



## Appendix B

Peak Output Power

```

Access Code from SU: AD59E5328A41120D5 hex
Burst Distance: 10 Time Slots
Trigger for SU: Not supported
Power Class: 2
Power Control: Not supported
Gain: 0.000 dB
Add. Transmission (Receive): 0.000 dB
Add. Transmission (Transmit): 0.000 dB
Longest Packet Type: DHS
Unmod. part before Mod.: 100.000 us
Unmod. part after Mod.: 0.000 us
Payload Length DH1: 216 Bits
Payload Length DH3: 1464 Bits
Payload Length DH5: 2712 Bits
Voltage Value 1: 3.800 Volt
Voltage Value 2: 12.000 Volt
Temperature: 25.000 Deg C

```

Next measurement will be running with the following parameter:

```

Voltage: Middle
Temperature: Middle
Power Mode: Not Controlled
Measurement: Conducted
EUT Test Mode: TX
BI Data From File: No
BI Signal Packet Type: DHS
BI Signal Pattern: PRBS 9
Whitening: No
Number of packets: 1
EUT Tx Frequency: 2402.000 MHz
EUT Rx Frequency: 2402.000 MHz
BI Signalling Level: -55.000 dBm

```

```

Operator intervention start at 2001-07-09, 11:11:01
Intervention Type 'Please bring the EUT into test mode TX TEST'
Operator intervention end at 2001-07-09, 11:11:03
Operator intervention start at 2001-07-09, 11:11:04
Intervention Type 'Please set the EUT Pattern to PRBS'
Operator intervention end at 2001-07-09, 11:11:05
Operator intervention start at 2001-07-09, 11:11:06
Intervention Type 'Please set the EUT Packet Type to DHS'
Operator intervention end at 2001-07-09, 11:11:06
Operator intervention start at 2001-07-09, 11:11:06
Intervention Type 'Please set the EUT TX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-07-09, 11:11:07
Operator intervention start at 2001-07-09, 11:11:07
Intervention Type 'Please set the EUT RX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-07-09, 11:11:07

```

TX FREQ [MHz]	RX FREQ [MHz]	MEAS FREQ [MHz]	MEASUREMENT	LEVEL [dBm]	LIMIT [dBm]	VERDICT
2402.000	2402.000	2402.000	Average (+ gain)	0.46 <	20.00	PASS
2402.000	2402.000	2402.000	Peak (+ gain)	0.61 <	23.00	PASS
2402.000	2402.000	2402.000	Average	0.46 <	4.00	PASS
2402.000	2402.000	2402.000	Average	0.46 >	-6.00	PASS
Operator intervention start at 2001-07-09, 11:11:10						
Intervention Type 'Please set the EUT TX Frequency to 2441.000000 MHz'						
Operator intervention end at 2001-07-09, 11:11:52						
Operator intervention start at 2001-07-09, 11:11:52						
Intervention Type 'Please set the EUT RX Frequency to 2441.000000 MHz'						
Operator intervention end at 2001-07-09, 11:11:53						
2441.000	2441.000	2441.000	Average (+ gain)	0.90 <	20.00	PASS
2441.000	2441.000	2441.000	Peak (+ gain)	1.07 <	23.00	PASS

```

=====
# ROHDE & SCHWARZ Certific. Bluetooth Test System TS8960 SW Version: bl_23
#
# Program name: tc_AllPower
# Program revision: 1.1.1
#
# All Power Measurement Test Cases
#
#-----
# Test Case started: 2001-07-09, 11:10:56 (ets_1)
# Report File: /home/ts8960/project/ts8960/sw/ALE/tc/dat/Thor/Thor.mmm.rep
# Eut File: Thor
# Operator's account name: ts8960
# Global Parameter Settings:
# Wait On Compare : No
# Wait On OUTSIDE : No
# Wait On FAIL : No
# Abort On FAIL : No
# Skip Manual Interventions : No
# Plots Disabled : No
# Remove Plots after Program Run : No
# Info Enabled : No
# Short Mode : No
# Force Mode : No
# Part : 1
#-----

```

Starting program tc\_AllPower

TC Output Power RFC Check

Operator intervention start at 2001-07-09, 11:10:57

Intervention Type 'Please reset the EUT'

Operator intervention end at 2001-07-09, 11:10:59

Starting TC Output Power (TRM/CA/01/C)

Test Specification RF: 0.9

EUT connected for Measurement and Signalling at: SSCU-Port 'MEASUREMENT DUT COND'

Next measurement will be running with the following EUT paramter:

```

Manufacturer: GN Netcom Inc.
Model: Bluetooth Headset / Thor
Serial No: no info
Comment: class 2 Bluetooth device
Setup mode: Interim Testing
Test Mode Handle: Every Connection
Country: All
EUT Address: 00025B000000 hex
Tester Address: 008037122094 hex
Active Member Address: 00000007 hex
Access Code from EUT: AD59E5328A41120D5 hex

```

```

2441.000 2441.000 2441.000 Average 0.90 < 4.00 PASS
2441.000 2441.000 2441.000 Average 0.90 > -6.00 PASS
Operator intervention start at 2001-07-09, 11:11:55
Intervention Type 'Please set the EUT TX Frequency to 2480.000000 MHz'
Operator intervention end at 2001-07-09, 11:12:04
Operator intervention start at 2001-07-09, 11:12:04
Intervention Type 'Please set the EUT RX Frequency to 2480.000000 MHz'
Operator intervention end at 2001-07-09, 11:12:05

```

```

2480.000 2480.000 2480.000 Average (+ gain) -1.01 < 20.00 PASS
2480.000 2480.000 2480.000 Peak (+ gain) -0.88 < 23.00 PASS
2480.000 2480.000 2480.000 Average -1.01 < 4.00 PASS
2480.000 2480.000 2480.000 Average -1.01 > -6.00 PASS

```

=====  
All selected Output Power tests are completed  
=====

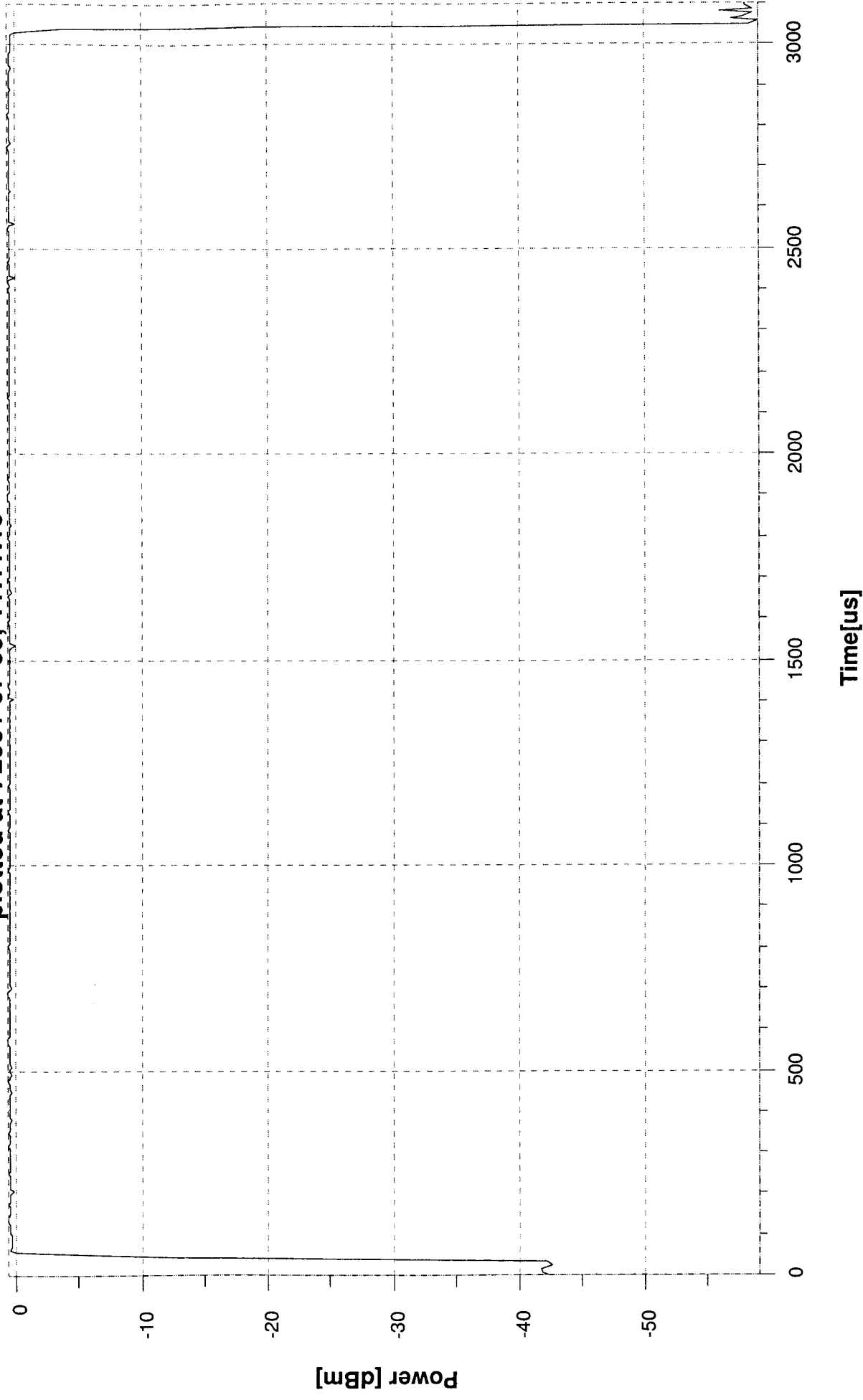
```

#####
# Duration 00:01:11
# Final Test Case verdict: PASS
# Report file closed at 2001-07-09, 11:12:07
#####

```

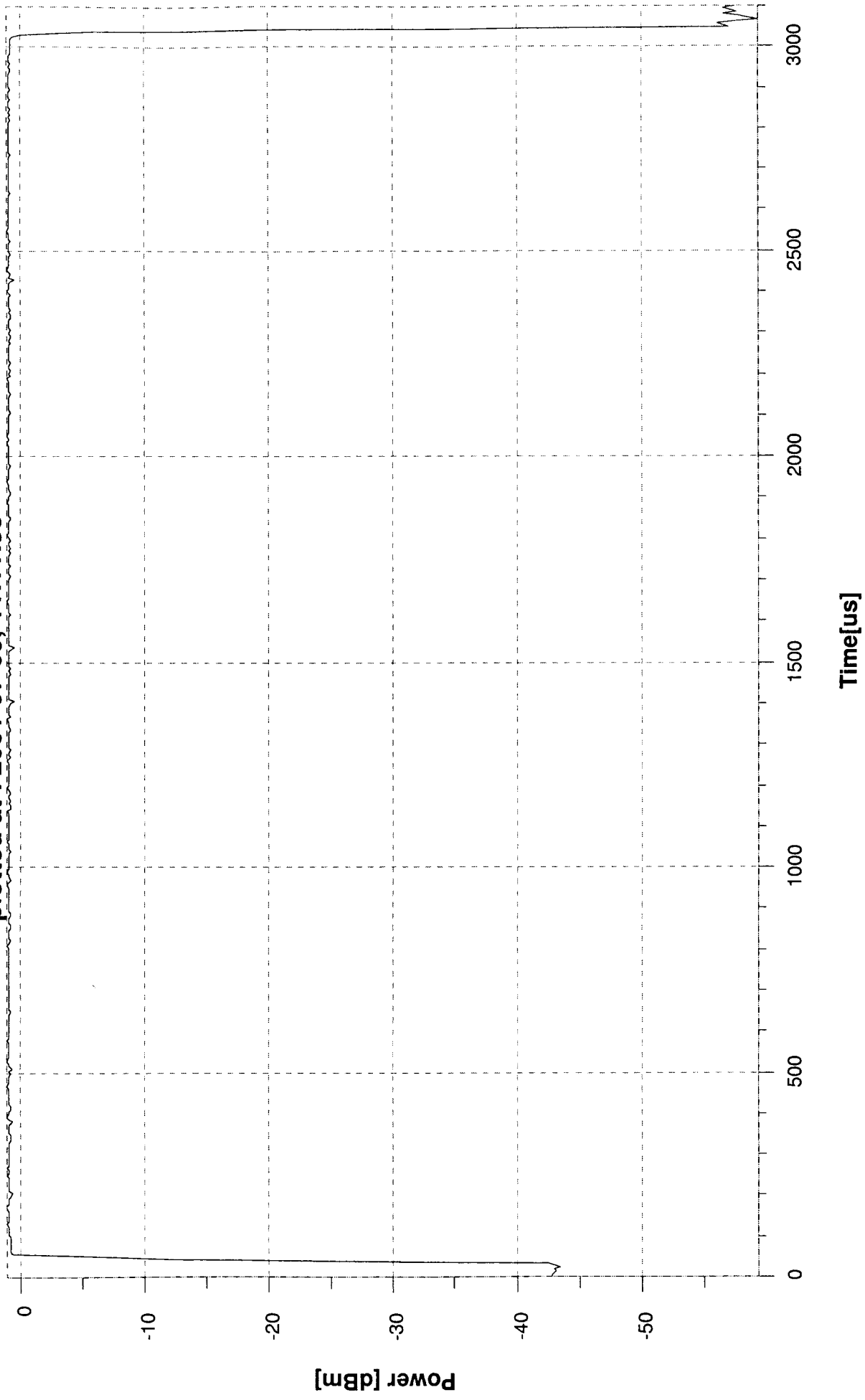
**Measured Burst TC Output Power -Measured EUT: Thor -EUT TX Frequency 2402.000 MHz**

plotted at : 2001-07-09, 11:11:10

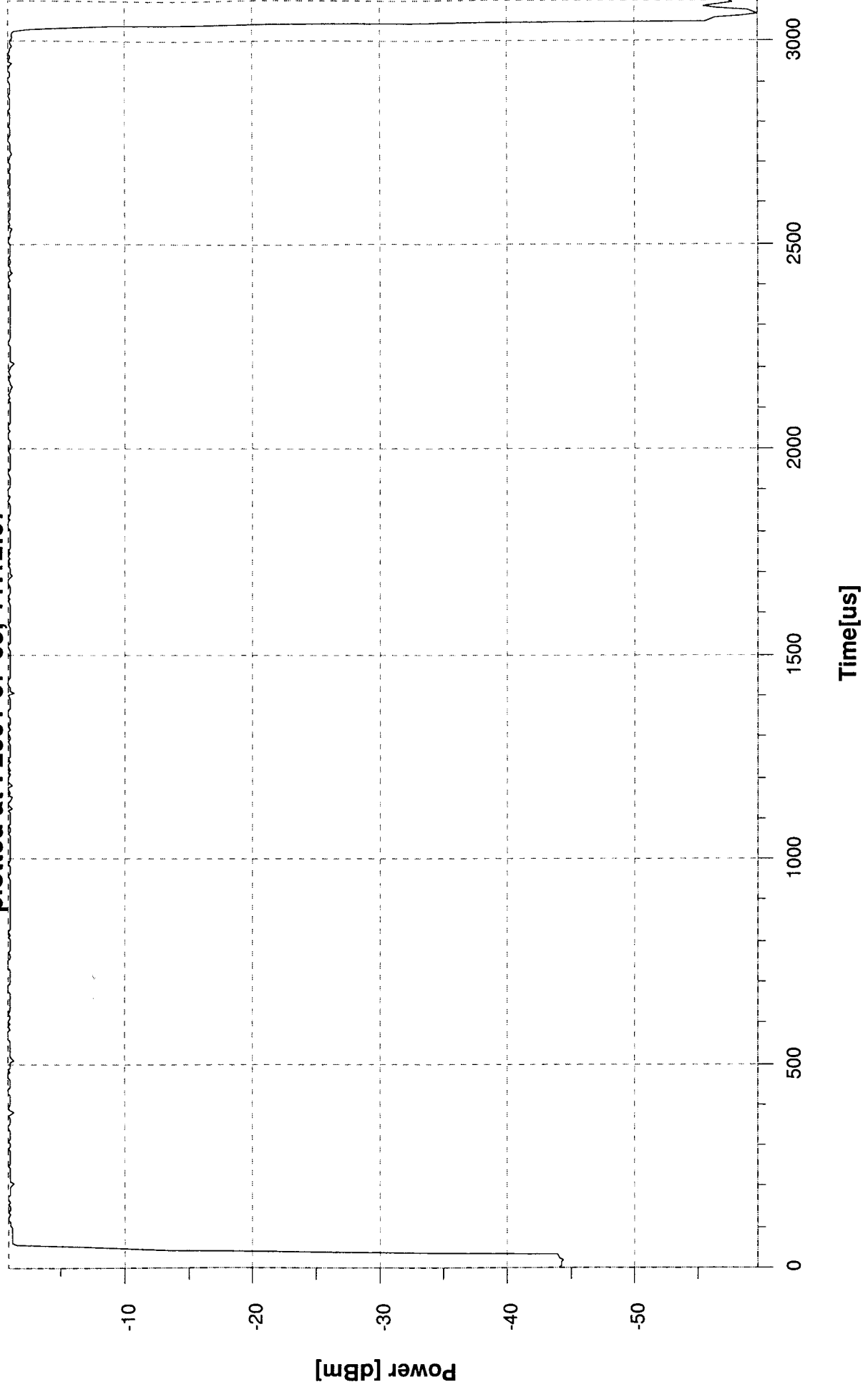


Measured Burst TC Output Power -Measured EUT: Thor -EUT TX Frequency 2441.000 MHz

plotted at : 2001-07-09, 11:11:55

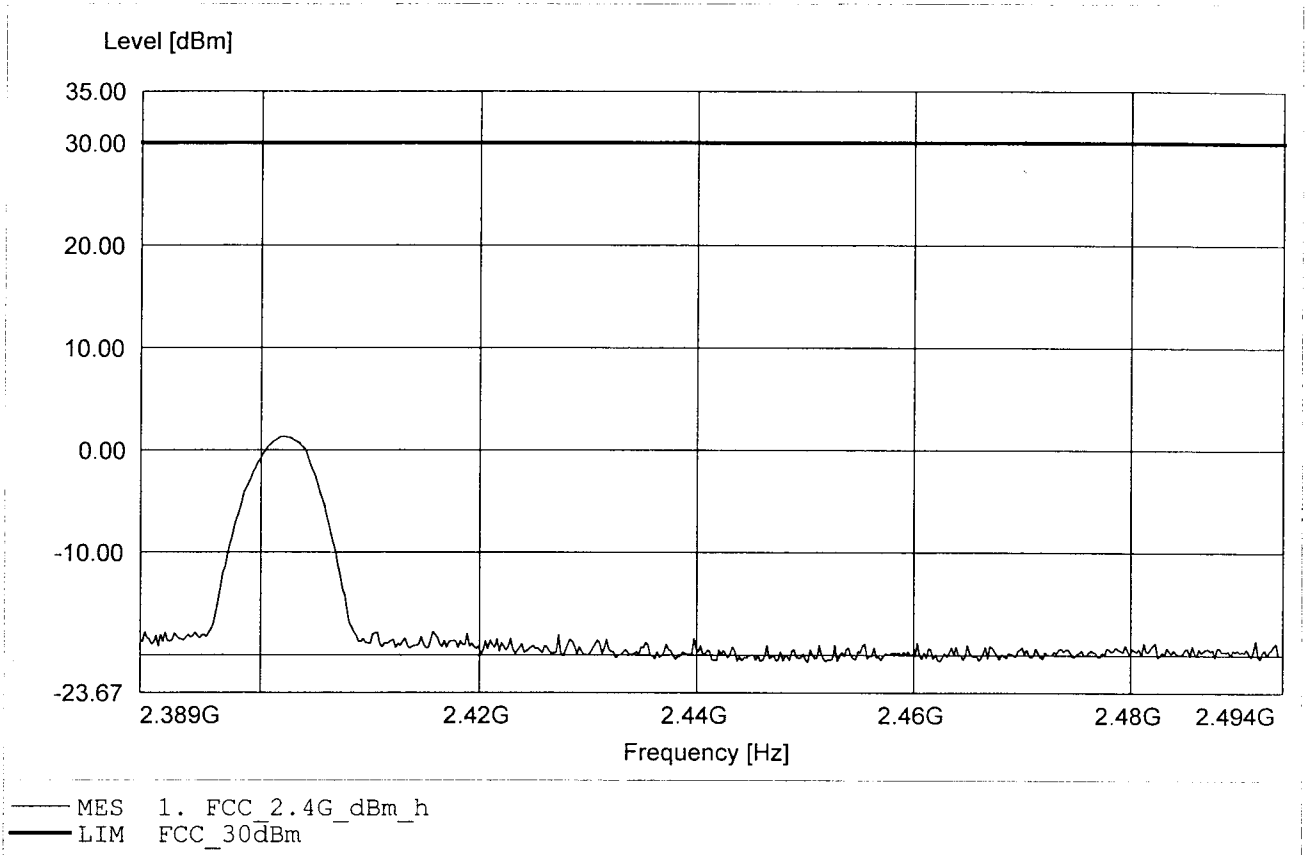


Measured Burst TC Output Power -Measured EUT: Thor -EUT TX Frequency 2480.000 MHz  
plotted at : 2001-07-09, 11:12:07



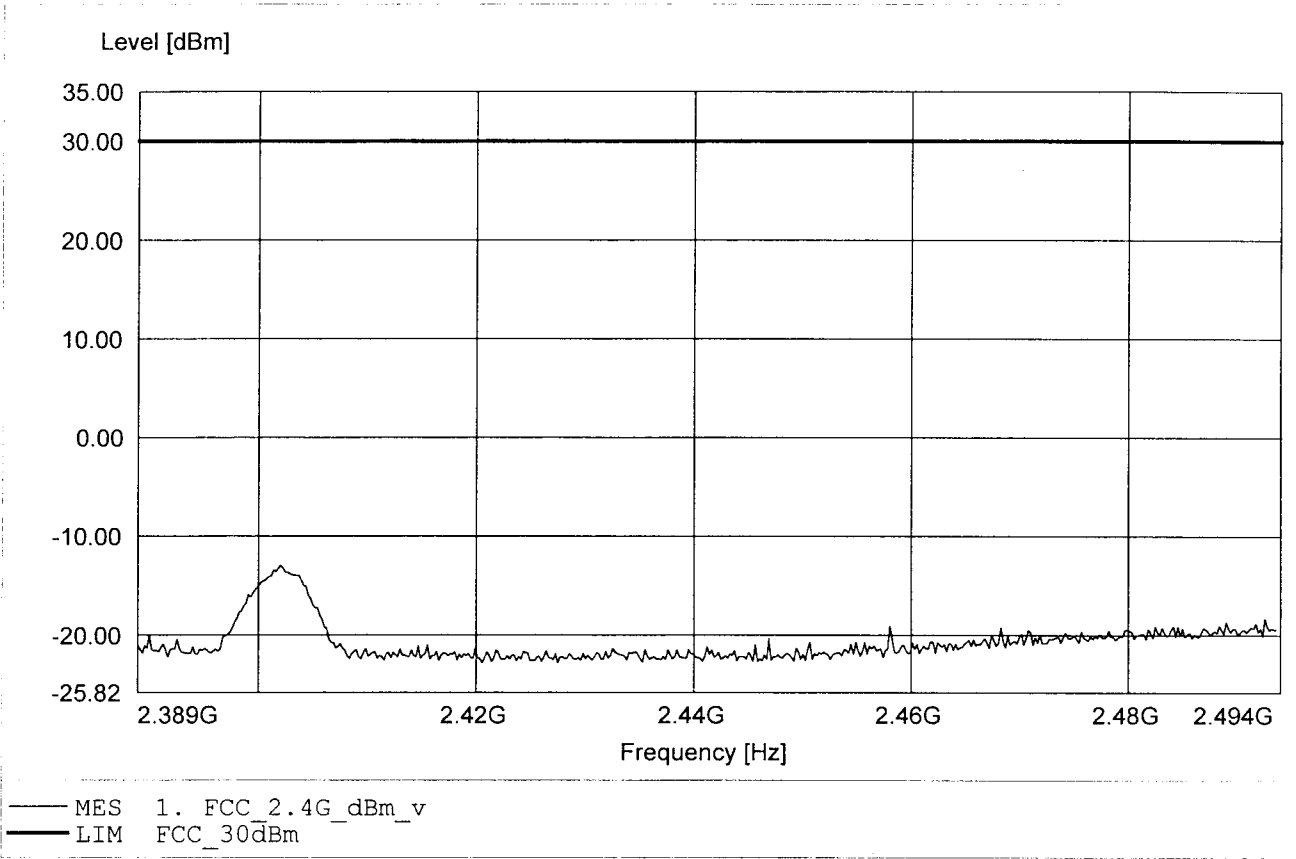
**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.402GHz Pmax:1.32dBm RBW:5MHz



**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

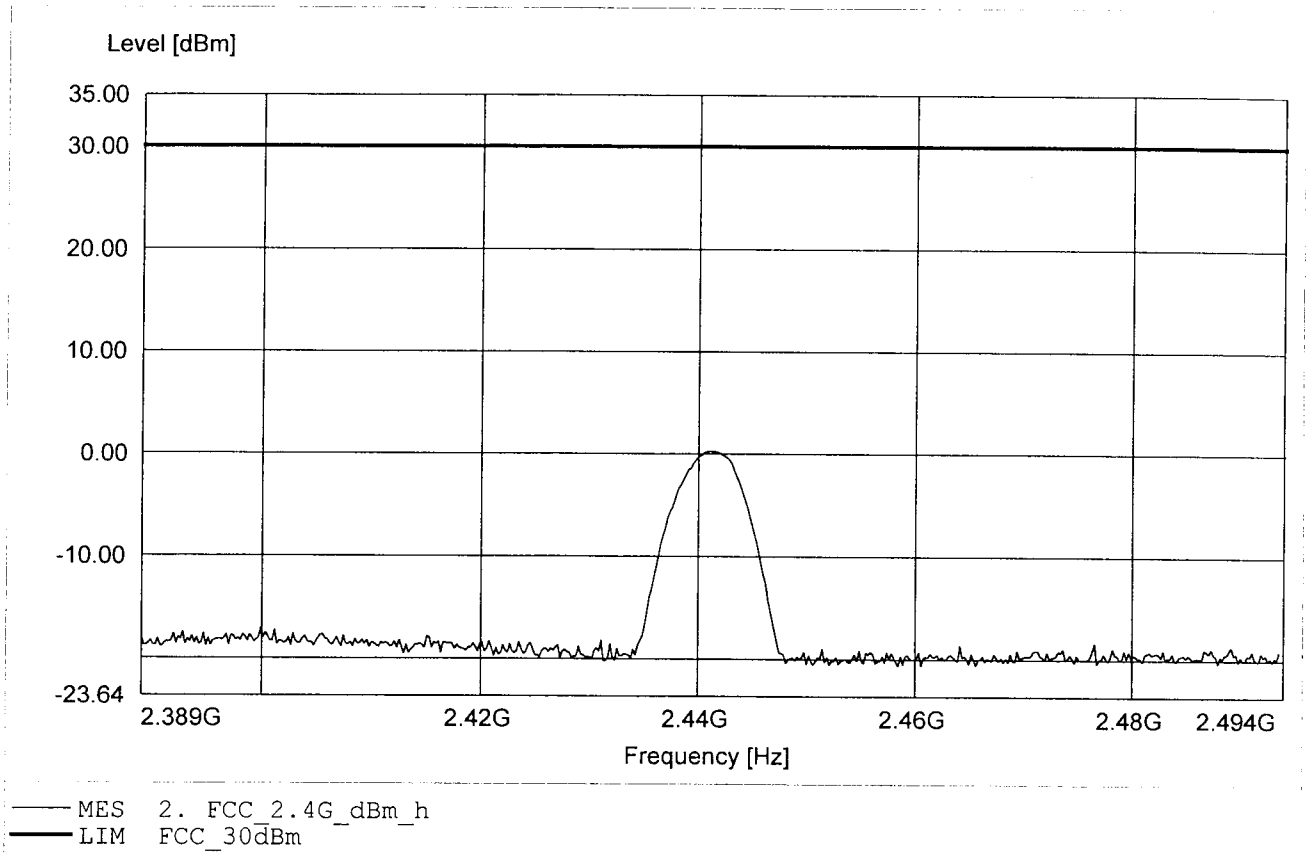
EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.402GHz Pmax:-12.99dBm RBW:5MHz





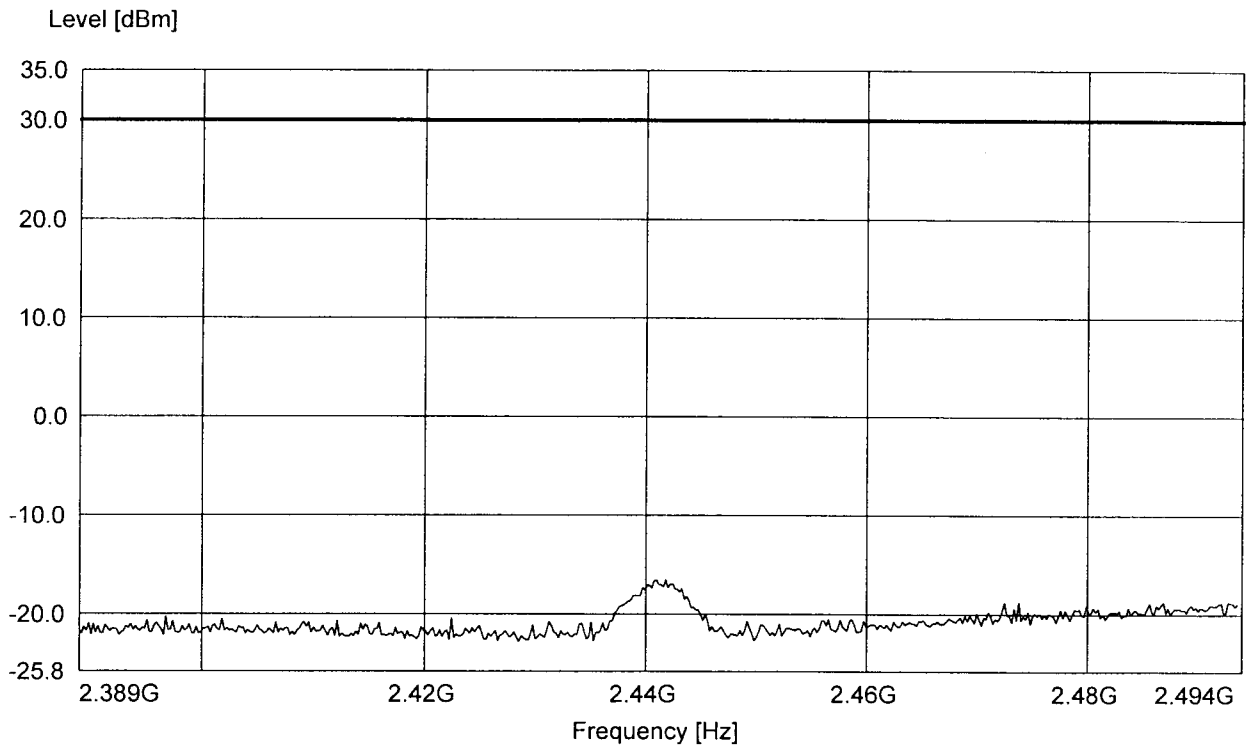
**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.441GHz Pmax:0.29dBm RBW:5MHz



