



FCC Test Report

for

47 CFR Part 15 Subpart C and IC RSS-210

Equipment : PDA Phone w/BT & WLAN
Model No. : ELF0101
FCC ID : NM8EFN
IC ID : 4115B-EFN
Filing Type : Certification
Applicant : High Tech Computer Corp.
23 Xinghua Rd., Taoyuan 330, Taiwan

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- The data shown in this test report were carried out on Aug. 22, 2007 at **Sporton International Inc. LAB.**
- Report No.: FR780314, Report Version: Rev. 01.

Jones Tsai
Manager

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.



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History of this test report

Report Issue Date: Sep. 12, 2007

Report No.	Description



1. General Description of Equipment under Test

1.1 Applicant

High Tech Computer Corp.
23 Xinghua Rd., Taoyuan 330, Taiwan

1.2 Manufacturer

High Tech Computer Corp.
23 Xinghua Rd., Taoyuan 330, Taiwan

1.3 Basic Description of Equipment under Test

Equipment		PDA Phone w/BT & WLAN
Model No.		ELF0101
PDA Phone A		PDA Phone with LCD Panel 1
PDA Phone B		PDA Phone with LCD Panel 2
AC Adapter 1	Brand Name	Delta
	Model Name	ADP-5FH B
	Power Rating	I/P:100-240Vac,50-60Hz,0.2A; O/P:5Vdc
	AC Power Cord Type	1.8 meter shielded cable without ferrite core
AC Adapter 2	Brand Name	Phihong
	Model Name	PSAA05A-050
	Power Rating	I/P:100-240V-200mA,50-60Hz,13-20VA; O/P:5Vdc,1A
	AC Power Cord Type	1.8 meter shielded cable without ferrite core
Battery 1	Brand Name	Samsung
	Model Name	ELF0160
	Rating	3.7Vdc, 1100mAh
	Type	Li-ion
Battery 2	Brand Name	Tws
	Model Name	ELF0160
	Rating	3.7Vdc, 1100mAh
	Type	Li-ion
Earphone 1	Brand Name	Cotron
	Model Name	CHM-311STV08001
	Signal line Type	1.6 meter shielded cable without ferrite core
Earphone 2	Brand Name	MEC
	Model Name	60-4269-500
	Signal line Type	1.5 meter shielded cable without ferrite core
Earphone 3	Brand Name	Cotron
	Model Name	CHM-311STV08002



	Signal line Type	1.6 meter shielded cable without ferrite core
Holster	Brand Name	NEWTECH
	Model Name	HTC597-11
USB Cable	Brand Name	High Tech
	Signal line Type	1.2 meter shielded cable without ferrite core
LCD Panel 1	Brand Name	Samsung
	Model Name	LMS283GF01
LCD Panel 2	Brand Name	Toppoly
	Model Name	TD028THED1
Camera 1	Brand Name	LITEON
	Model Name	07PE01
Camera 2	Brand Name	PRIMAX
	Model Name	50-70422HTT8

**1.2 Feature of Equipment under Test**

Product Feature & Specification				
1. Type of Modulation	WLAN : DSSS / OFDM Bluetooth : GFSK			
2. Number of Channels	WLAN : 11 Channels Bluetooth : 79 Channels			
3. Frequency Band	WLAN : 2400 MHz ~ 2483.5 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz			
4. Carrier Frequency of each channel	WLAN : $2412 + (n - 1) * 5$ MHz; $n = 1 \sim 11$ Bluetooth : $2402 + n * 1$ MHz; $n = 0 \sim 78$			
5. Channel Spacing	WLAN : 5 MHz Bluetooth : 1 MHz			
6. Maximum Output Power to Antenna (Normal Condition)	802.11b : 19.66 dBm 802.11g : 17.60 dBm Bluetooth : 1.4dBm			
7. HW Version :	XT02			
8. SW Version :	4.1.13.47			
9. Type of Antenna Connector	N/A			
10. Antenna Type	WLAN : PIFA Antenna Bluetooth : Chip Antenna			
11. Antenna Gain	WLAN : 0 dBi Bluetooth : 0 dBi			
12. Function Type	Transmitter		Transceiver	V



2. Test Configuration of Equipment under Test

2.1 Test Manner

- 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.
- The EUT is programmed to transmit signal continuously for all testings.
- Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.
- For radiated measurements, the results were the maximum of those obtained in 3 orthogonal axes and only showed the worst data in this report.

2.2 Test Mode

Application			
Radiated Emission / RF Conducted	802.11b	802.11g	BT
	Mode1:CH01_2412MHz	Mode4:CH01_2412MHz	Mode7:CH00_2402MHz
	Mode2:CH06_2437MHz	Mode5:CH06_2437MHz	Mode8:CH39_2441MHz
	Mode3:CH11_2462MHz	Mode6:CH11_2462MHz	Mode9:CH78_2480MHz
Conducted Emission	Mode 1: PDA Phone A + GSM850 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 1 + Battery 1 Mode 2: PDA Phone A + GSM850 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 2 + Battery 1 Mode 3: PDA Phone A + GSM850 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + USB Link + Battery Mode 4: PDA Phone A + GSM850 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 1 + Battery 2 Mode 5: PDA Phone B + GSM850 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 1 + Battery 1 Mode 6: PDA Phone A + PCS1900 Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 1 + Battery 1 Mode 7: PDA Phone A + EDGE Idle Mode + BT Link + WLAN Link + Camera + MPEG4 + Adapter 1 + Battery 1		

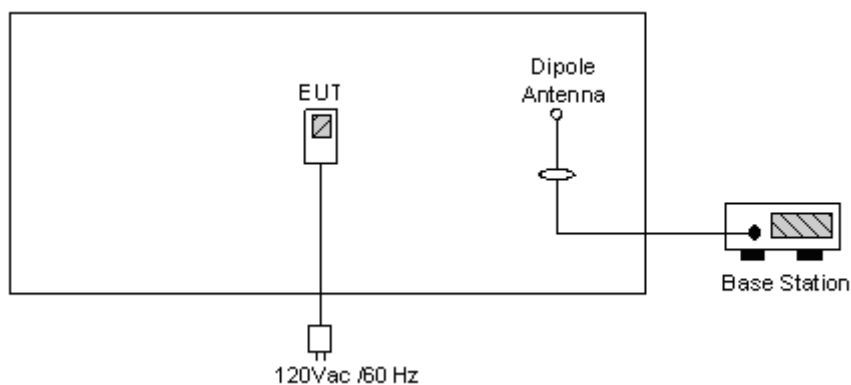
**2.3 Ancillary Equipment List**

Item	Equipment	Trade Name	Model Name	FCC ID	Power Cord / Cable
1.	Notebook	DELL	D400	E2K24GBRL	AC I/P: Unshielded, 1.2m DC I/P: 19.5V, 3.34A
2.	WLAN AP	SMC	SMC-100	HEDWG4005ACC	Unshielded, 1.8 m
3.	BT Base Station	Anritus	8852A	N/A	N/A
4.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A
5.	(RS-232)Mouse	State	MS-303	DoC	Unshielded, 1.2m

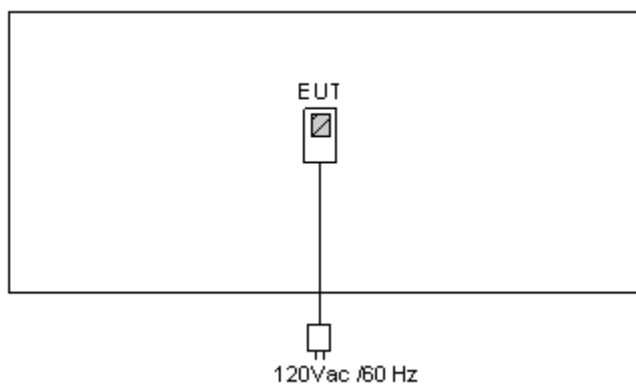
2.4 Connection Diagram of Test System

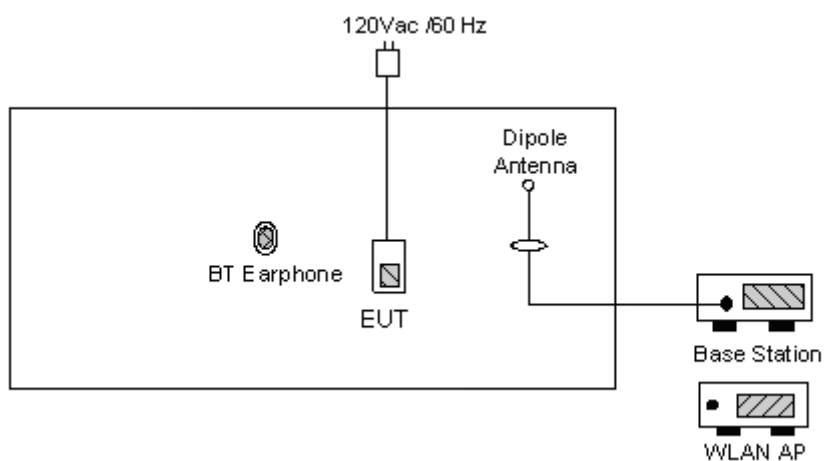
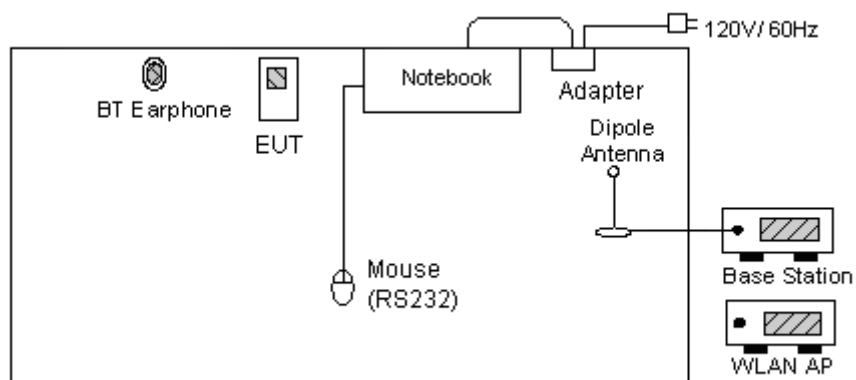
<Radiated Emission >

Bluetooth Tx Mode



WLAN Tx Mode



<Conducted Emission>
EUT with Adapter Mode

EUT with USB Link Mode




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 : 886-3-318-0055
Test Site No : CO01-HY, 03CH04-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 and IC RSS-210 Issued 7

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)	Maximum Peak Output Power	Pass
15.209(a)	Radiated Emission	Pass
15.247 (c)	100kHz Bandwidth of Frequency Band Edges	Pass
15.247(d)	Power Spectral Density	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass

**The Emission Mode: Bluetooth**

FCC Rule	Description of Test	Result
15.207	Conducted Emission	Pass
15.247(a) (1)	Hopping Channel Bandwidth	Pass
15.247(a)(1)	Hopping Channel Separation	Pass
15.247(a)(1)(iii)	Number of Hopping Frequency Used	Pass
15.247(a)(1)(iii)	Dwell Time of Each Frequency	Pass
15.247(b)	Output Power	Pass
15.247(c)	100kHz Bandwidth of Frequency Band Edges	Pass
15.209(a)	Radiated Emission	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass

5.2 6dB Bandwidth Measurement

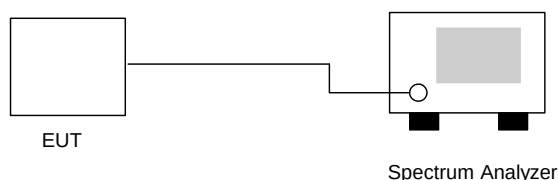
5.2.1 Measuring Instruments :

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 : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

802.11b

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

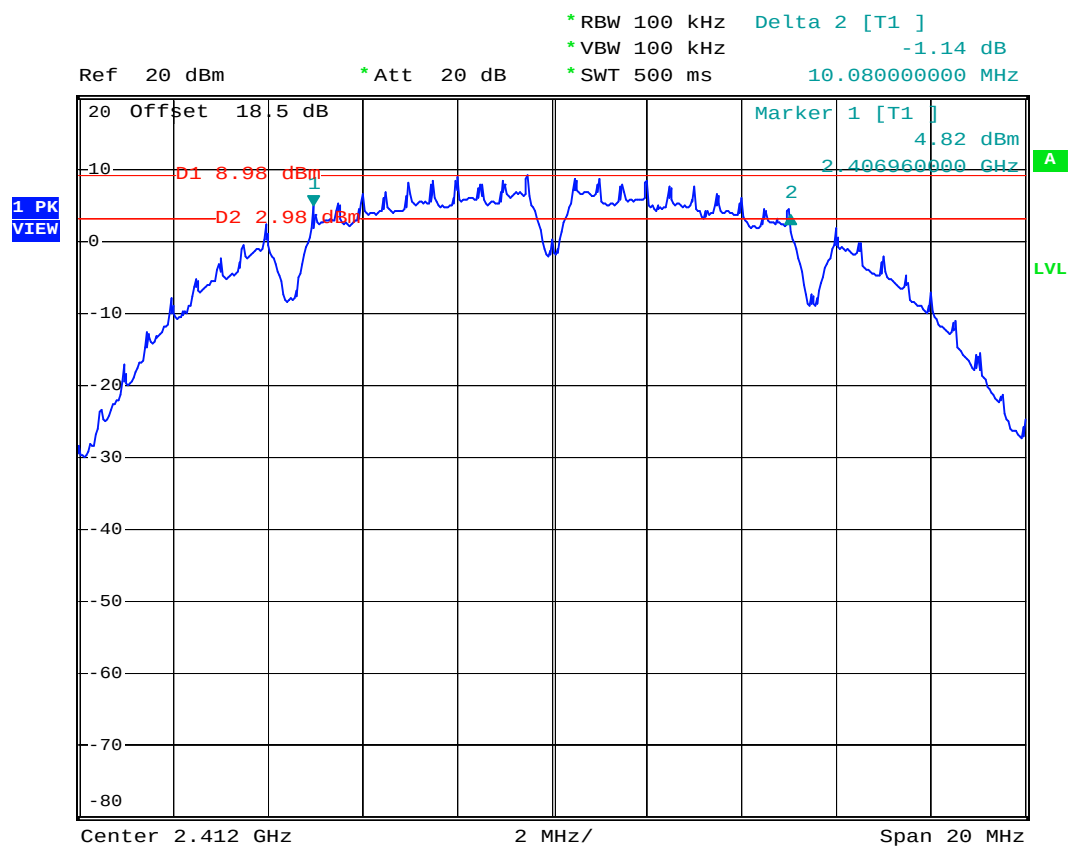
802.11g

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



5.2.5 6dB Bandwidth

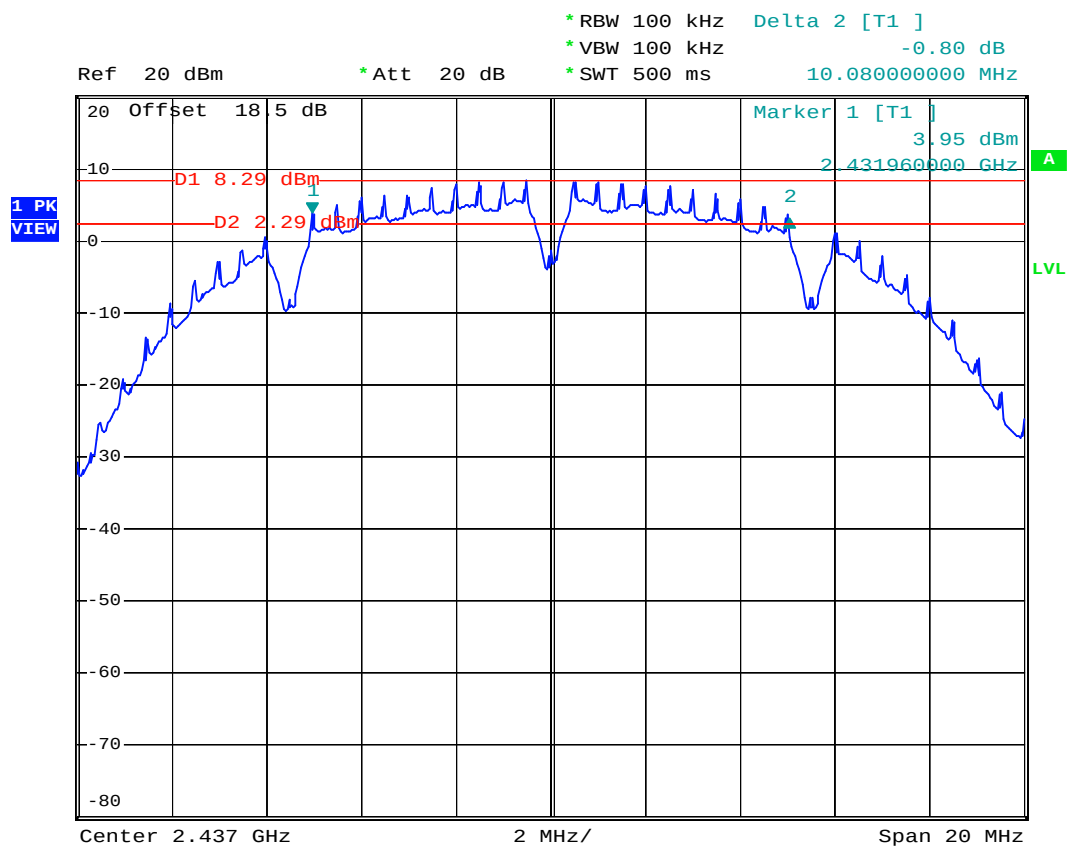
Mode 1



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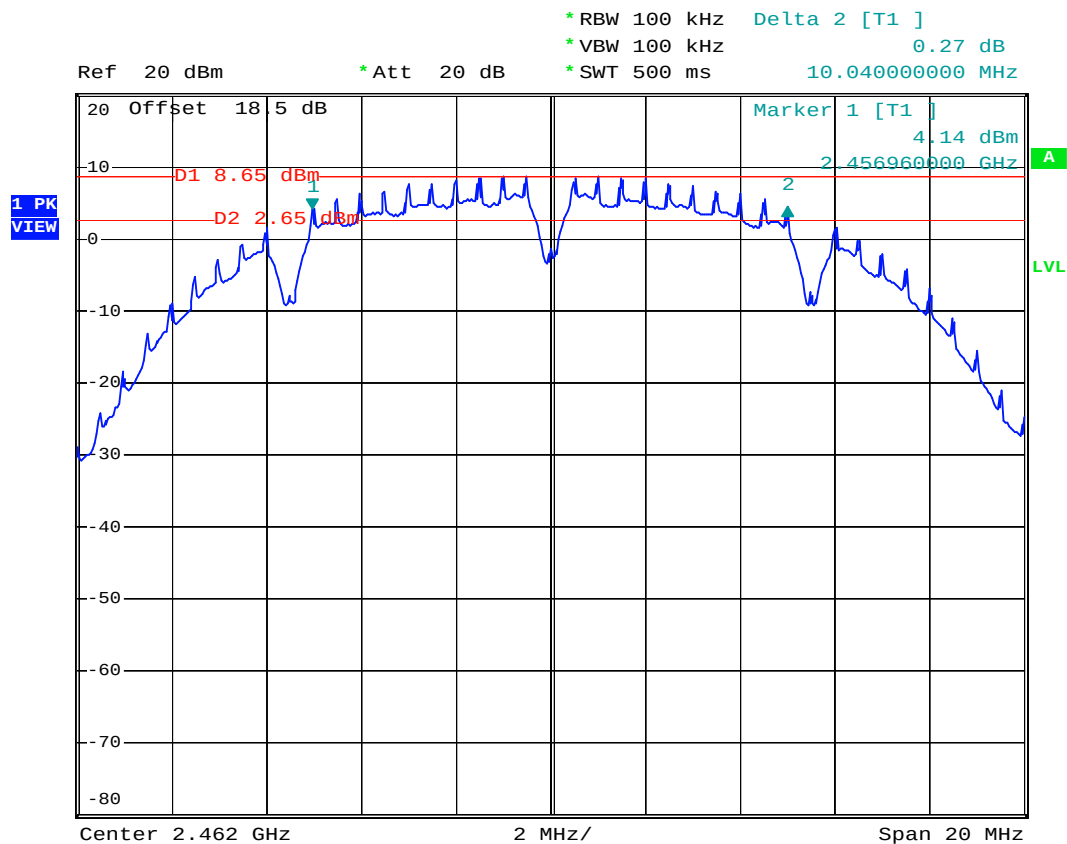
Mode 2



