



### 3.15 Radiated Emission Measurement

#### 3.15.1 Limit of Radiated Emission Measurement

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

#### 3.15.2 Measuring Instruments

See list of measuring instruments of this test report.

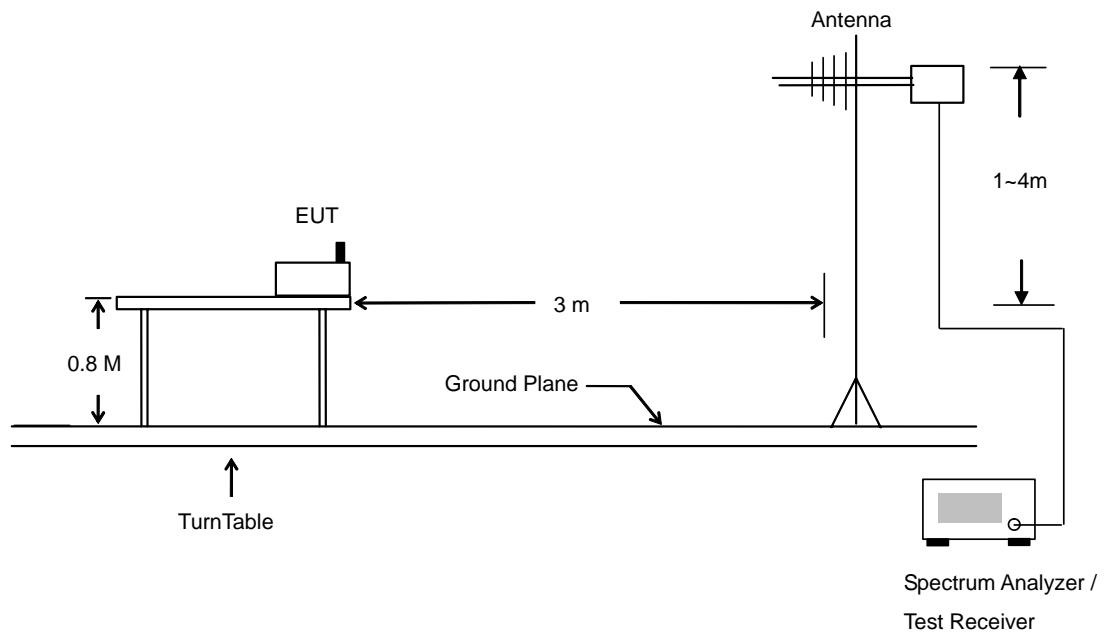


### 3.15.3 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- e. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- f. For testing below 1GHz, set the test-receiver system to peak detector function and specified bandwidth,120KHz. When the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported,otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
- g. For testing above 1GHz, set the test-receiver system to peak detector function and specified bandwidth,1MHz. When the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again by setting the measurement bandwidth of test-receiver system to 1MHz with 10Hz video resolution bandwidth,then reported. The highest frequency range was investigated up to the tenth harmonic of the highest fundamental frequency, and the amplitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be reported.



3.15.4 Typical Test Setup of Radiated Emission

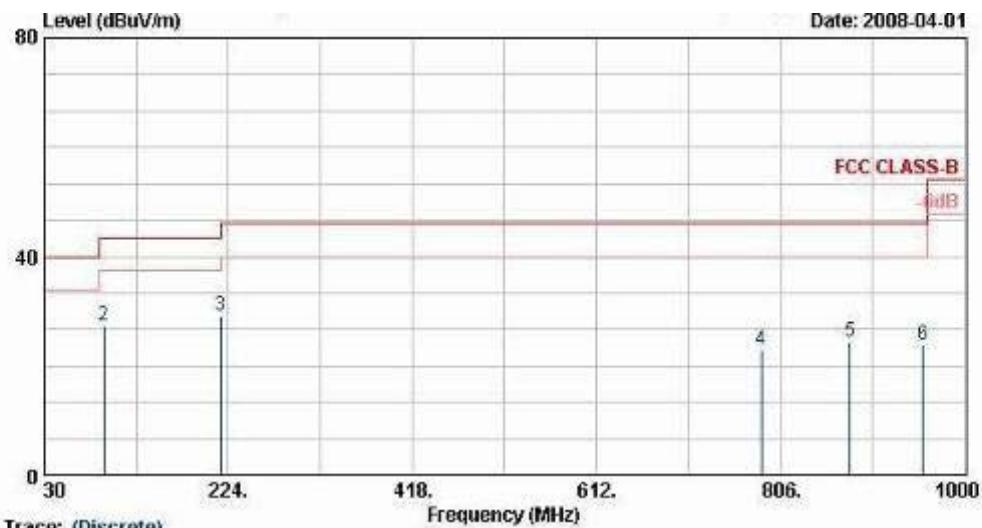




## 3.15.5 Test Result

## Frequency Range Below 1 GHz

**Modulation Type :** /4-DQPSK (EDR 2Mbps)    **Temperature :** 21~26  
**Channel :** 39    **Relative Humidity :** 49~51%  
**Test Engineer :** Sun Wang    **Polarization :** Horizontal

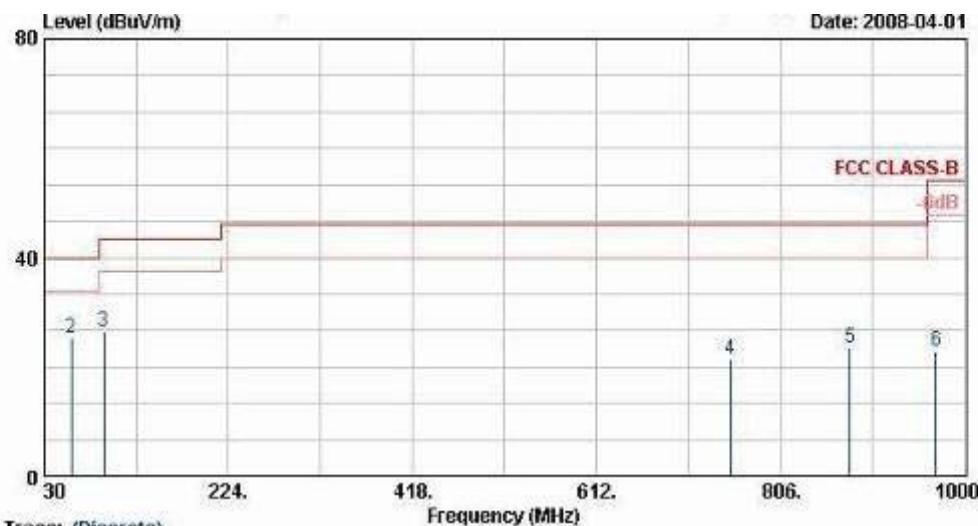


	Freq	Level	Over Limit	Limit Line	Read	Antenna	Cable	Preamp	Ant	Table	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cm	deg		
1	30.00	23.39	-16.61	40.00	36.93	19.66	0.30	33.50	---	---	Peak	
2	92.84	27.30	-16.20	43.50	50.51	9.62	0.50	33.33	100	100	Peak	
3	216.03	29.04	-16.96	46.00	51.61	10.27	0.66	33.50	---	---	Peak	
4	785.80	22.75	-23.25	46.00	34.52	19.68	1.20	32.65	---	---	Peak	
5	878.90	24.44	-21.58	46.00	35.51	20.38	1.30	32.75	---	---	Peak	
6	955.90	23.80	-22.20	46.00	33.99	20.93	1.26	32.39	---	---	Peak	



## Frequency Range Below 1 GHz

<b>Modulation Type :</b>	/4-DQPSK (EDR 2Mbps)	<b>Temperature :</b>	21~26
<b>Channel :</b>	39	<b>Relative Humidity :</b>	49~51%
<b>Test Engineer :</b>	Sun Wang	<b>Polarization :</b>	Vertical



**Site** DDCN05-HV  
**Condition** PCC CLASS-B 3m LP-ANT(051121) VERTICAL  
**EUT** Smart Phone  
**Power** 120Vac/60Hz  
**Model** FR 811107-01  
**memo** BT TS\_Dh38 : 2441MHz + Adaptor  
**Data Rate** 20H5  
**Plane** E1  
**TMR**  
**S/N** TV611X400994

		TY611X400894									
Line	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
			Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cm	deg	
1	30.00	23.89	-16.11	40.00	37.43	19.66	0.30	33.50	---	---	Peak
2	58.89	25.27	-14.73	40.00	51.49	6.77	0.40	33.39	100	143	Peak
3	92.64	26.54	-16.98	43.50	49.75	9.62	0.50	33.33	---	---	Peak
4	752.90	21.28	-24.72	46.00	33.65	19.38	L.10	32.85	---	---	Peak
5	878.90	23.64	-22.36	46.00	34.71	20.38	L.30	32.75	---	---	Peak
6	969.90	23.00	-31.00	54.00	32.96	21.03	L.30	32.29	---	---	Peak

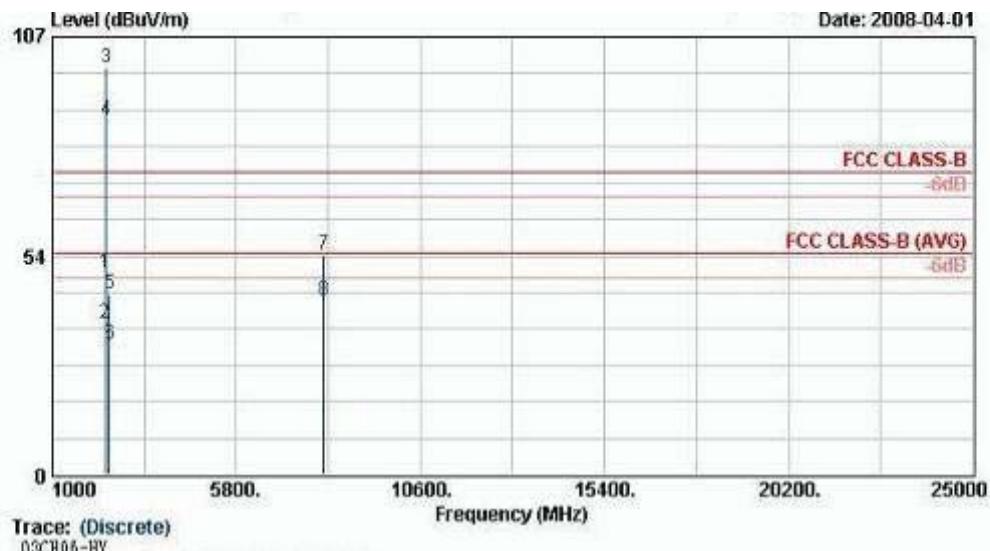


## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26

Channel : 00 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Horizontal



	Freq	Level	Over Limit	Limit Line	Read	Antenna	Cable	Preamp	Ant	Table	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cn	deg			
1	2389.99	49.38	-24.62	74.00	49.28	31.86	3.92	35.68	100	0	Peak		
2 @	2389.99	36.91	-17.09	54.00	36.81	31.86	3.92	35.68	108	100	Average		
3 @	2402.00	99.33			99.22	31.88	3.92	35.68	100	0	Peak		
4 @	2402.00	86.75			86.65	31.86	3.92	35.68	108	100	Average		
5	2494.00	44.30	-29.70	74.00	43.95	32.00	4.05	35.70	100	0	Peak		
6	2494.00	31.69	-22.31	54.00	31.34	32.00	4.05	35.70	108	100	Average		
7 @	8082.00	53.67	-20.33	74.00	46.79	35.72	7.47	36.30	100	0	Peak		
8 @	8082.00	42.57	-11.43	54.00	35.68	35.72	7.47	36.30	100	221	Average		

Remark: #3 and #4 are Fundamental Signals

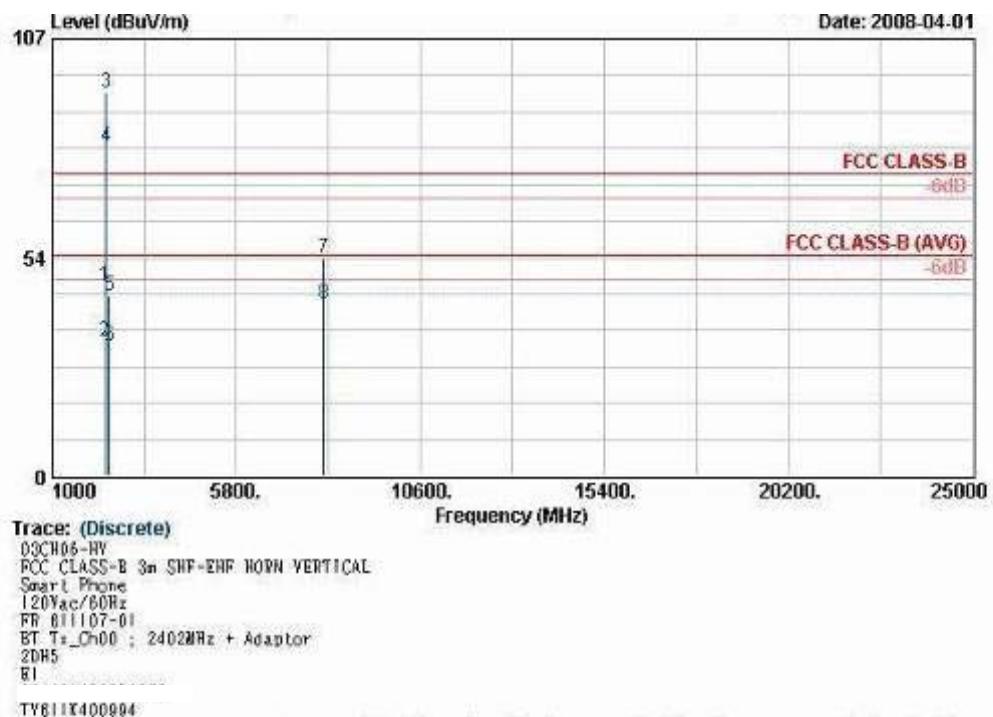


## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26

Channel : 00 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Vertical



	Freq	Level	Over Limit	Limit Line	Read	Antenna	Cable	Preamp	Ant	Table	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cn	deg			
1	2389.99	46.68	-27.32	74.00	46.58	31.86	3.92	35.68	100	0	Peak		
2 @	2389.99	33.10	-20.90	54.00	33.00	31.86	3.92	35.68	102	309	Average		
3 @	2402.00	93.86			93.74	31.88	3.92	35.68	100	0	Peak		
4 @	2402.00	80.73			80.63	31.86	3.92	35.68	102	309	Average		
5	2484.00	44.03	-29.97	74.00	43.70	31.98	4.05	35.70	100	0	Peak		
6	2484.00	31.64	-22.36	54.00	31.31	31.98	4.05	35.70	102	309	Average		
7 @	8076.00	53.35	-20.65	74.00	46.46	35.71	7.47	36.30	100	0	Peak		
8 @	8076.00	42.16	-11.84	54.00	35.28	35.71	7.47	36.30	100	122	Average		

Remark: #3 and #4 are Fundamental Signals

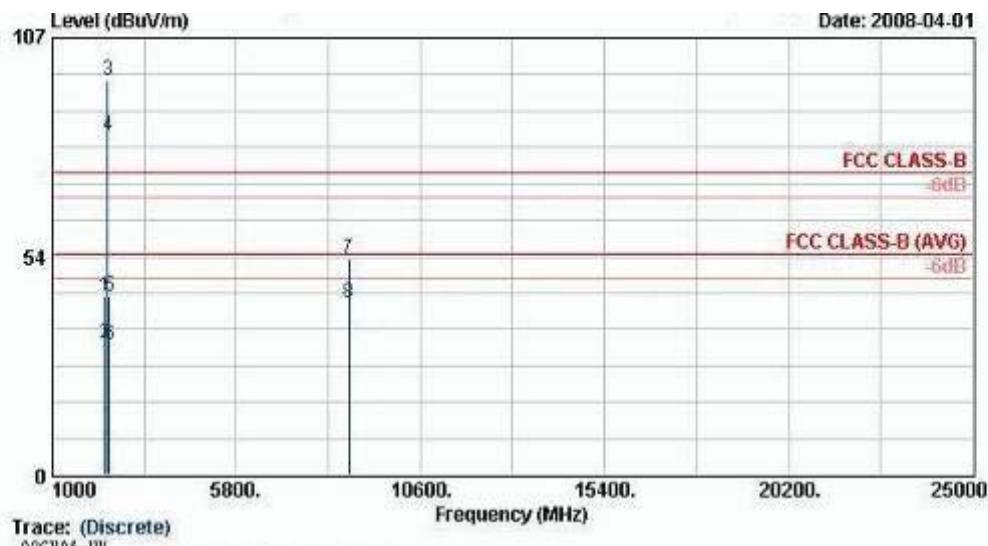


## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26

Channel : 39 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Horizontal



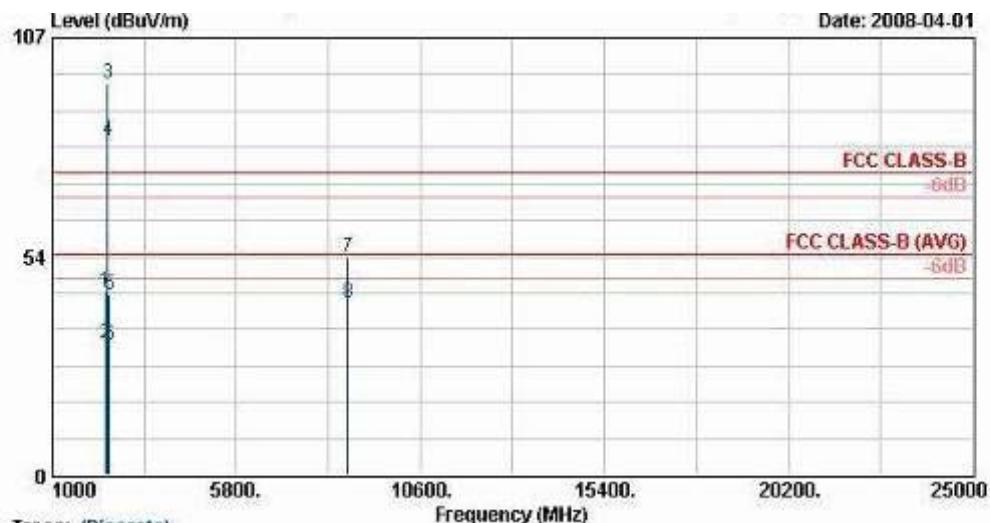
	Freq	Level	Over Limit	Limit Line	Read	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cm	deg	
1	2372.00	43.72	-30.28	74.00	43.68	31.83	3.89	35.68	100	0	Peak
2	2372.00	32.14	-21.86	54.00	32.10	31.83	3.89	35.68	105	336	Average
3 @	2441.00	96.51			96.29	31.93	3.99	35.69	100	0	Peak
4 @	2441.00	83.23			83.01	31.93	3.99	35.69	105	336	Average
5	2500.00	43.95	-30.05	74.00	43.60	32.00	4.05	35.70	100	0	Peak
6	2500.00	31.71	-22.29	54.00	31.36	32.00	4.05	35.70	105	336	Average
7	8727.00	52.89	-21.11	74.00	45.72	36.13	7.48	36.44	100	0	Peak
8 @	8727.00	42.09	-11.91	54.00	34.92	36.13	7.48	36.44	100	192	Average

