

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

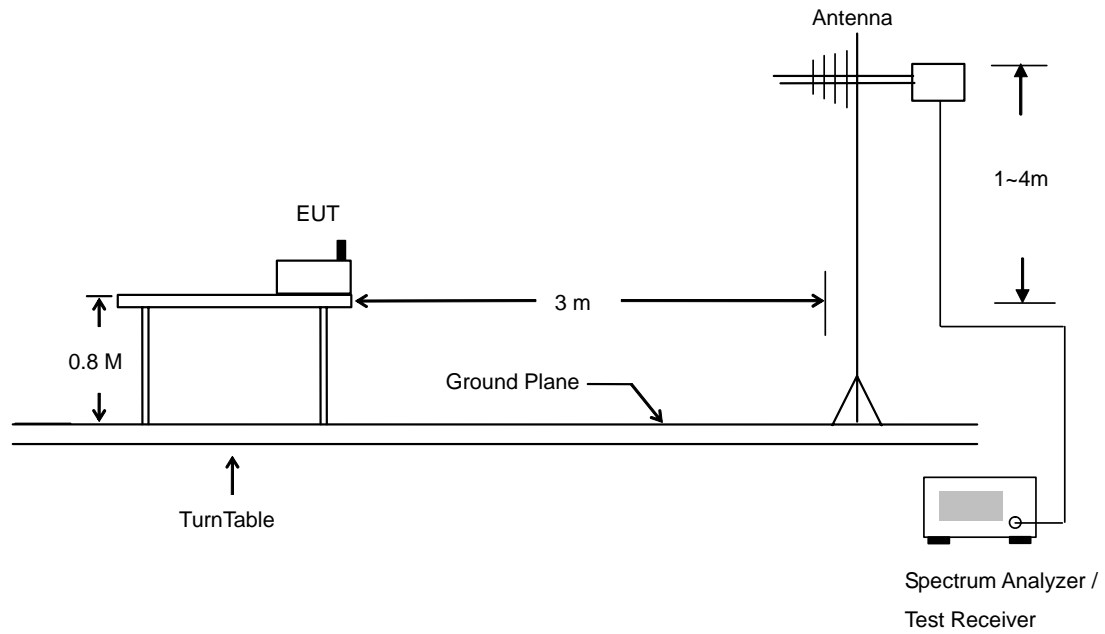
See list of measuring instruments of this test report.



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)

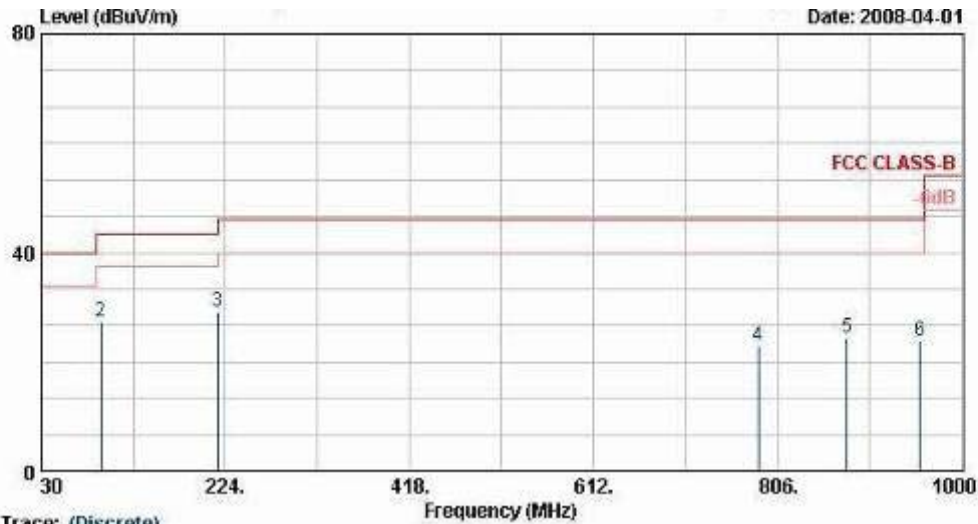
Temperature : 21~26

Channel : 39

Relative Humidity : 49~51%

Test Engineer : Sun Wang

Polarization : Horizontal



Trace: (Discrete)

Site: D3CH06-RV
Condition: FCC CLASS-B 3m LF-ANT(851121) HORIZONTAL
EUT: Smart Phone
Power: 120Vac/60Hz
Model: FR 811107-01
Memo: BT T+_Ch38 : 2441MHz + Adaptor
Data Rate: 2DH5
Plane: B1
TWST
S/N: TV811X400894

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cn	deg	
1	30.00	23.39	-16.61	40.00	36.93	19.66	0.30	33.50	---	Peak
2	92.64	27.30	-16.20	43.50	50.51	9.62	0.50	33.33	100	Peak
3	218.03	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	-21.56	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

Modulation Type : /4-DQPSK (EDR 2Mbps)

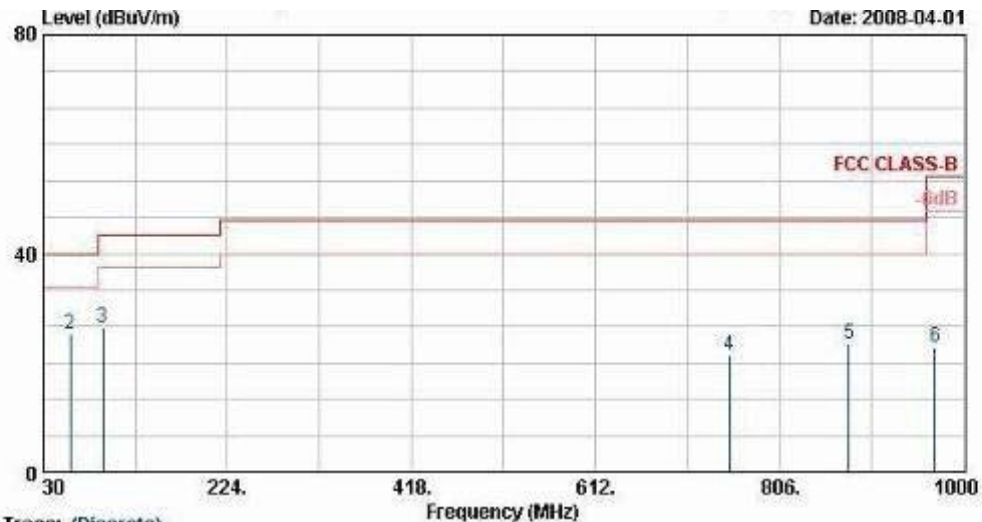
Temperature : 21~26

Channel : 39

Relative Humidity : 49~51%

Test Engineer : Sun Wang

Polarization : Vertical



Trace: (Discrete)

Site: 03CH06-HV
Condition: FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT: Smart Phone
Power: 120Vac/60Hz
Model: FR 811107-01
Memo: BT Tx_Ch39 ; 2441MHz + Adaptor
Data Rate: 2DR5
Plane: BI
TWT: 100W
S/N: TV811X400994

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	Ant Pos	Table 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	-16.96	43.50	49.75	9.62	0.50	33.33	---	---	Peak
4	752.90	21.28	-24.72	46.00	33.65	19.38	1.10	32.85	---	---	Peak
5	878.90	23.64	-22.36	46.00	34.71	20.38	1.30	32.75	---	---	Peak
6	969.90	23.00	-31.00	54.00	32.96	21.03	1.30	32.29	---	---	Peak

**Frequency Range : 1 GHz ~ 25GHz****Modulation Type :** /4-DQPSK (EDR 2Mbps)**Temperature :**

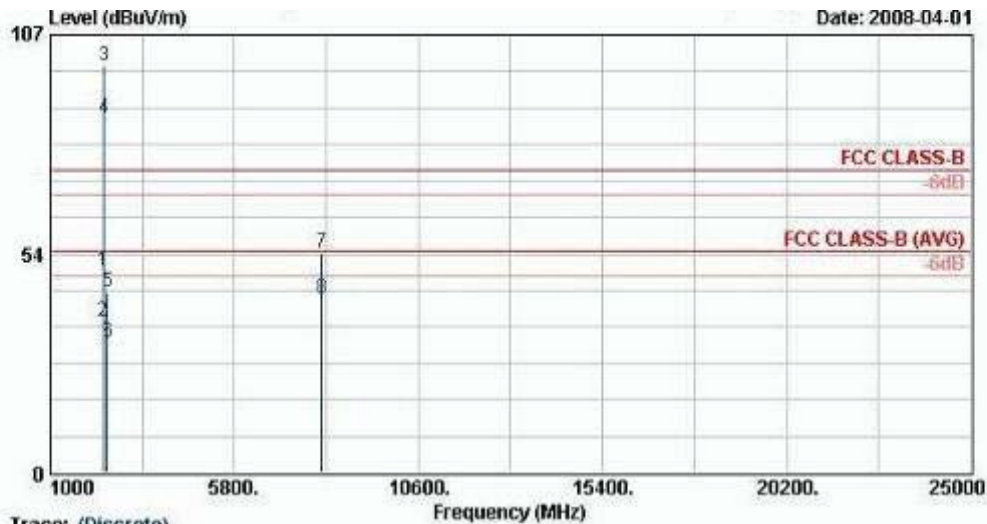
21~26

Channel : 00**Relative Humidity :**

49~51%

Test Engineer : Sun Wang**Polarization :**

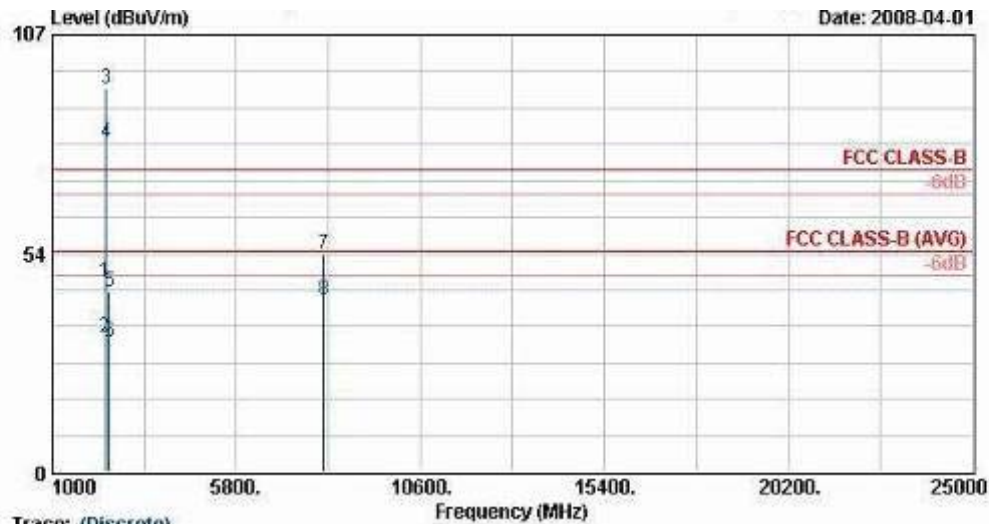
Horizontal



Site
Condition
EUT
Power
Model
Memo
Data Rate
Plane
TWT
S/N

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV		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

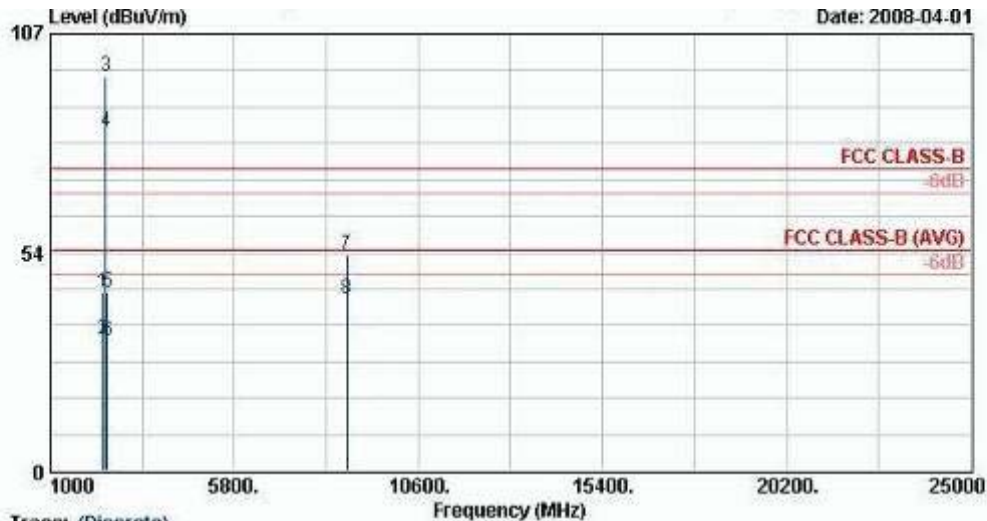
Site
Condition
EUT
Power
Model
Memo
Data Rate
Plane
1dB
S/N

Trace: (Discrete)

D3CH06-HV
FCC CLASS-B 3m SHF-EHF NORM VERTICAL
Smart Phone
120Vac/60Hz
FR 811107-01
BT Tx_Ch00 : 2402MHz + Adaptor
20dB5
E1
TY811X400994

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	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**Trace: (Discrete)**

Site: 03CH06-HY
Condition: FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT: Smart Phone
Power: 120Vac/60Hz
Model: FR 811107-01
Memo: BT Tx_Ch39 : 2441MHz + Adaptor
Data Rate: 2DH5
Plane: EI
TWT: TY811X400994

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cn	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

