



FCC Test Report

for

47 CFR Part 15 Subpart C

Equipment : Qual-Band PDA Phone
Trade Name : ASUS
Model No. : P320
FCC ID : MSQP320
Filing Type : Certification
Applicant : ASUSTek COMPUTER INC.
4F., No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

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- The data shown in this test report were carried out on Mar. 28, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR822203B, Report Version: Rev.01

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Manager

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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1. General Description of Equipment under Test

1.1 Applicant

ASUSTek COMPUTER INC.
4F., No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

1.2 Manufacturer

1. **Pegatron Corporation Taoyuan Mfg.**
No.5, Shing Yeh Street, 333 Kwei Shan Hsiang, Taoyuan Hsien, Taiwan
2. **ProTek (Shanghai) Ltd.**
No.3768, Xiu Yan Road, Nanhui District, 201315 Shanghai, People's Republic of China
3. **MainTek Computer (Suzhou) Co., Ltd.**
No.233 Jing Feng Road, 215011 Suzhou New District, Jiangsu, People's Republic of China

1.3 Basic Description of Equipment under Test

Equipment		Qual-Band PDA Phone
Trade Name		ASUS
Model Name		P320
FCC ID		MSQP320
AC Adapter	Brand Name	TAMURA
	Model Name	JSP050090UU
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.3A; O/P: 5Vdc, 0.9A
	AC Power Cord Type	1.5 meter shielded cable without ferrite core
Car Charger	Brand Name	L&K
	Model Name	04G267011910
	Power Rating	I/P: 12V/24V; O/P: 5V, 900mA
	Power Cord Type	1.8 meter shielded cable without ferrite core
Battery	Brand Name	ASUS
	Model Name	SBP-17
	Rating	3.7Vdc, 1100mAh
	Type	Li-ion
Earphone	Brand Name	ASUS
	Model Name	04G171301270
	Signal line Type	1.5 meter non-shielded cable without ferrite core
USB Cable	Brand Name	Foxconn
	Model Name	14G000506200
	Signal Line Type	1 meter shielded cable with ferrite core

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**

DUT Type	Qual-Band PDA Phone
Trade Name	ASUS
Model Name	P320
FCC ID	MSQP320
Tx Frequency	GSM850 : 824 ~ 849 MHz PCS1900 : 1850 ~1910 MHz Bluetooth / Bluetooth EDR : 2400 ~ 2483.5 MHz 802.11b / 802.11g : 2400 ~ 2483.5 MHz
Rx Frequency	GSM850 : 869 ~ 894 MHz PCS1900 : 1930 ~ 1990 MHz Bluetooth / Bluetooth EDR : 2400 ~ 2483.5 MHz 802.11b / 802.11g : 2400 ~ 2483.5 MHz GPS : 1575.42 MHz
Antenna Type	GSM850 / PCS1900 : Fixed Internal GPS : Fixed Internal Bluetooth / Bluetooth EDR : Chip Antenna 802.11b / 802.11g : Chip Antenna
Power Rating	DC 4.2V, 2.5A
HW Version	ER2
SW Version	20080221_Version 2.6.4
Maximum Output Power to Antenna	GSM850 : 32.07 dBm(GSM) / 32.04 dBm(GPRS10) / 27.23 dBm(EGPRS10) PCS1900 : 29.24 dBm(GSM) / 29.20 dBm(GPRS10) / 26.06 dBm(GPRS10) Bluetooth : 2.06 dBm(1Mbps) Bluetooth EDR : -0.1 dBm(2Mbps) / 0.1 dBm(3Mbps) 802.11b : 14.42 dBm 802.11g : 16.81 dBm
Antenna Gain	Bluetooth / Bluetooth EDR : -3 dBi 802.11b / 802.11g : -3 dBi
Type of Antenna Connector	N/A
GPRS / EGPRS Multislot class	10
Type of Modulation	GSM / GPRS : GMSK EDGE : 8PSK Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : $\pi/4$ -DQPSK, 8-DPSK 802.11b/g : DSSS, OFDM



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			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	14.39	14.40	14.18	14.42
CH 06	2437 MHz	14.39	14.41	13.95	14.39
CH 11	2462 MHz	14.23	14.08	13.90	14.28

802.11g

Channel	Frequency (MHz)	Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	16.46	16.32	16.22	16.37	16.43	16.73	16.41	16.70
CH 06	2437 MHz	16.37	16.62	16.51	16.23	16.53	16.56	16.78	16.81
CH 11	2462 MHz	16.28	16.56	16.05	16.67	15.98	16.68	16.50	16.07

- c. The 802.11b/g data rate were set in 11Mbps and 54Mbps, 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

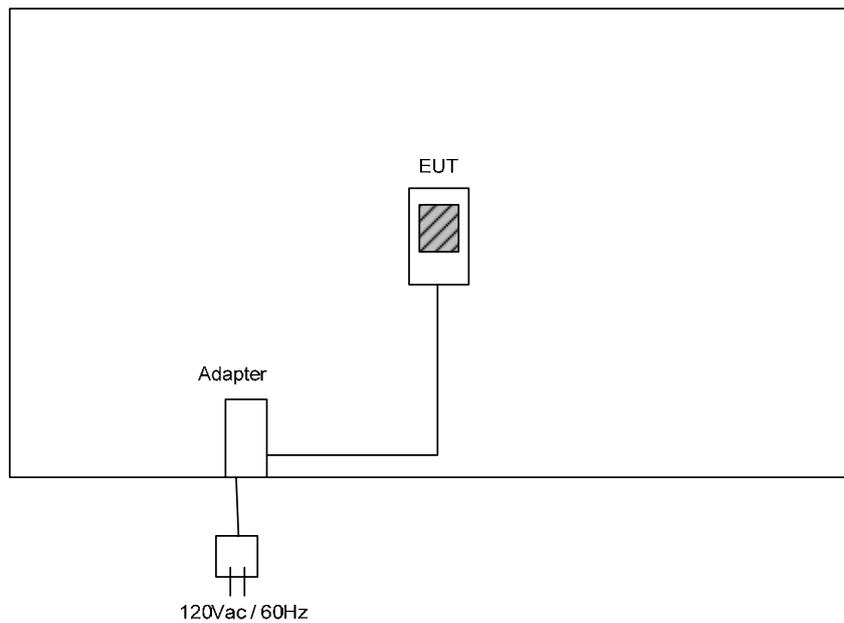
Application		
Radiated Emission	802.11b	802.11g
	Mode 1: CH01_2412 MHz	Mode 4: CH01_2412 MHz
	Mode 2: CH06_2437 MHz	Mode 5: CH06_2437 MHz
	Mode 3: CH11_2462 MHz	Mode 6: CH11_2462 MHz
Conducted Emission	Mode 1: GSM850 Idle Mode + GPS Rx + BT Link + WLAN Link + Camera + Adapter	
	Mode 2: GSM850 Idle Mode + GPS Rx + BT Link + WLAN Link + MPEG4 + Adapter	
	Mode 3: GSM850 Idle Mode + GPS Rx + BT Link + WLAN Link + Camera + USB Link	
	Mode 4: PCS1900 Idle Mode + GPS Rx + BT Link + WLAN Link + Camera + USB Link	
	Mode 5: EDGE Idle Mode + GPS Rx + BT Link + WLAN Link + Camera + USB Link	

2.3 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1.	Base Station	R&S	CMU200	N/A	Unshielded, 1.8m
2.	WLAN AP	SMC	SMC-100	HEDWG4005ACC	Unshielded, 1.8m
3.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A
4.	Notebook	DELL	D400	R33002	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	(RS-232)Mouse	State	MS-303	Fcc Doc	N/A
6.	iPod	Apple	A1199	DoC	Shielded, 1.2m
7.	GPS Station	T&E	GP-50	N/A	Unshielded, 1.8m

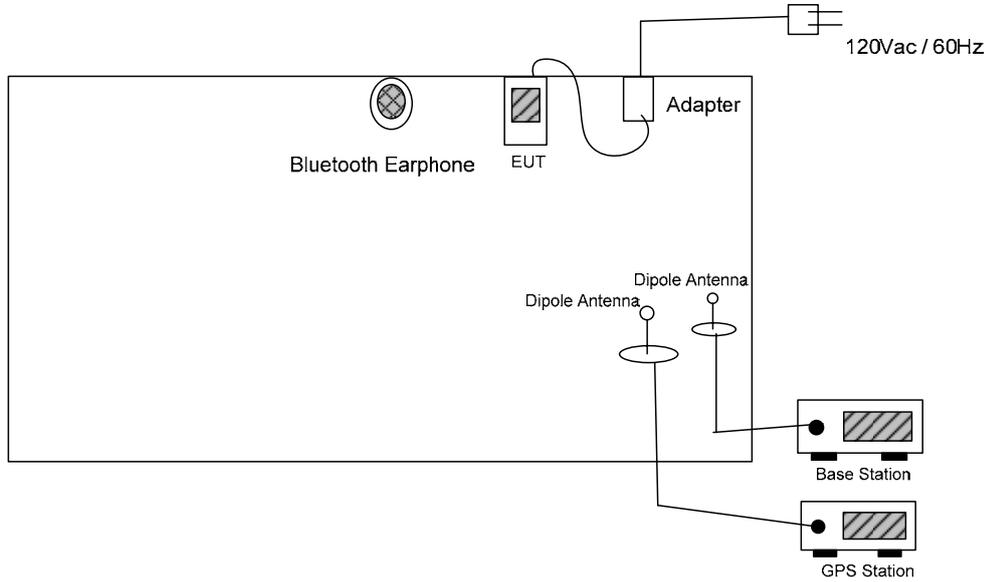
2.4 Connection Diagram of Test System

<Radiated Emission>

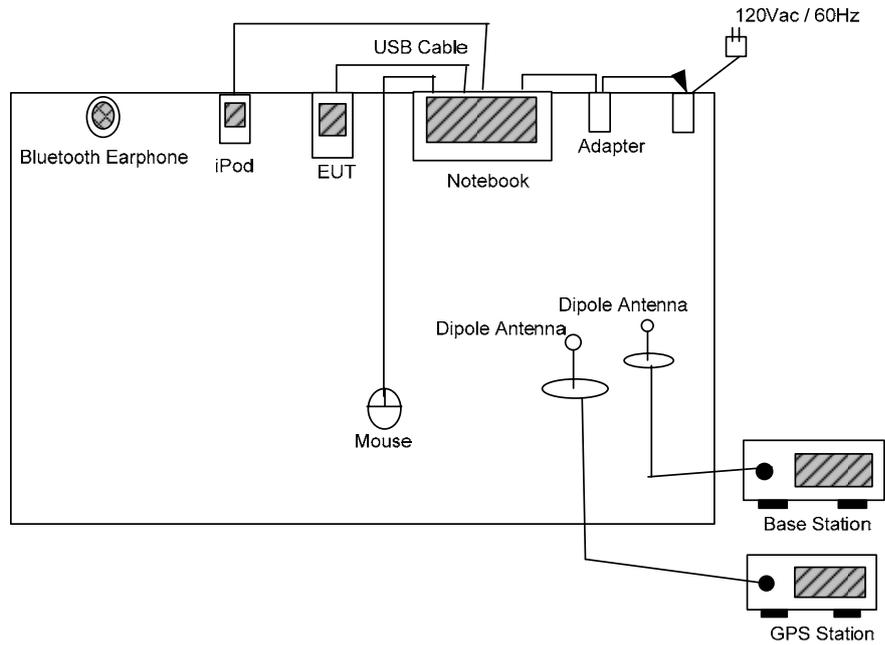


<Conducted Emission>

Mode 1 ~ 2



Mode 3 ~ 5





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

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

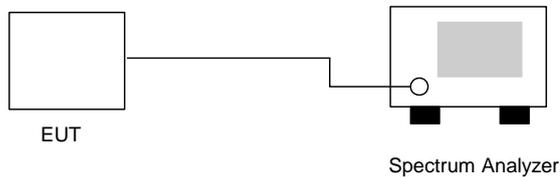
5.2.1 Measuring Instruments

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 : 20~26°C
- Relative Humidity : 49~52%
- Test Enginner : Ken

• 802.11b

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	9.56	> 0.5MHz	Mode 1
06	2437	9.52	> 0.5MHz	Mode 2
11	2462	9.96	> 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	16.52	> 0.5MHz	Mode 5
11	2462	16.52	> 0.5MHz	Mode 6

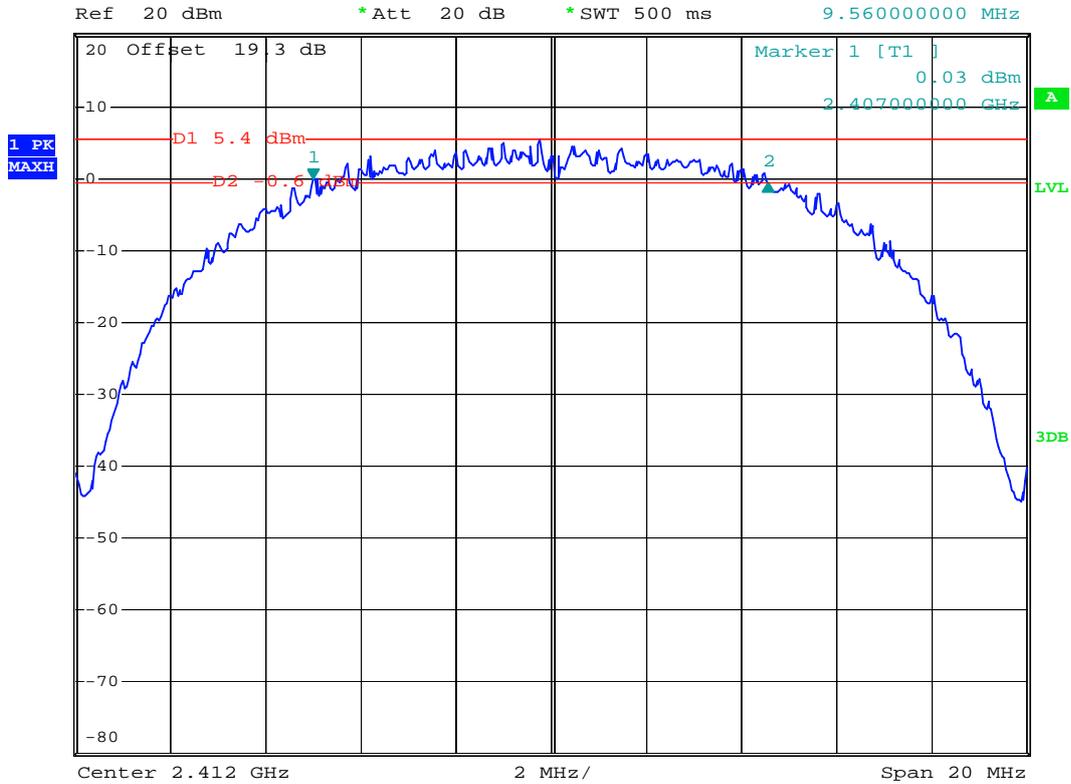


5.2.5 6dB Bandwidth

Mode 1



*RBW 100 kHz Delta 2 [T1]
*VBW 100 kHz -0.54 dB
*SWT 500 ms 9.56000000 MHz



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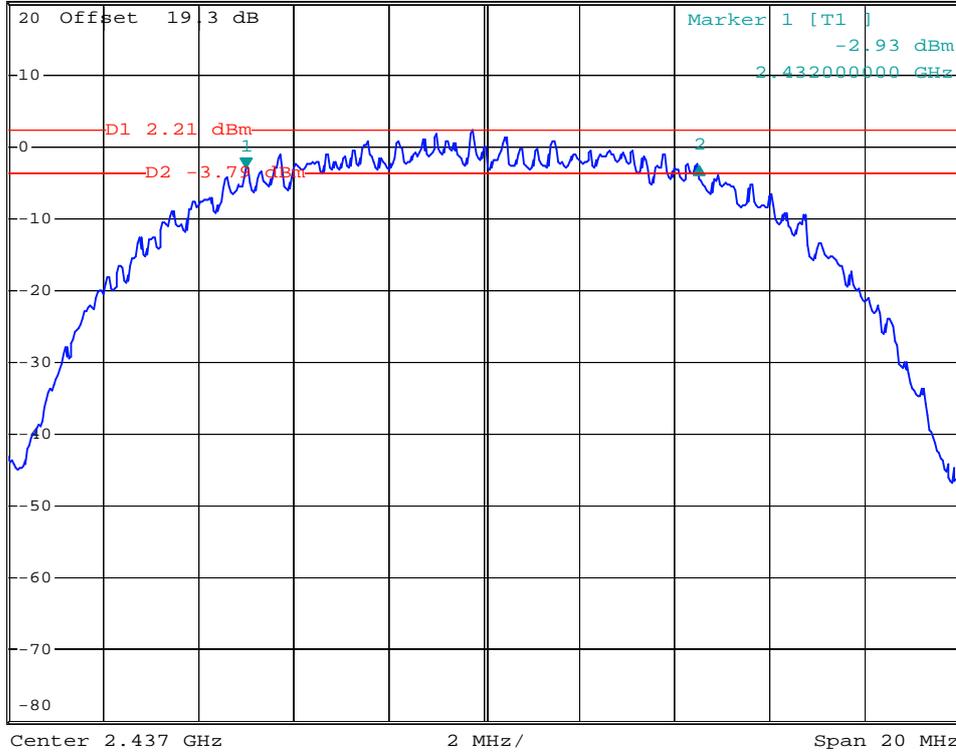
Mode 2



*RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz 0.28 dB
 *SWT 500 ms 9.520000000 MHz

Ref 20 dBm

*Att 20 dB



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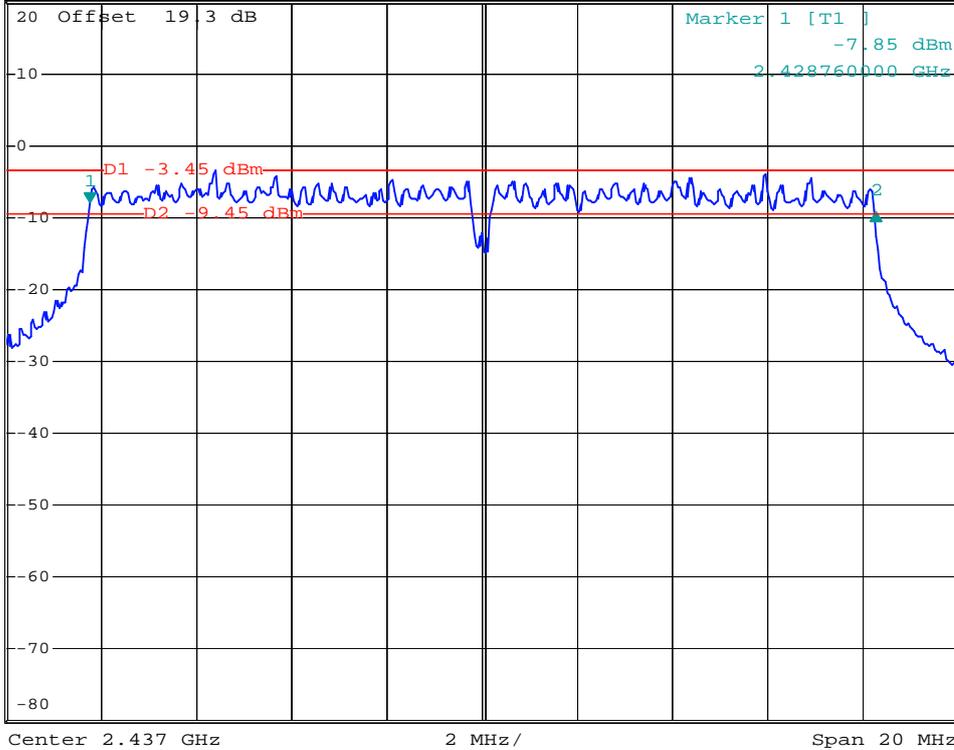
Mode 5



*RBW 100 kHz Delta 2 [T1]
 *VBW 100 kHz -1.30 dB
 *SWT 500 ms 16.520000000 MHz

Ref 20 dBm

*Att 20 dB



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5.3 Power Spectral Density Measurement

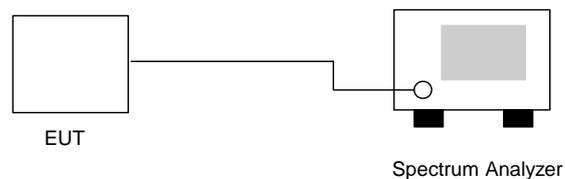
5.3.1 Measuring Instruments

As described in chapter 6 of this test report.

