



FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment : PDA Phone

Model No. : RAPH110

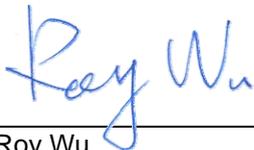
FCC ID : NM8RPL

Filing Type : Certification

Applicant : HTC Corporation

23 Xinghua Rd., Taoyuan 330, Taiwan

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- The data shown in this test report were carried out on June 30, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR830416A, Report Version: Rev.01



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Report Version: Rev.01

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1. General Description of Equipment under Test

1.1 Applicant

HTC Corporation
23 Xinghua Rd., Taoyuan 330, Taiwan

1.2 Manufacturer

HTC Corporation
23 Xinghua Rd., Taoyuan 330, Taiwan

1.3 Basic Description of Equipment under Test

PDA Phone A	PDA Phone with Camera 1 + Main Source
PDA Phone B	PDA Phone with Camera 2 + Second Source
PDA Phone C	PDA Phone without Camera

1.4 Feature of Equipment under Test

Product Feature & Specification			
DUT Type :	PDA Phone		
Model Name :	RAPH110		
FCC ID :	NM8RPL		
Tx Frequency :	2400 MHz ~ 2483.5 MHz		
Rx Frequency :	2400 MHz ~ 2483.5 MHz		
Maximum Output Power to Antenna :	802.11b : 15.88 dBm 802.11g : 21.52 dBm		
Type of Antenna Connector :	N/A		
Antenna Type :	PIFA Antenna		
Antenna Gain :	0 dBi		
Type of Modulation :	DSSS / OFDM		
Function Type :	Transmitter		Transceiver V
DUT Stage :	Production Unit		

2. Test Configuration of Equipment under Test

2.1 Test Manner

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- b. Power Table as below:

802.11b

Channel	Frequency (MHz)	Data Rate (dBm)			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	15.06	15.25	15.22	15.26
CH 06	2437 MHz	15.76	15.72	15.52	15.88
CH 11	2462 MHz	15.43	15.18	15.15	15.28

802.11g

Channel	Frequency (MHz)	Data Rate (dBm)							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	21.22	21.02	20.27	20.02	18.46	18.34	16.94	16.69
CH 06	2437 MHz	21.52	21.45	20.37	20.43	19.03	18.81	17.09	16.93
CH 11	2462 MHz	21.26	21.36	20.11	20.00	18.58	18.21	16.96	16.76

The 802.11b data rate were set in 11Mbps and 802.11g set in 6Mbps, due to the highest RF output power.

- c. The EUT is programmed to transmit signal continuously for all testings.
- d. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.

2.2 Test Mode

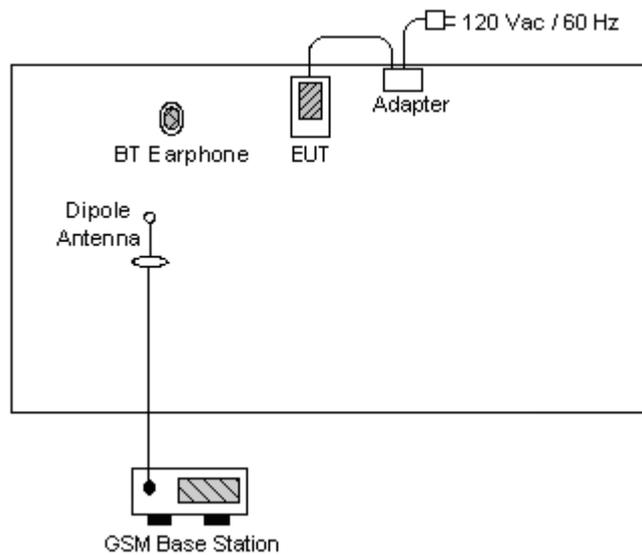
Application	Test Mode	
Radiated Emission / RF Conducted	802.11b	802.11g
	Mode 1: CH01_2412 MHz Mode 2: CH06_2437 MHz Mode 3: CH11_2462 MHz	Mode 4: CH01_2412 MHz Mode 5: CH06_2437 MHz Mode 6: CH11_2462 MHz
Conducted Emission	Mode 1: PDA Phone A + GSM Idle + BT Link + WLAN Link + Battery 1 + Adapter 1 Mode 2: PDA Phone A + GSM Idle + BT Link + WLAN Link + Battery 1 + Adapter 2 Mode 3: PDA Phone A + GSM Idle + BT Link + WLAN Link + Battery 2 + Adapter 3 + USB Cable 1 Mode 4: PDA Phone A + GSM Idle + BT Link + WLAN Link + Battery 2 + Adapter 3 + USB Cable 2 Mode 5: PDA Phone A + GSM Idle + BT Link + WLAN Link + Battery 2 + Adapter 4 Mode 6: PDA Phone B + GSM Idle + BT Link + WLAN Link + Battery 1 + Adapter 2 Mode 7: PDA Phone C + GSM Idle + BT Link + WLAN Link + Battery 1 + Adapter 2	

2.3 Ancillary Equipment List

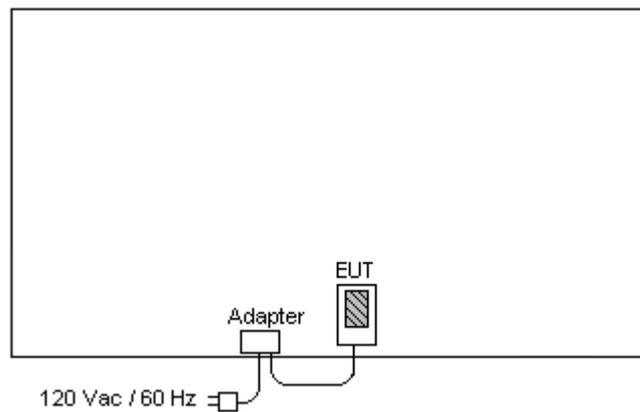
Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	BT Base Station	Anritus	8852A	N/A	N/A	Unshielded, 1.8 m
3.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A	N/A

2.4 Connection Diagram of Test System

<Conducted Emission>



<Radiated Emission>



3. RF Utility

The programmed RF Utility is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testings.

4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-328-4978

Test Site No : CO05-HY, 03CH06-HY
FCC Designation No : TW1022

4.1 Test Voltage

AC 120V / 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test Compliance

47 CFR Part 15 Subpart C

4.4 Frequency Range

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 25000 MHz

4.5 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

5. Test Data and Test Result

5.1 List of Measurements and Examinations

The Emission Mode: Wireless LAN

FCC Rule	Description of Test	Result
15.207	Conducted Emission	Pass
15.247(a)(2)	6dB Bandwidth	Pass
15.247(b)(1)	Maximum Peak Output Power	Pass
15.209(a) 15.247(d)	Radiated Emission	Pass
15.247(d)	100 KHz Bandwidth of Frequency Band Edges	Pass
15.247(e)	Power Spectral Density	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass

5.2 6dB Bandwidth Measurement

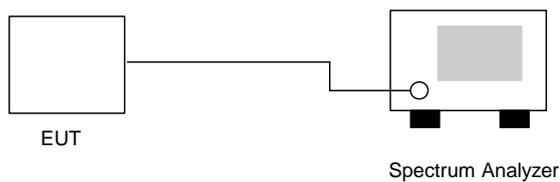
5.2.1 Measuring Instruments

As described in chapter 6 of this test report.

5.2.2 Test Procedure

1. The transmitter output was connected to the spectrum analyzer directly.
2. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
3. The 6 dB bandwidth is defined as the frequency range where the power is higher than the peak power minus 6dB.

5.2.3 Test Setup Layout



5.2.4 Test Result

- Application Type : WLAN 802.11b/g
- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : C.K.C

▪ **802.11b**

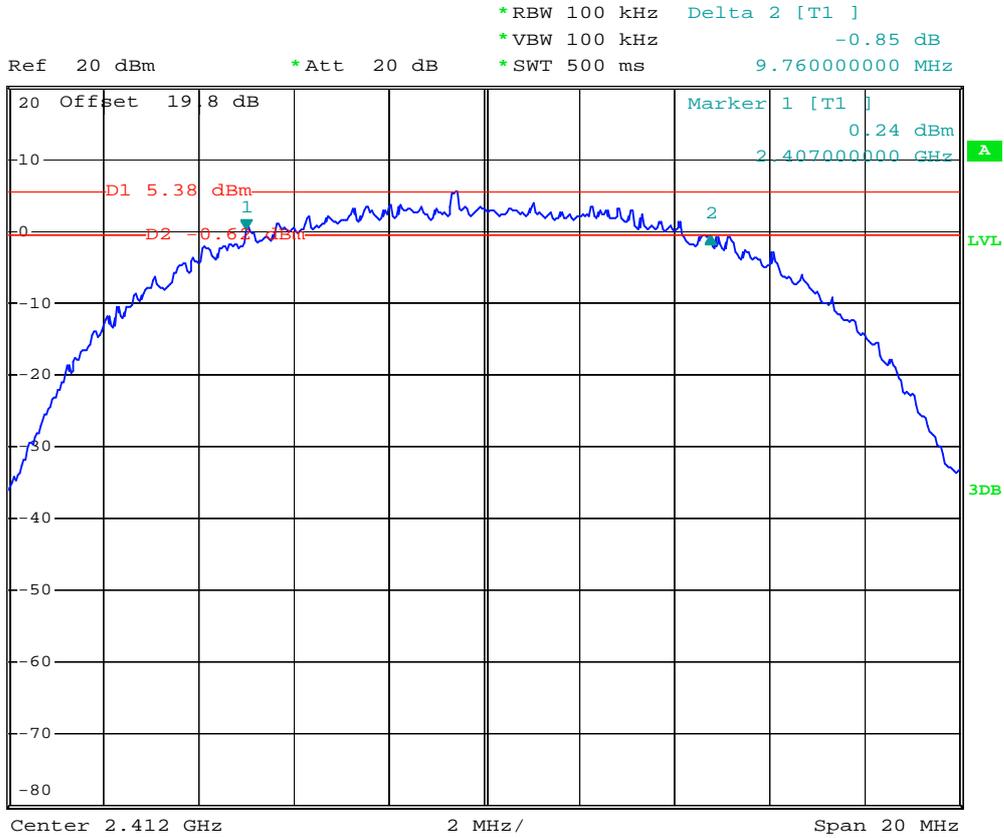
Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	9.76	> 0.5MHz	Mode 1
06	2437	10.16	> 0.5MHz	Mode 2
11	2462	9.76	> 0.5MHz	Mode 3

▪ **802.11g**

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	16.36	> 0.5MHz	Mode 4
06	2437	16.36	> 0.5MHz	Mode 5
11	2462	16.36	> 0.5MHz	Mode 6

5.2.5 6dB Bandwidth

Mode 1

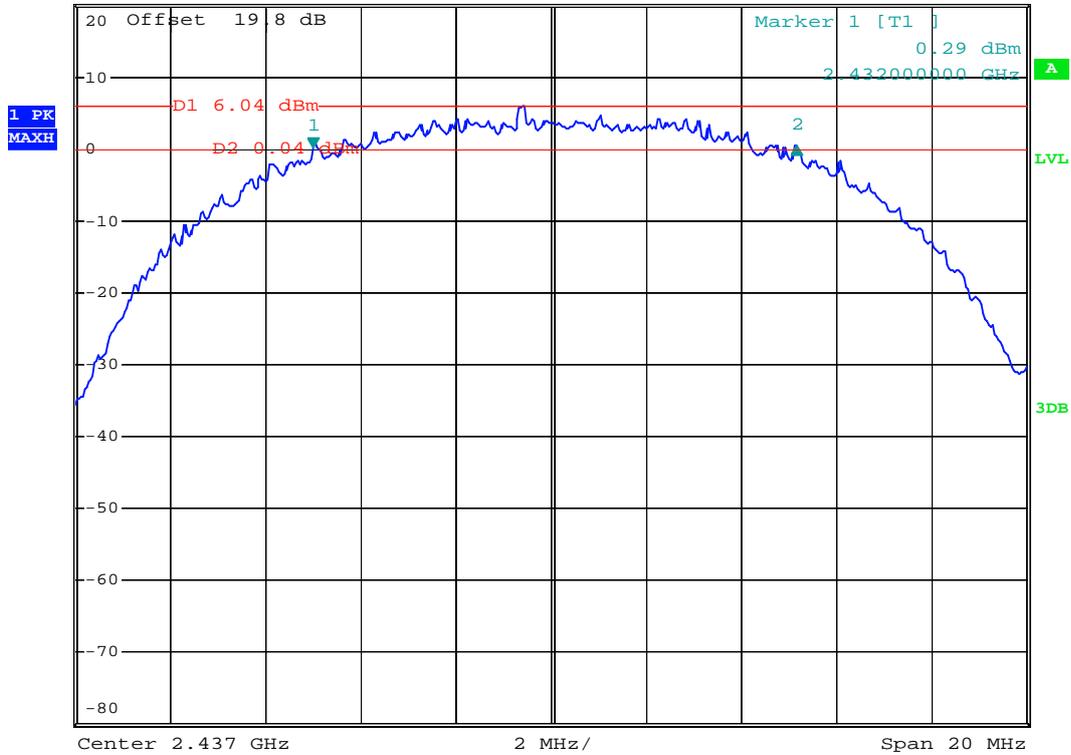


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Mode 2



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.10 dB
 *SWT 500 ms 10.160000000 MHz

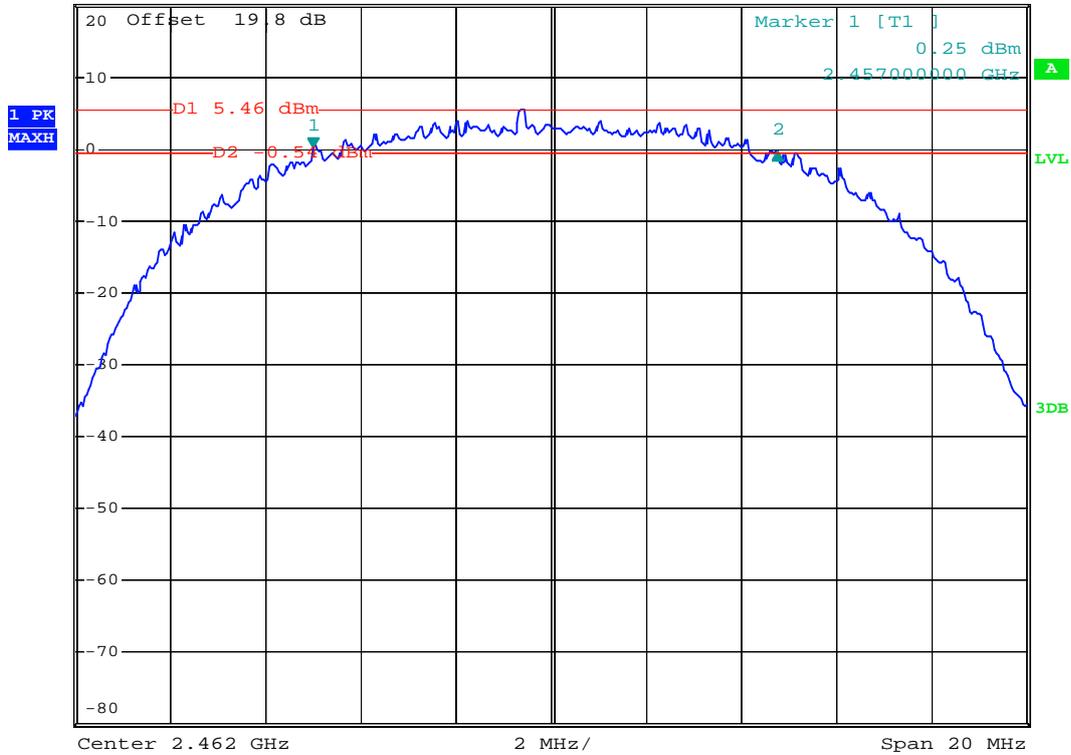


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Mode 3

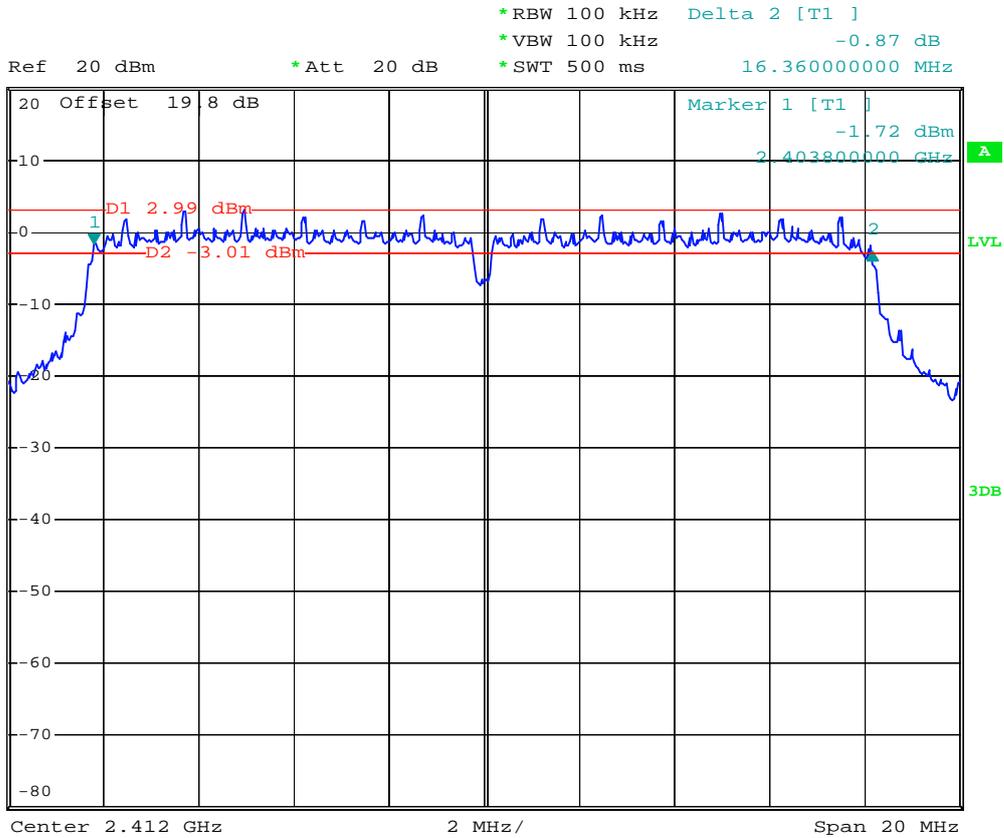


Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz -0.69 dB
 *SWT 500 ms 9.760000000 MHz



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Mode 4

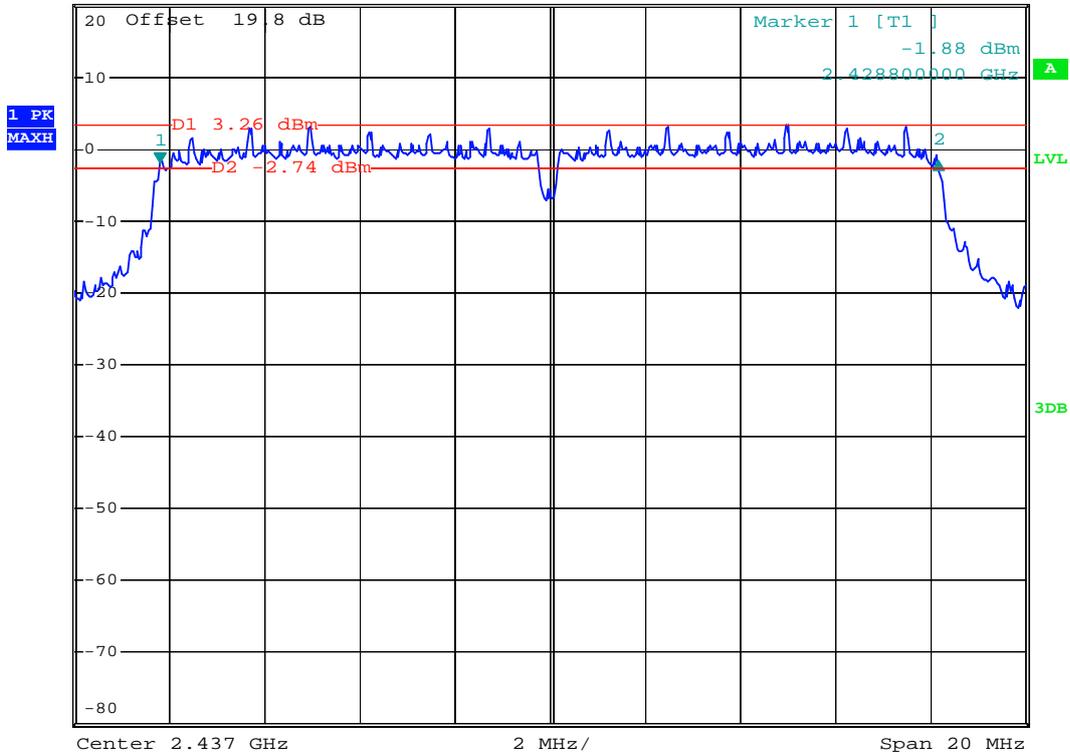


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Mode 5



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.23 dB
 *SWT 500 ms 16.360000000 MHz