**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

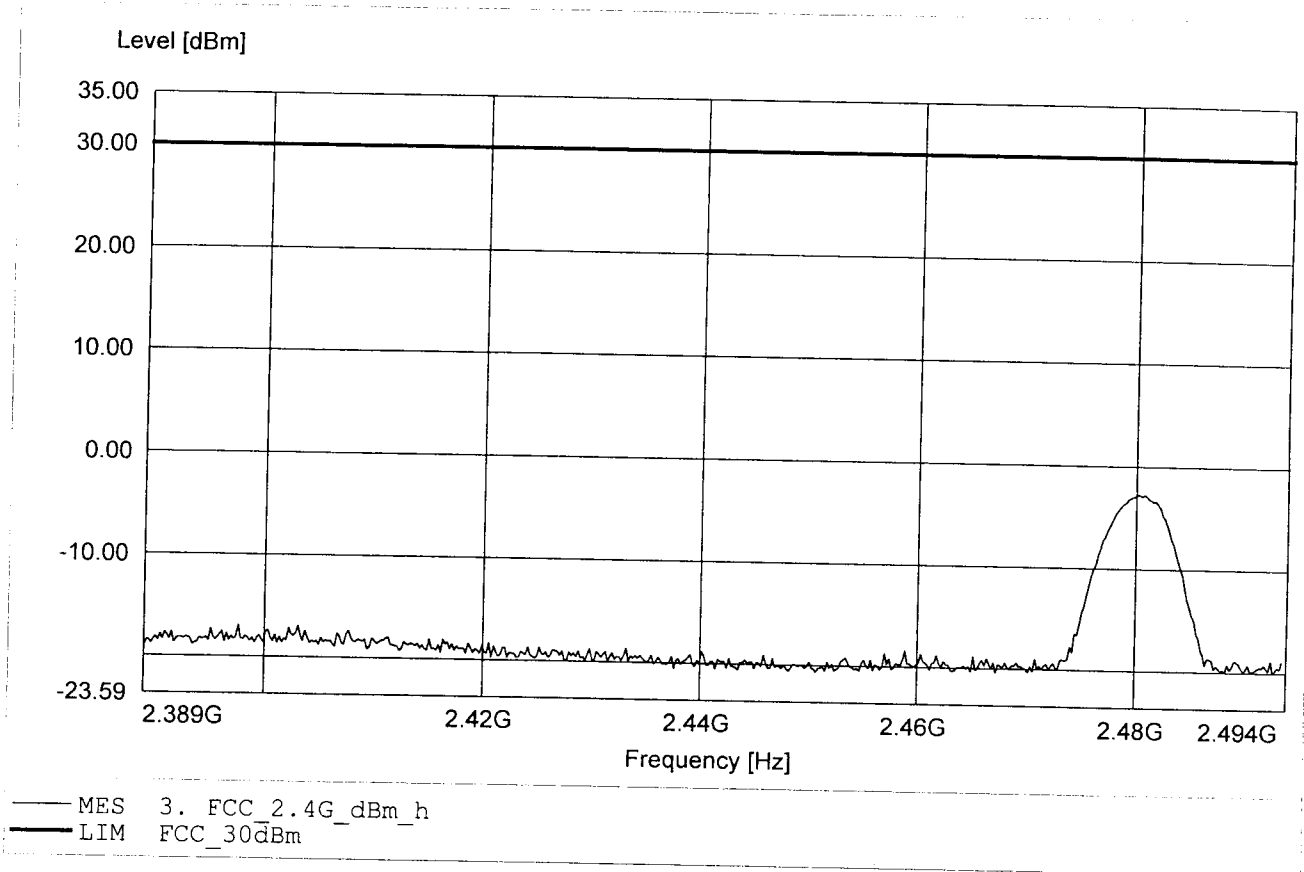
EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.442GHz Pmax:-16.50dBm RBW:5MHz



— MES 2. FCC\_2.4G\_dBm\_v  
— LIM FCC\_30dBm

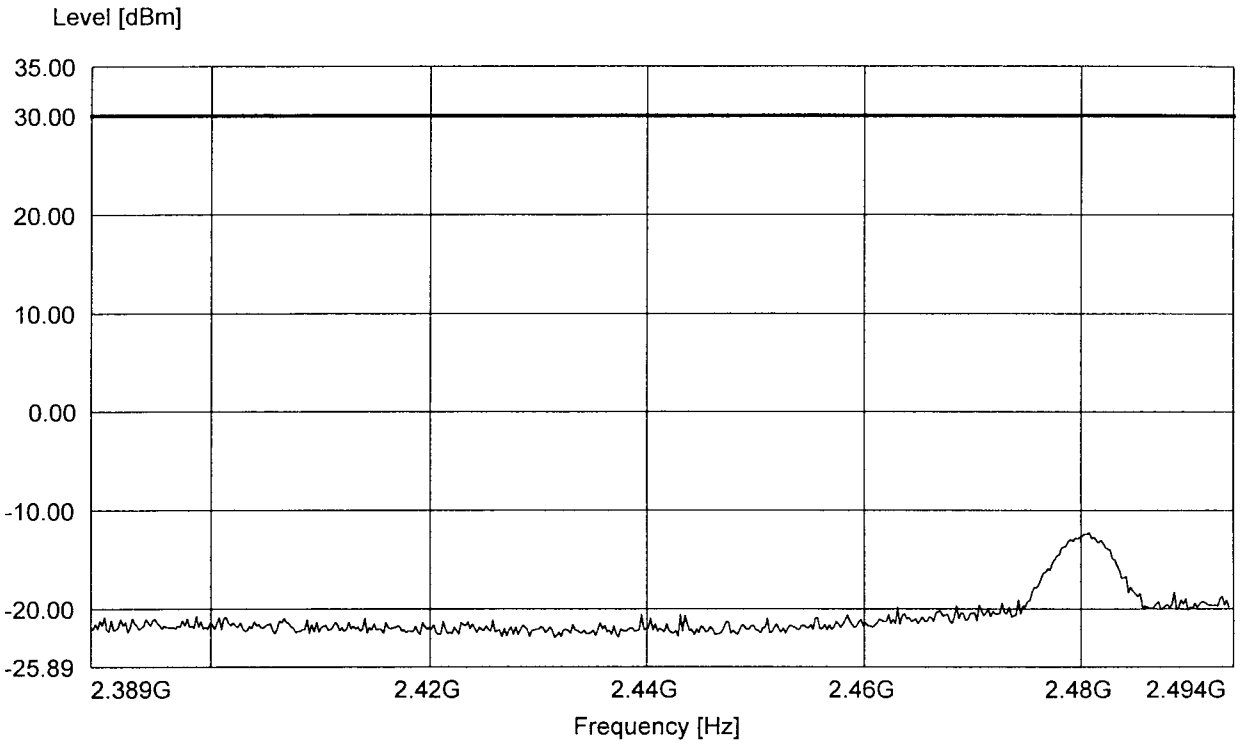
**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.480GHz Pmax:-2.73dBm RBW:5MHz



**Carrier power (dBm)**  
**FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025  
Comment 2: Freq:2.481GHz Pmax:-12.24dBm RBW:5MHz



— MES 3. FCC 2.4G\_dBm\_v  
— LIM FCC\_30dBm

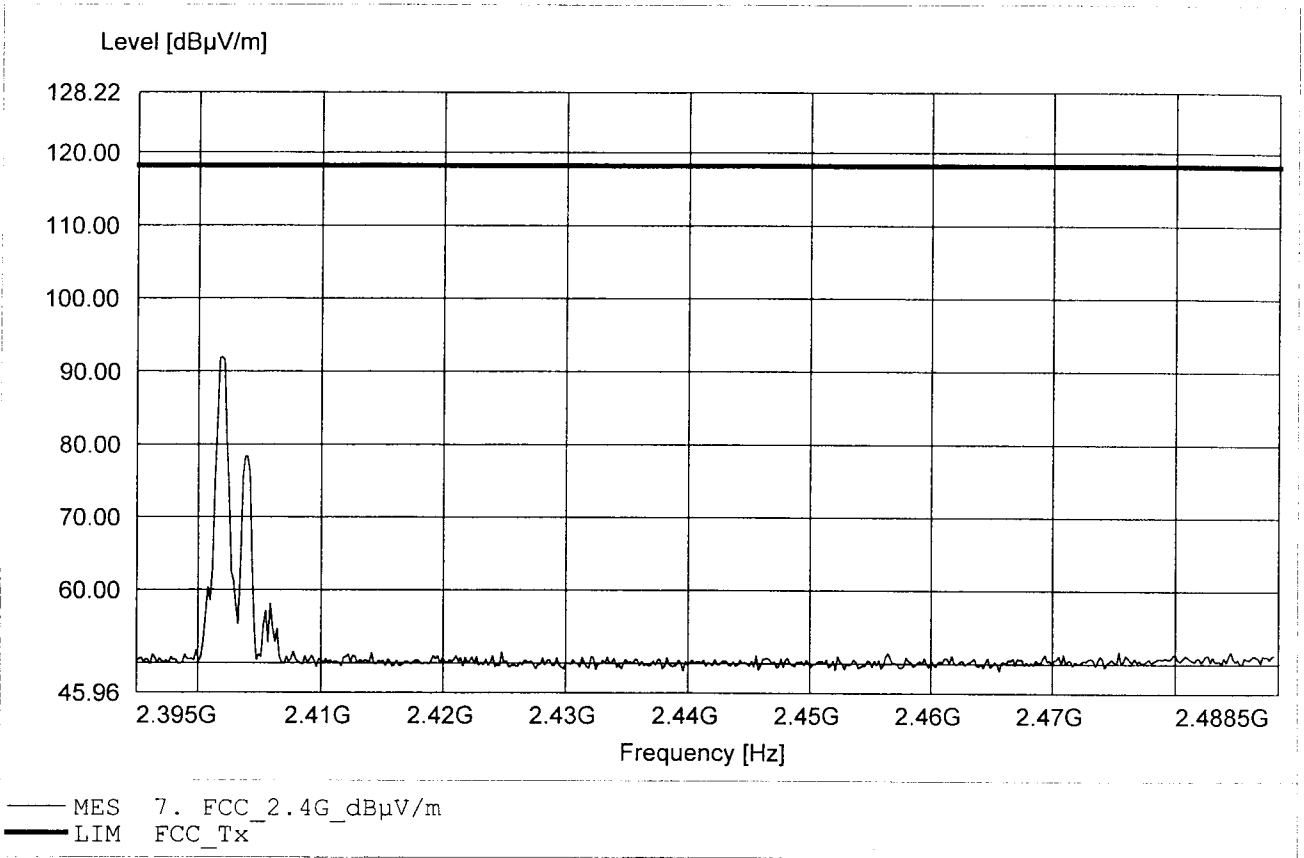


## Appendix C

Spurious Emissions radiated - Transmitter operating

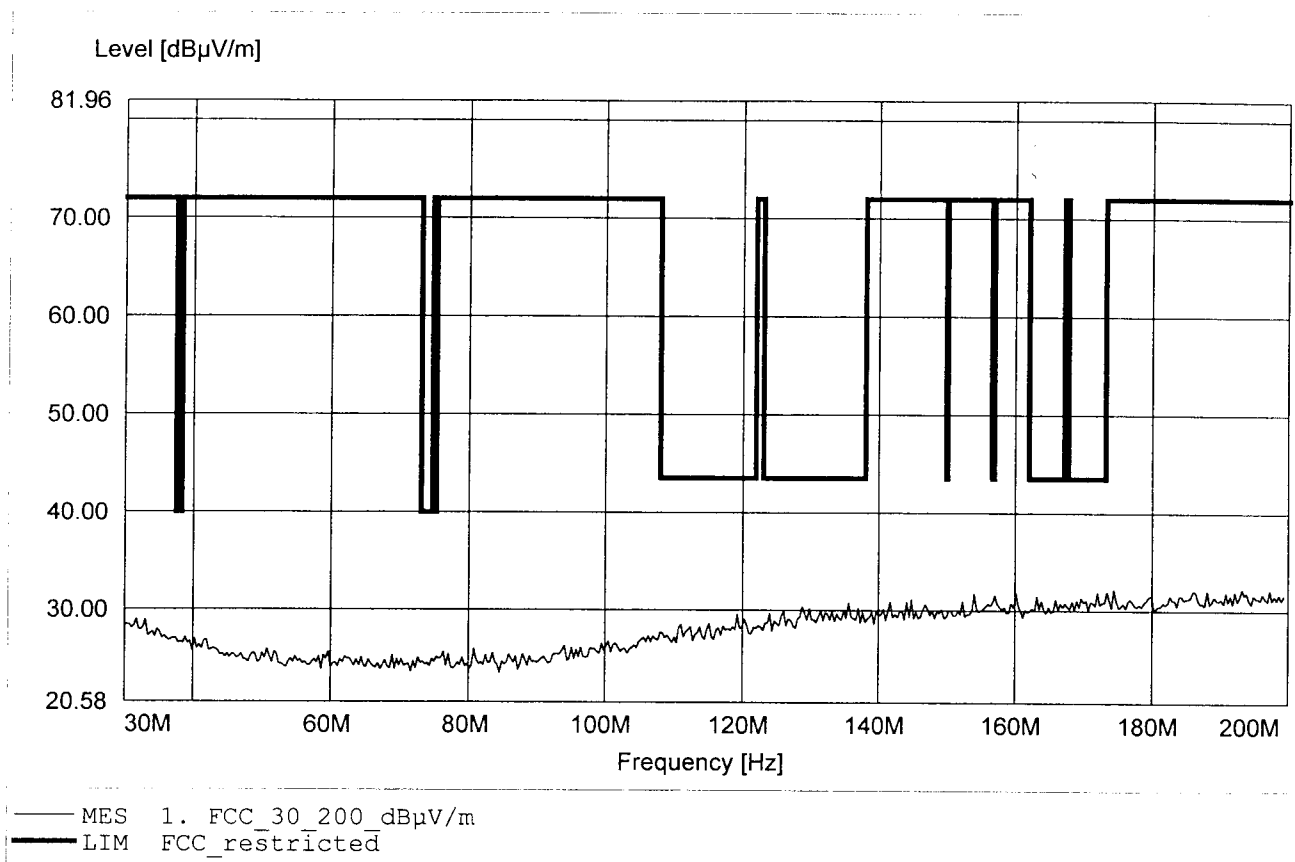
**Carrier power Field Strength  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D  
Comment 2: Freq:2.402GHz Emax:91.96dBµV/m RBW:1MHz



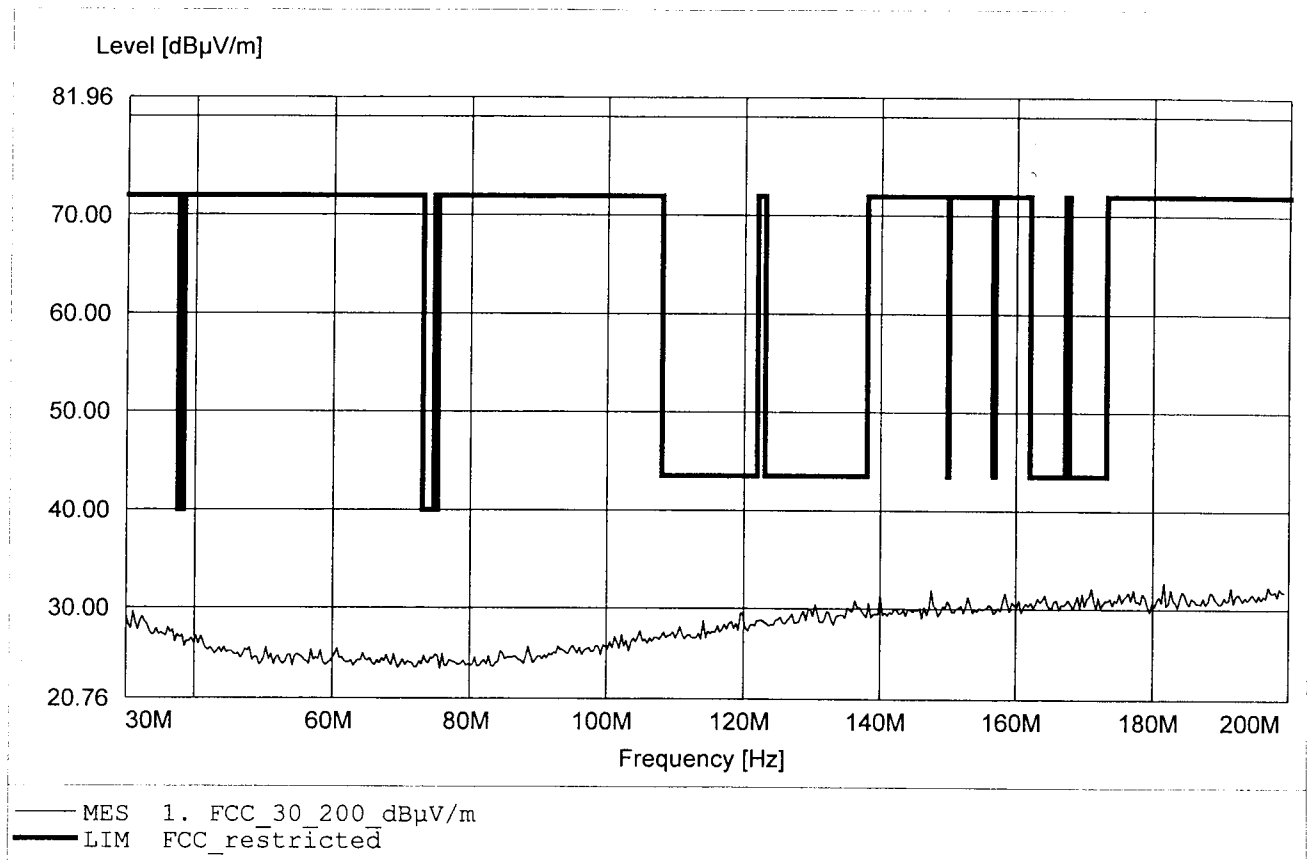
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq:193.186MHz Emax:32.24dBµV/m RBW:100KHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

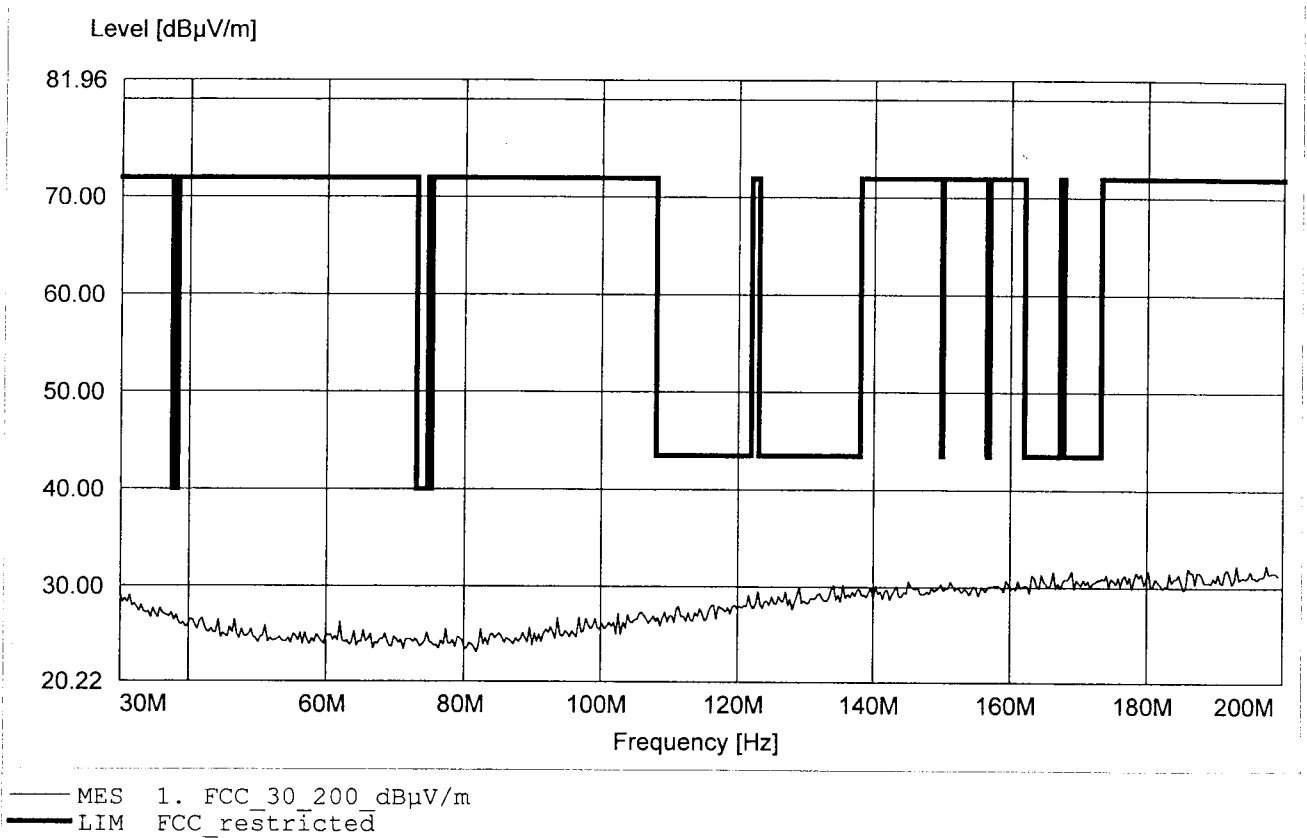
EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq:181.603MHz Emax:32.69dBµV/m RBW:100KHz





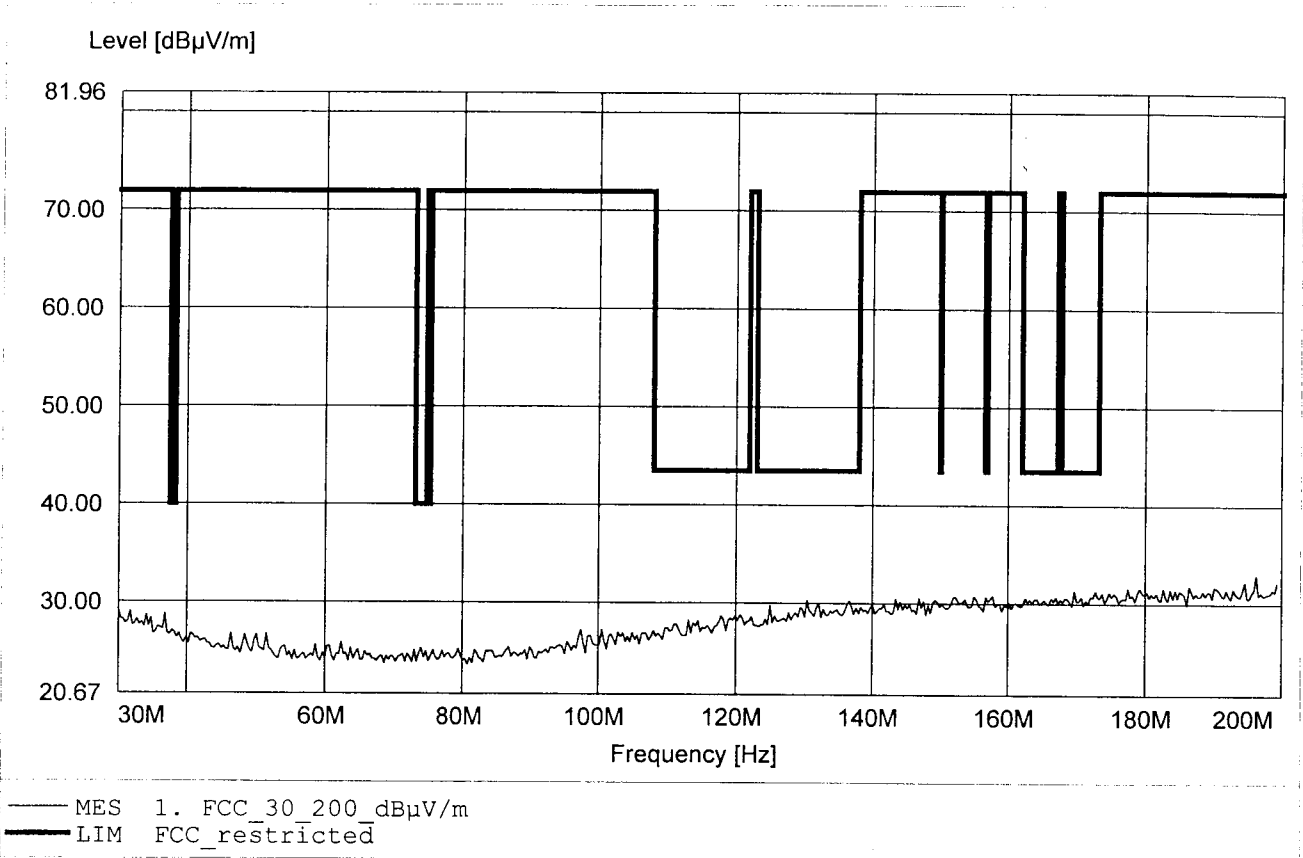
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq:197.615MHz Emax:32.39dBµV/m RBW:100KHz



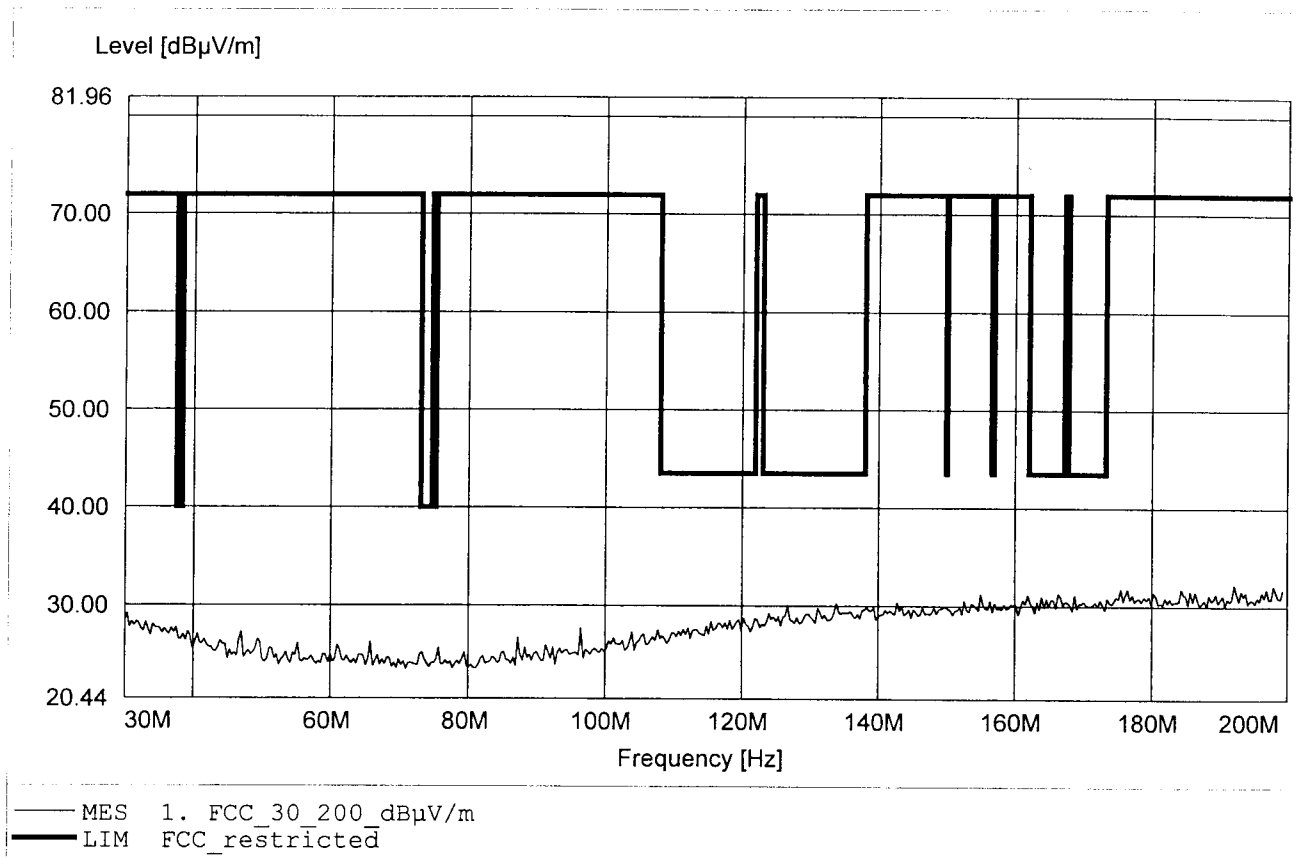
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
 Applicant: GN Netcom Inc.  
 Model: Thor  
 Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
 Test Site / Operator: ETS / Mr. Trefke  
 Test Specification: according to § 15.247  
 Comment 1: Dist.: 3m, Ant.: HK 116  
 Comment 2: Freq:196.253MHz Emax:32.94dBµV/m RBW:100KHz



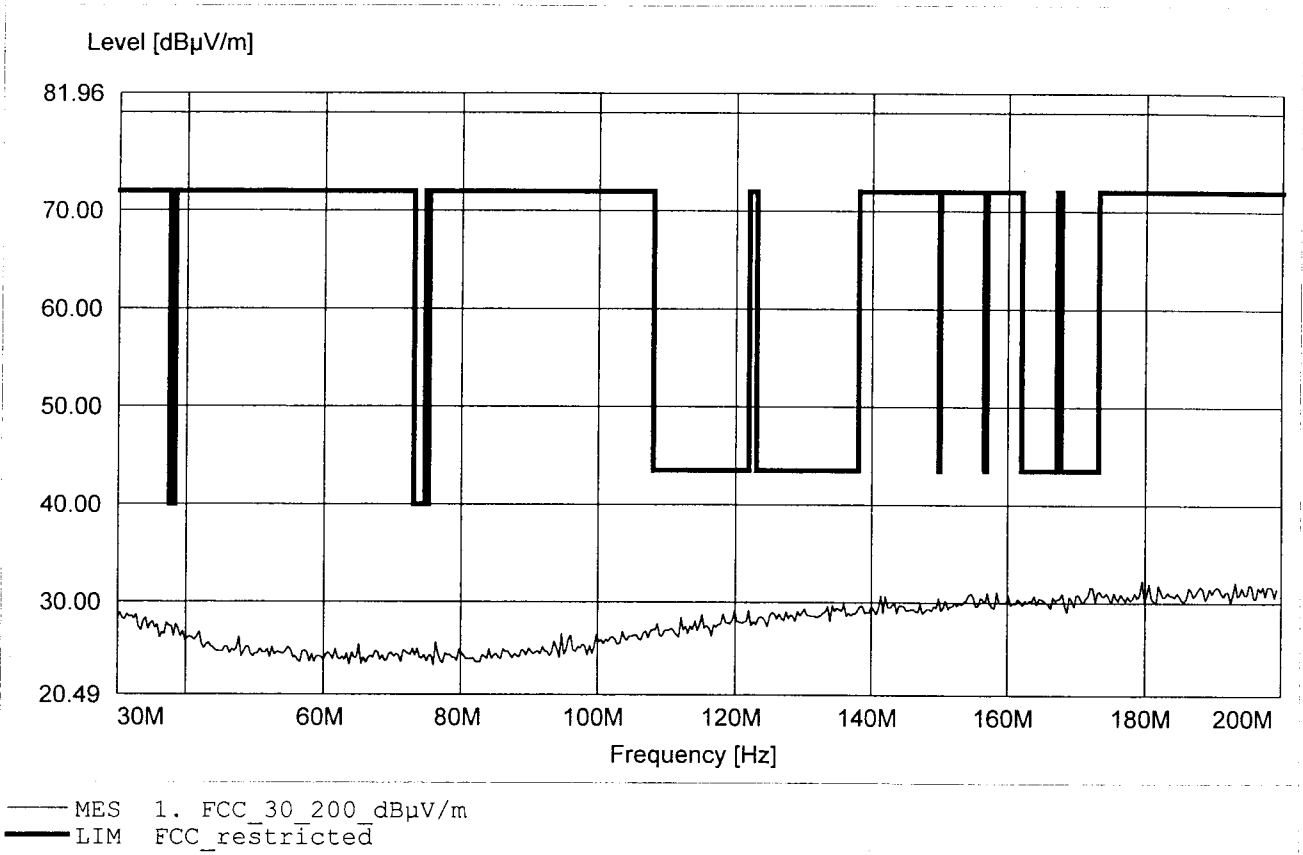
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq:192.164MHz Emax:32.23dBuV/m RBW:100KHz



