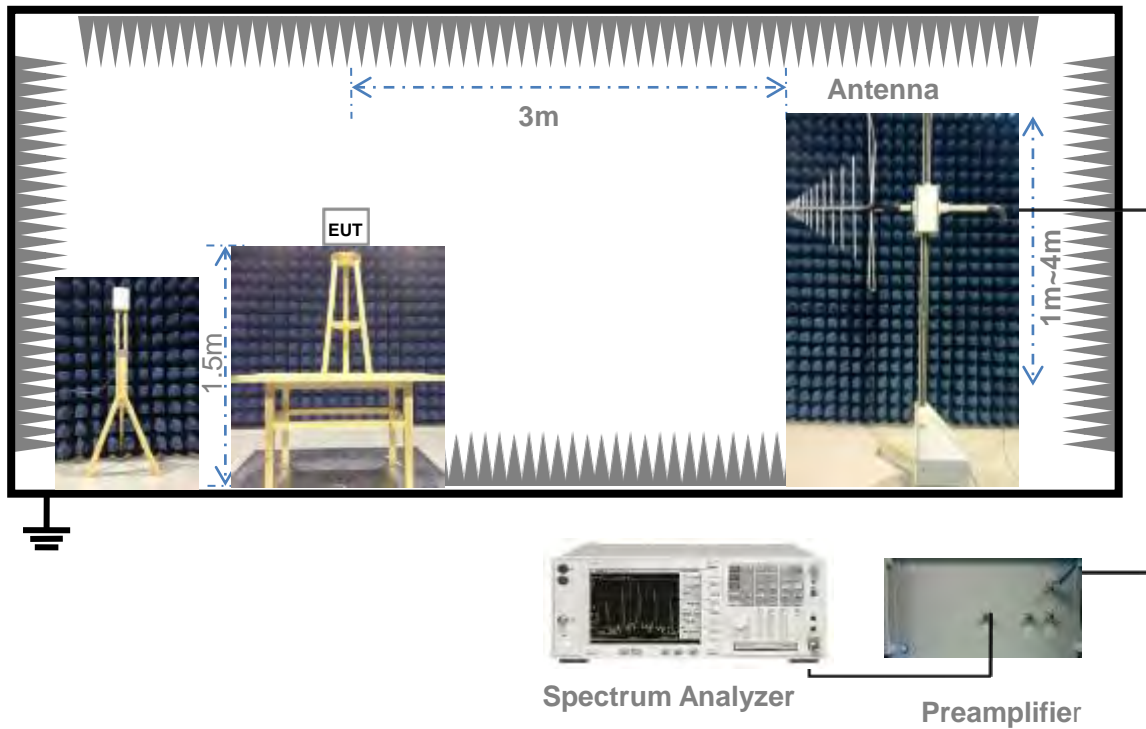
(Diagram 1)

4.4.2 For Frequency Stability Test



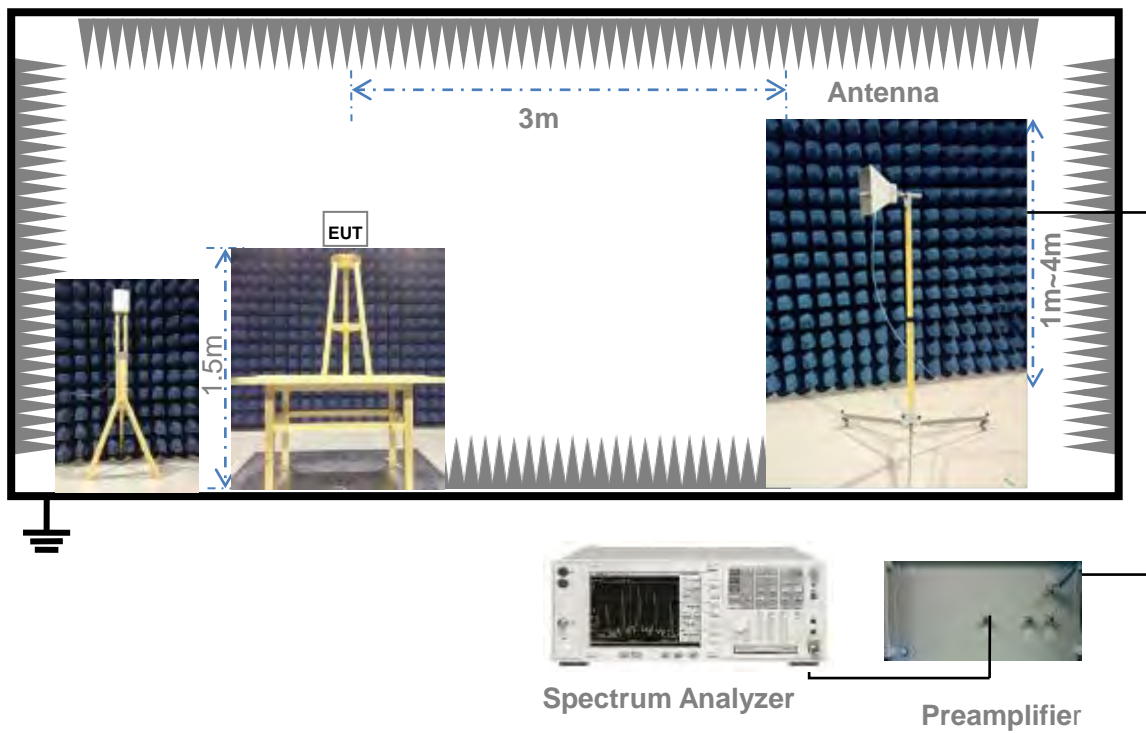
(Diagram 2)

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~TC18
Peak to average ratio	NTNV	Test Setup 1	TC04~TC06, TC10~TC12, TC16~TC18
Occupied Bandwidth	NTNV	Test Setup 1	TC01~TC18
Frequency Stability	NTNV	Test Setup 2	TC01~TC18
Conducted Out of Band Emissions	NTNV	Test Setup 1	TC01~TC18
Band Edge	NTNV	Test Setup 1	TC01, TC03, TC04, TC06, TC07, TC09, TC10, TC12, TC13, TC15, TC16, TC18,
Transmitter Radiated Power (EIPR/ERP)	NTNV	Test Setup 3 Test Setup 4	TC01~TC18
Radiated Out of Band Emissions	NTNV	Test Setup 3 Test Setup 4	TC01~TC18
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): $RBW=VBW=1\text{MHz}$, 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.

5.2 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.

FCC PART 22

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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

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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

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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

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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	27.98	35	PASS
	190	836.6	28.14		PASS
	251	848.8	28.09		PASS
GSM 1900	512	1850.2	28.79	32	PASS
	661	1880.0	28.84		PASS
	810	1909.8	29.03		PASS
GPRS 850	128	824.2	28.25	35	PASS
	190	836.6	28.38		PASS
	251	848.8	28.32		PASS
GPRS 1900	512	1850.2	28.84	32	PASS
	661	1880.0	28.95		PASS
	810	1909.8	29.21		PASS

NOTE: For the GPRS 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	28.25	27.85	27.46	27.47
	190	836.6	28.38	27.93	27.54	27.60
	251	848.8	28.32	27.89	27.49	27.51
GPRS 1900	512	1850.2	28.84	27.96	26.10	26.10
	661	1880.0	28.95	28.09	26.26	26.26
	810	1909.8	29.21	28.39	26.63	26.62

WCDMA Mode Test data:

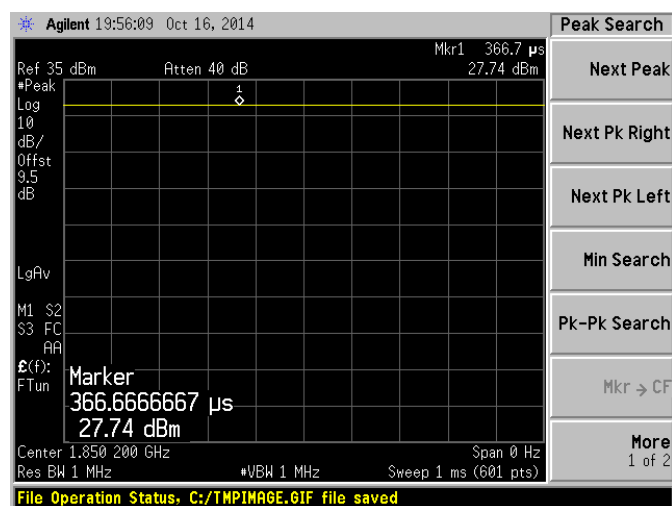
Band	Channel	Frequency (MHz)	Output Power(dBm)
WCDMA 850	4132	826.4	23.19
	4183	835	22.95
	4233	846.6	23.18
WCDMA 1900	9262	1852.4	22.73
	9401	1880.2	22.36
	9538	1907.6	22.81

A.2 Peak to Average Radio

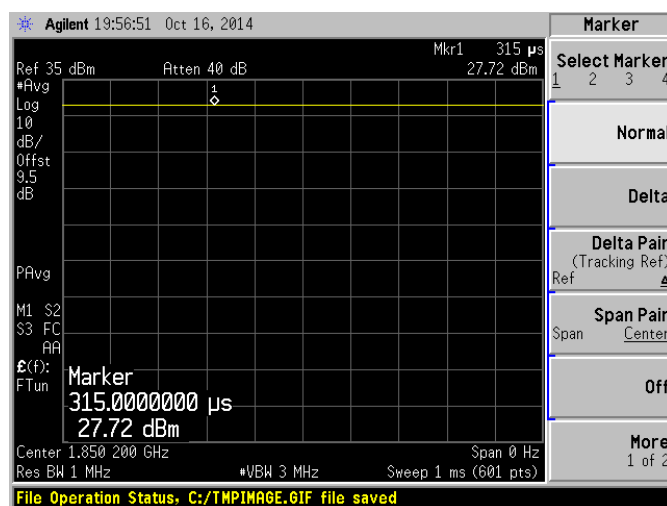
Band	Channel	Frequency (MHz)	Peak to Average radio	Limit	Verdict
			dBm	dBm	
GSM 1900MHz	512	1850.2	0.02	13	PASS
	661	1880.0	0.02		PASS
	810	1909.8	0.01		PASS
WCDMA 1900MHz	9262	1852.4	0.14	13	PASS
	9401	1880.2	0.09		PASS
	9538	1907.6	0.91		PASS

Test plots

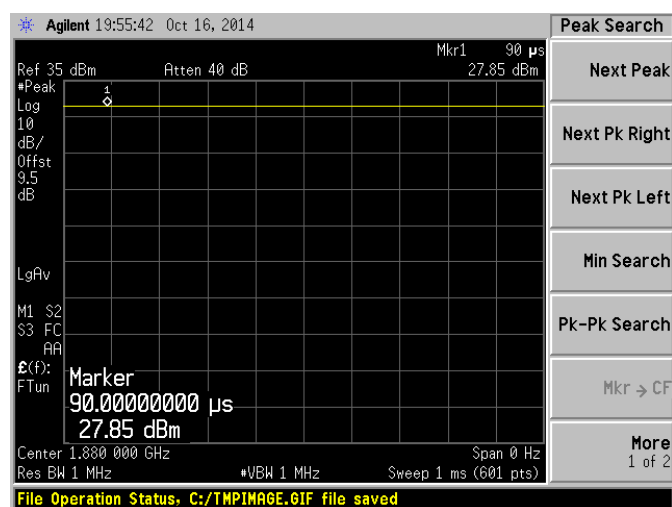
GSM 1900MHz CHANNEL 512 PEAK POWER



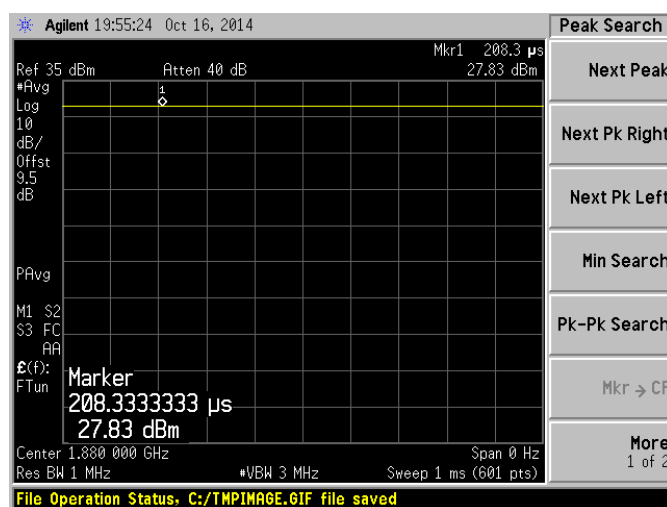
GSM 1900MHz CHANNEL 512 AV POWER



GSM 1900MHz CHANNEL 661 PEAK POWER

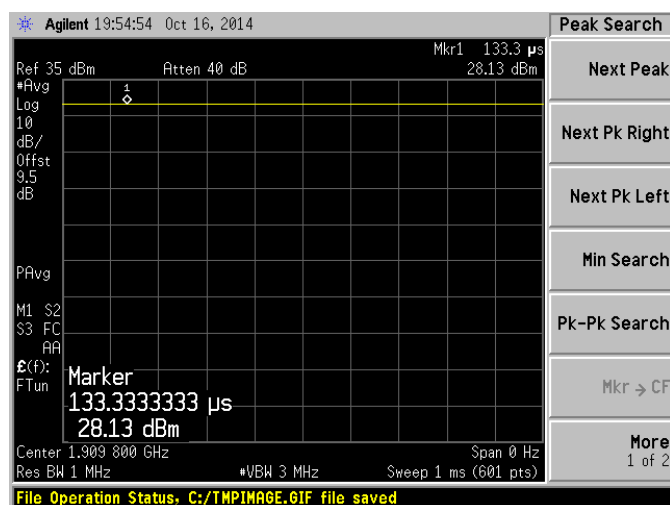
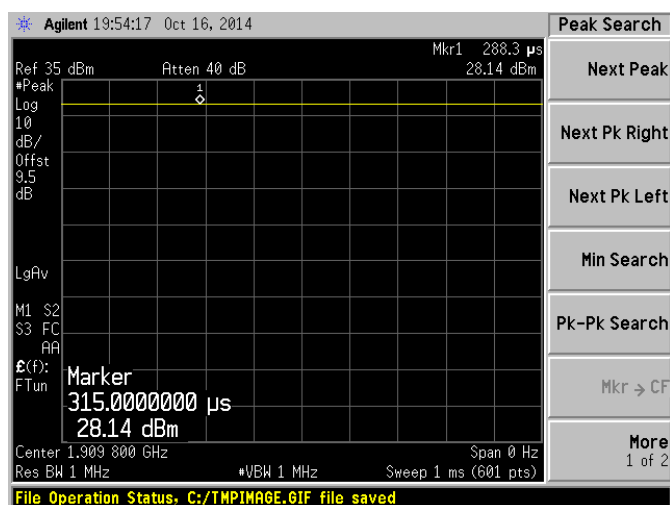


GSM 1900MHz CHANNEL 661 AV POWER



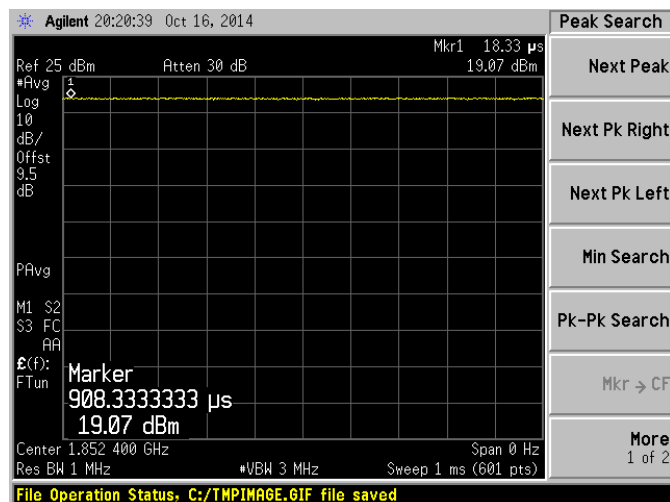
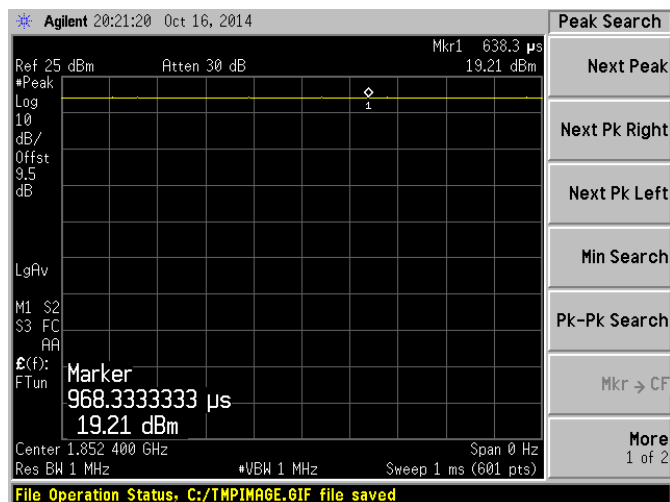
GSM 1900MHz CHANNEL 810 PEAK POWER

GSM 1900MHz CHANNEL 810 AV POWER



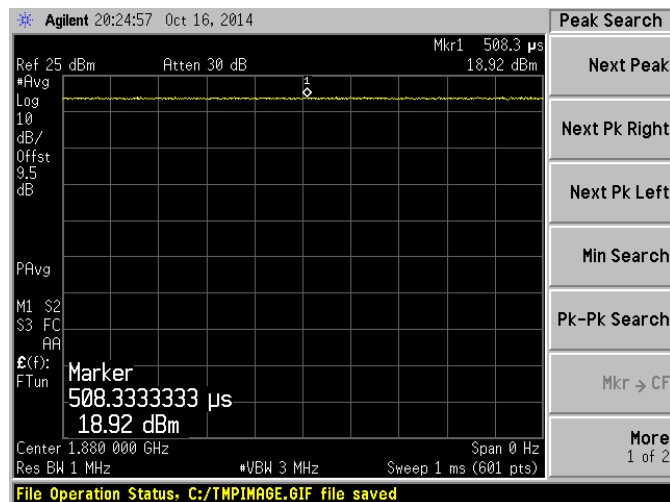
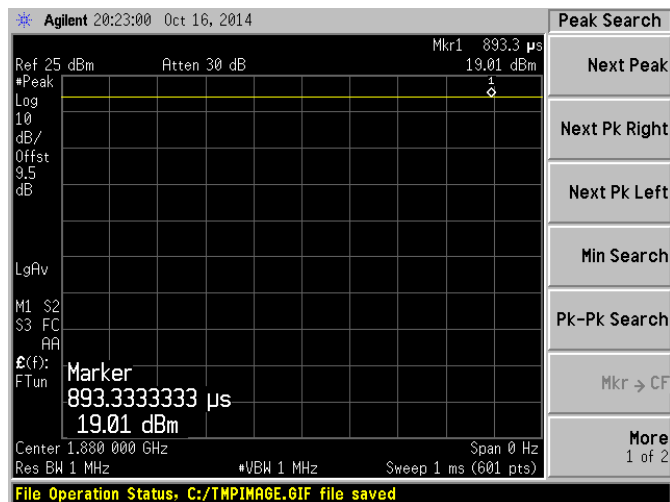
WCDMA 1900MHz CHANNEL 9262 PEAK POWER

WCDMA 1900MHz CHANNEL 9262 AV POWER



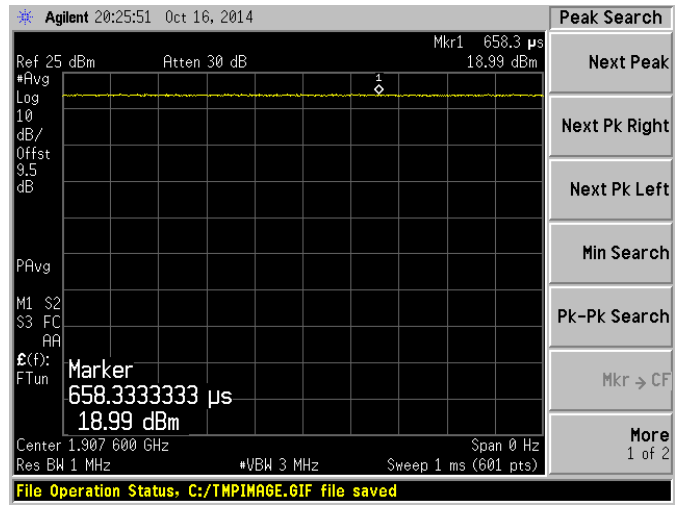
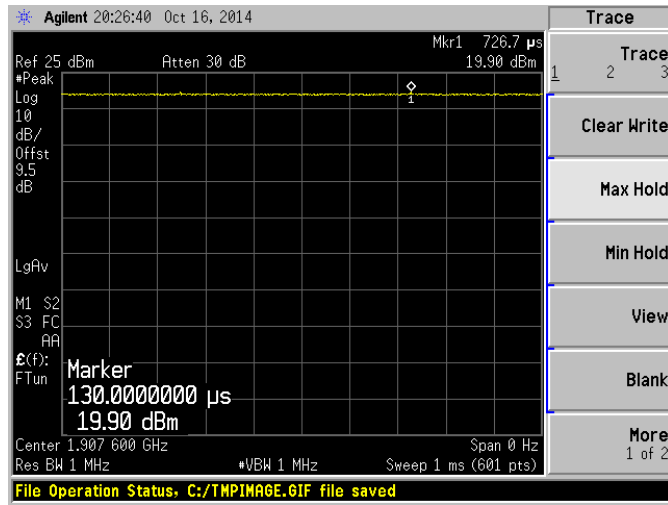
WCDMA 1900MHz CHANNEL 9401 PEAK POWER

WCDMA 1900MHz CHANNEL 9401 AV POWER



WCDMA 1900MHz CHANNEL 9538 PEAK POWER

WCDMA 1900MHz CHANNEL 9538 AV POWER



A.3 Occupied Bandwidth

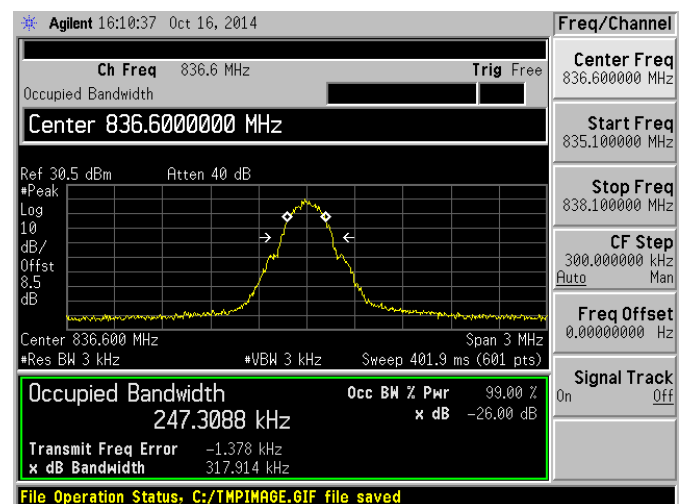
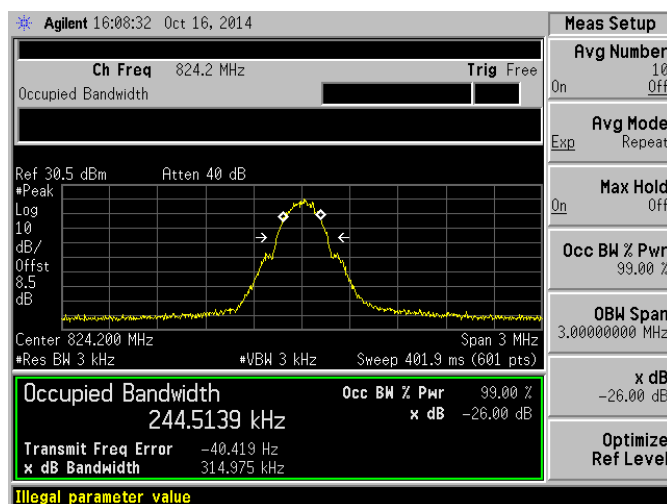
Test Data

Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth	Measured -26dB Occupied Bandwidth
GSM 850MHz	128	824.2	244.5139 kHz	314.975 kHz
	190	836.6	247.3088 kHz	317.914 kHz
	251	848.8	243.8194 kHz	317.699 kHz
GSM 1900MHz	512	1850.2	251.4457 kHz	318.179 kHz
	661	1880.0	245.2736 kHz	317.699 kHz
	810	1909.8	242.5813 kHz	316.453 kHz
GPRS 850MHz	128	824.2	245.9459 kHz	324.332 kHz
	190	836.6	245.9014 kHz	317.514 kHz
	251	848.8	247.9185 kHz	319.993 kHz
GPRS 1900MHz	512	1850.2	243.9895 kHz	318.208 kHz
	661	1880.0	246.1679 kHz	318.412 kHz
	810	1909.8	244.9869 kHz	310.616 kHz
WCDMA 850	4132	826.4	4.1479 MHz	4.681 MHz
	4183	836.6	4.1488 MHz	4.682 MHz
	4233	846.6	4.1554 MHz	4.697 MHz
WCDMA 1900	9262	1852.4	4.1686 MHz	4.716 MHz
	9401	1880.2	4.1559 MHz	4.687 MHz
	9538	1907.6	4.1596 MHz	4.684 MHz

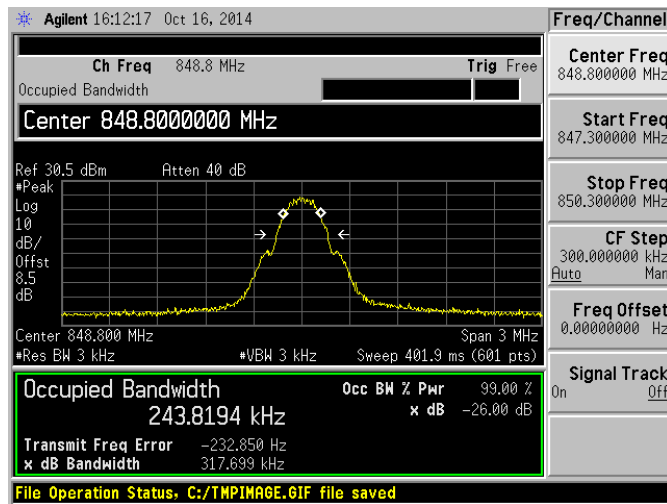
Test plots

GSM 850MHz CHANNEL 128

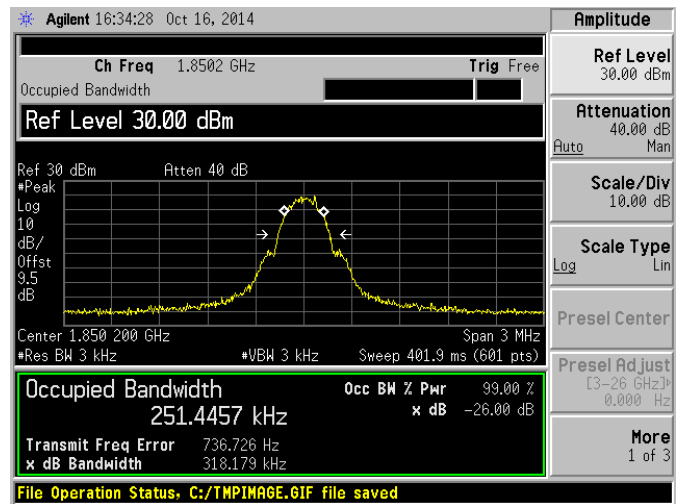
GSM 850MHz CHANNEL 190



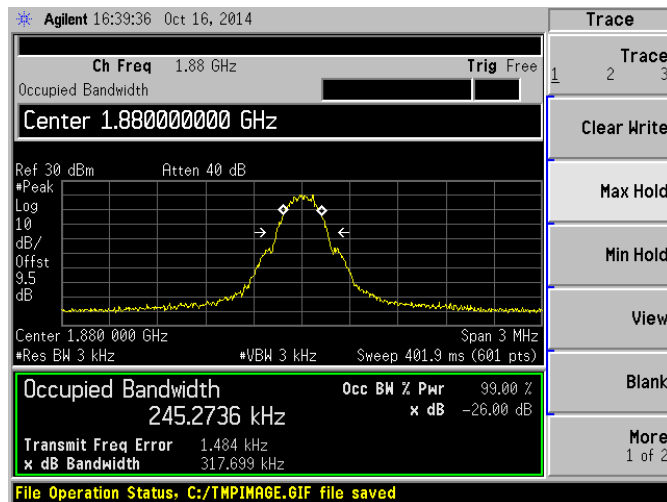
GSM 850MHz CHANNEL 251



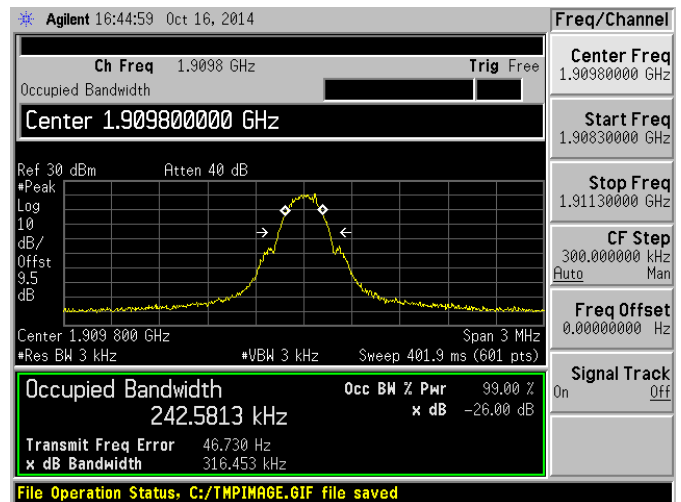
GSM 1900MHz CHANNEL 512



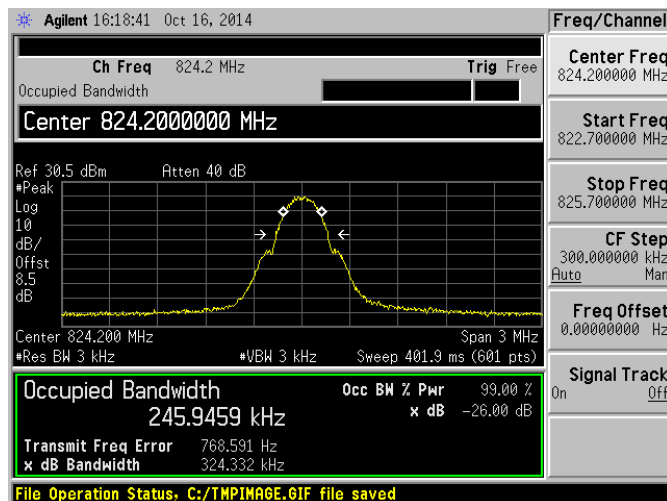
GSM 1900MHz CHANNEL 661



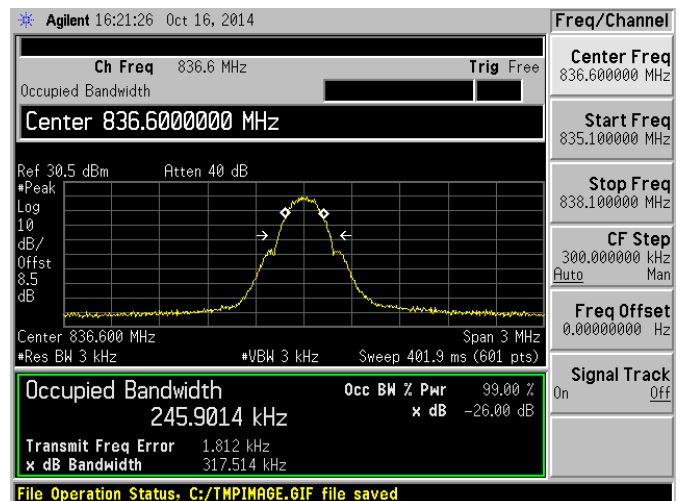
GSM 1900MHz CHANNEL 810



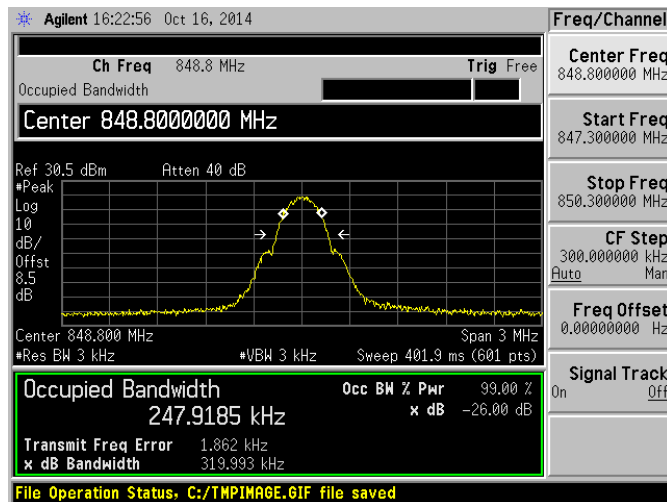
GPRS 850MHz CHANNEL 128



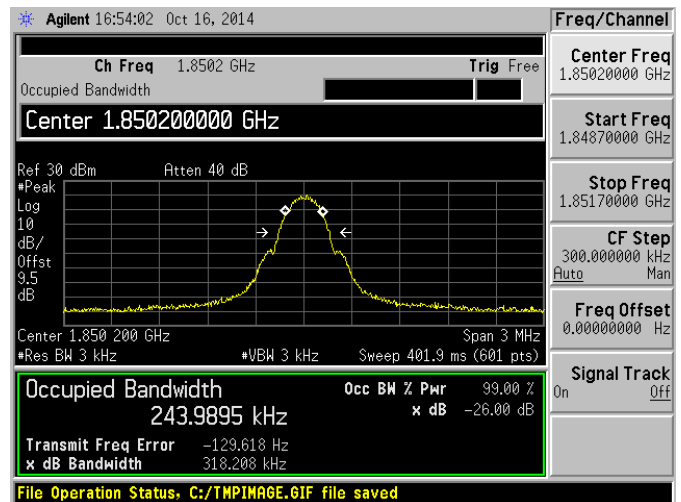
GPRS 850MHz CHANNEL 190



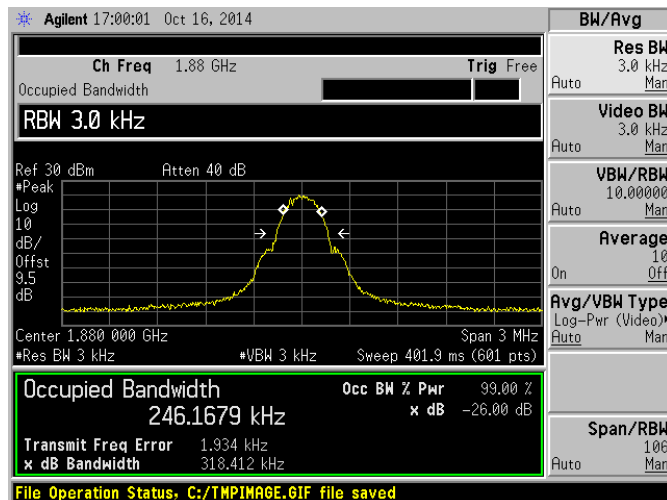
GPRS 850MHz CHANNEL 251



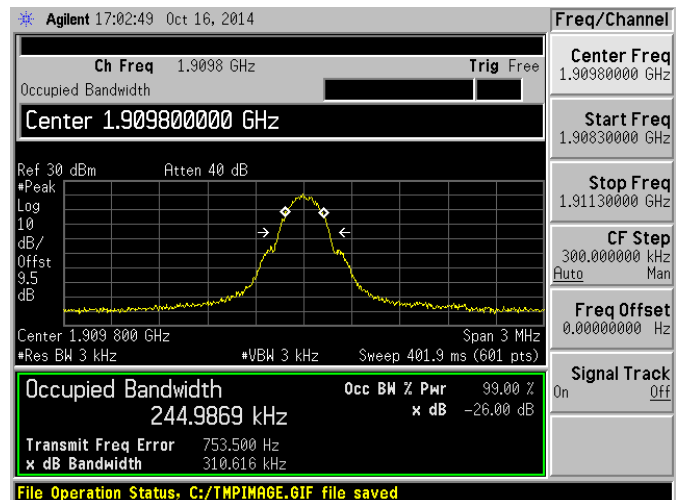
GPRS 1900MHz CHANNEL 512



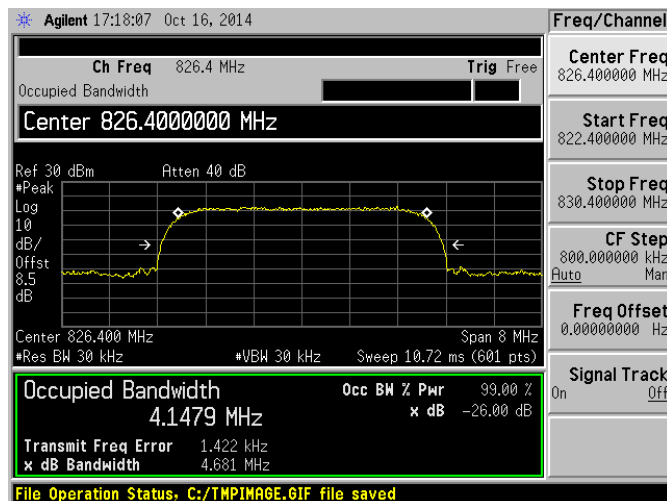
GPRS 1900MHz CHANNEL 661



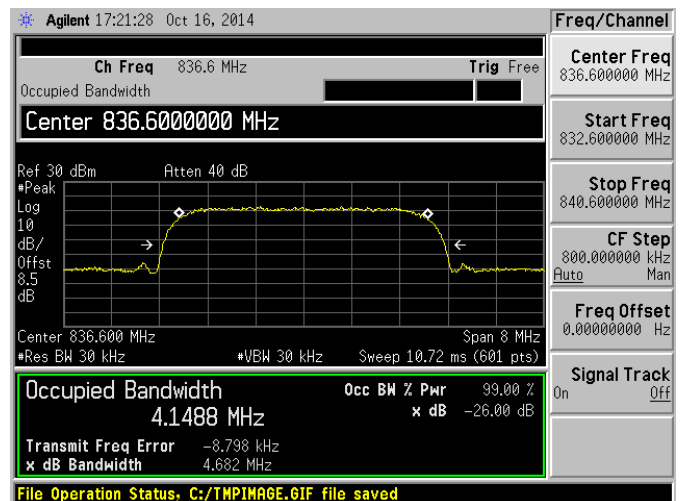
GPRS 1900MHz CHANNEL 810



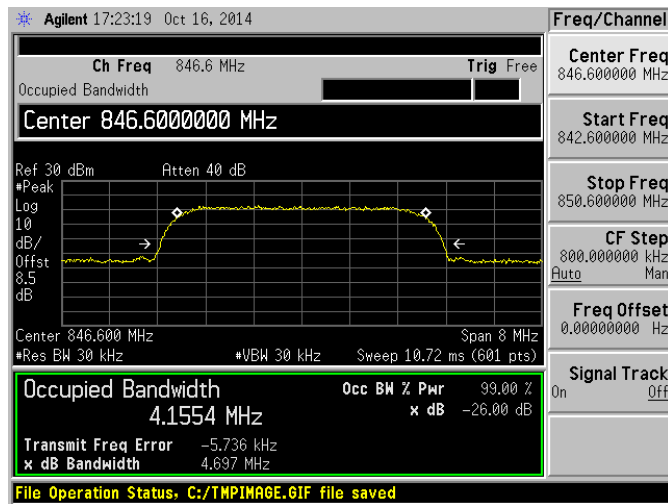
WCDMA 850MHz CHANNEL 4132



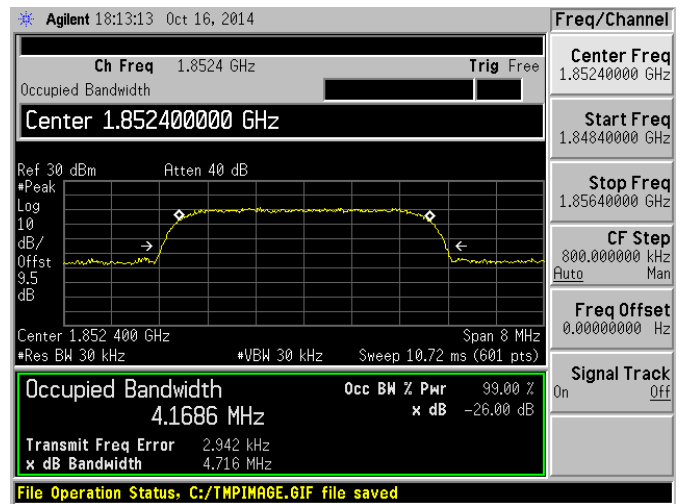
WCDMA 850MHz CHANNEL 4183



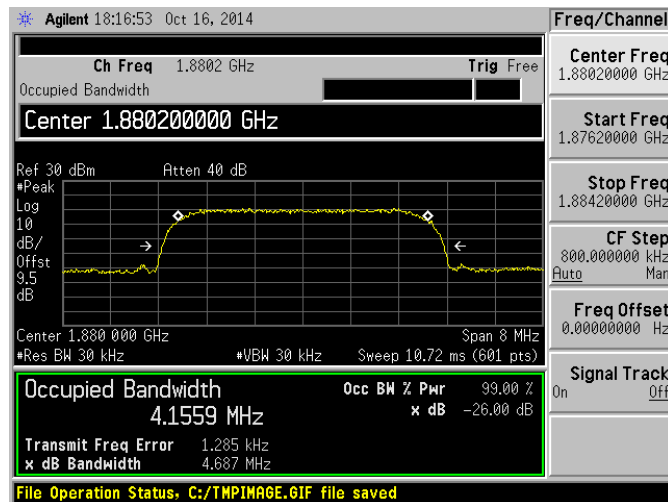
WCDMA 850MHz CHANNEL 4233



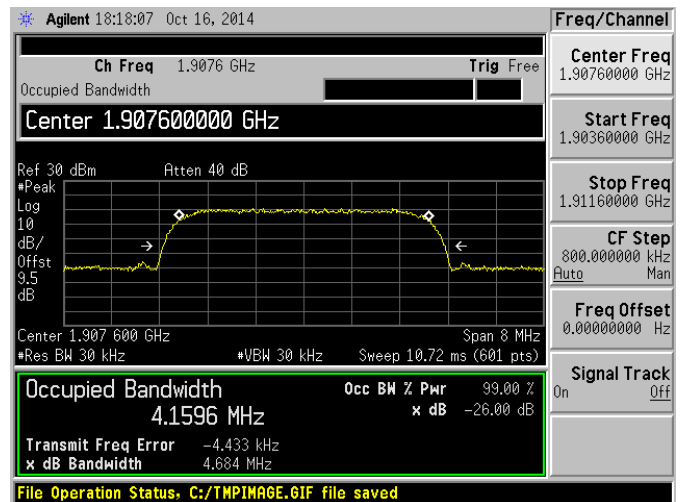
WCDMA 1900MHz CHANNEL 9262



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	63.12	±2060.5	26.32	±2091.5	18.24	±2122	PASS
	-20	75.27		49.22		48.85		
	-10	30.81		0.87		42.82		
	0	54.90		74.76		67.61		
	+10	-5.95		41.21		74.98		
	+20	30.97		53.40		37.51		
	+30	38.53		33.93		24.02		
	+40	28.67		16.43		-2.96		
	+50	14.09		80.68		-2.48		
4.2	+25	27.35	±2060.5	25.06	±2091.5	36.37	±2122	PASS
3.5	+25	6.10		34.97		15.30		

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	-5.19	±4625.5	48.91	±4700.0	29.27	±4774.5	PASS
	-20	19.00		11.01		-8.57		
	-10	38.22		15.79		36.13		
	0	25.23		41.59		-14.70		
	+10	-1.45		-10.89		-8.71		
	+20	6.94		-7.13		-15.98		
	+30	21.13		29.44		21.63		
	+40	41.23		-10.34		-2.73		
	+50	30.96		15.41		8.69		
4.2	+25	-5.63		32.72		48.24		
3.5	+25	20.67		-9.80		36.41		

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	-3.51	±4625.5	16.52	±4700.0	16.62	±4774.5	PASS
	-20	43.61		39.74		-4.70		
	-10	31.83		29.21		5.59		
	0	20.08		11.20		11.51		
	+10	-12.32		42.22		-9.42		
	+20	17.45		23.45		-13.86		
	+30	21.45		27.13		29.87		
	+40	7.14		-15.60		11.59		
	+50	16.48		-17.11		5.90		
4.2	+25	-13.29		-11.48		-0.49		
3.5	+25	43.61		18.41		-3.07		

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	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	±2060.5	44.99	±2091.5	77.46	±2122	PASS
3.5	+25	25.64		-8.66		68.75		

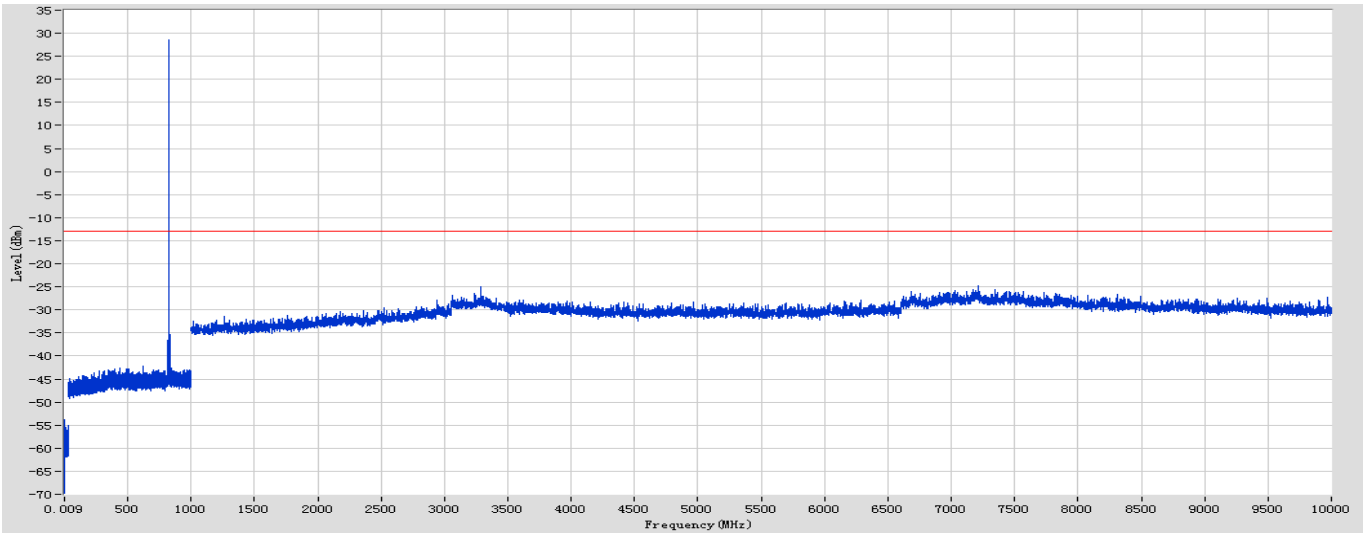
WCDMA 1900MHz Band:

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	-2.17	±4625.5	33.00	±4700.0	2.22	±4774.5	PASS
	-20	1.62		8.40		14.44		
	-10	33.49		-3.89		15.15		
	0	38.49		23.41		35.15		
	+10	6.64		-6.77		26.44		
	+20	19.16		30.32		10.15		
	+30	26.99		-1.36		43.42		
	+40	11.18		37.91		-1.15		
	+50	18.96		-8.98		33.87		
4.2	+25	39.46		6.68		14.28		
3.5	+25	19.87		-10.76		28.94		