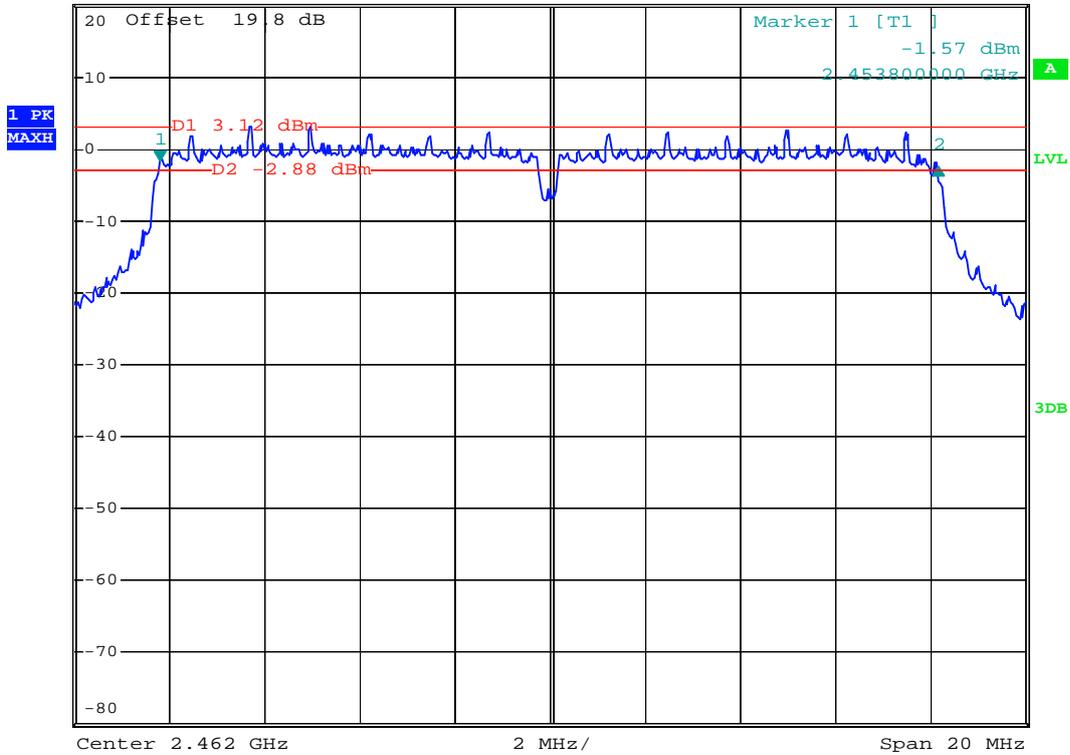


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Mode 6



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz -0.92 dB
 *SWT 500 ms 16.360000000 MHz



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5.3 Power Spectral Density Measurement

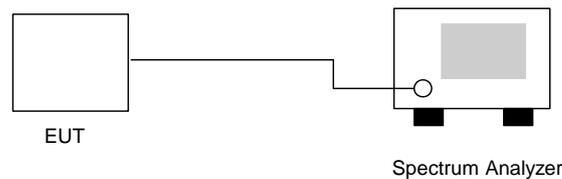
5.3.1 Measuring Instruments

As described in chapter 6 of this test report.

5.3.2 Test Procedure

1. The transmitter output was connected to spectrum analyzer directly.
2. The spectrum analyzer's resolution bandwidth was set at 3kHz RBW and 30kHz VBW as that of the fundamental frequency. Set the sweep time=span/3kHz.
3. The power spectral density was measured and recorded.
4. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

5.3.3 Test Setup Layout



5.3.4 Test Result

- Application Type : 802.11b/g
- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : C.K.C

802.11b

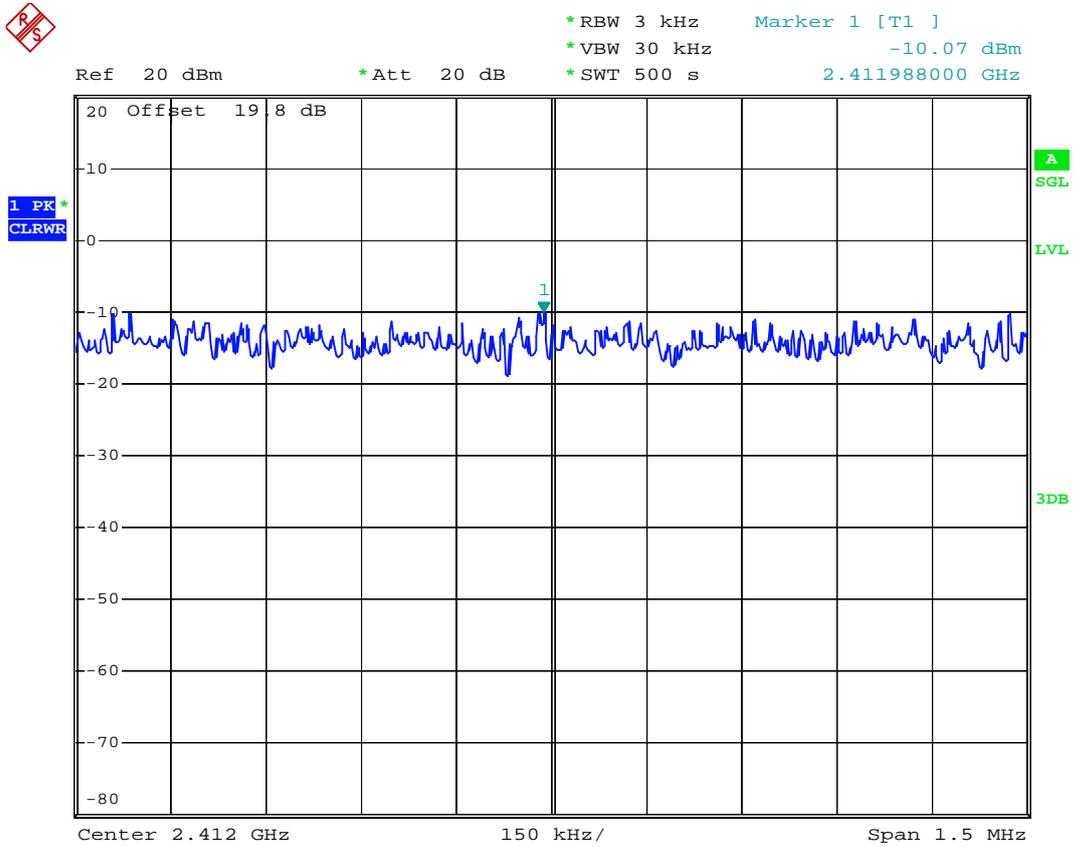
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-10.07	8	Mode 1
06	2437	-9.31	8	Mode 2
11	2462	-9.64	8	Mode 3

802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-10.95	8	Mode 4
06	2437	-10.45	8	Mode 5
11	2462	-11.29	8	Mode 6

5.3.5 Power Spectral Density

Mode 1



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Mode 2

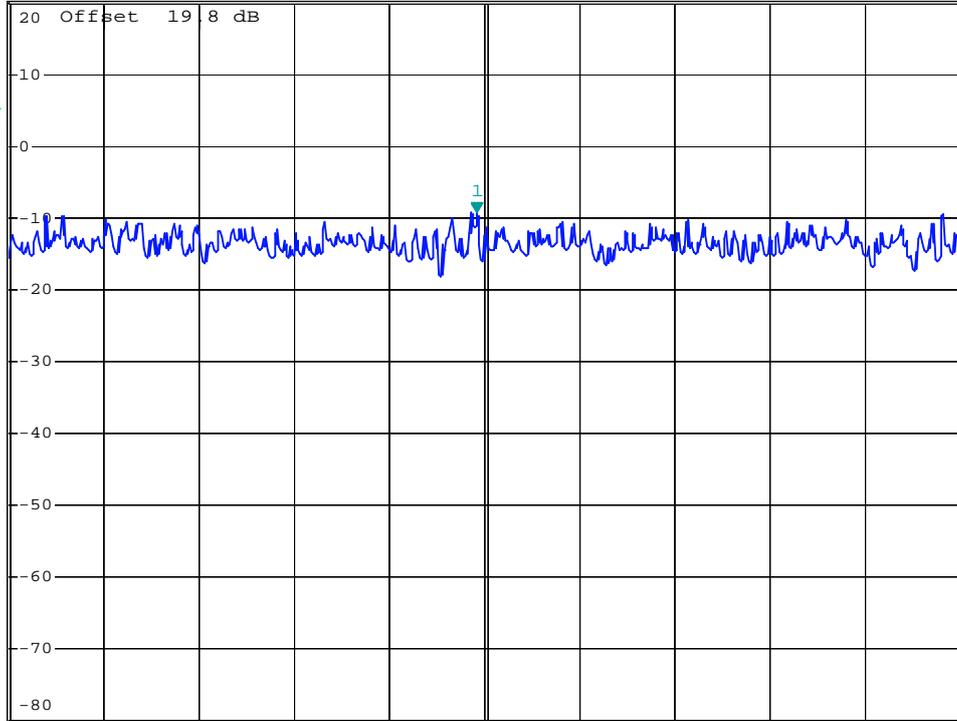


*RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -9.31 dBm
 *SWT 500 s 2.436988000 GHz

Ref 20 dBm

*Att 20 dB

1 PK*
CLRWR



Center 2.437 GHz

150 kHz/

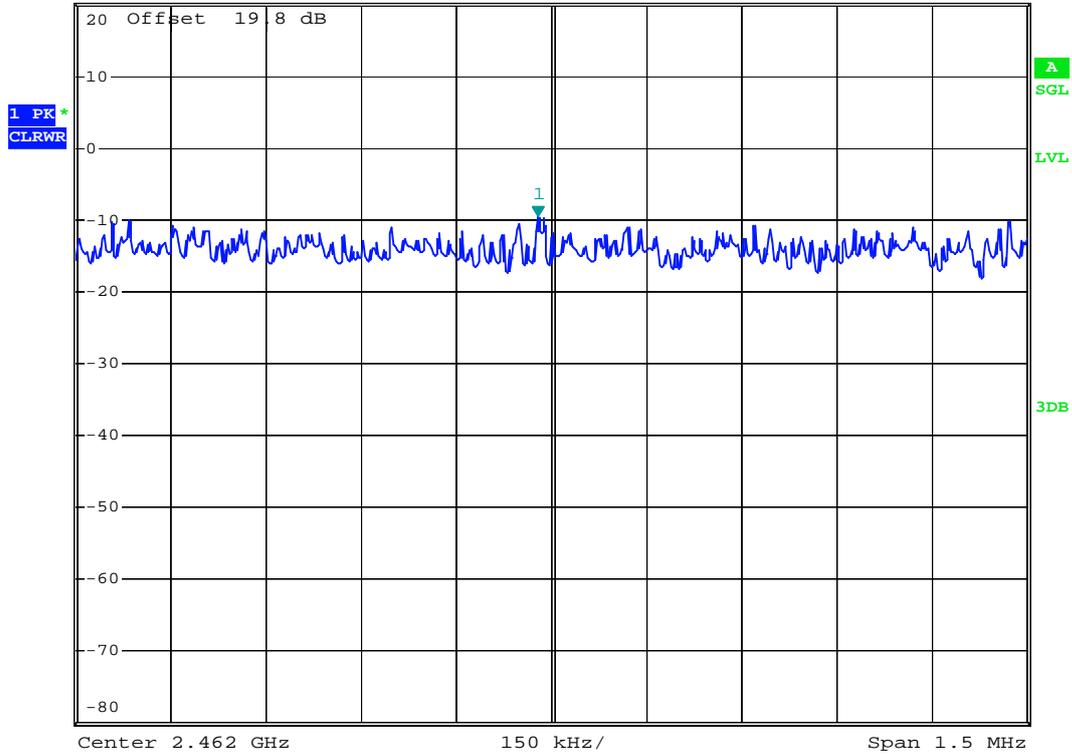
Span 1.5 MHz

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Mode 3



Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -9.64 dBm
 *SWT 500 s 2.461979000 GHz



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Mode 4

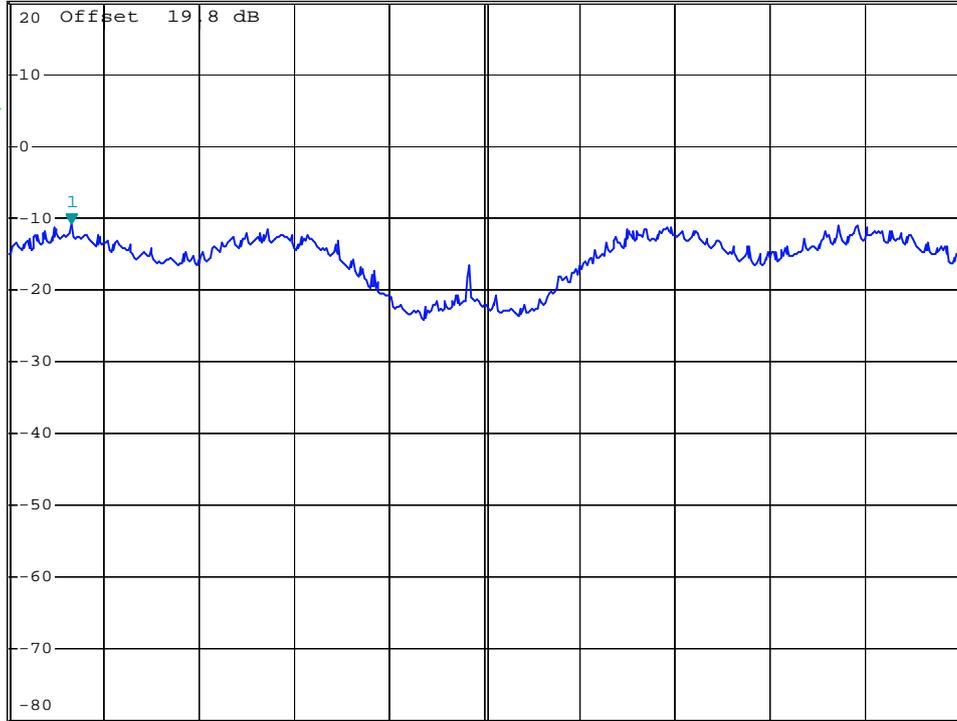


*RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -10.95 dBm
 *SWT 500 s 2.411349000 GHz

Ref 20 dBm

*Att 20 dB

1 PK*
 CLRWR



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Mode 5

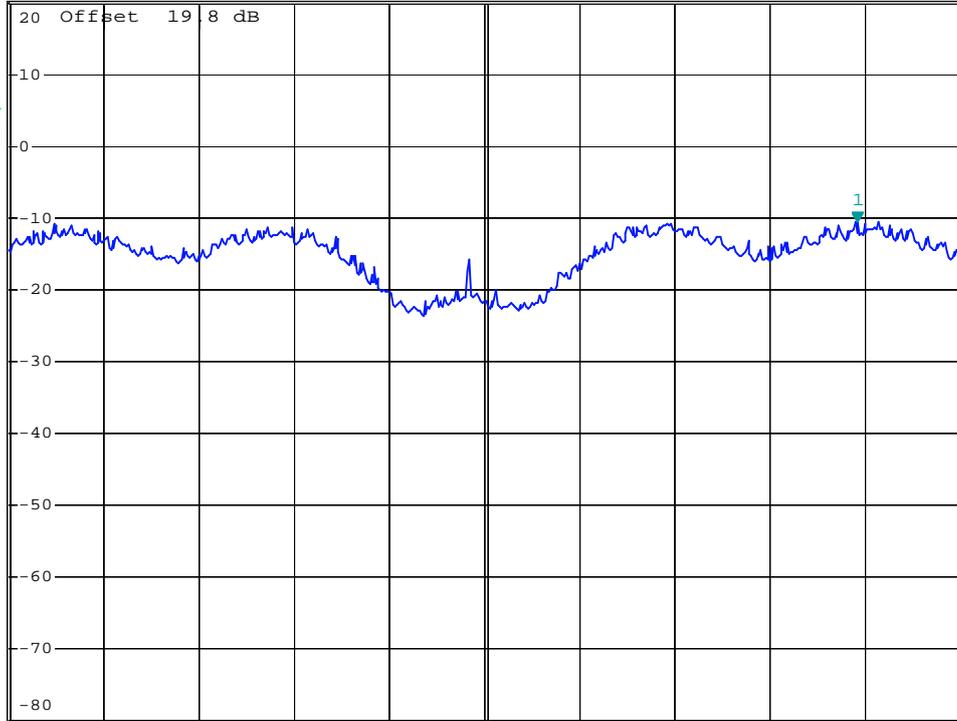


*RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -10.45 dBm
 *SWT 500 s 2.437588000 GHz

Ref 20 dBm

*Att 20 dB

1 PK*
 CLRWR



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Mode 6

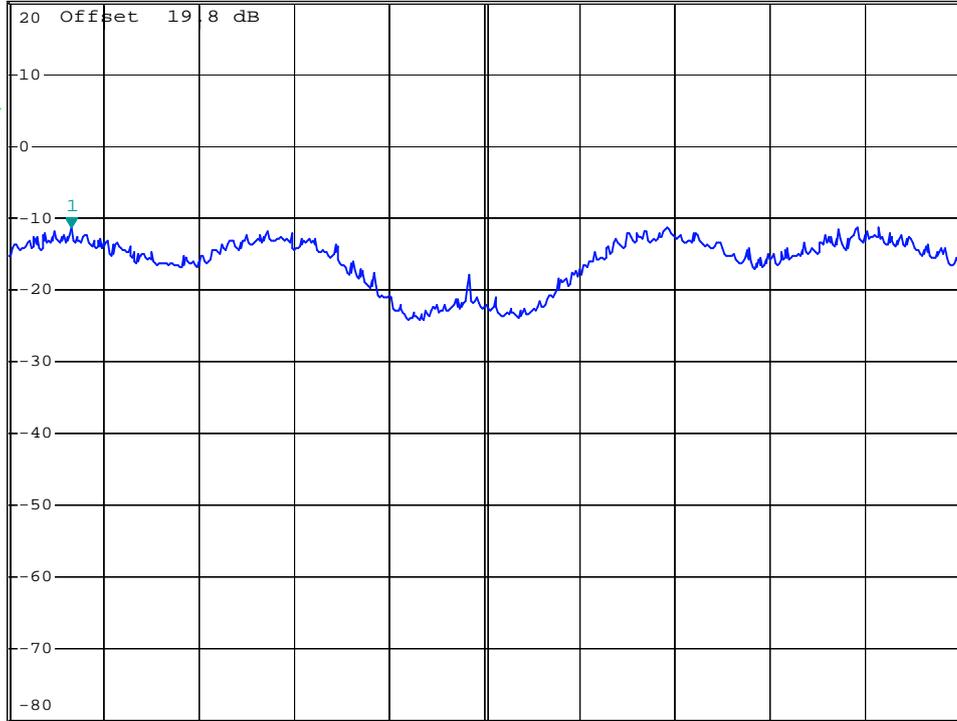


*RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -11.29 dBm
 *SWT 500 s 2.461349000 GHz

Ref 20 dBm

*Att 20 dB

1 PK*
 CLRWR



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5.4 Band Edges Measurement

5.4.1 Measuring Instruments

As described in chapter 6 of this test report.

5.4.2 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set both RBW and VBW of spectrum analyzer to 100 KHz with suitable frequency span including 100 KHz bandwidth from band edge.
3. The band edges was measured and recorded.

