



FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment : PDA Phone
Model No. : DIAM100
FCC ID : NM8DMS
Filing Type : Certification
Applicant : High Tech Computer Corp.
23 Xinghua Rd., Taoyuan 330, Taiwan

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- The data shown in this test report were carried out on Apr. 03, 2008 at **Sporton International Inc. Lab.**
- Report No.: FR822609-01-BB, Report Version: Rev. 01.

Roy Wu
Manager

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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1. General Description of Equipment under Test

1.1 Applicant

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

1.2 Manufacturer

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

1.3 Basic Description of Equipment under Test

Equipment		PDA Phone
Model Name		DIAM100
FCC ID		NM8DMS
PDA Phone A		LCD Panel 1 + Photo Camera 1 + Video Camera 1 + main PA
PDA Phone B		LCD Panel 2 + Photo Camera 2 + Video Camera 2 + main PA
PDA Phone C		LCD Panel 2 + Photo Camera 2 + Video Camera 2 + second PA
AC Adapter A	Brand Name	DELTA
	Model Name	ADP-5FH B
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.2A; O/P: 5Vdc, 1A
	AC Power Cord Type	1.8 meter shielded cable without ferrite core
AC Adapter B	Brand Name	PHIHONG
	Model Name	PSAA05A-050
	Power Rating	I/P: 100-240Vac, 50-60Hz, 13-20VA; O/P: 5Vdc, 1A
	AC Power Cord Type	1.8 meter shielded cable without ferrite core
AC Adapter C	Brand Name	hTC
	Model Name	TC P300
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.2A; O/P: 5Vdc, 1A
	Power Cord Type	1.8 meter shielded cable without ferrite core
Car Charger	Brand Name	PHIHONG
	Model Name	CLA05D-050A
	Power Rating	I/P: 10V/30Vdc; O/P: 5Vdc, 1A
	Power Cord Type	1.8 meter shielded cable without ferrite core
Battery 1	Manufacturer	Total Wireless Solutions (Macao Commercial Offshore) Limited (TWS)
	Brand Name	hTC
	Model Name	DIAM160
	Power Rating	3.7Vdc, 900mA
	Type	Li-ion
Battery 2	Manufacturer	DESAY CORPORATION (Desay)
	Brand Name	hTC
	Model Name	DIAM160
	Power Rating	3.7Vdc, 900mA
	Type	Li-ion



Battery 3	Manufacturer	SAMSUNG SDI CO., LTD.
	Brand Name	hTC
	Model Name	DIAM160
	Power Rating	3.7Vdc, 900mA
	Type	Li-ion
Battery 4	Manufacturer	SIMPLO TECHNOLOGY CO., LTD.
	Brand Name	hTC
	Model Name	DIAM171
	Power Rating	3.7Vdc, 1340mA
	Type	Li-ion
Battery 5	Manufacturer	Total Wireless Solutions (Macao Commercial Offshore) Limited (TWS)
	Brand Name	hTC
	Model Name	DIAM171
	Power Rating	3.7Vdc, 1340mA
	Type	Li-ion
Battery 6	Manufacturer	WellDone Company
	Brand Name	hTC
	Model Name	DIAM160
	Power Rating	3.7Vdc, 900mA
	Type	Li-ion
Earphone A	Brand Name	COTRON
	Model Name	RC E100
	Signal Line Type	1.7 meter shielded cable without ferrite core
Earphone B	Brand Name	COTRON
	Model Name	HS S200
	Signal Line Type	1.6 meter shielded cable without ferrite core
Earphone C	Brand Name	COTRON
	Model Name	HS S300
	Signal Line Type	1.6 meter shielded cable without ferrite core
USB Cable A	Brand Name	MEC
	Model Name	DC U300
	Signal Line Type	1.4 meter shielded cable with ferrite core
USB Cable B	Brand Name	MEC
	Model Name	DC U100
	Signal Line Type	1.2 meter shielded cable with ferrite core
LCD Panel 1	Brand Name	Hitachi
	Model Name	DX07D05VM0AAA
LCD Panel 2	Brand Name	Sharp
	Model Name	LS028V7DX01
Photo Camera 1	Brand Name	Foxconn
	Model Name	CMHT-3A403D
Photo Camera 2	Brand Name	LiteOn
	Model Name	07PM12
Video Camera 1	Brand Name	Foxconn
	Model Name	CMHT-00M00D



Video Camera 2	Brand Name	LiteOn
	Model Name	07PC05
Holster	Brand Name	XIGMA
	Model Name	PO S400

Remark:

1. Above EUT's information was declared by manufacturer. Please refer to the specifications of manufacturer or User's Manual for more detailed features description.
2. ADP-5FH X (X=A, B, C, D or E) have the same circuit design, the difference between these models are plug, only ADP-5FH B used for testing.
3. PSAA05X-050 (X=A, C, E, K or S) have the same circuit design, the difference between these models are plug, only PSAA05A-05 used for testing.



1.4 Feature of Equipment under Test

Product Feature & Specification			
DUT Type :	PDA Phone		
Model Name :	DIAM100		
FCC ID :	NM8DMS		
Tx Frequency :	GSM850 : 824 MHz ~ 849 MHz PCS1900 : 1850 MHz ~1910 MHz WCDMA Band V : 824 MHz ~ 849 MHz WCDMA Band II : 1850 MHz ~ 1910 MHz WLAN / Bluetooth : 2400 MHz ~ 2483.5 MHz		
Rx Frequency :	GSM850 : 869 MHz ~ 894 MHz PCS1900 : 1930 MHz ~ 1990 MHz WCDMA Band V : 869 MHz ~ 894 MHz WCDMA Band II : 1930 MHz ~ 1990 MHz WLAN / Bluetooth : 2400 MHz ~ 2483.5 MHz		
Number of Channels :	Bluetooth : 79 WLAN : 11		
Carrier Frequency of Each Channel :	Bluetooth : 2402+n*1 MHz; n=0~78 WLAN : 2412+(n-1)*5 MHz; n=1~11		
Channel Spacing :	GSM : 200 KHz Bluetooth : 1 MHz WLAN : 5 MHz		
Maximum Output Power to Antenna :	PCS1900 : 30.02 dBm (GSM) / 25.71 dBm (EDGE) Bluetooth : -0.23 dBm (1Mbps) Bluetooth EDR : 0.77 dBm (2Mbps) / 0.42 dBm (3Mbps) WLAN : 17.22 dBm (802.11b) / 19.15 dBm (802.11g)		
Type of Antenna Connector :	N/A		
Antenna Type :	Bluetooth : PIFA Antenna WLAN : PIFA Antenna		
Antenna Gain :	Bluetooth : -1 dBi WLAN : -1 dBi		
Power Rating (DC/AC Voltage) :	Battery : DC 3.7V Adapter : AC 100-240V		
GPRS / EGPRS Multislot class :	12		
Type of Modulation :	GSM / GPRS : GMSK EDGE : 8PSK WCDMA / HSDPA : QPSK Bluetooth (1Mbps) : GFSK Bluetooth EDR (2Mbps) : $\pi/4$ -DQPSK Bluetooth EDR (3Mbps) : 8-DPSK WLAN : DSSS / OFDM		
Function Type :	Transmitter		Transceiver V
DUT Stage :	Identical Prototype		



2. Test Configuration of Equipment under Test

2.1 Test Manner

- 3 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.
- 4 The data rate, 2Mbps, was chosen to being tested, due to the highest RF output power.

Channel	Frequency	Data Rate / Modulation		
		GFSK	$\pi/4$ -DQPSK	8-DPSK
		1Mbps	2Mbps	3Mbps
Ch00	2400MHz	-1.03 dBm	-0.03 dBm	-0.39 dBm
Ch39	2441MHz	-0.32 dBm	0.73 dBm	0.34 dBm
Ch78	2480MHz	-0.23 dBm	0.77 dBm	0.42 dBm

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

- 5 The EUT is programmed to transmit signal continuously for all testings.
- 6 Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 25000 MHz.



6.1 Test Mode

Application			
Radiated Emission / RF Conducted	BT(1Mbps)	BT-EDR(2Mbps)	BT-EDR(3Mbps)
	Mode1: CH00_2402MHz	Mode4: CH00_2402MHz	Mode7: CH00_2402MHz
	Mode2: CH39_2441MHz	Mode5: CH39_2441MHz	Mode8: CH39_2441MHz
	Mode3: CH78_2480MHz	Mode6: CH78_2480MHz	Mode9: CH78_2480MHz
Conducted Emission	Mode 1: PDA Phone A + PCS1900 Idle Mode + BT Link + WLAN Link + Battery 1 + Photo Camera + Adapter A + GPS Rx		
	Mode 2: PDA Phone A + PCS1900 Idle Mode + BT Link + WLAN Link + Battery 2 + Photo Camera + Adapter B + GPS Rx		
	Mode 3: PDA Phone A + PCS1900 Idle Mode + BT Link + WLAN Link + Battery 3 + Photo Camera + Adapter C + GPS Rx + USB cable A		
	Mode 4: PDA Phone A + PCS1900 Idle Mode + BT Link + WLAN Link + Battery 3 + Photo Camera + Adapter C + GPS Rx + USB cable B		
	Mode 5: PDA Phone A + EDGE Idle Mode + BT Link + WLAN Link + Battery 3 + Video Camera + GPS Rx + USB cable A Link with NB		
	Mode 6: PDA Phone A + EDGE Idle Mode + BT Link + WLAN Link + Battery 3 + MPEG4 + GPS Rx + USB cable B Link with NB		
	Mode 7: PDA Phone B + EDGE Idle Mode + BT Link + WLAN Link + Battery 3 + Video Camera + GPS Rx + USB cable A Link with NB		
	Mode 8: PDA Phone A + EDGE Idle Mode + BT Link + WLAN Link + Battery 4 + Video Camera + GPS Rx + USB cable A Link with NB		
	Mode 9: PDA Phone A + EDGE Idle Mode + BT Link + WLAN Link + Battery 5 + Video Camera + GPS Rx + USB cable A Link with NB		

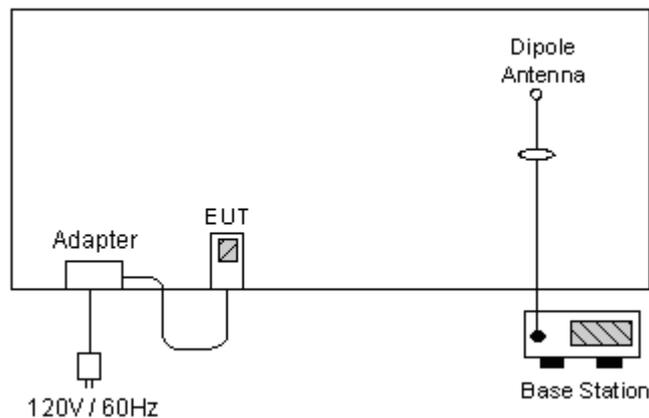
Note: For BT, we tested radiated emissions full modes in 2Mbps and retesting the worst channel, CH78, in 1Mbps and 3Mbps respectively.

6.2 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable / Power Cord
1.	Base Station	Agilent	E5515C	N/A	Unshielded, 1.8m
2.	WLAN AP	SMC	SMC-100	HEDWG4005ACC	Unshielded, 1.8m
3.	GPS Station	T&E	GP-50	N/A	Unshielded, 1.8m
4.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A
5.	Notebook	DELL	D400	E2K24GBRL	N/A
6.	(RS-232)Mouse	State	MS-303	FCC DoC	Unshielded, 1.2m
7.	iPod	Apple	A1199	DoC	Shielded, 1.2m

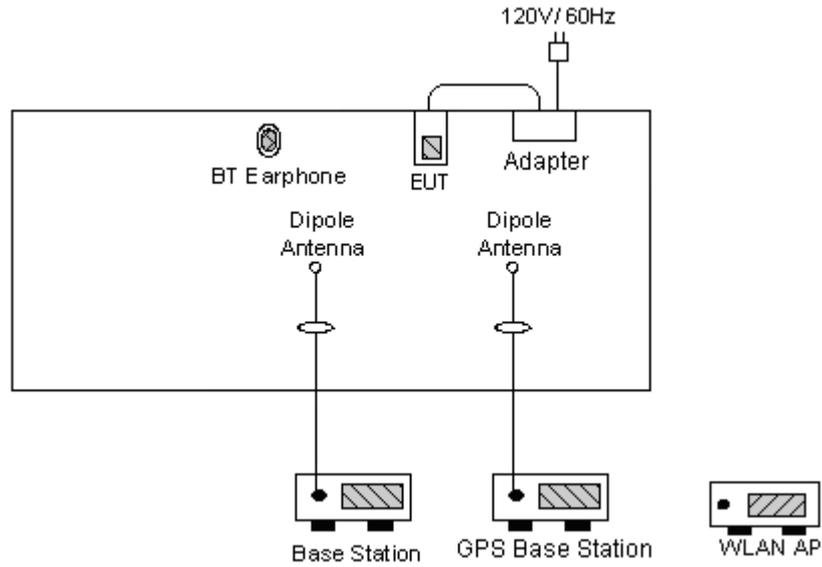
6.3 Connection Diagram of Test System

<Radiated Emission>

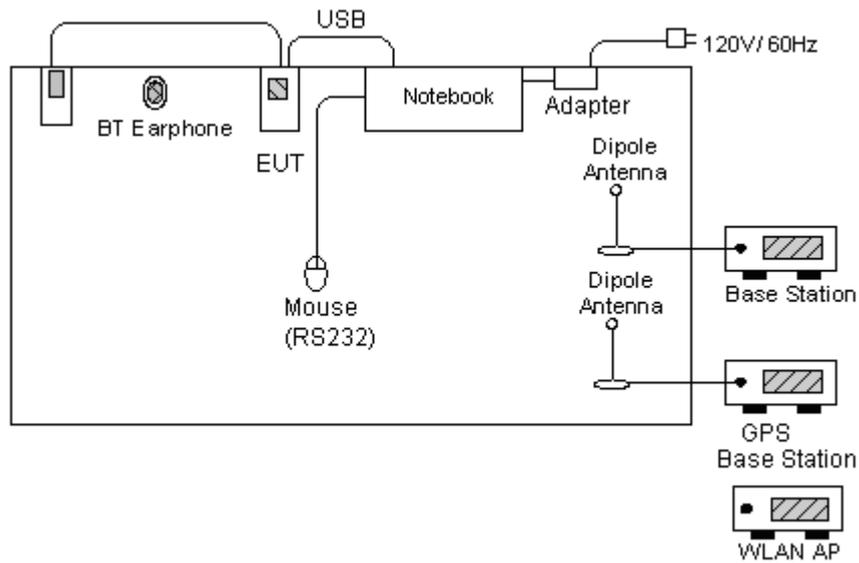


<Conducted Emission>

EUT with Adapter Mode



EUT with USB Link Mode





3. RF Utility

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



4. General Information of Test

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

Test Site No : CO04-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	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 :

- a. The transmitter output was connected to the spectrum analyzer via a low lose cable.
b. Set both RBW and VBW of spectrum analyzer to 100 KHz with suitable frequency span including 100 KHz bandwidth from band edge.
c. The band edges was measured and recorded.

5.2.3 Test Result :

Application Type : Bluetooth
Temperature : 26~27°C
Relative Humidity : 48~49%
Test Engineer : Ken

- 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)

Table with 11 columns: Frequency, Level, Over Limit, Limit Line, Read Level, Antenna Factor, Cable Loss, Preamp Factor, Ant Pos, Table Pos, Remark. Rows show data for 2483.50 MHz at Average and Peak levels.

CH78 (Vertical)

Table with 11 columns: Frequency, Level, Over Limit, Limit Line, Read Level, Antenna Factor, Cable Loss, Preamp Factor, Ant Pos, Table Pos, Remark. Rows show data for 2483.50 MHz at Average and Peak levels.



> BT EDR(2Mbps)

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
2389.61	32.91	-21.09	54.00	32.81	31.86	3.92	35.68	102	32	Average
2389.61	48.21	-25.79	74.00	48.11	31.86	3.92	35.68	100	0	Peak

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
2388.66	31.93	-22.07	54.00	31.83	31.86	3.92	35.68	127	65	Average
2388.66	45.95	-28.05	74.00	45.85	31.86	3.92	35.68	100	0	Peak

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	47.51	-6.49	54.00	47.18	31.98	4.05	35.70	102	14	Average
2483.47	59.67	-14.33	74.00	59.34	31.98	4.05	35.70	100	0	Peak

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	39.76	-14.24	54.00	39.43	31.98	4.05	35.70	100	181	Average
2483.47	62.05	-11.95	74.00	61.72	31.98	4.05	35.70	100	0	Peak

> BT EDR(3Mbps)

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	46.86	-7.14	54.00	46.53	31.98	4.05	35.70	103	12	Average
2483.47	60.00	-14.00	74.00	59.67	31.98	4.05	35.70	100	0	Peak

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	39.01	-14.99	54.00	38.68	31.98	4.05	35.70	100	182	Average
2483.47	60.20	-13.80	74.00	59.87	31.98	4.05	35.70	100	0	Peak



BT(1Mbps)

CH78

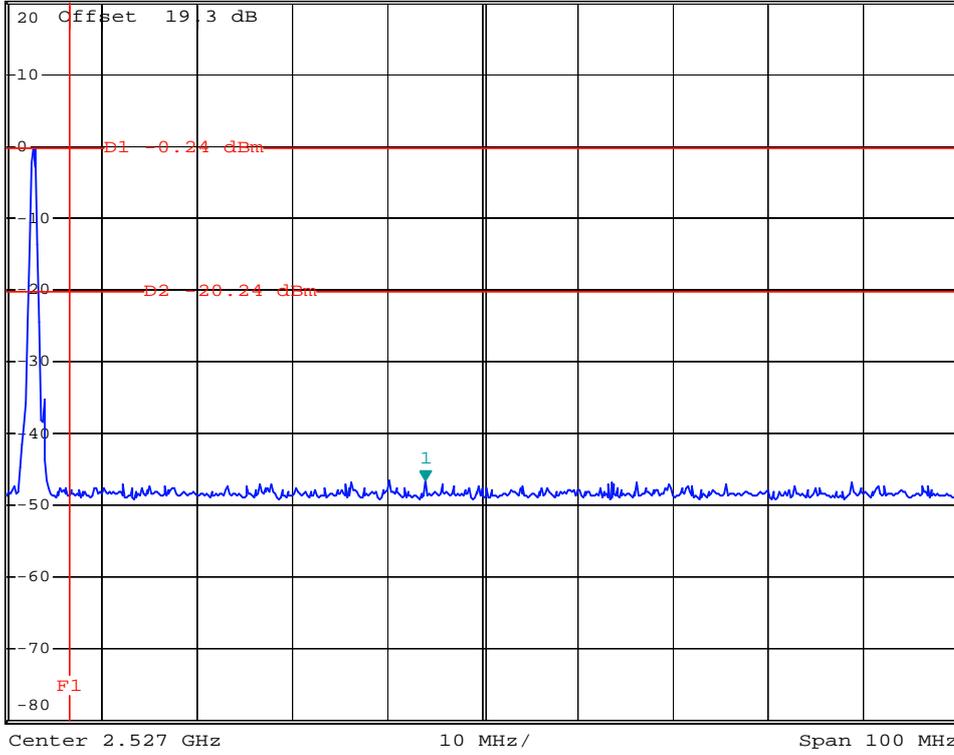


*RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -46.61 dBm
 *SWT 500 ms 2.521000000 GHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Date: 29.FEB.2008 10:59:55

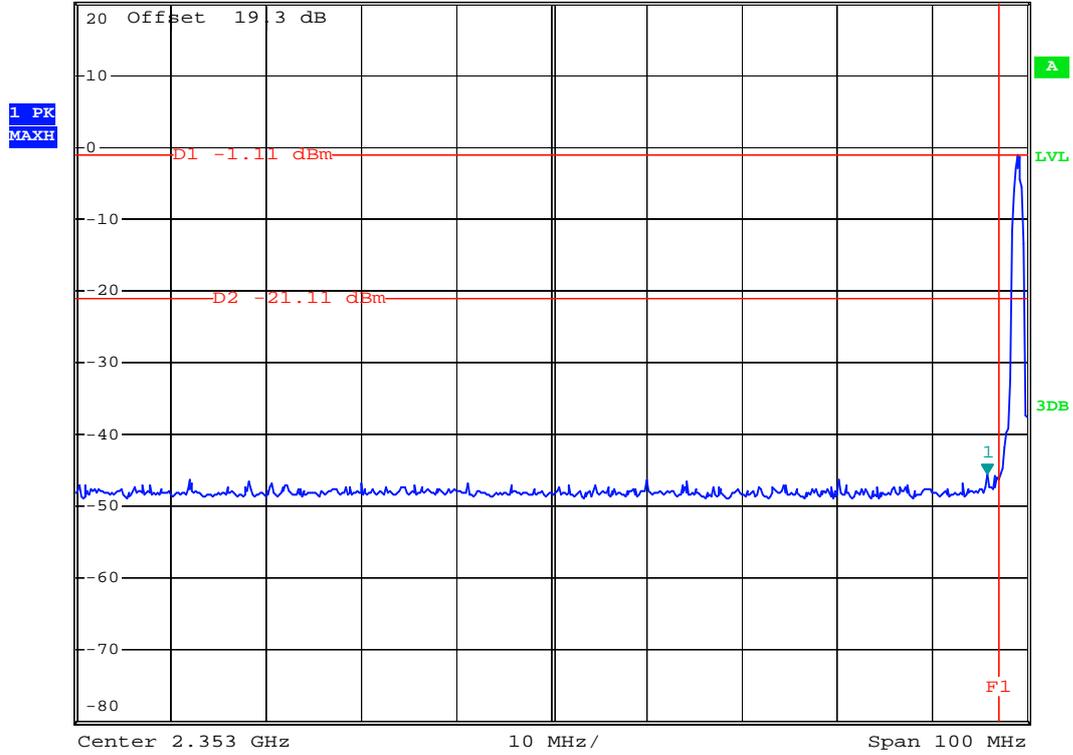


BT-EDR(2Mbps)

CH00



Ref 20 dBm *Att 20 dB *RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -45.46 dBm
 *SWT 500 ms 2.398800000 GHz



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BT-EDR(2Mbps)

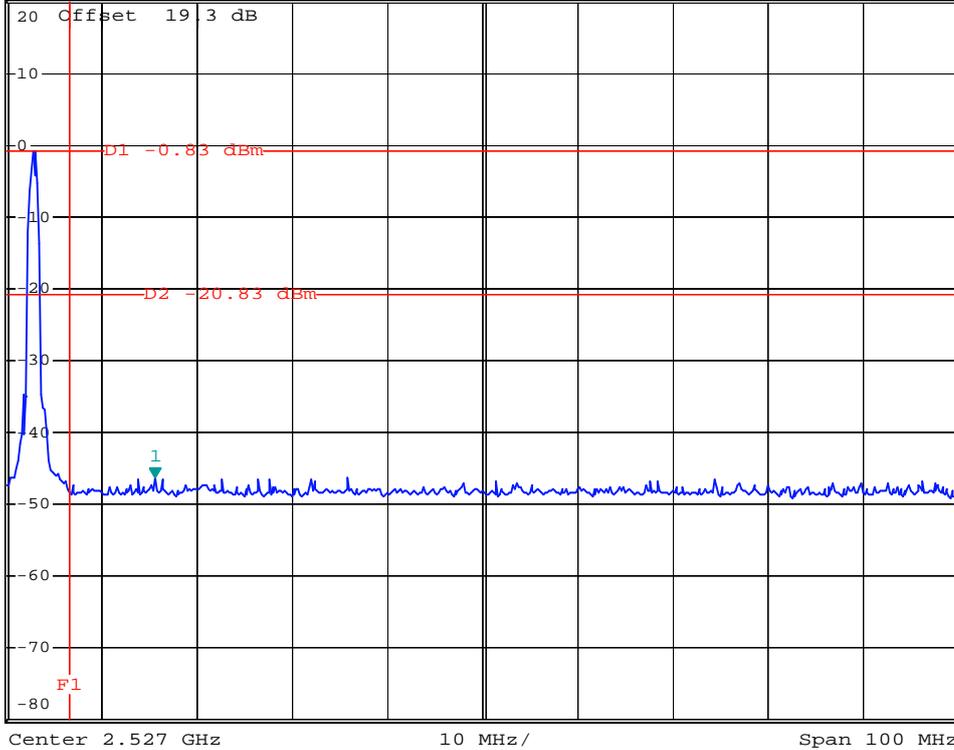
CH78



*RBW 100 kHz Marker 1 [T1]
 *VBW 100 kHz -46.20 dBm
 *SWT 500 ms 2.492600000 GHz

Ref 20 dBm

*Att 20 dB



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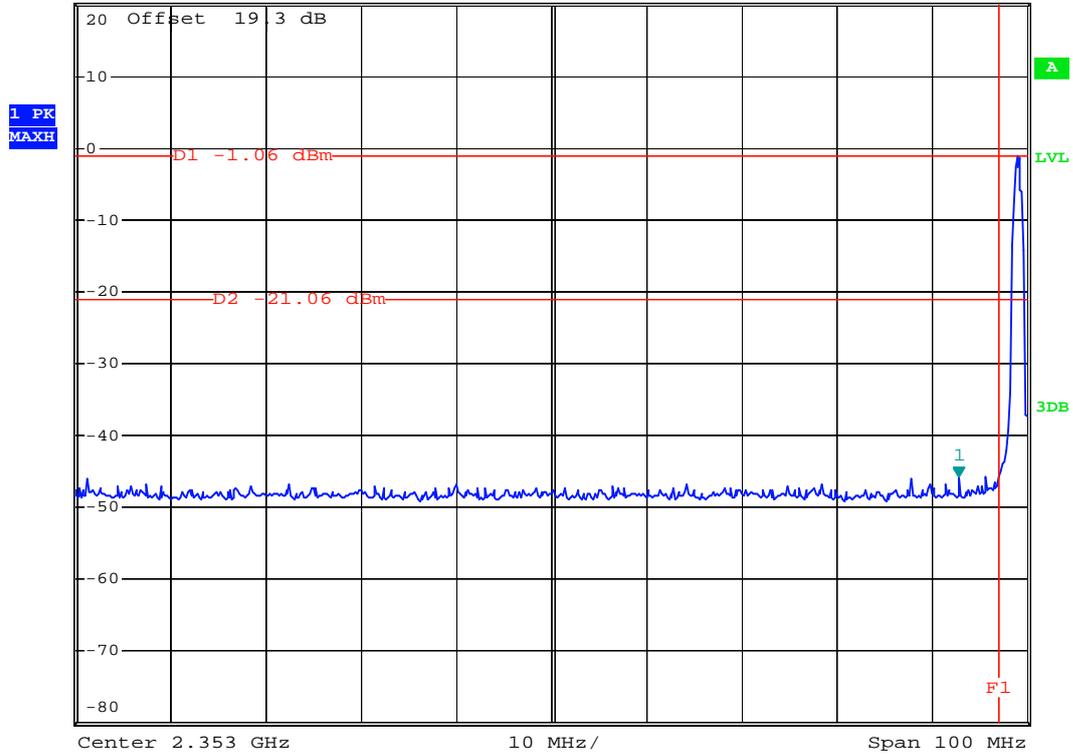


