



47 CFR PART 15B, 22H, 24E

TEST REPORT

of

GSM Dual Band GPRS Digital Mobile Phone

Model Name: i300
Brand Name: verykool
Report No.: SZ08080043E01
FCC ID: WA6I300



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prepared by

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1. TEST CERTIFICATION

Equipment under Test: GSM Dual Band GPRS Digital Mobile Phone

Brand Name: verykool
 Model Name: i300
 FCC ID: WA6I300
 Applicant: Verykool USA Inc.
 4350 Executive Drive, Suite 100, San Diego, CA 92121, USA
 Manufacturer: SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD
 NO.9008 ShenNan Road, Overseas Chinese Town, Shenzhen, Guangdong, China

Emission Designator 300KGXW

Test Standards: 47 CFR Part 2
 47 CFR Part 22 Subpart H
 47 CFR Part 24 Subpart E
 47 CFR Part 15 Subpart B

Test Date(s): August 18, 2008 – September 5, 2008

Test Result: PASS

* We Hereby Certify That:

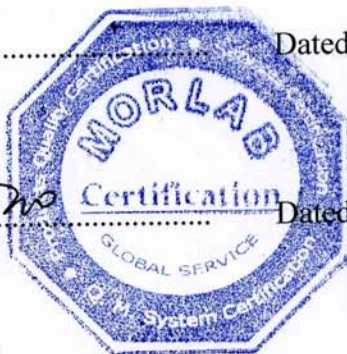
The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Ni Yong Dated: 2008.09.05
 Ni Yong

Reviewed by: Luo Biao Dated: 2008.09.05
 Luo Biao

Approved by: Shu Luan Dated: 2008.09.05
 Shu Luan



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type GSM Dual Band GPRS Digital Mobile Phone
Model Name..... i300
Serial No. (n.a, marked #1 by test site)
IMEI..... IMEI:35763002000697 IMEISV:78
Hardware Version..... V1.3
Software Version KAAI300FM_VK_EN_FR_SP_90_724
Emission Designator 300KGXW
Frequency Range..... GSM 850MHz: Tx: 824.20 - 848.80MHz (at intervals of 200kHz);
Rx: 869.20 - 893.80MHz (at intervals of 200kHz)
GSM 1900MHz: Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz);
Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz)
Modulation Type GMSK
Power supply..... Battery
Brand Name: verykool
Model No.: KLB65N167
Serial No.: (n.a. marked #1 by test site)
Capacitance: 650mAh
Rated Voltage: 3.7V
Charge Limit: 4.2V
Manufacturer: ZHAOQING XUNJIA TECHNOLOGY DEVELOPMENT
CO.,LTD
Ancillary Equipment 1 ... AC Adapter (Charger for Battery)
Brand Name: verykool
Model Name: KTC-08BIM5G
Serial No.: (n.a. marked #1 by test site)
Rated Input: ~ 100-240V, 0.15A,50/60Hz
Rated Output: = 5V, 500mA, Max 3W
Manufacturer: SHENZHEN OCT XINQIAO TECHNOLOGY CO.,LTD
Wire Length: 75cm

Note 1: The EUT is a GSM mobile phone; it supports GSM 850MHz, 1900MHz, GPRS, GSM 850MHz, 1900MHz bands and GPRS are tested in this report.

Note 2: A connecting between EUT and a System Simulator (SS) was established at the start of the test, and maintained during the all test in this report

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices
2	47 CFR Part 2 (10-1-05 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
3	47 CFR Part 22 (10-1-05 Edition)	Public Mobile Services
4	47 CFR Part 24 (10-1-05 Edition)	Personal Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS
3	2.106 22.905 24.229	Frequencies	PASS
4	2.1046	Conducted RF Output Power	PASS
5	2.1049	20dB Occupied Bandwidth	PASS
6	2.1055 22.355 24.235	Frequency Stability	PASS
7	2.1051 2.1057 22.917 24.238	Conducted Out of Band Emissions	PASS
8	2.1051 2.1057 22.917 24.238	Band Edge	PASS
9	22.913 24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
10	2.1053 2.1057 22.917 24.238	Radiated Out of Band Emissions	PASS

NOTE:

The tests were performed according to the method of measurements prescribed in ANSI C63.4 2003.



2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab 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 L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

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

Temperature (°C):	20 - 25
Relative Humidity (%):	40 - 60
Atmospheric Pressure (kPa):	96-106

3. TEST CONDITIONS SETTING

3.1 Test Mode

During the measurement, there are four Test Modes that will be tested in Conducted Emission and Radiated Emission. These test modes are showed as below:

(1) The first test mode: traffic operating mode

The EUT configuration of the emission tests is EUT + Battery + Charger

Before the measurement, the lithium battery was completely discharged.

During the measurement, the lithium battery was installed into the EUT, and the charger was connected to the EUT. A communication link was established between the EUT and a System Simulator (SS). The EUT operated at GSM 850MHz mid ARFCN (190) and maximum output power (level 5).

(2) The first test mode: idle mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

Before the measurement, the lithium battery was completely discharged.

During the measurement, the lithium battery was installed into the EUT, and the charger was connected to the EUT. No communication link was established between the EUT and a System Simulator (SS).

(3) The third test mode: GPRS mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

Before the measurement, the lithium battery was completely discharged.

During the measurement, the lithium battery was installed into the EUT, and the charger was connected to the EUT. The EUT was working under GPRS mode, and transferring data..

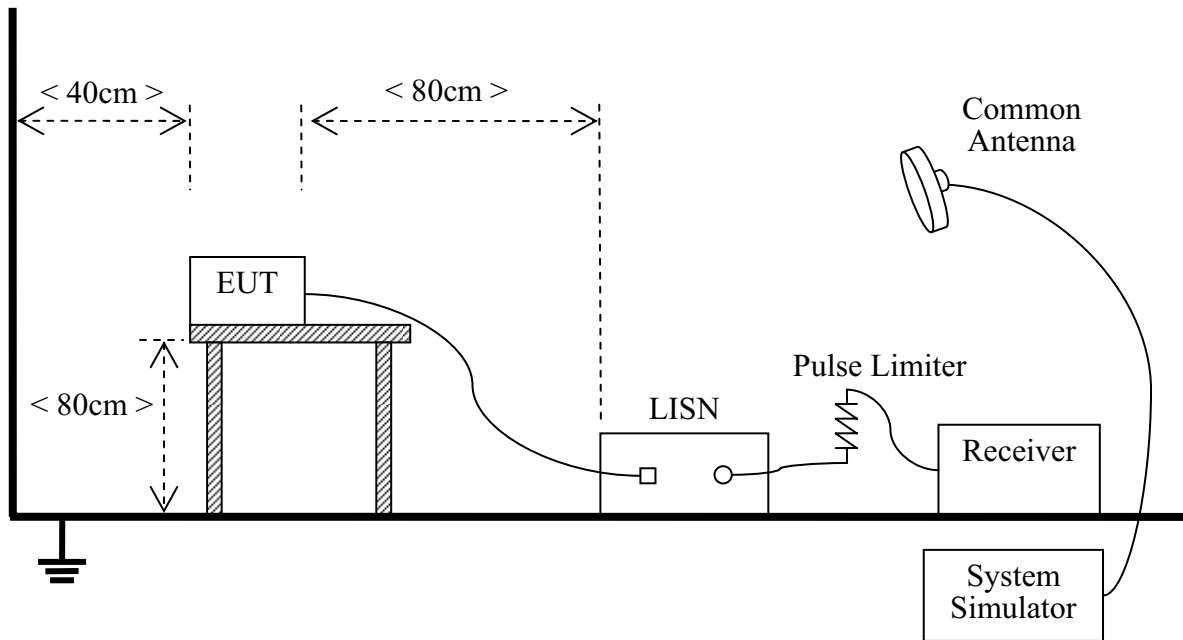
NOTE: The first test mode, second test mode and third test mode were tested, and only the worst cases are recorded in this report..

The third test mode was only tested in Radiated Disturbance.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



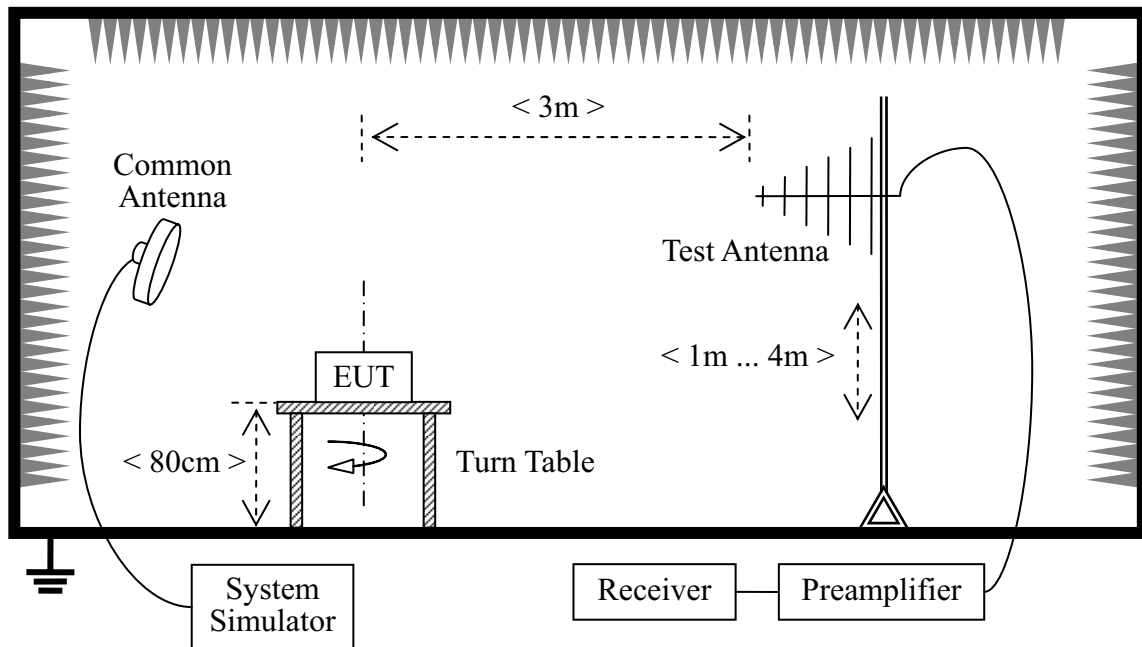
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
LISN	Schwarzbeck	NSLK 8127	812744	2008.08	1year
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year
Personal Computer	HP	Pavilion ze2202	CNF5460DNL	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
Wireless Router	(n.a.)	D-Link	BN64448000052	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2008.08	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2008.07	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2008.07	1year
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year
Personal Computer	HP	Pavilion ze2202	CNF5460DNL	(n.a.)	(n.a.)
Wireless Router	(n.a.)	D-Link	BN64448000052	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

4. 47 CFR PART 15B REQUIREMENTS

4.1 Conducted Emission

4.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- The limit subjects to the Class B digital device.
- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.1.2 Test Description

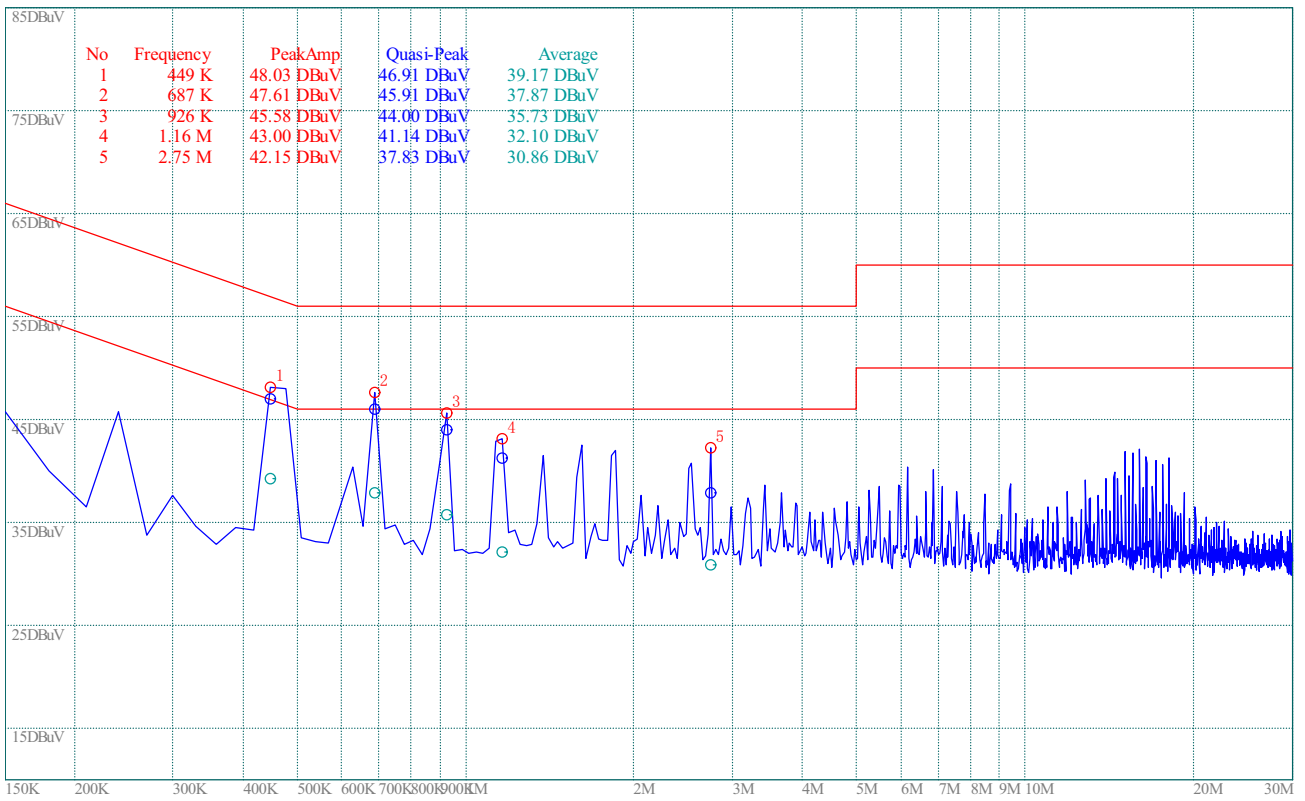
See section 3.2.1 of this report.

4.1.3 Test Result

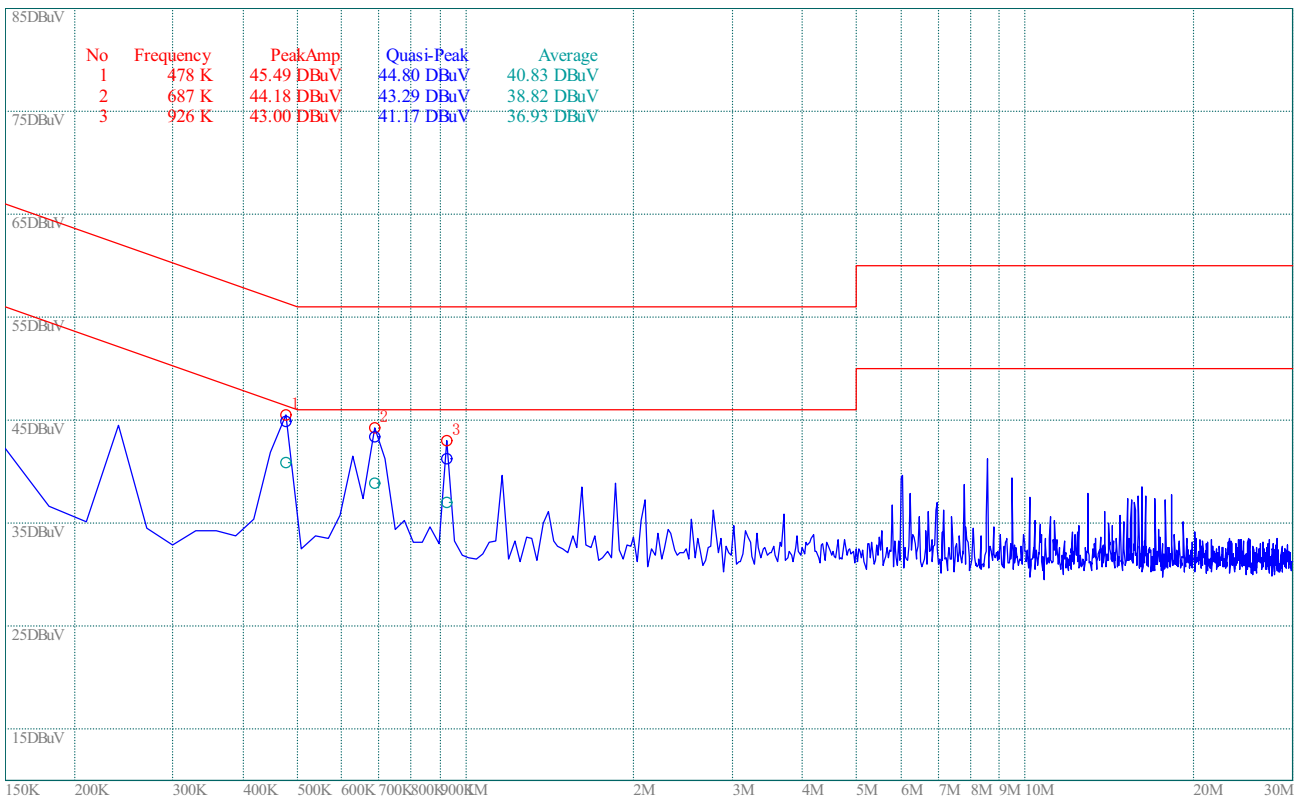
The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

Note: three test modes were tested; only the result of the first mode was displayed below as the worst result. Following is the plots for emission measurement. Test Verdict Recorded for Suspicious Points are displayed on the plot and all passed.