A.5 Conducted Out of Band Emissions

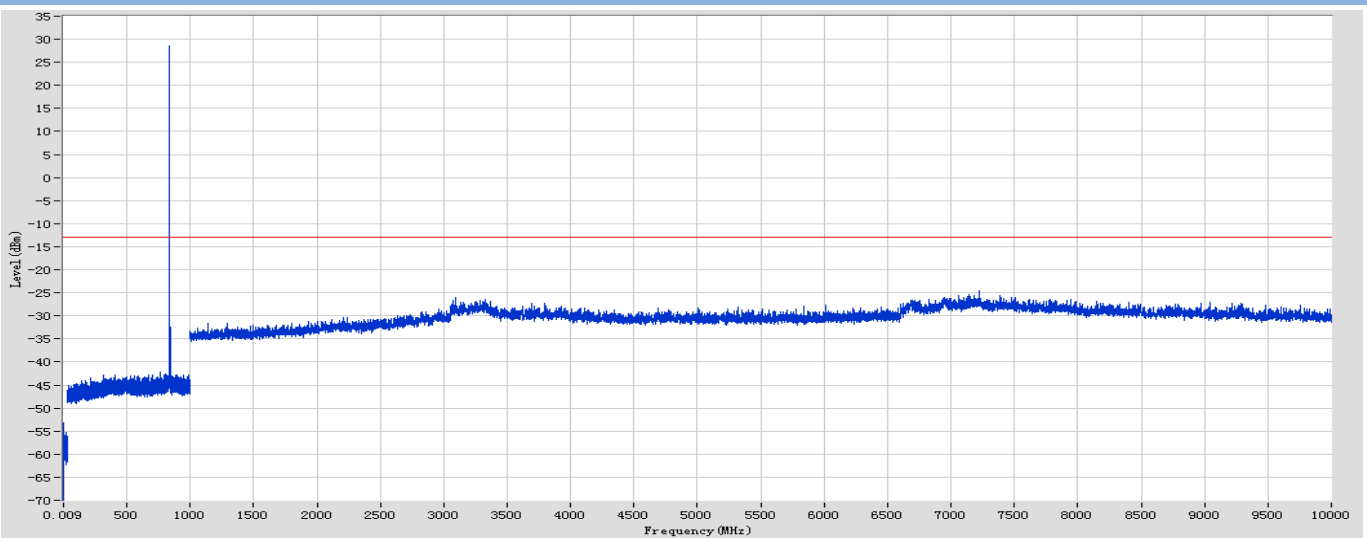
Test Data

GSM 850MHz CHANNEL 128



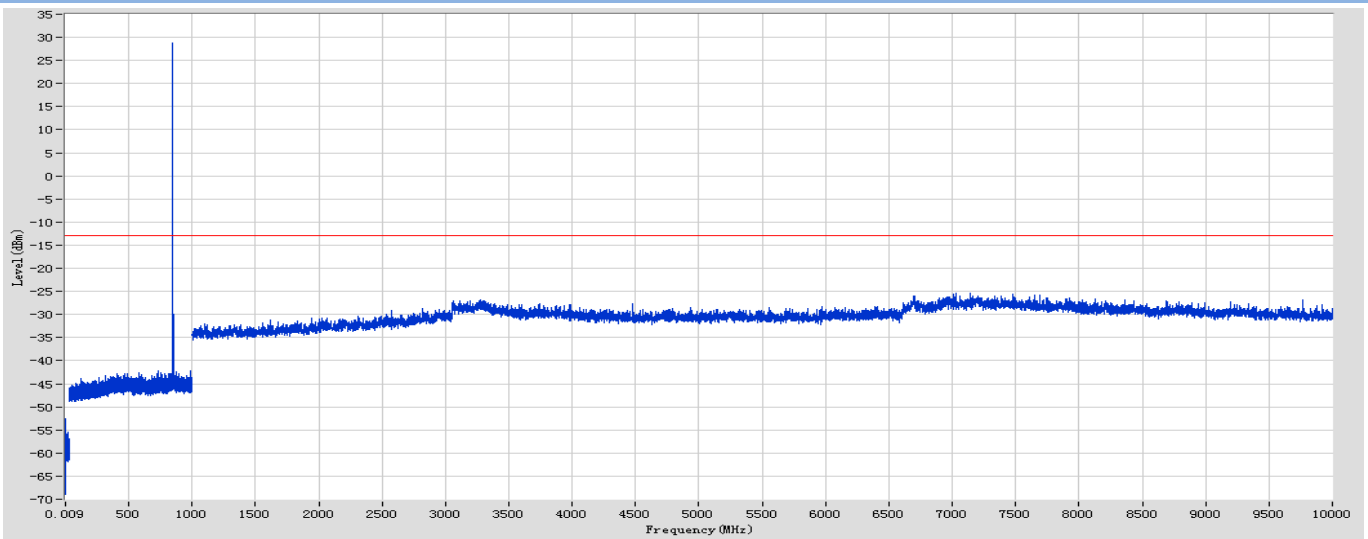
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	435.49	-42.64	-13.00	29.64	Pass
500.00	1000.00	0.10	Peak	824.26	28.67	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	7214.76	-24.69	-13.00	11.69	Pass

GSM 850MHz CHANNEL 190



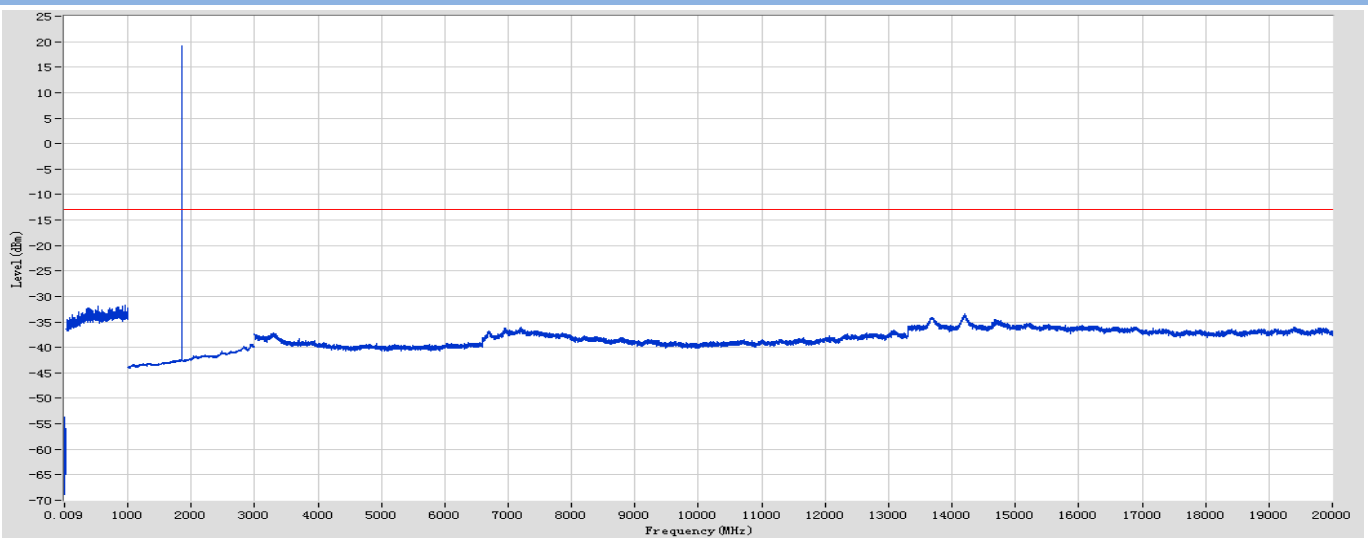
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	311.36	-42.76	-13.00	29.76	Pass
500.00	1000.00	0.10	Peak	836.67	28.47	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	7221.76	-24.54	-13.00	11.54	Pass

GSM 850MHz CHANNEL 251



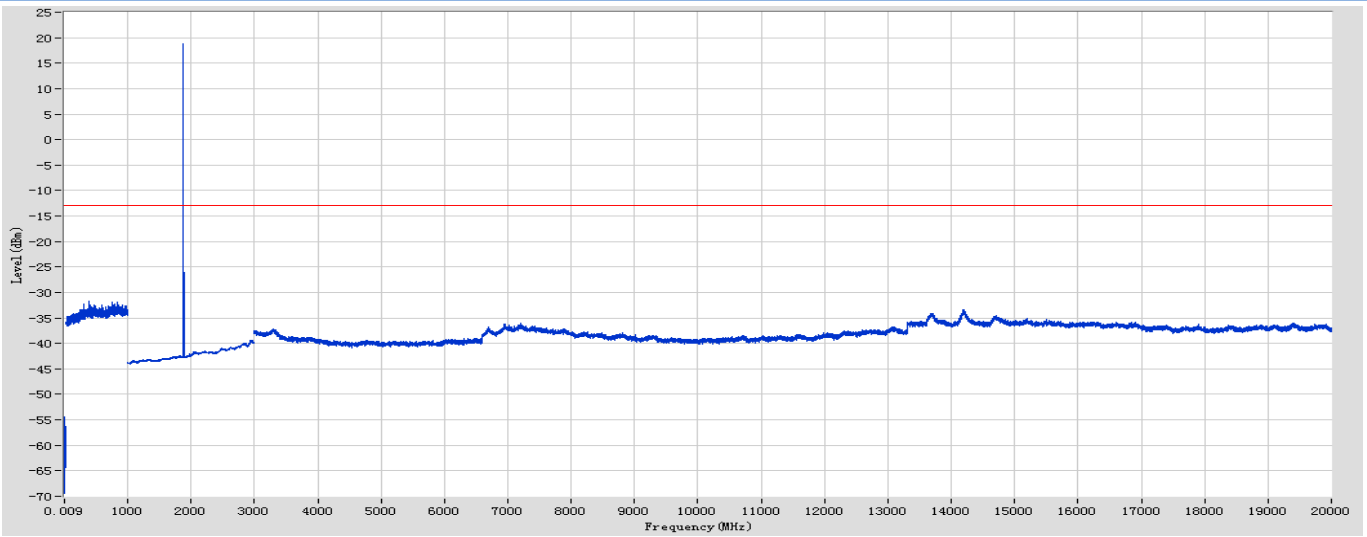
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	487.10	-42.73	-13.00	29.73	Pass
500.00	1000.00	0.10	Peak	848.77	28.67	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	7026.74	-25.34	-13.00	12.34	Pass

GSM 1900MHz CHANNEL 512



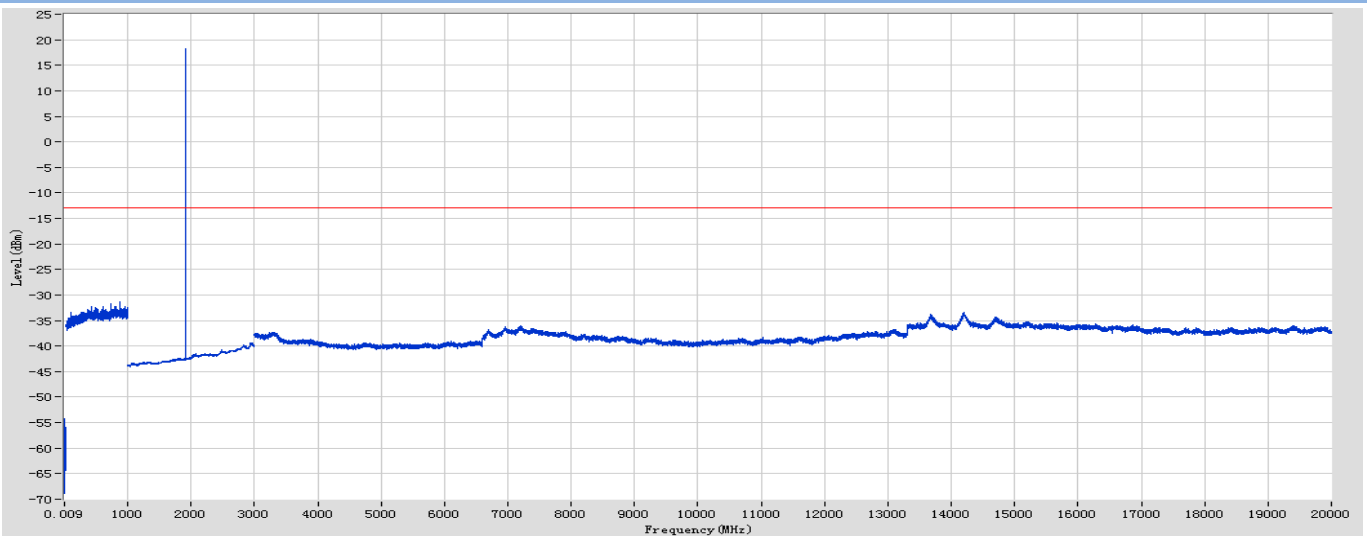
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	951.95	-31.78	-13.00	18.78	Pass
1000.00	3000.00	1.00	RMS	1850.43	19.11	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14197.37	-33.45	-13.00	20.45	Pass

GSM 1900MHz CHANNEL 661



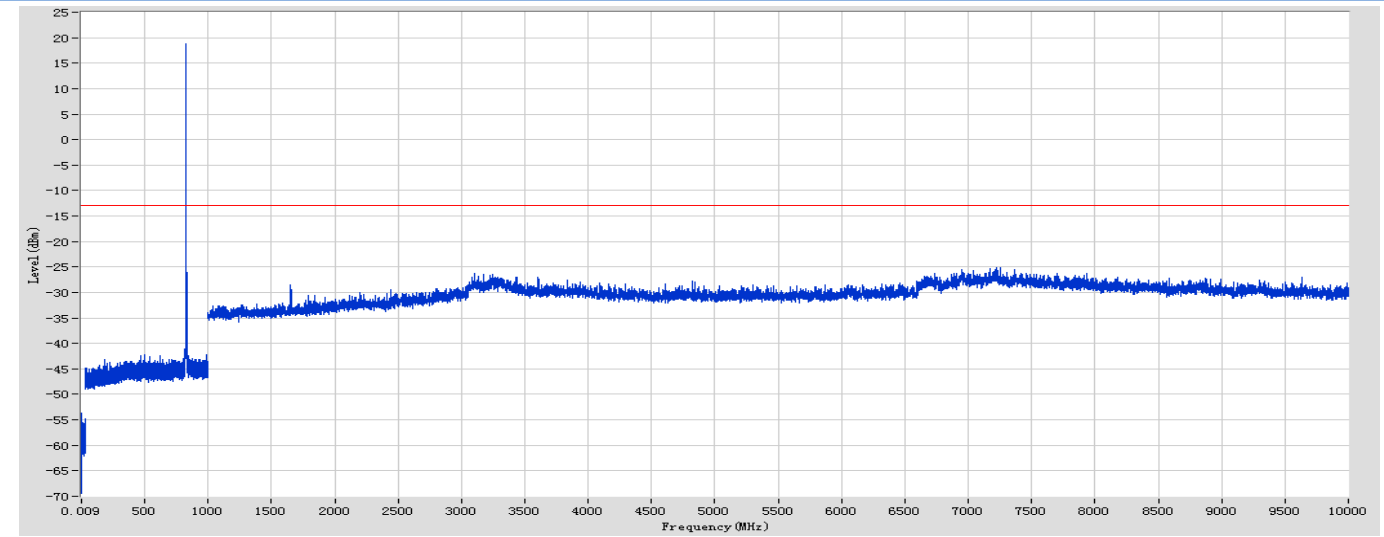
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	383.36	-31.76	-13.00	18.76	Pass
1000.00	3000.00	1.00	RMS	1879.44	18.78	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14188.37	-33.46	-13.00	20.46	Pass

GSM 1900MHz CHANNEL 810



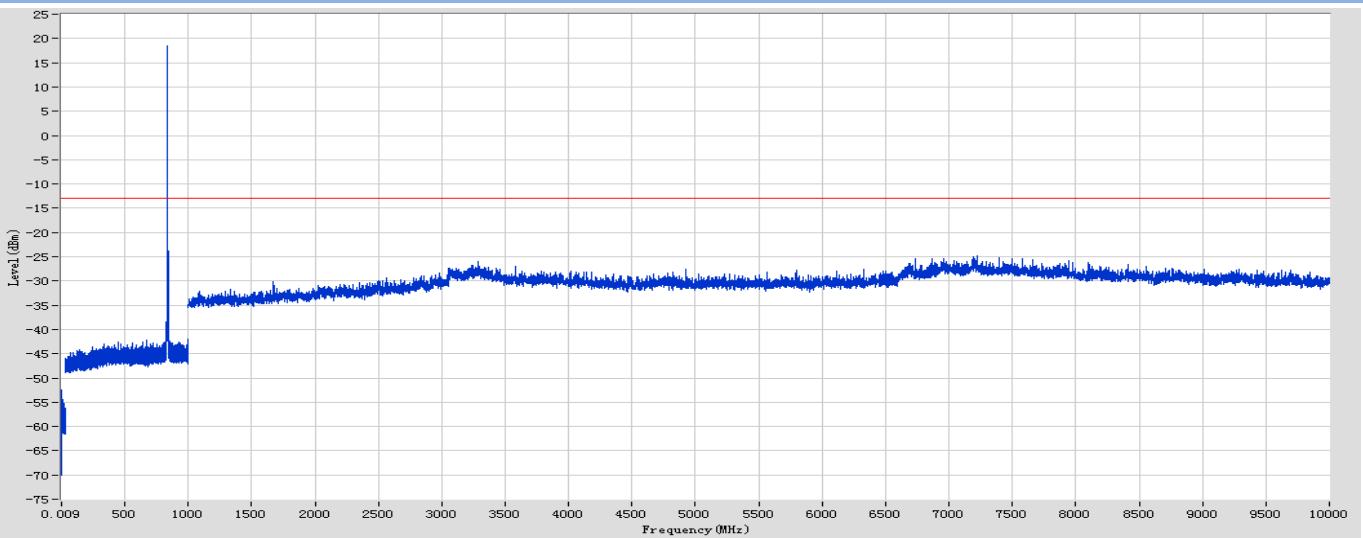
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	871.87	-31.33	-13.00	18.33	Pass
1000.00	3000.00	1.00	RMS	1909.45	18.28	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14205.37	-33.34	-13.00	20.34	Pass

WCDMA 850MHz CHANNEL 4132



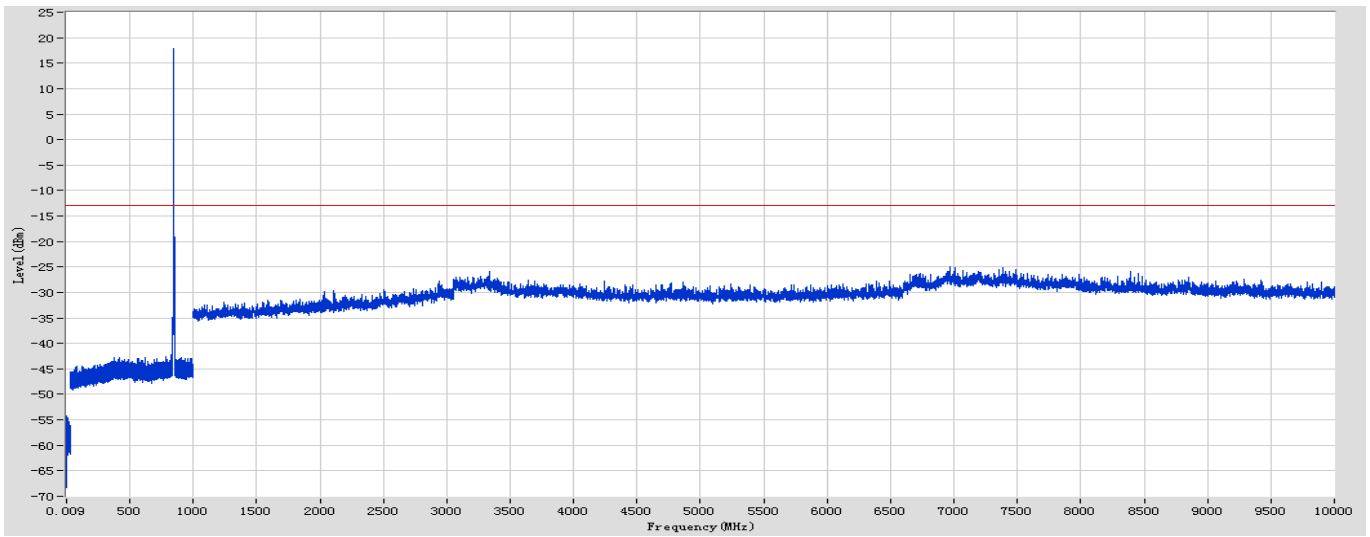
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	498.80	-42.20	-13.00	29.20	Pass
500.00	1000.00	0.10	Peak	827.17	18.79	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	7227.76	-25.06	-13.00	12.06	Pass

WCDMA 850MHz CHANNEL 4183



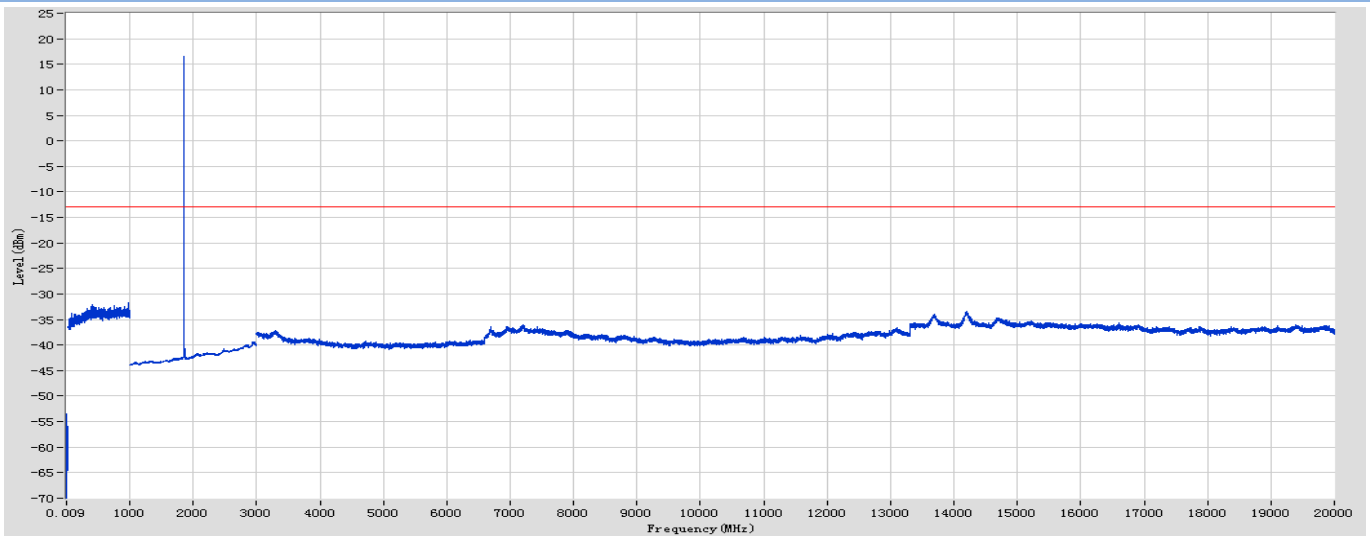
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	446.19	-42.64	-13.00	29.64	Pass
500.00	1000.00	0.10	Peak	837.27	18.44	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	7220.76	-24.90	-13.00	11.90	Pass

WCDMA 850MHz CHANNEL 4233



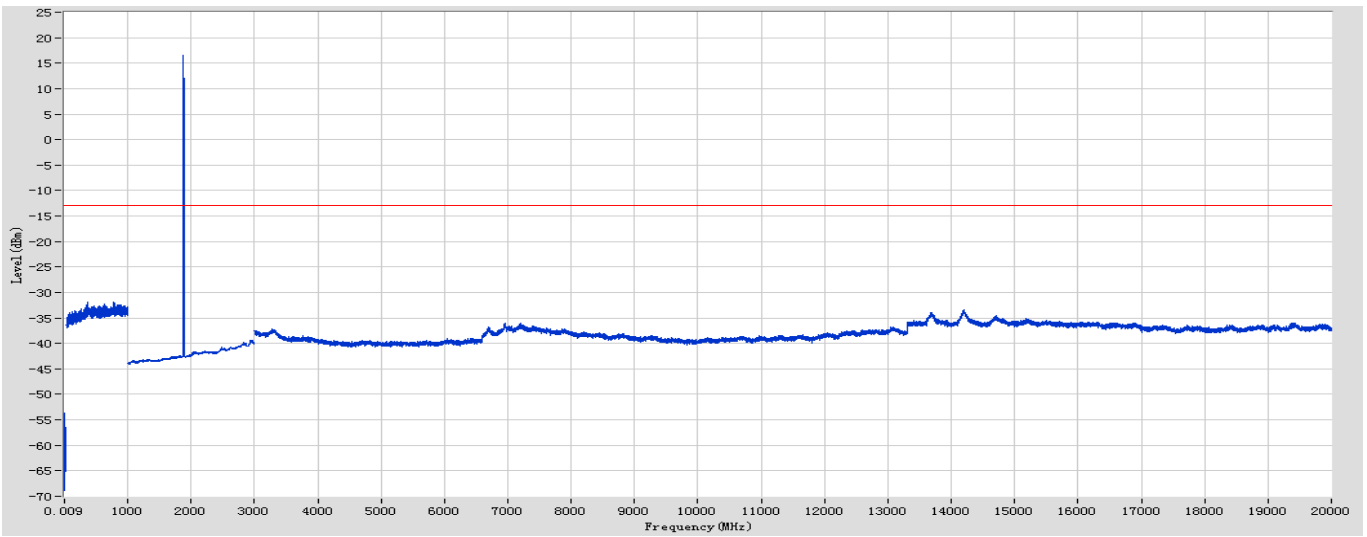
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	500.00	0.10	Peak	380.87	-42.82	-13.00	29.82	Pass
500.00	1000.00	0.10	Peak	846.87	17.89	N/A	N/A	N/A
1000.00	10000.00	1.00	Peak	6968.73	-24.91	-13.00	11.91	Pass

