



FCC Test Report

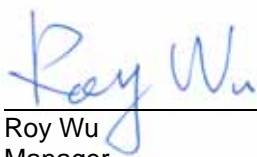
According to

47 CFR Part 15 Subpart C

Equipment : GPS PDA
Trade Name : MTC; GETAC
Model No. : PS535E
FCC ID : MAUPS535E
Filing Type : Certification
Applicant : **MiTAC Technology Corp.**

9th. FL., No.75, Ming Sheng E. Rd., Sec.3, Taipei, Taiwan

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- The data shown in this test report were carried out on Feb. 19, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR812802A, Report Version: Rev.01



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Manager

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Table of Contents

History of this test report.....	ii
1. General Description of Equipment under Test.....	1
1.1 Applicant	1
1.2 Manufacturer.....	1
1.3 Basic Description of Equipment under Test.....	1
1.4 Feature of Equipment under Test.....	2
1.5 Specification of PDA	3
2. Test Configuration of Equipment under Test.....	4
2.1 Test Manner.....	4
2.2 Test Mode.....	4
2.3 Ancillary Equipment List.....	5
2.4 Connection Diagram of Test System	5
3. RF Utility.....	7
4. General Information of Test.....	8
4.1 Test Voltage.....	8
4.2 Standard for Methods of Measurement	8
4.3 Test Compliance	8
4.4 Frequency Range	8
4.5 Test Distance	8
5. Test Data and Test Result.....	9
5.1 List of Measurements and Examinations.....	9
5.2 6dB Bandwidth Measurement.....	10
5.3 Power Spectral Density Measurement.....	18
5.4 Band Edges Measurement	26
5.5 Peak Output Power Measurement.....	33
5.6 Conducted Emission.....	35
5.7 Radiated Emission Measurement.....	38
5.8 Antenna Requirements	68
6. List of Measuring Equipment	69
7. Uncertainty Evaluation.....	70
Appendix A. External Photographs of EUT	
Appendix B. Internal Photographs of EUT	
Appendix C. Setup Photographs	



1. General Description of Equipment under Test

1.1 Applicant

MiTAC Technology Corp.
9th. FL., No.75, Ming Sheng E. Rd., Sec.3, Taipei, Taiwan

1.2 Manufacturer

MiTAC Technology Corp.
9th. FL., No.75, Ming Sheng E. Rd., Sec.3, Taipei, Taiwan

1.3 Basic Description of Equipment under Test

Equipment		GPS PDA
Trade Name		MTC; GETAC
Model Name		PS535E
FCC ID		MAUPS535E
AC Adapter	Brand Name	Phihong
	Model Name	PSC11R-050
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.3A; O/P: 5Vdc, 2A
	AC Power Cord Type	1.9 meter shielded cable without ferrite core
Battery	Brand Name	MTC
	Model Name	PS535E
	Power Rating	3.7Vdc, 2400mAh
	Type	Li-ion
USB Cable	Brand Name	Incare
	Model Name	KYCPDX00051
	Signal Line Type	1 meter shielded cable without ferrite core
LCD Panel	Brand Name	NEC
	Model Name	NL2432HC22-40A

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 PDA		
Trade Name :	MTC; GETAC		
Model Name :	PS535E		
FCC ID :	MAUPS535E		
Tx Frequency :	802.11b/g : 2400 MHz ~ 2483.5 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz		
Rx Frequency :	802.11b/g : 2400 MHz ~ 2483.5 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz		
Number of Channels :	Bluetooth : 79 802.11b/g : 11		
Carrier Frequency of Each Channel :	Bluetooth : 2402+n*1 MHz; n=0~78 802.11b/g : 2412+(n-1)*5 MHz; n=1~11		
Channel Spacing :	Bluetooth : 1 MHz 802.11b/g : 5 MHz		
Maximum Output Power to Antenna :	Bluetooth : 0.74 dBm (1Mbps) Bluetooth EDR : 1.1 dBm (2Mbps) / 1.25 dBm (3Mbps) 802.11b : 13.97 dBm 802.11g : 17.18 dBm		
Type of Antenna Connector :	Bluetooth : MICRO Connector 802.11b/g : MICRO Connector		
Antenna Type :	Bluetooth : PIFA Antenna 802.11b/g : PIFA Antenna		
Antenna Gain :	Bluetooth : -3.8 dB 802.11b/g : -1.72 dB		
Type of Modulation :	Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : /4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK 802.11b/g : DSSS / OFDM		
Function Type :	Transmitter		Transceiver V
DUT Stage :	Production Unit		



1.5 Specification of PDA

Notebook Specification			
Item	Brand	Model	Specification
SD RAM	Samsung	---	64 MB
NAND Flash	Samsung	---	2 GB
LCD Monitor	NEC	NL2432HC22-40A	3.5"
Touch Green	Liyi	SR4-036F-05G	---
Bluetooth	APM	APM8142	Class 2, V2.0 USB Interface
GPS	GlobalSat	ET-318	---
Modem	Billionton	RD002-D330	---
Wireless LAN	USI	WM-G-MR-05-GSPI	802.11 b/g
AC/DC Adapter	Phihong	PSC11R-050	Input: (1) Voltage: 100 ~ 240V A.C.; (2) Current: 0.2A (3) Rated Frequency: 50~60Hz 14~19VA Output: (1) Voltage: 5V (2) Current: 2A
Battery (LITHIUM)	MTC	PS535E	2400 mAh (2 cell per pack), 3.7V



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	13.15	13.86	13.62	13.97
CH 06	2437 MHz	12.56	12.57	12.18	13.09
CH 11	2462 MHz	12.84	13.39	13.06	13.30

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	15.99	16.92	16.88	16.84	17.07	17.18	16.86	16.75
CH 06	2437 MHz	15.68	16.37	16.09	15.36	15.47	16.45	16.63	15.95
CH 11	2462 MHz	16.22	16.25	15.8	16.47	17.08	16.37	16.22	15.61

- c. The 802.11b/g data rate were set in 11Mbps and 36Mbps, due to the highest RF output power.
- d. The EUT is programmed to transmit signal continuously for all testings.
- e. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.

2.2 Test Mode

Application		
Radiated Emission	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
	Mode 7: CH11_2462 MHz + Bluetooth CH78_2480 MHz	
Conducted Emission	Mode 1: GPS Rx + WLAN Link + BT Link + H Pattern + MPEG 4 + USB Link + Adapter	

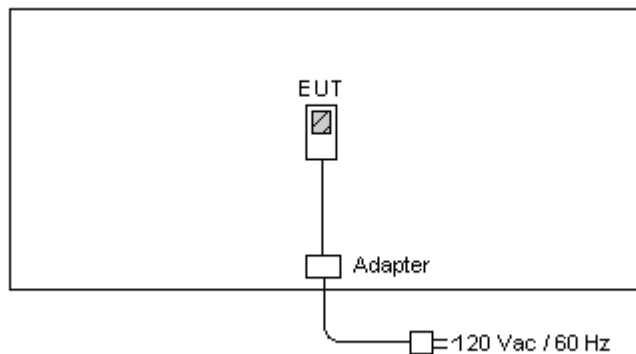
2.3 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1	Notebook	DELL	D400	E2K24GBRL	AC I/P: Unshielded, 1.2 m DC O/P: shielded, 1.8 m
2	GPS Station	T&E	GS-50	N/A	Unshielded, 1.8 m
3	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A
4	WLAN AP	SMC	SMC-100	HEDWG4005ACC	Unshielded, 1.8 m
5	RS-232 Mouse	State	MS-303	DoC	Unshielded, 1.2 m
6	i-pod	Apple	A1199	DoC	Shielded, 1.2 m

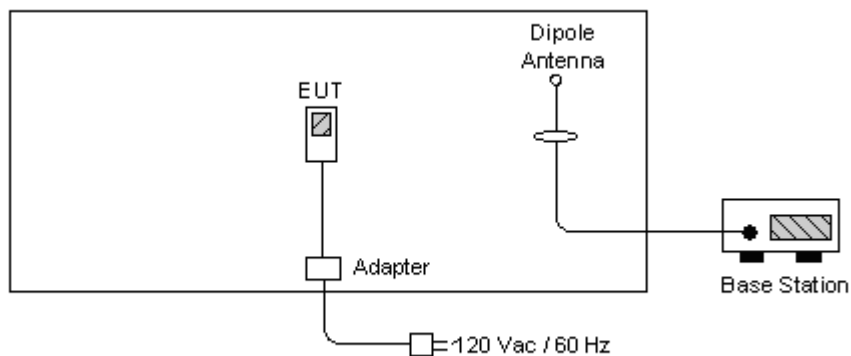
2.4 Connection Diagram of Test System

<Radiated Emission>

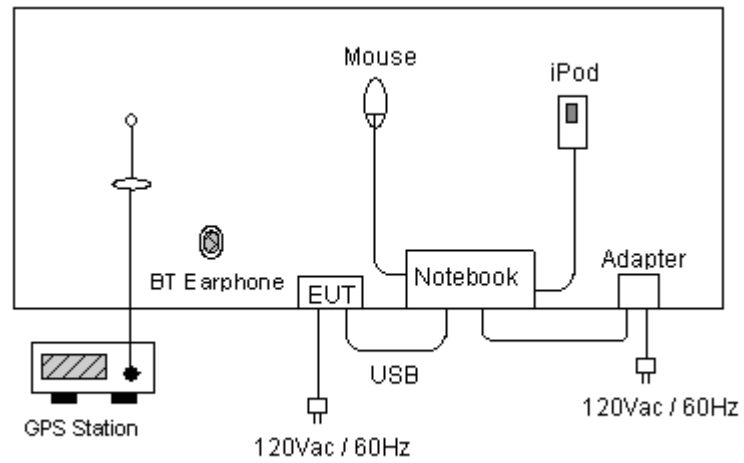
Mode 1~6



Mode 7



<Conducted 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 : CO01-HY, 03CH06-HY

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)	100kHz 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

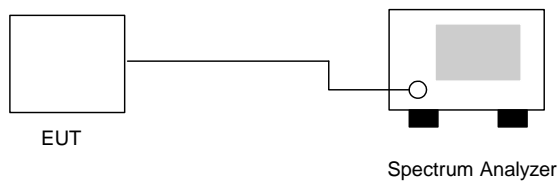
5.2.1 Measuring Instruments

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 : 802.11b/g
- Temperature : 20~21
- Relative Humidity : 49~51%
- Test Enginner : Sun

802.11b

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	10.08	> 0.5MHz	Plot 1
06	2437	10.04	> 0.5MHz	Plot 2
11	2462	10.04	> 0.5MHz	Plot 3

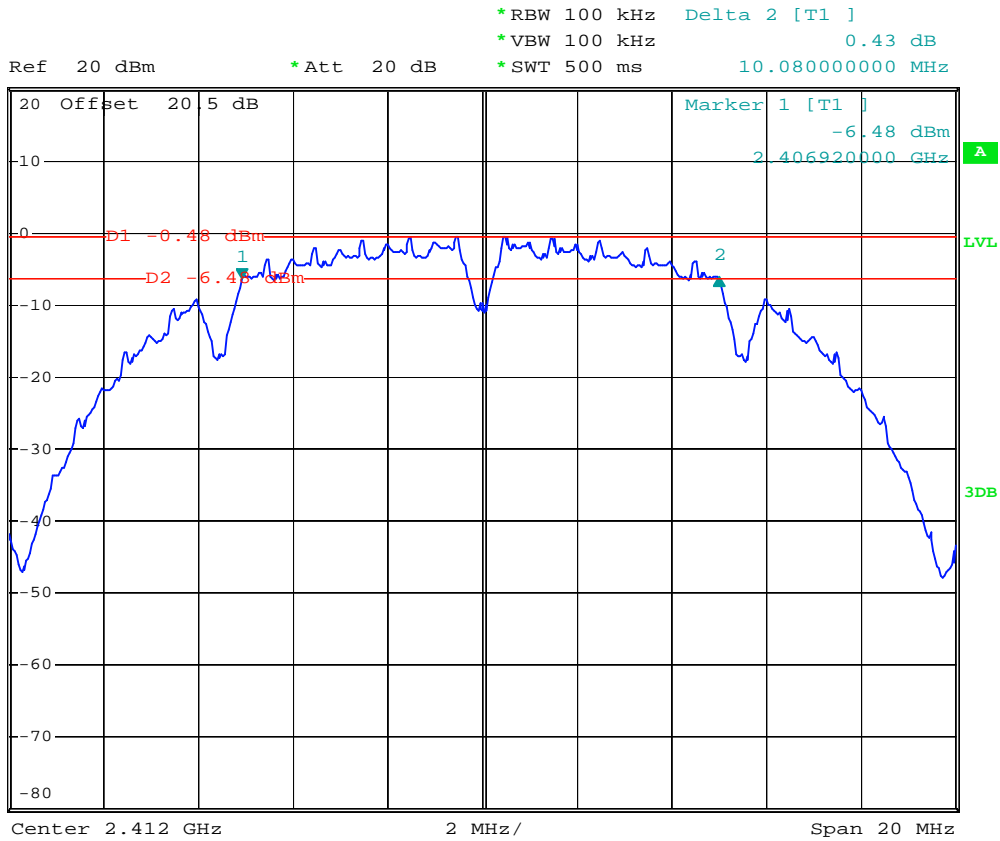
802.11g

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



5.2.5 6dB Bandwidth

Plot 1



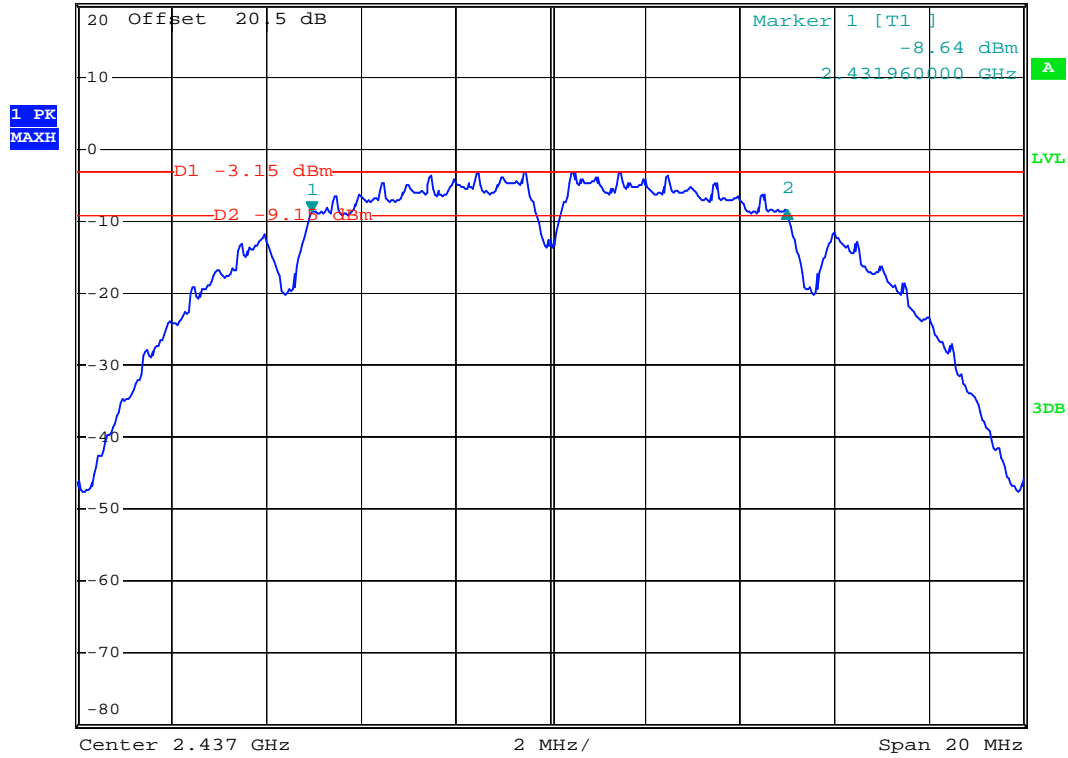
Date: 13.FEB.2008 11:20:10



Plot 2



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
*VBW 100 kHz 0.24 dB
*SWT 500 ms 10.04000000 MHz



