# FCC TEST REPORT

**for**

## 47 CFR, Part 15, Subpart C

Equipment : Pocket PC

Model No. : PE2060

FCC ID. : NM8HB20

Filing Type : Certification

Applicant : **High Tech Computer, Corp.**
23, Hsin Hua Rd., Taoyuan, Taiwan, R.O.C.

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***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

Original Report Issue Date: May 09, 2003

¦ No additional attachment.

? Additional attachment were issued as following record:

| Attachment No. | Issue Date | Description |
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Certificate No. : F342404

# CERTIFICATE OF COMPLIANCE

**for**

## 47 CFR, Part 15, Subpart C

Equipment : Pocket PC

Model No. : PE2060

FCC ID. : NM8HB20

Filing Type : Certification

Applicant : **High Tech Computer, Corp.**
23, Hsin Hua Rd., Taoyuan, Taiwan, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 1992** and the equipment under test was ***passed*** all test items required in FCC Part 15 subpart C, relative to the equipment under test. Testing was carried out on Apr. 28, 2003 at **SPORTON International Inc.** LAB.

K. J. Lin
Manager

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

# 1. General Description of Equipment under Test

## 1.1. Applicant

High Tech Computer, Corp.
23, Hsin Hua Rd., Taoyuan, Taiwan, R.O.C.

## 1.2. Manufacturer

Same as 1.1

## 1.3. Basic Description of Equipment under Test

| | |
|---|---|
| Equipment | : Pocket PC |
| Model No. | : PE2060 |
| FCC ID. | : NM8HB20 |
| Trade Name | : HP, HTC |
| Earphone Line | : Non-Shielded, 1m |
| USB Cable | : Shielded, 1m |
| Power Supply Type | : Linear |
| AC Power Input | : Wall-Mount, 2pin |
| DC Power Cable | : Non-Shielded, 1.7m |

## 1.4. Feature of Equipment under Test

| | | | | |
|---|---|---|---|---|
| 1. Host/Radio Interface | UART (460.8 Kbps) | | | |
| 2. Type of Modulation | GFSK BT=0.5 | | | |
| **3.** Number of Channels | USA & Europe | 79 | France | 23 |
| 4. Frequency Band | 2400MHz ~ 2483.5MHz | | | |
| 5. Carrier Frequency of each channel | f=2042+kMHz,k=0,…,78 | | | |
| 6. Bandwidth of each channel | 1MHz | | | |
| 7. Maximum Output Power to Antenna | -6dBm ~ +4dBm | | | |
| 8. IF & L.O. frequency | Direct conversion | | | |
| 9. Type of Antenna Connector (Ex: SMA,TNC, MCX, MMCX, UFC…….etc) | TS-3 Series CRS5001-1003 | | | |
| 10. Antenna Type / Class and Gain | Invert F, 2dBi(peak value) | | | |
| 11. Function Type | Transceiver | | | |
| 12. Power Rating (DC/AC , Voltage) | 3.7V ~4.2V | | | |
| 13. Duty Cycle | 35% | | | |
| 14. Basic function of product | In wireless environment connect communication devices | | | |
| 15. Adapter | DELTA / ADP-10SB | | | |
| 16. Cradle | HP / PE2065 | | | |

| Channel | Frequency | Channel | Frequency |
|---|---|---|---|
| 00 | 2402 | 40 | 2442 |
| 01 | 2403 | 41 | 2443 |
| 02 | 2404 | 42 | 2444 |
| 03 | 2405 | 43 | 2445 |
| 04 | 2406 | 44 | 2446 |
| 05 | 2407 | 45 | 2447 |
| 06 | 2408 | 46 | 2448 |
| 07 | 2409 | 47 | 2449 |
| 08 | 2410 | 48 | 2450 |
| 09 | 2411 | 49 | 2451 |
| 10 | 2412 | 50 | 2452 |
| 11 | 2413 | 51 | 2453 |
| 12 | 2414 | 52 | 2454 |
| 13 | 2415 | 53 | 2455 |
| 14 | 2416 | 54 | 2456 |
| 15 | 2417 | 55 | 2457 |
| 16 | 2418 | 56 | 2458 |
| 17 | 2419 | 57 | 2459 |
| 18 | 2420 | 58 | 2460 |
| 19 | 2421 | 59 | 2461 |
| 20 | 2422 | 60 | 2462 |
| 21 | 2423 | 61 | 2463 |
| 22 | 2424 | 62 | 2464 |
| 23 | 2425 | 63 | 2465 |
| 24 | 2426 | 64 | 2466 |
| 25 | 2427 | 65 | 2467 |
| 26 | 2428 | 66 | 2468 |
| 27 | 2429 | 67 | 2469 |
| 28 | 2430 | 68 | 2470 |
| 29 | 2431 | 69 | 2471 |
| 30 | 2432 | 70 | 2472 |
| 31 | 2433 | 71 | 2473 |
| 32 | 2434 | 72 | 2474 |
| 33 | 2435 | 73 | 2475 |
| 34 | 2436 | 74 | 2476 |
| 35 | 2437 | 75 | 2477 |
| 36 | 2438 | 76 | 2478 |
| 37 | 2439 | 77 | 2479 |
| 38 | 2440 | 78 | 2480 |
| 39 | 2441 | | |

# 2. Test Configuration of Equipment under Test

## 2.1. Test Manner

a. The EUT has been associated with notebook and peripherals pursuant to ANSI C63.4-1992 and configuration operated in a manner, which tended to maximize its emission characteristics in a typical application.

b. The complete test system included LOGITECH PS/2 Keyboard, LOGITECH USB Mouse, EPSON Printer, VIEWSONIC Monitor, COMPAQ Notebook and EUT for EMI test.

c. The following test modes were pretested:

Mode 1: Adaptor Connect, CH00( 2402MHz)
Mode 2: Adaptor Connect, CH39( 2441MHz)
Mode 3: Adaptor Connect, CH78( 2480MHz)
Mode 4: USB Cable, CH00( 2402MHz)
Mode 5: USB Cable, CH39( 2441MHz)
Mode 6: USB Cable, CH78( 2480MHz)
Mode 7: Cradle, CH00( 2402MHz)
Mode 8: Cradle, CH39( 2441MHz)
Mode 9: Cradle, CH78( 2480MHz)

For Conduction test, cause “Mode 7, 8, 9” generated the worst test result, it was reported as final data
For Radiation test, cause “Mode 4, 5, 6” generated the worst test result, it was reported as final data

b. Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 24800MHz.

## 2.2. Description of Test System

Support Unit 1. – PS/2 Keyboard (LOGITECH)

| | |
|---|---|
| FCC ID | : N/A |
| Model No. | : Y-SJ17 |
| Serial No. | : SP0054 |
| Data Cable | : Shielded, 1.7m |
| Remark | : This support device was tested to comply with FCC standards and authorized under a declaration of conformity. |

Support Unit 2. -- USB Mouse (LOGITECH)

| | |
|---|---|
| FCC ID | : N/A |
| Model No. | : M-BE58 |
| Serial No. | : SP0041 |
| Data Cable | : Shielded, 1.7m |
| Remark | : This support device was tested to comply with FCC standards and authorized under a declaration of conformity. |

Support Unit 3. -- Printer (EPSON) –for local workstation

| | |
|---|---|
| FCC ID | : N/A |
| Model No. | : STYLUS COLOR S680 |
| Power Supply Type | : Linear |
| Power Cord | : Non-Shielded |
| Serial No. | : SP0048 |
| Data Cable | : Shielded, 1.35m |

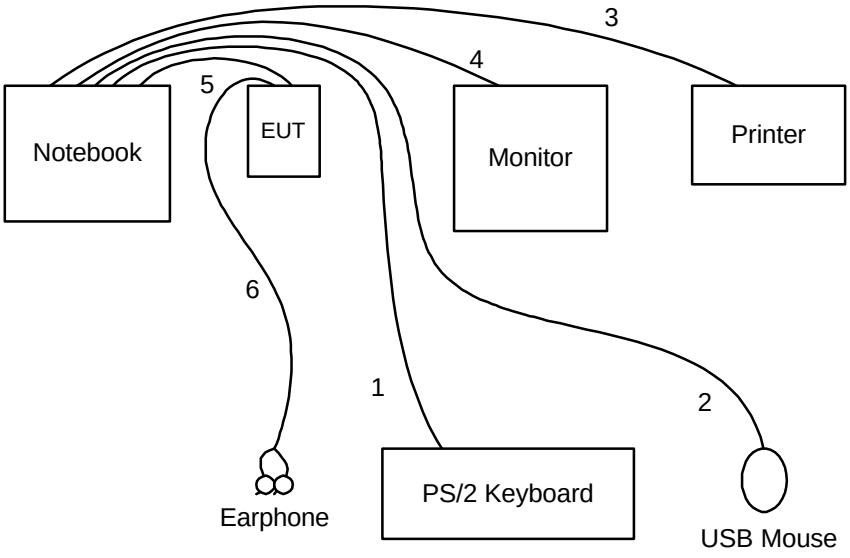
Support Unit 4. -- Monitor (VIEWSONIC)

| | |
|---|---|
| FCC ID | : N/A |
| Model No. | : VCDTS21553-3P |
| Power Supply Type | : Switching |
| Power Cord | : Non-Shielded |
| Serial No. | : SP063 |
| Data Cable | : Shielded, 1.7m |
| Remark | : This support device was tested to compy with FCC standards and authorized under a declaration of conformity. |

Support Unit 5. -- Notebook (COMPAQ)

| | |
|---|---|
| FCC ID | : N/A |
| Model No. | : Presario 1500 |
| Power Supply Type | : Switching |
| Power Cord | : Non-Shielded |
| Serial No. | : SP0036 |
| Remark | : This support device was tested to comply with FCC standards and authorized under a declaration of conformity. |

## 2.3. Connection Diagram of Test System




1. The I/O cable is connected from Notebook to the support unit 1.
2. The I/O cable is connected from Notebook to the support unit 2.
3. The I/O cable is connected from Notebook to the support unit 3.
4. The I/O cable is connected from Notebook to the support unit 4.
5. The USB cable is connected from Notebook to the EUT.
6. The Earphone line is connected from EUT to the Earphone.

# 3. Test Software

An executive program, EMCTEST.EXE under WIN XP, which generates a complete line of continuously repeating “ H “ pattern was used as the test software.

The program was executed as follows:

a. Turn on the power of all equipment.
b. The PC reads the test program from the hard disk drive and runs it.
c. The PC sends “ H“ messages to the monitor, and the monitor displays “ H “ patterns on the screen.
d. The PC sends “ H “ messages to the printer, then the printer prints them on the paper.
e. The PC sends “ H ” messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
f. Repeat the steps from c to d.

At the same time, the following programs were executed:
-Executed "HUSB" to display continuously repeating “ H “ patterns.
-Executed “Test Tool_460800” to transmitting signals at fixed frequency.

# 4. General Information of Test

| | | |
|---|---|---|
| Test Site Location | : | No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,<br>Kwei-Shan Hsiag, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL : 886-3-327-3456<br>FAX : 886-3-318-0055 |
| Test Site No | : | CO01-HY, 03CH03-HY |

## 4.1. Test Voltage

115V/60Hz

## 4.2. Standard for Methods of Measurement

ANSI C63.4-1992

## 4.3. Test in Compliance with

FCC Part 15, Subpart C

## 4.4. Frequency Range Investigated

a. Conduction: from 150 KHz to 30 MHz
b. Radiation: from 30 MHz to 24800MHz

## 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 |
|---|---|---|
| 15.107/15.207 | Conducted Emission | Pass |
| 15.247(a)(1) | Hopping Channel Separation | Pass |
| 15.247(a)(1)(ii) | Number of Hopping Frequency Used | Pass |
| 15.247(a)(1)(ii) | Hopping Channel Bandwidth | Pass |
| 15.247(a)(1)(ii) | Dwell Time of Each Frequency within a 30 Second Period | Pass |
| 15.247(b) | Output Power | Pass |
| 15.247(c) | 100KHz Bandwidth of Frequency Band Edges | Pass |
| 15.203 | Antenna Requirement | Pass |

## 5.2. Hopping Channel Separation

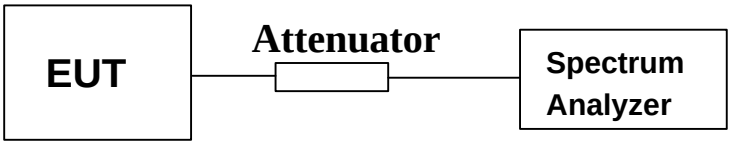
5.2.1. Measuring Instruments:

As described in chapter 9 of this test report.

