



FCC Test Report

for

47 CFR Part 15 Subpart C

Equipment : Message Device

Trade Name : ogo

Model No. : CT-25C

FCC ID : SOW-OGOCT25C

Filing Type : Certification

Applicant : IXI Mobile, Inc.

275 Shoreline Drive Suite 600, Redwood City, CA 94065, USA

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- The data shown in this test report were carried out on Nov. 07, 2007 at **Sporton International Inc. LAB.**
- Report No.: FR7N0718, Report Version: Rev.01

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Report Version: Rev.01



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History of this test report

Report Issue Date: Dec. 03, 2007

Report No.	Description



1. General Description of Equipment under Test

1.1 Applicant

IXI Mobile, Inc.

275 Shoreline Drive Suite 600, Redwood City, CA 94065, USA

1.2 Manufacturer

Inventec Appliance (Shanghai) Co.,Ltd.

No.7, Gui Qing Rd.,Caohejing Development Zone, Shanghai 200233, P.R.C.

1.3 Basic Description of Equipment under Test

Equipment		Message Device
Trade Name		ogo
Model Name		CT-25C
FCC ID		SOW-OG OCT25C
AC Adapter	Brand Name	PI
	Model Name	P925BW05050EB1u
	Power Rating	I/P:100-240Vac, 50-60Hz; O/P:5.0Vdc, 500mA
	AC Power Cord Type	1.6 meter
Battery	Brand Name	Formosa
	Model Name	IXC0000232
	Power Rating	3.7Vdc, 950mA
	Type	Li-ion

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

1.4 Feature of Equipment under Test

Product Feature & Specification				
1. Type of Modulation	1Mbps : GFSK 2Mbps : $\pi/4$ -DQPSK 3Mbps : 8-DPSK			
2. Number of Channels	2400 MHz ~ 2483.5 MHz			
3. Frequency Band	79			
4. Carrier Frequency of each channel	2402+n x 1 MHz; n = 0~78			
5. Channel Spacing	1 MHz			
6. Maximum Output Power to Antenna (Normal Condition)	BT (1Mbps) : -0.57 dBm BT EDR (2Mbps) : -0.02 dBm BT EDR (3Mbps) : 0.37 dBm			
7. Type of Antenna Connector	N/A			
8. Antenna Type	PIFA Antenna			
9. 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 data rate, 3Mbps, was chosen to being tested, due to the highest RF output power.

Channel	Frequency	Data Rate/ Modulation		
		GFSK	$\pi/4$ -DQPSK	8-DPSK
		1Mbps	2Mbps	3Mbps
Ch00	2400MHz	-0.57 dBm	-0.02 dBm	0.37 dBm
Ch39	2441MHz	-0.78 dBm	-0.45 dBm	-0.13 dBm
Ch78	2480MHz	-0.67 dBm	-0.36 dBm	0.03 dBm

Bluetooth uses frequency hopping spread spectrum (FHSS) operation which also facilitates Bluetooth multiple access and coexistence among other types of wireless systems. The basic frequency-hopping pattern is a pseudo-random ordering of 79 channel frequencies in the ISM band and the hopping rate is nominally 1600 hops per second. The EDR modulation format uses one of two types of DPSK ($\pi/4$ -DQPSK or 8-DPSK) in the payload section of the packet. As shown in figure, the EDR packet begins using GFSK modulation during the access code and header portions of the packet but changes to DPSK modulation after the guard time. Changing to a DPSK format allows increased data rates of 2 Mb/s or 3 Mb/s.

- 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.

2.2 Test Mode

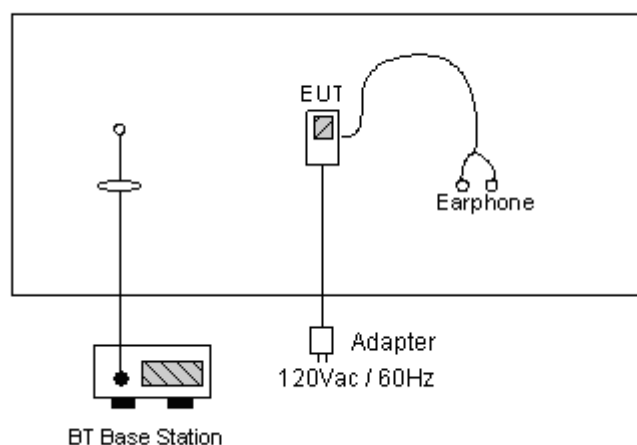
Application			
Radiated Emission	BT Tx	BT Tx(EDR 2Mbps)	BT Tx(EDR 3Mbps)
	Mode 1: CH00_2402 MHz	Mode 2: CH00_2402 MHz	Mode 3: CH00_2402 MHz Mode 4: CH39_2441 MHz Mode 5: CH78_2480 MHz
Conducted Emission	Mode 1: CDMA 850 Idle + BT Link + MP3 + GPS Rx + Earphone + Adapter Mode 2: CDMA 1900 Idle + BT Link + MP3 + GPS Rx + Earphone + Adapter		

2.3 Ancillary Equipment List

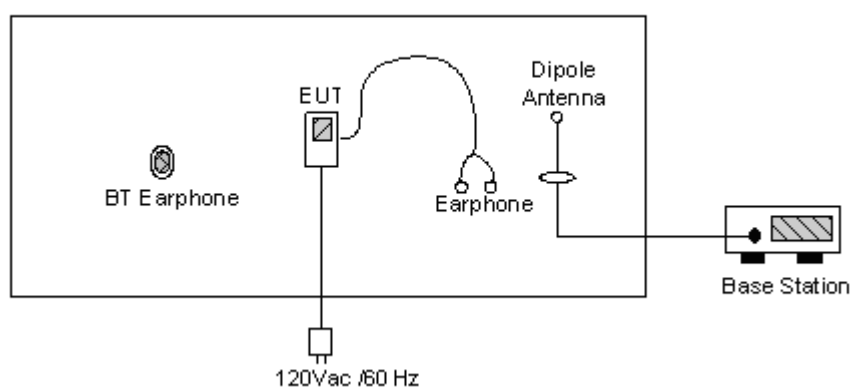
Item	Asset	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1.	BT Base Station	Anritus	8852B	N/A	Unshielded, 1.8m
2.	Bluetooth Earphone	Nokia	HS.12W	PYAHS.12W	N/A

2.4 Connection Diagram of Test System

<Radiated Emission>



<Conducted Emission>





3. RF Utility

The programmed RF Utility is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testings.



4. General Information of Test

Test Site Location : No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.
TEL : 86-0512- 5790-0158
FAX : 86-0512- 5790-0958
Test Site No : CO01-KS, 03CH01-KS

4.1 Test Voltage

AC 120V / 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test Compliance

47 CFR Part 15 Subpart C

4.4 Frequency Range

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 25000 MHz

4.5 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.



5. Test Data and Test Result

5.1 List of Measurements and Examinations

The Emission Mode: Bluetooth

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	Pass
15.247(d)	Power Spectral Density	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass



5.2 Band Edges 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 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.

5.2.3 Test Result :

- Application Type : Bluetooth
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

- Test Result in BT lower band : PASS
- Test Result in BT higher band : PASS
- Test Result in BT EDR(2Mbps) lower band : PASS
- Test Result in BT EDR(2Mbps) higher band : PASS
- Test Result in BT EDR(3Mbps) lower band : PASS
- Test Result in BT EDR(3Mbps) higher band : PASS



5.2.4 Note on Band Edge Emission :

➤BT

CH00 (Horizontal)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	73.23	-0.77	74.00	73.23	31.93	35.18	3.25	-	-	Peak
2400.00	50.22	-3.78	54.00	50.22	31.93	35.18	3.25	148	273	Average

CH00 (Vertical)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	73.59	-0.41	74.00	73.59	31.93	35.18	3.25	-	-	Peak
2400.00	49.69	-4.31	54.00	49.69	31.93	35.18	3.25	103	349	Average

➤BT EDR(2Mbps)

CH00 (Horizontal)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	72.40	-1.60	74.00	72.40	31.93	35.18	3.25	-	-	Peak
2400.00	50.09	-3.91	54.00	50.09	31.93	35.18	3.25	149	273	Average

CH00 (Vertical)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	70.84	-3.16	74.00	70.84	31.93	35.18	3.25	-	-	Peak
2400.00	45.12	-8.88	54.00	45.12	31.93	35.18	3.25	104	349	Average

**➤BT EDR(3Mbps)****CH00 (Horizontal)**

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	73.54	-0.46	74.00	73.54	31.93	35.18	3.25	-	-	Peak
2400.00	50.29	-3.71	54.00	50.29	31.93	35.18	3.25	149	273	Average

CH00 (Vertical)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2400.00	70.69	-3.31	74.00	70.69	31.93	35.18	3.25	-	-	Peak
2400.00	45.17	-8.83	54.00	45.17	31.93	35.18	3.25	104	349	Average

CH78 (Horizontal)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2483.50	57.31	-16.69	74.00	56.98	32.24	35.20	3.29	-	-	Peak
2483.50	37.54	-16.46	54.00	37.21	32.24	35.20	3.29	149	273	Average

CH78 (Vertical)

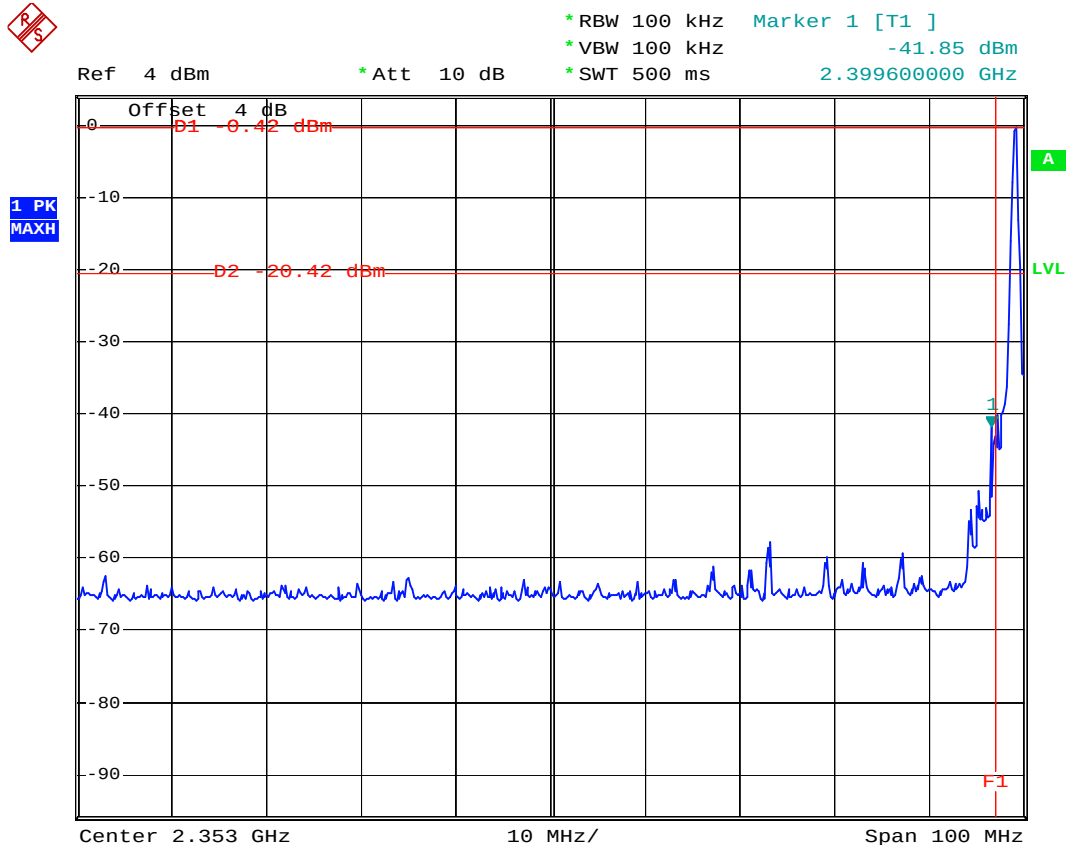
Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2483.50	39.17	-14.83	54.00	38.84	32.24	35.20	3.29	102	239-	Peak
2483.50	59.01	-14.99	74.00	58.68	32.24	35.20	3.29	-	-	Average



5.2.5 20dB Band Edge

BT

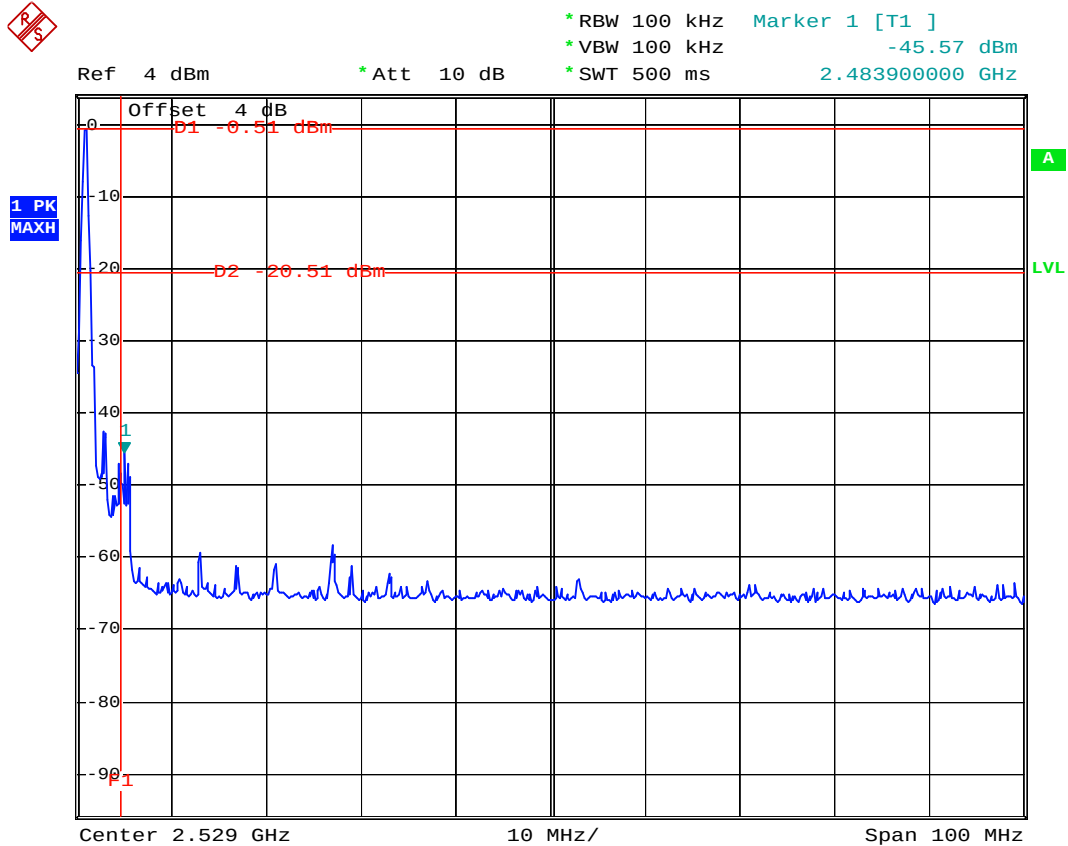
CH00



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CH78

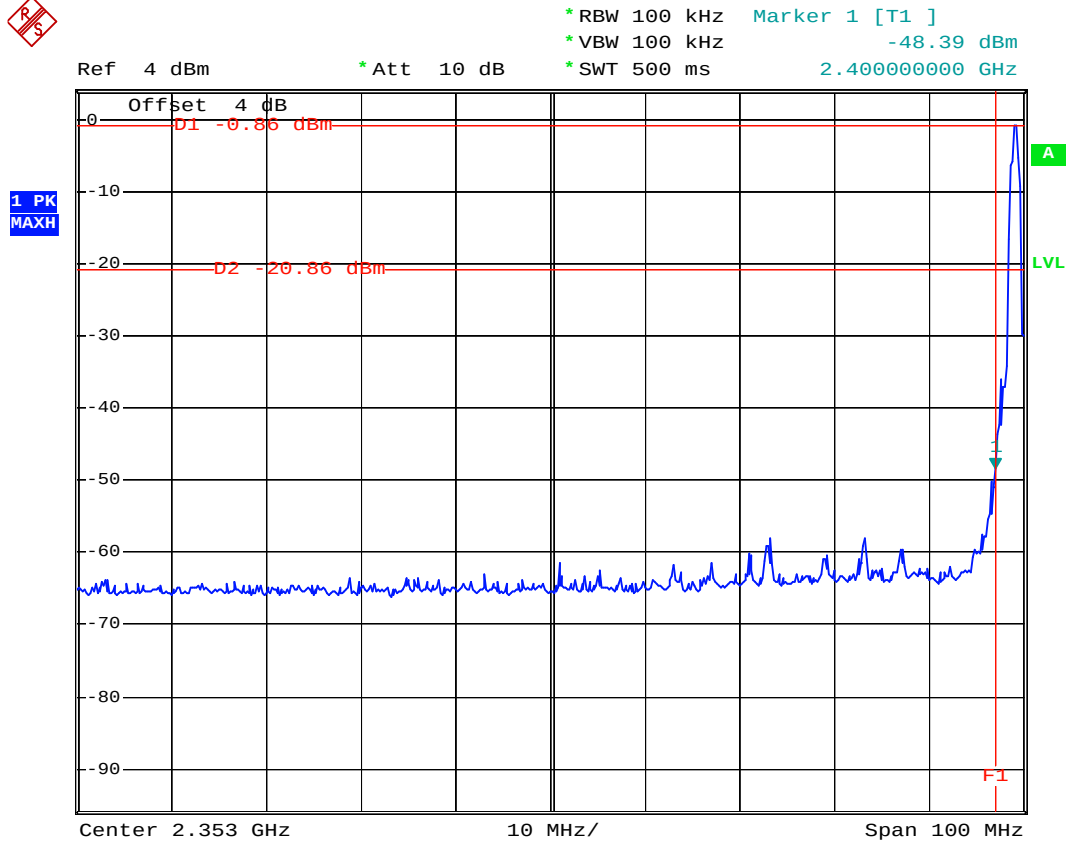


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BT EDR(2Mbps)

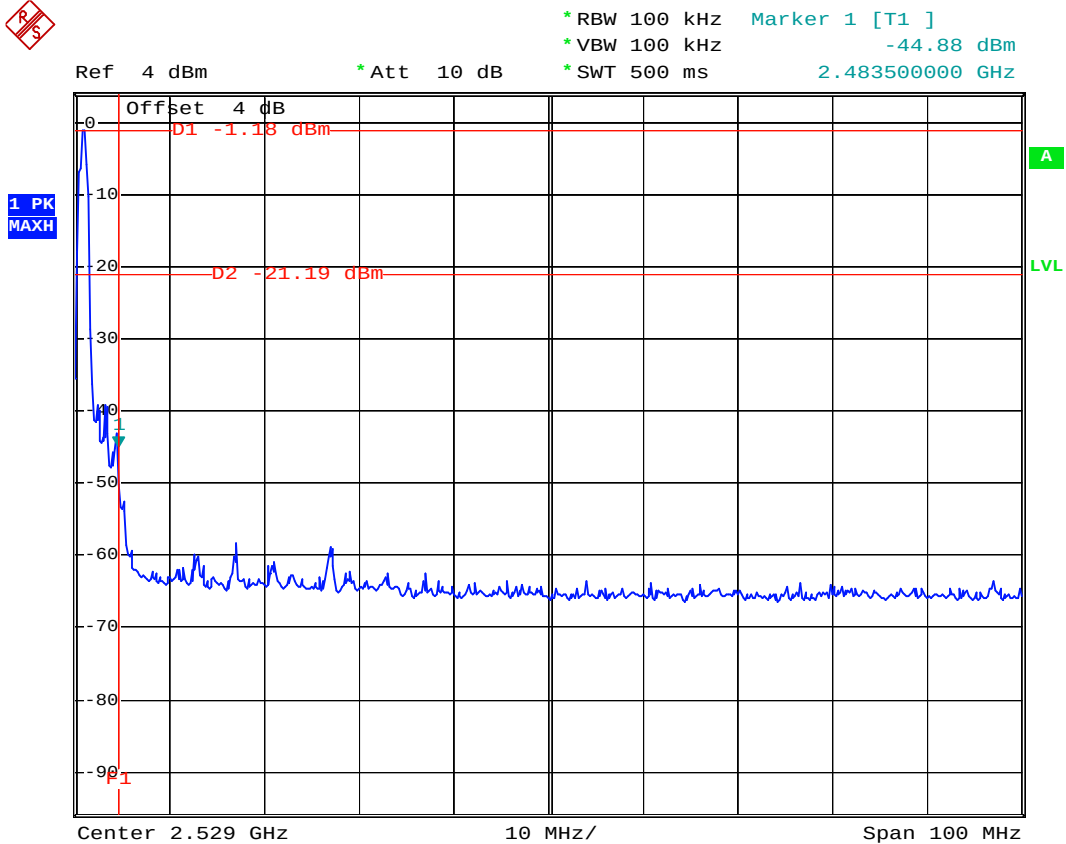
CH00



Date: 21.NOV.2007 10:40:18



CH78

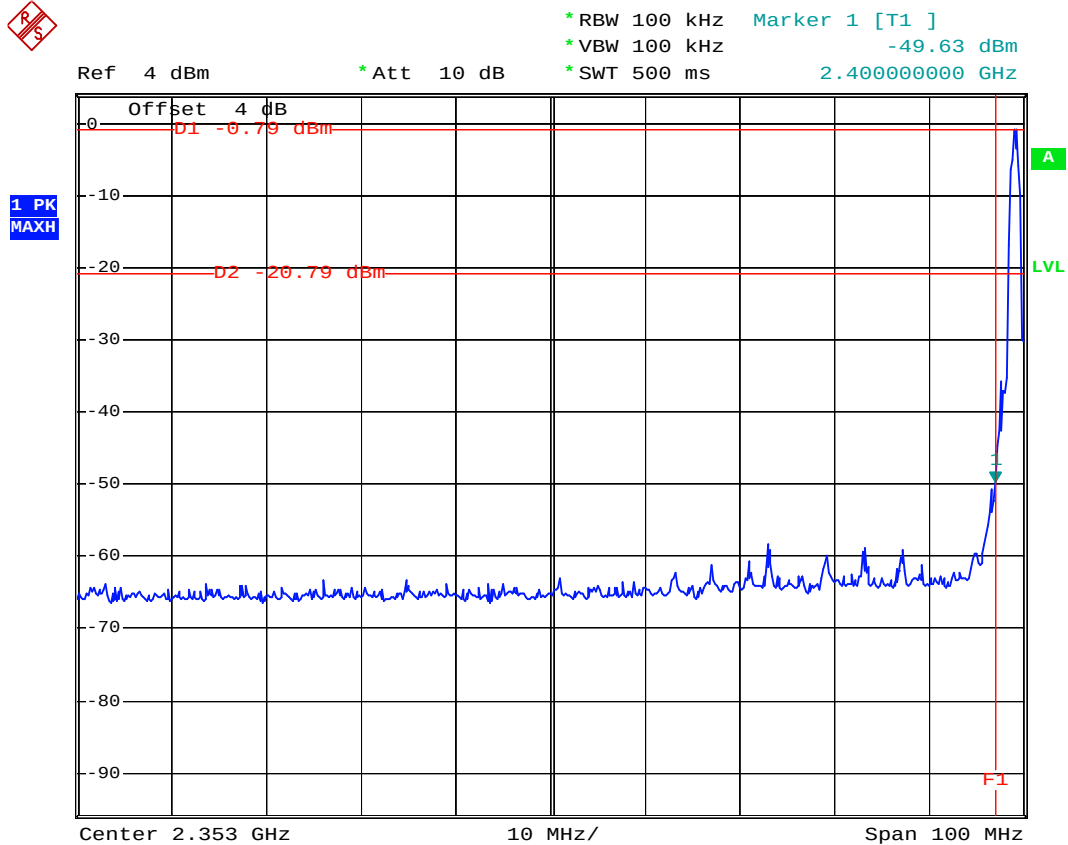


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BT EDR(3Mbps)

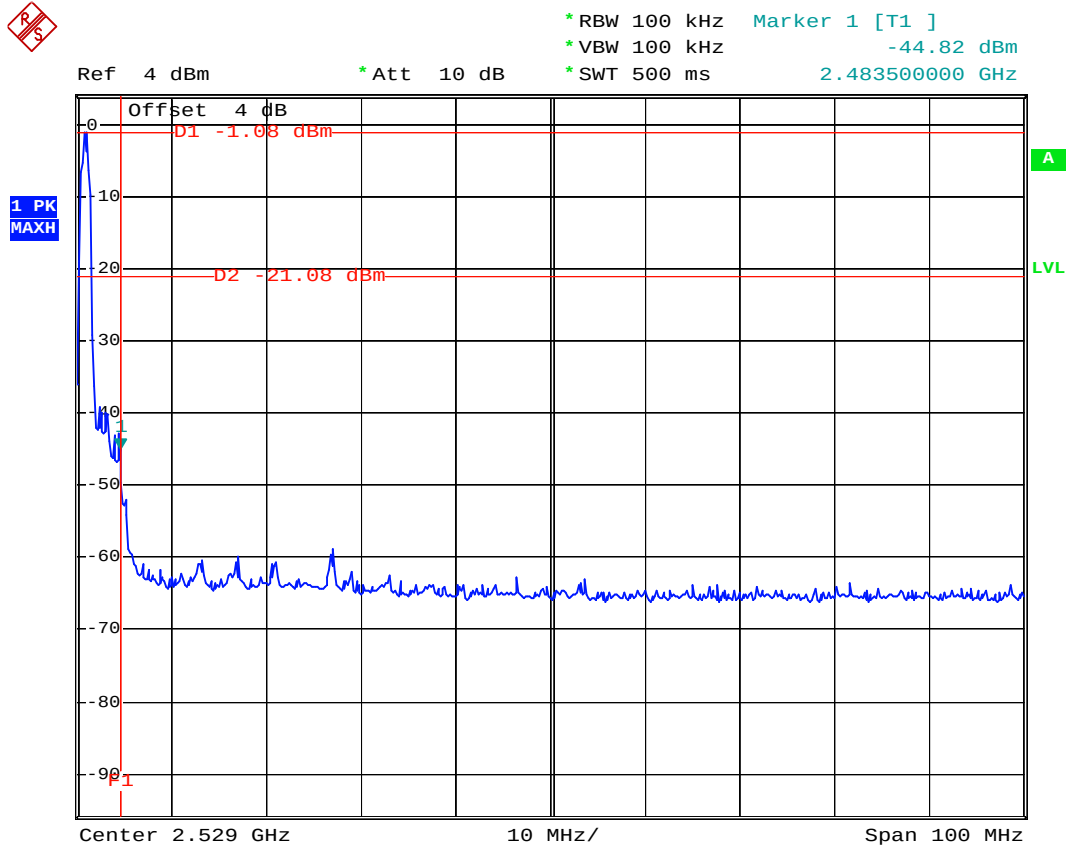
CH00



Date: 21.NOV.2007 11:15:17



CH78



Date: 21.NOV.2007 11:09:54

5.3 Hopping Channel Separation

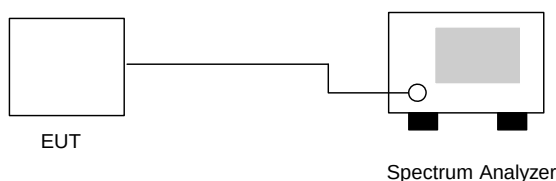
5.3.1 Measuring Instruments :

As described in chapter 9 of this test report.

