FCC

RF TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

GSM digital mobile phone

ISSUED TO
Power Idea Technology Limited.

4th Floor, A Section , Languang Science & technology Xinxi RD, Hi-Tech Industrial Park North, Nanshan, ShenZhen, China.

Prepared by: Cao Shaodong
(Reporting Specialist)
Date 2014.5.24

Approved by: Wei Yanquan
(Chief Engineer)
Date 2014.5.24

Report No.:	BL-SZ1440058-601
EUT Type:	GSM digital mobile phone
Model Name:	RG100, RG150, MARINER PRO
Brand Name:	N/A
Test Standard:	47 CFR Part 2
	47 CFR Part 22 Subpart H
	47 CFR Part 24 Subpart E
FCC ID:	ZLE-RG100RG150
Test conclusion:	PASS
Test Date:	May 4, 2014 ~ May 20, 2014
Date of Issue:	May 24, 2014

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Revision History

Version	Issue Date	Revisions
Rev. 01	May 24, 2014	Initial Issue

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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 Test Environment Condition

Ambient Temperature	15 to 35℃
Ambient Relative Humidity	30 to 60%
Ambient Pressure	86 to106kPa

1.4 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	Power Idea Technology Limited.
Address	4th Floor, A Section, Languang Science & technology Xinxi RD, Hi-Tech Industrial Park North, Nanshan, Shenzhen, China.

2.2 Manufacturer

Manufacturer	Power Idea Technology Limited.
Address	4th Floor, A Section, Languang Science & technology Xinxi RD, Hi-Tech Industrial Park North, Nanshan, Shenzhen, China.

2.3 General Description for Equipment under Test (EUT)

EUT Type	GSM digital mobile phone
Model Name	RG100
Series Model Name	RG100, RG150, MARINER PRO
Description of Model name differentiation	The equipment model RG100, RG150 and MARINER PRO are GSM digital mobile phone, the electrical parameters and internal structure of circuit are same, only the model is different.
Hardware Version	RG126_V2.1
Software Version	N/A
Network and Wireless connectivity	2G Network GSM 850/900/1800/1900
About the Product	The equipment is Mobile Phone, intended for used with information technology equipment.

2.4 Technical Information

Frequency Bands	GSM 850/1900
Modulation Type	GSM: GMSK GPRS: GMSK EGPRS: 8PSK
Tx Frequency Range	GSM 850MHz: 824.20 - 848.80MHz (at intervals of 200kHz); GSM 1900MHz: 1850.20 - 1909.80MHz (at intervals of 200kHz);
Rx Frequency Range	GSM850: 869.20 - 893.80MHz (at intervals of 200kHz) GSM1900: 1930.20 - 1989.80MHz (at intervals of 200kHz)
Power Class	GSM 850: 4 GSM 1900: 1
Multislot Class	GPRS:12, EGPRS: 12

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

2.5 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No	RG100 lithium-ion battery
	Serial No	N/A
	Capacitance	2400mAh
	Rated Voltage	3.7V
	Extreme Voltage	Low: 3.5V / High:4.2V
Ancillary Equipment 2	TRAVEL CHARGER	
	Brand Name	N/A
	Model No	RD0501000-USBA-BMG
	Serial No	1403
	Rated Input	~ 100-240V, 250mA, 50/60Hz
	Rated Output	⎓ 5V, 1000mA
Ancillary Equipment 3	Stereo Headset	
Ancillary Equipment 4	USB Data Cable	

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

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

3.2 Verdict

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

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

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

4.2 Test Equipment List

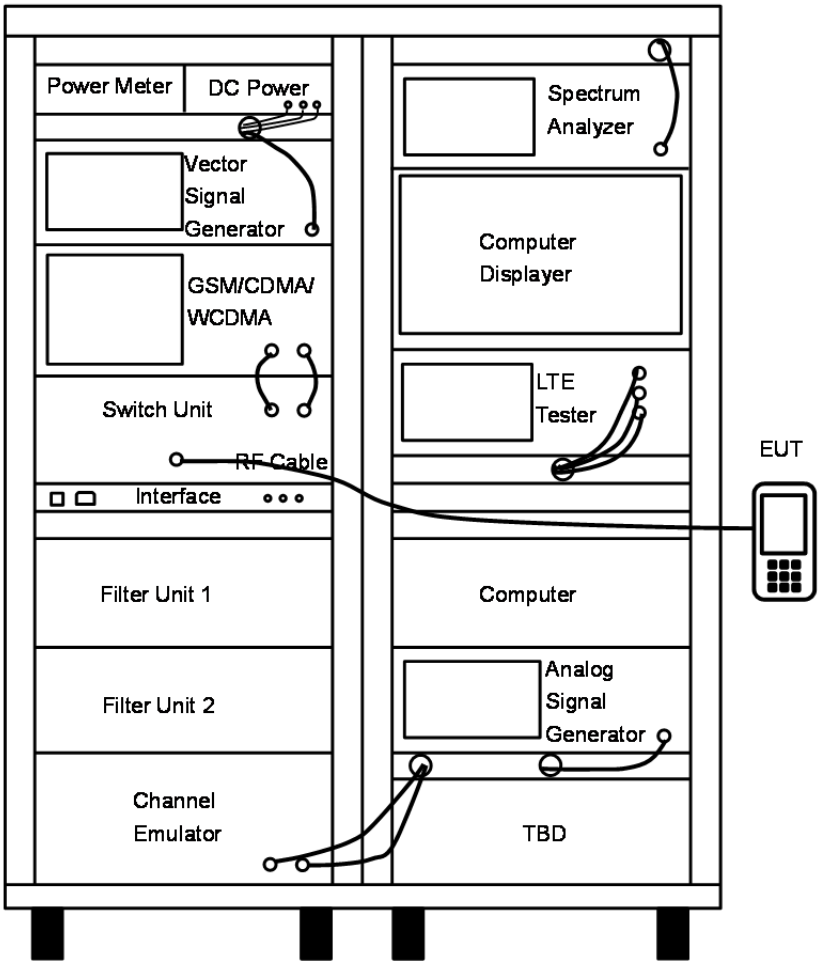
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2014.05.10	2015.05.09
Spectrum Analyzer	ROHDE&SCHWARZ	FSL3	103640/003	2014.05.02	2015.05.01
Power Splitter	KMW	DCPD-LDC	1305003215	2014.05.14	2015.05.13
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2014.05.08	2015.05.07
Attenuator (20dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2013.07.06	2014.07.07
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2013.07.06	2014.07.07
Test Antenna-Loop(9kHz-30MHz)	SCHWARZBECK	FMZB 1519	1519-037	2013.07.02	2014.07.01
Test Antenna-Bi-Log(30MHz-3GHz)	SCHWARZBECK	VULB 9163	9163-624	2013.07.03	2014.07.02
Test Antenna-Horn(1-18GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2013.07.02	2014.07.01
Test Antenna-Horn(15-26.5GHz)	SCHWARZBECK	BBHA 9170	9170-305	2013.07.02	2014.07.01
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2013.10.07	2014.10.06

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

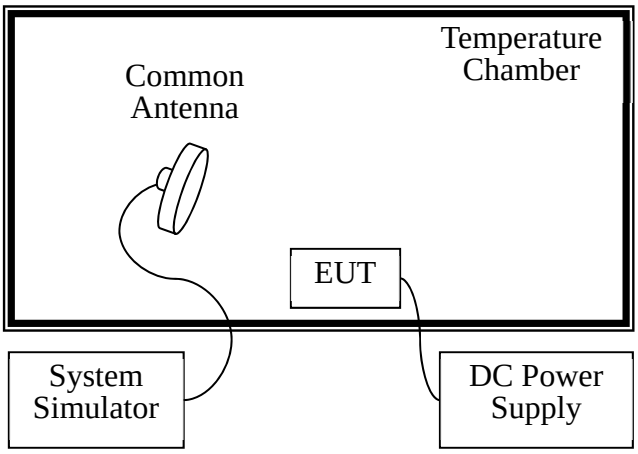
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



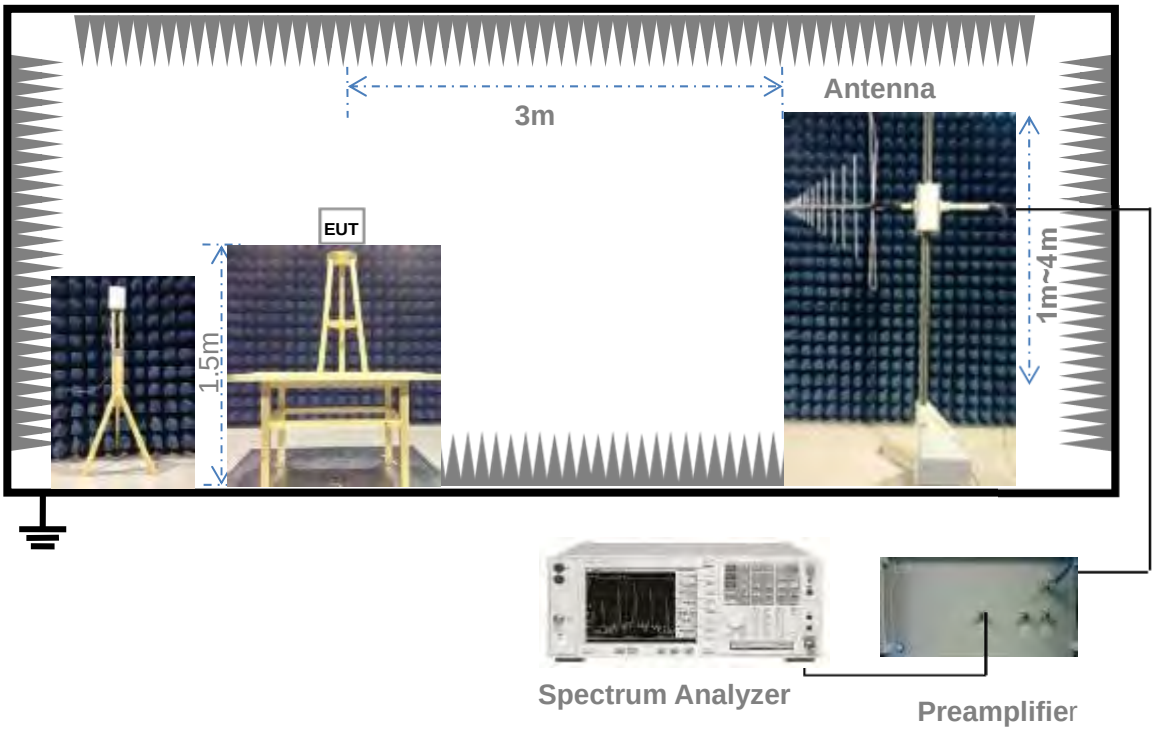
(Diagram 1)

4.4.2 For Frequency Stability Test



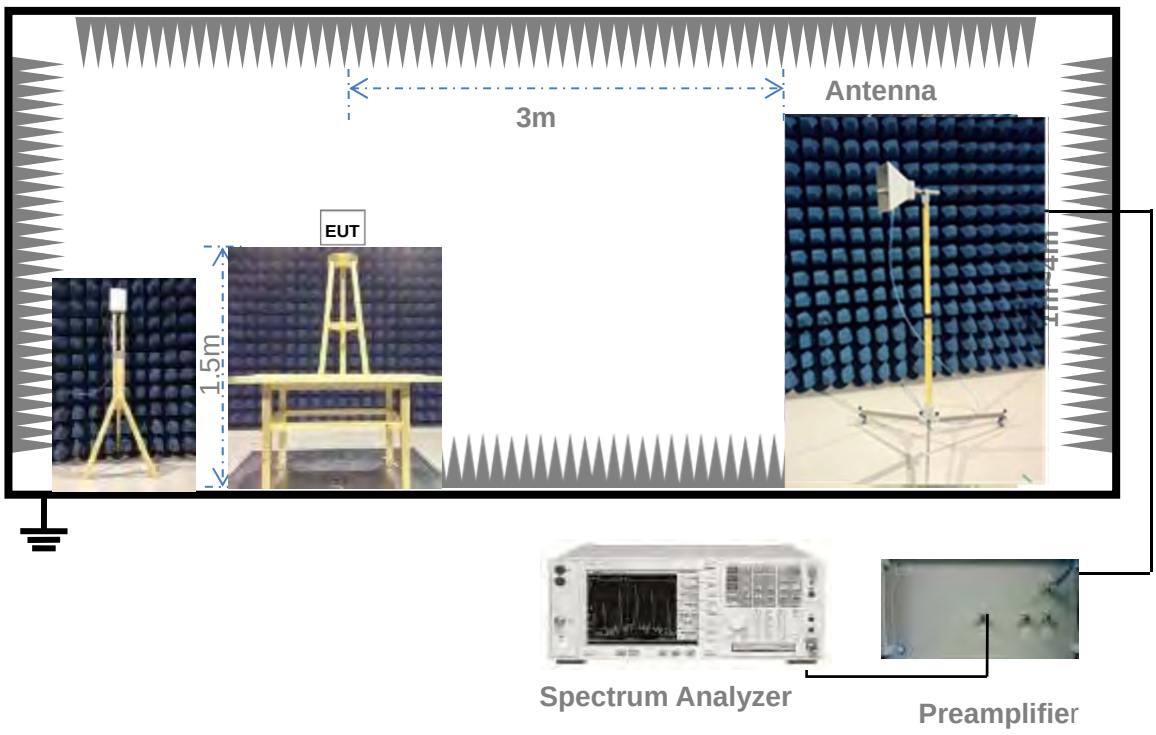
(Diagram 2)

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 radio	NTNV	Test Setup 1	TC04~TC06, TC16~18
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~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=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
2. The low, middle and the high channels are selected to perform tests respectively. For GSM modulated, set the TCH number to 128 as the low channel, and for WCDMA modulated, set the TCH number to 4132 as the low channel.
3. Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; search peak and mark it; finally record the peak and the plot.
4. Set the TCH number to 190 as the middle channel for GSM modulated, and Set the TCH number to 4175 as the middle channel for WCDMA modulated, then repeat step 3.
5. Set the TCH number to 251 as the high channel for GSM modulated, and Set the TCH number to 4233 as the middle channel for WCDMA modulated, then repeat step 3.

FCC PART 24

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

5.2 Peak to average radio

5.2.1 Limit

FCC § 2.1049 & 24.232

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

5.2.2 Test Procedure

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

Test procedures:

A .For GSM/EGPRS operating mode:

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

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

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

B. For UMTS operating mode:

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

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

5.3 Occupied Bandwidth

5.3.1 Limit

FCC § 2.1049

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

Occupied bandwidth is also known as the 99% emission bandwidth

5.3.2 Test Procedure

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

FCC PART 22

1. The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.
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.

5.4 Frequency Stability

5.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235

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

The test conditions are:

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

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

5.4.2 Test Procedure

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

5.5 Conducted Out of Band Emissions

5.5.1 Limit

FCC §22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P) dB. This calculated to be -13dBm.

5.5.2 Test Procedure

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

FCC PART 22

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

5.6 Band Edge

5.6.1 Limit

FCC § 22.917(b) & 24.238(b)

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

5.6.2 Test Procedure

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

FCC PART 22

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

5.7 Transmitter Radiated Power (EIRP/ERP)

5.7.1 Limit

FCC §22.913 & 24.232

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

5.7.2 Test Procedure

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

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

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

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

The substitution corrections are obtained as described below:

ASUBST = PSUBST_TX - PSUBST_RX - LSUBST_CABLES + GSUBST_TX_ANT

ATOT = LCABLES + ASUBST

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

PSUBST_TX is signal generator level,

PSUBST_RX is receiver level,

LSUBST_CABLES is cable losses including TX cable,

GSUBST_TX_ANT is substitution antenna gain.

ATOT is total correction factor including cable loss and substitution correction

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

5.8 Radiated Out of Band Emissions

5.8.1 Limit

FCC § 22.917(a) & 24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

5.8.2 Test Procedure

See section 5.6.2 of this report.