5.3.2 Test Procedure

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

5.3.3 Test Setup Layout





5.3.4 Test Result

- Application Type : 802.11b/g
- Temperature : 20~26°C
- Relative Humidity : 49~52%
- Test Enginner : Ken

• 802.11b

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-8.79	8	Mode 1
06	2437	-11.43	8	Mode 2
11	2462	-11.67	8	Mode 3

• 802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-15.61	8	Mode 4
06	2437	-17.92	8	Mode 5
11	2462	-18.33	8	Mode 6

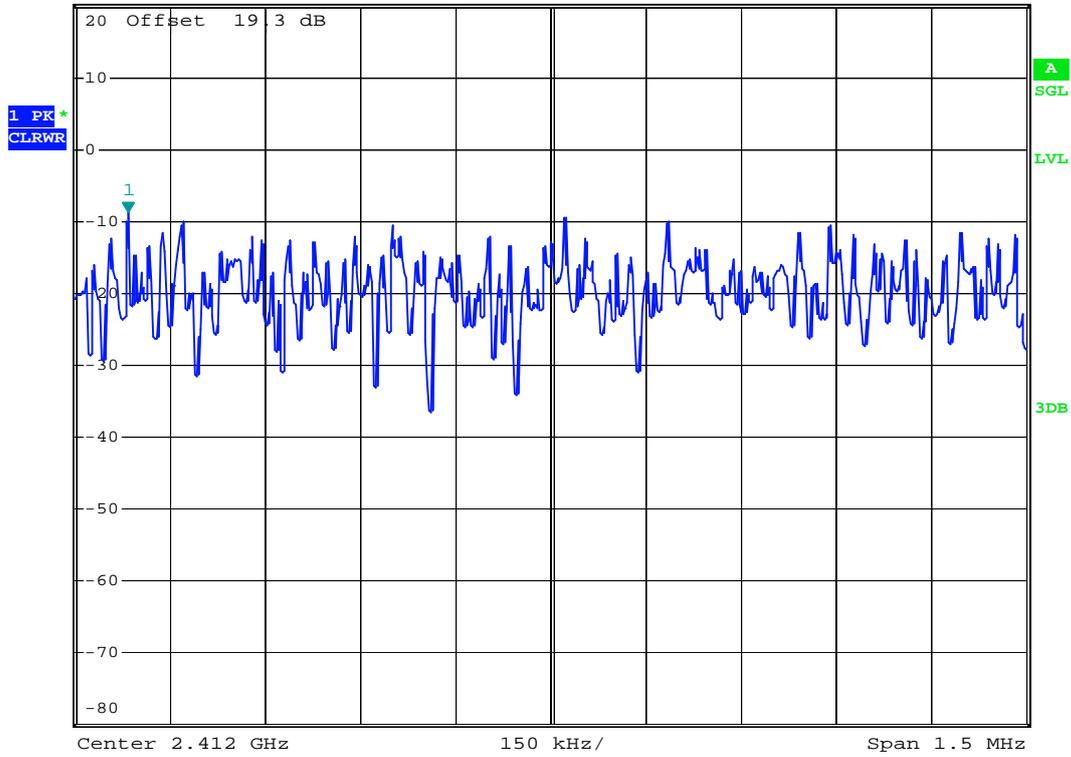


5.3.5 Power Spectral Density

Mode 1



Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1] -8.79 dBm
*VBW 30 kHz *SWT 500 s 2.411334000 GHz



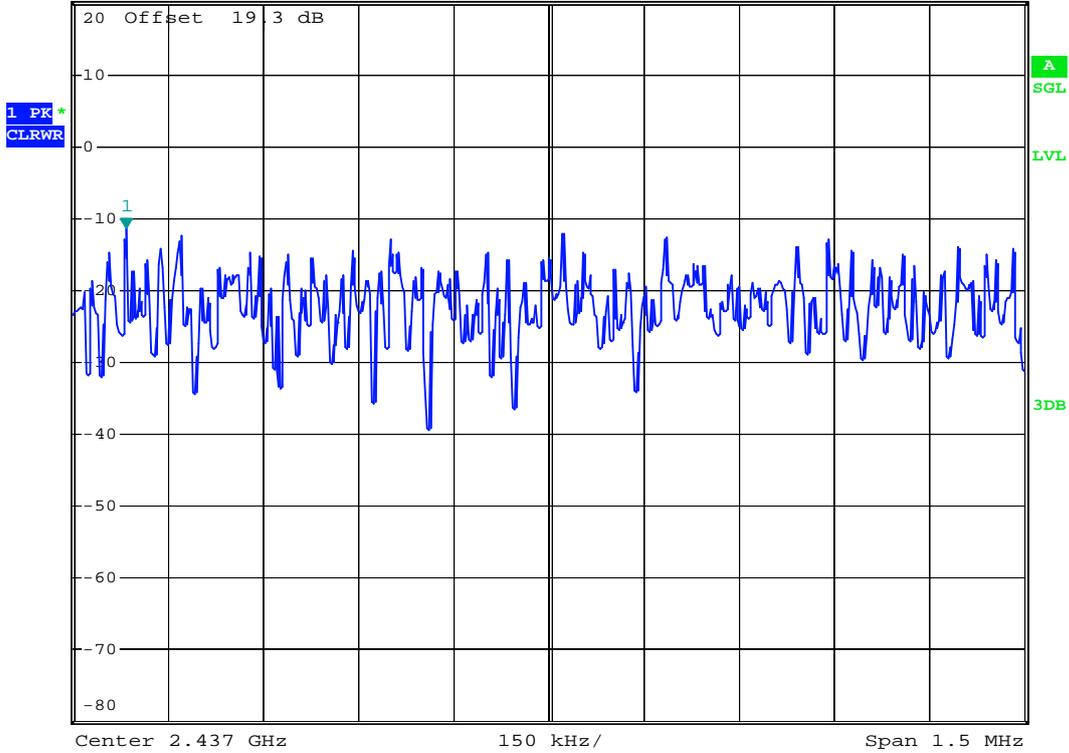
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Mode 2



Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1]
*VBW 30 kHz -11.34 dBm
*SWT 500 s 2.436334000 GHz



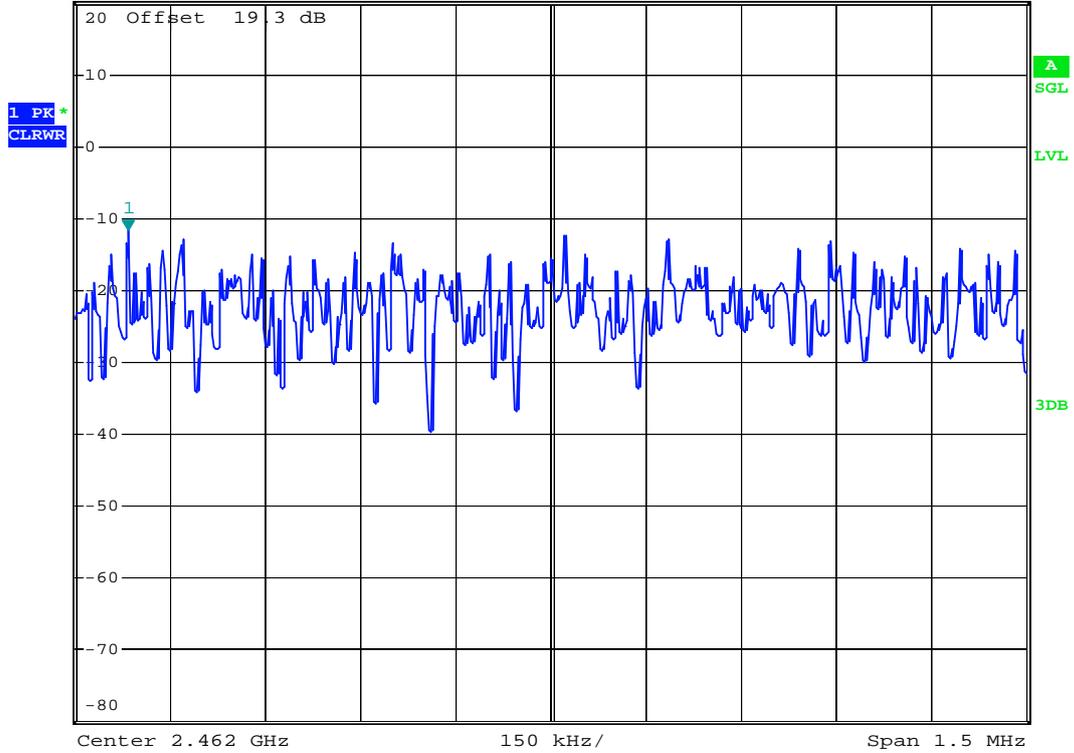
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Mode 3



*RBW 3 kHz Marker 1 [T1]
 *VBW 30 kHz -11.67 dBm
 *SWT 500 s 2.461334000 GHz
 Ref 20 dBm *Att 20 dB



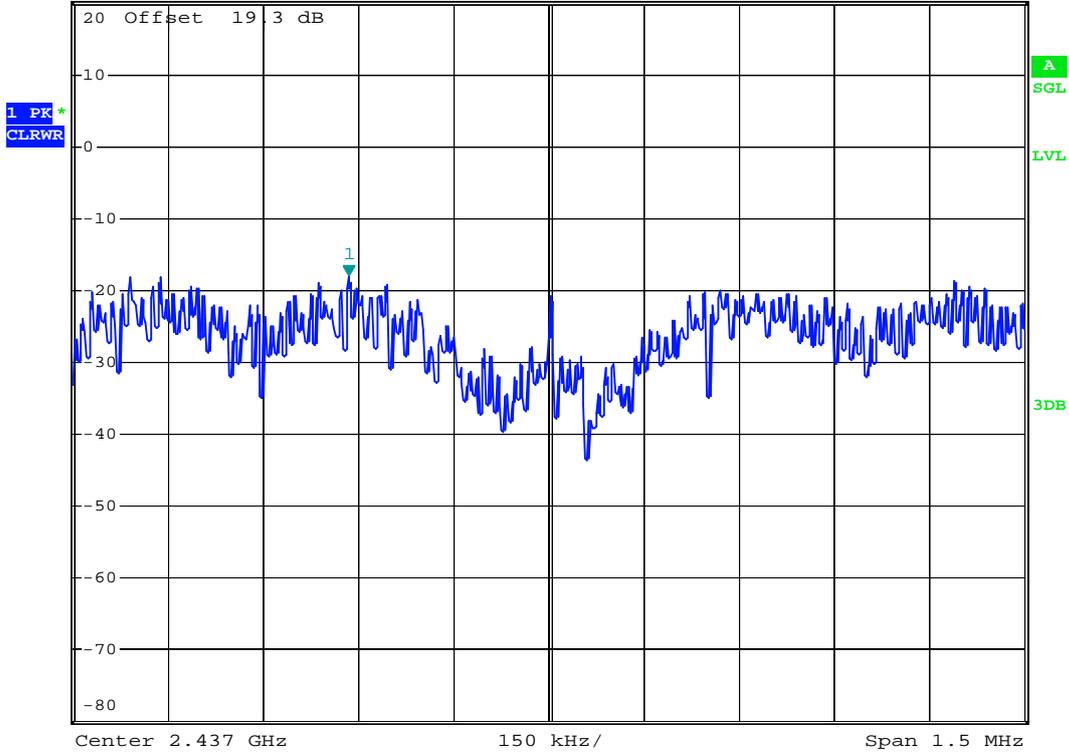
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Mode 5



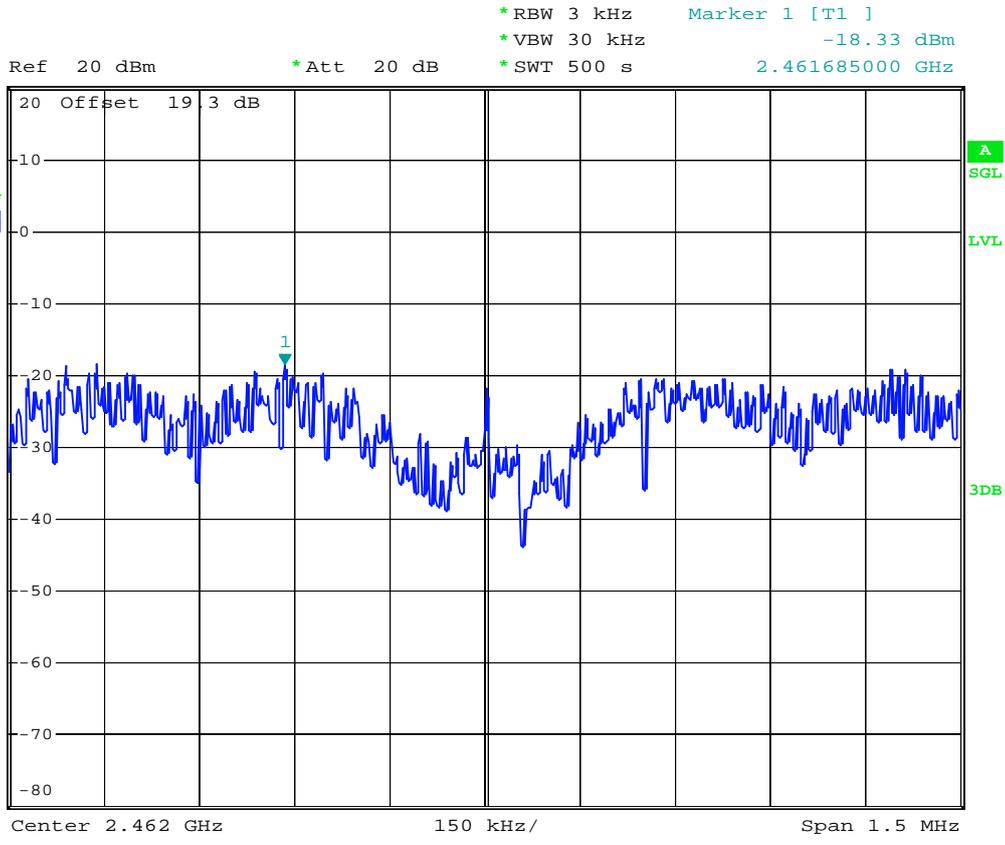
Ref 20 dBm *Att 20 dB *RBW 3 kHz Marker 1 [T1] -17.92 dBm
*VBW 30 kHz 2.436685000 GHz
*SWT 500 s



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Mode 6



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5.4 Band Edges Measurement

5.4.1 Measuring Instruments

As described in chapter 6 of this test report.

