FCC TEST REPORT

for

47 CFR Part 15 Subpart C

Equipment	:	**O2 Xda Zinc Windows Mobile Pocket PC Phone (GSM900/DCS1800/PCS1900/UMTS 2100/Bluetooth/WLAN)**
Trade Name	:	**O2**
Model No.	:	**O2Z1, O2 XDA Zinc**
FCC ID	:	**MSQO2Z1**
Filing Type	:	**Certification**
Applicant	:	**ASUSTeK Computer Inc.** No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- **Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.**
- The data shown in this test report were carried out on Aug. 25, 2006 at **Sporton International Inc. LAB.**
- Report No.: FR680914, Report Version: Rev. 02

Roy Wu
Deputy Manager

SPORTON International Inc.

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

Table of Contents

History of this test report ii
1. General Description of Equipment under Test 1
1.1 Applicant 1
1.2 Manufacturer 1
1.3 Basic Description of Equipment under Test 1
1.4 Feature of Equipment under Test 2
2 Test Configuration of Equipment under Test 3
2.1 Test Manner 3
2.2 Test Mode 3
2.3 Connection Diagram of Test System 3
2.4 Ancillary Equipment List 4
3. RF Utility 5
4. General Information of Test 6
4.1 Test Voltage 6
4.2 Standard for Methods of Measurement 6
4.3 Test in Compliance with 6
4.4 Frequency Range Investigated 6
4.5 Test Distance 6
5. Test Data and Test Result 7
5.1 List of Measurements and Examinations 7
5.2 6dB Bandwidth Measurement 9
5.3 Power Spectral Density Measurement 16
5.4 Band Edges Measurement 24
5.5 Hopping Channel Separation 33
5.6 Number of Hopping Frequency 37
5.7 Hopping Channel Bandwidth 39
5.8 Dwell Time of Each Frequency 43
5.9 Peak Output Power Measurement 63
5.10 Conducted Emission 68
5.11 Radiated Emission Measurement 75
5.12 Antenna Requirements 131
6 List of Measuring Equipments Used 132
7 Uncertainty Evaluation 133
Appendix A. Photographs of EUT External
Appendix B. Photographs of EUT Internal
Appendix C. Photographs of Setup
Appendix D. Band Edge Radiation Data

History of this test report

Report Issue Date: Aug. 30, 2006

Report No.	Description

1. General Description of Equipment under Test

1.1 Applicant

ASUSTeK Computer Inc.
No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.

1.2 Manufacturer

ASUSTeK Computer Inc.
No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.
ASUSTeK Computer Inc.
No.5, Shing Yeh Street, 333 Kwei Shan Hsiang, Taoyuan Hsien, Taiwan
ASUSTek Computer Inc.
No.76, Ligung St., Peitou, 112 Taipei, Taiwan
North Tec Asia (Shanghai) Limited
Factory 2, 3678 Xiu Yan Rd., 201319 Nanhui District, Shanghai, People's Republic of China

1.3 Basic Description of Equipment under Test

Equipment	: O2 Xda Zinc Windows Mobile Pocket PC Phone (GSM900/DCS1800/PCS1900/UMTS 2100/Bluetooth/WLAN)
Trade Name	: O2
Model No.	: O2Z1, O2 XDA Zinc
FCC ID	: MSQO2Z1
Power Supply Type	: Switching, From battery 3.7V
AC Power Cord	: AC 120V, Wall-mount, 1.8 meter, 2 pin
Adapter	: Phihong, PSC05R-050CP PH
Battery	: ASUS, SBP-06
Earphone 1	: O2, CHM-201STV1017(TPE)
Earphone 2	: ASUS, CHM-201STV1017(TPE)
Earphone 3	: COTRON, CHM-71STS01005(TPE)
USB Cable	: FOXCONN, CUHD004B-S17-E

Remark : Earphone 1 and Earphone 2 have the same circuit design, only earphone 1 was used for testing.

1.4 Feature of Equipment under Test

Product Feature & Specification		
1.	DUT Type	O2 Xda Zinc Windows Mobile Pocket PC Phone (GSM900/DCS1800/PCS1900/UMTS 2100/Bluetooth/WLAN)
2.	Trade Name	O2
3.	Model Name	O2Z1, O2 XDA Zinc
4.	FCC ID	MSQO2Z1
5.	Tx Frequency	PCS1900 : 1850 ~1910 MHz Bluetooth : 2400~2483.5 MHz 802.11b / 802.11g : 2400 ~ 2483.5 MHz
6.	Rx Frequency	PCS1900 : 1930 ~ 1990 MHz Bluetooth : 2400~2483.5 MHz 802.11b / 802.11g : 2400 ~ 2483.5 MHz
7.	Number of Channels	Bluetooth : 79 WLAN : 11
8.	Carrier Frequency of Each Channel	Bluetooth : 2402+n*1 MHz; n=0~78 WLAN : 2412+(n-1)*5 MHz; n=1~11
9.	Antenna Connector	N/A
10.	Antenna Type	PCS1900 : PIFA Antenna Bluetooth : PIFA Antenna 802.11b / 802.11g : PIFA Antenna
11.	Antenna Gain	PCS1900 : 0 dBi Bluetooth : -4 dBi 802.11b / 802.11g : -4 dBi
12.	HW Version	1.3
13.	SW Version	2.0.9
14.	Maximum Output Power	PCS1900 : 29 dBm Bluetooth : 0.01 dBm 802.11b : 13.73 dBm / 802.11g : 16.78 dBm
15.	Type of Modulation	PCS1900 : GMSK Bluetooth : GFSK 802.11b / 802.11g : DSSS / OFDM
16.	DUT Stage	Identical Prototype
17.	Application Type	Certification

2 Test Configuration of Equipment under Test

2.1 Test Manner

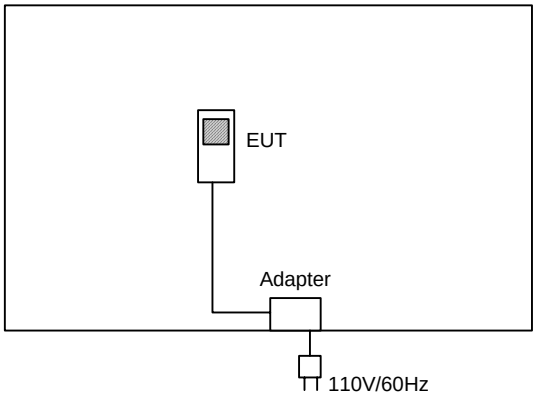
a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
b. For spurious emission below 1GHz, only one channel of each application was tested because it is not related to channel selection.
c. The EUT is programmed to transmit signal continuously for all testings.
d. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.

2.2 Test Mode

Application			
Radiated Emission	**802.11b**	**802.11g**	**BT**
	Mode 1: Tx_CH01_2412 MHz	Mode 4: Tx_CH01_2412 MHz	Mode 7: Tx_CH00_2402 MHz
	Mode 2: Tx_CH06_2437 MHz	Mode 5: Tx_CH06_2437 MHz	Mode 8: Tx_CH39_2441 MHz
	Mode 3: Tx_CH11_2462 MHz	Mode 6: Tx_CH11_2462 MHz	Mode 9: Tx_CH78_2480 MHz
Conducted Emission	Mode 1: PCS Idle Mode + BT Link + WLAN Link + Earphone 2 + Adapter + Camera		
	Mode 2: PCS Idle Mode + BT Link + WLAN Link + Earphone 2 + Adapter + MPEG 4		
	Mode 3: PCS Idle Mode + BT Link + WLAN Link + Earphone 2 + USB Link + Camera		

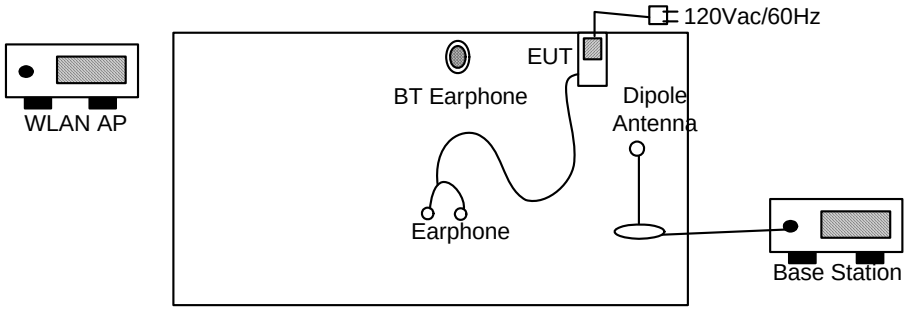
2.3 Connection Diagram of Test System

<Radiated Emission>

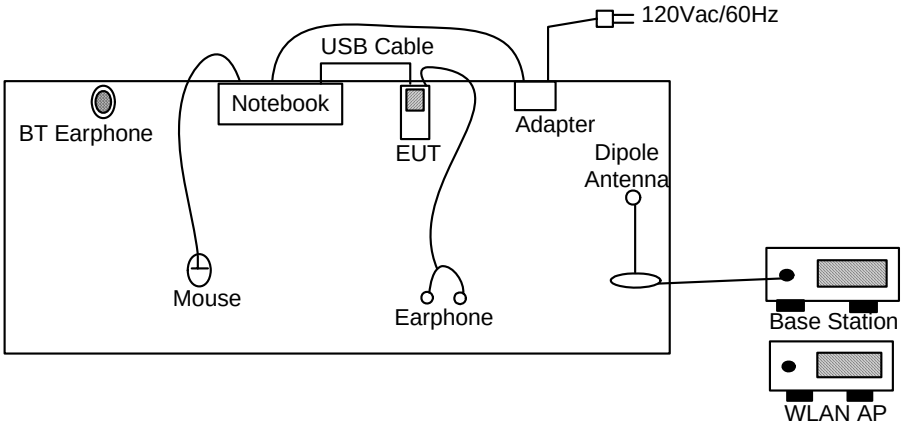


<Conducted Emission>

Mode 1-2



Mode 3



2.4 Ancillary Equipment List

Item	Asset	Model Name	Power Cord
1.	Base Station (R&S)	CMU 200	N/A
2.	Notebook (DELL)	D400	N/A
3.	USB Mouse (Microsoft)	B75-00093	Non-shielded, 1.8 m
4.	BT Earphone (Free Style)	JD-100	N/A
5.	WLAN AP (SMC)	SMC-100	N/A

3. RF Utility

The EUT is linked with BT earphone and WLAN AP for conducted emission or in BT continuous Tx mode controlled by RF utility and base station simulator or in WLAN continuous Tx mode controlled by RF utility for radiation emission and other conducted tests.

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, 03CH06-HY

4.1 Test Voltage

120V/ 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test in Compliance with

47 CFR Part 15 Subpart C

4.4 Frequency Range Investigated

a. Conducted Emission : from 150 KHz to 30 MHz
b. Radiated Emission : 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 & 20dB 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

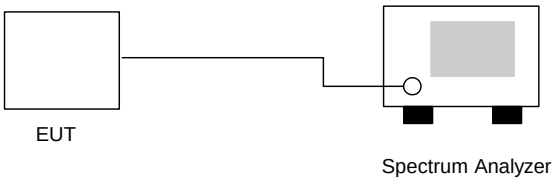
5.2.1 Measuring Instruments：

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°C
- Relative Humidity : 51%
- Test Enginner : Andy

802.11b

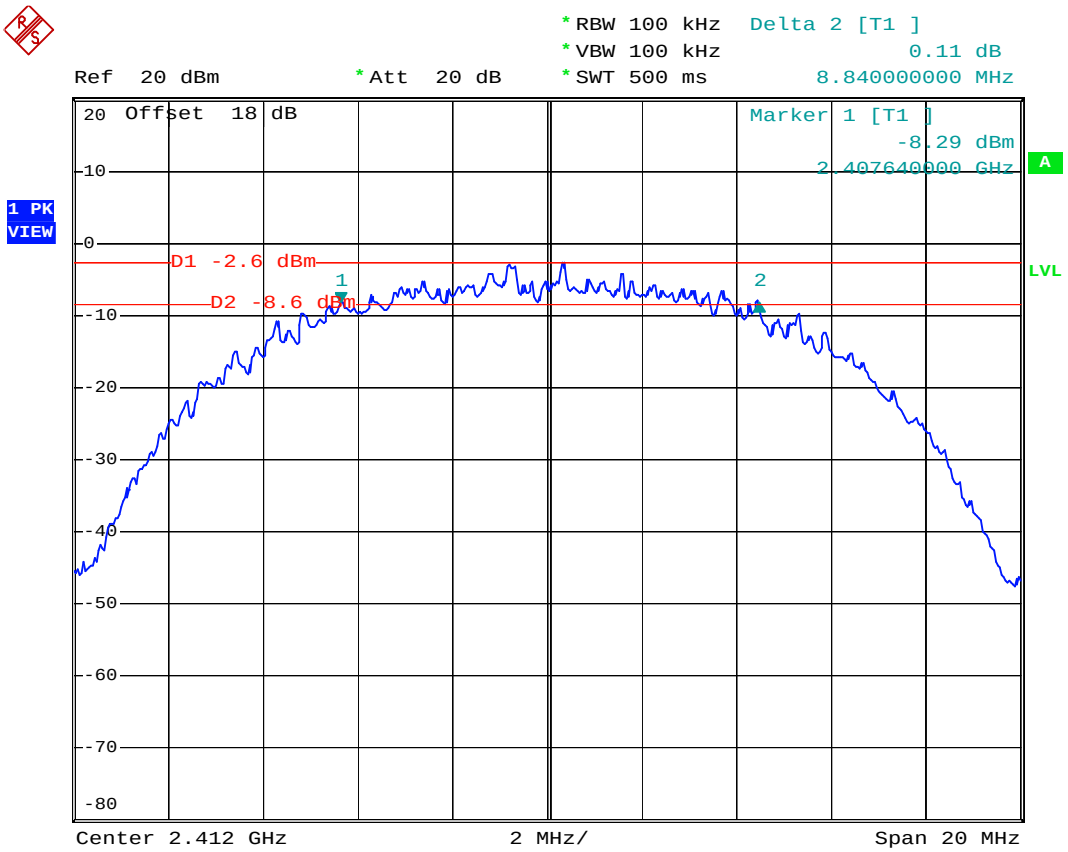
Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	8.84	> 0.5MHz	Mode 1
06	2437	8.84	> 0.5MHz	Mode 2
11	2462	8.84	> 0.5MHz	Mode 3

802.11g

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	16.56	> 0.5MHz	Mode 4
06	2437	16.56	> 0.5MHz	Mode 5
11	2462	16.56	> 0.5MHz	Mode 6

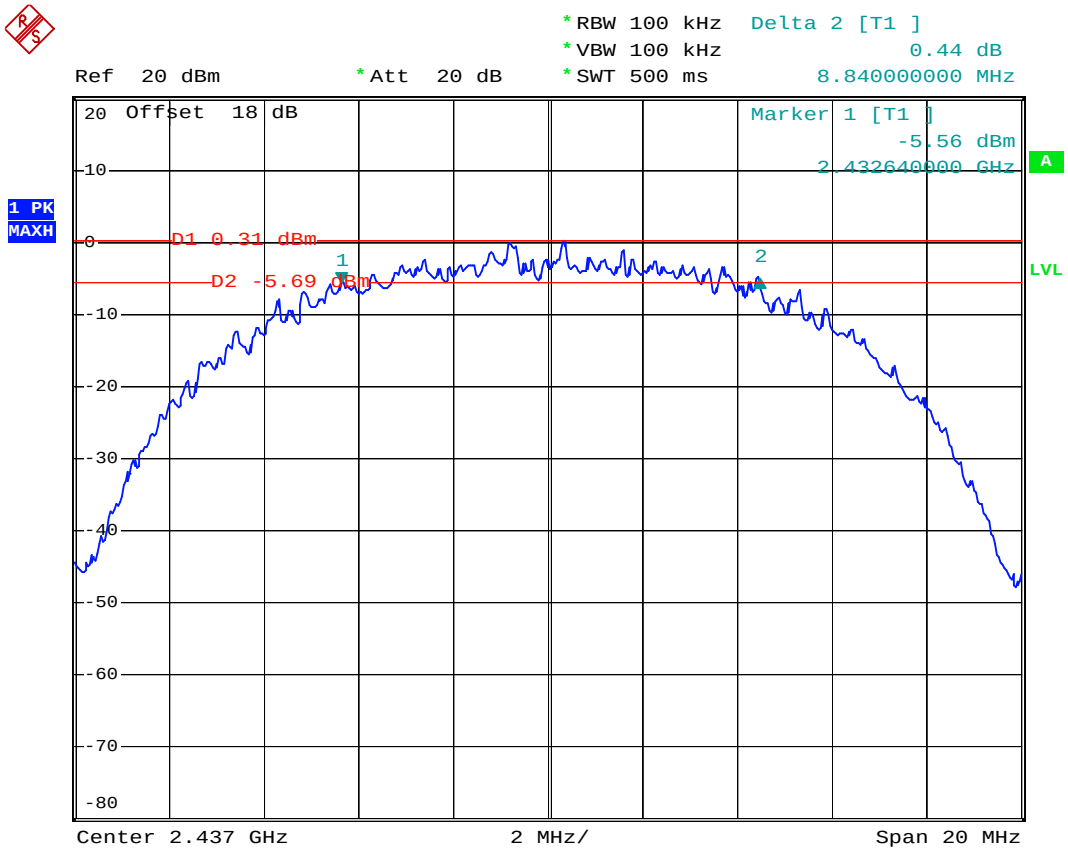
5.2.5 6dB Bandwidth

Mode 1



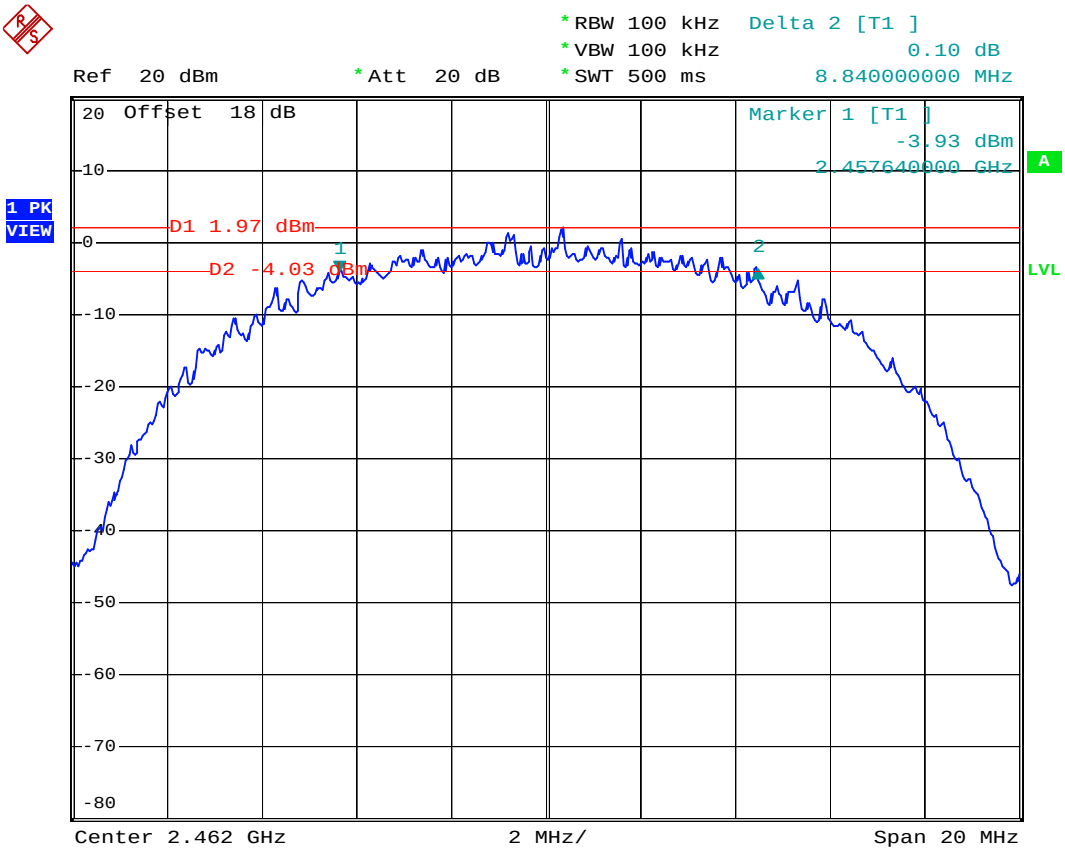
Date: 11.AUG.2006 22:46:24

Mode 2



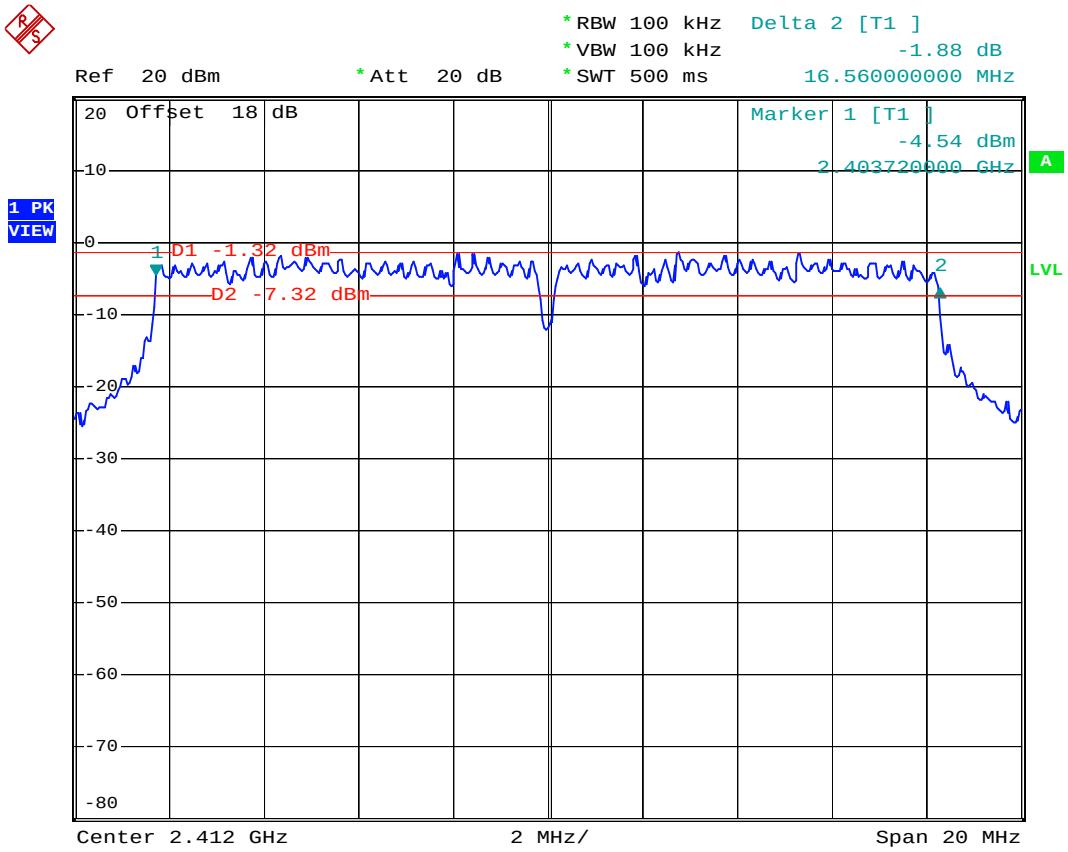
Date: 11.AUG.2006 22:48:22

Mode 3



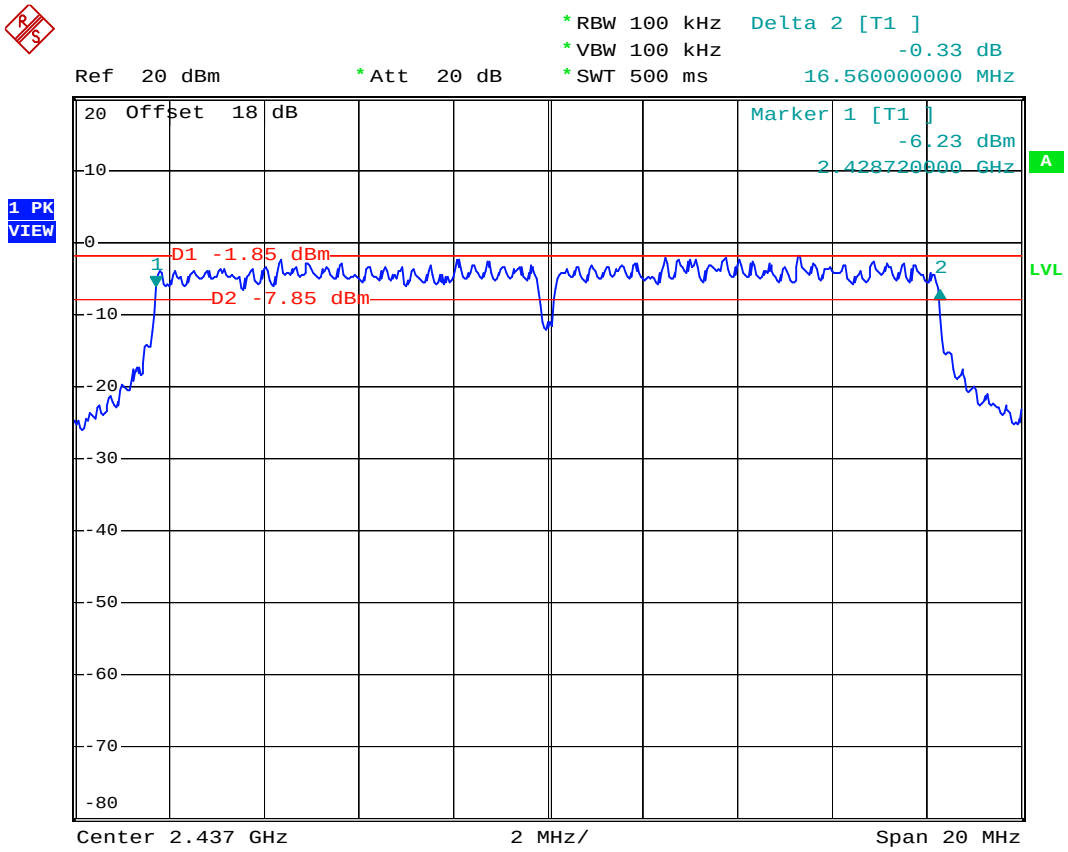
Date: 11.AUG.2006 22:49:32

Mode 4



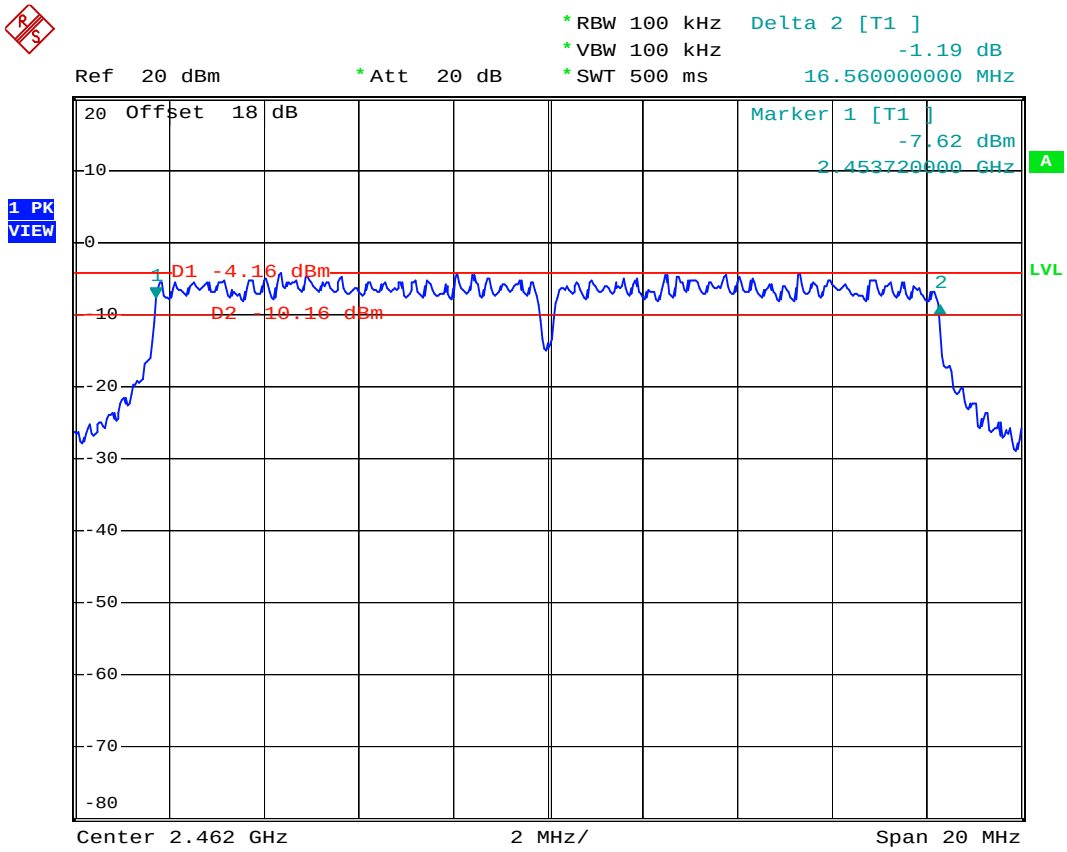
Date: 11.AUG.2006 23:06:22

Mode 5



Date: 11.AUG.2006 23:01:18

Mode 6



Date: 11.AUG.2006 22:59:57

5.3 Power Spectral Density Measurement

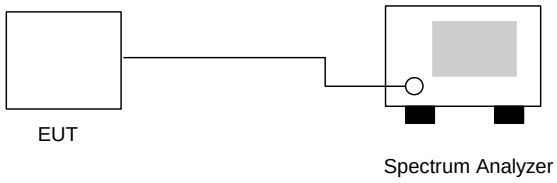
5.3.1 Measuring Instruments：

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°C
- Relative Humidity : 51%
- Test Enginner : Andy

