



FCC TEST REPORT

for

47 CFR Part 15 Subpart C

Equipment : Mobile Phone
Trade Name : Vodafone 804N
Model No. : KMP7N2H1
FCC ID : GKRKMP7N2H1
Filing Type : Certification
Applicant : **Compal Electronics, Inc.**
No. 581, Juikuang Rd., Neihsu, Taipei, (114) Taiwan, R.O.C.

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- The data shown in this test report were carried out on Dec. 06, 2005 at **Sporton International Inc. LAB.**
- Report No.: FR5N0707, Report Version: Rev. 01.

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EMC/SAR Director

SPORTON International Inc.

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History of this test report

Report Issue Date: Dec. 12, 2005

Report No.	Description



1. General Description of Equipment under Test

1.1. Applicant

Compal Electronics, Inc.

No. 581, Juikuang Rd., Neihu, Taipei, (114) Taiwan, R.O.C.

1.2. Manufacturer

Compal Electronics, Inc.

No. 581, Juikuang Rd., Neihu, Taipei, (114) Taiwan, R.O.C.

1.3. Basic Description of Equipment under Test

Equipment : Mobile Phone
Trade Name : Vodafone 804N
Model No. : KMP7N2H1
FCC ID : GKRKMP7N2H1
Power Supply Type : Switching
AC Power Cord : AC 120V, Wall-mount, 3.8 meter, 2 pin

1.4. Feature of Equipment under Test

Product Feature & Specification			
1. Modulation Type/Data Rate	GFSK		
2. Frequency Range.	2400 MHz ~ 2483.5 MHz		
Number of Channels	79		
3. Carrier Frequency of each channel	2402+ n*1 MHz, n= 0~78		
4. Channel Spacing	1 MHz		
5. Maximum Output Power to Antenna (Normal condition)	-0.68 dBm		
6. Type of Antenna Connector	N/A		
7. Antenna Type	Embedded Antenna		
8. Antenna Gain	-4.4 dBi		
9. HW Version	EP2-2		
10. SW Version	1.0		
11. Function Type	Transmitter		Transceiver V
12. Power Rating (DC/AC , Voltage)	3.8V		
13. DUT Stage	Production Unit		

2. Test Configuration of Equipment under Test

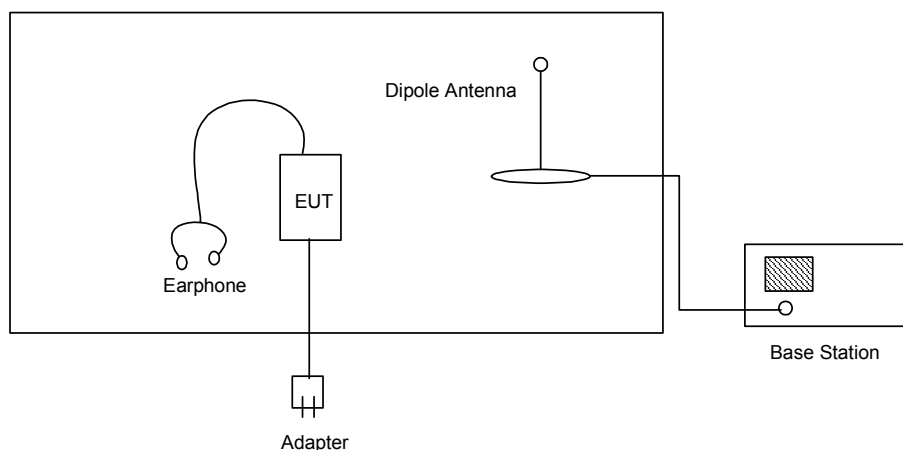
2.1. Test Manner

- The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- For spurious emission below 1GHz, only one channel of each application was tested because it is not related to channel selection.
- The EUT is programmed to transmit signal continuously for all testings.
- Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 18000MHz.

2.2. Test Mode

Application	Bluetooth
Radiated Emission and conducted test items	Mode 1: Tx_CH00_2402 MHz
	Mode 2: Tx_CH39_2441 MHz
	Mode 3: Tx_CH78_2480 MHz
Conducted Emission	Mode 1: PCS 1900 Idle Mode + BT Link + MP3 Player + Adapter
	Mode 2: PCS 1900 Idle Mode + BT Link + Camera + Adapter

2.3. Connection Diagram of Test System



2.4. Ancillary Equipment List

Item	Equipment	Model No.	Serial No.
1.	Base Station (R&S)	CMU200	105934



3. RF Utility

The EUT is in BT link mode with BT device for conducted emission or in BT continuous Tx Mode controlled by RF utility and base station simulator for radiation emission and other conducted tests.



4. General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055
Test Site No : CO01-HY, 03CH06-HY

4.1. Test Voltage

AC 120V

4.2. Standard for Methods of Measurement

ANSI C63.4-2003

4.3. Test in Compliance with

47 CFR Part 15 Subpart C

4.4. Frequency Range Investigated

Conduction: from 150 kHz to 30 MHz

Radiation: from 30 MHz to 18000MHz

4.5. Test Distance

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



5. Report of Measurements and Examinations

5.1. List of Measurements and Examinations

FCC Rule	Description of Test	Result	Section
15.247(a)(1)	Hopping Channel Separation	Pass	5.2
15.247(a)(1)(iii)	Number of Hopping Frequency Used	Pass	5.3
15.247(a)(1)	Hopping Channel Bandwidth	Pass	5.4
15.247(a)(1)(iii)	Dwell Time of Each Frequency within a 30 Second Period	Pass	5.5
15.247(b)(1)	Output Power	Pass	5.6
15.247(c)	100kHz Bandwidth of Frequency Band Edges	Pass	5.7
15.207	Conducted Emission	Pass	5.8
15.209	Radiated Emission	Pass	5.9
15.203	Antenna Requirement	Pass	5.10

5.2. Hopping Channel Separation

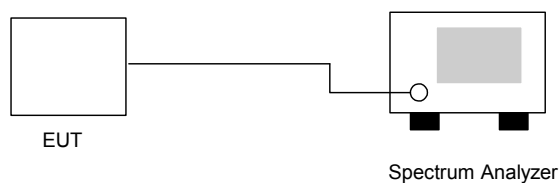
5.2.1. Measuring Instruments :

As described in chapter 6 of this test report.

5.2.2. Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
2. Set RBW of spectrum analyzer to 30kHz and VBW to 100kHz.
3. The Hopping Channel Separation is defined as the channel is separated with the next channel.

5.2.3. Test Setup Layout :



5.2.4. Test Result : The spectrum analyzer plots are attached as below

- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

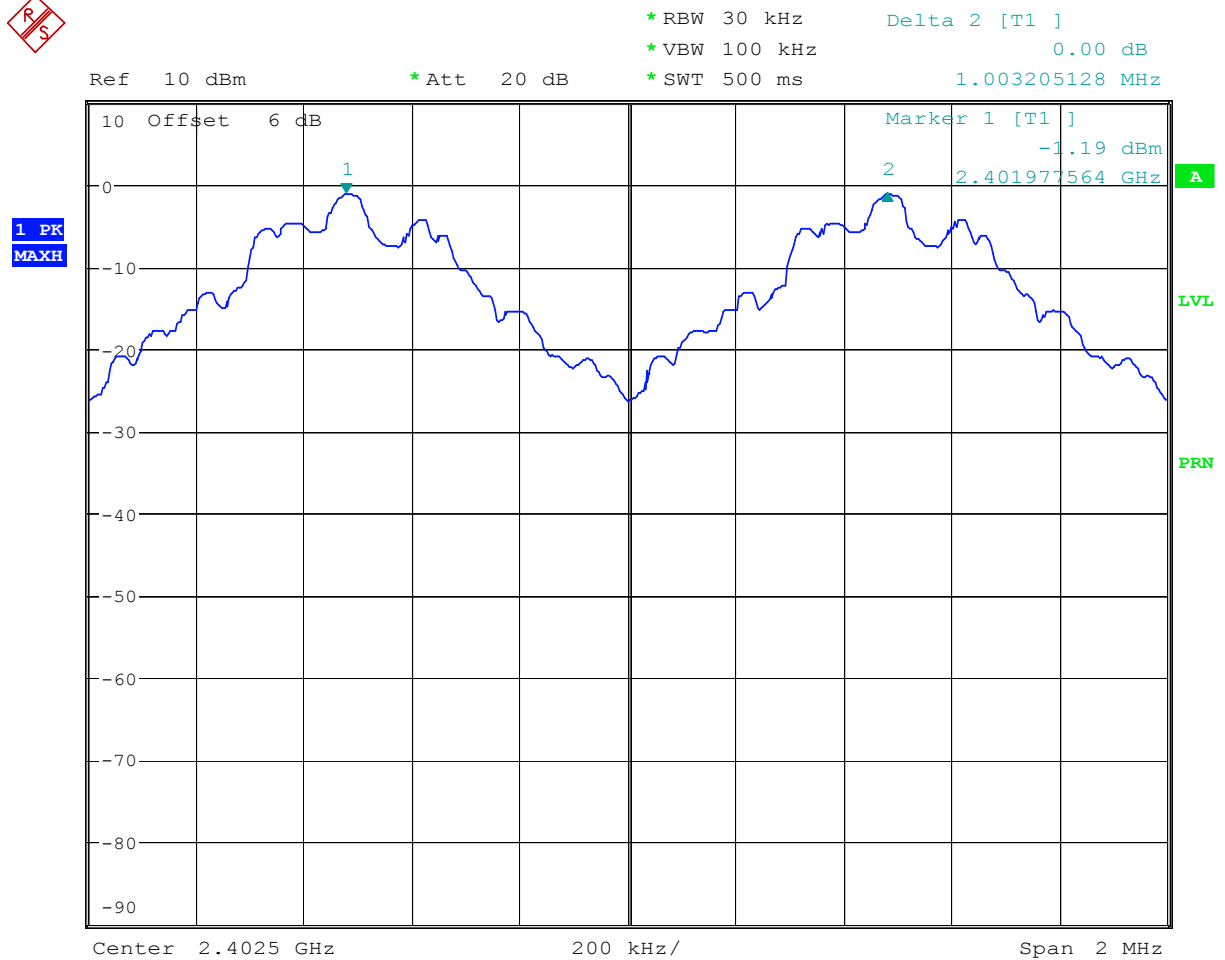
Channel	Frequency (MHz)	Hopping Channel Separation (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	1.003	0.819	Mode 1
39	2441	1.003	0.880	Mode 2
78	2480	1.006	0.877	Mode 3

Remark: Limit is the greater one of 25kHz or the 20dB bandwidth of the hopping channel.



5.2.5 Hopping Channel Separation

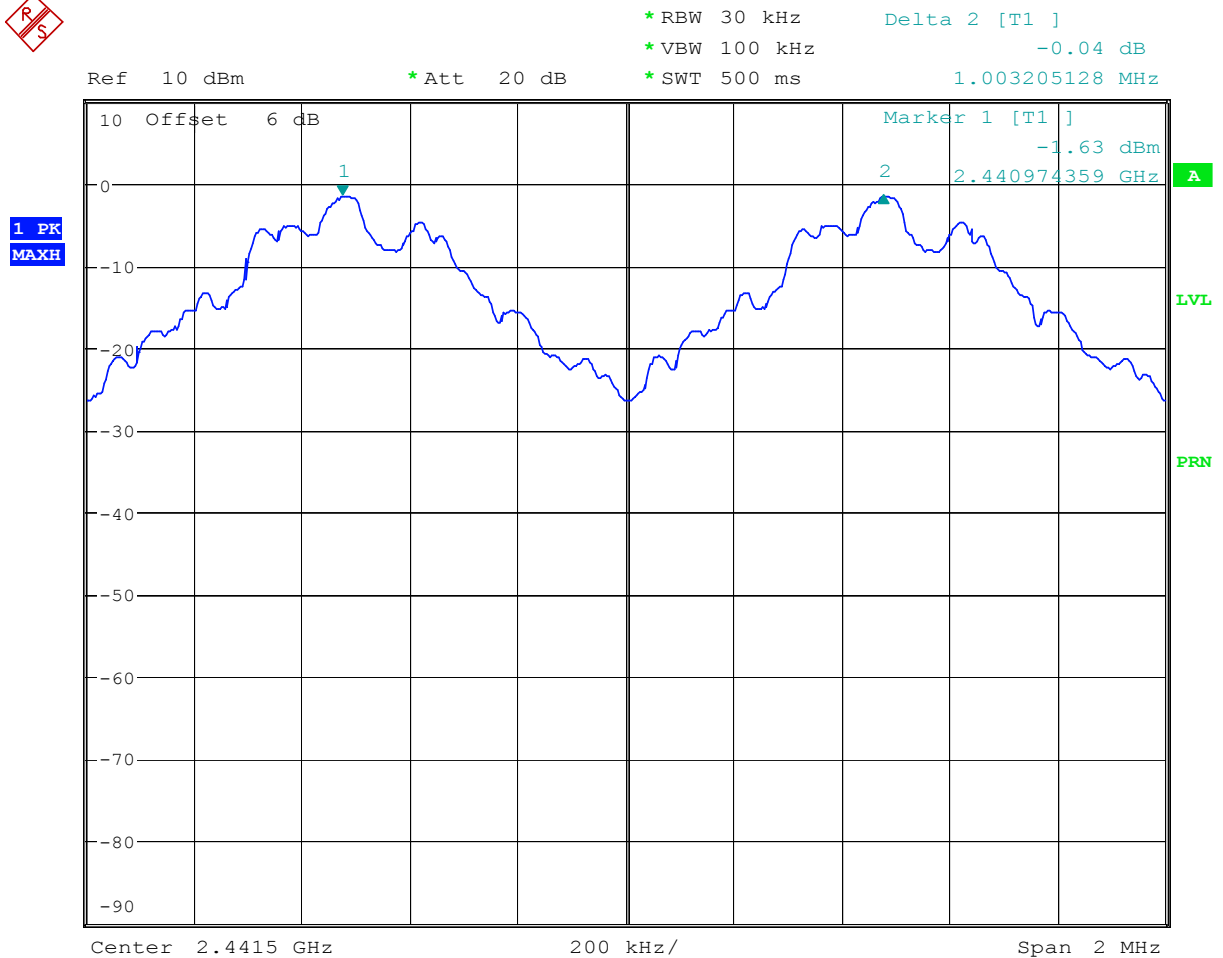
Mode 1: CH00 (2402MHz)



Date: 30.NOV.2005 10:07:05



Mode 2: CH39 (2441MHz)



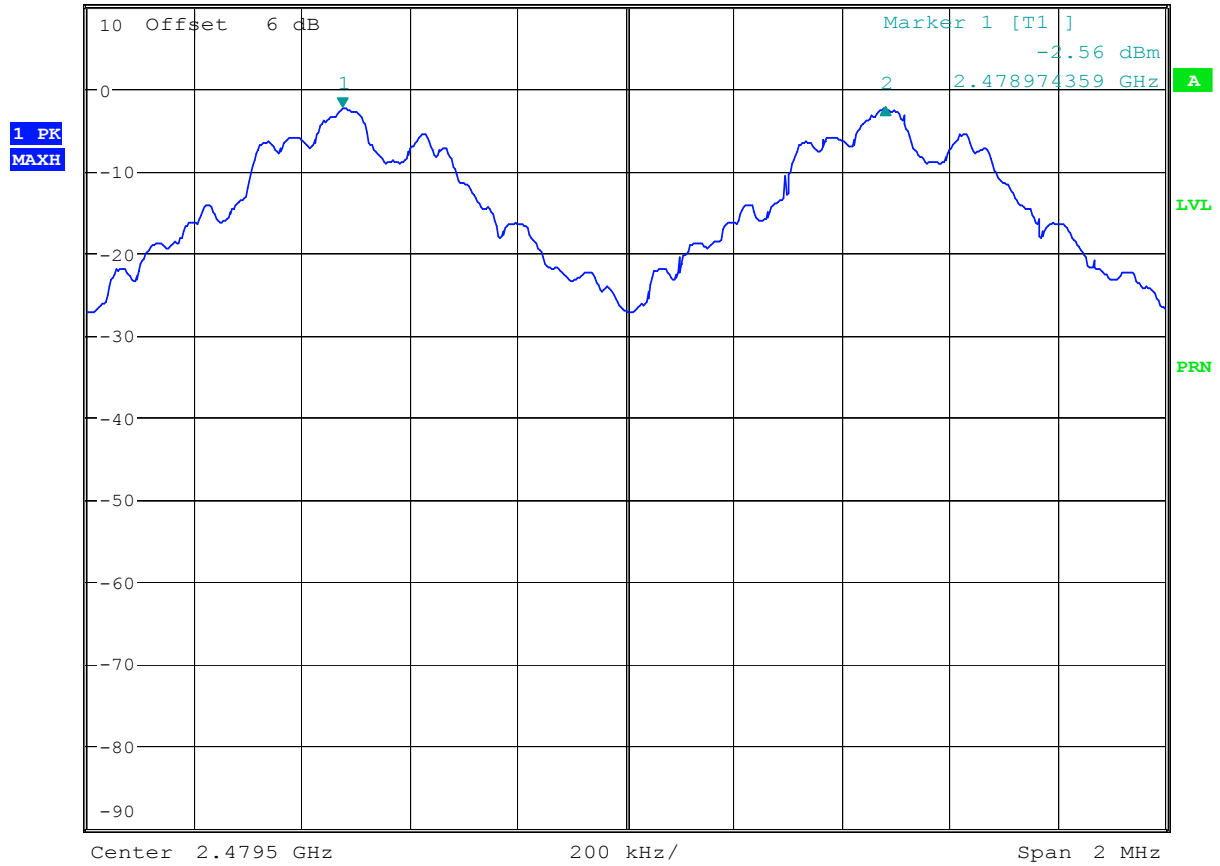
Date: 30.NOV.2005 10:07:49



Mode 3: CH78 (2480MHz)



Ref 10 dBm * Att 20 dB * RBW 30 kHz Delta 2 [T1]
* VBW 100 kHz 0.01 dB
* SWT 500 ms 1.006410256 MHz



Date: 30.NOV.2005 10:17:11

5.3. Number of Hopping Frequency

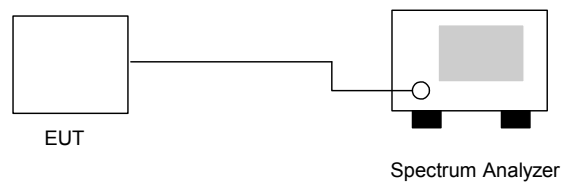
5.3.1. Measuring Instruments :

As described in chapter 6 of this test report.