5.4.2 Test Procedure

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set both RBW and VBW of spectrum analyzer to 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 : 20~26°C
- Relative Humidity : 49~52%
- 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
2389.61	35.78	-18.22	54.00	35.68	31.86	3.92	35.68	103	222	Average
2389.61	48.97	-25.03	74.00	48.87	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
2387.90	36.63	-17.37	54.00	36.53	31.86	3.92	35.68	100	213	Average
2387.90	48.54	-25.46	74.00	48.44	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	38.83	-15.17	54.00	38.50	31.98	4.05	35.70	197	16	Average
2483.50	51.04	-22.96	74.00	50.71	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
2484.61	39.05	-14.95	54.00	38.72	31.98	4.05	35.70	158	320	Average
2484.61	51.11	-22.89	74.00	50.78	31.98	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
2389.42	36.69	-17.31	54.00	36.59	31.86	3.92	35.68	100	232	Average
2389.42	51.18	-22.82	74.00	51.08	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
2388.09	34.17	-19.83	54.00	34.07	31.86	3.92	35.68	100	217	Average
2388.09	48.60	-25.40	74.00	48.50	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	47.28	-6.72	54.00	46.95	31.98	4.05	35.70	107	358	Average
2483.50	64.76	-9.24	74.00	64.43	31.98	4.05	35.70	100	0	Peak

CH11 (Vertical)

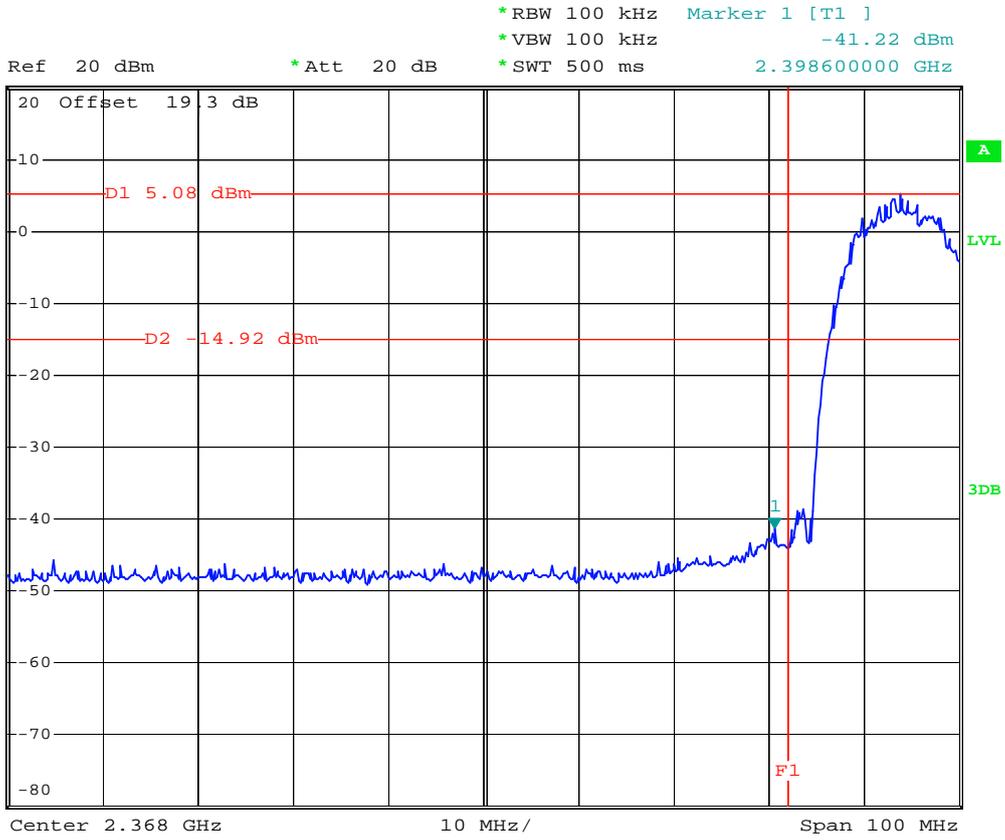
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	39.14	-14.86	54.00	38.81	31.98	4.05	35.70	100	0	Average
2483.50	55.95	-18.05	74.00	55.62	31.98	4.05	35.70	100	0	Peak



5.4.5 20dB Band Edge

WLAN 802.11b

CH01



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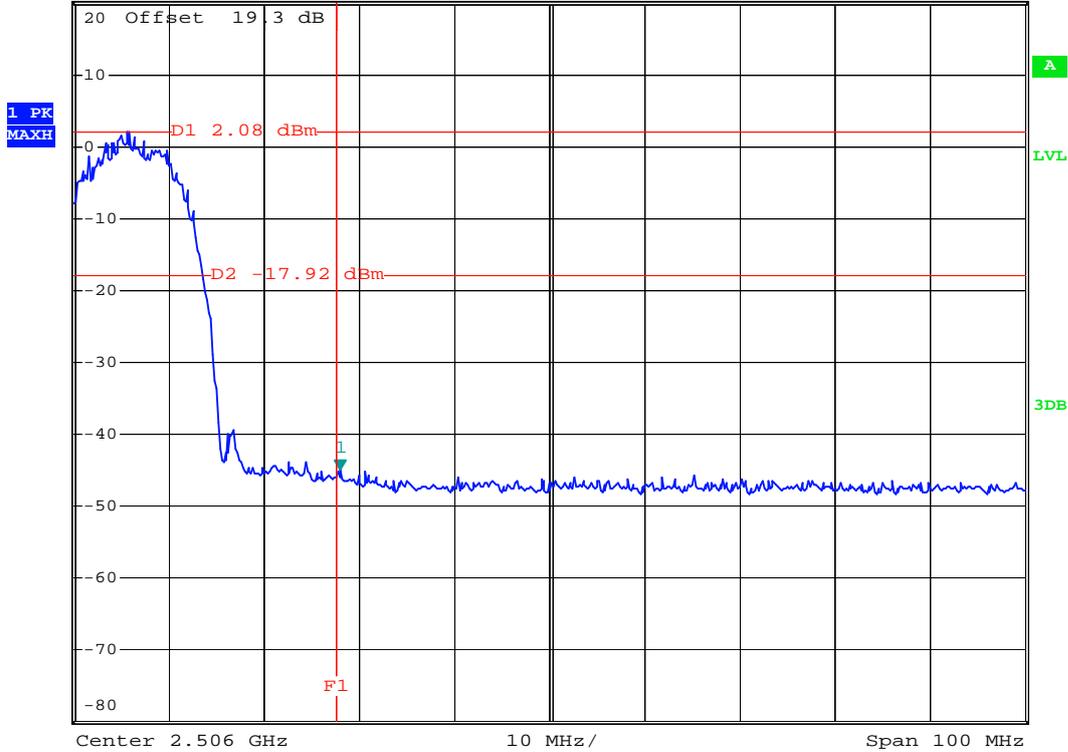
CH11



*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -44.96 dBm
*SWT 500 ms 2.484000000 GHz

Ref 20 dBm

*Att 20 dB



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WLAN 802.11g

CH01

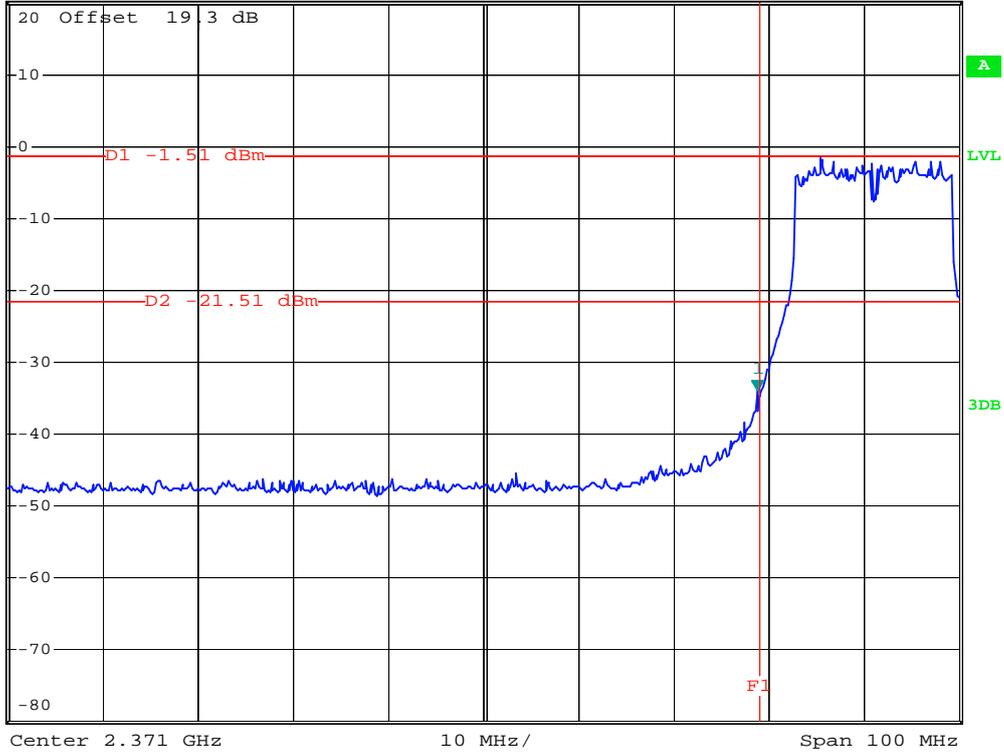


*RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -34.03 dBm
 *SWT 500 ms 2.399800000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



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CH11

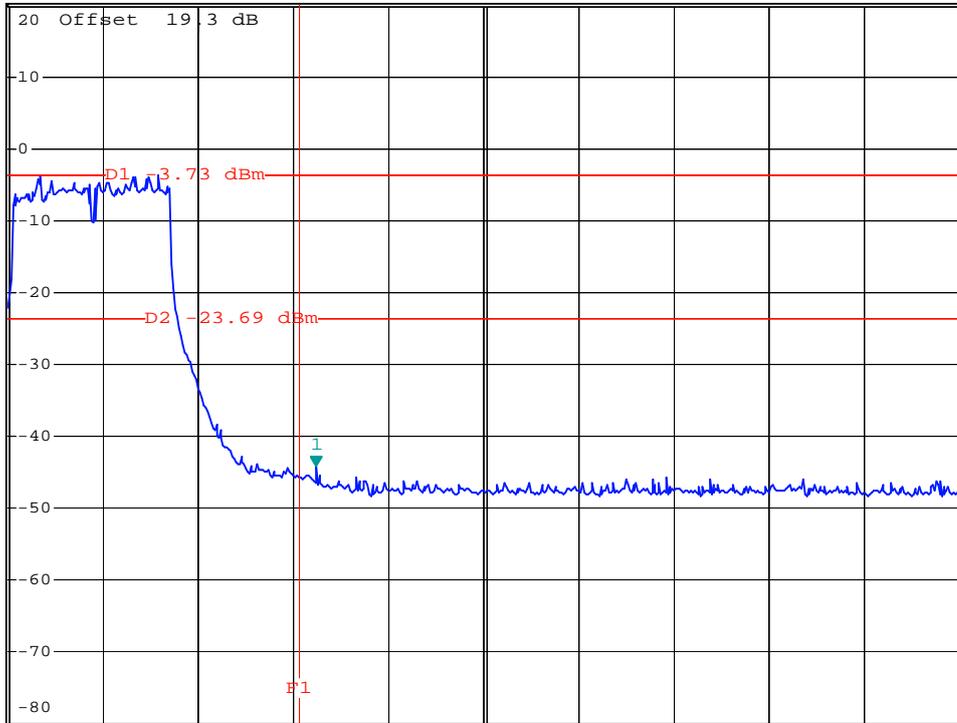


*RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -44.21 dBm
*SWT 500 ms 2.485400000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.503 GHz 10 MHz/ Span 100 MHz

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5.5 Peak Output Power Measurement

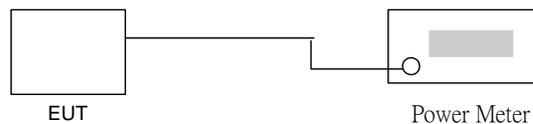
5.5.1 Measuring Instruments

As described in chapter 6 of this test report.

5.5.2 Test Procedure

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 : WLAN 802.11b/g
- Temperature : 20~26°C
- Relative Humidity : 49~52%
- Test Enginner : Ken

• WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt / dBm)
01	2412	14.42	1W / 30dBm
06	2437	14.39	1W / 30dBm
11	2462	14.28	1W / 30dBm

• WLAN 802.11g

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt / dBm)
01	2412	16.70	1W / 30dBm
06	2437	16.81	1W / 30dBm
11	2462	16.07	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

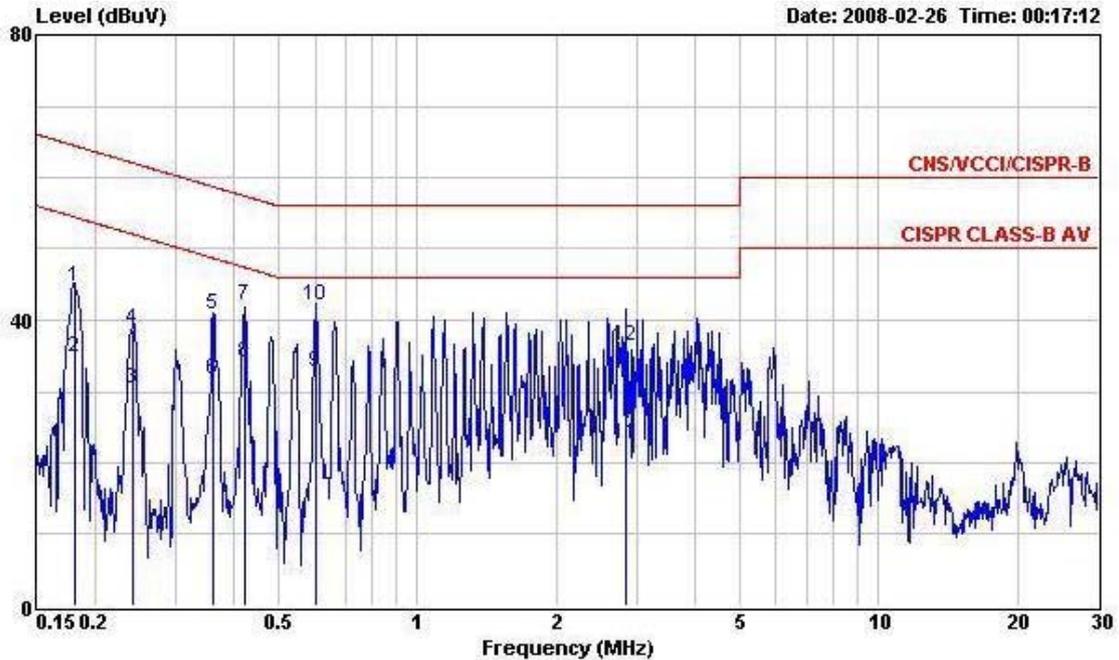
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.
- 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

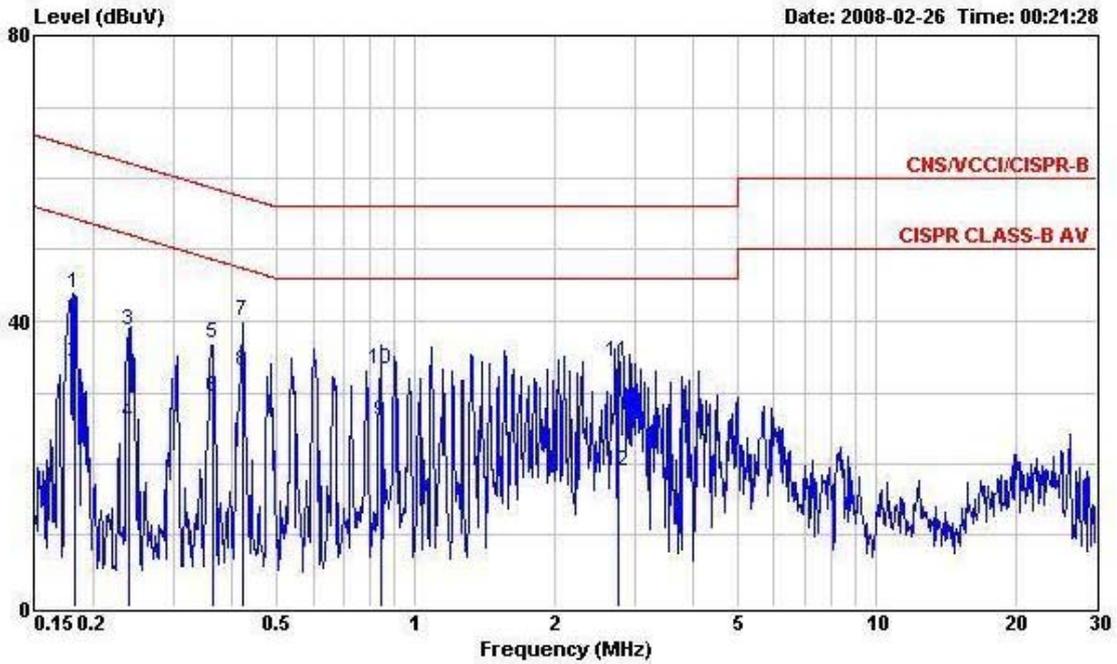
- Temperature : 21~22°C
- Relative Humidity : 52~53%
- Test Enginner : Sun
- Test Mode : Mode 1

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



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 : +Camera+Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.181	44.63	-19.81	64.44	44.44	0.10	0.09	QP
2	0.181	34.81	-19.63	54.44	34.62	0.10	0.09	Average
3	0.242	30.31	-21.72	52.03	30.13	0.10	0.08	Average
4	0.242	38.62	-23.41	62.03	38.44	0.10	0.08	QP
5	0.360	40.67	-18.06	58.73	40.52	0.10	0.05	QP
6	0.360	31.79	-16.94	48.73	31.64	0.10	0.05	Average
7	0.421	41.99	-15.44	57.43	41.84	0.10	0.05	QP
8	0.421	33.93	-13.50	47.43	33.78	0.10	0.05	Average
9	0.601	32.75	-13.25	46.00	32.55	0.10	0.10	Average
10	0.601	42.16	-13.84	56.00	41.96	0.10	0.10	QP
11	2.840	22.51	-23.49	46.00	22.16	0.15	0.20	Average
12	2.840	36.30	-19.70	56.00	35.95	0.15	0.20	QP