802.11b

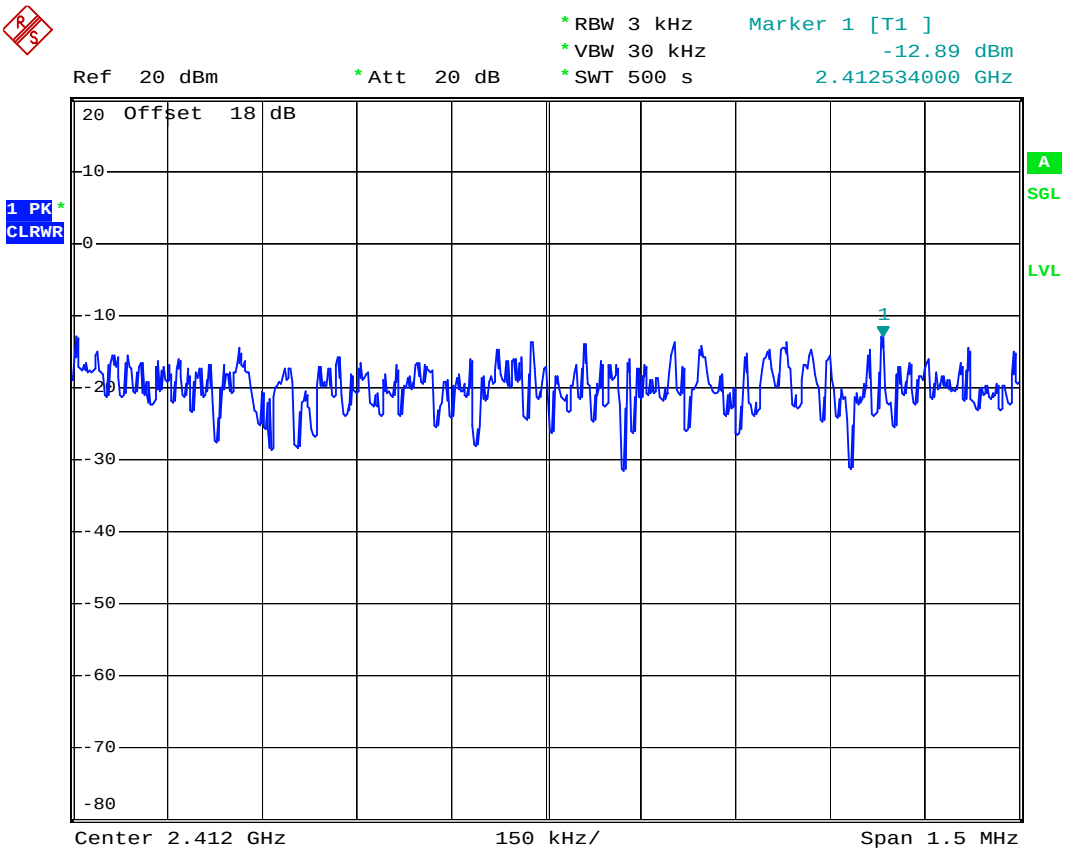
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-12.89	8	Mode 1
06	2437	-11.19	8	Mode 2
11	2462	-10.78	8	Mode 3

802.11g

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-14.58	8	Mode 4
06	2437	-14.75	8	Mode 5
11	2462	-15.74	8	Mode 6

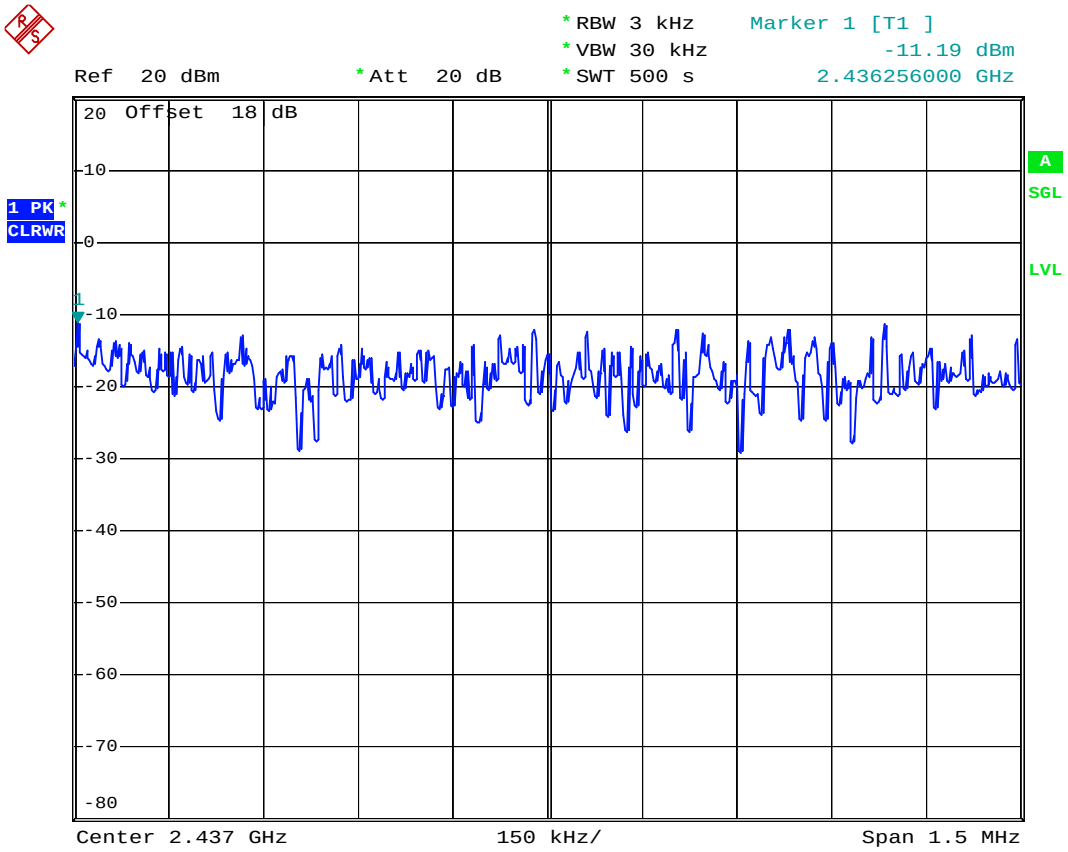
5.3.5 Power Spectral Density

Mode 1



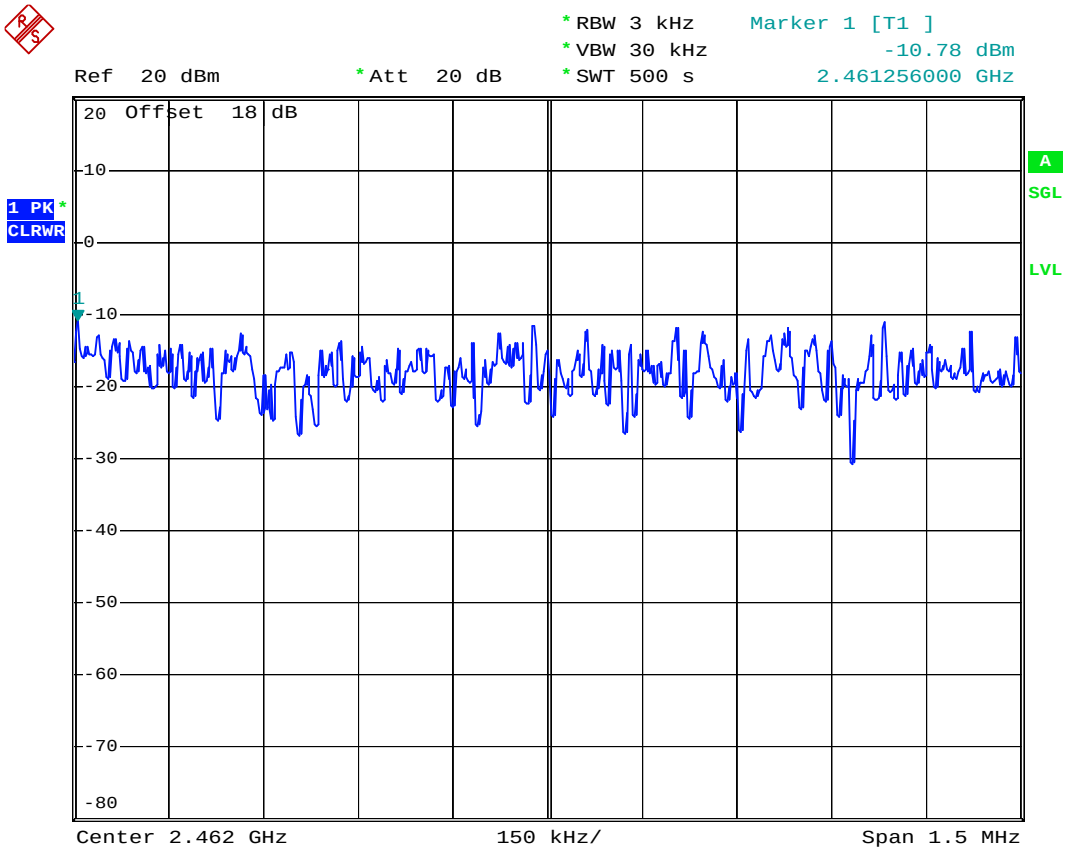
Date: 12.AUG.2006 00:48:16

Mode 2



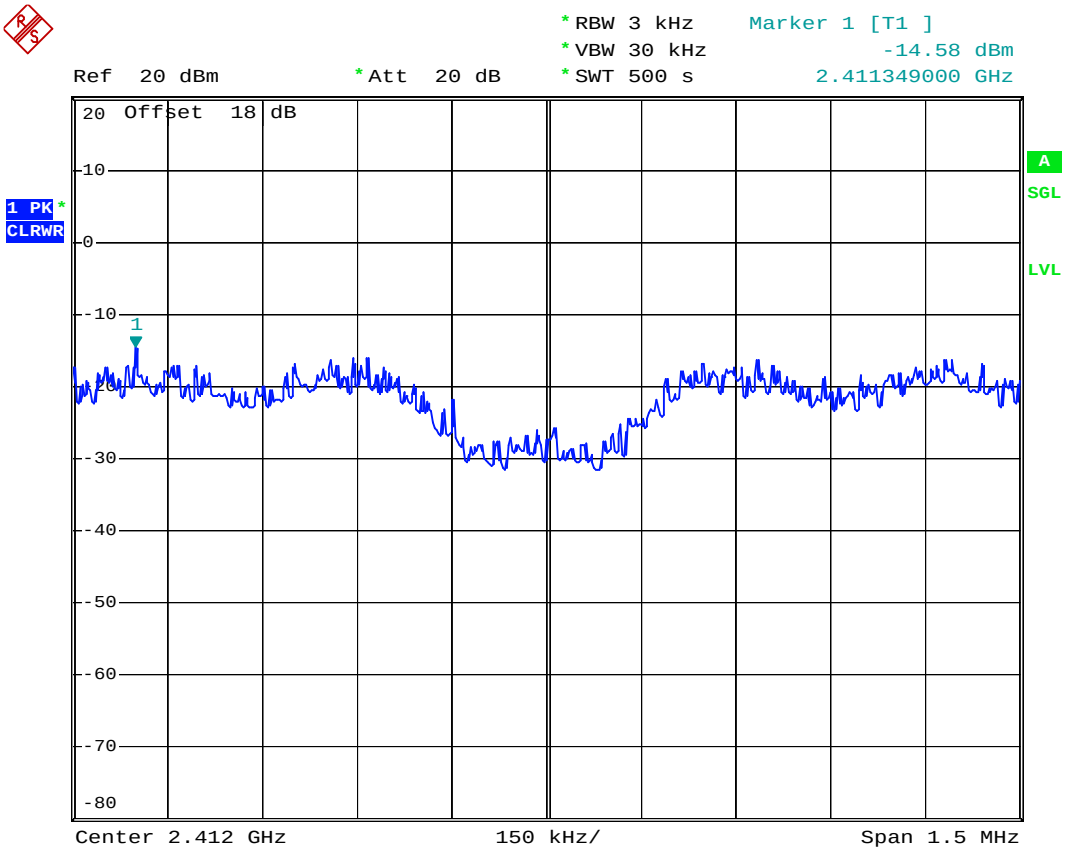
Date: 12.AUG.2006 00:10:34

Mode 3



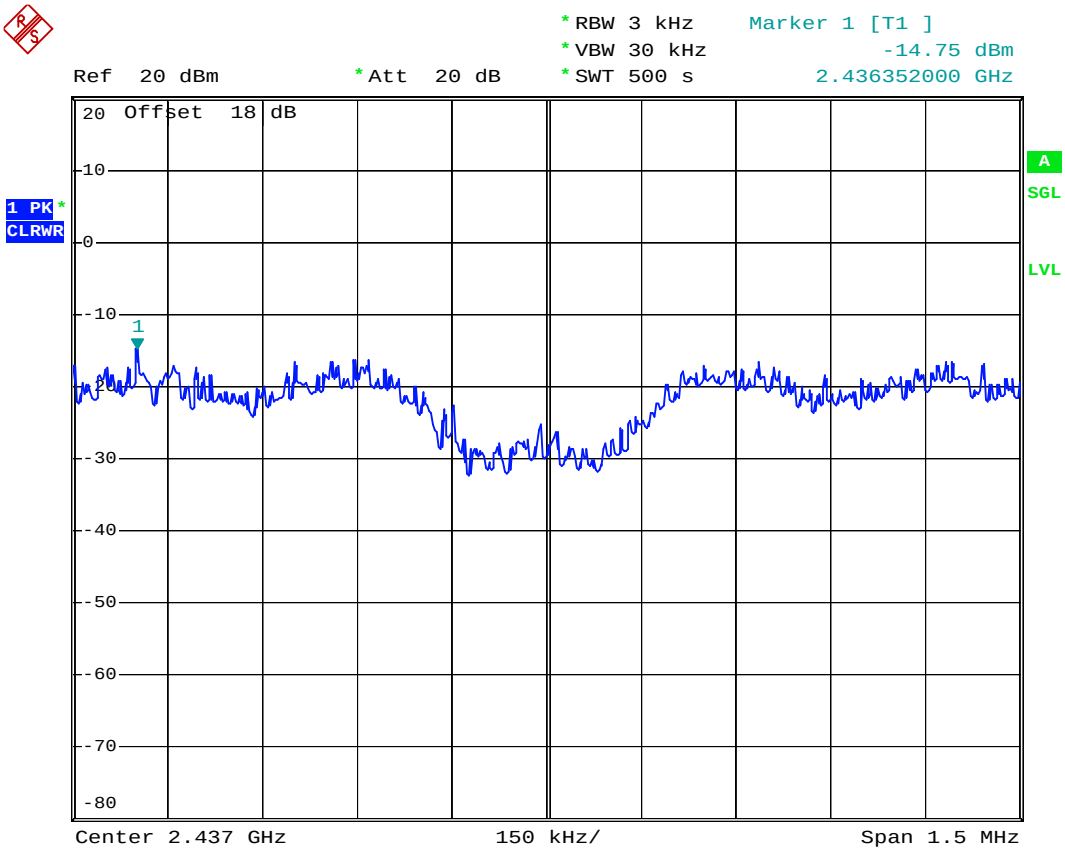
Date: 12.AUG.2006 00:00:46

Mode 4



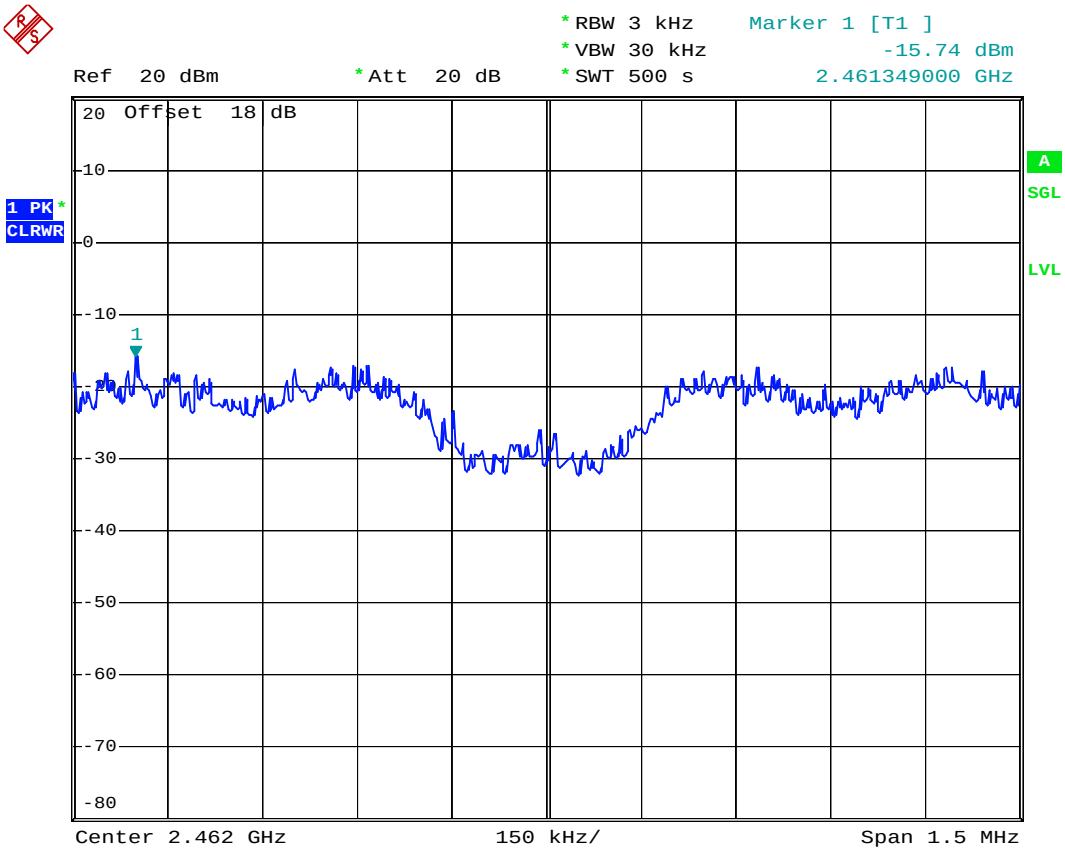
Date: 11.AUG.2006 23:16:39

Mode 5



Date: 11.AUG.2006 23:27:32

Mode 6



Date: 11.AUG.2006 23:40:07

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°C
- Relative Humidity : 51%
- Test Enginner : Andy

- Test Result in WLAN lower band (Channel 1) : PASS
- Test Result in WLAN higher band (Channel 11) : PASS
- Test Result in BT lower band (Channel 00) : PASS
- Test Result in BT higher band (Channel 78) : 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)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390.00	50.83	-23.17	74.00	51.77	30.26	4.26	35.46	100	0	Peak
2390.00	40.69	-13.31	54.00	41.63	30.26	4.26	35.46	106	269	Average

CH01 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.00	50.27	-23.73	74.00	51.21	30.26	4.26	35.46	100	360	Peak
2388.00	40.40	-13.60	54.00	41.35	30.26	4.23	35.44	110	212	Average

CH11 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2489.00	49.14	-24.86	74.00	49.98	30.30	4.39	35.53	100	360	Peak
2489.00	39.36	-14.64	54.00	40.21	30.30	4.36	35.51	100	270	Average

CH11 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.00	49.63	-24.37	74.00	50.49	30.29	4.36	35.51	100	0	Peak
2484.00	39.65	-14.35	54.00	40.51	30.29	4.36	35.51	106	213	Average

➢WLAN 802.11g

CH01 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.00	54.91	-19.09	74.00	55.85	30.26	4.26	35.46	100	0	Peak
2389.00	41.71	-12.29	54.00	42.65	30.26	4.23	35.46	100	269	Average

CH01 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390.00	52.65	-21.35	74.00	53.59	30.26	4.26	35.46	100	360	Peak
2390.00	40.88	-13.12	54.00	41.82	30.26	4.26	35.46	100	267	Average

CH11 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.00	51.76	-22.24	74.00	52.62	30.29	4.36	35.51	100	0	Peak
2484.00	39.62	-14.38	54.00	40.48	30.29	4.36	35.51	100	268	Average

CH11 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.00	53.12	-20.88	74.00	53.98	30.29	4.36	35.51	100	360	Peak
2484.00	40.15	-13.85	54.00	41.01	30.29	4.36	35.51	107	213	Average

➢BT

CH00 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.00	49.40	-24.60	74.00	50.35	30.26	4.23	35.44	100	360	Peak
2388.00	38.85	-15.15	54.00	39.80	30.26	4.23	35.44	100	165	Average

CH00 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2390.00	49.77	-24.23	74.00	50.71	30.26	4.26	35.46	100	360	Peak
2390.00	38.79	-15.21	54.00	39.73	30.26	4.26	35.46	100	12	Average

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	54.57	-19.43	74.00	55.43	30.29	4.36	35.51	100	0	Peak
2483.50	47.98	-6.02	54.00	48.84	30.29	4.36	35.51	100	11	Average

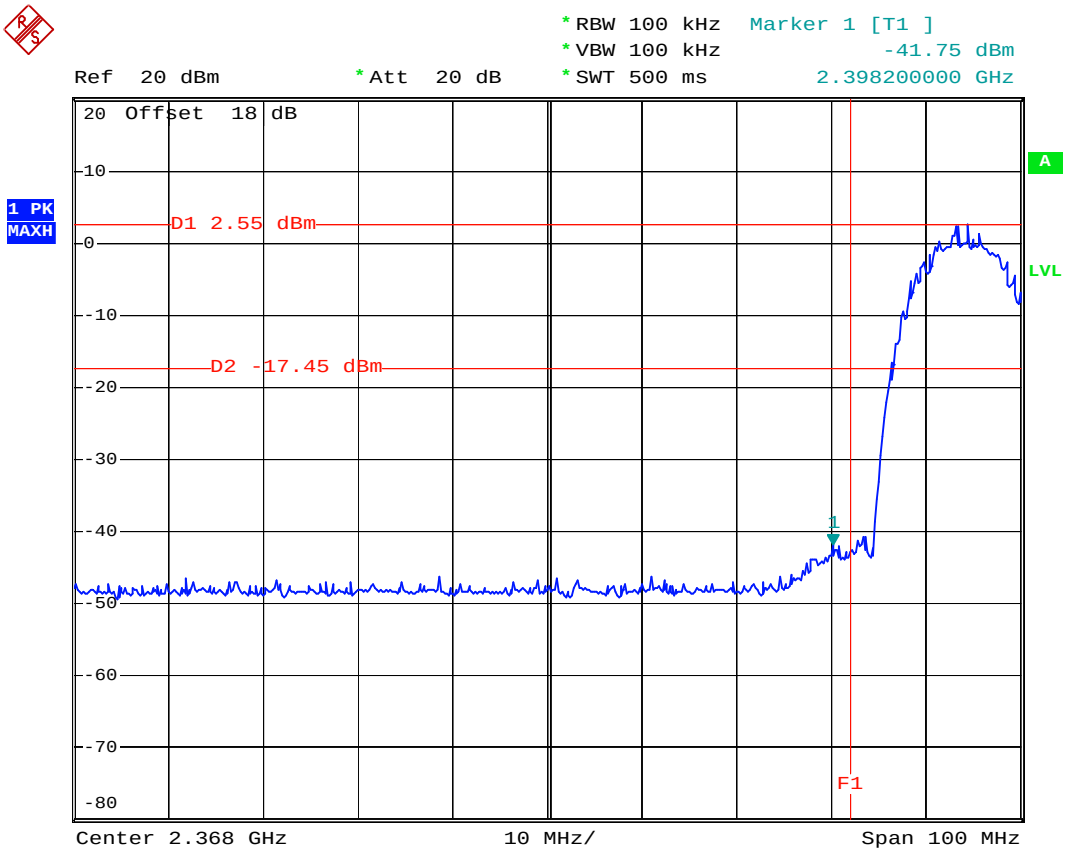
CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Abtebba Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	56.14	-17.86	74.00	57.00	30.29	4.36	35.51	100	360	Peak
2483.50	50.03	-3.97	54.00	50.89	30.29	4.36	35.51	102	157	Average