Test Plot:



(Plot A: L Phase)



(Plot B: N Phase)

4.2 Radiated Emission

4.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

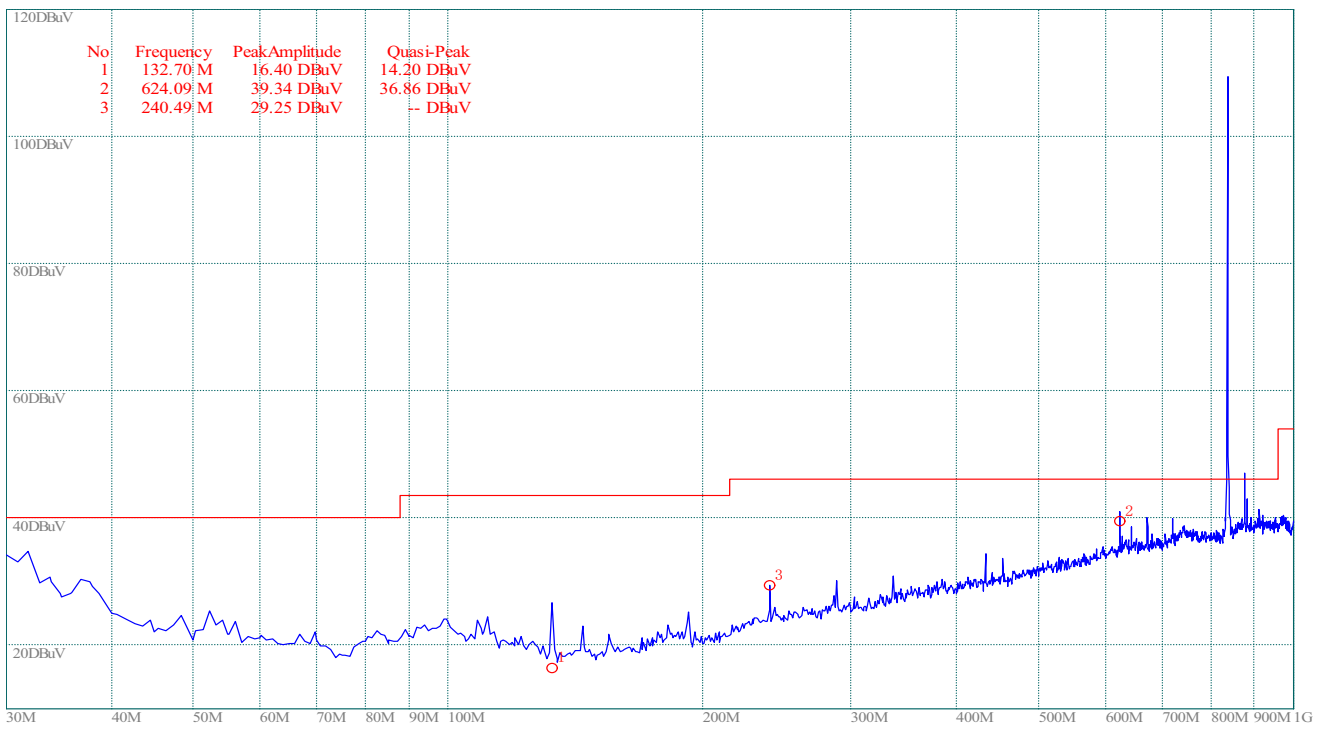
See section 3.2.2 of this report.

4.2.3 Test Result

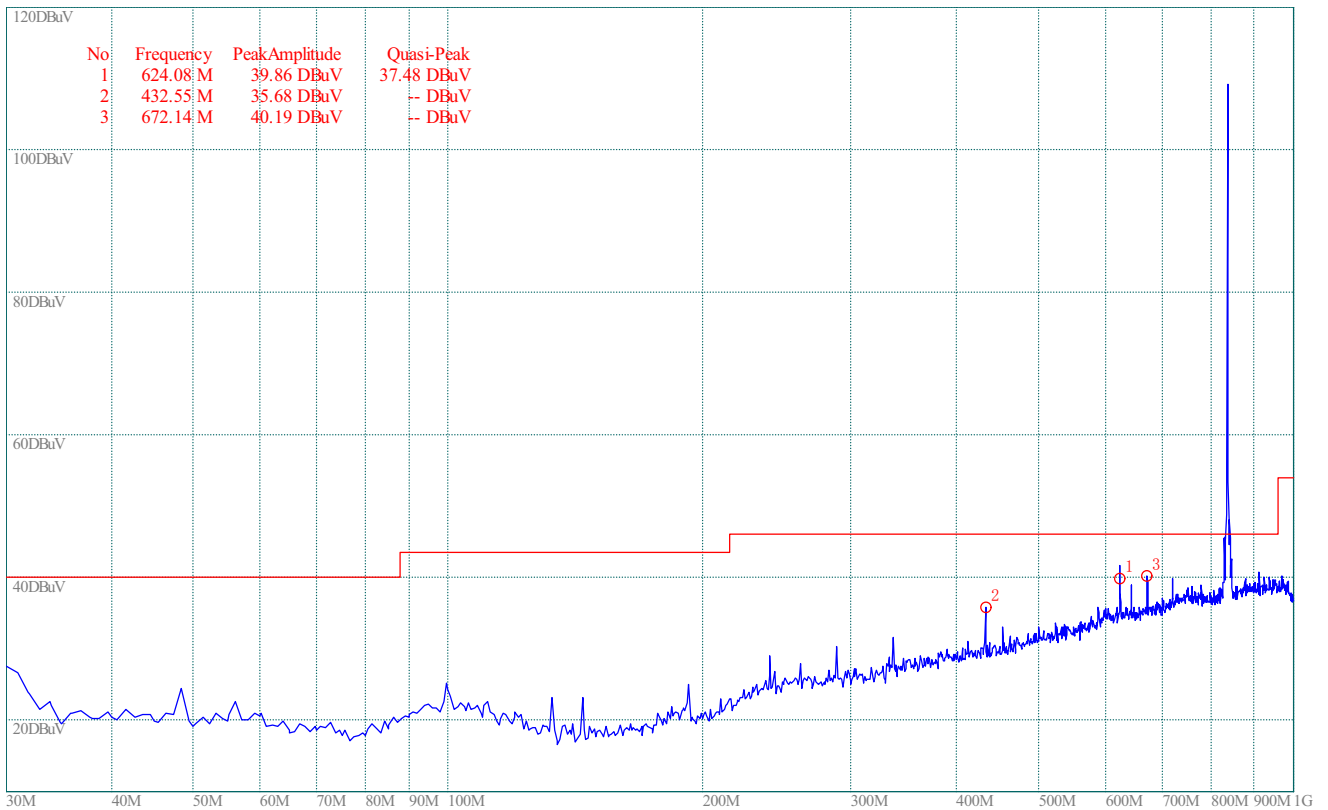
The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

Note: three test modes were tested; only the result of the first mode was displayed below as the worst result., Following is the plots for emission measurement. Test Verdict Recorded for Suspicious Points are displayed on the plot and all passed.

Test Plot:



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

5. 47 CFR PART 2, PART 22H AND PART 24 REQUIREMENTS

5.1 Frequencies

5.1.1 Requirement

According to FCC section 22.905, the frequency blocks assignment for the cellular radiotelephone service is listed as below:

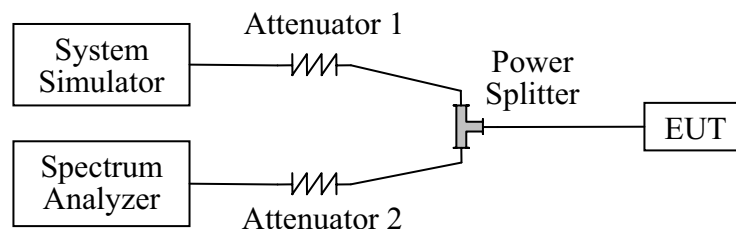
- (a) Channel Block A:
 Mobile 824 - 835MHz, Base 869 - 880MHz;
 Mobile 845 - 846.5MHz, Base 890 - 891.5MHz
- (b) Channel Block B:
 Mobile 835 - 845 MHz, Base 880 - 890MHz;
 Mobile 846.5 - 849 MHz, Base 891.5 - 894MHz

According to FCC section 24.229, the frequencies available in the Broadband PCS services are listed as below, in accordance with the frequency allocations table of FCC section 2.106.

- (a) The following frequency blocks are available for assignment on an MTA basis:
 Block A: 1850 - 1865MHz paired with 1930 - 1945MHz;
 Block B: 1870 - 1885MHz paired with 1950 - 1965MHz.
- (b) The following frequency blocks are available for assignment on a BTA basis:
 Block C: 1895 - 1910 MHz paired with 1975 - 1990MHz;
 Block D: 1865 - 1870 MHz paired with 1945 - 1950MHz;
 Block E: 1885 - 1890 MHz paired with 1965 - 1970MHz;
 Block F: 1890 - 1895 MHz paired with 1970 - 1975MHz.

5.1.2 Test Description

1. Test Setup:



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. The EUT is

commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year
Spectrum Analyzer	Agilent	E7405A	US44210471	2008.07	1year
Power Splitter	Weinschel	1506A	NW521	(n.a.)	(n.a.)
Attenuator 1	Resnet	20dB	(n.a.)	(n.a.)	(n.a.)
Attenuator 2	Resnet	3dB	(n.a.)	(n.a.)	(n.a.)

5.1.3 Test Result

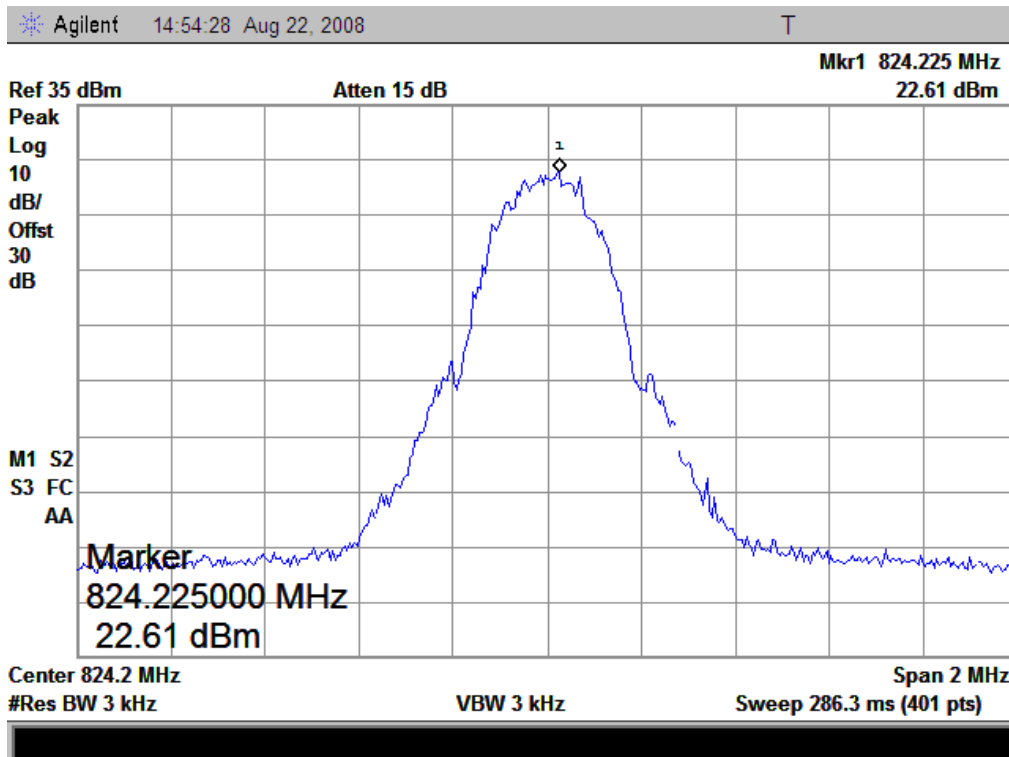
The Tx frequency arrangement of the Cellular 850MHz band employed by the EUT should be from 824.2MHz to 848.8MHz (the corresponding frequency block is from 824MHz to 849MHz), and Tx frequency arrangement of the PCS 1900MHz band employed by the EUT should be from 1850.2MHz to 1909.8MHz (the corresponding frequency block is from 1850MHz to 1910MHz). Here the lowest and highest channels are tested to verify the EUT's using the frequency block required.

1. Test Verdict:

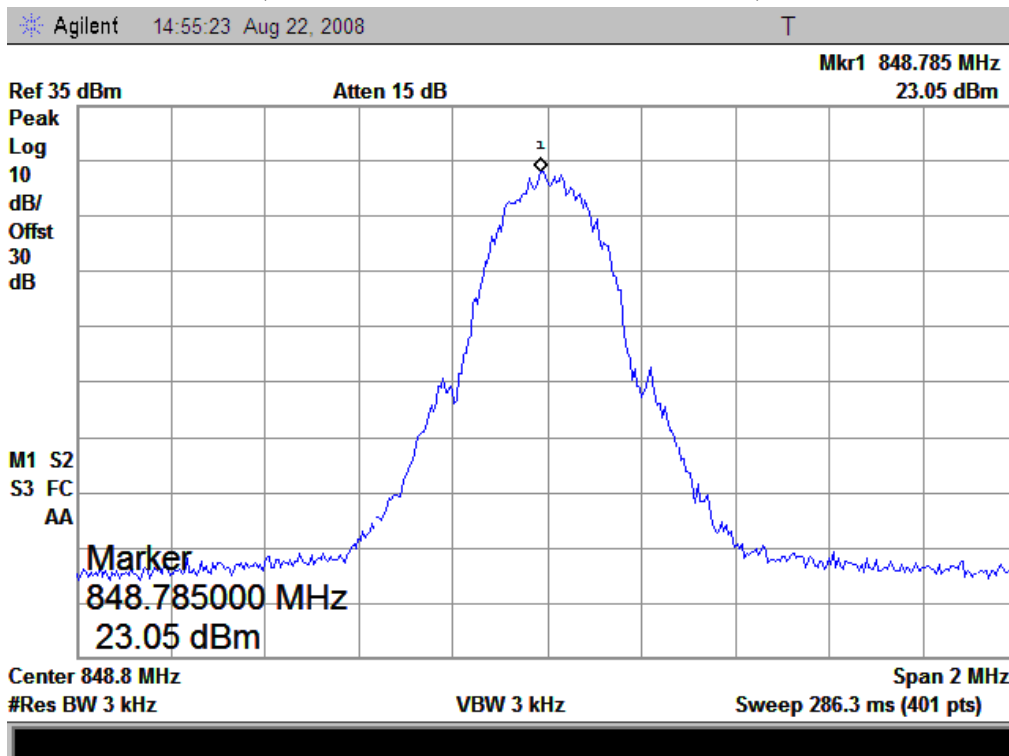
The required frequency block is employed legally, the verdict is PASS.

