

**FCC PART 22H/24E MEASUREMENT AND TEST REPORT**

**For**

**SHENZHEN B&L YX TECHNOLOGY CO., LTD.**

**East 5th Floor, Building 10th, Hengmingzhu Industry Center,  
Fuyu Industry Zone, Shajing, Shenzhen, China**

**E.U.T.: Mobile Phone**

**Model Name: D209, SALSA, SALSA PLUS**

**Trade name: OLA**

**FCC ID: QCOTM7219**

**Report Number: NTC1209800F**

**Test Date(s): September 24 2012 to October 24 2012**

**Report Date(s): October 24, 2012**

**Prepared by**

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**Approved & Authorized Signer**



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**Note: This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Dongguan NTC Co., Ltd. The test results referenced from this report are relevant only to the sample tested.**

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## 1.0 GENERAL INFORMATION

### 1.1 Product Description for Equipment under Test

The SHENZHEN B&L YX TECHNOLOGY CO., LTD.'s product, model name : D209 is a GSM mobil phone. It's power by internal 3.7V rechargeable Li-lithium battery, and also can be charged by external adapter. For more details features, please refer to User's Manual.

Manufacturer	: SHENZHEN B&L YX TECHNOLOGY CO., LTD.
Address	: East 5th Floor, Building 10th, Hengmingzhu Industry Center, Fuyu Industry Zone, Shajing, Shenzhen, China
Frequency:	: Cellular Band: 824.2-848.8MHz (TX) 869.2-893.8MHz(RX) PCB Band: 1850.2-1909.8MHz (TX) 1930.2-1989.8MHz(RX)
Modulation	: GMSK (GSM/PCS)
Software Version:	: 7219_10G_YT_OLA_L03_SC DUAL_160X128_3216_V102_120825_1204
Hardware Version:	: 7219-MB-V1.0
Max RF Output Power	: 32.29dBm (Cellular Band) 29.27dBm (PCS Band)
Antenna Type	: PIFA
Antenna Gain	: 2dBi
Power Supply	: Li-lithium Battery 3.7V : Input : AC 110-240V 50/60Hz (Adapter) : Output :DC 5V 500mA $\pm$ 50mA : Model: ODL-012- :
Model name	: D209, SALSA, SALAS PLUS
Remark	: All models are the same except colour and model name, we prepare D209 for EMC test.

## 1.2 Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services

Part 24 Subpart E - Personal Communication Services

Applicable Standards: TIA/EIA 603-C, ANSI C63.4-2003.

All radiated and conducted emissions measurements were performed at Dongguan NTC Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters..

## 1.3 Special Accessories

Not available for this EUT intended for grant.

## 1.4 Equipment Modifications

Not available for this EUT intended for grant.

## 1.5 Objective

This type approval report is prepared on behalf of SHENZHEN B&L YX TECHNOLOGY CO., LTD. in accordance with Part 2, Subpart J, Part 22 Subpart H, and Part 24 Subpart E of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC rules for output power, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, band edge and radiated margin.

## 1.6 Test Facility

Accredited by FCC, August 02, 2011

The Certificate Registration Number is 665078.

Accredited by Industry Canada, July 01, 2011

The Certificate Registration Number is 46405-9743.

**1.7 Summary of Test Results**

<b>FCC Rules</b>	<b>Description Of Test</b>	<b>Result</b>
§2.1046 §22.913(a) §24.232(c)	RF Output Power	Compliant
§ 2.1049 § 22.905 § 22.917 § 24.238	Occupied Bandwidth	Compliant
§ 2.1055 § 22.355 § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliant
§ 22.917 (a) § 24.238 (a)	Out of band emission, Band Edge	Compliant
§ 2.1047	Modulation Characteristics	N/A
§ 2.1051 § 22.917 (a) § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053 § 22.917 (a) § 24.238 (a)	Field Strength of Spurious Radiation	Compliant
§1.1307, §2.1093	RF Exposure (SAR)	Compliant(refer to SAR report please)

\* SAR report provide by SIEMIC Testing and Certification Services.

## 2.0 RF OUTPUT POWER

### 2.1 Applicable Standard

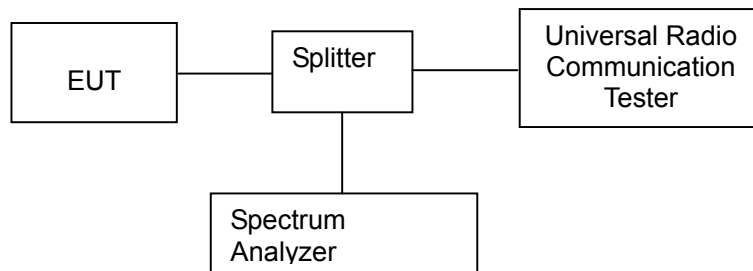
According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (C), in no case may the peak output power of a base station transmitter exceed 2 watt EIRP.

### 2.2 Test Procedure

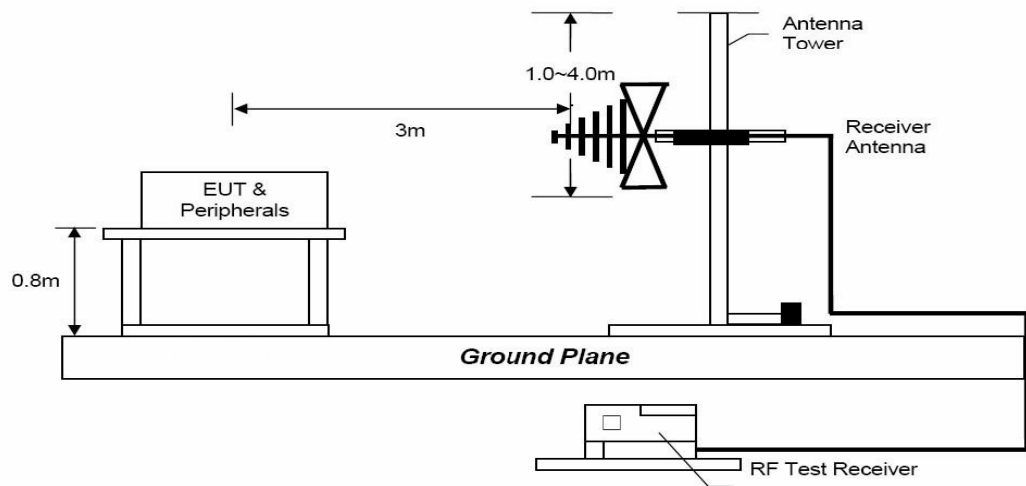
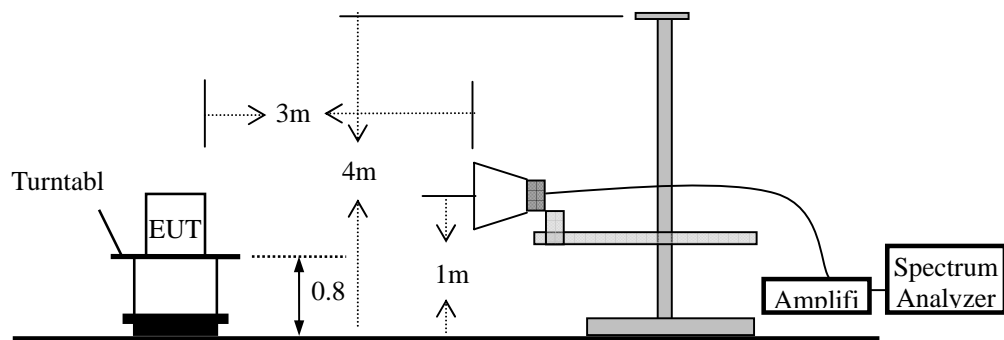
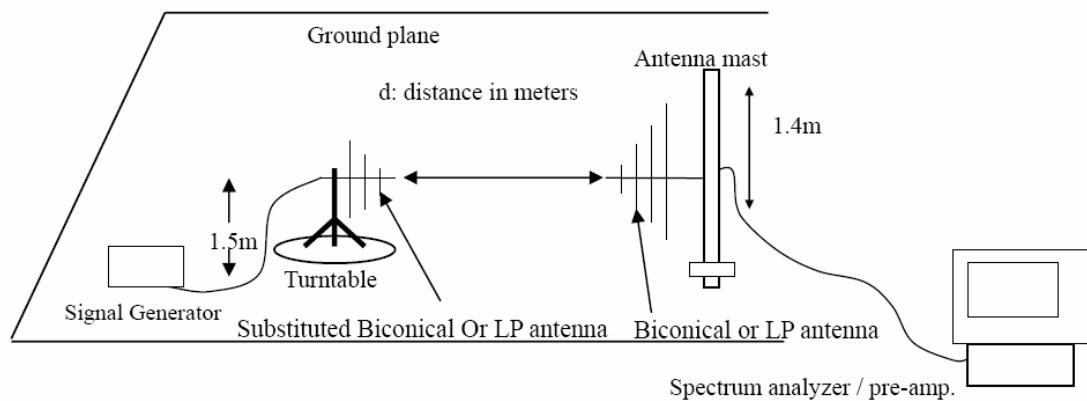
#### ***Conducted Method:***

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a spectrum analysis. Transmitter output was read off the spectrum analysis in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to spectrum analysis reading.



#### ***Radiated method:***

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer. During the measurement, the EUT was communication with the station. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna from 4m to 1m. The reading was recorded and the field strength (E in dBuV/m) was calculated. ERP in frequency band 824.2 –848.80.8MHz were measured using a substitution method. The EUT was replaced by dipole antenna connected, the S.G. output was recorded and ERP was calculated as follows: EIRP in frequency band 1850.2 –1909.8MHz were measured using a substitution method. The EUT was replaced by or horn antenna connected, the S.G. output was recorded and EIRP was calculated as follows:  $ERP = S.G. \text{ output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable Loss (dB)}$

**Radiated Emission Test Set-Up, Frequency Below 1000MHz****Radiated Emission Test Set-Up, Frequency above 1GHz****Substituted Method Test Set-UP**



**Conducted Power:**

Cellular Band (Part 22H)				
Humidity :		55 %	Temperature :	26 °C
Test Result:		PASS	Test By:	Rose
Mode	Channel	Frequency (MHz)	Output Power (dBm)	Tune up power tolerant
GSM	Low	824.2	32.28	$32.5 \pm 1$
	Middle	836.6	32.27	$32.5 \pm 1$
	High	848.8	32.29	$32.5 \pm 1$

PCS Band (Part 24E)				
Humidity :		55 %	Temperature :	26 °C
Test Result:		PASS	Test By:	Rose
Mode	Channel	Frequency (MHz)	Output Power (dBm)	Tune up power tolerant
GSM	Low	1850.2	29.27	$29.5 \pm 1$
	Middle	1880.0	29.26	$29.5 \pm 1$
	High	1909.8	29.24	$29.5 \pm 1$

