FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment	:	**ZTE C78 CDMA1X Digital Mobile Phone**
Trade Name	:	**ZTE**
Model No.	:	**ZTE C78**
FCC ID	:	**Q78-ZTEC78**
Filing Type	:	**Certification**
Applicant	:	**ZTE CORPORATION** ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

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- The data shown in this test report were carried out on Mar. 25, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR830102, Report Version: Rev.01

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Manager

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Table of Contents

History of This Test Report ..... **ii**
1. General Description of Equipment under Test **1**
1.1 Applicant 1
1.2 Manufacturer 1
1.3 Basic Description of Equipment under Test 1
1.4 Feature of Equipment under Test 2
2. Test Configuration of Equipment under Test **3**
2.1 Test Manner 3
2.2 Test Mode 3
2.3 Ancillary Equipment List 4
2.4 Connection Diagram of Test System 4
3. RF Utility **6**
4. General Information of Test **7**
4.1 Test Voltage 7
4.2 Standard for Methods of Measurement 7
4.3 Test Compliance 7
4.4 Frequency Range 7
4.5 Test Distance 7
5. Test Data and Test Result **8**
5.1 List of Measurements and Examinations 8
5.2 Band Edges Measurement 9
5.3 Hopping Channel Separation 17
5.4 Number of Hopping Frequency 28
5.5 Hopping Channel Bandwidth 33
5.6 Dwell Time of Each Frequency 44
5.7 Peak Output Power Measurement 64
5.8 Conducted Emission 75
5.9 Radiated Emission Measurement 84
5.10 Antenna Requirements 104
6. List of Measuring Equipments **105**
7. Uncertainty Evaluation **106**
Appendix A. External Photographs of EUT
Appendix B. Internal Photographs of EUT
Appendix C. Setup Photographs

History of This Test Report

Report Issue Date: Mar. 26, 2008

Report No.	Description

1. General Description of Equipment under Test

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

1.3 Basic Description of Equipment under Test

Equipment		ZTE C78 CDMA1X Digital Mobile Phone
Trade Name		ZTE
Model Name		ZTE C78
FCC ID		Q78-ZTEC78
AC Adapter	**Brand Name**	ZTE
	Model Name	STC-A22O50U5-C
	Power Rating	I/P:100-240Vac, 50-60Hz; O/P:5.0Vdc, 700mA
	AC Power Cord Type	1.8 meter non-shielded cable without ferrite core
Battery	**Brand Name**	ZTE
	Model Name	Li3709T42P3h553447
	Rating	3.7Vdc, 900mAh
	Type	Li-ion
Earphone	**Brand Name**	ZTE
	Model Name	P500
	Signal Line Type	1.2 meter non-shielded cable without ferrite core
USB Cable	**Brand Name**	ZTE
	Model Name	ZX676.12.3012JA.A
	Signal Line Type	1.2 meter shielded cable without ferrite core

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

1.4 Feature of Equipment under Test

Product Feature & Specification	
DUT Type :	ZTE C78 CDMA1X Digital Mobile Phone
Trade Name :	ZTE
Model Name :	ZTE C78
FCC ID :	Q78-ZTEC78
Tx Frequency :	CDMA2000 Cellular : 824 ~ 849 MHz CDMA2000 AWS : 1710 ~ 1755 MHz CDMA2000 PCS : 1850 ~1910 MHz Bluetooth : 2400 ~ 2483.5 MHz
Rx Frequency :	CDMA2000 Cellular : 869 ~ 894 MHz CDMA2000 AWS : 2110 ~ 2155 MHz CDMA2000 PCS : 1930 ~ 1990 MHz Bluetooth : 2400 ~ 2483.5 MHz
Number of Channels :	Bluetooth : 79
Carrier Frequency of Each Channel :	Bluetooth : 2402+n*1 MHz; n=0~78
Channel Spacing :	Bluetooth : 1 MHz
Maximum Output Power to Antenna :	Bluetooth : 1.12 dBm (1Mbps) Bluetooth EDR : -1.81 dBm (2Mbps) / -1.40 dBm (3Mbps)
Type of Antenna Connector :	N/A
Antenna Type :	CDMA2000 : Fixed Internal Bluetooth : Fixed Internal
Antenna Gain :	Bluetooth : -1 dBi
HW Version :	c73B
SW Version :	ZTEC78V1.0.0B02
Modulation Type :	CDMA2000 : QPSK Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π/4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK
DUT Stage :	Production Unit

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. The data rate, 1Mbps, was chosen to being tested, due to the highest RF output power.

Channel	Frequency	Data Rate / Modulation		
		GFSK	π/4-DQPSK	8-DPSK
		1Mbps	2Mbps	3Mbps
Ch00	2400MHz	1.12 dBm	-1.81 dBm	-1.40 dBm
Ch39	2441MHz	0.95 dBm	-2.27 dBm	-1.77 dBm
Ch78	2480MHz	-0.27 dBm	-3.64 dBm	-3.16 dBm

Bluetooth uses frequency hopping spread spectrum (FHSS) operation which also facilities 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.

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

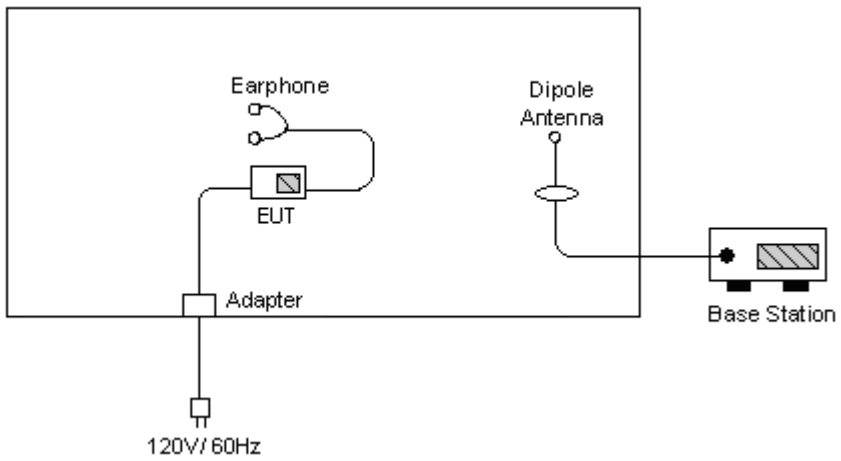
Application			
Radiated Emission	BT Tx(1Mbps)		
	Mode 1: CH00_2402 MHz		
	Mode 2: CH39_2441 MHz		
	Mode 3: CH78_2480 MHz		
Conducted Emission	Mode 1: CDMA2000 Cellular Idle Mode + BT Idle + Adapter + Camera + Earphone + GPS Rx		
	Mode 2: CDMA2000 Cellular Idle Mode + BT Idle + USB Link + Camera + Earphone + GPS Rx		
	Mode 3: CDMA2000 PCS Idle Mode + BT Idle + Adapter + Camera + Earphone + GPS Rx		
	Mode 4: CDMA2000 AWS Idle Mode + BT Idle + Adapter + Camera + Earphone + GPS Rx		

2.3 Ancillary Equipment List

Item	Asset	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1.	PC	COMPAQ	D380MX	Fcc Doc	Unshielded, 1.8 m
		Dell	WHM	Fcc Doc	Unshielded, 1.8 m
2.	Monitor	VIEWSONIC	VCDTS21553-3P	Fcc Doc	Shielded, 1.2 m / Unshielded, 1.8 m
3.	i-Pod	Apple	A1199	Doc	Shielded, 1.8 m / N/A
4.	(USB)Mouse	Microsoft	B75-00093	Fcc Doc	Shielded, 1.8 m / N/A
5.	Base Station	R&S	CMU200	N/A	N/A / Unshielded, 1.8 m
		Anritus	8852-A	N/A	N/A / Unshielded, 1.8 m
6.	Bluetooth Earphone	Nokia	HS.12W	PYAHS.12W	N/A / N/A
7.	(USB)Keyboard	Dell	L100	Fcc Doc	Shielded, 1.8 m

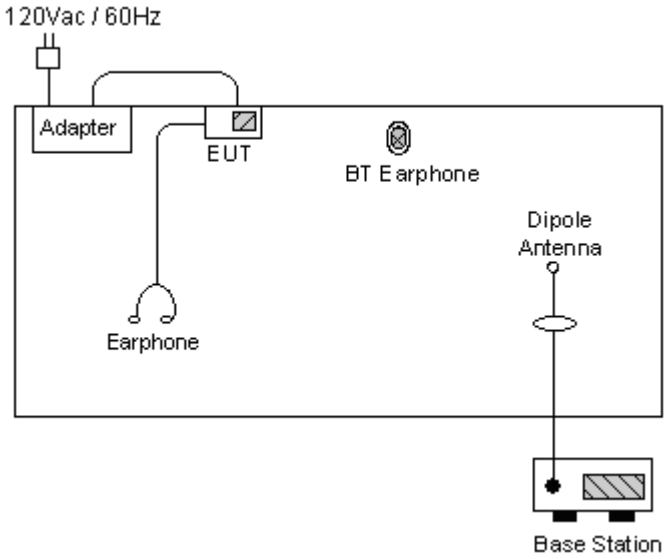
2.4 Connection Diagram of Test System

<Radiated Emission>

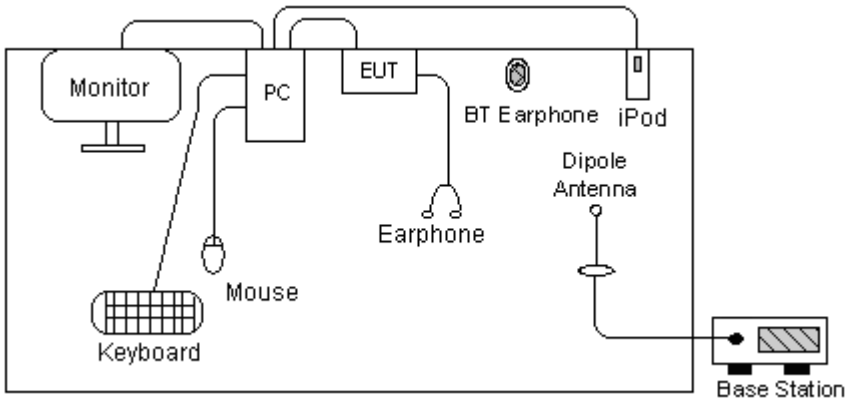


<Conducted Emission>

Phone with Adapter Mode



Phone with USB Link Mode



3. RF Utility

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

4. General Information of Test

Test Site Location	:	No. 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)(1)(iii)	Hopping Channel Bandwidth	Pass
15.247(a)(1)	Hopping Channel Separation	Pass
15.247(a)(1)(iii)	Number of Hopping Frequency	Pass
15.247(a)(1)(iii)	Dwell Time of Each Frequency	Pass
15.247(b)(1)	Output Power	Pass
15.247(d)	100 KHz Bandwidth of Frequency Band Edges	Pass
15.209(a) 15.247(d)	Radiated Emission	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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

- 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 (1Mbps)

CH00 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2363.60	30.39	-23.61	54.00	30.55	-0.16	177	178	Average
2370.00	48.78	-25.22	74.00	48.86	-0.08	-	-	Peak

CH00 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2326.00	44.06	-29.94	74.00	44.39	-0.33	-	-	Peak
2326.00	29.89	-44.11	74.00	30.22	-0.33	130	275	Average

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2490.00	61.03	-12.97	74.00	60.63	0.40	-	-	Peak
2490.00	29.88	-24.12	54.00	29.48	0.40	199	165	Average

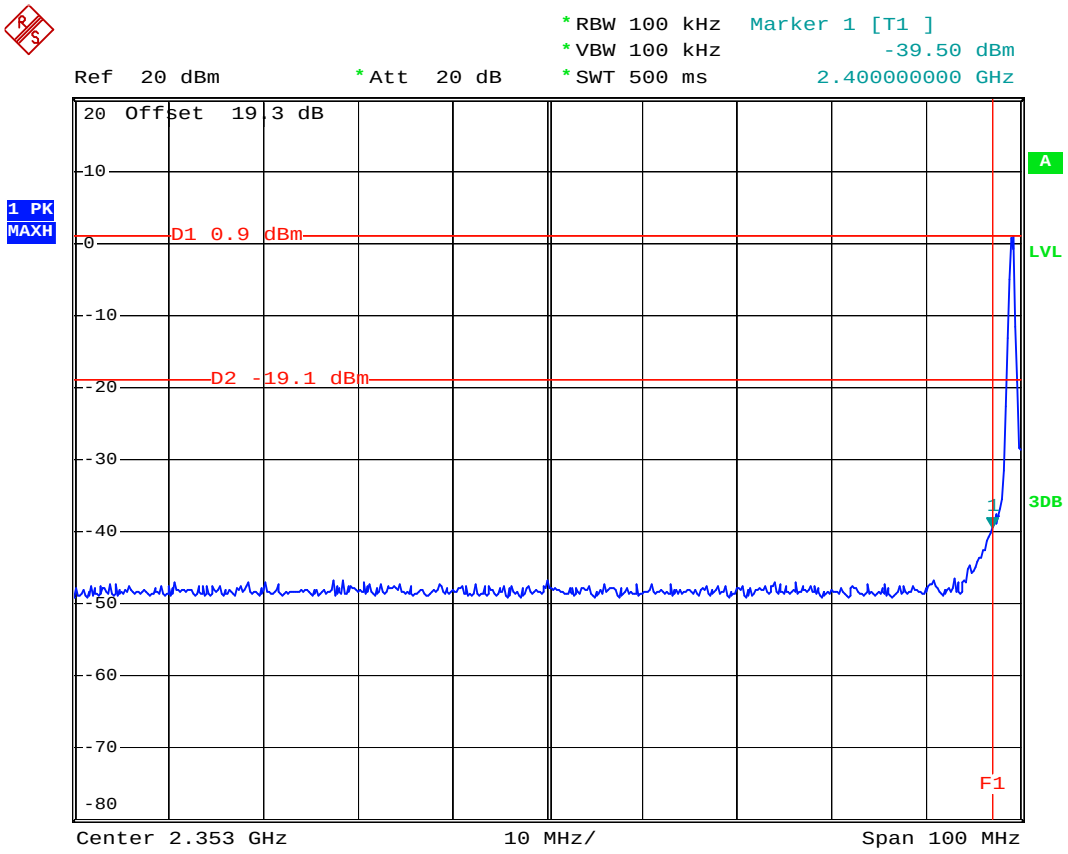
CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2492.00	44.91	-29.09	74.00	44.51	0.40	-	-	Peak
2490.10	29.55	-24.45	54.00	29.15	0.40	100	265	Average

5.2.5 Band Edge

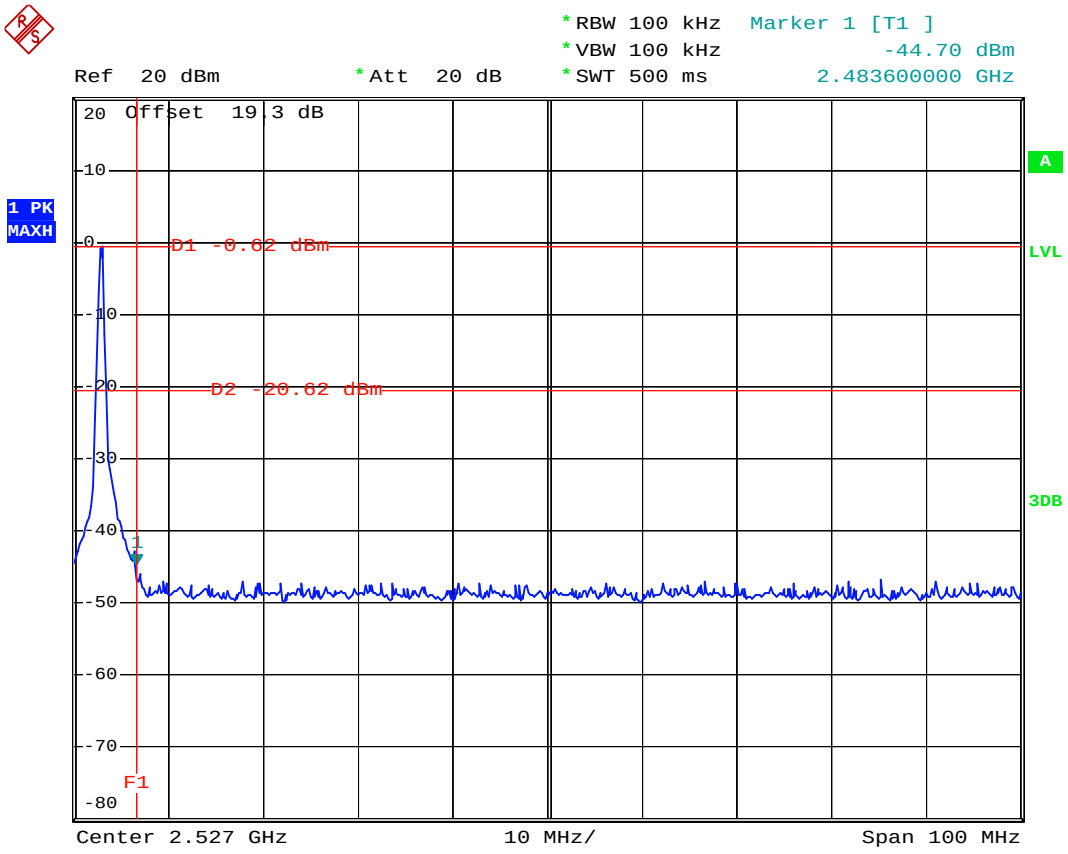
BT

CH00



Date: 18.MAR.2008 19:26:33

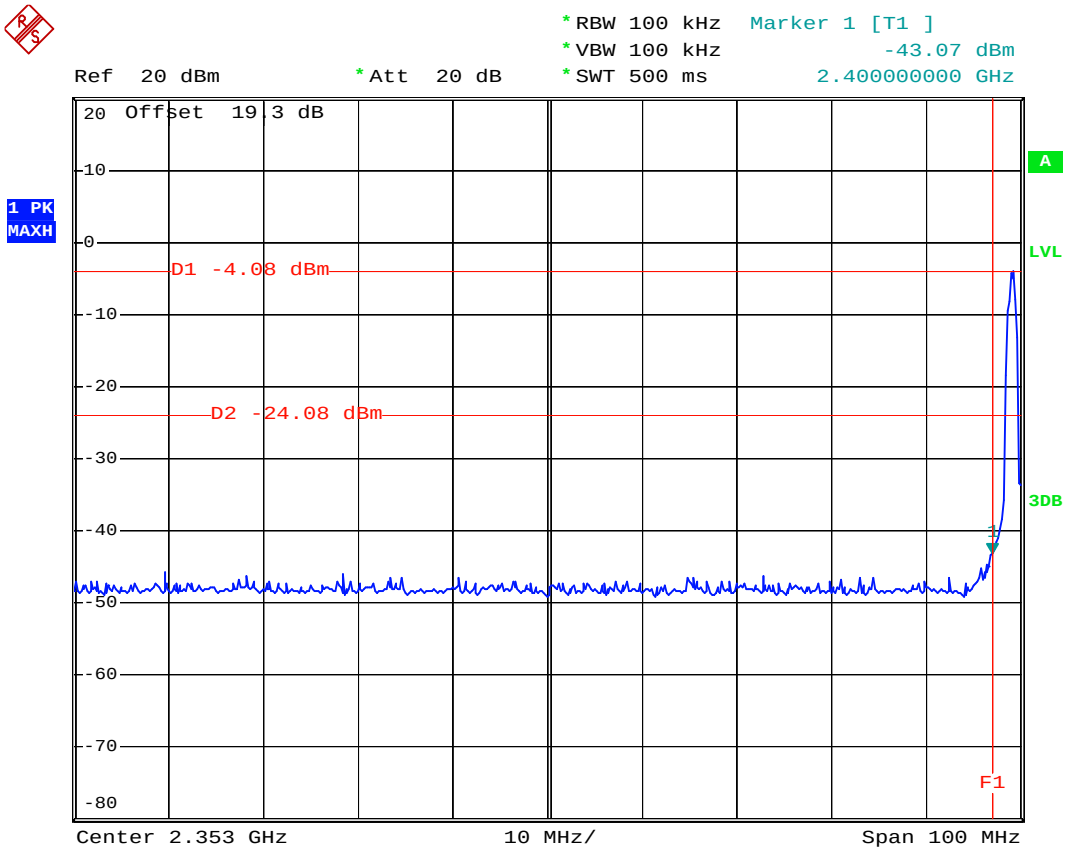
CH78



Date: 18.MAR.2008 19:27:09

BT EDR(2Mbps)

CH00



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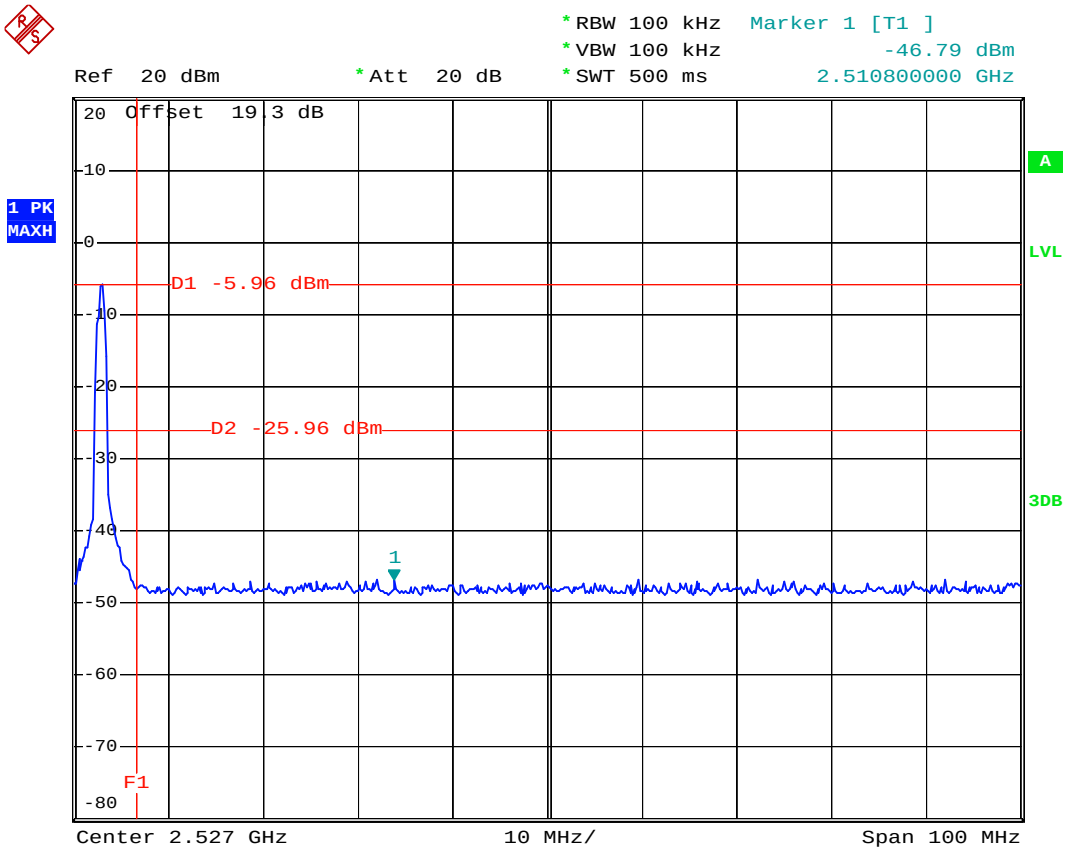
CH78



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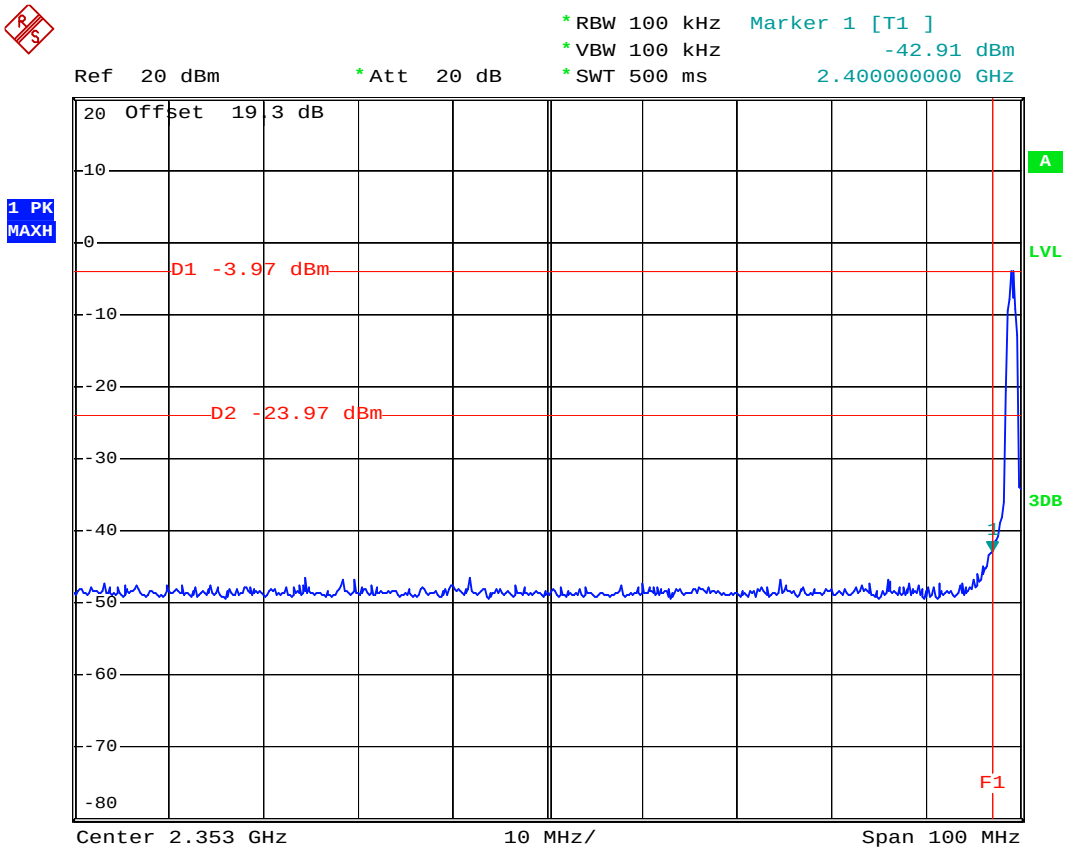
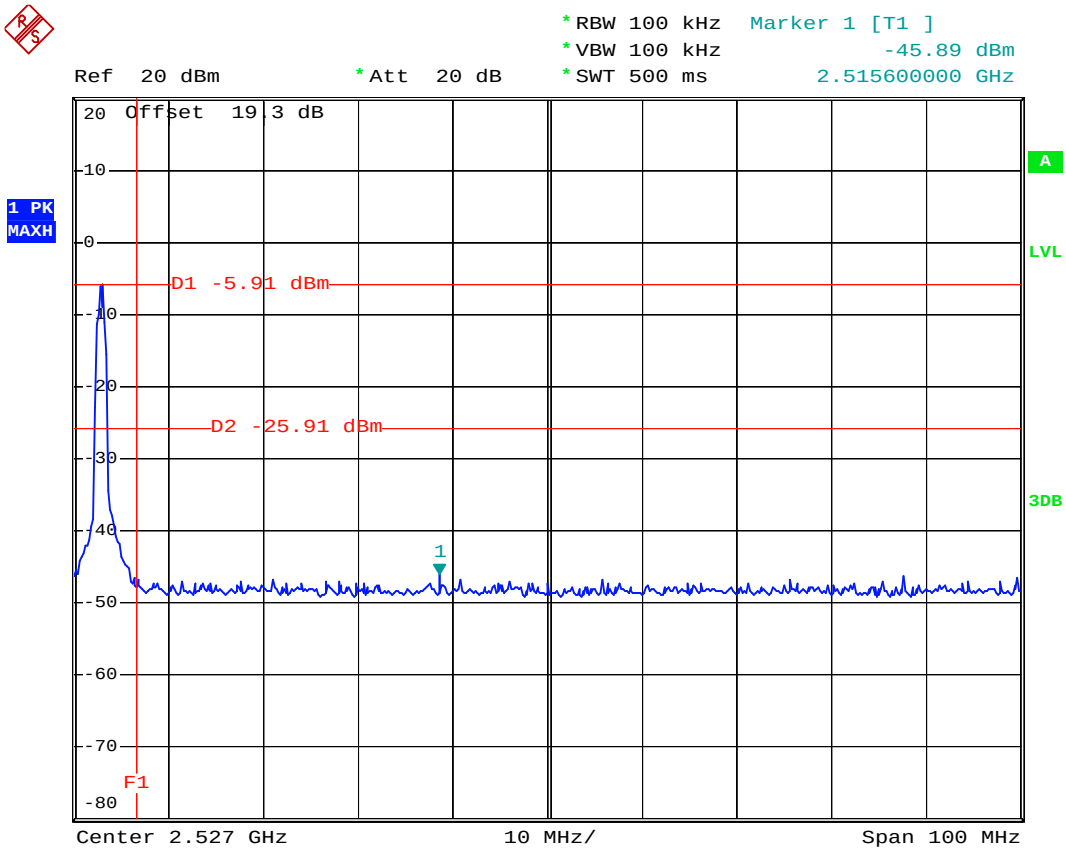
BT EDR(3Mbps)

CH00



Date: 18.MAR.2008 19:51:03

CH78



Date: 18.MAR.2008 19:52:26

5.3 Hopping Channel Separation

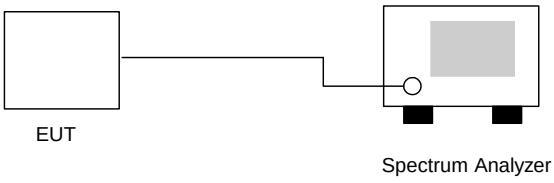
5.3.1 Measuring Instruments

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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.000	0.611	Mode 1
39	2441	1.000	0.608	Mode 2
78	2480	1.000	0.609	Mode 3

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

- Application Type : BT EDR(2Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.000	0.835	Mode 4
39	2441	1.000	0.829	Mode 5
78	2480	1.008	0.824	Mode 6

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

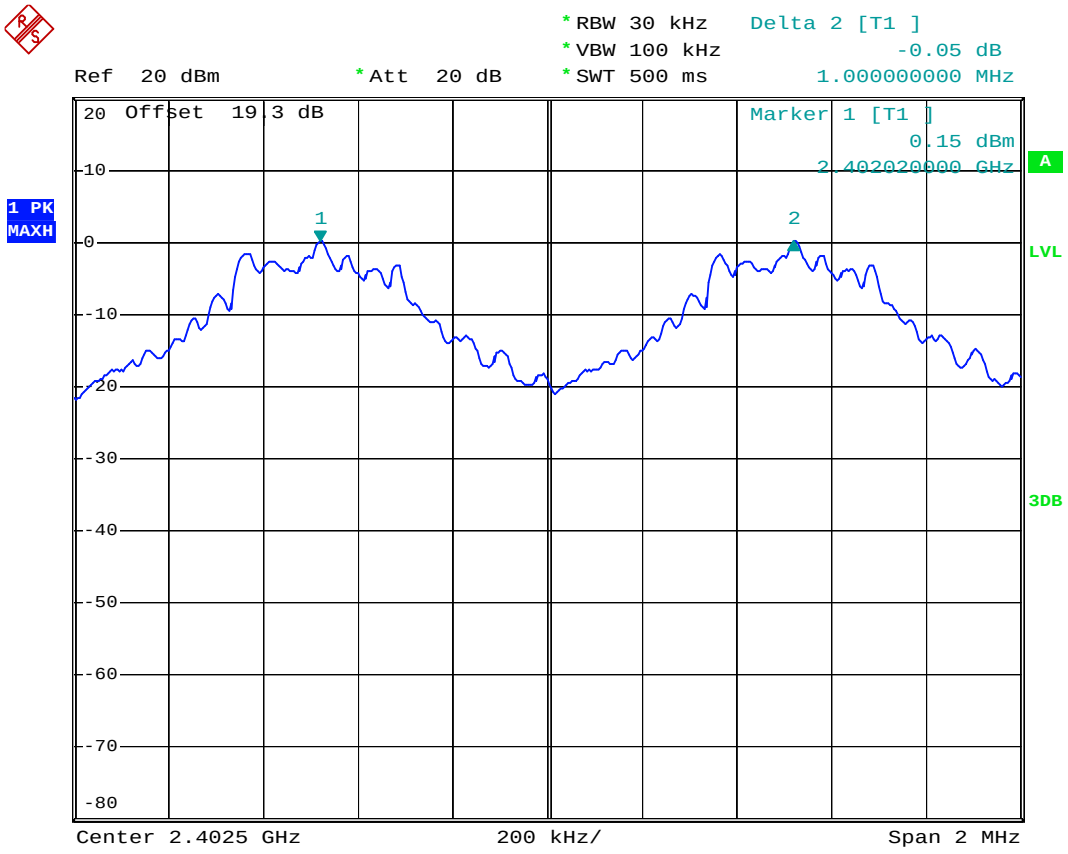
- Application Type : BT EDR(3Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.008	0.813	Mode 7
39	2441	1.008	0.811	Mode 8
78	2480	1.000	0.811	Mode 9