5.4.3 Test Result

- Application Type : WLAN 802.11b/g
- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : C.K.C

Test Result in WLAN lower band (802.11b/g)	:	PASS
Test Result in WLAN higher band (802.11b/g)	:	PASS

5.4.4 Note on Band Edge Emission

>802.11b

CH01 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384.10	51.76	-22.24	74.00	51.66	31.86	3.92	35.68	100	0	Peak
2384.10	38.64	-15.36	54.00	38.56	31.83	3.92	35.68	100	26	Average

CH01 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384.86	46.19	-27.81	74.00	46.09	31.86	3.92	35.68	100	0	Peak
2384.86	32.73	-21.27	54.00	32.65	31.83	3.92	35.68	100	138	Average

CH11 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2487.65	51.98	-22.02	74.00	51.65	31.98	4.05	35.70	100	0	Peak
2487.65	39.04	-14.97	54.00	38.68	32.00	4.05	35.70	100	25	Average

CH11 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	47.74	-26.26	74.00	47.41	31.98	4.05	35.70	100	0	Peak
2483.66	35.09	-18.91	54.00	34.76	31.98	4.05	35.70	131	307	Average

>802.11g

CH01 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	73.17	-0.83	74.00	73.07	31.86	3.92	35.68	100	0	Peak
2389.99	50.92	-3.08	54.00	50.82	31.86	3.92	35.68	100	22	Average

CH01 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	70.08	-3.92	74.00	69.98	31.86	3.92	35.68	100	0	Peak
2389.99	47.08	-6.92	54.00	46.98	31.86	3.92	35.68	141	308	Average

CH11 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	72.24	-1.76	74.00	71.91	31.98	4.05	35.70	100	0	Peak
2483.50	50.88	-3.12	54.00	50.55	31.98	4.05	35.70	100	26	Average

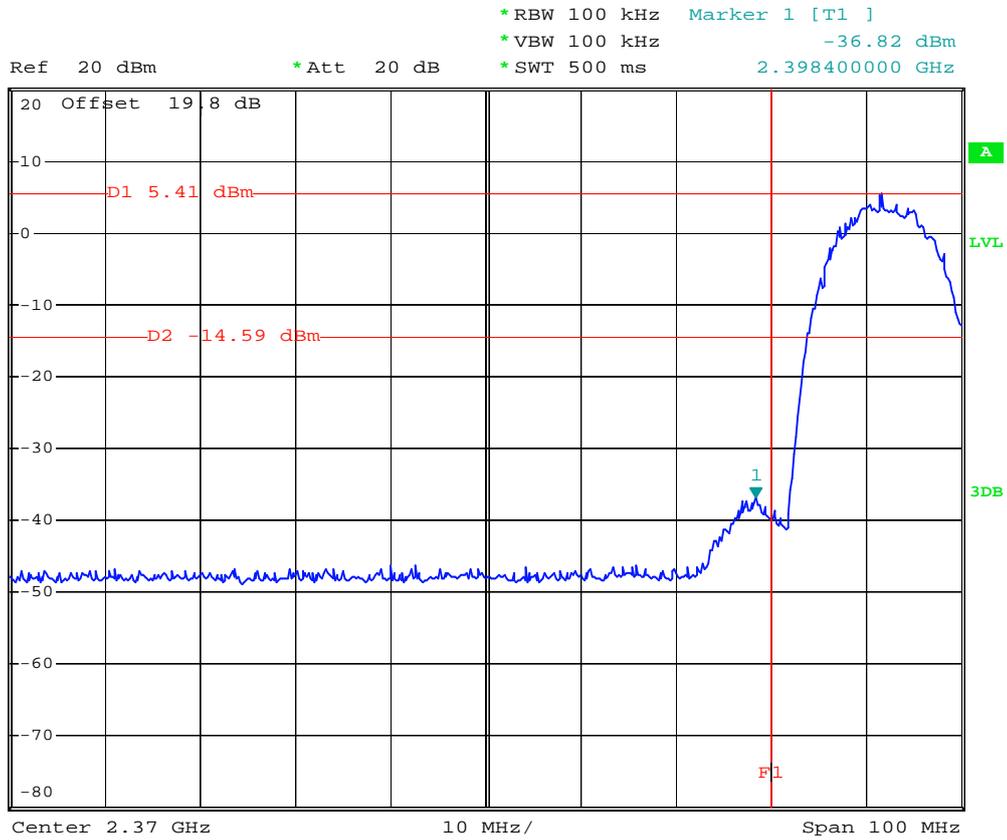
CH11 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	68.79	-5.21	74.00	68.46	31.98	4.05	35.70	100	0	Peak
2483.66	47.24	-6.76	54.00	46.91	31.98	4.05	35.70	114.	309	Average

5.4.5 20dB Band Edge

WLAN 802.11b

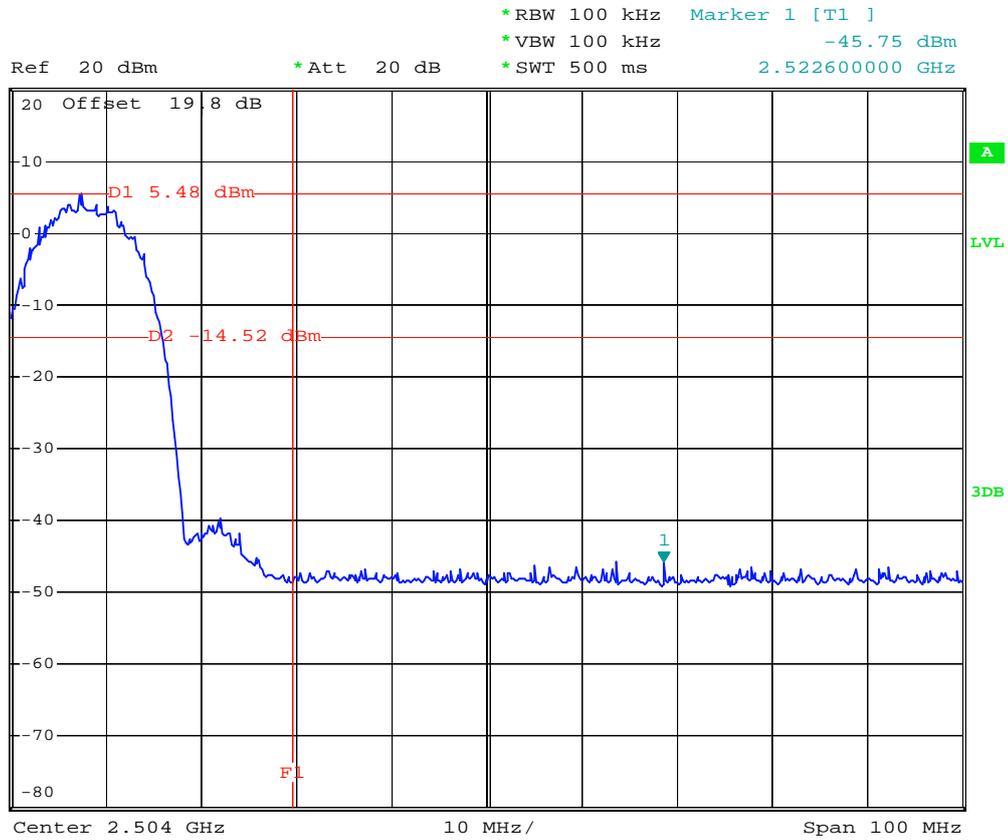
CH01



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WLAN 802.11b

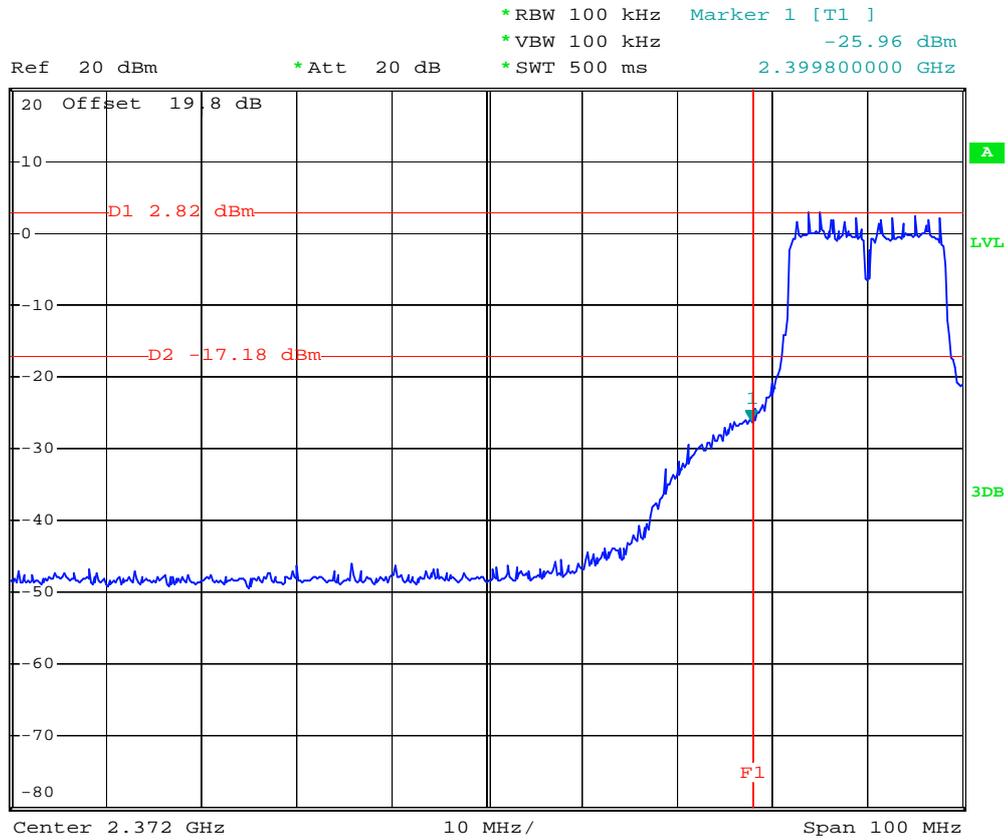
CH11



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WLAN 802.11g

CH01



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WLAN 802.11g

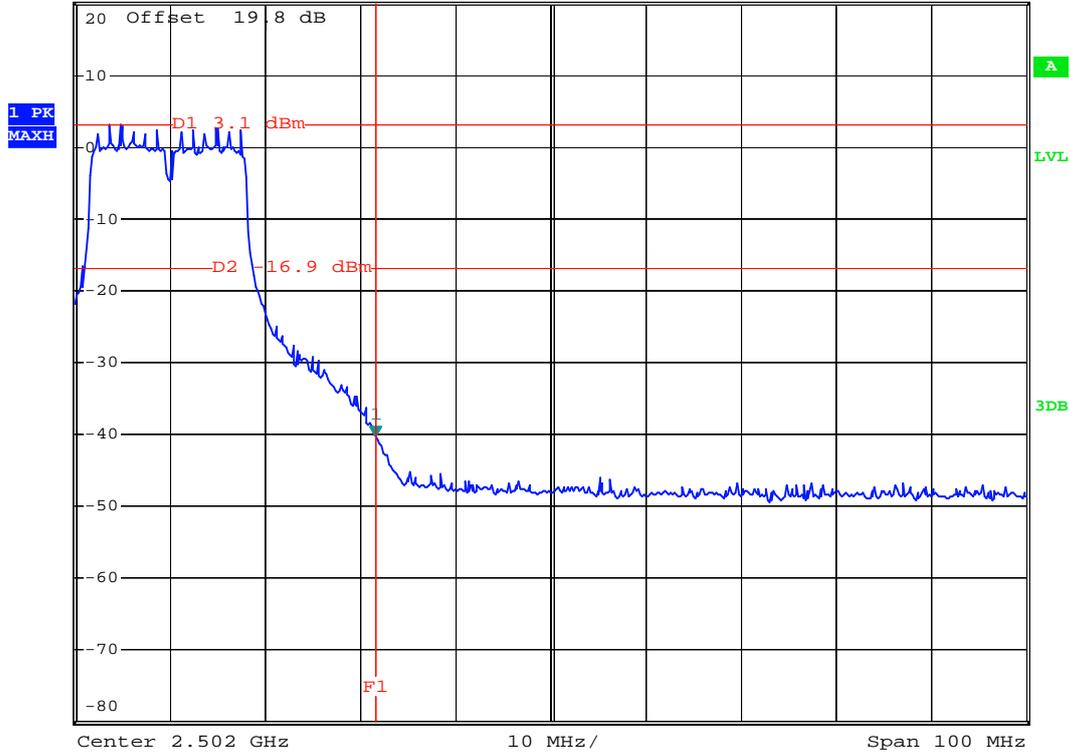
CH11



*RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -40.23 dBm
 *SWT 500 ms 2.483600000 GHz

Ref 20 dBm

*Att 20 dB



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5.5 Peak Output Power Measurement

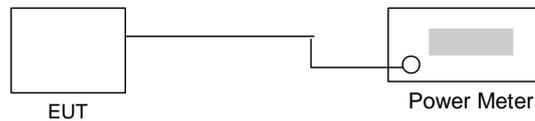
5.5.1 Measuring Instruments

As described in chapter 6 of this test report.

5.5.2 Test Procedure

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter for WLAN measurement. The power is equal to the reading level on power meter plus cable loss at the EUT antenna terminal.

5.5.3 Test Setup Layout



5.5.4 Test Result

- Application Type : WLAN 802.11b/g
- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : C.K.C

WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	15.26	1W/30 dBm
06	2437	15.88	1W/30 dBm
11	2462	15.28	1W/30 dBm

WLAN 802.11g

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	21.22	1W/30 dBm
06	2437	21.52	1W/30 dBm
11	2462	21.26	1W/30 dBm

5.6 Conducted Emission

5.6.1 Measuring Instruments

As described in chapter 6 of this test Report.

The receiver setting :

150 KHz ~ 30 MHz	Detector : Quasi – Peak and Average Bandwidth : 9 KHz
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5.6.2 Test Procedures

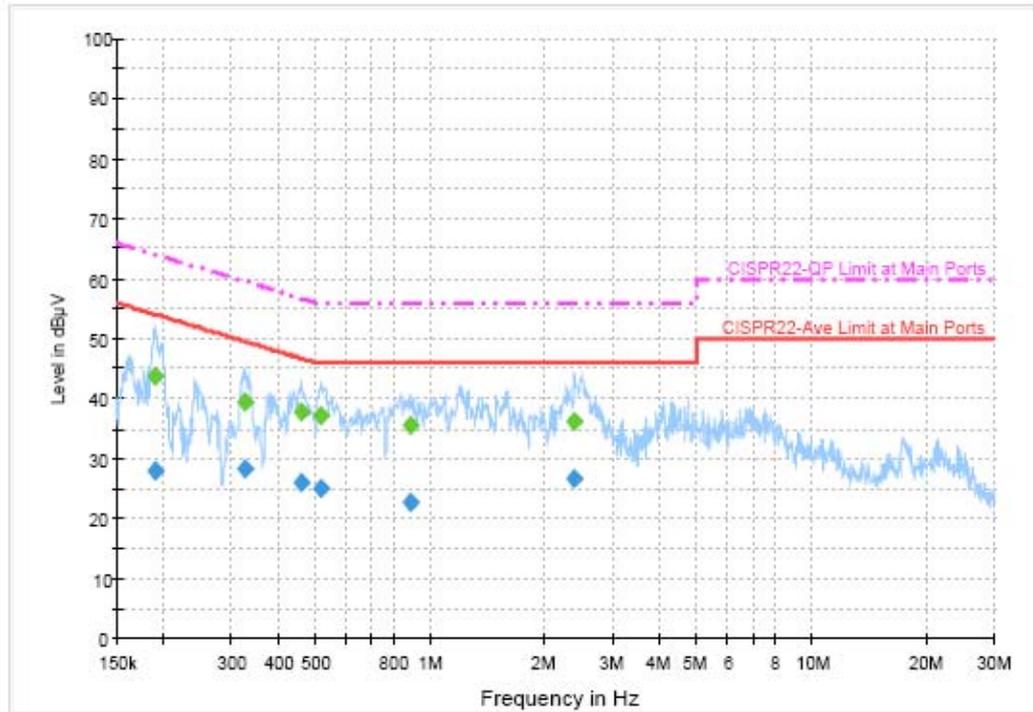
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power port of a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISN.
4. The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

5.6.3 Test Data

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 1

■ The test that passed at minimum margin was marked by the frame in the following table.

<Line>



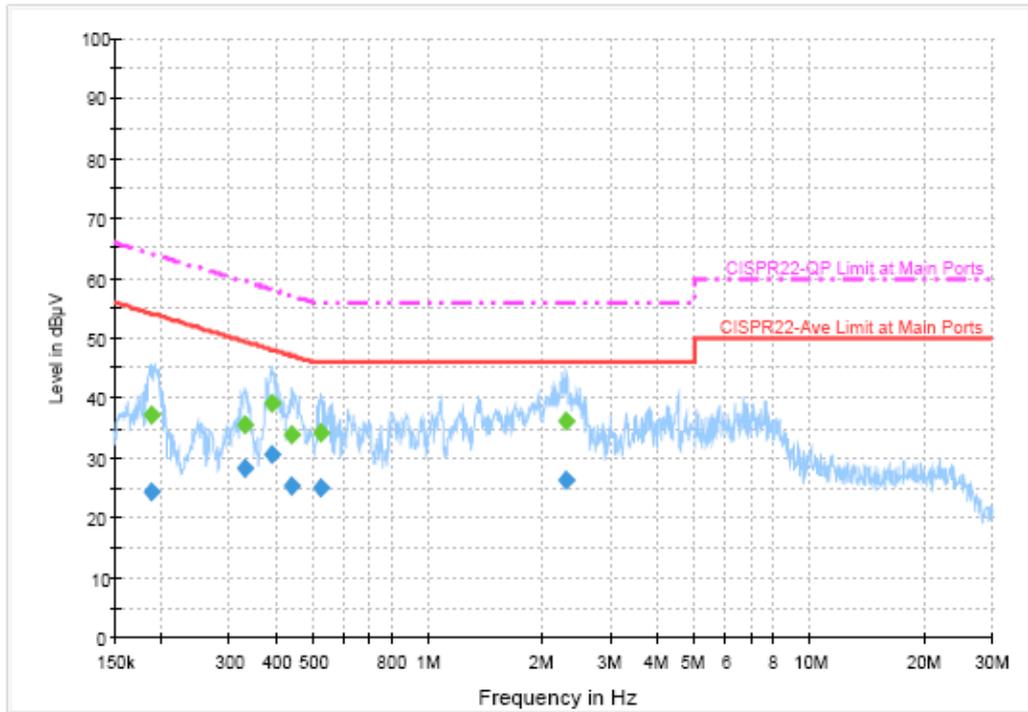
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190600	27.8	Off	L1	9.5	26.2	54.0
0.324110	28.3	Off	L1	9.5	21.3	49.6
0.456870	25.9	Off	L1	9.5	20.8	46.7
0.517060	25.0	Off	L1	9.5	21.0	46.0
0.882790	22.8	Off	L1	9.6	23.2	46.0
2.385360	26.6	Off	L1	9.6	19.4	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190600	43.6	Off	L1	9.5	20.4	64.0
0.324110	39.4	Off	L1	9.5	20.2	59.6
0.456870	37.7	Off	L1	9.5	19.0	56.7
0.517060	37.1	Off	L1	9.5	19.0	56.0
0.882790	35.7	Off	L1	9.6	20.3	56.0
2.385360	36.3	Off	L1	9.6	19.7	56.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.188330	24.2	Off	N	9.6	29.9	54.1
0.329330	28.3	Off	N	9.5	21.2	49.5
0.386350	30.7	Off	N	9.5	17.4	48.1
0.439000	25.2	Off	N	9.5	21.9	47.1
0.523290	25.0	Off	N	9.5	21.0	46.0
2.301180	26.5	Off	N	9.6	19.5	46.0

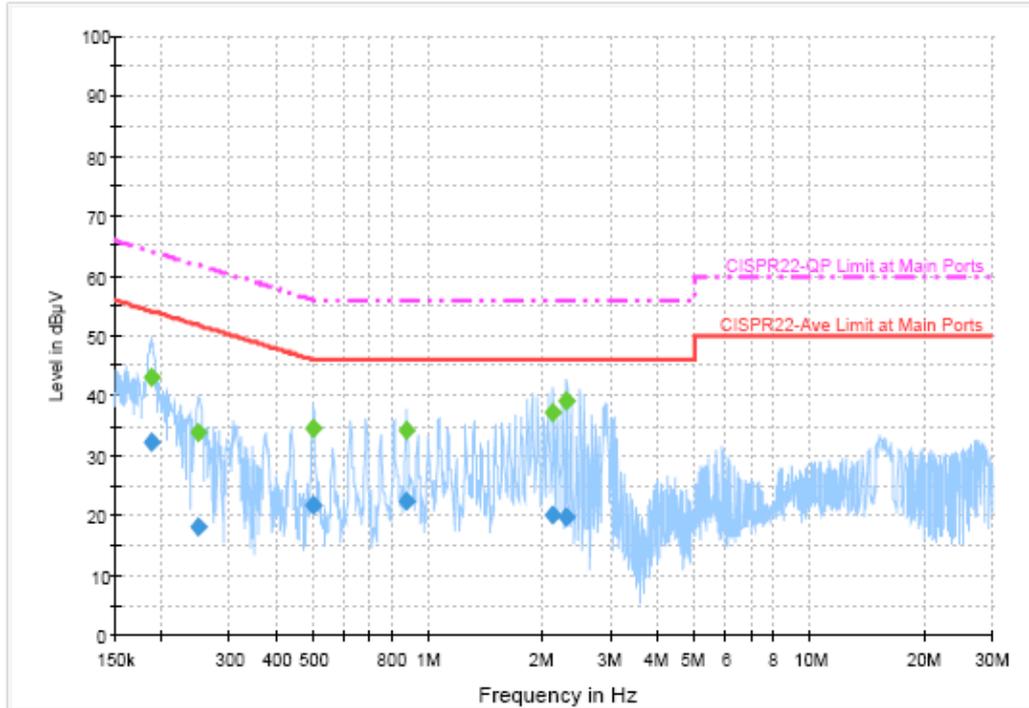
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.188330	37.1	Off	N	9.6	27.0	64.1
0.329330	35.4	Off	N	9.5	24.1	59.5
0.386350	39.0	Off	N	9.5	19.1	58.1
0.439000	34.0	Off	N	9.5	23.1	57.1
0.523290	34.1	Off	N	9.5	21.9	56.0
2.301180	36.1	Off	N	9.6	19.9	56.0

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 2

■ The test that passed at minimum margin was marked by the frame in the following table.

