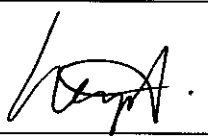
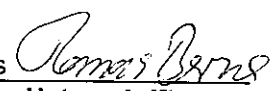


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |                                                                                                                                                                                                                     |                                                                                                         |                                                                                                                          |                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Prüfbericht - Nr.:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                     | 14004905 002                                                                                                                                                                                                        |                                                                                                         | <b>Seite 1 von 13</b>                                                                                                    |                                                                                       |
| Test Report No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     | Page 1 of 13                                                                                                                                                                                                        |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Auftraggeber:</b><br>Applicant                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                     | UNIFAT Technology Ltd.<br>7/F., Sui Hong Ind. Bldg.<br>547 – 549 Castle Peak Road<br>Kwai Chung, N.T.<br>Hong Kong                                                                                                  |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Gegenstand der Prüfung:</b><br>Test item                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     | Bluetooth Hands-Free Car Kit                                                                                                                                                                                        |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Bezeichnung:</b><br>Identification                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                     | BTU-02                                                                                                                                                                                                              | <b>Serien-Nr.:</b><br>Serial No.                                                                        |                                                                                                                          | Engineering sample                                                                    |
| <b>Wareneingangs-Nr.:</b><br>Receipt No.                                                                                                                                                                                                                                                                                                                                                                                                                                               |                     | 040520006                                                                                                                                                                                                           | <b>Eingangsdatum:</b><br>Date of receipt                                                                |                                                                                                                          | 20.05.2004                                                                            |
| <b>Prüfort:</b><br>Testing location                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     | TÜV Rheinland Hong Kong Ltd.<br>Room 8, 25th Floor, Skyline Tower, 39 Wang Kwong Road, Kowloon Bay<br>Kowloon, Hong Kong<br>Hong Kong Productivity Council<br>HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Prüfgrundlage:</b><br>Test specification                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     | FCC Part 15 Subpart C<br>ANSI C63.4-2001<br>CISPR 22:1997                                                                                                                                                           |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Prüfergebnis:</b><br>Test Result                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     | Das vorstehend beschriebene Gerät wurde geprüft und entspricht oben genannter Prüfgrundlage.<br>The above mentioned product was tested and passed.                                                                  |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>geprüft / tested by:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |                                                                                                                                                                                                                     | <b>kontrolliert / reviewed by:</b>                                                                      |                                                                                                                          |                                                                                       |
| 08.06.2004                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Hugo Wan            |                                                                                                                                  | 08.06.2004                                                                                              | Thomas Berns                                                                                                             |  |
| <b>Datum</b><br>Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Name</b><br>Name | <b>Unterschrift</b><br>Signature                                                                                                                                                                                    | <b>Datum</b><br>Date                                                                                    | <b>Name</b><br>Name                                                                                                      | <b>Unterschrift</b><br>Signature                                                      |
| <b>Sonstiges:</b><br>Other Aspects                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                     | FCCID: RIIBTU-02                                                                                                                                                                                                    |                                                                                                         |                                                                                                                          |                                                                                       |
| <b>Abkürzungen:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                     | OK, Pass, P<br>Fail, F<br>N/A<br>NT                                                                                                                                                                                 | = entspricht Prüfgrundlage<br>= entspricht nicht Prüfgrundlage<br>= nicht anwendbar<br>= nicht getestet | <b>Abbreviations:</b><br>OK, Pass, P<br>Fail, F<br>N/A<br>NT<br>= passed<br>= failed<br>= not applicable<br>= not tested |                                                                                       |
| <p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicate in extracts. This test report does not entitle to carry any safety mark on this or similar products.</p> |                     |                                                                                                                                                                                                                     |                                                                                                         |                                                                                                                          |                                                                                       |

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|                                                 |                 |
|-------------------------------------------------|-----------------|
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|-------------------------------------------------|-----------------|

## Product information

### Manufacturers declarations

|                                         | Transmitter                                                                             | Receiver                          |
|-----------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------|
| Operating frequency range               | 2402 - 2480 MHz                                                                         | 2402 - 2480 MHz                   |
| Type of modulation                      | FHSS modulation                                                                         | FHSS modulation                   |
| Number of channels                      | 79                                                                                      | 79                                |
| Channel separation                      | 1 MHz                                                                                   | 1 MHz                             |
| Type of antenna                         | Integral Antenna                                                                        | Integral Antenna                  |
| Antenna gain (dBi)                      | 0                                                                                       |                                   |
| Power level                             | fix                                                                                     |                                   |
| Type of equipment                       | stand alone, plug-in radio device                                                       | stand alone, plug-in radio device |
| Connection to public utility power line | No                                                                                      |                                   |
| Nominal voltage                         | V <sub>nom</sub> : 12 V                                                                 | V <sub>nom</sub> : 12 V           |
| Independent Operation Modes             | Page scan<br>Inquiry scan<br>Connection state - ACL Link<br>Connection state - SCO Link |                                   |

### Product function and intended use

The test item is a Handsfree Car Kit based on the Bluetooth technology.

Bluetooth is a short-range radio link intended to be a cable replacement between portable and/or fixed electronic devices.

Bluetooth operates in the unlicensed ISM Band at 2.4 GHz. In the US a band of 83.5 MHz width is available. In this band, 79 RF channels spaced 1 MHz apart are defined.

The channel is represented by a pseudo-random hopping sequence through the 79 channels. The channel is divided into time slots, with a nominal slot length of 625 µs, where each slot corresponds to different RF hop frequencies. The nominal hop rate is 1600 hops/s. The symbol rate on the channel is 1 Ms/s.

### Submitted documents

Circuit Diagram  
PCB Layout  
Block Diagram  
Bill of material  
User manual

### Special accessories and auxiliary equipment

None

## List of Test and Measurement Instruments

|                                     | Kind of Equipment               | Manufacturer      | Type                | S/N          |
|-------------------------------------|---------------------------------|-------------------|---------------------|--------------|
| <input type="checkbox"/>            | Test Receiver                   | Rohde & Schwarz   | ESH-3               | 890173/033   |
| <input type="checkbox"/>            | L/I/S/N                         | Rohde & Schwarz   | ESH 3-Z5            | 849876/026   |
| <input type="checkbox"/>            | Oscilloscope                    | HP                | 54713B              | US34510455   |
| <input type="checkbox"/>            | Test Receiver                   | Rohde & Schwarz   | ESVP                | 882402/033   |
| <input type="checkbox"/>            | Absorbing Clamp                 | Rohde & Schwarz   | MDS-21              | 979 3/4      |
| <input checked="" type="checkbox"/> | Test Receiver                   | Rohde & Schwarz   | ESVS30              | 842807/009   |
| <input checked="" type="checkbox"/> | Biconical Antenna               | Rohde & Schwarz   | HK116               | 841489/015   |
| <input checked="" type="checkbox"/> | Log.-Periodic Antenna           | Rohde & Schwarz   | HL223               | 841516/017   |
| <input type="checkbox"/>            | Universal Power Analyzer        | Voltech           | PM3000A             | 9915         |
| <input type="checkbox"/>            | Reference Impedance Network     | Voltech           | IEC 555<br>Standard | 9946         |
| <input type="checkbox"/>            | AC Power Source                 | California Instr. | 4500L               | HK51895      |
| <input type="checkbox"/>            | Trip-Loop Antenna               | Chase             | LLA6142             | 1019         |
| <input checked="" type="checkbox"/> | Double Ridge Horn Antenna       | EMCO              | 3115                | 9002-3351    |
| <input checked="" type="checkbox"/> | Double Ridge Horn Antenna       | EMCO              | 3115                | 9002-3347    |
| <input type="checkbox"/>            | RF Comms Test Set               | HP                | 8920B               | US36492628   |
| <input type="checkbox"/>            | Spectrum Analyser + Tracking G. | HP                | 8596E               | 3639A00758   |
| <input type="checkbox"/>            | Signal Generator                | Rohde & Schwarz   | SMY 01              | 844146/024   |
| <input type="checkbox"/>            | Signal Generator                | Rohde & Schwarz   | SMY 01              | 844146/023   |
| <input type="checkbox"/>            | BiLog Antenna                   | EMCO              | 3143                | 9607-1287    |
| <input type="checkbox"/>            | Isotropic Field Probe           | Holladay          | HI-4422             | 90956        |
| <input type="checkbox"/>            | Power Amplifier                 | Kalmus            | 757-LC              | 7620-1       |
| <input type="checkbox"/>            | Power Amplifier                 | Kalmus            | 122-FC              | 7620-2       |
| <input type="checkbox"/>            | Coupling Clamp                  | Schaffner         | CDN 126             | 312          |
| <input type="checkbox"/>            | Couple Device Network           | Fischer           | CDN-M2              | 9604         |
| <input checked="" type="checkbox"/> | Spectrum Analyzer               | Rohde & Schwarz   | FSP30               | 1093.4495K30 |
| <input type="checkbox"/>            | Temperature Chamber             | Binder            | MK 240              | 9020-0028    |
| <input type="checkbox"/>            | EFT,ESD,SURGE, DIPS tester      | Schaffner         | Best 96             | IN3796-011   |
| <input type="checkbox"/>            | Surge Generator                 | Schaffner         | NSG650              | 280          |

## Result FCC Part 15 – Subpart C

| Subclause 15.203 – Antenna Information |                                                                                             | Pass |
|----------------------------------------|---------------------------------------------------------------------------------------------|------|
| <b>Requirement:</b>                    | No antenna other than that furnished by the responsible party shall be used with the device |      |
| <b>Result:</b>                         | Permanent attached antenna                                                                  |      |
| <b>Verdict:</b>                        | Pass                                                                                        |      |

| Subclause 15.204 – Antenna Information |                                                                                                                                                                        | Pass |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Requirement:</b>                    | Provide information for every antenna proposed for the use with the EUT                                                                                                |      |
| <b>Result:</b>                         | a) Antenna type: Inverted F type antenna soldered to the circuit board<br>b) Manufacturer and model no: N.A.<br>c) Gain with reference to an isotropic radiator: 0 dBi |      |
| <b>Verdict:</b>                        | Pass                                                                                                                                                                   |      |

| Subclause 15.207 – Conducted Emission                                                   |  | N.A. |
|-----------------------------------------------------------------------------------------|--|------|
| Applicable only to equipment designed to be connected to the public utility power line. |  |      |

| Subclause 15.247 (a) – Carrier Frequency Separation                                                                                                                                                                                                                                                     |                                                                                                                                                                              | Pass |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Requirement:                                                                                                                                                                                                                                                                                            | Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater. |      |
| Test Specification : FCC Part 15 Subpart A – Subclause 15.31<br>Mode of operation : Tx mode (hopping on), DH1 packet<br>Port of testing : Temporary antenna port<br>Detector : Peak<br>RBW/VBW : 100 kHz / 300 kHz<br>Supply voltage : 12VDC from AC/DC adapter<br>Temperature : 23°C<br>Humidity : 54% |                                                                                                                                                                              |      |
| Result: The centre frequencies of the hopping channels are separated by more than the 20dB bandwidth. For test results plots refer to Appendix 1, page 2.                                                                                                                                               |                                                                                                                                                                              |      |
| Verdict: Pass                                                                                                                                                                                                                                                                                           |                                                                                                                                                                              |      |

| Subclause 15.247 (a) – Time of Occupancy (Dwell Time)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Pass |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Requirement:</b> Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.                                                                                                                                                                                                                                                                                                                                                                          |      |
| Test Specification : FCC Part 15 Subpart A – Subclause 15.31<br>Mode of operation : Tx mode (hopping on), DH5 packet<br>Port of testing : Temporary antenna port<br>Detector : Peak<br>RBW/VBW : 1 MHz / 3 MHz<br>Supply voltage : 12VDC from AC/DC adapter<br>Temperature : 23°C<br>Humidity : 54%                                                                                                                                                                                                                                                                                                                                                                           |      |
| <b>Result:</b> The screenshot in Appendix 1 page 4 shows the occurrence of a channel in a 12.8 s time period. In inquiry and page scan mode Bluetooth is using 32 hopping channels only. The frequency was used 26 times. The dwell time for the longest supported packet type is about 3 ms. As a result the average time of occupancy will not be greater than 400 ms.<br><br>i.e. Time period calculation:<br>$0.4 \times 32 = 12.8\text{s}$<br><br>Limit calculation:<br>$26 \times 2.936 \times 10^{-3} = 76.34 \times 10^{-3}\text{s}$<br>$\leq 400 \times 10^{-3}\text{s}$<br><br>For test protocols please refer to Appendix 1, page 3-4.<br><br><b>Verdict:</b> Pass |      |

**Subclause 15.247 (a) – 20 dB Bandwidth**

**Requirement:** Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

Test Specification : FCC Part 15 Subpart A – Subclause 15.31  
 Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz), DH5 packet  
 Port of testing : Temporary antenna port  
 Detector : Peak  
 RBW/VBW : 30 kHz / 100 kHz  
 Supply voltage : 12VDC from AC/DC adapter  
 Temperature : 23°C  
 Humidity : 54%

**Results**

| Frequency (MHz) | 20 dB right (MHz) | 20 dB left (MHz) | 20dB bandwidth (MHz) |
|-----------------|-------------------|------------------|----------------------|
| 2402            | 0.404             | 0.436            | 0.840                |
| 2441            | 0.400             | 0.440            | 0.840                |
| 2480            | 0.400             | 0.440            | 0.840                |

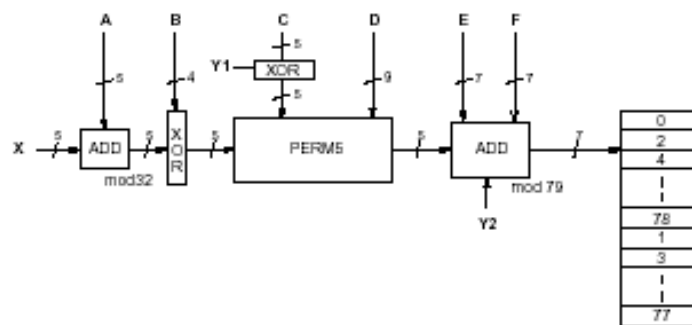
For test protocols refer to Appendix 1, page 5-7.

**Subclause 15.247 (a) – Hopping Sequence****Pass**

**Requirement:** The hopping sequence is generated and provided with an example.

**Hopping sequence**

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master. The X input determines the phase in the 32-hop segment, whereas Y1 and Y2 selects between master-to-slave and slave-to-master transmission. The inputs A to D determine the ordering within the segment, the inputs E and F determine the mapping onto the hop frequencies.



**Example data:**

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x0000010

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

```

0x0000010: 08 66 | 10 70 | 12 19 | 14 23 | 16 01 | 18 05 | 20 33 | 22 37 |
0x0000030: 24 03 | 26 07 | 28 35 | 30 39 | 32 72 | 34 76 | 36 25 | 38 29 |
0x0000050: 40 74 | 42 78 | 44 27 | 46 31 | 48 09 | 50 13 | 52 41 | 54 45 |
0x0000070: 56 11 | 58 15 | 60 43 | 62 47 | 32 17 | 36 19 | 34 49 | 38 51 |
0x0000090: 40 21 | 44 23 | 42 53 | 46 55 | 48 33 | 52 35 | 50 65 | 54 67 |
0x00000b0: 56 37 | 60 39 | 58 69 | 62 71 | 64 25 | 68 27 | 66 57 | 70 59 |
0x00000d0: 72 29 | 76 31 | 74 61 | 78 63 | 01 41 | 05 43 | 03 73 | 07 75 |
0x00000f0: 09 45 | 13 47 | 11 77 | 15 00 | 64 49 | 66 53 | 68 02 | 70 06 |
0x0000110: 01 51 | 03 55 | 05 04 | 07 08 | 72 57 | 74 61 | 76 10 | 78 14 |
0x0000130: 09 59 | 11 63 | 13 12 | 15 16 | 17 65 | 19 69 | 21 18 | 23 22 |
0x0000150: 33 67 | 35 71 | 37 20 | 39 24 | 25 73 | 27 77 | 29 26 | 31 30 |
0x0000170: 41 75 | 43 00 | 45 28 | 47 32 | 17 02 | 21 04 | 19 34 | 23 36 |
0x0000190: 33 06 | 37 08 | 35 38 | 39 40 | 25 10 | 29 12 | 27 42 | 31 44 |
0x00001b0: 41 14 | 45 16 | 43 46 | 47 48 | 49 18 | 53 20 | 51 50 | 55 52 |
0x00001d0: 65 22 | 69 24 | 67 54 | 71 56 | 57 26 | 61 28 | 59 58 | 63 60 |
0x00001f0: 73 30 | 77 32 | 75 62 | 00 64 | 49 34 | 51 42 | 57 66 | 59 74 |
0x0000210: 53 36 | 55 44 | 61 68 | 63 76 | 65 50 | 67 58 | 73 03 | 75 11 |
0x0000230: 69 52 | 71 60 | 77 05 | 00 13 | 02 38 | 04 46 | 10 70 | 12 78 |
0x0000250: 06 40 | 08 48 | 14 72 | 16 01 | 18 54 | 20 62 | 26 07 | 28 15 |
0x0000270: 22 56 | 24 64 | 30 09 | 32 17 | 02 66 | 06 74 | 10 19 | 14 27 |
0x0000290: 04 70 | 08 78 | 12 23 | 16 31 | 18 03 | 22 11 | 26 35 | 30 43 |
0x00002b0: 20 07 | 24 15 | 28 39 | 32 47 | 34 68 | 38 76 | 42 21 | 46 29 |
0x00002d0: 36 72 | 40 01 | 44 25 | 48 33 | 50 05 | 54 13 | 58 37 | 62 45 |
0x00002f0: 52 09 | 56 17 | 60 41 | 64 49 | 34 19 | 36 35 | 50 51 | 52 67 |
0x0000310: 38 21 | 40 37 | 54 53 | 56 69 | 42 27 | 44 43 | 58 59 | 60 75 |
0x0000330: 46 29 | 48 45 | 62 61 | 64 77 | 66 23 | 68 39 | 03 55 | 05 71 |
0x0000350: 70 25 | 72 41 | 07 57 | 09 73 | 74 31 | 76 47 | 11 63 | 13 00 |
0x0000370: 78 33 | 01 49 | 15 65 | 17 02 | 66 51 | 70 67 | 03 04 | 07 20 |
0x0000390: 68 55 | 72 71 | 05 08 | 09 24 | 74 59 | 78 75 | 11 12 | 15 28 |
0x00003b0: 76 63 | 01 00 | 13 16 | 17 32 | 19 53 | 23 69 | 35 06 | 39 22 |
0x00003d0: 21 57 | 25 73 | 37 10 | 41 26 | 27 61 | 31 77 | 43 14 | 47 30 |
0x00003f0: 29 65 | 33 02 | 45 18 | 49 34 | 19 04 | 21 08 | 23 20 | 25 24 |

```

**Subclause 15.247 (a) – Equal Hopping Frequency Use****Pass**

Requirement: Each of the transmitter's hopping channels is used equally on average.

Equal hopping frequency use

The EUT complies with the Bluetooth RF specifications. For details refer to the Bluetooth standard.

| Subclause 15.247 (a) – Receiver Input Bandwidth                                                                                                                                        |                                                                                                                                    | Pass |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------|
| Requirement:                                                                                                                                                                           | The associated receiver(s) complies with the requirement that its input bandwidth matches the bandwidth of the transmitted signal. |      |
| Receiver input bandwidth                                                                                                                                                               |                                                                                                                                    |      |
| The receiver bandwidth is equal to the receiver bandwidth in the 79 hopping channel mode, which is 1 MHz. The receiver bandwidth was verified during Bluetooth RF conformance testing. |                                                                                                                                    |      |

| Subclause 15.247 (a) – Receiver Hopping Capability                                                  |                                                                                                               | Pass |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------|
| Requirement:                                                                                        | The associated receiver has the ability to shift frequencies in synchronisation with the transmitted signals. |      |
| Receiver hopping Capability                                                                         |                                                                                                               |      |
| The EUT complies with the Bluetooth RF specifications. For details refer to the Bluetooth standard. |                                                                                                               |      |

| Subclause 15.247 (b) – Peak Output Power                                                                                                                                                                                                                                                                           |                                 |                                                                                                                                                                                  |                    | Pass          |         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------|---------|
| Test Specification : FCC Part 15 Subpart A – Subclause 15.31<br>Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz), DH1 packet<br>Port of testing : Temporary antenna port<br>Detector : Peak<br>RBW/VBW : 1 MHz / 3 MHz<br>Supply voltage : 12VDC from AC/DC adapter<br>Temperature : 23°C<br>Humidity : 54% |                                 |                                                                                                                                                                                  |                    |               |         |
| Requirement:                                                                                                                                                                                                                                                                                                       |                                 | For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 Watt. |                    |               |         |
| <b>Result</b><br>All three transmit frequency modes comply with the maximum peak output power limit..<br>For test protocols please refer to Appendix 1, page 8-10.                                                                                                                                                 |                                 |                                                                                                                                                                                  |                    |               |         |
| Frequency (MHz)                                                                                                                                                                                                                                                                                                    | Maximum peak output power (dBm) | Cable attenuation (dB)                                                                                                                                                           | Output power (dBm) | Limit (W/dBm) | Verdict |
| 2402                                                                                                                                                                                                                                                                                                               | -10.23                          | 4.30                                                                                                                                                                             | -5.93              | 0.125 / 21.0  | Pass    |
| 2441                                                                                                                                                                                                                                                                                                               | -11.56                          | 4.15                                                                                                                                                                             | -7.41              | 0.125 / 21.0  | Pass    |
| 2480                                                                                                                                                                                                                                                                                                               | -12.32                          | 4.50                                                                                                                                                                             | -7.82              | 0.125 / 21.0  | Pass    |

| Subclause 15.247 (b) – Band edge compliance                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                | Pass |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Test Specification : FCC Part 15 Subpart A – Subclause 15.31<br>Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz), DH1 packet<br>Port of testing : Temporary antenna port<br>Detector : Peak<br>RBW/VBW : 300 kHz / 1 MHz<br>Supply voltage : 12VDC from AC/DC adapter<br>Temperature : 23°C<br>Humidity : 54% |                                                                                                                                                                                                                                                                                                                                                                                                                |      |
| Requirement:                                                                                                                                                                                                                                                                                                         | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |      |
| <b>Result</b><br><br>There is no peak found outside any 100 kHz bandwidth of the operating frequency band in the three transmit frequency. All three transmit frequency modes comply with the limit stated in subclause 15.247(c).<br><br>For test protocols refer to Appendix 1, page 11-13.                        |                                                                                                                                                                                                                                                                                                                                                                                                                |      |

| Subclause 15.247 (c) – Spurious Conducted Emissions                                                                                                                                                                                                                                                                    |                        |                                                                                                                                                                                                                                                                                                                                                                                                                |                     | Pass     |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------|---------|
| Test Specification : FCC Part 15 Subpart A – Subclause 15.31<br>Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz), DH1 packet<br>Port of testing : Temporary antenna port<br>Detector : Peak<br>RBW/VBW : 100 kHz / 300 kHz<br>Supply voltage : 12VDC from AC/DC adapter<br>Temperature : 23°C<br>Humidity : 54% |                        |                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |         |
| Requirement:                                                                                                                                                                                                                                                                                                           |                        | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. |                     |          |         |
| <b>Result</b><br><br>There is no peak found outside any 100kHz bandwidth of the operating frequency band in the three transmit frequency. All three transmit frequency modes comply with the limit stated in subclause 15.247(c).<br><br>For test protocols refer to Appendix 1, page 14-20.                           |                        |                                                                                                                                                                                                                                                                                                                                                                                                                |                     |          |         |
| Operating frequency MHz                                                                                                                                                                                                                                                                                                | Spurious frequency MHz | Spurious Level dBm                                                                                                                                                                                                                                                                                                                                                                                             | Reference value dBm | Delta dB | Verdict |
| 2402                                                                                                                                                                                                                                                                                                                   | 1186.520               | -52.49                                                                                                                                                                                                                                                                                                                                                                                                         | -11.09              | -41.4    | Pass    |
|                                                                                                                                                                                                                                                                                                                        | 4795.660               | -53.08                                                                                                                                                                                                                                                                                                                                                                                                         | -11.09              | -41.99   | Pass    |

|      |          |        |        |        |      |
|------|----------|--------|--------|--------|------|
| 2441 | 1206.460 | -51.20 | -11.82 | -39.38 | Pass |
|      | 4875.420 | -52.47 | -11.82 | -40.65 | Pass |
| 2480 | 1226.400 | -51.65 | -12.42 | -39.23 | Pass |
|      | 4955.180 | -51.17 | -12.42 | -38.75 | Pass |

**Subclause 15.247 (c) – Spurious Radiated Emissions****Pass**

Test Specification : ANSI C63.4 - 1992  
 Mode of operation : Tx mode (2402MHz, 2441MHz, 2480MHz), DH1 packet  
 Port of testing : Enclosure  
 Detector : Peak  
 RBW/VBW : 100 kHz / 300 kHz for  $f < 1$  GHz  
               1 MHz / 3 MHz for  $f > 1$  GHz  
 Supply voltage : 12VDC from car battery  
 Temperature : 23°C  
 Humidity : 54%

**Requirement:** In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

**Result**

All three transmit frequency modes comply with the field strength within the restricted bands.  
 For test protocols refer to Appendix 1, page 21-68.