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

5.3.5 Hopping Channel Seperation

Mode 1



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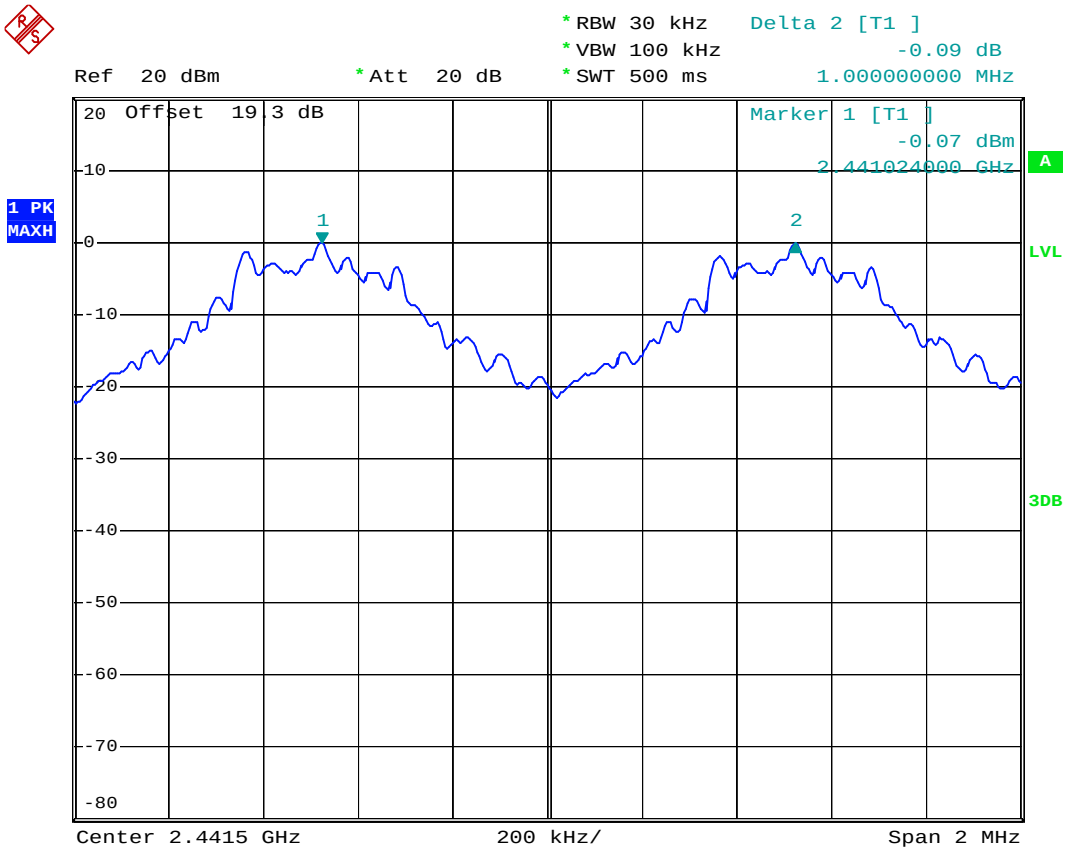
Mode 2



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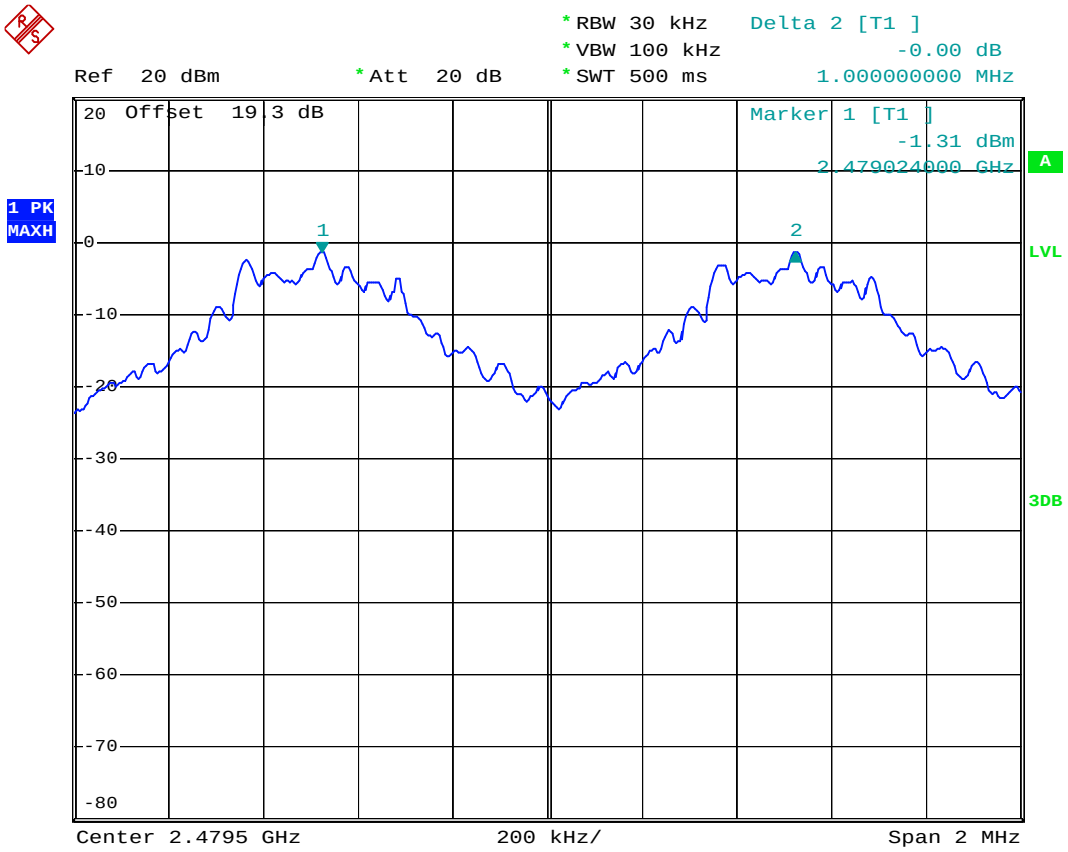
Mode 3



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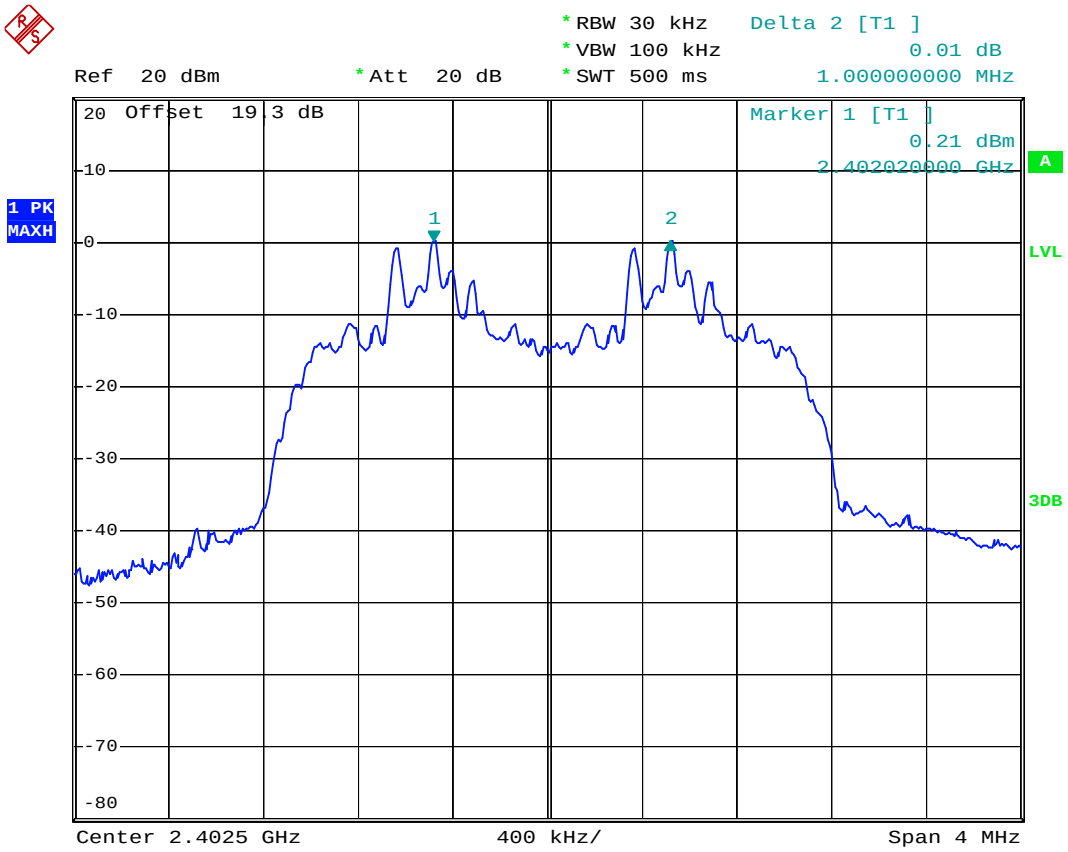
Mode 4



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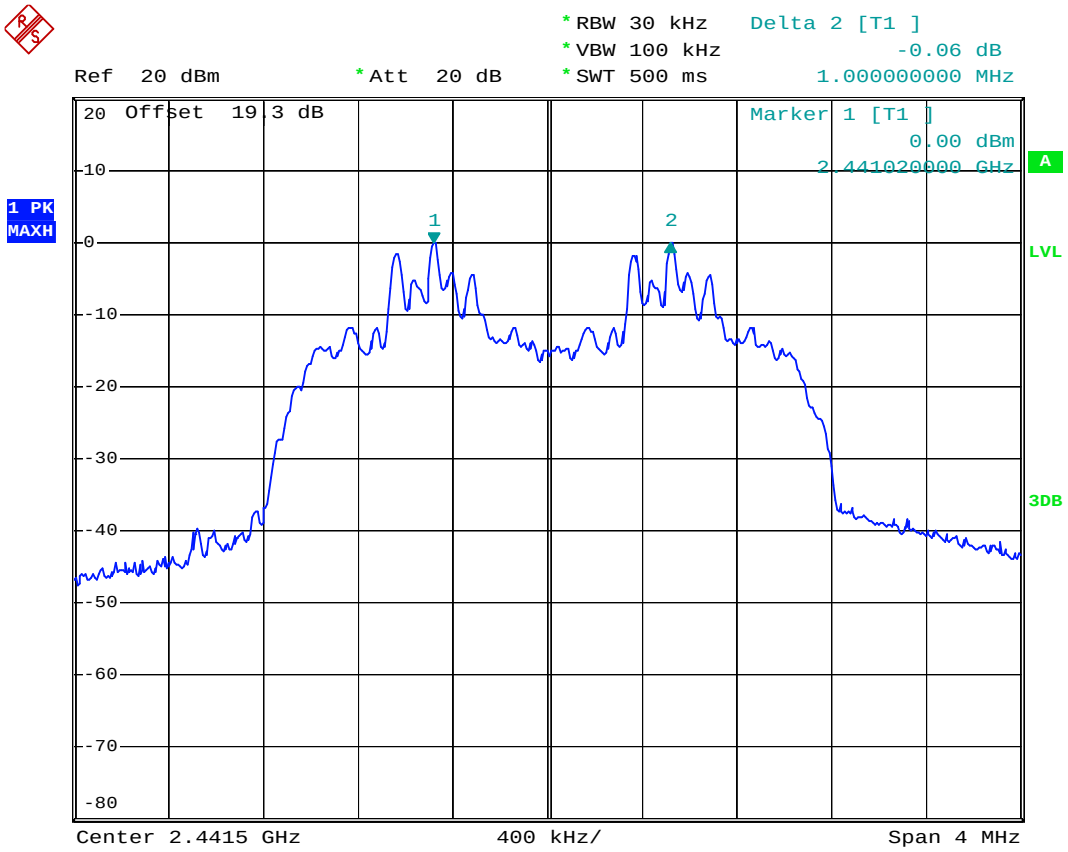
Mode 5



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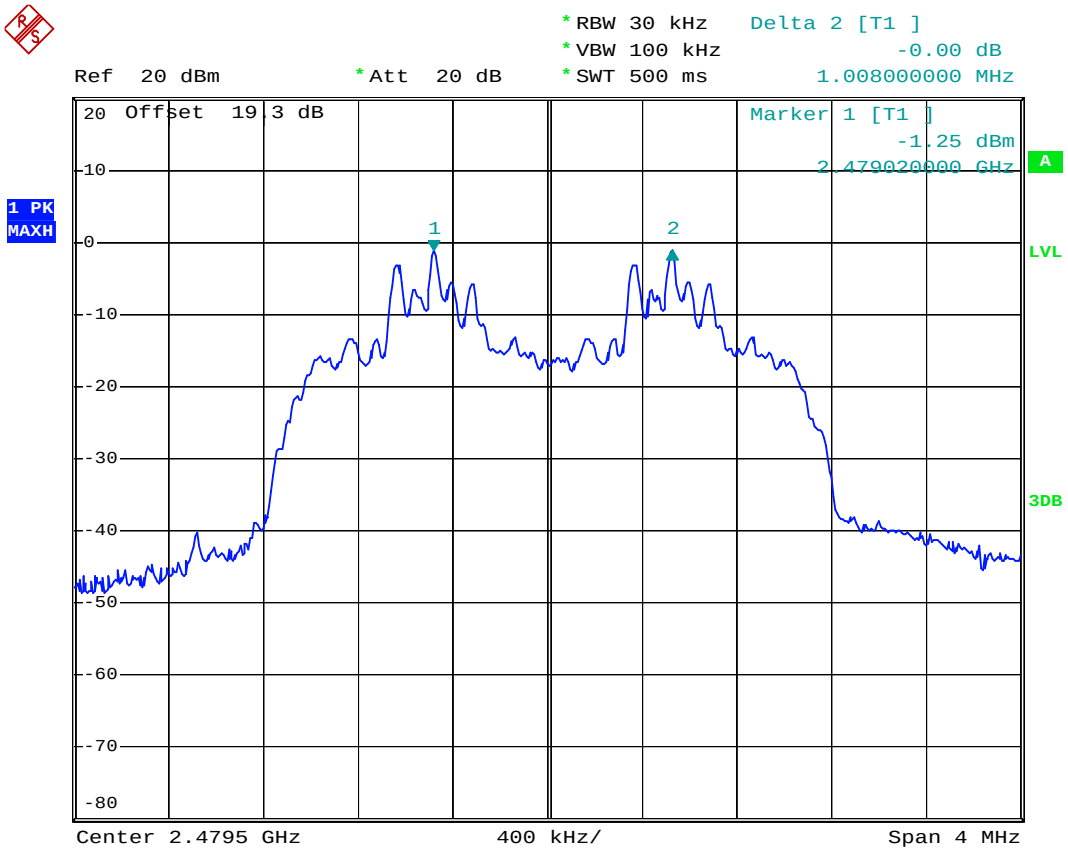
Mode 6



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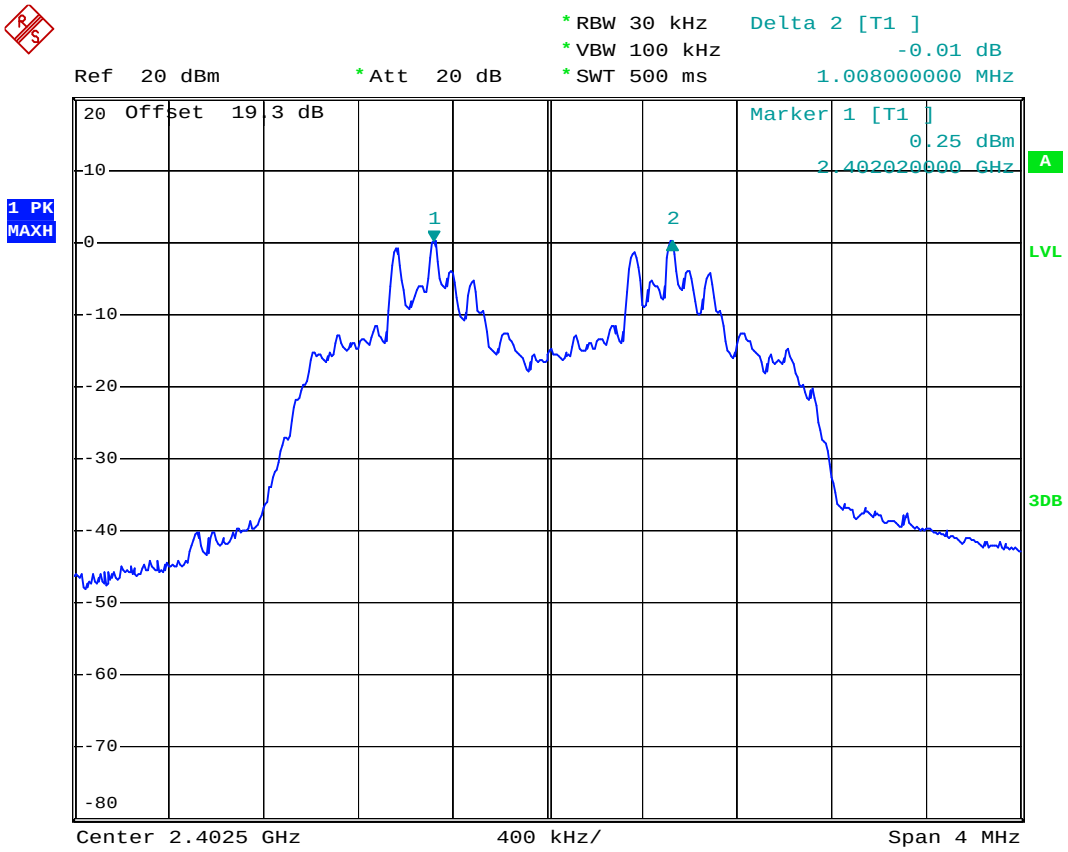
Mode 7



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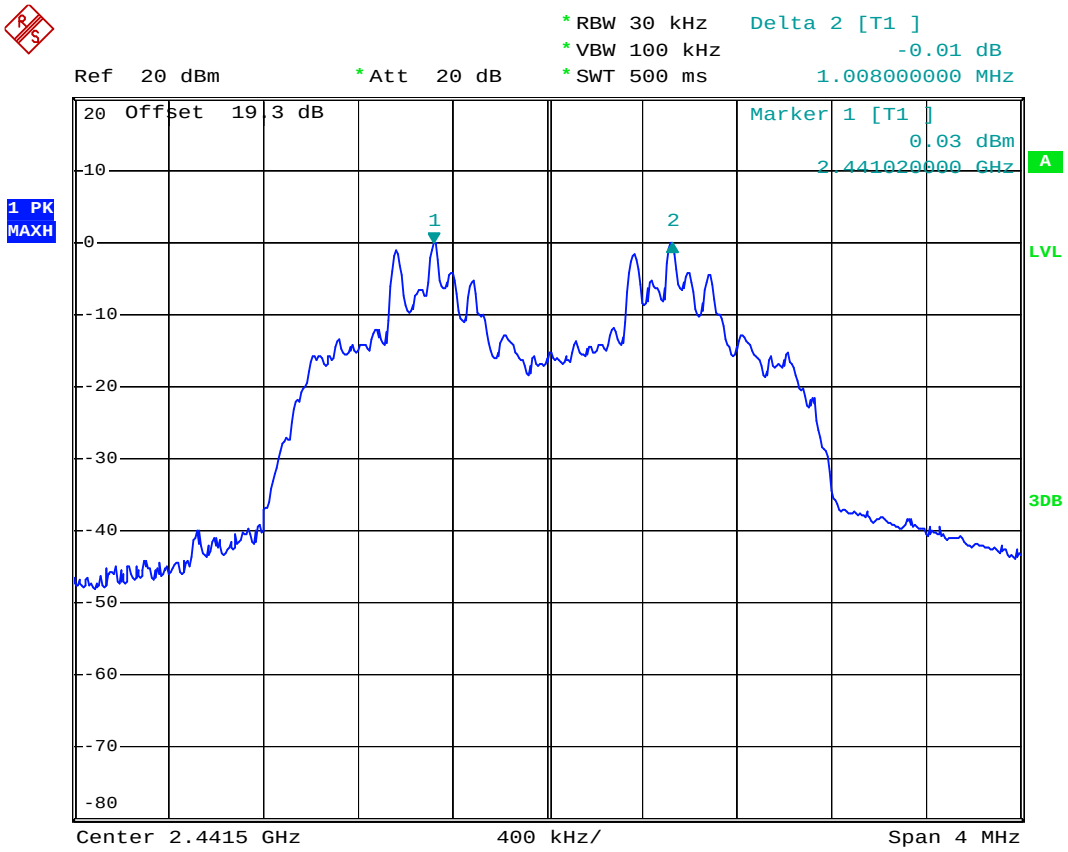
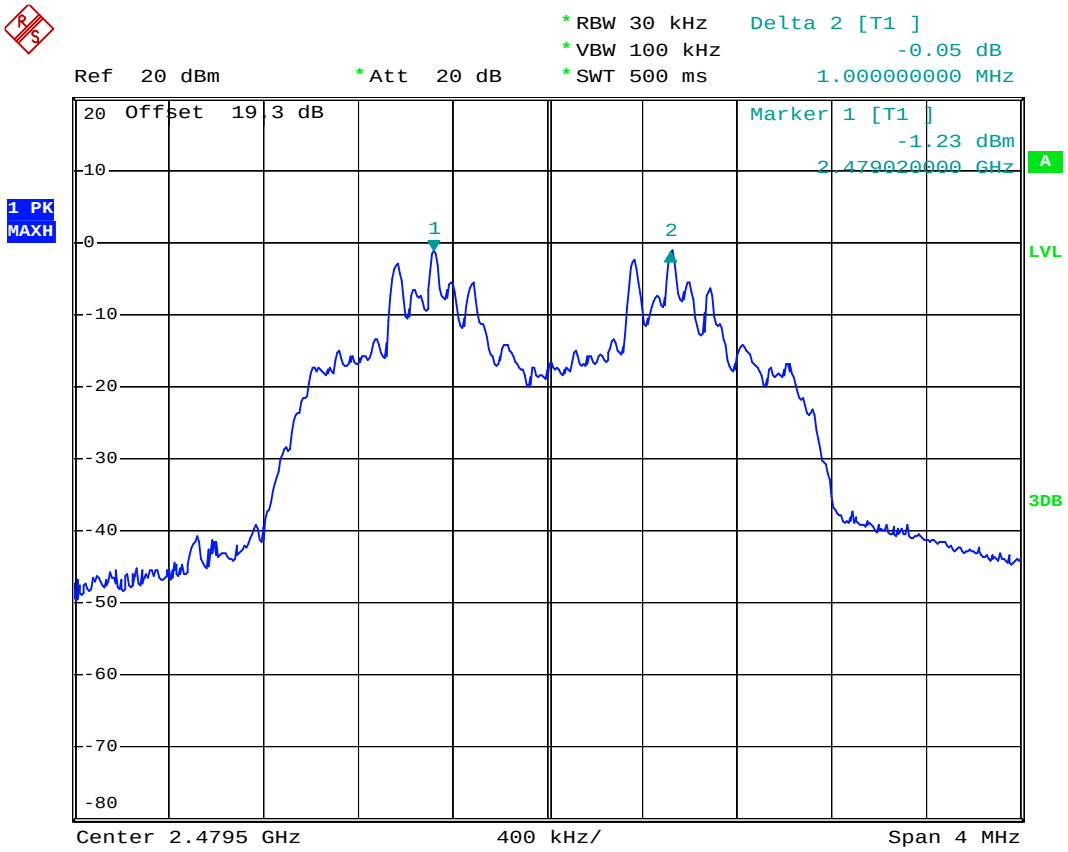
Mode 8



Date: 18.MAR.2008 19:59:04

Mode 9



Date: 18.MAR.2008 19:59:45

5.4 Number of Hopping Frequency

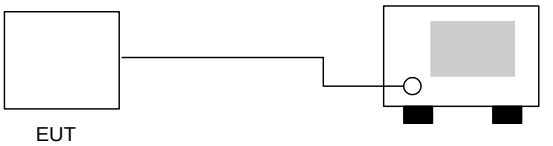
5.4.1 Measuring Instruments

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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

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

- Application Type : BT EDR(2Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

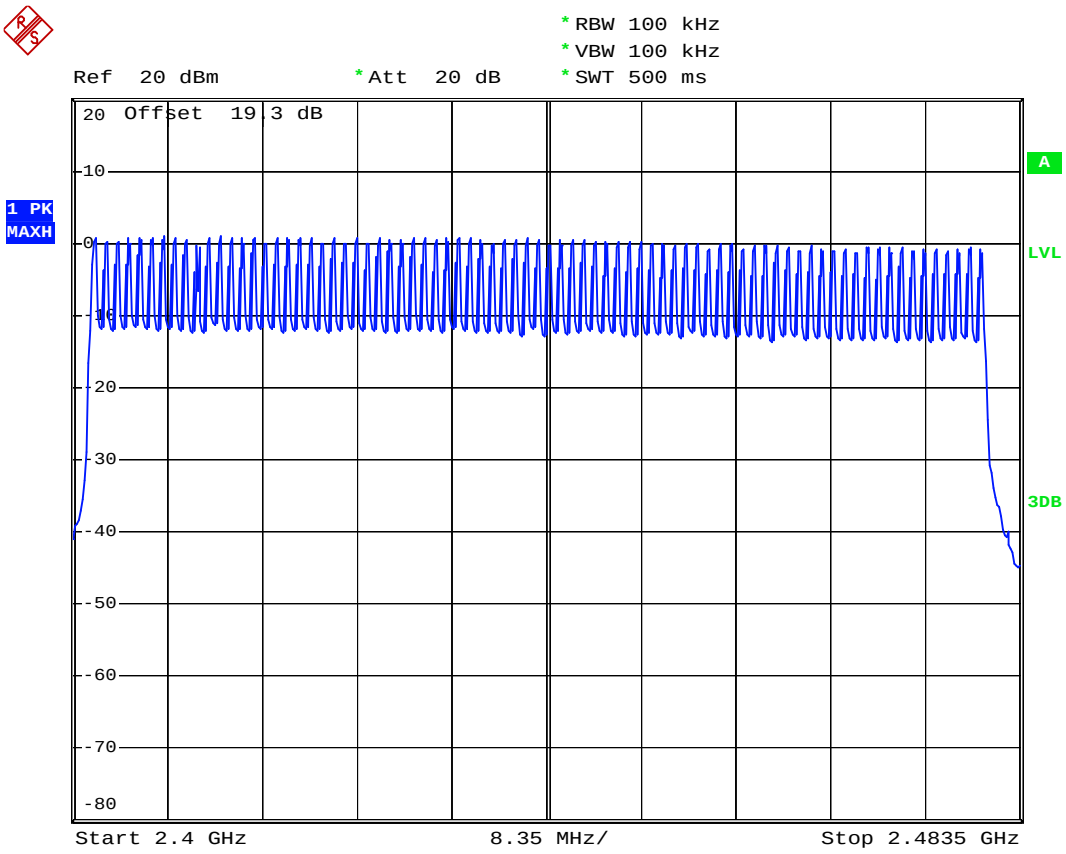
Number of Hopping Frequency (Channel)	Limits (Channel)
79	15

- Application Type : BT EDR(3Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

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

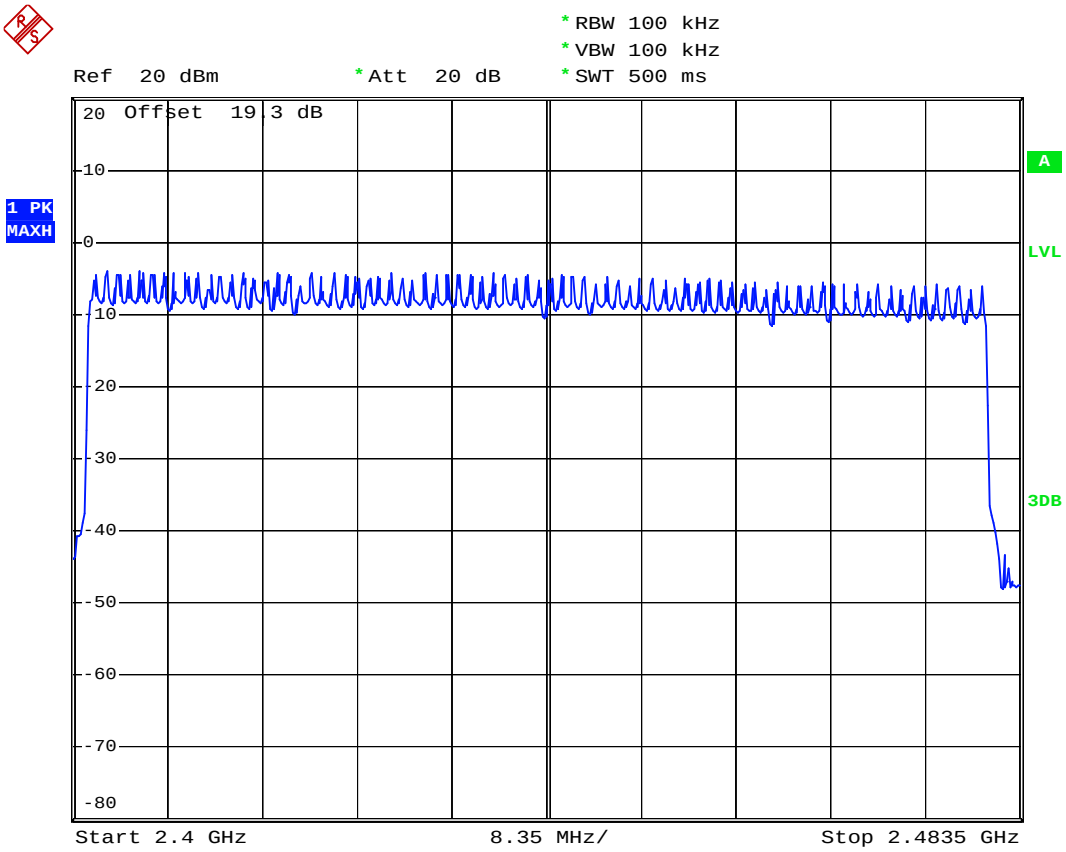
5.4.5 Number of Hopping Frequency

BT



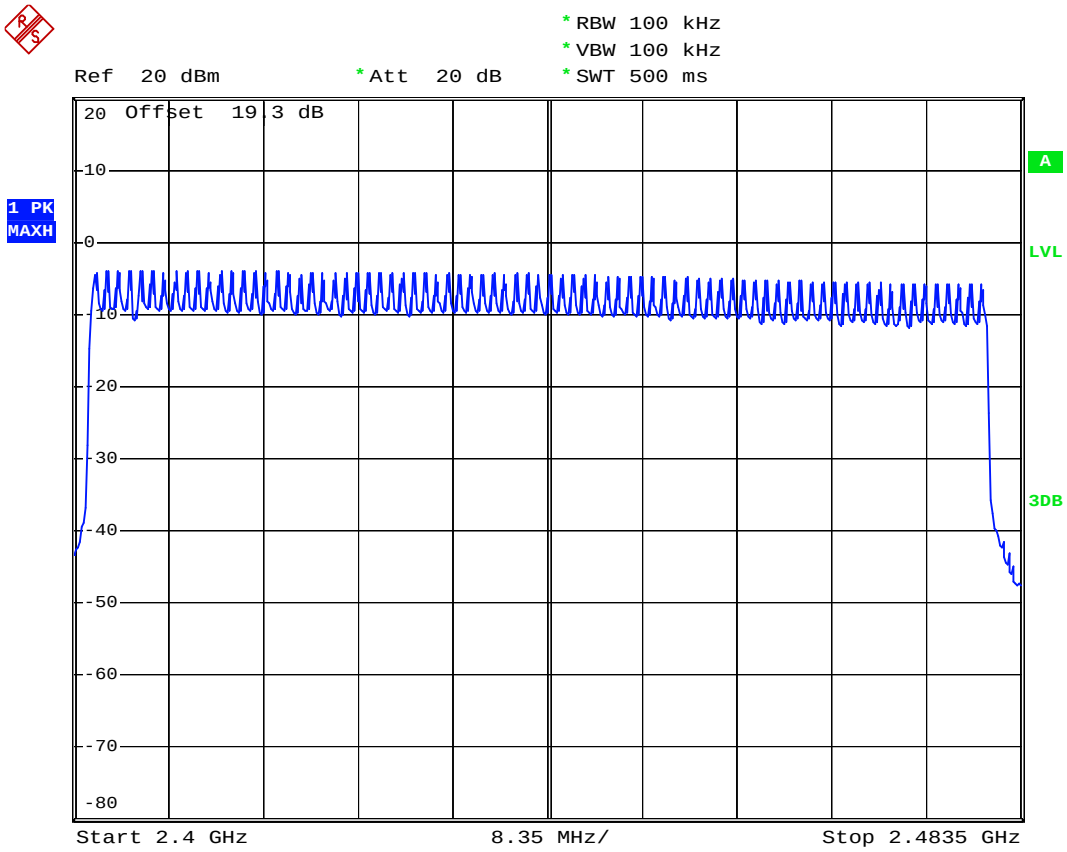
Date: 18.MAR.2008 19:40:49

BT EDR(2Mbps)