BT-EDR(3Mbps)

CH00



Ref 20 dBm *Att 20 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -45.83 dBm
*SWT 500 ms 2.395800000 GHz



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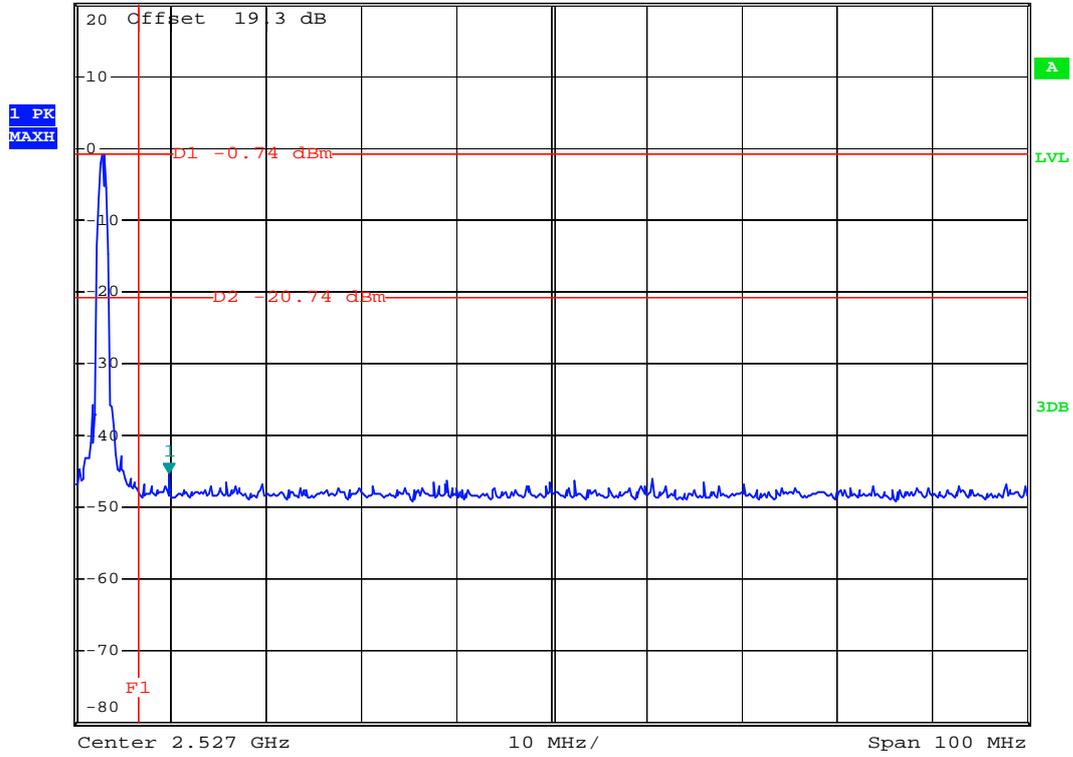


BT-EDR(3Mbps)

CH78



Ref 20 dBm *Att 20 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -45.30 dBm
*SWT 500 ms 2.486800000 GHz



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5.3 Hopping Channel Separation

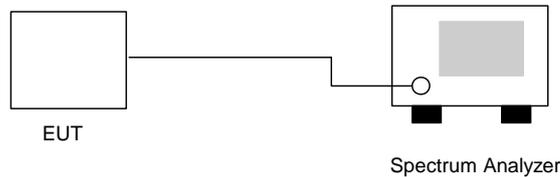
5.3.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.3.2 Test Procedure :

- a. The output of EUT was connected to the spectrum analyzer by a low loss cable.
- b. Set RBW of spectrum analyzer to $\geq 1\%$ of the span and VBW \geq RBW.
- c. 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(1Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.000	0.572	Mode 1
39	2441	1.000	0.572	Mode 2
78	2480	1.000	0.573	Mode 3

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 Test Result : The spectrum analyzer plots are attached as below

Application Type : BT-EDR(2Mbps)

Temperature : 26~27°C

Relative Humidity : 48~49%

Test Enginner : Ken

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.008	0.832	Mode 4
39	2441	1.000	0.829	Mode 5
78	2480	1.008	0.829	Mode 6

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

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

Application Type : BT-EDR(3Mbps)

Temperature : 26~27°C

Relative Humidity : 48~49%

Test Enginner : Ken

Channel	Frequency (MHz)	Carrier Frequency Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.008	0.805	Mode 7
39	2441	1.008	0.805	Mode 8
78	2480	1.008	0.805	Mode 9

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



5.3.7 Hopping Channel Separation

Mode 1

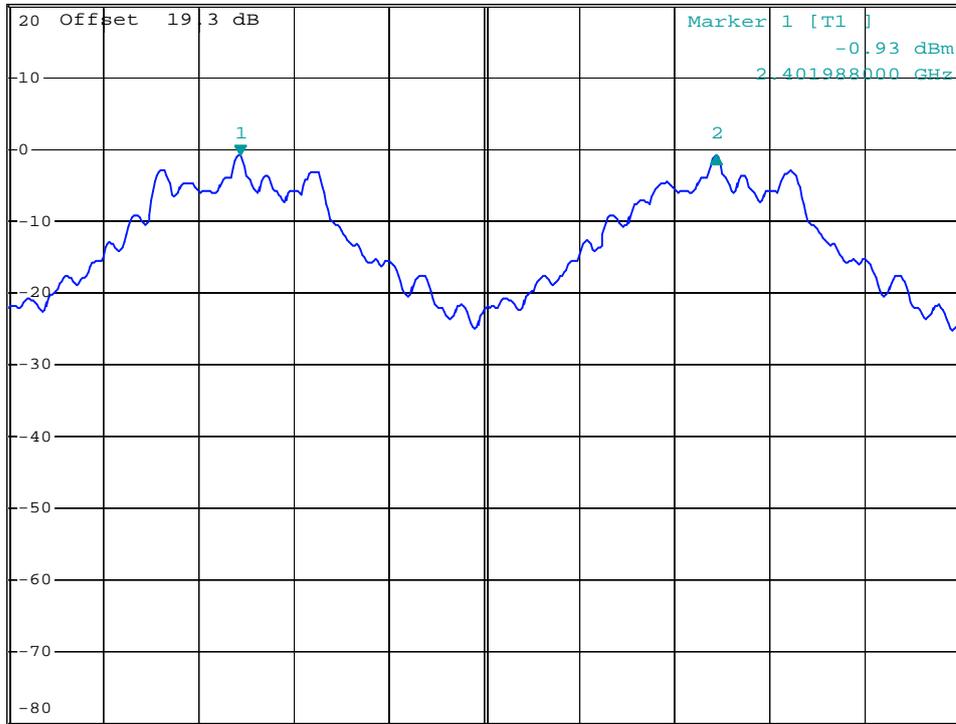


*RBW 30 kHz Delta 2 [T1]
*VBW 100 kHz -0.03 dB
*SWT 500 ms 1.000000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



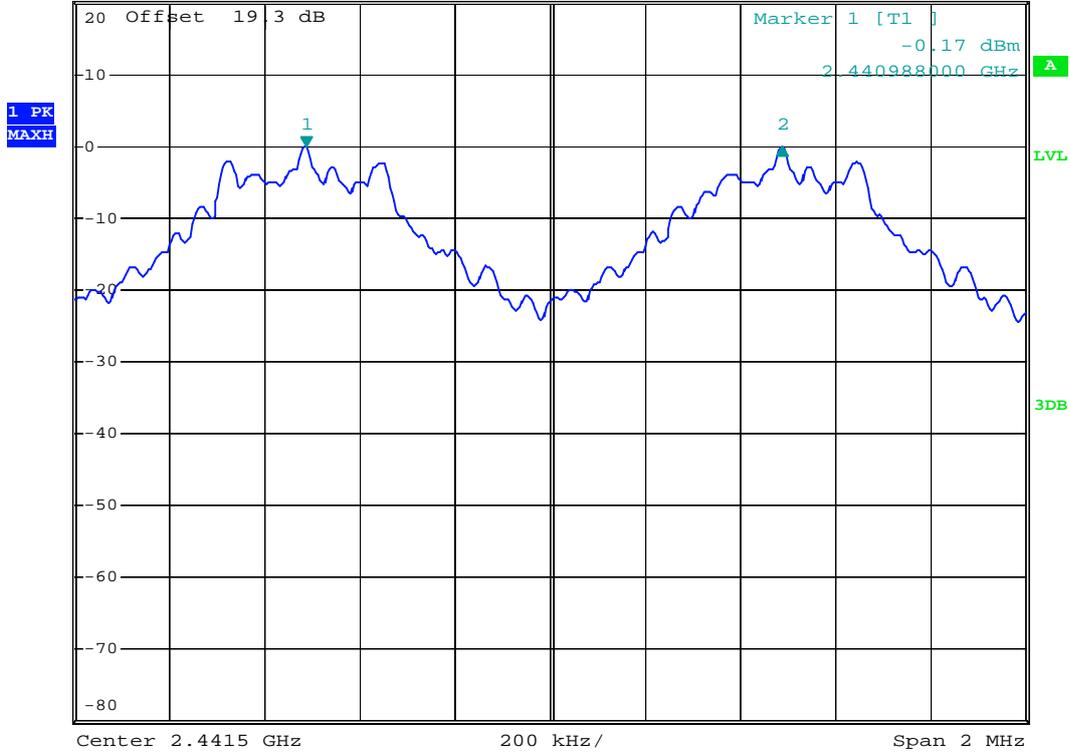
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Mode 2



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 100 kHz -0.01 dB
 *SWT 500 ms 1.000000000 MHz



Date: 29.FEB.2008 11:21:42



Mode 3

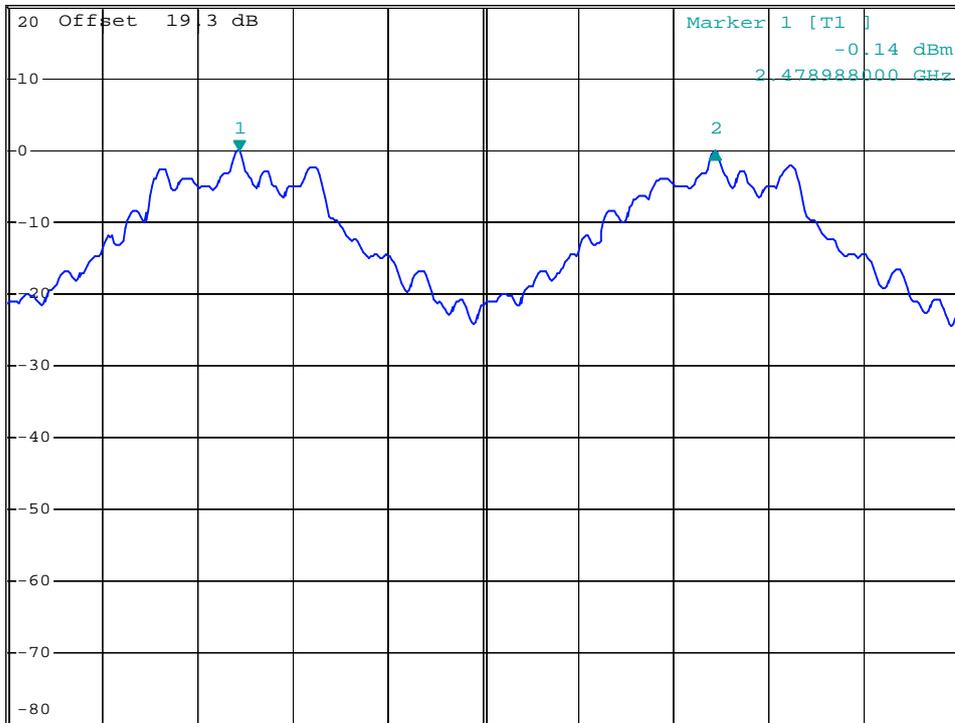


*RBW 30 kHz Delta 2 [T1]
*VBW 100 kHz -0.04 dB
*SWT 500 ms 1.000000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4795 GHz 200 kHz/ Span 2 MHz

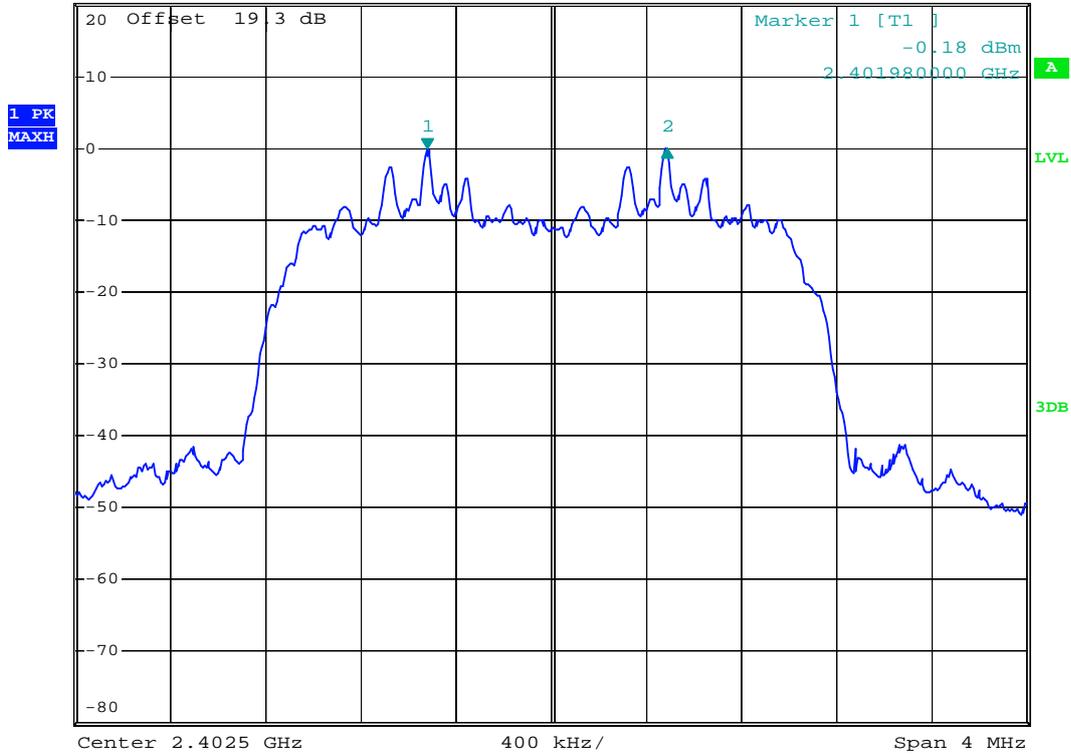
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Mode 4



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1] *VBW 100 kHz 0.04 dB *SWT 500 ms 1.008000000 MHz



Date: 29.FEB.2008 23:09:44



Mode 5

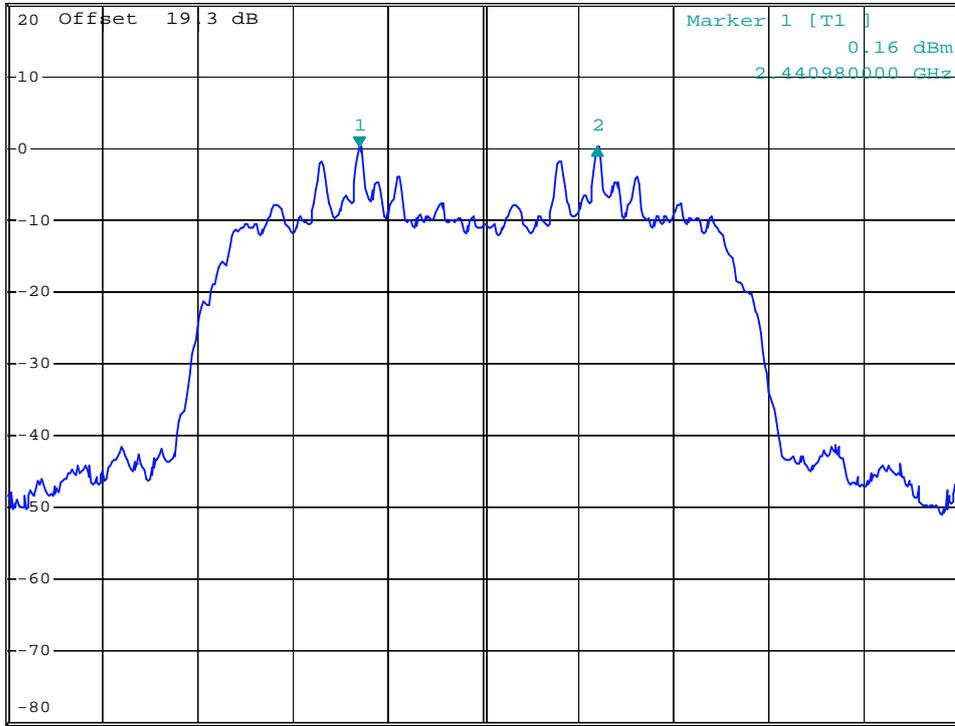


*RBW 30 kHz Delta 2 [T1]
*VBW 100 kHz -0.04 dB
*SWT 500 ms 1.00000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4415 GHz 400 kHz/ Span 4 MHz

Date: 29.FEB.2008 23:11:00



Mode 6

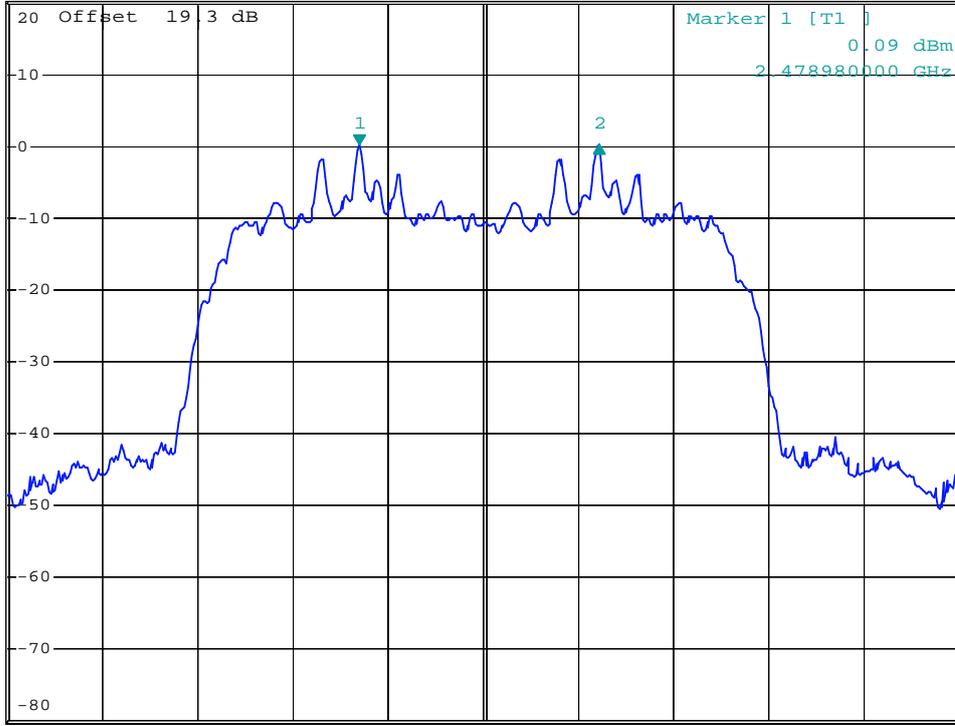


*RBW 30 kHz Delta 2 [T1]
 *VBW 100 kHz 0.01 dB
 *SWT 500 ms 1.008000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4795 GHz 400 kHz / Span 4 MHz

Date: 29.FEB.2008 23:12:08



Mode 7

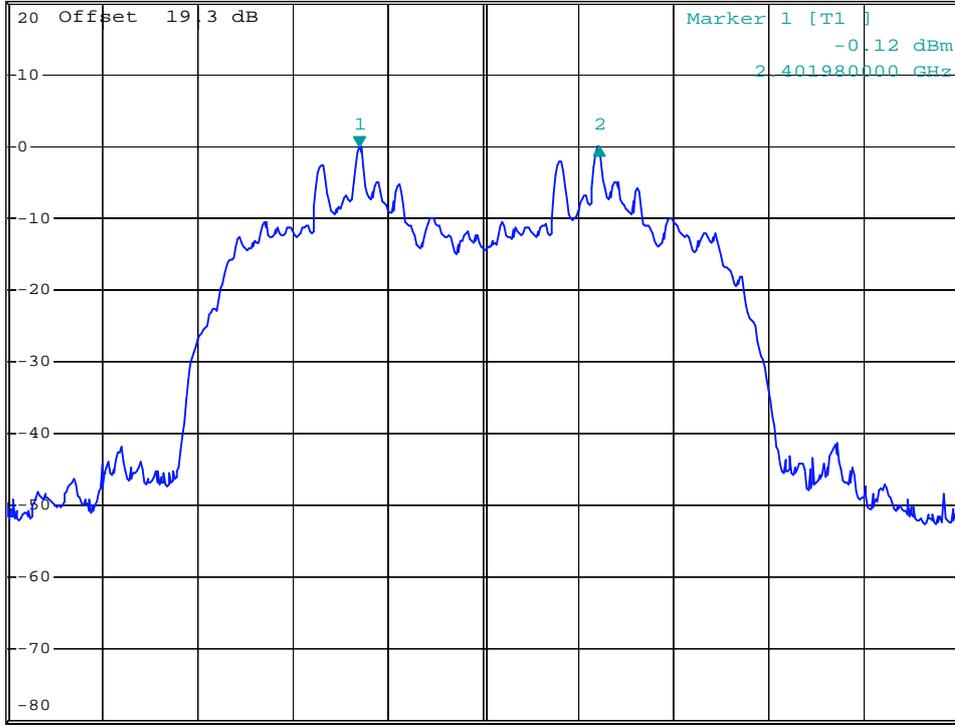


*RBW 30 kHz Delta 2 [T1]
*VBW 100 kHz 0.03 dB
*SWT 500 ms 1.008000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4025 GHz 400 kHz/ Span 4 MHz

Date: 29.FEB.2008 23:13:17



Mode 8

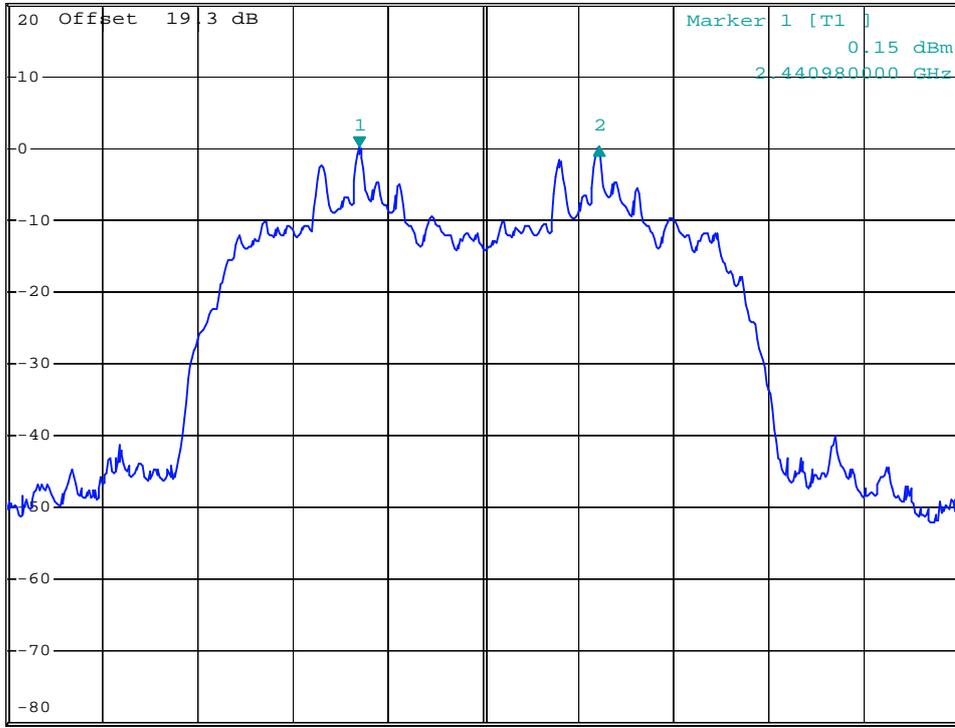


*RBW 30 kHz Delta 2 [T1]
 *VBW 100 kHz 0.04 dB
 *SWT 500 ms 1.008000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4415 GHz 400 kHz/ Span 4 MHz

