



FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment : GPS Phone

Trade Name : Mio

Model Name : N169

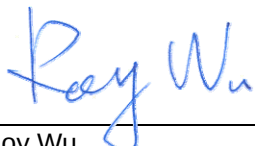
FCC ID : P4Q-N169

Filing Type : Certification

Applicant : MiTAC International Corp.

6th Fl., No.187, Tiding Blvd., Sec. 2, Taipei, Taiwan, R.O.C.

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- The data shown in this test report had been finished on Aug. 01, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR821504-03, Report Version: Rev.01



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Report Version: Rev.01

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History of This Test Report

Report Issue Date: Aug. 06, 2008

Report No.	Description

1. General Description of Equipment under Test

1.1 Applicant

MiTAC International Corp.

6th Fl., No.187, Tiding Blvd., Sec. 2, Taipei, Taiwan, R.O.C.

1.2 Manufacturer

MiTAC Computer (KunShan) Co., Ltd.

No. 269, 2nd Road, Export Processing Zone, Changjiang South Road, KunShan, JiangSu Prov., China

1.3 Basic Description of Equipment under Test

AC Adapter 1	Trade Name	PHIHONG
	Model Name	PSAA05R-050
	Power Rating	I/P: 100-240V, 50-60Hz, 0.3A O/P: +5Vdc, 1A Max.
	AC Power Cord Type	1.85m non-shielded cable without ferrite core
AC Adapter 2	Trade Name	TPT
	Model Name	MII050100
	Power Rating	I/P: 100-240V, 50-60Hz, 0.5A; O/P: +5Vdc, 1A Max
	AC Power Cord Type	1.2m non-shielded cable without ferrite core
Battery 1	Trade Name	Welldone
	Model Name	E4MT261K1002
	Rating	3.7V, 1100mAh
	Type	Li-ion
Battery 2	Trade Name	Welldone
	Model Name	E4MT261K1002
	Rating	3.7V, 1150mAh
	Type	Li-ion
Earphone 1	Trade Name	PETER
	Model Name	A1-CS-127
	Signal line Type	1.2m shielded cable without ferrite core
Earphone 2	Trade Name	PETER
	Model Name	D-AS-107-070917A
	Signal line Type	1.3m non-shielded cable without ferrite core
Remote Control for Earphone 2	Trade Name	BIMOS
	Model Name	781001010002
	Signal line Type	1.1m shielded cable without ferrite core
USB Cable	Trade Name	MPT
	Model Name	A5B-1A-1.3M
LCD Panel	Trade Name	TPO
	Model Name	99000307
Camera	Trade Name	HANSUNG
	Model Name	MT01SS40B

Remark: Above EUT's information was declared by manufacturer. Please refer to the specifications of manufacturer or User's Manual for more detailed features description.

1.4 Feature of Equipment under Test

Product Feature & Specification				
DUT Type :	GPS Phone			
Trade Name :	Mio			
Model Name :	N169			
FCC ID :	P4Q-N169			
Tx Frequency :	2400 MHz ~ 2483.5 MHz			
Rx Frequency :	2400 MHz ~ 2483.5 MHz			
Number of Channels :	11			
Carrier Frequency of Each Channel :	2412+(n-1)*5 MHz; n=1~11			
Channel Spacing :	5 MHz			
Maximum Output Power to Antenna :	802.11b : 12.62 dBm 802.11g : 17.52 dBm			
Type of Antenna Connector :	N/A			
Antenna Type :	Monopole Antenna			
Antenna Gain :	2 dBi			
Type of Modulation :	DSSS / OFDM			
HW Version	R05			
SW Version	R33			
Function Type :	Transmitter		Transceiver	V
DUT Stage :	Identical Prototype			

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	11.37	11.60	11.49	12.51
CH 06	2437 MHz	12.00	11.81	11.72	12.37
CH 11	2462 MHz	12.60	12.33	12.48	12.62

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	15.85	15.88	15.44	15.67	15.60	15.97	-	17.52
CH 06	2437 MHz	16.02	16.17	15.99	15.92	16.00	16.2	-	17.50
CH 11	2462 MHz	16.95	17.33	16.86	16.92	16.78	17.3	-	17.31

The 802.11b/g data rate were set in 11Mbps and 54Mbps, due to the highest RF output power. The data rate 48Mbps is not supported by the EUT.

- 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

Test Item	Test Mode	
Radiated Emission / RF Conducted	802.11b	802.11g
	Mode 1: CH01_2412 MHz	Mode 4: CH01_2412 MHz
	Mode 2: CH06_2437 MHz	Mode 5: CH06_2437 MHz
	Mode 3: CH11_2462 MHz	Mode 6: CH11_2462 MHz
Conducted Emission	Mode 1: BT Link + WLAN Link + Adapter 1	
	Mode 2: BT Link + WLAN Link + Adapter 2	

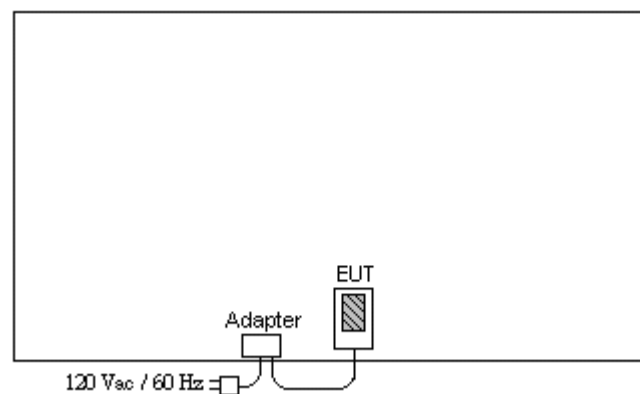
2.3 Ancillary Equipment List

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 Station	Anritus	8852A	N/A	N/A	Unshielded, 1.8m
3.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A	N/A
4.	WLAN AP	SMC	SMC-100	HEDWG4005ACC	N/A	Unshielded, 1.8m

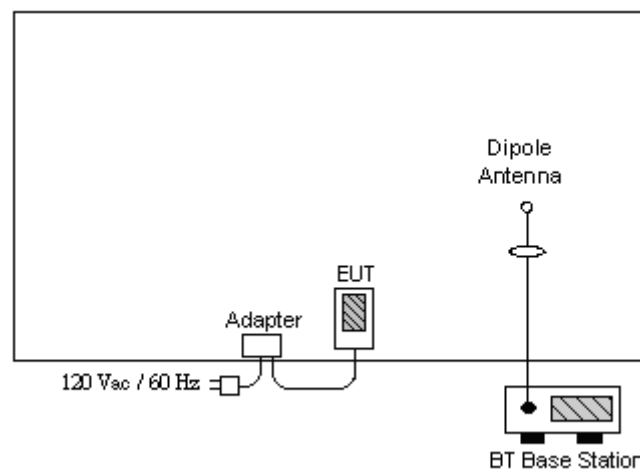
2.4 Connection Diagram of Test System

<Radiation>

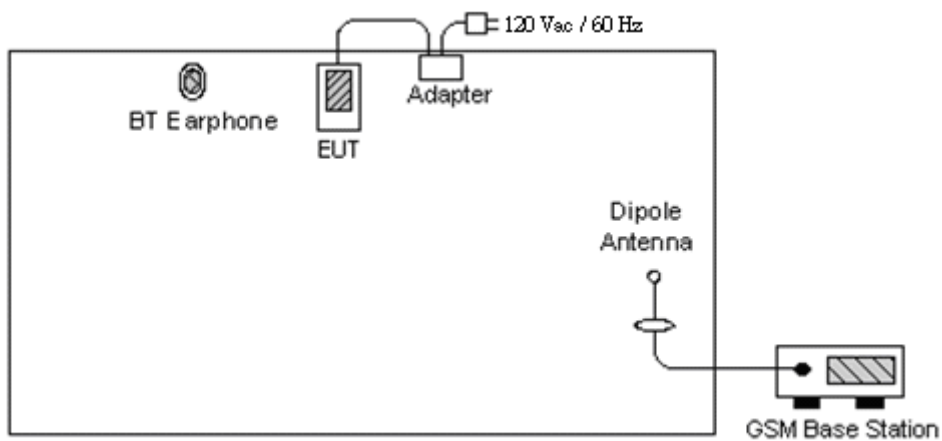
WLAN



Bluetooth



<Conduction>



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 : CO04-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

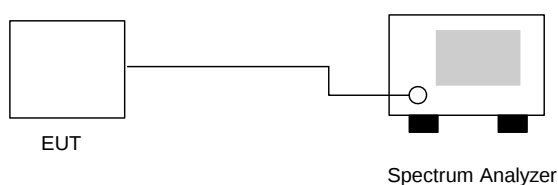
5.2.1 Measuring Instruments

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 : 29~30℃
- Relative Humidity : 39~40%
- Test Enginner : Ken

▪ 802.11b

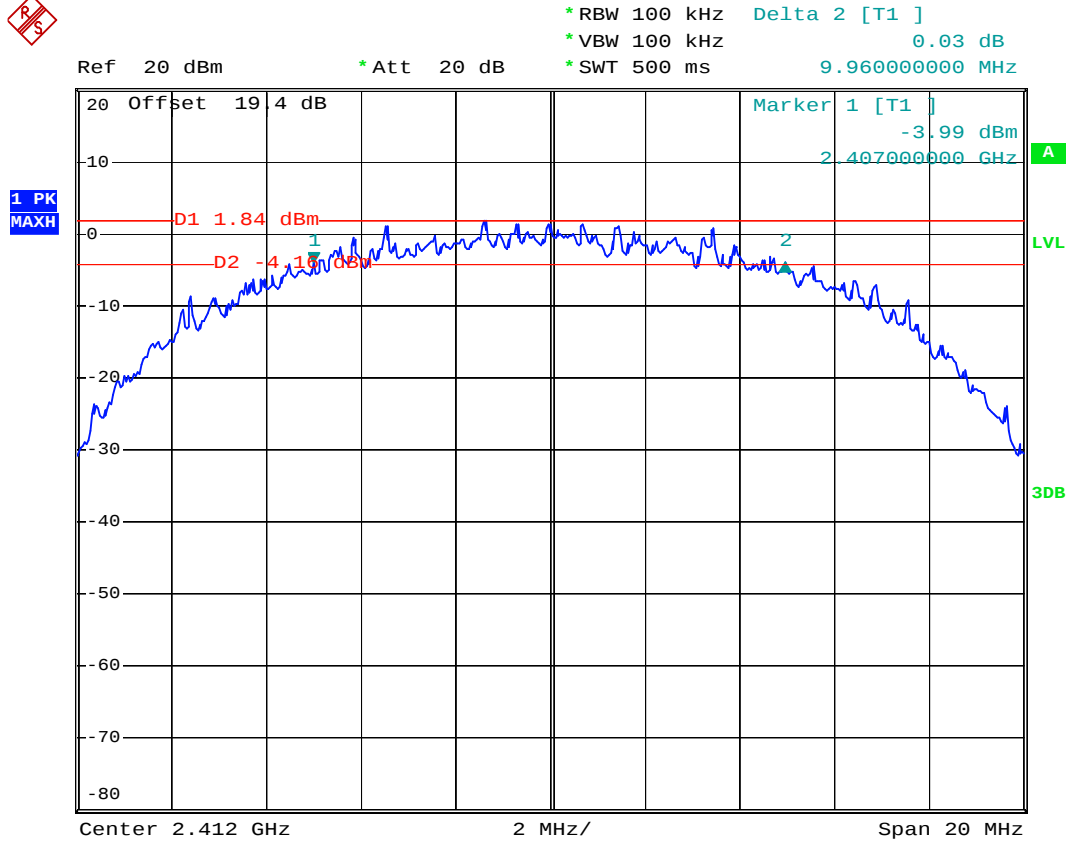
Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	9.96	> 0.5MHz	Mode 1
06	2437	9.80	> 0.5MHz	Mode 2
11	2462	9.80	> 0.5MHz	Mode 3

▪ 802.11g

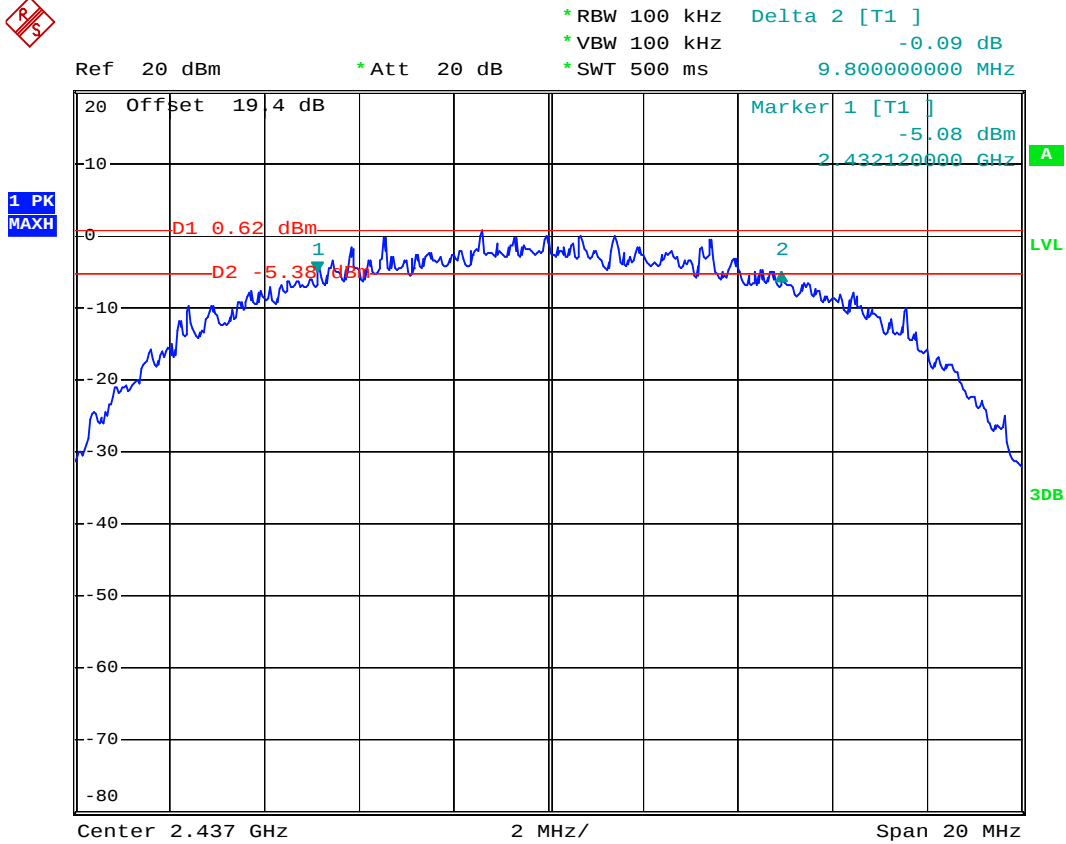
Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	16.52	> 0.5MHz	Mode 4
06	2437	16.48	> 0.5MHz	Mode 5
11	2462	16.52	> 0.5MHz	Mode 6