**Spurious emissions Field Strength Tx**  
**FCC RULES PART 15, SUBPART C**

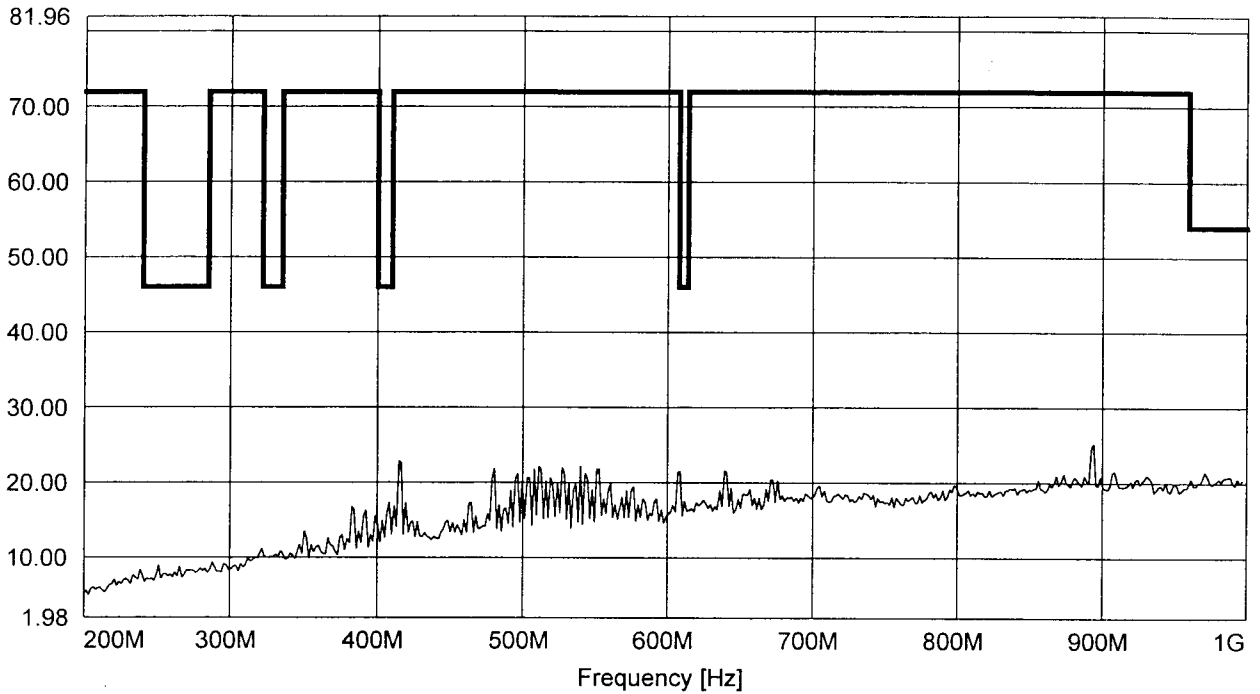
EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HK 116  
Comment 2: Freq:179.559MHz Emax:32.28dBµV/m RBW:100KHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:894.188MHz Emax:25.23dBµV/m RBW:100KHz

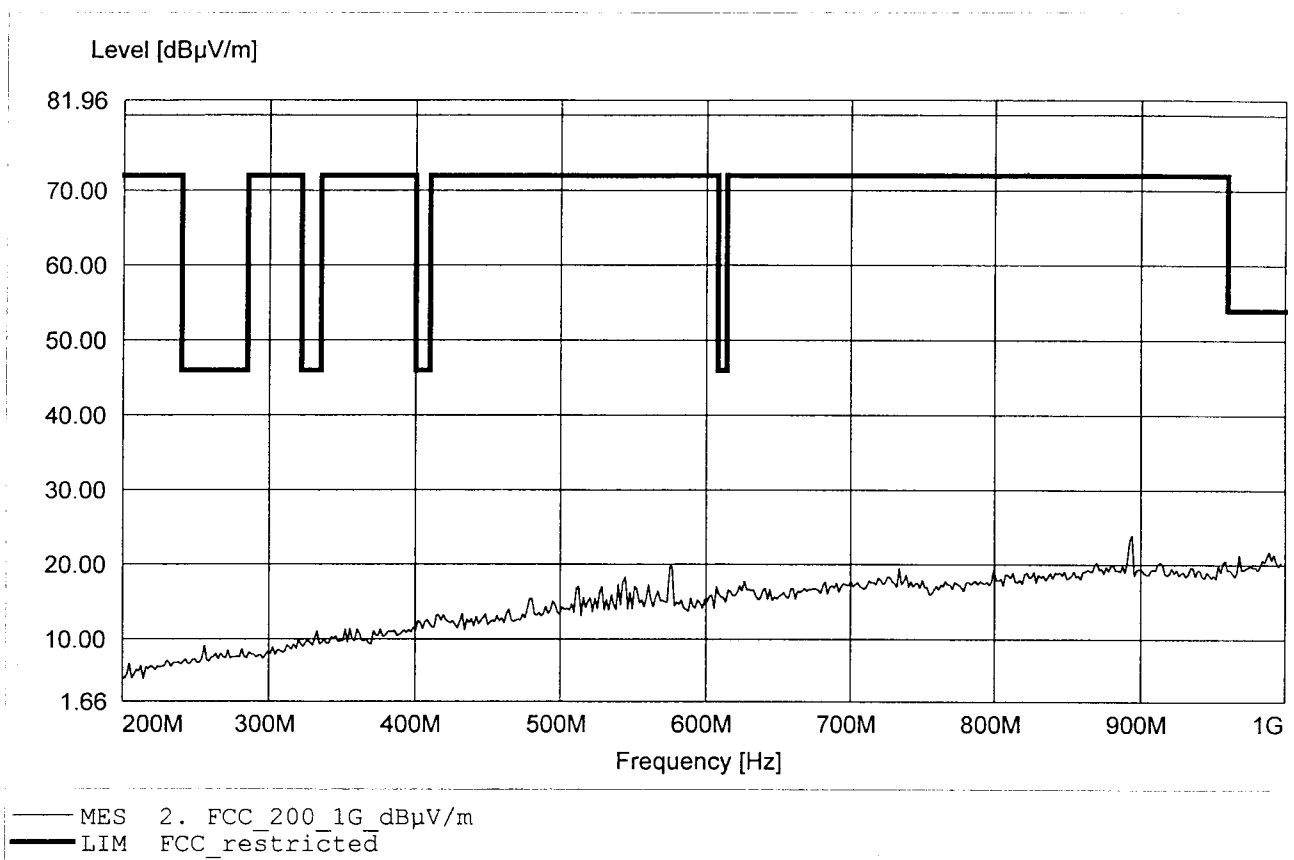
Level [dBµV/m]



— MES 2. FCC\_200\_1G\_dBµV/m  
— LIM FCC\_restricted

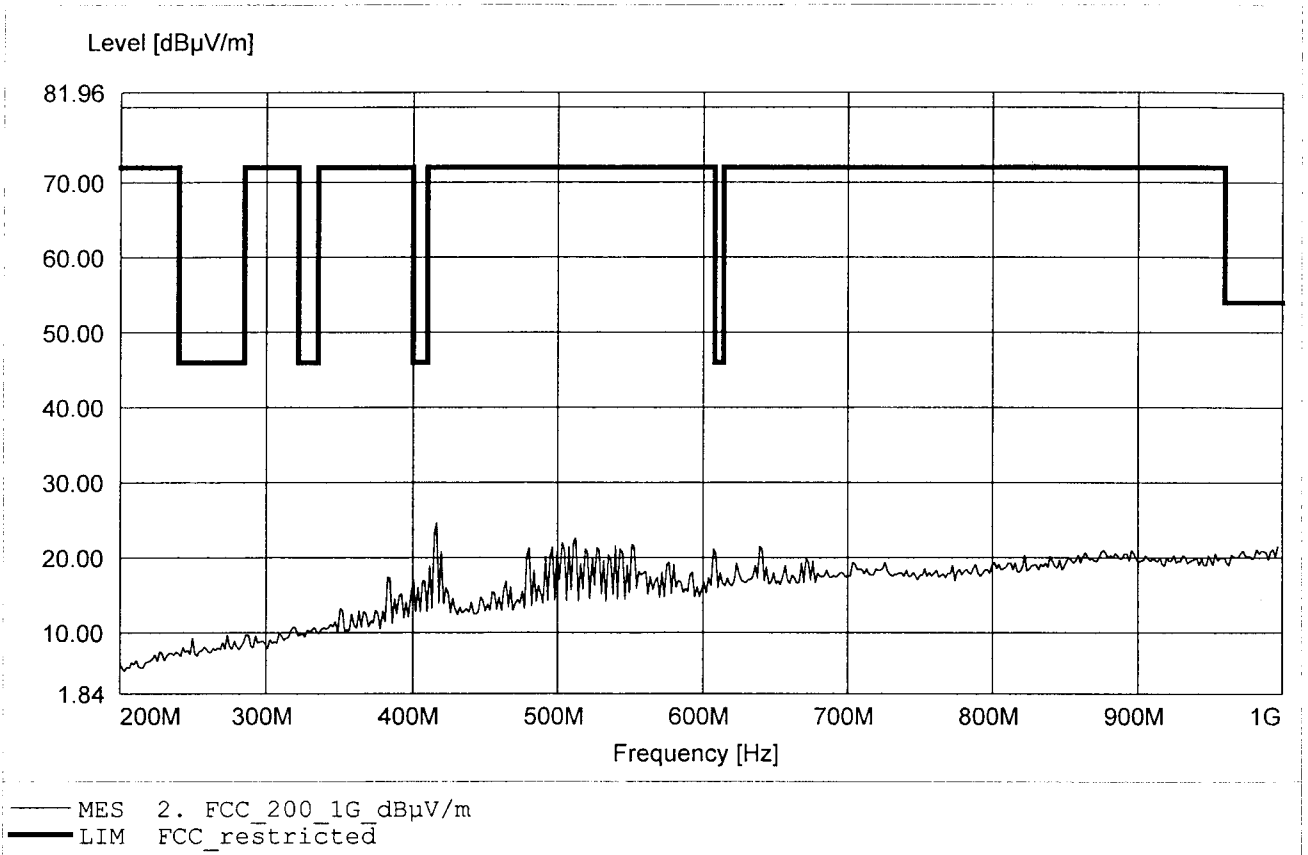
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:894.188MHz Emax:23.96dBuV/m RBW:100KHz



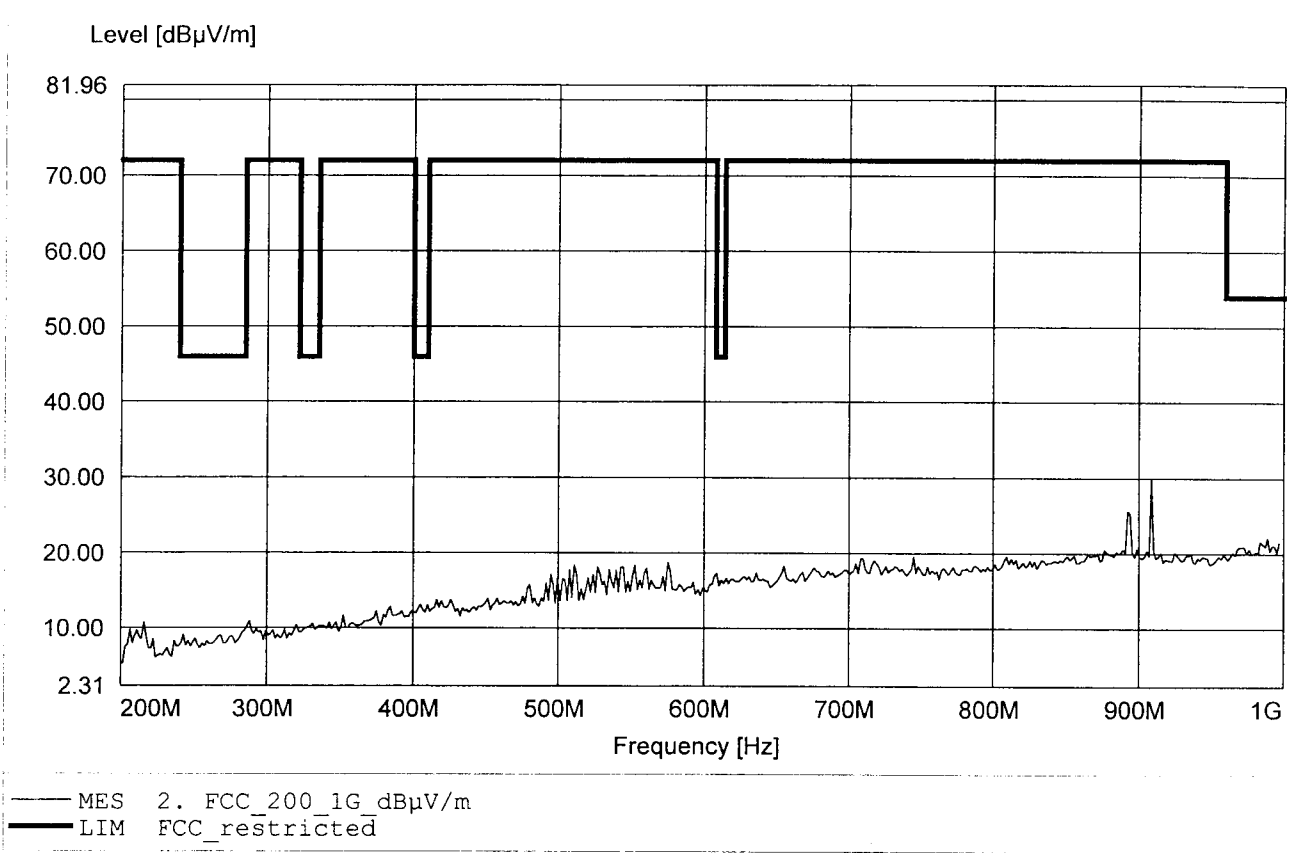
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:416.433MHz Emax:24.61dBµV/m RBW:100KHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

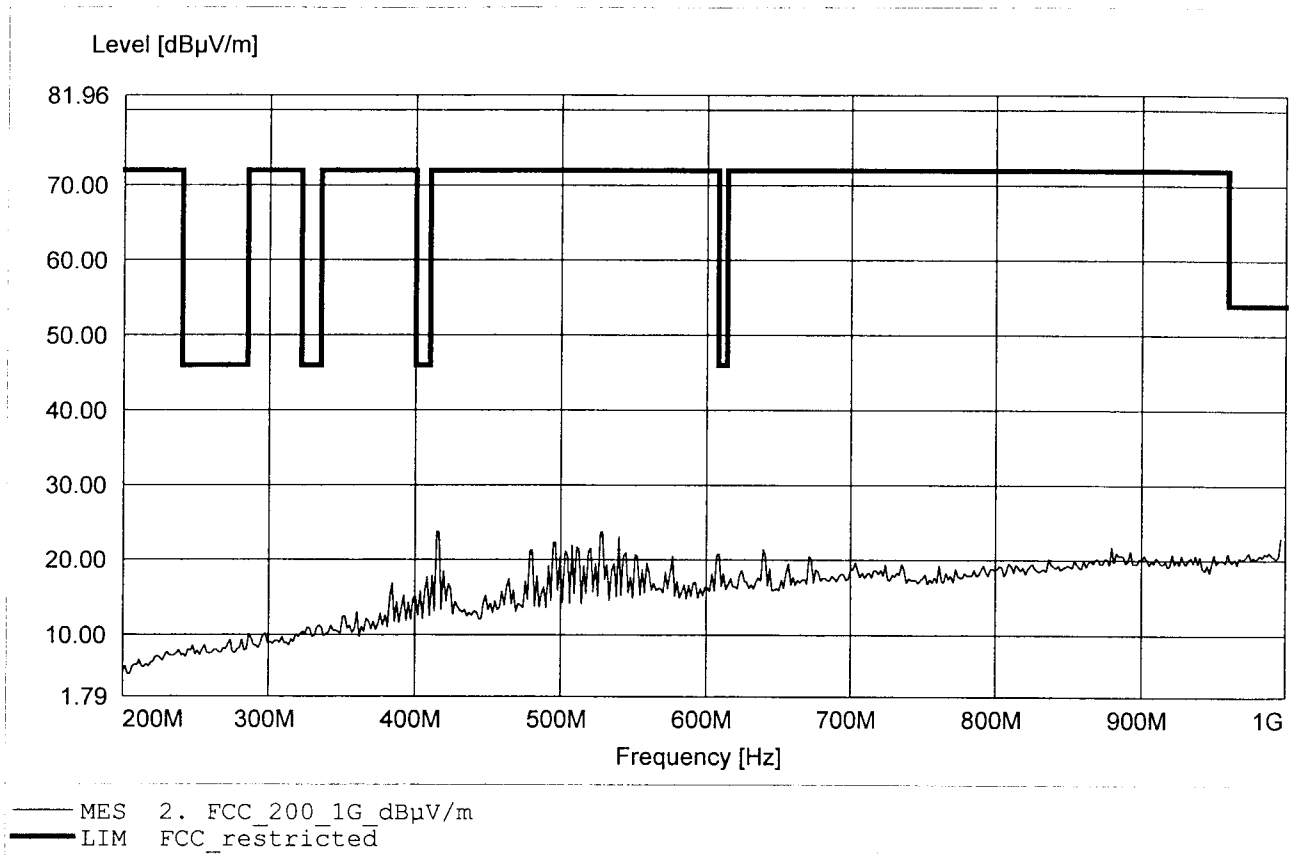
EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:908.617MHz Emax:29.97dBµV/m RBW:100KHz





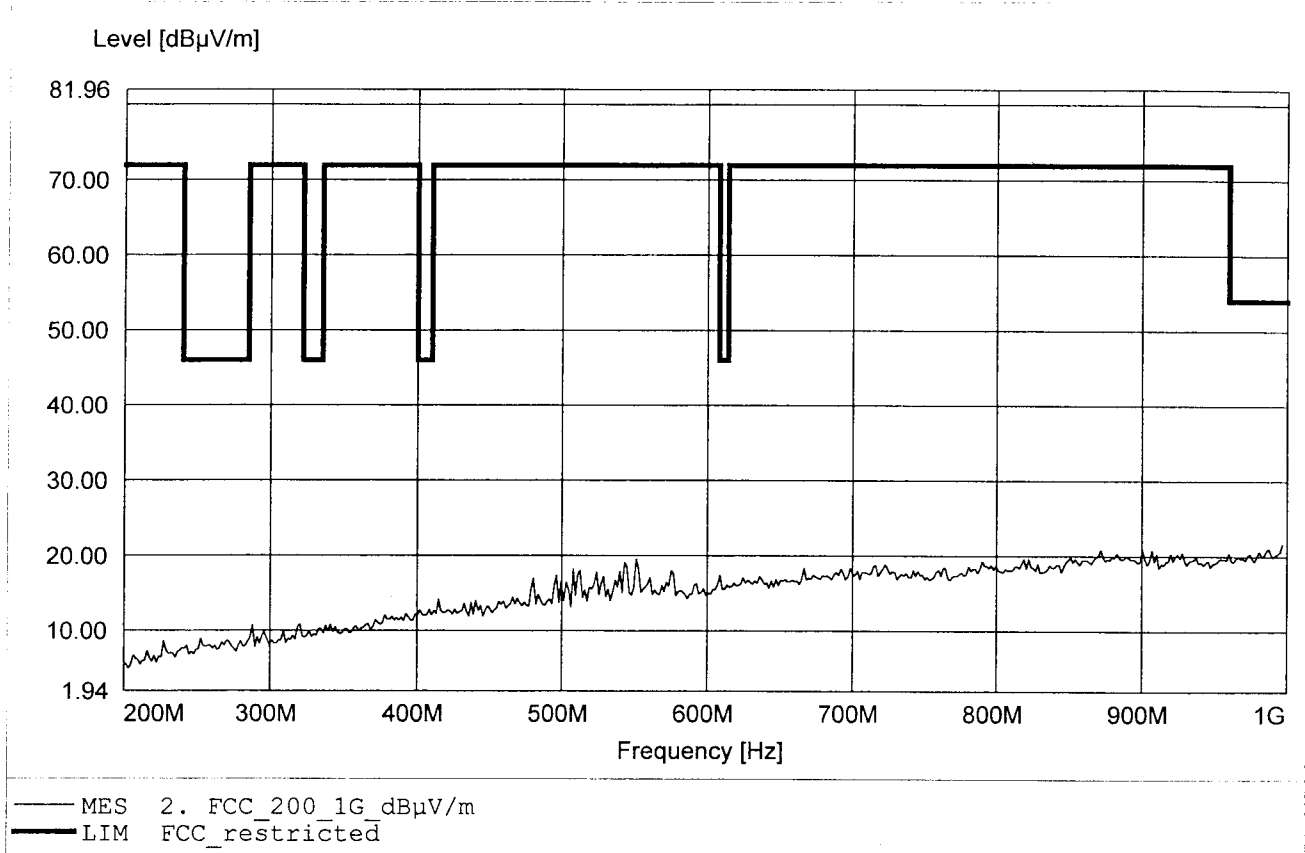
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to S 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:414.830MHz Emax:23.80dBµV/m RBW:100KHz



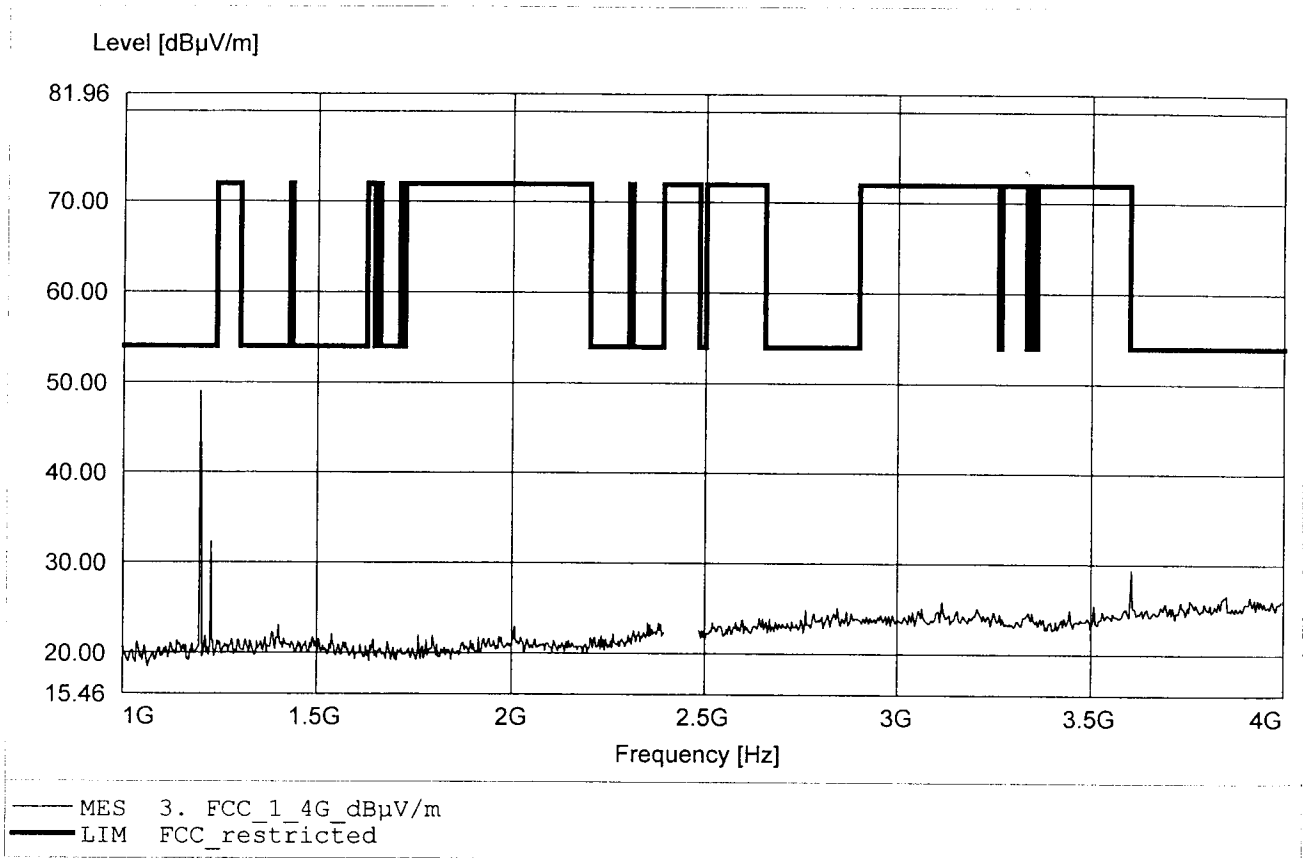
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.  
Comment 2: Freq:996.794MHz Emax:21.70dBµV/m RBW:100KHz



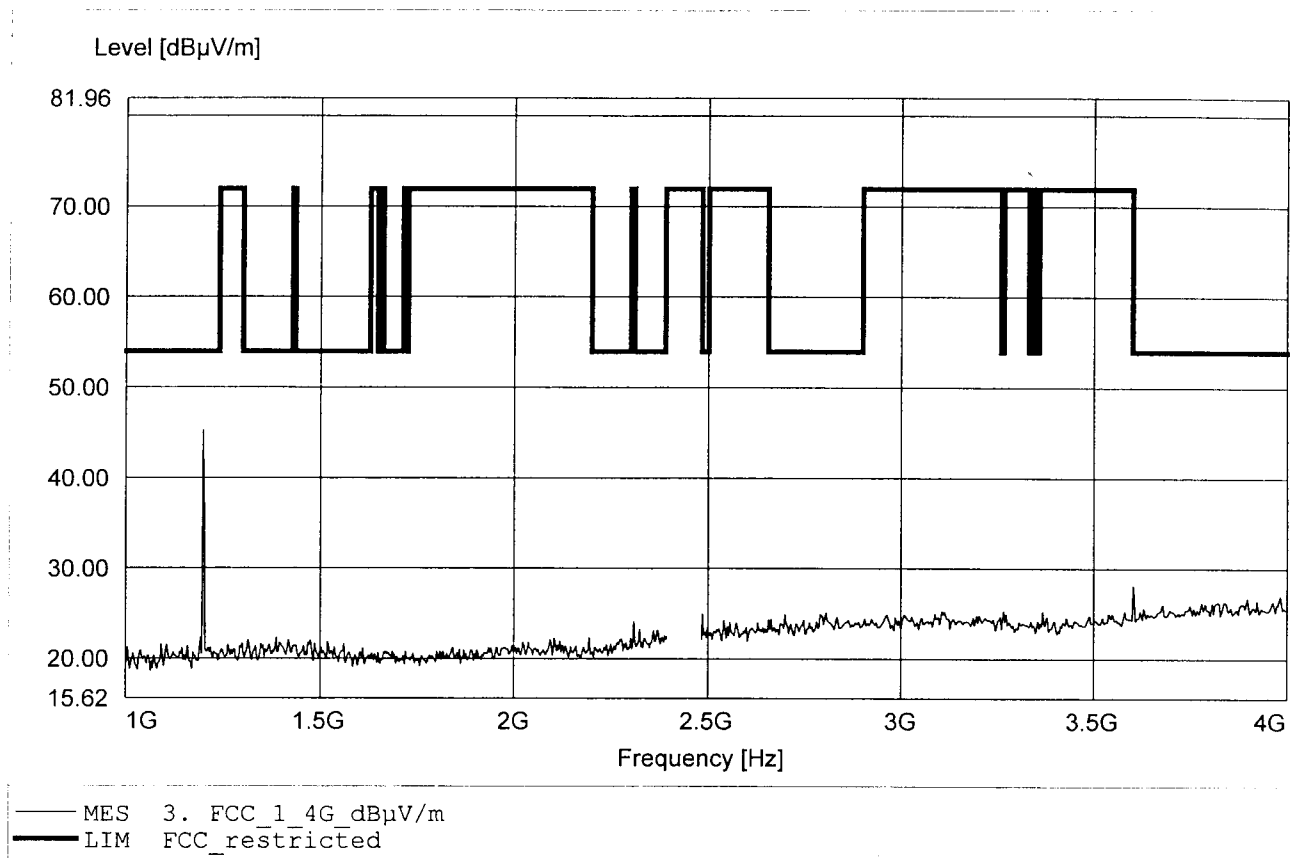
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:1.199GHz Emax:49.06dBµV/m RBW:1MHz



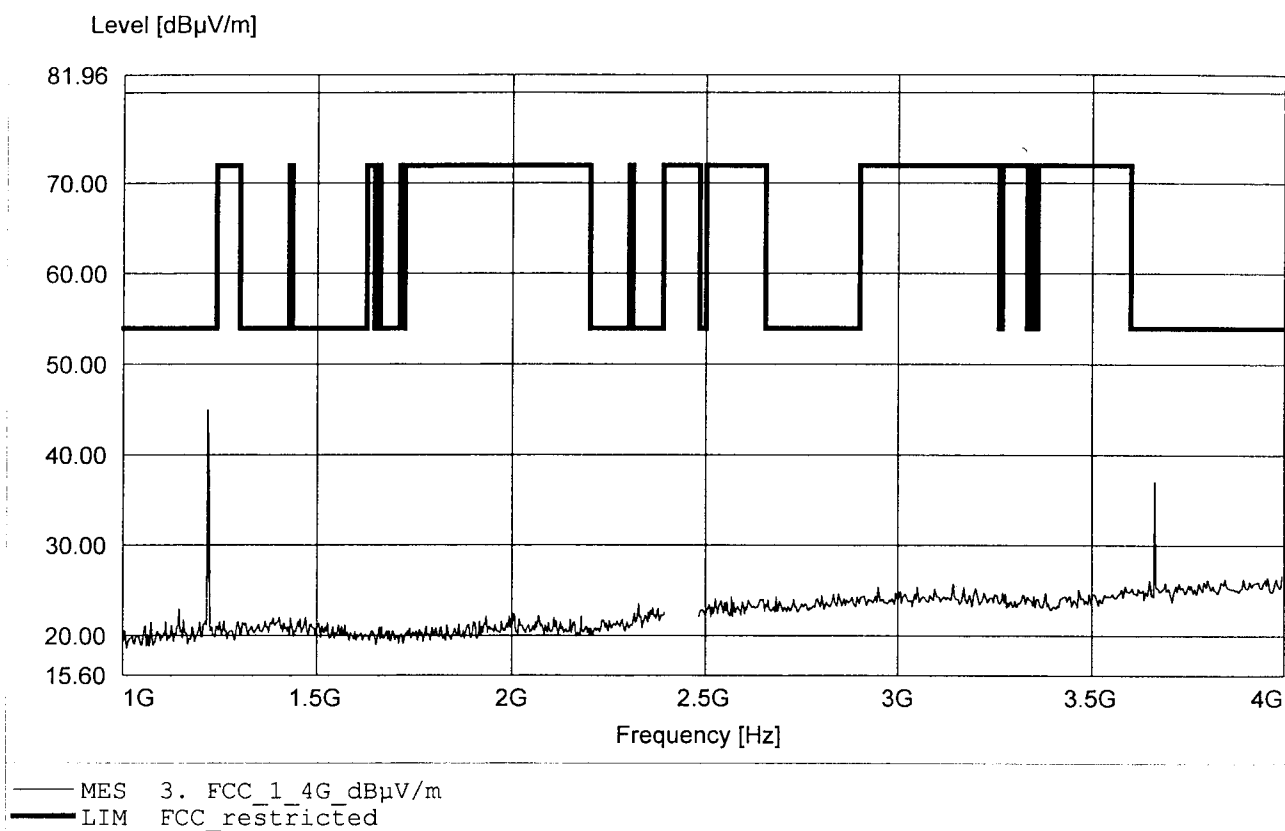
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:1.199GHz Emax:45.34dBµV/m RBW:1MHz