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

ANNEX A TEST RESULT

A.1 Conducted RF Output Power

GSM Mode Test Data

Band	Channel	Frequency (MHz)	Measured Output Power (dBm)	Limit (dBm)	Verdict
GSM 850	128	824.2	32.65	35	PASS
	190	836.6	32.60		PASS
	251	848.8	32.58		PASS
GSM 1900	512	1850.2	29.80	32	PASS
	661	1880.0	29.70		PASS
	810	1909.8	29.27		PASS
GPRS 850	128	824.2	32.06	35	PASS
	190	836.6	32.04		PASS
	251	848.8	32.01		PASS
GPRS 1900	512	1850.2	29.41	32	PASS
	661	1880.0	29.28		PASS
	810	1909.8	29.31		PASS
EGPRS 850	128	824.2	32.37	35	PASS
	190	836.6	32.36		PASS
	251	848.8	32.24		PASS
EGPRS 1900	512	1850.2	29.46	32	PASS
	661	1880.0	29.35		PASS
	810	1909.8	29.47		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	32.06	31.09	29.47	28.75
	190	836.6	32.04	31.09	29.44	28.84
	251	848.8	32.01	31.06	29.42	28.79
GPRS 1900	512	1850.2	29.41	28.44	26.67	25.81
	661	1880.0	29.28	28.32	26.55	25.68
	810	1909.8	29.31	28.35	26.58	25.72

EDGE Conducted output power

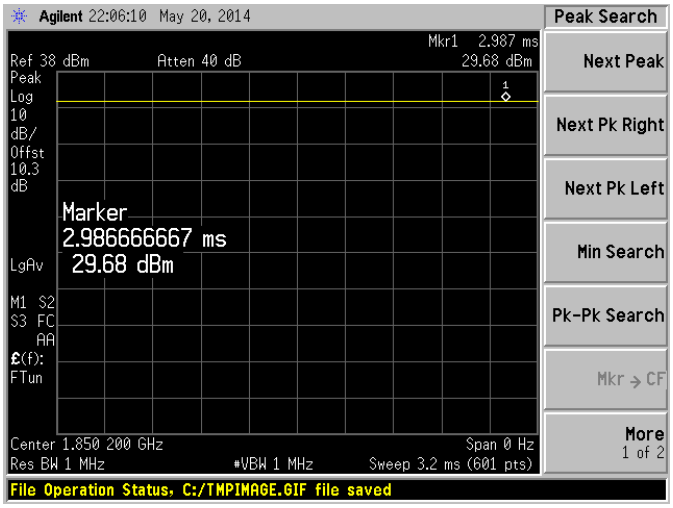
Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
EGPRS 850	128	824.2	32.37	31.31	29.41	28.46
	190	836.6	32.36	31.33	29.41	28.56
	251	848.8	32.24	31.23	29.34	28.46
EGPRS 1900	512	1850.2	29.46	28.45	26.65	25.87
	661	1880.0	29.35	28.36	26.57	25.81
	810	1909.8	29.47	28.48	26.61	25.93

A.2 Peak to Average Radio

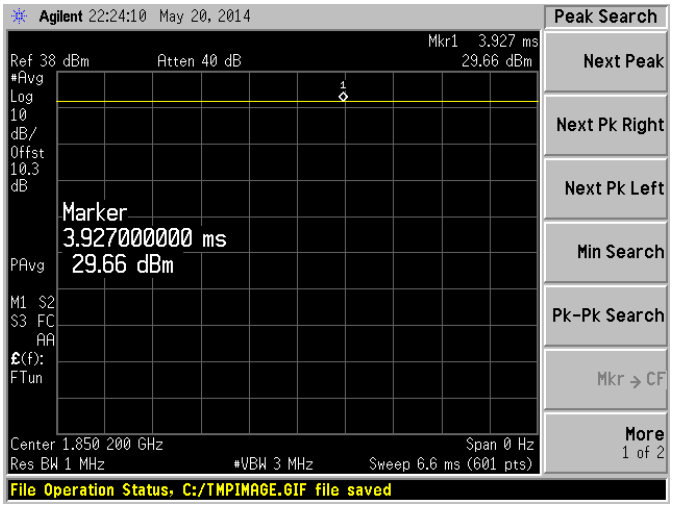
Band	Channel	Frequency (MHz)	Peak to Average radio	Limit	Verdict
			dBm	dBm	
GSM 1900MHz	512	1850.2	0.02	13	PASS
	661	1880.0	0.07		PASS
	810	1909.8	0.02		PASS
EDGE 1900MHz	512	1850.2	0.01	13	PASS
	661	1880.0	0.03		PASS
	810	1909.8	0.03		PASS

Test plots

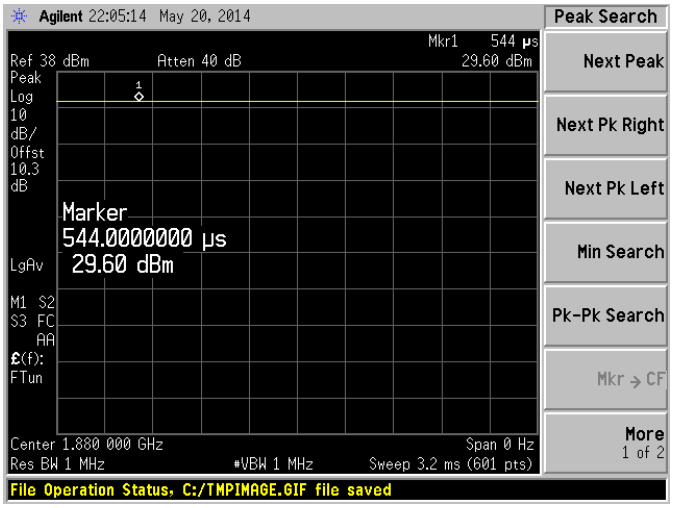
GSM 1900MHz CHANNEL 512 PEAK POWER



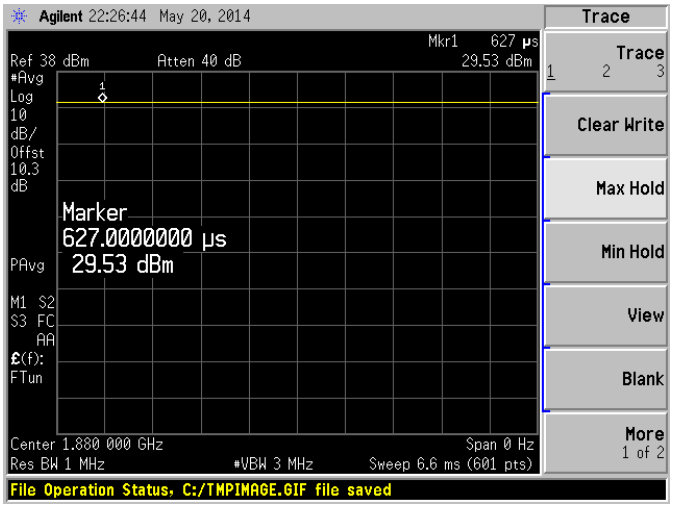
GSM 1900MHz CHANNEL 512 AV POWER



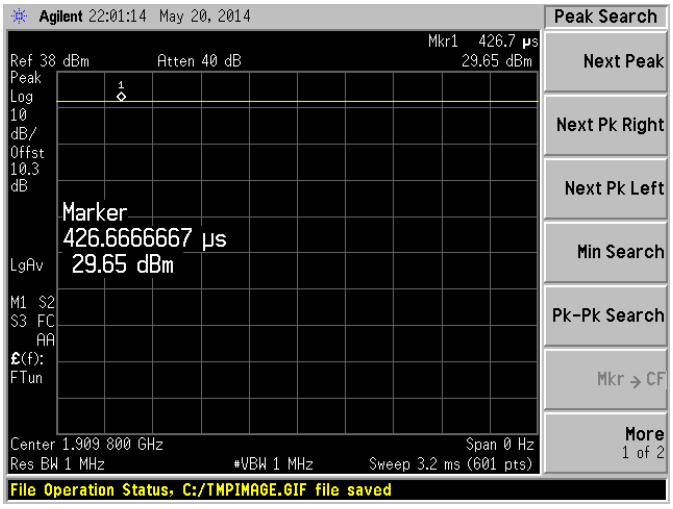
GSM 1900MHz CHANNEL 661 PEAK POWER



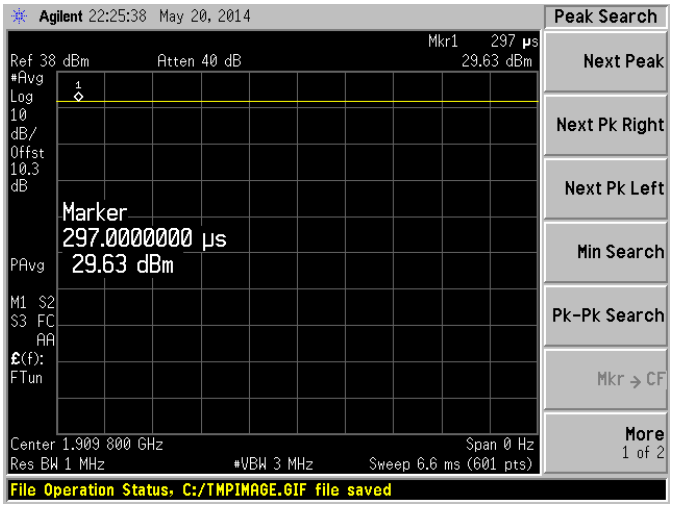
GSM 1900MHz CHANNEL 661 AV POWER



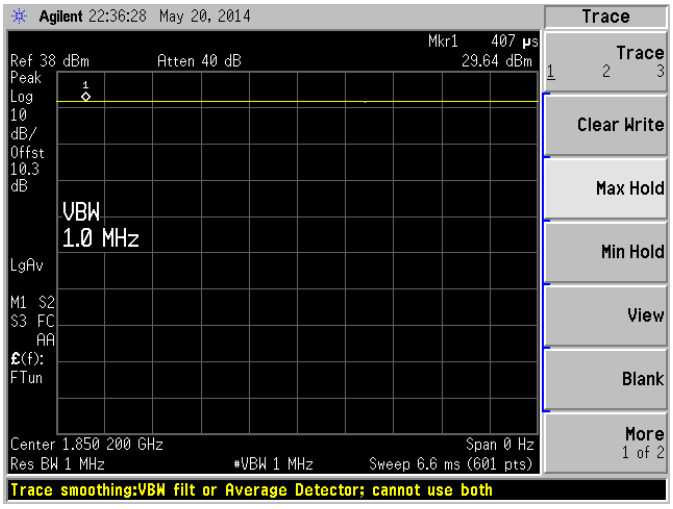
GSM 1900MHz CHANNEL 810 PEAK POWER



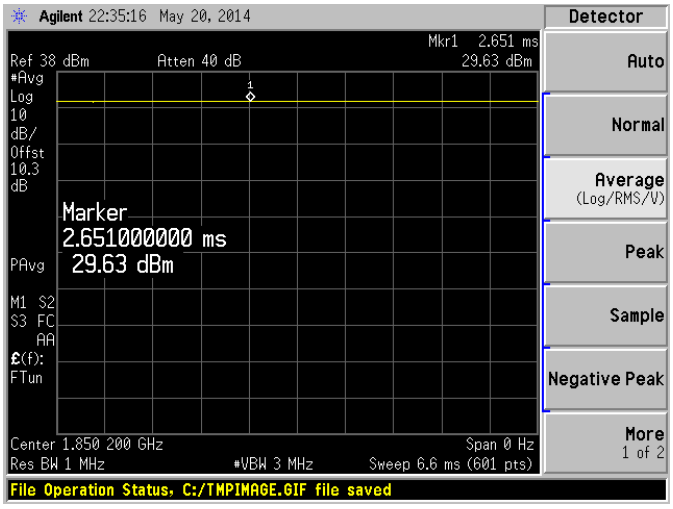
GSM 1900MHz CHANNEL 810 AV POWER



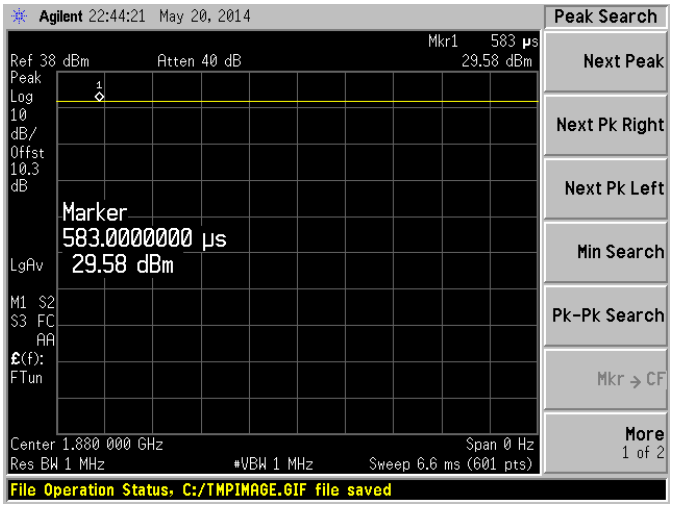
EDGE 1900MHz CHANNEL 512 PEAK POWER



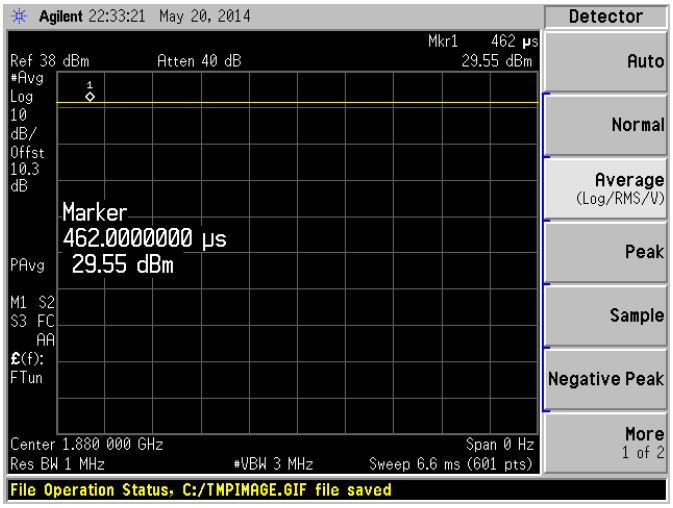
EDGE 1900MHz CHANNEL 512 AV POWER



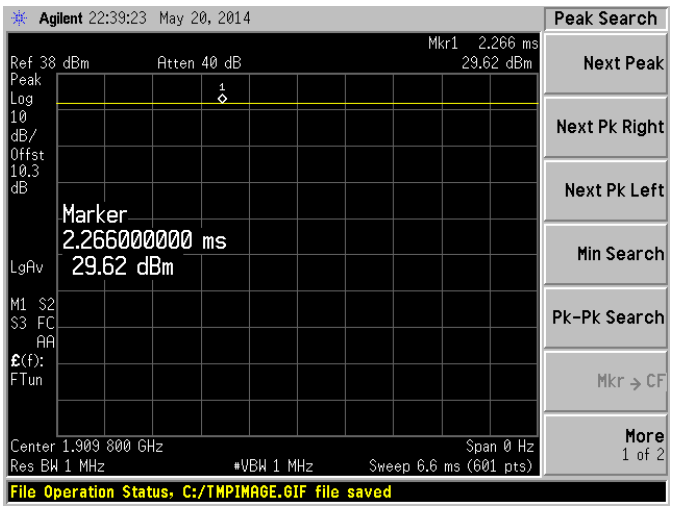
EDGE 1900MHz CHANNEL 661 PEAK POWER



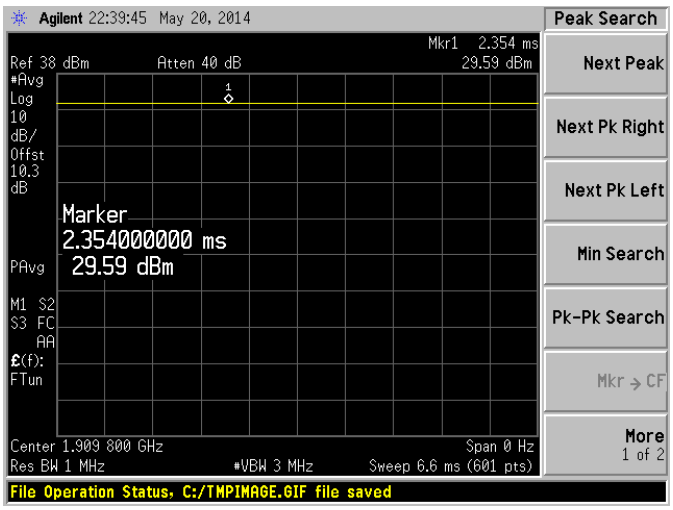
EDGE 1900MHz CHANNEL 661 AV POWER



EDGE 1900MHz CHANNEL 810 PEAK POWER



EDGE 1900MHz CHANNEL 810 AV POWER



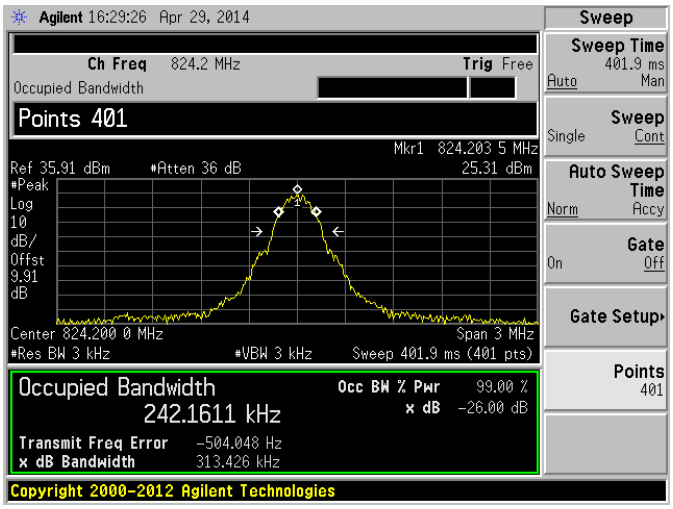
A.3 Occupied Bandwidth

Test Data

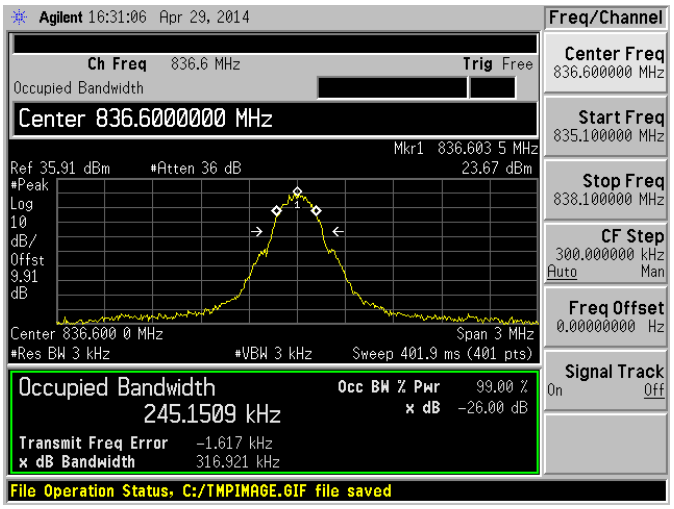
Band	Channel	Frequency (MHz)	Measured 99% Occupied Bandwidth
GSM 850MHz	128	824.2	242.1611 kHz
	190	836.6	245.1509 kHz
	251	848.8	244.3537 kHz
GSM 1900MHz	512	1850.2	240.0229 kHz
	661	1880.0	247.7975 kHz
	810	1909.8	244.3710 kHz