**Radiated Power (ERP and EIRP)**

Cellular Band (Part 22H)									
Humidity :		55 %	Temperature :				26 °C		
Mode:		GSM	Test By:				Rose		
Test Result:		PASS							
Indicated		Antenna	Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
Frequency (MHz)	Ampl (dBμV/m)	Polar (H/V)	Frequency (MHz)	S.G. Level (dBm)	Polar (H/V)				
Low Channel									
824.2	88.96	H	824.2	20.61	H	0	0.9	19.71	38.45
824.2	102.32	V	824.2	31.54	V	0	0.9	30.64	38.45
Middle Channel									
836.6	89.43	H	836.6	19.46	H	0	0.9	18.56	38.45
836.6	101.85	V	836.6	30.65	V	0	0.9	29.75	38.45
High Channel									
848.8	89.65	H	848.8	20.52	H	0	0.9	19.62	38.45
848.8	102.59	V	848.8	31.93	V	0	0.9	31.03	38.45

PCS Band (Part 24E)									
Humidity :		56 %	Temperature :				26 °C		
Mode:		GSM	Test By:				Rose		
Test Result:		PASS							
Indicated		Antenna	Substituted			Antenna Gain Correction (dBi)	Cable Loss (dB)	Absolute Level (dBm)	Limit (dBm)
Frequency (MHz)	Ampl (dBμV/m)	Polar (H/V)	Frequency (MHz)	S.G. Level (dBm)	Polar (H/V)				
Low Channel									
1850.2	89.63	H	1850.2	18.84	H	6.2	2.3	22.74	33
1850.2	99.75	V	1850.2	24.11	V	6.2	2.3	28.01	33
Middle Channel									
1880	88.76	H	1880	18.03	H	6.2	2.3	21.93	33
1880	98.42	V	1880	23.73	V	6.2	2.3	27.63	33
High Channel									
1909.8	88.91	H	1909.8	18.12	H	6.2	2.3	22.02	33
1909.8	98.87	V	1909.8	23.89	V	6.2	2.3	27.79	33

### 3. Test OCCUPIED BANDWIDTH

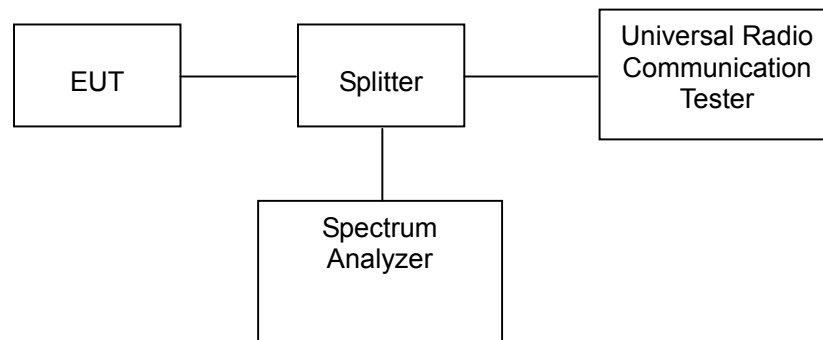
#### 3.1 Applicable Standard

CFR 47 §2.1049, §22.917, §22.905 and §24.238.

#### 3.2 Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 30 kHz (Cellular /PCS) and the 26 dB & 99% bandwidth was recorded.

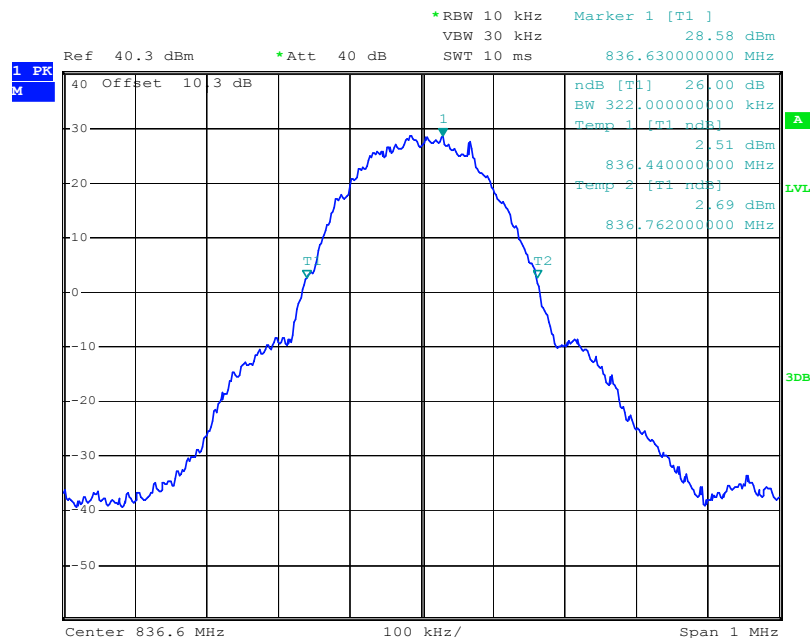


Cellular Band (Part 22H)				
Humidity :		55 %	Temperature :	26 °C
Test Result:		PASS	Test By:	Rose
Mode	Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM	190	836.6	246.0000	322.0000

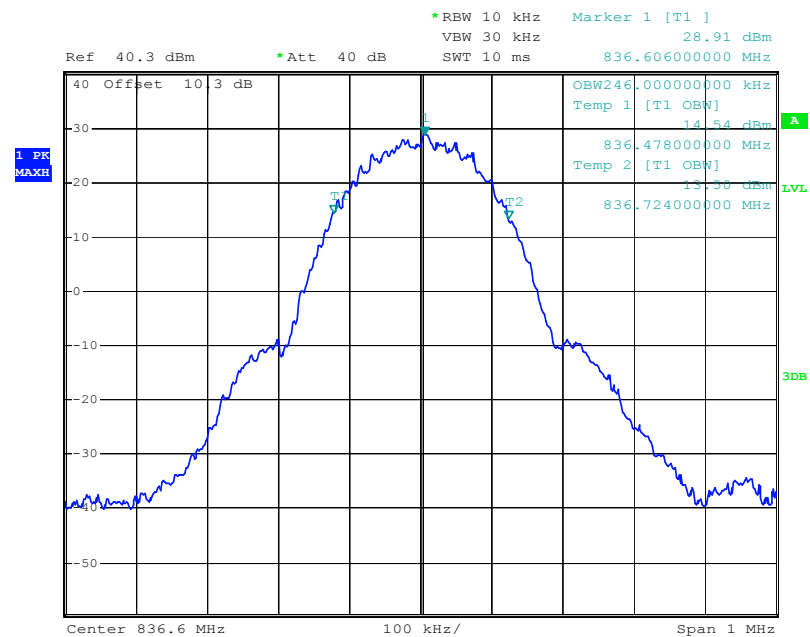
PCS Band (Part 24E)				
Humidity :		55 %	Temperature :	26 °C
Test Result:		PASS	Test By:	Rose
Mode	Channel	Frequency (MHz)	99% Power Bandwidth (kHz)	26 dB Bandwidth (kHz)
GSM	661	1880.0	246.0000	320.0000

Cellular Band (Part 22H)  
GSM

26 dB Bandwidth

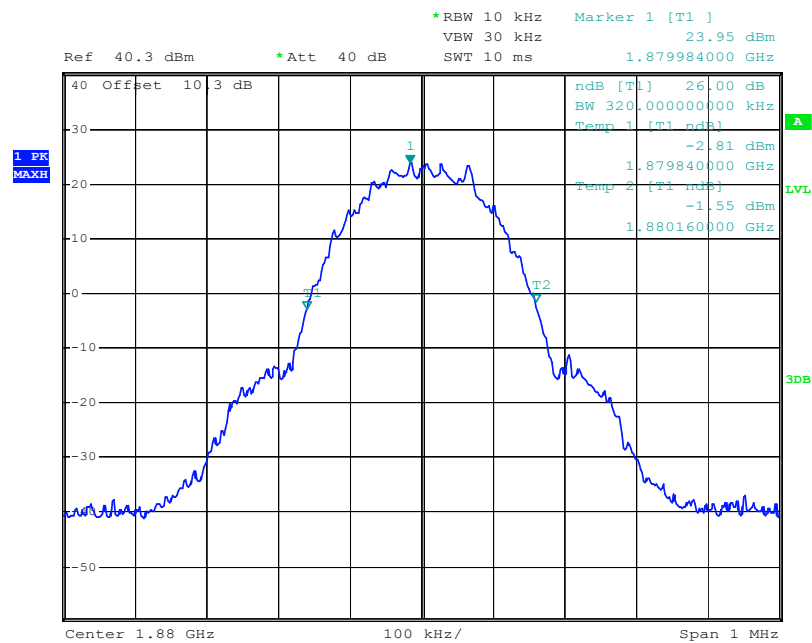


99% Band width

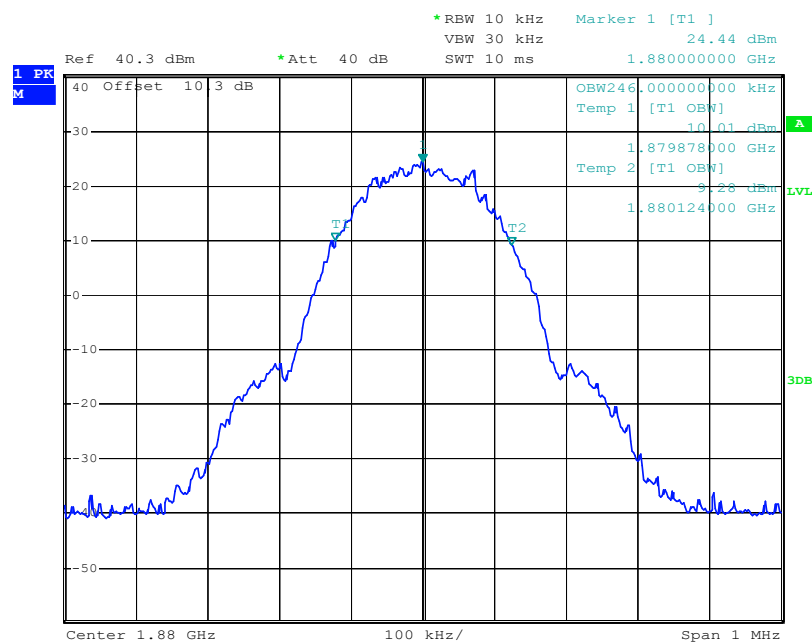


PCS Band (Part 24H)  
GSM

26 dB Bandwidth



99% Band width



## 4. FREQUENCY STABILITY

### 4.1 Applicable Standard

CFR47 § 2.1055 (a), § 2.1055 (d), §22.355, §24.235

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

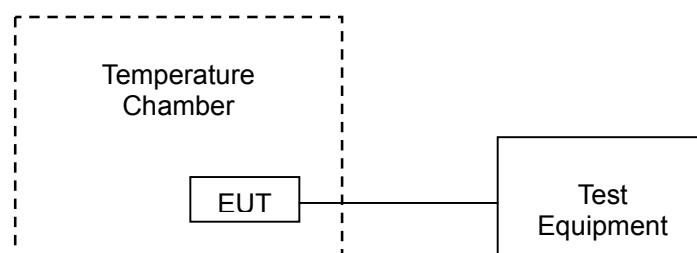
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