Date: 18.MAR.2008 20:13:57

BT EDR(3Mbps)



Date: 18.MAR.2008 20:19:46

5.5 Hopping Channel Bandwidth

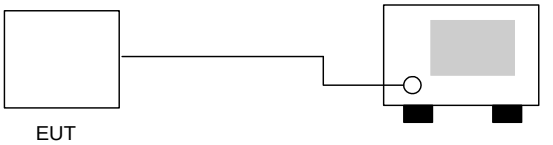
5.5.1 Measuring Instruments

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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	0.916	Mode 1
39	2441	0.912	Mode 2
78	2480	0.914	Mode 3

- Application Type : BT EDR(2Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

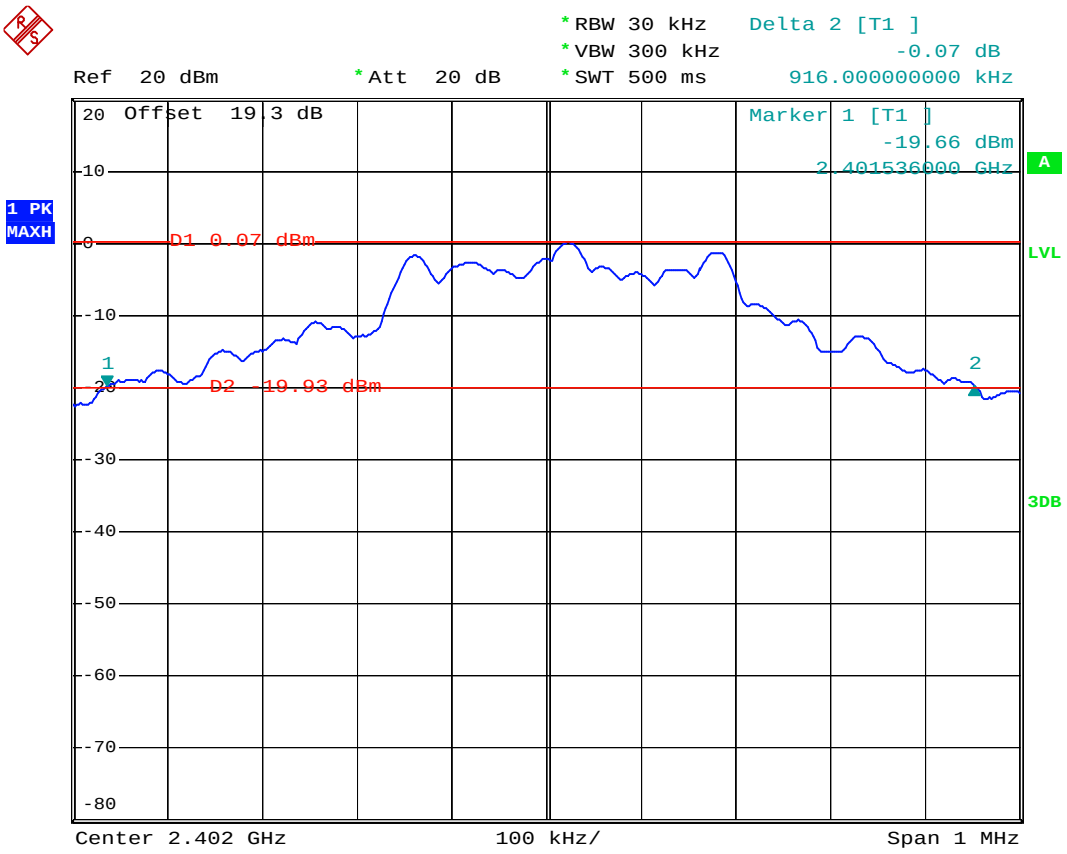
Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.252	Mode 4
39	2441	1.244	Mode 5
78	2480	1.236	Mode 6

- Application Type : BT EDR(3Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.220	Mode 7
39	2441	1.216	Mode 8
78	2480	1.216	Mode 9

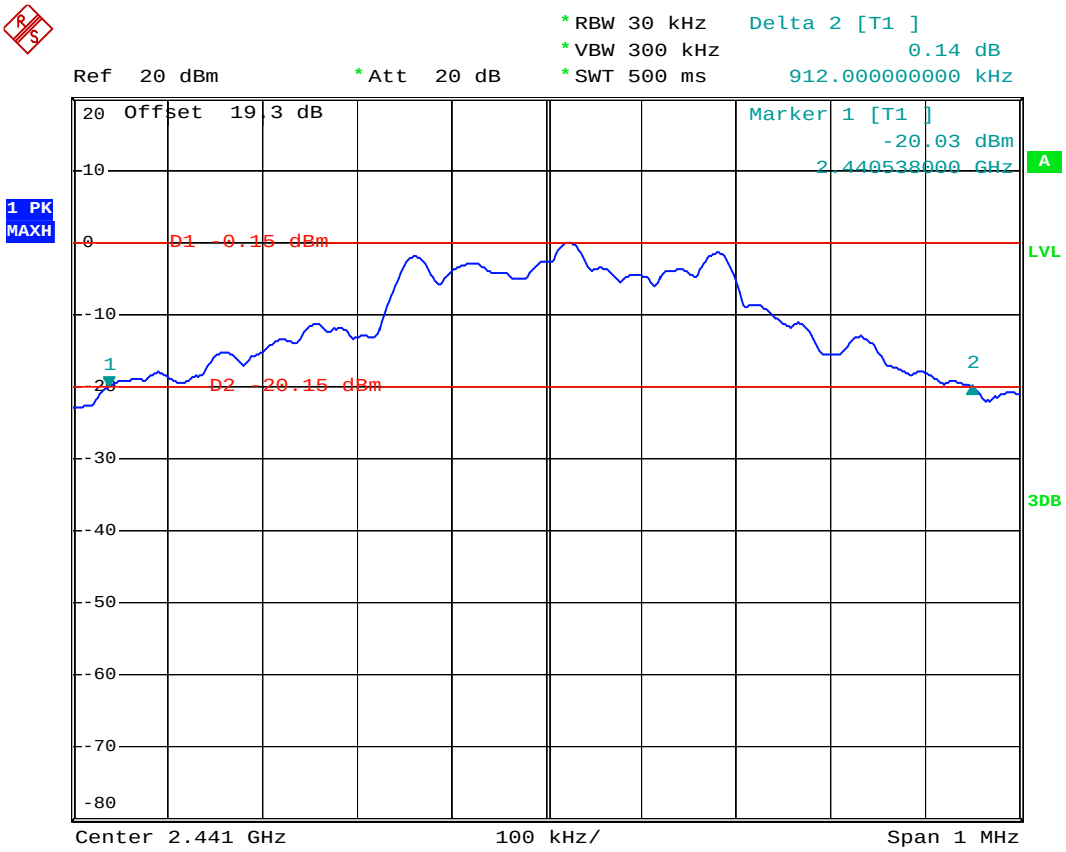
5.5.5 Hopping Channel Bandwidth

Mode 1



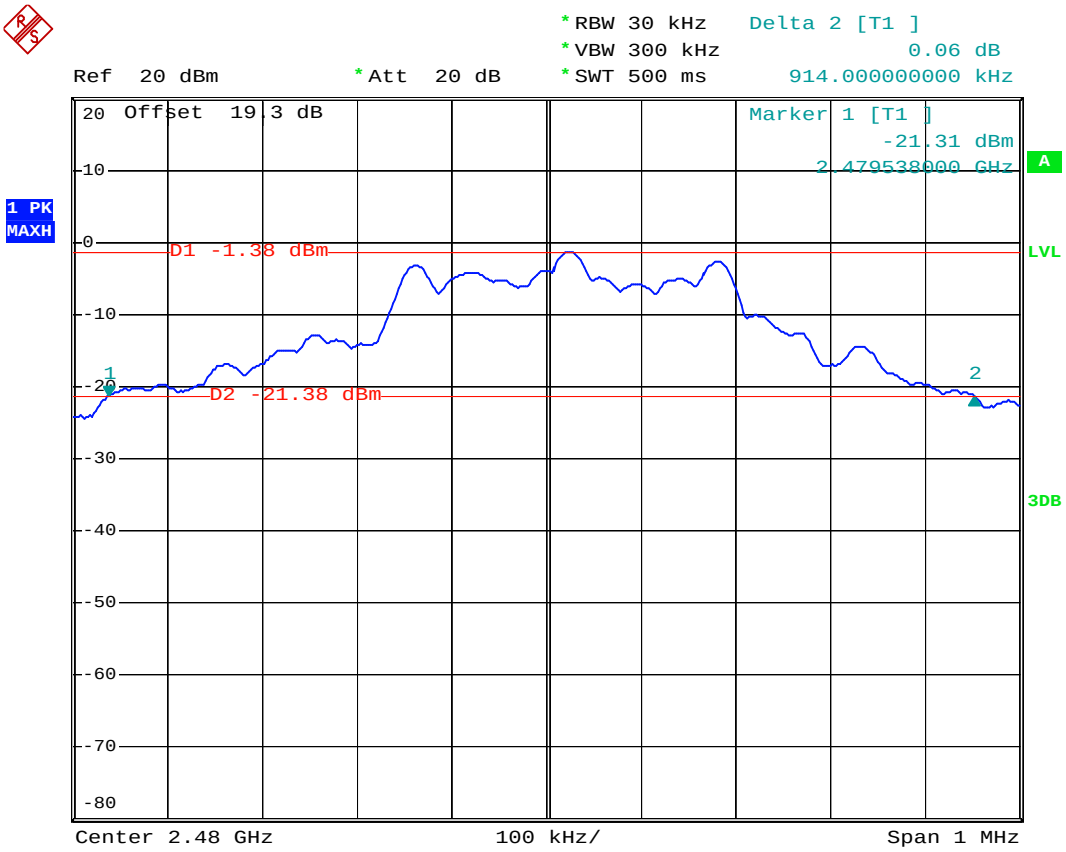
Date: 18.MAR.2008 19:22:51

Mode 2



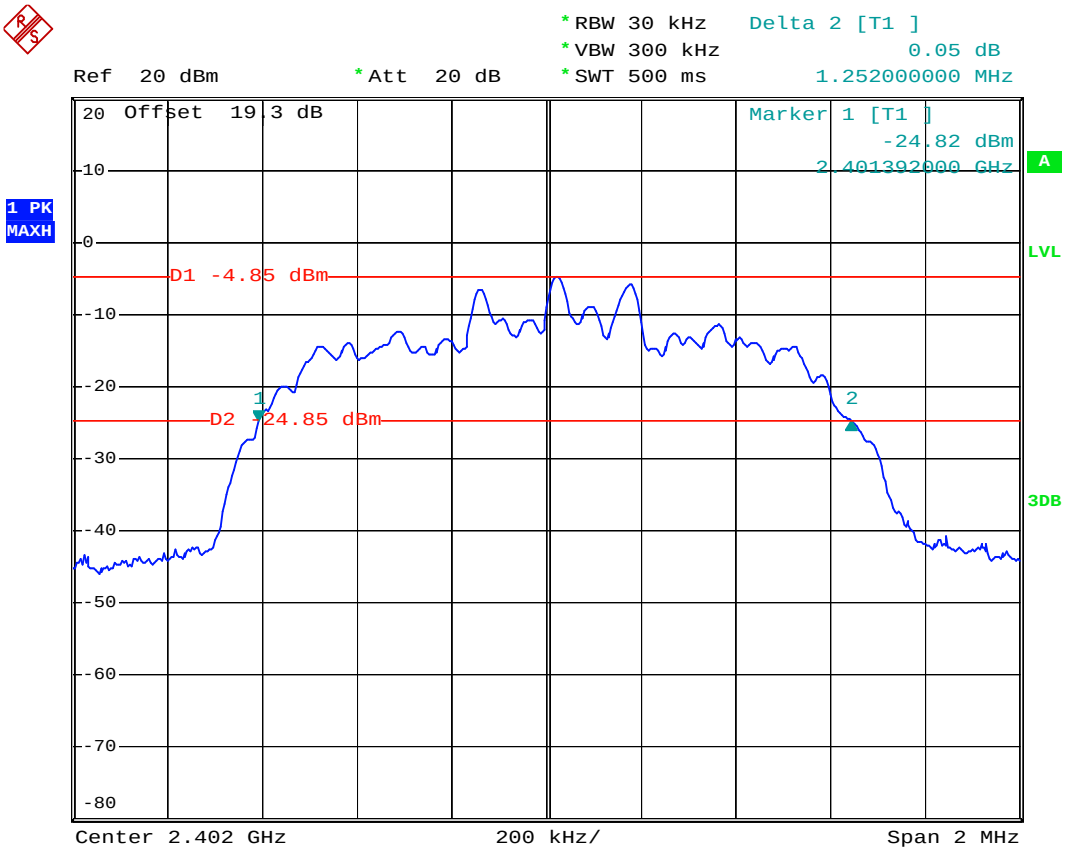
Date: 18.MAR.2008 19:24:13

Mode 3



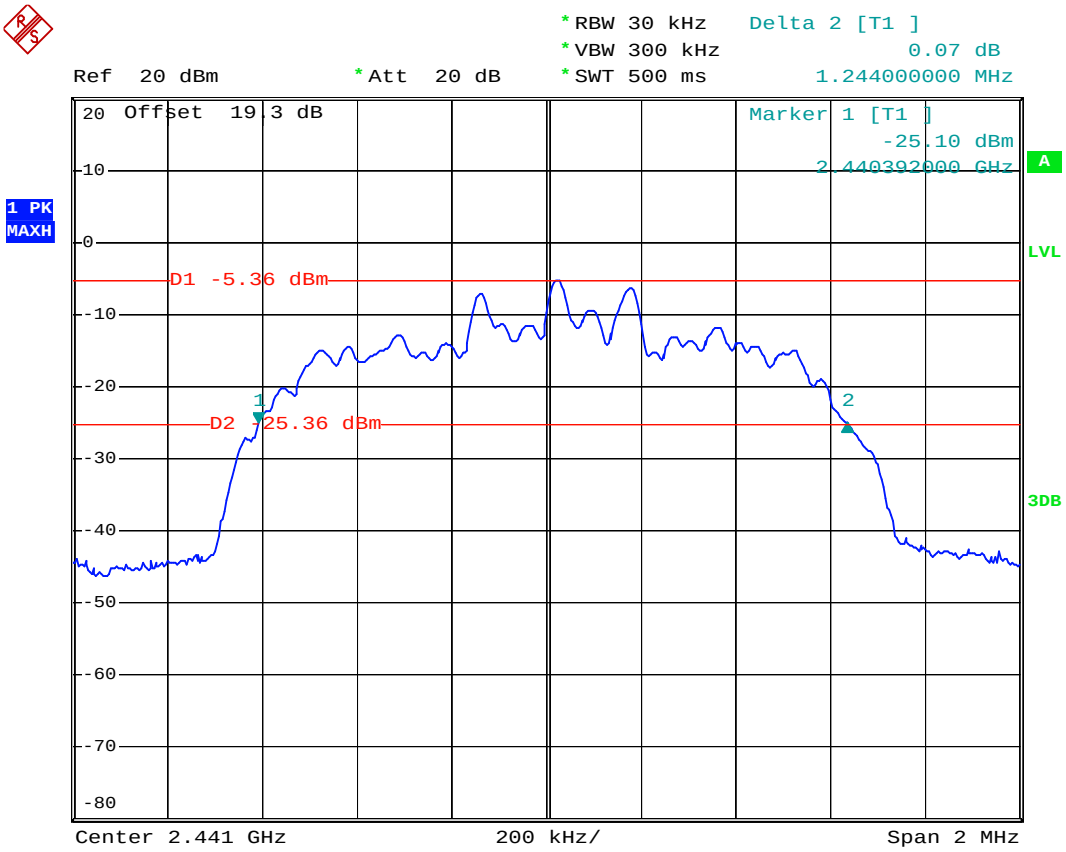
Date: 18.MAR.2008 19:25:01

Mode 4



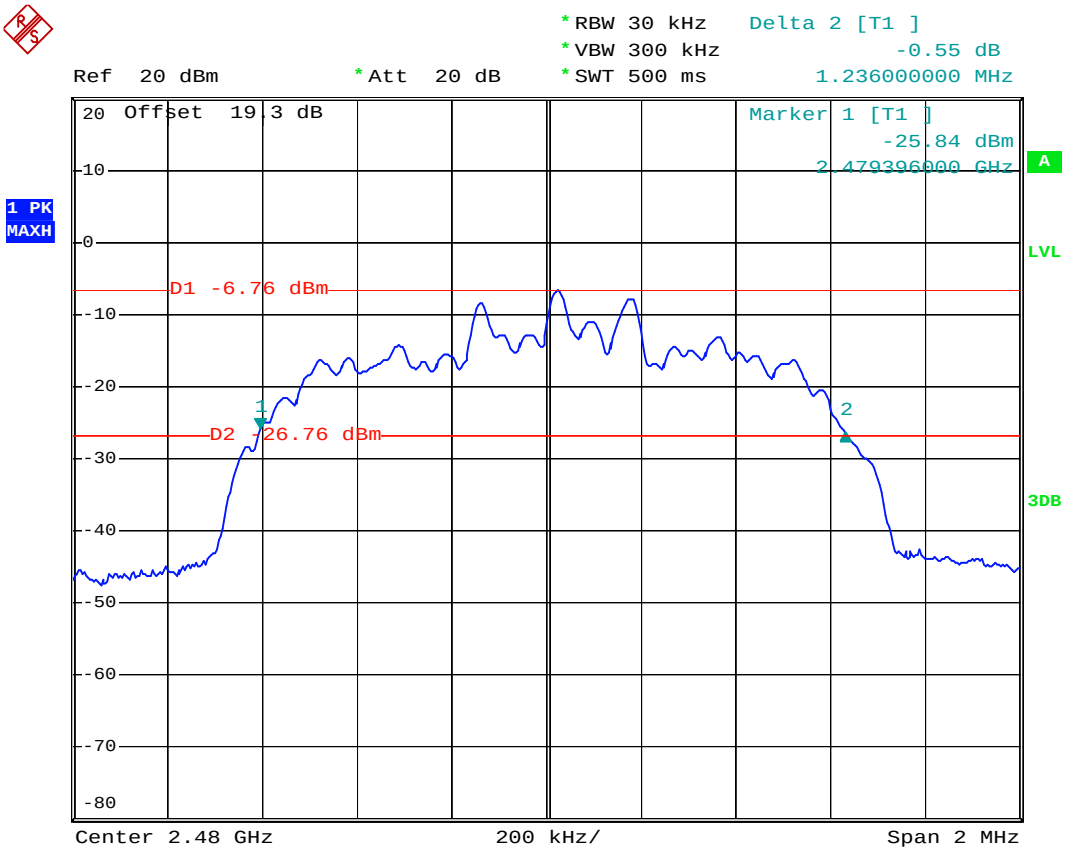
Date: 18.MAR.2008 19:42:57

Mode 5

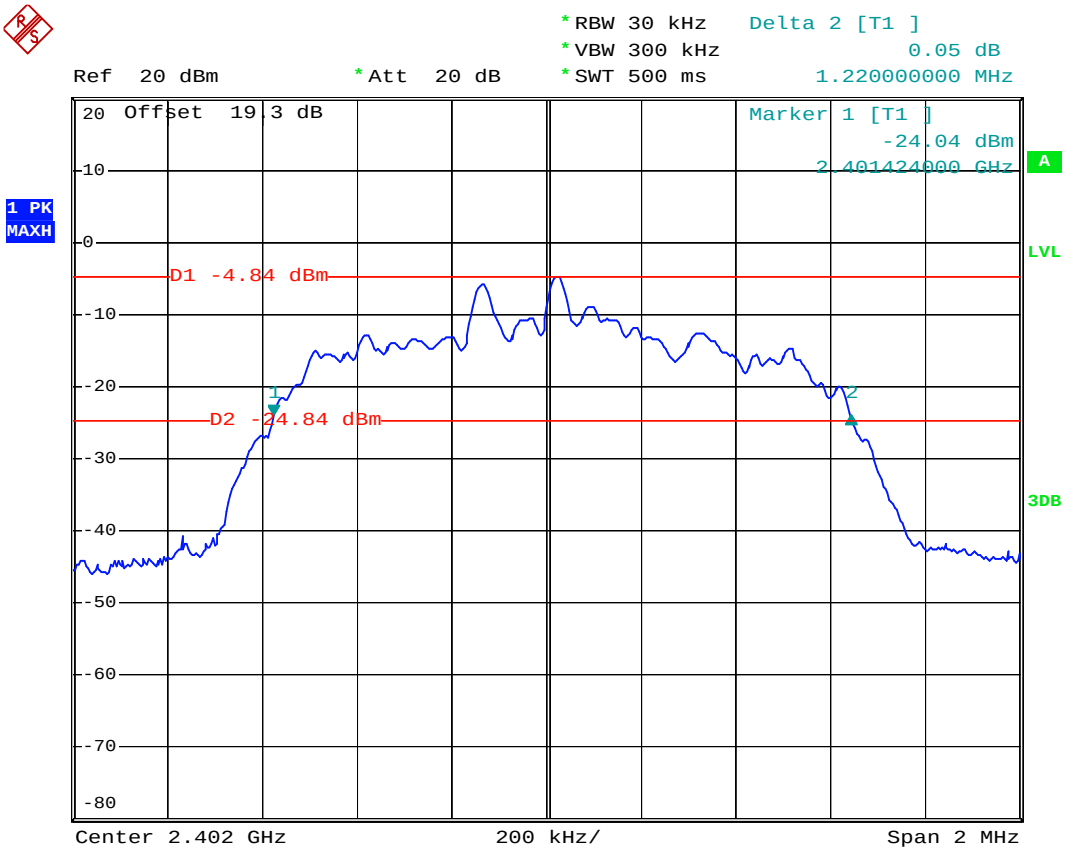


Date: 18.MAR.2008 19:43:38

Mode 6

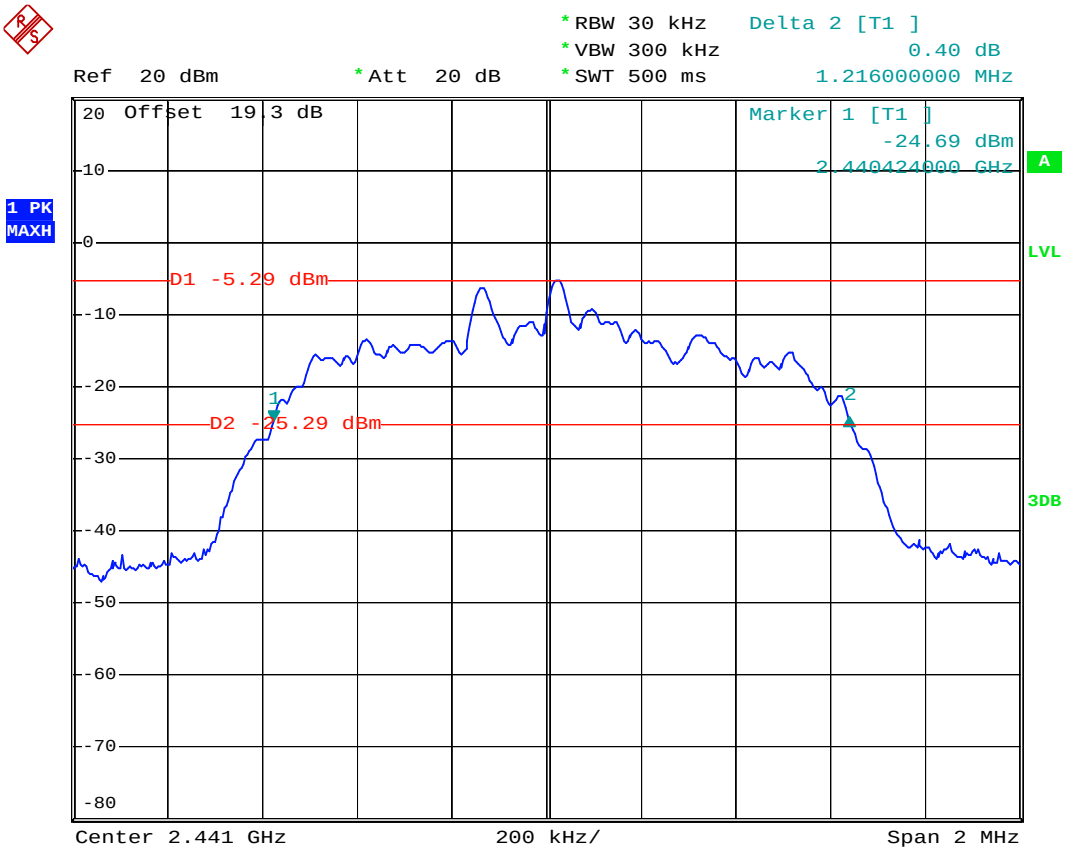

*RBW 30 kHz
*VBW 300 kHz
*SWT 500 ms
Delta 2 [T1]
-0.55 dB
1.236000000 MHz
Ref 20 dBm
*Att 20 dB
20 Offset 19.3 dB
Marker 1 [T1]
-25.84 dBm
2.479396000 GHz
1 PK
MAXH
A
LVL
3DB
D1 -6.76 dBm
D2 -26.76 dBm
Center 2.48 GHz
200 kHz/
Span 2 MHz
Date: 18.MAR.2008 19:44:42

Mode 7

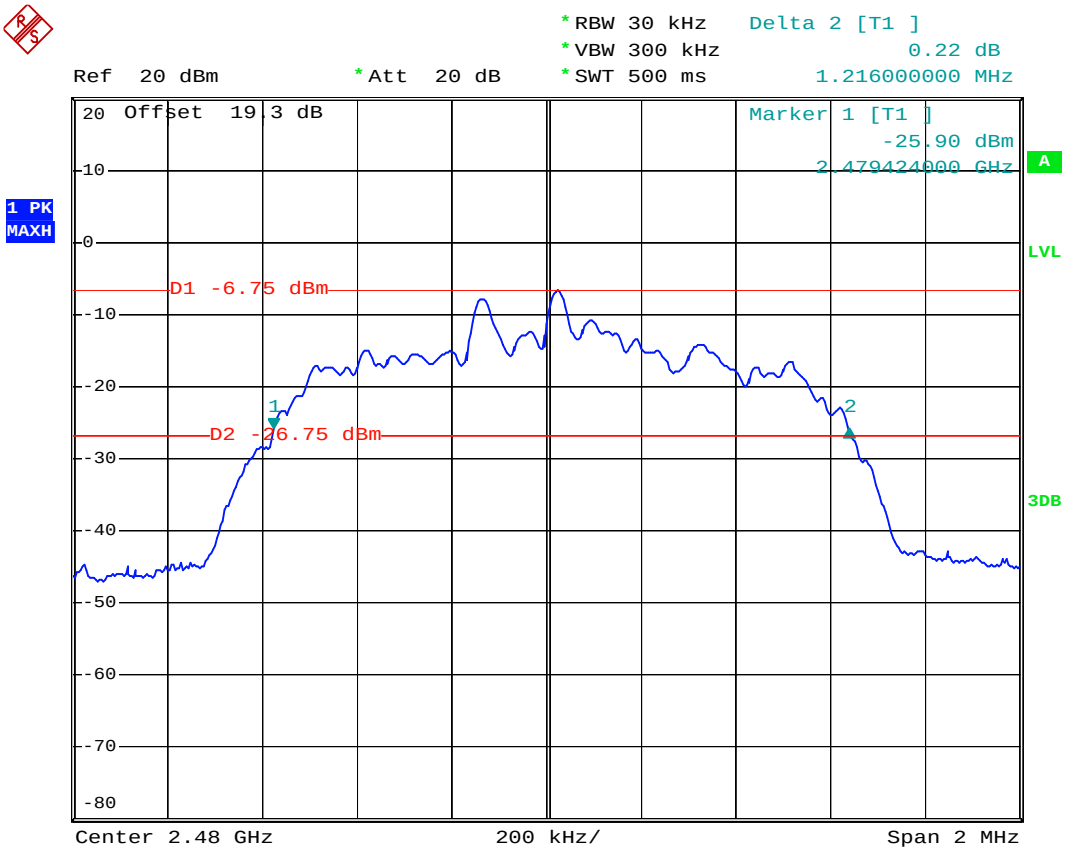


Date: 18.MAR.2008 19:48:24

Mode 8


*RBW 30 kHz
*VBW 300 kHz
*SWT 500 ms
Delta 2 [T1]
0.40 dB
1.216000000 MHz
Ref 20 dBm
*Att 20 dB
20 Offset 19.3 dB
Marker 1 [T1]
-24.69 dBm
2.440424000 GHz
1 PK
MAXH
A
LVL
3DB
D1 -5.29 dBm
D2 -25.29 dBm
Center 2.441 GHz
200 kHz/
Span 2 MHz
Date: 18.MAR.2008 19:47:40

Mode 9



Date: 18.MAR.2008 19:46:59

5.6 Dwell Time of Each Frequency

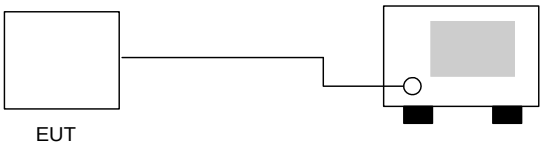
5.6.1 Measuring Instruments

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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.1	412	0.118	0.4
DH3	4.8	1712	0.260	0.4
DH5	4	3000	0.379	0.4