5.4.4 20dB Band Edge

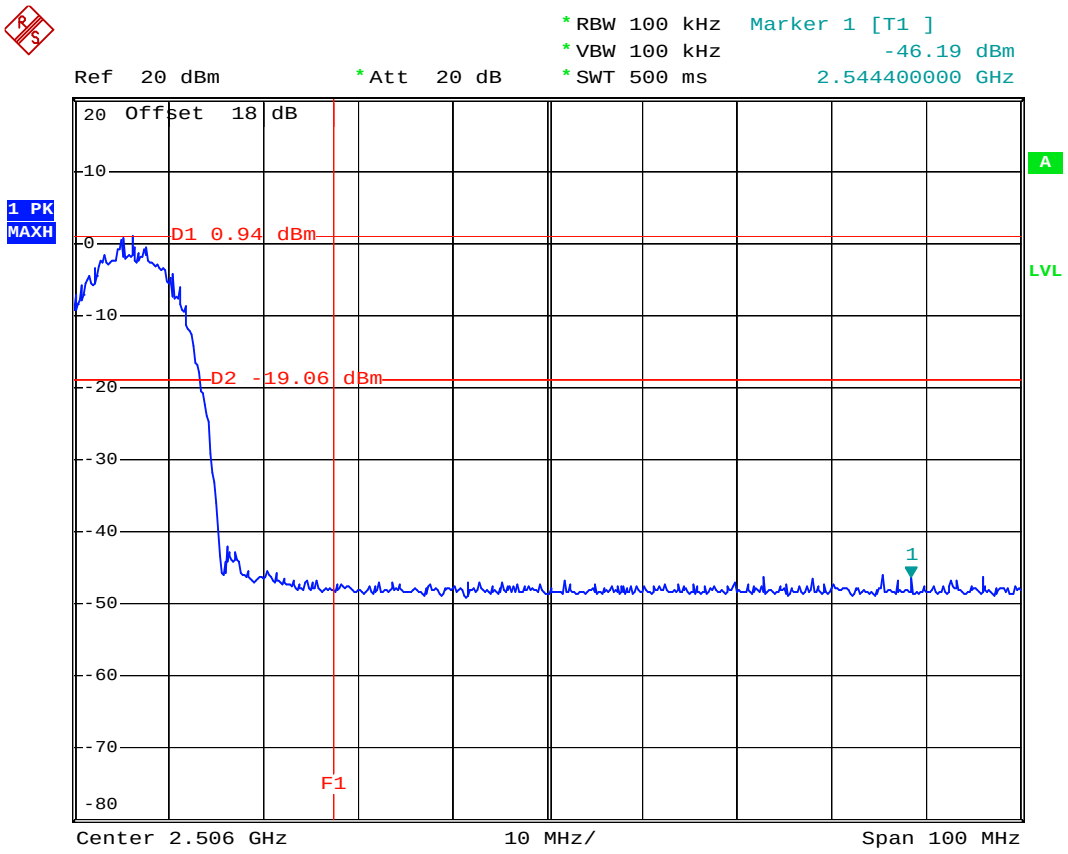
WLAN 802.11b

CH01



Date: 11.AUG.2006 22:53:57

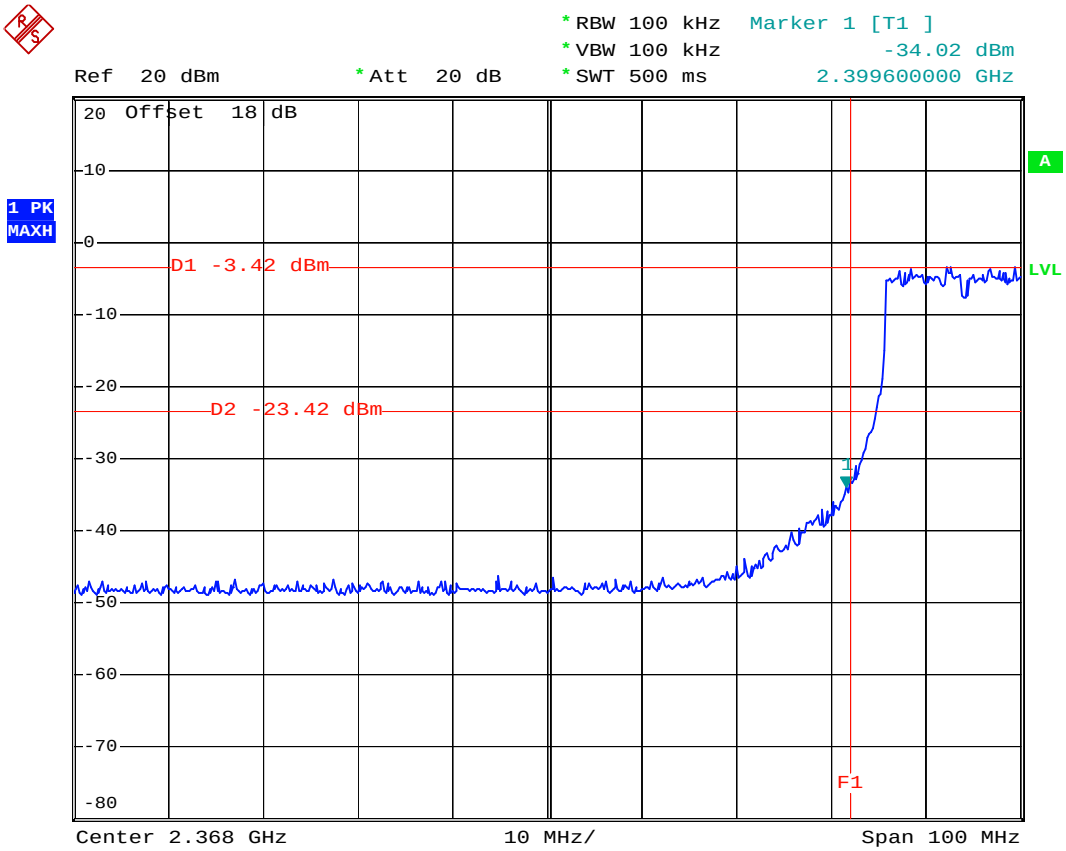
CH11



Date: 11.AUG.2006 22:52:01

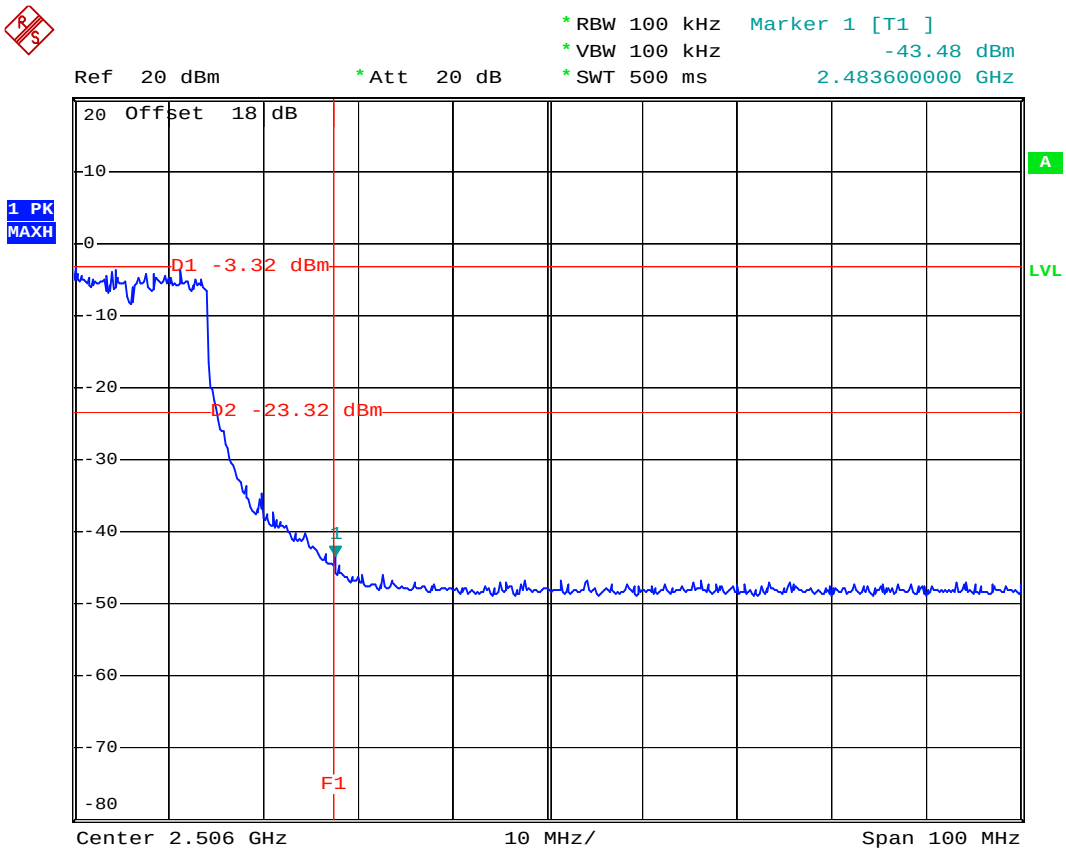
WLAN 802.11g

CH01



Date: 11.AUG.2006 22:56:24

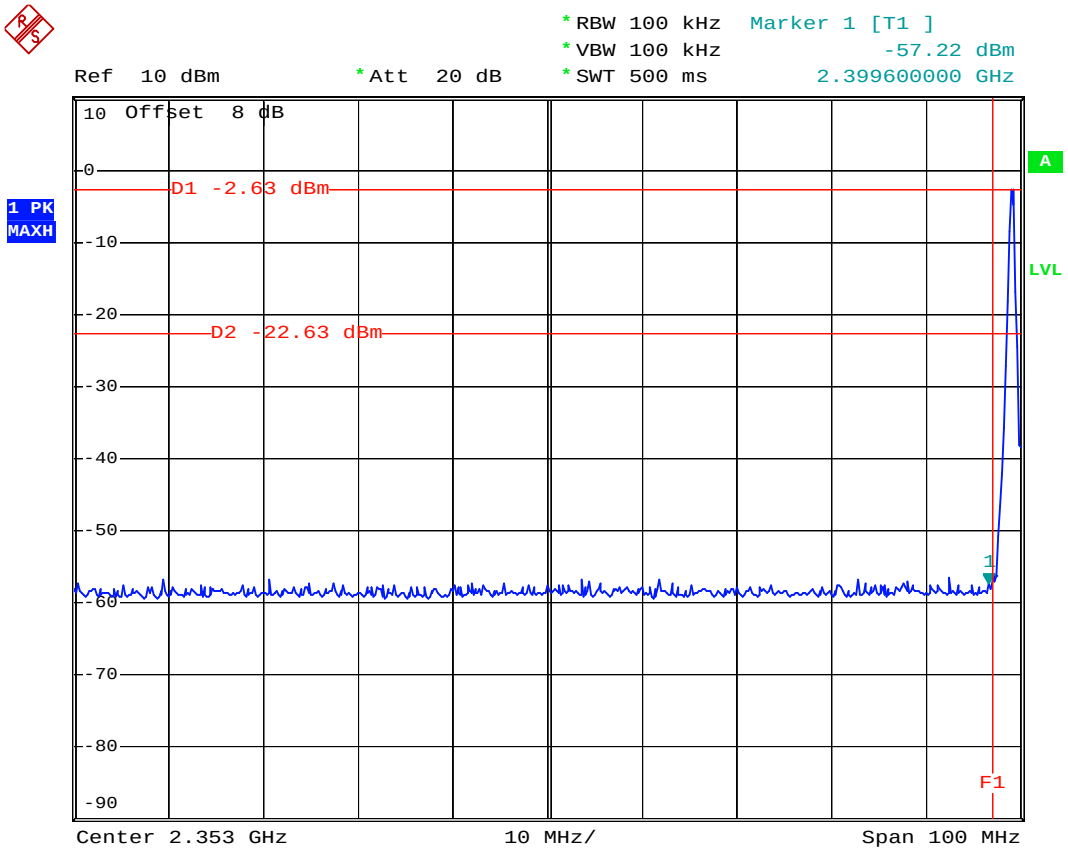
CH11



Date: 11.AUG.2006 22:58:19

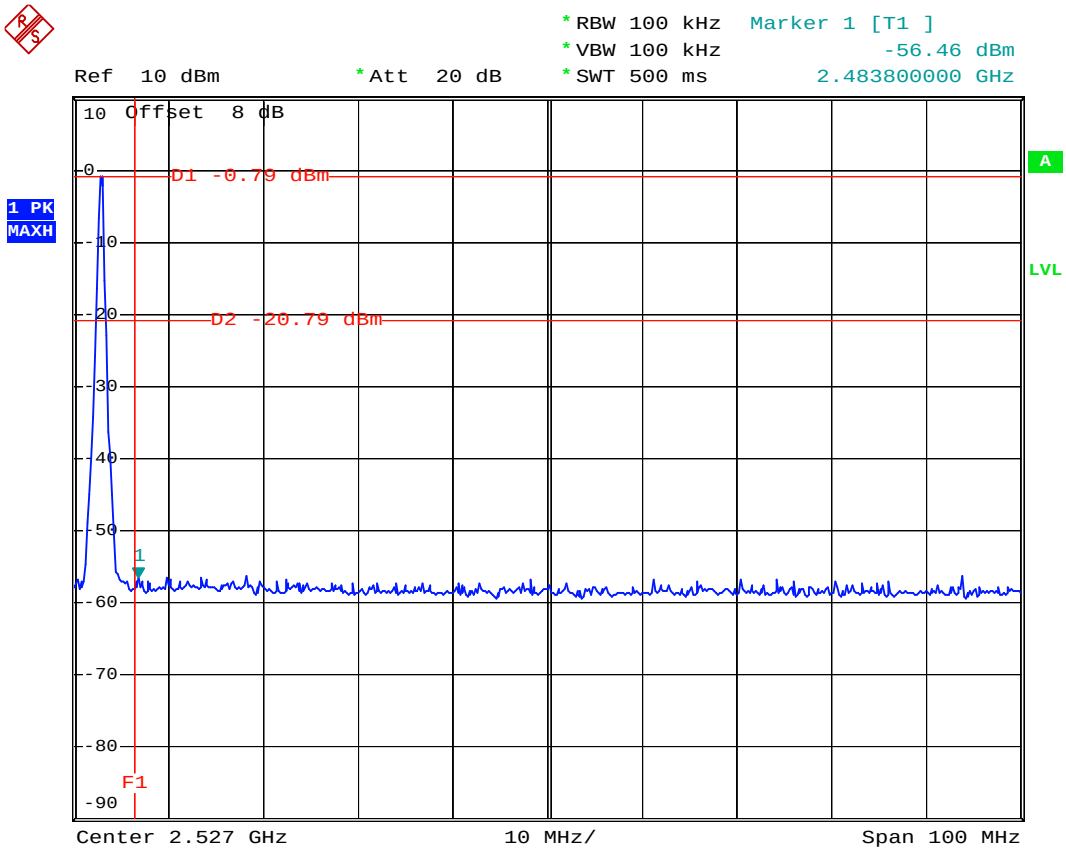
Bluetooth

CH00



Date: 11.AUG.2006 21:24:29

CH78



Date: 11.AUG.2006 21:22:01

5.5 Hopping Channel Separation

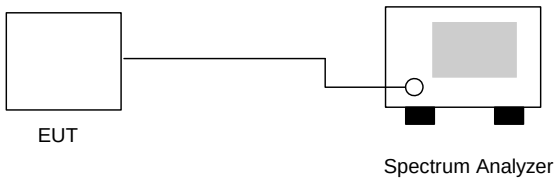
5.5.1 Measuring Instruments：

As described in chapter 9 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 100kHz and VBW to 100kHz.
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

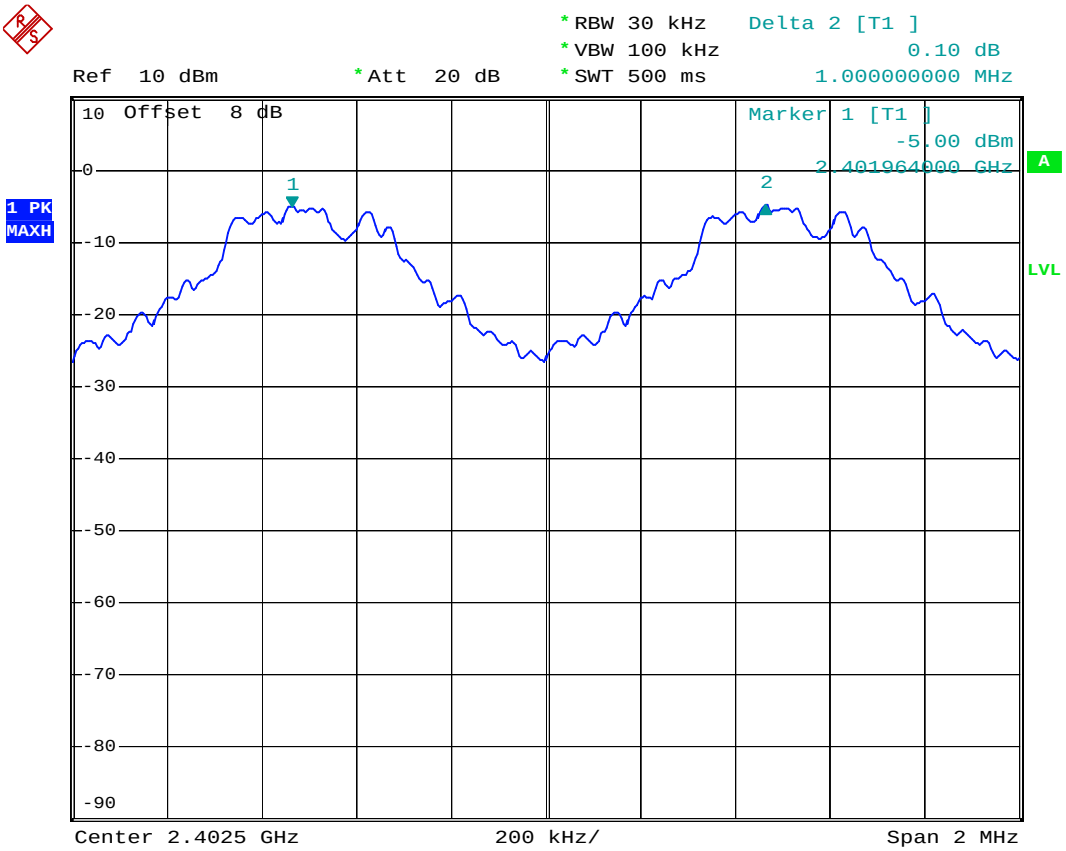
- Application Type : BT
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.000	0.922	Mode 7
39	2441	1.000	0.922	Mode 8
78	2480	1.004	0.922	Mode 9

Note: Limits =25kHz or the 20dB bandwidth of the hopping channel, which ever is greater

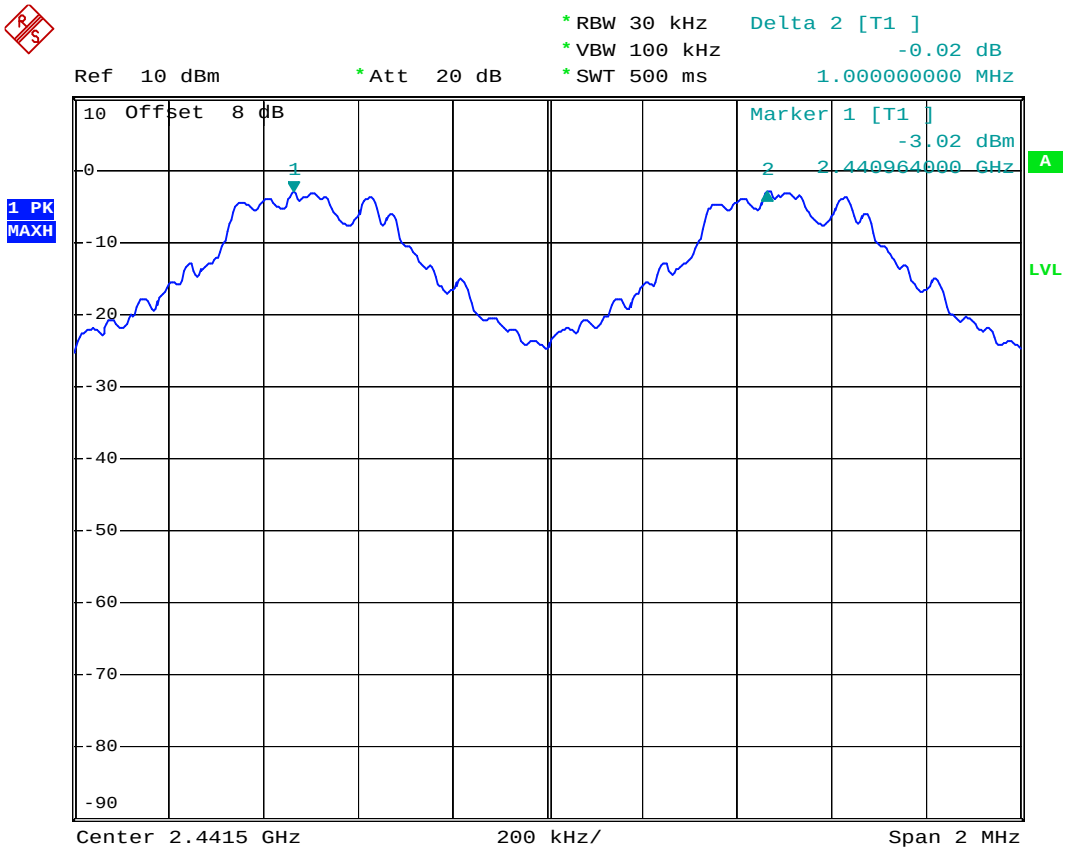
5.5.5 Hopping Channel Seperation

Mode 7



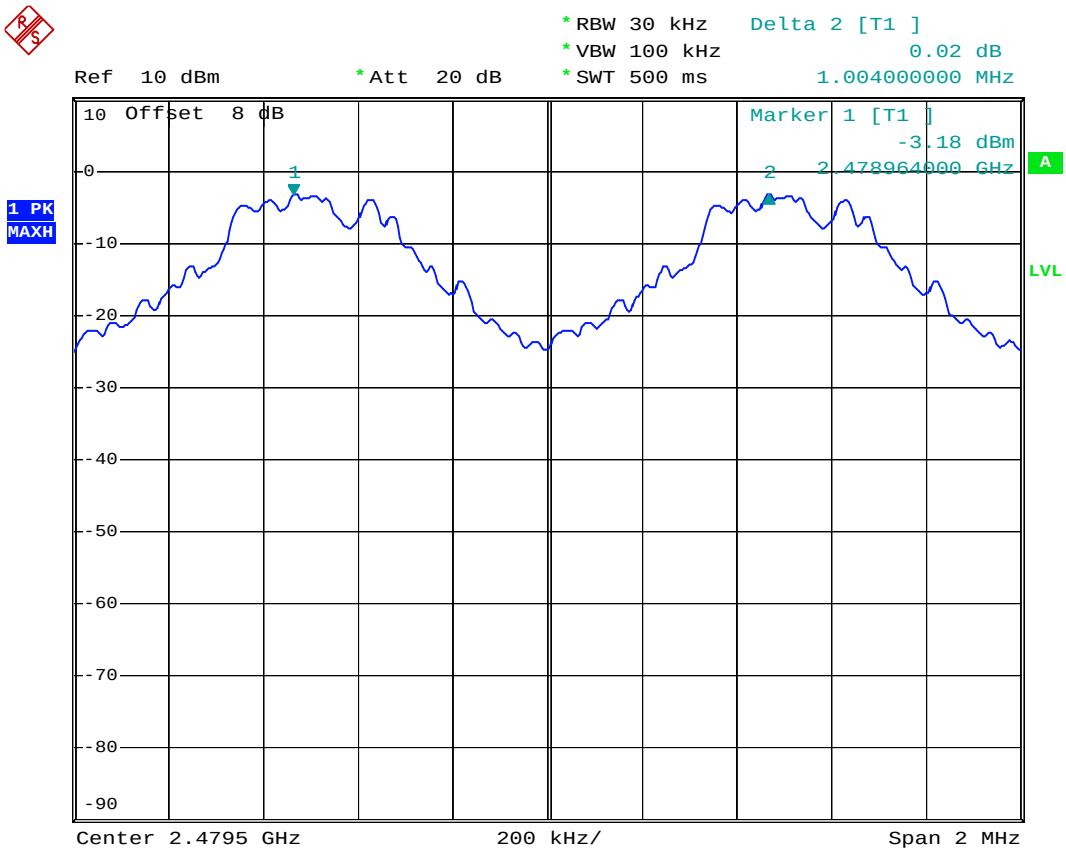
Date: 11.AUG.2006 21:25:48

Mode 8



Date: 11.AUG.2006 21:28:35

Mode 9



Date: 11.AUG.2006 21:29:34

5.6 Number of Hopping Frequency

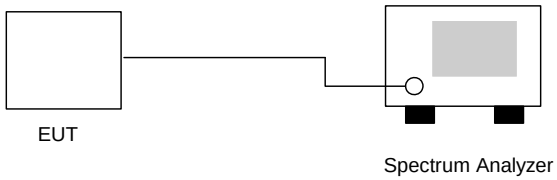
5.6.1 Measuring Instruments：

As described in chapter 9 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：

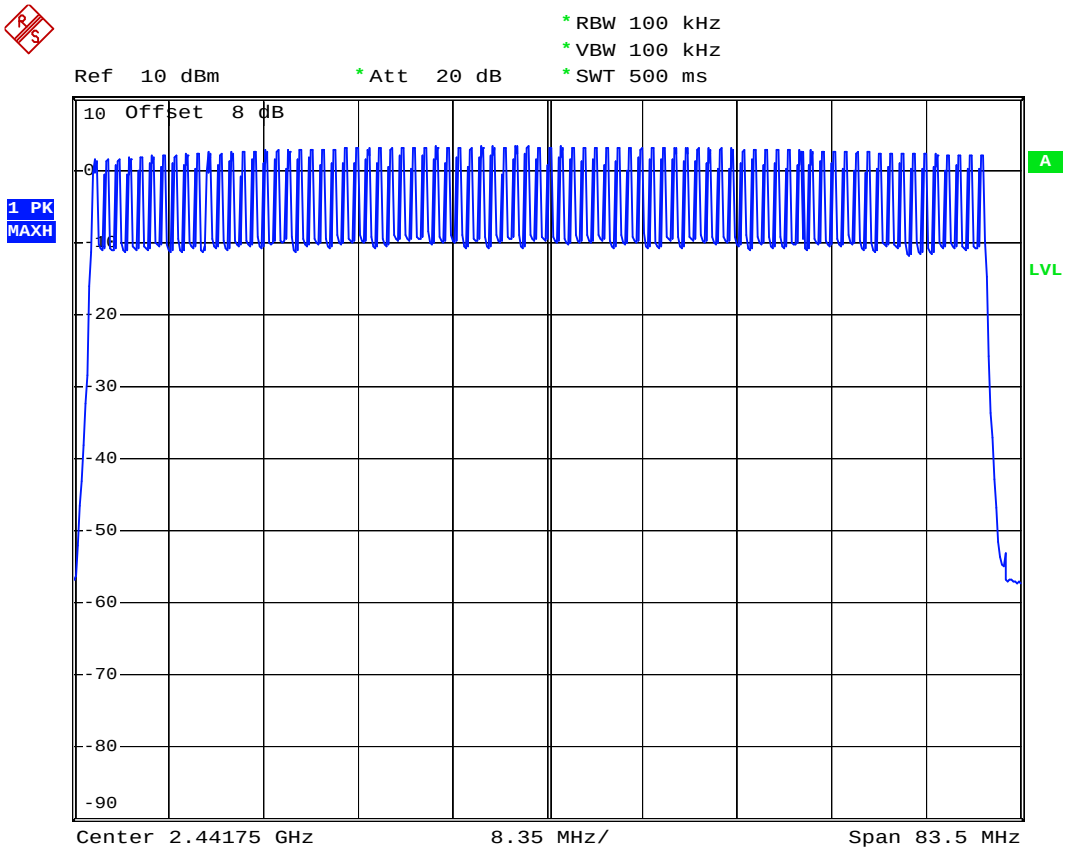


5.6.4 Test Result：See spectrum analyzer plots below

- Application Type : BT
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy

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

5.6.5 Number of Hopping Frequency



Date: 11.AUG.2006 22:16:20

5.7 Hopping Channel Bandwidth

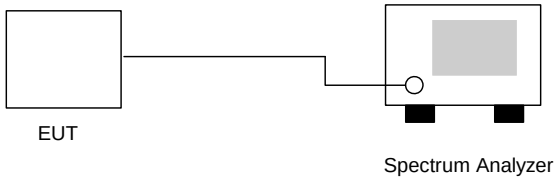
5.7.1 Measuring Instruments：

As described in chapter 9 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：



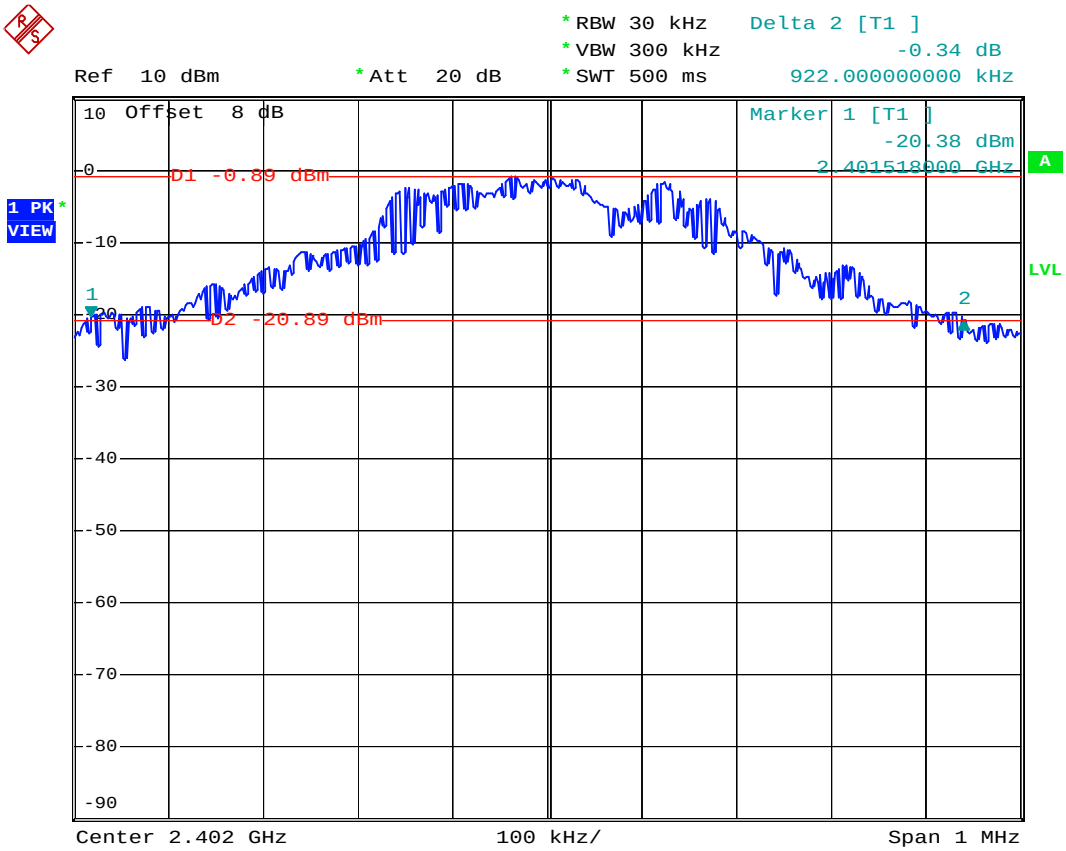
5.7.4 Test Result：See spectrum analyzer plots below