Band	Channel	Frequency (MHz)	Measured Carrier (dBm)	Refer to Plot
GSM 850MHz	128	824.2	22.61	Plot A
	251	848.8	23.05	Plot B
GSM 1900MHz	512	1850.2	19.76	Plot C
	810	1909.8	21.74	Plot D

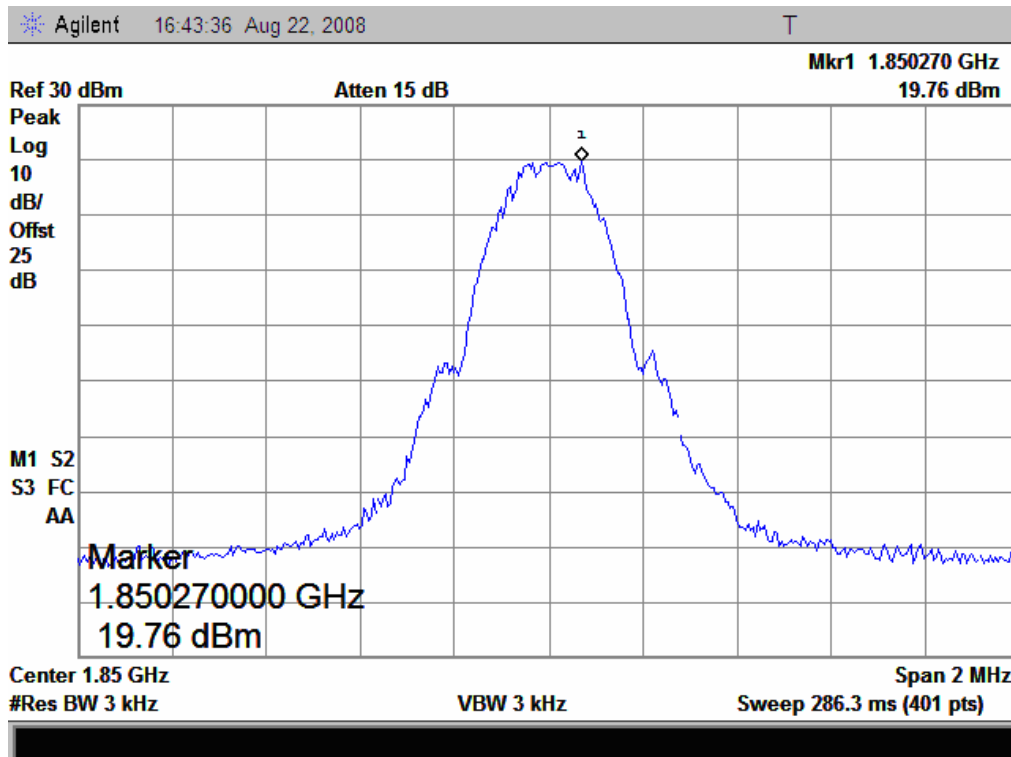
2. Test Plot:



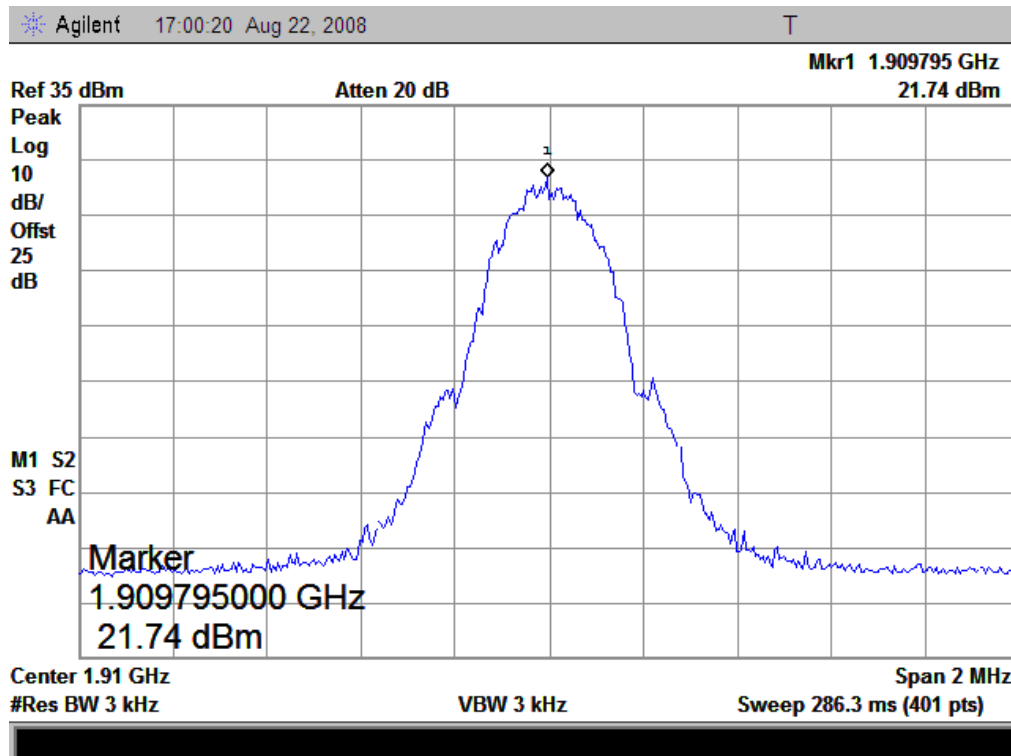
(Plot A: GSM 850MHz Channel = 128)



(Plot B: GSM 850MHz Channel = 251)



(Plot C: GSM 1900MHz Channel = 512)



(Plot D: GSM 1900MHz Channel = 810)

5.2 Conducted RF Output Power

5.2.1 Requirement

According to FCC section 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 FCC section 2.1033(c)(8).

5.2.2 Test Description

See section 3.2 of this report.

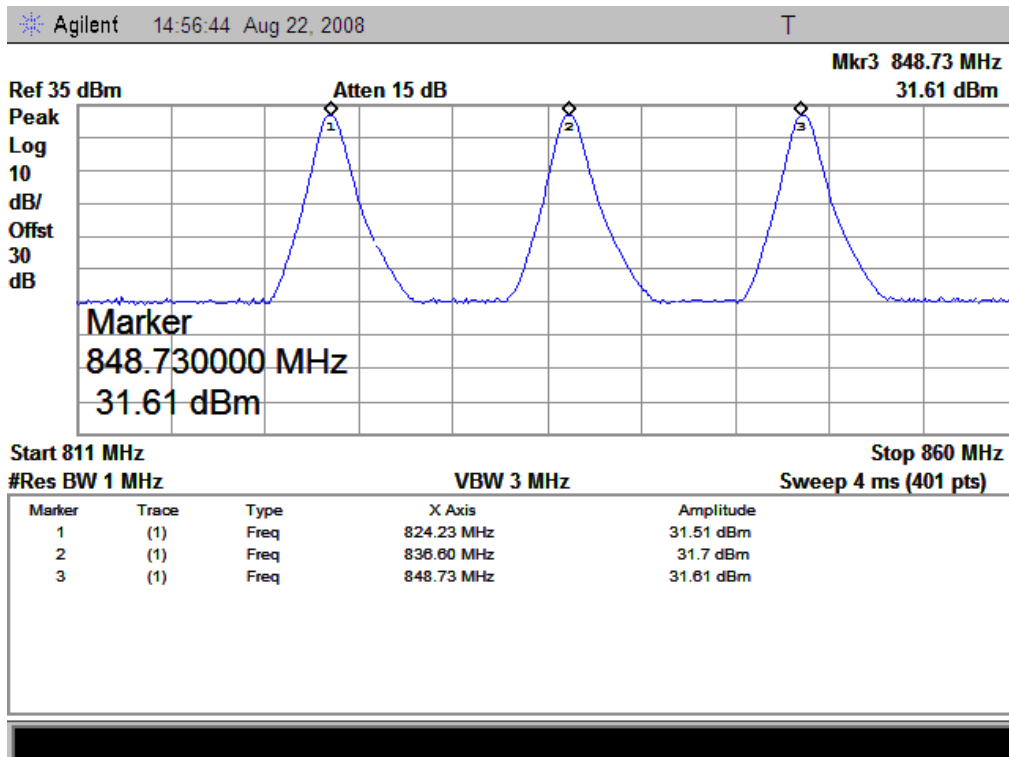
5.2.3 Test Result

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the GSM 850MHz operates at PCL=5 (where Power Class is 4), the rated conducted RF output power is 33dBm within the tolerance of ± 3 dB, and For the GSM 1900MHz operates at PCL=0 (where Power Class is 1), the rated conducted RF output power is 30dBm within the tolerance of ± 3 dB.

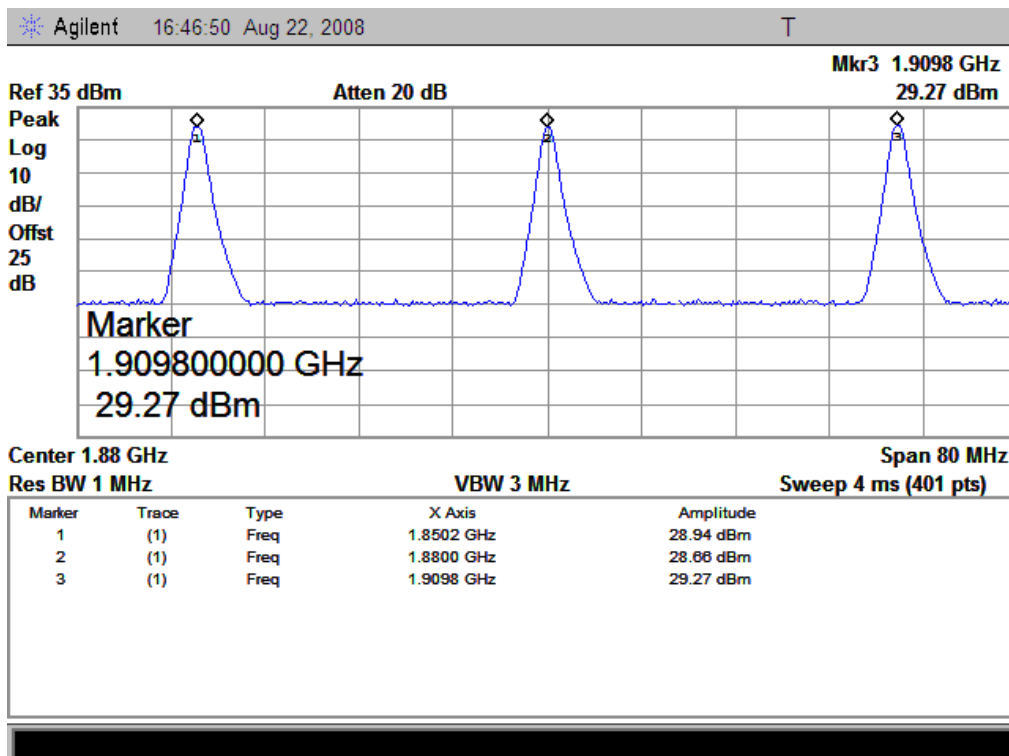
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Output Power		Rated Output Power		Verdict
			dBm	Refer to Plot	dBm	Tolerance (dB)	
GSM 850MHz	128	824.2	31.52	Plot A	33	± 3	PASS
	190	836.6	31.70				PASS
	251	848.8	31.61				PASS
GSM 1900MHz	512	1850.2	28.94	Plot B	30	± 3	PASS
	661	1880.0	28.66				PASS
	810	1909.8	29.27				PASS

2. Test Plot:



(Plot A: GSM 850MHz Channel = 128, 190, 251)



(Plot B: GSM 1900MHz Channel = 512, 661, 810)

5.3 20dB Occupied Bandwidth

5.3.1 Definition

According to FCC section 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, or 20dB bandwidth ($10 \cdot \log 1\% = 20\text{dB}$) taking the total RF output power as reference.

5.3.2 Test Description

See section 3.2 of this report.

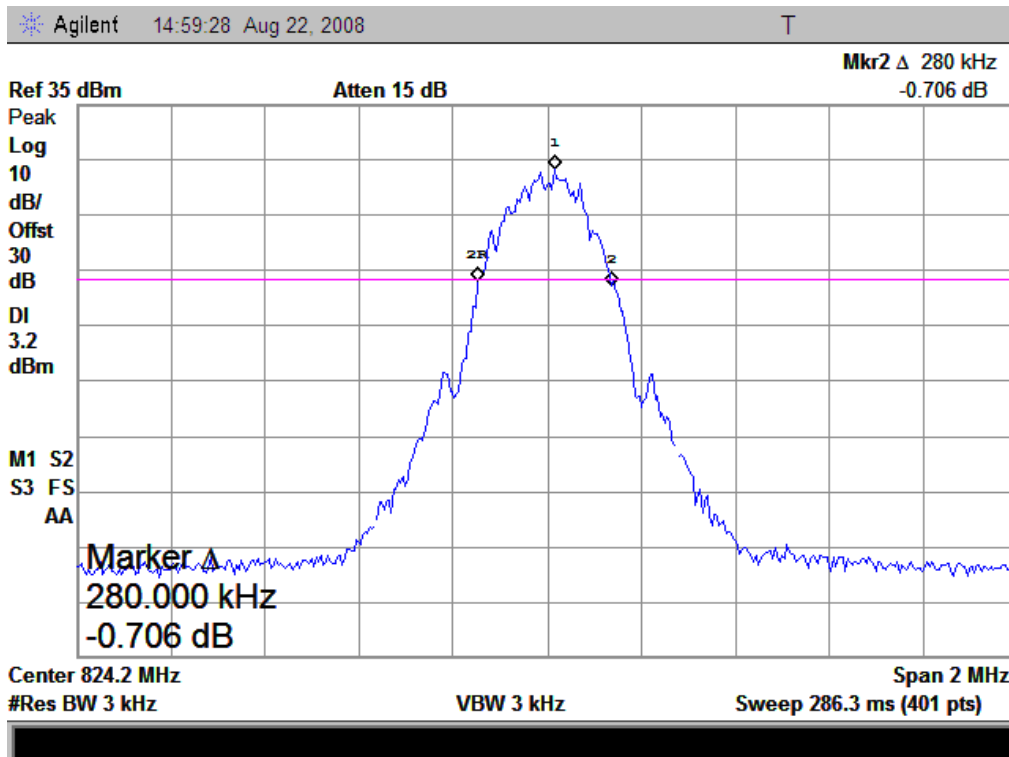
5.3.3 Test Verdict

Here the lowest, middle and highest channels are tested to record the 20dB occupied bandwidth, it's about 300kHz.