- Application Type : BT EDR(2Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9	424	0.121	0.4
DH3	4.9	1684	0.261	0.4
DH5	3.8	2984	0.358	0.4

- Application Type : BT EDR(3Mbps)
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

CH39

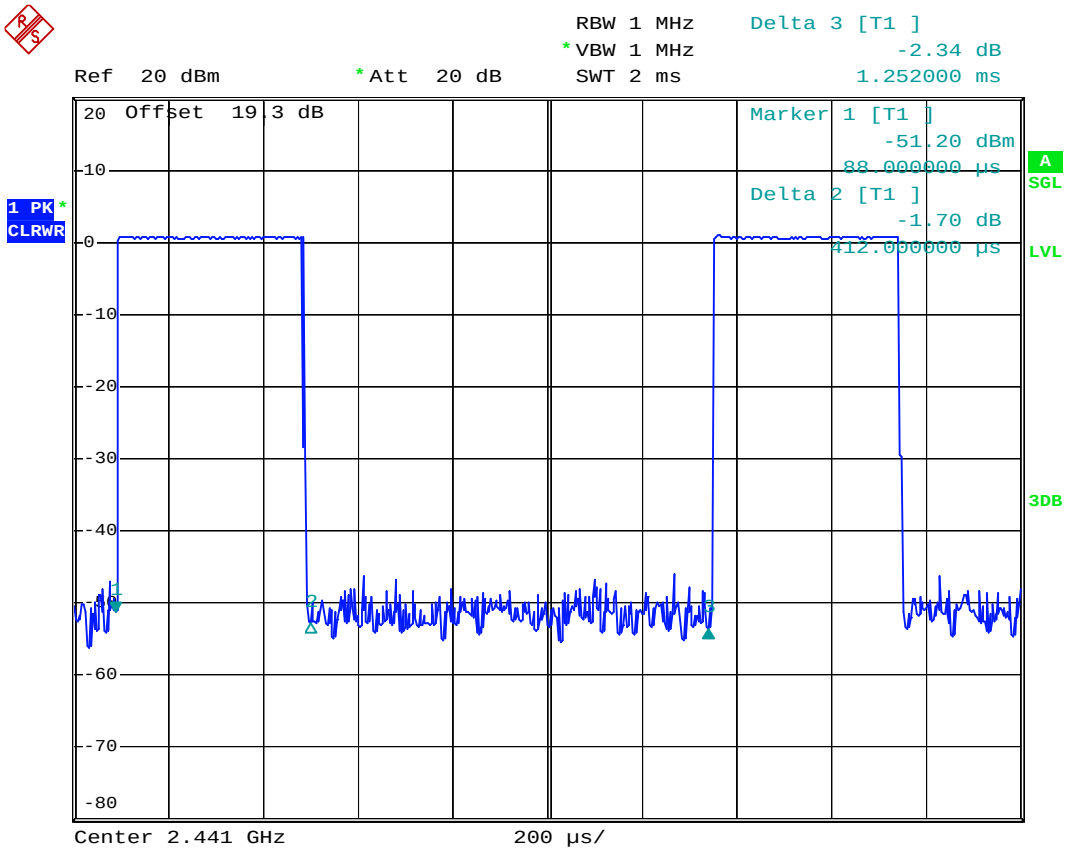
Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.3	424	0.125	0.4
DH3	4.8	1680	0.255	0.4
DH5	3.2	3000	0.303	0.4

※ Remark:

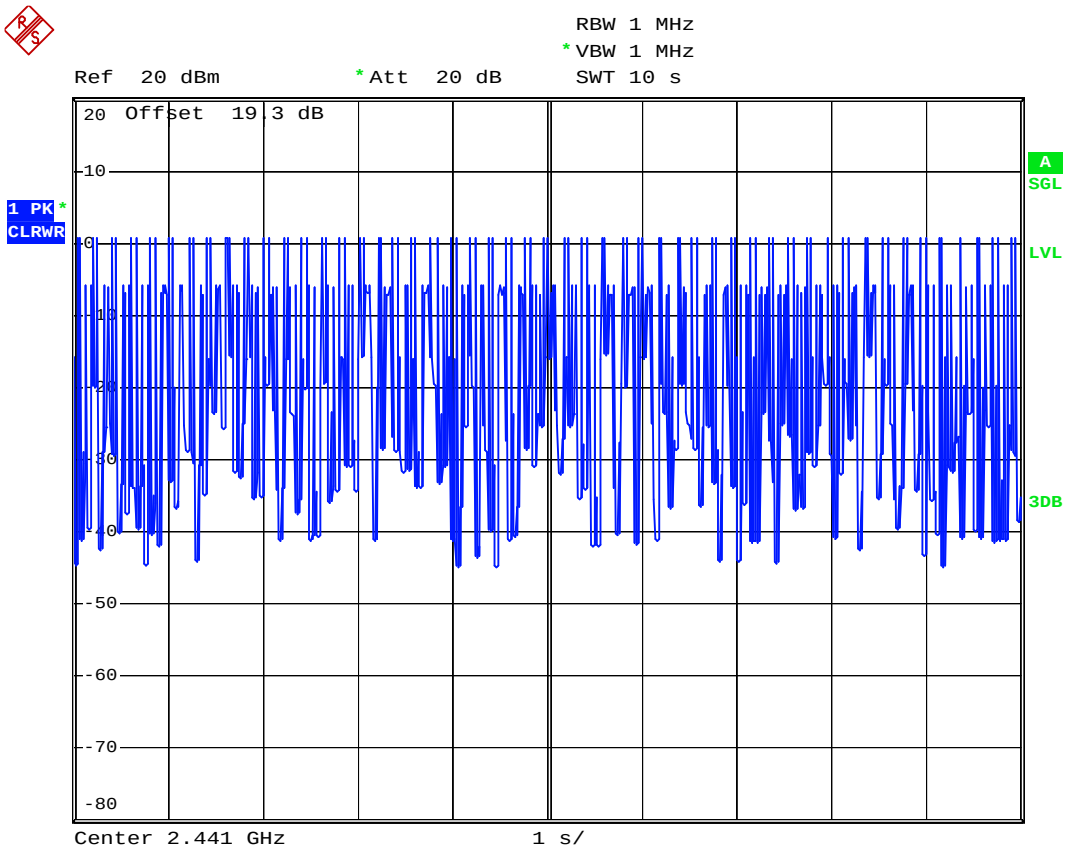
1. Dwell Time=79(channels) x 0.4(s) x average hopping channel x package transfer time
2. 79 channels come from the Hopping Channel number.
3. Average Hopping Channel = hops/sweep time
4. t: Package Transfer Time(us)

5.6.5 Dwell Time

DH1 (CH39)

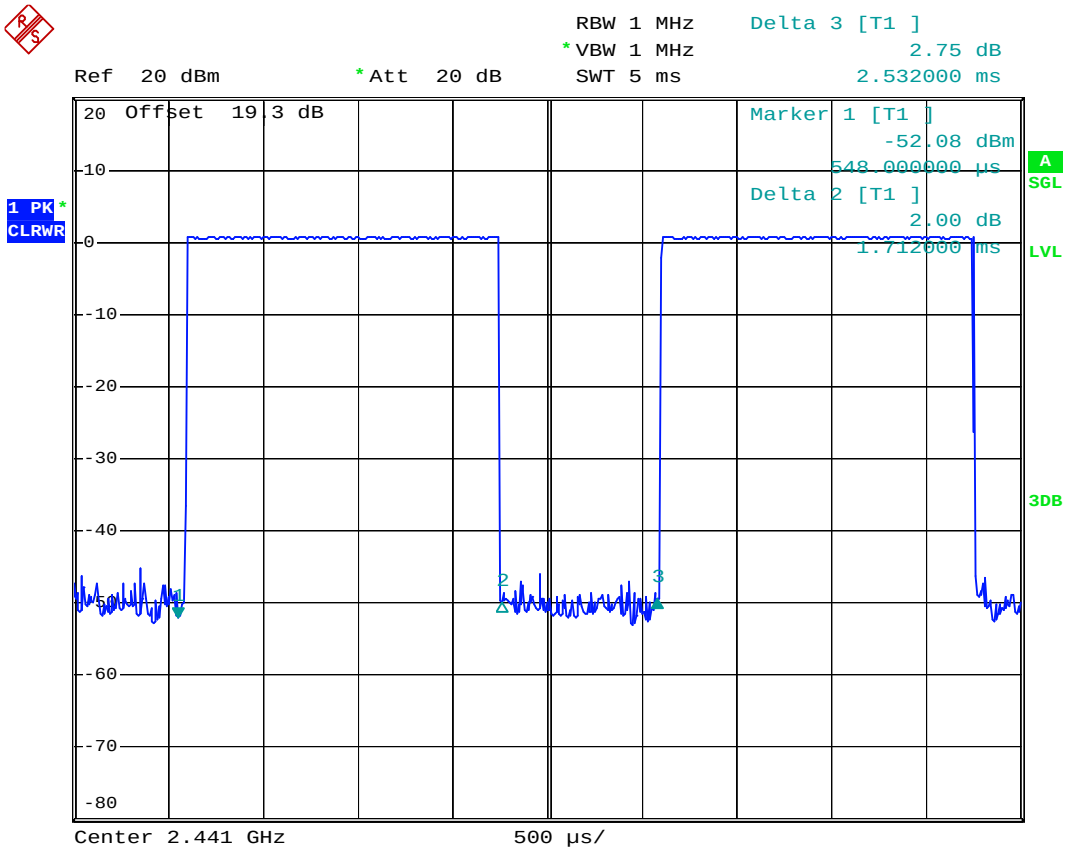


Date: 18.MAR.2008 19:31:18

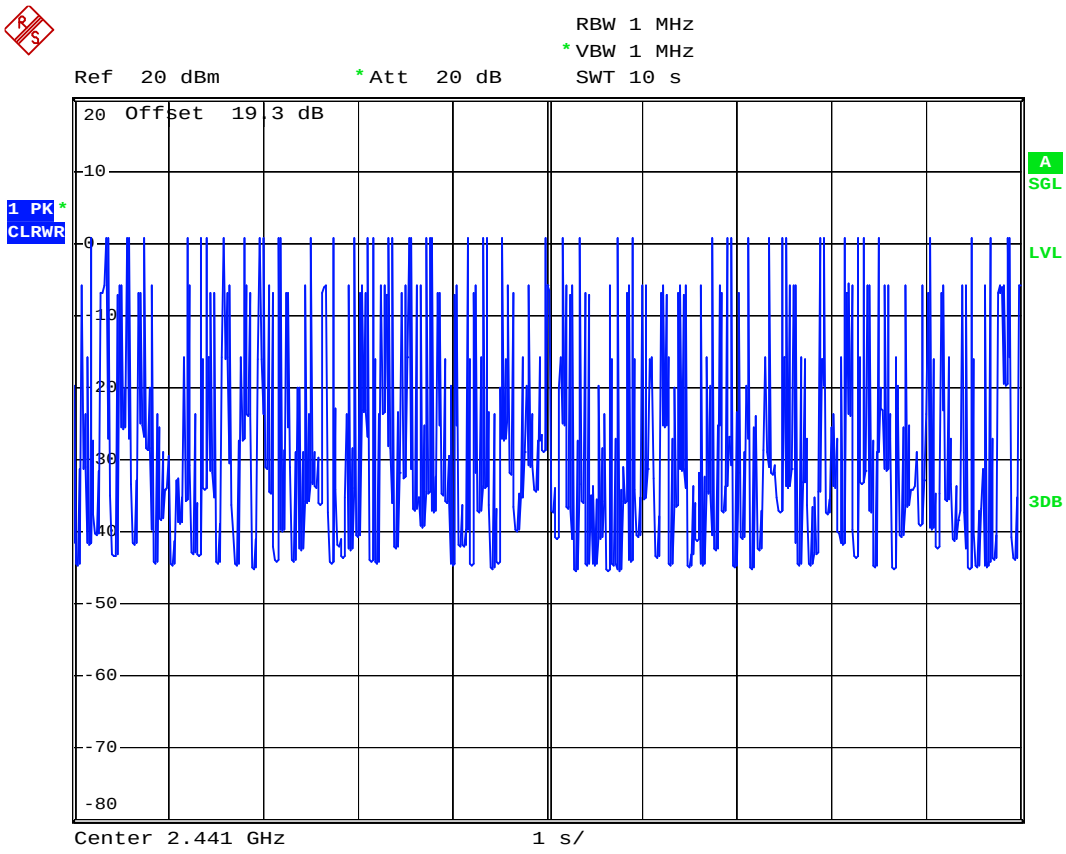


Date: 18.MAR.2008 19:32:59

DH3 (CH39)

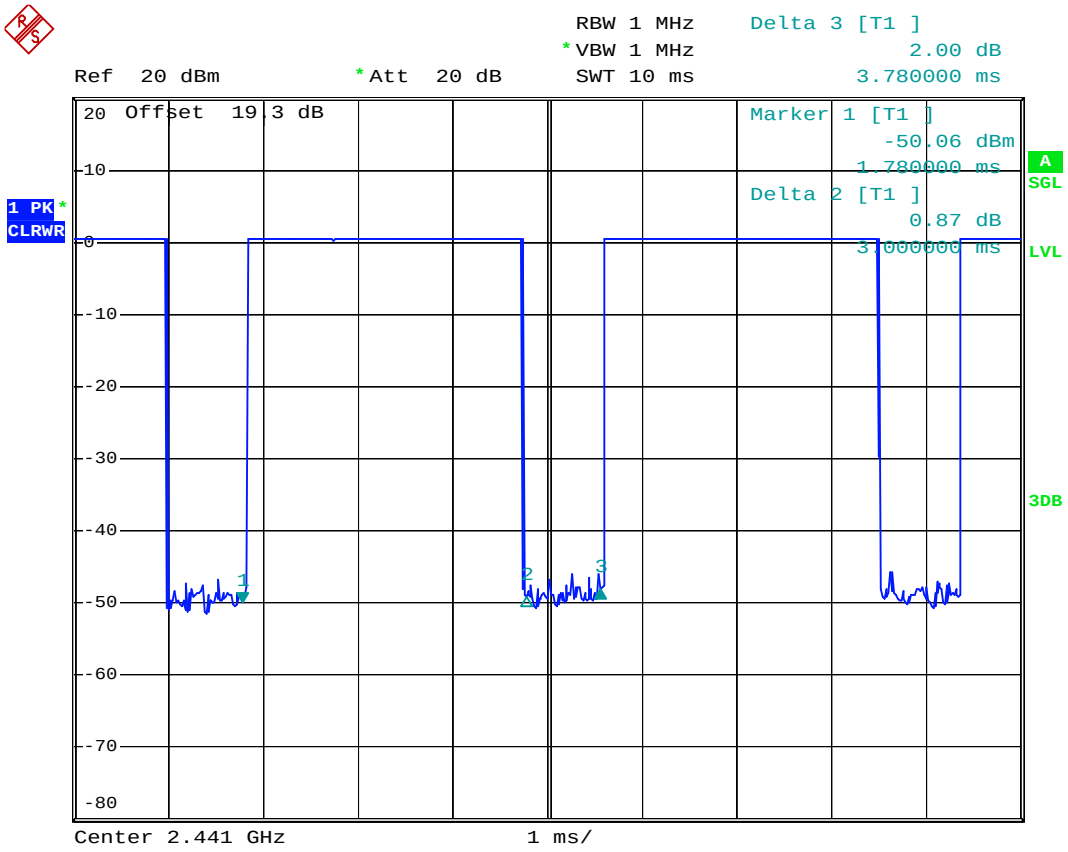


Date: 18.MAR.2008 19:31:54

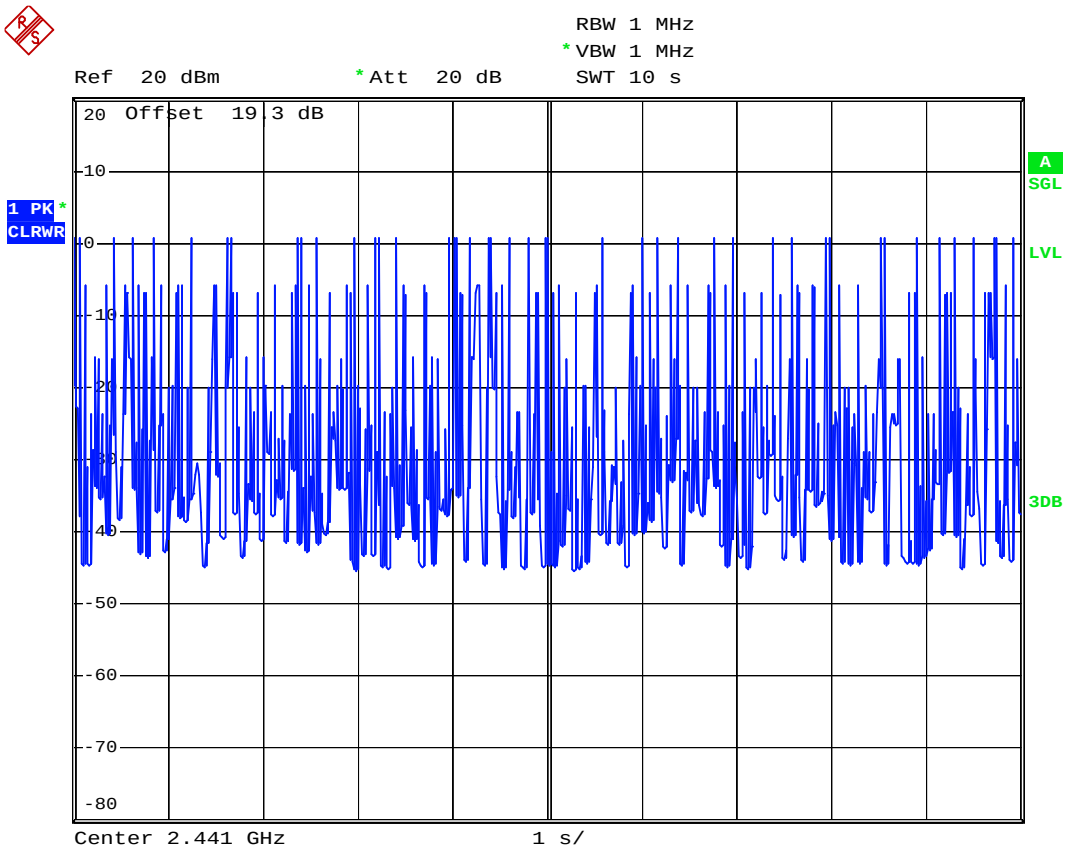


Date: 18.MAR.2008 19:33:25

DH5 (CH39)

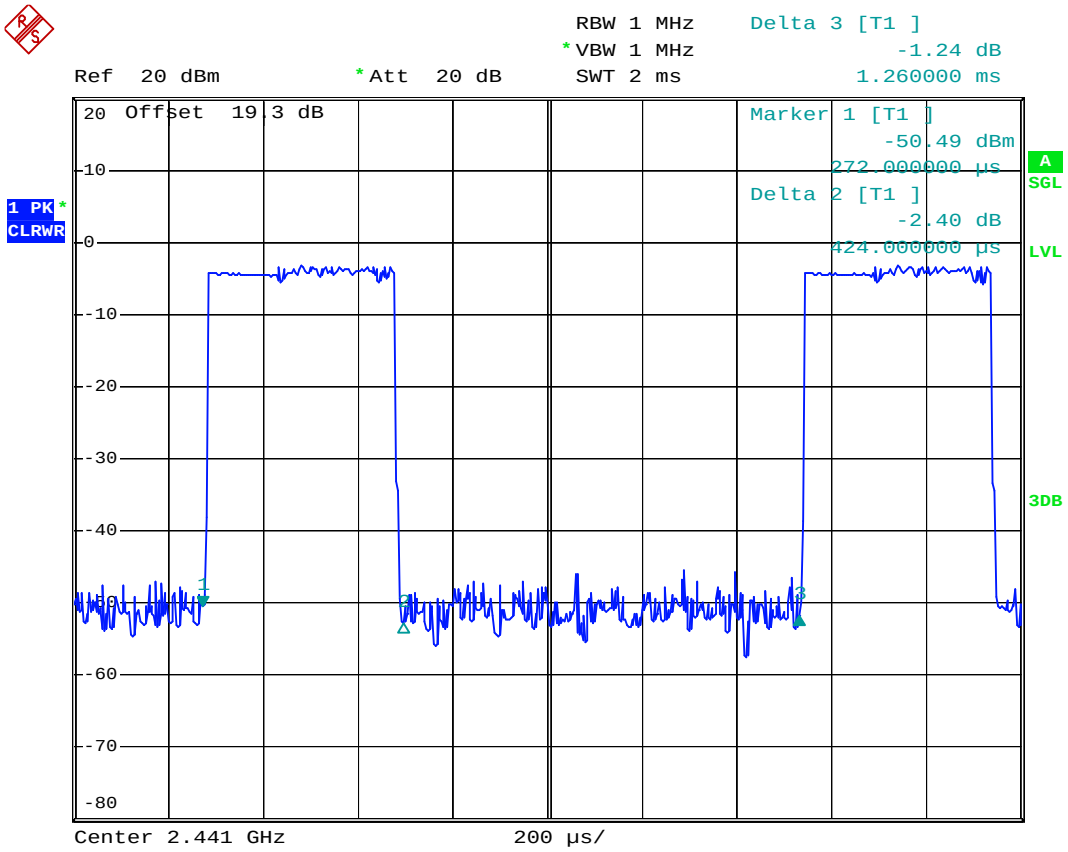


Date: 18.MAR.2008 19:32:31

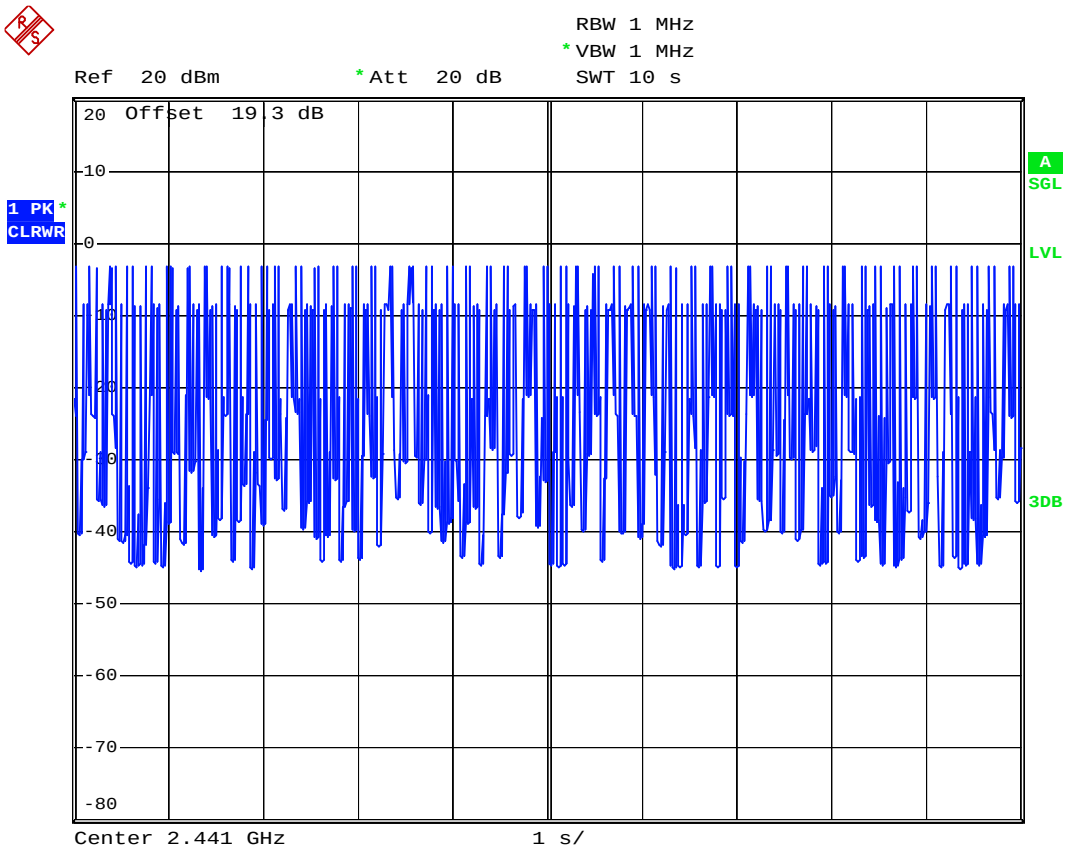


Date: 18.MAR.2008 19:33:47

2DH1 (CH39)

