FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment	:	**GPS PDA**
Trade Name	:	**MTC; GETAC**
Model No.	:	**PS535E**
FCC ID	:	**MAUPS535E**
Filing Type	:	**Certification**
Applicant	:	**MiTAC Technology Corp.** 9th. FL., No.75, Ming Sheng E. Rd., Sec.3, Taipei, Taiwan

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- The data shown in this test report were carried out on Feb. 19, 2008 at **Sporton International Inc. LAB.**
- Report No.: FR812802B, Report Version: Rev.01

Roy Wu
Manager

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

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History of This Test Report

Report Issue Date: Feb. 19, 2008

Report No.	Description

1. General Description of Equipment under Test

1.1 Applicant

MiTAC Technology Corp.
9th. FL., No.75, Ming Sheng E. Rd., Sec.3, Taipei, Taiwan

1.2 Manufacturer

GeTAC Technology(Kunshan) LTD.
No.269, 2nd Road, Export Processing Zone, Changjiang South Road, Kunshan, Jiangsu, P.R.C

1.3 Basic Description of Equipment under Test

Equipment		GPS PDA
Trade Name		MTC; GETAC
Model Name		PS535E
FCC ID		MAUPS535E
AC Adapter	**Brand Name**	Phihong
	Model Name	PSC11R-050
	Power Rating	I/P:100-240Vac, 50-60Hz, 0.3A; O/P: 5Vdc, 2A
	AC Power Cord Type	1.9 meter shielded cable without ferrite core
Battery	**Brand Name**	MTC
	Model Name	PS535E
	Power Rating	3.7Vdc, 2400mAh
	Type	Li-ion
USB Cable	**Brand Name**	Incare
	Model Name	KYCPDX00051
	Signal Line Type	1 meter shielded cable without ferrite core
LCD Panel	**Brand Name**	NEC
	Model Name	NL2432HC22-40A

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 :	GPS PDA			
Trade Name :	MTC; GETAC			
Model Name :	PS535E			
FCC ID :	MAUPS535E			
Tx Frequency :	802.11b/g : 2400 MHz ~ 2483.5 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz			
Rx Frequency :	802.11b/g : 2400 MHz ~ 2483.5 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz			
Number of Channels :	Bluetooth : 79 802.11b/g : 11			
Carrier Frequency of Each Channel :	Bluetooth : 2402+n*1 MHz; n=0~78 802.11b/g : 2412+(n-1)*5 MHz; n=1~11			
Channel Spacing :	Bluetooth : 1 MHz 802.11b/g : 5 MHz			
Maximum Output Power to Antenna :	Bluetooth : 0.74 dBm (1Mbps) Bluetooth EDR : 1.1 dBm (2Mbps) / 1.25 dBm (3Mbps) 802.11b : 13.97 dBm 802.11g : 17.18 dBm			
Type of Antenna Connector :	Bluetooth : MICRO Connector 802.11b/g : MICRO Connector			
Antenna Type :	Bluetooth : PIFA Antenna 802.11b/g : PIFA Antenna			
Antenna Gain :	Bluetooth : -3.8 dB 802.11b/g : -1.72 dB			
Type of Modulation :	Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : π/4-DQPSK Bluetooth EDR (3Mbps) : 8-DPSK 802.11b/g : DSSS / OFDM			
Function Type :	Transmitter		Transceiver	V
DUT Stage :	Production Unit			

1.5 Specification of PDA

Notebook Specification			
Item	**Brand**	**Model**	**Specification**
SD RAM	Samsung	---	64 MB
NAND Flash	Samsung	---	2 GB
LCD Monitor	NEC	NL2432HC22-40A	3.5”
Touch Green	Liyi	SR4-036F-05G	---
Bluetooth	APM	APM8142	Class 2, V2.0 USB Interface
GPS	GlobalSat	ET-318	---
Modem	Billionton	RD002-D330	---
Wireless LAN	USI	WM-G-MR-05-GSPI	802.11 b/g
AC/DC Adapter	Phihong	PSC11R-050	Input: (1) Voltage: 100 ~ 240V A.C.; (2) Current: 0.2A (3) Rated Frequency: 50~60Hz 14~19VA Output: (1) Voltage: 5V (2) Current: 2A
Battery (LITHIUM)	MTC	PS535E	2400 mAh (2 cell per pack), 3.7V

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, 3Mbps, 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	-0.05 dBm	0.6 dBm	0.68 dBm
Ch39	2441MHz	0.74 dBm	1.1 dBm	1.25 dBm
Ch78	2480MHz	0.32 dBm	0.41 dBm	0.59 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

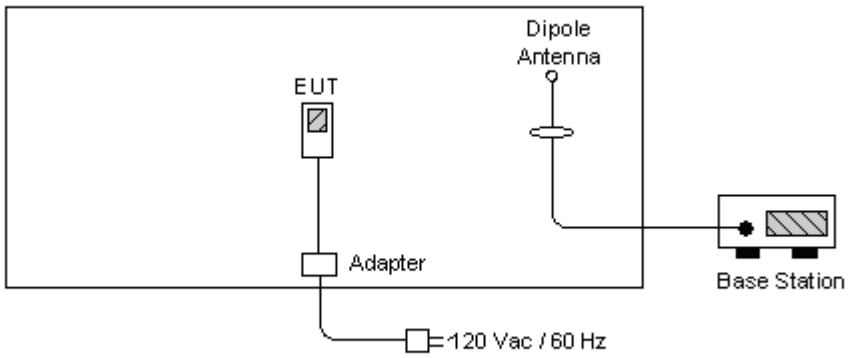
Application			
Radiated Emission	BT Tx	BT Tx(EDR 2Mbps)	BT Tx(EDR 3Mbps)
	Mode 1: CH78_2480 MHz	Mode 2: CH78_2480 MHz	Mode 3: CH00_2402 MHz Mode 4: CH39_2441 MHz Mode 5: CH78_2480 MHz
	Co-location		
	Mode 6: CH78_2480 MHz + 802.11b Tx CH11_2462MHz		
Conducted Emission	Mode 1: GPS Rx + WLAN Link + BT Link + H Pattern + MPEG 4 + USB Link + Adapter		

2.3 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1	Notebook	DELL	D400	E2K24GBRL	AC I/P: Unshielded, 1.2 m DC O/P: shielded, 1.8 m
2	GPS Station	T&E	GS-50	N/A	Unshielded, 1.8 m
3	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A
4	WLAN AP	SMC	SMC-100	HEDWG4005ACC	Unshielded, 1.8 m
5	RS-232 Mouse	State	MS-303	DoC	Unshielded, 1.2 m
6	i-pod	Apple	A1199	DoC	Shielded, 1.2 m

2.4 Connection Diagram of Test System

<Radiated Emission>



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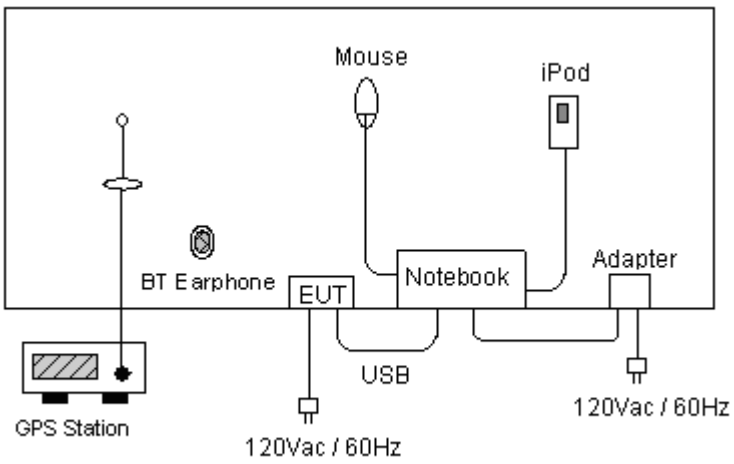


3. RF Utility

Running “BT_EMI_Tool” program into Engineer mode to link with the Base Station. The programmed RF Utility is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testings.

4. General Information of Test

Test Site Location	:	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-328-4978
Test Site No	:	CO01-HY, 03CH06-HY

4.1 Test Voltage

AC 120V / 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2003

4.3 Test Compliance

47 CFR Part 15 Subpart C

4.4 Frequency Range

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

4.5 Test Distance

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

5. Test Data and Test Result

5.1 List of Measurements and Examinations

The Emission Mode: 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 Used	Pass
15.247(a)(1)(iii)	Dwell Time of Each Frequency	Pass
15.247(b)(1)	Output Power	Pass
15.247(d)	100kHz 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
- T emperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

- 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)**

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.47	59.12	-14.88	74.00	58.79	31.98	4.05	35.70	100	0	Peak
2483.47	49.38	-4.62	54.00	49.05	31.98	4.05	35.70	102	312	Average

CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.47	63.85	-10.15	74.00	63.52	31.98	4.05	35.70	100	0	Peak
2483.47	50.42	-3.58	54.00	50.09	31.98	4.05	35.70	100	329	Average

BT EDR(2Mbps)

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	59.34	-14.66	74.00	59.01	31.98	4.05	35.70	100	0	Peak
2483.50	47.42	-6.58	54.00	47.09	31.98	4.05	35.70	102	309	Average

CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	62.59	-11.41	74.00	62.26	31.98	4.05	35.70	100	0	Peak
2483.50	49.61	-4.39	54.00	49.28	31.98	4.05	35.70	101	332	Average

➢ **BT EDR(3Mbps)**

CH00 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.62	46.34	-27.66	74.00	46.24	31.86	3.92	35.68	100	0	Peak
2385.62	33.20	-20.80	54.00	33.10	31.86	3.92	35.68	161	73	Average

CH00 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2375.74	46.29	-27.71	74.00	46.25	31.83	3.89	35.68	100	0	Peak
2375.74	33.07	-20.93	54.00	33.03	31.83	3.89	35.68	100	145	Average

CH78 (Horizontal)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	58.07	-15.93	74.00	57.74	31.98	4.05	35.70	100	0	Peak
2483.50	46.72	-7.28	54.00	46.39	31.98	4.05	35.70	100	311	Average

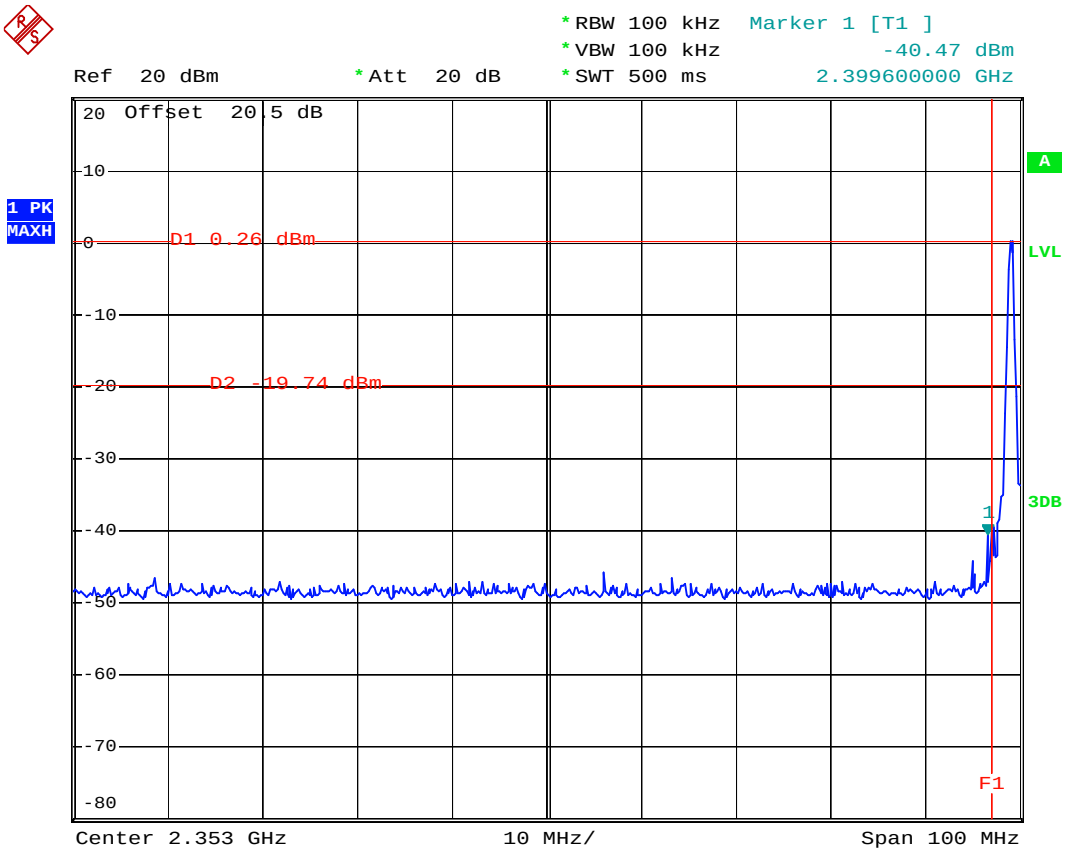
CH78 (Vertical)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.50	61.04	-12.96	74.00	60.71	31.98	4.05	35.70	100	0	Peak
2483.50	48.32	-5.68	54.00	47.99	31.98	4.05	35.70	100	330	Average

5.2.5 20dB Band Edge

BT

CH00



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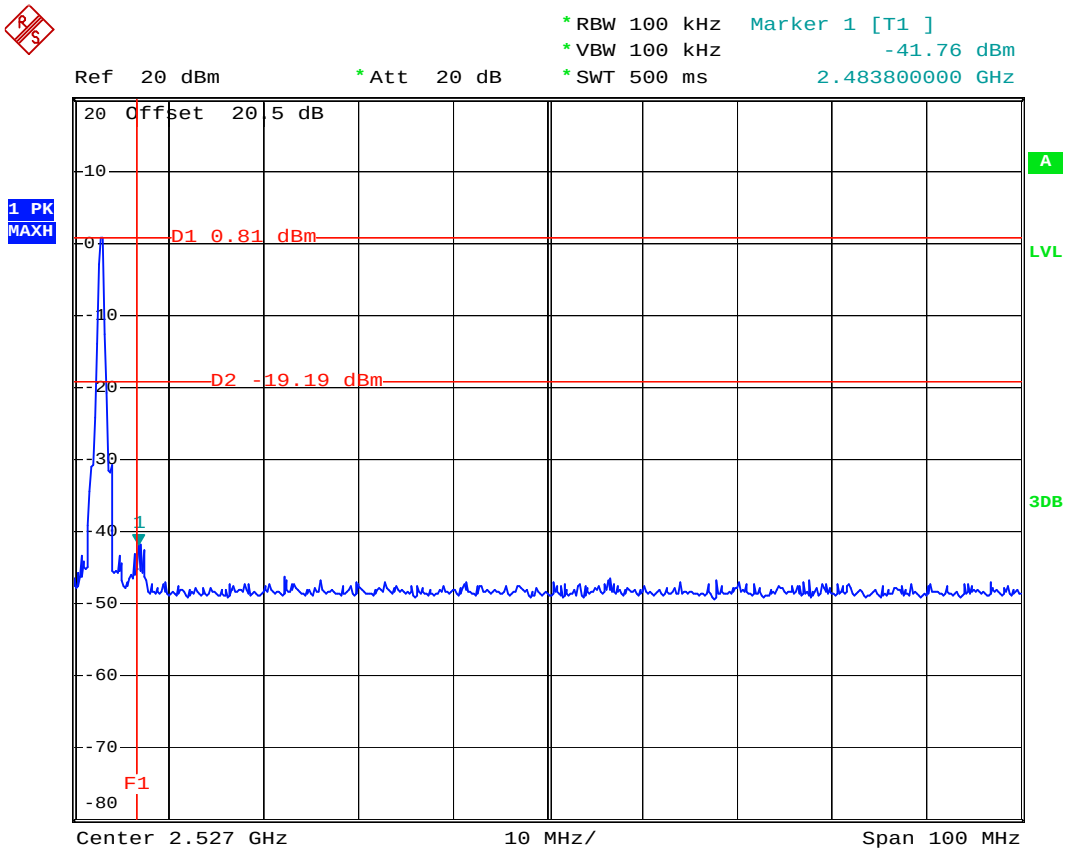
CH78



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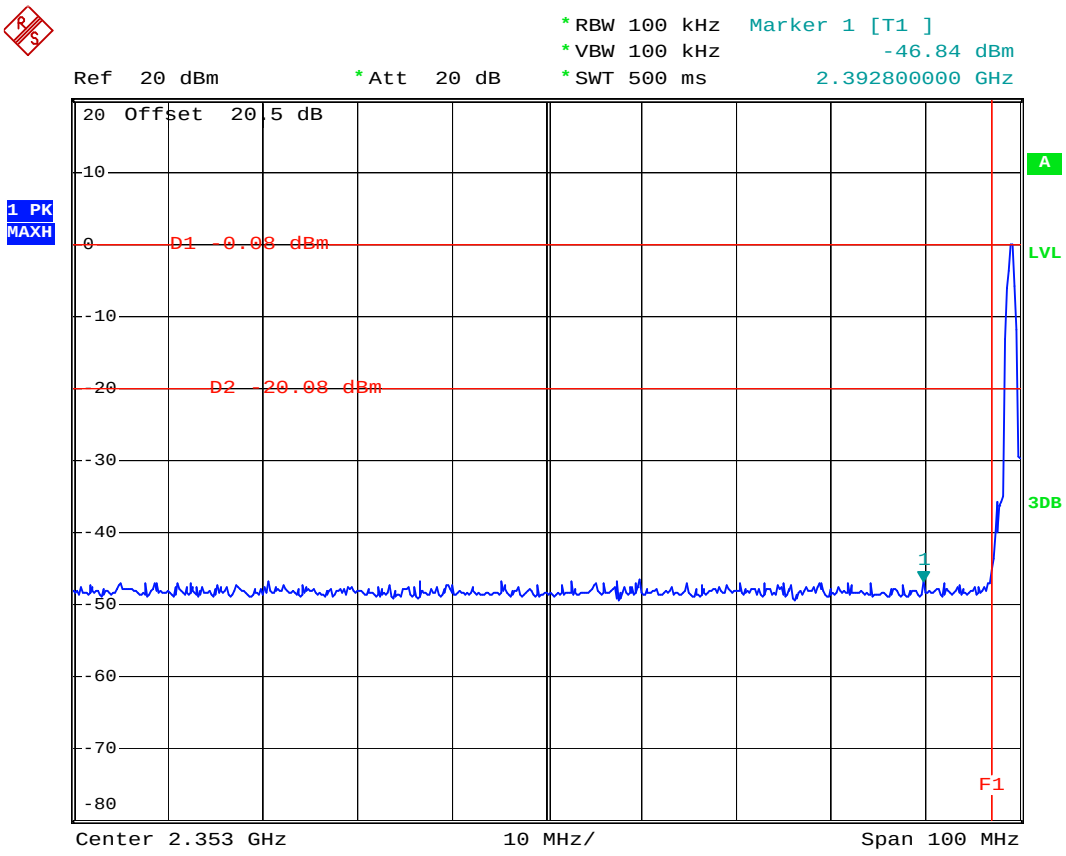
BT EDR(2Mbps)

CH00



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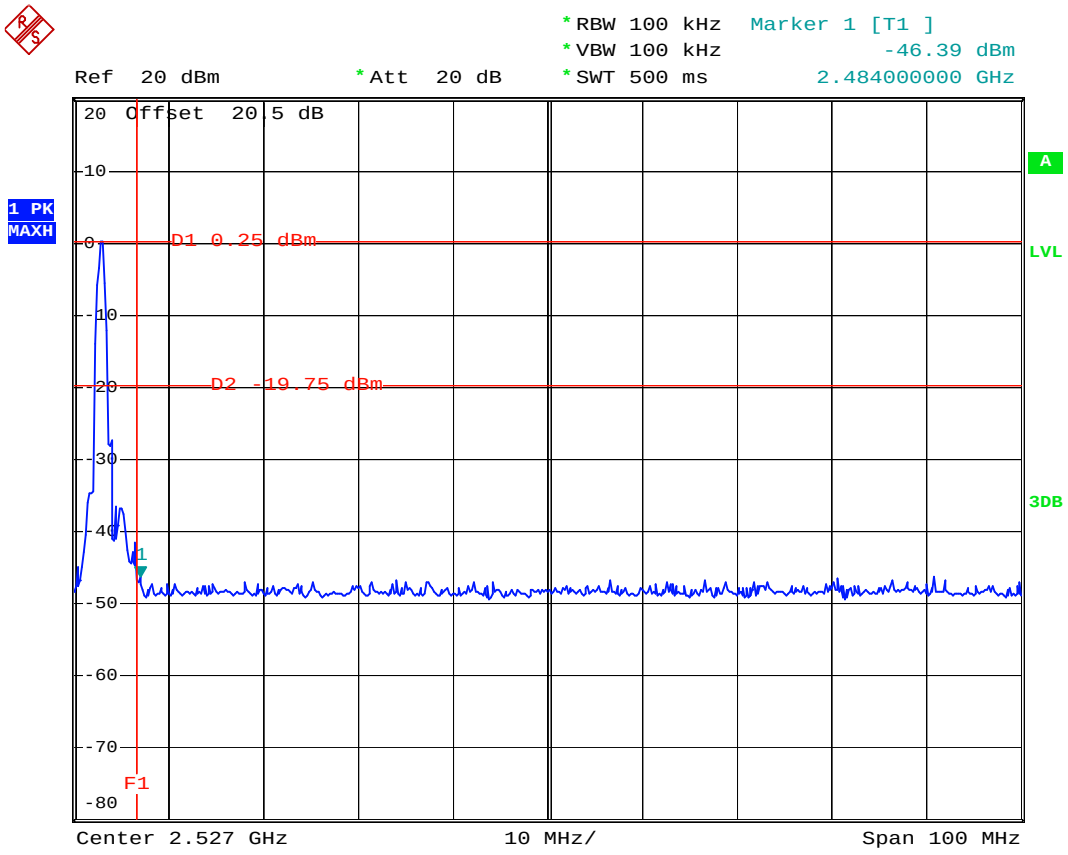
CH78



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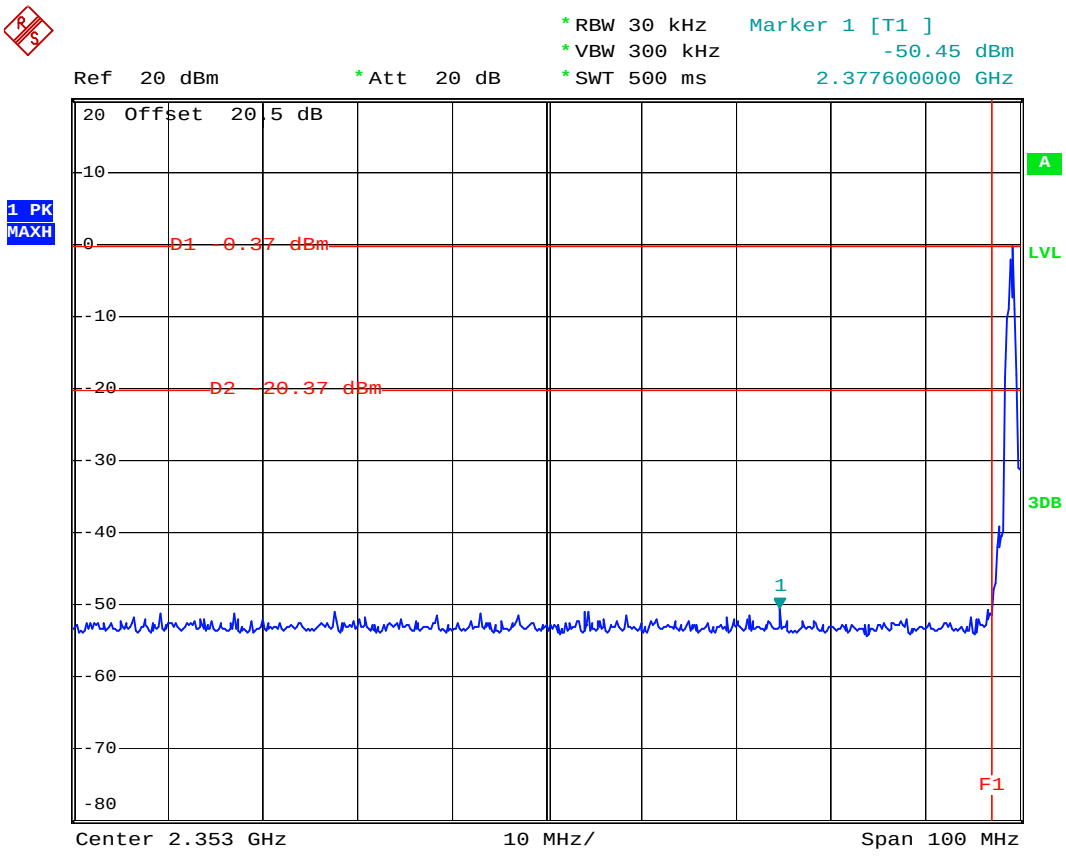
BT EDR(3Mbps)

CH00



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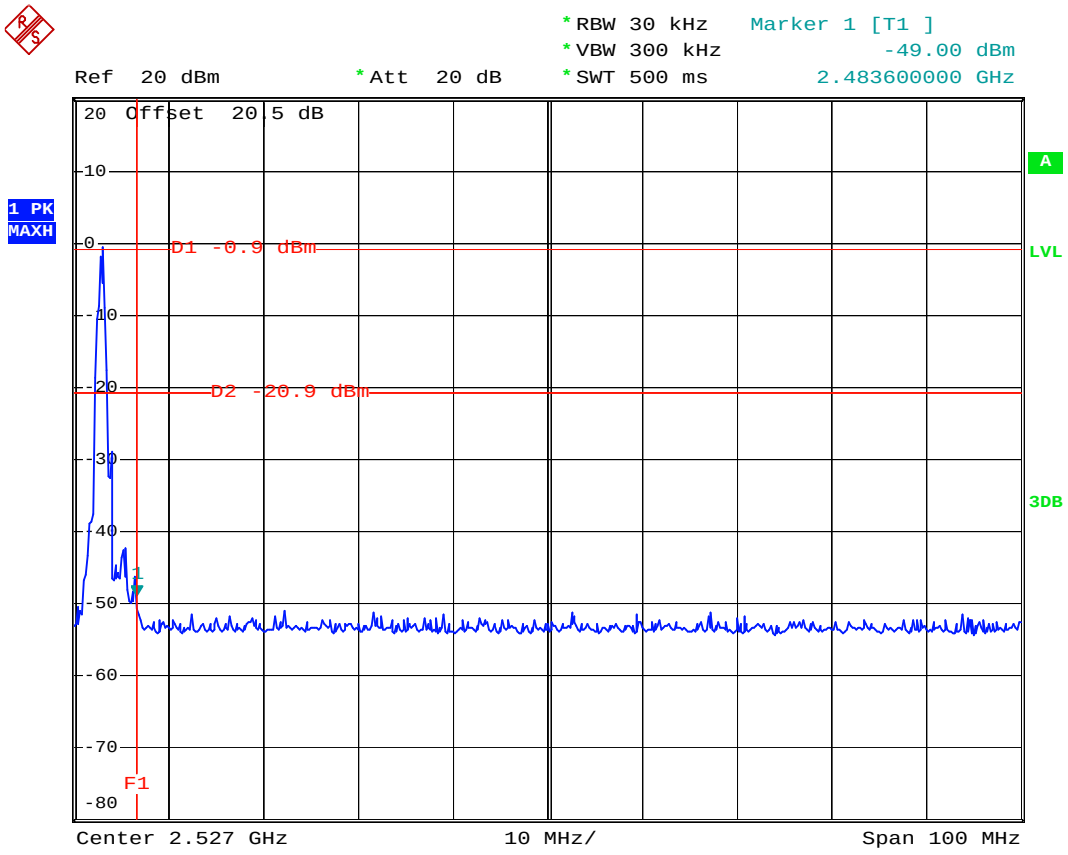
CH78



Date: 13.FEB.2008 16:08:41

5.3 Hopping Channel Separation

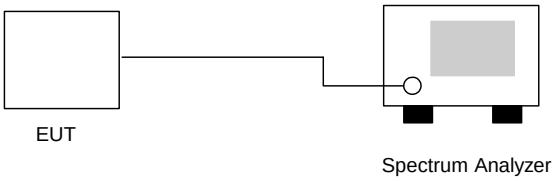
5.3.1 Measuring Instruments

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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.000	0.597	Plot 1
39	2441	1.004	0.601	Plot 2
78	2480	1.004	0.599	Plot 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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.002	0.808	Plot 4
39	2441	1.002	0.811	Plot 5
78	2480	1.008	0.808.	Plot 6

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

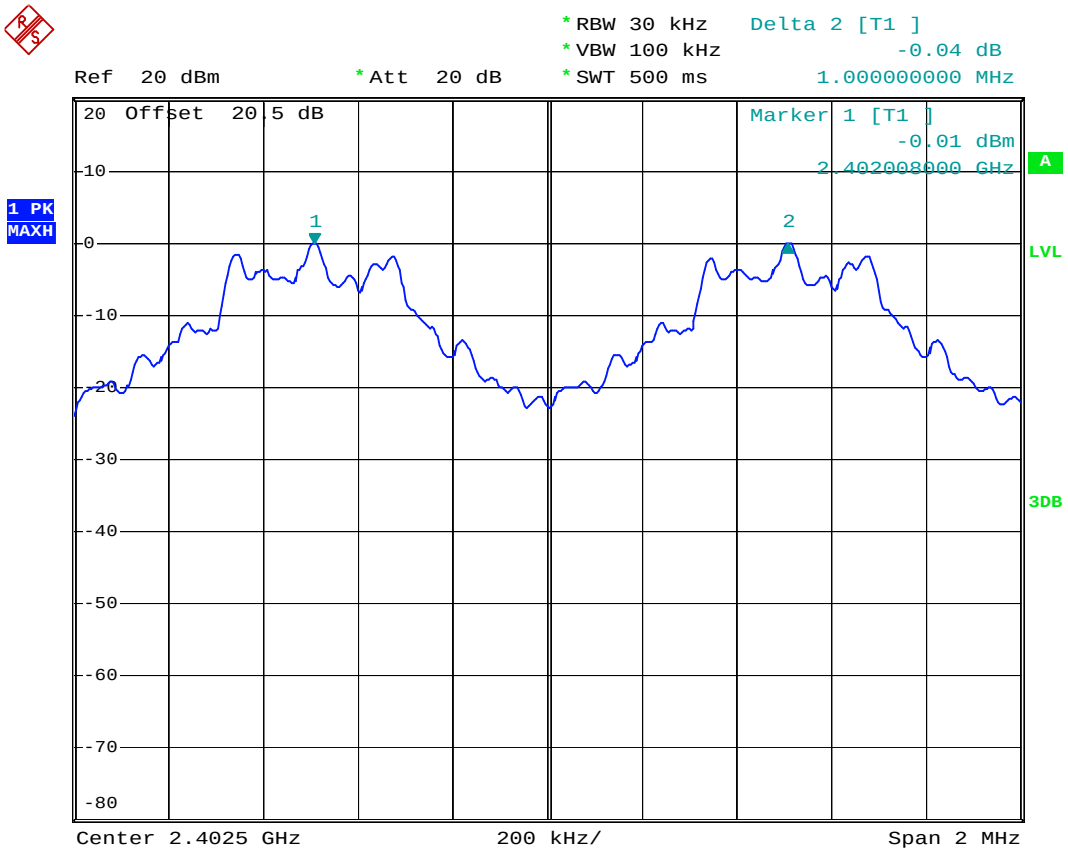
- Application Type : BT EDR(3Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.002	0.837	Plot 7
39	2441	1.002	0.837	Plot 8
78	2480	1.002	0.837	Plot 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