5.2.2. Test Procedure:

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 100KHz 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:

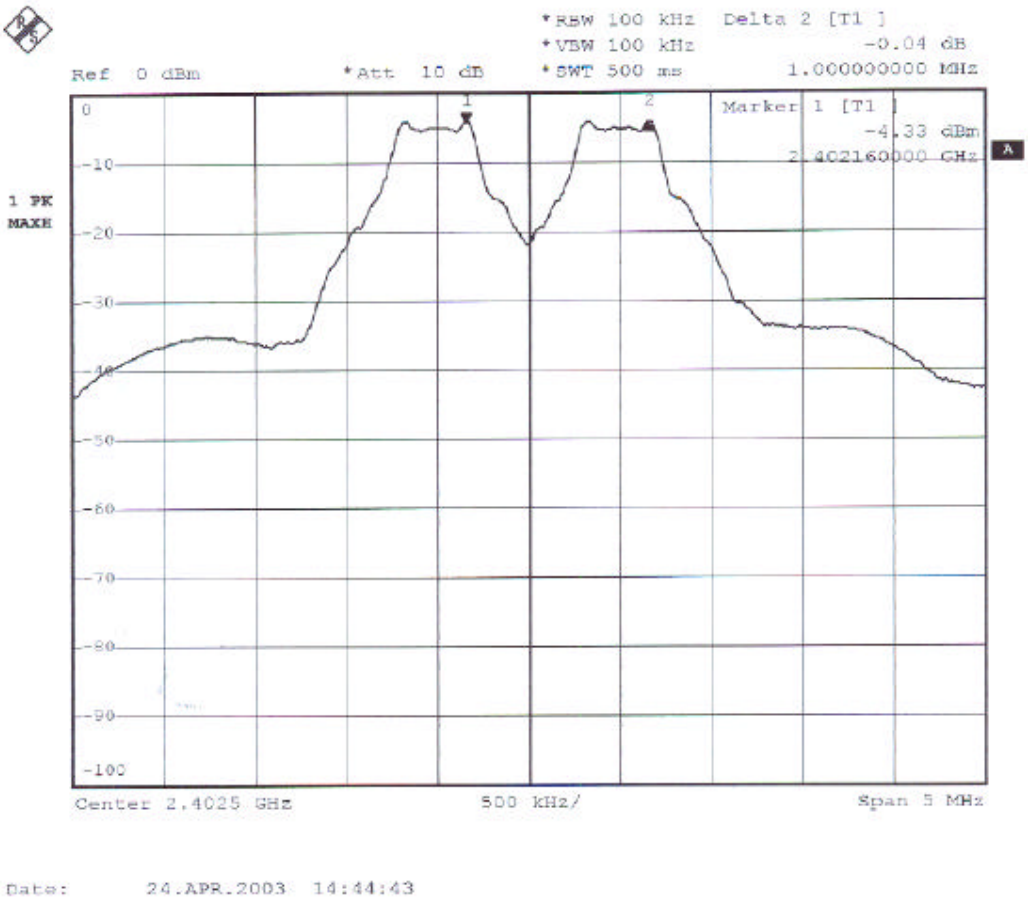



5.2.4. Test Result: The spectrum analyzer plots are attached as below

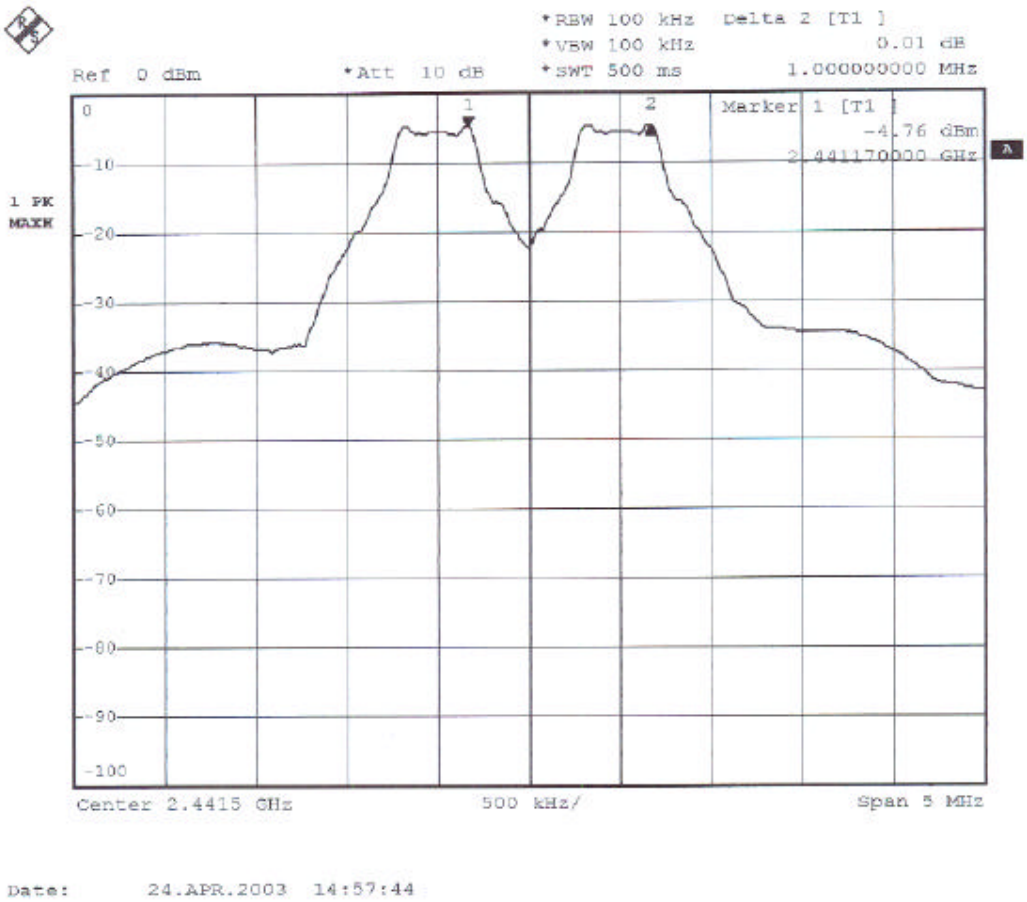
- Temperature: 27°C
- Relative Humidity: 63 %
- Duty cycle of the equipment during the test X = 35%
-

| Channel | Frequency ( MHz ) | Hopping Channel Separation ( MHz ) | Limits ( KHz ) | Plot Ref. No. |
|---|---|---|---|---|
| 00 | 2402 | 1.0 | 25 | 1 |
| 39 | 2441 | 1.0 | 25 | 2 |
| 78 | 2480 | 1.0 | 25 | 3 |

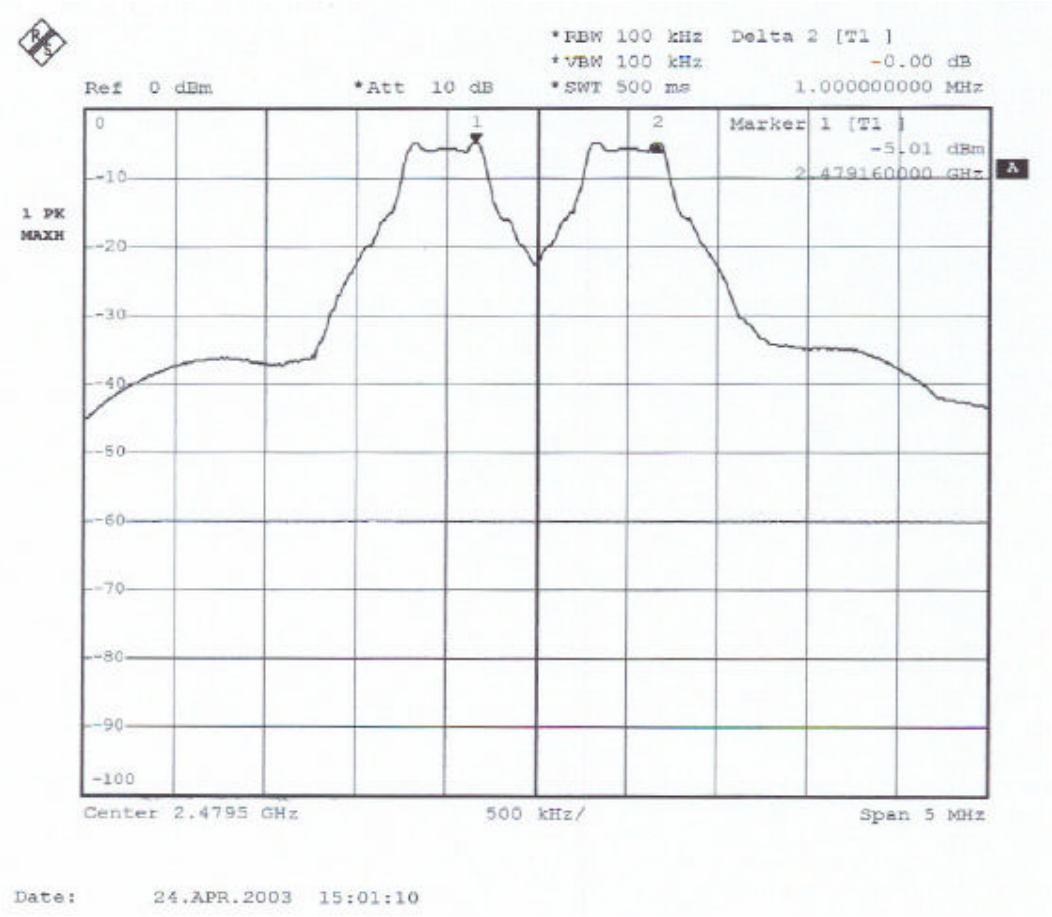
Plot 1 (Channel 00):



Plot 2 (Channel 39):



Plot 3 (Channel 78):




5.2.5. Test Configuration( EUT Operating Condition) :

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies respectively.

## 5.3. Number of Hopping Frequency

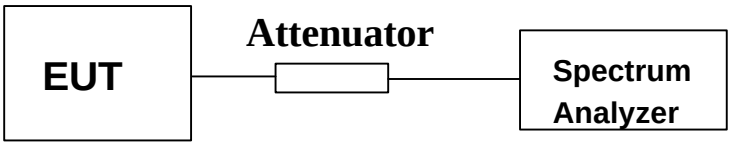
5.3.1. Measuring Instruments:

As described in chapter 9 of this test report.

5.3.2. Test Procedure:

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
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:

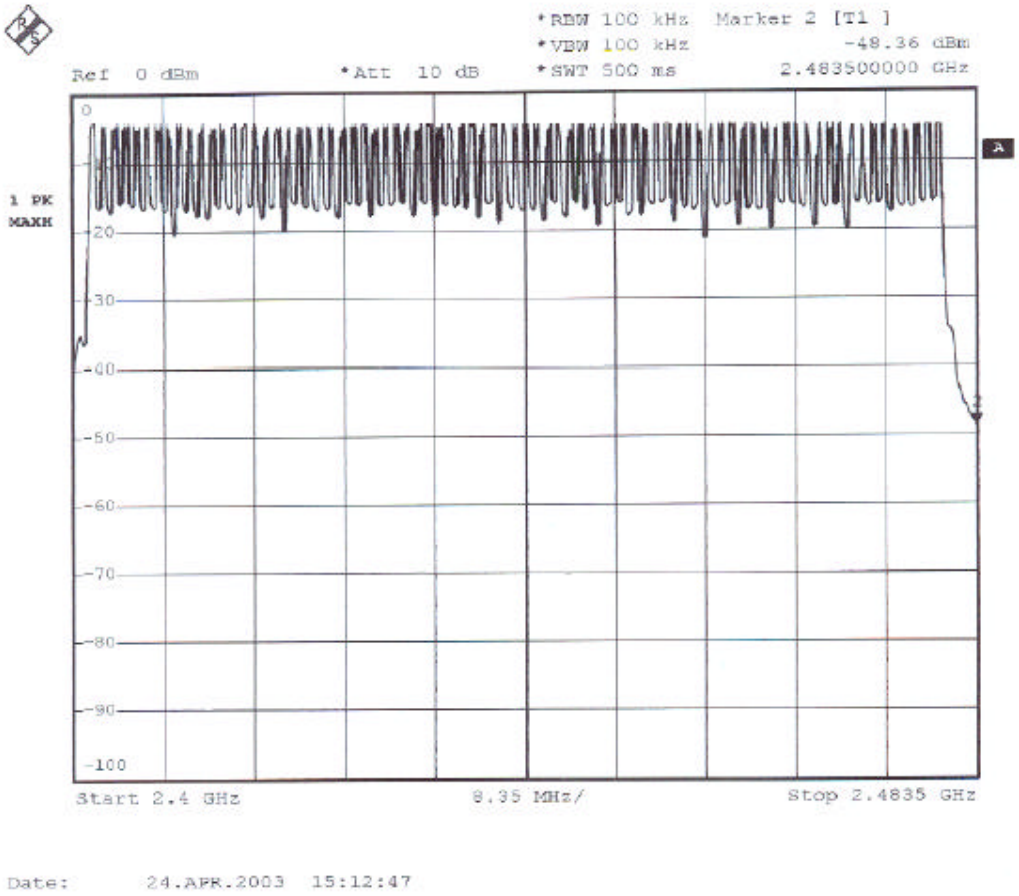



5.3.4. Test Result: See spectrum analyzer plots below

- Temperature: 27°C
- Relative Humidity: 63 %
- Duty cycle of the equipment during the test X = 35%

| Number of Hopping Frequency (Channel) | Limits (Channel) | Plot Ref. No. |
|---|---|---|
| 79 | 75 | 1 |