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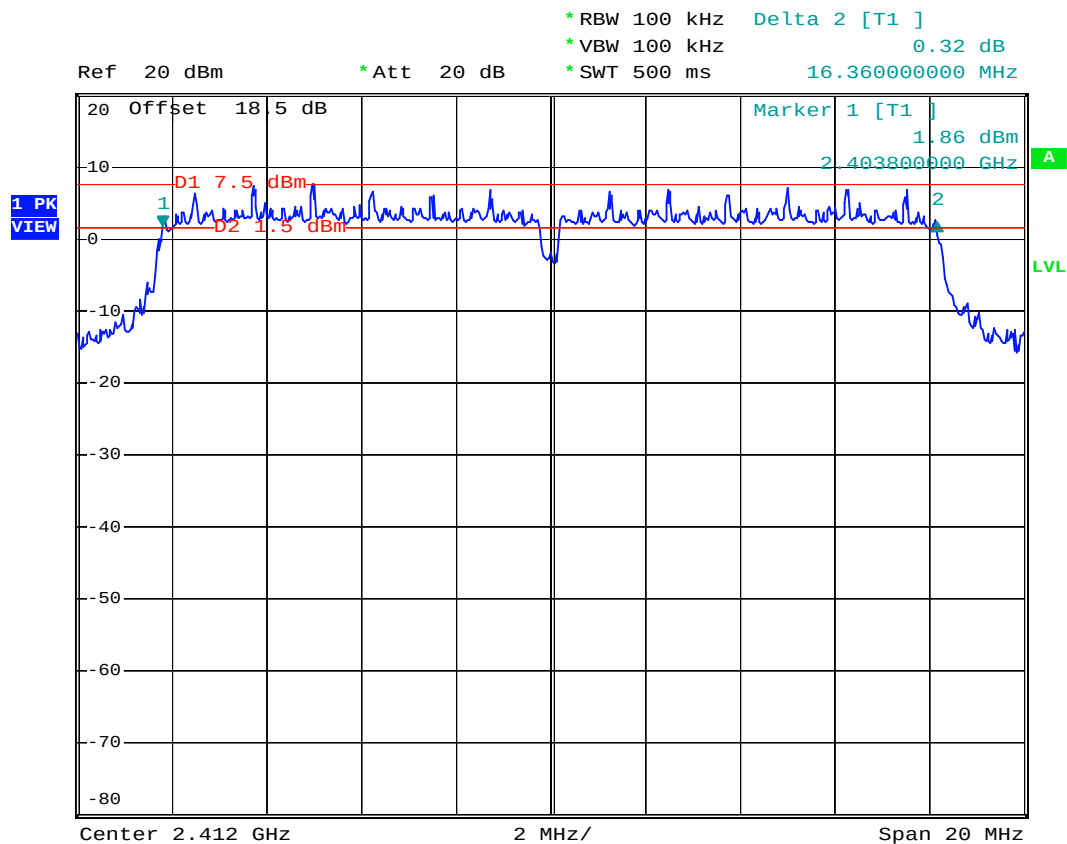
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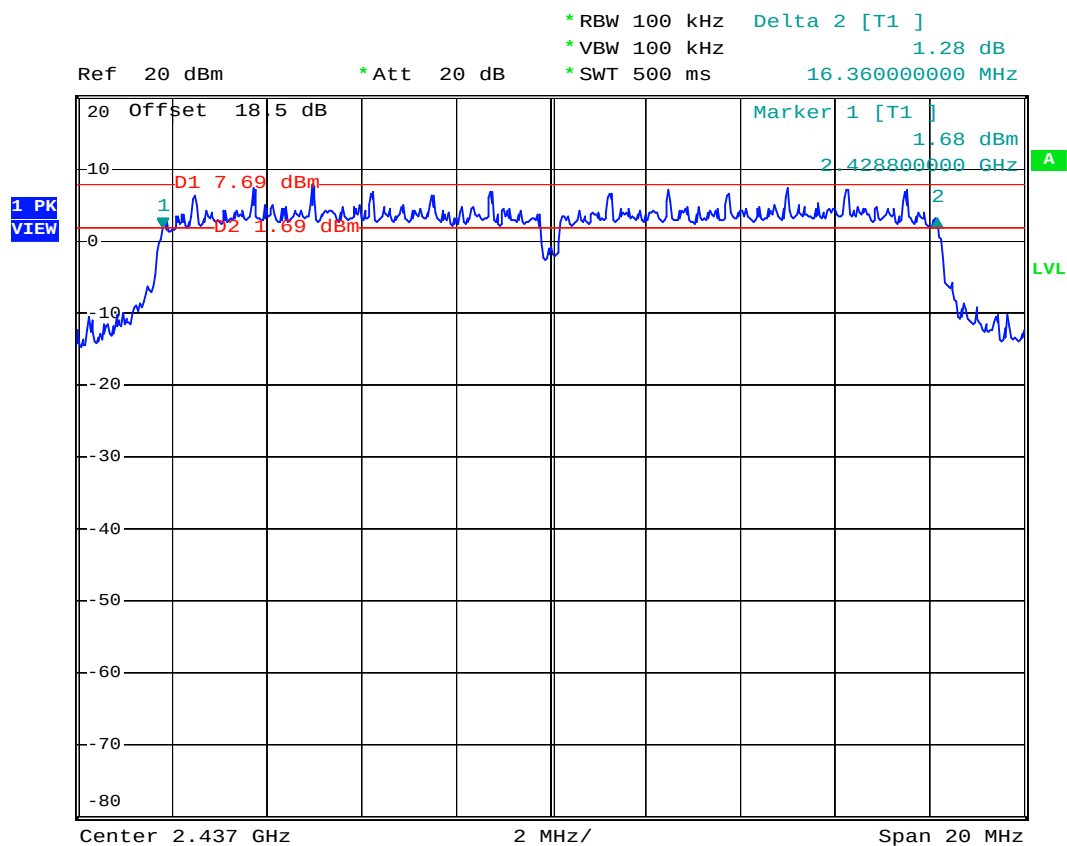
Mode 4



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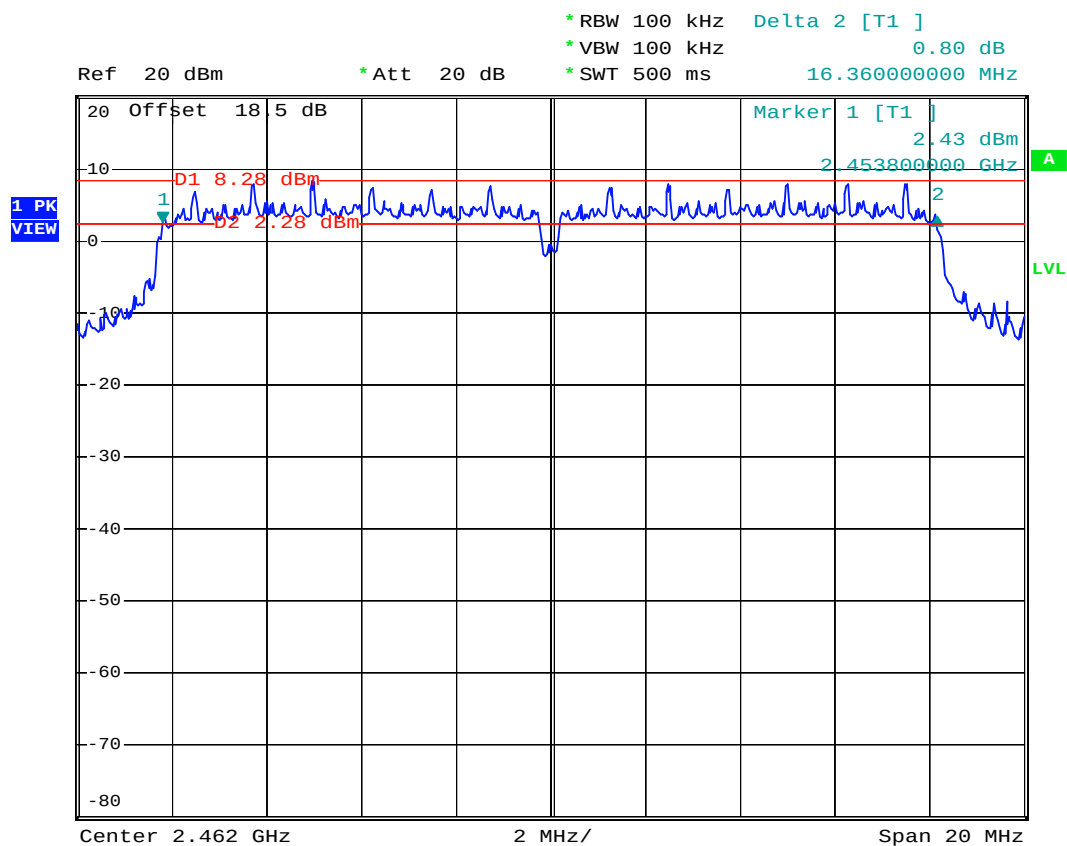
Mode 5



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Mode 6



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5.3 Power Spectral Density Measurement

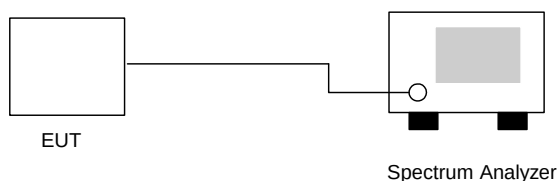
5.3.1 Measuring Instruments :

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 : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

802.11b

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-5.15	8	Mode 1
06	2437	-5.24	8	Mode 2
11	2462	-4.82	8	Mode 3

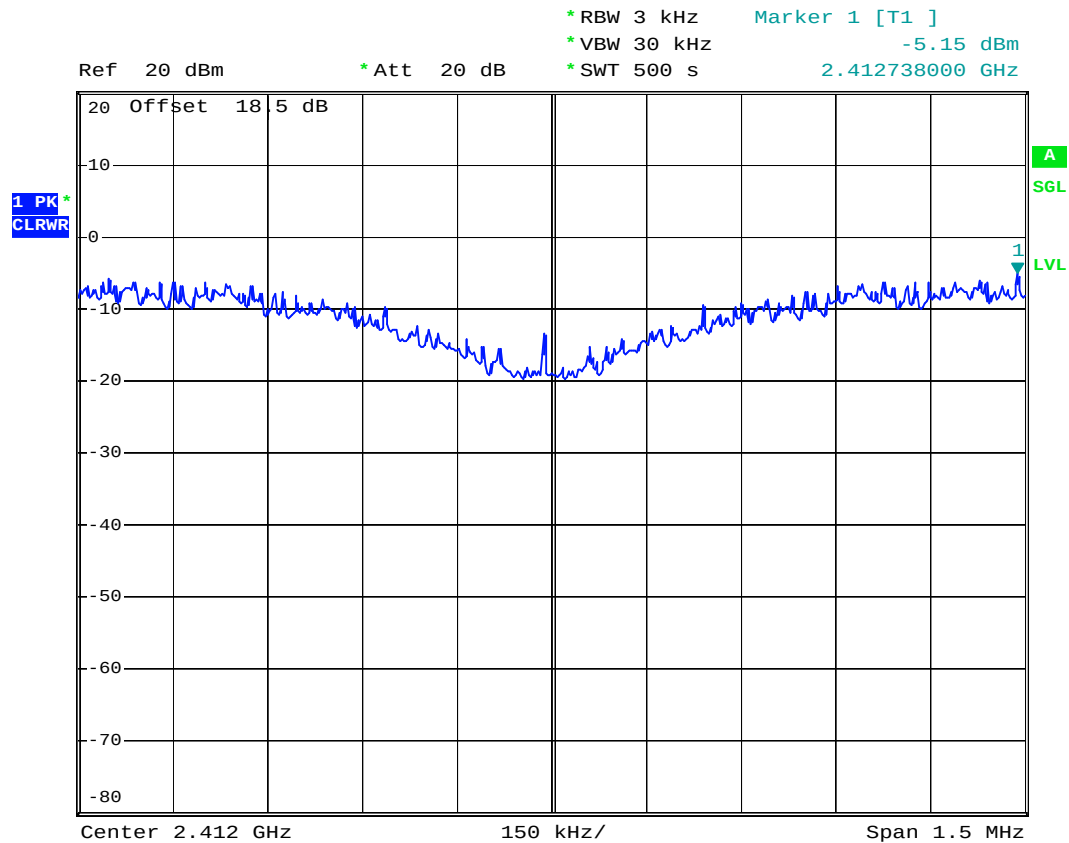
802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-6.74	8	Mode 4
06	2437	-6.68	8	Mode 5
11	2462	-6.21	8	Mode 6



5.3.5 Power Spectral Density

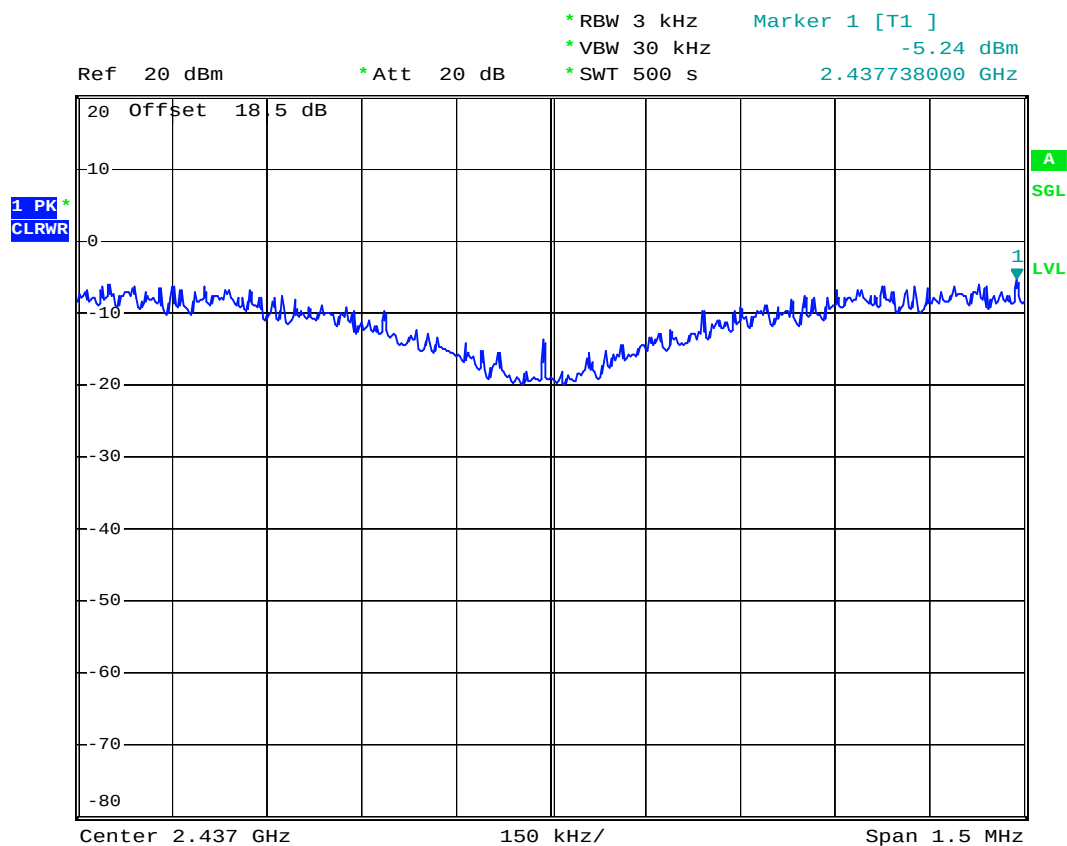
Mode 1



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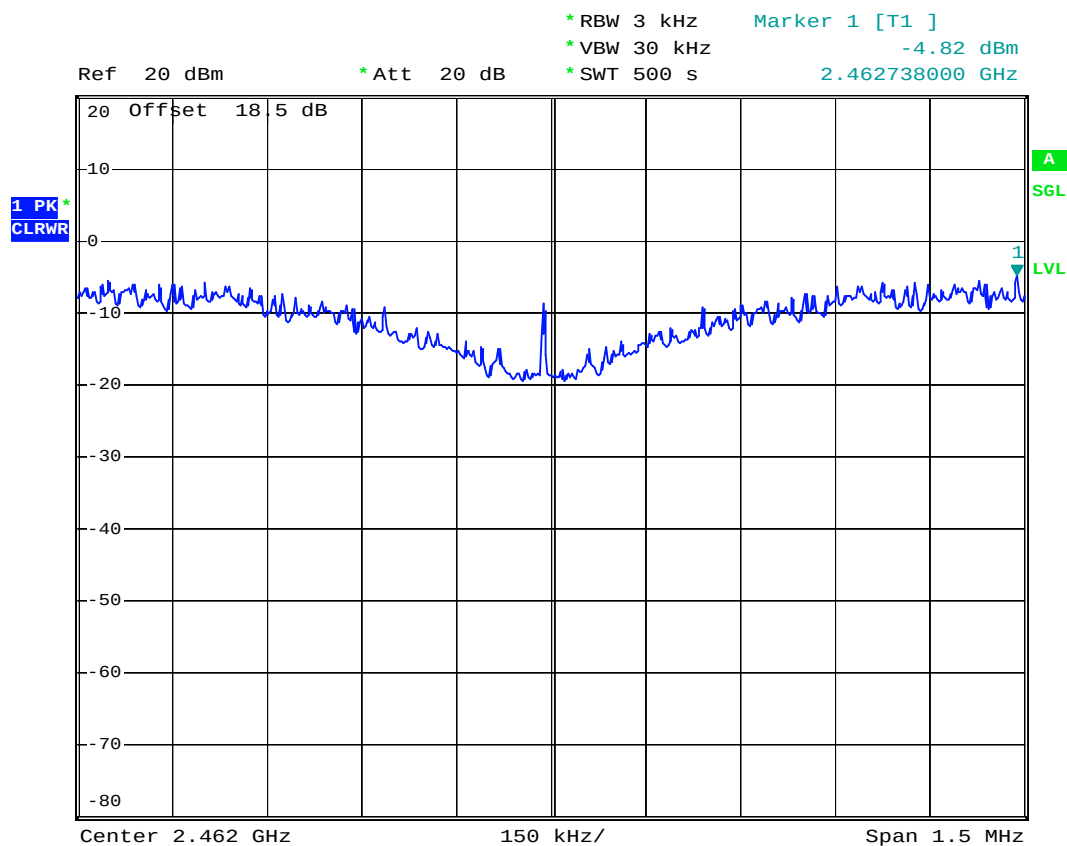
Mode 2



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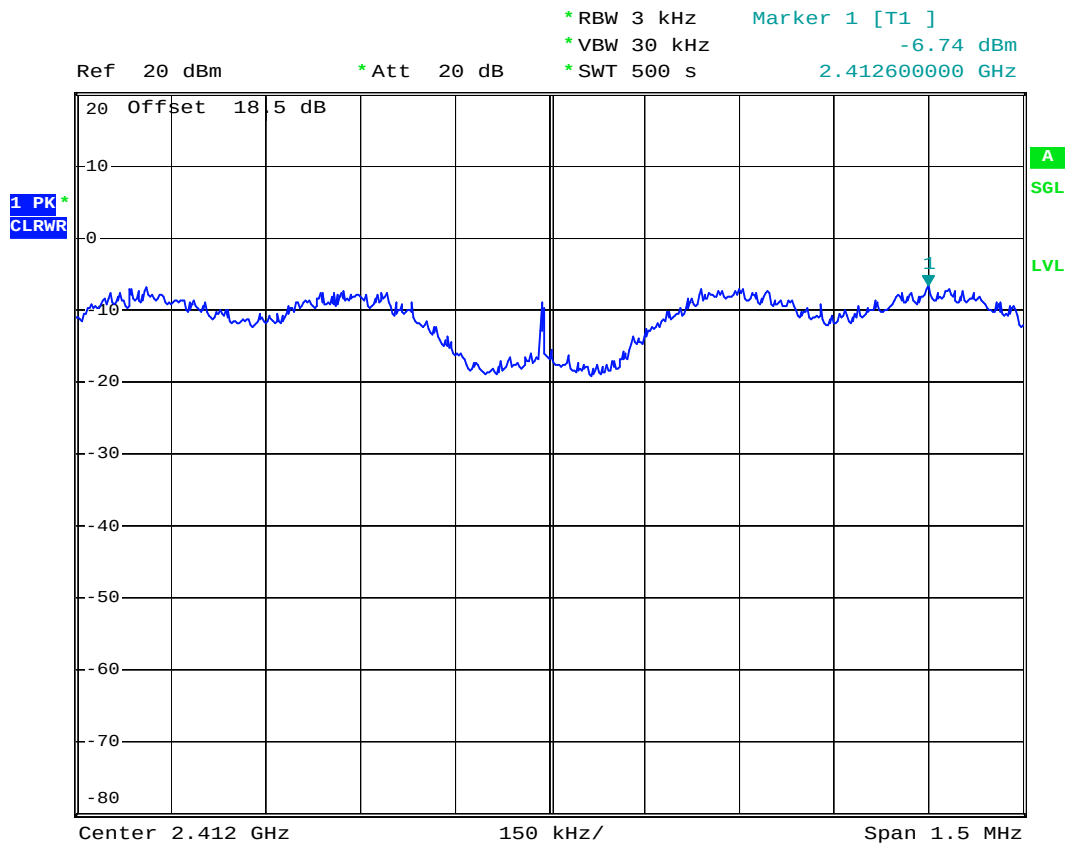
Mode 3