WCDMA 1900MHz CHANNEL 9262



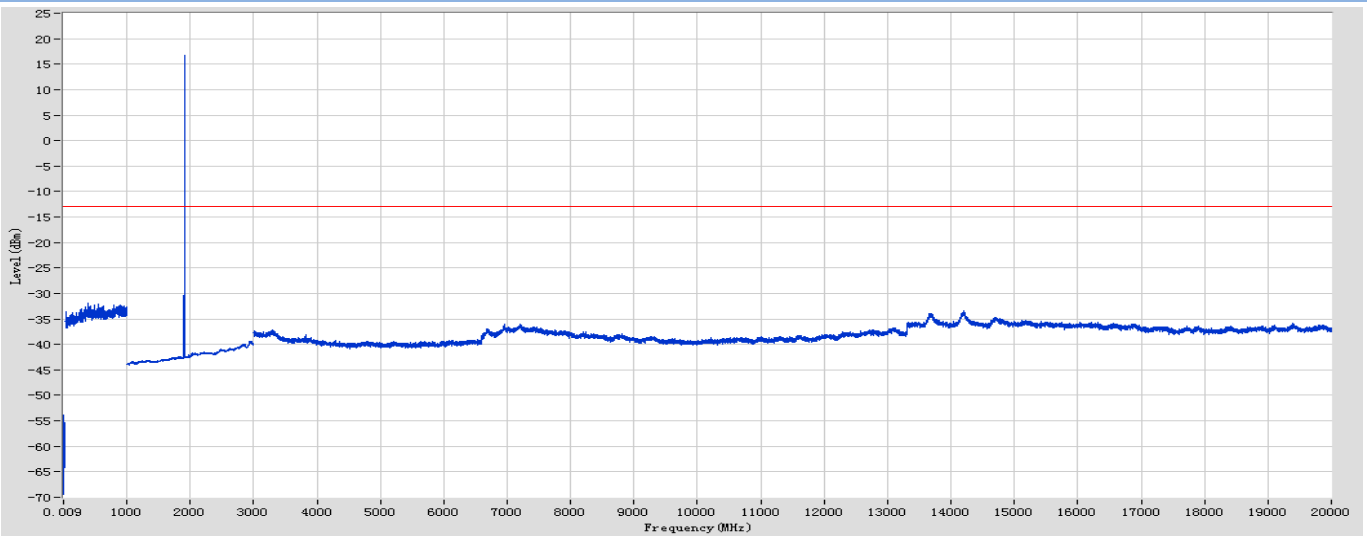
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	968.97	-31.73	-13.00	18.73	Pass
1000.00	3000.00	1.00	RMS	1852.43	16.59	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14200.37	-33.35	-13.00	20.35	Pass

WCDMA 1900MHz CHANNEL 9400



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	357.34	-31.83	-13.00	18.83	Pass
1000.00	3000.00	1.00	RMS	1879.44	16.60	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14202.37	-33.41	-13.00	20.41	Pass

WCDMA 1900MHz CHANNEL 9538



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30.00	1000.00	1.00	Peak	380.36	-31.92	-13.00	18.92	Pass
1000.00	3000.00	1.00	RMS	1907.45	16.68	N/A	N/A	N/A
3000.00	20000.00	1.00	RMS	14195.37	-33.36	-13.00	20.36	Pass

A.6 Band Edge

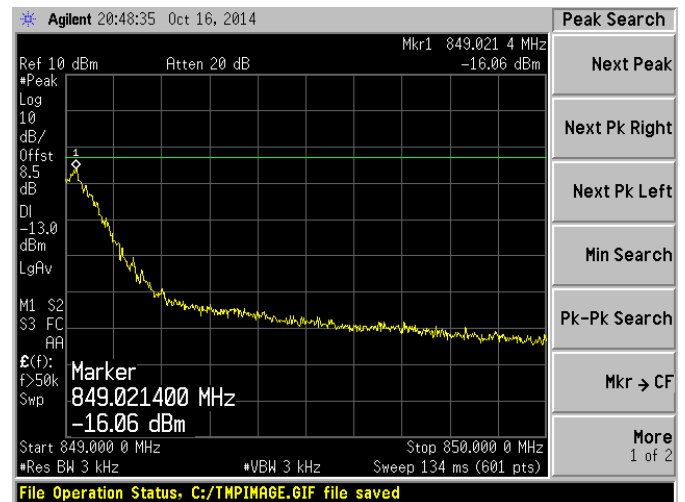
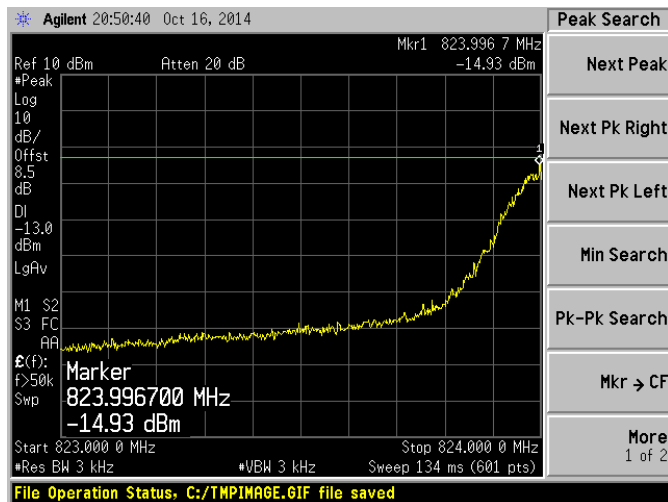
Test Data

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Limit (dBm)	Verdict
GSM 850	128	824.2	-14.93	-13	PASS
	251	848.8	-16.06		PASS
GSM 1900	512	1850.2	-17.96	-13	PASS
	810	1909.8	-16.07		PASS
GPRS 850	128	824.2	-15.37	-13	PASS
	251	848.8	-16.24		PASS
GPRS 1900	512	1850.2	-18.21	-13	PASS
	810	1909.8	-16.15		PASS
WCDMA 850	4132	826.4	-27.26	-13	PASS
	4233	846.6	-23.31		PASS
WCDMA 1900	9262	1852.4	-22.78	-13	PASS
	9538	1907.6	-25.77		PASS

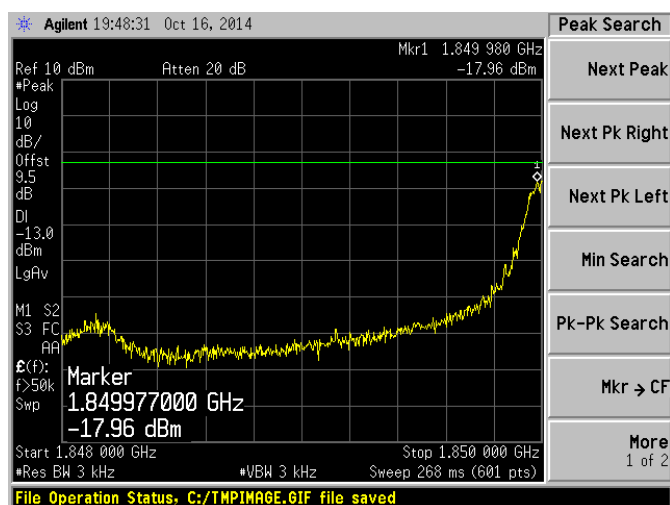
Test Plots

GSM 850MHz CHANNEL 128

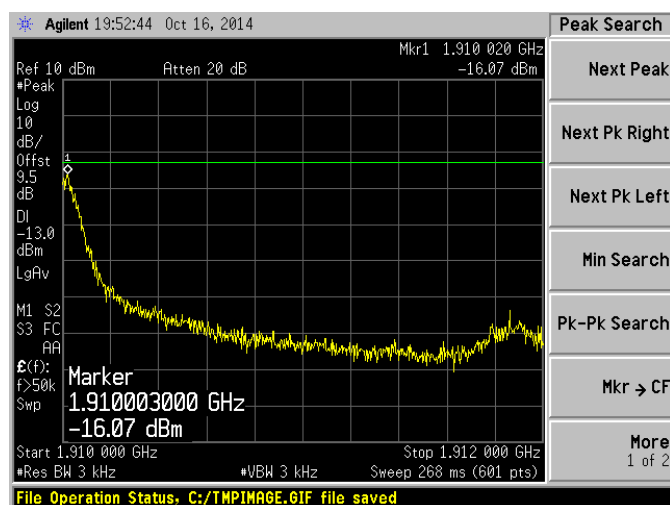
GSM 850MHz CHANNEL 251



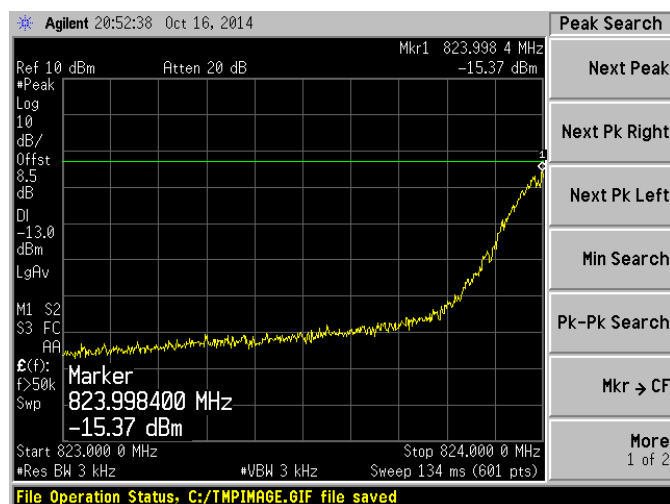
GSM 1900MHz CHANNEL 512



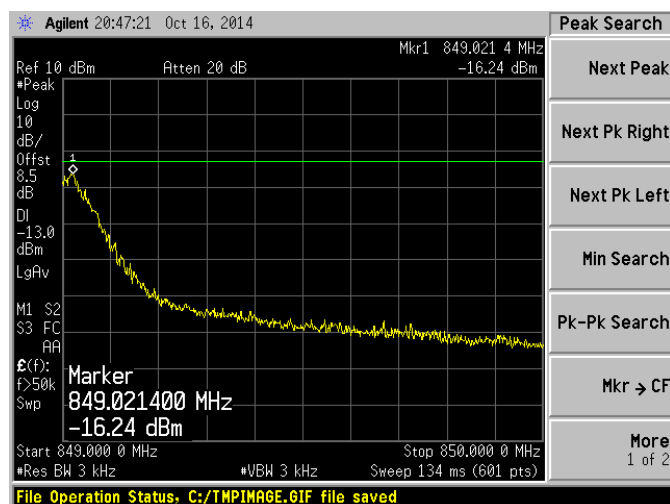
GSM 1900MHz CHANNEL 810



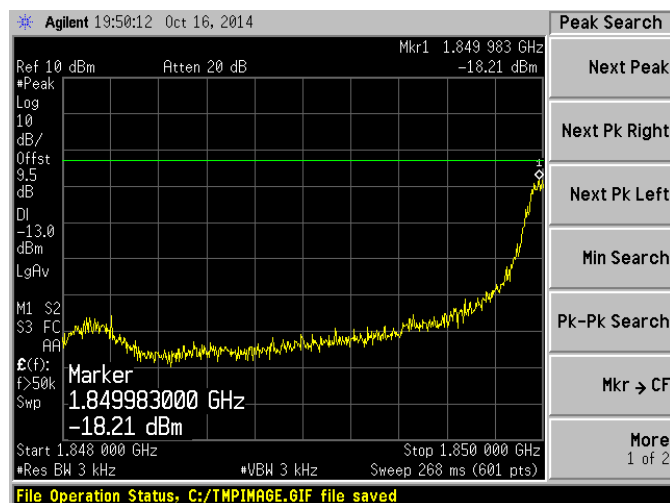
GPRS 850MHz CHANNEL 128



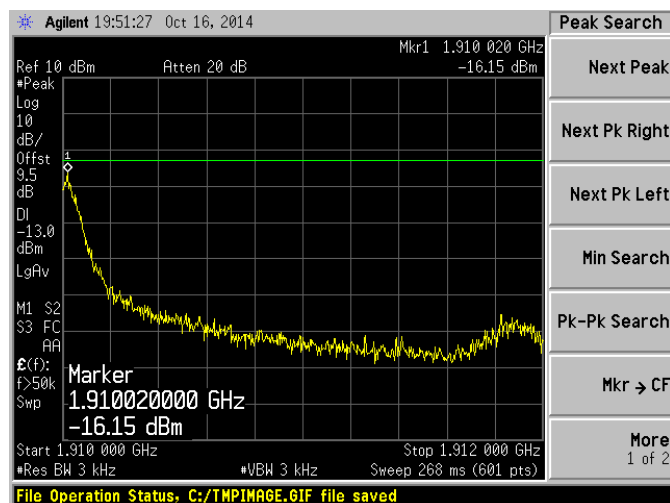
GPRS 850MHz CHANNEL 251



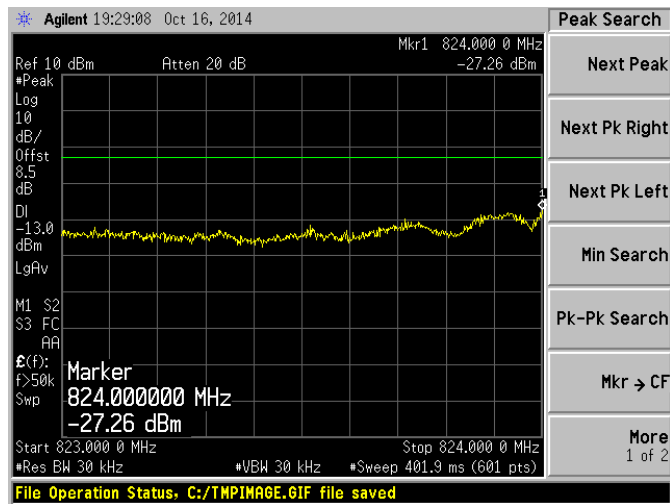
GPRS1900MHz CHANNEL 512



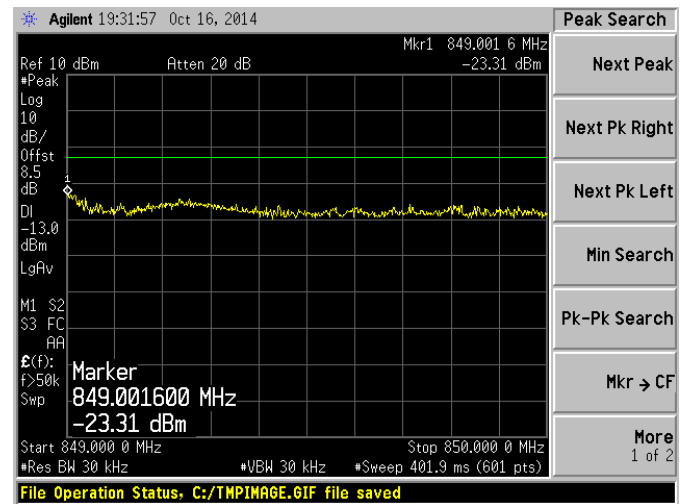
GPRS 1900MHz CHANNEL 810



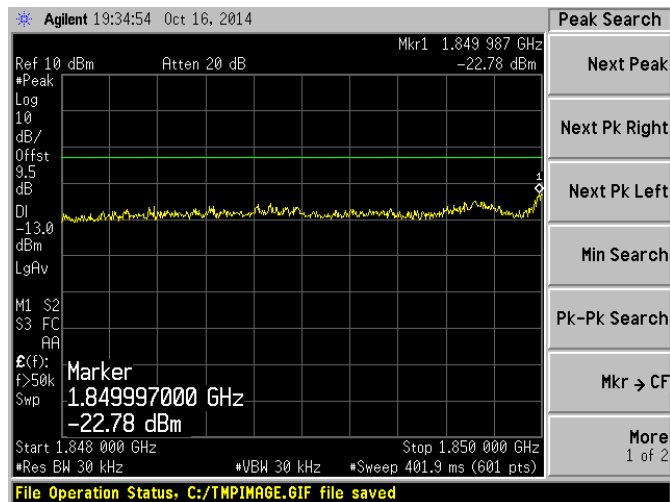
WCDMA 850MHz CHANNEL 4132



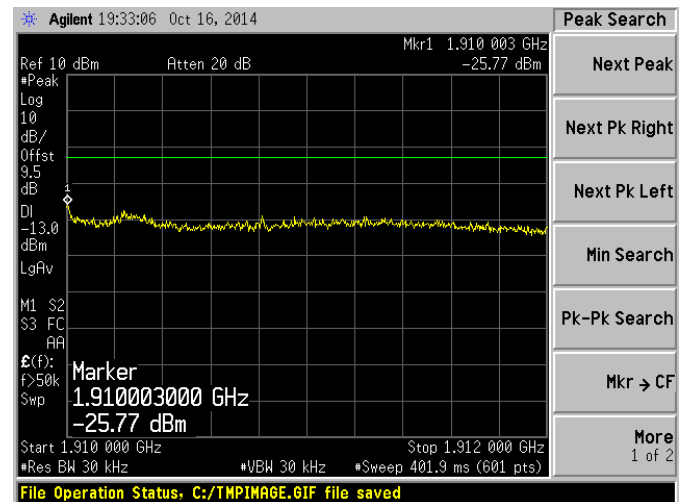
WCDMA 850MHz CHANNEL 4233



WCDMA 1900MHz CHANNEL 9262



WCDMA 1900MHz CHANNEL 9538



A.7 Transmitter Radiated Power (EIRP/ERP)

Minimum RF power: GSM850 5.42dBm, GSM 1900 -0.65dBm, WCDMA 850 -1.85dBm, WCDMA 1900 -0.61dBm.

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	-11.01	37.02	26.01	0.40	38.5	7	PASS
	190	836.60	5	-10.35	37.02	26.67	0.46			PASS
	251	848.80	5	-10.37	37.02	26.65	0.46			PASS
GPRS 850	128	824.20	5	-11.39	37.02	25.63	0.37	38.5	7	PASS
	190	836.60	5	-10.12	37.02	26.9	0.49			PASS
	251	848.80	5	-10.34	37.02	26.68	0.47			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	-10.87	39.21	28.34	0.68	33	2	PASS
	661	1880.0	0	-12.07	39.21	27.14	0.52			PASS
	810	1909.8	0	-11.85	39.21	27.36	0.54			PASS
GPRS 1900	512	1850.2	0	-11.61	39.21	27.6	0.58	33	2	PASS
	661	1880.0	0	-12.27	39.21	26.94	0.49			PASS
	810	1909.8	0	-12.5	39.21	26.71	0.47			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	-16.48	37.02	20.54	0.11	38.5	7	PASS
	4183	836.6	-17.18	37.02	19.84	0.10			PASS
	4233	846.6	-15.93	37.02	21.09	0.13			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	-16.00	39.21	23.21	0.21	33	2	PASS
	9401	1880.2	-17.56	39.21	21.65	0.15			PASS
	9538	1907.6	-17.04	39.21	22.17	0.16			PASS

