



Appendix B

Peak Output Power

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=====
# ROHDE & SCHWARZ Certific. Bluetooth Test System TS8960 SW Version: b1_23
# Program name: tc_AllPower
# All Power Measurement Test Cases
#
# Test Case started: 2001-06-30, 07:32:07 (ets_1)
# Report File: /home/ts8960/project/ts8960/sw/ALE/tc/dat/BTA-NWL/BTA-NWL1.mm.rep
# Eut File: BTA-NW1
# 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
=====

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=====
TC Output Power RFC Check
.
.
Operator intervention start at 2001-06-30, 07:32:08
Intervention Type 'Please reset the EUT'
Operator intervention end at 2001-06-30, 07:32:39
Starting TC Output Power (TRM/CA/01/C)
=====

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Test Specification RF: 0.9
=====

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EUT connected for Measurement and Signalling at: SSCU-Port 'MEASUREMENT DUT COND'
=====
Next measurement will be running with the following EUT paramter:

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Manufacturer: SONY Corporatio
Model: Modem Adaptor with Bluetooth Funktion / BTA-NW1
Serial No: None
Comment: Class 2
Blue Test (Power: Ext.=96 Int.=29)
Interim Testing
Test Mode Handle: Every Parameter Set
Country: All
EUT Address: 00026BC6967E hex

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```

Tester Address: 00806BC6967E hex
Active Member Address: 00000007 hex
Access Code from EUT: AD59EE5328A41120D5 hex
Access Code from SU: AB7CC2D999F9A58F2A hex
Burst Distance: 2 Time Slots
Trigger for SU: Not supported
Power Class: 2
Power Control: Not supported
Gain: 0.000 dBi
Add. Transmission (Receive): 0.000 dB
Add. Transmission (Transmit): 0.000 dB
Longest Packet Type: DH5
Unmod. part before Mod.: 35.500 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: 120.000 Volt
Voltage Value 2: 0.000 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
B1 Data From File: No
B1 Signal Packet Type: DH5
B1 Signal Pattern: PRBS 9
Whitening: No
Number of Packets: 1
EUT Tx Frequency: 2402.000 MHz
EUT Rx Frequency: 2402.000 MHz
B1 Signalling Level: -55.000 dBm

```