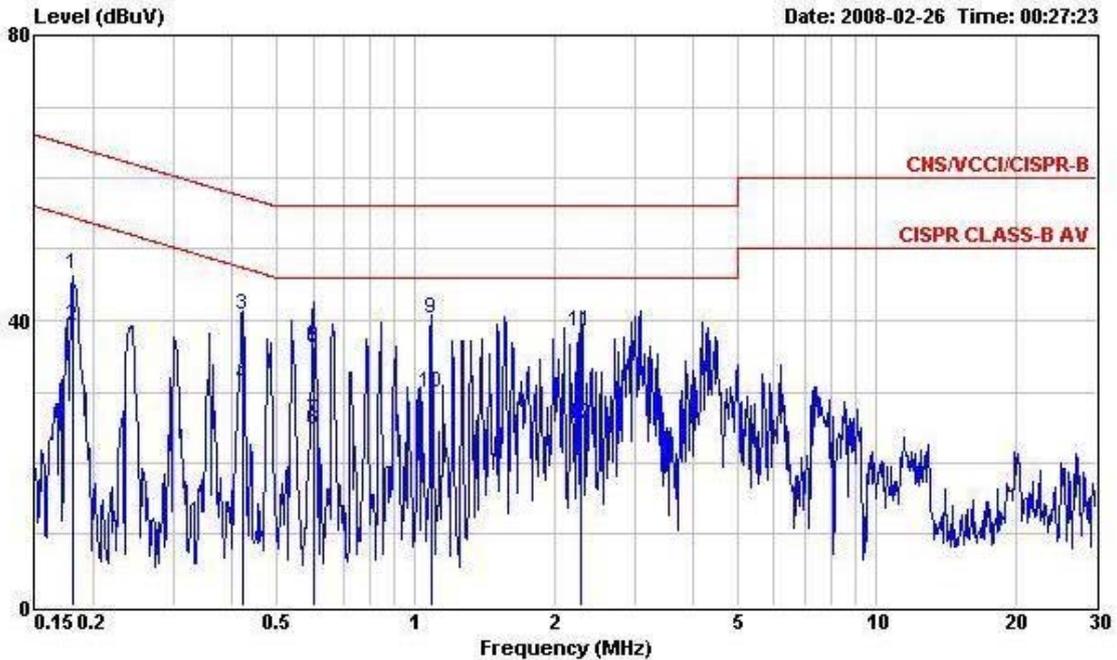
Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 :+Camera+Adaptor

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.182	44.02	-20.37	64.39	43.83	0.10	0.09	QP
2	0.182	34.34	-20.05	54.39	34.15	0.10	0.09	Average
3	0.240	38.62	-23.48	62.10	38.44	0.10	0.08	QP
4	0.240	25.74	-26.36	52.10	25.56	0.10	0.08	Average
5	0.363	36.89	-21.77	58.66	36.74	0.10	0.05	QP
6	0.363	29.45	-19.21	48.66	29.30	0.10	0.05	Average
7	0.421	39.99	-17.44	57.43	39.84	0.10	0.05	QP
8	0.421	33.02	-14.41	47.43	32.87	0.10	0.05	Average
9	0.844	25.97	-20.03	46.00	25.72	0.10	0.15	Average
10	0.844	33.19	-22.81	56.00	32.94	0.10	0.15	QP
11	2.760	34.23	-21.77	56.00	33.93	0.10	0.20	QP
12	2.760	18.94	-27.06	46.00	18.64	0.10	0.20	Average



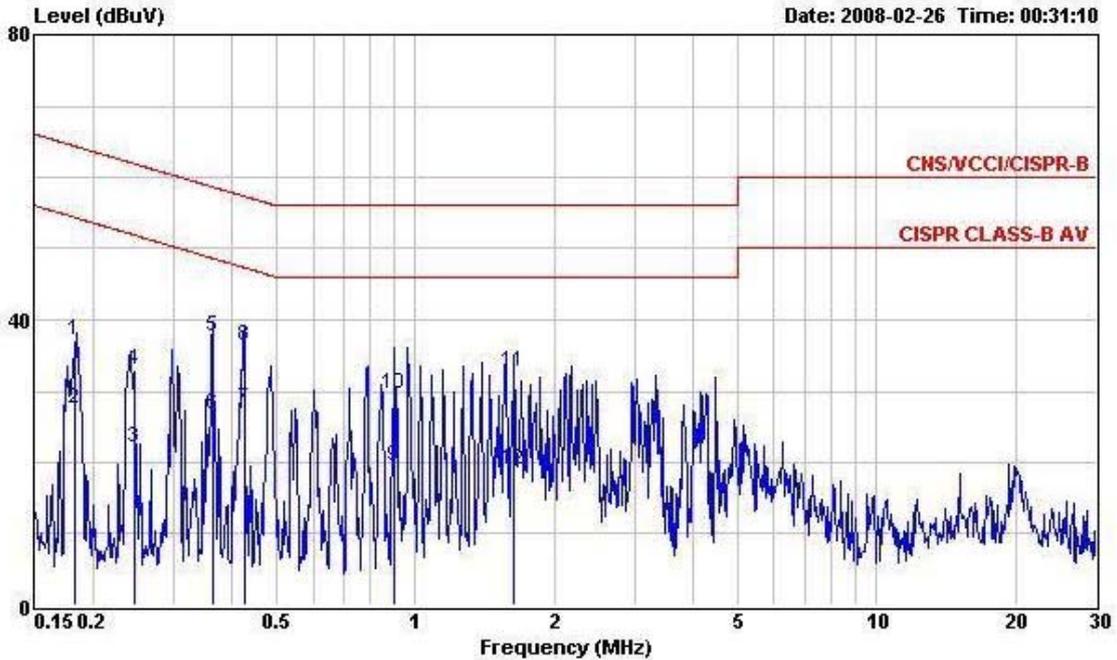
- Temperature : 21~22°C
- Relative Humidity : 52~53%
- Test Enginner : Sun
- Test Mode : Mode 2

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



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 : +MPEG4+Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.181	46.48	-17.96	64.44	46.29	0.10	0.09	QP
2	0.181	39.19	-15.25	54.44	39.00	0.10	0.09	Average
3	0.421	40.74	-16.69	57.43	40.59	0.10	0.05	QP
4	0.421	30.97	-16.46	47.43	30.82	0.10	0.05	Average
5	0.601	36.09	-19.91	56.00	35.89	0.10	0.10	QP
6	0.601	24.58	-21.42	46.00	24.38	0.10	0.10	Average
7	0.601	25.92	-20.08	46.00	25.72	0.10	0.10	Average
8	0.601	36.24	-19.76	56.00	36.04	0.10	0.10	QP
9	1.080	40.36	-15.64	56.00	40.08	0.10	0.18	QP
10	1.080	29.97	-16.03	46.00	29.69	0.10	0.18	Average
11	2.280	38.41	-17.59	56.00	38.07	0.12	0.22	QP
12	2.280	25.57	-20.43	46.00	25.23	0.12	0.22	Average



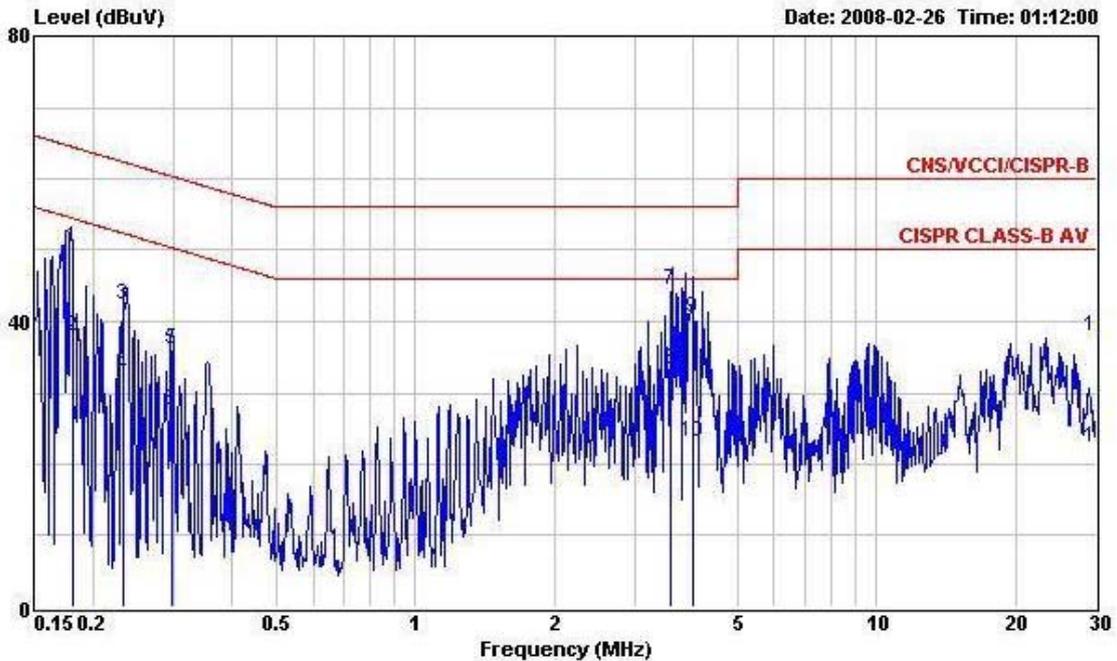
Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 : +MPEG4+Adaptor

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.183	37.18	-27.17	64.35	36.99	0.10	0.09	QP
2	0.183	27.48	-26.87	54.35	27.29	0.10	0.09	Average
3	0.247	22.17	-29.70	51.87	21.99	0.10	0.08	Average
4	0.247	32.98	-28.89	61.87	32.80	0.10	0.08	QP
5	0.363	37.74	-20.92	58.66	37.59	0.10	0.05	QP
6	0.363	26.70	-21.96	48.66	26.55	0.10	0.05	Average
7	0.426	27.42	-19.91	47.33	27.27	0.10	0.05	Average
8	0.426	36.45	-20.88	57.33	36.30	0.10	0.05	QP
9	0.899	19.51	-26.49	46.00	19.25	0.10	0.16	Average
10	0.899	29.57	-26.43	56.00	29.31	0.10	0.16	QP
11	1.640	32.77	-23.23	56.00	32.45	0.10	0.22	QP
12	1.640	18.98	-27.02	46.00	18.66	0.10	0.22	Average



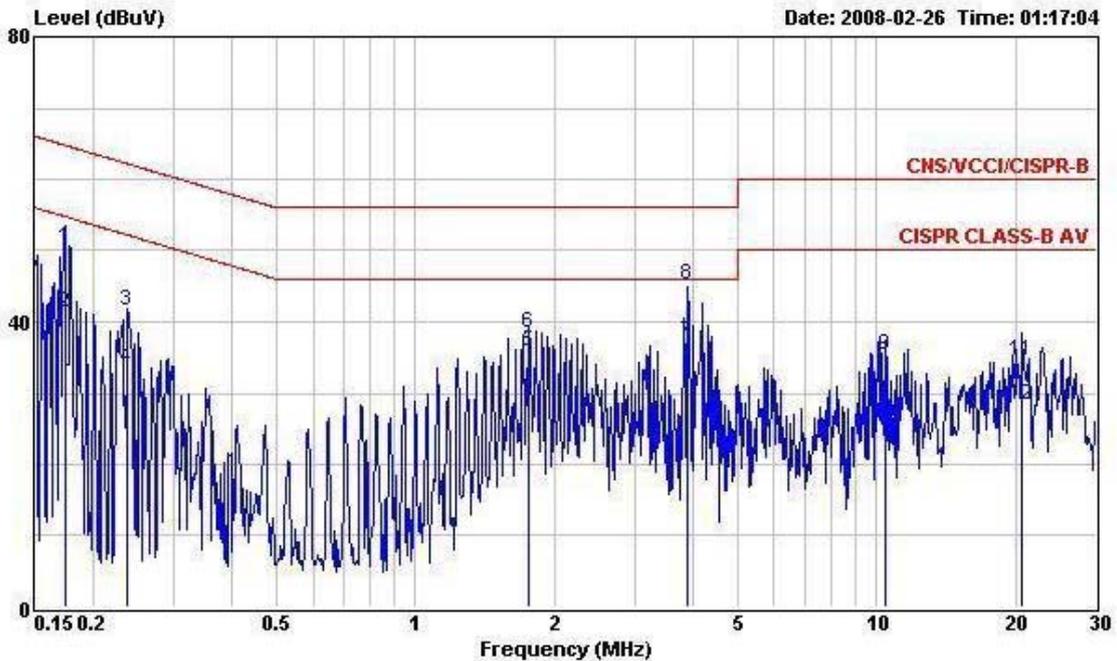
- Temperature : 21~22°C
- Relative Humidity : 52~53%
- Test Enginner : Sun
- Test Mode : Mode 3

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



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 : +Camera+USB Link

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.182	50.28	-14.14	64.42	50.09	0.10	0.09	QP
2	0.182	37.82	-16.60	54.42	37.63	0.10	0.09	Average
3	0.232	42.39	-19.99	62.38	42.20	0.10	0.09	QP
4	0.232	32.47	-19.91	52.38	32.28	0.10	0.09	Average
5	0.297	36.07	-24.26	60.33	35.90	0.10	0.07	QP
6	0.297	27.45	-22.88	50.33	27.28	0.10	0.07	Average
7	3.592	44.49	-11.51	56.00	44.14	0.18	0.17	QP
8	3.592	33.31	-12.69	46.00	32.96	0.18	0.17	Average
9	4.010	40.60	-15.40	56.00	40.24	0.20	0.16	QP
10	4.010	23.01	-22.99	46.00	22.65	0.20	0.16	Average
11	30.000	37.97	-22.03	60.00	36.96	0.60	0.41	QP
12	30.000	22.22	-27.78	50.00	21.21	0.60	0.41	Average



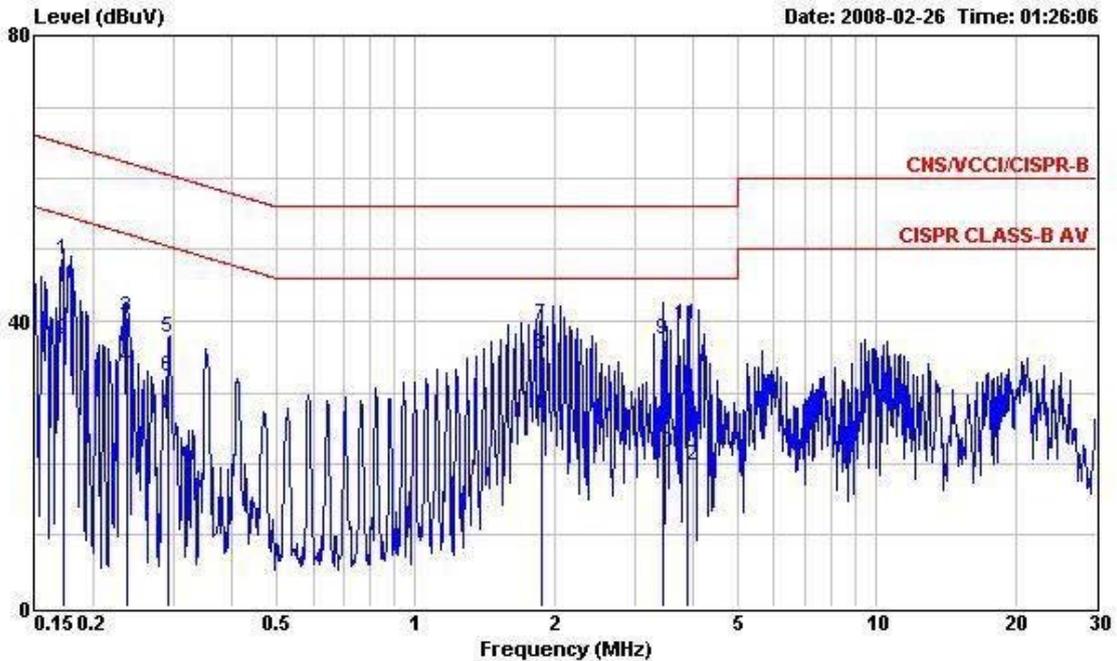
Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 622203
 Memo : GSM850 Idle+GPS Rx+BT Link+WLAN Link
 : +Camera+USB Link

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.174	50.28	-14.49	64.77	50.09	0.10	0.09	QP
2	0.174	41.21	-13.56	54.77	41.02	0.10	0.09	Average
3	0.238	41.46	-20.71	62.17	41.28	0.10	0.08	QP
4	0.238	33.50	-18.67	52.17	33.32	0.10	0.08	Average
5	1.760	35.82	-10.18	46.00	35.49	0.10	0.23	Average
6	1.760	38.35	-17.65	56.00	38.02	0.10	0.23	QP
7	3.872	37.21	-8.79	46.00	36.95	0.10	0.16	Average
8	3.872	45.23	-10.77	56.00	44.97	0.10	0.16	QP
9	10.450	35.22	-24.78	60.00	34.68	0.21	0.33	QP
10	10.450	25.80	-24.20	50.00	25.26	0.21	0.33	Average
11	20.700	34.63	-25.37	60.00	33.82	0.42	0.39	QP
12	20.700	28.33	-21.67	50.00	27.52	0.42	0.39	Average



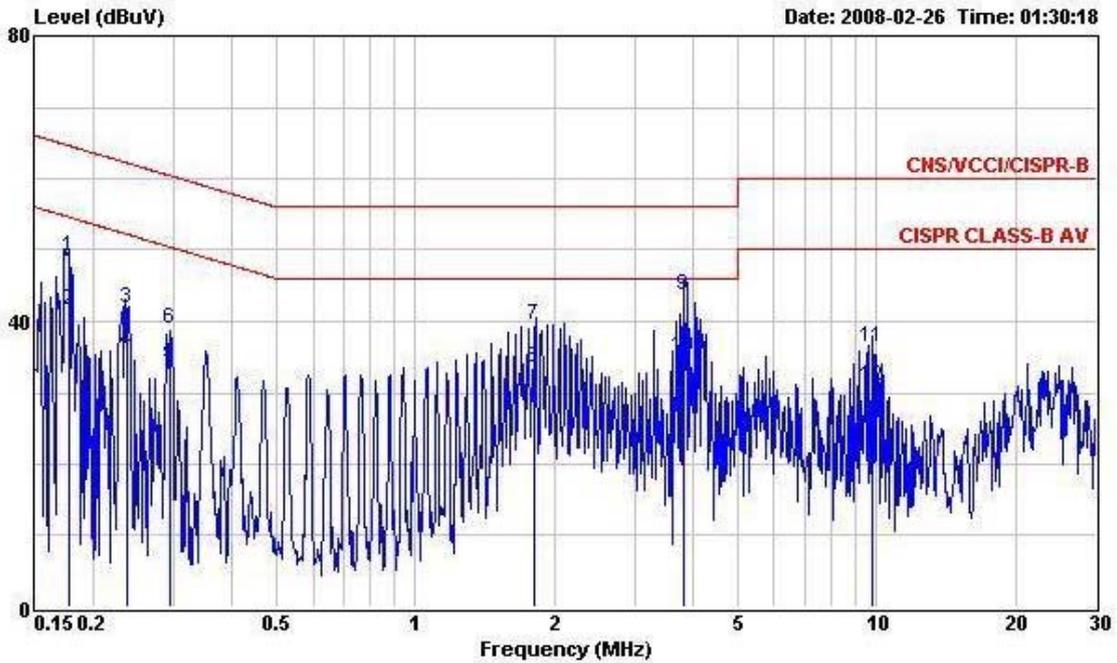
- Temperature : 21~22°C
- Relative Humidity : 52~53%
- Test Enginner : Sun
- Test Mode : Mode 4