Date: 29.FEB.2008 23:14:15



Mode 9

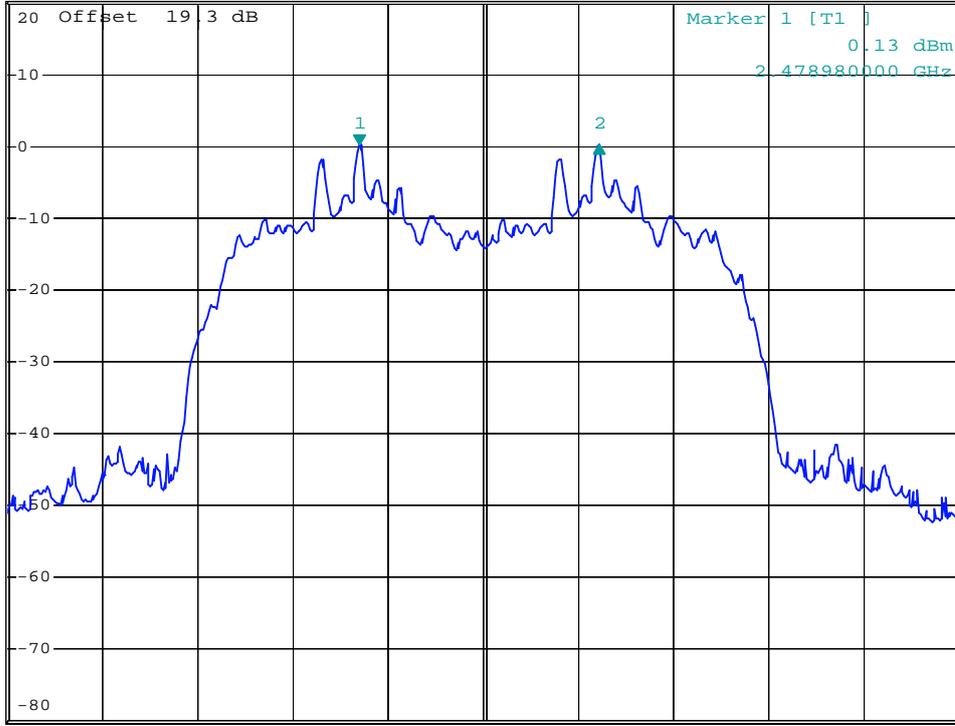


*RBW 30 kHz Delta 2 [T1]
*VBW 100 kHz 0.02 dB
*SWT 500 ms 1.008000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.4795 GHz 400 kHz/ Span 4 MHz

Date: 29.FEB.2008 23:15:28

5.4 Number of Hopping Frequency

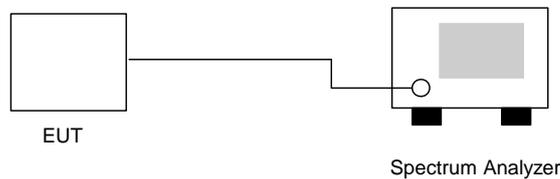
5.4.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.4.2 Test Procedure :

- a. The output of EUT was connected to the spectrum analyzer by a low loss cable.
- b. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
- c. 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(1Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

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

5.4.5 Test Result : See spectrum analyzer plots below

Application Type : BT-EDR(2Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

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



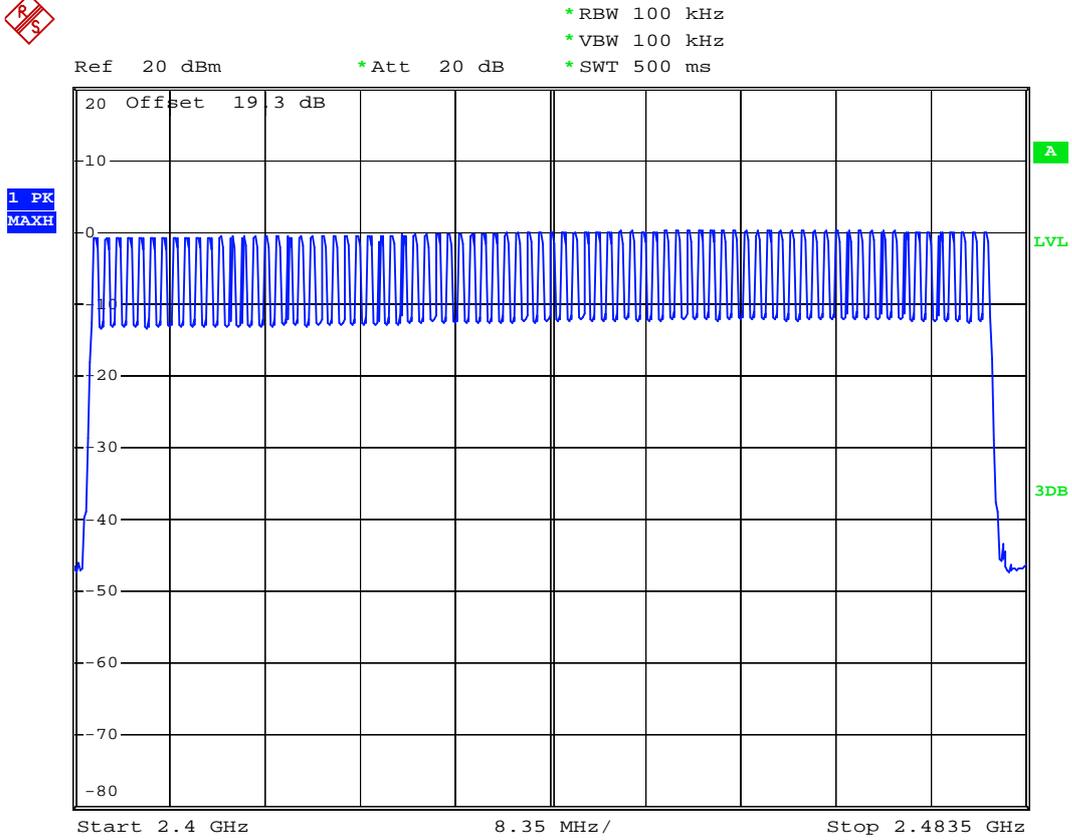
5.4.6 Test Result : See spectrum analyzer plots below
Application Type : BT-EDR(3Mbps)
Temperature : 26~27°C
Relative Humidity : 48~49%
Test Enginner : Ken

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



5.4.7 Number of Hopping Frequency

BT(1Mbps)



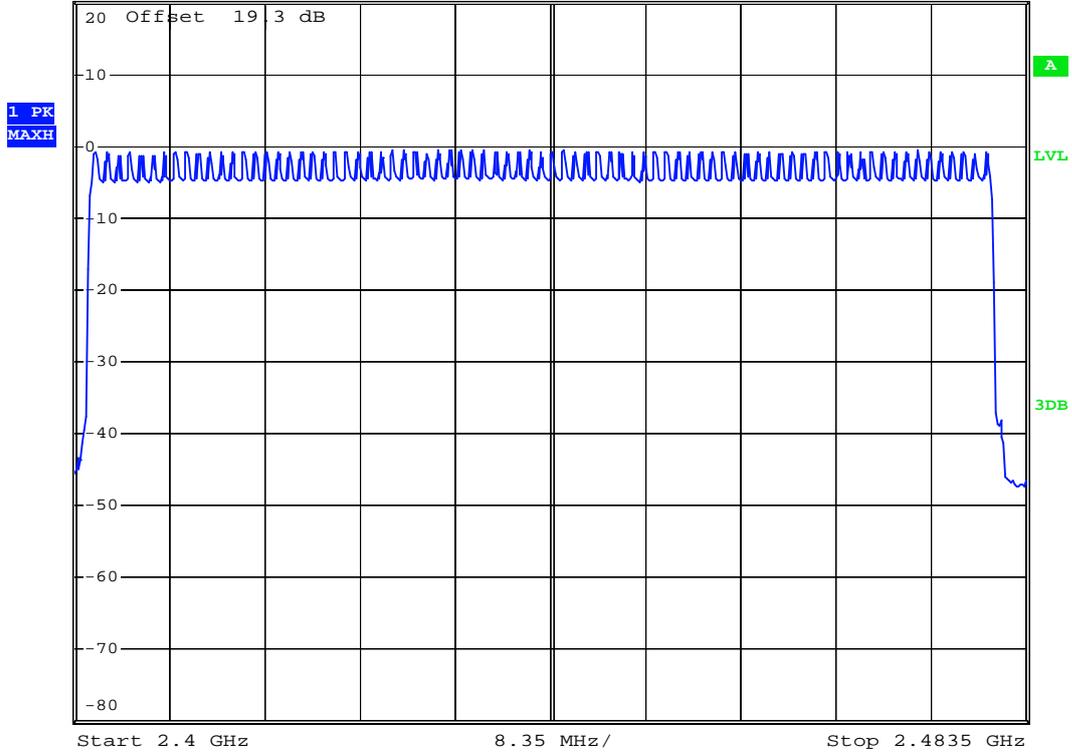
Date: 29.FEB.2008 13:09:57



BT-EDR(2Mbps)



Ref 20 dBm *Att 20 dB *RBW 100 kHz
*VBW 100 kHz *SWT 500 ms



Date: 29.FEB.2008 23:55:00

5.5 Hopping Channel Bandwidth

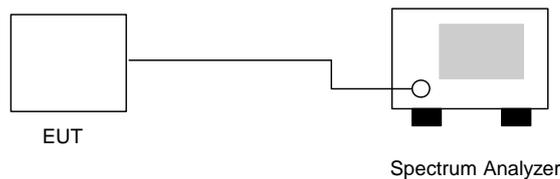
5.5.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.5.2 Test Procedure :

- a. The transmitter output was connected to the spectrum analyzer by a low loss cable.
- b. Set RBW of spectrum analyzer to 30kHz and VBW to 300kHz.
- c. 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(1Mbps)

Temperature : 26~27°C

Relative Humidity : 48~49%

Test Enginner : Ken

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	0.858	Mode 1
39	2441	0.858	Mode 2
78	2480	0.860	Mode 3



5.5.5 Test Result : See spectrum analyzer plots below

Application Type : BT-EDR(2Mbps)

Temperature : 26~27°C

Relative Humidity : 48~49%

Test Enginner : Ken

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.248	Mode 4
39	2441	1.244	Mode 5
78	2480	1.244	Mode 6

5.6.7 Test Result : See spectrum analyzer plots below

Application Type : BT-EDR(3Mbps)

Temperature : 26~27°C

Relative Humidity : 48~49%

Test Enginner : Ken

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Plot Ref. No.
00	2402	1.208	Mode 7
39	2441	1.208	Mode 8
78	2480	1.208	Mode 9

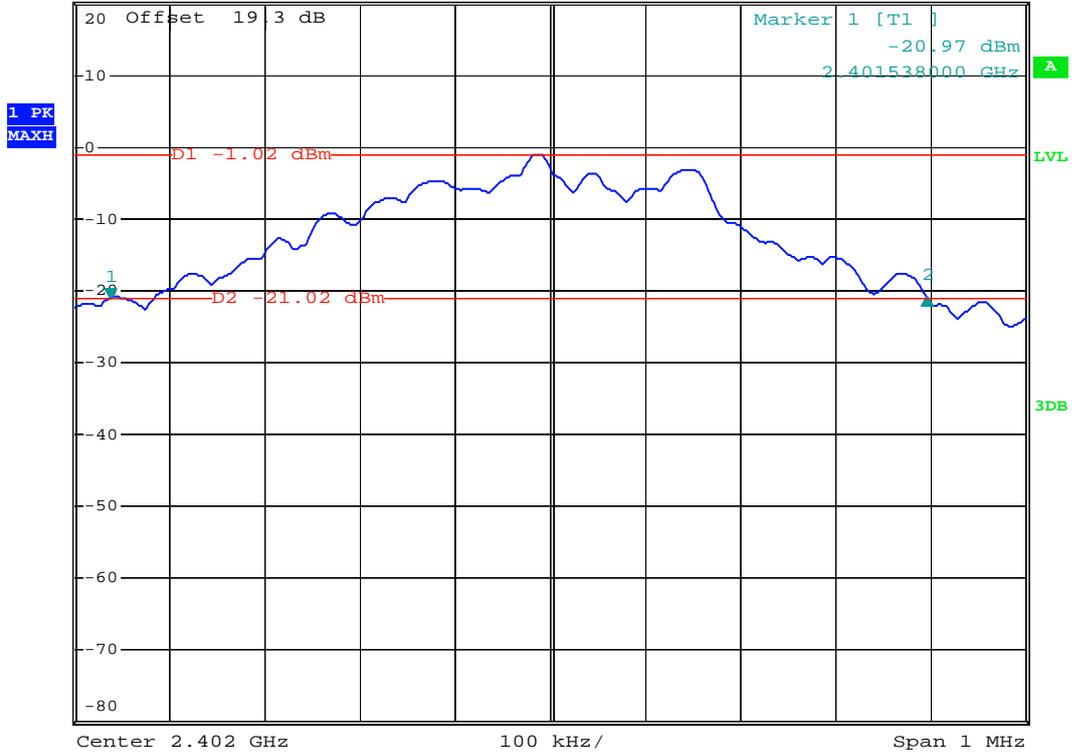


5.5.6 Hopping Channel Bandwidth

Mode 1



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1] *VBW 300 kHz 0.26 dB *SWT 500 ms 858.00000000 kHz



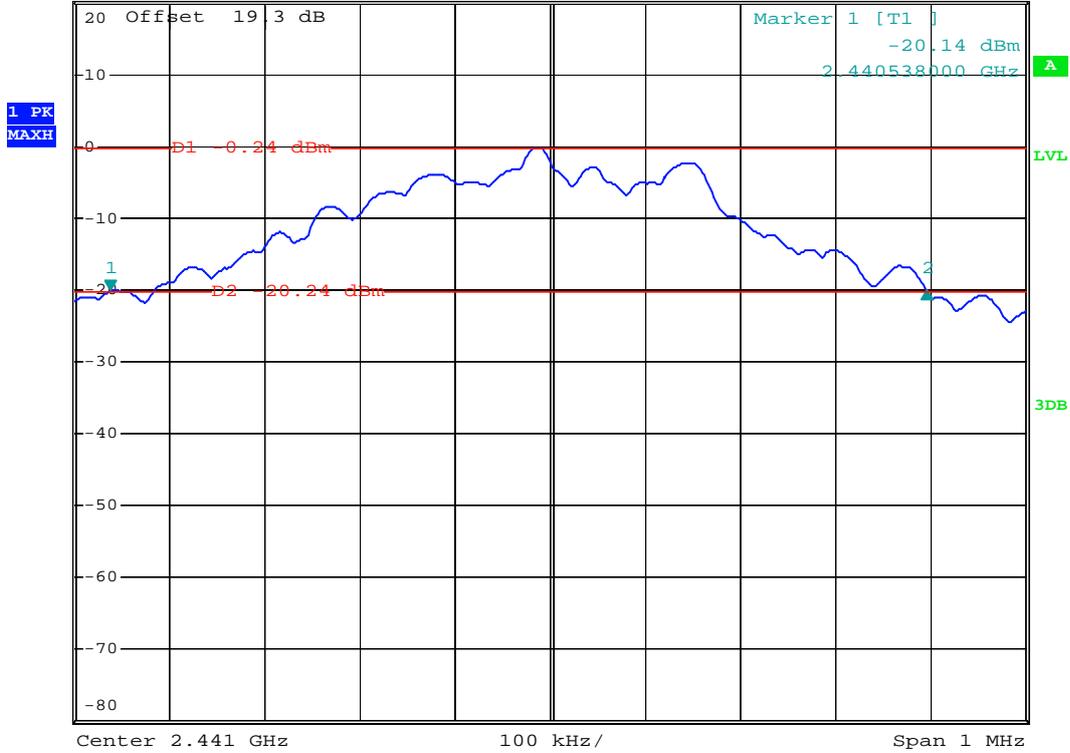
Date: 29.FEB.2008 10:56:28



Mode 2



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz 0.20 dB
 *SWT 500 ms 858.00000000 kHz



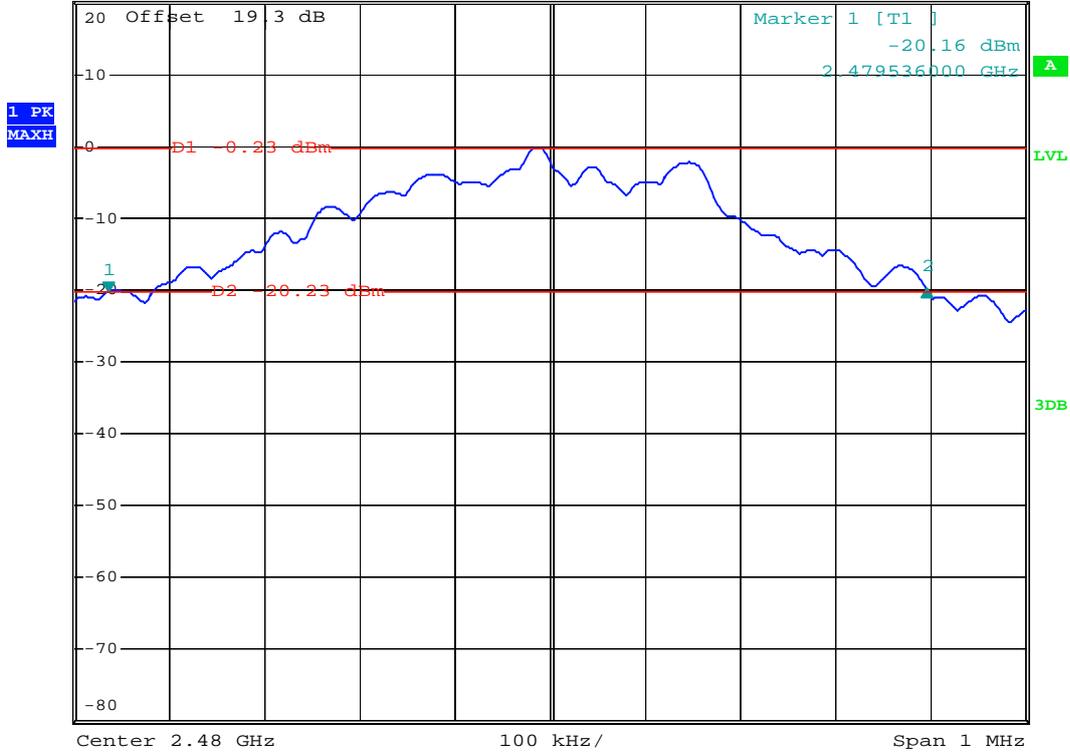
Date: 29.FEB.2008 10:57:35



Mode 3



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz 0.27 dB
 *SWT 500 ms 860.00000000 kHz



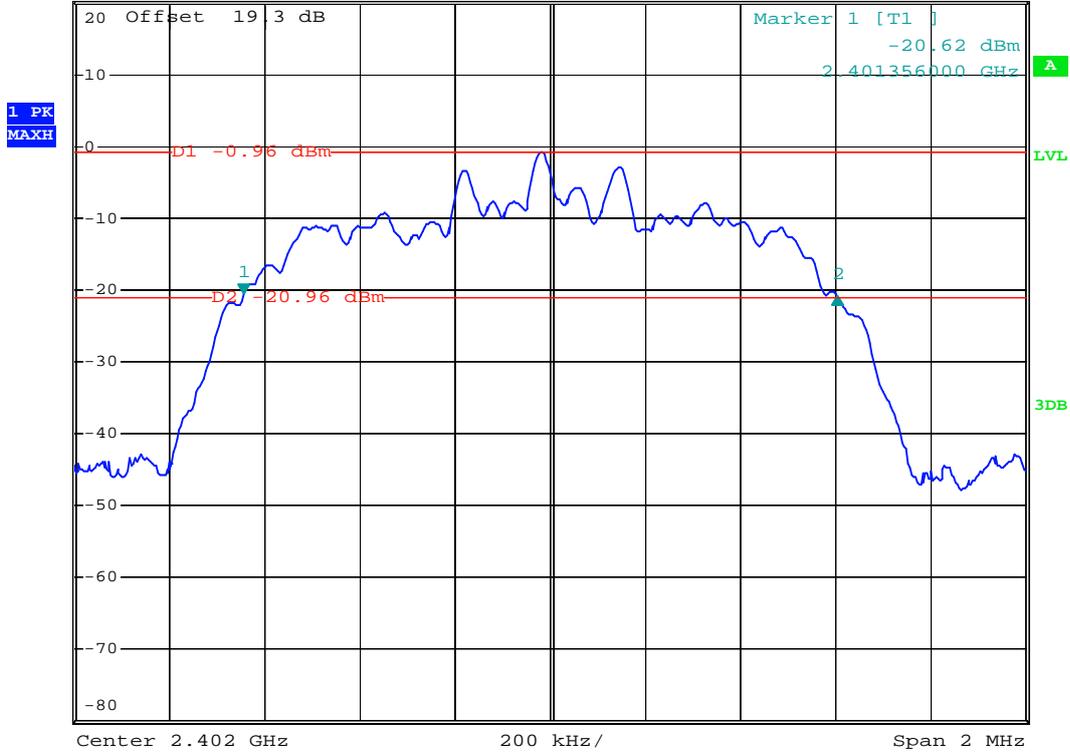
Date: 29.FEB.2008 10:58:30



Mode 4



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz -0.32 dB
 *SWT 500 ms 1.248000000 MHz



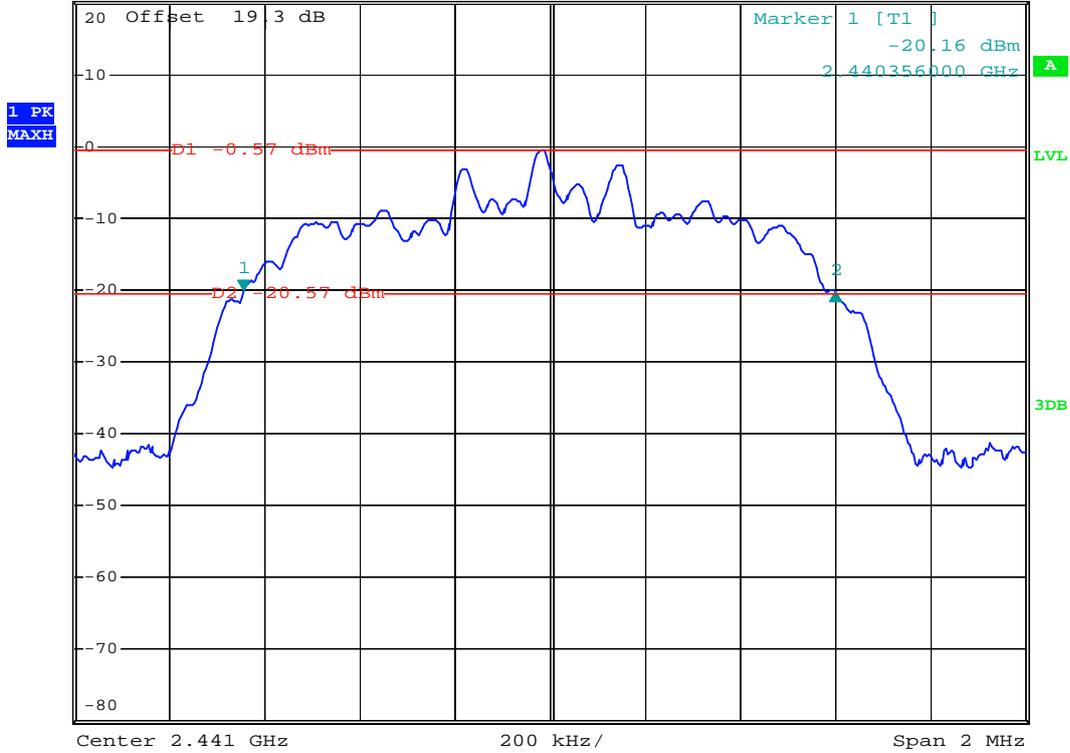
Date: 29.FEB.2008 22:41:07



Mode 5



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz -0.18 dB
 *SWT 500 ms 1.244000000 MHz