5.2.5 6dB Bandwidth

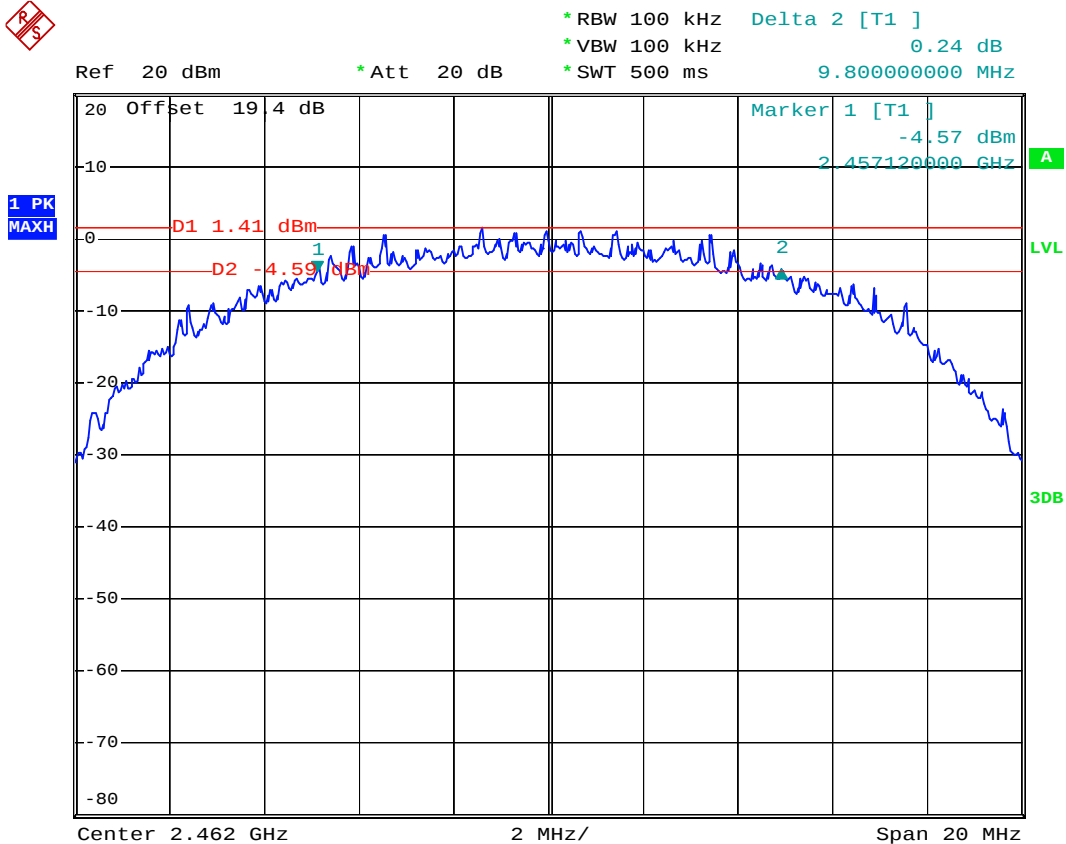
Mode 1



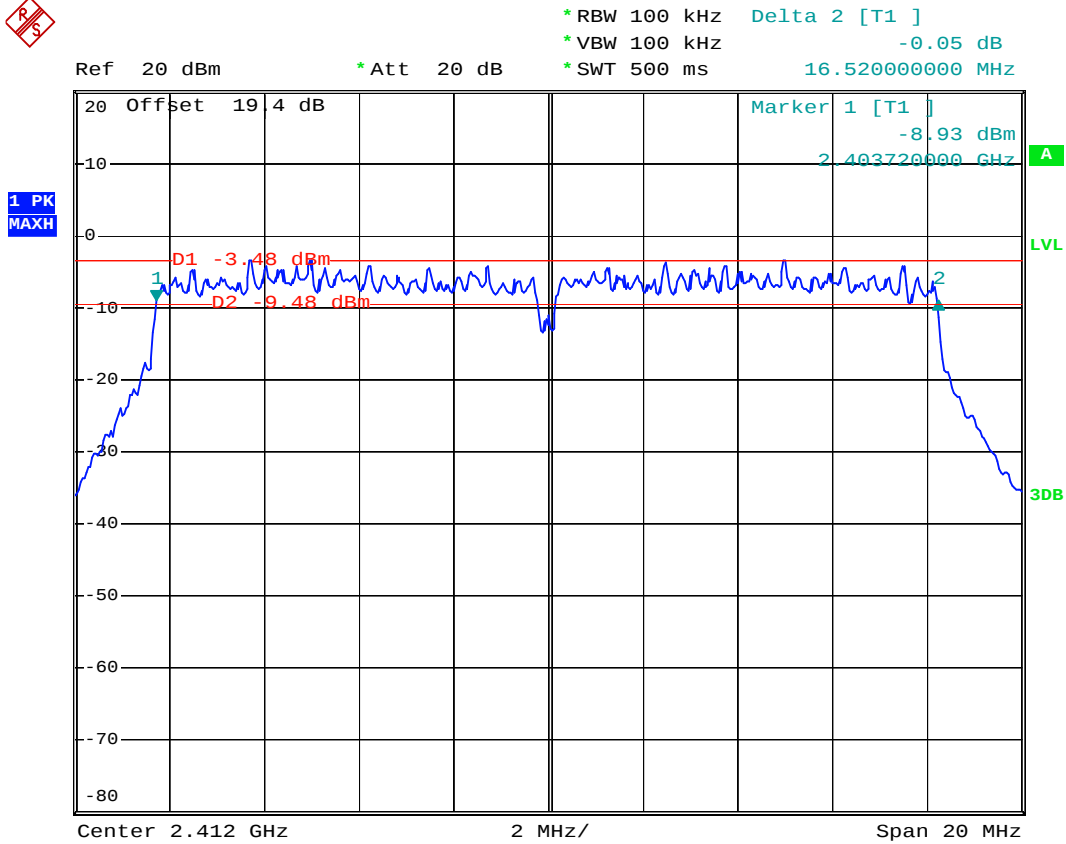
Mode 2



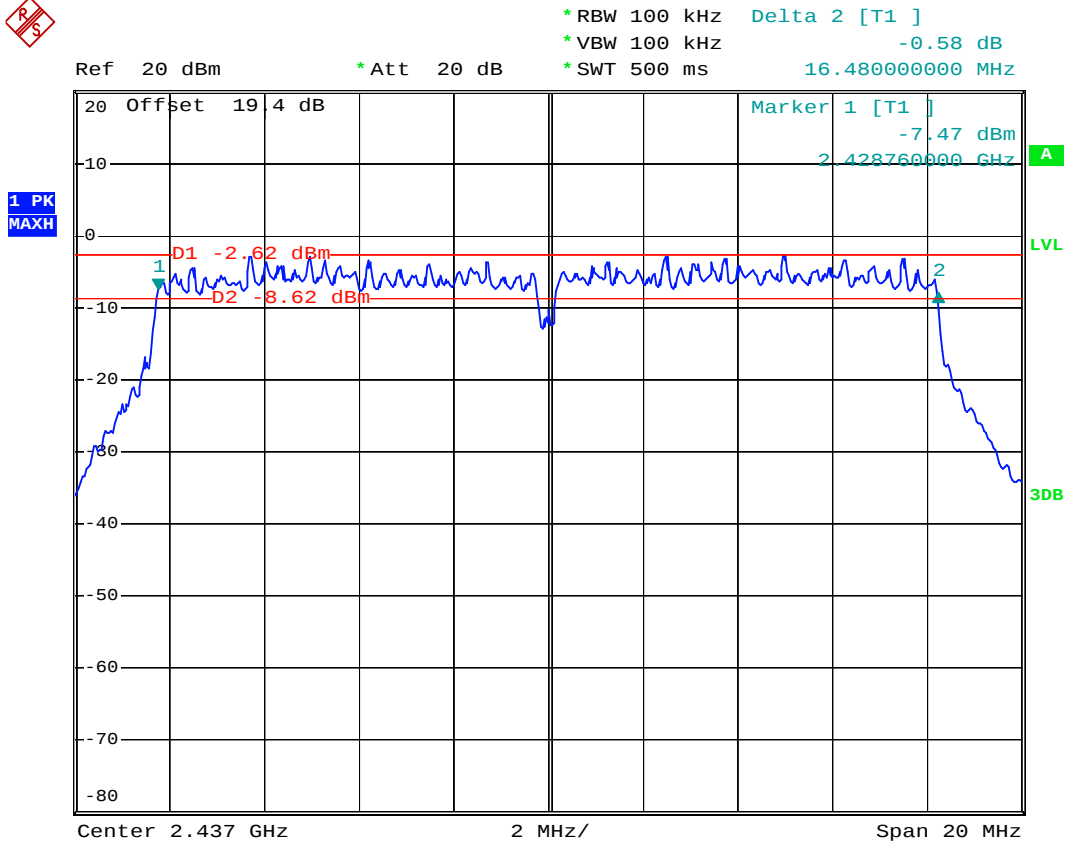
Mode 3



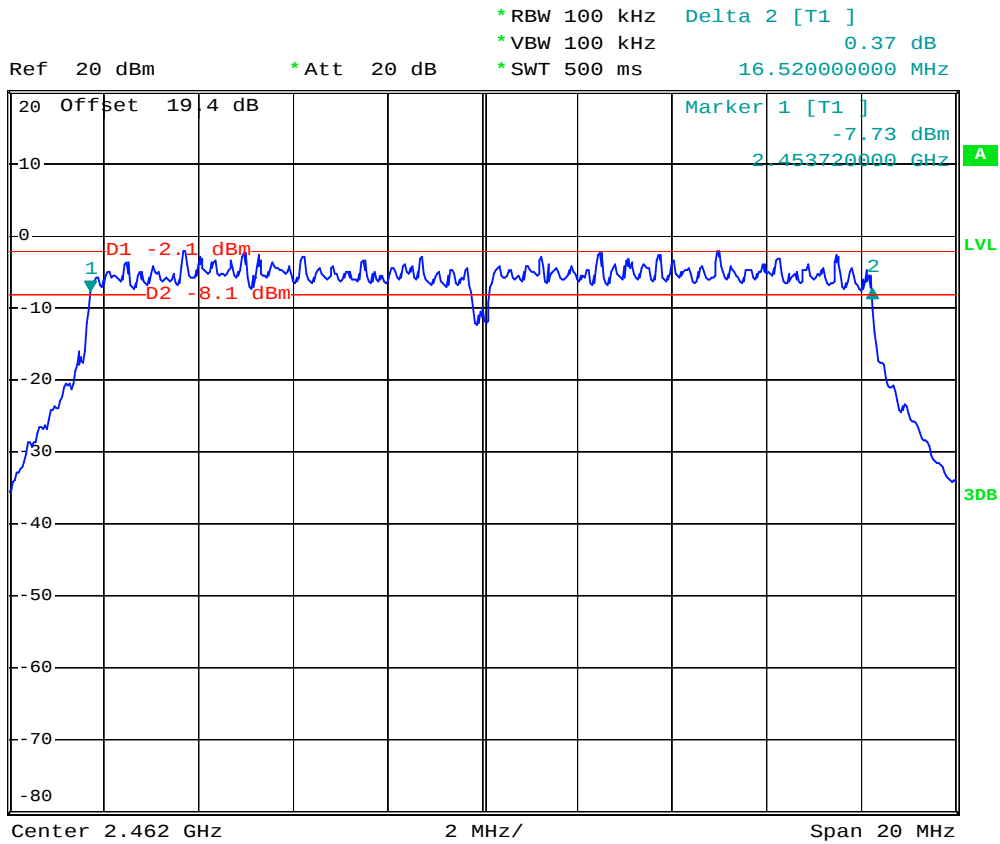
Mode 4



Mode 5



Mode 6



5.3 Power Spectral Density Measurement

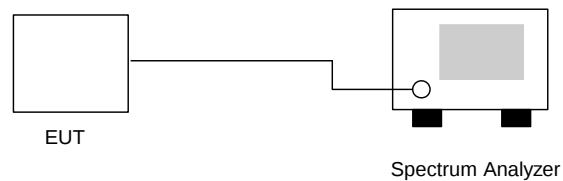
5.3.1 Measuring Instruments

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 : 29~30℃
- Relative Humidity : 39~40%
- Test Enginner : Ken

802.11b

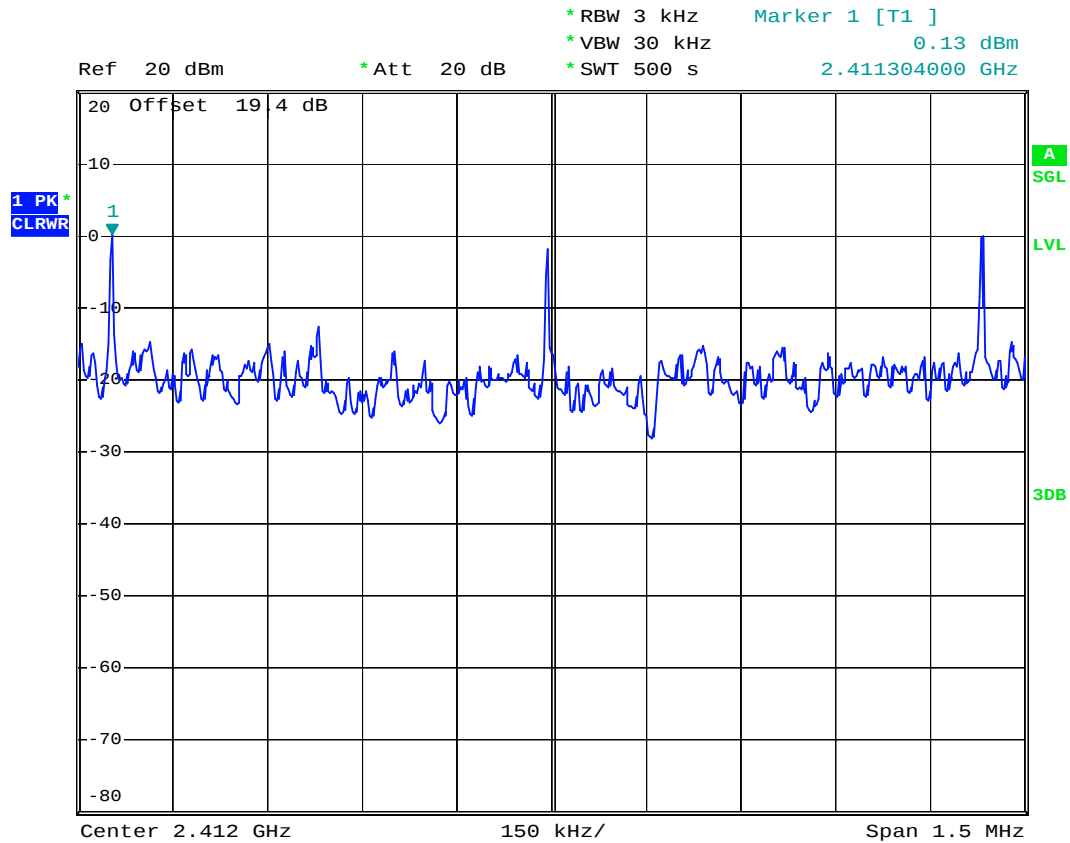
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	0.13	8	Mode 1
06	2437	-0.04	8	Mode 2
11	2462	0.03	8	Mode 3

802.11g

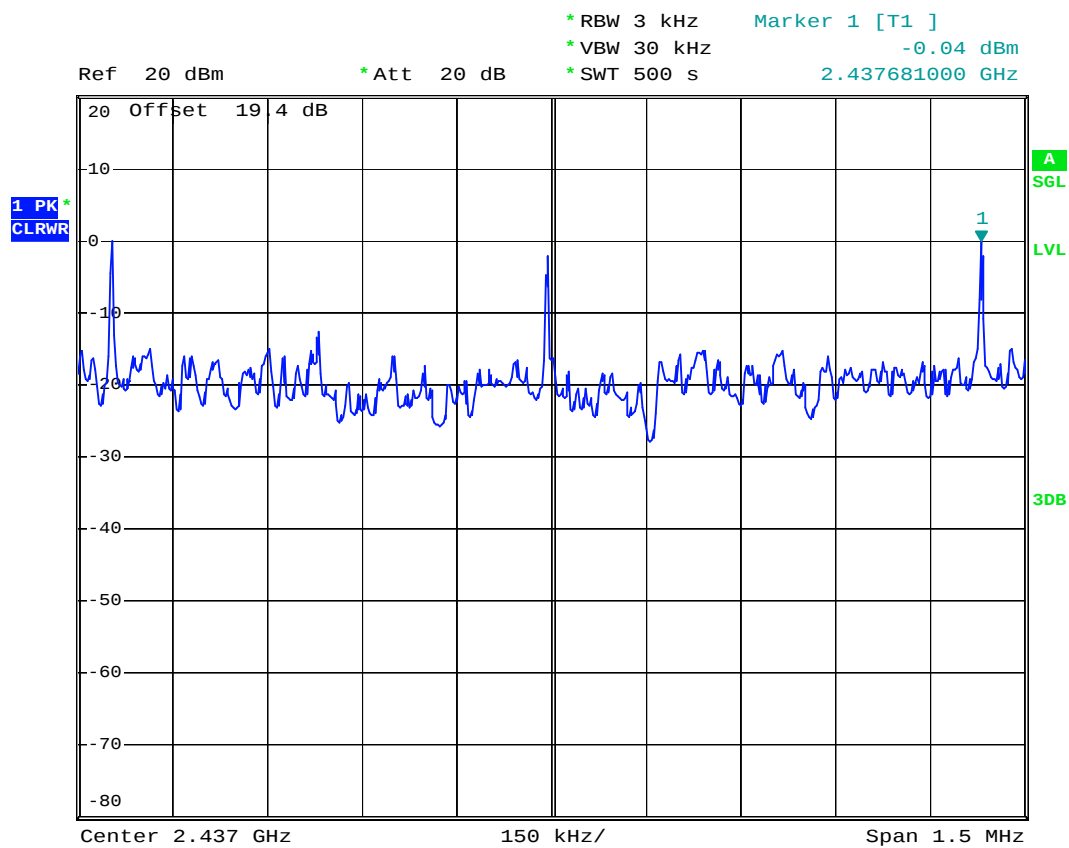
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-17.18	8	Mode 4
06	2437	-17.54	8	Mode 5
11	2462	-18.01	8	Mode 6