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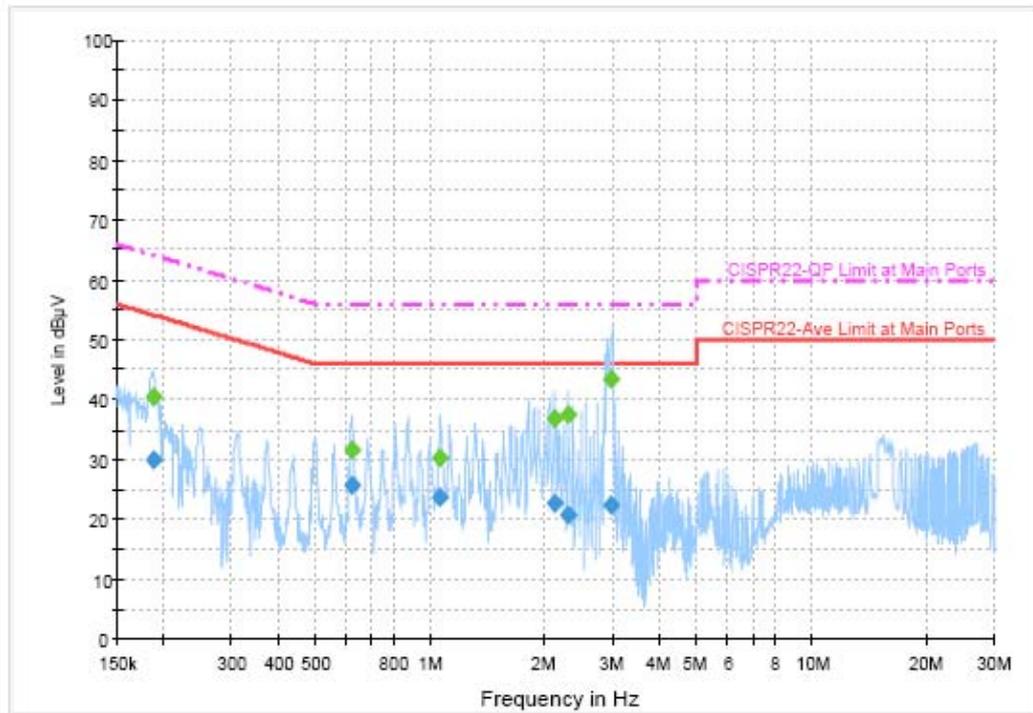
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.187580	32.3	Off	L1	9.5	21.8	54.1
0.250040	18.0	Off	L1	9.5	33.8	51.8
0.498810	21.7	Off	L1	9.5	24.3	46.0
0.872290	22.4	Off	L1	9.6	23.6	46.0
2.116130	20.2	Off	L1	9.6	25.8	46.0
2.301180	19.8	Off	L1	9.6	26.2	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.187580	43.2	Off	L1	9.5	20.9	64.1
0.250040	34.0	Off	L1	9.5	27.8	61.8
0.498810	34.4	Off	L1	9.5	21.6	56.0
0.872290	34.1	Off	L1	9.6	21.9	56.0
2.116130	37.3	Off	L1	9.6	18.7	56.0
2.301180	39.2	Off	L1	9.6	16.8	56.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186830	30.0	Off	N	9.6	24.2	54.2
0.621290	25.8	Off	N	9.5	20.2	46.0
1.056520	23.6	Off	N	9.6	22.4	46.0
2.107700	22.8	Off	N	9.6	23.2	46.0
2.292010	20.7	Off	N	9.6	25.3	46.0
2.976080	22.3	Off	N	9.6	23.7	46.0

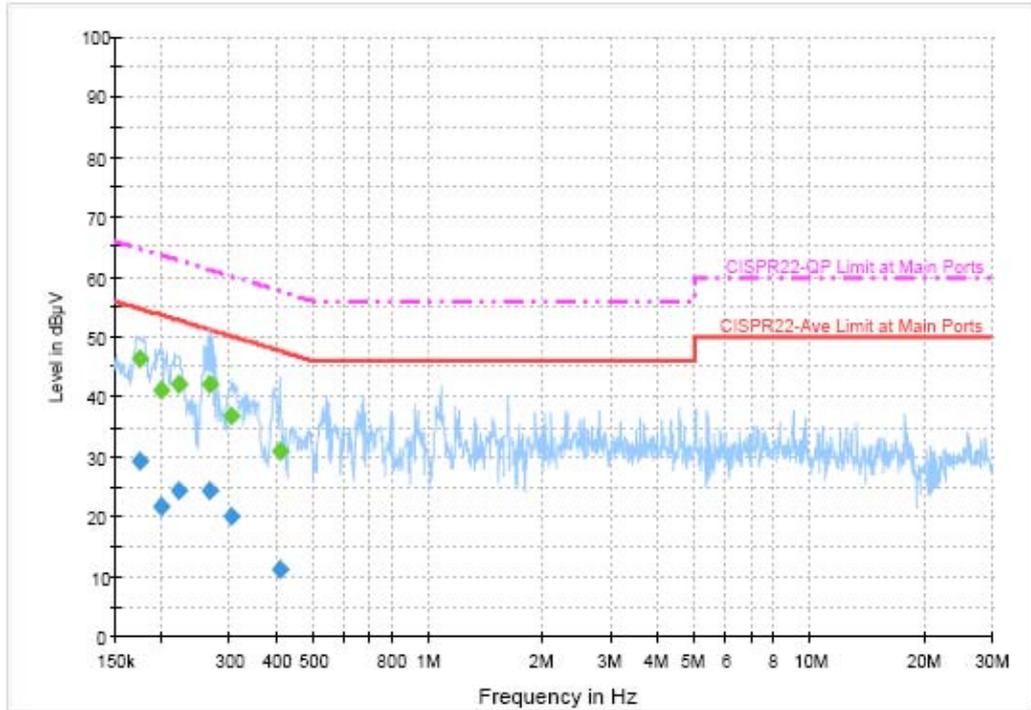
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186830	40.4	Off	N	9.6	23.8	64.2
0.621290	31.5	Off	N	9.5	24.5	56.0
1.056520	30.3	Off	N	9.6	25.7	56.0
2.107700	36.7	Off	N	9.6	19.3	56.0
2.292010	37.4	Off	N	9.6	18.6	56.0
2.976080	43.3	Off	N	9.6	12.7	56.0

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 3

■ The test that passed at minimum margin was marked by the frame in the following table.

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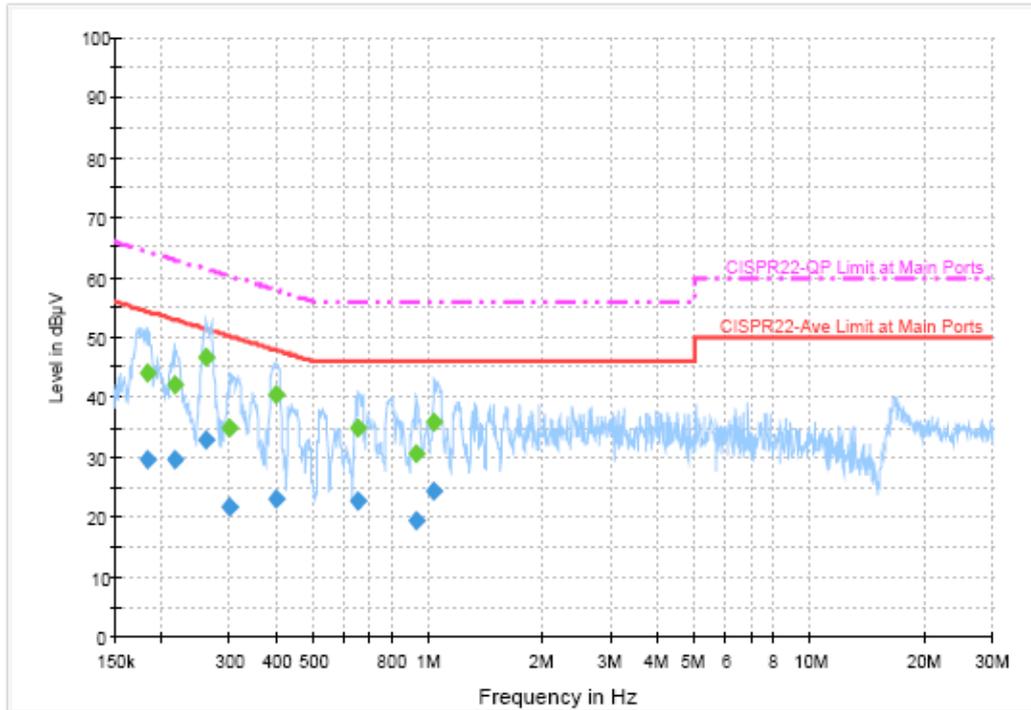
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174570	29.3	Off	L1	9.5	25.4	54.7
0.199950	21.6	Off	L1	9.5	32.0	53.6
0.221820	24.4	Off	L1	9.5	28.4	52.8
0.267600	24.3	Off	L1	9.5	26.9	51.2
0.305280	20.2	Off	L1	9.5	29.9	50.1
0.405310	11.2	Off	L1	9.5	36.5	47.7

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174570	46.2	Off	L1	9.5	18.5	64.7
0.199950	41.2	Off	L1	9.5	22.4	63.6
0.221820	42.2	Off	L1	9.5	20.6	62.8
0.267600	42.1	Off	L1	9.5	19.1	61.2
0.305280	36.8	Off	L1	9.5	23.3	60.1
0.405310	31.0	Off	L1	9.5	26.7	57.7

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.183140	29.5	Off	N	9.6	24.8	54.3
0.215700	29.7	Off	N	9.5	23.3	53.0
0.261260	32.8	Off	N	9.5	18.6	51.4
0.301640	21.8	Off	N	9.5	28.4	50.2
0.395720	23.2	Off	N	9.5	24.7	47.9
0.651770	22.8	Off	N	9.5	23.2	46.0
...

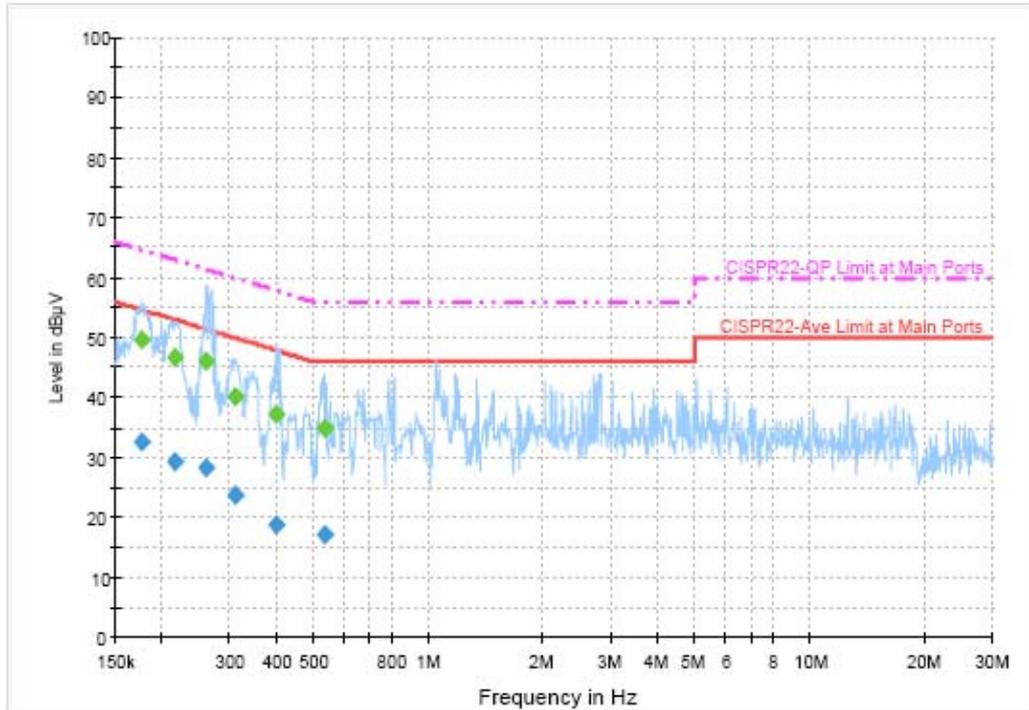
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.183140	44.2	Off	N	9.6	20.1	64.3
0.215700	42.1	Off	N	9.5	20.9	63.0
0.261260	46.6	Off	N	9.5	14.8	61.4
0.301640	34.7	Off	N	9.5	25.5	60.2
0.395720	40.5	Off	N	9.5	17.4	57.9
0.651770	34.9	Off	N	9.5	21.1	56.0
...

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 4

■ The test that passed at minimum margin was marked by the frame in the following table.

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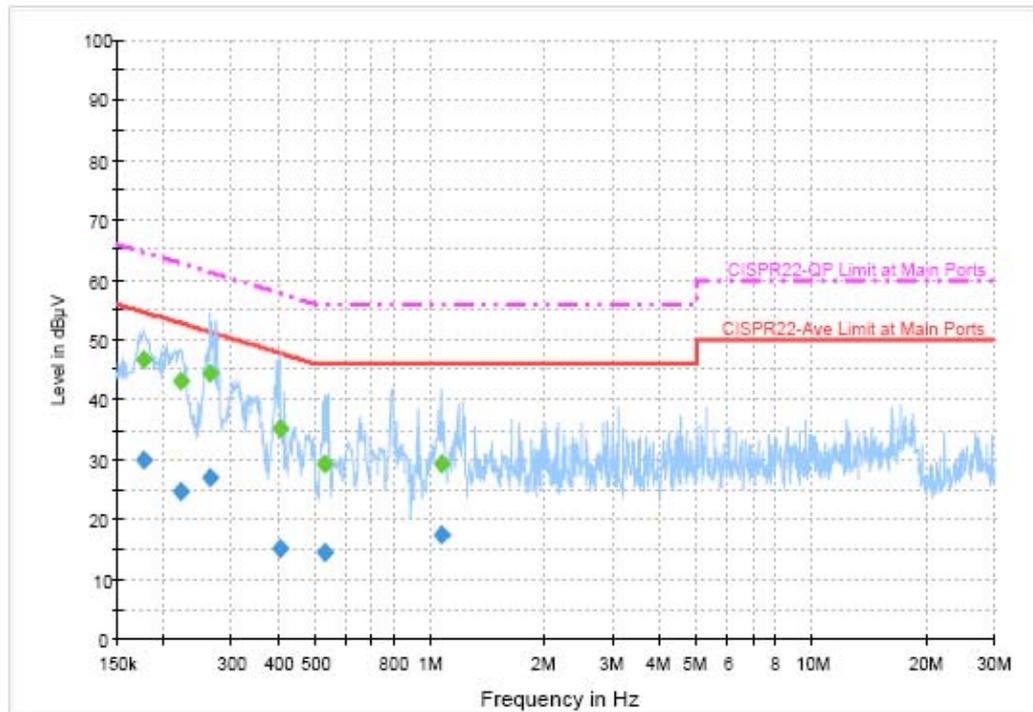
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177380	32.5	Off	L1	9.5	22.1	54.6
0.214850	29.3	Off	L1	9.5	23.7	53.0
0.260220	28.3	Off	L1	9.5	23.1	51.4
0.308950	23.6	Off	L1	9.5	26.4	50.0
0.397300	18.8	Off	L1	9.5	29.1	47.9
0.531710	17.0	Off	L1	9.5	29.0	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177380	49.5	Off	L1	9.5	15.1	64.6
0.214850	46.6	Off	L1	9.5	16.4	63.0
0.260220	46.2	Off	L1	9.5	15.2	61.4
0.308950	40.2	Off	L1	9.5	19.8	60.0
0.397300	37.1	Off	L1	9.5	20.8	57.9
0.531710	35.0	Off	L1	9.5	21.0	56.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177380	29.8	Off	N	9.6	24.8	54.6
0.220050	24.6	Off	N	9.5	28.2	52.8
0.263360	27.0	Off	N	9.5	24.3	51.3
0.400480	15.3	Off	N	9.6	32.5	47.8
0.525380	14.5	Off	N	9.5	31.5	46.0
1.060740	17.4	Off	N	9.6	28.6	46.0

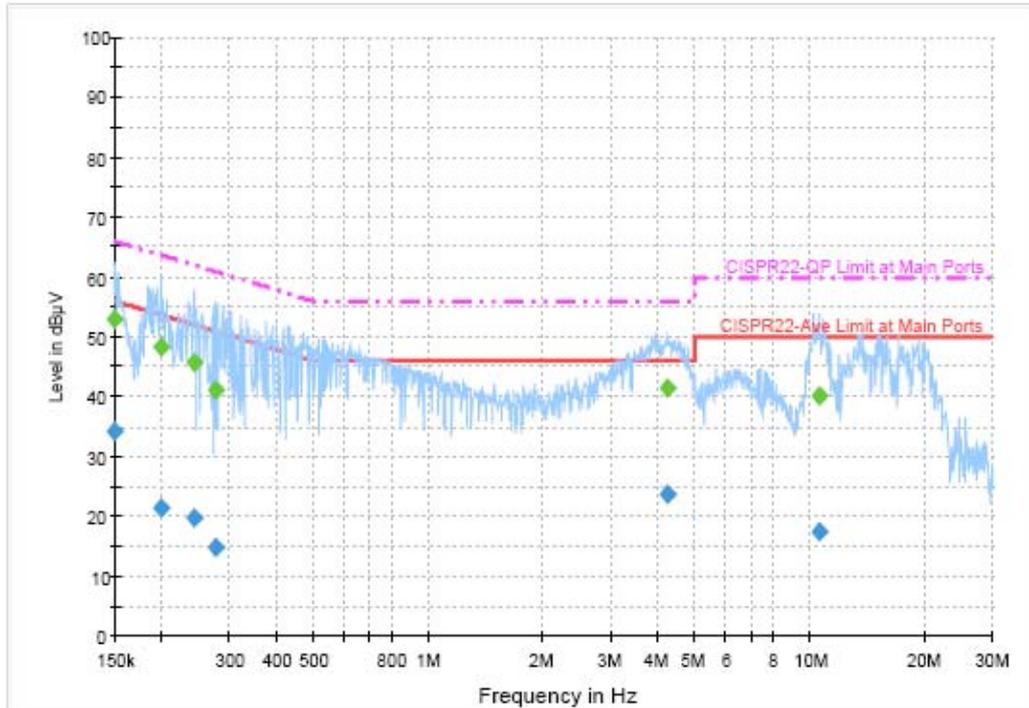
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177380	46.8	Off	N	9.6	17.8	64.6
0.220050	43.1	Off	N	9.5	19.7	62.8
0.263360	44.4	Off	N	9.5	16.9	61.3
0.400480	35.1	Off	N	9.6	22.7	57.8
0.525380	29.2	Off	N	9.5	26.8	56.0
1.060740	29.2	Off	N	9.6	26.8	56.0

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 5

■ The test that passed at minimum margin was marked by the frame in the following table.