Test plots

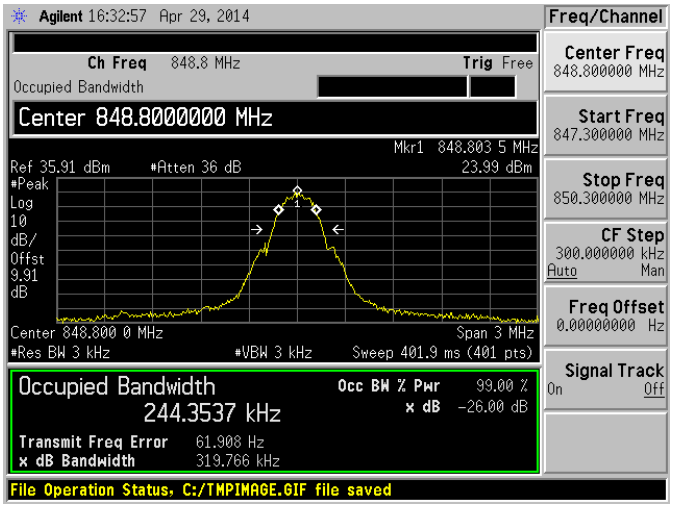
GSM 850MHz CHANNEL 128



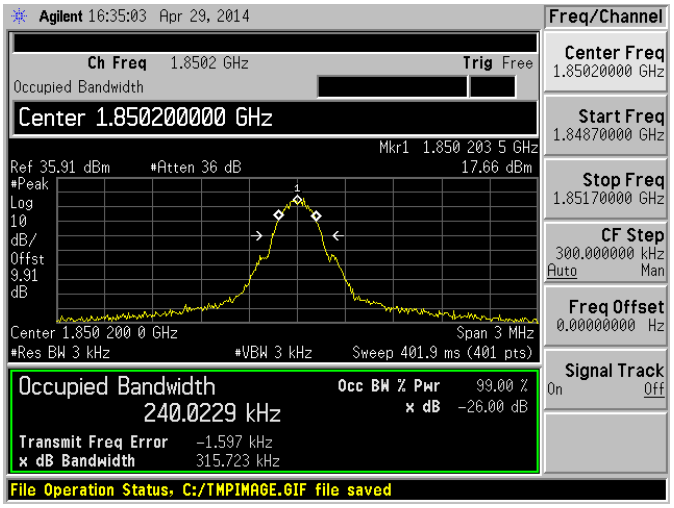
GSM 850MHz CHANNEL 190



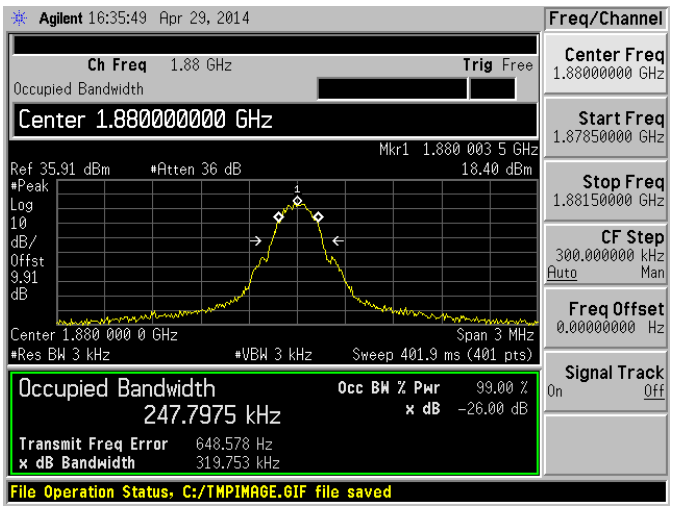
GSM 850MHz CHANNEL 251



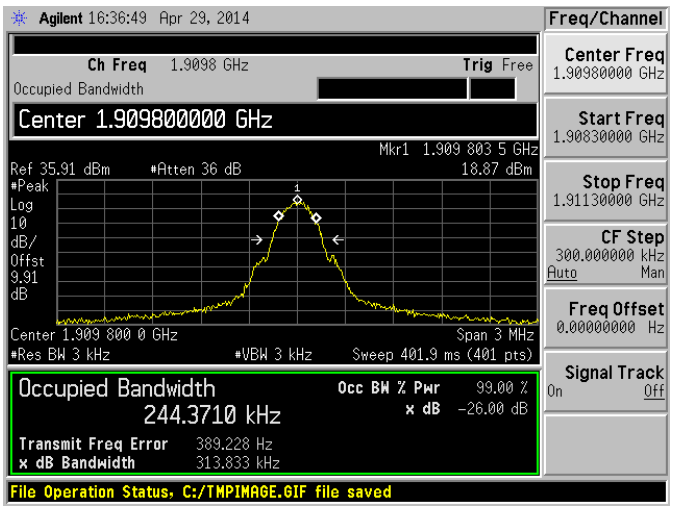
GSM 1900MHz CHANNEL 512



GSM 1900MHz CHANNEL 661



GSM 1900MHz CHANNEL 810



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	5.78	±2060.5	-29.36	±2091.5	27.18	±2122	PASS
	-20	-10.17		-2.15		30.07		
	-10	23.28		40.06		5.48		
	0	-3.03		1.99		-1.82		
	+10	-3.03		-19.86		19.02		
	+20	-10.39		-2.32		44.78		
	+30	17.75		23.12		21.99		
	+40	5.31		-2.15		17.67		
	+50	-12.19		35.31		-19.44		
4.2	+25	20.74		29.35		-6.76		
3.5	+25	23.29		-27.15		14.09		

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	-3.51	±2060.5	-14.54	±2091.5	16.62	±2122	PASS
	-20	43.61		0.04		-4.70		
	-10	31.83		-20.28		5.59		
	0	20.08		19.52		11.51		
	+10	-12.32		41.57		-9.42		
	+20	17.45		5.52		-13.86		
	+30	21.45		34.18		29.87		
	+40	7.14		54.18		11.59		
	+50	16.48		-10.22		5.90		
4.2	+25	-13.29		10.43		-0.49		
3.5	+25	43.61		29.13		-3.07		

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	-11.37	±2060.5	12.63	±2091.5	6.02	±2122	PASS
	-20	25.34		42.41		0.88		
	-10	7.07		4.00		-17.65		
	0	2.51		-7.89		9.51		
	+10	12.69		-8.11		10.15		
	+20	22.70		32.78		7.03		
	+30	1.85		44.40		-14.09		
	+40	-7.93		-7.29		-9.88		
	+50	-2.98		47.40		-0.96		
4.2	+25	14.83		3.60		-1.39		
3.5	+25	19.32		-13.23		-26.91		

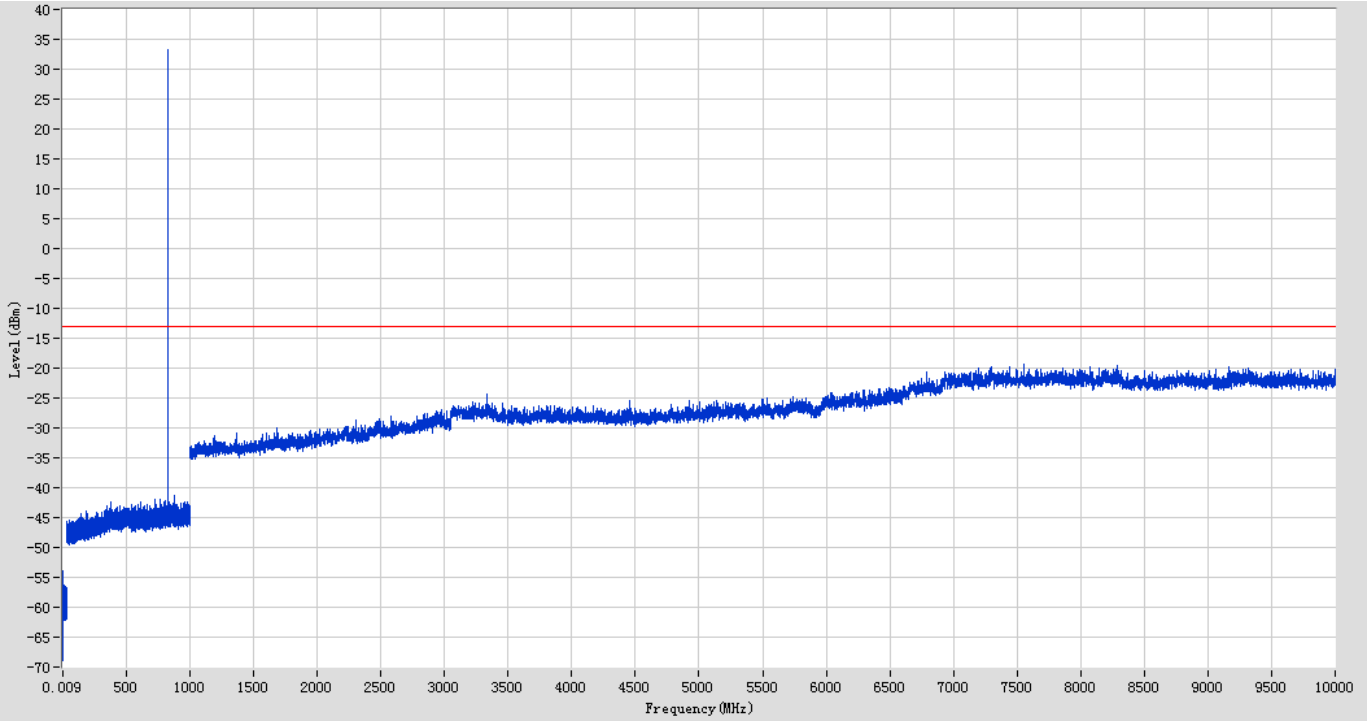
GPRS 1900MHz Band:

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	-13.77	±2060.5	53.65	±2091.5	-18.56	±2122	PASS
	-20	0.62		-14.50		-13.47		
	-10	1.65		41.59		12.18		
	0	2.47		-11.82		-14.06		
	+10	-10.76		-19.88		18.79		
	+20	-2.11		39.14		22.39		
	+30	13.33		17.14		37.27		
	+40	5.33		-6.07		2.37		
	+50	-2.56		3.89		-11.52		
4.2	+25	17.60		16.08		-5.41		
3.5	+25	-8.09		3.88		12.65		

A.5 Conducted Out of Band Emissions

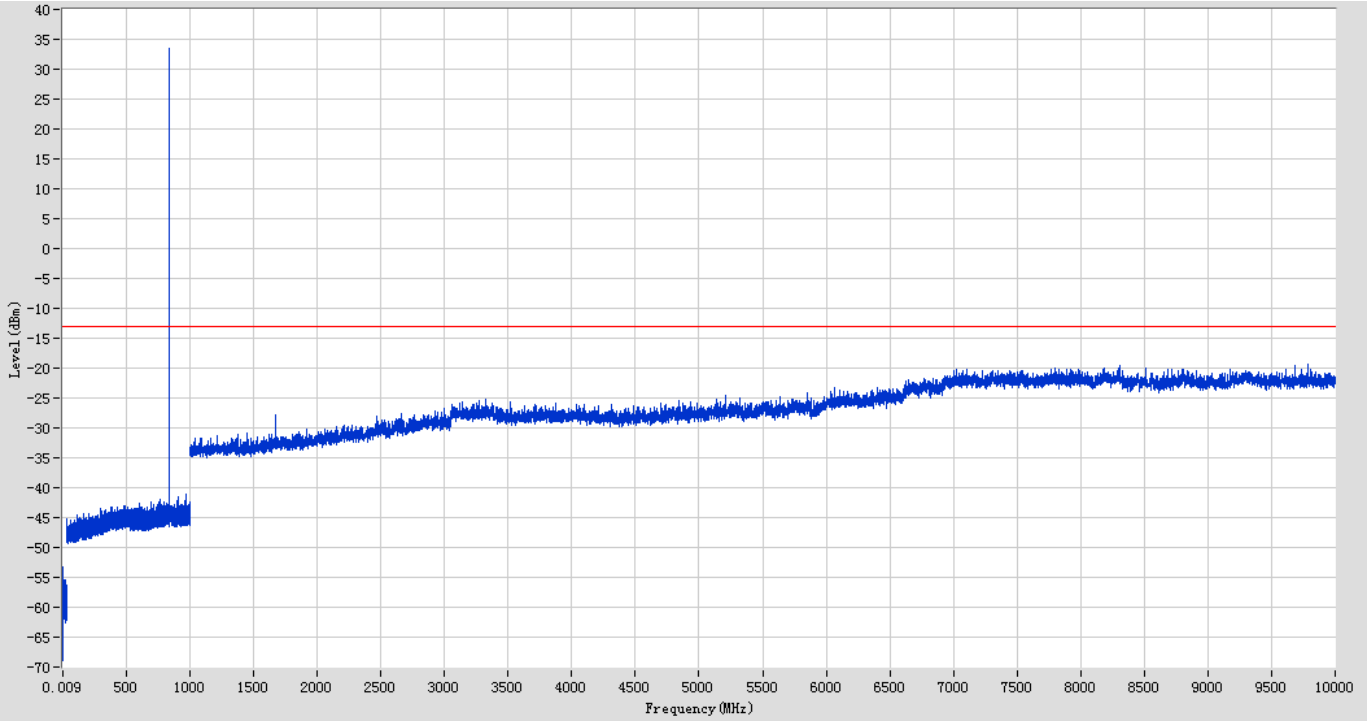
Test Data

GSM 850MHz CHANNEL 128



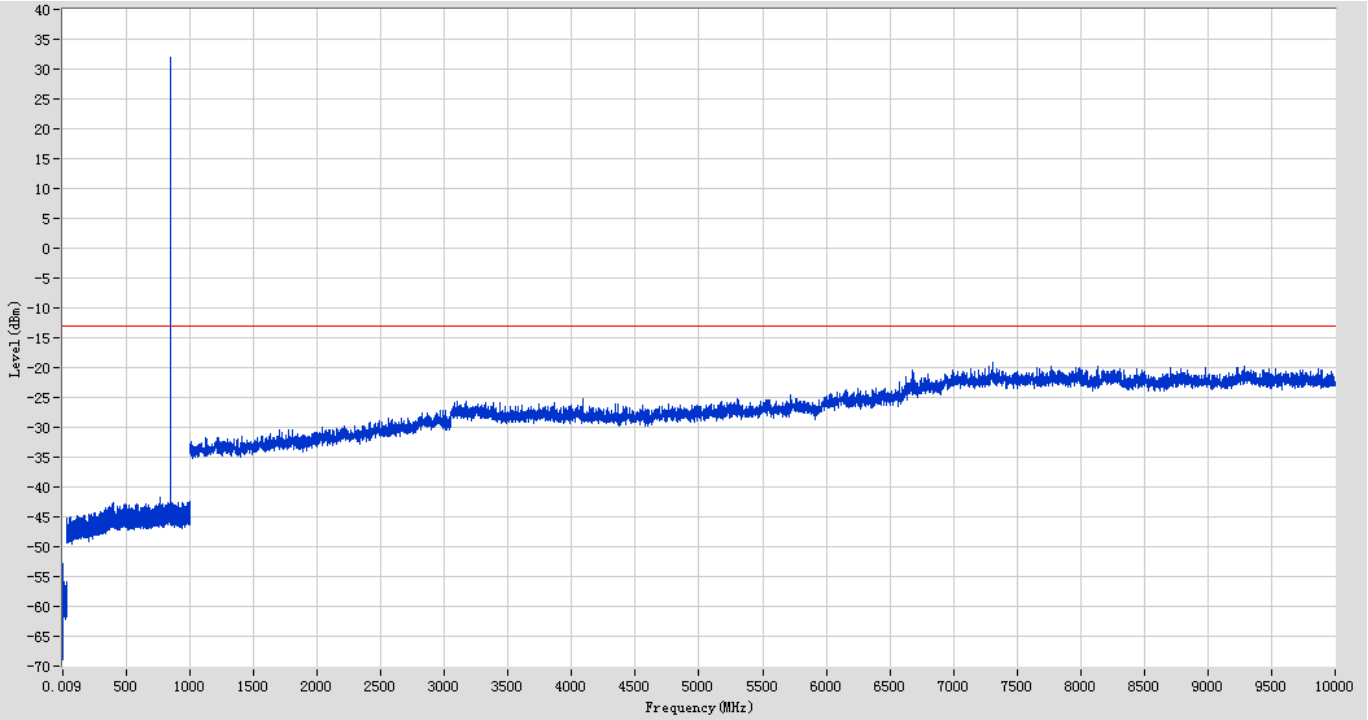
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	377.874	-42.3484	-13	29.35	Pass
500	1000	0.1	Peak	824.1648	33.31652	N/A	N/A	N/A
1000	10000	1	Peak	7549.8	-19.3382	-13	6.33	Pass

GSM 850MHz CHANNEL 190



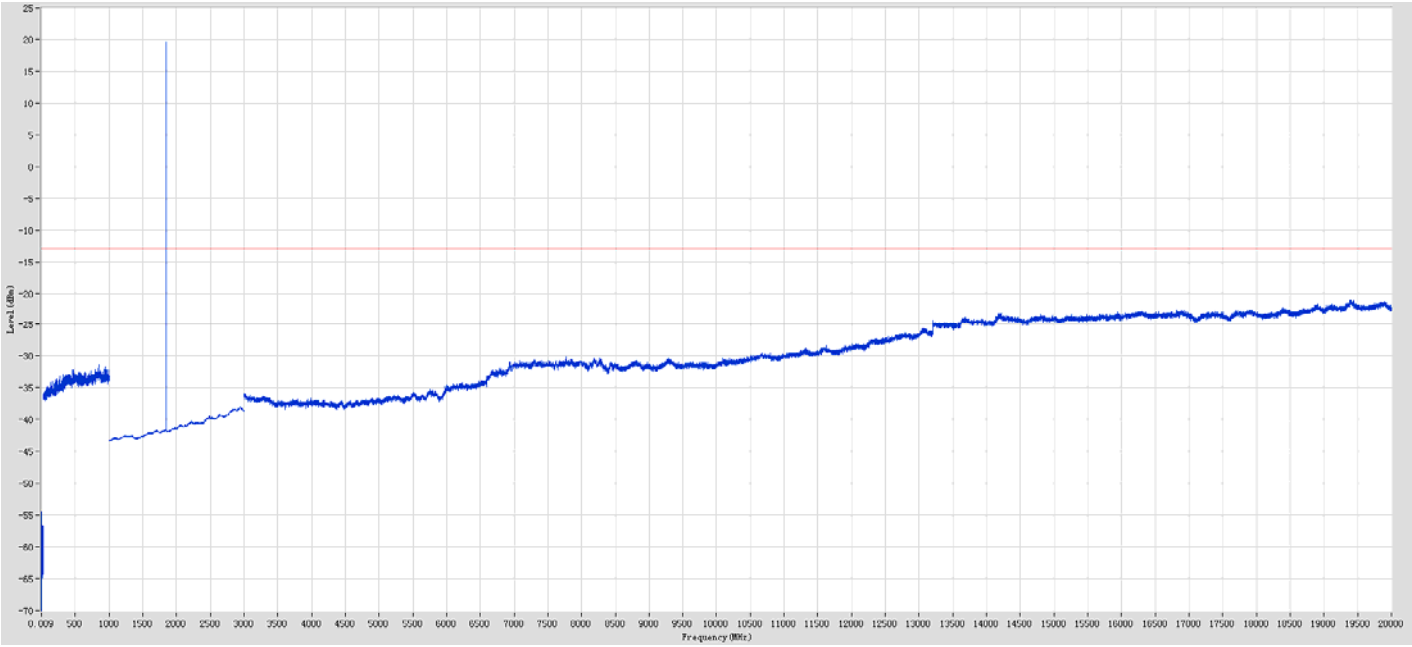
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	490.8981	-43.0456	-13	30.04565	Pass
500	1000	0.1	Peak	836.6673	33.43485	N/A	N/A	N/A
1000	10000	1	Peak	9781.73	-19.4441	-13	6.444131	Pass