Tx frequency 2402MHz

Vertical Polarization

| Freq     | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
|----------|---------|---------|------------|---------|-------------|--------|--------------------|
| GHz      | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 112.000  | 17.80   | 11.60   | 0.80       | -       | -           | 30.20  | 43.5 / QP          |
| 176.000  | 12.80   | 15.60   | 1.00       | -       | -           | 29.40  | 43.5 / QP          |
| 4804.000 | 46.86   | 33.40   | 3.53       | 32.87   | 0.33        | 51.25  | 54.0 / P           |
| 4803.980 | 38.12   | 33.40   | 3.53       | 32.87   | 0.33        | 42.51  | 54.0 / A           |

Tx frequency 2402MHz

Horizontal Polarization

| Freq     | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
|----------|---------|---------|------------|---------|-------------|--------|--------------------|
| GHz      | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 128.000  | 21.80   | 13.00   | 0.90       | -       | -           | 35.70  | 43.5 / QP          |
| 160.000  | 18.70   | 14.70   | 0.90       | -       | -           | 34.30  | 43.5 / QP          |
| 208.000  | 10.40   | 16.70   | 1.10       | -       | -           | 28.20  | 43.5 / QP          |
| 4804.060 | 42.14   | 33.40   | 3.53       | 32.87   | 0.33        | 46.53  | 54.0 / P           |
| 4803.980 | 32.69   | 33.40   | 3.53       | 32.87   | 0.33        | 37.08  | 54.0 / A           |

| Tx frequency 2441MHz Vertical Polarization   |         |         |            |         |             |        |                    |
|----------------------------------------------|---------|---------|------------|---------|-------------|--------|--------------------|
| Freq                                         | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
| GHz                                          | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 112.000                                      | 16.80   | 11.60   | 0.80       | -       | -           | 29.20  | 43.5 / QP          |
| 176.000                                      | 11.20   | 15.60   | 1.00       | -       | -           | 27.80  | 43.5 / QP          |
| 4882.020                                     | 48.00   | 33.40   | 3.53       | 32.87   | 0.33        | 52.39  | 54.0 / P           |
| 4882.020                                     | 41.95   | 33.40   | 3.53       | 32.87   | 0.33        | 46.34  | 54.0 / A           |
| Tx frequency 2441MHz Horizontal Polarization |         |         |            |         |             |        |                    |
| Freq                                         | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
| GHz                                          | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 128.000                                      | 20.10   | 13.00   | 0.90       | -       | -           | 34.00  | 43.5 / QP          |
| 160.000                                      | 14.90   | 14.70   | 0.90       | -       | -           | 30.50  | 43.5 / QP          |
| 208.002                                      | 13.50   | 16.70   | 1.10       | -       | -           | 31.30  | 43.5 / QP          |
| 4882.000                                     | 43.09   | 33.40   | 3.53       | 32.87   | 0.33        | 47.48  | 54.0 / P           |
| 4881.980                                     | 36.96   | 33.40   | 3.53       | 32.87   | 0.33        | 41.35  | 54.0 / A           |
| 7323.180                                     | 37.44   | 37.10   | 4.56       | 34.15   | 0.18        | 45.13  | 54.0 / P           |
| 7322.960                                     | 30.54   | 37.10   | 4.56       | 34.15   | 0.18        | 38.23  | 54.0 / A           |
| Tx frequency 2480MHz Vertical Polarization   |         |         |            |         |             |        |                    |
| Freq                                         | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
| GHz                                          | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 112.000                                      | 17.30   | 11.60   | 0.80       | -       | -           | 29.70  | 43.5 / QP          |
| 176.000                                      | 11.30   | 15.60   | 1.00       | -       | -           | 27.90  | 43.5 / QP          |
| 208.000                                      | 7.70    | 16.70   | 1.10       | -       | -           | 25.50  | 43.5 / QP          |
| 224.000                                      | 6.30    | 17.00   | 1.10       | -       | -           | 24.40  | 43.5 / QP          |
| 4959.660                                     | 48.02   | 33.40   | 3.53       | 32.87   | 0.33        | 52.41  | 54.0 / P           |
| 4959.920                                     | 46.80   | 33.40   | 3.53       | 32.87   | 0.33        | 51.19  | 54.0 / A           |
| Tx frequency 2480MHz Horizontal Polarization |         |         |            |         |             |        |                    |
| Freq                                         | Reading | AF      | Cable att. | Pre-amp | Filter att. | Level  | Limit/<br>Detector |
| GHz                                          | dBuV    | dB(1/m) | dB         | dB      | dB          | dBuV/m | dBuV/m             |
| 128.000                                      | 20.20   | 13.00   | 0.90       | -       | -           | 34.10  | 43.5 / QP          |
| 160.000                                      | 17.10   | 14.70   | 0.90       | -       | -           | 32.70  | 43.5 / QP          |
| 224.000                                      | 11.60   | 17.00   | 1.10       | -       | -           | 29.70  | 43.5 / QP          |
| 268.844                                      | 6.20    | 18.90   | 1.30       | -       | -           | 26.40  | 43.5 / QP          |
| 4959.960                                     | 44.86   | 33.40   | 3.53       | 32.87   | 0.33        | 49.25  | 54.0 / P           |
| 4960.000                                     | 39.58   | 33.40   | 3.53       | 32.87   | 0.33        | 43.97  | 54.0 / A           |
| 7439.400                                     | 39.37   | 37.10   | 4.56       | 34.15   | 0.18        | 47.06  | 54.0 / P           |
| 7439.980                                     | 34.24   | 37.10   | 4.56       | 34.15   | 0.18        | 41.93  | 54.0 / A           |

# **Appendix 1**

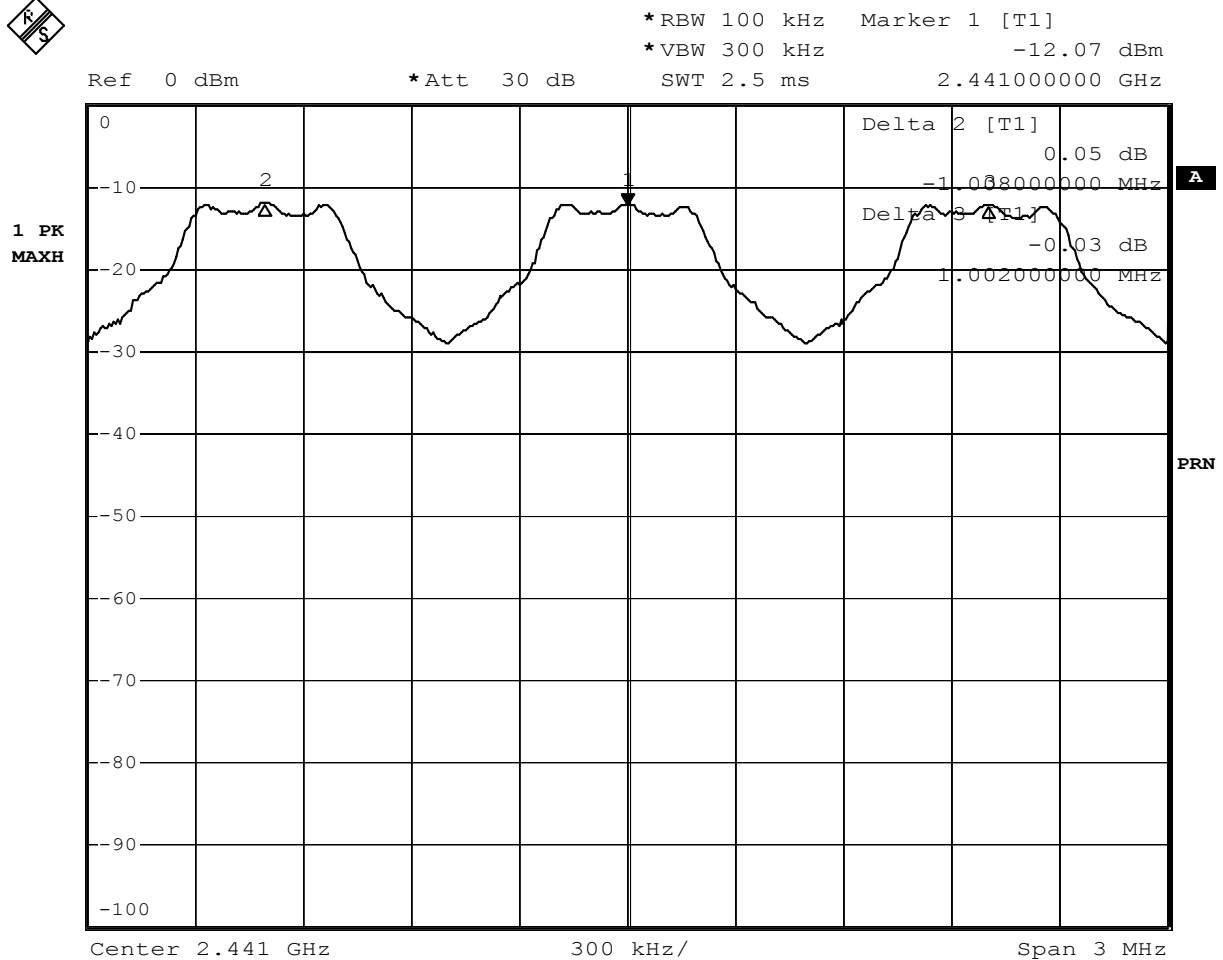
## **Test results**

## Carrier Frequency Separation

Date: 1 Jun 2004  
 EUT: BTU-02  
 Company: Unifat Technology Ltd.  
 Humidity: 50%  
 Temperature: 23°C  
 Voltage supply: 12VDC from AC/DC adapter  
 Test by: Hugo Wan  
 Op. mode: Hopping on

Reference frequency (MHz)  
2441.000

Channel Separation (MHz)  
1.002

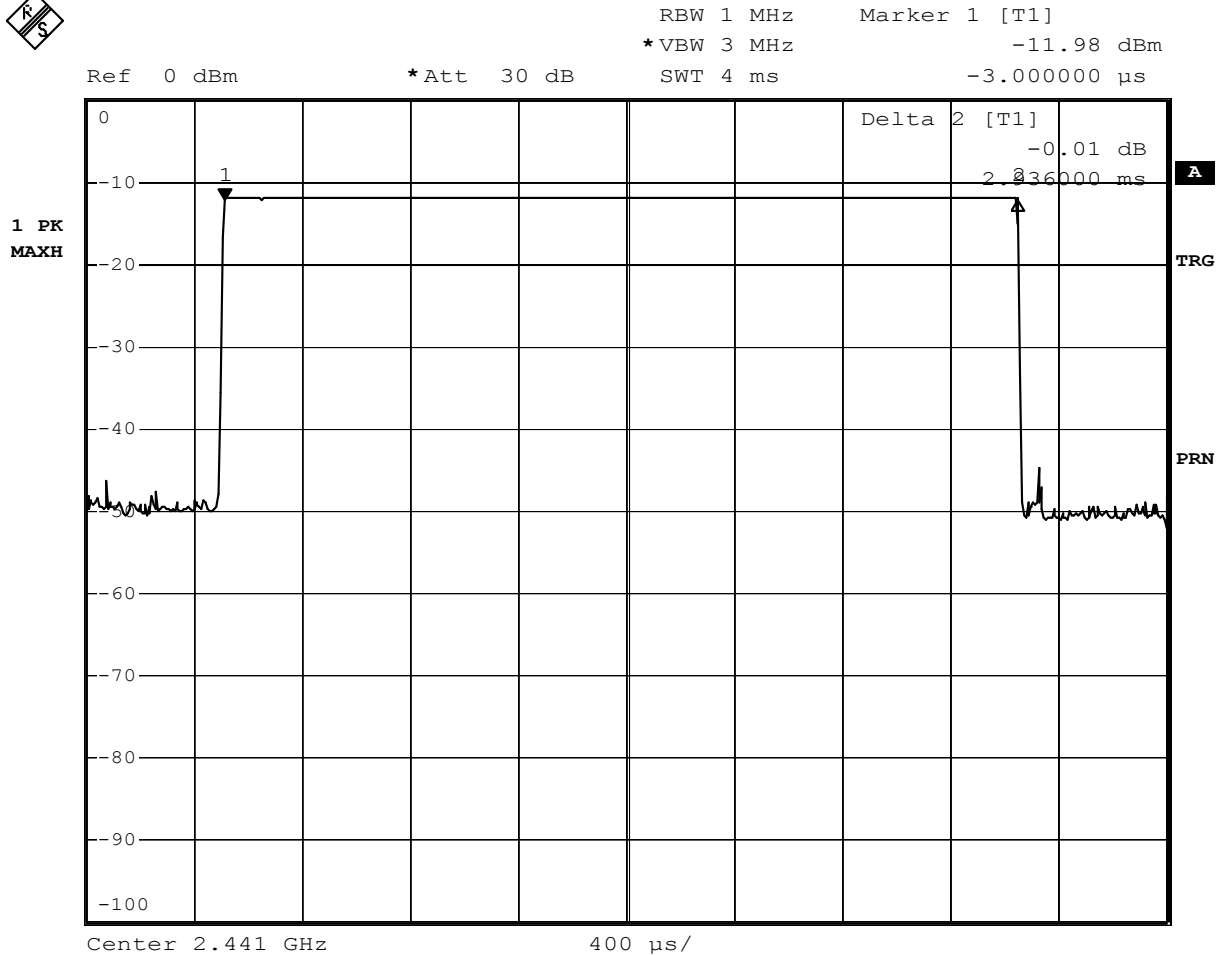


Date: 1.JUN.2004 16:39:42

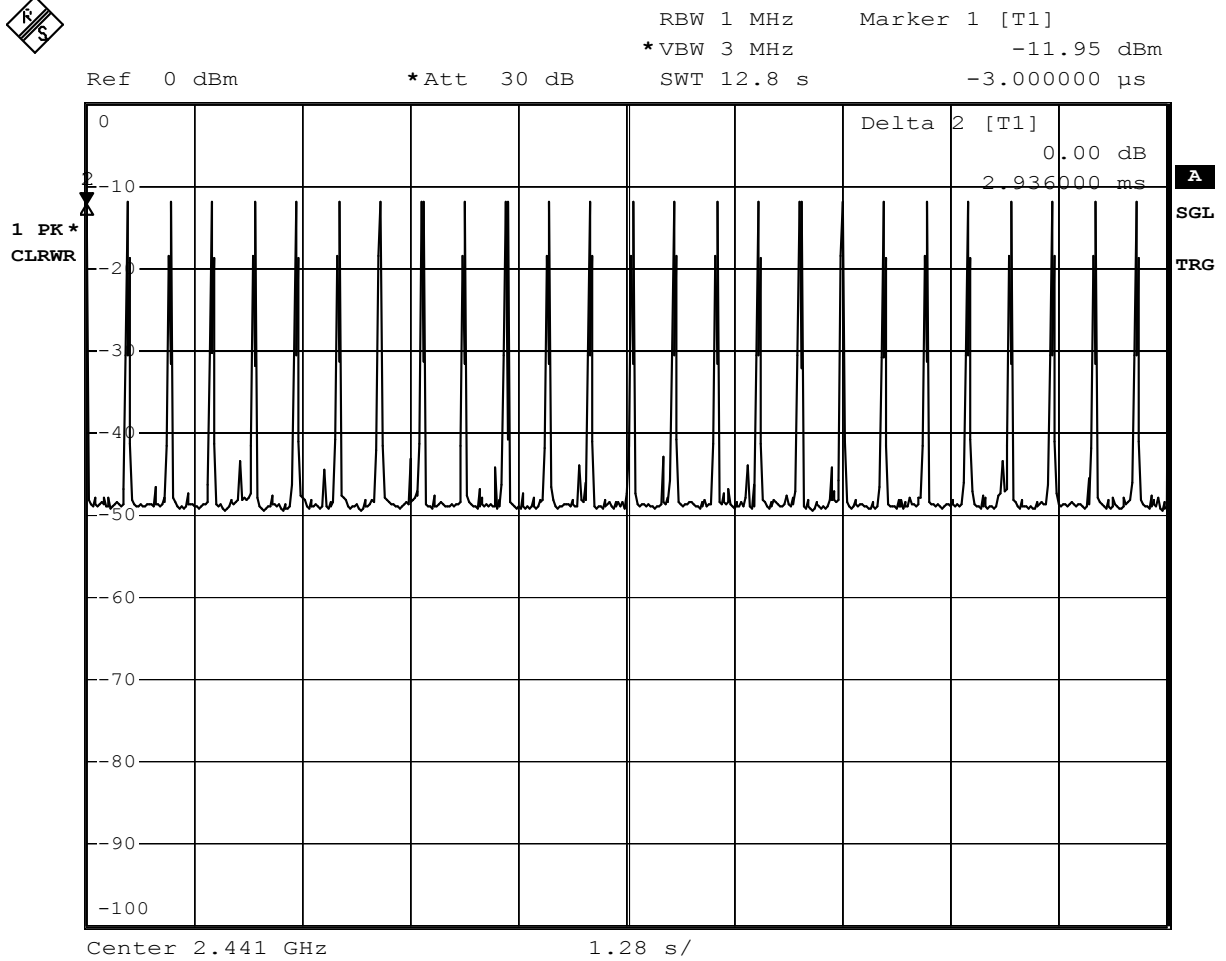
## Dwell Time

Date: 1 Jun 2004  
 EUT: BTU-02  
 Company: Unifat Technology Ltd.  
 Humidity: 50%  
 Temperature: 23°C  
 Voltage supply: 12VDC from AC/DC adapter  
 Test by: Hugo Wan  
 Op. mode: Hopping on

| Burst Duration (ms) | Number of hopping | Time of occupancy (s)          | Results |
|---------------------|-------------------|--------------------------------|---------|
| 2.936               | 26                | $0.002936 \times 26 = 0.07634$ | Pass    |



Date: 1.JUN.2004 16:43:31



Date: 1.JUN.2004 16:46:29

## 20dB Bandwidth

Date: 1 Jun 2004

EUT: BTU-02

Company: Unifat Technology Ltd.

Humidity: 50%

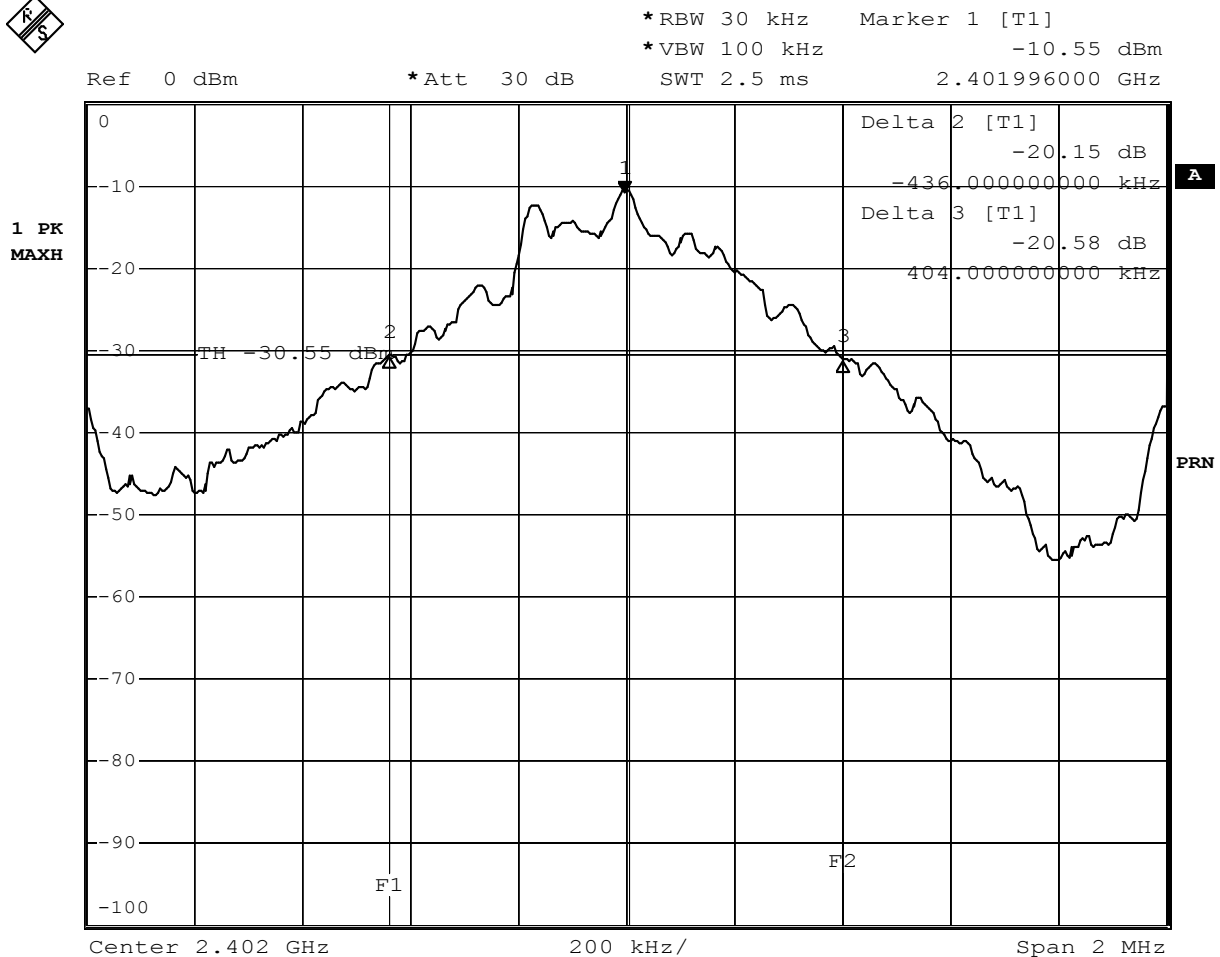
Temperature: 23°C

Voltage supply: 12VDC from AC/DC adapter

Test by: Hugo Wan

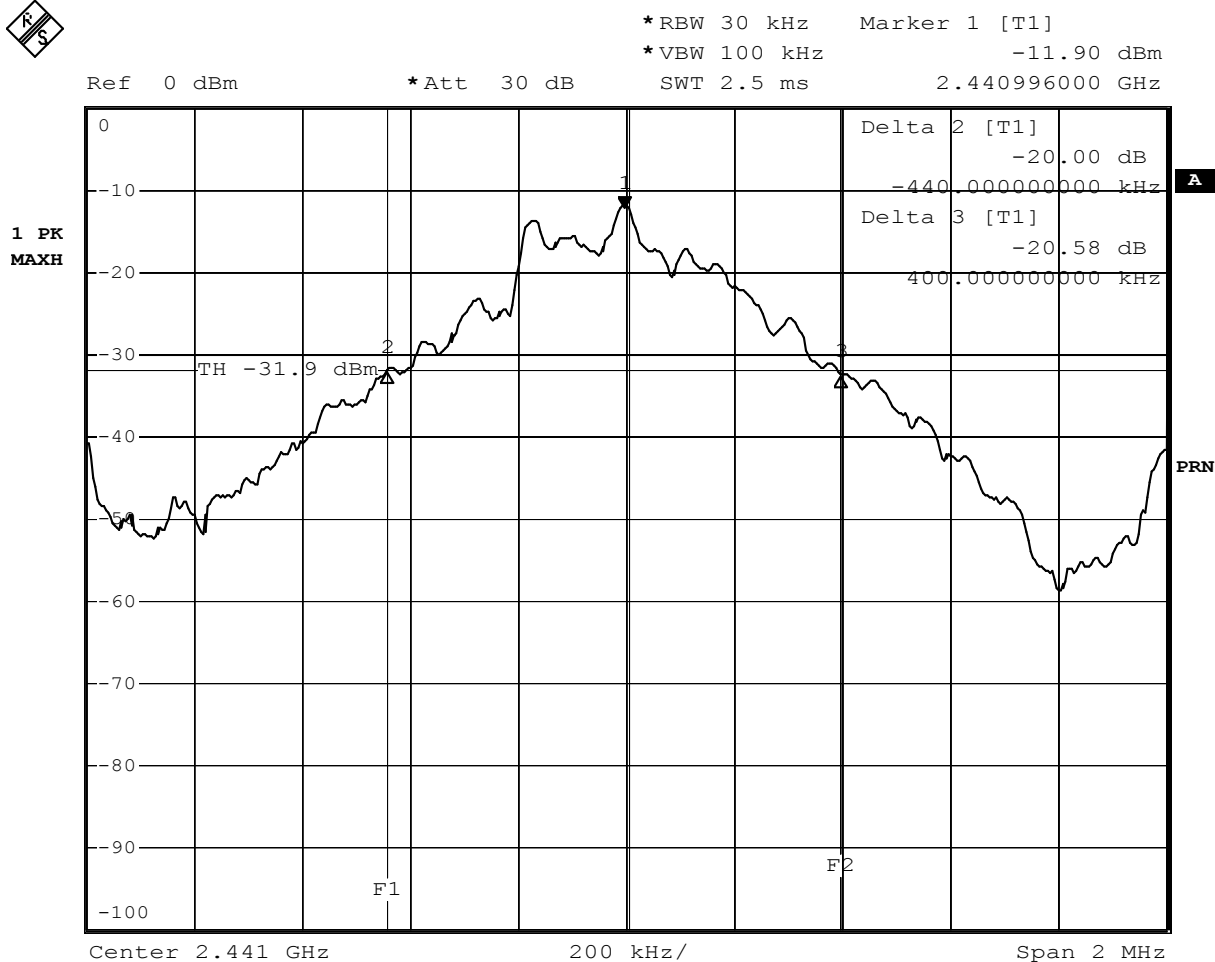
Op. mode: TX mode, DH5 with PRBS9 payload

| Tx frequency (MHz) | $\Delta f_L$ (MHz) | $\Delta f_H$ (MHz) | $ \Delta f_H  +  \Delta f_L $ (MHz) | Results |
|--------------------|--------------------|--------------------|-------------------------------------|---------|
| 2402               | -0.436             | 0.404              | 0.840                               | Pass    |
| 2441               | -0.440             | 0.400              | 0.840                               | Pass    |
| 2480               | -0.440             | 0.400              | 0.840                               | Pass    |



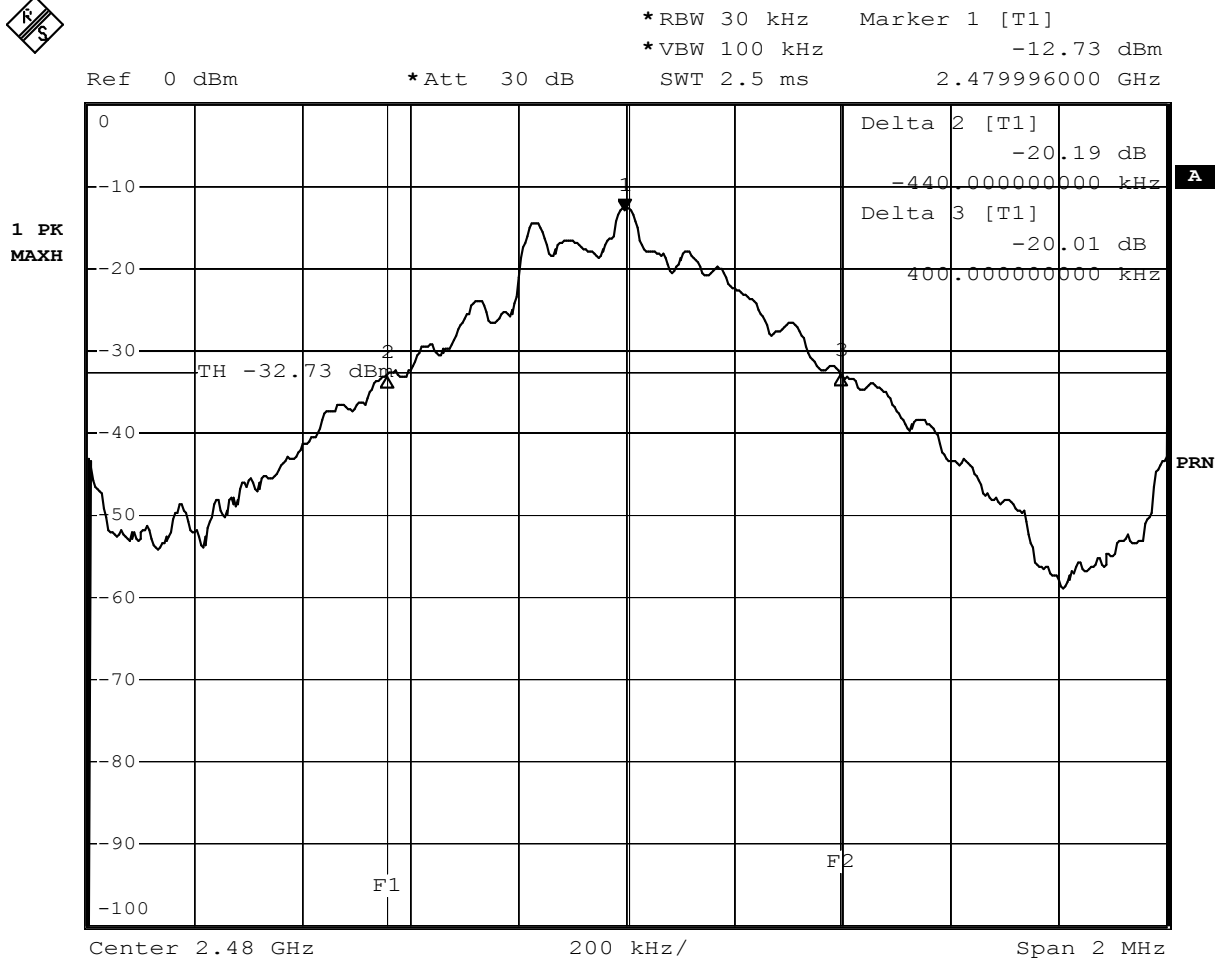
Date: 1.JUN.2004 16:49:54

Tx frequency: 2402MHz



Date: 1.JUN.2004 16:51:37

Tx frequency: 2441MHz



Date: 1.JUN.2004 16:54:42

Tx frequency: 2480MHz

## Peak Output Power

Date: 1 Jun 2004

EUT: BTU-02

Company: Unifat Technology Ltd.