### 4.2 Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 30 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



Cellular Band				
Humidity :	56 %	Temperature :	25 °C	
Mode:	GSM	Test By:	Rose	
Test Result:	PASS			
Middle channel, f <sub>o</sub> =836.6MHz;				
Temperature (°C)	Power Supplied (Vdc)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.7	-11	-0.01392	2.5
-20		-15	-0.01894	2.5
-10		-10	-0.01261	2.5
0		-9	-0.01013	2.5
20		-13	-0.01652	2.5
40		-14	-0.01786	2.5
50		-12	-0.01573	2.5
25	3.7	-8	-0.00865	2.5
	3.5	-9	-0.01013	2.5
	4.2	-7	-0.00828	2.5



PCB Band				
Humidity :	52 %	Temperature :	23 °C	
Mode:	GSM	Test By:	Rose	
Test Result:	PASS			
Middle channel, f <sub>o</sub> =1880.0MHz;				
Temperature (°C)	Power Supplied (Vdc)	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30	3.7	-12	0.006383	2.5
-20		-11	0.005851	2.5
-10		-10	0.005319	2.5
0		-12	0.006383	2.5
20		-13	0.006915	2.5
40		-11	0.005851	2.5
50		-12	0.006383	2.5
25	3.7	-11	0.005851	2.5
	3.5	-11	0.005851	2.5
	4.2	-12	0.006383	2.5

## 5. BAND EDGES

### 5.1 Applicable Standard

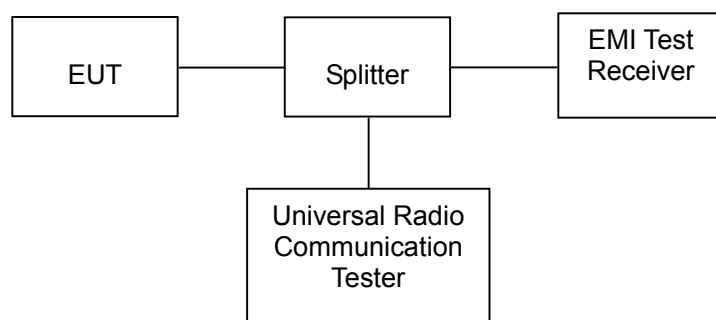
According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

According to §24.238(a), the power of any emissions 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.

### 5.2 Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency, RBW set to 3 kHz.



Cellular Band			
Humidity :	56 %	Temperature :	26 °C
Test Result:	PASS	Test By:	Rose
Mode	GSM		
Frequency (MHz)	Emission (dBm)	Limit (dBm)	
824	-13.57	-13	
849	-12.76	-13	

Note: 1. Correction Factor(dB)=10log(1% Emission BW/RBW)  $\approx$  0.31

2. Band Edge= Measurement Value + Correction Factor (dB)

3. Offset= External attenuator+cable loss+10log(1%Emission BW/RBW)=11.5dB

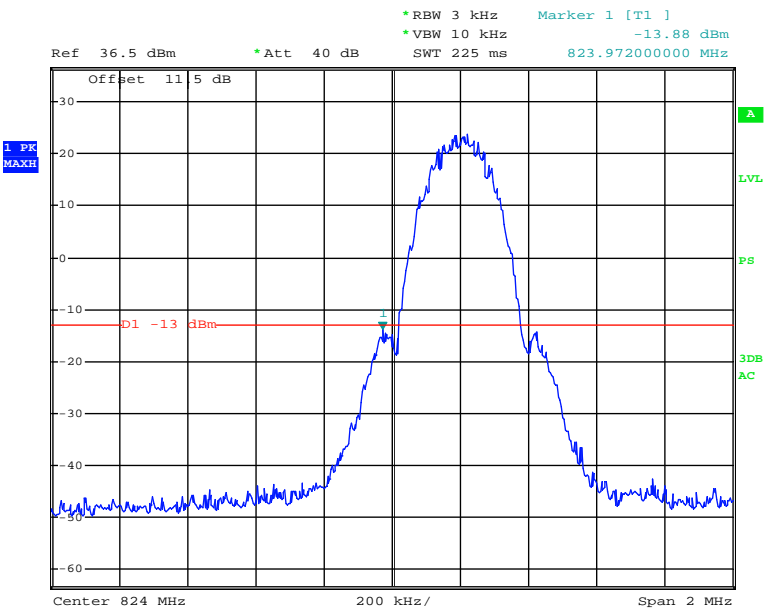
PCS Band			
Humidity :	56 %	Temperature :	26 °C
Test Result:	PASS	Test By:	Rose
Mode	GSM		
Frequency (MHz)	Emission (dBm)	Limit (dBm)	
1850	-14.81	-13	
1910	-17.31	-13	

Note: 1. Correction Factor(dB)=10log(1% Emission BW/RBW)  $\approx$  0.28

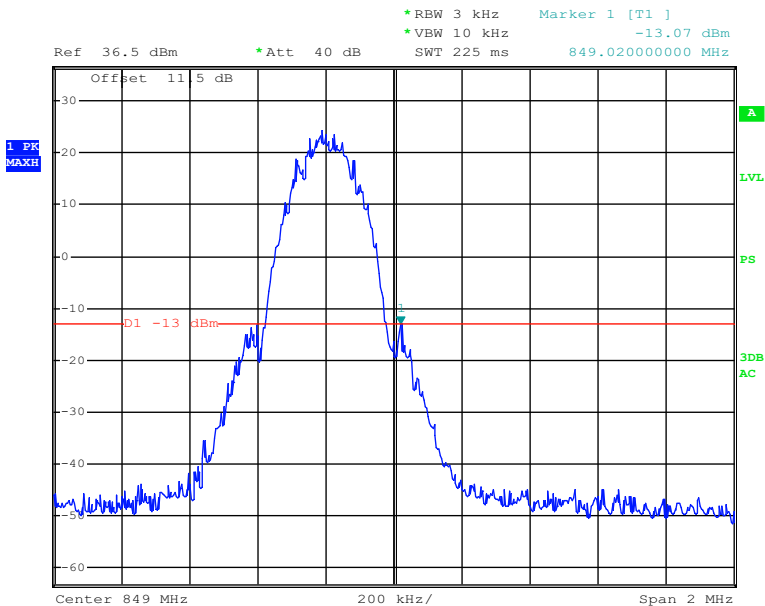
2. Band Edge= Measurement Value + Correction Factor (dB)

3. Offset=External attenuator+cable loss+10log(1%Emission BW/RBW)=11.8dB

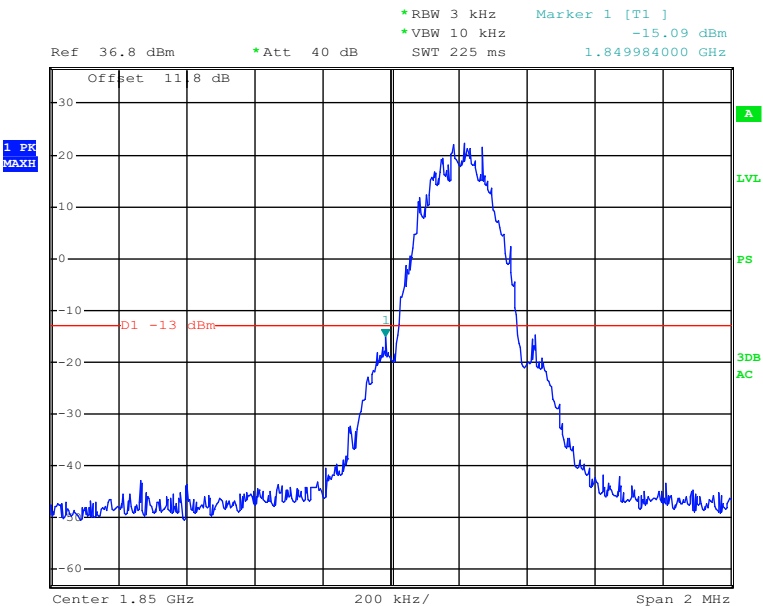
Cellular Band, Low Channel (GSM)



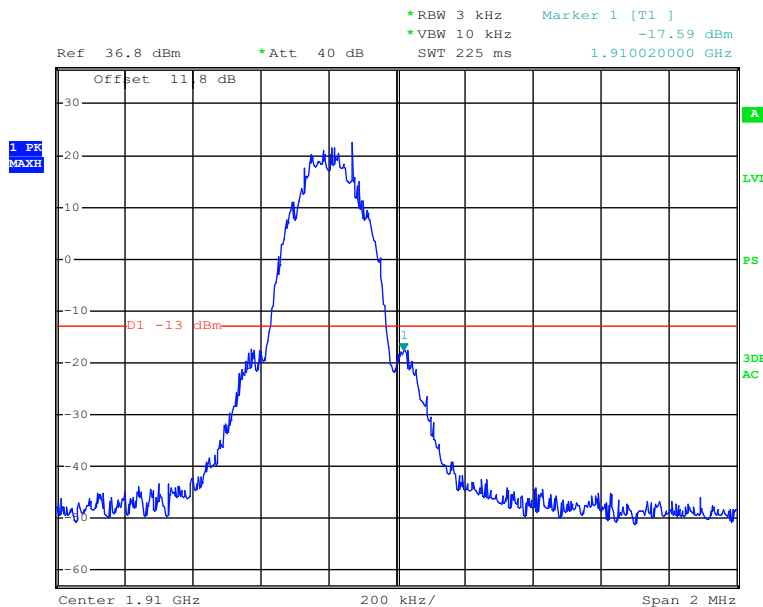
Cellular Band, High Channel (GSM)



PCS Band, Low Channel (GSM)



PCS Band, High Channel (GSM)



## **6. MODULATION CHARACTERISTIC**

According to FCC § 2.1047(d), Part 22H & 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

## 7. SPURIOUS EMISSIONS AT ANTENNA TERMINALS

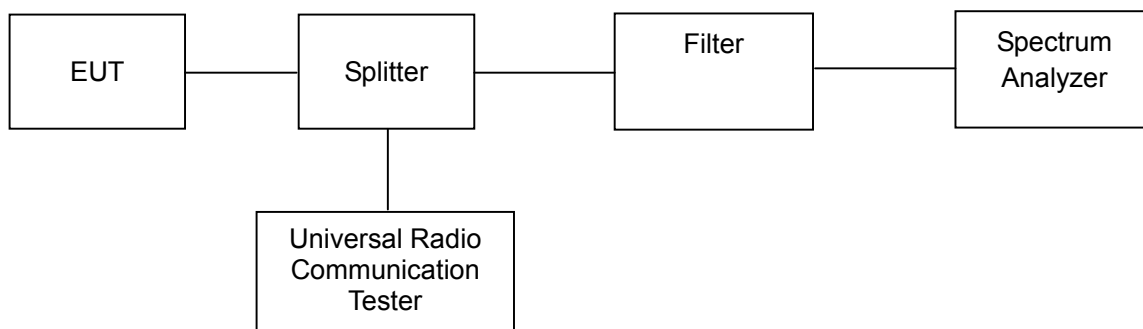
### 7.1 Applicable Standards

CFR 47 §2.1051, §22.917(a) and §24.238(a).