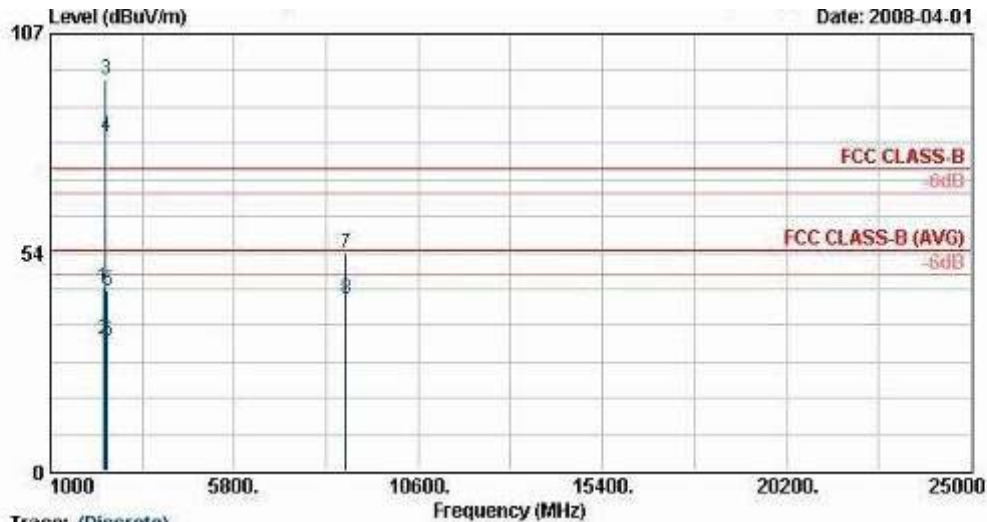


Frequency Range : 1 GHz ~ 25GHz

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

Channel : 39 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Vertical



Trace: (Discrete)

Site: D9CH06-RV
 Condition: FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT: Smart Phone
 Power: 120Vac/60Hz
 Model: FR 811107-01
 Memo: BT T₊Ch39 : 2441MHz + Adaptor
 Data Rate: 20dB5
 Plane: E1
 TWT: TV811X400004
 S/N:

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV		dB	dB	cn	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)

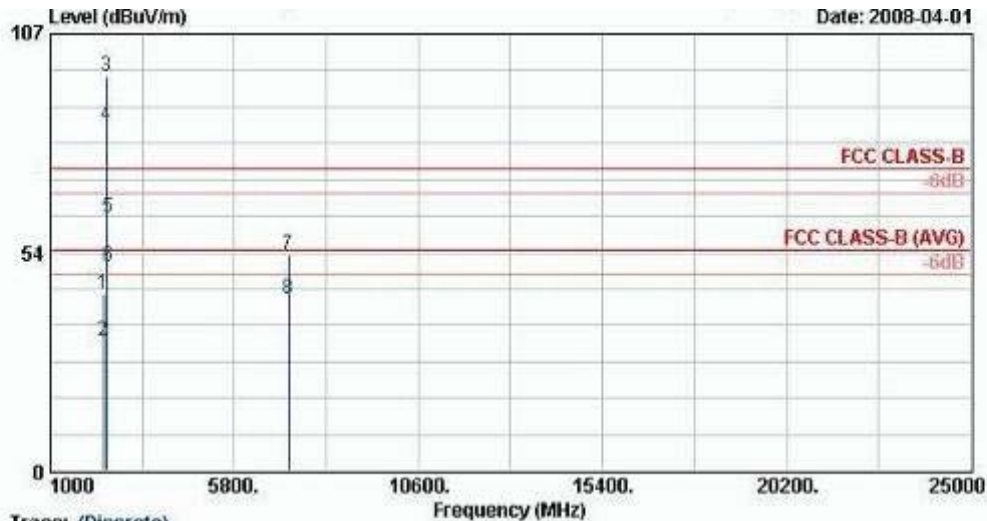
Temperature : 21~26

Channel : 78

Relative Humidity : 49~51%

Test Engineer : Sun Wang

Polarization : Horizontal



Site
Condition
EUT
Power
Model
Memo
Data Rate
Plane
IMEI
S/N

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			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

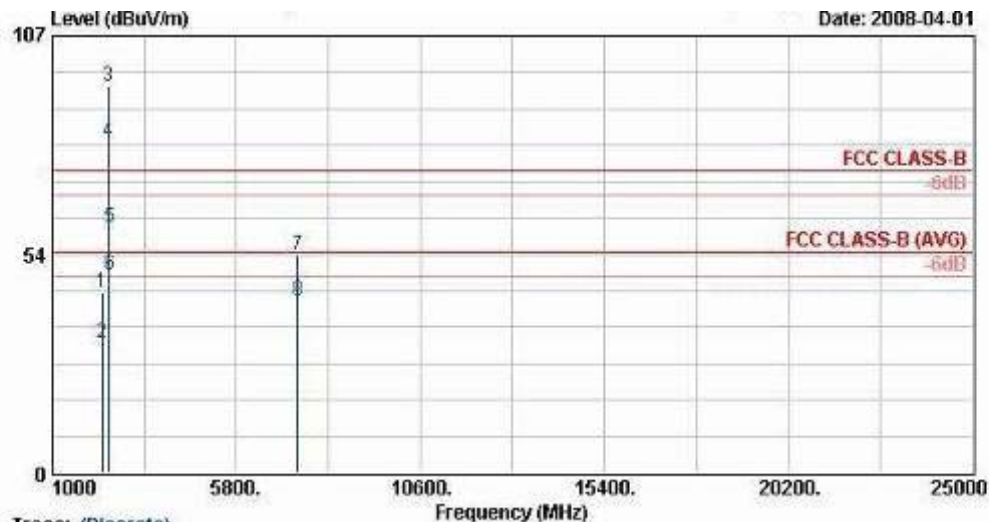


Frequency Range : 1 GHz ~ 25GHz

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

Channel : 78 Relative Humidity : 49~51%

Test Engineer : Sun Wang Polarization : Vertical



Site
Condition
EUT
Power
Model
Memo
Data Rate
Plane
1dB
S/N

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cn	deg	
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.

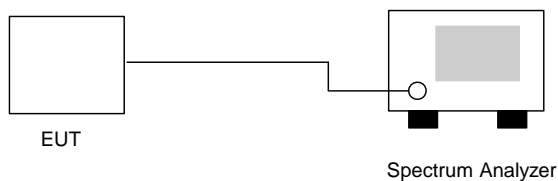
3.16.2 Measuring Instruments

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

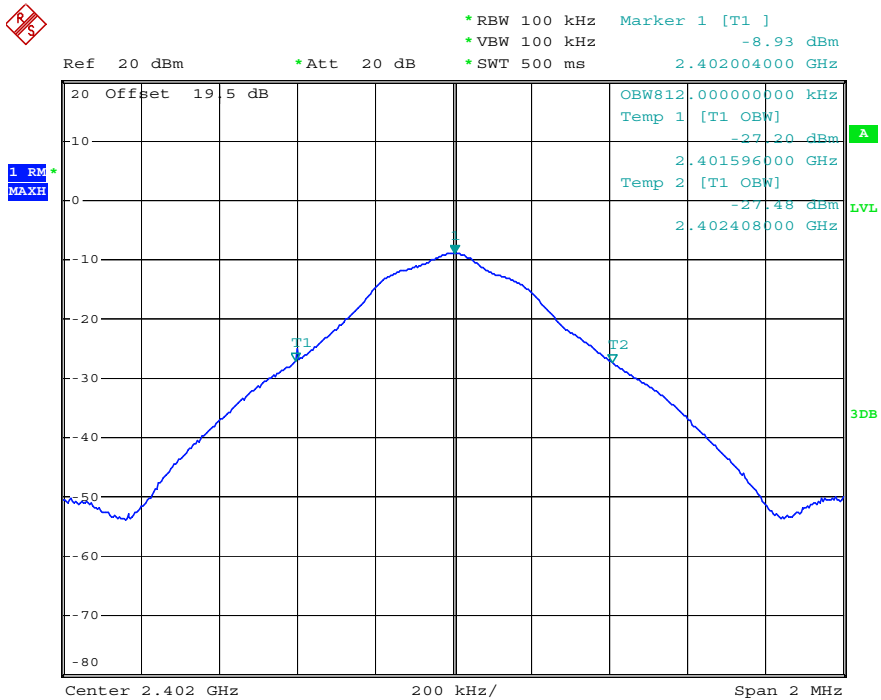
Modulation Type : GFSK

Temperature : 27~29

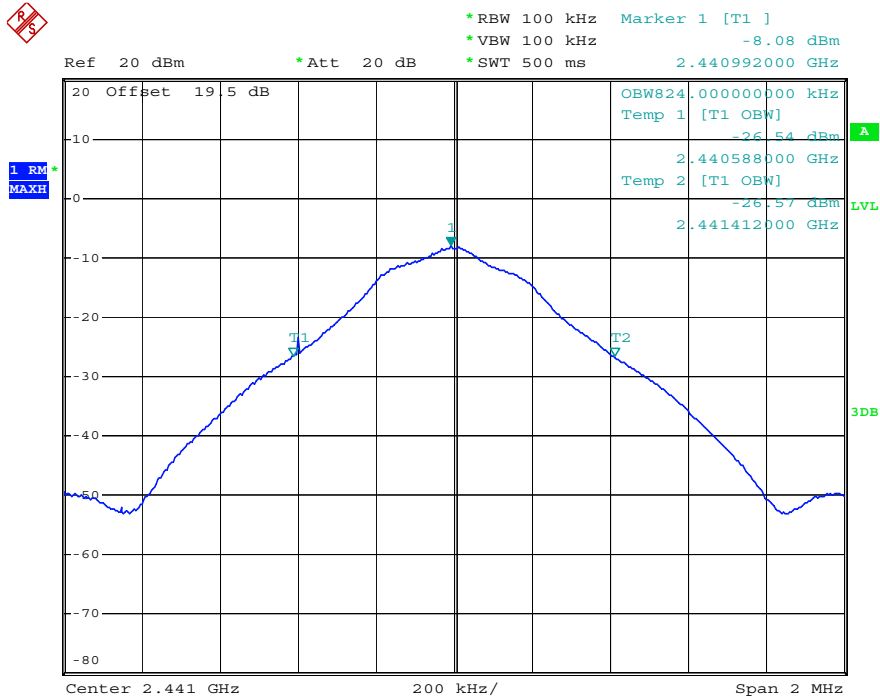
Test Engineer : Darren Lin

Relative Humidity : 47~48%

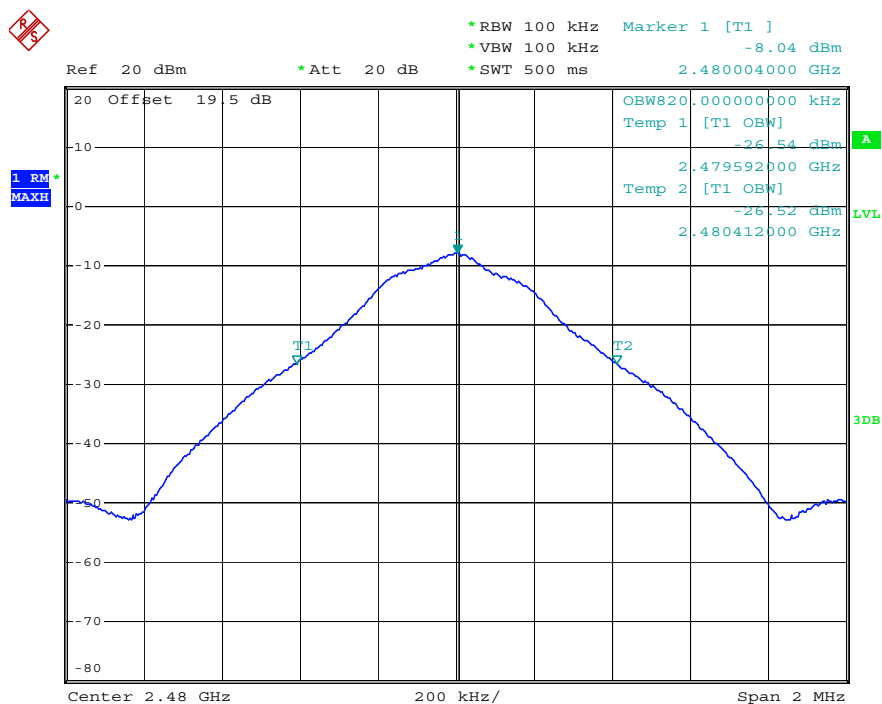
Channel	Frequency (MHz)	99% Emission bandwidth (MHz)
00	2402	0.812
39	2441	0.824
78	2480	0.820