- Application Type : BT
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	0.922	1.000	Mode 7
39	2441	0.922	1.000	Mode 8
78	2480	0.922	1.000	Mode 9

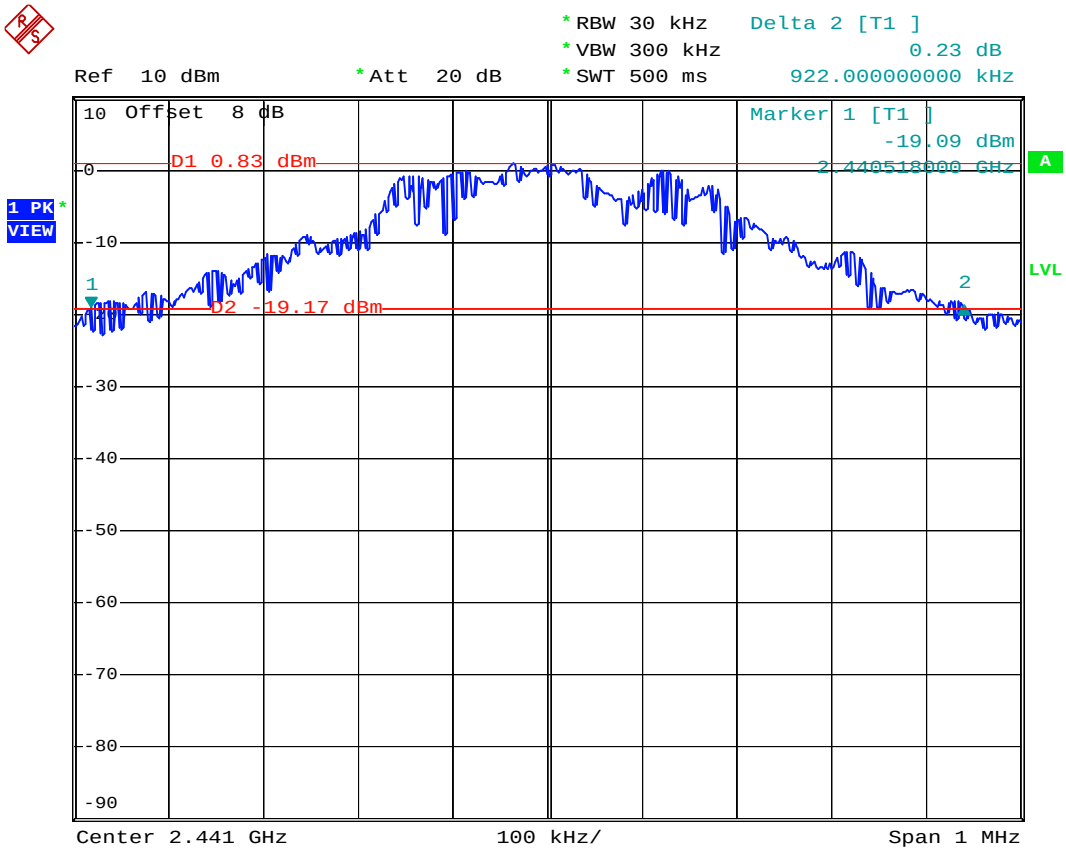
5.7.5 Hopping Channel Bandwidth

Mode 7



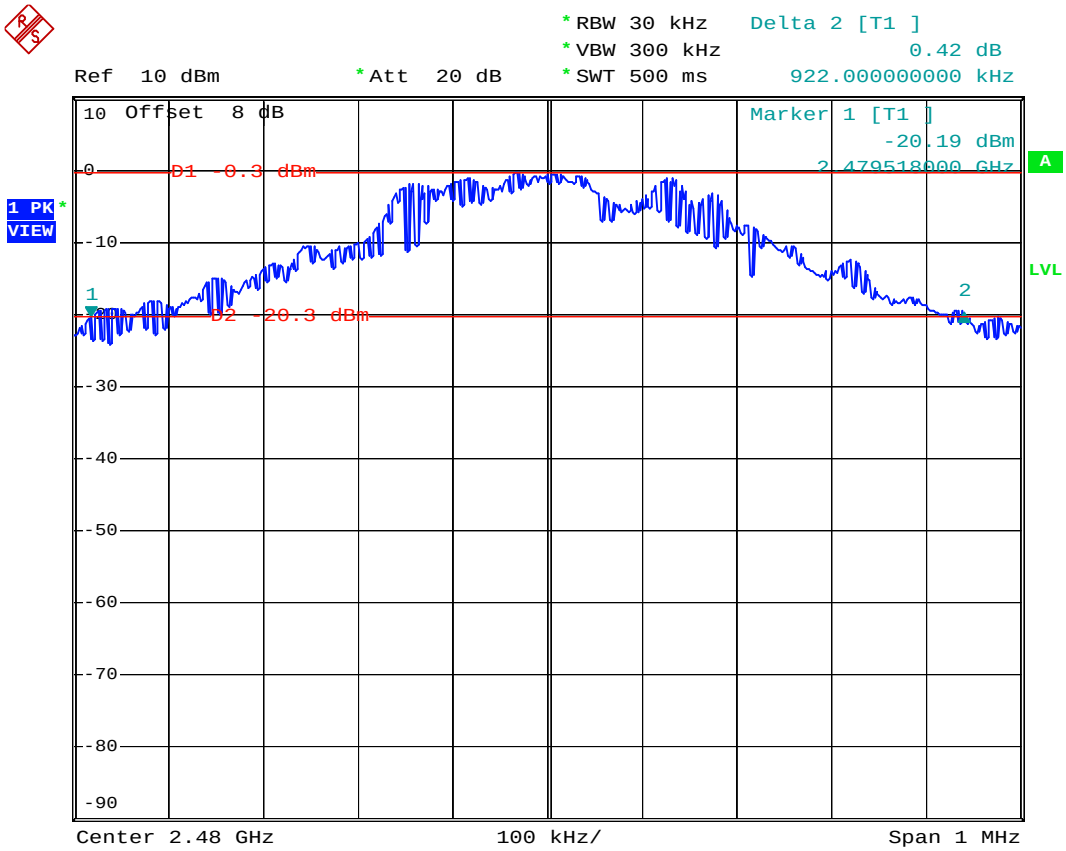
Date: 11.AUG.2006 21:16:58

Mode 8



Date: 11.AUG.2006 21:18:21

Mode 9



Date: 11.AUG.2006 21:19:33

5.8 Dwell Time of Each Frequency

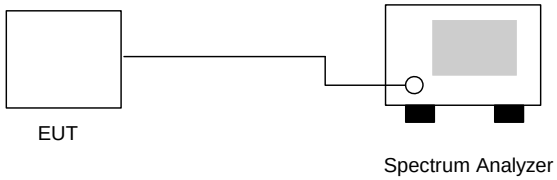
5.8.1 Measuring Instruments：

As described in chapter 9 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 =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°C
- Relative Humidity : 51%
- Test Enginner : Andy

Ch00

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.3	496	0.130	0.4
DH3	4.2	1766	0.234	0.4
DH5	3.2	3056	0.309	0.4

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	7.9	492	0.123	0.4
DH3	5	1776	0.281	0.4
DH5	3	3056	0.290	0.4

CH78

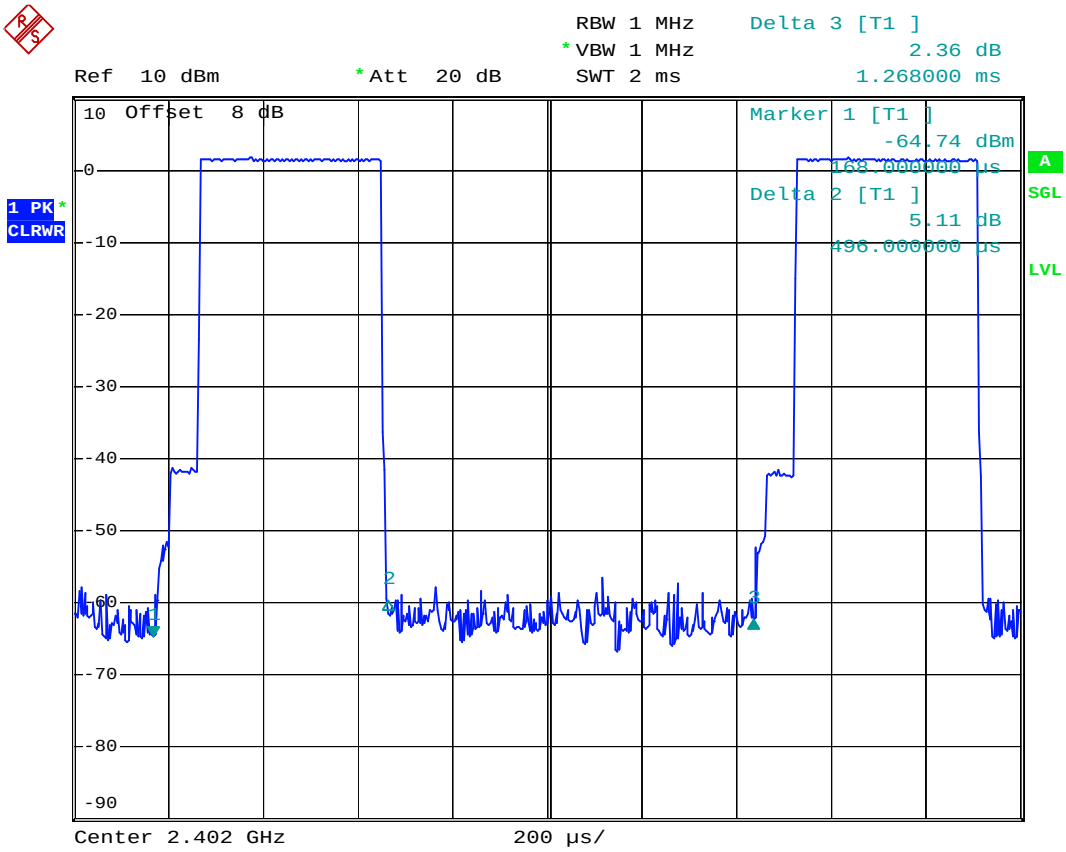
Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.2	496	0.129	0.4
DH3	4.8	1756	0.266	0.4
DH5	3.2	3036	0.307	0.4

※ Remark:

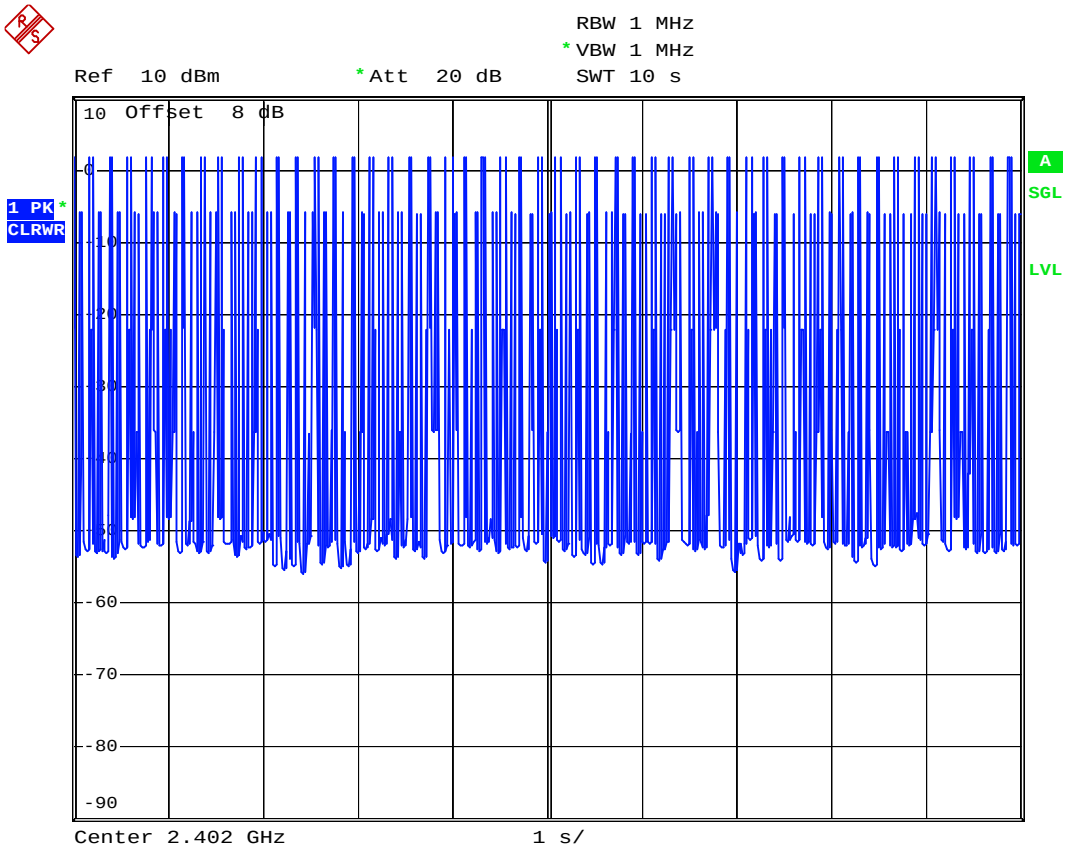
1. Dwell Time=79(channels) x 0.4(s) x average hopping channel x package transfer time
2. 79channels come from the Hopping Channel number.
3. Average Hopping Channel = hops/sweep time
4. t: Package Transfer Time(us)

5.8.5 Dwell Time

DH1 (CH00)

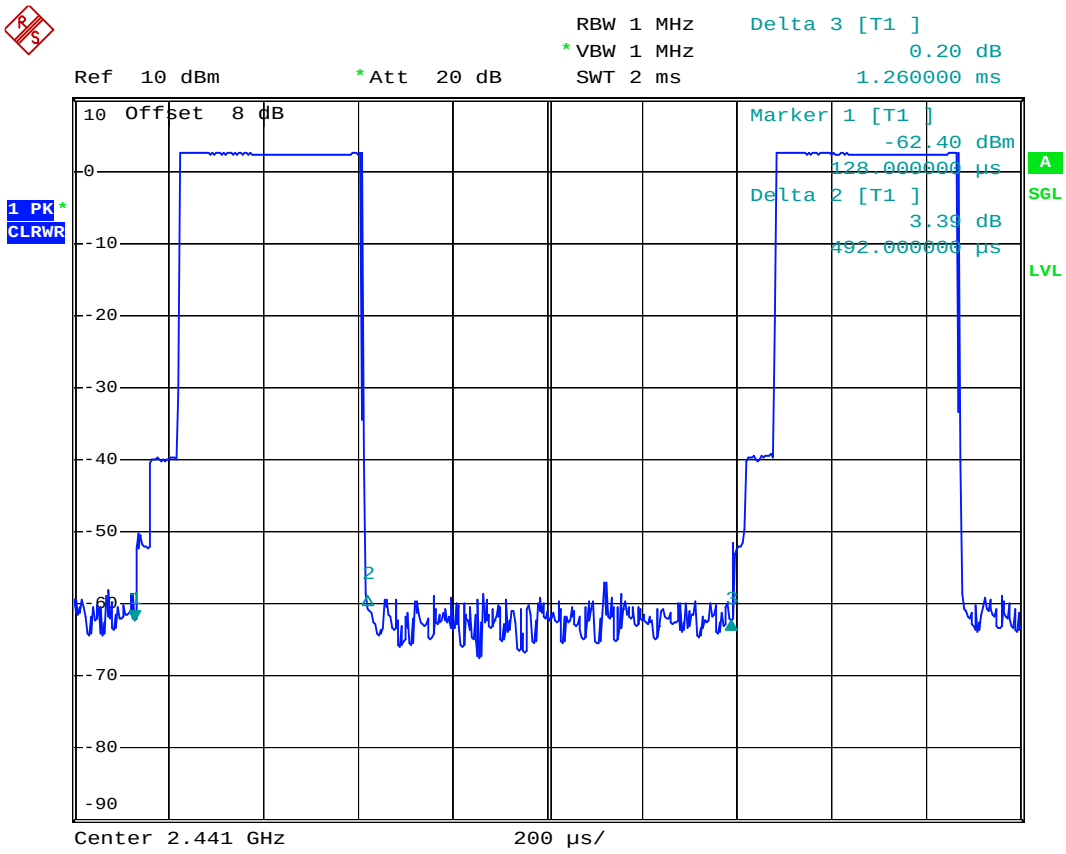


Date: 16.AUG.2006 05:00:29

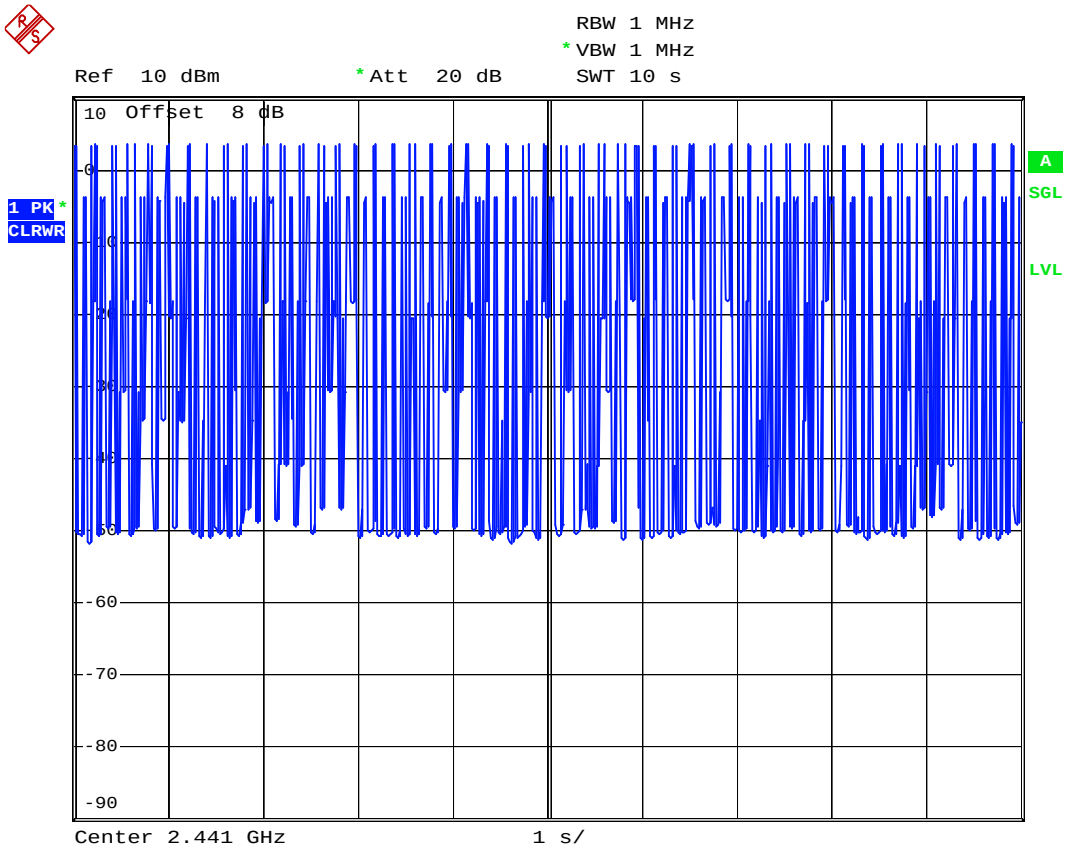


Date: 11.AUG.2006 21:55:24

DH1 (CH39)

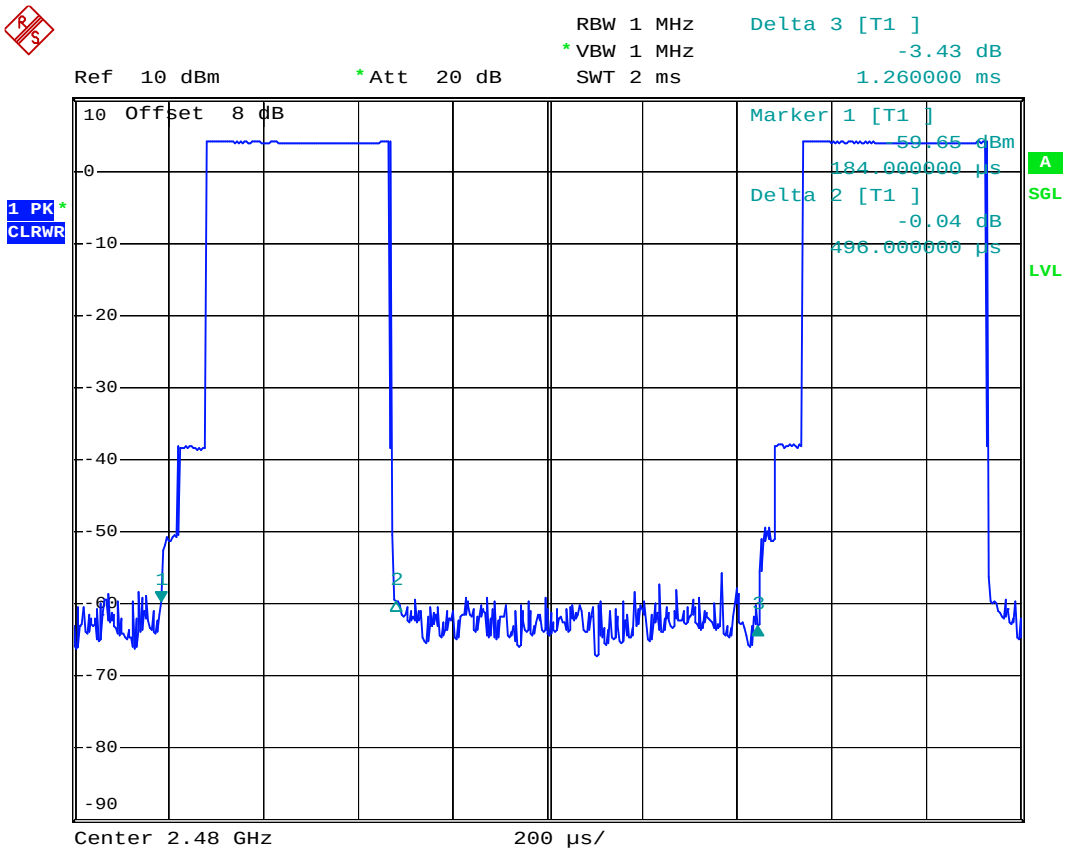


Date: 16.AUG.2006 05:01:22

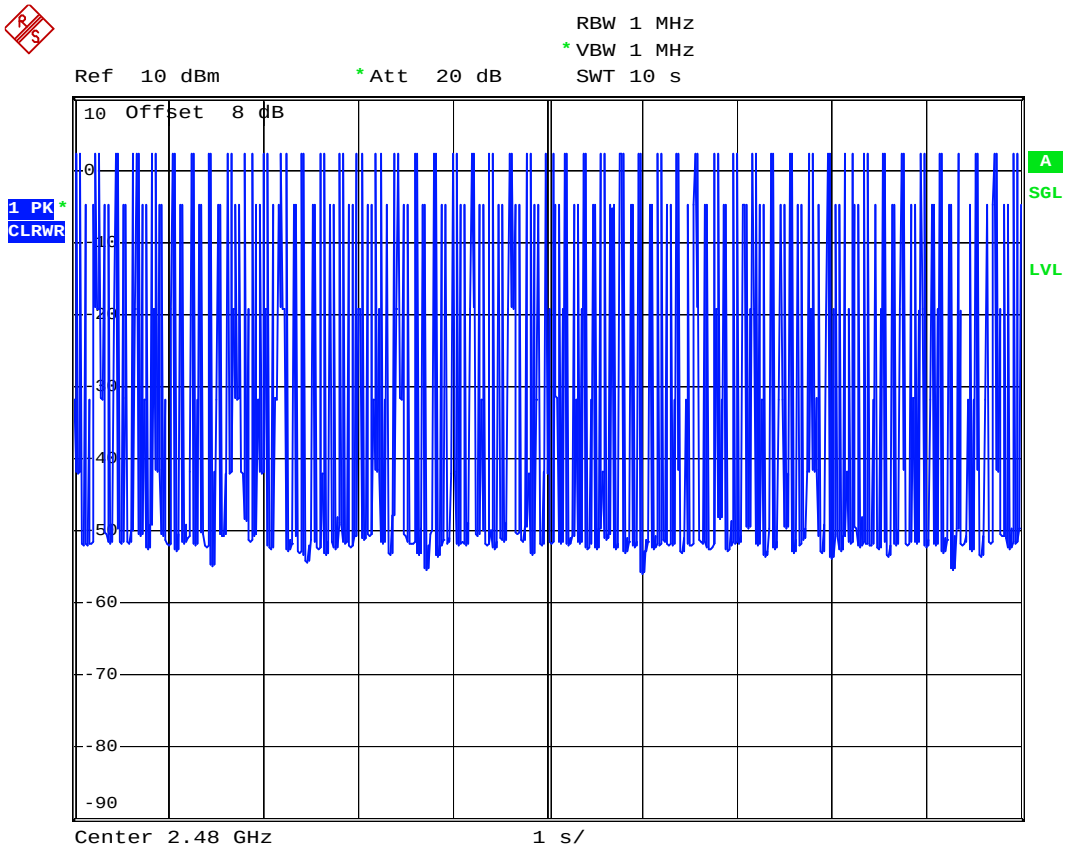


Date: 11.AUG.2006 21:55:59

DH1 (CH78)

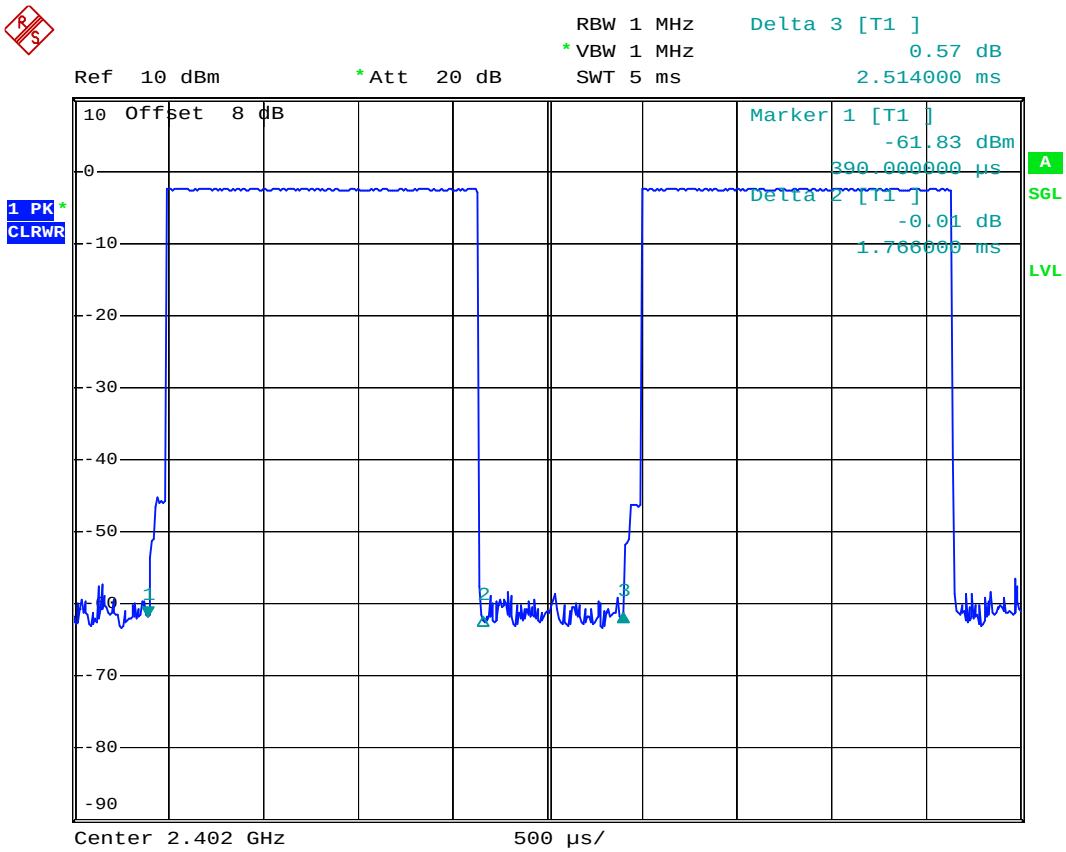


Date: 16.AUG.2006 05:02:13

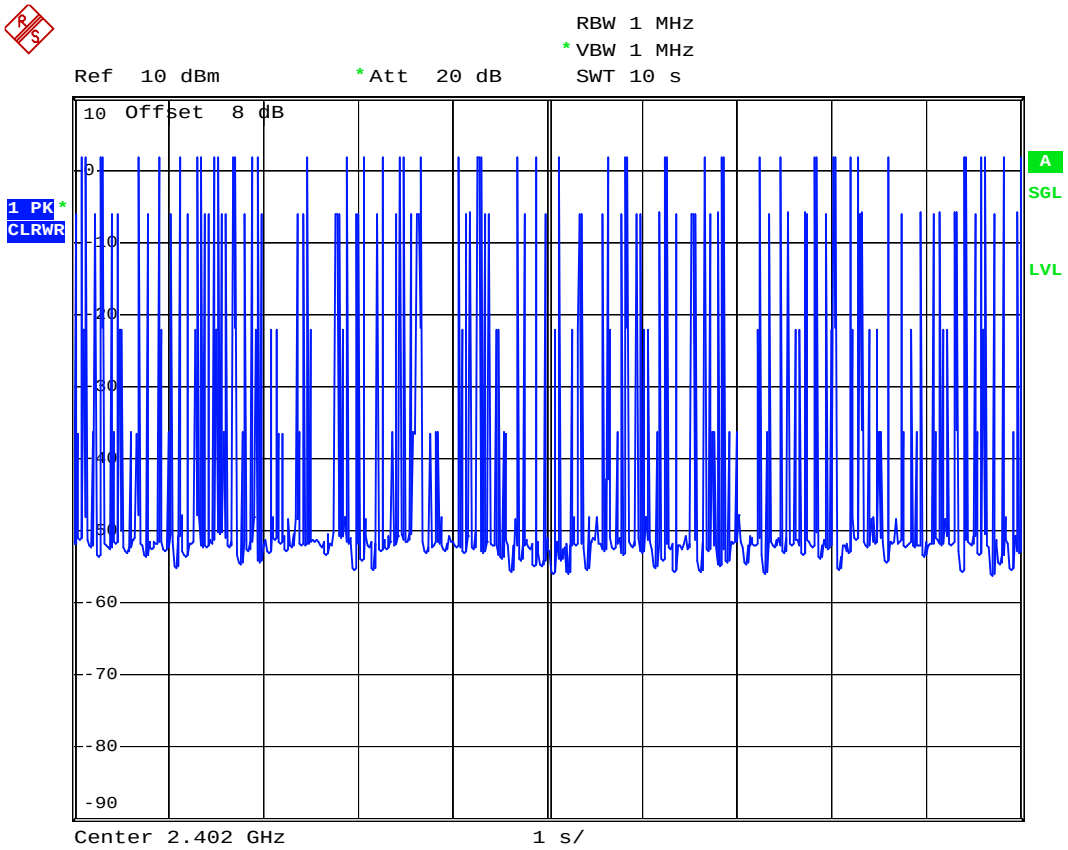


Date: 11.AUG.2006 21:56:35

DH3 (CH00)