Humidity: 50%

Temperature: 23°C

Voltage supply: 12VDC from AC/DC adapter

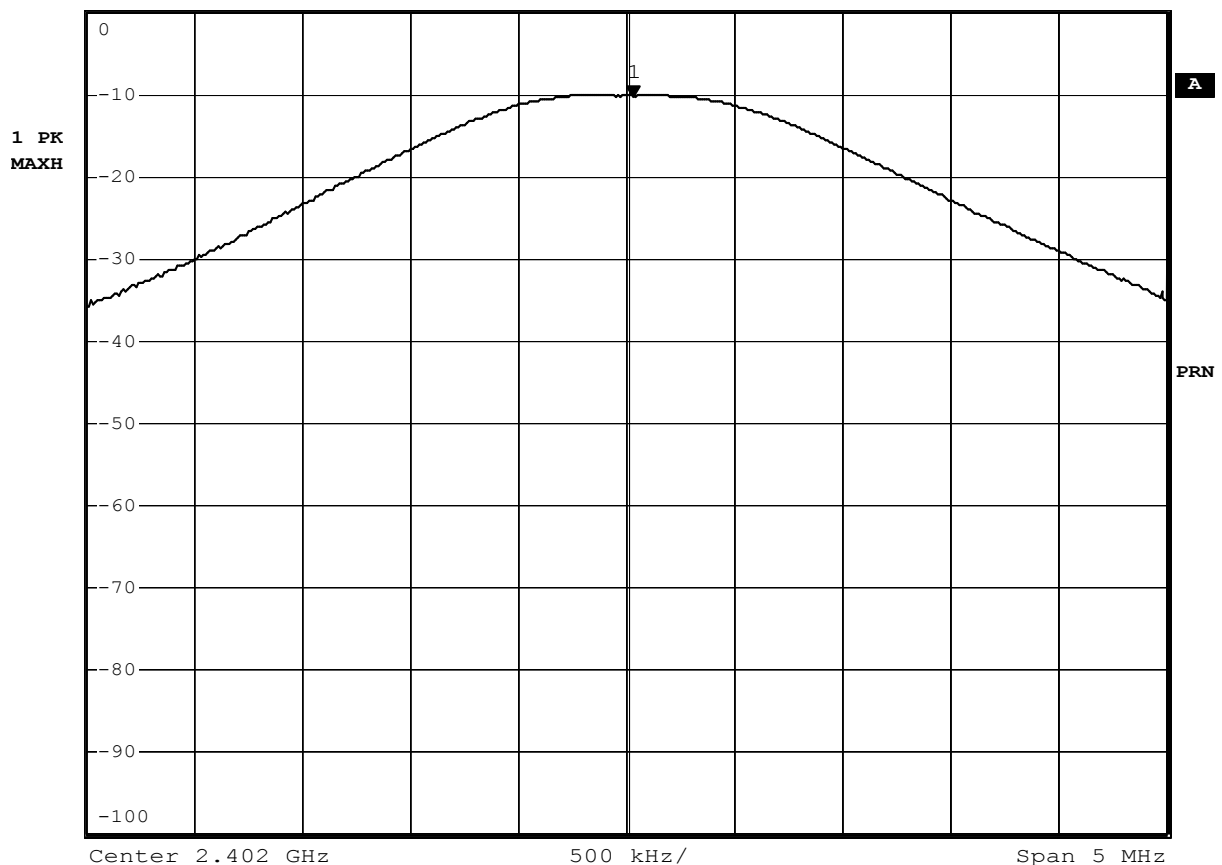
Test by: Hugo Wan

Op. mode: TX mode, DH1 with PRBS9 payload

| Tx Frequency<br>(MHz) | Cable Attenuation<br>(dB) | Power P <sub>PK</sub><br>(dBm) | Actual Peak Power<br>(dBm) | Results |
|-----------------------|---------------------------|--------------------------------|----------------------------|---------|
| 2402                  | 4.30                      | -10.23                         | -5.93                      | Pass    |
| 2441                  | 4.15                      | -11.56                         | -7.41                      | Pass    |
| 2480                  | 4.50                      | -12.32                         | -7.82                      | Pass    |

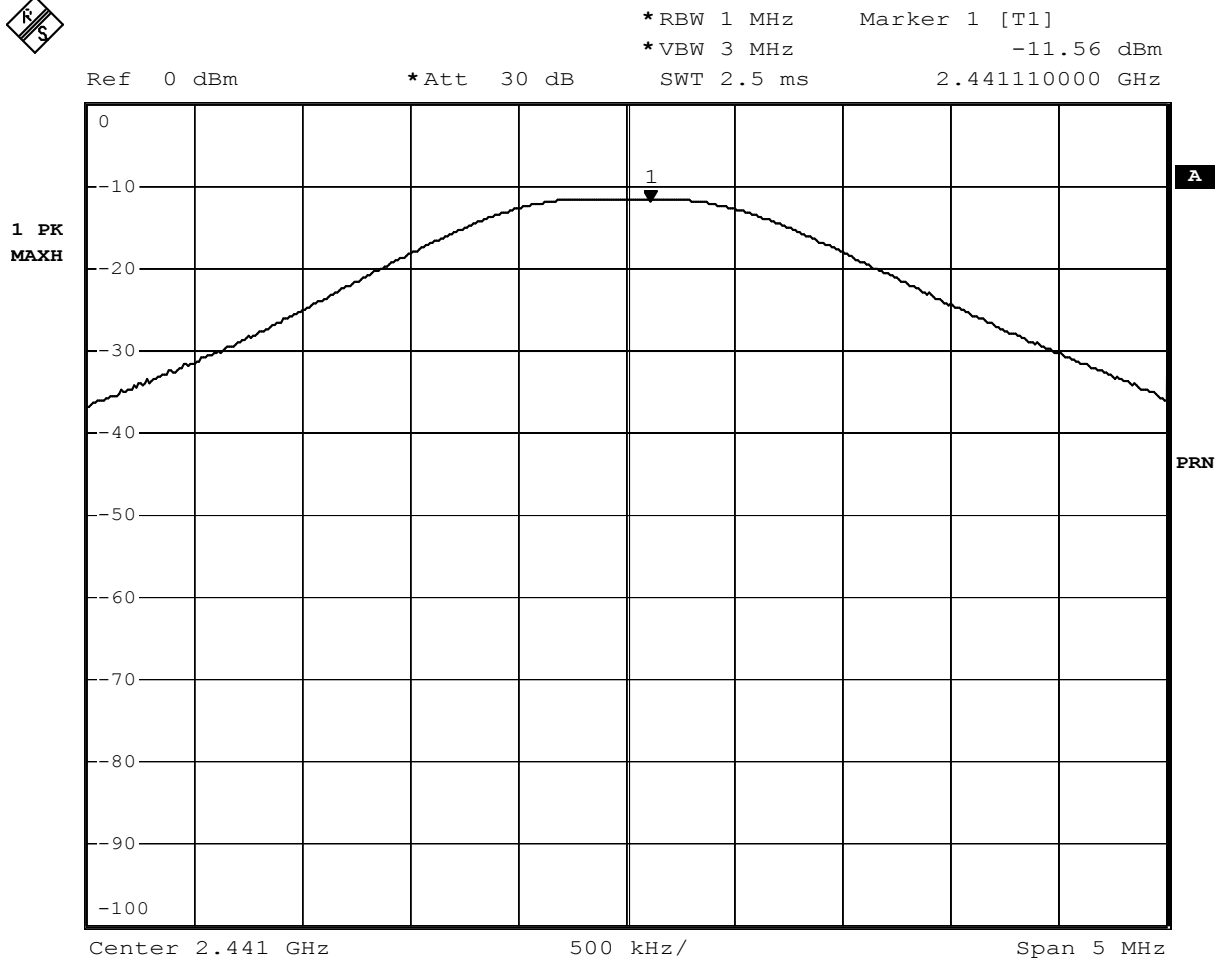


\*RBW 1 MHz      Marker 1 [T1]  
 \*VBW 3 MHz      -10.23 dBm  
 Ref 0 dBm      \*Att 30 dB      SWT 2.5 ms      2.402030000 GHz



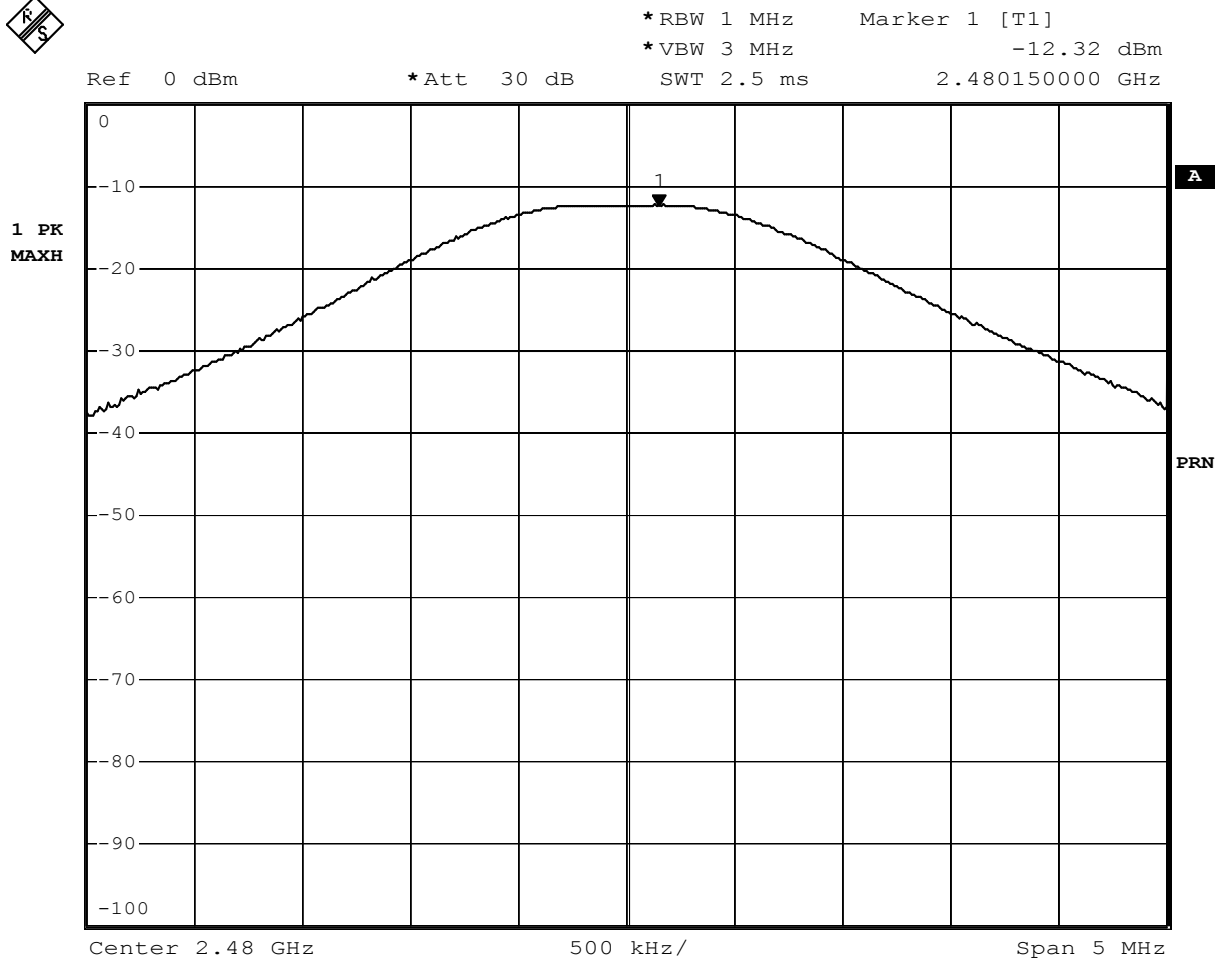
Date: 1.JUN.2004 15:10:30

Tx frequency: 2402MHz



Date: 1.JUN.2004 15:11:36

Tx frequency: 2441MHz



Date: 1.JUN.2004 15:12:19

Tx frequency: 2480MHz

## Band Edge Compliance

Date: 1 Jun 2004

EUT: BTU-02

Company: Unifat Technology Ltd.

Humidity: 50%

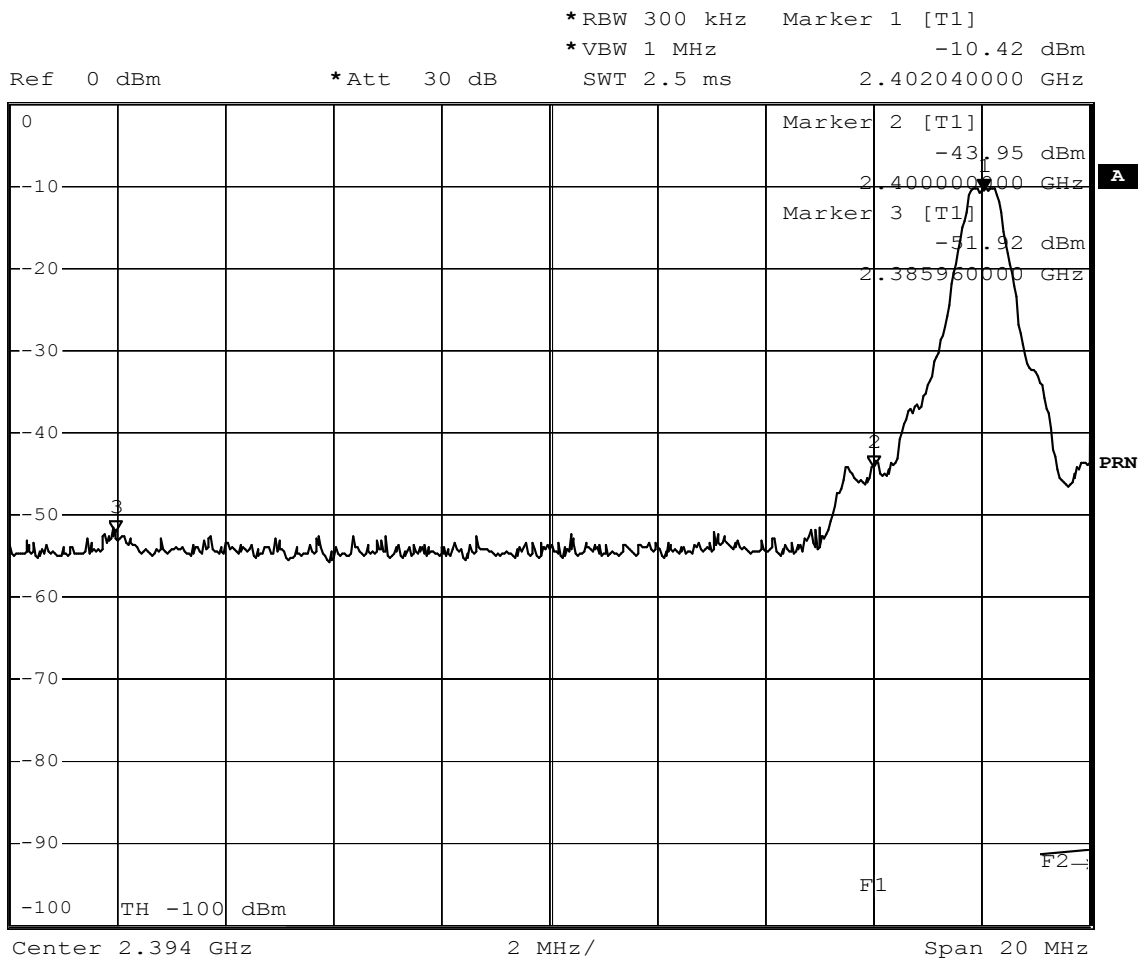
Temperature: 23°C

Voltage supply: 12VDC from AC/DC adapter

Test by: Hugo Wan

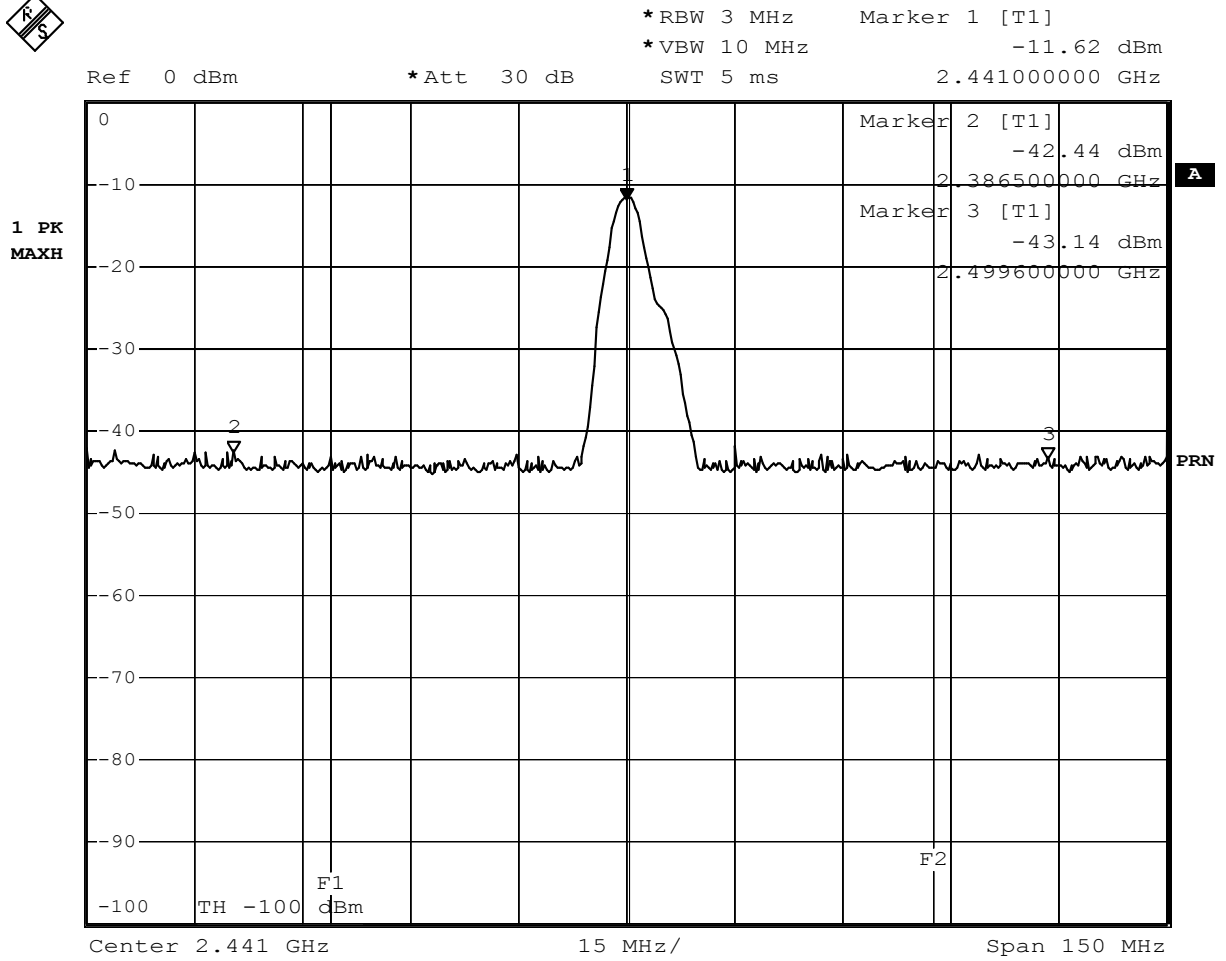
Op. mode: TX mode, DH1 with PRBS9 payload

| Tx Frequency (MHz) | Peak in band Power level (dBm) | RF power outside 100kHz BW (MHz) | RF power difference outside 100kHz BW (dB) | Results |
|--------------------|--------------------------------|----------------------------------|--------------------------------------------|---------|
| 2402               | -10.42                         | No Peak                          | -                                          | Pass    |
| 2480               | -12.70                         | No Peak                          | -                                          | Pass    |



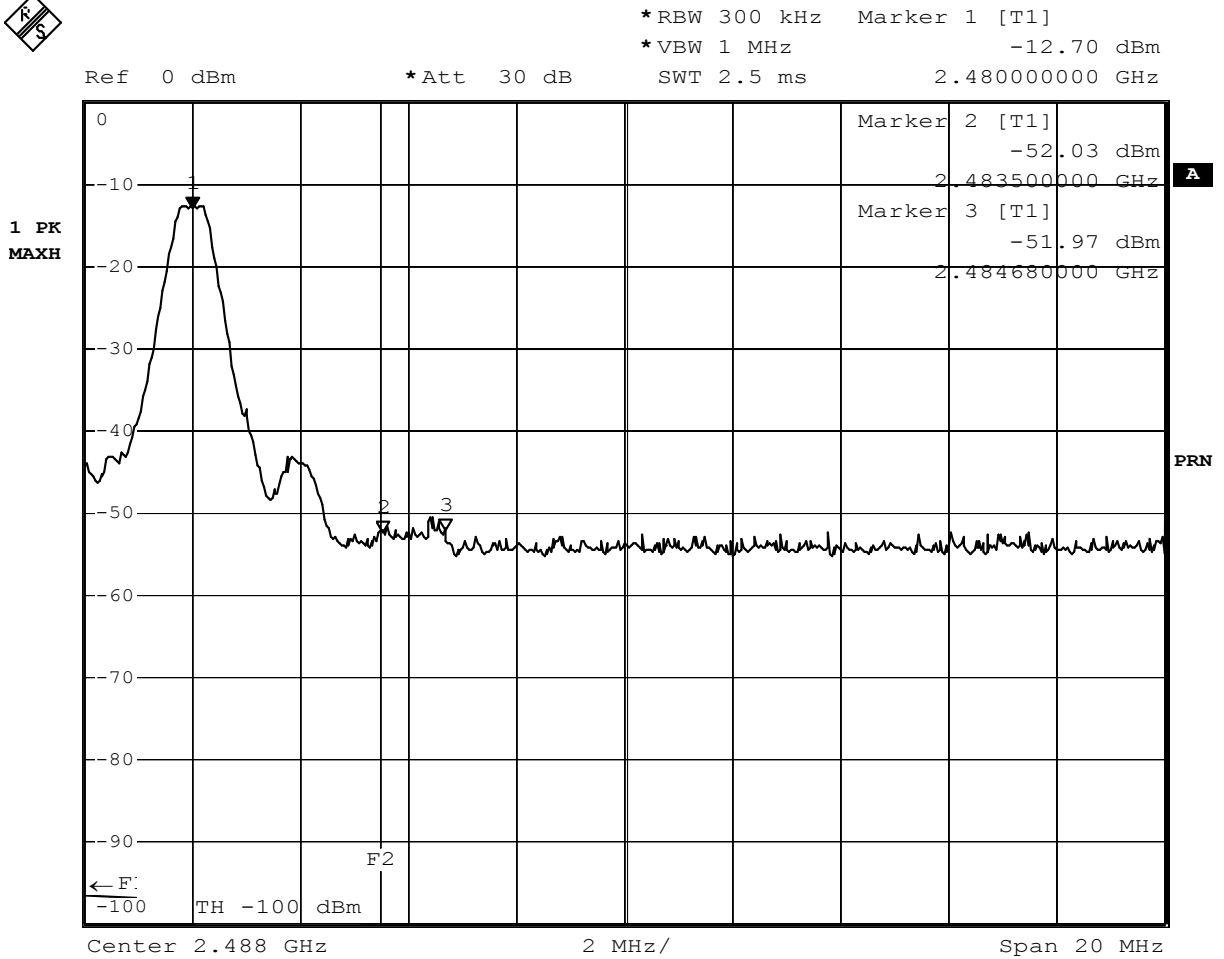
Date: 1.JUN.2004 16:58:56

Tx frequency: 2402MHz



Date: 1.JUN.2004 16:57:51

Tx frequency: 2441MHz



Date: 1.JUN.2004 16:56:58

Tx frequency: 2480MHz

## Spurious Emissions - Conducted

Date: 1 Jun 2004

EUT: BTU-02

Company: Unifat Technology Ltd.

Humidity: 50%

Temperature: 23°C

Voltage supply: 12VDC from AC/DC adapter

Test by: Hugo Wan

Op. mode: TX mode, DH1 with PRBS9 payload

Tx frequency : 2402MHz

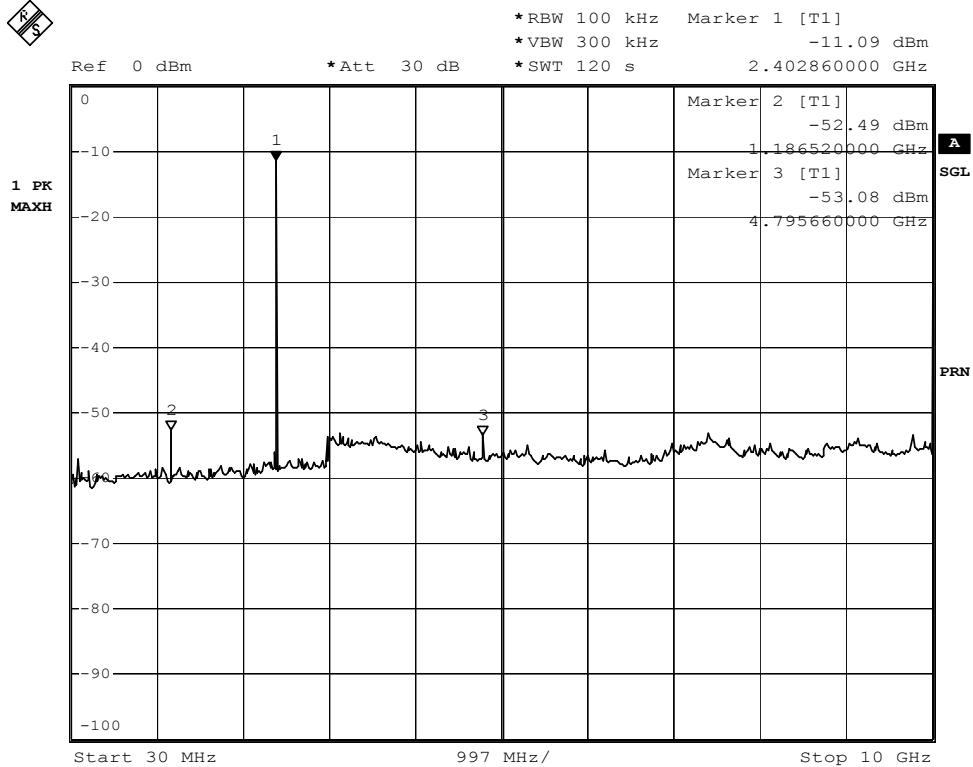
| Spurious Frequency (MHz) | Power level (dBm) | Reference value (dBm) | Delta to reference level (dB) | Results |
|--------------------------|-------------------|-----------------------|-------------------------------|---------|
| 1186.520                 | -52.49            | -11.09                | -41.4                         | Pass    |
| 4795.660                 | -53.08            | -11.09                | -41.99                        | Pass    |

Tx frequency : 2441MHz

| Spurious Frequency (MHz) | Power level (dBm) | Reference value (dBm) | Delta to reference level (dB) | Results |
|--------------------------|-------------------|-----------------------|-------------------------------|---------|
| 1206.460                 | -51.20            | -11.82                | -39.38                        | Pass    |
| 4875.420                 | -52.47            | -11.82                | -40.65                        | Pass    |

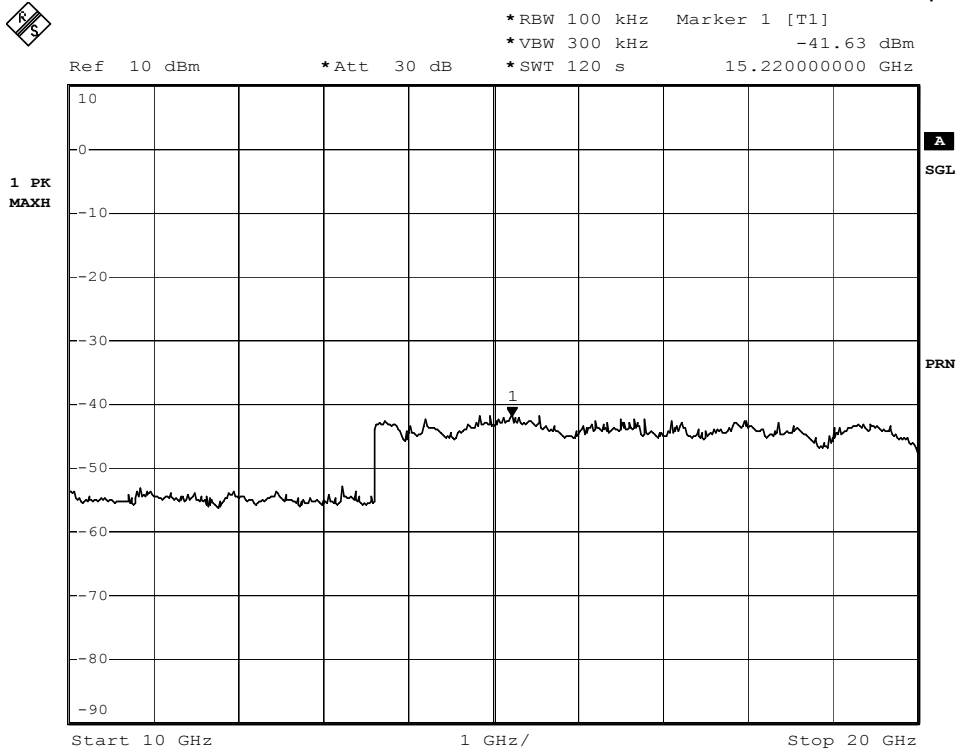
Tx frequency : 2480MHz

| Spurious Frequency (MHz) | Power level (dBm) | Reference value (dBm) | Delta to reference level (dB) | Results |
|--------------------------|-------------------|-----------------------|-------------------------------|---------|
| 1226.400                 | -51.65            | -12.42                | -39.23                        | Pass    |
| 4955.180                 | -51.17            | -12.42                | -38.75                        | Pass    |