Remark: #3 and #4 are Fundamental Signals



## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26  
 Channel : 39 Relative Humidity : 49~51%  
 Test Engineer : Sun Wang Polarization : Vertical



	Freq	Level	Over Limit	Limit Line	Read	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/n	dB	dB	cm	deg	
1	2388.00	45.13	-28.87	74.00	45.03	31.86	3.92	35.68	100	0	Peak
2	2388.00	32.18	-21.82	54.00	32.08	31.86	3.92	35.68	100	266	Average
3	2441.00	95.72			95.50	31.93	3.99	35.69	100	0	Peak
4	2441.00	82.03			81.81	31.93	3.99	35.69	100	266	Average
5	2484.00	44.23	-29.77	74.00	43.90	31.98	4.05	35.70	100	0	Peak
6	2484.00	31.73	-22.27	54.00	31.40	31.98	4.05	35.70	100	266	Average
7	8706.00	53.33	-20.67	74.00	46.22	36.08	7.45	36.42	100	0	Peak
8	8706.00	42.15	-11.85	54.00	35.04	36.08	7.45	36.42	100	307	Average

Remark: #3 and #4 are Fundamental Signals

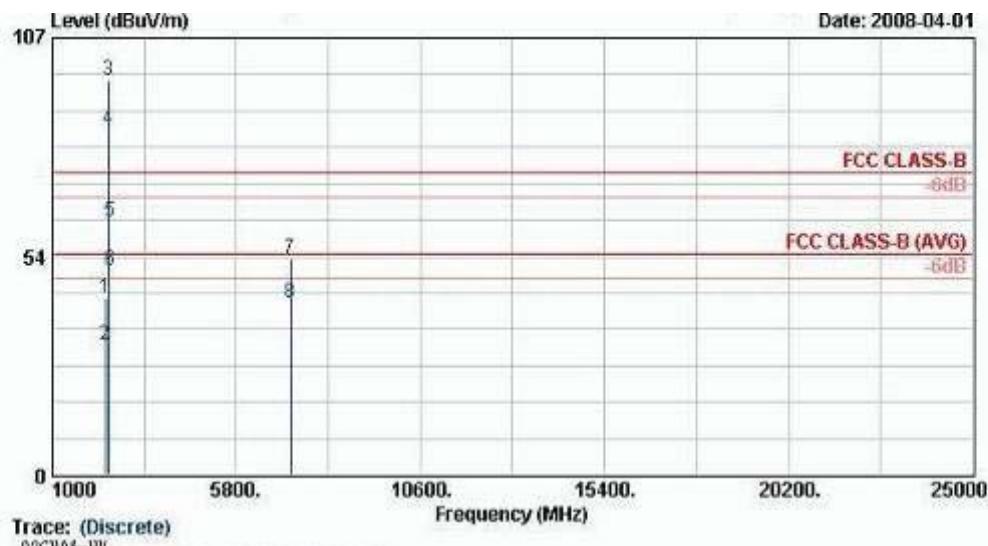


## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26

Channel : 78 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Horizontal



Site: 03CH06-RV  
 Condition: FCC CLASS-B 3m SHF-ERF HORN HORIZONTAL  
 EUT: Smart Phone  
 Power: 120Vac/60Hz  
 Model: FR 811107-01  
 Memo: BT Tx\_Oh76 : 2480MHz + Adaptor  
 Data Rate: 2DHS5  
 Plane: EI  
 IET: TV8111X400994  
 S/N:

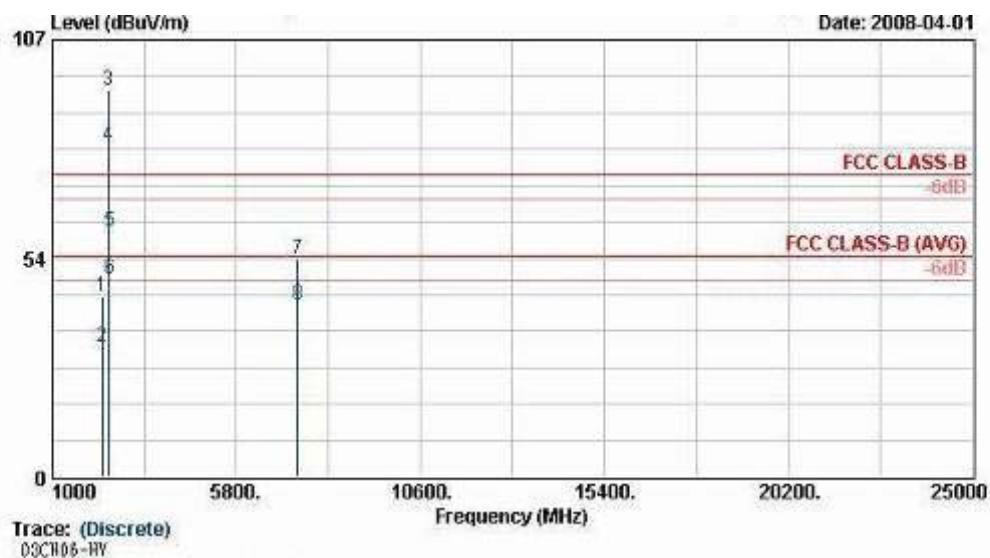
	Freq	Level	Over Limit	Limit Line	Read	Antenna	Cable	Preamp	Ant	Table	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg			
1	2390.00	43.48	-30.52	74.00	43.38	31.86	3.92	35.68	100		0	Peak	
2	2390.00	31.98	-22.02	54.00	31.88	31.86	3.92	35.68	103		315	Average	
3 X	2480.00	96.66			96.33	31.98	4.05	35.70	100		0	Peak	
4 @	2480.00	84.80			84.47	31.98	4.05	35.70	103		315	Average	
5	2483.47	61.90	-12.10	74.00	61.57	31.98	4.05	35.70	100		0	Peak	
6 !	2483.47	50.00	-4.00	54.00	49.67	31.98	4.05	35.70	103		315	Average	
7	7221.00	52.87	-21.13	74.00	46.09	35.71	7.17	36.09	100		0	Peak	
8	7221.00	42.08	-11.92	54.00	35.29	35.71	7.17	36.09	100		216	Average	

Remark: #3 and #4 are Fundamental Signals



## Frequency Range : 1 GHz ~ 25GHz

Modulation Type : /4-DQPSK (EDR 2Mbps) Temperature : 21~26  
 Channel : 78 Relative Humidity : 49~51%  
 Test Engineer : Sun Wang Polarization : Vertical



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
			MHz	dBuV/m	dB	Line	Level	Factor	Loss	Pos	
1	2310.00	44.19	-29.81	74.00	44.29	31.73	3.82	35.66	100	0	Peak
2	2310.00	31.84	-22.16	54.00	31.94	31.73	3.82	35.66	100	264	Average
3 X	2480.00	94.76			94.43	31.98	4.05	35.70	100	0	Peak
4 @	2480.00	81.26			80.93	31.98	4.05	35.70	100	264	Average
5 !	2483.47	60.14	-13.86	74.00	59.81	31.98	4.05	35.70	100	0	Peak
6 !	2483.47	48.36	-5.64	54.00	48.03	31.98	4.05	35.70	100	264	Average
7	7392.00	53.30	-20.70	74.00	46.59	35.64	7.23	36.16	100	0	Peak
8	7392.00	42.00	-12.00	54.00	35.29	35.64	7.23	36.16	100	111	Average

Remark: #3 and #4 are Fundamental Signals



### 3.16 99% Bandwidth Measurement (BT)

#### 3.16.1 Limits of 99% Bandwidth Measurement

None.

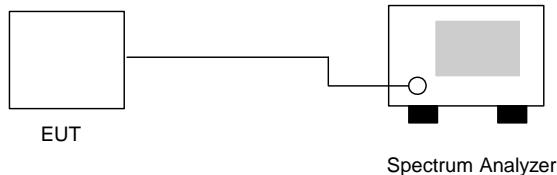
#### 3.16.2 Measuring Instruments

See list of measuring instruments of this test report.

#### 3.16.3 Test Procedure

4. The transmitter output was connected to the spectrum analyzer directly.
5. Set RBW of spectrum analyzer to 300kHz and VBW to 300kHz.
6. Set the 99% bandwidth function of spectrum analyzer, then measured and recorded.

#### 3.16.4 Test Setup



#### 3.16.5 Test Result

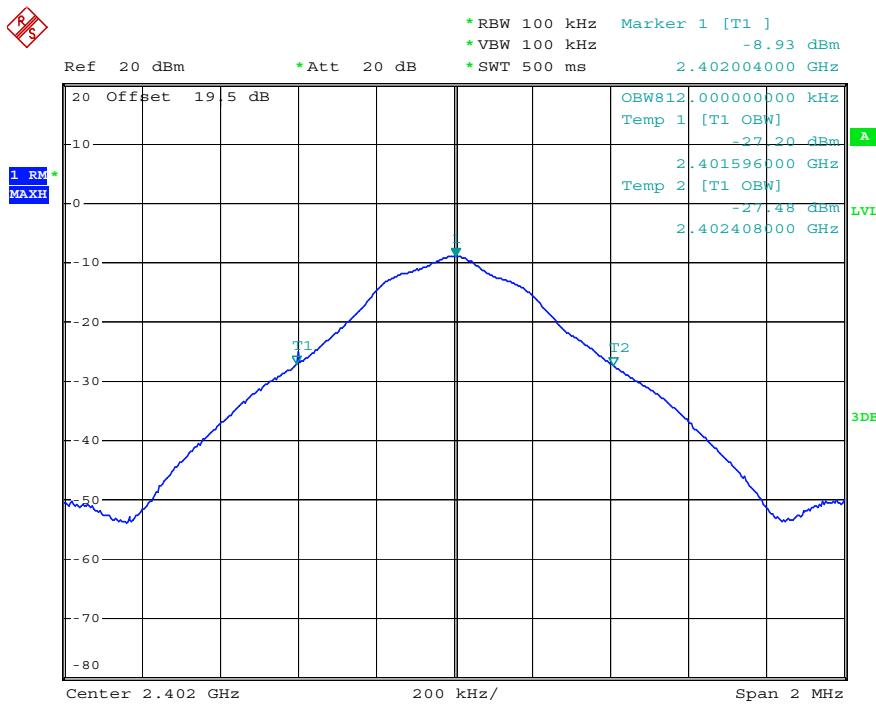
**Modulation Type :** GFSK

**Temperature :** 27~29

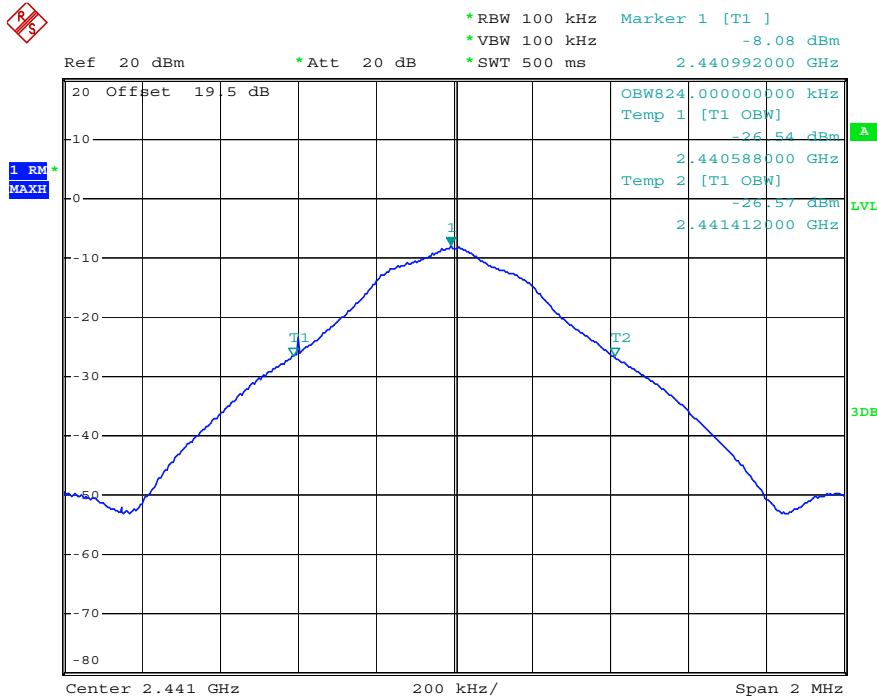
**Test Engineer :** Darren Lin

**Relative Humidity :** 47~48%

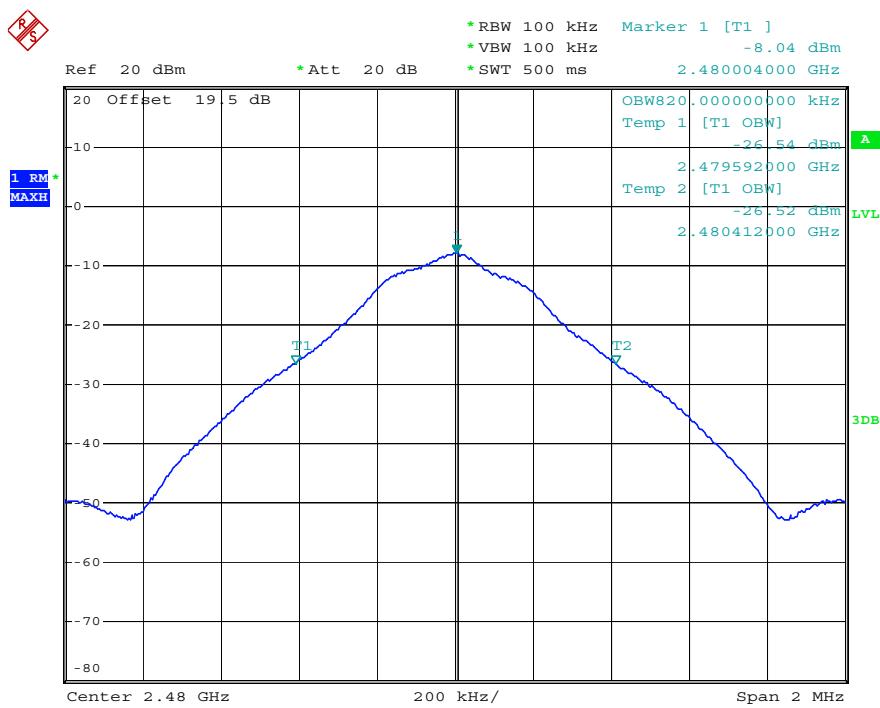
Channel	Frequency ( MHz )	99% Emission bandwidth ( MHz )
00	2402	0.812
39	2441	0.824
78	2480	0.820