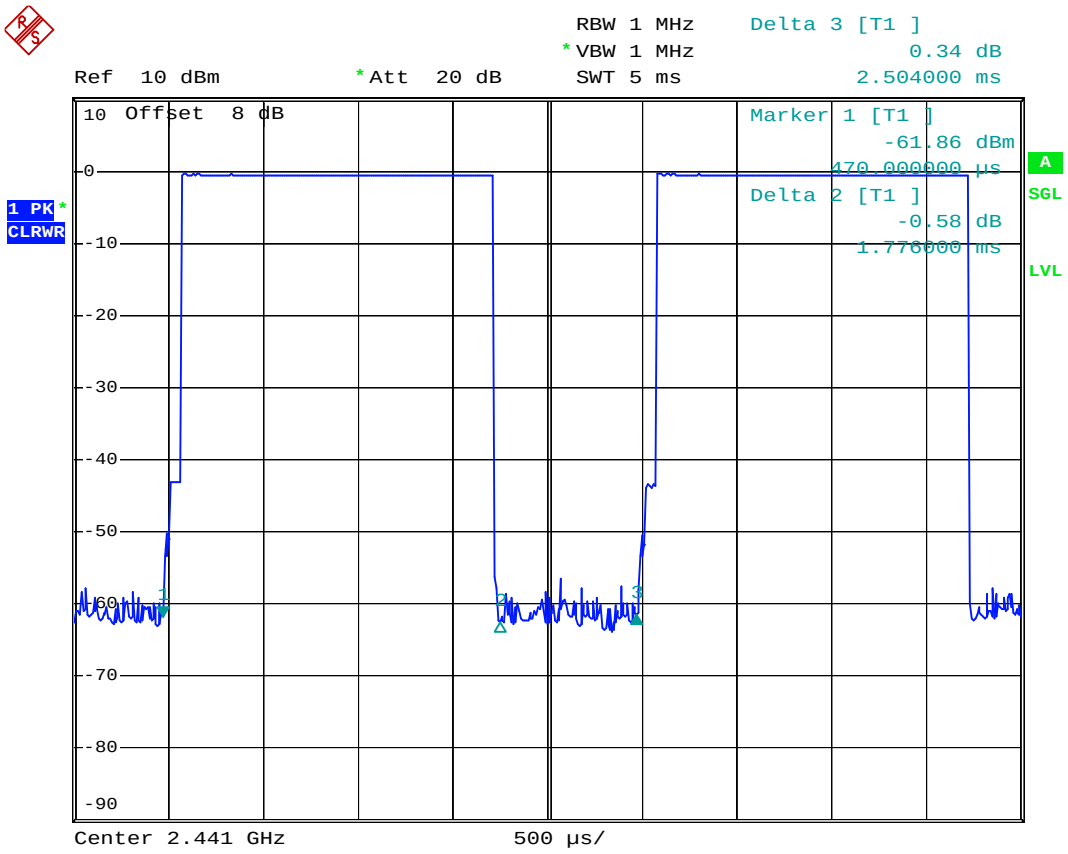


Date: 11.AUG.2006 21:38:55

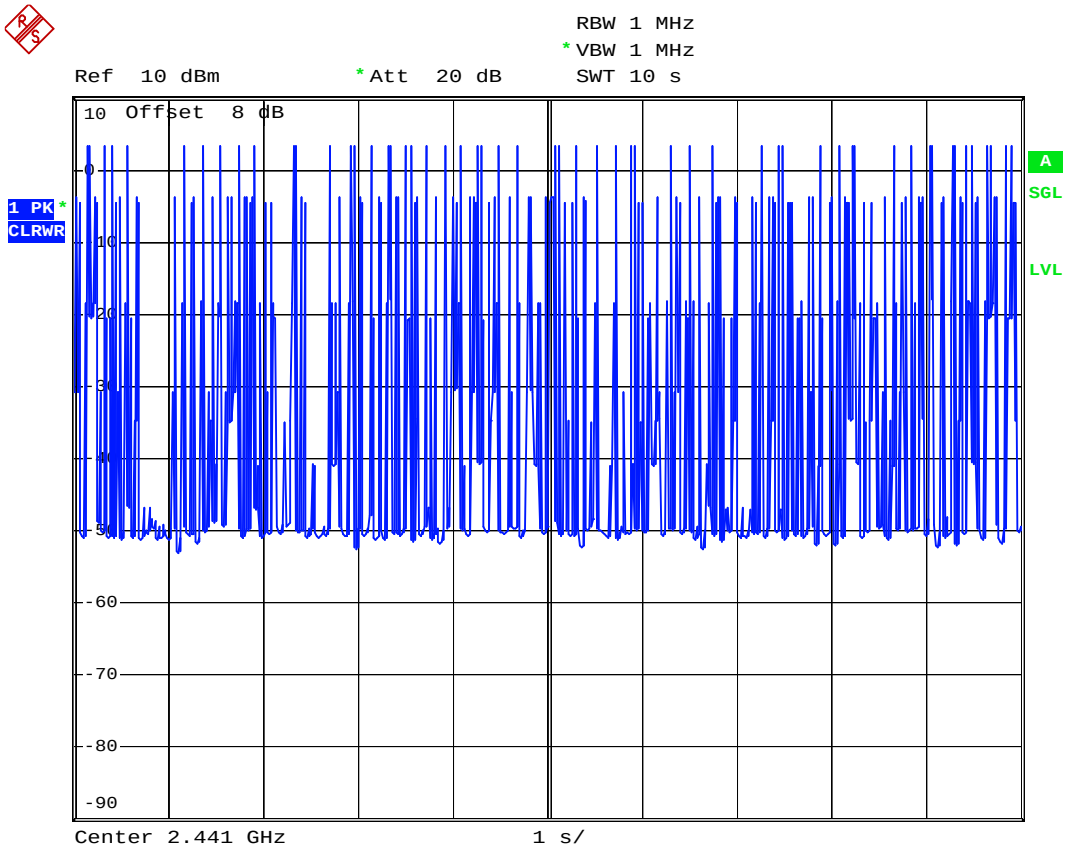


Date: 11.AUG.2006 21:54:24

DH3 (CH39)

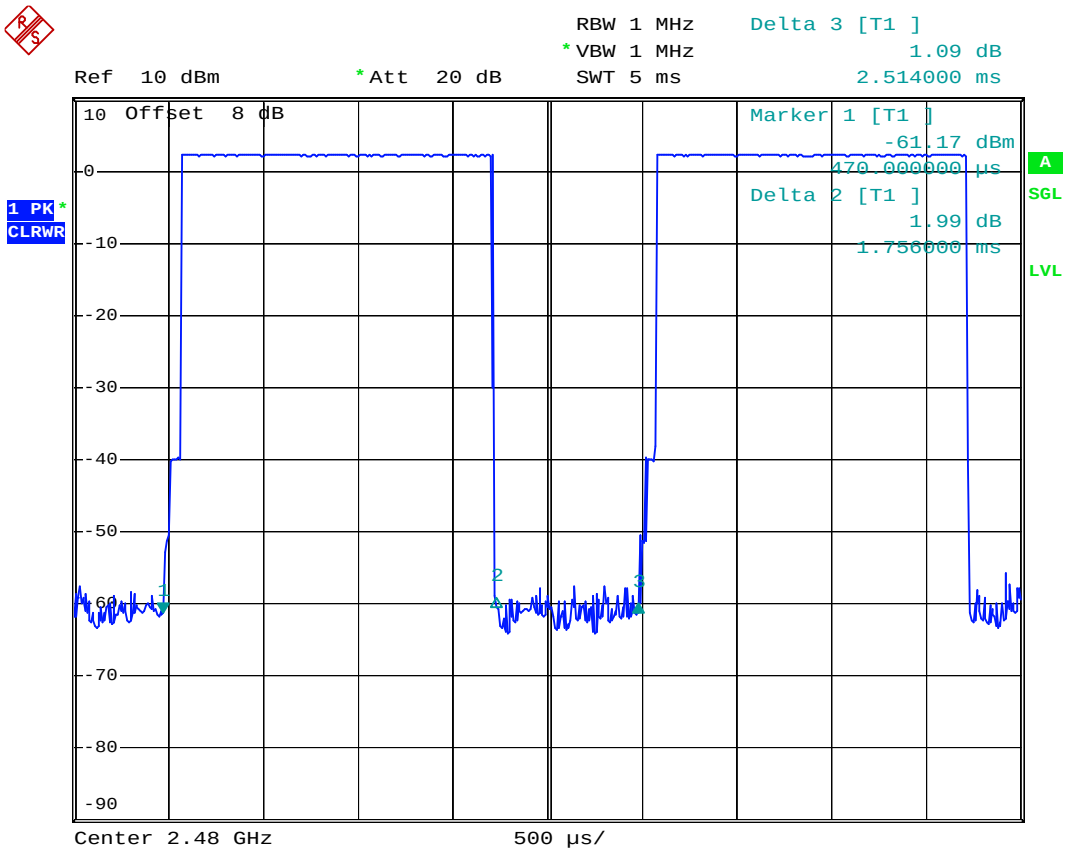


Date: 11.AUG.2006 21:37:46

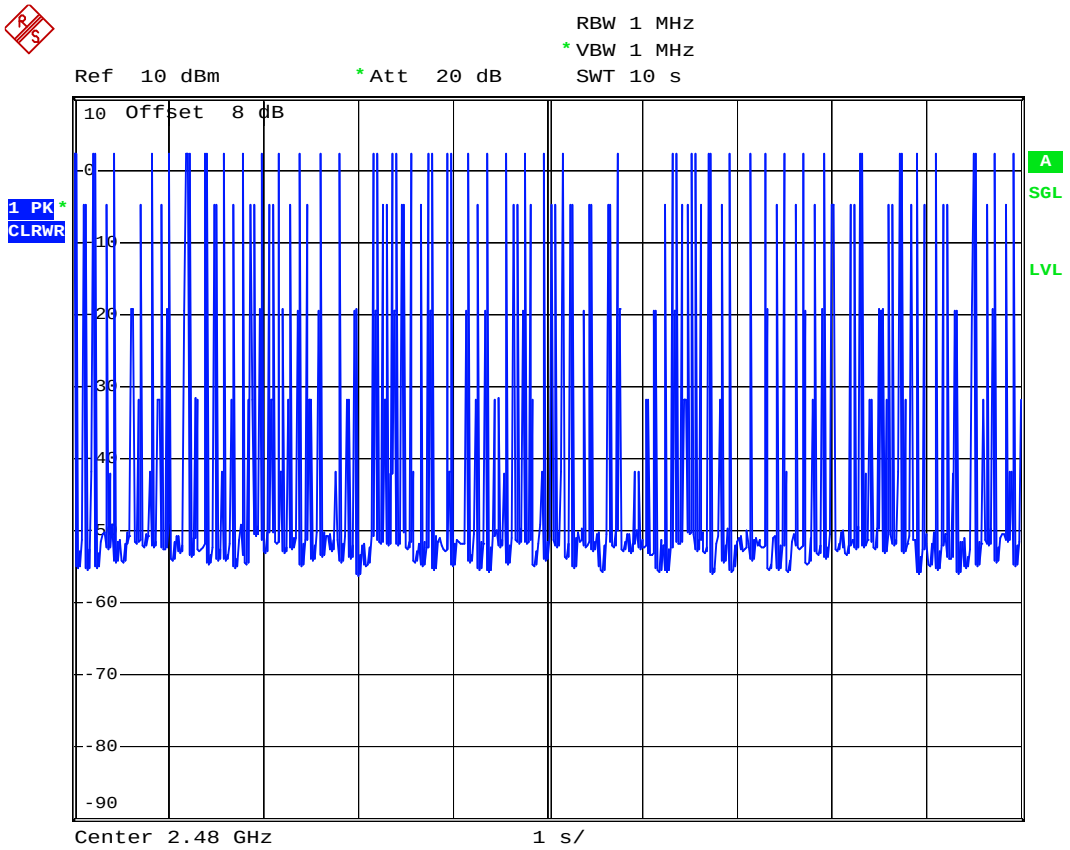


Date: 11.AUG.2006 21:53:52

DH3 (CH78)

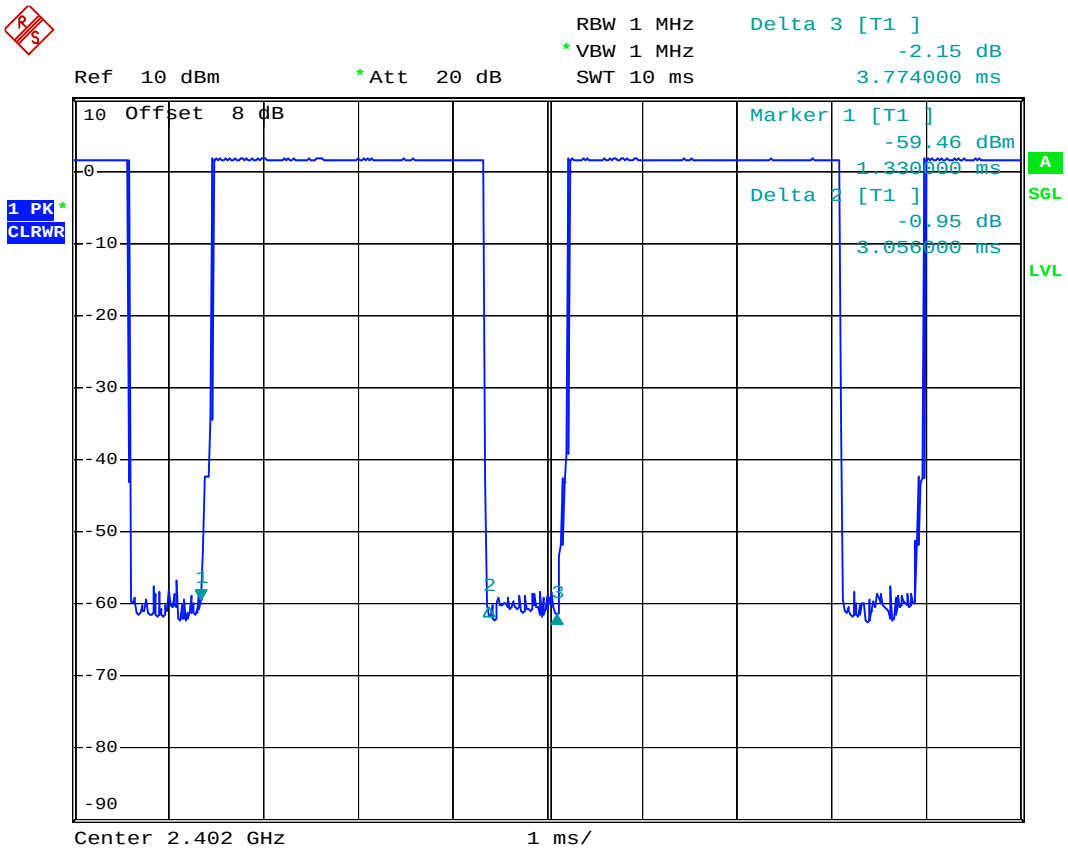


Date: 11.AUG.2006 21:43:20

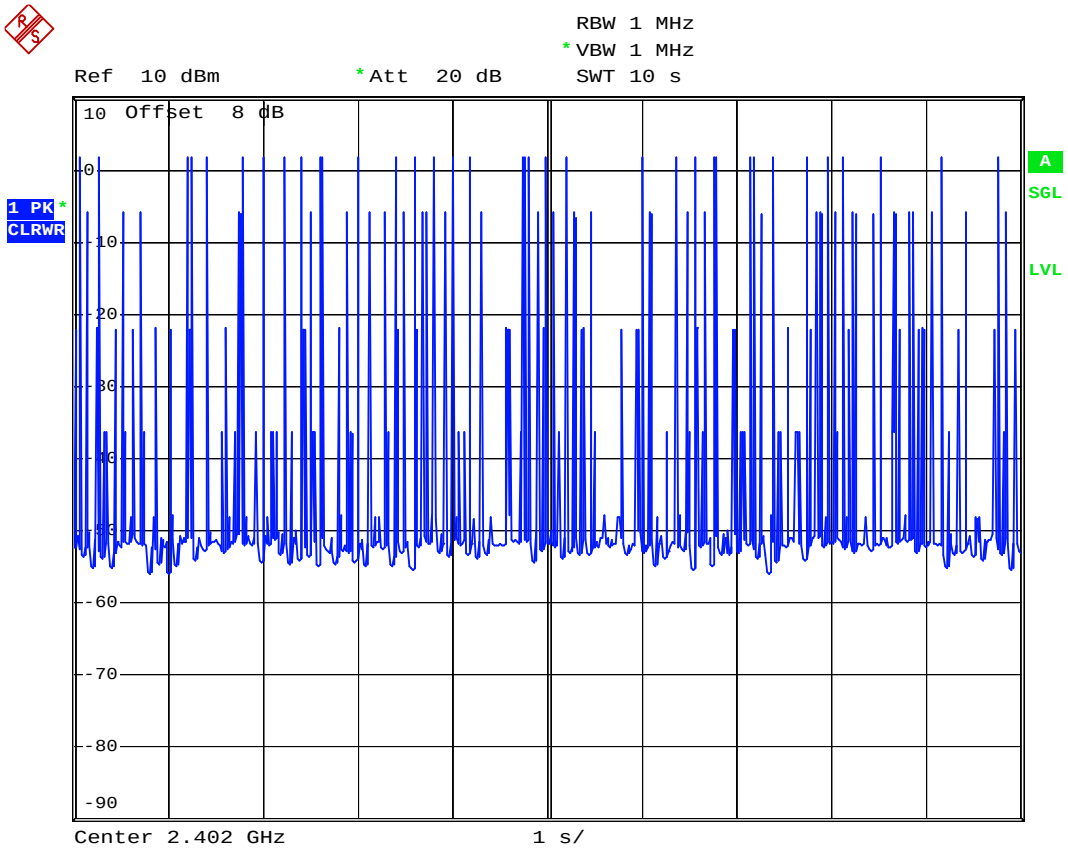


Date: 11.AUG.2006 21:52:44

DH5 (CH00)

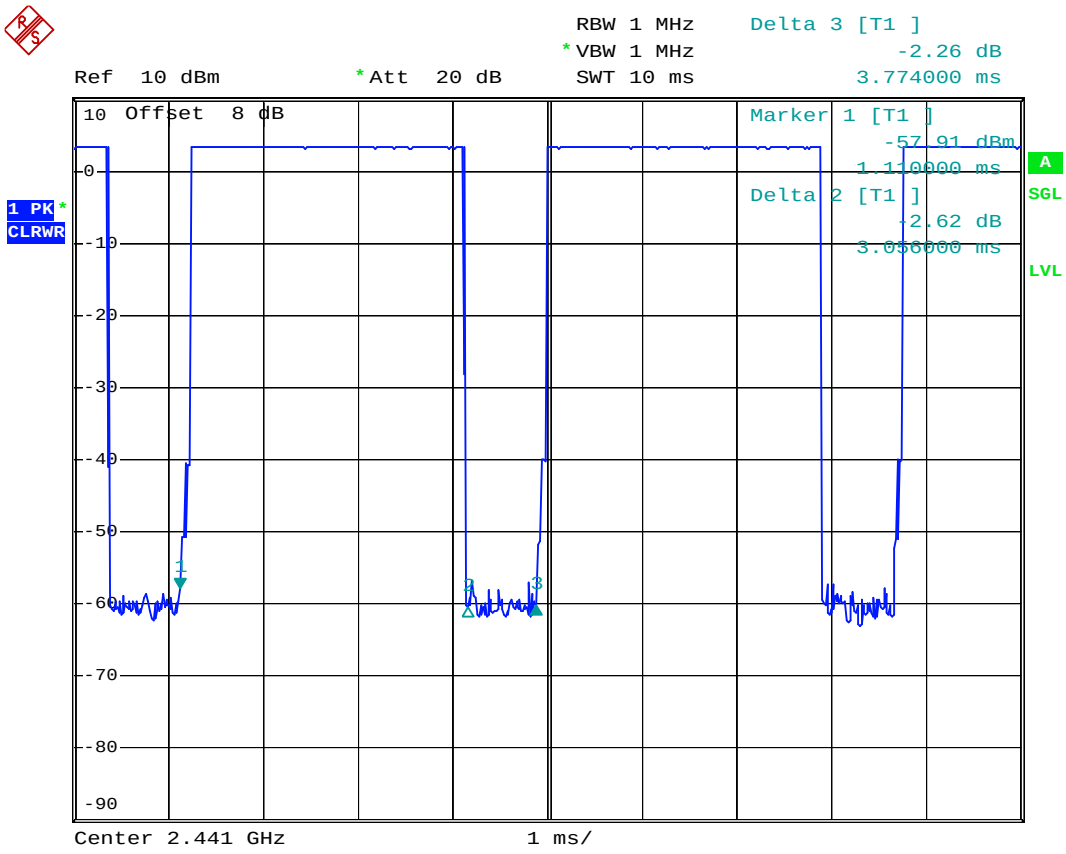


Date: 11.AUG.2006 21:46:30

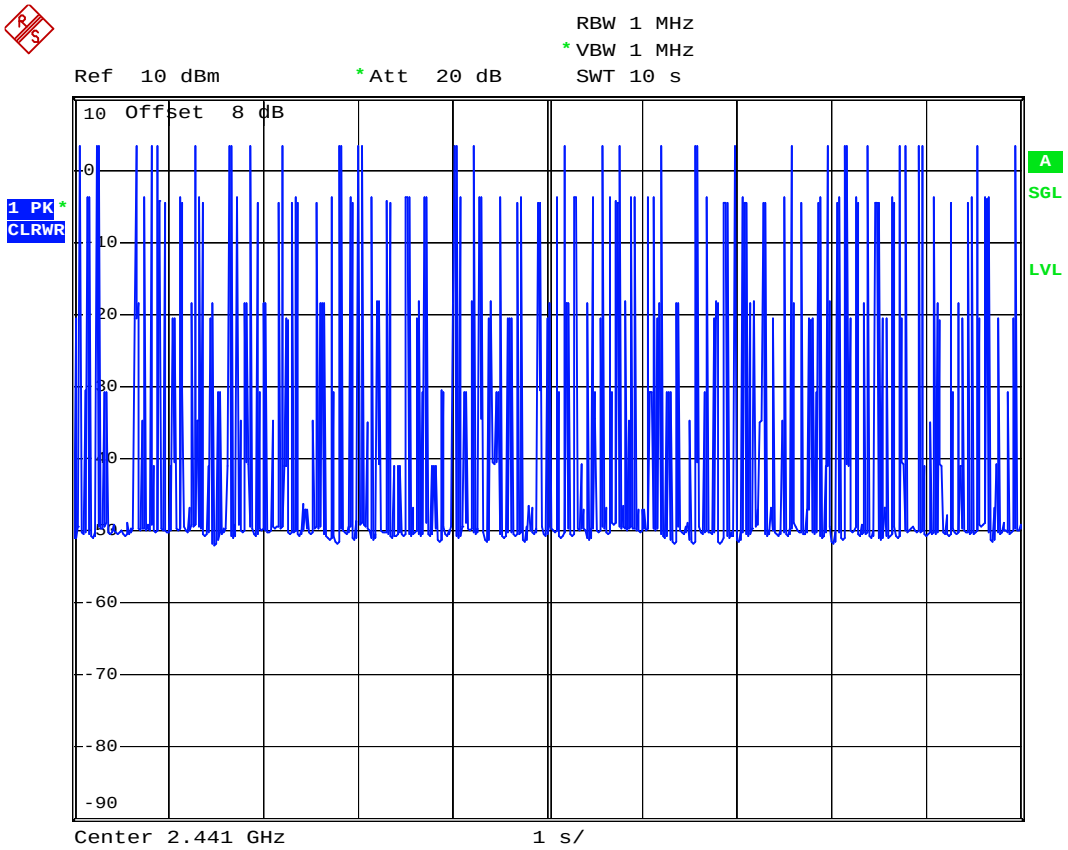


Date: 11.AUG.2006 21:47:28

DH5 (CH39)