5.3.5 Power Spectral Density

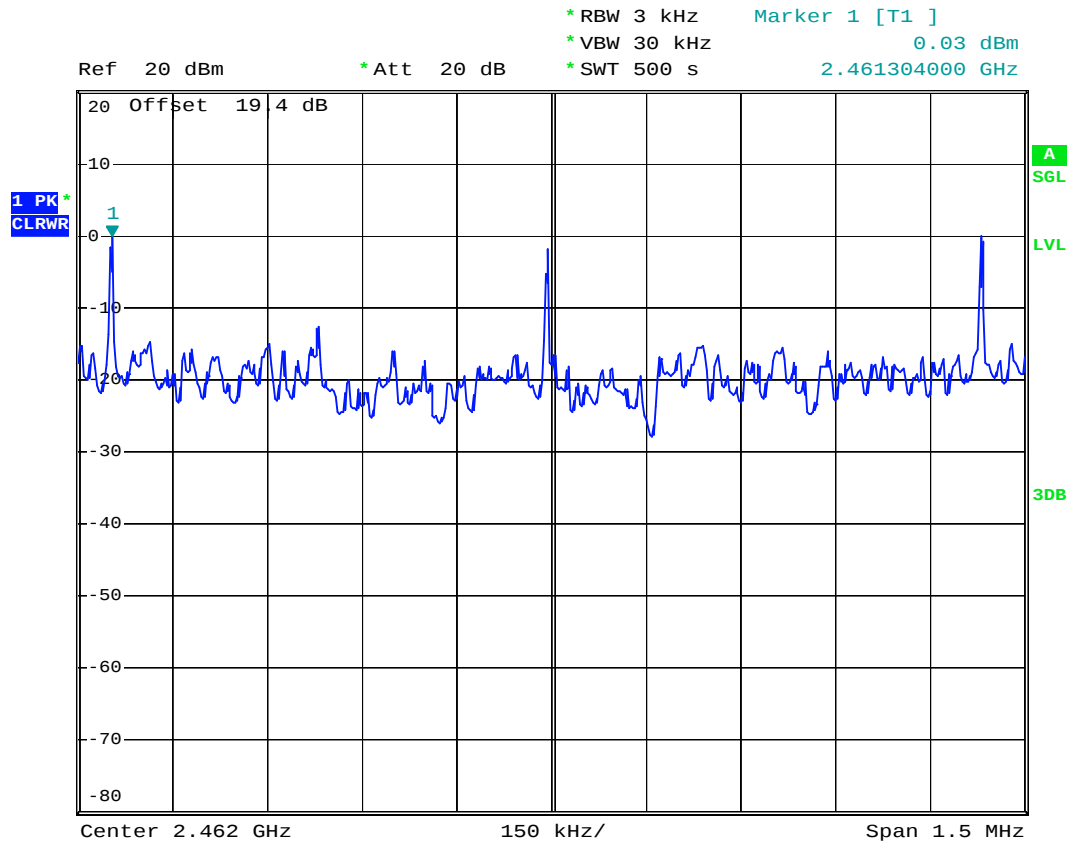
Mode 1



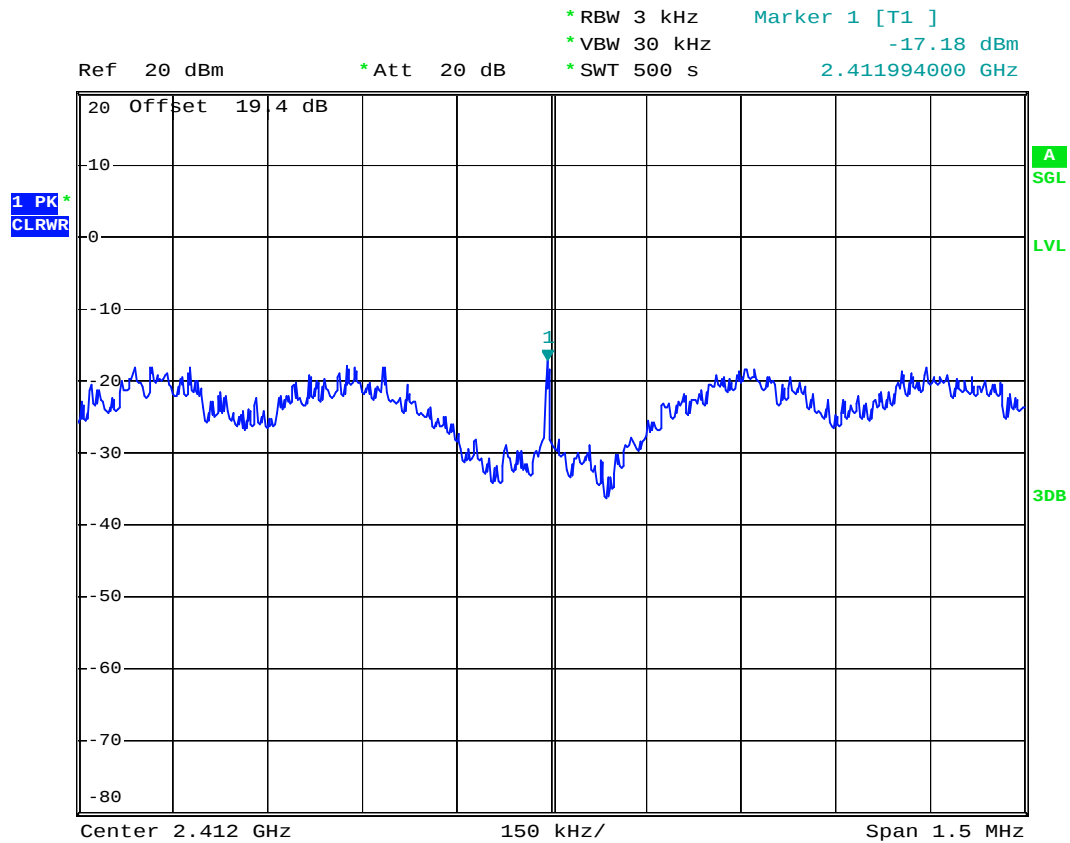
Mode 2



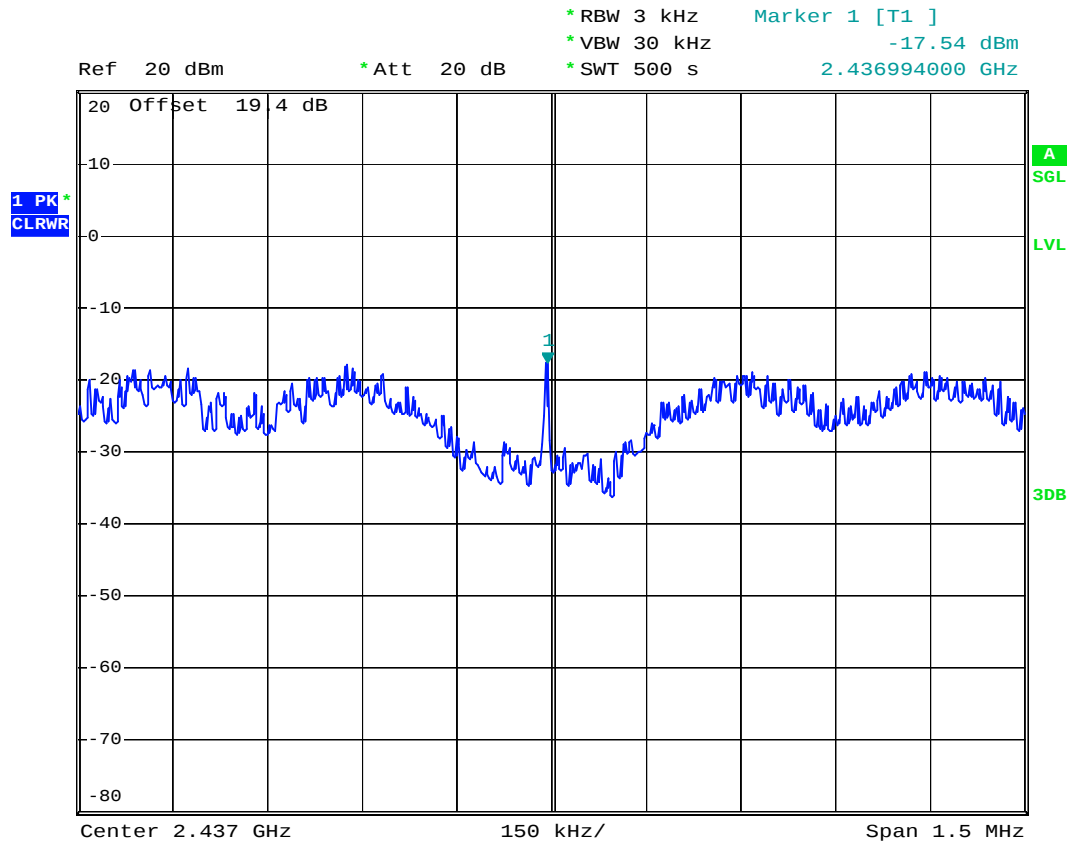
Mode 3



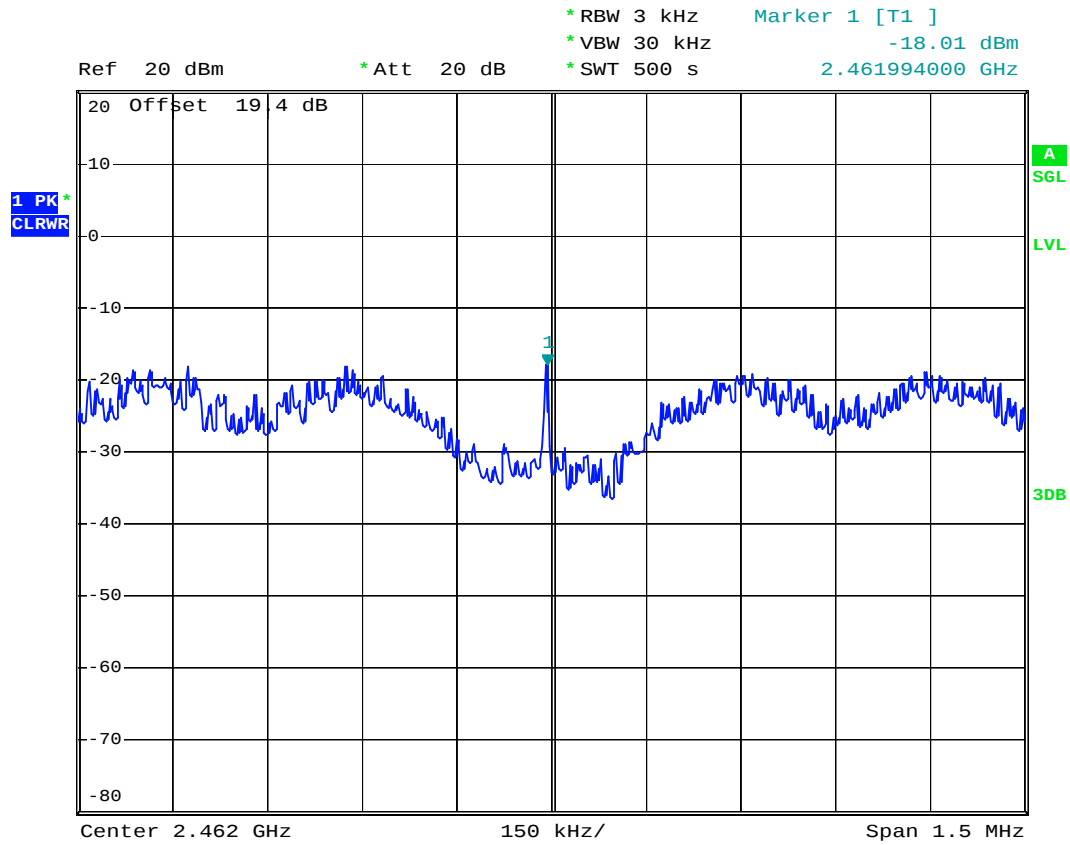
Mode 4



Mode 5



Mode 6



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 : 29~30°C
- Relative Humidity : 39~40%
- Test Enginner : Ken

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
➤WLAN 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
2384.29	32.54	-21.46	54.00	32.46	31.83	3.92	35.68	104	216	Average
2384.29	44.91	-29.09	74.00	44.83	31.83	3.92	35.68	100	0	Peak

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
2386.57	34.22	-19.78	54.00	34.12	31.86	3.92	35.68	100	8	Average
2386.57	47.23	-26.77	74.00	47.13	31.86	3.92	35.68	100	0	Peak

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
2495.06	35.71	-18.29	54.00	35.36	32.00	4.05	35.70	135	357	Average
2495.06	48.97	-25.03	74.00	48.62	32.00	4.05	35.70	100	0	Peak

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
2495.06	35.71	-18.29	54.00	35.36	32.00	4.05	35.70	135	357	Average
2495.06	48.97	-25.03	74.00	48.62	32.00	4.05	35.70	100	0	Peak

➤WLAN 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
2388.66	32.56	-21.44	54.00	32.46	31.86	3.92	35.68	101	165	Average
2388.66	50.23	-23.77	74.00	50.13	31.86	3.92	35.68	100	0	Peak

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
2389.61	35.24	-18.76	54.00	35.14	31.86	3.92	35.68	155	26	Average
2389.61	55.27	-18.73	74.00	55.17	31.86	3.92	35.68	100	0	Peak

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	36.15	-17.85	54.00	35.82	31.98	4.05	35.70	184	24	Average
2483.50	56.94	-17.06	74.00	56.61	31.98	4.05	35.70	100	0	Peak

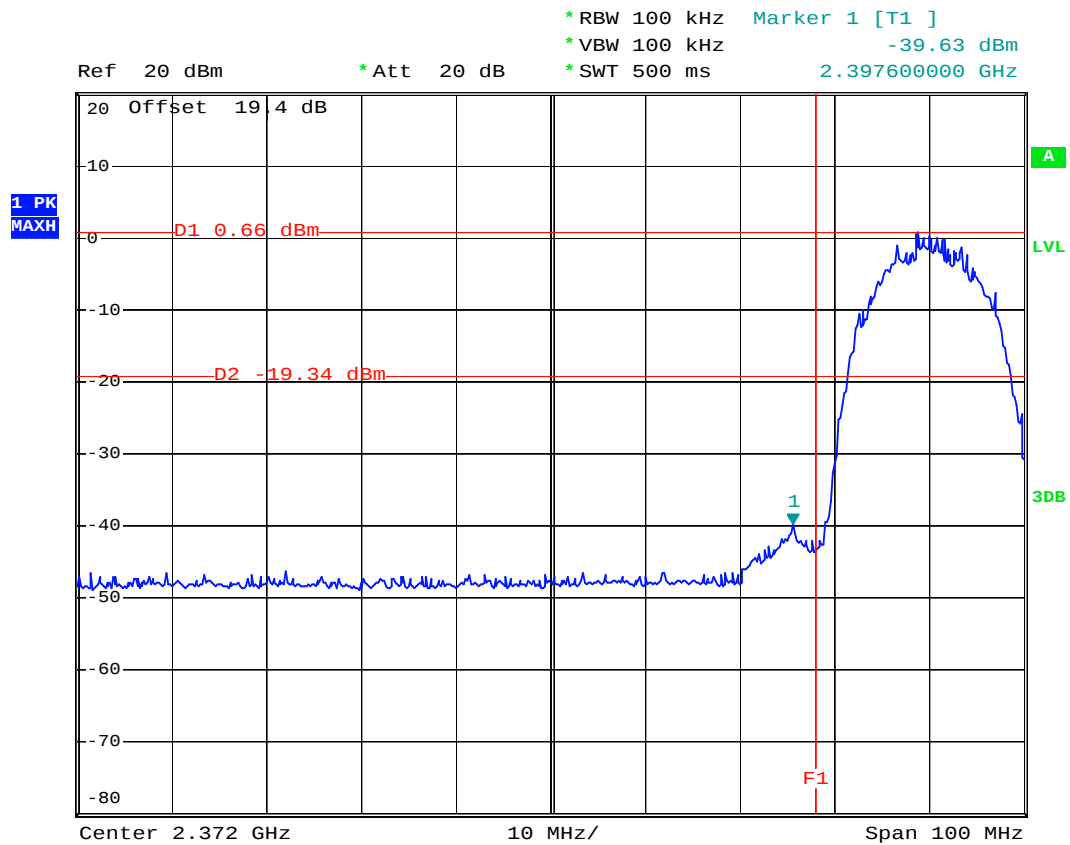
CH11 (Vertical)

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
2483.50	36.06	-17.94	54.00	35.73	31.98	4.05	35.70	134	354	Average
2483.50	55.99	-18.01	74.00	55.66	31.98	4.05	35.70	100	0	Peak