Date: 9.JUL.2008 21:13:35



Date: 9.JUL.2008 21:13:56



Date: 9.JUL.2008 21:14:18

### 3.16.6 Test Result

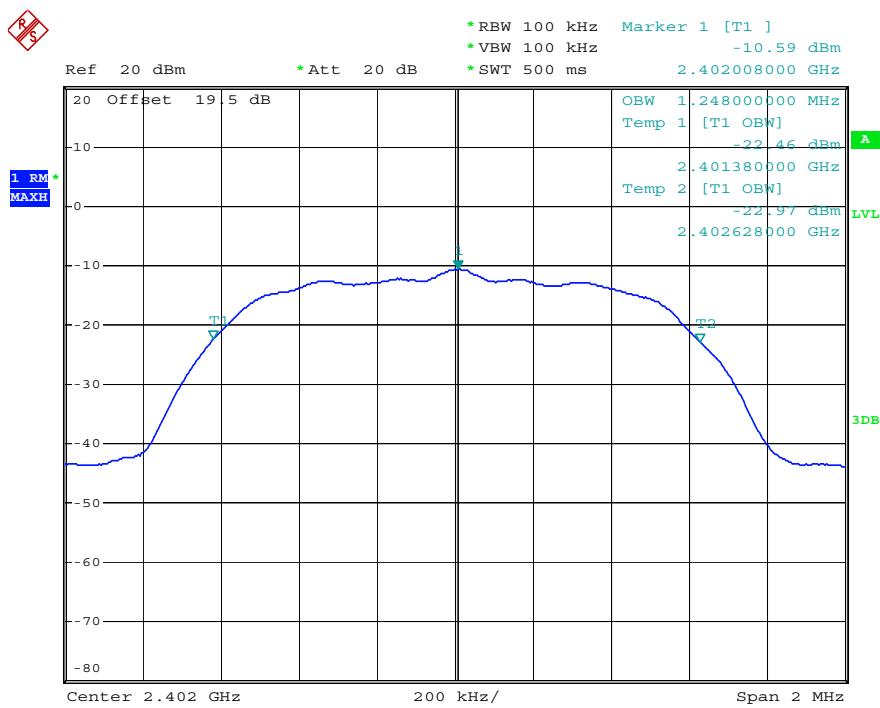
**Modulation Type :** /4-DQPSK

**Temperature :** 27~29

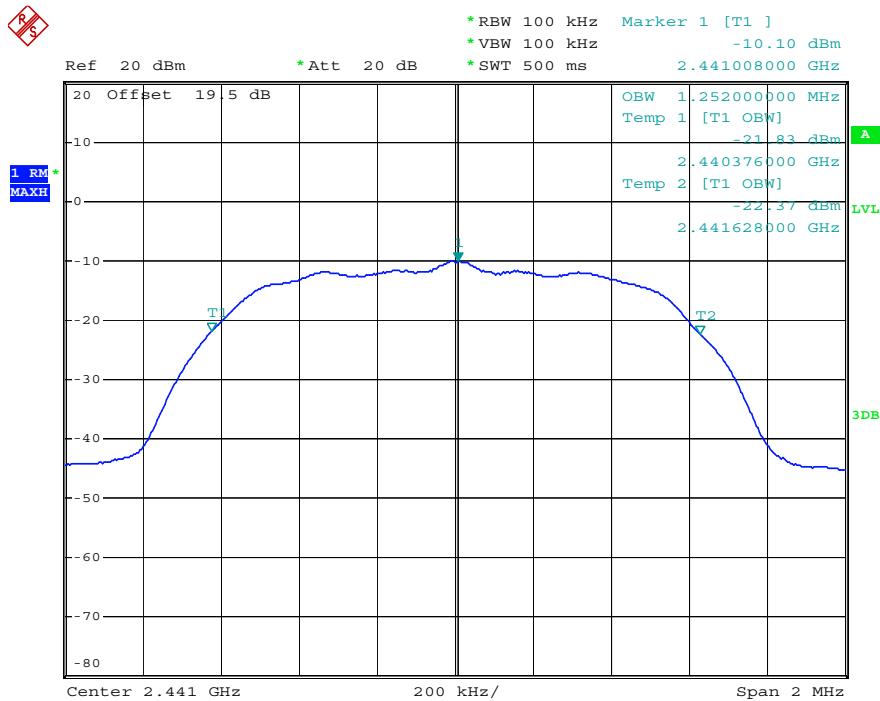
**Test Engineer :** Darren Lin

**Relative Humidity :** 47~48%

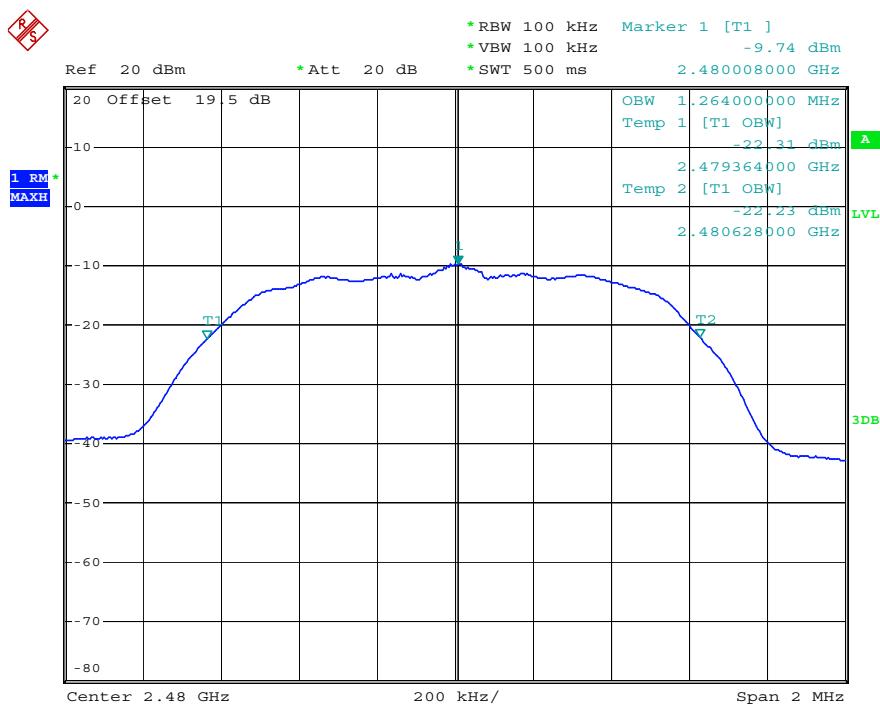
Channel	Frequency ( MHz )	99% Emission bandwidth ( MHz )
00	2402	1.248
39	2441	1.252
78	2480	1.264



Date: 9.JUL.2008 20:38:20



Date: 9.JUL.2008 20:39:53



Date: 9.JUL.2008 20:40:16

### 3.16.7 Test Result

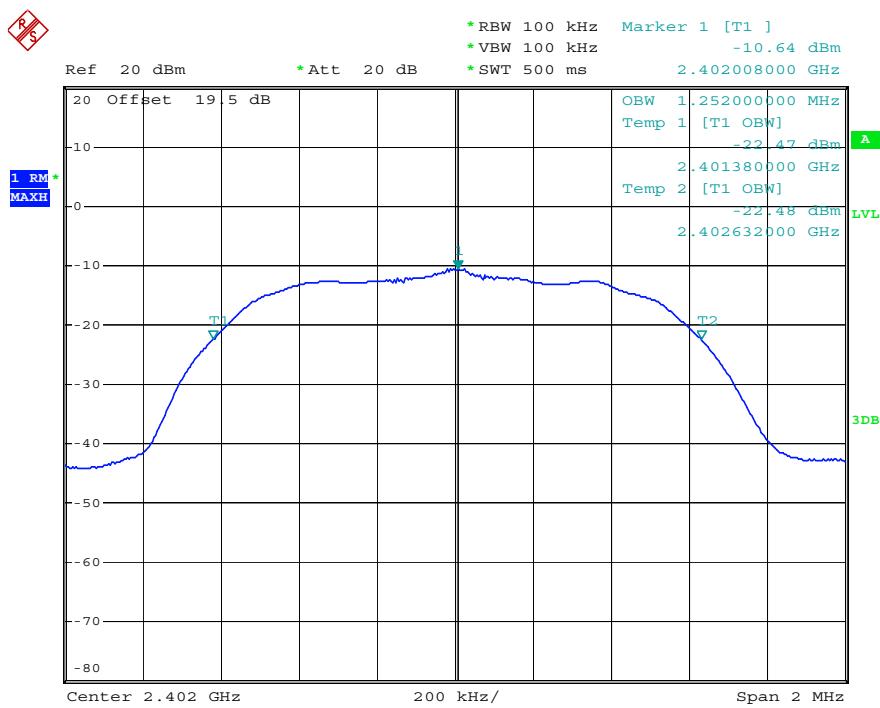
Modulation Type : 8-DPSK

Temperature : 27~29

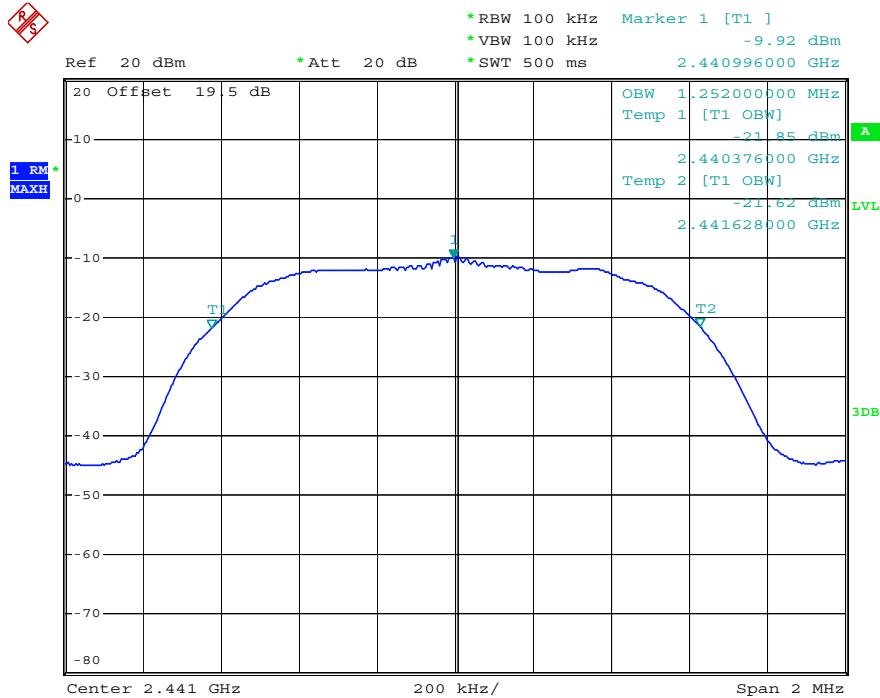
Test Engineer : Darren Lin

Relative Humidity : 47~48%

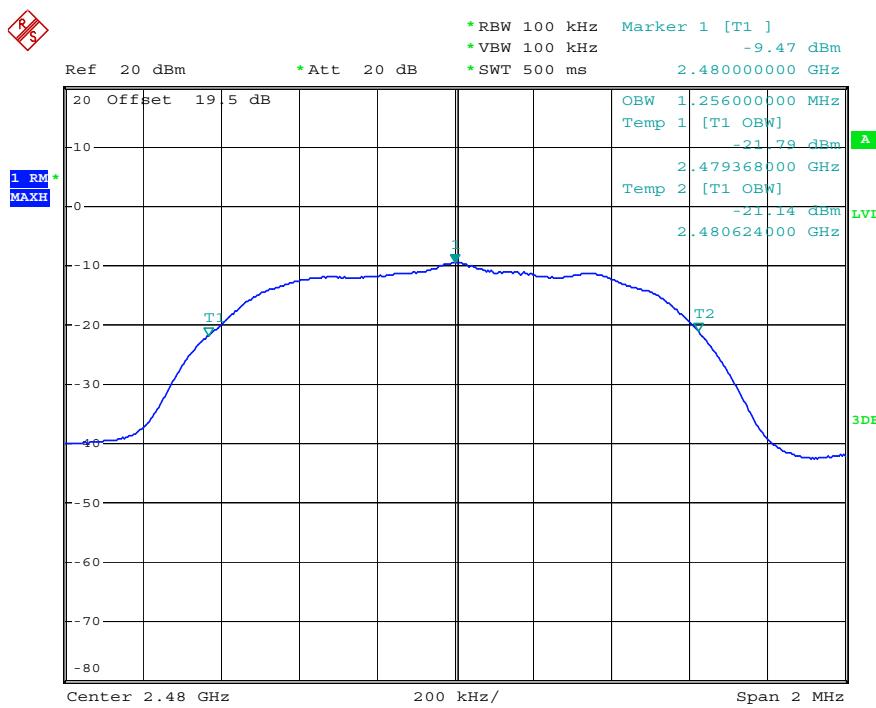
Channel	Frequency ( MHz )	99% Emission bandwidth ( MHz )
00	2402	1.252
39	2441	1.252
78	2480	1.256



Date: 9.JUL.2008 21:13:09



Date: 9.JUL.2008 21:12:41



Date: 9.JUL.2008 21:12:12



### **3.17 Antenna Requirements**

#### **3.17.1 Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

#### **3.17.2 Antenna Connected Construction**

The antennas type used in this product is PIFA antenna for both WLAN and BT without connector and it is considered to meet antenna requirement of FCC.

#### **3.17.3 Antenna Gain**

The antenna gain of EUT is  $-1$  dBi, which is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



### **3.18 Test of Conducted Powerline**

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

#### **3.18.1 Major Measuring Instruments**

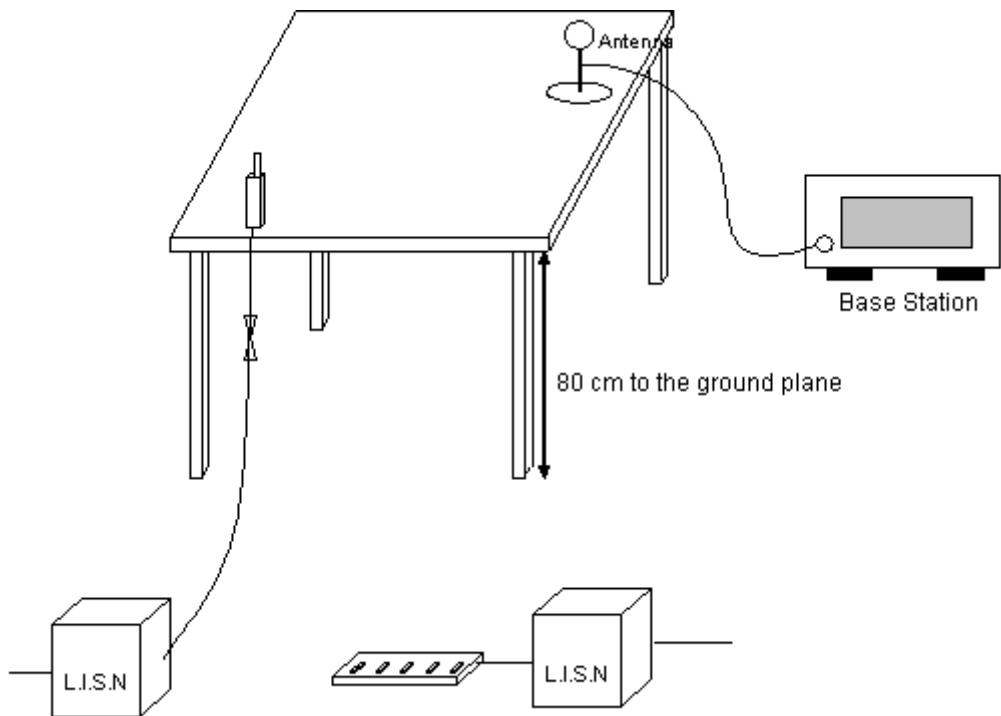
See list of measuring instruments of this test report.

#### **3.18.2 Test Procedures**

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.



3.18.3 Typical Test Setup Layout of Conducted Powerline



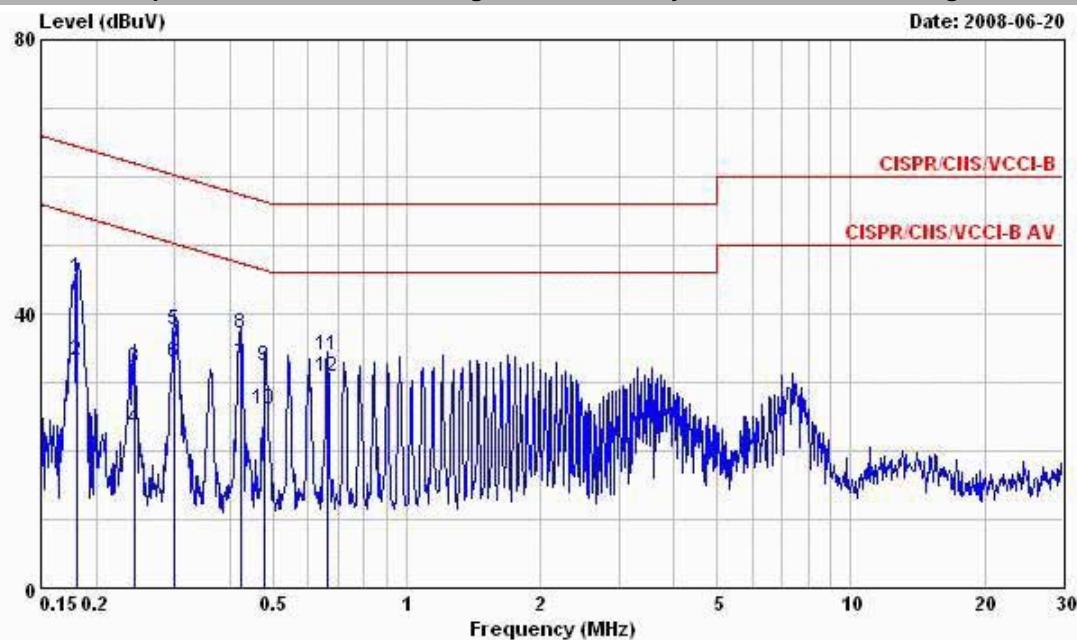


### 3.18.4 Test Result of AC Powerline Conducted Emission

Test Mode: Mode 1

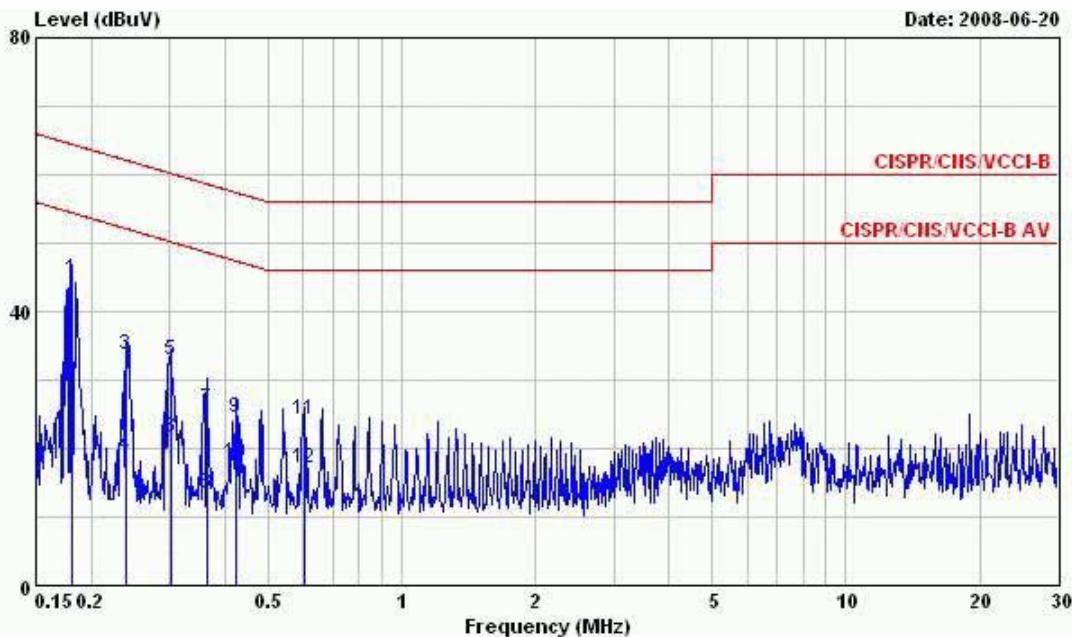
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**