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



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : PCS1900 Idle+GPS Rx+BT Link+WLAN Link
 : +Camera+USB Link

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.172	48.59	-16.27	64.86	48.40	0.10	0.09	QP
2	0.172	37.53	-17.33	54.86	37.34	0.10	0.09	Average
3	0.237	40.65	-21.55	62.20	40.46	0.10	0.09	QP
4	0.237	33.64	-18.56	52.20	33.45	0.10	0.09	Average
5	0.292	37.60	-22.87	60.47	37.43	0.10	0.07	QP
6	0.292	32.15	-18.32	50.47	31.98	0.10	0.07	Average
7	1.880	39.40	-16.60	56.00	39.07	0.10	0.23	QP
8	1.880	35.43	-10.57	46.00	35.10	0.10	0.23	Average
9	3.450	37.28	-18.72	56.00	36.92	0.18	0.18	QP
10	3.450	21.62	-24.38	46.00	21.26	0.18	0.18	Average
11	3.880	39.52	-16.48	56.00	39.16	0.20	0.16	QP
12	3.880	19.74	-26.26	46.00	19.38	0.20	0.16	Average



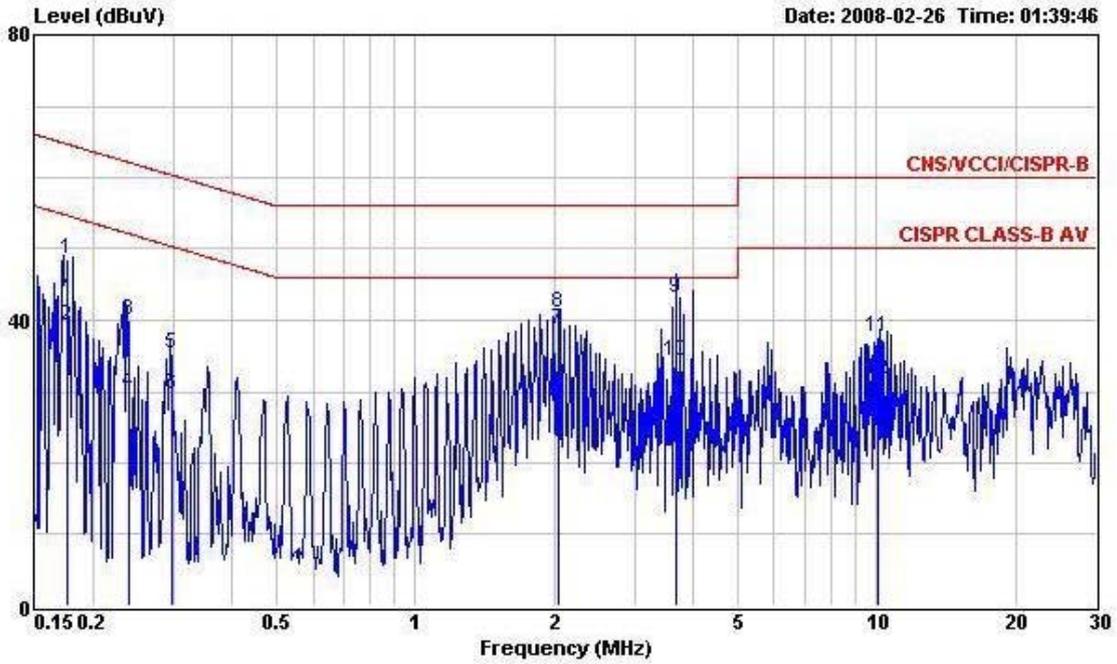
Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : PCS1900 Idle+GPS Rx+BT Link+WLAN Link
 : +Camera+USB Link

	Freq	Level	Over	Limit	Read	Probe	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.177	49.00	-15.63	64.63	48.81	0.10	0.09	QP
2	0.177	41.62	-13.01	54.63	41.43	0.10	0.09	Average
3	0.236	41.81	-20.41	62.22	41.62	0.10	0.09	QP
4	0.236	35.83	-16.39	52.22	35.64	0.10	0.09	Average
5	0.293	34.11	-16.34	50.45	33.94	0.10	0.07	Average
6	0.293	38.94	-21.51	60.45	38.77	0.10	0.07	QP
7	1.815	39.45	-16.55	56.00	39.12	0.10	0.23	QP
8	1.815	33.43	-12.57	46.00	33.10	0.10	0.23	Average
9	3.806	43.52	-12.48	56.00	43.25	0.10	0.17	QP
10	3.806	35.00	-11.00	46.00	34.73	0.10	0.17	Average
11	9.773	36.27	-23.73	60.00	35.73	0.20	0.34	QP
12	9.773	30.90	-19.10	50.00	30.36	0.20	0.34	Average



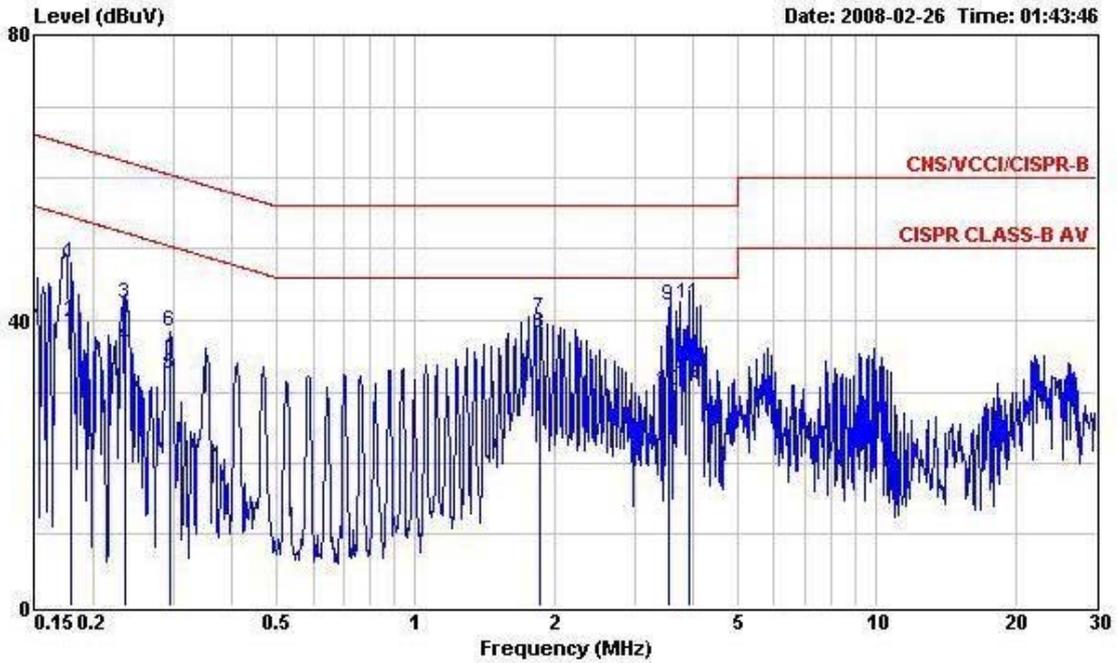
- Temperature : 21~22°C
- Relative Humidity : 52~53%
- Test Enginner : Sun
- Test Mode : Mode 5

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



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : EDGE Idle+GPS Rx+BTLink+WLAN Link
 : +Camera+USB Link

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.176	48.64	-16.01	64.65	48.45	0.10	0.09	QP
2	0.176	39.16	-15.49	54.65	38.97	0.10	0.09	Average
3	0.238	40.03	-22.12	62.15	39.85	0.10	0.08	QP
4	0.238	29.90	-22.25	52.15	29.72	0.10	0.08	Average
5	0.296	35.22	-25.14	60.36	35.05	0.10	0.07	QP
6	0.296	29.61	-20.75	50.36	29.44	0.10	0.07	Average
7	2.045	38.75	-7.25	46.00	38.41	0.10	0.24	Average
8	2.045	41.02	-14.98	56.00	40.68	0.10	0.24	QP
9	3.683	43.10	-12.90	56.00	42.74	0.19	0.17	QP
10	3.683	34.23	-11.77	46.00	33.87	0.19	0.17	Average
11	10.109	37.78	-22.22	60.00	37.13	0.30	0.35	QP
12	10.109	31.76	-18.24	50.00	31.11	0.30	0.35	Average



Site : site
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900 PDA
 Power : 120V/60Hz
 Model : FR 822203
 Memo : EDGE Idle+GPS Rx+BTLink+WLAN Link
 :+Camera+USB Link

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.179	47.98	-16.56	64.54	47.79	0.10	0.09	QP
2	0.179	39.67	-14.87	54.54	39.48	0.10	0.09	Average
3	0.235	42.22	-20.05	62.27	42.03	0.10	0.09	QP
4	0.235	36.32	-15.95	52.27	36.13	0.10	0.09	Average
5	0.294	32.59	-17.82	50.41	32.42	0.10	0.07	Average
6	0.294	38.41	-22.00	60.41	38.24	0.10	0.07	QP
7	1.870	40.15	-15.85	56.00	39.82	0.10	0.23	QP
8	1.870	38.18	-7.82	46.00	37.85	0.10	0.23	Average
9	3.559	42.19	-13.81	56.00	41.92	0.10	0.17	QP
10	3.559	30.24	-15.76	46.00	29.97	0.10	0.17	Average
11	3.920	42.37	-13.63	56.00	42.11	0.10	0.16	QP
12	3.920	31.26	-14.74	46.00	31.00	0.10	0.16	Average



5.7 Radiated Emission Measurement

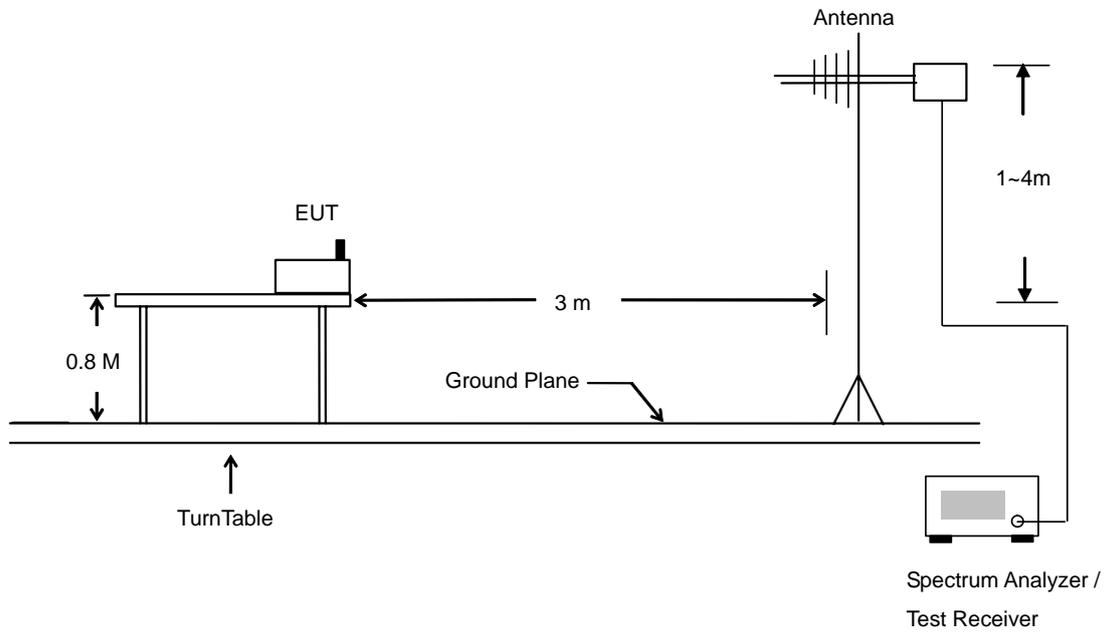
5.7.1 Measuring Instruments

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

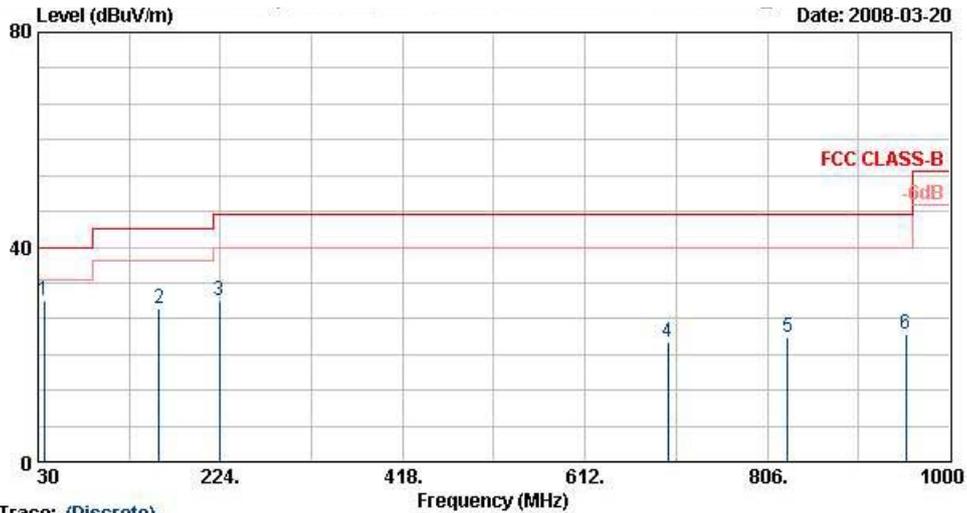




5.7.4 Test Data

- Temperature : 2.~26°C
- Relating Humidity : 49~52%
- Test Enginner : Derek
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

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



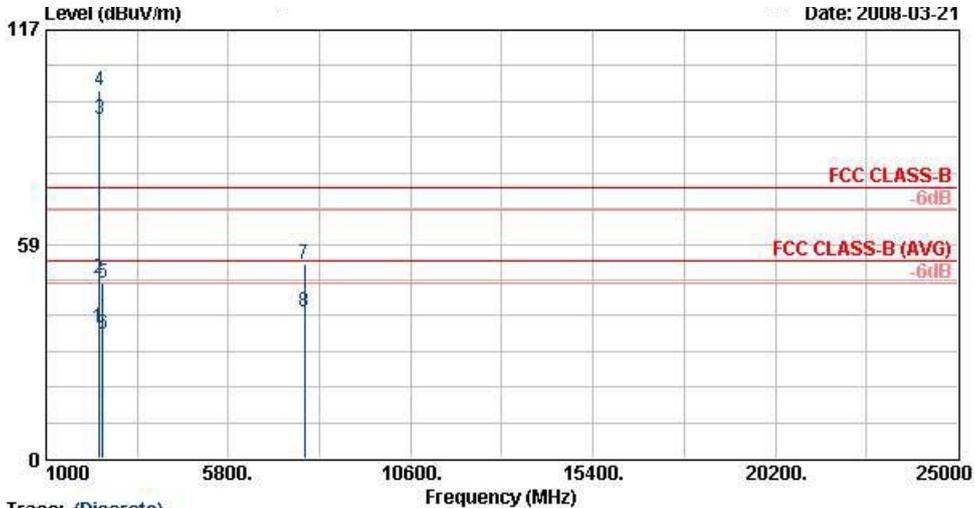
Trace: (Discrete)
 Site : D3CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 116 Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 11
 Plane :
 TMET :

	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	36.48	29.89	-10.11	40.00	47.77	15.08	0.30	33.26	100	132	Peak
2	158.79	28.59	-14.91	43.50	51.33	10.16	0.60	33.50	---	---	Peak
3	222.78	30.10	-15.90	46.00	52.22	10.67	0.70	33.49	---	---	Peak
4	700.40	22.43	-23.57	46.00	35.61	18.89	1.10	33.17	---	---	Peak
5	827.80	23.10	-22.90	46.00	34.52	20.01	1.20	32.63	---	---	Peak
6	953.80	23.74	-22.26	46.00	34.00	20.91	1.24	32.41	---	---	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 004400003501112

Trace: (Discrete)

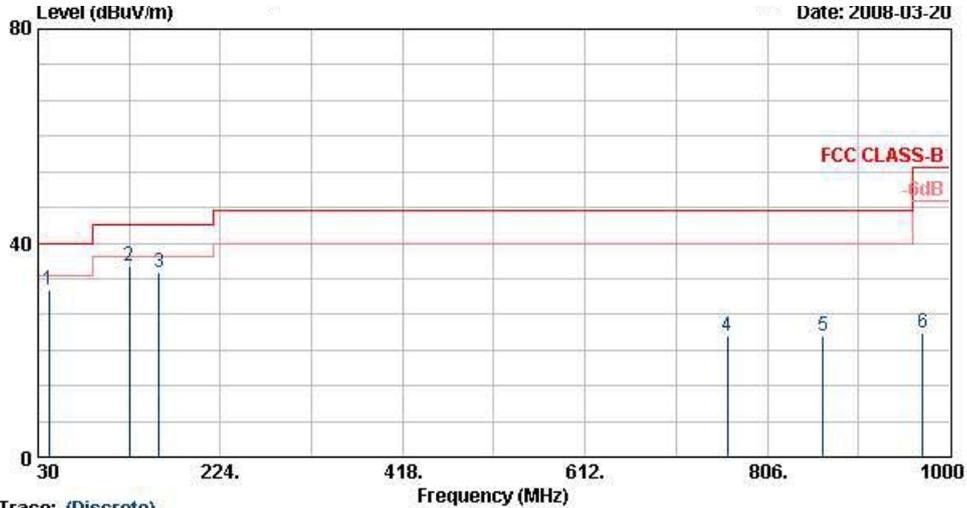
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2389.61	35.78	-18.22	54.00	35.68	31.86	3.92	35.68	103	222	Average
2	2389.61	48.97	-25.03	74.00	48.87	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	92.48			92.33	31.88	3.95	35.68	103	222	Average
4 X	2412.00	100.61			100.46	31.88	3.95	35.68	100	0	Peak
5	2484.00	47.84	-26.16	74.00	47.51	31.98	4.05	35.70	100	0	Peak
6	2484.00	34.07	-19.93	54.00	33.74	31.98	4.05	35.70	103	222	Average
7	7797.00	53.17	-20.83	74.00	46.36	35.66	7.41	36.26	100	0	Peak
8	7797.00	40.21	-13.79	54.00	33.40	35.66	7.41	36.26	100	157	Average