Plot 1:


*RBW 100 kHz
*VBW 100 kHz
*SWT 500 ms
Marker 2 [T1 ]
-48.36 dBm
2.483500000 GHz
Ref 0 dBm
*Att 10 dB
1 PK
MAXH
0
-20
-30
-40
-50
-60
-70
-80
-90
-100
A
Start 2.4 GHz
0.35 MHz/
Stop 2.4835 GHz
Date: 24.APR.2003 15:12:47

## 5.4. Hopping Channel Bandwidth

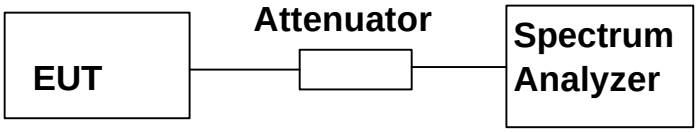
5.4.1. Measuring Instruments:

As described in chapter 9 of this test report.

5.4.2. Test Procedure:

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 100KHz and VBW to 100KHz.
3. The Hopping Channel bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20 dB.

5.4.3. Test Setup Layout:

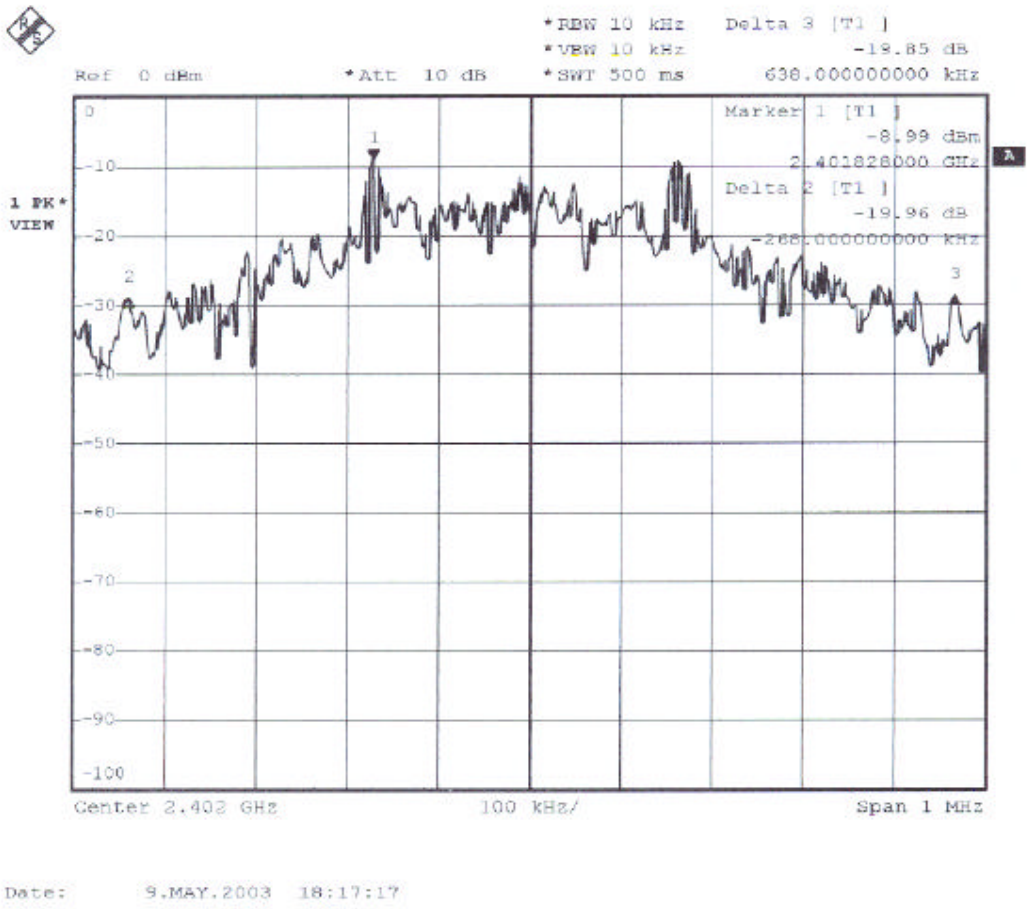



5.4.4. Test Result: See spectrum analyzer plots below

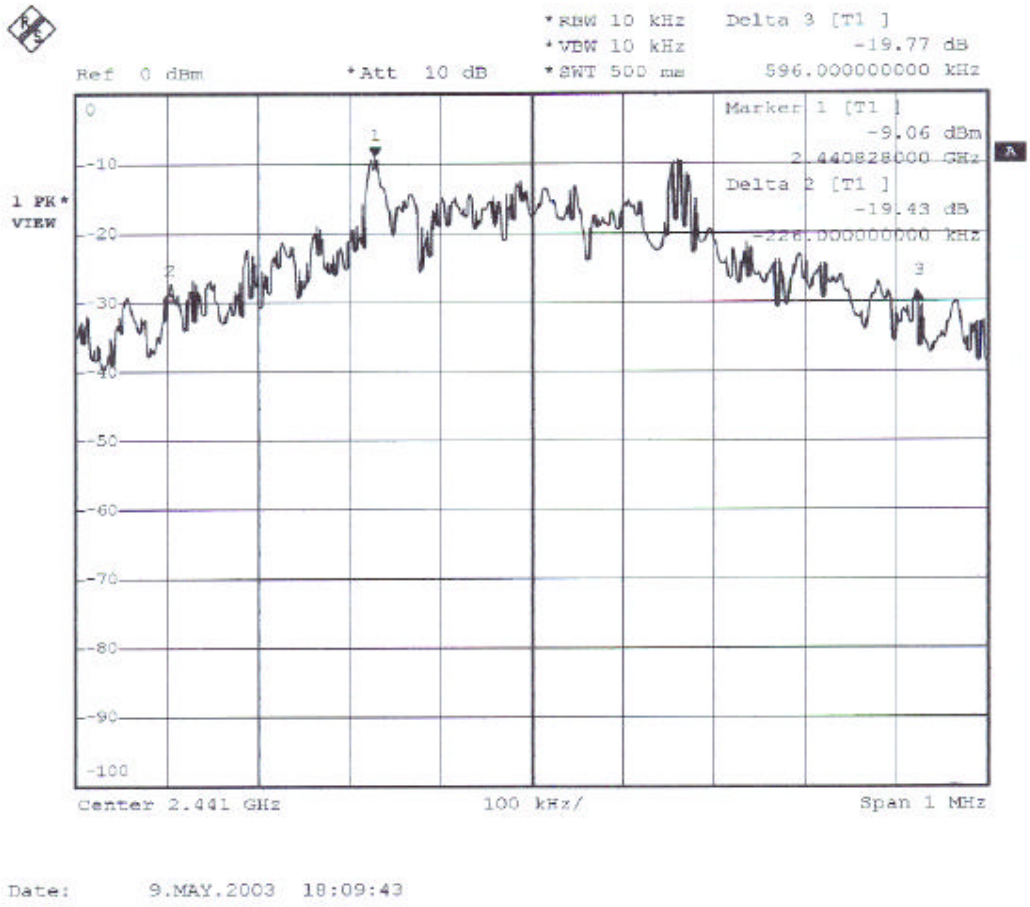
- Temperature: 27°C
- Relative Humidity: 63 %
- Duty cycle of the equipment during the test X = 35%

| Channel | Frequency (MHz) | Hopping Channel Bandwidth (MHz) | Limits (MHz) | Plot Ref. No. |
|---|---|---|---|---|
| 00 | 2402 | 0.9060 | 1.0 | 1 |
| 39 | 2441 | 0.8220 | 1.0 | 2 |
| 78 | 2480 | 0.8700 | 1.0 | 3 |

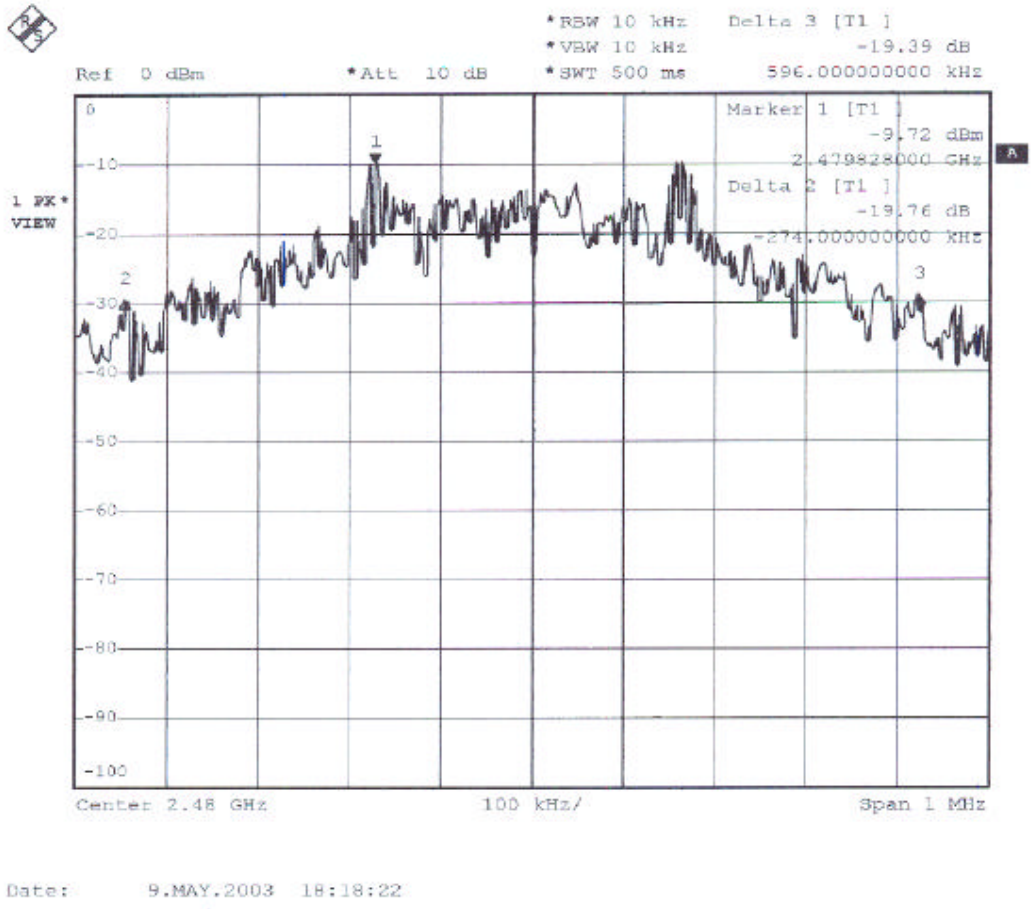
Plot 1 (Channel 00)



Plot 2 (Channel 39)



Plot 3 (Channel 78)




5.4.5. Test Configuration( EUT Operating Condition) :

Same as Section 5.2.5.

## 5.5. Dwell Time of Each Frequency within a 30 Seconds Period

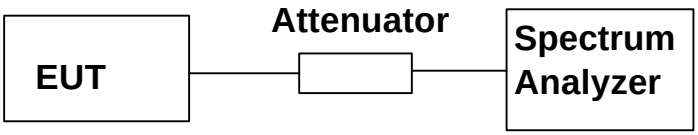
5.5.1. Measuring Instruments:

As described in chapter 9 of this test report.