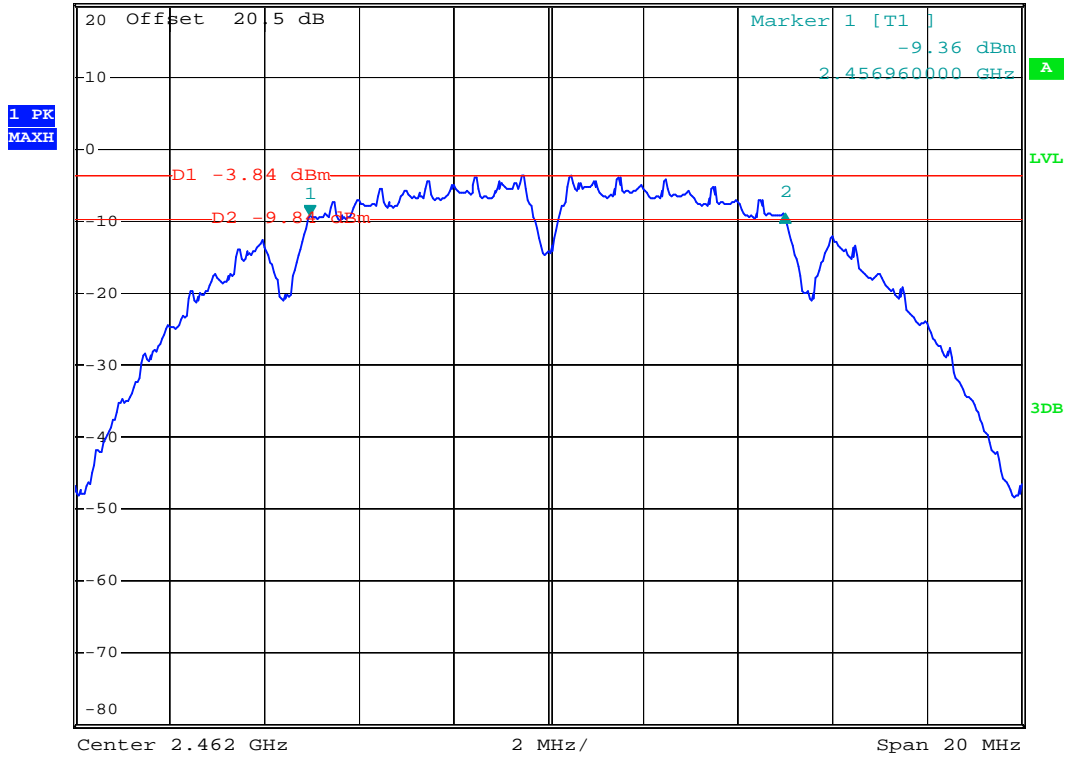
Date: 13.FEB.2008 11:17:45



Plot 3



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.33 dB
 *SWT 500 ms 10.040000000 MHz



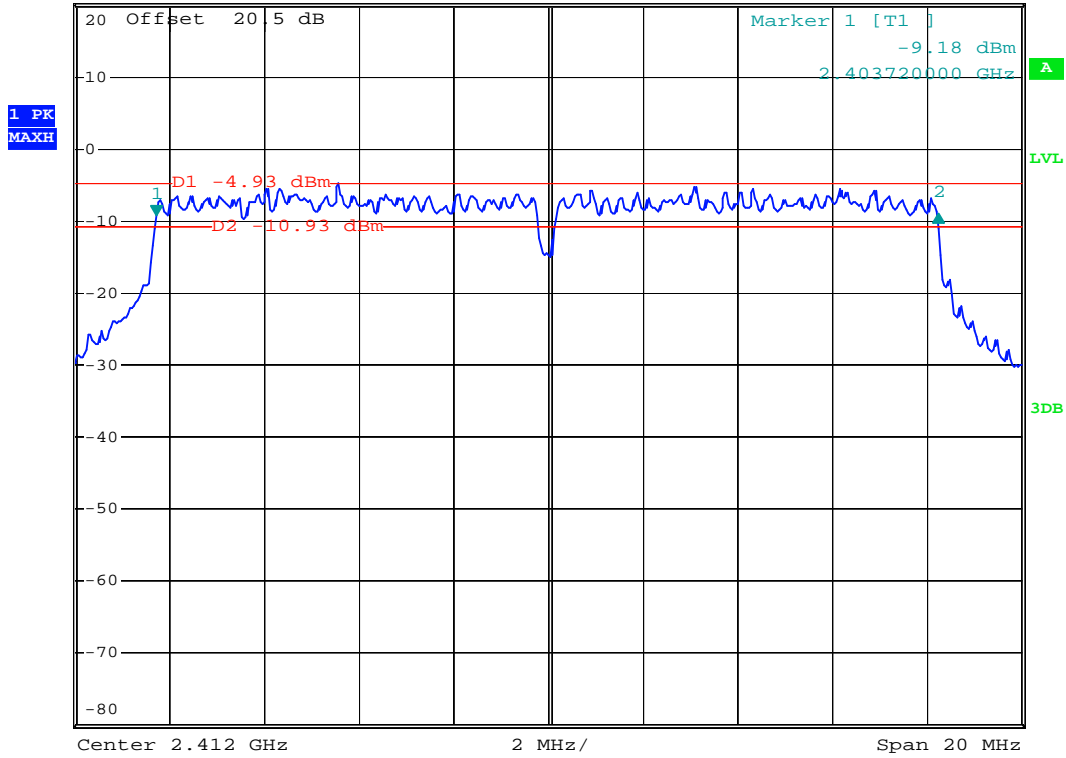
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Plot 4



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.11 dB
 *SWT 500 ms 16.52000000 MHz



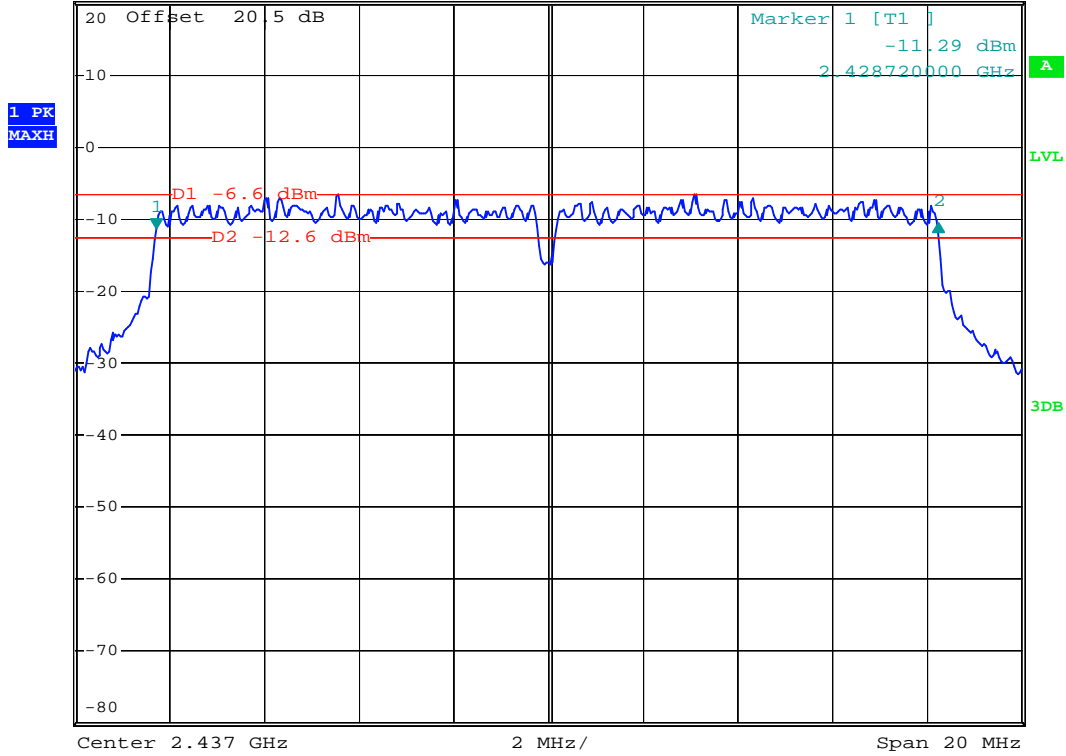
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Plot 5



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.76 dB
 *SWT 500 ms 16.52000000 MHz



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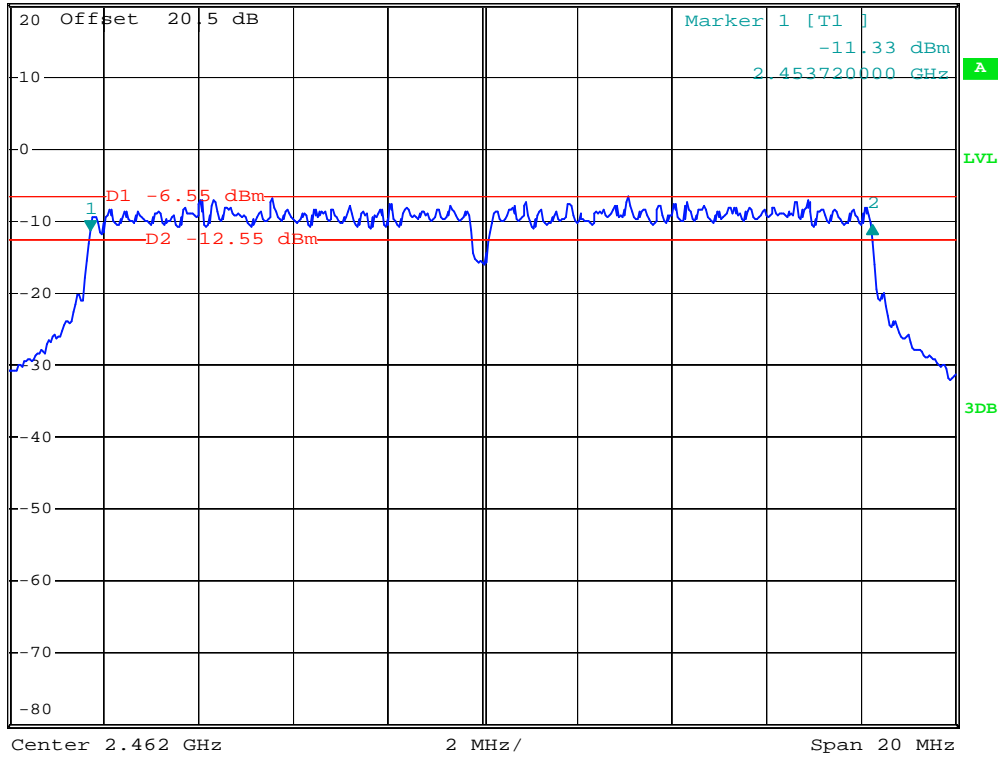


Plot 6



Ref 20 dBm *Att 20 dB *RBW 100 kHz Delta 2 [T1]
*VBW 100 kHz 0.75 dB
*SWT 500 ms 16.52000000 MHz

1 PK
MAXH



Date: 13.FEB.2008 14:30:22

5.3 Power Spectral Density Measurement

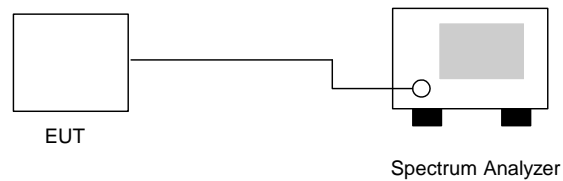
5.3.1 Measuring Instruments

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 : 20~21
- Relative Humidity : 49~51%
- Test Enginner : Sun

802.11b

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-12.68	8	Plot 1
06	2437	-14.66	8	Plot 2
11	2462	-15.79	8	Plot 3

802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-18.28	8	Plot 4
06	2437	-20.51	8	Plot 5
11	2462	-21.59	8	Plot 6



5.3.5 Power Spectral Density

Mode 1

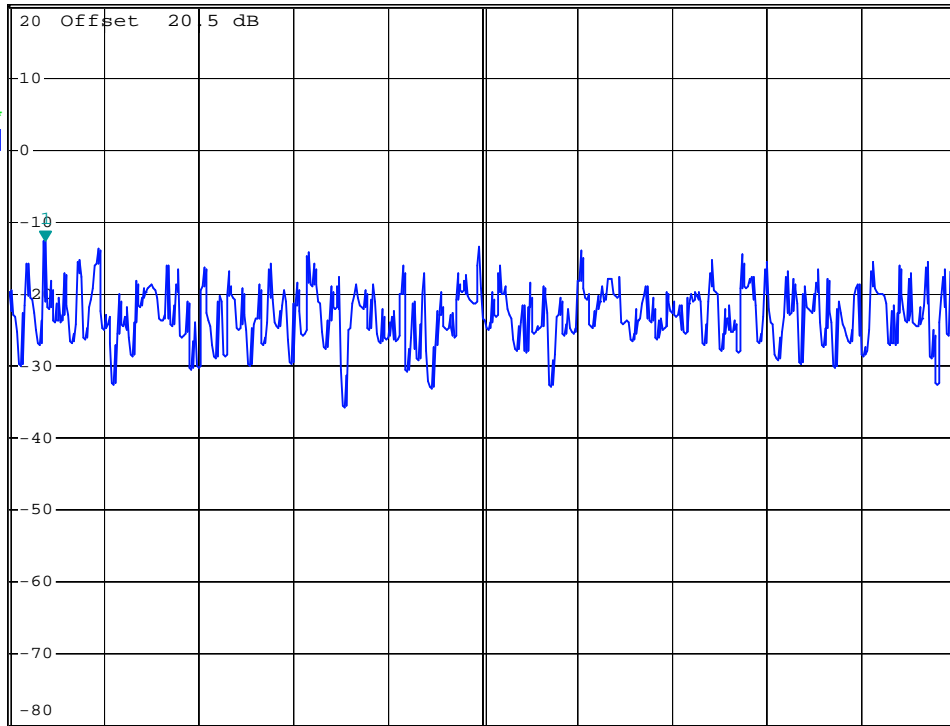


*RBW 3 kHz Marker 1 [T1]
*VBW 30 kHz -12.68 dBm
*SWT 500 s 2.411307000 GHz

Ref 20 dBm

*Att 20 dB

1 PK*
CLRWR



Center 2.412 GHz

150 kHz/

Span 1.5 MHz

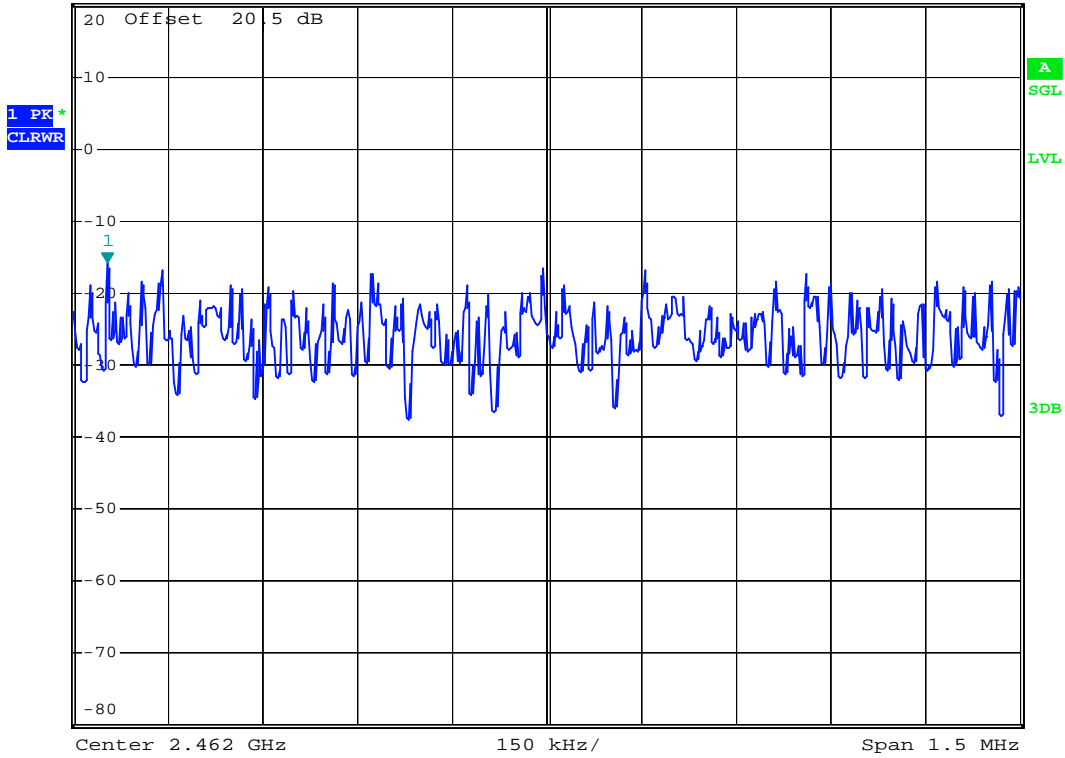
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Mode 3



Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1]
*VBW 30 kHz -15.79 dBm
*SWT 500 s 2.461304000 GHz