Plot 1



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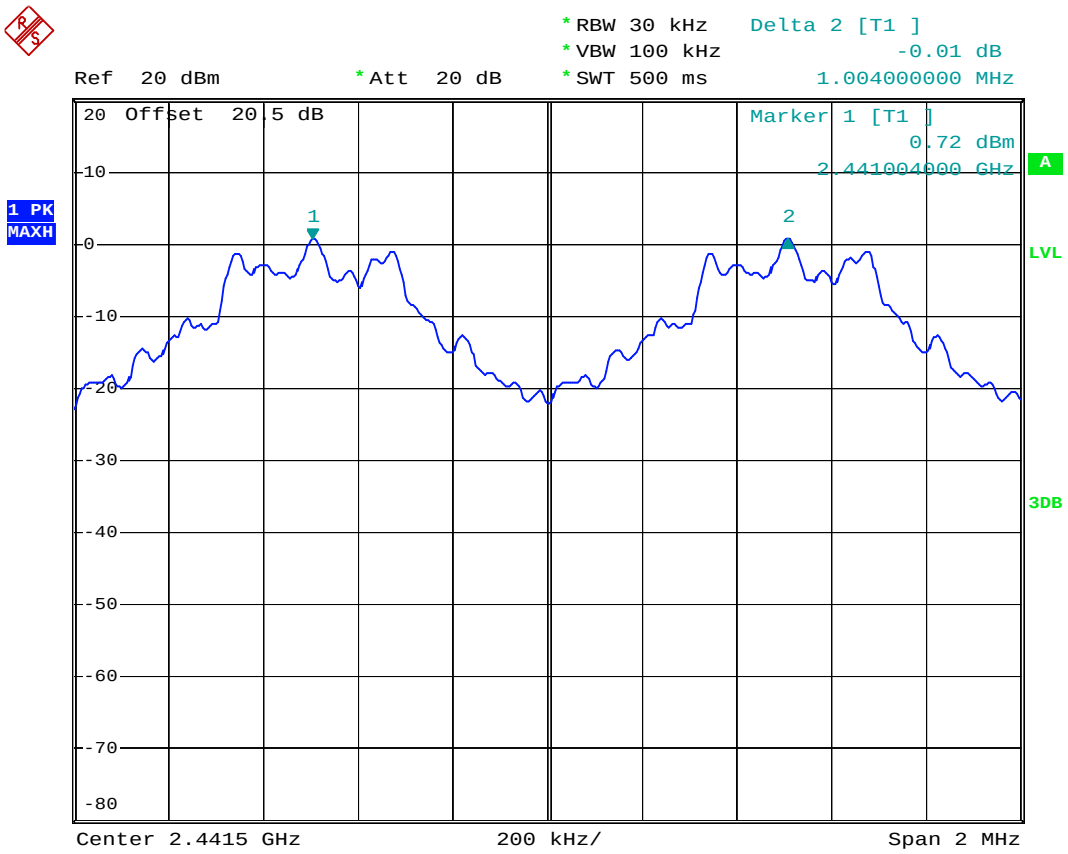

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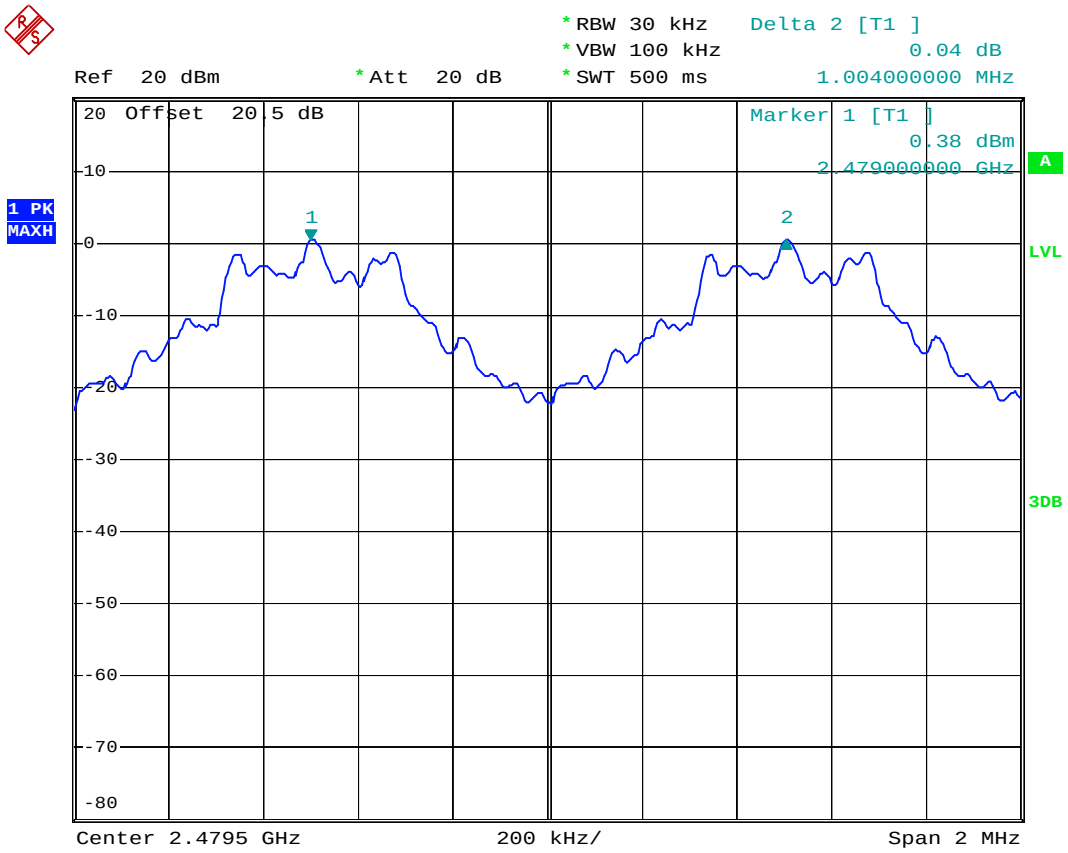

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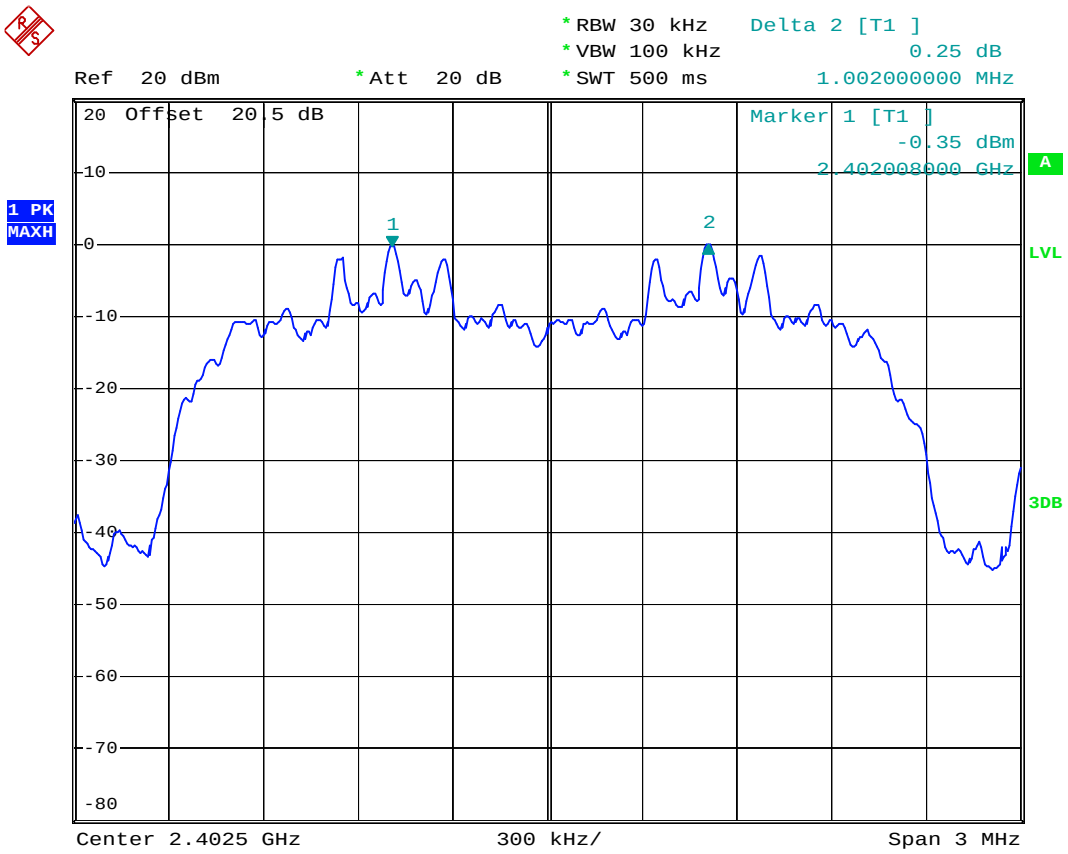
Plot 4



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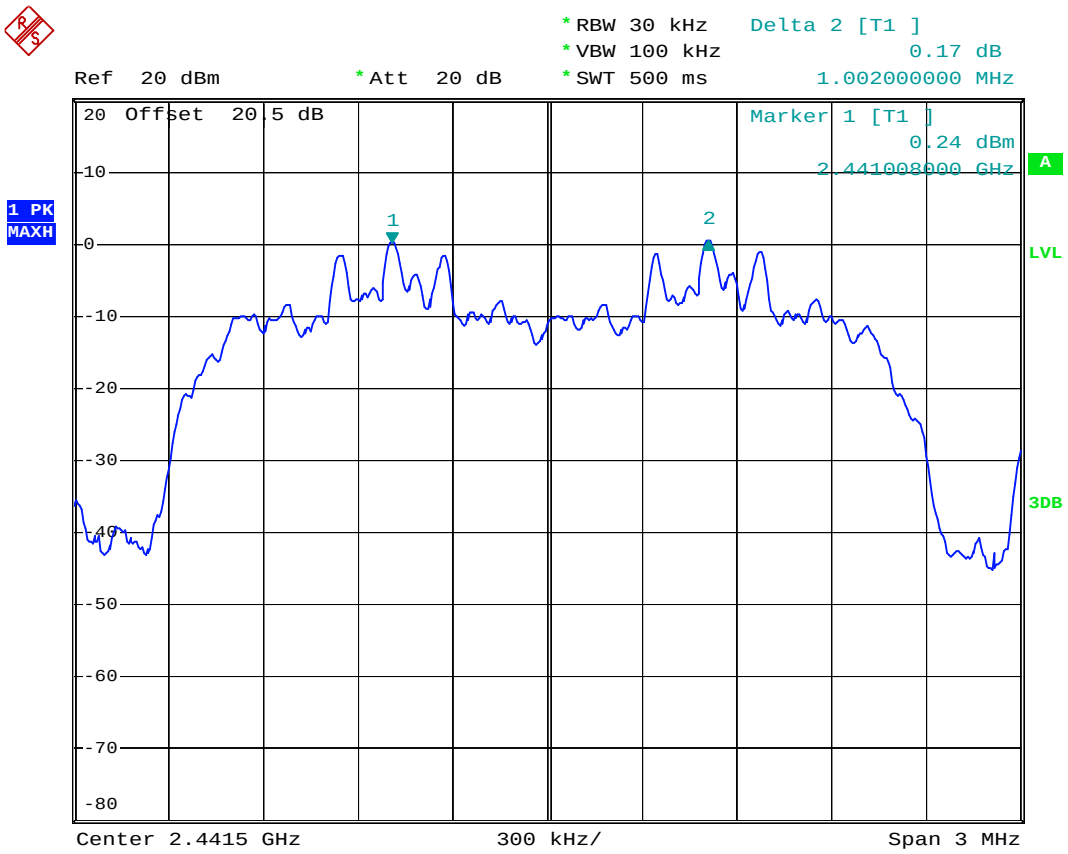

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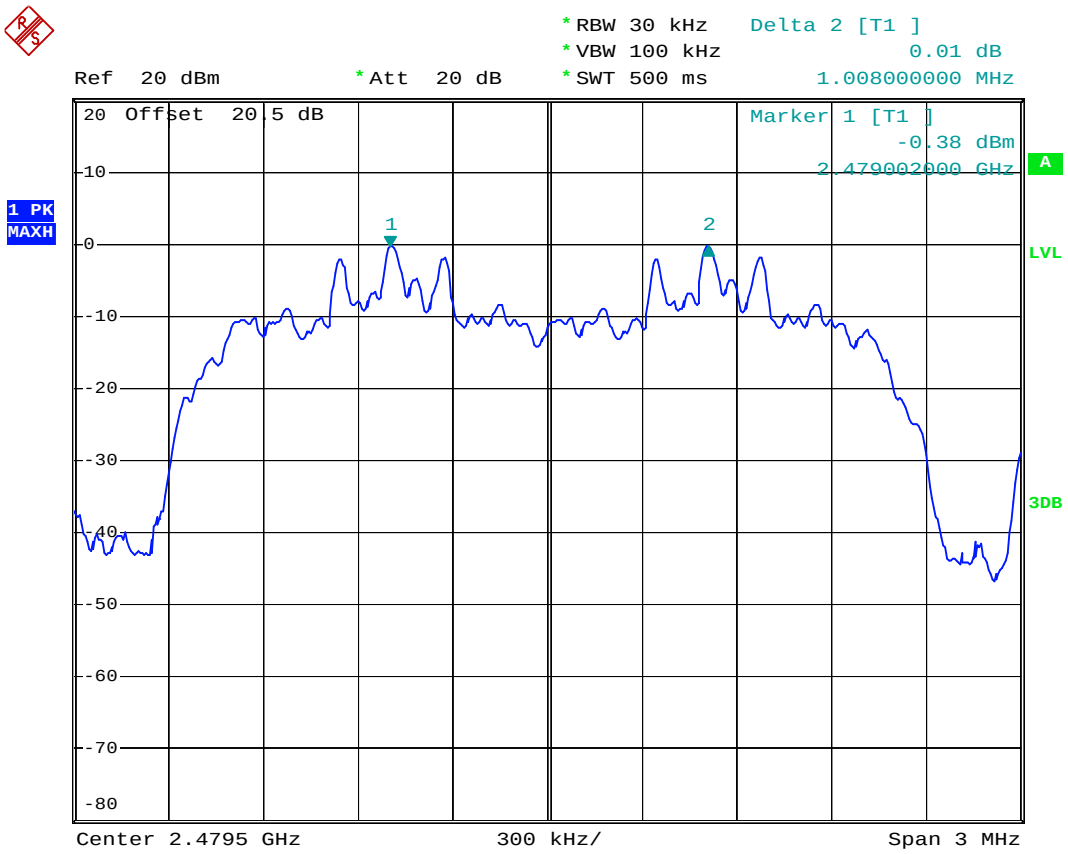
Plot 6



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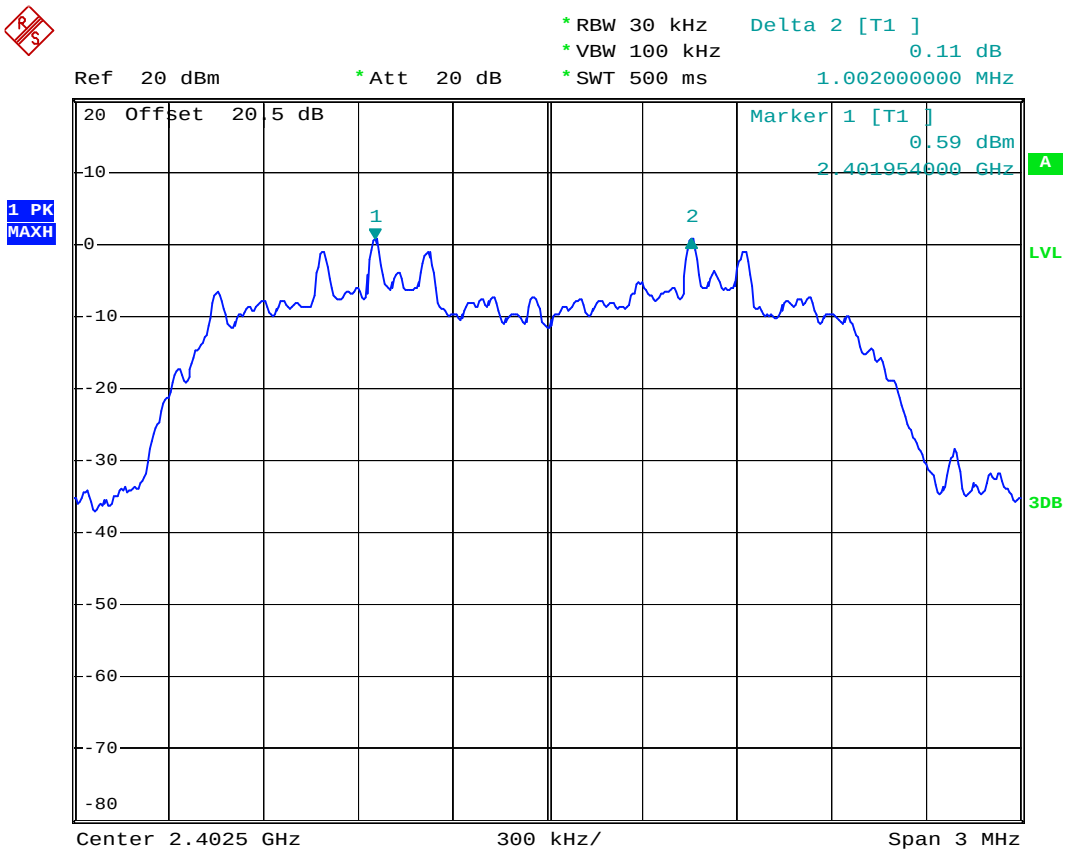

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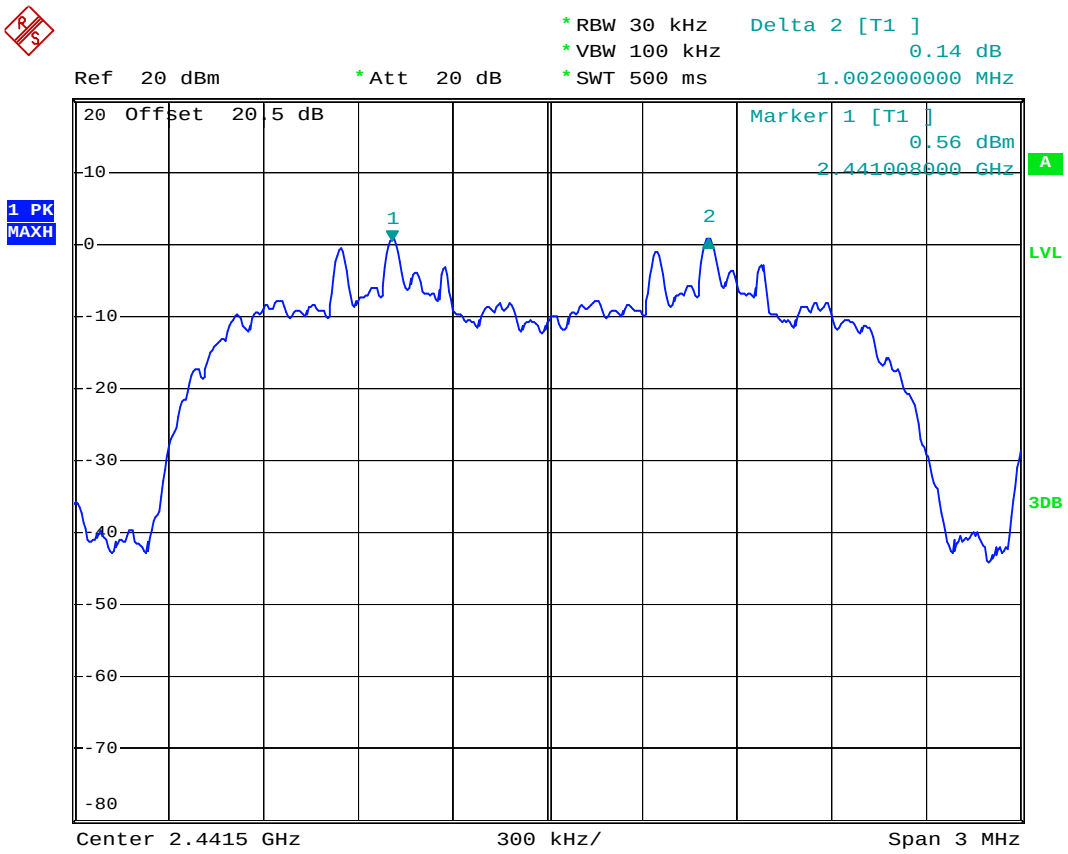
Plot 8



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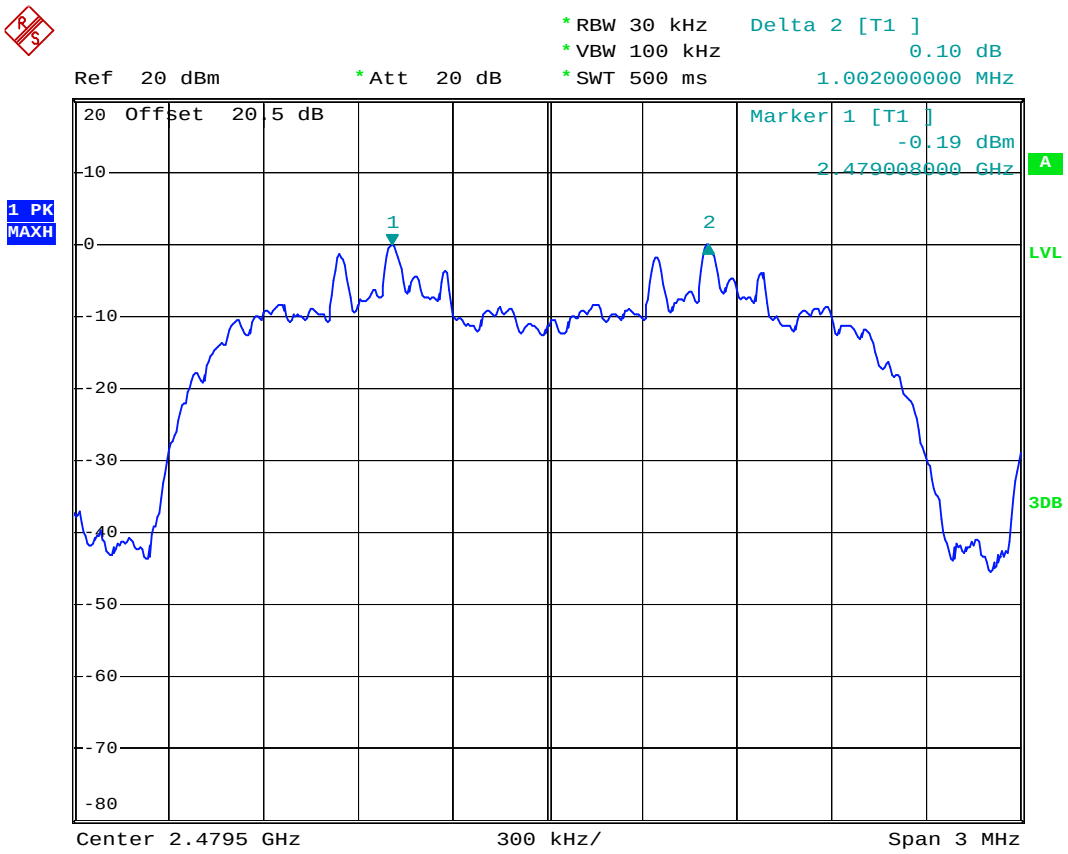
Plot 9



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5.4 Number of Hopping Frequency

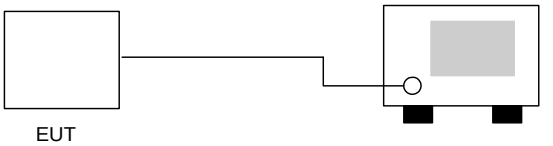
5.4.1 Measuring Instruments

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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

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

- Application Type : BT EDR(2Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

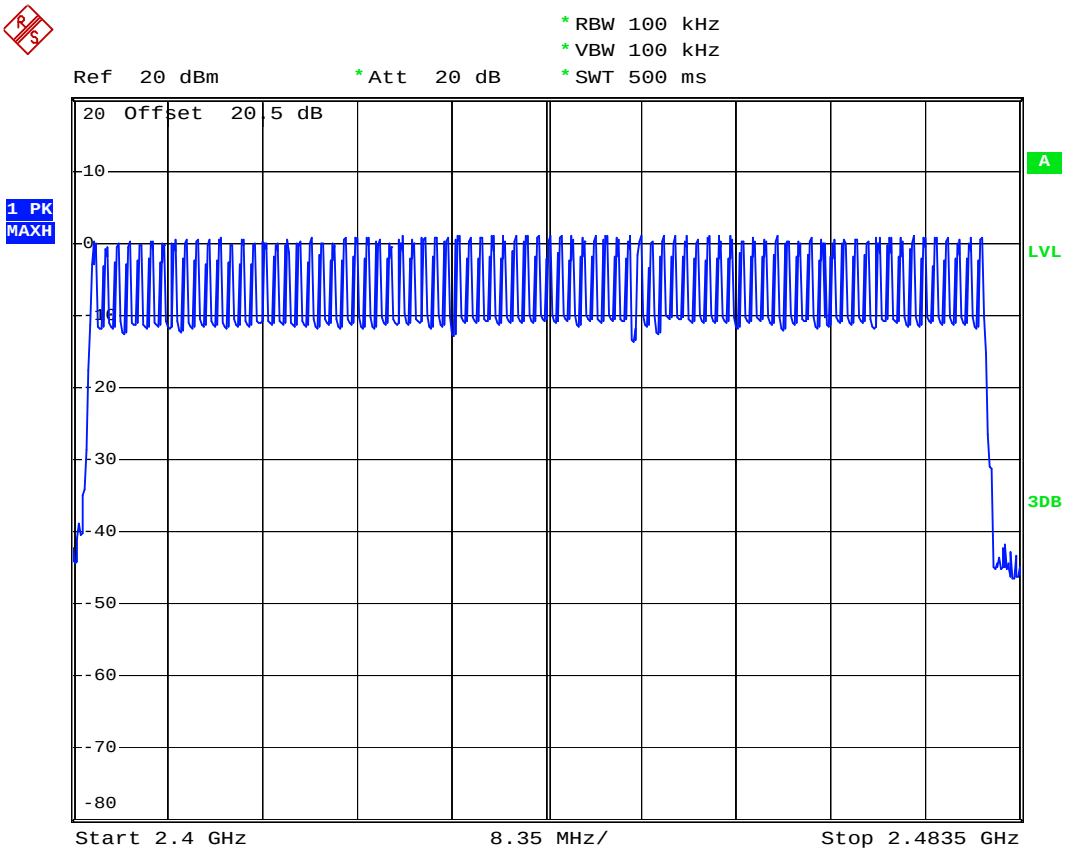
Number of Hopping Frequency (Channel)	Limits (Channel)
79	15

- Application Type : BT EDR(3Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

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

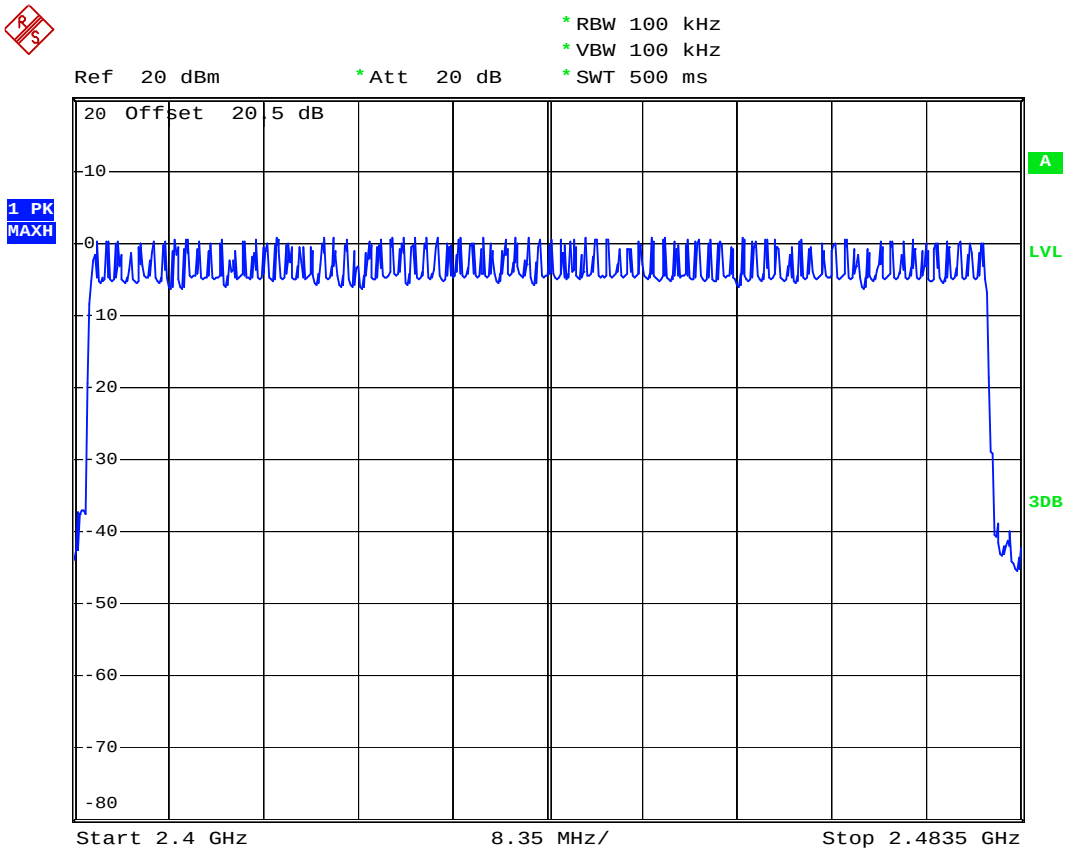
5.4.5 Number of Hopping Frequency

BT



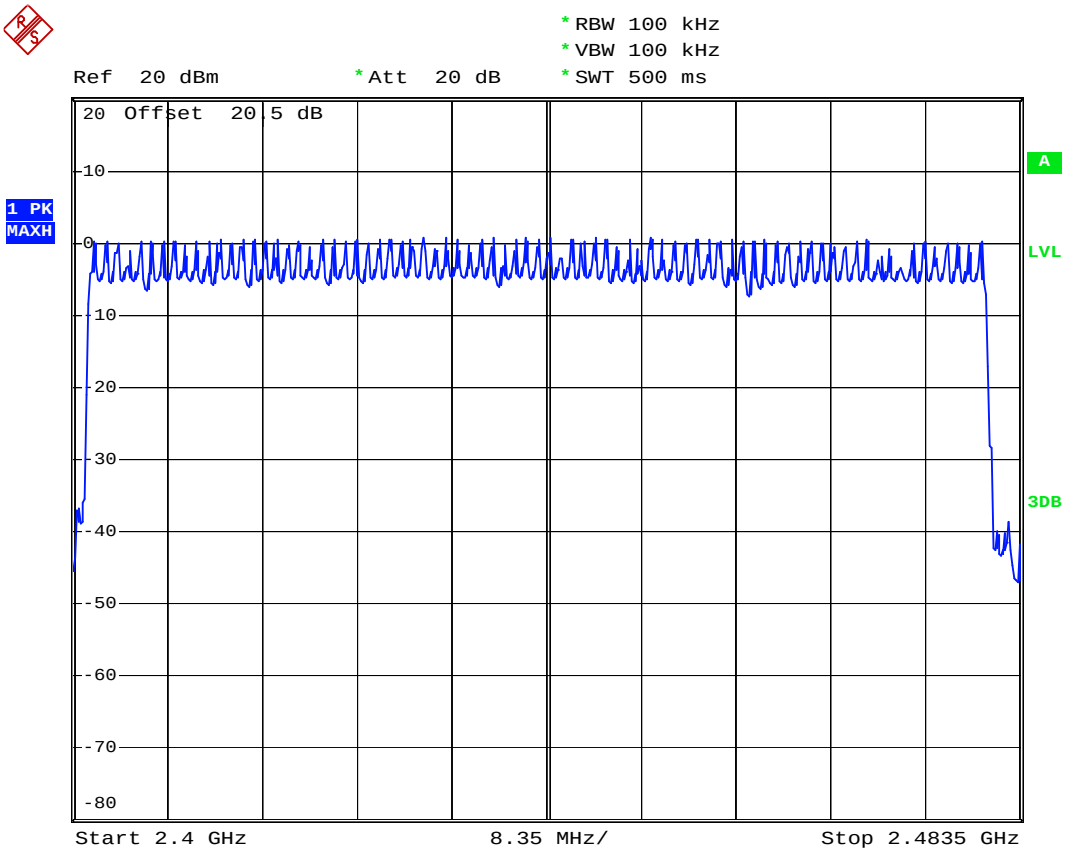
Date: 13.FEB.2008 15:26:44

BT EDR(2Mbps)