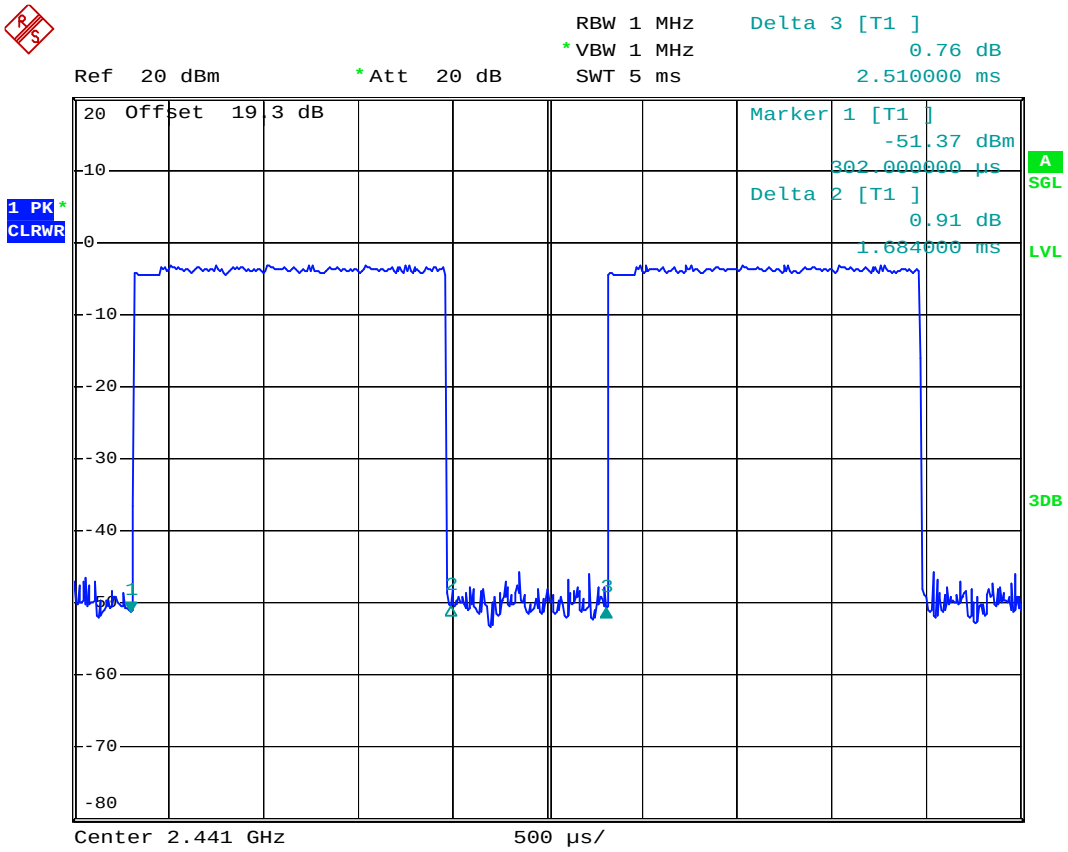


Date: 18.MAR.2008 20:00:57

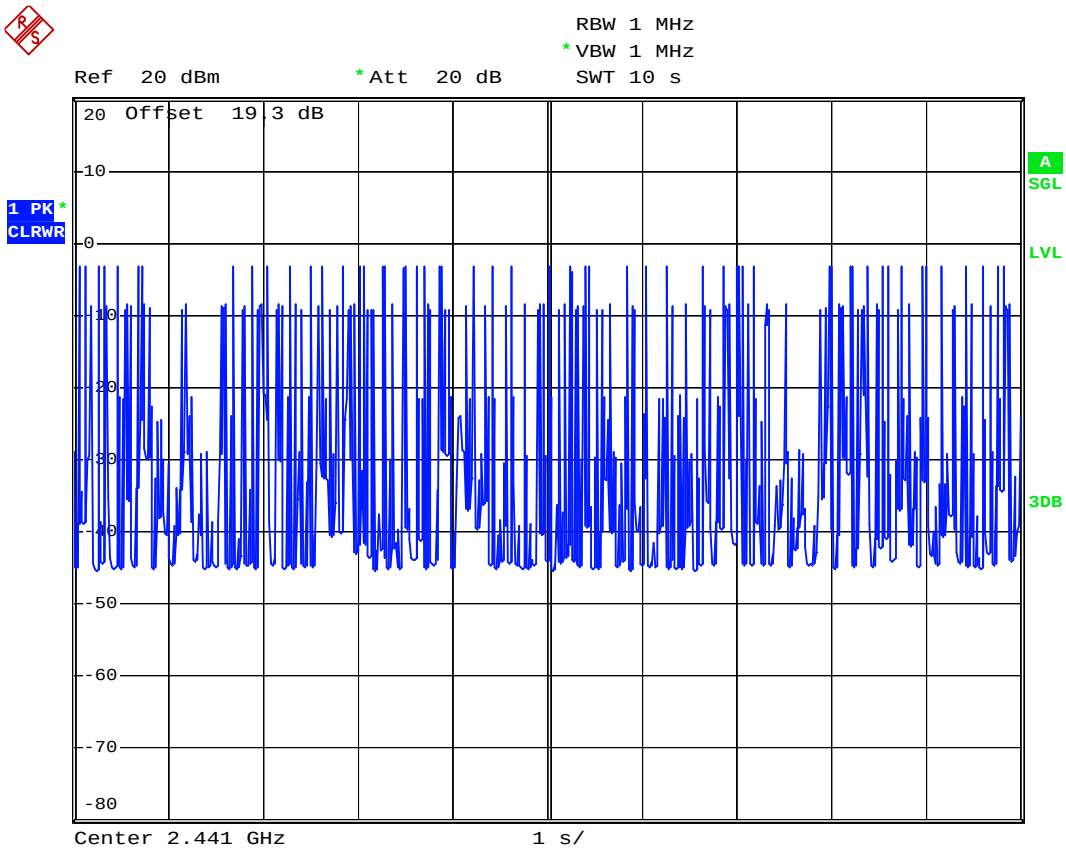


Date: 18.MAR.2008 20:07:05

2 DH3 (CH39)

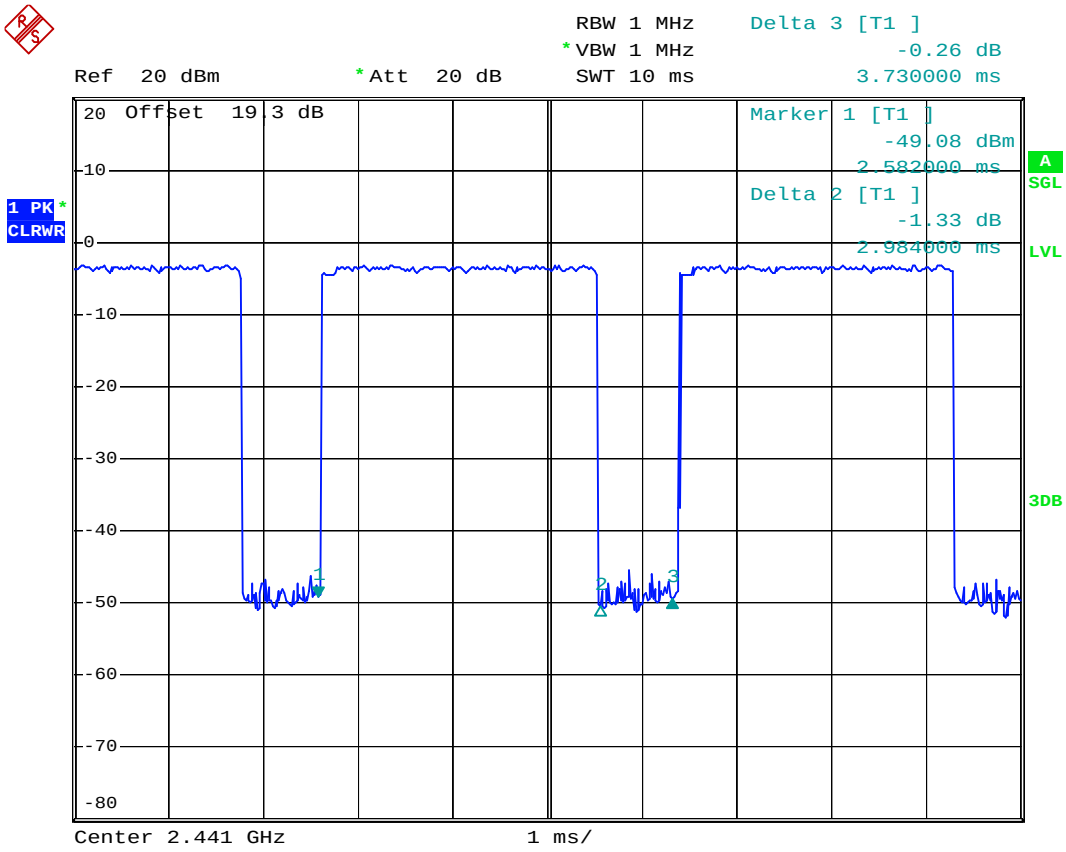


Date: 18.MAR.2008 20:01:26

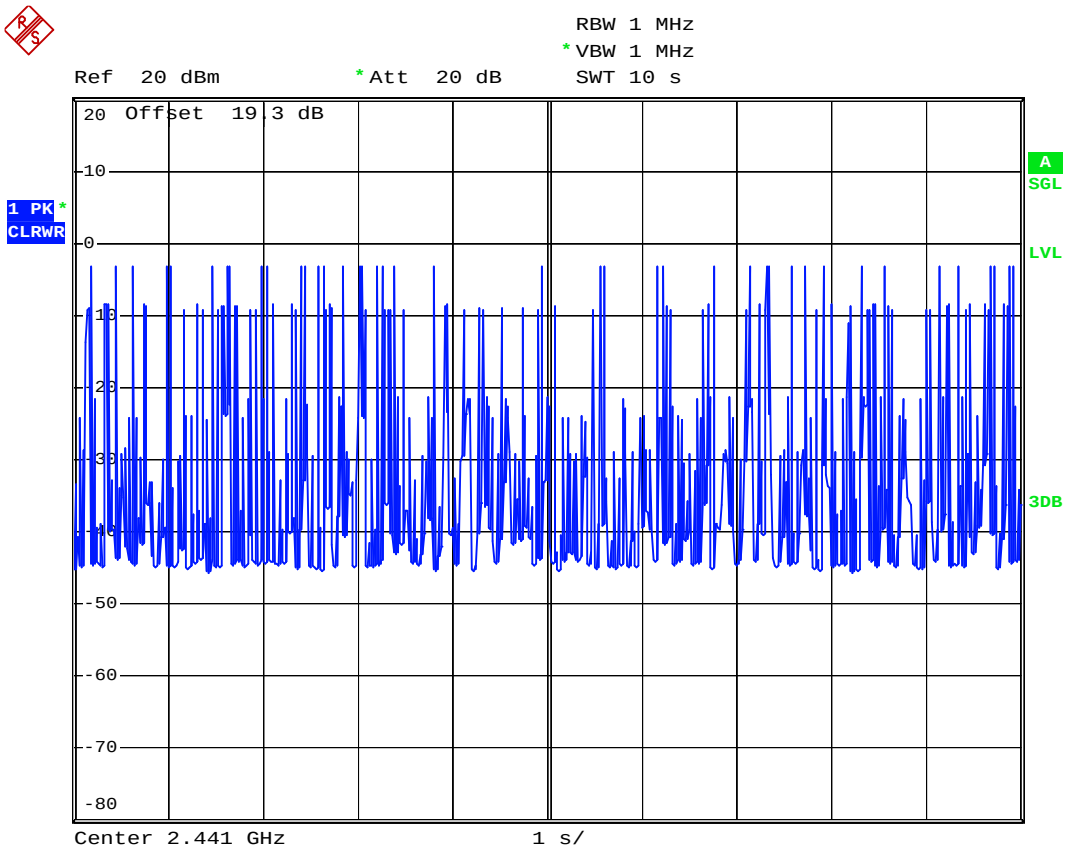


Date: 18.MAR.2008 20:06:27

2 DH5 (CH39)

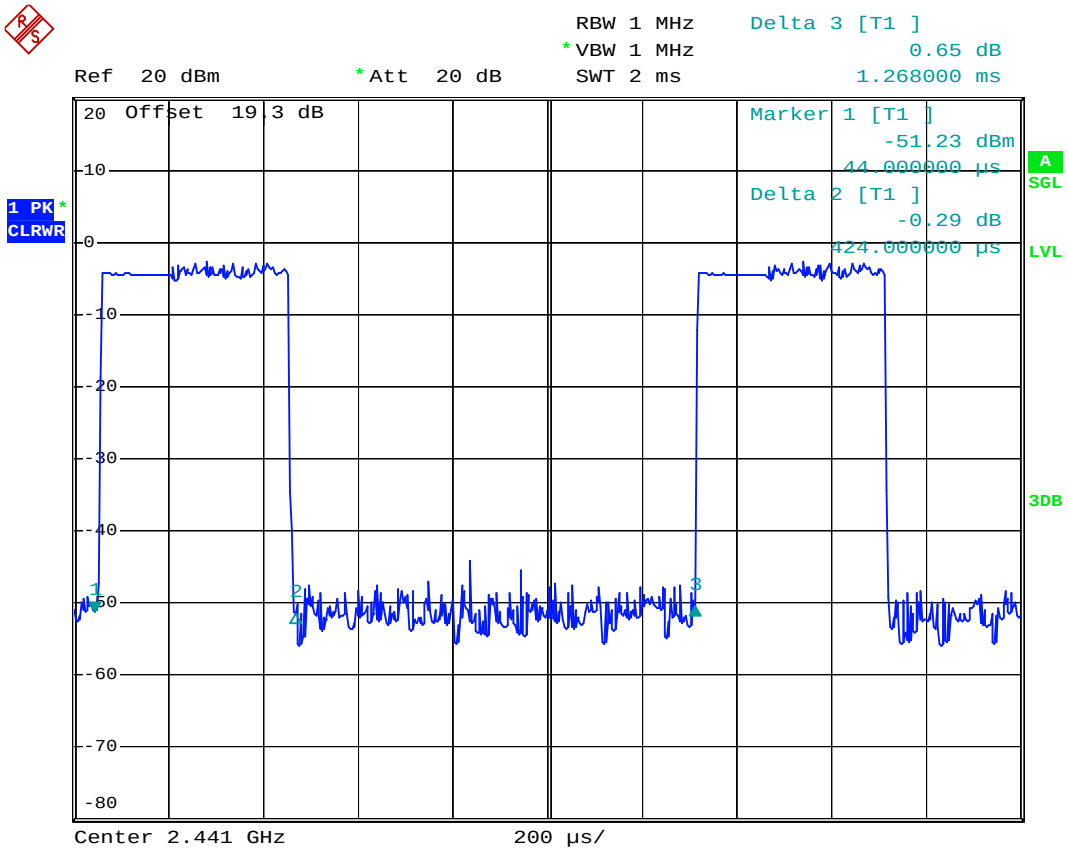


Date: 18.MAR.2008 20:01:55

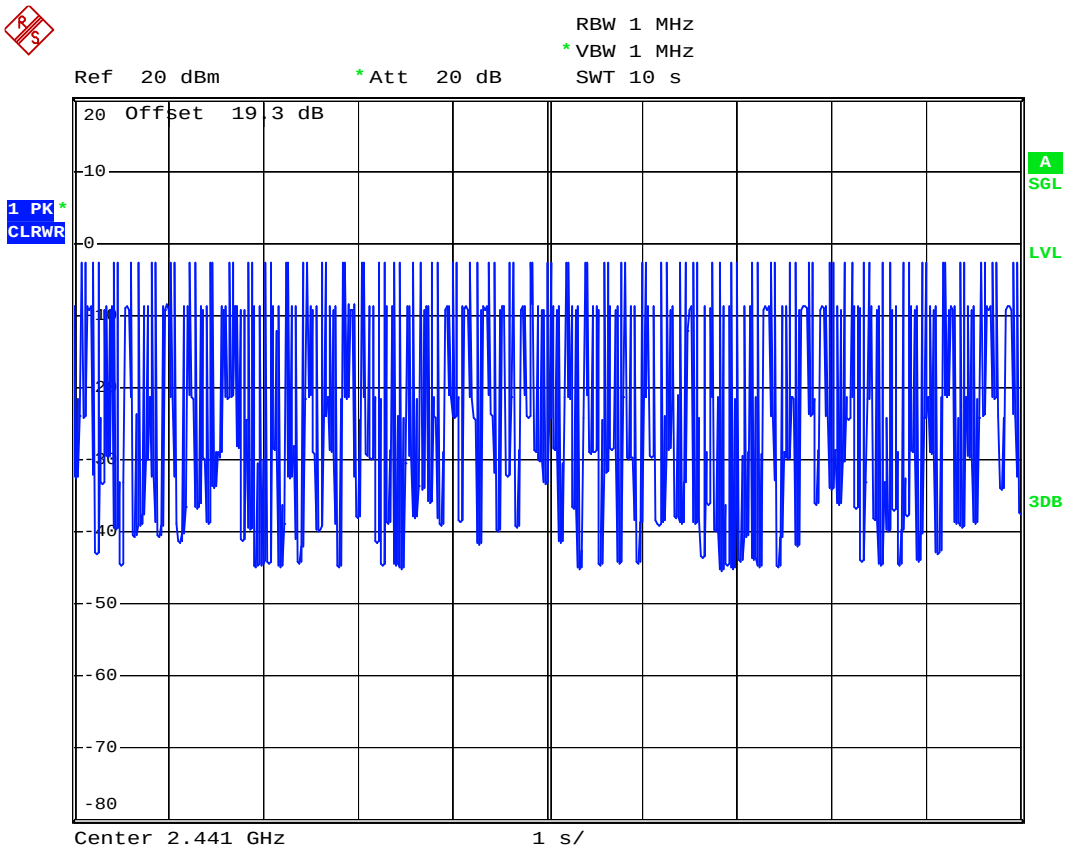


Date: 18.MAR.2008 20:07:35

3DH1 (CH39)

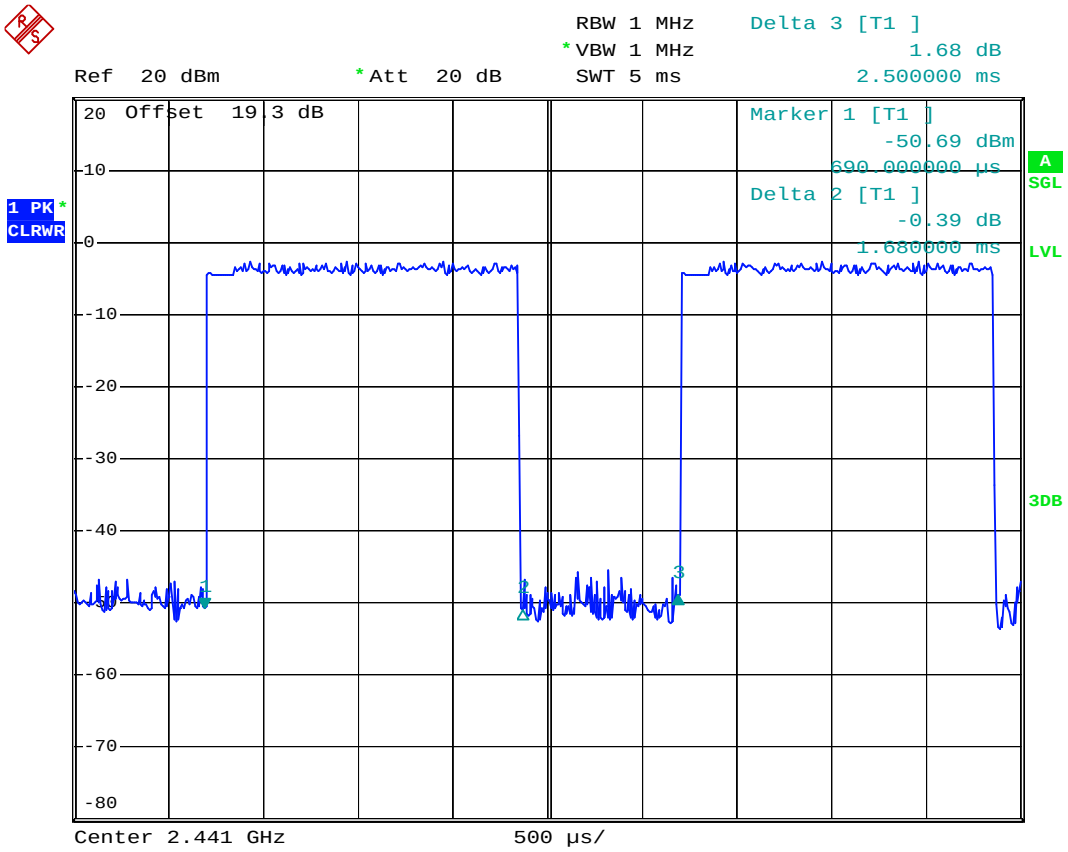


Date: 18.MAR.2008 20:03:01

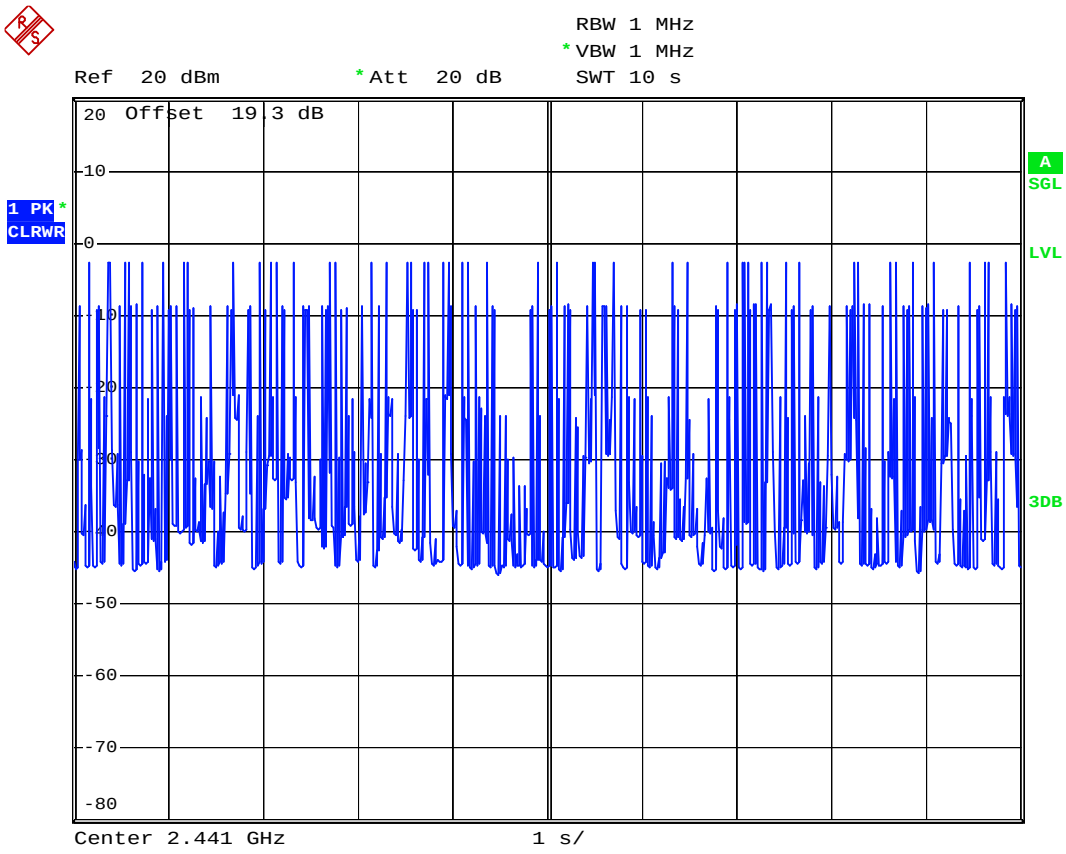


Date: 18.MAR.2008 20:07:58

3DH3 (CH39)

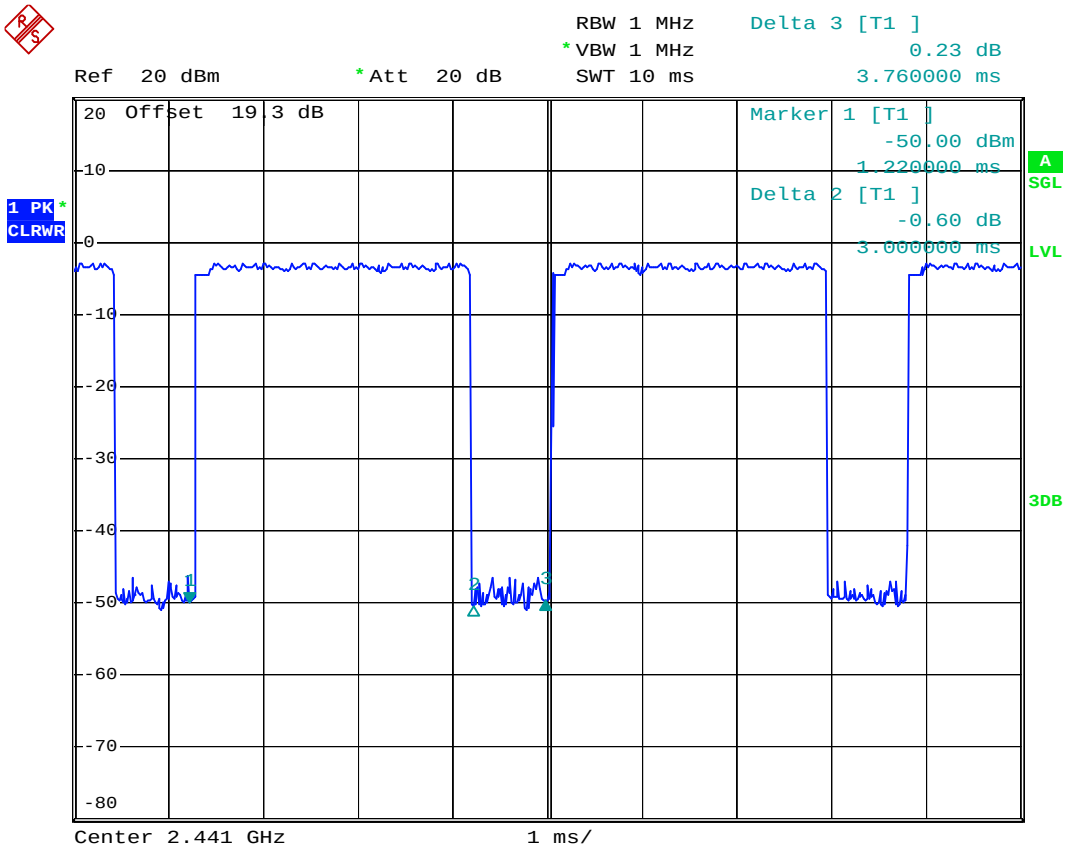


Date: 18.MAR.2008 20:03:35

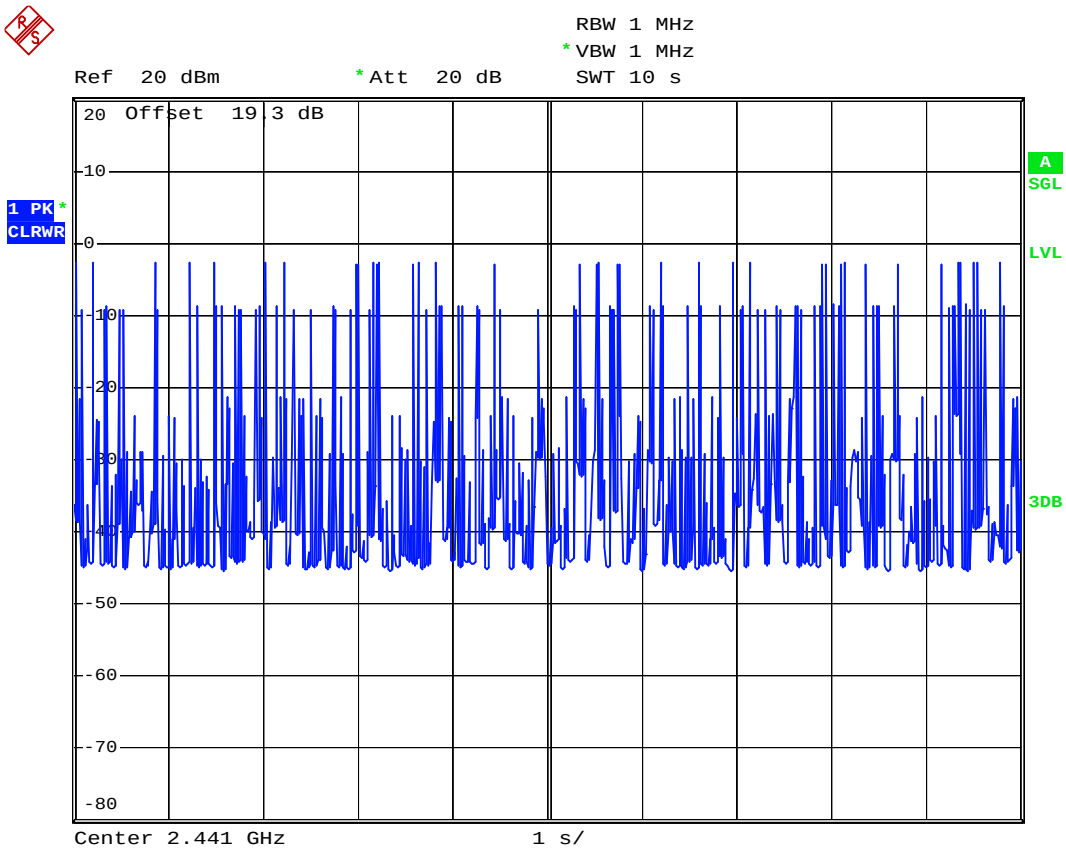


Date: 18.MAR.2008 20:08:17

3DH5 (CH39)



Date: 18.MAR.2008 20:04:36



Date: 18.MAR.2008 20:08:37

5.7 Peak Output Power Measurement

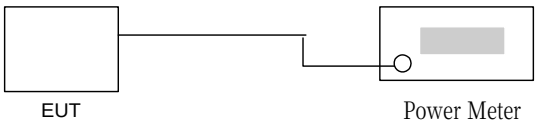
5.7.1 Measuring Instruments

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 : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark

- **BT(1Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt / dBm)
00	2402	1.12	1W / 30dBm
39	2441	0.95	1W / 30dBm
78	2480	-0.27	1W / 30dBm

- **BT EDR(2Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt / dBm)
00	2402	-1.81	1W / 30dBm
39	2441	-2.27	1W / 30dBm
78	2480	-3.64	1W / 30dBm

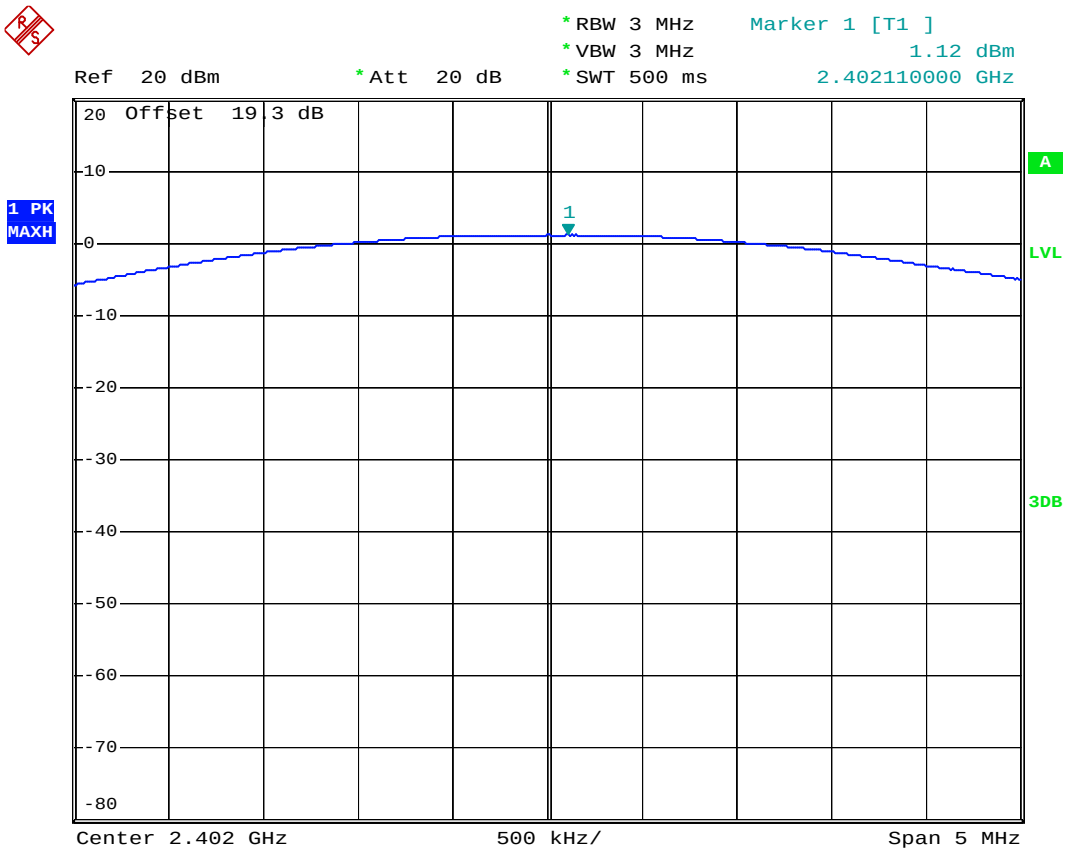
- **BT EDR(3Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt / dBm)
00	2402	-1.40	1W / 30dBm
39	2441	-1.77	1W / 30dBm
78	2480	-3.16	1W / 30dBm

5.7.5 Output Power

BT(1Mbps)

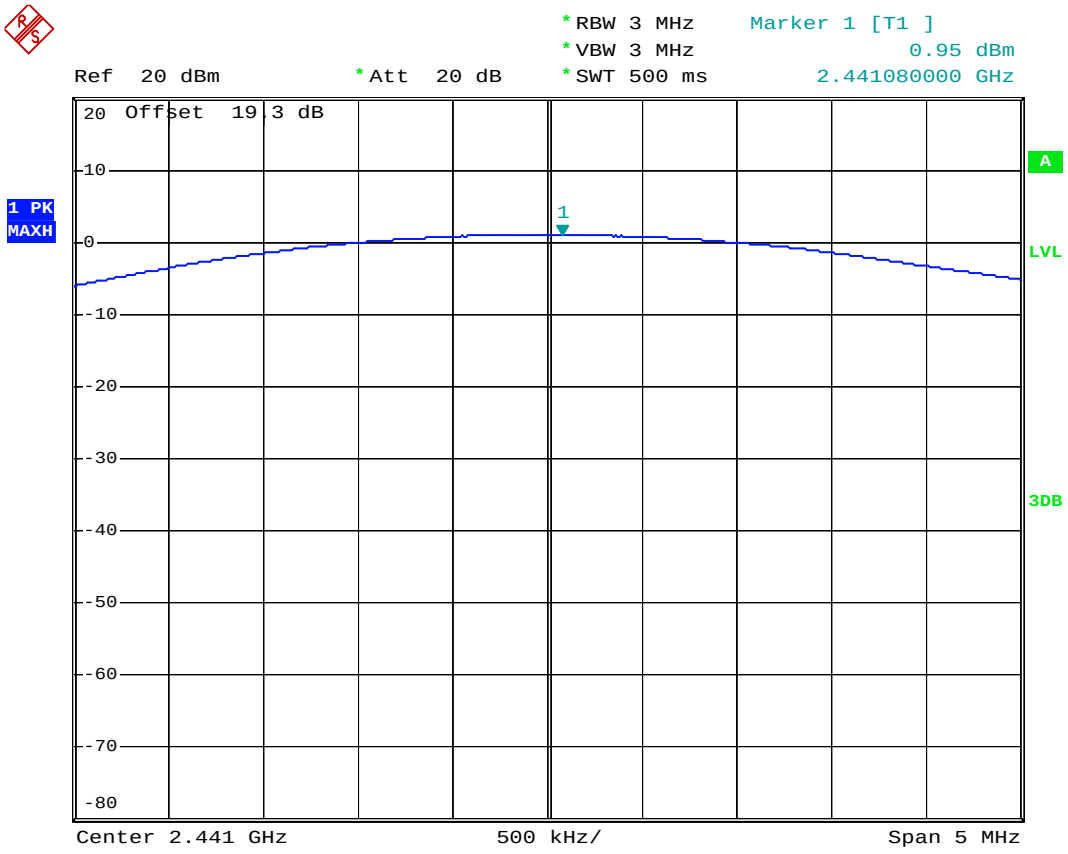
Mode : CH00 (2402MHz)



Date: 18.MAR.2008 18:56:29

BT(1Mbps)

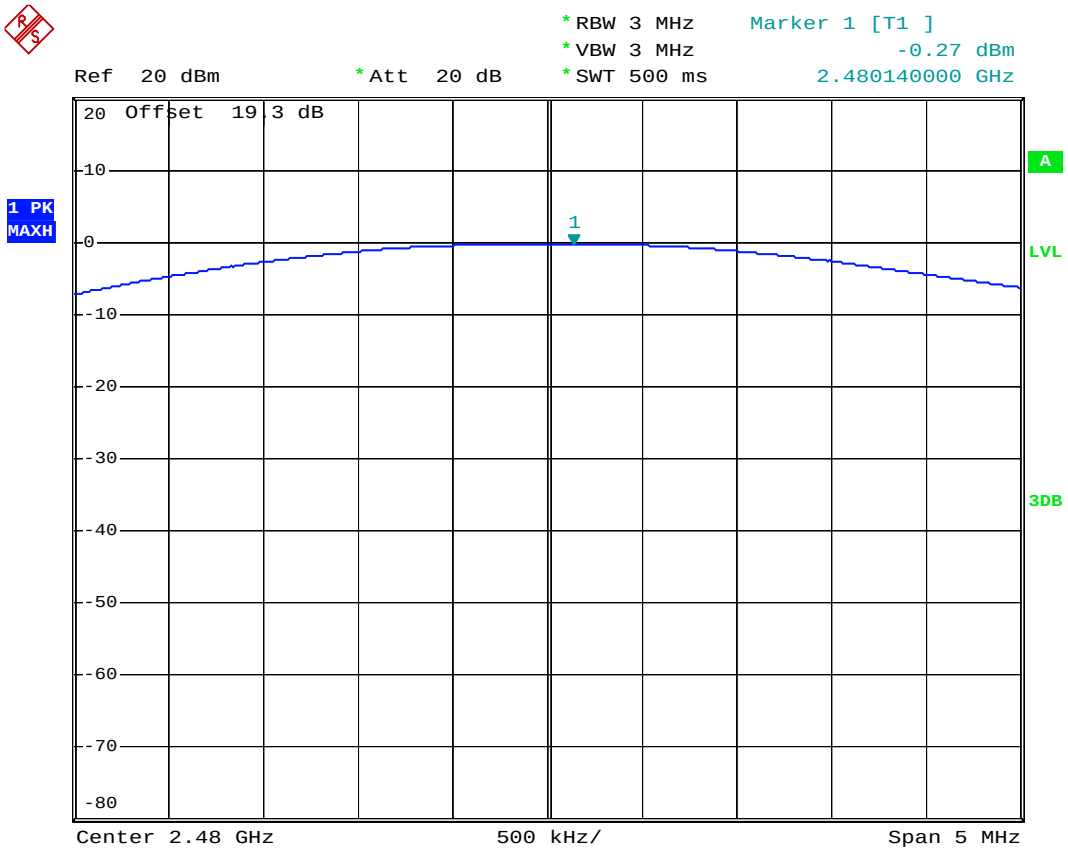
Mode : CH39 (2441MHz)