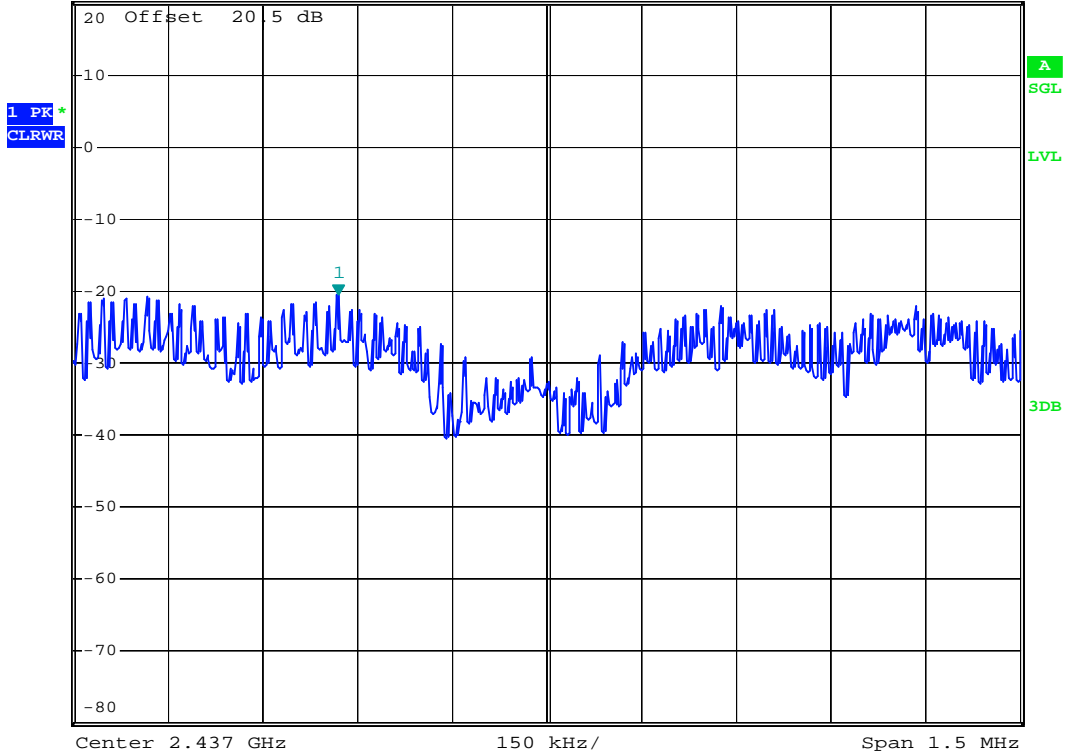
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Mode 5



Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1] -20.51 dBm
*VBW 30 kHz 2.436670000 GHz
*SWT 500 s



Date: 13.FEB.2008 14:10:18

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 100kHz 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 : 20~21
- Relative Humidity : 49~51%
- Test Enginner : Sun

- 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
2388.85	56.40	-17.60	74.00	56.30	31.86	3.92	35.68	100	0	Peak
2388.85	44.48	-9.52	54.00	44.38	31.86	3.92	35.68	188	127	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
2388.09	52.01	-21.99	74.00	51.91	31.86	3.92	35.68	100	0	Peak
2388.09	40.28	-13.72	54.00	40.18	31.86	3.92	35.68	100	211	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
2486.13	57.57	-16.43	74.00	57.24	31.98	4.05	35.70	100	0	Peak
2486.13	45.67	-8.33	54.00	45.34	31.98	4.05	35.70	180	136	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
2485.18	52.75	-21.25	74.00	52.42	31.98	4.05	35.70	100	0	Peak
2485.18	40.34	-13.66	54.00	40.01	31.98	4.05	35.70	100	260	Average



>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
2389.61	69.26	-4.74	74.00	69.16	31.86	3.92	35.68	100	0	Peak
2389.61	49.98	-4.02	-54.00	49.88	31.86	3.92	35.68	188	125	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	60.36	-13.64	74.00	60.26	31.86	3.92	35.68	100	0	Peak
2389.99	44.12	-9.88	-54.00	44.02	31.86	3.92	35.68	100	189	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
2483.47	67.85	-6.15	74.00	67.52	31.98	4.05	35.70	100	0	Peak
2483.47	50.68	-3.32	54.00	50.35	31.98	4.05	35.70	186	153	Average

CH11 (Vertical)

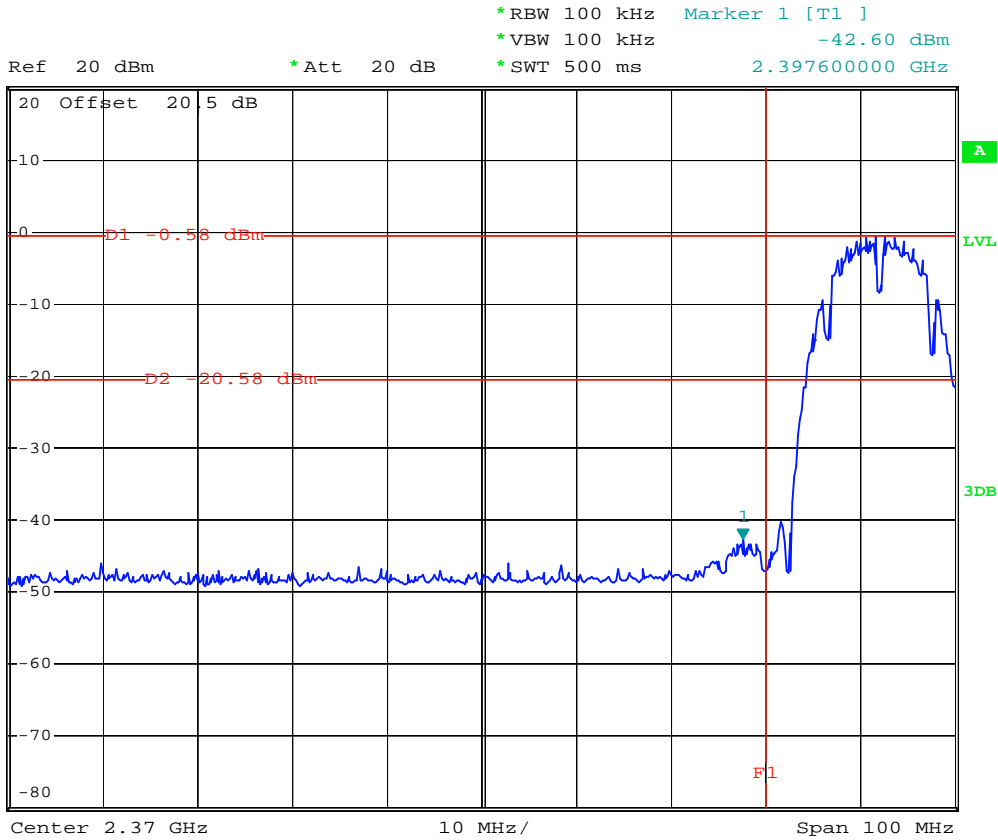
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.47	61.11	-12.89	74.00	60.78	31.98	4.05	35.70	100	0	Peak
2483.47	43.06	-10.94	54.00	42.73	31.98	4.05	35.70	100	259	Average



5.4.5 20dB Band Edge

802.11b

CH01



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CH11

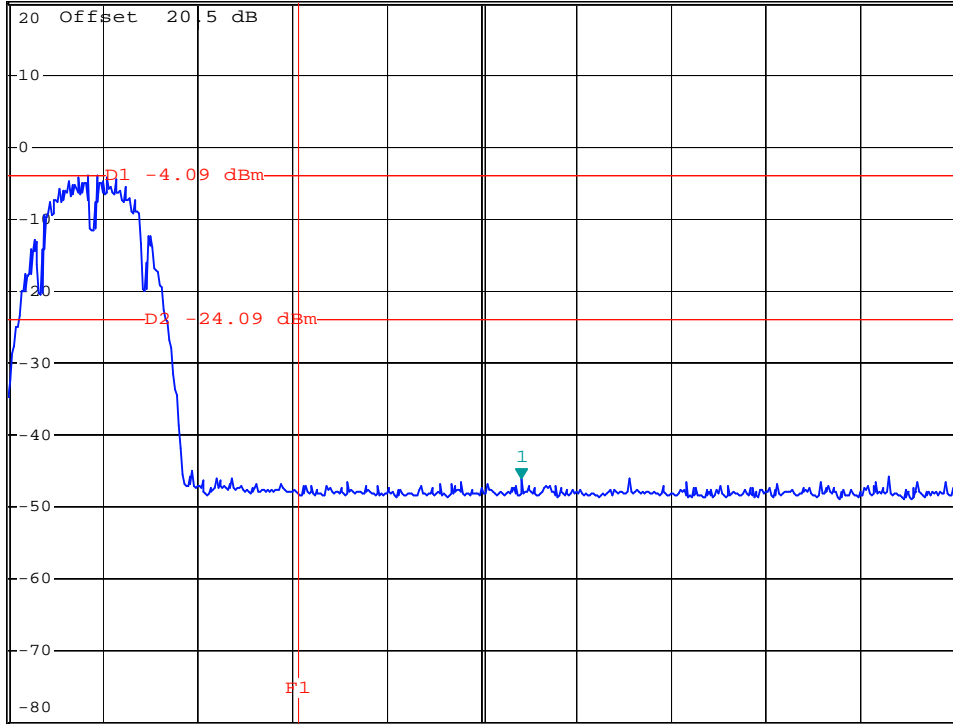


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -46.04 dBm
*SWT 500 ms 2.507200000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
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Center 2.503 GHz 10 MHz/ Span 100 MHz

Date: 13.FEB.2008 11:25:34



802.11g

CH01

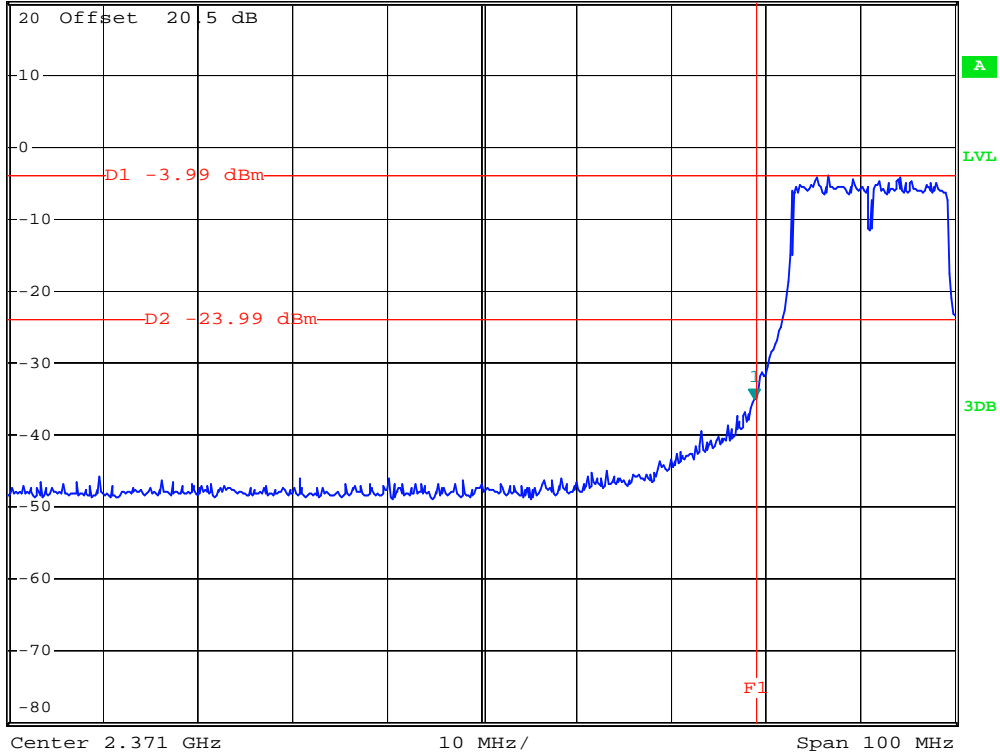


*RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -35.07 dBm
 *SWT 500 ms 2.399800000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Date: 13.FEB.2008 14:36:54



CH11

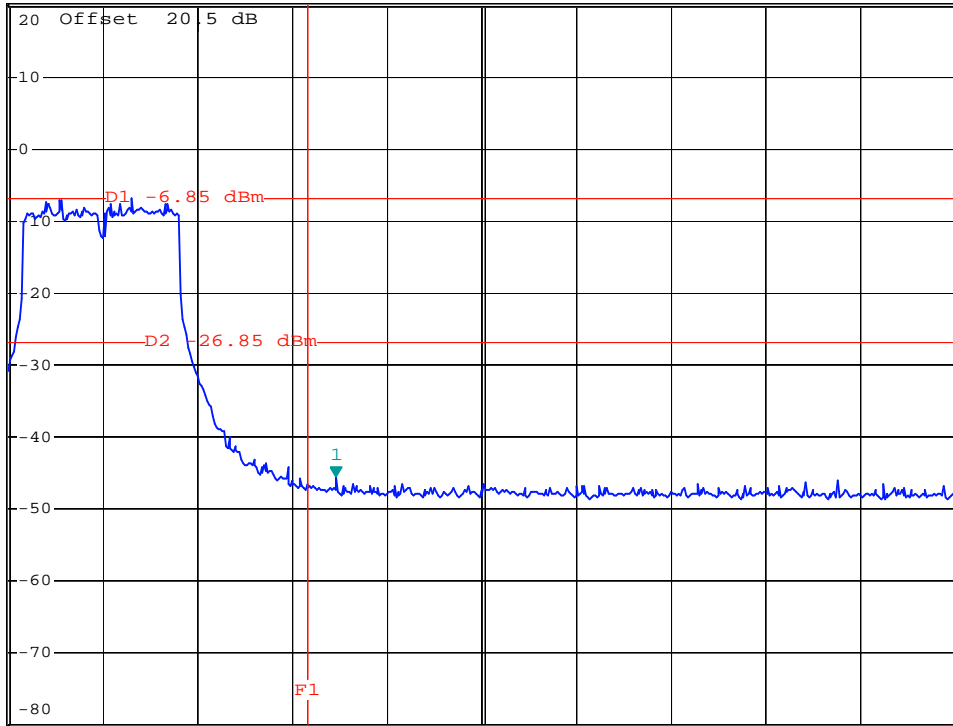


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -45.52 dBm
*SWT 500 ms 2.486600000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.502 GHz 10 MHz/ Span 100 MHz

Date: 13.FEB.2008 14:35:34

5.5 Peak Output Power Measurement

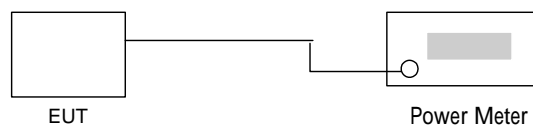
5.5.1 Measuring Instruments

As described in chapter 6 of this test report.

5.5.2 Test Procedure

1. 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.
2. The antenna port (RF output) of the EUT was connected to the input (RF input) of a spectrum analyzer for BT measurement. RBW and VBW are set to 3MHz. The cable loss has been offset before testing.

5.5.3 Test Setup Layout





5.5.4 Test Result

- Application Type : 802.11b/g
- Temperature : 20~21
- Relative Humidity : 49~51%
- Test Enginner : Sun

802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	13.97	1W / 30dBm
06	2437	13.09	1W / 30dBm
11	2462	13.30	1W / 30dBm

802.11g

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	17.18	1W / 30dBm
06	2437	16.45	1W / 30dBm
11	2462	16.37	1W / 30dBm



5.6 Conducted Emission

5.6.1 Measuring Instruments

As described in chapter 6 of this test Report.