Date: 13.FEB.2008 15:59:10

BT EDR(3Mbps)



Date: 13.FEB.2008 16:04:10

5.5 Hopping Channel Bandwidth

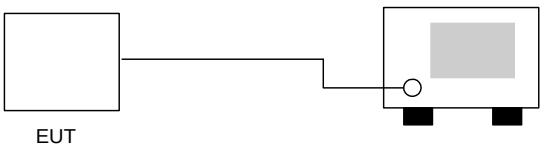
5.5.1 Measuring Instruments

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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	0.896	Plot 1
39	2441	0.902	Plot 2
78	2480	0.898	Plot 3

- Application Type : BT EDR(2Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

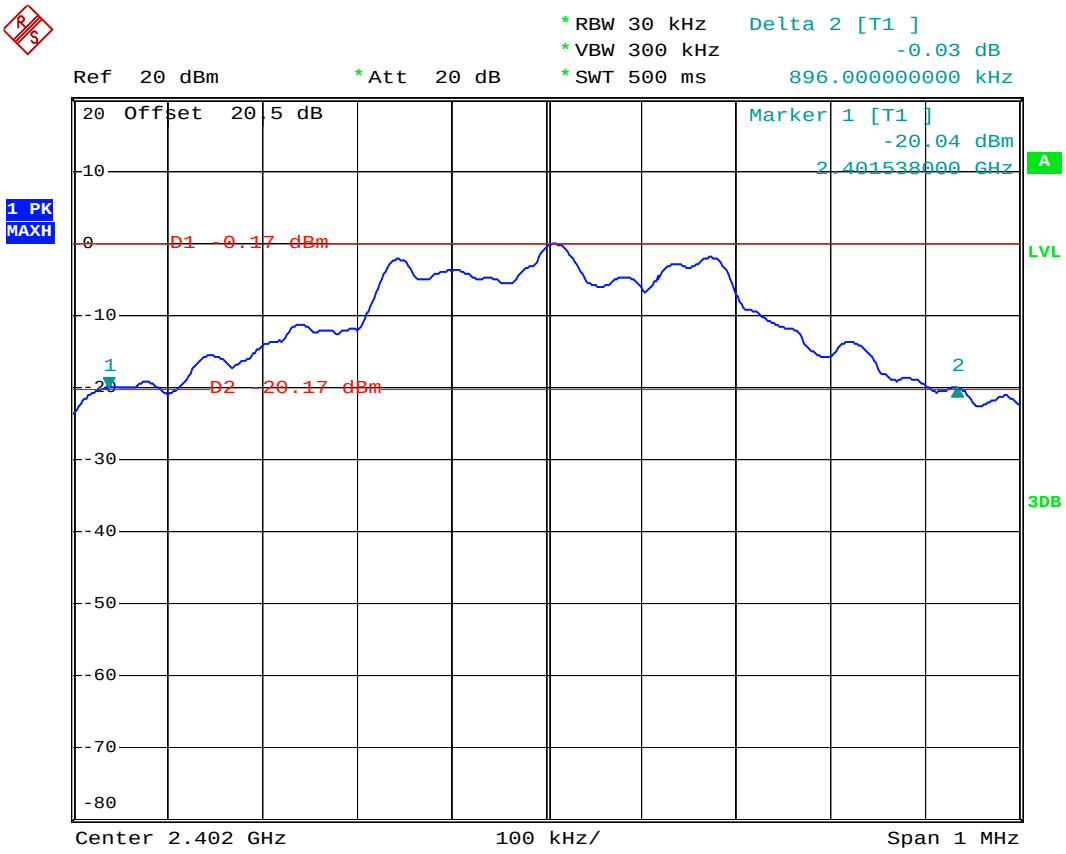
Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.212	Plot 4
39	2441	1.216	Plot 5
78	2480	1.212	Plot 6

- Application Type : BT EDR(3Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.256	Plot 7
39	2441	1.256	Plot 8
78	2480	1.256	Plot 9

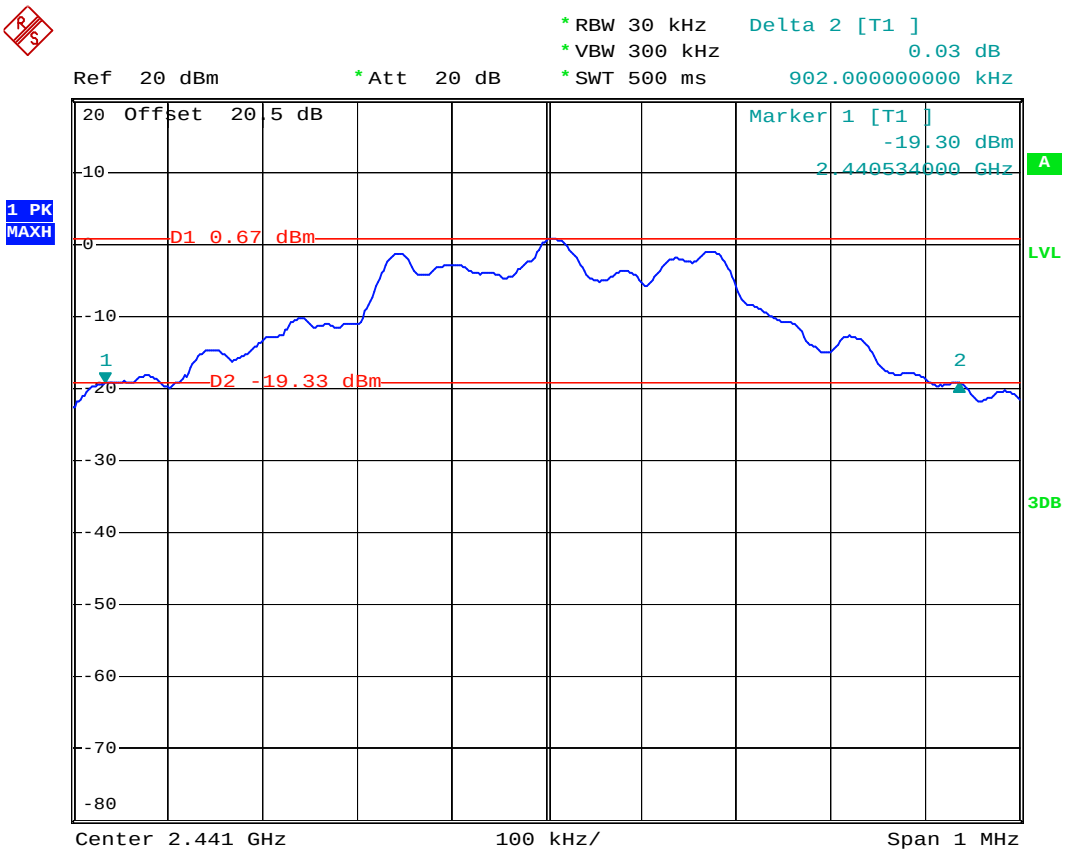
5.5.5 Hopping Channel Bandwidth

Plot 1



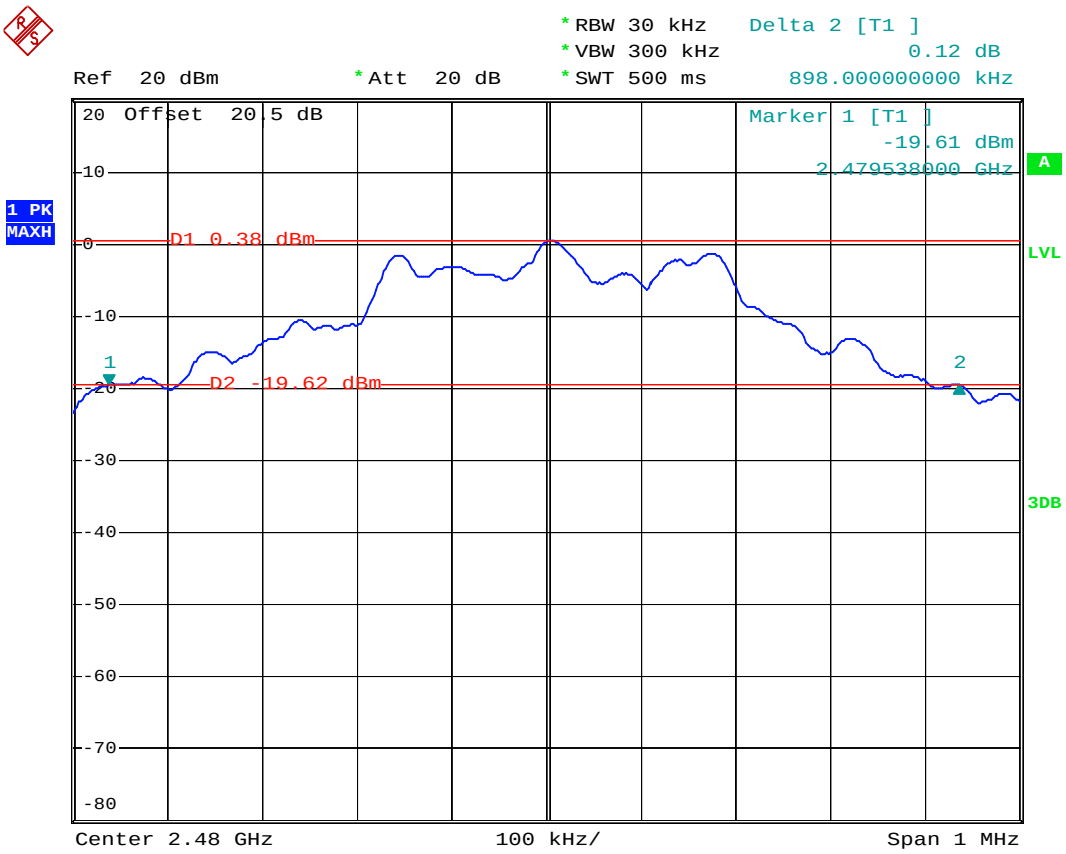
Date: 13.FEB.2008 15:09:42

Plot 2



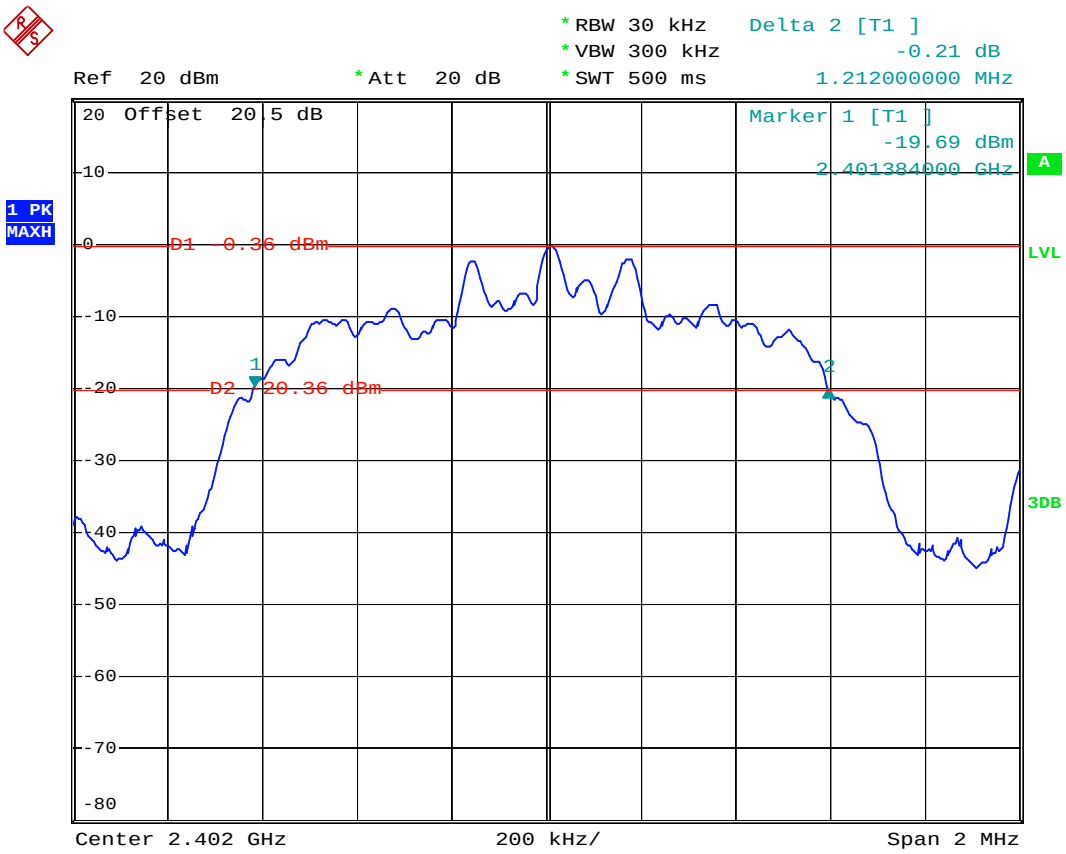
Date: 13.FEB.2008 15:10:58

Plot 3

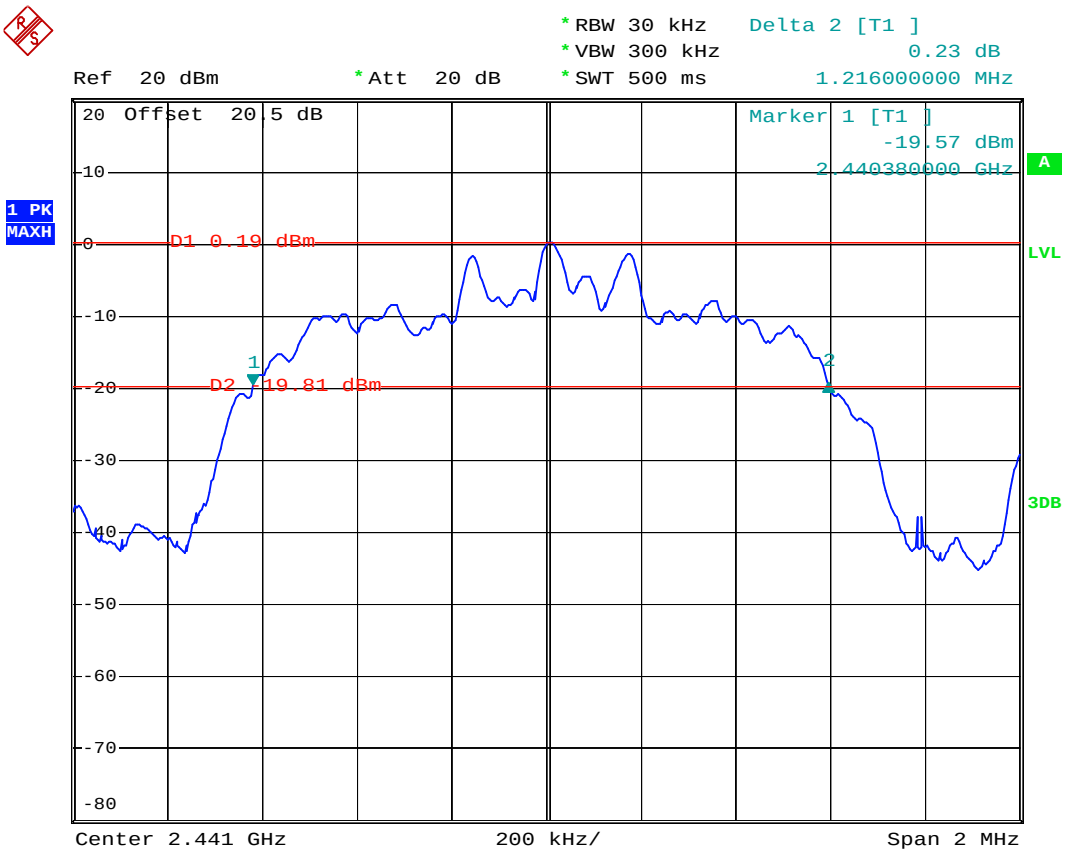


Date: 13.FEB.2008 15:11:56

Plot 4

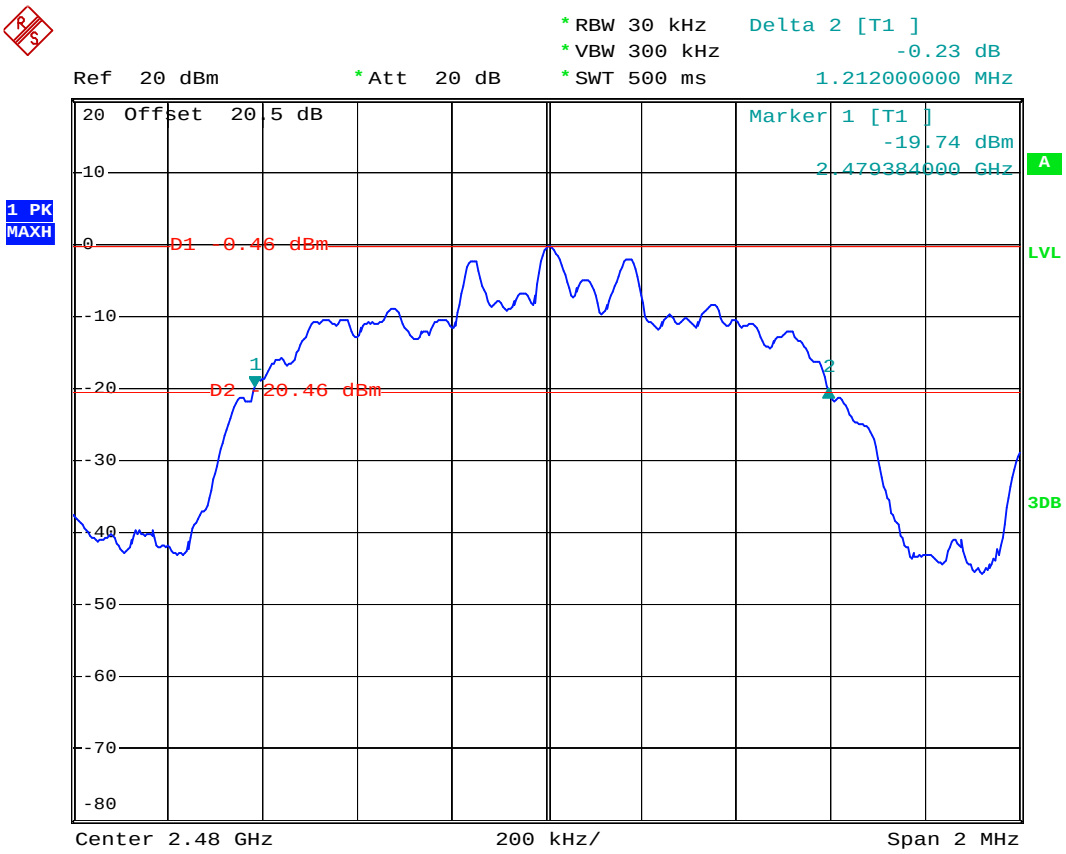

*RBW 30 kHz
*VBW 300 kHz
*SWT 500 ms
Delta 2 [T1]
-0.21 dB
1.212000000 MHz
Ref 20 dBm
*Att 20 dB
20 Offset 20.5 dB
Marker 1 [T1]
-19.69 dBm
2.401384000 GHz
1 PK
MAXH
A
LVL
3DB
D1 -0.36 dBm
D2 -20.36 dBm
Center 2.402 GHz
200 kHz/
Span 2 MHz
Date: 13.FEB.2008 15:30:58

Plot 5



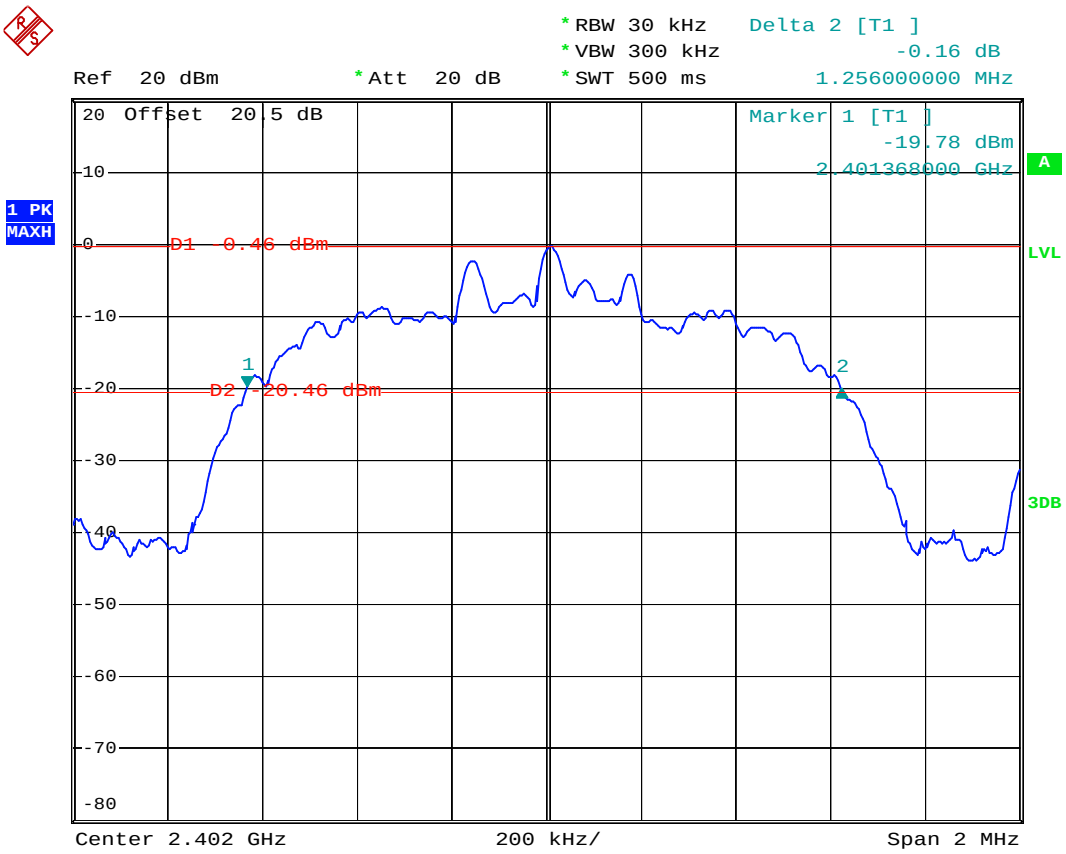
Date: 13.FEB.2008 15:31:56

Plot 6



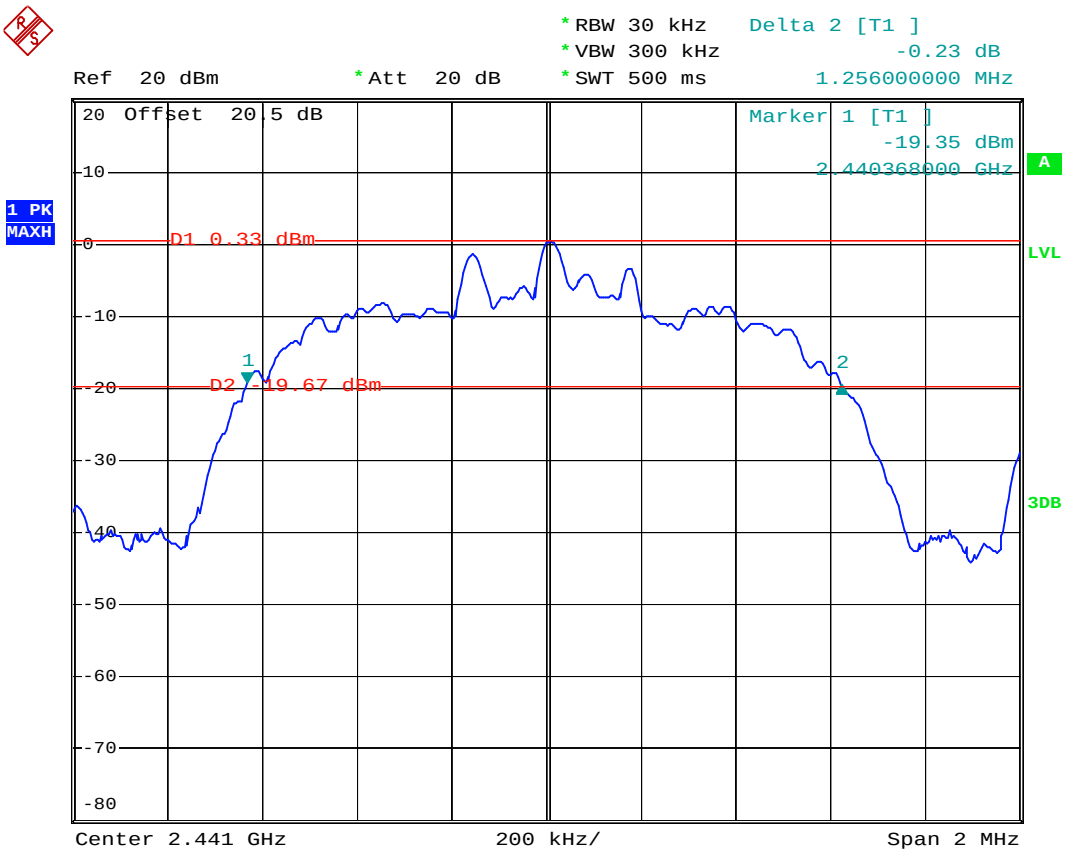
Date: 13.FEB.2008 15:32:46

Plot 7



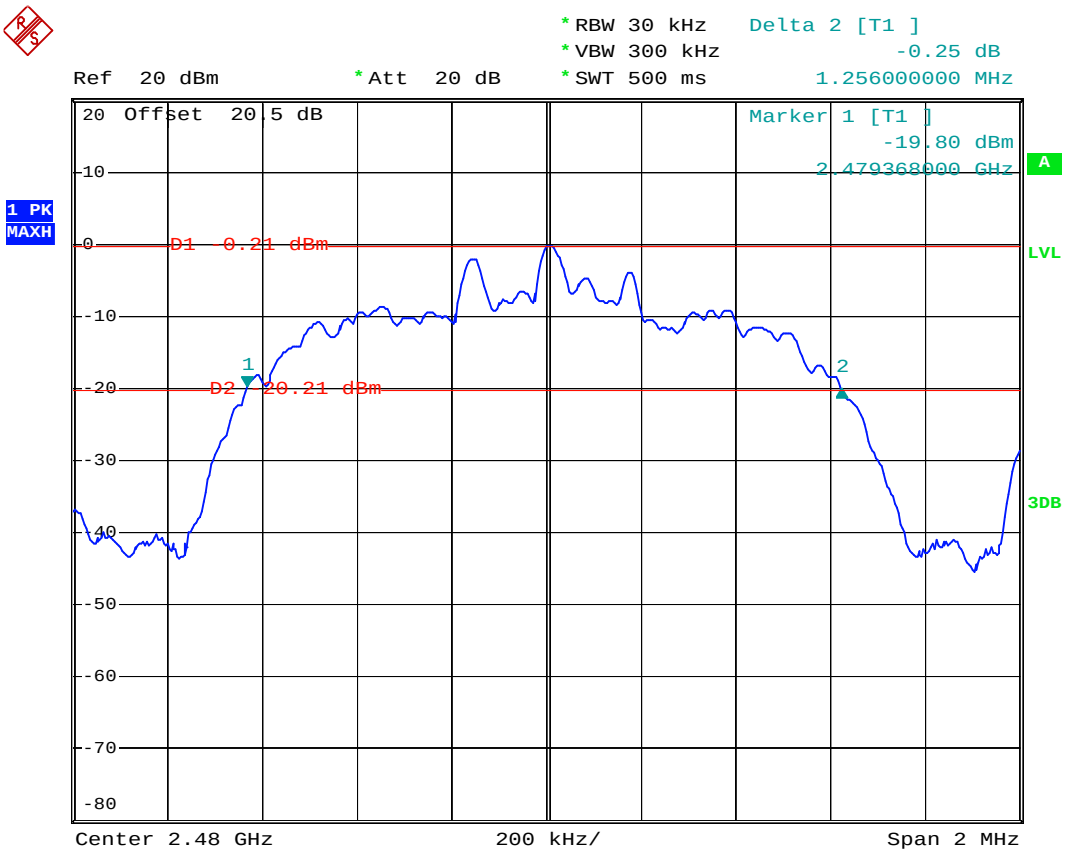
Date: 13.FEB.2008 16:06:11

Plot 8



Date: 13.FEB.2008 16:06:57

Plot 9



Date: 13.FEB.2008 16:07:45

5.6 Dwell Time of Each Frequency

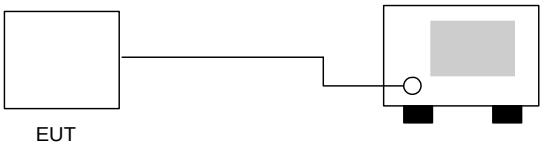
5.6.1 Measuring Instruments

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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.7	432	0.119	0.4
DH3	4.3	1720	0.234	0.4
DH5	3.5	3100	0.343	0.4

- Application Type : BT EDR(2Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.4	456	0.121	0.4
DH3	4.7	1730	0.257	0.4
DH5	4.6	3080	0.448	0.4