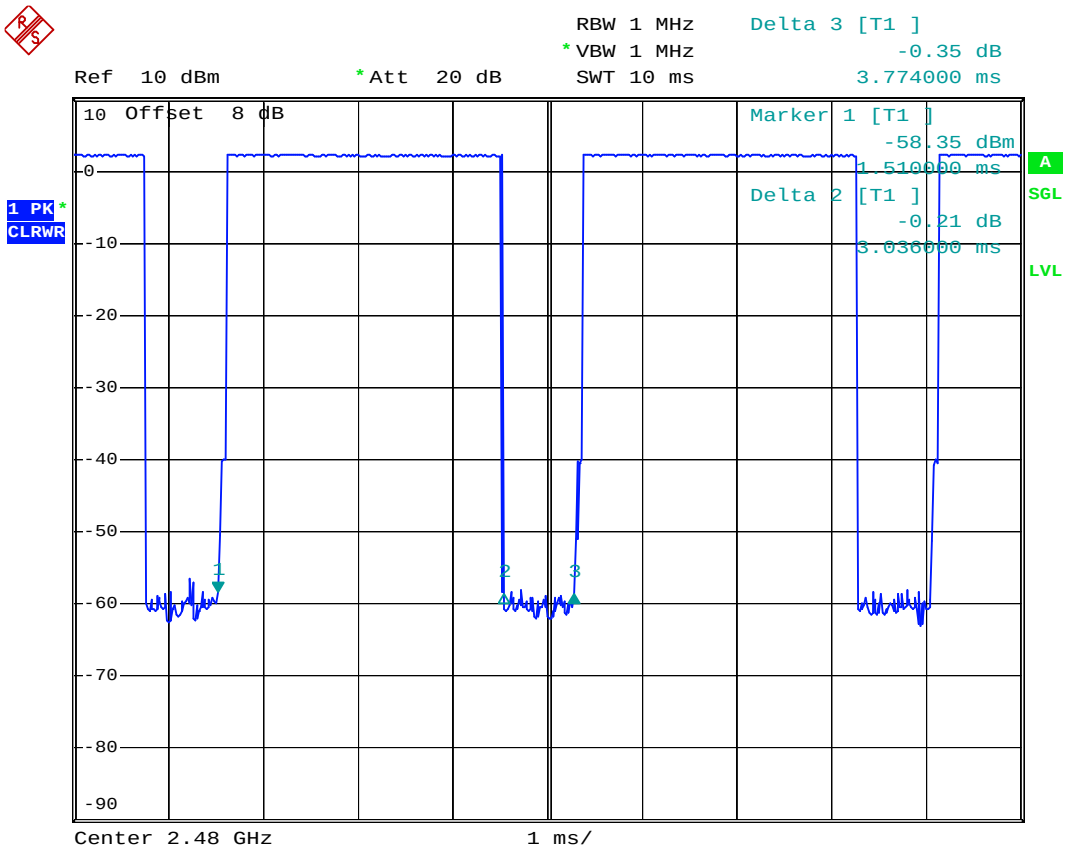


Date: 11.AUG.2006 21:45:33

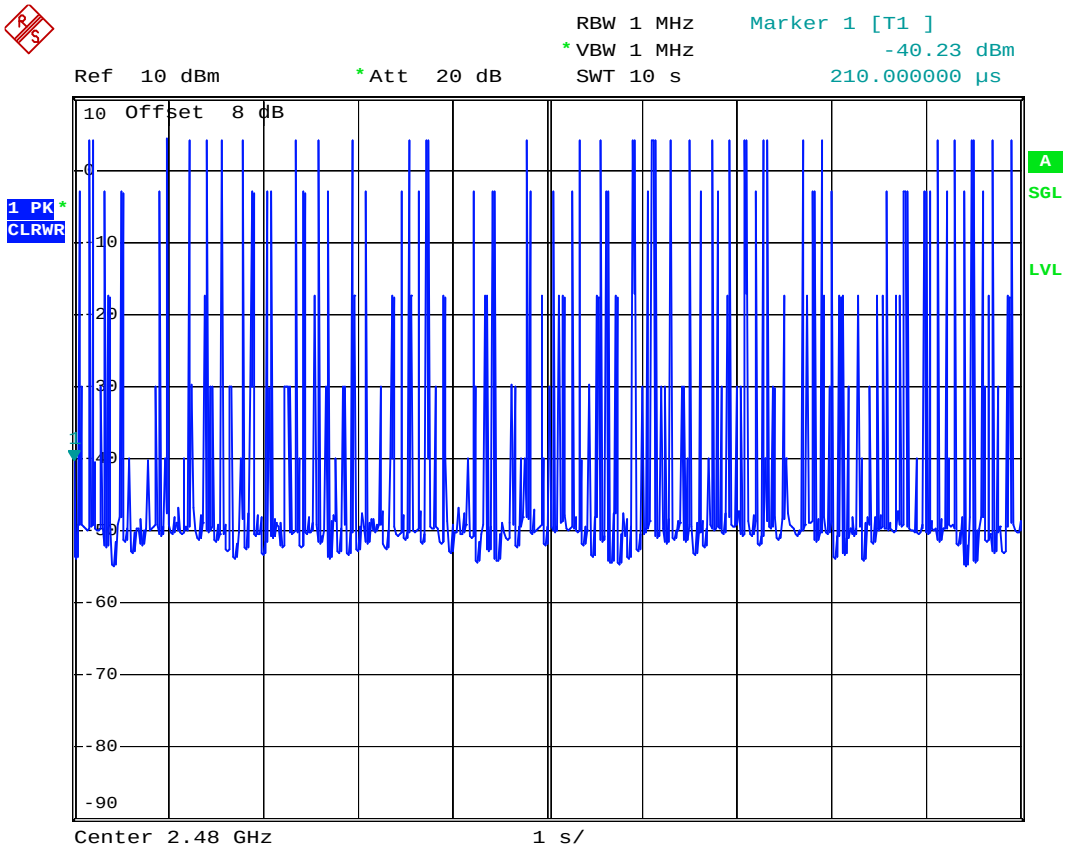


Date: 11.AUG.2006 21:48:01

DH5 (CH78)



Date: 11.AUG.2006 21:44:30



Date: 16.AUG.2006 04:57:35

5.9 Peak Output Power Measurement

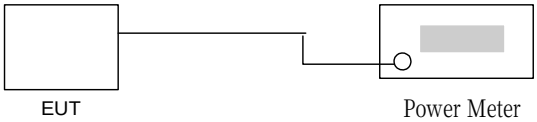
5.9.1 Measuring Instruments：

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°C
- Relative Humidity : 51%
- Test Enginner : Andy

WLAN 802.11b

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	13.73	1W/30 dBm
06	2437	13.35	1W/30 dBm
11	2462	13.36	1W/30 dBm

WLAN 802.11g

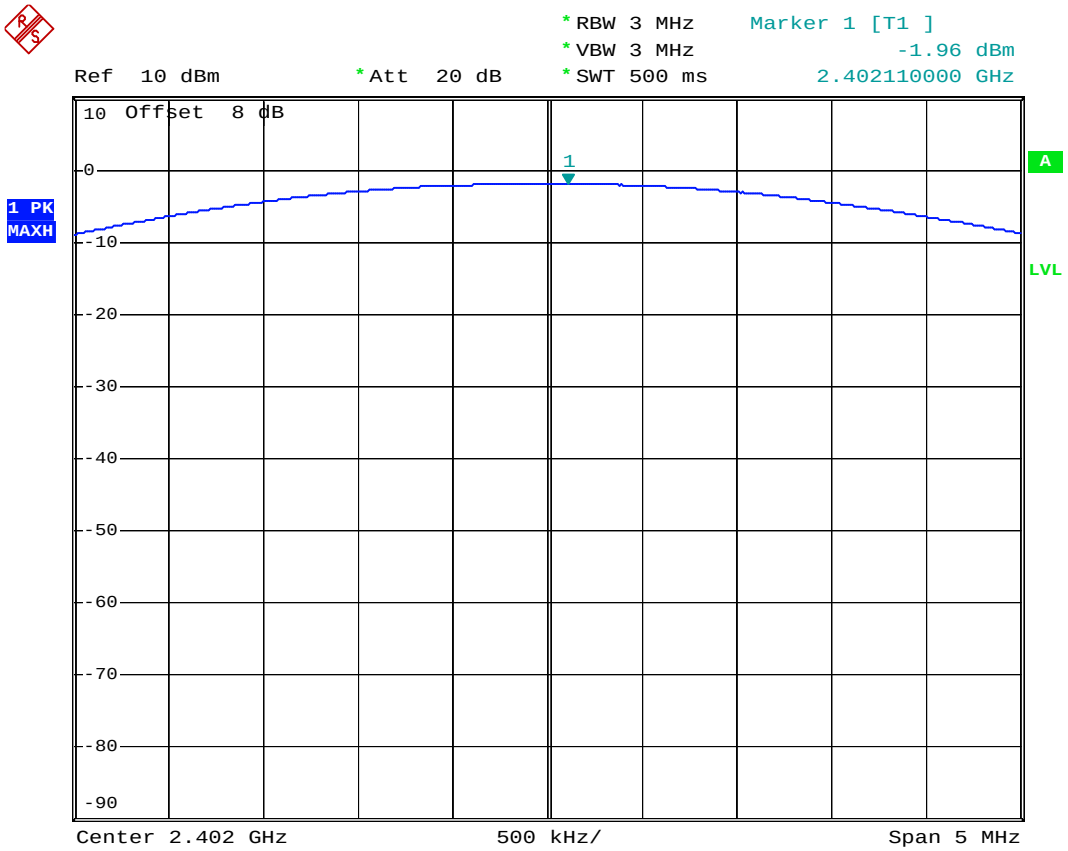
Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	15.21	1W/30 dBm
06	2437	16.78	1W/30 dBm
11	2462	15.85	1W/30 dBm

Bluetooth

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-1.96	1W/30 dBm
39	2441	0.01	1W/30 dBm
78	2480	-0.22	1W/30 dBm

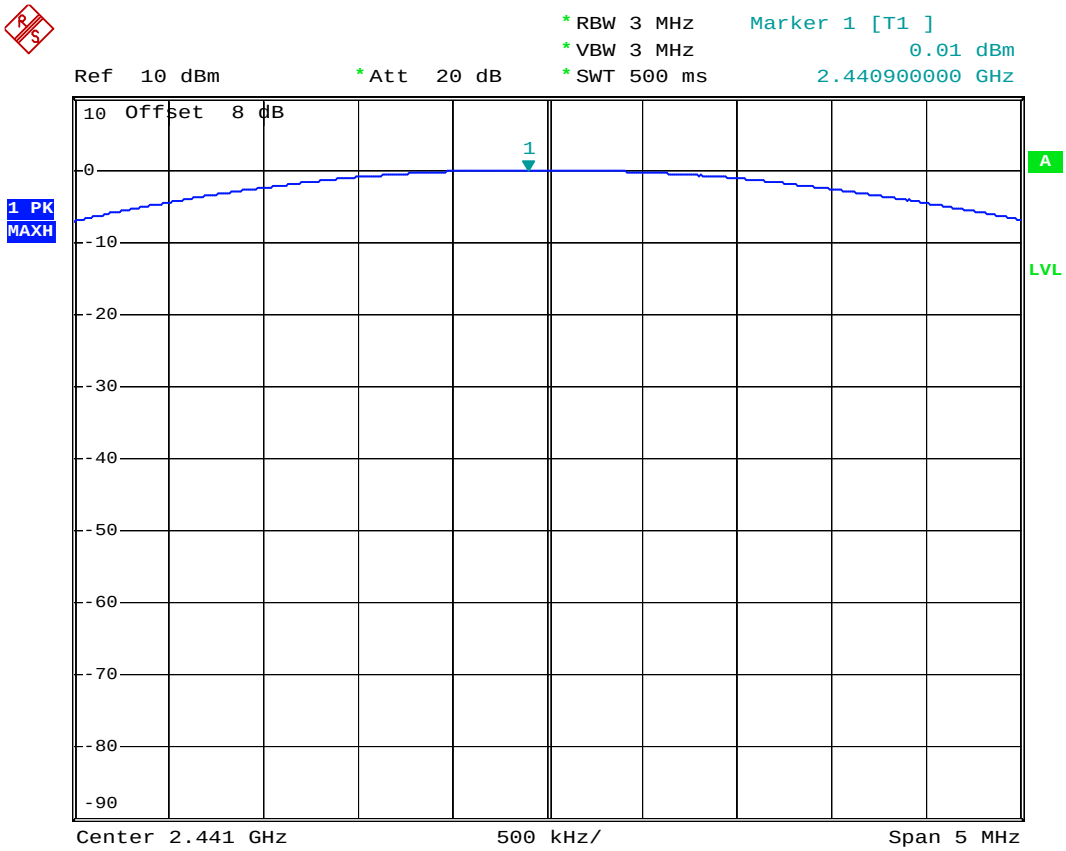
5.9.5 Output Power

BT Mode : CH00 (2402MHz)



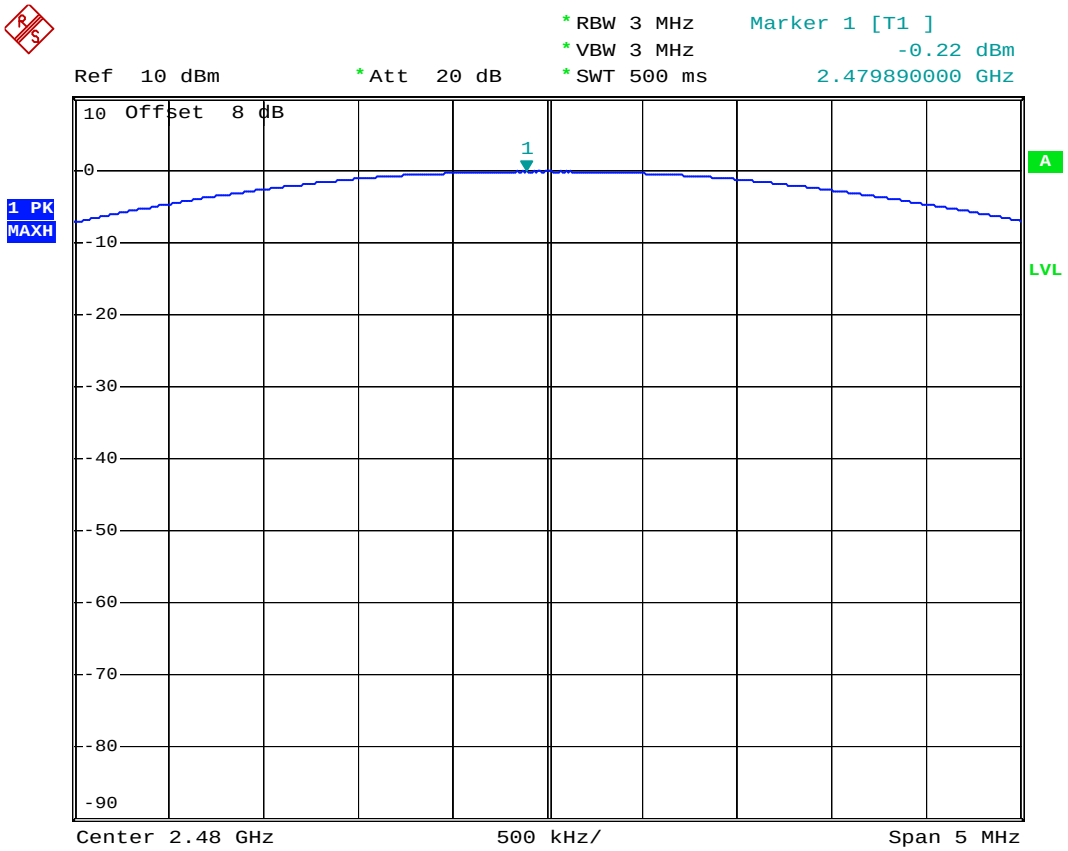
Date: 11.AUG.2006 21:07:53

BT Mode : CH39 (2441MHz)



Date: 11.AUG.2006 21:08:21

BT Mode : CH78 (2480MHz)



Date: 11.AUG.2006 21:08:45

5.10 Conducted Emission

5.10.1 Measuring Instruments

As describ ed in chapter 6 of this test Report.

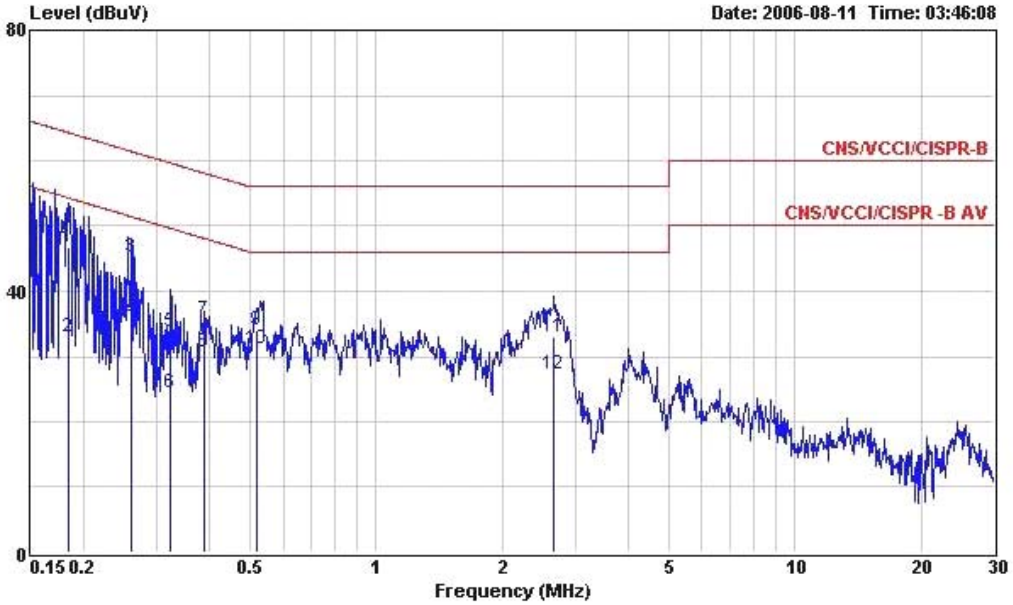
5.10.2 Test Procedures：

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.

5.10.3 Test Data

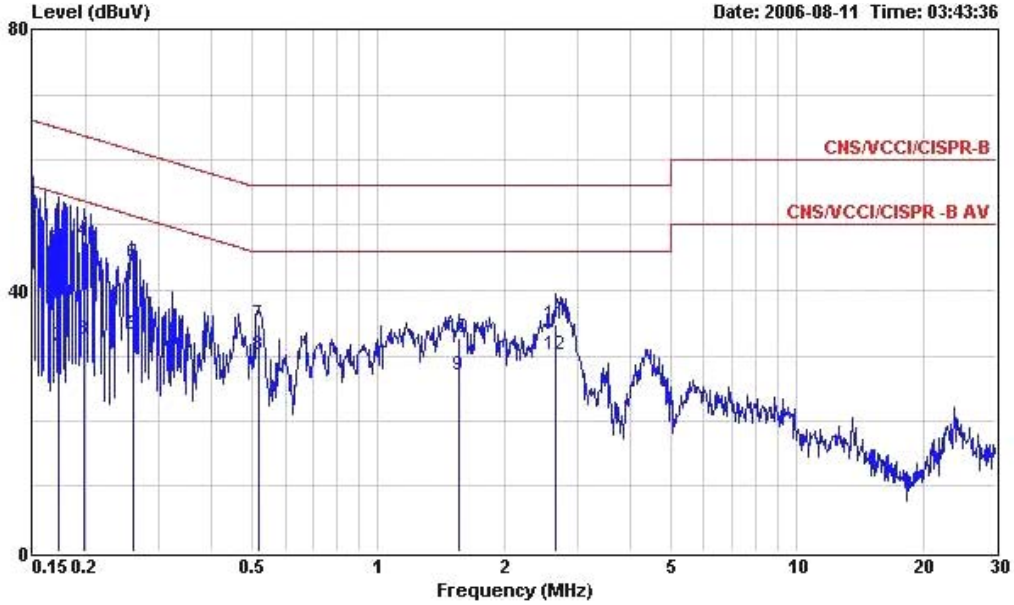
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy
- Test Mode : Mode 1

■ **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 : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link+Adapter
Memo : +Camera+Earphone2
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.184	46.88	-17.41	64.29	46.76	0.10	0.02	QP
2	0.184	32.87	-21.42	54.29	32.75	0.10	0.02	Average
3	0.260	45.28	-16.15	61.43	45.06	0.10	0.12	QP
4	0.260	35.65	-15.78	51.43	35.43	0.10	0.12	Average
5	0.323	33.88	-25.75	59.63	33.57	0.10	0.21	QP
6	0.323	24.29	-25.34	49.63	23.98	0.10	0.21	Average
7	0.387	35.58	-22.54	58.12	35.20	0.10	0.28	QP
8	0.387	30.53	-17.59	48.12	30.15	0.10	0.28	Average
9	0.517	34.02	-21.98	56.00	33.69	0.10	0.23	QP
10	0.517	31.17	-14.83	46.00	30.84	0.10	0.23	Average
11	2.660	33.00	-23.00	56.00	32.60	0.14	0.26	QP
12	2.660	27.23	-18.77	46.00	26.83	0.14	0.26	Average

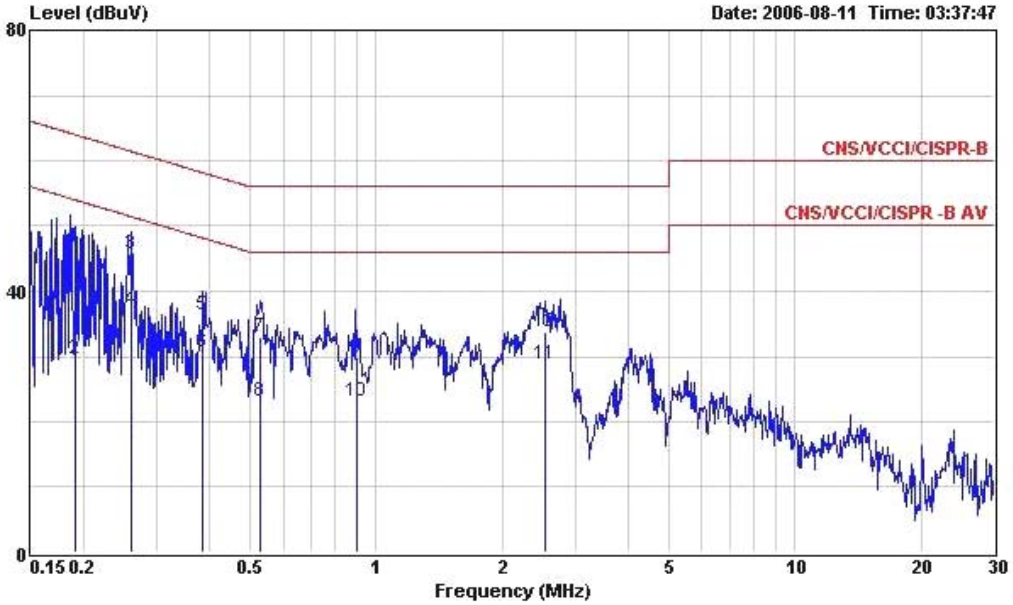


Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link+Adapter
Memo : +Camera+Earphone2
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.173	46.69	-18.13	64.82	46.57	0.10	0.02	QP
2	0.173	31.42	-23.40	54.82	31.30	0.10	0.02	Average
3	0.199	32.38	-21.27	53.65	32.26	0.10	0.02	Average
4	0.199	47.52	-16.13	63.65	47.40	0.10	0.02	QP
5	0.261	33.28	-18.13	51.41	33.06	0.10	0.12	Average
6	0.261	44.03	-17.38	61.41	43.81	0.10	0.12	QP
7	0.518	34.81	-21.19	56.00	34.49	0.10	0.22	QP
8	0.518	30.19	-15.81	46.00	29.87	0.10	0.22	Average
9	1.560	26.92	-19.08	46.00	26.63	0.10	0.19	Average
10	1.560	32.67	-23.33	56.00	32.38	0.10	0.19	QP
11	2.660	34.83	-21.17	56.00	34.47	0.10	0.26	QP
12	2.660	30.04	-15.96	46.00	29.68	0.10	0.26	Average

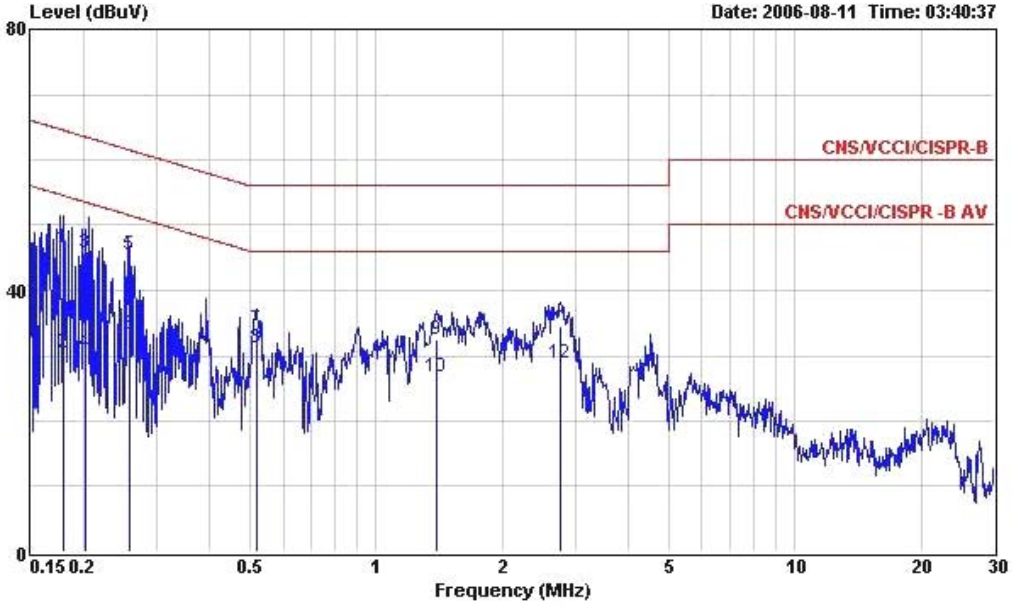
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy
- Test Mode : Mode 2

■ 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 : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link+Adapter
Memo : +MPEG4+Earphone2
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.191	46.67	-17.31	63.98	46.55	0.10	0.02	QP
2	0.191	29.63	-24.35	53.98	29.51	0.10	0.02	Average
3	0.260	45.62	-15.81	61.43	45.40	0.10	0.12	QP
4	0.260	37.22	-14.21	51.43	37.00	0.10	0.12	Average
5	0.385	36.42	-21.75	58.17	36.05	0.10	0.27	QP
6	0.385	30.74	-17.43	48.17	30.37	0.10	0.27	Average
7	0.528	33.06	-22.94	56.00	32.74	0.10	0.22	QP
8	0.528	23.14	-22.86	46.00	22.82	0.10	0.22	Average
9	0.897	29.84	-26.16	56.00	29.65	0.10	0.09	QP
10	0.897	23.19	-22.81	46.00	23.00	0.10	0.09	Average
11	2.530	28.75	-17.25	46.00	28.36	0.13	0.26	Average
12	2.530	33.87	-22.13	56.00	33.48	0.13	0.26	QP

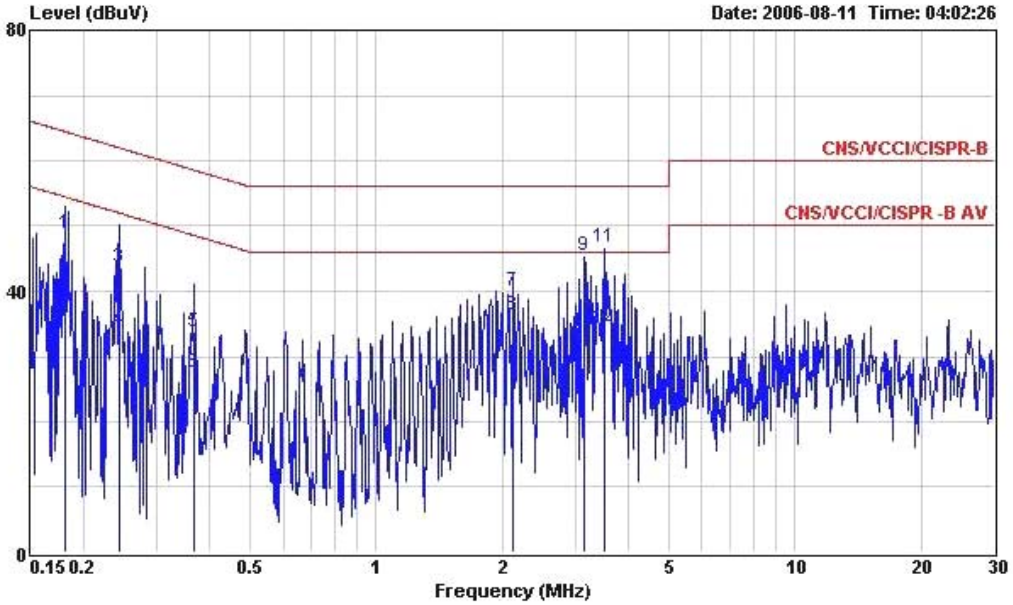


Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link+Adapter
Memo : +MPEG4+Earphone2
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.179	46.42	-18.11	64.53	46.30	0.10	0.02	QP
2	0.179	30.42	-24.11	54.53	30.30	0.10	0.02	Average
3	0.202	45.80	-17.72	63.52	45.68	0.10	0.02	QP
4	0.202	30.28	-23.24	53.52	30.16	0.10	0.02	Average
5	0.259	45.54	-15.94	61.48	45.32	0.10	0.12	QP
6	0.259	33.22	-18.26	51.48	33.00	0.10	0.12	Average
7	0.518	33.91	-22.09	56.00	33.59	0.10	0.22	QP
8	0.518	31.07	-14.93	46.00	30.75	0.10	0.22	Average
9	1.400	32.54	-23.46	56.00	32.28	0.10	0.16	QP
10	1.400	26.66	-19.34	46.00	26.40	0.10	0.16	Average
11	2.760	34.58	-21.42	56.00	34.22	0.10	0.26	QP
12	2.760	28.96	-17.04	46.00	28.60	0.10	0.26	Average