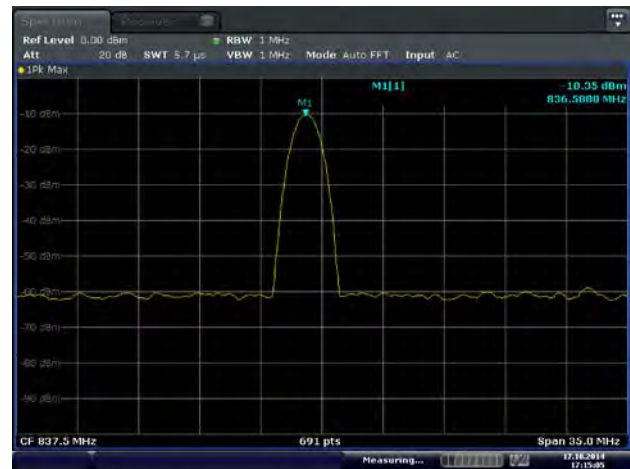
Test Plots

GSM 850MHz CHANNEL 128



Date: 17/10/2014 17:06:12

GSM 850MHz CHANNEL 190



Date: 17/10/2014 17:15:05

GSM 850MHz CHANNEL 251



Date: 17/10/2014 17:17:07

GSM 1900MHz CHANNEL 512



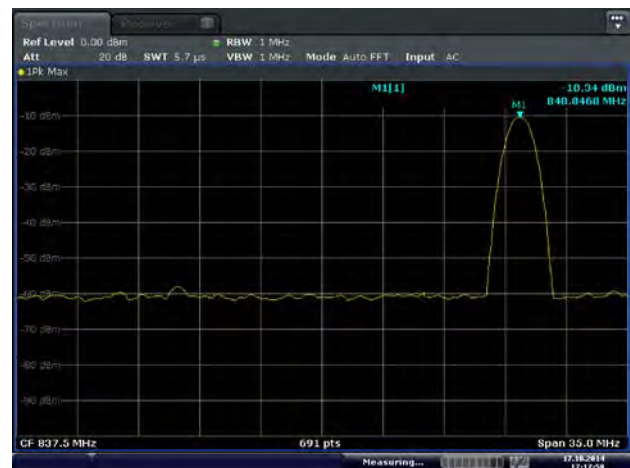
Date: 17/10/2014 17:11:06

GSM 1900MHz CHANNEL 661



Date: 17/10/2014 17:14:09

GSM 1900MHz CHANNEL 810



Date: 17/10/2014 17:17:58

GPRS 850MHz CHANNEL 128



Date: 17/07/2014 16:10:48

GPRS 850MHz CHANNEL 190



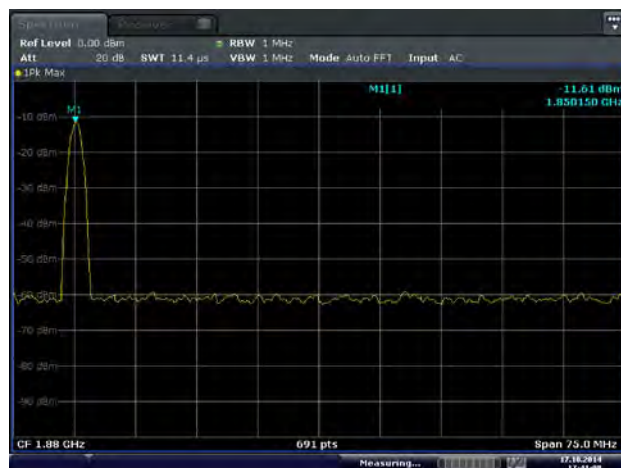
Date: 17/07/2014 16:10:00

GPRS 850MHz CHANNEL 251



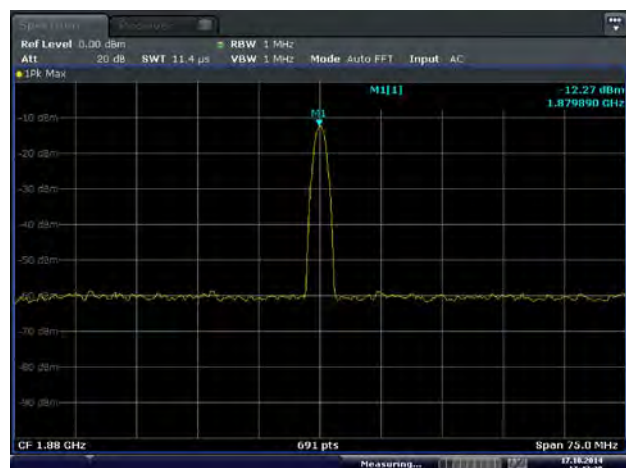
Date: 17/07/2014 16:10:18

GPRS 1900MHz CHANNEL 512



Date: 17/07/2014 17:43:09

GPRS 1900MHz CHANNEL 661



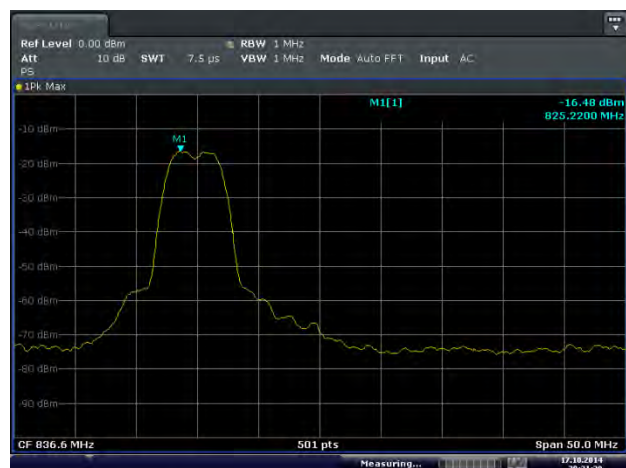
Date: 17/07/2014 17:42:29

GPRS 1900MHz CHANNEL 810



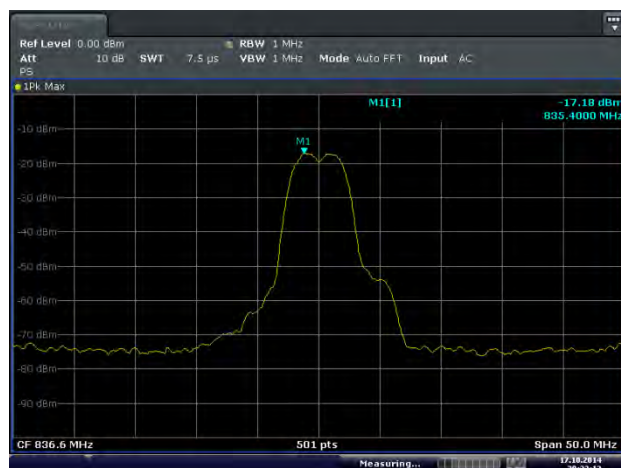
Date: 17/07/2014 17:45:48

WCDMA 850MHz CHANNEL 4132



Date: 17.07.2014 20:21:39

WCDMA 850MHz CHANNEL 4183



Date: 17.07.2014 20:21:12

WCDMA 850MHz CHANNEL 4233



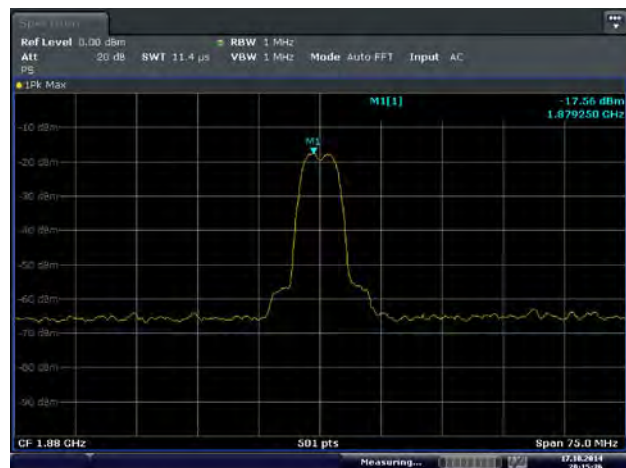
Date: 17.07.2014 20:22:42

WCDMA 1900MHz CHANNEL 9262



Date: 17.07.2014 20:12:49

WCDMA 1900MHz CHANNEL 9401



Date: 17.07.2014 20:15:37

WCDMA 1900MHz CHANNEL 9538



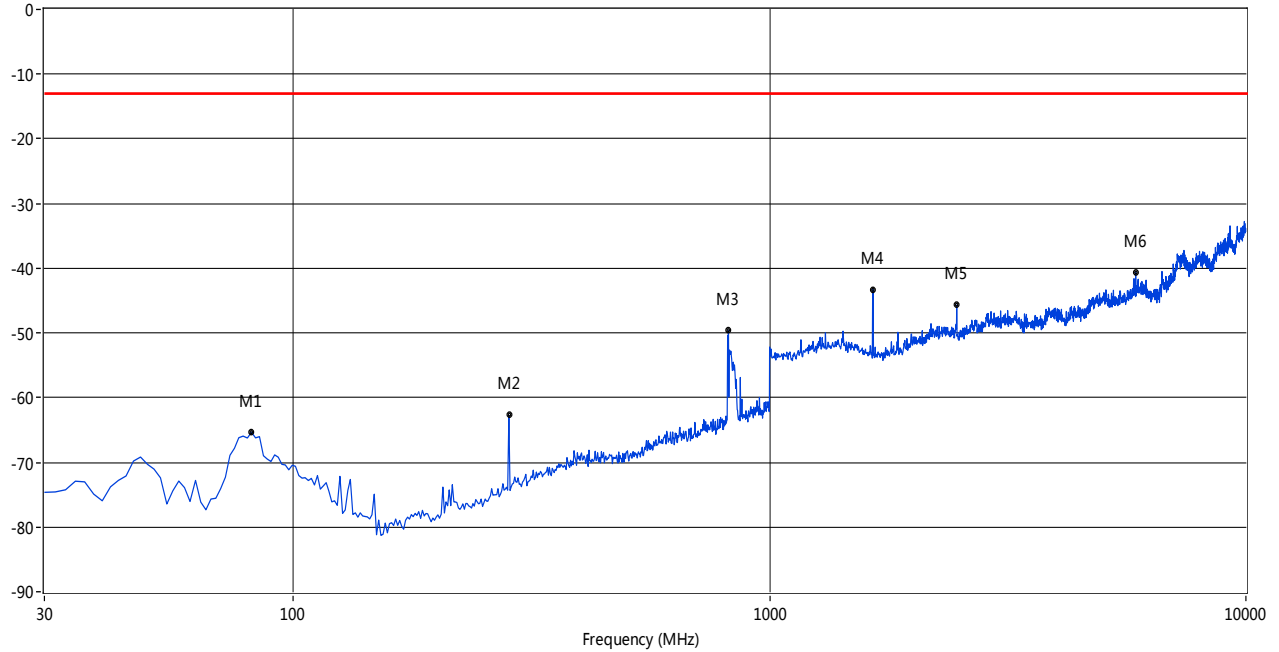
Date: 17.07.2014 20:16:39

A.8 Radiated Out of Band Emissions

Test Data

GSM 850MHz CHANNEL 128, ANT V

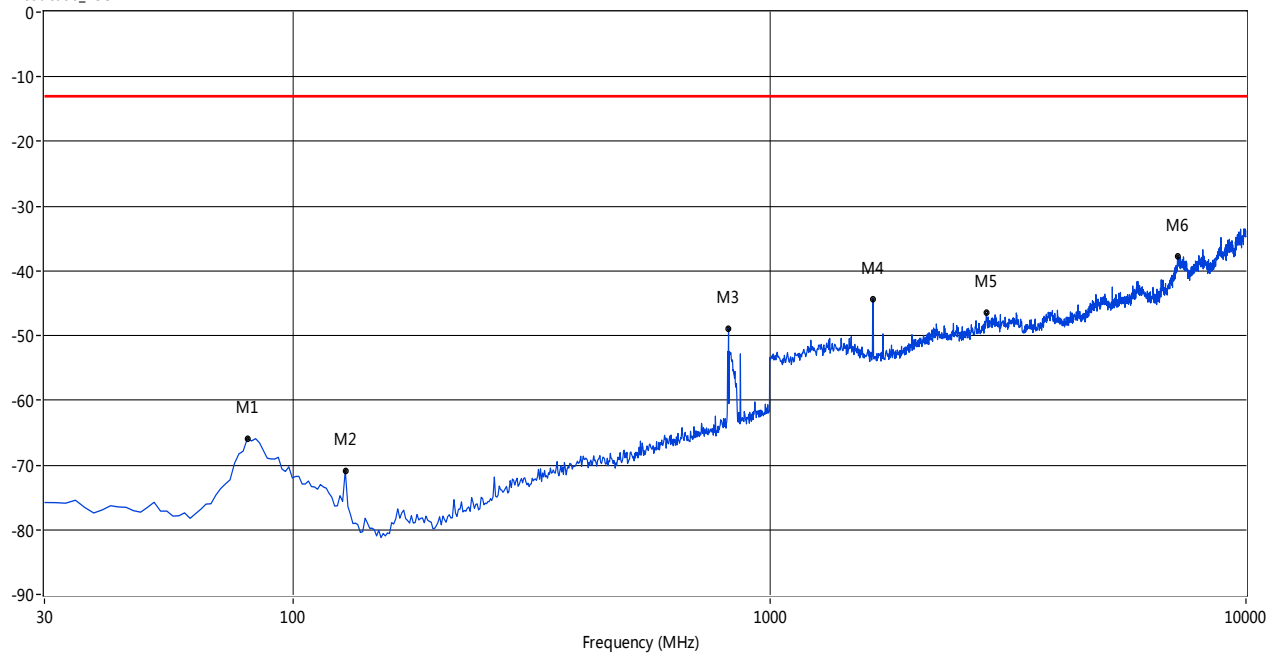
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-65.35	-4.23	-13.0	52.35	111.10	Vertical	PASS
283.39	-62.71	-6.38	-13.0	49.71	5.10	Vertical	PASS
819.23	-49.61	5.98	-13.0	36.61	290.40	Vertical	PASS
1645.59	-43.28	8.27	-13.0	30.28	284.20	Vertical	PASS
2470.88	-45.69	12.41	-13.0	32.69	296.30	Vertical	PASS
5870.22	-40.58	26.89	-13.0	27.58	61.60	Vertical	PASS

GSM 850MHz CHANNEL 128, ANT H

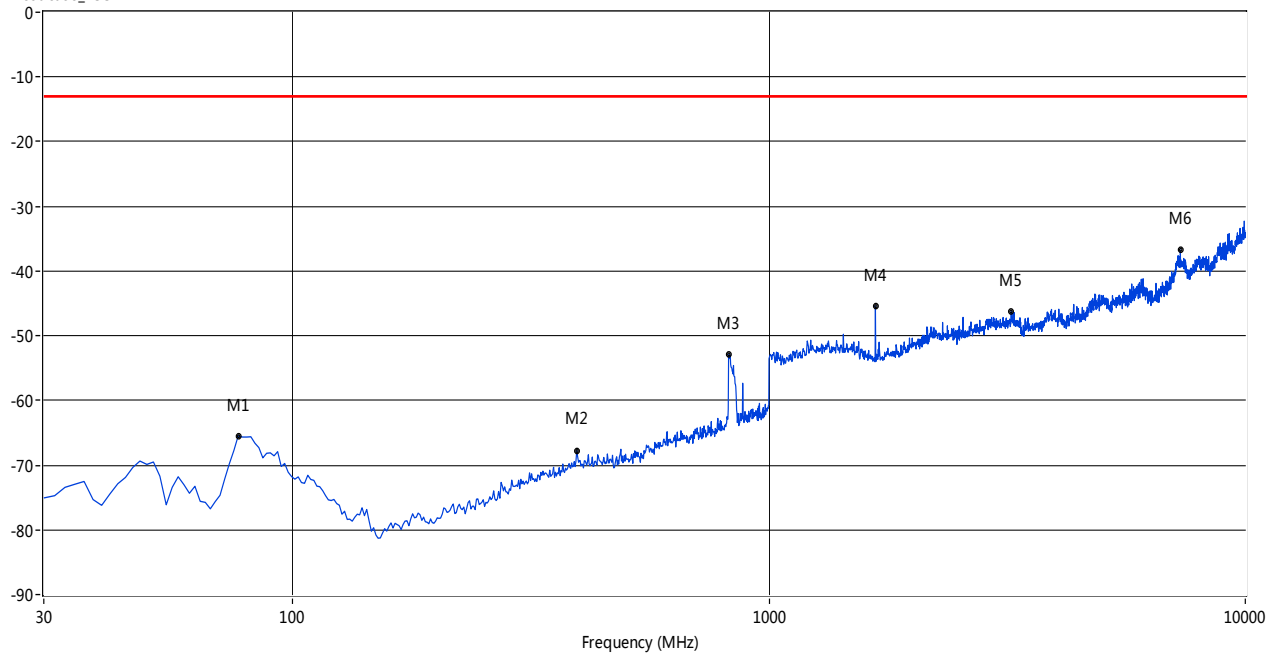
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
80.03	-65.87	-4.76	-13.0	52.87	323.70	Horizontal	PASS
128.45	-70.84	-10.48	-13.0	57.84	243.80	Horizontal	PASS
819.24	-48.88	5.98	-13.0	35.88	360.00	Horizontal	PASS
1645.59	-44.31	8.27	-13.0	31.31	35.20	Horizontal	PASS
2850.25	-46.52	15.54	-13.0	33.52	272.30	Horizontal	PASS
7184.69	-37.70	29.30	-13.0	24.70	141.10	Horizontal	PASS

GSM 850MHz CHANNEL 190, ANT V

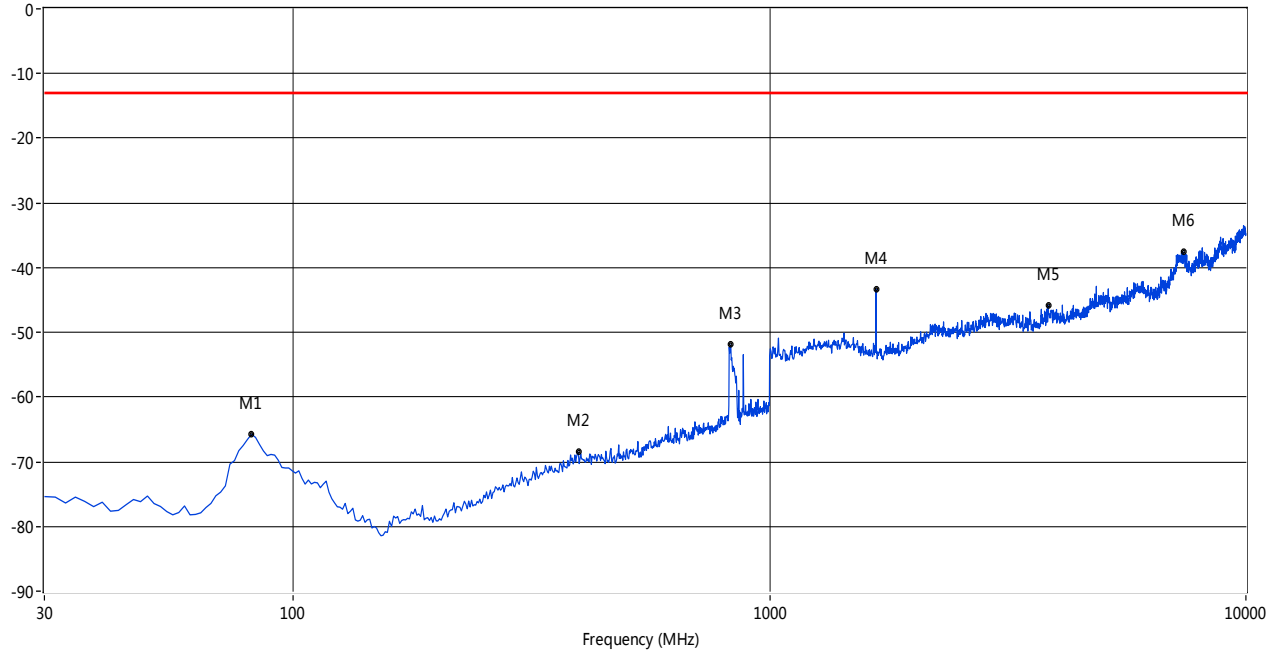
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
76.81	-65.47	-5.79	-13.0	52.47	71.20	Vertical	PASS
394.76	-67.73	-2.31	-13.0	54.73	31.30	Vertical	PASS
822.46	-52.96	16.09	-13.0	39.96	36.50	Vertical	PASS
1672.21	-45.39	8.29	-13.0	32.39	108.30	Vertical	PASS
3224.63	-46.27	20.34	-13.0	33.27	70.80	Vertical	PASS
7304.49	-36.75	29.68	-13.0	23.75	46.00	Vertical	PASS

GSM 850MHz CHANNEL 190, ANT H

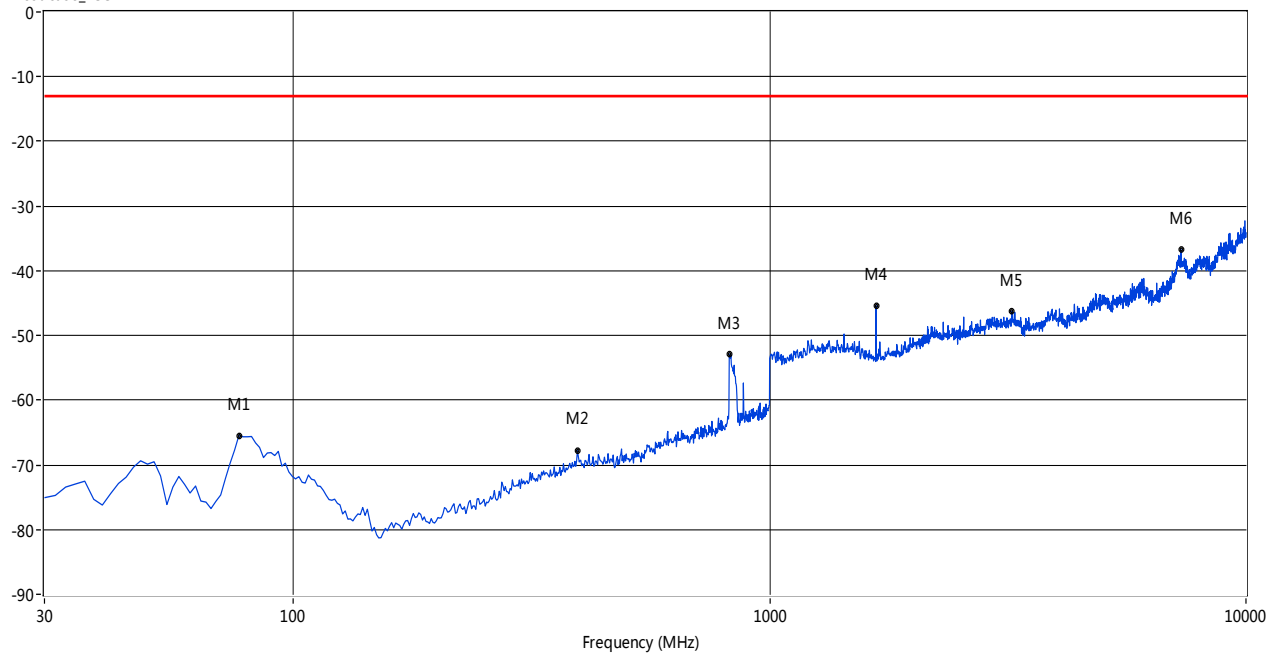
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-65.77	-4.23	-13.0	52.77	160.50	Horizontal	PASS
396.37	-68.50	-2.27	-13.0	55.50	2.10	Horizontal	PASS
827.30	-51.94	15.23	-13.0	38.94	111.10	Horizontal	PASS
1672.21	-43.31	8.29	-13.0	30.31	30.20	Horizontal	PASS
3843.59	-45.86	22.19	-13.0	32.86	358.50	Horizontal	PASS
7384.36	-37.59	29.81	-13.0	24.59	220.00	Horizontal	PASS

GSM 850MHz CHANNEL 251, ANT V

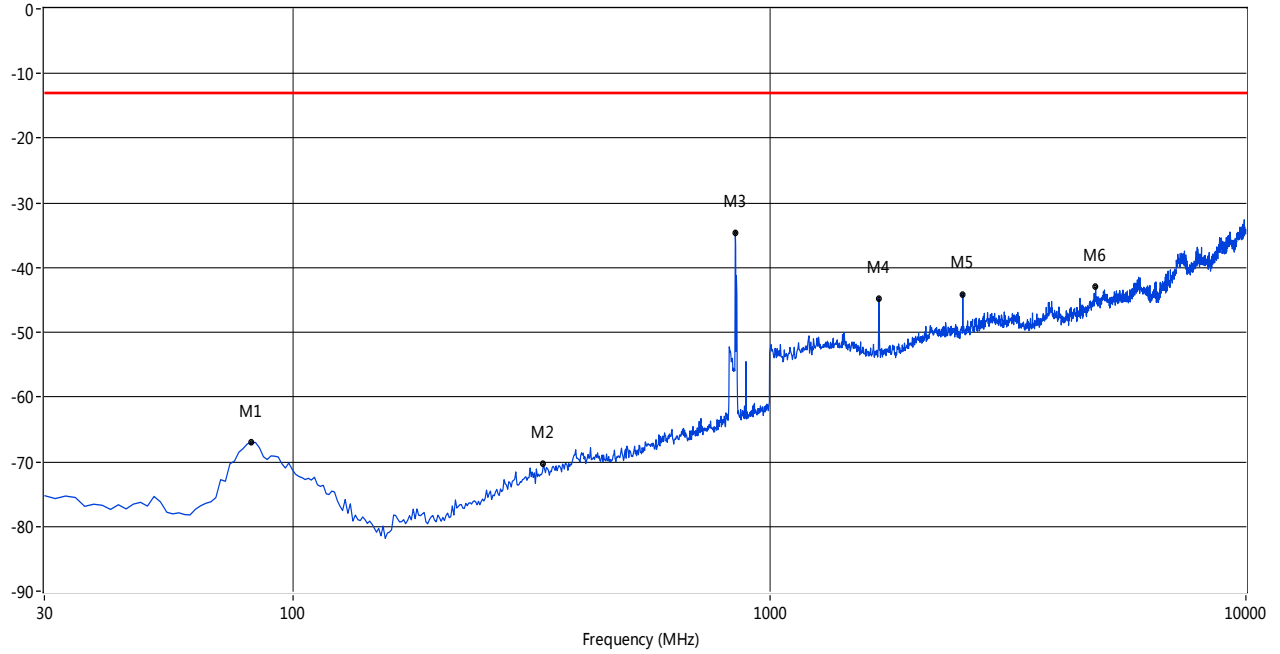
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
76.81	-65.47	-5.79	-13.0	52.47	71.20	Vertical	PASS
394.76	-67.73	-2.31	-13.0	54.73	31.30	Vertical	PASS
822.46	-52.96	16.09	-13.0	39.96	36.50	Vertical	PASS
1672.21	-45.39	8.29	-13.0	32.39	108.30	Vertical	PASS
3224.63	-46.27	20.34	-13.0	33.27	70.80	Vertical	PASS
7304.49	-36.75	29.68	-13.0	23.75	46.00	Vertical	PASS

GSM 850MHz CHANNEL 251, ANT H

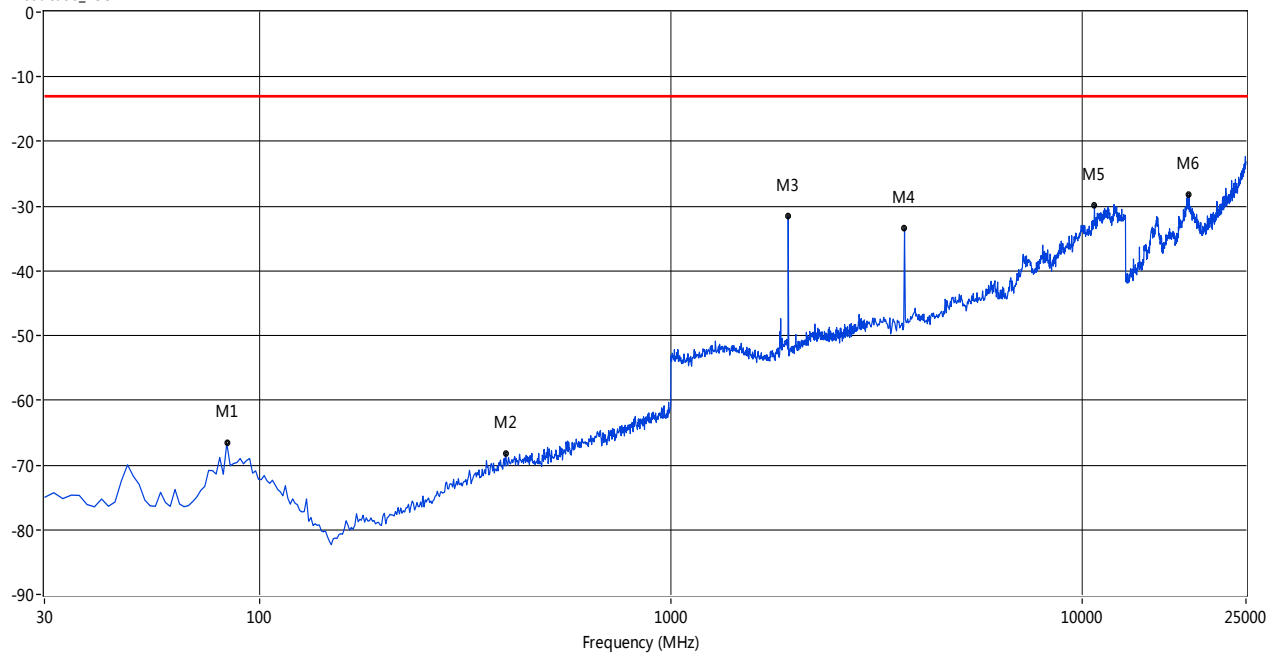
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-67.04	-4.23	-13.0	54.04	358.20	Horizontal	PASS
335.04	-70.35	-4.33	-13.0	57.35	0.80	Horizontal	PASS
846.67	-34.56	11.75	-13.0	21.56	0.80	Horizontal	PASS
1695.51	-44.77	8.60	-13.0	31.77	326.70	Horizontal	PASS
2544.09	-44.08	12.72	-13.0	31.08	308.20	Horizontal	PASS
4836.94	-42.99	25.23	-13.0	29.99	177.20	Horizontal	PASS