- Application Type : BT EDR(3Mbps)
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

CH39

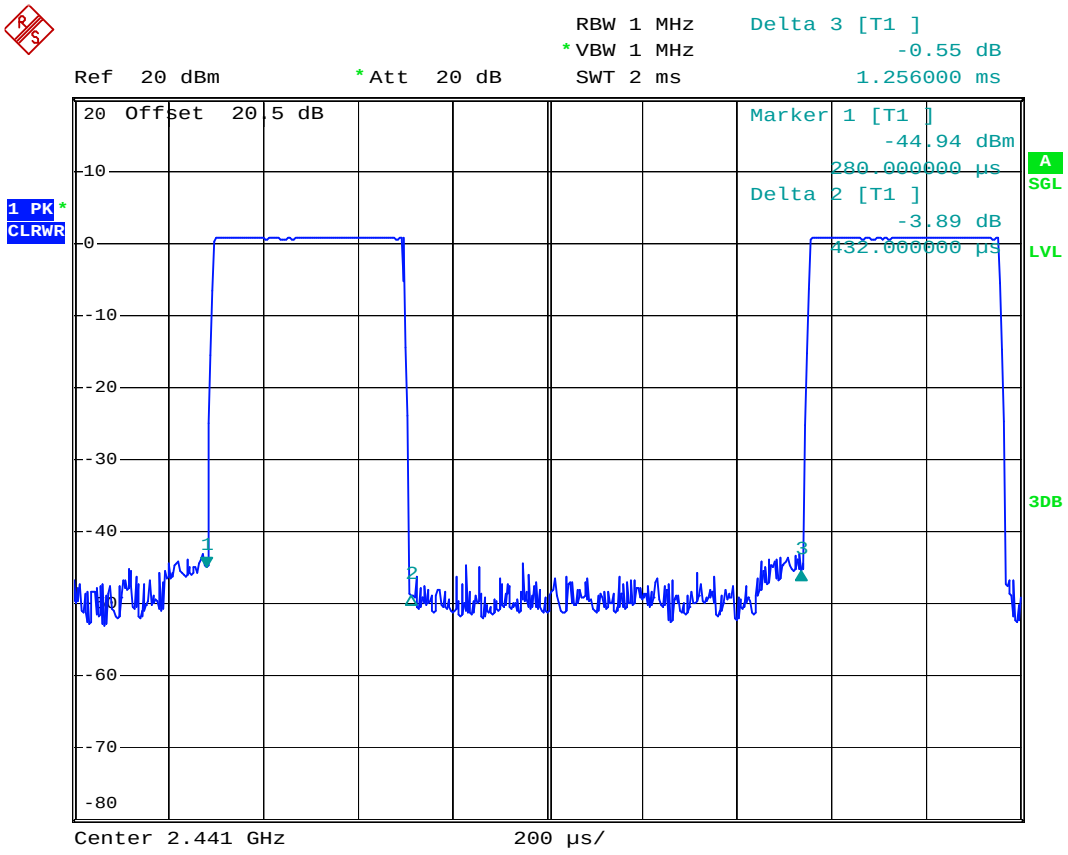
Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.3	448	0.132	0.4
DH3	5.2	1740	0.286	0.4
DH5	3.5	3020	0.334	0.4

※ Remark:

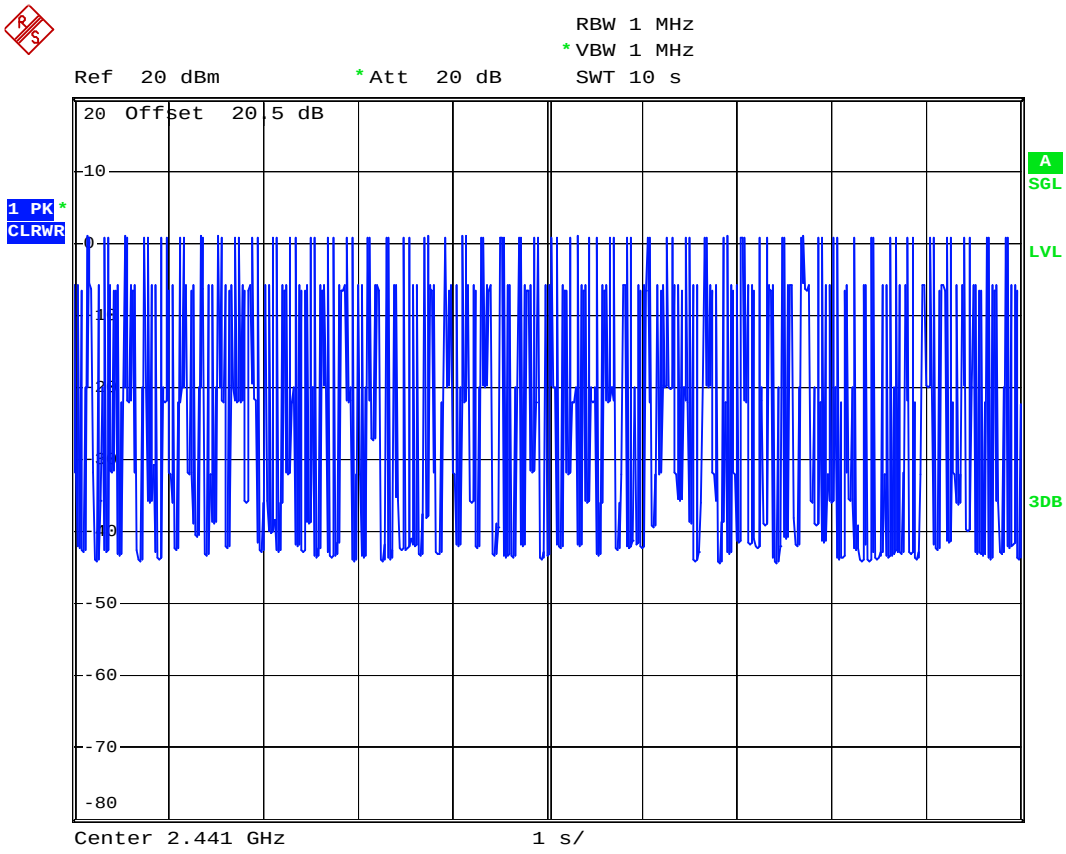
1. Dwell Time=79(channels) x 0.4(s) x average hopping channel x package transfer time
2. 79 channels come from the Hopping Channel number.
3. Average Hopping Channel = hops/sweep time
4. t: Package Transfer Time(us)

5.6.5 Dwell Time

DH1 (CH39)

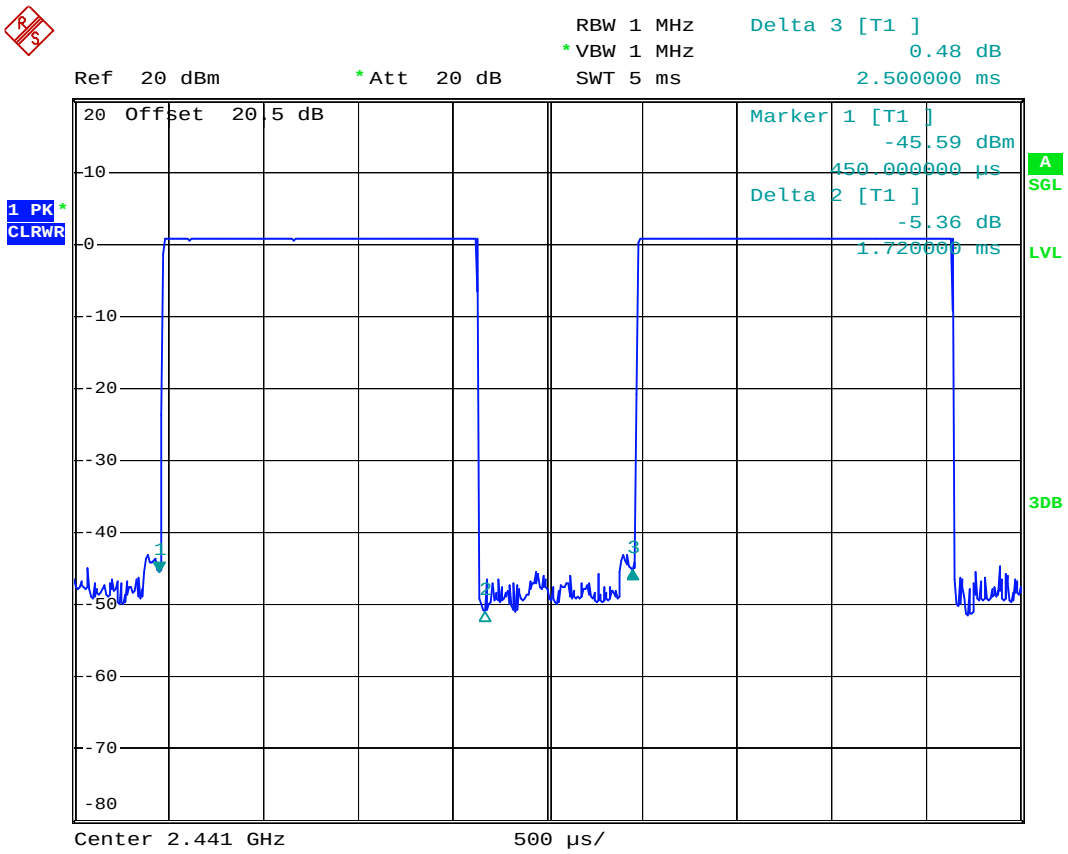


Date: 13.FEB.2008 15:17:53

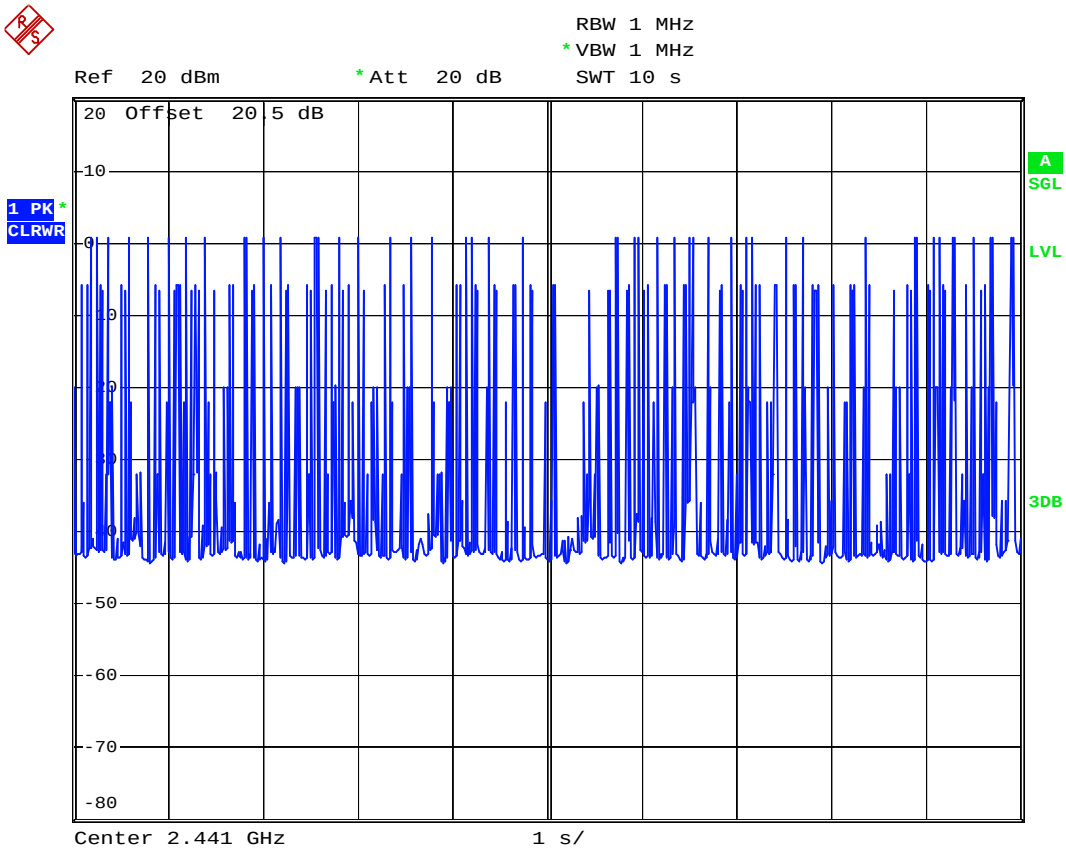


Date: 13.FEB.2008 15:20:32

DH3 (CH39)

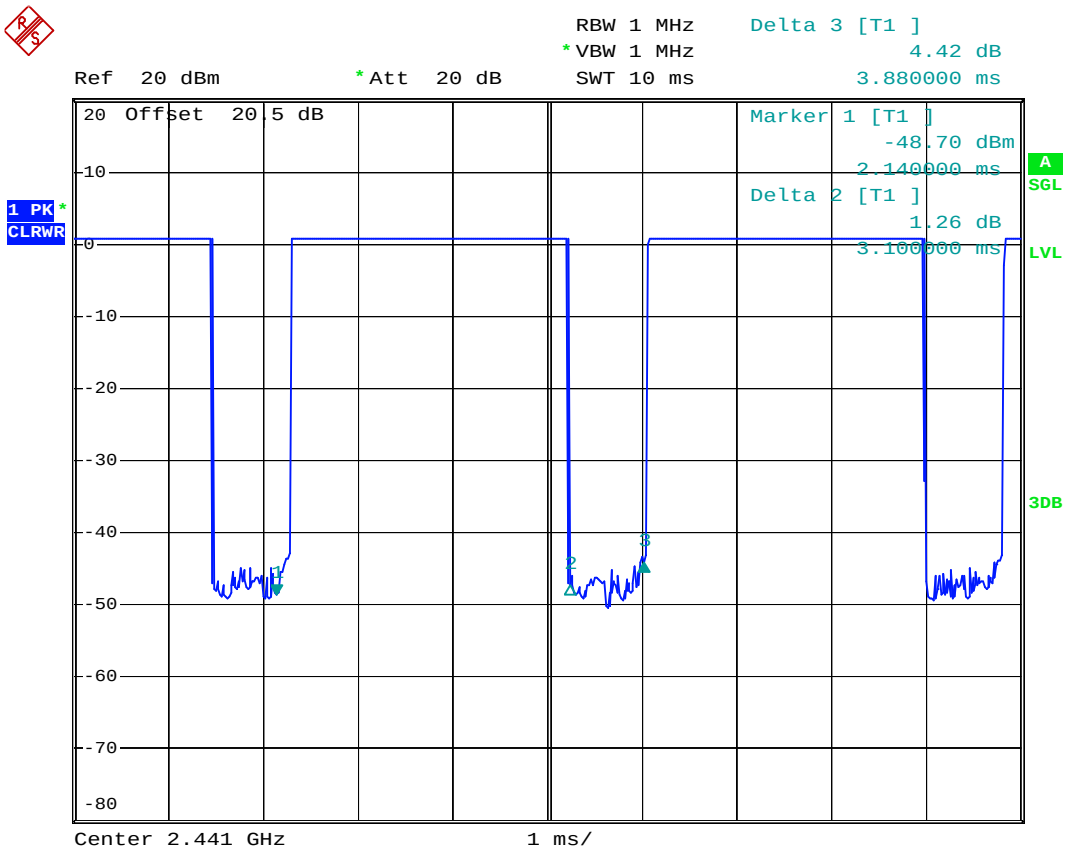


Date: 13.FEB.2008 15:18:45

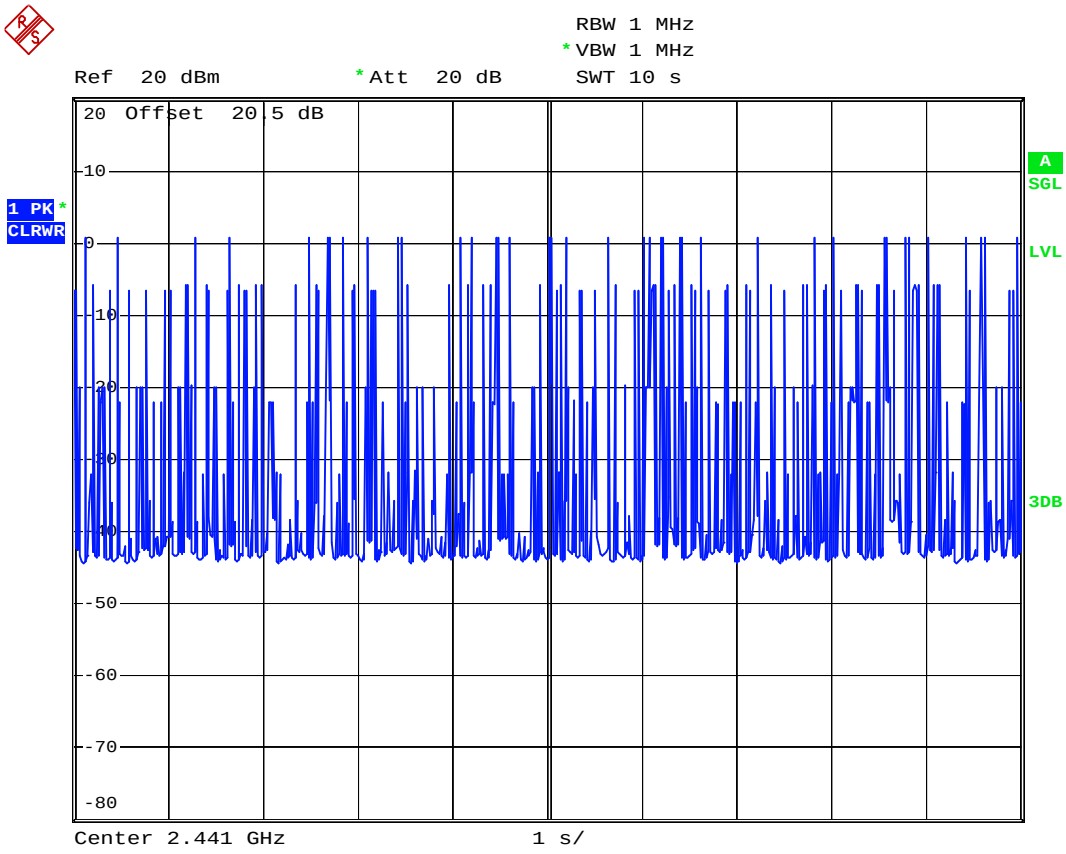


Date: 13.FEB.2008 15:21:17

DH5 (CH39)

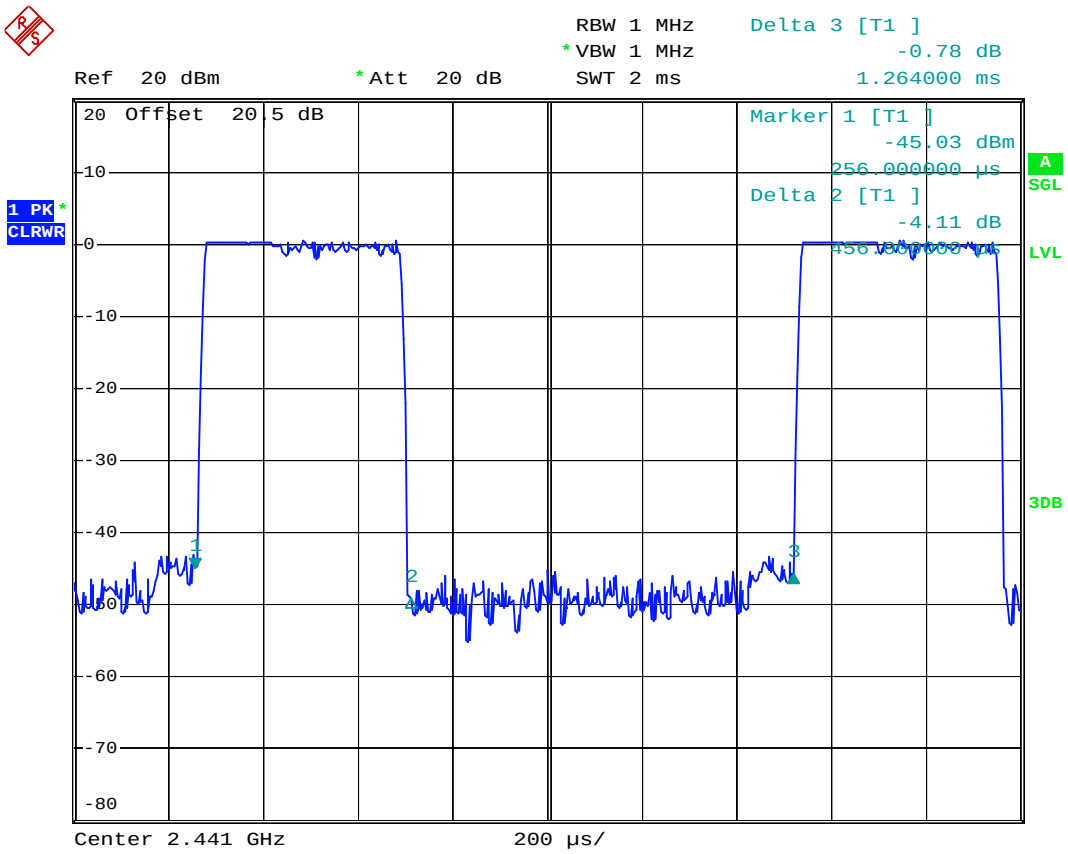


Date: 13.FEB.2008 15:19:34

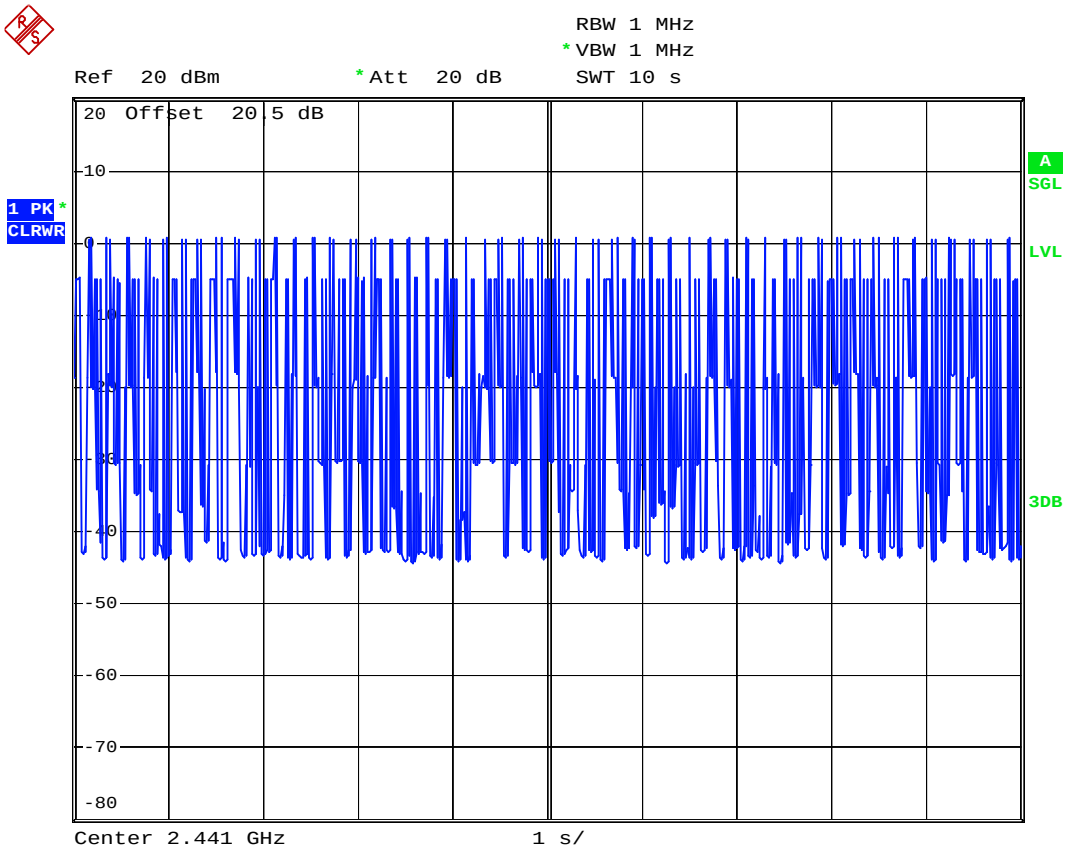


Date: 13.FEB.2008 15:20:08

2DH1 (CH39)