Remark: #3 and #4 are Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



Trace: (Discrete)

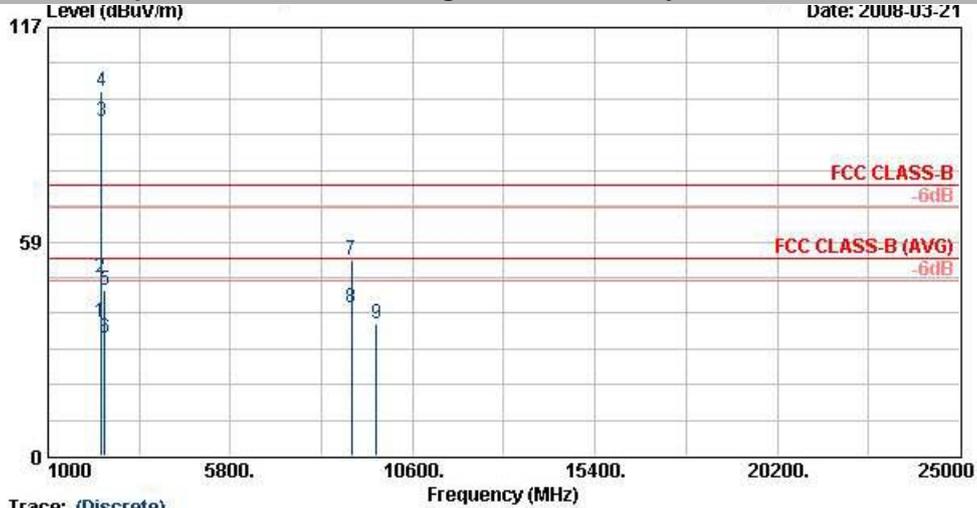
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 11
 Plane :
 TMET :

	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	41.34	31.09	-8.91	40.00	51.44	12.51	0.30	33.16	---	Peak
2	126.93	35.74	-7.76	43.50	56.20	12.34	0.50	33.30	100	206 Peak
3	158.79	34.45	-9.05	43.50	57.19	10.16	0.60	33.50	---	Peak
4	763.40	22.59	-23.41	46.00	34.80	19.48	1.10	32.79	---	Peak
5	864.90	22.58	-23.42	46.00	33.76	20.28	1.25	32.72	---	Peak
6	971.30	23.18	-30.82	54.00	33.12	21.03	1.30	32.28	---	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 004400003501112

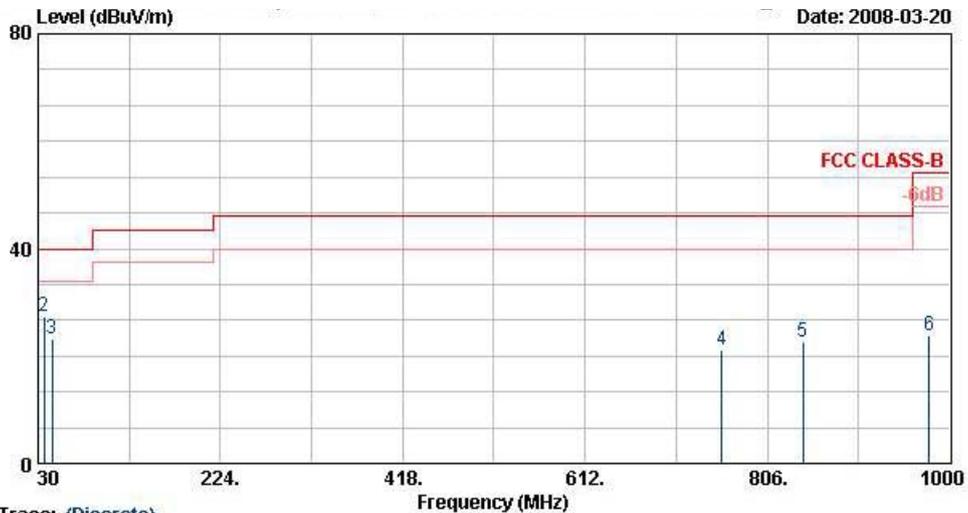
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2387.90	36.63	-17.37	54.00	36.53	31.86	3.92	35.68	100	213	Average
2	2387.90	48.54	-25.46	74.00	48.44	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	91.16			91.01	31.88	3.95	35.68	100	213	Average
4 X	2412.00	99.59			99.44	31.88	3.95	35.68	100	0	Peak
5	2500.00	45.02	-28.98	74.00	44.67	32.00	4.05	35.70	100	0	Peak
6	2500.00	32.17	-21.83	54.00	31.82	32.00	4.05	35.70	100	213	Average
7	8982.00	53.52	-20.48	74.00	45.83	36.48	7.80	36.59	100	0	Peak
8	8982.00	40.36	-13.64	54.00	32.67	36.48	7.80	36.59	100	155	Average
9	9642.00	36.12	-37.88	74.00	75.00	-10.09	7.94	36.73	100	0	Peak

Remark: #3 and #4 are Fundamental Signal



- 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)

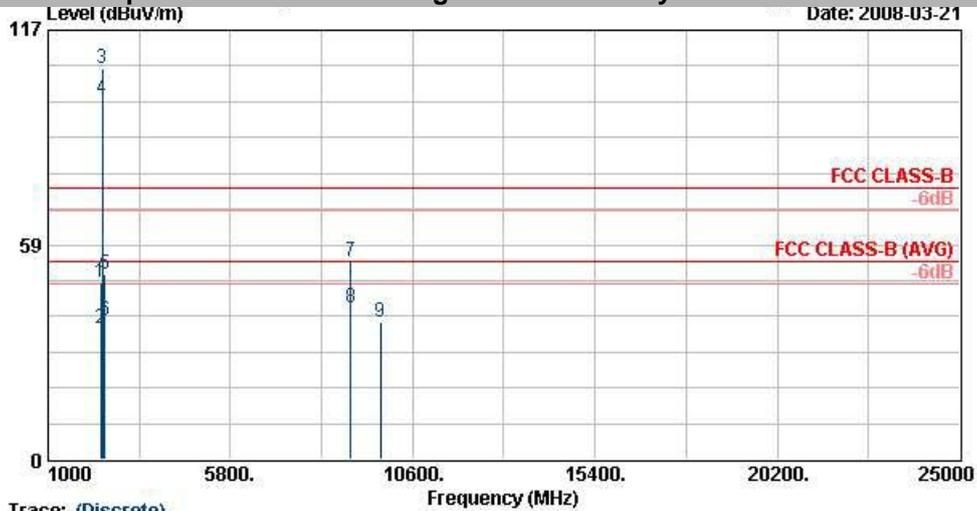
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 11
 Plane :
 IMET :

	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	22.50	-17.50	40.00	36.04	19.66	0.30	33.50	---	---	Peak
2	36.48	27.35	-12.65	40.00	45.22	15.08	0.30	33.26	100	306	Peak
3	44.58	23.25	-16.75	40.00	45.04	11.02	0.30	33.11	---	---	Peak
4	757.80	21.15	-24.85	46.00	33.45	19.42	1.10	32.82	---	---	Peak
5	843.90	22.49	-23.51	46.00	33.82	20.13	1.20	32.66	---	---	Peak
6	978.30	23.70	-30.30	54.00	33.53	21.09	1.30	32.23	---	---	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 11
 Plane : H
 TIME : 004400003501112

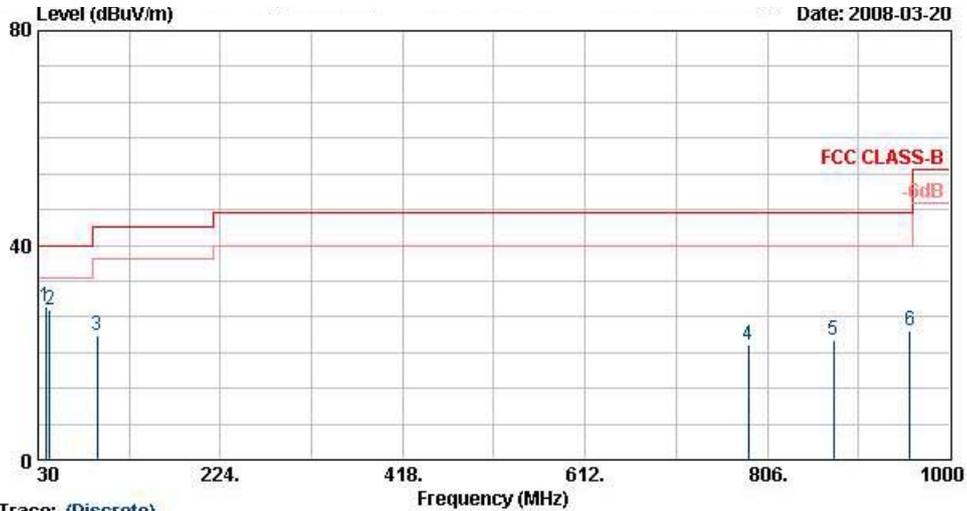
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2380.00	48.26	-25.74	74.00	48.18	31.83	3.92	35.68	100	0	Peak
2	2380.00	35.60	-18.40	54.00	35.52	31.83	3.92	35.68	108	357	Average
3 X	2437.00	106.66			106.43	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	98.49			98.26	31.93	3.99	35.69	108	357	Average
5	2484.00	50.51	-23.49	74.00	50.18	31.98	4.05	35.70	100	0	Peak
6	2484.00	37.78	-16.22	54.00	37.45	31.98	4.05	35.70	108	357	Average
7	8976.00	54.07	-19.93	74.00	46.43	36.45	7.77	36.59	100	0	Peak
8	8976.00	41.52	-12.48	54.00	33.88	36.45	7.77	36.59	100	124	Average
9	9747.00	37.40	-36.60	74.00	76.02	-9.85	7.98	36.75	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 :
 Condition :
 EUT :
 Power :
 Model :
 Memo :
 Data Rate :
 Plane :
 TIME :

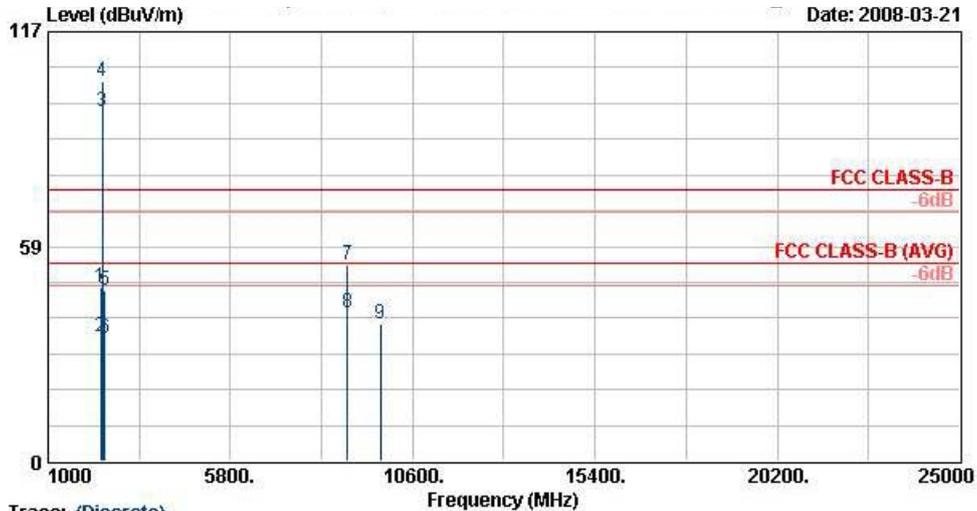
Trace: (Discrete)
 D3CH06-HY
 FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 120Vac/60Hz
 FR 822203
 11b Tx_Ch06; 2437MHz + Adaptor
 11

	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	37.83	28.53	-11.47	40.00	46.91	14.56	0.30	33.24	100	174 Peak	
2	42.69	28.07	-11.93	40.00	48.90	12.02	0.30	33.15	---	---	Peak
3	92.64	23.34	-20.16	43.50	46.56	9.62	0.50	33.33	---	---	Peak
4	785.80	21.40	-24.60	46.00	33.16	19.68	1.20	32.65	---	---	Peak
5	876.80	22.20	-23.80	46.00	33.28	20.36	1.30	32.74	---	---	Peak
6	957.30	24.18	-21.82	46.00	34.35	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 : 03CH06-HY
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 004400003501112

Trace: (Discrete)

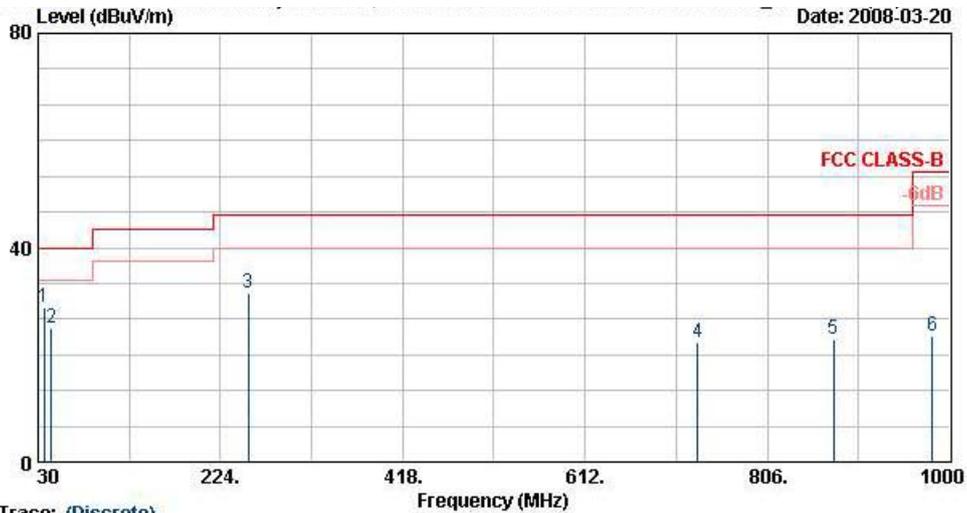
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBUV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBUV/m	dBUV	dB/m	dB	dB	cm	deg	
1	2390.00	47.45	-26.55	74.00	47.35	31.86	3.92	35.68	100	0	Peak
2	2390.00	33.98	-20.02	54.00	33.88	31.86	3.92	35.68	100	57	Average
3 @	2437.00	95.08			94.85	31.93	3.99	35.69	100	57	Average
4 X	2437.00	103.50			103.27	31.93	3.99	35.69	100	0	Peak
5	2484.00	46.37	-27.63	74.00	46.04	31.98	4.05	35.70	100	0	Peak
6	2484.00	33.37	-20.63	54.00	33.04	31.98	4.05	35.70	100	57	Average
7	8877.00	53.34	-20.66	74.00	45.90	36.31	7.65	36.53	100	0	Peak
8	8877.00	40.40	-13.60	54.00	32.96	36.31	7.65	36.53	100	197	Average
9	9747.00	37.33	-36.67	74.00	75.94	-9.85	7.98	36.75	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)

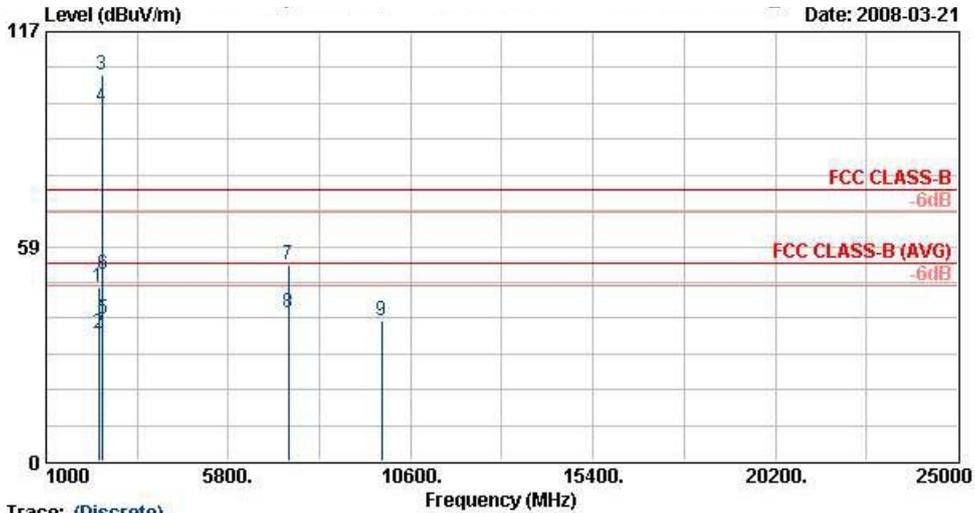
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 11
 Plane :
 TMEI :

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	36.48	28.73	-11.27	40.00	46.61	15.08	0.30	33.26	100	118 Peak
2	44.04	25.05	-14.95	40.00	46.36	11.52	0.30	33.13	---	Peak
3	253.83	31.62	-14.38	46.00	52.00	12.34	0.70	33.43	---	Peak
4	731.90	22.32	-23.68	46.00	35.00	19.19	1.10	32.97	---	Peak
5	876.80	22.91	-23.09	46.00	33.98	20.36	1.30	32.74	---	Peak
6	981.80	23.51	-30.49	54.00	33.31	21.11	1.30	32.20	---	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 004400003501112