5.3.2. Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
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.

5.3.3. Test Setup Layout :



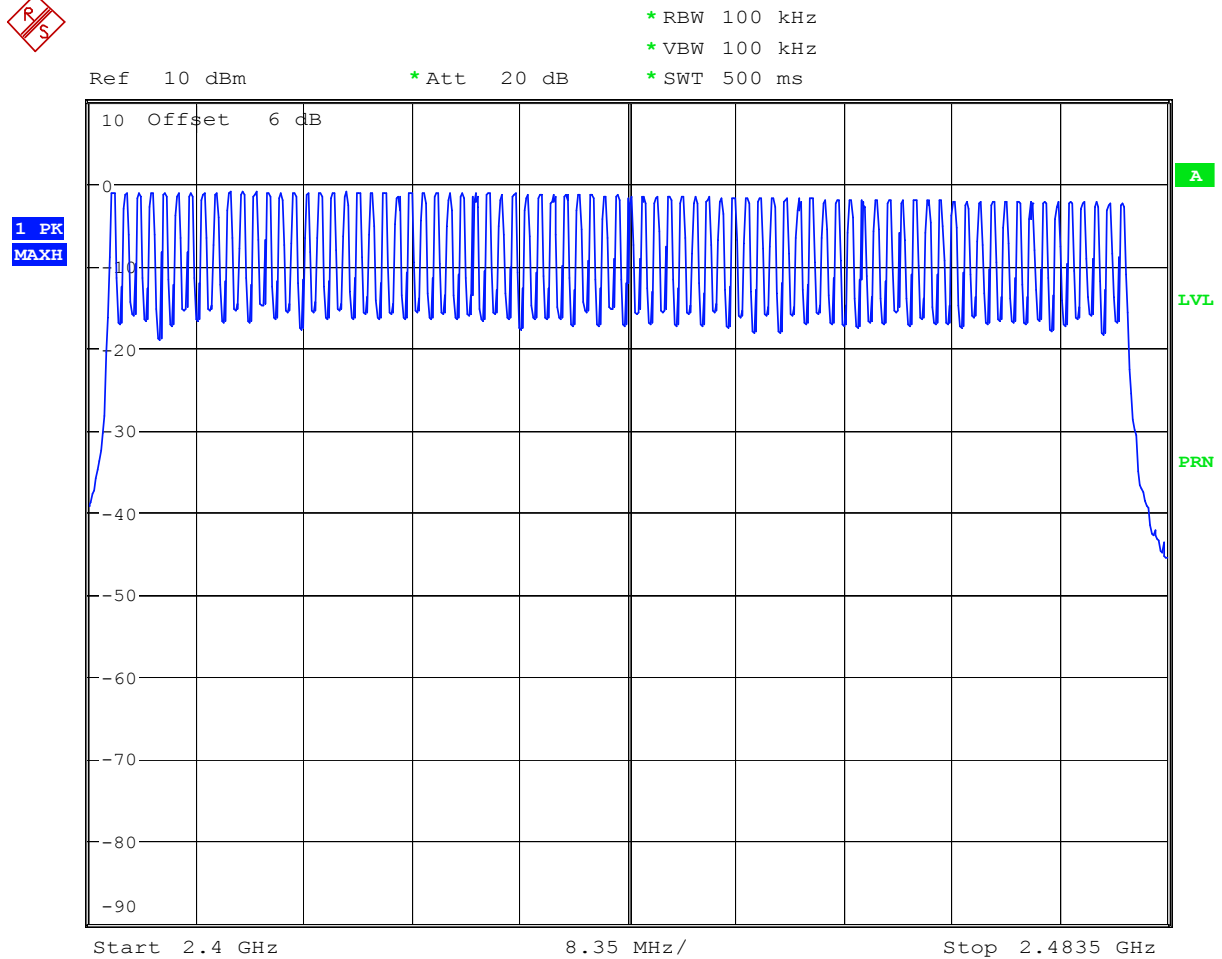
5.3.4. Test Result : See spectrum analyzer plots below

- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

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



5.3.5 Number of Hopping Frequency



Date: 30.NOV.2005 10:46:41

5.4 Hopping Channel Bandwidth

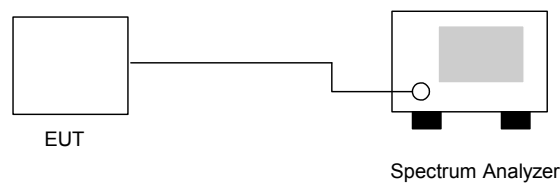
5.4.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.4.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
2. Set RBW of spectrum analyzer to 30kHz and VBW to 300kHz.
3. The Hopping Channel bandwidth is defined as the frequency range where the power is higher than peak power minus 20dB.

5.4.3 Test Setup Layout :



5.4.4 Test Result : See spectrum analyzer plots below

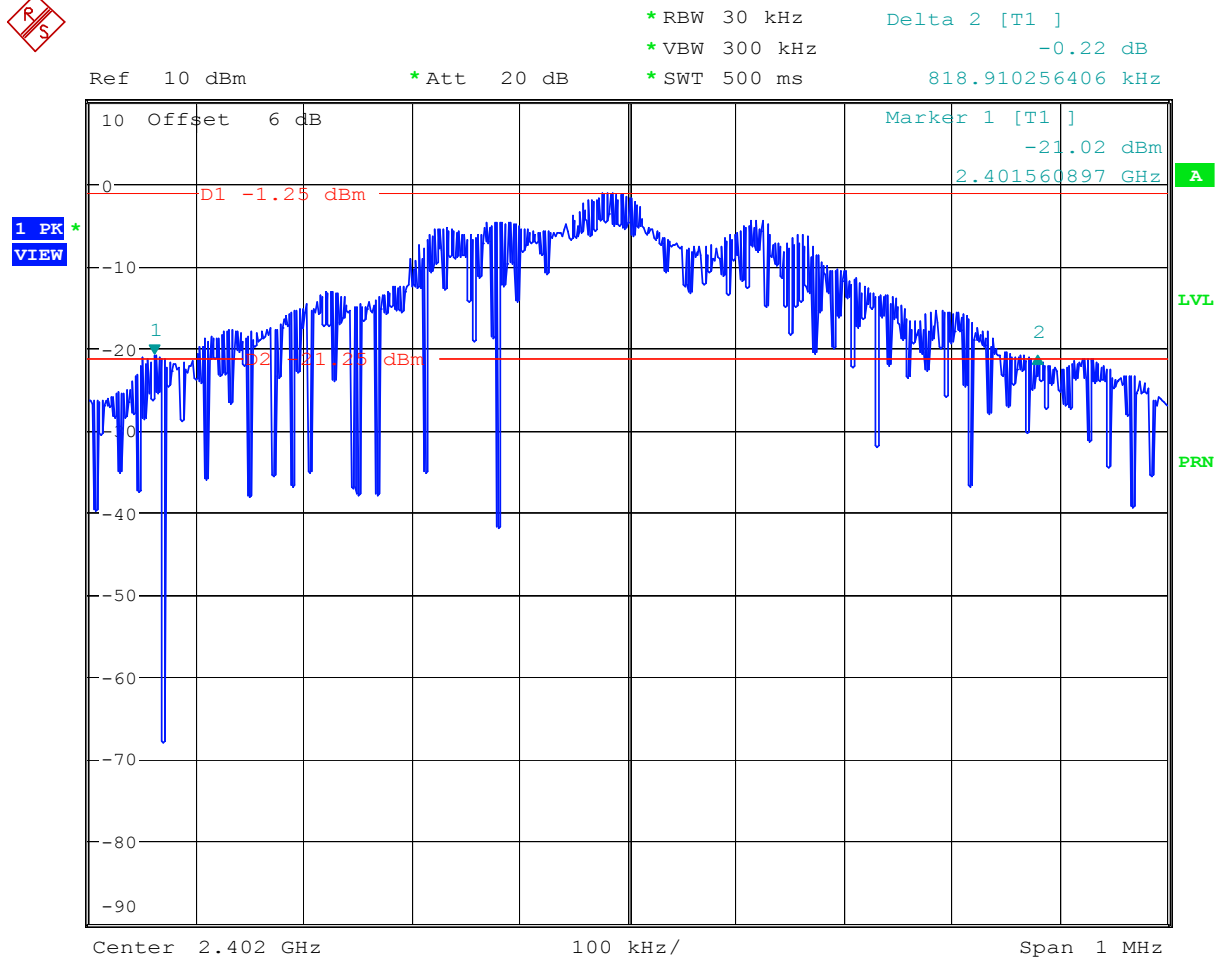
- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

Channel	Frequency (MHz)	Hopping Channel Bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
00	2402	0.819	1.0	Mode 1
39	2441	0.880	1.0	Mode 2
78	2480	0.877	1.0	Mode 3



5.4.5 Hopping Channel Bandwidth

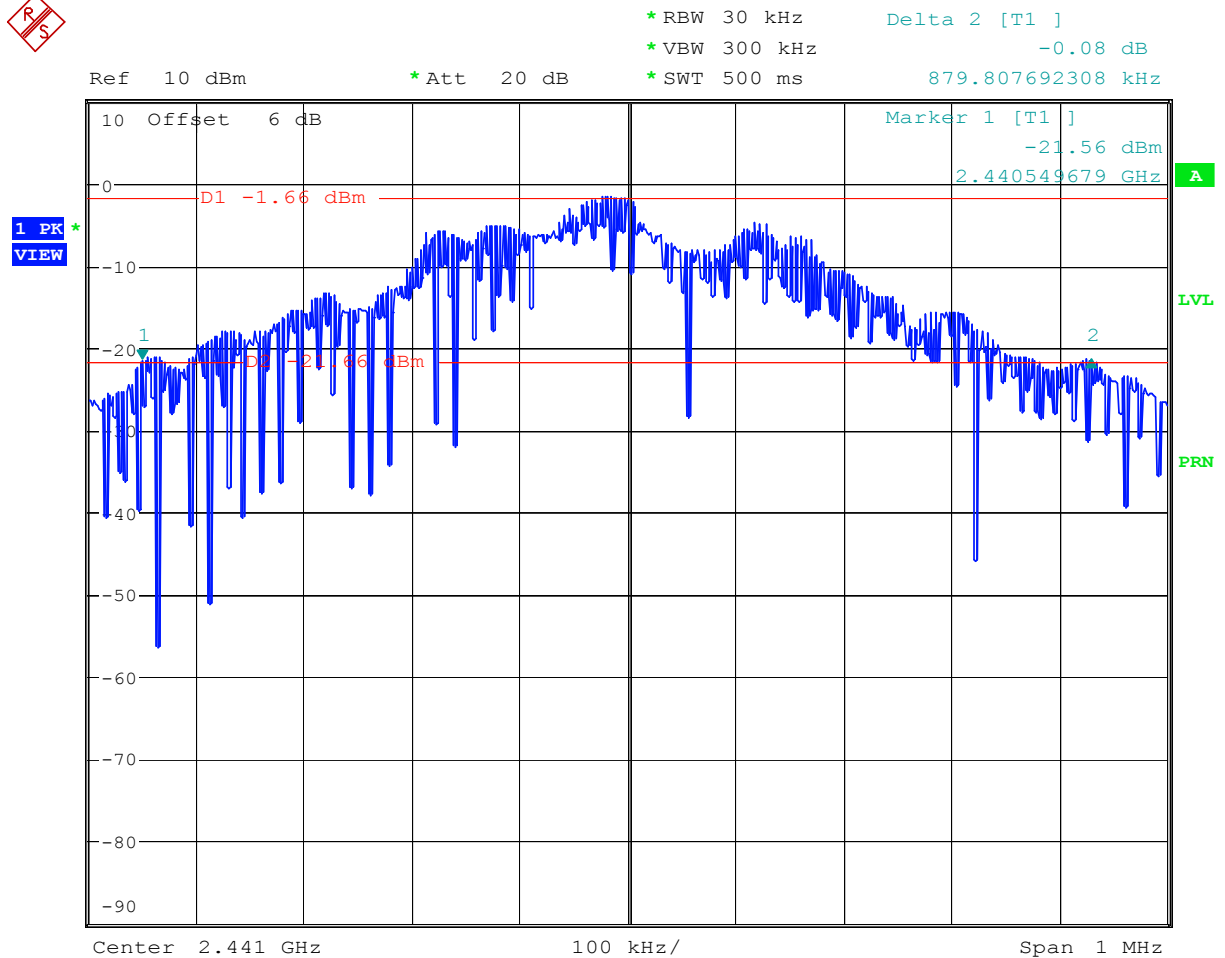
Mode 1: CH00 (2402MHz)



Date: 30.NOV.2005 10:03:39



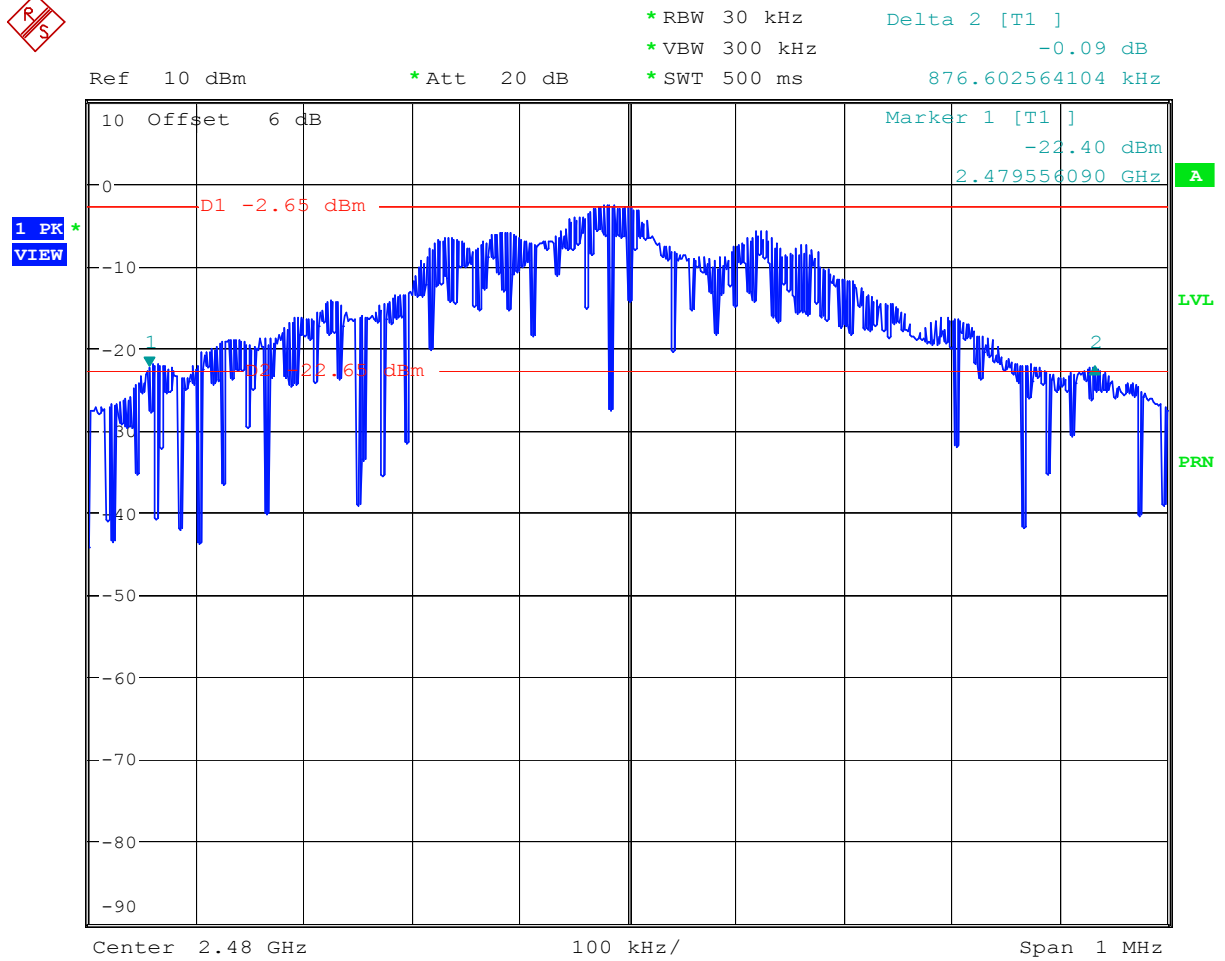
Mode 2: CH39 (2441MHz)



Date: 30.NOV.2005 10:09:45



Mode 3: CH78 (2480MHz)



Date: 30.NOV.2005 10:13:34

5.5 Dwell Time of Each Frequency within a 30 Seconds Period

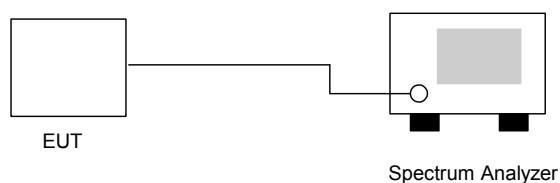
5.5.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.5.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
2. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
3. Set the center frequency on any frequency would be measured and set the frequency span to zero span.
4. The equation = $30 \times (1600/79) \times t$ (t = the time duration of one single pulse)

5.5.3 Test Setup Layout :



5.5.4 Test Result : See spectrum analyzer plots below

- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

Ch00

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.4	463.14	0.138	0.4
DH3	4.3	1737.17	0.236	0.4
DH5	3.3	3003.2	0.313	0.4

CH39

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	8.9	456.73	0.128	0.4
DH3	4.9	1748.39	0.271	0.4
DH5	3.1	2990.38	0.293	0.4

CH78

Package Mode	Average Hopping Channel	Package Transfer Time (us)	Dwell Time (s)	Limit (s)
DH1	9.4	458.33	0.136	0.4
DH3	4.4	1724.35	0.240	0.4
DH5	3.5	2974.35	0.329	0.4