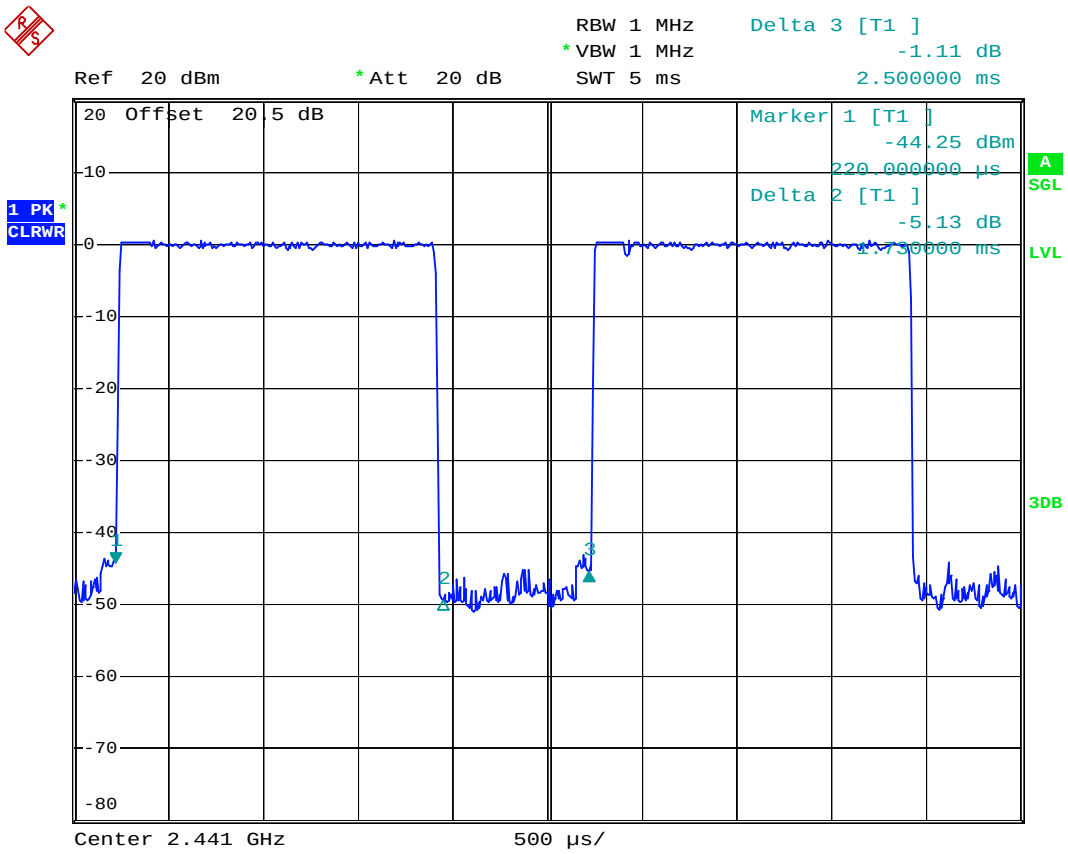


Date: 13.FEB.2008 15:48:40

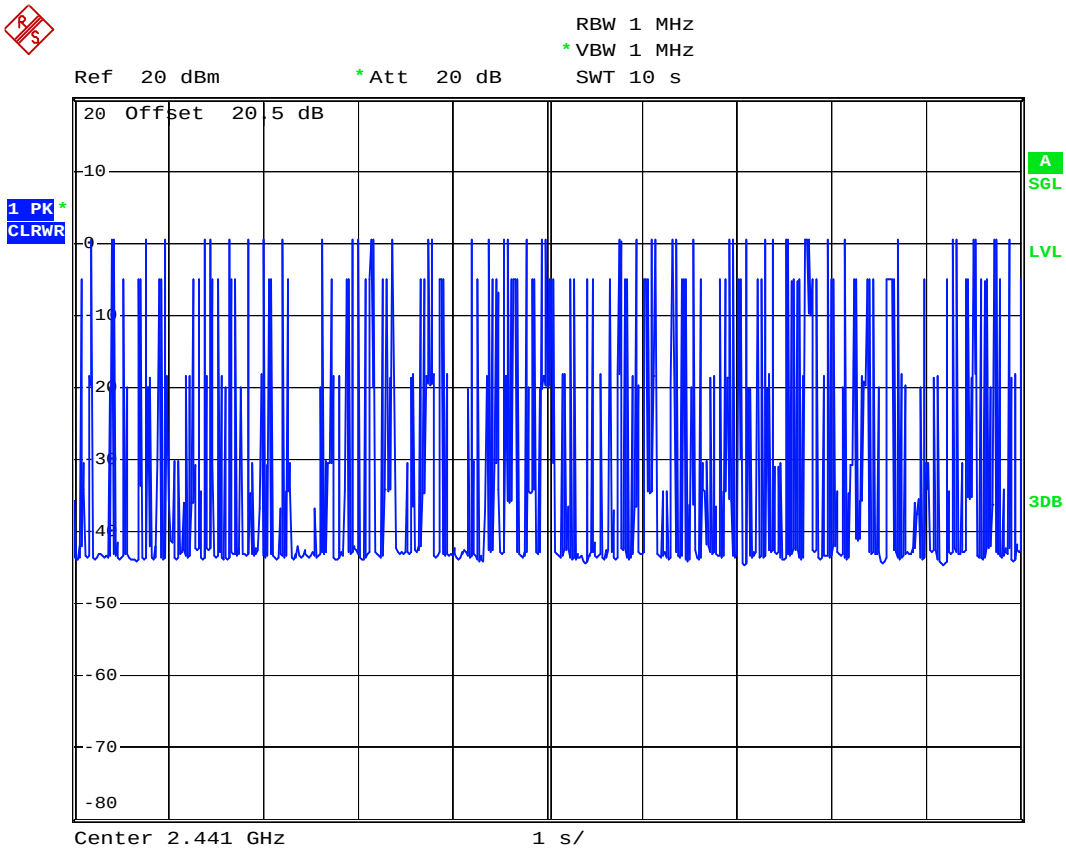


Date: 13.FEB.2008 15:53:50

2 DH3 (CH39)

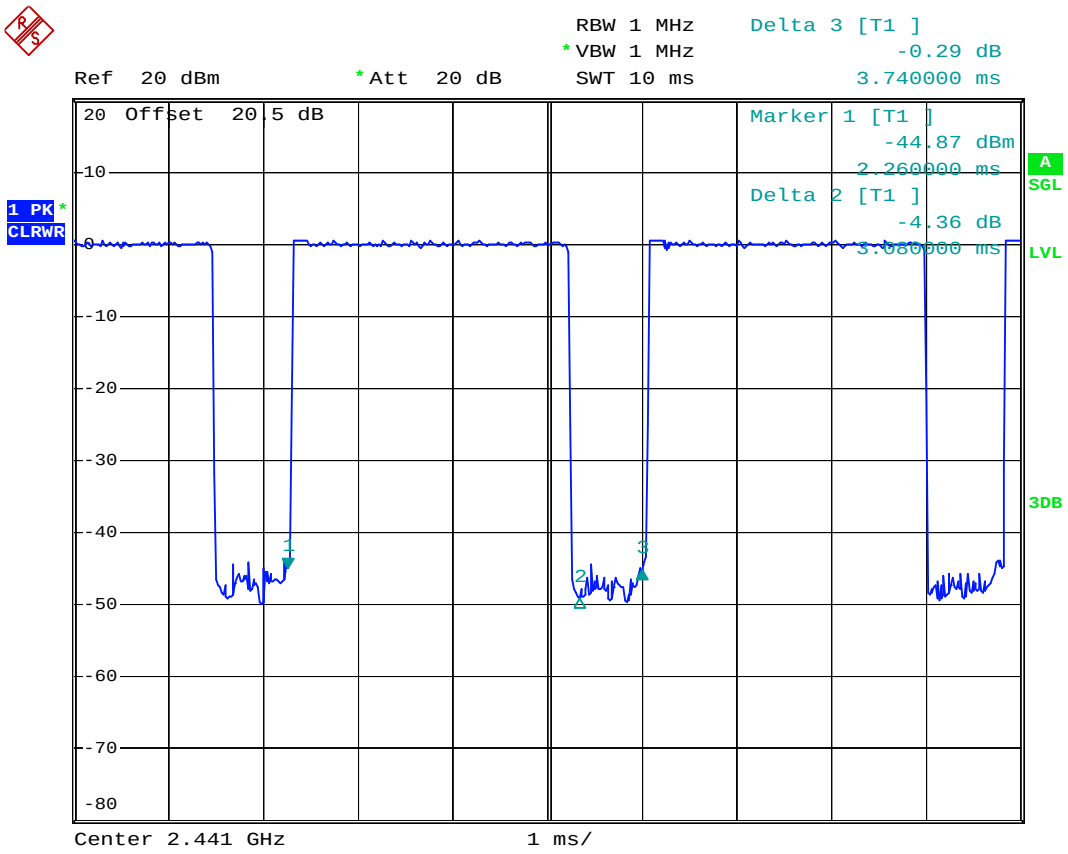


Date: 13.FEB.2008 15:49:31

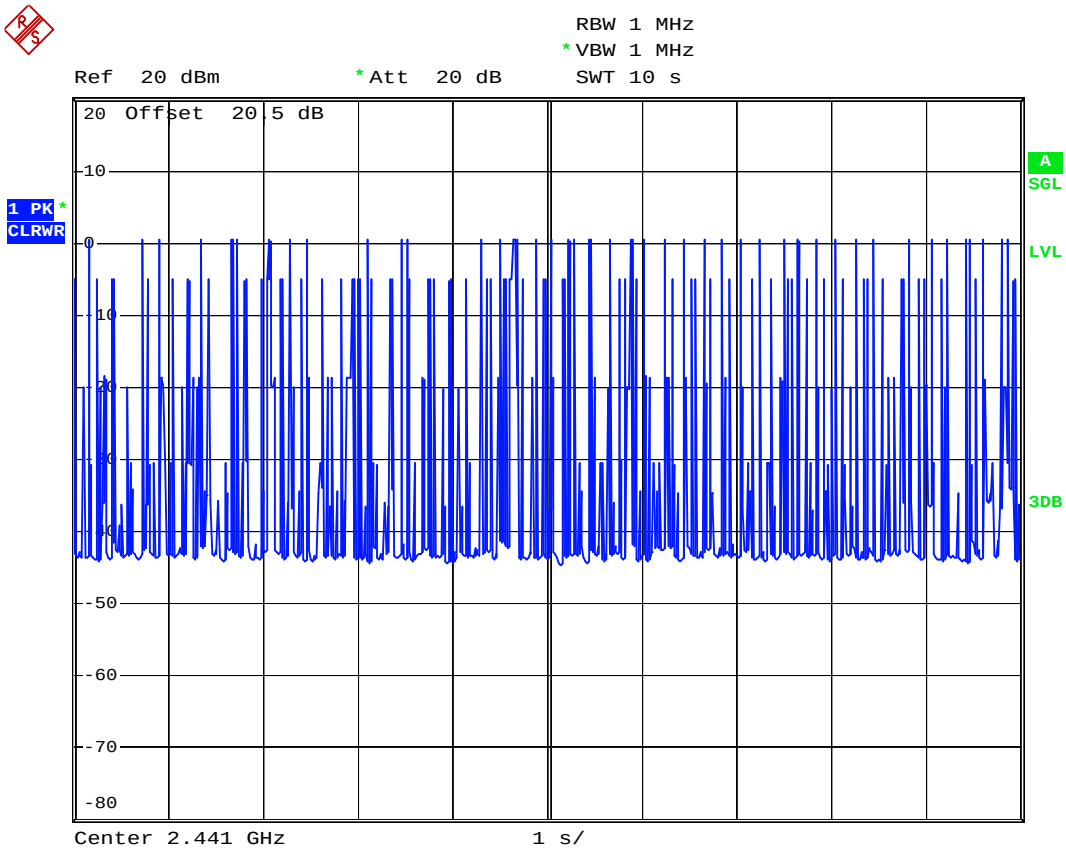


Date: 13.FEB.2008 15:54:18

2 DH5 (CH39)

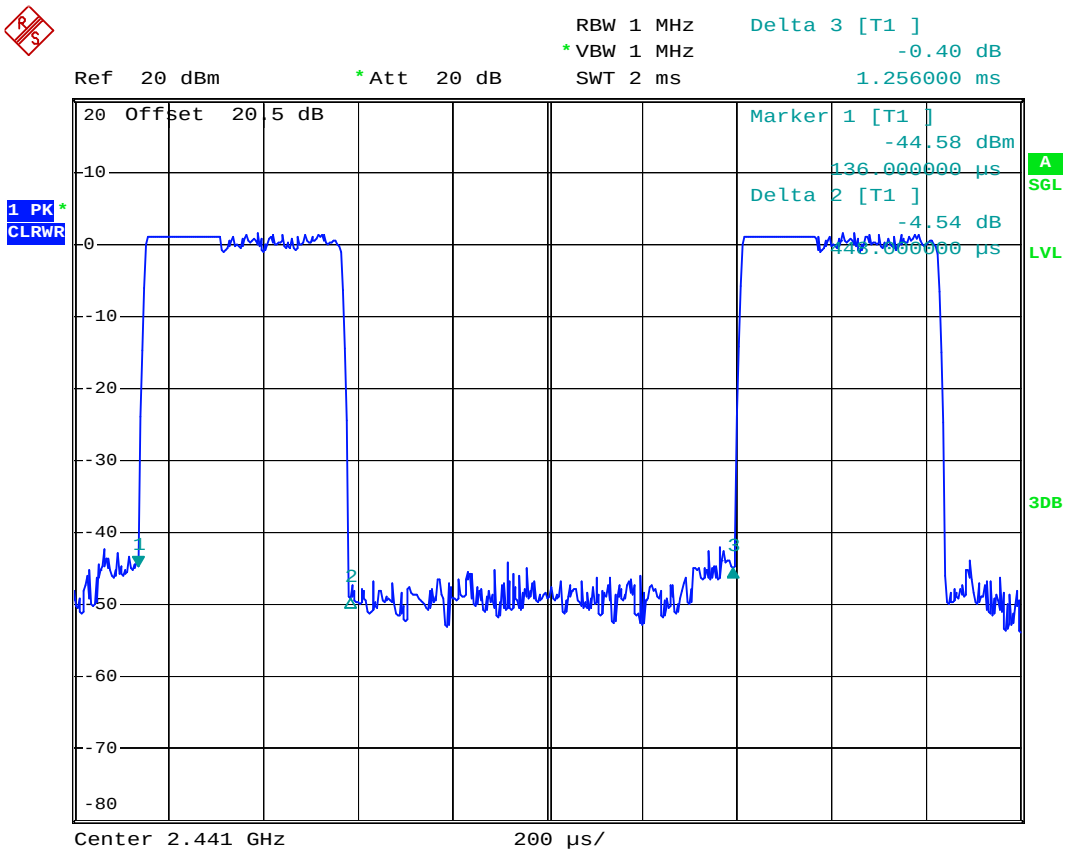


Date: 13.FEB.2008 15:50:08

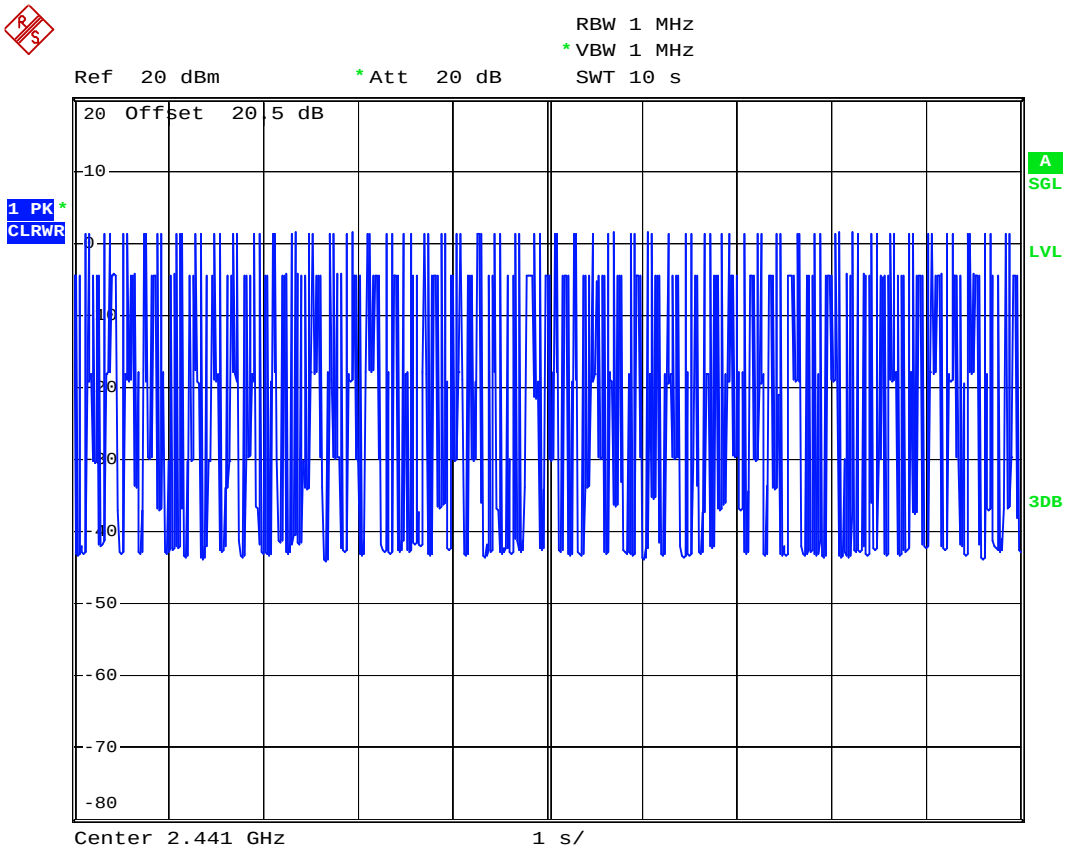


Date: 13.FEB.2008 15:52:35

3DH1 (CH39)

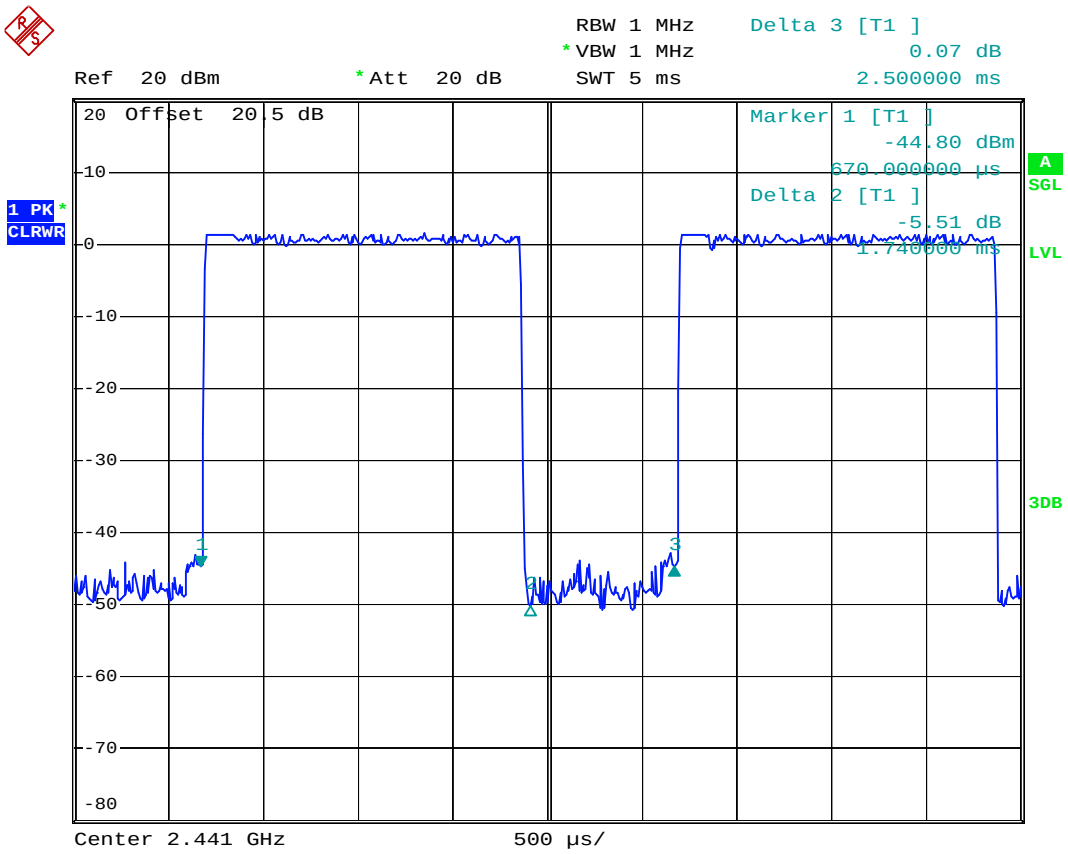


Date: 13.FEB.2008 16:21:23

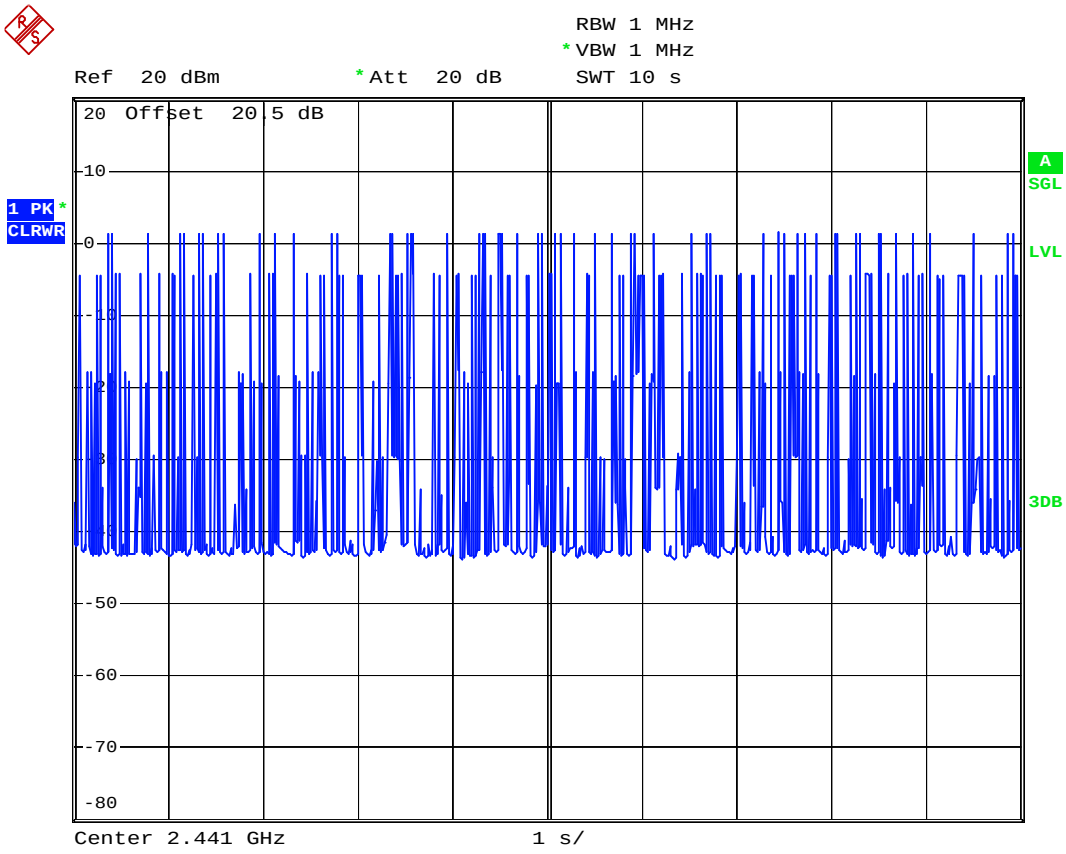


Date: 13.FEB.2008 16:23:54

3DH3 (CH39)

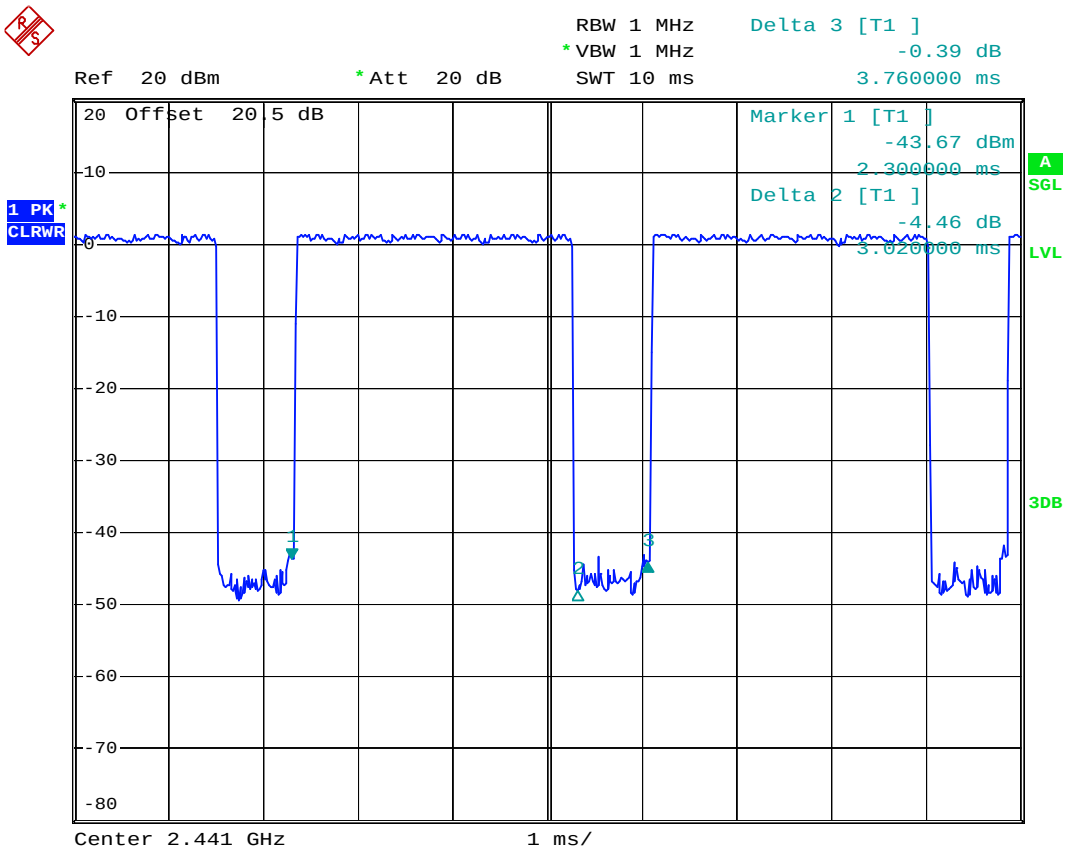


Date: 13.FEB.2008 16:22:04

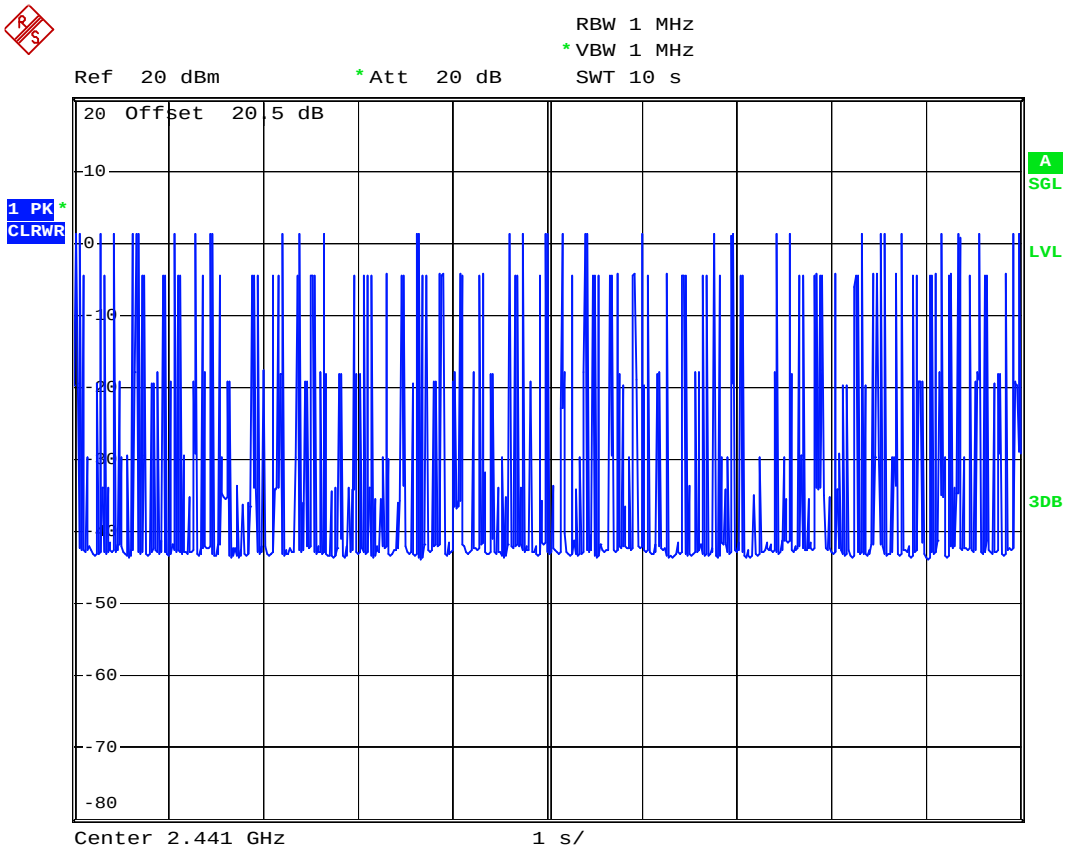


Date: 13.FEB.2008 16:24:17

3DH5 (CH39)



Date: 13.FEB.2008 16:23:01



Date: 13.FEB.2008 16:23:26

5.7 Peak Output Power Measurement

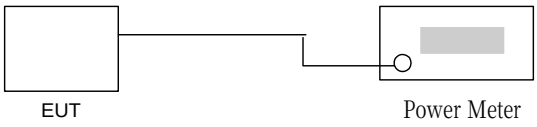
5.7.1 Measuring Instruments

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 : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Sun

- **BT(1Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-0.05	1W / 30dBm
39	2441	0.74	1W / 30dBm
78	2480	0.32	1W / 30dBm

- **BT EDR(2Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	0.6	1W / 30dBm
39	2441	1.1	1W / 30dBm
78	2480	0.41	1W / 30dBm

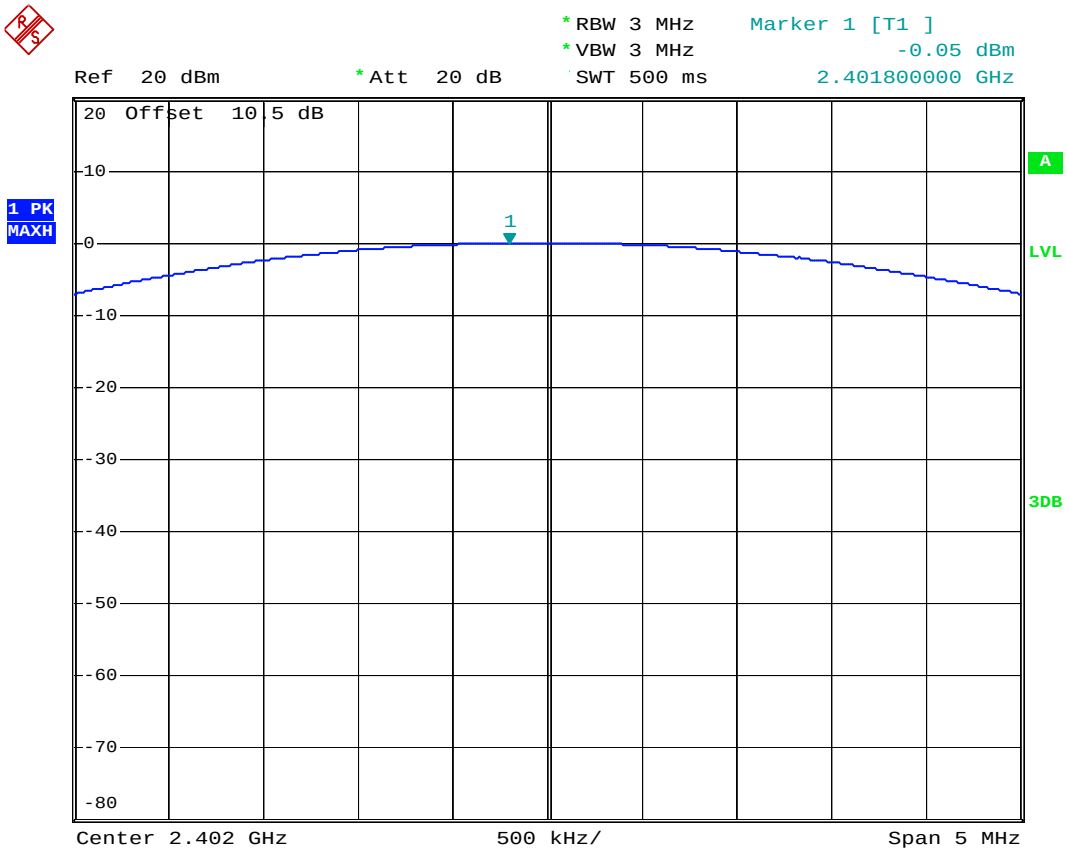
- **BT EDR(3Mbps)**

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	0.68	1W / 30dBm
39	2441	1.25	1W / 30dBm
78	2480	0.59	1W / 30dBm

5.7.5 Output Power

BT(1Mbps)

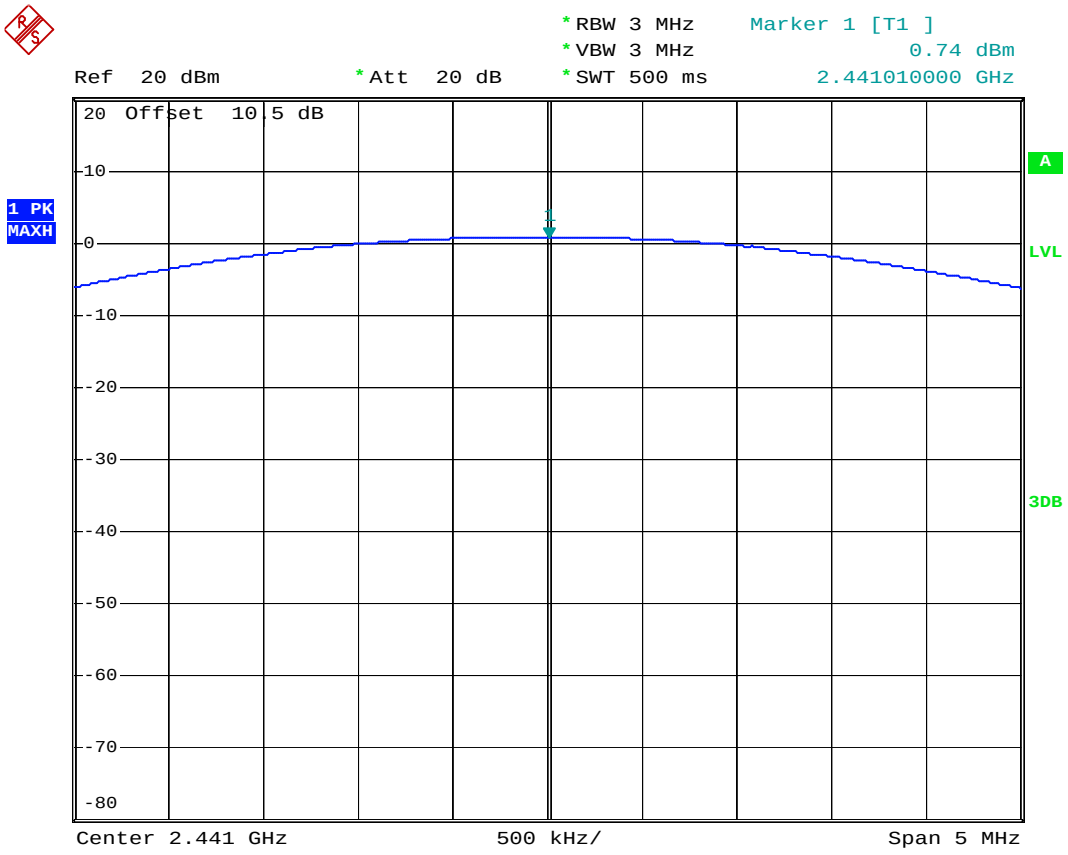
Mode : CH00 (2402MHz)



Date: 12.FEB.2008 14:22:32

BT(1Mbps)