GSM 850MHz CHANNEL 251



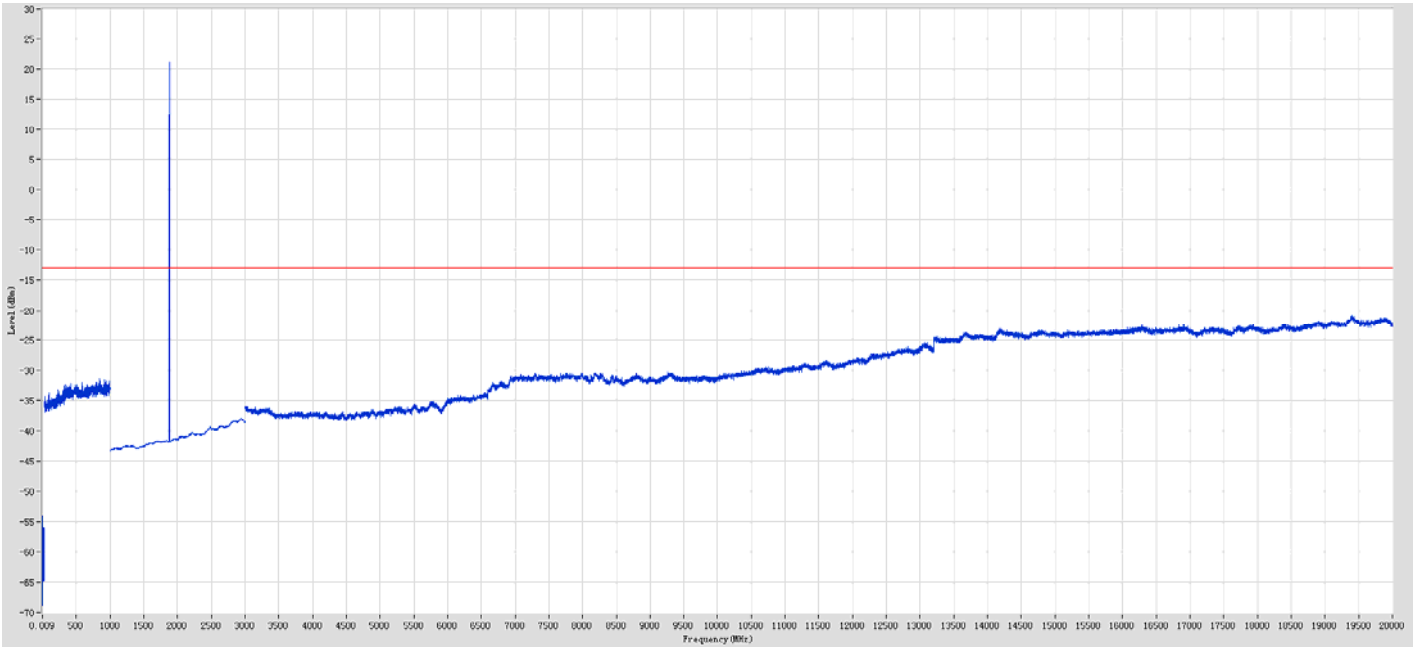
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	500	0.1	Peak	398.5784	-42.6357	-13	29.63568	Pass
500	1000	0.1	Peak	848.8698	32.02244	N/A	N/A	N/A
1000	10000	1	Peak	7305.77	-19.0224	-13	6.02235	Pass

GSM 1900MHz CHANNEL 512



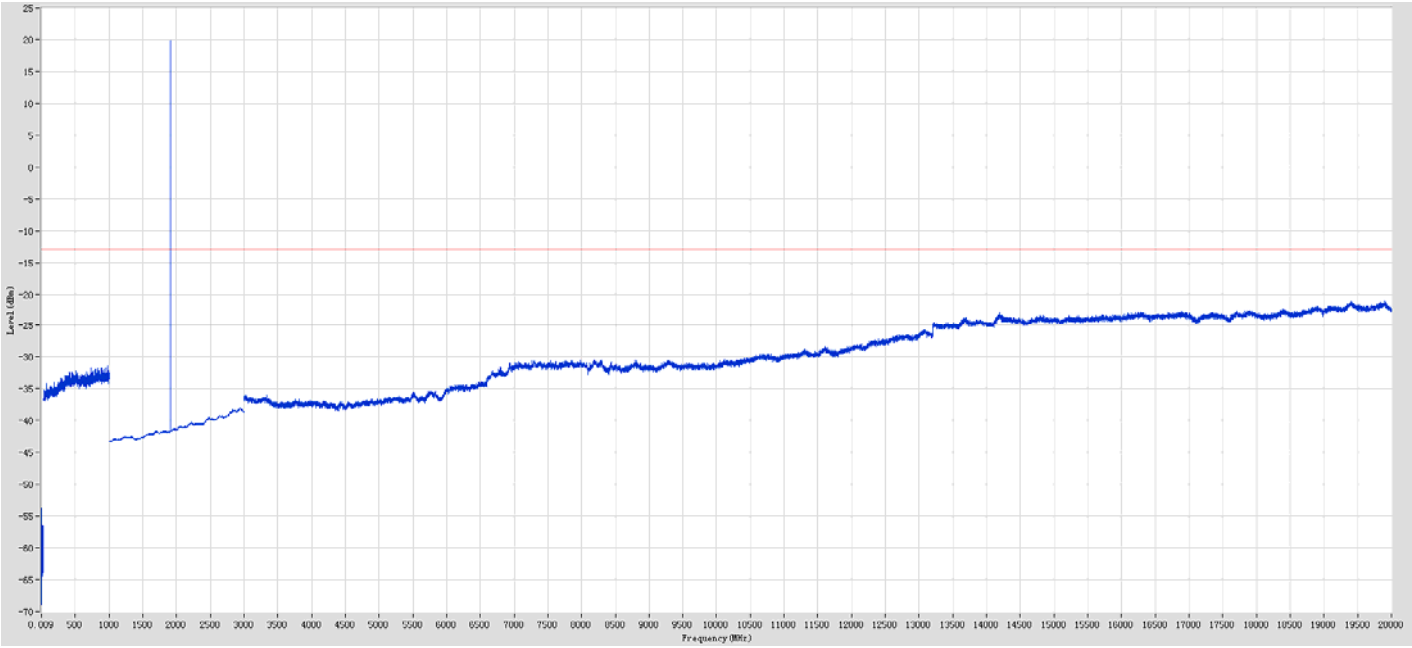
Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	1	Peak	858.8545	-31.4375	-13	18.43754	Pass
1000	3000	1	RMS	1849.425	19.56401	N/A	N/A	N/A
3000	20000	1	RMS	19392.01	-21.0436	-13	8.043617	Pass

GSM 1900MHz CHANNEL 661



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	845.8411	-31.4644	-13	18.46437	Pass
1000	3000	1	Peak	1880.44	21.08779	N/A	N/A	N/A
3000	20000	1	Peak	19400.03	-20.9489	-13	7.948863	Pass

GSM 1900MHz CHANNEL 810



Start Frequency[MHz]	Stop Frequency[MHz]	RBW [MHz]	Detector	Frequency [MHz]	Emission[dBm]	Limit [dBm]	Margin [dB]	Verdict
30	1000	0.1	Peak	980.9804	-31.4325	-13	18.43249	Pass
1000	3000	1	Peak	1910.455	19.84604	N/A	N/A	N/A
3000	20000	1	Peak	19905.85	-20.9518	-13	7.951797	Pass

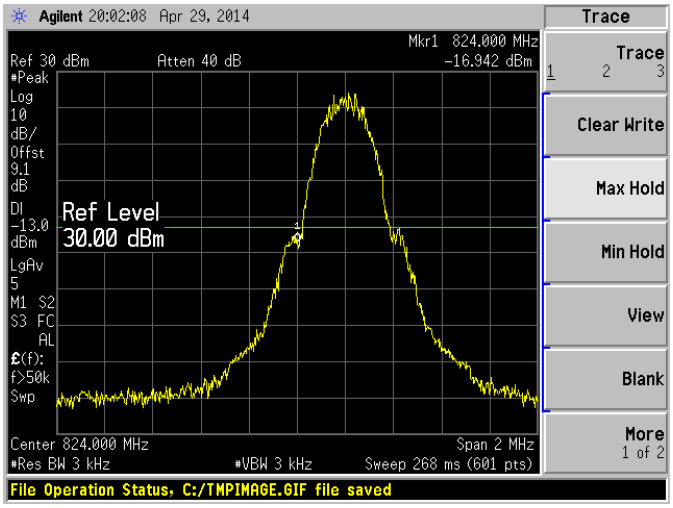
A.6 Band Edge

Test Data

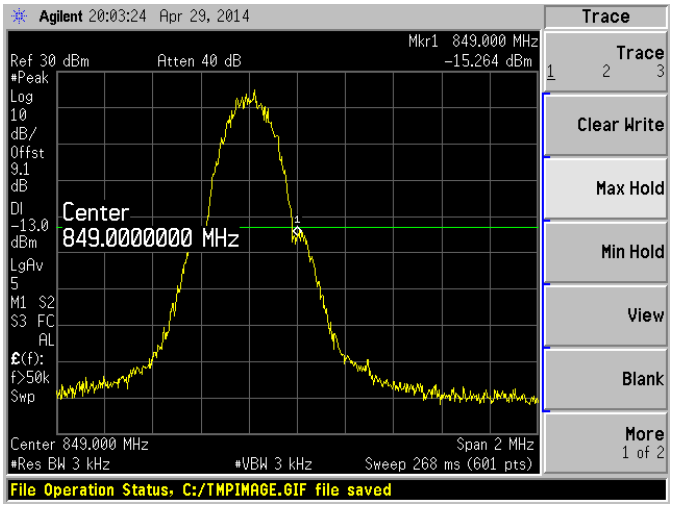
Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850	128	824.2	-16.94	A.5.1	-13	PASS
	251	848.8	-15.26	A.5.2		PASS
GSM 1900	512	1850.2	-16.17	A.5.3	-13	PASS
	810	1909.8	-19.80	A.5.4		PASS

Test Plots

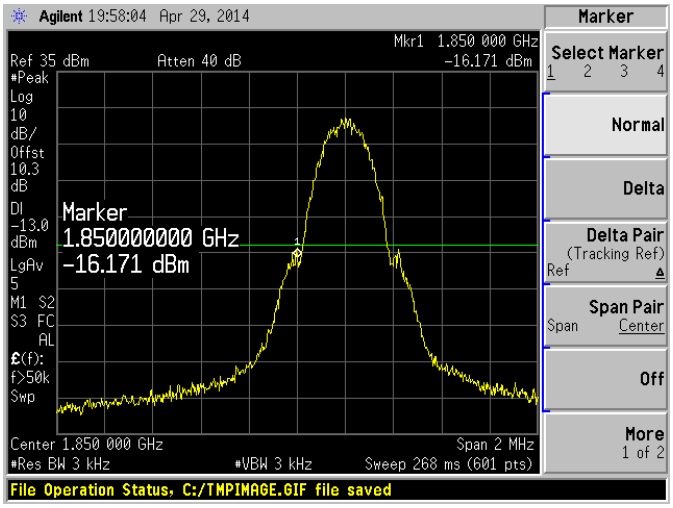
GSM 850MHz CHANNEL 128



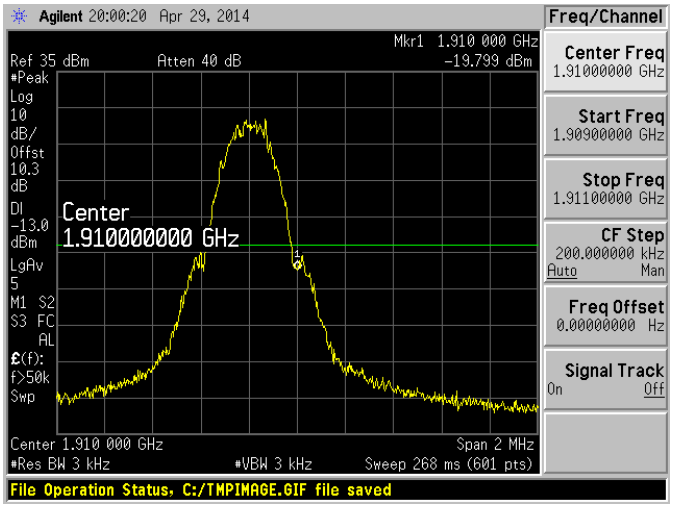
GSM 850MHz CHANNEL 251



GSM 1900MHz CHANNEL 512



GSM 1900MHz CHANNEL 810



A.7 Transmitter Radiated Power (EIRP/ERP)

Minimum RF power: GSM850 5.7dBm, GSM 1900 0.7dBm

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	-16.54	42	25.46	0.352	38.5	7	PASS
	190	836.60	5	-17.16	42	24.84	0.305			PASS
	251	848.80	5	-17.37	42	24.63	0.290			PASS
GPRS 850	128	824.20	5	-17.44	42	24.56	0.286	38.5	7	PASS
	190	836.60	5	-17.93	42	24.07	0.255			PASS
	251	848.80	5	-18.2	42	23.80	0.240			PASS
EGPRS 850	128	824.20	5	-17.57	42	24.43	0.277	38.5	7	PASS
	190	836.60	5	-18.05	42	23.95	0.248			PASS
	251	848.80	5	-18.26	42	23.74	0.237			PASS

Band	Channel	Frequency (MHz)	PCL	Measured EIRP				Limit		Verdict
				SA Read Value (dBm)	Correction Factor(dB)	ERP (dBm)	ERP (W)	dBm	W	
GSM 1900	512	1850.2	0	-19.21	49	29.79	0.953	33	2	PASS
	661	1880.0	0	-19.43	49	29.57	0.906			PASS
	810	1909.8	0	-19.47	49	29.53	0.897			PASS
GPRS 1900	512	1850.2	0	-18.08	49	30.92	1.236	33	2	PASS
	661	1880.0	0	-18.62	49	30.38	1.091			PASS
	810	1909.8	0	-20.31	49	28.69	0.740			PASS
EGPRS 1900	512	1850.2	0	-20.52	49	28.48	0.705	33	2	PASS
	661	1880.0	0	-20.49	49	28.51	0.710			PASS
	810	1909.8	0	-20.41	49	28.59	0.723			PASS