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

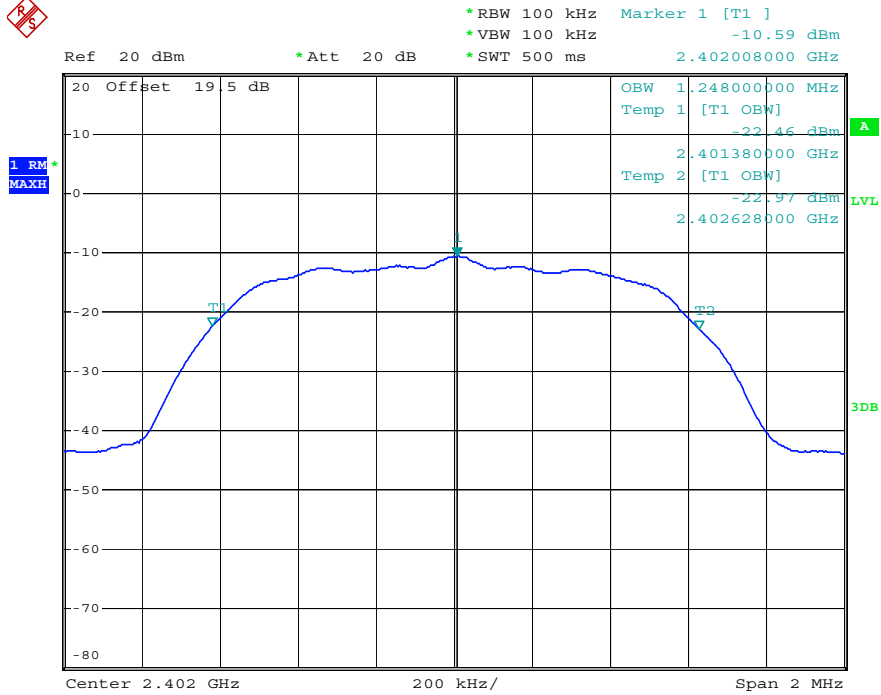
Modulation Type : /4-DQPSK

Temperature : 27~29

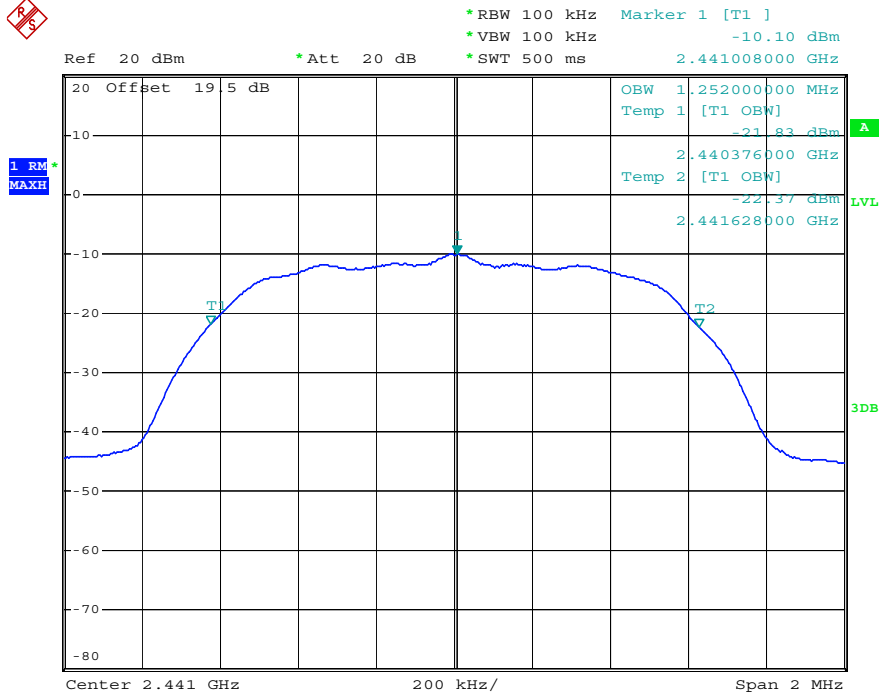
Test Engineer : Darren Lin

Relative Humidity : 47~48%

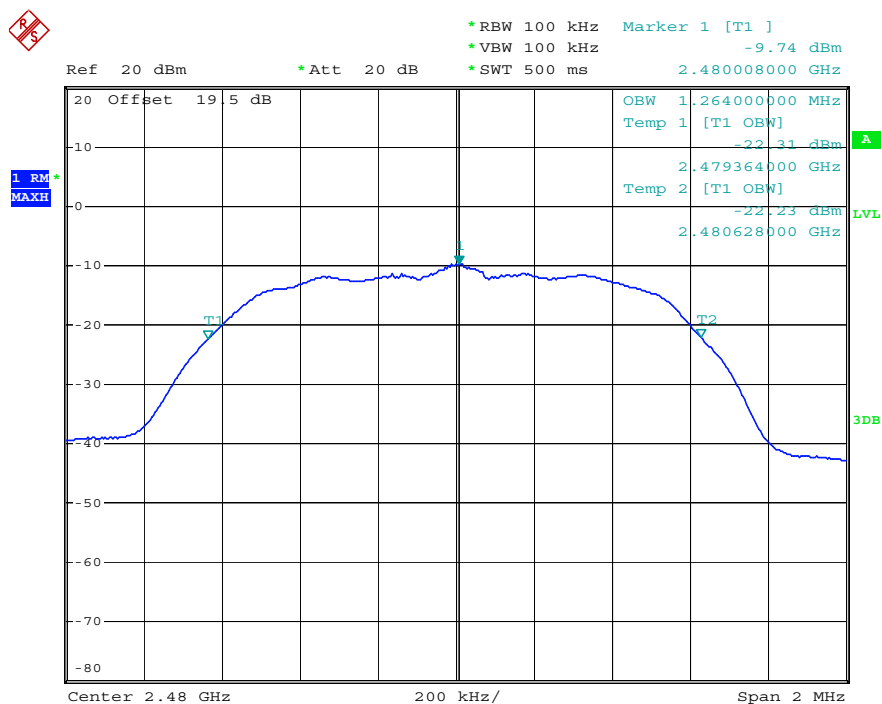
Channel	Frequency (MHz)	99% Emission bandwidth (MHz)
00	2402	1.248
39	2441	1.252
78	2480	1.264



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

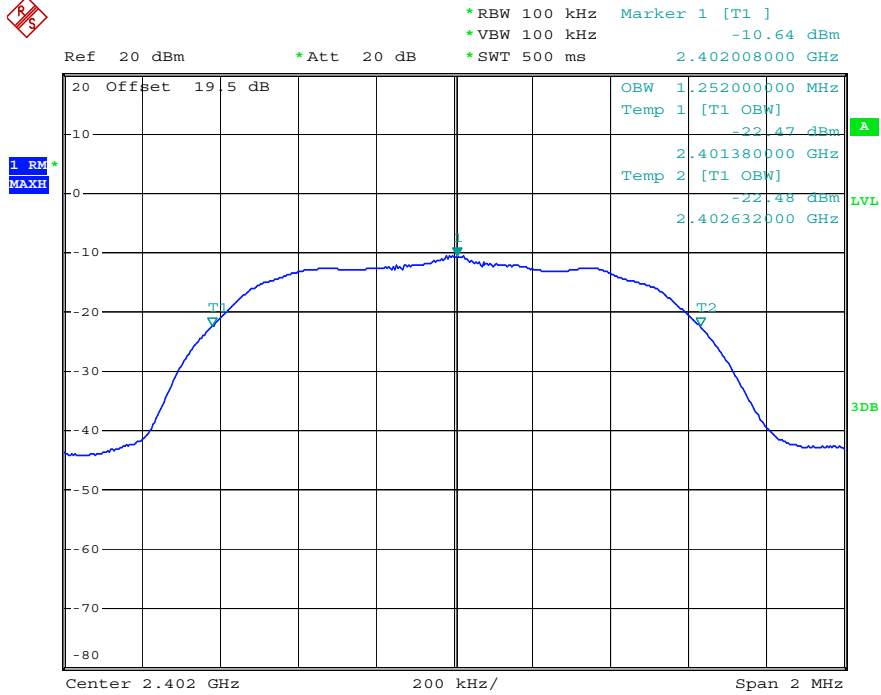
Modulation Type : 8-DPSK

Temperature : 27~29

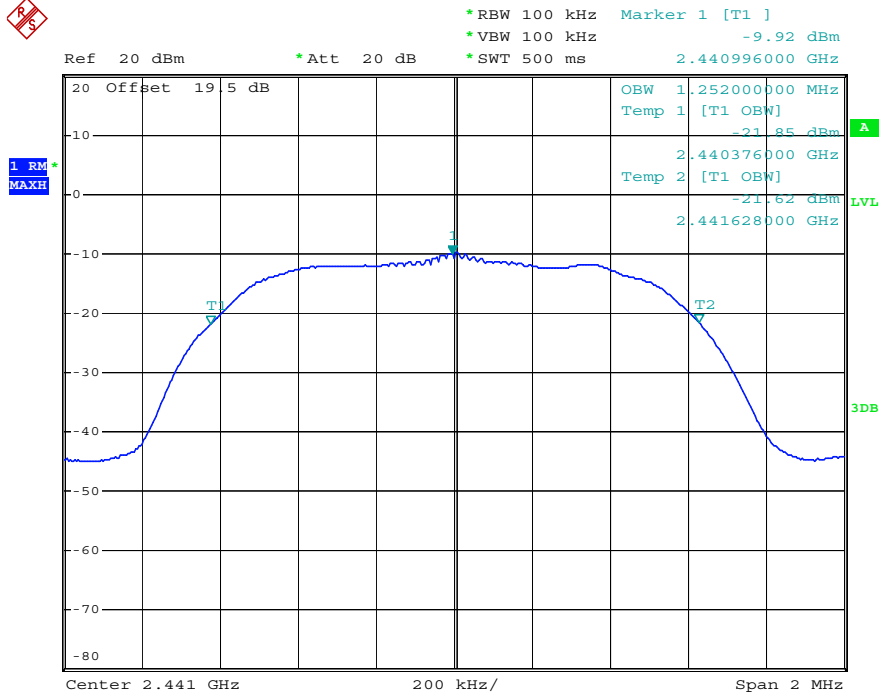
Test Engineer : Darren Lin

Relative Humidity : 47~48%

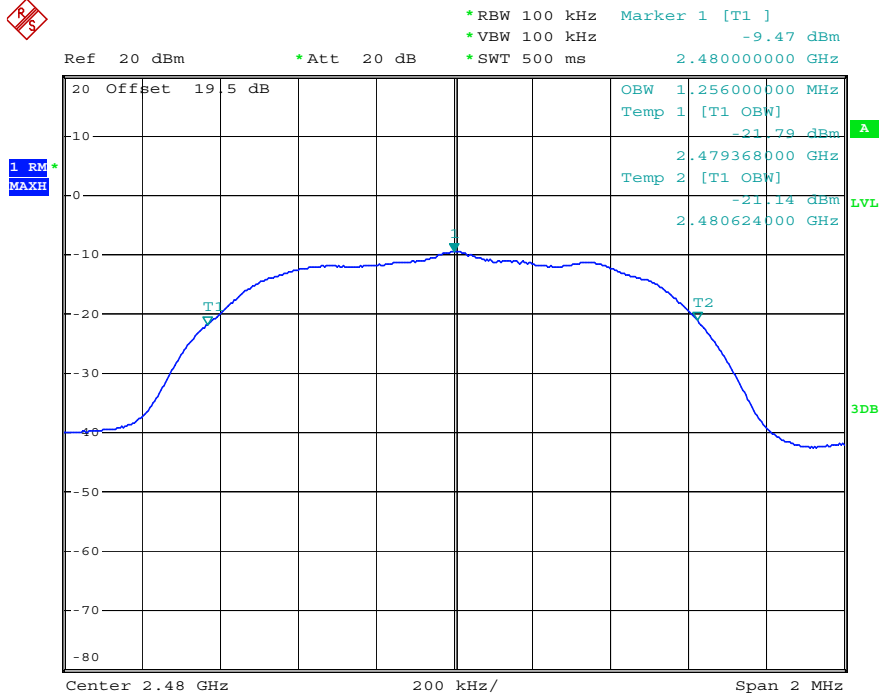
Channel	Frequency (MHz)	99% Emission bandwidth (MHz)
00	2402	1.252
39	2441	1.252
78	2480	1.256



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.

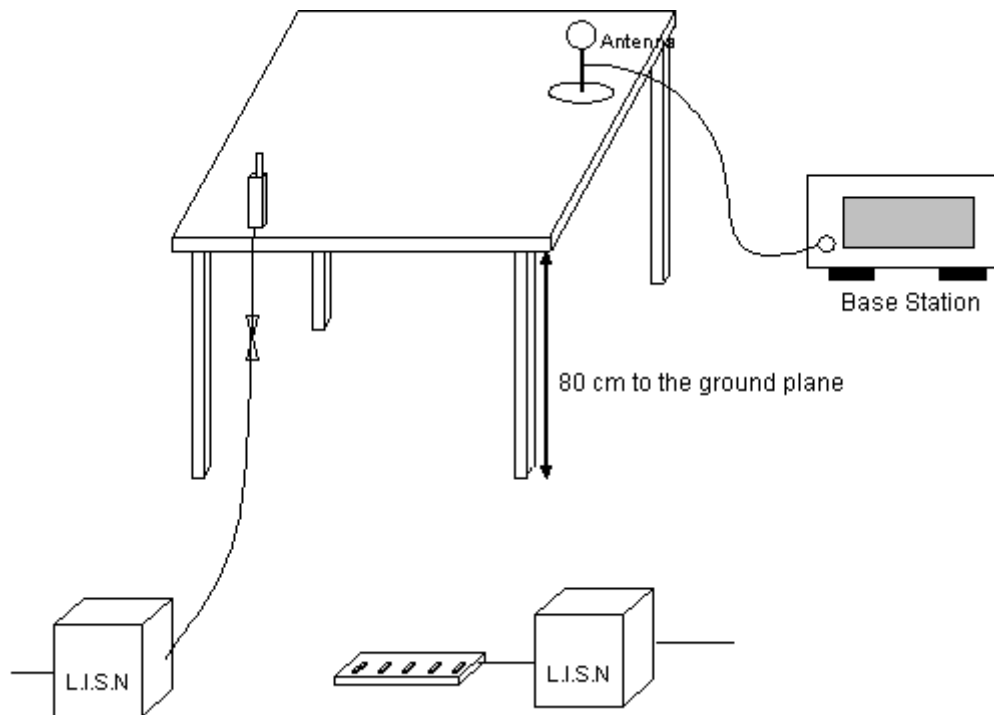
3.18.1 Major Measuring Instruments

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.