5.5.2. Test Procedure:

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 100KHz and VBW to 100KHz.
3. Set the center frequency on any frequency would be measure and set the frequency span to zero span.

5.5.3. Test Setup Layout:

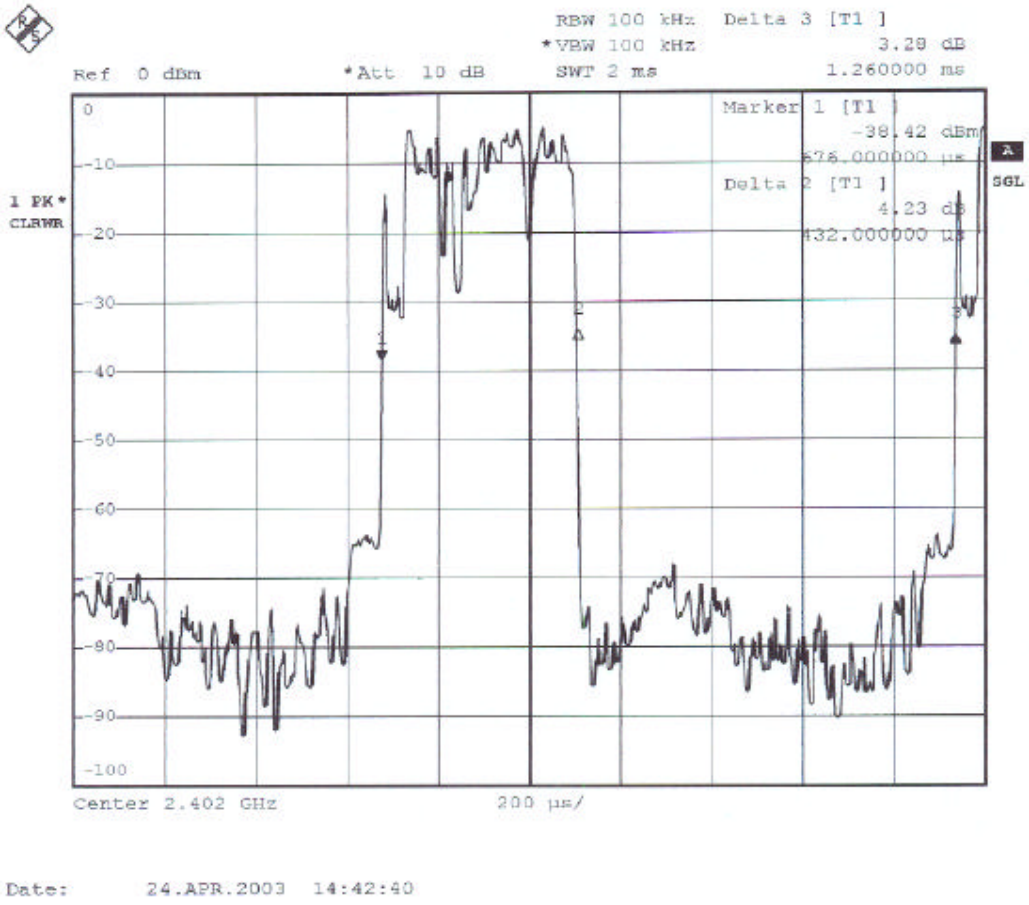



5.5.4. Test Result: See spectrum analyzer plots below

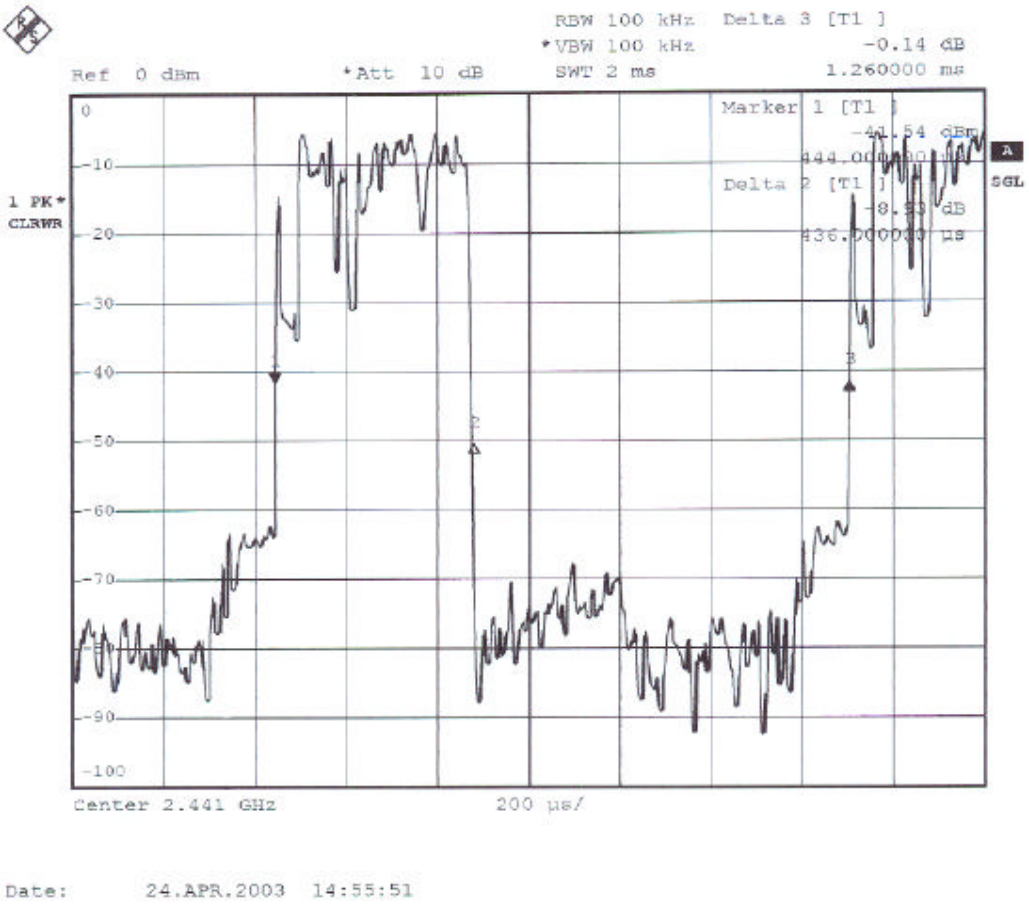
- Temperature: 27°C
- Relative Humidity: 63 %
- Duty cycle of the equipment during the test X = 35%

| Channel | Frequency (MHz) | Dwell Time (s) | Limits (s) | Plot Ref. No. |
|---|---|---|---|---|
| 00 | 2402 | 0.130198915 | 0.4 | 1 |
| 39 | 2441 | 0.131404461 | 0.4 | 2 |
| 78 | 2480 | 0.131404461 | 0.4 | 3 |

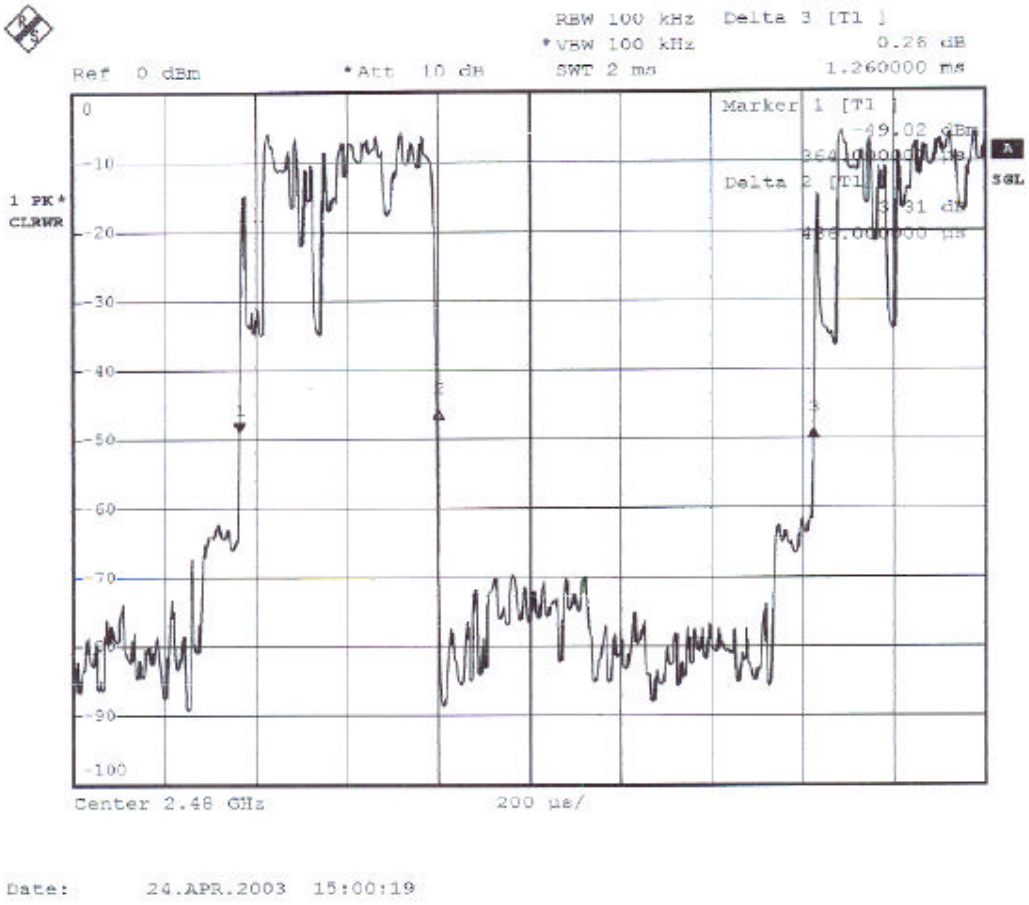
Plot 1 (Channel 00)



Plot 2 (Channel 39)



Plot 3 (Channel 78)




5.5.5. Test Configuration( EUT Operating Condition) :

Same as Section 5.2.5.

## 5.6. Output Power

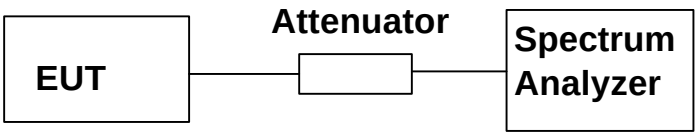
5.6.1. Measuring Instruments:

As described in chapter 9 of this test report.

5.6.2. Test Procedure:

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. The center frequency of the spectrum analyzer was set to the fundamental frequency and using 1MHz RBW and 1MHz VBW.