Site : CO04-HY  
Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE  
EUT : Smart Phone  
POWER: 120V/60Hz  
Model : FD 811107-02  
Memo : Mode 1  
IMEI :

		Over	Limit	Read	LISN	Cable	
Freq	Level	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB
1	0.1815220	45.17	-19.25	64.42	45.06	0.09	0.02 QP
2	0.1815220	33.13	-21.29	54.42	33.02	0.09	0.02 Average
3	0.2429320	32.00	-30.00	62.00	31.88	0.09	0.03 QP
4	0.2429320	23.18	-28.82	52.00	23.06	0.09	0.03 Average
5	0.2986930	37.63	-22.65	60.28	37.49	0.10	0.04 QP
6	0.2986930	32.98	-17.30	50.28	32.84	0.10	0.04 Average
7	0.4214950	32.69	-14.73	47.42	32.53	0.10	0.06 Average
8	0.4214950	37.09	-20.33	57.42	36.93	0.10	0.06 QP
9	0.4786490	32.44	-23.92	56.36	32.29	0.10	0.05 QP
10	0.4786490	26.00	-20.36	46.36	25.85	0.10	0.05 Average
11	0.6612710	33.97	-22.03	56.00	33.82	0.11	0.04 QP
12	0.6612710	30.85	-15.15	46.00	30.70	0.11	0.04 Average



Site : C004-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL

EUT : Smart Phone

POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 1

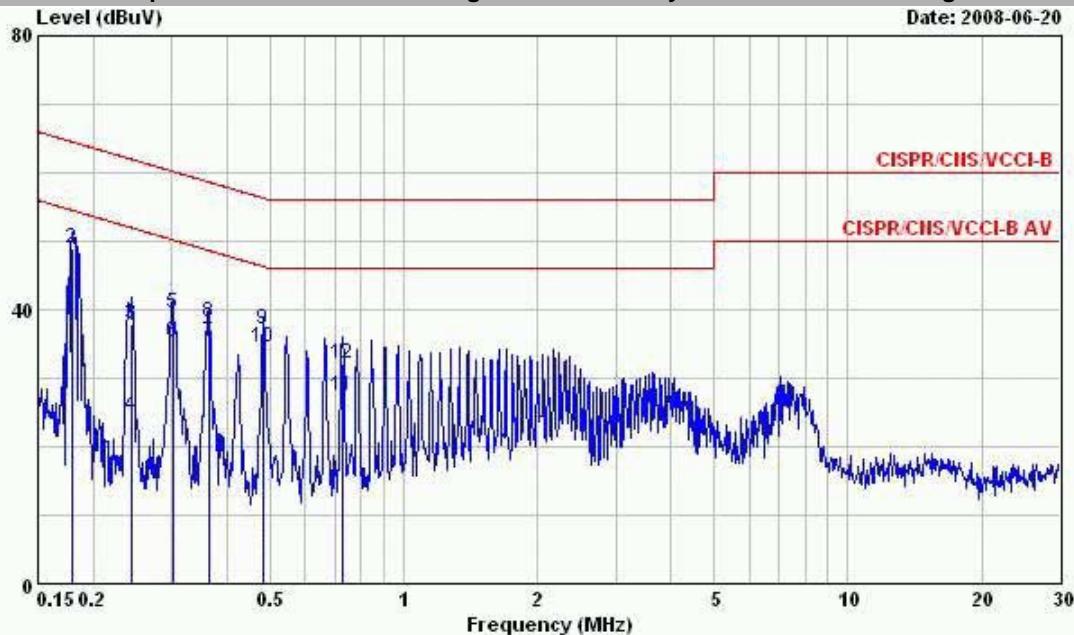
IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN		Cable Loss	Remark
					dBuV	dB		
1 0.1805620	44.65	-19.81	64.46	44.55	0.08	0.02	QP	
2 0.1805620	29.50	-24.96	54.46	29.40	0.08	0.02	Average	
3 0.2391010	33.65	-28.48	62.13	33.54	0.08	0.03	QP	
4 0.2391010	18.84	-33.29	52.13	18.73	0.08	0.03	Average	
5 0.3018750	32.93	-27.26	60.19	32.80	0.09	0.04	QP	
6 0.3018750	21.45	-28.74	50.19	21.32	0.09	0.04	Average	
7 0.3633820	25.68	-32.97	58.65	25.54	0.09	0.05	QP	
8 0.3633820	13.52	-35.13	48.65	13.38	0.09	0.05	Average	
9 0.4214950	24.49	-32.93	57.42	24.34	0.09	0.06	QP	
10 0.4214950	17.86	-29.56	47.42	17.71	0.09	0.06	Average	
11 0.6011200	24.25	-31.75	56.00	24.11	0.10	0.04	QP	
12 0.6011200	17.22	-28.78	46.00	17.08	0.10	0.04	Average	



Test Mode: Mode 2

- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**

Site : CO04-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE

EUT : Smart Phone

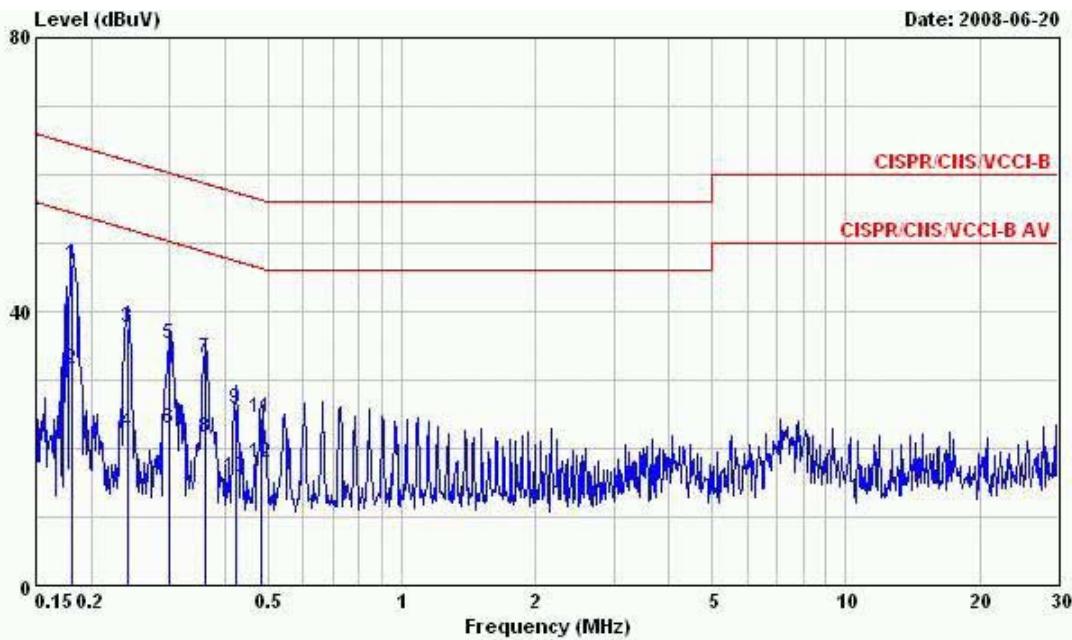
POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 2

IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable		Remark
						dBuV	dB	
MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1 @0.1796080	40.61	-13.89	54.50	40.50	0.09	0.02	0.02	Average
2 0.1796080	49.06	-15.44	64.50	48.95	0.09	0.02	0.02	QP
3 0.2429320	37.88	-24.12	62.00	37.76	0.09	0.03	0.03	QP
4 0.2429320	24.50	-27.50	52.00	24.38	0.09	0.03	0.03	Average
5 0.3018750	39.44	-20.75	60.19	39.30	0.10	0.04	0.04	QP
6 0.3018750	35.21	-14.98	50.19	35.07	0.10	0.04	0.04	Average
7 @0.3633820	35.28	-13.37	48.65	35.13	0.10	0.05	0.05	Average
8 0.3633820	38.27	-20.38	58.65	38.12	0.10	0.05	0.05	QP
9 0.4837480	36.99	-19.28	56.27	36.84	0.10	0.05	0.05	QP
10 @0.4837480	34.37	-11.90	46.27	34.22	0.10	0.05	0.05	Average
11 0.7274420	27.29	-18.71	46.00	27.15	0.11	0.03	0.03	Average
12 0.7274420	32.09	-23.91	56.00	31.95	0.11	0.03	0.03	QP



Site : C004-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL

EUT : Smart Phone

POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 2

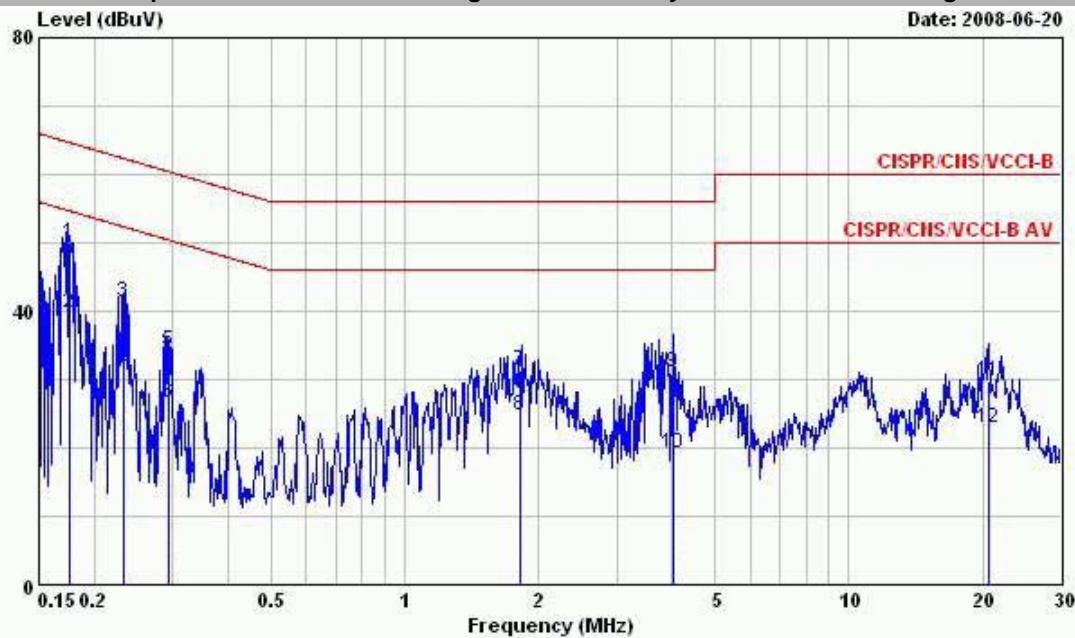
IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN		Cable Loss	Remark
					dBuV	Factor		
1 0.1815220	46.74	-17.68	64.42	46.64	0.08	0.02	QP	
2 0.1815220	31.67	-22.75	54.42	31.57	0.08	0.02	Average	
3 0.2416480	37.55	-24.49	62.04	37.44	0.08	0.03	QP	
4 0.2416480	22.31	-29.73	52.04	22.20	0.08	0.03	Average	
5 0.3002800	35.35	-24.89	60.24	35.22	0.09	0.04	QP	
6 0.3002800	22.86	-27.38	50.24	22.73	0.09	0.04	Average	
7 0.3614620	33.12	-25.57	58.69	32.98	0.09	0.05	QP	
8 0.3614620	21.62	-27.07	48.69	21.48	0.09	0.05	Average	
9 0.4237340	25.78	-31.59	57.37	25.63	0.09	0.06	QP	
10 0.4237340	15.76	-31.61	47.37	15.61	0.09	0.06	Average	
11 0.4837480	24.44	-31.83	56.27	24.30	0.09	0.05	QP	
12 0.4837480	17.83	-28.44	46.27	17.69	0.09	0.05	Average	



Test Mode: Mode 3

- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**

Site : CO04-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE

EUT : Smart Phone

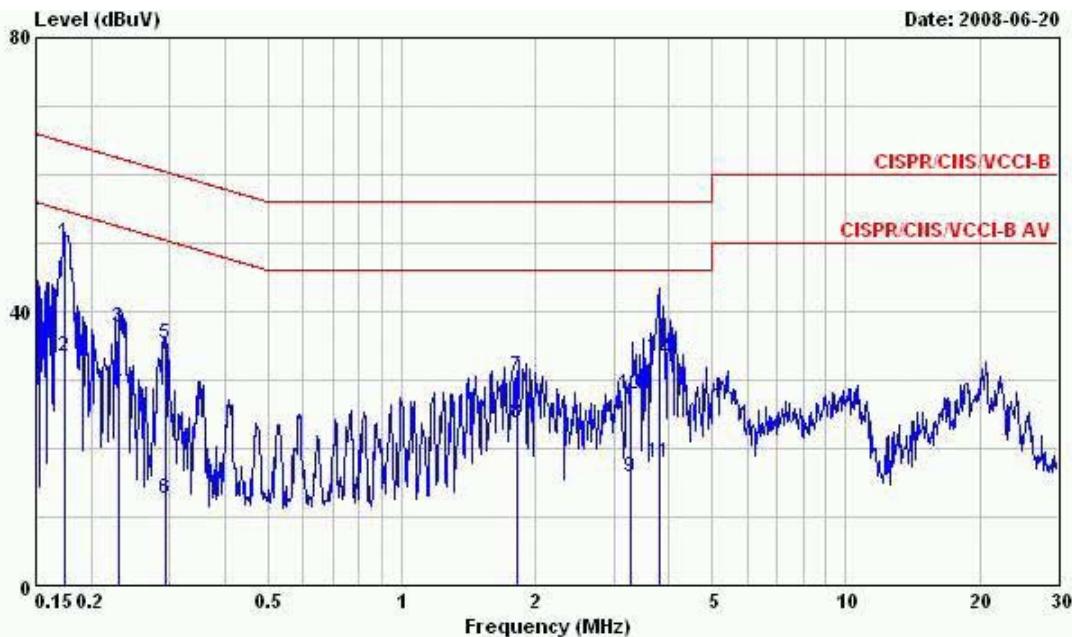
POWER: From Notebook

Model : FD 811107-02

Memo : Mode 3

IMEI :

Freq MHz	Level dBuV	Over Limit dB	Limit Line dBuV	Read Level dBuV	LISN Factor	Cable Loss dB		Remark
						Cable	Loss	
1 @0.1751540	50.08	-14.63	64.71	49.97	0.09	0.02	QP	
2 0.1751540	39.69	-15.02	54.71	39.58	0.09	0.02	Average	
3 0.2328500	41.23	-21.12	62.35	41.11	0.09	0.03	QP	
4 0.2328500	31.38	-20.97	52.35	31.26	0.09	0.03	Average	
5 0.2940970	34.19	-26.22	60.41	34.05	0.10	0.04	QP	
6 0.2940970	26.57	-23.84	50.41	26.43	0.10	0.04	Average	
7 1.825	31.24	-24.76	56.00	31.07	0.13	0.04	QP	
8 1.825	24.84	-21.16	46.00	24.67	0.13	0.04	Average	
9 4.008	30.97	-25.03	56.00	30.73	0.17	0.07	QP	
10 4.008	19.15	-26.85	46.00	18.91	0.17	0.07	Average	
11 20.590	29.80	-30.20	60.00	29.36	0.43	0.01	QP	
12 20.590	22.78	-27.22	50.00	22.34	0.43	0.01	Average	