Date: 18.MAR.2008 18:57:27

Bluetooth(1Mbps)

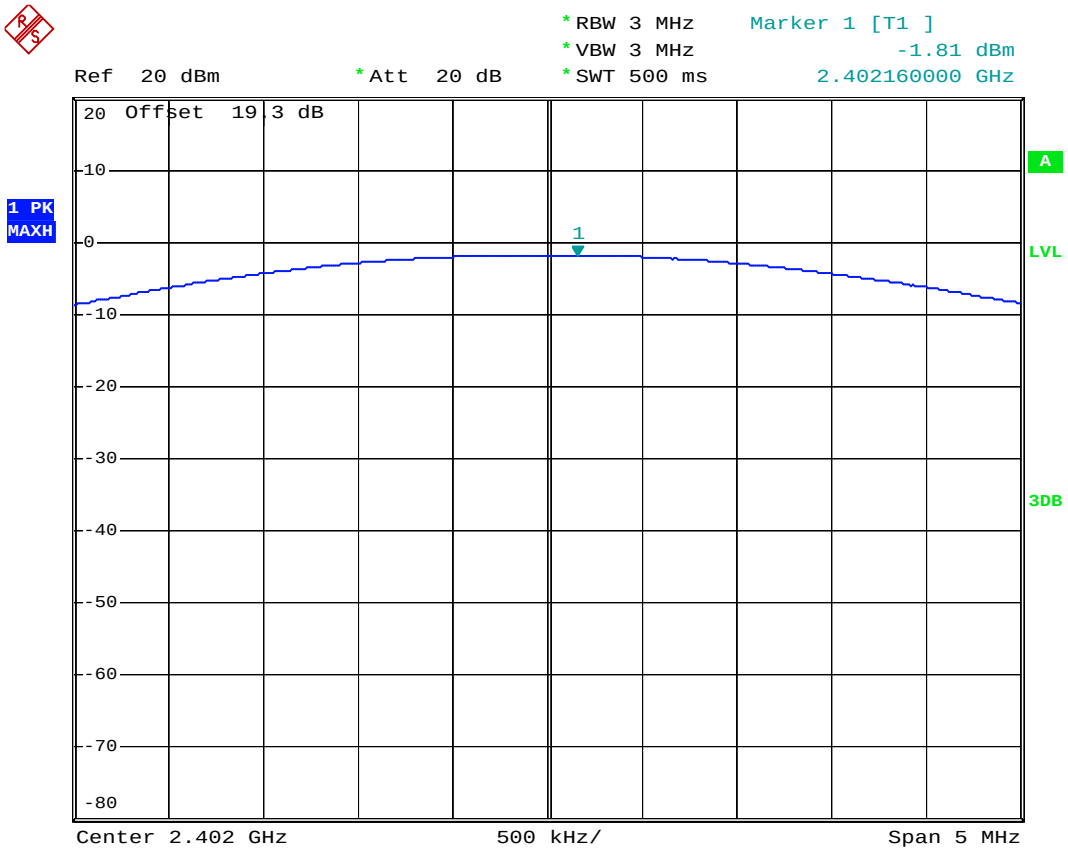
Mode : CH78 (2480MHz)



Date: 18.MAR.2008 18:58:51

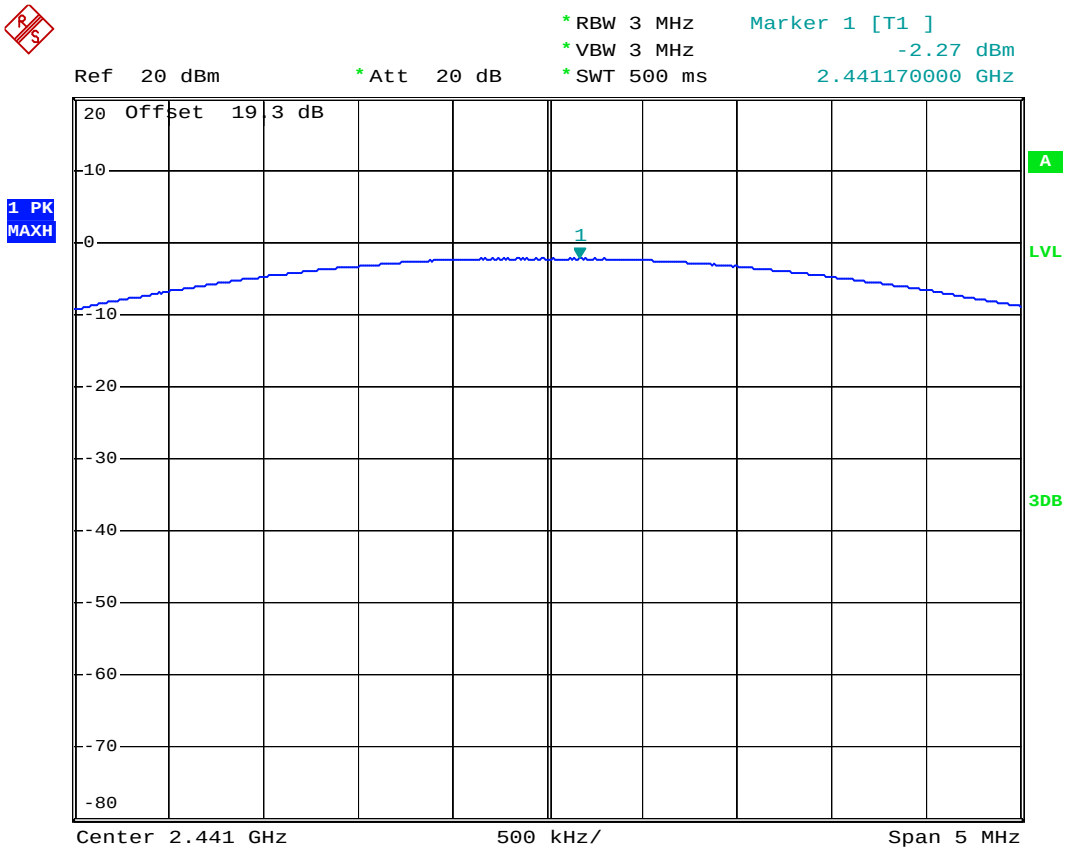
Bluetooth(2Mbps)

Mode : CH00 (2402MHz)



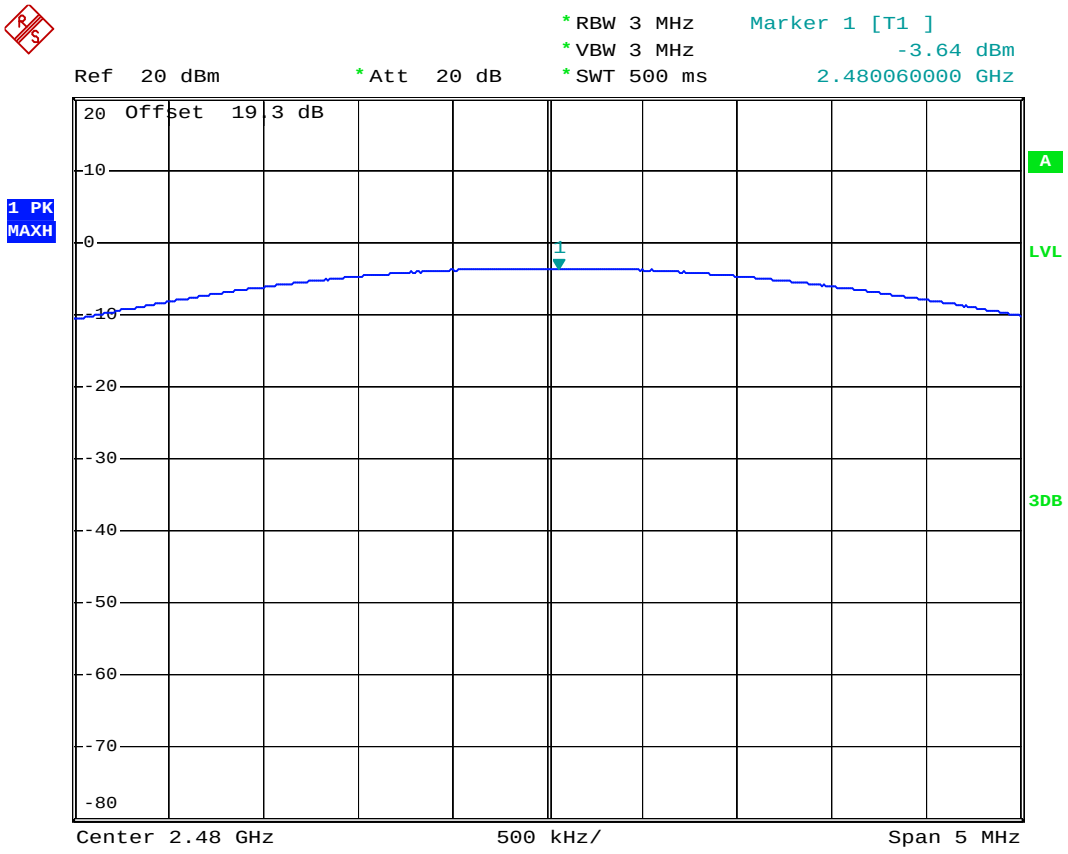
Bluetooth(2Mbps)

Mode : CH39 (2441MHz)



Bluetooth(2Mbps)

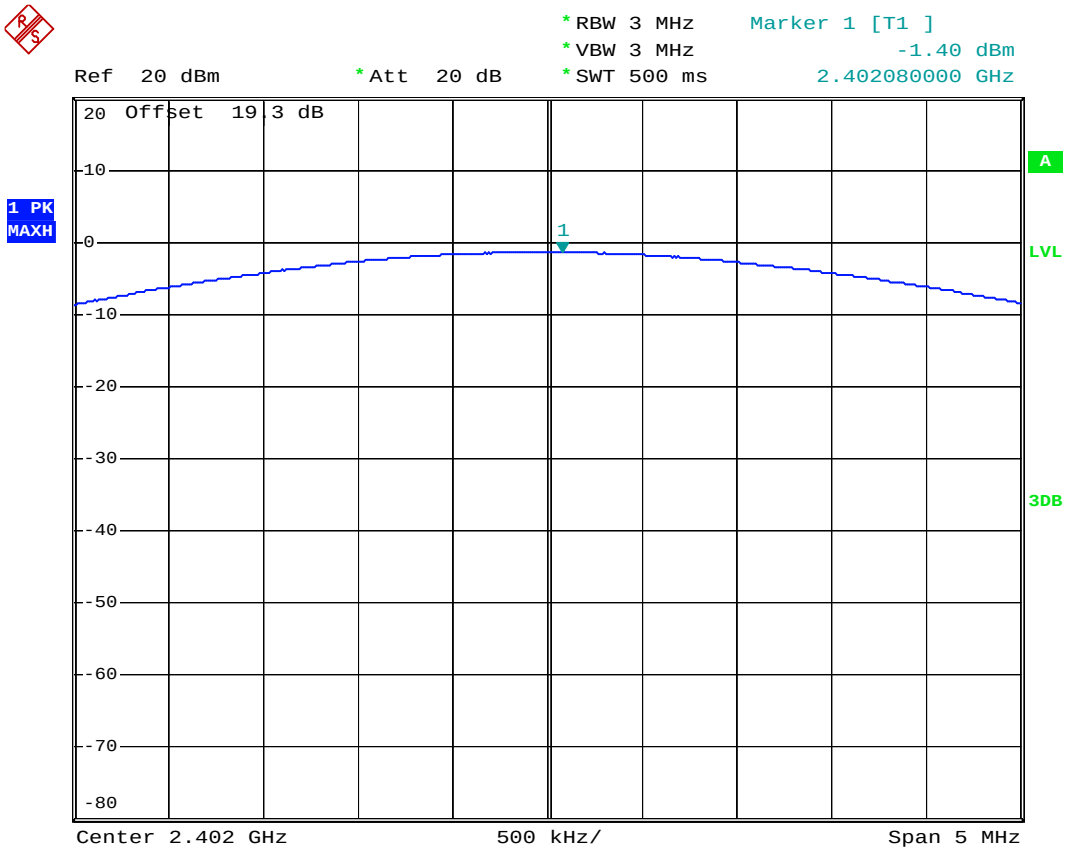
Mode : CH78 (2480MHz)



Date: 18.MAR.2008 19:03:11

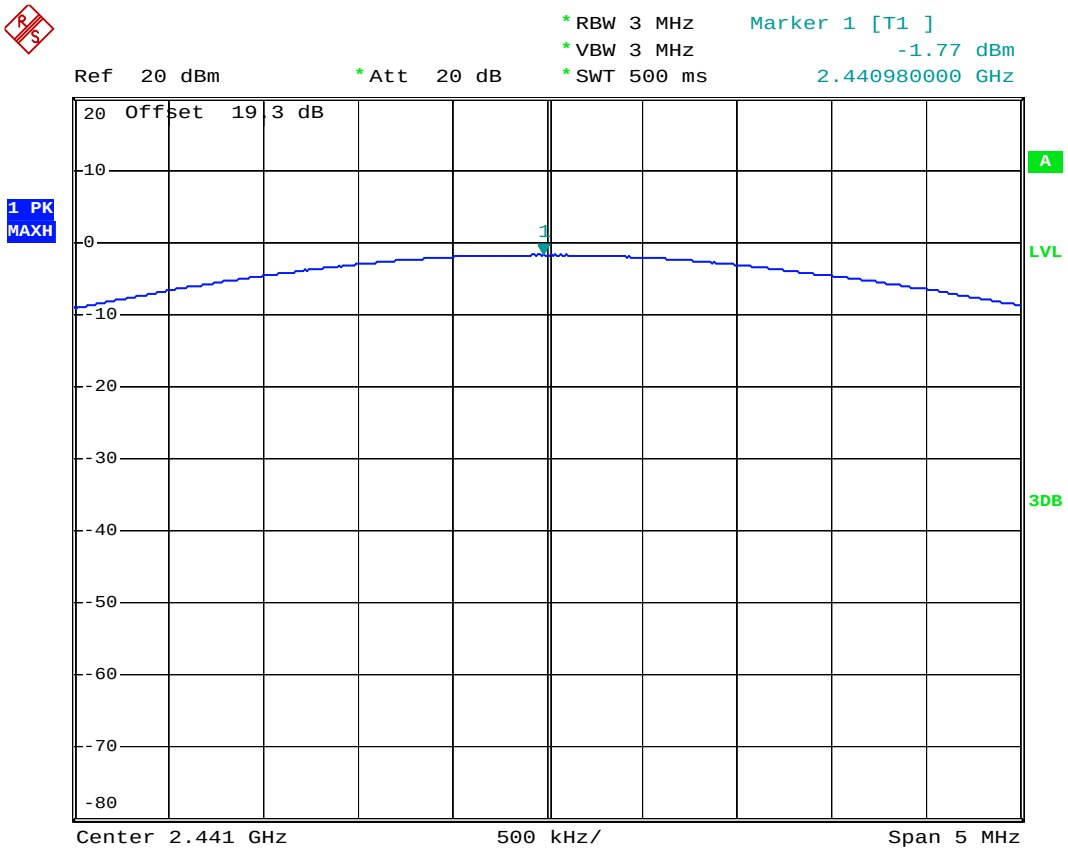
Bluetooth(3Mbps)

Mode : CH00 (2402MHz)



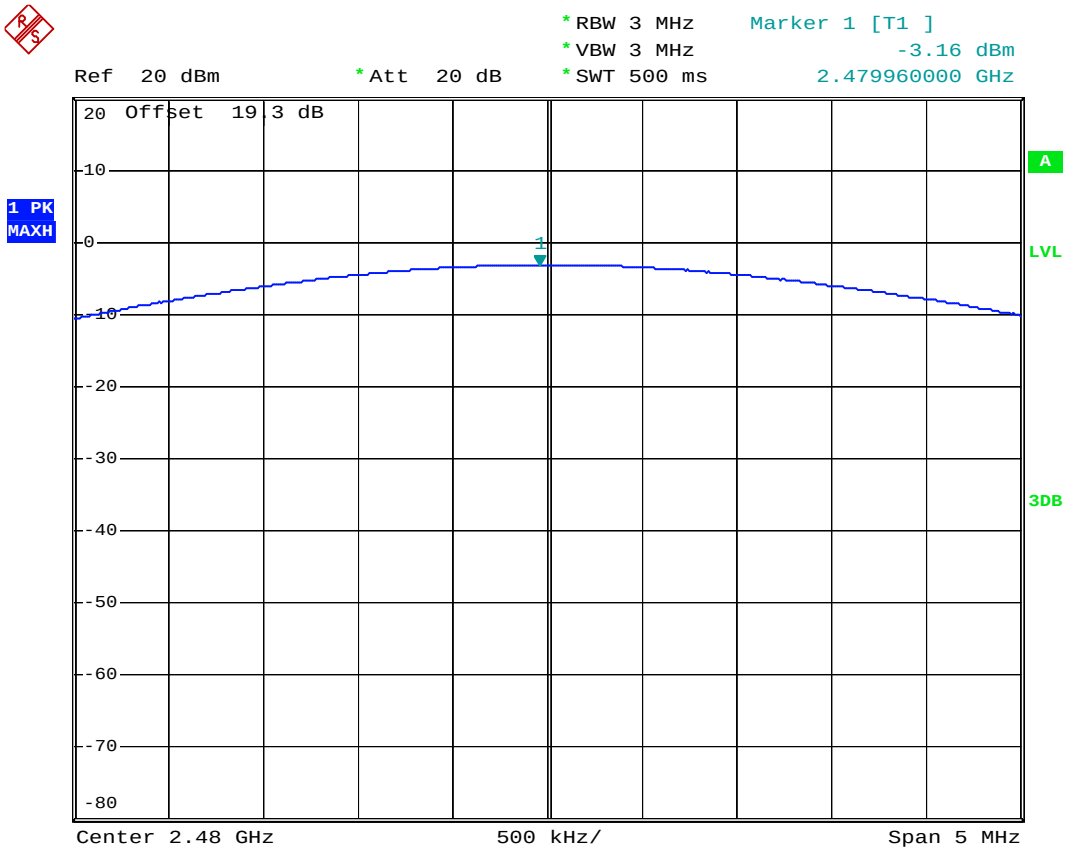
Bluetooth(3Mbps)

Mode : CH39 (2441MHz)



Bluetooth(3Mbps)

Mode : CH78 (2480MHz)



Date: 18.MAR.2008 19:05:36

5.8 Conducted Emission

5.8.1 Measuring Instruments

As describ ed in chapter 6 of this test Report.

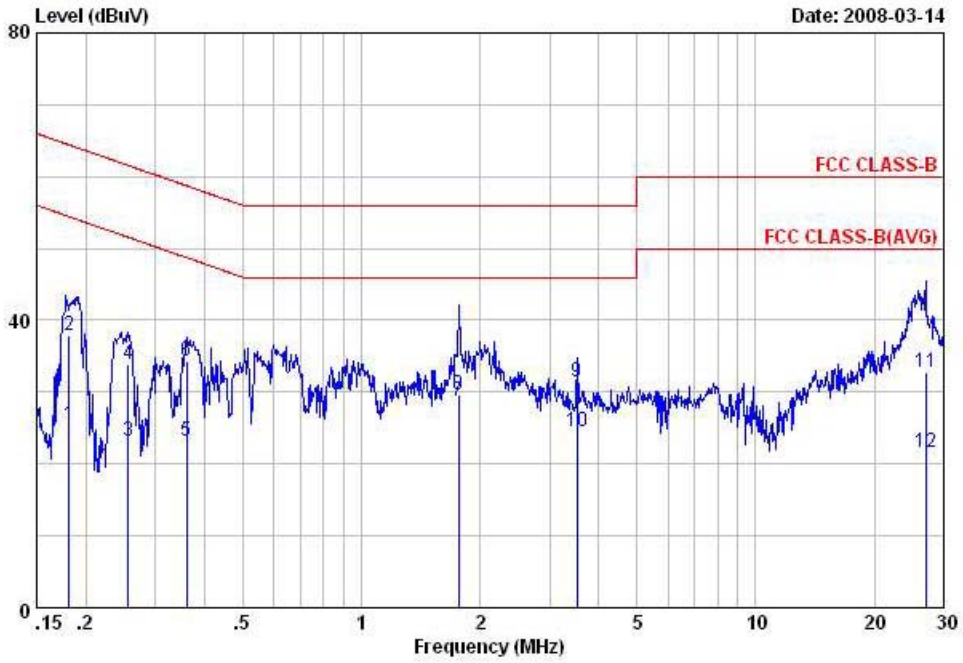
5.8.2 Test Procedures

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

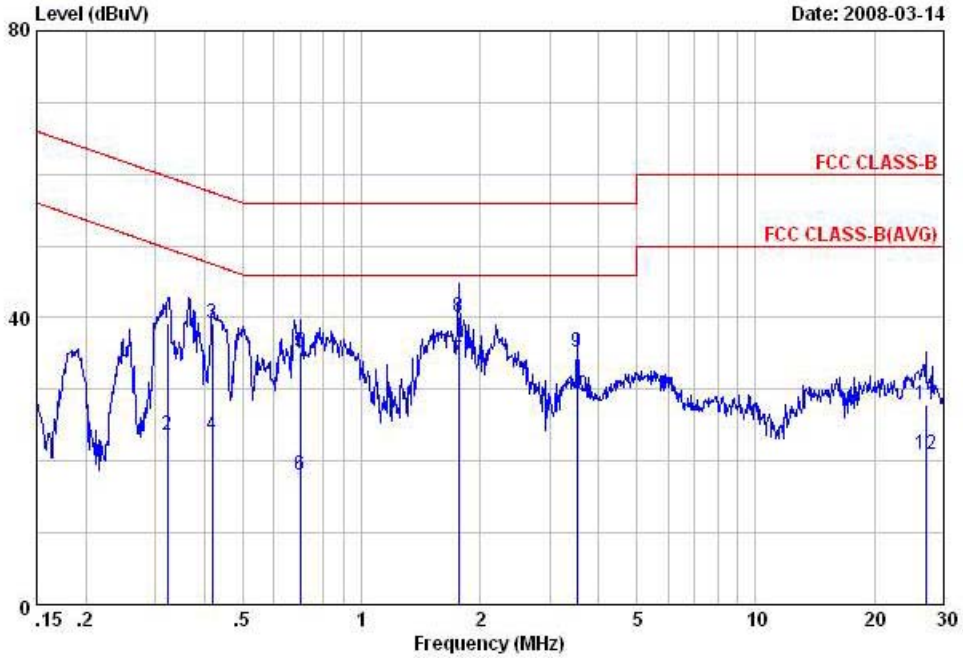
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark
- Test Mode : Mode 1

■ 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
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA850 Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.18	25.48	-38.96	64.44	15.40	-0.07	10.15	Average
2	0.18	37.78	-26.66	64.44	27.70	-0.07	10.15	QP
3	0.26	23.09	-38.47	61.56	13.00	-0.07	10.16	Average
4	0.26	33.79	-27.77	61.56	23.70	-0.07	10.16	QP
5	0.36	23.09	-35.65	58.74	12.99	-0.08	10.18	Average
6	0.36	34.31	-24.43	58.74	24.21	-0.08	10.18	QP
7	1.76	28.73	-27.27	56.00	18.52	-0.11	10.32	QP
8	1.76	29.66	-26.34	56.00	19.45	-0.11	10.32	Average
9	3.53	31.39	-24.61	56.00	21.13	-0.12	10.38	QP
10	3.53	24.46	-31.54	56.00	14.20	-0.12	10.38	Average
11	26.98	32.85	-27.15	60.00	21.95	0.22	10.68	QP
12	26.98	21.59	-38.41	60.00	10.69	0.22	10.68	Average

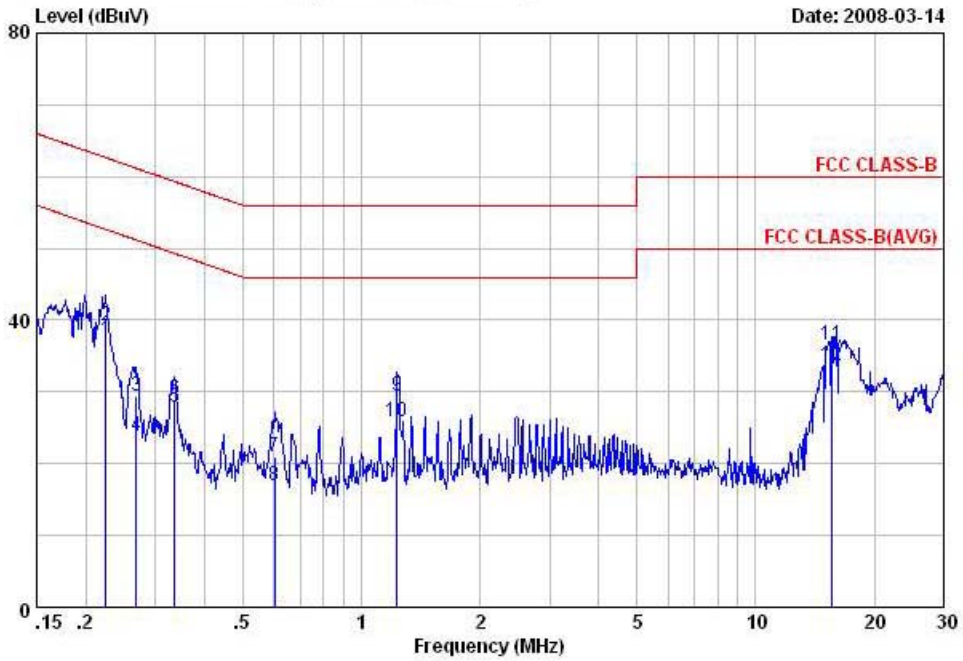


Site : C001-KS
Condition: FCC CLASS-B LISN-071001 NEUTRAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA850 Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.32	39.20	-20.47	59.67	29.10	-0.08	10.18	QP
2	0.32	23.57	-26.10	49.67	13.47	-0.08	10.18	Average
3	0.42	39.12	-18.34	57.46	29.01	-0.08	10.19	QP
4	0.42	23.69	-23.77	47.46	13.58	-0.08	10.19	Average
5	0.70	35.15	-20.85	56.00	25.00	-0.08	10.23	QP
6	0.70	18.15	-27.85	46.00	8.00	-0.08	10.23	Average
7	1.76	34.11	-11.89	46.00	23.90	-0.11	10.32	Average
8	1.76	40.21	-15.79	56.00	30.00	-0.11	10.32	QP
9	3.53	35.26	-20.74	56.00	25.00	-0.12	10.38	QP
10	3.53	29.26	-16.74	46.00	19.00	-0.12	10.38	Average
11	26.98	27.86	-32.14	60.00	17.00	0.18	10.68	QP
12	26.98	20.86	-29.14	50.00	10.00	0.18	10.68	Average

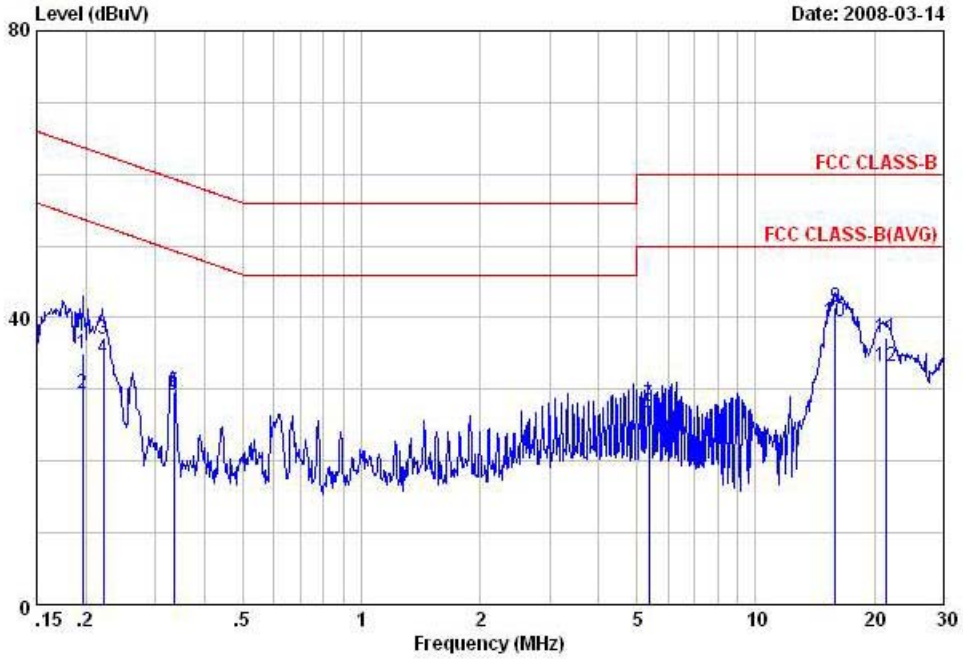
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark
- Test Mode : Mode 2

■ **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
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA850 Idle+BT Link+USB Link+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.22	37.25	-15.41	52.66	27.17	-0.07	10.15	Average
2	0.22	39.32	-23.34	62.66	29.24	-0.07	10.15	QP
3	0.27	29.44	-31.72	61.16	19.35	-0.07	10.16	QP
4	0.27	23.95	-27.21	51.16	13.86	-0.07	10.16	Average
5	0.34	27.90	-21.41	49.31	17.80	-0.08	10.18	Average
6	0.34	28.90	-30.41	59.31	18.80	-0.08	10.18	QP
7	0.60	20.98	-35.02	56.00	10.85	-0.09	10.22	QP
8	0.60	17.01	-28.99	46.00	6.88	-0.09	10.22	Average
9	1.23	29.34	-26.66	56.00	19.16	-0.10	10.28	QP
10	1.23	25.90	-20.10	46.00	15.72	-0.10	10.28	Average
11	15.55	36.51	-23.49	60.00	26.01	-0.02	10.52	QP
12	15.55	33.70	-16.30	50.00	23.20	-0.02	10.52	Average