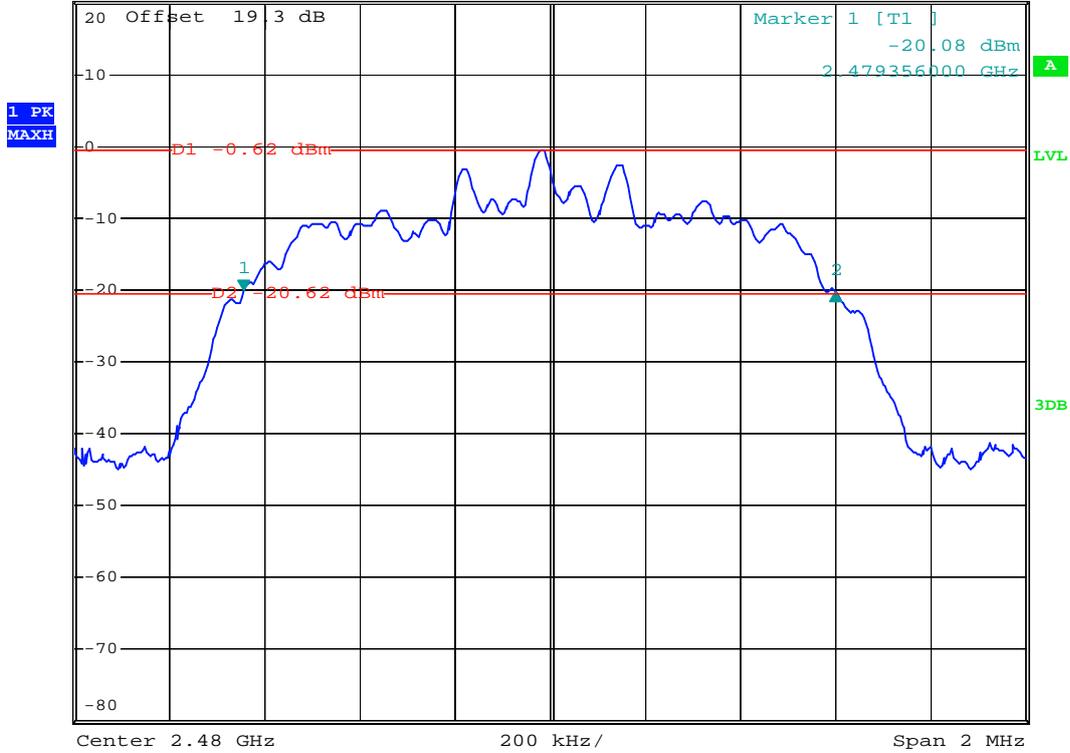
Date: 29.FEB.2008 22:45:57



Mode 6



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz -0.10 dB
 *SWT 500 ms 1.244000000 MHz



Date: 29.FEB.2008 22:47:43



Mode 7

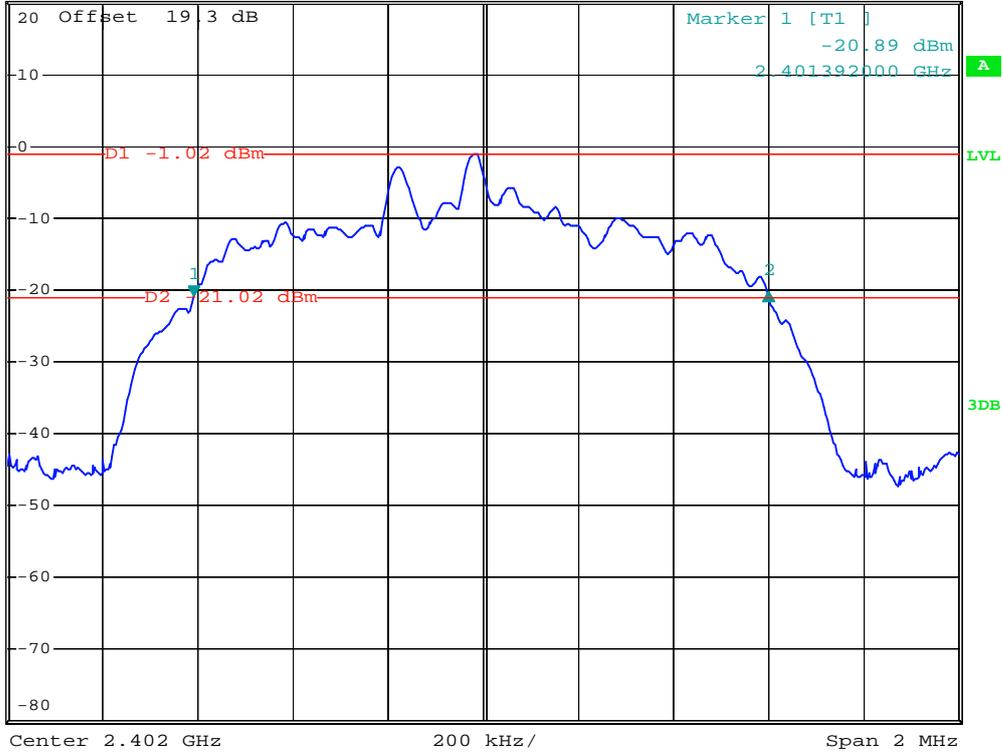


*RBW 30 kHz Delta 2 [T1]
*VBW 300 kHz 0.61 dB
*SWT 500 ms 1.208000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



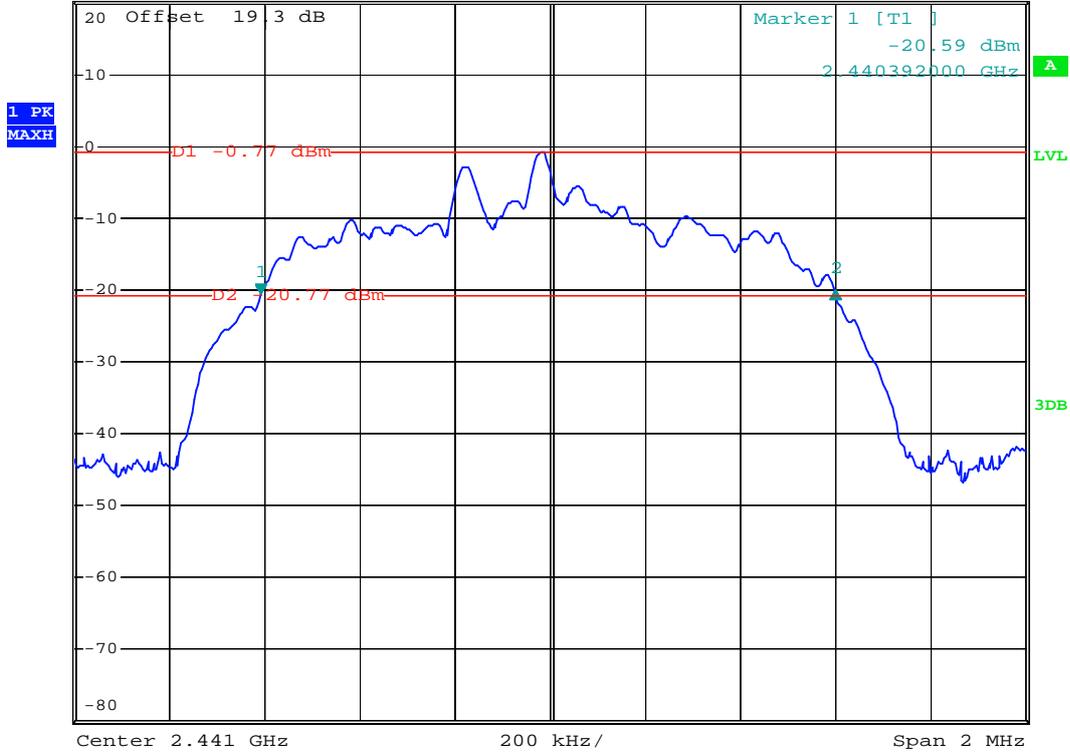
Date: 29.FEB.2008 22:50:41



Mode 8



Ref 20 dBm *Att 20 dB *RBW 30 kHz Delta 2 [T1]
 *VBW 300 kHz 0.56 dB
 *SWT 500 ms 1.208000000 MHz



Date: 29.FEB.2008 22:53:11



Mode 9

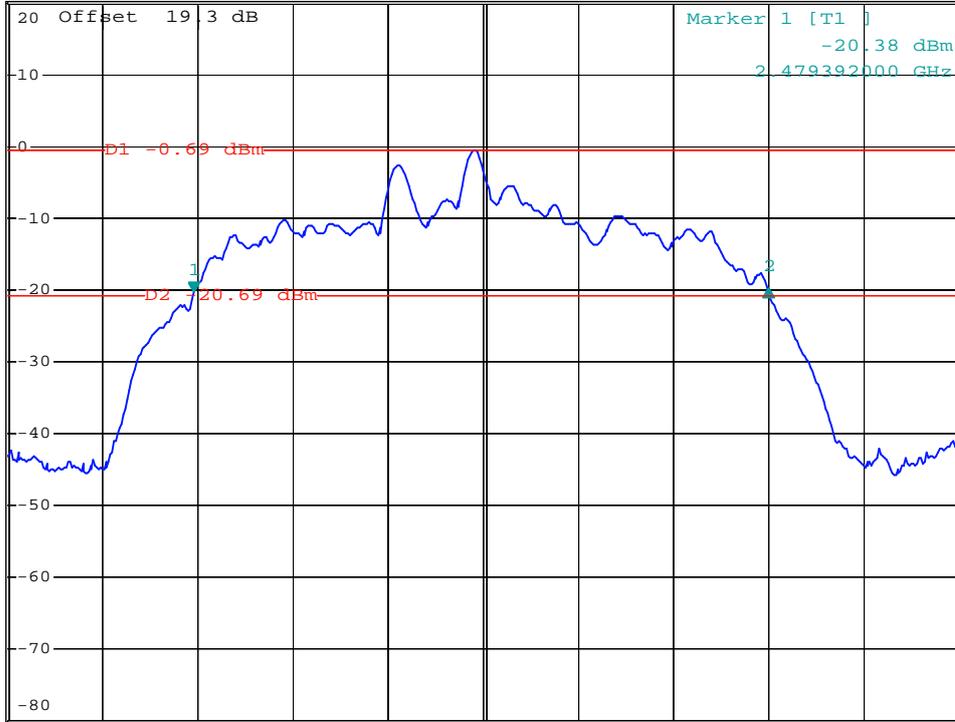


*RBW 30 kHz Delta 2 [T1]
*VBW 300 kHz 0.49 dB
*SWT 500 ms 1.208000000 MHz

Ref 20 dBm

*Att 20 dB

1 PK
MAXH



Center 2.48 GHz

200 kHz/

Span 2 MHz

Date: 29.FEB.2008 22:56:43

5.6 Dwell Time of Each Frequency

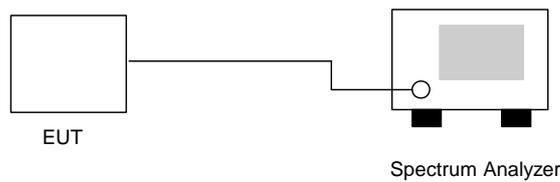
5.6.1 Measuring Instruments

As described in chapter 6 of this test report.

5.6.2 Test Procedure

- a. The transmitter output was connected to the spectrum analyzer by a low loss cable.
- b. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
- c. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- d. The calculate equals $79 * 0.4 * (1600/79) * t$ (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(1Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.7	448	0.123	0.4
DH3	4.2	1730	0.230	0.4
DH5	3.3	3020	0.315	0.4



5.6.5 Test Result : See spectrum analyzer plots below
 Application Type : BT-EDR(2Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.1	452	0.116	0.4
DH3	5	1742	0.275	0.4
DH5	3.2	2980	0.301	0.4

5.6.6 Test Result : See spectrum analyzer plots below
 Application Type : BT-EDR(3Mbps)
 Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Ken

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.9	452	0.127	0.4
DH3	5.2	1730	0.284	0.4
DH5	3.8	3040	0.365	0.4

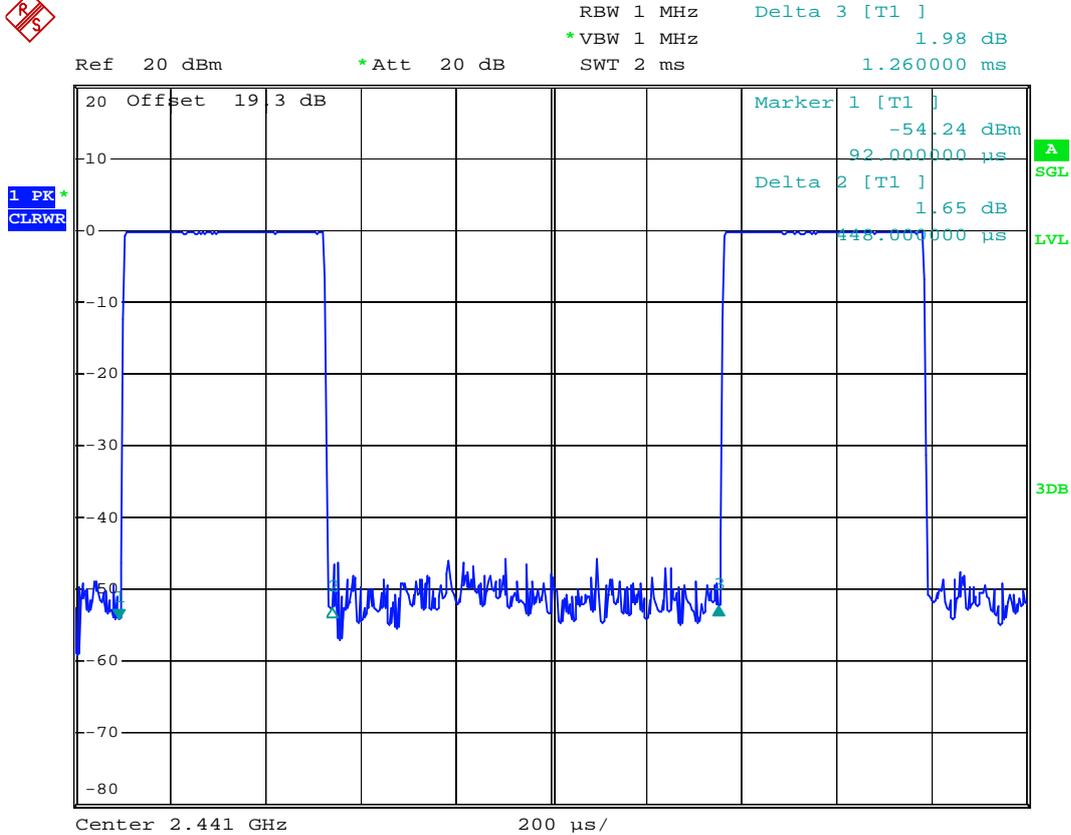
※ Remark:

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)

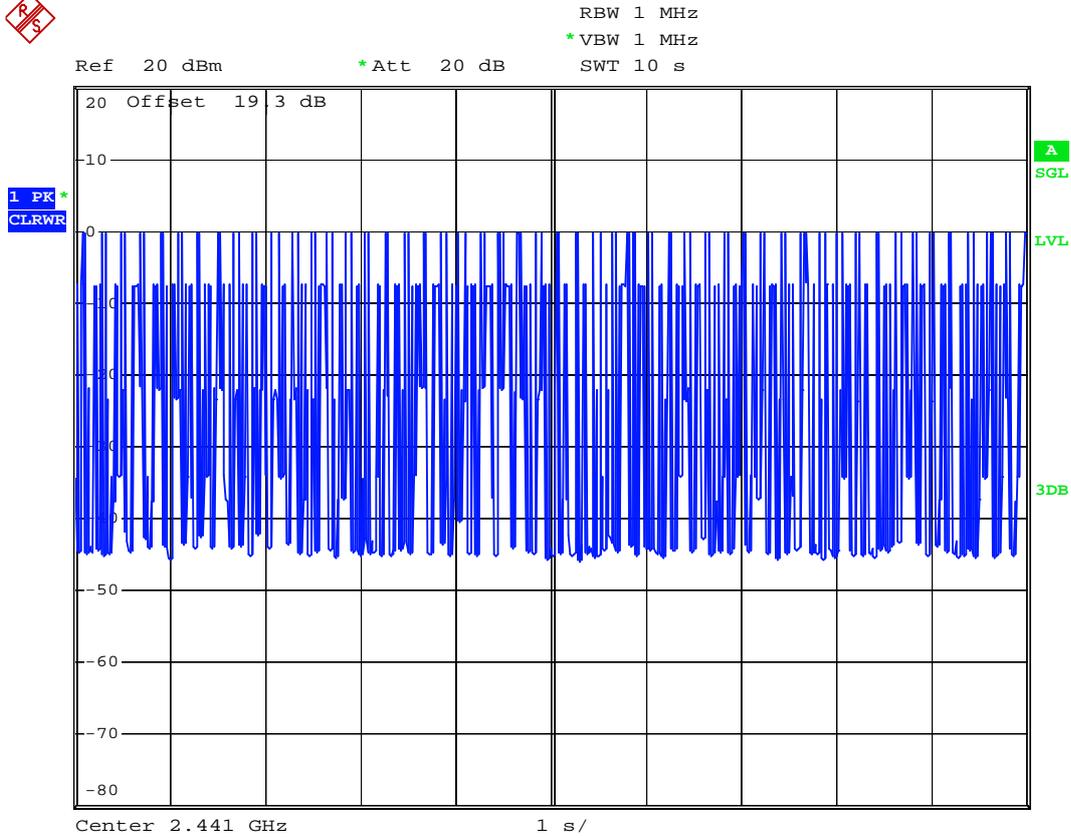


5.6.7 Dwell Time

BT(1Mbps)_DH1 (CH39)



Date: 29.FEB.2008 11:23:56



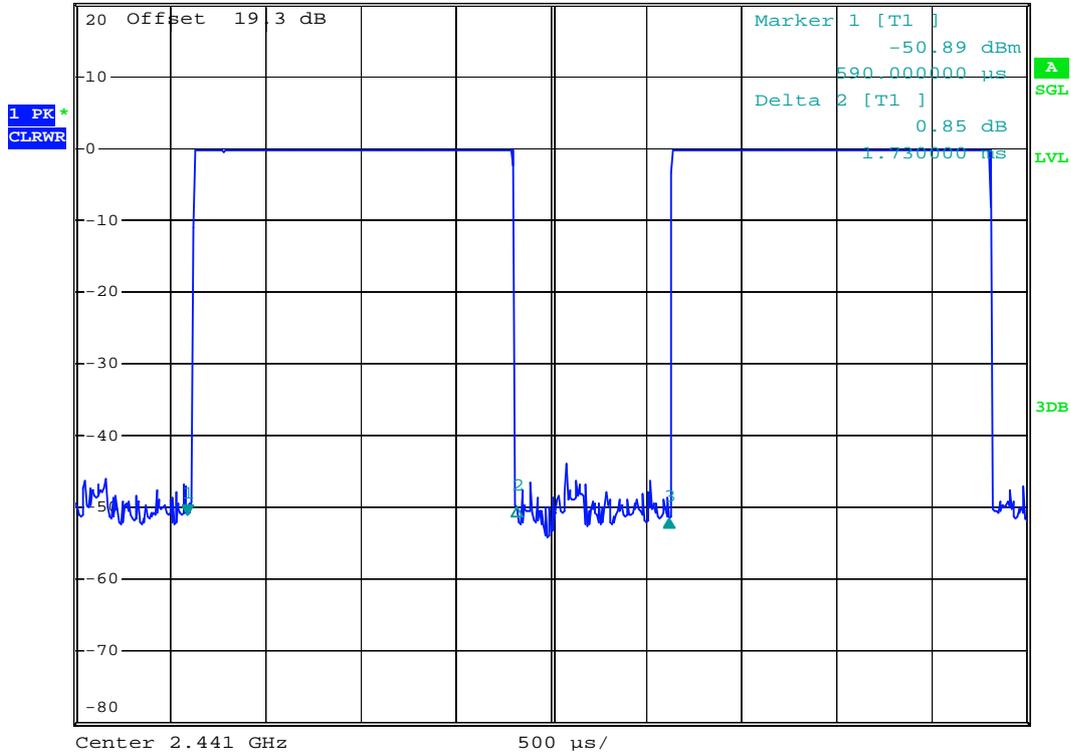
Date: 29.FEB.2008 11:25:54



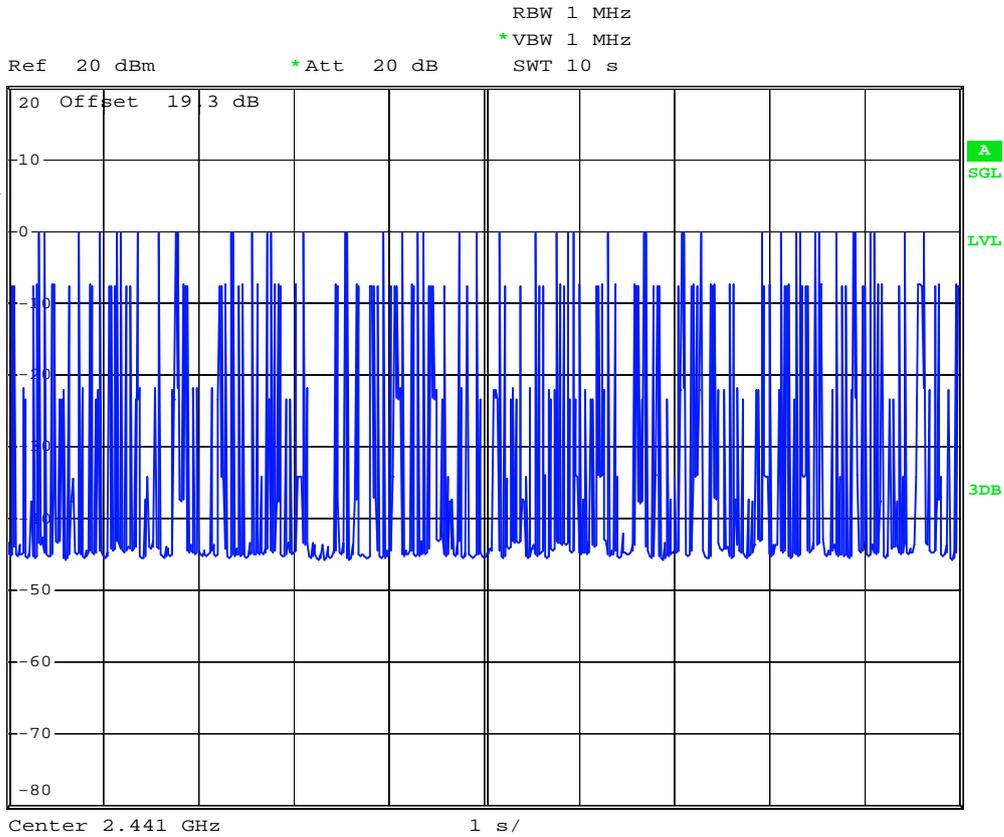
BT(1Mbps)_DH3 (CH39)



Ref 20 dBm *Att 20 dB RBW 1 MHz Delta 3 [T1] -0.62 dB
 *VBW 1 MHz SWT 5 ms 2.530000 ms



Date: 29.FEB.2008 11:24:29



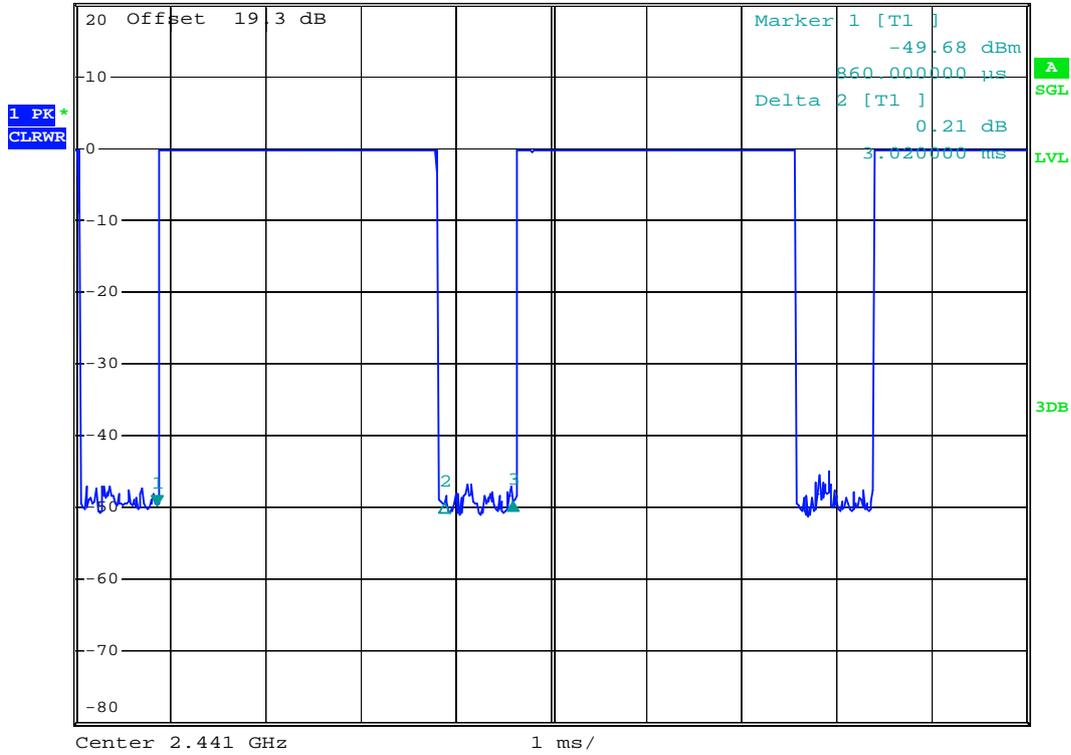
Date: 29.FEB.2008 11:26:16



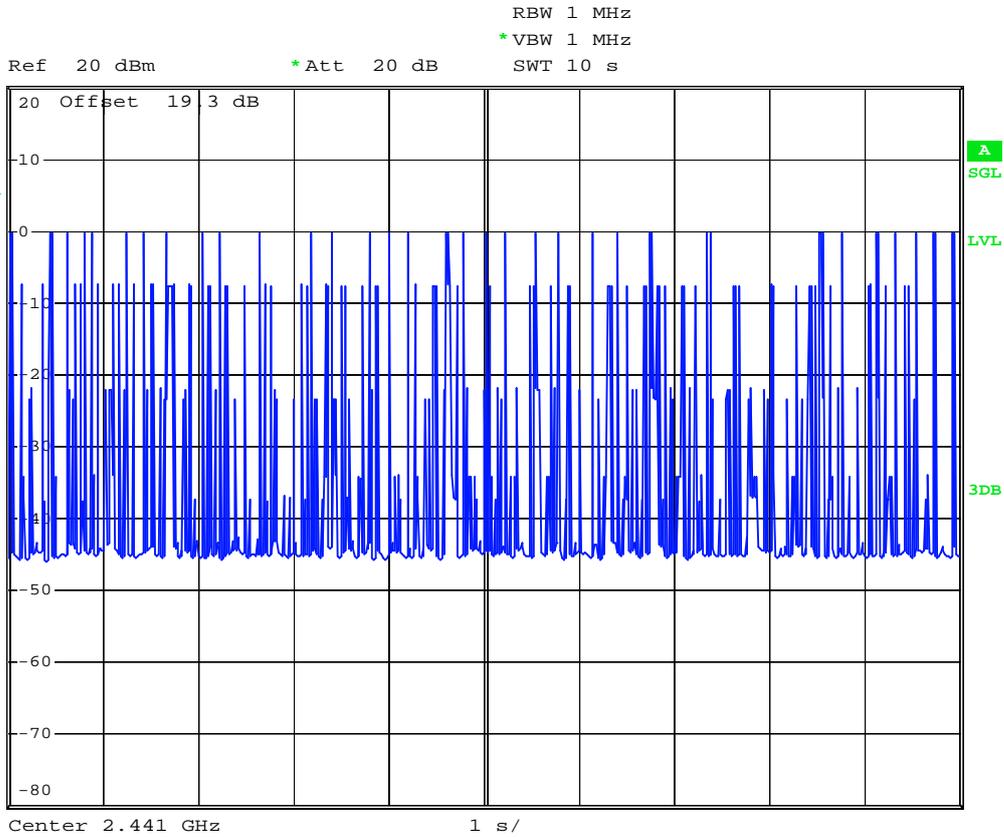
BT(1Mbps)_DH5 (CH39)