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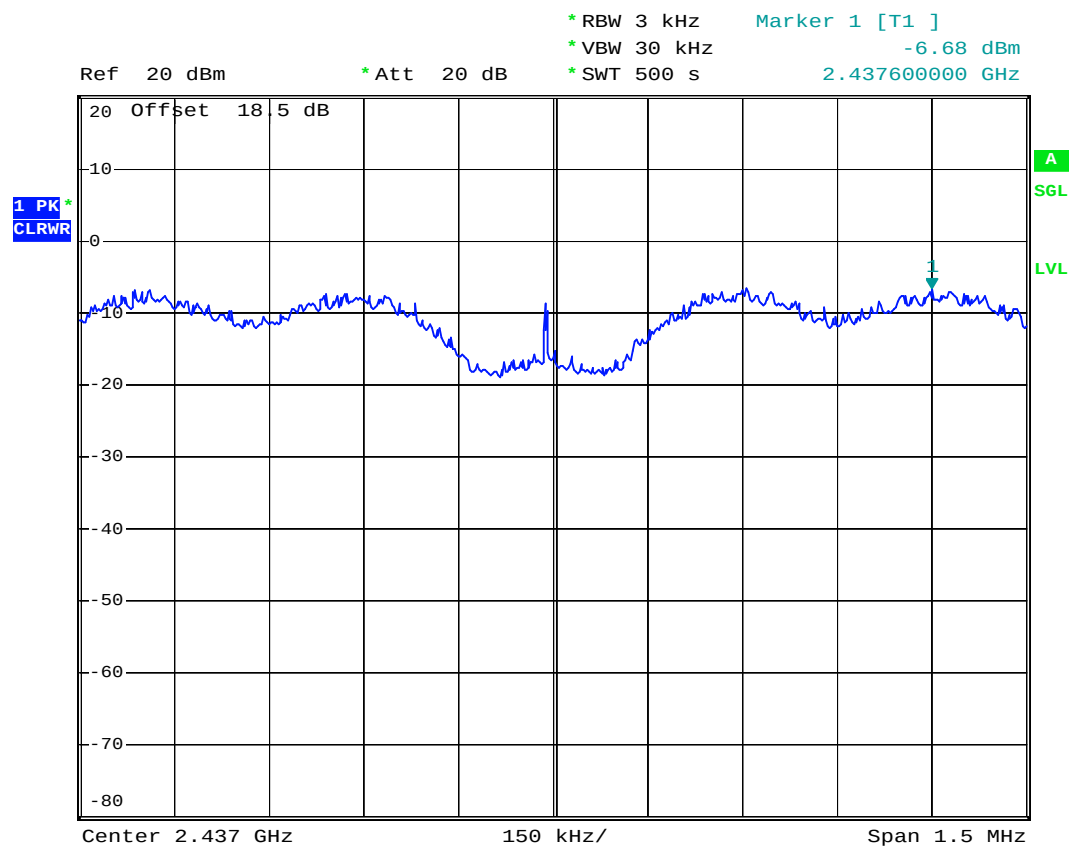
Mode 4



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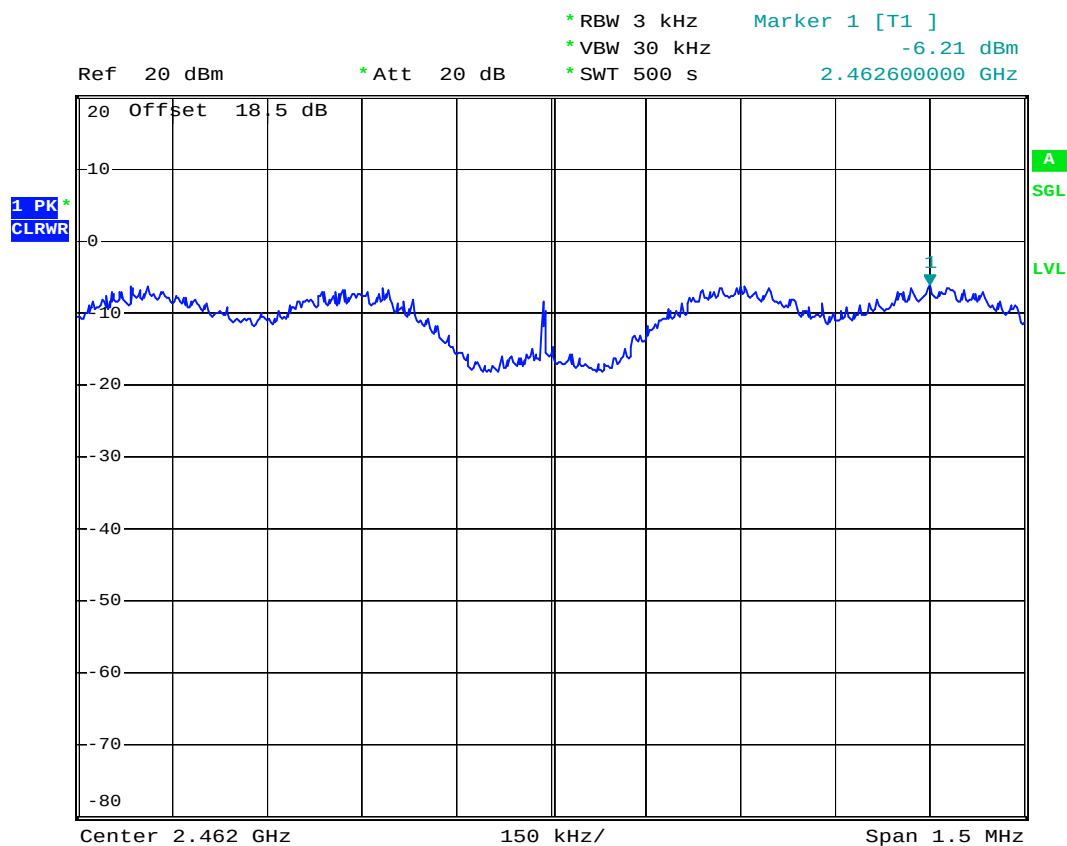
Mode 5



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Mode 6



Date: 16.AUG.2007 21:20:58



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 and BT
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

- Test Result in WLAN lower band (802.11b/g) : PASS
- Test Result in WLAN higher band (802.11b/g) : PASS
- Test Result in BT lower band : PASS
- Test Result in BT higher band : 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
2390.0	59.92	-14.08	74.00	61.37	30.26	3.75	35.46	100	0	Peak
2390.0	51.08	-2.92	54.00	52.53	30.26	3.75	35.46	100	185	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
2387.3	59.70	-14.30	74.00	61.13	30.26	3.75	35.44	100	0	Peak
2387.3	50.30	-3.70	54.00	51.73	30.26	3.75	35.44	100	196	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
2484.6	58.97	-15.03	74.00	60.33	30.29	3.86	35.51	100	0	Peak
2484.6	49.09	-4.91	54.00	50.45	30.29	3.86	35.51	100	26	Average

CH11 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2488.0	49.48	-24.52	74.00	50.83	30.30	3.86	35.51	100	209	Peak
2488.0	40.04	-13.96	54.00	41.39	30.30	3.86	35.51	100	209	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
2390.0	72.56	-1.44	74.00	74.12	29.69	4.26	35.51	100	0	Peak
2390.0	53.66	-0.34	54.00	55.22	29.69	4.26	35.51	100	89	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
2390.0	71.54	-2.46	74.00	72.99	30.26	3.75	35.46	100	0	Peak
2390.0	53.89	-0.11	54.00	55.34	30.26	3.75	35.46	100	194	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
2483.5	66.89	-7.11	74.00	68.25	30.29	3.86	35.51	100	0	Peak
2483.5	46.91	-7.09	54.00	48.27	30.29	3.86	35.51	100	89	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
2483.5	62.02	-11.98	74.00	63.38	30.29	3.86	35.51	100	0	Peak
2483.5	44.30	-9.70	54.00	45.66	30.29	3.86	35.51	100	211	Average

**➤ BT(1Mbps)**

CH00 (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
2390.000	48.09	-25.91	74.00	50.06	28.07	3.74	33.78	100	0	Peak
2390.000	34.02	-19.98	54.00	35.99	28.07	3.74	33.78	100	346	Average

CH00 (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
2390.000	45.49	-28.51	74.00	47.46	28.07	3.74	33.78	100	0	Peak
2390.000	31.02	-22.98	54.00	32.99	28.07	3.74	33.78	109	41	Average

CH78 (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
2483.500	61.60	-12.40	74.00	63.30	28.26	3.84	33.80	100	0	Peak
2483.500	50.64	-3.36	54.00	52.34	28.26	3.84	33.80	100	106	Average

CH78 (Vertical)

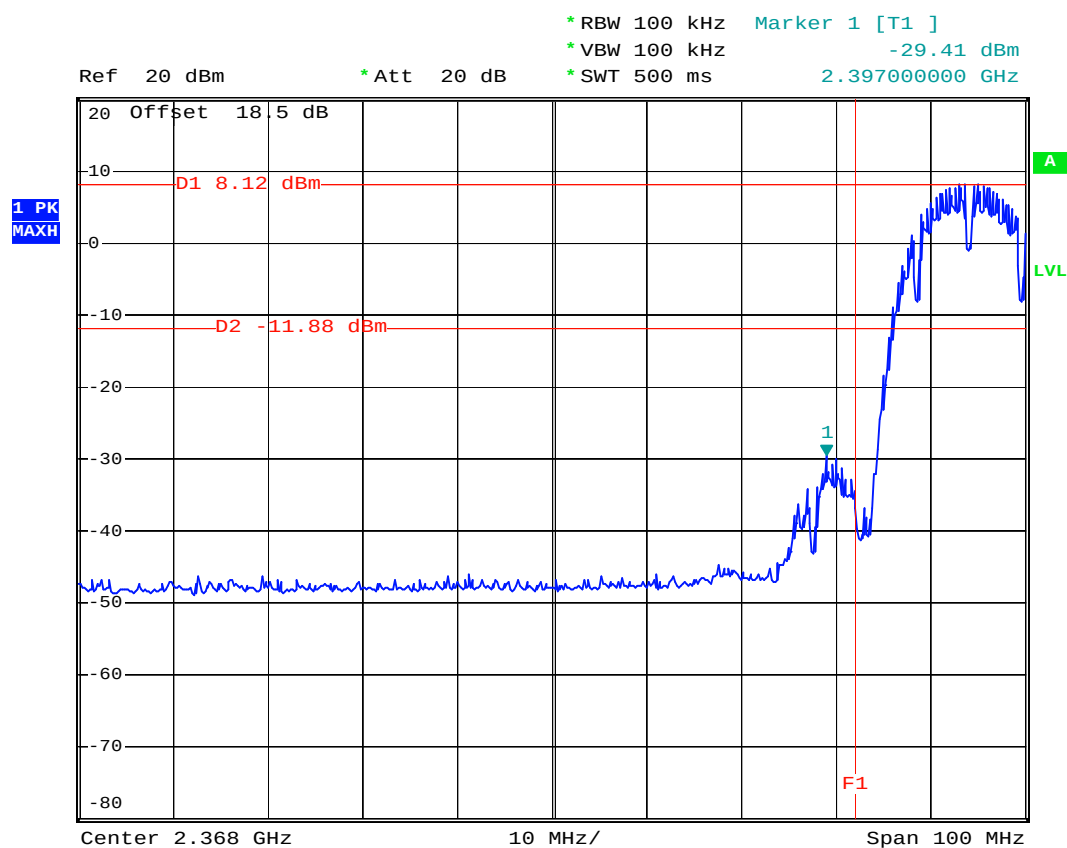
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.500	59.31	-14.69	74.00	61.01	28.26	3.84	33.80	100	0	Peak
2483.500	48.18	-5.82	54.00	49.88	28.26	3.84	33.80	105	35	Average