5.6.3. Test Setup Layout:

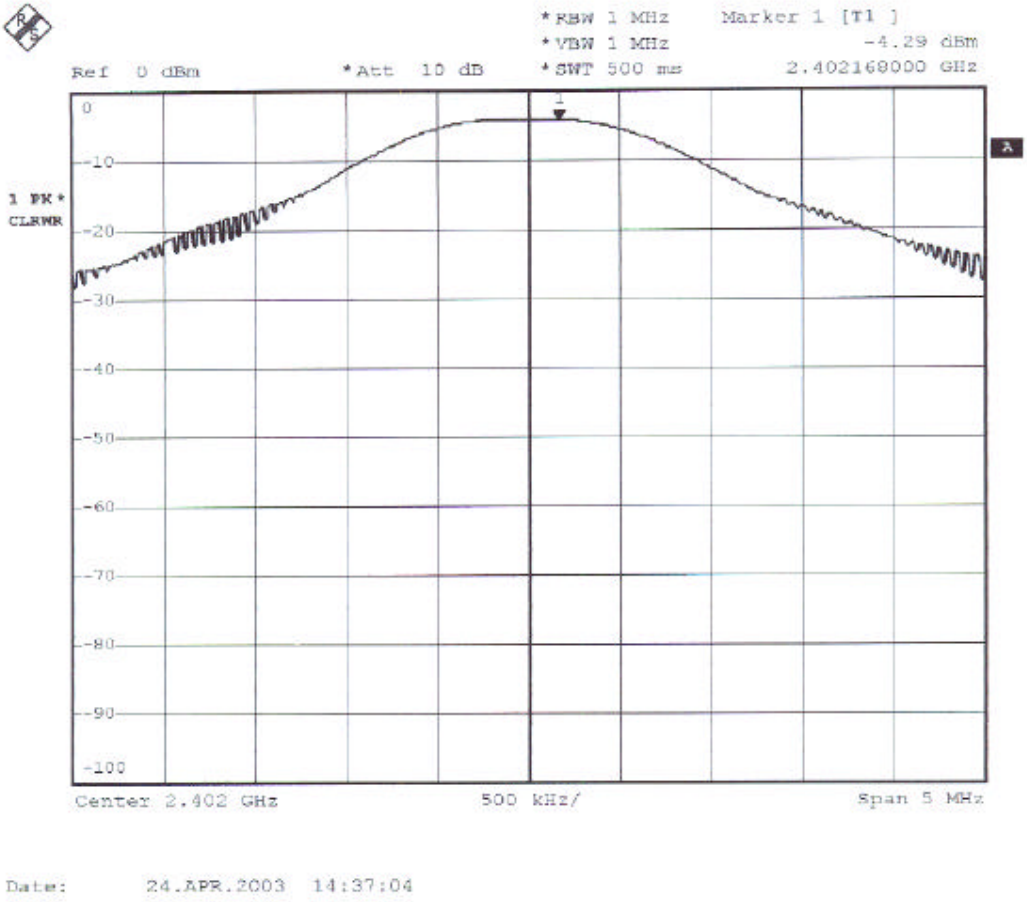



5.6.4. Test Result: See spectrum analyzer plots below

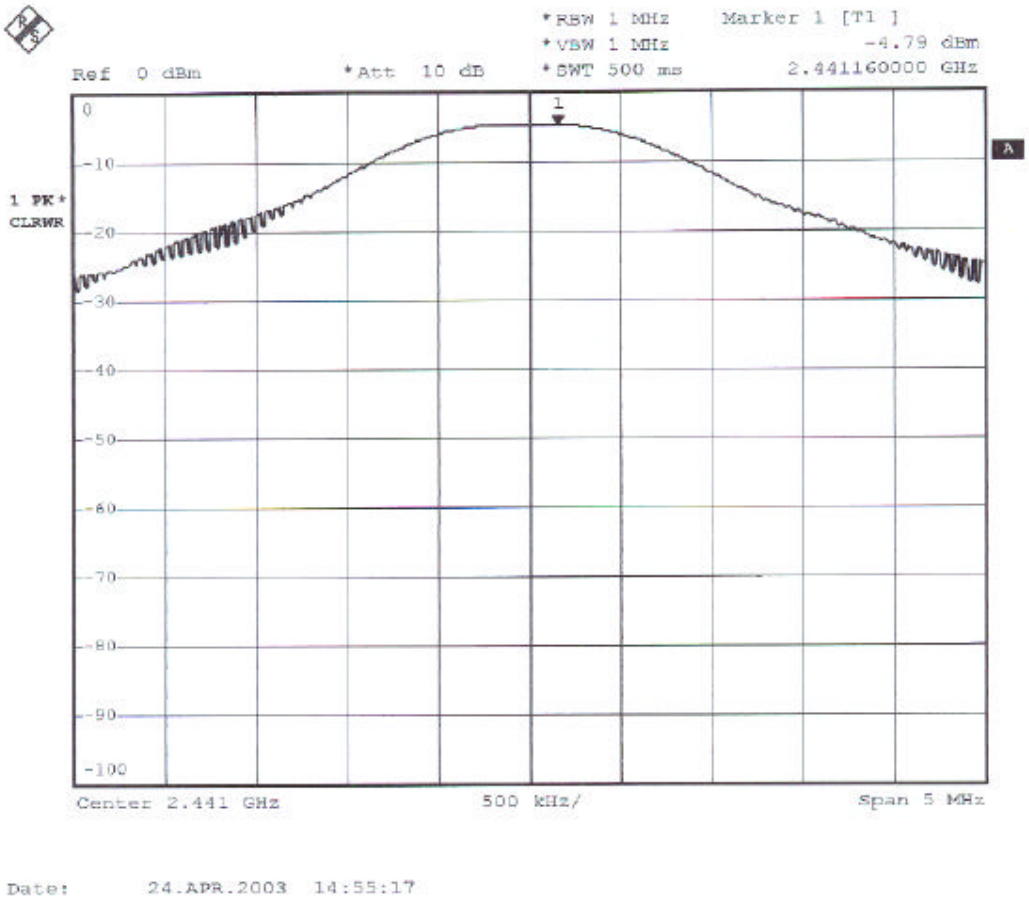
- Temperature: 27°C
- Relative Humidity: 63 %
- Duty cycle of the equipment during the test X = 35%

| Channel | Frequency (MHz) | Measured Output Power (mWatt) | Measured Output Power (dBm) | Limits (Watt/dBm ) |
|---|---|---|---|---|
| 00 | 2402 | 0.372391706 | -4.29 | 1W/30 dBm |
| 39 | 2441 | 0.331894458 | -4.79 | 1W/30 dBm |
| 78 | 2480 | 0.311171634 | -5.07 | 1W/30 dBm |

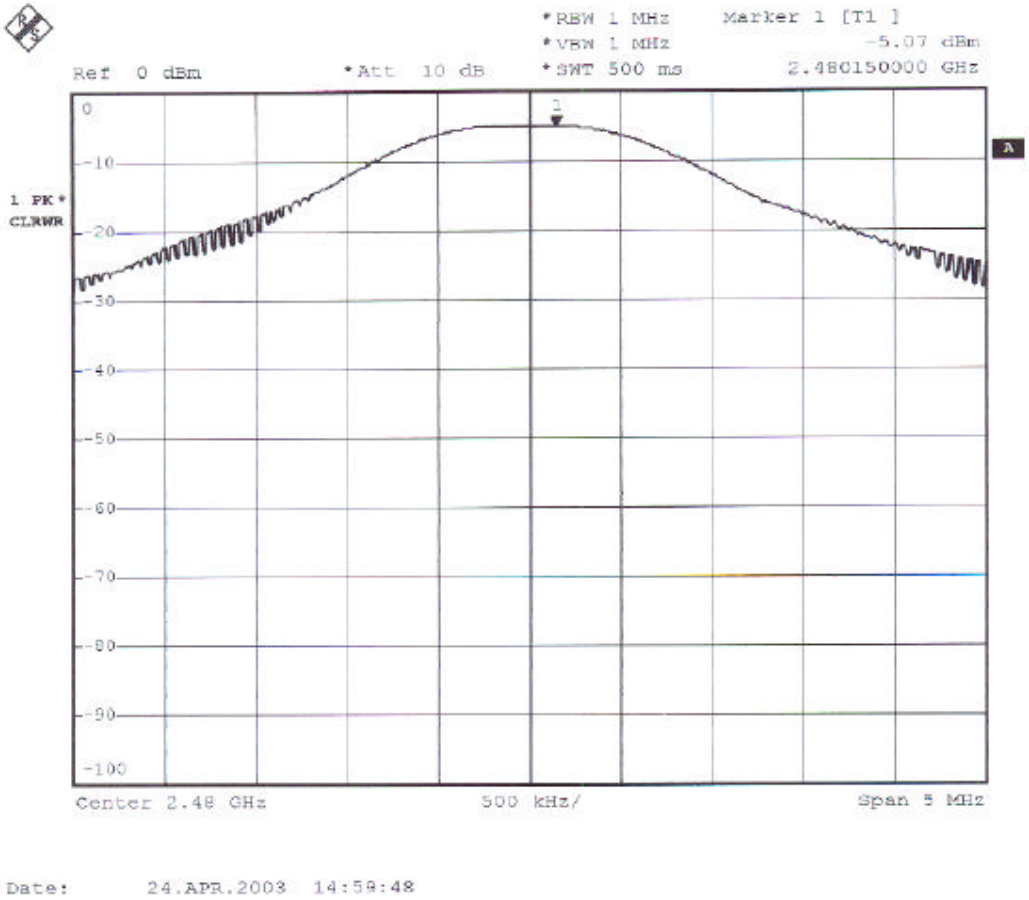
Plot 1 (Channel 00)



Plot 2 (Channel 39)



Plot 3 (Channel 78)




5.6.5. Test Configuration( EUT Operating Condition) :

Same as Section 5.2.5.

## 5.7. 100KHz Bandwidth of Frequency Band Edges

5.7.1. Measuring Instruments:

As described in chapter 9 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 convenient frequency span including 100 KHz bandwidth from band edge.
3. The band edges was measured and recorded.

5.7.3. Test Result:

| | |
|---|---|
| Test Result in lower band (Channel 00): | PASS |
| Test Result in higher band(Channel 78): | PASS |

5.7.4. Note on Band edge Emission

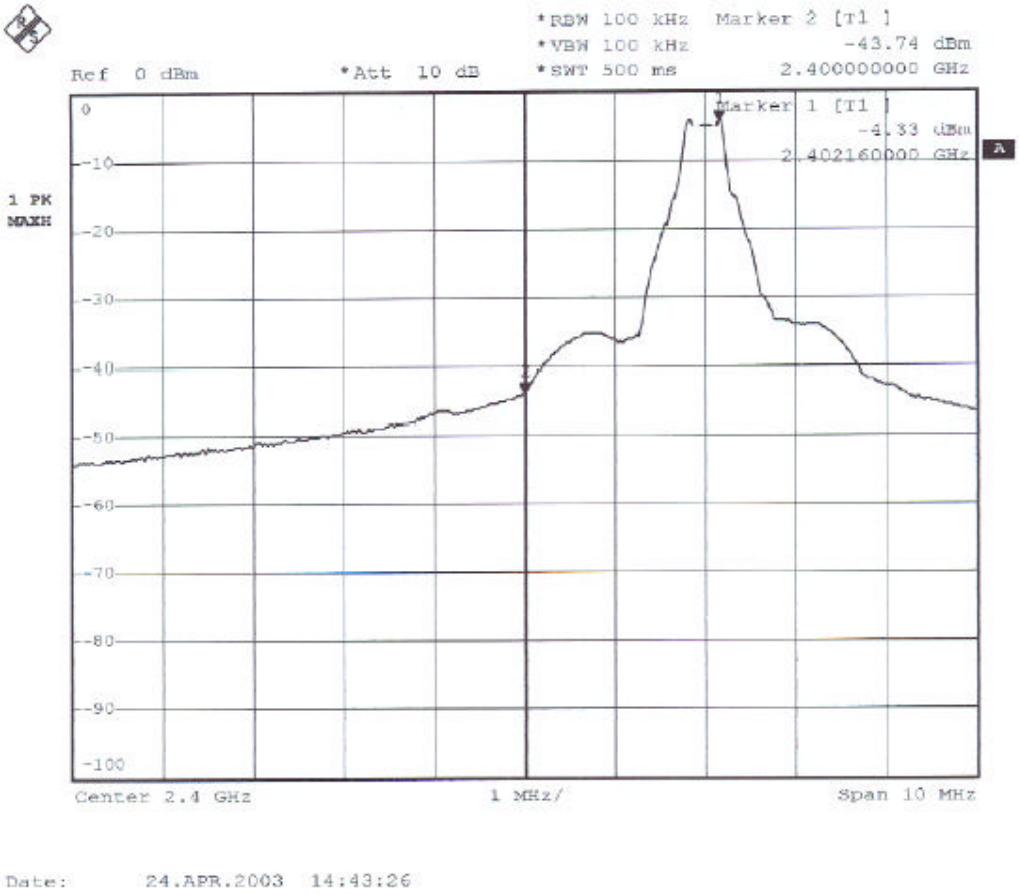
The band edge emission plot on page 31. shows 43.58dB delta between carrier maximum power and local maximum emission in the restricted band (2.4835GHz).

| Polarity | The emission of carrier power strength (dBµV/m) | The maximum field strength in restrict band (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Detector | Result |
|---|---|---|---|---|---|---|
| H | 88.91 | 45.33 | 74.00 | -28.67 | Peak | Pass |
| H | 63.64 | 20.06 | 54.00 | -33.94 | Average | Pass |
| V | 86.46 | 42.88 | 74.00 | -31.12 | Peak | Pass |
| V | 63.13 | 19.55 | 54.00 | -34.45 | Average | Pass |