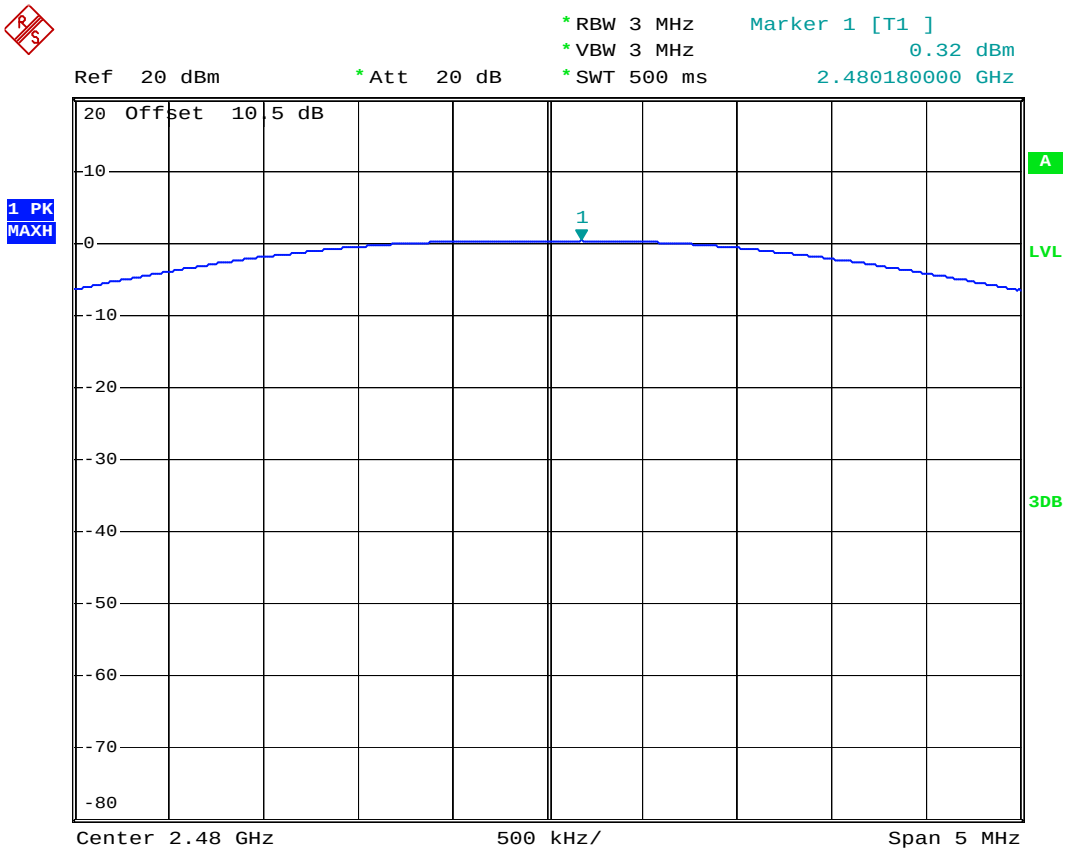
Mode : CH39 (2441MHz)



Date: 12.FEB.2008 14:22:56

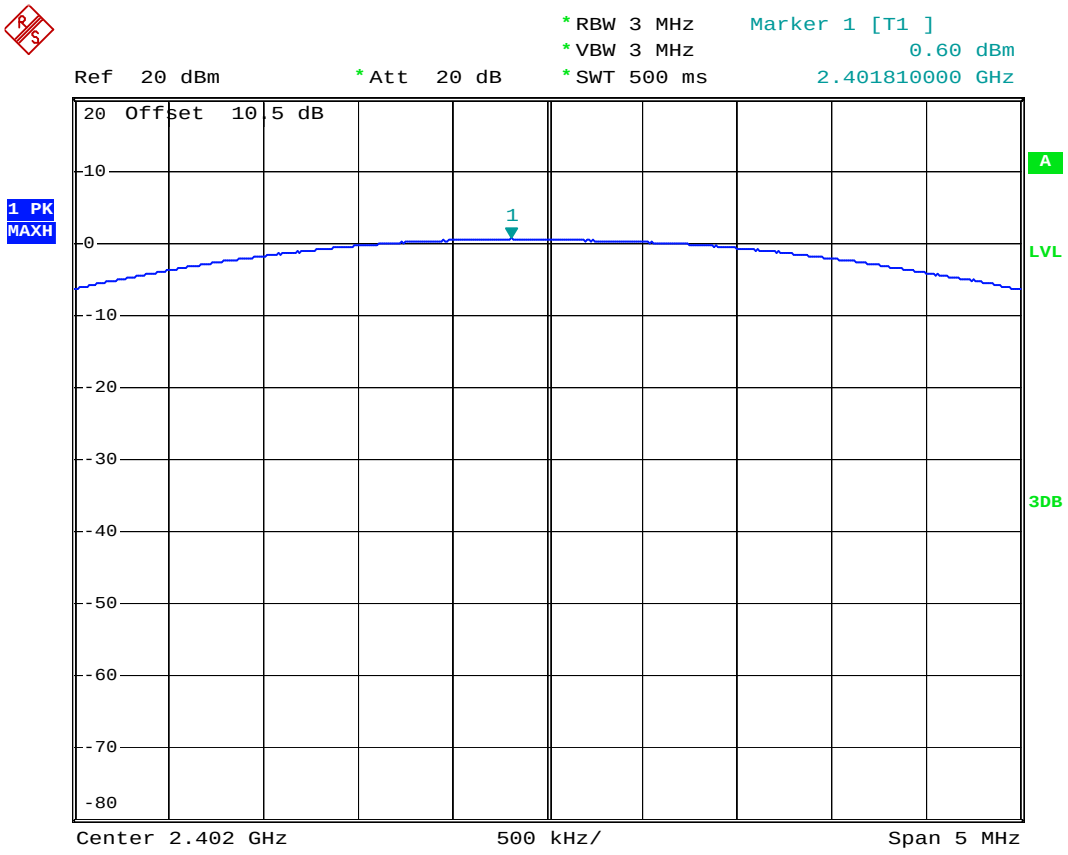
Bluetooth(1Mbps)

Mode : CH78 (2480MHz)



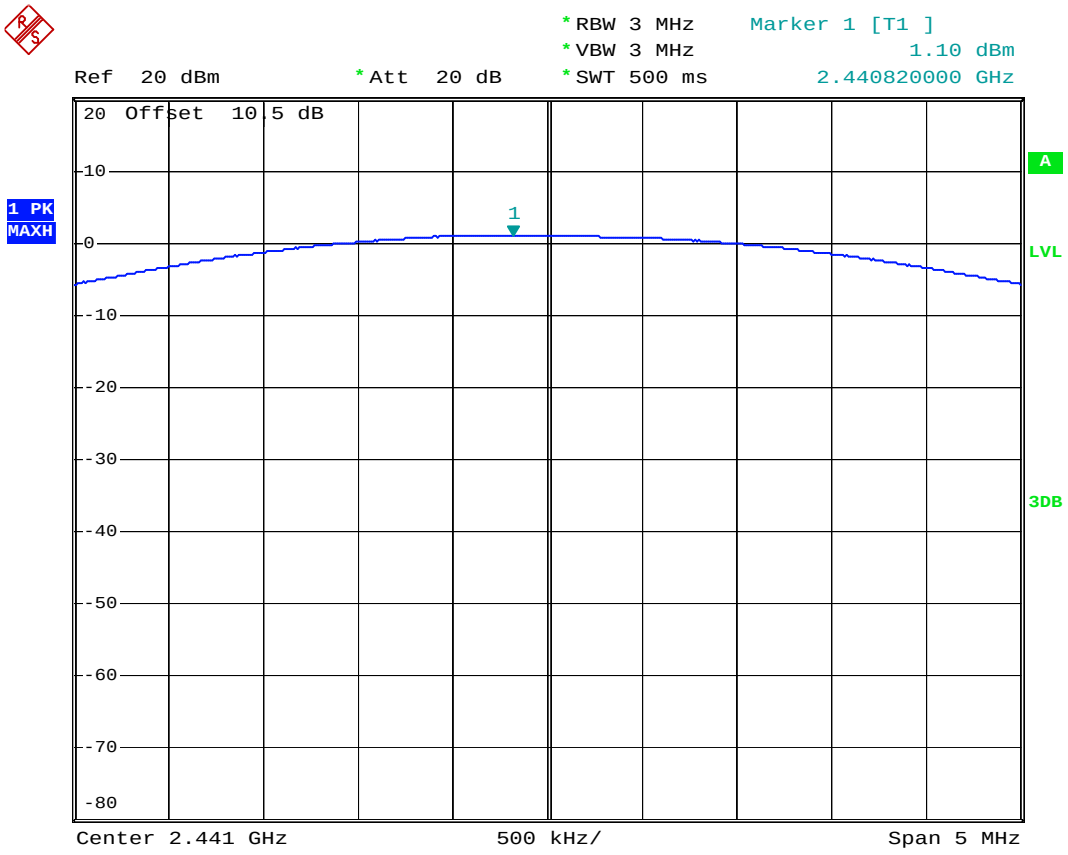
Bluetooth(2Mbps)

Mode : CH00 (2402MHz)



Bluetooth(2Mbps)

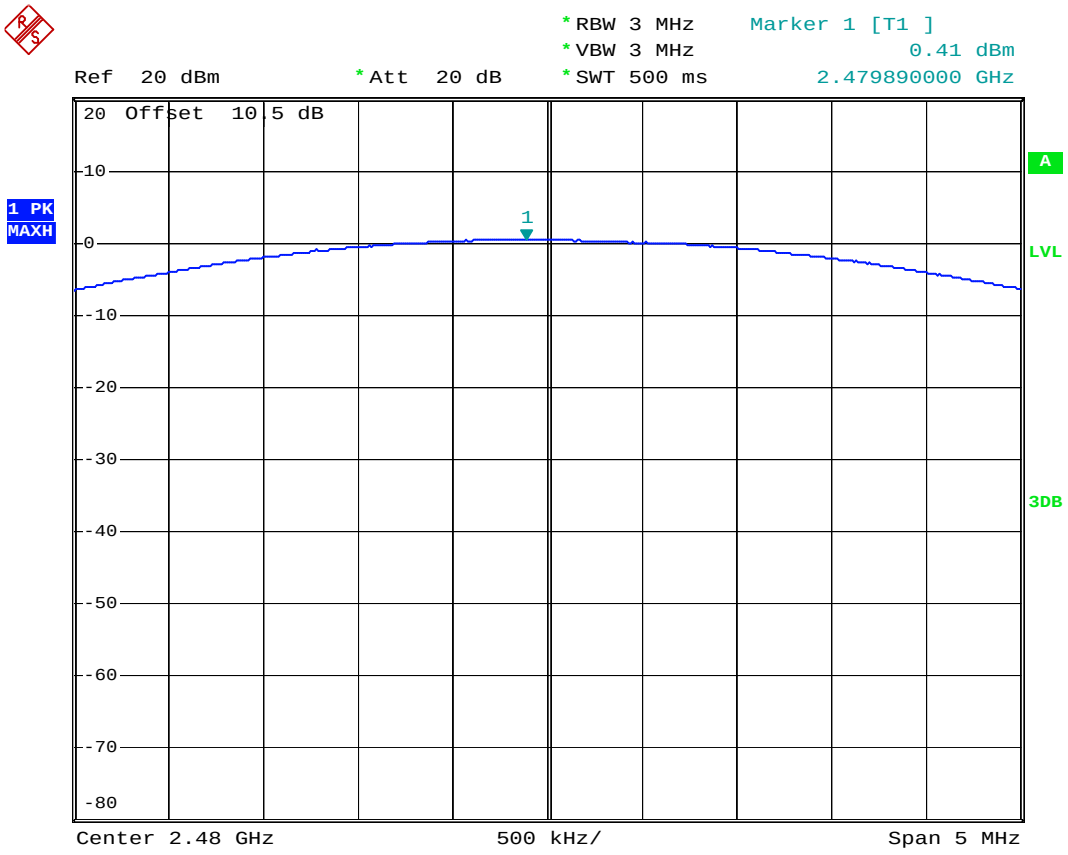
Mode : CH39 (2441MHz)



Date: 12.FEB.2008 14:27:05

Bluetooth(2Mbps)

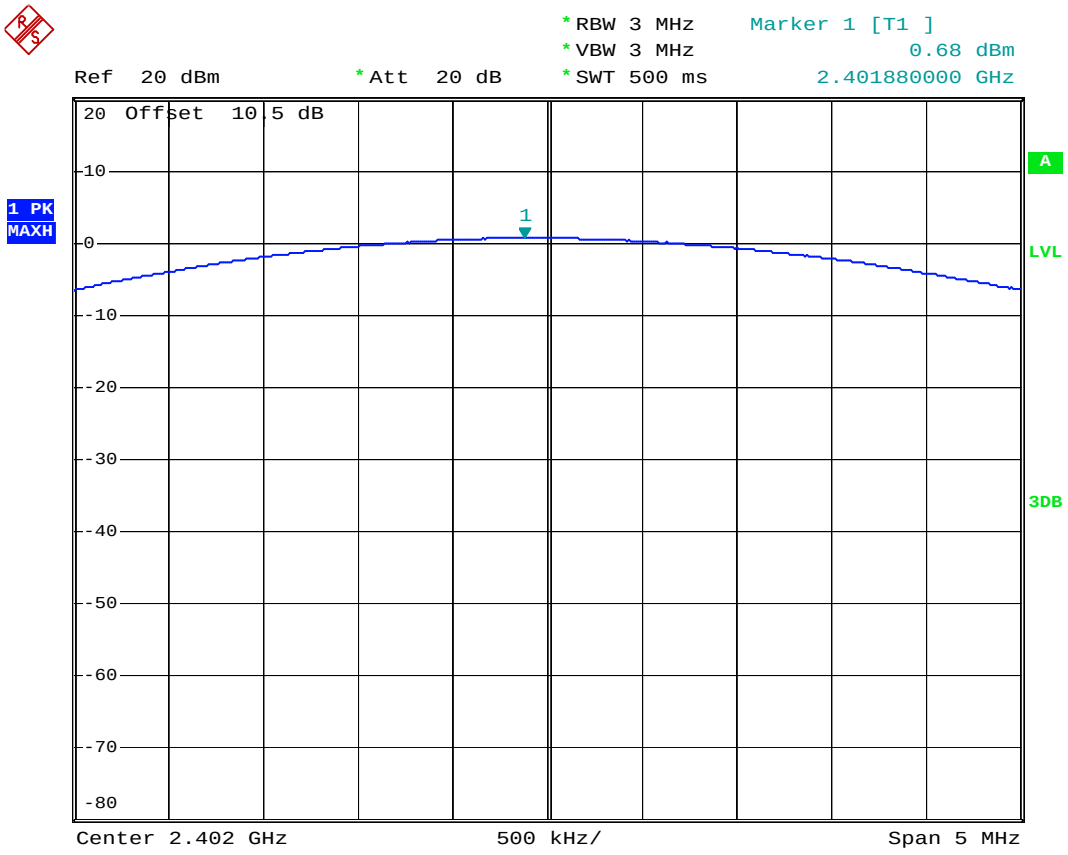
Mode : CH78 (2480MHz)



Date: 12.FEB.2008 14:27:28

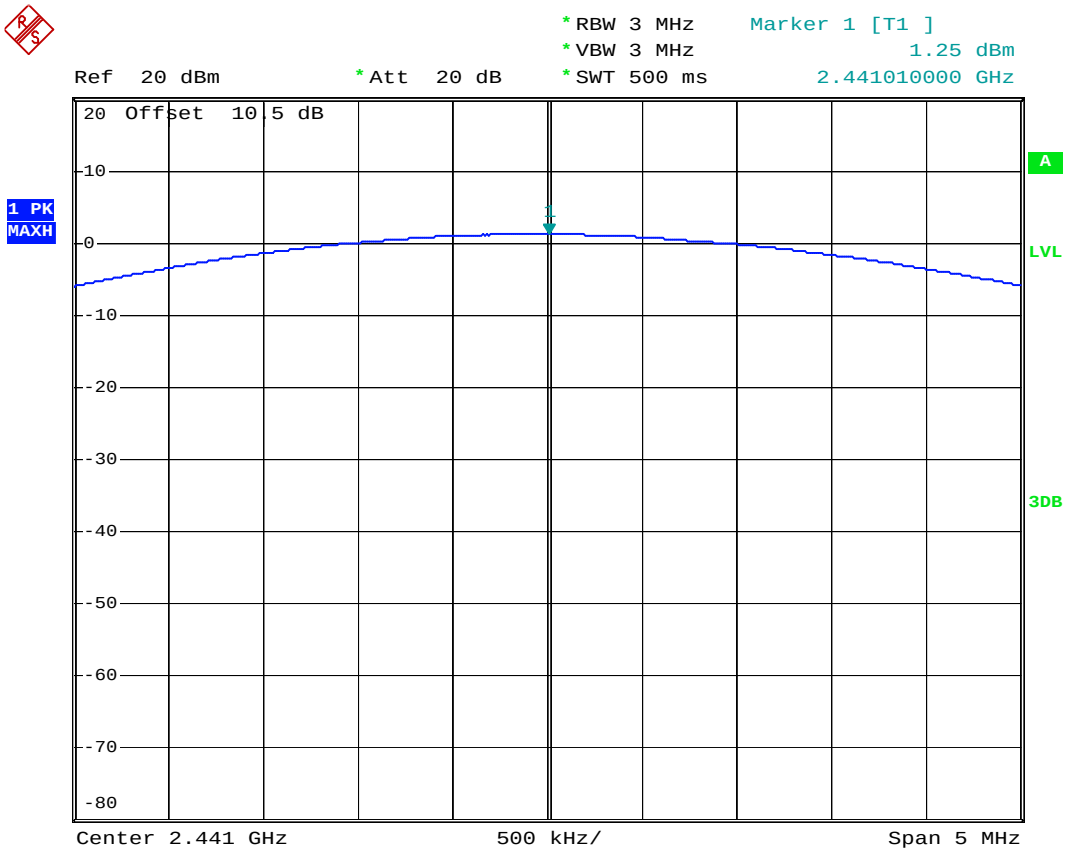
Bluetooth(3Mbps)

Mode : CH00 (2402MHz)



Bluetooth(3Mbps)

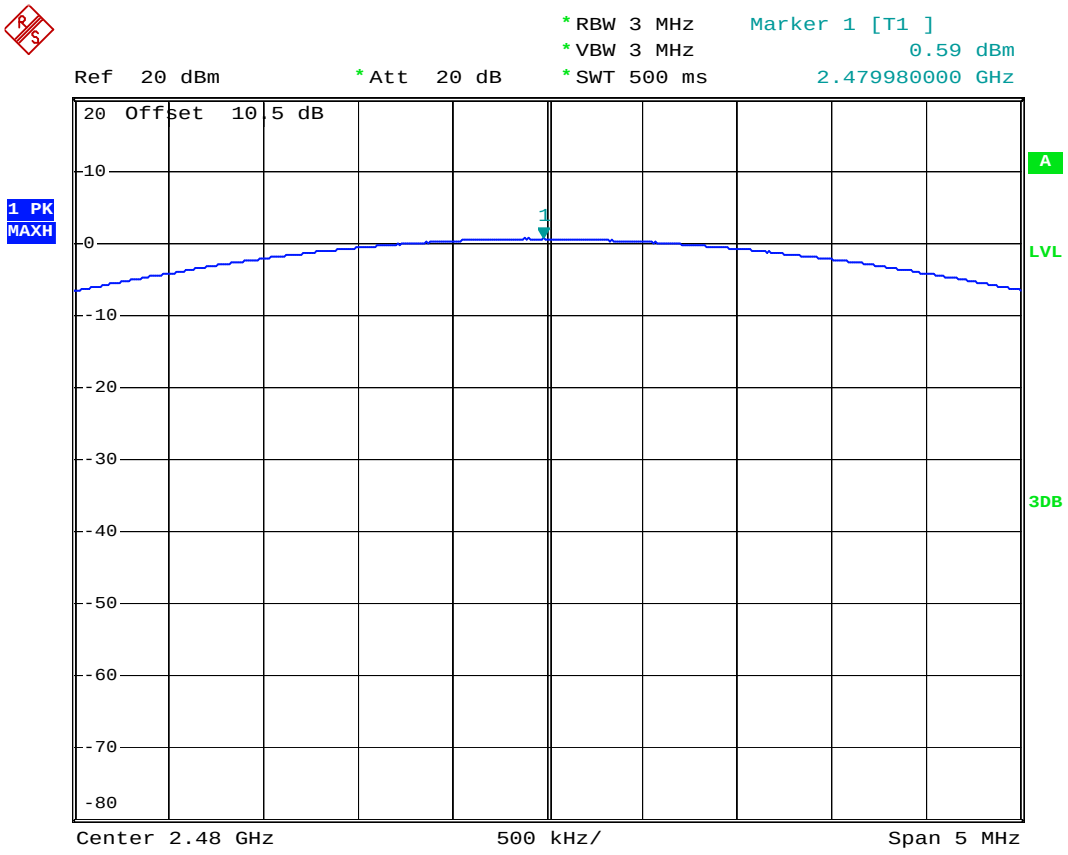
Mode : CH39 (2441MHz)



Date: 12.FEB.2008 14:33:31

Bluetooth(3Mbps)

Mode : CH78 (2480MHz)



Date: 12.FEB.2008 14:33:54

5.8 Conducted Emission

5.8.1 Measuring Instruments

As describ ed in chapter 6 of this test Report.

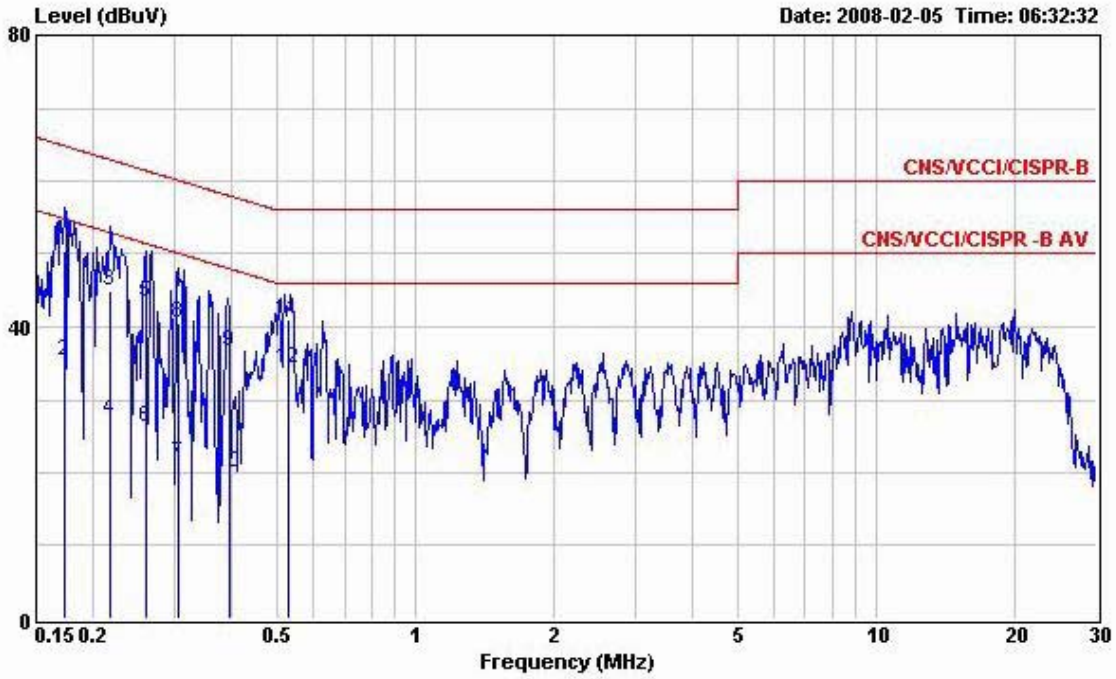
5.8.2 Test Procedures

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

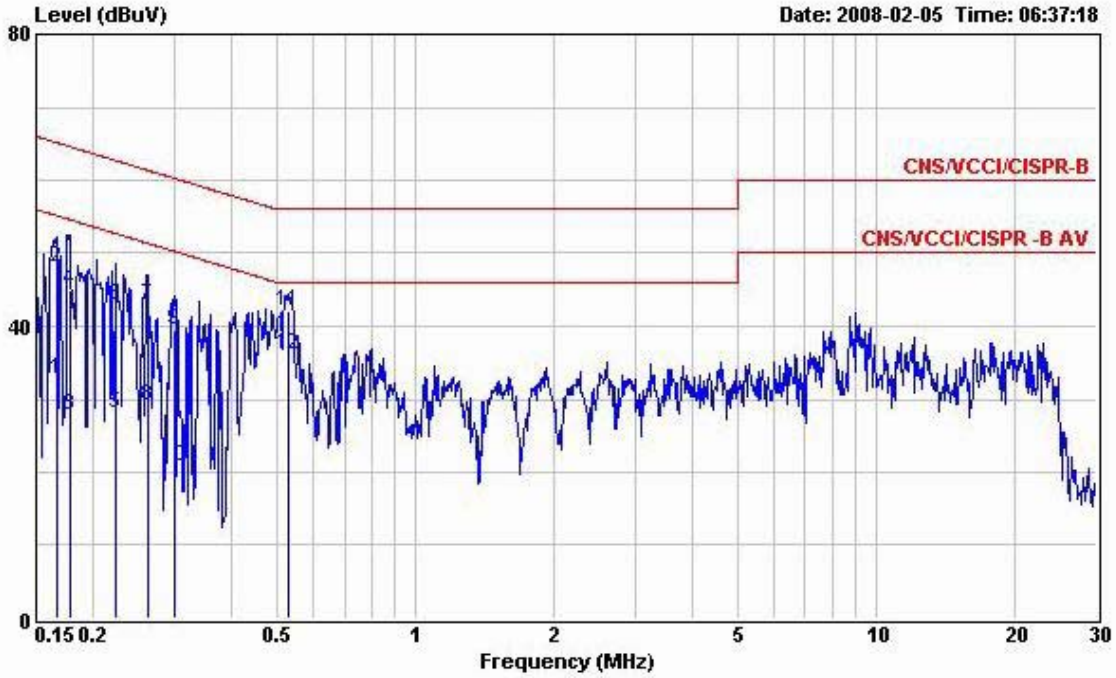
- Temperature : 20~21℃
- Relative Humidity : 49~51%
- Test Enginner : Derek
- Test Mode : Mode 1

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



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : GPS Rx + WLAN Link + BT Link + H Pattern
Memo : + MPEG4 + USB Link + Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.173	50.52	-14.32	64.84	50.33	0.09	0.10	QP
2	0.173	35.43	-29.41	64.84	35.24	0.09	0.10	Average
3	0.217	44.85	-18.08	62.93	44.67	0.08	0.10	QP
4	0.217	27.14	-35.79	62.93	26.96	0.08	0.10	Average
5	0.259	43.41	-18.05	61.46	43.22	0.09	0.10	QP
6	0.259	26.17	-35.29	61.46	25.98	0.09	0.10	Average
7	0.305	21.31	-38.80	60.11	21.11	0.10	0.10	Average
8	0.305	40.39	-19.72	60.11	40.19	0.10	0.10	QP
9	0.395	36.69	-21.27	57.96	36.47	0.12	0.10	QP
10	0.395	20.11	-37.85	57.96	19.89	0.12	0.10	Average
11	0.530	41.13	-14.87	56.00	40.89	0.14	0.10	QP
12	0.530	34.25	-21.75	56.00	34.01	0.14	0.10	Average



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : GPS Rx + WLAN Link + BT Link + H Pattern
Memo : + MPEG4 + USB Link + Adaptor

	Freq	Level	Over Limit	Limit Line	Read Level	Cable Loss	Probe Factor	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.166	32.85	-22.31	55.16	32.66	0.09	0.10	Average
2	0.166	48.16	-17.00	65.16	47.97	0.09	0.10	QP
3	0.178	27.79	-26.79	54.58	27.60	0.09	0.10	Average
4	0.178	45.02	-19.56	64.58	44.83	0.09	0.10	QP
5	0.223	28.04	-24.67	52.71	27.85	0.09	0.10	Average
6	0.223	42.84	-19.87	62.71	42.65	0.09	0.10	QP
7	0.262	42.74	-18.63	61.37	42.54	0.10	0.10	QP
8	0.262	29.22	-22.15	51.37	29.02	0.10	0.10	Average
9	0.300	39.57	-20.67	60.24	39.37	0.10	0.10	QP
10	0.300	20.66	-29.58	50.24	20.46	0.10	0.10	Average
11	0.529	42.20	-13.80	56.00	41.96	0.14	0.10	QP
12	0.529	36.01	-9.99	46.00	35.77	0.14	0.10	Average

5.9 Radiated Emission Measurement

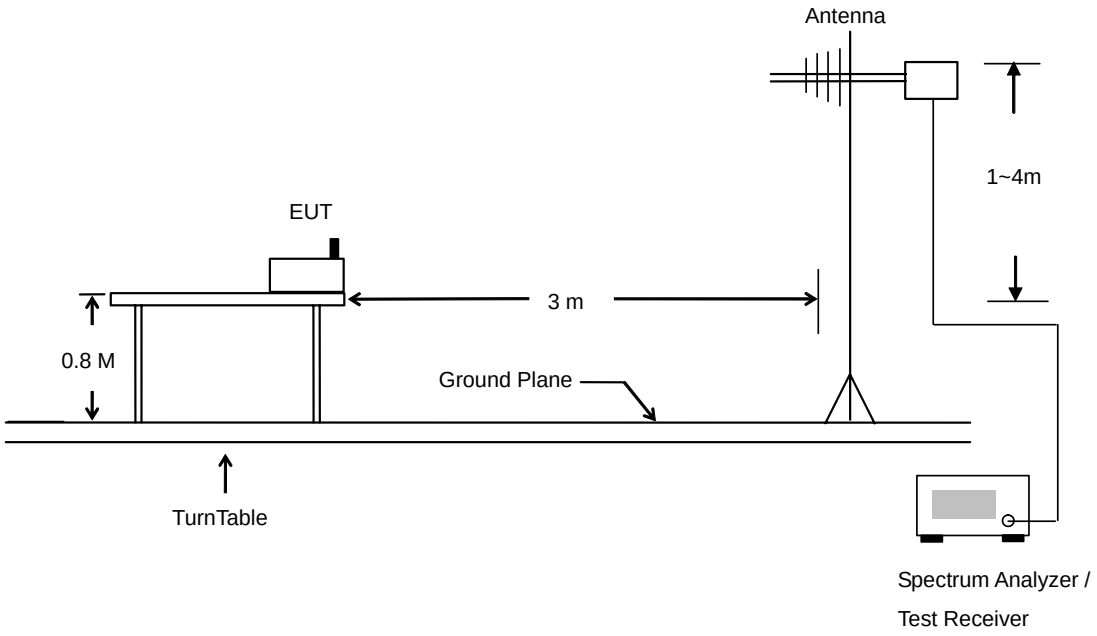
5.9.1 Measuring Instruments

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.