RBW 1 MHz Delta 3 [T1] 0.63 dB
 *VBW 1 MHz 3.740000 ms
 Ref 20 dBm *Att 20 dB SWT 10 ms



Date: 29.FEB.2008 11:25:08



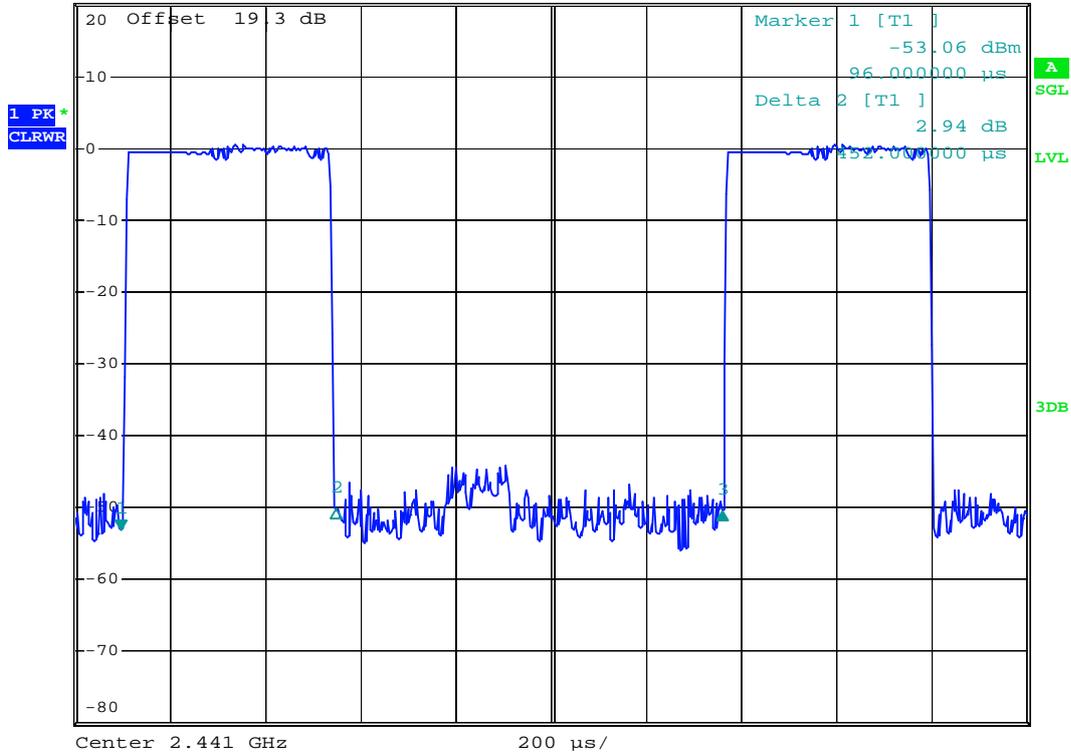
Date: 29.FEB.2008 11:25:31



BT-EDR(2Mbps)_DH1(CH39)



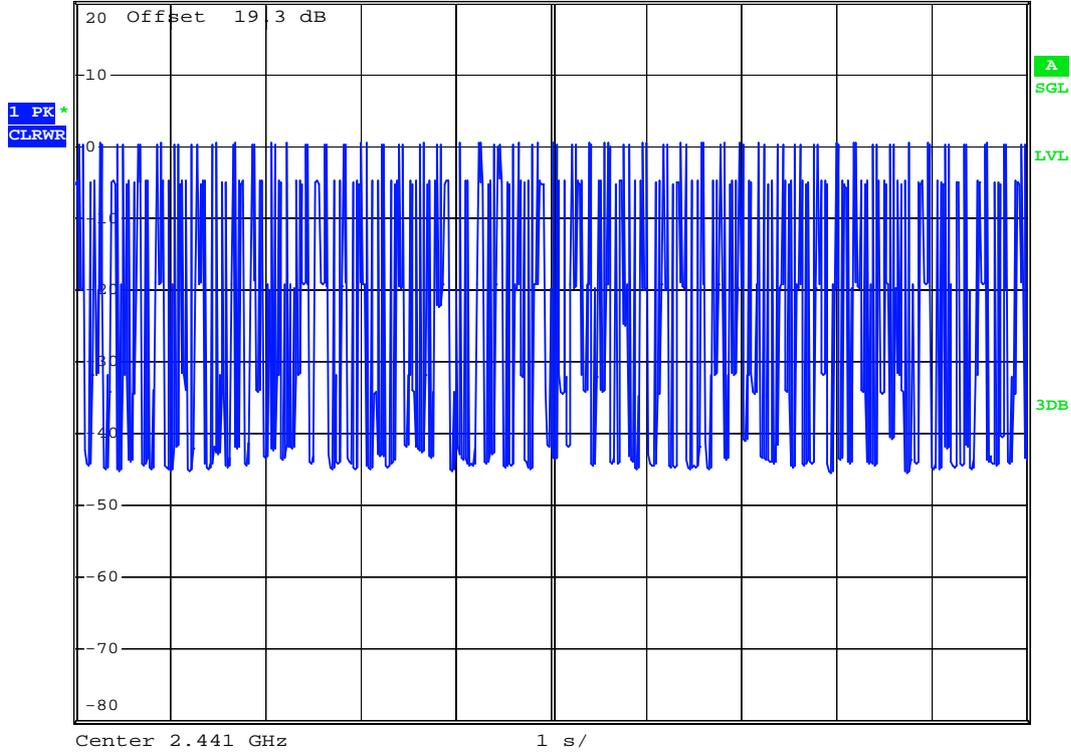
Ref 20 dBm *Att 20 dB RBW 1 MHz Delta 3 [T1] 2.70 dB
 *VBW 1 MHz 1.264000 ms
 SWT 2 ms



Date: 29.FEB.2008 23:18:07



Ref 20 dBm *Att 20 dB RBW 1 MHz
*VBW 1 MHz SWT 10 s



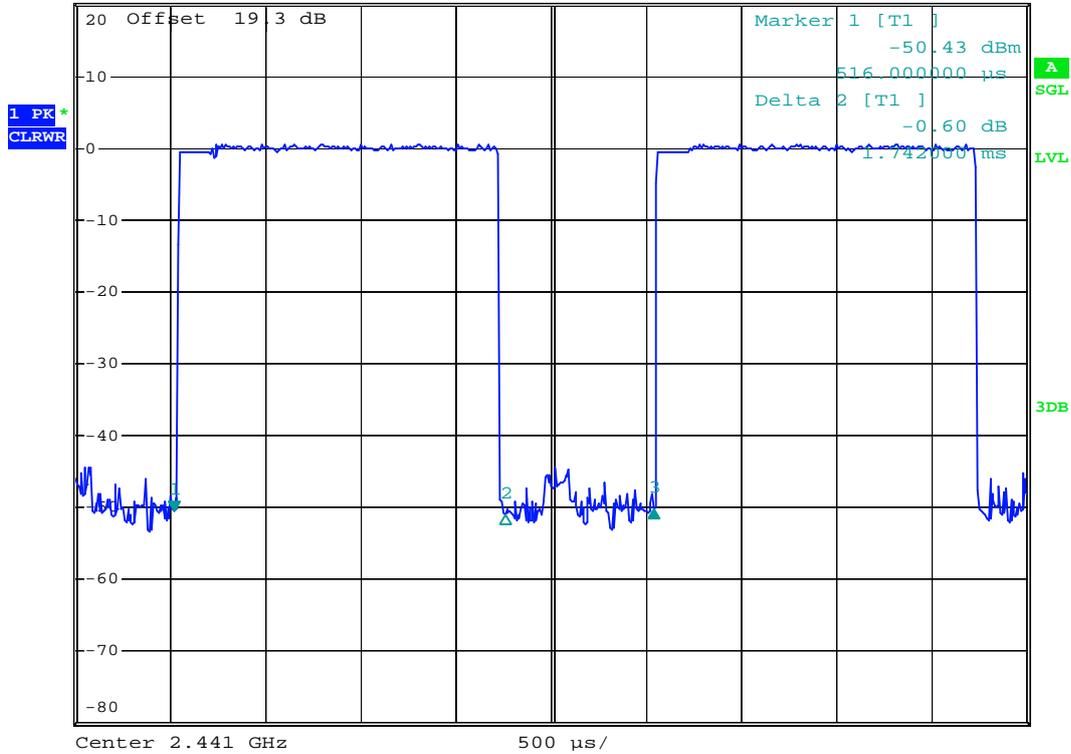
Date: 29.FEB.2008 23:32:19



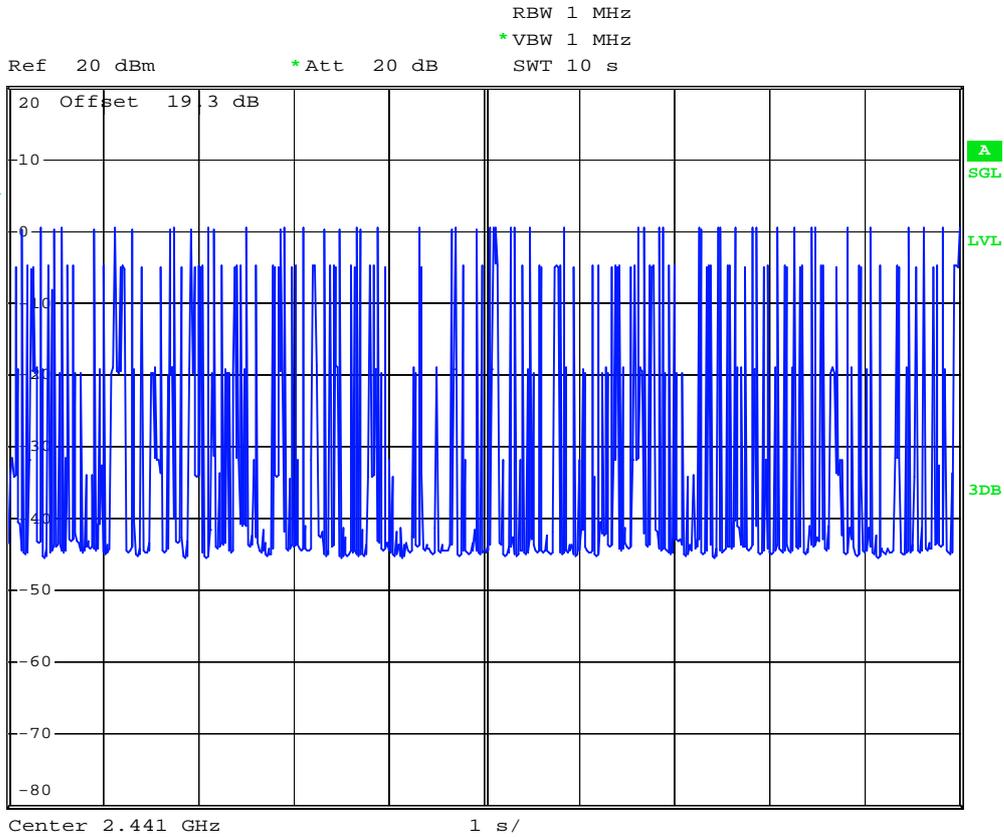
BT-EDR(2Mbps)_DH3 (CH39)



Ref 20 dBm *Att 20 dB RBW 1 MHz Delta 3 [T1] 0.21 dB
 *VBW 1 MHz 2.524000 ms
 SWT 5 ms



Date: 29.FEB.2008 23:18:40



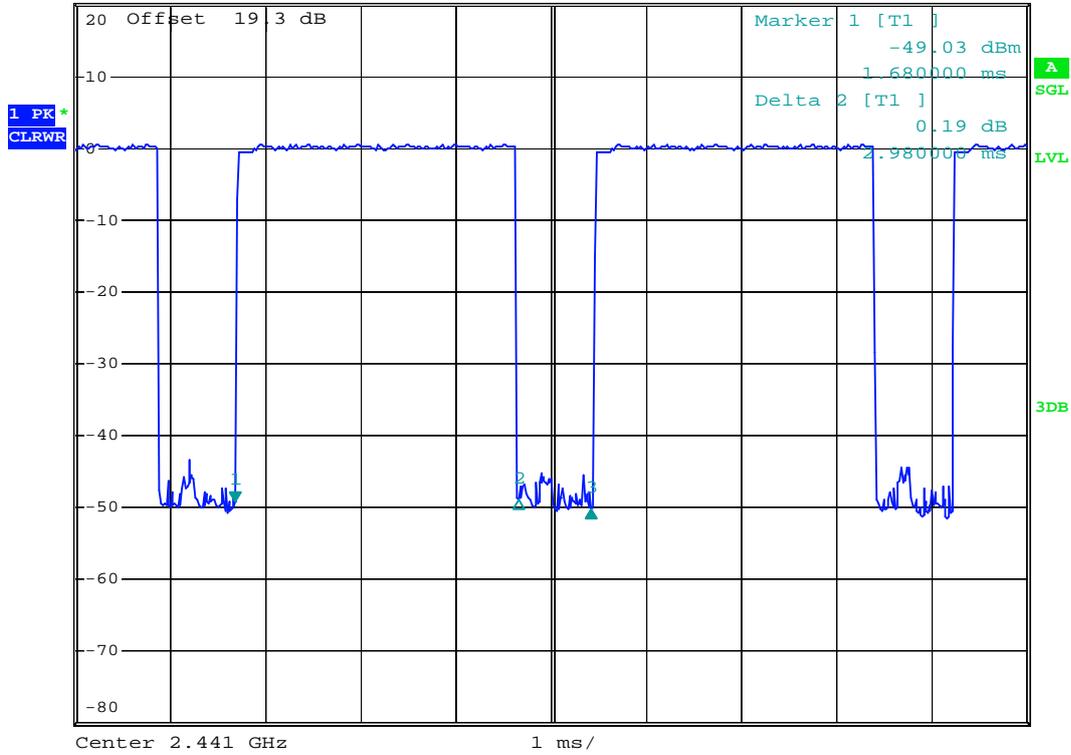
Date: 29.FEB.2008 23:32:47



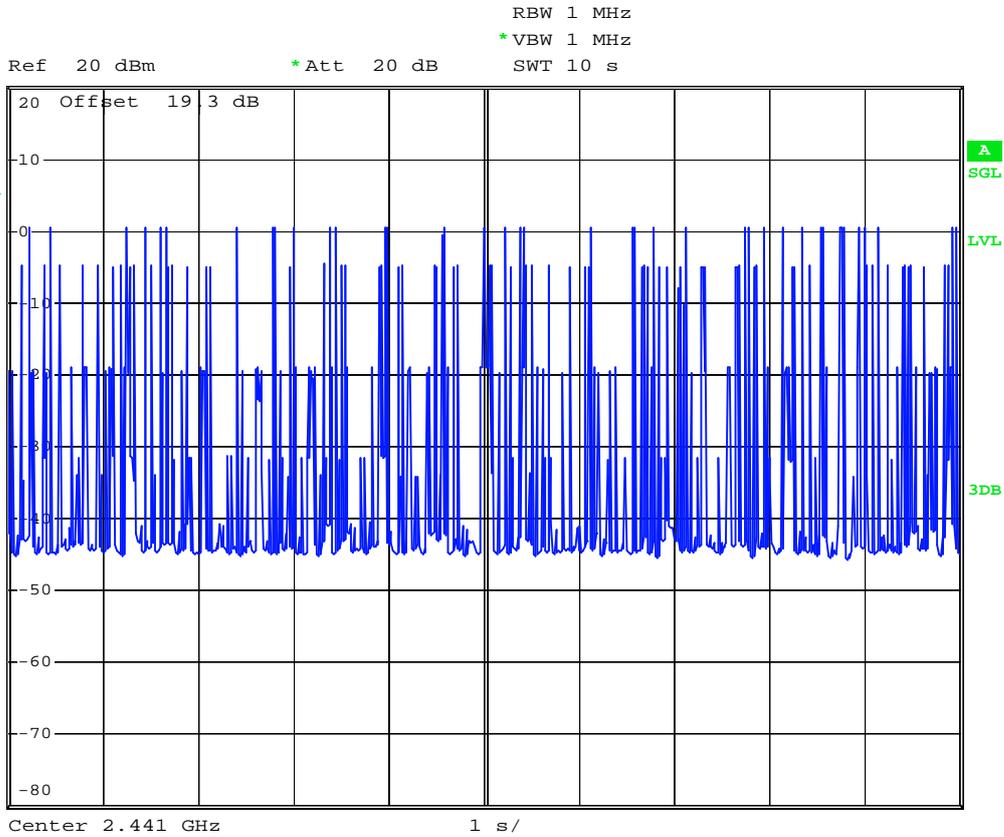
BT-EDR(2Mbps)_DH5 (CH39)



RBW 1 MHz Delta 3 [T1]
 *VBW 1 MHz -1.19 dB
 Ref 20 dBm *Att 20 dB SWT 10 ms 3.740000 ms



Date: 29.FEB.2008 23:17:08



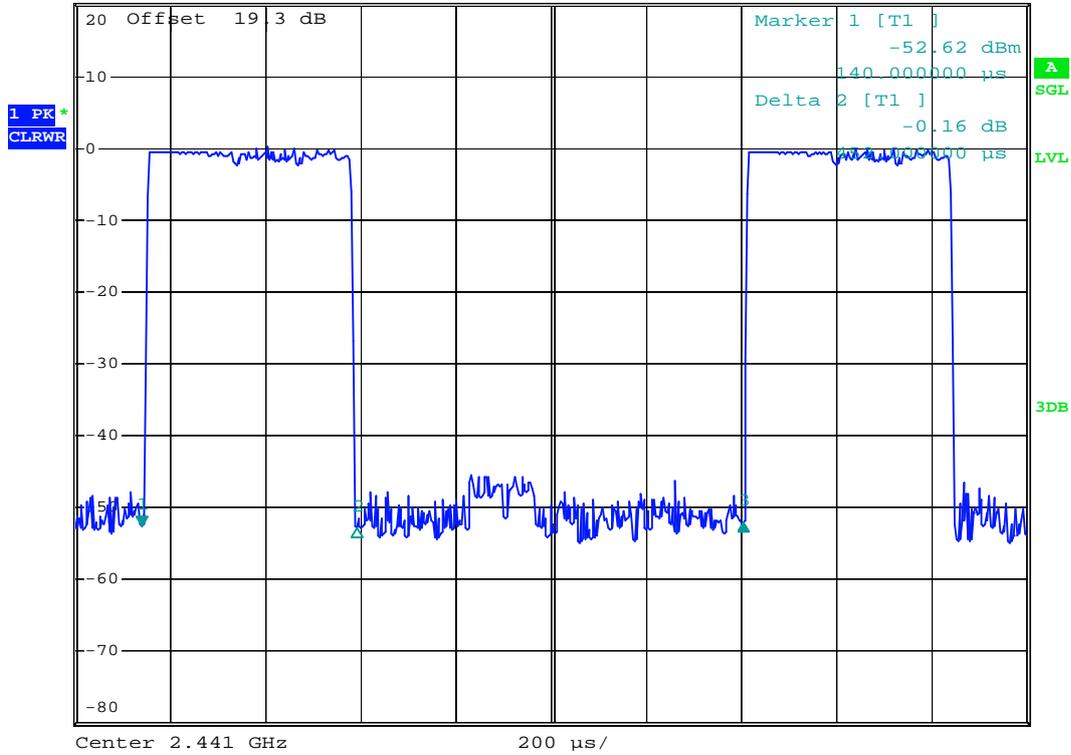
Date: 29.FEB.2008 23:33:11



BT-EDR(3Mbps)_DH1 (CH39)



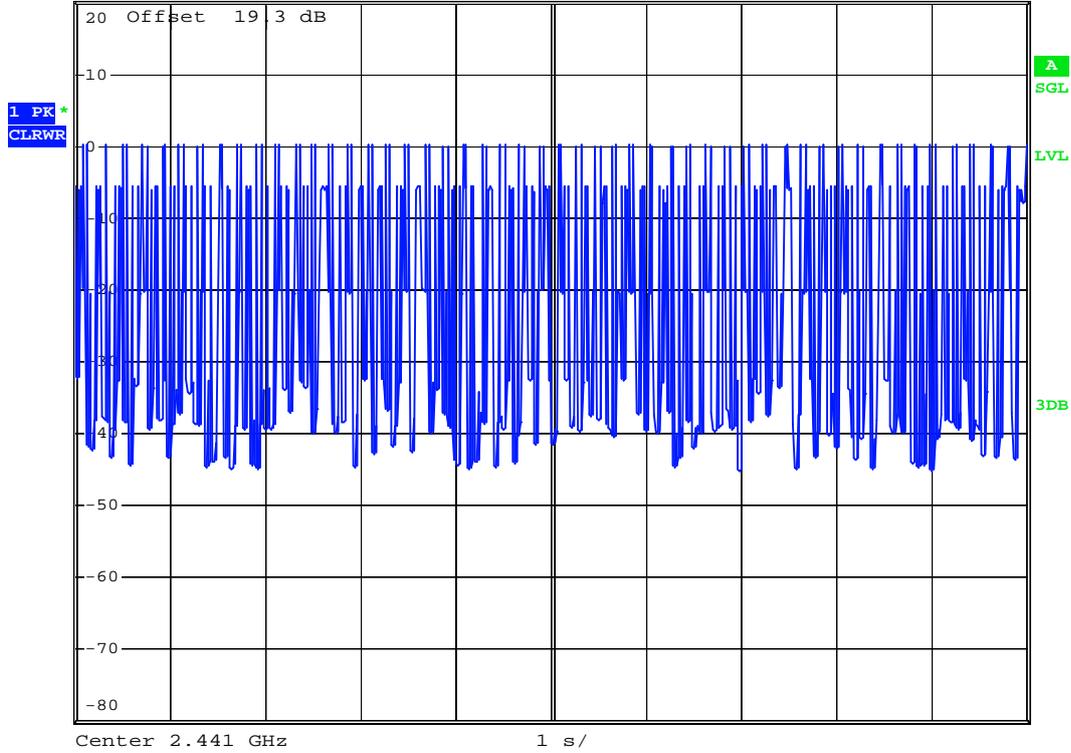
RBW 1 MHz Delta 3 [T1]
 *VBW 1 MHz 0.56 dB
 Ref 20 dBm *Att 20 dB SWT 2 ms 1.264000 ms