5.4.5 Band Edge

WLAN 802.11b

CH01

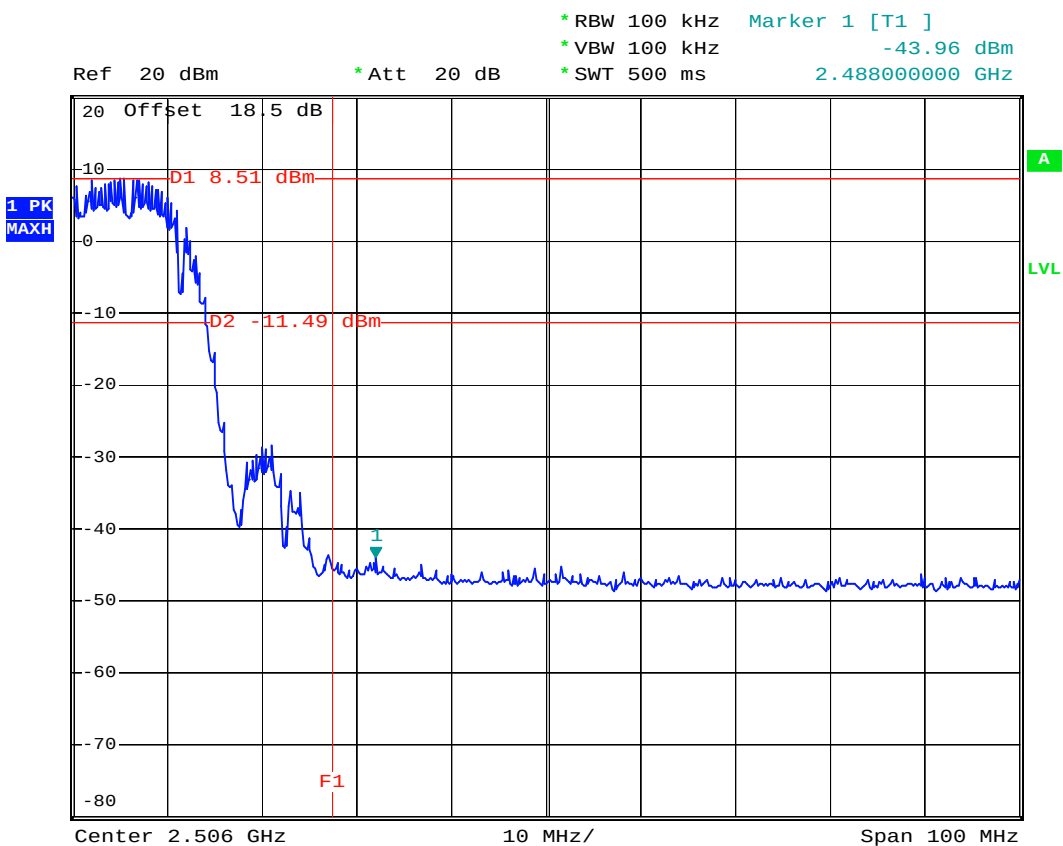


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WLAN 802.11b

CH11

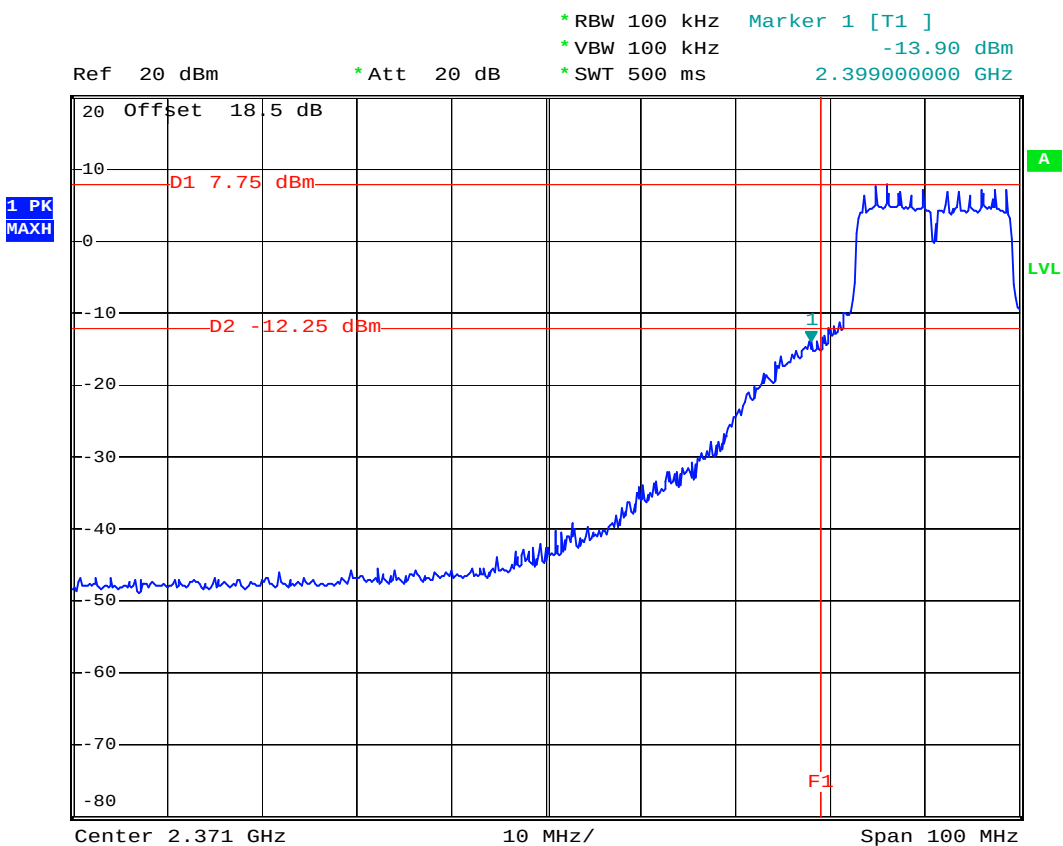


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WLAN 802.11g

CH01

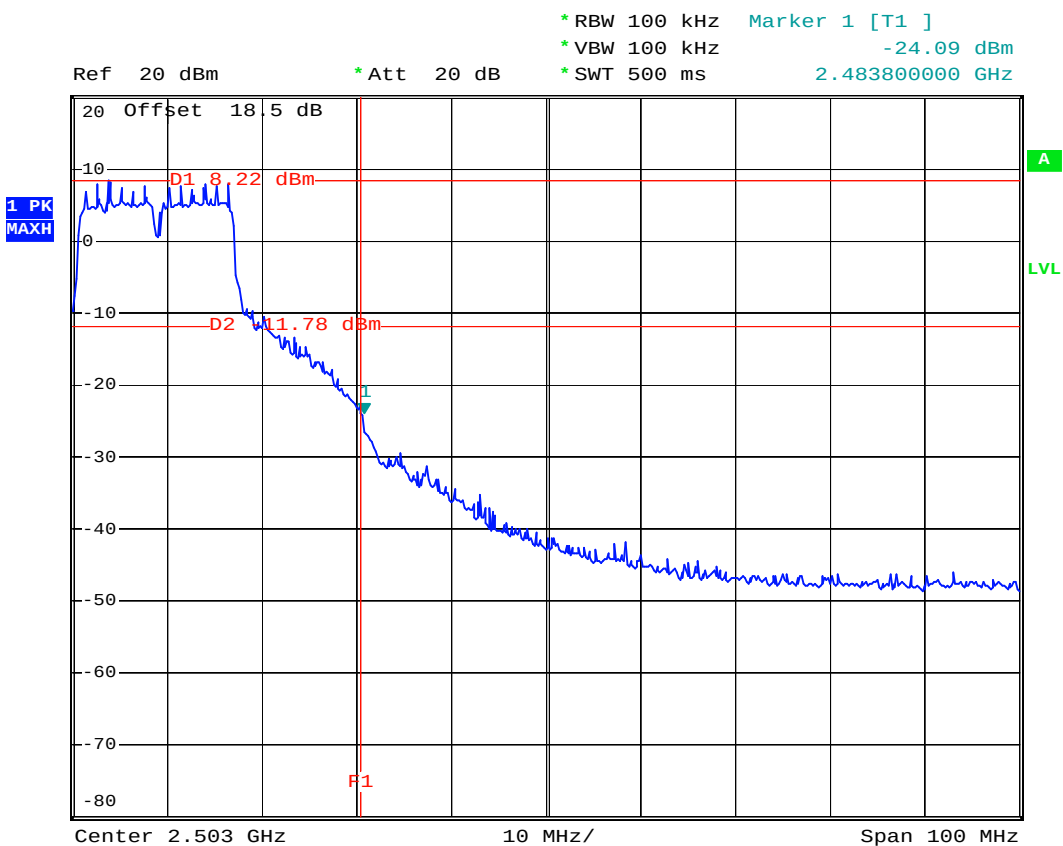


Date: 16.AUG.2007 20:48:25



WLAN 802.11g

CH11

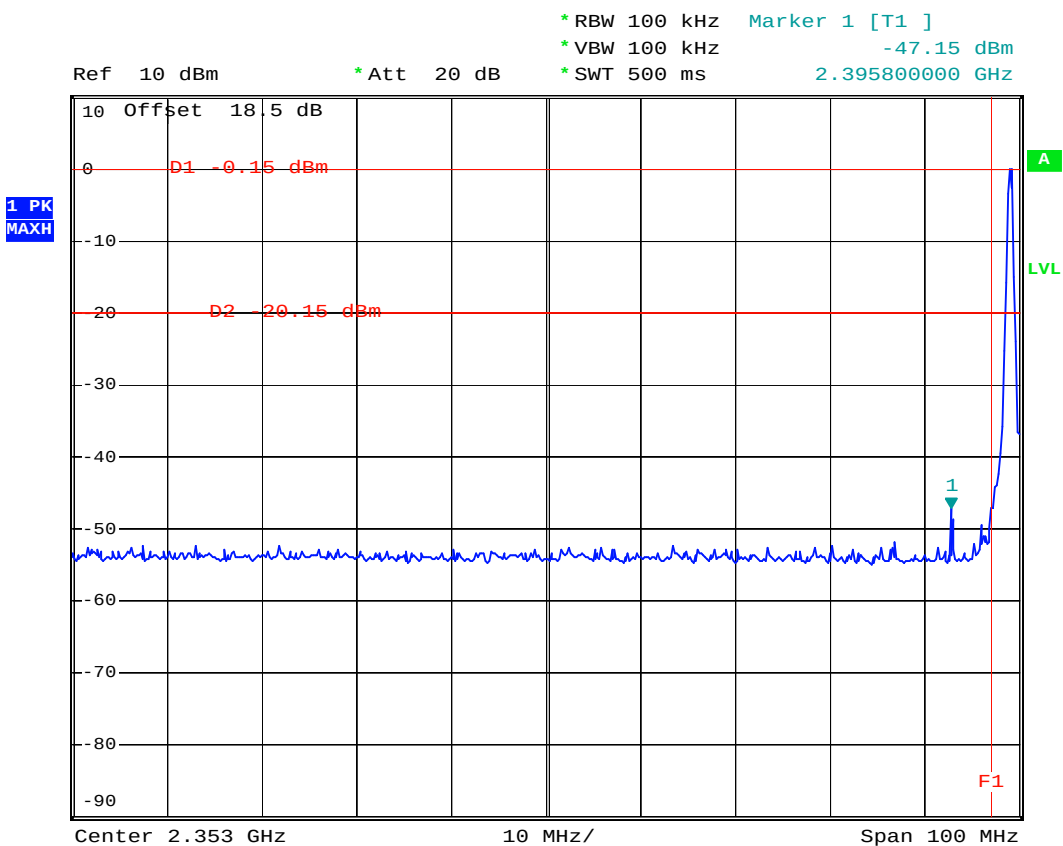


Date: 16.AUG.2007 20:50:31



BT

CH00

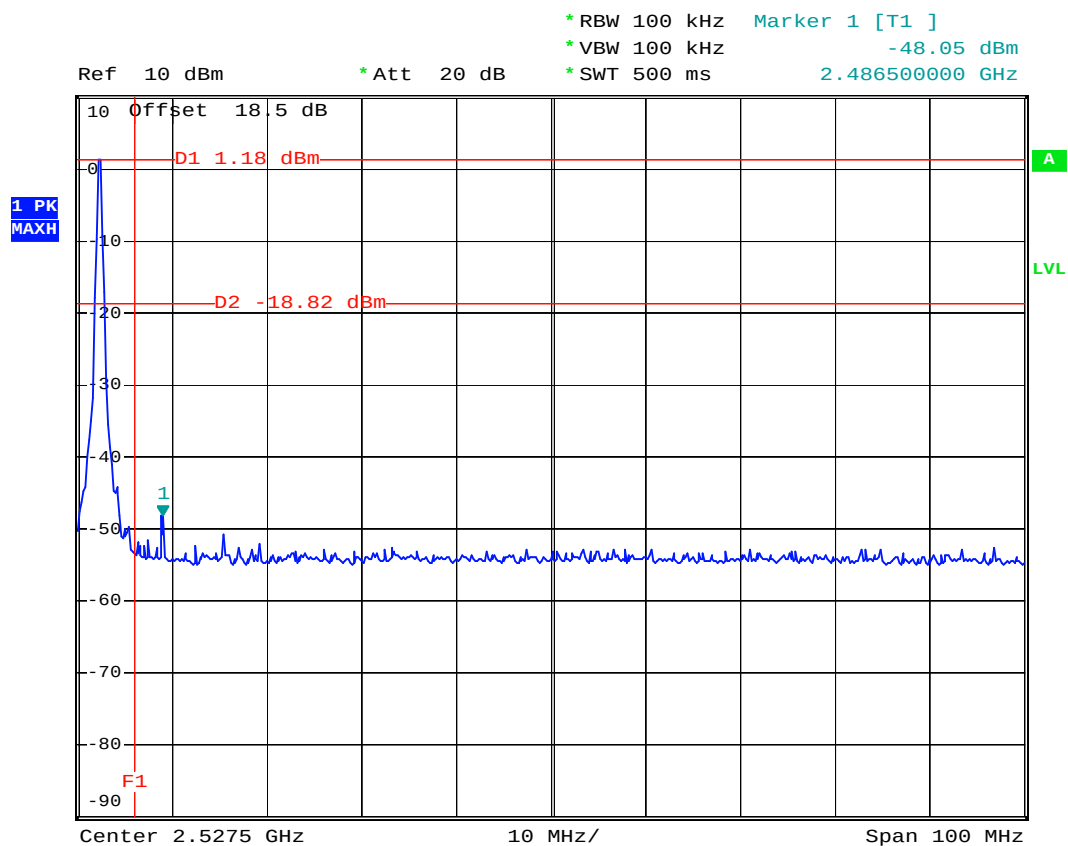


Date: 16.AUG.2007 23:37:27



BT

CH78



Date: 16.AUG.2007 23:57:12

5.5 Hopping Channel Separation

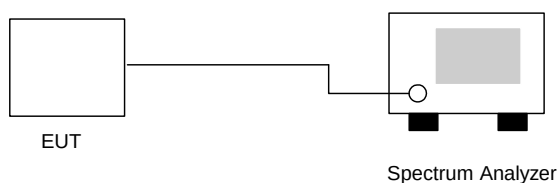
5.5.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.5.2 Test Procedure :

1. The output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Set RBW of spectrum analyzer to $\geq 1\%$ of the span and VBW $\geq$ RBW.
3. The Hopping Channel Separation is defined as the channel is separated with the next channel.

5.5.3 Test Setup Layout :



5.5.4 Test Result : The spectrum analyzer plots are attached as below

- Application Type : BT
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

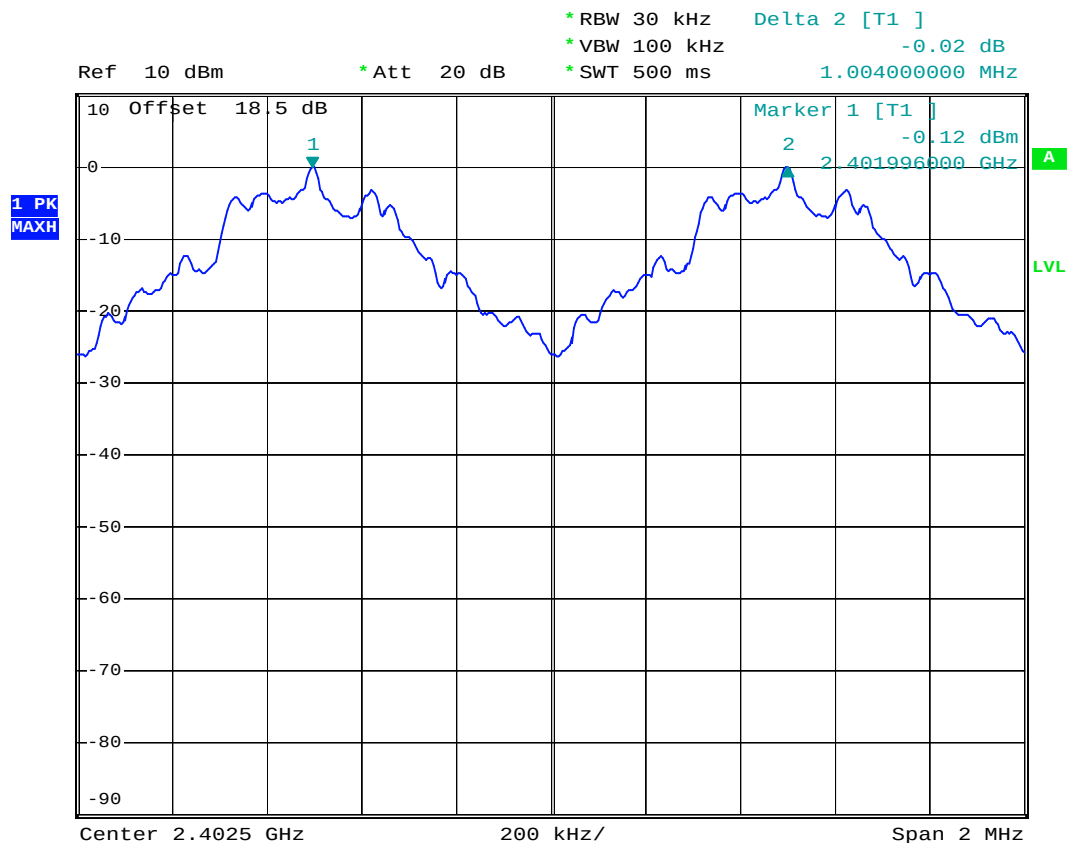
Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.004	0.495	Mode 7
39	2441	1.004	0.495	Mode 8
78	2480	1.004	0.544	Mode 9

Note: Hopping Channel Separation shall be greater 2/3 of 20dB bandwidth. Refer the result of 20dB bandwidth to section 5.7.



5.5.5 Hopping Channel Separation

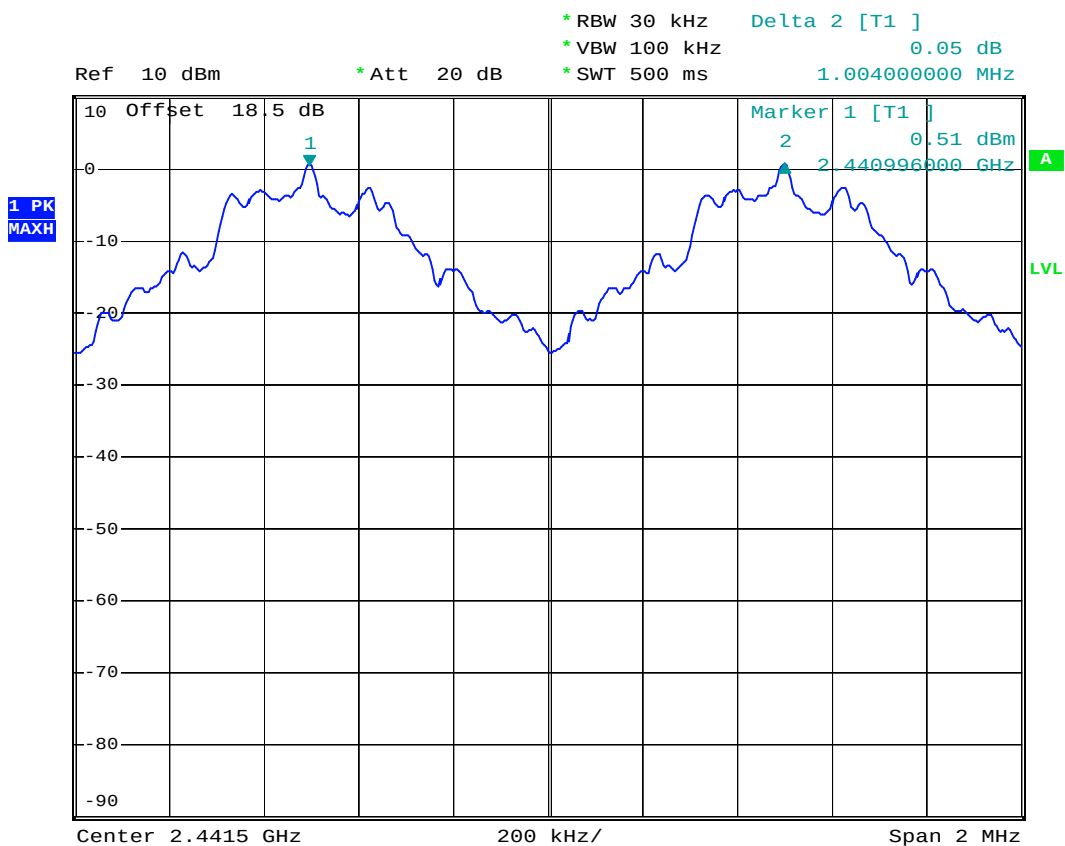
Mode 7



Date: 16.AUG.2007 23:59:26



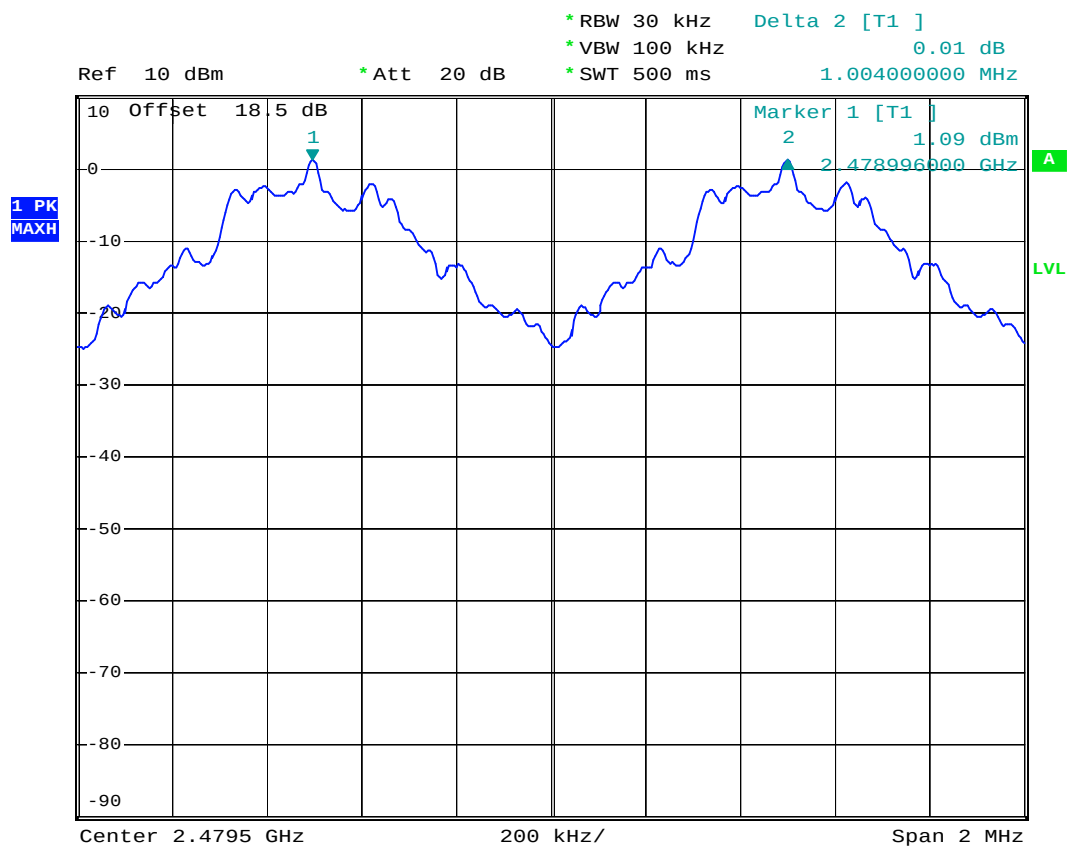
Mode 8



Date: 16.AUG.2007 23:58:52



Mode 9



Date: 16.AUG.2007 23:58:24

5.6 Number of Hopping Frequency

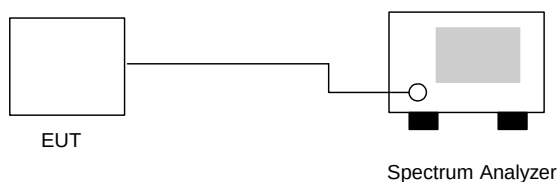
5.6.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.6.2 Test Procedure :

1. The output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
3. The number of hopping frequency used is defined as the device has the numbers of total channel.

5.6.3 Test Setup Layout :



5.6.4 Test Result : See spectrum analyzer plots below

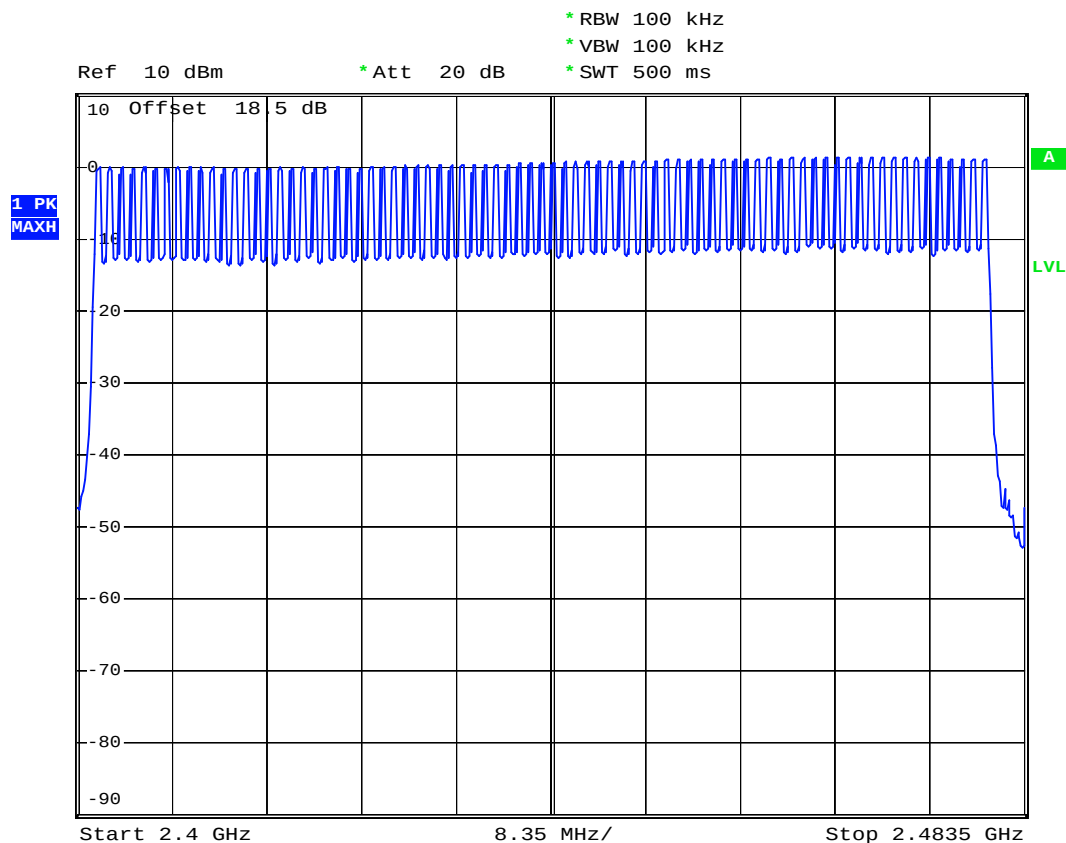
- Application Type : BT(1Mbps)
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

Number of Hopping Frequency (Channel)	Limits (Channel)
79	15



5.6.5 Number of Hopping Frequency

BT



Date: 17.AUG.2007 01:22:53

5.7 Hopping Channel Bandwidth

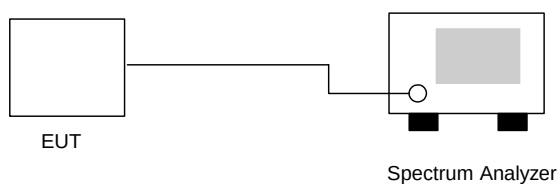
5.7.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.7.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer by a low loss cable.
2. Set RBW of spectrum analyzer to 30kHz and VBW to 300kHz.
3. The Hopping Channel bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20 dB.