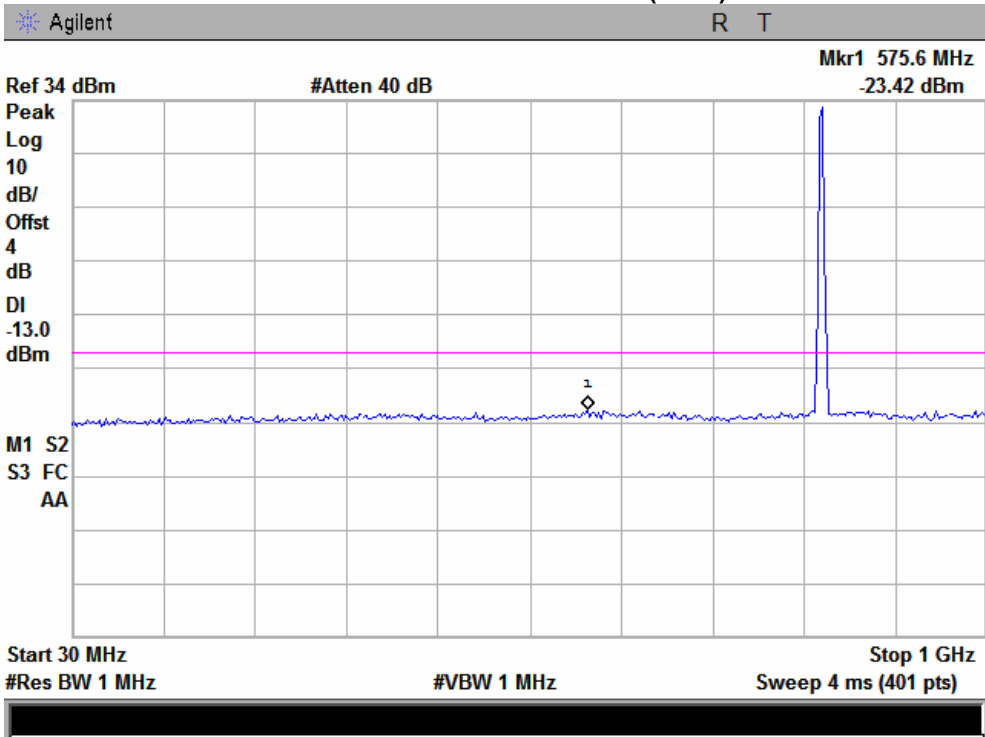
The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

### 7.2 Test Procedure

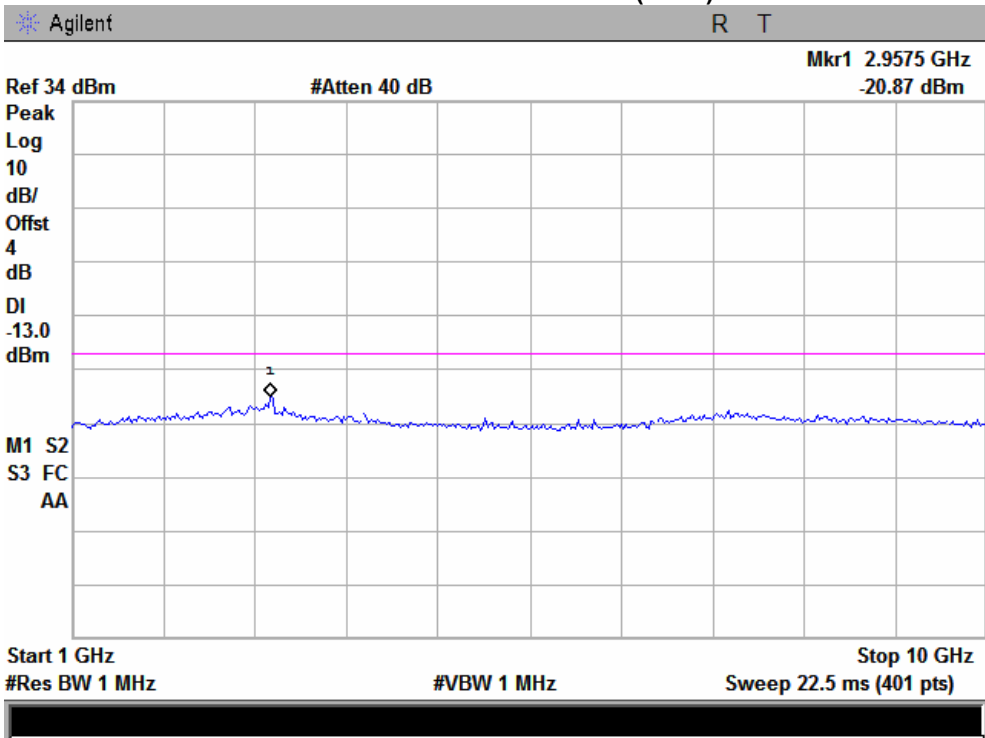
The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1000 kHz. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



Cellular Band (Part 22H)  
30 – 1000 MHz - Low Channel (GSM)

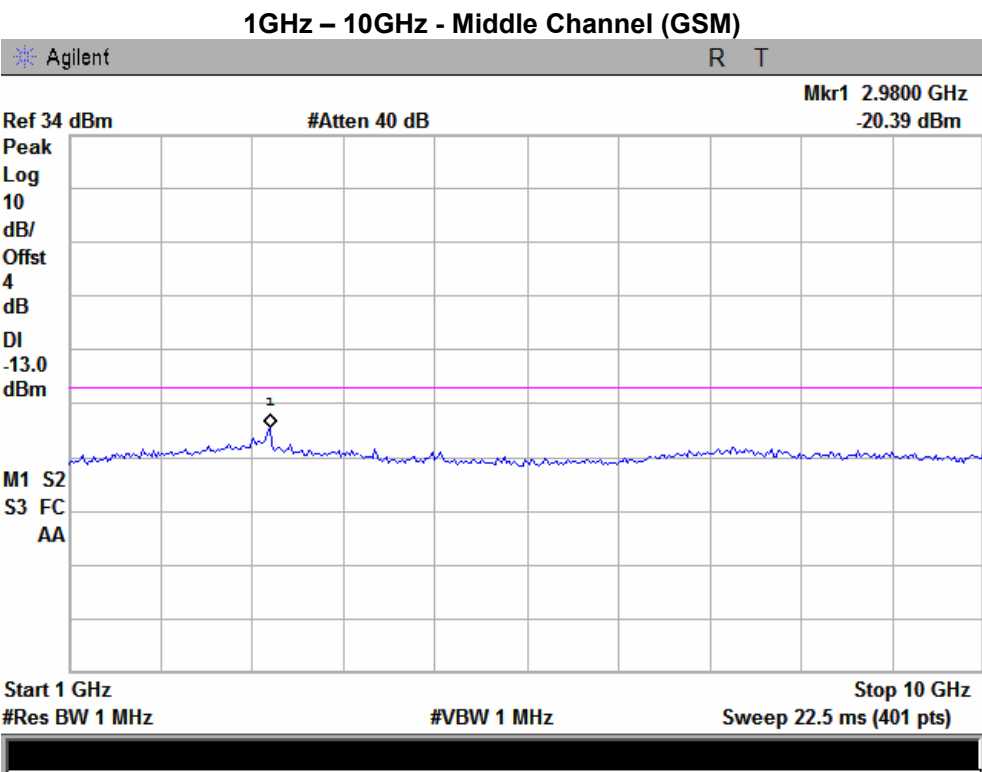
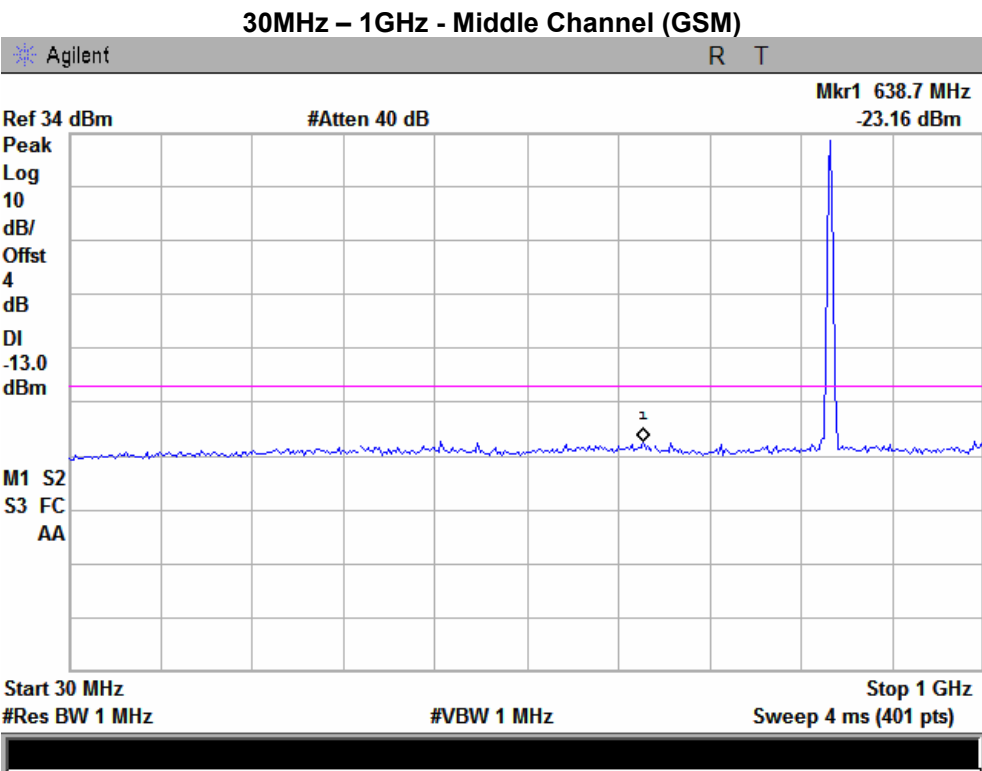


1GHz – 10GHz - Low Channel (GSM)

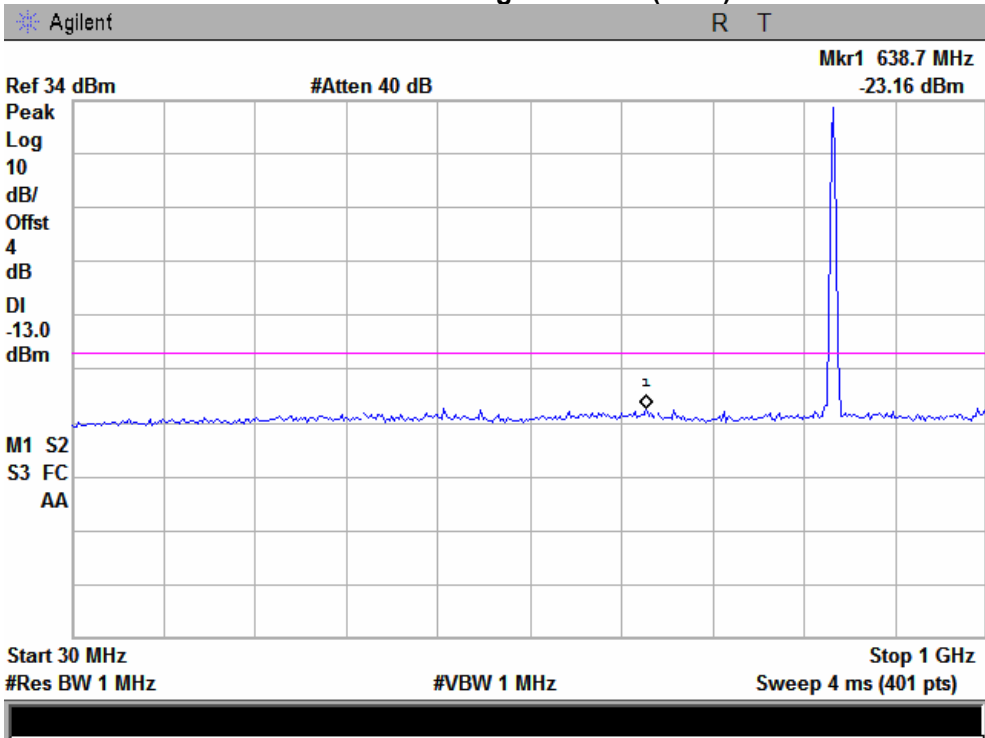


Note: This test was witnessed in SIEMIC Shenzhen (China) Laboratories.