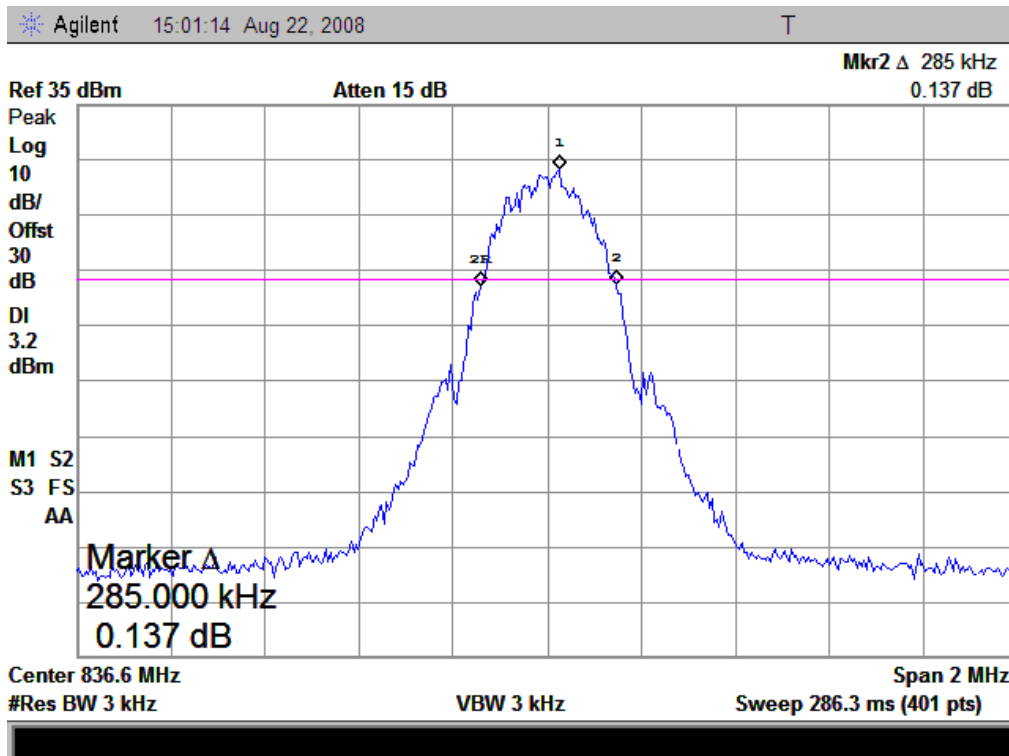
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured 20dB Occupied Bandwidth (kHz)	Refer to Plot
GSM 850MHz	128	824.2	280.0	Plot A
	190	836.6	285.0	Plot B
	251	848.8	290.0	Plot C
GSM 1900MHz	512	1850.2	285.0	Plot D
	661	1880.0	290.0	Plot E
	810	1909.8	285.0	Plot F

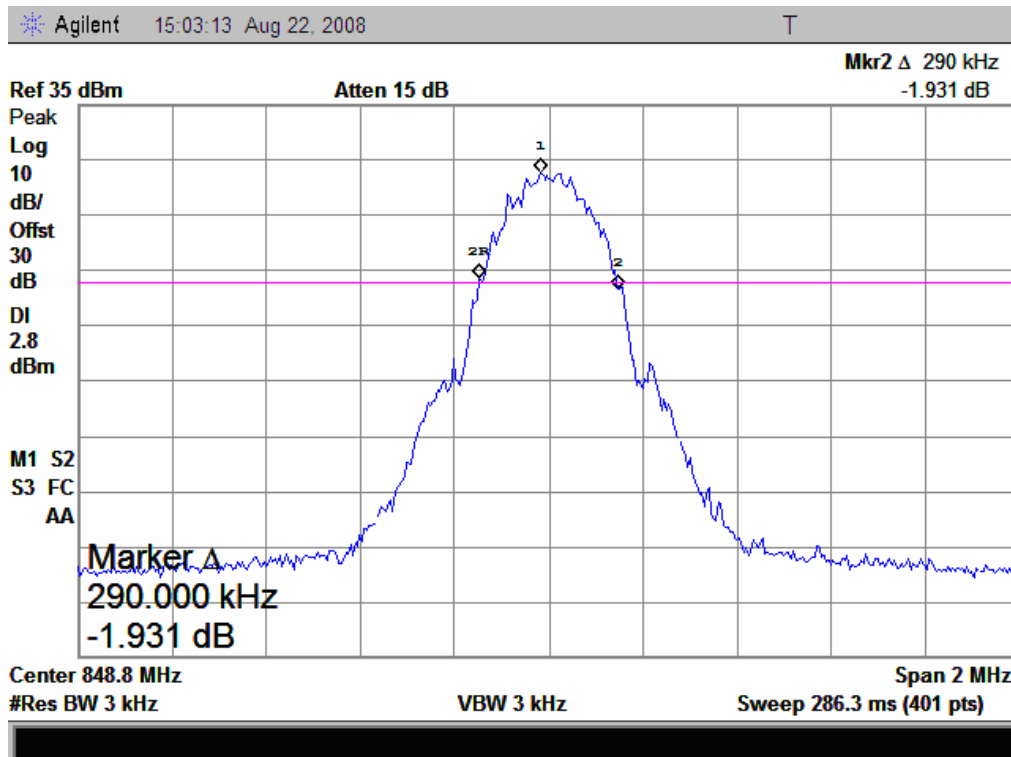
2. Test Plot:



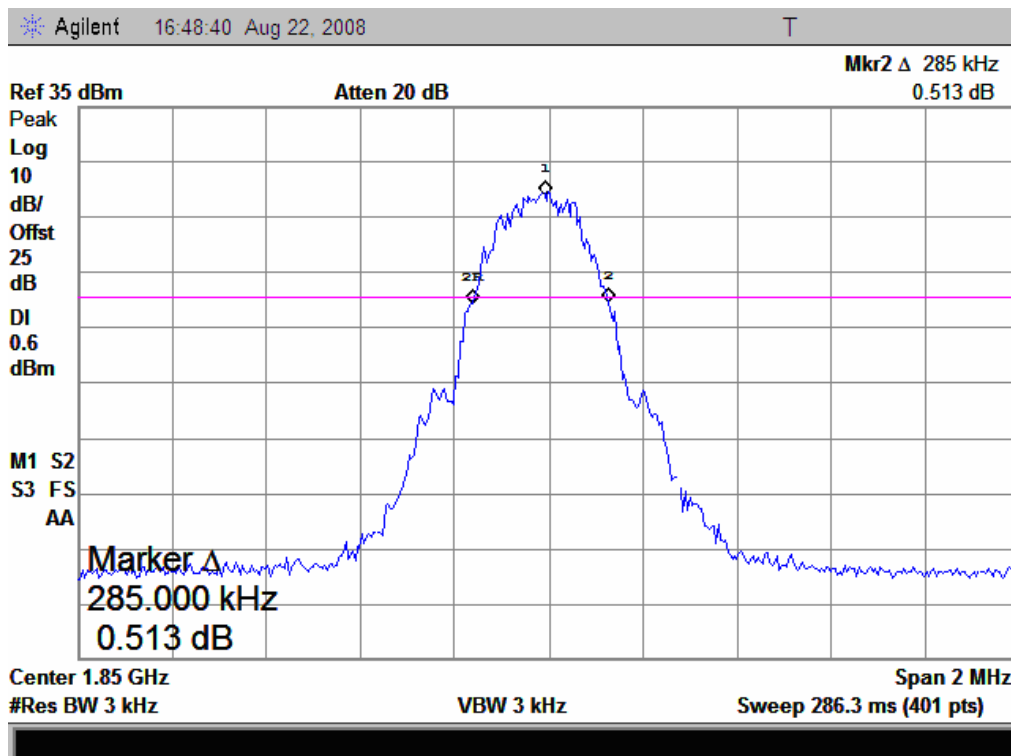
(Plot A: GSM 850MHz Channel = 128)



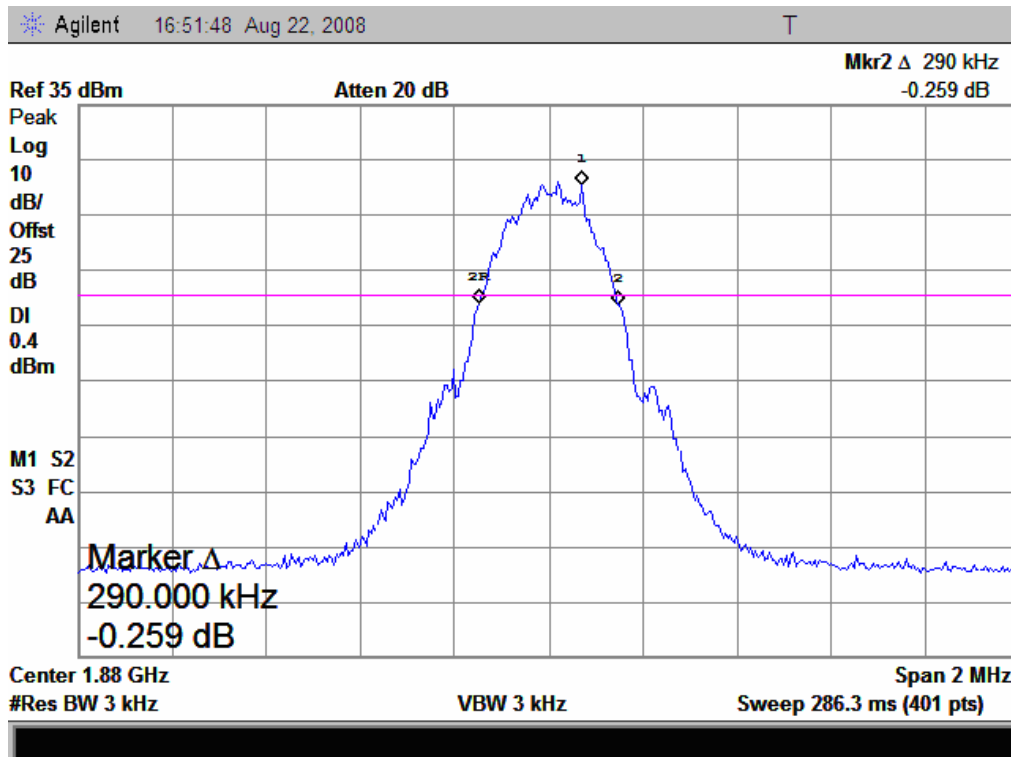
(Plot B: GSM 850MHz Channel = 190)



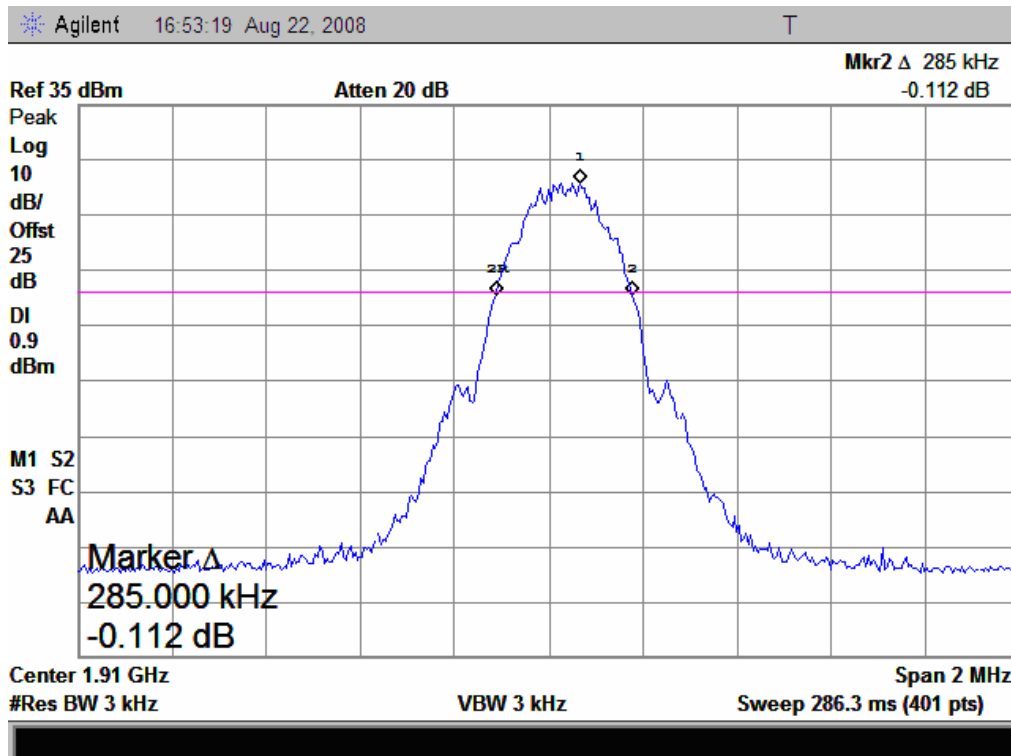
(Plot C: GSM 850MHz Channel = 251)



(Plot D: GSM 1900MHz Channel = 512)



(Plot E: GSM 1900MHz Channel = 661)



(Plot F: GSM 1900MHz Channel = 810)

5.4 Frequency Stability

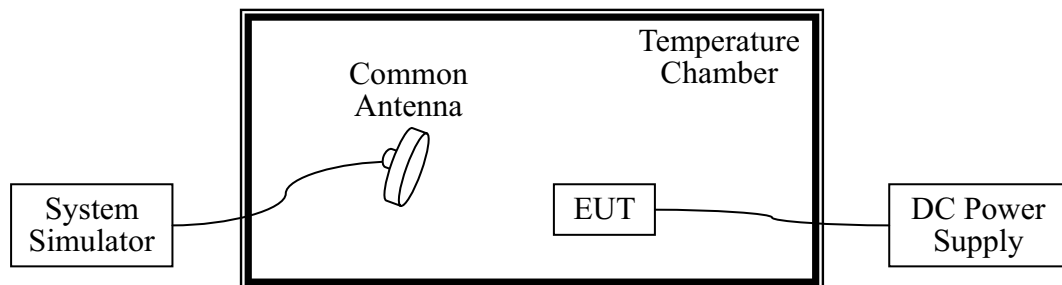
5.4.1 Requirement

According to FCC section 22.355 and FCC section 24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, 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 Description

1. Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power i.e. Power Control Level (PCL) = 5 and Power Class = 4. A call is established between the EUT and the SS via a Common Antenna.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2007.06	1year
DC Power Supply	Good Will	GPS-3030DD	EF920938	2007.06	2year
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2007.03	1year

5.4.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.2VDC and 3.6VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency

deviation limit of GSM 850MHz band is ± 2.5 ppm, and GSM 1900MHz is ± 1 ppm

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	
GSM 850MHz	3.7	-30	24.18	± 2060.5	-23.31	± 2091.5	27.58	± 2122	PASS
		-20	-26.71		-36.31		-39.35		
		-10	-30.82		-19.13		-24.65		
		0	23.13		-22.85		-24.51		
		+10	25.77		-24.79		-33.66		
		+20	29.77		-19.97		-24.40		
		+30	34.29		-30.42		-39.34		
		+40	30.10		31.65		-46.42		
		+50	32.10		32.44		23.95		
	4.2	+25	42.30	38.56	36.47				
3.6	+25	-23.28	-20.15	-22.50					
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	
GSM 1900MHz	3.7	-30	41.08	± 1850.2	-41.27	± 1880.0	50.13	± 1909.8	PASS
		-20	31.15		-49.25		-25.84		
		-10	75.76		62.90		41.24		
		0	59.30		41.54		-37.82		
		+10	72.58		-42.00		-61.58		
		+20	-55.2		-36.78		-26.87		
		+30	-42.14		-62.91		-61.73		
		+40	-69.36		-76.35		-81.22		
		+50	-64.61		-64.35		-75.10		
	4.2	+25	-35.40	-32.19	-38.27				
3.6	+25	26.49	25.58	24.58					

5.5 Conducted Out of Band Emissions

5.5.1 Requirement

According to FCC section 22.917(a) and FCC section 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 Description

See section 3.2 of this report.