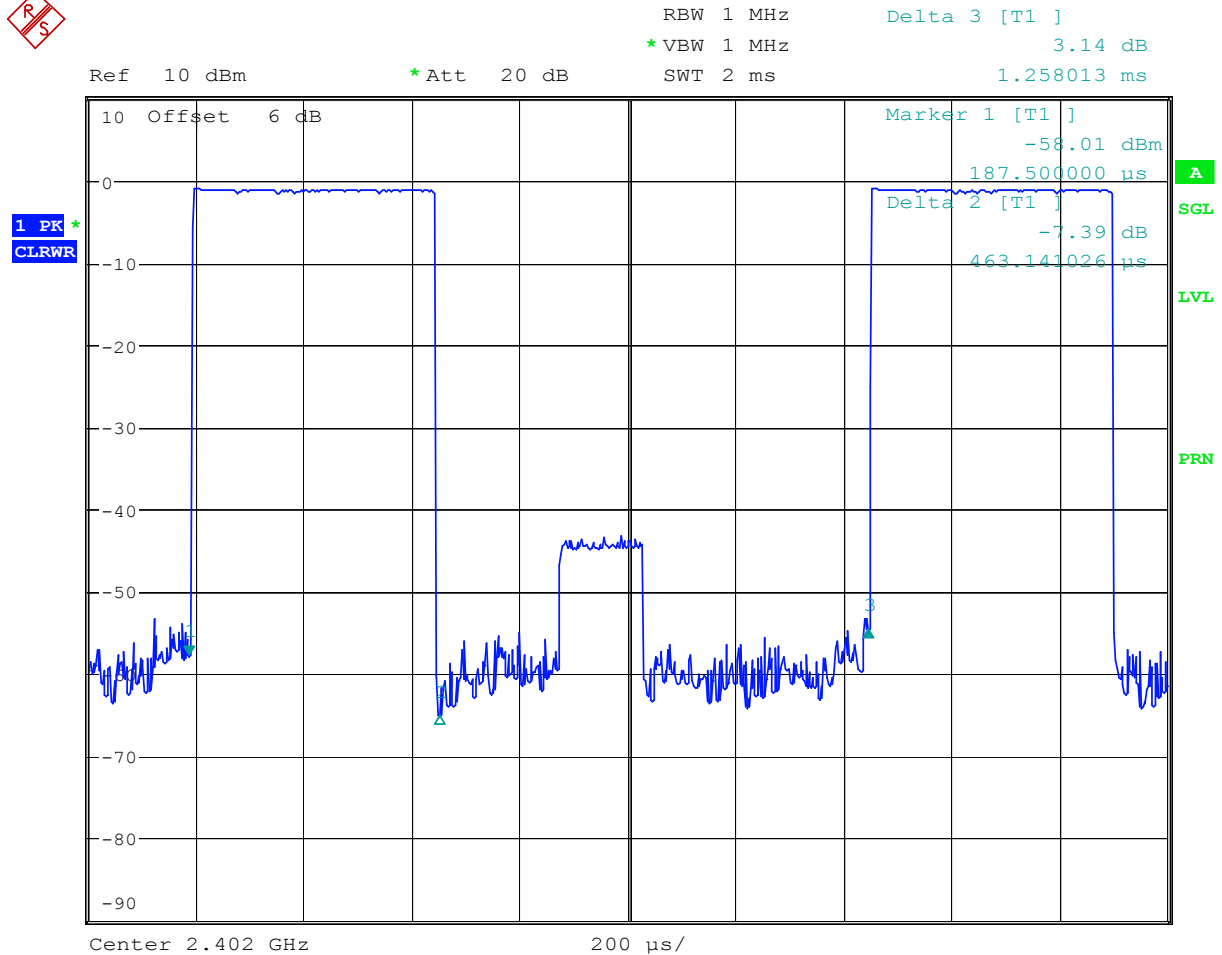
※ Remark:

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



5.5.5 Dwell Time

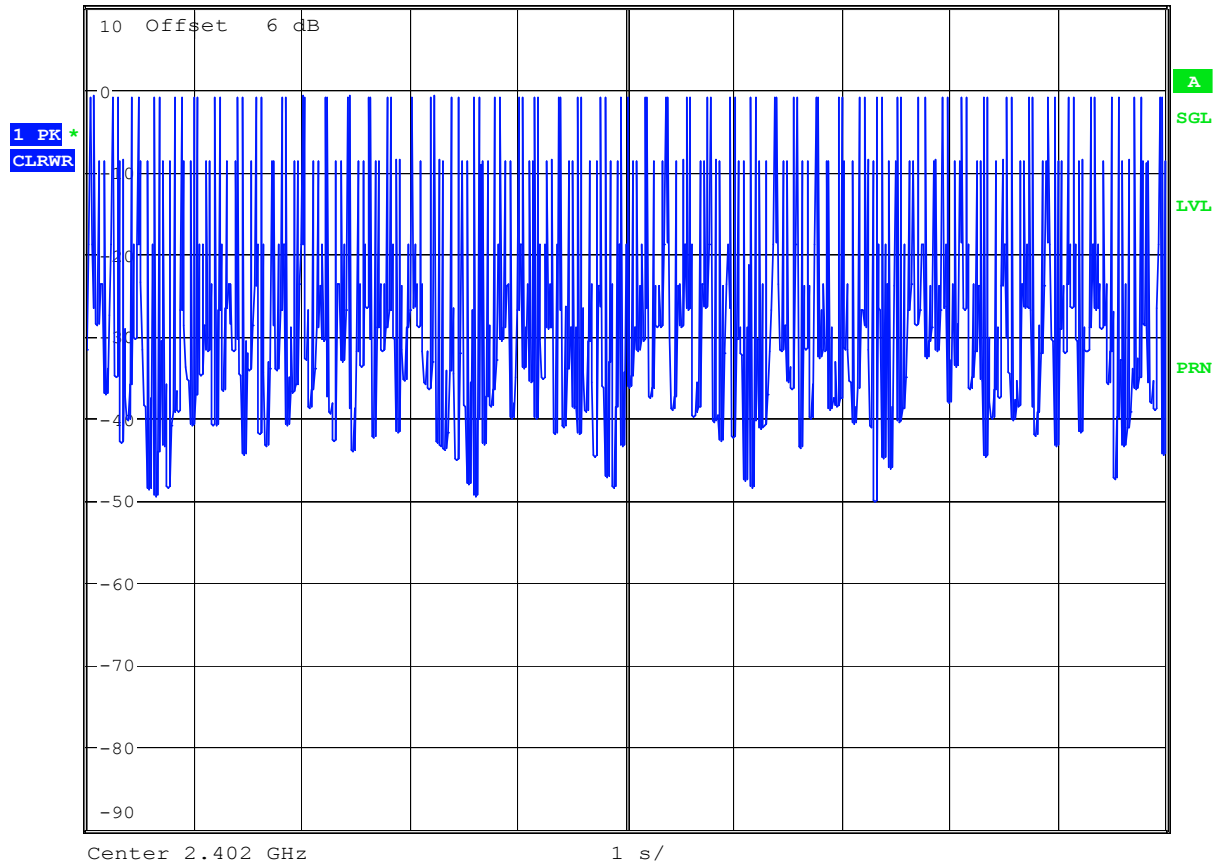
DH1 (CH00)



Date: 30.NOV.2005 10:28:56



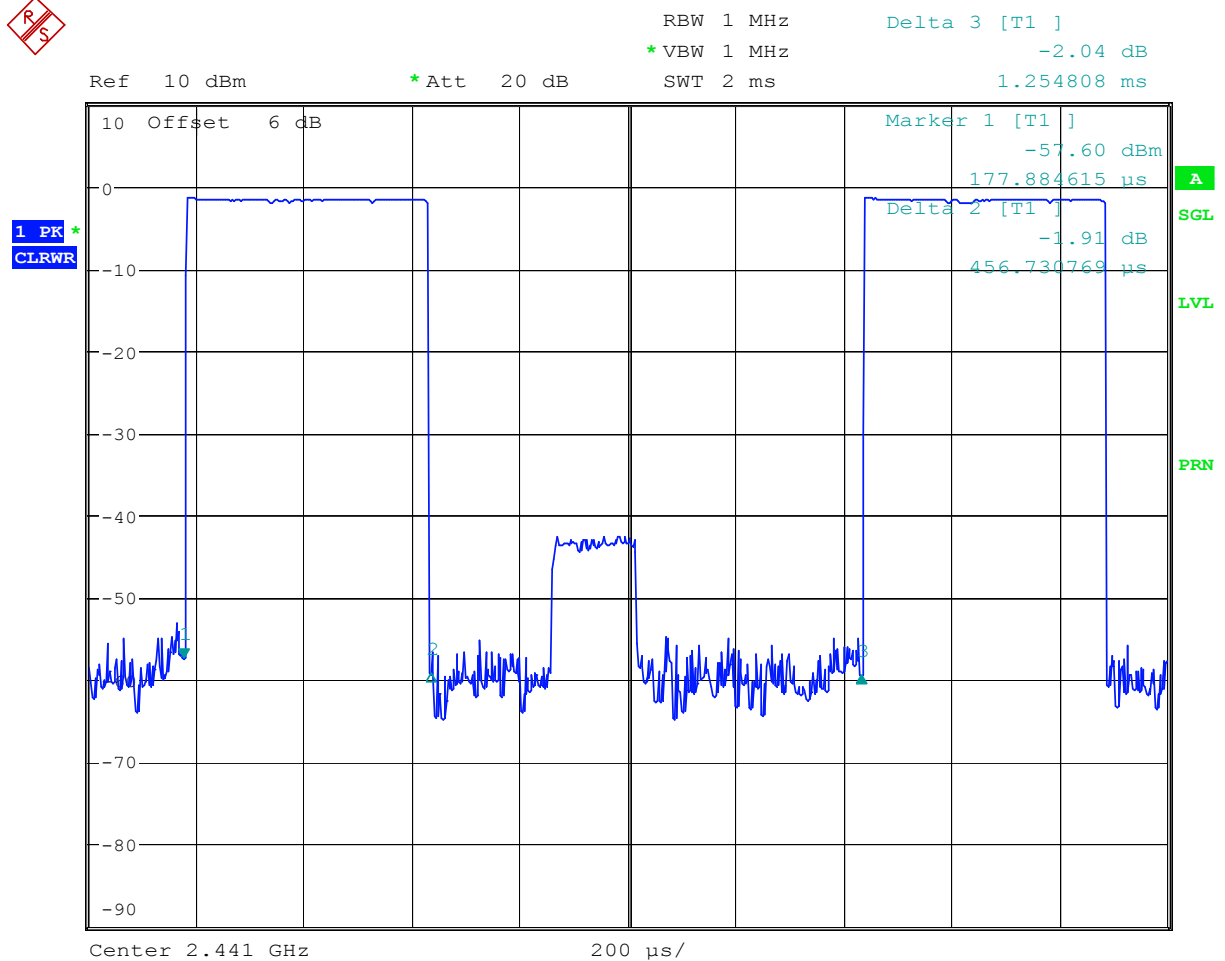
Ref 10 dBm * Att 20 dB RBW 1 MHz
* VBW 1 MHz SWT 10 s



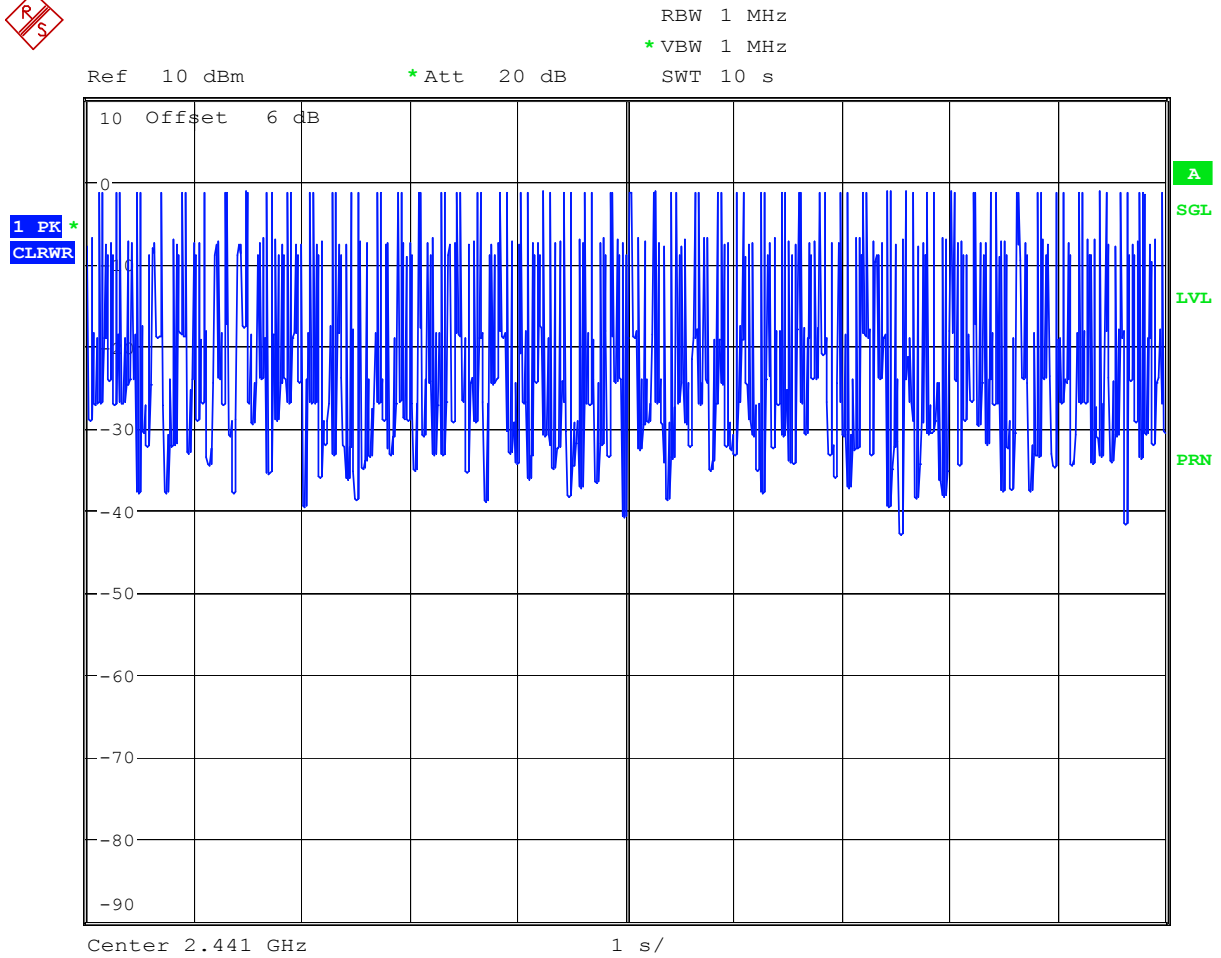
Date: 30.NOV.2005 10:34:19



DH1 (CH39)