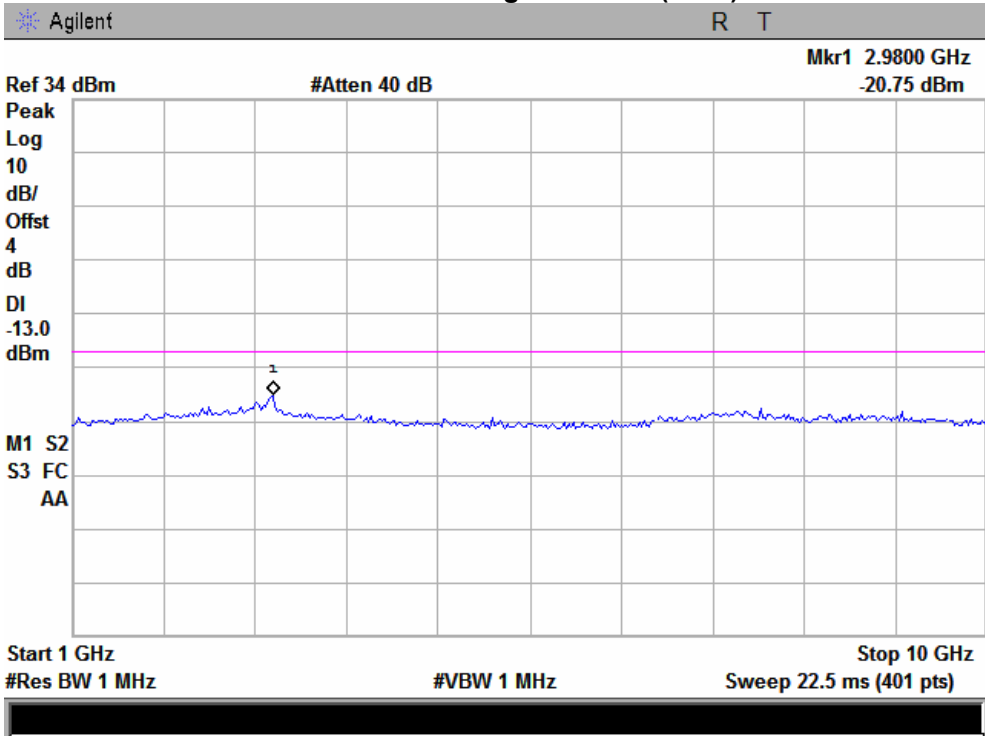




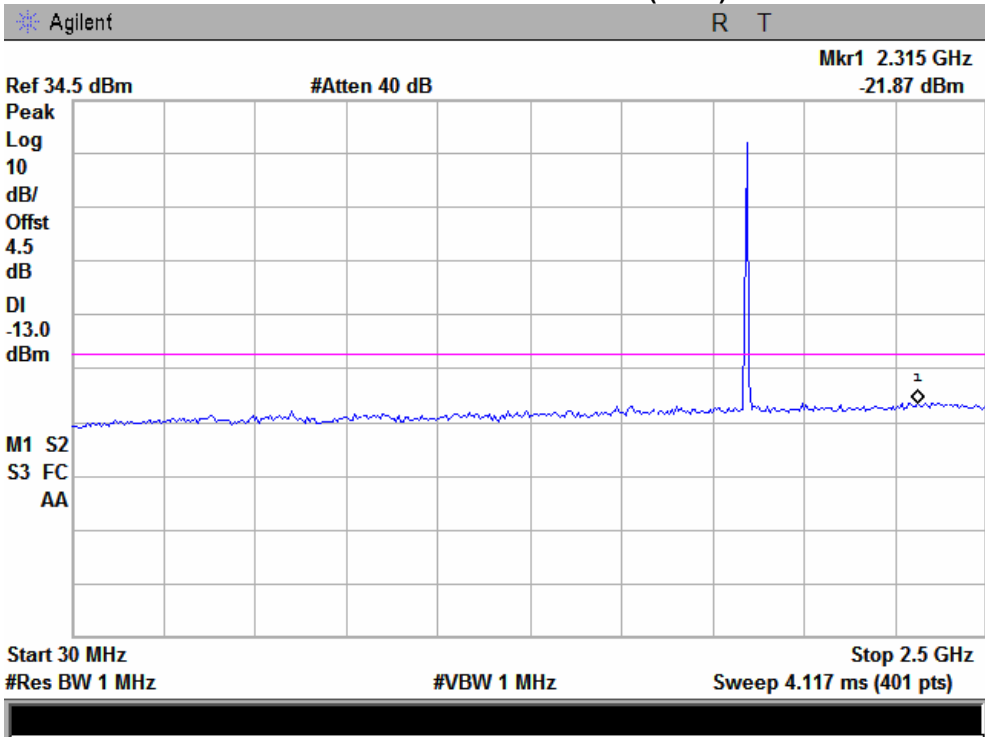
30MHz – 1GHz - High Channel (GSM)



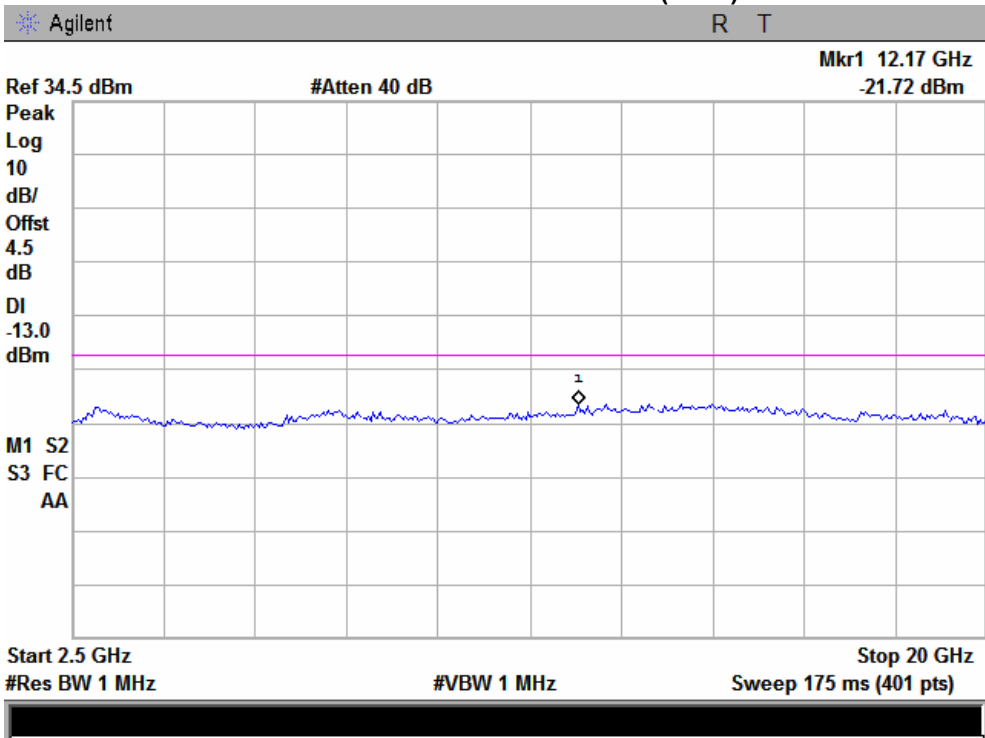
30MHz – 10GHz - High Channel (GSM)



PCS Band (Part24E)  
30 – 2500 MHz - Low Channel (GSM)



2.5GHz – 20GHz - Low Channel (GSM)



Note: This test was witnessed in SIEMIC Shenzhen (China) Laboratories.

Agilent R T

Ref 34.5 dBm #Atten 40 dB Mkr1 2.346 GHz -21.61 dBm

Peak Log 10 dB/ Offst 4.5 dB DI -13.0 dBm

M1 S2 S3 FC AA

Start 30 MHz Stop 2.5 GHz

#Res BW 1 MHz #VBW 1 MHz Sweep 4.117 ms (401 pts)

Agilent R T

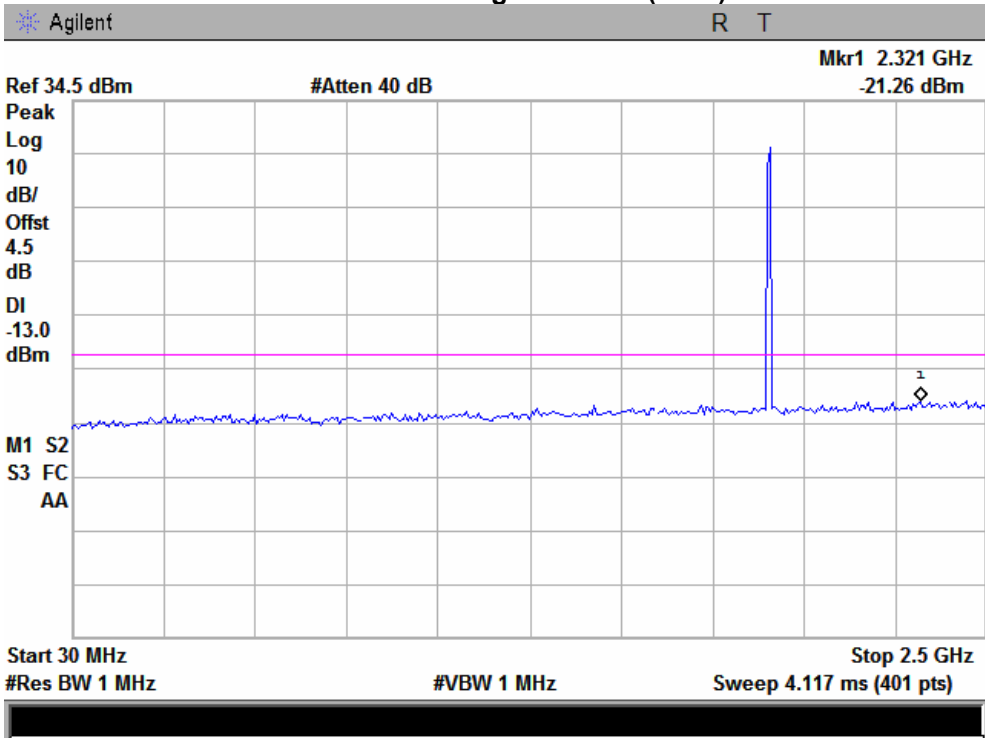
Ref 34.5 dBm #Atten 40 dB Mkr1 12.78 GHz -22.1 dBm