5.5.3 Test Result

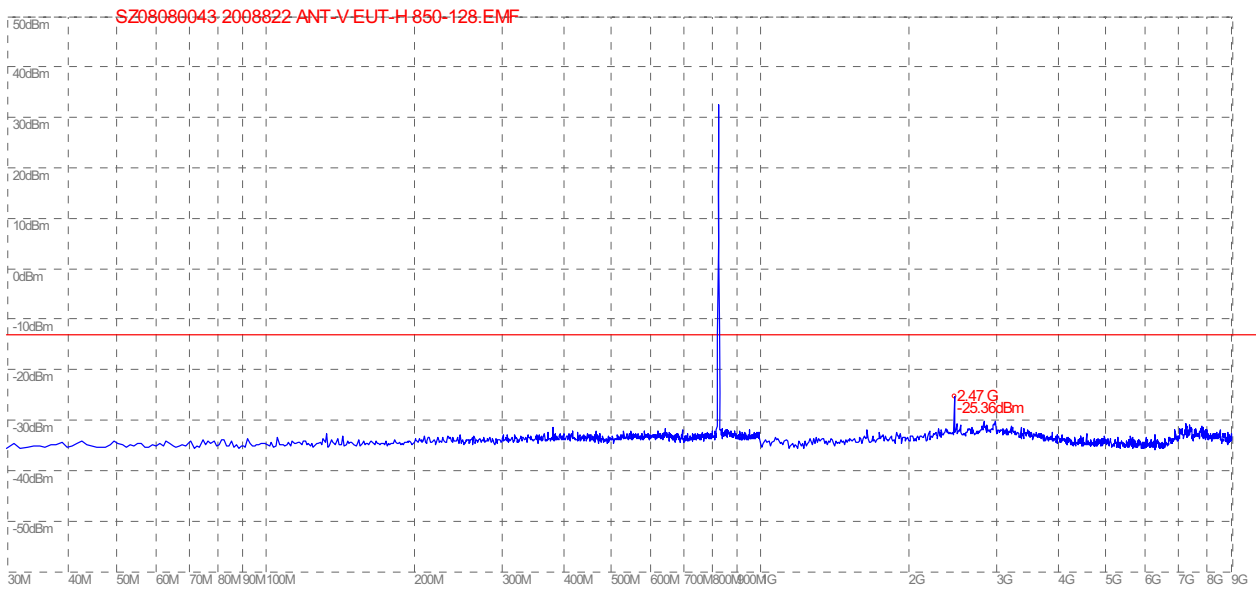
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

1. Test Verdict:

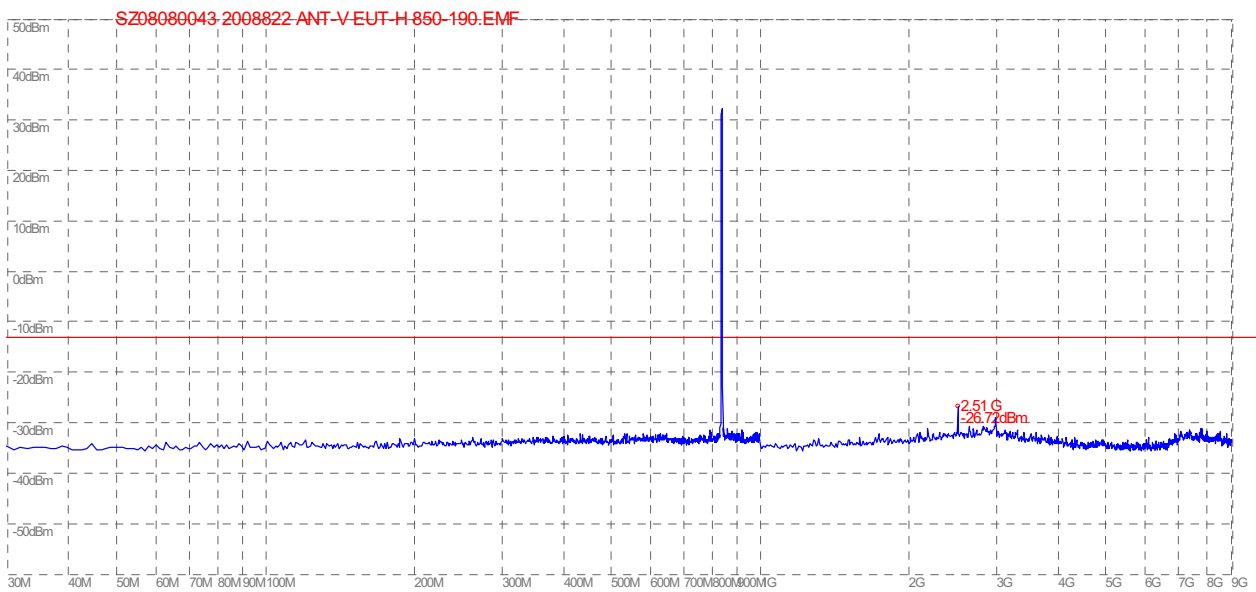
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	25.36	Plot A	-13	PASS
	190	836.6	26.72	Plot B		PASS
	251	848.8	27.26	Plot C		PASS
GSM 1900MHz	512	1850.2	---	Plot D	-13	PASS
	661	1880.0	---	Plot E		PASS
	810	1909.8	---	Plot F		PASS

2. Test Plot for the Whole Measurement Frequency Range:

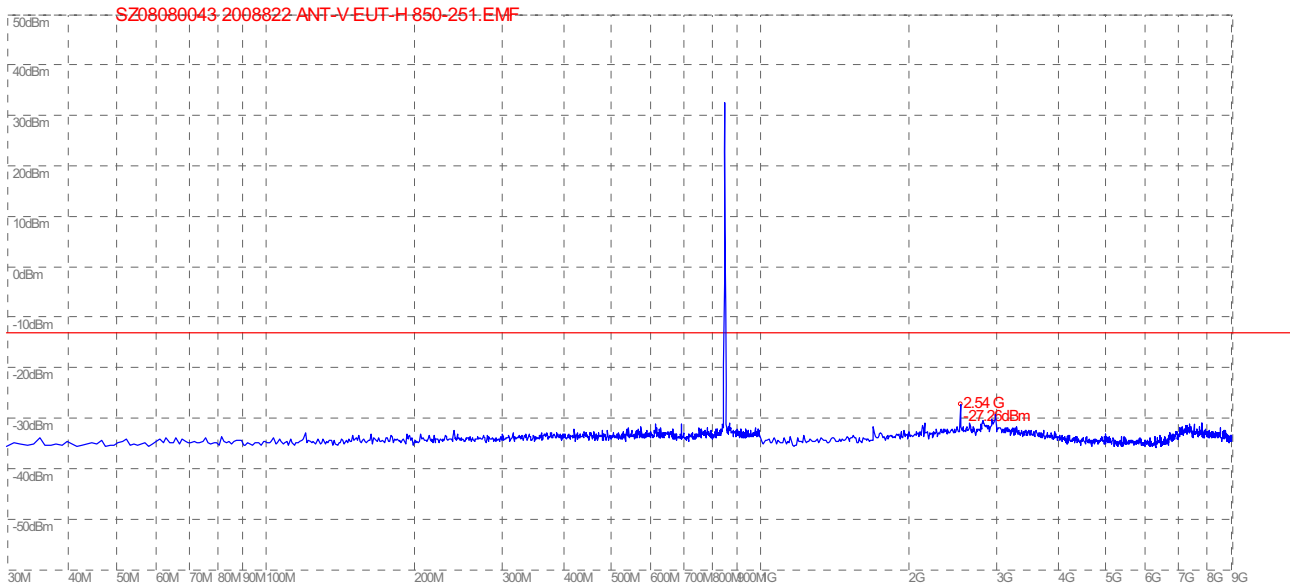
Note: the power of the EUT transmitting frequency should be ignored.



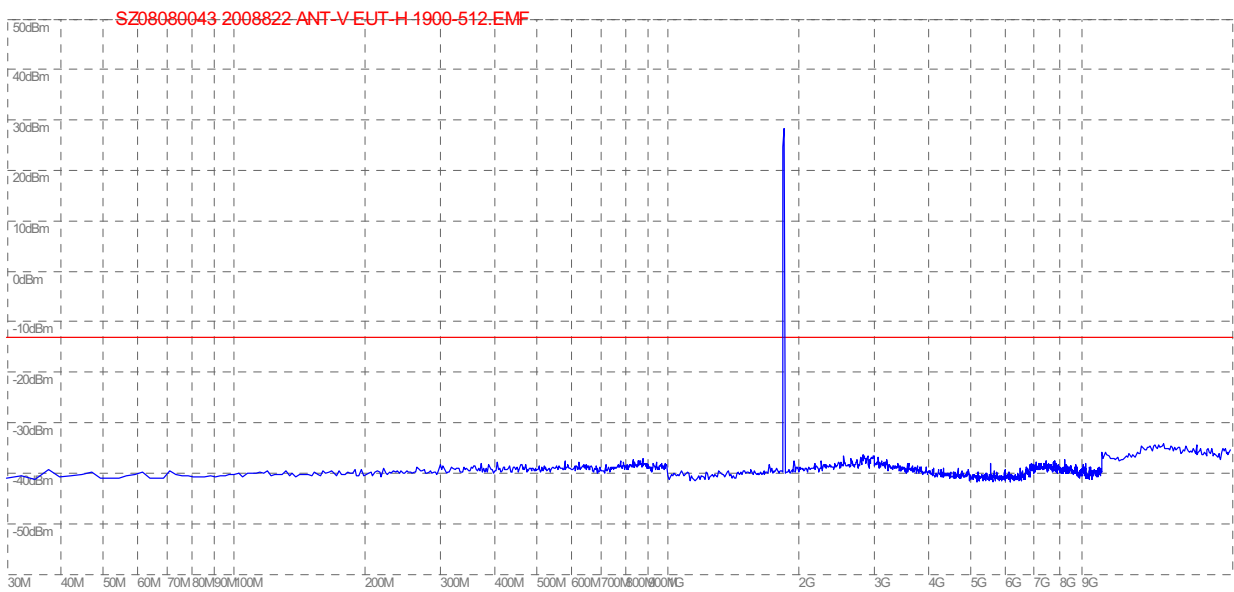
(Plot A: GSM 850MHz Channel = 128, 30MHz to 10GHz)



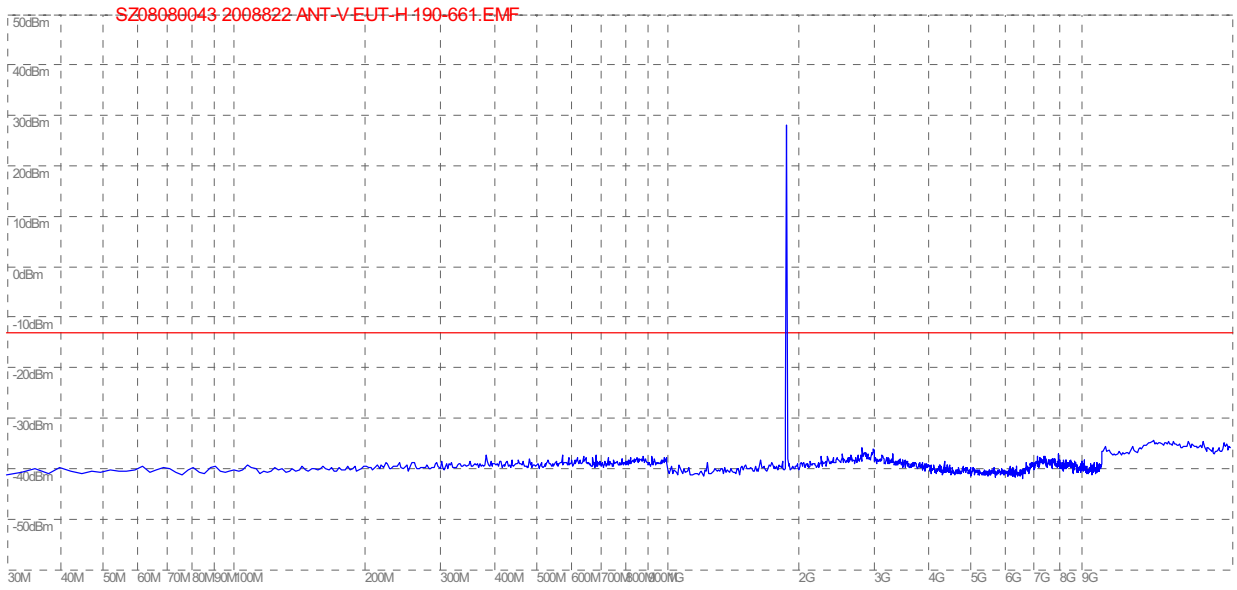
(Plot B: GSM 850MHz Channel = 190, 30MHz to 10GHz)



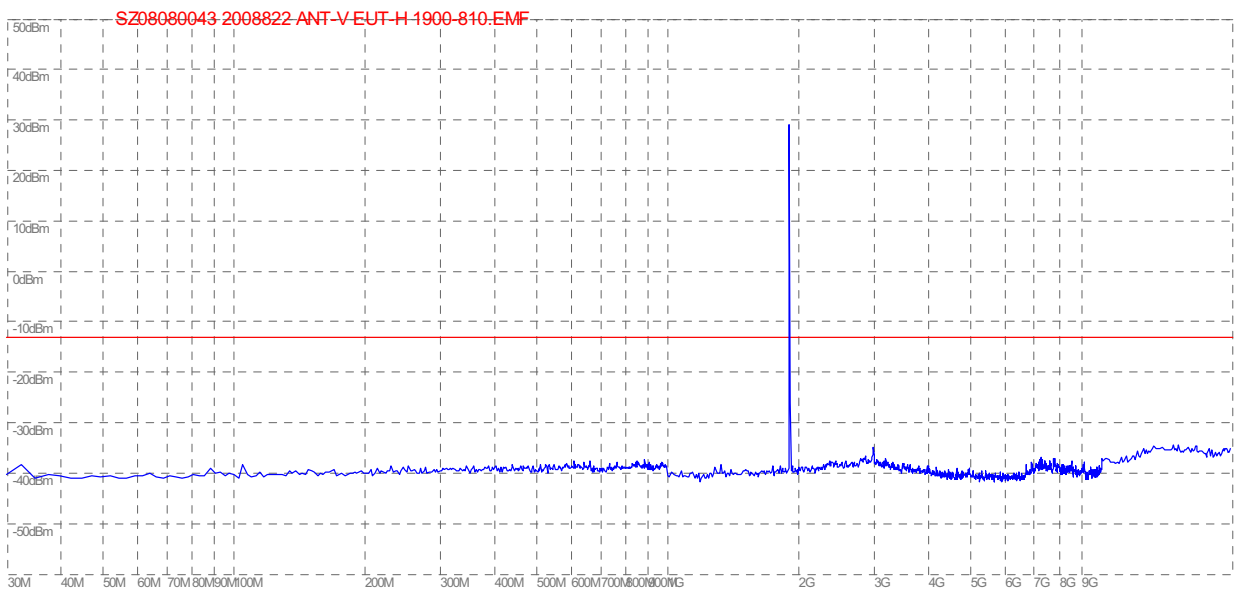
(Plot C: GSM 850MHz Channel = 251, 30MHz to 10GHz)



(Plot D: GSM 1900MHz Channel = 512, 30MHz to 20GHz)



(Plot E: GSM 1900MHz Channel = 661, 30MHz to 20GHz)



(Plot F: GSM 1900MHz Channel = 810, 30MHz to 20GHz)

5.6 Band Edge

5.6.1 Requirement

According to FCC section 22.917(b) and FCC section 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 Description

See section 3.2 of this report.