Test Plots

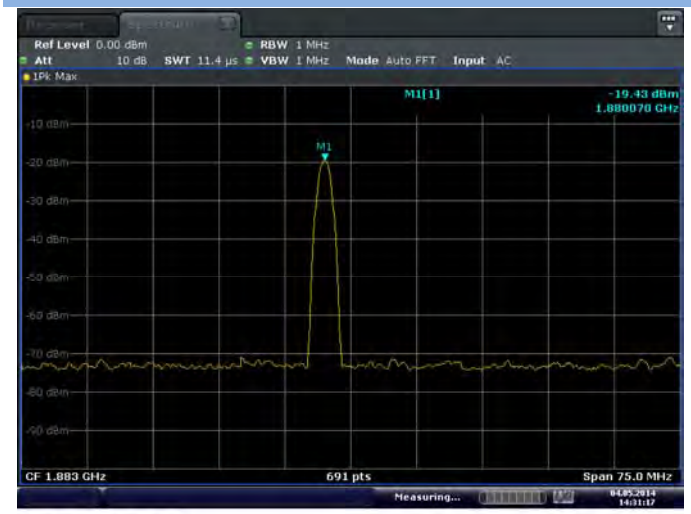
GSM 850MHz CHANNEL 128

GSM 850MHz CHANNEL 190

GSM 850MHz CHANNEL 251

GSM 1900MHz CHANNEL 512

GSM 1900MHz CHANNEL 661



GSM 1900MHz CHANNEL 810

850MHz CHANNEL 128

Date: 4.MAY.2014 17:44:30

850MHz CHANNEL 190

Date: 4.MAY.2014 17:41:21

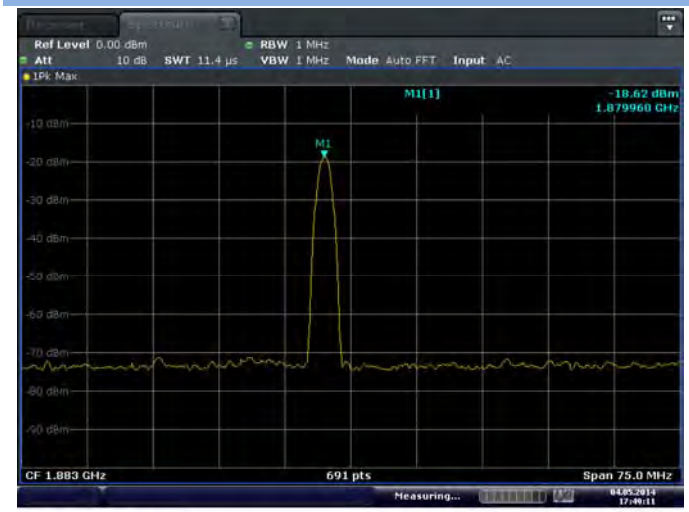
GPRS 850MHz CHANNEL 251

Date: 4.MAY.2014 17:45:53

GPRS 1900MHz CHANNEL 512

Date: 4.MAY.2014 17:50:14

GPRS 1900MHz CHANNEL 661



Date: 4.MAY.2014 17:49:11

GPRS 1900MHz CHANNEL 810

Date: 4.MAY.2014 17:52:07

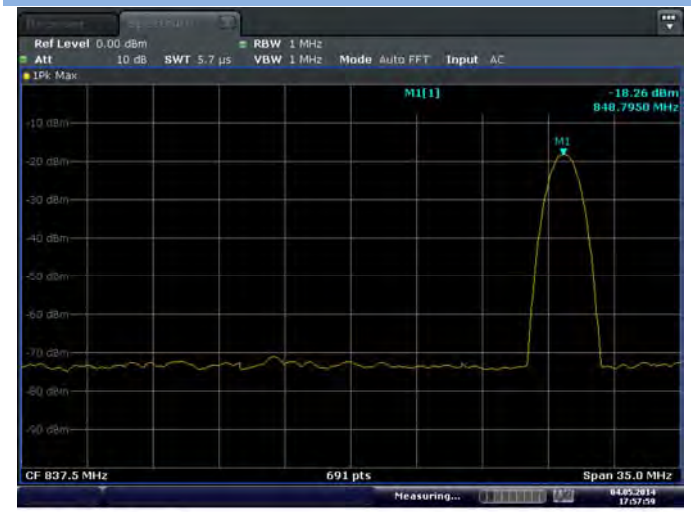
EGPRS 850MHz CHANNEL 128

Date: 4.MAY.2014 17:56:52

EGPRS 850MHz CHANNEL 190

Date: 4.MAY.2014 17:55:26

EGPRS 850MHz CHANNEL 251

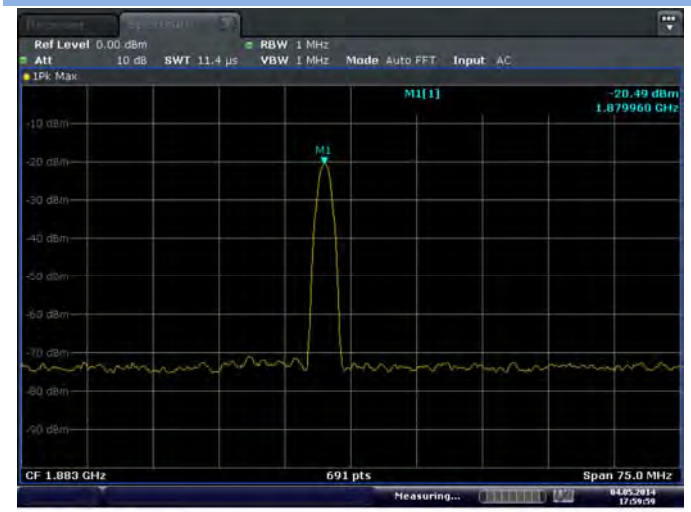


Date: 4.MAY.2014 17:57:59

EGPRS 1900MHz CHANNEL 512

Date: 4.MAY.2014 18:01:23

EGPRS 1900MHz CHANNEL 661



Date: 4.MAY.2014 17:59:59

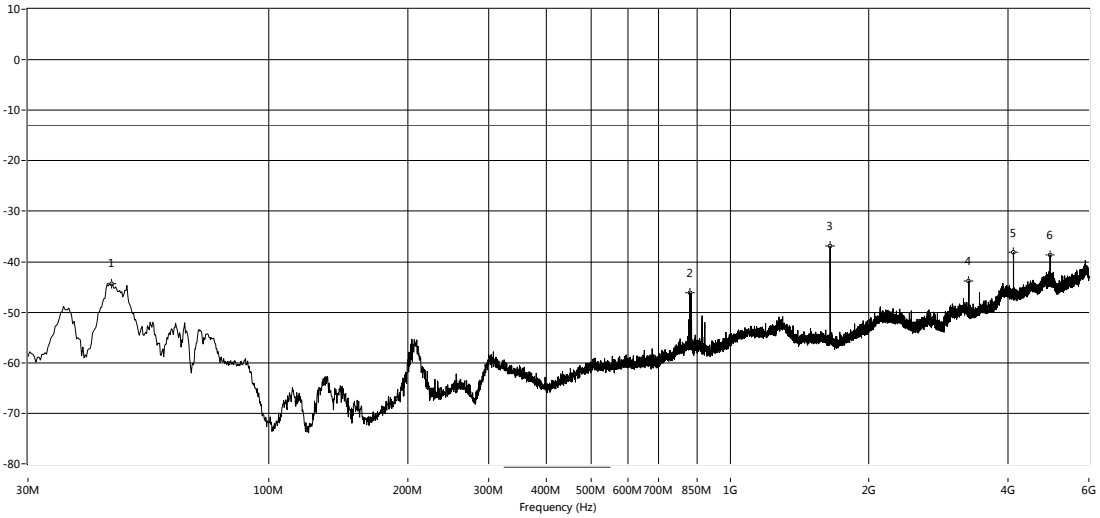
EGPRS 1900MHz CHANNEL 810

Date: 4.MAY.2014 18:01:56

A.8 Radiated Out of Band Emissions

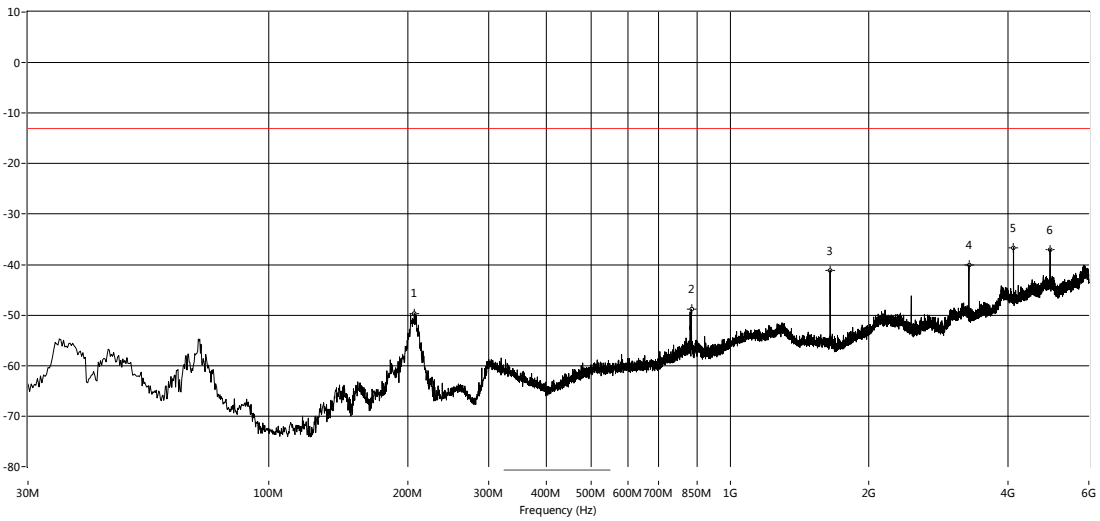
Test Data

GSM 850MHz CHANNEL 128 30MHz- 6GHz, ANT V



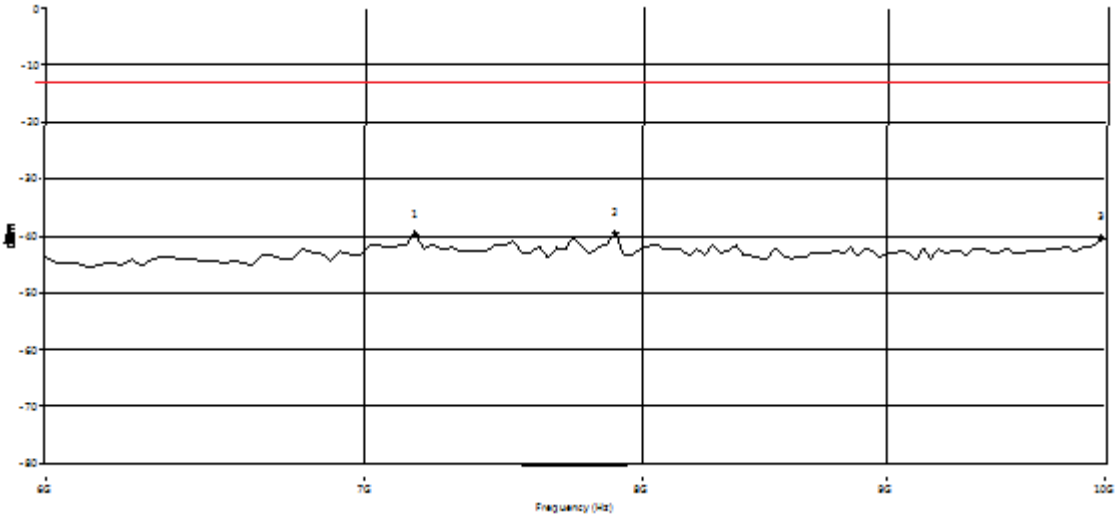
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
45.516	-44.40	-13.0	31.4	0.0	Vertical	PASS
817.686	-46.15	-13.0	33.1	0.0	Vertical	PASS
1648.338	-36.90	-13.0	23.9	0.0	Vertical	PASS
3296.176	-43.78	-13.0	30.8	0.0	Vertical	PASS
4120.970	-38.16	-13.0	25.2	0.0	Vertical	PASS
4945.764	-39.84	-13.0	26.8	0.0	Vertical	PASS

GSM 850MHz CHANNEL 128 30MHz- 6GHz, ANT H



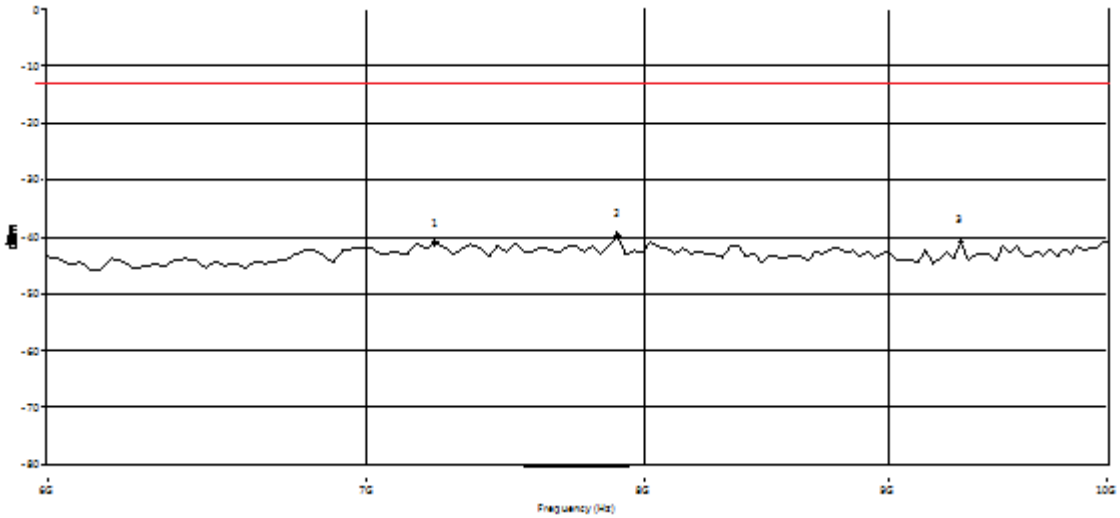
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
206.496	-49.68	-13.0	36.7	0.0	Horizontal	PASS
824.231	-48.86	-13.0	35.9	0.0	Horizontal	PASS
1648.338	-41.13	-13.0	28.1	0.0	Horizontal	PASS
3296.926	-40.16	-13.0	27.2	0.0	Horizontal	PASS
4120.220	-36.60	-13.0	23.6	0.0	Horizontal	PASS
4945.764	-37.44	-13.0	24.4	0.0	Horizontal	PASS

GSM 850MHz CHANNEL 128 6GHz- 12.75GHz, ANT V



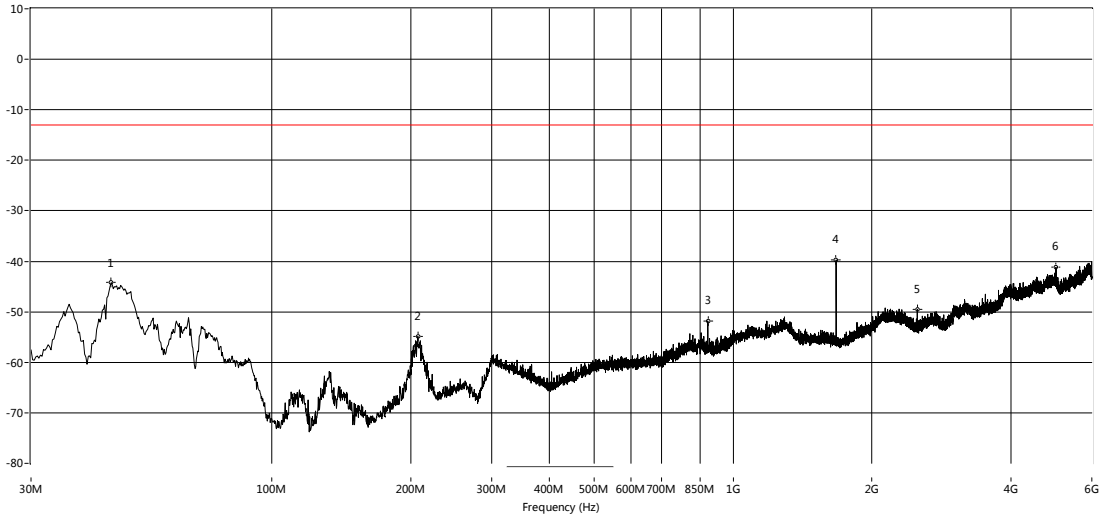
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-39.78	-13.0	12.4	0.0	Vertical	PASS
7896.839	-39.54	-13.0	11.0	0.0	Vertical	PASS
9983.361	-40.44	-13.0	11.0	0.0	Vertical	PASS

GSM 850MHz CHANNEL 128 6GHz- 12.75GHz, ANT H



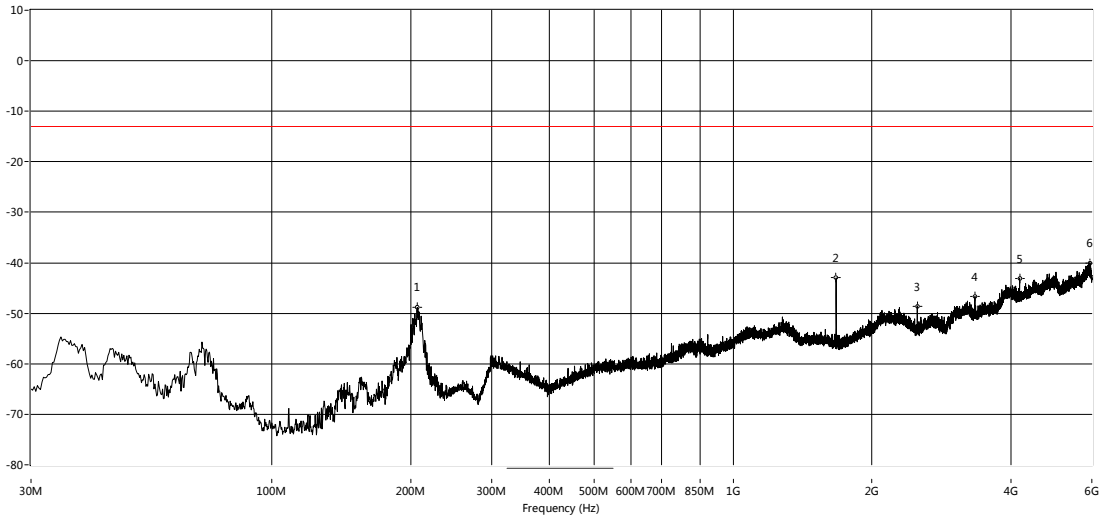
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7232.945	-41.09	-13.0	11.6	0.0	Horizontal	PASS
7896.839	-39.74	-13.0	11.2	0.0	Horizontal	PASS
9319.468	-40.95	-13.0	11.4	0.0	Horizontal	PASS

GSM 850MHz CHANNEL 190 30MHz- 6GHz, ANT V



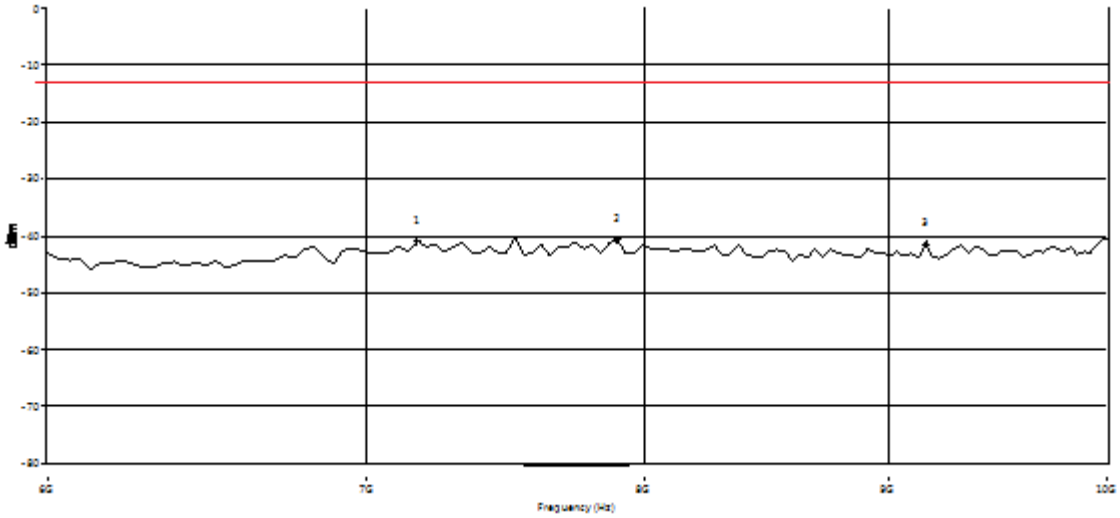
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
44.789	-44.23	-13.0	31.2	0.0	Vertical	PASS
207.223	-54.88	-13.0	41.9	0.0	Vertical	PASS
881.690	-51.83	-13.0	38.8	0.0	Vertical	PASS
1673.332	-39.73	-13.0	26.7	0.0	Vertical	PASS
2510.122	-49.51	-13.0	36.5	0.0	Vertical	PASS
5020.740	-41.26	-13.0	28.3	0.0	Vertical	PASS

GSM 850MHz CHANNEL 190 30MHz- 6GHz, ANT H



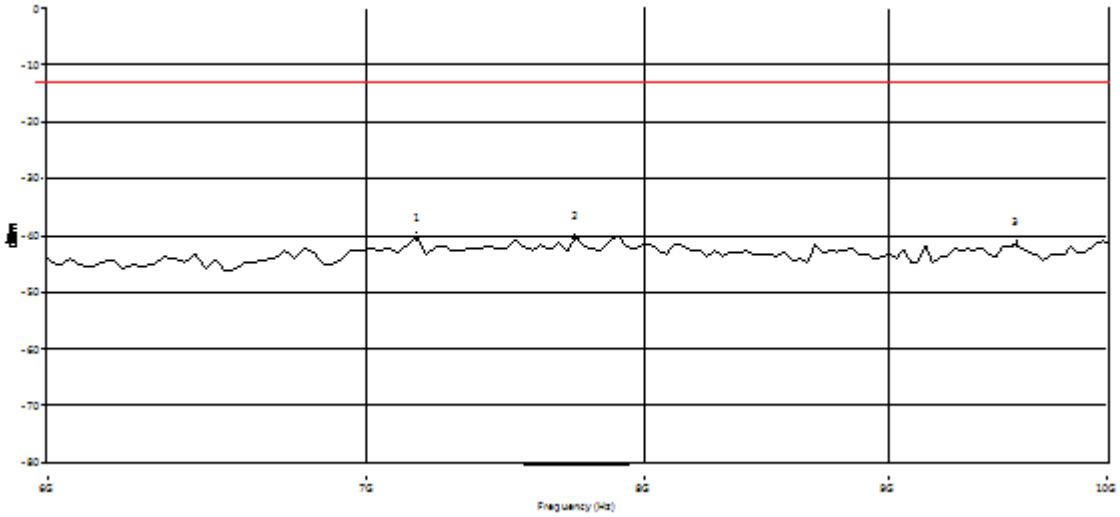
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
206.496	-48.85	-13.0	35.8	0.0	Horizontal	PASS
1673.332	-42.98	-13.0	30.0	0.0	Horizontal	PASS
2510.122	-48.55	-13.0	35.5	0.0	Horizontal	PASS
3346.413	-46.68	-13.0	33.7	0.0	Horizontal	PASS
4183.204	-43.06	-13.0	30.1	0.0	Horizontal	PASS
5944.514	-40.06	-13.0	27.1	0.0	Horizontal	PASS