5.6.2 Test Procedures

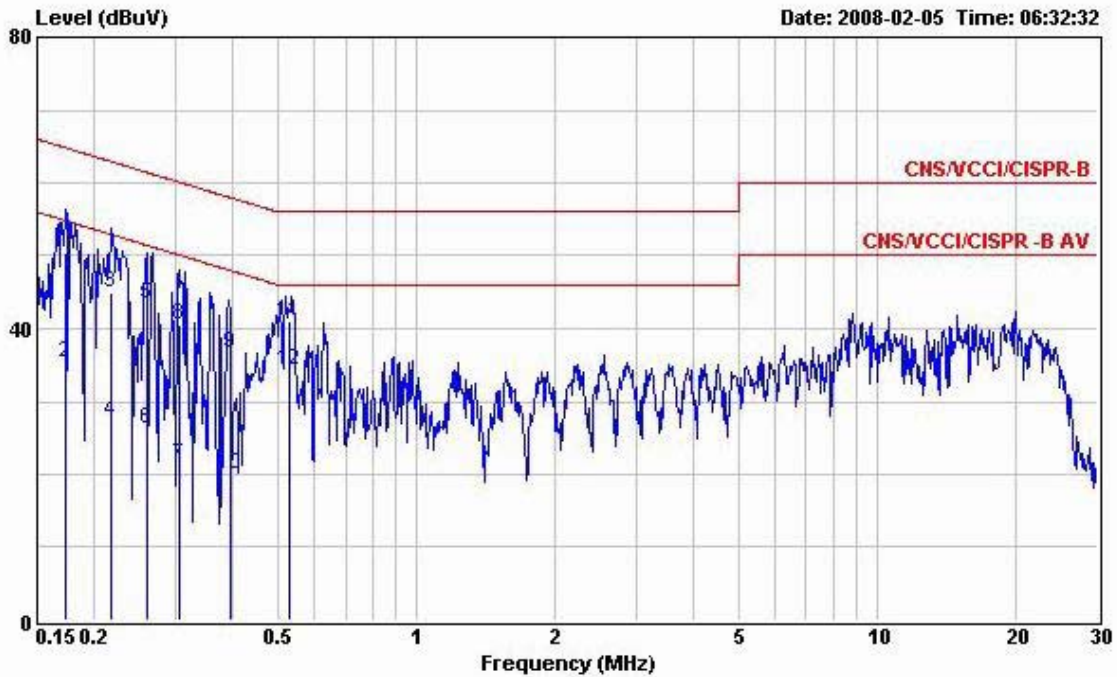
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.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



5.6.3 Test Data

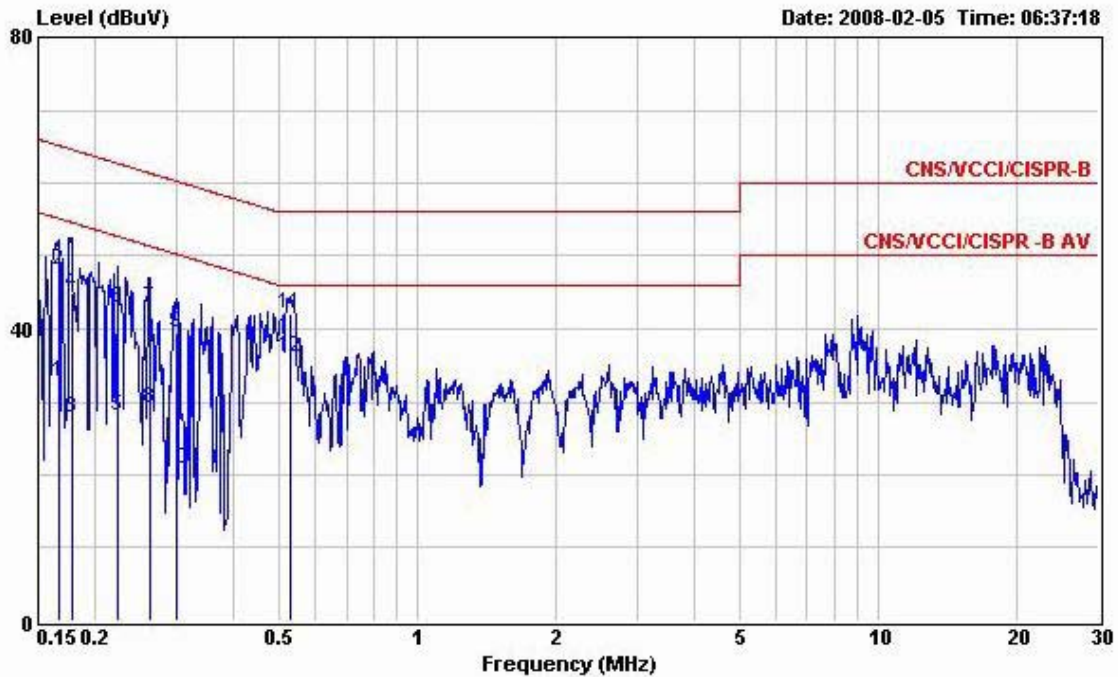
- Temperature : 20~21
- Relative Humidity : 49~51%
- Test Enginner : Derek
- Test Mode : Mode 1

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



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : GPS Rx + WLAN Link + BT Link + H Pattern
 Memo : + MPEG4 + USB Link + Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.173	50.52	-14.32	64.84	50.33	0.09	0.10	QP
2	0.173	35.43	-29.41	64.84	35.24	0.09	0.10	Average
3	0.217	44.85	-18.08	62.93	44.67	0.08	0.10	QP
4	0.217	27.14	-35.79	62.93	26.96	0.08	0.10	Average
5	0.259	43.41	-18.05	61.46	43.22	0.09	0.10	QP
6	0.259	26.17	-35.29	61.46	25.98	0.09	0.10	Average
7	0.305	21.31	-38.80	60.11	21.11	0.10	0.10	Average
8	0.305	40.39	-19.72	60.11	40.19	0.10	0.10	QP
9	0.395	36.69	-21.27	57.96	36.47	0.12	0.10	QP
10	0.395	20.11	-37.85	57.96	19.89	0.12	0.10	Average
11	0.530	41.13	-14.87	56.00	40.89	0.14	0.10	QP
12	0.530	34.25	-21.75	56.00	34.01	0.14	0.10	Average



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : GPS Rx + WLAN Link + BT Link + H Pattern
 Memo : + MPEG4 + USB Link + Adaptor

	Freq	Level	Over	Limit	Read	Cable	Probe	Remark
	MHz	dBuV	Limit	Line	Level	Loss	Factor	
			dB	dBuV	dBuV	dB	dB	
1	0.166	32.85	-22.31	55.16	32.66	0.09	0.10	Average
2	0.166	48.16	-17.00	65.16	47.97	0.09	0.10	QP
3	0.178	27.79	-26.79	54.58	27.60	0.09	0.10	Average
4	0.178	45.02	-19.56	64.58	44.83	0.09	0.10	QP
5	0.223	28.04	-24.67	52.71	27.85	0.09	0.10	Average
6	0.223	42.84	-19.87	62.71	42.65	0.09	0.10	QP
7	0.262	42.74	-18.63	61.37	42.54	0.10	0.10	QP
8	0.262	29.22	-22.15	51.37	29.02	0.10	0.10	Average
9	0.300	39.57	-20.67	60.24	39.37	0.10	0.10	QP
10	0.300	20.66	-29.58	50.24	20.46	0.10	0.10	Average
11	0.529	42.20	-13.80	56.00	41.96	0.14	0.10	QP
12	0.529	36.01	-9.99	46.00	35.77	0.14	0.10	Average



5.7 Radiated Emission Measurement

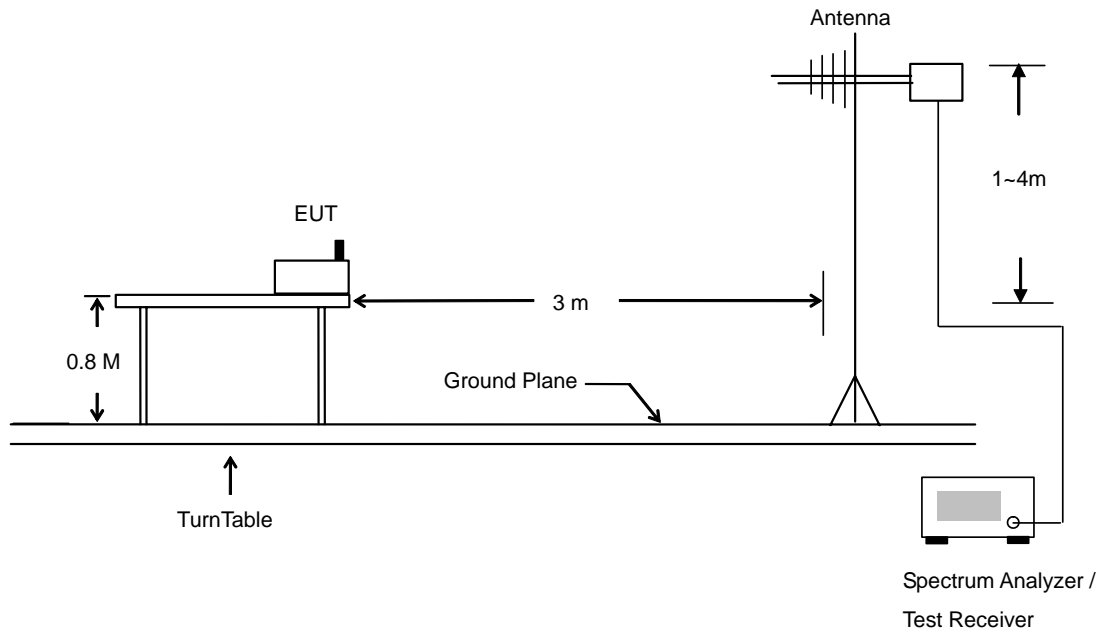
5.7.1 Measuring Instruments

As described in chapter 6 of this Report.

5.7.2 Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- e. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. 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.
- h. 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

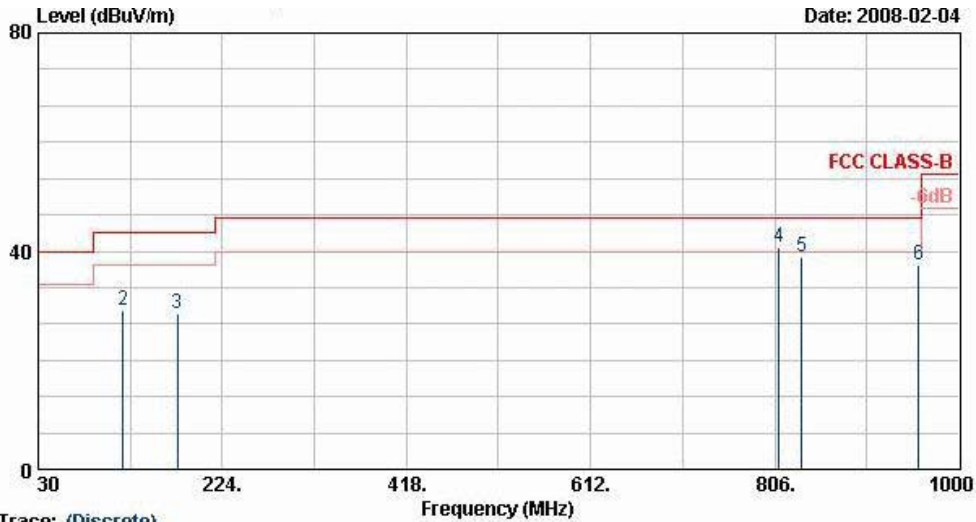




5.7.4 Test Data

- Temperature : 21~22°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.



Trace: (Discrete)

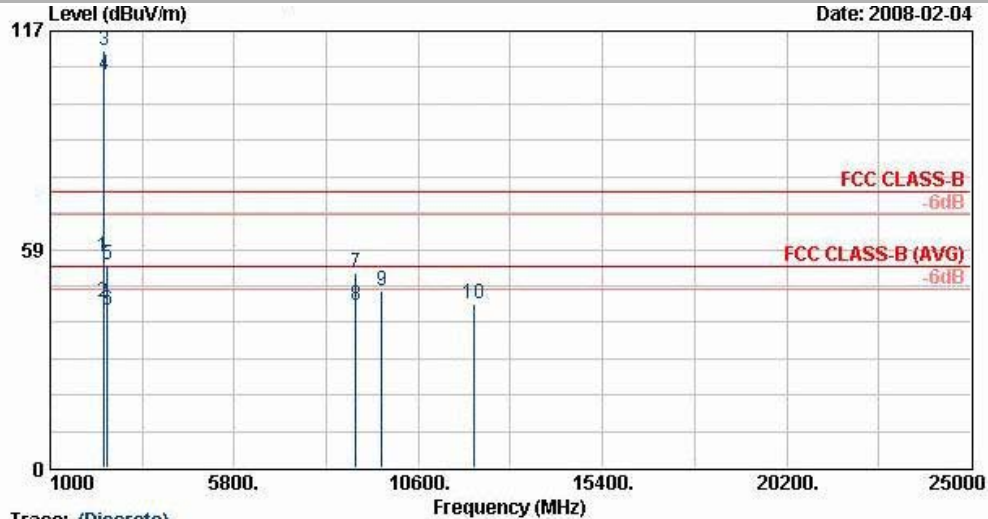
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11b Tx_Ch01_2412MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T61XXP0003

	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	24.35	-15.65	40.00	37.89	19.66	0.30	33.50	---	---	Peak
2	119.64	29.03	-14.47	43.50	49.45	12.50	0.50	33.42	---	---	Peak
3	176.88	28.56	-14.94	43.50	51.61	9.69	0.60	33.34	---	---	Peak
4	810.30	40.82	-5.18	46.00	52.32	19.89	1.20	32.58	100	247	Peak
5	834.80	38.91	-7.09	46.00	50.28	20.07	1.20	32.64	---	---	Peak
6	957.30	37.60	-8.40	46.00	47.77	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 612602
 Memo : 802.11b Tx_Ch01_2412MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T613XP0003

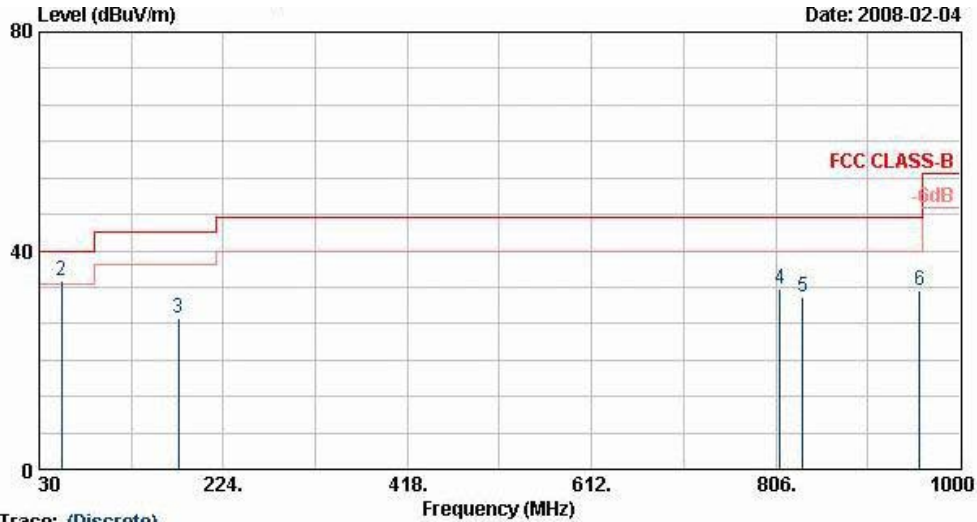
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.85	56.40	-17.60	74.00	56.30	31.86	3.92	35.68	100	0	Peak
2	2388.85	44.48	-9.52	54.00	44.38	31.86	3.92	35.68	188	127	Average
3 X	2412.00	111.68			111.53	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	105.13			104.85	31.95	4.02	35.69	188	127	Average
5	2484.00	54.33	-19.67	74.00	54.00	31.98	4.05	35.70	100	0	Peak
6	2484.00	42.39	-11.61	54.00	42.06	31.98	4.05	35.70	188	127	Average
7	8970.00	52.41	-21.59	74.00	44.77	36.45	7.77	36.59	100	0	Peak
8	8970.00	43.33	-10.67	54.00	35.69	36.45	7.77	36.59	100	261	Average
9	9645.00	47.60	-26.40	74.00	86.48	-10.09	7.94	36.73	100	0	Peak
10	12057.00	44.02	-29.98	74.00	80.77	-9.80	9.31	36.26	100	0	Peak

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.