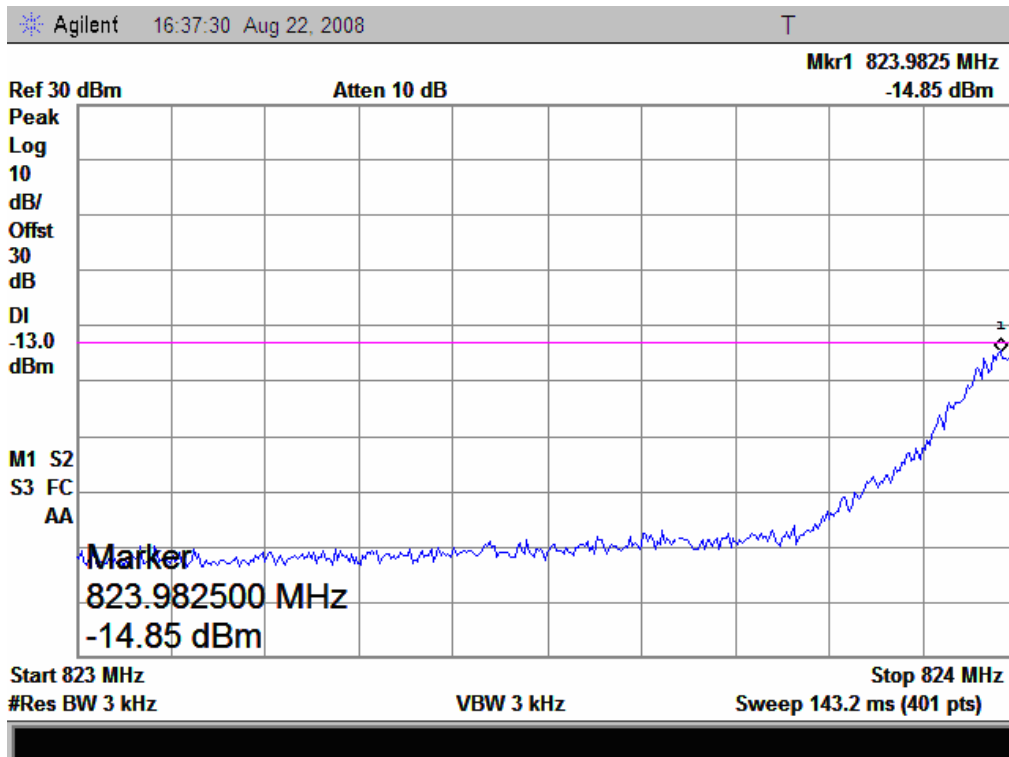
5.6.3 Test Result

The lowest and highest channels are tested to verify the band edge emissions.

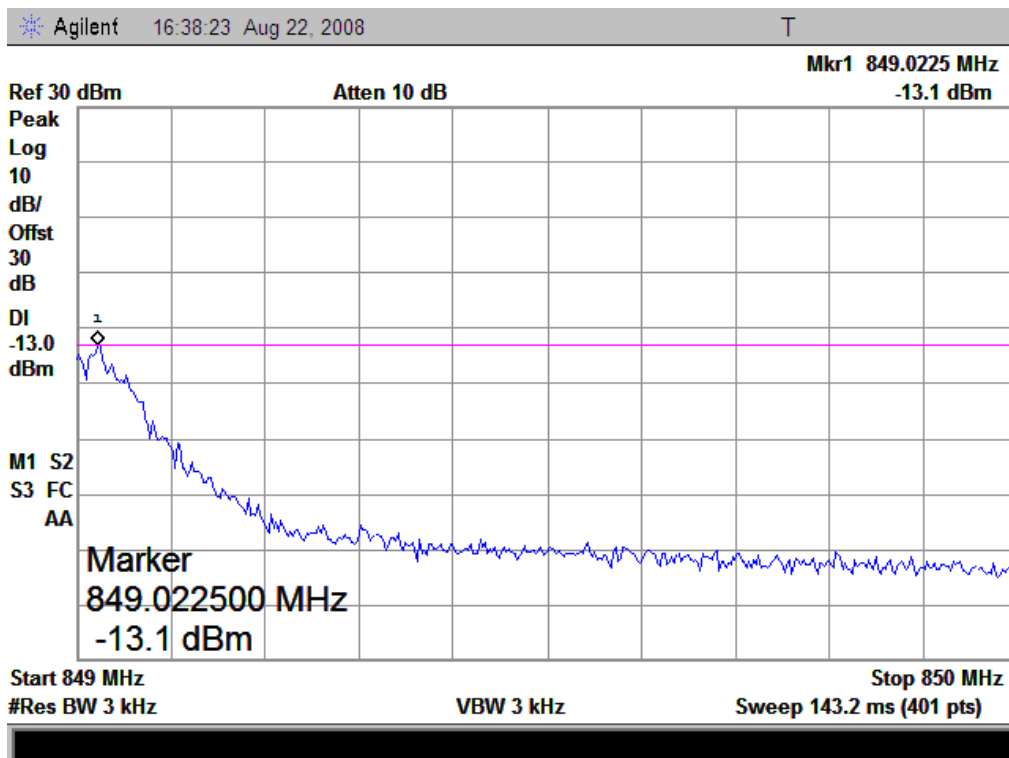
1. Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
GSM 850MHz	128	824.2	-14.85	Plot A	-13	PASS
	251	848.8	-13.10	Plot B		PASS
GSM 1900MHz	512	1850.2	-15.55	Plot C	-13	PASS
	810	1909.8	-15.47	Plot D		PASS

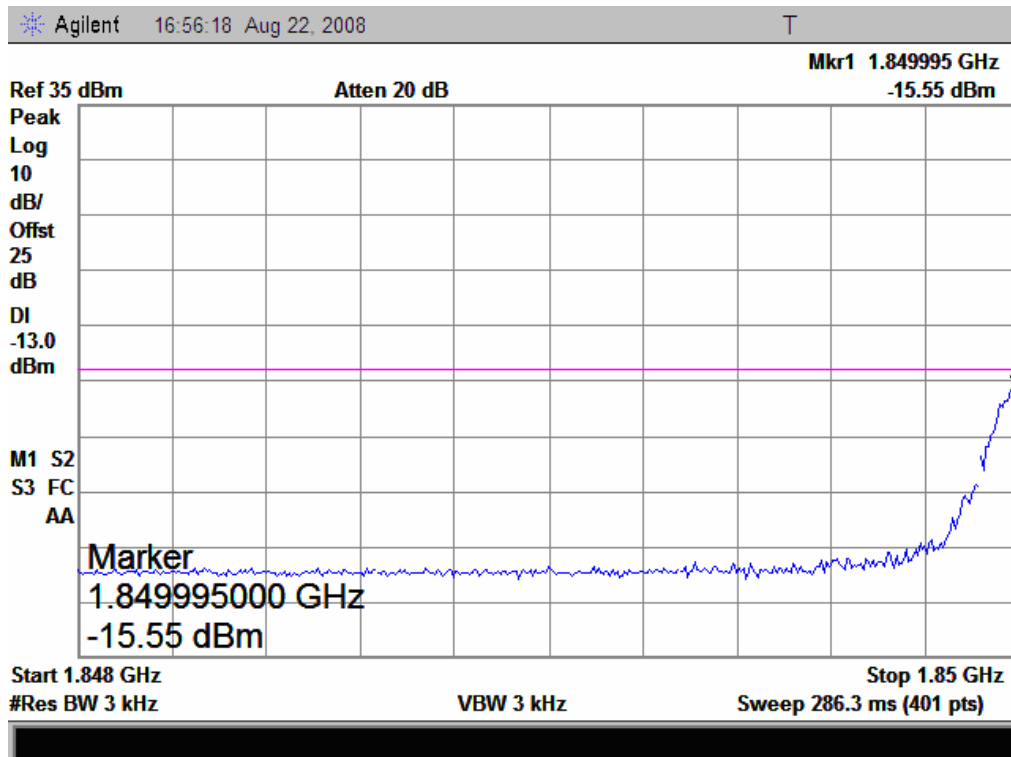
2. Test Plot:



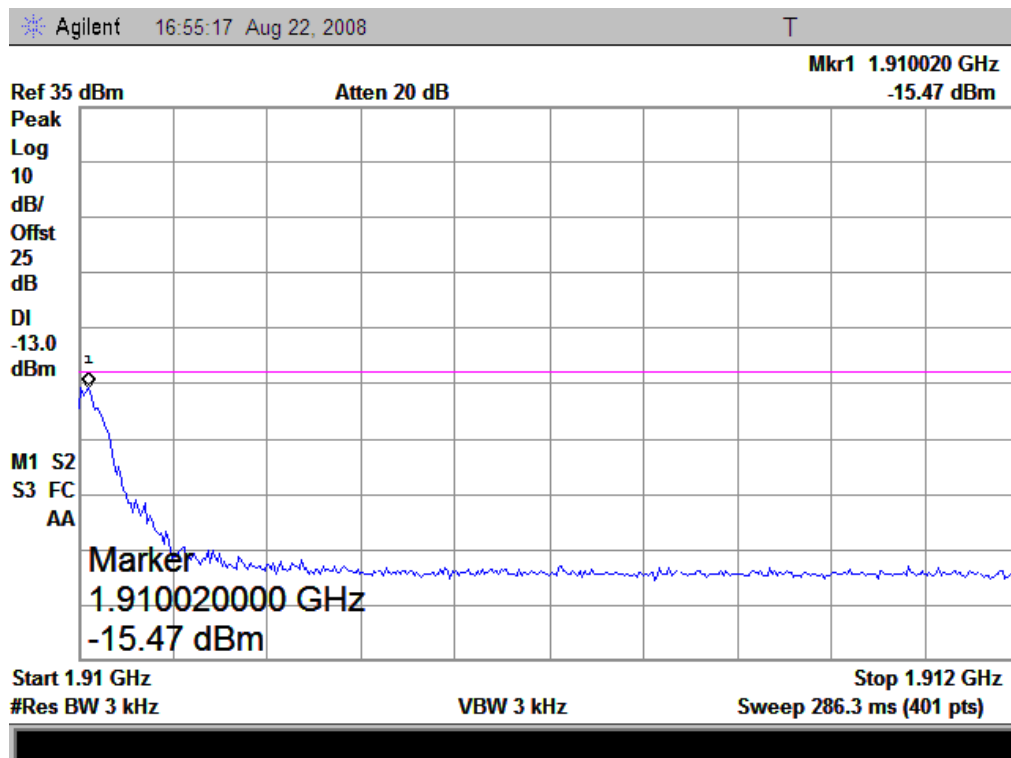
(Plot A: Channel = 128)



(Plot B: Channel = 251)



(Plot C: Channel = 512)



(Plot D: Channel = 810)

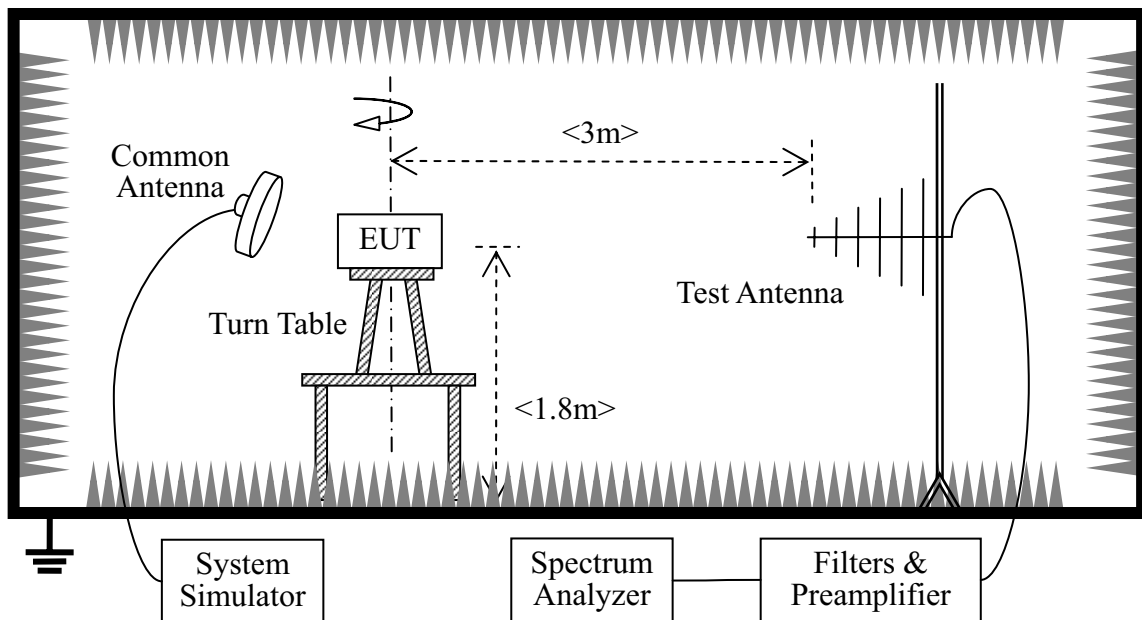
5.7 Transmitter Radiated Power (EIRP/ERP)

5.7.1 Requirement

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 Description

1. Test Setup:



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. The EUT is commanded by the SS to operate at the maximum output power i.e. GSM850MHz band Power Control Level (PCL) = 5 and Power Class = 4 and GSM1900MHz band Power Control Level (PCL) = 0 and Power Class = 1. A call is established between the EUT and the SS via a Common Antenna.

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

2. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2007.06	1year

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E7405A	US44210471	2007.07	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2006.08	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2007.07	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2007.07	1year

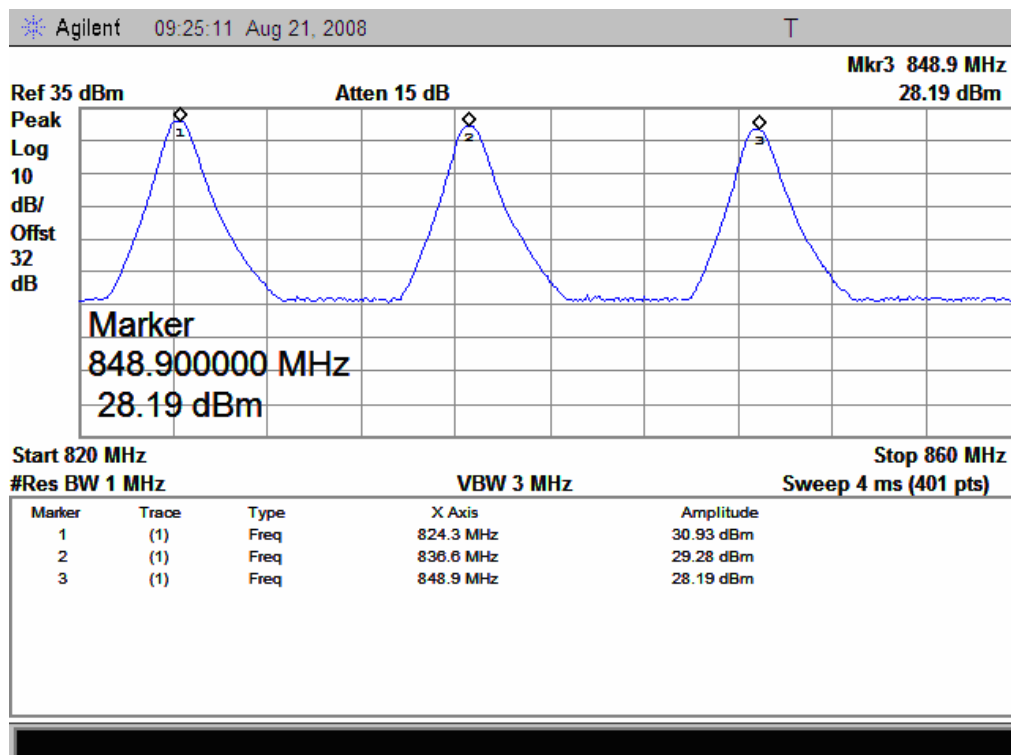
5.7.3 Test Result

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.