GSM 850MHz CHANNEL 190 6GHz- 12.75GHz, ANT V



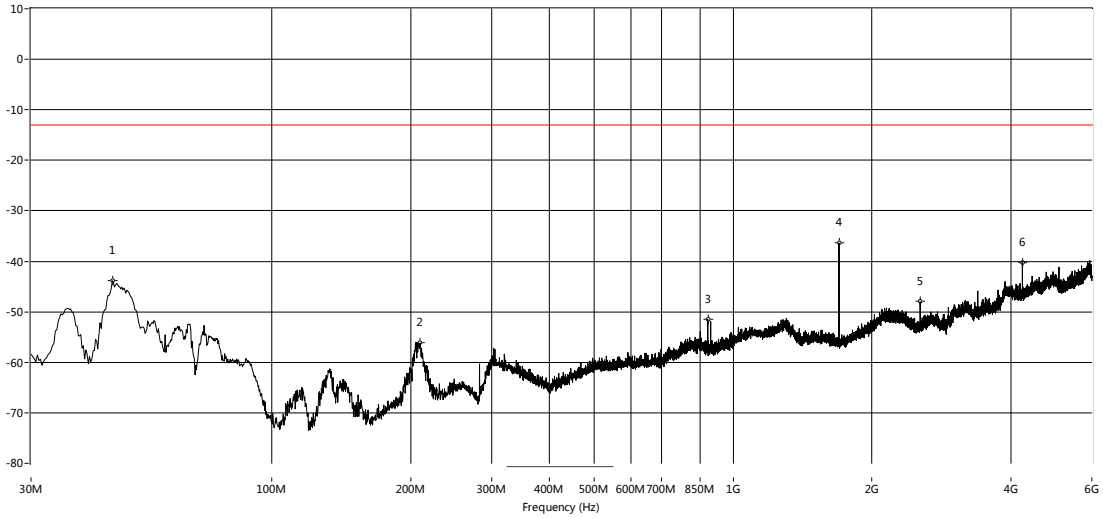
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-40.93	-13.0	17.0	0.0	Vertical	PASS
7896.839	-40.66	-13.0	16.7	0.0	Vertical	PASS
9161.398	-41.53	-13.0	17.5	0.0	Vertical	PASS

GSM 850MHz CHANNEL 190 6GHz- 12.75GHz, ANT H



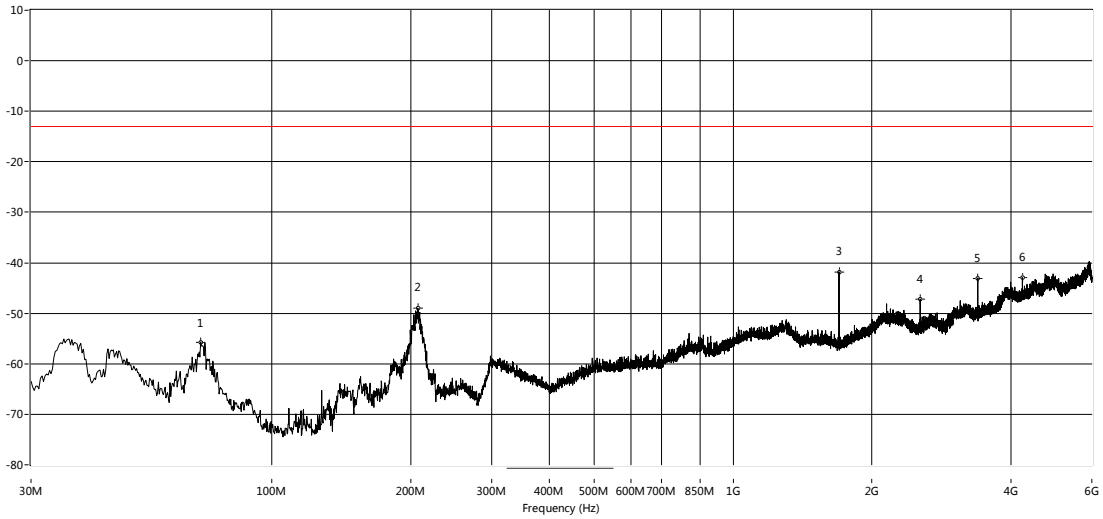
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-40.28	-13.0	16.8	0.0	Horizontal	PASS
7738.769	-40.42	-13.0	17.5	0.0	Horizontal	PASS
9572.379	-41.57	-13.0	16.9	0.0	Horizontal	PASS

GSM 850MHz CHANNEL 251 30MHz- 6GHz, ANT V



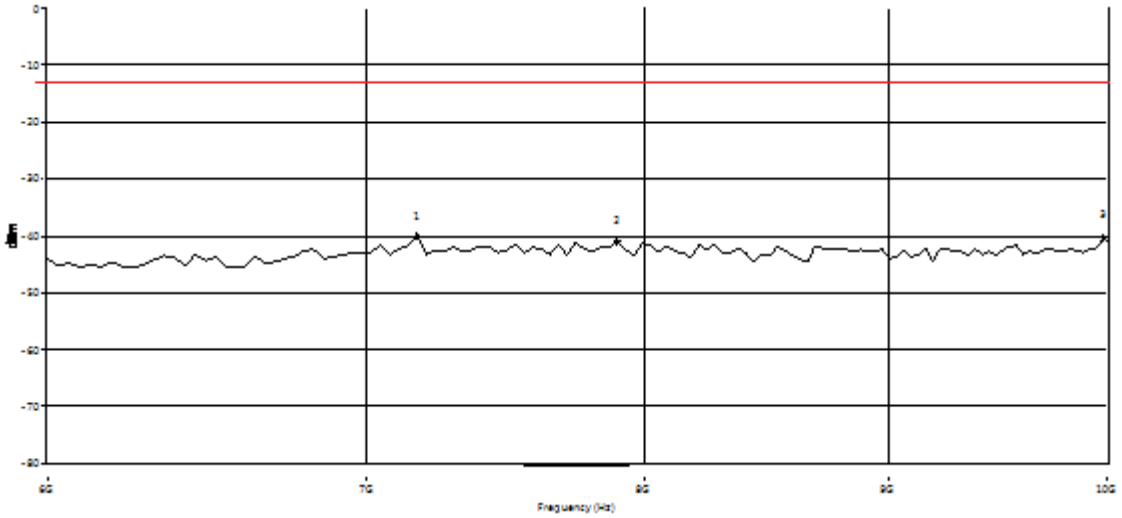
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
45.031	-43.86	-13.0	30.9	0.0	Vertical	PASS
209.648	-56.19	-13.0	43.2	0.0	Vertical	PASS
881.690	-51.52	-13.0	38.5	0.0	Vertical	PASS
1697.826	-36.40	-13.0	23.4	0.0	Vertical	PASS
2546.613	-47.99	-13.0	35.0	0.0	Vertical	PASS
4243.189	-40.32	-13.0	27.3	0.0	Vertical	PASS

GSM 850MHz CHANNEL 251 30MHz- 6GHz, ANT H



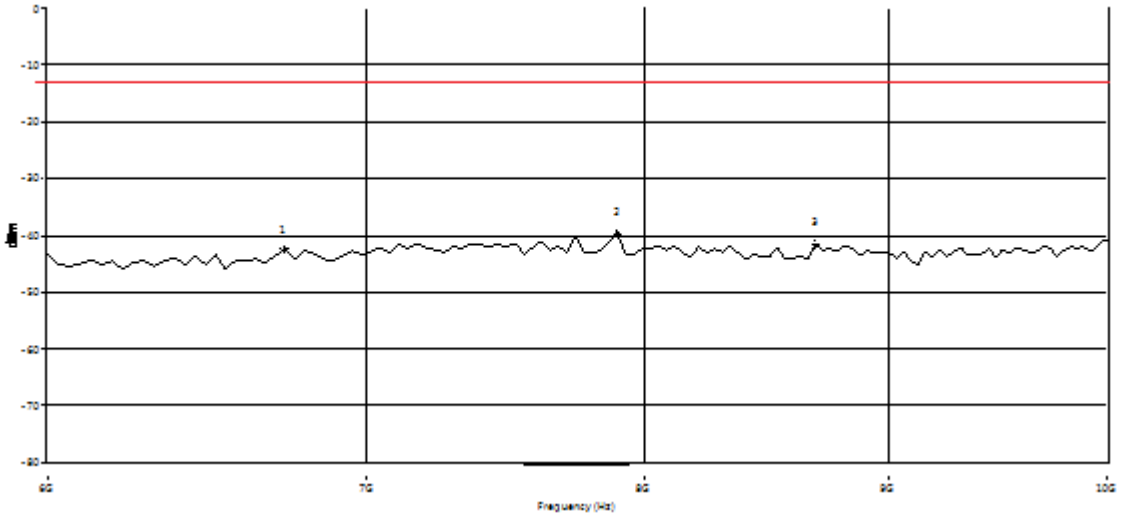
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
70.002	-55.68	-13.0	42.7	0.0	Horizontal	PASS
207.223	-48.97	-13.0	36.0	0.0	Horizontal	PASS
1697.326	-41.82	-13.0	28.8	0.0	Horizontal	PASS
2546.613	-47.18	-13.0	34.2	0.0	Horizontal	PASS
3395.151	-43.04	-13.0	30.0	0.0	Horizontal	PASS

GSM 850MHz CHANNEL 251 6GHz- 12.75GHz, ANT V



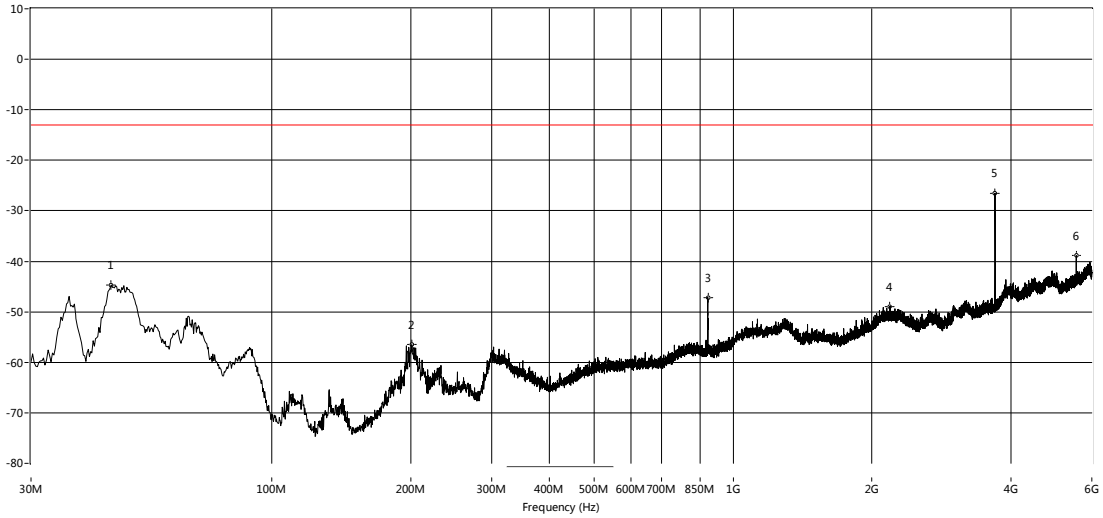
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-40.04	-13.0	15.9	0.0	Vertical	PASS
7896.839	-40.96	-13.0	17.7	0.0	Vertical	PASS
9983.361	-40.16	-13.0	18.3	0.0	Vertical	PASS

GSM 850MHz CHANNEL 251 6GHz- 12.75GHz, ANT H



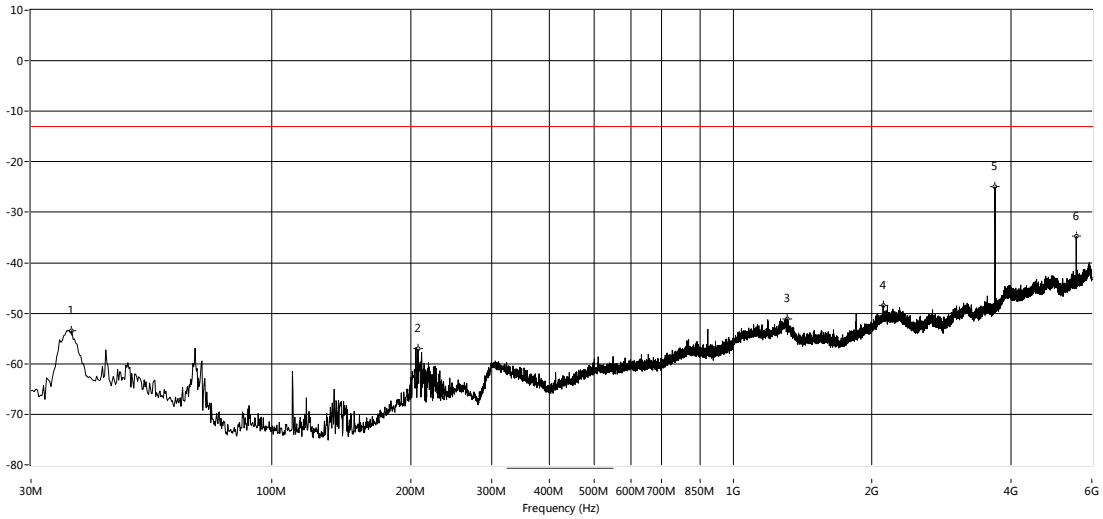
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
6727.121	-42.45	-13.0	16.3	0.0	Horizontal	PASS
7896.839	-39.72	-13.0	16.3	0.0	Horizontal	PASS
8687.188	-41.66	-13.0	17.7	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 512 30MHz- 6GHz, ANT V



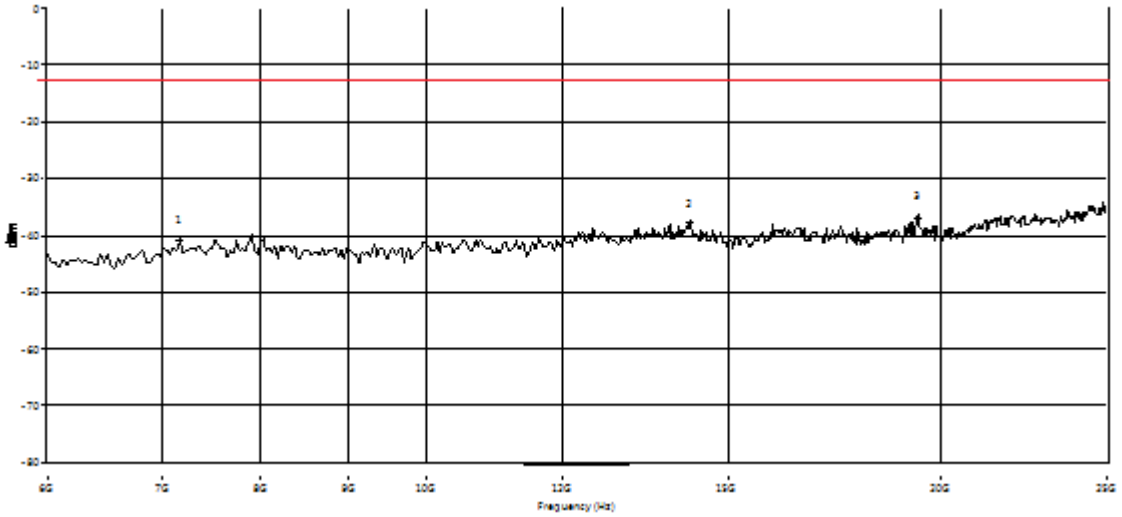
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
44.789	-44.68	-13.0	31.7	0.0	Vertical	PASS
200.920	-56.52	-13.0	43.5	0.0	Vertical	PASS
881.690	-47.18	-13.0	34.2	0.0	Vertical	PASS
2187.203	-48.93	-13.0	35.9	0.0	Vertical	PASS
3700.325	-26.52	-13.0	13.5	0.0	Vertical	PASS
5550.862	-38.88	-13.0	25.9	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 512 30MHz- 6GHz, ANT H



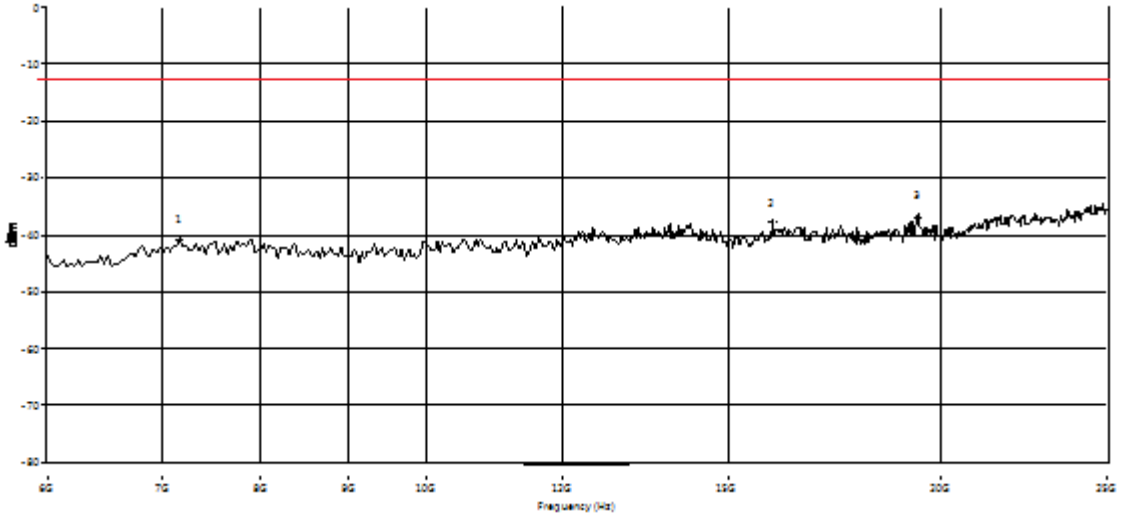
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
36.788	-53.46	-13.0	40.5	0.0	Horizontal	PASS
207.223	-57.08	-13.0	44.1	0.0	Horizontal	PASS
1309.423	-51.07	-13.0	38.1	0.0	Horizontal	PASS
2115.721	-48.47	-13.0	35.5	0.0	Horizontal	PASS
3700.325	-25.01	-13.0	12.0	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 512 6GHz- 25GHz, ANT V