Date: 30.NOV.2005 10:28:15



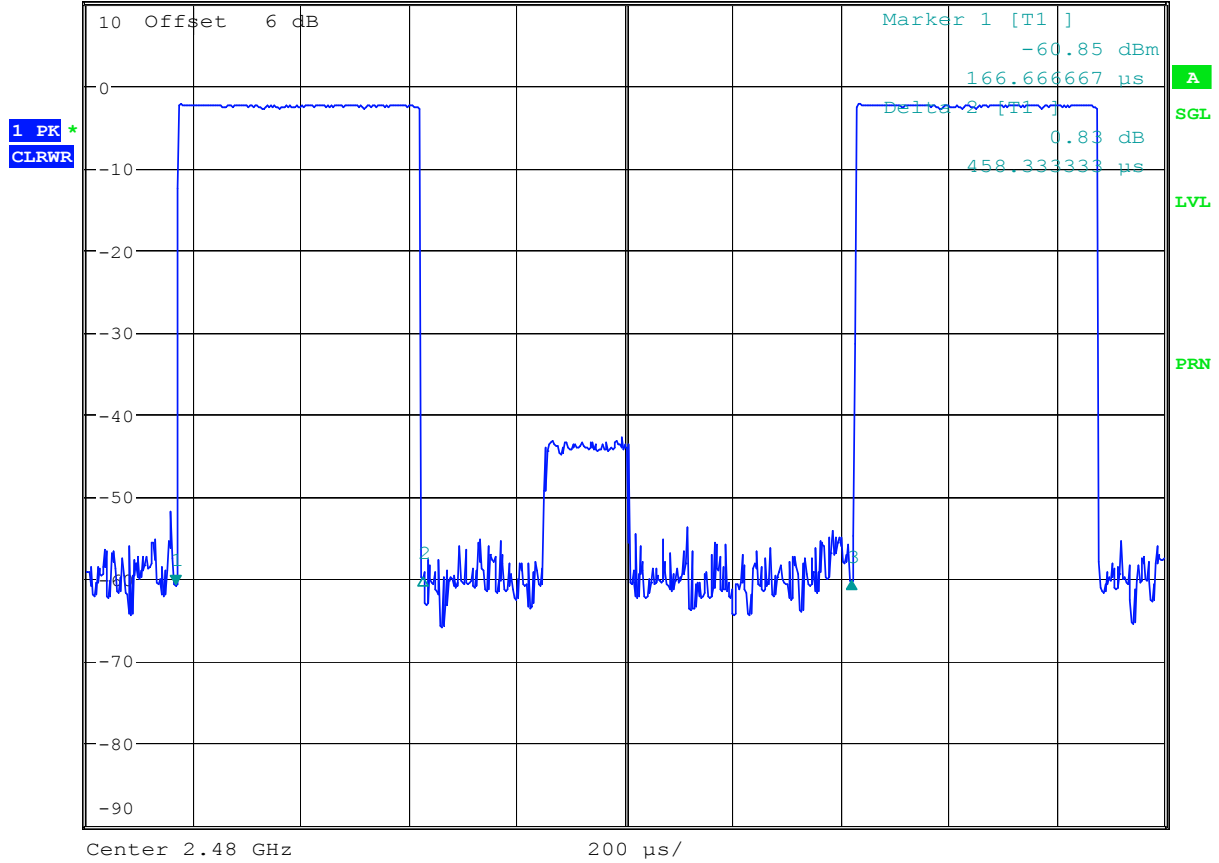
Date: 30.NOV.2005 10:34:47



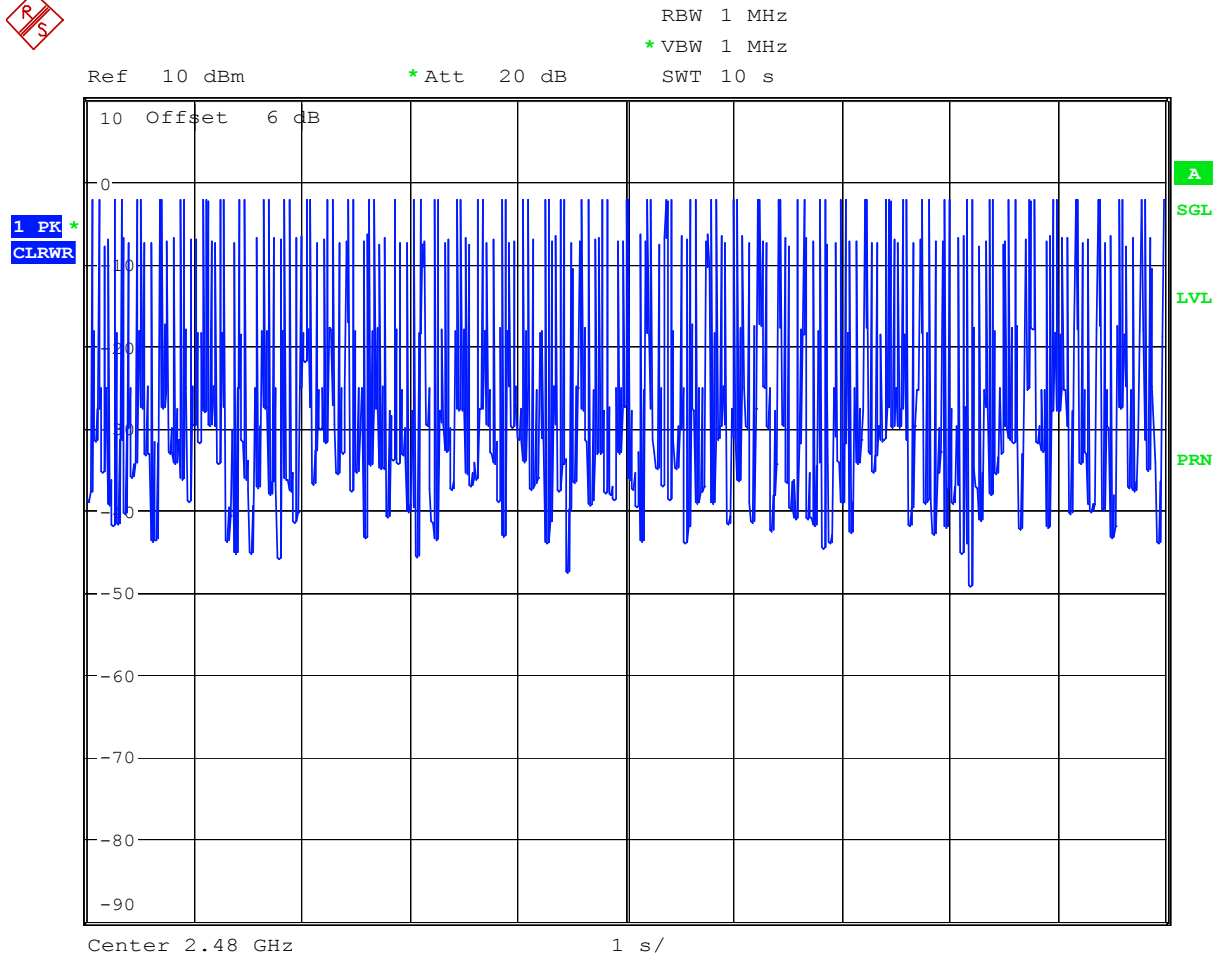
DH1 (CH78)



RBW 1 MHz Delta 3 [T1]
* VBW 1 MHz 0.30 dB
SWT 2 ms 1.253205 ms
Ref 10 dBm * Att 20 dB



Date: 30.NOV.2005 10:24:29



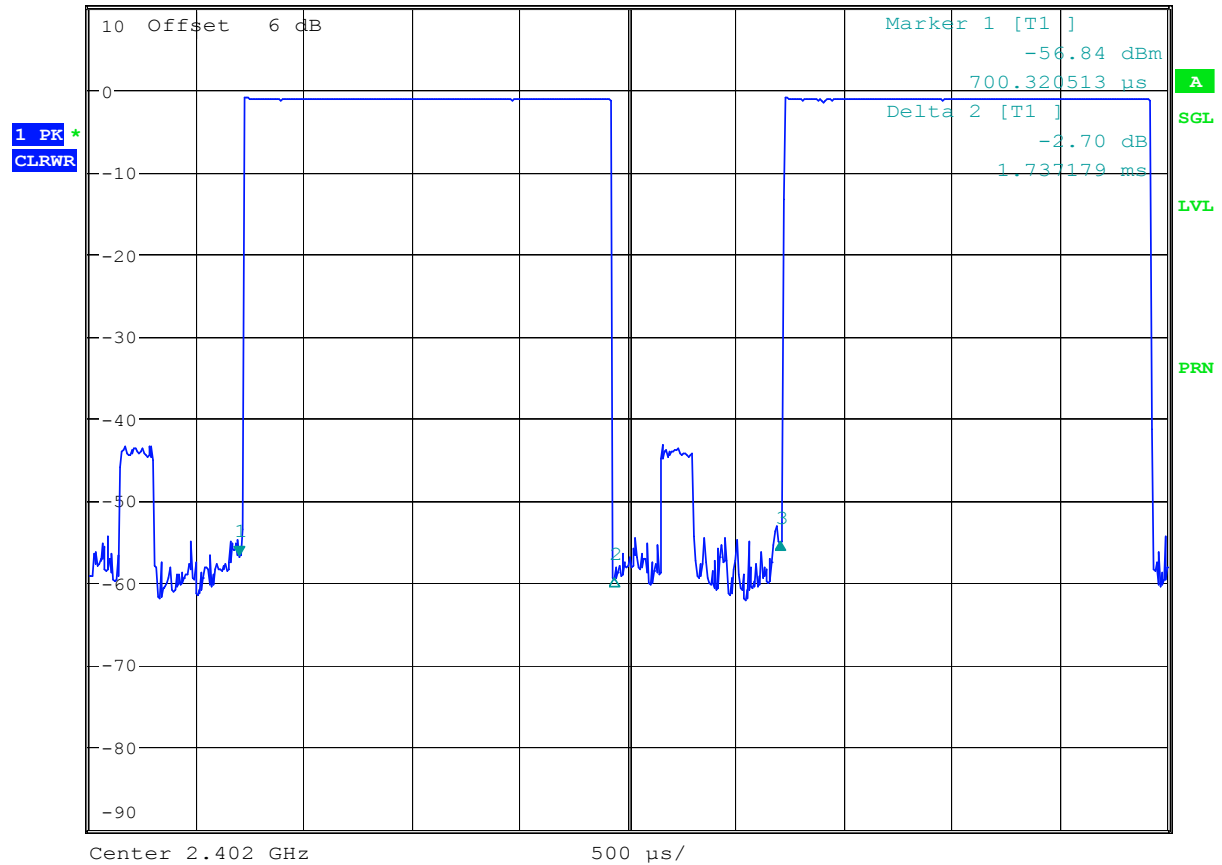
Date: 30.NOV.2005 10:35:21



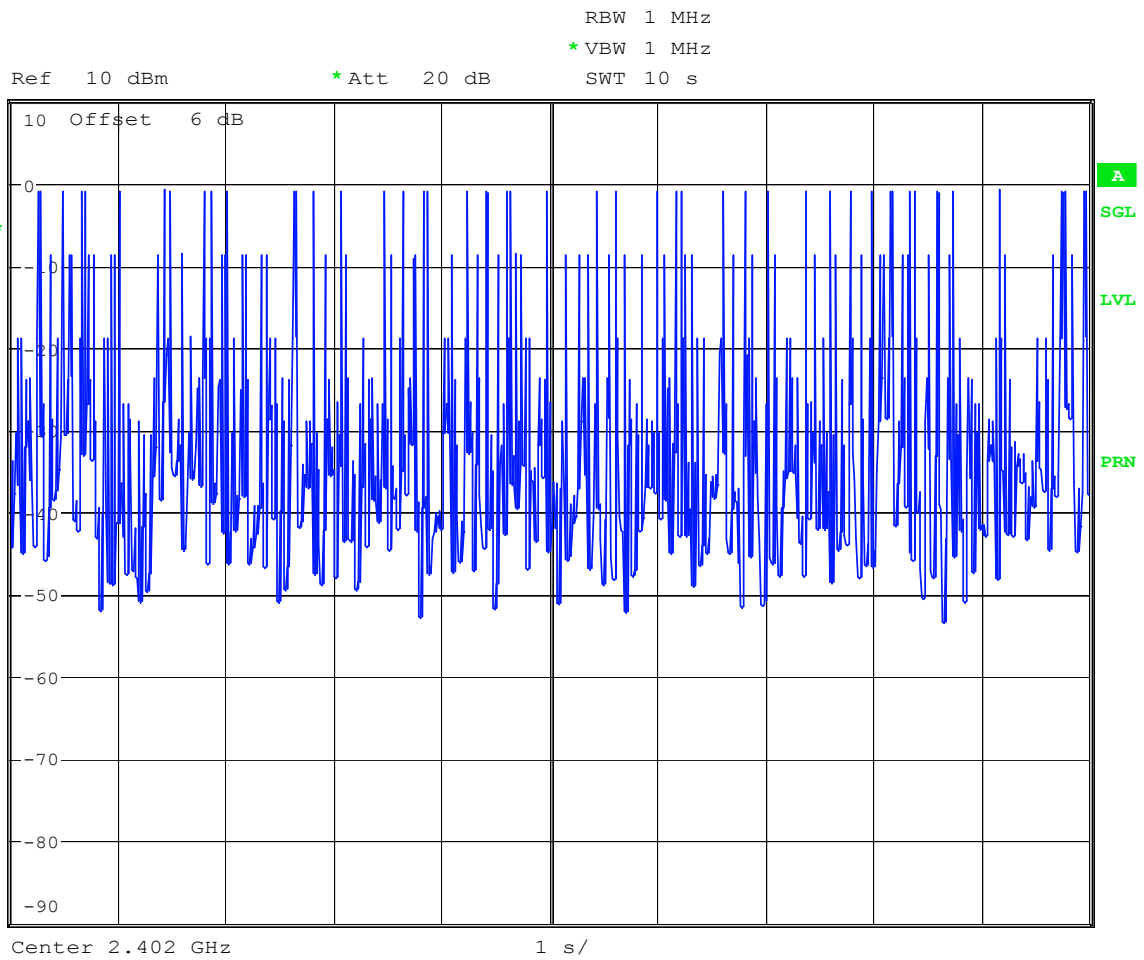
DH3 (CH00)



Ref 10 dBm * Att 20 dB RBW 1 MHz Delta 3 [T1] 1.57 dB
* VBW 1 MHz SWT 5 ms 2.508013 ms



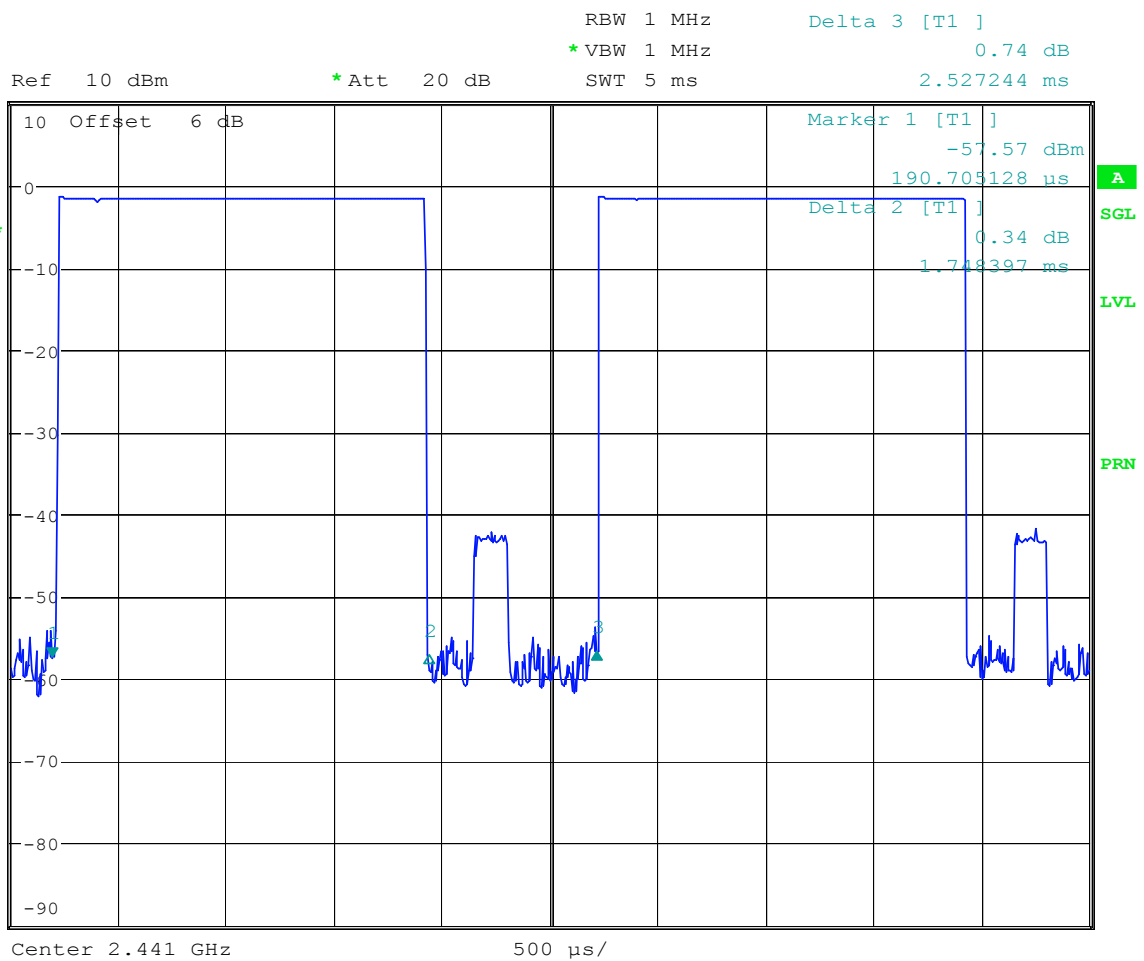
Date: 30.NOV.2005 10:29:55



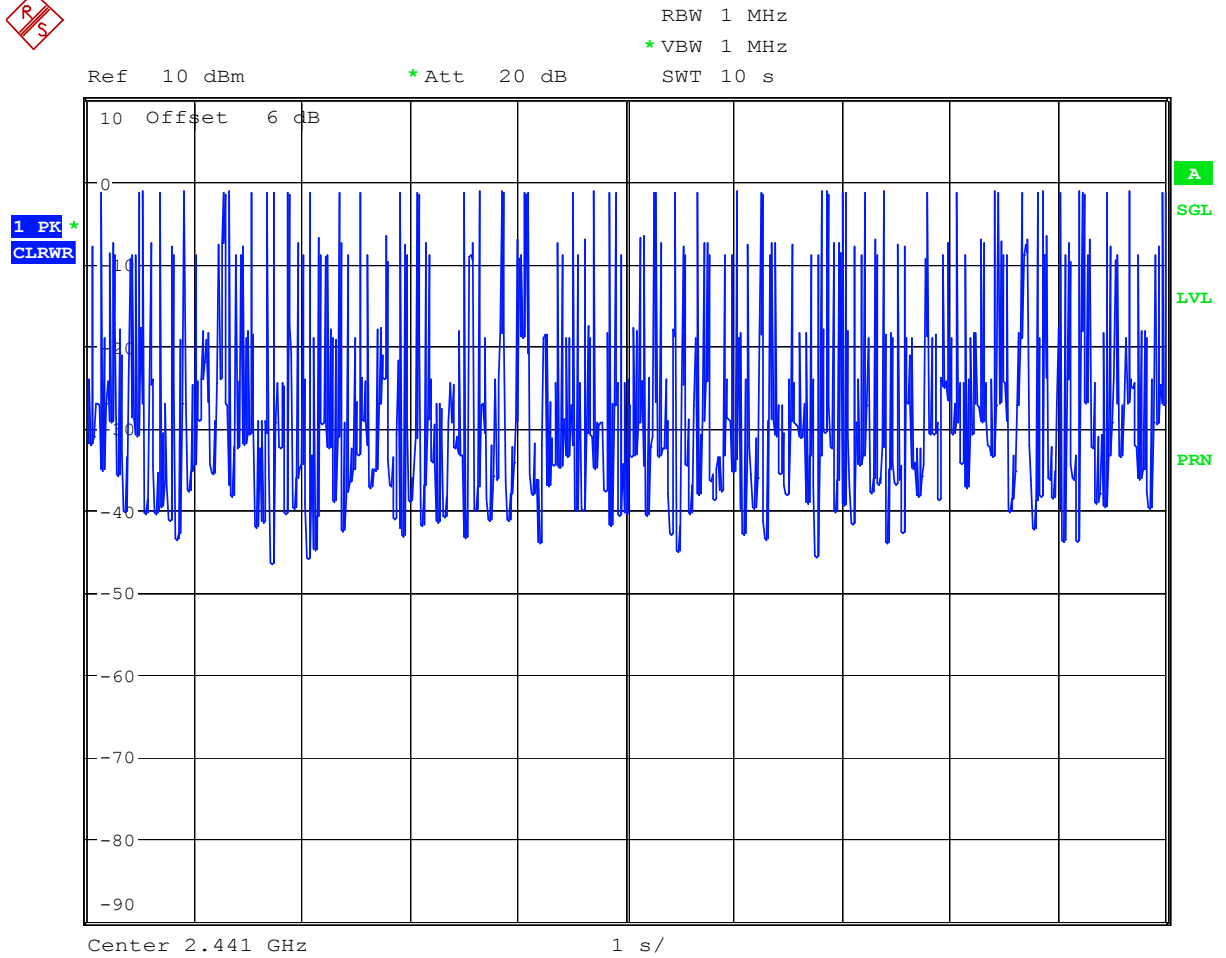
Date: 30.NOV.2005 10:33:54



DH3 (CH39)