5.3.2 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 30kHz and VBW to 100kHz.
3. The Hopping Channel Separation is defined as the channel is separated with the next channel.

5.3.3 Test Setup Layout :



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

- Application Type : BT
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Carrier Frequency		Limits	Plot
	Frequency (MHz)	Separation (MHz)		
00	2402	1.008	0.603	Mode 1
39	2441	1.000	0.597	Mode 2
78	2480	1.000	0.603	Mode 3

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



- Application Type : BT EDR(2Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Carrier Frequency		Limits (MHz)	Plot Ref. No.
	Frequency (MHz)	Separation (MHz)		
00	2402	1.000	0.803	Mode 4
39	2441	1.010	0.808	Mode 5
78	2480	1.010	0.803	Mode 6

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

- Application Type : BT EDR(3Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

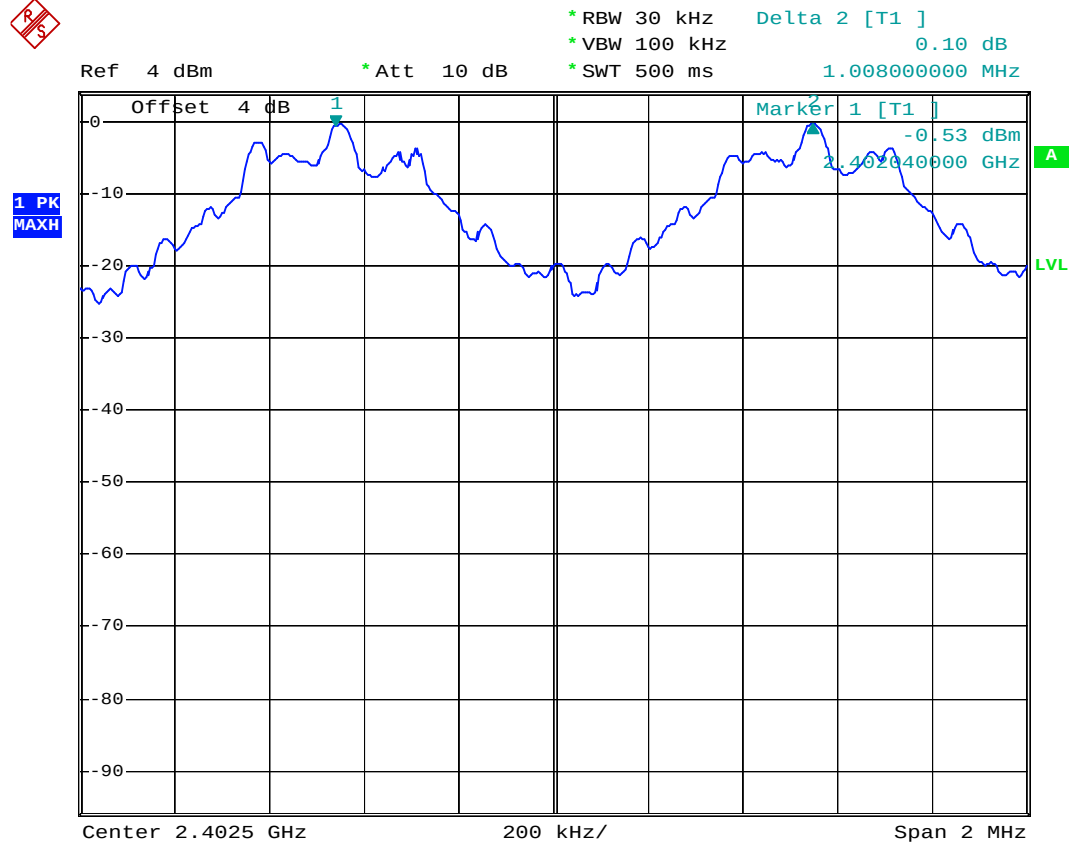
Channel	Carrier Frequency		Limits (MHz)	Plot Ref. No.
	Frequency (MHz)	Separation (MHz)		
00	2402	1.010	0.800	Mode 7
39	2441	1.000	0.803	Mode 8
78	2480	1.010	0.803	Mode 9

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



5.3.5 Hopping Channel Separation

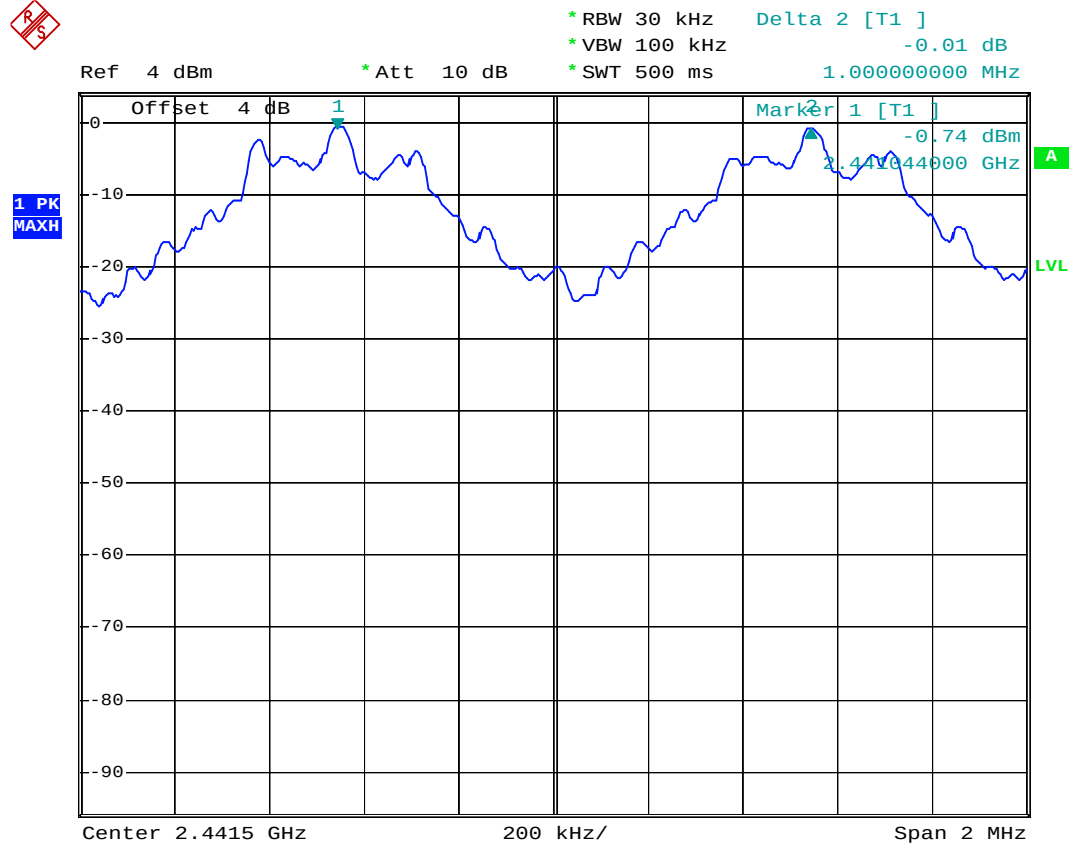
Mode 1



Date: 21.NOV.2007 10:12:55



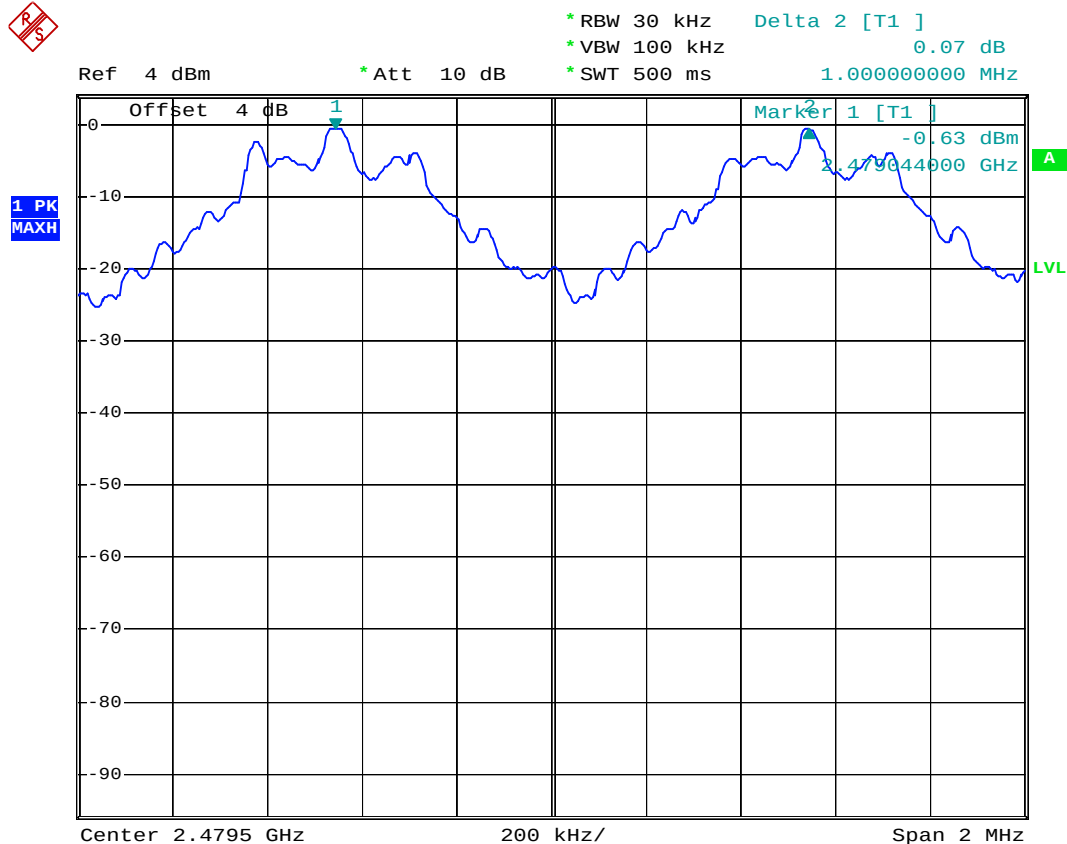
Mode 2



Date: 21.NOV.2007 10:14:33



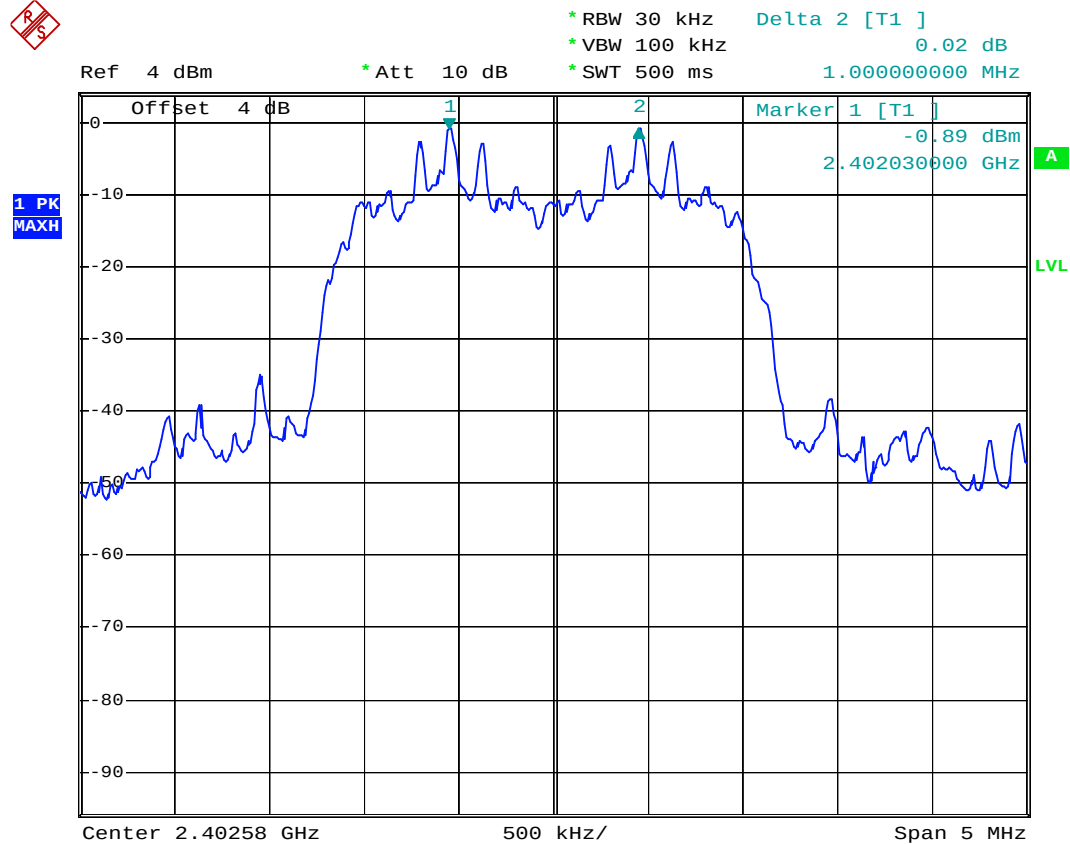
Mode 3



Date: 21.NOV.2007 10:15:52



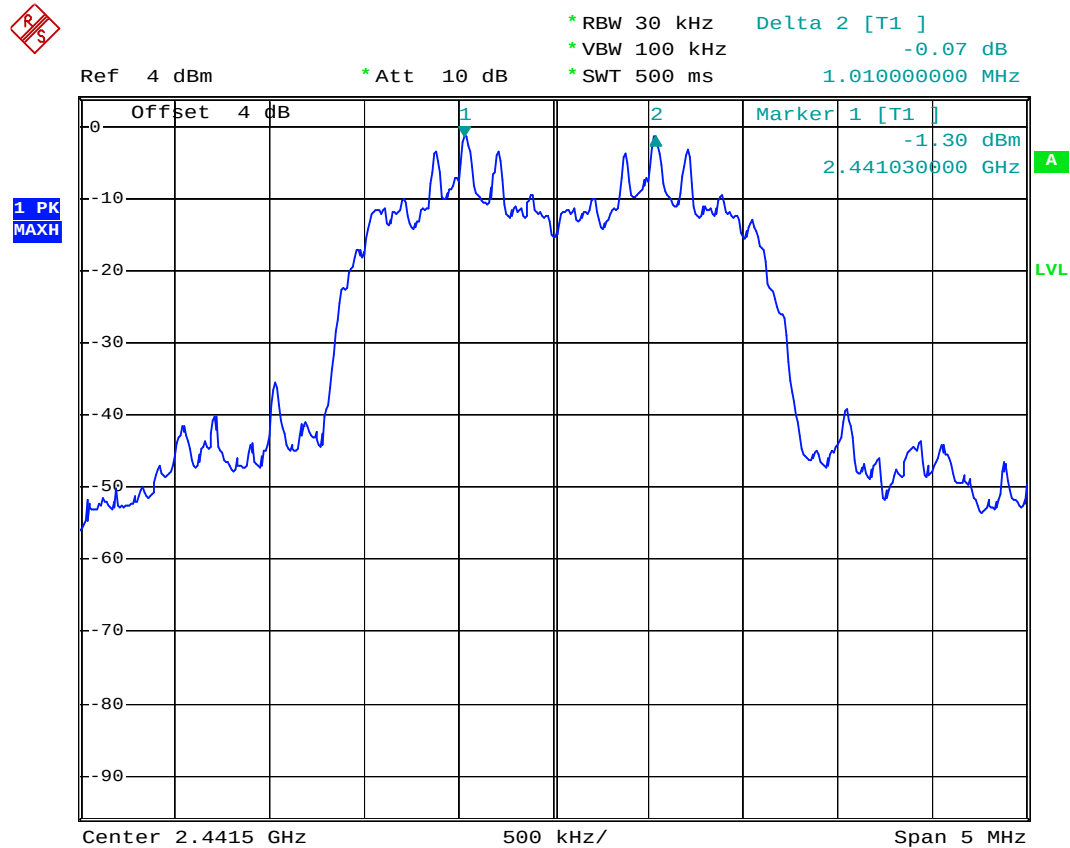
Mode 4



Date: 21.NOV.2007 10:42:19



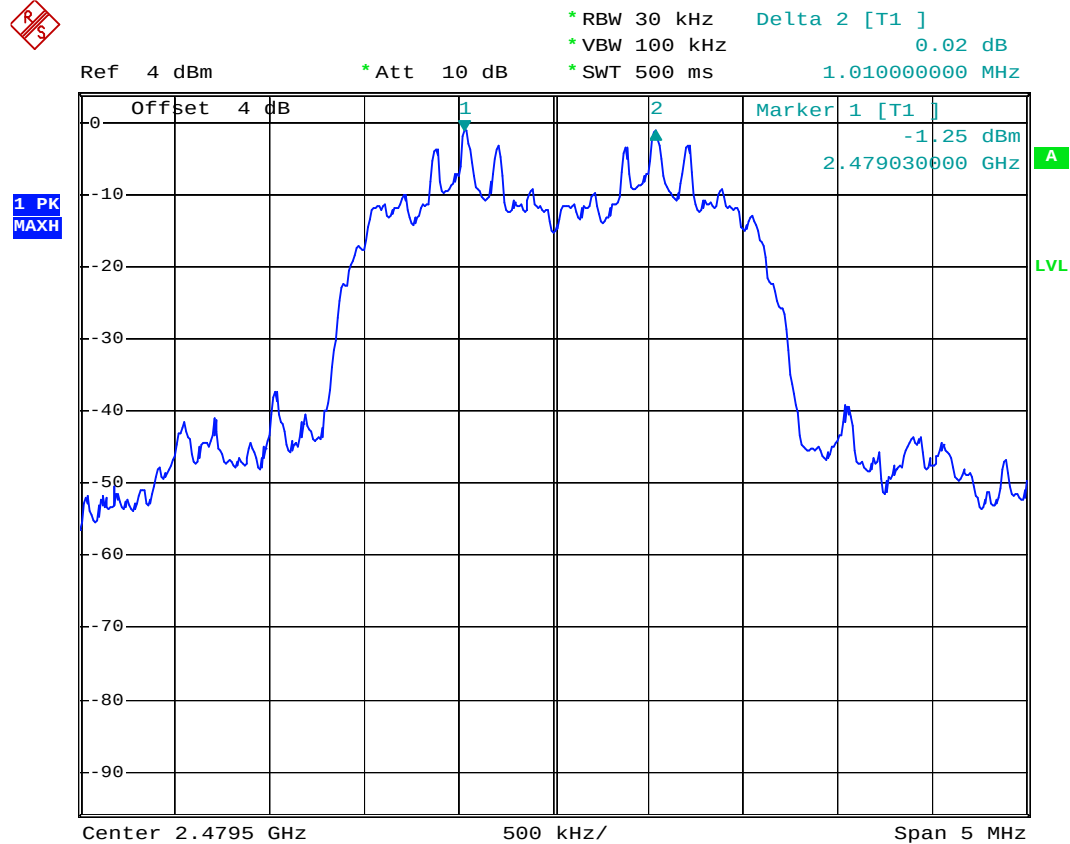
Mode 5



Date: 21.NOV.2007 10:43:10



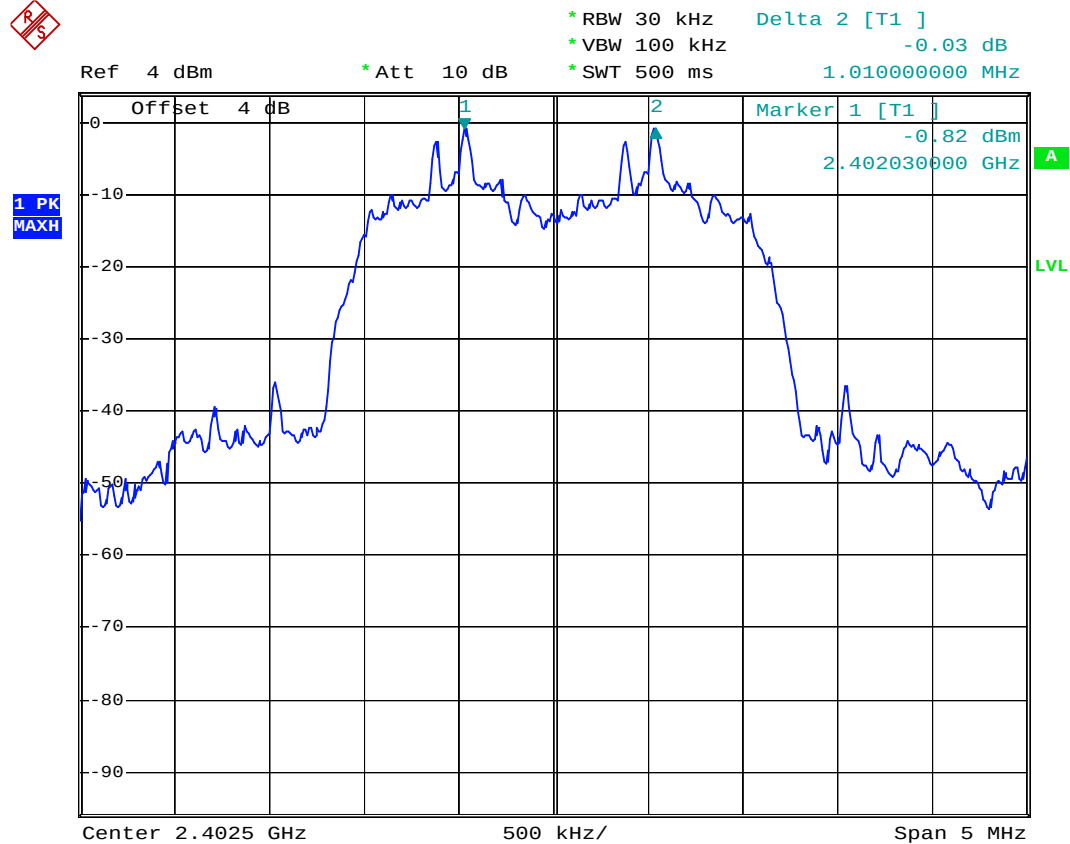
Mode 6



Date: 21.NOV.2007 10:44:16



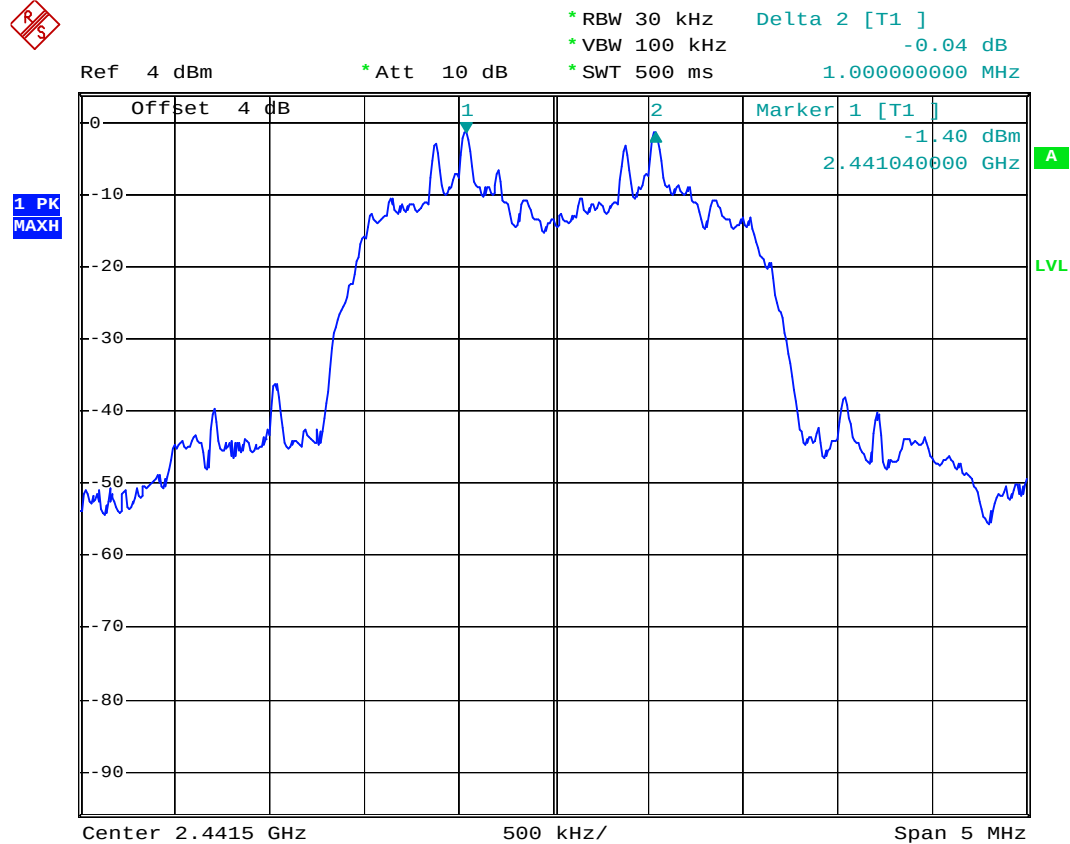
Mode 7



Date: 21.NOV.2007 11:06:22



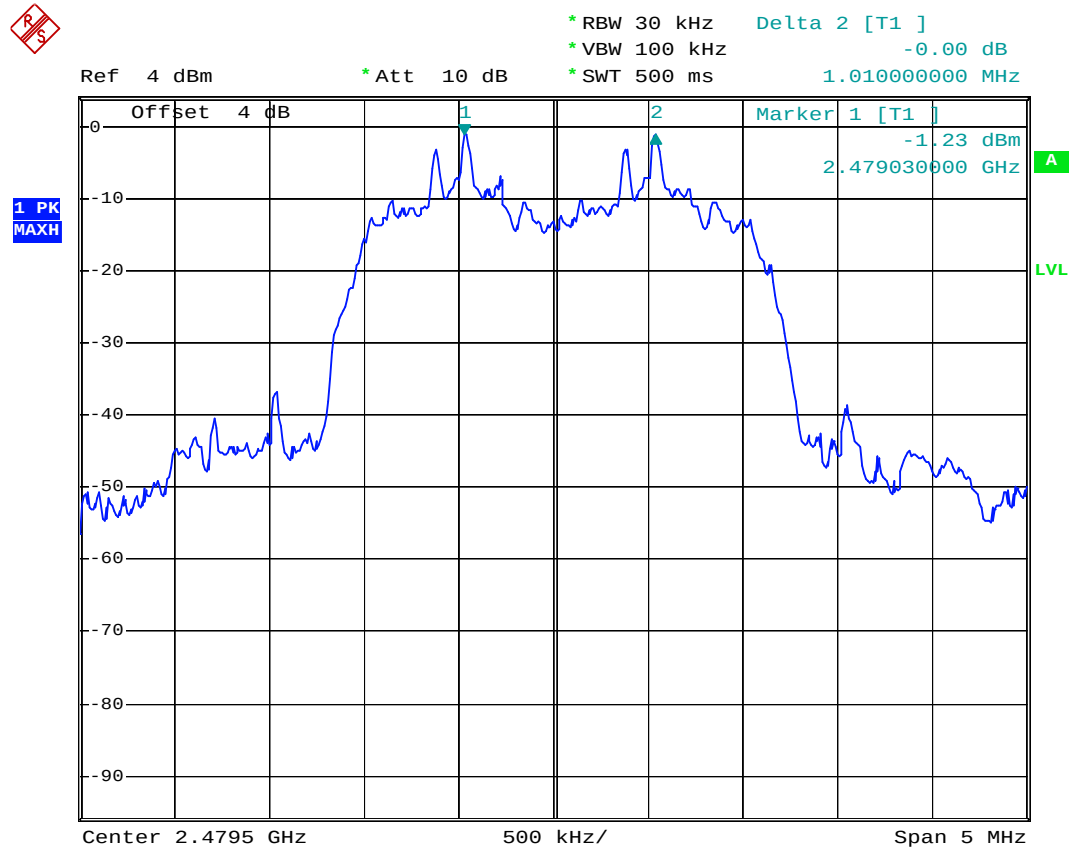
Mode 8



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Mode 9



Date: 21.NOV.2007 11:07:15

5.4 Number of Hopping Frequency

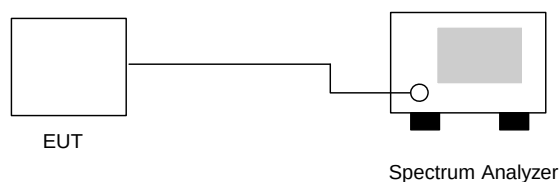
5.4.1 Measuring Instruments :

As described in chapter 9 of this test report.