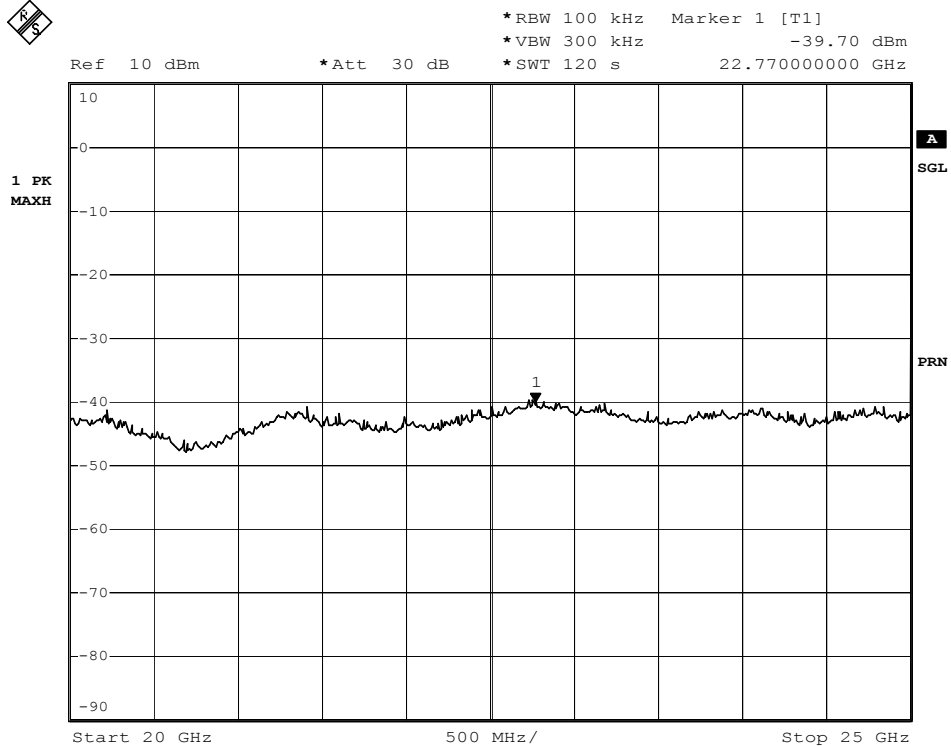
Date: 1.JUN.2004 15:34:26

Tx frequency: 2402MHz



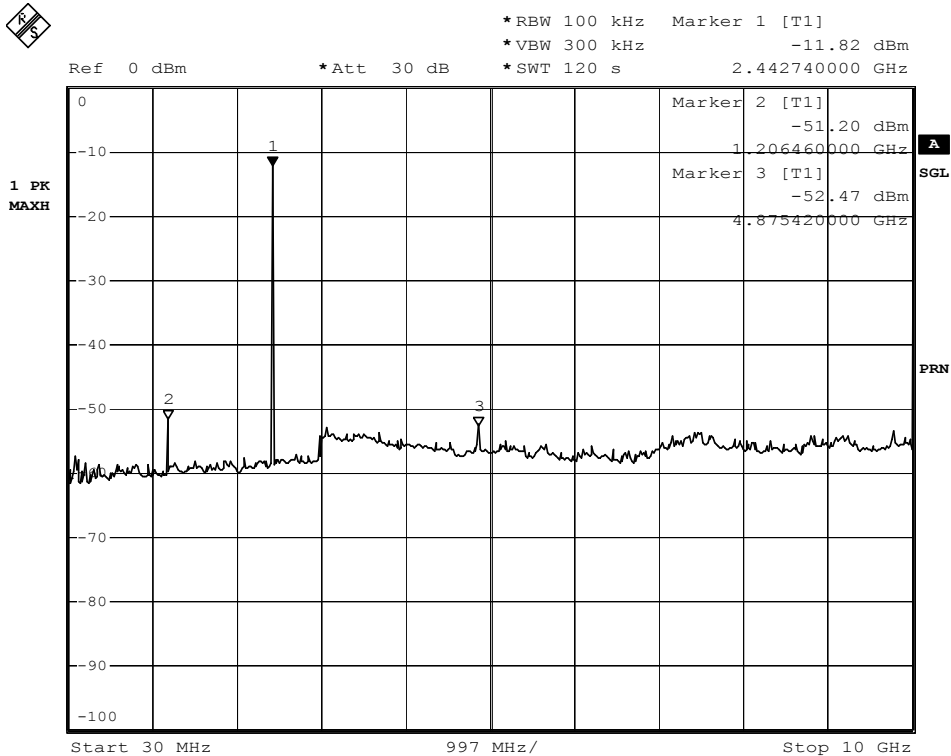
Date: 1.DEC.2003 18:33:18

Tx frequency: 2402MHz



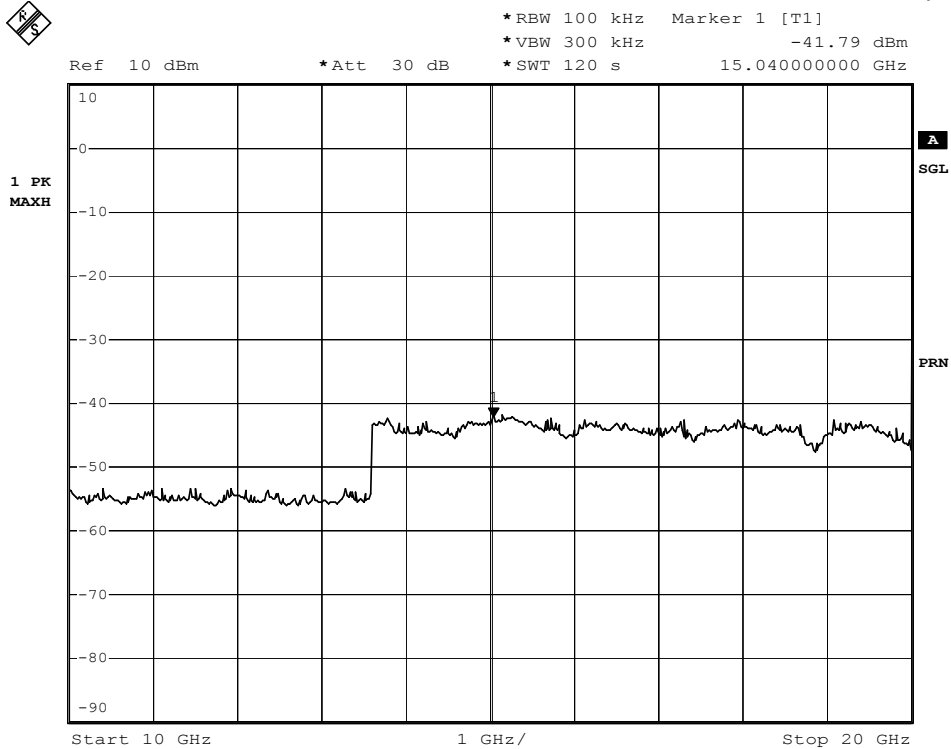
Date: 1.DEC.2003 18:35:42

Tx frequency: 2402MHz



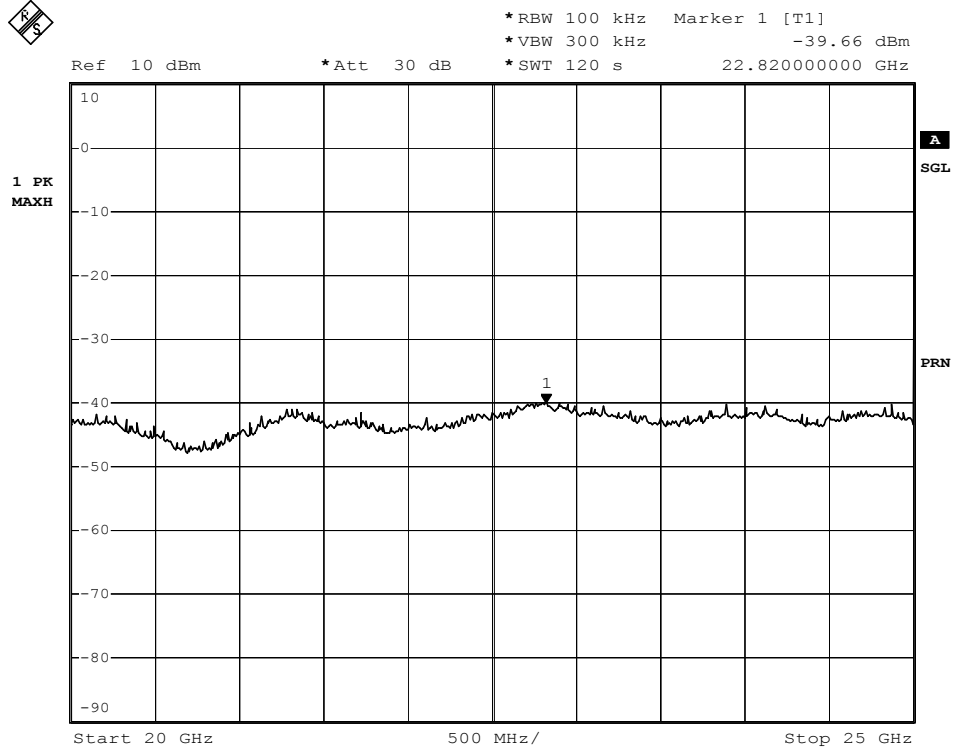
Date: 1.JUN.2004 15:32:13

Tx frequency: 2441MHz



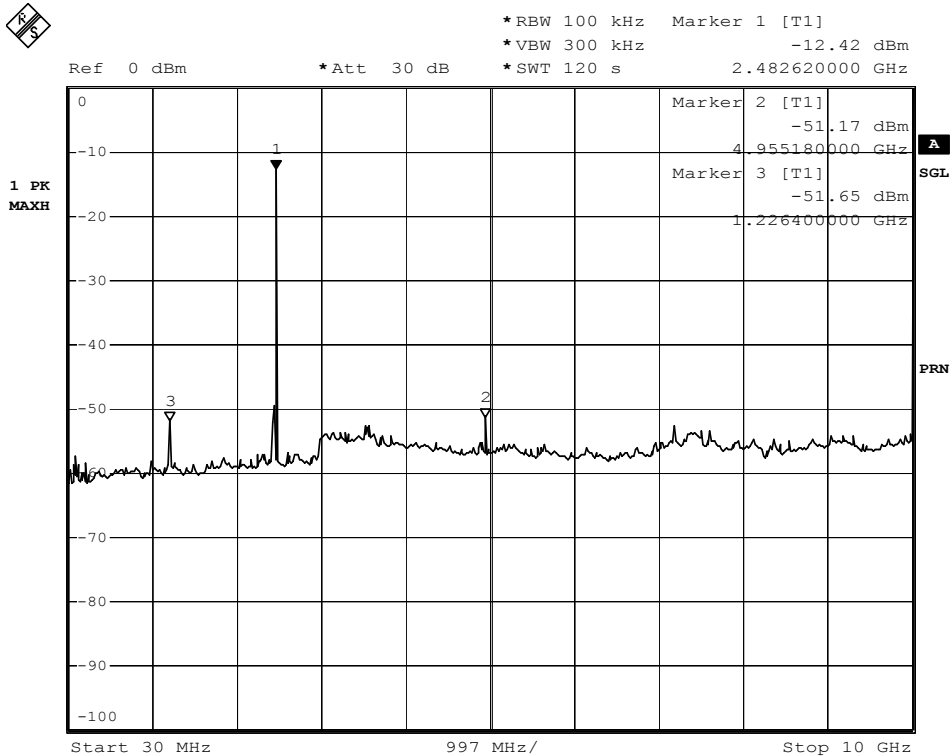
Date: 1.DEC.2003 18:43:57

Tx frequency: 2441MHz



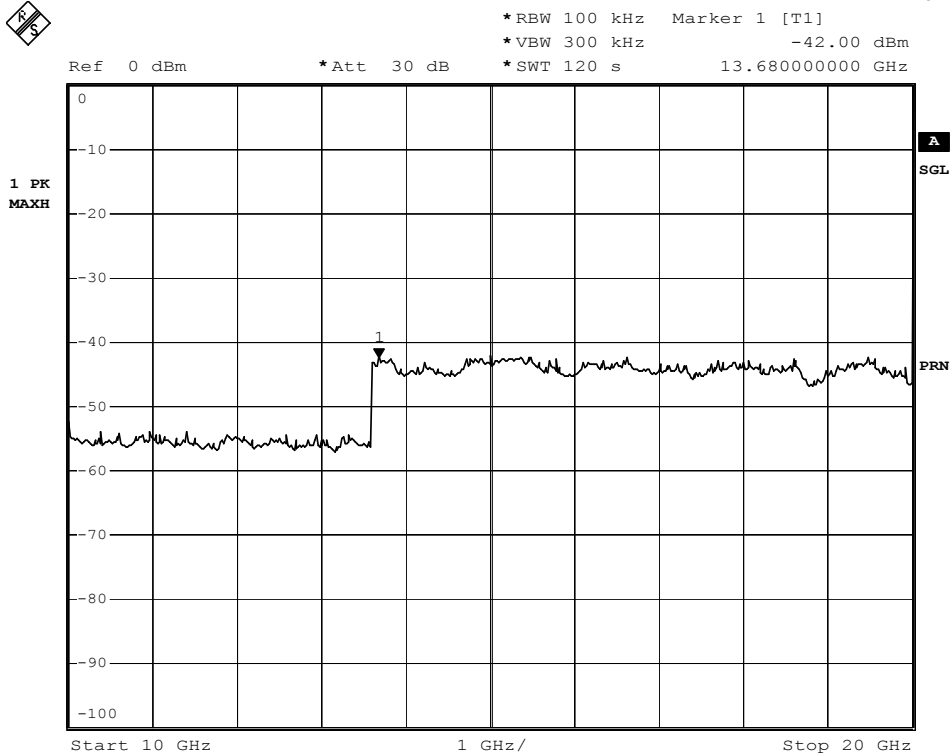
Date: 1.DEC.2003 18:47:52

Tx frequency: 2441MHz



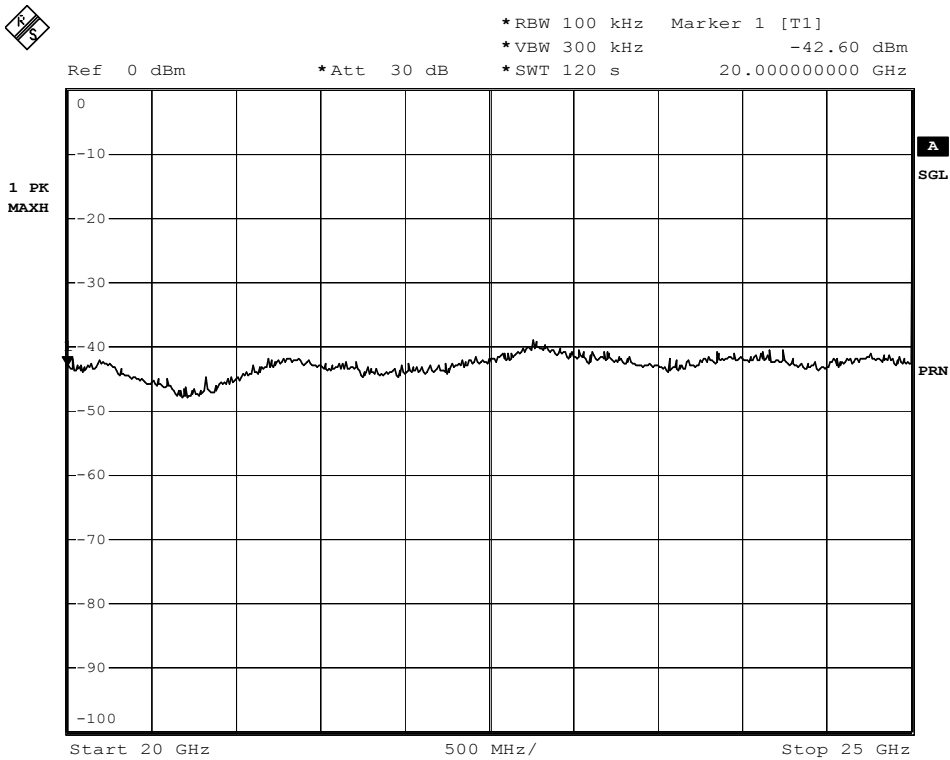
Date: 1.JUN.2004 15:18:25

Tx frequency: 2480MHz



Date: 1.JUN.2004 15:21:14

Tx frequency: 2480MHz



Date: 1.JUN.2004 15:28:41

Tx frequency: 2480MHz

## Spurious Emissions - Radiated

Date: 27 May 2004

EUT: BTU-02

Company: Unifat Technology Ltd.

Voltage supply: 12VDC from car battery

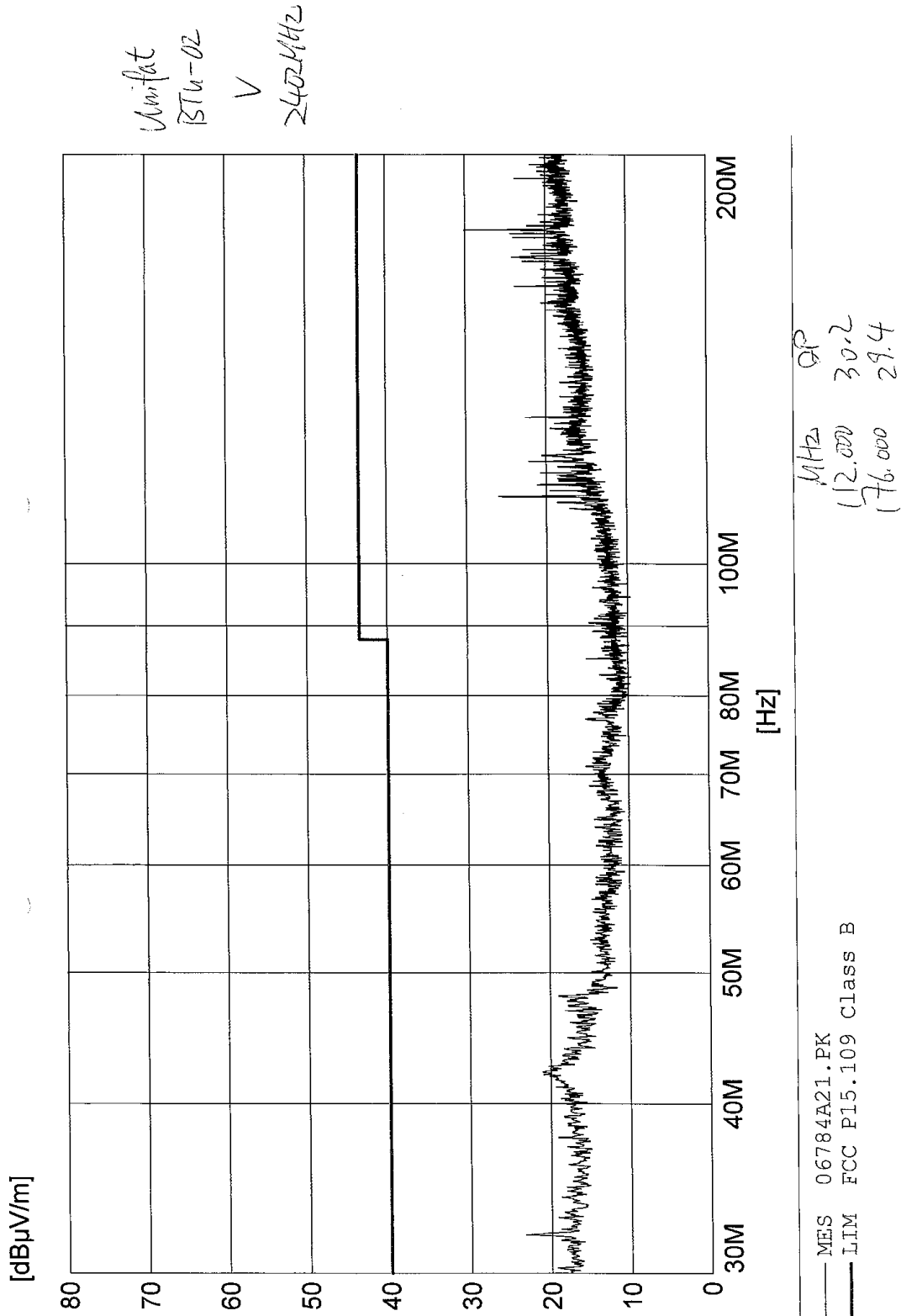
Test by: Hugo Wan

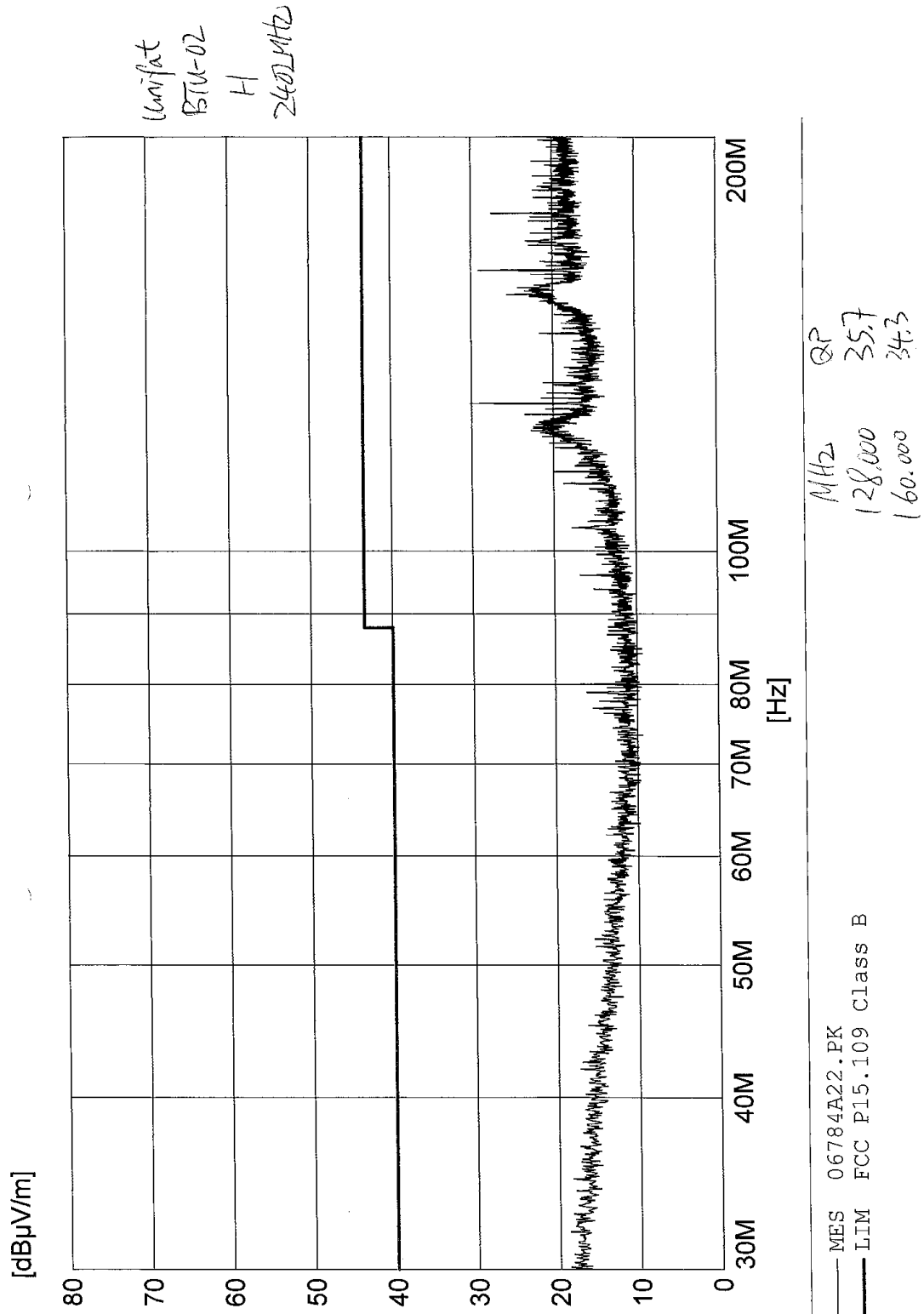
Op. mode: TX mode, DH1 with PRBS9 payload

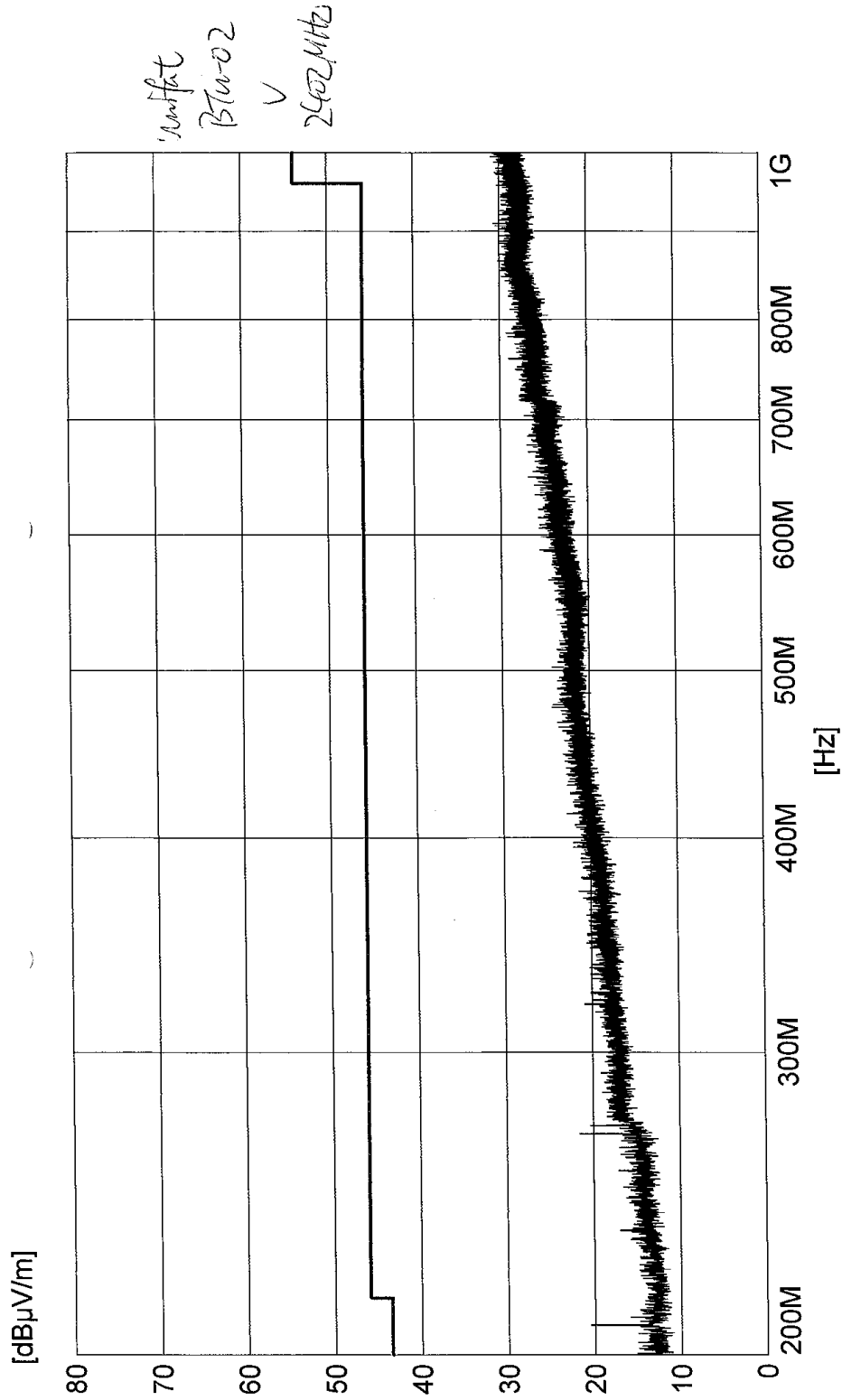
| Tx frequency<br>(MHz) | Polarization | Spurious<br>Frequency (MHz) | Power Level<br>(dBuV/m) | Detector<br>(P/QP/A) |
|-----------------------|--------------|-----------------------------|-------------------------|----------------------|
| 2402                  | V            | 112.000                     | 30.2                    | QP                   |
| 2402                  | V            | 176.000                     | 29.4                    | QP                   |
| 2402                  | V            | 4804.000                    | 51.25                   | P                    |
| 2402                  | V            | 4803.980                    | 42.51                   | A                    |
| 2402                  | H            | 128.000                     | 35.7                    | QP                   |
| 2402                  | H            | 160.000                     | 34.3                    | QP                   |
| 2402                  | H            | 208.000                     | 28.2                    | QP                   |
| 2402                  | H            | 4804.060                    | 46.53                   | P                    |
| 2402                  | H            | 4803.980                    | 37.08                   | A                    |