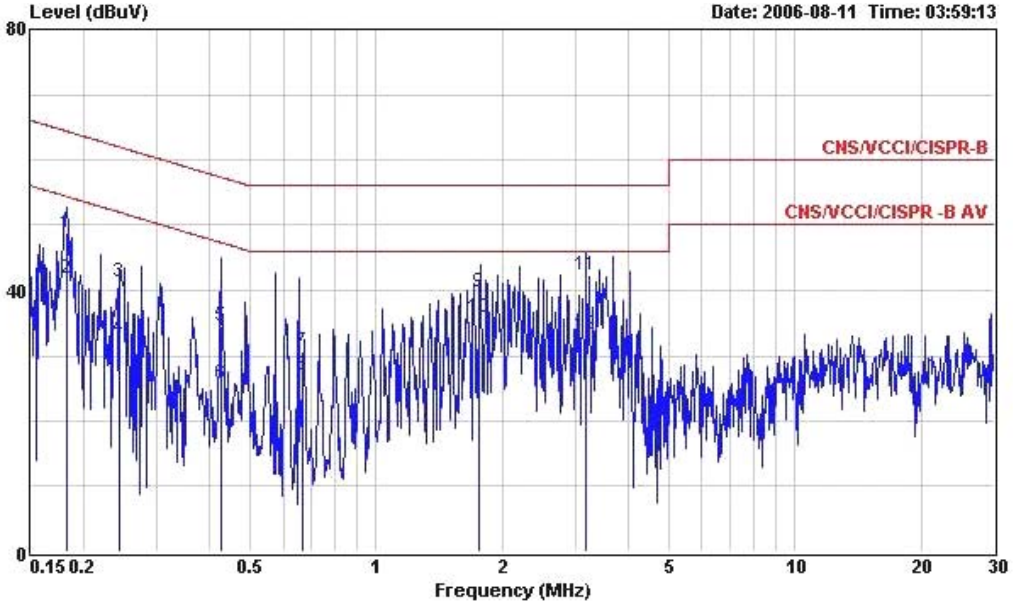
- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andy
- Test Mode : Mode 3

■ 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 : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link
Memo : +USB Link+Earphone2+Camera
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.181	48.88	-15.56	64.44	48.76	0.10	0.02	QP
2	0.181	39.56	-14.88	54.44	39.44	0.10	0.02	Average
3	0.243	43.65	-18.34	61.99	43.45	0.10	0.10	QP
4	0.243	34.14	-17.85	51.99	33.94	0.10	0.10	Average
5	0.367	33.66	-24.91	58.57	33.30	0.10	0.26	QP
6	0.367	27.54	-21.03	48.57	27.18	0.10	0.26	Average
7	2.120	39.91	-16.09	56.00	39.54	0.11	0.26	QP
8	2.120	36.28	-9.72	46.00	35.91	0.11	0.26	Average
9	3.151	45.38	-10.62	56.00	44.96	0.17	0.25	QP
10	3.151	33.76	-12.24	46.00	33.34	0.17	0.25	Average
11	3.513	46.77	-9.23	56.00	46.34	0.18	0.25	QP
12	3.513	34.45	-11.55	46.00	34.02	0.18	0.25	Average



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : Mobile Phone
Power : 120V/60Hz
Model : FR 680914
Memo : PCS1900 Idle+BT Link+WLAN Link
Memo : +USB Link+Earphone2+Camera
Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.182	48.86	-15.53	64.39	48.74	0.10	0.02	QP
2	0.182	41.79	-12.60	54.39	41.67	0.10	0.02	Average
3	0.244	41.29	-20.66	61.95	41.09	0.10	0.10	QP
4	0.244	32.82	-19.13	51.95	32.62	0.10	0.10	Average
5	0.426	34.62	-22.71	57.33	34.25	0.10	0.27	QP
6	0.426	25.60	-21.73	47.33	25.23	0.10	0.27	Average
7	0.669	30.67	-25.33	56.00	30.41	0.10	0.16	QP
8	0.669	27.13	-18.87	46.00	26.87	0.10	0.16	Average
9	1.764	39.73	-16.27	56.00	39.41	0.10	0.22	QP
10	1.764	35.80	-10.20	46.00	35.48	0.10	0.22	Average
11	3.156	42.27	-13.73	56.00	41.92	0.10	0.25	QP
12	3.156	33.31	-12.69	46.00	32.96	0.10	0.25	Average

5.11 Radiated Emission Measurement

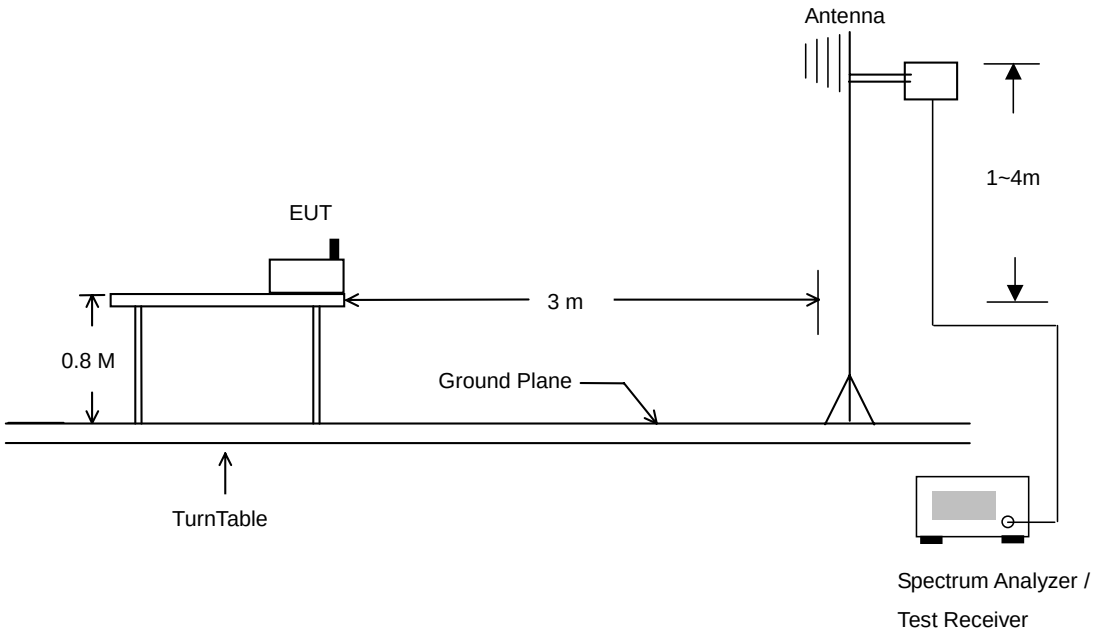
5.11.1 Measuring Instruments

As described in chapter 6 of this Report.

5.11.2 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.

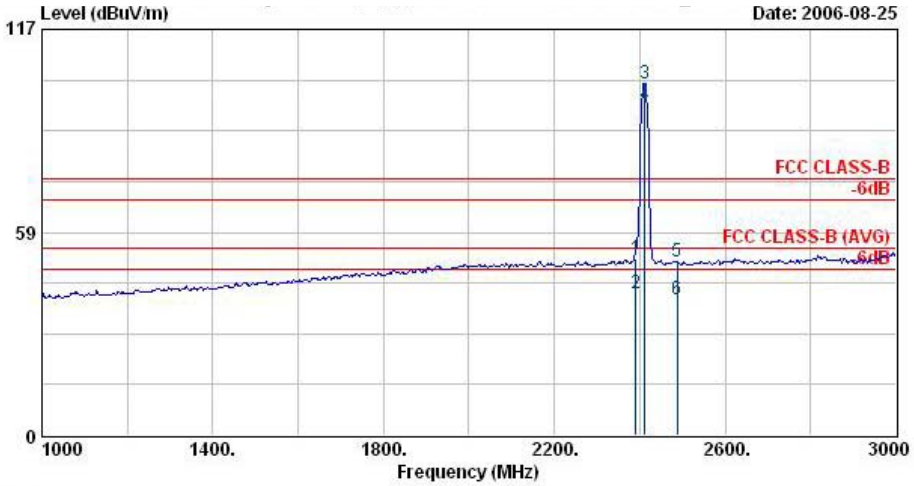
5.11.3 Typical Test Setup Layout of Radiated Emission



5.11.4 Test Data

- Temperature : 25°C
- Relative Humidity : 51%
- Test Enginner : Andrew
- Test Mode : Mode 1
- Polarization : Horizontal

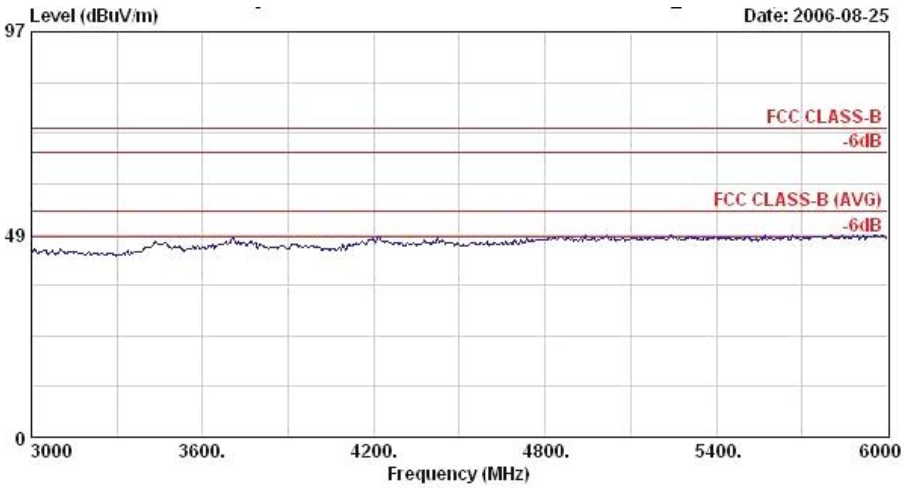
■ **The test that passed at minimum margin was marked by the frame in the following table.**



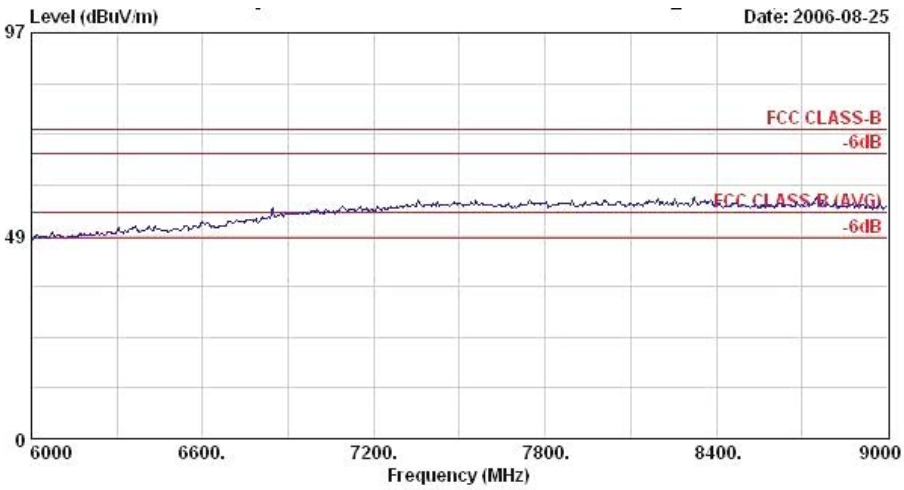
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11

	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	2390.00	50.83	-23.17	74.00	51.77	30.26	4.26	35.46	100	0	Peak
2 @	2390.00	40.69	-13.31	54.00	41.63	30.26	4.26	35.46	106	269	Average
3 @	2412.00	101.25			102.18	30.27	4.26	35.46	100	0	Peak
4 @	2412.00	95.18			96.11	30.27	4.26	35.46	106	269	Average
5	2488.00	49.92	-24.08	74.00	50.77	30.30	4.36	35.51	100	0	Peak
6	2488.00	39.22	-14.78	54.00	40.07	30.30	4.36	35.51	106	269	Average

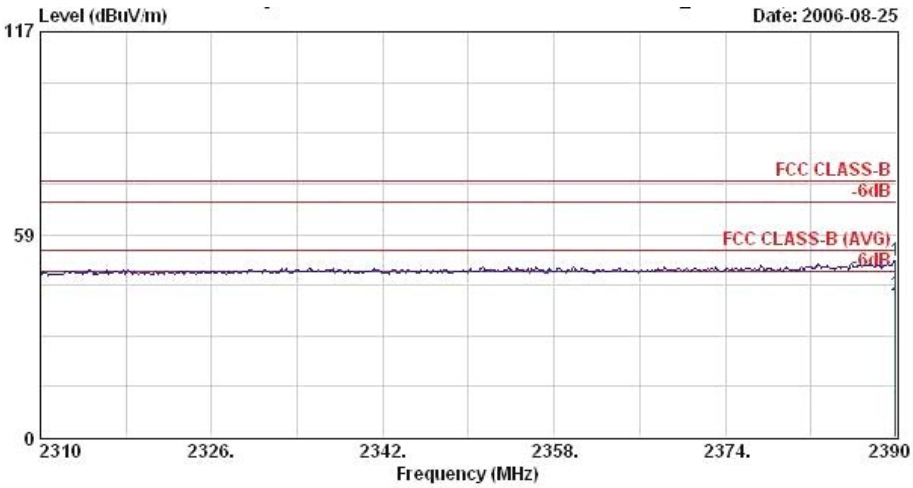
Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11

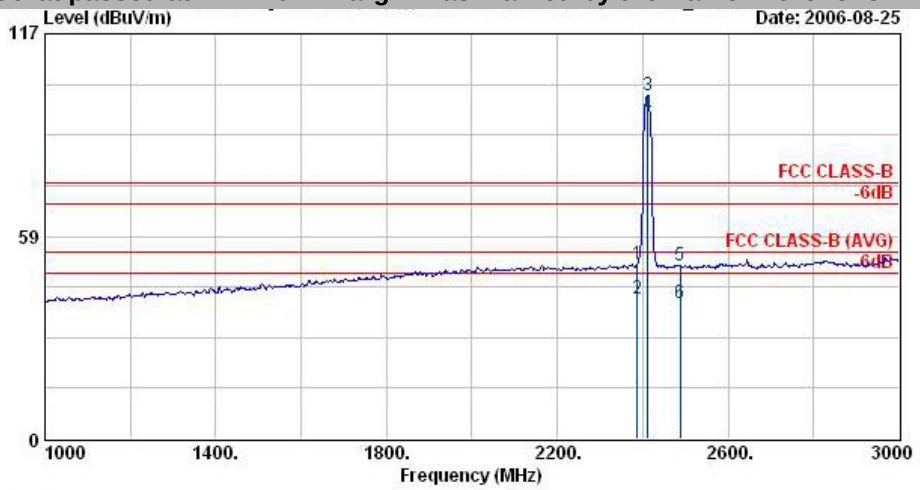


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11

	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	2389.92	50.83	-23.17	74.00	51.76	30.26	4.26	35.46	100	0	Peak
2 @	2389.92	40.69	-13.31	54.00	41.63	30.26	4.26	35.46	106	269	Average

- Polarization : Vertical

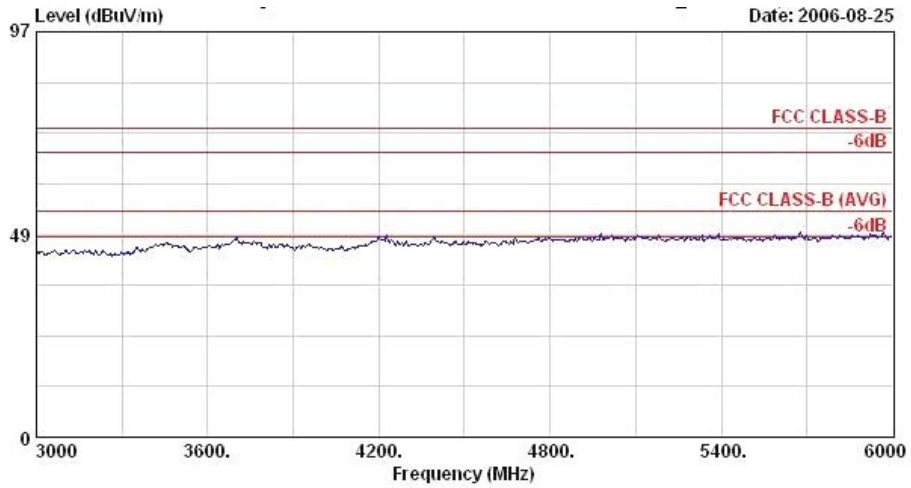
■ The test that passed at minimum margin was marked by the frame in the following table.



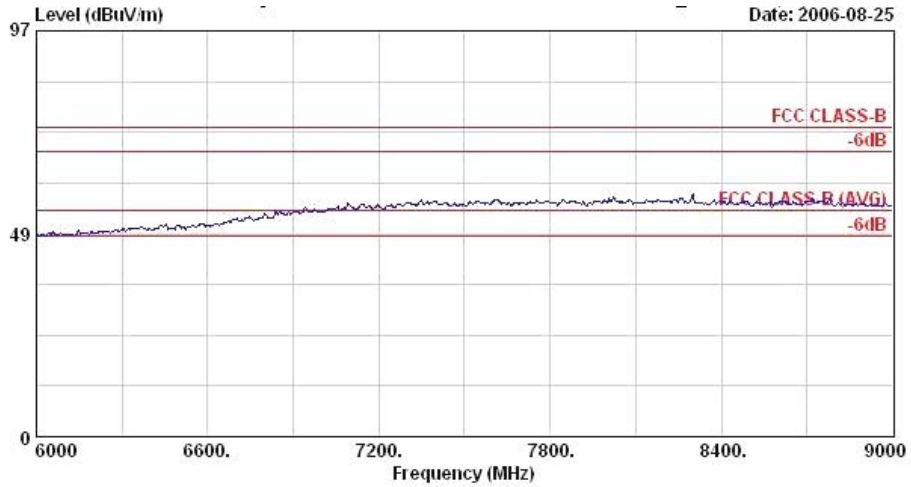
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11

	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	2388.00	50.27	-23.73	74.00	51.21	30.26	4.26	35.46	100	360	Peak
2	2388.00	40.40	-13.60	54.00	41.35	30.26	4.23	35.44	110	212	Average
3 @	2412.00	99.16			100.09	30.27	4.26	35.46	100	360	Peak
4 @	2412.00	93.55			94.48	30.27	4.26	35.46	110	212	Average
5	2488.00	50.13	-23.87	74.00	50.98	30.30	4.36	35.51	100	360	Peak
6	2488.00	39.32	-14.68	54.00	40.17	30.30	4.36	35.51	110	212	Average

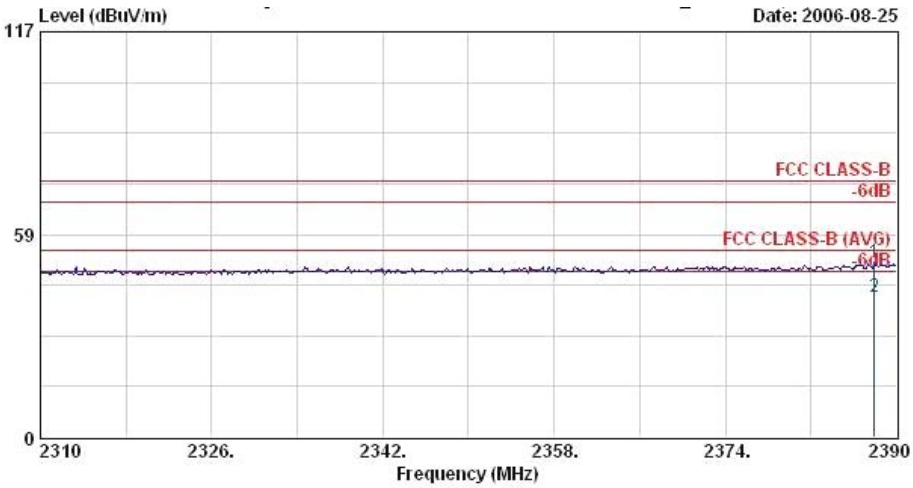
Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11



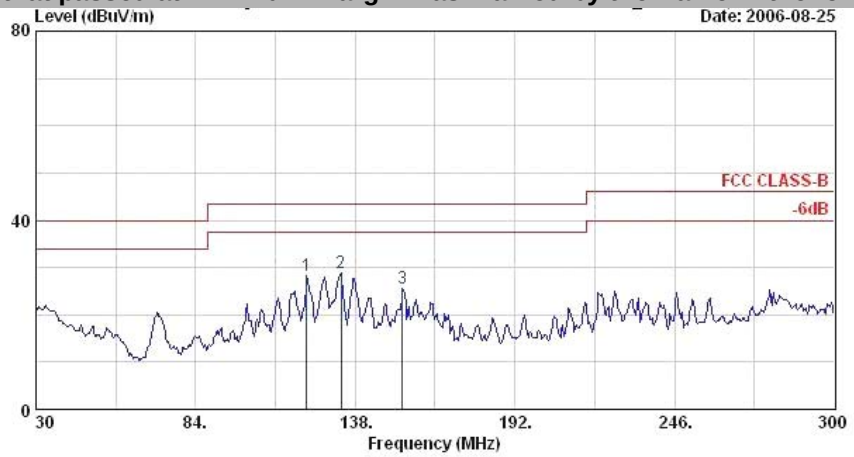
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH01;2412MHz
Plane : E2
Data Rate : 11

	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	2387.92	50.27	-23.73	74.00	51.21	30.26	4.23	35.44	100	0	Peak
2 @	2387.92	40.40	-13.60	54.00	41.35	30.26	4.23	35.44	110	212	Average

Remark: There is no more obvious spurious emission except the listings above.

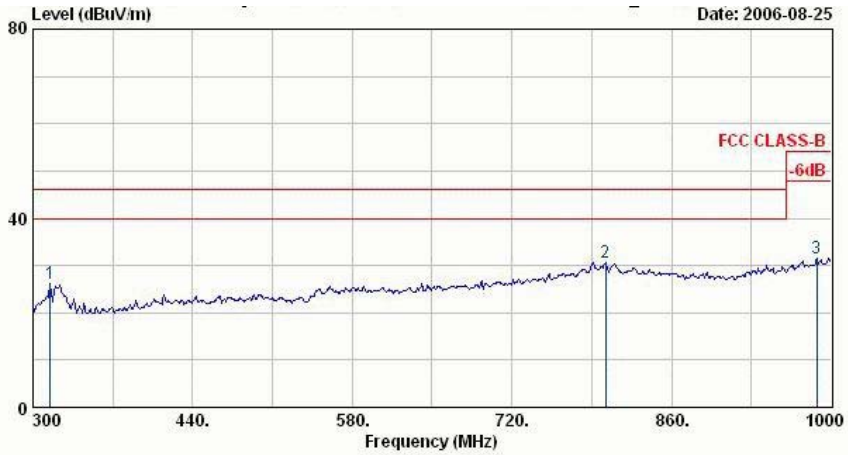
- Test Mode : Mode 2
- Polarization : Horizontal

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



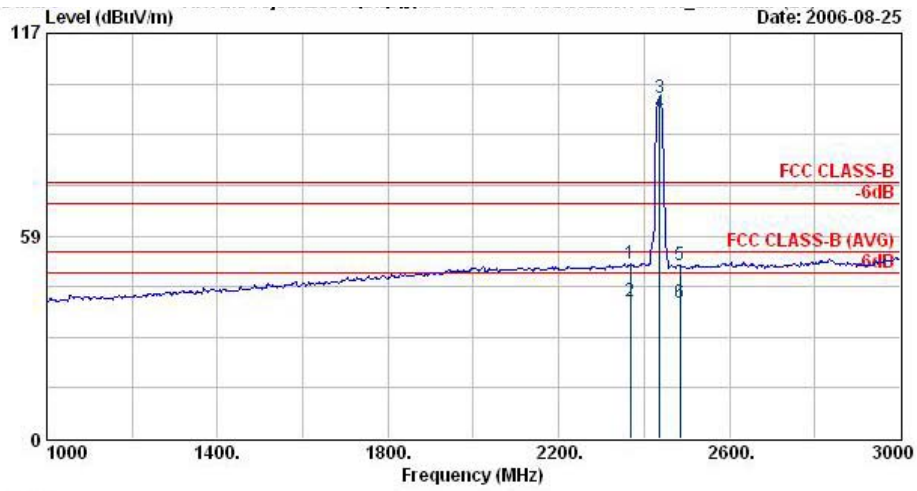
Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

	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	121.53	28.34	-15.16	43.50	42.66	12.66	1.93	28.90	400	0	Peak
2	133.14	28.79	-14.71	43.50	43.98	11.45	2.23	28.87	102	223	Peak
3	153.93	25.57	-17.93	43.50	42.71	9.49	2.19	28.82	400	0	Peak



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

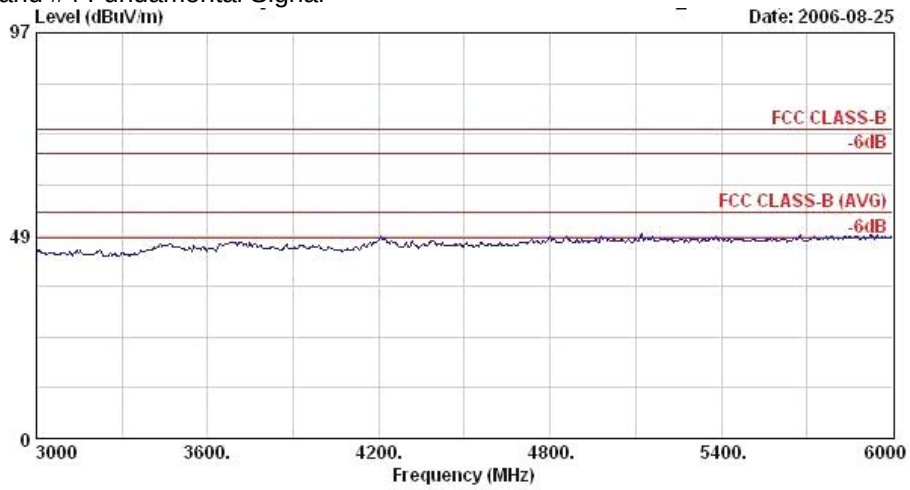
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	315.40	26.09	-19.91	46.00	38.38	13.40	3.25	28.93	100	0	Peak
2	801.90	30.73	-15.27	46.00	32.14	21.86	5.61	28.88	100	0	Peak
3	987.40	31.58	-22.42	54.00	31.69	22.59	6.11	28.81	100	0	Peak



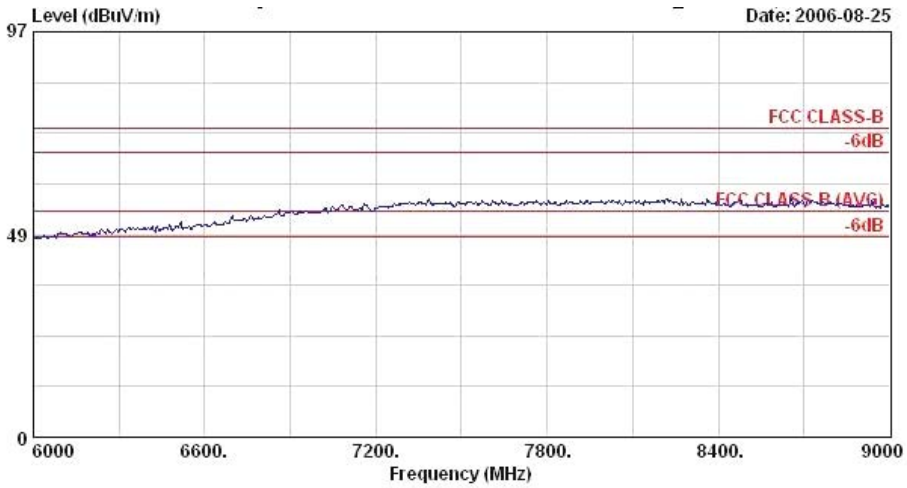
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

	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	2368.00	50.25	-23.75	74.00	51.21	30.24	4.23	35.44	100	0	Peak
2	2368.00	39.43	-14.57	54.00	40.39	30.24	4.23	35.44	103	269	Average
3 X	2437.00	98.33			99.23	30.28	4.29	35.47	100	0	Peak
4 @	2437.00	93.90	------	------	94.80	30.28	4.29	35.47	103	269	Average
5	2484.00	50.14	-23.86	74.00	51.00	30.29	4.36	35.51	100	0	Peak
6	2484.00	39.22	-14.78	54.00	40.08	30.29	4.36	35.51	103	269	Average