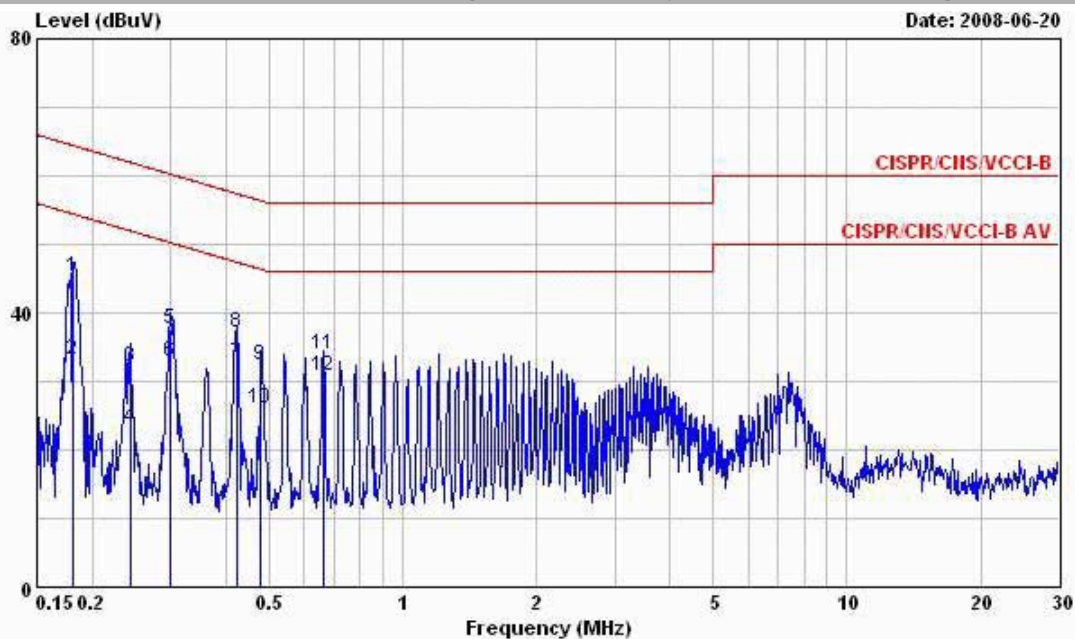
3.18.3 Typical Test Setup Layout of Conducted Powerline



**3.18.4 Test Result of AC Powerline Conducted Emission**

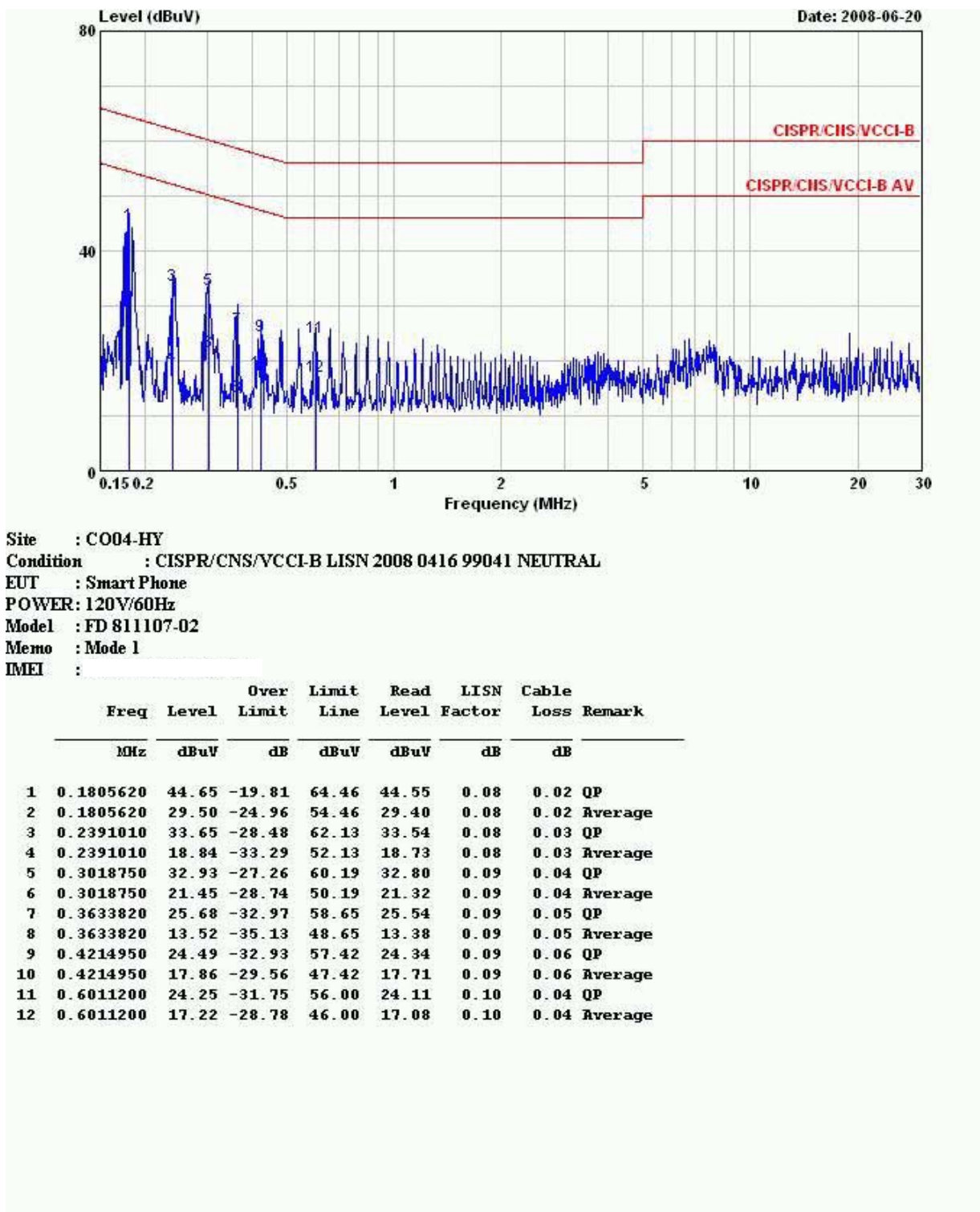
Test Mode: Mode 1

- 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 :

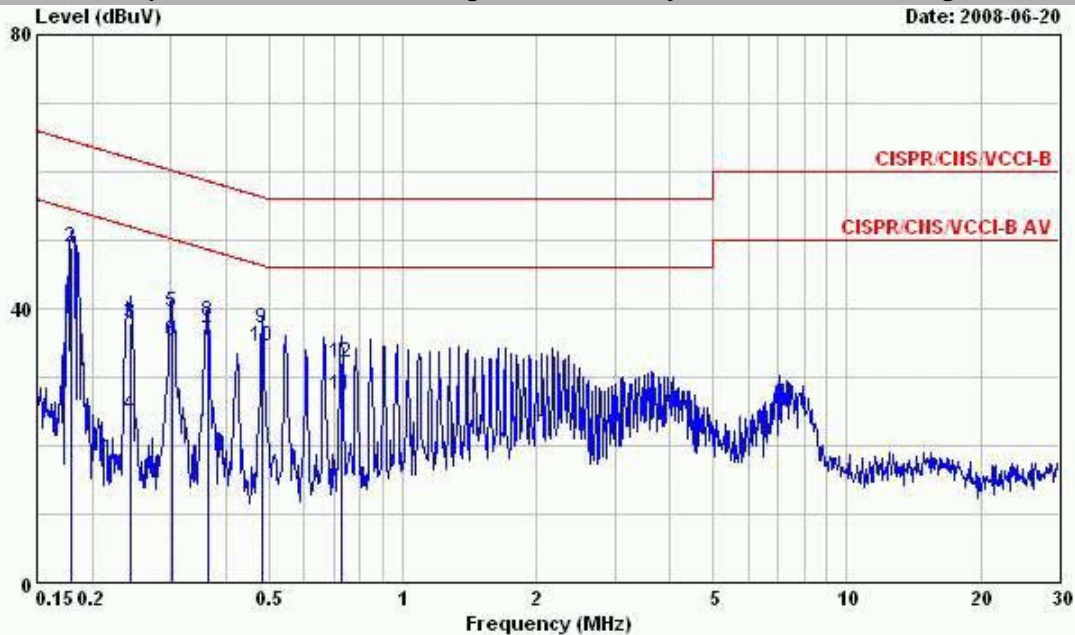
	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
		dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1815220	45.17	-19.25	64.42	45.06	0.09	0.02	QP
2	0.1815220	33.13	-21.29	54.42	33.02	0.09	0.02	Average
3	0.2429320	32.00	-30.00	62.00	31.88	0.09	0.03	QP
4	0.2429320	23.18	-28.82	52.00	23.06	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





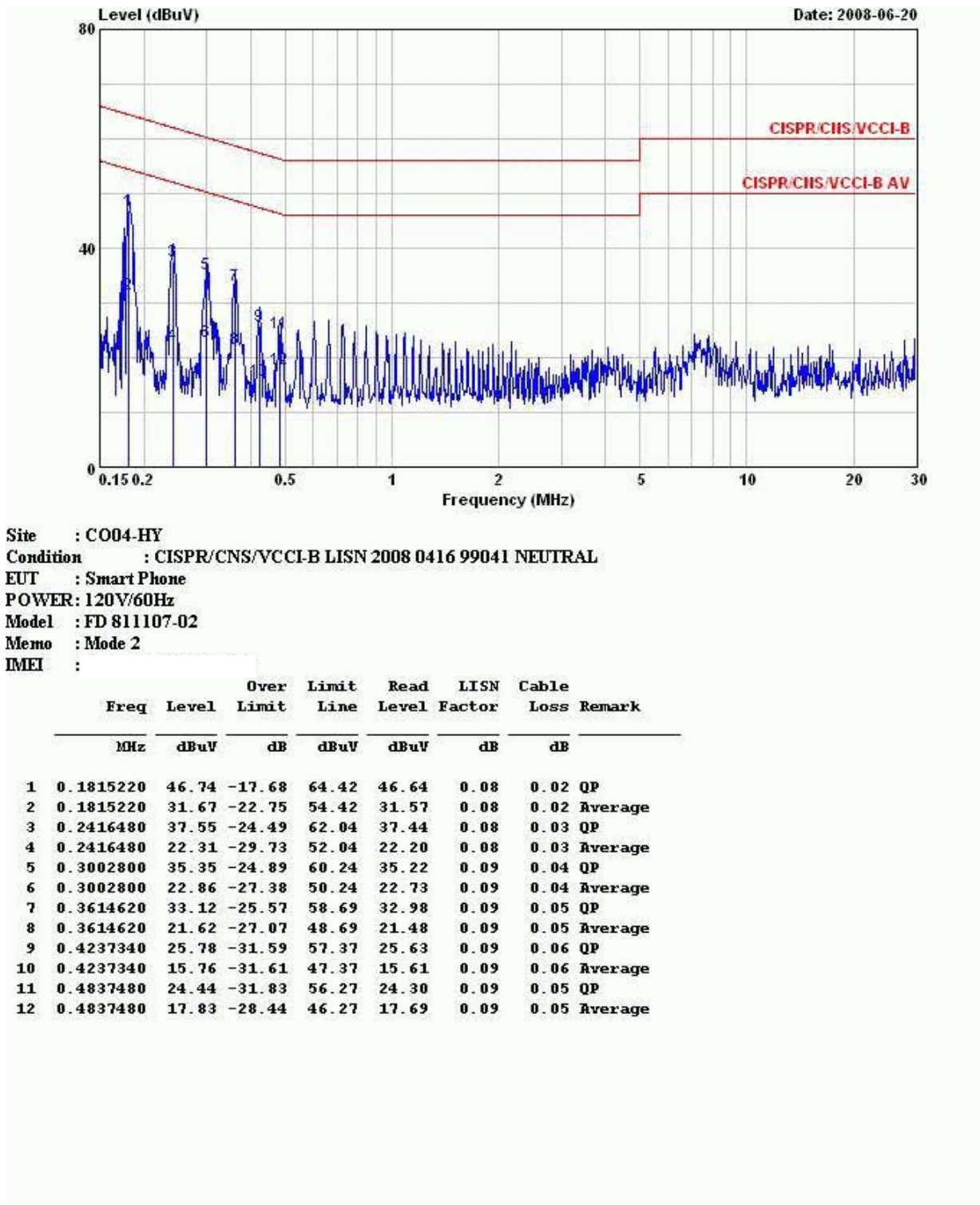
Test Mode: Mode 2

- 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 :

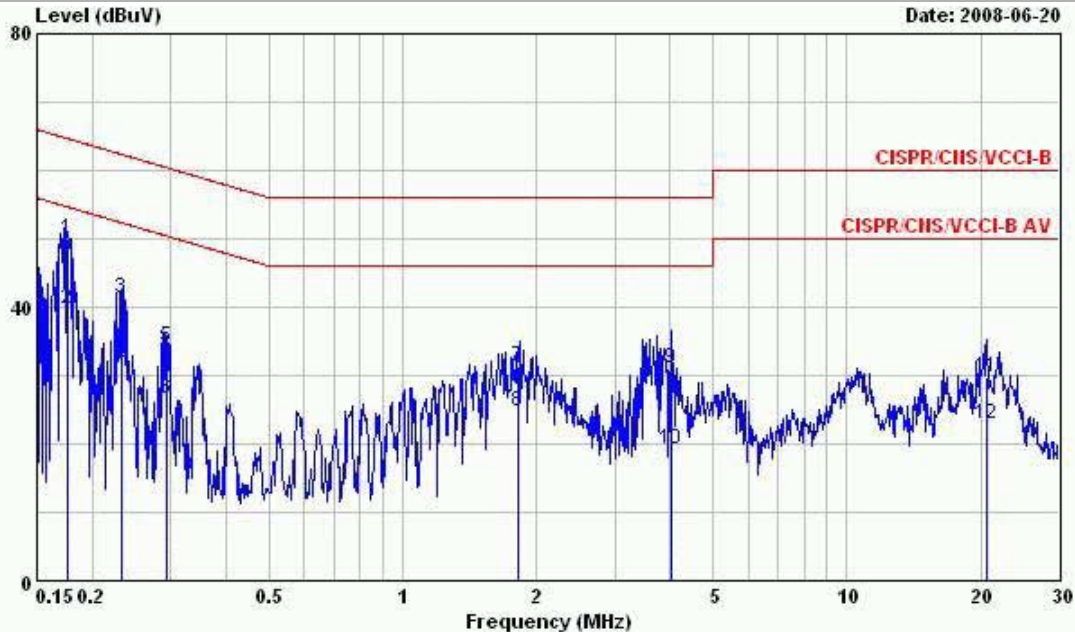
	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
		dB		dBuV	dB		dB	
1	@0.1796080	40.61	-13.89	54.50	40.50	0.09	0.02	Average
2	0.1796080	49.06	-15.44	64.50	48.95	0.09	0.02	QP
3	0.2429320	37.88	-24.12	62.00	37.76	0.09	0.03	QP
4	0.2429320	24.50	-27.50	52.00	24.38	0.09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