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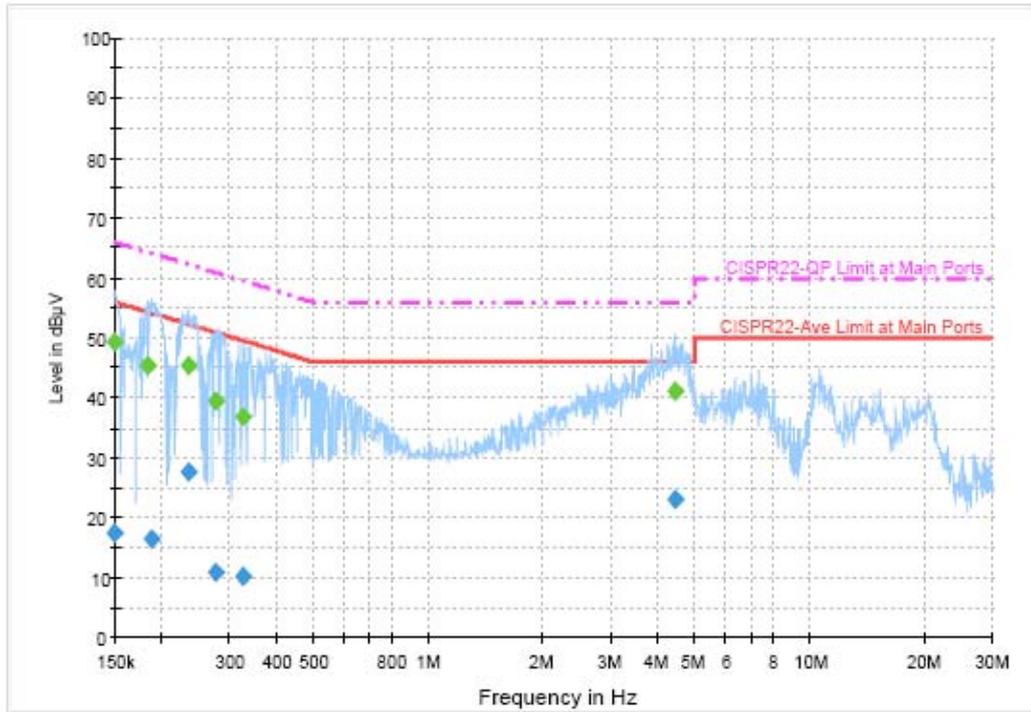
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150600	34.2	Off	L1	9.5	21.8	56.0
0.198360	21.4	Off	L1	9.5	32.3	53.7
0.242180	19.6	Off	L1	9.6	32.4	52.0
0.277390	14.8	Off	L1	9.5	36.1	50.9
4.221580	23.7	Off	L1	9.6	22.3	46.0
10.531630	17.6	Off	L1	9.7	32.4	50.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150600	52.8	Off	L1	9.5	13.2	66.0
0.198360	48.3	Off	L1	9.5	15.4	63.7
0.242180	45.7	Off	L1	9.6	16.3	62.0
0.277390	41.1	Off	L1	9.5	19.8	60.9
4.221580	41.4	Off	L1	9.6	14.6	56.0
10.531630	40.0	Off	L1	9.7	20.0	60.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	17.6	Off	N	9.5	38.4	56.0
0.187580	16.6	Off	N	9.6	37.5	54.1
0.233630	27.7	Off	N	9.6	24.6	52.3
0.276280	10.7	Off	N	9.5	40.2	50.9
0.325410	10.2	Off	N	9.5	39.4	49.6
4.411090	22.9	Off	N	9.7	23.1	46.0

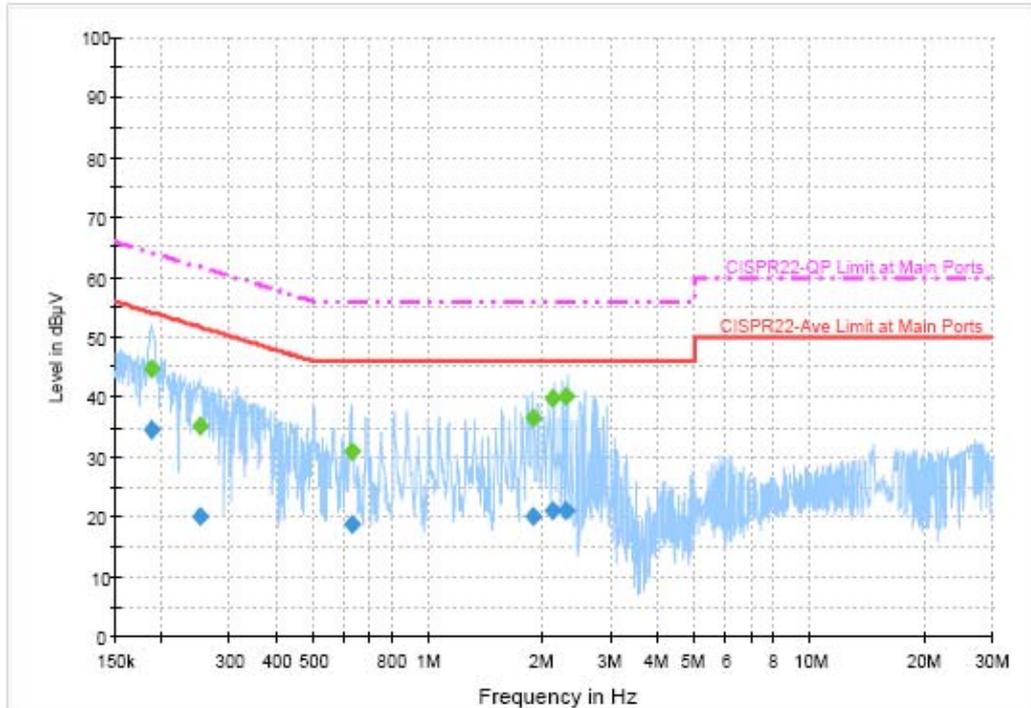
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	49.2	Off	N	9.5	16.8	66.0
0.183140	45.4	Off	N	9.6	18.9	64.3
0.233630	45.6	Off	N	9.6	16.7	62.3
0.276280	39.5	Off	N	9.5	21.4	60.9
0.325410	36.9	Off	N	9.5	22.7	59.6
4.411090	41.2	Off	N	9.7	14.8	56.0

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 6

■ The test that passed at minimum margin was marked by the frame in the following table.

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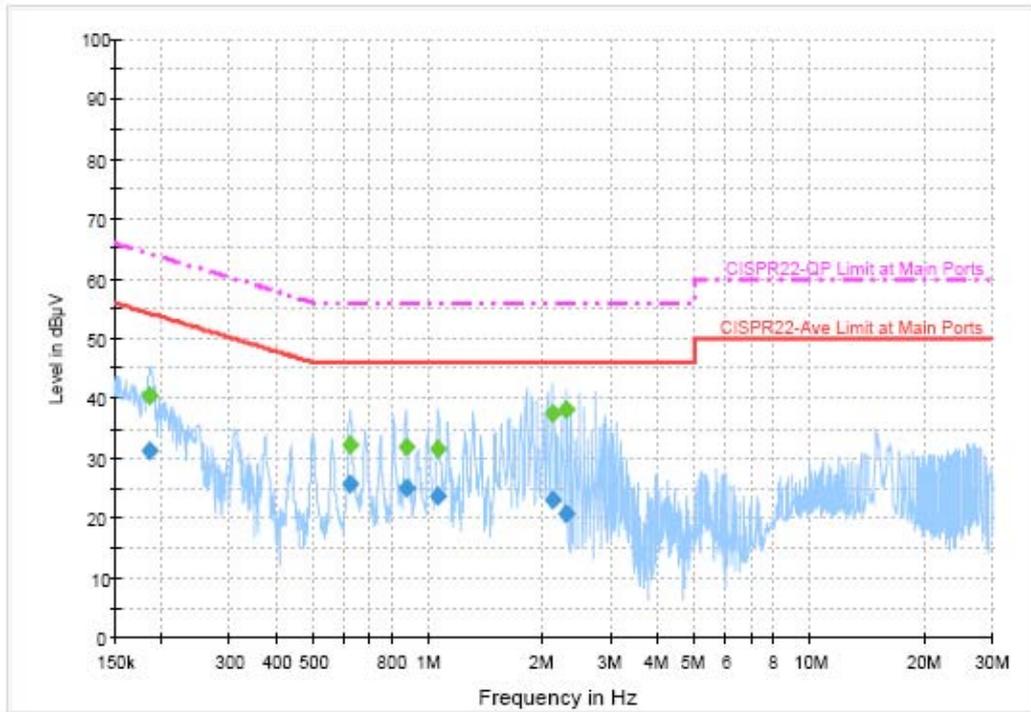
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.188330	34.5	Off	L1	9.5	19.6	54.1
0.251040	20.2	Off	L1	9.6	31.5	51.7
0.626270	18.9	Off	L1	9.5	27.1	46.0
1.869810	19.9	Off	L1	9.6	26.1	46.0
2.112780	20.9	Off	L1	9.6	25.1	46.0
2.302640	20.9	Off	L1	9.6	25.1	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.188330	44.9	Off	L1	9.5	19.2	64.1
0.251040	35.2	Off	L1	9.6	26.5	61.7
0.626270	30.8	Off	L1	9.5	25.2	56.0
1.869810	36.6	Off	L1	9.6	19.4	56.0
2.112780	39.9	Off	L1	9.6	16.1	56.0
2.302640	40.2	Off	L1	9.6	15.8	56.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186090	31.4	Off	N	9.6	22.8	54.2
0.621290	25.6	Off	N	9.5	20.4	46.0
0.868810	25.1	Off	N	9.6	20.9	46.0
1.056520	23.7	Off	N	9.6	22.3	46.0
2.107700	22.9	Off	N	9.6	23.1	46.0
2.292010	20.7	Off	N	9.6	25.3	46.0

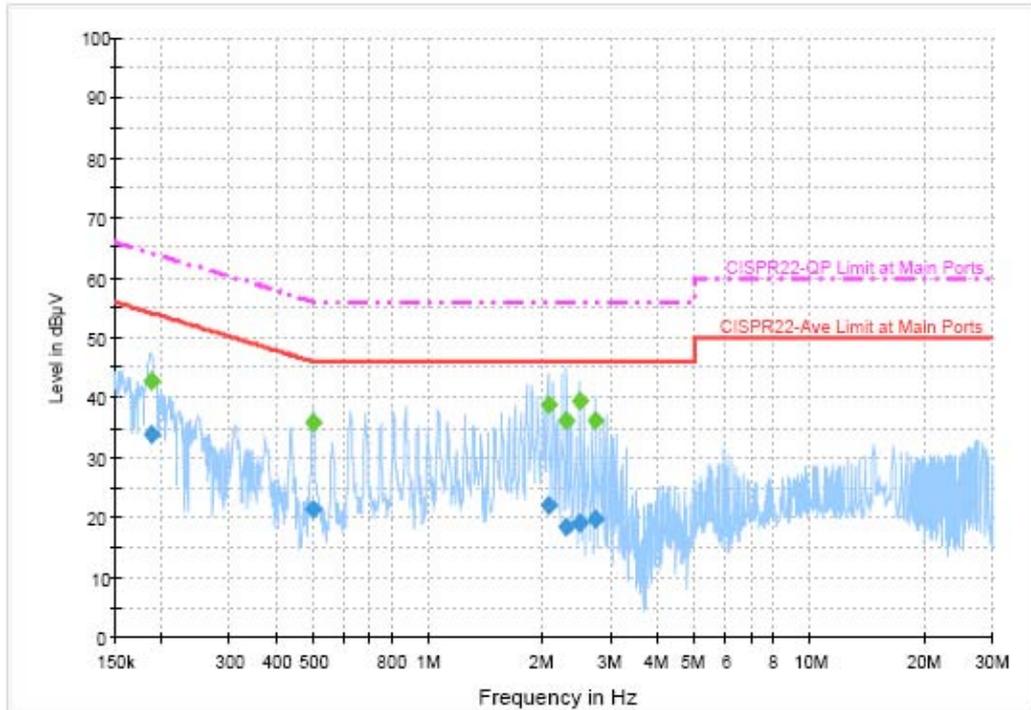
Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186090	40.6	Off	N	9.6	23.6	64.2
0.621290	32.4	Off	N	9.5	23.6	56.0
0.868810	31.9	Off	N	9.6	24.1	56.0
1.056520	31.4	Off	N	9.6	24.6	56.0
2.107700	37.7	Off	N	9.6	18.3	56.0
2.292010	38.2	Off	N	9.6	17.8	56.0

- Temperature : 24~25°C
- Relative Humidity : 55~57%
- Test Enginner : Sam
- Test Mode : Mode 7

■ The test that passed at minimum margin was marked by the frame in the following table.

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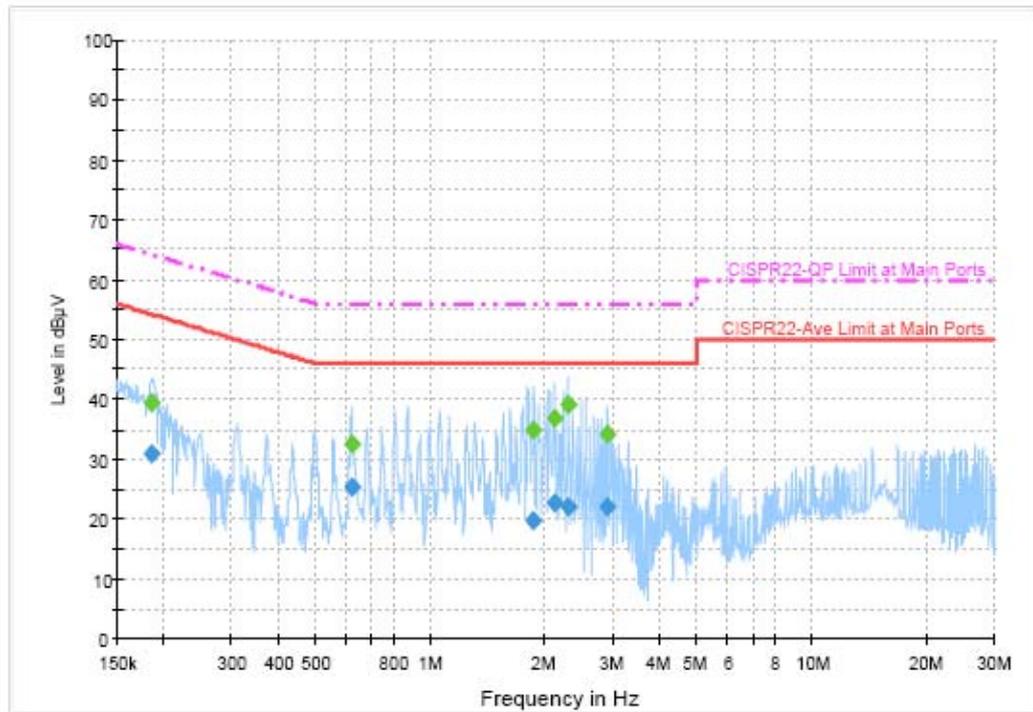
Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186830	34.0	Off	L1	9.5	20.2	54.2
0.496830	21.5	Off	L1	9.5	24.6	46.1
2.049620	22.0	Off	L1	9.6	24.0	46.0
2.301180	18.5	Off	L1	9.6	27.5	46.0
2.482510	19.1	Off	L1	9.6	26.9	46.0
2.732120	19.7	Off	L1	9.6	26.3	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186830	42.8	Off	L1	9.5	21.4	64.2
0.496830	35.7	Off	L1	9.5	20.4	56.1
2.049620	39.0	Off	L1	9.6	17.0	56.0
2.301180	36.3	Off	L1	9.6	19.7	56.0
2.482510	39.4	Off	L1	9.6	16.6	56.0
2.732120	36.1	Off	L1	9.6	19.9	56.0

<Neutral>



Final Measurement Detector 1

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186090	31.1	Off	N	9.6	23.1	54.2
0.621290	25.4	Off	N	9.5	20.6	46.0
1.862360	19.7	Off	N	9.6	26.3	46.0
2.107700	22.7	Off	N	9.6	23.3	46.0
2.292010	21.9	Off	N	9.6	24.1	46.0
2.912330	22.1	Off	N	9.6	23.9	46.0

Final Measurement Detector 2

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186090	39.5	Off	N	9.6	24.7	64.2
0.621290	32.4	Off	N	9.5	23.6	56.0
1.862360	34.9	Off	N	9.6	21.1	56.0
2.107700	37.0	Off	N	9.6	19.0	56.0
2.292010	39.1	Off	N	9.6	16.9	56.0
2.912330	34.2	Off	N	9.6	21.8	56.0

5.7 Radiated Emission Measurement

5.7.1 Measuring Instruments

As described in chapter 6 of this Report.

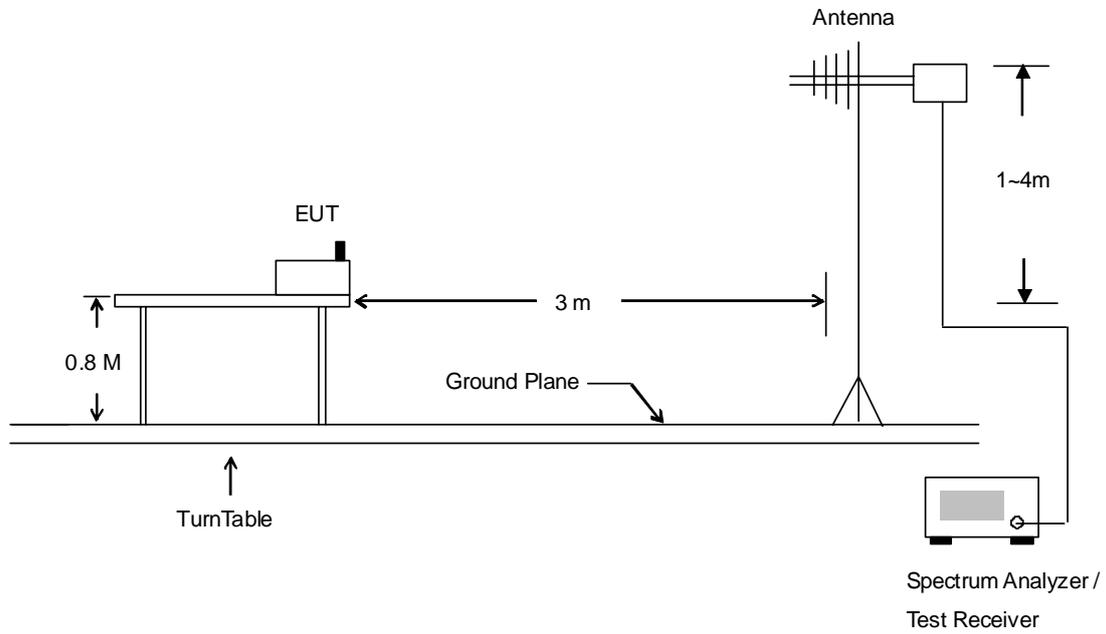
The spectrum analyzer setting :

30 ~ 1000 MHz	Detector : Quasi – Peak Bandwidth : 120 KHz
1 ~ 25 GHz	Detector : Peak and Average Bandwidth : 1 MHz

5.7.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. 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.
5. 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.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, 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.
8. For testing above 1GHz, 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 and reported.