Date: 30.NOV.2005 10:27:35



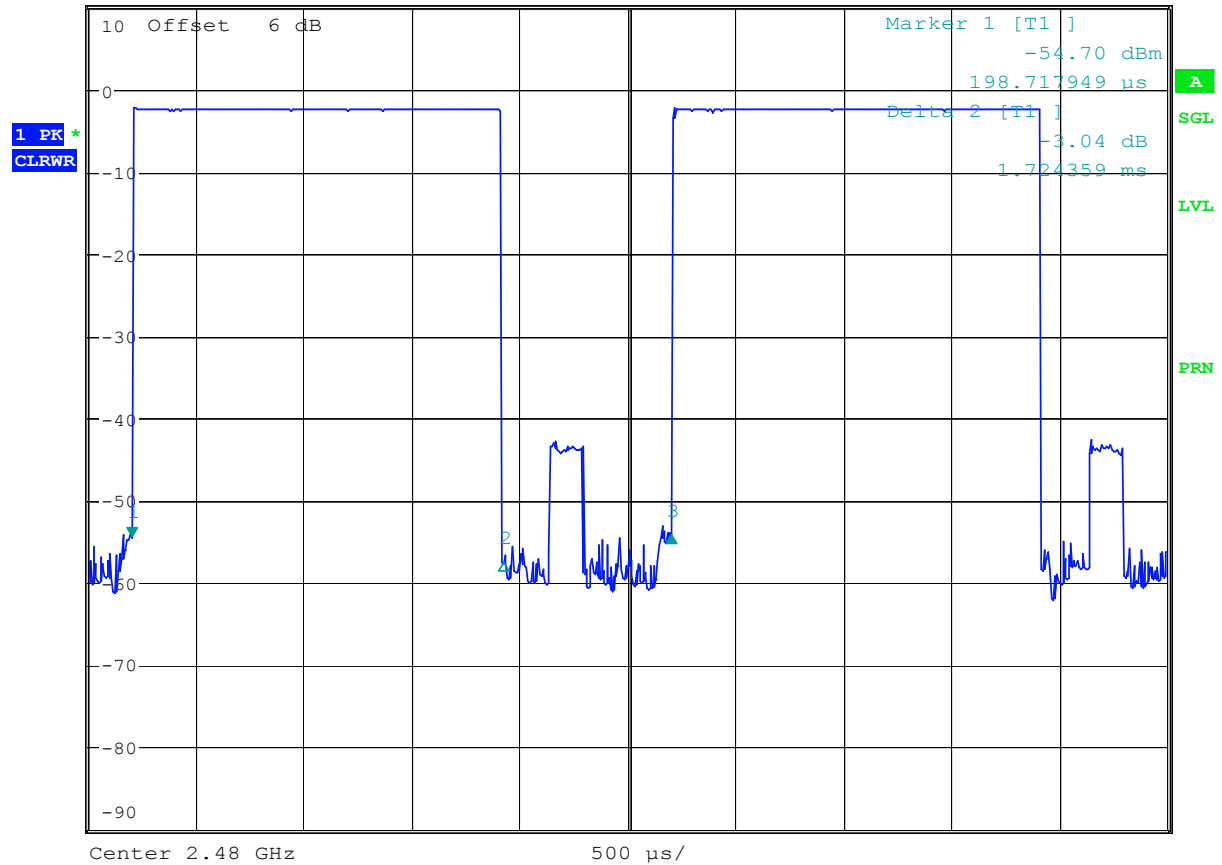
Date: 30.NOV.2005 10:33:28



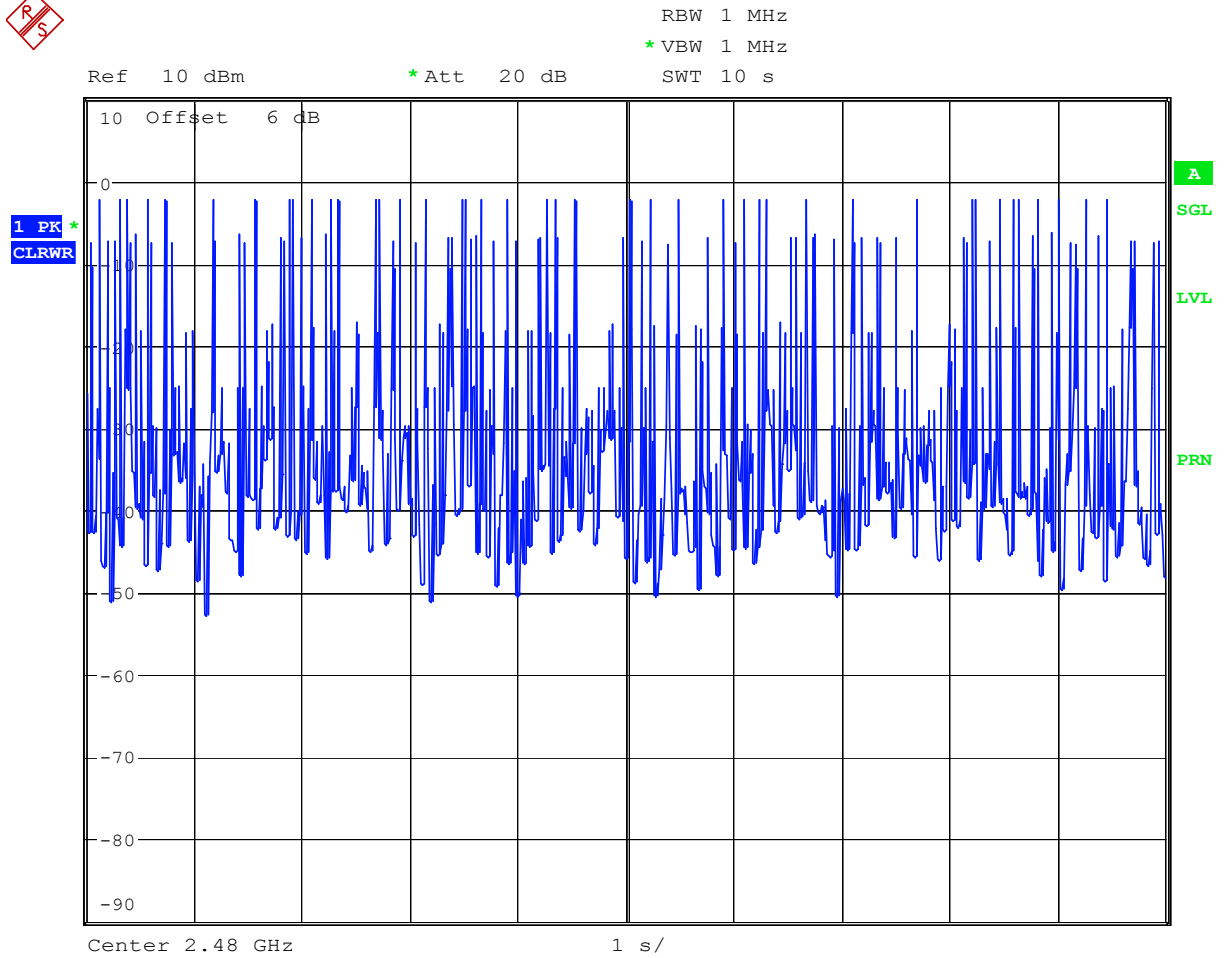
DH3 (CH78)



RBW 1 MHz Delta 3 [T1]
* VBW 1 MHz 0.33 dB
Ref 10 dBm * Att 20 dB SWT 5 ms 2.503205 ms



Date: 30.NOV.2005 10:25:03



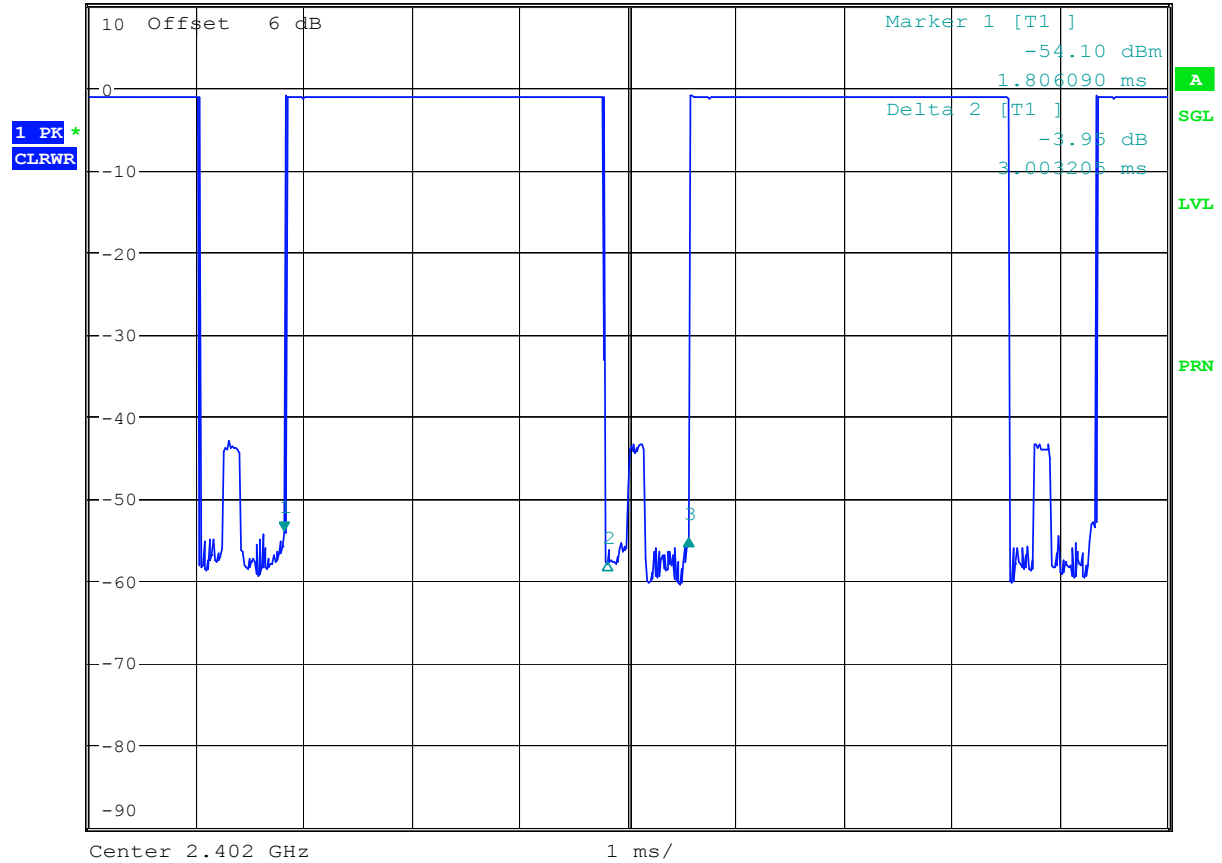
Date: 30.NOV.2005 10:33:01



DH5 (CH00)



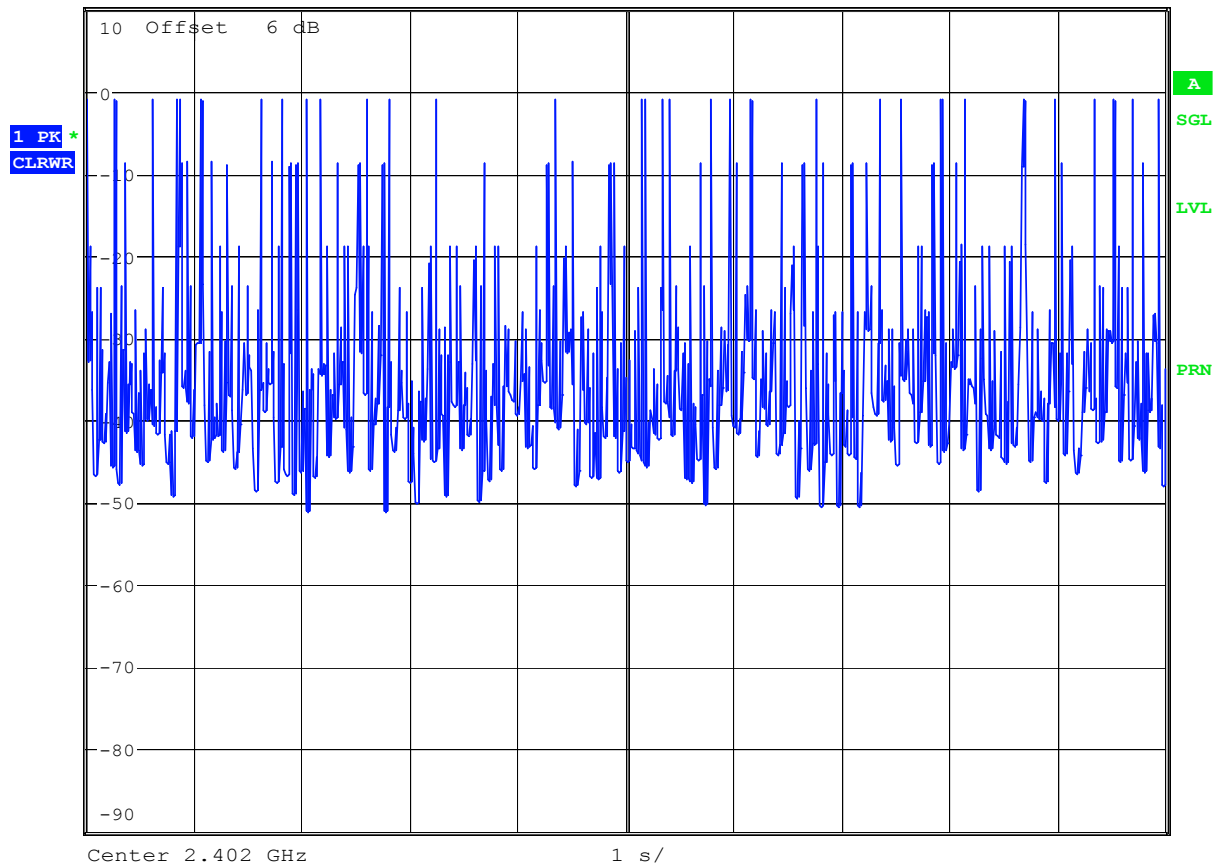
Ref 10 dBm * Att 20 dB RBW 1 MHz Delta 3 [T1] -0.95 dB
* VBW 1 MHz SWT 10 ms 3.758013 ms



Date: 30.NOV.2005 10:30:30



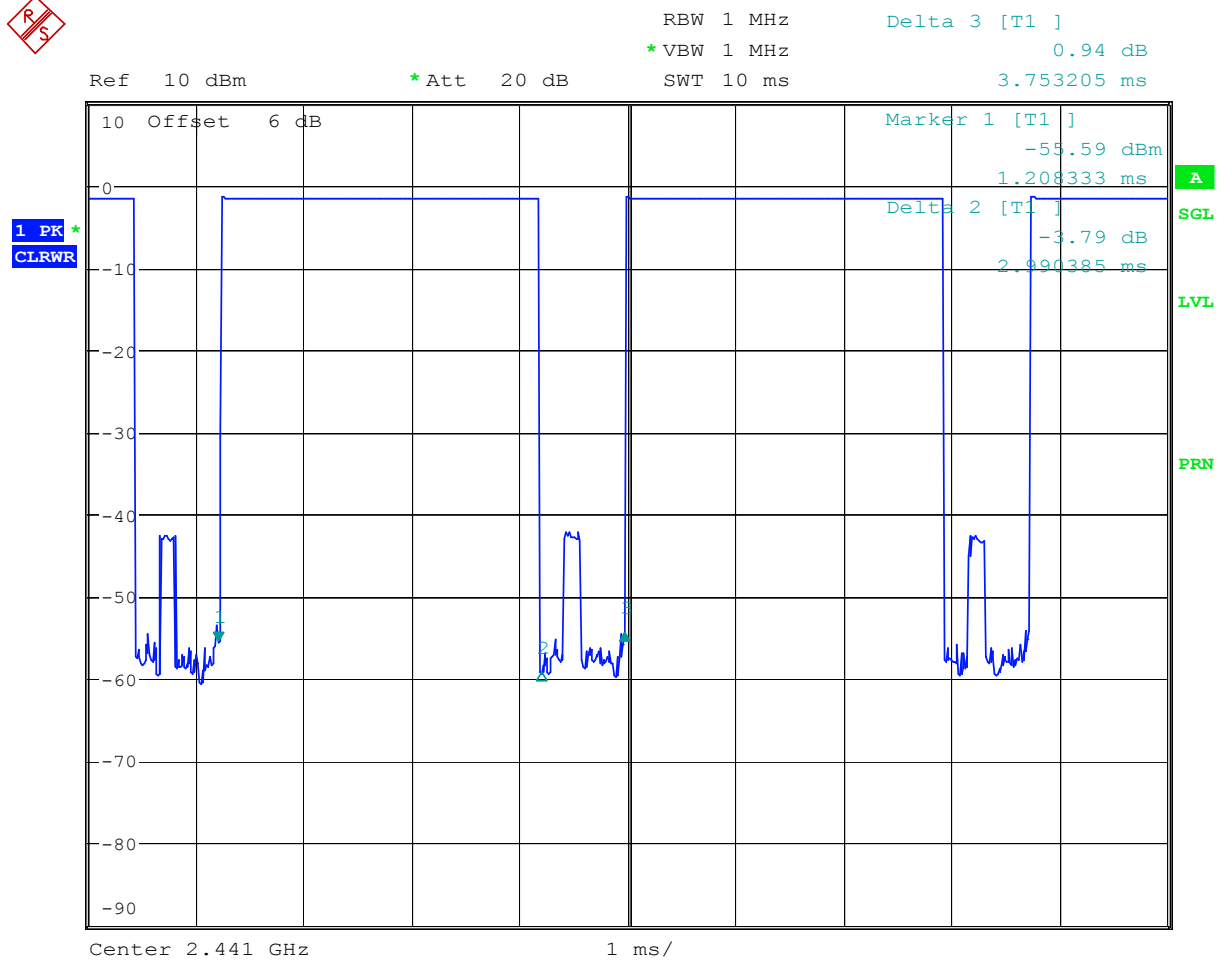
Ref 10 dBm * Att 20 dB RBW 1 MHz
* VBW 1 MHz SWT 10 s