5.4.2 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.

5.4.3 Test Setup Layout :



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

- Application Type : BT
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

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

- Application Type : BT EDR(2Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

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

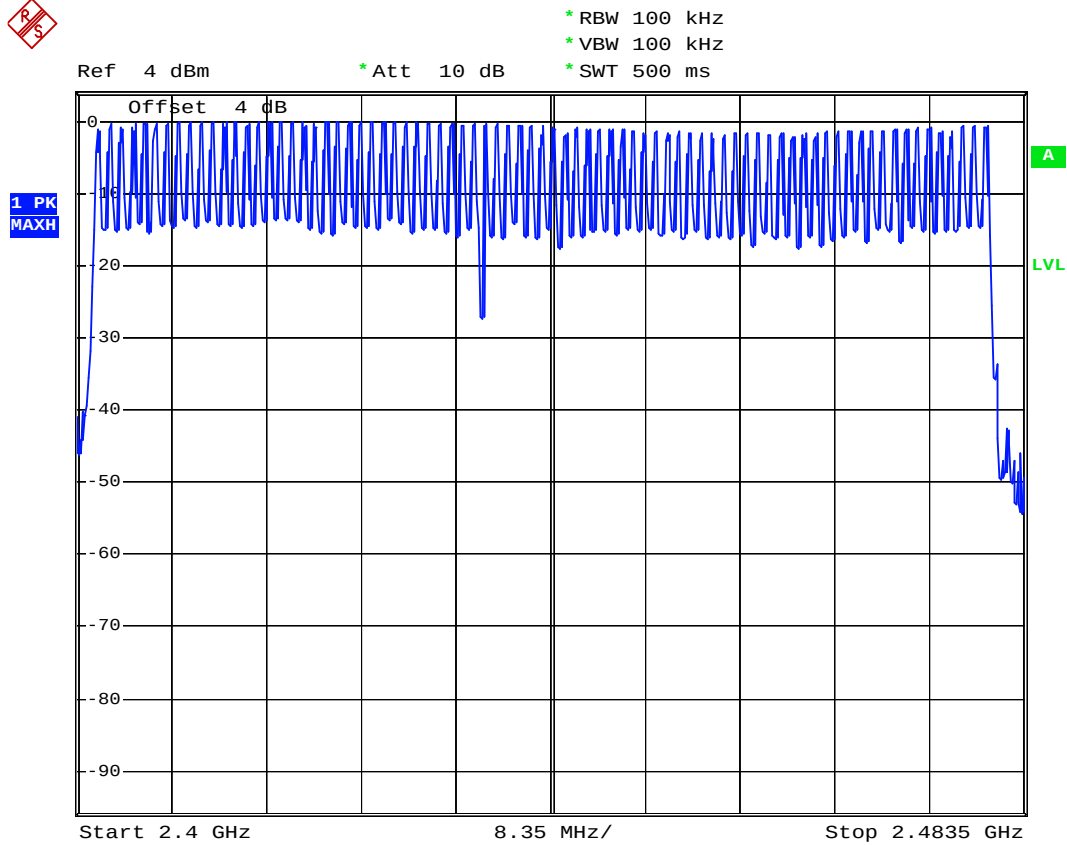
- Application Type : BT EDR(3Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

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



5.4.5 Number of Hopping Frequency

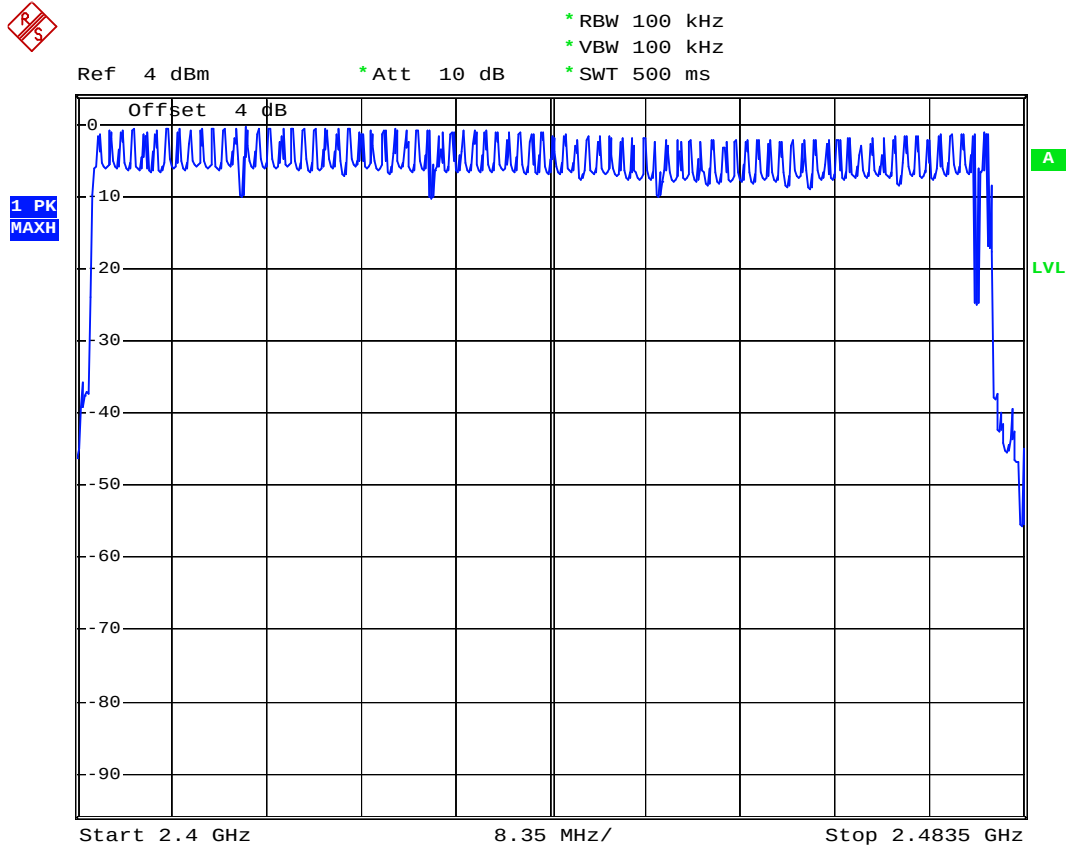
BT



Date: 21.NOV.2007 10:25:50



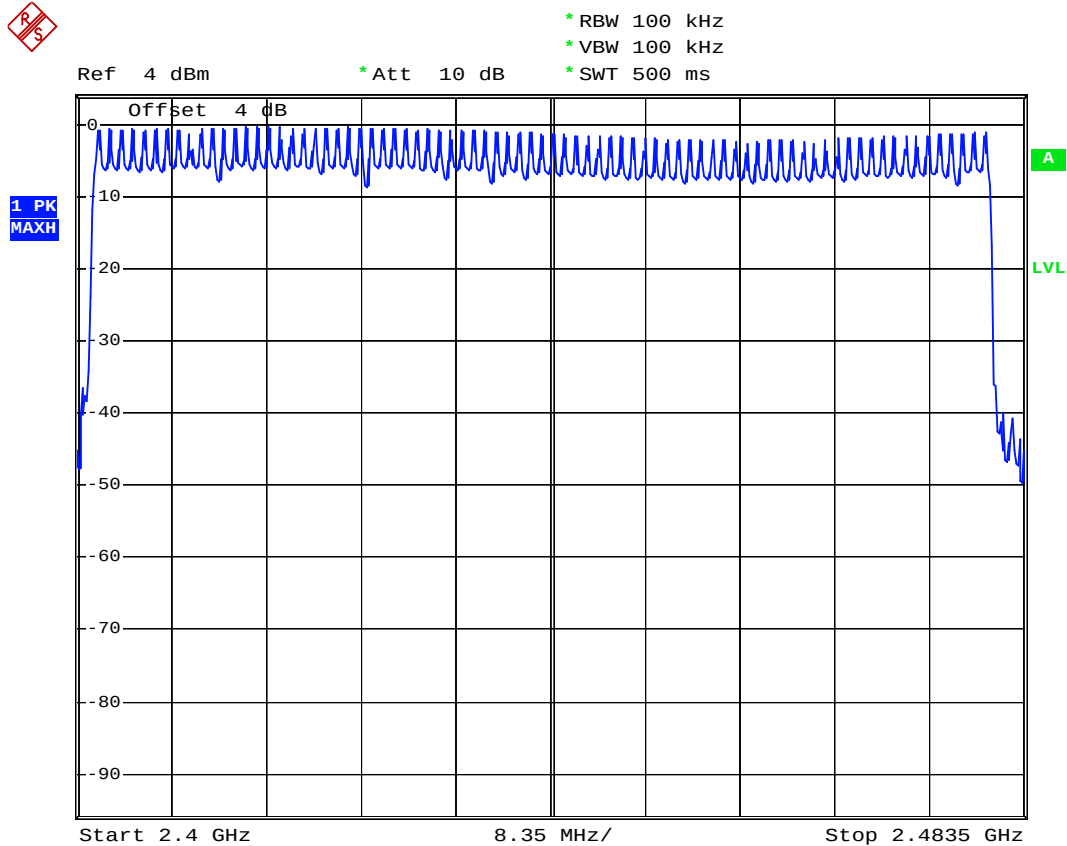
BT EDR(2Mbps)



Date: 21.NOV.2007 10:52:43



BT EDR(3Mbps)



Date: 21.NOV.2007 11:25:08

5.5 Hopping Channel Bandwidth

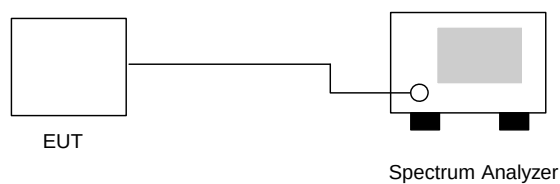
5.5.1 Measuring Instruments :

As described in chapter 9 of this test report.

5.5.2 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.

5.5.3 Test Setup Layout :



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

- Application Type : BT
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	0.904	Mode 1
39	2441	0.896	Mode 2
78	2480	0.904	Mode 3

- Application Type : BT EDR(2Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

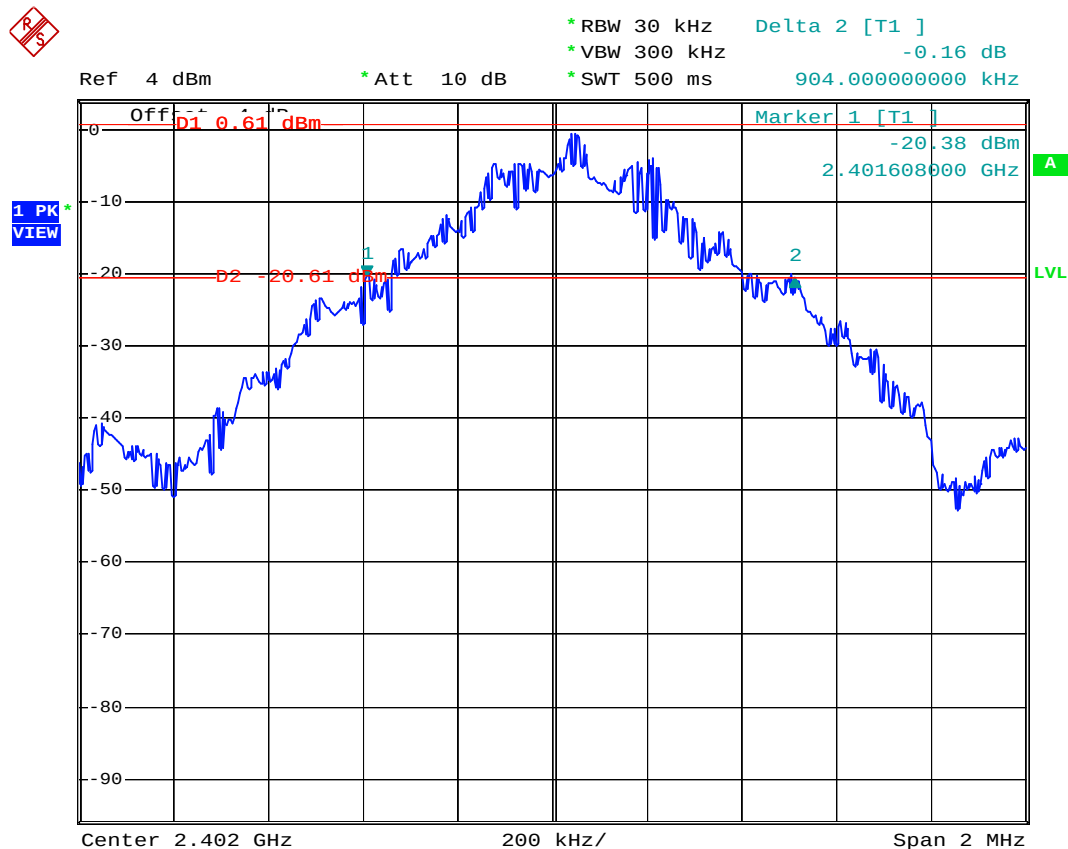
Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.204	Mode 4
39	2441	1.212	Mode 5
78	2480	1.204	Mode 6

- Application Type : BT EDR(3Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.200	Mode 7
39	2441	1.204	Mode 8
78	2480	1.204	Mode 9

**5.5.5 Hopping Channel Bandwidth**

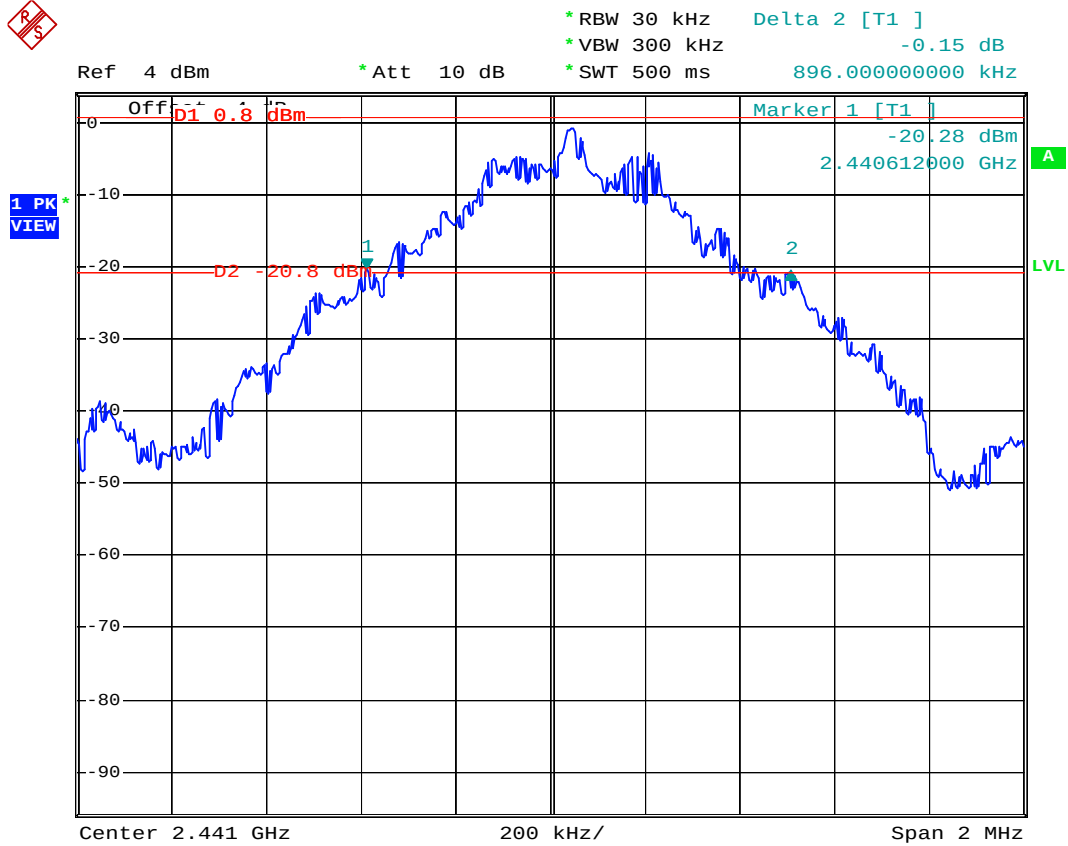
Mode 1



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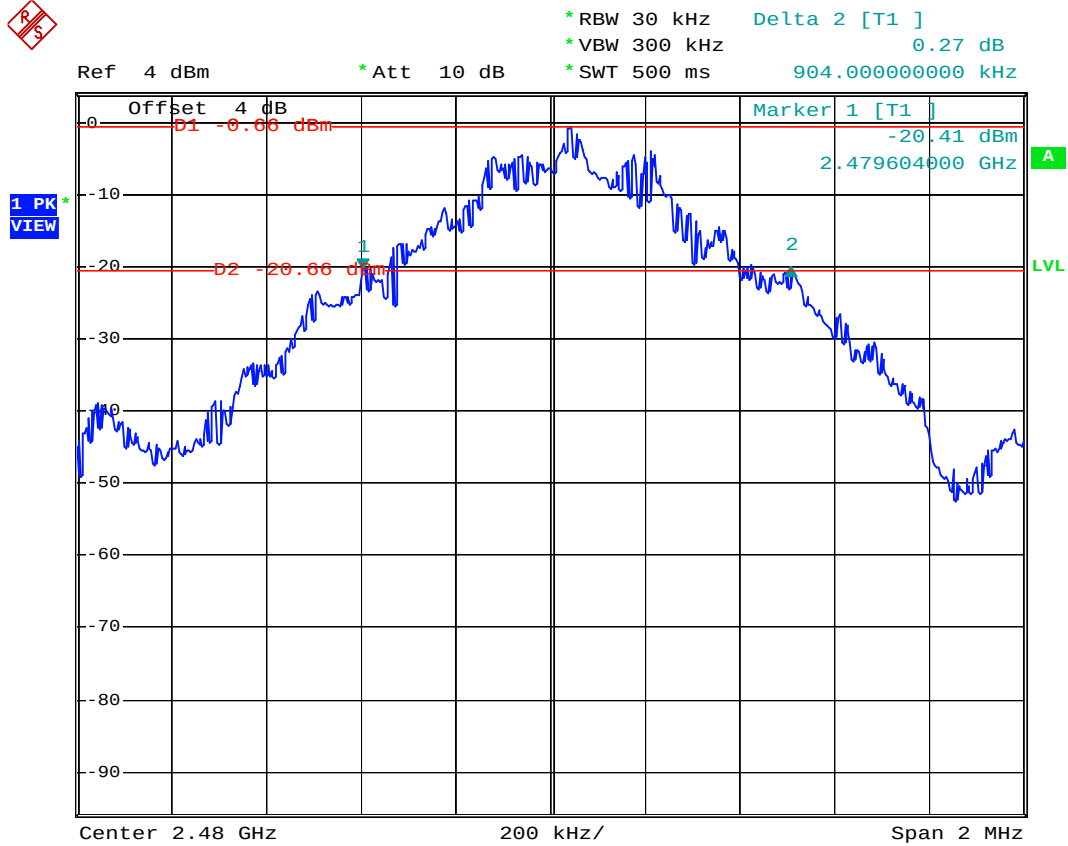
Mode 2



Date: 21.NOV.2007 10:19:49



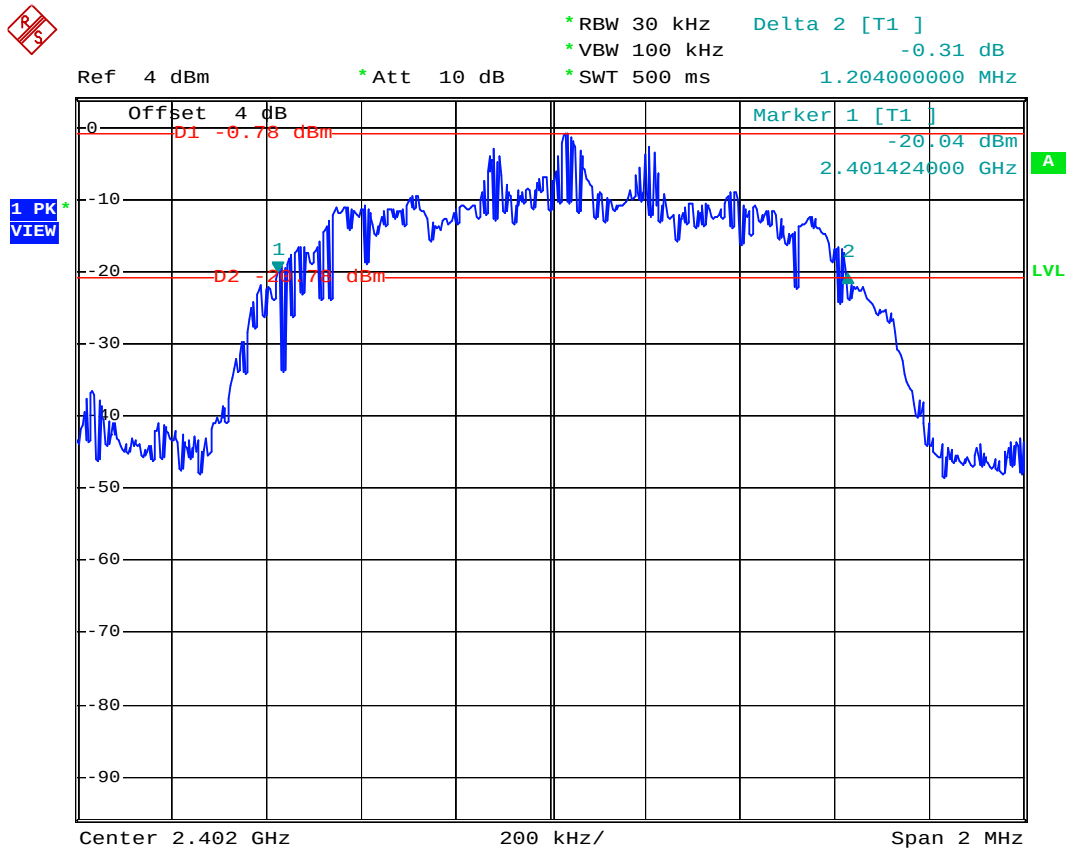
Mode 3



Date: 21.NOV.2007 10:16:35



Mode 4



Date: 21.NOV.2007 11:45:15



Mode 5



Date: 21.NOV.2007 11:44:12



Mode 6



Date: 21.NOV.2007 10:45:26



Mode 7



Date: 21.NOV.2007 11:12:36



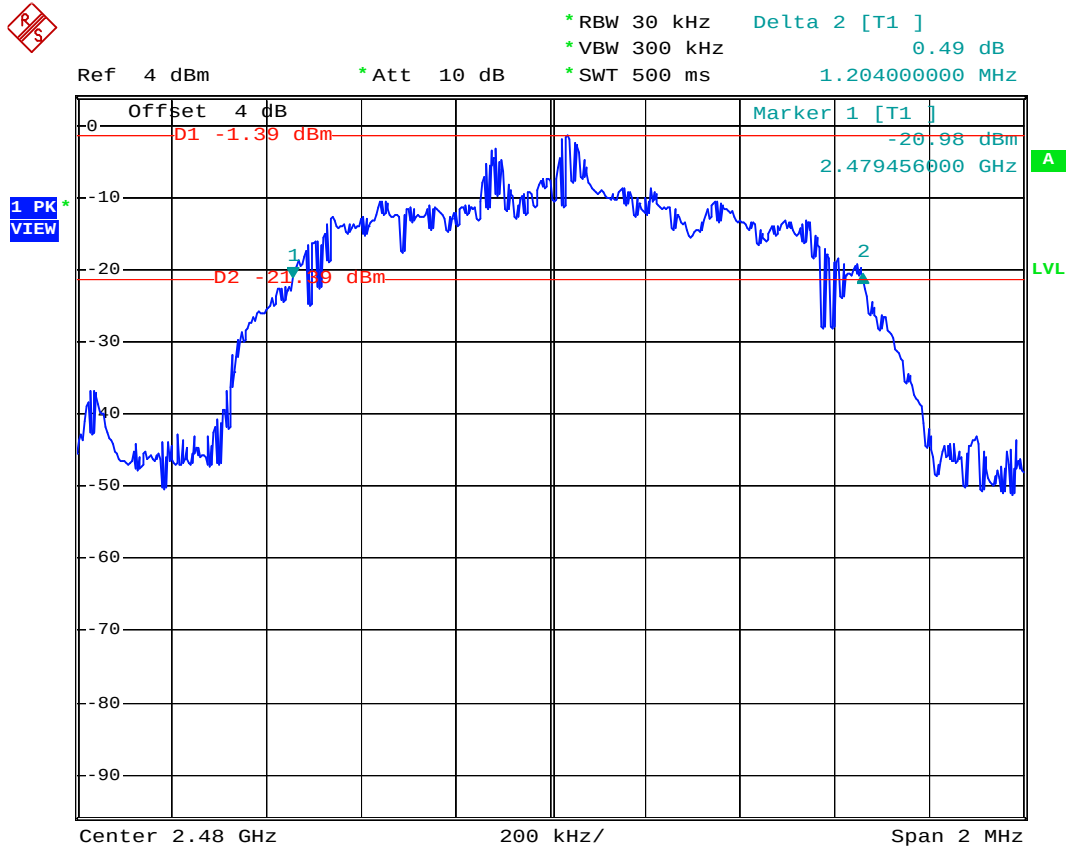
Mode 8



Date: 21.NOV.2007 11:13:29



Mode 9



Date: 21.NOV.2007 11:08:42

5.6 Dwell Time of Each Frequency

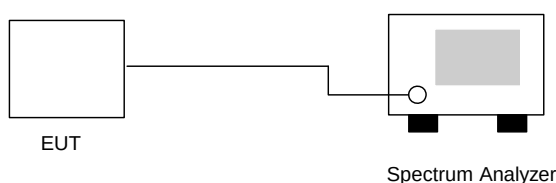
5.6.1 Measuring Instruments :

As described in chapter 9 of this test report.