Site : CO04-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL

EUT : Smart Phone

POWER: From Notebook

Model : FD 811107-02

Memo : Mode 3

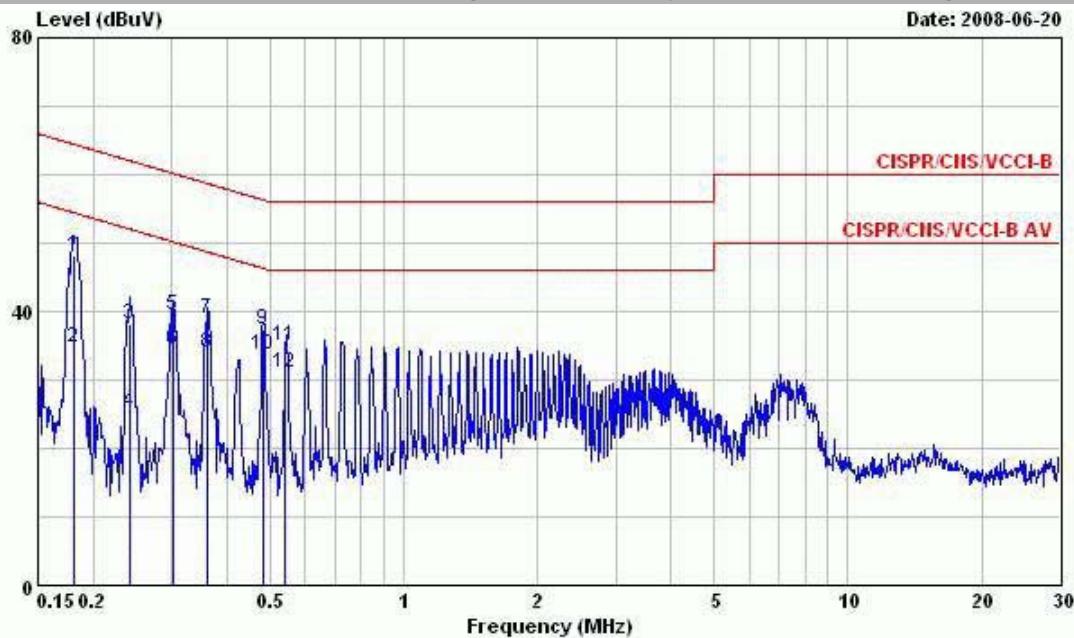
IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN		Cable Loss	Remark
					dBuV	dB		
1	0.1749130	49.98	-14.74	64.72	49.88	0.08	0.02	QP
2	0.1749130	33.34	-21.38	54.72	33.24	0.08	0.02	Average
3	0.2316200	37.52	-24.87	62.39	37.41	0.08	0.03	QP
4	0.2316200	29.11	-23.28	52.39	29.00	0.08	0.03	Average
5	0.2939830	35.20	-25.21	60.41	35.07	0.09	0.04	QP
6	0.2939830	12.53	-37.88	50.41	12.40	0.09	0.04	Average
7	1.826	30.48	-25.52	56.00	30.32	0.12	0.04	QP
8	1.826	23.57	-22.43	46.00	23.41	0.12	0.04	Average
9	3.288	15.88	-30.12	46.00	15.68	0.14	0.06	Average
10	3.288	28.02	-27.98	56.00	27.82	0.14	0.06	QP
11	3.793	17.91	-28.09	46.00	17.69	0.15	0.07	Average
12	3.793	33.45	-22.55	56.00	33.23	0.15	0.07	QP



Test Mode: Mode 4

- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**

Site : C004-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE

EUT : Smart Phone

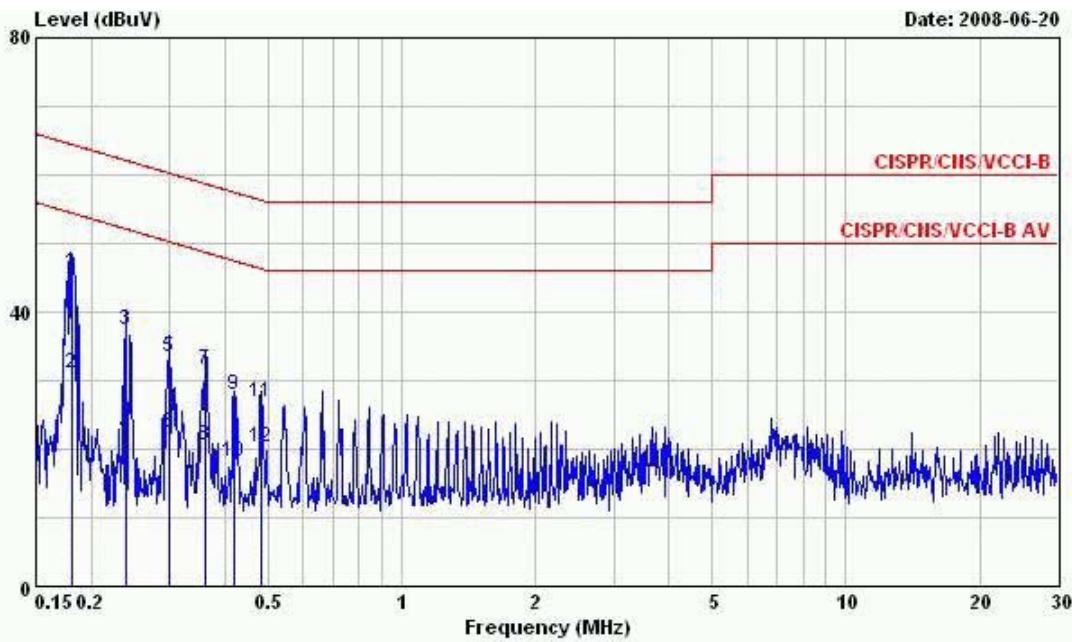
POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 4

IMEI :

	Freq	Over Level	Limit	Read Line	LISN Level	Cable Factor	Cable Loss Remark	
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1815220	48.17	-16.25	64.42	48.06	0.09	0.02	QP
2	0.1815220	34.76	-19.66	54.42	34.65	0.09	0.02	Average
3	0.2416480	38.20	-23.84	62.04	38.08	0.09	0.03	QP
4	0.2416480	25.17	-26.87	52.04	25.05	0.09	0.03	Average
5	0.3018750	39.42	-20.77	60.19	39.28	0.10	0.04	QP
6	0.3018750	34.47	-15.72	50.19	34.33	0.10	0.04	Average
7	0.3614620	38.97	-19.72	58.69	38.82	0.10	0.05	QP
8	0.3614620	34.06	-14.63	48.69	33.91	0.10	0.05	Average
9	0.4811910	37.28	-19.04	56.32	37.13	0.10	0.05	QP
10	0.4811910	33.70	-12.62	46.32	33.55	0.10	0.05	Average
11	0.5408900	35.08	-20.92	56.00	34.93	0.10	0.05	QP
12	0.5408900	31.05	-14.95	46.00	30.90	0.10	0.05	Average



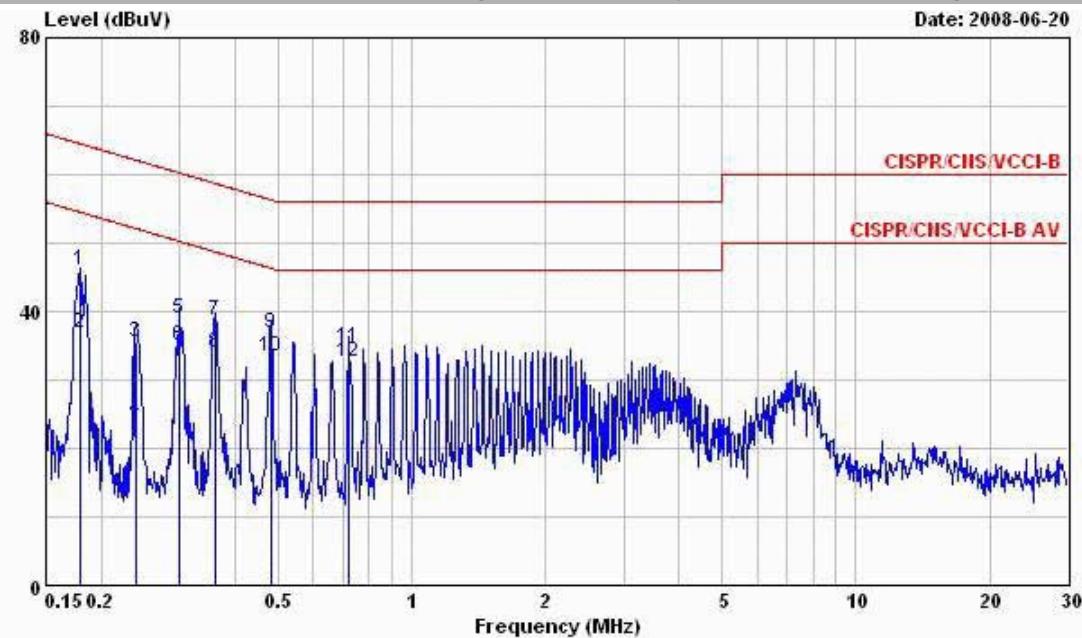
Site : CO04-HY  
Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL  
EUT : Smart Phone  
POWER: 120V/60Hz  
Model : FD 811107-02  
Memo : Mode 4  
IMEI :

Freq	Level	Over Limit	Limit	Read Line	LISN		Cable Loss	Remark
					dBuV	dB		
1 0.1815220	45.70	-18.72	64.42	45.60	0.08	0.02	QP	
2 0.1815220	30.93	-23.49	54.42	30.83	0.08	0.02	Average	
3 0.2403720	37.29	-24.79	62.08	37.18	0.08	0.03	QP	
4 0.2403720	22.04	-30.04	52.08	21.93	0.08	0.03	Average	
5 0.2986930	33.50	-26.78	60.28	33.37	0.09	0.04	QP	
6 0.2986930	22.36	-27.92	50.28	22.23	0.09	0.04	Average	
7 0.3595520	31.46	-27.28	58.74	31.32	0.09	0.05	QP	
8 0.3595520	20.52	-28.22	48.74	20.38	0.09	0.05	Average	
9 0.4192670	27.77	-29.69	57.46	27.62	0.09	0.06	QP	
10 0.4192670	18.15	-29.31	47.46	18.00	0.09	0.06	Average	
11 0.4811910	26.87	-29.45	56.32	26.73	0.09	0.05	QP	
12 0.4811910	20.16	-26.16	46.32	20.02	0.09	0.05	Average	



Test Mode: Mode 5

- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**

Site : C004-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE

EUT : Smart Phone

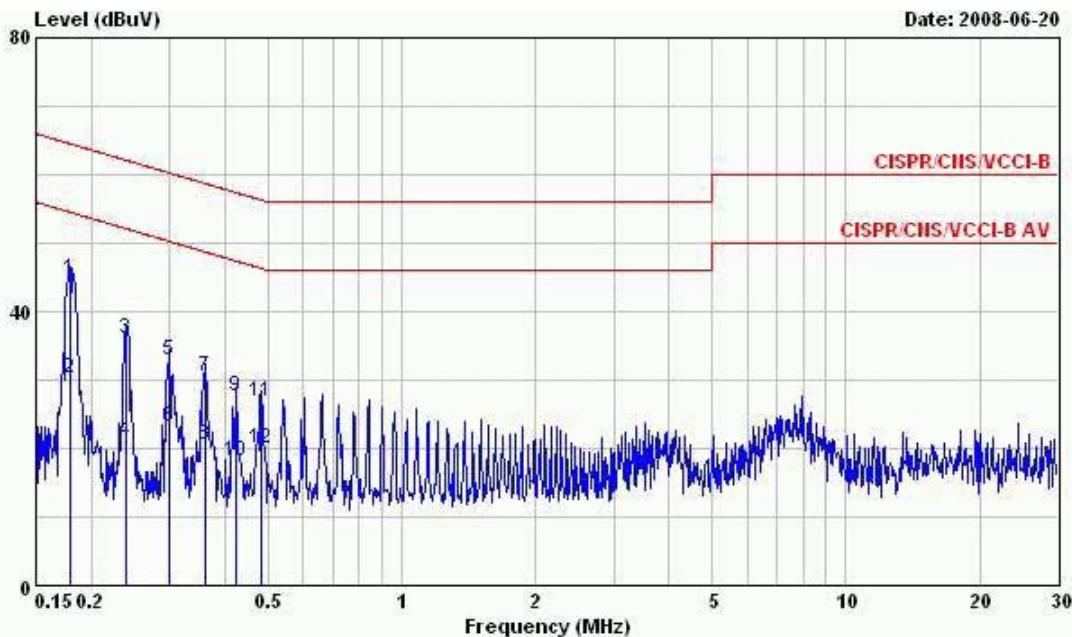
POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 5

IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable	
						dBuV	dB
1 0.1796080	46.06	-18.44	64.50	45.95	0.09	0.02	QP
2 0.1796080	36.95	-17.55	54.50	36.84	0.09	0.02	Average
3 0.2391010	35.64	-26.49	62.13	35.52	0.09	0.03	QP
4 0.2391010	24.19	-27.94	52.13	24.07	0.09	0.03	Average
5 0.3002800	39.04	-21.20	60.24	38.90	0.10	0.04	QP
6 0.3002800	34.97	-15.27	50.24	34.83	0.10	0.04	Average
7 0.3595520	38.57	-20.17	58.74	38.42	0.10	0.05	QP
8 @0.3595520	34.06	-14.68	48.74	33.91	0.10	0.05	Average
9 0.4811910	36.82	-19.50	56.32	36.67	0.10	0.05	QP
10 @0.4811910	33.37	-12.95	46.32	33.22	0.10	0.05	Average
11 0.7197740	34.83	-21.17	56.00	34.69	0.11	0.03	QP
12 @0.7197740	32.72	-13.28	46.00	32.58	0.11	0.03	Average



Site : C004-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL

EUT : Smart Phone

POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 5

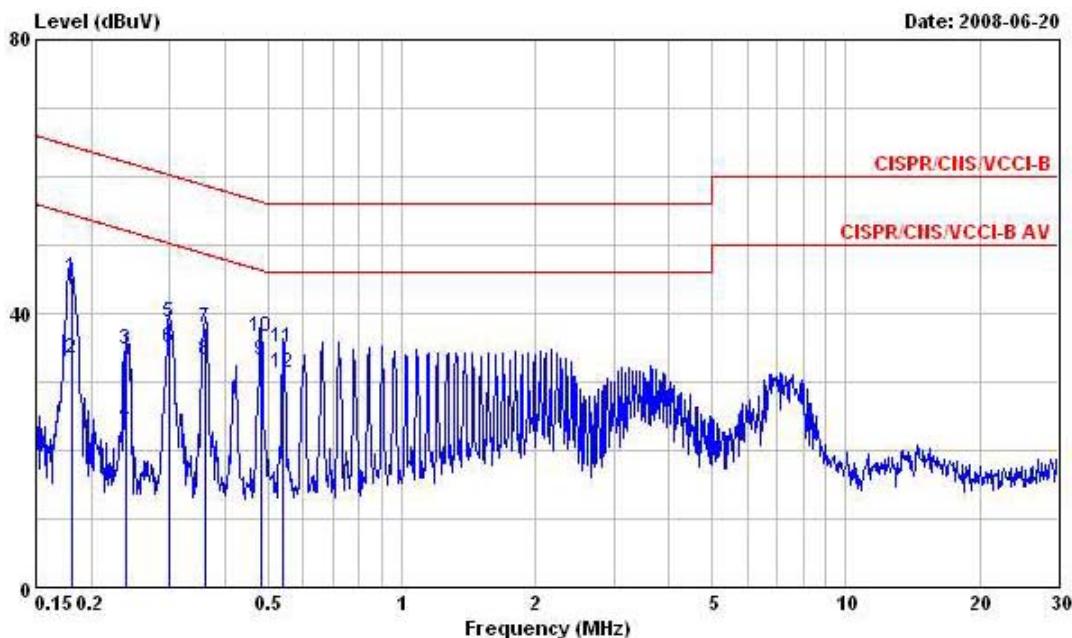
IMEI : 00440145066639701

Freq	Level	Over Limit	Limit Line	Read Level	LISN		Cable Loss	Remark
					dBuV	dB		
1 0.1796080	44.75	-19.75	64.50	44.65	0.08	0.02	QP	
2 0.1796080	30.38	-24.12	54.50	30.28	0.08	0.02	Average	
3 0.2403720	36.03	-26.05	62.08	35.92	0.08	0.03	QP	
4 0.2403720	21.01	-31.07	52.08	20.90	0.08	0.03	Average	
5 0.2986930	32.92	-27.36	60.28	32.79	0.09	0.04	QP	
6 0.2986930	23.18	-27.10	50.28	23.05	0.09	0.04	Average	
7 0.3595520	30.46	-28.28	58.74	30.32	0.09	0.05	QP	
8 0.3595520	20.42	-28.32	48.74	20.28	0.09	0.05	Average	
9 0.4214950	27.63	-29.79	57.42	27.48	0.09	0.06	QP	
10 0.4214950	18.08	-29.34	47.42	17.93	0.09	0.06	Average	
11 0.4811910	26.91	-29.41	56.32	26.77	0.09	0.05	QP	
12 0.4811910	19.88	-26.44	46.32	19.74	0.09	0.05	Average	



Test Mode: Mode 6

- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 24~25
- Relative Humidity: 51~53%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