5.4.5 20dB Band Edge

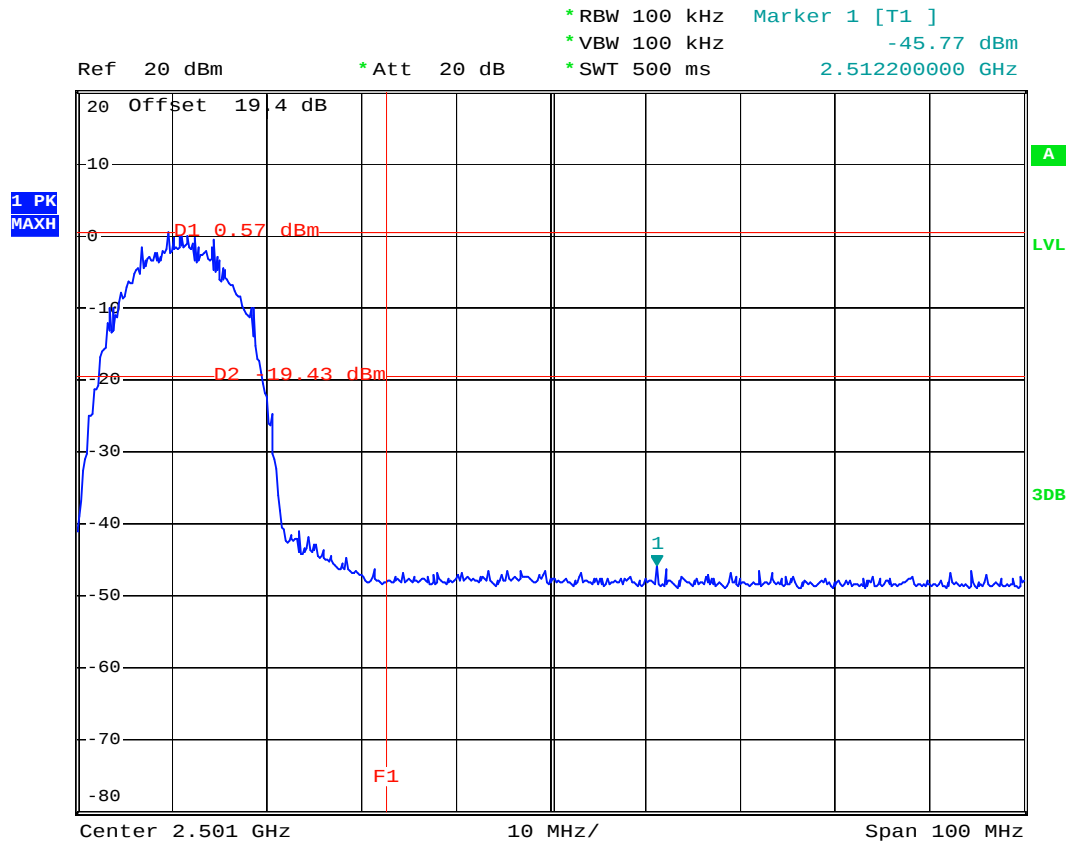
WLAN 802.11b

CH01



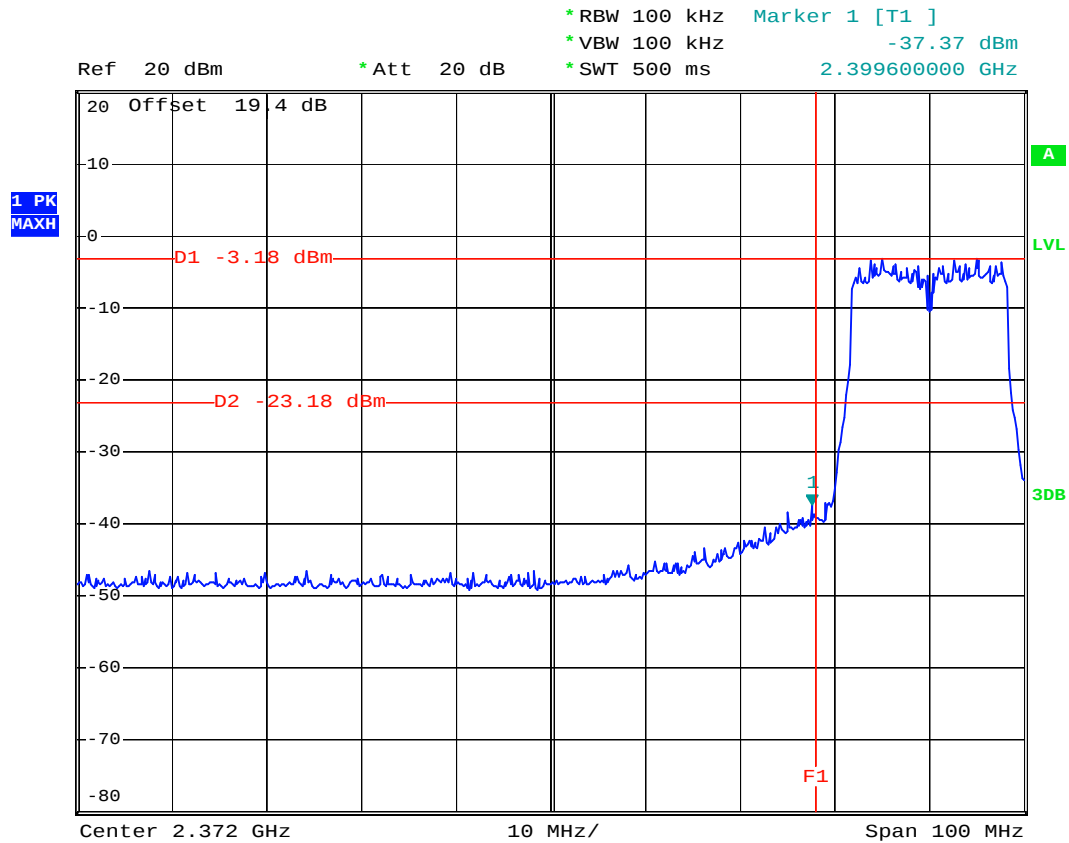
WLAN 802.11b

CH11



WLAN 802.11g

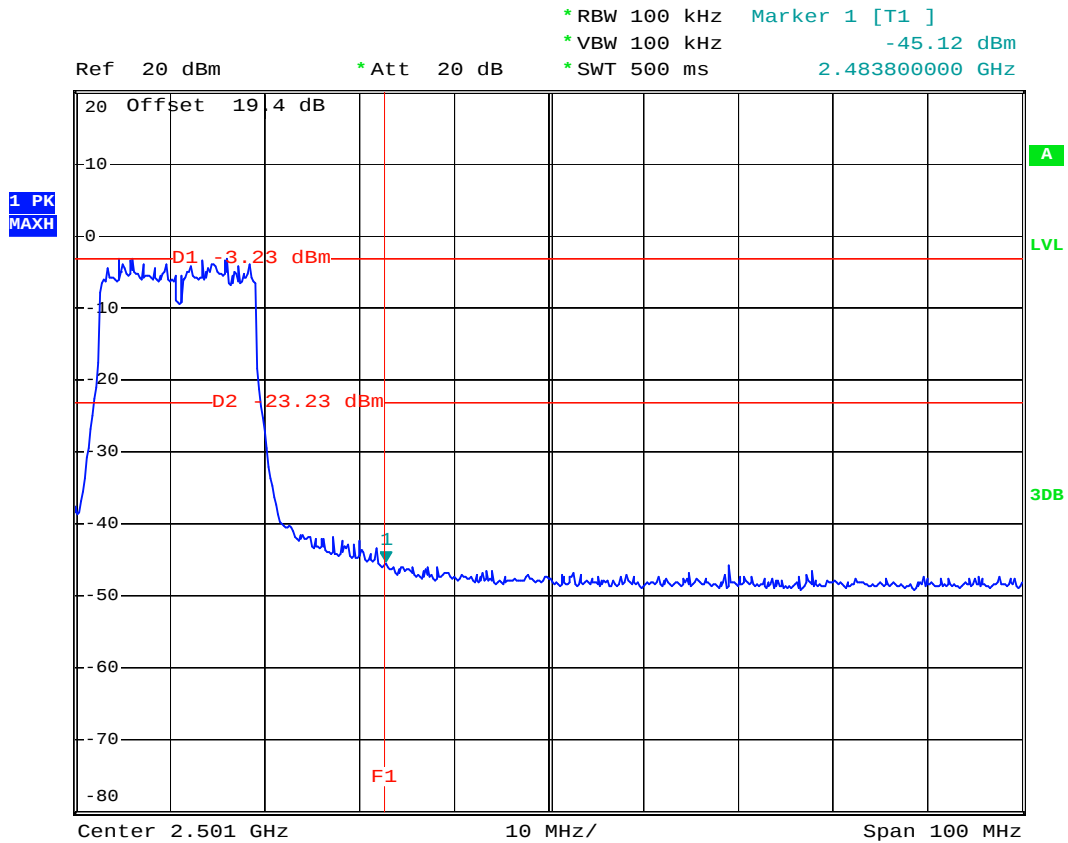
CH01



Date: 11 DEC 2007 03:10:37

WLAN 802.11g

CH11



5.5 Peak Output Power Measurement

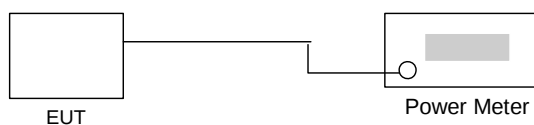
5.5.1 Measuring Instruments

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 : 29~30℃
- Relative Humidity : 39~40%
- Test Enginner : Ken

WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	12.51	1W/30 dBm
06	2437	12.37	1W/30 dBm
11	2462	12.62	1W/30 dBm

WLAN 802.11g

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	17.52	1W/30 dBm
06	2437	17.50	1W/30 dBm
11	2462	17.31	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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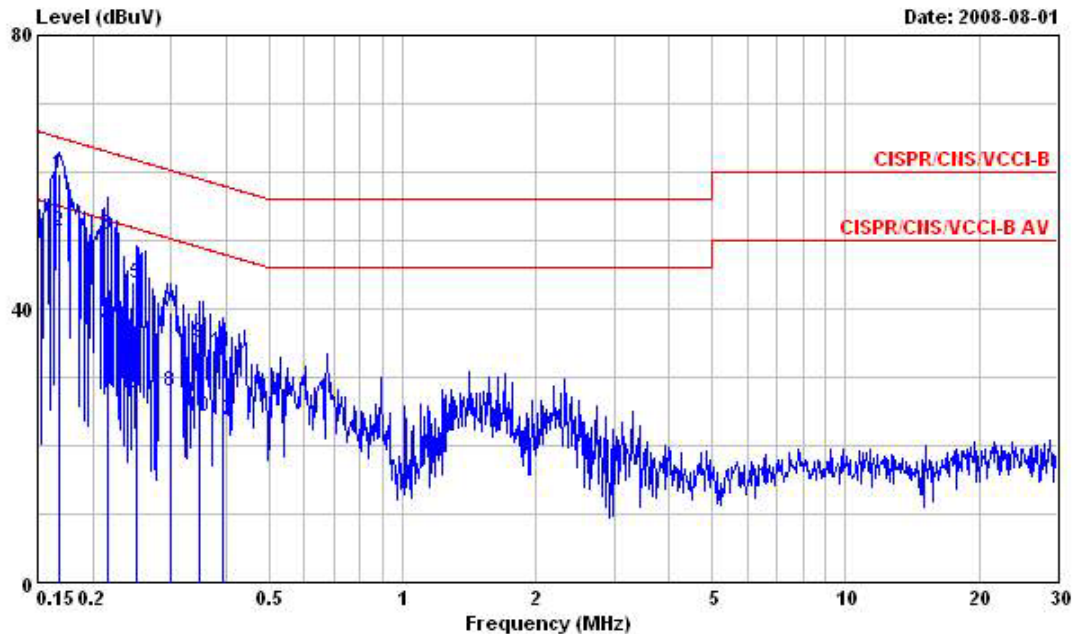
5.6.2 Test Procedures

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

- Test Mode : Mode 1
- Temperature : 29~30°C
- Relative Humidity : 39~40%
- Test Enginner : Happyer
- Test Condition : Line

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

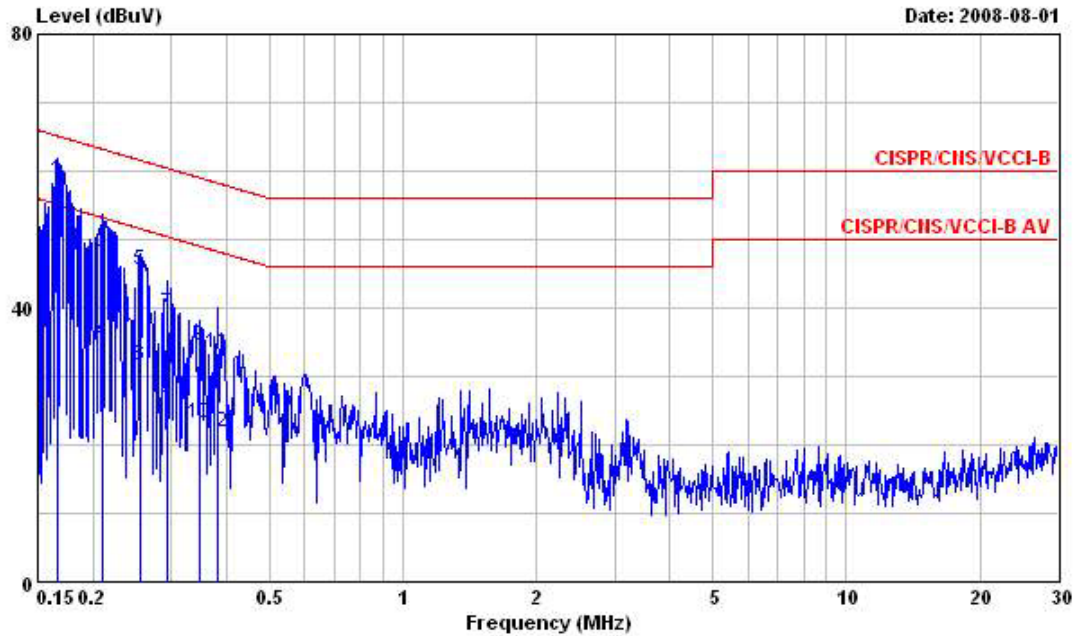


Site : CO04-HY
Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 NEUTRAL
EUT : PDA Phone
POWER: 120V/60Hz
Model : FR 821504-03
Memo : MODE 1

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.1685440	59.82	-5.21	65.03	59.68	0.08	0.06	QP
2	0.1685440	51.40	-3.63	55.03	51.26	0.08	0.06	Average
3	0.2162030	50.90	-12.06	62.96	50.76	0.08	0.06	QP
4	0.2162030	37.34	-15.62	52.96	37.20	0.08	0.06	Average
5	0.2507790	43.69	-18.04	61.73	43.56	0.08	0.05	QP
6	0.2507790	27.76	-23.97	51.73	27.63	0.08	0.05	Average
7	0.3002800	39.56	-20.68	60.24	39.42	0.09	0.05	QP
8	0.3002800	27.84	-22.40	50.24	27.70	0.09	0.05	Average
9	0.3464610	35.02	-24.03	59.05	34.89	0.09	0.04	QP
10	0.3464610	24.31	-24.74	49.05	24.18	0.09	0.04	Average
11	0.3934400	33.81	-24.18	57.99	33.68	0.09	0.04	QP
12	0.3934400	23.72	-24.27	47.99	23.59	0.09	0.04	Average

- Test Condition: Neutral

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

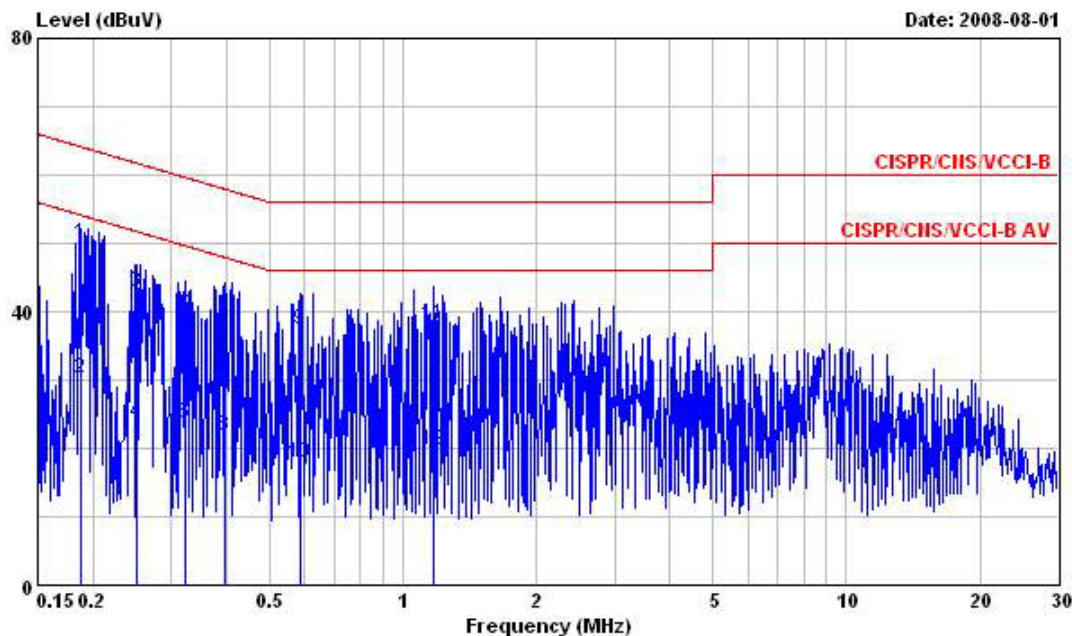


Site : CO04-HY
Condition : CISPR/CIS/VCCI-B LISN 2008 0416 99041 LINE
EUT : PDA Phone
POWER: 120V/60Hz
Model : FR 821504-03
Memo : MODE 1