5.6.2 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)

5.6.3 Test Setup Layout :



5.6.4 Test Result : See spectrum analyzer plots below

- Application Type : BT
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.7	548	0.151	0.4
DH3	3.7	1810	0.212	0.4
DH5	3.4	3070	0.330	0.4

※ Remark:

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



- Application Type : BT EDR(2Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.3	560	0.165	0.4
DH3	4.9	1820	0.282	0.4
DH5	3.5	3000	0.332	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)

- Application Type : BT EDR(3Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.2	560	0.163	0.4
DH3	5.4	1820	0.311	0.4
DH5	3.2	3080	0.311	0.4

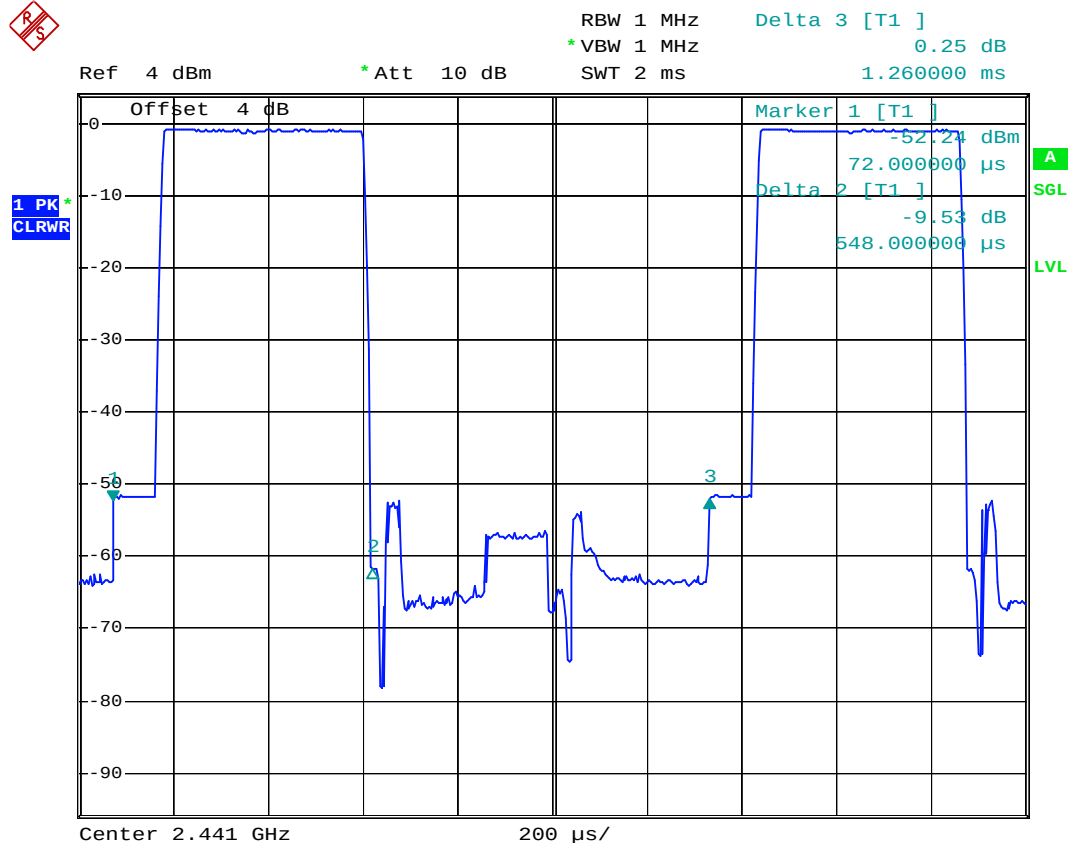
※ Remark:

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)

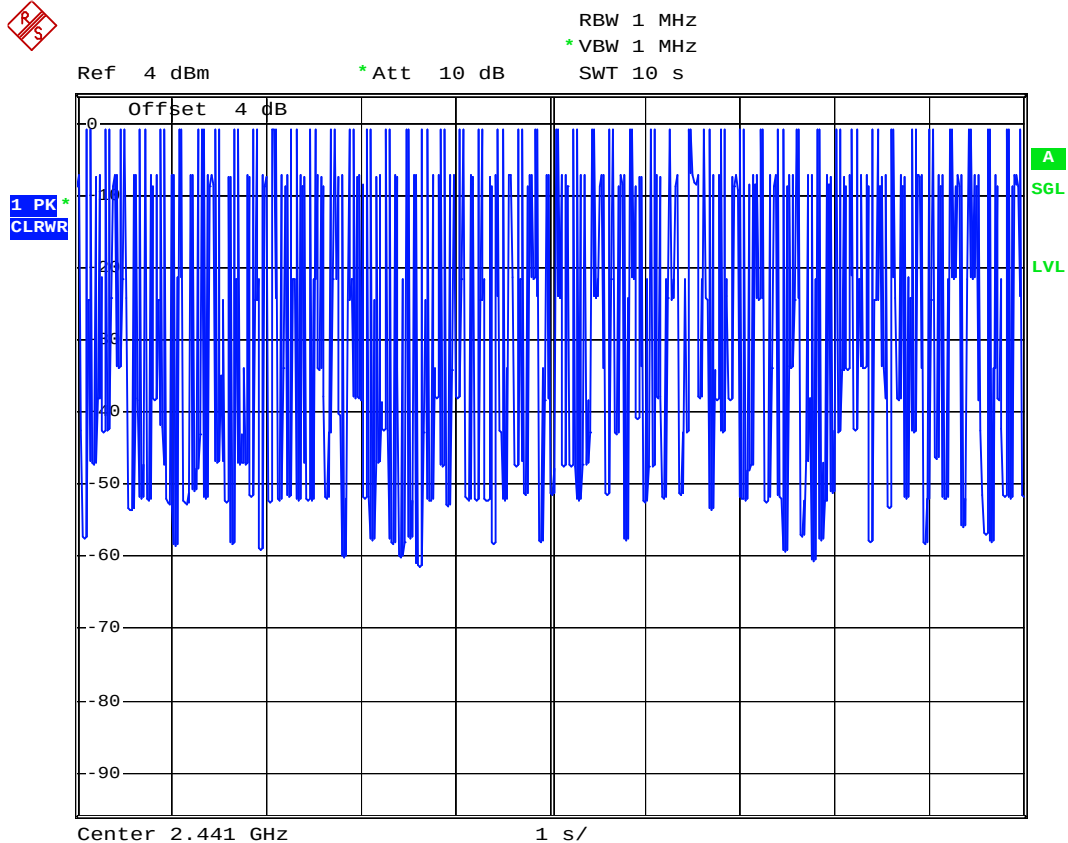


5.6.5 Dwell Time

DH1 (CH39)



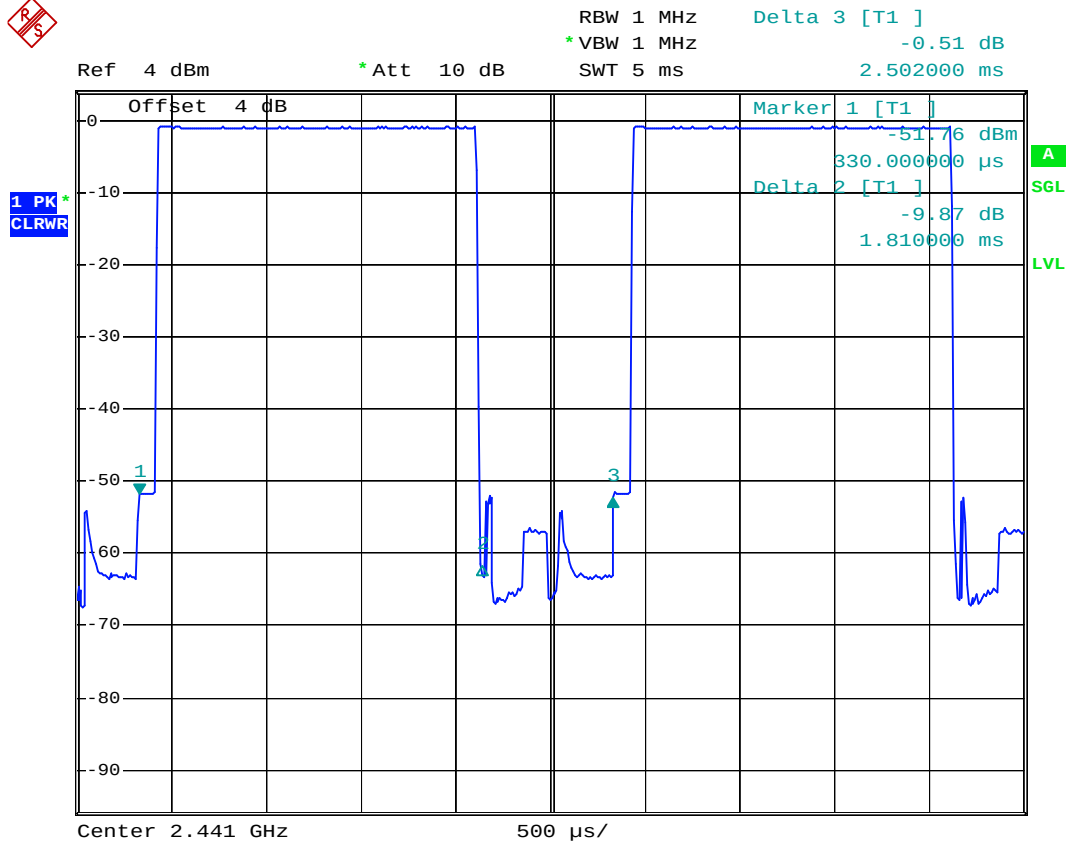
Date: 21.NOV.2007 10:29:55



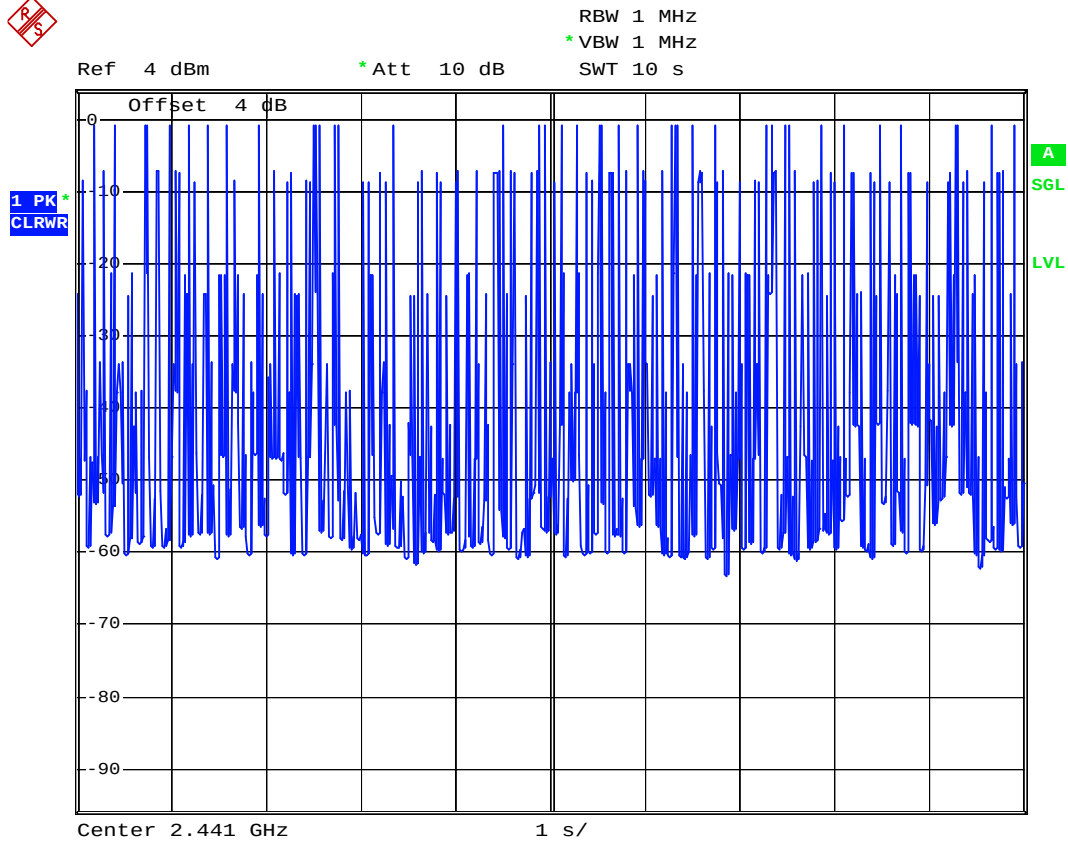
Date: 21.NOV.2007 10:34:57



DH3 (CH39)



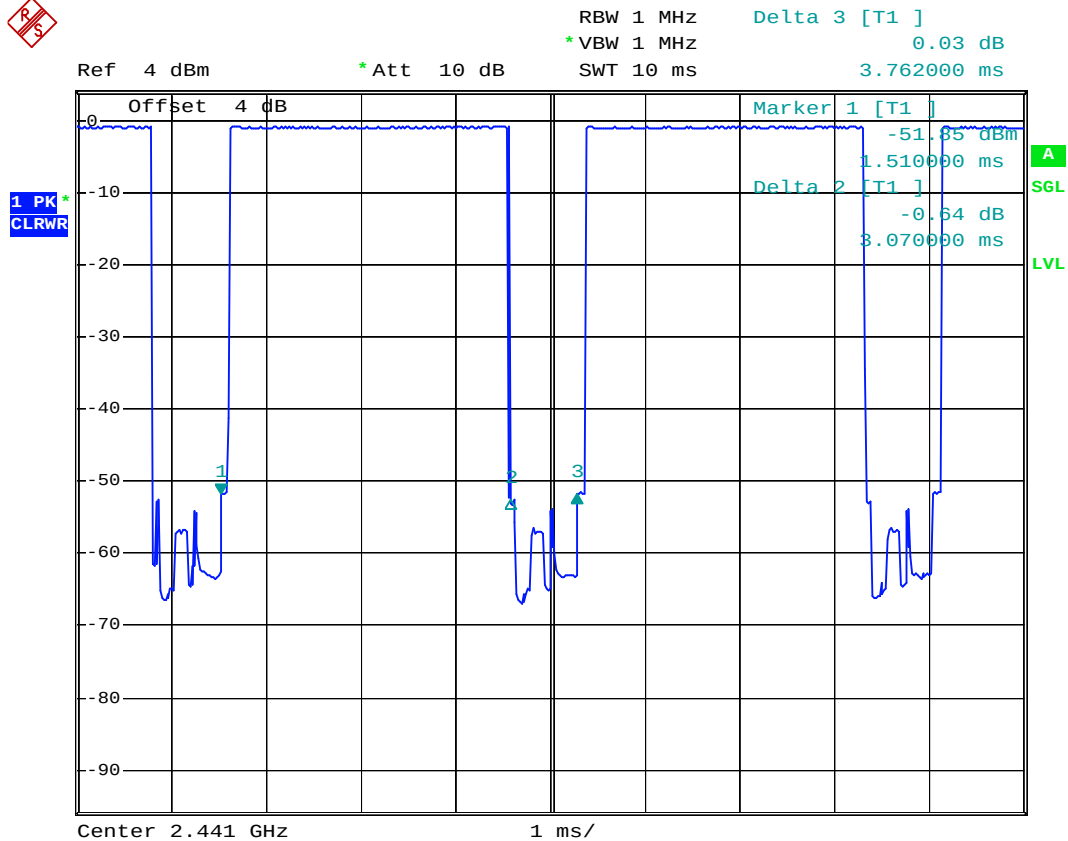
Date: 21.NOV.2007 10:31:03



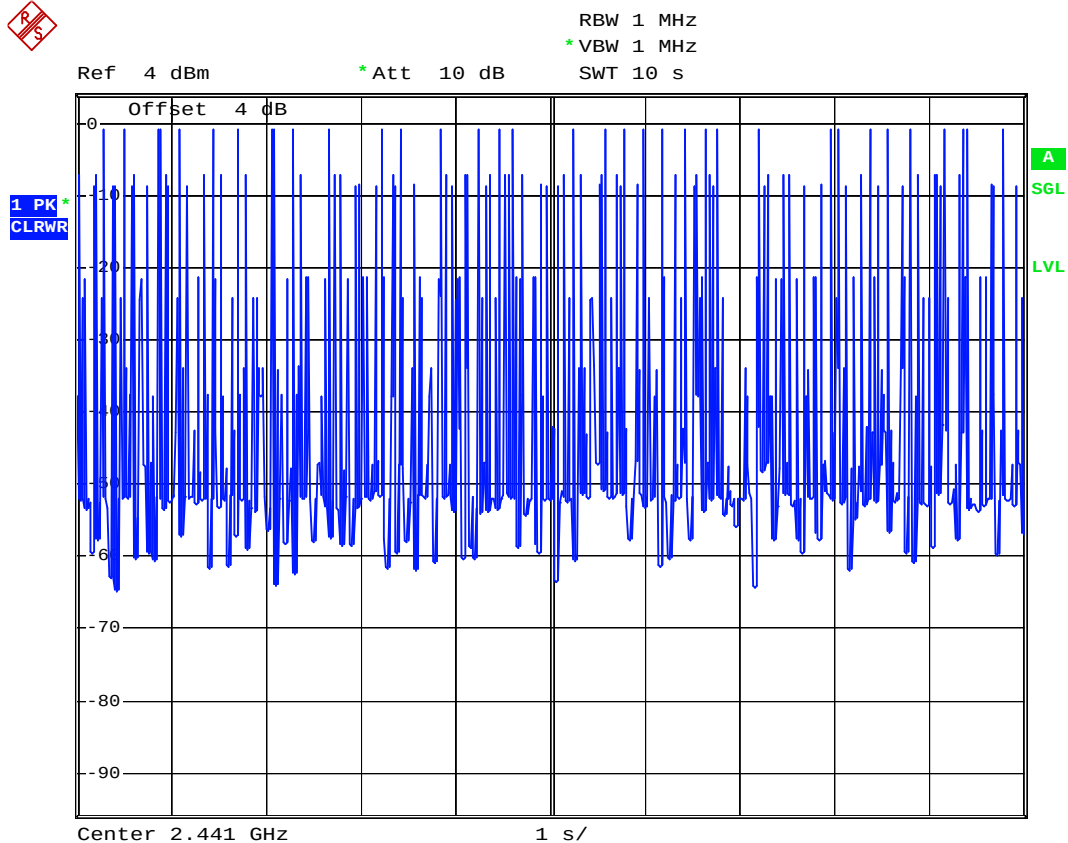
Date: 21.NOV.2007 10:33:16



DH5 (CH39)



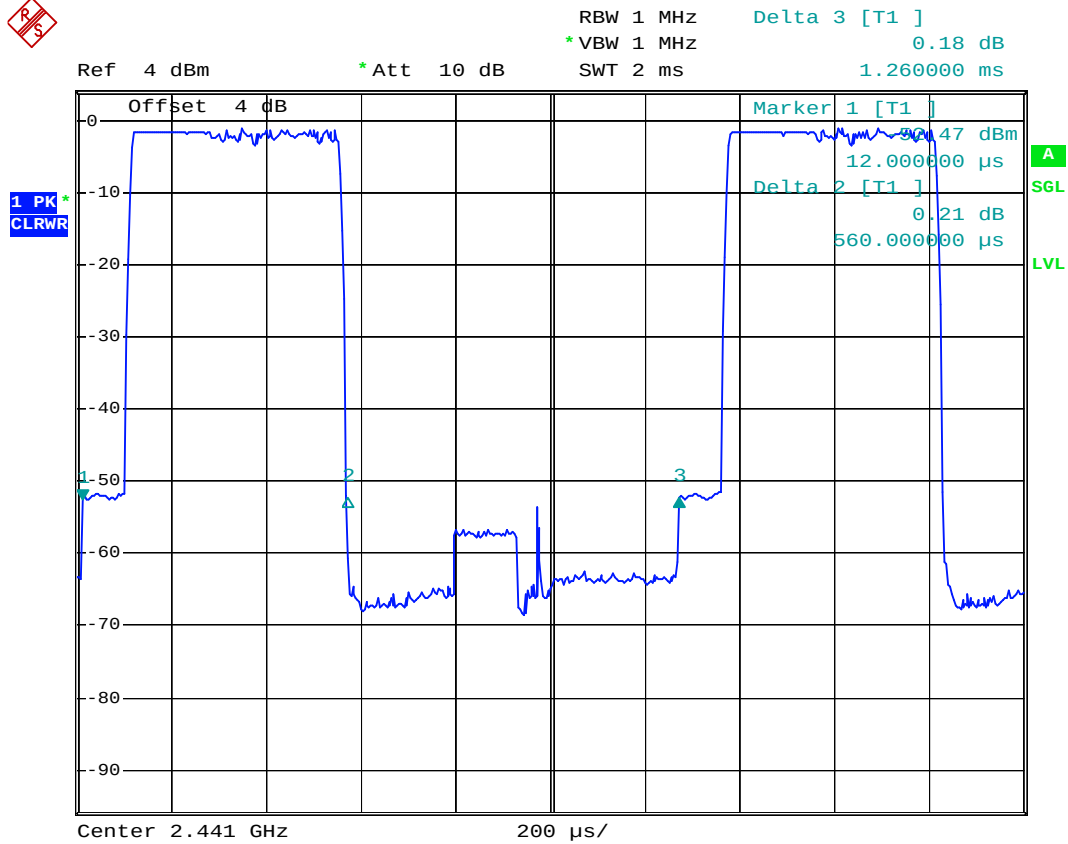
Date: 21.NOV.2007 10:32:01



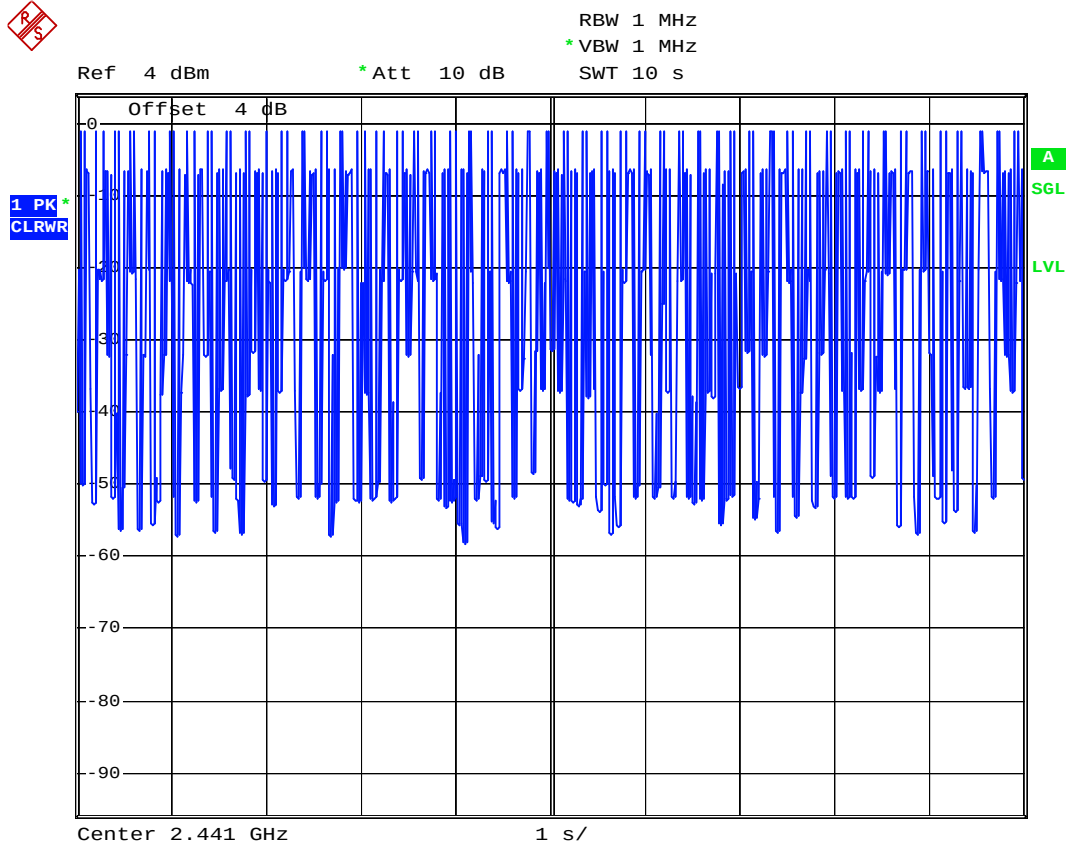
Date: 21.NOV.2007 10:34:17



2DH1 (CH39)