GSM 1900MHz CHANNEL 512, ANT V

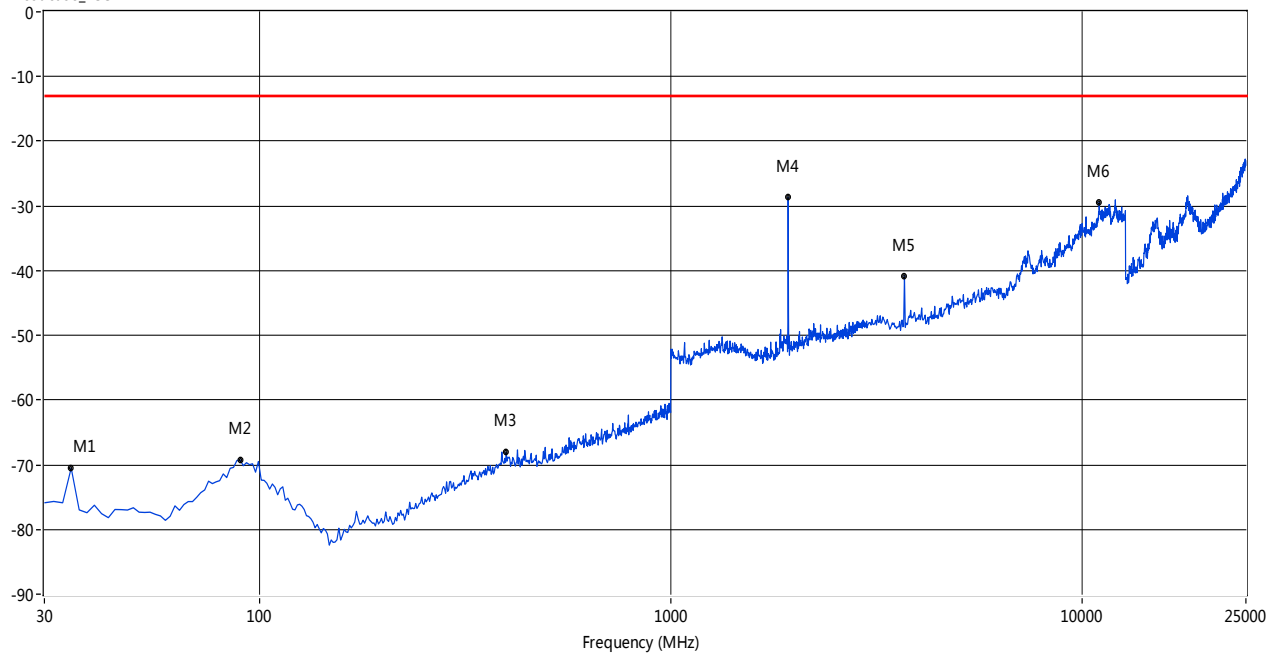
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
83.26	-66.67	-3.86	-13.0	53.67	111.80	Vertical	PASS
396.37	-68.26	-2.30	-13.0	55.26	255.10	Vertical	PASS
1928.45	-31.48	9.79	-13.0	18.48	292.90	Vertical	PASS
3697.59	-33.48	20.81	-13.0	20.48	36.10	Vertical	PASS
10705.91	-29.91	36.89	-13.0	16.91	277.20	Vertical	PASS
18192.18	-28.18	38.92	-13.0	15.18	304.20	Vertical	PASS

GSM 1900MHz CHANNEL 512, ANT H

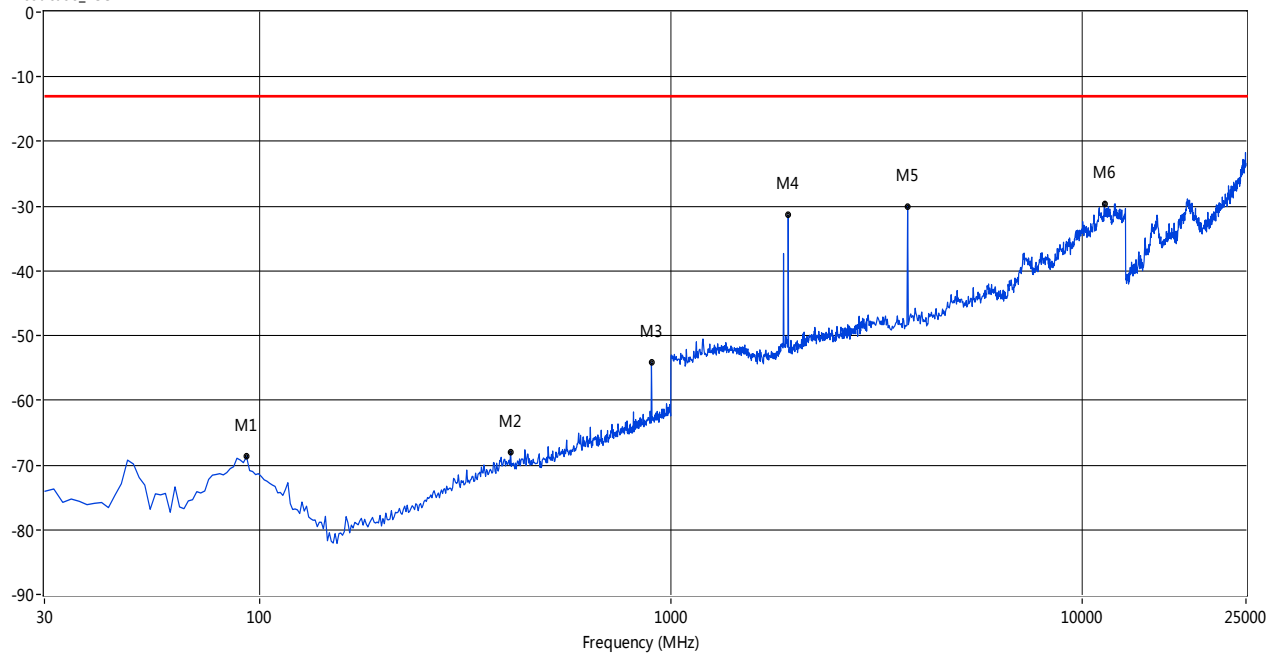
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
34.84	-70.50	-9.29	-13.0	57.50	339.10	Horizontal	PASS
89.72	-69.24	-1.81	-13.0	56.24	201.20	Horizontal	PASS
397.99	-68.03	-2.27	-13.0	55.03	87.20	Horizontal	PASS
1928.45	-28.63	9.79	-13.0	15.63	33.40	Horizontal	PASS
3697.59	-40.79	20.81	-13.0	27.79	360.70	Horizontal	PASS
10997.92	-29.40	38.55	-13.0	16.40	70.60	Horizontal	PASS

GSM 1900MHz CHANNEL 661, ANT V

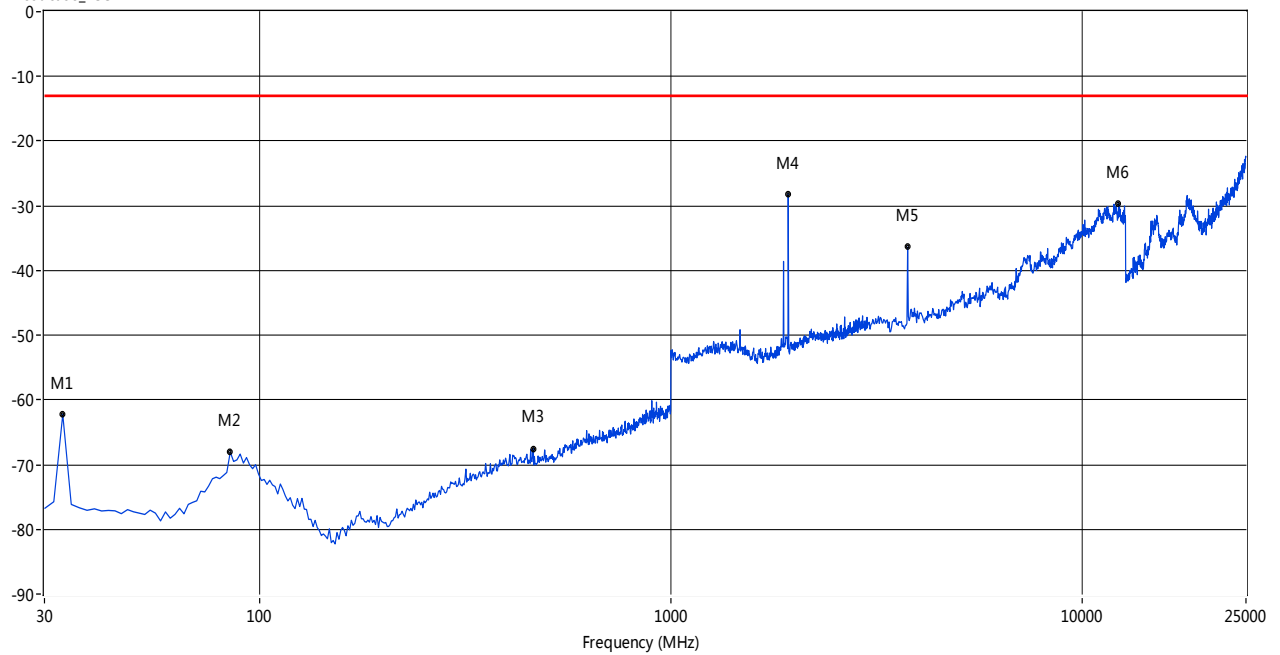
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
92.95	-68.71	-2.42	-13.0	55.71	1.60	Vertical	PASS
407.67	-67.93	-2.33	-13.0	54.93	91.40	Vertical	PASS
896.71	-54.21	5.86	-13.0	41.21	260.60	Vertical	PASS
1928.45	-31.37	9.79	-13.0	18.37	154.60	Vertical	PASS
3762.48	-30.06	21.30	-13.0	17.06	27.40	Vertical	PASS
11322.38	-29.72	38.57	-13.0	16.72	68.90	Vertical	PASS

GSM 1900MHz CHANNEL 661, ANT H

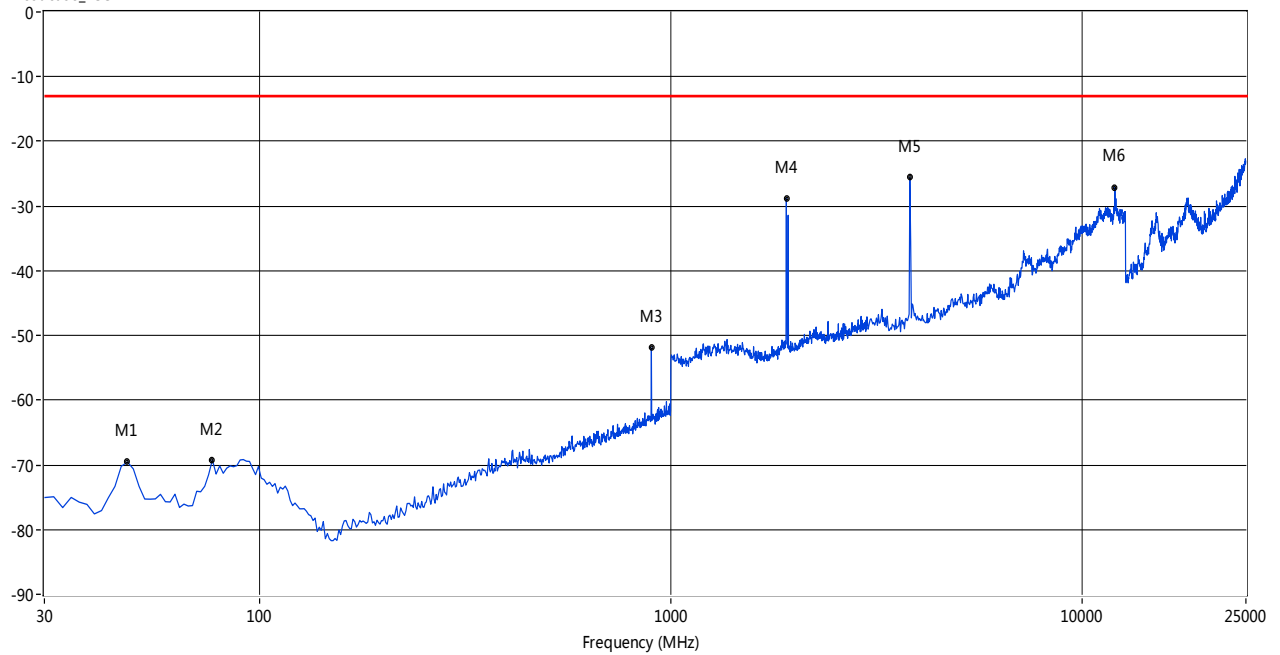
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
33.23	-62.25	-9.16	-13.0	49.25	114.40	Horizontal	PASS
84.88	-68.06	-3.35	-13.0	55.06	178.60	Horizontal	PASS
462.55	-67.50	-1.85	-13.0	54.50	10.00	Horizontal	PASS
1928.45	-28.13	9.79	-13.0	15.13	32.90	Horizontal	PASS
3762.48	-36.37	21.30	-13.0	23.37	0.00	Horizontal	PASS
12247.09	-29.59	37.94	-13.0	16.59	97.20	Horizontal	PASS

GSM 1900MHz CHANNEL 810 , ANT V

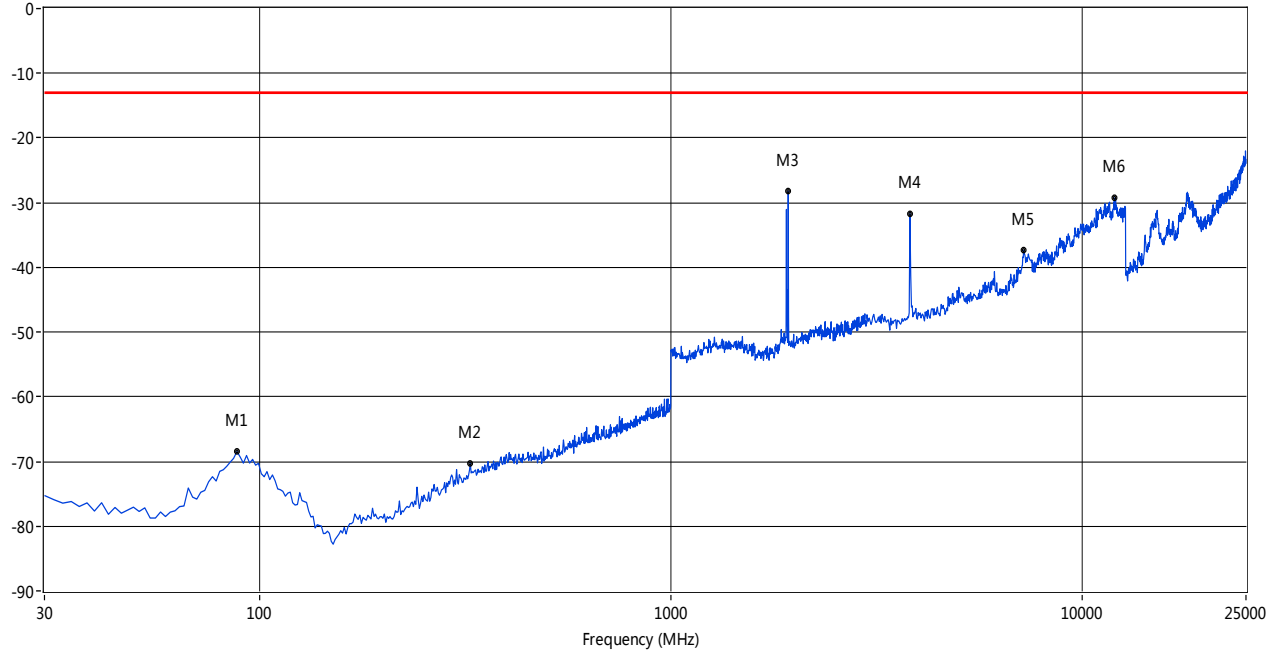
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
47.75	-69.55	-10.27	-13.0	56.55	337.50	Vertical	PASS
76.81	-69.21	-5.86	-13.0	56.21	74.60	Vertical	PASS
896.71	-51.92	5.86	-13.0	38.92	327.50	Vertical	PASS
1908.49	-28.85	11.20	-13.0	15.85	99.50	Vertical	PASS
3811.15	-25.58	21.53	-13.0	12.58	35.50	Vertical	PASS
12003.74	-27.13	38.88	-13.0	14.13	358.90	Vertical	PASS

GSM 1900MHz CHANNEL 810 , ANT H

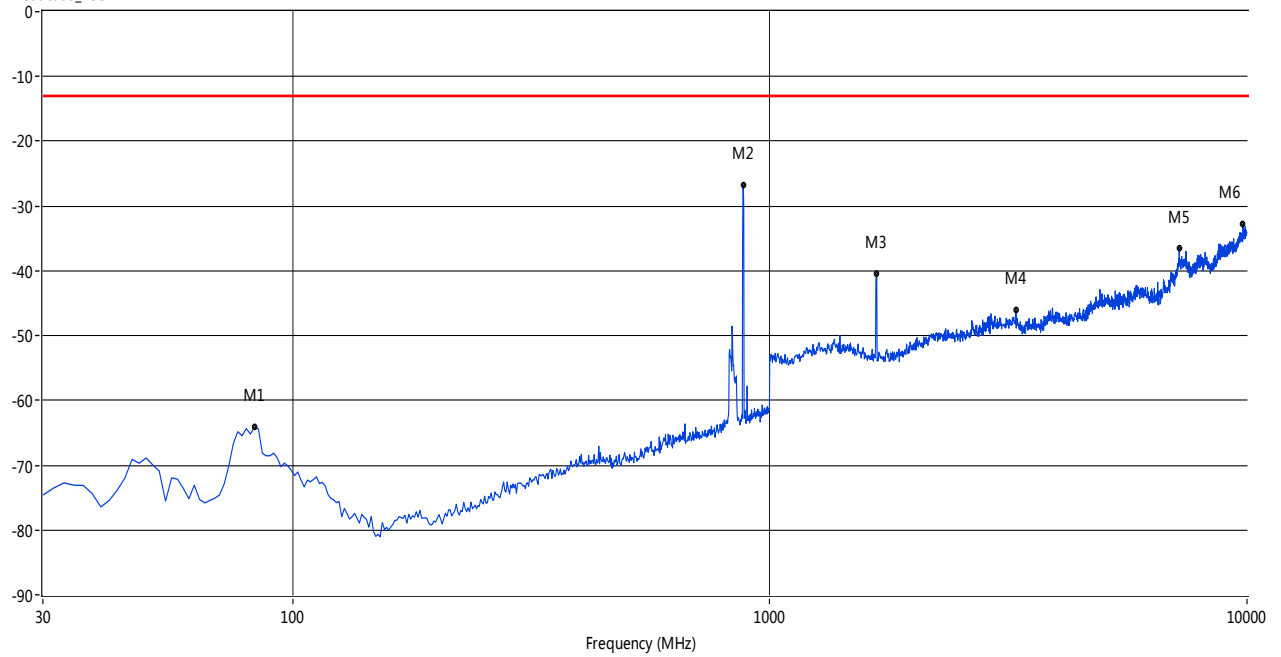
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
88.10	-68.45	-2.33	-13.0	55.45	263.60	Horizontal	PASS
325.36	-70.26	-4.72	-13.0	57.26	303.00	Horizontal	PASS
1928.45	-28.20	9.79	-13.0	15.20	32.20	Horizontal	PASS
3811.15	-31.71	21.53	-13.0	18.71	-0.00	Horizontal	PASS
7201.75	-37.37	29.52	-13.0	24.37	352.40	Horizontal	PASS
12003.74	-29.25	38.88	-13.0	16.25	360.20	Horizontal	PASS

WCDMA 850MHz CHANNEL 4132, ANT V

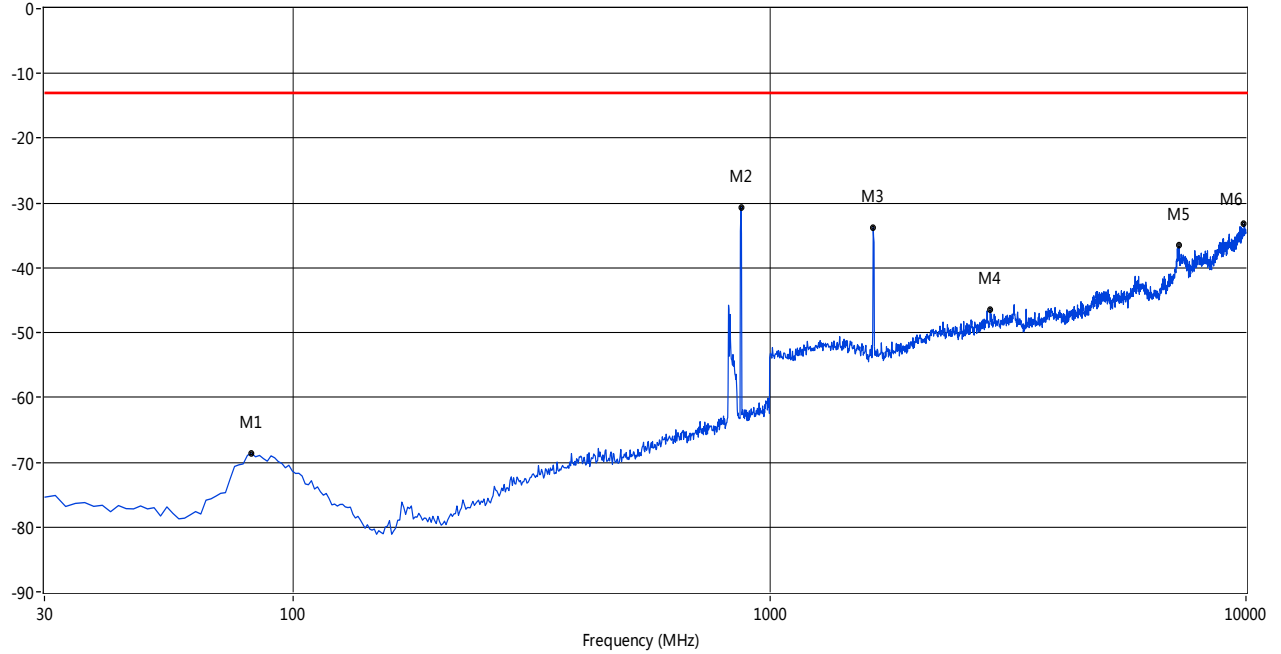
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
83.26	-64.17	-3.75	-13.0	51.17	67.00	Vertical	PASS
878.95	-26.74	6.00	-13.0	13.74	309.90	Vertical	PASS
1648.92	-40.48	8.30	-13.0	27.48	290.00	Vertical	PASS
2904.53	-46.09	19.96	-13.0	33.09	75.70	Vertical	PASS
7211.31	-36.50	29.54	-13.0	23.50	8.10	Vertical	PASS
9800.33	-32.86	35.73	-13.0	19.86	354.70	Vertical	PASS

WCDMA 850MHz CHANNEL 4132, ANT H

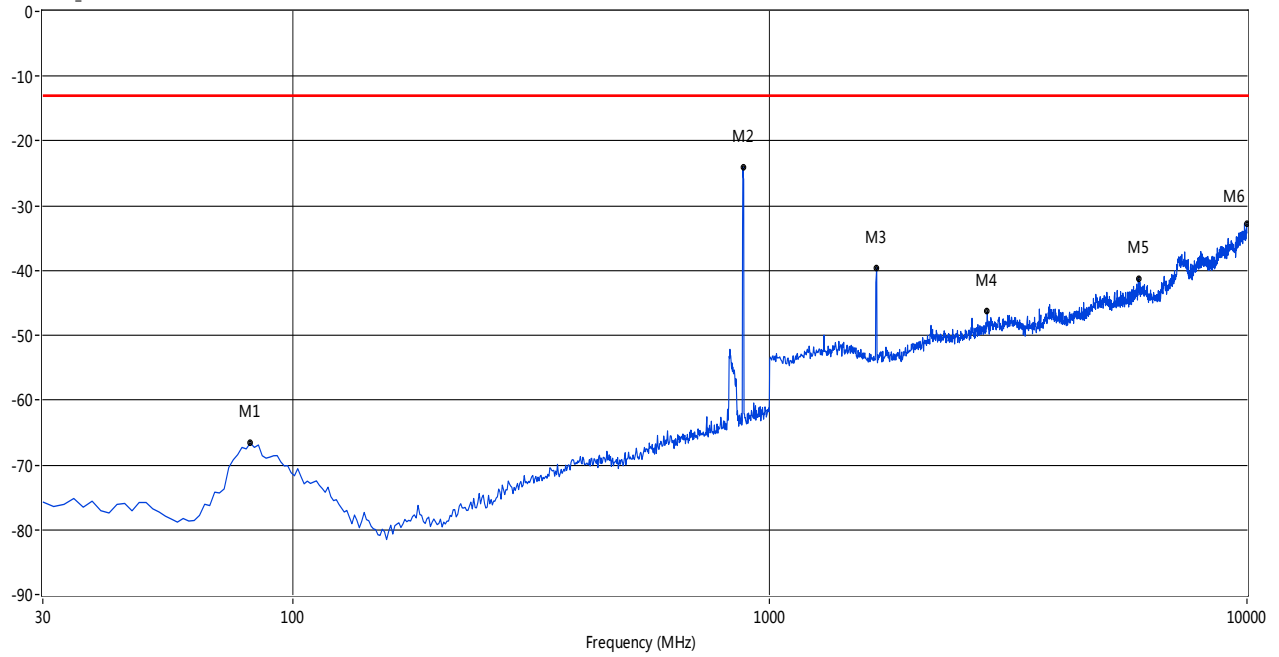
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-68.68	-4.23	-13.0	55.68	273.60	Horizontal	PASS
870.88	-30.68	5.71	-13.0	17.68	10.20	Horizontal	PASS
1648.92	-33.75	8.22	-13.0	20.75	360.00	Horizontal	PASS
2903.49	-46.48	15.45	-13.0	33.48	257.90	Horizontal	PASS
7231.28	-36.60	29.57	-13.0	23.60	229.30	Horizontal	PASS
9913.48	-33.19	36.21	-13.0	20.19	150.40	Horizontal	PASS