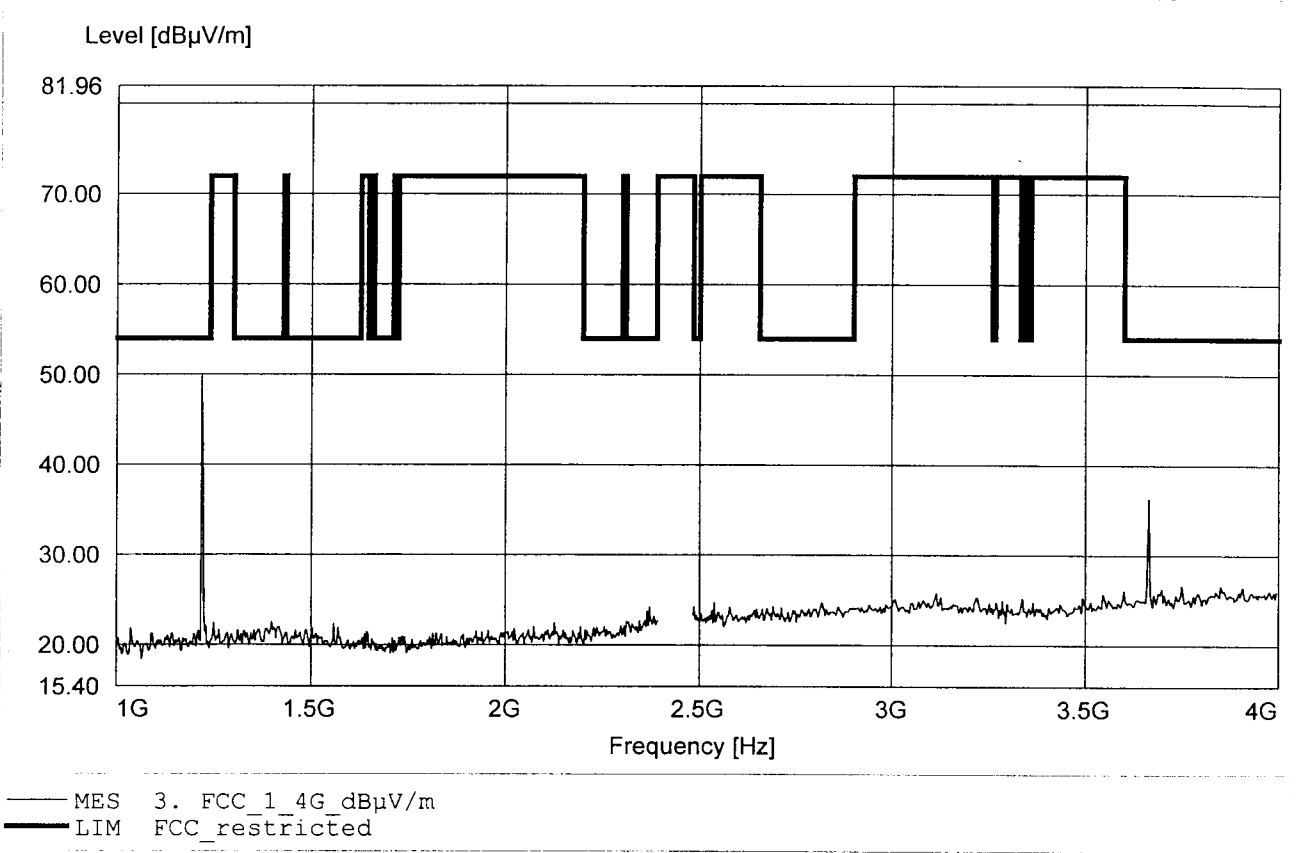
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:1.219GHz Emax:44.99dBuV/m RBW:1MHz



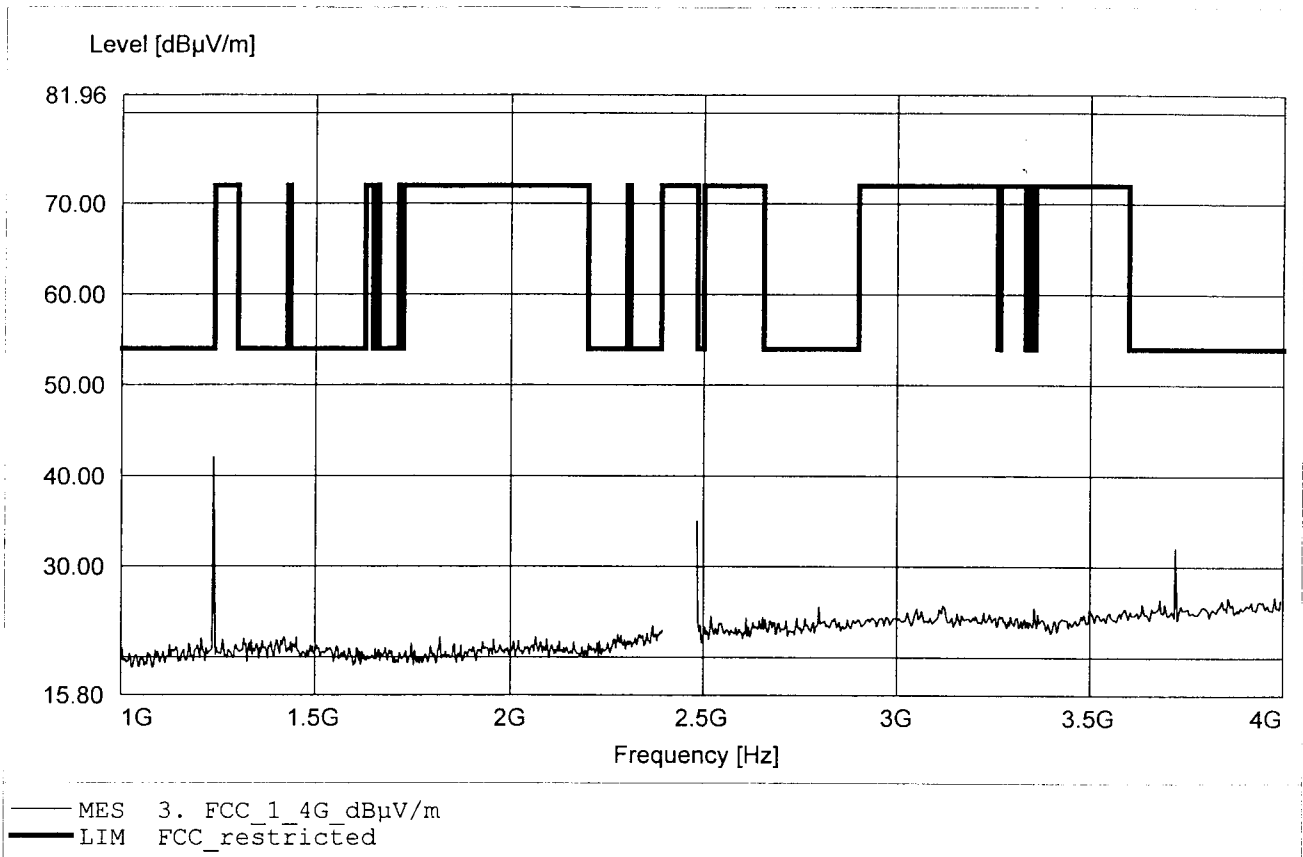
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:1.219GHz Emax:49.76dBµV/m RBW:1MHz



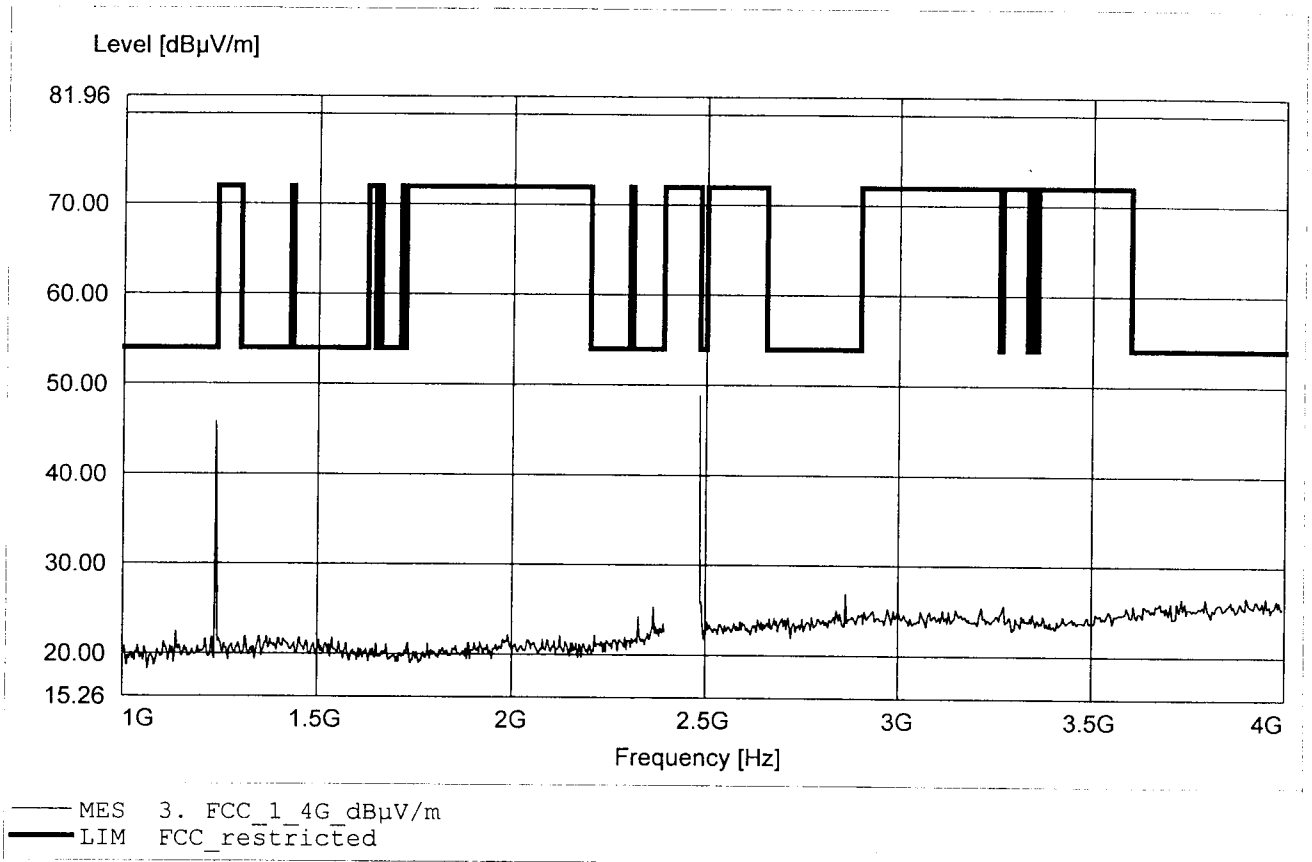
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:1.238GHz Emax:42.07dBµV/m RBW:1MHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

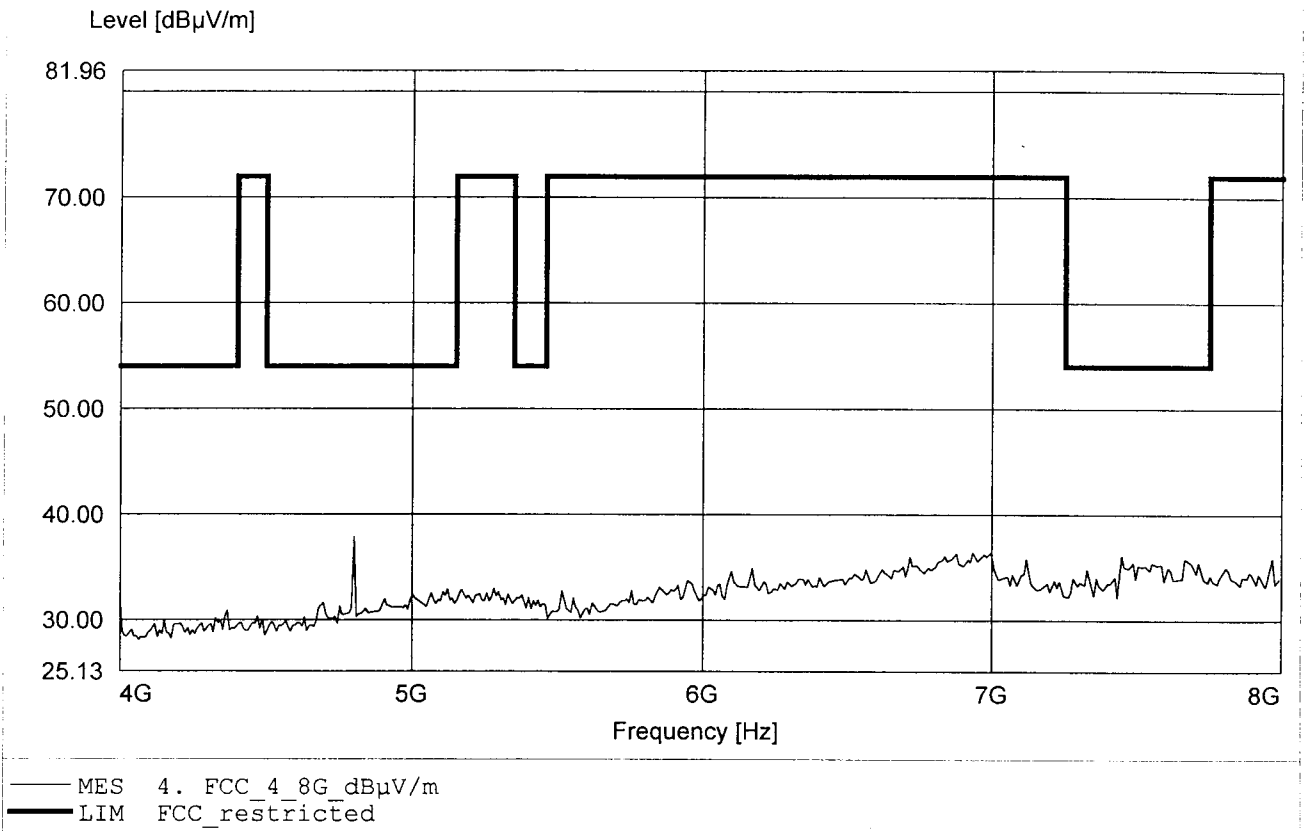
EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:2.484GHz Emax:48.87dBµV/m RBW:1MHz





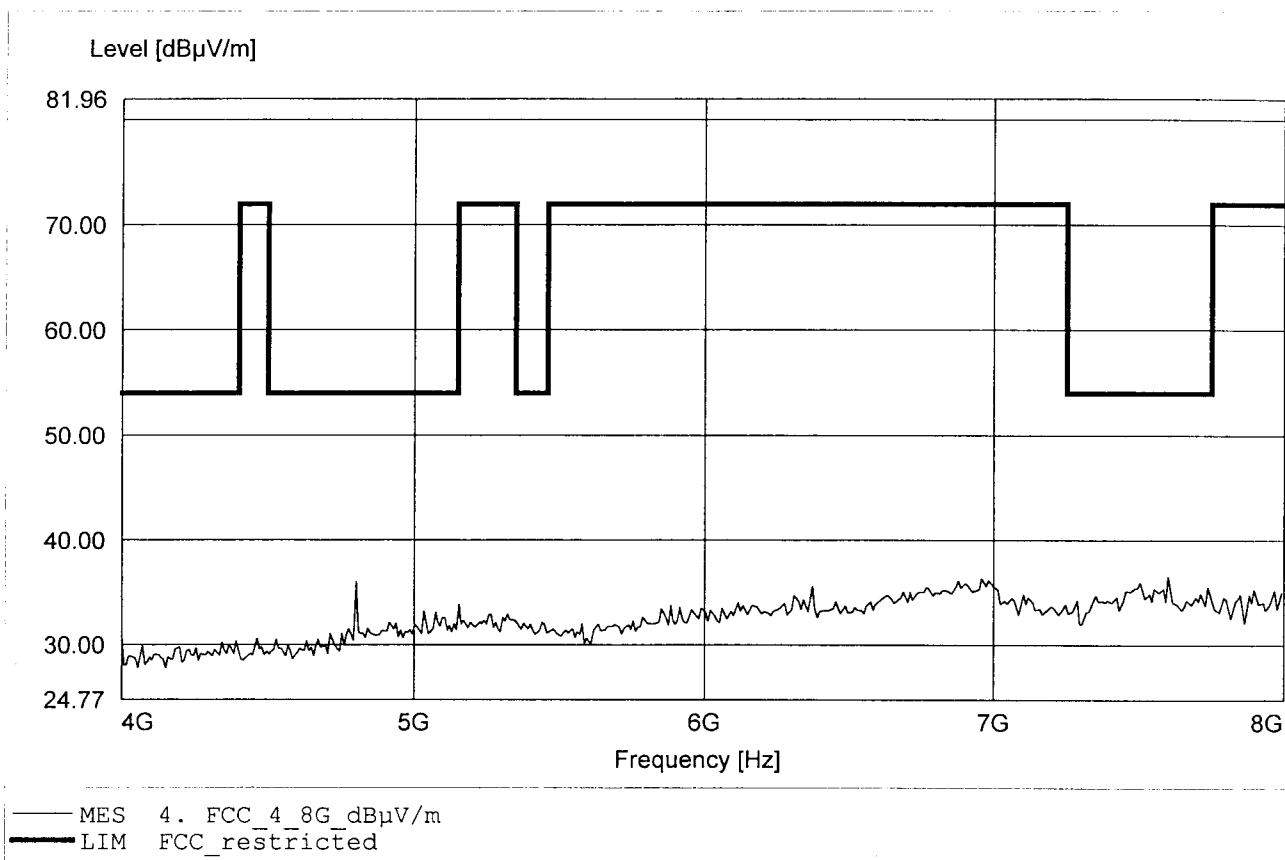
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:4.802GHz Emax:37.88dBµV/m RBW:1MHz



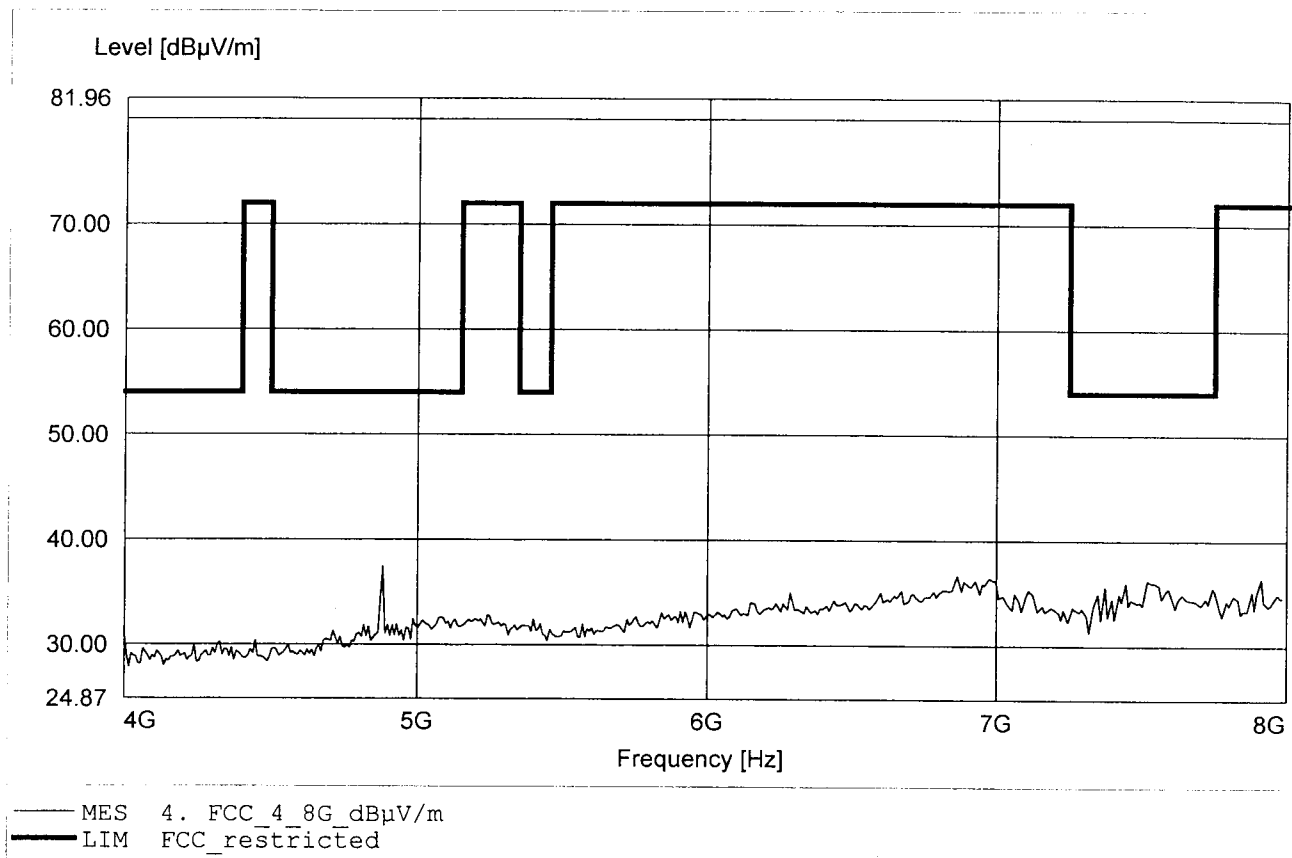
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:7.599GHz Emax:36.55dBµV/m RBW:1MHz



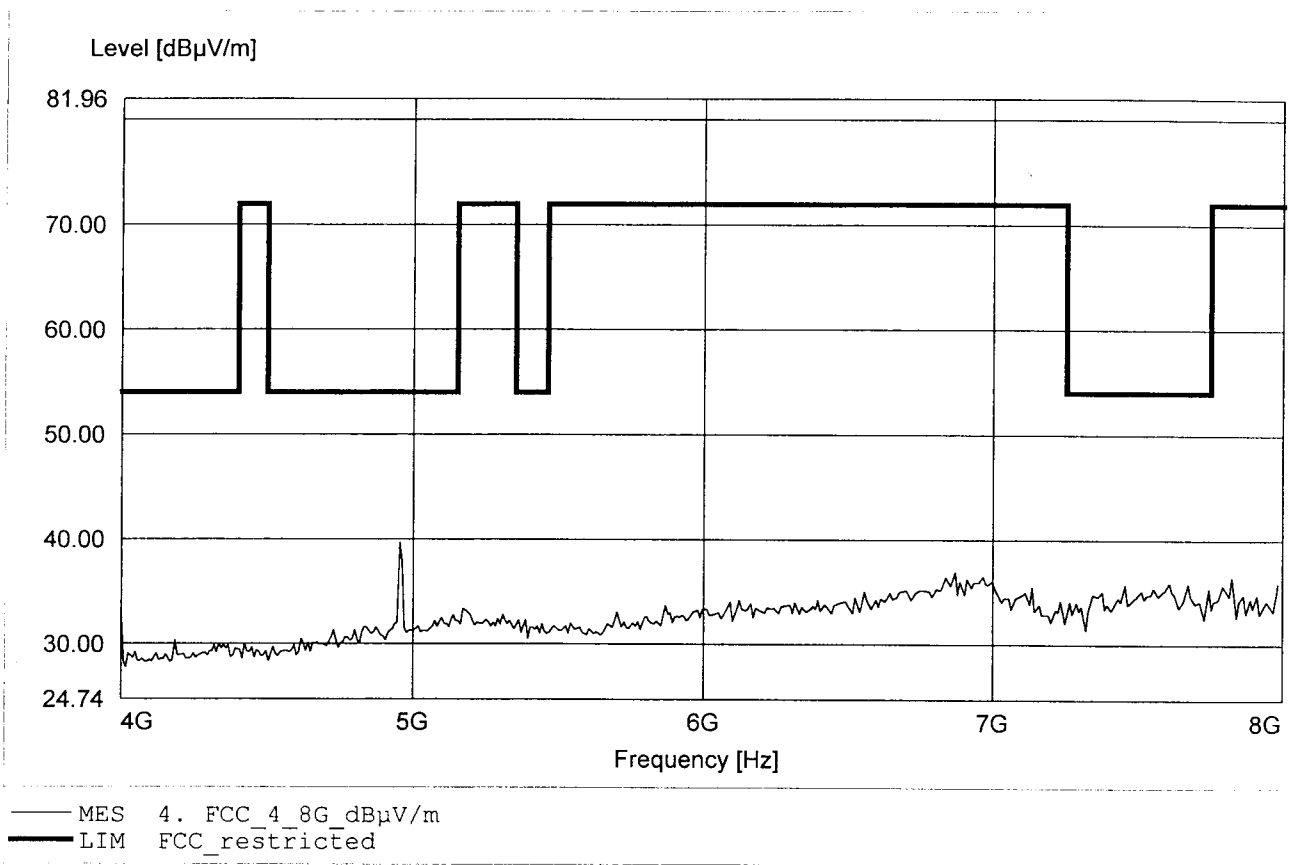
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:4.882GHz Emax:37.45dBµV/m RBW:1MHz



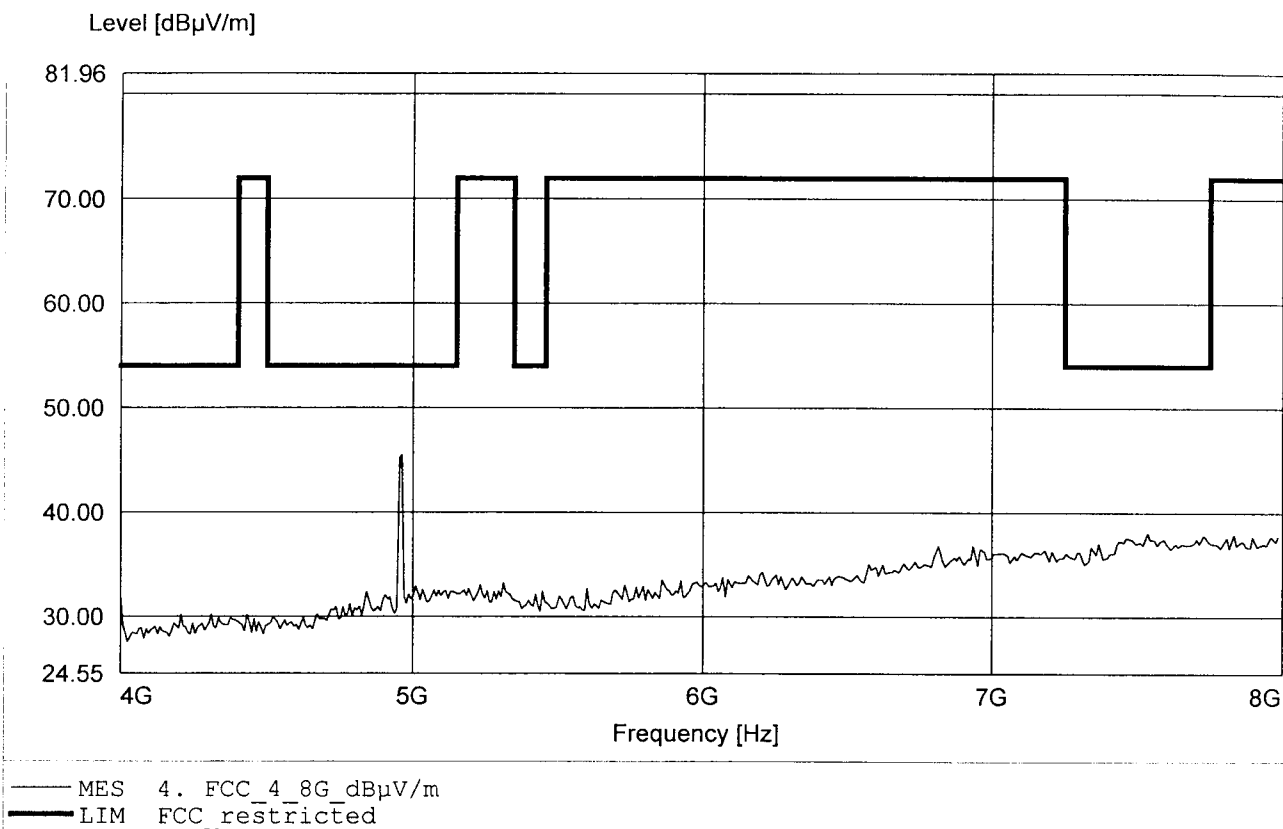
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:4.954GHz Emax:39.68dBuV/m RBW:1MHz