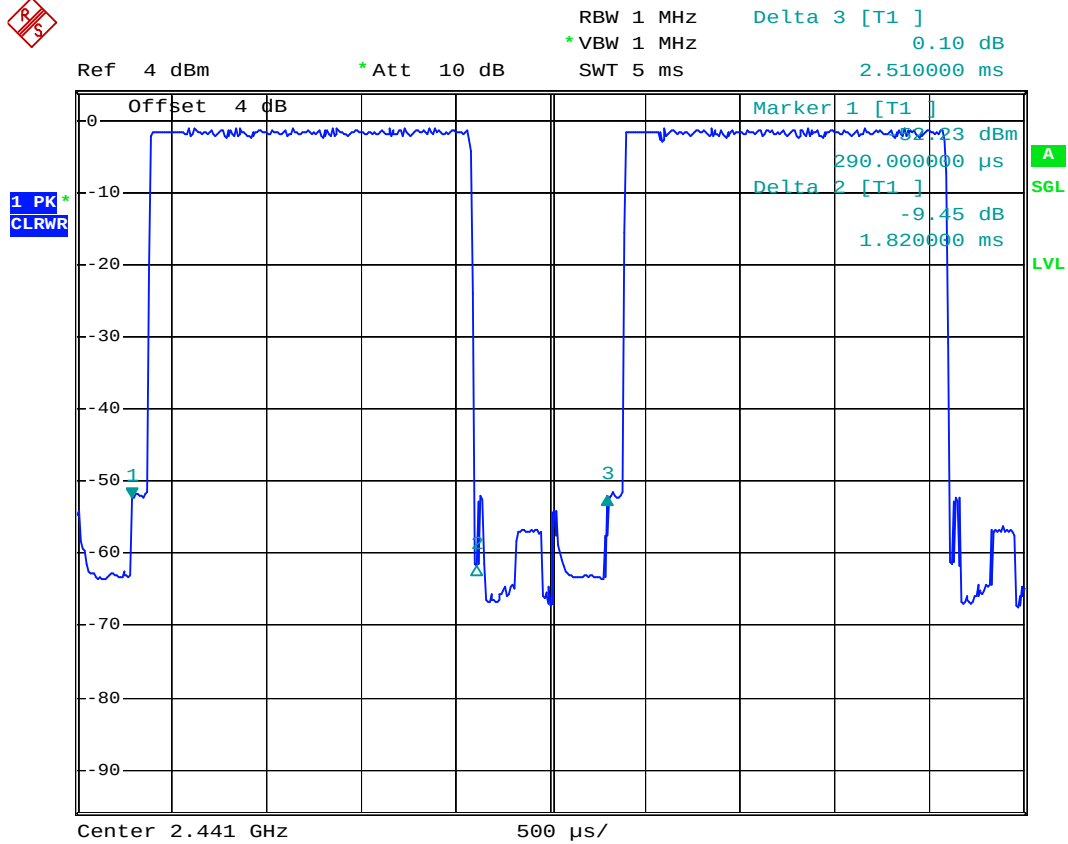
Date: 21.NOV.2007 10:58:39



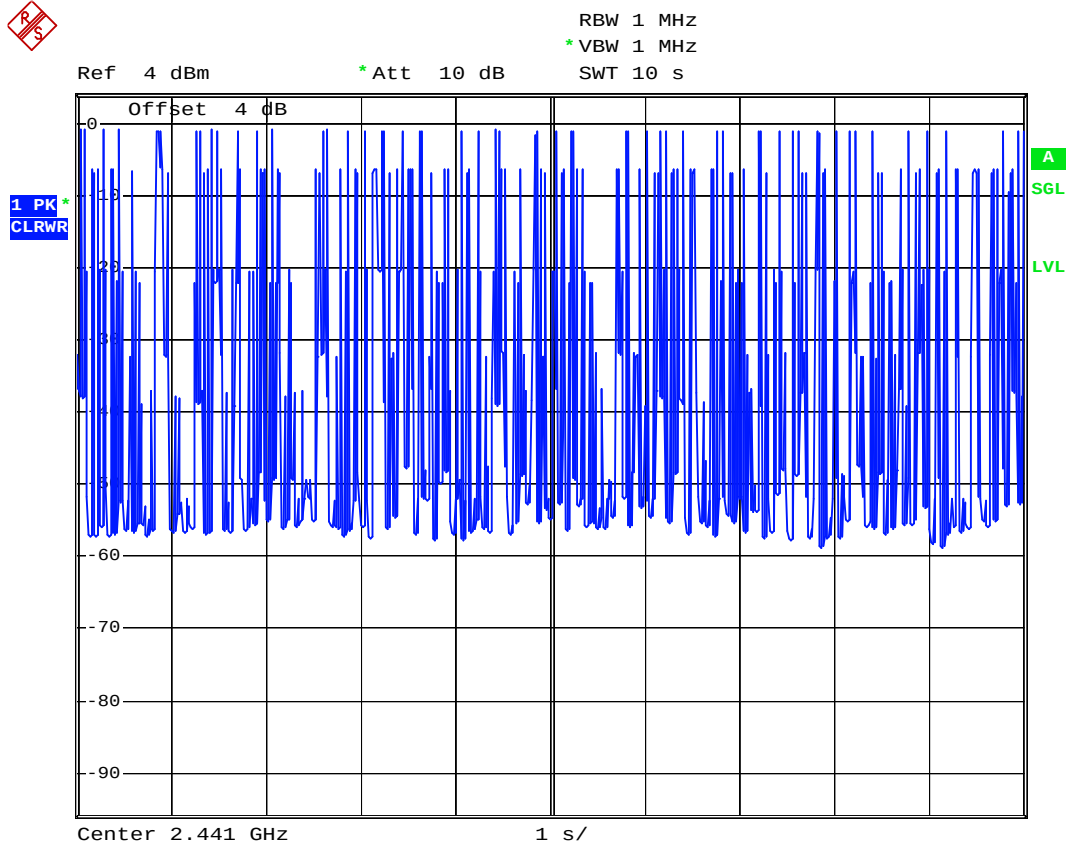
Date: 21.NOV.2007 10:54:33



2DH3 (CH39)



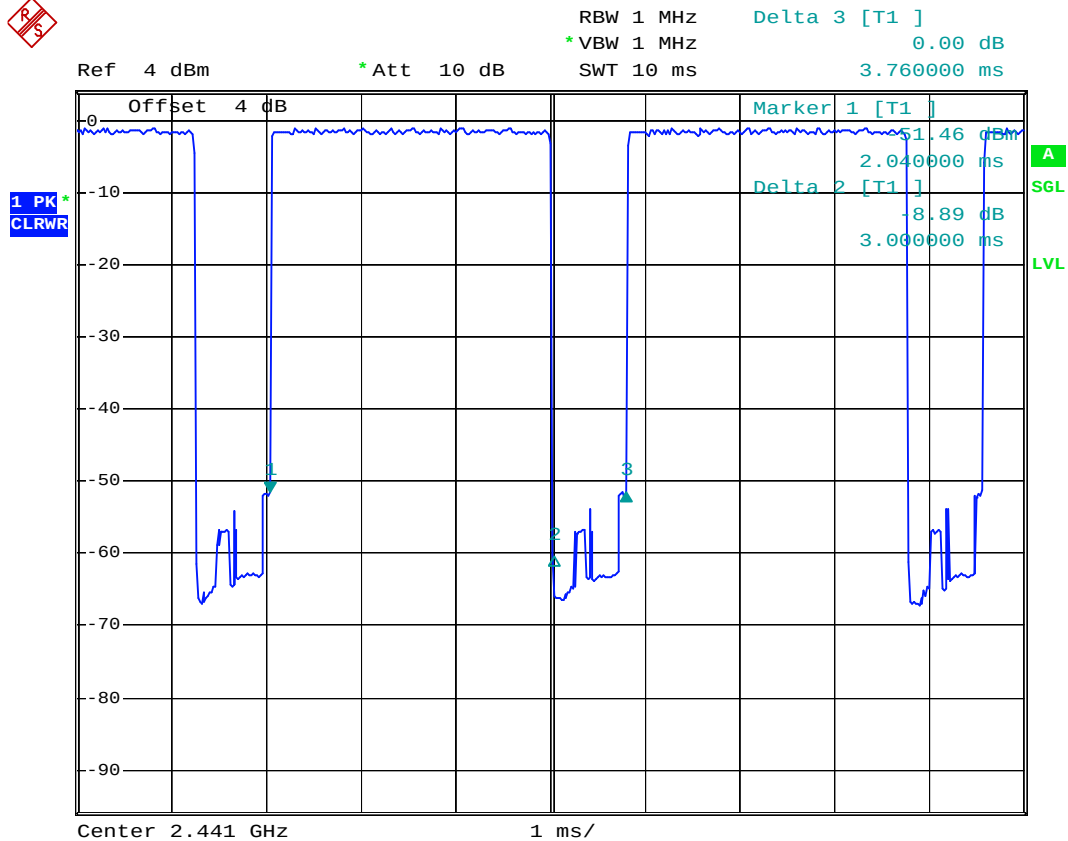
Date: 21.NOV.2007 10:59:15



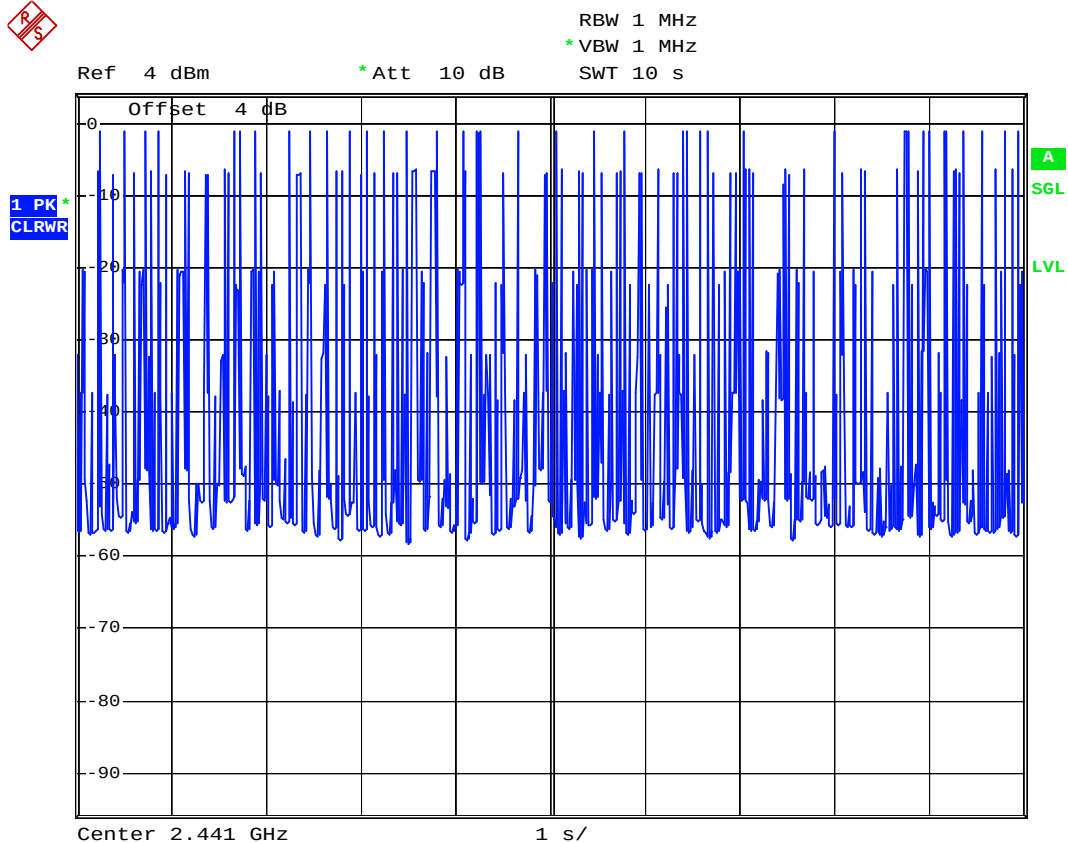
Date: 21.NOV.2007 10:55:33



2DH5 (CH39)



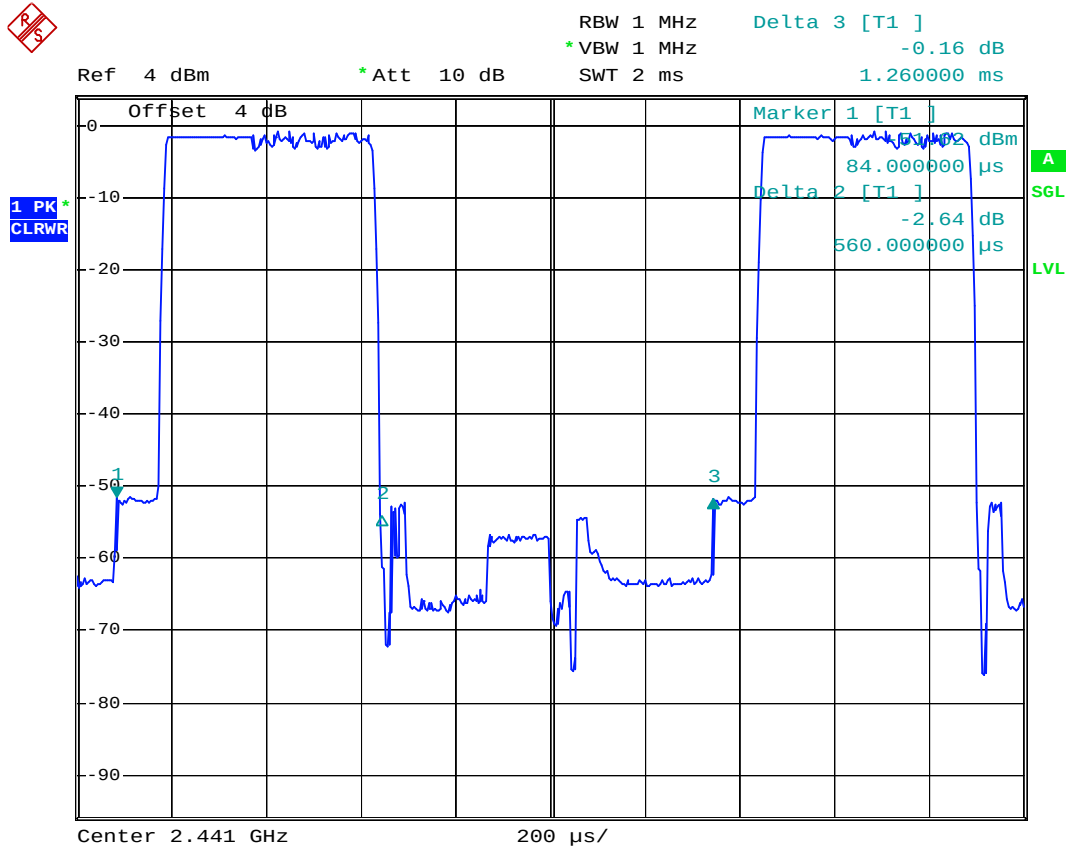
Date: 21.NOV.2007 10:57:25



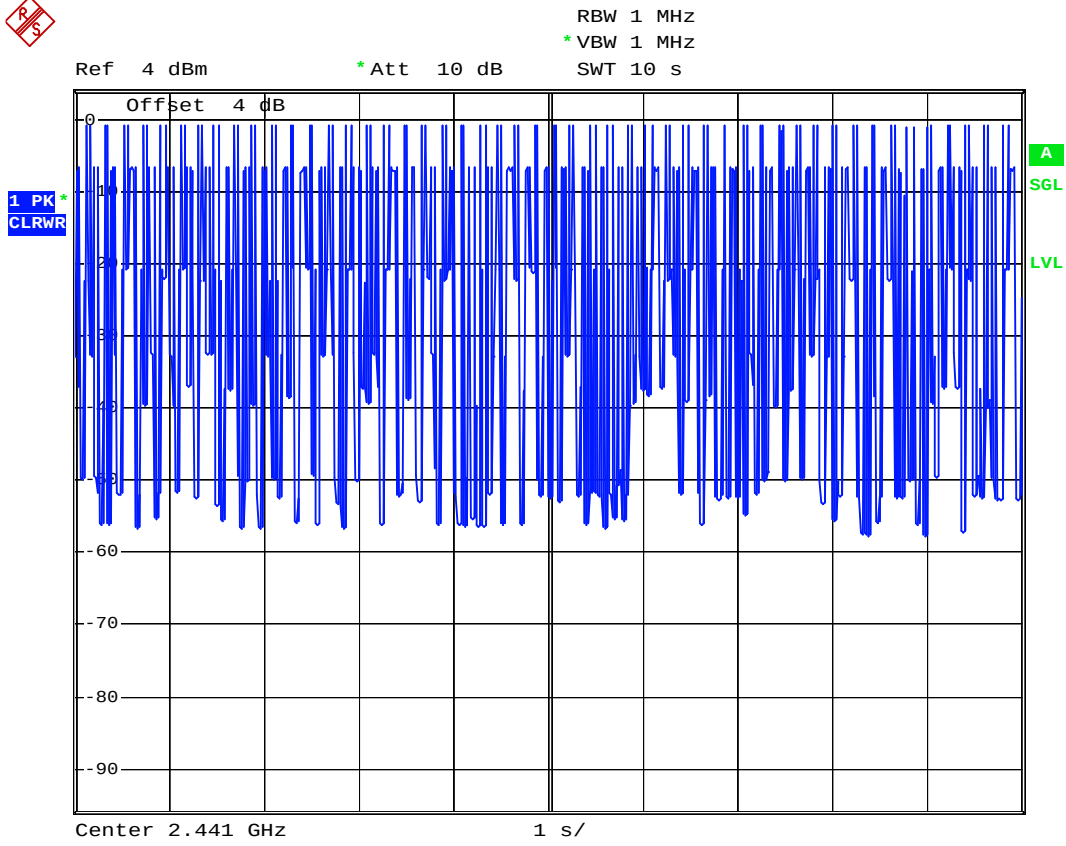
Date: 21.NOV.2007 10:56:10



3DH1 (CH39)



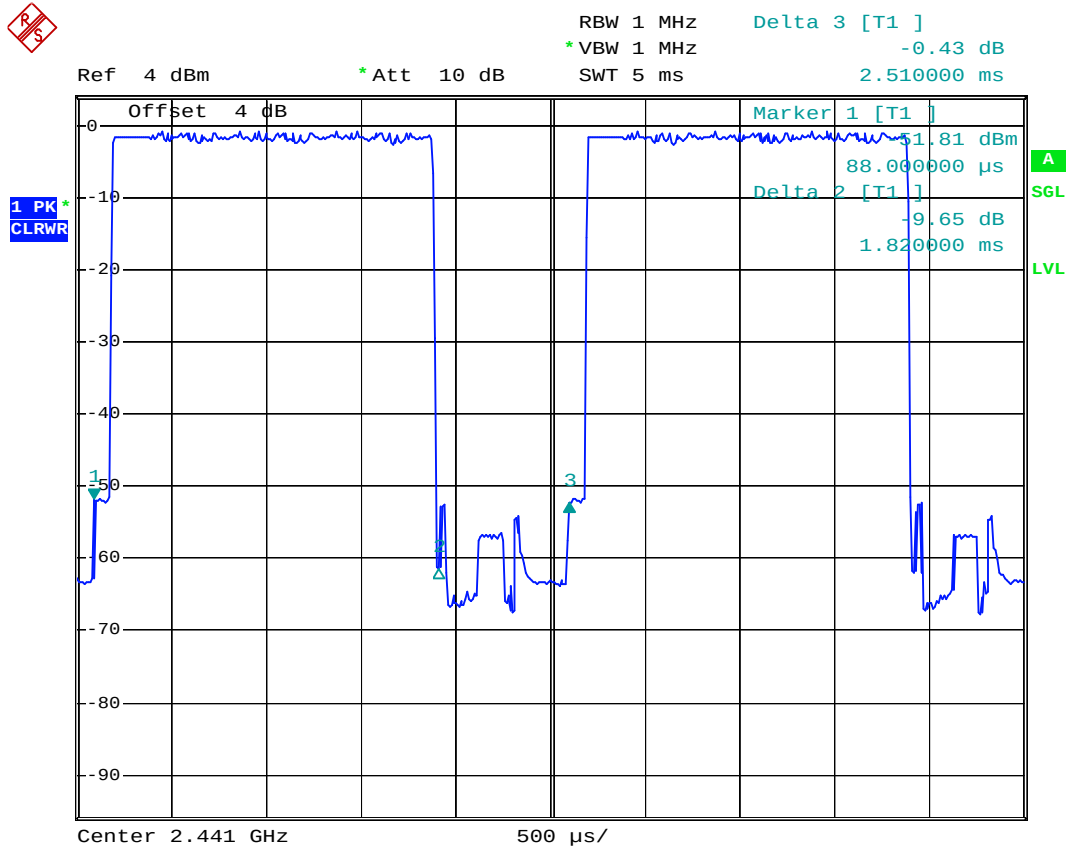
Date: 21.NOV.2007 11:16:36



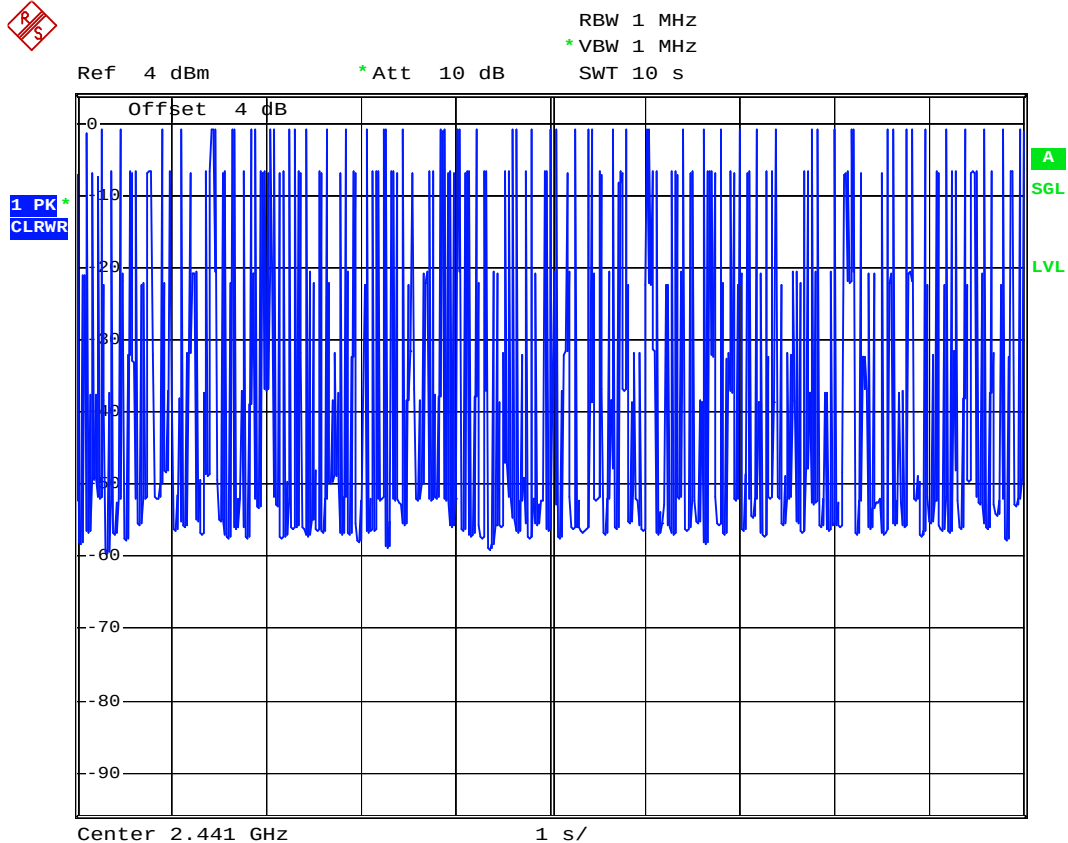
Date: 21.NOV.2007 11:20:16



3DH3 (CH39)



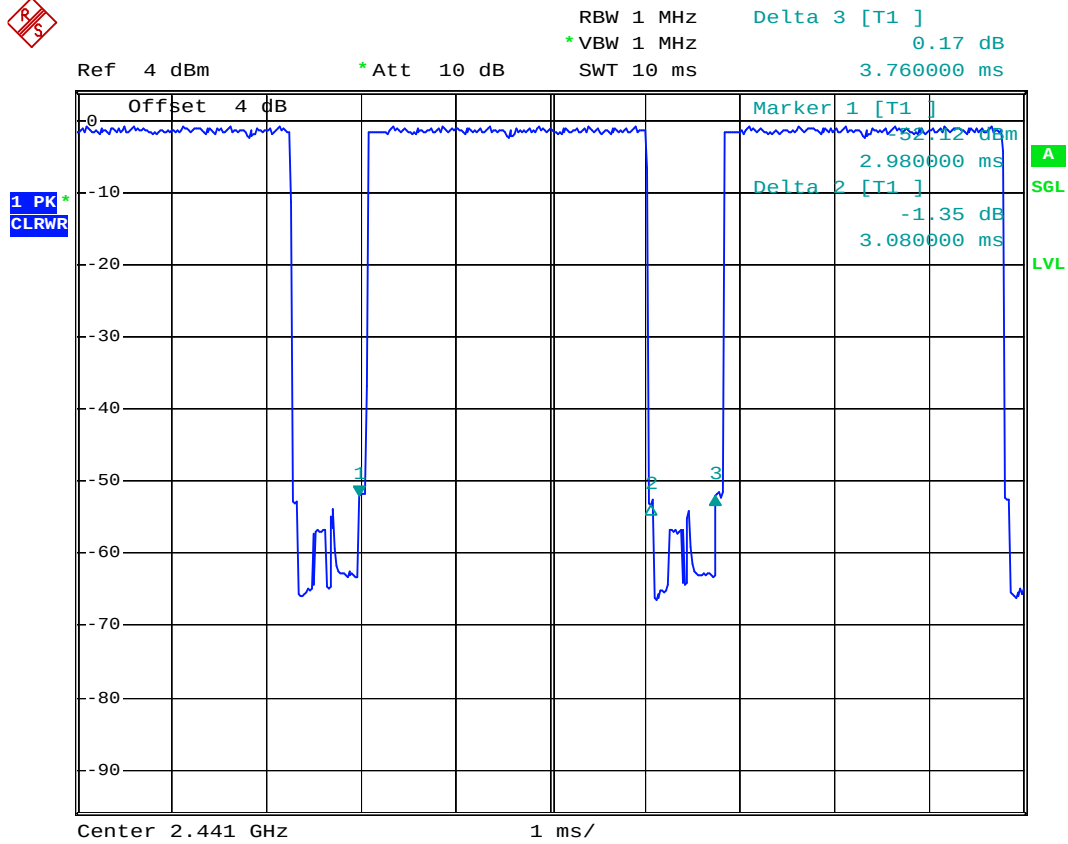
Date: 21.NOV.2007 11:01:13



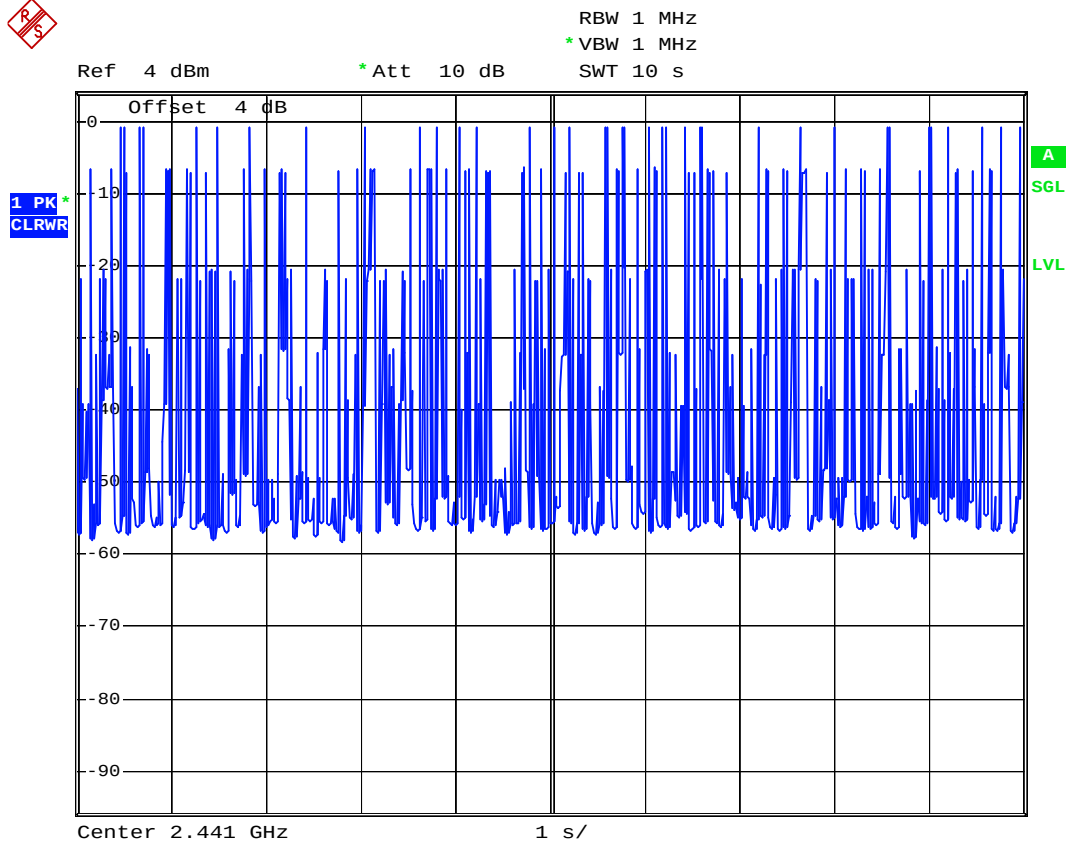
Date: 21.NOV.2007 11:19:33



3DH5 (CH39)