Peak Log 10 dB/ Offst 4.5 dB DI -13.0 dBm

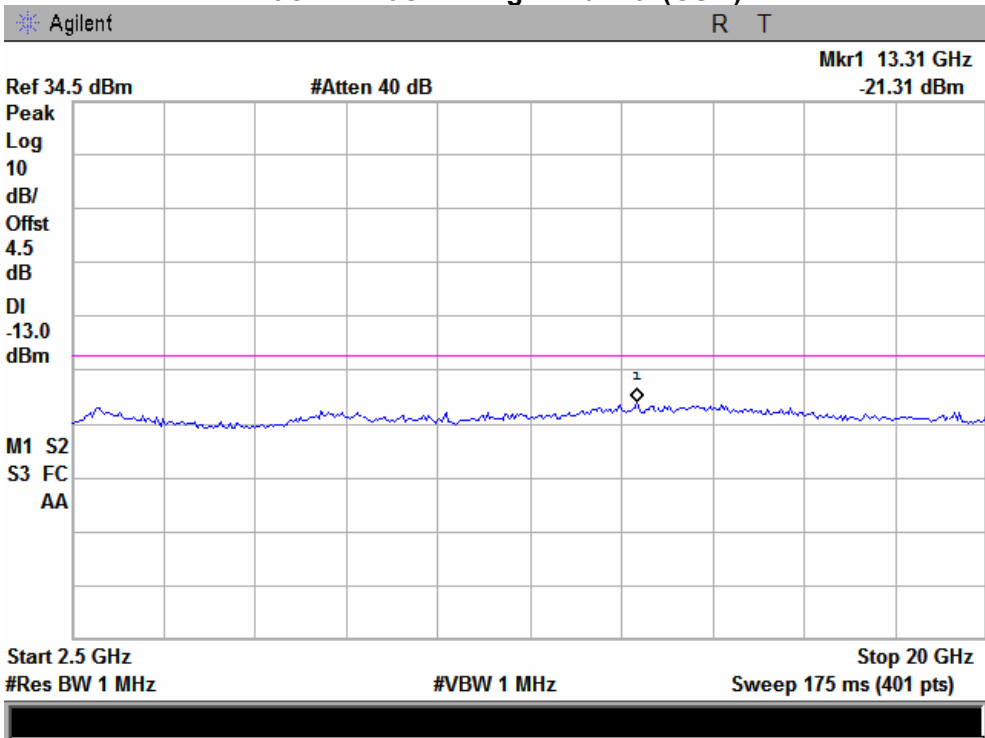
M1 S2 S3 FC AA

Start 2.5 GHz Stop 20 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 175 ms (401 pts)

30 – 2500MHz - High Channel (GSM)



2.5GHz – 20GHz - High Channel (GSM)



## 8. FIELD STRENGTH OF SPURIOUS RADIATED EMISSIONS

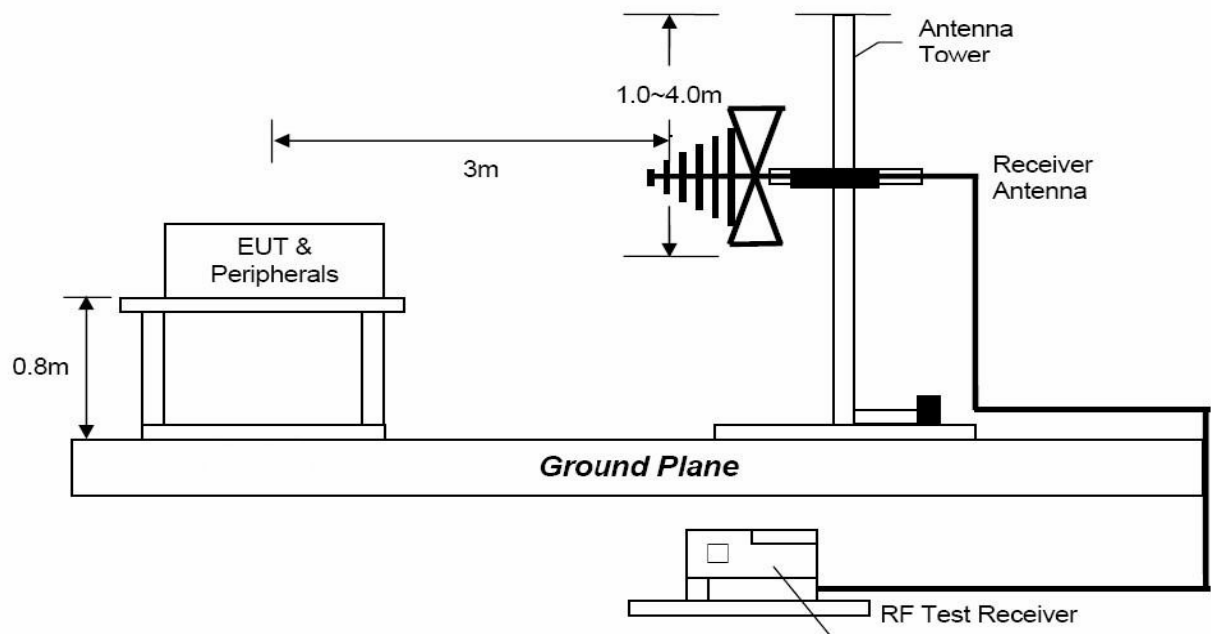
### 8.1 Applicable Standards

According to FCC §2.1053

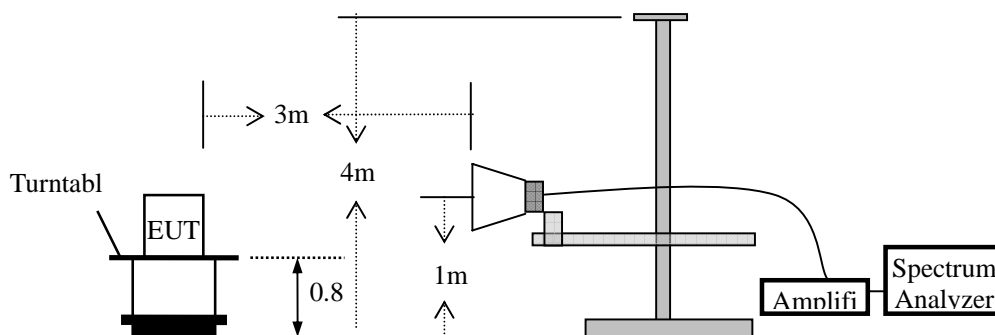
FCC §22.917(a), §24.238(a), the magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under the conditions specified in the instruction manual and/ or alignment procedure, shall not be less than  $43 + 10 \log$  (mean output power in watts) dBc below the mean power output outside a license's frequency block (-13dBm)

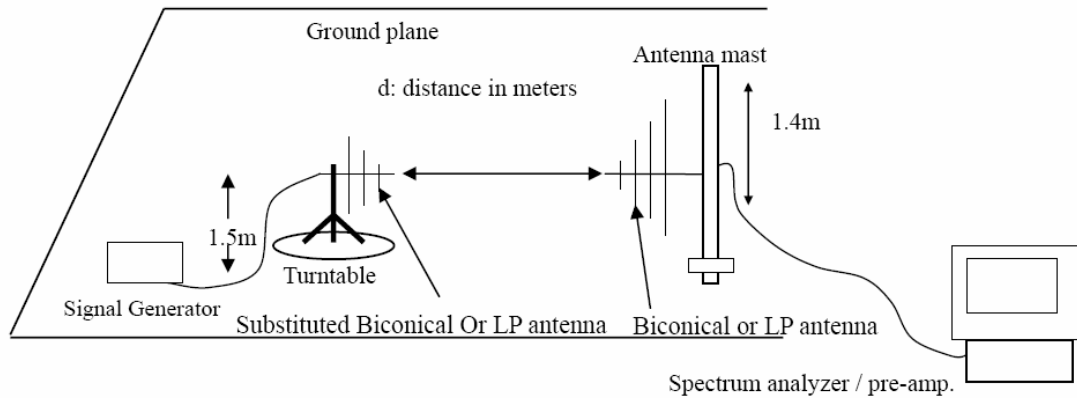
### 8.2 Test of Block Diagram of configuration

#### Radiated Emission Test Set-Up, Frequency Below 1000MHz



#### Radiated Emission Test Set-Up, Frequency above 1GHz



**Substituted Method Test Set-UP****8.3 Test Procedure**

The EUT was placed on a non-conductive, The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission were identified, the power of the emission was determined using the substitution method. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.  $EIRP = S.G. \text{ output (dBm)} + \text{Antenna Gain(dBi)} - \text{Cable Loss (dB)}$

Cellular Band									
Humidity :		56 %	Temperature :			25 °C			
Mode:		GSM	Test By:			Rose			
Test Result:		PASS	Frequency range:			Above 1GHz			
Indicated		Antenna	Substituted				Absolute Level (dBm)	Limit (dBm)	Margin (dBm)
Frequency (MHz)	Ampl (dBμV/m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)			
Low Channel									
1648.4	62.14	V	1648.4	-38.0	6.3	2.0	-33.7	-13	-20.7
1648.4	59.73	H	1648.4	-40.8	6.3	2.0	-36.5	-13	-23.5
2472.6	51.06	V	2472.6	-47.1	7.3	2.5	-42.3	-13	-29.3
2472.6	49.73	H	2472.6	-51.3	7.3	2.5	-46.5	-13	-33.5
3296.8	46.84	V	3296.8	-52.1	7.4	3.2	-47.9	-13	-34.9
3296.8	44.79	H	3296.8	-53.4	7.4	3.2	-49.2	-13	-36.2
Middle Channel									
1673.2	63.17	V	1673.2	-36.9	6.3	2.0	-32.6	-13	-19.6
1673.2	61.23	H	1673.2	-39.2	6.3	2.0	-34.9	-13	-21.9
2509.8	52.49	V	2509.8	-46.6	7.3	2.5	-41.8	-13	-28.8
2509.8	50.73	H	2509.8	-48.4	7.3	2.5	-43.6	-13	-30.6
3346.4	47.51	V	3346.4	-50.6	7.4	3.3	-46.5	-13	-33.5
3346.4	46.62	H	3346.4	-52.3	7.4	3.3	-48.2	-13	-35.2
High Channel									
1697.6	61.03	V	1697.6	-39.1	6.3	2.1	-34.9	-13	-21.9
1697.6	59.14	H	1697.6	-41.5	6.3	2.1	-37.3	-13	-24.3
2546.4	50.46	V	2546.4	-48.4	7.2	2.6	-43.8	-13	-30.8
2546.4	47.22	H	2546.4	-51.8	7.2	2.6	-47.2	-13	-34.2
3395.2	44.28	V	3395.2	-54.4	7.4	3.3	-50.3	-13	-37.3
3395.2	41.51	H	3395.2	-58.2	7.4	3.3	-54.1	-13	-41.1