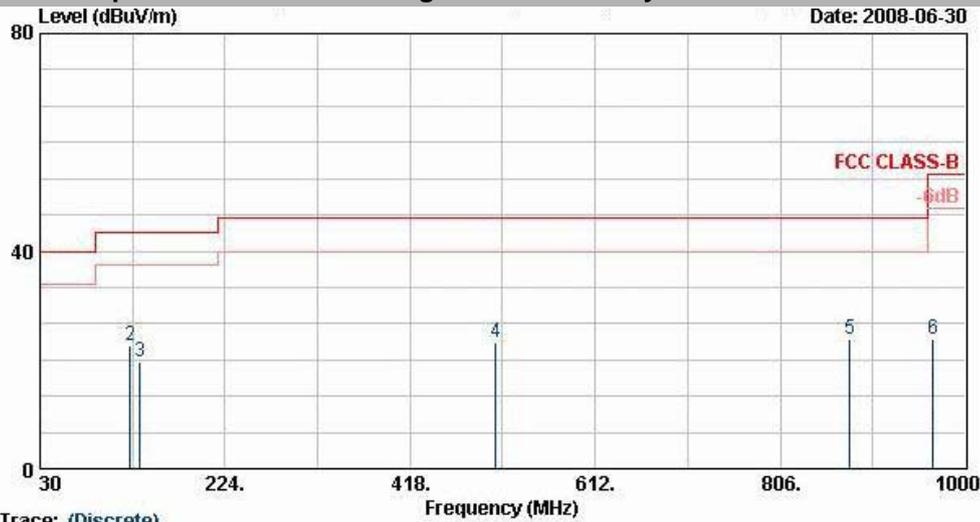
5.7.3 Typical Test Setup Layout of Radiated Emission



5.7.4 Test Data

- Temperature : 25~26°C
- Relating Humidity : 49~51%
- Test Enginner : Sun
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



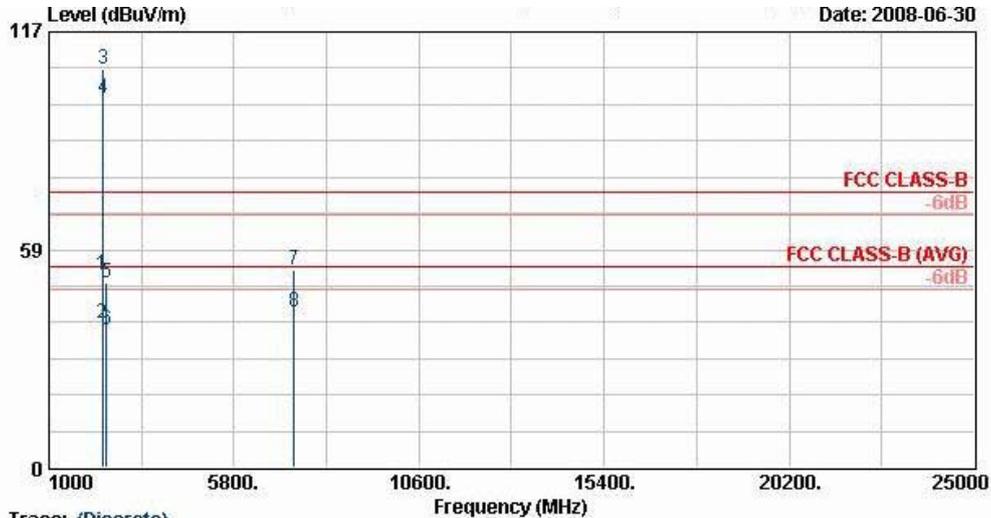
Site :
Condition :
EUT :
Power :
Model :
Memo :
Data Rate :
Plane :
TARET :

Trace: (Discrete)
: 03CH06-HY
: FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
: Smart Phone WCDMA (band I/VIII) +
: GSM/GPRS/EDGE(900/1800/1900)
: 120Vac/60Hz
: FR 830416
: Mode 6
: 11
: H (slide Off)
: 35314202000010801

	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	30.00	23.23	-16.77	40.00	36.77	19.66	0.30	33.50	100	121	Peak
2	124.23	22.63	-20.87	43.50	42.82	12.64	0.50	33.34	---	---	Peak
3	134.49	19.66	-23.84	43.50	41.53	11.05	0.50	33.43	---	---	Peak
4	507.90	23.11	-22.89	46.00	37.91	17.51	1.00	33.31	---	---	Peak
5	878.90	23.89	-22.11	46.00	34.96	20.38	1.30	32.75	---	---	Peak
6	966.40	23.91	-30.09	54.00	33.93	21.00	1.30	32.32	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



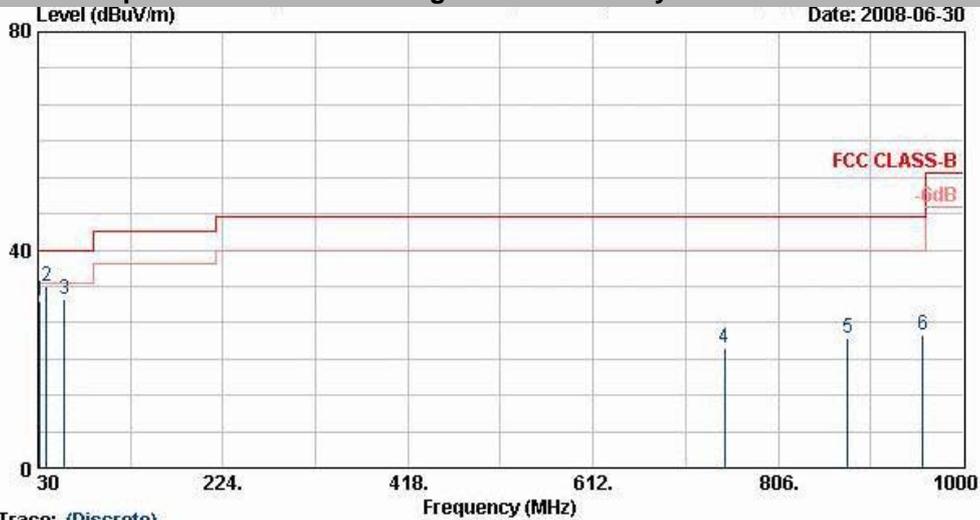
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 6
 Data Rate : 11
 Plane : H (slide Off)
 T&ET : 35314202000010601

	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	2384.10	51.76	-22.24	74.00	51.66	31.86	3.92	35.68	100	0	Peak
2	2384.10	38.64	-15.36	54.00	38.56	31.83	3.92	35.68	100	26	Average
3 X	2412.00	107.17			107.02	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	99.05			98.90	31.88	3.95	35.68	100	26	Average
5	2492.00	49.76	-24.24	74.00	49.41	32.00	4.05	35.70	100	0	Peak
6	2492.00	36.84	-17.16	54.00	36.49	32.00	4.05	35.70	100	26	Average
7	7362.00	53.15	-20.85	74.00	46.42	35.66	7.22	36.14	100	0	Peak
8	7362.00	41.94	-12.06	54.00	35.21	35.66	7.22	36.14	100	151	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

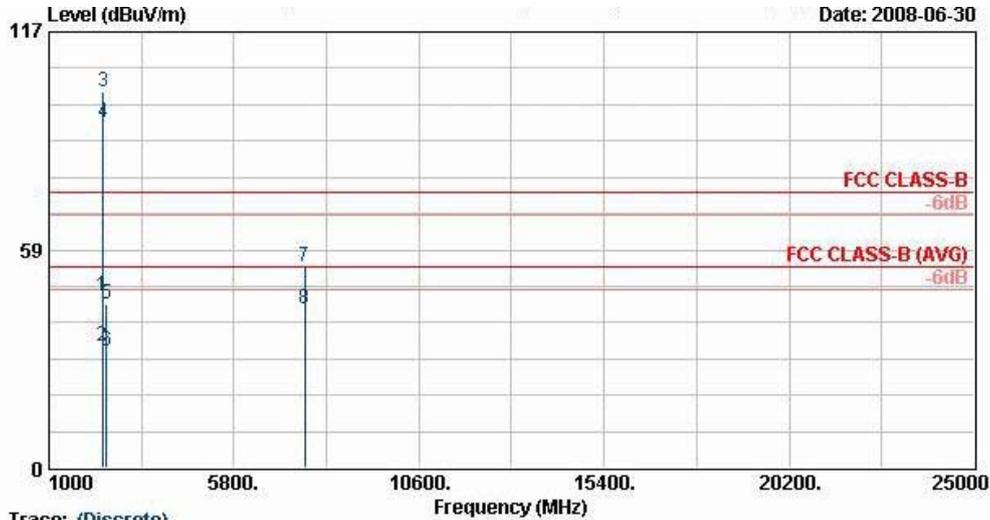


Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIIT) + GSM/GPRS/EDGE(800/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 6
 Data Rate : 11
 Plane : H (slide Off)
 TMET : 35314202000010601

	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	32.43	30.69	-9.31	40.00	46.23	17.54	0.30	33.38	---	---	Peak
2	39.18	33.24	-6.76	40.00	52.13	14.03	0.30	33.22	100	216	Peak
3	58.08	30.95	-9.05	40.00	57.02	6.91	0.40	33.38	---	---	Peak
4	749.40	21.95	-24.05	46.00	34.37	19.35	1.10	32.87	---	---	Peak
5	878.90	23.76	-22.24	46.00	34.83	20.38	1.30	32.75	---	---	Peak
6	957.30	24.30	-21.70	46.00	34.48	20.94	1.27	32.38	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

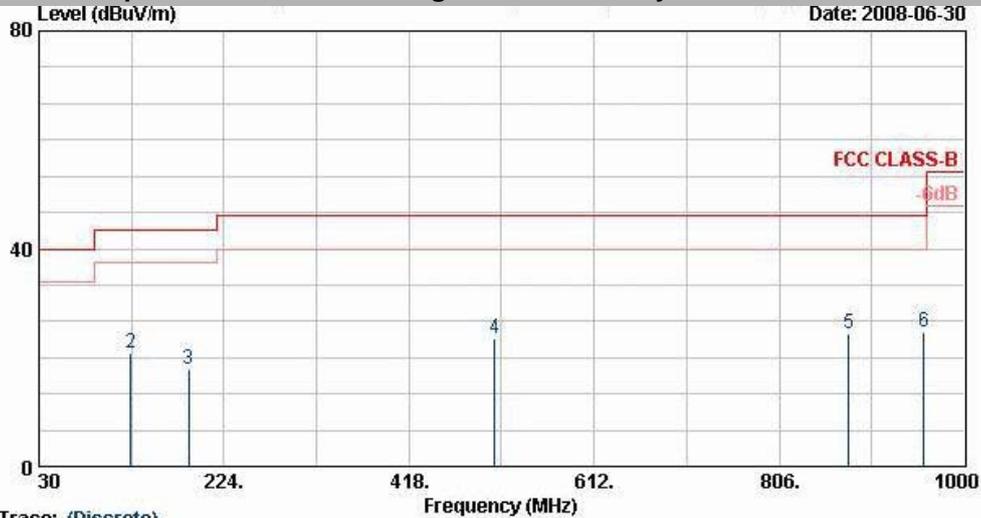
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIII) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 6
 Data Rate : 11
 Plane : H (slide Off)
 TWT : 35314202000010601

	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	2384.86	46.19	-27.81	74.00	46.09	31.86	3.92	35.68	100	0	Peak
2	2384.86	32.73	-21.27	54.00	32.65	31.83	3.92	35.68	100	138	Average
3 X	2412.00	100.69			100.54	31.88	3.95	35.68	100	0	Peak
4 X	2412.00	92.50			92.35	31.88	3.95	35.68	100	138	Average
5	2484.00	44.08	-29.92	74.00	43.75	31.98	4.05	35.70	100	0	Peak
6	2484.00	31.31	-22.69	54.00	30.98	31.98	4.05	35.70	100	138	Average
7	7626.00	53.90	-20.10	74.00	47.17	35.63	7.33	36.23	100	0	Peak
8	7626.00	42.77	-11.23	54.00	36.04	35.63	7.33	36.23	100	251	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 2
- Polarization : Horizontal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

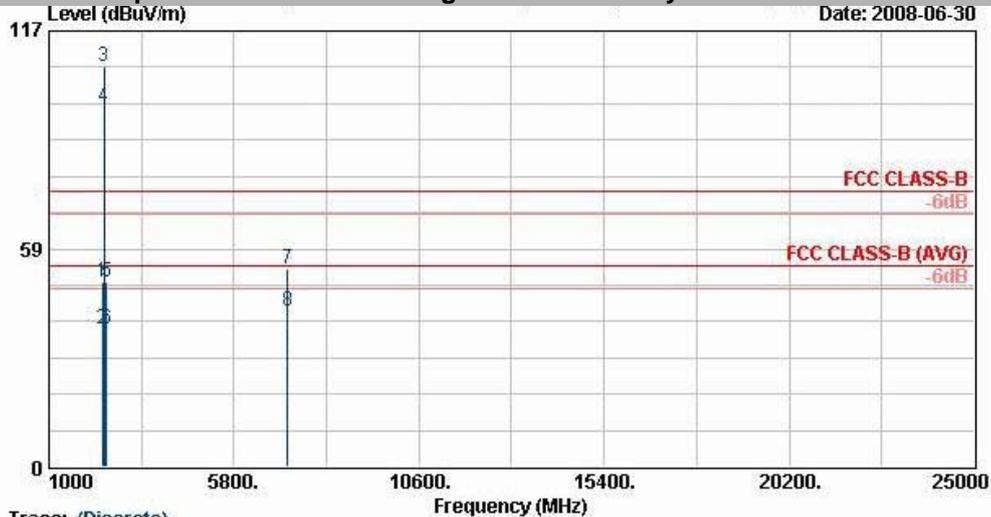


Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Smart Phone WCDMA (band I/VIII) + GSM/GPRS/EDGE(800/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 7
 Data Rate : 11
 Plane : H (slide Off)
 TMET : 35314202000010601

	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	23.20	-16.80	40.00	36.74	19.66	0.30	33.50	100	226	Peak
2	126.39	20.90	-22.60	43.50	41.21	12.50	0.50	33.31	---	---	Peak
3	187.14	17.81	-25.69	43.50	41.31	9.39	0.60	33.49	---	---	Peak
4	507.90	23.52	-22.48	46.00	38.32	17.51	1.00	33.31	---	---	Peak
5	878.90	24.33	-21.67	46.00	35.40	20.38	1.30	32.75	---	---	Peak
6	957.30	24.66	-21.34	46.00	34.84	20.94	1.27	32.38	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band 1/YTIT) + GSM/GPRS/EDGE(800/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 7
 Data Rate : 11
 Plane : H (slide Off)
 IMET : 35314202000010601

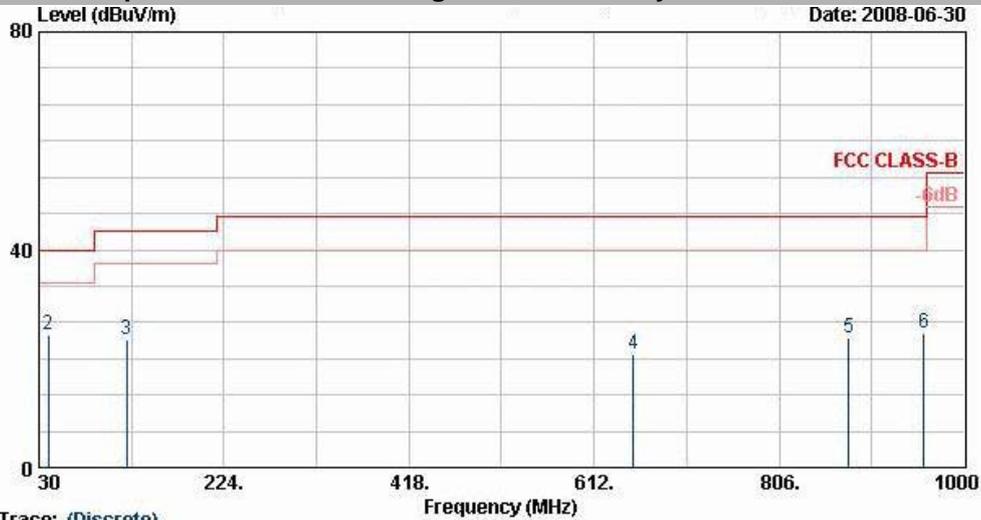
Trace: (Discrete)

	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	2388.00	49.41	-24.59	74.00	49.31	31.86	3.92	35.68	100	0	Peak
2	2388.00	37.11	-16.89	54.00	37.01	31.86	3.92	35.68	100	29	Average
3 X	2437.00	107.58			107.35	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	96.41			96.18	31.93	3.99	35.69	100	29	Average
5	2500.00	49.56	-24.44	74.00	49.21	32.00	4.05	35.70	100	0	Peak
6	2500.00	36.90	-17.10	54.00	36.55	32.00	4.05	35.70	100	29	Average
7	7191.00	53.06	-20.94	74.00	46.26	35.72	7.16	36.08	100	0	Peak
8	7191.00	41.81	-12.19	54.00	35.01	35.72	7.16	36.08	100	182	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin is marked by the boldface in the following table.

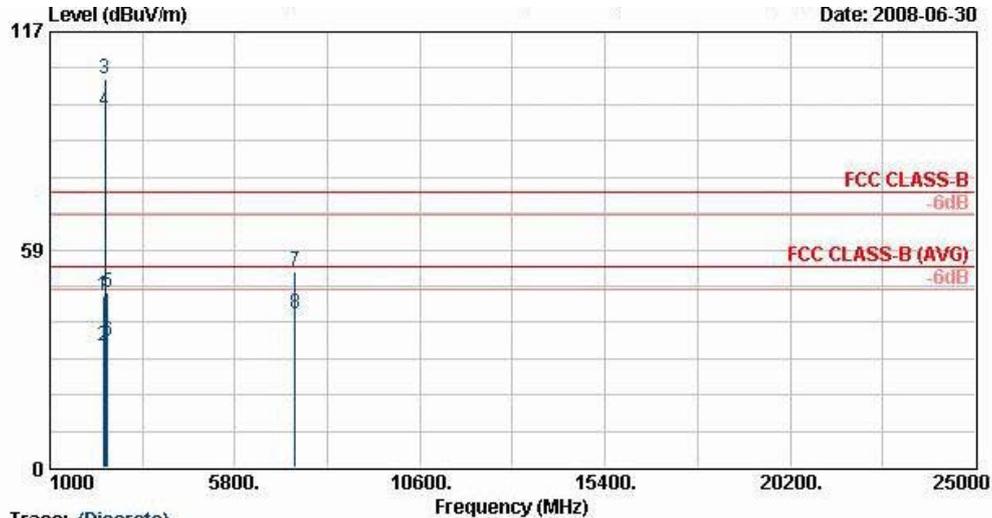


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIII) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 7
 Data Rate : 11
 Plane : H (slide Off)
 TMET : 35314202000010601

	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	23.82	-16.18	40.00	37.36	19.66	0.30	33.50	---	---	Peak
2	39.99	24.44	-15.56	40.00	43.83	13.51	0.30	33.20	100	259	Peak
3	121.53	23.44	-20.06	43.50	43.72	12.60	0.50	33.38	---	---	Peak
4	652.80	20.76	-25.24	46.00	34.00	18.69	1.10	33.02	---	---	Peak
5	878.90	23.77	-22.23	46.00	34.84	20.38	1.30	32.75	---	---	Peak
6	957.30	24.62	-21.38	46.00	34.79	20.94	1.27	32.38	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



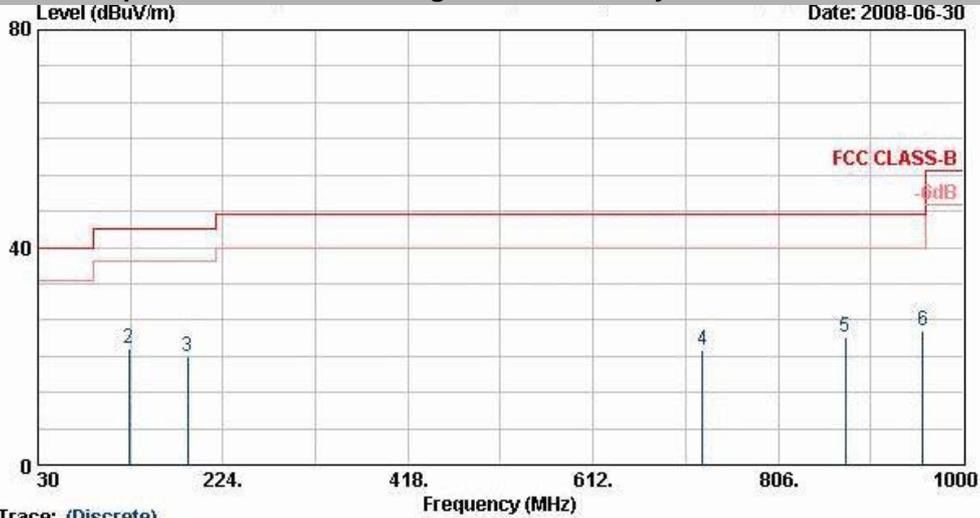
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(800/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 7
 Data Rate : 11
 Plane : H (slide Off)
 T&ET : 35314202000010601

	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	2382.00	46.10	-27.90	74.00	46.02	31.83	3.92	35.68	100	0	Peak
2	2382.00	32.56	-21.44	54.00	32.48	31.83	3.92	35.68	136	308	Average
3 X	2437.00	104.19			103.96	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	95.73			95.50	31.93	3.99	35.69	136	308	Average
5	2484.00	46.81	-27.19	74.00	46.48	31.98	4.05	35.70	100	0	Peak
6	2484.00	33.79	-20.21	54.00	33.46	31.98	4.05	35.70	136	308	Average
7	7362.00	52.63	-21.37	74.00	45.89	35.66	7.22	36.14	100	0	Peak
8	7362.00	41.44	-12.56	54.00	34.71	35.66	7.22	36.14	100	221	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 3
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