5.7.3 Test Setup Layout :



5.7.4 Test Result : See spectrum analyzer plots below

- Application Type : BT
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	0.742	Mode 7
39	2441	0.742	Mode 8
78	2480	0.816	Mode 9



5.7.5 Hopping Channel Bandwidth

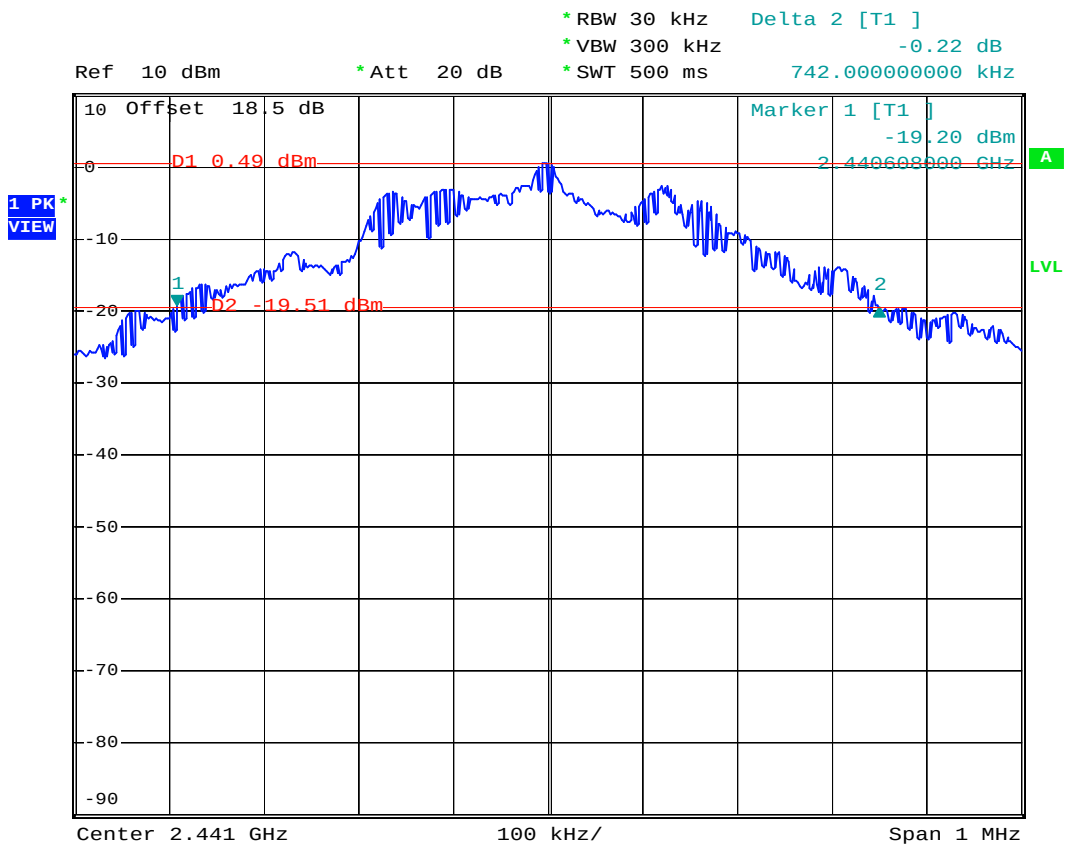
Mode 7



Date: 16.AUG.2007 23:15:11



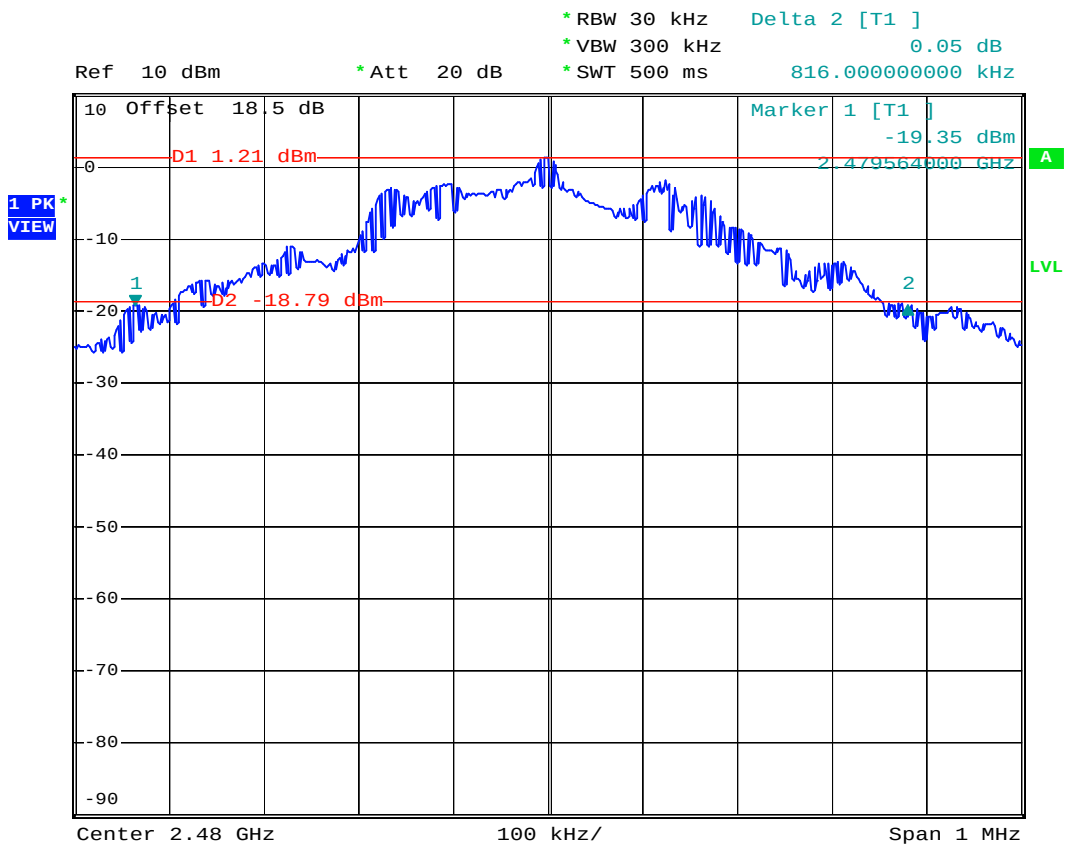
Mode 8



Date: 16.AUG.2007 23:16:53



Mode 9



Date: 16.AUG.2007 23:34:40

5.8 Dwell Time of Each Frequency

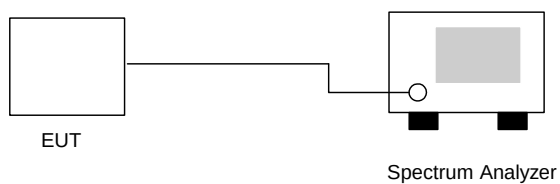
5.8.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.8.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer by a low loss cable.
2. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
3. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
4. The calculate equals $79 * 0.4 * (1600/79) * t$ (t = the time duration of one single pulse)

5.8.3 Test Setup Layout :



**5.8.4 Test Result : See spectrum analyzer plots below**

- Application Type : BT
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.9	448	0.126	0.4
DH3	3.8	1708	0.205	0.4
DH5	3.6	2980	0.339	0.4

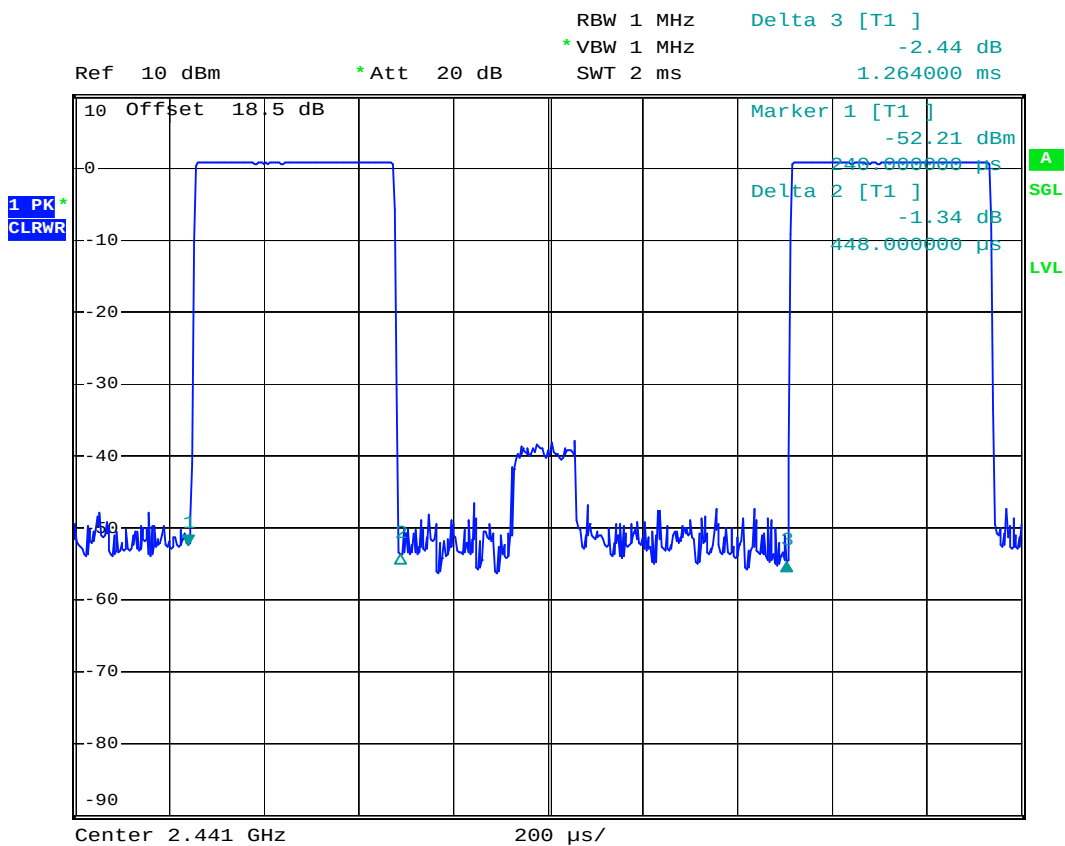
※ Remark:

1. Dwell Time=79(channels) x 0.4(s) x average hopping channel x package transfer time
2. 79 channels come from the Hopping Channel number.
3. Average Hopping Channel = hops/sweep time
4. t: Package Transfer Time(us)

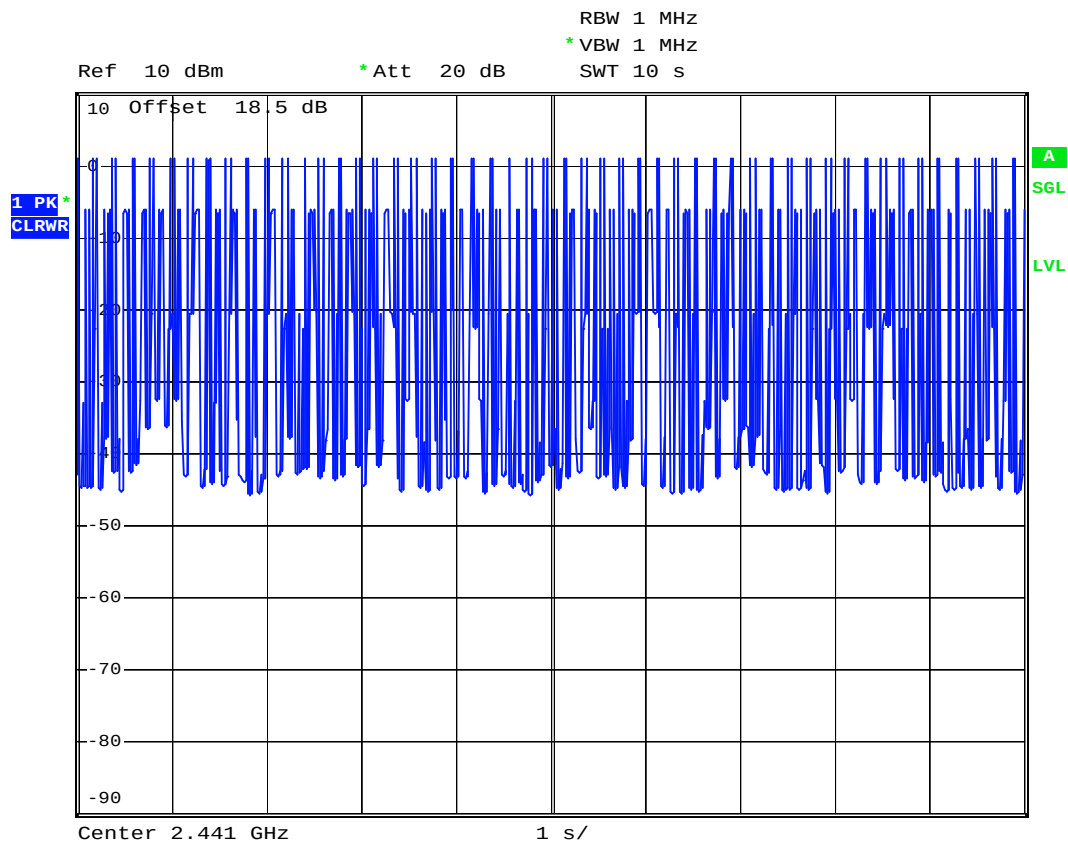


5.8.5 Dwell Time

BT_DH1 (CH39)



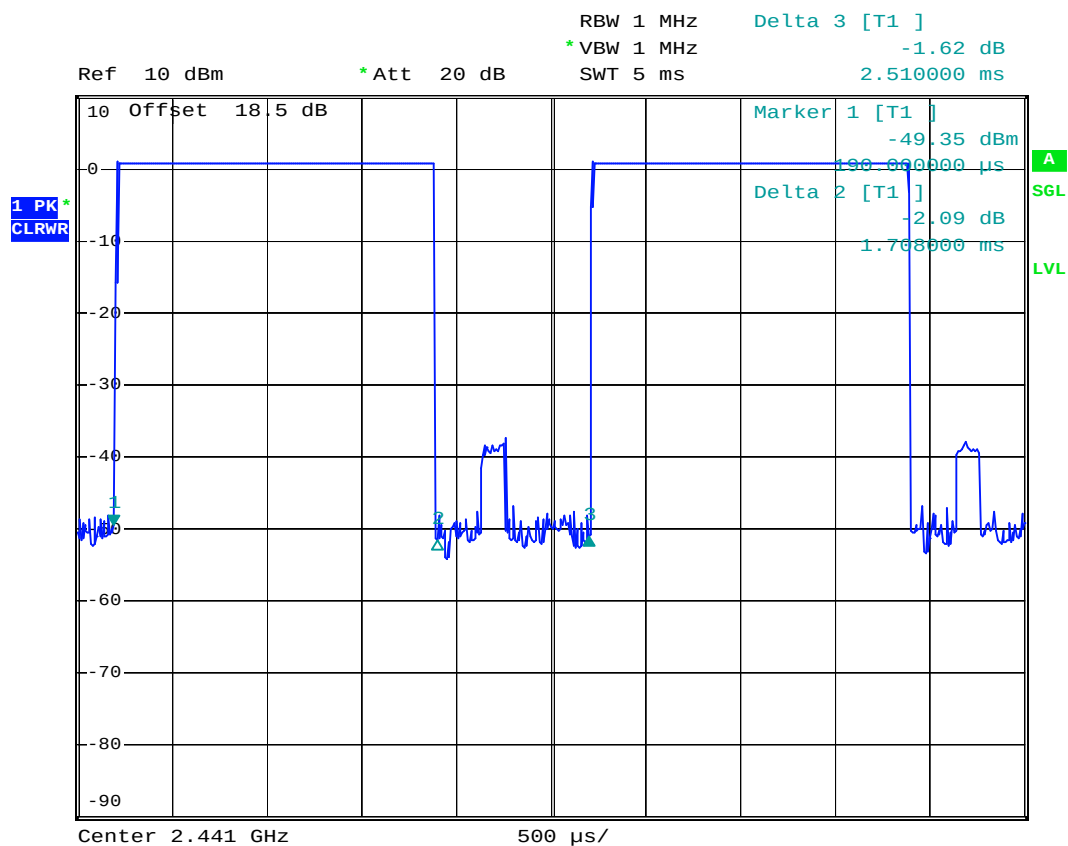
Date: 17.AUG.2007 00:07:35



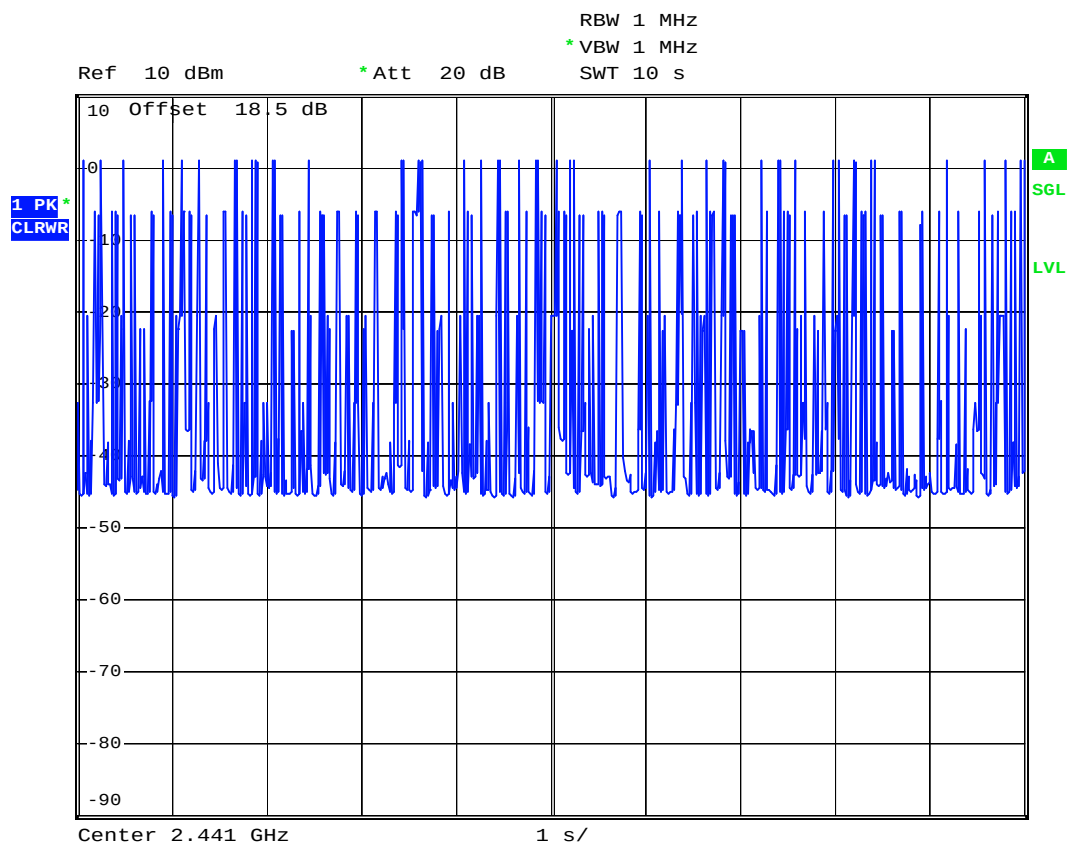
Date: 17.AUG.2007 00:54:11



BT_DH3 (CH39)



Date: 17.AUG.2007 00:11:59

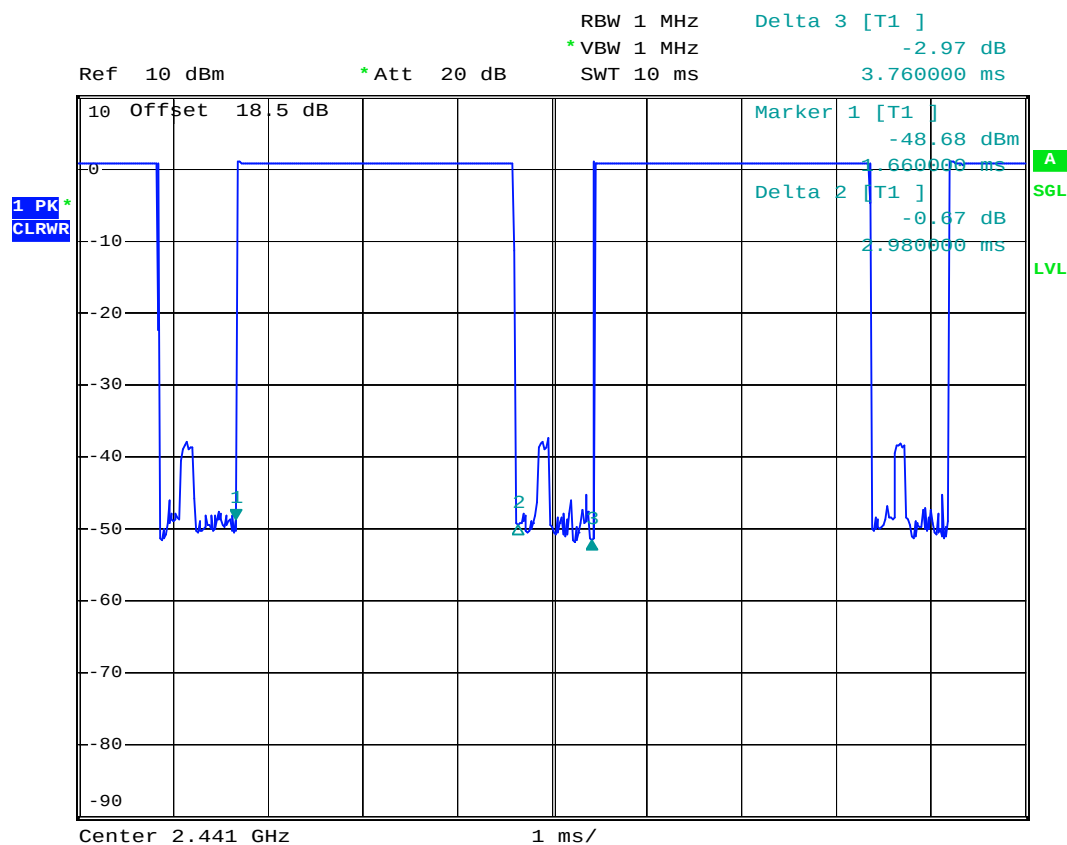


Date: 17.AUG.2007 00:49:11

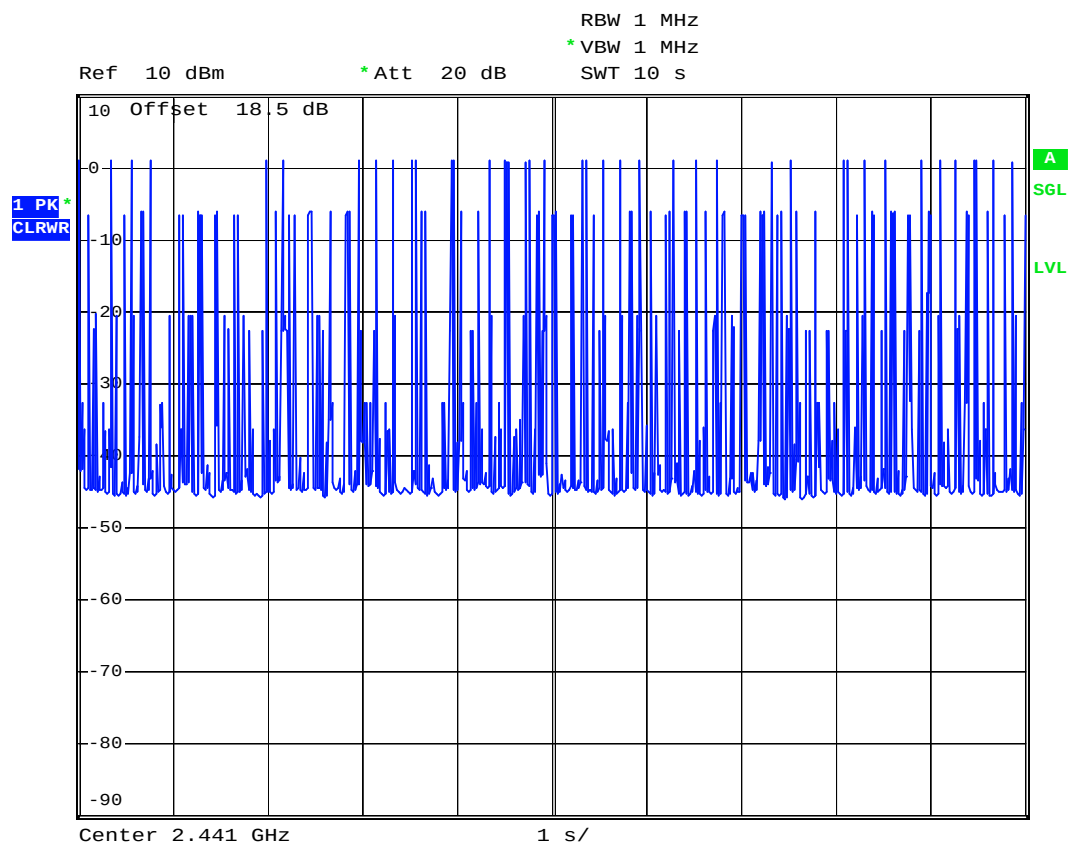


Report No. : FR780314

BT_DH5 (CH39)