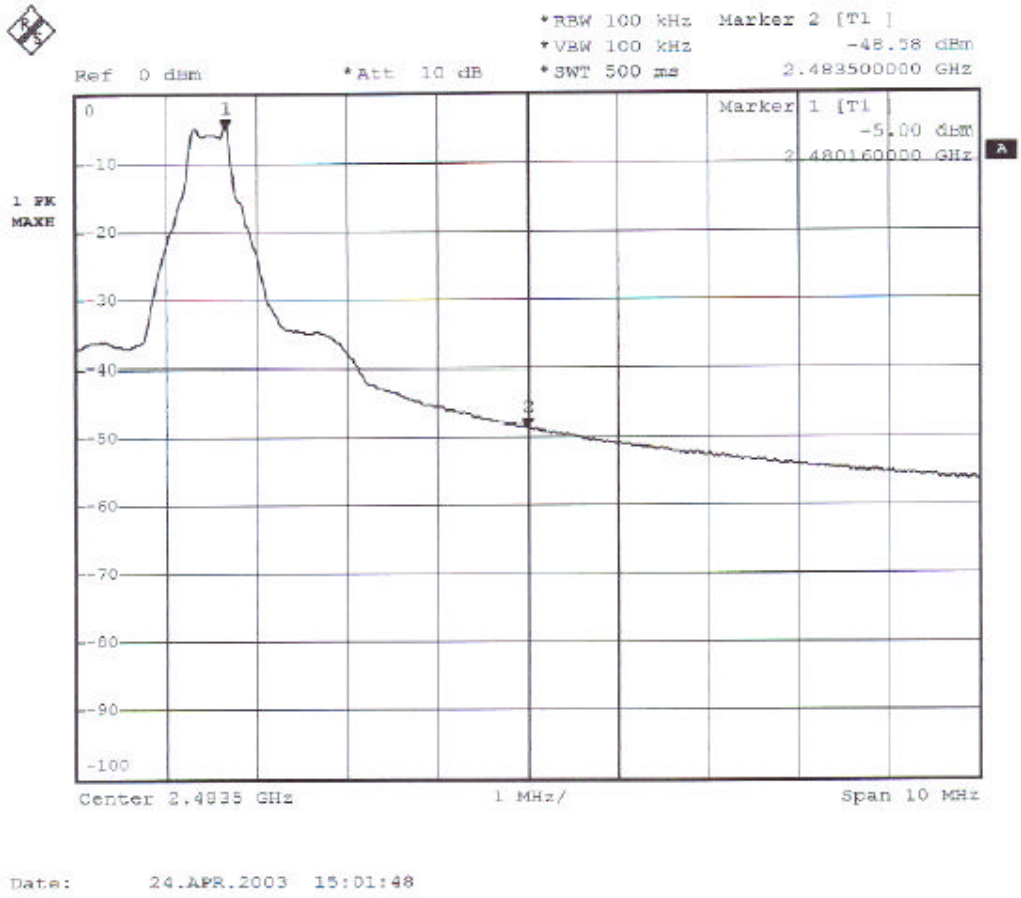
* The maximum field strength in restricted band is the emission of carrier power strength subtract to the delta between carrier maximum power and local maximum emission in the restricted band.

The spectrum analyzer plots are attached as below:

Plot 1 (Channel 00):



Plot 2 (Channel 78):



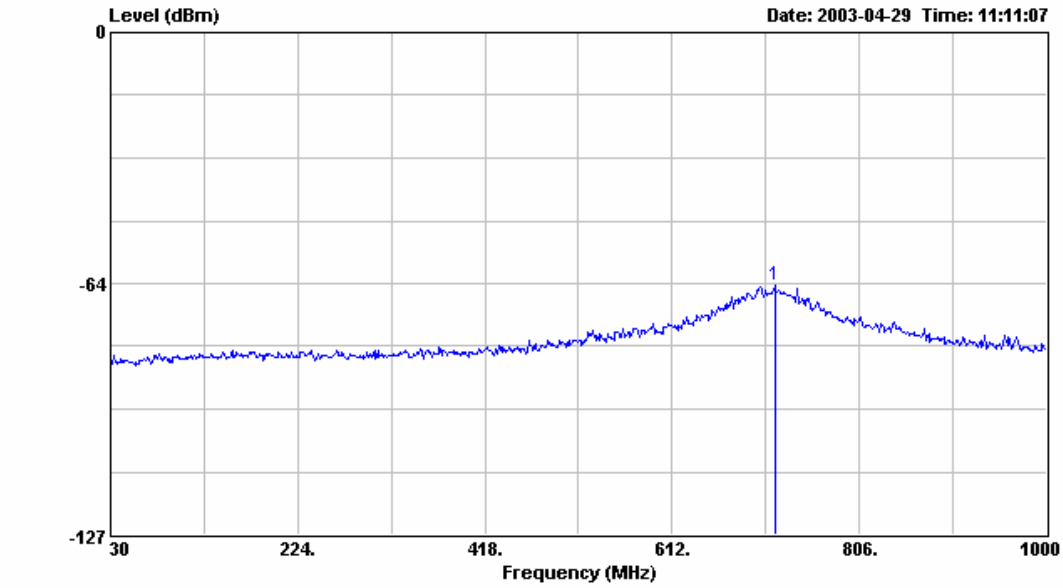

Comments: All emissions in those 100kHz bandwidth are attenuated more then 20dB from carrier maximum power.

5.7.5. Test Configuration( EUT Operating Condition) :

The software provided by client to enable the EUT under transmission condition continuously at lowest, and highest channel frequencies respectively.

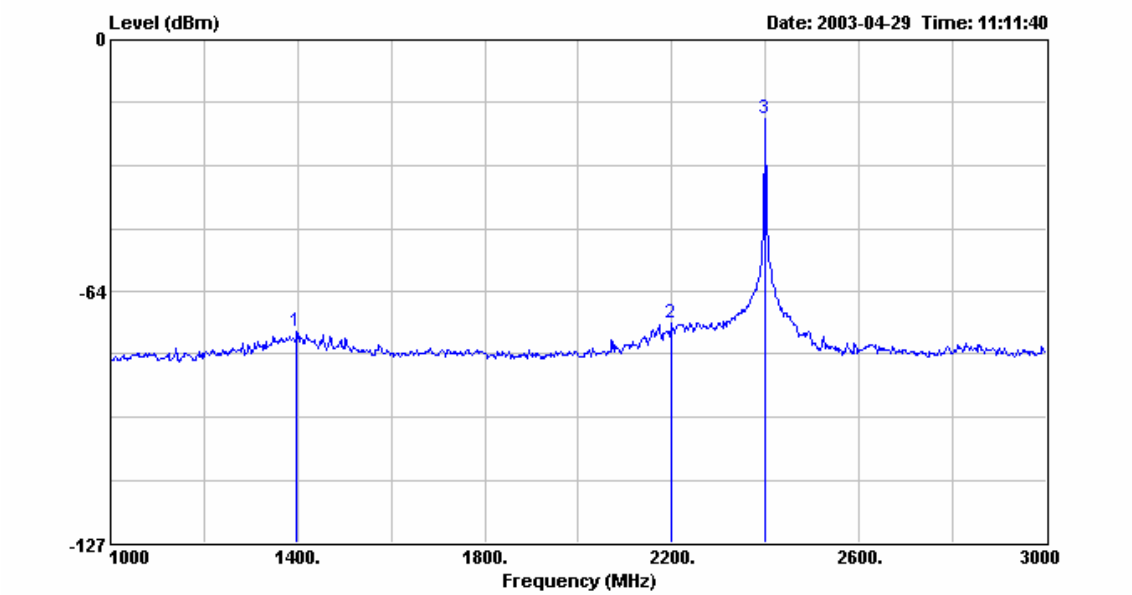
The Out of Band spurious Emission (Conducted) are attached as below:

- CH00 2402MHz
- Temperature: 27 °C
- Relative Humidity: 63 %



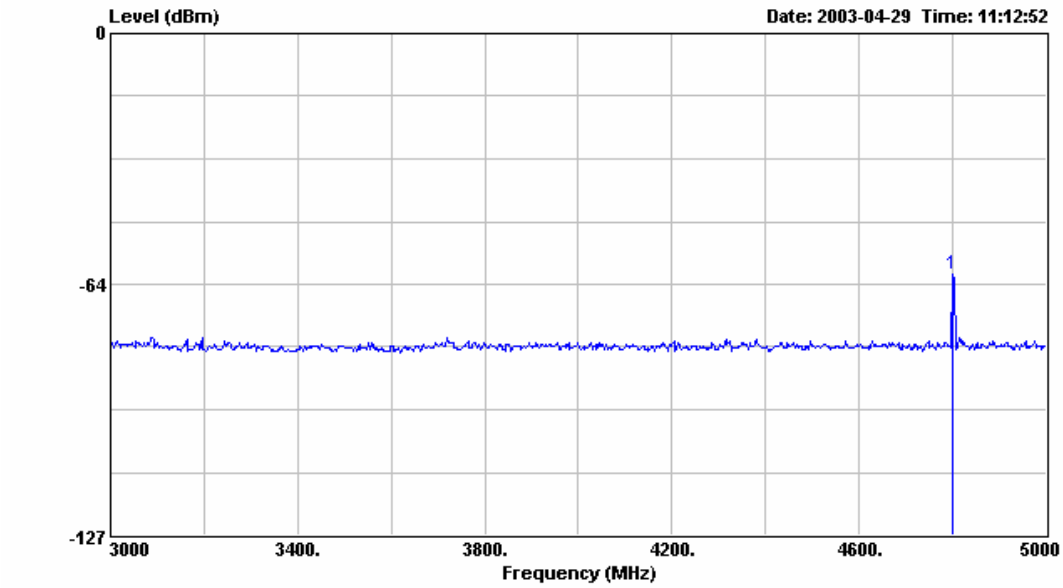

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH00 2402MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 718.700 | -64.13 | -457.13 | 393.00 | -64.13 | 0.00 | 0.00 | 0.00 | 0.00 | |



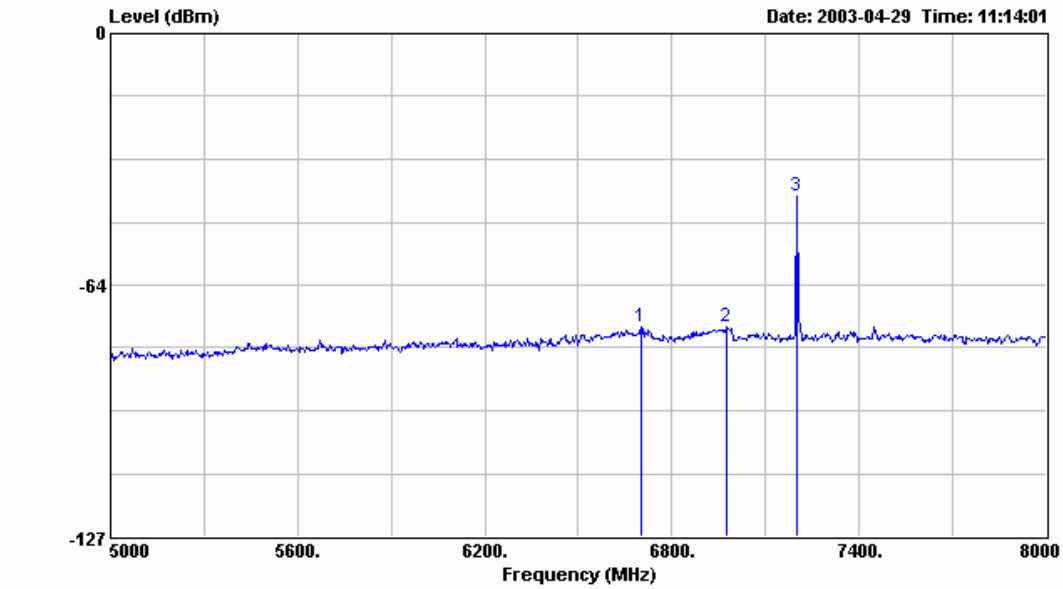

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH00 2402MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 1398.000 | -73.86 | -466.86 | 393.00 | -73.86 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 2198.000 | -71.36 | -464.36 | 393.00 | -71.36 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 @ | 2398.000 | -19.71 | -412.71 | 393.00 | -19.71 | 0.00 | 0.00 | 0.00 | 0.00 | |