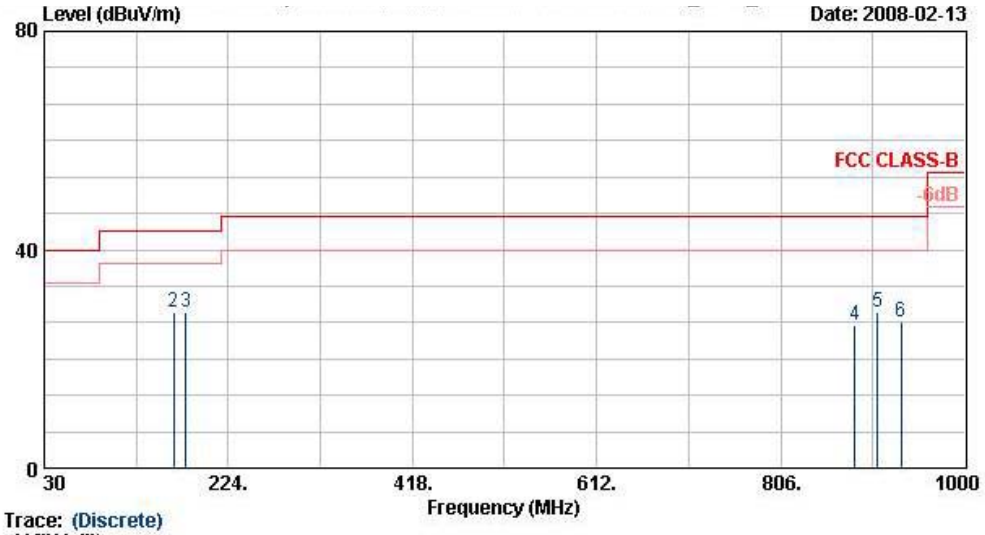
5.9.3 Typical Test Setup Layout of Radiated Emission



5.9.4 Test Data

- Temperature : 21~22°C
- Relating Humidity : 49~51%
- Test Enginner : Sun
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

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



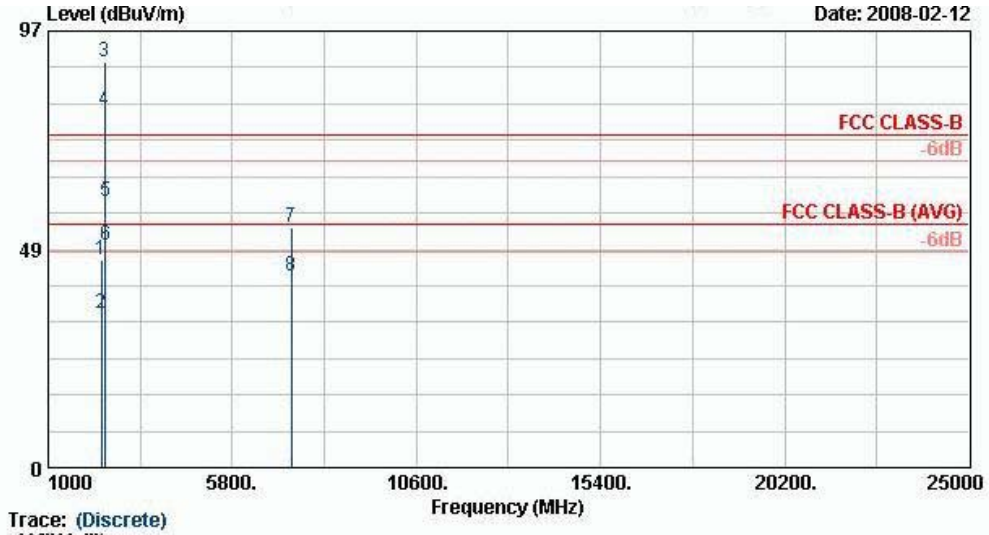
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78, 2460MHz + Adaptor
Data Rate : DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	25.36	-14.64	40.00	39.57	18.95	0.30	33.46	100	137	Peak
2	166.08	28.65	-14.85	43.50	51.50	10.01	0.60	33.45	---	---	Peak
3	179.58	28.58	-14.92	43.50	51.78	9.50	0.60	33.30	---	---	Peak
4	883.80	26.16	-19.84	46.00	37.21	20.41	1.30	32.76	---	---	Peak
5	908.30	28.45	-17.55	46.00	39.30	20.59	1.30	32.74	---	---	Peak
6	932.80	26.89	-19.11	46.00	37.48	20.76	1.20	32.56	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



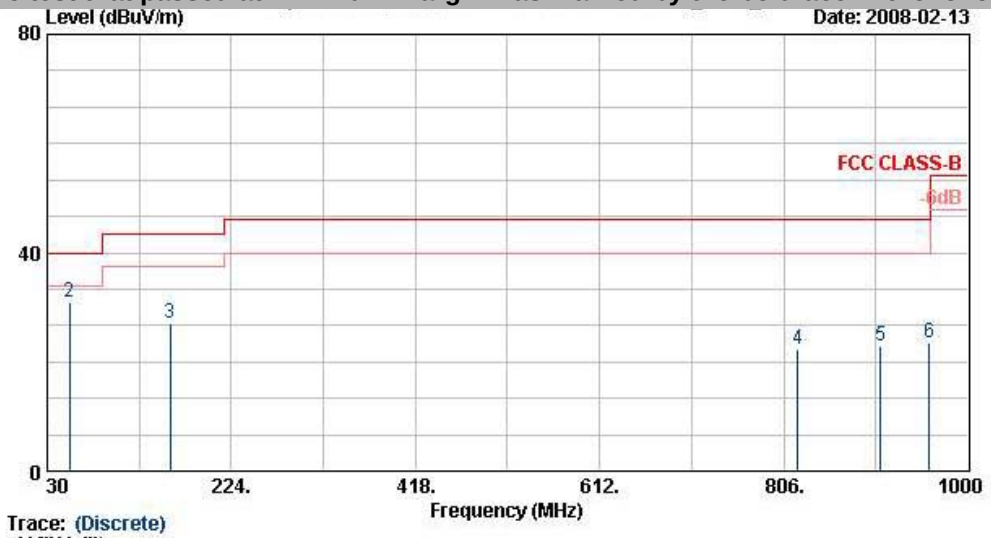
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78,2480MHz + Adaptor
Data Rate : DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2380.00	46.02	-27.98	74.00	45.98	31.83	3.89	35.68	100	0	Peak
2	2380.00	34.13	-19.87	54.00	34.09	31.83	3.89	35.68	102	312	Average
3 X	2480.00	90.08			89.75	31.98	4.05	35.70	100	0	Peak
4 X	2480.00	79.16			78.83	31.98	4.05	35.70	102	312	Average
5	2483.47	59.12	-14.88	74.00	58.79	31.98	4.05	35.70	100	0	Peak
6 !	2483.47	49.38	-4.62	54.00	49.05	31.98	4.05	35.70	102	312	Average
7	7341.00	53.32	-20.68	74.00	46.59	35.66	7.21	36.14	100	0	Peak
8	7341.00	42.51	-11.49	54.00	35.78	35.66	7.21	36.14	100	324	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



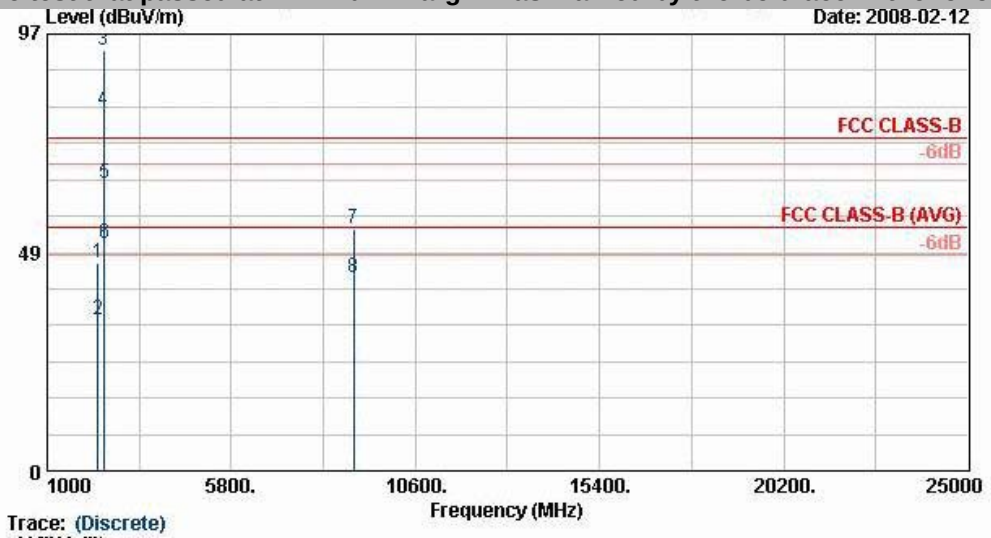
Trace: (Discrete)

Site	:	03CH06-HY
Condition	:	FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT	:	CPA PDA
Power	:	120Vac/60Hz
Model	:	FR 812802
Memo	:	BT Tx_Ch78, 2480MHz + Adaptor
Data Rate	:	DH5
Plane	:	E2
P/N	:	PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	27.59	-12.41	40.00	41.13	19.66	0.30	33.50	---	---	Peak
2	53.49	30.84	-9.16	40.00	56.12	7.64	0.36	33.28	100	157	Peak
3	159.33	27.19	-16.31	43.50	49.93	10.16	0.60	33.50	---	---	Peak
4	820.80	22.38	-23.62	46.00	33.83	19.96	1.20	32.61	---	---	Peak
5	908.30	22.89	-23.11	46.00	33.75	20.59	1.30	32.74	---	---	Peak
6	959.40	23.40	-22.60	46.00	33.52	20.95	1.29	32.37	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



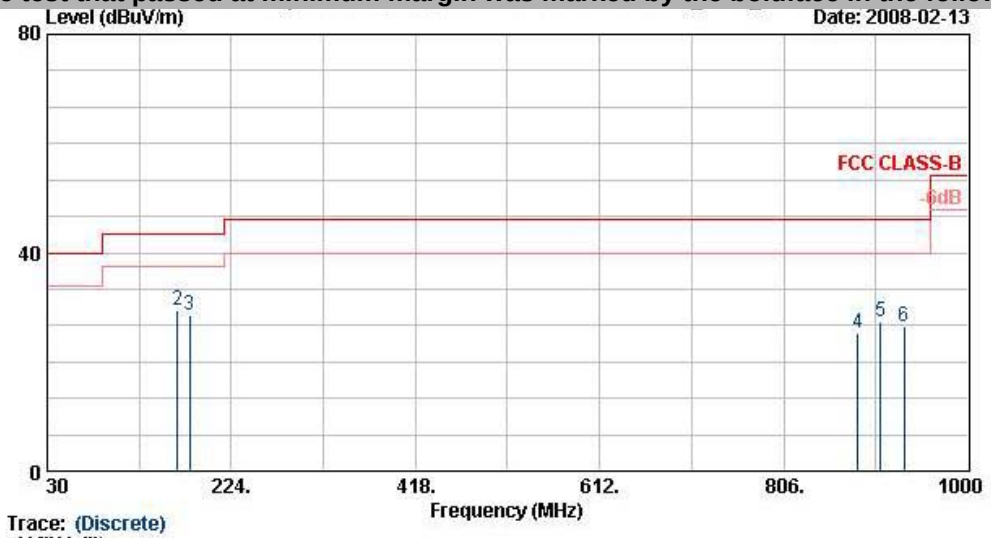
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78, 2480MHz + Adaptor
Data Rate : DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2329.00	46.02	-27.98	74.00	46.12	31.73	3.82	35.66	100	0	Peak
2	2329.00	33.54	-20.46	54.00	33.64	31.73	3.82	35.66	100	329	Average
3 X	2480.00	93.46			93.13	31.98	4.05	35.70	100	0	Peak
4 @	2480.00	80.09			79.76	31.98	4.05	35.70	100	329	Average
5	2483.47	63.85	-10.15	74.00	63.52	31.98	4.05	35.70	100	0	Peak
6 !	2483.47	50.42	-3.58	54.00	50.09	31.98	4.05	35.70	100	329	Average
7	8991.00	53.71	-20.29	74.00	46.02	36.48	7.80	36.59	100	0	Peak
8	8991.00	42.84	-11.16	54.00	35.15	36.48	7.80	36.59	100	247	Average

Remark: #3 and #4 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.



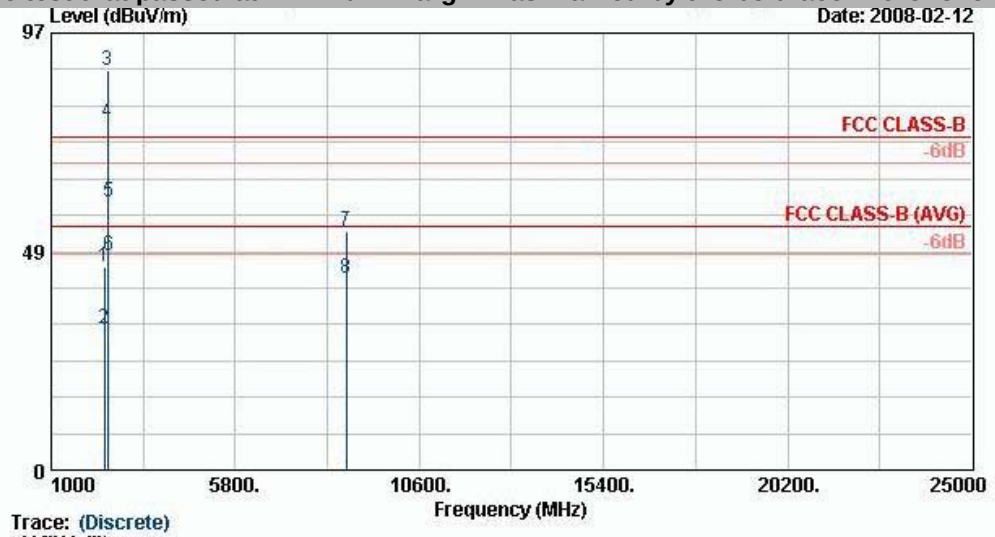
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORTZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78,2480MHz + Adaptor
Data Rate : 2-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	25.05	-14.95	40.00	38.59	19.66	0.30	33.50	---	---	Peak
2	166.89	29.43	-14.07	43.50	52.29	9.99	0.60	33.45	100	194	Peak
3	180.39	28.60	-14.90	43.50	51.85	9.44	0.60	33.29	---	---	Peak
4	883.80	25.20	-20.80	46.00	36.25	20.41	1.30	32.76	---	---	Peak
5	908.30	27.47	-18.53	46.00	38.33	20.59	1.30	32.74	---	---	Peak
6	932.80	26.56	-19.44	46.00	37.15	20.76	1.20	32.56	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



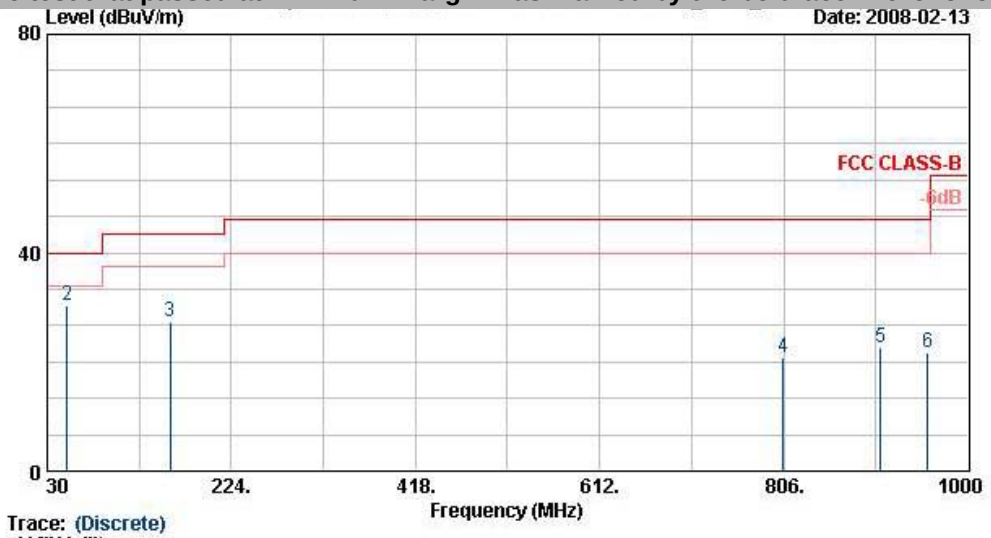
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78,2480MHz + Adaptor
Data Rate : 2-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2387.00	45.09	-28.91	74.00	45.05	31.83	3.89	35.68	100	0	Peak
2	2387.00	31.30	-22.70	54.00	31.26	31.83	3.89	35.68	102	309	Average
3 X	2480.00	88.83			88.50	31.98	4.05	35.70	100	0	Peak
4 X	2480.00	77.20			76.87	31.98	4.05	35.70	102	309	Average
5	2483.50	59.34	-14.66	74.00	59.01	31.98	4.05	35.70	100	0	Peak
6	2483.50	47.42	-6.58	54.00	47.09	31.98	4.05	35.70	102	309	Average
7	8697.00	53.01	-20.99	74.00	45.90	36.08	7.45	36.42	100	0	Peak
8	8697.00	42.47	-11.53	54.00	35.36	36.08	7.45	36.42	100	218	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



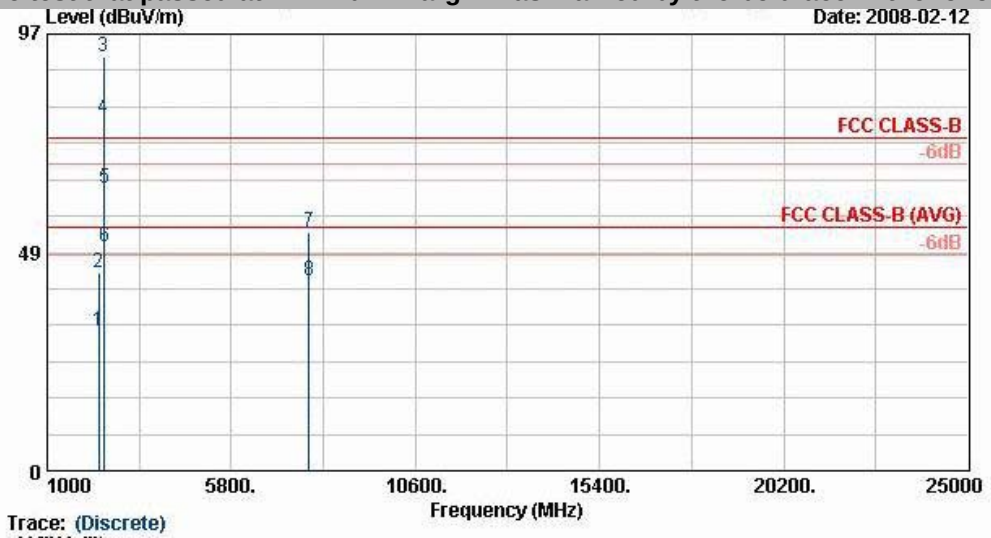
Trace: (Discrete)

Site	:	03CH06-HY
Condition	:	FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT	:	CPA PDA
Power	:	120Vac/60Hz
Model	:	FR 812802
Memo	:	BT Tx_Ch78,2480MHz + Adaptor
Data Rate	:	2-DH5
Plane	:	E2
P/N	:	PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	27.54	-12.46	40.00	41.08	19.66	0.30	33.50	---	---	Peak
2	51.33	30.30	-9.70	40.00	55.24	7.93	0.32	33.19	100	184	Peak
3	159.33	27.48	-16.02	43.50	50.22	10.16	0.60	33.50	---	---	Peak
4	805.40	20.96	-25.04	46.00	32.48	19.85	1.20	32.57	---	---	Peak
5	908.30	22.70	-23.30	46.00	33.56	20.59	1.30	32.74	---	---	Peak
6	957.30	21.72	-24.28	46.00	31.89	20.94	1.27	32.38	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



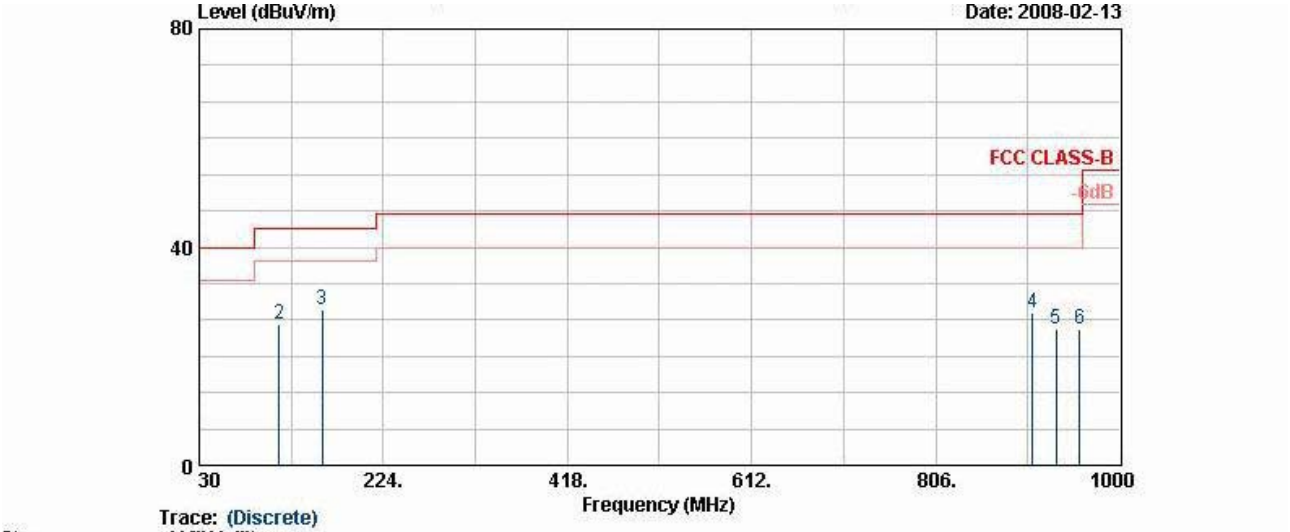
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78, 2480MHz + Adaptor
Data Rate : 2-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2348.00	30.96	-23.04	54.00	31.06	31.73	3.82	35.66	101	332	Average
2	2348.00	44.06	-29.94	74.00	44.16	31.73	3.82	35.66	100	0	Peak
3 X	2480.00	91.87			91.54	31.98	4.05	35.70	100	0	Peak
4 @	2480.00	78.14			77.81	31.98	4.05	35.70	101	332	Average
5	2483.50	62.59	-11.41	74.00	62.26	31.98	4.05	35.70	100	0	Peak
6 !	2483.50	49.61	-4.39	54.00	49.28	31.98	4.05	35.70	101	332	Average
7	7821.00	52.90	-21.10	74.00	46.07	35.66	7.42	36.26	100	0	Peak
8	7821.00	42.14	-11.86	54.00	35.31	35.66	7.42	36.26	100	87	Average

Remark: #3 and #4 are Fundamental Signals

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

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

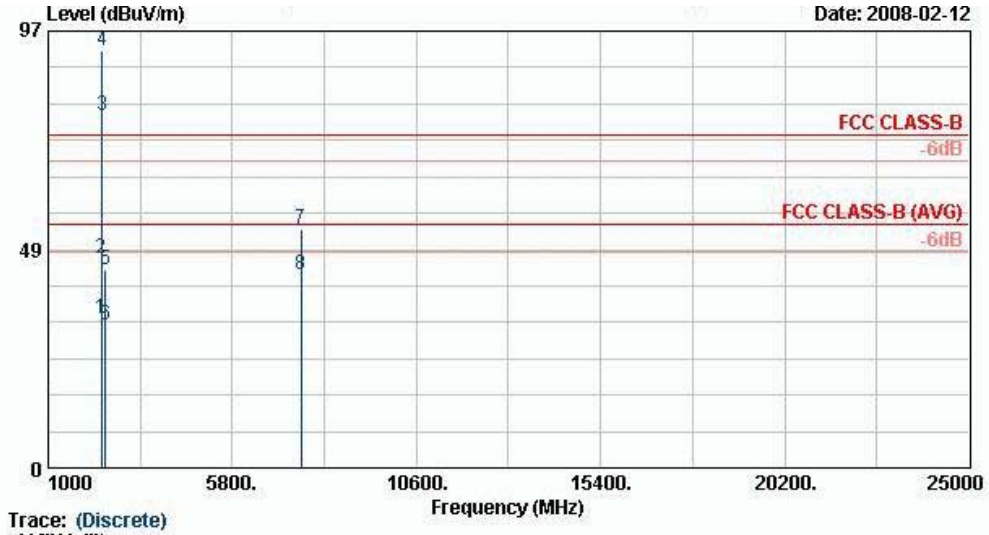


Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch00;2402MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	30.00	26.37	-13.63	40.00	39.91	19.66	0.30	33.50	100	146	Peak
2	114.24	25.86	-17.64	43.50	46.78	12.13	0.50	33.55	---	---	Peak
3	159.33	28.57	-14.93	43.50	51.31	10.16	0.60	33.50	---	---	Peak
4	908.30	27.98	-18.02	46.00	38.84	20.59	1.30	32.74	---	---	Peak
5	932.80	24.97	-21.03	46.00	35.57	20.76	1.20	32.56	---	---	Peak
6	957.30	24.94	-21.06	46.00	35.11	20.94	1.27	32.38	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



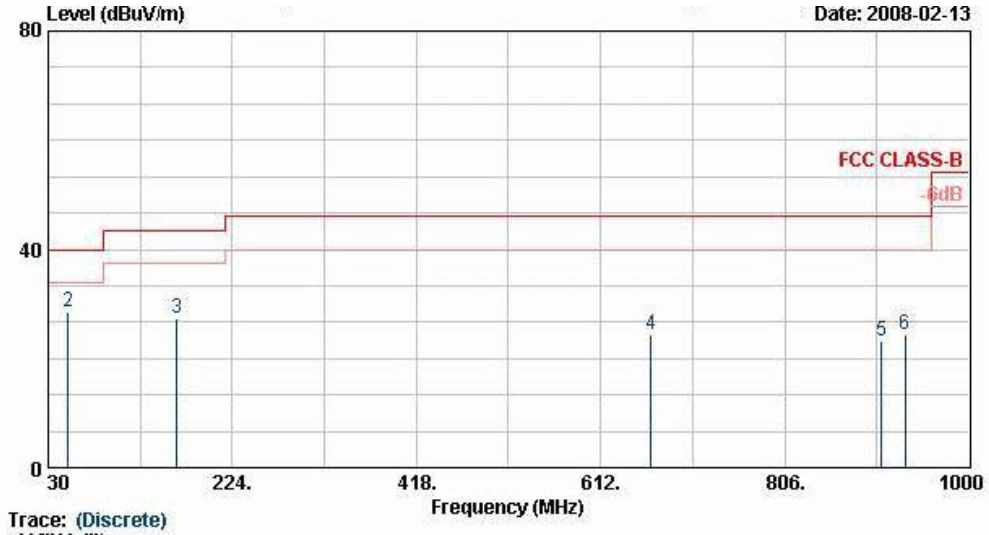
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch00;2402MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2385.62	33.20	-20.80	54.00	33.10	31.86	3.92	35.68	161	73	Average
2	2385.62	46.34	-27.66	74.00	46.24	31.86	3.92	35.68	100	0	Peak
3 @	2402.00	78.24			78.14	31.86	3.92	35.68	161	73	Average
4 @	2402.00	92.56			92.46	31.86	3.92	35.68	100	0	Peak
5	2494.00	44.08	-29.92	74.00	43.73	32.00	4.05	35.70	100	0	Peak
6	2494.00	31.86	-22.14	54.00	31.51	32.00	4.05	35.70	161	73	Average
7	7596.00	53.14	-20.86	74.00	46.42	35.62	7.32	36.22	100	0	Peak
8 @	7596.00	42.87	-11.13	54.00	36.15	35.62	7.32	36.22	100	181	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



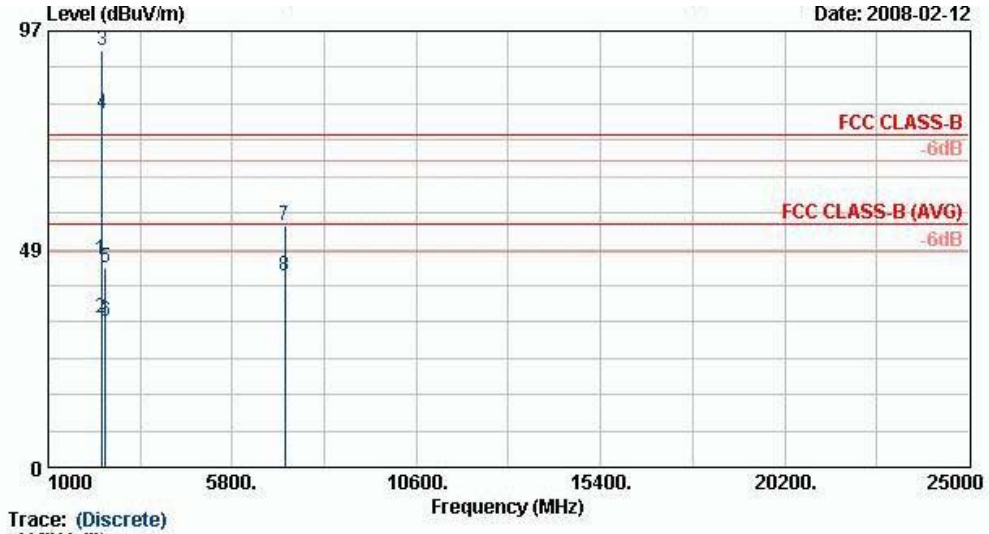
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch00;2402MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	30.00	28.81	-11.19	40.00	42.35	19.66	0.30	33.50	100	194	Peak
2 @	50.79	28.64	-11.36	40.00	53.41	8.08	0.30	33.15	---	---	Peak
3	165.54	27.36	-16.14	43.50	50.21	10.01	0.60	33.45	---	---	Peak
4	665.40	24.50	-21.50	46.00	37.77	18.74	1.05	33.06	---	---	Peak
5	908.30	23.27	-22.73	46.00	34.13	20.59	1.30	32.74	---	---	Peak
6	932.80	24.49	-21.51	46.00	35.09	20.76	1.20	32.56	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



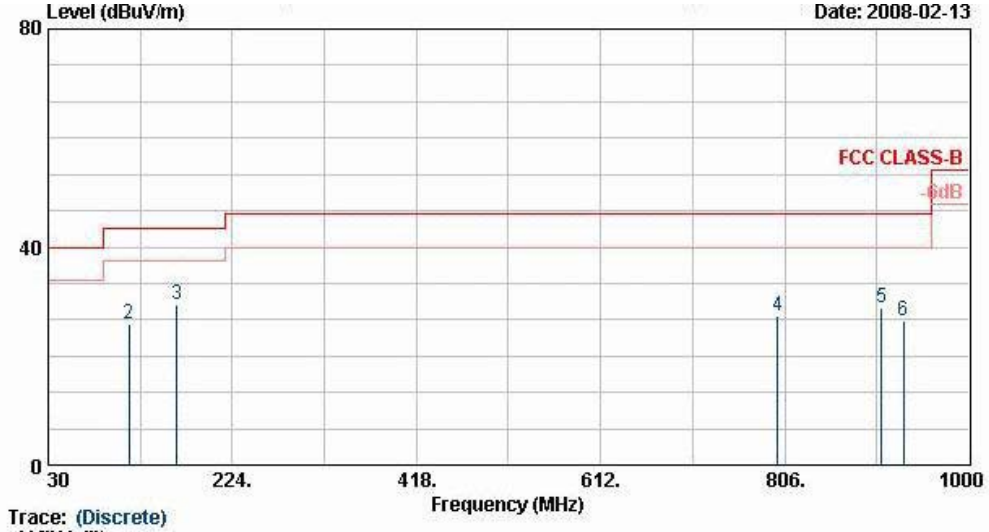
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch00;2402MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2375.74	46.29	-27.71	74.00	46.25	31.83	3.89	35.68	100	0	Peak
2	2375.74	33.07	-20.93	54.00	33.03	31.83	3.89	35.68	100	145	Average
3 @	2402.00	92.69			92.59	31.86	3.92	35.68	100	0	Peak
4 @	2402.00	78.67			78.57	31.86	3.92	35.68	100	145	Average
5	2484.00	44.37	-29.63	74.00	44.04	31.98	4.05	35.70	100	0	Peak
6	2484.00	32.32	-21.68	54.00	31.99	31.98	4.05	35.70	100	145	Average
7	7176.00	53.62	-20.38	74.00	46.80	35.73	7.15	36.07	100	0	Peak
8 @	7176.00	42.51	-11.49	54.00	35.70	35.73	7.15	36.07	100	310	Average