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1667680	58.80	-6.32	65.12	58.66	0.09	0.05	QP
2	0.1667680	45.87	-9.25	55.12	45.73	0.09	0.05	Average
3	0.2094380	48.11	-15.12	63.23	47.96	0.09	0.06	QP
4	0.2094380	35.04	-18.19	53.23	34.89	0.09	0.06	Average
5	0.2547970	45.50	-16.10	61.60	45.36	0.09	0.05	QP
6	0.2547970	31.64	-19.96	51.60	31.50	0.09	0.05	Average
7	0.2939830	39.18	-21.23	60.41	39.03	0.10	0.05	QP
8	0.2939830	26.78	-23.63	50.41	26.63	0.10	0.05	Average
9	0.3464610	34.37	-24.68	59.05	34.23	0.10	0.04	QP
10	0.3464610	23.28	-25.77	49.05	23.14	0.10	0.04	Average
11	0.3811300	33.46	-24.79	58.25	33.32	0.10	0.04	QP
12	0.3811300	21.78	-26.47	48.25	21.64	0.10	0.04	Average

- Test Mode : Mode 2
- Temperature : 29~30°C
- Relative Humidity : 39~40%
- Test Condition : Line
- Test Engineer: Happyer

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

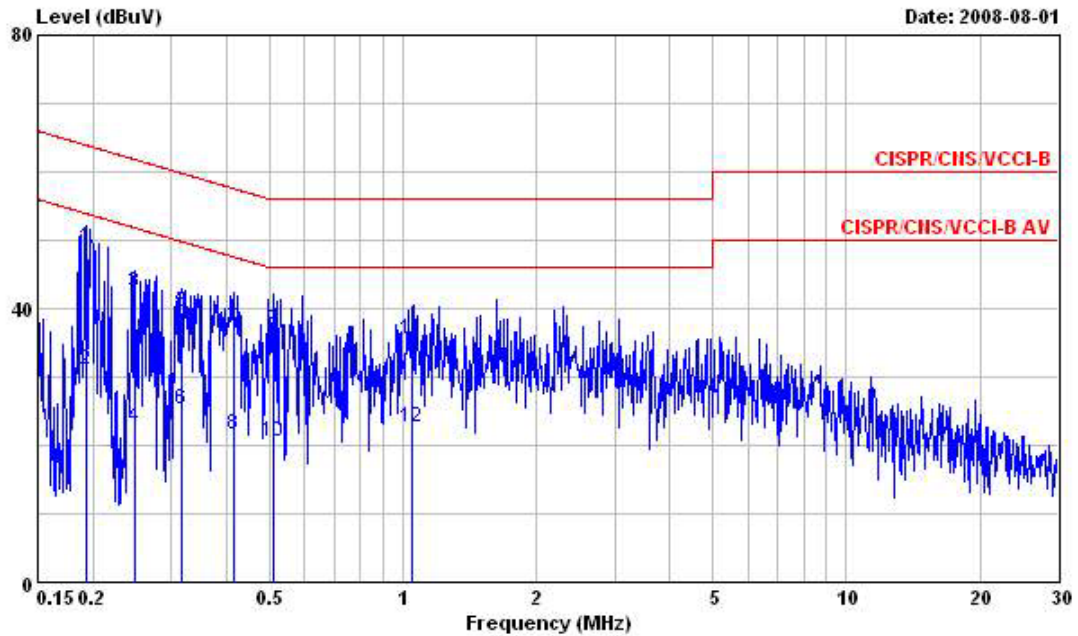


Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 2008 0416 99041 LINE
 EUT : PDA Phone
 POWER: 120V/60Hz
 Model : FR 821504-03
 Memo : MODE 2

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.1873850	49.93	-14.22	64.15	49.78	0.09	0.06	QP
2	0.1873850	30.23	-23.92	54.15	30.08	0.09	0.06	Average
3	0.2507790	42.89	-18.84	61.73	42.75	0.09	0.05	QP
4	0.2507790	23.69	-28.04	51.73	23.55	0.09	0.05	Average
5	0.3216920	39.50	-20.16	59.66	39.35	0.10	0.05	QP
6	0.3216920	23.55	-26.11	49.66	23.40	0.10	0.05	Average
7	0.3955300	39.58	-18.37	57.95	39.44	0.10	0.04	QP
8	0.3955300	21.89	-26.06	47.95	21.75	0.10	0.04	Average
9	0.5854040	37.25	-18.75	56.00	36.94	0.10	0.21	QP
10	0.5854040	17.89	-28.11	46.00	17.58	0.10	0.21	Average
11	1.170	38.06	-17.94	56.00	37.45	0.11	0.50	QP
12	1.170	19.63	-26.37	46.00	19.02	0.11	0.50	Average

- Test Condition: Neutral

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



Site : CO04-HY

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

EUT : PDA Phone

POWER: 120V/60Hz

Model : FR 821504-03

Memo : MODE 2

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1934380	48.83	-15.06	63.89	48.69	0.08	0.06	QP
2	0.1934380	31.08	-22.81	53.89	30.94	0.08	0.06	Average
3	0.2494540	42.29	-19.49	61.78	42.16	0.08	0.05	QP
4	0.2494540	22.75	-29.03	51.78	22.62	0.08	0.05	Average
5	0.3166190	39.43	-20.37	59.80	39.29	0.09	0.05	QP
6	0.3166190	25.20	-24.60	49.80	25.06	0.09	0.05	Average
7	0.4148480	36.98	-20.57	57.55	36.83	0.09	0.06	QP
8	0.4148480	21.46	-26.09	47.55	21.31	0.09	0.06	Average
9	0.5100690	36.74	-19.26	56.00	36.49	0.10	0.15	QP
10	0.5100690	20.59	-25.41	46.00	20.34	0.10	0.15	Average
11	1.050	35.54	-20.46	56.00	34.96	0.11	0.47	QP
12	1.050	22.74	-23.26	46.00	22.16	0.11	0.47	Average

5.7 Radiated Emission Measurement

5.7.1 Measuring Instruments

As described in chapter 6 of this Report.

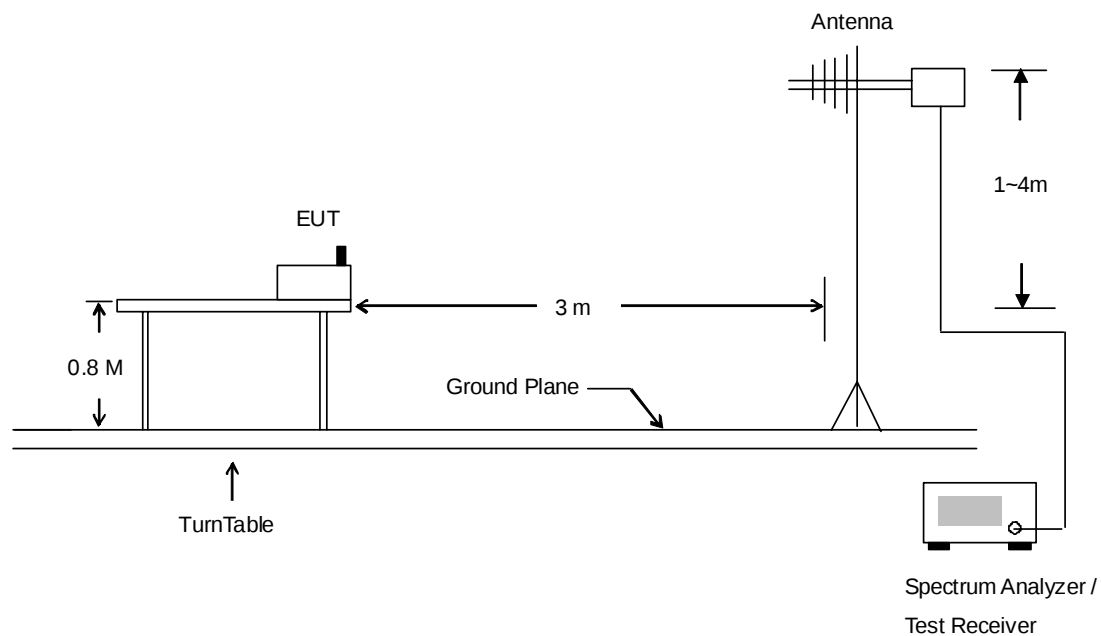
The spectrum analyzer setting :

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.

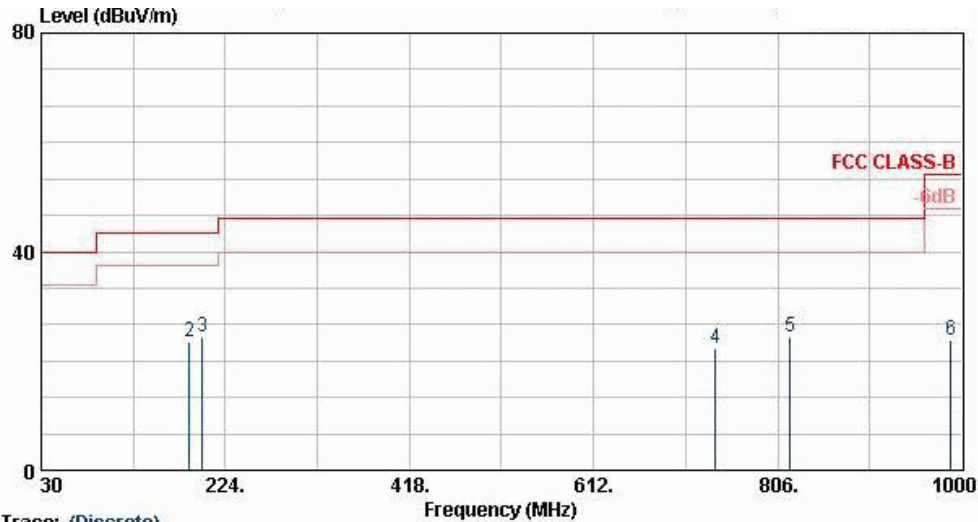
5.7.3 Typical Test Setup Layout of Radiated Emission



5.7.4 Test Data

- Test Mode : Mode 1
- Temperature : 21~26°C
- Relating Humidity : 49~55%
- Test Enginner : Sun
- Polarization : Horizontal (30MHz-1GHz)

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

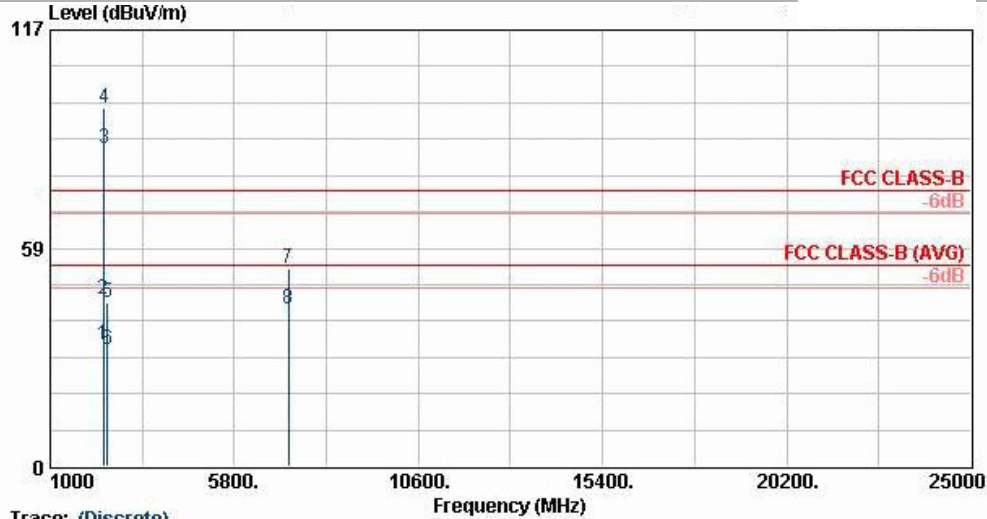


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11b Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 135790246811222

	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/m	dB	dB	cm	deg
1	30.00	23.73	-16.27	40.00	37.27	19.66	0.30	33.50	100	164 Peak
2	186.33	23.62	-19.88	43.50	47.09	9.40	0.60	33.46	---	---
3	199.83	24.36	-19.14	43.50	47.99	9.30	0.60	33.53	---	---
4	740.30	22.43	-23.57	46.00	35.00	19.26	1.10	32.93	---	---
5	819.40	24.37	-21.63	46.00	35.82	19.96	1.20	32.61	---	---
6	988.80	23.89	-30.11	54.00	33.59	21.16	1.30	32.16	---	---

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

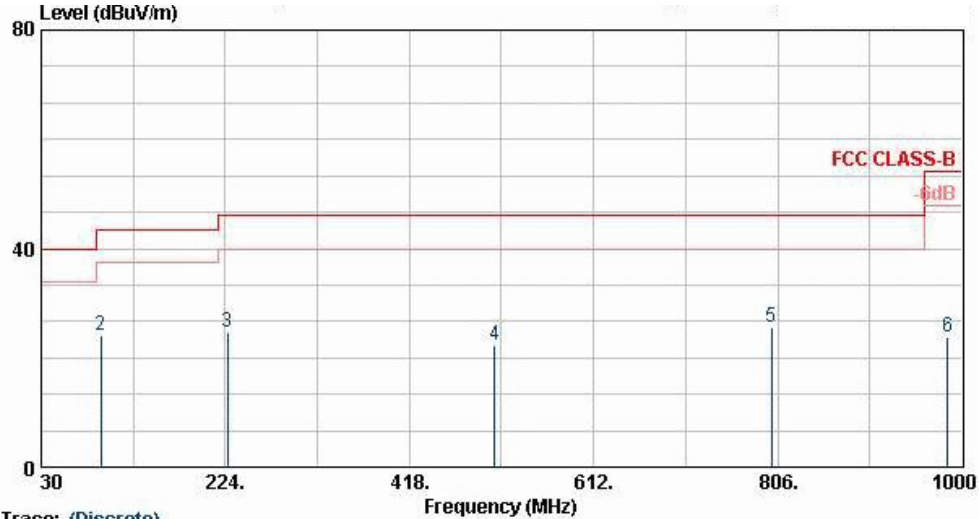
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch01; 2412MHz + Adaptor
Data Rate : 11
Plane : H
TWT : 135790246811222

	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	2384.29	32.54	-21.46	54.00	32.46	31.83	3.92	35.68	104	216 Average
2	2384.29	44.91	-29.09	74.00	44.83	31.83	3.92	35.68	100	0 Peak
3 X	2412.00	85.26			85.11	31.88	3.95	35.68	104	216 Average
4 X	2412.00	96.27			96.12	31.88	3.95	35.68	100	0 Peak
5	2494.00	43.87	-30.13	74.00	43.52	32.00	4.05	35.70	100	0 Peak
6	2494.00	31.38	-22.62	54.00	31.03	32.00	4.05	35.70	104	216 Average
7	7206.00	53.27	-20.73	74.00	46.46	35.72	7.17	36.08	100	0 Peak
8	7206.00	42.04	-11.96	54.00	35.24	35.72	7.17	36.08	100	117 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.