**The test that passed at the minimum margin was marked by a frame in the following data**

Site : CO04-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE

EUT : Smart Phone

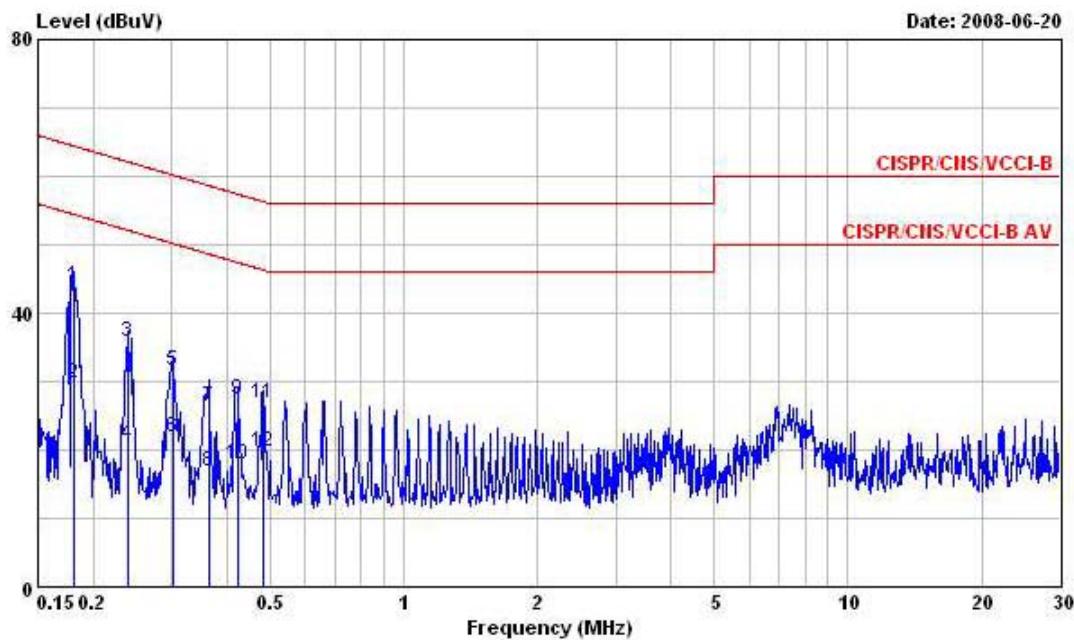
POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 6

IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss		Remark
						dBuV	dB	
1 @0.1805620	45.35	-19.11	64.46	45.24	0.09	0.02	QP	
2 @0.1805620	33.47	-20.99	54.46	33.36	0.09	0.02	Average	
3 @0.2403720	34.70	-27.38	62.08	34.58	0.09	0.03	QP	
4 @0.2403720	23.97	-28.11	52.08	23.85	0.09	0.03	Average	
5 @0.2986930	38.73	-21.55	60.28	38.59	0.10	0.04	QP	
6 @0.2986930	34.98	-15.30	50.28	34.84	0.10	0.04	Average	
7 @0.3614620	37.79	-20.90	58.69	37.64	0.10	0.05	QP	
8 @0.3614620	33.16	-15.53	48.69	33.01	0.10	0.05	Average	
9 @0.4811910	33.07	-13.25	46.32	32.92	0.10	0.05	Average	
10 @0.4811910	36.50	-19.82	56.32	36.35	0.10	0.05	QP	
11 @0.5406800	34.92	-21.08	56.00	34.77	0.10	0.05	QP	
12 @0.5406800	31.30	-14.70	46.00	31.15	0.10	0.05	Average	



Site : CO04-HY

Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL

EUT : Smart Phone

POWER: 120V/60Hz

Model : FD 811107-02

Memo : Mode 6

IMEI :

Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable	
						dB	dBuV
1 0.1805620	44.00	-20.46	64.46	43.90	0.08	0.02	QP
2 0.1805620	29.73	-24.73	54.46	29.63	0.08	0.02	Average
3 0.2391010	35.89	-26.24	62.13	35.78	0.08	0.03	QP
4 0.2391010	20.86	-31.27	52.13	20.75	0.08	0.03	Average
5 0.3018750	31.55	-28.64	60.19	31.42	0.09	0.04	QP
6 0.3018750	21.91	-28.28	50.19	21.78	0.09	0.04	Average
7 0.3633820	26.29	-32.36	58.65	26.15	0.09	0.05	QP
8 0.3633820	16.82	-31.83	48.65	16.68	0.09	0.05	Average
9 0.4214950	27.48	-29.94	57.42	27.33	0.09	0.06	QP
10 0.4214950	17.93	-29.49	47.42	17.78	0.09	0.06	Average
11 0.4811910	26.85	-29.47	56.32	26.71	0.09	0.05	QP
12 0.4811910	19.83	-26.49	46.32	19.69	0.09	0.05	Average



### 3.19 Test of Radiated Emission

Radiated emissions from 30 MHz to 13 GHz were measured with a bandwidth of 120 kHz and 1MHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

#### 3.19.1 Major Measuring Instruments

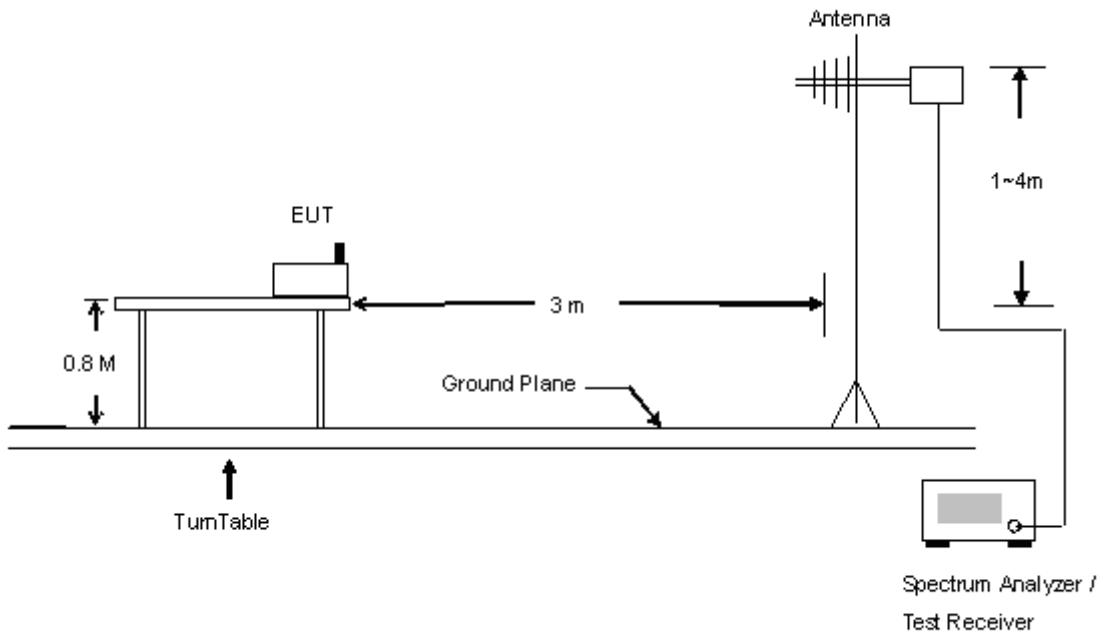
See list of measuring instruments of this test report.

#### 3.19.2 Test Procedures

- a. The EUT was placed on a turntable with 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a Bi-Log antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both for horizontal polarization and vertical polarization of the antenna.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.



### 3.19.3 Typical Test Setup Layout of Radiated Emission



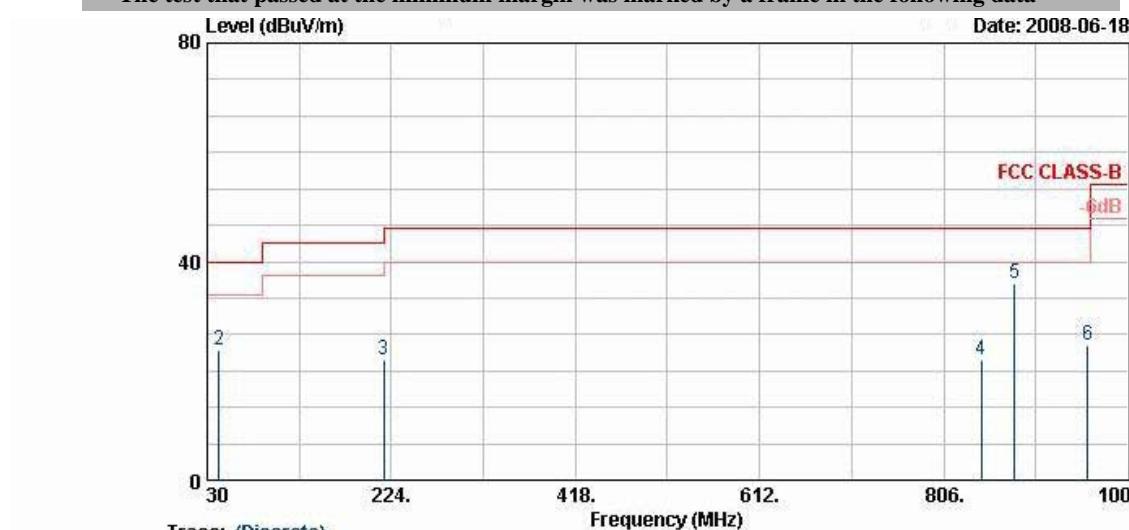


## 3.19.4 Test Result of Radiated Emission

Test Mode: Mode 1

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>uV/m</sub>) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

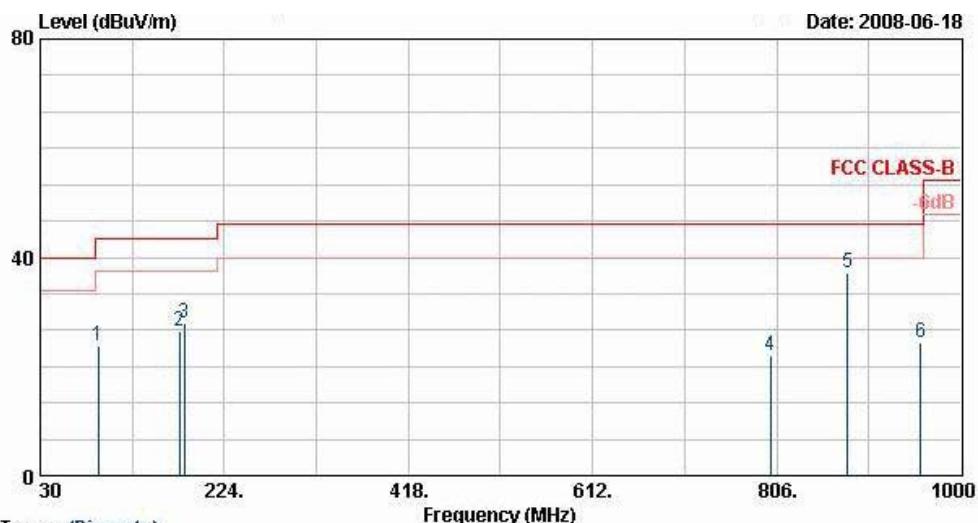
The test that passed at the minimum margin was marked by a frame in the following data



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Table Remark
	MHz	dB <sub>uV/m</sub>	dB	dB <sub>uV/m</sub>	dB <sub>uV</sub>	dB/m	dB	dB	cm	deg	
1	30.00	21.48	-18.52	40.00	35.02	19.66	0.30	33.50	---	---	Peak
2	42.69	23.89	-16.11	40.00	44.72	12.02	0.30	33.15	100	215	Peak
3	216.03	21.86	-24.14	46.00	44.43	10.27	0.66	33.50	---	---	Peak
4	845.30	21.89	-24.11	46.00	33.22	20.14	1.20	32.67	---	---	Peak
5	880.30	35.85			46.91	20.39	1.30	32.75	---	---	Peak
6	957.30	24.75	-21.25	46.00	34.92	20.94	1.27	32.38	---	---	Peak

Remark:

- #5 Base Station Signal.
- The spurious emission above 1 GHz is too low to be taken.



## Trace: (Discrete)

Site : 03CH06-HY  
Condition : FCC CLASS-B 3m LF-ANT(0511121) VERTICAL  
EUT : Smart Phone  
Power : 120Vac/60Hz  
Model : FD 811107-02  
Memo : Mode 1  
S/N :

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	91.29	23.69	-19.81	43.50	47.26	9.23	0.50	33.30	---	---	Peak
2	176.88	26.48	-17.02	43.50	49.53	9.69	0.60	33.34	---	---	Peak
3	181.74	27.83	-15.67	43.50	51.11	9.43	0.60	33.32	100	176	Peak
4	799.80	21.94	-24.06	46.00	33.48	19.82	1.20	32.56	---	---	Peak
5	880.30	37.31			48.37	20.39	1.30	32.75	---	---	Peak
6	957.30	24.40	-21.60	46.00	34.58	20.94	1.27	32.38	---	---	Peak

## Remark:

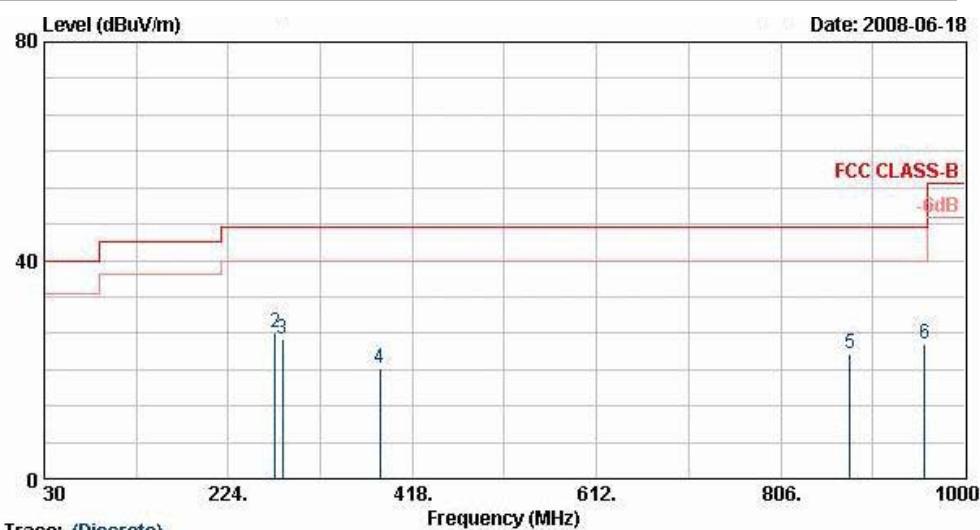
1. #5 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 2

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>uV/m</sub>) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

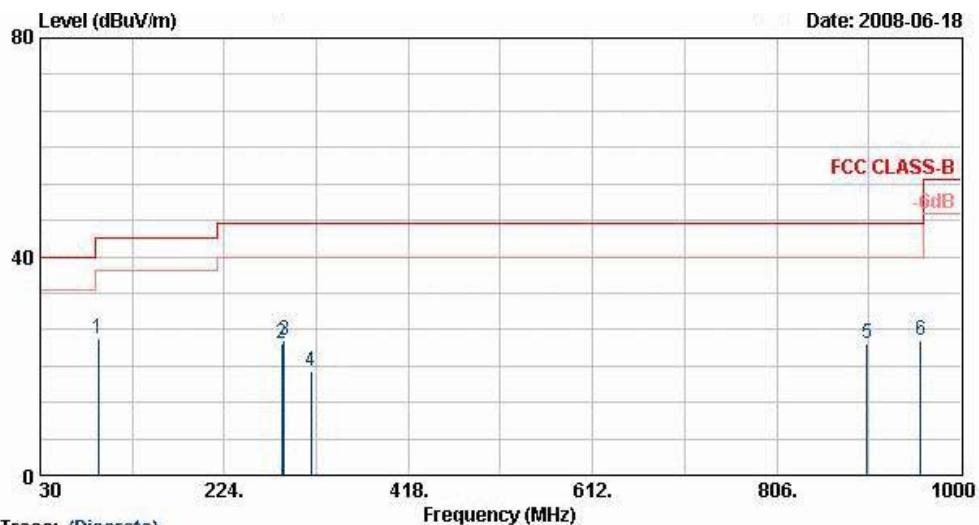
The test that passed at the minimum margin was marked by a frame in the following data



Site : 03CH06-HV  
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL  
 EUT : Smart Phone  
 Power : 120Vac/60Hz  
 Model : FD 811107-02  
 Memo : Mode 2  
 S/N :

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
MHz	dB <sub>uV/m</sub>	dB	dB <sub>uV/m</sub>	dB <sub>uV</sub>	dB/m	dB	dB	cm	deg
1	30.00	21.98	-18.02	40.00	35.52	19.66	0.30	33.50	100
2	273.54	26.76	-19.24	46.00	46.74	12.71	0.70	33.39	---
3	280.83	25.56	-20.44	46.00	45.37	12.86	0.70	33.38	---
4	383.30	20.11	-25.89	46.00	37.00	15.34	0.87	33.10	---
5	878.90	23.03	-22.97	46.00	34.10	20.38	1.30	32.75	---
6	957.30	24.61	-21.39	46.00	34.78	20.94	1.27	32.38	---

Remark: The spurious emission above 1 GHz is too low to be taken.