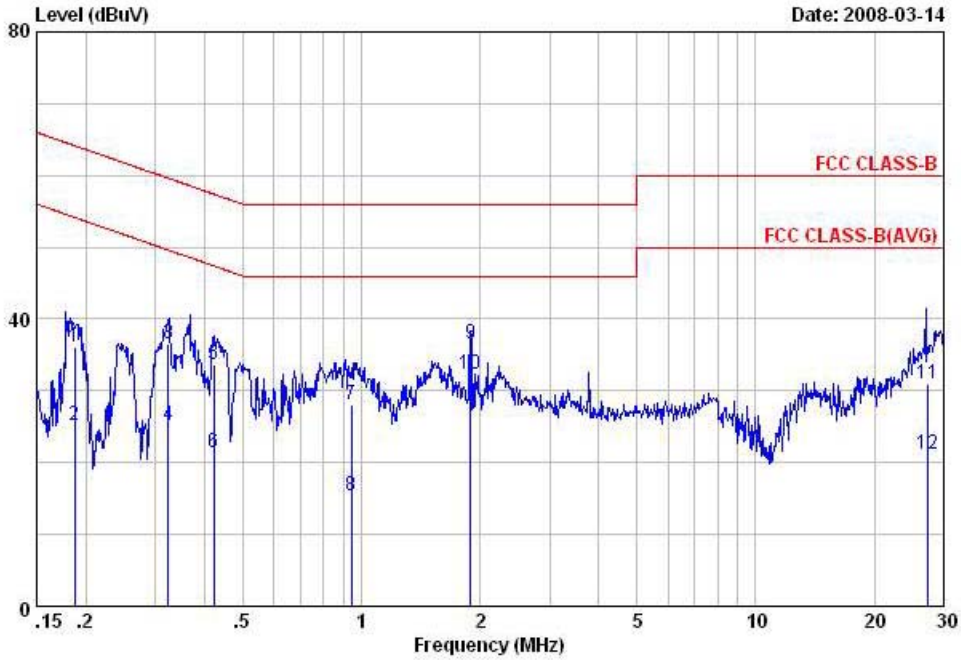


Site : C001-KS
Condition: FCC CLASS-B LISN-071001 NEUTRAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA850 Idle+BT Link+USB Link+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.20	35.08	-28.68	63.76	25.00	-0.07	10.15	QP
2	0.20	29.38	-24.38	53.76	19.30	-0.07	10.15	Average
3	0.22	37.08	-25.66	62.74	27.00	-0.07	10.15	QP
4	0.22	34.38	-18.36	52.74	24.30	-0.07	10.15	Average
5	0.33	29.60	-29.74	59.34	19.50	-0.08	10.18	QP
6	0.33	29.30	-20.04	49.34	19.20	-0.08	10.18	Average
7	5.37	27.87	-32.13	60.00	17.60	-0.13	10.40	QP
8	5.37	26.79	-23.21	50.00	16.52	-0.13	10.40	Average
9	15.90	41.52	-18.48	60.00	31.03	-0.03	10.52	QP
10	15.90	39.52	-10.48	50.00	29.03	-0.03	10.52	Average
11	21.39	37.27	-22.73	60.00	26.61	0.07	10.59	QP
12	21.39	33.27	-16.73	50.00	22.61	0.07	10.59	Average

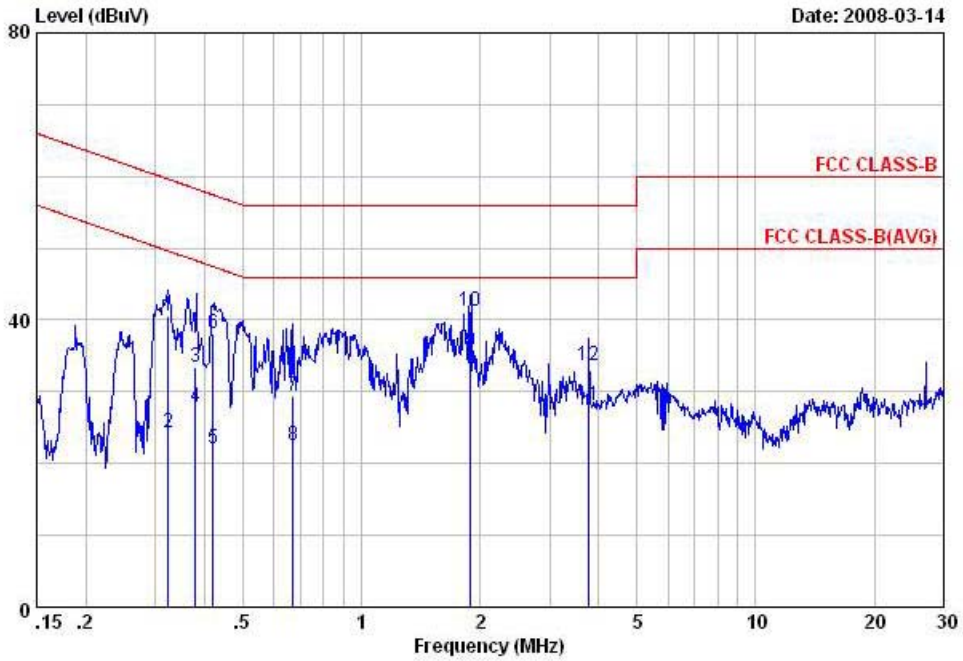
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark
- Test Mode : Mode 3

■ **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
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA 1900 Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.19	36.08	-28.09	64.17	26.00	-0.07	10.15	QP
2	0.19	25.08	-29.09	54.17	15.00	-0.07	10.15	Average
3	0.32	36.60	-23.02	59.62	26.50	-0.08	10.18	QP
4	0.32	25.10	-24.52	49.62	15.00	-0.08	10.18	Average
5	0.42	33.62	-23.78	57.40	23.51	-0.08	10.19	QP
6	0.42	21.32	-26.08	47.40	11.21	-0.08	10.19	Average
7	0.94	28.16	-27.84	56.00	18.00	-0.10	10.26	QP
8	0.94	15.46	-30.54	46.00	5.30	-0.10	10.26	Average
9	1.89	36.51	-19.49	56.00	26.30	-0.11	10.32	QP
10	1.89	32.21	-13.79	46.00	22.00	-0.11	10.32	Average
11	27.20	30.90	-29.10	60.00	20.00	0.22	10.68	QP
12	27.20	21.10	-28.90	50.00	10.20	0.22	10.68	Average

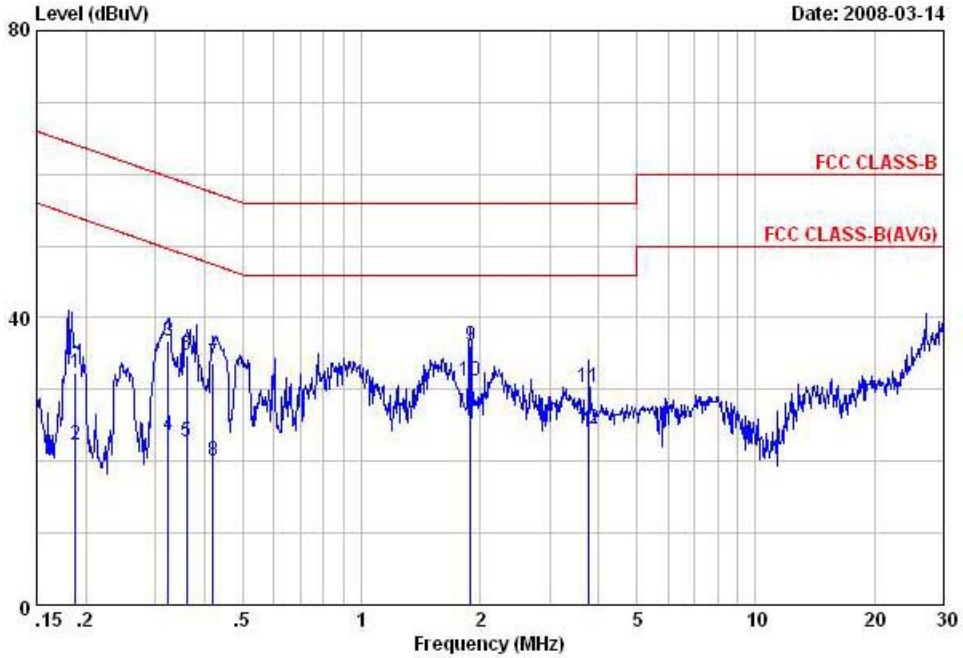


Site : C001-KS
Condition: FCC CLASS-B LISN-071001 NEUTRAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA 1900 Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.32	40.66	-18.95	59.61	30.56	-0.08	10.18	QP
2	0.32	24.30	-25.31	49.61	14.20	-0.08	10.18	Average
3	0.38	33.51	-24.77	58.28	23.40	-0.08	10.19	QP
4	0.38	27.81	-20.47	48.28	17.70	-0.08	10.19	Average
5	0.42	22.02	-25.41	47.43	11.91	-0.08	10.19	Average
6	0.42	38.22	-19.21	57.43	28.11	-0.08	10.19	QP
7	0.67	29.45	-26.55	56.00	19.30	-0.08	10.23	QP
8	0.67	22.45	-23.55	46.00	12.30	-0.08	10.23	Average
9	1.89	35.71	-10.29	46.00	25.50	-0.11	10.32	Average
10	1.89	41.21	-14.79	56.00	31.00	-0.11	10.32	QP
11	3.78	28.16	-17.84	46.00	17.91	-0.13	10.38	Average
12	3.78	33.66	-22.34	56.00	23.41	-0.13	10.38	QP

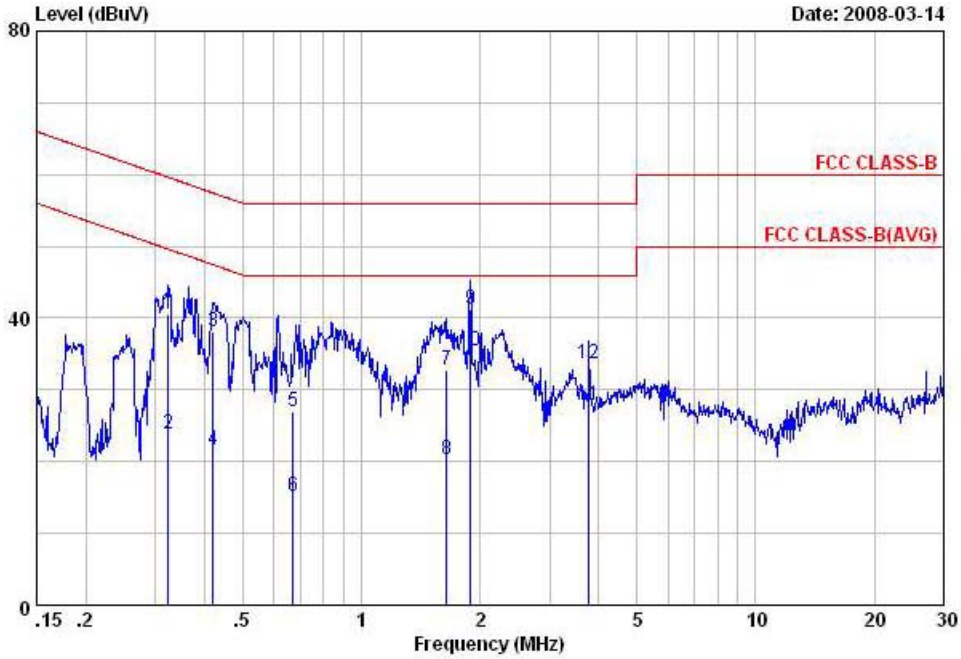
- Temperature : 25~28℃
- Relative Humidity : 39~42%
- Test Enginner : Mark
- Test Mode : Mode 4

■ **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
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA AWS Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.19	32.38	-31.75	64.13	22.30	-0.07	10.15	QP
2	0.19	22.38	-31.75	54.13	12.30	-0.07	10.15	Average
3	0.32	36.80	-22.82	59.62	26.70	-0.08	10.18	QP
4	0.32	23.70	-25.92	49.62	13.60	-0.08	10.18	Average
5	0.36	22.71	-26.00	48.71	12.61	-0.08	10.18	Average
6	0.36	34.71	-24.00	58.71	24.61	-0.08	10.18	QP
7	0.42	33.72	-23.73	57.45	23.61	-0.08	10.19	QP
8	0.42	20.12	-27.33	47.45	10.01	-0.08	10.19	Average
9	1.89	36.11	-19.89	56.00	25.90	-0.11	10.32	QP
10	1.89	31.11	-14.89	46.00	20.90	-0.11	10.32	Average
11	3.78	30.26	-25.74	56.00	20.01	-0.13	10.38	QP
12	3.78	24.46	-21.54	46.00	14.21	-0.13	10.38	Average



Site : C001-KS
Condition: FCC CLASS-B LISN-071001 NEUTRAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : CDMA AWS Idle+BT Link+Adaptor+camera
: +earphone+GPS Rx

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.32	40.60	-19.02	59.62	30.50	-0.08	10.18	QP
2	0.32	23.90	-25.72	49.62	13.80	-0.08	10.18	Average
3	0.42	38.12	-19.31	57.43	28.01	-0.08	10.19	QP
4	0.42	21.72	-25.71	47.43	11.61	-0.08	10.19	Average
5	0.67	26.95	-29.05	56.00	16.80	-0.08	10.23	QP
6	0.67	15.15	-30.85	46.00	5.00	-0.08	10.23	Average
7	1.65	32.80	-23.20	56.00	22.60	-0.11	10.31	QP
8	1.65	20.20	-25.80	46.00	10.00	-0.11	10.31	Average
9	1.89	41.21	-14.79	56.00	31.00	-0.11	10.32	QP
10	1.89	35.51	-10.49	46.00	25.30	-0.11	10.32	Average
11	3.78	27.95	-18.05	46.00	17.70	-0.13	10.38	Average
12	3.78	33.56	-22.44	56.00	23.31	-0.13	10.38	QP

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.

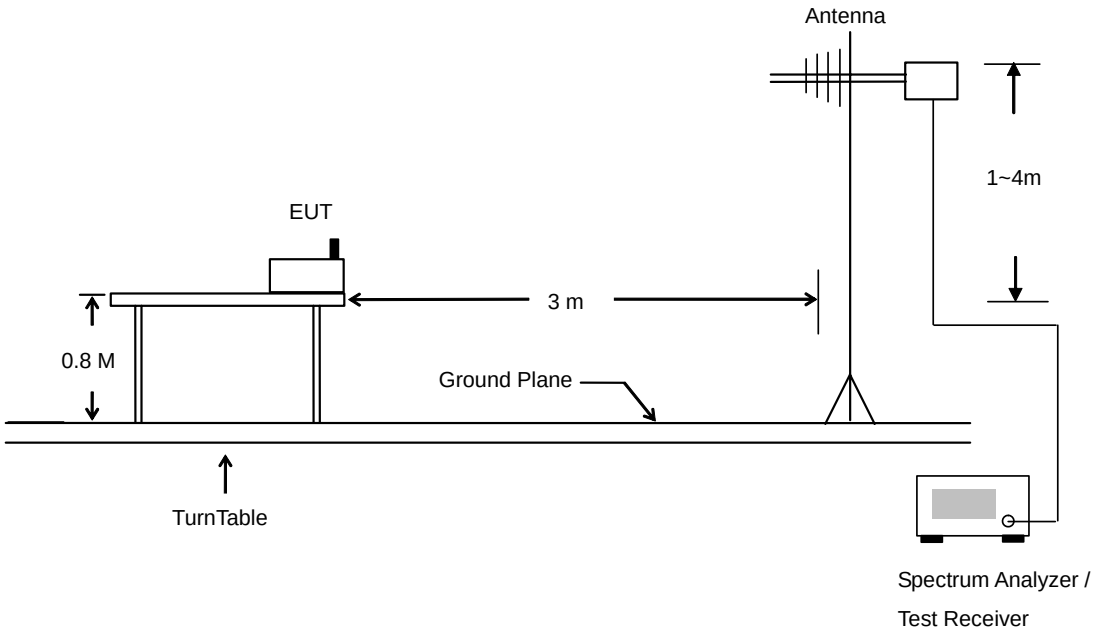
e. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

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.

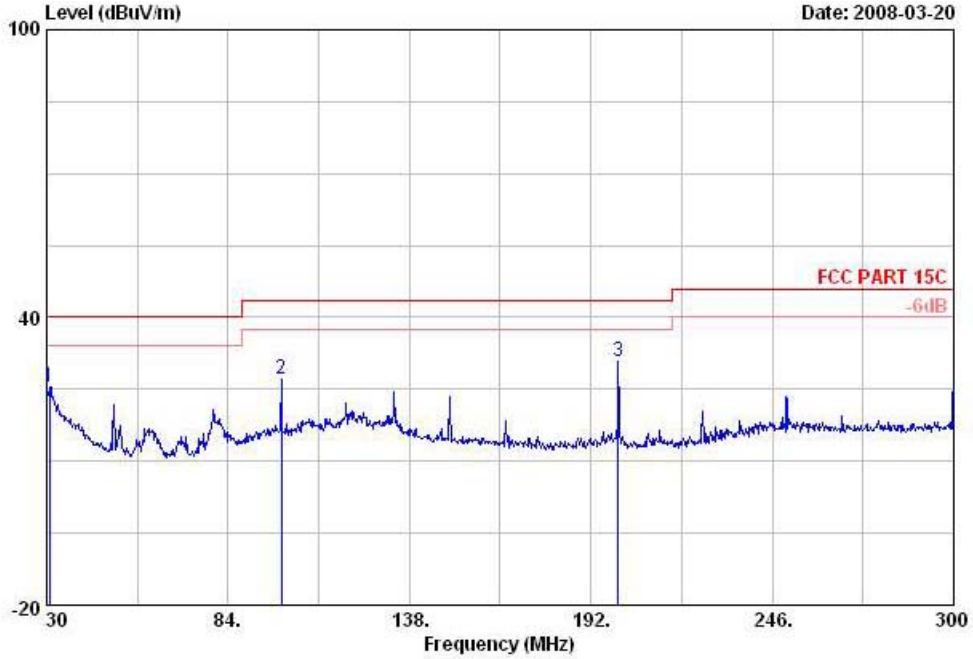
5.9.3 Typical Test Setup Layout of Radiated Emission



5.9.4 Test Data

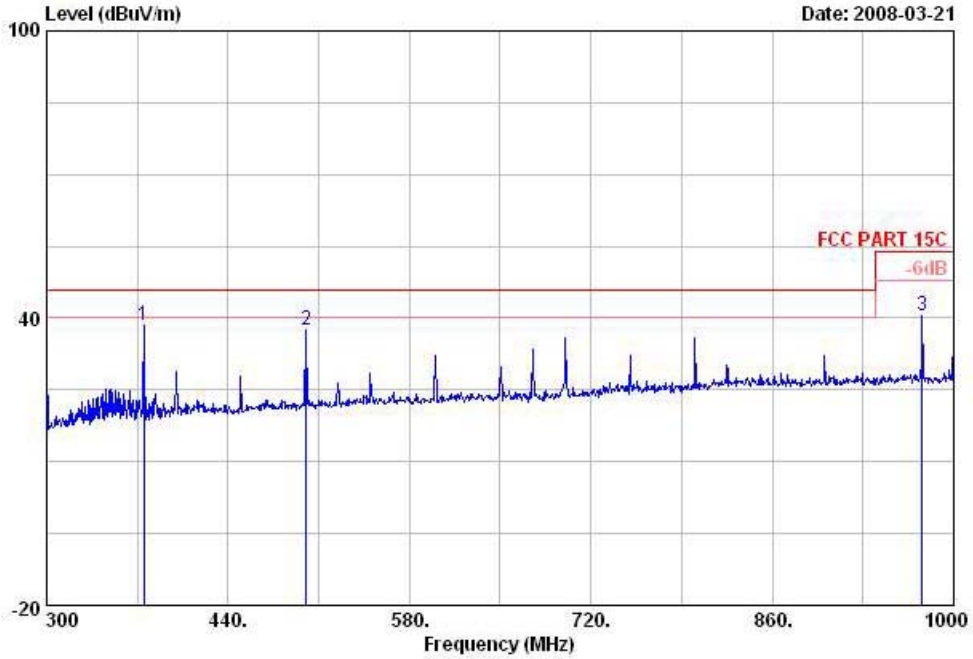
- Temperature : 23~25°C
- Relating Humidity : 39~42%
- Test Enginner : Mark
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

■ 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
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	30.81	25.45	-14.55	40.00	35.24	-9.79	---	---	Peak
2	99.93	27.28	-16.22	43.50	44.61	-17.33	---	---	Peak
3	200.10	30.69	-12.81	43.50	49.18	-18.49	---	---	Peak

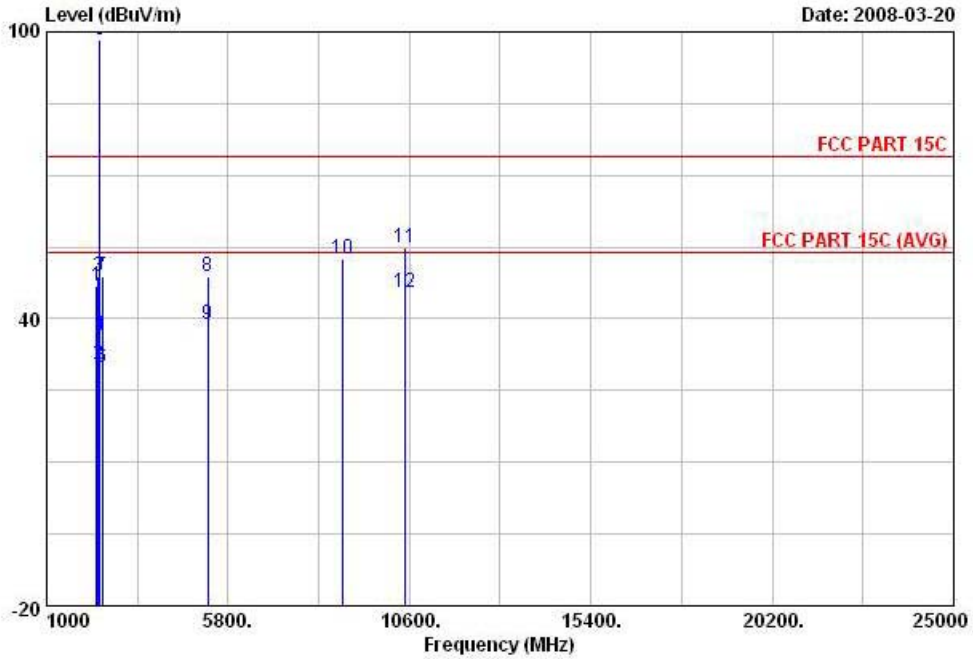


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DHS Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	374.90	38.65	-7.35	46.00	51.23	-12.58	---	---	Peak
2	500.20	37.46	-8.54	46.00	47.59	-10.13	---	---	Peak
3	975.50	40.53	-13.47	54.00	44.70	-4.17	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



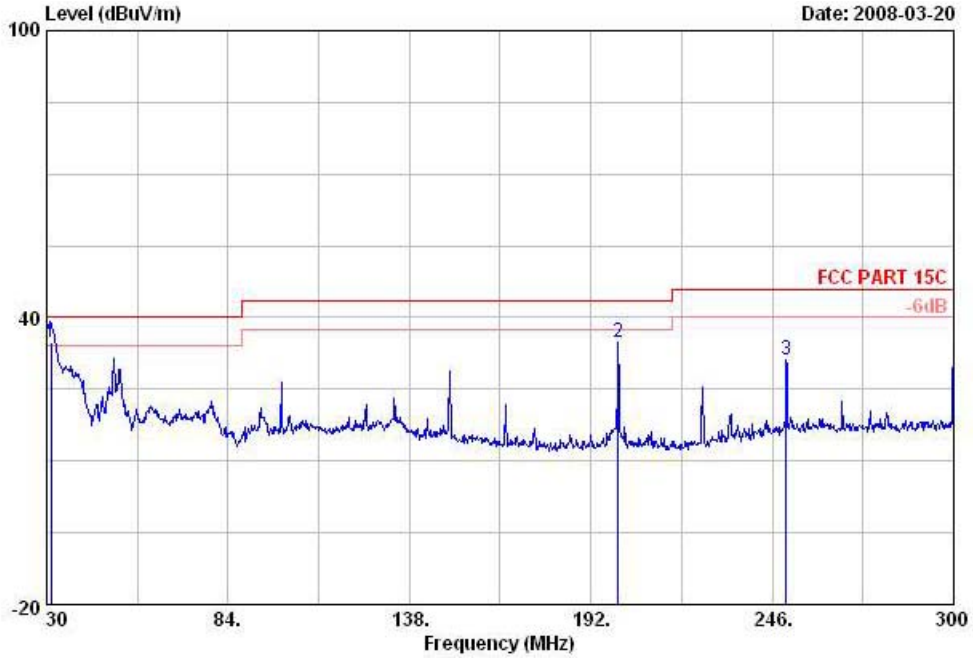
Site : 03CH01-KS
Condition: FCC PART 15C 3m HF ANT-070911 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		2324.00	46.71	-27.29	74.00	47.04	-0.33	---	---	Peak
2		2363.60	30.39	-23.61	54.00	30.55	-0.16	177	178	Average
3		2370.00	48.78	-25.22	74.00	48.86	-0.08	---	---	Peak
4		2401.80	36.44			36.44	0.00	177	178	Average
5	X	2402.00	98.30			98.30	0.00	---	---	Peak
6		2472.56	29.87	-24.13	54.00	29.54	0.33	177	178	Average
7		2474.00	48.84	-25.16	74.00	48.51	0.33	---	---	Peak
8		5274.00	48.85	-25.15	74.00	44.50	4.35	---	---	Peak
9		5274.00	38.94	-15.06	54.00	34.59	4.35	---	---	Average
10		8835.00	52.66	-21.34	74.00	44.76	7.90	---	---	Peak
11		10473.00	54.87	-19.13	74.00	44.40	10.47	---	---	Peak
12		10473.00	45.58	-8.42	54.00	35.11	10.47	---	---	Average

Remark: #4 and #5 are Fundamental Signals

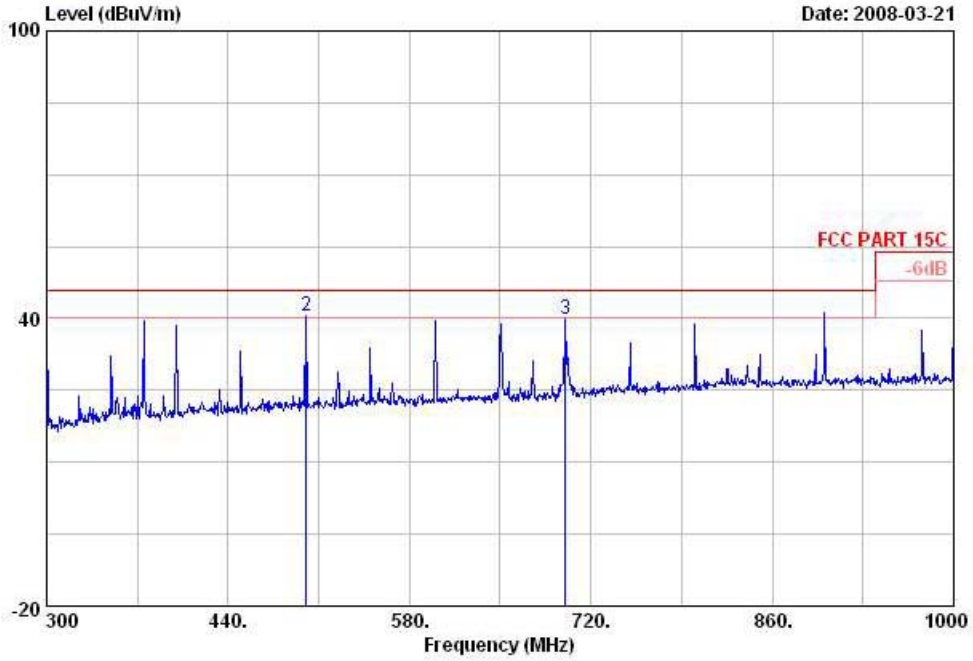
- Polarization : Vertical (30MHz-1GHz)

■ **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
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1 !	31.22	34.96	-5.04	40.00	46.00	-11.04	100	335	QP
2	200.10	34.88	-8.62	43.50	53.37	-18.49	---	---	Peak
3	250.05	31.14	-14.86	46.00	46.64	-15.50	---	---	Peak

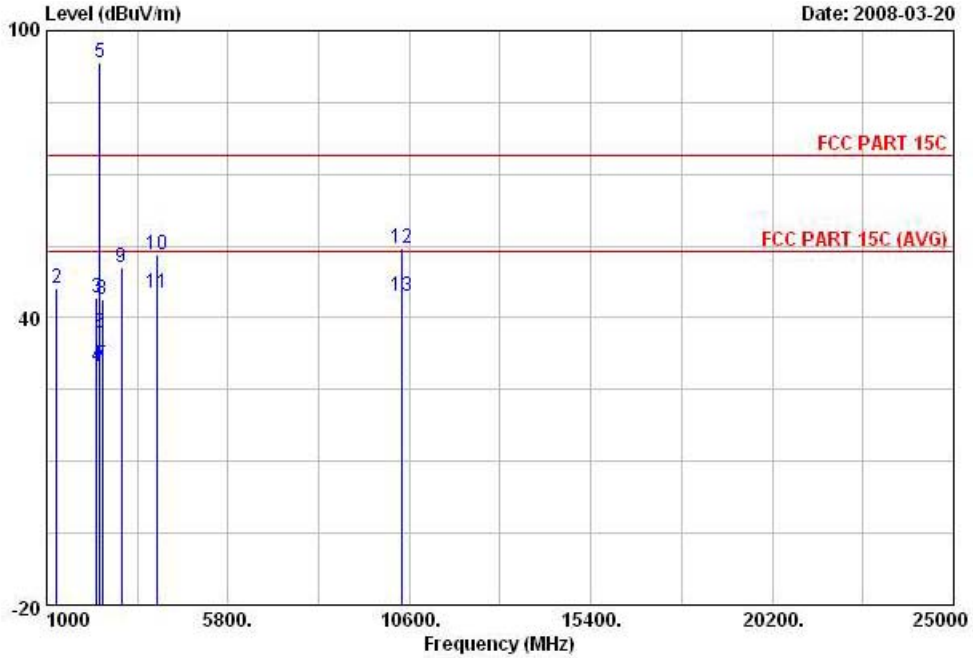


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	!	300.00	40.99	-5.01	46.00	55.58	-14.59	---	---	Peak
2	!	500.20	40.43	-5.57	46.00	50.56	-10.13	---	---	Peak
3		700.40	39.85	-6.15	46.00	47.53	-7.68	---	---	Peak

Polarization : Vertical (1GHz-25GHz)

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



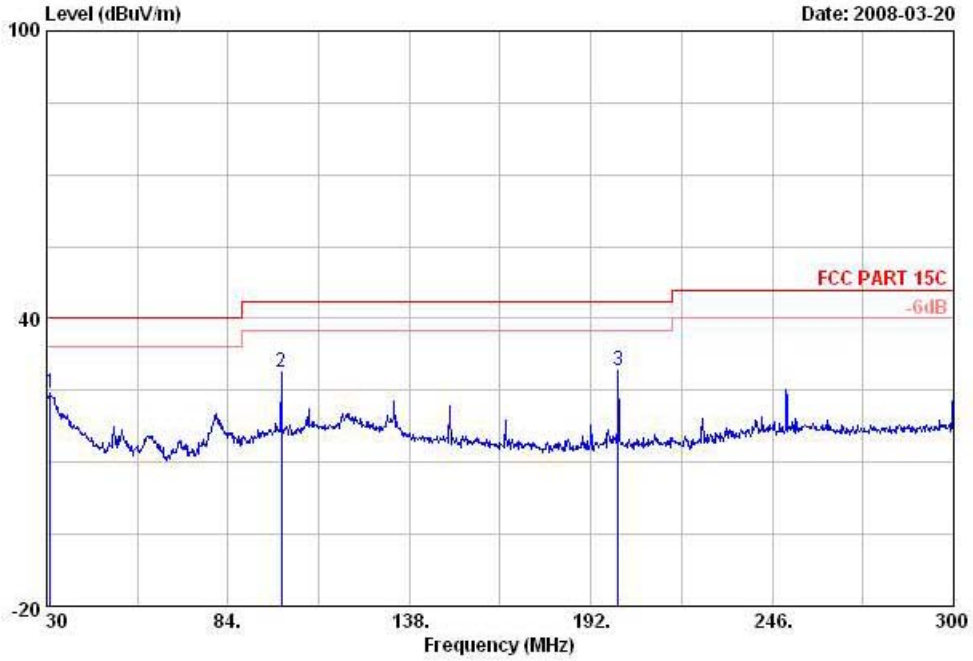
Site : 03CH01-KS
Condition: FCC PART 15C 3m HF ANT-070911 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH00 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		1000.00	45.10	-8.90	54.00	51.93	-6.83	---	---	Peak
2		1274.00	46.11	-27.89	74.00	51.48	-5.37	---	---	Peak
3		2326.00	44.06	-29.94	74.00	44.39	-0.33	---	---	Peak
4		2326.30	29.89	-44.11	74.00	30.22	-0.33	130	275	Average
5	X	2402.00	93.46			93.46	0.00	---	---	Peak
6		2402.10	36.75			36.75	0.00	130	275	Average
7		2472.50	30.11	-23.89	54.00	29.78	0.33	130	275	Average
8		2474.00	43.79	-30.21	74.00	43.46	0.33	---	---	Peak
9		2976.00	50.49	-23.51	74.00	50.41	0.08	---	---	Peak
10		3921.00	53.20	-20.80	74.00	50.42	2.78	---	---	Peak
11		3921.00	45.24	-8.76	54.00	42.46	2.78	100	125	Average
12		10383.00	54.63	-19.37	74.00	44.26	10.37	---	---	Peak
13		10383.00	44.63	-9.37	54.00	34.26	10.37	---	---	Average