**Note:** Spurious emissions below 1000MHz were found more than 20dB below limit line.



PCS Band									
Humidity :		56 %	Temperature :				25 °C		
Mode:		GSM	Test By:				Rose		
Test Result:		PASS	Frequency range:				Above 1GHz		
Indicated		Antenna	Substituted				Absolute Level (dBm)	Limit (dBm)	Margin (dBm)
Frequency (MHz)	Ampl (dBμV/m)	Polar (H/V)	Frequency (MHz)	Level (dBm)	Antenna Gain (dBi)	Cable Loss (dB)			
Low Channel									
3700.4	48.25	V	3700.4	-46.9	7.9	3.6	-42.6	-13	-29.6
3700.4	45.64	H	3700.4	-49.9	7.9	3.6	-45.6	-13	-32.6
5550.6	53.73	V	5550.6	-36.3	10.3	5.8	-31.8	-13	-18.8
5550.6	51.42	H	5550.6	-39.1	10.3	5.8	-34.6	-13	-21.6
7400.8	39.47	V	7400.8	-55.3	11.8	7.2	-50.7	-13	-37.7
7400.8	36.96	H	7400.8	-56.9	11.8	7.2	-52.3	-13	-39.3
Middle Channel									
3760	49.33	V	3760	-45.8	7.9	3.6	-41.5	-13	-28.5
3760	46.78	H	3760	-48.1	7.9	3.6	-43.8	-13	-30.8
5640	54.15	V	5640	-35.9	10.5	5.8	-31.2	-13	-18.2
5640	52.12	H	5640	-38.1	10.5	5.8	-33.4	-13	-20.4
7520	40.23	V	7520	-54.6	12.1	7.2	-49.7	-13	-36.7
7520	37.15	H	7520	-57.8	12.1	7.2	-52.9	-13	-39.9
High Channel									
3819.6	46.82	V	3819.6	-48.7	8.2	3.7	-44.2	-13	-31.2
3819.6	44.07	H	3819.6	-51.2	8.2	3.7	-46.7	-13	-33.7
5729.4	51.36	V	5729.4	-39.4	10.8	5.9	-34.5	-13	-21.5
5729.4	49.73	H	5729.4	-42.2	10.8	5.9	-37.3	-13	-24.3
7639.2	36.82	V	7639.2	-57.8	12.5	7.3	-52.6	-13	-39.6
7639.2	35.14	H	7639.2	-60.0	12.5	7.3	-54.8	-13	-41.8

**Note: Spurious emissions below 1000MHz were found more than 20dB below limit line.**

## **9. RF Exposure**

### **9.1 Applicable Standards**

§1.1307 and §2.1093.

### **9.2 Test Result**

Compliance

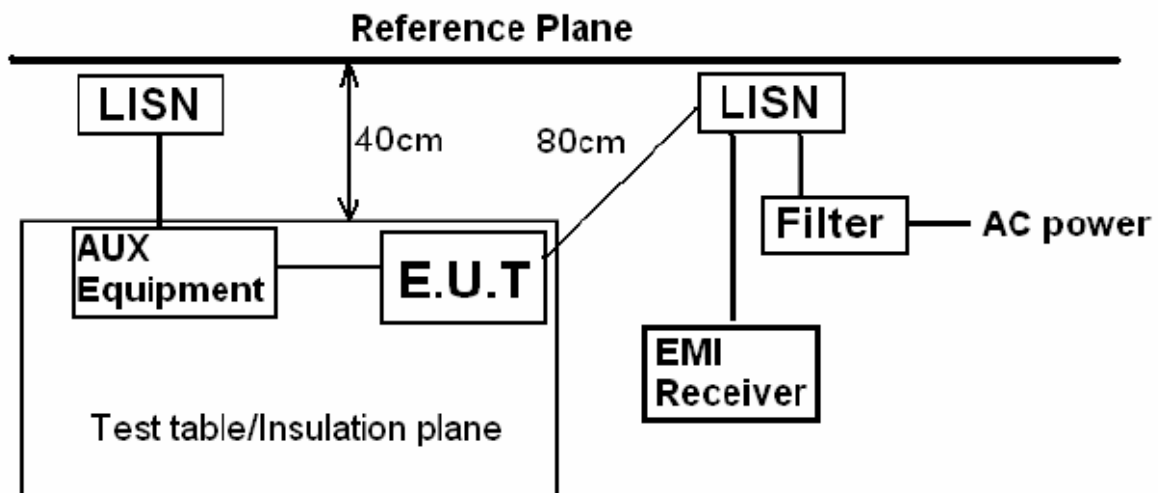
The EUT is a portable device, thus requires SAR evaluation; please refer to SAR Report that issue by SIEMIC Testing and Certification Services.

## 10. Conducted Emissions Test

### 10.1 Applicable Standards

According to FCC §15.207. The emission value for frequency within 150KHz to 30MHz shall not Exceed criteria of below chart.

### 10.2 Test SET-UP (Block Diagram of Configuration)



### 10.3 Test Procedure

- The EUT was placed on a table which is 0.8m above ground plane.
- Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- Repeat above procedures until all frequency measured were complete.

### 10.4 Test Condition

Frequency Range: 150KHz ~ 30MHz

Detector: RBW 9KHz, VBW 30KHz

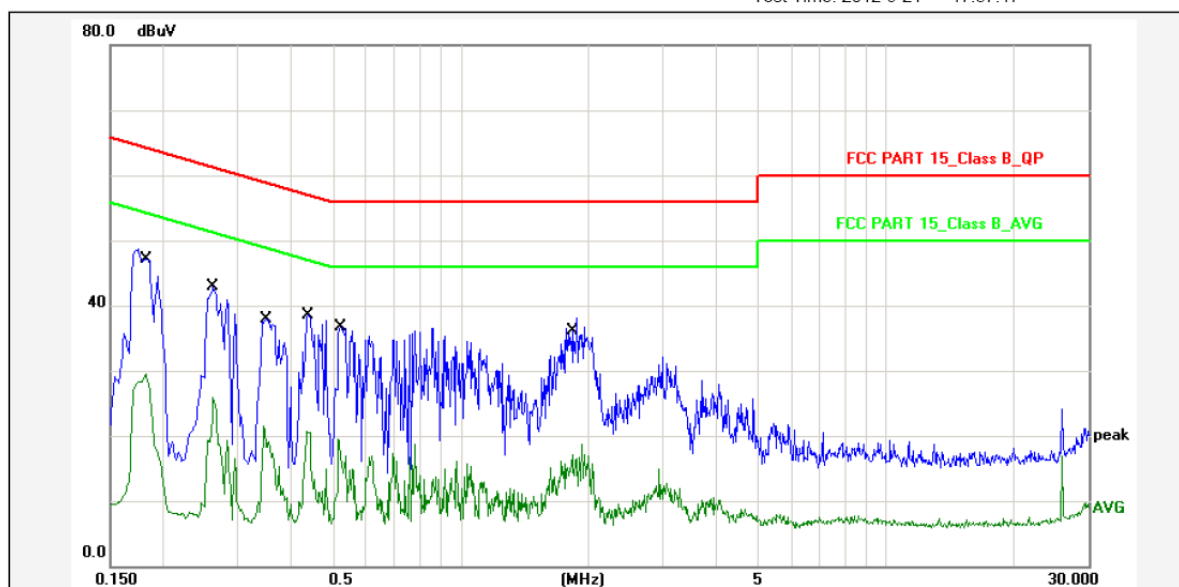
Operation Mode: GSM, PCS

### 10.5 Measurement Results

**Pass**

Please refer to following plots.

Test Time: 2012-9-21 17:57:17



Report No.: D209

Test Standard: FCC PART 15\_Class B\_QP

Test Item: Conducted Emission

Phase: L1

Applicant: B&amp;L

Temp.( )/Hum.(%): 26(C) / 60 %

Product: Mobile Phone

Power Rating: AC 120V/60Hz

Model No.: D209

Test Engineer: Think

Test Mode: GSM

Remark:

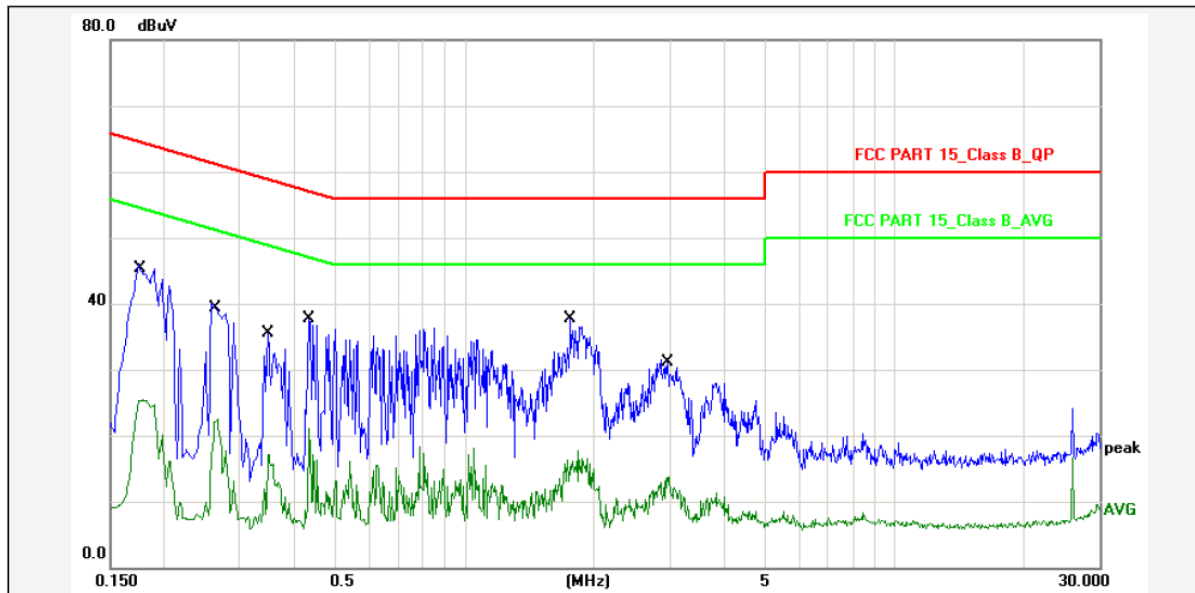
No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1805	10.80	32.60	43.40	64.46	-21.06	QP	P	
2	0.1805	10.80	18.30	29.10	54.46	-25.36	AVG	P	
3	0.2620	10.80	28.90	39.70	61.36	-21.66	QP	P	
4	0.2620	10.80	15.08	25.88	51.36	-25.48	AVG	P	
5	0.3500	10.80	24.18	34.98	58.96	-23.98	QP	P	
6	0.3500	10.80	10.75	21.55	48.96	-27.41	AVG	P	
7	0.4340	10.80	23.97	34.77	57.18	-22.41	QP	P	
8	0.4340	10.80	9.85	20.65	47.18	-26.53	AVG	P	
9	0.5220	10.80	21.28	32.08	56.00	-23.92	QP	P	
10	0.5220	10.80	8.61	19.41	46.00	-26.59	AVG	P	
11	1.8380	10.80	23.36	34.16	56.00	-21.84	QP	P	
12	1.8380	10.80	6.29	17.09	46.00	-28.91	AVG	P	

Note: Level=Reading+Factor.

Margin=Limit-Level.