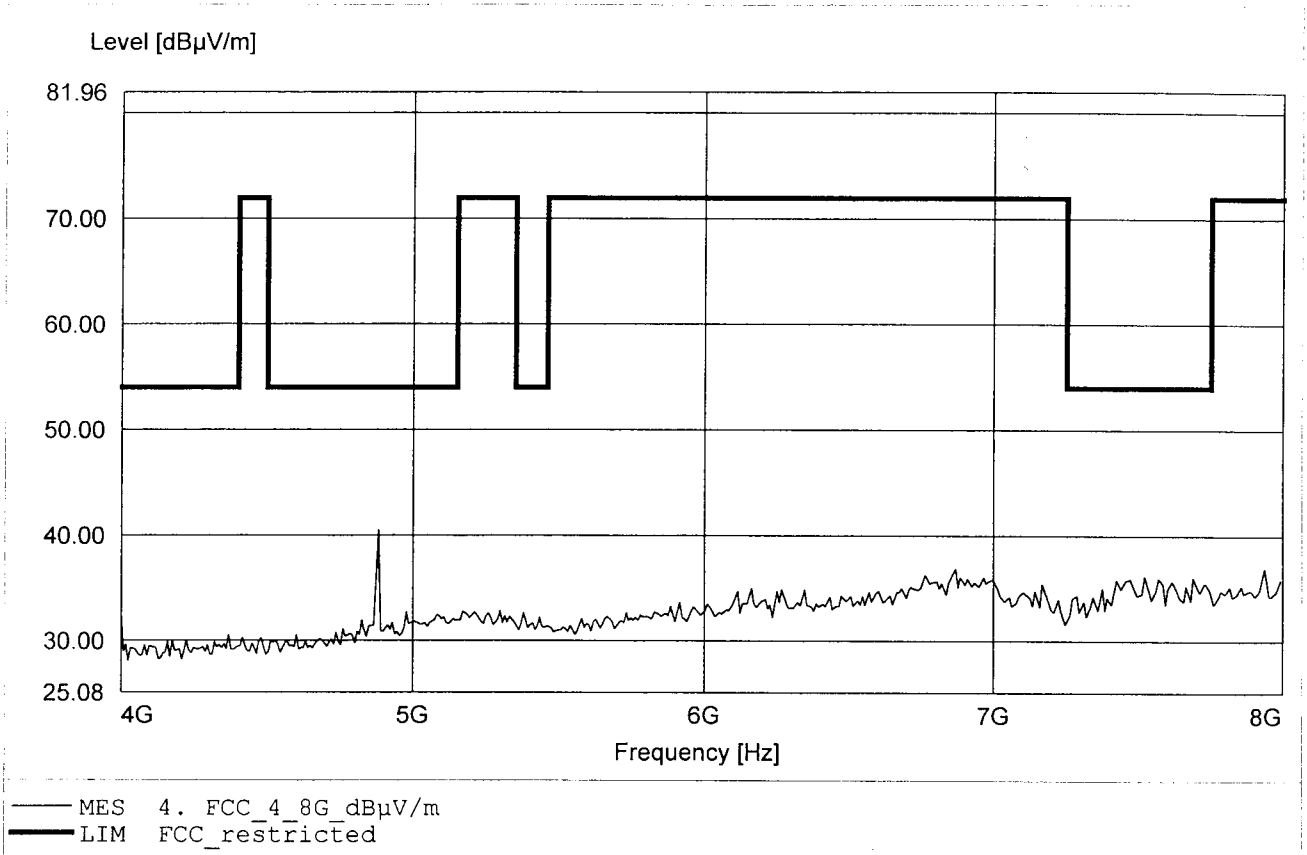
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:4.962GHz Emax:45.49dBµV/m RBW:1MHz



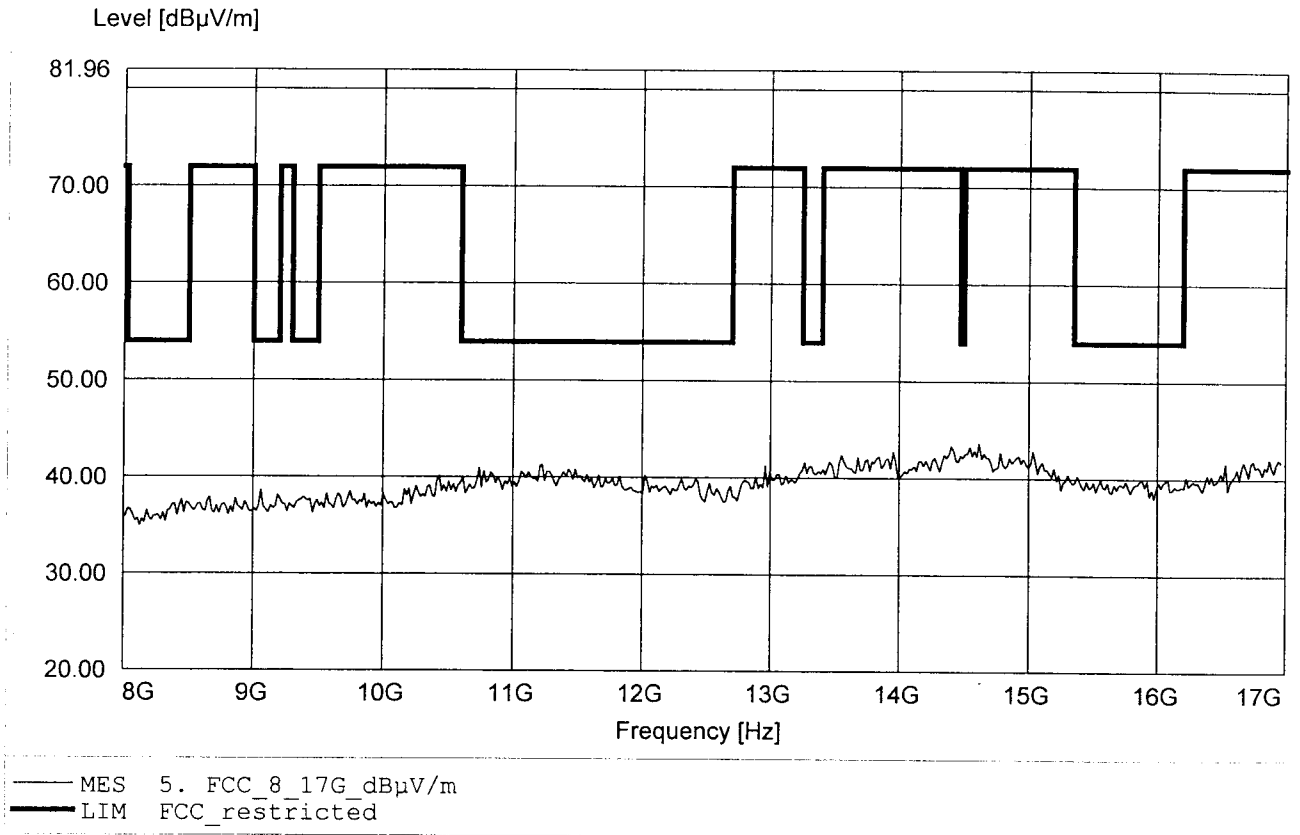
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:4.882GHz Emax:40.47dBµV/m RBW:1MHz



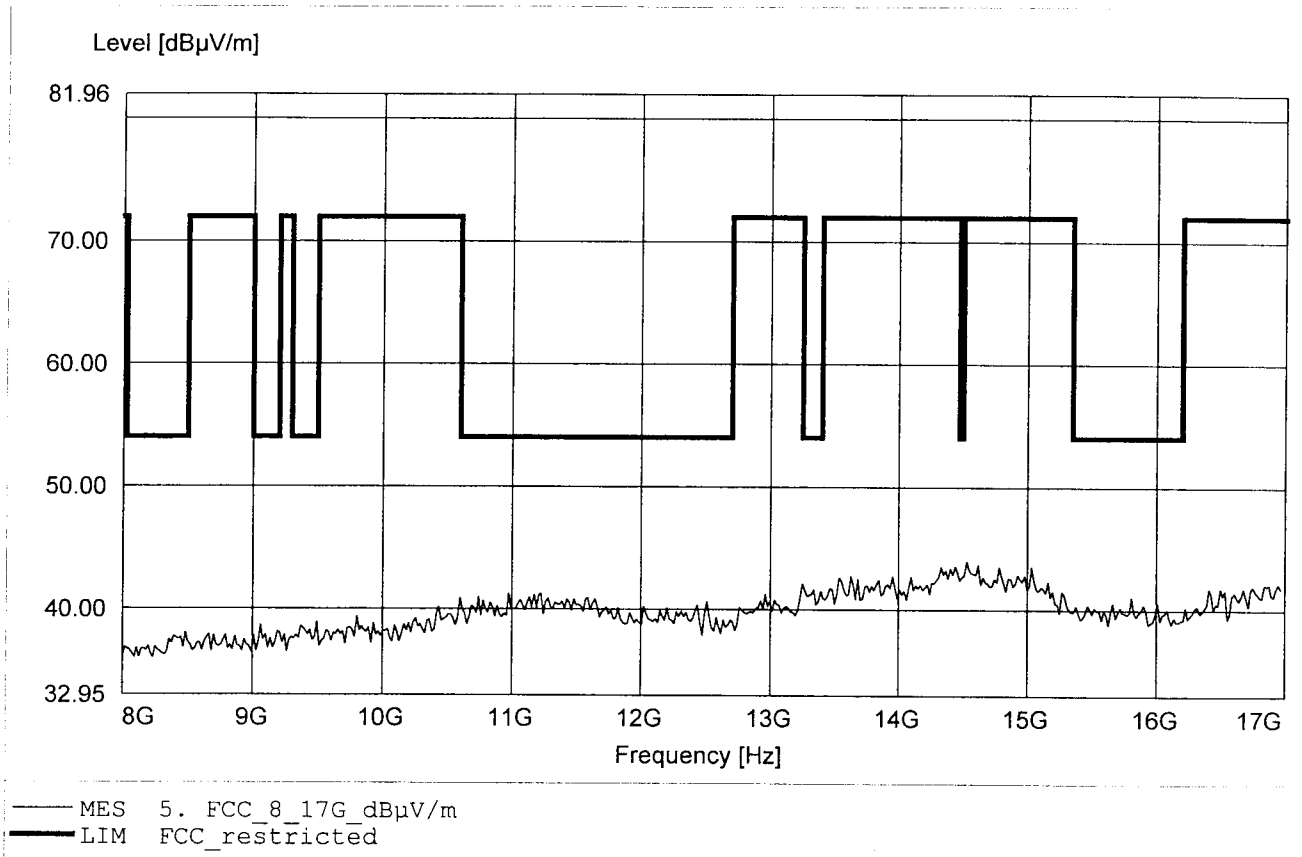
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.565GHz Emax:43.75dBµV/m RBW:1MHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

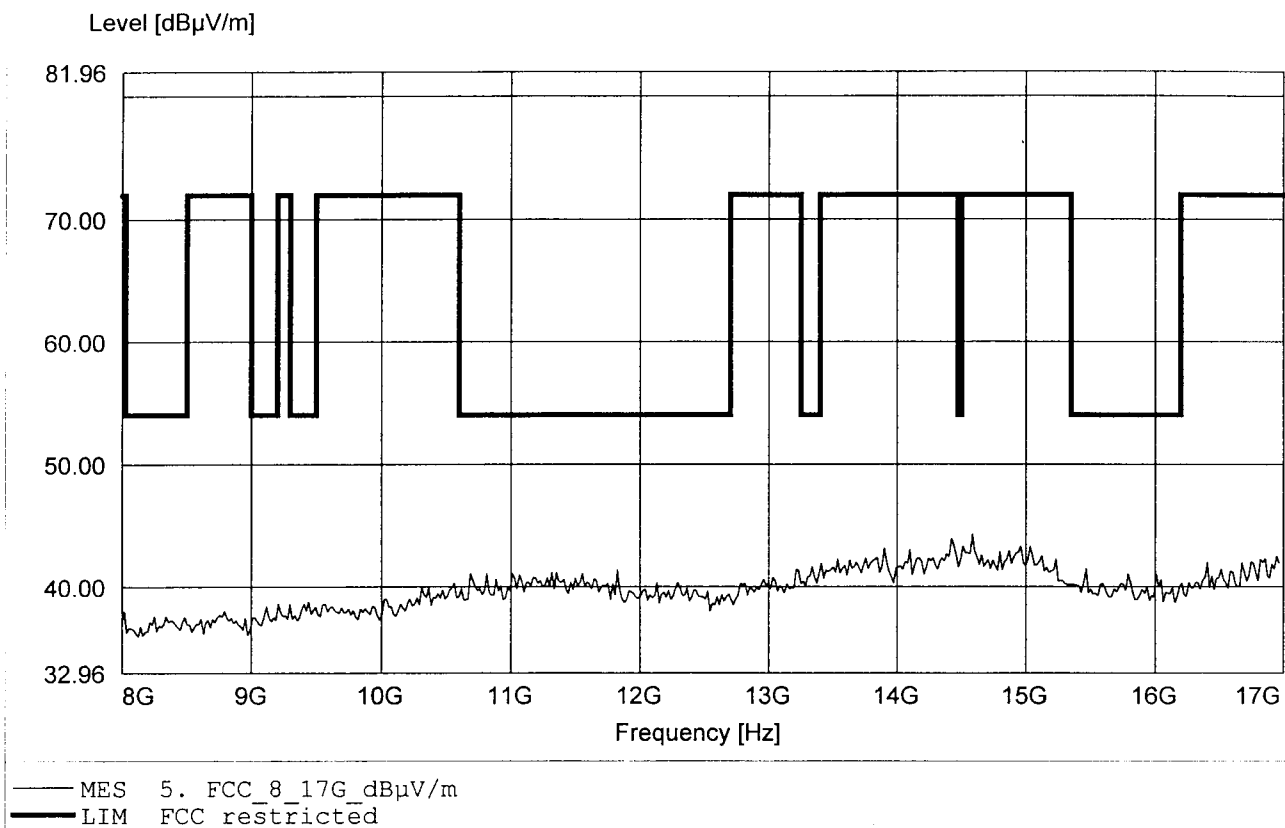
EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.529GHz Emax:43.98dBµV/m RBW:1MHz





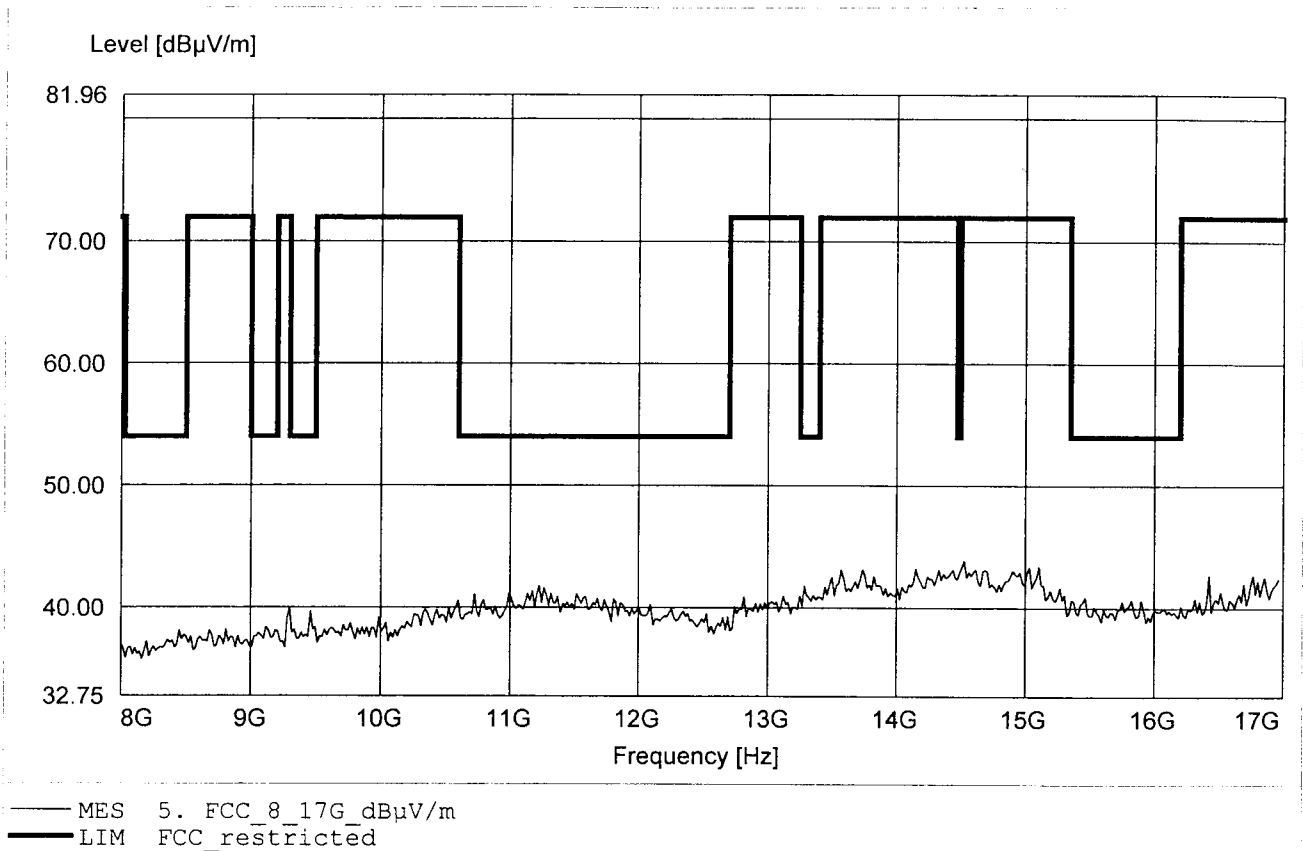
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.583GHz Emax:44.30dBµV/m RBW:1MHz



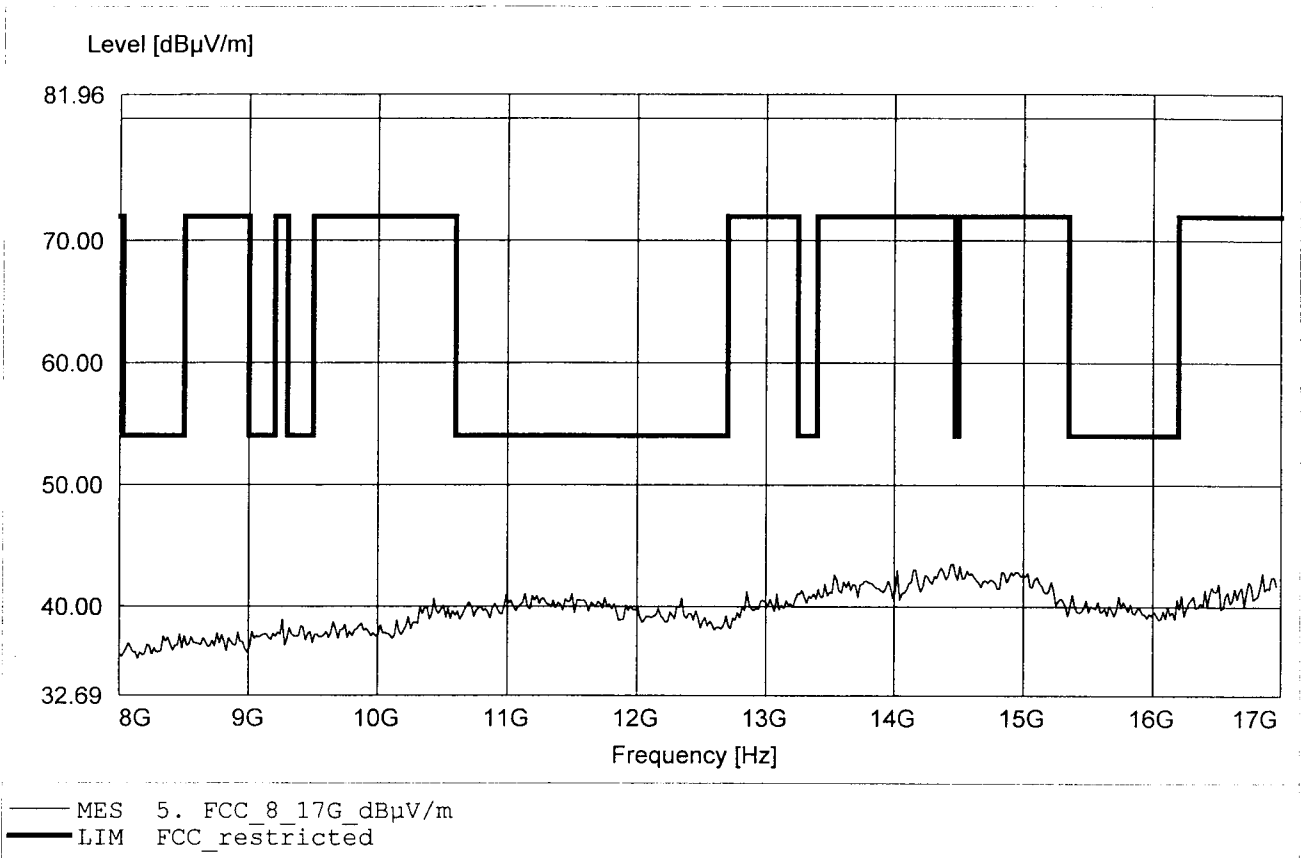
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.529GHz Emax:43.90dBµV/m RBW:1MHz



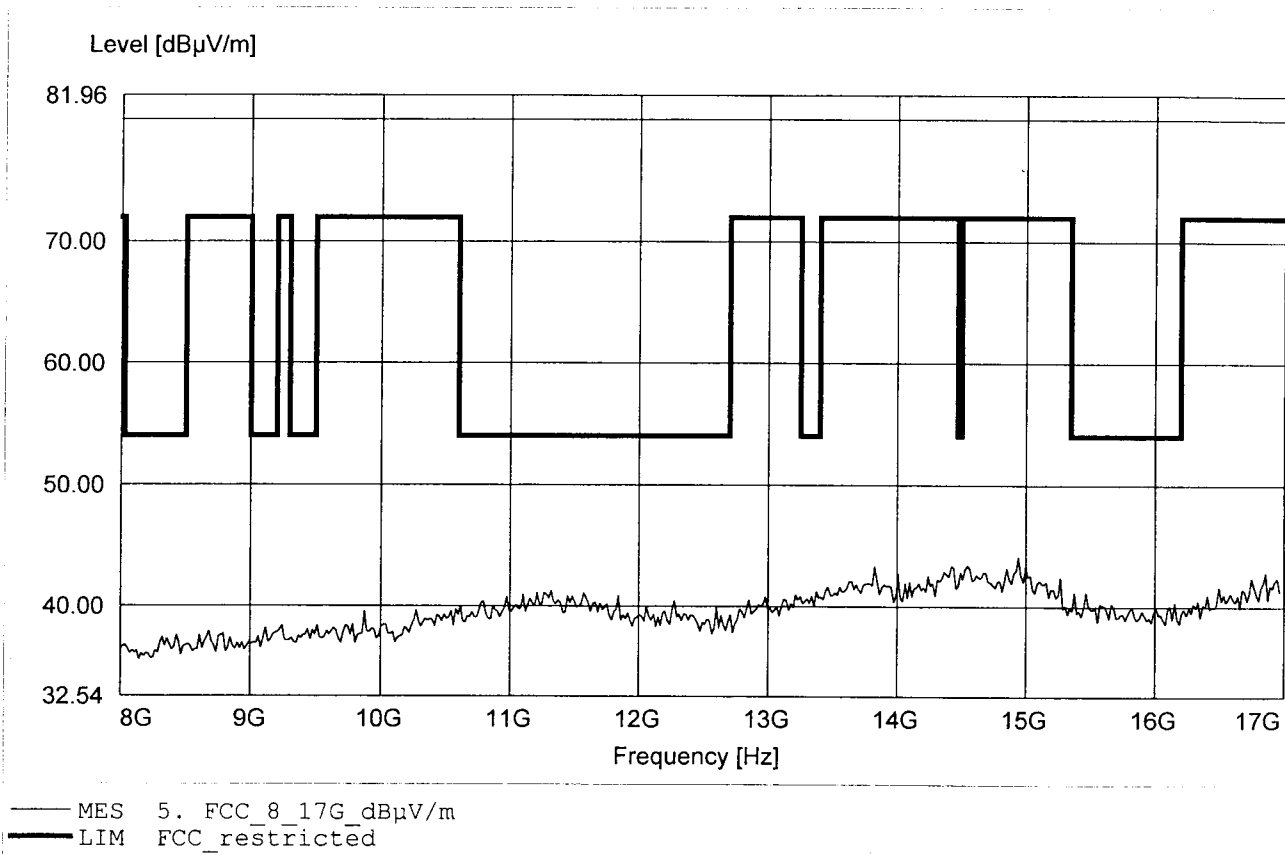
**Spurious emissions Field Strength Tx**  
**FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.457GHz Emax:43.49dBµV/m RBW:1MHz



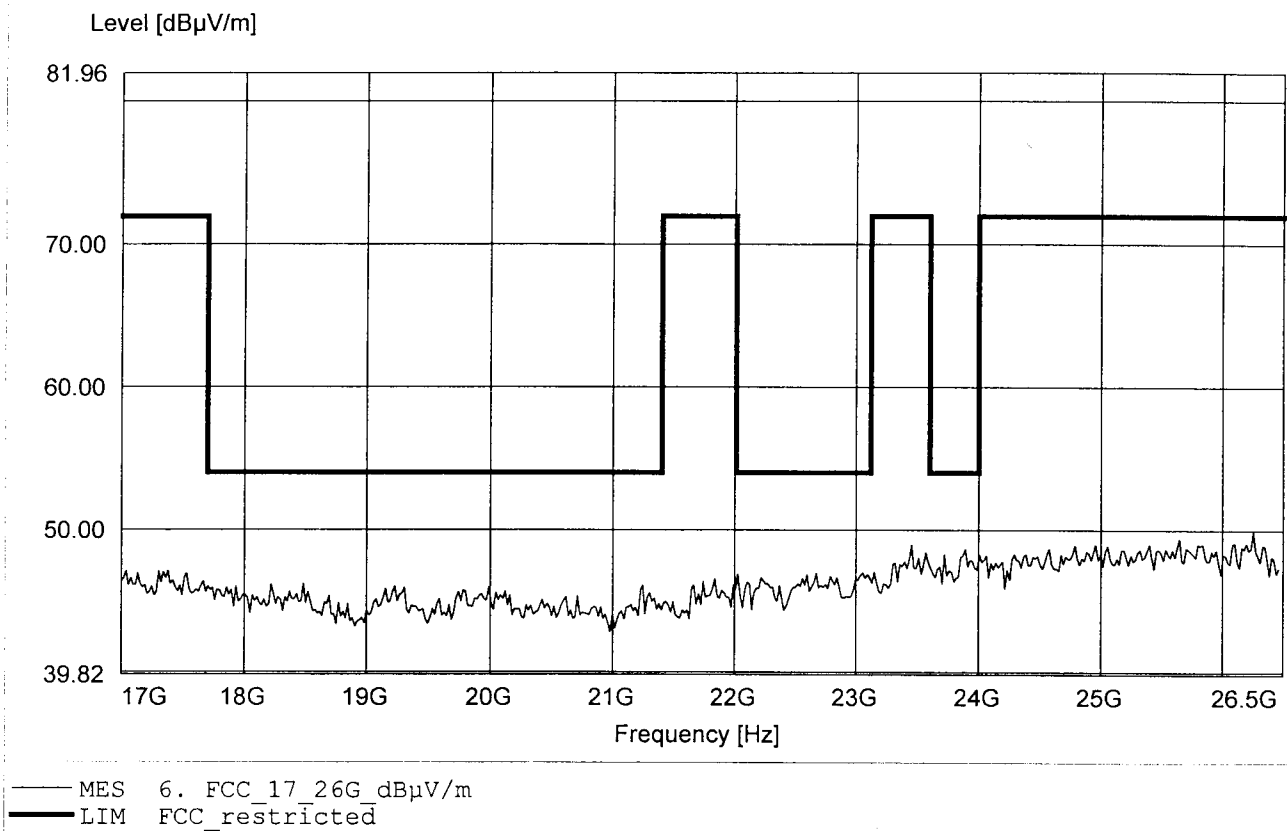
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.  
Comment 2: Freq:14.944GHz Emax:44.13dBµV/m RBW:1MHz



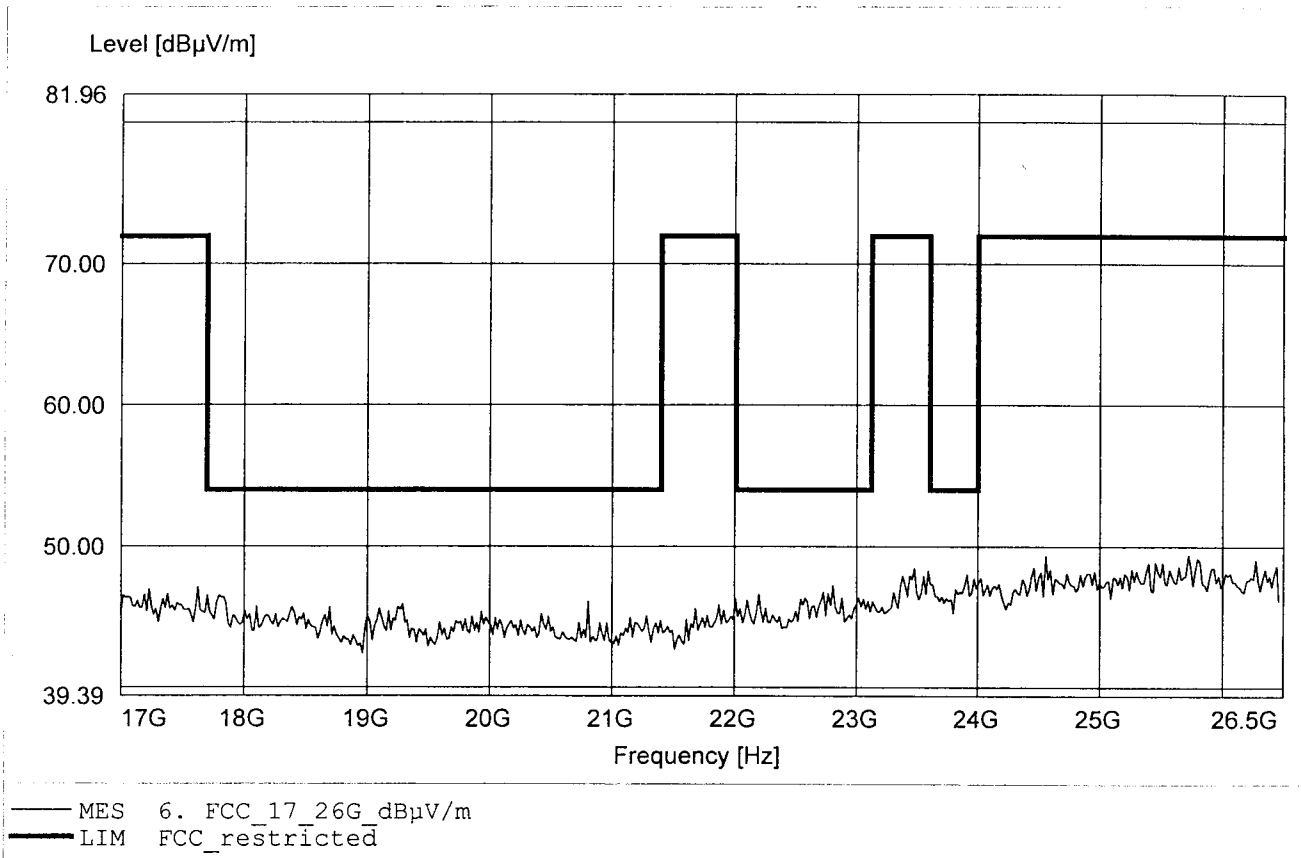
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:26.253GHz Emax:49.90dBµV/m RBW:1MHz