WCDMA 850MHz CHANNEL 4183, ANT V

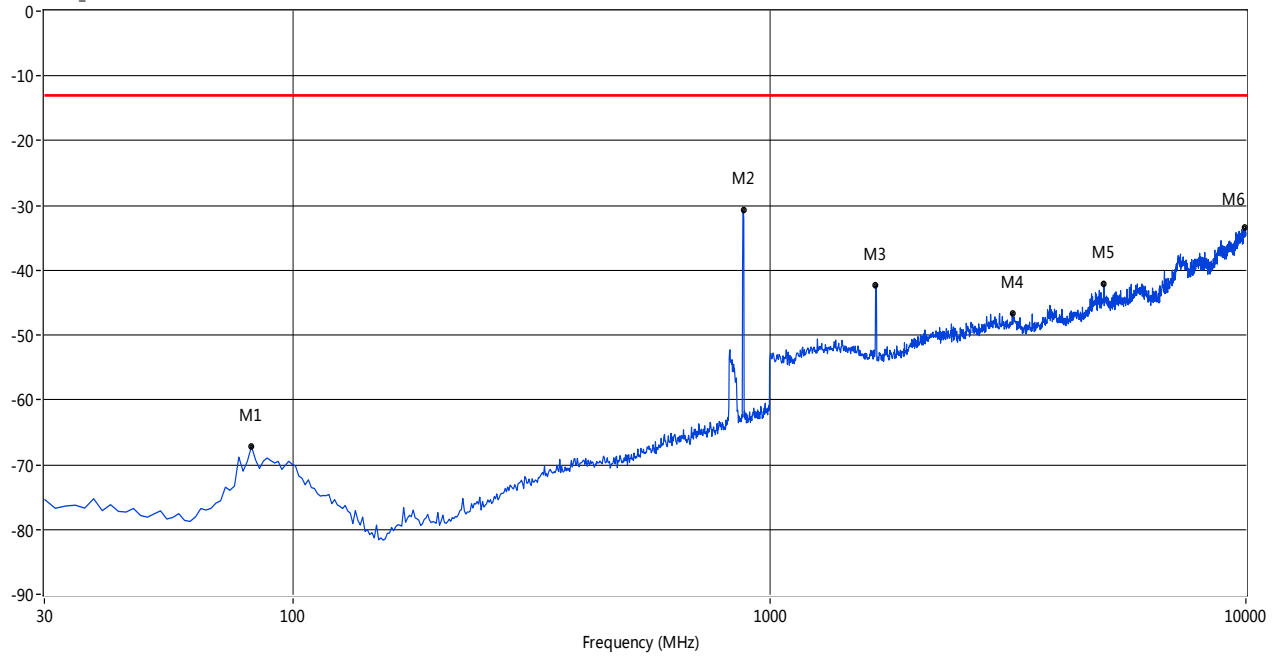
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-66.61	-4.23	-13.0	53.61	147.60	Vertical	PASS
878.95	-23.98	6.00	-13.0	10.98	276.70	Vertical	PASS
1675.54	-39.57	8.30	-13.0	26.57	261.60	Vertical	PASS
2856.91	-46.30	15.55	-13.0	33.30	249.70	Vertical	PASS
5920.13	-41.23	27.62	-13.0	28.23	181.30	Vertical	PASS
9993.34	-32.69	36.54	-13.0	19.69	360.20	Vertical	PASS

WCDMA 850MHz CHANNEL 4183, ANT H

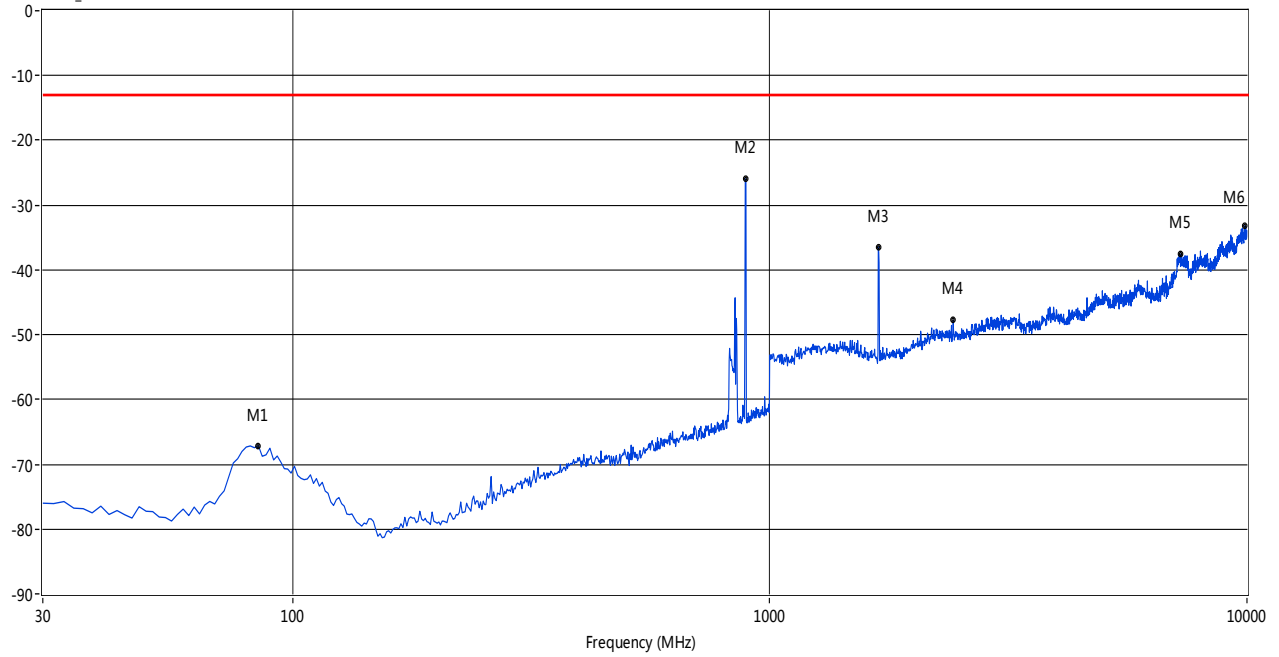
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-67.17	-4.23	-13.0	54.17	84.70	Horizontal	PASS
880.57	-30.73	6.01	-13.0	17.73	6.50	Horizontal	PASS
1668.89	-42.37	8.30	-13.0	29.37	358.20	Horizontal	PASS
3234.61	-46.62	20.36	-13.0	33.62	194.00	Horizontal	PASS
5036.61	-42.13	25.43	-13.0	29.13	184.30	Horizontal	PASS
9960.07	-33.45	36.40	-13.0	20.45	309.30	Horizontal	PASS

WCDMA 850MHz CHANNEL 4233, ANT V

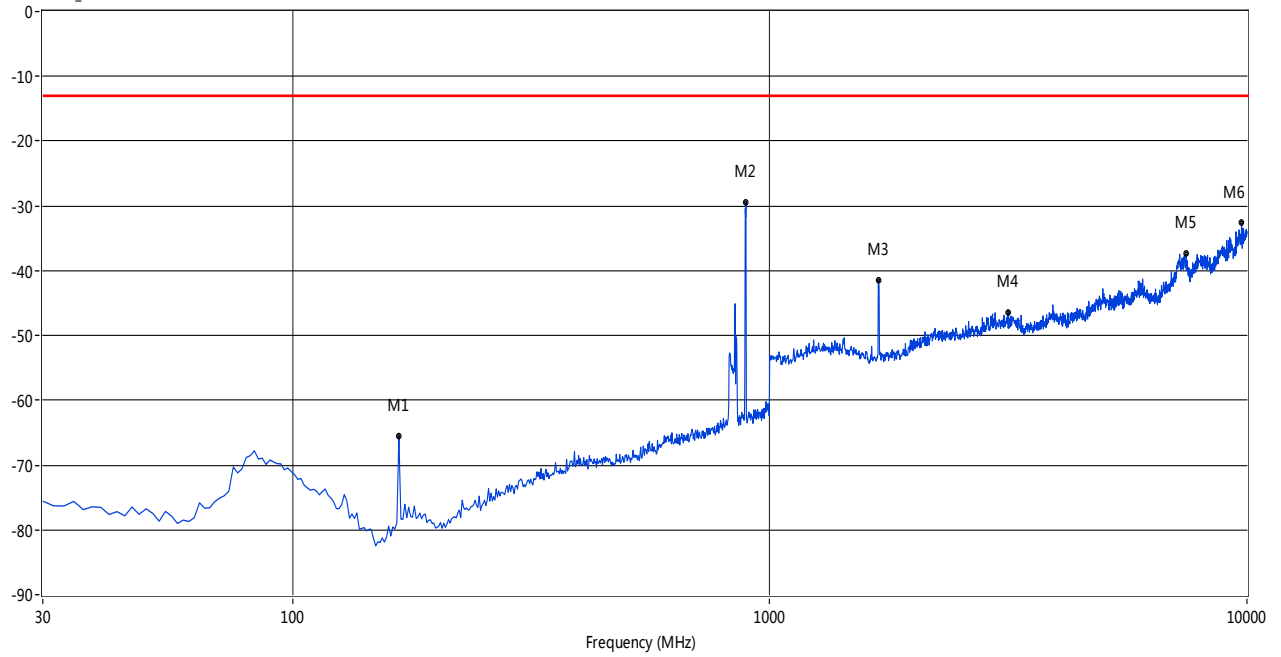
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
84.88	-67.13	-3.25	-13.0	54.13	325.70	Vertical	PASS
890.25	-25.92	6.02	-13.0	12.92	255.30	Vertical	PASS
1688.85	-36.46	8.48	-13.0	23.46	271.40	Vertical	PASS
2424.29	-47.76	12.82	-13.0	34.76	222.30	Vertical	PASS
7244.59	-37.54	29.59	-13.0	24.54	294.00	Vertical	PASS
9893.51	-33.19	36.12	-13.0	20.19	61.20	Vertical	PASS

WCDMA 850MHz CHANNEL 4233, ANT H

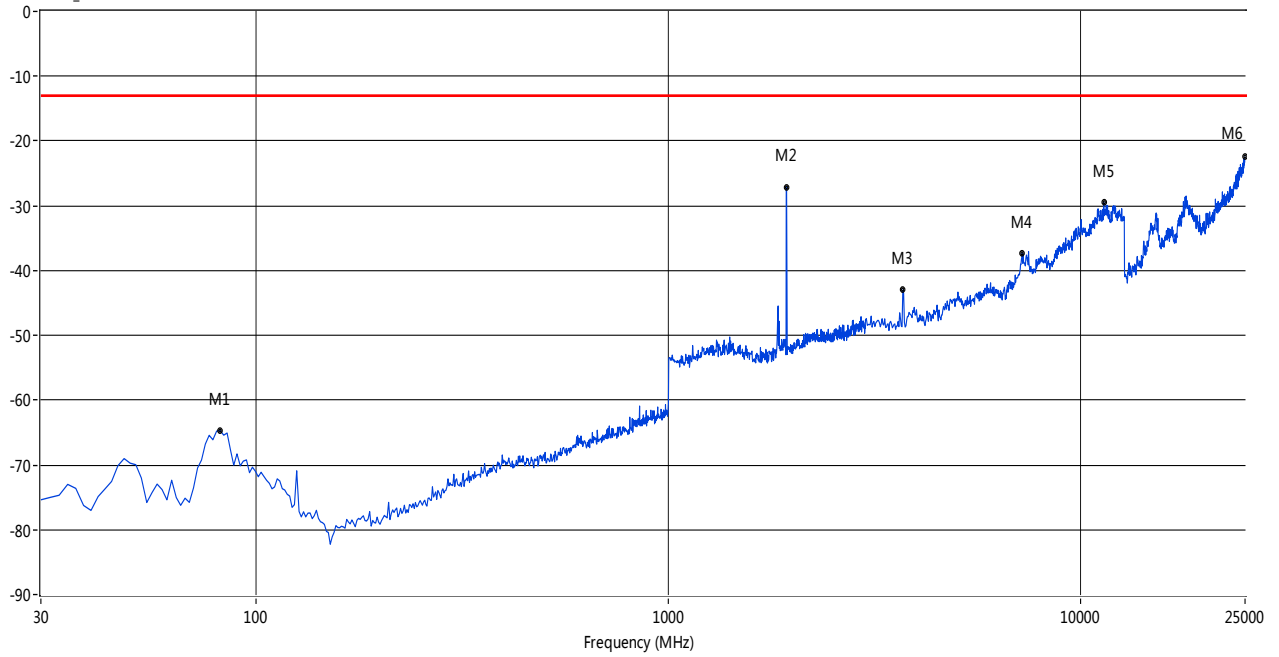
RSE Test case_FCC PART 22



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
167.19	-65.58	-12.50	-13.0	52.58	303.40	Horizontal	PASS
891.86	-29.47	5.98	-13.0	16.47	1.90	Horizontal	PASS
1688.85	-41.43	8.48	-13.0	28.43	141.80	Horizontal	PASS
3164.73	-46.48	20.37	-13.0	33.48	359.90	Horizontal	PASS
7450.92	-37.41	29.41	-13.0	24.41	45.70	Horizontal	PASS
9740.43	-32.64	35.61	-13.0	19.64	98.40	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9262, ANT V

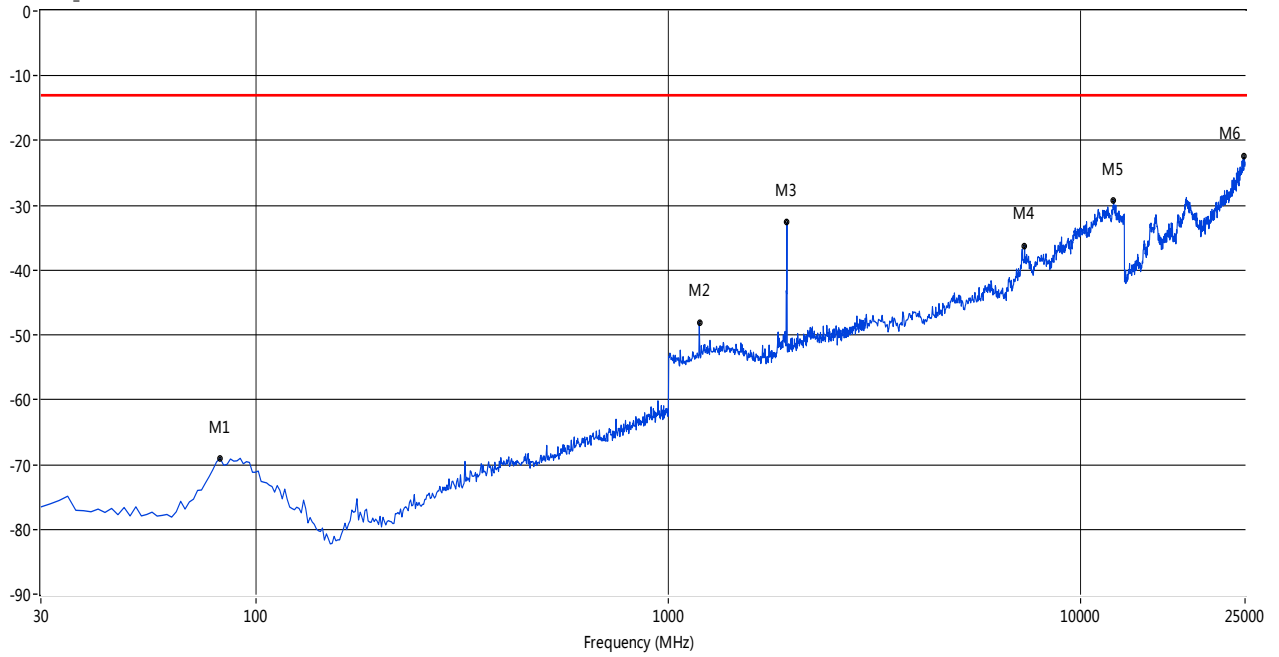
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-64.66	-4.33	-13.0	51.66	92.20	Vertical	PASS
1928.45	-27.14	9.79	-13.0	14.14	25.40	Vertical	PASS
3697.59	-42.99	20.81	-13.0	29.99	73.50	Vertical	PASS
7201.75	-37.26	29.52	-13.0	24.26	302.20	Vertical	PASS
11354.83	-29.46	38.78	-13.0	16.46	302.20	Vertical	PASS
24979.62	-22.40	42.82	-13.0	9.40	282.90	Vertical	PASS

WCDMA 1900MHz CHANNEL 9262, ANT H

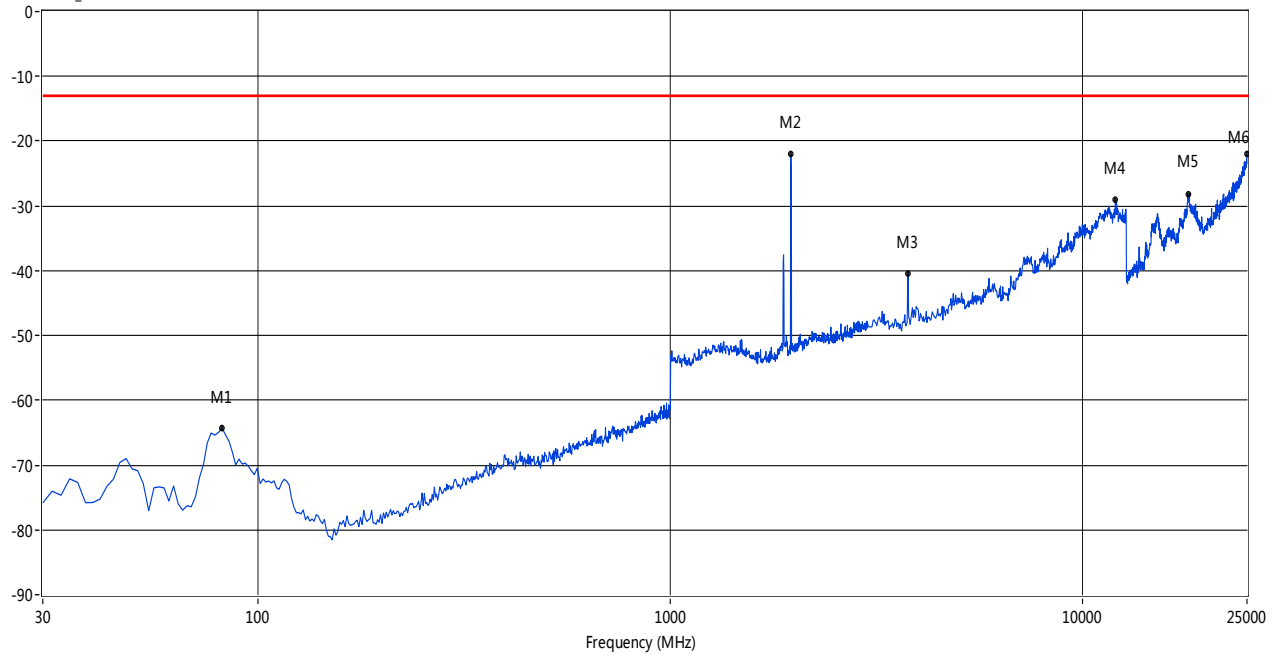
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-69.04	-4.33	-13.0	56.04	242.40	Horizontal	PASS
1186.36	-48.02	8.14	-13.0	35.02	57.70	Horizontal	PASS
1935.11	-32.65	9.63	-13.0	19.65	307.90	Horizontal	PASS
7299.08	-36.20	29.67	-13.0	23.20	249.10	Horizontal	PASS
12003.74	-29.22	38.88	-13.0	16.22	135.30	Horizontal	PASS
24857.32	-22.49	42.63	-13.0	9.49	146.80	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9401, ANT V

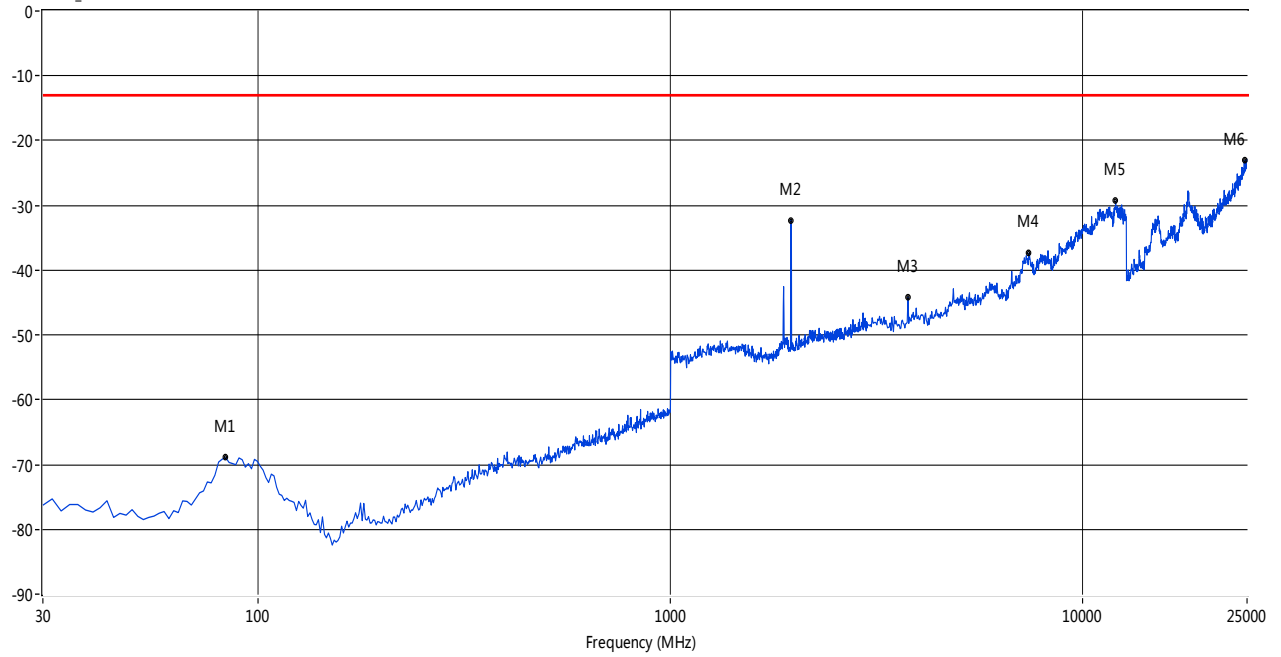
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-64.27	-4.33	-13.0	51.27	87.20	Vertical	PASS
1958.40	-22.00	9.96	-13.0	9.00	144.50	Vertical	PASS
3762.48	-40.44	21.30	-13.0	27.44	124.10	Vertical	PASS
11987.52	-28.96	38.84	-13.0	15.96	57.50	Vertical	PASS
17988.35	-28.10	39.52	-13.0	15.10	263.30	Vertical	PASS
24959.23	-22.04	42.79	-13.0	9.04	173.20	Vertical	PASS