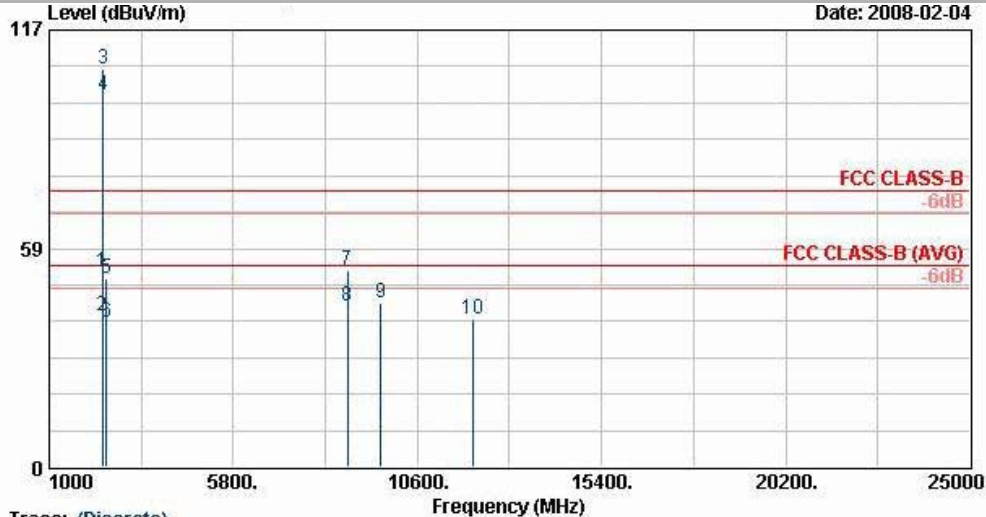
Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 612602
 Memo : 802.11b Tx_Ch01_2412MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : 1613XP0003

	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	30.00	24.90	-15.10	40.00	38.44	19.66	0.30	33.50	---	Peak
2 !	53.49	34.57	-5.43	40.00	59.85	7.64	0.36	33.28	100	236 Peak
3	176.88	27.78	-15.72	43.50	50.83	9.69	0.60	33.34	---	Peak
4	810.30	32.94	-13.06	46.00	44.43	19.89	1.20	32.58	---	Peak
5	834.80	31.65	-14.35	46.00	43.03	20.07	1.20	32.64	---	Peak
6	957.30	32.78	-13.22	46.00	42.95	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 : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11b Tx_Ch01_2412MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T61XXP0003

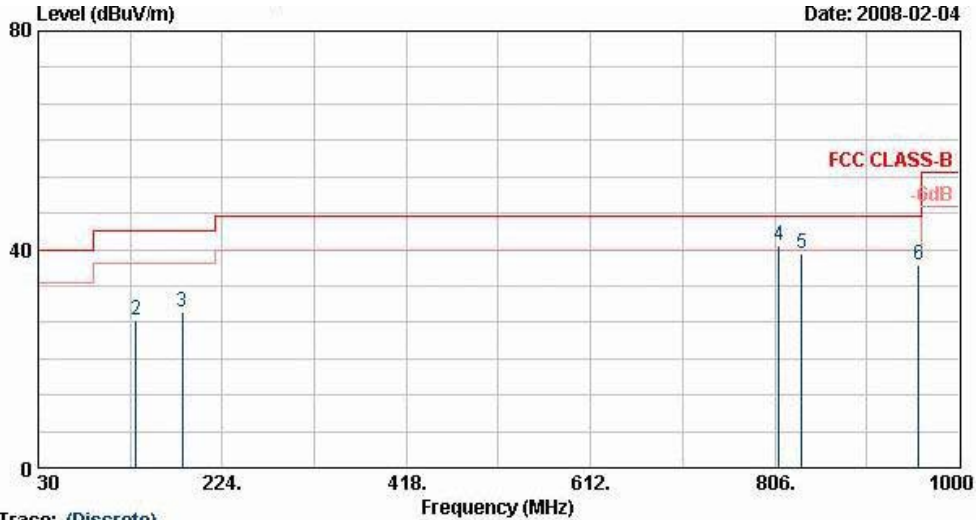
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.09	52.01	-21.99	74.00	51.91	31.86	3.92	35.68	100	0	Peak
2	2388.09	40.28	-13.72	54.00	40.18	31.86	3.92	35.68	100	211	Average
3 X	2412.00	106.48			106.33	31.88	3.95	35.68	100	0	Peak
4 @	2412.00	99.69			99.54	31.88	3.95	35.68	100	211	Average
5	2484.00	50.51	-23.49	74.00	50.18	31.98	4.05	35.70	100	0	Peak
6	2484.00	38.72	-15.28	54.00	38.39	31.98	4.05	35.70	100	211	Average
7	8769.00	52.50	-21.50	74.00	45.26	36.17	7.53	36.47	100	0	Peak
8	8769.00	43.13	-10.87	54.00	35.89	36.17	7.53	36.47	100	68	Average
9	9642.00	43.79	-30.21	74.00	82.66	-10.09	7.94	36.73	100	0	Peak
10	12057.00	39.66	-34.34	74.00	76.41	-9.80	9.31	36.26	100	0	Peak

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)

```

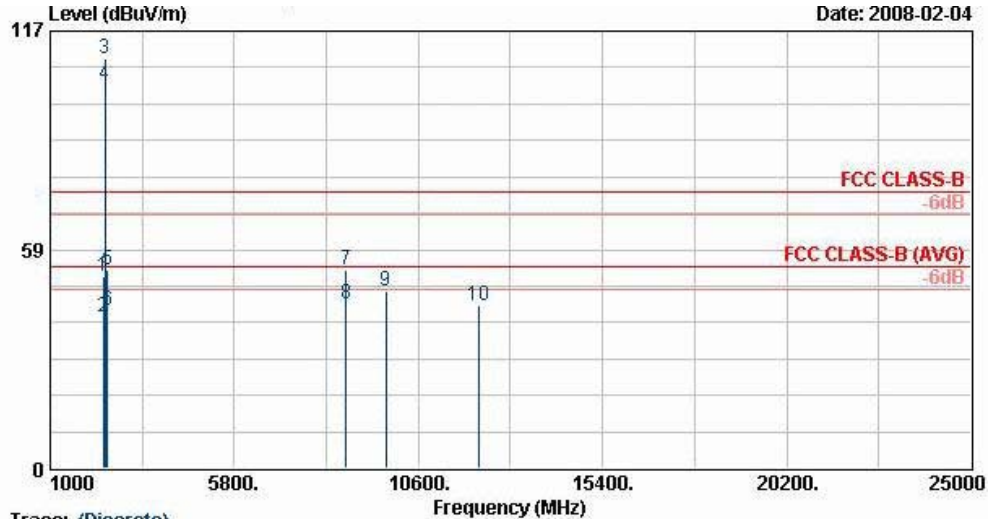
Site      : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT      : CPA_PDA
Power     : 120Vac/60Hz
Model    : FR 812802
Memo     : 802.11b Tx_Ch06_2437MHz +Adaptor
Data Rate : 11
Plane    : E1
S/N      : T61XXP0003
    
```

	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	30.00	24.58	-15.42	40.00	38.12	19.66	0.30	33.50	---	Peak
2	133.14	27.11	-16.39	43.50	48.60	11.37	0.50	33.36	---	Peak
3	181.74	28.42	-15.08	43.50	51.70	9.43	0.60	33.32	---	Peak
4 @	810.30	40.65	-5.35	46.00	52.14	19.89	1.20	32.58	100	113 Peak
5	834.80	39.34	-6.66	46.00	50.71	20.07	1.20	32.64	---	Peak
6	957.30	37.32	-8.68	46.00	47.49	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 : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802_11b Tx_Ch06_2437MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T613XP0003

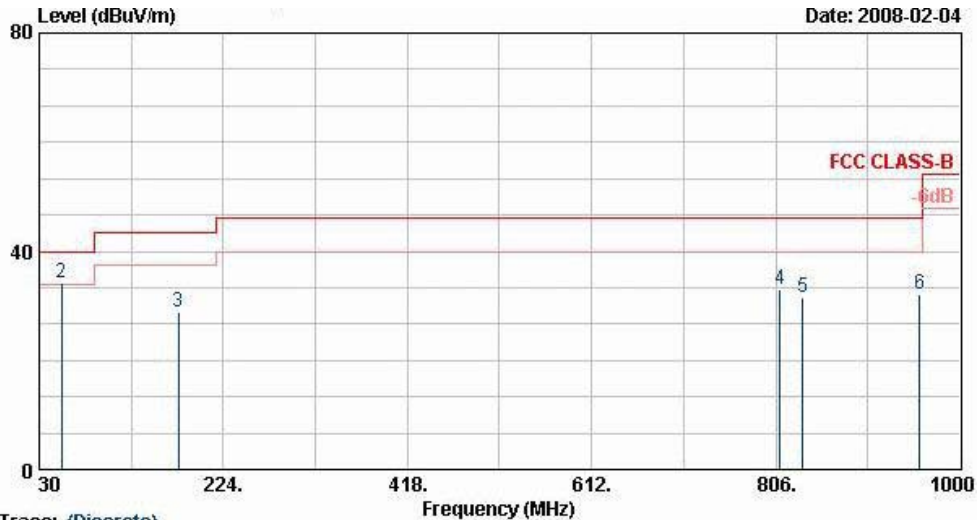
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.00	51.30	-22.70	74.00	51.20	31.86	3.92	35.68	100	0	Peak
2	2388.00	40.63	-13.37	54.00	40.53	31.86	3.92	35.68	151	224	Average
3 @	2437.00	109.72			109.50	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	102.79			102.56	31.93	3.99	35.69	151	224	Average
5	2494.00	53.06	-20.94	74.00	52.71	32.00	4.05	35.70	100	0	Peak
6	2494.00	42.03	-11.97	54.00	41.68	32.00	4.05	35.70	151	224	Average
7	8721.00	52.90	-21.10	74.00	45.76	36.10	7.48	36.44	100	0	Peak
8	8721.00	43.96	-10.04	54.00	36.82	36.10	7.48	36.44	100	222	Average
9	9747.00	47.31	-26.69	74.00	85.92	-9.85	7.98	36.75	100	0	Peak
10	12186.00	43.40	-30.60	74.00	80.44	-10.25	9.39	36.18	100	0	Peak

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.



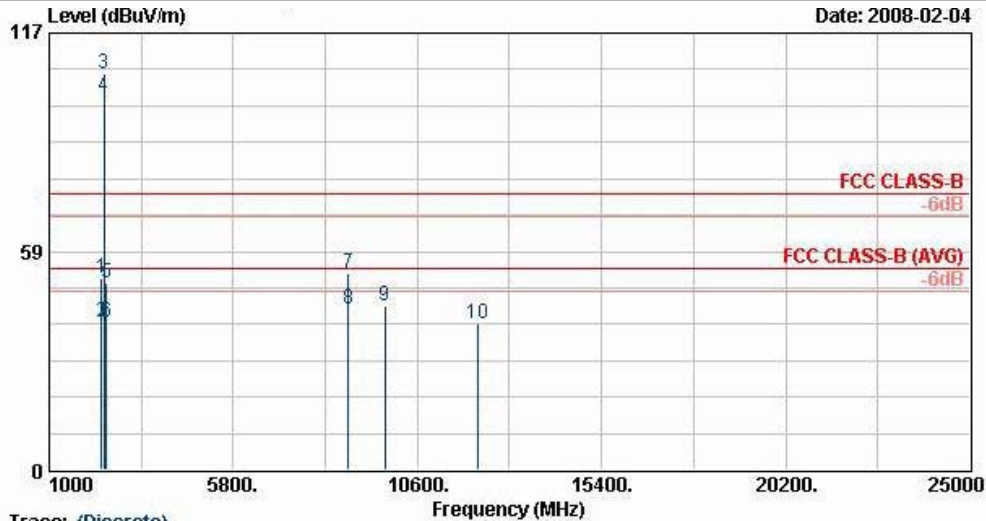
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LP-ANT(051121) VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11b Tx_Ch06_2437MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : 1617XP0003

	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	30.00	25.48	-14.52	40.00	39.02	19.66	0.30	33.50	---	Peak
2 !	53.49	34.06	-5.94	40.00	59.34	7.64	0.36	33.28	100	182 Peak
3	176.88	28.88	-14.62	43.50	51.93	9.69	0.60	33.34	---	Peak
4	810.30	33.16	-12.84	46.00	44.65	19.89	1.20	32.58	---	Peak
5	834.80	31.67	-14.33	46.00	43.04	20.07	1.20	32.64	---	Peak
6	957.30	32.07	-13.93	46.00	42.24	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.



Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11b Tx_Ch06_2437MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T613XP0003

Trace: (Discrete)

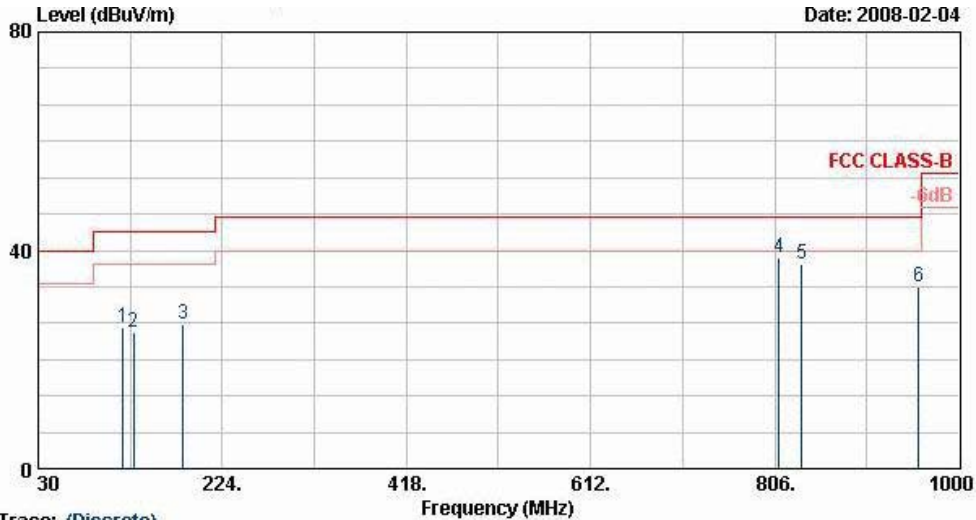
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2364.00	51.17	-22.83	74.00	51.14	31.81	3.89	35.67	100	0	Peak
2	2364.00	39.59	-14.41	54.00	39.57	31.81	3.89	35.67	100	211	Average
3 @	2437.00	106.12			105.89	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	100.17			99.94	31.93	3.99	35.69	100	211	Average
5	2484.00	49.96	-24.04	74.00	49.63	31.98	4.05	35.70	100	0	Peak
6	2484.00	39.72	-14.28	54.00	39.39	31.98	4.05	35.70	100	211	Average
7	8802.00	52.59	-21.41	74.00	45.29	36.22	7.56	36.48	100	0	Peak
8	8802.00	43.17	-10.83	54.00	35.87	36.22	7.56	36.48	100	298	Average
9	9747.00	43.80	-30.20	74.00	82.42	-9.85	7.98	36.75	100	0	Peak
10	12186.00	39.02	-34.98	74.00	76.06	-10.25	9.39	36.18	100	0	Peak

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)

```

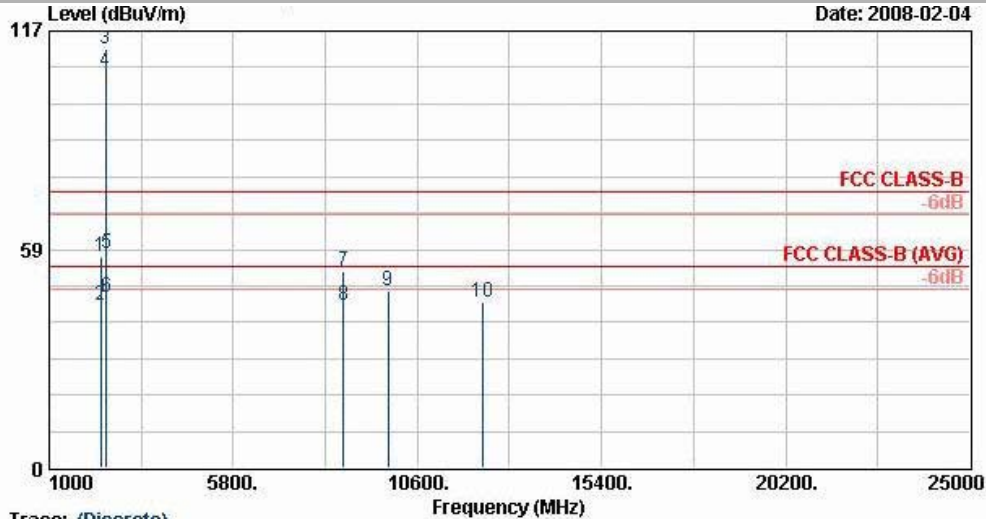
Site      : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT       : CPA_PDA
Power     : 120Vac/60Hz
Model     : FR 812802
Memo      : 802.11b Tx_Ch11_2462MHz +Adaptor
Data Rate : 11
Plane     : E1
S/N       : T61XXP0003
    
```

	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	119.64	25.80	-17.70	43.50	46.21	12.50	0.50	33.42	---	---	Peak
2	130.44	25.11	-18.39	43.50	46.21	11.70	0.50	33.29	---	---	Peak
3	182.28	26.60	-16.90	43.50	49.93	9.43	0.60	33.35	---	---	Peak
4 @	810.30	38.75	-7.25	46.00	50.24	19.89	1.20	32.58	100	167	Peak
5	834.80	37.57	-8.43	46.00	48.95	20.07	1.20	32.64	---	---	Peak
6	957.30	33.24	-12.76	46.00	43.42	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 :
Condition :
EUT :
Power :
Model :
Memo :
Data Rate :
Plane :
S/N :

Trace: (Discrete)
: D3CH06-HY
: FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
: CPA PDA
: 120Vac/60Hz
: FR 612602
: 802.11b Tx_Ch11_2462MHz +Adaptor
: 11
: E1
: T613XP0003

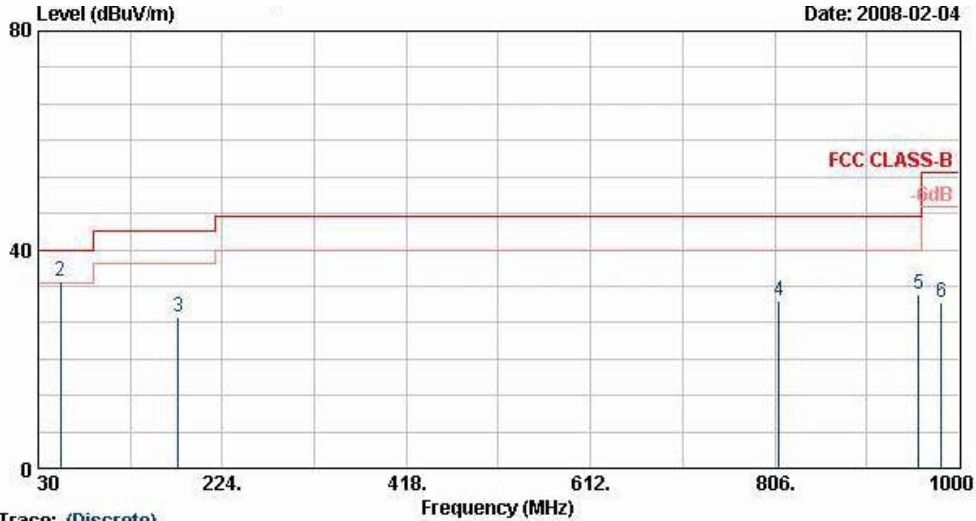
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2342.00	56.42	-17.58	74.00	56.45	31.78	3.86	35.67	100	0	Peak
2	2342.00	43.59	-10.41	54.00	43.62	31.78	3.86	35.67	180	136	Average
3 @	2462.00	112.13			111.85	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	106.11			105.83	31.95	4.02	35.69	180	136	Average
5	2486.13	57.57	-16.43	74.00	57.24	31.98	4.05	35.70	100	0	Peak
6	2486.13	45.67	-8.33	54.00	45.34	31.98	4.05	35.70	180	136	Average
7	8682.00	52.69	-21.31	74.00	45.62	36.06	7.42	36.41	100	0	Peak
8	8682.00	43.66	-10.34	54.00	36.59	36.06	7.42	36.41	100	236	Average
9	9846.00	47.46	-26.54	74.00	85.82	-9.63	8.04	36.77	100	0	Peak
10	12306.00	44.39	-29.61	74.00	81.69	-10.65	9.47	36.12	100	0	Peak

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.