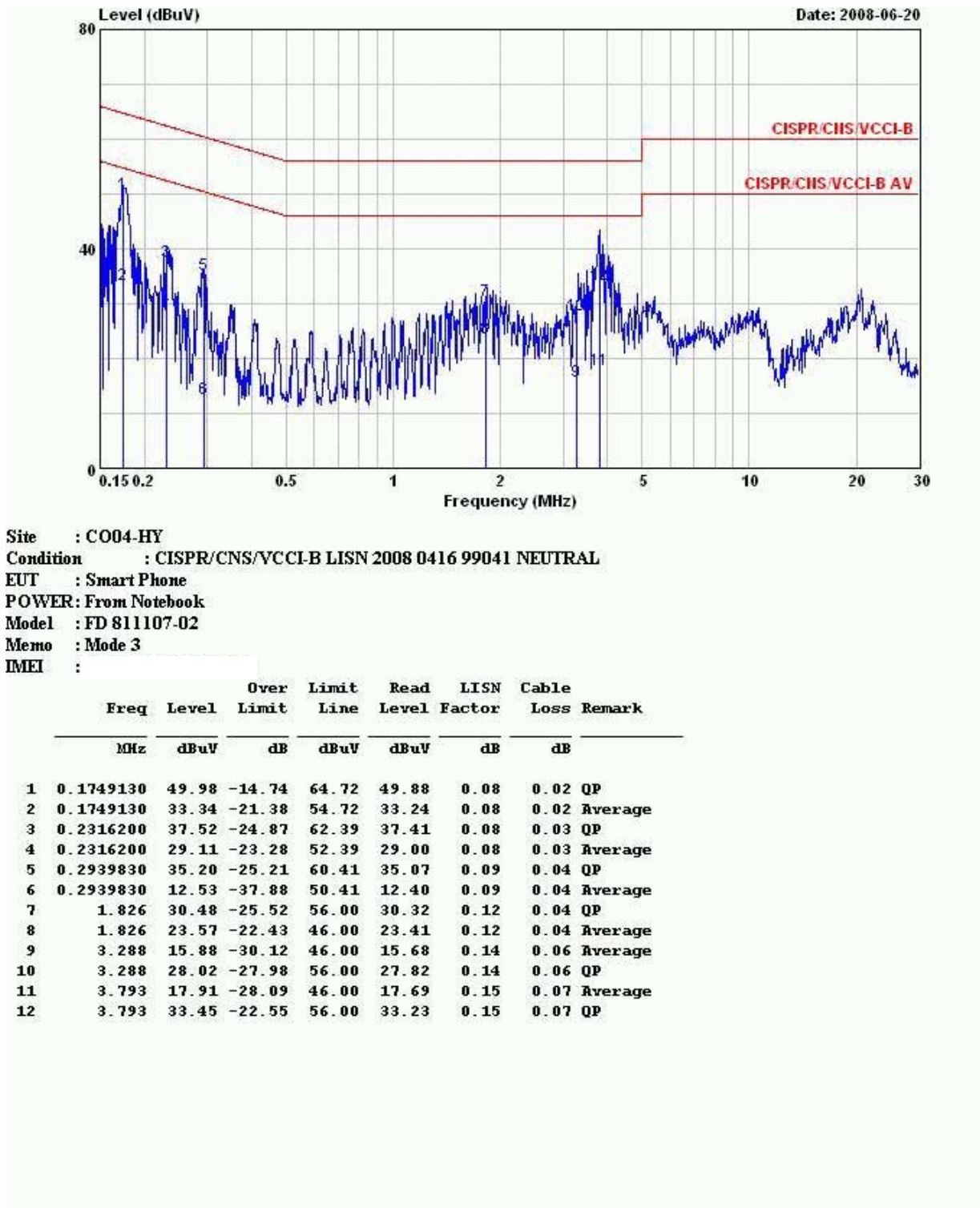
Test Mode: Mode 3

- 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 :

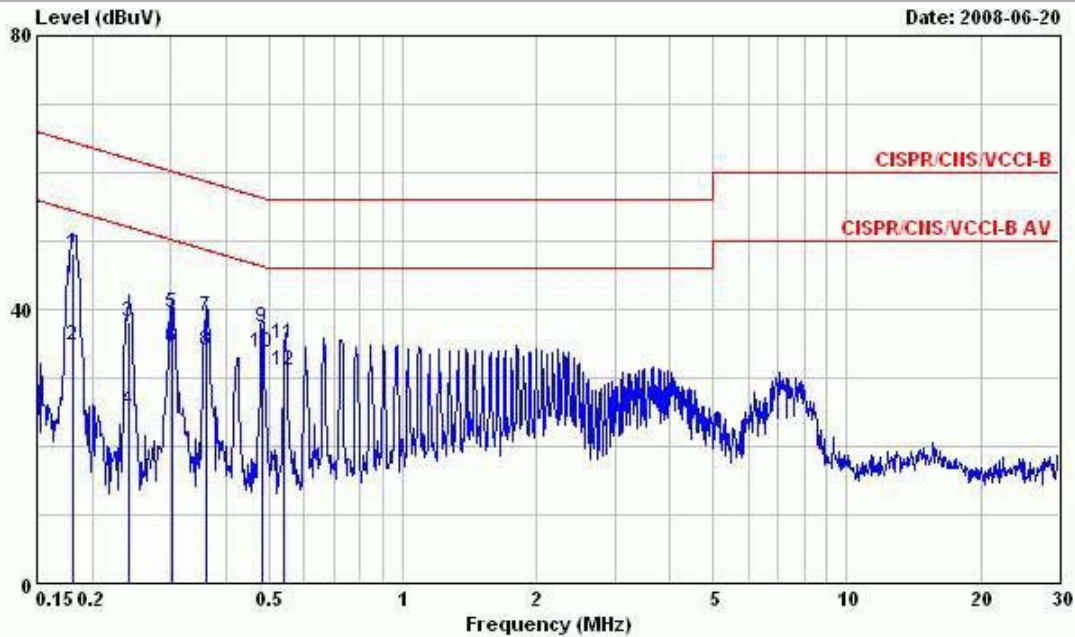
	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
		dB		dBuV	dB		dB	
1	0.1751540	50.08	-14.63	64.71	49.97	0.09	0.02	QP
2	0.1751540	39.69	-15.02	54.71	39.58	0.09	0.02	Average
3	0.2328500	41.23	-21.12	62.35	41.11	0.09	0.03	QP
4	0.2328500	31.38	-20.97	52.35	31.26	0.09	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





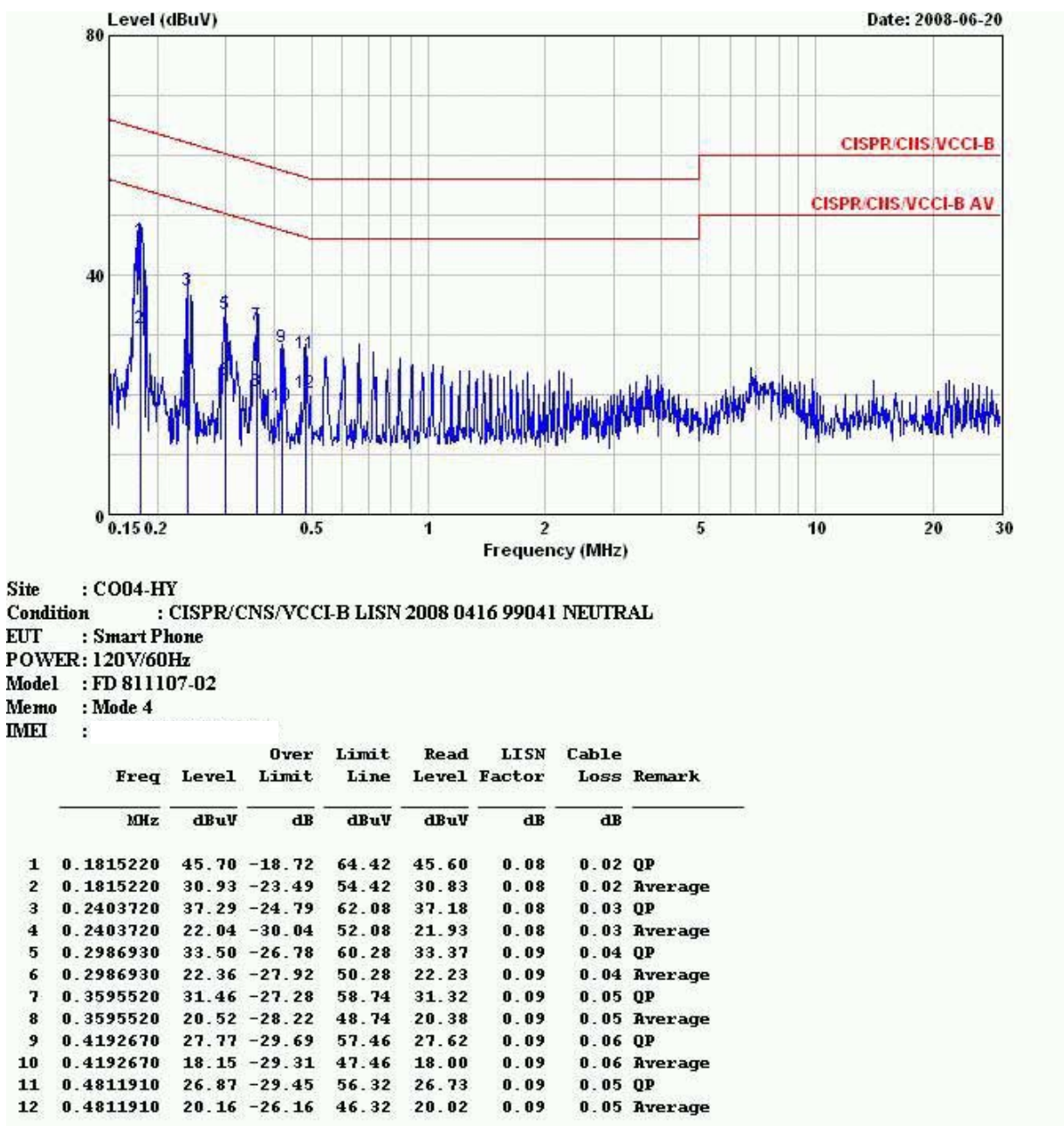
Test Mode: Mode 4

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

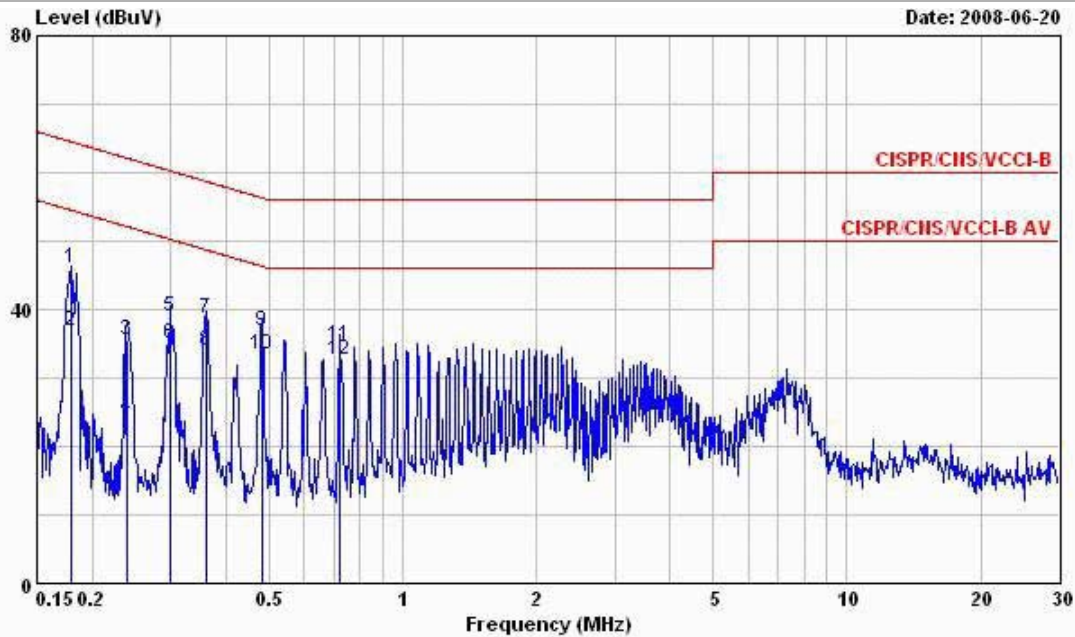
	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1815220	48.17	-16.25	64.42	48.06	0.09	0.02	QP
2	0.1815220	34.76	-19.66	54.42	34.65	0.09	0.02	Average
3	0.2416480	38.20	-23.84	62.04	38.08	0.09	0.03	QP
4	0.2416480	25.17	-26.87	52.04	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