File:D209\#1

Page: 1



Report No.: D209

Test Standard: FCC PART 15\_Class B\_QP

Test item: Conducted Emission

Phase: N

Applicant: B&amp;L

Temp.( )/Hum.(%): 26(C) / 60 %

Product: Mobile Phone

Power Rating: AC 120V/60Hz

Model No.: D209

Test Engineer: Think

Test Mode: GSM

Remark:

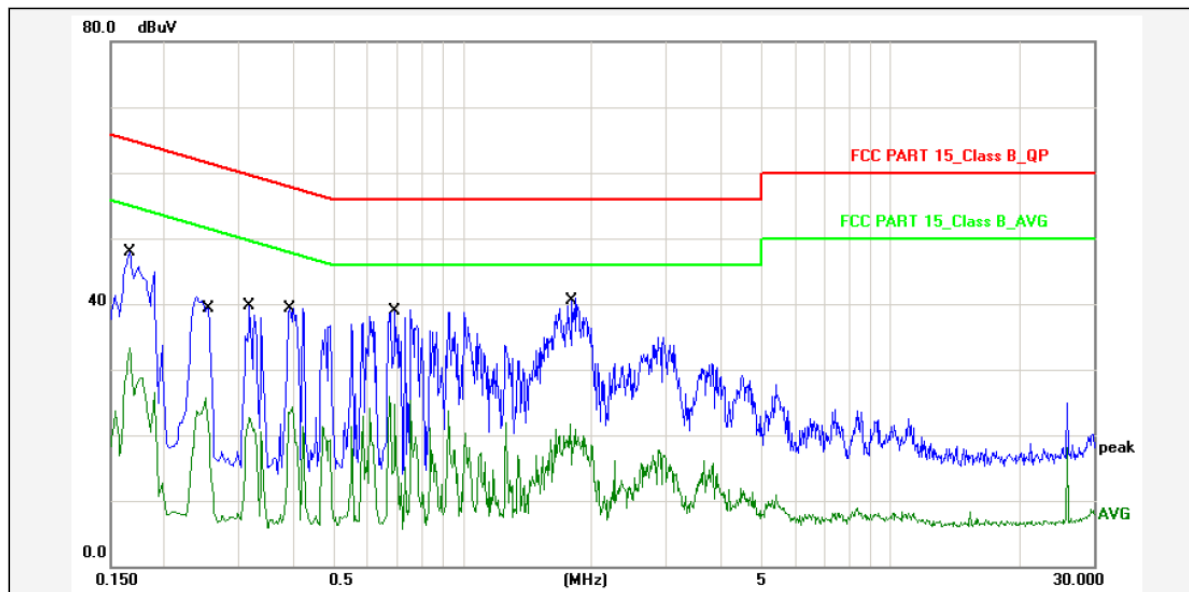
No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1780	10.80	31.91	42.71	64.57	-21.86	QP	P	
2	0.1780	10.80	14.61	25.41	54.57	-29.16	AVG	P	
3	0.2660	10.80	26.37	37.17	61.24	-24.07	QP	P	
4	0.2660	10.80	11.77	22.57	51.24	-28.67	AVG	P	
5	0.3500	10.80	20.76	31.56	58.96	-27.40	QP	P	
6	0.3500	10.80	6.30	17.10	48.96	-31.86	AVG	P	
7	0.4340	10.80	23.99	34.79	57.18	-22.39	QP	P	
8	0.4340	10.80	10.38	21.18	47.18	-26.00	AVG	P	
9	1.7660	10.80	21.83	32.63	56.00	-23.37	QP	P	
10	1.7660	10.80	6.84	17.64	46.00	-28.36	AVG	P	
11	2.9739	10.80	17.22	28.02	56.00	-27.98	QP	P	
12	2.9739	10.80	2.90	13.70	46.00	-32.30	AVG	P	

Note: Level=Reading+Factor.

Margin=Limit-Level.

File:D209\ #2

Page: 1



Report No.: D209

Test Standard: FCC PART 15\_Class B\_QP

Test item: Conducted Emission

Phase: L1

Applicant: B&amp;L

Temp.( )/Hum.(%): 26(C) / 60 %

Product: Mobile Phone

Power Rating: AC 120V/60Hz

Model No.: D209

Test Engineer: Think

Test Mode: PCS

Remark:

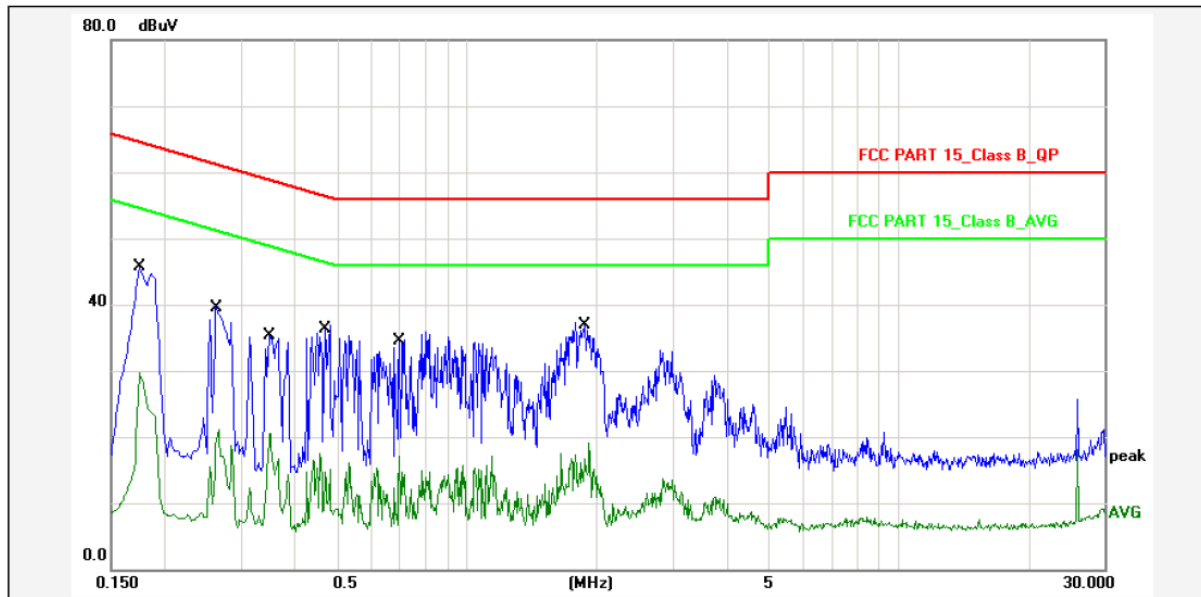
No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1660	10.80	33.09	43.89	65.15	-21.26	QP	P	
2	0.1660	10.80	22.40	33.20	55.15	-21.95	AVG	P	
3	0.2540	10.80	23.57	34.37	61.62	-27.25	QP	P	
4	0.2540	10.80	14.93	25.73	51.62	-25.89	AVG	P	
5	0.3180	10.80	23.88	34.68	59.76	-25.08	QP	P	
6	0.3180	10.80	11.88	22.68	49.76	-27.08	AVG	P	
7	0.3980	10.80	24.52	35.32	57.89	-22.57	QP	P	
8	0.3980	10.80	13.46	24.26	47.89	-23.63	AVG	P	
9	0.6940	10.80	24.60	35.40	56.00	-20.60	QP	P	
10	0.6940	10.80	15.15	25.95	46.00	-20.05	AVG	P	
11	1.7900	10.80	26.01	36.81	56.00	-19.19	QP	P	
12	1.7900	10.80	10.82	21.62	46.00	-24.38	AVG	P	

Note: Level=Reading+Factor.

Margin=Limit-Level.

File:D209\#4

Page: 1



Report No.: D209

Test Standard: FCC PART 15\_Class B\_QP

Test item: Conducted Emission

Phase: N

Applicant: B&amp;L

Temp.( )/Hum.(%): 26(C) / 60 %

Product: Mobile Phone

Power Rating: AC 120V/60Hz

Model No.: D209

Test Engineer: Think

Test Mode: PCS

Remark:

No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1740	10.80	32.00	42.80	64.76	-21.96	QP	P	
2	0.1740	10.80	18.84	29.64	54.76	-25.12	AVG	P	
3	0.2660	10.80	25.66	36.46	61.24	-24.78	QP	P	
4	0.2660	10.80	10.28	21.08	51.24	-30.16	AVG	P	
5	0.3500	10.80	21.53	32.33	58.96	-26.63	QP	P	
6	0.3500	10.80	9.79	20.59	48.96	-28.37	AVG	P	
7	0.4700	10.80	21.57	32.37	56.51	-24.14	QP	P	
8	0.4700	10.80	6.68	17.48	46.51	-29.03	AVG	P	
9	0.6980	10.80	19.83	30.63	56.00	-25.37	QP	P	
10	0.6980	10.80	6.36	17.16	46.00	-28.84	AVG	P	
11	1.8780	10.80	21.09	31.89	56.00	-24.11	QP	P	
12	1.8780	10.80	8.39	19.19	46.00	-26.81	AVG	P	

Note: Level=Reading+Factor.

Margin=Limit-Level.

File:D209\#3

Page: 1

## 11. Test Equipment List

Description	Manfucaturer	Model Number	Serial Number	Calibration Date	Calibration Due Date
Receiver	Rohde & Schwarz	ESCI7	100837	Mar.14, 2012	Mar.14 2013
Receiver	Rohde & Schwarz	ESCI	101152	Mar. 09, 2012	Mar.09 2013
L.I.S.N	Rohde & Schwarz	ENV-216	101317	Mar. 07, 2012	Mar. 07, 2013
RF Switching Unit	Compliance Direction Systems Inc.	RSU-M2	38311	Mar. 07, 2012	Mar. 07, 2013
Splitter	Agilent	11636B	07184	Aug. 15, 2012	Aug. 15, 2013
DC Power Source	HUA YI	HY5003-2	N/A	Mar. 19, 2012	Mar. 19, 2013
Temperature & Humidity Chamber	TOS STAR	TOS-831B	20071117	May 23, 2012	May 23, 2013
Spectrum Analyzer	Agilent	E4407B	CFG038	Oct. 24, 2012	Oct. 24, 2013
Spectrum Analyzer	Rohde & Schwarz	FSP30	849720/021	Aug. 15, 2012	Aug. 15, 2013
Universal Radio Communication Tester	Rohde & Schwarz	CMU200	108462	Aug. 15, 2012	Aug. 15, 2013
Fliter	Amindeon	82346	N/A	Aug. 15, 2012	Aug. 15, 2013
Pre-Amplifier	HP	8447D	2944A07999	Mar. 19, 2012	Mar. 19, 2013
Broadband Antenna	Schwarzbeck	VULB9162	9162-010	Apr. 18, 2012	Apr. 18, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	D262	Mar. 26, 2012	Mar. 26, 2013
Horn Antenna	ETS	3116	00101347	Apr. 24, 2012	Apr. 24, 2013
Pre-Amplifier	Agilent	8449B	3008A02964	Mar. 19, 2012	Mar. 19, 2013
Cable	UBER+SUHNER	CBL2-NN-1M	22320001	Mar. 19, 2012	Mar. 19, 2013
Cable	Schwarzbeck	CIL02	N/A	Mar. 19, 2012	Mar. 19, 2013