Date: 29.FEB.2008 23:30:07



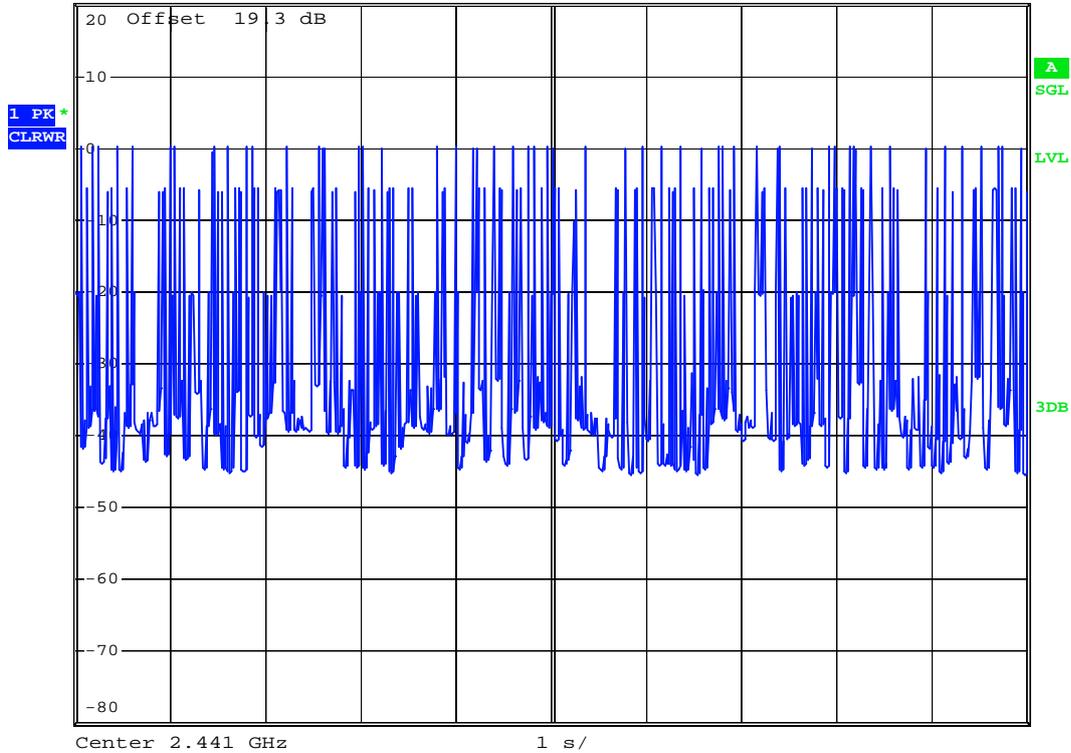
Ref 20 dBm *Att 20 dB RBW 1 MHz
*VBW 1 MHz SWT 10 s



Date: 29.FEB.2008 23:33:54



Ref 20 dBm *Att 20 dB RBW 1 MHz
*VBW 1 MHz SWT 10 s



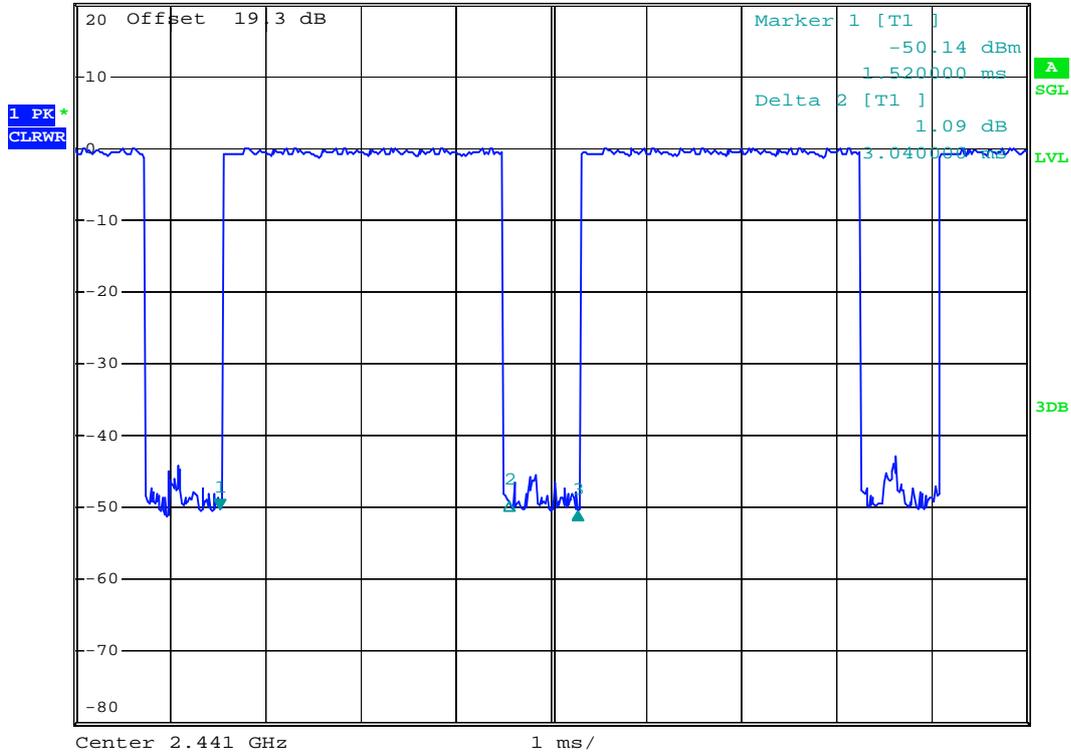
Date: 29.FEB.2008 23:34:23



BT-EDR(3Mbps)_DH5 (CH39)



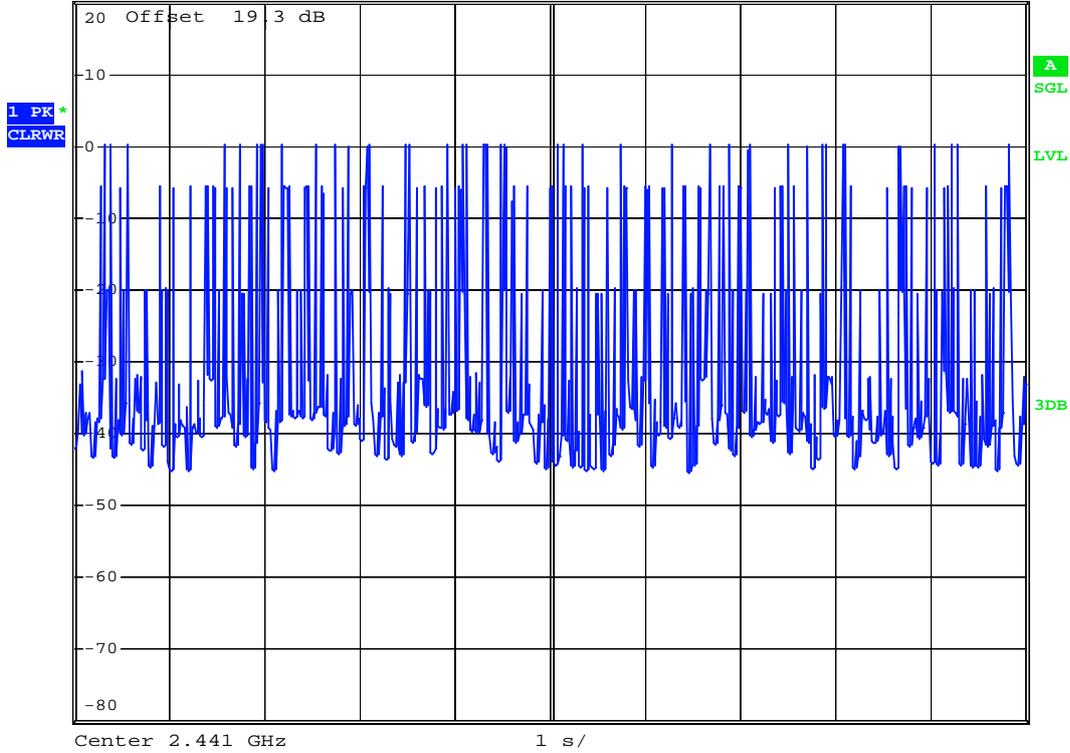
Ref 20 dBm *Att 20 dB RBW 1 MHz Delta 3 [T1] -0.40 dB
 *VBW 1 MHz SWT 10 ms 3.760000 ms



Date: 29.FEB.2008 23:31:22



Ref 20 dBm *Att 20 dB RBW 1 MHz
*VBW 1 MHz SWT 10 s



Date: 29.FEB.2008 23:34:45

5.7 Peak Output Power Measurement

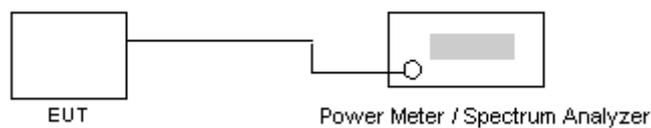
5.7.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.7.2 Test Procedure :

- a. The antenna port(RF output) of the EUT was connected to the input(RF input)of a power meter for WLAN measurement. The power is equal to the reading level on power meter plus cable loss at the EUT antenna terminal.
- b. The antenna port(RF output) of the EUT was connected to the input (RF input) of a spectrum analyzer for BT measurement. The cable loss has been offset before testing.

5.7.3 Test Setup Layout :





5.7.4 Test Result :

Application Type : BT
Temperature : 26~27°C
Relative Humidity : 48~49%
Test Enginner : Ken

BT(1Mbps)

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-1.03	1W/30 dBm
39	2441	-0.32	1W/30 dBm
78	2480	-0.23	1W/30 dBm

BT EDR(2Mbps)

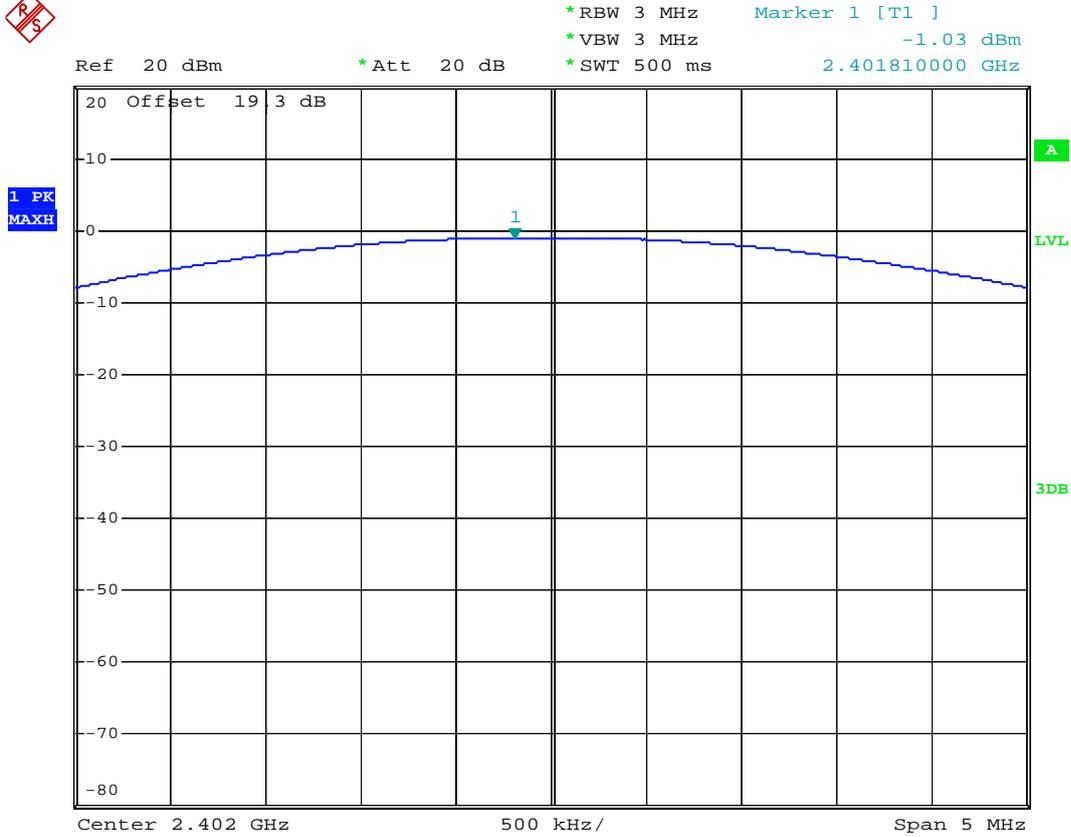
Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-0.03	1W/30 dBm
39	2441	0.73	1W/30 dBm
78	2480	0.77	1W/30 dBm

BT EDR(3Mbps)

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-0.39	1W/30 dBm
39	2441	0.34	1W/30 dBm
78	2480	0.42	1W/30 dBm



5.7.5 Output Power
BT(1Mbps)
Mode : CH00 (2402MHz)



Date: 29.FEB.2008 10:33:24

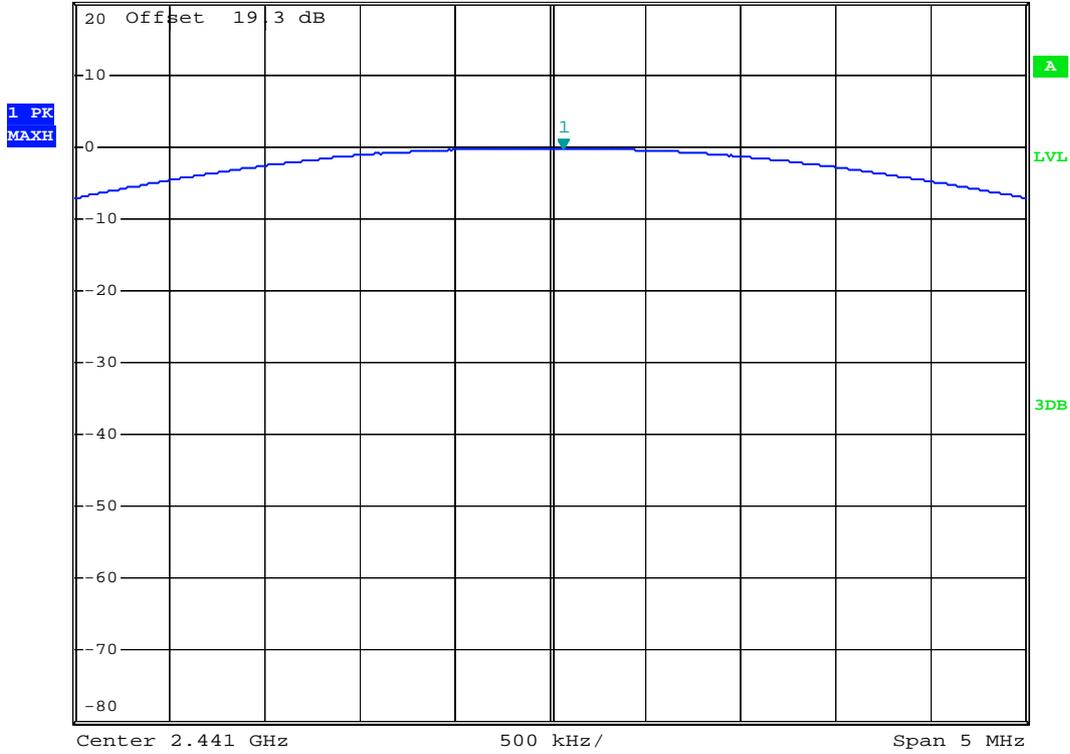


BT(1Mbps)

Mode : CH39 (2441MHz)



*RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz -0.32 dBm
 *SWT 500 ms 2.441070000 GHz
 Ref 20 dBm *Att 20 dB



Date: 29.FEB.2008 10:33:45

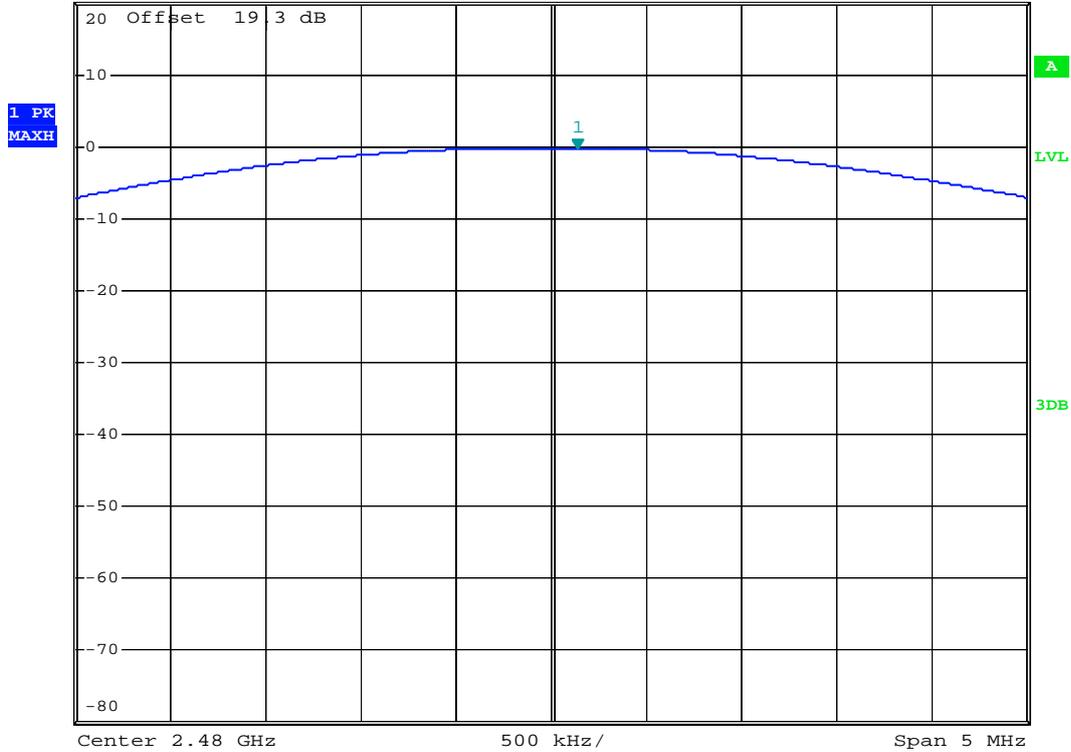


BT(1Mbps)

Mode : CH78 (2480MHz)



*RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz -0.23 dBm
 *SWT 500 ms 2.480140000 GHz
 Ref 20 dBm *Att 20 dB



Date: 29.FEB.2008 10:34:08

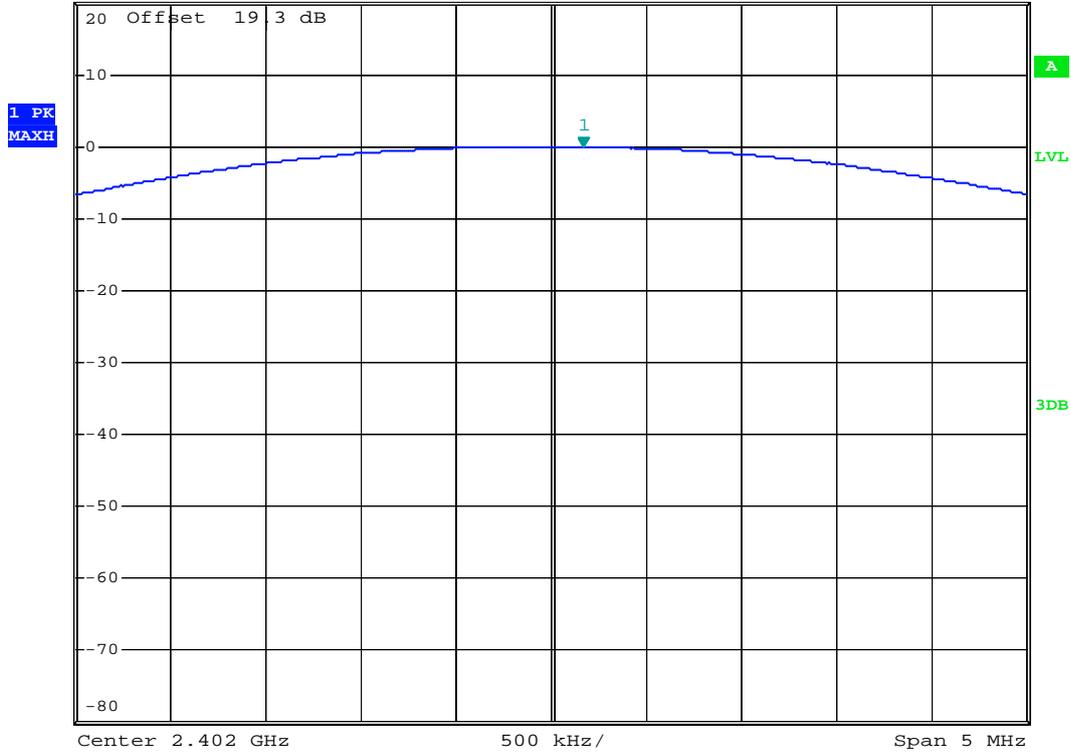


BT-EDR(2Mbps)

Mode : CH00 (2402MHz)



Ref 20 dBm *Att 20 dB *RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz -0.03 dBm
 *SWT 500 ms 2.402170000 GHz



Date: 29.FEB.2008 10:37:12

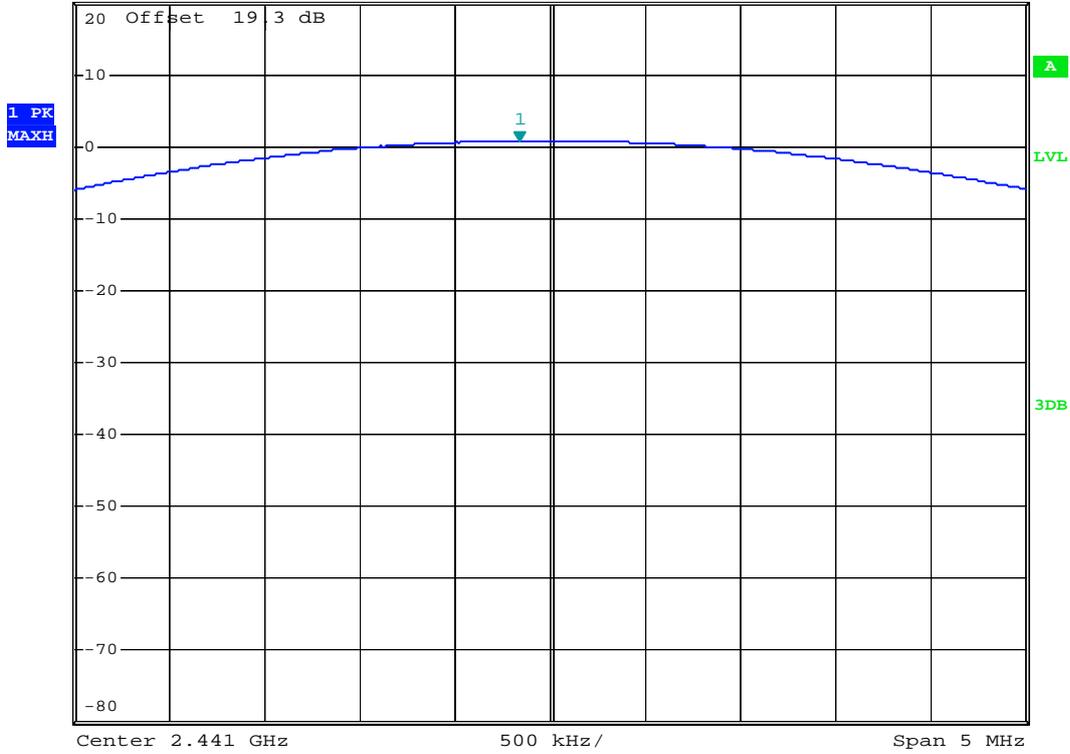


BT-EDR(2Mbps)

Mode : CH39 (2441MHz)



Ref 20 dBm *Att 20 dB *RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz 0.73 dBm
 *SWT 500 ms 2.440840000 GHz



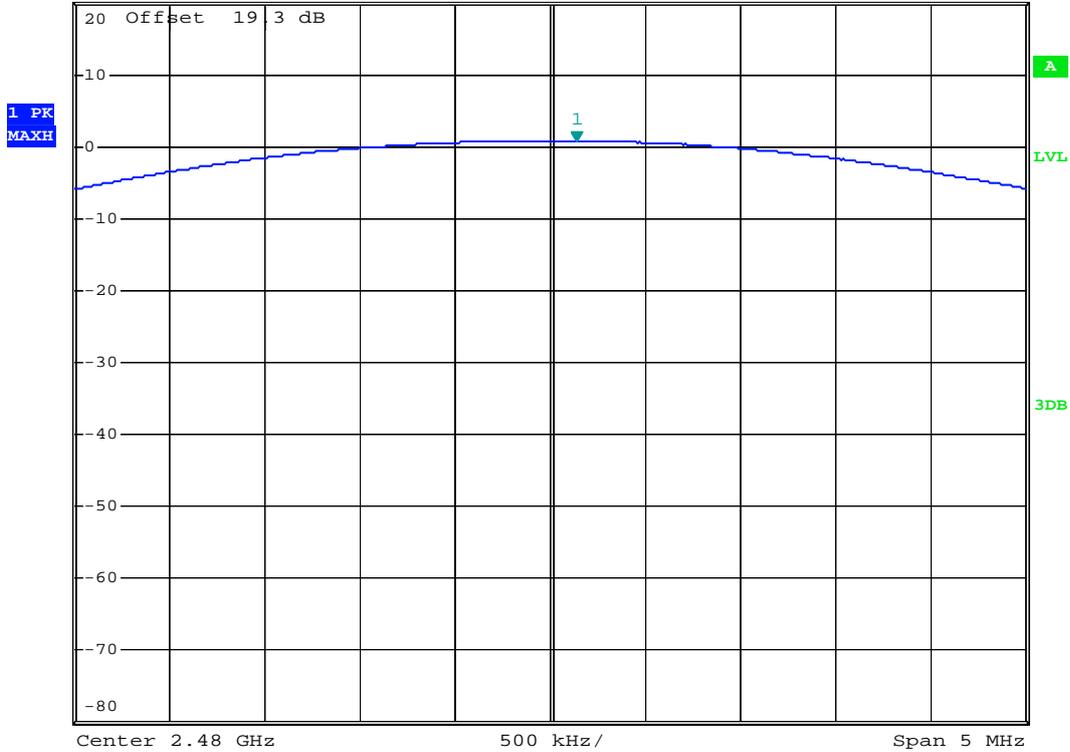
Date: 29.FEB.2008 10:37:43



BT-EDR(2Mbps)
Mode : CH78 (2480MHz)