## Trace: (Discrete)

Site 03CH06-HY  
Condition FCC CLASS-B 3m LF-ANT(051121) VERTICAL  
EUT Smart Phone  
Power 120Vac/60Hz  
Model FD 811107-02  
Memo Mode 2  
S/N

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
			MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	
1	91.29	24.88	-18.62	43.50	48.45	9.23	0.50	33.30	100	163	Peak
2	284.34	24.10	-21.90	46.00	43.85	12.92	0.70	33.37	---	---	Peak
3	287.04	24.56	-21.44	46.00	44.26	12.97	0.70	33.36	---	---	Peak
4	315.40	18.96	-27.04	46.00	37.85	13.61	0.80	33.29	---	---	Peak
5	901.30	23.95	-22.05	46.00	34.91	20.54	1.30	32.79	---	---	Peak
6	957.30	24.71	-21.29	46.00	34.88	20.94	1.27	32.38	---	---	Peak

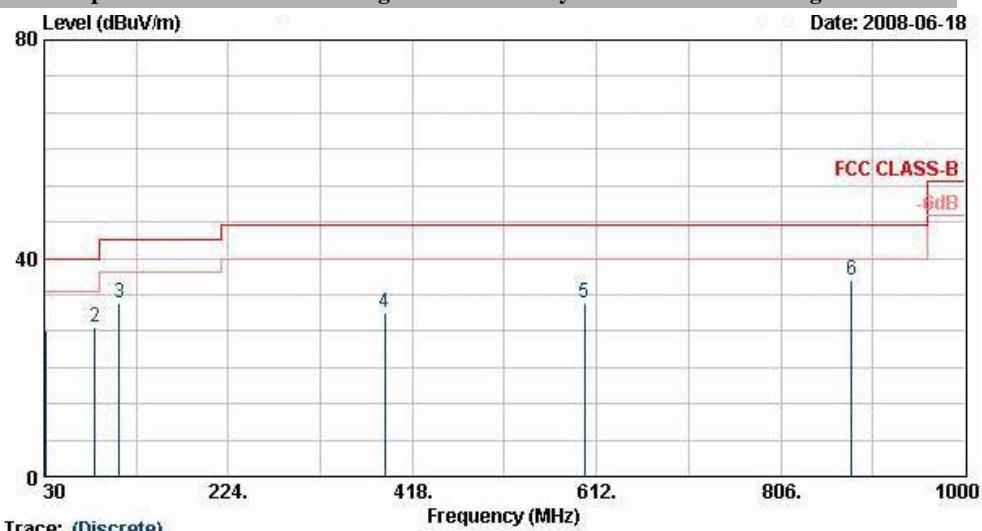
Remark: The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 3

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>uV/m</sub>) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

The test that passed at the minimum margin was marked by a frame in the following data



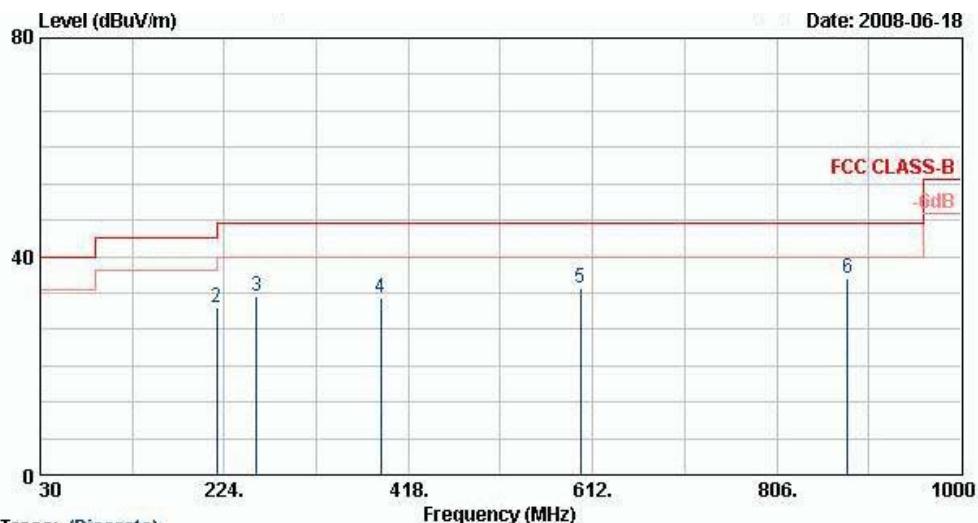
## Trace: (Discrete)

Site : 03CH06-HV  
 Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL  
 EUT : Smart Phone  
 Power : From System  
 Model : FD 811107-02  
 Memo :  
 S/N : Mode 3

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
MHz	dB <sub>uV/m</sub>	dB	dB <sub>uV/m</sub>	dB <sub>uV</sub>	dB/m	dB	dB	cm	deg	
1	31.08	26.65	-13.35	40.00	40.86	18.95	0.30	33.46	---	--- Peak
2	83.73	27.49	-12.51	40.00	52.48	7.97	0.44	33.40	---	--- Peak
3	108.84	31.91	-11.59	43.50	53.38	11.67	0.50	33.63	100	224 Peak
4	388.90	30.13	-15.87	46.00	46.92	15.49	0.81	33.08	---	--- Peak
5	598.90	31.75	-14.25	46.00	45.17	18.45	1.00	32.87	---	--- Peak
6	880.30	36.02		47.08	20.39	1.30	32.75	---	---	--- Peak

## Remark:

- #6 Base Station Signal.
- The spurious emission above 1 GHz is too low to be taken.



## Trace: (Discrete)

Site Condition: 03CH06-HV  
 EUT: FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 Power: Smart Phone  
 From System: From System  
 Model: FD 811107-02  
 Memo: Mode 3  
 S/N:

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	28.70	-11.30	40.00	42.24	19.66	0.30	33.50	100	173 Peak
2	216.03	30.68	-15.32	46.00	53.25	10.27	0.66	33.50	---	--- Peak
3	257.88	32.57	-13.43	46.00	52.88	12.42	0.70	33.42	---	--- Peak
4	388.90	32.50	-13.50	46.00	49.28	15.49	0.81	33.08	---	--- Peak
5	598.90	34.26	-11.74	46.00	47.68	18.45	1.00	32.87	---	--- Peak
6	880.30	36.11	---	47.17	20.39	1.30	32.75	---	---	--- Peak

## Remark:

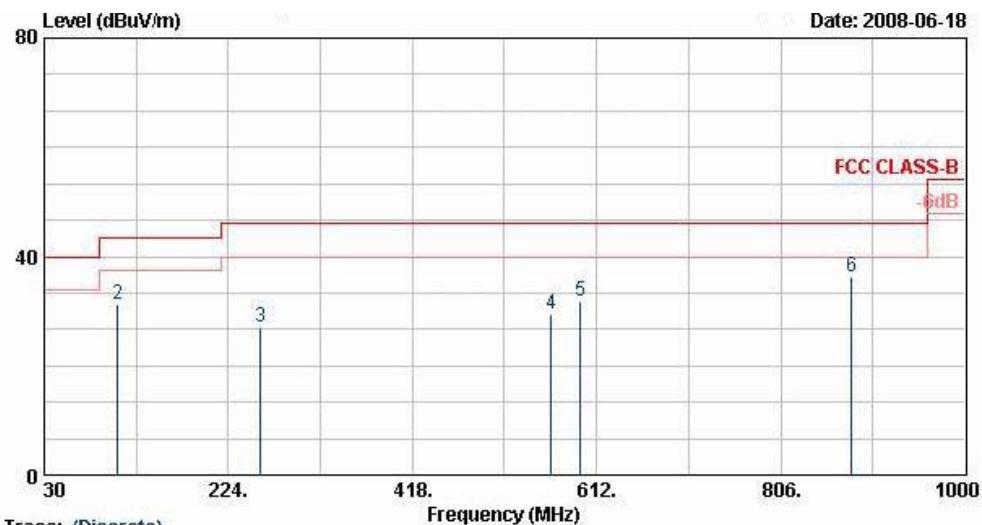
1. #6 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 4

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>UV</sub>/m) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

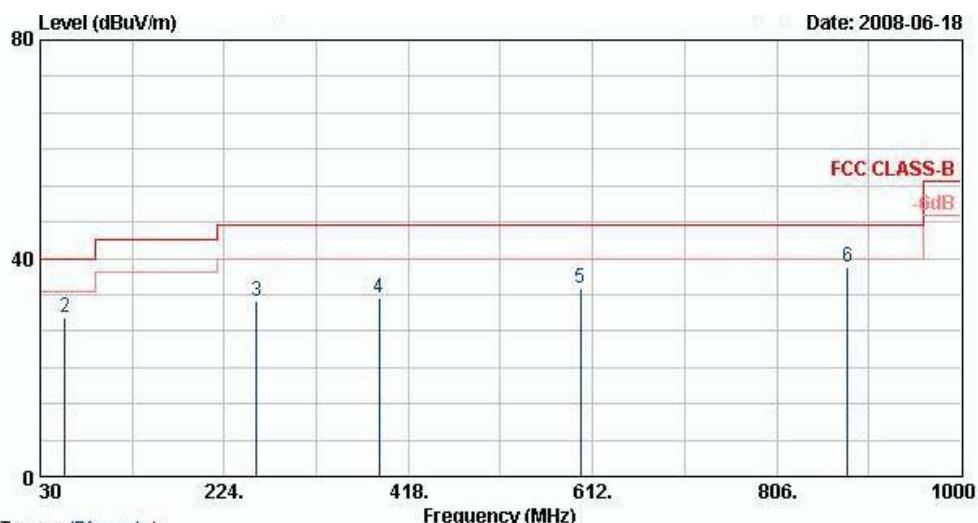
The test that passed at the minimum margin was marked by a frame in the following data



Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		MHz	dB <sub>UV</sub> /m	dB	dB <sub>UV</sub> /m	dB <sub>UV</sub>	dB/m	dB	cm	
1	30.54	26.66	-13.34	40.00	40.86	18.95	0.30	33.46	---	Peak
2	107.49	31.31	-12.19	43.50	52.81	11.60	0.50	33.59	100	281 Peak
3	257.88	27.20	-18.80	46.00	47.50	12.42	0.70	33.42	---	---
4	563.90	29.57	-16.43	46.00	48.53	18.09	1.00	33.04	---	---
5	595.40	31.95	-14.05	46.00	45.42	18.42	1.00	32.88	---	---
6	880.30	36.25			47.31	20.39	1.30	32.75	---	---

Remark:

- #6 Base Station Signal.
- The spurious emission above 1 GHz is too low to be taken.



## Trace: (Discrete)

Site : 03CH06-RY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 EUT : Smart Phone  
 Power : From System  
 Model : FD 811107-02  
 Memo : Mode 4  
 S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
			Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	28.48	-11.52	40.00	42.02	19.66	0.30	33.50	---	---	Peak
2	56.19	29.05	-10.95	40.00	54.82	7.20	0.40	33.37	100	159	Peak
3	257.88	32.18	-13.82	46.00	52.49	12.42	0.70	33.42	---	---	Peak
4	386.80	32.70	-13.30	46.00	49.52	15.44	0.83	33.09	---	---	Peak
5	598.90	34.54	-11.46	46.00	47.96	18.45	1.00	32.87	---	---	Peak
6	880.30	38.25			49.31	20.39	1.30	32.75	---	---	Peak

## Remark:

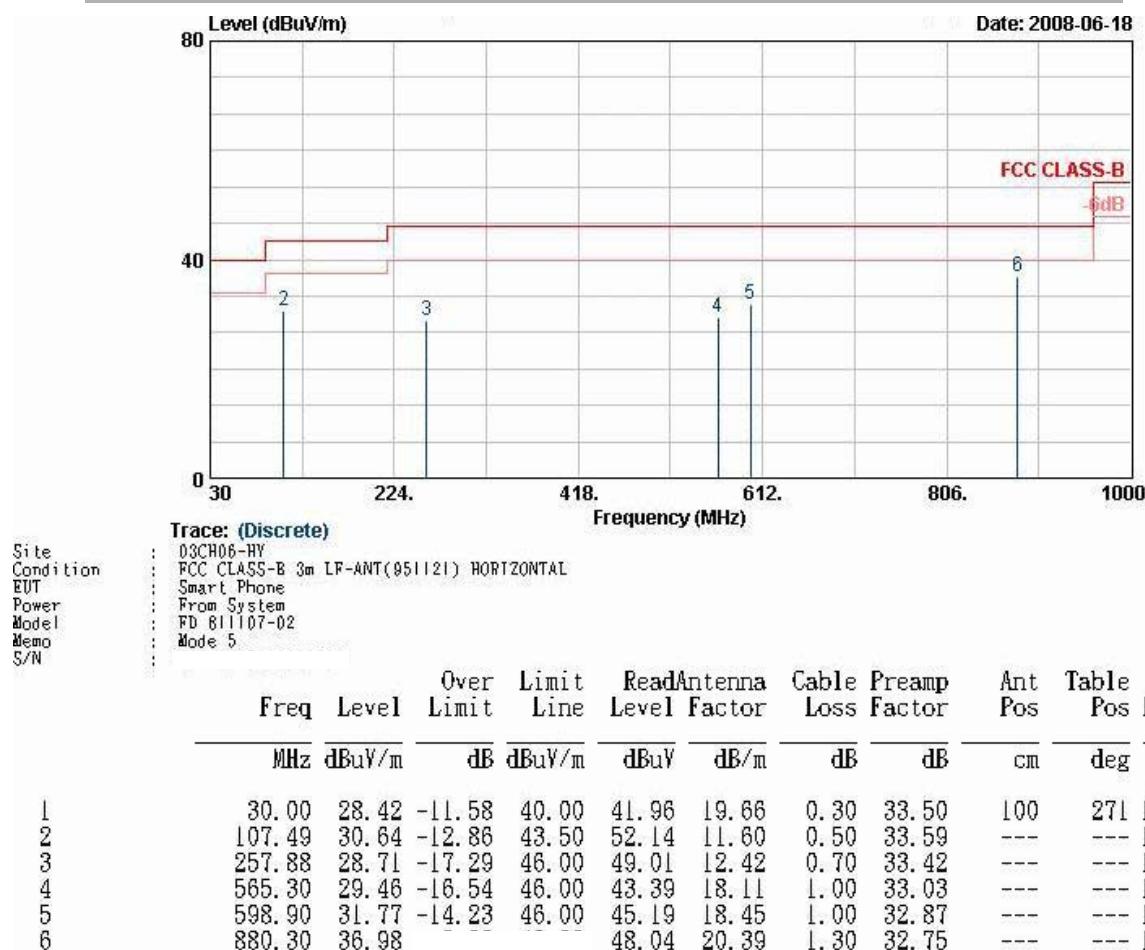
1. #6 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 5

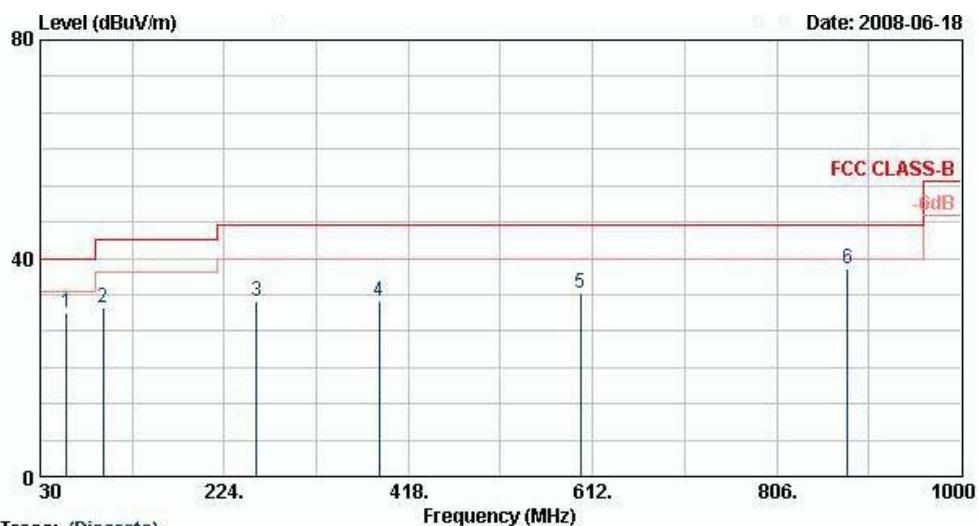
- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>uV/m</sub>) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

The test that passed at the minimum margin was marked by a frame in the following data



Remark:

- #6 Base Station Signal.
- The spurious emission above 1 GHz is too low to be taken.