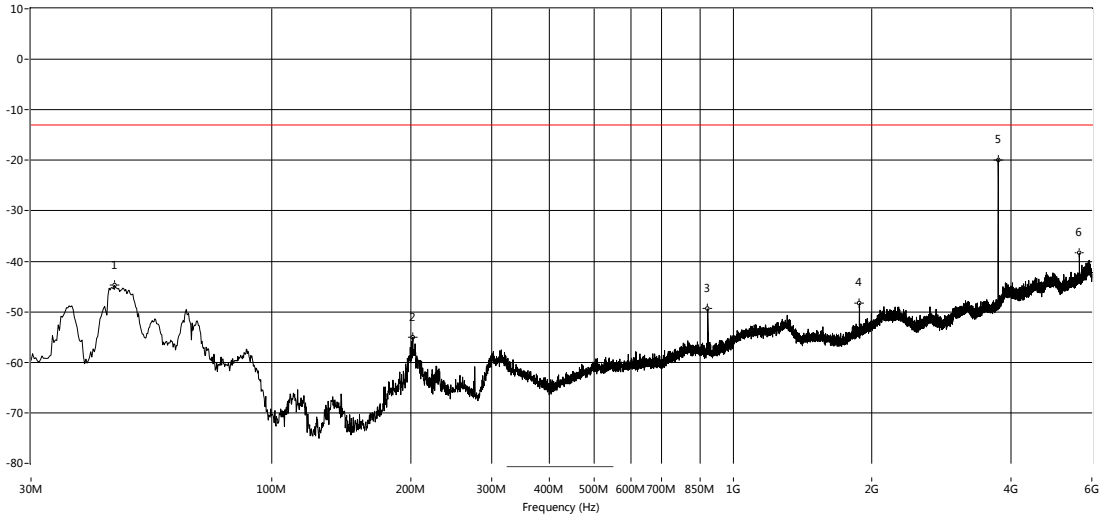
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-40.82	-13.0	16.9	0.0	Vertical	PASS
14251.248	-37.85	-13.0	17.1	0.0	Vertical	PASS
19372.712	-36.98	-13.0	15.8	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 512 6GHz- 25GHz, ANT H



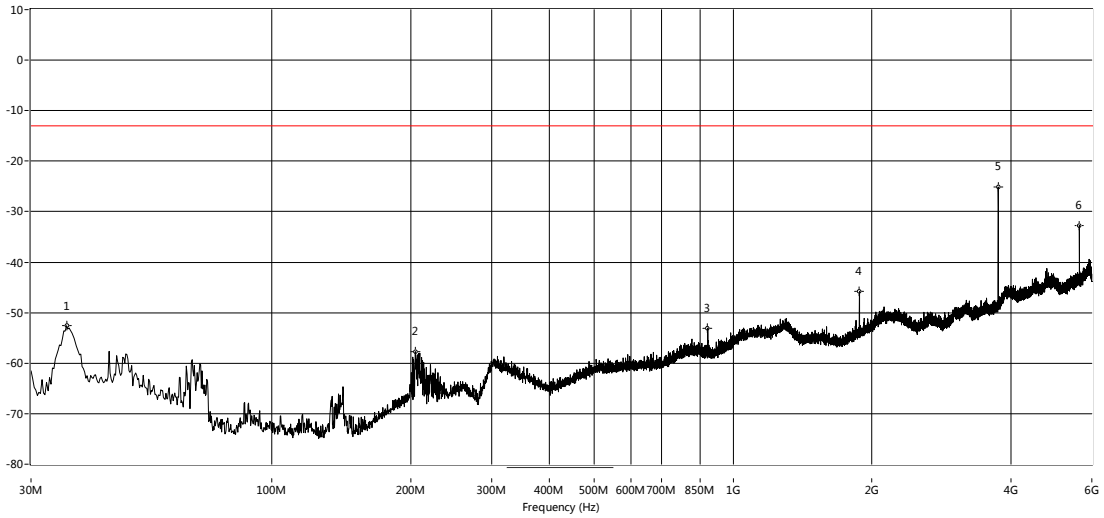
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7169.717	-40.81	-13.0	15.9	0.0	Horizontal	PASS
15926.789	-37.87	-13.0	17.7	0.0	Horizontal	PASS
19372.712	-36.98	-13.0	15.4	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 661 30MHz- 6GHz, ANT V



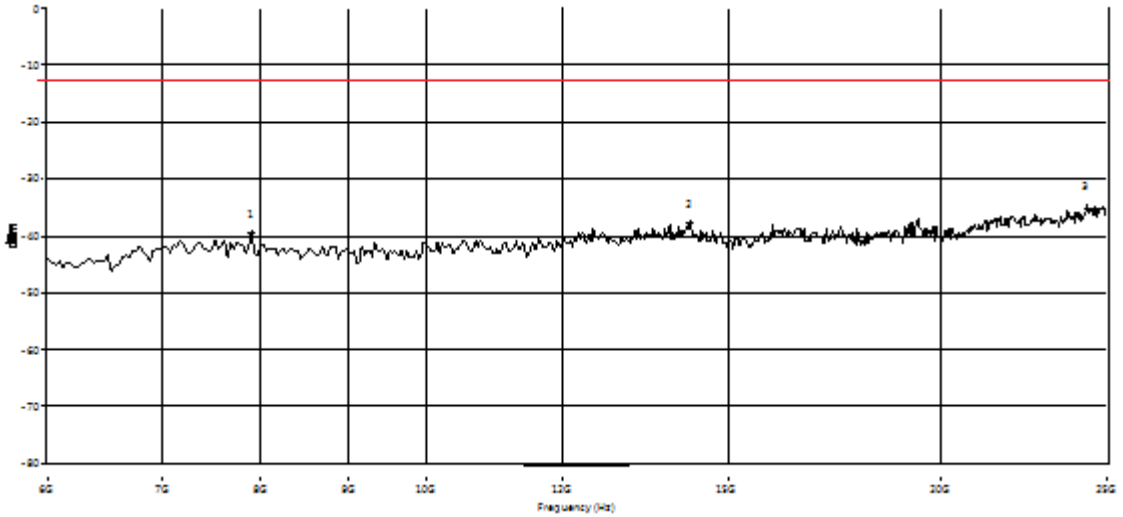
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
45.516	-44.77	-13.0	31.8	0.0	Vertical	PASS
202.132	-55.00	-13.0	42.0	0.0	Vertical	PASS
881.447	-49.42	-13.0	36.4	0.0	Vertical	PASS
1880.280	-48.35	-13.0	35.4	0.0	Vertical	PASS
3759.560	-19.87	-13.0	6.9	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 661 30MHz- 6GHz, ANT H



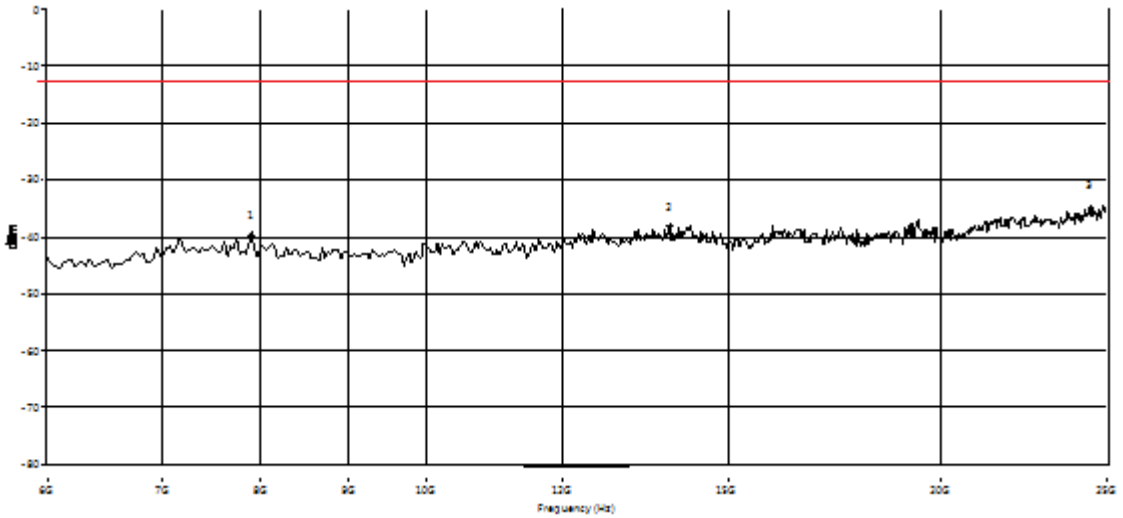
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
35.819	-52.60	-13.0	39.6	360.0	Horizontal	PASS
204.556	-57.73	-13.0	44.7	0.0	Horizontal	PASS
881.447	-53.05	-13.0	40.0	0.0	Horizontal	PASS
1880.280	-45.83	-13.0	32.8	0.0	Horizontal	PASS
3759.560	-25.14	-13.0	12.1	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 661 6GHz- 25GHz, ANT V



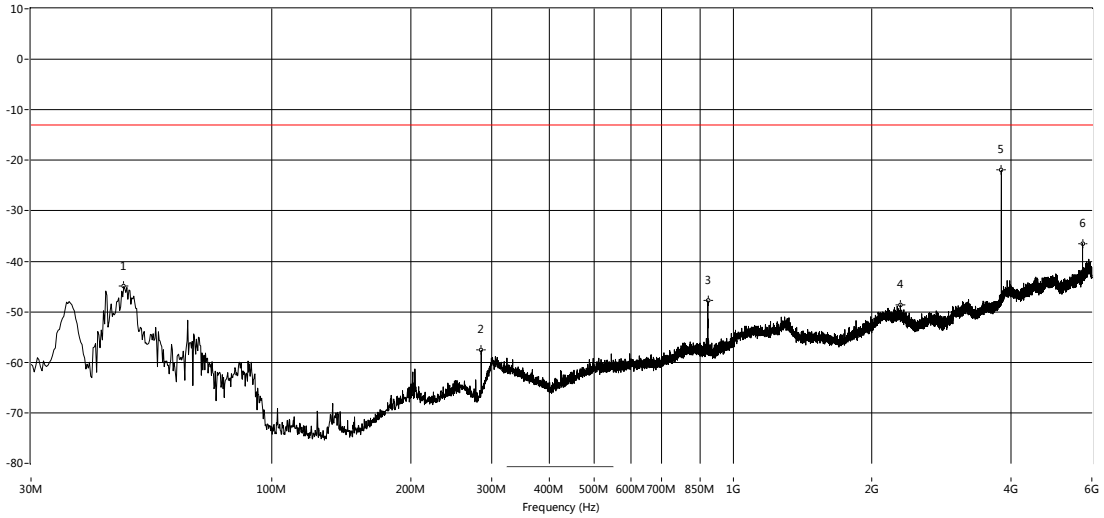
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7896.839	-39.63	-13.0	15.9	0.0	Vertical	PASS
14251.248	-37.85	-13.0	15.5	0.0	Vertical	PASS
24336.106	-35.12	-13.0	16.1	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 661 6GHz- 25GHz, ANT H



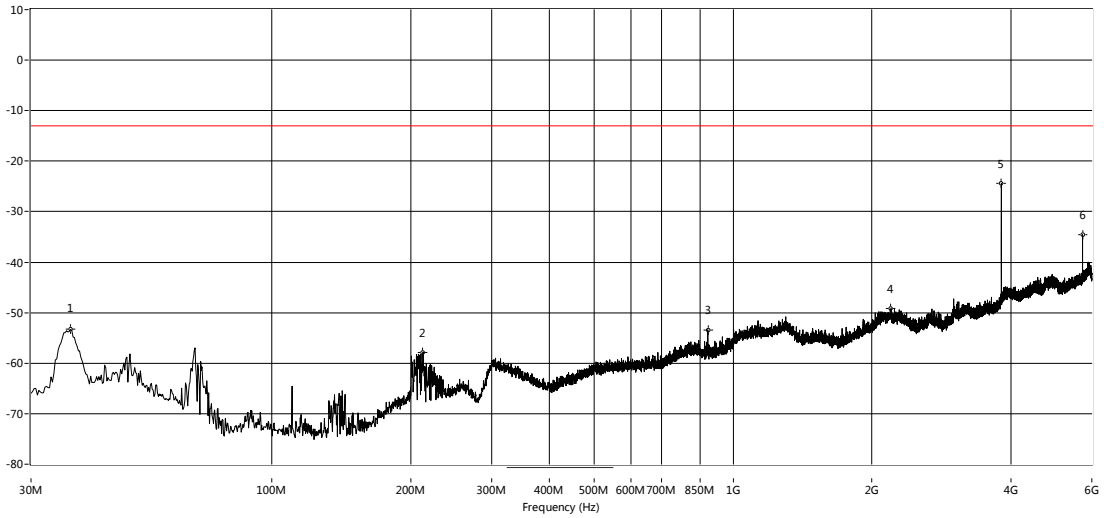
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7896.839	-39.69	-13.0	15.3	0.0	Horizontal	PASS
13871.880	-38.13	-13.0	15.3	0.0	Horizontal	PASS
24462.562	-34.91	-13.0	15.0	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 810 30MHz- 6GHz, ANT V



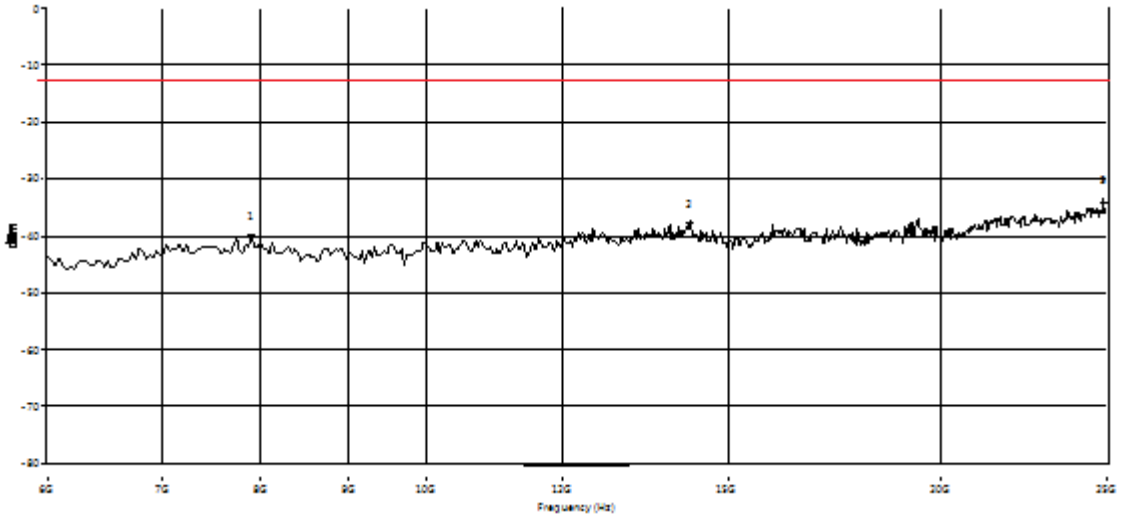
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
47.698	-44.97	-13.0	32.0	0.0	Vertical	PASS
284.319	-57.60	-13.0	44.6	0.0	Vertical	PASS
881.932	-47.79	-13.0	34.8	0.0	Vertical	PASS
2306.673	-48.66	-13.0	35.7	-0.0	Vertical	PASS
3819.545	-21.98	-13.0	9.0	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 810 30MHz- 6GHz, ANT H



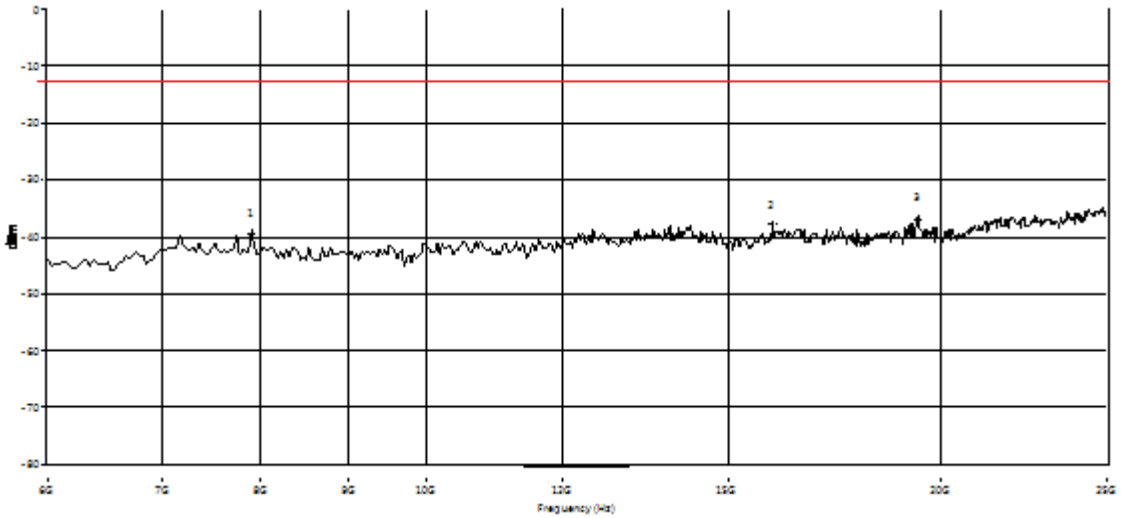
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
36.546	-53.34	-13.0	40.3	0.0	Horizontal	PASS
212.557	-57.82	-13.0	44.8	0.0	Horizontal	PASS
881.932	-53.39	-13.0	40.4	0.0	Horizontal	PASS
2192.202	-49.22	-13.0	36.2	360.0	Horizontal	PASS
3819.545	-24.37	-13.0	11.4	0.0	Horizontal	PASS
5729.318	-34.61	-13.0	21.6	0.0	Horizontal	PASS

GSM 1900MHz CHANNEL 810 6GHz- 25GHz, ANT V



Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7896.839	-39.88	-13.0	16.4	0.0	Vertical	PASS
14251.248	-37.85	-13.0	15.2	0.0	Vertical	PASS
24873.544	-34.26	-13.0	16.4	0.0	Vertical	PASS