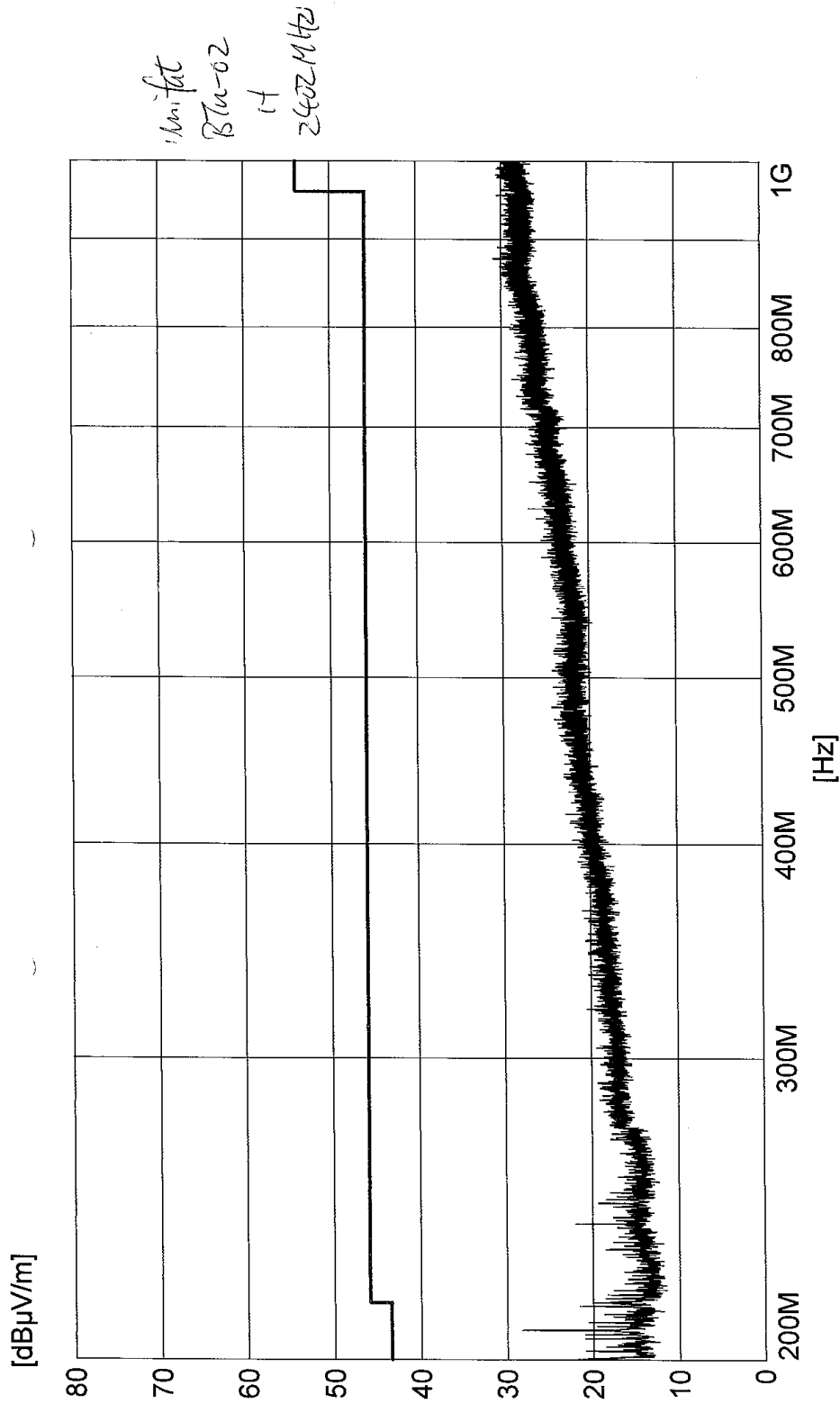
| Tx frequency<br>(MHz) | Polarization | Spurious<br>Frequency (MHz) | Power Level<br>(dBuV/m) | Detector<br>(P/QP/A) |
|-----------------------|--------------|-----------------------------|-------------------------|----------------------|
| 2441                  | V            | 112.000                     | 29.2                    | QP                   |
| 2441                  | V            | 176.000                     | 27.8                    | QP                   |
| 2441                  | V            | 4882.020                    | 52.39                   | P                    |
| 2441                  | V            | 4882.020                    | 46.34                   | A                    |
| 2441                  | H            | 128.000                     | 34.0                    | QP                   |
| 2441                  | H            | 160.000                     | 30.5                    | QP                   |
| 2441                  | H            | 208.002                     | 31.3                    | QP                   |
| 2441                  | H            | 4882.000                    | 47.48                   | P                    |
| 2441                  | H            | 4881.980                    | 41.35                   | A                    |
| 2441                  | H            | 7323.180                    | 45.13                   | P                    |
| 2441                  | H            | 7322.960                    | 38.23                   | A                    |

| Tx frequency<br>(MHz) | Polarization | Spurious<br>Frequency (MHz) | Power Level<br>(dBuV/m) | Detector<br>(P/QP/A) |
|-----------------------|--------------|-----------------------------|-------------------------|----------------------|
| 2480                  | V            | 112.000                     | 29.7                    | QP                   |
| 2480                  | V            | 176.000                     | 27.9                    | QP                   |
| 2480                  | V            | 208.000                     | 25.5                    | QP                   |
| 2480                  | V            | 224.000                     | 24.0                    | QP                   |
| 2480                  | V            | 4959.660                    | 52.41                   | P                    |
| 2480                  | V            | 4959.920                    | 51.19                   | A                    |
| 2480                  | H            | 128.000                     | 34.1                    | QP                   |
| 2480                  | H            | 160.000                     | 32.7                    | QP                   |
| 2480                  | H            | 224.000                     | 29.7                    | QP                   |
| 2480                  | H            | 268.844                     | 26.4                    | QP                   |
| 2480                  | H            | 4959.960                    | 49.25                   | P                    |
| 2480                  | H            | 4960.000                    | 43.97                   | A                    |
| 2480                  | H            | 7439.400                    | 47.06                   | P                    |
| 2480                  | H            | 7439.980                    | 41.93                   | A                    |



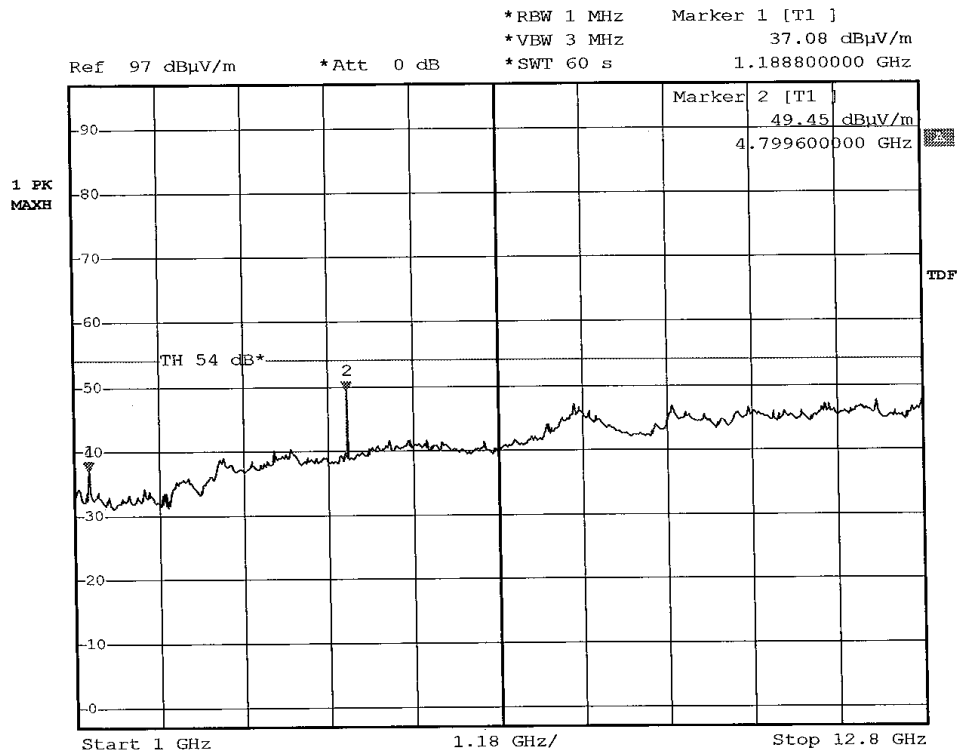






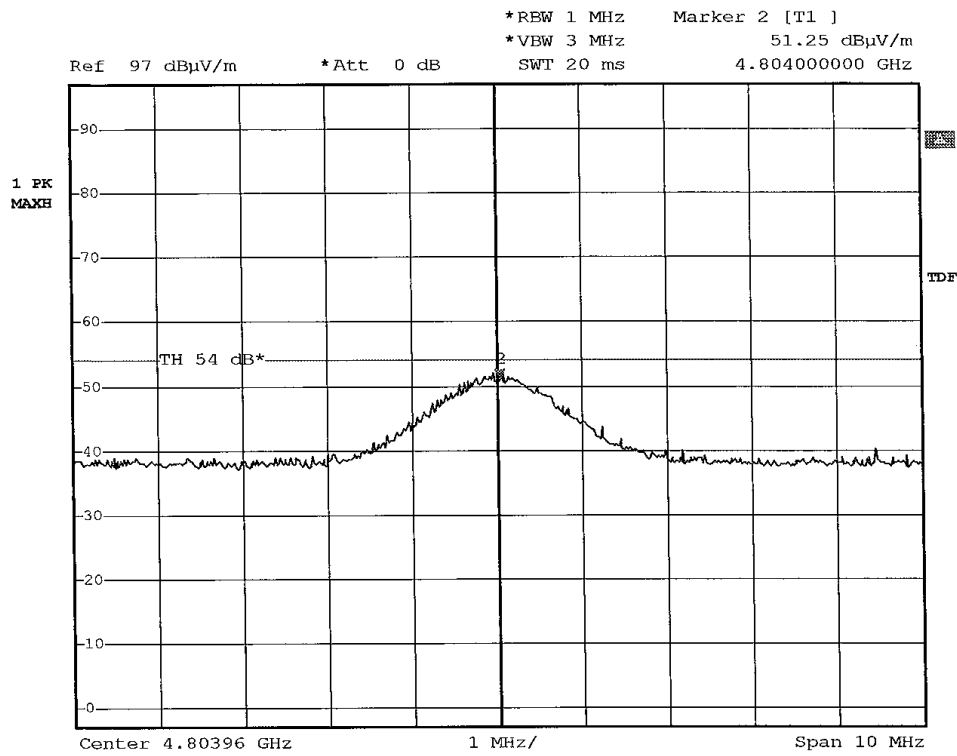
— MES TUV010404A04.PK  
— LIM FCC P15.247 (USA)