Date: 21.NOV.2007 11:18:26



Date: 21.NOV.2007 11:19:02

5.7 Peak Output Power Measurement

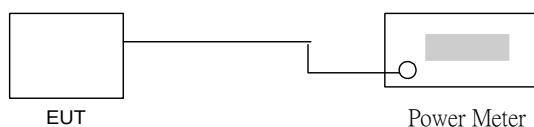
5.7.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.7.2 Test Procedure :

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

5.7.3 Test Setup Layout :



5.7.4 Test Result :

- Application Type : BT
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-0.57	1W/30 dBm
39	2441	-0.78	1W/30 dBm
78	2480	-0.67	1W/30 dBm



- Application Type : BT EDR(2Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-0.02	1W/30 dBm
39	2441	-0.45	1W/30 dBm
78	2480	-0.36	1W/30 dBm

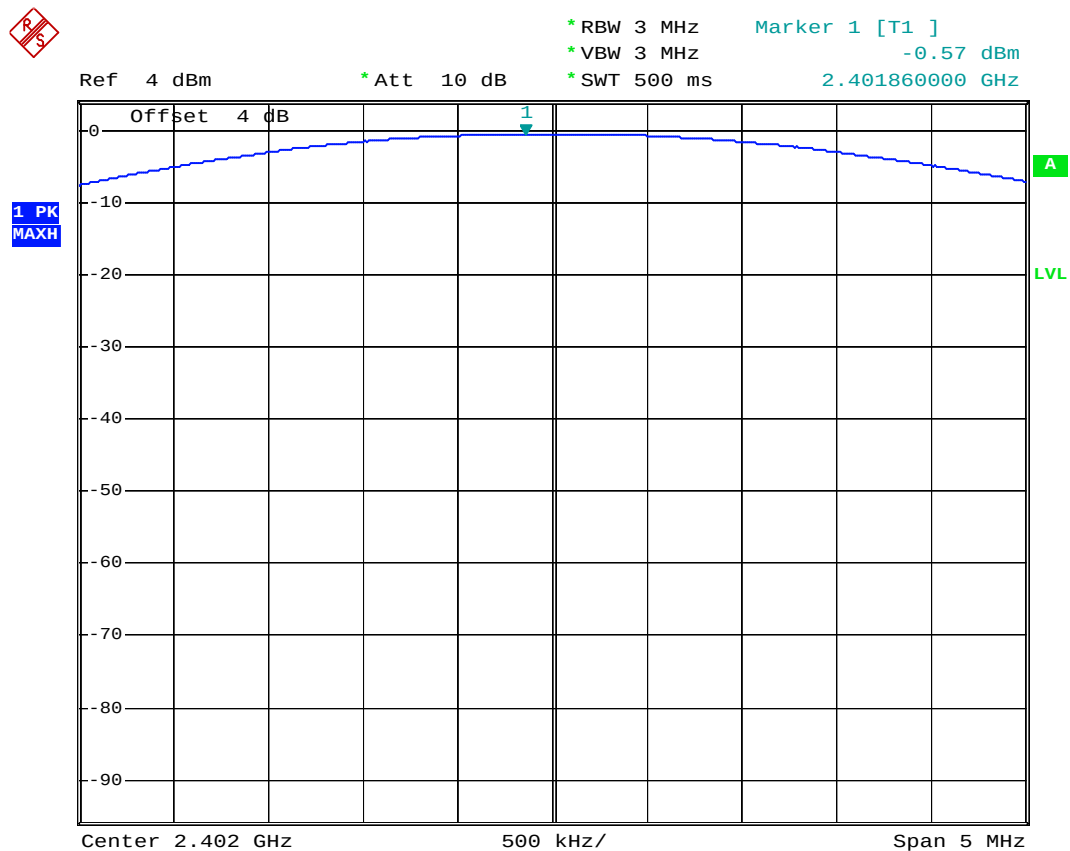
- Application Type : BT EDR(3Mbps)
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	0.37	1W/30 dBm
39	2441	-0.13	1W/30 dBm
78	2480	0.03	1W/30 dBm



5.7.5 Output Power

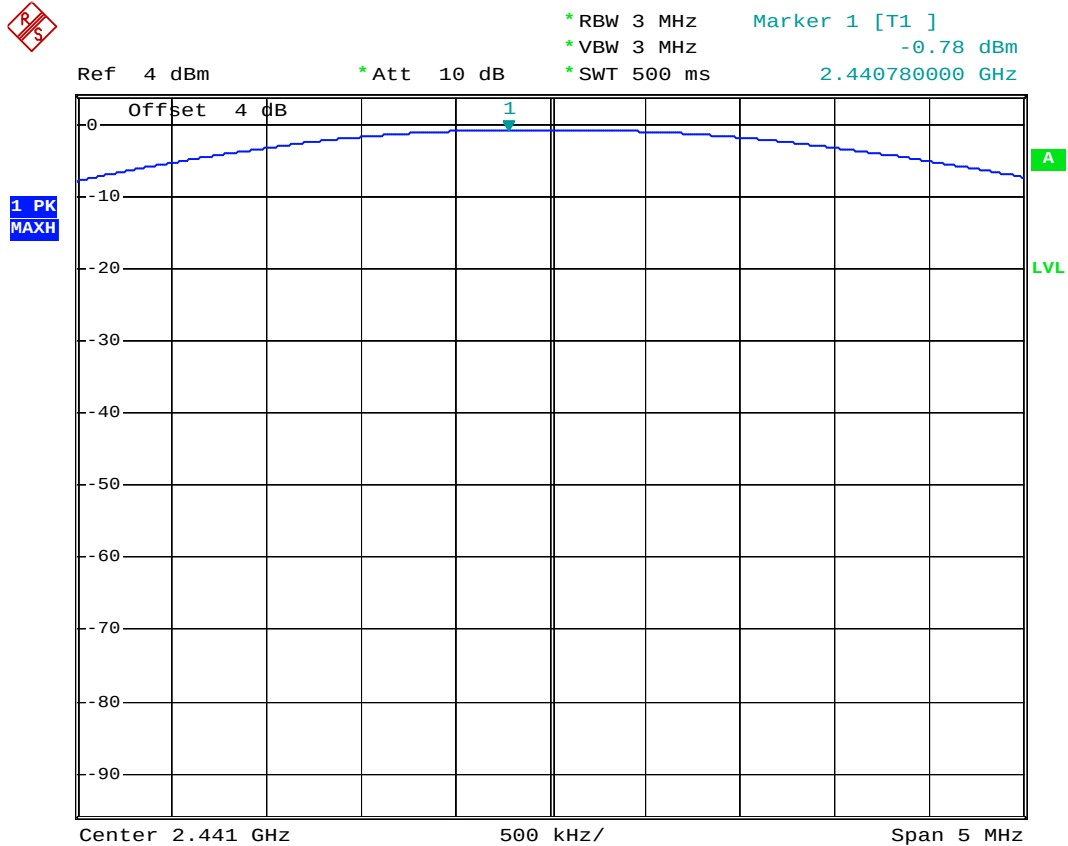
Bluetooth(1Mbps) Mode : CH00 (2402MHz)



Date: 21.NOV.2007 10:09:21



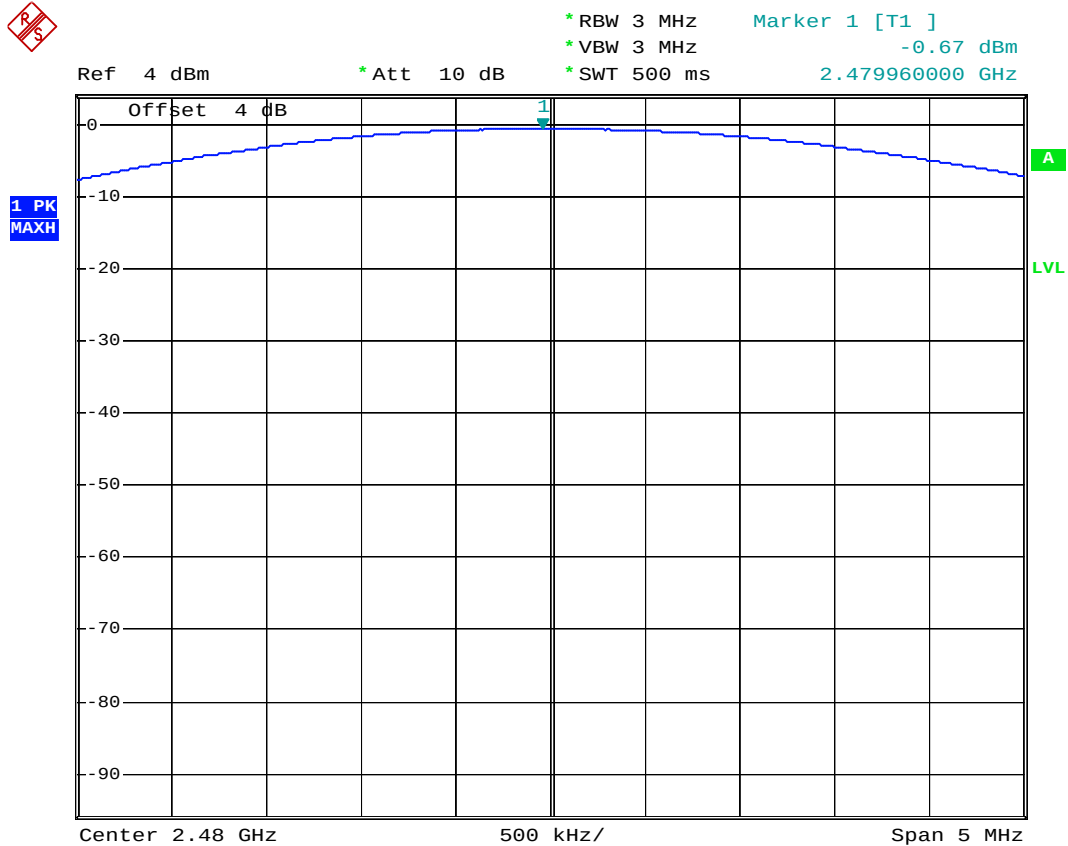
Bluetooth(1Mbps) Mode : CH39 (2441MHz)



Date: 21.NOV.2007 10:19:11



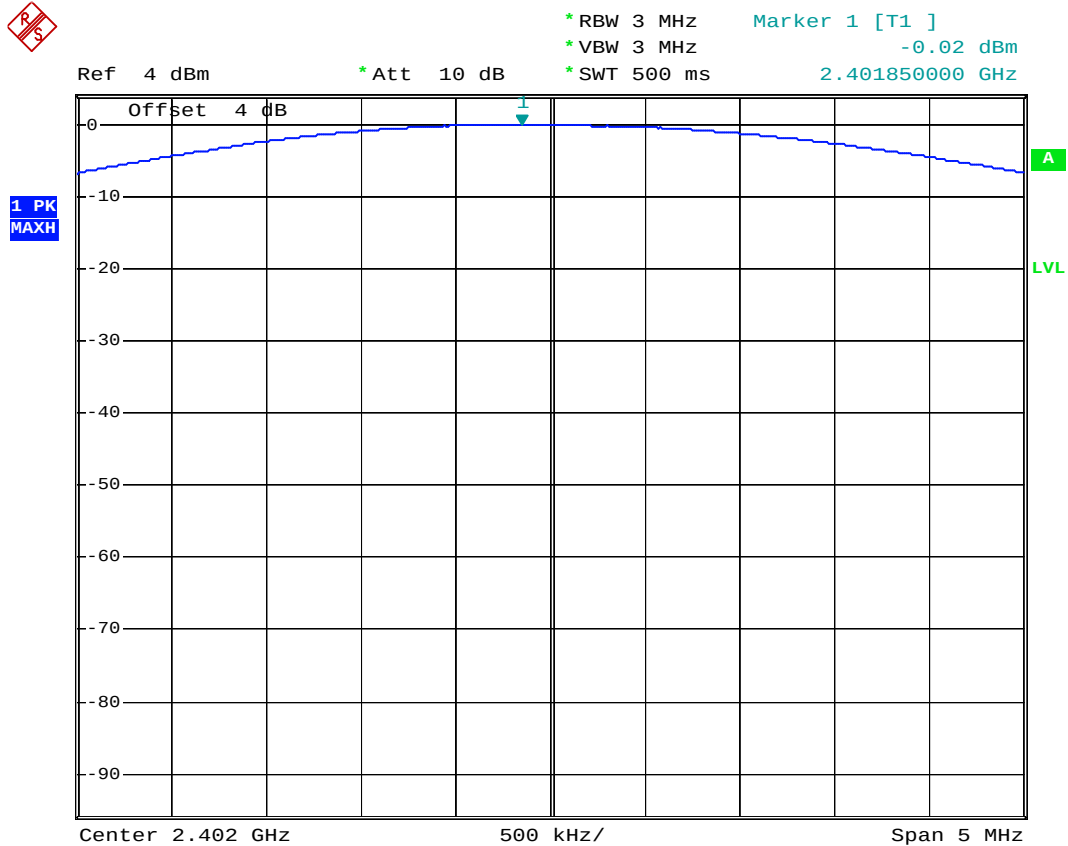
Bluetooth(1Mbps) Mode : CH78 (2480MHz)



Date: 21.NOV.2007 10:18:27



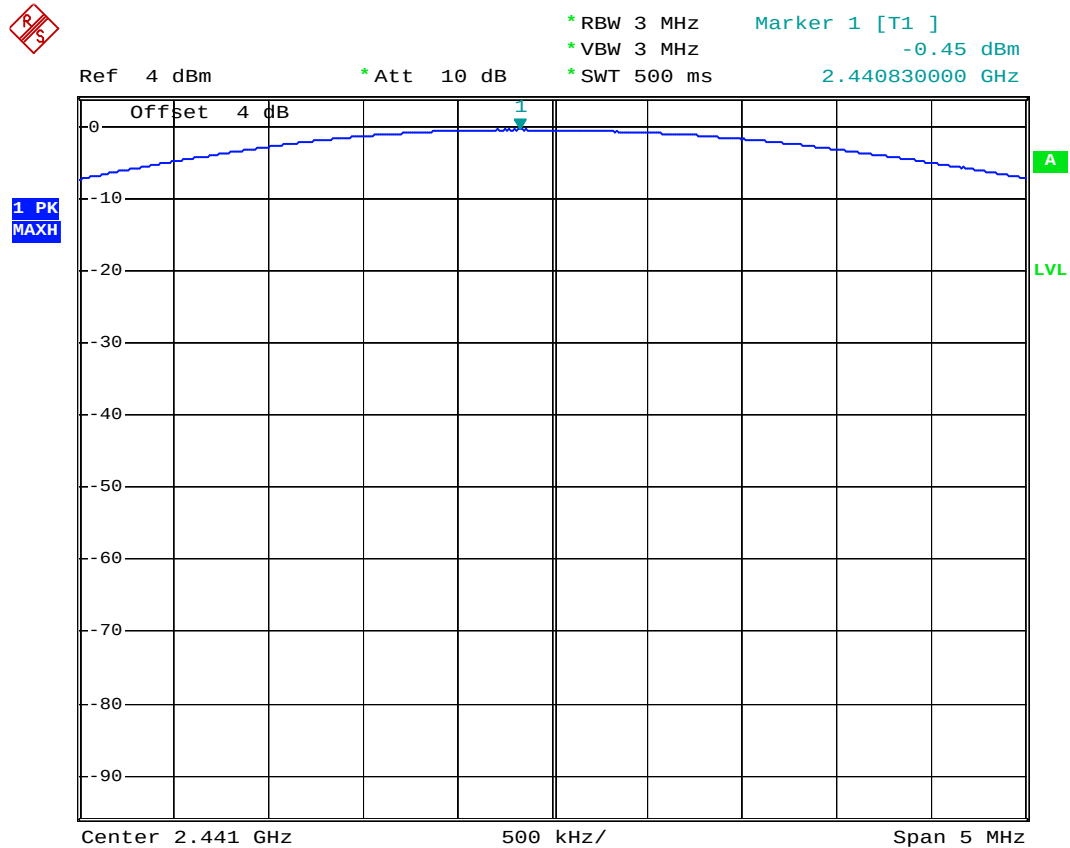
Bluetooth(2Mbps) Mode : CH00 (2402MHz)



Date: 21.NOV.2007 10:41:04



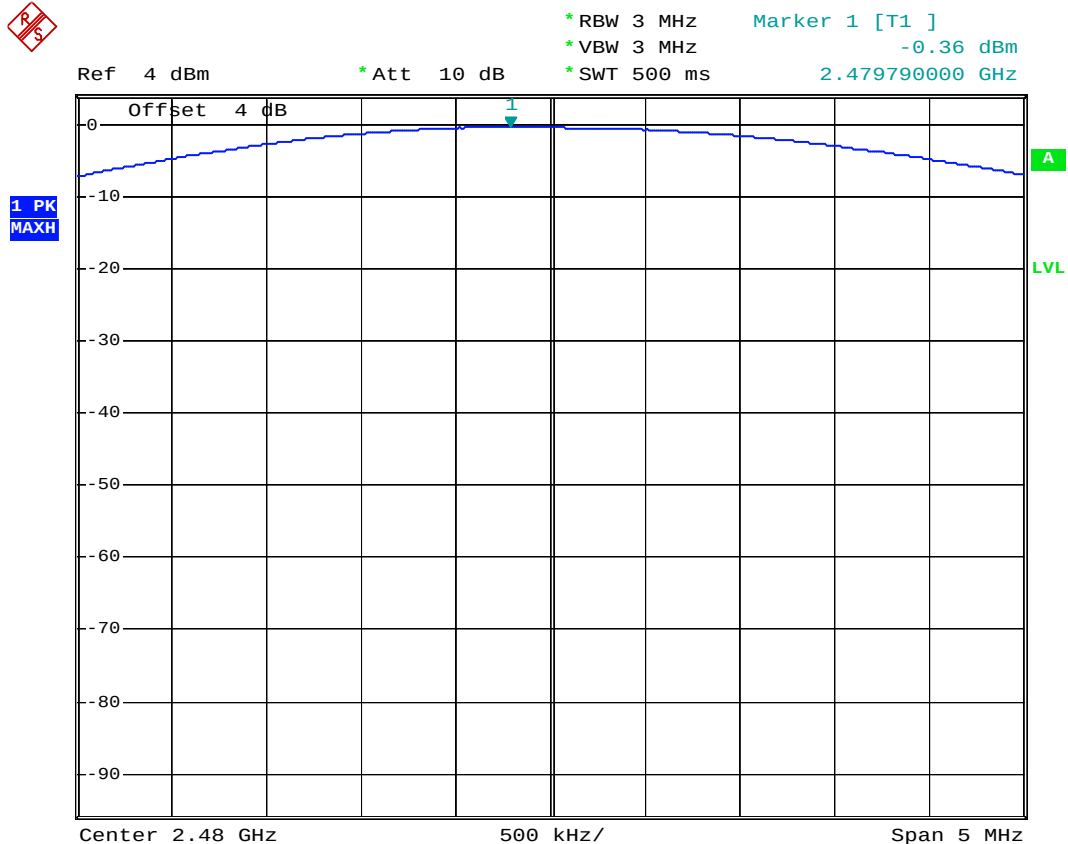
Bluetooth(2Mbps) Mode : CH39 (2441MHz)



Date: 21.NOV.2007 10:47:55



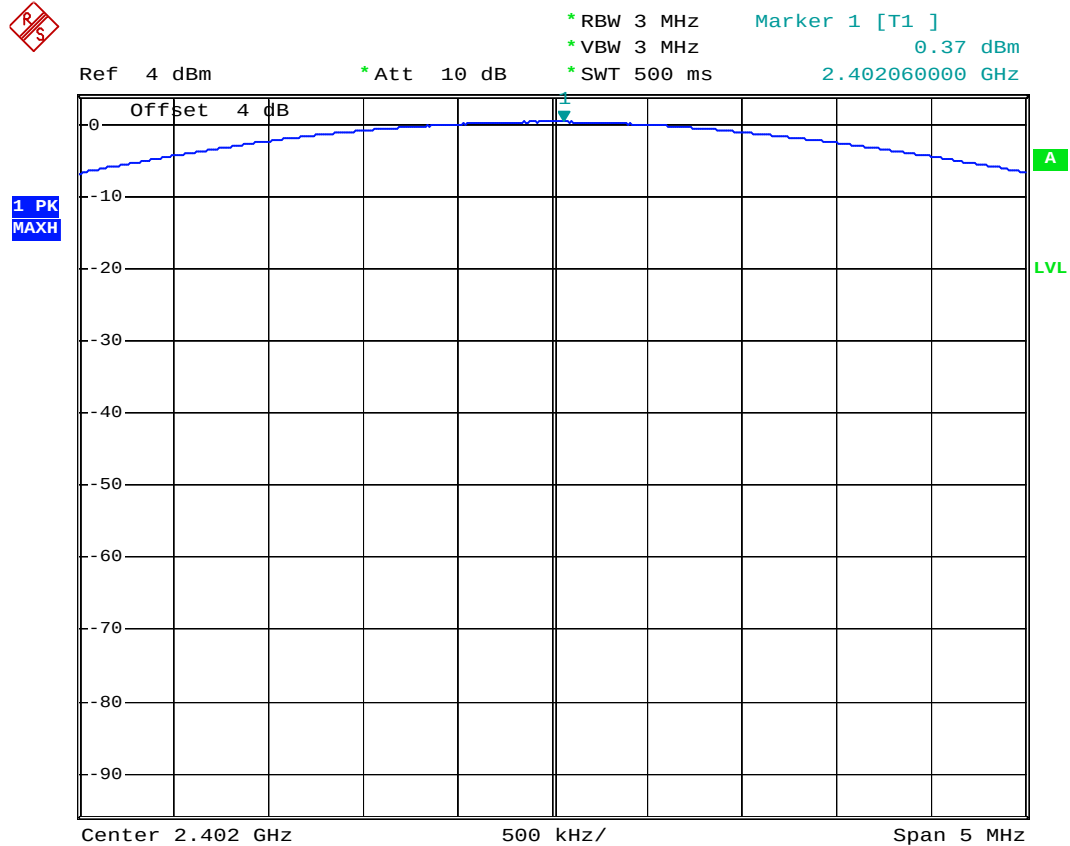
Bluetooth(2Mbps) Mode : CH78 (2480MHz)



Date: 21.NOV.2007 10:47:02



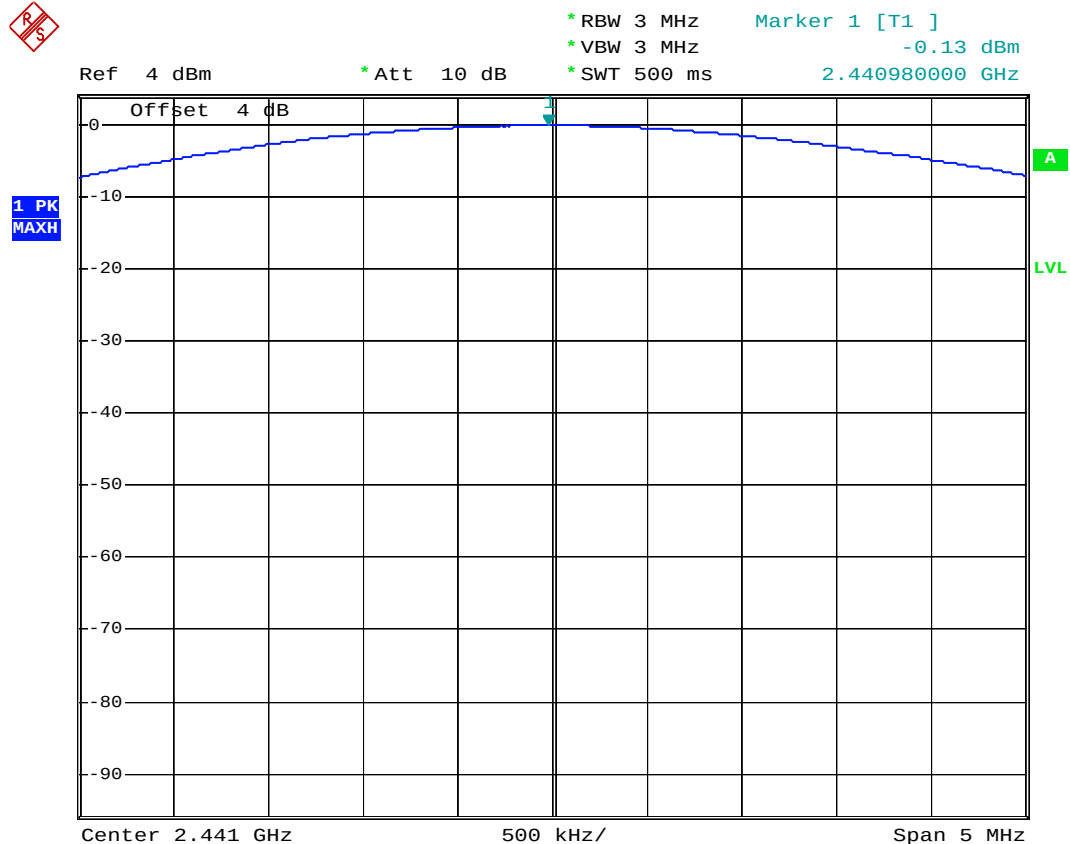
Bluetooth(3Mbps) Mode : CH00 (2402MHz)



Date: 21.NOV.2007 11:11:32



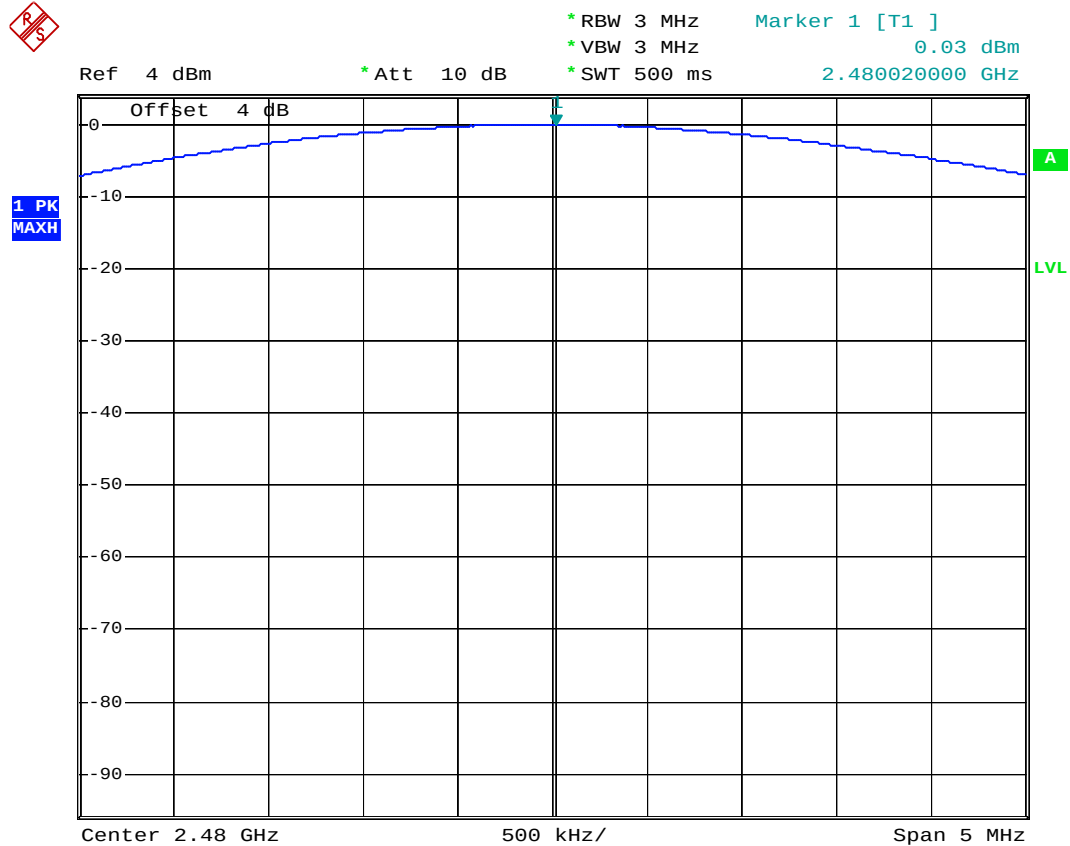
Bluetooth(3Mbps) Mode : CH39 (2441MHz)



Date: 21.NOV.2007 11:02:50



Bluetooth(3Mbps) Mode : CH78 (2480MHz)



Date: 21.NOV.2007 11:10:37



5.8 Conducted Emission

5.8.1 Measuring Instruments

As described in chapter 6 of this test Report.