Remark: #3 and #4 Fundamental Signal



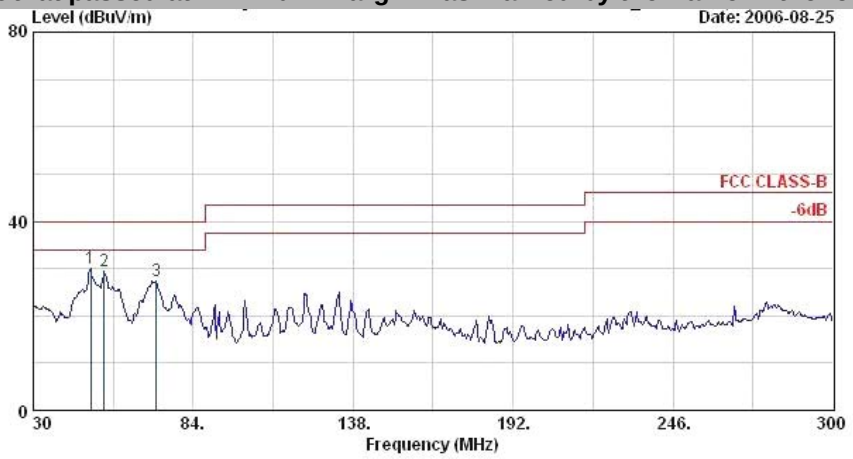
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

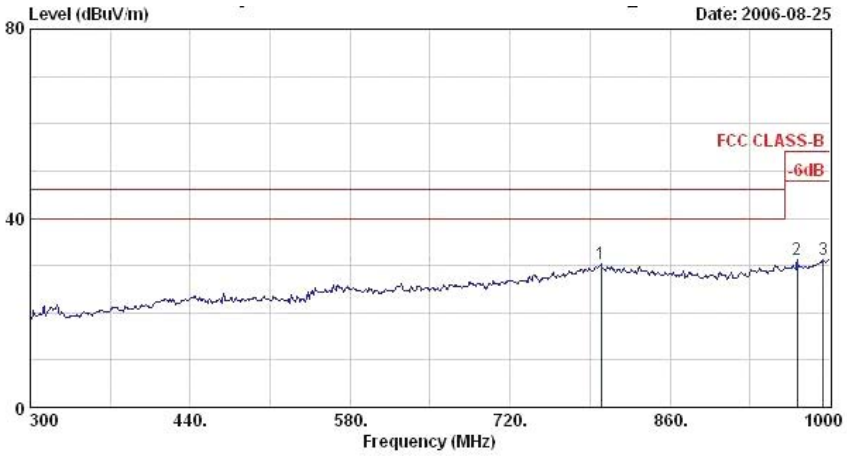
- Polarization : Vertical

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



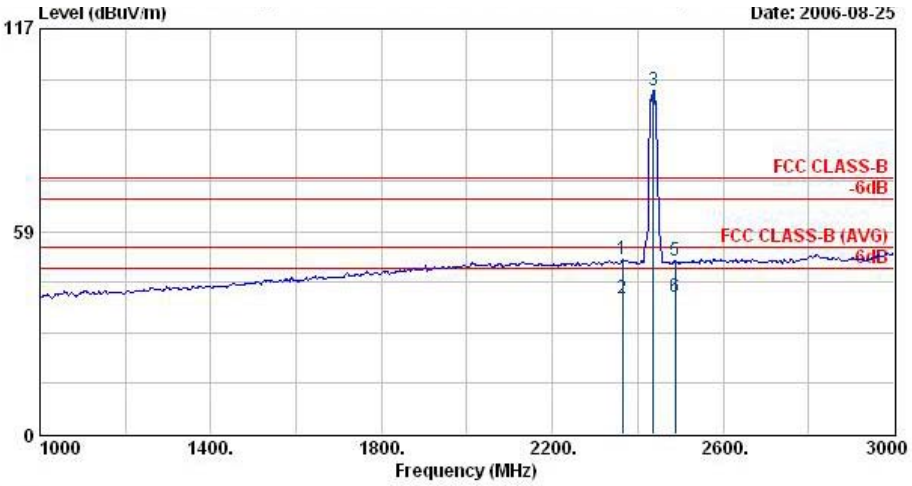
Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

	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	49.44	30.08	-9.92	40.00	47.32	10.30	1.07	28.61	100	305	Peak
2	54.03	29.42	-10.58	40.00	48.37	8.53	1.14	28.63	400	0	Peak
3	71.58	27.37	-12.63	40.00	48.27	6.41	1.39	28.69	400	0	Peak



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

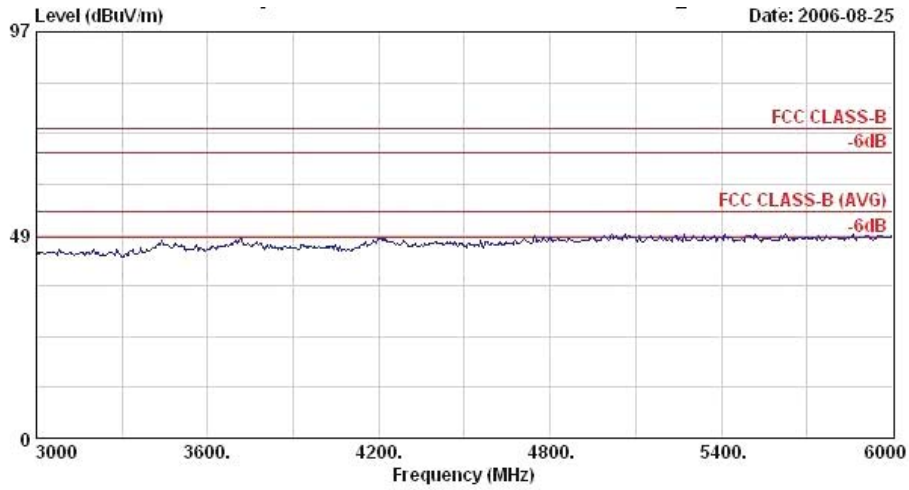
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	799.80	30.38	-15.62	46.00	31.73	21.90	5.62	28.87	100	0	Peak
2	971.30	31.11	-22.89	54.00	31.94	22.09	5.93	28.84	100	0	Peak
3	994.40	31.27	-22.73	54.00	31.08	22.79	6.19	28.80	100	0	Peak



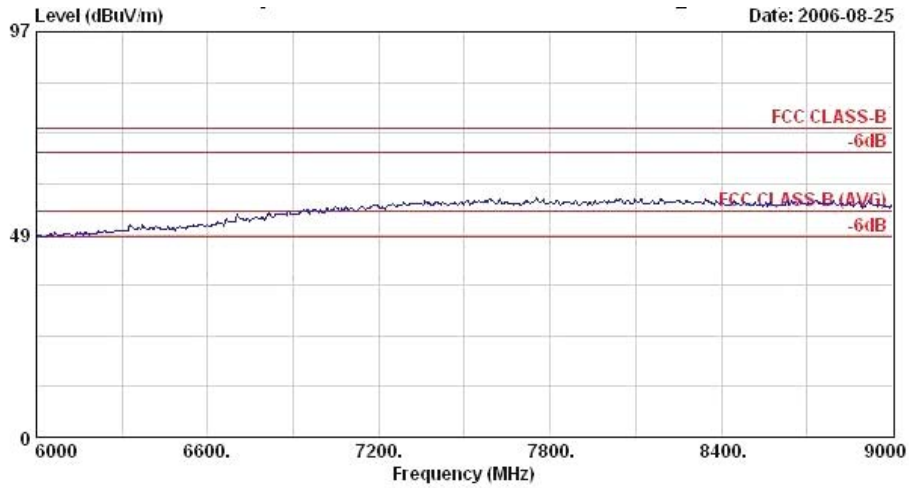
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

	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	2364.00	50.35	-23.65	74.00	51.33	30.24	4.20	35.42	100	0	Peak
2	2364.00	39.23	-14.77	54.00	40.21	30.24	4.20	35.42	106	213	Average
3 X	2437.00	99.25			100.15	30.28	4.29	35.47	100	0	Peak
4 @	2437.00	93.70			94.60	30.28	4.29	35.47	106	213	Average
5	2488.00	50.18	-23.82	74.00	51.04	30.30	4.36	35.51	100	0	Peak
6	2488.00	39.51	-14.49	54.00	40.36	30.30	4.36	35.51	106	213	Average

Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

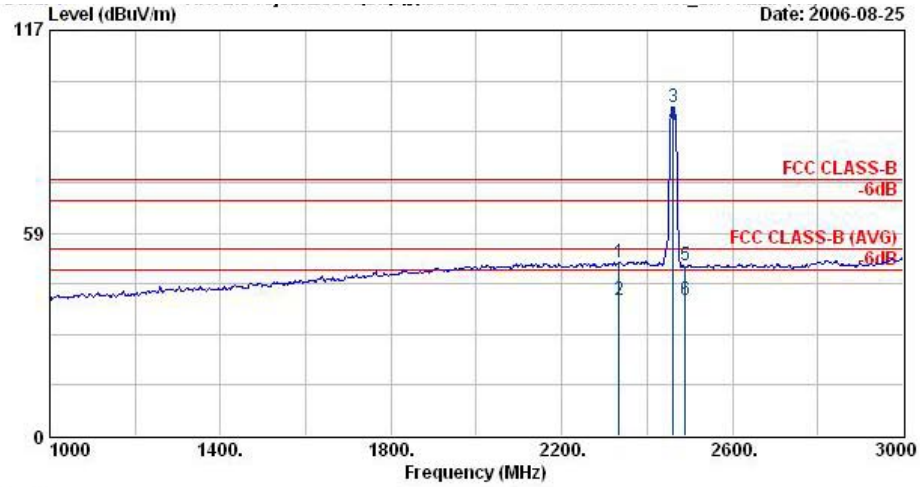


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH06;2437MHz
Plane : E2
Data Rate : 11

Remark: There is no more obvious spurious emission except the listings above.

- Test Mode : Mode 3
- Polarization : Horizontal

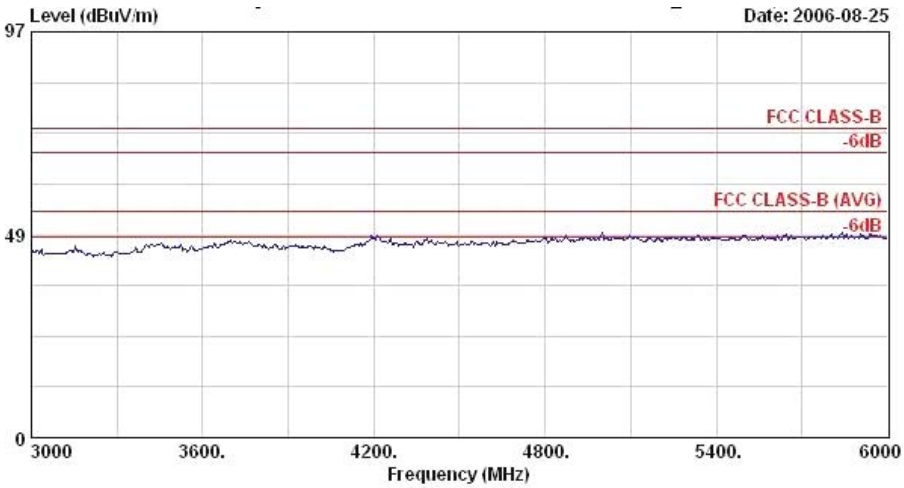
■ The test that passed at minimum margin was marked by the frame in the following table.



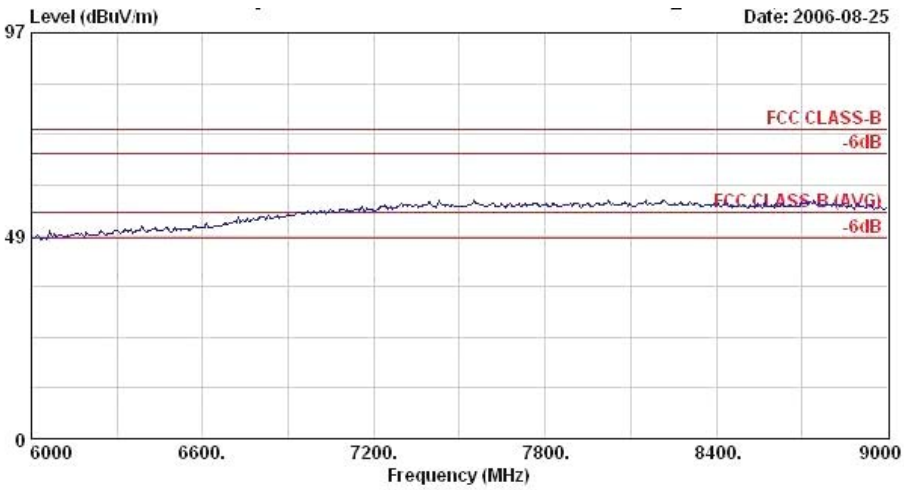
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11

	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	2334.00	50.03	-23.97	74.00	51.04	30.23	4.17	35.40	100	360	Peak
2	2334.00	39.18	-14.82	54.00	40.18	30.23	4.17	35.40	100	270	Average
3 @	2462.00	94.95			95.83	30.29	4.33	35.49	100	360	Peak
4 @	2462.00	89.39	-----	-----	90.27	30.29	4.33	35.49	100	270	Average
5	2489.00	49.14	-24.86	74.00	49.98	30.30	4.39	35.53	100	360	Peak
6	2489.00	39.36	-14.64	54.00	40.21	30.30	4.36	35.51	100	270	Average

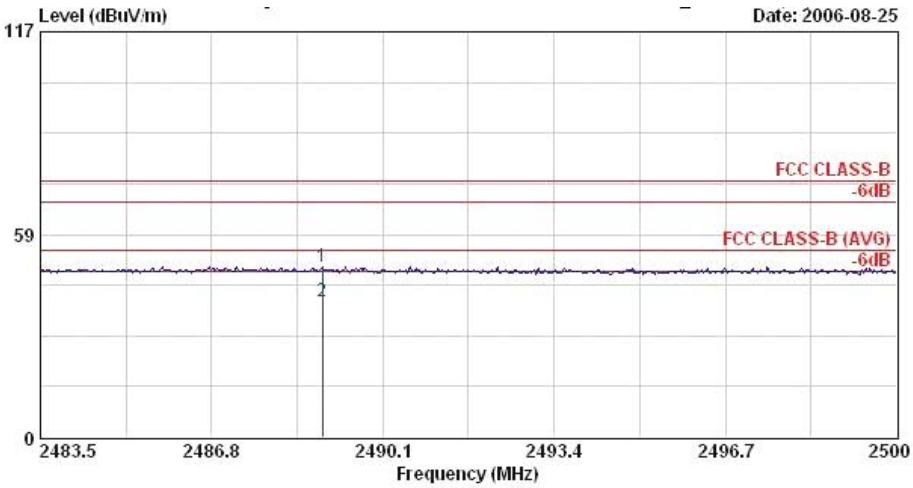
Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11

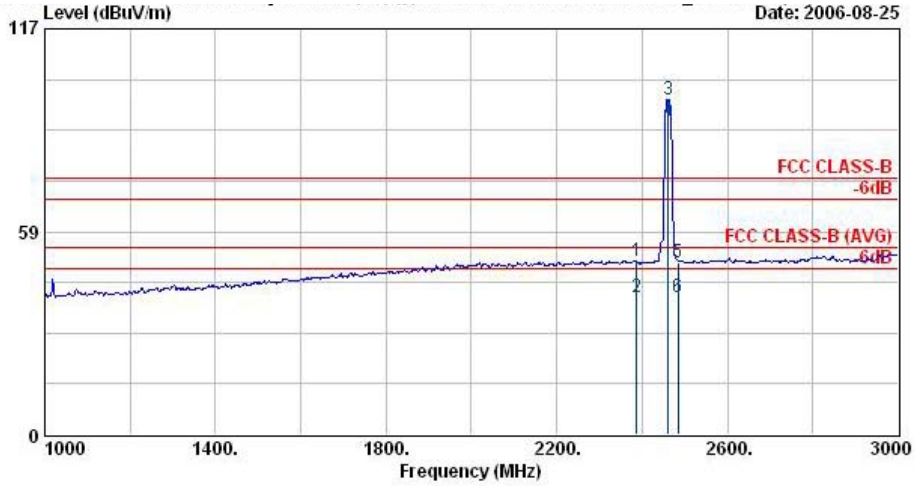


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11

	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	2488.93	49.14	-24.86	74.00	49.99	30.30	4.36	35.51	100	0	Peak
2	2488.93	39.36	-14.64	54.00	40.21	30.30	4.36	35.51	100	270	Average

- Polarization : Vertical

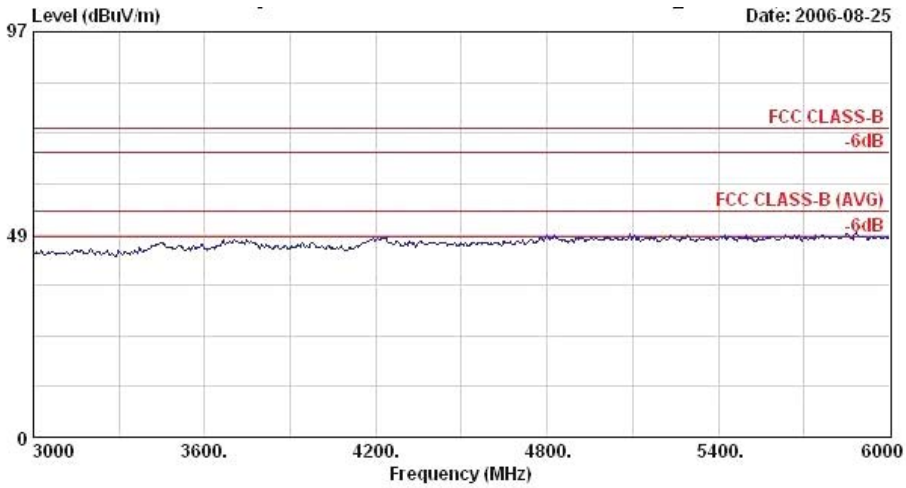
■ **The test that passed at minimum margin was marked by the frame in the following table.**



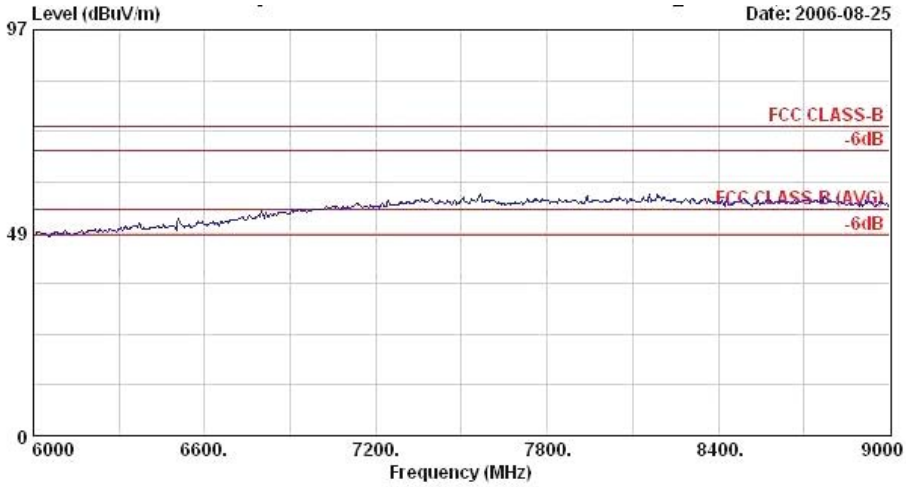
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11

	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	2388.00	50.11	-23.89	74.00	51.06	30.26	4.23	35.44	100	0	Peak
2	2388.00	39.61	-14.39	54.00	40.56	30.26	4.23	35.44	106	213	Average
3 @	2462.00	96.55			97.43	30.29	4.33	35.49	100	0	Peak
4 @	2462.00	90.60	------	------	91.48	30.29	4.33	35.49	106	213	Average
5	2484.00	49.63	-24.37	74.00	50.49	30.29	4.36	35.51	100	0	Peak
6	2484.00	39.65	-14.35	54.00	40.51	30.29	4.36	35.51	106	213	Average

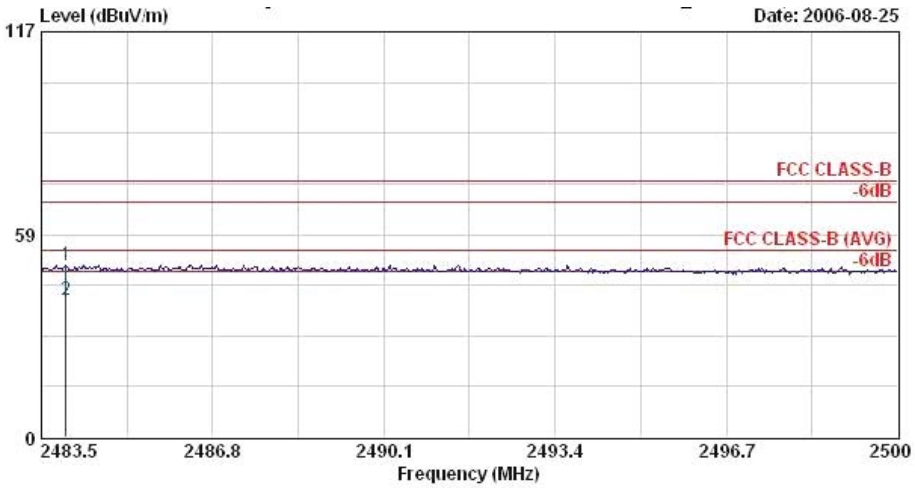
Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11



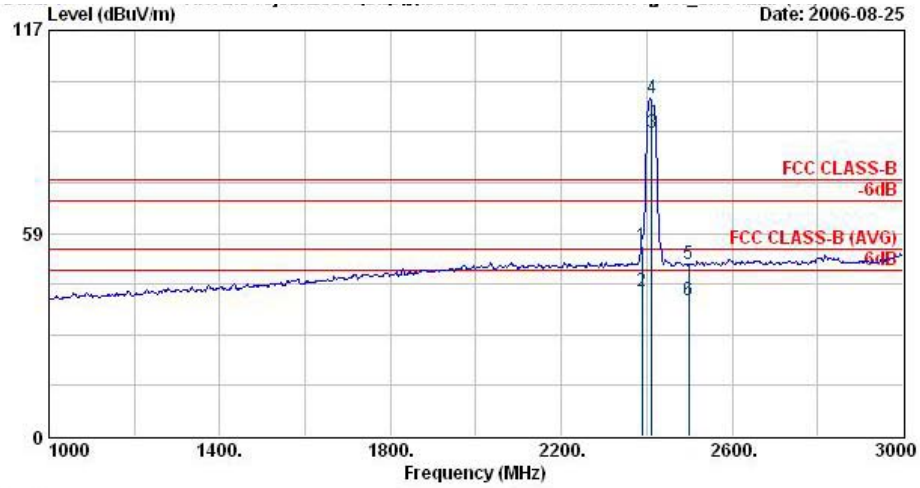
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11b Tx_CH11;2462MHz
Plane : E2
Data Rate : 11

	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	2483.98	49.63	-24.37	74.00	50.49	30.29	4.36	35.51	100	0	Peak
2 @	2483.98	39.65	-14.35	54.00	40.51	30.29	4.36	35.51	106	213	Average

Remark: There is no more obvious spurious emission except the listings above.

- Test Mode : Mode 4
- Polarization : Horizontal

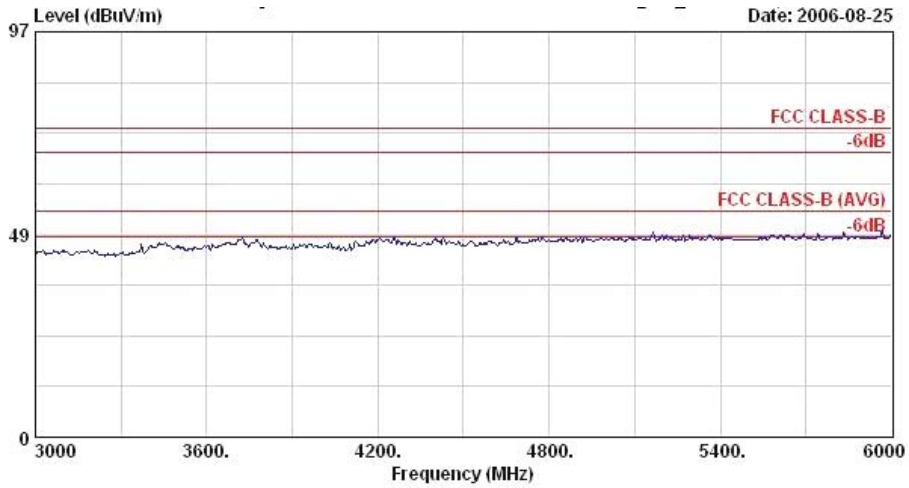
■ The test that passed at minimum margin was marked by the frame in the following table.



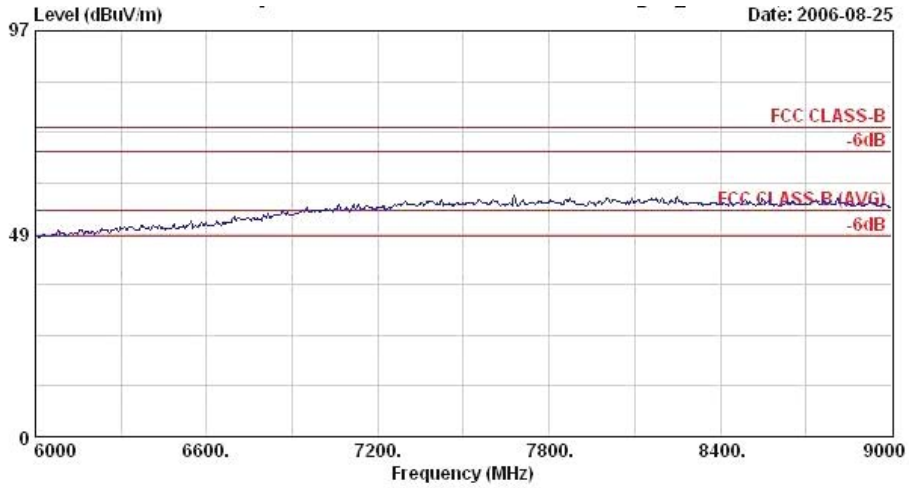
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11g Tx_CH01;2412MHz
Plane : E2
Data Rate : 54

	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	2389.00	54.91	-19.09	74.00	55.85	30.26	4.26	35.46	100	0	Peak
2 @	2389.00	41.71	-12.29	54.00	42.65	30.26	4.26	35.46	100	269	Average
3 @	2412.00	87.45			88.38	30.27	4.26	35.46	100	269	Average
4 @	2412.00	97.39			98.32	30.27	4.26	35.46	100	0	Peak
5	2498.00	49.65	-24.35	74.00	50.49	30.30	4.39	35.53	100	0	Peak
6	2498.00	39.32	-14.68	54.00	40.16	30.30	4.39	35.53	100	269	Average

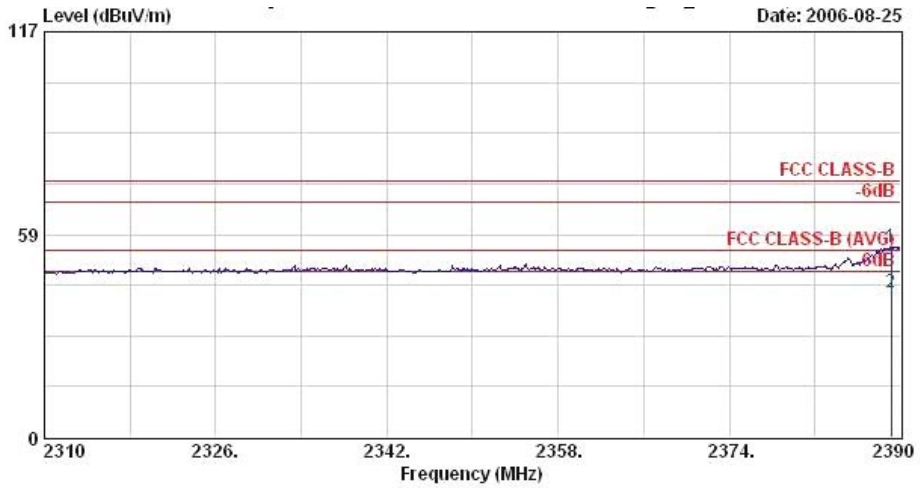
Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11g Tx_CH01;2412MHz
Plane : E2
Data Rate : 54



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11g Tx_CH01;2412MHz
Plane : E2
Data Rate : 54



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : 3G 手機(WLAN+BT)
Power : 120Vac/60Hz
Model : FR 680914
Memo : 11g Tx_CH01;2412MHz
Plane : E2
Data Rate : 54

	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	2389.12	54.91	-19.09	74.00	55.86	30.26	4.23	35.44	100	0	Peak
2 @	2389.12	41.71	-12.29	54.00	42.66	30.26	4.23	35.44	100	269	Average