GSM 1900MHz CHANNEL 810 6GHz- 25GHz, ANT H

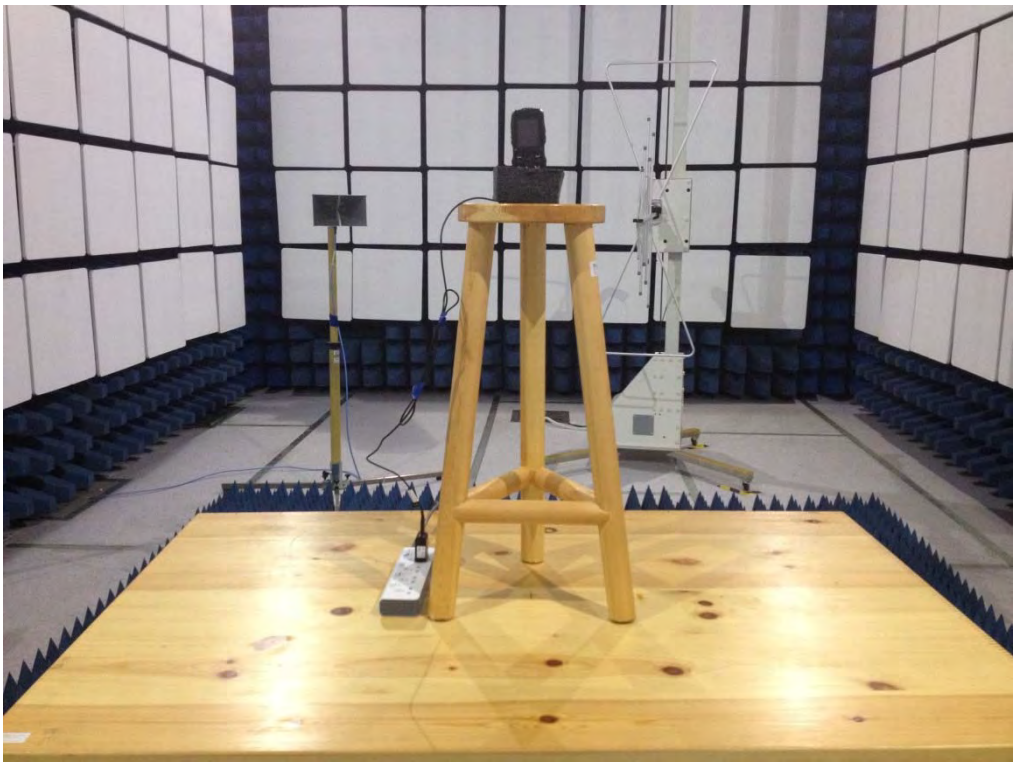


Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
7896.839	-39.44	-13.0	15.8	0.0	Horizontal	PASS
15926.789	-37.87	-13.0	16.0	0.0	Horizontal	PASS
19372.712	-36.98	-13.0	17.0	0.0	Horizontal	PASS

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

THE PHOTO OF USB CABLE

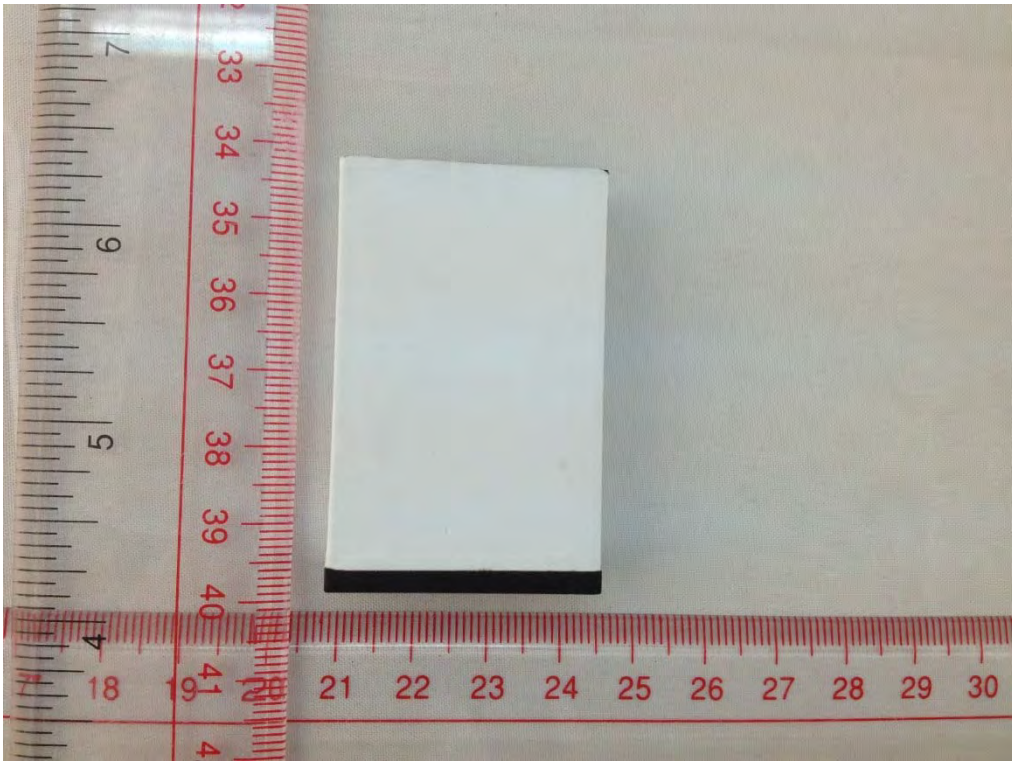
THE PHOTO OF AUDIO CABLE

THE PHOTO OF CHARGER

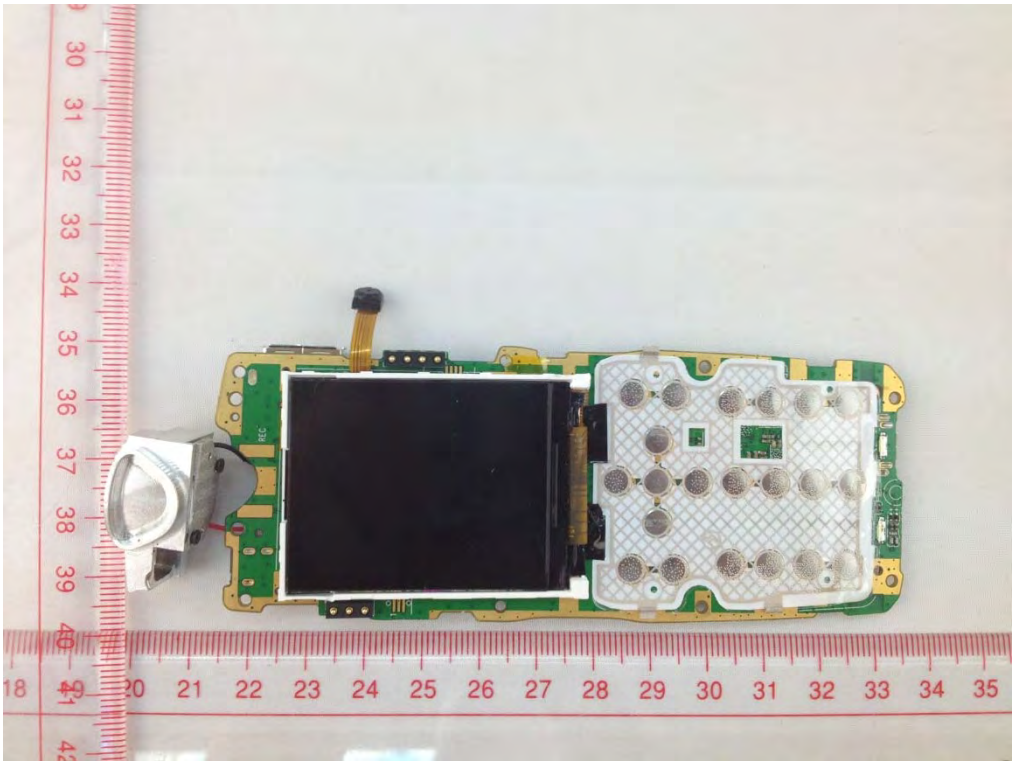
C.2 Inside of the EUT

EUT UNCOVER VIEW 1

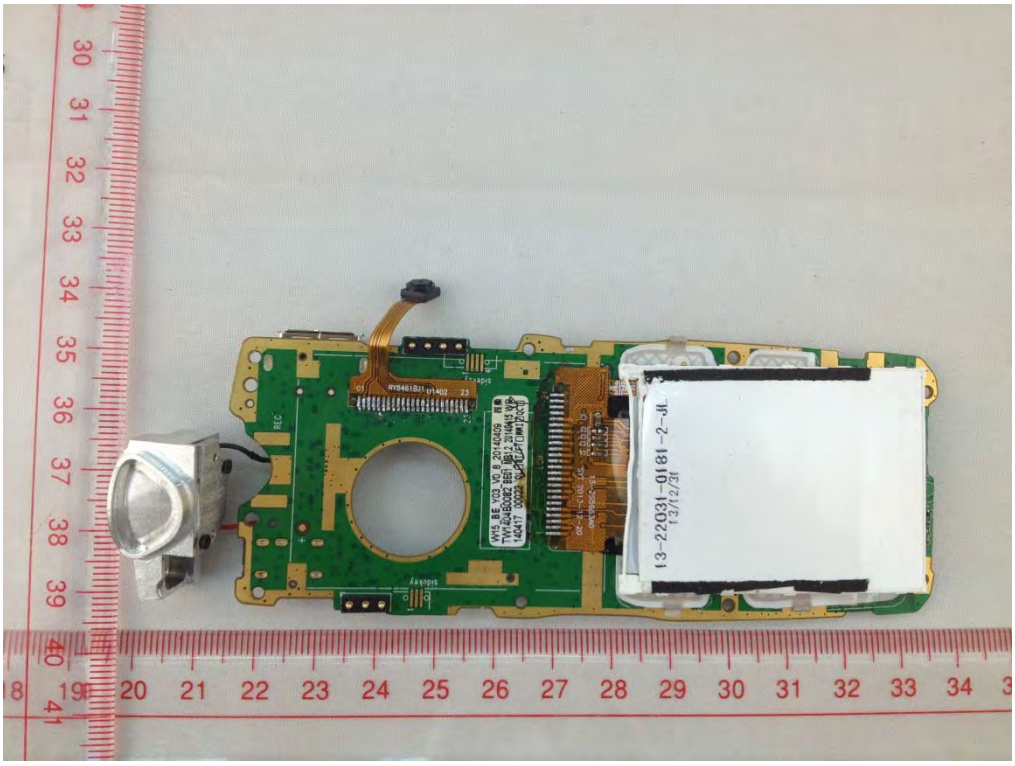
EUT UNCOVER VIEW 2



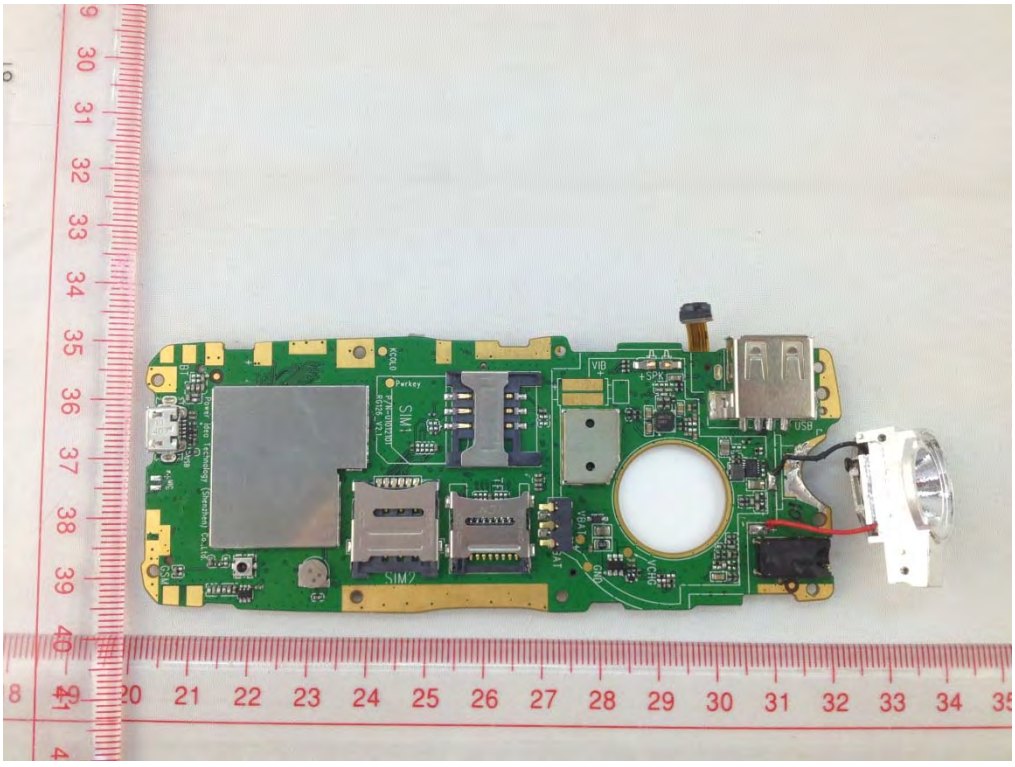
THE BATTERY



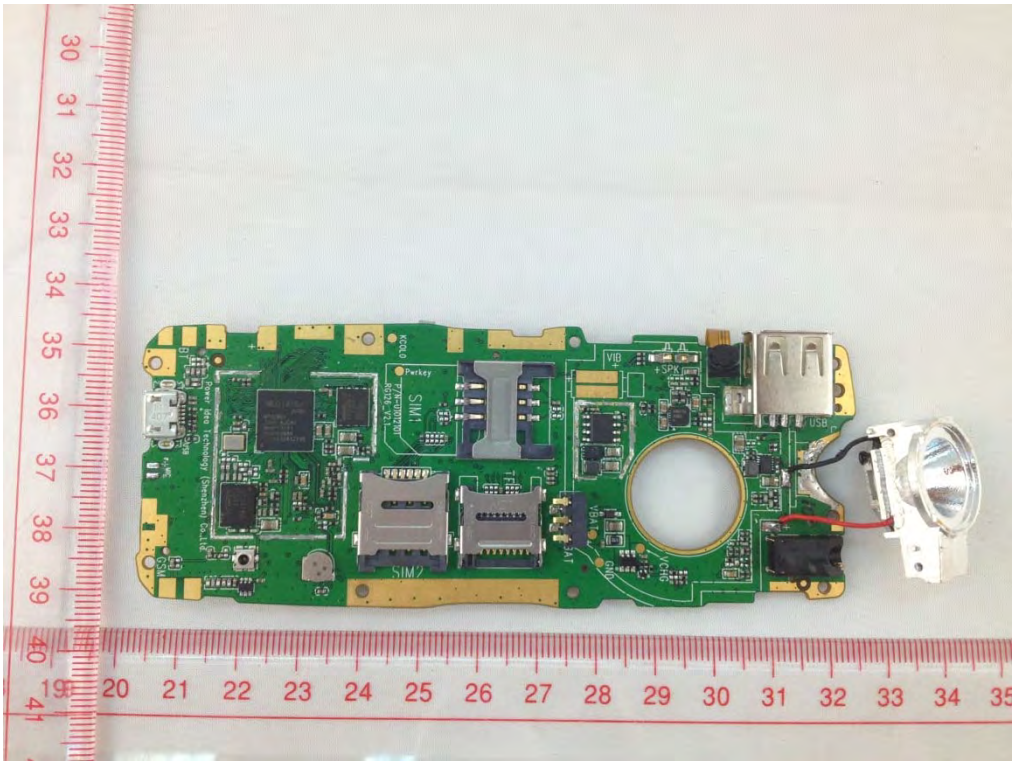
MAIN BOARD TOP VIEW 1



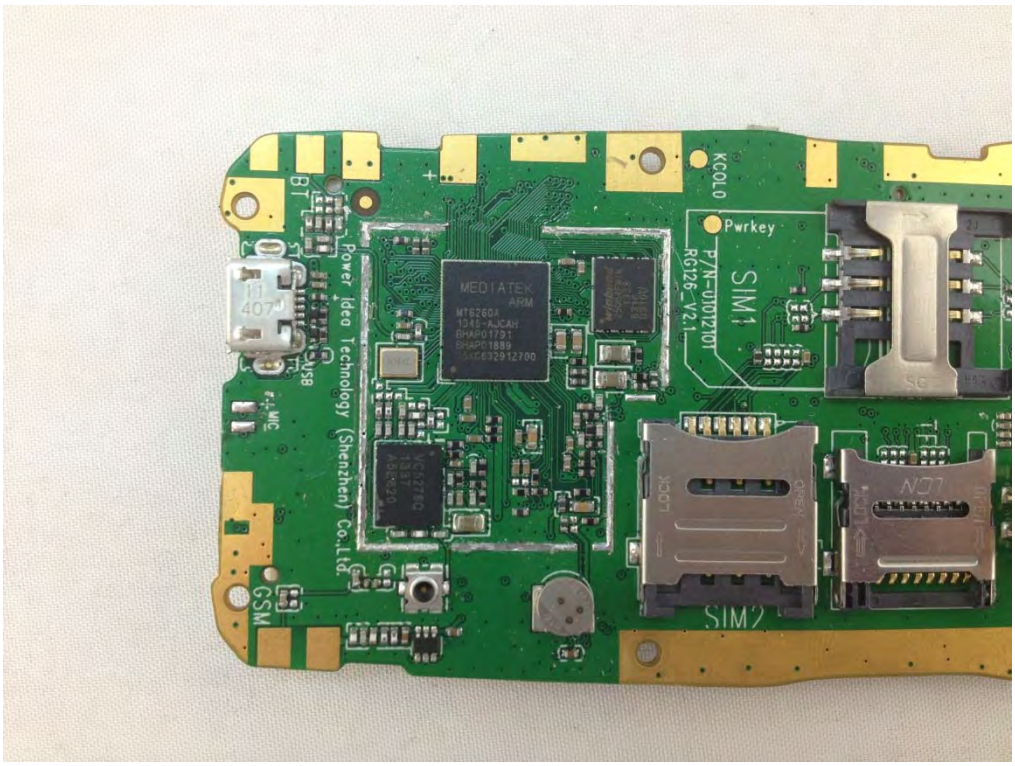
MAIN BOARD BACK VIEW 1



MAIN BOARD BACK VIEW 2



MAIN BOARD TOP VIEW 2



RF BOARD

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