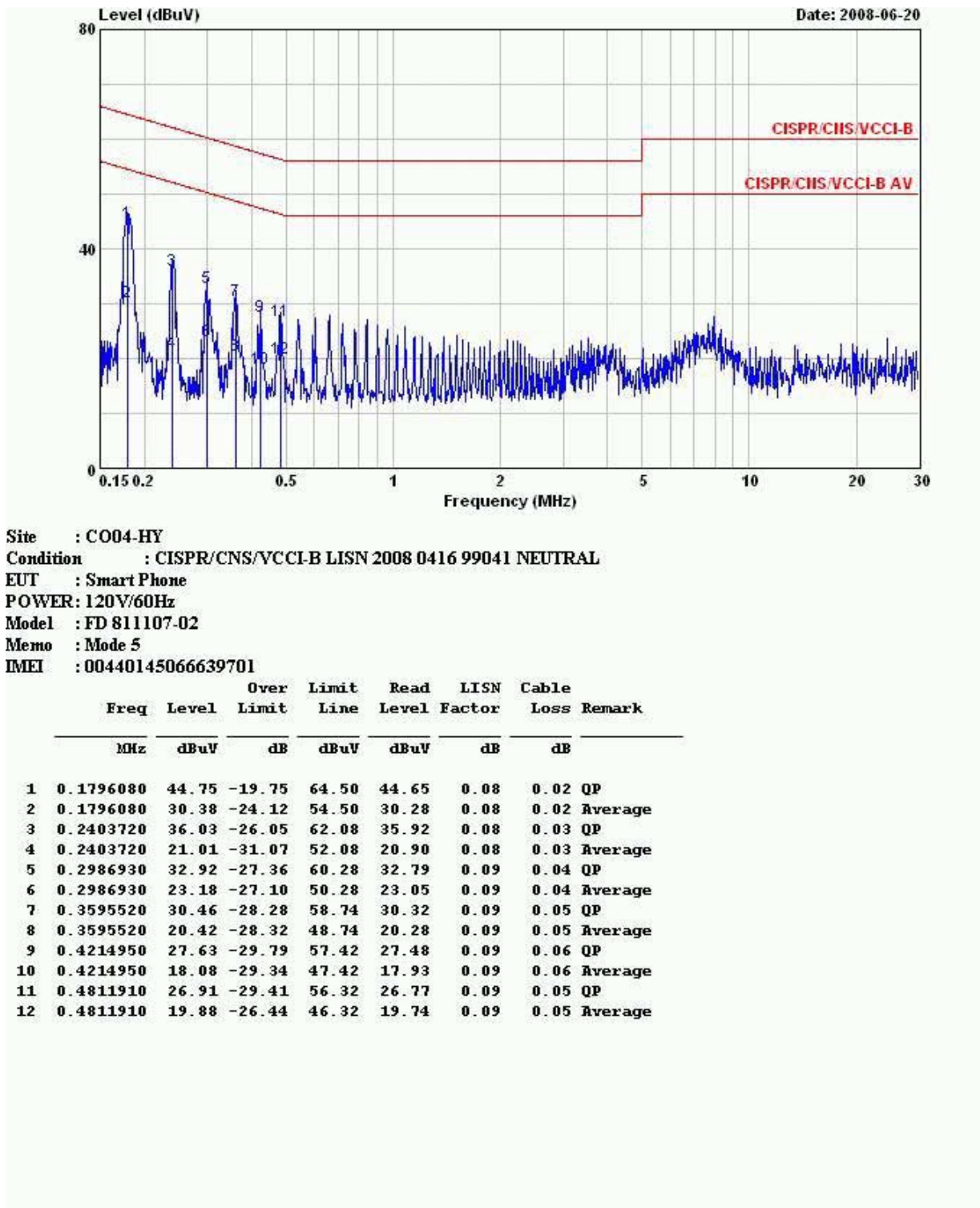
Test Mode: Mode 5

- 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 : CO04-HY
Condition : CISPR/CIS/VCCI-B LISN 2008 0416 99041 LINE
EUT : Smart Phone
POWER: 120V/60Hz
Model : FD 811107-02
Memo : Mode 5
IMEI :

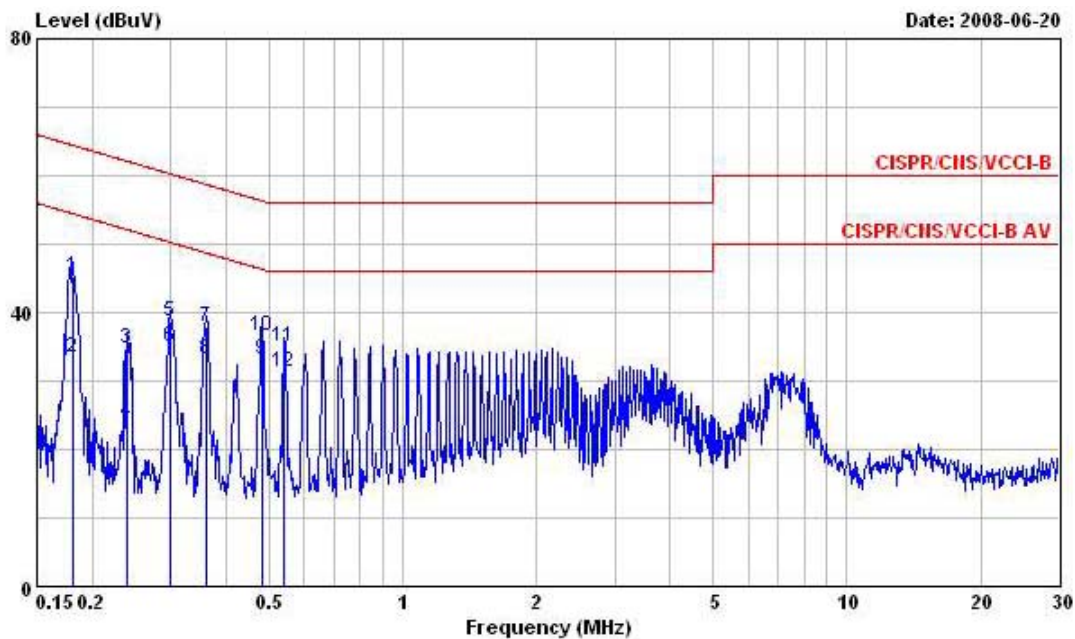
	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1796080	46.06	-18.44	64.50	45.95	0.09	0.02	QP
2	0.1796080	36.95	-17.55	54.50	36.84	0.09	0.02	Average
3	0.2391010	35.64	-26.49	62.13	35.52	0.09	0.03	QP
4	0.2391010	24.19	-27.94	52.13	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





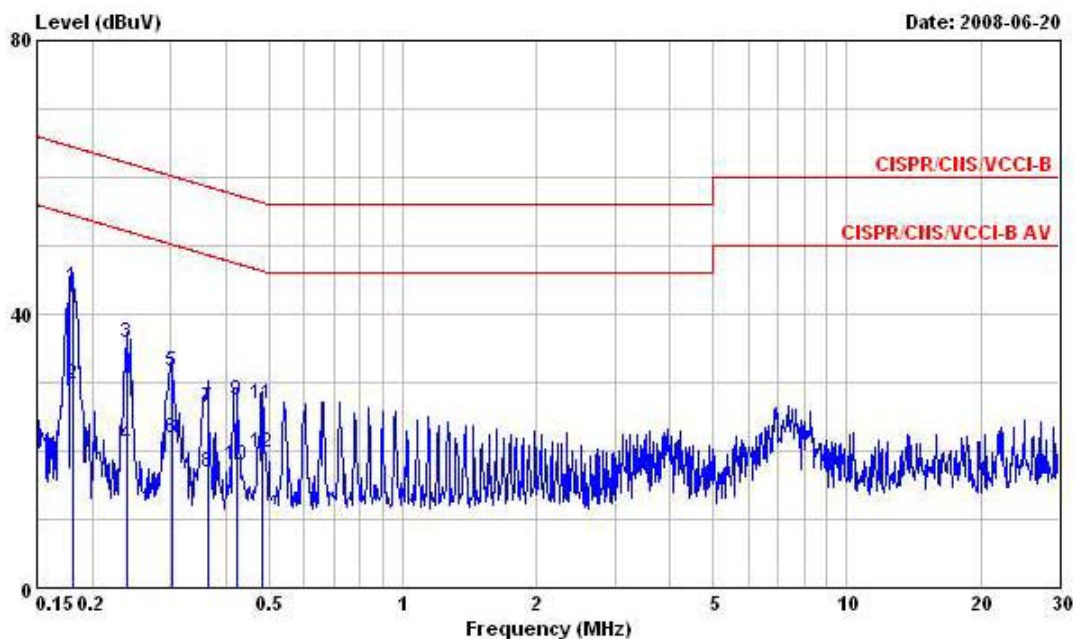
Test Mode: Mode 6

- 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/CIS/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	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	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/CIS/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	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
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.

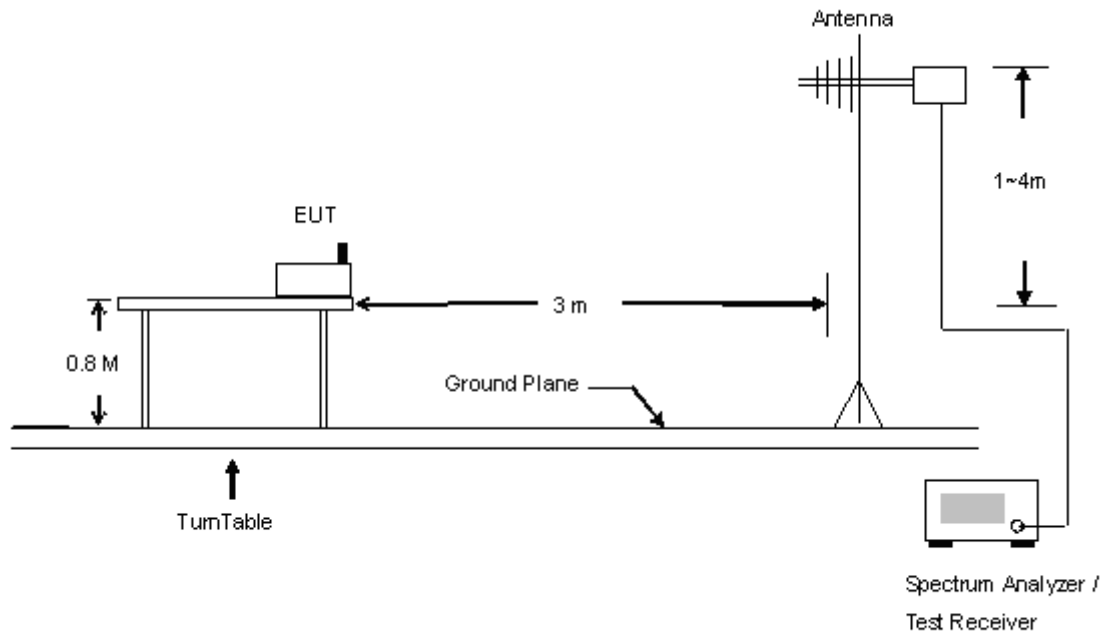
3.19.1 Major Measuring Instruments

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



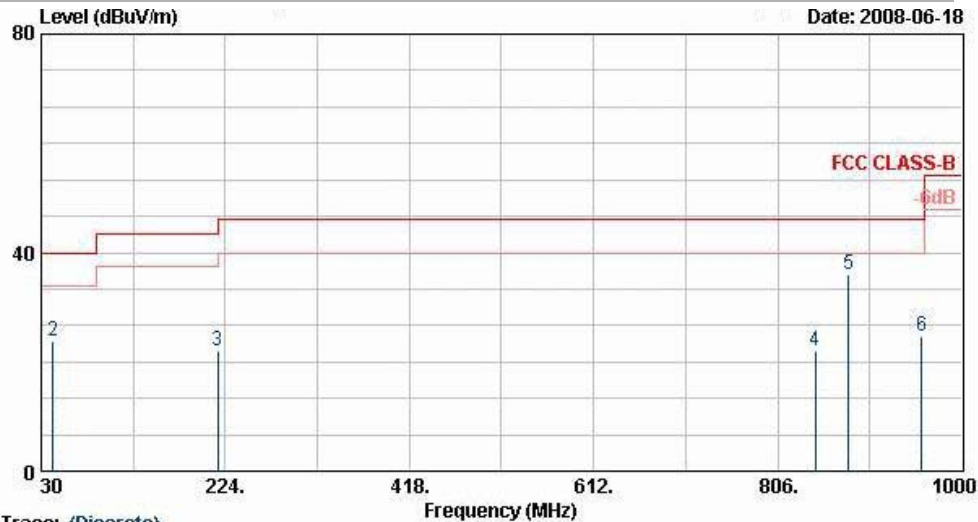


3.19.4 Test Result of Radiated Emission

Test Mode: Mode 1

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dBuV/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



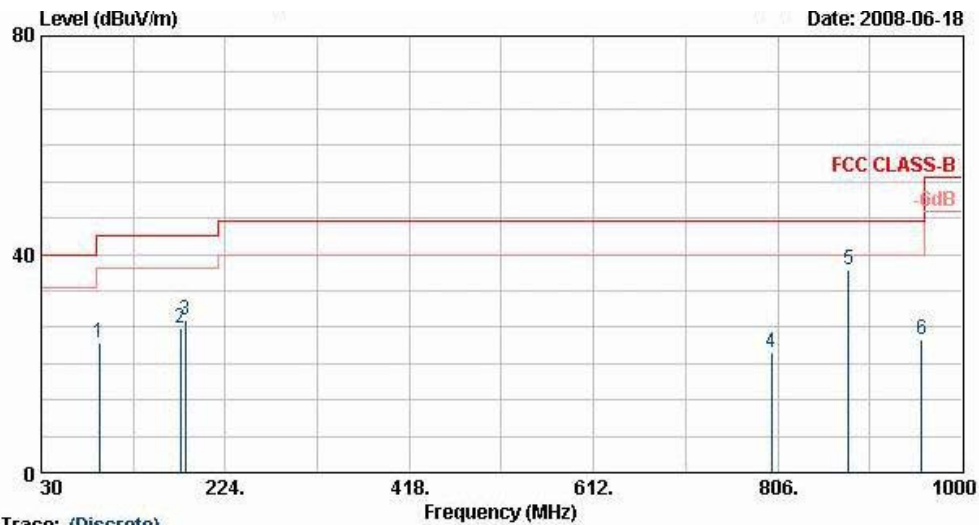
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(851121) HORIZONTAL
 EUT : Smart Phone
 Power : 120Vac/60Hz
 Model : FD 811107-02
 Memo : Mode 1
 S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	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:

1. #5 Base Station Signal.