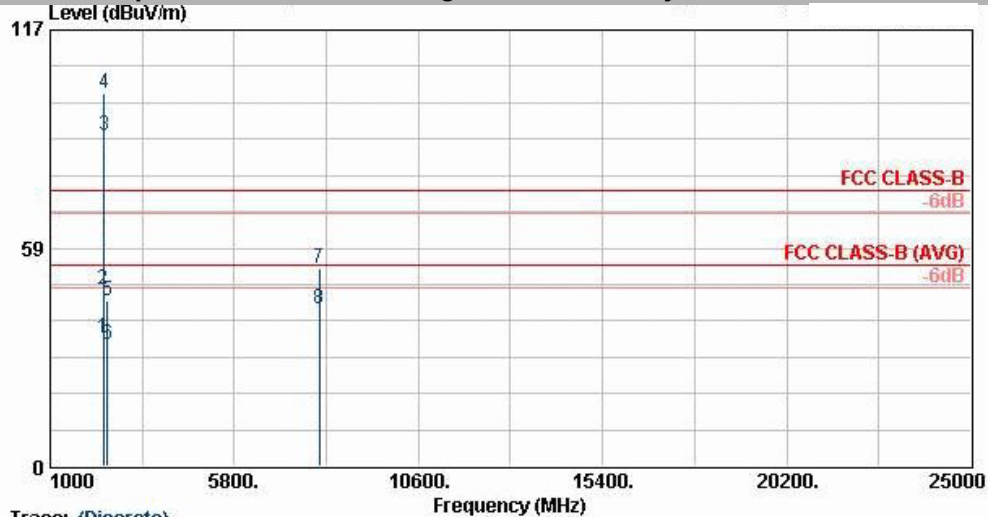
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch01; 2412MHz + Adaptor
Data Rate : 11
Plane : H
TIME : 135790246611222

	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	30.00	22.75	-17.25	40.00	36.29	19.66	0.30	33.50	100	132 Peak
2	93.18	23.99	-19.51	43.50	47.20	9.62	0.50	33.33	---	---
3	226.29	24.71	-21.29	46.00	46.65	10.84	0.70	33.48	---	---
4	507.90	22.44	-23.56	46.00	37.24	17.51	1.00	33.31	---	---
5	799.80	25.48	-20.52	46.00	37.02	19.82	1.20	32.56	---	---
6	985.30	23.64	-30.36	54.00	33.38	21.14	1.30	32.18	---	---

- Polarization : Vertical (1GHz-25GHz)

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



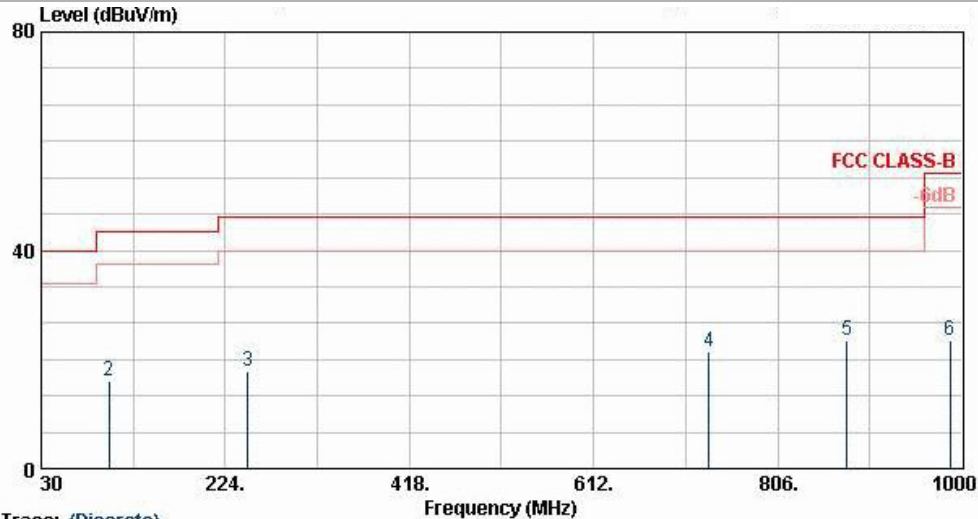
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch01; 2412MHz + Adaptor
Data Rate : 11
Plane : H
IMEI : 135790246811222

	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	2386.57	34.22	-19.78	54.00	34.12	31.86	3.92	35.68	100	8	Average
2	2386.57	47.23	-26.77	74.00	47.13	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	88.62			88.47	31.88	3.95	35.68	100	8	Average
4 X	2412.00	100.09			99.94	31.88	3.95	35.68	100	0	Peak
5	2500.00	44.32	-29.68	74.00	43.97	32.00	4.05	35.70	100	0	Peak
6	2500.00	32.56	-21.44	54.00	32.21	32.00	4.05	35.70	100	8	Average
7	8007.00	53.28	-20.72	74.00	46.36	35.70	7.52	36.30	100	0	Peak
8	8007.00	42.16	-11.84	54.00	35.24	35.70	7.52	36.30	100	304	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 2
- Temperature : 21~26°C
- Relative Humidity : 49~55%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

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

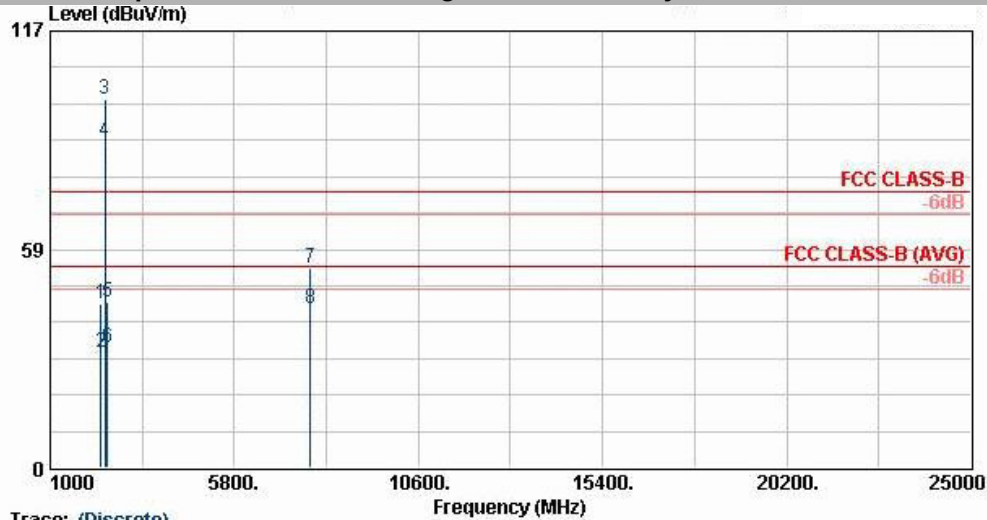


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11b Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 11
 Plane : H
 TIME : 135790246811222

	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	34.21	-5.79	40.00	48.41	18.95	0.30	33.46	100	142	Peak
2	101.28	16.18	-27.32	43.50	37.88	11.07	0.50	33.27	---	---	Peak
3	247.89	17.84	-28.16	46.00	38.42	12.16	0.70	33.44	---	---	Peak
4	733.30	21.43	-24.57	46.00	34.10	19.20	1.10	32.97	---	---	Peak
5	878.90	23.40	-22.60	46.00	34.47	20.38	1.30	32.75	---	---	Peak
6	987.40	23.47	-30.53	54.00	33.18	21.15	1.30	32.16	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



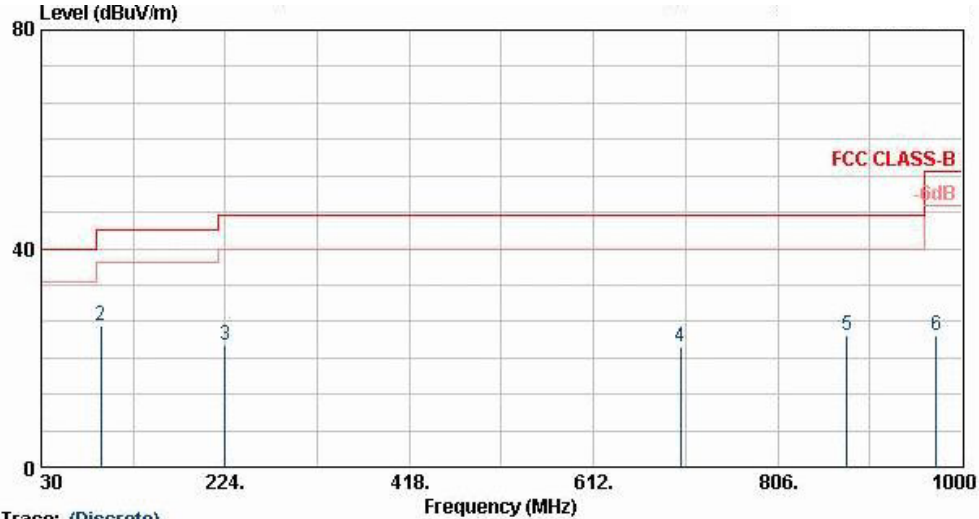
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch06; 2437MHz + Adaptor
Data Rate : 11
Plane : H
TMET : 135790246811222

	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	2318.00	43.95	-30.05	74.00	44.04	31.76	3.82	35.67	100	0	Peak
2	2318.00	30.81	-23.19	54.00	30.89	31.76	3.82	35.67	193	357	Average
3 X	2437.00	98.84			98.61	31.93	3.99	35.69	100	0	Peak
4 X	2437.00	87.37			87.14	31.93	3.99	35.69	193	357	Average
5	2484.00	44.47	-29.53	74.00	44.14	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.02	-21.98	54.00	31.69	31.98	4.05	35.70	193	357	Average
7	7776.00	53.58	-20.42	74.00	46.78	35.66	7.40	36.26	100	0	Peak
8	7776.00	42.44	-11.56	54.00	35.64	35.66	7.40	36.26	100	197	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.



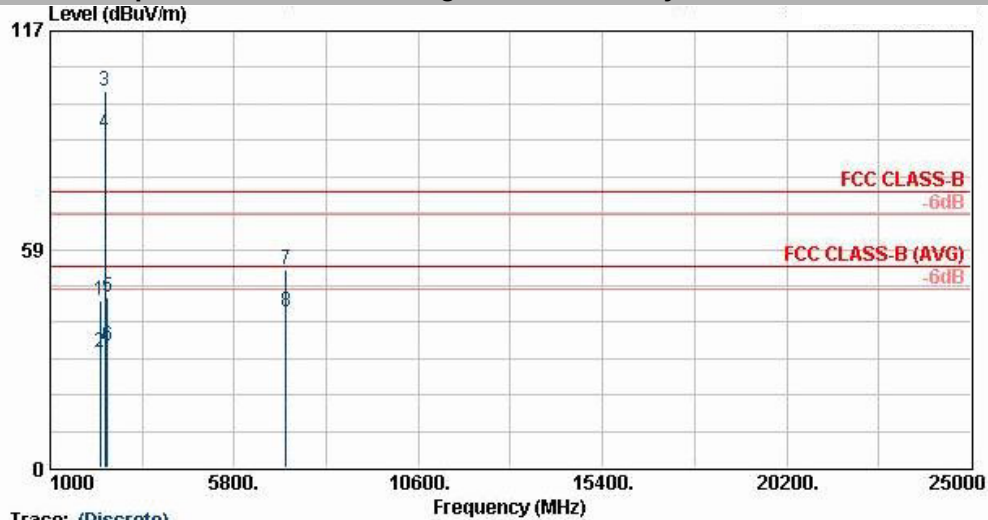
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch06; 2437MHz + Adaptor
Data Rate : 11
Plane : H
TIME : 135790246611222

	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	30.00	22.94	-17.06	40.00	36.48	19.66	0.30	33.50	100	121 Peak
2	92.64	25.76	-17.74	43.50	48.97	9.62	0.50	33.33	---	---
3	224.13	22.44	-23.56	46.00	44.49	10.73	0.70	33.48	---	---
4	703.90	22.16	-23.84	46.00	35.24	18.93	1.14	33.15	---	---
5	878.90	24.12	-21.88	46.00	35.19	20.38	1.30	32.75	---	---
6	973.40	24.18	-29.82	54.00	34.08	21.05	1.30	32.26	---	---

- Polarization : Vertical (1GHz-25GHz)

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



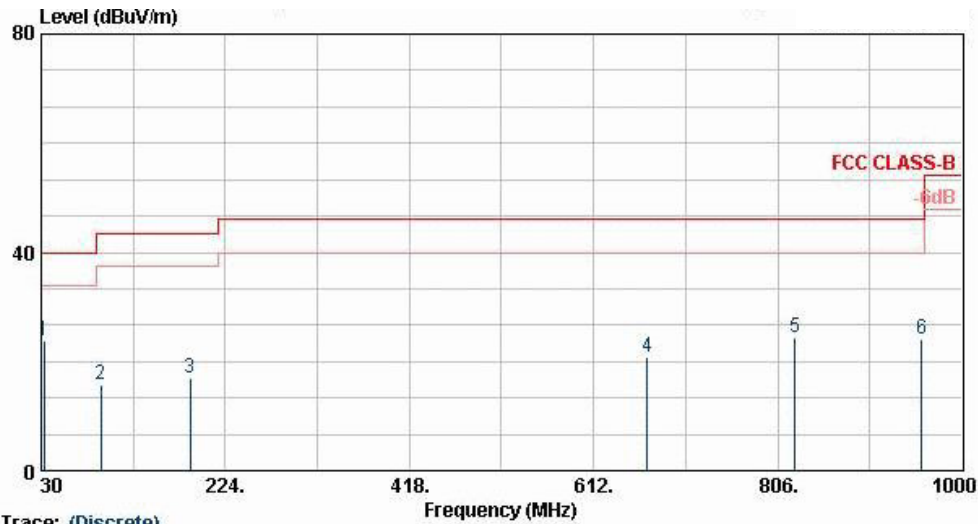
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch06; 2437MHz + Adaptor
Data Rate : 11
Plane : H
TMET : 135790246811222

	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	2310.00	44.96	-29.04	74.00	45.06	31.73	3.82	35.66	100	0 Peak
2	2310.00	30.98	-23.02	54.00	31.08	31.73	3.82	35.66	151	10 Average
3 X	2437.00	100.78			100.55	31.93	3.99	35.69	100	0 Peak
4 @	2437.00	89.60			89.37	31.93	3.99	35.69	151	10 Average
5	2494.00	45.60	-28.40	74.00	45.25	32.00	4.05	35.70	100	0 Peak
6	2494.00	32.68	-21.32	54.00	32.33	32.00	4.05	35.70	151	10 Average
7	7146.00	53.12	-20.88	74.00	46.30	35.74	7.14	36.06	100	0 Peak
8	7146.00	41.96	-12.04	54.00	35.14	35.74	7.14	36.06	100	228 Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 3
- Temperature : 21~26°C
- Relative Humidity : 49~55%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

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

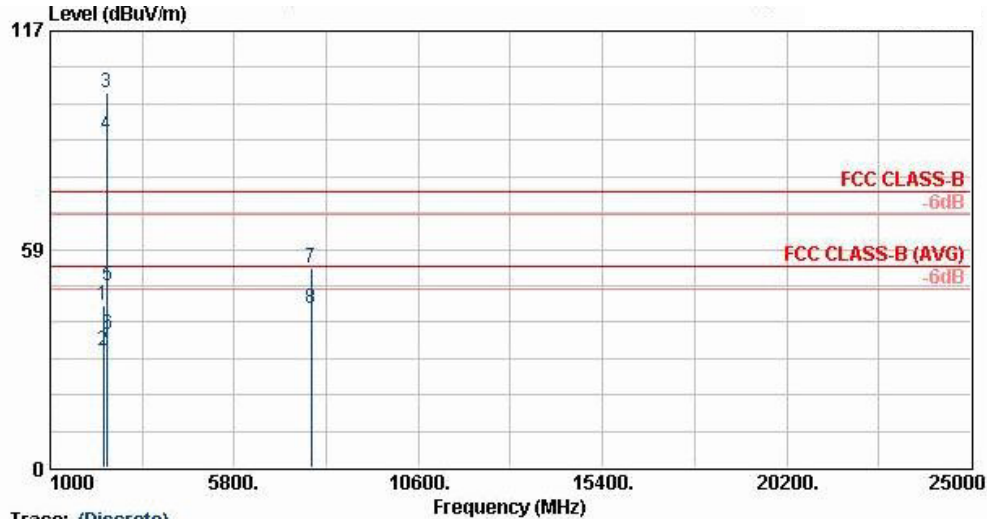

Trace: (Discrete)

Site : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch11; 2462MHz + Adaptor
Data Rate : 11
Plane : H
IMEI : 135790246811222

	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/m	dB	dB	cm	deg
1	33.24	23.86	-16.14	40.00	39.40	17.54	0.30	33.38	100	84 Peak
2	92.64	15.87	-27.63	43.50	39.09	9.62	0.50	33.33	---	---
3	187.14	17.05	-26.45	43.50	40.55	9.39	0.60	33.49	---	---
4	668.90	20.89	-25.11	46.00	34.19	18.76	1.01	33.07	---	---
5	824.30	24.52	-21.48	46.00	35.95	19.99	1.20	32.62	---	---
6	957.30	24.06	-21.94	46.00	34.23	20.94	1.27	32.38	---	---

- Polarization : Horizontal (1GHz-25GHz)

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



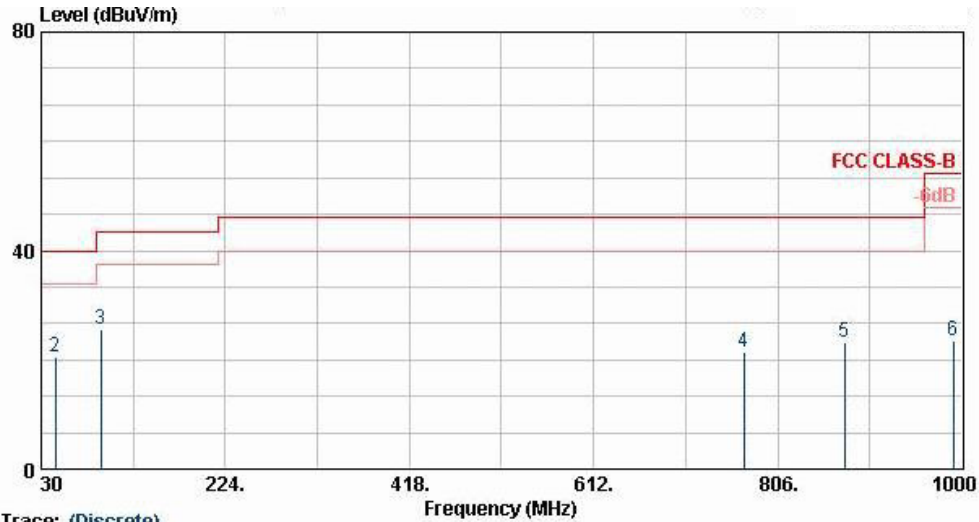
Trace: (Discrete)
 Site : D3CH06-HV
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11b Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 11
 Plane : H
 TWT : 135790246611222

	Freq	Level	Over	Limit	ReadAntenna	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	43.38	-30.62	74.00	43.28	31.86	3.92	35.68	100	0 Peak
2	2390.00	31.25	-22.75	54.00	31.15	31.86	3.92	35.68	184	26 Average
3 X	2462.00	100.36			100.08	31.95	4.02	35.69	100	0 Peak
4 X	2462.00	89.19			88.91	31.95	4.02	35.69	184	26 Average
5	2496.01	48.83	-25.17	74.00	48.48	32.00	4.05	35.70	100	0 Peak
6	2496.01	35.64	-18.36	54.00	35.29	32.00	4.05	35.70	184	26 Average
7	7806.00	53.63	-20.37	74.00	46.80	35.66	7.42	36.26	100	0 Peak
8	7806.00	42.46	-11.54	54.00	35.64	35.66	7.42	36.26	100	103 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.