Remark: #3 and #4 are Fundamental Signals

- Test Mode : Mode 4
- Polarization : Horizontal (30MHz-1GHz)

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



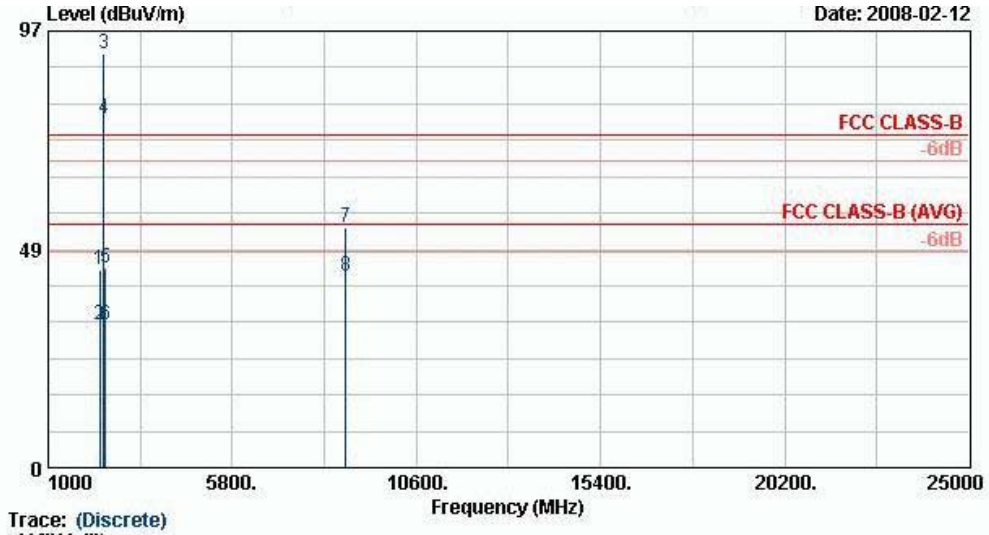
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(95112I) HORIZONTAL
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch39;2441MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	26.58	-13.42	40.00	40.79	18.95	0.30	33.46	100	147	Peak
2	114.78	25.96	-17.54	43.50	46.89	12.13	0.50	33.55	---	---	Peak
3	165.54	29.56	-13.94	43.50	52.41	10.01	0.60	33.45	---	---	Peak
4	798.40	27.42	-18.58	46.00	38.99	19.80	1.20	32.57	---	---	Peak
5	908.30	28.72	-17.28	46.00	39.58	20.59	1.30	32.74	---	---	Peak
6	931.40	26.57	-19.43	46.00	37.20	20.75	1.20	32.57	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



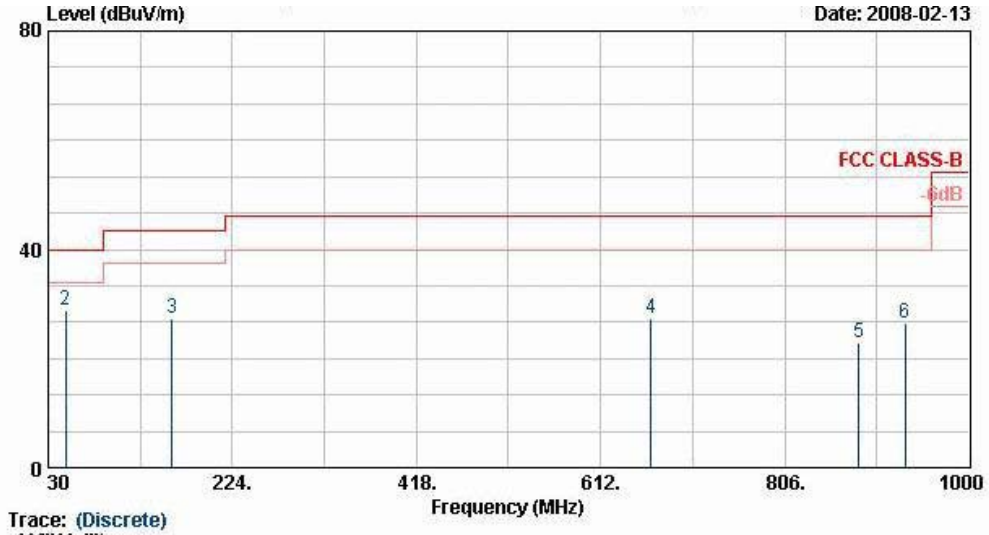
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch39;2441MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2350.00	44.16	-29.84	74.00	44.20	31.78	3.86	35.67	100	0	Peak
2	2350.00	31.77	-22.23	54.00	31.80	31.78	3.86	35.67	157	75	Average
3 X	2441.00	91.89			91.67	31.93	3.99	35.69	100	0	Peak
4 X	2441.00	77.53			77.31	31.93	3.99	35.69	157	75	Average
5	2492.00	44.26	-29.74	74.00	43.91	32.00	4.05	35.70	100	0	Peak
6	2492.00	31.75	-22.25	54.00	31.40	32.00	4.05	35.70	157	75	Average
7	8751.00	53.41	-20.59	74.00	46.21	36.15	7.50	36.45	100	0	Peak
8	8751.00	42.69	-11.31	54.00	35.49	36.15	7.50	36.45	100	139	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



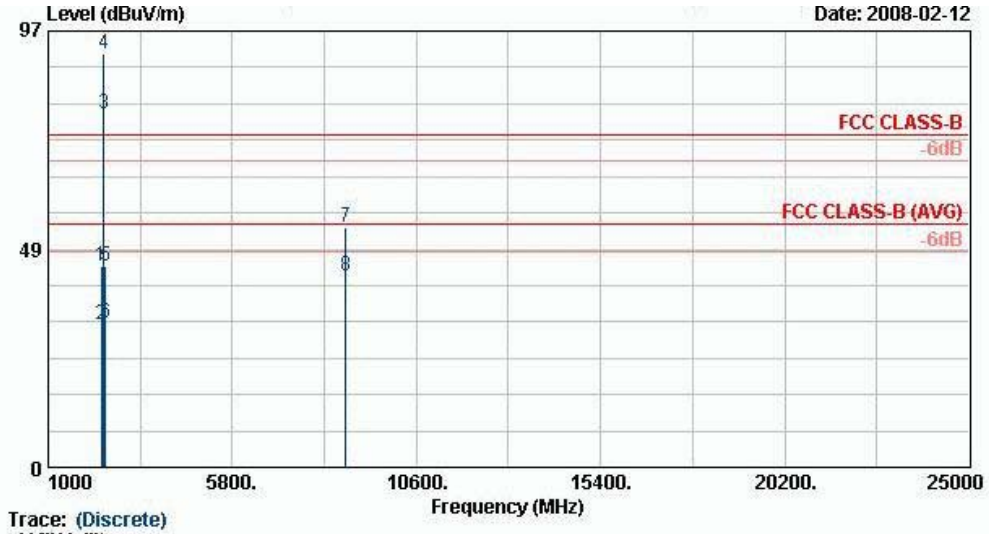
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch39;2441MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	28.20	-11.80	40.00	41.74	19.66	0.30	33.50	---	---	Peak
2	48.63	28.73	-11.27	40.00	52.51	9.06	0.30	33.14	100	321	Peak
3	160.14	27.50	-16.00	43.50	50.26	10.13	0.60	33.49	---	---	Peak
4	665.40	27.51	-18.49	46.00	40.78	18.74	1.05	33.06	---	---	Peak
5	883.80	23.03	-22.97	46.00	34.08	20.41	1.30	32.76	---	---	Peak
6	932.80	26.55	-19.45	46.00	37.15	20.76	1.20	32.56	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



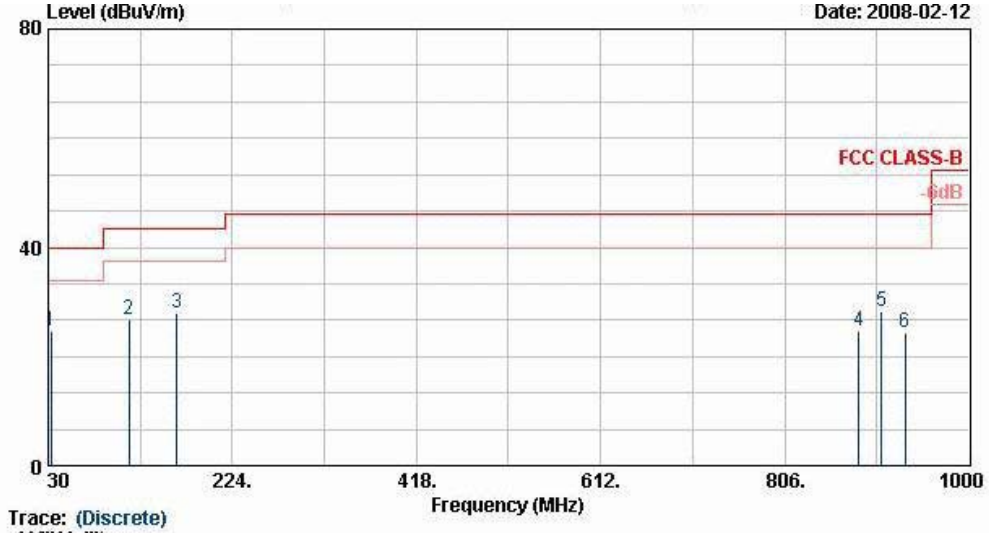
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch39;2441MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2382.00	44.60	-29.40	74.00	44.52	31.83	3.92	35.68	100	0	Peak
2	2382.00	31.57	-22.43	54.00	31.49	31.83	3.92	35.68	103	336	Average
3 @	2441.00	78.57			78.35	31.93	3.99	35.69	103	336	Average
4 X	2441.00	91.94			91.72	31.93	3.99	35.69	100	0	Peak
5	2486.00	44.54	-29.46	74.00	44.21	31.98	4.05	35.70	100	0	Peak
6	2486.00	32.05	-21.95	54.00	31.72	31.98	4.05	35.70	103	336	Average
7	8751.00	53.44	-20.56	74.00	46.23	36.15	7.50	36.45	100	0	Peak
8	8751.00	42.63	-11.37	54.00	35.43	36.15	7.50	36.45	100	184	Average

Remark: #3 and #4 are Fundamental Signals

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

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

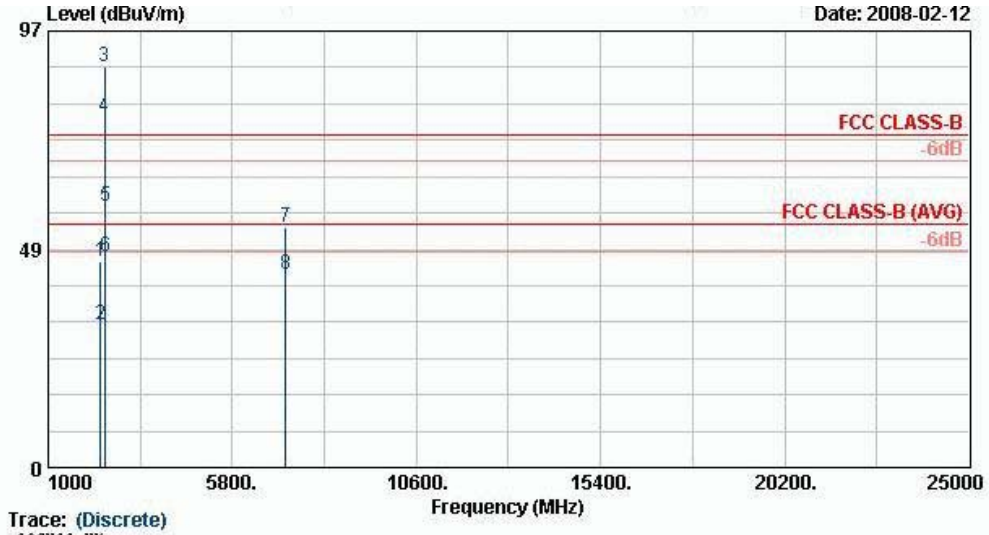


Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	33.24	24.83	-15.17	40.00	40.36	17.54	0.30	33.38	100	133	Peak
2	114.78	26.75	-16.75	43.50	47.67	12.13	0.50	33.55	---	---	Peak
3	165.54	27.81	-15.69	43.50	50.65	10.01	0.60	33.45	---	---	Peak
4	883.80	24.82	-21.18	46.00	35.87	20.41	1.30	32.76	---	---	Peak
5	908.30	28.11	-17.89	46.00	38.97	20.59	1.30	32.74	---	---	Peak
6	932.80	24.52	-21.48	46.00	35.11	20.76	1.20	32.56	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



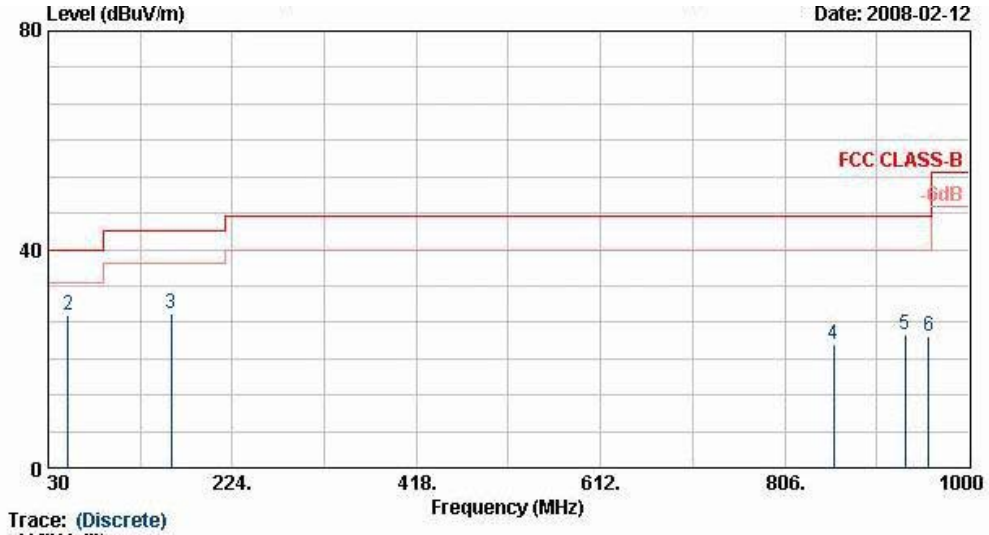
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2374.00	45.64	-28.36	74.00	45.59	31.83	3.89	35.68	100	0	Peak
2	2374.00	31.76	-22.24	54.00	31.72	31.83	3.89	35.68	100	311	Average
3 X	2480.00	89.14			88.81	31.98	4.05	35.70	100	0	Peak
4 X	2480.00	77.83			77.50	31.98	4.05	35.70	100	311	Average
5	2483.50	58.07	-15.93	74.00	57.74	31.98	4.05	35.70	100	0	Peak
6	2483.50	46.72	-7.28	54.00	46.39	31.98	4.05	35.70	100	311	Average
7	7197.00	53.36	-20.64	74.00	46.57	35.72	7.16	36.08	100	0	Peak
8	7197.00	42.87	-11.13	54.00	36.07	35.72	7.16	36.08	100	124	Average

Remark: #3 and #4 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



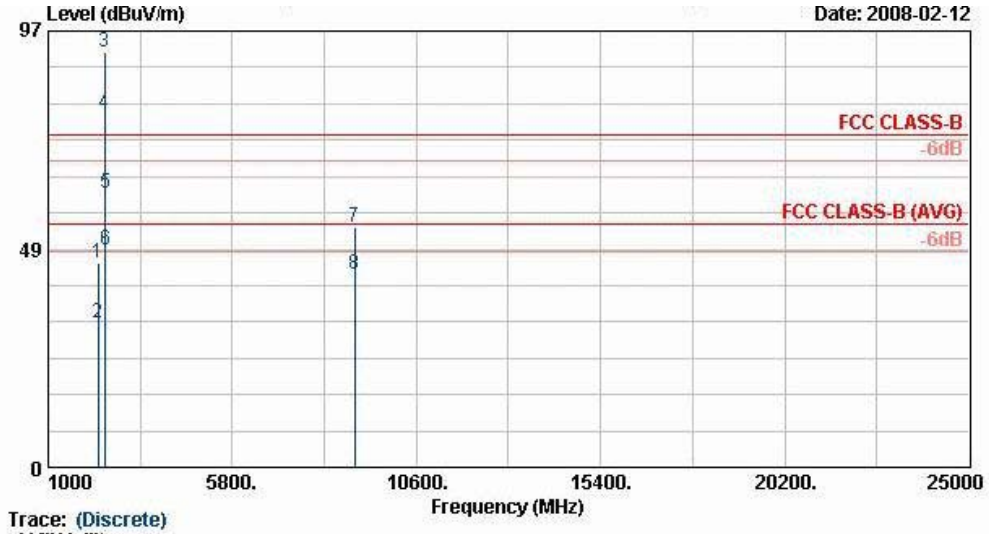
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-G38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	27.03	-12.97	40.00	40.57	19.66	0.30	33.50	---	---	Peak
2	50.79	27.93	-12.07	40.00	52.70	8.08	0.30	33.15	100	177	Peak
3	159.33	28.23	-15.27	43.50	50.97	10.16	0.60	33.50	---	---	Peak
4	857.90	22.48	-23.52	46.00	33.74	20.23	1.20	32.70	---	---	Peak
5	932.80	24.44	-21.56	46.00	35.04	20.76	1.20	32.56	---	---	Peak
6	957.30	24.17	-21.83	46.00	34.34	20.94	1.27	32.38	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



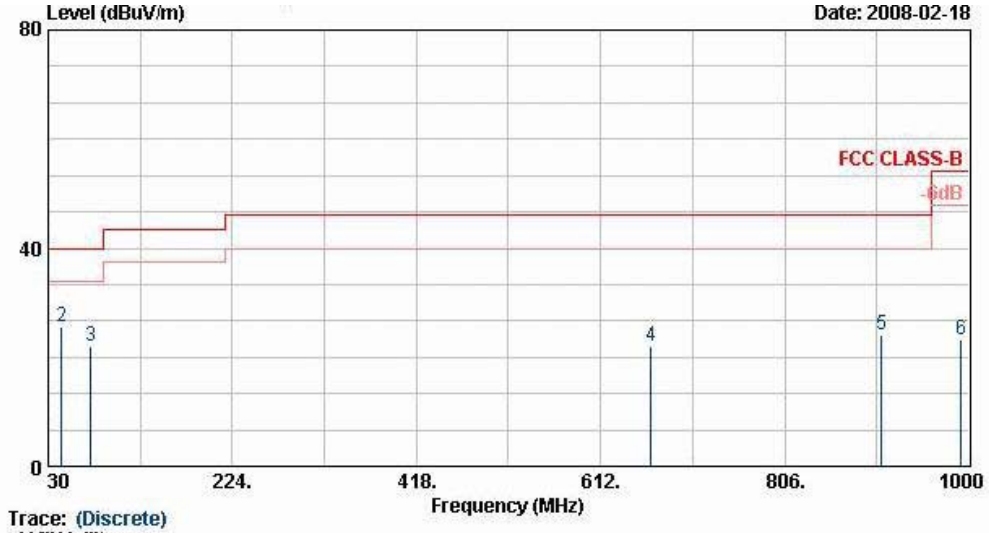
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480MHz + Adaptor
Data Rate : 3-DH5
Plane : E2
P/N : PS525E-C38120

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2310.00	45.45	-28.55	74.00	45.56	31.73	3.82	35.66	100	0	Peak
2	2310.00	31.99	-22.01	54.00	32.09	31.73	3.82	35.66	100	330	Average
3 X	2480.00	92.36			92.03	31.98	4.05	35.70	100	0	Peak
4 @	2480.00	78.67			78.34	31.98	4.05	35.70	100	330	Average
5	2483.50	61.04	-12.96	74.00	60.71	31.98	4.05	35.70	100	0	Peak
6 !	2483.50	48.32	-5.68	54.00	47.99	31.98	4.05	35.70	100	330	Average
7	8982.00	53.34	-20.66	74.00	45.65	36.48	7.80	36.59	100	0	Peak
8	8982.00	42.94	-11.06	54.00	35.25	36.48	7.80	36.59	100	244	Average

Remark: #3 and #4 are Fundamental Signals

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

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

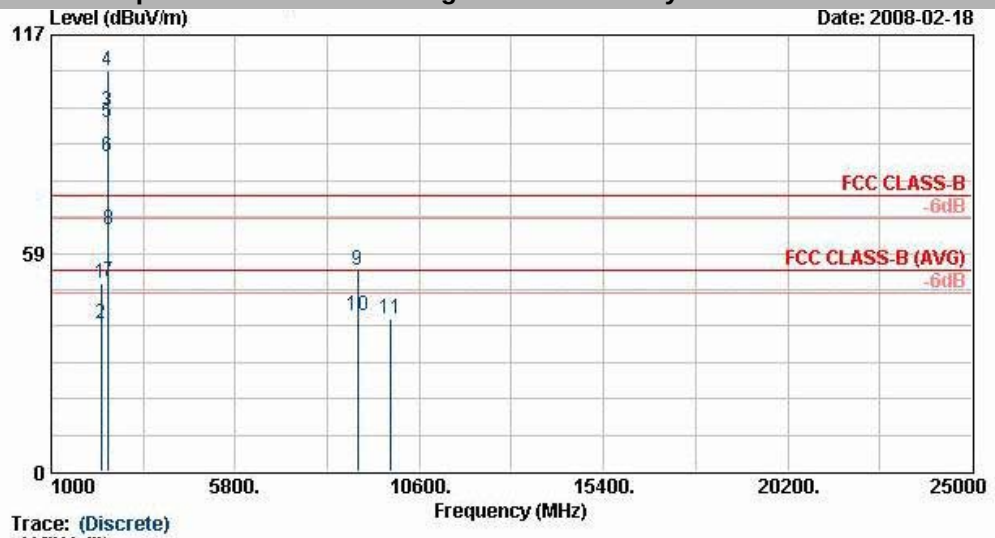


Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480 + 11g Tx_Ch11;2462MHz
: + Adaptor
Data Rate : BT:DH5 WLAN:36
Plane : EI
S/N : T81XXP0003

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	23.83	-16.17	40.00	37.37	19.66	0.30	33.50	---	---	Peak
2	44.04	25.57	-14.43	40.00	46.88	11.52	0.30	33.13	100	146	Peak
3	75.09	22.05	-17.95	40.00	48.02	7.18	0.40	33.55	---	---	Peak
4	665.40	22.01	-23.99	46.00	35.28	18.74	1.05	33.06	---	---	Peak
5	908.30	24.23	-21.77	46.00	35.09	20.59	1.30	32.74	---	---	Peak
6	992.30	23.27	-30.73	54.00	32.91	21.18	1.30	32.13	---	---	Peak

- Polarization : Horizontal (1GHz-25GHz)

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



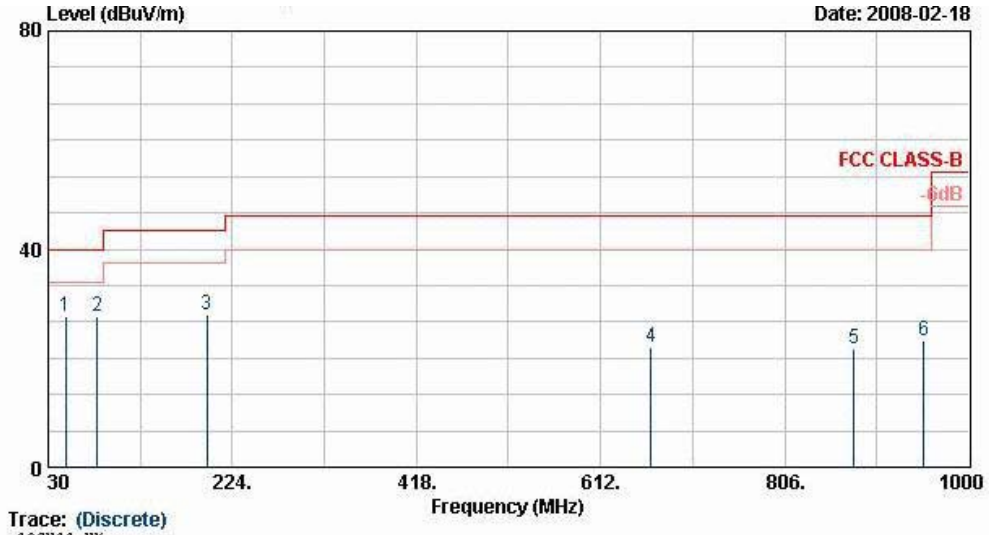
Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480 + 11g Tx_Ch11;2462MHz
: + Adaptor
Data Rate : BT:DH5 WLAN:36
Plane : EI
S/N : T81XXP0003

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2310.00	50.51	-23.49	74.00	50.61	31.73	3.82	35.66	100	0	Peak
2	2310.00	39.56	-14.44	54.00	39.66	31.73	3.82	35.66	105	6	Average
3 @	2462.00	96.69			96.41	31.95	4.02	35.69	105	6	Average
4 @	2462.00	107.51			107.23	31.95	4.02	35.69	100	0	Peak
5 X	2480.00	93.73			93.40	31.98	4.05	35.70	100	0	Peak
6 X	2480.00	84.38			84.05	31.98	4.05	35.70	100	18	Average
7 !	2483.50	51.03	-2.97	54.00	50.70	31.98	4.05	35.70	100	18	Average
8	2483.50	64.80	-9.20	74.00	64.47	31.98	4.05	35.70	100	0	Peak
9	8991.00	53.97	-20.03	74.00	46.28	36.48	7.80	36.59	100	0	Peak
10	8991.00	41.57	-12.43	54.00	33.88	36.48	7.80	36.59	100	117	Average
11	9846.00	40.75	-33.25	74.00	79.12	-9.63	8.04	36.77	100	0	Peak

Remark: #3, #4, #5, and #6 are Fundamental Signals

- Polarization : Vertical (30MHz-1GHz)

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



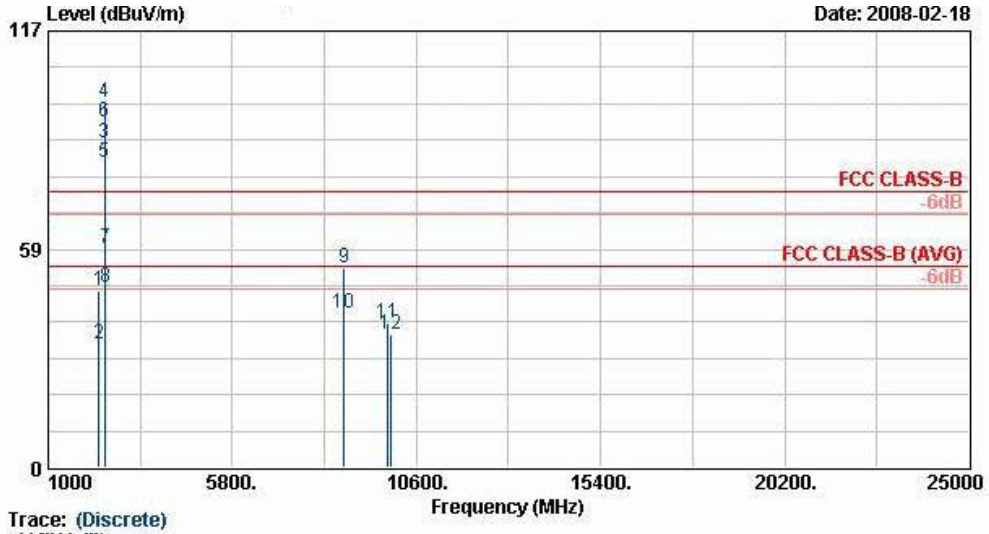
Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(95112I) VERTICAL
EUT : GPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480 + llg Tx_Ch11;2462MHz
: + Adaptor
Data Rate : BT:DH5 WLAN:36
Plane : EI
S/N : T81XXP0003

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	48.09	27.54	-12.46	40.00	51.31	9.06	0.30	33.14	---	---	Peak
2	81.84	27.76	-12.24	40.00	53.00	7.67	0.48	33.39	100	213	Peak
3	197.13	28.07	-15.43	43.50	51.69	9.32	0.60	33.55	---	---	Peak
4	665.40	22.06	-23.94	46.00	35.33	18.74	1.05	33.06	---	---	Peak
5	878.90	21.85	-24.15	46.00	32.92	20.38	1.30	32.75	---	---	Peak
6	952.40	23.23	-22.77	46.00	33.52	20.90	1.23	32.42	---	---	Peak

- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH06-HY
Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL
EUT : CPA PDA
Power : 120Vac/60Hz
Model : FR 812802
Memo : BT Tx_Ch78;2480 + llg Tx_Ch11;2462MHz
: + Adaptor
Data Rate : BT:DH5 WLAN:36
Plane : EI
S/N : T81XXP0003

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2316.00	47.58	-26.42	74.00	47.69	31.73	3.82	35.67	100	0	Peak
2	2316.00	32.93	-21.07	54.00	33.04	31.73	3.82	35.67	100	267	Average
3 @	2462.00	87.09			86.81	31.95	4.02	35.69	140	320	Average
4 X	2462.00	98.07			97.79	31.95	4.02	35.69	100	0	Peak
5 X	2480.00	81.80			81.47	31.98	4.05	35.70	140	320	Average
6 X	2480.00	92.56			92.23	31.98	4.05	35.70	100	0	Peak
7	2483.50	58.63	-15.37	74.00	58.30	31.98	4.05	35.70	100	0	Peak
8 !	2483.50	48.30	-5.70	54.00	47.97	31.98	4.05	35.70	140	320	Average
9	8721.00	53.53	-20.47	74.00	46.38	36.10	7.48	36.44	100	0	Peak
10	8721.00	41.14	-12.86	54.00	34.00	36.10	7.48	36.44	100	177	Average
11	9846.00	38.59	-35.41	74.00	76.95	-9.63	8.04	36.77	100	0	Peak
12	9921.00	35.47	-38.53	74.00	73.66	-9.48	8.07	36.79	100	0	Peak

Remark: #3, #4, #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 antennas used in this product are PIFA Antenna for BT with MICRO connector. 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 Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jul. 14, 2007	Jul. 13, 2008	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 29, 2007	Mar. 28, 2008	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 03, 2007	Dec. 02, 2008	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO01-HY)
Impedance Stabilization Network	SCHAFFNER	T400	21653	150kHz – 230MHz	Mar. 28, 2007	Mar. 27, 2008	Conduction (CO01-HY)
Impedance Stabilization Network	SCHAFFNER	T400	23342	150kHz – 230MHz	Mar. 05, 2007	Mar. 04, 2008	Conduction (CO01-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 26, 2007	Jul. 25, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	071025	1G~18G	Jun. 04, 2007	Jun. 03, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G - 40G	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
PreAmplifier	EMEC	PA303	PA303-SMA-059	100K~3GHz	Nov. 26, 2007	Nov. 25, 2008	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	103937	Third-Band	Oct. 19, 2007	Oct. 18, 2008	Radiation (03CH06-HY)

7. Uncertainty Evaluation

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

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

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

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.11	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)