Date: 17.AUG.2007 00:22:12



Date: 17.AUG.2007 00:48:33

5.9 Peak Output Power Measurement

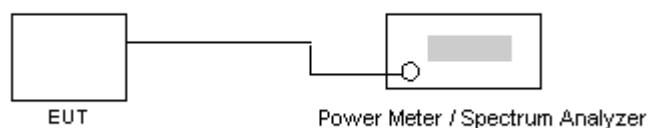
5.9.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.9.2 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. The cable loss has been offset before testing.

5.9.3 Test Setup Layout :



**5.9.4 Test Result :**

- Application Type : WLAN 802.11b/g and BT
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun

WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	19.17	1W/30 dBm
06	2437	19.14	1W/30 dBm
11	2462	19.66	1W/30 dBm

WLAN 802.11g

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	17.15	1W/30 dBm
06	2437	17.22	1W/30 dBm
11	2462	17.60	1W/30 dBm

BT

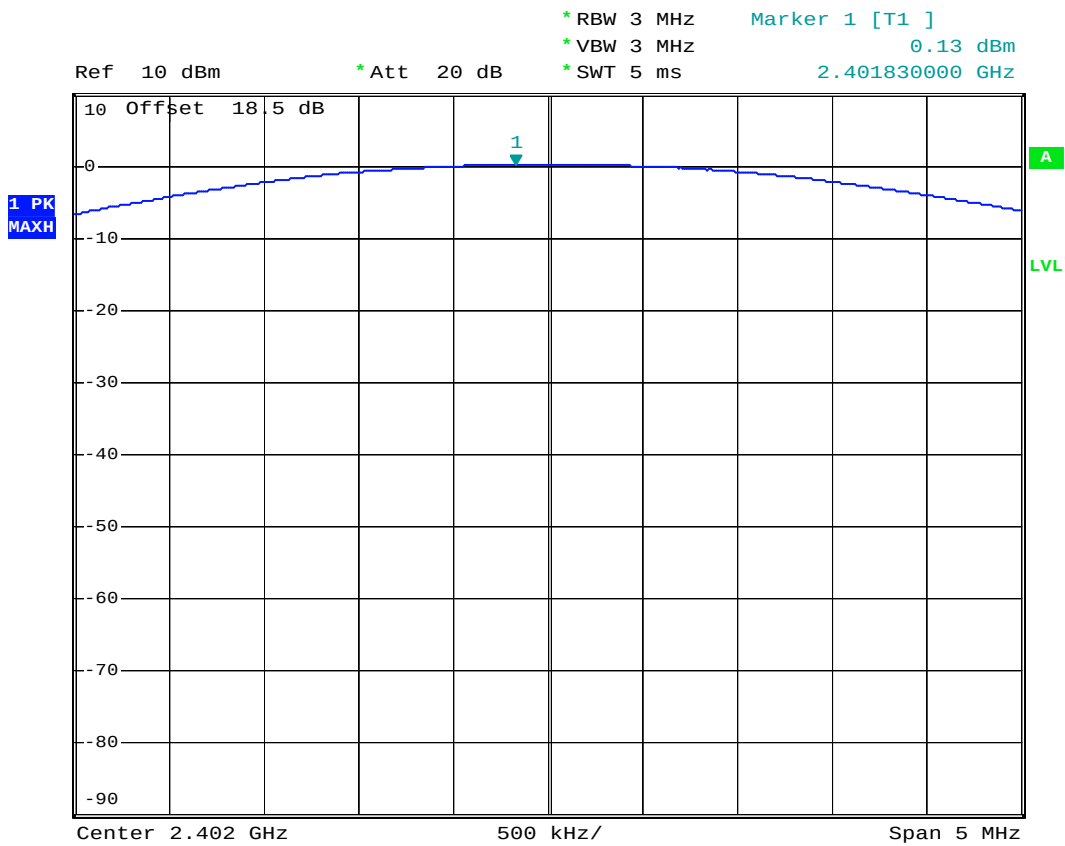
Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	0.13	1W/30 dBm
39	2441	0.87	1W/30 dBm
78	2480	1.40	1W/30 dBm



5.9.5 Output Power

BT

Mode : CH00 (2402MHz)

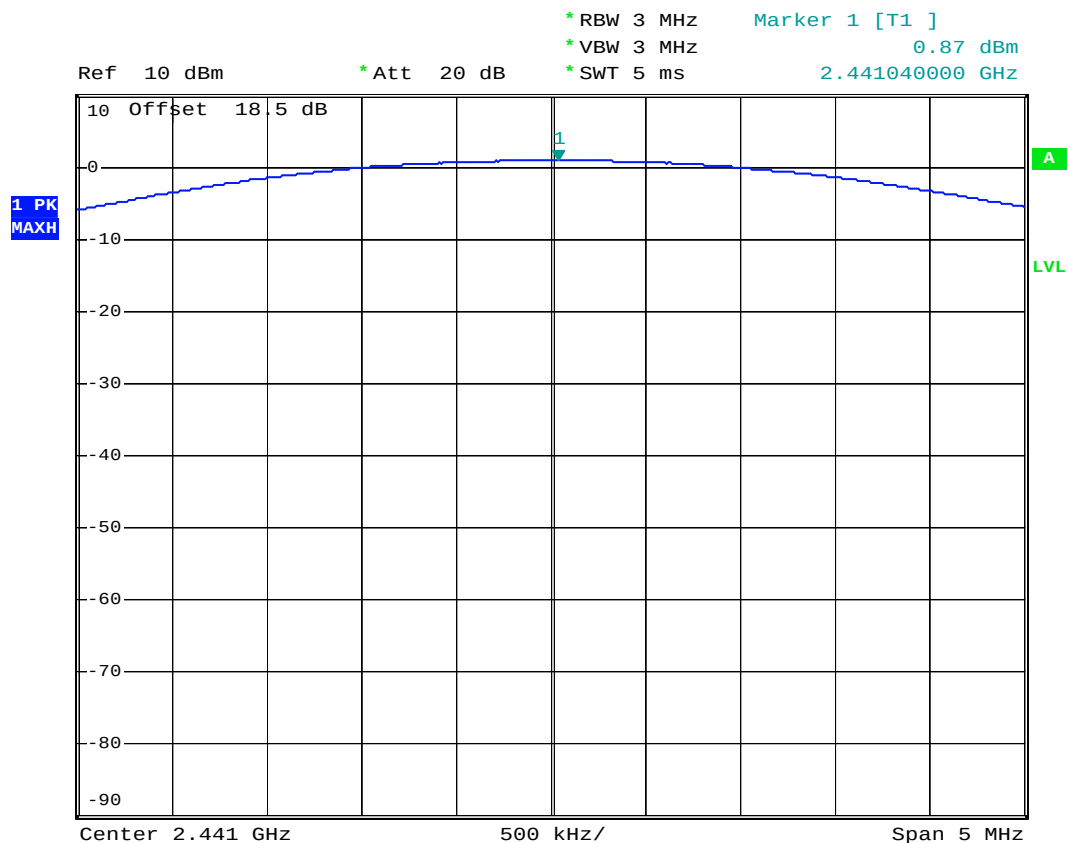


Date: 16.AUG.2007 22:47:10



BT

Mode : CH39 (2441MHz)

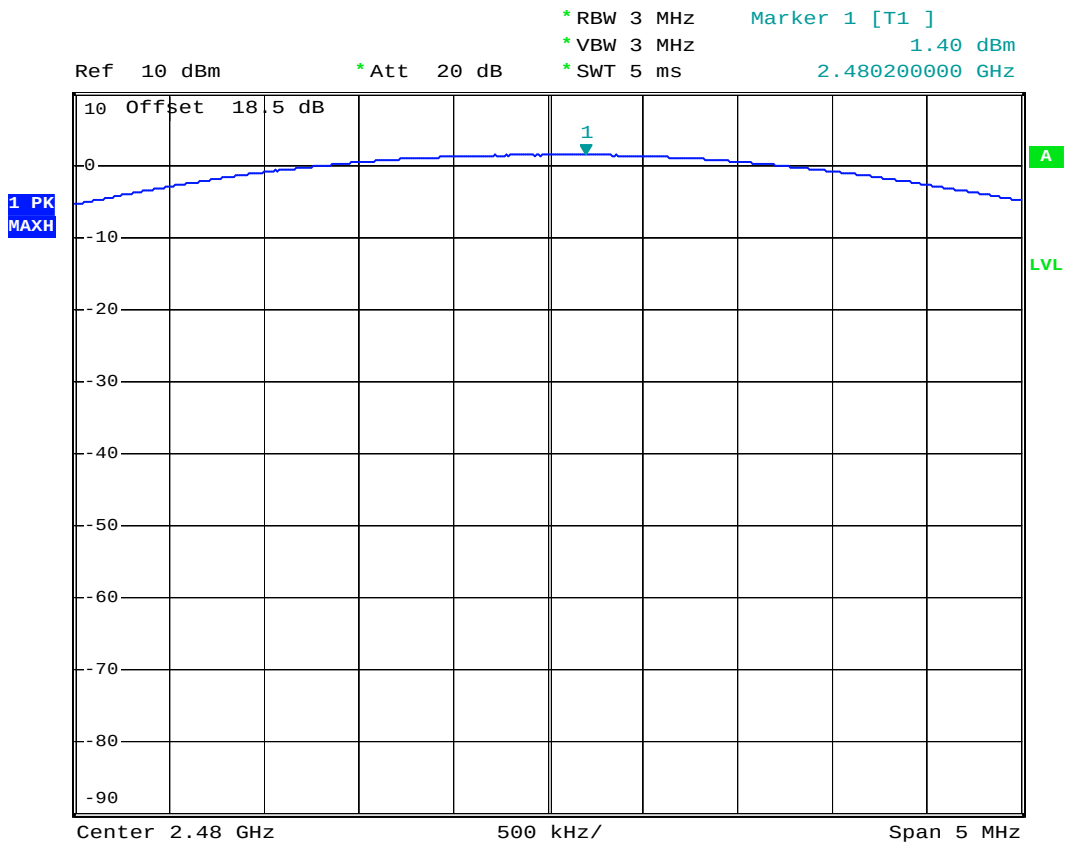


Date: 16.AUG.2007 22:46:19



BT

Mode : CH78 (2480MHz)



Date: 16.AUG.2007 22:46:46



5.10 Conducted Emission

5.10.1 Measuring Instruments

As described in chapter 6 of this test Report.

The receiver setting :

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

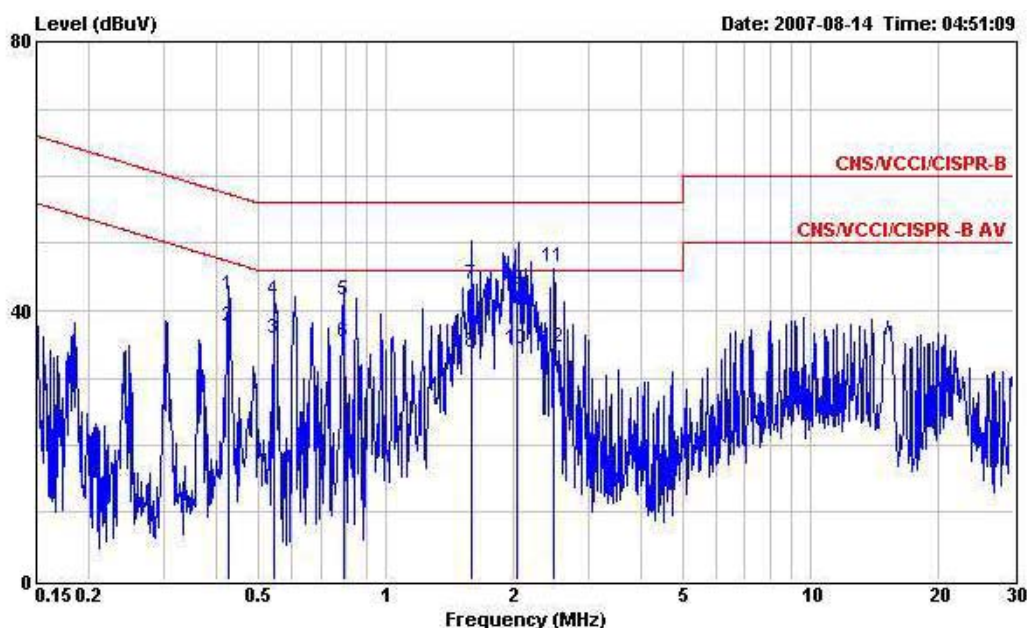
- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power port of a line impedance stabilization network (LISN).
- All the support units are connected to the other LISN.
- The LISN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



5.10.3 Test Data

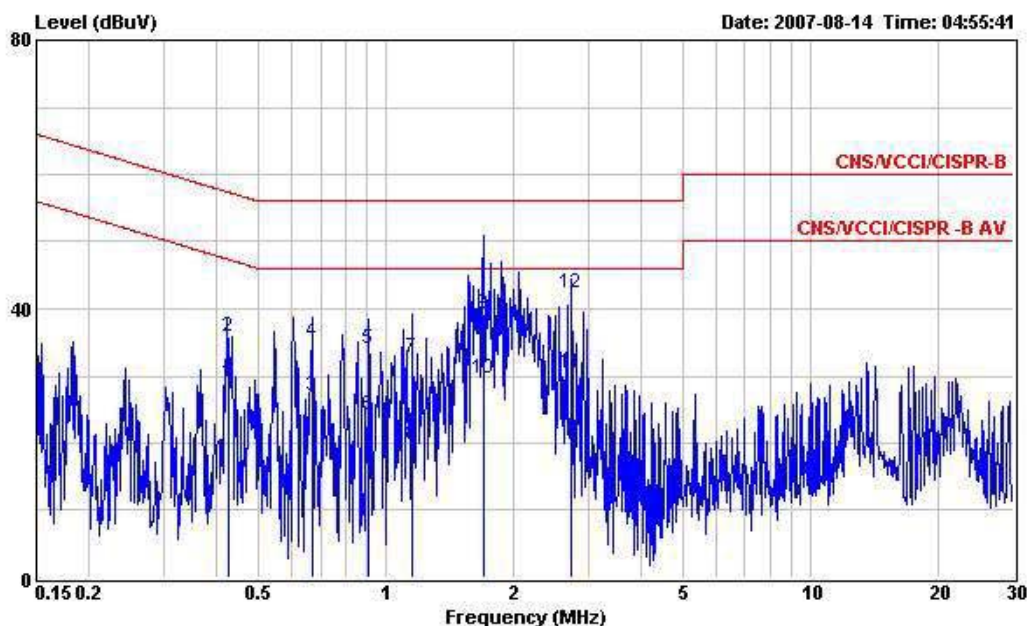
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Enginner : Sun
- Test Mode : Mode 1

■ 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 : Pocket PC phone For FCC
 Power : 120Vac/60Hz
 Model : FR 780314
 Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 : +MPEG4+Adaptor1+Battery1
 Sample : A

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.426	42.25	-15.08	57.33	42.10	0.05	0.10	QP
2	0.426	37.62	-9.71	47.33	37.47	0.05	0.10	Average
3	0.546	35.74	-10.26	46.00	35.56	0.08	0.10	Average
4	0.546	41.67	-14.33	56.00	41.49	0.08	0.10	QP
5	0.792	41.59	-14.41	56.00	41.35	0.14	0.10	QP
6	0.792	35.29	-10.71	46.00	35.05	0.14	0.10	Average
7	1.590	43.94	-12.06	56.00	43.62	0.22	0.10	QP
8	1.590	33.75	-12.25	46.00	33.43	0.22	0.10	Average
9	2.040	43.20	-12.80	56.00	42.86	0.24	0.10	QP
10	2.040	34.16	-11.84	46.00	33.82	0.24	0.10	Average
11	2.490	46.53	-9.47	56.00	46.19	0.21	0.13	QP
12	2.490	34.60	-11.40	46.00	34.26	0.21	0.13	Average



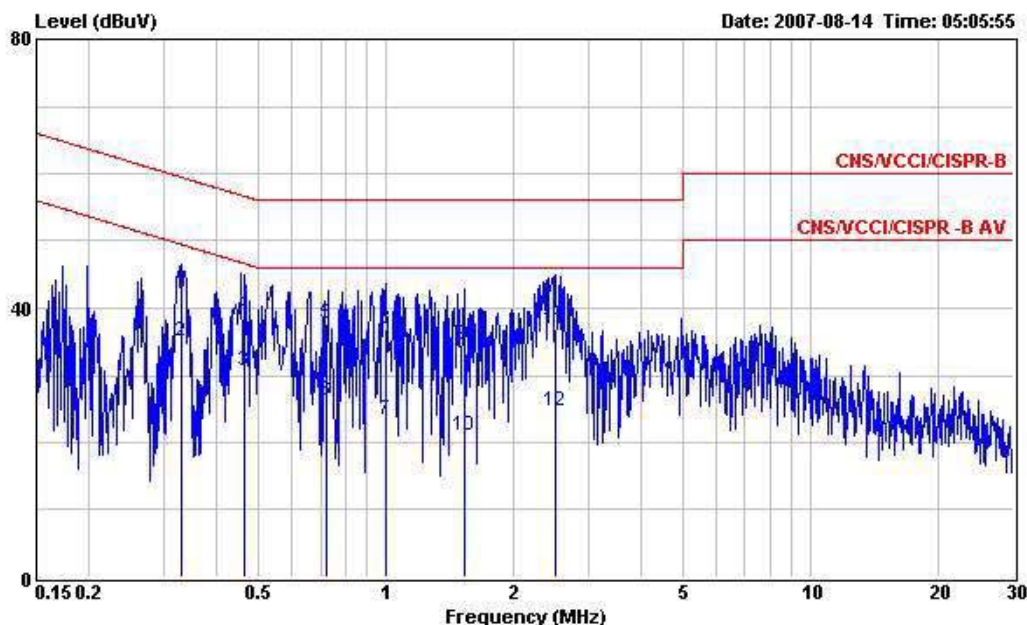
Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
 EUT : Pocket PC phone For FCC
 Power : 120Vac/60Hz
 Model : FR 780314
 Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 : +MPEG4+Adaptor1+Battery1
 Sample : A