Remark: #5 and #6 are Fundamental Signals

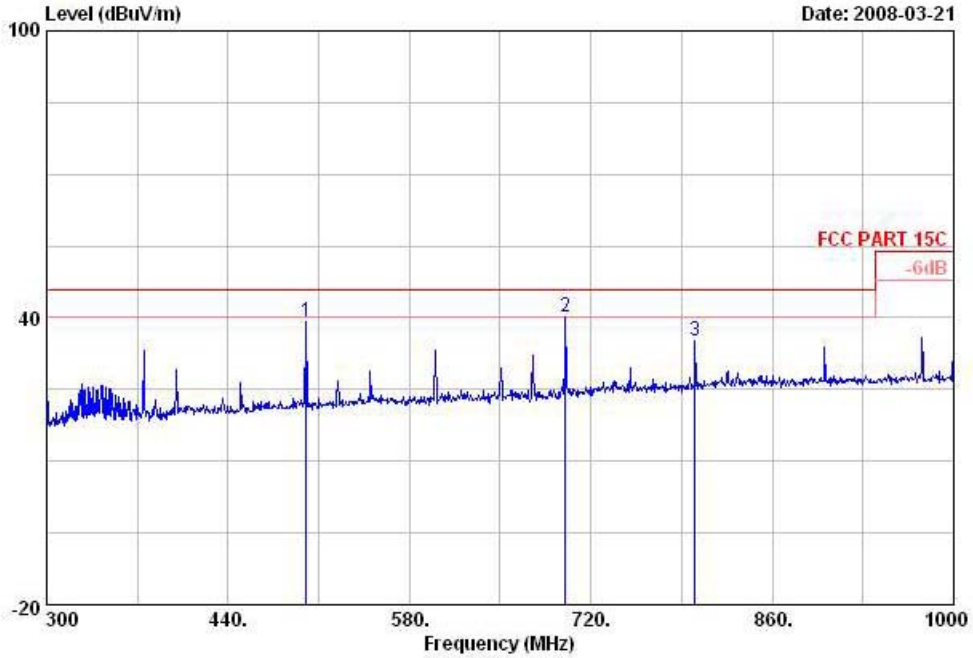
- Test Mode : Mode 2
- Polarization : Horizontal (30MHz-1GHz)

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



Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	31.08	24.35	-15.65	40.00	35.39	-11.04	---	---	Peak
2	99.93	28.69	-14.81	43.50	46.02	-17.33	---	---	Peak
3	200.10	29.10	-14.40	43.50	47.59	-18.49	---	---	Peak

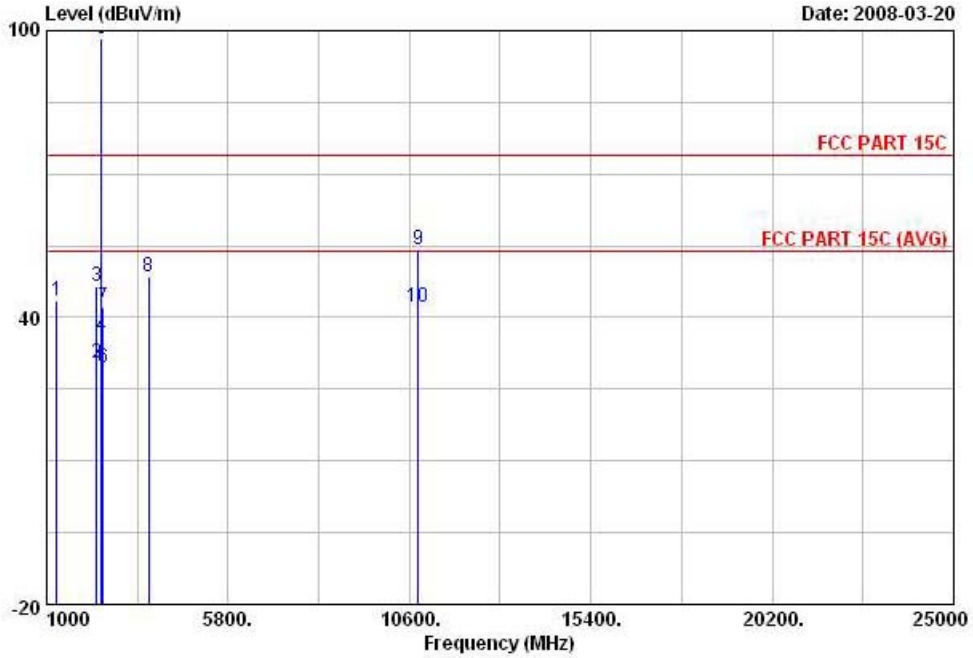


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		500.20	39.23	-6.77	46.00	49.36	-10.13	---	---	Peak
2	!	700.40	40.26	-5.74	46.00	47.94	-7.68	---	---	Peak
3		800.50	35.22	-10.78	46.00	41.14	-5.92	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



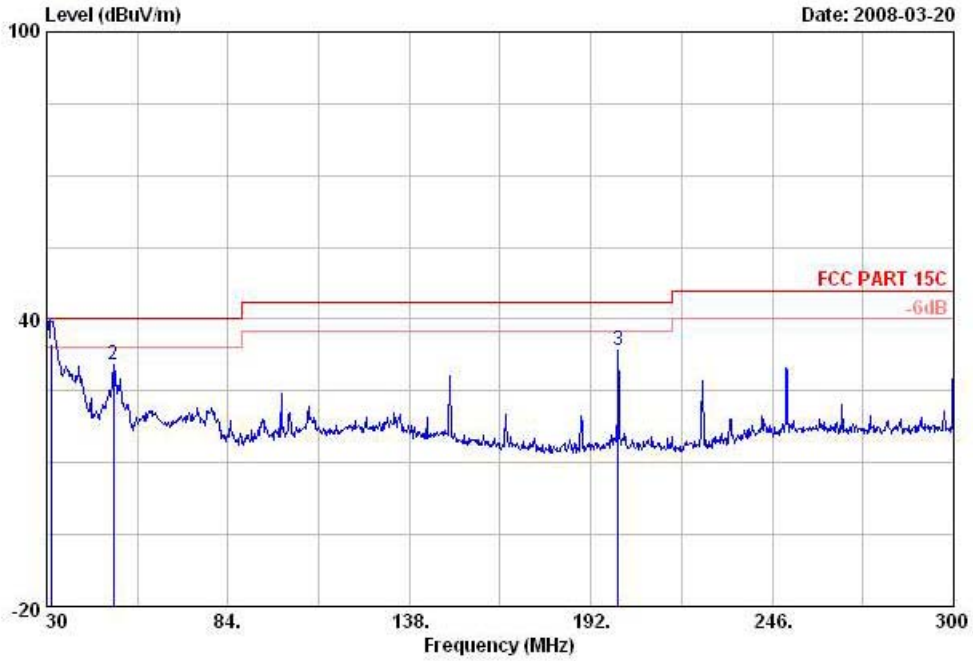
Site : 03CH01-KS
Condition: FCC PART 15C 3m HF ANT-070911 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		1274.00	43.60	-30.40	74.00	48.97	-5.37	---	---	Peak
2		2324.76	30.55	-23.45	54.00	30.88	-0.33	100	347	Average
3		2326.00	46.61	-27.39	74.00	46.94	-0.33	---	---	Peak
4		2441.00	36.16			35.95	0.21	100	347	Average
5	X	2442.00	98.49			98.28	0.21	---	---	Peak
6		2483.50	29.59	-24.41	54.00	29.26	0.33	100	347	Average
7		2483.50	42.24	-31.76	74.00	41.91	0.33	---	---	Peak
8		3696.00	48.49	-25.51	74.00	46.12	2.37	---	---	Peak
9		10830.00	54.37	-19.63	74.00	43.46	10.91	---	---	Peak
10		10830.00	42.12	-11.88	54.00	31.21	10.91	---	---	Average

Remark: #4and #5 are Fundamental Signals

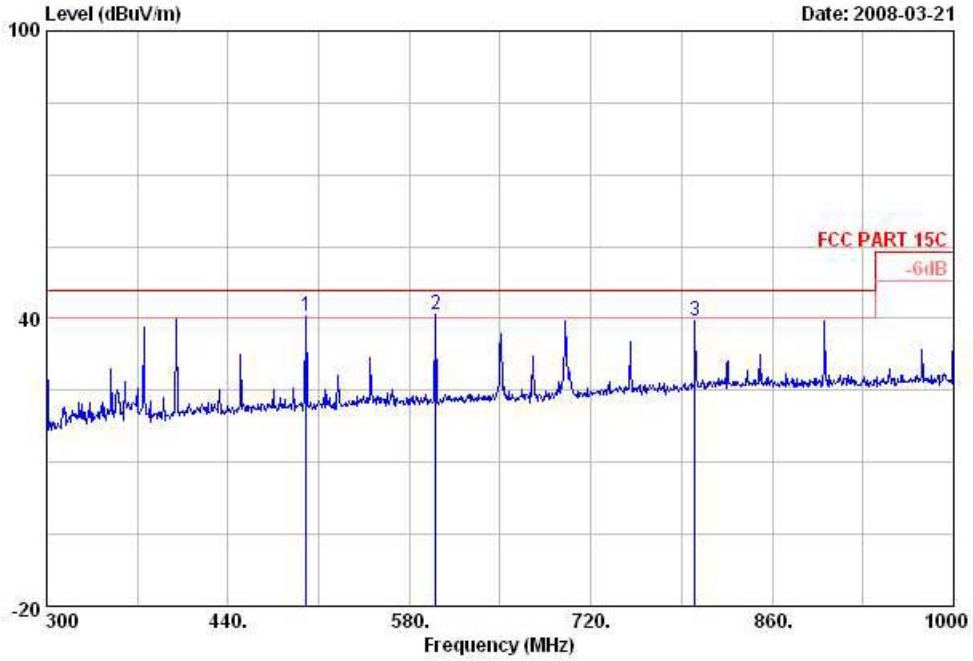
- Polarization : Vertical (30MHz-1GHz)

■ **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
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1 !	31.29	34.96	-5.04	40.00	46.00	-11.04	100	0	QP
2	49.98	30.42	-9.58	40.00	50.65	-20.23	---	---	Peak
3	200.10	33.50	-10.00	43.50	51.99	-18.49	---	---	Peak

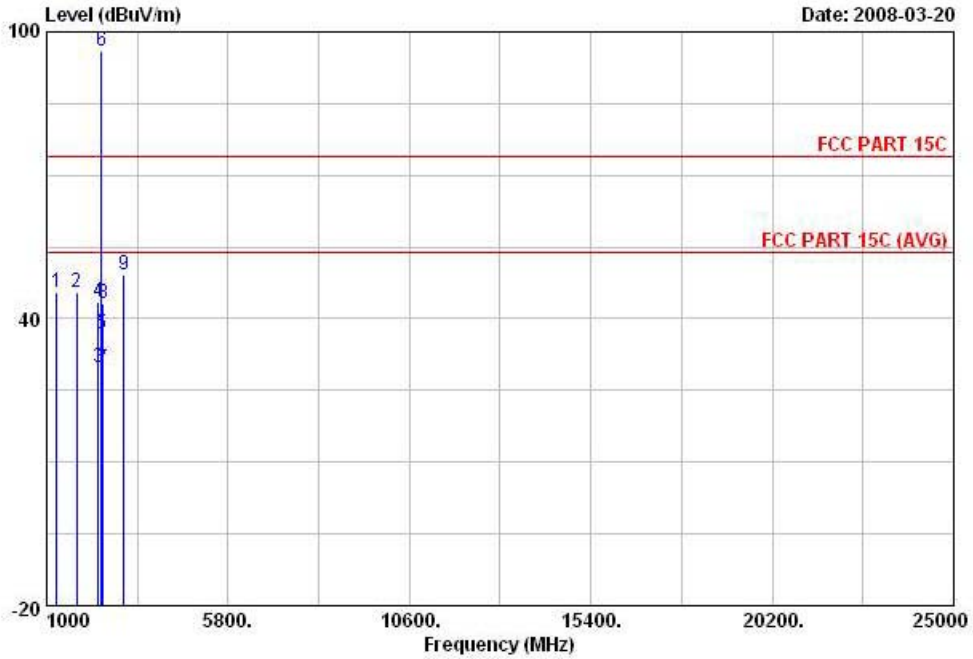


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1 !	500.20	40.42	-5.58	46.00	50.55	-10.13	---	---	Peak
2 !	600.30	40.72	-5.28	46.00	49.80	-9.08	---	---	Peak
3	800.50	39.60	-6.40	46.00	45.52	-5.92	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



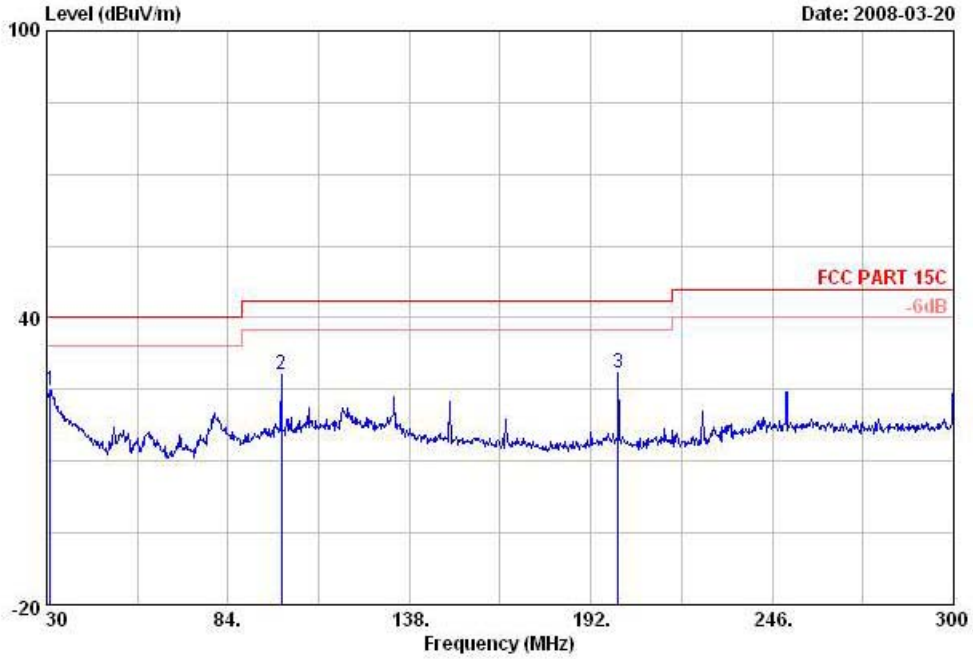
Site : 03CH01-KS
Condition: FCC PART 15C 3m HF ANT-070911 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH39 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		1274.00	45.46	-28.54	74.00	50.83	-5.37	---	---	Peak
2		1800.00	45.67	-28.33	74.00	48.42	-2.75	---	---	Peak
3		2369.30	29.96	-24.04	54.00	30.04	-0.08	100	218	Average
4		2370.00	43.61	-30.39	74.00	43.69	-0.08	---	---	Peak
5		2440.98	36.67			36.46	0.21	100	218	Average
6	X	2442.00	96.10			95.89	0.21	---	---	Peak
7		2484.60	29.60	-24.40	54.00	29.27	0.33	100	218	Average
8		2486.00	43.14	-30.86	74.00	42.81	0.33	---	---	Peak
9		3051.00	49.16	-24.84	74.00	48.93	0.23	---	---	Peak

Remark: #5 and #6 are Fundamental Signals

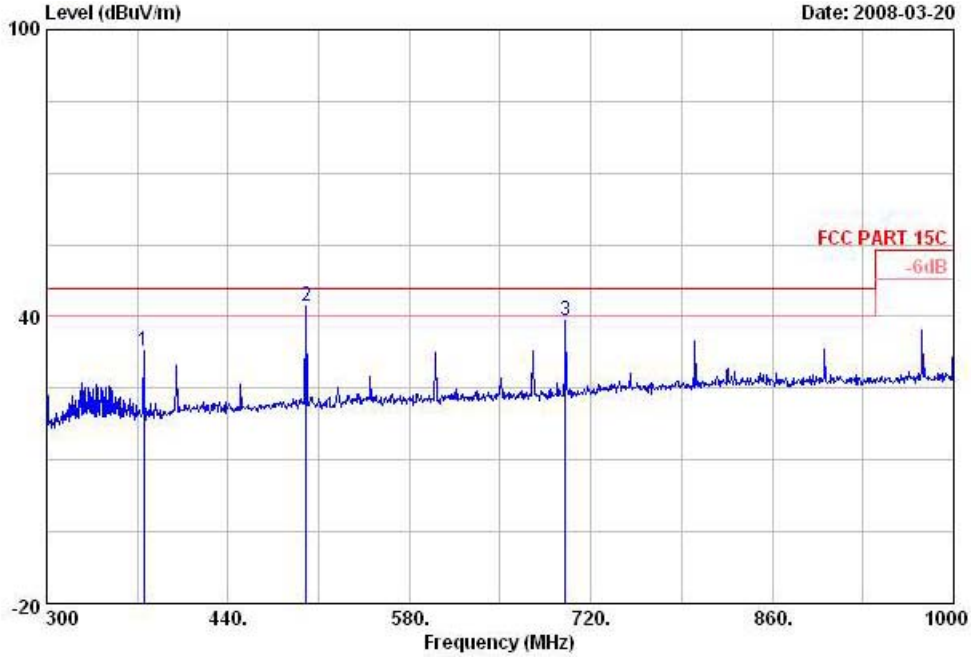
- est Mode : Mode 3
- Polarization : Horizontal (30MHz-1GHz)

■ 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
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	31.08	24.84	-15.16	40.00	35.88	-11.04	---	---	Peak
2	99.93	28.03	-15.47	43.50	45.36	-17.33	---	---	Peak
3	200.10	28.60	-14.90	43.50	47.09	-18.49	---	---	Peak

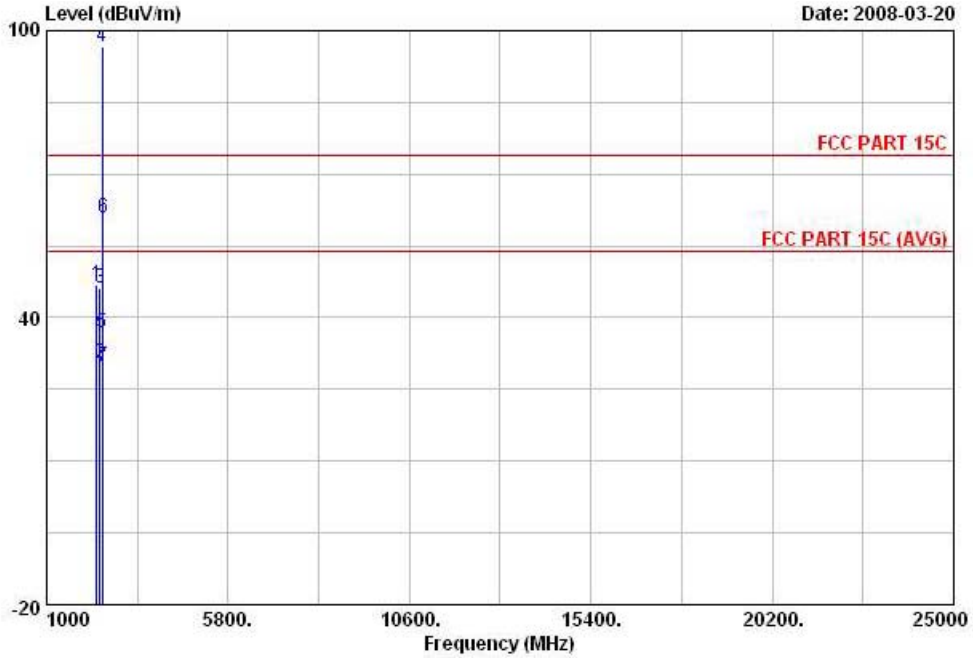


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1	374.90	32.89	-13.11	46.00	45.47	-12.58	---	---	Peak
2 !	500.20	42.25	-3.75	46.00	52.38	-10.13	---	---	Peak
3	700.40	39.02	-6.98	46.00	46.70	-7.68	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



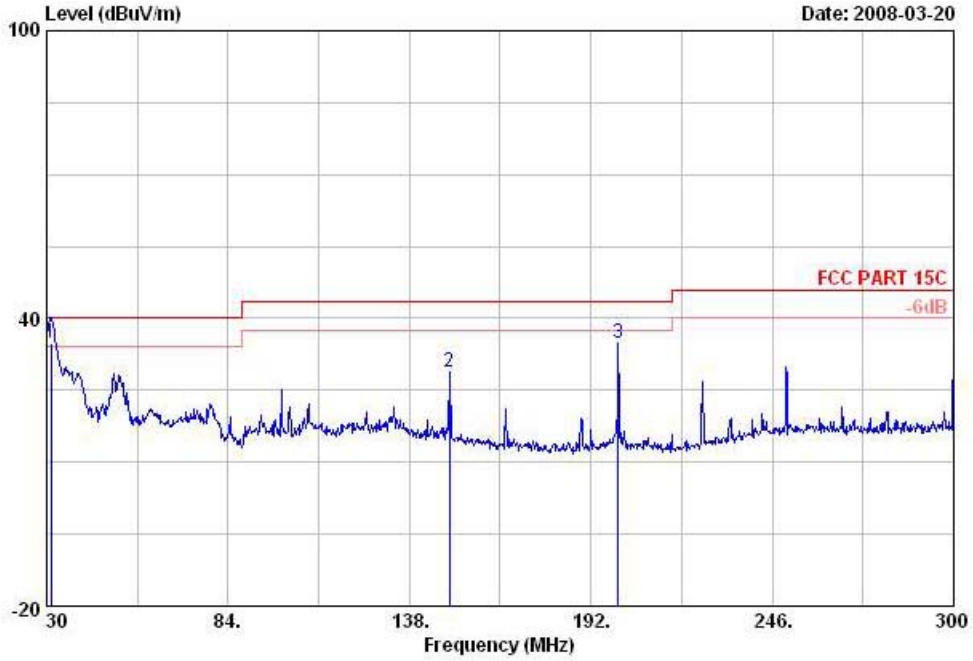
Site : 03CH01-KS
Condition: FCC PART 15C 3m HF ANT-070911 HORIZONTAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		2326.00	46.75	-27.25	74.00	47.08	-0.33	---	---	Peak
2		2399.80	30.62	-23.38	54.00	30.62	0.00	199	165	Average
3		2400.00	46.07	-27.93	74.00	46.07	0.00	---	---	Peak
4	X	2480.00	96.68			96.35	0.33	---	---	Peak
5		2480.00	36.98			36.65	0.33	199	165	Average
6		2490.00	61.03	-12.97	74.00	60.63	0.40	---	---	Peak
7		2490.00	29.88	-24.12	54.00	29.48	0.40	199	165	Average

Remark: #4 and #5 are Fundamental Signals

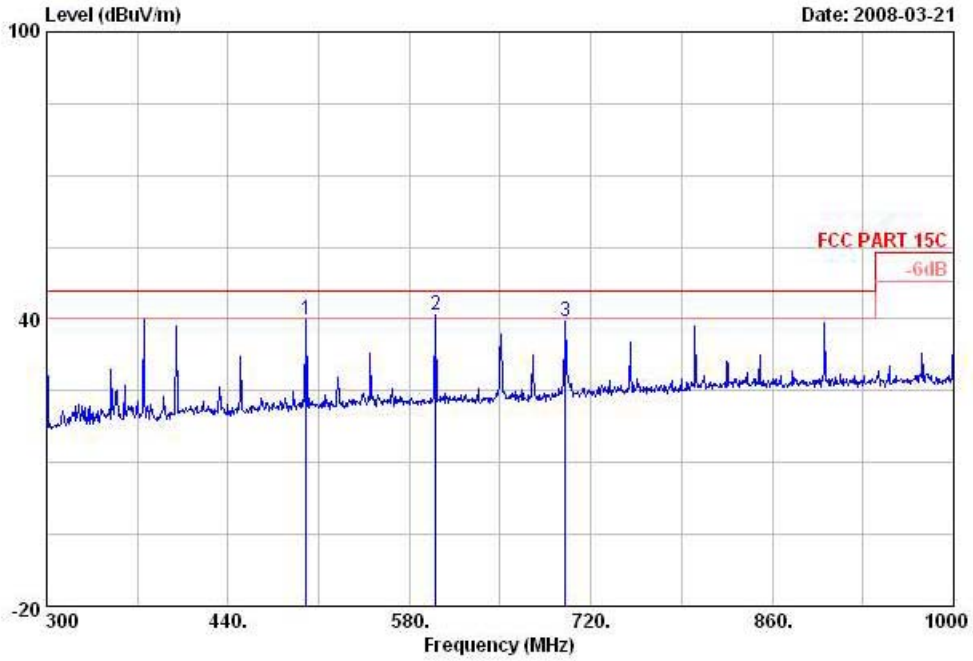
- Polarization : Vertical (30MHz-1GHz)

■ 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
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1 !	31.25	34.86	-5.14	40.00	45.90	-11.04	100	253	QP
2	149.88	28.86	-14.64	43.50	46.34	-17.48	---	---	Peak
3	200.10	34.97	-8.53	43.50	53.46	-18.49	---	---	Peak

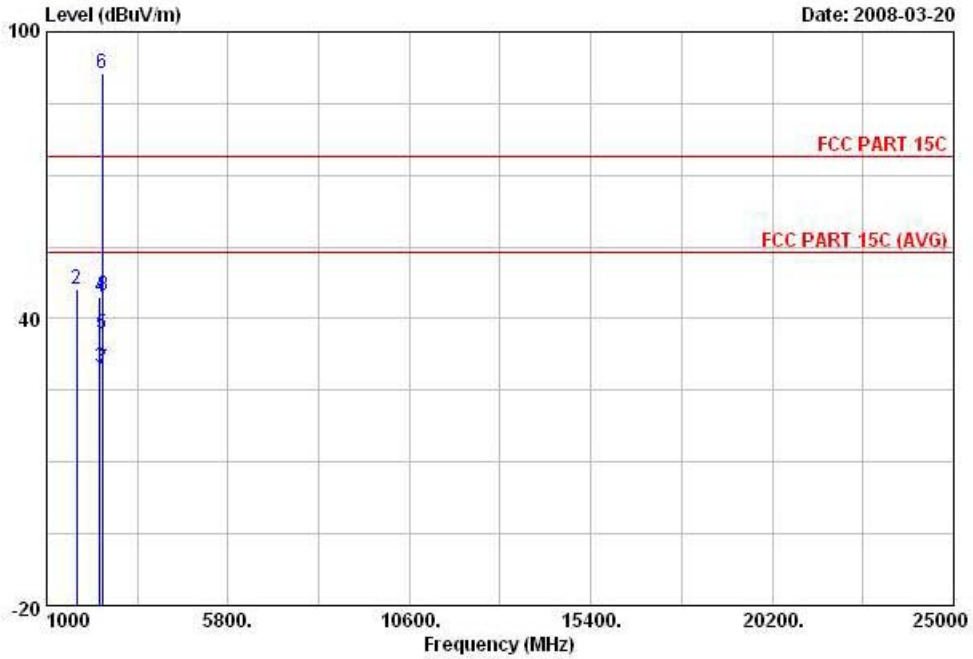


Site : 03CH01-KS
Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		500.20	39.81	-6.19	46.00	49.94	-10.13	---	---	Peak
2	!	600.30	40.85	-5.15	46.00	49.93	-9.08	---	---	Peak
3		700.40	39.59	-6.41	46.00	47.27	-7.68	---	---	Peak

- Polarization : Vertical (1GHz-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 HF ANT-070911 VERTICAL
EUT : CDMA 2000 Mobile phone
Power : 120Vac/60Hz
Model : C78
Memo : BT CH78 DH5 Link 1Mbps

		Freq	Level	Over Limit	Limit Line	Read Level	Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	cm	deg	
1		1000.00	45.46	-8.54	54.00	52.29	-6.83	---	---	Peak
2		1800.00	46.26	-27.74	74.00	49.01	-2.75	---	---	Peak
3		2400.00	29.69	-24.31	54.00	29.69	0.00	100	265	Average
4		2400.00	44.38	-29.62	74.00	44.38	0.00	---	---	Peak
5		2480.00	36.69			36.36	0.33	100	265	Average
6	X	2480.00	91.36			91.03	0.33	---	---	Peak
7		2490.10	29.55	-24.45	54.00	29.15	0.40	100	265	Average
8		2492.00	44.91	-29.09	74.00	44.51	0.40	---	---	Peak

Remark: #5 and #6 are Fundamental Signals

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 antenna used in this product is Fixed Internal without connecter. 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 necessany to reduce maximum peak output powen 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, 2008	Mar. 14, 2009	Conduction (CO01-KS)
LISN	MessTec	AN3016	060103	9kHz~30MHz	Jun. 30, 2006	Jun. 29, 2008	Conduction (CO01-KS)
LISN	MessTec	AN3016	060105	9kHz~30MHz	Jun. 30, 2006	Jun. 29, 2008	Conduction (CO01-KS)
EMI Filter	MPE	250V/32A	N/A	100KHz~10GHz,100 dB	N/A	N/A	Conduction (CO01-KS)
EMI Filter	MPE	250V/32A	N/A	100KHz~10GHz,100 dB	N/A	N/A	Conduction (CO01-KS)
DC LISN	EM Test	AN20200	60102	100kHz – 108MHz	Aug. 30, 2007	Aug. 29, 2008	Conduction (CO01-KS)
DC LISN	EM Test	AN20200	60107	100kHz – 108MHz	Aug. 30, 2007	Aug. 29, 2008	Conduction (CO01-KS)
Transient Limiter	Com-Power	LIT-153	531037	150K~30MHz	N/A	N/A	Conduction (CO01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9K~40GHz	Mar. 13, 2008	Mar. 12, 2009	Radiation (03CH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9KHz~2.75GHz	Mar. 15, 2008	Mar. 14, 2009	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	WHKX1.5/15G-10SS	23	N/A	N/A	N/A	Radiation (03CH01-KS)
High Pass filter	N/A	WHKX2.2-18G-10SS	8	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG2400/2483-2390/2493-35/10SS	14	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG 1850/1910-1835/1925-40/8SS	15	N/A	N/A	N/A	Radiation (03CH01-KS)
Band Reject Filter	WI	WRCG 824/849-814/859-40/8SS	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		$u(x_i)$	Ci	$Ci*u(x_i)$
	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 Γ1= 0.197 Antenna VSWR Γ2= 0.194 Uncertainty=20log(1-Γ1*Γ2*Γ3)	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	**2.36**				
Measuring uncertainty for a level of Confidence of 95% U=2Uc(y)	**4.72**				

The measured result is ：y dBuV ± U dB

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