MHz QP  
208.000 282



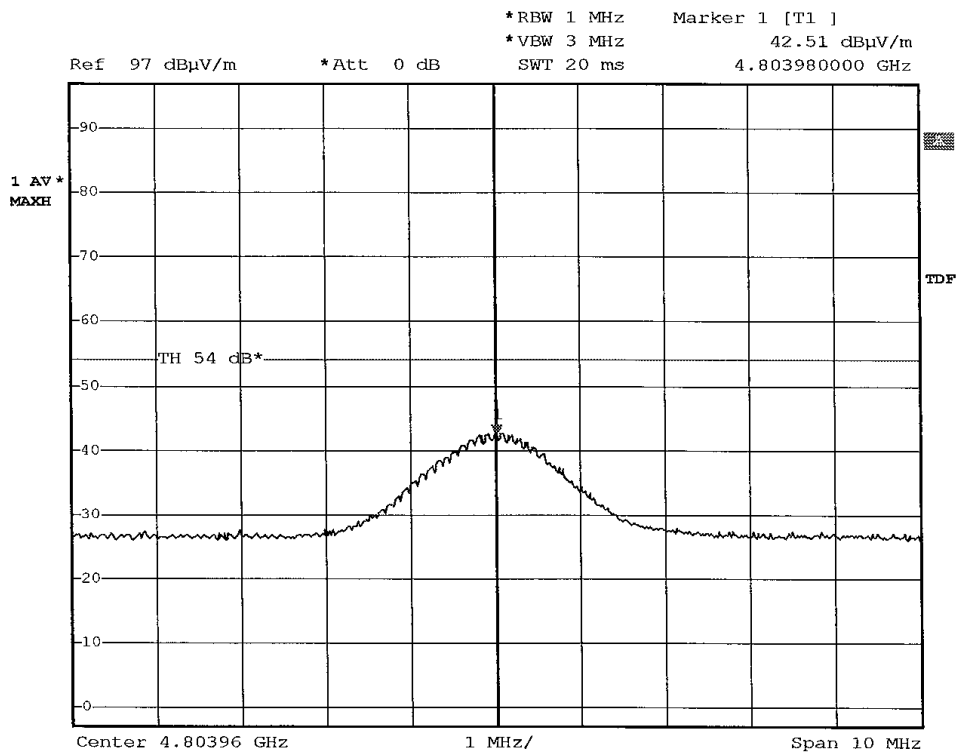
Date: 27.MAY.2004 09:55:05

BTU-02  
2402 MHz  
✓



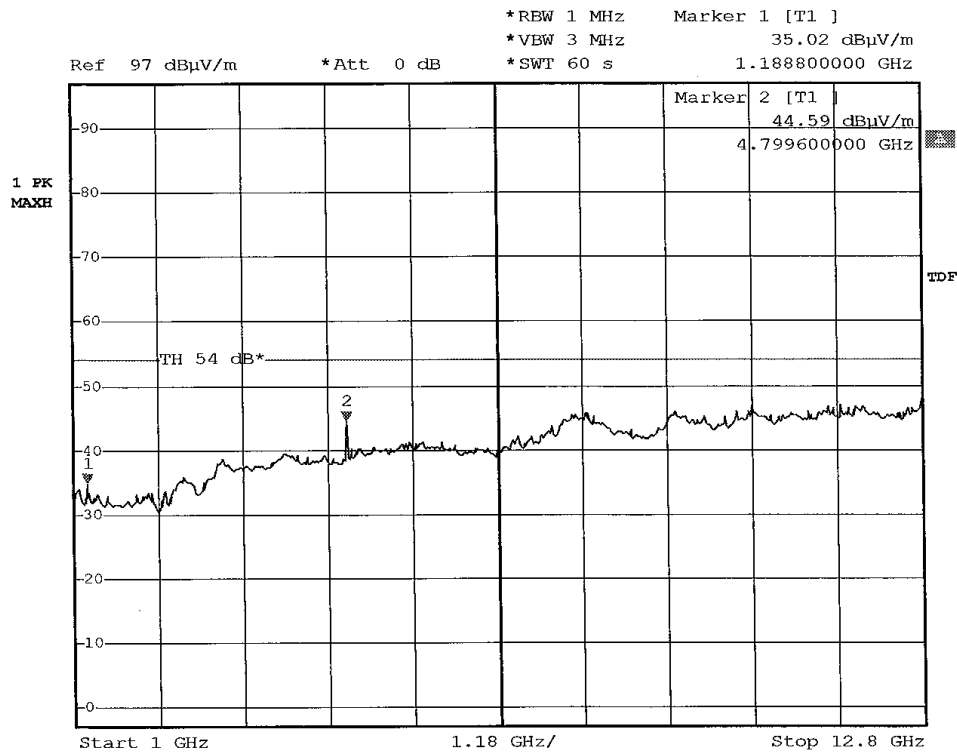
Date: 27.MAY.2004 10:01:33

BTU-02  
 2402MHz  
 ✓



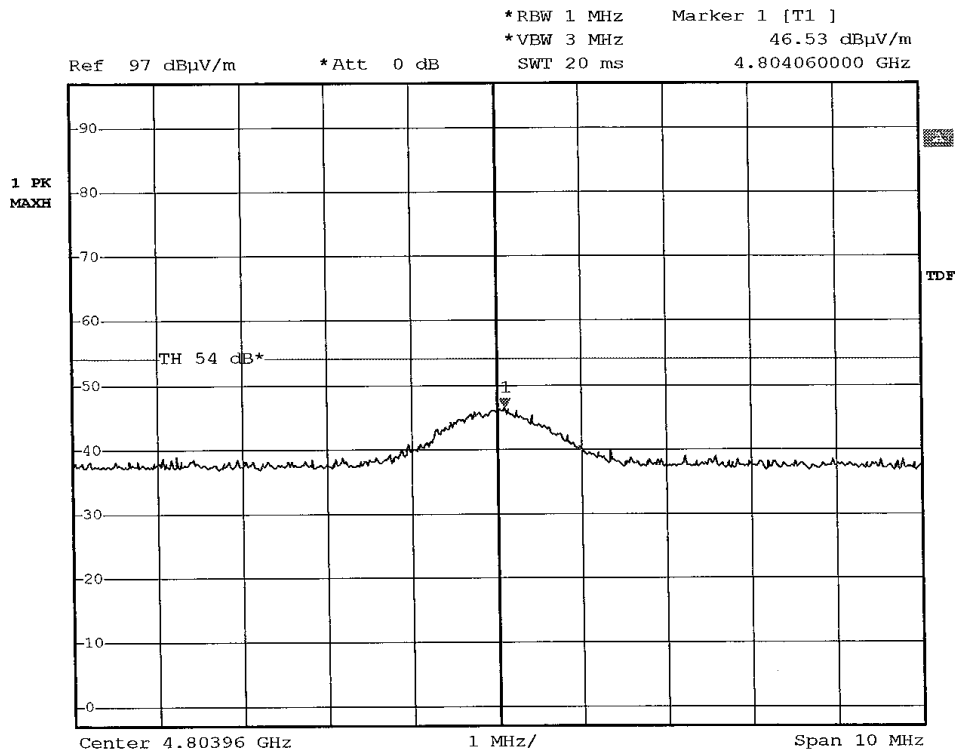
Date: 27.MAY.2004 10:29:21

BTU-02  
 2402 MHz  
 V



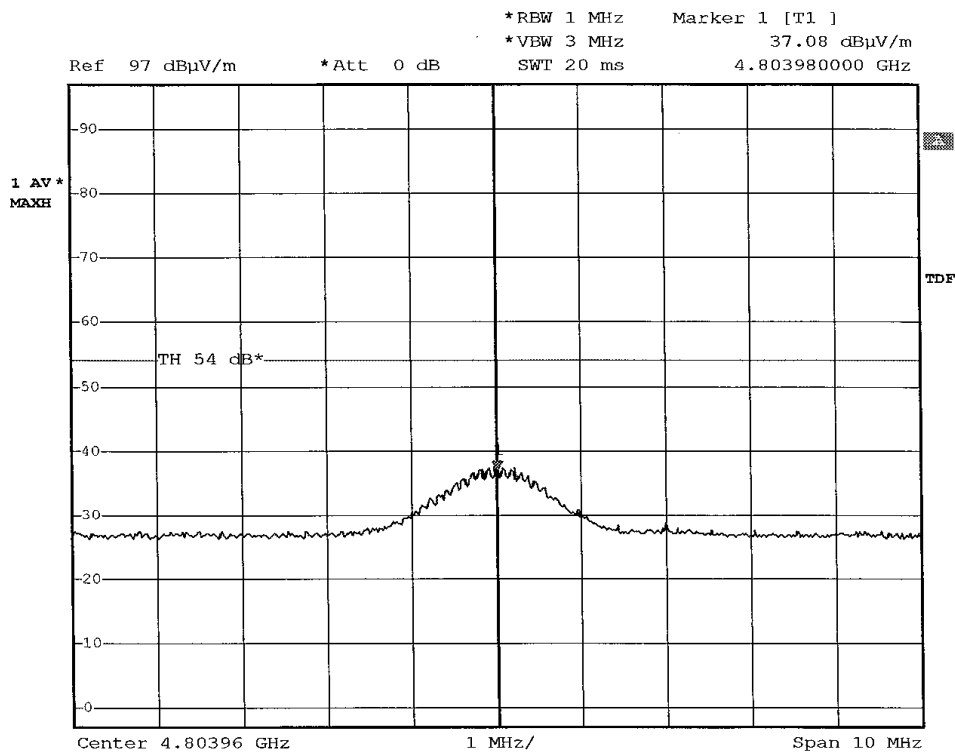
Date: 27.MAY.2004 09:57:49

BTu-02  
 2402MHz  
 H



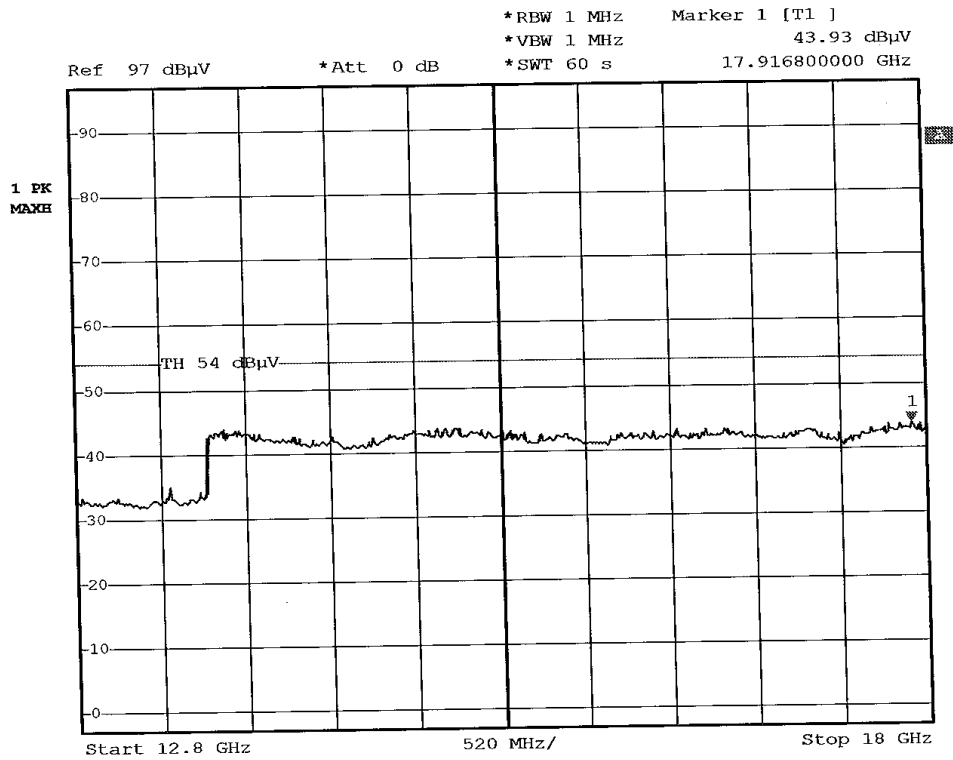
Date: 27.MAY.2004 10:34:23

BTM-02  
2402MHz  
1-1



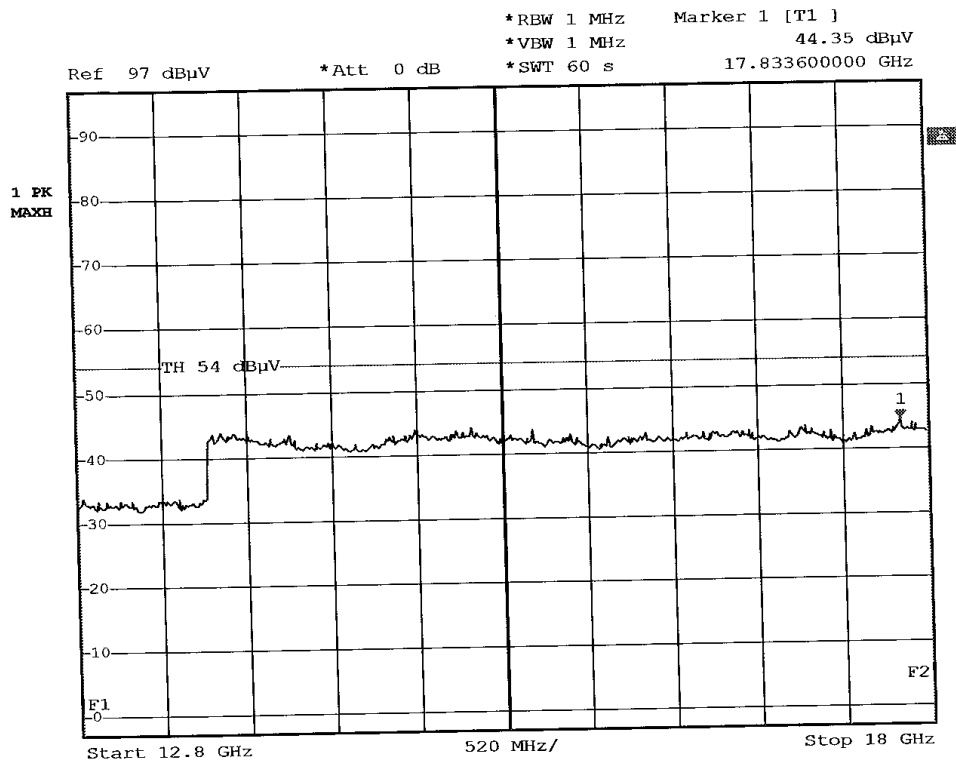
Date: 27.MAY.2004 10:35:19

BTM-02  
 2402MHz  
 H



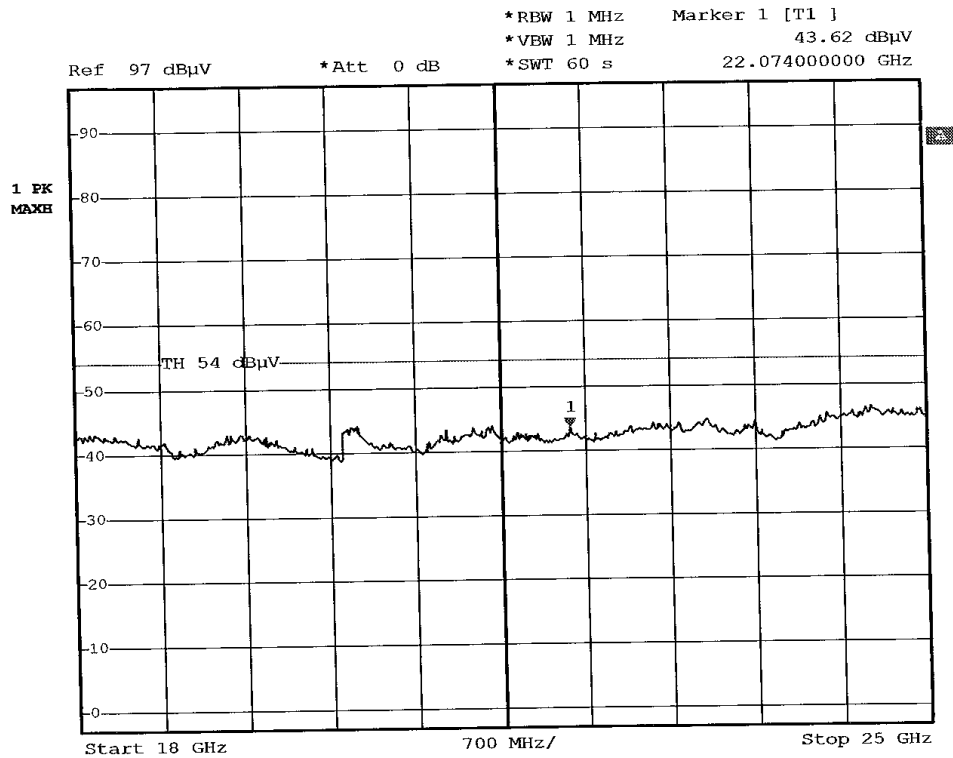
Date: 27.NOV.2003 12:46:44

unfat  
 BTU-02  
 2402 MHz  
 V  
 FCC



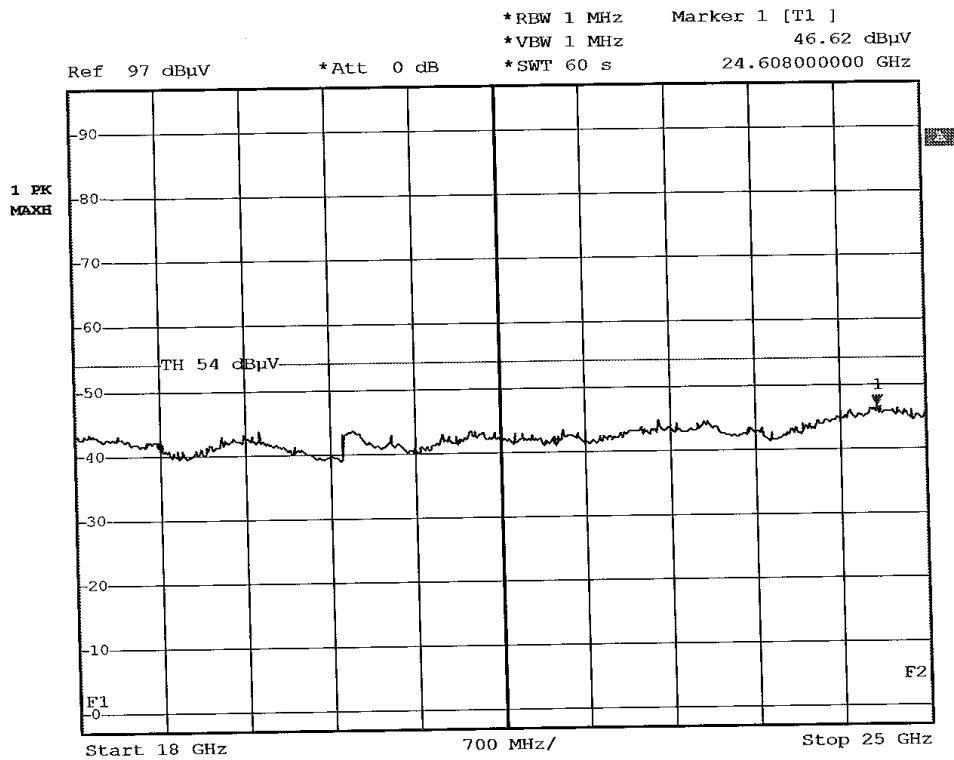
Date: 27.NOV.2003 12:42:34

Unifit  
 BTH-02  
 2402MHz  
 H  
 FCC



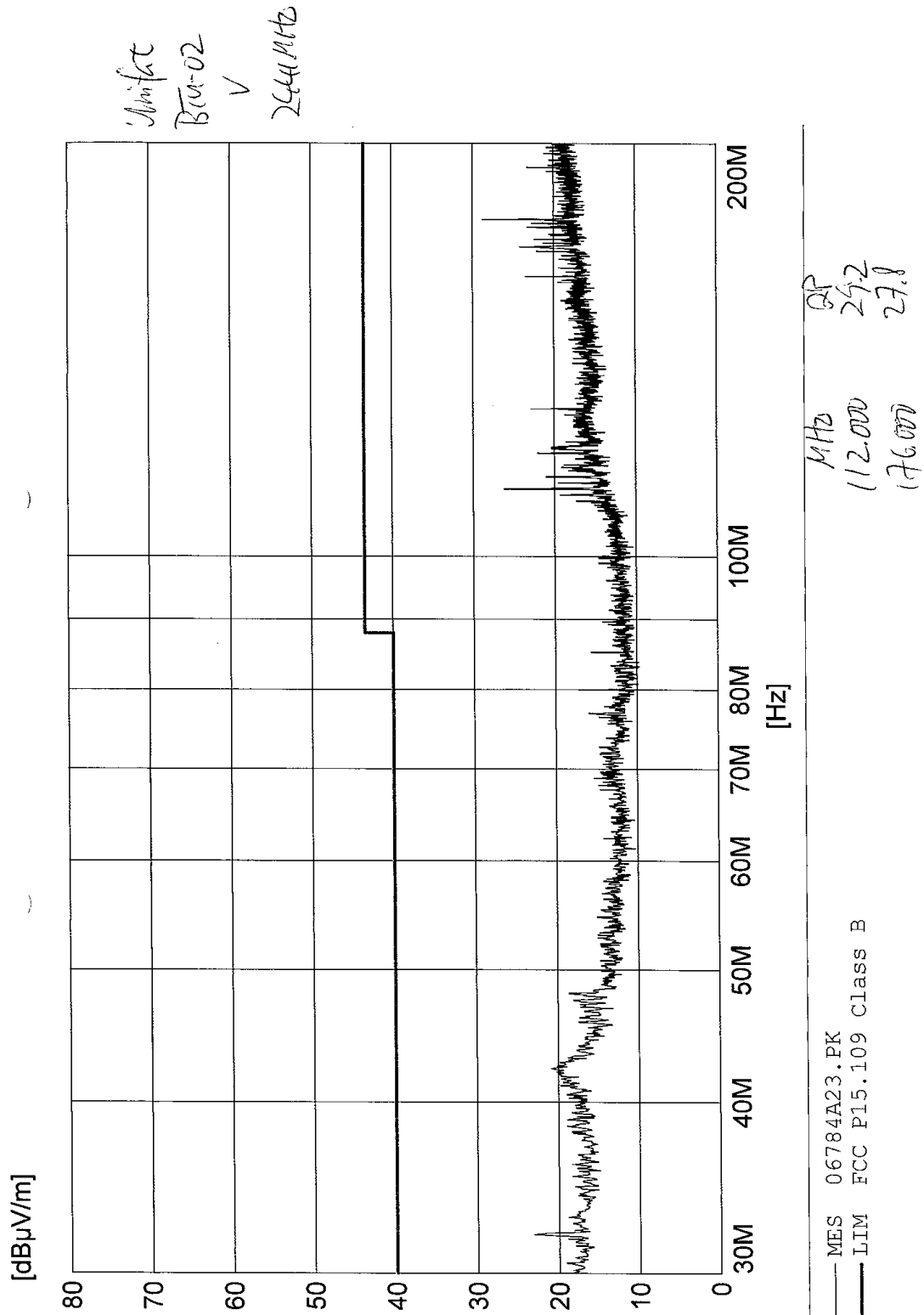
Date: 27.NOV.2003 13:11:55

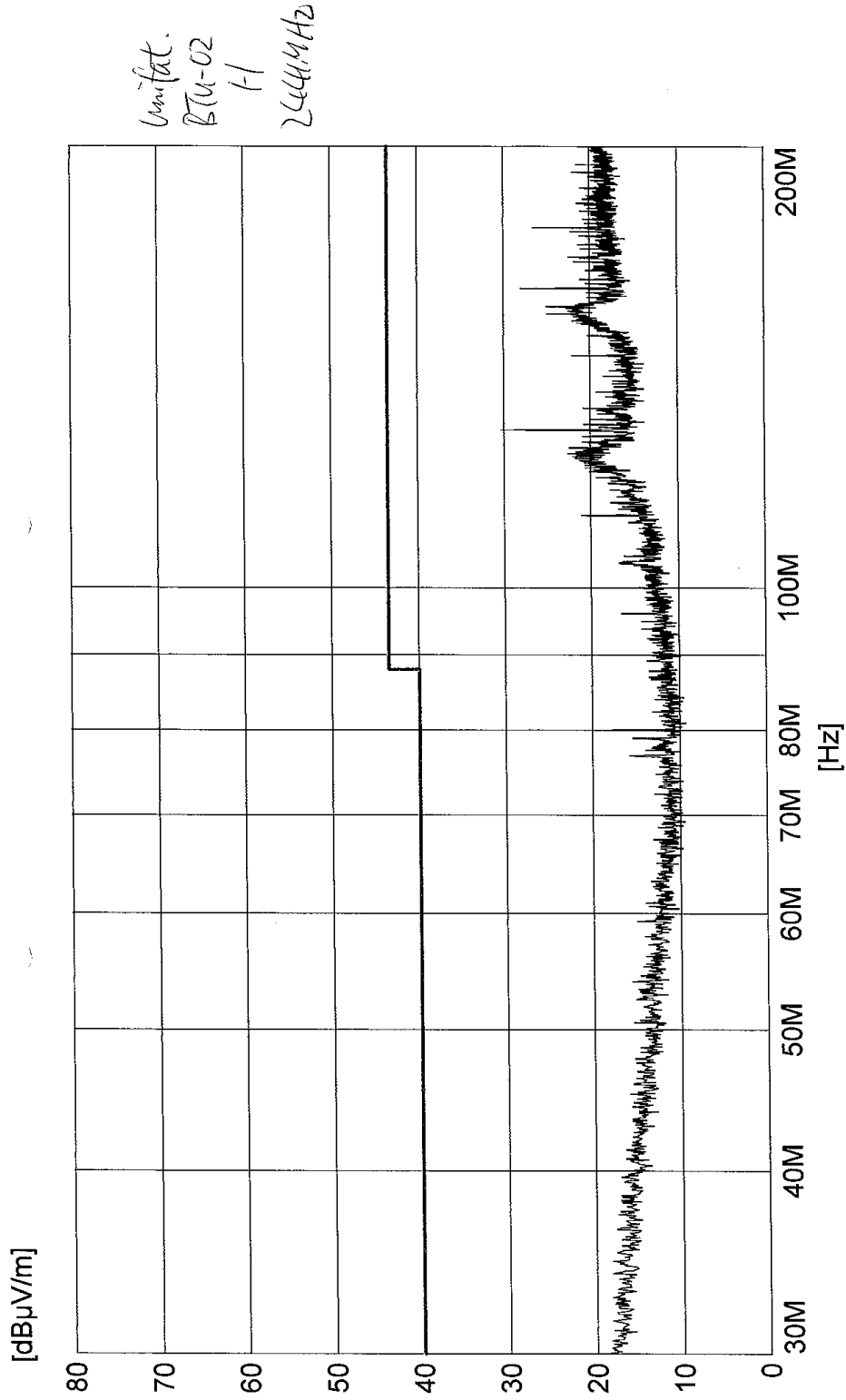
BTU-02  
 2400 MHz  
 ✓  
 FCC



Date: 27.NOV.2003 13:05:57

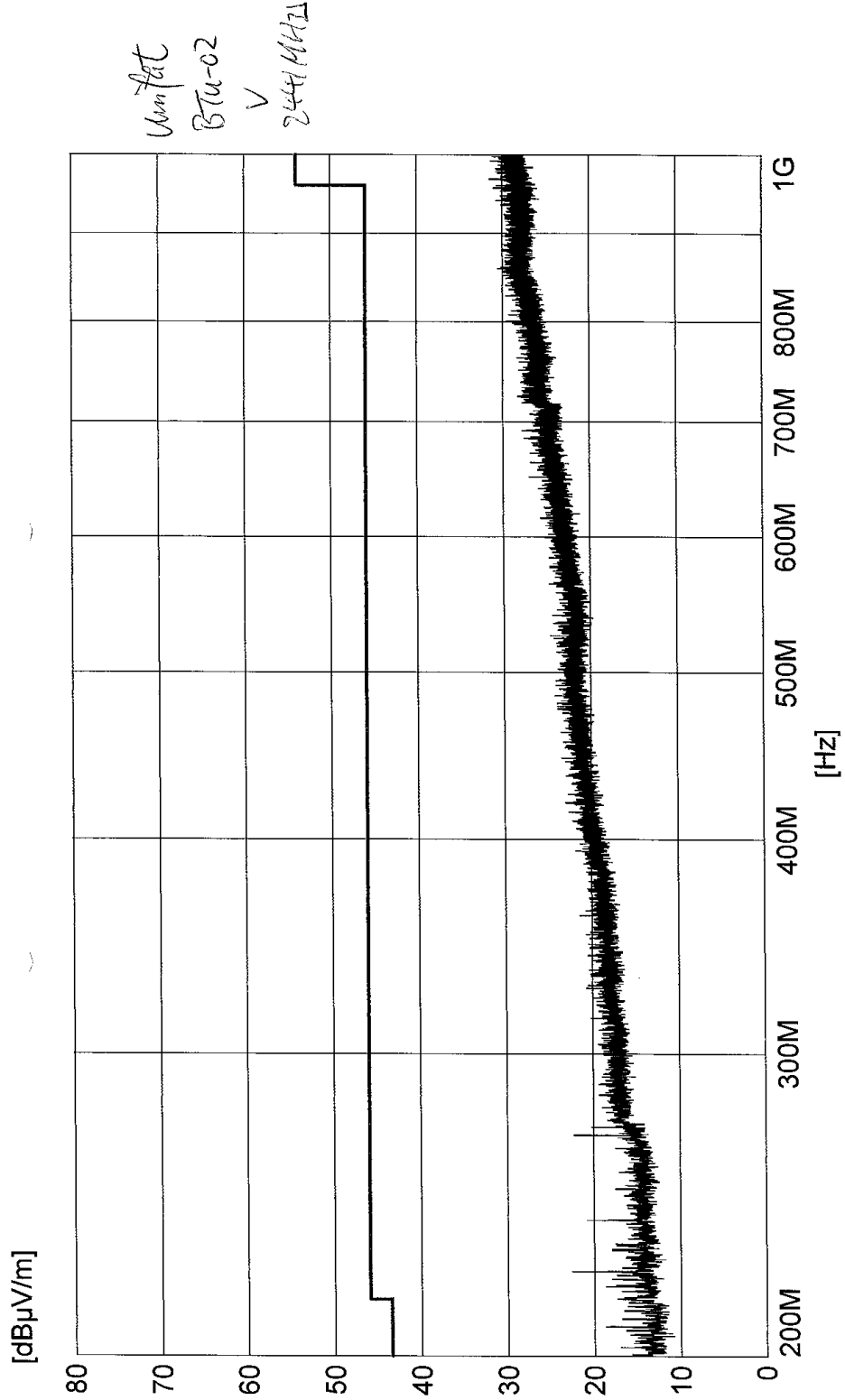
Unifast  
 BTU-02  
 2402MHz  
 H  
 FCC



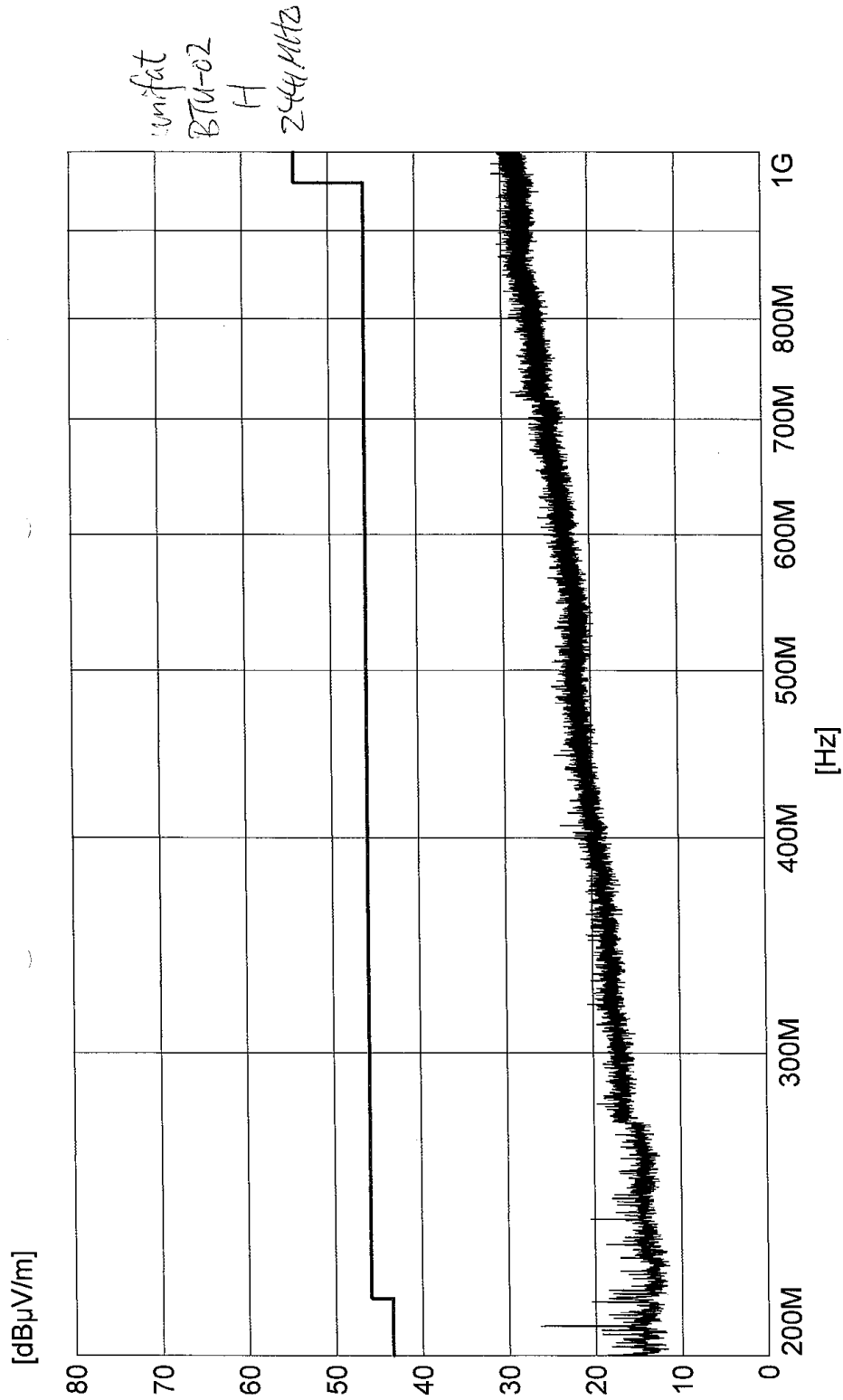


MHz  
128.000  
160.000  
34.0  
30.5

— MES 06784A24.PK  
— LIM FCC P15.109 Class B

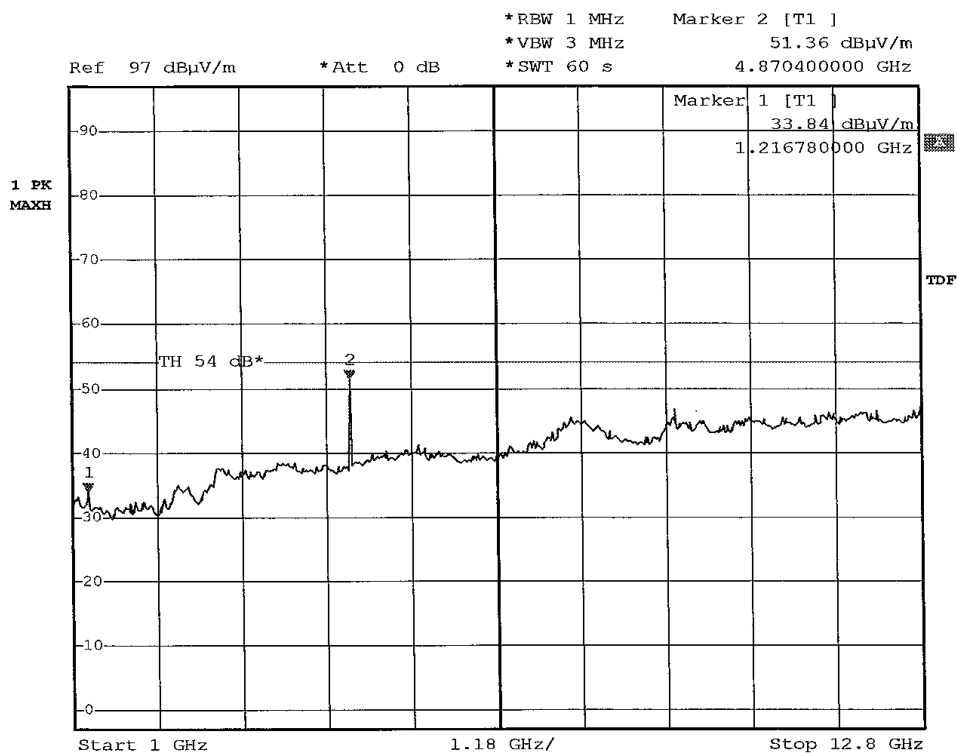


— MES 06784A28.PK  
 — LIM FCC P15.247 (USA)



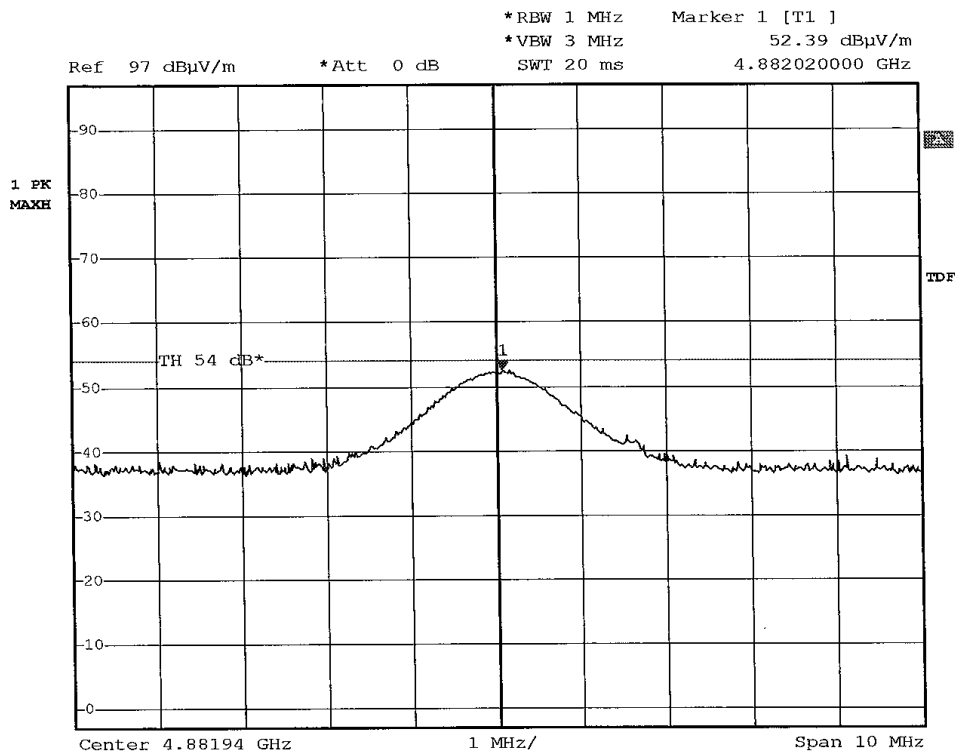
— MES TUV010404A02.PK  
— LIM FCC P15.247 (USA)