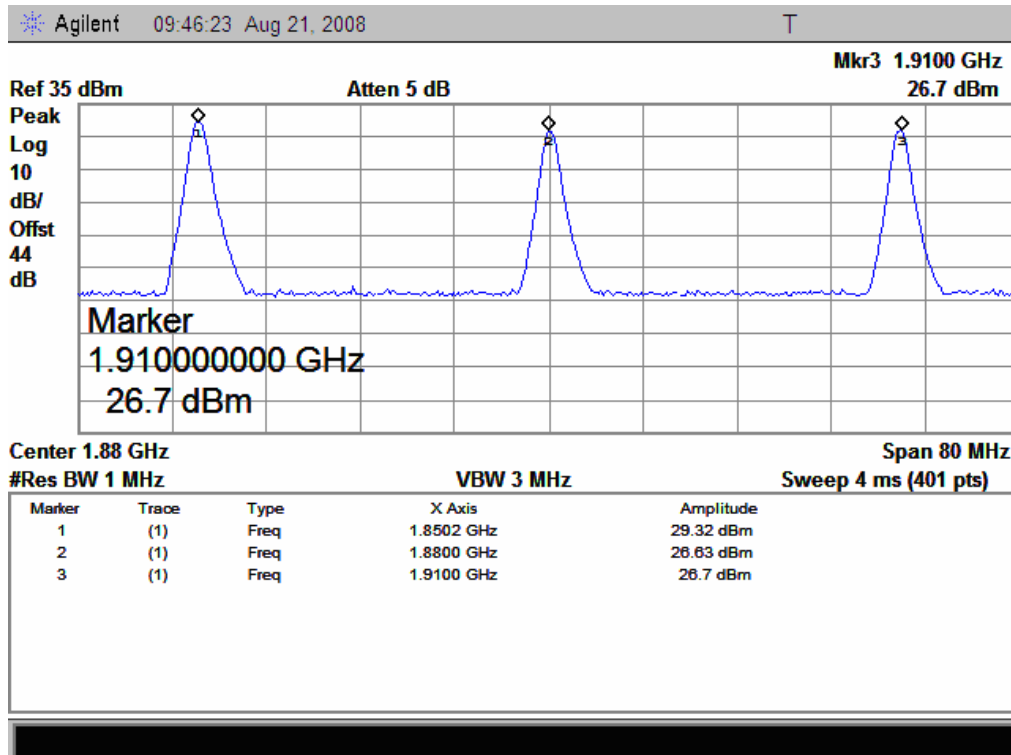
Test Verdict:

Band	Channel	Frequency (MHz)	Measured ERP/EIRP			Limit		Verdict
			dBm	W	Refer to Plot	dBm	W	
GSM 850MHz	128	824.20	30.93	1.24	Plot A	38.45	7	PASS
	190	836.60	29.28	0.85	Plot B			PASS
	251	848.80	28.19	0.66	Plot C			PASS
GSM 1900MHz	512	1850.2	29.32	0.86	Plot D	33	2	PASS
	661	1880.0	26.63	0.46	Plot E			PASS
	810	1909.8	26.70	0.47	Plot F			PASS

3. Test Plot:



(Plot A: GSM 850MHz Channel = 128, 190, 251)



(Plot D: GSM 1900MHz Channel = 512, 661, 810)

5.8 Radiated Out of Band Emissions

5.8.1 Requirement

According to FCC section 22.917(a) and section 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 Description

See section 5.7.2 of this report.

5.8.3 Test Result

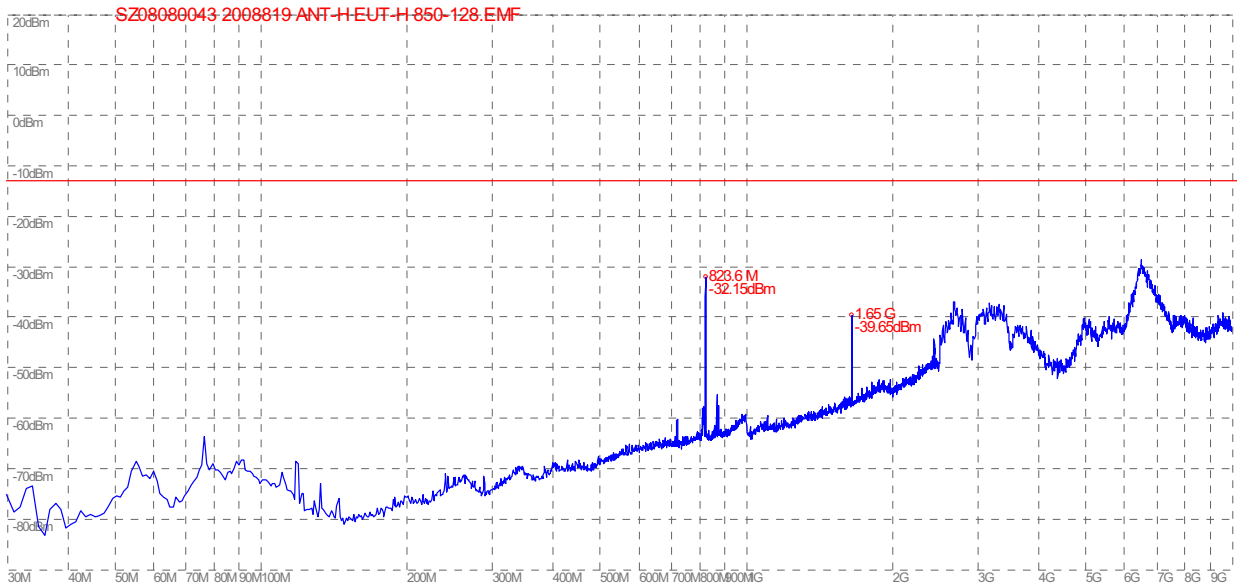
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

1. Test Verdict:

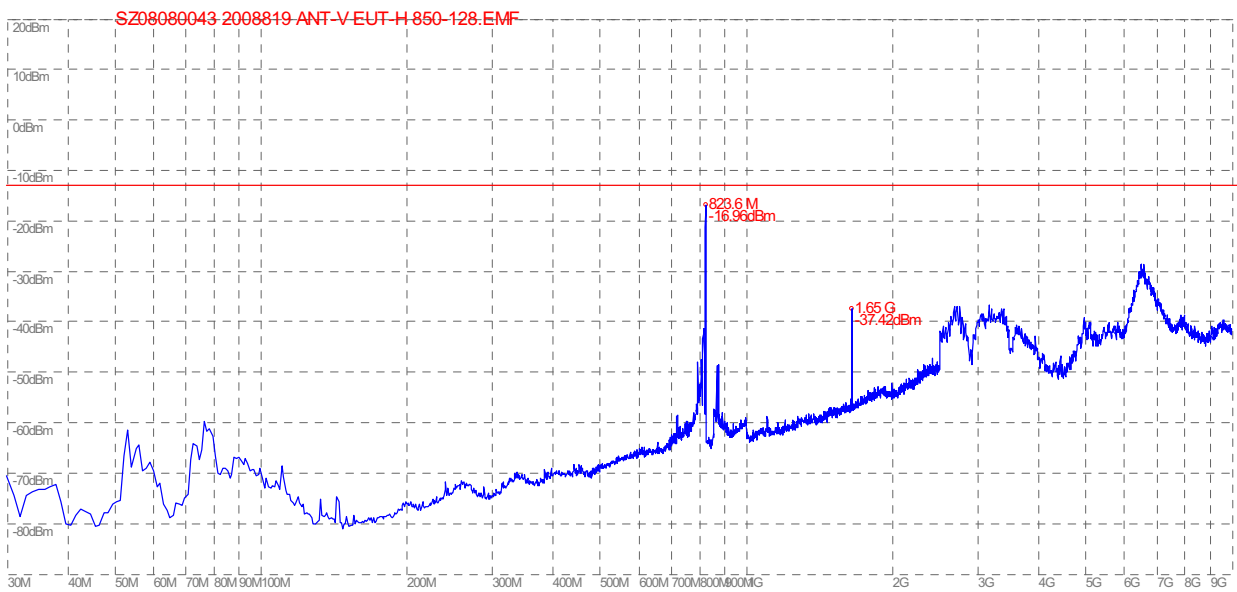
Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
GSM 850MHz	128	824.2	< -30	< -30	Plot A.1/A.2	-13	PASS
	190	836.6	< -30	< -30	Plot B.1/B.2		PASS
	251	848.8	< -30	< -30	Plot C.1/C.2		PASS
GSM 1900MHz	512	1850.2	< -25	< -25	Plot D.1/D.2	-13	PASS
	661	1880.0	< -25	< -25	Plot E.1/E.2		PASS
	810	1909.8	< -25	< -25	Plot F.1/F.2		PASS

2. Test Plot for the Whole Measurement Frequency Range:

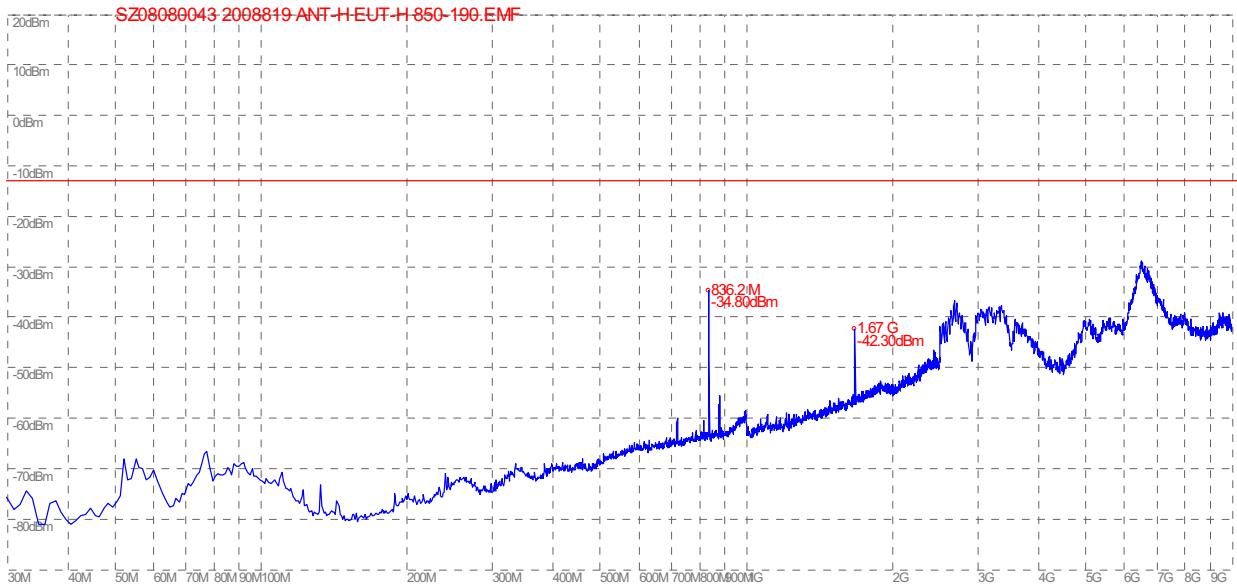
Note: the power of the EUT transmitting frequency should be ignored.



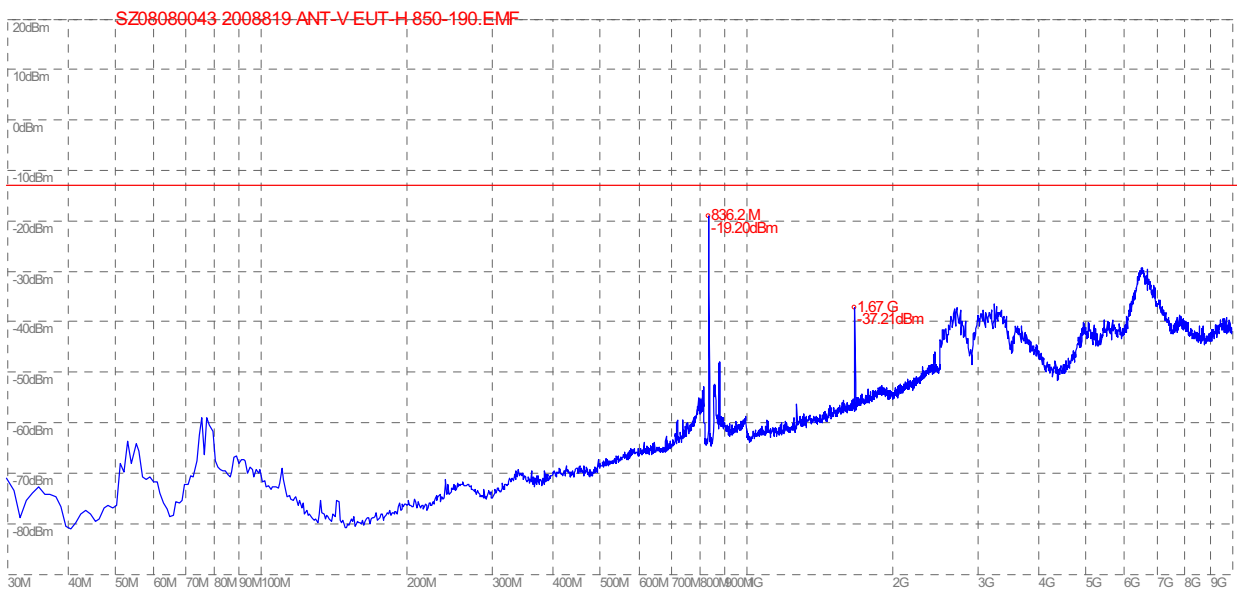
(Plot A.1: GSM 850MHz Channel = 128, Test Antenna Horizontal)



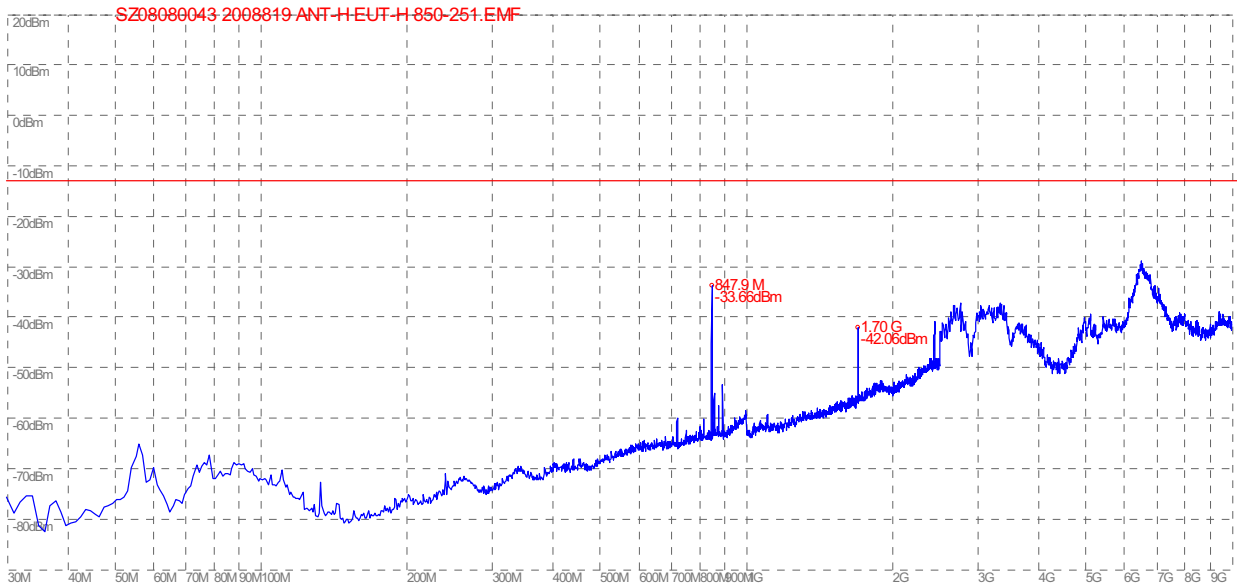
(Plot A.2: GSM 850MHz Channel = 128, Test Antenna Vertical)



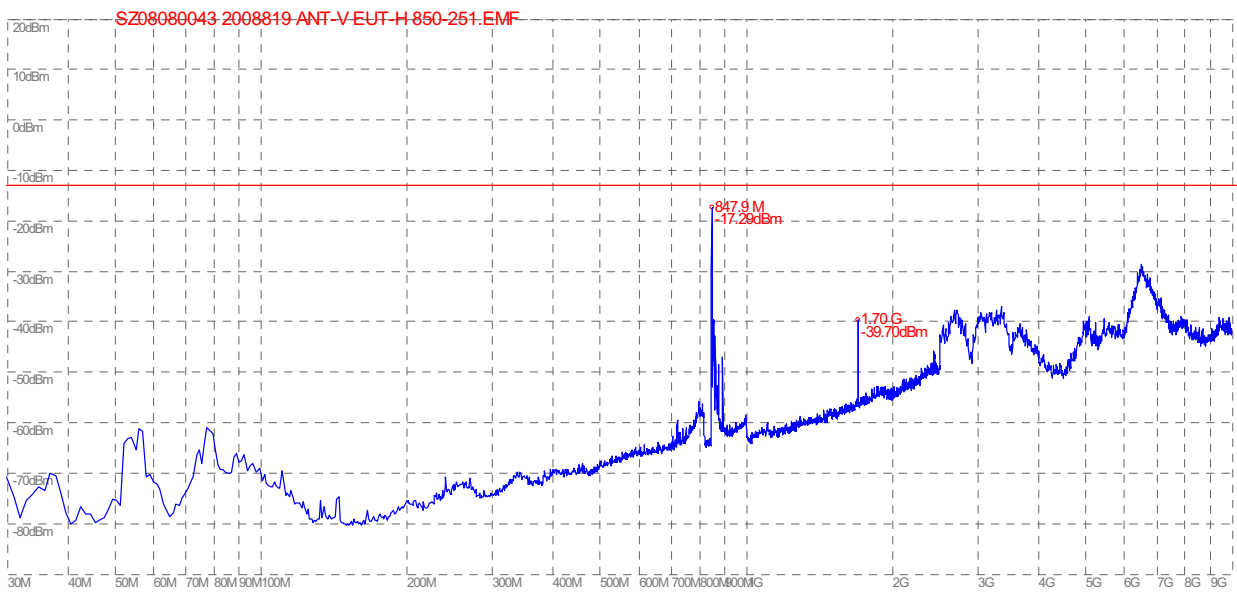
(Plot B.1: GSM 850MHz Channel = 190, Test Antenna Horizontal)