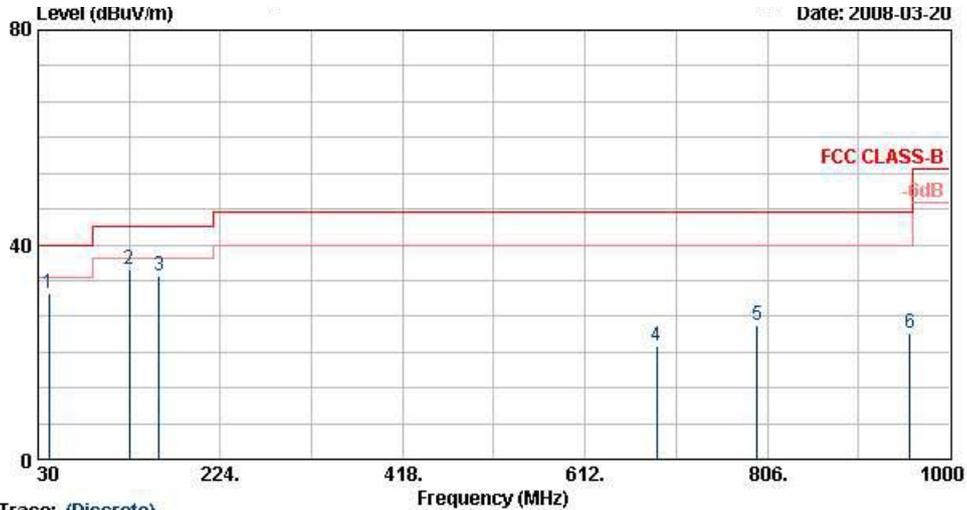
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBUV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBUV/m	dBUV	dB/m	dB	dB	cm	deg	
1	2390.00	47.43	-26.57	74.00	47.34	31.86	3.92	35.68	100	0	Peak
2	2390.00	34.61	-19.39	54.00	34.51	31.86	3.92	35.68	197	16	Average
3 X	2462.00	105.26			104.98	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	96.73			96.45	31.95	4.02	35.69	197	16	Average
5	2483.50	38.83	-15.17	54.00	38.50	31.98	4.05	35.70	197	16	Average
6	2483.50	51.04	-22.96	74.00	50.71	31.98	4.05	35.70	100	0	Peak
7	7386.00	53.62	-20.38	74.00	46.90	35.64	7.23	36.15	100	0	Peak
8	7386.00	40.26	-13.74	54.00	33.54	35.64	7.23	36.15	100	268	Average
9	9846.00	38.31	-35.69	74.00	76.67	-9.63	8.04	36.77	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)

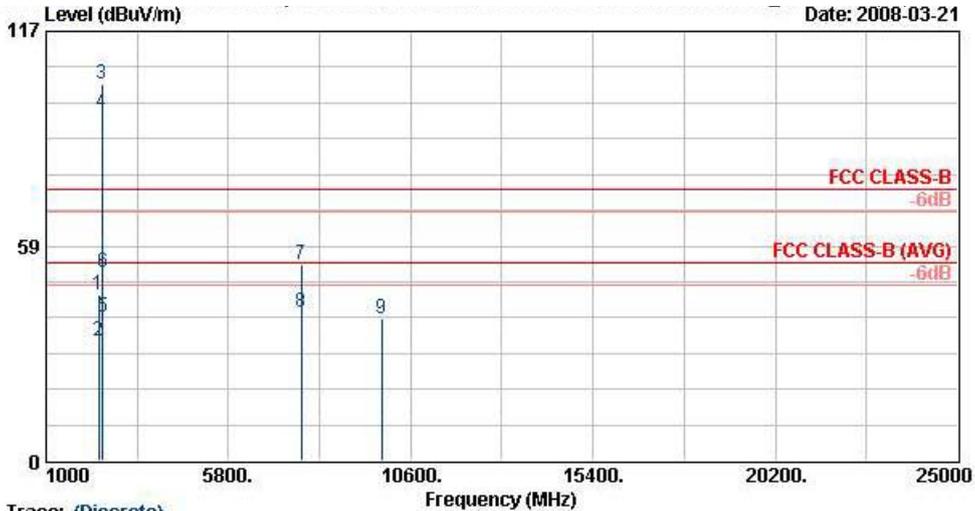
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 11
 Plane :
 TMEI :

	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	41.34	31.04	-8.96	40.00	51.39	12.51	0.30	33.16	100	143 Peak	
2	126.93	35.50	-8.00	43.50	55.96	12.34	0.50	33.30	---	---	Peak
3	158.79	34.28	-9.22	43.50	57.02	10.16	0.60	33.50	---	---	Peak
4	687.80	21.20	-24.80	46.00	34.39	18.84	1.10	33.13	---	---	Peak
5	794.90	25.07	-20.93	46.00	36.68	19.77	1.20	32.59	---	---	Peak
6	957.30	23.50	-22.50	46.00	33.67	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11b Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 11
 Plane : H
 TMET : 004400003501112

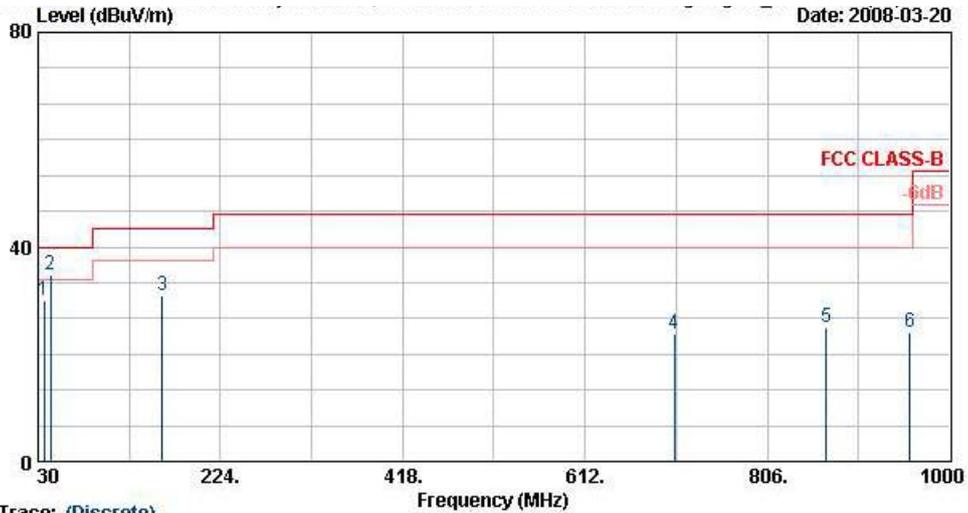
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBUV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBUV/m	dBUV	dB	dB	cm	deg	
1	2388.00	45.12	-28.88	74.00	45.02	31.86	3.92	35.68	100	0 Peak
2	2388.00	32.74	-21.26	54.00	32.64	31.86	3.92	35.68	158	320 Average
3 X	2462.00	102.71			102.43	31.95	4.02	35.69	100	0 Peak
4 @	2462.00	94.64			94.36	31.95	4.02	35.69	158	320 Average
5	2484.61	39.05	-14.95	54.00	38.72	31.98	4.05	35.70	158	320 Average
6	2484.61	51.11	-22.89	74.00	50.78	31.98	4.05	35.70	100	0 Peak
7	7716.00	53.68	-20.32	74.00	46.90	35.64	7.38	36.24	100	0 Peak
8	7716.00	40.56	-13.44	54.00	33.78	35.64	7.38	36.24	100	322 Average
9	9846.00	38.58	-35.42	74.00	76.94	-9.63	8.04	36.77	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)

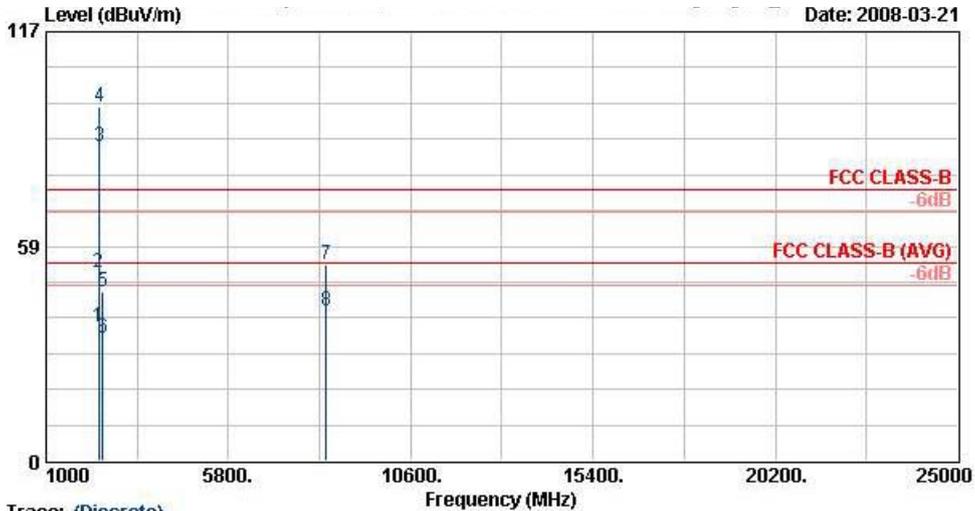
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LP-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 54
 Plane :
 TMEI :

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	36.48	30.05	-9.95	40.00	47.93	15.08	0.30	33.26	---	Peak
2 !	43.23	34.71	-5.29	40.00	56.02	11.52	0.30	33.13	100	123 Peak
3	162.03	30.96	-12.54	43.50	53.75	10.09	0.60	33.48	---	Peak
4	707.40	23.80	-22.20	46.00	36.81	18.95	1.17	33.13	---	Peak
5	868.40	24.89	-21.11	46.00	36.03	20.30	1.28	32.72	---	Peak
6	957.30	24.05	-21.95	46.00	34.22	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch01; 2412MHz + Adaptor
 Data Rate : 54
 Plane : R
 TMET : 004400003501112

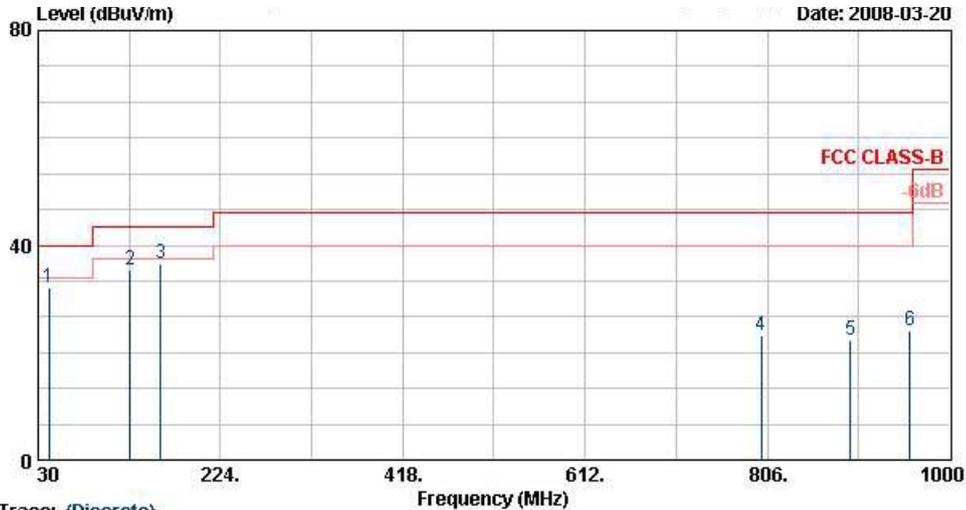
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB/m	dB	dB	cm	deg	
1	2389.42	36.69	-17.31	54.00	36.59	31.86	3.92	35.68	100	232	Average
2	2389.42	51.18	-22.82	74.00	51.08	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	85.86			85.71	31.88	3.95	35.68	100	232	Average
4 X	2412.00	96.45			96.30	31.88	3.95	35.68	100	0	Peak
5	2500.00	46.09	-27.91	74.00	45.74	32.00	4.05	35.70	100	0	Peak
6	2500.00	33.52	-20.48	54.00	33.17	32.00	4.05	35.70	100	232	Average
7	8382.00	53.52	-20.48	74.00	46.80	35.78	7.25	36.30	100	0	Peak
8	8382.00	40.79	-13.21	54.00	34.06	35.78	7.25	36.30	100	157	Average

Remark: #3 and #4 are Fundamental Signals



- Polarization : Vertical (30MHz-1GHz)

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



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

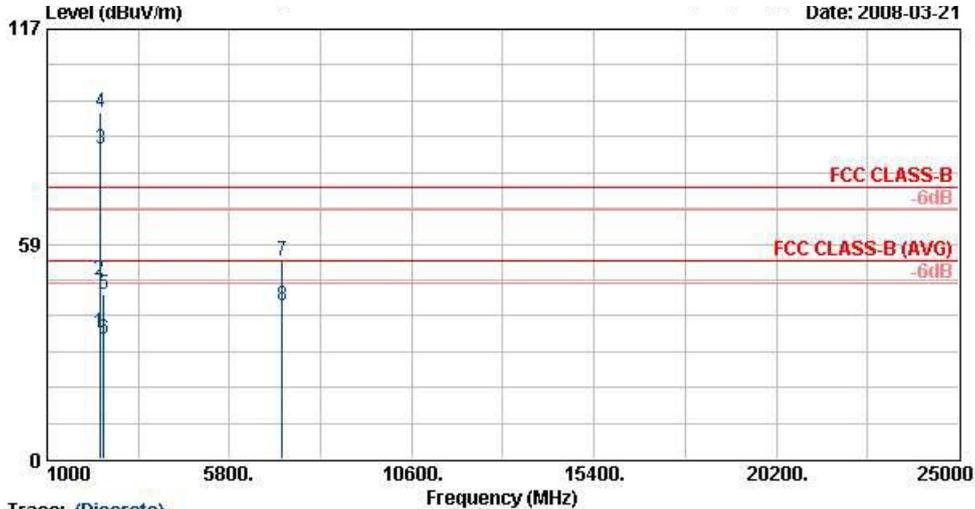
Trace: (Discrete)
D3CH06-HY
FCC CLASS-B 3m LF-ANT(951121) VERTICAL
GSM/EDGE(Class 10) 850/900/1800/1900
PDA Phone
120Vac/60Hz
FR 622203
11g Tx_Ch01; 2412MHz + Adaptor
54

	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	41.34	32.06	-7.94	40.00	52.41	12.51	0.30	33.16	---	---	Peak
2	128.28	35.32	-8.18	43.50	55.93	12.18	0.50	33.29	---	---	Peak
3	160.68	36.53	-6.97	43.50	59.31	10.11	0.60	33.48	100	208	Peak
4	799.80	23.25	-22.75	46.00	34.79	19.82	1.20	32.56	---	---	Peak
5	894.30	22.38	-23.62	46.00	33.37	20.49	1.30	32.79	---	---	Peak
6	957.30	24.06	-21.94	46.00	34.23	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 622203
 Memo : 11g Tx_CH01; 2412MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 004400003501112

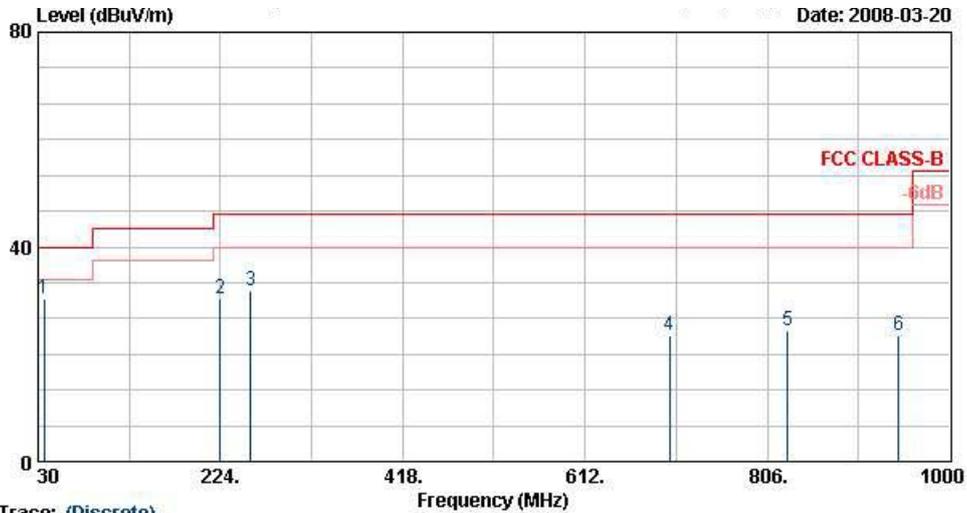
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.09	34.17	-19.83	54.00	34.07	31.86	3.92	35.68	100	217	Average
2	2388.09	48.60	-25.40	74.00	48.50	31.86	3.92	35.68	100	0	Peak
3 @	2412.00	84.27			84.12	31.88	3.95	35.68	100	217	Average
4 X	2412.00	94.33			94.18	31.88	3.95	35.68	100	0	Peak
5	2484.00	45.00	-29.00	74.00	44.67	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.49	-21.51	54.00	32.16	31.98	4.05	35.70	100	217	Average
7	7191.00	54.01	-19.99	74.00	47.21	35.72	7.16	36.08	100	0	Peak
8	7191.00	41.57	-12.43	54.00	34.77	35.72	7.16	36.08	100	177	Average

Remark: #3 and #4 are Fundamental Signals



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

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



Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 54
 Plane :
 TMEI :