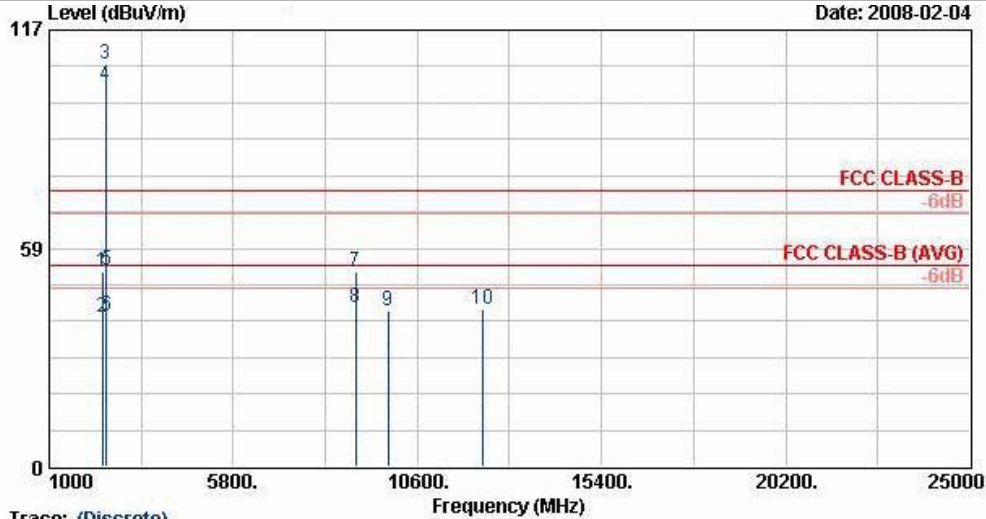
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11b Tx_Ch11_2462MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T61XP0003

	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	24.77	-15.23	40.00	38.31	19.66	0.30	33.50	---	---	Peak
2 @	53.49	34.23	-5.77	40.00	59.51	7.64	0.36	33.28	100	251	Peak
3	177.69	27.76	-15.74	43.50	50.86	9.63	0.60	33.33	---	---	Peak
4	810.30	30.50	-15.50	46.00	41.99	19.89	1.20	32.58	---	---	Peak
5	957.30	31.73	-14.27	46.00	41.91	20.94	1.27	32.38	---	---	Peak
6	981.80	30.35	-23.65	54.00	40.14	21.11	1.30	32.20	---	---	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 612602
 Memo : 802.11b Tx_Ch11_2462MHz +Adaptor
 Data Rate : 11
 Plane : E1
 S/N : T813XP0003

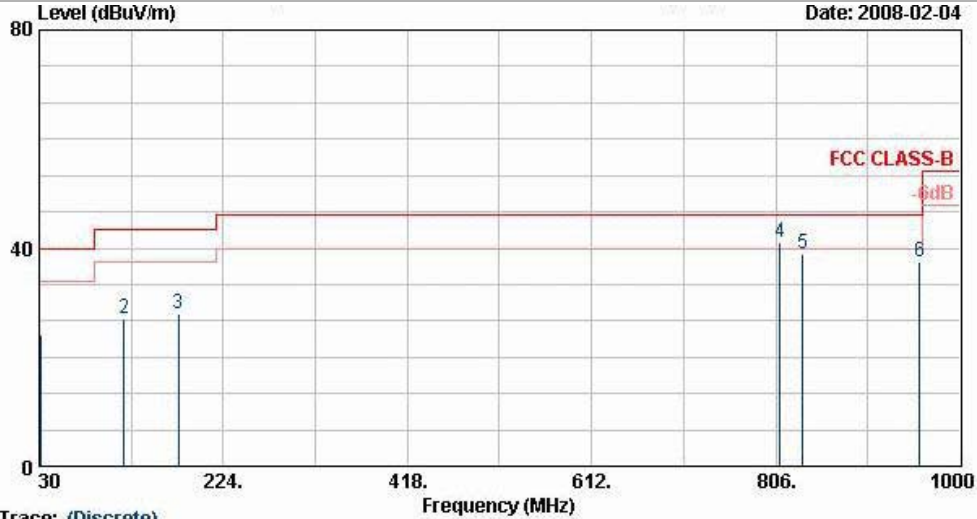
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2382.00	52.03	-21.97	74.00	51.95	31.83	3.92	35.68	100	0	Peak
2	2382.00	39.95	-14.05	54.00	39.87	31.83	3.92	35.68	100	260	Average
3 @	2462.00	108.03			107.75	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	102.12			101.84	31.95	4.02	35.69	100	260	Average
5	2485.18	52.75	-21.25	74.00	52.42	31.98	4.05	35.70	100	0	Peak
6	2485.18	40.34	-13.66	54.00	40.01	31.98	4.05	35.70	100	260	Average
7	8994.00	52.29	-21.71	74.00	44.60	36.48	7.80	36.59	100	0	Peak
8	8994.00	42.68	-11.32	54.00	34.99	36.48	7.80	36.59	100	168	Average
9	9846.00	41.76	-32.24	74.00	80.12	-9.63	8.04	36.77	100	0	Peak
10	12306.00	42.16	-31.84	74.00	79.46	-10.65	9.47	36.12	100	0	Peak

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)

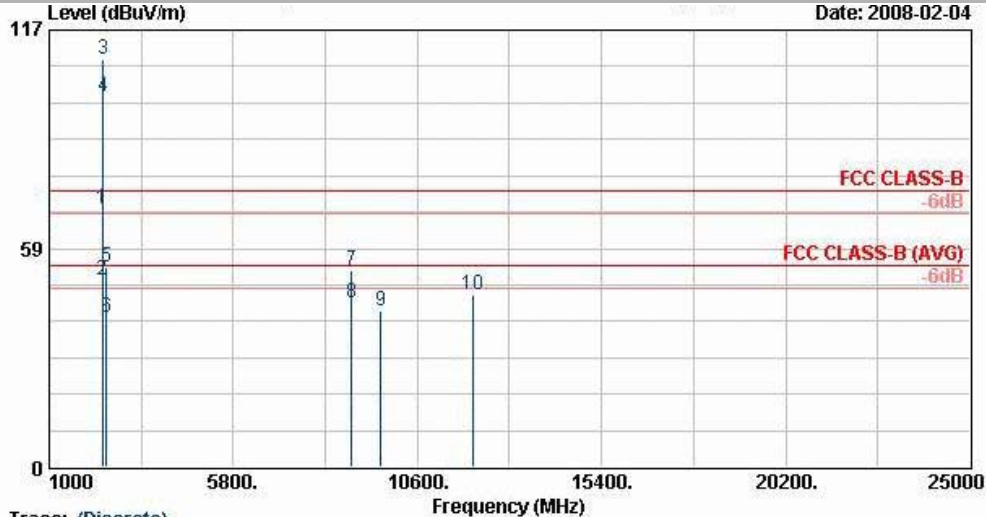
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : Mobile Phone(GSM1900/GPRS/Bluetooth/
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch01;2412MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T613XP0003

	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	31.08	23.98	-16.02	40.00	38.18	18.95	0.30	33.46	---	---	Peak
2	119.64	26.94	-16.56	43.50	47.35	12.50	0.50	33.42	---	---	Peak
3	176.88	27.95	-15.55	43.50	51.00	9.69	0.60	33.34	---	---	Peak
4 !	810.30	41.07	-4.93	46.00	52.57	19.89	1.20	32.58	100	167	Peak
5	834.80	38.96	-7.04	46.00	50.34	20.07	1.20	32.64	---	---	Peak
6	957.30	37.41	-8.59	46.00	47.59	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 : Mobile Phone(GSM1900/GPRS/Bluetooth/
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch01;2412MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T61XXP0003

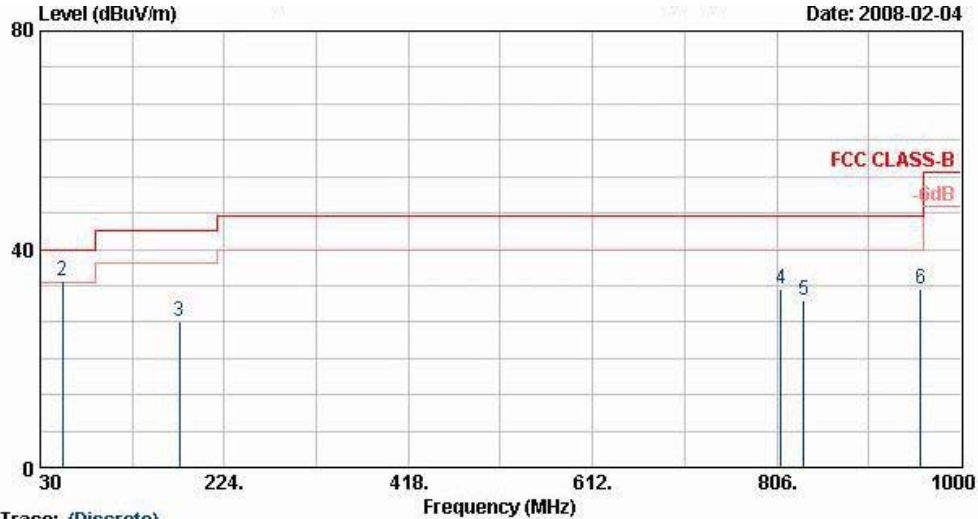
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	Pos	deg
1	!	2389.61	69.26	-4.74	74.00	69.16	31.86	3.92	35.68	100	0 Peak
2	!	2389.61	49.98	-4.02	54.00	49.88	31.86	3.92	35.68	188	125 Average
3	X	2412.00	109.02			108.85	31.90	3.95	35.69	100	0 Peak
4	@	2412.00	99.16			99.01	31.88	3.95	35.68	188	125 Average
5		2486.00	53.45	-20.55	74.00	53.12	31.98	4.05	35.70	100	0 Peak
6		2486.00	40.13	-13.87	54.00	39.80	31.98	4.05	35.70	188	125 Average
7		8886.00	52.76	-21.24	74.00	45.26	36.34	7.68	36.53	100	0 Peak
8		8886.00	43.76	-10.24	54.00	36.27	36.34	7.68	36.53	100	189 Average
9		9642.00	41.87	-32.13	74.00	80.75	-10.09	7.94	36.73	100	0 Peak
10		12057.00	45.96	-28.04	74.00	82.71	-9.80	9.31	36.26	100	0 Peak

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.



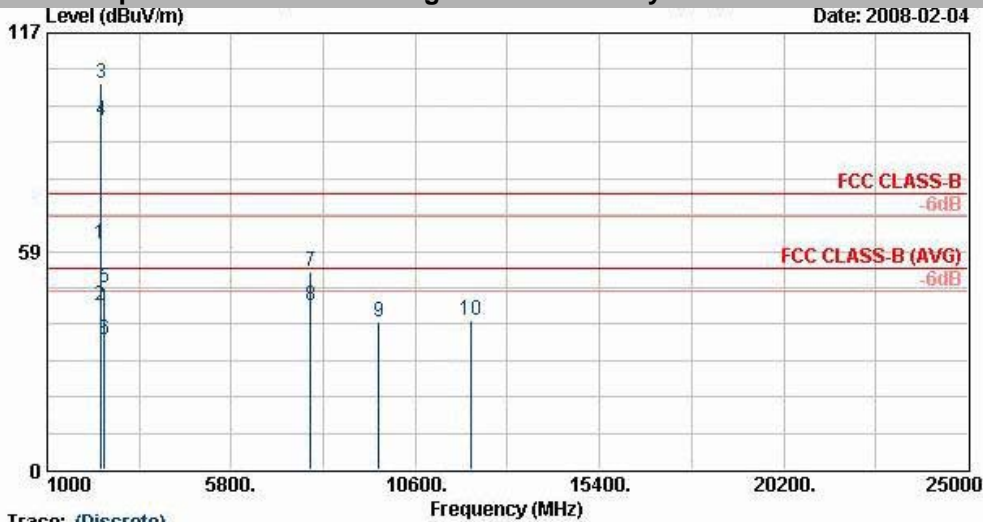
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : Mobile Phone(GSM1900/GPRS/Bluetooth/
 Power : 120Vac/60Hz
 Model : FR 612602
 Memo : 802.11g Tx_Ch01; 2412MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T81XXP0003

	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	30.00	25.41	-14.59	40.00	38.95	19.66	0.30	33.50	---	---	Peak
2 !	53.49	34.05	-5.95	40.00	59.33	7.64	0.36	33.28	100	299	Peak
3	176.88	26.78	-16.72	43.50	49.83	9.69	0.60	33.34	---	---	Peak
4	810.30	32.64	-13.36	46.00	44.13	19.89	1.20	32.58	---	---	Peak
5	834.80	30.68	-15.32	46.00	42.06	20.07	1.20	32.64	---	---	Peak
6	957.30	32.66	-13.34	46.00	42.83	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      : Mobile Phone(GSM1900/GPRS/Bluetooth/
Power    : 120Vac/60Hz
Model    : FR 612602
Memo     : 802.11g Tx_Ch01;2412MHz +Adaptor
Data Rate : 36
Plane    : E1
S/N      : T813XP0003
    