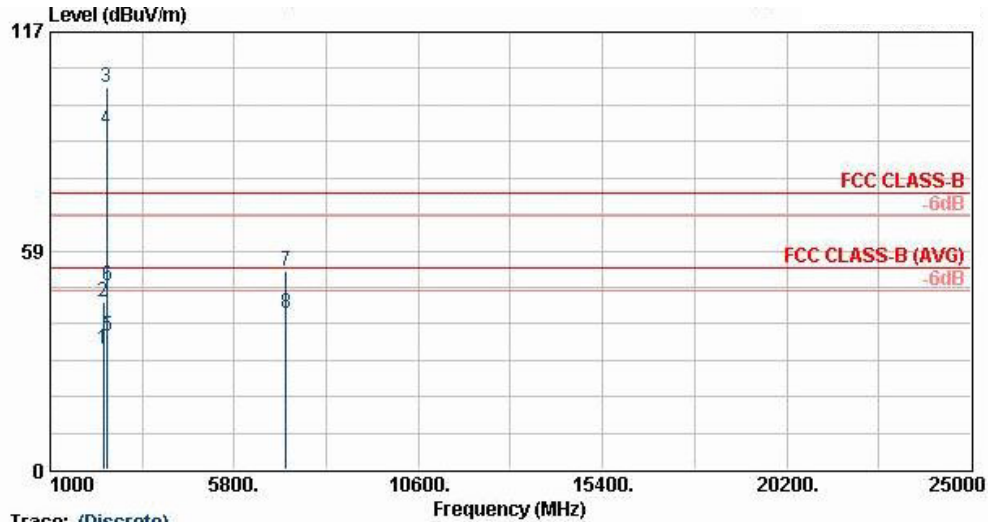
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch11; 2462MHz + Adaptor
Data Rate : 11
Plane : H
IMEI : 135790246811222

	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	22.54	-17.46	40.00	36.08	19.66	0.30	33.50	100	151	Peak
2	44.58	20.51	-19.49	40.00	42.30	11.02	0.30	33.11	---	---	Peak
3	92.64	25.50	-18.00	43.50	48.72	9.62	0.50	33.33	---	---	Peak
4	770.40	21.55	-24.45	46.00	33.65	19.54	1.10	32.74	---	---	Peak
5	876.80	23.18	-22.82	46.00	34.26	20.36	1.30	32.74	---	---	Peak
6	990.90	23.46	-30.54	54.00	33.11	21.18	1.30	32.13	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

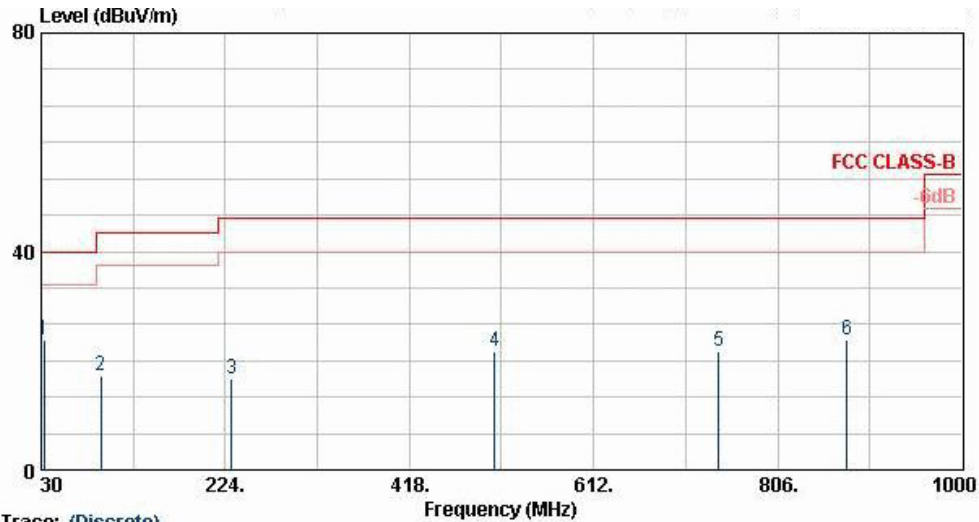
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11b Tx_Ch11; 2462MHz + Adaptor
Data Rate : 11
Plane : H
IMEI : 135790246611222

	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	2390.00	32.14	-21.86	54.00	32.04	31.86	3.92	35.68	135	357	Average
2	2390.00	44.66	-29.34	74.00	44.57	31.86	3.92	35.68	100	0	Peak
3 X	2462.00	102.39			102.12	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	91.07			90.79	31.95	4.02	35.69	135	357	Average
5	2495.06	35.71	-18.29	54.00	35.36	32.00	4.05	35.70	135	357	Average
6	2495.06	48.97	-25.03	74.00	48.62	32.00	4.05	35.70	100	0	Peak
7	7146.00	53.02	-20.98	74.00	46.20	35.74	7.14	36.06	100	0	Peak
8	7146.00	41.96	-12.04	54.00	35.14	35.74	7.14	36.06	100	297	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 4
- Temperature : 21~26°C
- Relative Humidity : 49~55%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

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

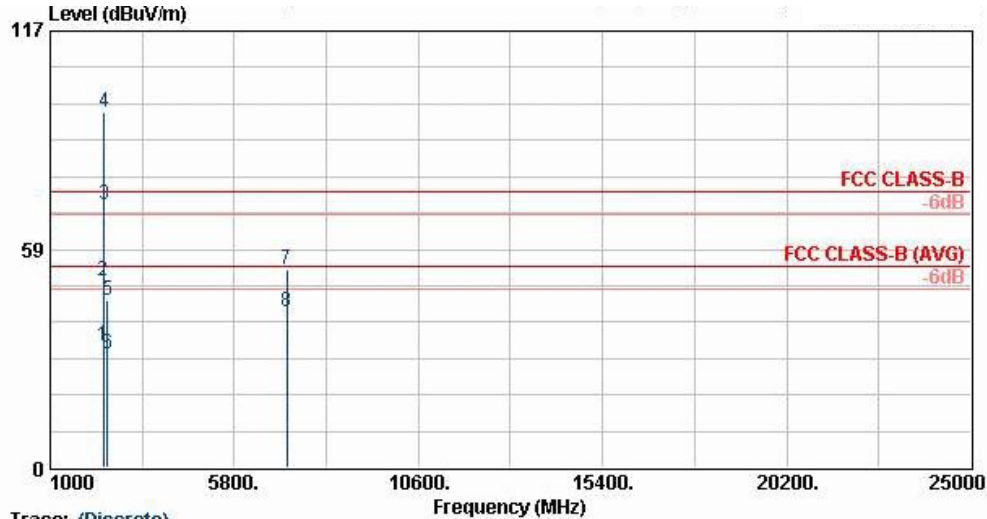


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11g Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 135790246811222

	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/m	dB	dB	cm	deg
1 @	33.24	23.88	-16.12	40.00	39.42	17.54	0.30	33.38	100	131 Peak
2	92.64	17.28	-26.22	43.50	40.50	9.62	0.50	33.33	---	---
3	230.88	16.80	-29.20	46.00	38.44	11.13	0.70	33.47	---	---
4	507.90	21.86	-24.14	46.00	36.66	17.51	1.00	33.31	---	---
5	743.80	21.73	-24.27	46.00	34.24	19.30	1.10	32.90	---	---
6	878.90	23.77	-22.23	46.00	34.84	20.38	1.30	32.75	---	---

- Polarization : Horizontal (1GHz-25GHz)

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



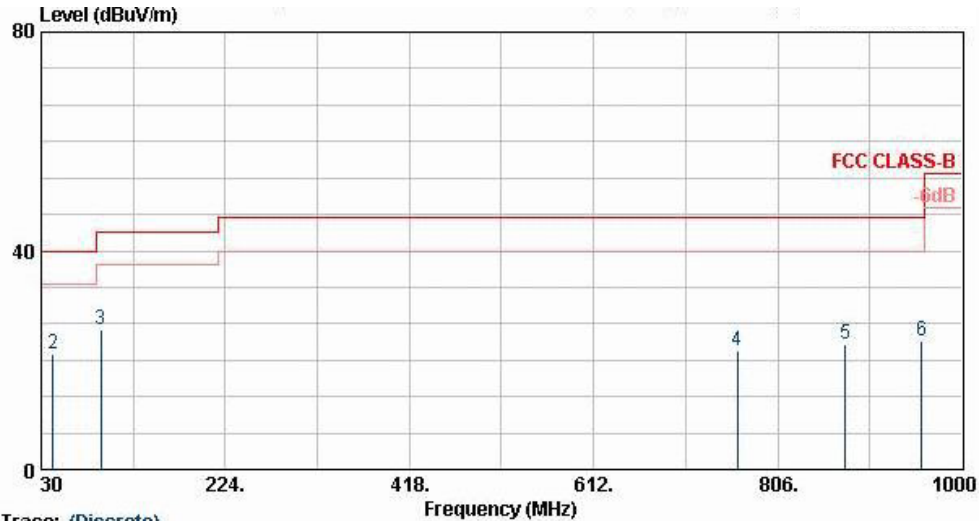
Trace: (Discrete)
 Site : D3CH06-HV
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11g Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 54
 Plane : H
 TWT : 135790246611222

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	2388.66	32.56	-21.44	54.00	32.46	31.86	3.92	35.68	101	165 Average
2	2388.66	50.23	-23.77	74.00	50.13	31.86	3.92	35.68	100	0 Peak
3 @	2412.00	70.50			70.35	31.88	3.95	35.68	101	165 Average
4 @	2412.00	95.45			95.29	31.88	3.95	35.68	100	0 Peak
5	2494.00	44.91	-29.09	74.00	44.56	32.00	4.05	35.70	100	0 Peak
6	2494.00	30.61	-23.39	54.00	30.26	32.00	4.05	35.70	101	165 Average
7	7176.00	52.95	-21.05	74.00	46.14	35.73	7.15	36.07	100	0 Peak
8 @	7176.00	41.85	-12.15	54.00	35.04	35.73	7.15	36.07	100	127 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.



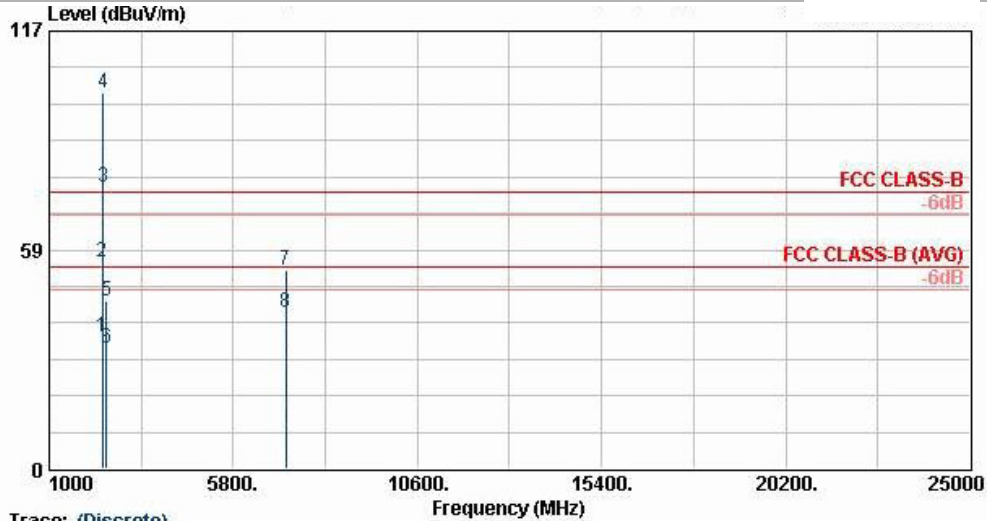
Trace: (Discrete)

Site : 03CH06-RV
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch01; 2412MHz + Adaptor
Data Rate : 54
Plane : H
TIME : 135790246811222

	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	22.99	-17.01	40.00	36.53	19.66	0.30	33.50	100	252	Peak
2	42.69	20.98	-19.02	40.00	41.81	12.02	0.30	33.15	---	---	Peak
3	92.64	25.56	-17.94	43.50	48.77	9.62	0.50	33.33	---	---	Peak
4	763.40	21.65	-24.35	46.00	33.86	19.48	1.10	32.79	---	---	Peak
5	877.50	22.77	-23.23	46.00	33.84	20.37	1.30	32.75	---	---	Peak
6	957.30	23.59	-22.41	46.00	33.77	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)

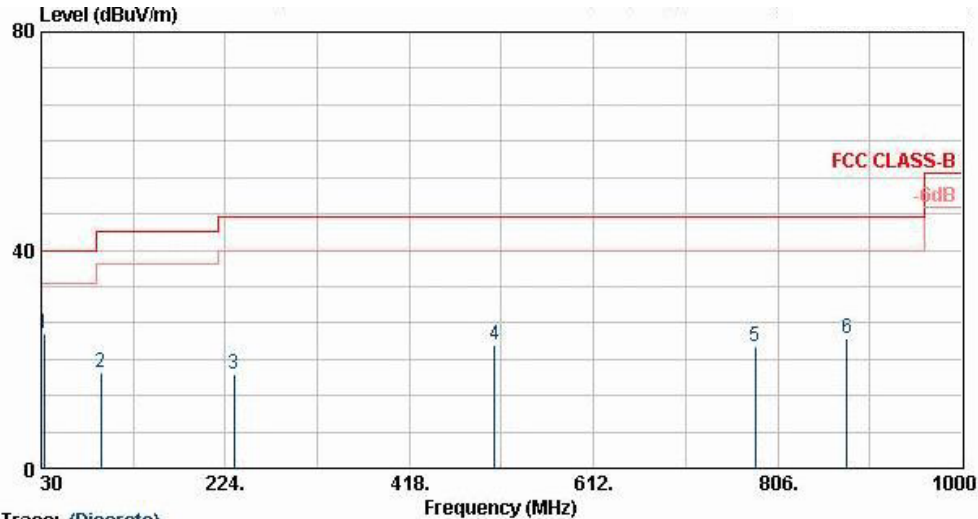
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch01; 2412MHz + Adaptor
Data Rate : 54
Plane : H
TABLE : 135790246811222

	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	2389.61	35.24	-18.76	54.00	35.14	31.86	3.92	35.68	155	26	Average
2	2389.61	55.27	-18.73	74.00	55.17	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	75.28			75.13	31.88	3.95	35.68	155	26	Average
4 @	2412.00	100.41			100.26	31.88	3.95	35.68	100	0	Peak
5	2500.00	44.78	-29.22	74.00	44.43	32.00	4.05	35.70	100	0	Peak
6	2500.00	32.36	-21.64	54.00	32.01	32.00	4.05	35.70	155	26	Average
7	7161.00	53.07	-20.93	74.00	46.25	35.74	7.15	36.07	100	0	Peak
8 @	7161.00	41.96	-12.04	54.00	35.14	35.74	7.15	36.07	100	288	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 5
- Temperature : 21~26°C
- Relative Humidity : 49~55%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

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

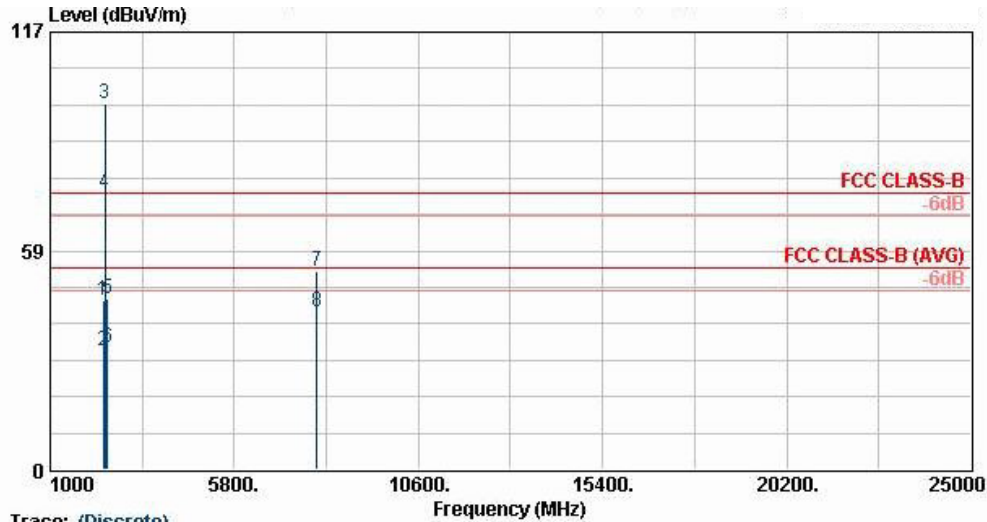


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11g Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 135790246811222