5.8.2 Test Procedures :

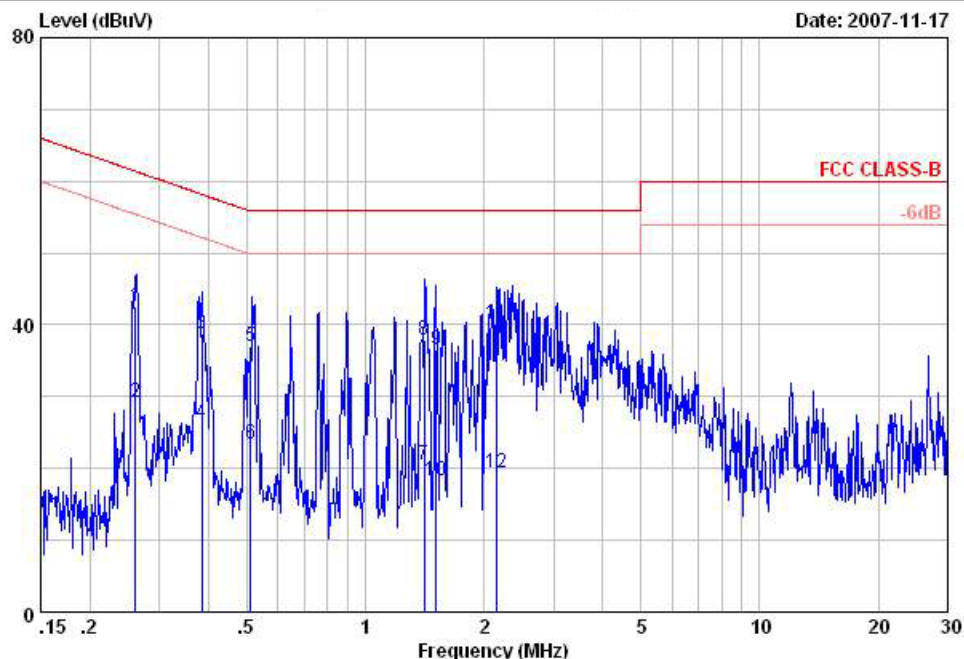
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.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



5.8.3 Test Data

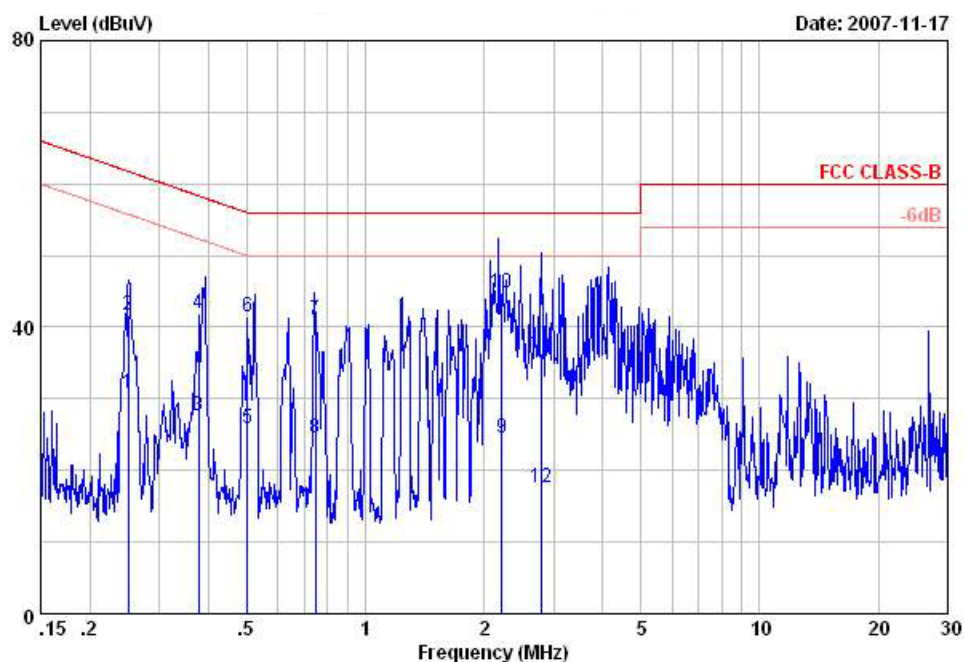
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao
- Test Mode : Mode 1

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



Site : C001-KS
 Condition: FCC CLASS-B LISN-071001 LINE
 EYT : Mobile Phone
 Power : 120V/60Hz
 Model : FR7N0718
 Memo : CDMA 850 Idle+BT Link+MP3+GPS Rx
 : +Earphone+Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.26	42.47	-18.93	61.40	32.38	-0.07	10.16	QP
2	0.26	29.22	-32.18	61.40	19.13	-0.07	10.16	Average
3	0.39	38.80	-19.37	58.17	28.69	-0.08	10.19	QP
4	0.39	26.21	-31.96	58.17	16.10	-0.08	10.19	Average
5	0.51	36.96	-19.04	56.00	26.83	-0.08	10.21	QP
6	0.51	23.37	-32.63	56.00	13.24	-0.08	10.21	Average
7	1.41	20.49	-35.51	56.00	10.30	-0.10	10.29	Average
8	1.41	37.83	-18.17	56.00	27.64	-0.10	10.29	QP
9	1.51	36.57	-19.43	56.00	26.38	-0.11	10.30	QP
10	1.51	18.31	-37.69	56.00	8.12	-0.11	10.30	Average
11	2.16	40.16	-15.84	56.00	29.93	-0.11	10.34	QP
12	2.16	19.36	-36.64	56.00	9.13	-0.11	10.34	Average



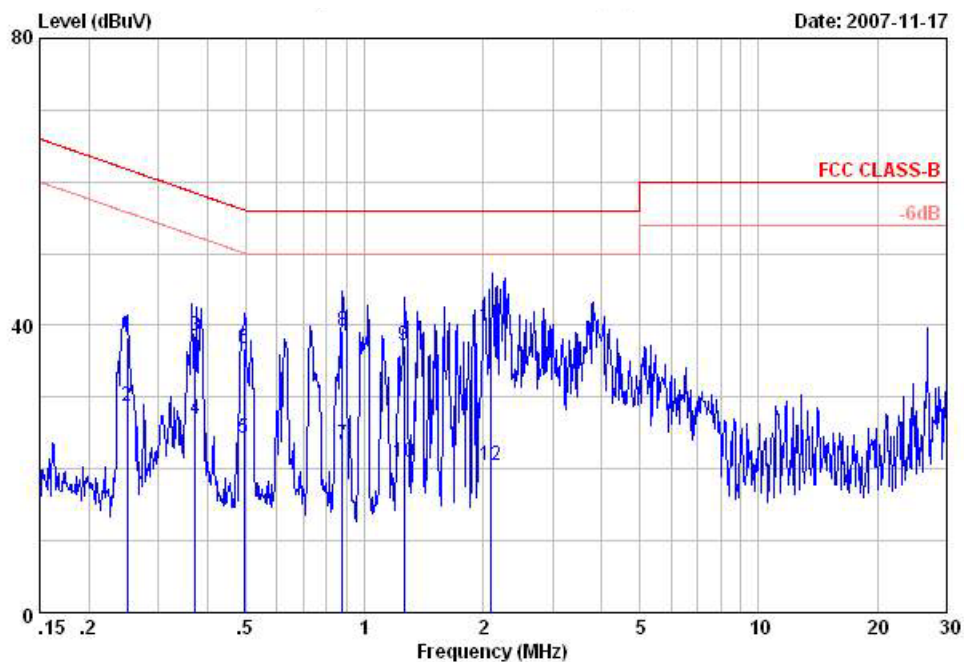
Site : C001-KS
 Condition: FCC CLASS-B LISN-071001 NEUTRAL
 EYT : Mobile Phone
 Power : 120V/60Hz
 Model : FR7N0718
 Memo : CDMA 850 Idle+BT Link+MP3+GPS Rx
 : +Earphone+Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.25	30.82	-30.94	61.76	20.73	-0.07	10.16	Average
2	0.25	41.65	-20.11	61.76	31.56	-0.07	10.16	QP
3	0.38	27.74	-30.61	58.35	17.63	-0.08	10.19	Average
4	0.38	41.97	-16.38	58.35	31.86	-0.08	10.19	QP
5	0.50	25.89	-30.11	56.00	15.76	-0.08	10.21	Average
6	0.50	41.55	-14.45	56.00	31.42	-0.08	10.21	QP
7	0.75	41.00	-15.00	56.00	30.84	-0.08	10.24	QP
8	0.75	24.43	-31.57	56.00	14.27	-0.08	10.24	Average
9	2.21	24.61	-31.39	56.00	14.38	-0.11	10.34	Average
10	2.21	44.90	-11.10	56.00	34.67	-0.11	10.34	QP
11	2.79	36.39	-19.61	56.00	26.15	-0.12	10.36	QP
12	2.79	17.61	-38.39	56.00	7.37	-0.12	10.36	Average



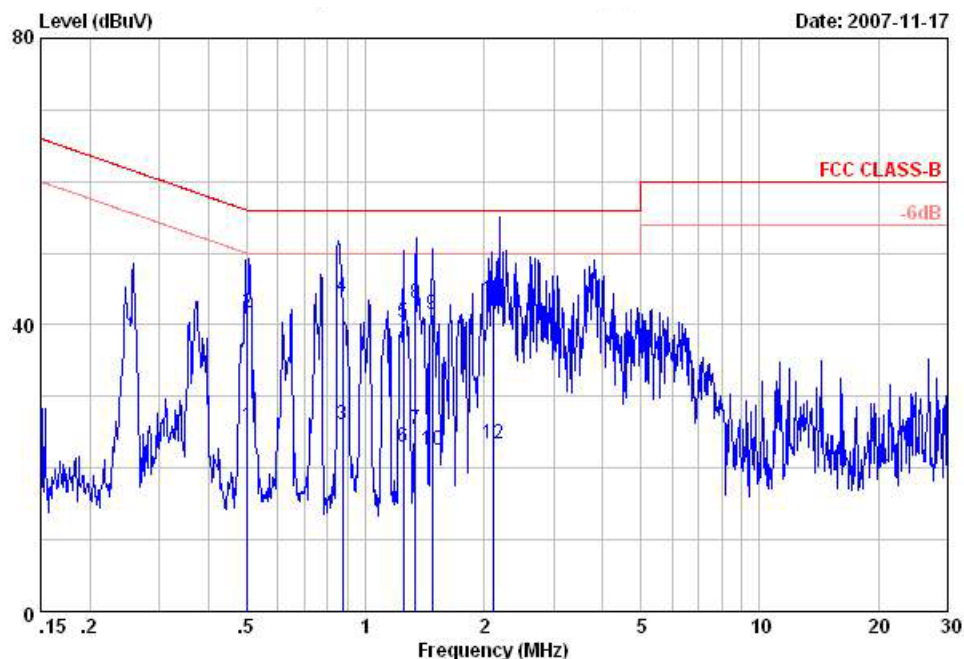
- Temperature : 25~27°C
- Relative Humidity : 37~44%
- Test Enginner : Tim Kao
- Test Mode : Mode 2

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



Site : C001-KS
 Condition: FCC CLASS-B LISN-071001 LINE
 EYT : Mobile Phone
 Power : 120V/60Hz
 Model : FR7N0718
 Memo : CDMA 1900 Idle+BT Link+MP3+GPS Rx
 : +Earphone+Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.25	38.43	-23.33	61.76	28.34	-0.07	10.16	QP
2	0.25	28.65	-33.11	61.76	18.56	-0.07	10.16	Average
3	0.37	38.65	-19.81	58.46	28.54	-0.08	10.19	QP
4	0.37	26.96	-31.50	58.46	16.85	-0.08	10.19	Average
5	0.50	24.37	-31.70	56.07	14.24	-0.08	10.21	Average
6	0.50	36.74	-19.33	56.07	26.61	-0.08	10.21	QP
7	0.88	23.40	-32.60	56.00	13.25	-0.10	10.25	Average
8	0.88	39.27	-16.73	56.00	29.12	-0.10	10.25	QP
9	1.26	37.29	-18.71	56.00	27.11	-0.10	10.28	QP
10	1.26	20.86	-35.14	56.00	10.68	-0.10	10.28	Average
11	2.10	39.98	-16.02	56.00	29.76	-0.11	10.33	QP
12	2.10	20.55	-35.45	56.00	10.33	-0.11	10.33	Average



Site : C001-KS
 Condition: FCC CLASS-B LISN-071001 NEUTRAL
 EYT : Mobile Phone
 Power : 120V/60Hz
 Model : FR7N0718
 Memo : CDMA 1900 Idle+BT Link+MP3+GPS Rx
 : +Earphone+Adaptor

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.50	25.84	-30.16	56.00	15.71	-0.08	10.21	Average
2	0.50	41.66	-14.34	56.00	31.53	-0.08	10.21	QP
3	0.88	25.99	-30.01	56.00	15.83	-0.09	10.25	Average
4	0.88	43.94	-12.06	56.00	33.78	-0.09	10.25	QP
5	1.25	40.33	-15.67	56.00	30.14	-0.09	10.28	QP
6	1.25	22.96	-33.04	56.00	12.77	-0.09	10.28	Average
7	1.34	25.40	-30.60	56.00	15.21	-0.10	10.29	Average
8	1.34	43.05	-12.95	56.00	32.86	-0.10	10.29	QP
9	1.48	41.36	-14.64	56.00	31.16	-0.10	10.30	QP
10	1.48	22.46	-33.54	56.00	12.26	-0.10	10.30	Average
11	2.11	43.35	-12.65	56.00	33.12	-0.11	10.34	QP
12	2.11	23.46	-32.54	56.00	13.23	-0.11	10.34	Average

5.9 Radiated Emission Measurement

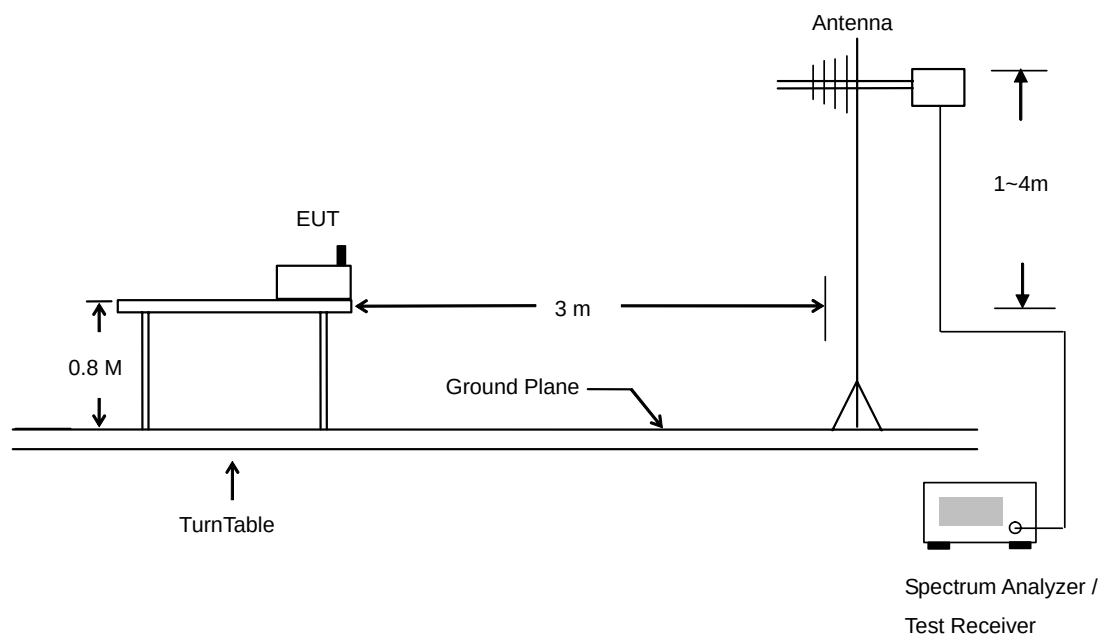
5.9.1 Measuring Instruments

As described in chapter 6 of this Report.

5.9.2 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.

5.9.3 Typical Test Setup Layout of Radiated Emission

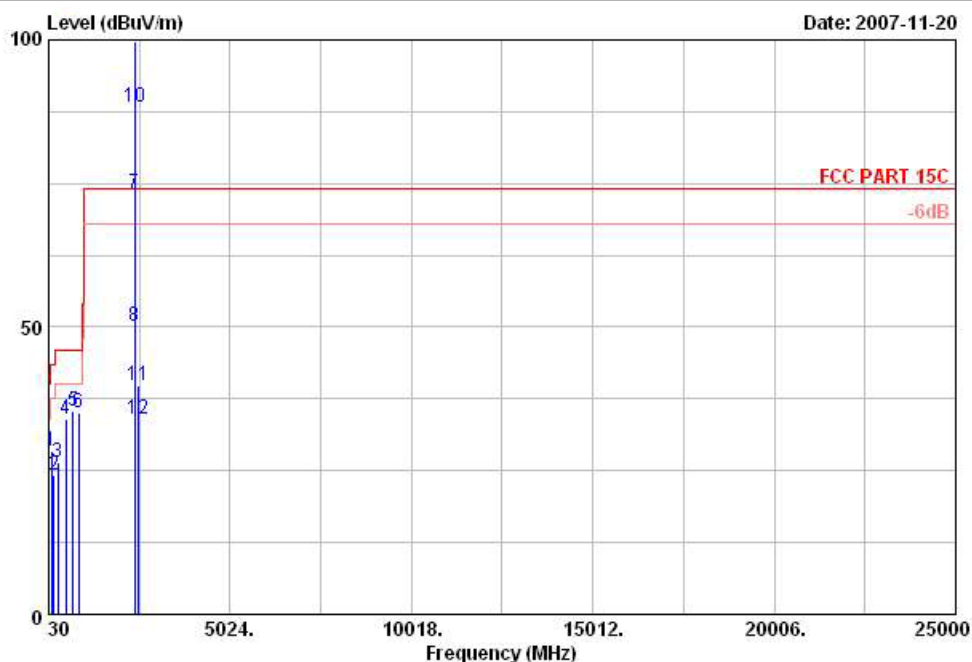




5.9.4 Test Data

- Temperature : 25~27°C
- Relating Humidity : 37~44%
- Test Enginner : Tim Kao
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 DHI Link mode

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Factor	Loss	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	108.03	28.28	-15.22	43.50	44.17	11.62	28.01	0.50	---	Peak
2	180.66	24.32	-19.18	43.50	43.29	8.40	28.01	0.64	---	Peak
3	288.12	26.34	-19.66	46.00	41.21	12.65	28.32	0.80	---	Peak
4	502.30	34.09	-11.91	46.00	44.18	17.25	28.39	1.05	---	Peak
5	690.60	35.38	-10.62	46.00	43.32	19.07	28.26	1.25	---	Peak
6	852.30	34.97	-11.03	46.00	40.01	20.47	26.91	1.40	---	Peak
7 !	2400.00	73.23	-0.77	74.00	73.23	31.93	35.18	3.25	---	Peak
8 !	2400.00	50.22	-3.78	54.00	50.22	31.93	35.18	3.25	148	273 Average
9 X	2402.00	99.71	---	---	99.71	31.93	35.18	3.25	---	Peak
10 X	2402.00	88.38	---	---	88.38	31.93	35.18	3.25	148	273 Average
11	2483.50	39.76	-34.24	74.00	39.43	32.24	35.20	3.29	---	Peak
12	2483.50	33.98	-20.02	54.00	33.65	32.24	35.20	3.29	148	273 Average

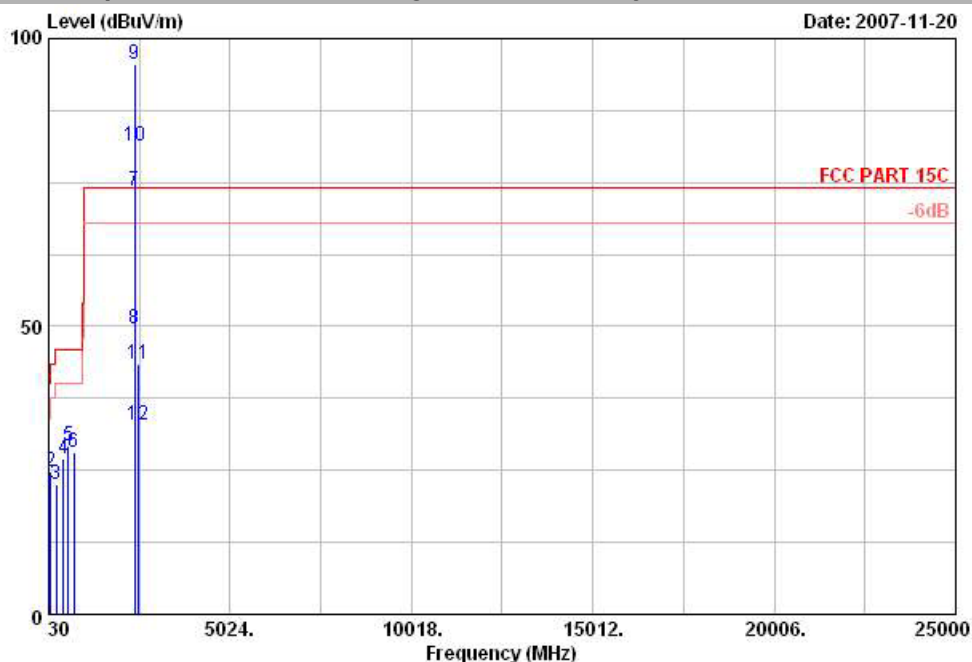
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Polarization : Vertical (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 DHL Link mode

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	32.97	33.06	-6.94	40.00	45.13	15.70	28.01	---	---	Peak
2	95.34	24.71	-18.79	43.50	42.42	9.80	27.99	---	---	Peak
3	243.03	22.70	-23.30	46.00	38.89	11.23	28.14	---	---	Peak
4	444.20	26.93	-19.07	46.00	38.04	16.30	28.40	---	---	Peak
5	566.70	29.19	-16.81	46.00	38.41	18.35	28.70	---	---	Peak
6	734.00	28.07	-17.93	46.00	34.71	19.96	27.90	---	---	Peak
7	2400.00	73.59	-0.41	74.00	73.59	31.93	35.18	---	---	Peak
8	2400.00	49.69	-4.31	54.00	49.69	31.93	35.18	103	349	Average
9	2402.00	95.65	---	---	95.65	31.93	35.18	---	---	Peak
10	2402.00	81.28	---	---	81.28	31.93	35.18	103	349	Average
11	2483.50	43.50	-30.50	74.00	43.17	32.24	35.20	---	---	Peak
12	2483.50	32.83	-21.17	54.00	32.50	32.24	35.20	103	349	Average

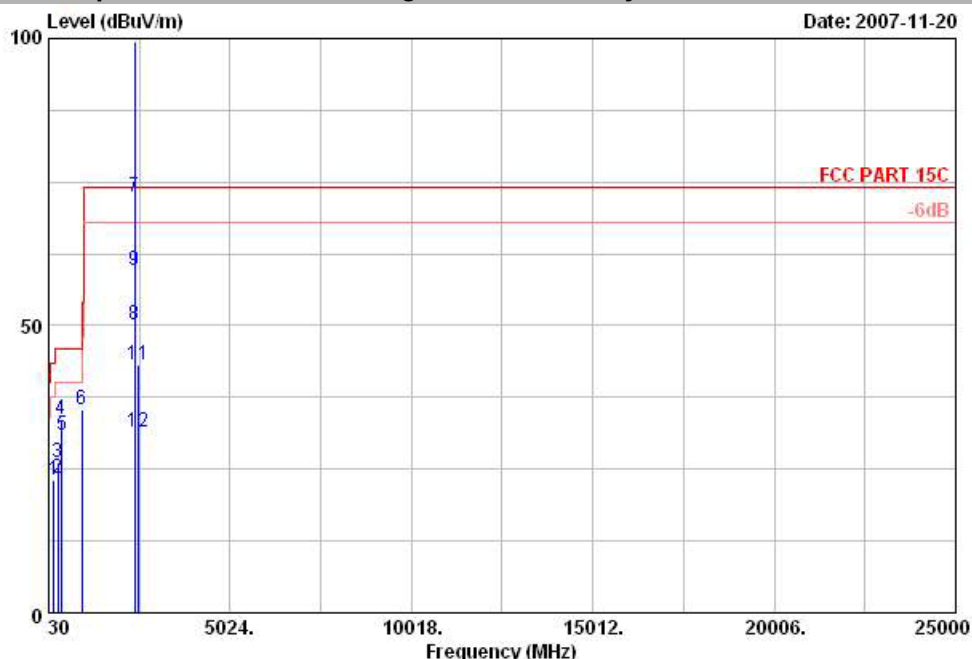
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Test Mode : Mode 2
- Polarization : Horizontal (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 2Mbps DH1 Link mode

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	180.66	23.18	-20.32	43.50	42.15	8.40	28.01	0.64	---	---	Peak
2	276.24	23.28	-22.72	46.00	38.33	12.45	28.28	0.78	---	---	Peak
3	288.12	26.19	-19.81	46.00	41.06	12.65	28.32	0.80	---	---	Peak
4	372.10	33.60	-12.40	46.00	46.22	14.89	28.40	0.89	---	---	Peak
5	395.90	31.01	-14.99	46.00	42.88	15.62	28.41	0.92	---	---	Peak
6	954.50	35.27	-18.73	54.00	39.84	20.74	26.82	1.51	---	---	Peak
7	2400.00	72.40	-1.60	74.00	72.40	31.93	35.18	3.25	---	---	Peak
8	2400.00	50.09	-3.91	54.00	50.09	31.93	35.18	3.25	149	273	Average
9	2402.00	59.71			59.71	31.93	35.18	3.25	149	273	Average
10	2402.00	99.53			99.53	31.93	35.18	3.25	---	---	Peak
11	2483.50	43.08	-30.92	74.00	42.75	32.24	35.20	3.29	---	---	Peak
12	2483.50	31.50	-22.50	54.00	31.17	32.24	35.20	3.29	149	273	Average