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



Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT : Smart Phone
Power : 120Vac/60Hz
Model : FD 611107-02
Memo : Mode 1
S/N :

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
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:

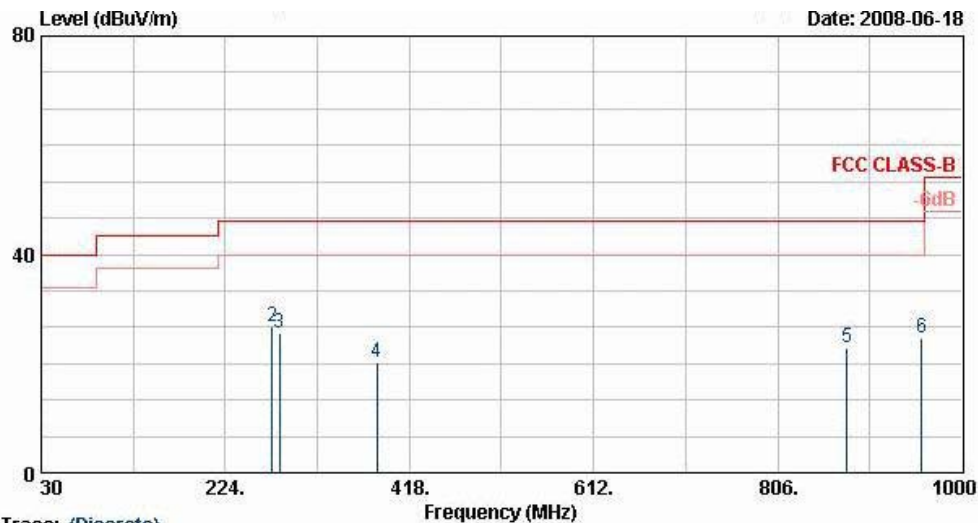
1. #5 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 2

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dBuV/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



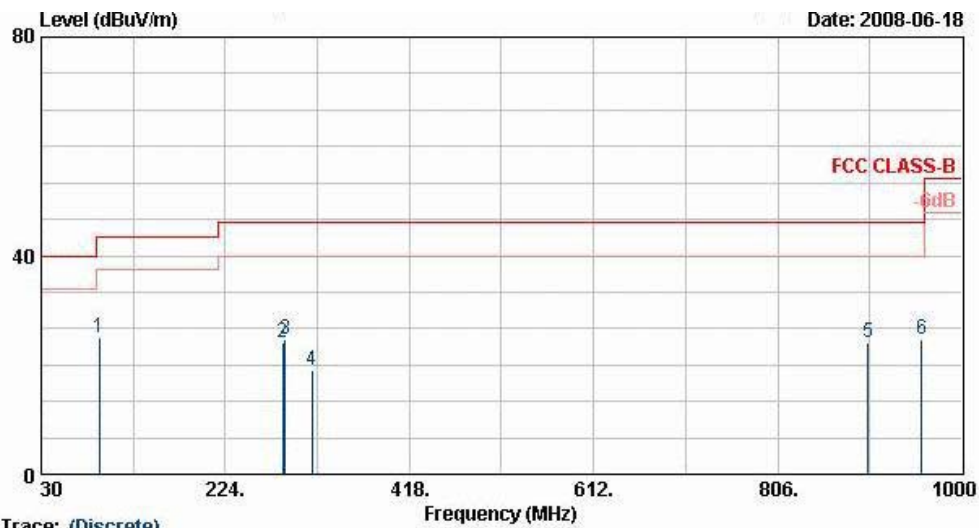
Site
Condition
EUT
Power
Model
Memo
S/N

Trace: (Discrete)

03CH06-HY
FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
Smart Phone
120Vac/60Hz
FD 611107-02
Mode 2

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	21.98	-18.02	40.00	35.52	19.66	0.30	33.50	100	216	Peak
2	273.54	26.76	-19.24	46.00	46.74	12.71	0.70	33.39	---	---	Peak
3	280.83	25.56	-20.44	46.00	45.37	12.86	0.70	33.38	---	---	Peak
4	383.30	20.11	-25.89	46.00	37.00	15.34	0.87	33.10	---	---	Peak
5	878.90	23.03	-22.97	46.00	34.10	20.38	1.30	32.75	---	---	Peak
6	957.30	24.61	-21.39	46.00	34.78	20.94	1.27	32.38	---	---	Peak

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



Trace: (Discrete)

Site : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT : Smart Phone
Power : 120Vac/60Hz
Model : FD 611107-02
Memo : Mode 2
S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
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

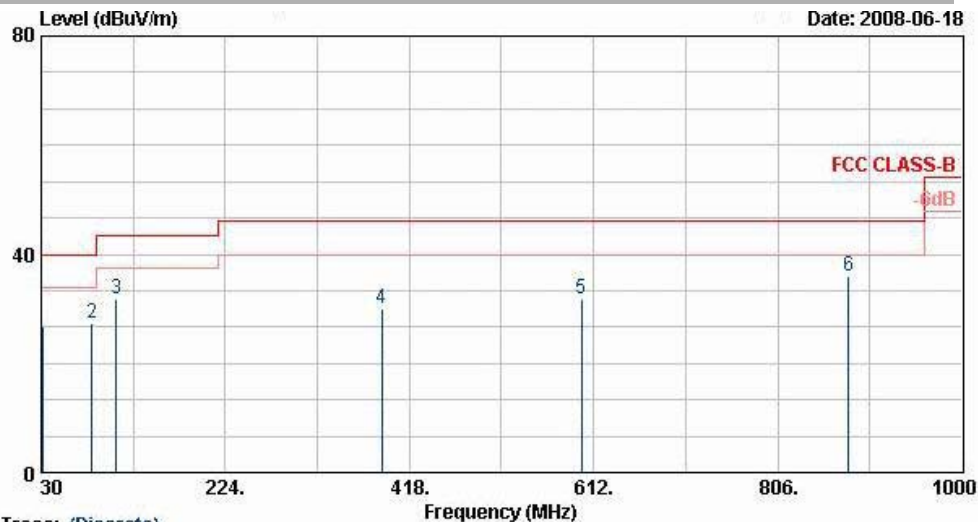
Remark: The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 3

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dBuV/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



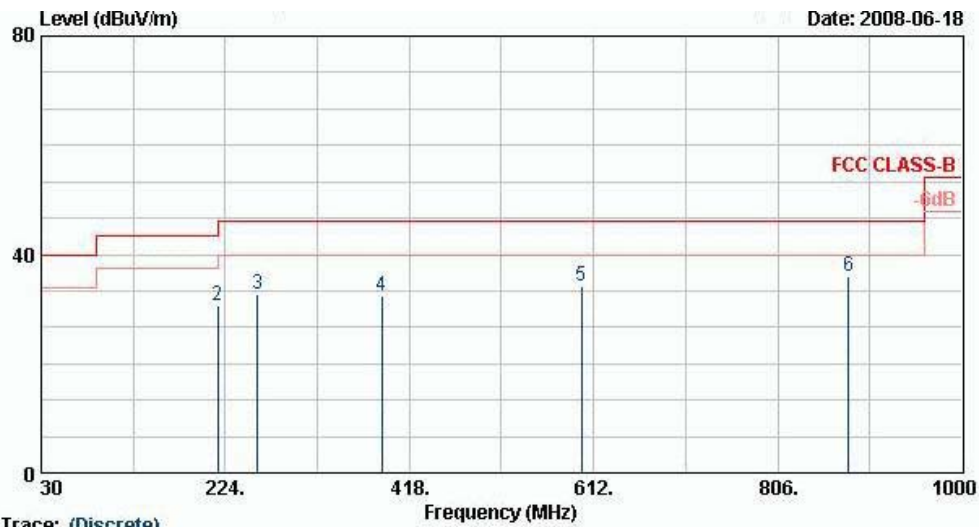
Trace: (Discrete)

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

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	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:

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



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			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:

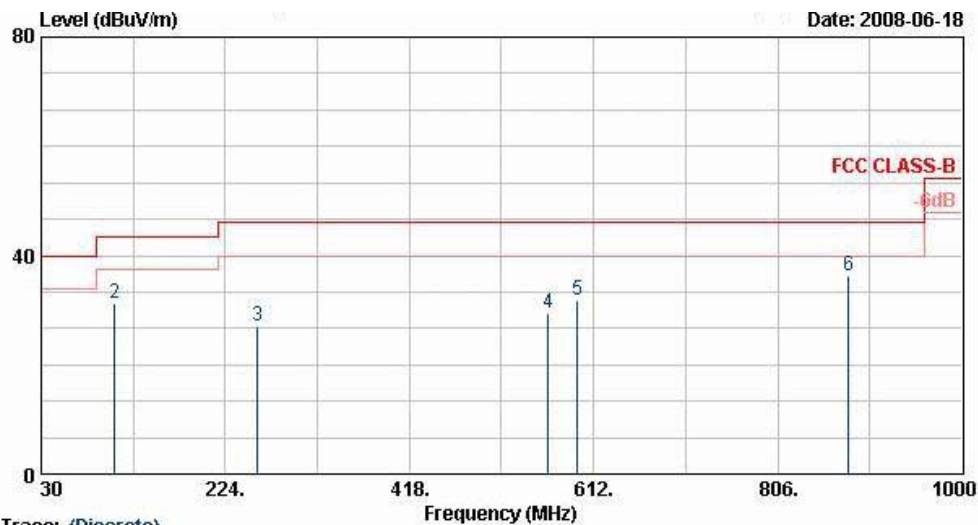
1. #6 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 4

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dBuV/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



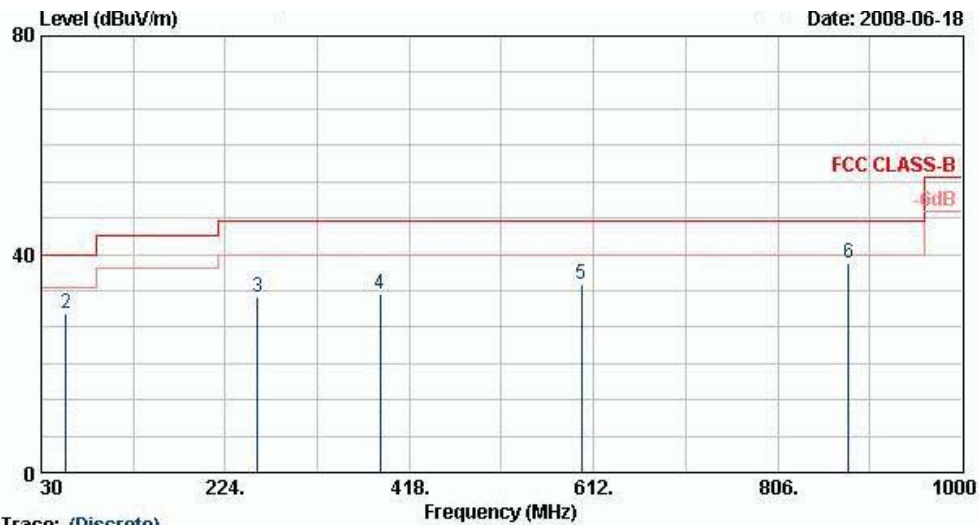
Trace: (Discrete)

Site : 03CH06-HV
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 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
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
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	---	---	Peak
4	563.90	29.57	-16.43	46.00	43.53	18.09	1.00	33.04	---	---	Peak
5	595.40	31.95	-14.05	46.00	45.42	18.42	1.00	32.88	---	---	Peak
6	880.30	36.25			47.31	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.



	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			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

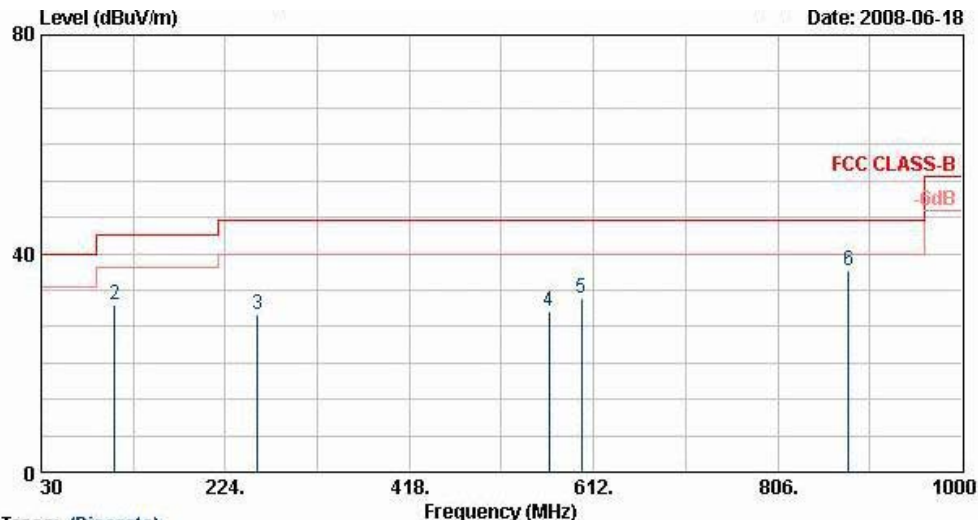
Remark:

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 (dBuV/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

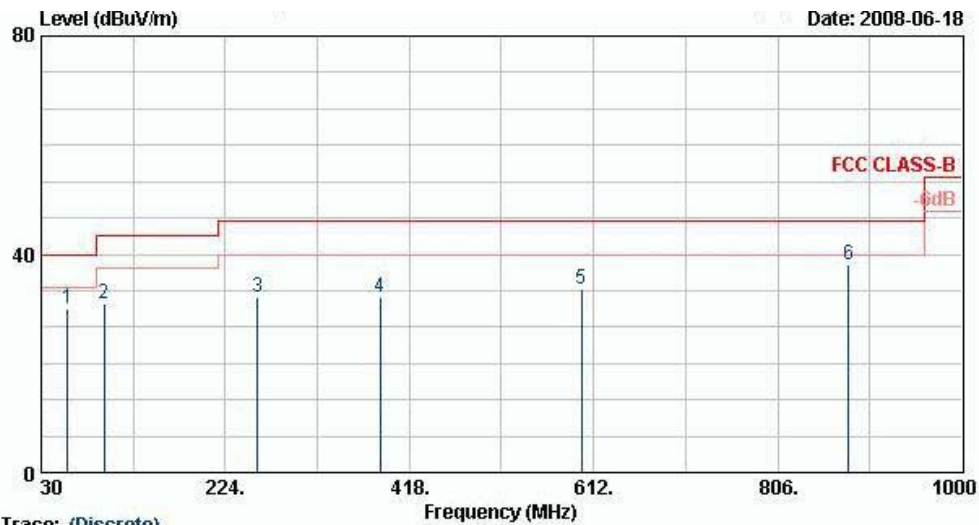
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
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	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	28.42	-11.58	40.00	41.96	19.66	0.30	33.50	100	271	Peak
2	107.49	30.64	-12.86	43.50	52.14	11.60	0.50	33.59	---	---	Peak
3	257.88	28.71	-17.29	46.00	49.01	12.42	0.70	33.42	---	---	Peak
4	565.30	29.46	-16.54	46.00	43.39	18.11	1.00	33.03	---	---	Peak
5	598.90	31.77	-14.23	46.00	45.19	18.45	1.00	32.87	---	---	Peak
6	880.30	36.98			48.04	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.