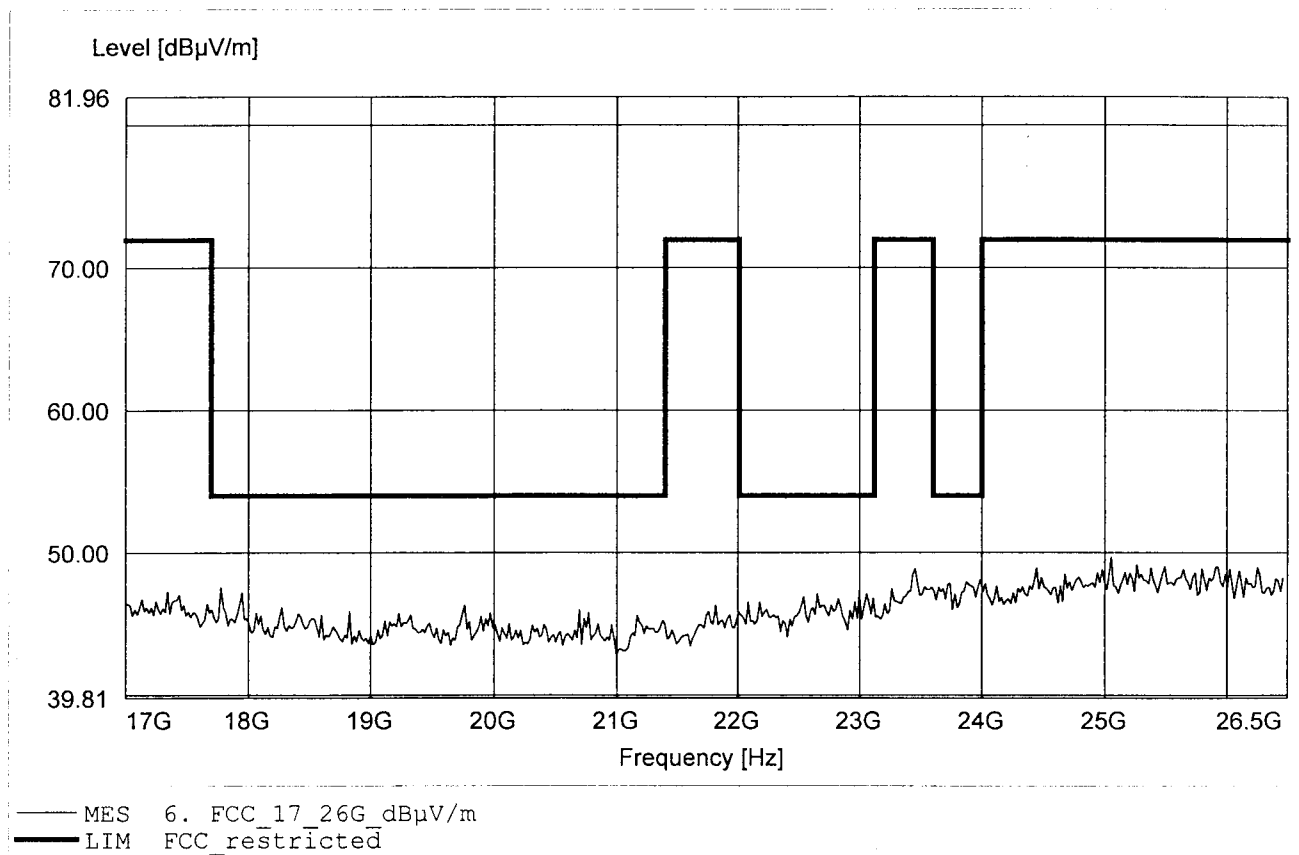
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2402 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:25.719GHz Emax:49.44dBµV/m RBW:1MHz



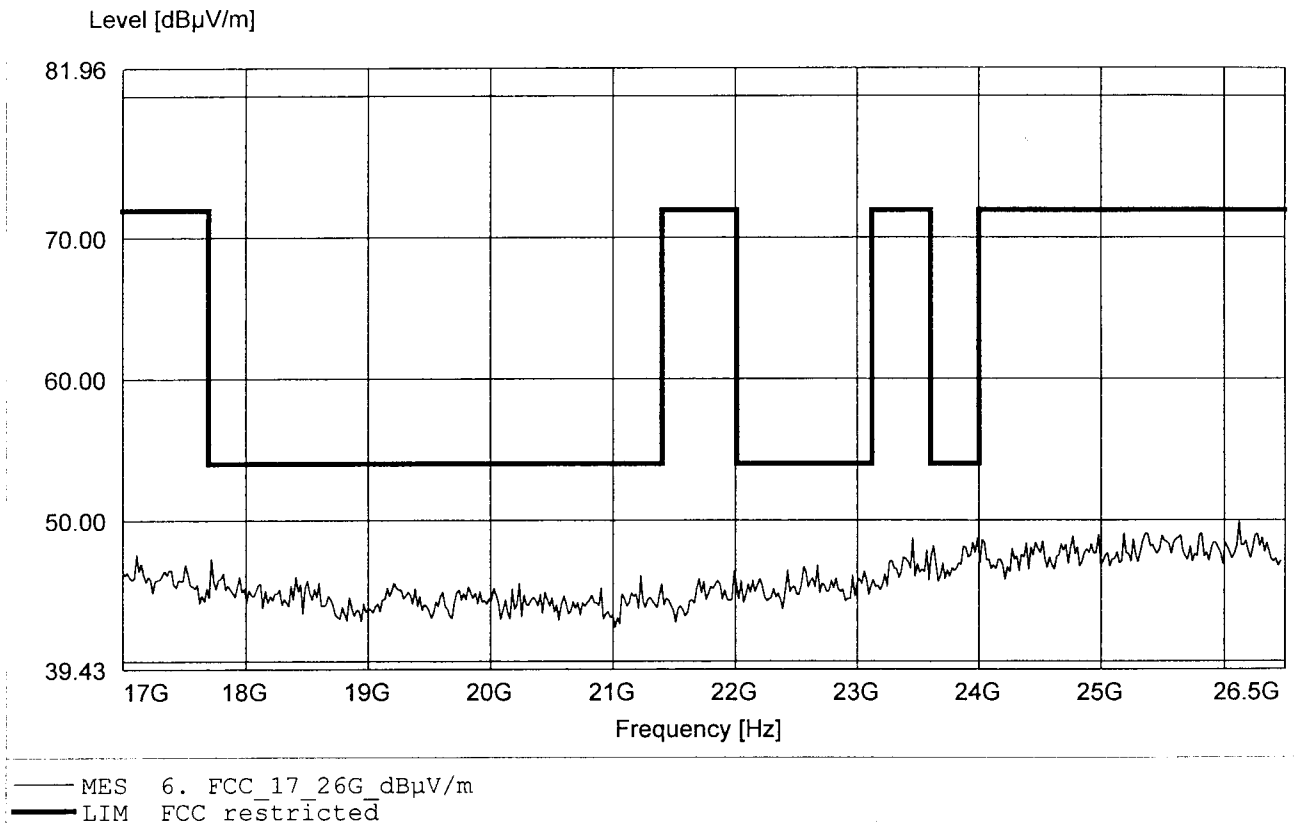
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:25.053GHz Emax:49.71dBµV/m RBW:1MHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

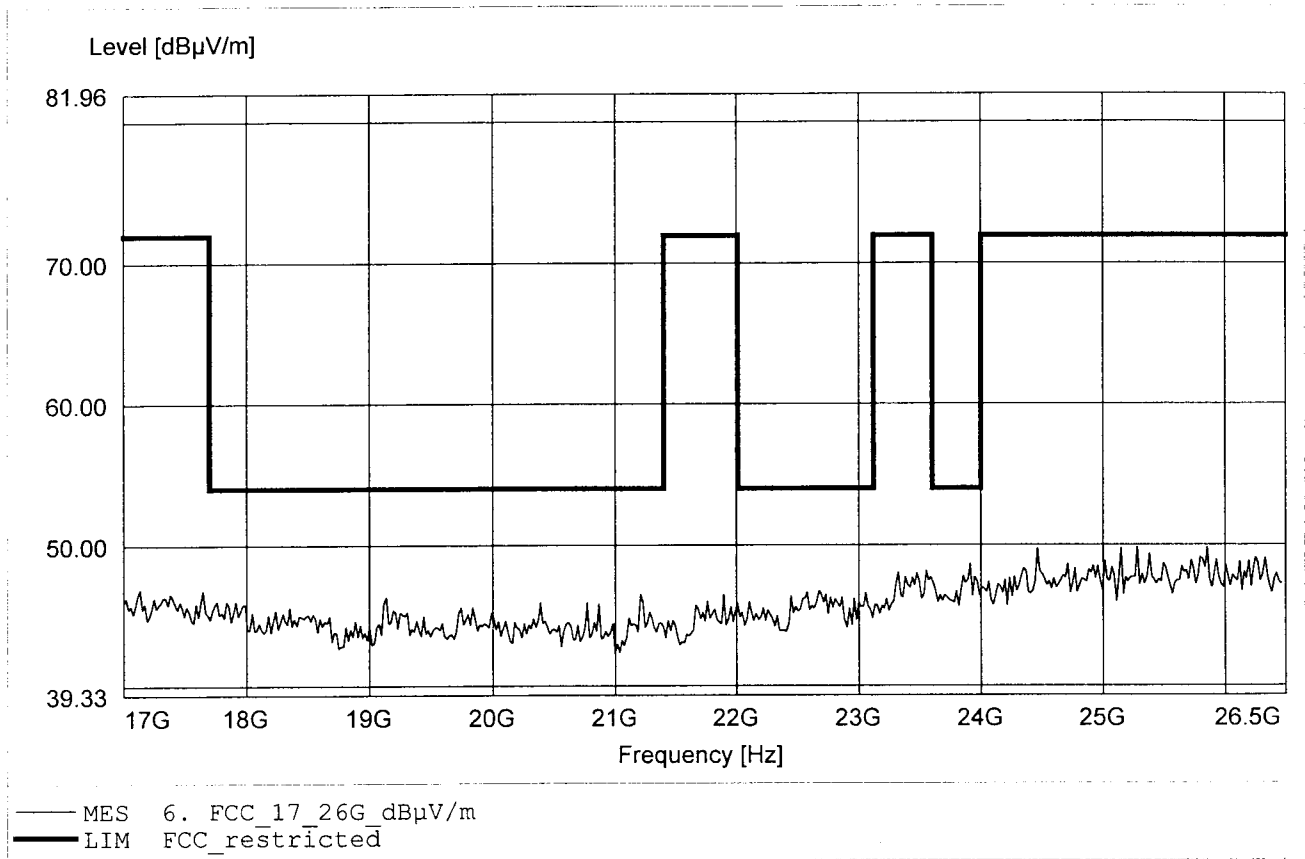
EUT: Bluetooth Headset (class 2 device) / Tx2441 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:26.119GHz Emax:49.87dBµV/m RBW:1MHz





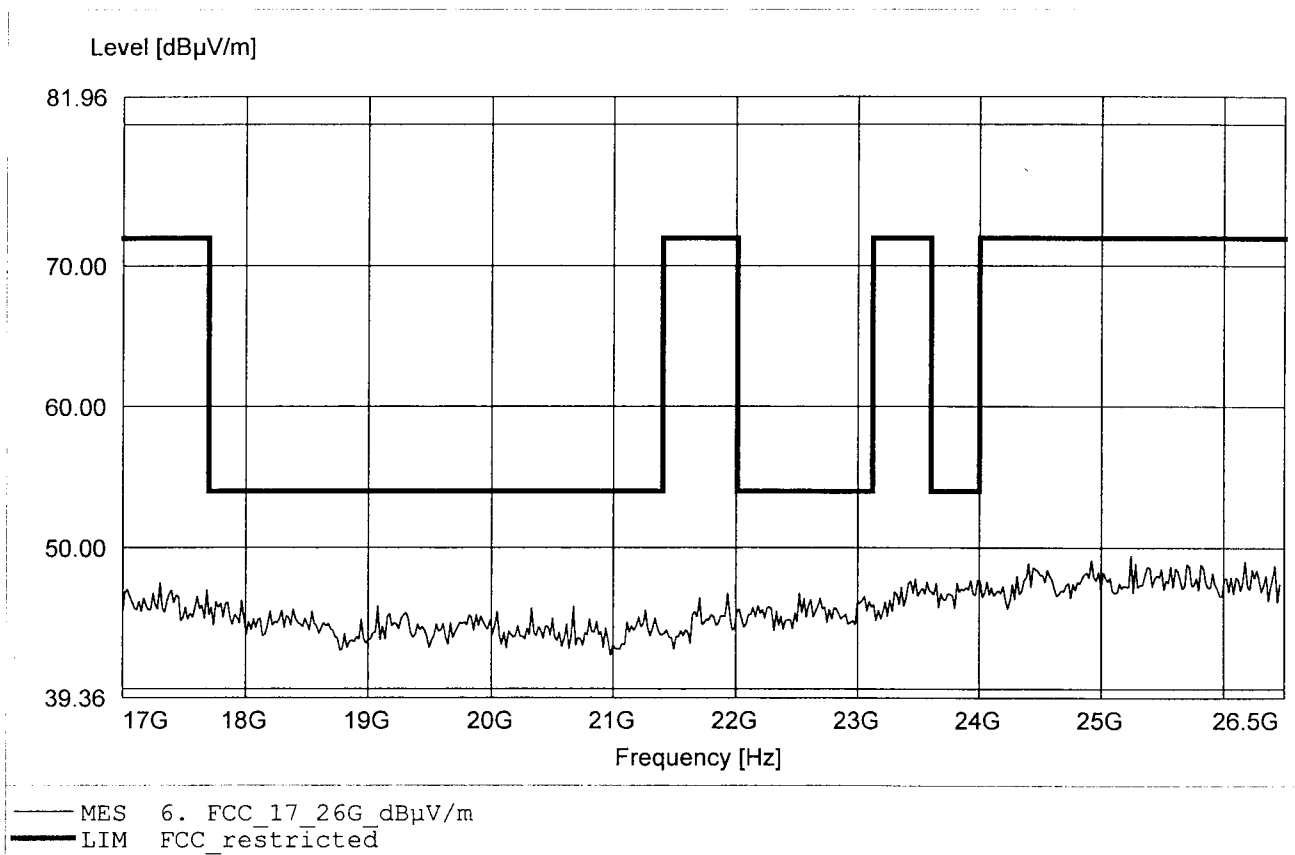
**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:25.853GHz Emax:49.83dBµV/m RBW:1MHz



**Spurious emissions Field Strength Tx  
FCC RULES PART 15, SUBPART C**

EUT: Bluetooth Headset (class 2 device) / Tx2480 MHz  
Applicant: GN Netcom Inc.  
Model: Thor  
Temperature/ Voltage: t nom=25°C / Unom= 3.8 V DC (battery)  
Test Site / Operator: ETS / Mr. Trefke  
Test Specification: according to § 15.247  
Comment 1: Dist.: 3m, Ant.: HL025, amplif.  
Comment 2: Freq:25.243GHz Emax:49.47dBµV/m RBW:1MHz





## Appendix D

Spurious Emissions conducted - Transmitter operating

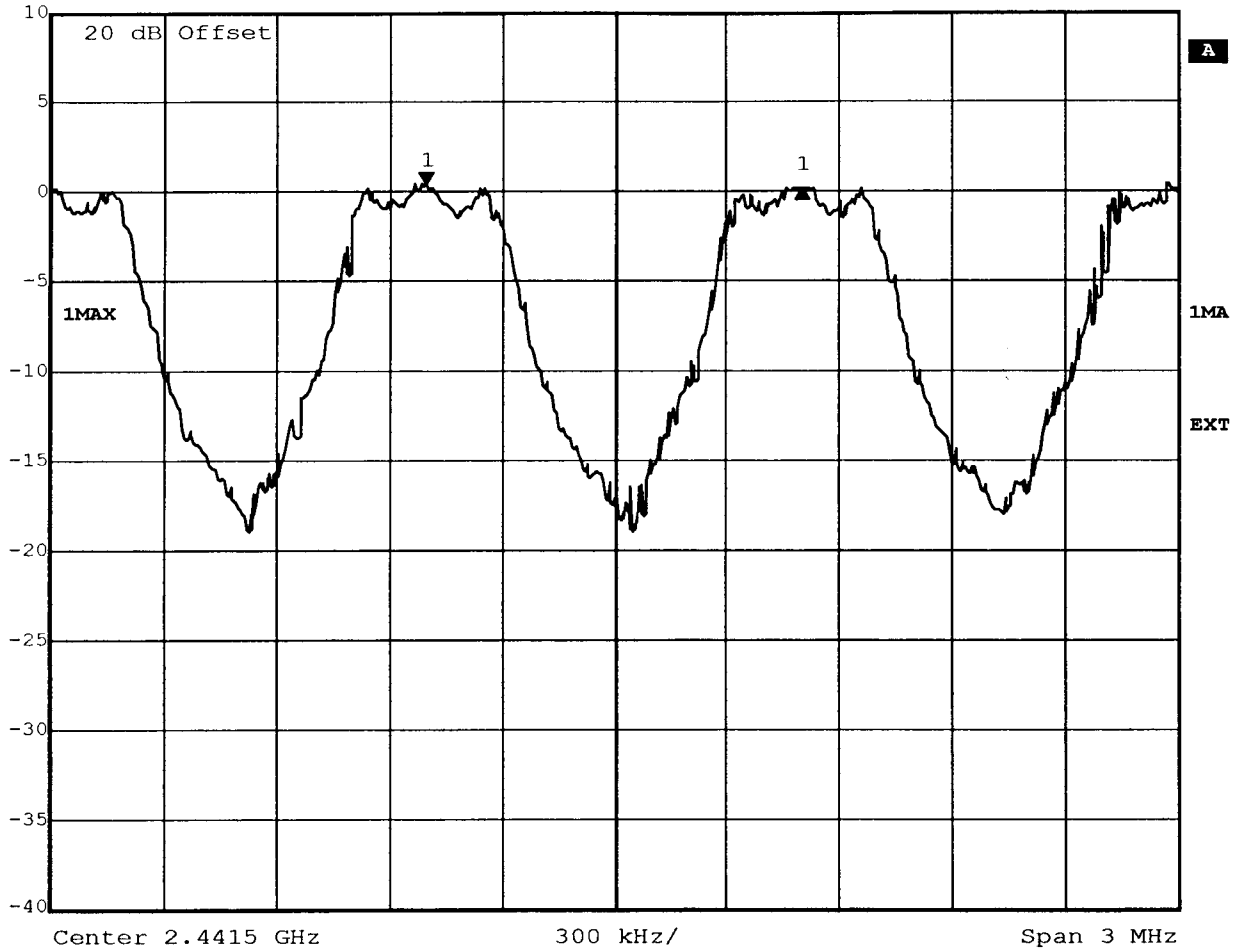


## Appendix E

### Carrier Frequency Separation



Delta 1 [T1] RBW 100 kHz RF Att 20 dB  
Ref Lvl -0.34 dB VBW 100 kHz  
10 dBm 1.00400802 MHz SWT 20 ms Unit dBm



Title: Carrier Frequency Separation  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 11:39:53

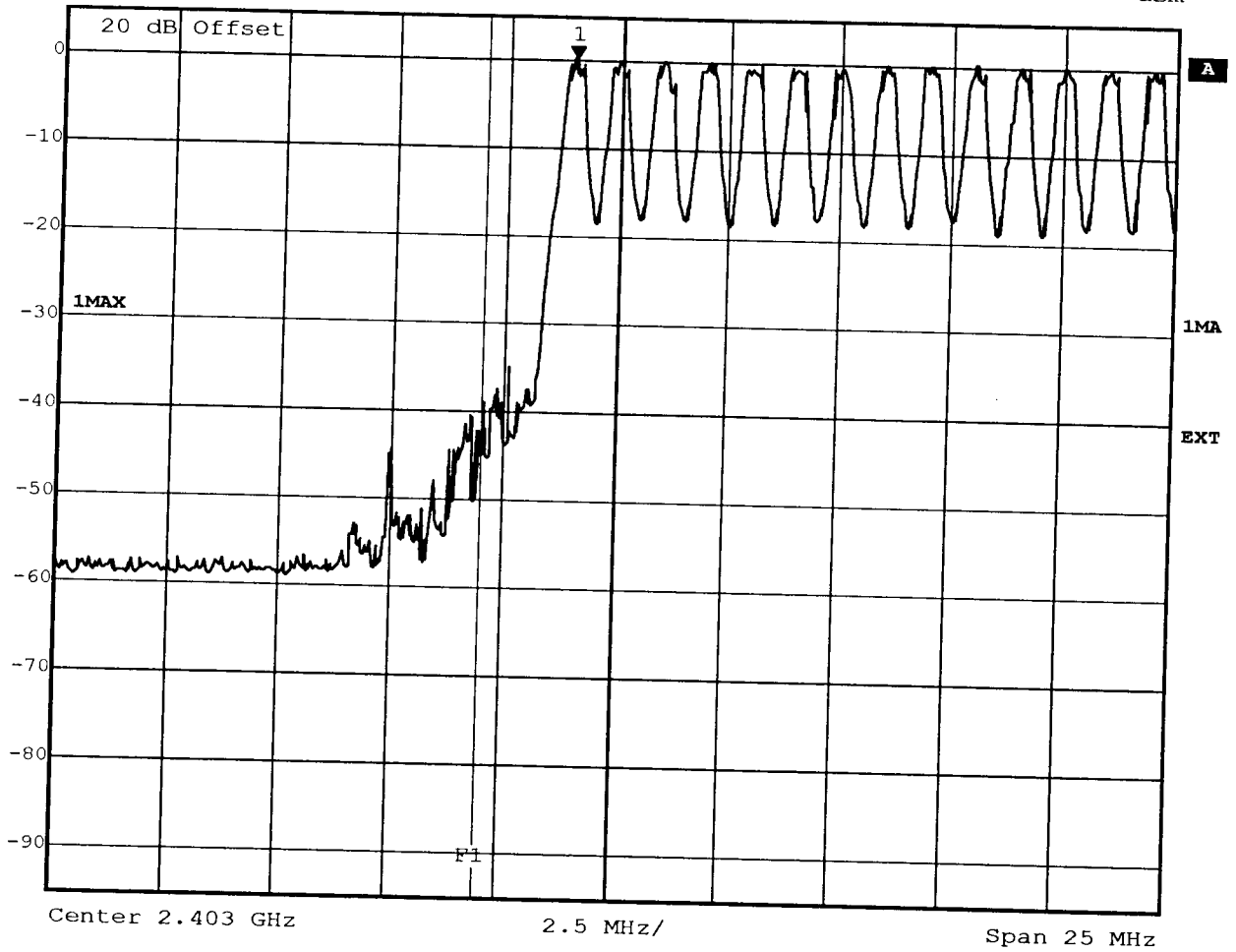


## Appendix F

Number of Hopping Frequencies



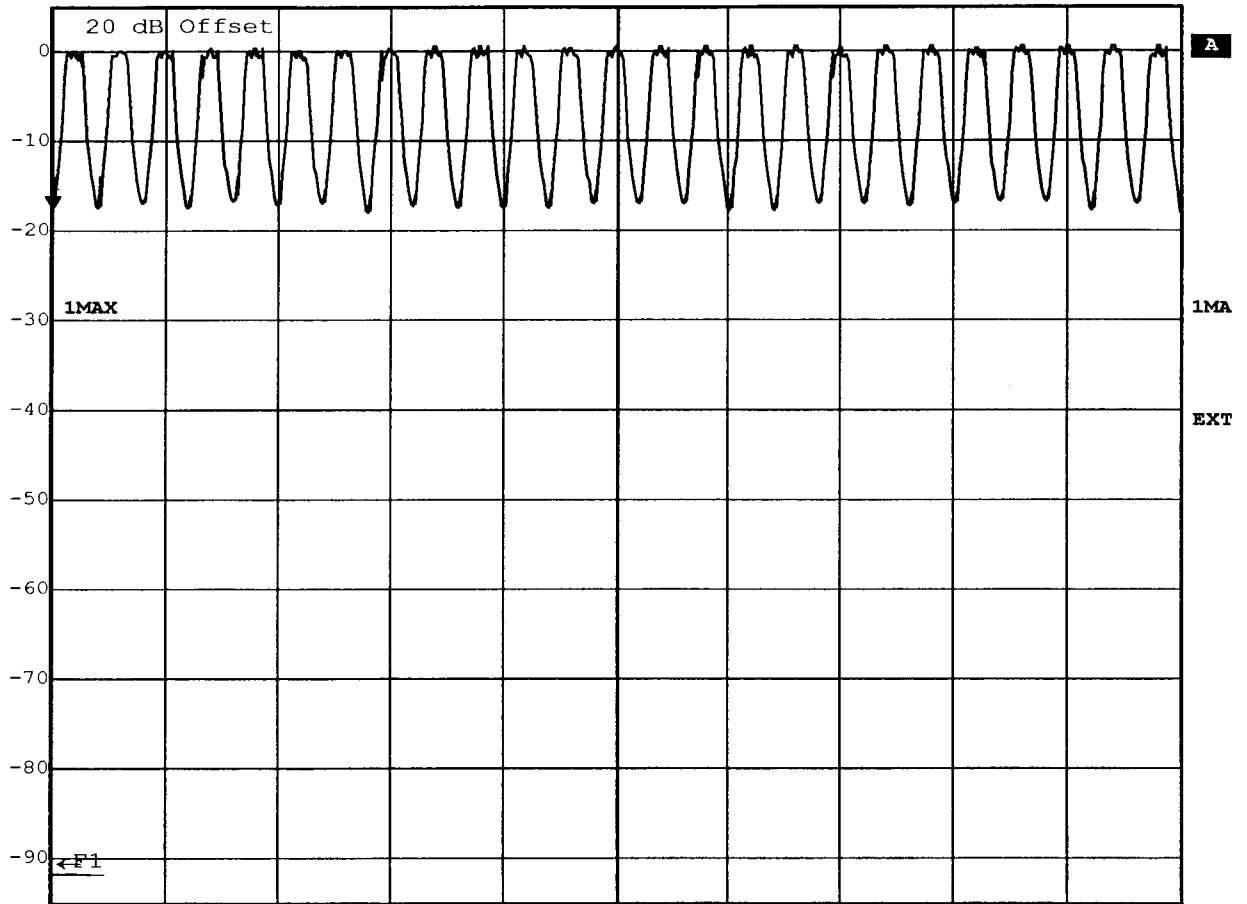
Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl 0.09 dBm VBW 100 kHz  
5 dBm 2.4020000 GHz SWT 20 ms Unit dBm



Title: Number of Hopping Frequencies  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:38:55



Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -17.53 dBm VBW 100 kHz  
5 dBm 2.41550000 GHz SWT 20 ms Unit dBm



Center 2.428 GHz 2.5 MHz/ Span 25 MHz

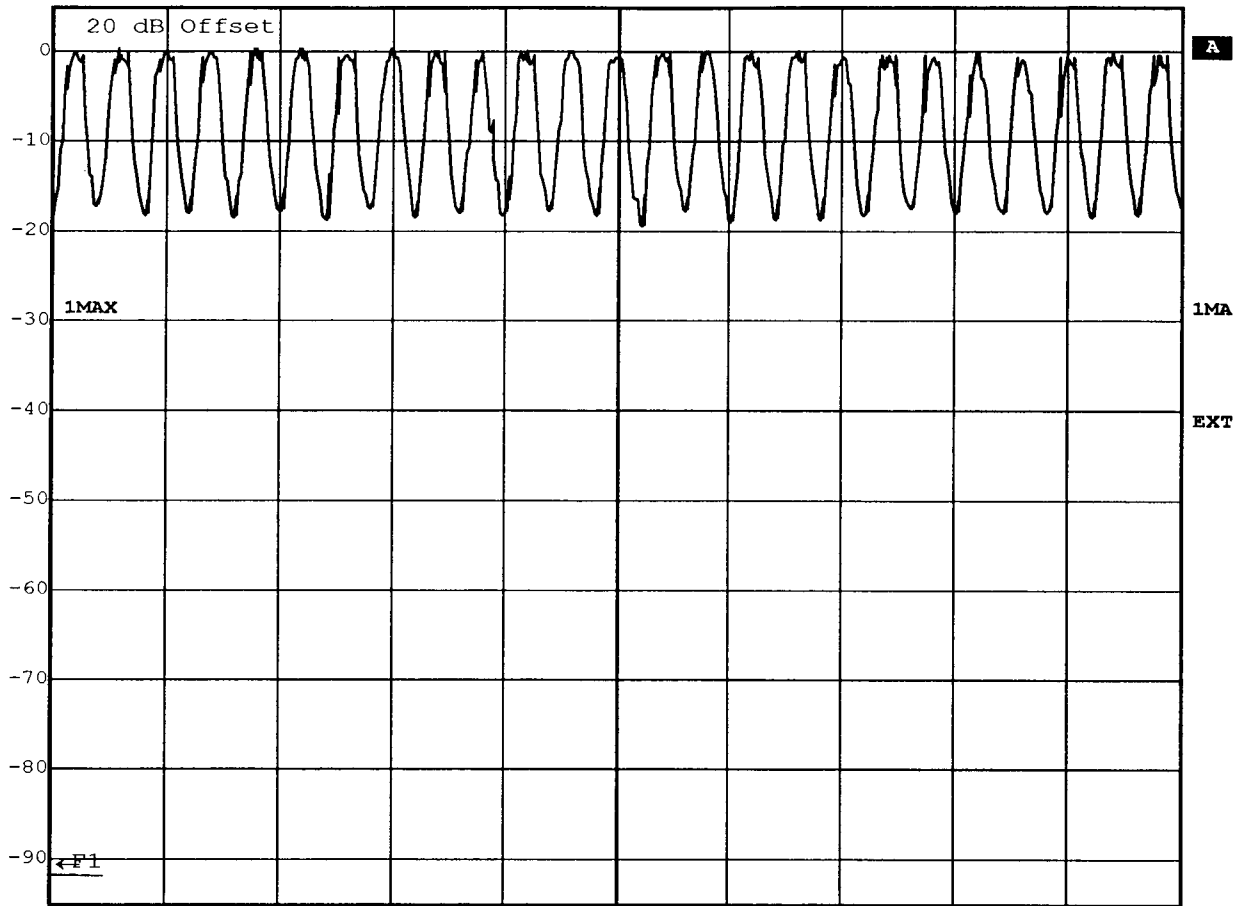
Title: Number of Hopping Frequencies  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:53:33