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.425	29.15	-18.20	47.35	29.00	0.05	0.10	Average
2	0.425	35.85	-21.50	57.35	35.70	0.05	0.10	QP
3	0.668	27.06	-18.94	46.00	26.85	0.11	0.10	Average
4	0.668	34.98	-21.02	56.00	34.77	0.11	0.10	QP
5	0.909	34.05	-21.95	56.00	33.79	0.16	0.10	QP
6	0.909	24.28	-21.72	46.00	24.02	0.16	0.10	Average
7	1.153	32.62	-23.38	56.00	32.34	0.18	0.10	QP
8	1.153	19.77	-26.23	46.00	19.49	0.18	0.10	Average
9	1.700	39.17	-16.83	56.00	38.85	0.22	0.10	QP
10	1.700	29.65	-16.35	46.00	29.33	0.22	0.10	Average
11	2.732	30.44	-15.56	46.00	30.14	0.20	0.10	Average
12	2.732	42.44	-13.56	56.00	42.14	0.20	0.10	QP



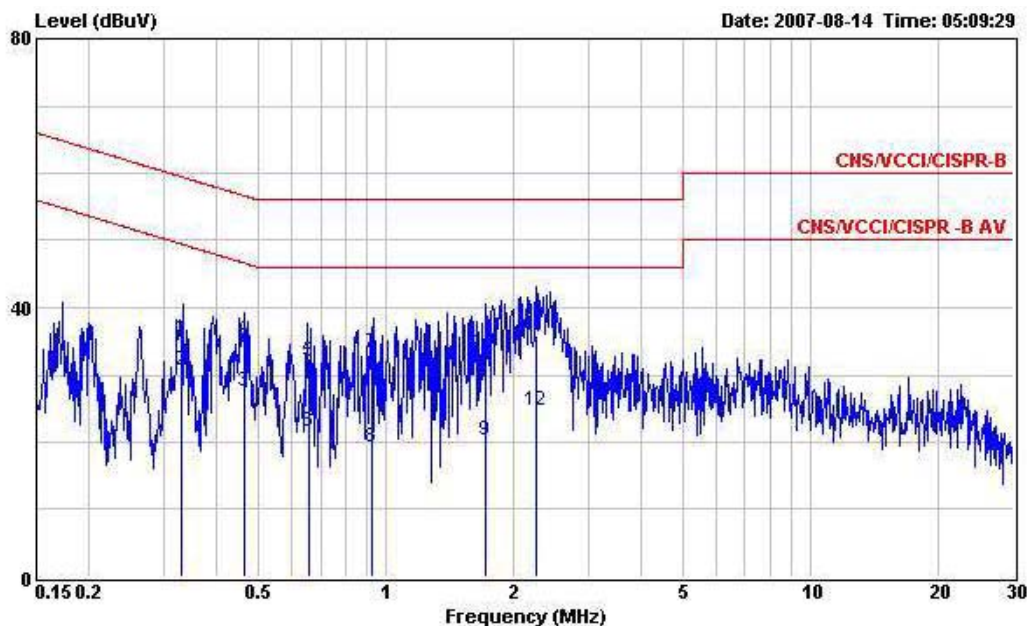
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 2

■ 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 : Pocket PC phone For FCC
 Power : 120Vac/60Hz
 Model : FR 780314
 Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 : +MPEG4+Adaptor2+Battery1
 Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.328	41.98	-17.51	59.49	41.82	0.06	0.10	QP
2	0.328	35.06	-14.43	49.49	34.90	0.06	0.10	Average
3	0.463	30.76	-15.88	46.64	30.60	0.06	0.10	Average
4	0.463	38.98	-17.66	56.64	38.82	0.06	0.10	QP
5	0.723	37.66	-18.34	56.00	37.44	0.12	0.10	QP
6	0.723	26.27	-19.73	46.00	26.05	0.12	0.10	Average
7	0.994	23.46	-22.54	46.00	23.19	0.17	0.10	Average
8	0.994	36.77	-19.23	56.00	36.50	0.17	0.10	QP
9	1.527	34.49	-21.51	56.00	34.18	0.21	0.10	QP
10	1.527	21.03	-24.97	46.00	20.72	0.21	0.10	Average
11	2.500	36.91	-19.09	56.00	36.57	0.21	0.13	QP
12	2.500	24.70	-21.30	46.00	24.36	0.21	0.13	Average



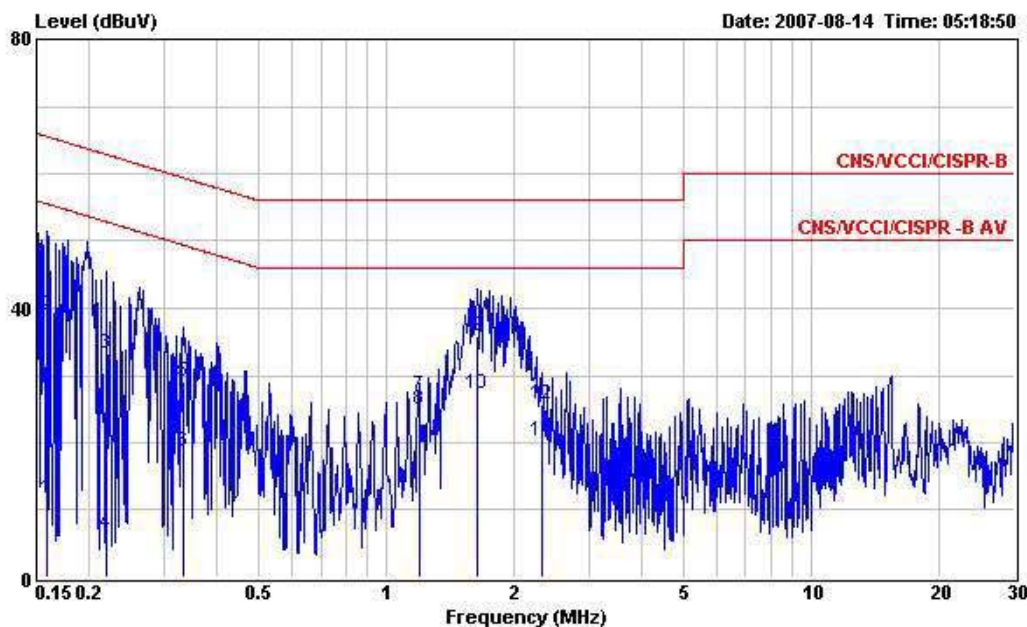
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 :MPEG4+Adaptor2+Battery1
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.328	35.28	-24.22	59.50	35.12	0.06	0.10	QP
2	0.328	30.58	-18.92	49.50	30.42	0.06	0.10	Average
3	0.464	27.57	-19.05	46.62	27.41	0.06	0.10	Average
4	0.464	35.38	-21.24	56.62	35.22	0.06	0.10	QP
5	0.656	32.06	-23.94	56.00	31.85	0.11	0.10	QP
6	0.656	21.44	-24.56	46.00	21.23	0.11	0.10	Average
7	0.929	33.18	-22.82	56.00	32.92	0.16	0.10	QP
8	0.929	19.34	-26.66	46.00	19.08	0.16	0.10	Average
9	1.710	20.18	-25.82	46.00	19.86	0.22	0.10	Average
10	1.710	33.60	-22.40	56.00	33.28	0.22	0.10	QP
11	2.260	35.74	-20.26	56.00	35.41	0.23	0.10	QP
12	2.260	24.68	-21.32	46.00	24.35	0.23	0.10	Average



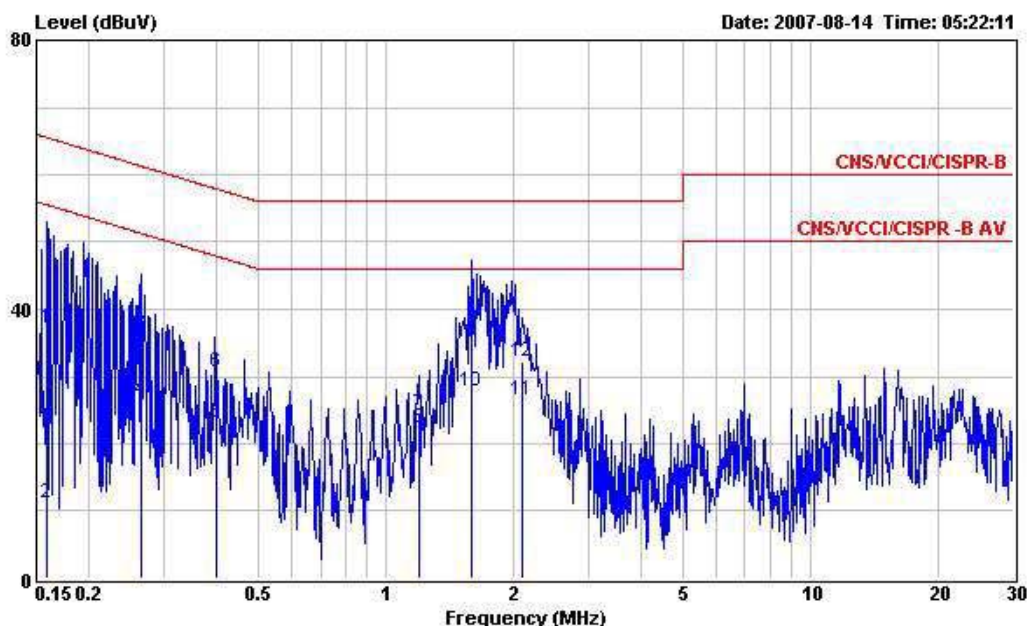
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 3

■ 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 : Pocket PC phone For FCC
Power : From Notebook
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 :+MPEG4+USB Link+Battery1
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.159	11.73	-43.79	55.52	11.55	0.08	0.10	Average
2	0.159	38.93	-26.59	65.52	38.75	0.08	0.10	QP
3	0.220	33.14	-29.68	62.82	32.95	0.09	0.10	QP
4	0.220	6.48	-46.34	52.82	6.29	0.09	0.10	Average
5	0.334	29.22	-30.13	59.35	29.06	0.06	0.10	QP
6	0.334	18.68	-30.67	49.35	18.52	0.06	0.10	Average
7	1.190	26.89	-29.11	56.00	26.60	0.19	0.10	QP
8	1.190	24.96	-21.04	46.00	24.67	0.19	0.10	Average
9	1.630	35.88	-20.12	56.00	35.56	0.22	0.10	QP
10	1.630	27.38	-18.62	46.00	27.06	0.22	0.10	Average
11	2.320	20.30	-25.70	46.00	19.96	0.22	0.12	Average
12	2.320	25.64	-30.36	56.00	25.30	0.22	0.12	QP



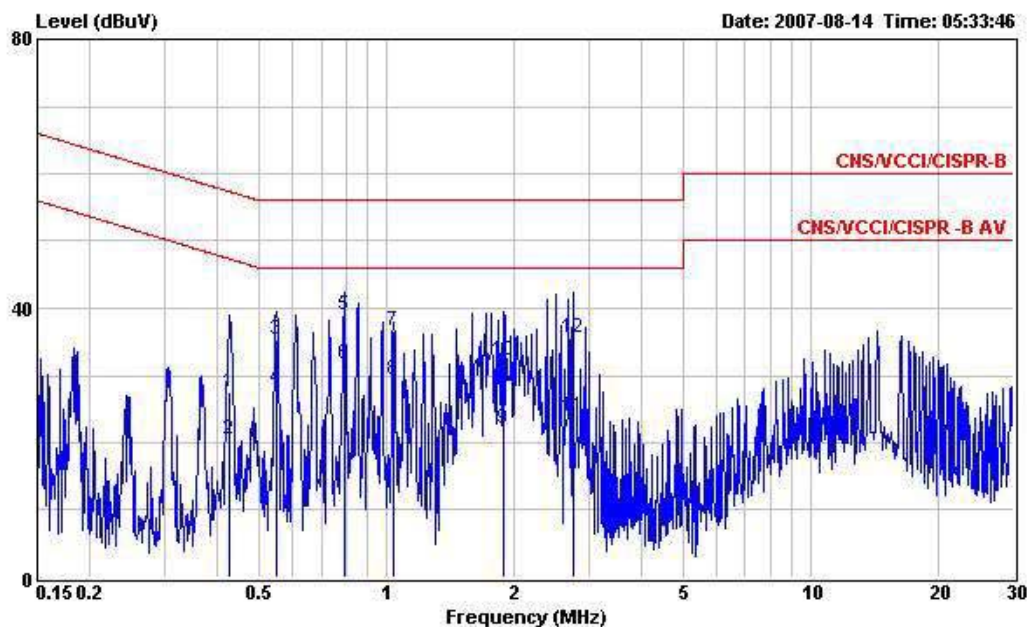
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : From Notebook
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 :+MPEG4+USB Link+Battery1
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.159	37.18	-28.34	65.52	37.00	0.08	0.10	QP
2	0.159	11.29	-44.23	55.52	11.11	0.08	0.10	Average
3	0.264	36.36	-24.94	61.30	36.18	0.08	0.10	QP
4	0.264	26.53	-24.77	51.30	26.35	0.08	0.10	Average
5	0.397	23.02	-24.89	47.91	22.88	0.04	0.10	Average
6	0.397	30.61	-27.30	57.91	30.47	0.04	0.10	QP
7	1.192	24.50	-31.50	56.00	24.21	0.19	0.10	QP
8	1.192	22.28	-23.72	46.00	21.99	0.19	0.10	Average
9	1.590	35.12	-20.88	56.00	34.80	0.22	0.10	QP
10	1.590	27.68	-18.32	46.00	27.36	0.22	0.10	Average
11	2.090	26.45	-19.55	46.00	26.12	0.23	0.10	Average
12	2.090	32.31	-23.69	56.00	31.98	0.23	0.10	QP



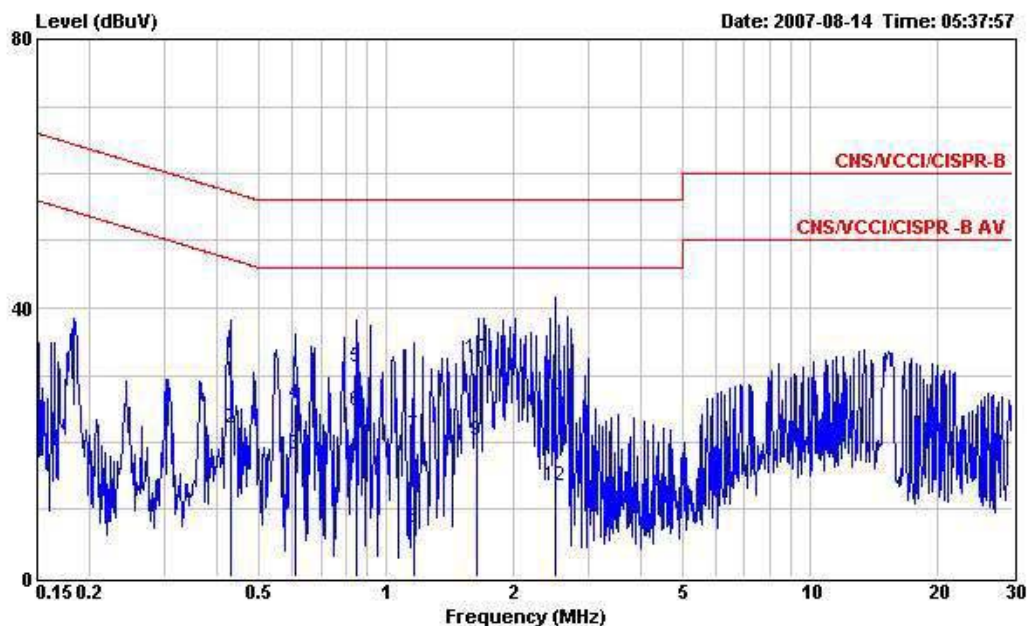
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 4

■ 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 : Pocket PC phone For FCC
 Power : 120Vac/60Hz
 Model : FR 780314
 Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 : +MPEG4+Adaptor1+Battery2
 Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.426	27.47	-29.86	57.33	27.32	0.05	0.10	QP
2	0.426	20.58	-26.75	47.33	20.43	0.05	0.10	Average
3	0.549	35.39	-20.61	56.00	35.21	0.08	0.10	QP
4	0.549	27.95	-18.05	46.00	27.77	0.08	0.10	Average
5	0.792	38.93	-17.07	56.00	38.69	0.14	0.10	QP
6	0.792	31.72	-14.28	46.00	31.48	0.14	0.10	Average
7	1.036	36.53	-19.47	56.00	36.26	0.17	0.10	QP
8	1.036	29.30	-16.70	46.00	29.03	0.17	0.10	Average
9	1.890	21.99	-24.01	46.00	21.66	0.23	0.10	Average
10	1.890	32.32	-23.68	56.00	31.99	0.23	0.10	QP
11	2.740	23.96	-22.04	46.00	23.61	0.20	0.15	Average
12	2.740	35.61	-20.39	56.00	35.26	0.20	0.15	QP



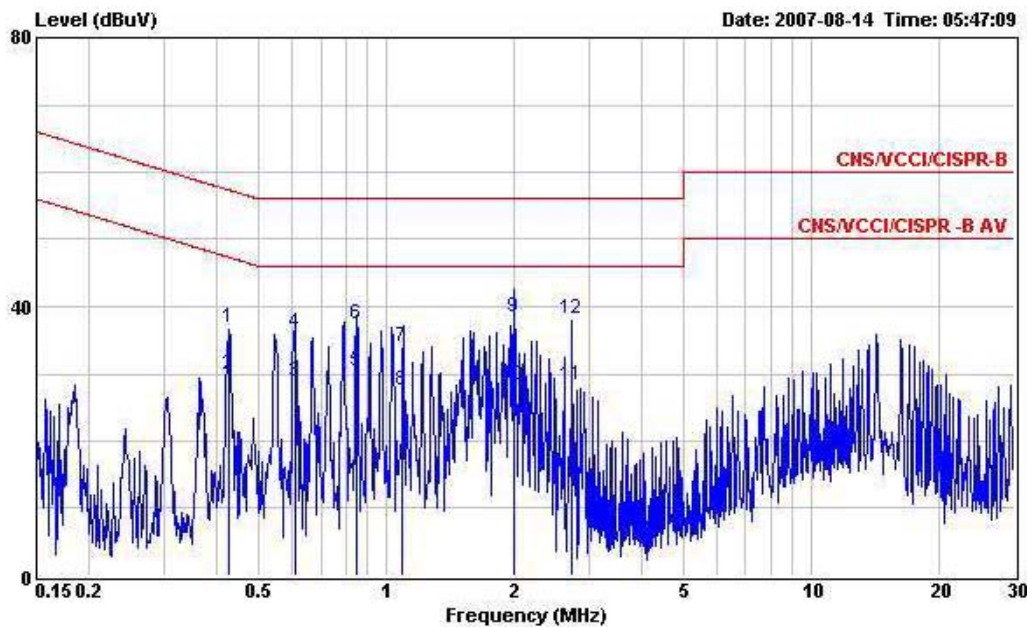
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 :+MPEG4+Adaptor1+Battery2
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.428	29.22	-28.07	57.29	29.07	0.05	0.10	QP
2	0.428	22.19	-25.10	47.29	22.04	0.05	0.10	Average
3	0.608	18.21	-27.79	46.00	18.01	0.10	0.10	Average
4	0.608	25.74	-30.26	56.00	25.54	0.10	0.10	QP
5	0.853	31.29	-24.71	56.00	31.04	0.15	0.10	QP
6	0.853	24.75	-21.25	46.00	24.50	0.15	0.10	Average
7	1.160	21.02	-34.98	56.00	20.74	0.18	0.10	QP
8	1.160	7.29	-38.71	46.00	7.01	0.18	0.10	Average
9	1.640	20.14	-25.86	46.00	19.82	0.22	0.10	Average
10	1.640	32.52	-23.48	56.00	32.20	0.22	0.10	QP
11	2.500	25.39	-30.61	56.00	25.08	0.21	0.10	QP
12	2.500	13.39	-32.61	46.00	13.08	0.21	0.10	Average



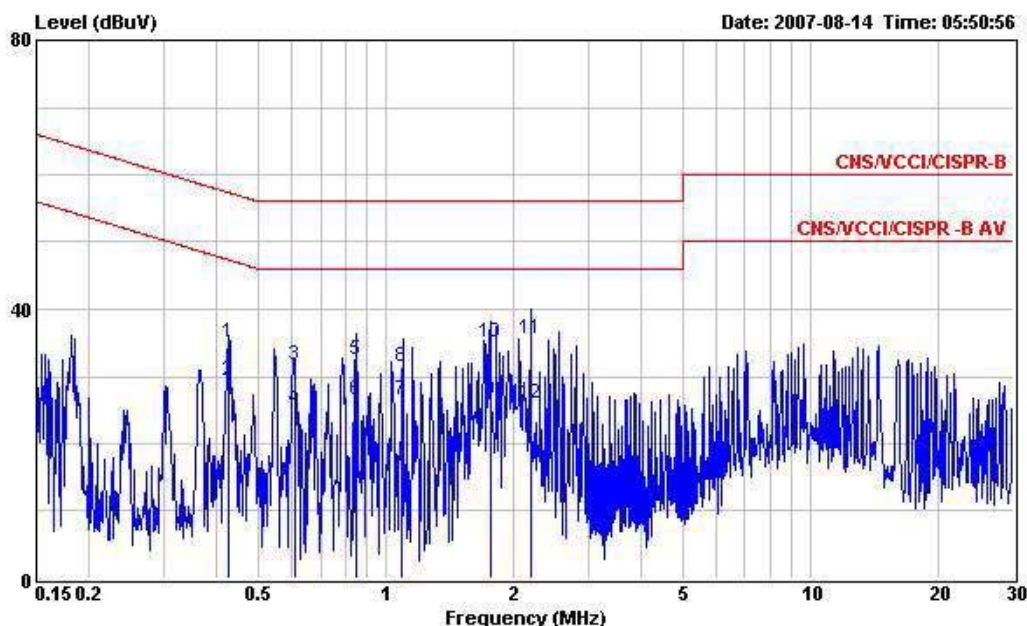
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 5