Ref 20 dBm *Att 20 dB *RBW 3 MHz Marker 1 [T1]
*VBW 3 MHz 0.77 dBm
*SWT 500 ms 2.480140000 GHz



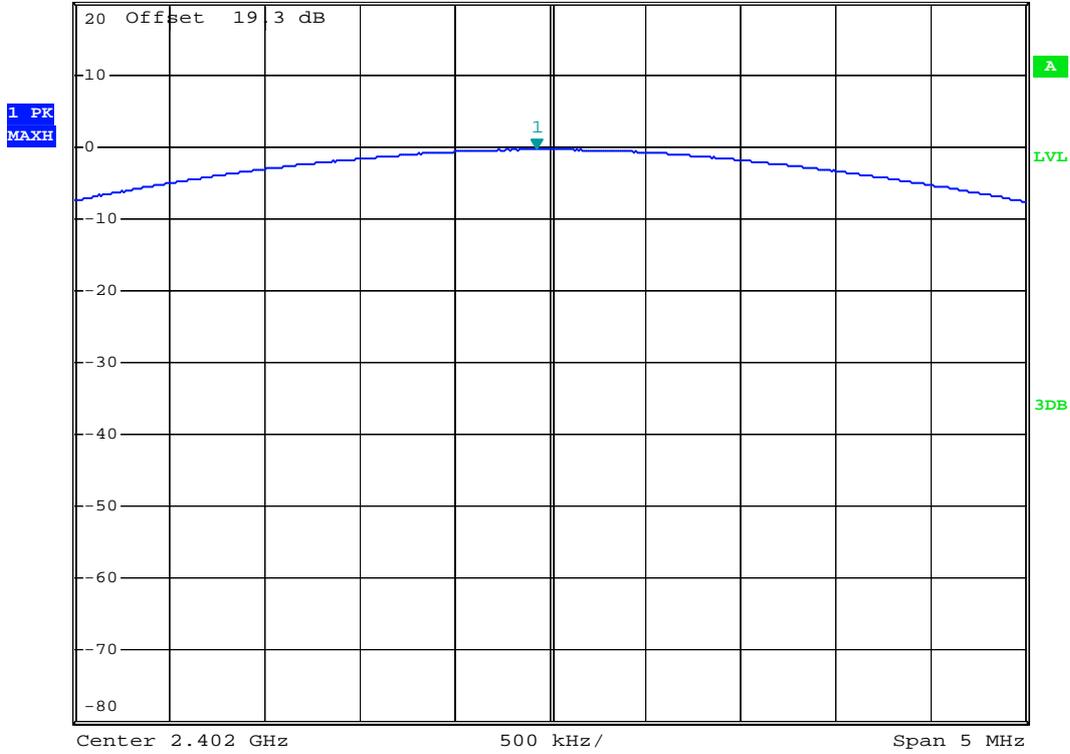
Date: 29.FEB.2008 10:38:20



BT-EDR(3Mbps)
Mode : CH00 (2402MHz)



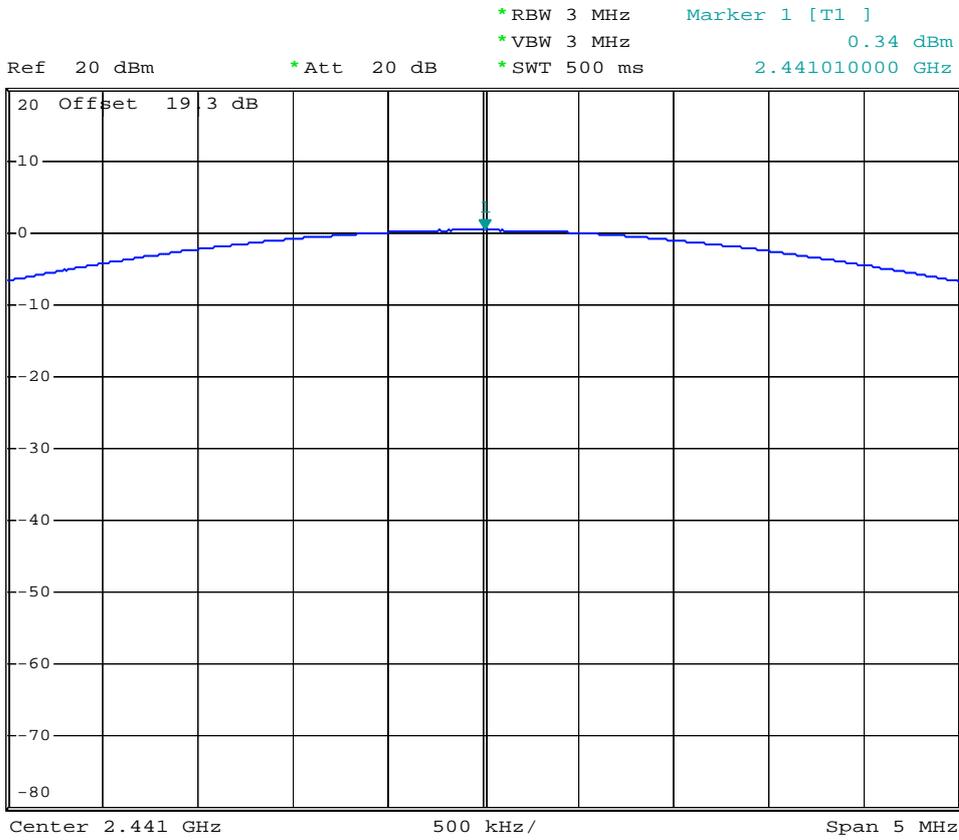
Ref 20 dBm *Att 20 dB *RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz -0.39 dBm
 *SWT 500 ms 2.401930000 GHz



Date: 29.FEB.2008 10:39:25



BT-EDR(3Mbps)
Mode : CH39 (2441MHz)



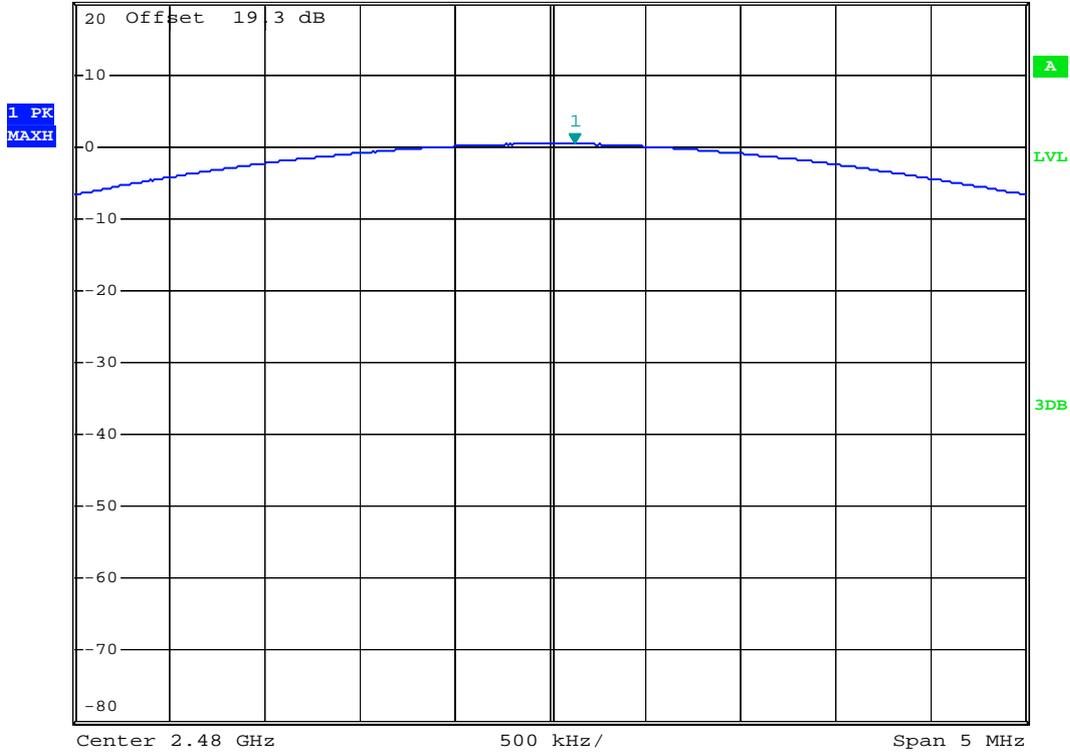
Date: 29.FEB.2008 10:39:52



BT-EDR(3Mbps)
Mode : CH78 (2480MHz)



Ref 20 dBm *Att 20 dB *RBW 3 MHz Marker 1 [T1]
 *VBW 3 MHz 0.42 dBm
 *SWT 500 ms 2.480130000 GHz



Date: 29.FEB.2008 10:40:16



5.8 Conducted Emission

5.8.1 Measuring Instruments

As described in chapter 6 of this test Report.

The receiver setting :

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

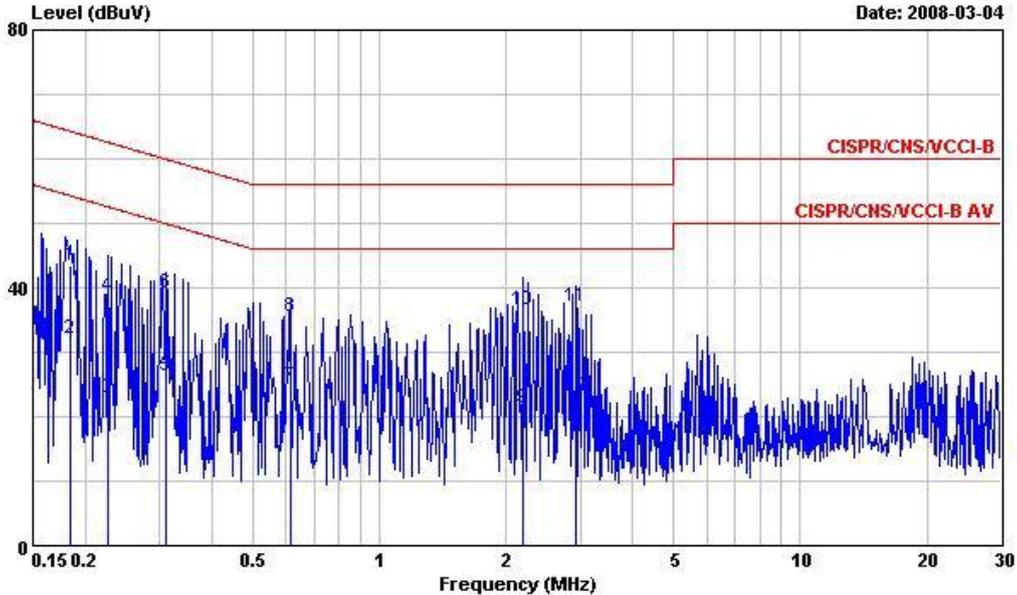
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.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



5.6.8 Test Data

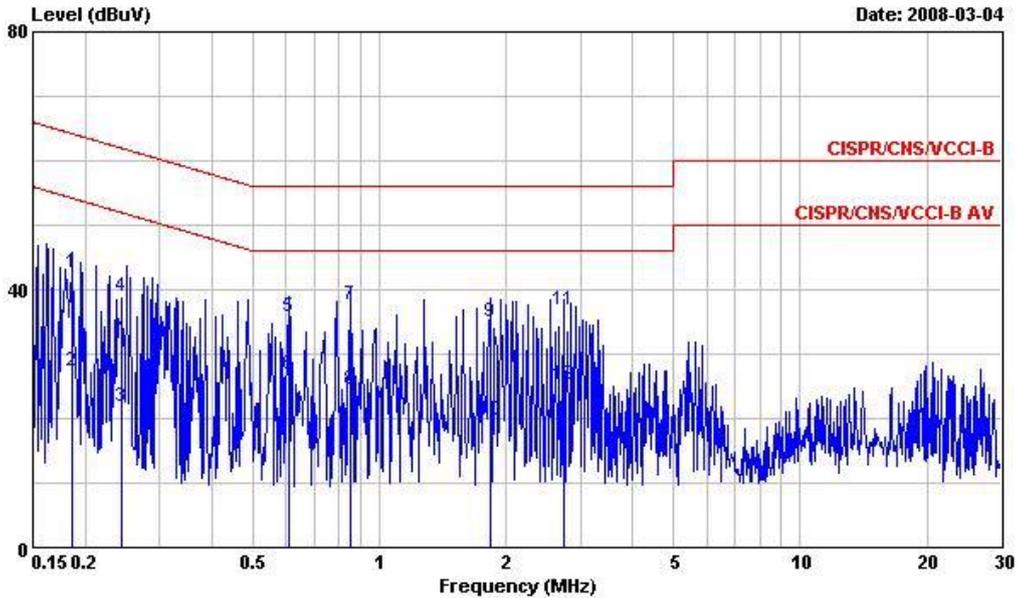
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 1

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link
 Memo : +Battery1 + Adaptor A +Camera 1+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.1848580	43.49	-20.77	64.26	42.84	0.10	0.55	QP
2	0.1848580	32.11	-22.15	54.26	31.46	0.10	0.55	Average
3	0.2267630	22.91	-29.66	52.57	22.31	0.10	0.50	Average
4	0.2267630	38.78	-23.79	62.57	38.18	0.10	0.50	QP
5	0.3099790	26.39	-23.58	49.97	25.89	0.10	0.40	Average
6	0.3099790	39.34	-20.63	59.97	38.84	0.10	0.40	QP
7	0.6139960	24.78	-21.22	46.00	24.28	0.10	0.40	Average
8	0.6139960	35.64	-20.36	56.00	35.14	0.10	0.40	QP
9	2.200	21.28	-24.72	46.00	20.66	0.10	0.52	Average
10	2.200	36.46	-19.54	56.00	35.84	0.10	0.52	QP
11	2.930	37.01	-18.99	56.00	36.32	0.10	0.59	QP
12	2.930	23.04	-22.96	46.00	22.35	0.10	0.59	Average



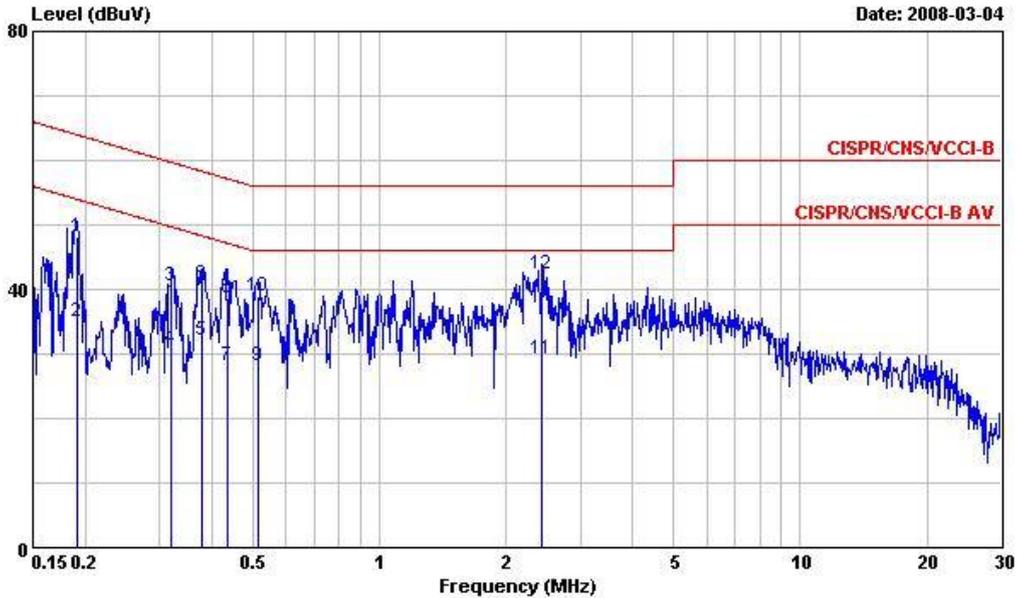
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link
 Memo : +Battery1 + Adaptor A +Camera 1+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.1863950	42.59	-21.61	64.20	41.94	0.10	0.55	QP
2	0.1863950	27.34	-26.86	54.20	26.69	0.10	0.55	Average
3	0.2428790	21.88	-30.12	52.00	21.28	0.10	0.50	Average
4	0.2428790	39.04	-22.96	62.00	38.44	0.10	0.50	QP
5	0.6107510	35.92	-20.08	56.00	35.42	0.10	0.40	QP
6	0.6107510	26.80	-19.20	46.00	26.30	0.10	0.40	Average
7	0.8527650	37.70	-18.30	56.00	37.10	0.10	0.50	QP
8	0.8527650	24.42	-21.58	46.00	23.82	0.10	0.50	Average
9	1.830	35.06	-20.94	56.00	34.46	0.10	0.50	QP
10	1.830	19.66	-26.34	46.00	19.06	0.10	0.50	Average
11	2.734	36.80	-19.20	56.00	36.07	0.15	0.58	QP
12	2.734	25.24	-20.76	46.00	24.51	0.15	0.58	Average



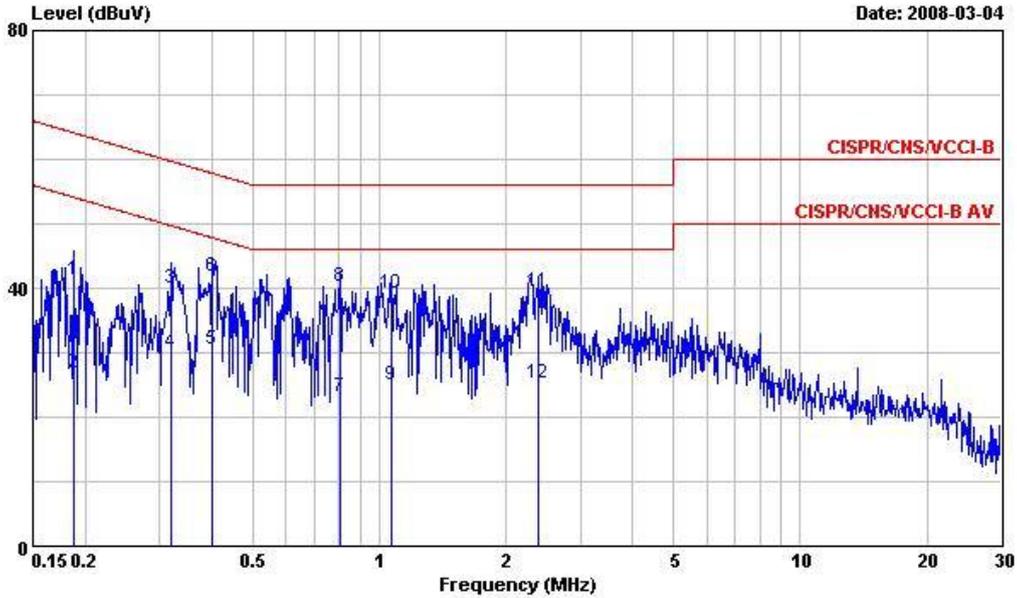
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 2

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link
 Memo : +Battery2 + Adaptor B +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1903870	48.23	-15.79	64.02	47.60	0.10	0.53	QP
2	0.1903870	34.89	-19.13	54.02	34.26	0.10	0.53	Average
3	0.3199920	40.44	-19.27	59.71	39.94	0.10	0.40	QP
4	0.3199920	30.77	-18.94	49.71	30.27	0.10	0.40	Average
5	0.3771120	32.11	-16.23	48.34	31.61	0.10	0.40	Average
6	0.3771120	40.78	-17.56	58.34	40.28	0.10	0.40	QP
7	0.4351090	28.11	-19.04	47.15	27.54	0.10	0.47	Average
8	0.4351090	38.71	-18.44	57.15	38.14	0.10	0.47	QP
9	0.5155030	28.11	-17.89	46.00	27.58	0.10	0.43	Average
10	0.5155030	38.97	-17.03	56.00	38.44	0.10	0.43	QP
11	2.430	29.25	-16.75	46.00	28.60	0.10	0.55	Average
12	2.430	42.41	-13.59	56.00	41.76	0.10	0.55	QP



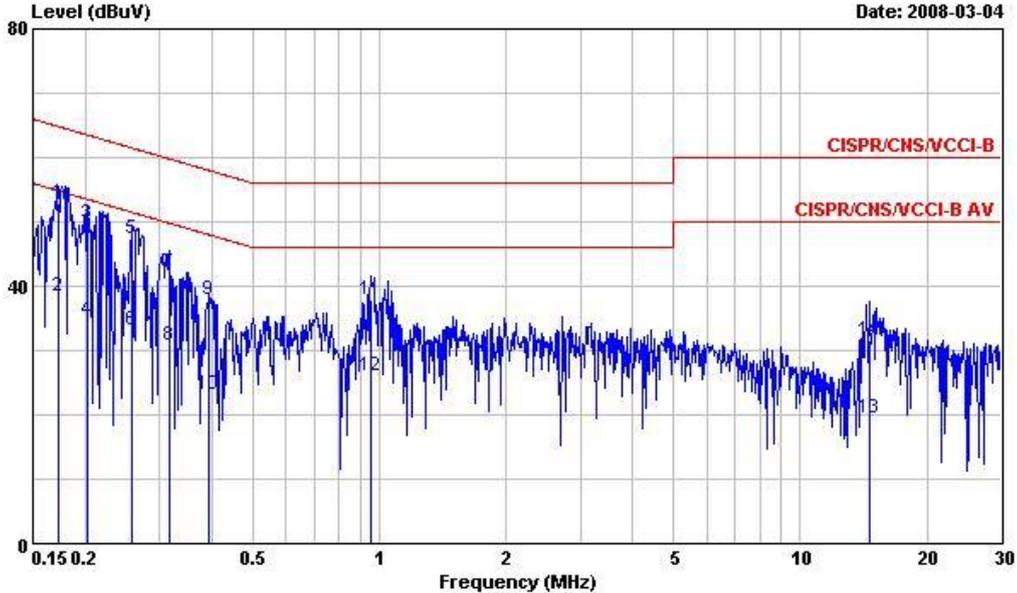
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link
 Memo : +Battery2 + Adaptor B +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1873850	41.44	-22.71	64.15	40.80	0.10	0.54	QP
2	0.1873850	26.80	-27.35	54.15	26.16	0.10	0.54	Average
3	0.3199920	39.88	-19.83	59.71	39.38	0.10	0.40	QP
4	0.3199920	29.98	-19.73	49.71	29.48	0.10	0.40	Average
5	0.3997440	30.42	-17.44	47.86	29.92	0.10	0.40	Average
6	0.3997440	41.74	-16.12	57.86	41.24	0.10	0.40	QP
7	0.8087580	23.10	-22.90	46.00	22.50	0.10	0.50	Average
8	0.8087580	40.30	-15.70	56.00	39.70	0.10	0.50	QP
9	1.070	24.96	-21.04	46.00	24.36	0.10	0.50	Average
10	1.070	39.20	-16.80	56.00	38.60	0.10	0.50	QP
11	2.380	39.35	-16.65	56.00	38.69	0.12	0.54	QP
12	2.380	25.37	-20.63	46.00	24.71	0.12	0.54	Average



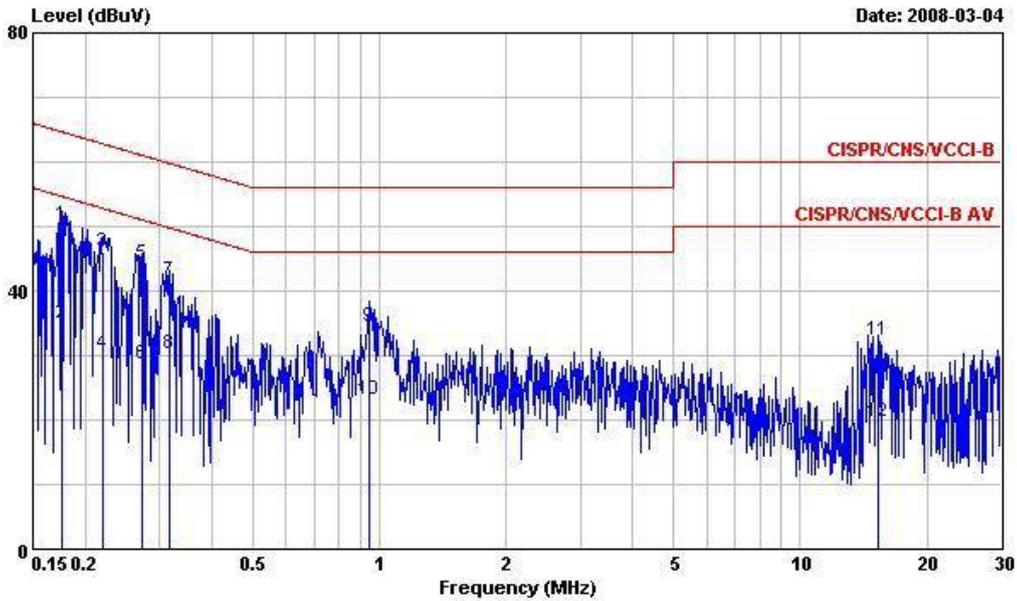
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 3