Site : D3CH06-HY
Condition : FCC CLASS-B 3m LP-ANT(051121) 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	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
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:

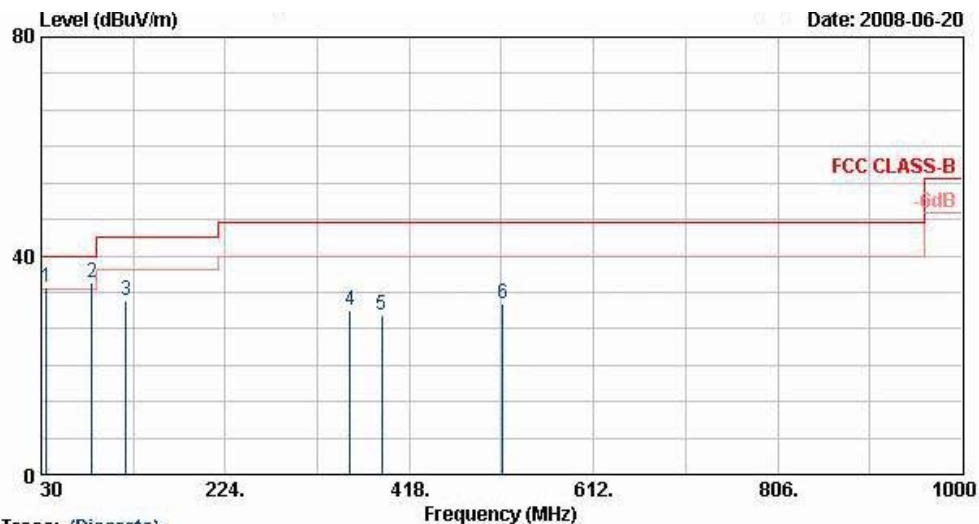
1. #6 Base Station Signal.
2. The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 6

- Test Distance: 3m
- Temperature: 24~25°C
- Relative Humidity: 49~50%
- Emission level (dBuV/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

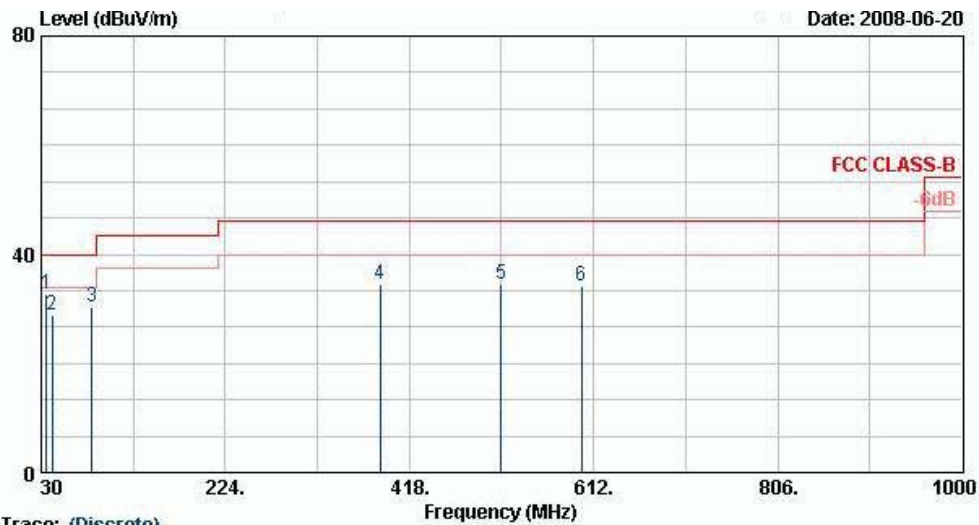


Trace: (Discrete)

Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Smart Phone
 Power : From System
 Model : FD 811107-02
 Memo : Mode 6
 S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	35.94	34.30	-5.70	40.00	51.67	15.61	0.30	33.28	---	---	Peak
2 @	83.73	35.08	-4.92	40.00	60.06	7.97	0.44	33.40	100	134	Peak
3	119.64	31.92	-11.58	43.50	52.34	12.50	0.50	33.42	---	---	Peak
4	355.30	29.90	-16.10	46.00	47.71	14.62	0.75	33.18	---	---	Peak
5	388.90	29.15	-16.85	46.00	45.94	15.49	0.81	33.08	---	---	Peak
6	516.30	31.24	-14.76	46.00	45.92	17.59	1.00	33.27	---	---	Peak

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



Trace: (Discrete)

Site : D3CH06-HY
Condition : FCC CLASS-B 3m LP-ANT(051121) VERTICAL
EUT : Smart Phone
Power : From System
Model : FD 611107-02
Memo : Mode 6
S/N :

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	35.94	32.79	-7.21	40.00	50.16	15.61	0.30	33.28	100	281	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

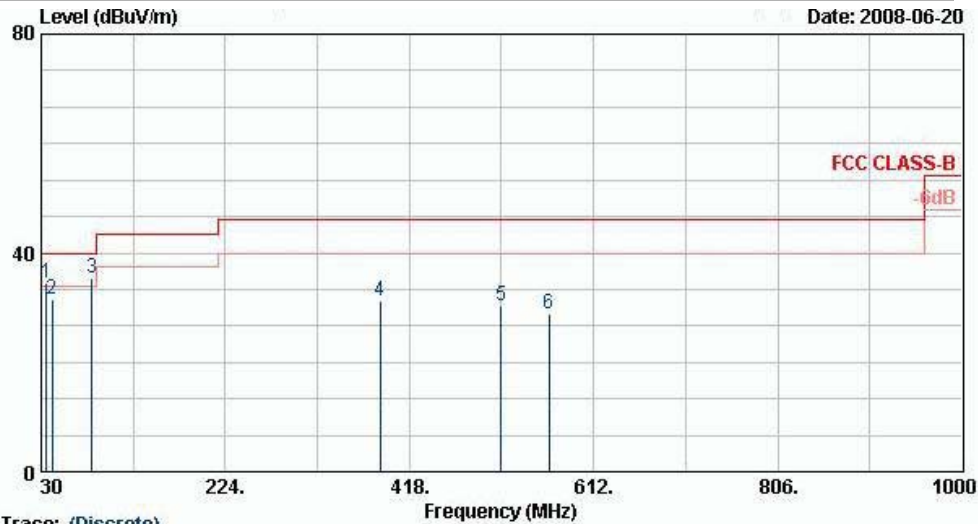
Remark: The spurious emission above 1 GHz is too low to be taken.



Test Mode: Mode 7

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

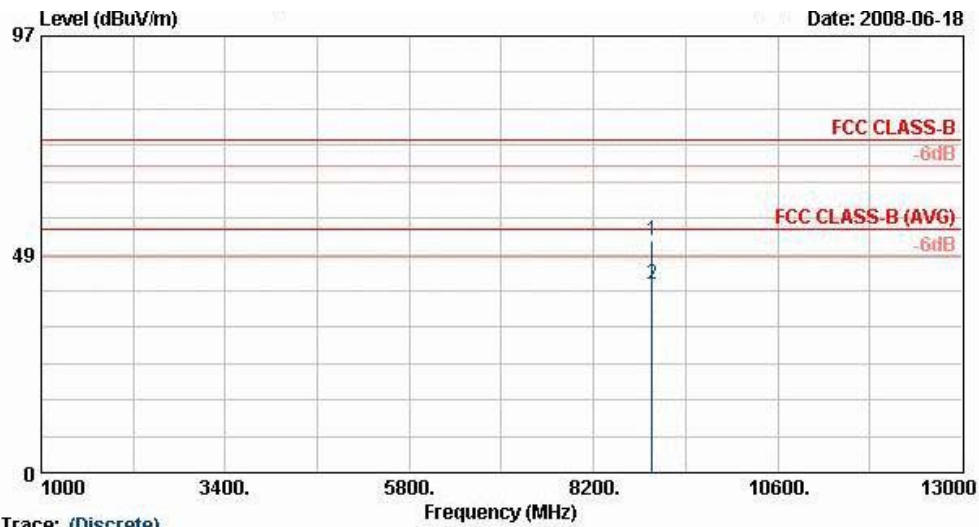
The test that passed at the minimum margin was marked by a frame in the following data



Trace: (Discrete)

Site : D3CH06-RV
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Smart Phone
 Power : From System
 Model : FD 811107-02
 Memo : Mode 7
 S/N :

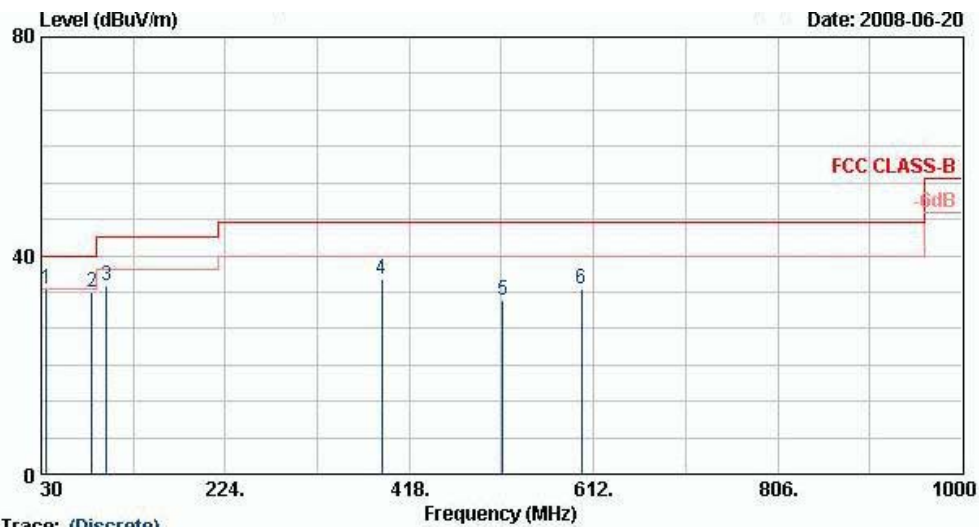
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	35.94	34.39	-5.61	40.00	51.76	15.61	0.30	33.28	---	---	Peak
2	41.34	31.55	-8.45	40.00	51.90	12.51	0.30	33.16	---	---	Peak
3 @	83.73	35.42	-4.58	40.00	60.40	7.97	0.44	33.40	370	283	QP
4	386.80	31.33	-14.67	46.00	48.15	15.44	0.83	33.09	---	---	Peak
5	514.90	30.40	-15.60	46.00	45.10	17.58	1.00	33.28	---	---	Peak
6	565.30	28.89	-17.11	46.00	42.81	18.11	1.00	33.03	---	---	Peak



Trace: (Discrete)

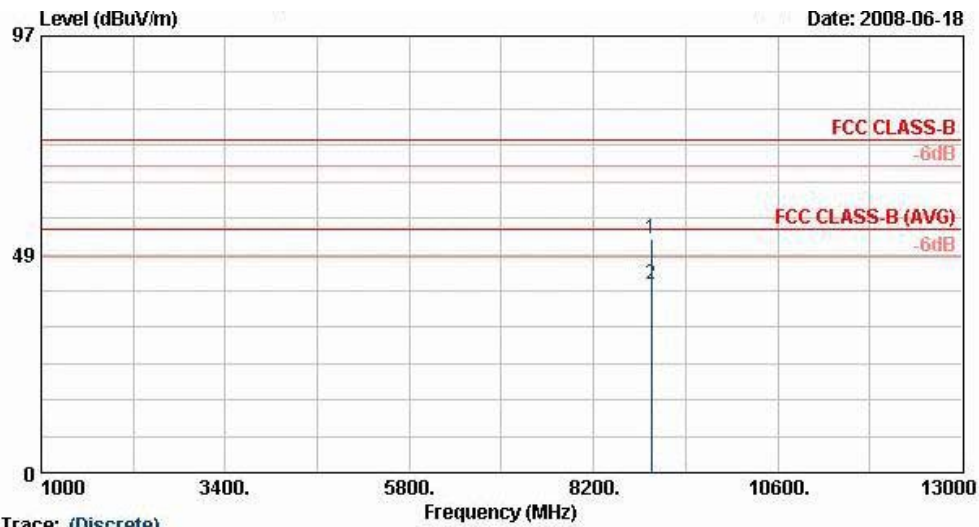
Site : D3CH06-HY
Condition : FCC CLASS-B 3m HF-ANT(8-18)-060918 HORIZONTAL
EUT : PDA Phone
Power : From System
Model : FD 811107-02
Memo : Mode 7
S/N :

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	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



Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT : Smart Phone
Power : From System
Model : FD 611107-02
Memo : Mode 7
S/N :

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
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 : D3CH06-HY
Condition : FCC CLASS-B 3m HF-ANT(8-18)-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	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
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
Combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of Confidence of 95% U=2Uc(y)	2.26		

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
Combined standard uncertainty Uc(y)	1.30		
Measuring uncertainty for a level of Confidence of 95% U=2Uc(y)	2.60		

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

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	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 = $20\log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of Confidence of 95% $U = 2U_c(y)$	4.72				

The measured result is : $y \text{ dBuV} \pm U \text{ dB}$
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.