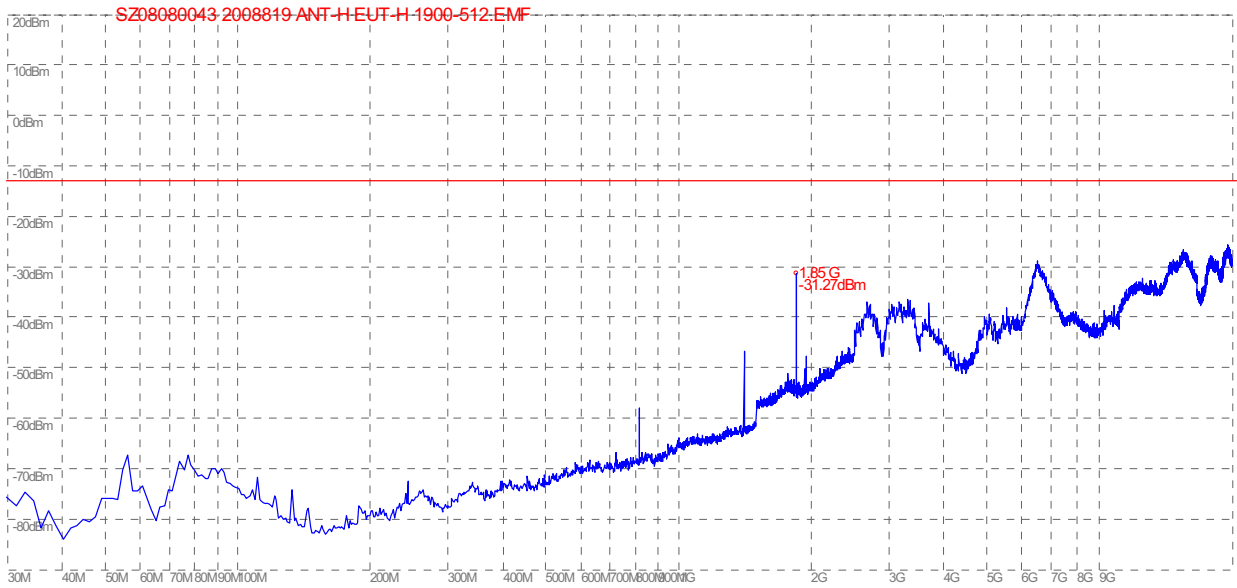
(Plot B.2: GSM 850MHz Channel = 190, Test Antenna Vertical)



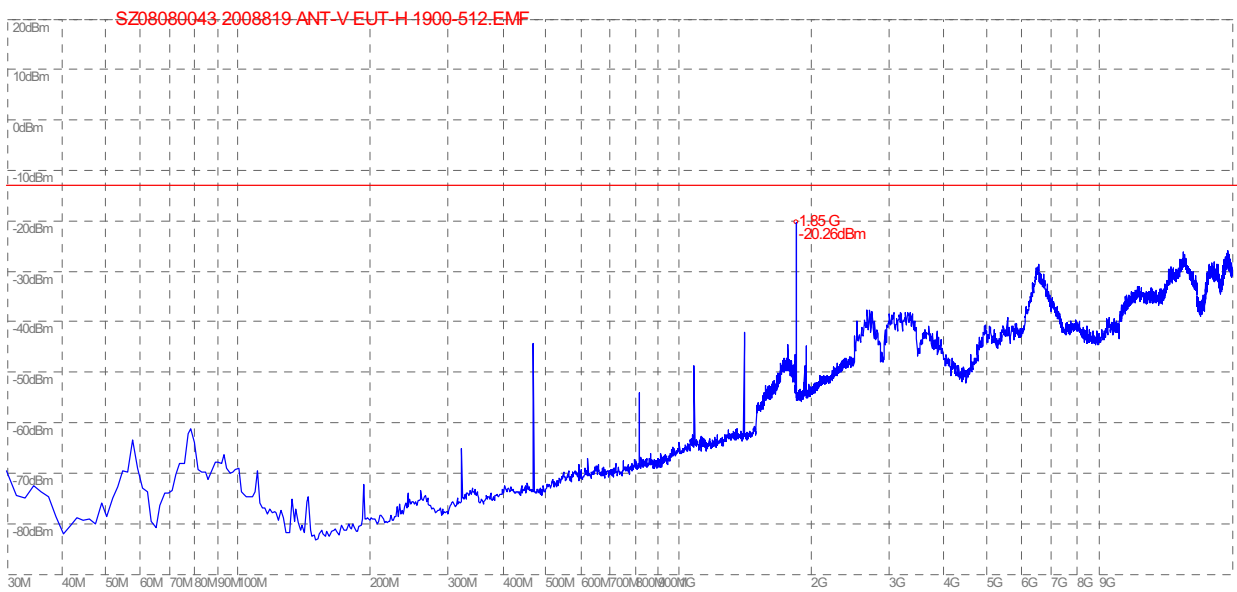
(Plot C.1: GSM 850MHz Channel = 251, Test Antenna Horizontal)



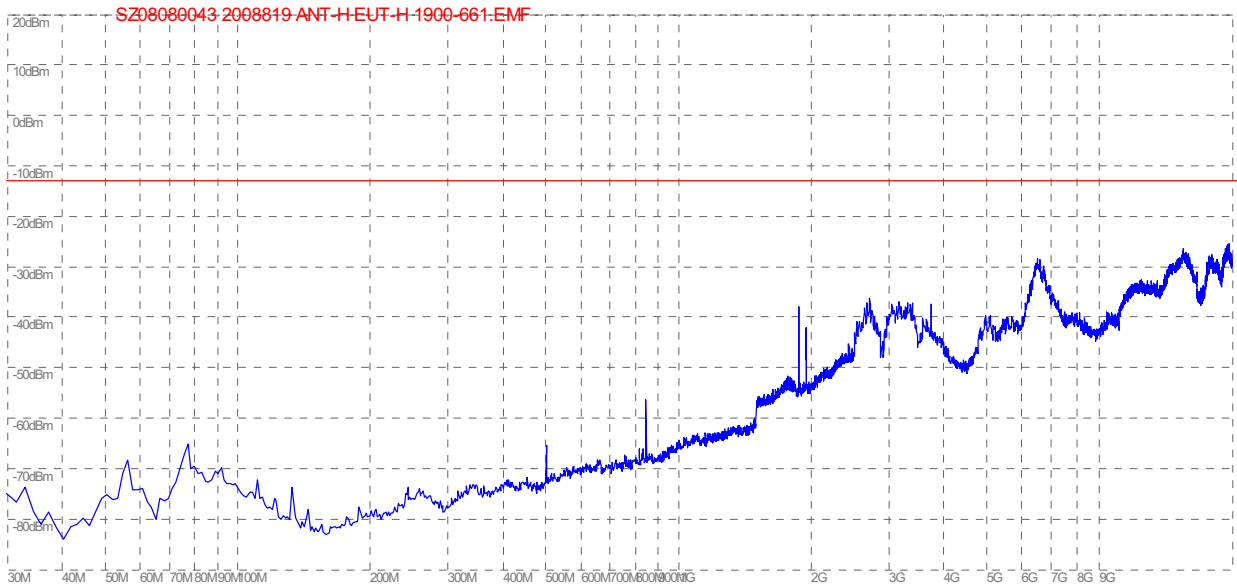
(Plot C.2: GSM 850MHz Channel = 251, Test Antenna Vertical)



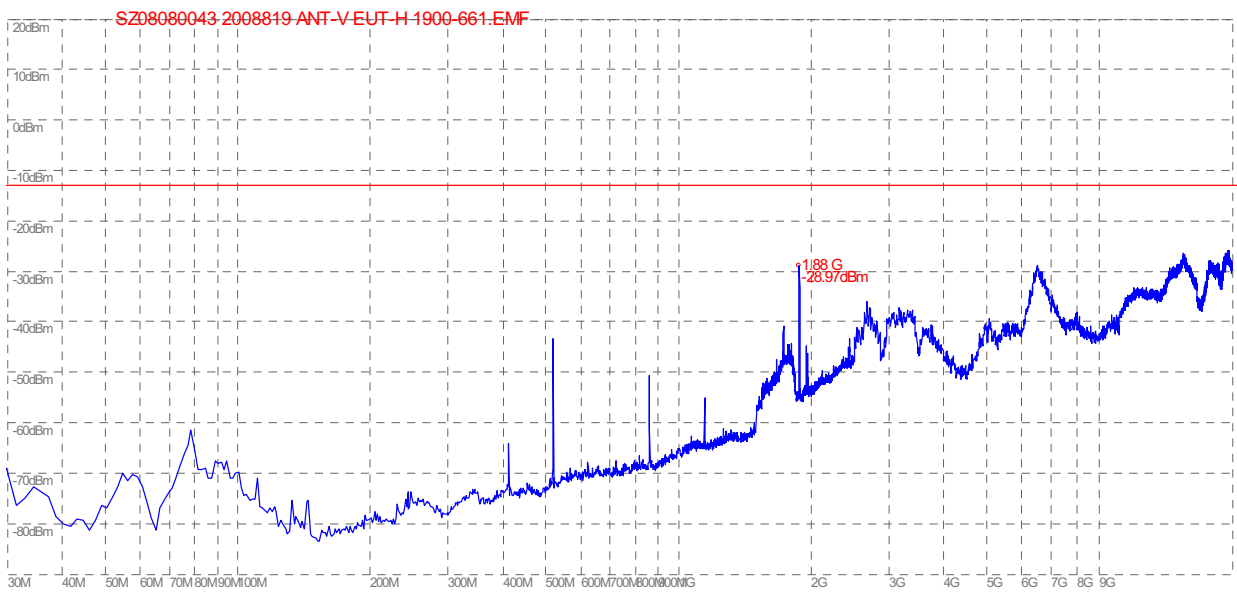
(Plot D.1: GSM 1900MHz Channel = 512, Test Antenna Horizontal)



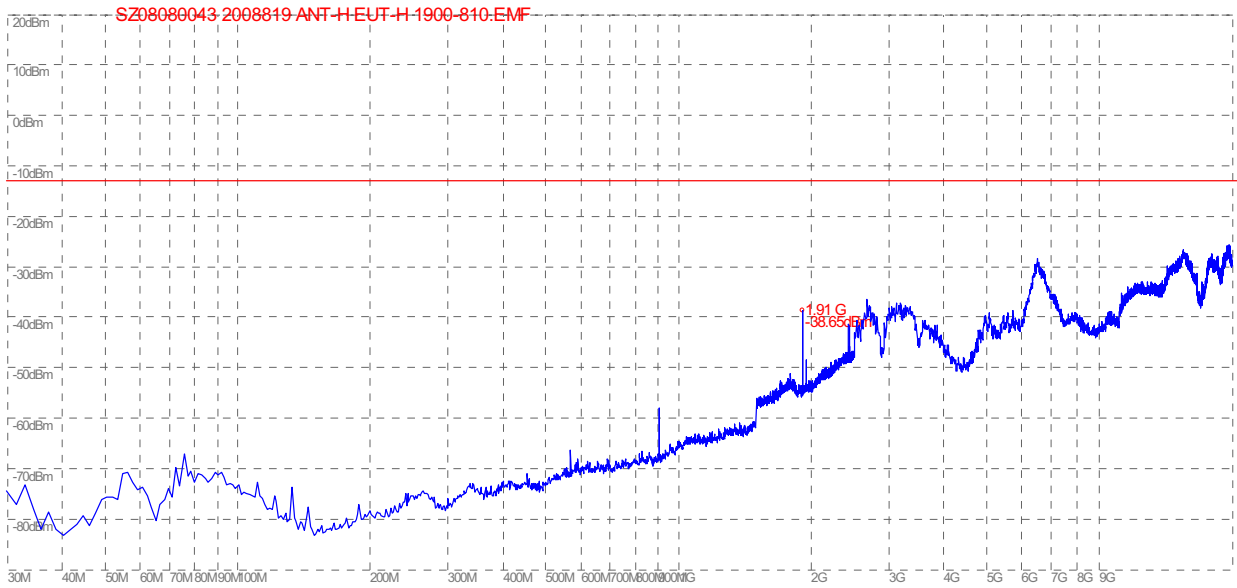
(Plot D.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)



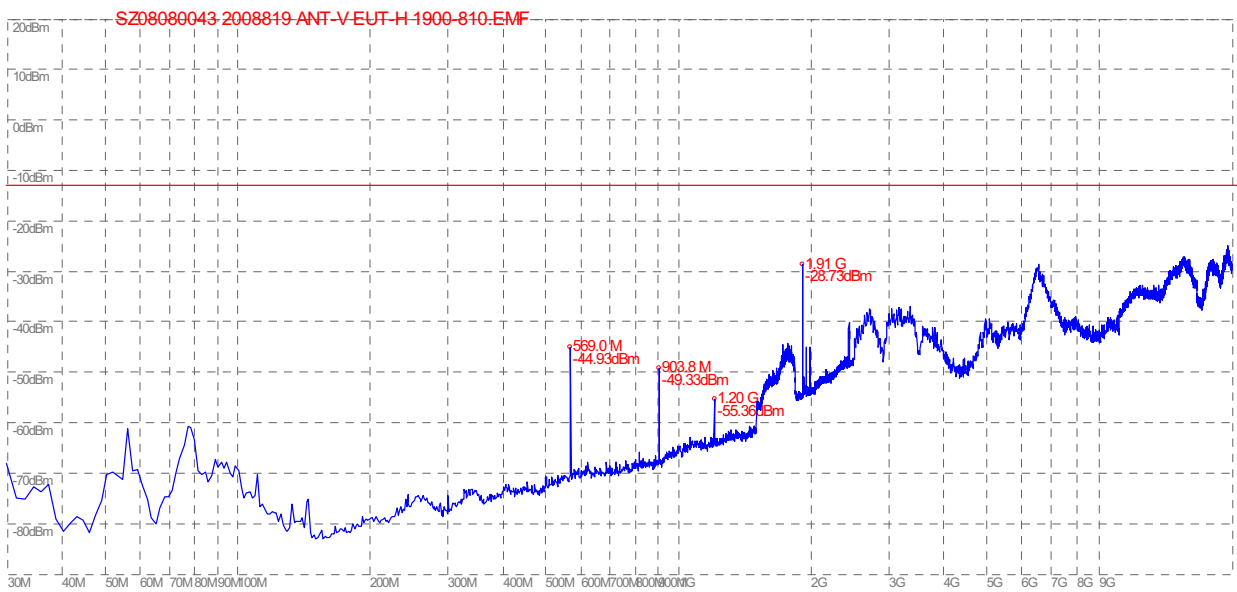
(Plot E.1: GSM 1900MHz Channel = 661, Test Antenna Horizontal)



(Plot E.2: GSM 1900MHz Channel = 661, Test Antenna Vertical)



(Plot F.1: GSM 1900MHz Channel = 810, Test Antenna Horizontal)



(Plot F.2: GSM 1900MHz Channel = 810, Test Antenna Vertical)

**** END OF REPORT ****