208.002 MHz  
363 RP



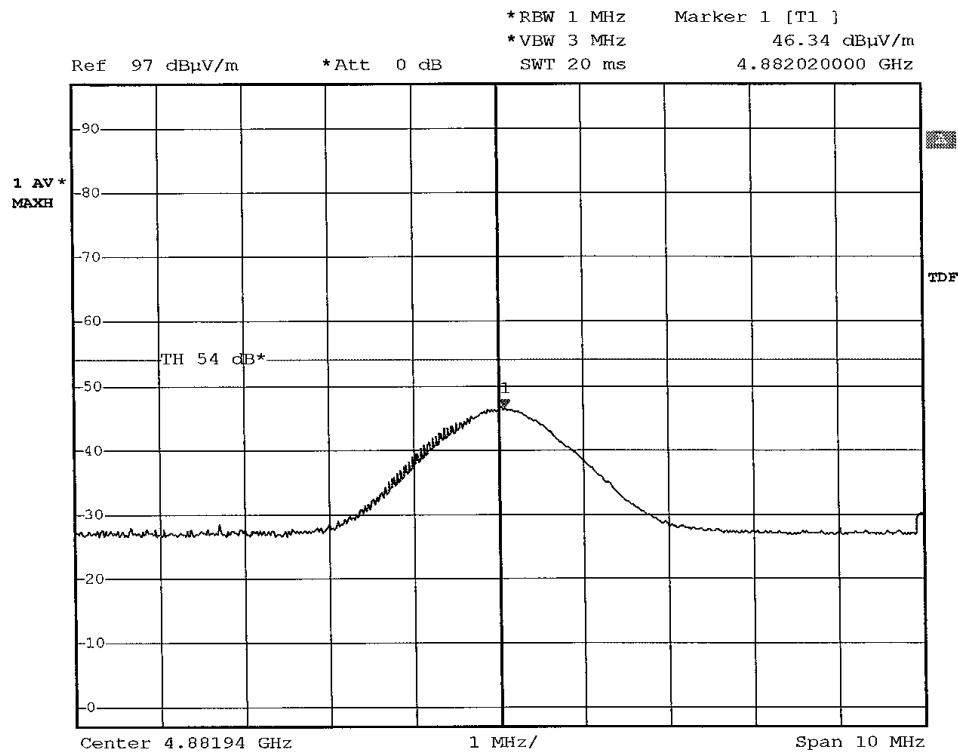
Date: 27.MAY.2004 10:40:19

BTM-02  
2441MHz  
✓



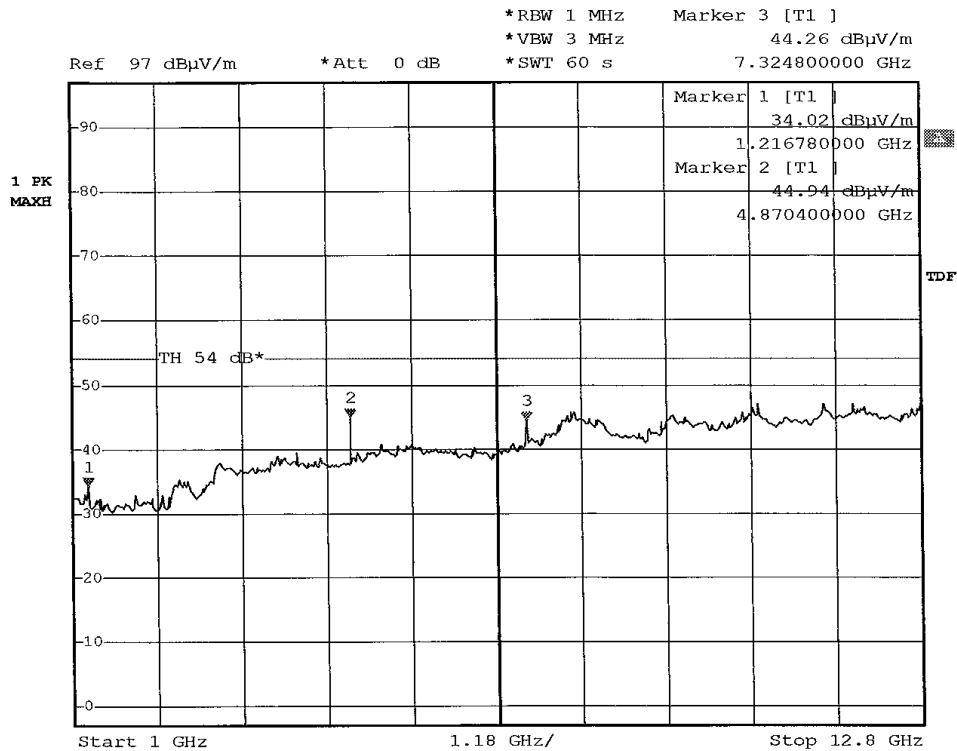
Date: 27.MAY.2004 10:50:39

BTU-02  
 2441 MHz  
 V



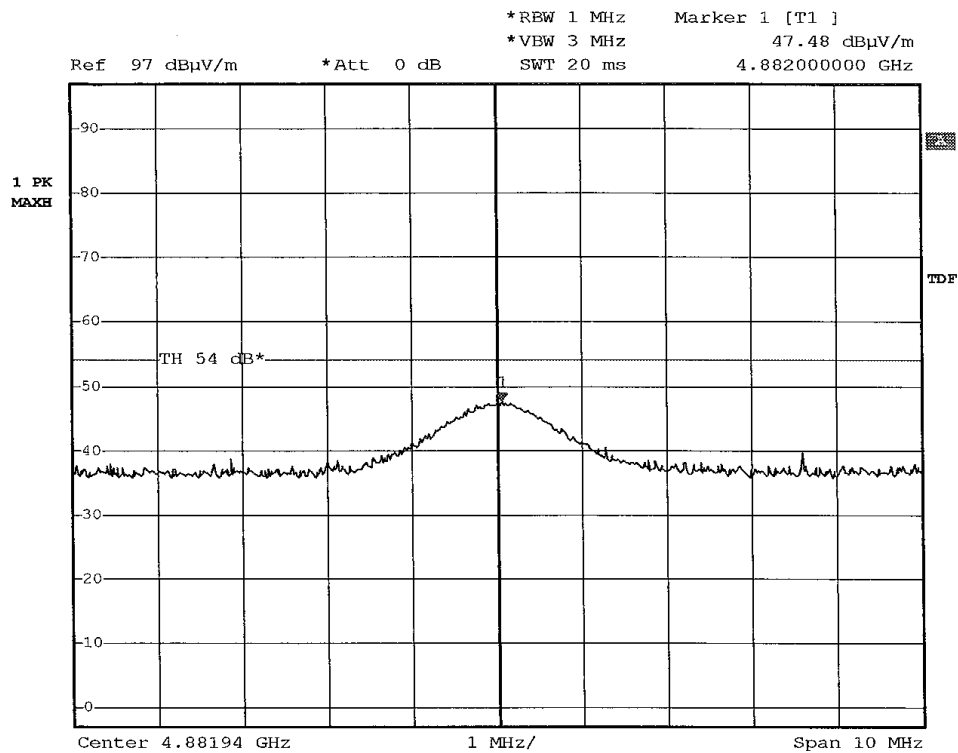
Date: 27.MAY.2004 10:51:37

BTU-02  
2641MHz  
V



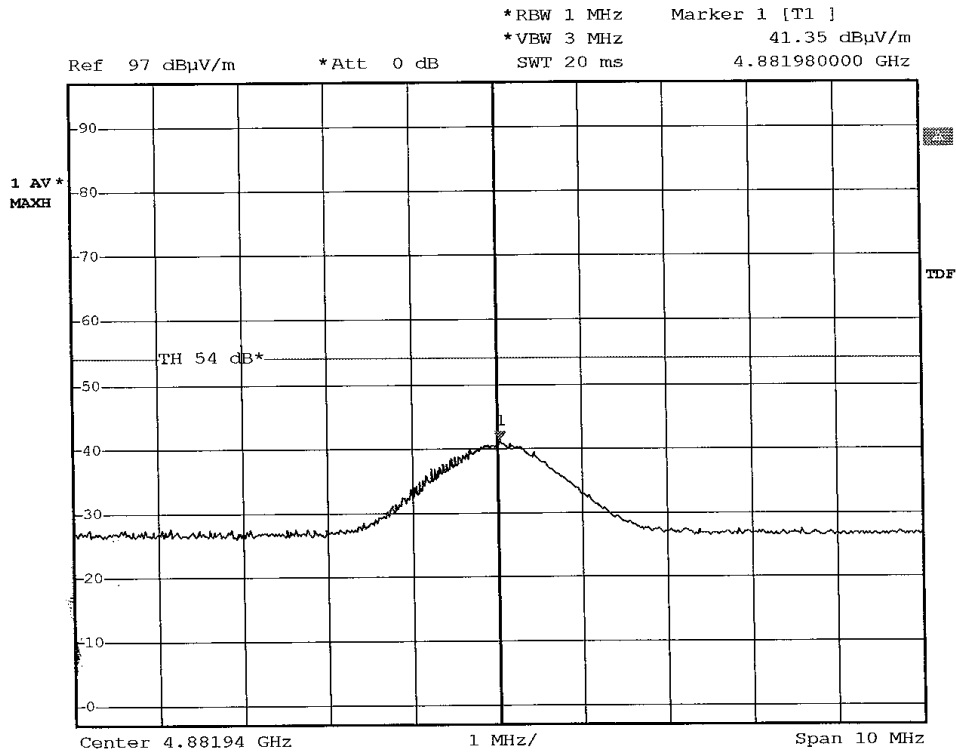
Date: 27.MAY.2004 10:43:57

BTU-02  
2441MHz  
H



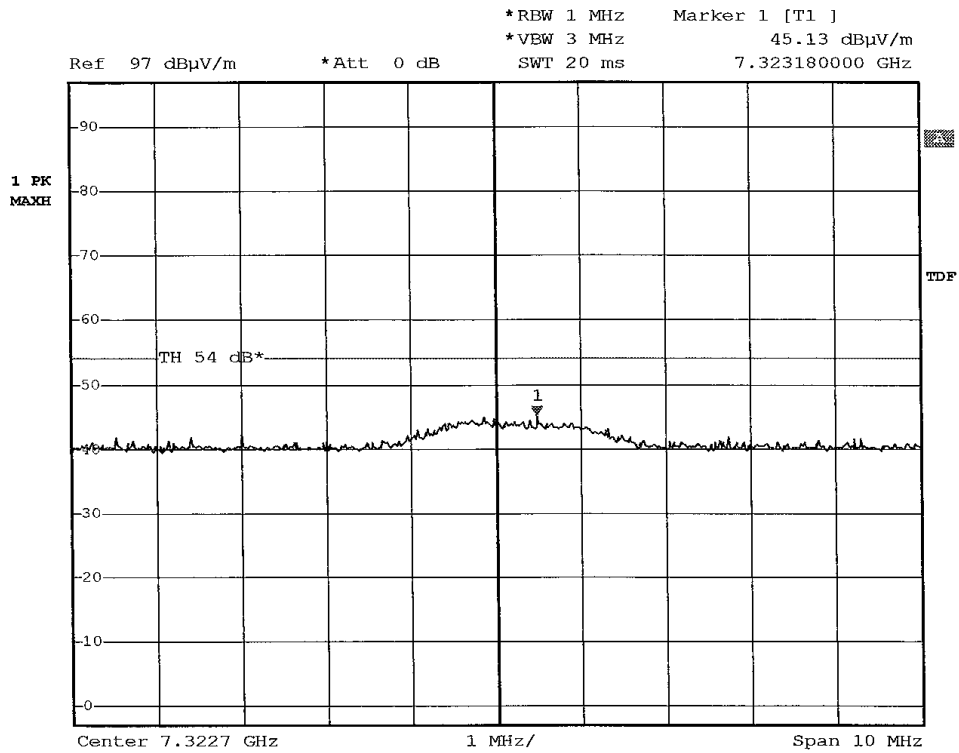
Date: 27.MAY.2004 10:57:27

BTM-02  
 2441MHz  
 11



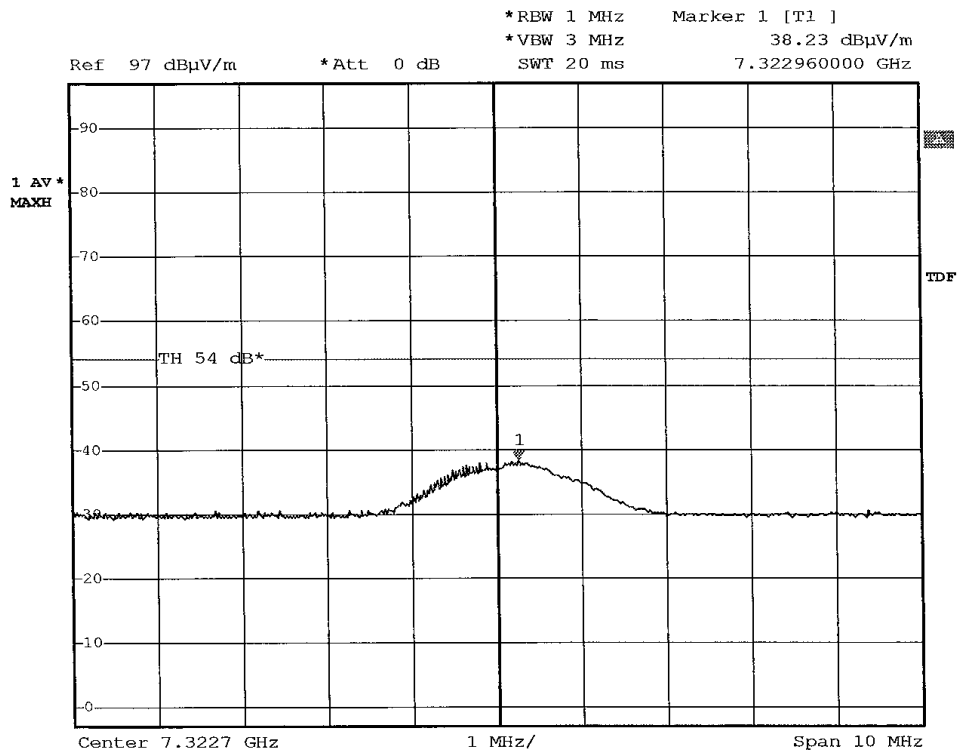
Date: 27.MAY.2004 10:56:58

BTM-02  
 244 MHz  
 H



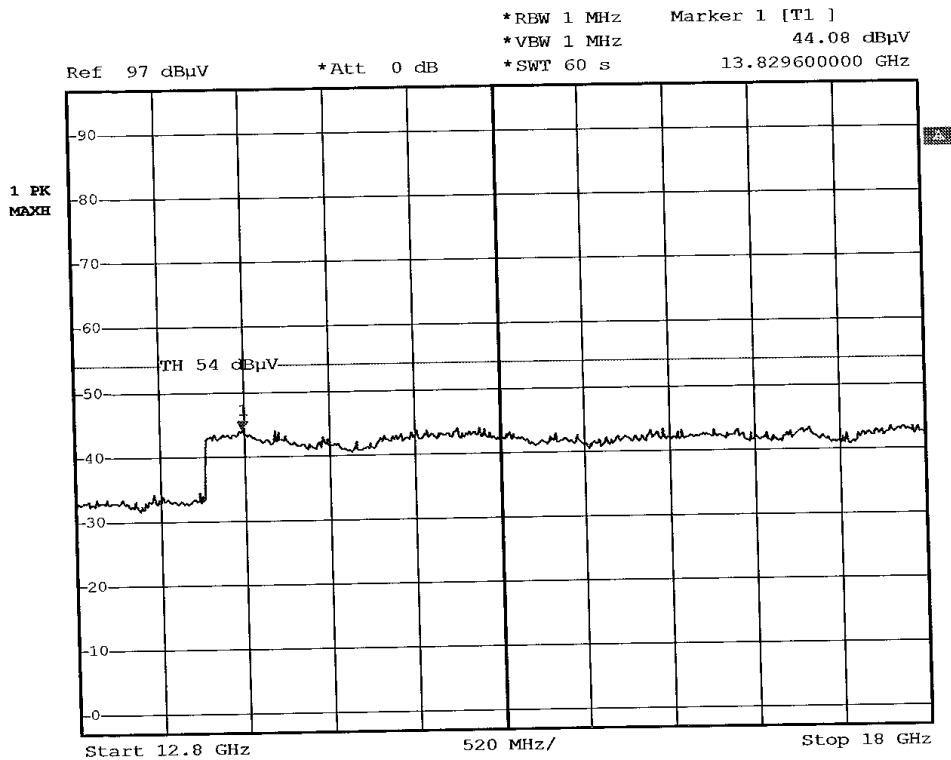
Date: 27.MAY.2004 11:00:34

BTU-02  
244 MHz  
H



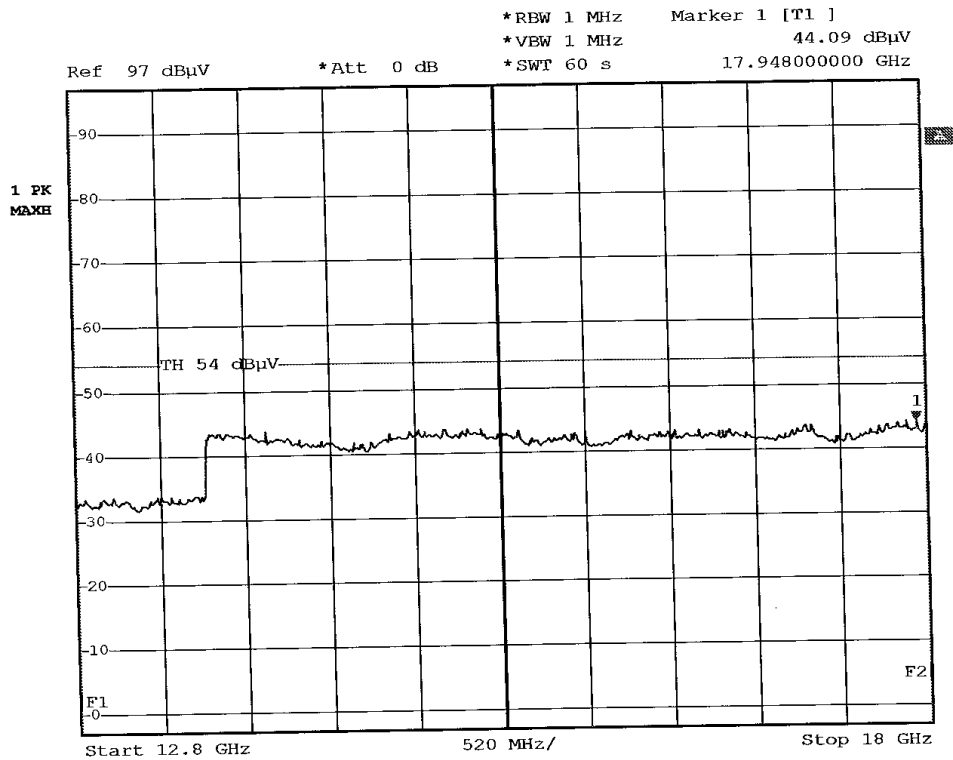
Date: 27.MAY.2004 11:00:59

BTU-02  
 244 MHz  
 14



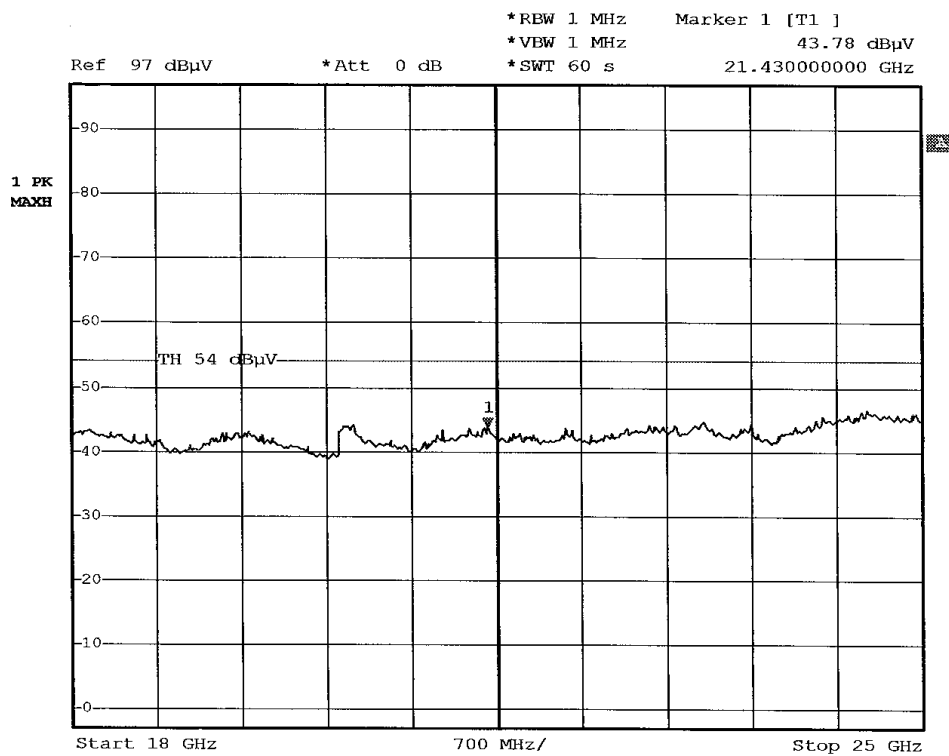
Date: 27.NOV.2003 12:32:46

Unifat  
 BTU-02  
 244MHz  
 V  
 FCC



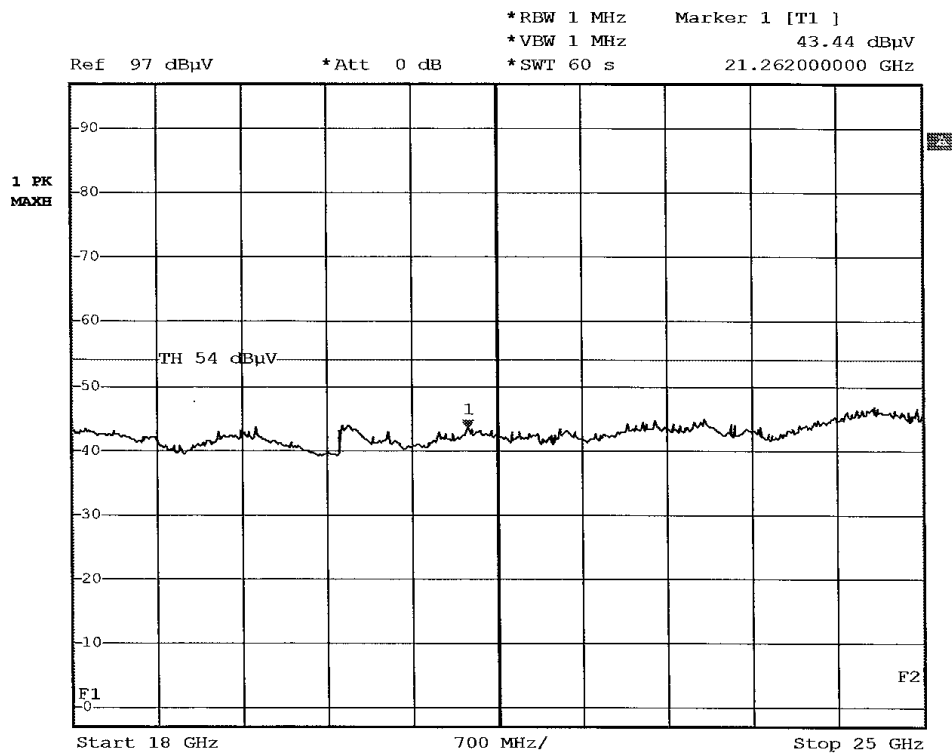
Date: 27.NOV.2003 12:36:36

Unifat  
 BTU-02  
 2641MHz  
 H  
 FCC



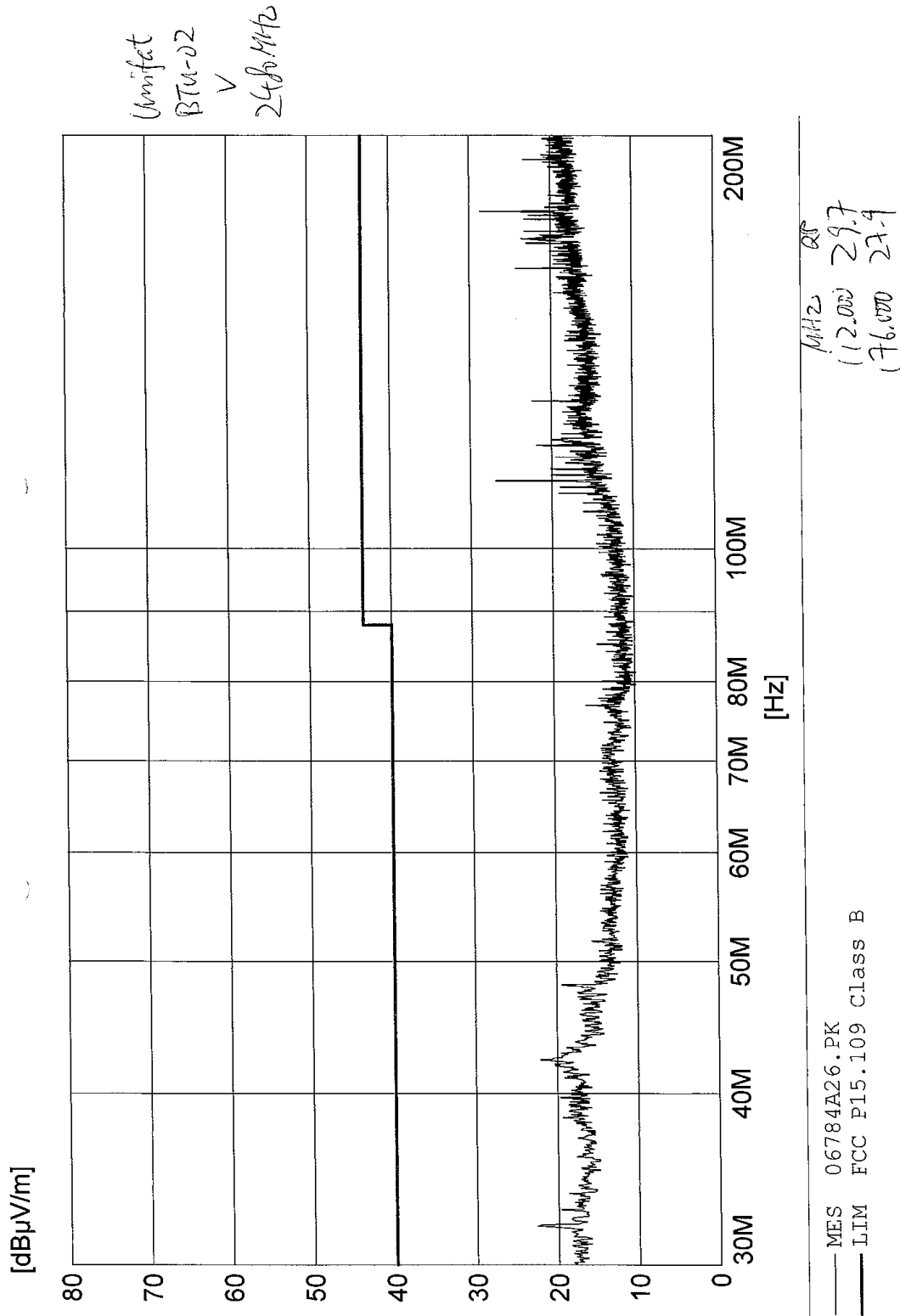
Date: 27.NOV.2003 13:12:36

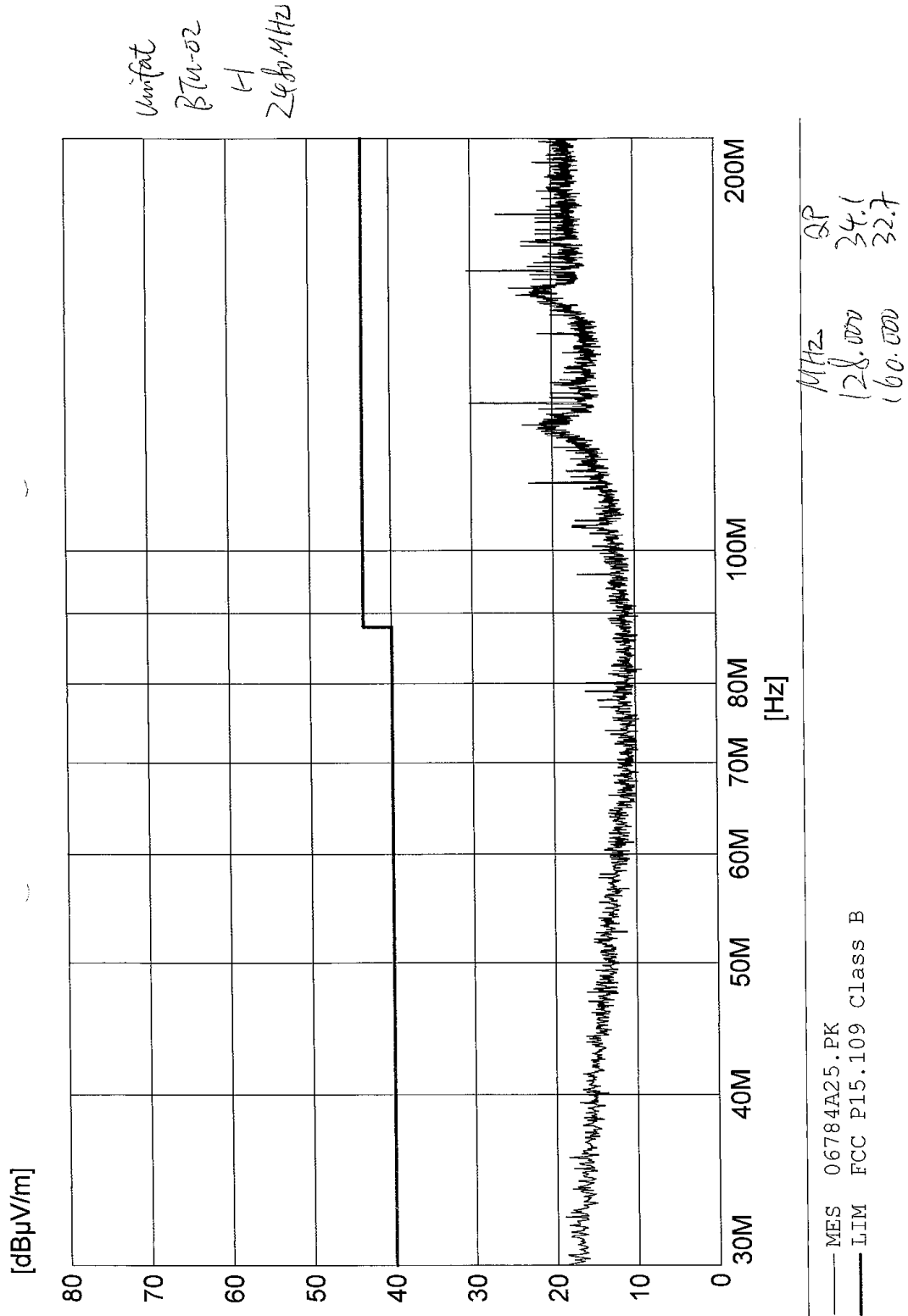
BTu-02  
2441MHz  
V  
FCC

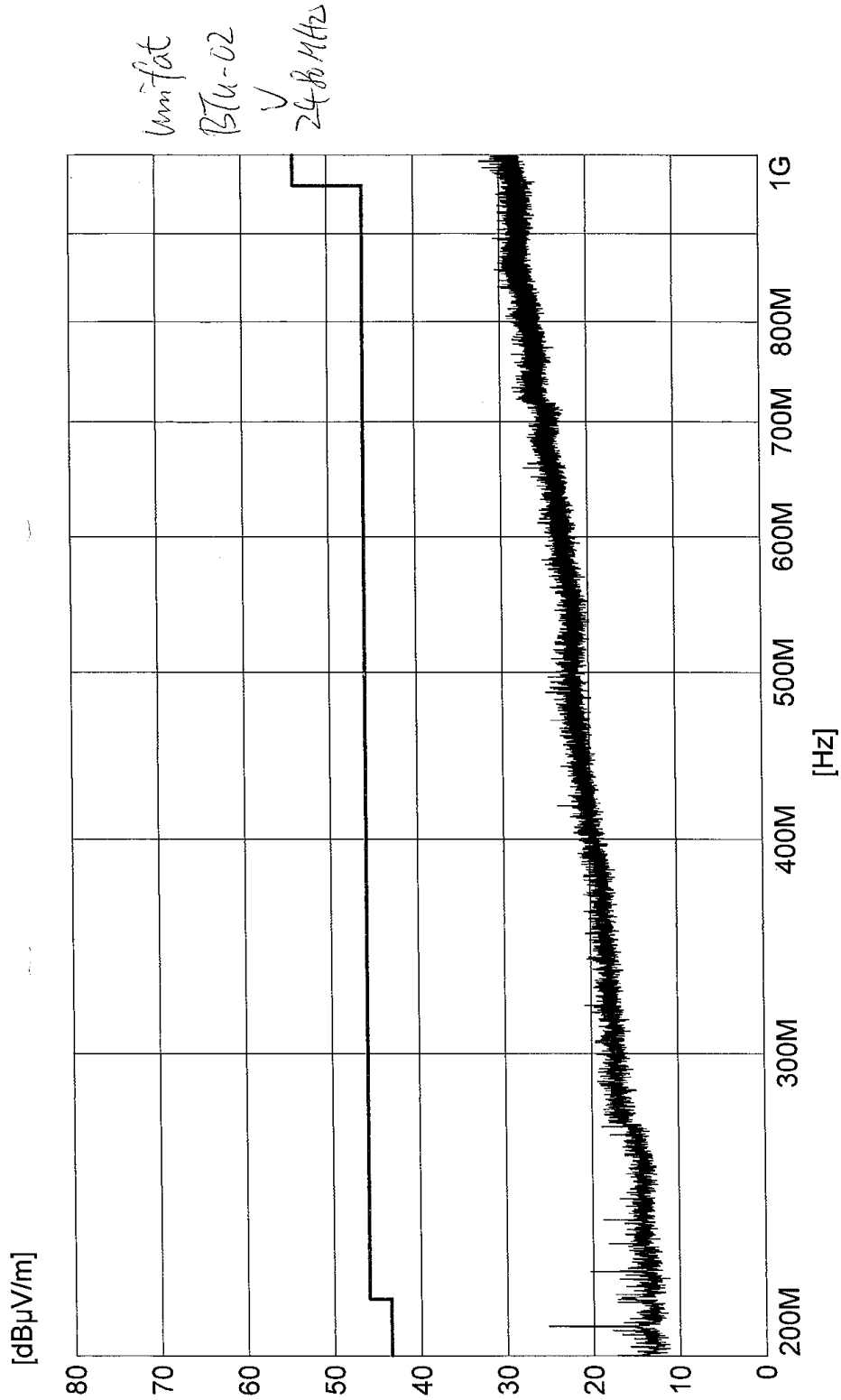


Date: 27.NOV.2003 13:07:10

unifat  
 BTU-02  
 2441 MHz  
 1-  
 FCC

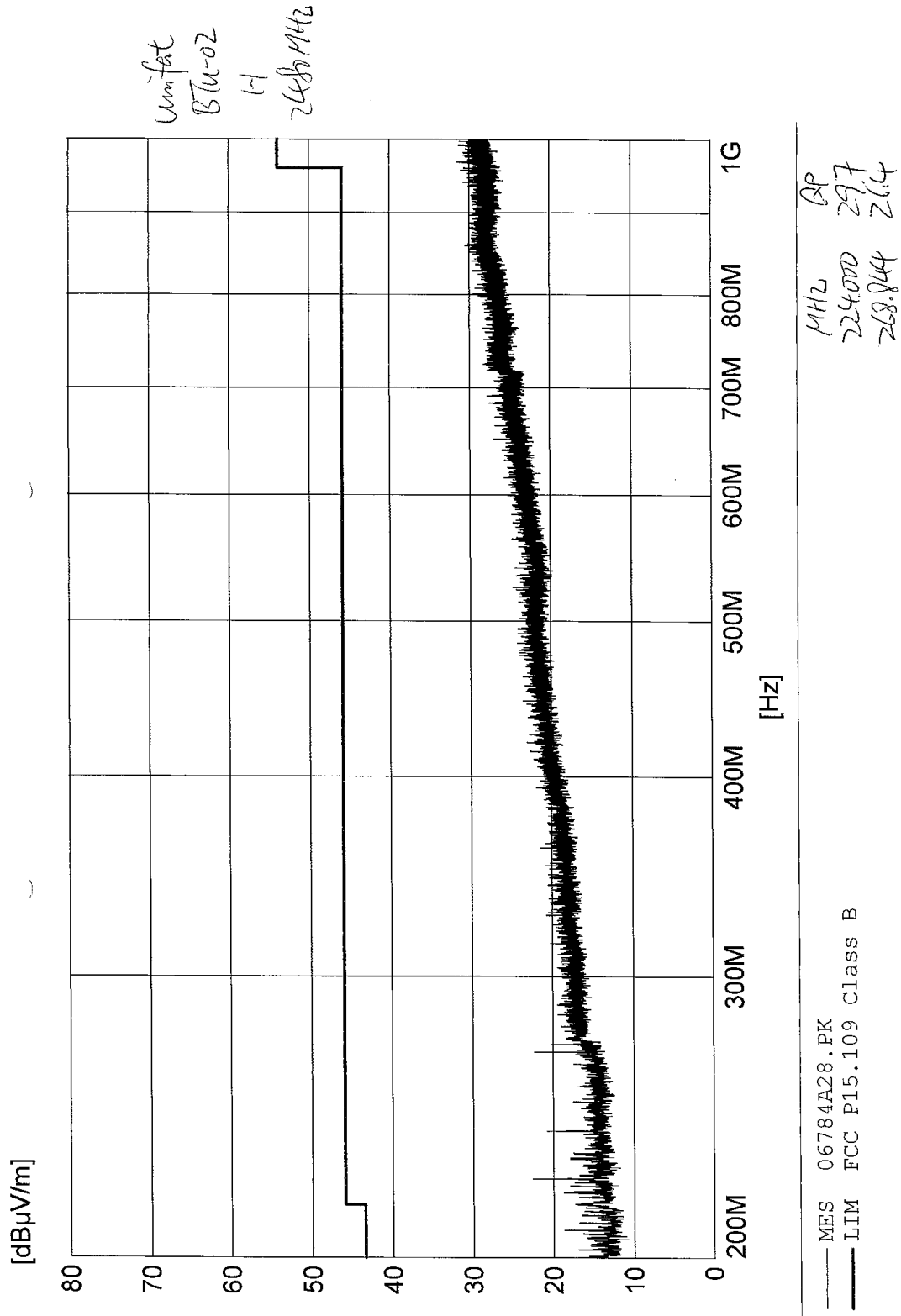