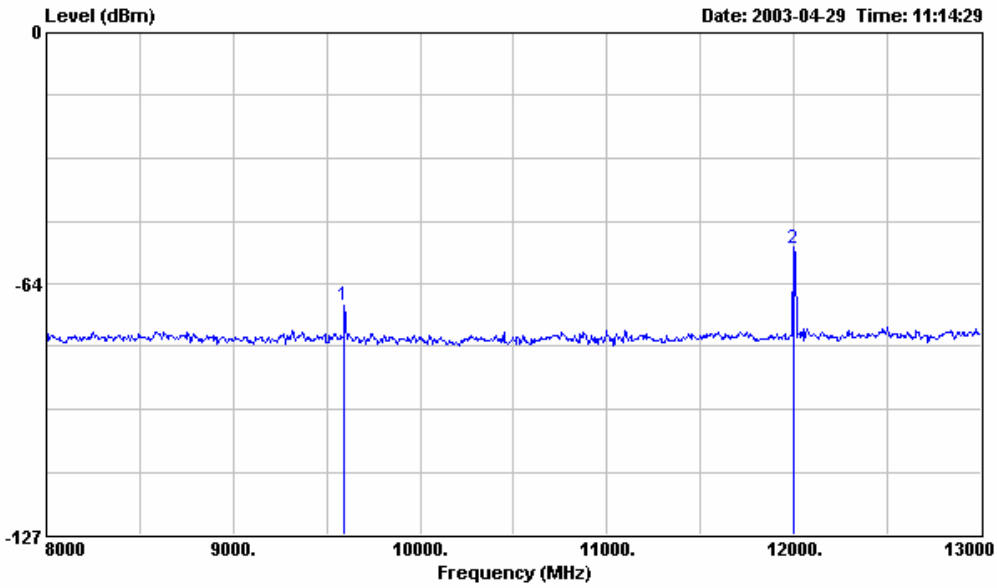

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH00 2402MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 4798.000 | -60.76 | -453.76 | 393.00 | -60.76 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH00 2402MHz
: Conducted
: F342404

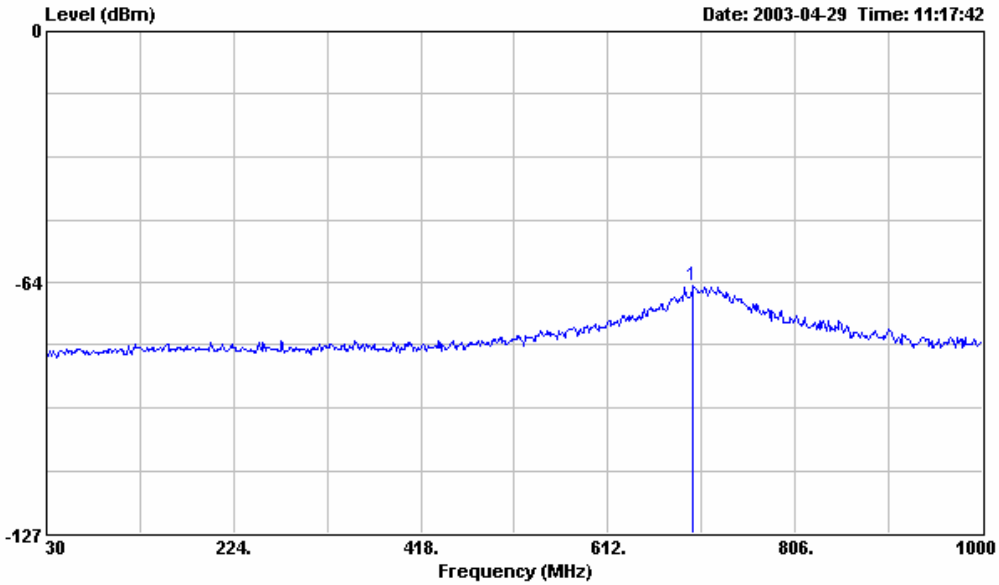
| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 6701.000 | -74.29 | -467.29 | 393.00 | -74.29 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 6977.000 | -74.16 | -467.16 | 393.00 | -74.16 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 @ | 7202.000 | -41.25 | -434.25 | 393.00 | -41.25 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH00 2402MHz
: Conducted
: F342404

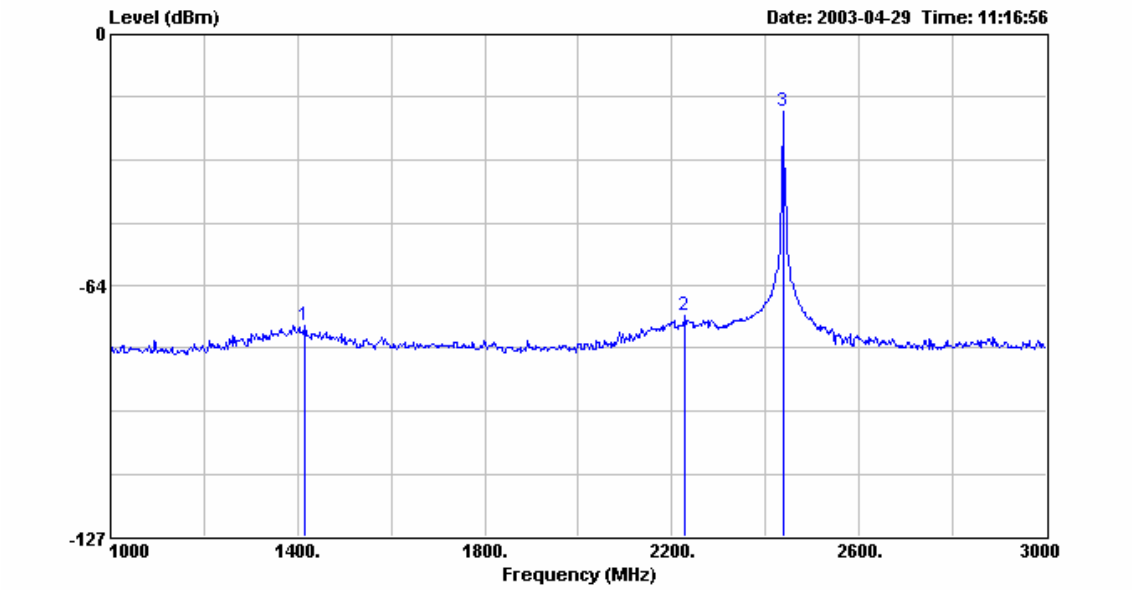
| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 9595.000 | -69.18 | -462.18 | 393.00 | -69.18 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | @11995.000 | -54.40 | -447.40 | 393.00 | -54.40 | 0.00 | 0.00 | 0.00 | 0.00 | |

- CH39 2441MHz
- Temperature: 27 °C
- Relative Humidity: 63 %



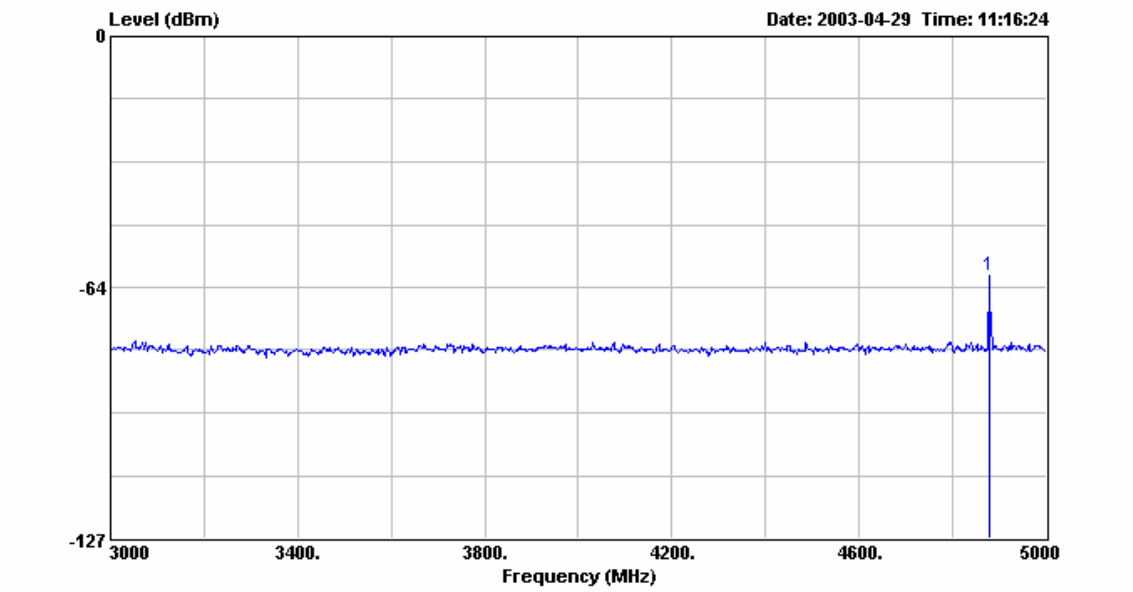

**Site** : 03CH06-Anechoic Chamber
**Condition** : 100cm 360deg
**EUT** : PDA
**Power** : 110V/60Hz
**Model** : PE2060
**Memo** : TX CH39 2441MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 700.270 | -64.54 | -457.54 | 393.00 | -64.54 | 0.00 | 0.00 | 0.00 | 0.00 | |



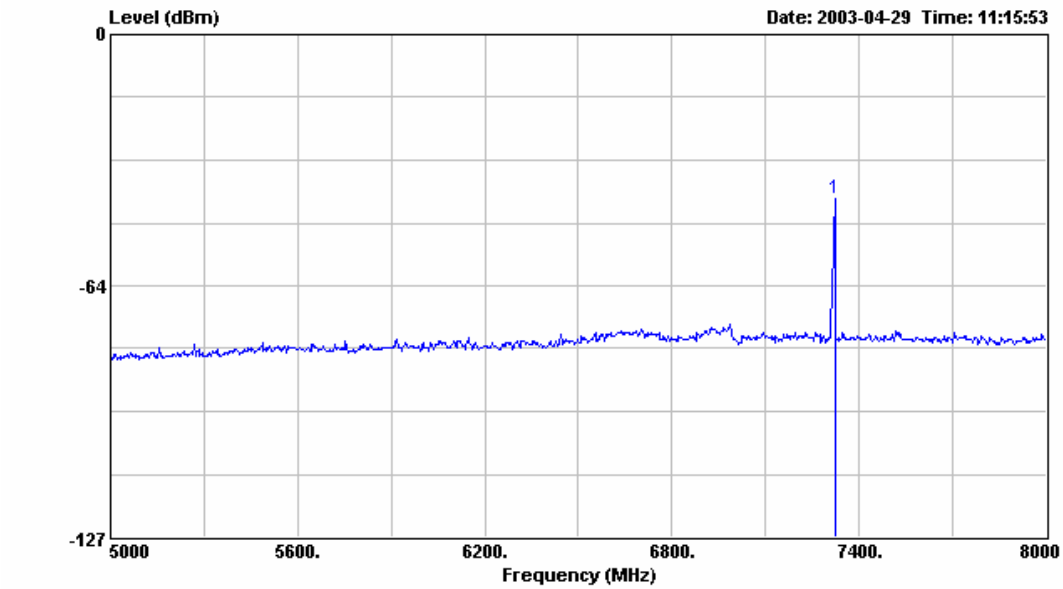

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH39 2441MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 1414.000 | -73.46 | -466.46 | 393.00 | -73.46 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 2228.000 | -71.28 | -464.28 | 393.00 | -71.28 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 @ | 2438.000 | -19.58 | -412.58 | 393.00 | -19.58 | 0.00 | 0.00 | 0.00 | 0.00 | |



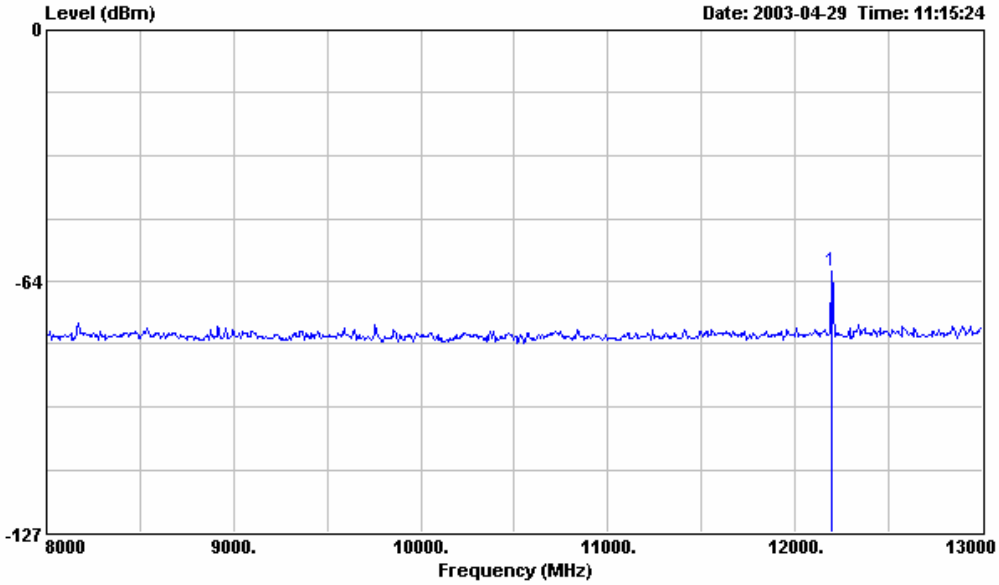

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH39 2441MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 4878.000 | -60.61 | -453.61 | 393.00 | -60.61 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH39 2441MHz
: Conducted
: F342404