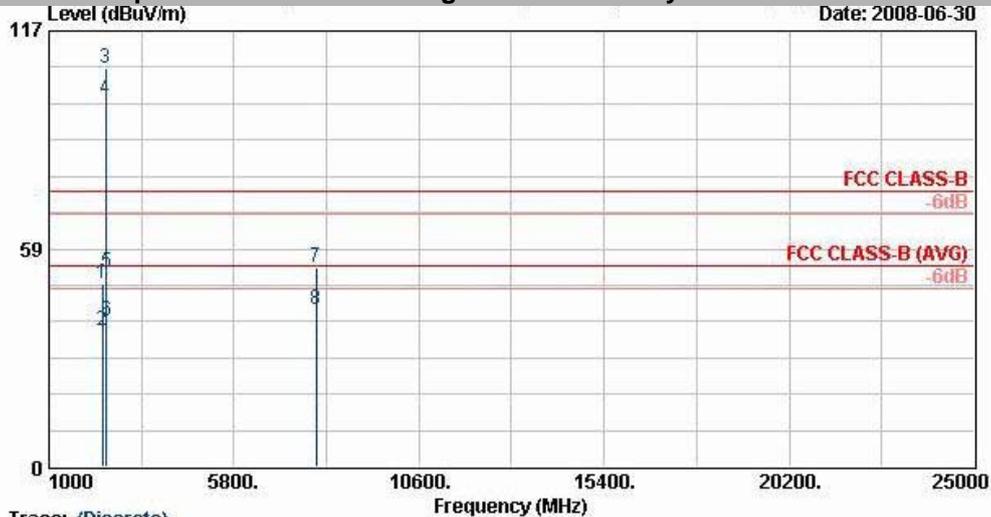
```

Site      : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT      : Smart Phone WCDMA (band 1/VTTT) +
          GSM/GPRS/EDGE(800/1800/1900)
Power    : 120Vac/60Hz
Model    : FR 830416
Memo     : Mode 8
Data Rate : 11
Plane    : H (slide Off)
TIME     : 35314202000010601
    
```

	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	23.52	-16.48	40.00	37.06	19.66	0.30	33.50	100	132	Peak
2	125.04	21.47	-22.03	43.50	41.64	12.66	0.50	33.33	---	---	Peak
3	187.14	19.78	-23.72	43.50	43.29	9.39	0.60	33.49	---	---	Peak
4	726.30	21.09	-24.91	46.00	33.83	19.13	1.14	33.01	---	---	Peak
5	876.80	23.59	-22.41	46.00	34.67	20.36	1.30	32.74	---	---	Peak
6	957.30	24.72	-21.28	46.00	34.89	20.94	1.27	32.38	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



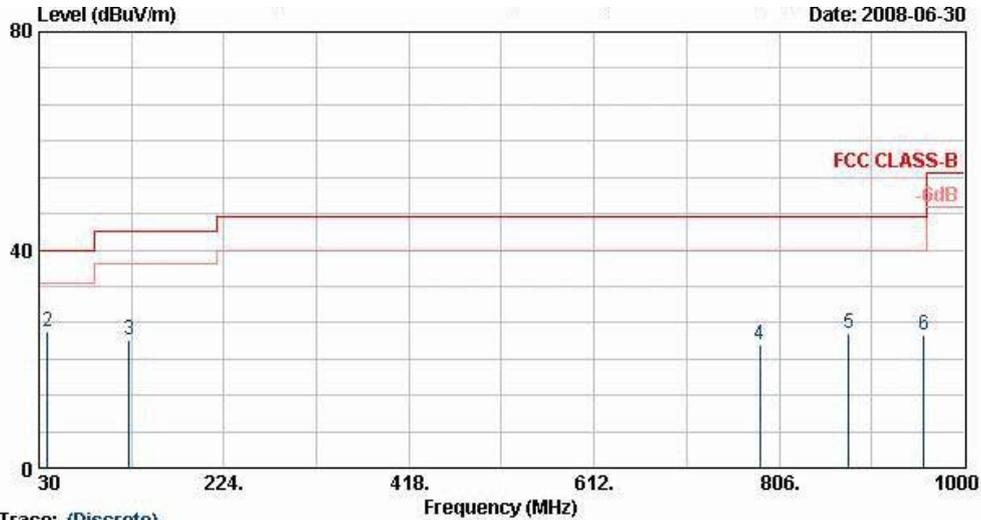
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band 1/YTIT) + GSM/GPRS/EDGE(800/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 8
 Data Rate : 11
 Plane : H (slide Off)
 IMET : 35314202000010601

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	2380.00	49.26	-24.74	74.00	49.18	31.83	3.92	35.68	100	0 Peak
2	2380.00	36.54	-17.46	54.00	36.46	31.83	3.92	35.68	100	25 Average
3 X	2462.00	107.18			106.90	31.95	4.02	35.69	100	0 Peak
4 @	2462.00	98.79			98.51	31.95	4.02	35.69	100	25 Average
5	2487.65	51.98	-22.02	74.00	51.65	31.98	4.05	35.70	100	0 Peak
6	2487.65	39.04	-14.97	54.00	38.68	32.00	4.05	35.70	100	25 Average
7	7941.00	53.47	-20.53	74.00	46.58	35.69	7.48	36.29	100	0 Peak
8	7941.00	42.30	-11.70	54.00	35.41	35.69	7.48	36.29	100	104 Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

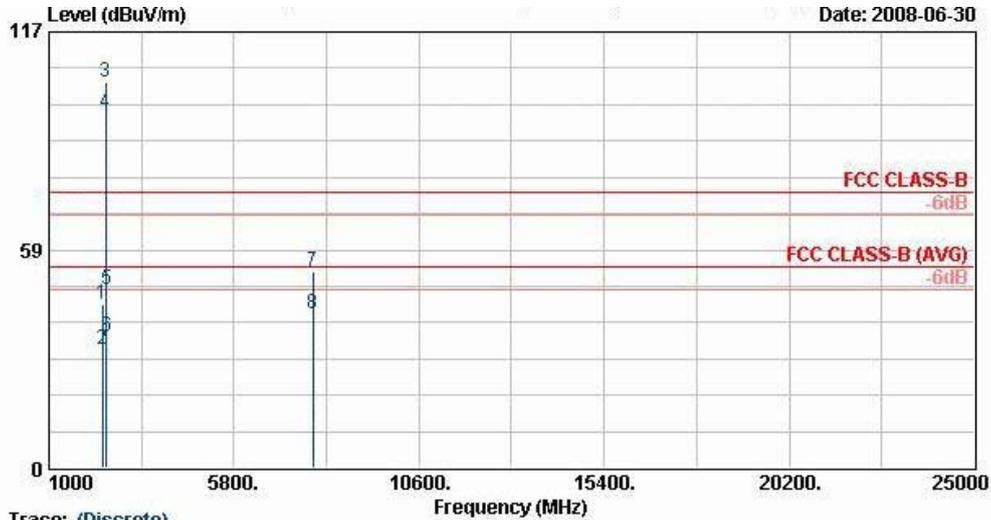


Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : Smart Phone WCDMA (band I/VIII) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 8
 Data Rate : 11
 Plane : H (slide Off)
 IMET : 35314202000010601

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Ant Pos	Table Pos	Remark
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB/m	dB	dB	cm	deg	
1	30.00	23.99	-16.01	40.00	37.53	19.66	0.30	33.50	---	---	Peak
2	39.18	24.91	-15.09	40.00	43.80	14.03	0.30	33.22	100	227	Peak
3	124.23	23.57	-19.93	43.50	43.76	12.64	0.50	33.34	---	---	Peak
4	785.80	22.54	-23.46	46.00	34.30	19.68	1.20	32.65	---	---	Peak
5	878.90	24.66	-21.34	46.00	35.73	20.38	1.30	32.75	---	---	Peak
6	957.30	24.49	-21.51	46.00	34.66	20.94	1.27	32.38	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

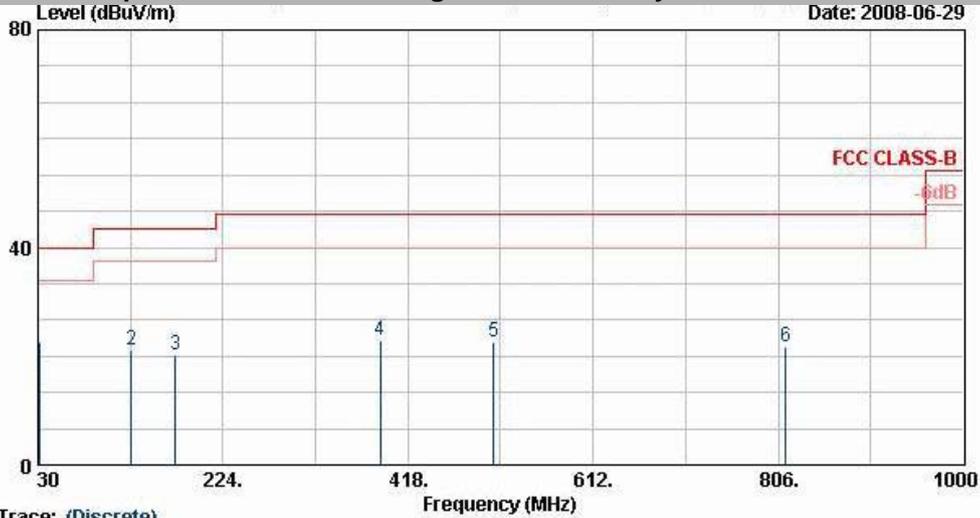
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIII) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 8
 Data Rate : 11
 Plane : H (slide Off)
 TWT : 35314202000010601

	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	2390.00	44.02	-29.98	74.00	43.92	31.86	3.92	35.68	100	0	Peak
2	2390.00	31.79	-22.21	54.00	31.69	31.86	3.92	35.68	131	307	Average
3 X	2462.00	103.59			103.31	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	95.34			95.06	31.95	4.02	35.69	131	307	Average
5	2483.66	47.74	-26.26	74.00	47.41	31.98	4.05	35.70	100	0	Peak
6	2483.66	35.09	-18.91	54.00	34.76	31.98	4.05	35.70	131	307	Average
7	7836.00	52.57	-21.43	74.00	45.74	35.67	7.44	36.27	100	0	Peak
8	7836.00	41.45	-12.55	54.00	34.61	35.67	7.44	36.27	100	291	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 4
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

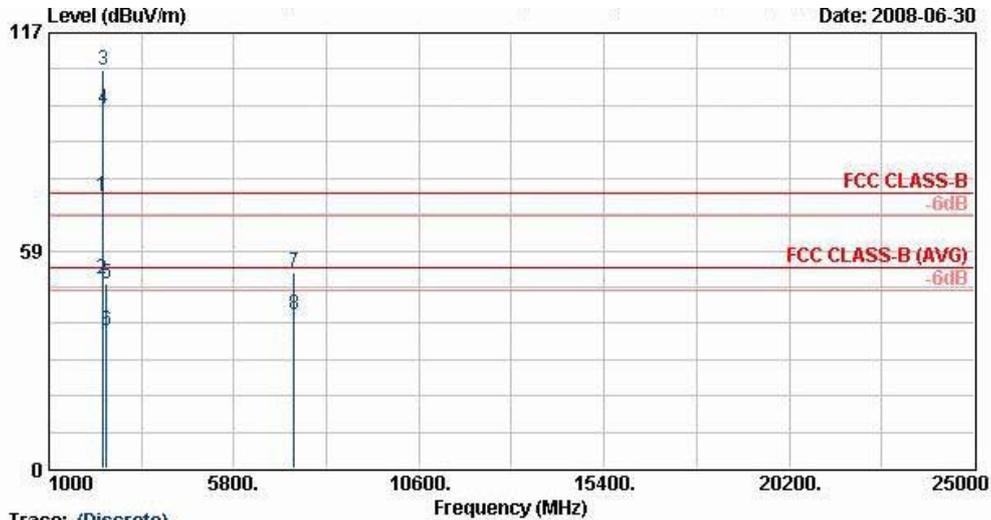
```

Site      : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT      : Smart Phone WCDMA (band 1/VTTT) +
          GSM/GPRS/EDGE(900/1800/1900)
Power     : 120Vac/60Hz
Model    : FR 830416
Memo      : Mode 4
Data Rate : 6
Plane     : H (slide Off)
TIME     : 35314202000010601
    
```

	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	22.48	-17.52	40.00	36.68	18.95	0.30	33.46	100	51	Peak
2	128.28	21.00	-22.50	43.50	41.60	12.18	0.50	33.29	---	---	Peak
3	174.18	20.17	-23.33	43.50	43.11	9.82	0.60	33.37	---	---	Peak
4	388.90	22.76	-23.24	46.00	39.54	15.49	0.81	33.08	---	---	Peak
5	507.90	22.56	-23.44	46.00	37.36	17.51	1.00	33.31	---	---	Peak
6	813.80	21.84	-24.16	46.00	33.32	19.92	1.20	32.59	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



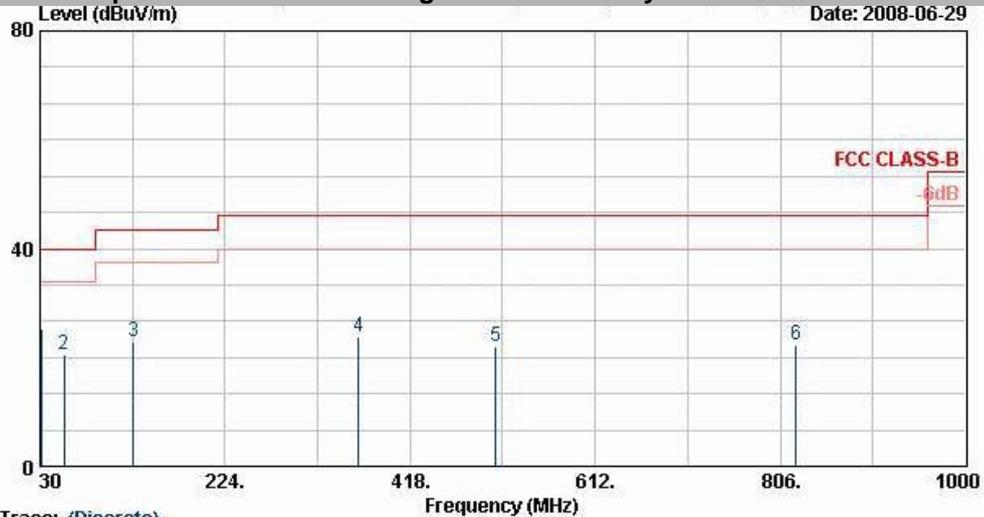
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band I/VIII) + GSM/GPRS/EDGE(800/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 9
 Data Rate : 6
 Plane : H (slide Off)
 IMET : 35314202000010601

	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 !	2389.99	73.17	-0.83	74.00	73.07	31.86	3.92	35.68	100	0	Peak
2 !	2389.99	50.92	-3.08	54.00	50.82	31.86	3.92	35.68	100	22	Average
3 X	2412.00	107.11			106.96	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	96.49			96.39	31.86	3.92	35.68	100	22	Average
5	2492.00	49.44	-24.56	74.00	49.09	32.00	4.05	35.70	100	0	Peak
6	2492.00	37.11	-16.89	54.00	36.76	32.00	4.05	35.70	100	22	Average
7	7356.00	52.68	-21.32	74.00	45.95	35.66	7.22	36.14	100	0	Peak
8	7356.00	41.24	-12.76	54.00	34.51	35.66	7.22	36.14	100	162	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Date: 2008-06-29

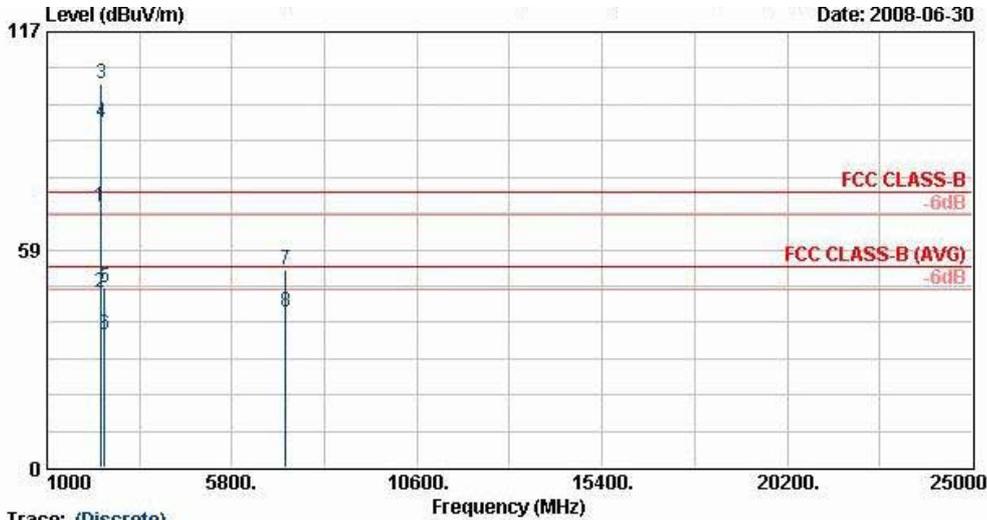
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIIT) +
 : GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 630416
 Memo : Mode 9
 Data Rate : 6
 Plane : H (slide Off)
 TMET : 35314202000010601

	Freq	Level	Over Limit	Limit Line	Read 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	31.62	25.40	-14.60	40.00	40.27	18.25	0.30	33.42	100	177	Peak
2	54.84	20.40	-19.60	40.00	46.02	7.35	0.40	33.37	---	---	Peak
3	128.28	22.94	-20.56	43.50	43.54	12.18	0.50	33.29	---	---	Peak
4	364.40	23.66	-22.34	46.00	41.19	14.87	0.75	33.15	---	---	Peak
5	507.90	22.02	-23.98	46.00	36.82	17.51	1.00	33.31	---	---	Peak
6	822.90	22.23	-23.77	46.00	33.67	19.98	1.20	32.61	---	---	Peak

- Polarization :Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

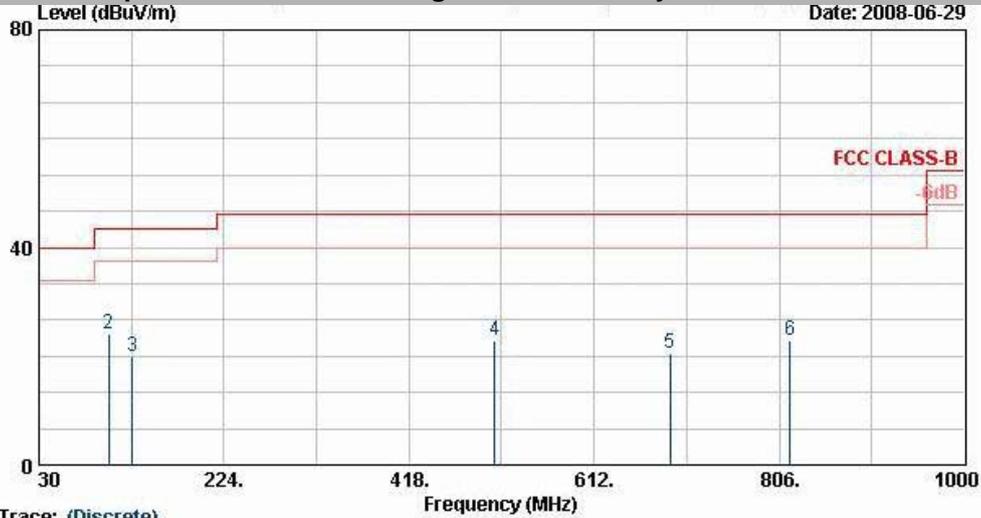
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : Smart Phone WCDMA (band 1/Y/T/T) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 9
 Data Rate : 6
 Plane : H (slide Off)
 T&ET : 35314202000010601

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 !	2389.99	70.08	-3.92	74.00	69.98	31.86	3.92	35.68	100	0	Peak
2	2389.99	47.08	-6.92	54.00	46.98	31.86	3.92	35.68	141	308	Average
3 X	2412.00	103.21			103.06	31.88	3.95	35.68	100	0	Peak
4 X	2412.00	92.56			92.41	31.88	3.95	35.68	141	308	Average
5	2492.00	48.25	-25.75	74.00	47.90	32.00	4.05	35.70	100	0	Peak
6	2492.00	35.55	-18.45	54.00	35.20	32.00	4.05	35.70	141	308	Average
7	7191.00	53.16	-20.84	74.00	46.35	35.72	7.16	36.08	100	0	Peak
8	7191.00	41.92	-12.08	54.00	35.12	35.72	7.16	36.08	100	192	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 5
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.