	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	33.24	24.57	-15.43	40.00	40.10	17.54	0.30	33.38	100	185	Peak
2	92.64	17.50	-26.00	43.50	40.71	9.62	0.50	33.33	---	---	Peak
3	233.04	17.20	-28.80	46.00	38.73	11.24	0.70	33.47	---	---	Peak
4	507.90	22.61	-23.39	46.00	37.41	17.51	1.00	33.31	---	---	Peak
5	782.30	22.34	-23.66	46.00	34.15	19.66	1.20	32.67	---	---	Peak
6	878.90	23.69	-22.31	46.00	34.76	20.38	1.30	32.75	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

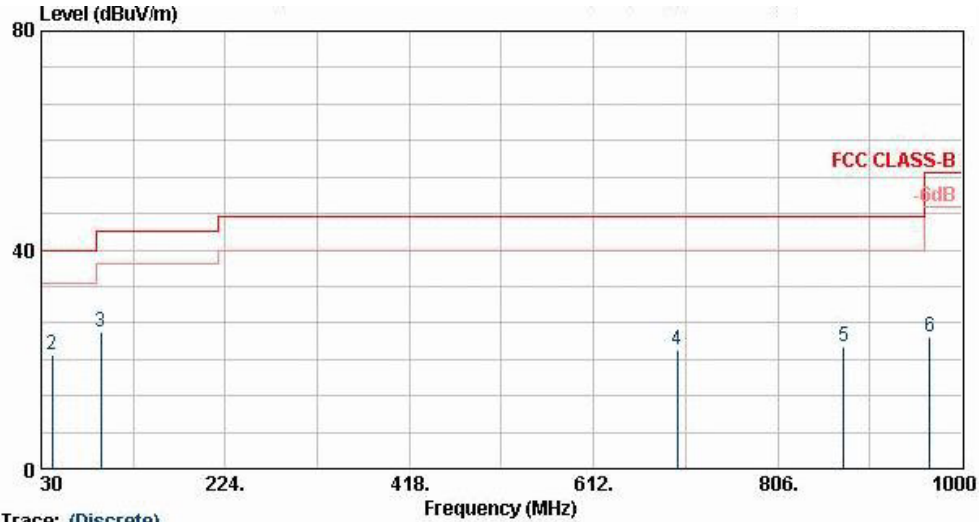
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch06; 2437MHz + Adaptor
Data Rate : 54
Plane : H
IMEI : 135790246611222

	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	45.04	-28.96	74.00	44.96	31.83	3.92	35.68	100	0	Peak
2	2382.00	31.63	-22.37	54.00	31.55	31.83	3.92	35.68	162	357	Average
3 X	2437.00	97.93			97.70	31.93	3.99	35.69	100	0	Peak
4 X	2437.00	74.13			73.90	31.93	3.99	35.69	162	357	Average
5	2484.00	45.49	-28.51	74.00	45.15	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.47	-21.53	54.00	32.14	31.98	4.05	35.70	162	357	Average
7	7962.00	53.27	-20.73	74.00	46.37	35.69	7.50	36.29	100	0	Peak
8	7962.00	42.01	-11.99	54.00	35.11	35.69	7.50	36.29	100	304	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.



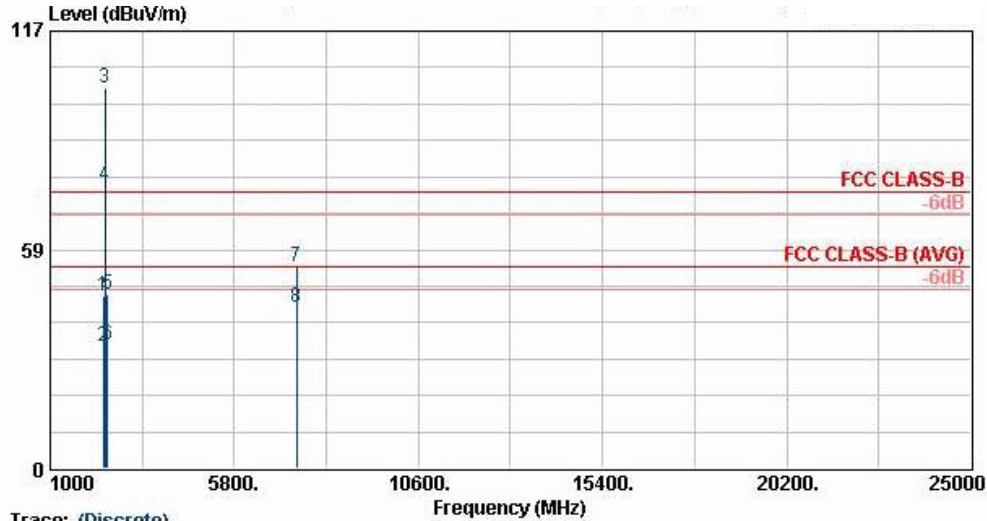
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch06; 2437MHz + Adaptor
Data Rate : 54
Plane : H
IMEI : 135790246611222

	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	23.45	-16.55	40.00	36.99	19.66	0.30	33.50	100	266	Peak
2	41.34	20.78	-19.22	40.00	41.13	12.51	0.30	33.16	---	---	Peak
3	92.64	24.93	-18.57	43.50	48.15	9.62	0.50	33.33	---	---	Peak
4	700.40	21.64	-24.36	46.00	34.82	18.89	1.10	33.17	---	---	Peak
5	875.40	22.39	-23.61	46.00	33.48	20.36	1.30	32.74	---	---	Peak
6	966.40	23.98	-30.02	54.00	34.00	21.00	1.30	32.32	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

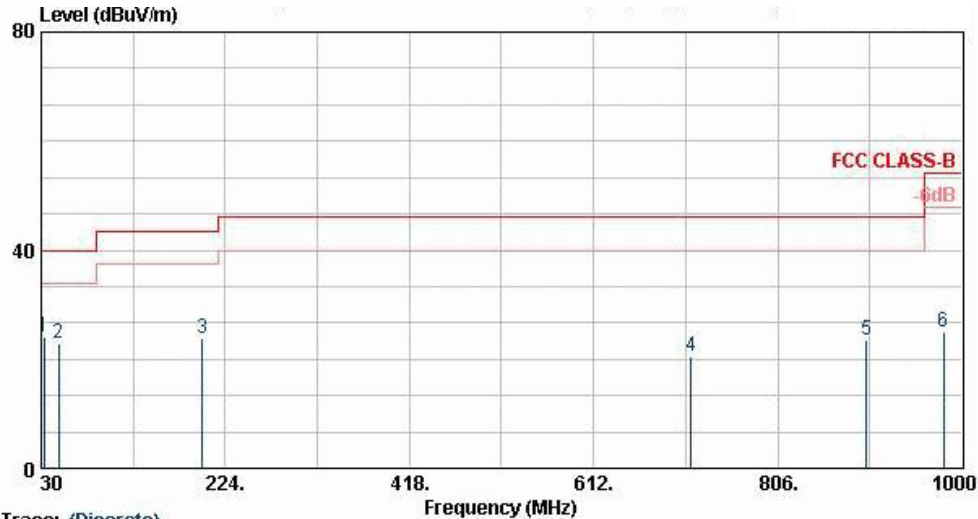
Site : 03CH06-HV
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch06; 2437MHz + Adaptor
Data Rate : 54
Plane : H
TIME : 135790246611222

	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	46.04	-27.96	74.00	45.94	31.86	3.92	35.68	100	0	Peak
2	2390.00	32.73	-21.27	54.00	32.63	31.86	3.92	35.68	154	23	Average
3 @	2437.00	101.59			101.37	31.93	3.99	35.69	100	0	Peak
4 X	2437.00	75.83			75.60	31.93	3.99	35.69	154	23	Average
5	2484.00	46.65	-27.35	74.00	46.32	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.86	-21.14	54.00	32.53	31.98	4.05	35.70	154	23	Average
7	7422.00	53.80	-20.20	74.00	47.10	35.63	7.24	36.17	100	0	Peak
8	7422.00	43.21	-10.79	54.00	36.51	35.63	7.24	36.17	100	109	Average

Remark: #3 and #4 are Fundamental Signals.

- Test Mode : Mode 6
- Temperature : 21~26°C
- Relative Humidity : 49~55%
- Test Engineer: Sun
- Polarization : Horizontal (30MHz-1GHz)

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

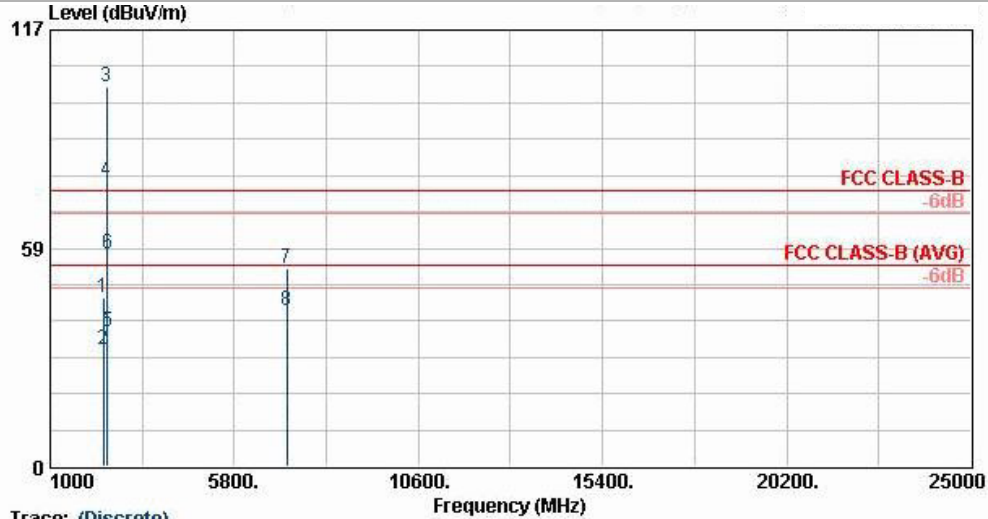


Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11g Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 135790246811222

	Freq	Level	Over	Limit	ReadAntenna	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	33.24	24.20	-15.80	40.00	39.74	17.54	0.30	33.38	100	197
2	48.09	22.98	-17.02	40.00	46.76	9.06	0.30	33.14	---	---
3	199.83	23.89	-19.61	43.50	47.52	9.30	0.60	33.53	---	---
4	714.40	20.40	-25.60	46.00	33.26	19.03	1.20	33.08	---	---
5	899.90	23.52	-22.48	46.00	34.49	20.53	1.30	32.80	---	---
6	980.40	24.93	-29.07	54.00	34.74	21.10	1.30	32.21	---	---

- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

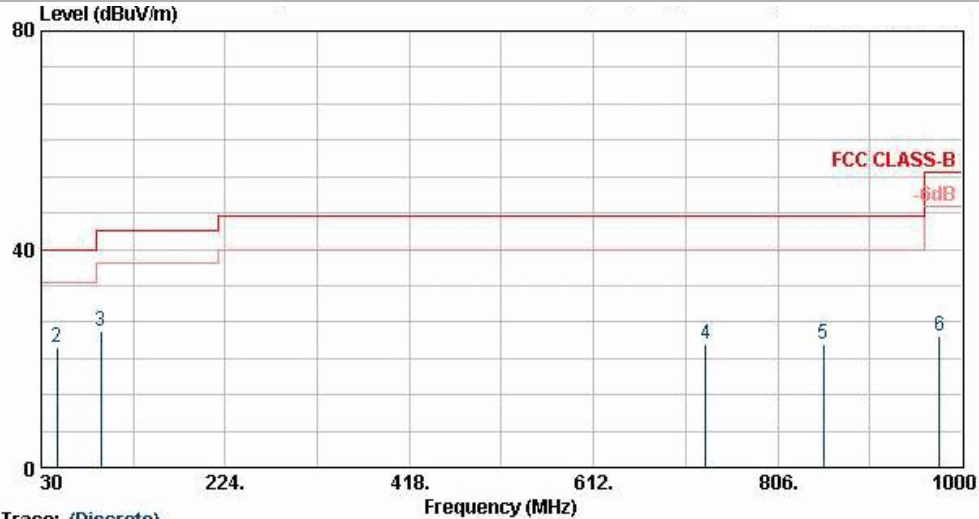
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch11; 2462MHz + Adaptor
Data Rate : 54
Plane : H
IMEI : 135790246811222

	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	2382.00	45.08	-28.92	74.00	45.00	31.83	3.92	35.68	100	0 Peak
2	2382.00	31.46	-22.54	54.00	31.38	31.83	3.92	35.68	184	24 Average
3 X	2462.00	101.85			101.57	31.95	4.02	35.69	100	0 Peak
4 X	2462.00	76.42			76.14	31.95	4.02	35.69	184	24 Average
5	2483.50	36.15	-17.85	54.00	35.82	31.98	4.05	35.70	184	24 Average
6	2483.50	56.94	-17.06	74.00	56.61	31.98	4.05	35.70	100	0 Peak
7	7161.00	53.01	-20.99	74.00	46.19	35.74	7.15	36.07	100	0 Peak
8	7161.00	41.83	-12.17	54.00	35.01	35.74	7.15	36.07	100	282 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.



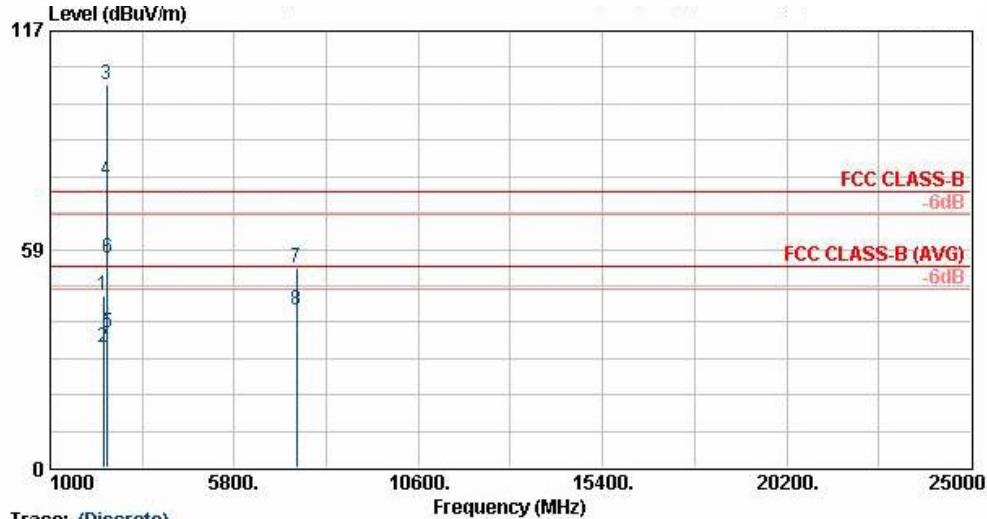
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(051121) VERTICAL
EUT : PDA Phone
Power : 120Vac/60Hz
Model : FR 703121
Memo : 802.11g Tx_Ch11; 2462MHz + Adaptor
Data Rate : 54
Plane : H
TIME : 135790246611222

	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	22.54	-17.46	40.00	36.08	19.66	0.30	33.50	100	188	Peak
2	46.74	21.98	-18.02	40.00	44.77	10.04	0.30	33.12	---	---	Peak
3	92.64	24.95	-18.55	43.50	48.17	9.62	0.50	33.33	---	---	Peak
4	729.80	22.47	-23.53	46.00	35.19	19.16	1.11	32.99	---	---	Peak
5	854.40	22.75	-23.25	46.00	34.03	20.21	1.20	32.69	---	---	Peak
6	976.90	24.05	-29.95	54.00	33.92	21.07	1.30	32.24	---	---	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-HV
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 703121
 Memo : 802.11g Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 54
 Plane : H
 TWT : 135790246611222

	Freq	Level	Over	Limit	ReadAntenna	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	46.14	-27.86	74.00	46.05	31.86	3.92	35.68	100	0 Peak
2	2390.00	32.31	-21.69	54.00	32.21	31.86	3.92	35.68	134	354 Average
3 @	2462.00	102.62			102.34	31.95	4.02	35.69	100	0 Peak
4 X	2462.00	77.07			76.79	31.95	4.02	35.69	134	354 Average
5	2483.50	36.06	-17.94	54.00	35.73	31.98	4.05	35.70	134	354 Average
6	2483.50	55.99	-18.01	74.00	55.66	31.98	4.05	35.70	100	0 Peak
7	7431.00	53.58	-20.42	74.00	46.88	35.63	7.24	36.17	100	0 Peak
8	7431.00	42.34	-11.66	54.00	35.64	35.63	7.24	36.17	100	95 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 antenna used in this product is Monopole 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
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. 29, 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)
EMI Test Receiver	R&S	ESVS10	834468/003	20...1000MHz	Apr. 24, 2008	Apr. 23, 2009	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	00075962	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)
Base Station Simulator	R & S	CMU200	103937	Third-Band	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 : $y \text{ dBuV} \pm U \text{ dB}$
for a level of confidence of approximately 95% , ($k = 2$)

Appendix A. Photographs of EUT

Please refer to Sporton report number EP821504-03 as below.