```

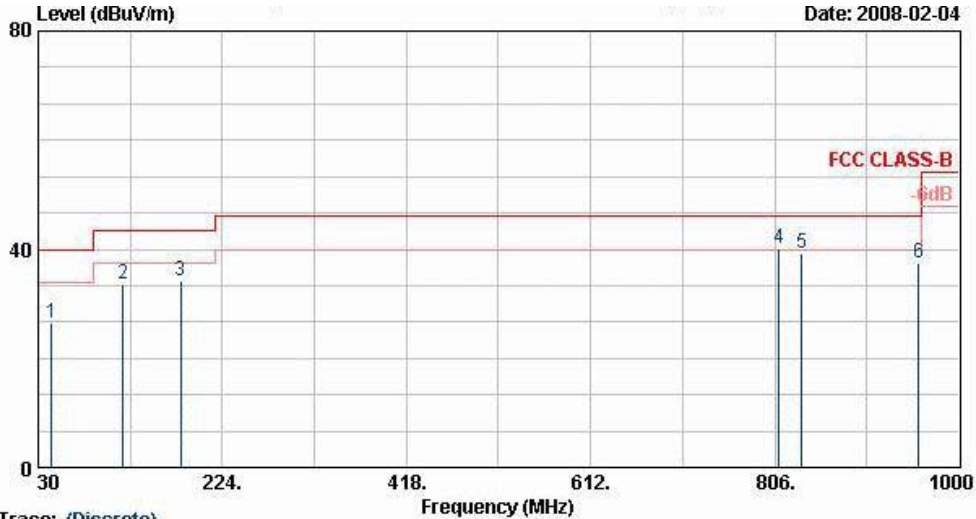
	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	2389.99	60.36	-13.64	74.00	60.26	31.86	3.92	35.68	100	0 Peak
2	2389.99	44.12	-9.88	54.00	44.02	31.86	3.92	35.68	100	189 Average
3 X	2412.00	103.38			103.22	31.88	3.95	35.68	100	0 Peak
4 @	2412.00	93.46			93.31	31.88	3.95	35.68	100	189 Average
5	2492.00	48.82	-25.18	74.00	48.47	32.00	4.05	35.70	100	0 Peak
6	2492.00	34.82	-19.18	54.00	34.47	32.00	4.05	35.70	100	189 Average
7	7869.00	53.09	-20.91	74.00	46.24	35.67	7.45	36.27	100	0 Peak
8	7869.00	44.13	-9.87	54.00	37.28	35.67	7.45	36.27	100	94 Average
9	9642.00	39.57	-34.43	74.00	78.45	-10.09	7.94	36.73	100	0 Peak
10	12057.00	39.92	-34.08	74.00	76.67	-9.80	9.31	36.26	100	0 Peak

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.



Trace: (Discrete)

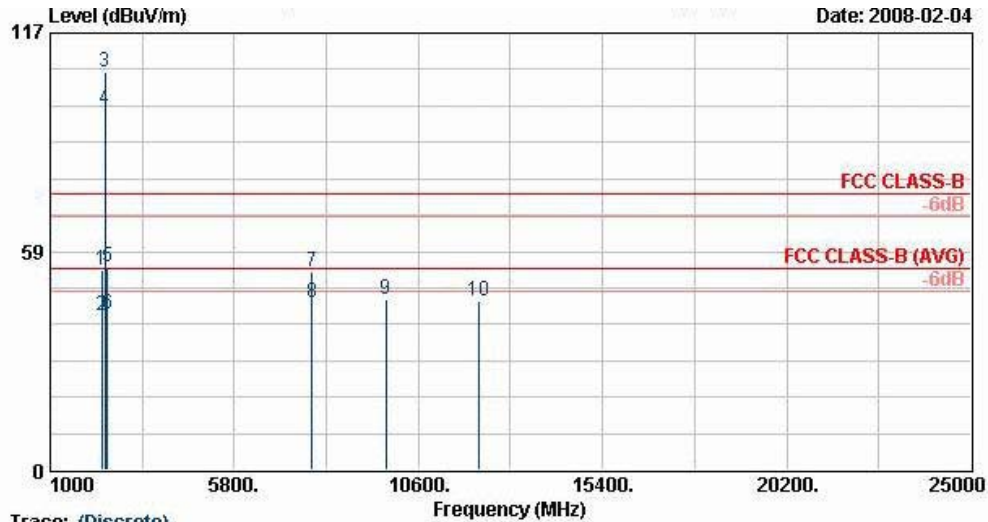
Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch06_2437MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T61XTP0003

	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	44.04	26.40	-13.60	40.00	47.71	11.52	0.30	33.13	---	---	Peak
2	119.64	33.46	-10.04	43.50	53.87	12.50	0.50	33.42	---	---	Peak
3	180.39	34.18	-9.32	43.50	57.43	9.44	0.60	33.29	---	---	Peak
4 !	810.30	40.11	-5.89	46.00	51.60	19.89	1.20	32.58	100	311	Peak
5	834.80	39.23	-6.77	46.00	50.60	20.07	1.20	32.64	---	---	Peak
6	957.30	37.40	-8.60	46.00	47.57	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch06_2437MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T613XP0003

Trace: (Discrete)

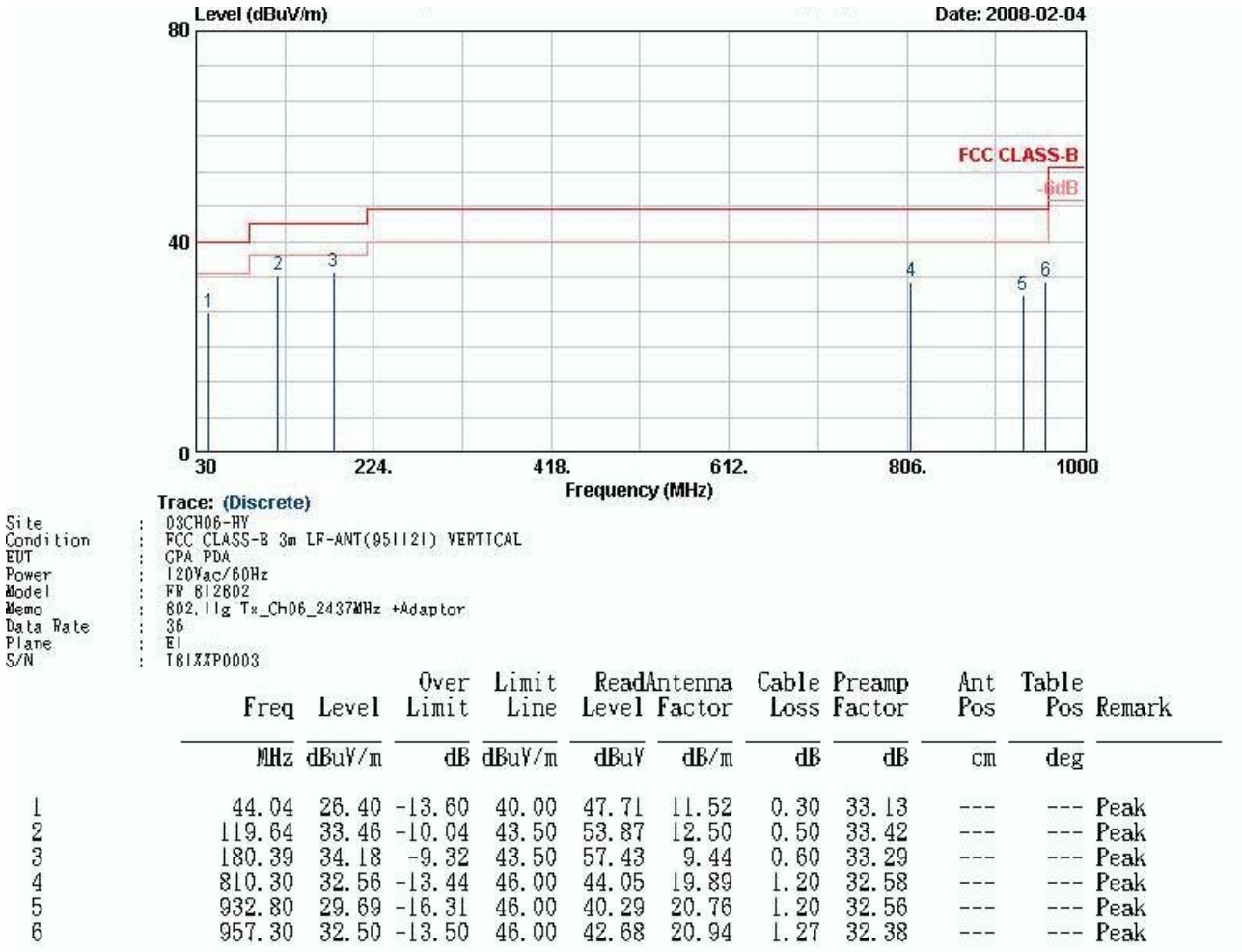
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2350.00	53.57	-20.43	74.00	53.60	31.78	3.86	35.67	100	0	Peak
2	2350.00	41.16	-12.84	54.00	41.19	31.78	3.86	35.67	187	244	Average
3 X	2437.00	106.52			106.32	31.90	3.99	35.69	100	0	Peak
4 @	2437.00	96.50			96.27	31.93	3.99	35.69	187	244	Average
5	2484.00	54.27	-19.73	74.00	53.94	31.98	4.05	35.70	100	0	Peak
6	2484.00	41.60	-12.40	54.00	41.27	31.98	4.05	35.70	187	244	Average
7	7833.00	52.92	-21.08	74.00	46.09	35.67	7.44	36.27	100	0	Peak
8	7833.00	44.85	-9.15	54.00	38.01	35.67	7.44	36.27	100	239	Average
9	9747.00	45.65	-28.35	74.00	84.27	-9.85	7.98	36.75	100	0	Peak
10	12186.00	45.02	-28.98	74.00	82.06	-10.25	9.39	36.18	100	0	Peak

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.



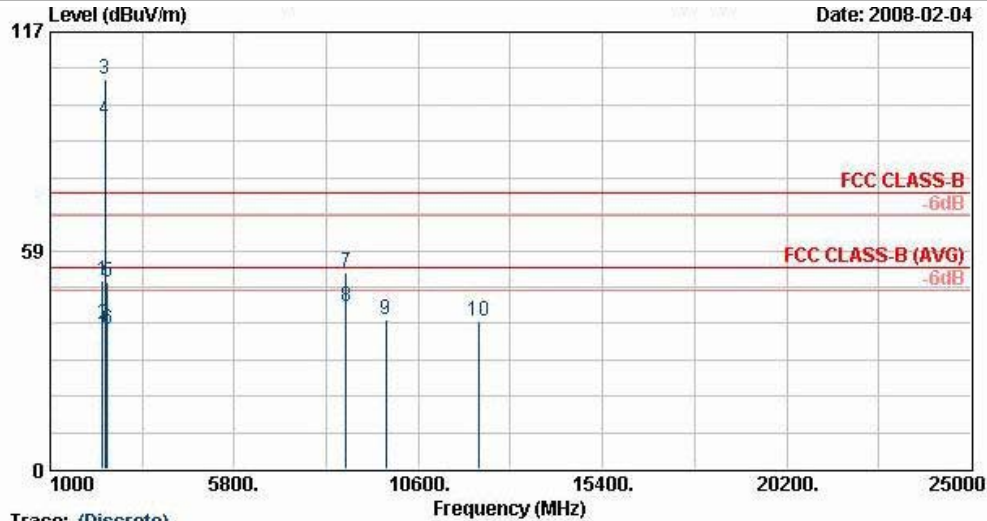
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch06_2437MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : 1613XP0003

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	Loss	Factor	Pos	Pos	
						dB	dB	cm	deg	
1	44.04	26.40	-13.60	40.00	47.71	11.52	0.30 33.13	---	---	Peak
2	119.64	33.46	-10.04	43.50	53.87	12.50	0.50 33.42	---	---	Peak
3	180.39	34.18	-9.32	43.50	57.43	9.44	0.60 33.29	---	---	Peak
4	810.30	32.56	-13.44	46.00	44.05	19.89	1.20 32.58	---	---	Peak
5	932.80	29.69	-16.31	46.00	40.29	20.76	1.20 32.56	---	---	Peak
6	957.30	32.50	-13.50	46.00	42.68	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch06_2437MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T61XXP0003

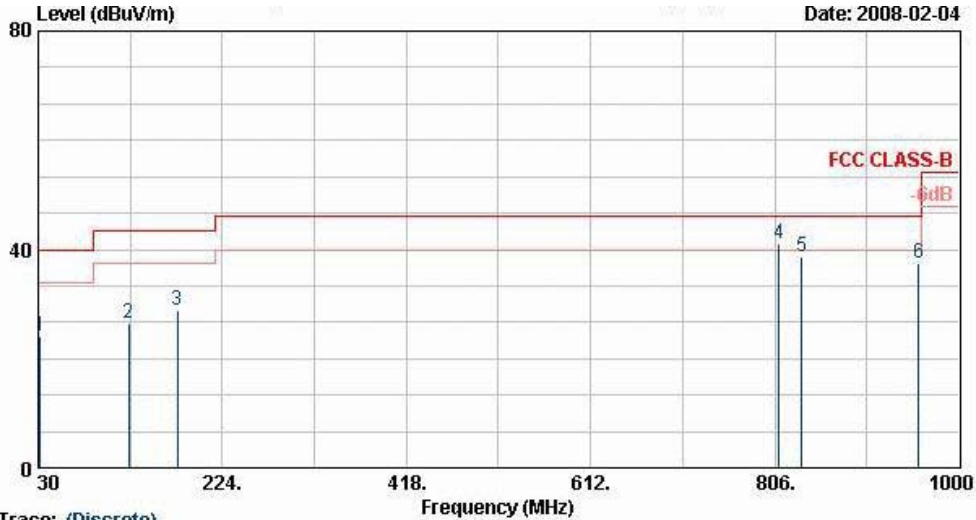
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2374.00	50.66	-23.34	74.00	50.62	31.83	3.89	35.68	100	0	Peak
2	2374.00	38.63	-15.37	54.00	38.59	31.83	3.89	35.68	100	210	Average
3 X	2437.00	104.34			104.13	31.90	3.99	35.69	100	0	Peak
4 @	2437.00	93.67			93.44	31.93	3.99	35.69	100	210	Average
5	2484.00	50.01	-23.99	74.00	49.68	31.98	4.05	35.70	100	0	Peak
6	2484.00	37.54	-16.46	54.00	37.21	31.98	4.05	35.70	100	210	Average
7	8718.00	52.54	-21.46	74.00	45.39	36.10	7.48	36.44	100	0	Peak
8	8718.00	43.52	-10.48	54.00	36.38	36.10	7.48	36.44	100	335	Average
9	9747.00	39.85	-34.15	74.00	78.46	-9.85	7.98	36.75	100	0	Peak
10	12186.00	39.44	-34.56	74.00	76.48	-10.25	9.39	36.18	100	0	Peak

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)

```

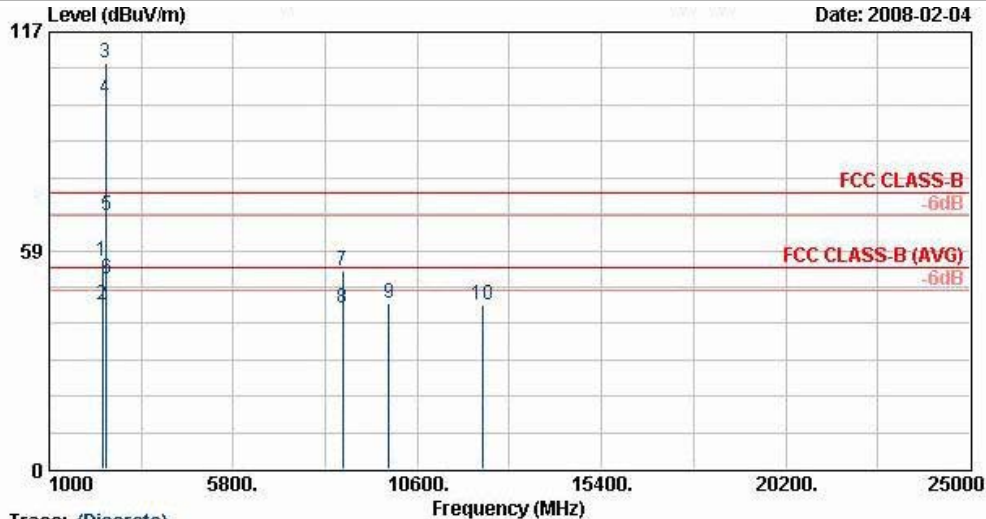
Site      : D3CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT      : CPA_PDA
Power     : 120Vac/60Hz
Model    : FR 812802
Memo     : 802.11g Tx_Ch11_2462MHz +Adaptor
Data Rate : 36
Plane    : E1
S/N      : T61XXP0003
    