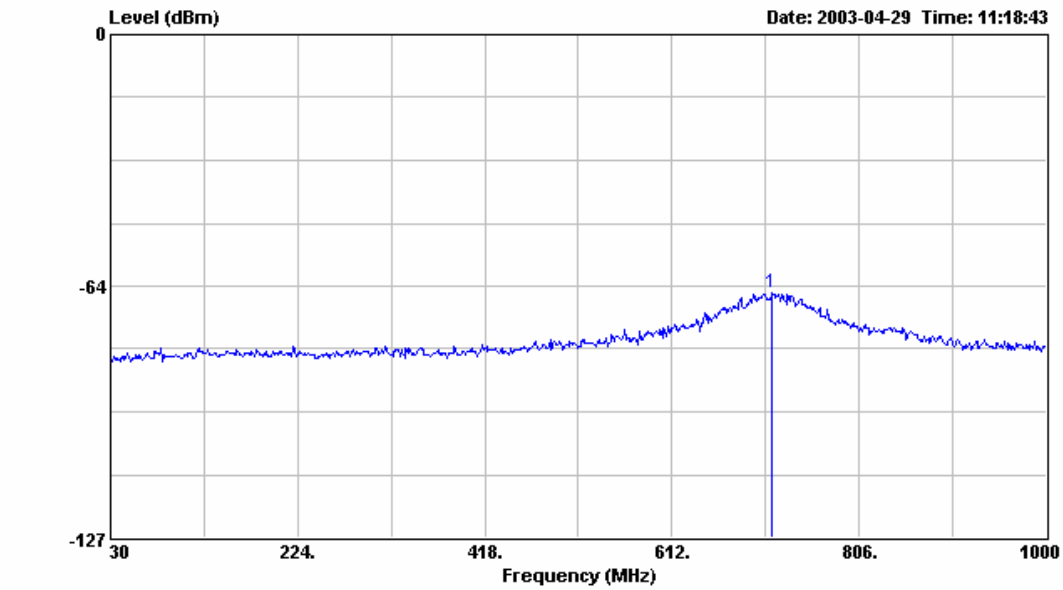
| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 7322.000 | -41.32 | -434.32 | 393.00 | -41.32 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH39 2441MHz
: Conducted
: F342404

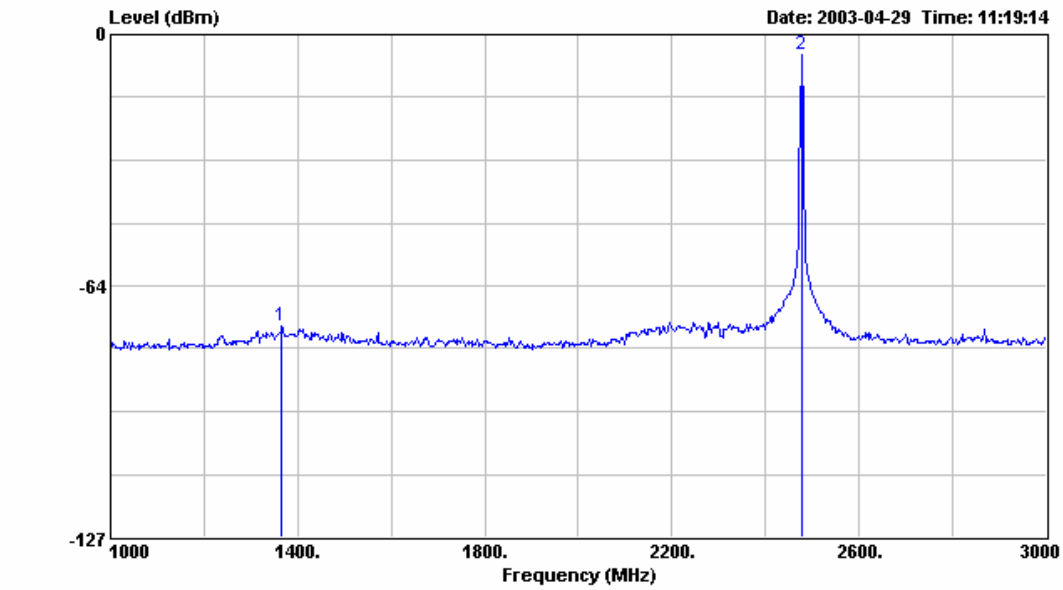
| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | @12195.000 | -60.85 | -453.85 | 393.00 | -60.85 | 0.00 | 0.00 | 0.00 | 0.00 | |

- CH78 2480MHz
- Temperature: 27 °C
- Relative Humidity: 63 %



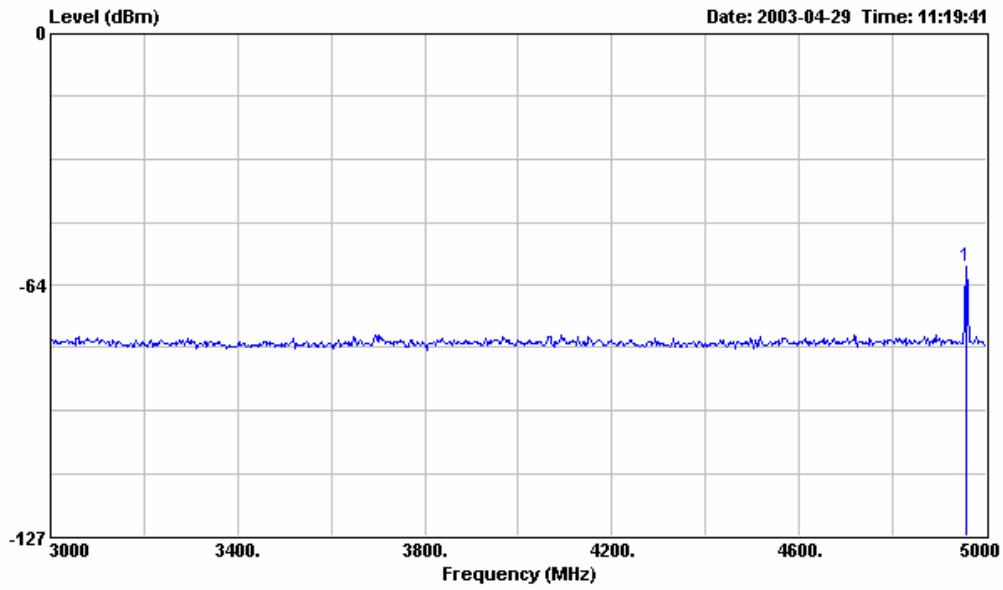

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH78 2480MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 715.790 | -65.30 | -458.30 | 393.00 | -65.30 | 0.00 | 0.00 | 0.00 | 0.00 | |



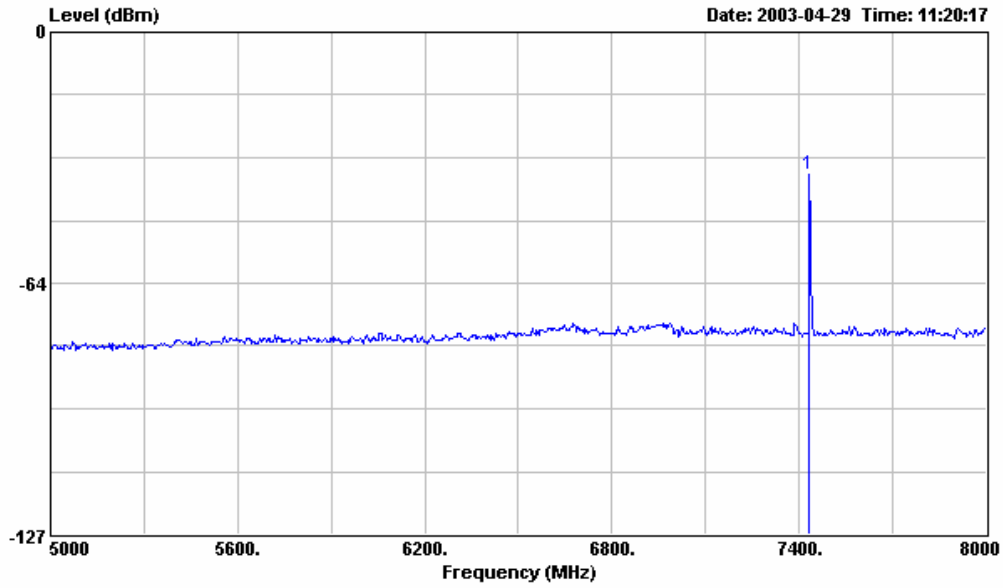

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH78 2480MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | 1366.000 | -73.68 | -466.68 | 393.00 | -73.68 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 @ | 2476.000 | -5.24 | -398.24 | 393.00 | -5.24 | 0.00 | 0.00 | 0.00 | 0.00 | |



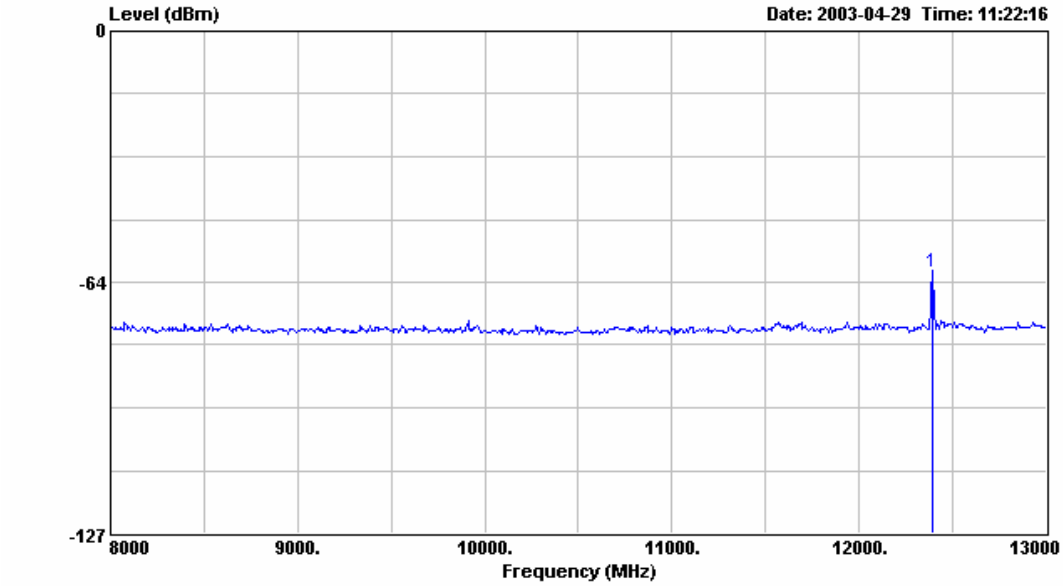

Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH78 2480MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 4958.000 | -58.87 | -451.87 | 393.00 | -58.87 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH78 2480MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 @ | 7433.000 | -36.14 | -429.14 | 393.00 | -36.14 | 0.00 | 0.00 | 0.00 | 0.00 | |




Site : 03CH06-Anechoic Chamber
Condition : 100cm 360deg
EUT : PDA
Power : 110V/60Hz
Model : PE2060
Memo : TX CH78 2480MHz
: Conducted
: F342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | LISN Factor | Cable Loss | Preamp Factor | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBm | dB | dBm | dBm | dB | dB | dB | dB | |
| 1 | @12390.000 | -60.75 | -453.75 | 393.00 | -60.75 | 0.00 | 0.00 | 0.00 | 0.00 | |

## 5.8. Test of Conducted Emission

Conducted Emissions were measured from 150 KHz to 30 MHz with a bandwidth of 9 KHz and return leads of the EUT according to the methods defined in ANSI C63.4-1992 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

5.8.1. Major Measuring Instruments:

| | |
|---|---|
| ● Test Receiver | (R&S ESCS 30) |
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 KHz |

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 mains through a line impedance stabilization network (LISN).
c. All the support units are connect 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.