Ref Lvl  
5 dBm

RBW 100 kHz RF Att 10 dB  
VBW 100 kHz  
SWT 20 ms Unit dBm



Center 2.453 GHz

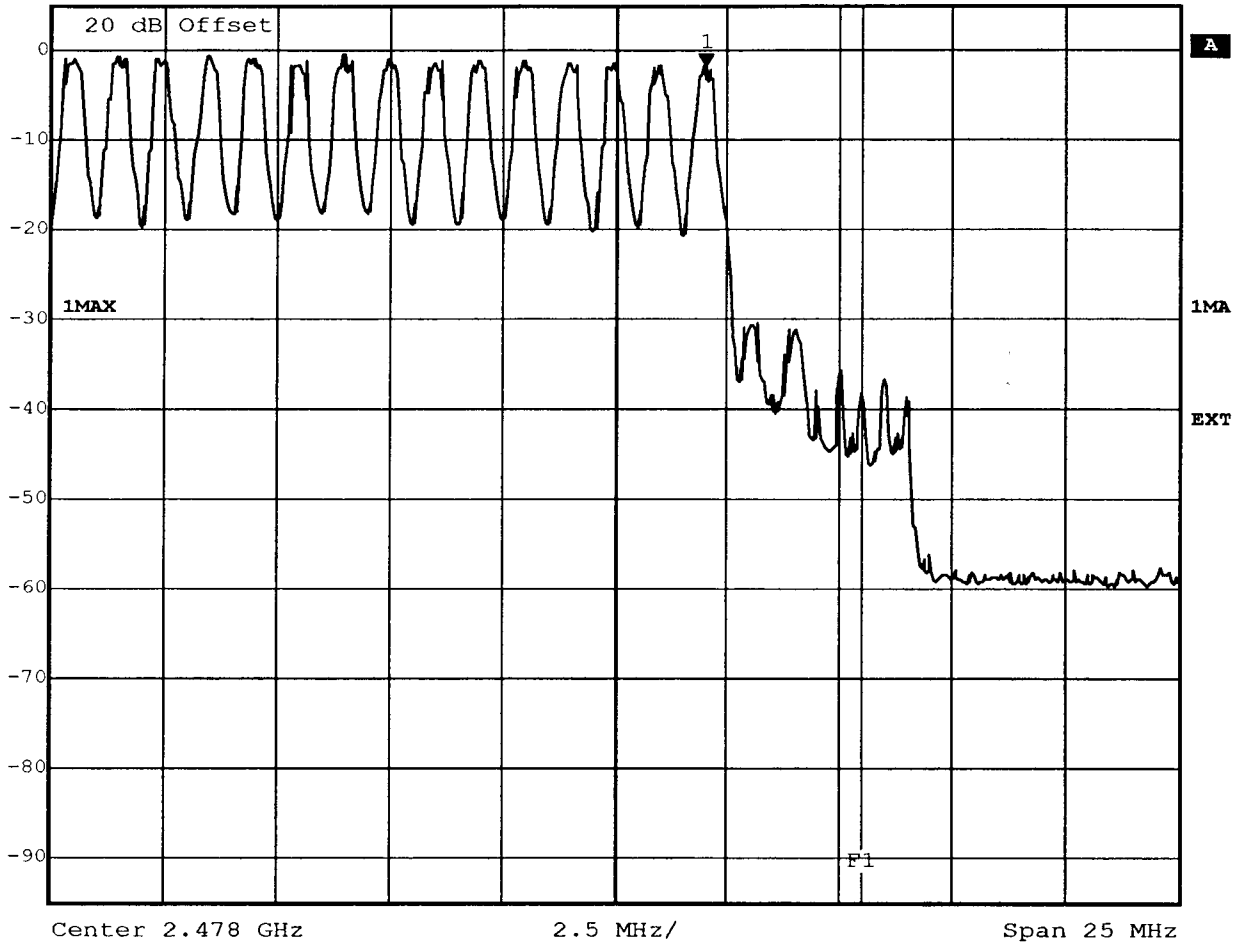
2.5 MHz/

Span 25 MHz

Title: Number of Hopping Frequencies  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:56:01



Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -1.83 dBm VBW 100 kHz  
5 dBm 2.48005010 GHz SWT 20 ms Unit dBm



Title: Number of Hopping Frequencies  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:57:53



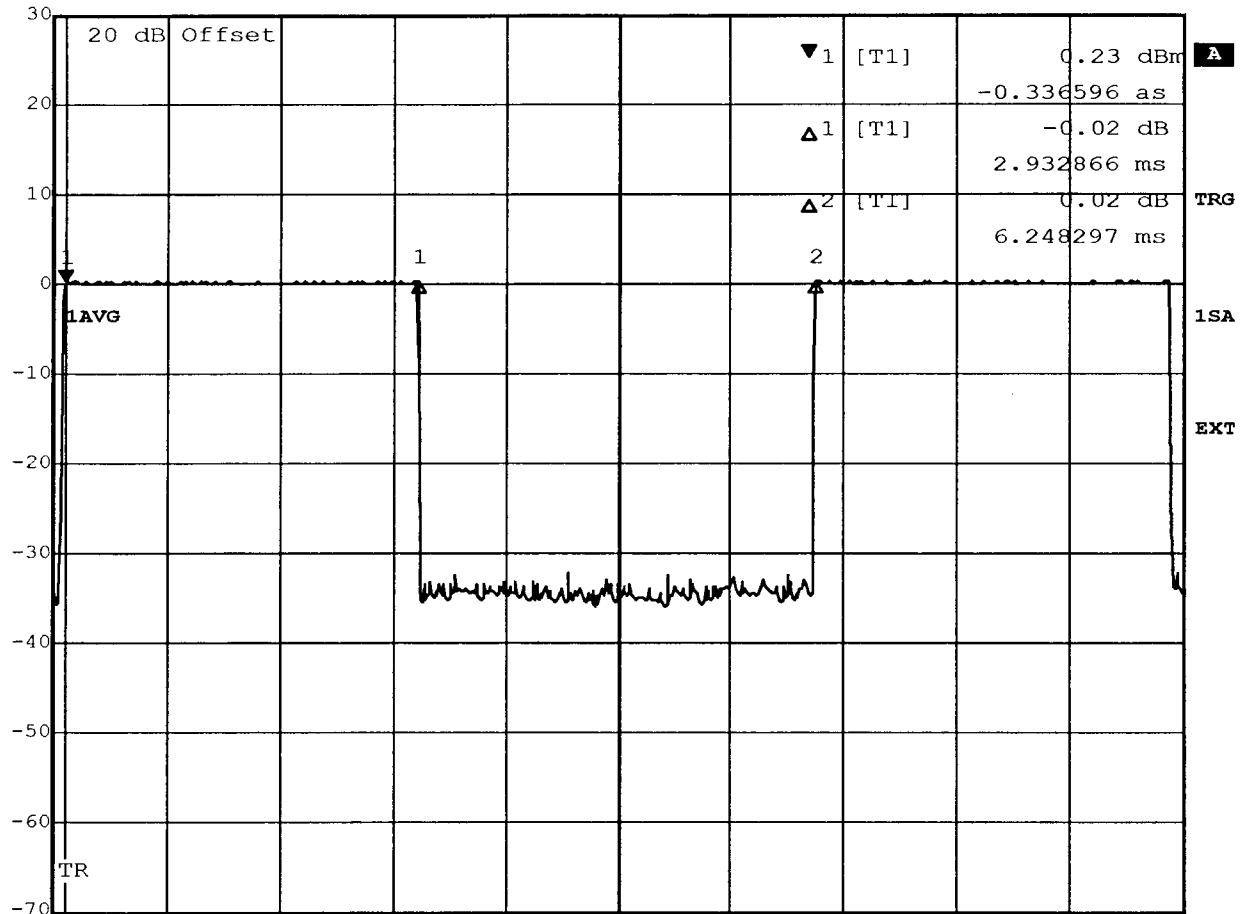
## Appendix G

Time of Occupancy (Dwell Time)



Marker 1 [T1] RBW 1 MHz RF Att 40 dB

Ref Lvl 0.23 dBm VBW 1 MHz  
 30 dBm -0.336596 as SWT 9.4 ms Unit dBm

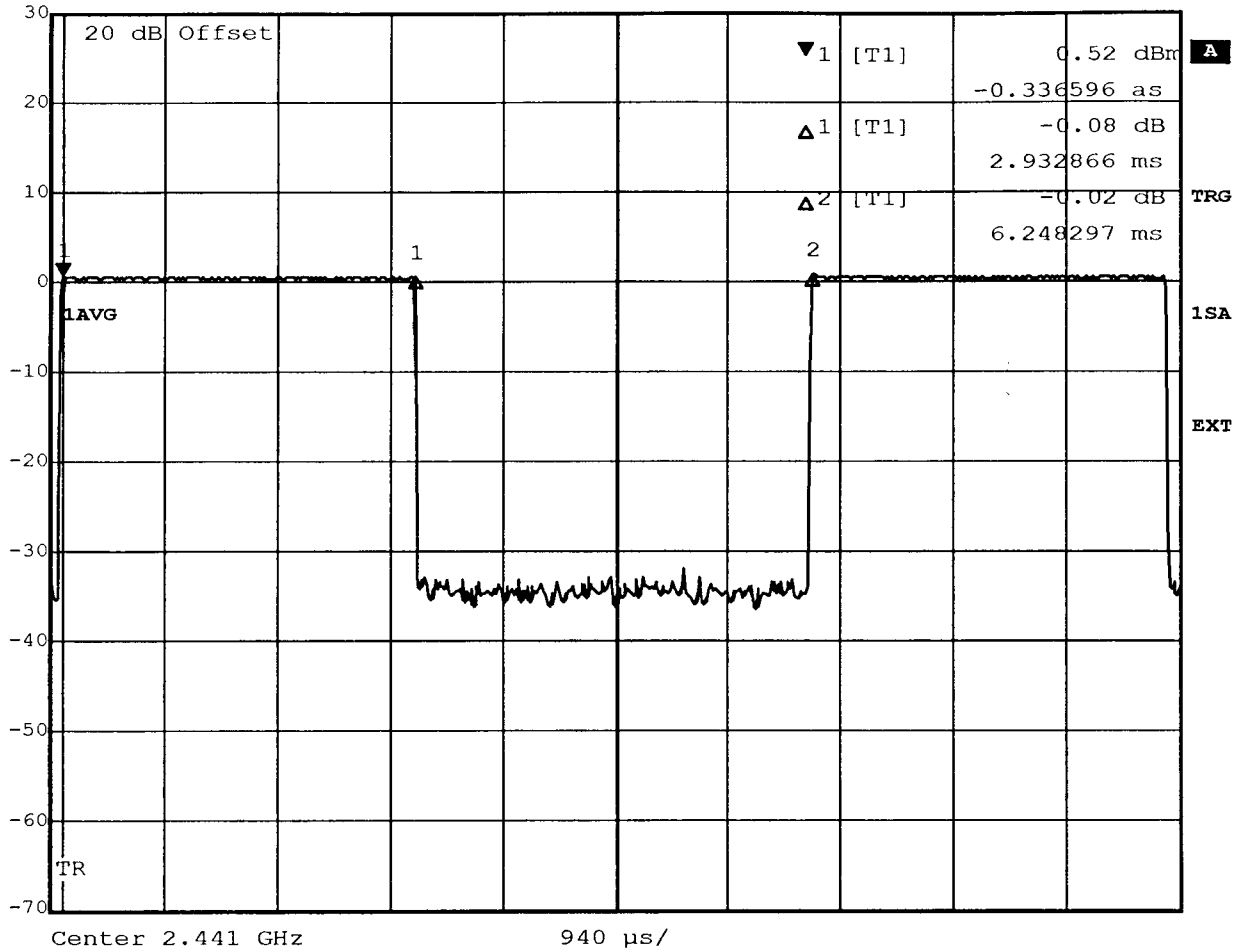


Center 2.402 GHz 940 μs/

Title: Time of Occupancy (Dwell Time)  
 Comment A: GN Netcom Inc. / Thor  
 Date: 9.JUL.2001 11:25:38



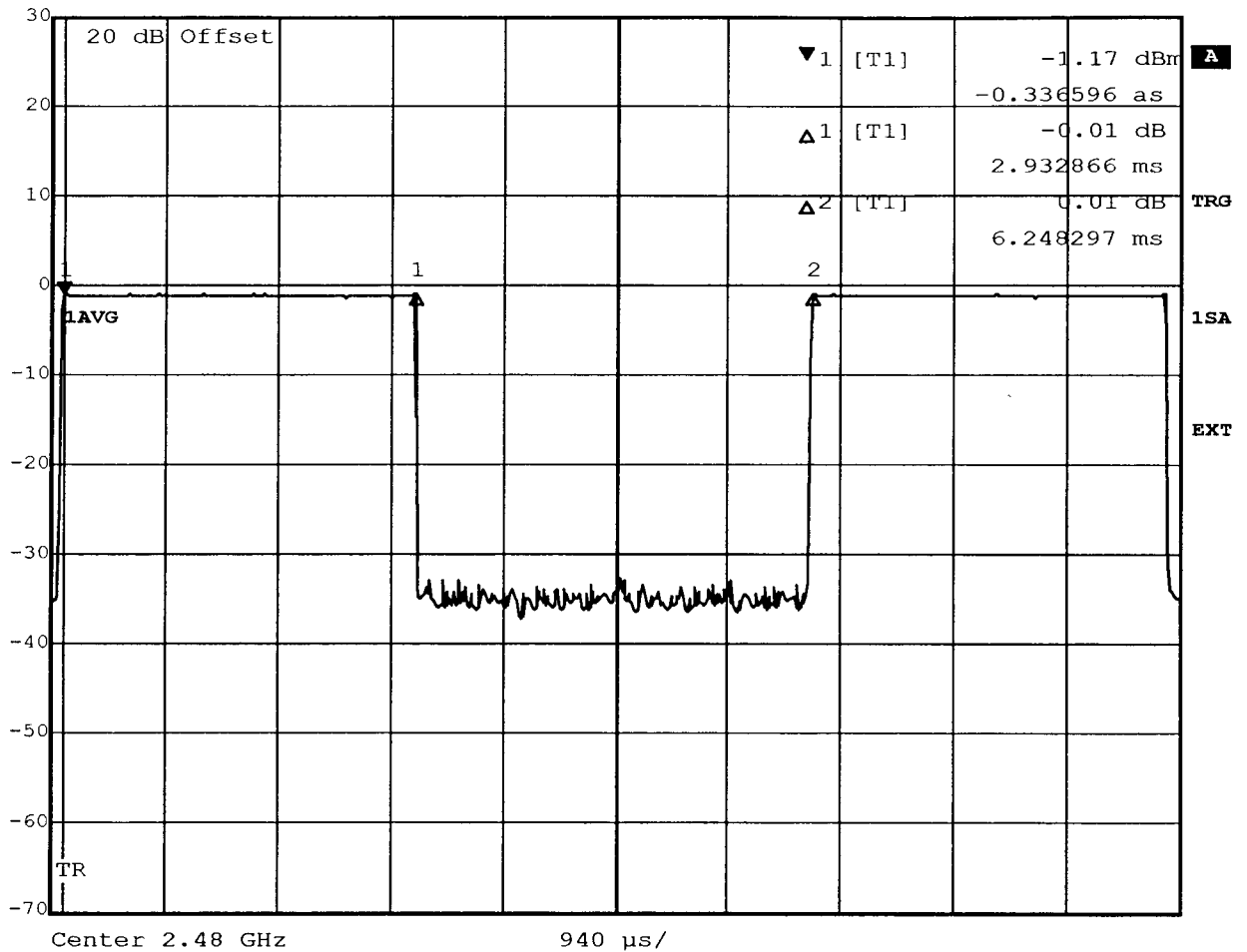
Marker 1 [T1] RBW 1 MHz RF Att 40 dB  
 Ref Lvl 0.52 dBm VBW 1 MHz  
 30 dBm -0.336596 as SWT 9.4 ms Unit dBm



Title: Time of Occupancy (Dwell Time)  
 Comment A: GN Netcom Inc. / Thor  
 Date: 9.JUL.2001 11:27:06



Marker 1 [T1]      RBW      1 MHz      RF Att      40 dB  
 Ref Lvl      -1.17 dBm      VBW      1 MHz  
 30 dBm      -0.336596 as      SWT      9.4 ms      Unit      dBm



Title: Time of Occupancy (Dwell Time)  
 Comment A: GN Netcom Inc. / Thor  
 Date: 9.JUL.2001 11:29:26



## Appendix H

20dB Bandwidth

```

=====
# ROHDE & SCHWARZ Certific. Bluetooth Test System TS8960 SW Version: bl_23
#
# Program name: tc_AllPower
#
# All Power Measurement Test Cases
=====

```

Test Case started: 2001-07-09, 11:15:52 (ets\_1)

```

Report File: /home/ts8960/project/ts8960/sw/ALE/tc/dat/Thor/Thor.mm.rep
Eut File: Thor
Operator's account name: ts8960
Global Parameter Settings:
#
# Wait On Compare : No
# Wait On OUTSIDE : No
# Wait On FAIL : No
# Abort On FAIL : No
# Skip Manual Interventions : No
# Plots Disabled : No
# Remove Plots after Program Run : No
# Info Enabled : No
# Short Mode : No
# Force Mode : No
# Part : 5
#

```

Starting program tc\_AllPower

```

=====
TC TX Output Spectrum - 20 dB Bandwidth RFC Check
.
..
Operator intervention start at 2001-07-09, 11:15:53
Intervention Type 'Please reset the EUT'
Operator intervention end at 2001-07-09, 11:15:57
Starting TC TX Output Spectrum - 20 dB Bandwidth (TRM/CA/05/C)
=====
Test Specification RF: 0.9
=====
EUT connected for Measurement and Signalling at: SSCU-Port 'MEASUREMENT DUT COND'
=====
Next measurement will be running with the following EUT parameter:
=====

```

```

Manufacturer: GN Netcom Inc.
Model: Bluetooth Headset / Thor
Serial No: no info
Comment: class 2 Bluetooth device
Setup mode: Interim Testing
Test Mode Handle: Every Connection
Country: All
EUT Address: 00025B000000 hex
Tester Address: 008037122094 hex
Active Member Address: 00000007 hex
Access Code from EUT: AD59EE5328A41120D5 hex
=====

```

```

Access Code from SU: AD59EE5328A41120D5 hex
Burst Distance: 10 Time Slots
Trigger for SU: Not supported
Power Control: Not supported
Add. Transmission (Receive): 0.000 dB
Add. Transmission (Transmit): 0.000 dB
Longest Packet Type: DH5
Voltage Value 1: 3.800 Volt
Voltage Value 2: 12.000 Volt
Temperature: 25.000 Deg C

```

Next measurement will be running with the following parameter:

```

Voltage: Middle
Temperature: Middle
Power Mode: Not Controlled
Measurement: Conducted
EUT Test Mode: Loopback
BI Data From File: No
BI Signal Packet Type: PRBS 9
Whitening: Yes
EUT Tx Frequency: 2402.000 MHz
EUT Rx Frequency: 2480.000 MHz
BI Signalling Level: -55.000 dBm

```

```

Operator intervention start at 2001-07-09, 11:16:00
Intervention Type 'Please bring the EUT into test mode LOOP BACK'
Operator intervention end at 2001-07-09, 11:16:07
Operator intervention start at 2001-07-09, 11:16:14
Intervention Type 'Please set the EUT TX Frequency to 2402.0000000 MHz'
Operator intervention end at 2001-07-09, 11:16:56
Operator intervention start at 2001-07-09, 11:16:56
Intervention Type 'Please set the EUT RX Frequency to 2480.0000000 MHz'
Operator intervention end at 2001-07-09, 11:16:56

```

TX [MHz]	RX [MHz]	START [MHz]	STOP [MHz]	LOW [MHz]	HIGH [MHz]	BW [MHz]	LIMIT [MHz]	VERDICT
2402	2480	2401.0	2403.0	2401.624	2402.392	0.768	<= 1.000	PASS
Operator intervention start at 2001-07-09, 11:17:10								
Intervention Type 'Please set the EUT TX Frequency to 2441.0000000 MHz'								
Operator intervention end at 2001-07-09, 11:17:24								
Operator intervention start at 2001-07-09, 11:17:24								
Intervention Type 'Please set the EUT RX Frequency to 2402.0000000 MHz'								
Operator intervention end at 2001-07-09, 11:17:27								
2441	2402	2440.0	2442.0	2440.604	2441.436	0.832	<= 1.000	PASS
Operator intervention start at 2001-07-09, 11:17:40								
Intervention Type 'Please set the EUT TX Frequency to 2480.0000000 MHz'								
Operator intervention end at 2001-07-09, 11:18:11								
2480	2402	2479.0	2481.0	2479.628	2480.400	0.772	<= 1.000	PASS

All selected TX Output Spectrum - 20 dB Bandwidth tests are completed

```

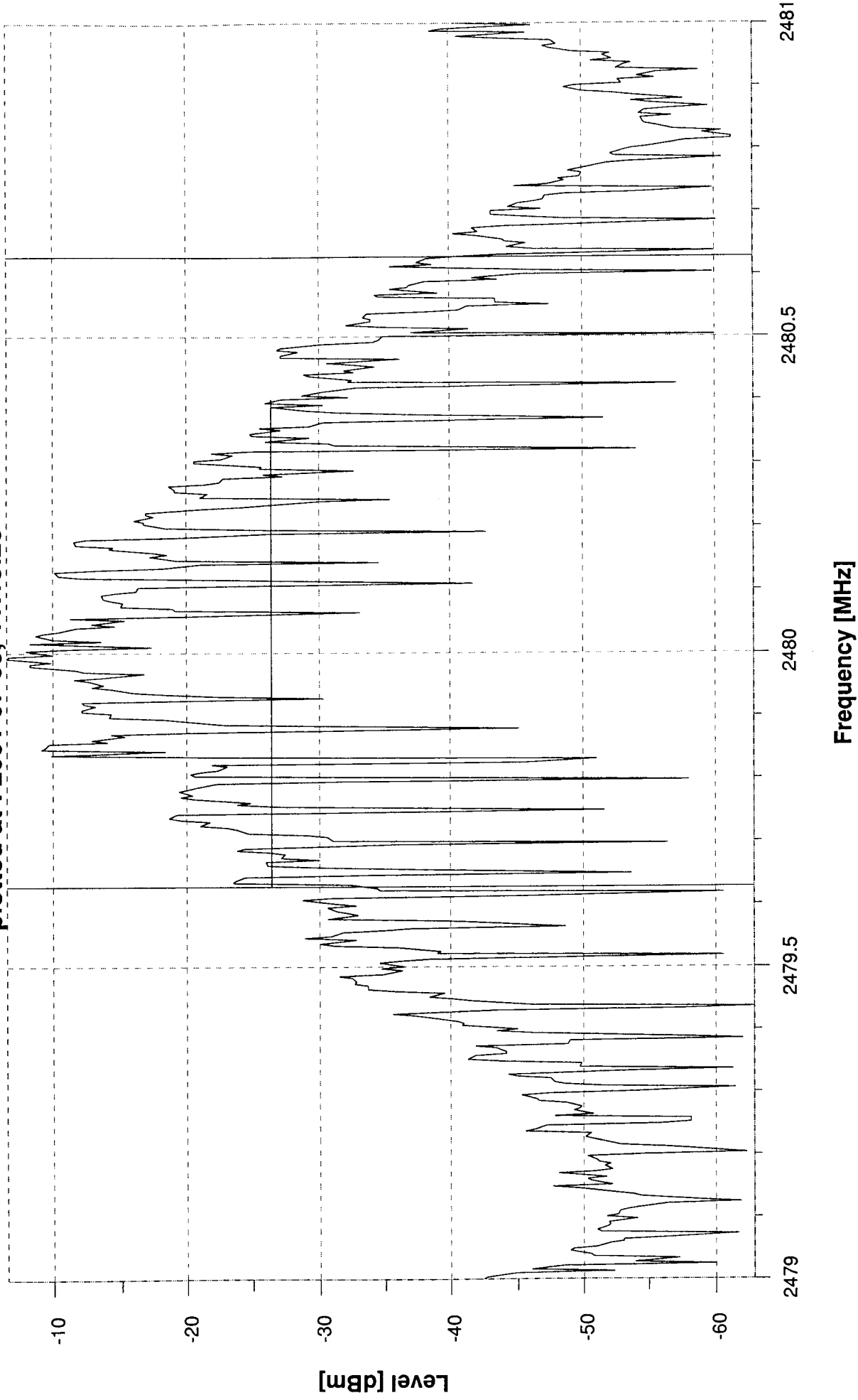
# Duration 00:02:32
# Final Test Case verdict: PASS
# Report file closed at 2001-07-09, 11:18:24
#