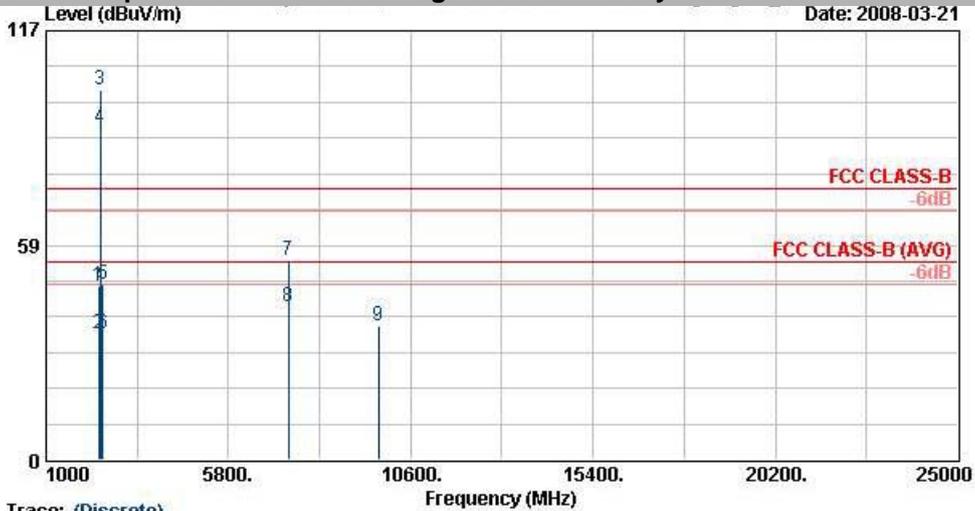
Trace: (Discrete)

	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	36.48	30.47	-9.53	40.00	48.35	15.08	0.30	33.26	119	Peak
2	223.59	30.21	-15.79	46.00	52.27	10.73	0.70	33.48	---	Peak
3	255.99	31.73	-14.27	46.00	52.07	12.38	0.70	33.42	---	Peak
4	701.80	23.62	-22.38	46.00	36.75	18.91	1.12	33.16	---	Peak
5	827.80	24.47	-21.53	46.00	35.88	20.01	1.20	32.63	---	Peak
6	945.40	23.58	-22.42	46.00	33.99	20.85	1.20	32.47	---	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 : PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 54
 Plane : H
 IMEI : 004400003501112

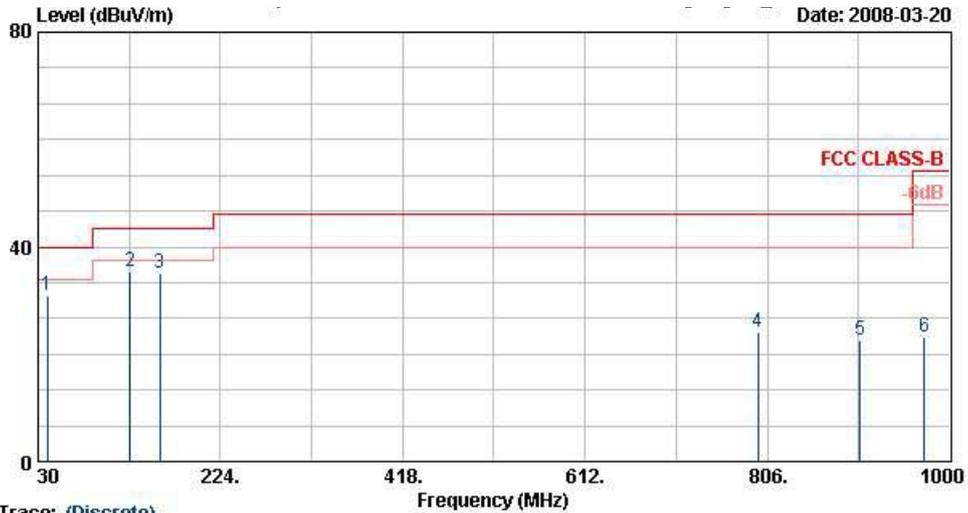
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2390.00	47.28	-26.72	74.00	47.19	31.86	3.92	35.68	100	0	Peak
2	2390.00	34.58	-19.42	54.00	34.48	31.86	3.92	35.68	101	226	Average
3 X	2437.00	100.94			100.71	31.93	3.99	35.69	100	0	Peak
4 @	2437.00	90.49			90.26	31.93	3.99	35.69	101	226	Average
5	2484.00	47.66	-26.34	74.00	47.33	31.98	4.05	35.70	100	0	Peak
6	2484.00	34.55	-19.45	54.00	34.22	31.98	4.05	35.70	101	226	Average
7	7386.00	54.18	-19.82	74.00	47.46	35.64	7.23	36.15	100	0	Peak
8	7386.00	41.77	-12.23	54.00	35.05	35.64	7.23	36.15	100	127	Average
9	9747.00	36.55	-37.45	74.00	75.17	-9.85	7.98	36.75	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 : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 54
 Plane :
 TMEI :

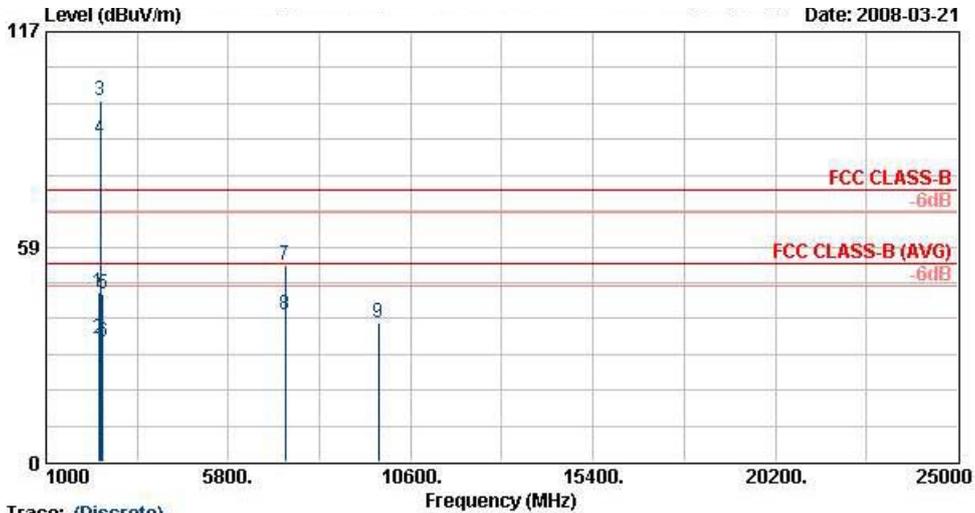
Trace: (Discrete)

	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	39.99	31.07	-8.93	40.00	50.46	13.51	0.30	33.20	---	---	Peak
2	127.74	35.32	-8.18	43.50	55.93	12.18	0.50	33.29	100	253	Peak
3	159.33	35.06	-8.44	43.50	57.80	10.16	0.60	33.50	---	---	Peak
4	796.30	24.12	-21.88	46.00	35.72	19.78	1.20	32.58	---	---	Peak
5	904.80	22.61	-23.39	46.00	33.51	20.56	1.30	32.76	---	---	Peak
6	973.40	23.33	-30.67	54.00	33.24	21.05	1.30	32.26	---	---	Peak



- 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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch06; 2437MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 004400003501112

Trace: (Discrete)

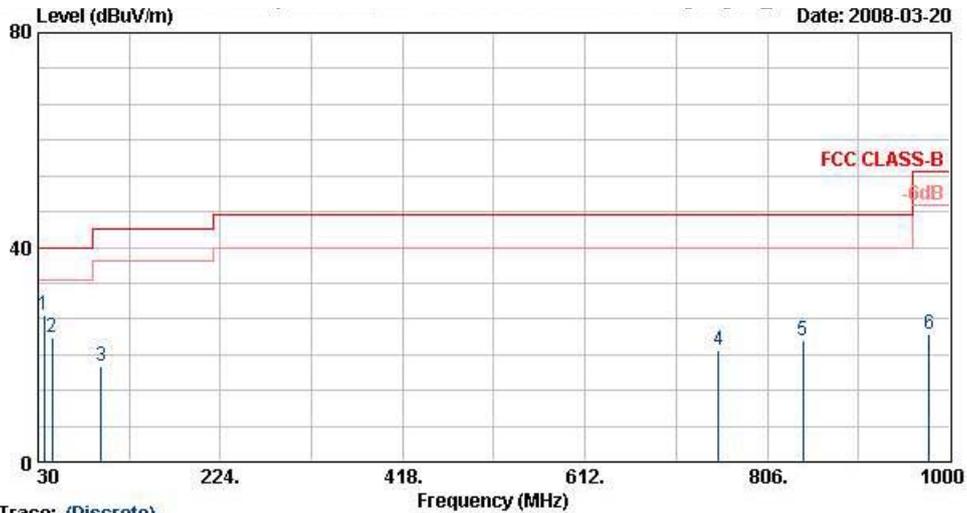
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB/m	dB	dB	cm	deg	
1	2382.00	45.97	-28.03	74.00	45.90	31.83	3.92	35.68	100	0	Peak
2	2382.00	33.65	-20.35	54.00	33.57	31.83	3.92	35.68	106	232	Average
3	2437.00	98.34			98.11	31.93	3.99	35.69	100	0	Peak
4	2437.00	87.89			87.66	31.93	3.99	35.69	106	232	Average
5	2500.00	45.60	-28.40	74.00	45.25	32.00	4.05	35.70	100	0	Peak
6	2500.00	32.46	-21.54	54.00	32.11	32.00	4.05	35.70	106	232	Average
7	7302.00	53.38	-20.62	74.00	46.62	35.68	7.20	36.12	100	0	Peak
8	7302.00	40.11	-13.89	54.00	33.35	35.68	7.20	36.12	100	187	Average
9	9747.00	37.98	-36.02	74.00	76.59	-9.85	7.98	36.75	100	0	Peak

Remark: #3 and #4 are Fundamer



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

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



Trace: (Discrete)

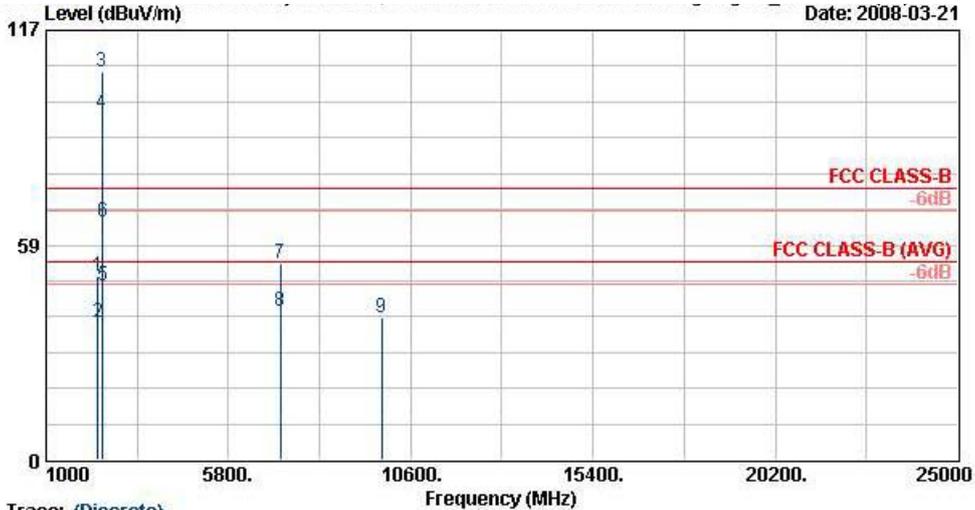
Site : 03CH06-HY
 Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 54
 Plane :
 IMEI :

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	36.48	27.35	-12.65	40.00	45.22	15.08	0.30	33.26	100	193 Peak
2	44.58	23.25	-16.75	40.00	45.04	11.02	0.30	33.11	---	---
3	97.23	17.80	-25.70	43.50	40.21	10.40	0.50	33.31	---	---
4	754.30	20.96	-25.04	46.00	33.30	19.40	1.10	32.84	---	---
5	843.90	22.49	-23.51	46.00	33.82	20.13	1.20	32.66	---	---
6	978.30	23.70	-30.30	54.00	33.53	21.09	1.30	32.23	---	---



• Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)

Site : 03CH06-RY
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
 EUT : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMET : 004400003501112

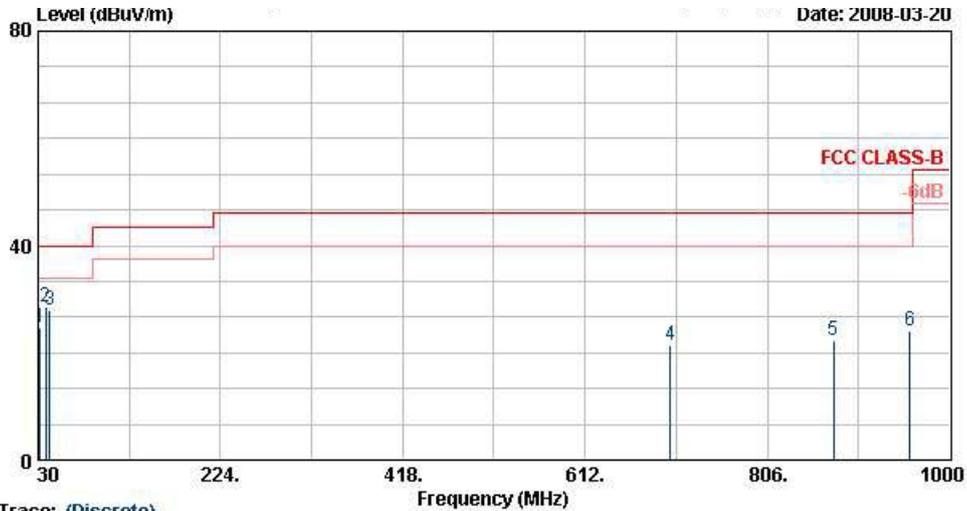
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2374.00	50.16	-23.84	74.00	50.11	31.83	3.89	35.68	100	0	Peak
2	2374.00	37.33	-16.67	54.00	37.29	31.83	3.89	35.68	107	358	Average
3 @	2462.00	105.65			105.37	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	94.20			93.92	31.95	4.02	35.69	107	358	Average
5	2483.50	47.28	-6.72	54.00	46.95	31.98	4.05	35.70	107	358	Average
6	2483.50	64.76	-9.24	74.00	64.43	31.98	4.05	35.70	100	0	Peak
7	7161.00	53.35	-20.65	74.00	46.54	35.74	7.15	36.07	100	0	Peak
8	7161.00	40.50	-13.50	54.00	33.68	35.74	7.15	36.07	100	127	Average
9	9846.00	38.64	-35.36	74.00	77.01	-9.63	8.04	36.77	100	0	Peak

Remark: #3 and #4 are Fundamer



- Polarization : Vertical (30MHz-1GHz)

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



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

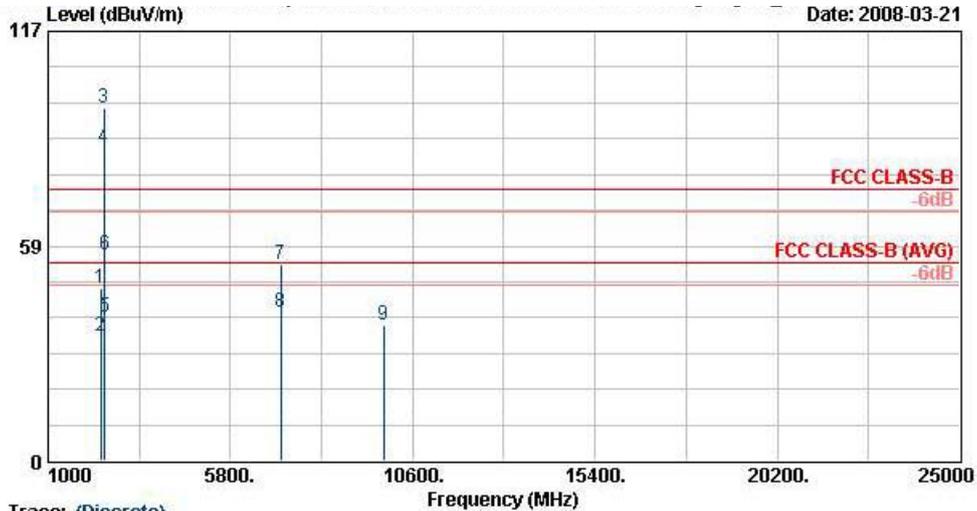
Trace: (Discrete)
 D3CH06-HY
 FCC CLASS-B 3m LF-ANT(951121) VERTICAL
 GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 120Vac/60Hz
 FR 822203
 11g Tx_Ch11; 2462MHz + Adaptor
 54

	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	31.89	24.74	-15.26	40.00	39.61	18.25	0.30	33.42	---	Peak
2	37.83	28.53	-11.47	40.00	46.91	14.56	0.30	33.24	100	172 Peak
3	42.69	28.07	-11.93	40.00	48.90	12.02	0.30	33.15	---	Peak
4	702.50	21.52	-24.48	46.00	34.65	18.91	1.12	33.16	---	Peak
5	876.80	22.20	-23.80	46.00	33.28	20.36	1.30	32.74	---	Peak
6	957.30	24.18	-21.82	46.00	34.35	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 : GSM/EDGE(Class 10) 850/900/1800/1900
 PDA Phone
 Power : 120Vac/60Hz
 Model : FR 822203
 Memo : 11g Tx_Ch11; 2462MHz + Adaptor
 Data Rate : 54
 Plane : H
 TMEI : 004400003501112

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2388.00	46.79	-27.21	74.00	46.69	31.86	3.92	35.68	100	0	Peak
2	2388.00	33.74	-20.26	54.00	33.64	31.86	3.92	35.68	100	190	Average
3 X	2462.00	96.31			96.03	31.95	4.02	35.69	100	0	Peak
4 @	2462.00	85.30			85.02	31.95	4.02	35.69	100	190	Average
5	2483.50	39.14	-14.86	54.00	38.81	31.98	4.05	35.70	100	190	Average
6	2483.50	55.95	-18.05	74.00	55.62	31.98	4.05	35.70	100	0	Peak
7	7137.00	53.58	-20.42	74.00	46.76	35.74	7.14	36.06	100	0	Peak
8	7137.00	40.55	-13.45	54.00	33.72	35.74	7.14	36.06	100	155	Average
9	9846.00	37.12	-36.88	74.00	75.49	-9.63	8.04	36.77	100	0	Peak

Remark: #3 and #4 are Fundamer



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 chip antenna 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	100174	9kHz – 2.75GHz	Mar. 03, 2008	Mar. 02, 2009	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2008	Mar. 30, 2009	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2008	Mar. 21, 2009	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Apr. 19, 2008	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	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)
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 (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% $U = 2U_e(y)$	4.72				

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