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link+Battery3
 Memo : USB Cable A+ Adaptor C +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1730690	53.00	-11.81	64.81	52.30	0.10	0.60	QP
2	0.1730690	38.31	-16.50	54.81	37.61	0.10	0.60	Average
3	0.2028850	49.66	-13.83	63.49	49.06	0.10	0.50	QP
4	0.2028850	34.70	-18.79	53.49	34.10	0.10	0.50	Average
5	0.2588790	47.46	-14.01	61.47	46.88	0.10	0.48	QP
6	0.2588790	33.03	-18.44	51.47	32.45	0.10	0.48	Average
7	0.3166190	42.16	-17.64	59.80	41.66	0.10	0.40	QP
8	0.3166190	30.85	-18.95	49.80	30.35	0.10	0.40	Average
9	0.3913610	37.88	-20.15	58.03	37.38	0.10	0.40	QP
10	0.3913610	23.15	-24.88	48.03	22.65	0.10	0.40	Average
11	0.9531270	37.98	-18.02	56.00	37.38	0.10	0.50	QP
12	0.9531270	26.13	-19.87	46.00	25.53	0.10	0.50	Average
13	14.590	19.53	-30.47	50.00	18.16	0.58	0.79	Average
14	14.590	31.63	-28.37	60.00	30.26	0.58	0.79	QP



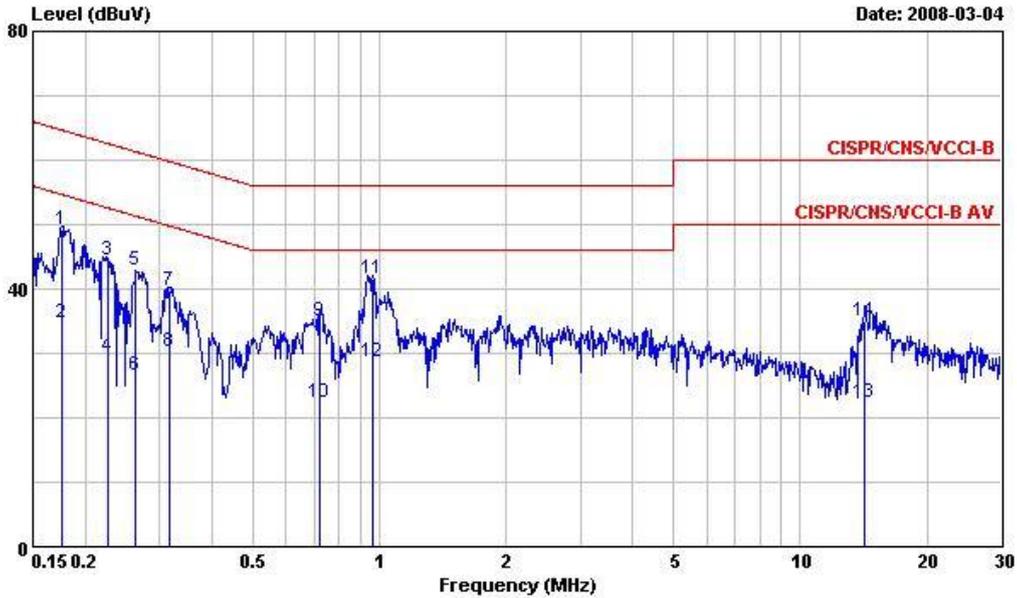
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link +Battery3
 Memo : USB Cable A+ Adaptor C +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.1758420	50.31	-14.37	64.68	49.62	0.10	0.59	QP
2	0.1758420	35.09	-19.59	54.68	34.40	0.10	0.59	Average
3	0.2196670	45.98	-16.85	62.83	45.38	0.10	0.50	QP
4	0.2196670	30.36	-22.47	52.83	29.76	0.10	0.50	Average
5	0.2715230	44.31	-16.76	61.07	43.76	0.10	0.45	QP
6	0.2715230	28.65	-22.42	51.07	28.10	0.10	0.45	Average
7	0.3166190	41.50	-18.30	59.80	41.00	0.10	0.40	QP
8	0.3166190	30.30	-19.50	49.80	29.80	0.10	0.40	Average
9	0.9480900	34.58	-21.42	56.00	33.98	0.10	0.50	QP
10	0.9480900	23.27	-22.73	46.00	22.67	0.10	0.50	Average
11	15.310	32.34	-27.66	60.00	31.24	0.30	0.80	QP
12	15.310	19.65	-30.35	50.00	18.55	0.30	0.80	Average



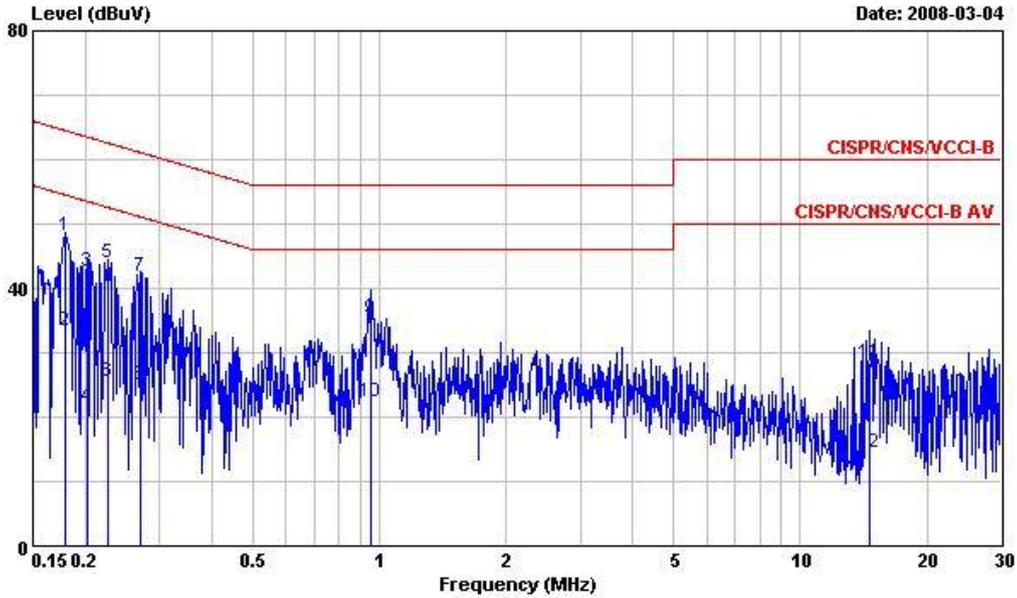
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 4

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link +Battery3
 Memo : USB Cable B+ Adaptor C +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.1758420	49.11	-15.57	64.68	48.42	0.10	0.59	QP
2	0.1758420	34.75	-19.93	54.68	34.06	0.10	0.59	Average
3	0.2267630	44.42	-18.15	62.57	43.82	0.10	0.50	QP
4	0.2267630	29.59	-22.98	52.57	28.99	0.10	0.50	Average
5	0.2630270	42.77	-18.57	61.34	42.20	0.10	0.47	QP
6	0.2630270	26.59	-24.75	51.34	26.02	0.10	0.47	Average
7	0.3166190	39.86	-19.94	59.80	39.36	0.10	0.40	QP
8	0.3166190	30.35	-19.45	49.80	29.85	0.10	0.40	Average
9	0.7197740	35.08	-20.92	56.00	34.58	0.10	0.40	QP
10	0.7197740	22.33	-23.67	46.00	21.83	0.10	0.40	Average
11	0.9632810	41.62	-14.38	56.00	41.02	0.10	0.50	QP
12	0.9632810	28.67	-17.33	46.00	28.07	0.10	0.50	Average
13	14.210	22.47	-27.53	50.00	21.13	0.55	0.79	Average
14	14.210	34.88	-25.12	60.00	33.54	0.55	0.79	QP



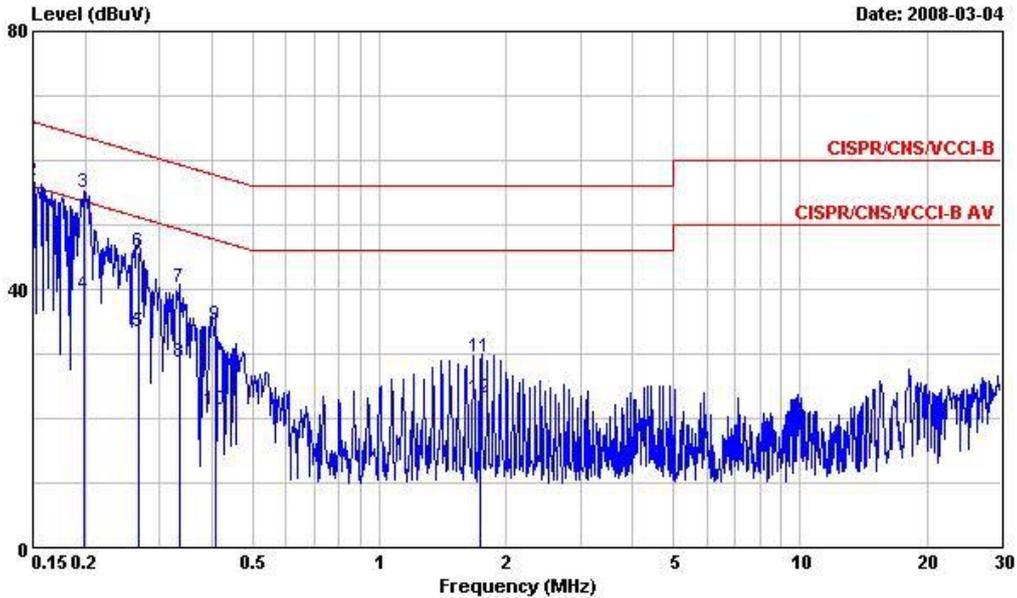
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: 120Vac/50Hz
 Model : FR822609-01
 Memo : PCS 1900 Idle+BT Link+WLAN Link +Battery3
 Memo : USB Cable B+ Adaptor C +Camera 1 +GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Over	Limit	Read	LISN	Cable		
Freq	Level	Limit	Line	Level	Factor	Loss	
MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1786590	48.26	-16.29	64.55	47.58	0.10	0.58 QP
2	0.1786590	33.52	-21.03	54.55	32.84	0.10	0.58 Average
3	0.2028850	42.60	-20.89	63.49	42.00	0.10	0.50 QP
4	0.2028850	21.53	-31.96	53.49	20.93	0.10	0.50 Average
5	0.2255640	43.92	-18.69	62.61	43.32	0.10	0.50 QP
6	0.2255640	25.51	-27.10	52.61	24.91	0.10	0.50 Average
7	0.2700880	41.78	-19.34	61.12	41.22	0.10	0.46 QP
8	0.2700880	25.08	-26.04	51.12	24.52	0.10	0.46 Average
9	0.9531270	35.36	-20.64	56.00	34.76	0.10	0.50 QP
10	0.9531270	22.30	-23.70	46.00	21.70	0.10	0.50 Average
11	14.590	28.37	-31.63	60.00	27.28	0.30	0.79 QP
12	14.590	14.40	-35.60	50.00	13.31	0.30	0.79 Average



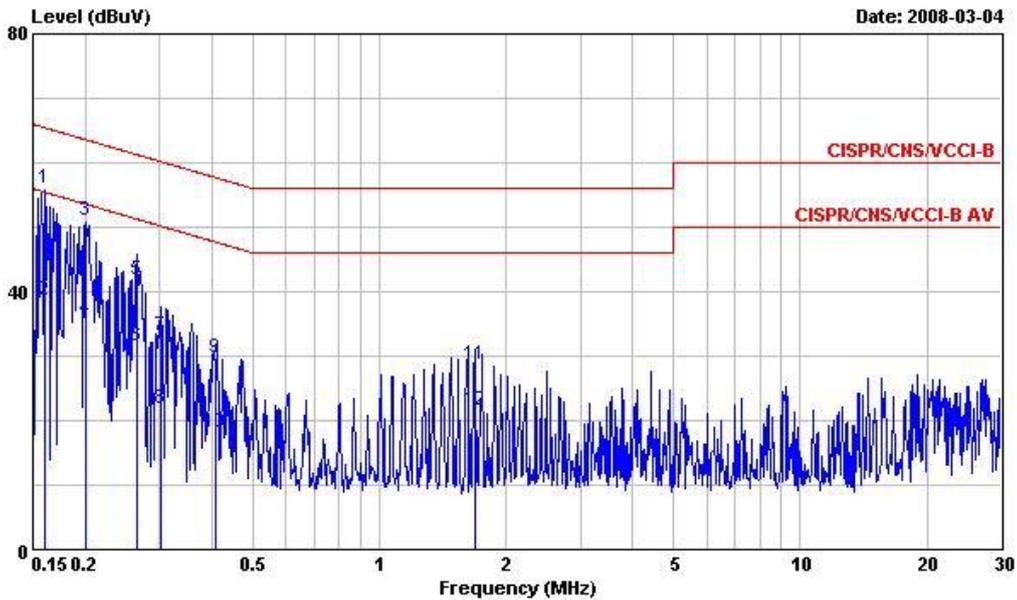
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 5

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: From NoteBook
 Model : FR822609-01
 Memo : EDGE Idle+BT Link+WLAN Link +Battery3
 Memo : USB A Link+Camera 2+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150000	33.66	-22.34	56.00	32.86	0.10	0.70	Average
2	@0.150000	56.88	-9.12	66.00	56.08	0.10	0.70	QP
3	@0.1986310	55.12	-8.55	63.67	54.52	0.10	0.50	QP
4	0.1986310	39.18	-14.49	53.67	38.58	0.10	0.50	Average
5	0.2672410	33.43	-17.77	51.20	32.87	0.10	0.46	Average
6	0.2672410	45.80	-15.40	61.20	45.24	0.10	0.46	QP
7	0.3338470	40.20	-19.15	59.35	39.70	0.10	0.40	QP
8	0.3338470	28.72	-20.63	49.35	28.22	0.10	0.40	Average
9	0.4061490	34.47	-23.26	57.73	33.96	0.10	0.41	QP
10	0.4061490	21.39	-26.34	47.73	20.88	0.10	0.41	Average
11	1.740	29.36	-26.64	56.00	28.76	0.10	0.50	QP
12	1.740	23.10	-22.90	46.00	22.50	0.10	0.50	Average



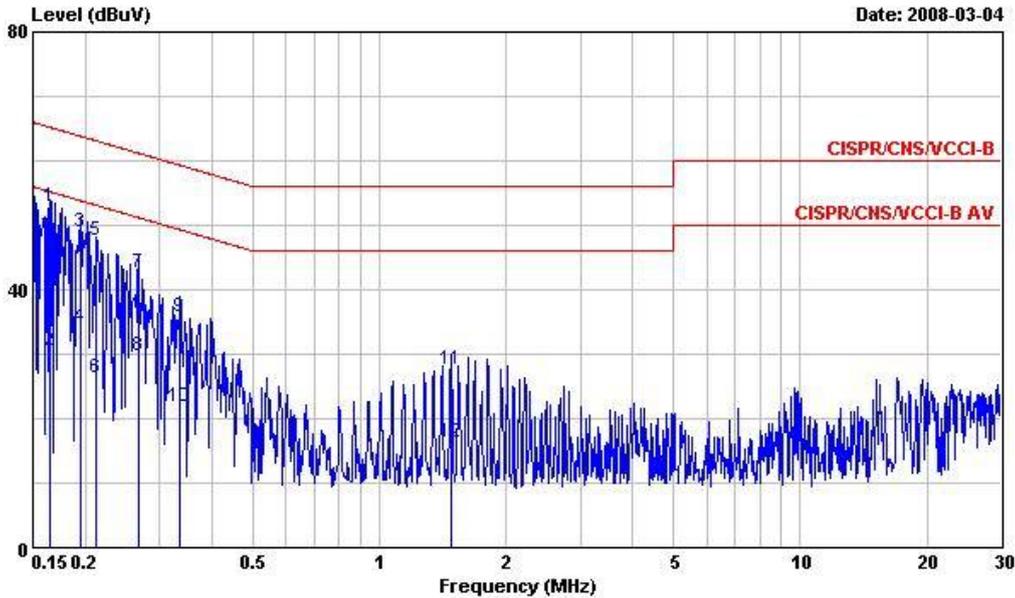
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: From Notebook
 Model : FR822609-01
 Memo : EDGE Idle+BT Idle+BT Link+WLAN Link +Battery3
 Memo : USB A Link+Camera 2+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Level	Over	Limit	Read	LISN	Cable	
Freq	dBuV	Limit	Line	Level	Factor	Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 @ 0.1598470	56.08	-9.39	65.47	55.32	0.10	0.66	QP
2 0.1598470	38.82	-16.65	55.47	38.06	0.10	0.66	Average
3 0.1996860	51.04	-12.58	63.62	50.44	0.10	0.50	QP
4 0.1996860	35.79	-17.83	53.62	35.19	0.10	0.50	Average
5 0.2644240	41.85	-19.44	61.29	41.28	0.10	0.47	QP
6 0.2644240	31.54	-19.75	51.29	30.97	0.10	0.47	Average
7 0.3034790	33.22	-26.93	60.15	32.72	0.10	0.40	QP
8 0.3034790	21.75	-28.40	50.15	21.25	0.10	0.40	Average
9 0.4061490	29.83	-27.90	57.73	29.32	0.10	0.41	QP
10 0.4061490	18.06	-29.67	47.73	17.55	0.10	0.41	Average
11 1.680	28.74	-27.26	56.00	28.14	0.10	0.50	QP
12 1.680	21.57	-24.43	46.00	20.97	0.10	0.50	Average



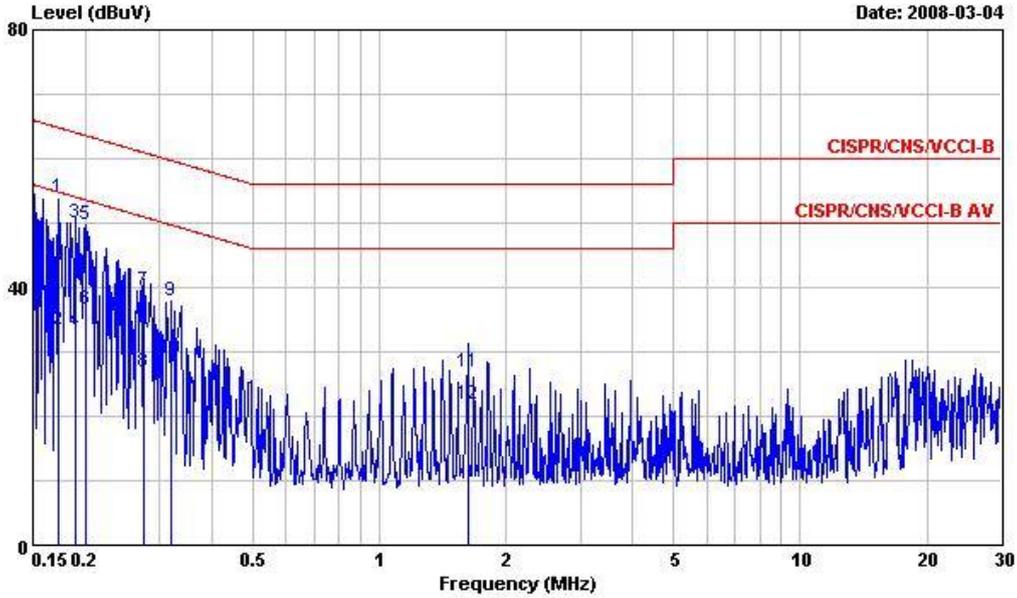
Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 6

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: From NoteBook
 Model : FR822609-01
 Memo : EDGE Idle+BT Link+WLAN Link +Battery3
 Memo : USB B Link+MPEG4+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1641380	52.88	-12.37	65.25	52.14	0.10	0.64	QP
2	0.1641380	30.45	-24.80	55.25	29.71	0.10	0.64	Average
3	0.1944650	49.00	-14.84	63.84	48.38	0.10	0.52	QP
4	0.1944650	34.26	-19.58	53.84	33.64	0.10	0.52	Average
5	0.2127940	47.68	-15.42	63.10	47.08	0.10	0.50	QP
6	0.2127940	26.41	-26.69	53.10	25.81	0.10	0.50	Average
7	0.2672410	42.52	-18.68	61.20	41.96	0.10	0.46	QP
8	0.2672410	29.76	-21.44	51.20	29.20	0.10	0.46	Average
9	0.3356200	35.78	-23.53	59.31	35.28	0.10	0.40	QP
10	0.3356200	21.83	-27.48	49.31	21.33	0.10	0.40	Average
11	1.480	27.50	-28.50	56.00	26.90	0.10	0.50	QP
12	1.480	16.42	-29.58	46.00	15.82	0.10	0.50	Average



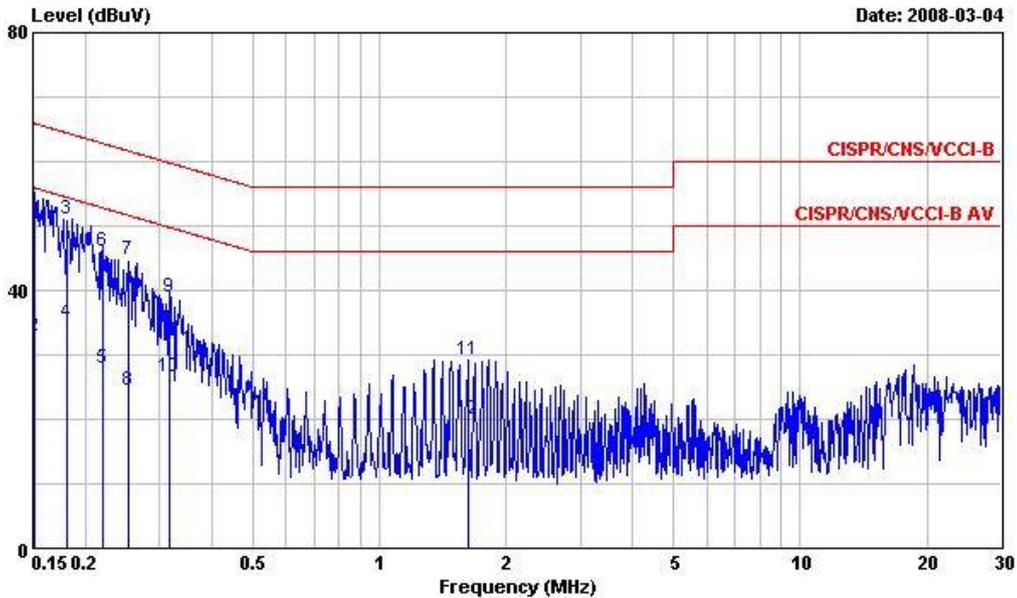
Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: From Notebook
 Model : FR822609-01
 Memo : EDGE Idle+BT Link+WLAN Link +Battery3
 Memo : USB B Link+MPEG4+GPS Rx
 IMEI : 35755901001791501
 SAMPLE : (A-M)

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1721540	54.00	-10.86	64.86	53.30	0.10	0.60	QP
2	0.1721540	33.34	-21.52	54.86	32.64	0.10	0.60	Average
3	0.1893810	49.92	-14.14	64.06	49.28	0.10	0.54	QP
4	0.1893810	33.08	-20.98	54.06	32.44	0.10	0.54	Average
5	0.2007470	49.78	-13.80	63.58	49.18	0.10	0.50	QP
6	0.2007470	36.71	-16.87	53.58	36.11	0.10	0.50	Average
7	0.2758730	39.39	-21.55	60.94	38.84	0.10	0.45	QP
8	0.2758730	26.96	-23.98	50.94	26.41	0.10	0.45	Average
9	0.3199920	37.84	-21.87	59.71	37.34	0.10	0.40	QP
10	0.3199920	28.82	-20.89	49.71	28.32	0.10	0.40	Average
11	1.620	26.80	-29.20	56.00	26.20	0.10	0.50	QP
12	1.620	21.95	-24.05	46.00	21.35	0.10	0.50	Average



Temperature : 26~27°C
 Relative Humidity : 48~49%
 Test Enginner : Happy
 Test Mode : Mode 7

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



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE
 EUT : PDA Phone WCDMA (band I/VIII)
 : +GSM/GPRS/EDGE(900/1800/1900)
 POWER: From NoteBook
 Model : FR822609-01
 Memo : EDGE Idle+BT Link+WLAN Link +Battery3
 Memo : USB A Link+Camera 2+GPS Rx
 IMEI : 357559010018905
 SAMPLE : (A-S)

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	@0.1515980	55.49	-10.42	65.91	54.70	0.10	0.69	QP
2	0.1515980	32.84	-23.07	55.91	32.05	0.10	0.69	Average
3	0.1803480	51.07	-13.40	64.47	50.40	0.10	0.57	QP
4	0.1803480	34.88	-19.59	54.47	34.21	0.10	0.57	Average
5	0.2196670	27.89	-24.94	52.83	27.29	0.10	0.50	Average
6	0.2196670	46.16	-16.67	62.83	45.56	0.10	0.50	QP
7	0.2521110	44.64	-17.05	61.69	44.04	0.10	0.50	QP
8	0.2521110	24.47	-27.22	51.69	23.87	0.10	0.50	Average
9	0.3166190	39.02	-20.78	59.80	38.52	0.10	0.40	QP
10	0.3166190	26.49	-23.31	49.80	25.99	0.10	0.40	Average
11	1.620	29.30	-26.70	56.00	28.70	0.10	0.50	QP
12	1.620	20.05	-25.95	46.00	19.45	0.10	0.50	Average