■ 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 : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 +MPEG4+Adaptor1+Battery1
Sample : B

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.425	36.80	-20.56	57.36	36.65	0.05	0.10	QP
2	0.425	29.92	-17.44	47.36	29.77	0.05	0.10	Average
3	0.608	28.85	-17.15	46.00	28.65	0.10	0.10	Average
4	0.608	36.15	-19.85	56.00	35.95	0.10	0.10	QP
5	0.849	30.27	-15.73	46.00	30.02	0.15	0.10	Average
6	0.849	37.36	-18.64	56.00	37.11	0.15	0.10	QP
7	1.093	34.05	-21.95	56.00	33.77	0.18	0.10	QP
8	1.093	27.62	-18.38	46.00	27.34	0.18	0.10	Average
9	2.000	38.42	-17.58	56.00	38.08	0.24	0.10	QP
10	2.000	28.27	-17.73	46.00	27.93	0.24	0.10	Average
11	2.729	28.19	-17.81	46.00	27.85	0.20	0.14	Average
12	2.729	38.07	-17.93	56.00	37.73	0.20	0.14	QP



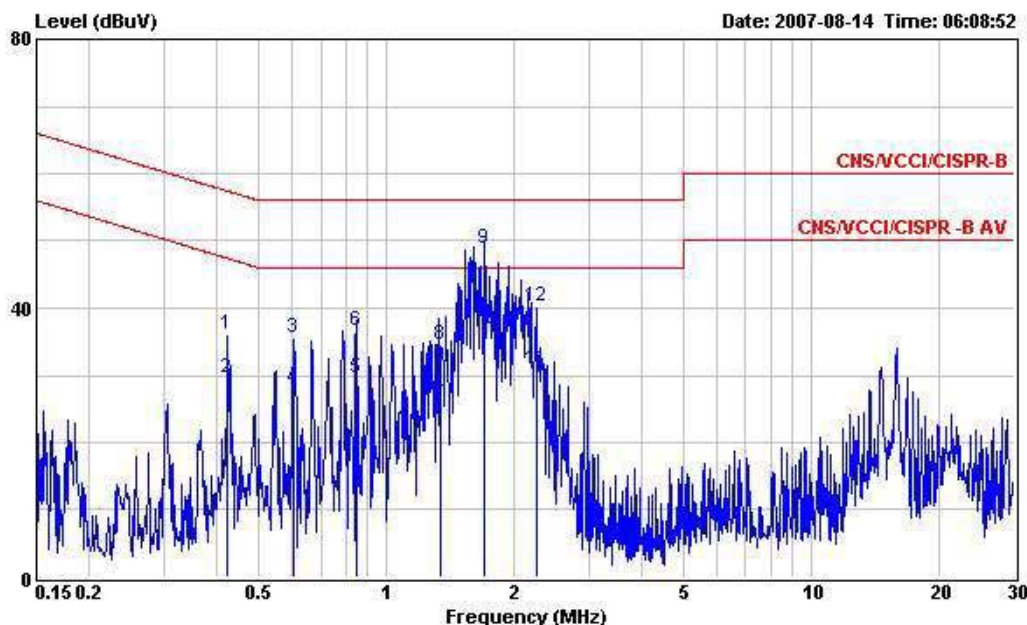
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : GSM850 Idle+BT Link+WLAN Link+Camera
 :+MPEG4+Adaptor1+Battery1
Sample : B

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.424	34.94	-22.43	57.37	34.79	0.05	0.10	QP
2	0.424	29.30	-18.07	47.37	29.15	0.05	0.10	Average
3	0.608	31.79	-24.21	56.00	31.59	0.10	0.10	QP
4	0.608	25.13	-20.87	46.00	24.93	0.10	0.10	Average
5	0.847	32.48	-23.52	56.00	32.23	0.15	0.10	QP
6	0.847	26.43	-19.57	46.00	26.18	0.15	0.10	Average
7	1.091	26.53	-19.47	46.00	26.25	0.18	0.10	Average
8	1.091	31.55	-24.45	56.00	31.27	0.18	0.10	QP
9	1.756	26.58	-19.42	46.00	26.25	0.23	0.10	Average
10	1.756	34.99	-21.01	56.00	34.66	0.23	0.10	QP
11	2.186	35.67	-20.33	56.00	35.34	0.23	0.10	QP
12	2.186	26.09	-19.91	46.00	25.76	0.23	0.10	Average



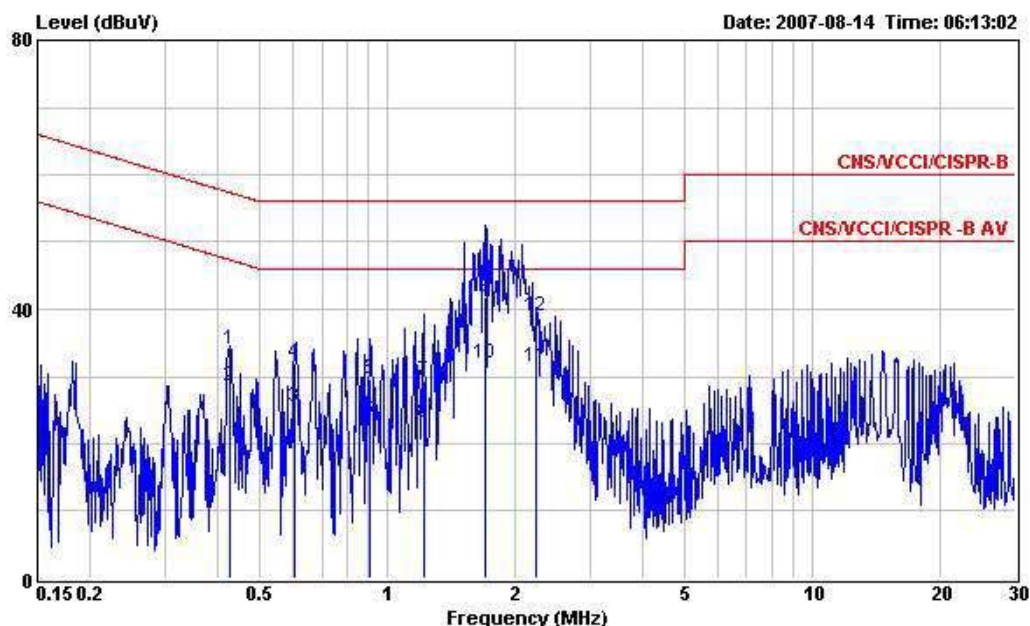
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 6

■ 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 : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : PCS1900 Idle+BT Link+WLAN Link+Camera
 :+MPEG4+Adaptor1+Battery1
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.423	36.15	-21.24	57.39	36.00	0.05	0.10	QP
2	0.423	29.50	-17.89	47.39	29.35	0.05	0.10	Average
3	0.604	35.49	-20.51	56.00	35.29	0.10	0.10	QP
4	0.604	28.14	-17.86	46.00	27.94	0.10	0.10	Average
5	0.848	29.68	-16.32	46.00	29.43	0.15	0.10	Average
6	0.848	36.75	-19.25	56.00	36.50	0.15	0.10	QP
7	1.335	25.67	-20.33	46.00	25.37	0.20	0.10	Average
8	1.335	34.50	-21.50	56.00	34.20	0.20	0.10	QP
9	1.700	48.77	-7.23	56.00	48.45	0.22	0.10	QP
10	1.700	36.77	-9.23	46.00	36.45	0.22	0.10	Average
11	2.250	30.86	-15.14	46.00	30.51	0.23	0.12	Average
12	2.250	40.29	-15.71	56.00	39.94	0.23	0.12	QP



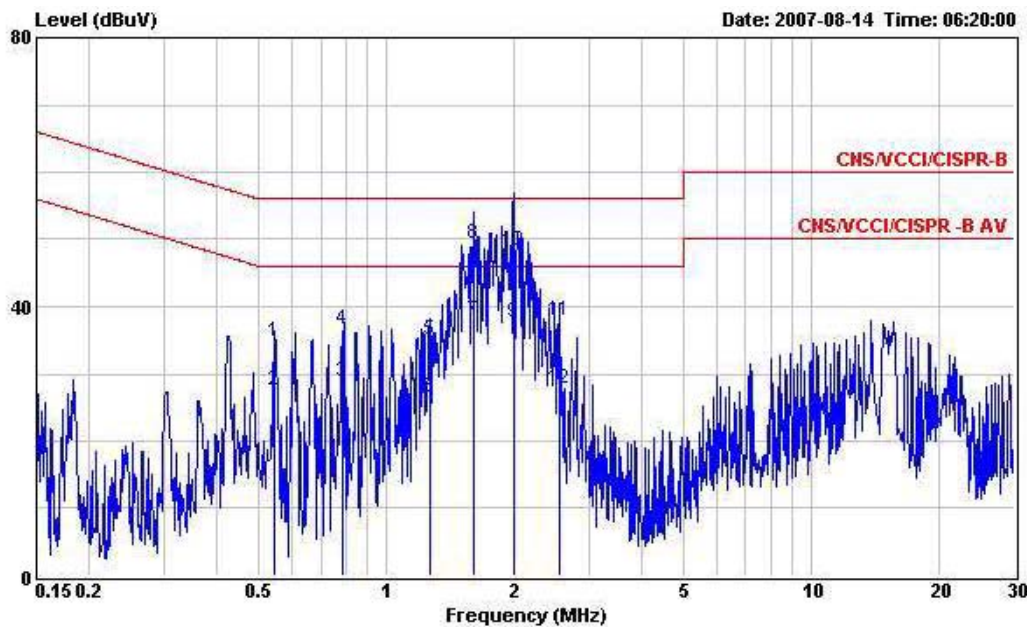
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : PCS1900 Idle+BT Link+WLAN Link+Camera
 :MPEG4+Adaptor1+Battery1
Sample : A

	Freq	Level	Over	Limit	Read	Cable	Probe	
	MHz	dBuV	Limit	Line	Level	Loss	Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.426	33.91	-23.42	57.33	33.76	0.05	0.10	QP
2	0.426	28.63	-18.70	47.33	28.48	0.05	0.10	Average
3	0.605	25.37	-20.63	46.00	25.17	0.10	0.10	Average
4	0.605	32.01	-23.99	56.00	31.81	0.10	0.10	QP
5	0.909	29.64	-26.36	56.00	29.38	0.16	0.10	QP
6	0.909	23.69	-22.31	46.00	23.43	0.16	0.10	Average
7	1.214	29.40	-26.60	56.00	29.11	0.19	0.10	QP
8	1.214	23.05	-22.95	46.00	22.76	0.19	0.10	Average
9	1.700	41.92	-14.08	56.00	41.60	0.22	0.10	QP
10	1.700	31.86	-14.14	46.00	31.54	0.22	0.10	Average
11	2.240	31.51	-14.49	46.00	31.18	0.23	0.10	Average
12	2.240	38.99	-17.01	56.00	38.66	0.23	0.10	QP



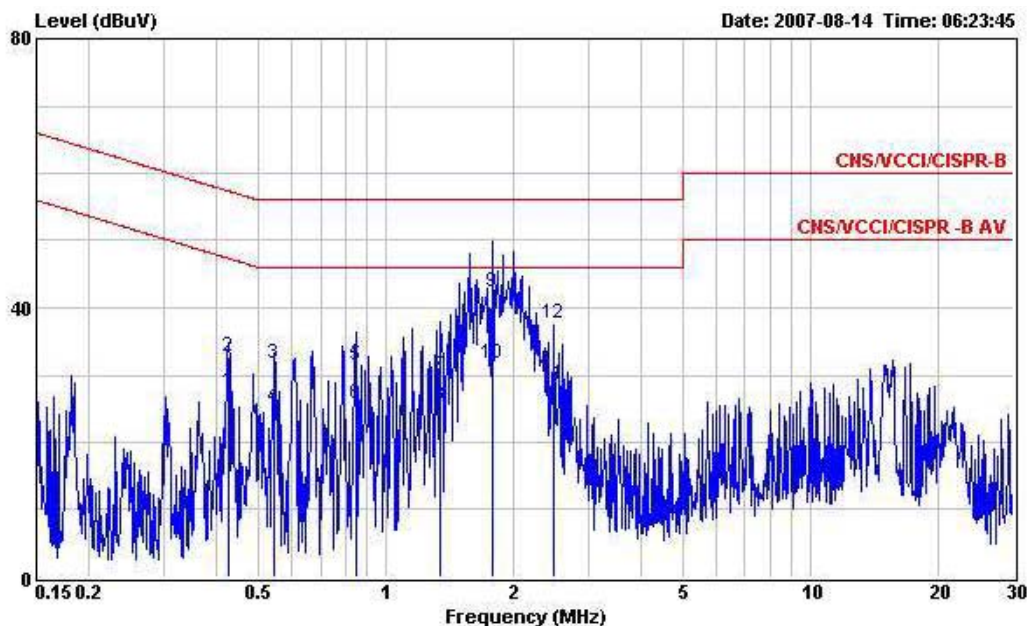
- Temperature : 25~26°C
- Relative Humidity : 58~59%
- Test Engineer : Sun
- Test Mode : Mode 7

■ 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 : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : EDGE Idle+BT Link+WLAN Link+Camera
 :MPEG4+Adaptor1+Battery1
Sample : A

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.546	34.84	-21.16	56.00	34.66	0.08	0.10	QP
2	0.546	27.41	-18.59	46.00	27.23	0.08	0.10	Average
3	0.789	28.88	-17.12	46.00	28.64	0.14	0.10	Average
4	0.789	36.54	-19.46	56.00	36.30	0.14	0.10	QP
5	1.270	34.96	-21.04	56.00	34.67	0.19	0.10	QP
6	1.270	26.43	-19.57	46.00	26.14	0.19	0.10	Average
7	1.600	37.81	-8.19	46.00	37.49	0.22	0.10	Average
8	1.600	49.23	-6.77	56.00	48.91	0.22	0.10	QP
9	1.990	37.74	-8.26	46.00	37.40	0.24	0.10	Average
10	1.990	48.35	-7.65	56.00	48.01	0.24	0.10	QP
11	2.544	37.86	-18.14	56.00	37.52	0.21	0.13	QP
12	2.544	27.89	-18.11	46.00	27.55	0.21	0.13	Average



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Pocket PC phone For FCC
Power : 120Vac/60Hz
Model : FR 780314
Memo : EDGE Idle+BT Link+WLAN Link+Camera
 :MPEG4+Adaptor1+Battery1
Sample : A

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.424	27.50	-19.87	47.37	27.35	0.05	0.10	Average
2	0.424	32.80	-24.57	57.37	32.65	0.05	0.10	QP
3	0.546	31.63	-24.37	56.00	31.45	0.08	0.10	QP
4	0.546	25.27	-20.73	46.00	25.09	0.08	0.10	Average
5	0.848	31.46	-24.54	56.00	31.21	0.15	0.10	QP
6	0.848	25.70	-20.30	46.00	25.45	0.15	0.10	Average
7	1.336	29.81	-26.19	56.00	29.51	0.20	0.10	QP
8	1.336	25.44	-20.56	46.00	25.14	0.20	0.10	Average
9	1.780	42.44	-13.56	56.00	42.11	0.23	0.10	QP
10	1.780	31.80	-14.20	46.00	31.47	0.23	0.10	Average
11	2.484	28.48	-17.52	46.00	28.17	0.21	0.10	Average
12	2.484	37.66	-18.34	56.00	37.35	0.21	0.10	QP



5.11 Radiated Emission Measurement

5.11.1 Measuring Instruments

As described in chapter 6 of this Report.

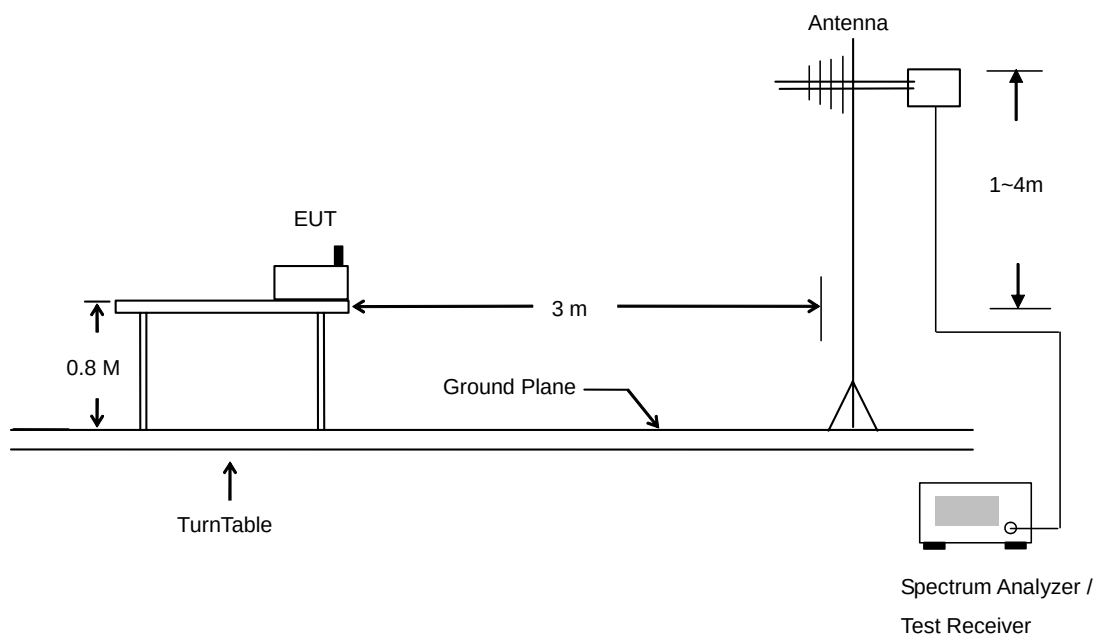
The spectrum analyzer setting :

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

5.11.2 Test Procedures

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

5.11.3 Typical Test Setup Layout of Radiated Emission

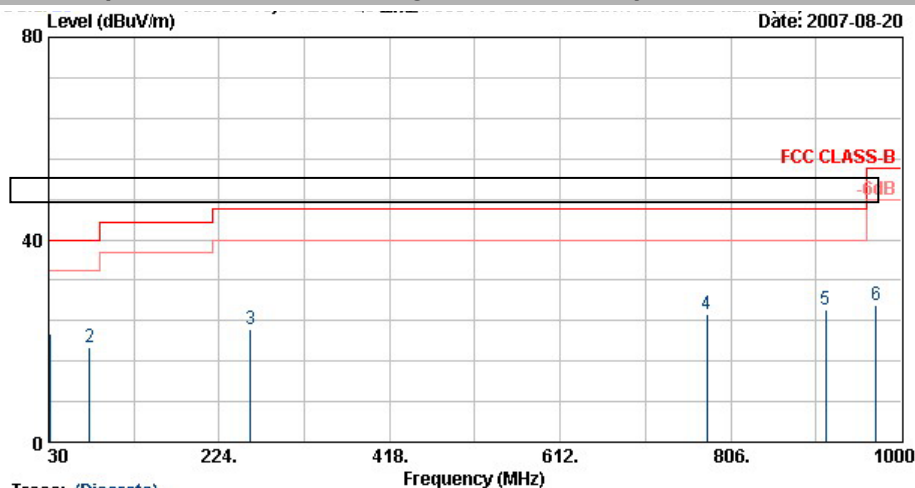




5.11.4 Test Data

- Temperature : 26~27°C
- Relating Humidity : 53~54%
- Test Enginner : Andrew
- Test Mode : Mode 1
- Polarization : Horizontal

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



Trace: (Discrete)

Site : 08CH06-HY
 Condition : LP-ANT(951121) HORIZONTAL
 EUT : Pocket PC phone For FCC
 Power : 120Wac/60Hz
 Model : FR 780314
 Memo : 802.11b Tx_Ch01;2412MHz +Adaptor
 Data Rate : 1
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level Factor	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	31.1	21.42	-18.58	40.00	33.25	18.95	0.64	31.43	100	248 Peak
2	77.0	18.82	-21.18	40.00	41.71	7.29	0.95	31.13	---	---
3	260.0	22.19	-23.81	46.00	38.91	12.45	1.77	30.95	---	---
4	778.8	25.19	-20.81	46.00	32.70	19.62	3.38	30.51	---	---
5	913.9	26.11	-19.89	46.00	31.98	20.63	3.85	30.34	---	---
6	971.3	26.97	-27.03	54.00	32.25	21.03	3.96	30.28	---	---