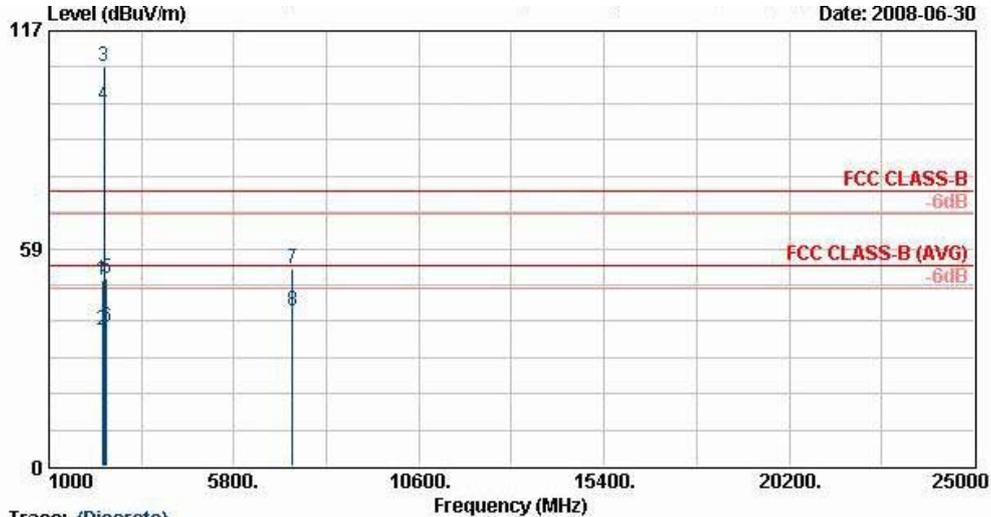


Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 10
 Data Rate : 6
 Plane : H (slide Off)
 TWT : 35314202000010601

	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 @	30.00	23.94	-16.06	40.00	37.48	19.66	0.30	33.50	100	256	Peak
2 @	103.44	24.18	-19.32	43.50	45.79	11.29	0.50	33.40	---	---	Peak
3 @	128.28	20.05	-23.45	43.50	40.66	12.18	0.50	33.29	---	---	Peak
4 @	507.90	22.83	-23.17	46.00	37.63	17.51	1.00	33.31	---	---	Peak
5 @	691.30	20.45	-25.55	46.00	33.64	18.85	1.10	33.14	---	---	Peak
6 @	817.30	22.78	-23.22	46.00	34.24	19.94	1.20	32.60	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

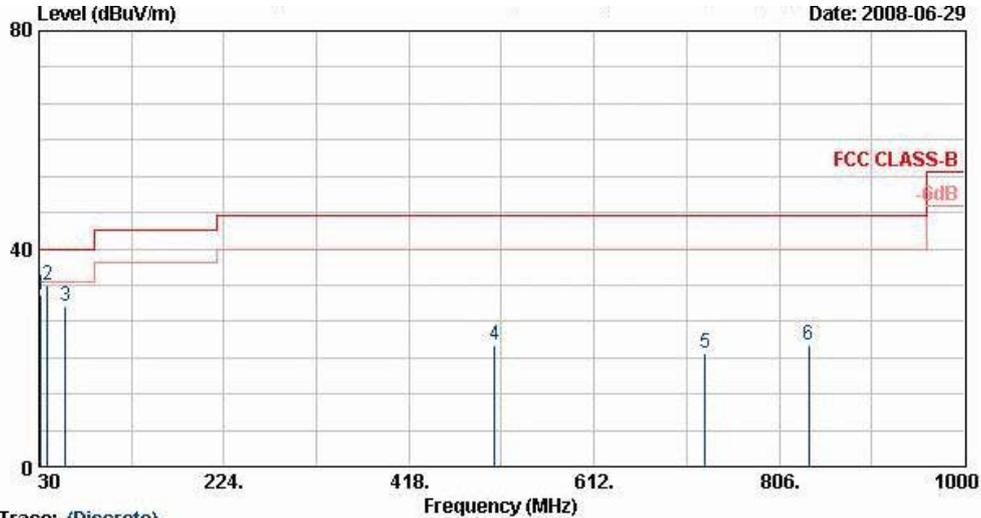
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 10
 Data Rate : 6
 Plane : H (slide Off)
 IMET : 35314202000010601

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1 @	2390.00	50.08	-23.92	74.00	49.98	31.86	3.92 35.68	100	0	Peak
2 @	2390.00	36.73	-17.27	54.00	36.63	31.86	3.92 35.68	100	27	Average
3 @	2437.00	107.43			07.20	31.93	3.99 35.69	100	0	Peak
4 @	2437.00	96.78			96.55	31.93	3.99 35.69	100	27	Average
5 @	2484.00	50.25	-23.75	74.00	49.92	31.98	4.05 35.70	100	0	Peak
6 @	2484.00	37.19	-16.81	54.00	36.86	31.98	4.05 35.70	100	27	Average
7 @	7317.00	52.97	-21.03	74.00	46.23	35.67	7.20 36.13	100	0	Peak
8 @	7317.00	41.84	-12.16	54.00	35.10	35.67	7.20 36.13	100	116	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertivcal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



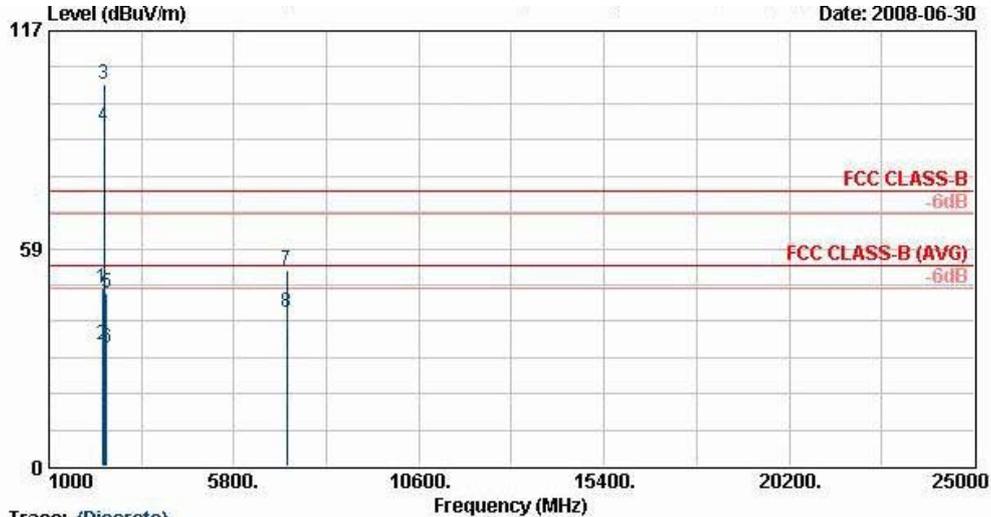
Trace: (Discrete)

Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : Smart Phone WCDMA (band 1/VIII) + GSM/GPRS/EDGE(800/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 10
 Data Rate : 6
 Plane : H (slide Off)
 TMET : 35314202000010601

	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 @	32.43	31.46	-8.54	40.00	46.99	17.54	0.30	33.38	---	---	Peak
2 @	38.64	33.44	-6.56	40.00	52.33	14.03	0.30	33.22	100	14	Peak
3 @	57.54	29.38	-10.62	40.00	55.30	7.06	0.40	33.38	---	---	Peak
4 @	507.90	22.18	-23.82	46.00	36.98	17.51	1.00	33.31	---	---	Peak
5 @	728.40	20.75	-25.25	46.00	33.48	19.15	1.12	33.00	---	---	Peak
6 @	836.90	22.38	-23.62	46.00	33.75	20.08	1.20	32.65	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Trace: (Discrete)

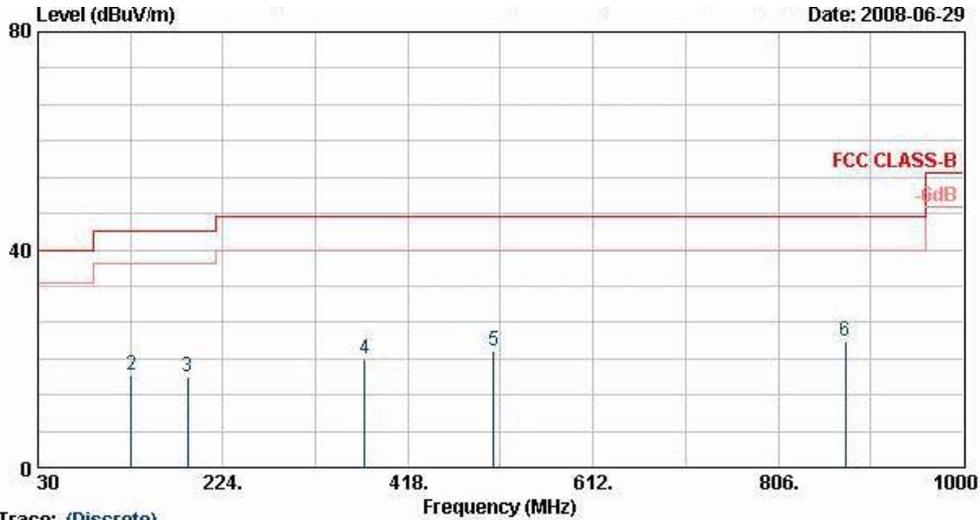
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 10
 Data Rate : 6
 Plane : H (slide Off)
 TMET : 35314202000010601

	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 @	2390.00	47.80	-26.20	74.00	47.70	31.86	3.92 35.68	100	0	Peak
2 @	2390.00	32.76	-21.24	54.00	32.66	31.86	3.92 35.68	145	306	Average
3 @	2437.00	102.51			102.29	31.93	3.99 35.69	100	0	Peak
4 @	2437.00	91.19			90.96	31.93	3.99 35.69	145	306	Average
5 @	2484.00	46.40	-27.60	74.00	46.07	31.98	4.05 35.70	100	0	Peak
6 @	2484.00	31.54	-22.46	54.00	31.21	31.98	4.05 35.70	145	306	Average
7 @	7167.00	52.42	-21.58	74.00	45.61	35.73	7.15 36.07	100	0	Peak
8 @	7167.00	41.31	-12.69	54.00	34.50	35.73	7.15 36.07	100	193	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 6
- Polarization : Horizontal (30MHz-1GHz)

The test that passed at minimum margin was marked by the boldface in the following table.

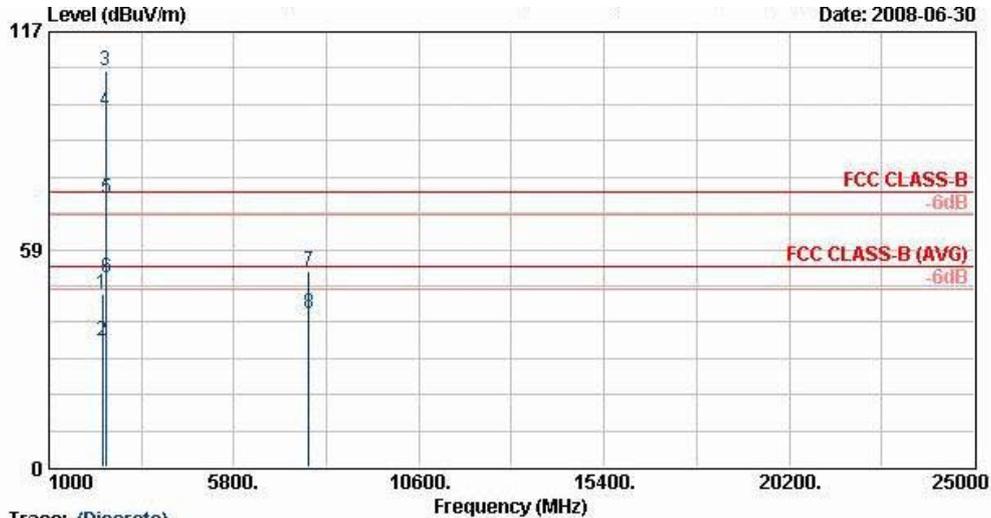


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Smart Phone WCDMA (band I/VIII) + GSM/GPRS/EDGE(900/1800/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 11
 Data Rate : 6
 Plane : H (slide Off)
 IMEI : 35314202000010601

	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	23.35	-16.65	40.00	36.89	19.66	0.30	33.50	100	63	Peak
2	128.28	16.91	-26.59	43.50	37.51	12.18	0.50	33.29	---	---	Peak
3	187.14	16.69	-26.81	43.50	40.19	9.39	0.60	33.49	---	---	Peak
4	372.80	20.00	-26.00	46.00	37.24	15.07	0.82	33.13	---	---	Peak
5	507.90	21.32	-24.68	46.00	36.12	17.51	1.00	33.31	---	---	Peak
6	876.80	23.25	-22.75	46.00	34.33	20.36	1.30	32.74	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



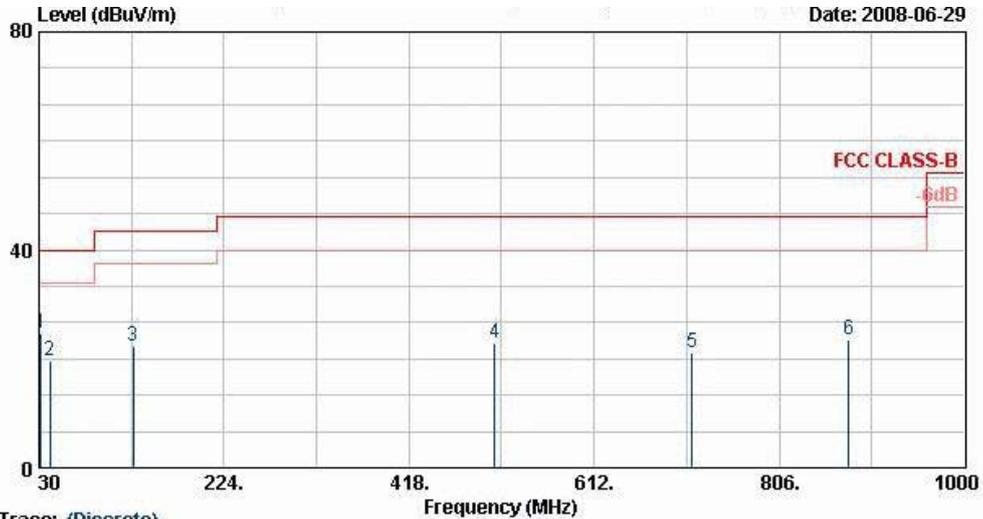
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : Smart Phone WCDMA (band I/VIII) + GSM/GPRS/EDGE(800/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 11
 Data Rate : 6
 Plane : H (slide Off)
 TMET : 35314202000010601

	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	2390.00	46.69	-27.31	74.00	46.59	31.86	3.92	35.68	100	0	Peak
2	2390.00	34.11	-19.89	54.00	34.01	31.86	3.92	35.68	100	26	Average
3 X	2462.00	106.58			106.30	31.95	4.02	35.70	100	0	Peak
4 @	2462.00	95.79			95.51	31.95	4.02	35.69	100	26	Average
5 !	2483.50	72.24	-1.76	74.00	71.91	31.98	4.05	35.70	100	0	Peak
6 !	2483.50	50.88	-3.12	54.00	50.55	31.98	4.05	35.70	100	26	Average
7	7737.00	52.71	-21.29	74.00	45.92	35.65	7.39	36.25	100	0	Peak
8	7737.00	41.30	-12.70	54.00	34.51	35.65	7.39	36.25	100	224	Average

Remark: #3 and #4 are Fundamental Signals

• Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



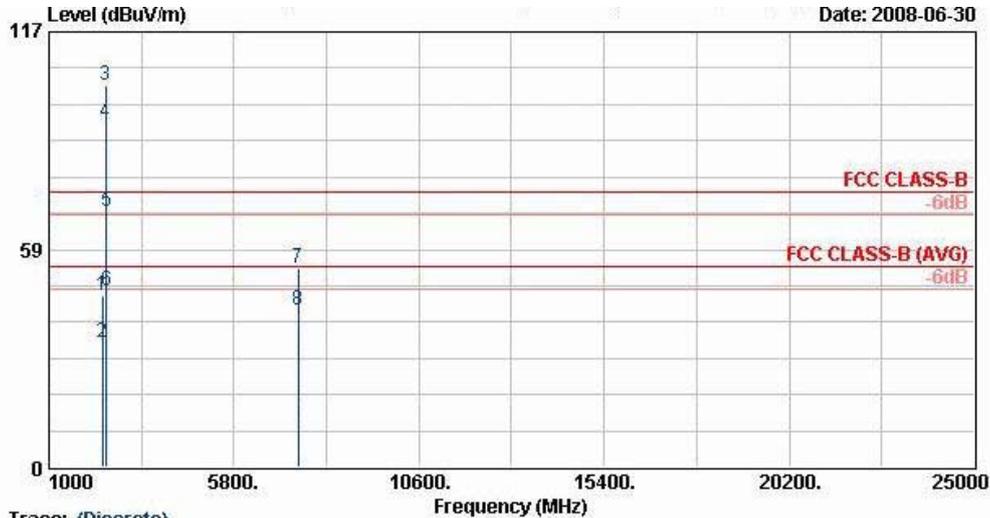
Trace: (Discrete)

Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
 EUT : Smart Phone WCDMA (band 1/VTTT) + GSM/GPRS/EDGE(900/1600/1900)
 Power : 120Vac/60Hz
 Model : FR 830416
 Memo : Mode 11
 Data Rate : 6
 Plane : H (slide Off)
 TMET : 35314202000010601

	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	32.43	24.67	-15.33	40.00	40.21	17.54	0.30	33.38	100	38 Peak
2	41.34	19.73	-20.27	40.00	40.08	12.51	0.30	33.16	---	Peak
3	129.09	22.18	-21.32	43.50	42.93	12.02	0.50	33.27	---	Peak
4	507.90	22.83	-23.17	46.00	37.63	17.51	1.00	33.31	---	Peak
5	714.40	21.20	-24.80	46.00	34.06	19.03	1.20	33.08	---	Peak
6	878.90	23.63	-22.37	46.00	34.70	20.38	1.30	32.75	---	Peak

- Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Site :
Condition :
EUT :
Power :
Model :
Memo :
Data Rate :
Plane :
TNET :

Trace: (Discrete)
: D3CH06-HY
: FCC CLASS-B 3m SHF-EHF HORN VERTICAL
: Smart Phone WCDMA (band I/VIII) +
: GSM/GPRS/EDGE(800/1600/1900)
: 120Vac/60Hz
: FR 830416
: Mode 11
: 6
: H (slide Off)
: 35314202000010601

	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	2388.00	46.26	-27.74	74.00	46.16	31.86	3.92	35.68	100	0	Peak
2	2388.00	33.35	-20.65	54.00	33.25	31.86	3.92	35.68	114	309	Average
3 X	2462.00	102.59			102.31	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	92.46			92.18	31.95	4.02	35.69	114	309	Average
5 !	2483.66	68.79	-5.21	74.00	68.46	31.98	4.05	35.70	100	0	Peak
6	2483.66	47.24	-6.76	54.00	46.91	31.98	4.05	35.70	114	309	Average
7	7467.00	53.48	-20.52	74.00	46.80	35.61	7.25	36.19	100	0	Peak
8	7467.00	42.32	-11.68	54.00	35.64	35.61	7.25	36.19	100	127	Average

Remark: #3 and #4 are Fundamental Signals

5.8 Antenna Requirements

5.8.1 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.

5.8.2 Antenna Connected Construction

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

5.8.3 Antenna Gain

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

6. List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Receiver	R&S	ESCS 30	100356	9kHz – 2.75GHz	Jul. 26, 2007	Jul. 25, 2008	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9kHz – 30MHz	Dec. 06, 2007	Dec. 05, 2008	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9kHz – 30MHz	Dec. 06, 2007	Dec. 05, 2008	Conduction (CO05-HY)
DC-Lisn	R&S	ESH3-26	1000485	0.1MHz-200MHz	Feb. 04, 2008	Feb. 03, 2009	Conduction (CO05-HY)
DC-Lisn	R&S	ESH3-26	1000484	0.1MHz-200MHz	Feb. 04, 2008	Feb. 03, 2009	Conduction (CO05-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz~2GHz	Dec. 01, 2007	Nov. 31, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	EMCO	3117	66583	1G~18G	Aug. 29, 2007	Aug. 28, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	15G~40GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz~26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESVS10	834468/003	20~1000MHz	Apr. 24, 2008	Apr. 23, 2009	Radiation (03CH06-HY)
Pre Amplifier	Agilent	310N	186713	9KHz~1GHz	Apr. 21, 2008	Apr. 20, 2009	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G~26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	103937	N/A	Oct. 19, 2007	Oct. 18, 2008	Radiation (03CH06-HY)

7. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150 KHz ~ 30 MHz)

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 (1 GHz ~ 40 GHz)

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 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 EP830416 as below.