```

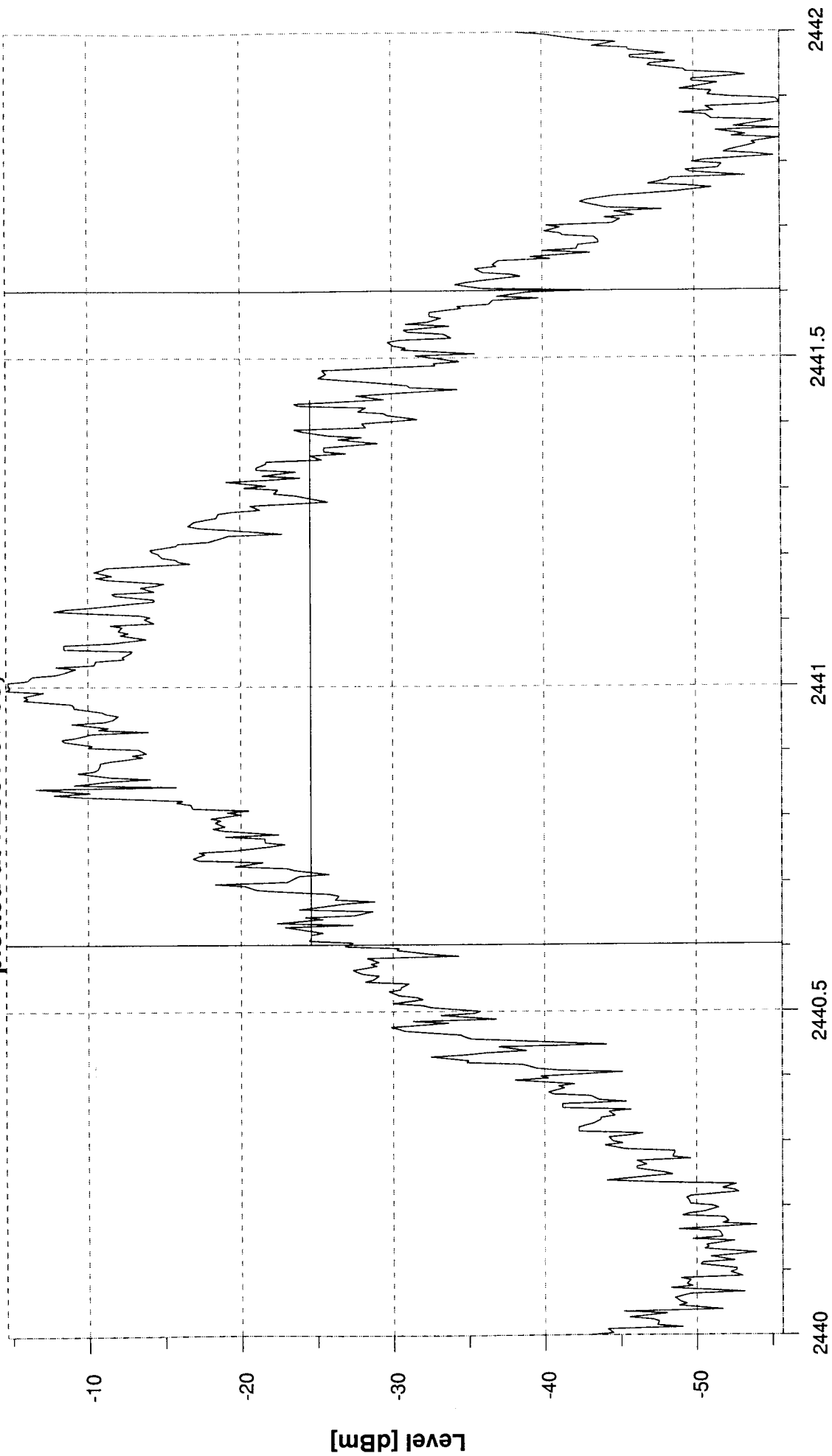




**Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2480.000 MHz  
plotted at : 2001-07-09, 11:18:23**

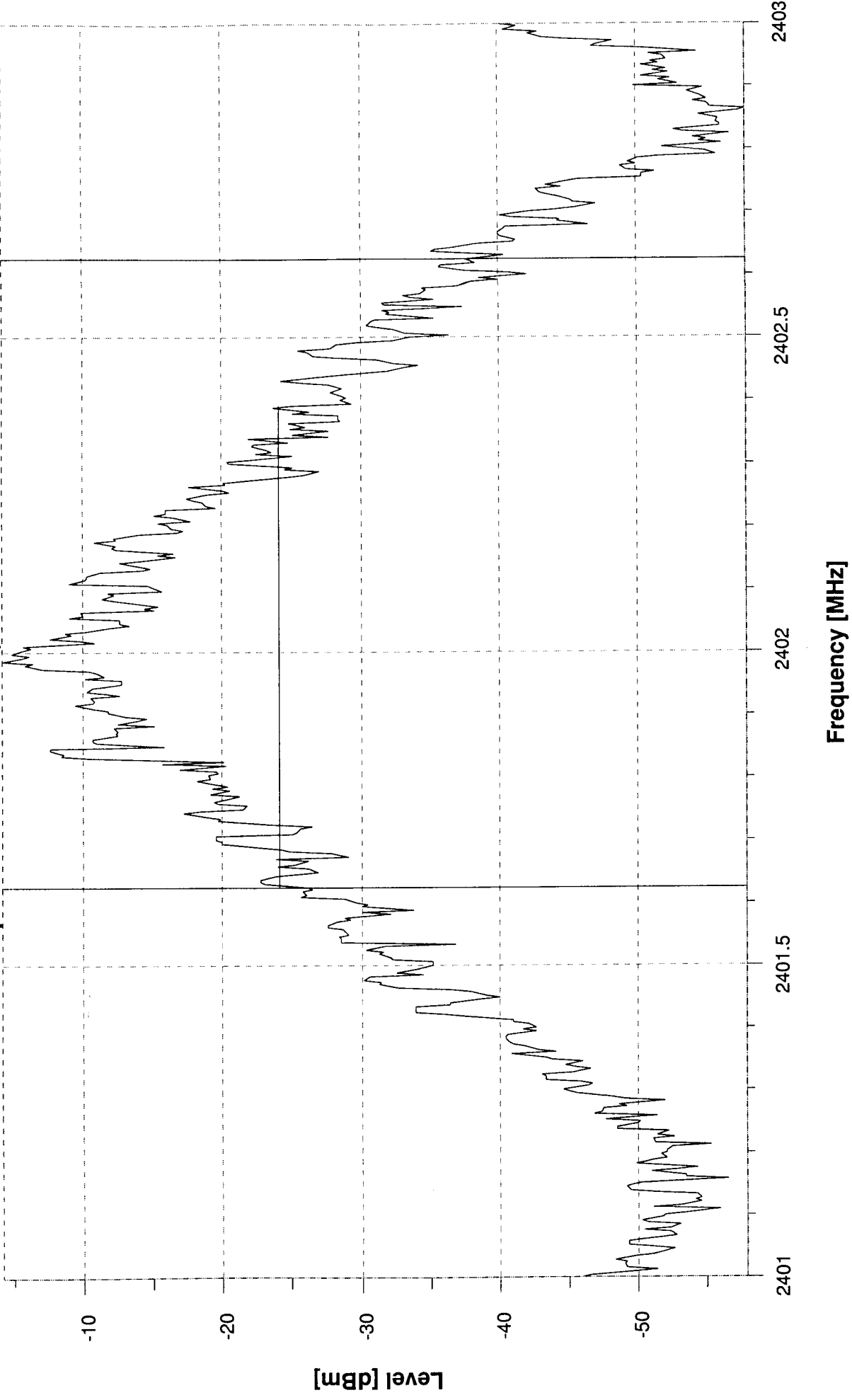


**Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2441.000 MHz  
plotted at : 2001-07-09, 11:17:40**



**Frequency [MHz]**

**Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2402.000 MHz  
plotted at : 2001-07-09, 11:17:10**



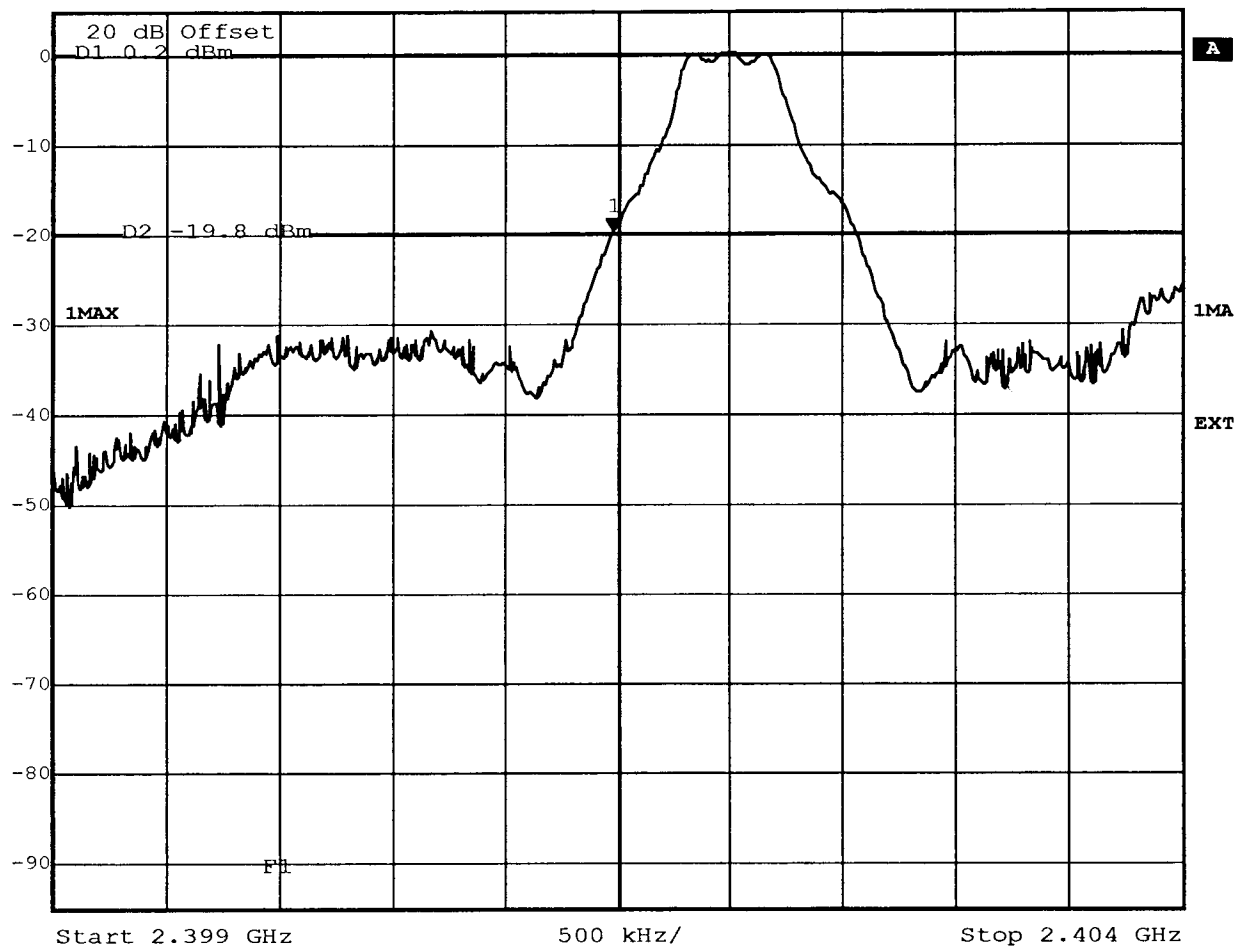


## Appendix I

Band-edge Compliance of RF Emissions



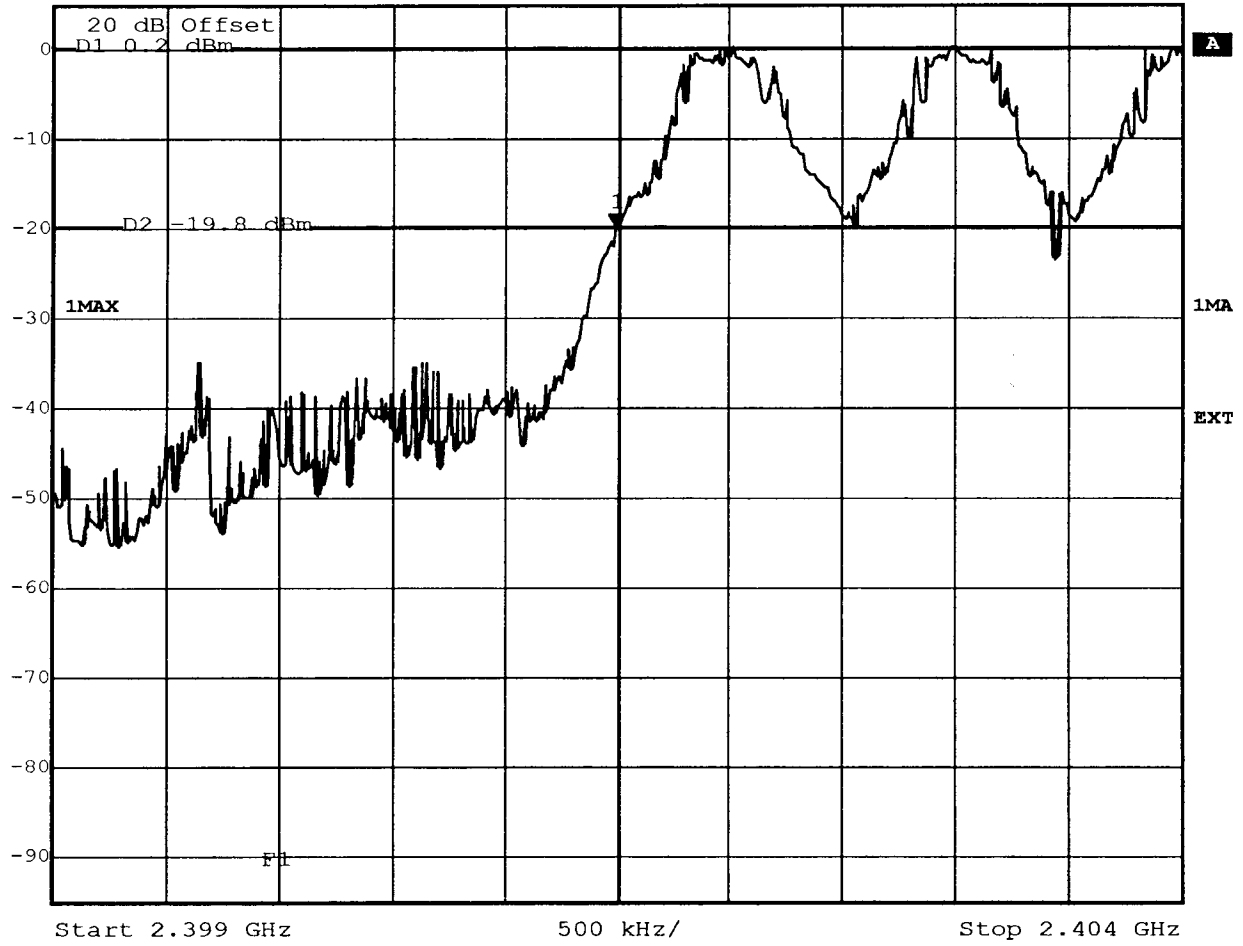
Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -19.71 dBm VBW 100 kHz  
5 dBm 2.40148497 GHz SWT 20 ms Unit dBm



Title: Band-edge Compliance of Conducted Emissions (Tx 2402 MHz)  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:30:05



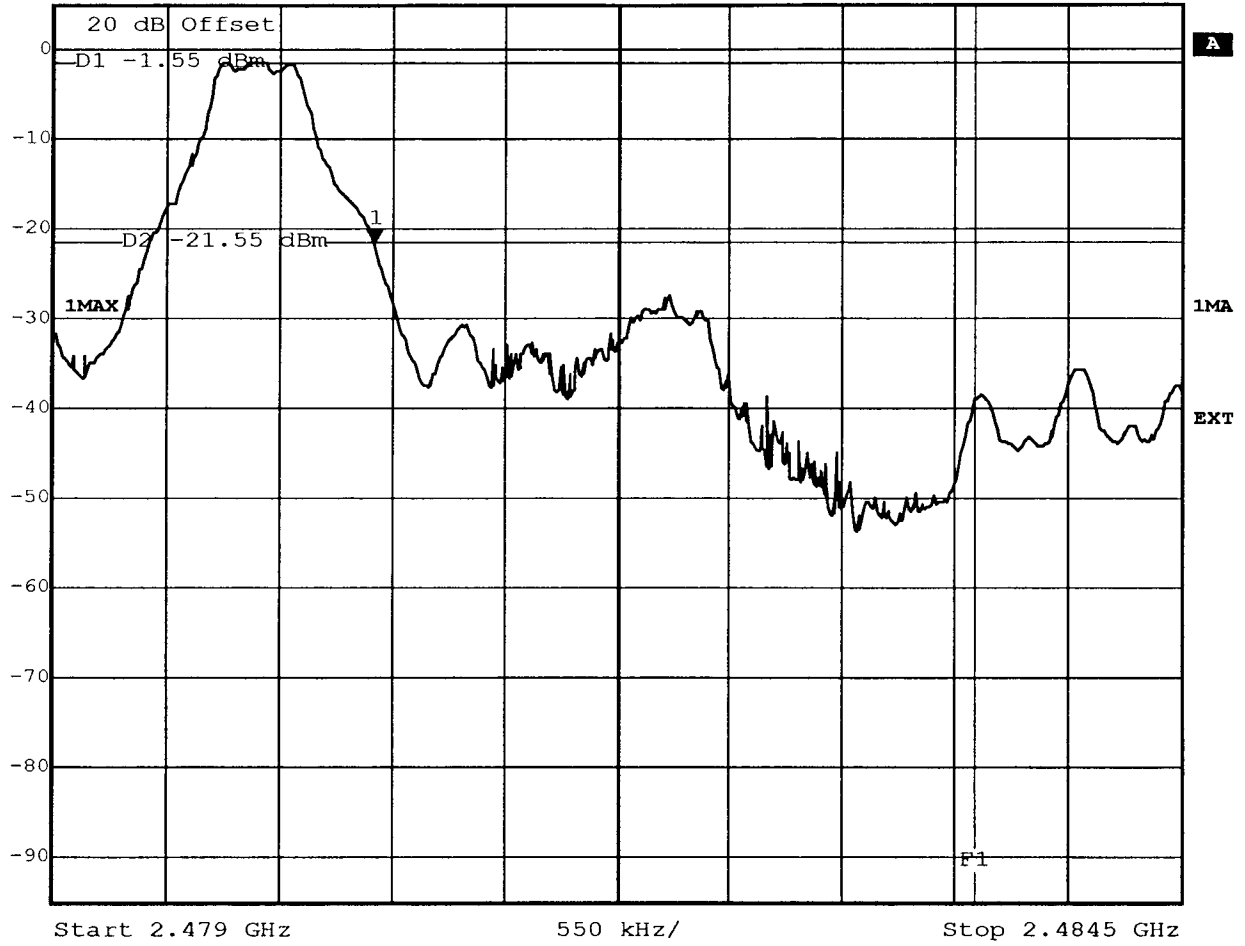
Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -19.83 dBm VBW 100 kHz  
5 dBm 2.40149499 GHz SWT 20 ms Unit dBm



Title: Band-edge Compliance of Conducted Emissions (hopping mode)  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:31:21



Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -21.65 dBm VBW 100 kHz  
5 dBm 2.48056513 GHz SWT 20 ms Unit dBm

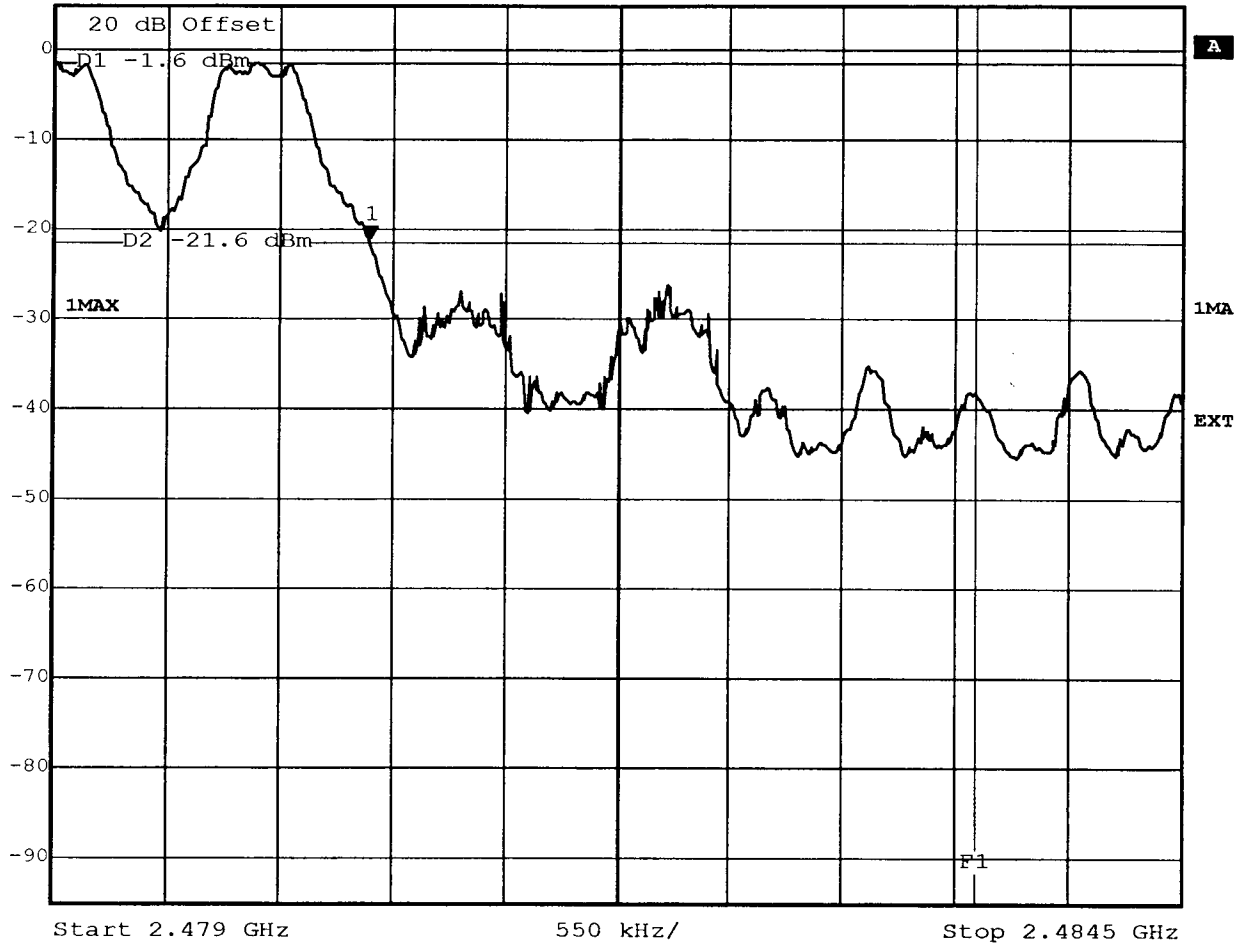


Title: Band-edge Compliance of Conducted Emissions (Tx 2480 MHz)  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:25:12





Marker 1 [T1] RBW 100 kHz RF Att 10 dB  
Ref Lvl -21.06 dBm VBW 100 kHz  
5 dBm 2.48054309 GHz SWT 20 ms Unit dBm



Title: Band-edge Compliance of Conducted Emissions (hopping mode)  
Comment A: GN Netcom Inc. / Thor  
Date: 9.JUL.2001 12:22:51



## Appendix J

Conducted Measurement at (AC) Power Line

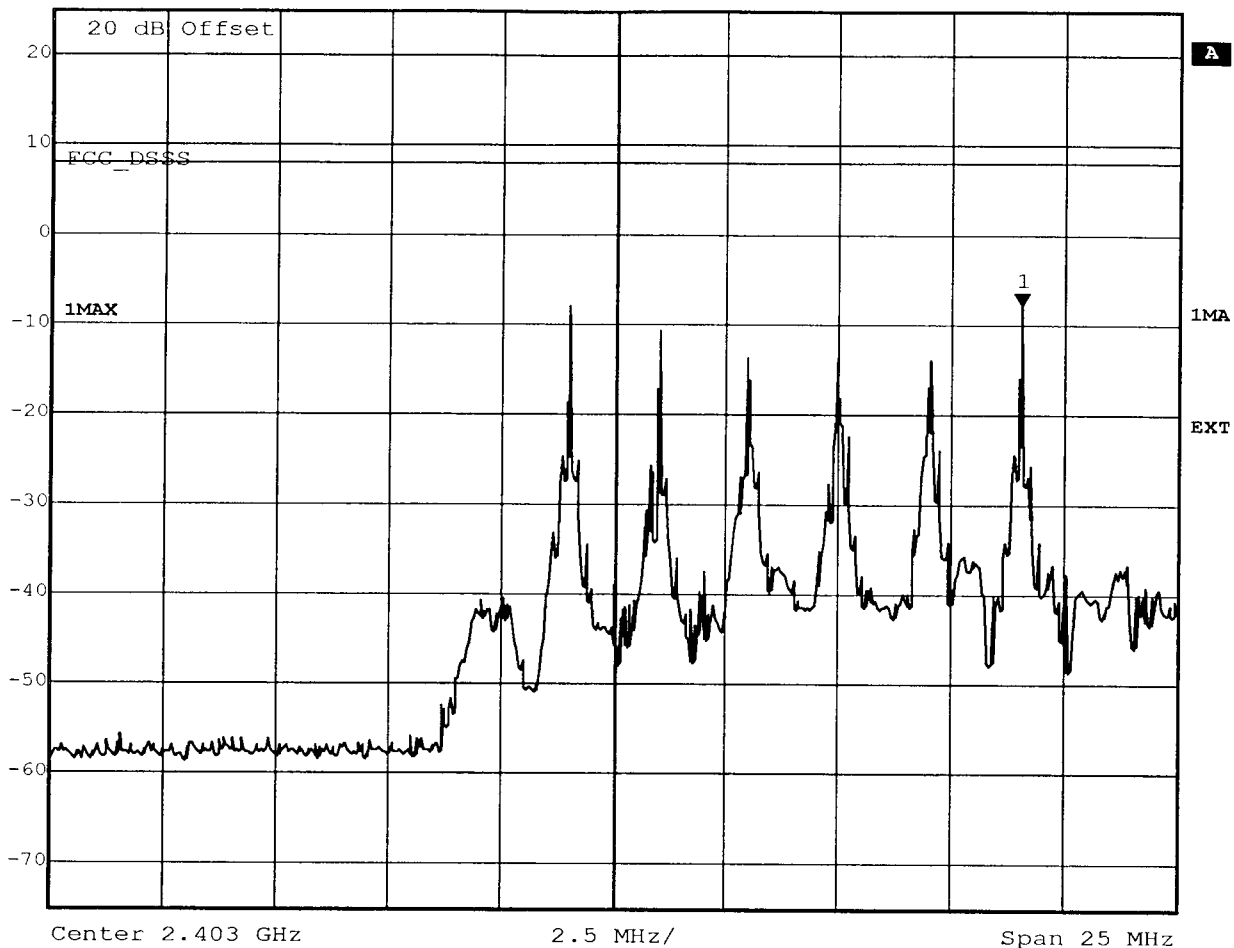


## Appendix K

Peak Power Spectral Density (Master Inquiry Mode)



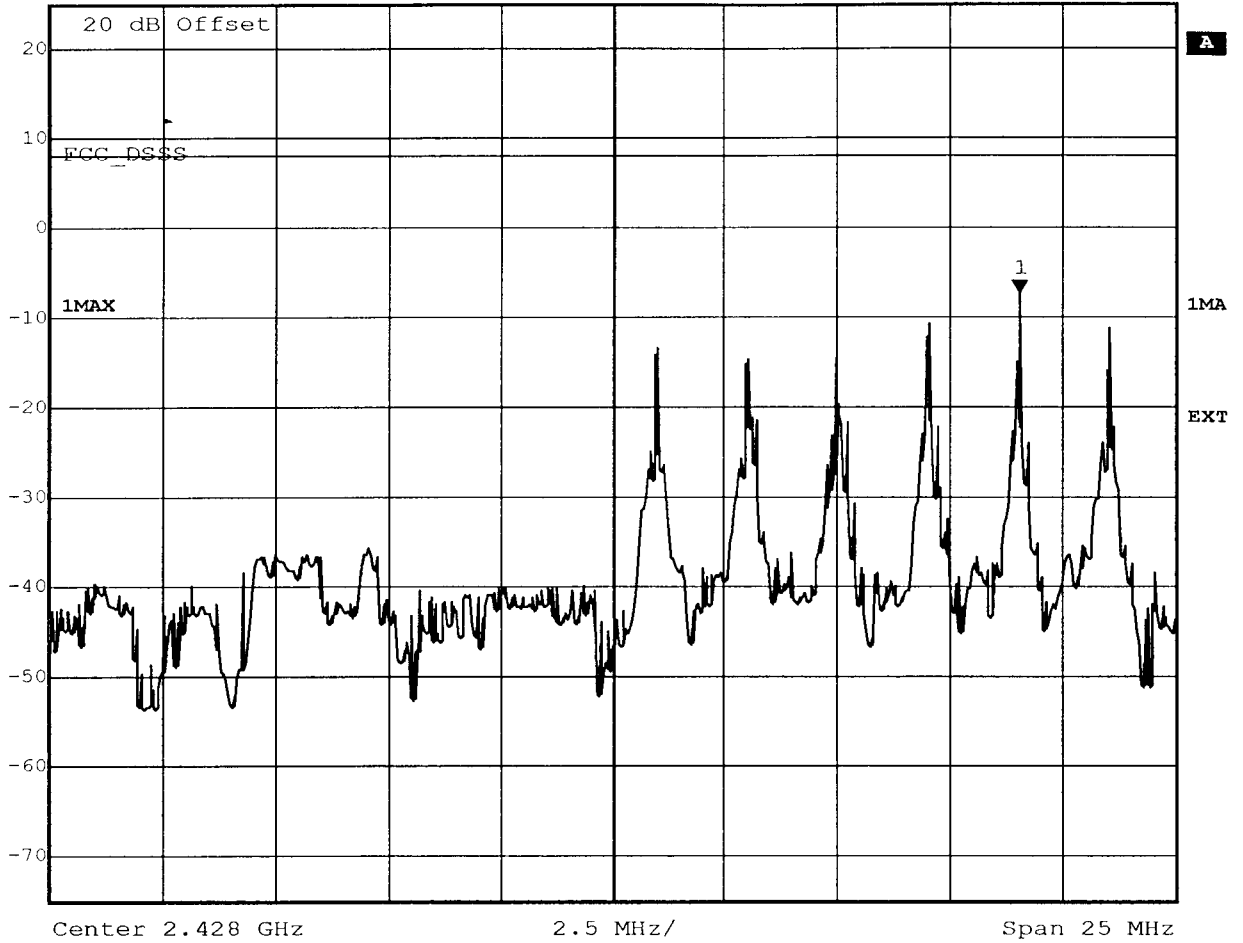
Marker 1 [T1] RBW 3 kHz RF Att 30 dB  
Ref Lvl -7.86 dBm VBW 3 kHz  
25 dBm 2.41204309 GHz SWT 10 s Unit dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Series 9200 Bluetooth wireless Headset  
Date: 24.AUG.2001 10:52:04



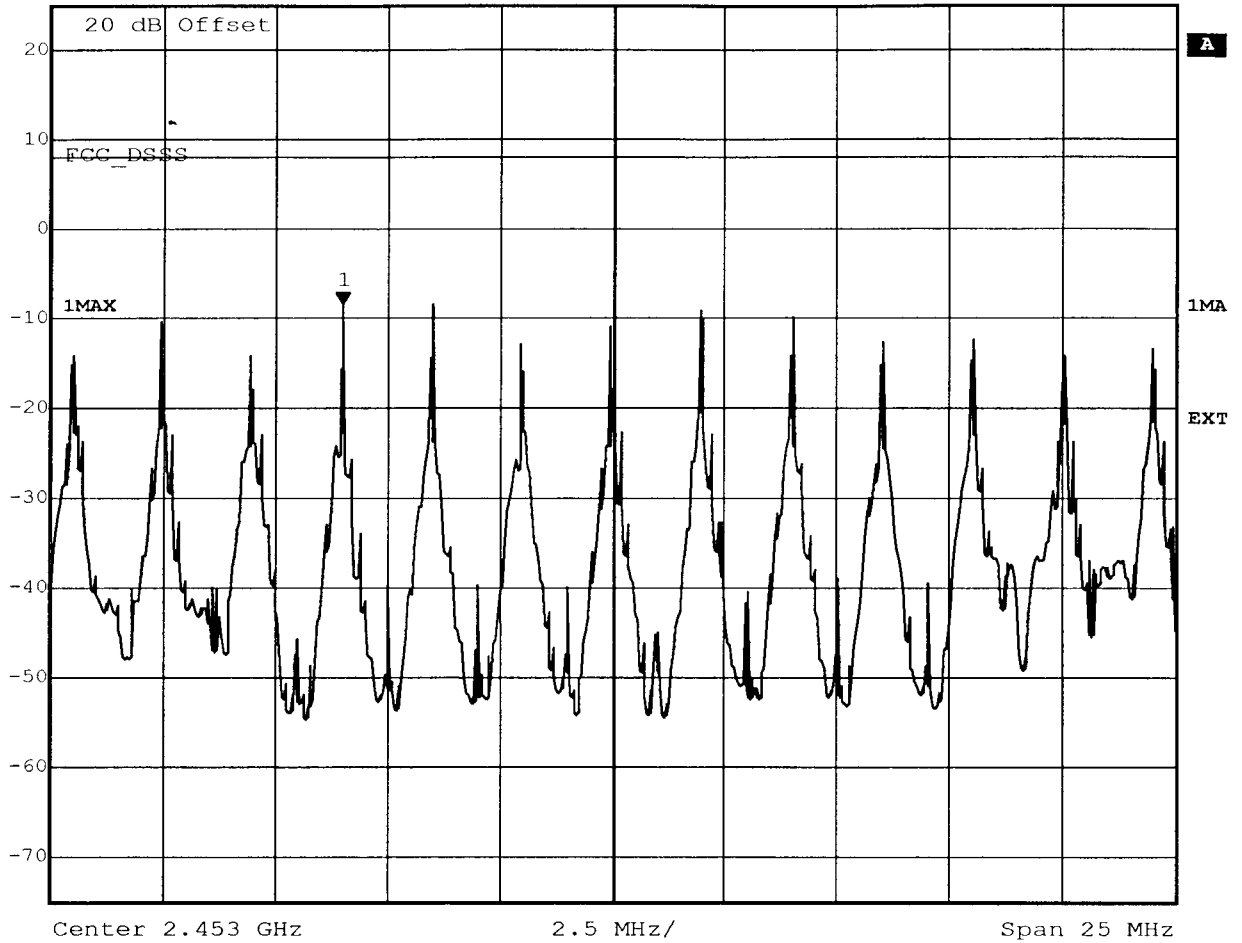
Marker 1 [T1] RBW 3 kHz RF Att 30 dB  
Ref Lvl -7.35 dBm VBW 3 kHz  
25 dBm 2.43704309 GHz SWT 10 s Unit dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Series 9200 Bluetooth wireless Headset  
Date: 24.AUG.2001 10:55:48



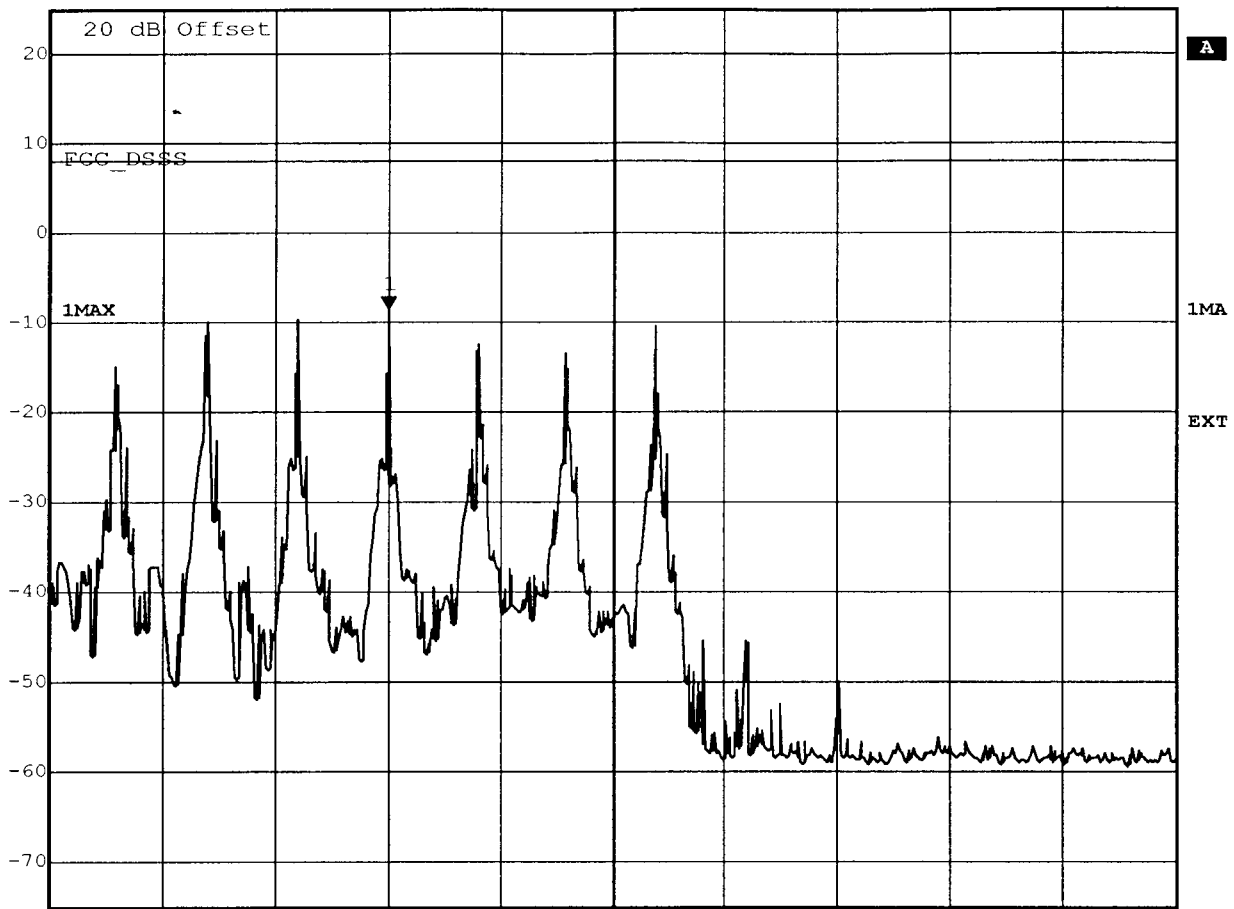
Marker 1 [T1] RBW 3 kHz RF Att 30 dB  
Ref Lvl -8.50 dBm VBW 3 kHz  
25 dBm 2.44701303 GHz SWT 10 s Unit dBm



Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Series 9200 Bluetooth wireless Headset  
Date: 24.AUG.2001 11:00:49



Marker 1 [T1] RBW 3 kHz RF Att 30 dB  
Ref Lvl -8.72 dBm VBW 3 kHz  
25 dBm 2.47301503 GHz SWT 10 s Unit dBm



Center 2.478 GHz 2.5 MHz/ Span 25 MHz

Title: Peak Power Spectral Density (Master Inquiry Mode)  
Comment A: Series 9200 Bluetooth wireless Headset  
Date: 24.AUG.2001 11:04:31