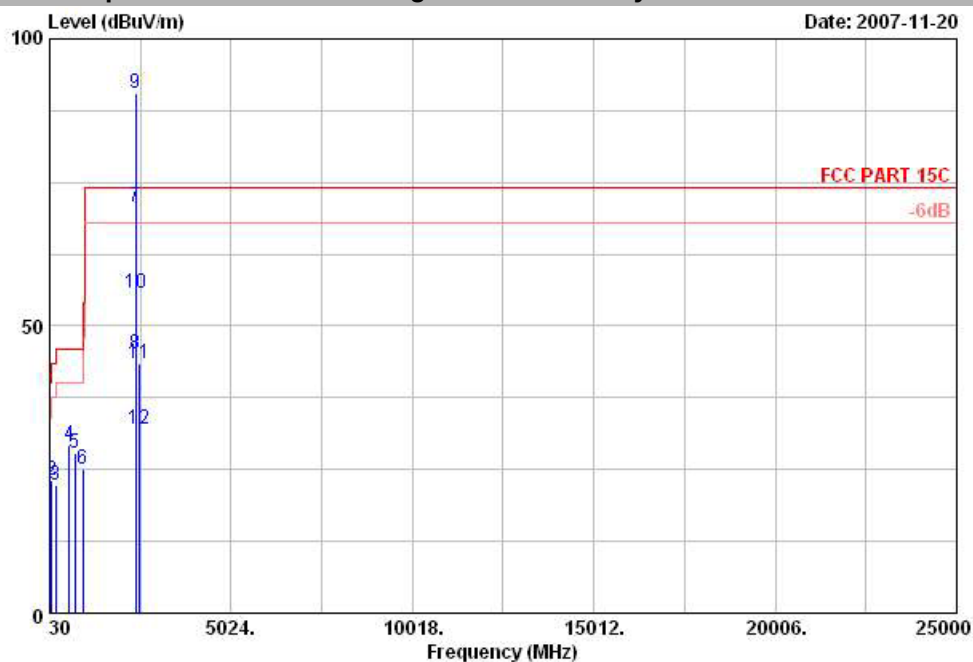
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Polarization : Vertical (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 2Mbps Dhl Link mode

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.62	33.39	-6.61	40.00	44.42	16.75	28.01	0.23	---	---	Peak
2	95.34	23.01	-20.49	43.50	40.72	9.80	27.99	0.48	---	---	Peak
3	204.15	22.33	-21.17	43.50	40.76	8.92	28.02	0.67	---	---	Peak
4	566.70	29.21	-16.79	46.00	38.43	18.35	28.70	1.13	---	---	Peak
5	734.00	27.91	-18.09	46.00	34.55	19.96	27.90	1.30	---	---	Peak
6	954.50	25.07	-28.93	54.00	29.64	20.74	26.82	1.51	---	---	Peak
7	2400.00	70.84	-3.16	74.00	70.84	31.93	35.18	3.25	---	---	Peak
8	2400.00	45.12	-8.88	54.00	45.12	31.93	35.18	3.25	104	349	Average
9	2402.00	90.53			90.53	31.93	35.18	3.25	---	---	Peak
10	2402.00	55.58			55.58	31.93	35.18	3.25	104	349	Average
11	2483.50	43.40	-30.60	74.00	43.07	32.24	35.20	3.29	---	---	Peak
12	2483.50	32.09	-21.91	54.00	31.76	32.24	35.20	3.29	104	349	Average

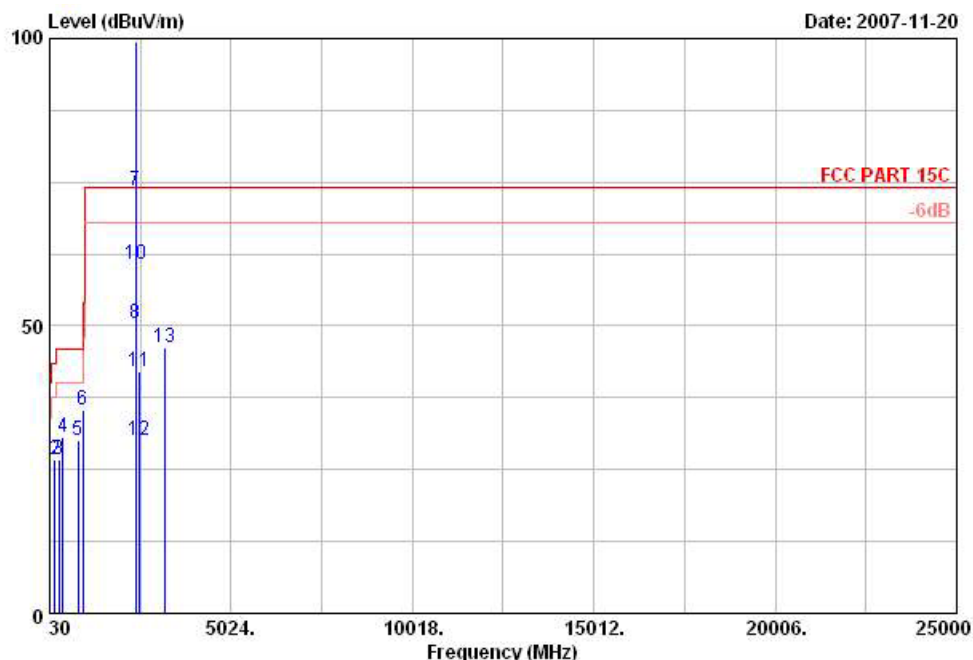
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Test Mode : Mode 3
- Polarization : Horizontal (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 3Mbps DH1 Link mode

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	31.35	21.80	-18.20	40.00	32.83	16.75	28.01	---	---	Peak
2	180.66	26.86	-16.64	43.50	45.83	8.40	28.01	---	---	Peak
3	288.12	26.78	-19.22	46.00	41.65	12.65	28.32	---	---	Peak
4	395.90	30.71	-15.29	46.00	42.58	15.62	28.41	---	---	Peak
5	807.50	30.00	-16.00	46.00	35.72	20.04	27.12	---	---	Peak
6	954.50	35.44	-18.56	54.00	40.01	20.74	26.82	---	---	Peak
7	2400.00	73.54	-0.46	74.00	73.54	31.93	35.18	3.25	---	Peak
8	2400.00	50.29	-3.71	54.00	50.29	31.93	35.18	3.25	149	273 Average
9	2402.00	99.54			99.54	31.93	35.18	3.25	---	Peak
10	2402.00	60.65			60.65	31.93	35.18	3.25	149	273 Average
11	2483.50	41.96	-32.04	74.00	41.63	32.24	35.20	3.29	---	Peak
12	2483.50	30.22	-23.78	54.00	29.89	32.24	35.20	3.29	149	273 Average
13	3183.00	46.33	-27.67	74.00	45.61	32.39	35.36	3.69	---	Peak

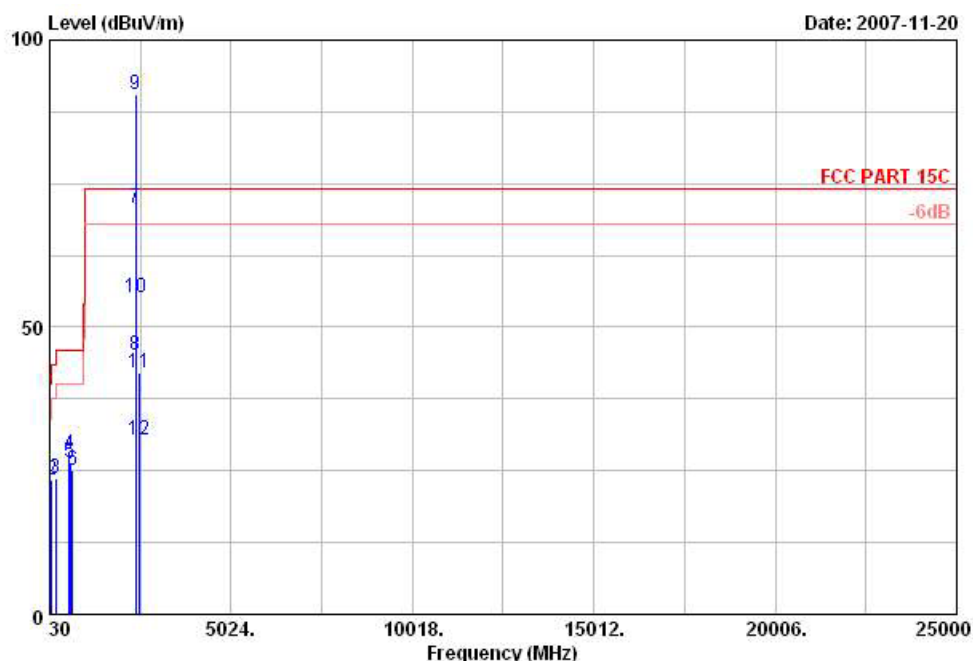
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Polarization : Vertical (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH00 3Mbps Dhl Link mode

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.35	35.46	-4.54	40.00	46.49	16.75	28.01	0.23	---	---	Peak
2	95.34	23.53	-19.97	43.50	41.24	9.80	27.99	0.48	---	---	Peak
3	204.15	23.64	-19.86	43.50	42.07	8.92	28.02	0.67	---	---	Peak
4	566.70	27.98	-18.02	46.00	37.20	18.35	28.70	1.13	---	---	Peak
5	594.00	26.42	-19.58	46.00	35.53	18.55	28.81	1.15	---	---	Peak
6	647.90	25.17	-20.83	46.00	33.58	18.91	28.54	1.22	---	---	Peak
7	2400.00	70.69	-3.31	74.00	70.69	31.93	35.18	3.25	---	---	Peak
8	2400.00	45.17	-8.83	54.00	45.17	31.93	35.18	3.25	104	349	Average
9	2402.00	90.67			90.67	31.93	35.18	3.25	---	---	Peak
10	2402.00	55.28			55.28	31.93	35.18	3.25	104	349	Average
11	2483.50	41.98	-32.02	74.00	41.65	32.24	35.20	3.29	---	---	Peak
12	2483.50	30.47	-23.53	54.00	30.14	32.24	35.20	3.29	104	349	Average

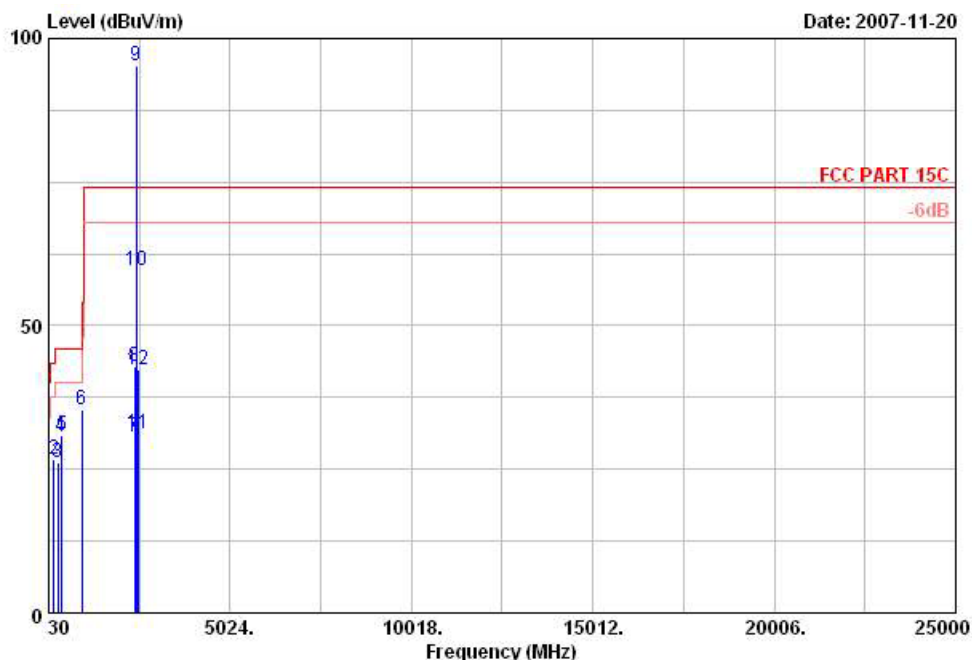
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Test Mode : Mode 4
- Polarization : Horizontal (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH39 3Mbps DH1 Link mode

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Pos	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	30.54	23.54	-16.46	40.00	33.33	18.00	28.01	---	---	Peak
2	180.66	26.71	-16.79	43.50	45.68	8.40	28.01	---	---	Peak
3	288.12	26.08	-19.92	46.00	40.95	12.65	28.32	---	---	Peak
4	372.10	30.51	-15.49	46.00	43.13	14.89	28.40	---	---	Peak
5	395.90	30.90	-15.10	46.00	42.77	15.62	28.41	---	---	Peak
6	954.50	35.47	-18.53	54.00	40.04	20.74	26.82	---	---	Peak
7	2400.00	30.56	-23.44	54.00	30.56	31.93	35.18	100	84	Average
8	2400.00	42.83	-31.17	74.00	42.83	31.93	35.18	---	---	Peak
9 X	2441.00	95.26			95.05	32.13	35.19	100	84	Peak
10 X	2441.00	59.65			59.44	32.13	35.19	100	84	Average
11	2483.50	31.15	-22.85	54.00	30.82	32.24	35.20	100	84	Average
12	2483.50	42.45	-31.55	74.00	42.12	32.24	35.20	---	---	Peak

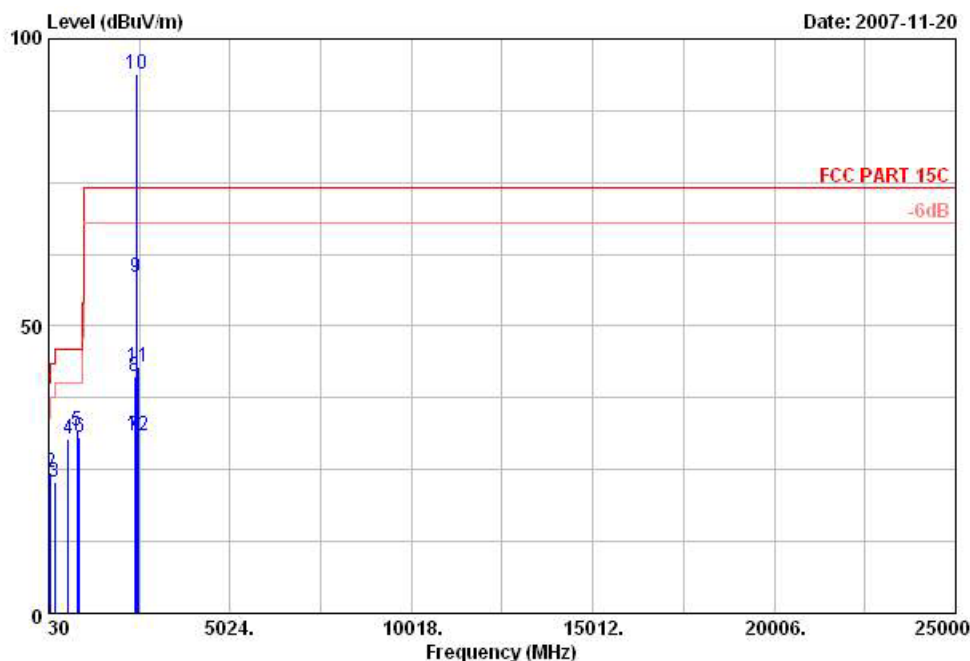
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Polarization : Vertical (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH39 3Mbps DH1 Link mode

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Factor	Loss	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	32.16	35.49	-4.51	40.00	46.52	16.75	28.01	0.23	---	---	Peak
2	95.34	24.53	-18.97	43.50	42.24	9.80	27.99	0.48	---	---	Peak
3	204.15	22.80	-20.70	43.50	41.23	8.92	28.02	0.67	---	---	Peak
4	566.70	30.39	-15.61	46.00	39.61	18.35	28.70	1.13	---	---	Peak
5	807.50	31.87	-14.13	46.00	37.59	20.04	27.12	1.36	---	---	Peak
6	881.00	30.50	-15.50	46.00	35.67	20.15	26.77	1.45	---	---	Peak
7	2400.00	30.81	-23.19	54.00	30.81	31.93	35.18	3.25	102	239	Average
8	2400.00	41.18	-32.82	74.00	41.18	31.93	35.18	3.25	---	---	Peak
9 X	2441.00	58.42	---	---	58.21	32.13	35.19	3.27	102	239	Average
10 X	2441.00	93.90	---	---	93.69	32.13	35.19	3.27	102	239	Peak
11	2483.50	42.99	-31.01	74.00	42.66	32.24	35.20	3.29	---	---	Peak
12	2483.50	31.03	-22.97	54.00	30.70	32.24	35.20	3.29	102	239	Average

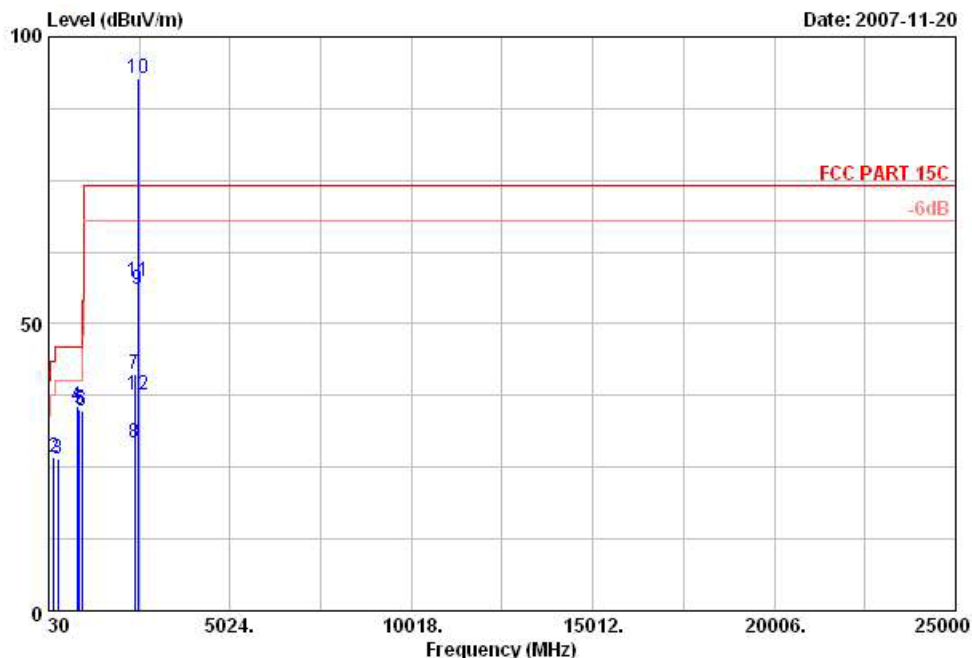
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Test Mode : Mode 5
- Polarization : Horizontal (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH78 3Mbps Dhl Link mode

Memo	Over				ReadAntenna		Preamp	Cable	Ant	Table	Remark
	Freq	Level	Limit	Limit	Level	Factor	Factor	Loss	Pos	Pos	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	31.62	21.51	-18.49	40.00	32.54	16.75	28.01	0.23	---	---	Peak
2	180.66	26.73	-16.77	43.50	45.70	8.40	28.01	0.64	---	---	Peak
3	288.12	26.34	-19.66	46.00	41.21	12.65	28.32	0.80	---	---	Peak
4	807.50	35.54	-10.46	46.00	41.26	20.04	27.12	1.36	---	---	Peak
5	881.00	35.14	-10.86	46.00	40.31	20.15	26.77	1.45	---	---	Peak
6	954.50	34.76	-19.24	54.00	39.33	20.74	26.82	1.51	---	---	Peak
7	2400.00	41.14	-32.86	74.00	41.14	31.93	35.18	3.25	---	---	Peak
8	2400.00	29.22	-24.78	54.00	29.22	31.93	35.18	3.25	149	273	Average
9 X	2480.00	55.99			55.66	32.24	35.20	3.29	149	273	Average
10 X	2480.00	92.88			92.55	32.24	35.20	3.29	---	---	Peak
11	2483.50	57.31	-16.69	74.00	56.98	32.24	35.20	3.29	---	---	Peak
12	2483.50	37.54	-16.46	54.00	37.21	32.24	35.20	3.29	149	273	Average

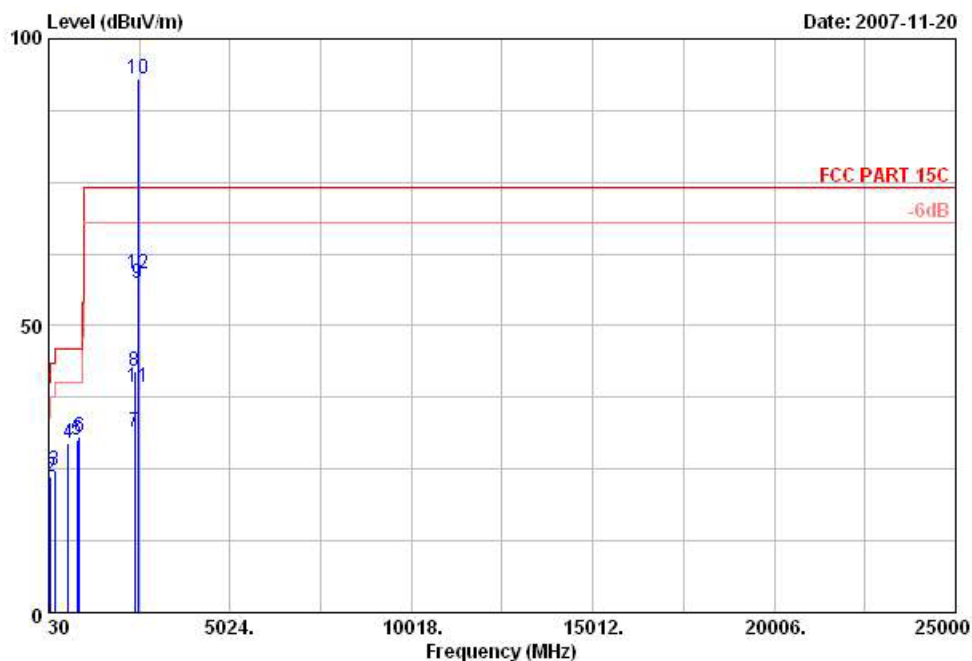
Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



- Polarization : Vertical (30MHz-25GHz)

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



Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : CDMA 2000 Mobile phone + Bluetooth
 Power : 120Vac / 60Hz
 Model : FR7N0718
 Memo : BT CH78 3Mbps DH1 Link mode

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Factor	Loss	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	31.62	36.02	-3.98	40.00	47.05	16.75	28.01	0.23	---	Peak
2	95.34	23.62	-19.88	43.50	41.33	9.80	27.99	0.48	---	Peak
3	204.15	24.88	-18.62	43.50	43.31	8.92	28.02	0.67	---	Peak
4	566.70	29.41	-16.59	46.00	38.63	18.35	28.70	1.13	---	Peak
5	807.50	30.02	-15.98	46.00	35.74	20.04	27.12	1.36	---	Peak
6	881.00	30.74	-15.26	46.00	35.91	20.15	26.77	1.45	---	Peak
7	2400.00	31.35	-22.65	54.00	31.35	31.93	35.18	3.25	102	239 Average
8	2400.00	41.93	-32.07	74.00	41.93	31.93	35.18	3.25	---	Peak
9	2480.00	57.44			57.11	32.24	35.20	3.29	102	239 Average
10	2480.00	93.05			92.72	32.24	35.20	3.29	---	Peak
11	2483.50	39.17	-14.83	54.00	38.84	32.24	35.20	3.29	102	239 Average
12	2483.50	59.01	-14.99	74.00	58.68	32.24	35.20	3.29	---	Peak

Remark:

1. "9" represents the Fundamental Signal
2. "10" represents the Fundamental Signal



5.10 Antenna Requirements

5.10.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

5.10.2 Antenna Connected Construction

The antennas used in this product are PIFA Antenna for BT without connector and it is considered to meet antenna requirement of FCC.

5.10.3 Antenna Gain

The antenna gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



6. List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Test Receiver	R&S	ESCI	100534	9KHz~2.75GHz	Mar. 15, 2007	Mar. 14, 2008	CO01-KS
LISN	MessTec	AN3016	060103	9kHz~30MHz	Jun. 30, 2006	Jun. 29, 2008	CO01-KS
LISN	MessTec	AN3016	060105	9kHz~30MHz	Jun. 30, 2006	Jun. 29, 2008	CO01-KS
EMI Filter	MPE	250V/32A	N/A	100KHz~10GHz,100 dB	N/A	N/A	CO01-KS
EMI Filter	MPE	250V/32A	N/A	100KHz~10GHz,100 dB	N/A	N/A	CO01-KS
DC LISN	EM Test	AN20200	60102	100kHz – 108MHz	Aug. 30, 2007	Aug. 29, 2008	CO01-KS
DC LISN	EM Test	AN20200	60107	100kHz – 108MHz	Aug. 30, 2007	Aug. 29, 2008	CO01-KS
Transient Limiter	Com-Power	LIT-153	531037	150K~30MHz	N/A	N/A	CO01-KS



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9K~40GHz	Mar. 13, 2007	Mar. 12, 2008	Radiation (03CH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9KHz~2.75GHz	Mar. 15, 2007	Mar. 14, 2008	Radiation (03CH01-KS)
Bilog Antenna	Schaffner	CBL6112D	23182	25MHz~2000MHz	May 22, 2007	May 21, 2008	Radiation (03CH01-KS)
Preamplifier	Agilent	8449B	3008A02370	1G~26.5GHz	Jun. 04, 2007	Jun. 03, 2008	Radiation (03CH01-KS)
Preamplifier	Wireless	FPA6592G	60006	30M~2000MHz	Jul. 24, 2007	Jul. 23, 2008	Radiation (03CH01-KS)
High Pass filter (3GHz)	Microwave Circuits	H3G018G	N/A	N/A	N/A	N/A	Radiation (03CH01-KS)
High Pass filter (7GHz)	Microwave Circuits	H07G18G3	N/A	N/A	N/A	N/A	Radiation (03CH01-KS)
High Pass filter	N/A	WHKX1.5/15 G-10SS	23	N/A	N/A	N/A	Radiation (03CH01-KS)
High Pass filter	N/A	WHKX2.2-18 G-10SS	8	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG2400/2483-2390/2	14	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG 1850/1910-1	15	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG 824/849-814/	34	N/A	N/A	N/A	Radiation (03CH01-KS)
Low pass filter (1.2GHz)	N/A	WLKS 1200-8SS	2	N/A	N/A	N/A	Radiation (03CH01-KS)
DRG Horn(Medium)	EMCO	3117	75959	1GHz ~ 18GHz	Aug. 17, 2007	Aug. 16, 2008	Radiation (03CH01-KS)

7. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

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

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

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.11	Normal(k=2)	0.06
Antenna factor calibration	0.91	Normal(k=2)	0.46
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.15	Normal(k=2)	0.08
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.52	Rectangular	0.88
Mismatch	+0.45/-0.48	U-shaped	0.33
Combined standard uncertainty Uc(y)	1.30		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.60		

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

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

The measured result is : $y \text{ dBuV} \pm U \text{ dB}$

for a level of confidence of approximately 95% , ($k = 2$)