## Trace: (Discrete)

Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
 EUT : Smart Phone  
 Power : From System  
 Model : FD 811107-02  
 Memo : Mode 5  
 S/N :

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	
1	58.08	29.99	-10.01	40.00	56.06	6.91	0.40	33.38	100	316 Peak
2	95.88	30.91	-12.59	43.50	53.55	10.21	0.50	33.34	---	--- Peak
3	257.88	32.16	-13.84	46.00	52.46	12.42	0.70	33.42	---	--- Peak
4	386.80	32.19	-13.81	46.00	49.00	15.44	0.83	33.09	---	--- Peak
5	598.90	33.69	-12.31	46.00	47.11	18.45	1.00	32.87	---	--- Peak
6	880.30	37.94			49.00	20.39	1.30	32.75	---	--- Peak

## Remark:

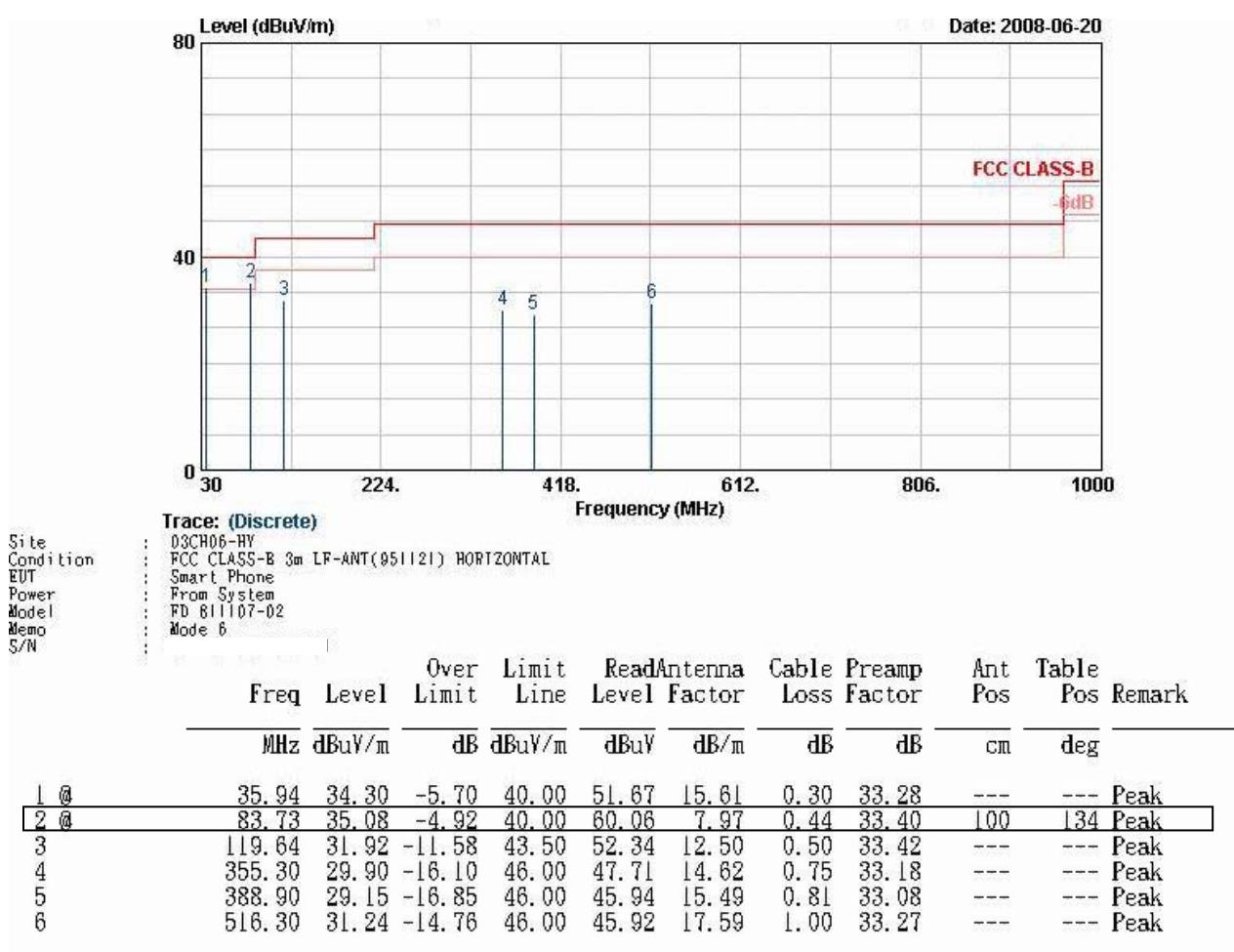
1. #6 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



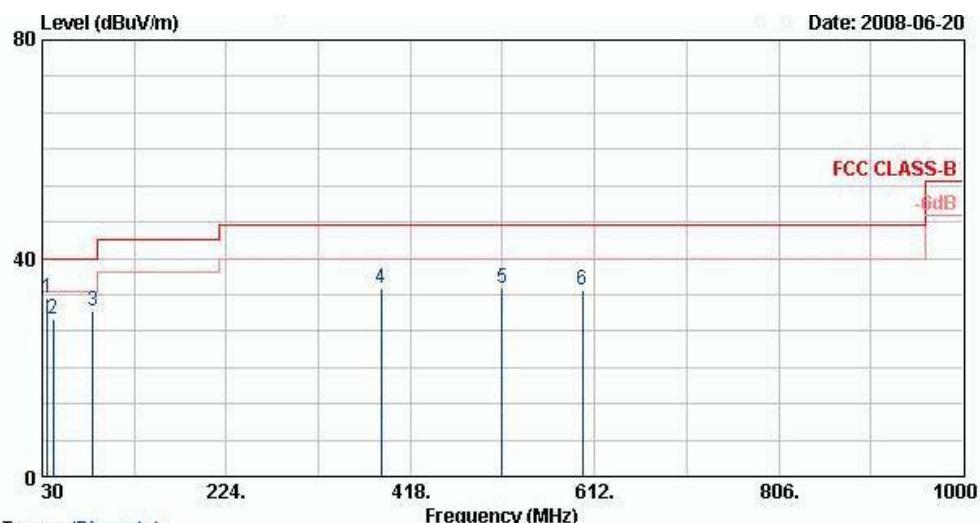
Test Mode: Mode 6

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>uV/m</sub>) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

The test that passed at the minimum margin was marked by a frame in the following data



Remark: The spurious emission above 1 GHz is too low to be taken.



Trace: (Discrete)

Site : 03CH06-RY  
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL  
EUT : Smart Phone  
Power : From System  
Model : FD 811107-02  
Memo : Mode B  
S/N :

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	
1 @		35.94	32.79	-7.21	40.00	50.16	15.61	0.30	33.28	100 Peak
2		41.88	28.97	-11.03	40.00	49.32	12.51	0.30	33.16	--- Peak
3		83.73	30.36	-9.64	40.00	55.35	7.97	0.44	33.40	--- Peak
4		386.80	34.59	-11.41	46.00	51.41	15.44	0.83	33.09	--- Peak
5		514.90	34.38	-11.62	46.00	49.07	17.58	1.00	33.28	--- Peak
6		598.90	34.21	-11.79	46.00	47.63	18.45	1.00	32.87	--- Peak

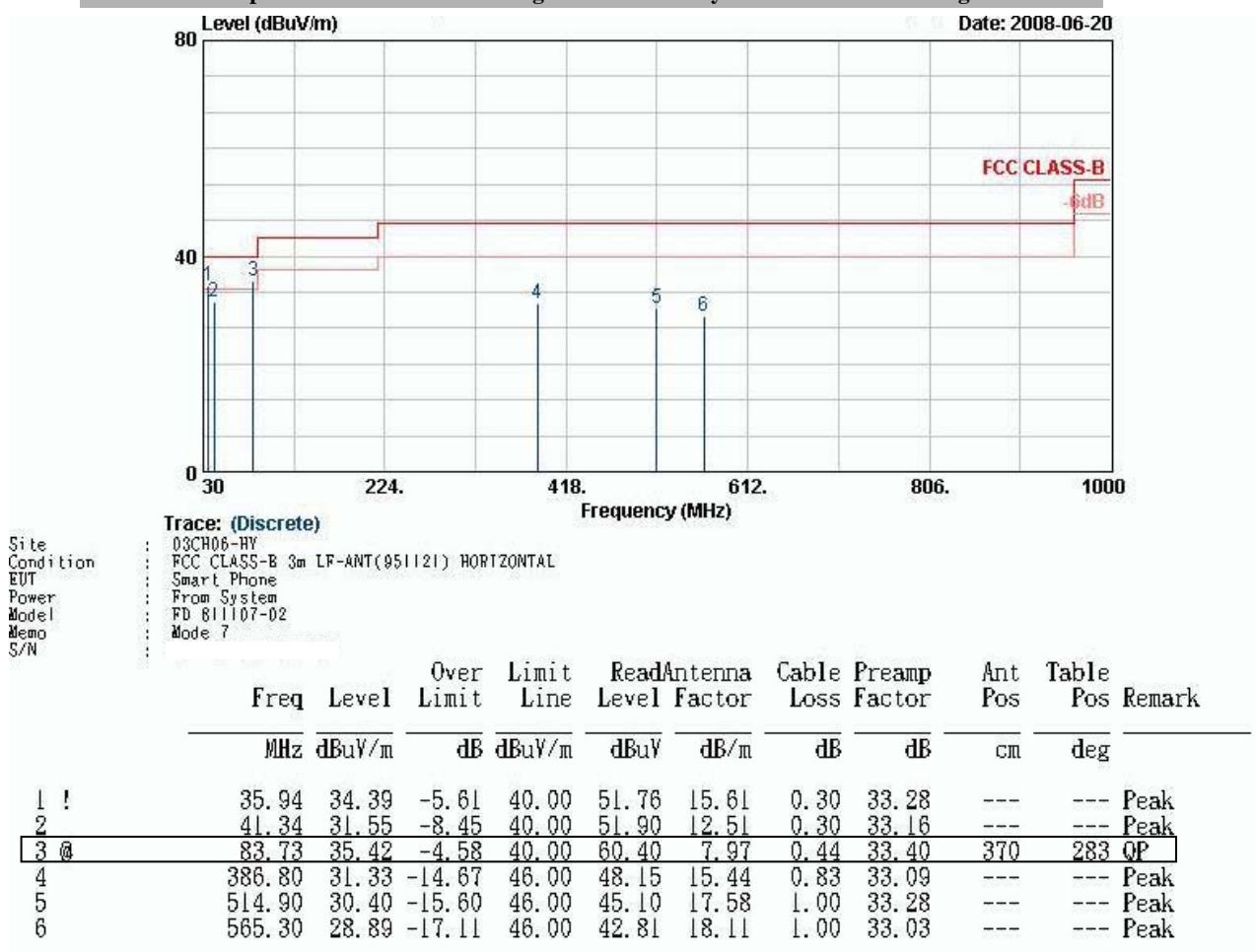
Remark: The spurious emission above 1 GHz is too low to be taken.

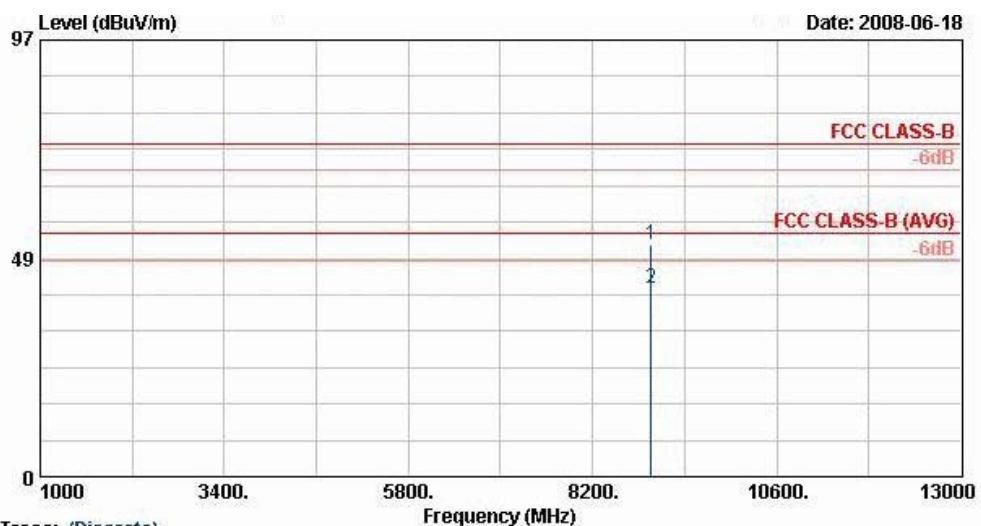


Test Mode: Mode 7

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dB<sub>UV</sub>/m) = 20 log Emission level (uV/m)
- Test Engineer: Andy
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

The test that passed at the minimum margin was marked by a frame in the following data

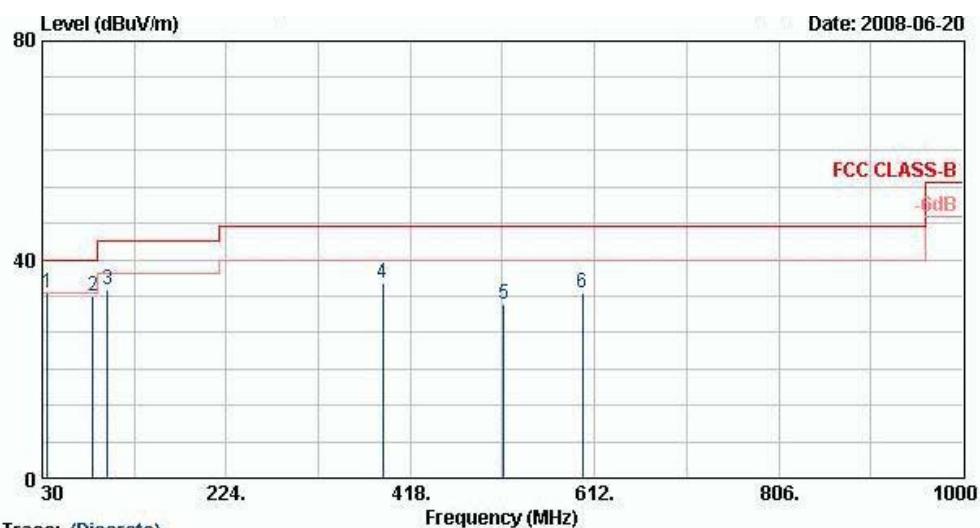




## Trace: (Discrete)

Site : 03CH06-RV  
Condition : FCC CLASS-B 3m HF-ANT(8-18)-060918 HORIZONTAL  
EUT : PDA Phone  
Power : From System  
Model : FD 811107-02  
Memo : Mode 7  
S/N :

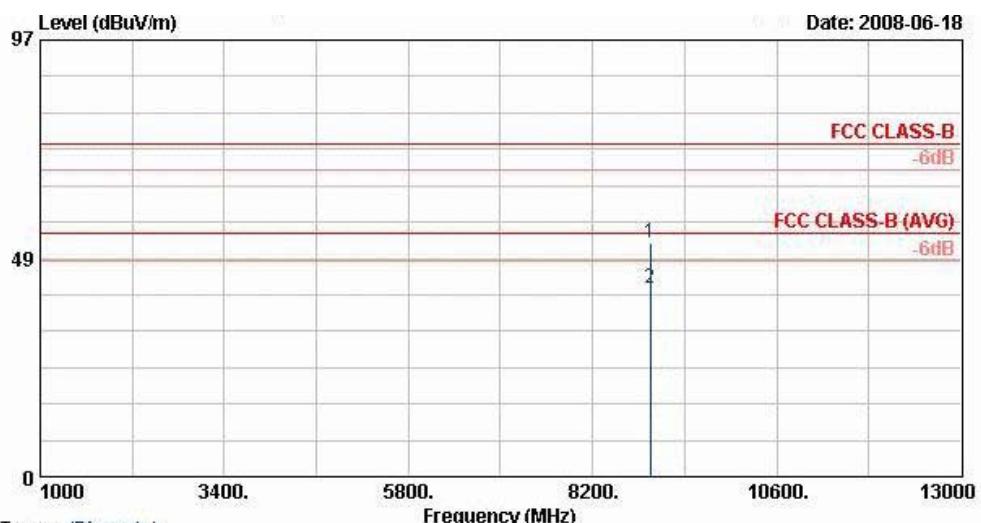
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
			Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	8968.00	51.59	-22.41	74.00	43.94	36.45	7.77	36.57	100	0	Peak
2	8968.00	41.69	-12.31	54.00	34.04	36.45	7.77	36.57	100	64	Average



## Trace: (Discrete)

Site : 03CH06-HV  
Condition : FCC CLASS-B 3m LF-ANT(851121) VERTICAL  
EUT : Smart Phone  
Power : From System  
Model : FD 811107-02  
Memo : Mode 7  
S/N :

Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	Pos	
1 @	35.94	33.89	-6.11	40.00	51.26	15.61	0.30	33.28	100	152 Peak
2 @	83.73	33.28	-6.72	40.00	58.27	7.97	0.44	33.40	---	--- Peak
3	98.58	34.48	-9.02	43.50	56.43	10.79	0.50	33.25	---	--- Peak
4	388.90	35.72	-10.28	46.00	52.50	15.49	0.81	33.08	---	--- Peak
5	516.30	31.84	-14.16	46.00	46.52	17.59	1.00	33.27	---	--- Peak
6	598.90	33.82	-12.18	46.00	47.24	18.45	1.00	32.87	---	--- Peak



## Trace: (Discrete)

Site : 03CH06-RV  
Condition : FCC CLASS-B 3m HF-ANT(B-18)-060918 VERTICAL  
EUT : PDA Phone  
Power : From System  
Model : FD 811107-02  
Memo : Mode 7  
S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
			MHz	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	
1	8948.00	51.79	-22.21	74.00	44.19	36.43	7.74	36.57	100	0	Peak
2	8948.00	41.79	-12.21	54.00	34.19	36.43	7.74	36.57	100	42	Average



#### 4. List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100359	9kHz – 2.75GHz	Mar. 03, 2008	Mar. 02, 2009	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2008	Mar. 30, 2009	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2008	Mar. 21, 2009	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2008	Apr. 19, 2009	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Mar. 27, 2008	Mar. 26, 2009	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A	Conduction (CO04-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	000666583	1G~18G	Aug. 29, 2007	Aug. 28, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G - 40G	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
Pre Amplifier	EMEC	PA303	PA303-SMA-059	100K~3GHz	Nov. 26, 2007	Nov. 25, 2008	Radiation (03CH06-HY)



## 5. Uncertainty Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
<b>Combined standard uncertainty <math>U_c(y)</math></b>	<b>1.13</b>		
<b>Measuring uncertainty for a level of Confidence of 95% <math>U=2U_c(y)</math></b>	<b>2.26</b>		

### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.11	Normal(k=2)	0.06
Antenna factor calibration	0.91	Normal(k=2)	0.46
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.15	Normal(k=2)	0.08
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.52	Rectangular	0.88
Mismatch	+0.45/-0.48	U-shaped	0.33
<b>Combined standard uncertainty <math>U_c(y)</math></b>	<b>1.30</b>		
<b>Measuring uncertainty for a level of Confidence of 95% <math>U=2U_c(y)</math></b>	<b>2.60</b>		

**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of $x_i$		$u(x_i)$	$Ci$	$Ci * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma 1= 0.197$ Antenna VSWR $\Gamma 2= 0.194$ Uncertainty=20log(1- $\Gamma 1^*\Gamma 2^*\Gamma 3$ )	+0.34/-0.35	U-shaped	0.244	1	0.244
<b>Combined standard uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring uncertainty for a level of Confidence of 95%    <math>U=2U_c(y)</math></b>	<b>4.72</b>				

**The measured result is :  $y$  dBuV  $\pm$   $U$  dB**

**for a level of confidence of approximately 95% , (  $k= 2$  )**



## **Appendix A. Photographs of EUT**

Please refer to Sporton report number EP811107-02 as below.