```

	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	31.89	24.01	-15.99	40.00	38.88	18.25	0.30	33.42	---	---	Peak
2	125.58	26.40	-17.10	43.50	46.72	12.50	0.50	33.31	---	---	Peak
3	176.88	28.82	-14.68	43.50	51.87	9.69	0.60	33.34	---	---	Peak
4 !	810.30	40.95	-5.05	46.00	52.45	19.89	1.20	32.58	100	254	Peak
5	834.80	38.78	-7.22	46.00	50.15	20.07	1.20	32.64	---	---	Peak
6	957.30	37.60	-8.40	46.00	47.77	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch11_2462MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T61XXP0003

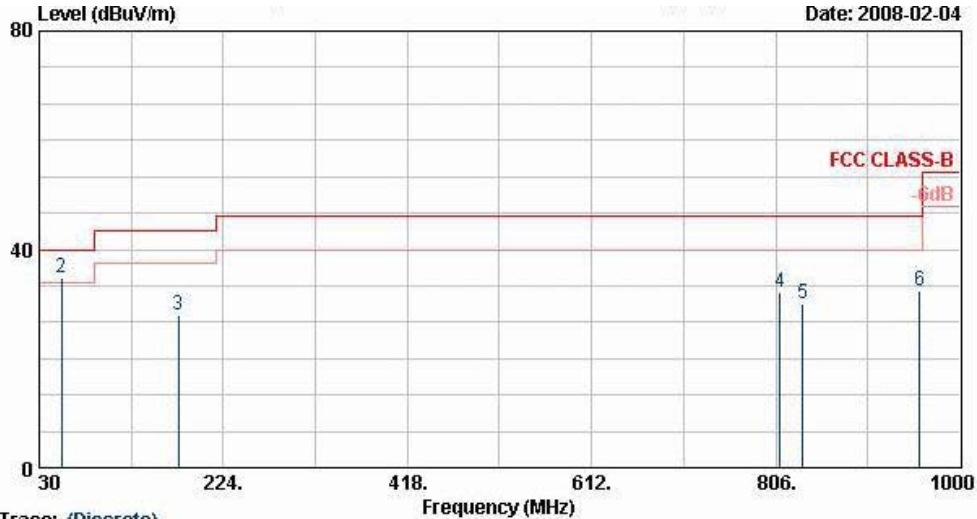
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2380.00	55.70	-18.30	74.00	55.62	31.83	3.92	35.68	100	0	Peak
2	2380.00	43.79	-10.21	54.00	43.71	31.83	3.92	35.68	186	153	Average
3 X	2462.00	108.84			108.56	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	99.00			98.72	31.95	4.02	35.69	186	153	Average
5	2483.47	67.85	-6.15	74.00	67.52	31.98	4.05	35.70	100	0	Peak
6 !	2483.47	50.68	-3.32	54.00	50.35	31.98	4.05	35.70	186	153	Average
7	8646.00	53.08	-20.92	74.00	46.07	36.01	7.39	36.39	100	0	Peak
8	8646.00	43.12	-10.88	54.00	36.11	36.01	7.39	36.39	100	245	Average
9	9852.00	44.38	-29.62	74.00	82.74	-9.63	8.04	36.77	100	0	Peak
10	12306.00	44.11	-29.89	74.00	81.41	-10.65	9.47	36.12	100	0	Peak

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.



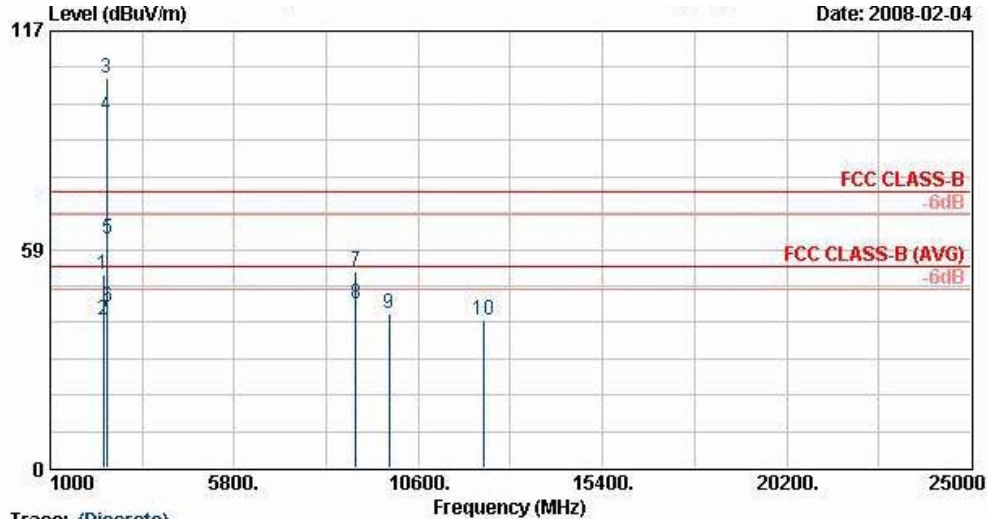
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch11_2462MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T613XP0003

	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	25.09	-14.91	40.00	39.30	18.95	0.30	33.46	---	---	Peak
2 !	53.49	34.72	-5.28	40.00	60.00	7.64	0.36	33.28	100	291	Peak
3	176.88	27.84	-15.66	43.50	50.88	9.69	0.60	33.34	---	---	Peak
4	810.30	32.25	-13.75	46.00	43.75	19.89	1.20	32.58	---	---	Peak
5	834.80	30.17	-15.83	46.00	41.54	20.07	1.20	32.64	---	---	Peak
6	957.30	32.29	-13.71	46.00	42.46	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.



Site : D3CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : 802.11g Tx_Ch11_2462MHz +Adaptor
 Data Rate : 36
 Plane : E1
 S/N : T613XP0003

Trace: (Discrete)

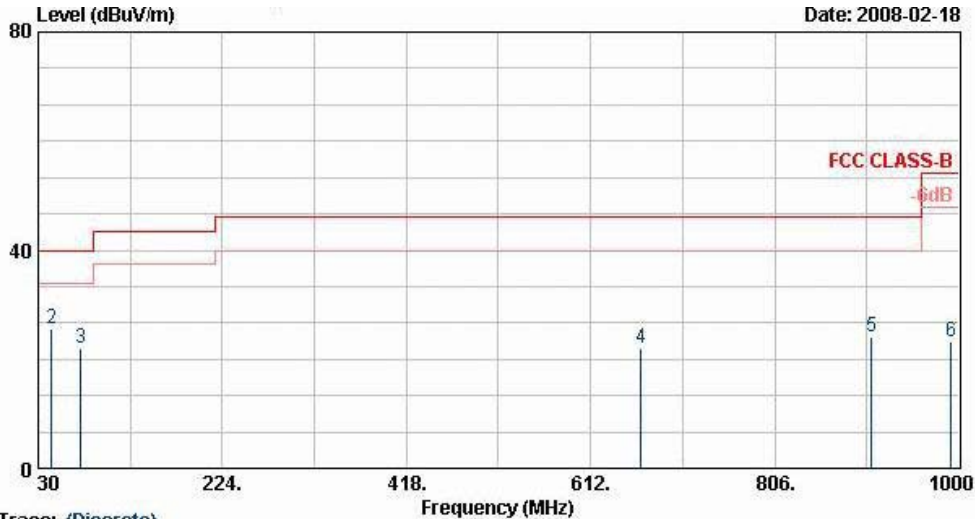
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.00	51.70	-22.30	74.00	51.60	31.86	3.92	35.68	100	0	Peak
2	2388.00	39.57	-14.43	54.00	39.47	31.86	3.92	35.68	100	259	Average
3 X	2462.00	104.29			104.01	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	94.22			93.94	31.95	4.02	35.69	100	259	Average
5	2483.47	61.11	-12.89	74.00	60.78	31.98	4.05	35.70	100	0	Peak
6	2483.47	43.06	-10.94	54.00	42.73	31.98	4.05	35.70	100	259	Average
7	8958.00	52.78	-21.22	74.00	45.15	36.43	7.77	36.57	100	0	Peak
8	8958.00	43.84	-10.16	54.00	36.21	36.43	7.77	36.57	100	184	Average
9	9846.00	41.22	-32.78	74.00	79.59	-9.63	8.04	36.77	100	0	Peak
10	12297.00	39.69	-34.31	74.00	76.96	-10.62	9.47	36.12	100	0	Peak

Remark: #3 and #4 are Fundamental Signals



- Test Mode : Mode 7
- Polarization : Horizontal (30MHz-1GHz)

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



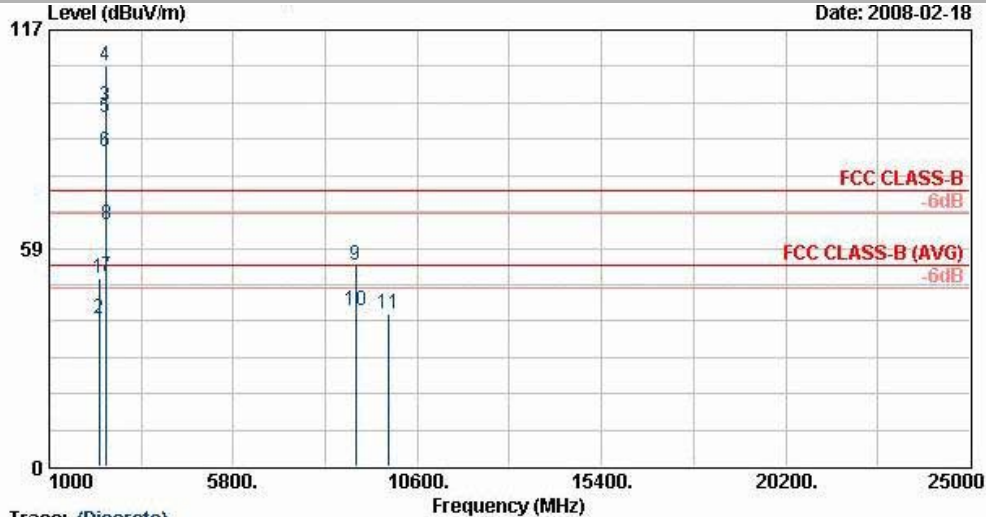
Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LP-ANT(051121) HORIZONTAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : BT Tx_Ch78;2480 + 11g Tx_Ch11;2462MHz
 + Adaptor
 Data Rate : BT;DH5 WLAN;36
 Plane : E1
 S/N : T613XP0003

	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	23.83	-16.17	40.00	37.37	19.66	0.30	33.50	---	---	Peak
2	44.04	25.57	-14.43	40.00	46.88	11.52	0.30	33.13	100	146	Peak
3	75.09	22.05	-17.95	40.00	48.02	7.18	0.40	33.55	---	---	Peak
4	665.40	22.01	-23.99	46.00	35.28	18.74	1.05	33.06	---	---	Peak
5	908.30	24.23	-21.77	46.00	35.09	20.59	1.30	32.74	---	---	Peak
6	992.30	23.27	-30.73	54.00	32.91	21.18	1.30	32.13	---	---	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 : CPA_PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : BT Tx_Ch76;2480 + 11g Tx_Ch11;2462MHz
 + Adaptor
 Data Rate : BT;DH5 WLAN:36
 Plane : EI
 S/N : T61XXP0003

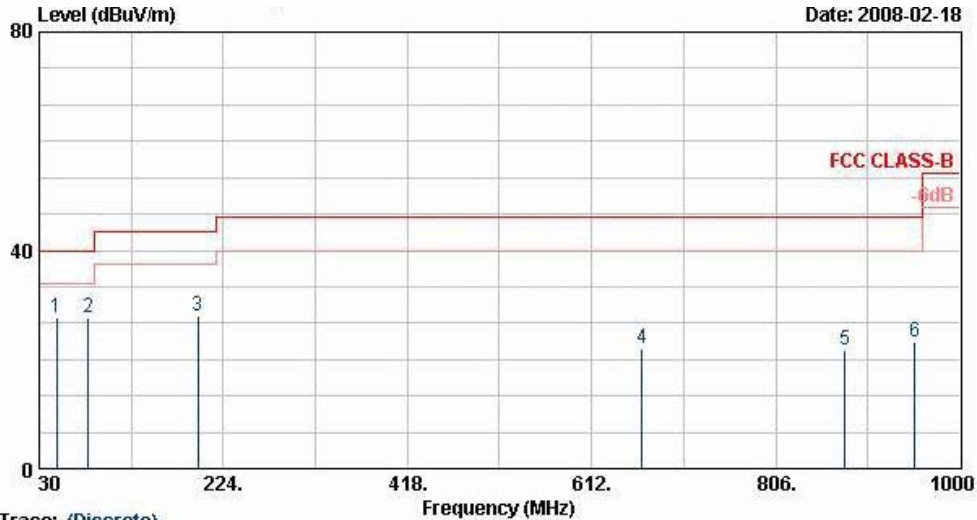
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2310.00	50.51	-23.49	74.00	50.61	31.73	3.82	35.66	100	0	Peak
2	2310.00	39.56	-14.44	54.00	39.66	31.73	3.82	35.66	105	6	Average
3 @	2462.00	96.69			96.41	31.95	4.02	35.69	105	6	Average
4 @	2462.00	107.51			107.23	31.95	4.02	35.69	100	0	Peak
5 X	2480.00	93.73			93.40	31.98	4.05	35.70	100	0	Peak
6 X	2480.00	84.38			84.05	31.98	4.05	35.70	100	18	Average
7 !	2483.50	51.03	-2.97	54.00	50.70	31.98	4.05	35.70	100	18	Average
8	2483.50	64.80	-9.20	74.00	64.47	31.98	4.05	35.70	100	0	Peak
9	8991.00	53.97	-20.03	74.00	46.28	36.48	7.80	36.59	100	0	Peak
10	8991.00	41.57	-12.43	54.00	33.88	36.48	7.80	36.59	100	117	Average
11	9846.00	40.75	-33.25	74.00	79.12	-9.63	8.04	36.77	100	0	Peak

Remark: #3, #4, #5, and #6 are Fundamental Signals



- Polarization : Vertical (30MHz-1GHz)

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



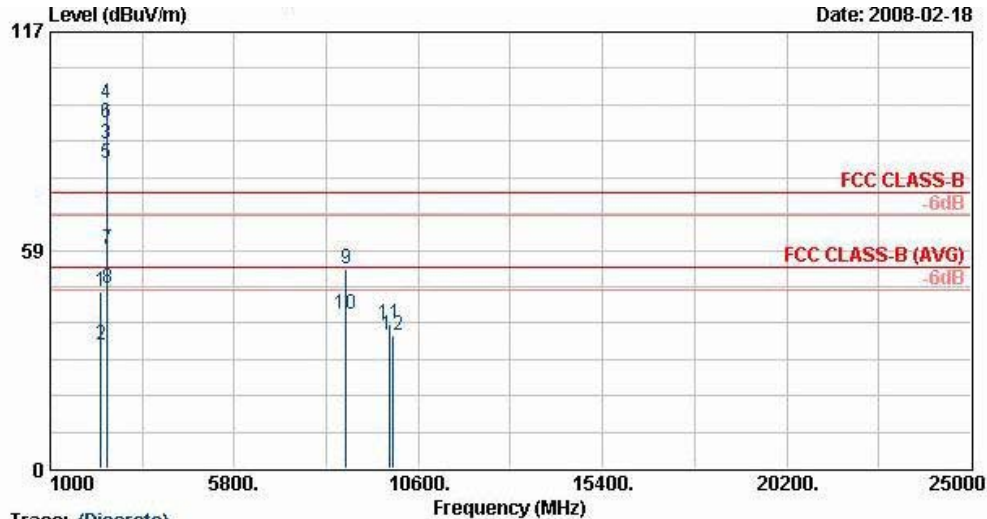
Trace: (Discrete)
 Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : BT Tx_Ch78;2460 + 11g Tx_Ch11;2462MHz
 : + Adaptor
 Data Rate : BT;DH5 WLAN;36
 Plane : E1
 S/N : T61ZXP0003

	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	48.09	27.54	-12.46	40.00	51.31	9.06	0.30	33.14	---	---	Peak
2	81.84	27.76	-12.24	40.00	53.00	7.67	0.48	33.39	100	213	Peak
3	197.13	28.07	-15.43	43.50	51.69	9.32	0.60	33.55	---	---	Peak
4	665.40	22.06	-23.94	46.00	35.33	18.74	1.05	33.06	---	---	Peak
5	878.90	21.85	-24.15	46.00	32.92	20.38	1.30	32.75	---	---	Peak
6	952.40	23.23	-22.77	46.00	33.52	20.90	1.23	32.42	---	---	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 : CPA PDA
 Power : 120Vac/60Hz
 Model : FR 812802
 Memo : BT Tx_Ch78;2480 + 11g Tx_Ch11;2462MHz
 + Adaptor
 Data Rate : BT:DH5 WLAN:36
 Plane : E1
 S/N : T61XXP0003

	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	2316.00	47.58	-26.42	74.00	47.69	31.73	3.82	35.67	100	0 Peak
2	2316.00	32.93	-21.07	54.00	33.04	31.73	3.82	35.67	100	267 Average
3 @	2462.00	87.09			86.81	31.95	4.02	35.69	140	320 Average
4 X	2462.00	98.07			97.79	31.95	4.02	35.69	100	0 Peak
5 X	2480.00	81.80			81.47	31.98	4.05	35.70	140	320 Average
6 X	2480.00	92.56			92.23	31.98	4.05	35.70	100	0 Peak
7	2483.50	58.63	-15.37	74.00	58.30	31.98	4.05	35.70	100	0 Peak
8 !	2483.50	48.30	-5.70	54.00	47.97	31.98	4.05	35.70	140	320 Average
9	8721.00	53.53	-20.47	74.00	46.38	36.10	7.48	36.44	100	0 Peak
10	8721.00	41.14	-12.86	54.00	34.00	36.10	7.48	36.44	100	177 Average
11	9846.00	38.59	-35.41	74.00	76.95	-9.63	8.04	36.77	100	0 Peak
12	9921.00	35.47	-38.53	74.00	73.66	-9.48	8.07	36.79	100	0 Peak

Remark: #3, #4, #5, and #6 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 are PIFA Antenna for 802.11b/g with MICRO connector. 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 Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jul. 14, 2007	Jul. 13, 2008	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 29, 2007	Mar. 28, 2008	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 03, 2007	Dec. 02, 2008	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO01-HY)
Impedance Stabilization Network	SCHAFFNER	T400	21653	150kHz – 230MHz	Mar. 28, 2007	Mar. 27, 2008	Conduction (CO01-HY)
Impedance Stabilization Network	SCHAFFNER	T400	23342	150kHz – 230MHz	Mar. 05, 2007	Mar. 04, 2008	Conduction (CO01-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 26, 2007	Jul. 25, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	071025	1G~18G	Jun. 04, 2007	Jun. 03, 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)
PreAmplifier	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 (150kHz ~ 30MHz)

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

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

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		



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

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				

The measured result is : y dBuV \pm U dB
for a level of confidence of approximately 95% , ($k = 2$)