Date: 30.NOV.2005 10:31:36



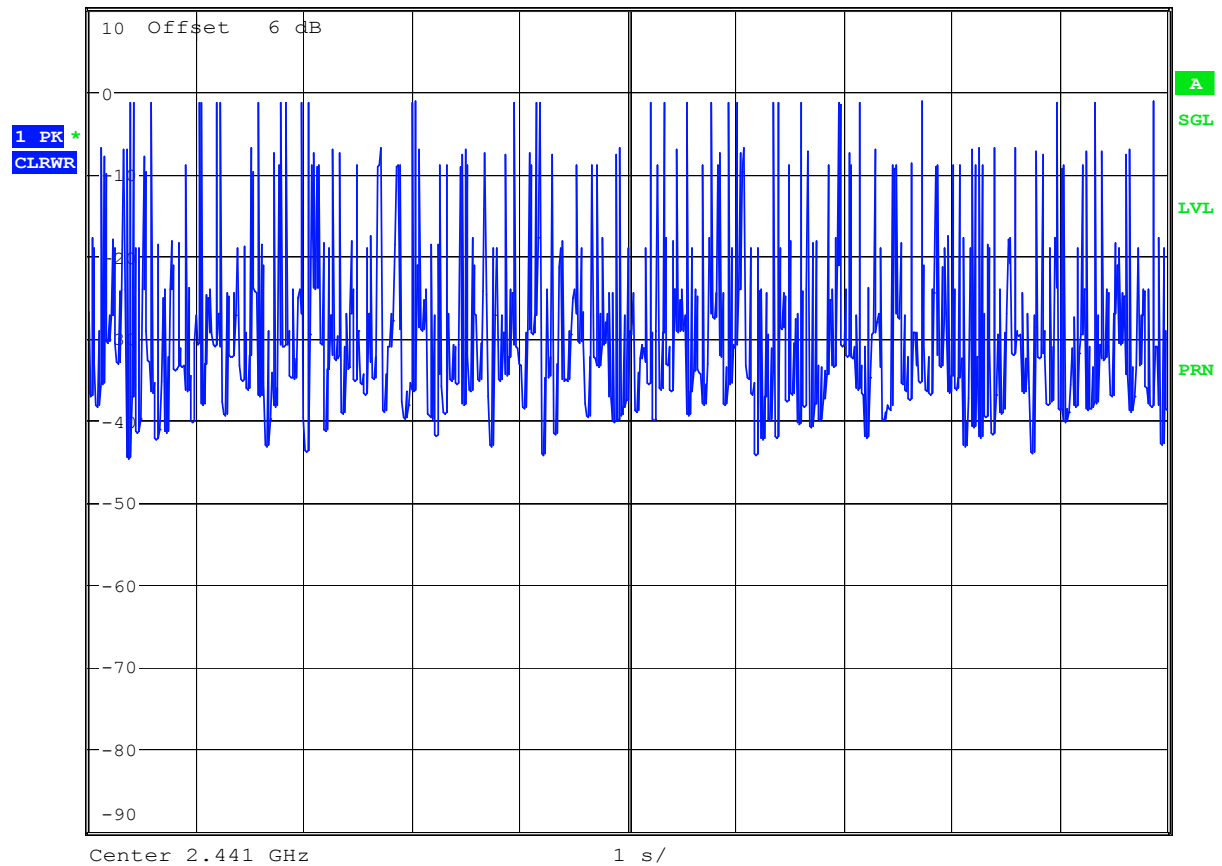
DH5 (CH39)



Date: 30.NOV.2005 10:26:37



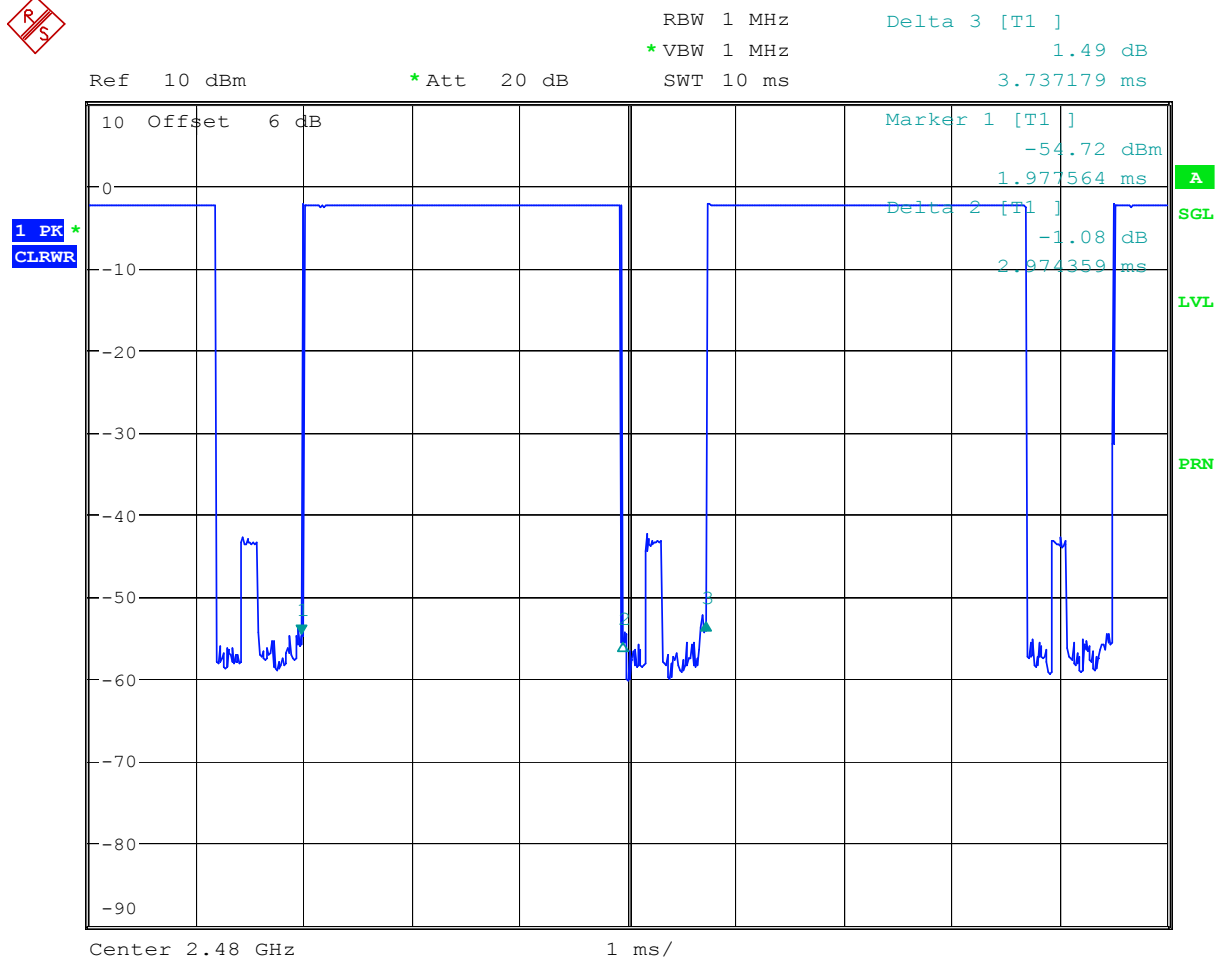
Ref 10 dBm * Att 20 dB RBW 1 MHz
* VBW 1 MHz SWT 10 s



Date: 30.NOV.2005 10:32:01



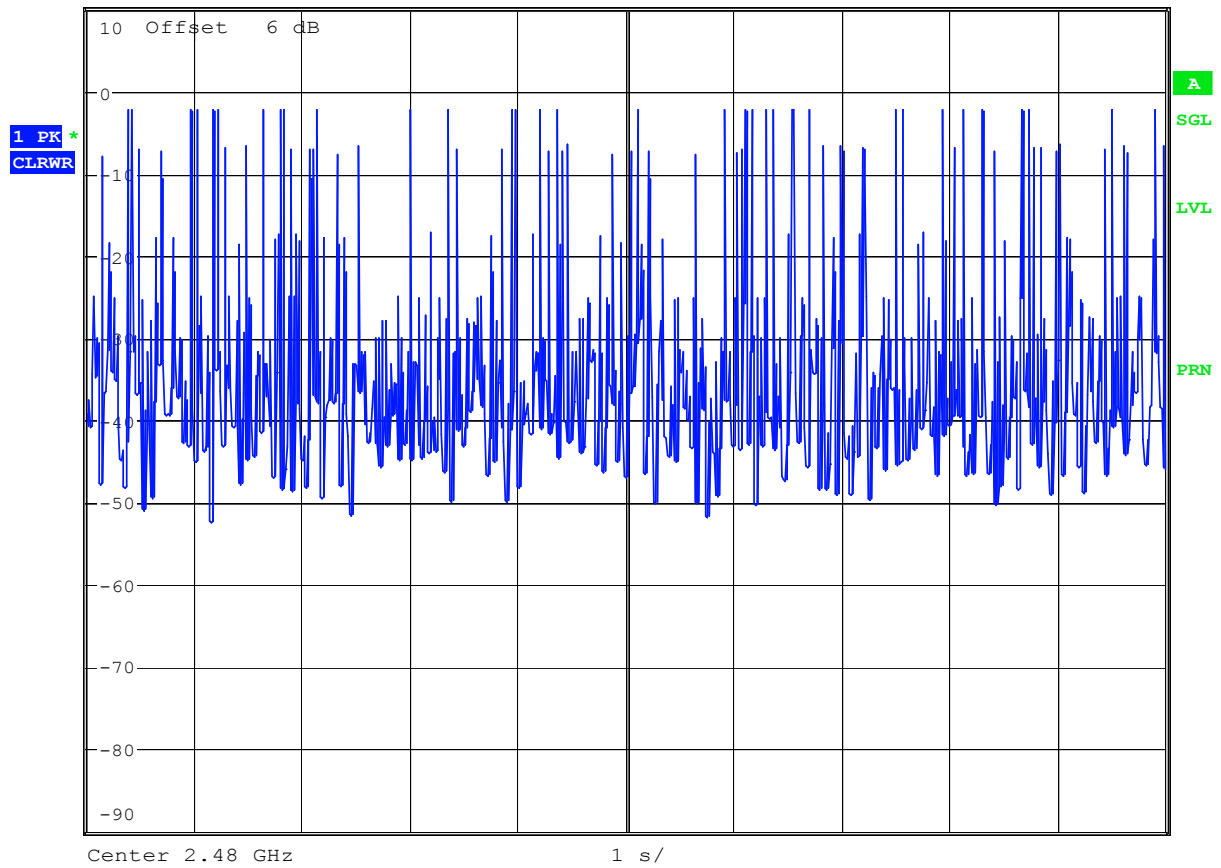
DH5 (CH78)



Date: 30.NOV.2005 10:25:57



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



Date: 30.NOV.2005 10:32:32

5.6 Output Power

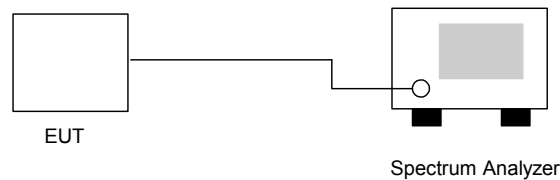
5.6.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.6.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer directly.
2. The center frequency of the spectrum analyzer was set to the fundamental frequency and set RBW to 3MHz and VBW to 3MHz.

5.6.3 Test Setup Layout :



5.6.4 Test Result : See spectrum analyzer plots below

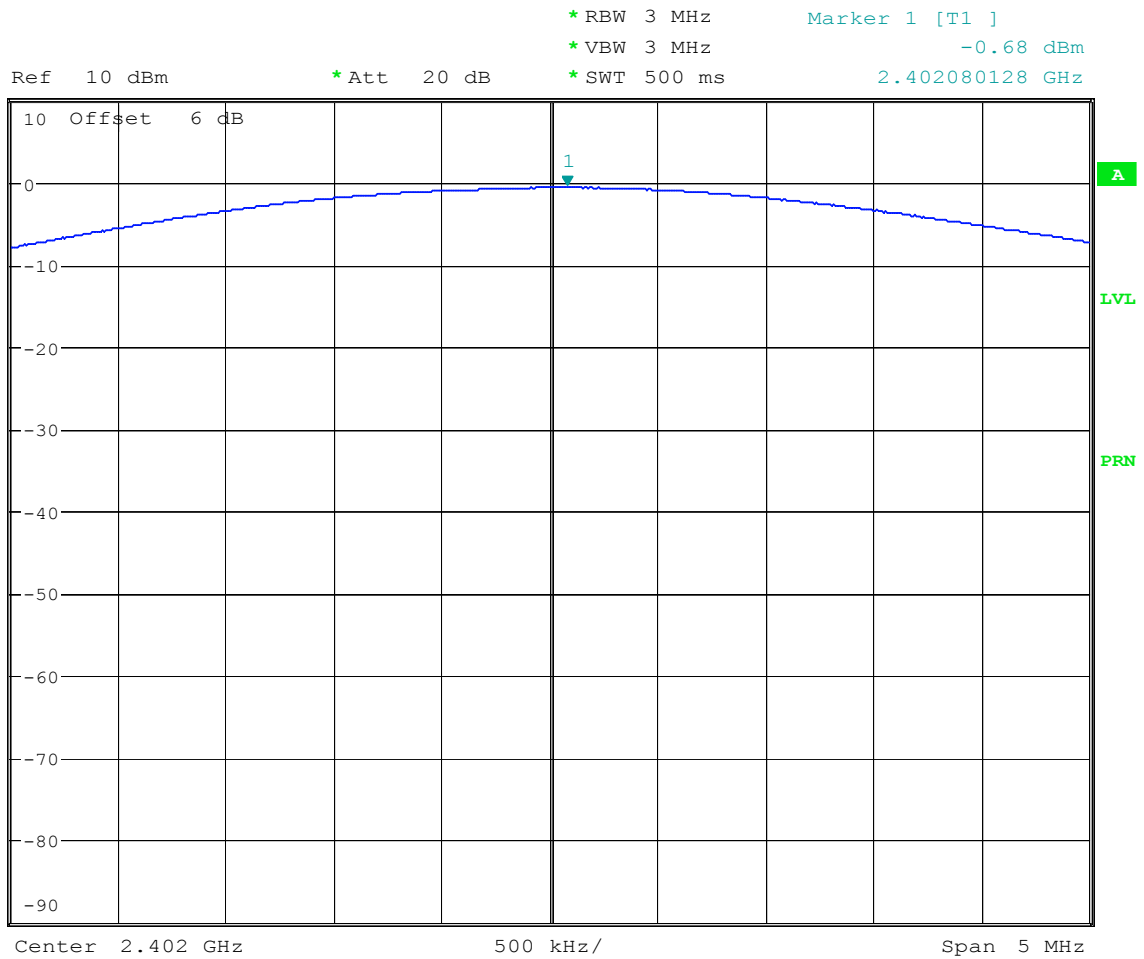
- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)	Plot Ref. No.
00	2402	-0.68	1W/30 dBm	Mode 1
39	2441	-1.18	1W/30 dBm	Mode 2
78	2480	-2.07	1W/30 dBm	Mode 3



5.6.5 Output Power

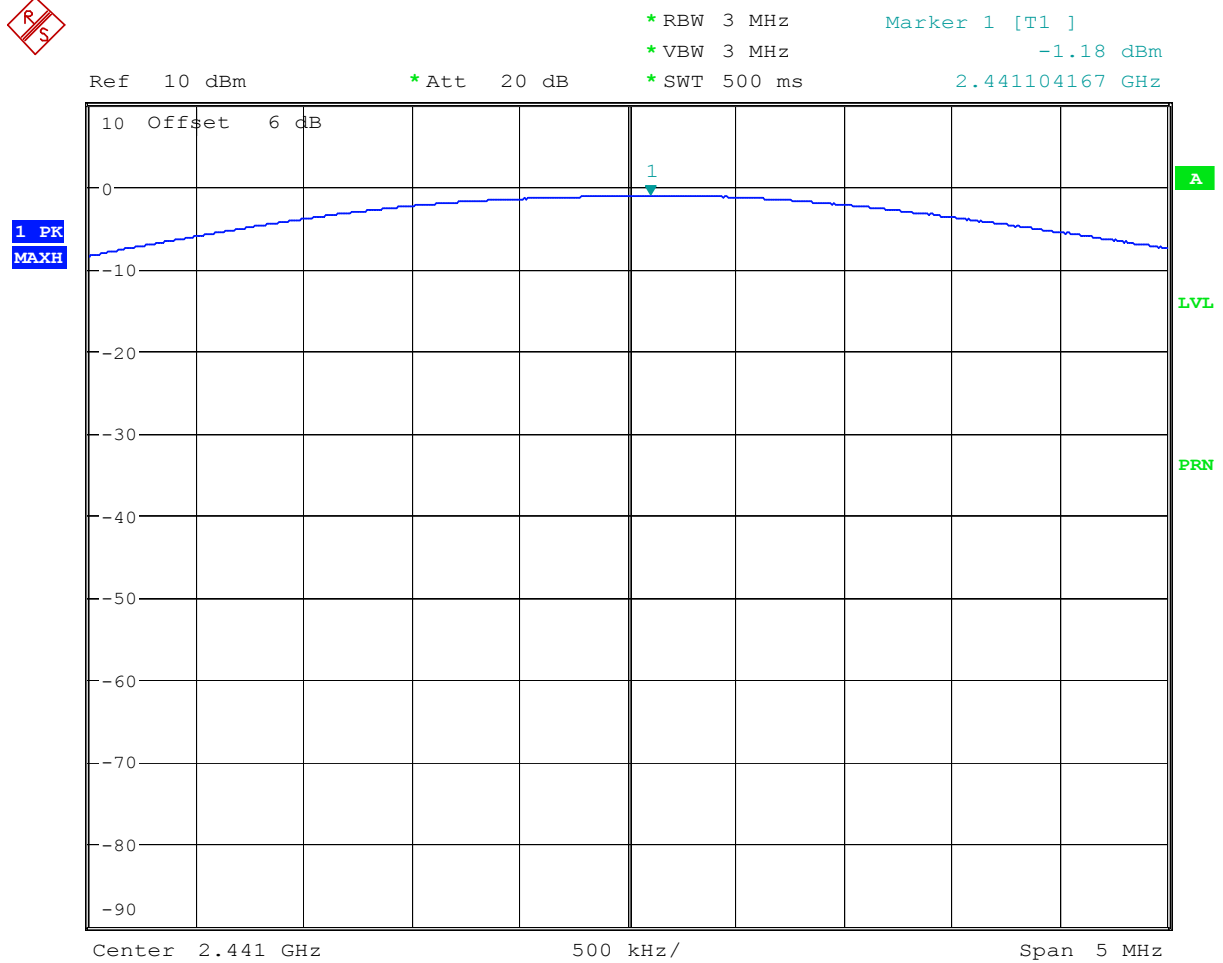
Mode 1: CH00 (2402MHz)