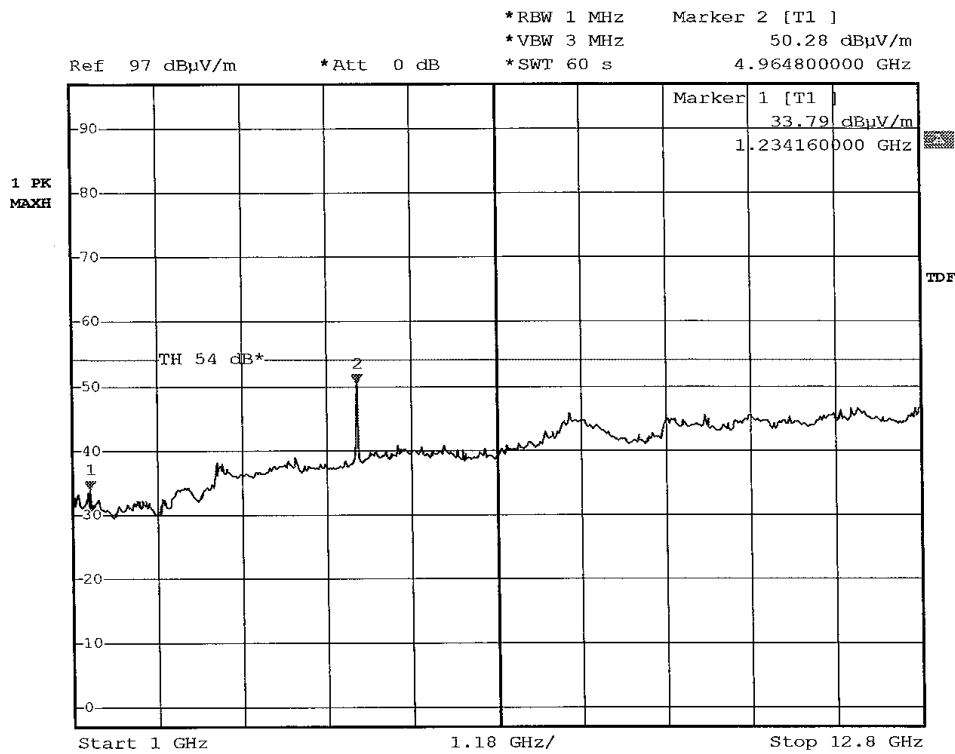




— MES 06784A27.PK  
- - - LIM FCC P15.109 Class B

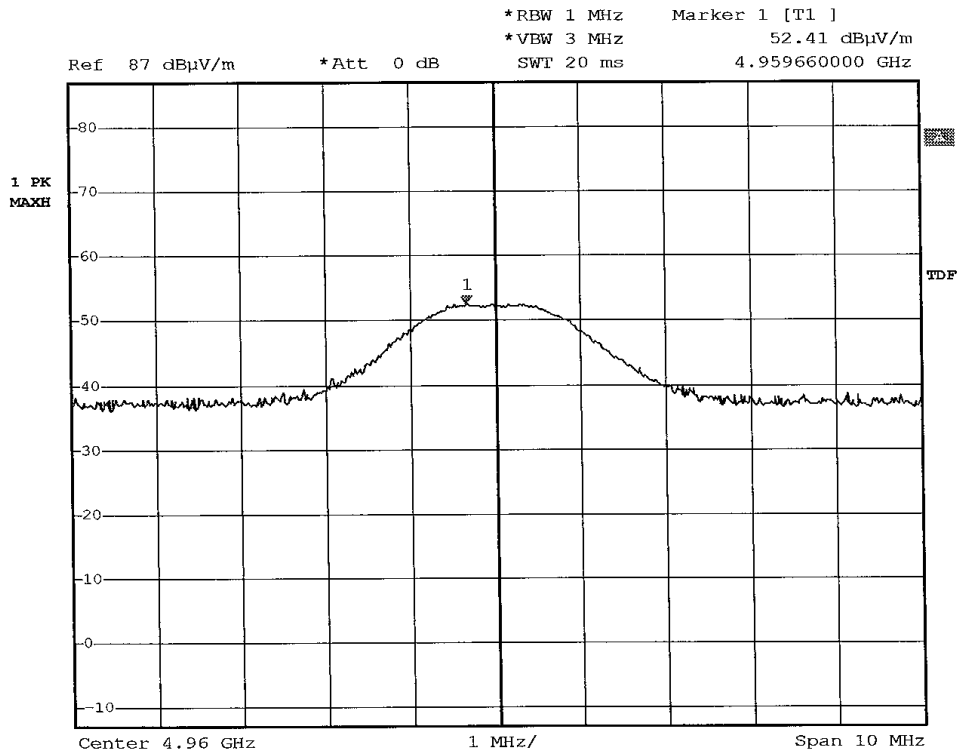
41Hz 2P  
208.000 25.5  
224.000 24.0





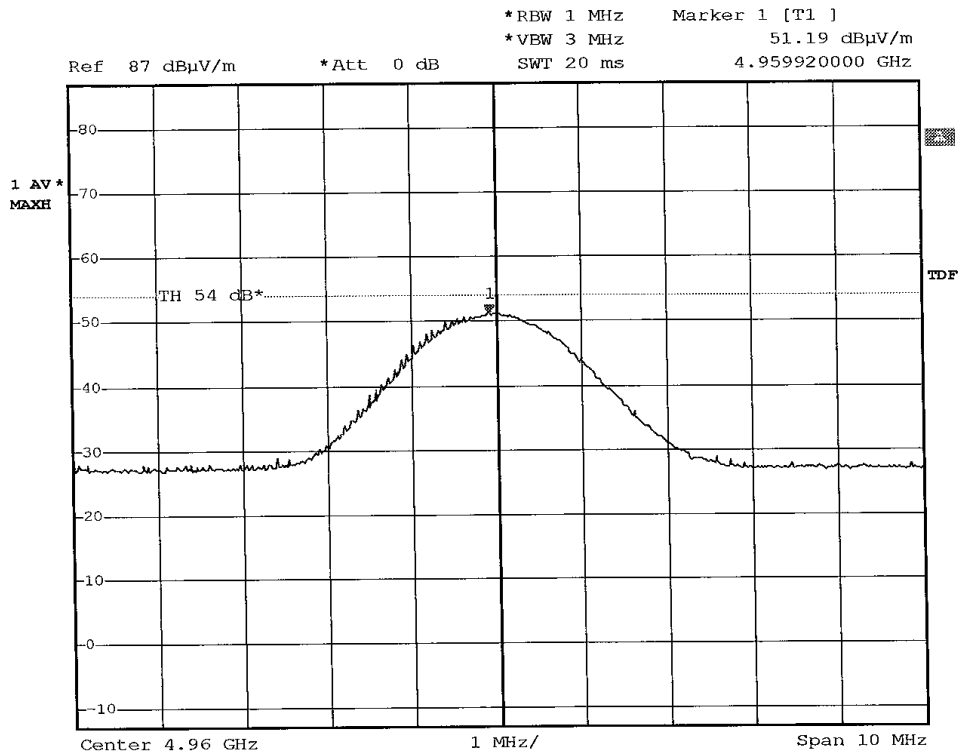
Date: 27.MAY.2004 11:07:48

3TU-02  
2480 MHz  
✓



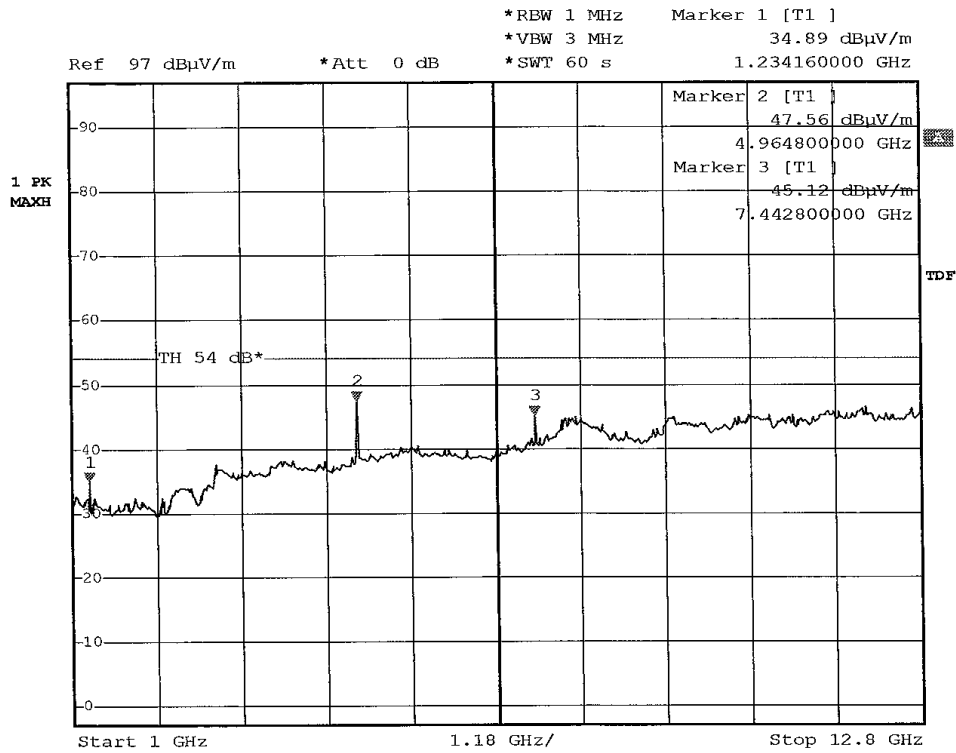
Date: 27.MAY.2004 18:09:07

BTU-02  
2480 MHz  
V



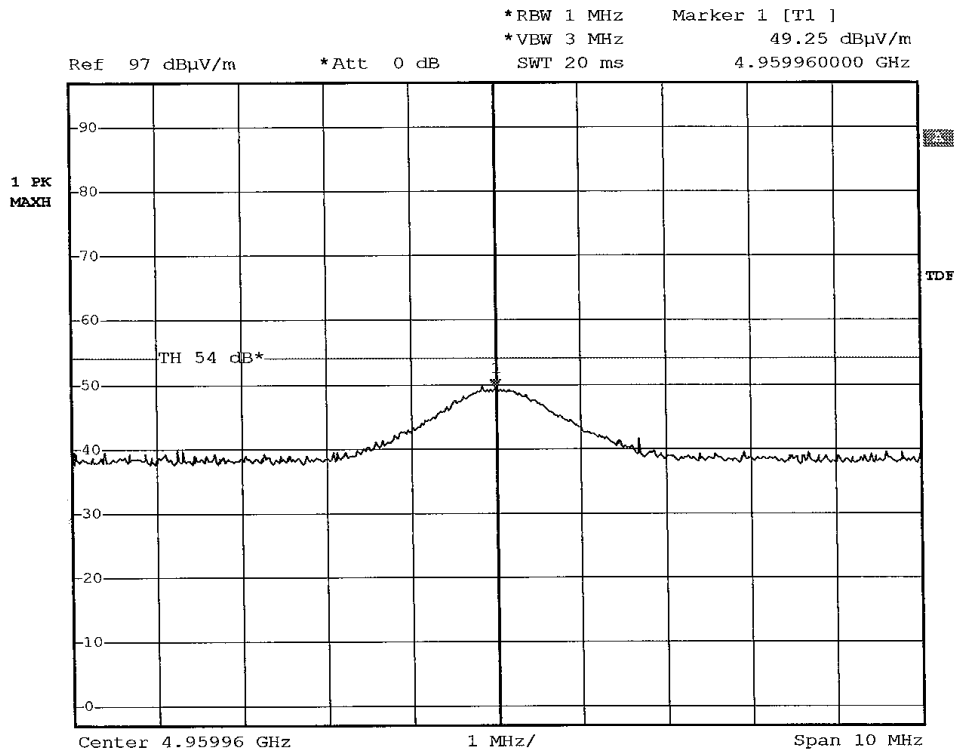
Date: 27.MAY.2004 18:10:28

BTu-02  
2480 MHz  
✓



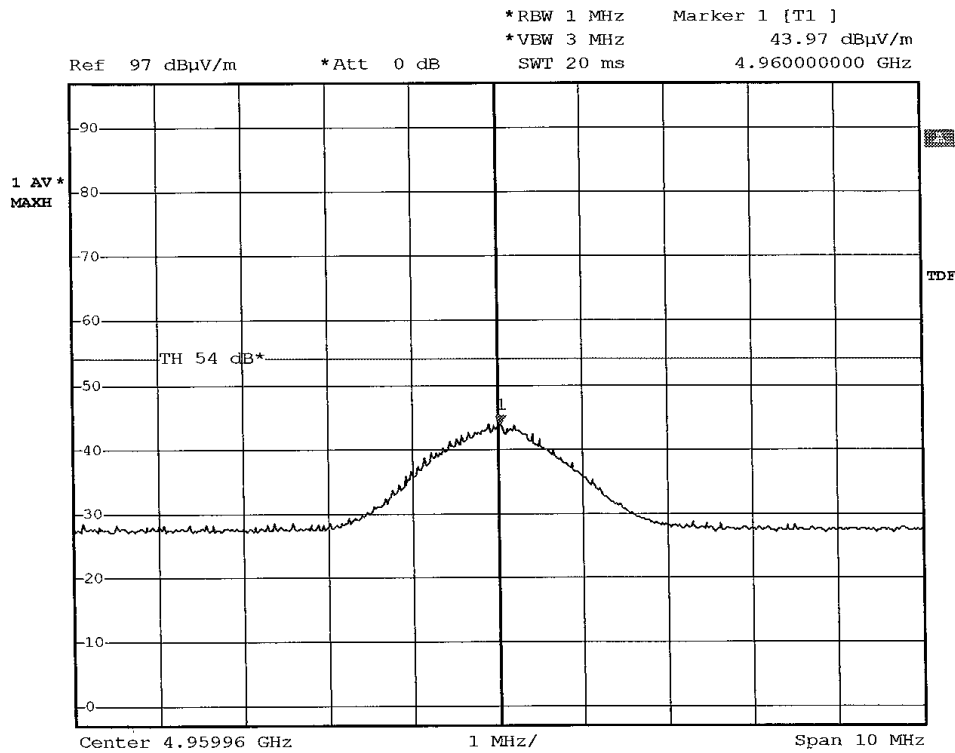
Date: 27.MAY.2004 11:10:05

BTU-02  
2480 MHz  
H



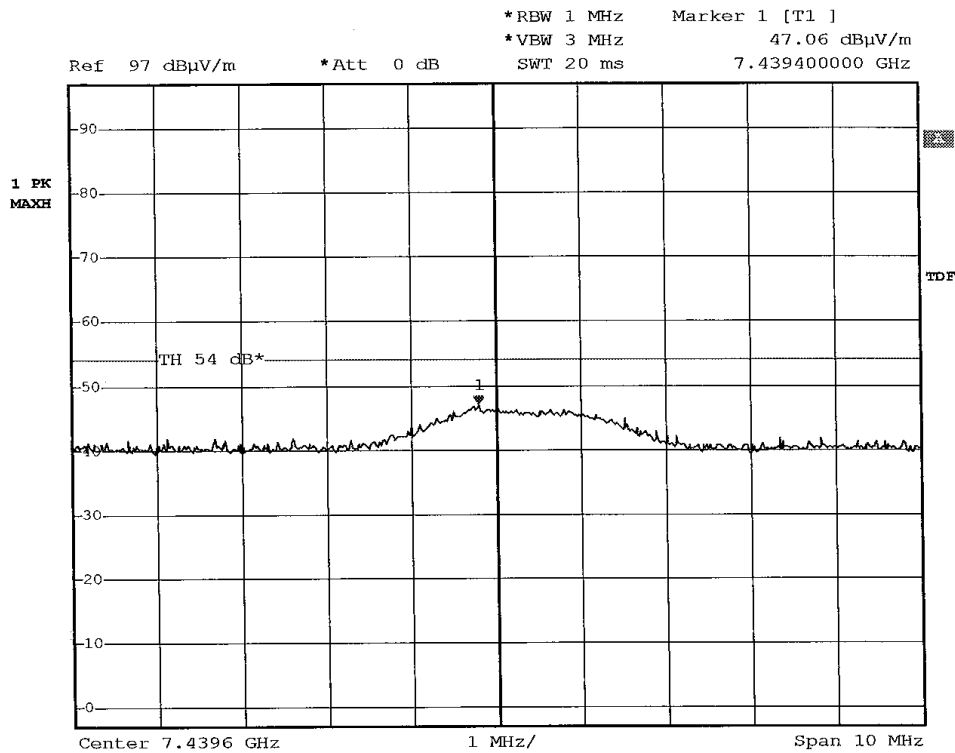
Date: 27.MAY.2004 11:19:56

BTU-02  
 2480 MHz  
 H



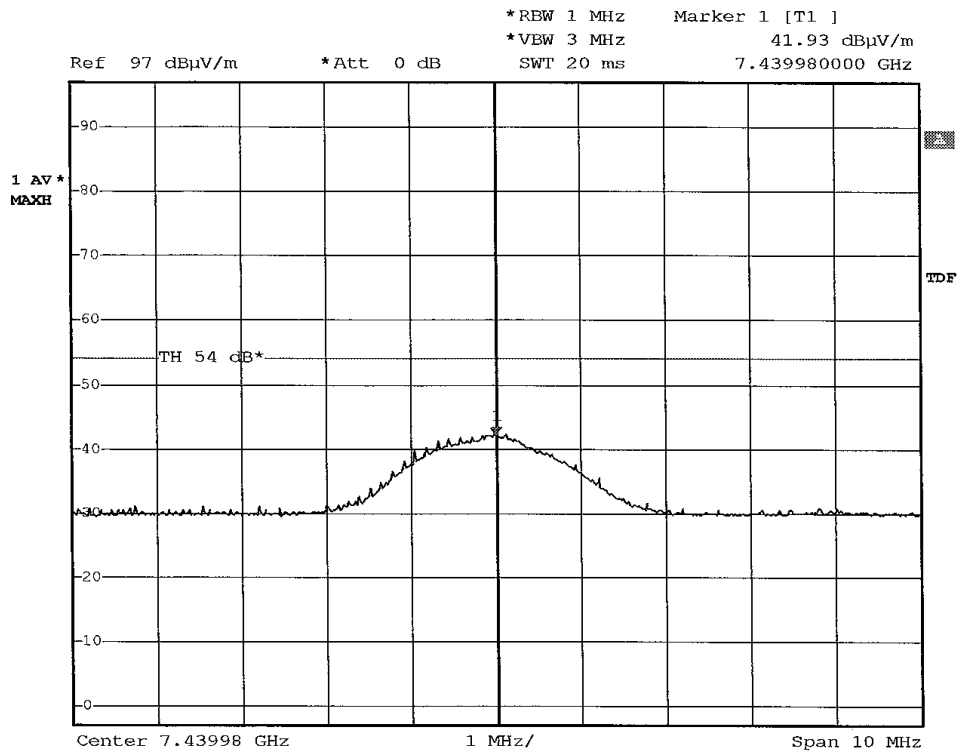
Date: 27.MAY.2004 11:20:21

BTU-02  
 2480 MHz  
 H



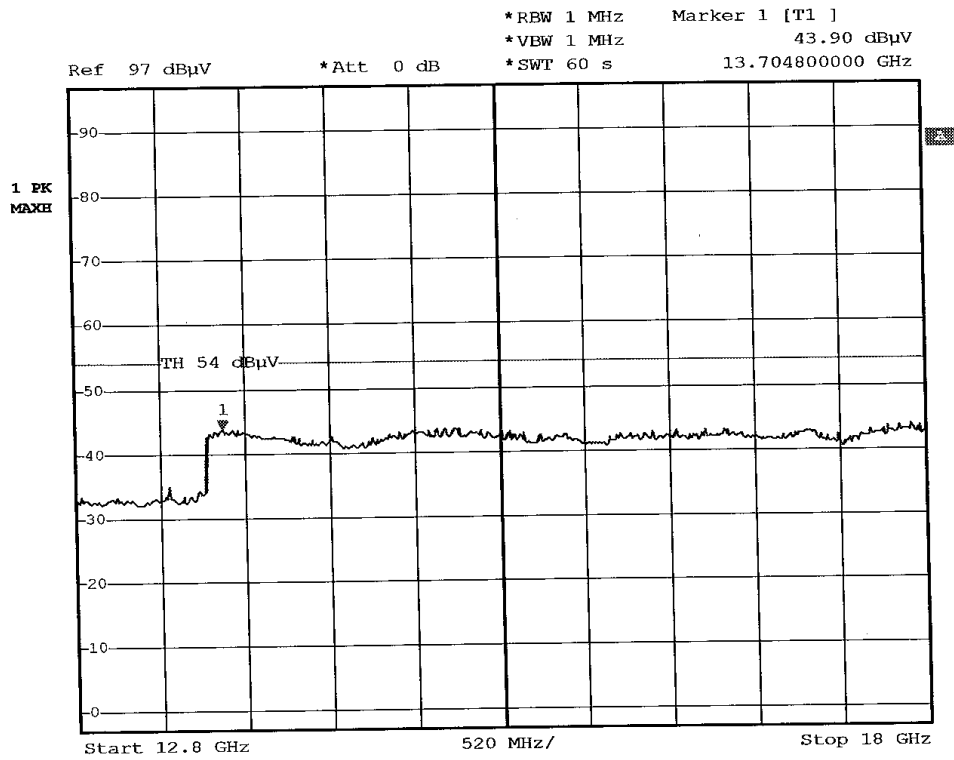
Date: 27.MAY.2004 11:22:21

BTU-02  
 248 MHz  
 14



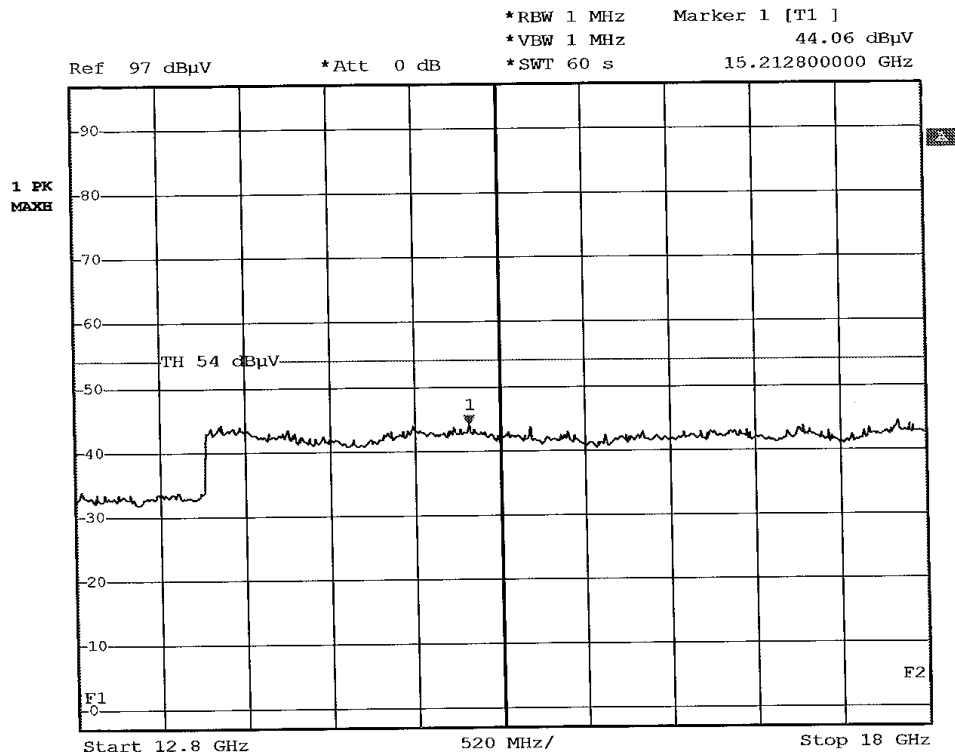
Date: 27.MAY.2004 11:22:51

BTU-02  
 2480 MHz  
 14



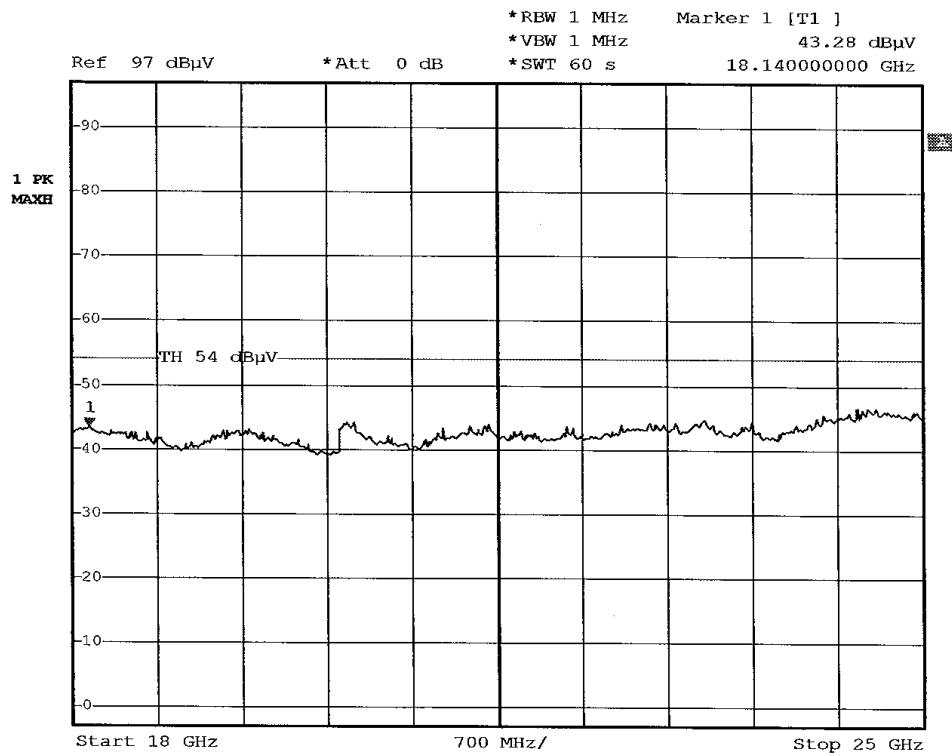
Date: 27.NOV.2003 12:47:06

Unifast  
BTU-02  
2480 MHz  
V  
FCC



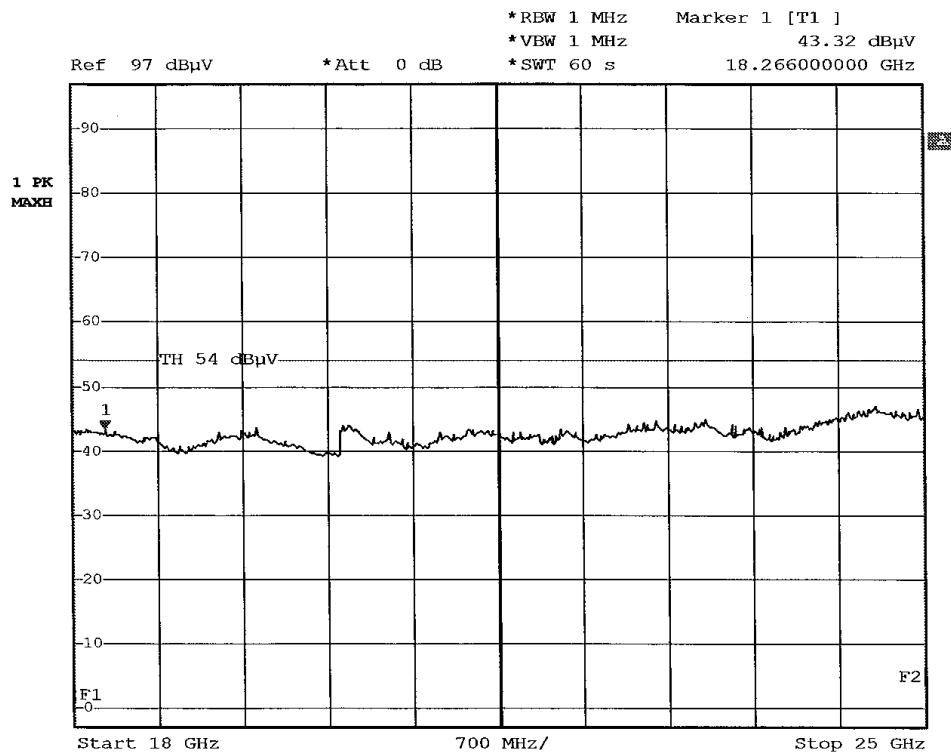
Date: 27.NOV.2003 12:42:45

Unifast  
 BTU-02  
 240 MHz  
 H  
 FCC



Date: 27.NOV.2003 13:13:25

BTu-02  
2480 MHz  
V  
FCC



Date: 27.NOV.2003 13:07:54

unifast  
BTU-02  
2480 MHz  
H  
FCC