WCDMA 1900MHz CHANNEL 9401, ANT H

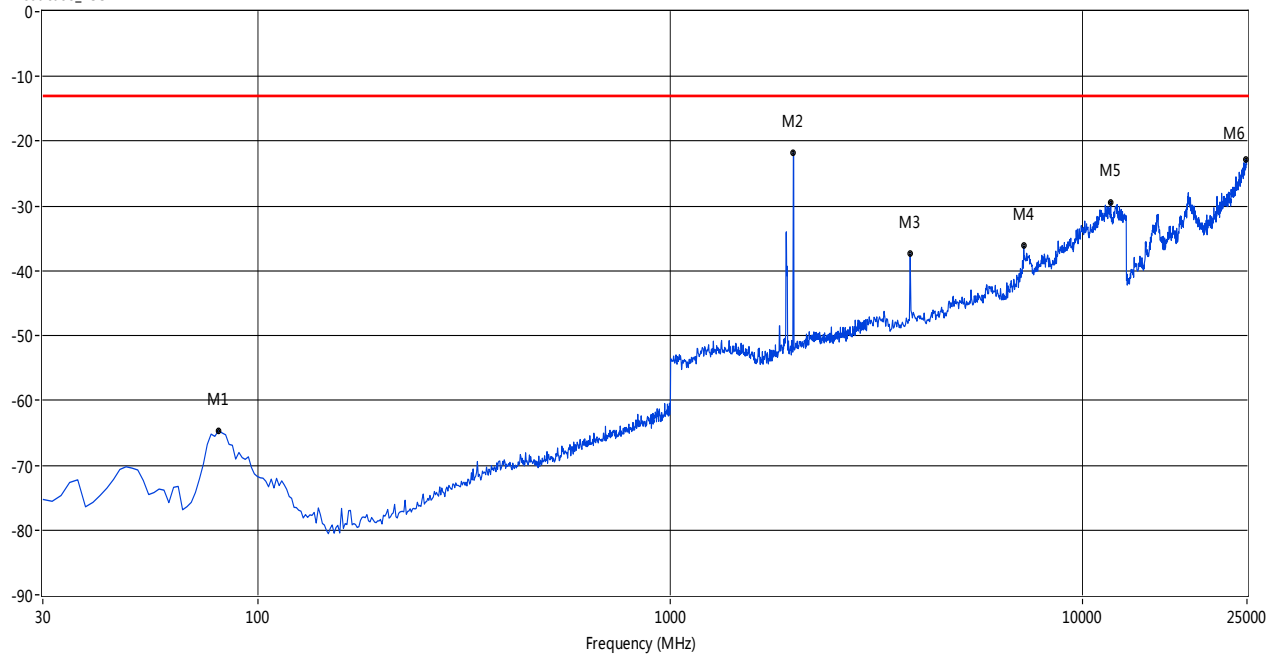
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
83.26	-68.94	-3.86	-13.0	55.94	288.10	Horizontal	PASS
1958.40	-32.27	9.96	-13.0	19.27	26.90	Horizontal	PASS
3762.48	-44.16	21.30	-13.0	31.16	355.20	Horizontal	PASS
7380.20	-37.40	29.80	-13.0	24.40	157.40	Horizontal	PASS
12003.74	-29.33	38.88	-13.0	16.33	162.60	Horizontal	PASS
24714.64	-23.04	42.42	-13.0	10.04	66.40	Horizontal	PASS

WCDMA 1900MHz CHANNEL 9538, ANT V

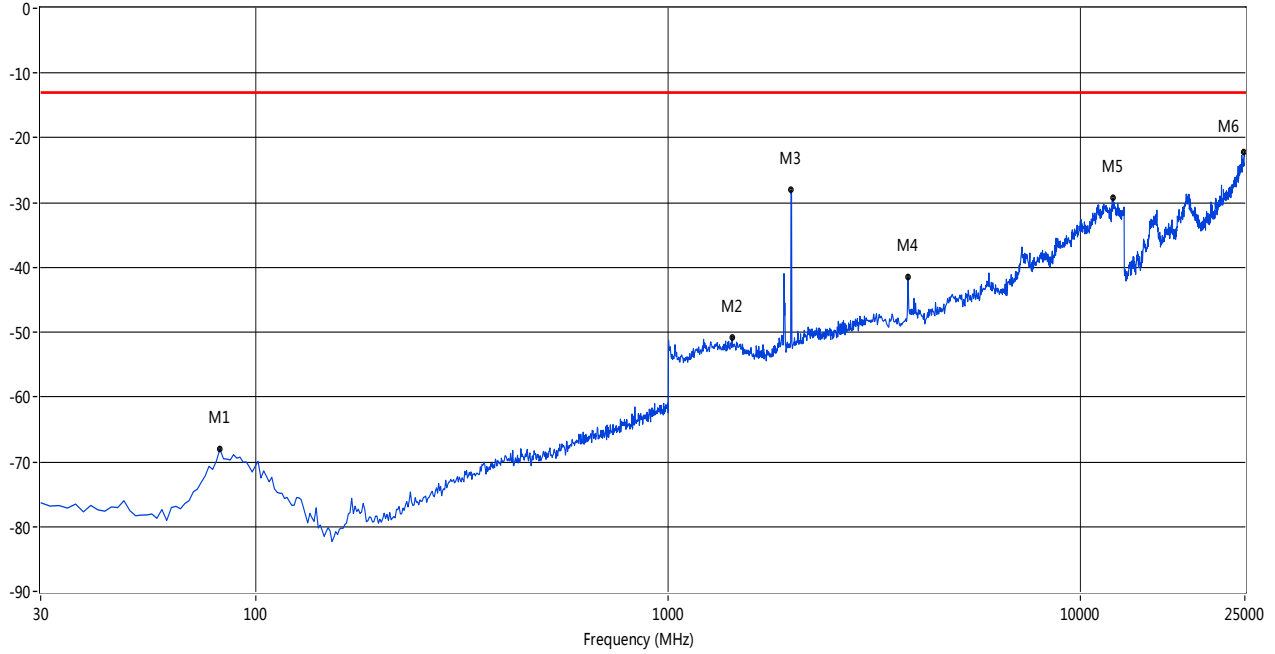
RSE Test case_FCC PART 24



Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
80.03	-64.65	-4.85	-13.0	51.65	61.90	Vertical	PASS
1985.02	-21.74	10.18	-13.0	8.74	150.60	Vertical	PASS
3811.15	-37.38	21.53	-13.0	24.38	73.30	Vertical	PASS
7185.52	-36.15	29.31	-13.0	23.15	342.60	Vertical	PASS
11679.28	-29.36	38.28	-13.0	16.36	27.30	Vertical	PASS
24857.32	-22.73	42.63	-13.0	9.73	56.40	Vertical	PASS

WCDMA 1900MHz CHANNEL 9538, ANT H

RSE Test case_FCC PART 24



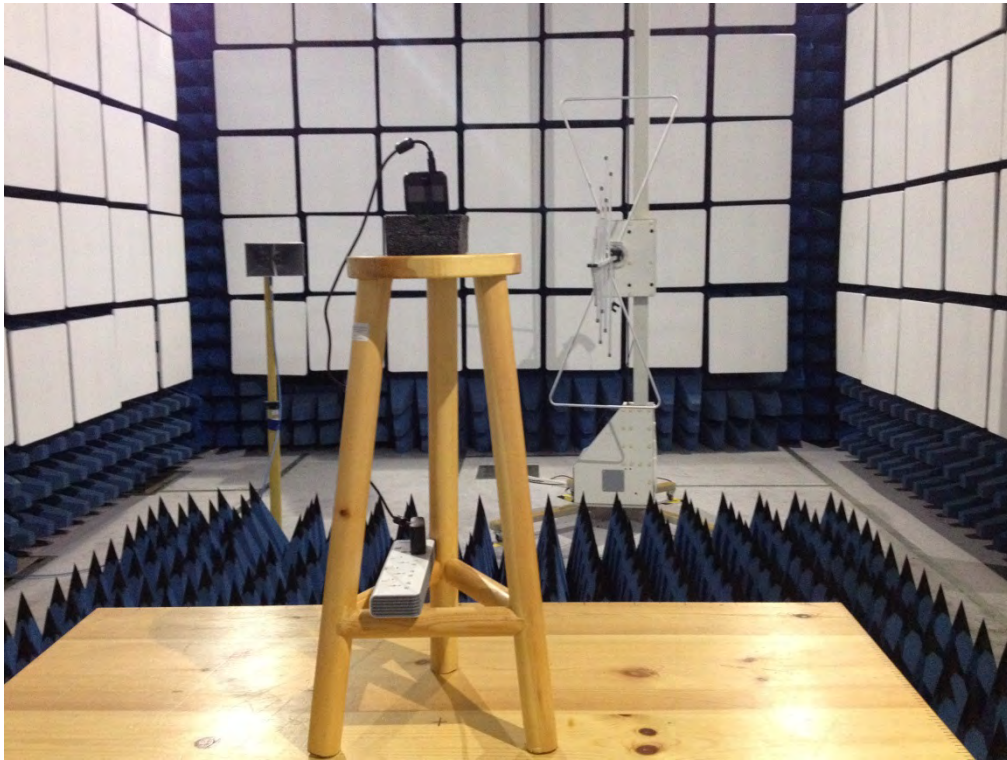
Frequency (MHz)	Peak (dBm)	Factor (dB)	PK Limit (dBuV)	Margin (dB)	Table (o)	ANT	Verdict
81.65	-68.02	-4.33	-13.0	55.02	293.70	Horizontal	PASS
1425.96	-50.83	9.22	-13.0	37.83	220.30	Horizontal	PASS
1981.70	-28.06	10.17	-13.0	15.06	304.60	Horizontal	PASS
3811.15	-41.47	21.53	-13.0	28.47	307.40	Horizontal	PASS
11971.30	-29.32	38.76	-13.0	16.32	255.50	Horizontal	PASS
24898.09	-22.28	42.69	-13.0	9.28	119.00	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



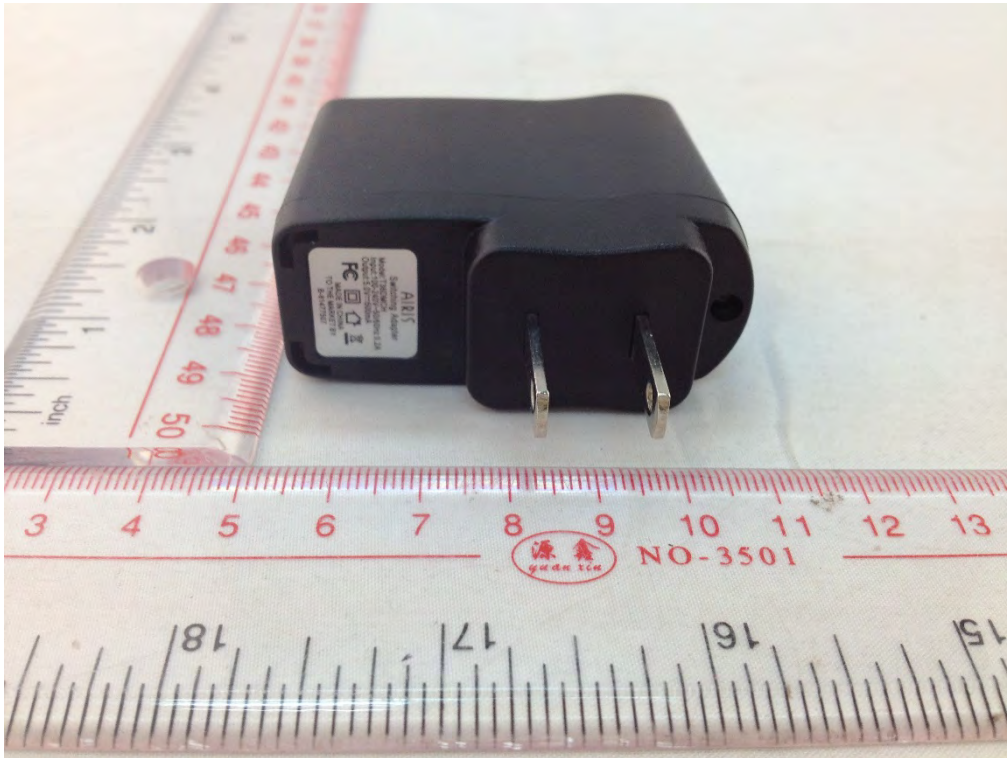
THE RIGHT OF EUT



THE UP OF EUT



THE DOWN OF EUT



CHARGER

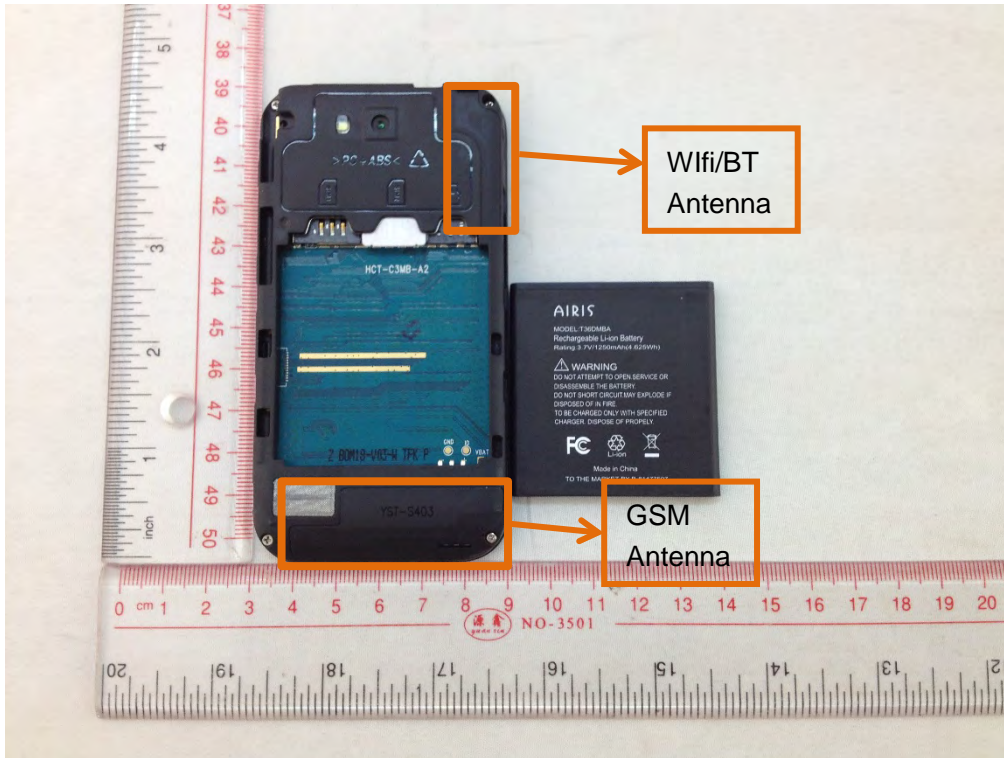


DATA CABLE



HEADPHONE CABLE

C.2 Inside of the EUT



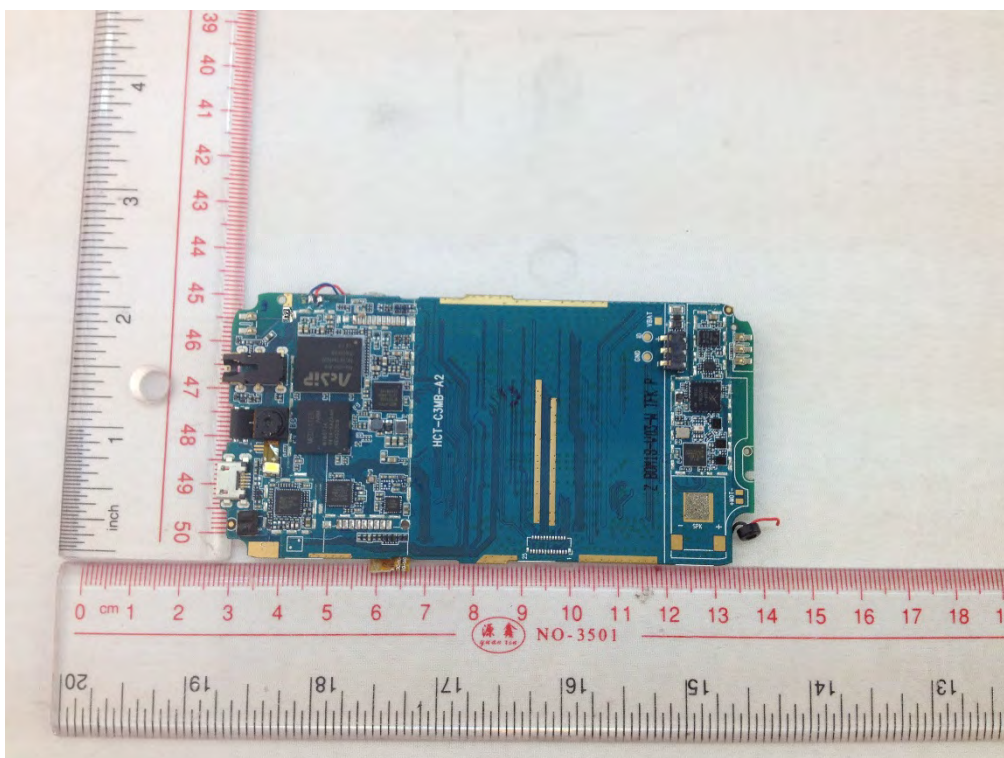
EUT UNCOVER VIEW 1



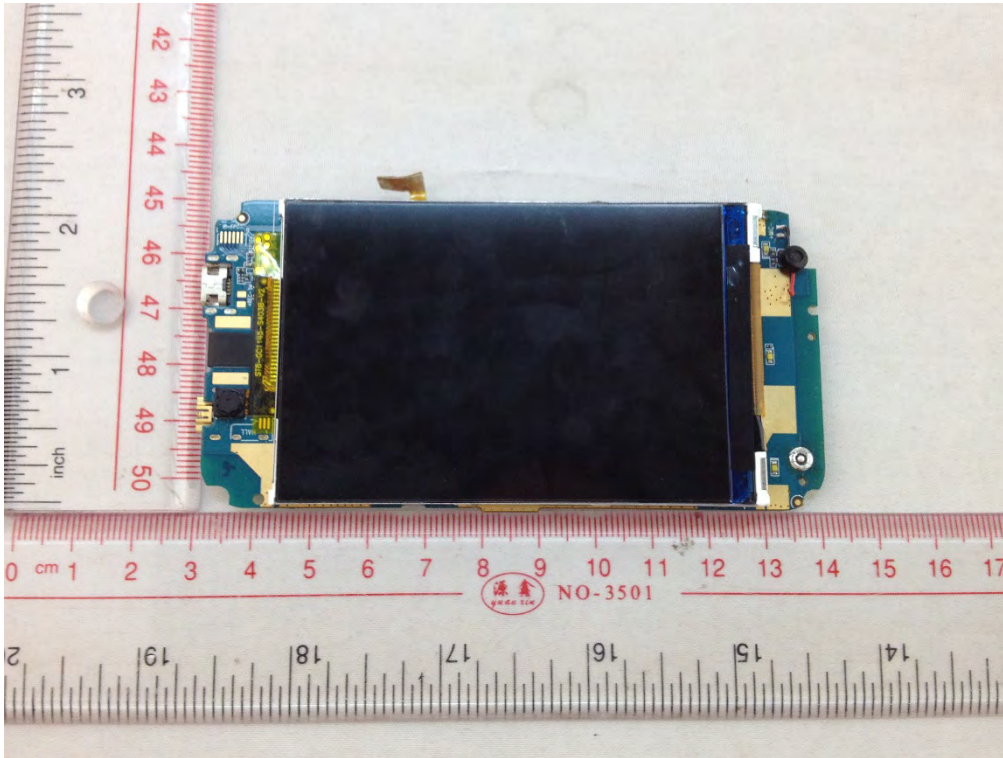
EUT UNCOVER VIEW 2



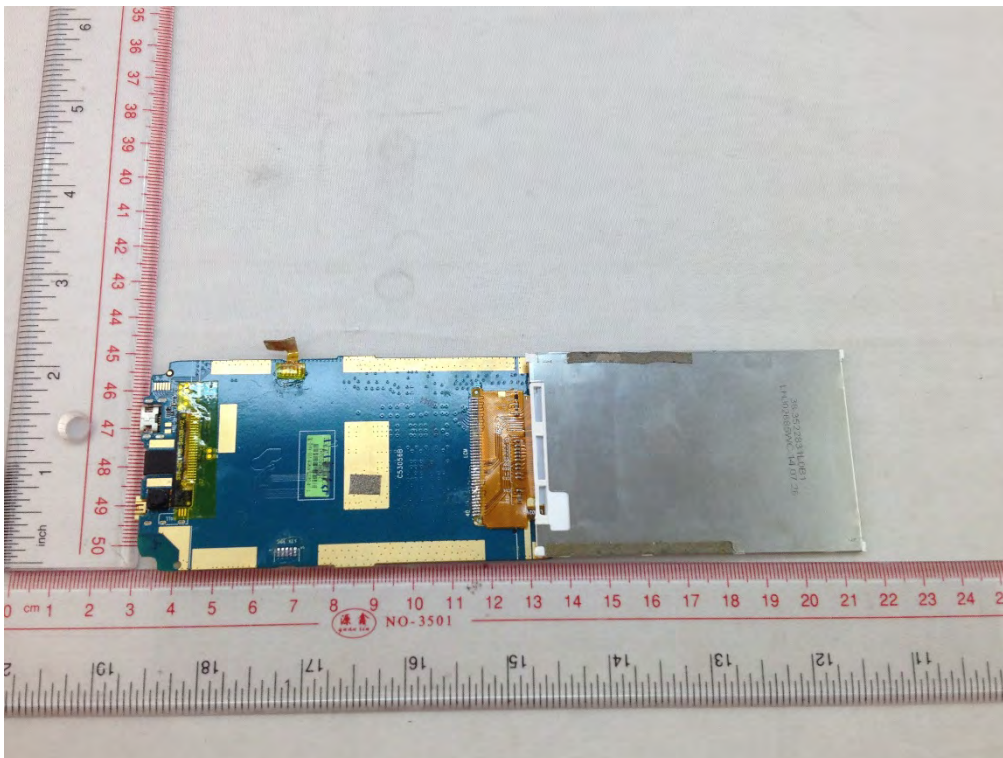
BATTERY



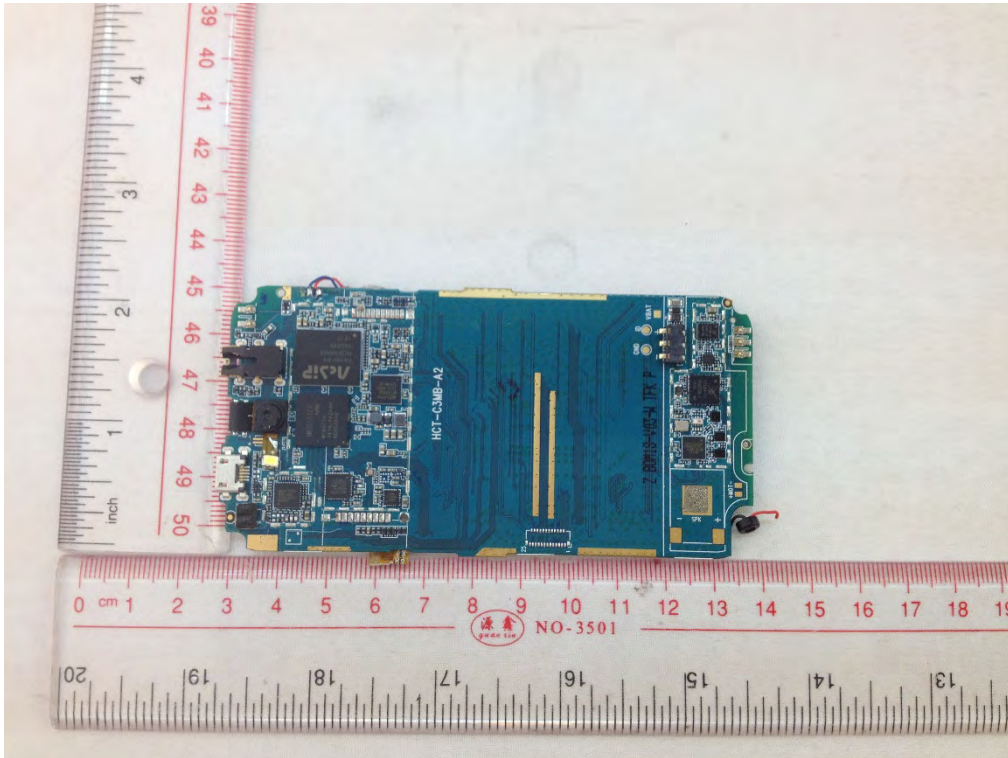
MAIN BOARD TOP VIEW 1



MAIN BOARD BACK VIEW 1



MAIN BOARD BACK VIEW 2



MAIN BOARD TOP VIEW 2

--END OF REPORT--