Date: 30.NOV.2005 10:01:28



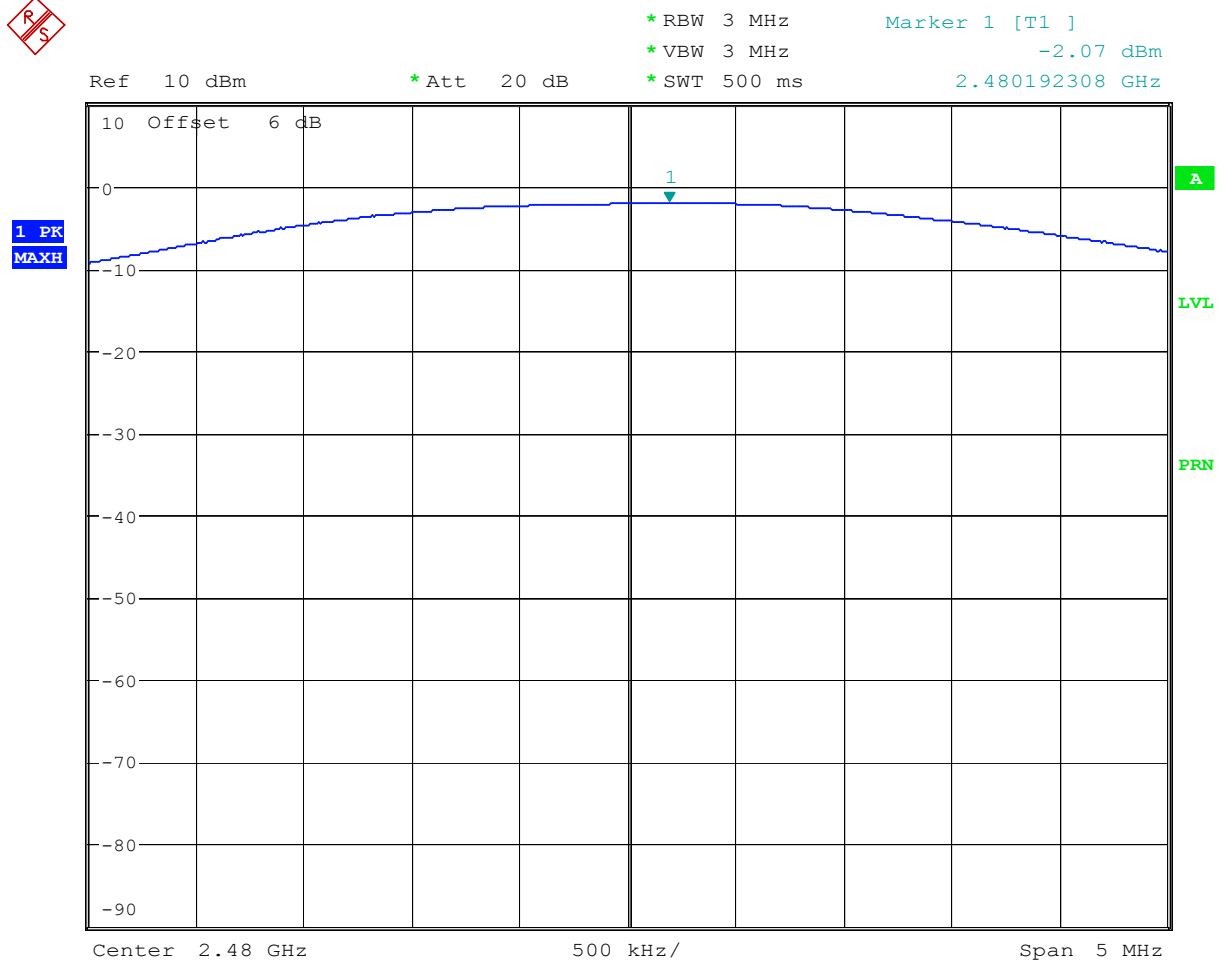
Mode 2: CH39 (2441MHz)



Date: 30.NOV.2005 10:10:33



Mode 3: CH78 (2480MHz)



Date: 30.NOV.2005 10:12:27



5.7 100kHz Bandwidth of Frequency Band Edges

5.7.1 Measuring Instruments :

As described in chapter 6 of this test report.

5.7.2 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 for the conducted measurement, and RBW/VBW=1MHz/1MHz for peak measurement and RBW/VBW=1MHz/300Hz for average measurement in the radiated measurement.
3. The band edges was measured and recorded.

5.7.3 Test Result :

- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay

Test Result in lower band (Channel 00) : PASS

Test Result in higher band(Channel 78) : PASS

5.7.4 Note on Band edge Emission

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)	Detect Mode
2390.00	62.70	-11.30	74.00	63.41	30.48	4.26	35.46	199	0	Peak
2390.00	38.53	-15.47	54.00	39.24	30.48	4.26	35.46	100	360	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)	Detect Mode
2390.00	60.98	-13.02	74.00	61.69	30.48	4.26	35.46	200	0	Peak
2390.00	38.62	-15.38	54.00	39.33	30.48	4.26	35.46	100	104	Average

**CH78 (Horizontal)**

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Detect
(MHz)	(dBuV/m)	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Mode
		(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2483.50	72.10	-1.90	74.00	72.84	30.41	4.36	35.51	100	0	Peak
2483.50	47.00	-7.00	54.00	47.74	30.41	4.36	35.51	100	360	Average

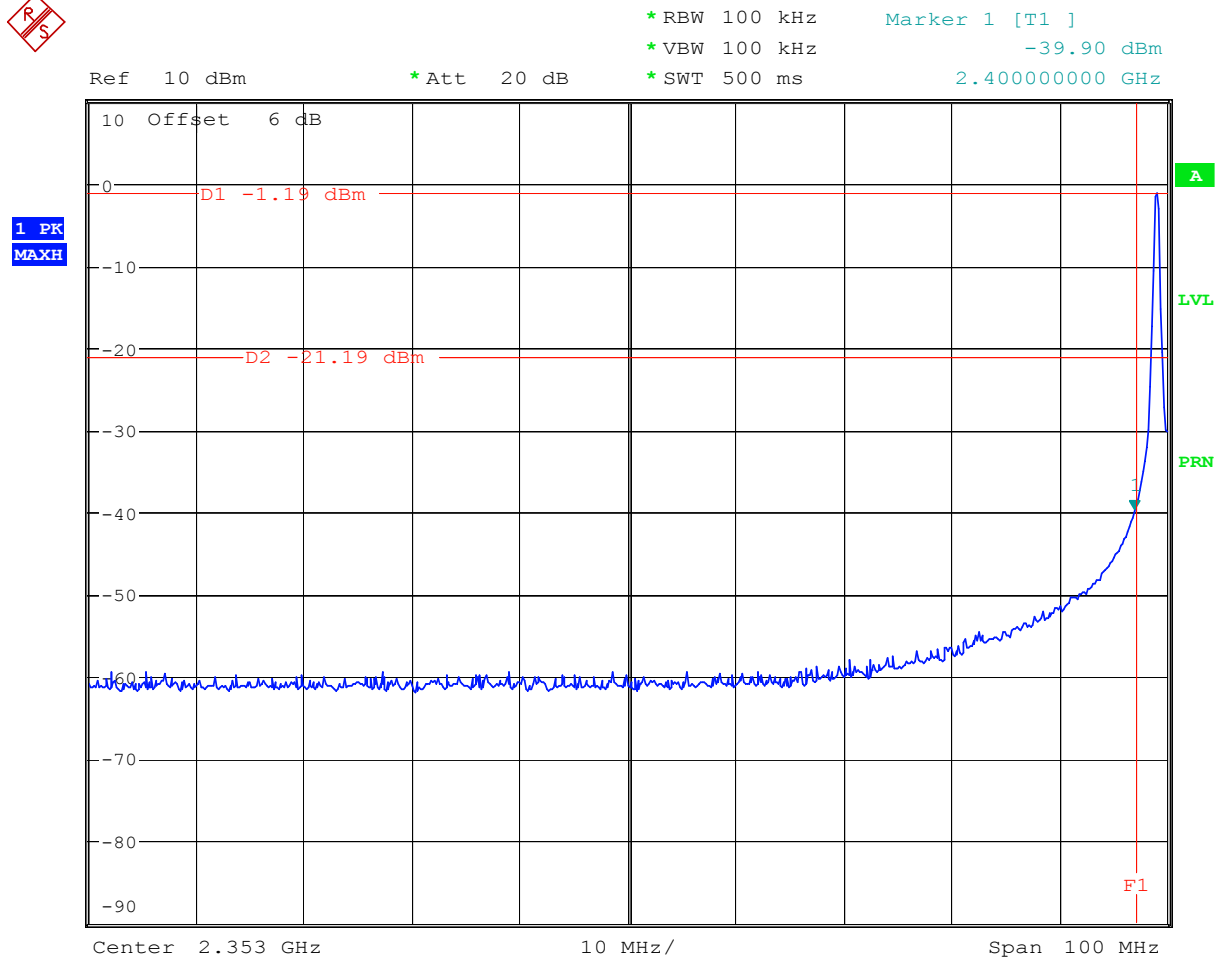
CH78 (Vertical)

Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Detect
(MHz)	(dBuV/m)	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Mode
		(dB)	(dBuV/m)	(dBuV)	(dB)	(dB)	(dB)	(cm)	(deg)	
2483.50	70.49	-3.51	74.00	71.23	30.41	4.36	35.51	200	360	Peak
2483.50	48.75	-5.25	54.00	49.49	30.41	4.36	35.51	100	102	Average



5.7.5 Frequency Band Edge

Mode 1: CH00 (2402 MHz)



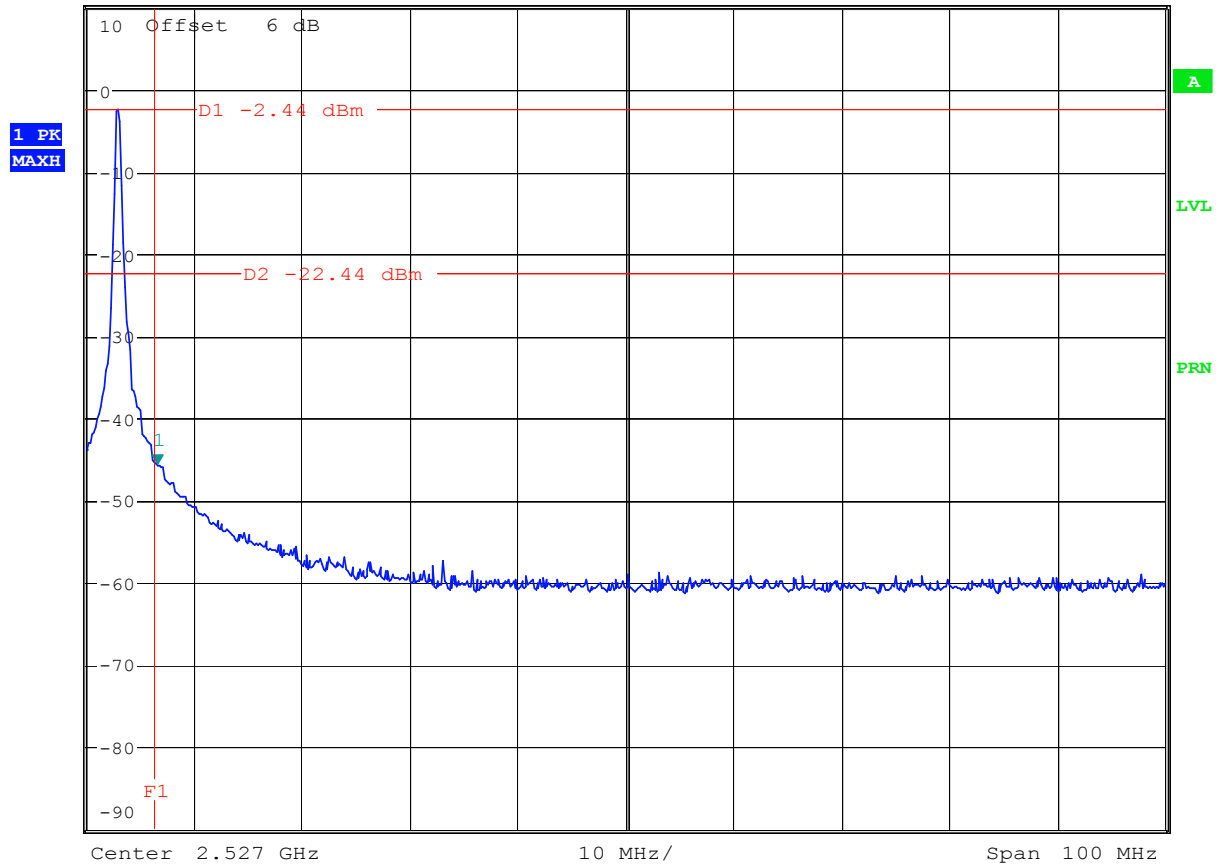
Date: 30.NOV.2005 10:05:44



Mode 3: CH78 (2480 MHz)



Ref 10 dBm * Att 20 dB * RBW 100 kHz Marker 1 [T1]
* VBW 100 kHz -45.69 dBm
* SWT 500 ms 2.483500000 GHz



Date: 30.NOV.2005 10:21:10

5.8 Conducted Emission

5.8.1 Measuring Instruments

As described in chapter 6 of this test Report.

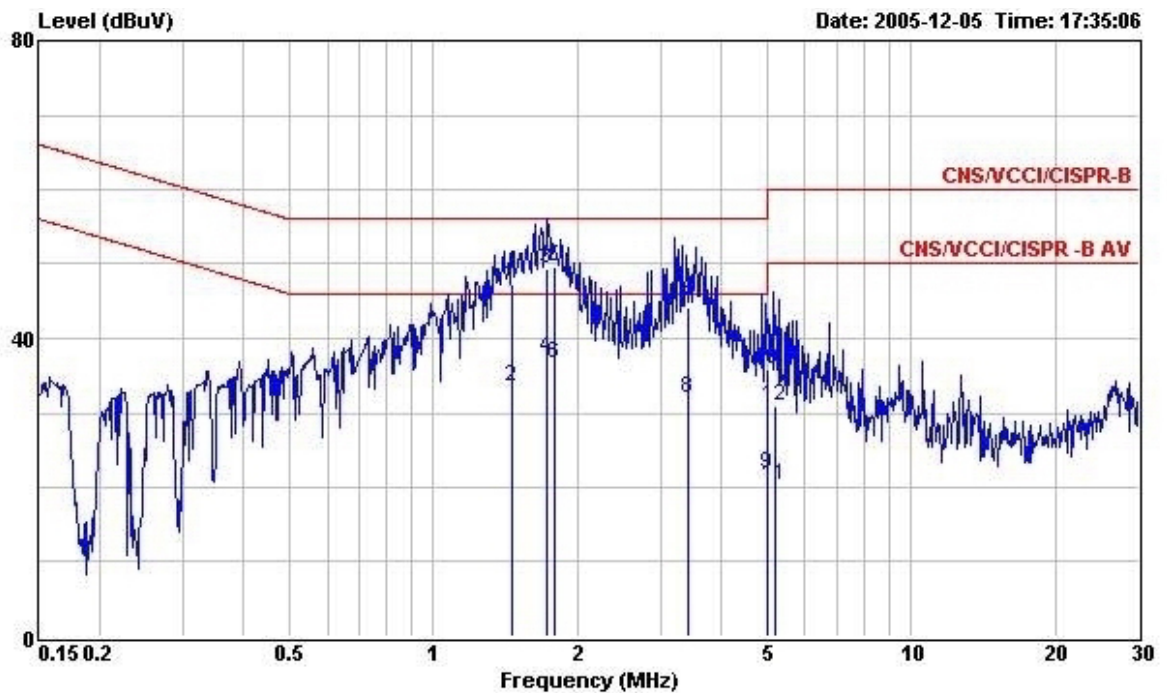
5.8.2 Test Procedures :

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of a line impedance stabilization network (LISN).
- c. All the support units are connected to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

5.8.3 Test Data Test Mode 1

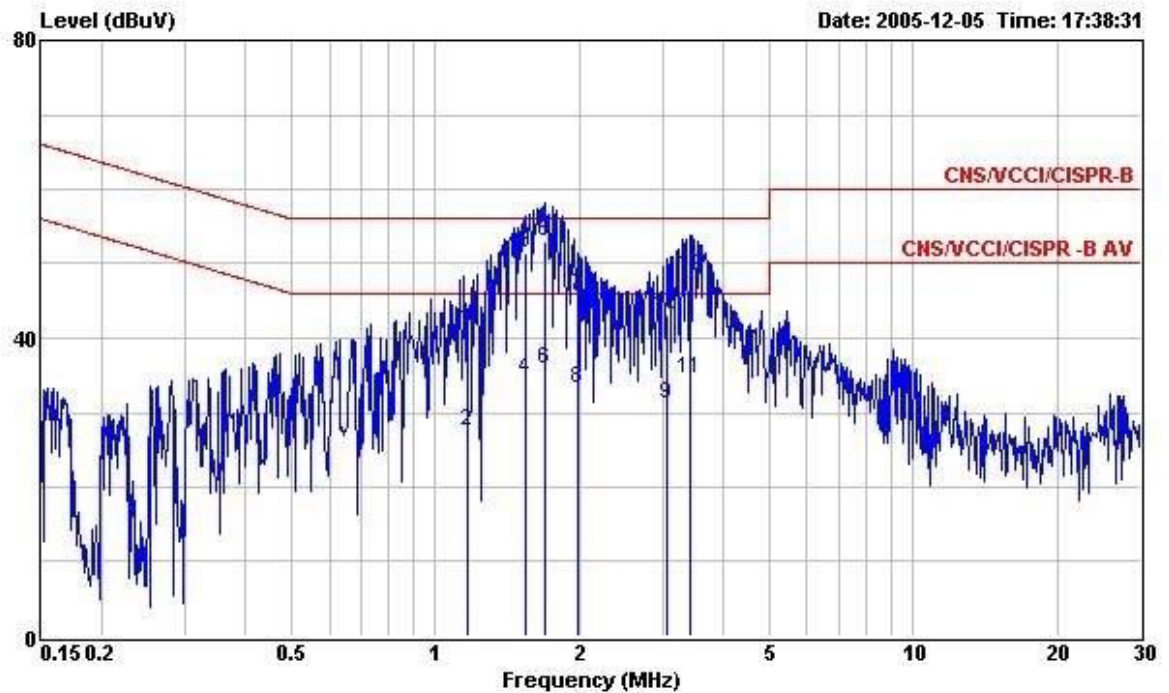
- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay
- Test Mode : Mode 1

■ 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 200505 LINE
 EUT : GSM/GPRS/WCDMA Mobile Phone
 : with Bluetooth
 Power : 120V/60Hz
 Model : FD5N0707
 Memo : PCS1900 IDLE + BT LINK+CHARGER+MP3 PLAY
 Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	1.460	47.37	-8.63	56.00	47.15	0.11	0.11	QP
2	1.460	33.44	-12.56	46.00	33.22	0.11	0.11	Average
3	1.731	49.28	-6.72	56.00	49.05	0.11	0.12	QP
4	1.731	37.39	-8.61	46.00	37.16	0.11	0.12	Average
5	1.790	49.60	-6.40	56.00	49.37	0.11	0.12	QP
6	1.790	36.72	-9.28	46.00	36.49	0.11	0.12	Average
7	3.410	44.27	-11.73	56.00	43.93	0.19	0.15	QP
8	3.410	32.01	-13.99	46.00	31.67	0.19	0.15	Average
9	4.984	21.86	-24.14	46.00	21.47	0.21	0.18	Average
10	4.984	35.79	-20.21	56.00	35.40	0.21	0.18	QP
11	5.170	20.30	-29.70	50.00	19.90	0.21	0.19	Average
12	5.170	30.95	-29.05	60.00	30.55	0.21	0.19	QP



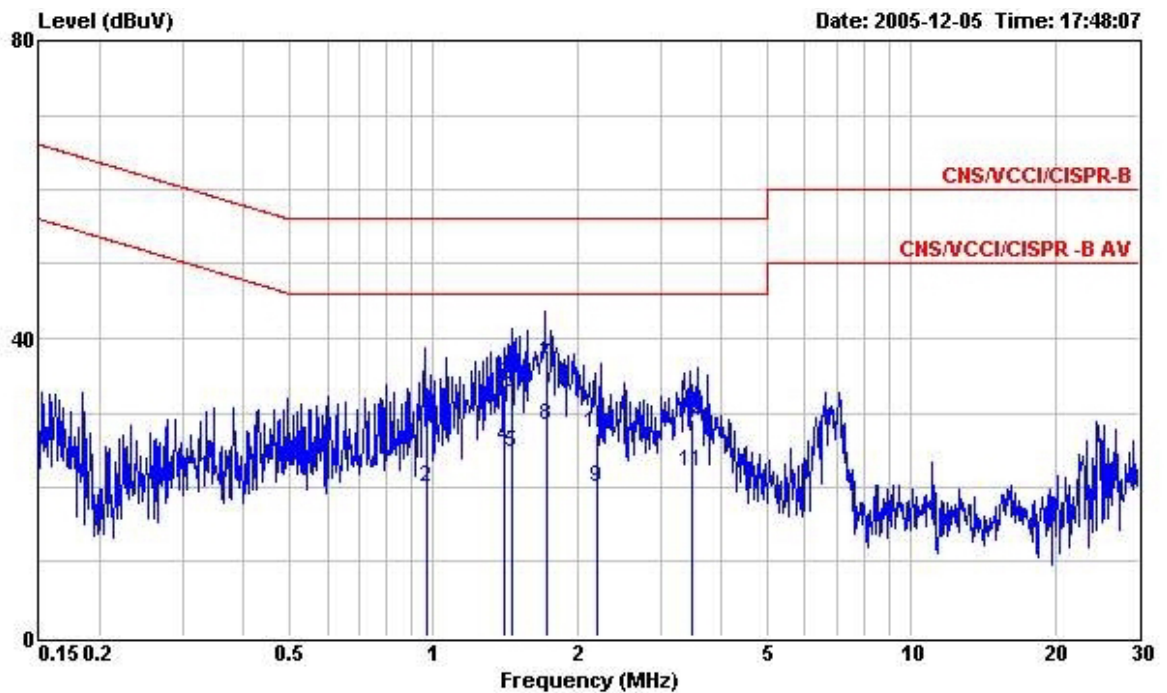
Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200505 NEUTRAL
 EUT : GSM/GPRS/WCDMA Mobile Phone
 : with Bluetooth
 Power : 120V/60Hz
 Model : FD5N0707
 Memo : PCS1900 IDLE + BT LINK+CHARGER+MP3 PLAY
 Memo :

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	1.165	41.38	-14.62	56.00	41.05	0.23	0.10	QP
2	1.165	27.59	-18.41	46.00	27.26	0.23	0.10	Average
3	1.540	51.46	-4.54	56.00	51.12	0.23	0.11	QP
4	1.540	34.60	-11.40	46.00	34.26	0.23	0.11	Average
5	1.699	53.07	-2.93	56.00	52.72	0.23	0.12	QP
6	1.699	35.73	-10.27	46.00	35.38	0.23	0.12	Average
7	1.984	45.73	-10.27	56.00	45.38	0.23	0.12	QP
8	1.984	33.37	-12.63	46.00	33.02	0.23	0.12	Average
9	3.066	31.25	-14.75	46.00	30.88	0.23	0.14	Average
10	3.066	43.15	-12.85	56.00	42.78	0.23	0.14	QP
11	3.420	34.42	-11.58	46.00	34.04	0.23	0.15	Average
12	3.420	48.44	-7.56	56.00	48.06	0.23	0.15	QP

5.8.4 Test Data Test Mode 2

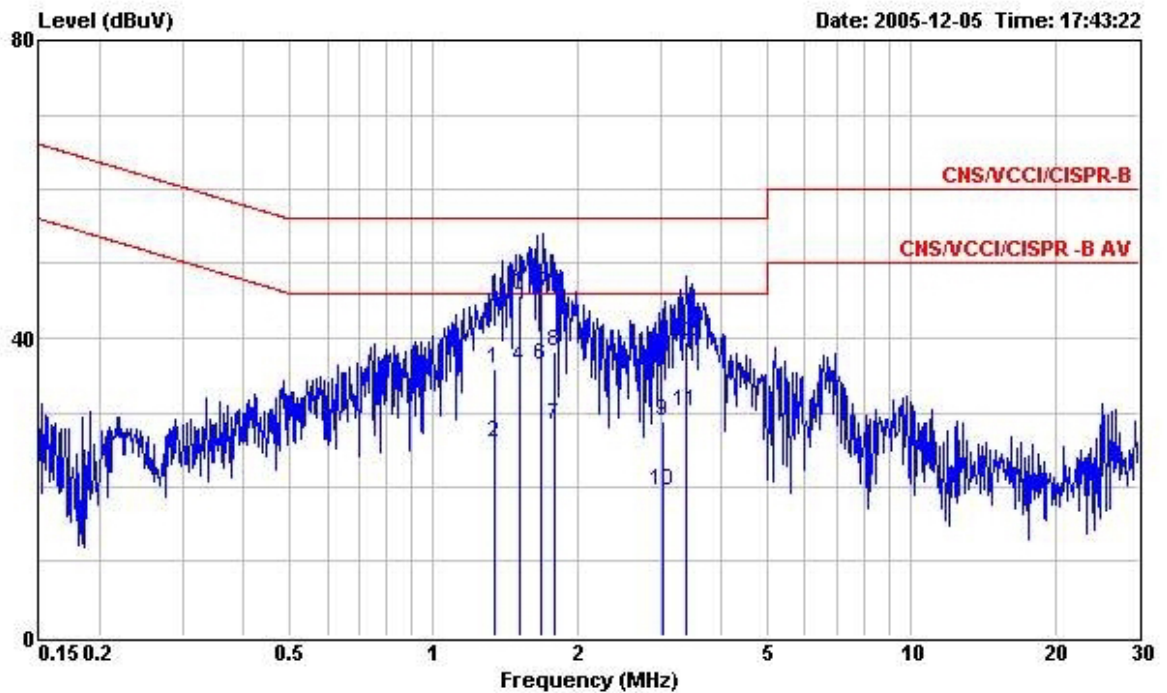
- Temperature: 24°C
- Relative Humidity: 54%
- Test Engineer : Jay
- Test Mode : Mode 1

■ 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 200505 LINE
 EUT : GSM/GPRS/WCDMA Mobile Phone
 : with Bluetooth
 Power : 120V/60Hz
 Model : FD5N0707
 Memo : PCS1900 IDLE + BT LINK+CAMERA
 Memo : +CHARGER

	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.973	28.44	-27.56	56.00	28.23	0.11	0.10	QP
2	0.973	19.93	-26.07	46.00	19.72	0.11	0.10	Average
3	1.411	33.73	-22.27	56.00	33.51	0.11	0.11	QP
4	1.411	25.33	-20.67	46.00	25.11	0.11	0.11	Average
5	1.465	24.76	-21.24	46.00	24.54	0.11	0.11	Average
6	1.465	32.82	-23.18	56.00	32.60	0.11	0.11	QP
7	1.720	36.35	-19.65	56.00	36.12	0.11	0.12	QP
8	1.720	28.30	-17.70	46.00	28.07	0.11	0.12	Average
9	2.211	19.89	-26.11	46.00	19.63	0.13	0.13	Average
10	2.211	27.19	-28.81	56.00	26.93	0.13	0.13	QP
11	3.476	22.11	-23.89	46.00	21.77	0.19	0.15	Average
12	3.476	29.05	-26.95	56.00	28.71	0.19	0.15	QP



Site : CO01-HY
 Condition : CNS/VCCI/CISPR-B 2001/004 200505 NEUTRAL
 EUT : GSM/GPRS/WCDMA Mobile Phone
 : with Bluetooth
 Power : 120V/60Hz
 Model : FD5N0707
 Memo : PCS1900 IDLE + BT LINK+CAMERA
 Memo : +CHARGER

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	1.340	35.76	-20.24	56.00	35.42	0.23	0.11	QP
2	1.340	25.99	-20.01	46.00	25.65	0.23	0.11	Average
3	1.523	45.67	-10.33	56.00	45.33	0.23	0.11	QP
4	1.523	36.18	-9.82	46.00	35.84	0.23	0.11	Average
5	1.687	46.05	-9.95	56.00	45.70	0.23	0.12	QP
6	1.687	36.44	-9.56	46.00	36.09	0.23	0.12	Average
7	1.790	28.30	-17.70	46.00	27.95	0.23	0.12	Average
8	1.790	38.24	-17.76	56.00	37.89	0.23	0.12	QP
9	3.036	28.87	-27.13	56.00	28.50	0.23	0.14	QP
10	3.036	19.53	-26.47	46.00	19.16	0.23	0.14	Average
11	3.383	30.25	-15.75	46.00	29.87	0.23	0.15	Average
12	3.383	39.54	-16.46	56.00	39.16	0.23	0.15	QP

5.9 Radiated Emission Measurement

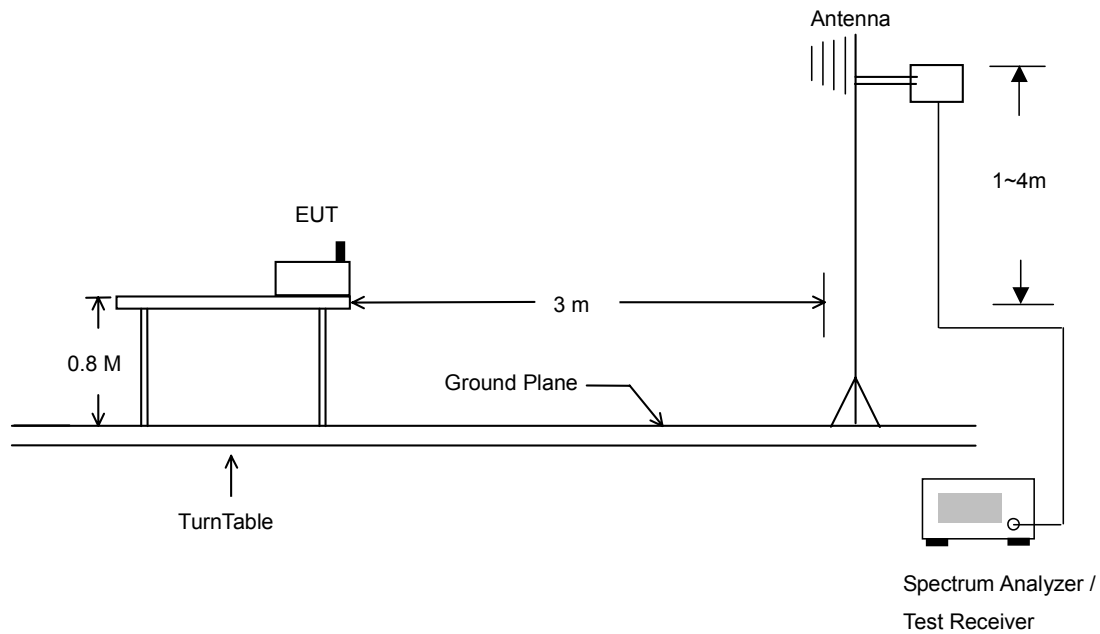
5.9.1 Measuring Instruments

As described in chapter 6 of this Report.

5.9.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. 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.
5. 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.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. 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.
8. 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

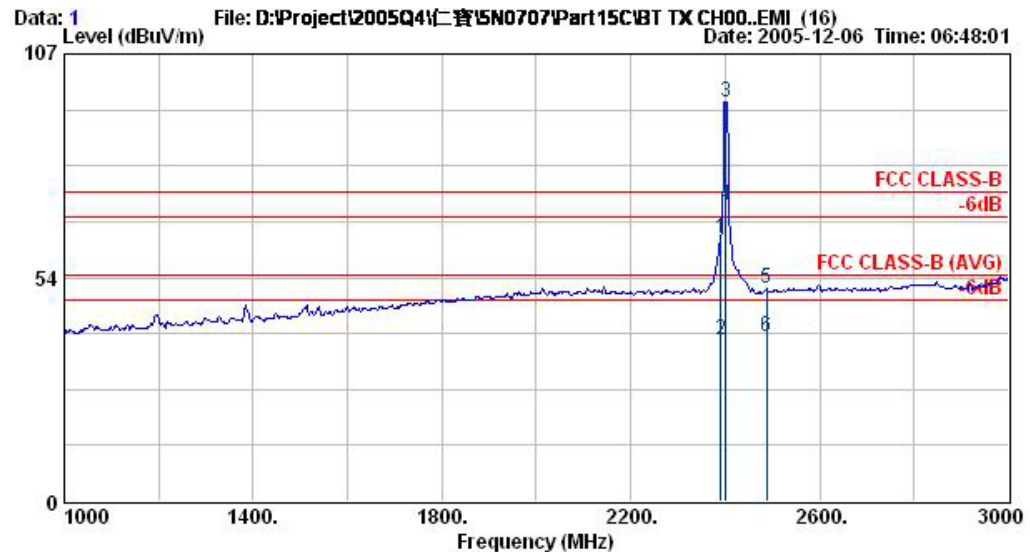




5.9.4 Test Data

- Temperature : 30 °C
- Relating Humidity : 58 %
- Test Enginner : Jay
- Test Mode : Mode 1
- Polarization : Horizontal

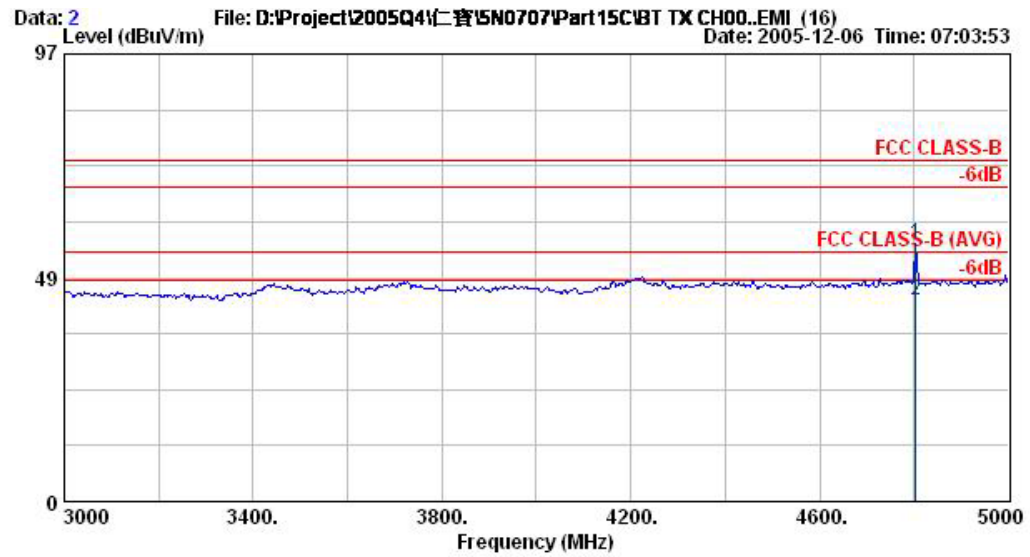
■ The test that passed at the minimum margin was marked by the frame in the following test record



Site : 03CH06-HY
 Condition : HF-ANT-071025-940201 HORIZONTAL
 EUT : GSM/GPRS/WCDMA Mobile Phone(Bluetooth)
 Power : 120Vac/60Hz
 Model : FR5N0707
 Memo : BT TX CH00,2402Mhz
 Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	2390.00	62.70	-11.30	74.00	63.41	30.48	4.26	35.46	199	0 Peak
2	2390.00	38.53	-15.47	54.00	39.24	30.48	4.26	35.46	100	360 Average
3 @	2402.00	95.62			96.33	30.48	4.26	35.46	199	0 Peak
4 X	2402.00	70.91			71.62	30.48	4.26	35.46	100	360 Average
5	2488.00	50.89	-23.11	74.00	51.64	30.40	4.36	35.51	199	0 Peak
6	2488.00	39.23	-14.77	54.00	39.98	30.40	4.36	35.51	100	360 Average

Remark: #3 and #4 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-071025-940201 HORIZONTAL
EUT : GSM/GPRS/WCDMA Mobile Phone(Bluetooth)
Power : 120Vac/60Hz
Model : FR5N0707
Memo : BT TX CH00,2402Mhz
Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	4804.00	56.06	-17.94	74.00	52.78	33.16	6.21	36.10	200	0 Peak
2	4804.00	43.49	-10.51	54.00	40.22	33.16	6.21	36.10	100	242 Average