```

Operator intervention start at 2001-06-30, 07:32:41
Intervention Type 'Please bring the EUT into test mode TX TEST'
Operator intervention end at 2001-06-30, 07:32:44
Operator intervention start at 2001-06-30, 07:32:44
Intervention Type 'Please set the EUT Pattern to PRBS'
Operator intervention end at 2001-06-30, 07:32:49
Operator intervention start at 2001-06-30, 07:32:50
Intervention Type 'Please set the EUT Packet Type to DH5'
Operator intervention end at 2001-06-30, 07:32:52
Operator intervention start at 2001-06-30, 07:32:52
Intervention Type 'Please set the EUT TX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-06-30, 07:32:53
Operator intervention start at 2001-06-30, 07:32:53
Intervention Type 'Please set the EUT RX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-06-30, 07:32:54

```

TX FREQ [MHz]	RX FREQ [MHz]	MEAS FREQ [MHz]	MEASUREMENT	LEVEL [dBm]	LIMIT [dBm]	VERDICT
2402.000	2402.000	2402.000	Average (+ gain)	2.80	< 20.00	PASS
2402.000	2402.000	2402.000	Peak (+ gain)	2.98	< 23.00	PASS
2402.000	2402.000	2402.000	Average	2.80	< 4.00	PASS
2402.000	2402.000	2402.000	Average	2.80	> -6.00	PASS
Operator intervention start at 2001-06-30, 07:32:57						
Intervention Type 'Please set the EUT TX Frequency to 2441.000000 MHz'						
Operator intervention end at 2001-06-30, 07:33:39						
Operator intervention start at 2001-06-30, 07:33:39						
Intervention Type 'Please set the EUT RX Frequency to 2441.000000 MHz'						
Operator intervention end at 2001-06-30, 07:33:40						

2441.000	2441.000	2441.000	Average (+ gain)	2.99	<	20.00	PASS
2441.000	2441.000	2441.000	Peak (+ gain)	3.28	<	23.00	PASS
2441.000	2441.000	2441.000	Average	2.99	<	4.00	PASS
2441.000	2441.000	2441.000	Average	2.99	>	-6.00	PASS

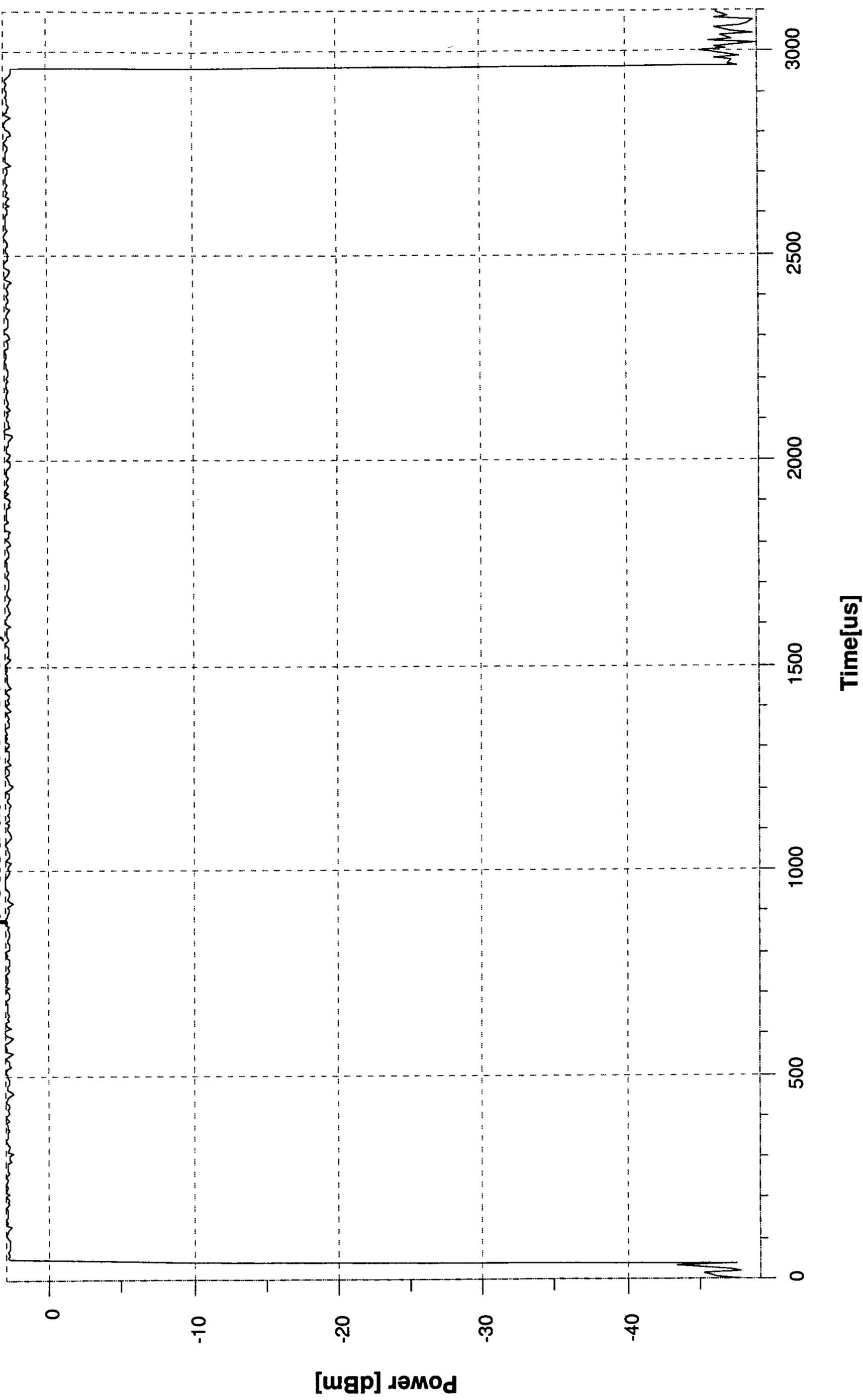
Operator intervention start at 2001-06-30, 07:33:42
 Intervention Type 'Please set the EUT TX Frequency to 2480.000000 MHz'
 Operator intervention end at 2001-06-30, 07:34:01
 Operator intervention start at 2001-06-30, 07:34:01
 Intervention Type 'Please set the EUT RX Frequency to 2480.000000 MHz'
 Operator intervention end at 2001-06-30, 07:34:03

2480.000	2480.000	2480.000	Average (+ gain)	3.67	<	20.00	PASS
2480.000	2480.000	2480.000	Peak (+ gain)	3.89	<	23.00	PASS
2480.000	2480.000	2480.000	Average	3.67	<	4.00	PASS
2480.000	2480.000	2480.000	Average	3.67	>	-6.00	PASS

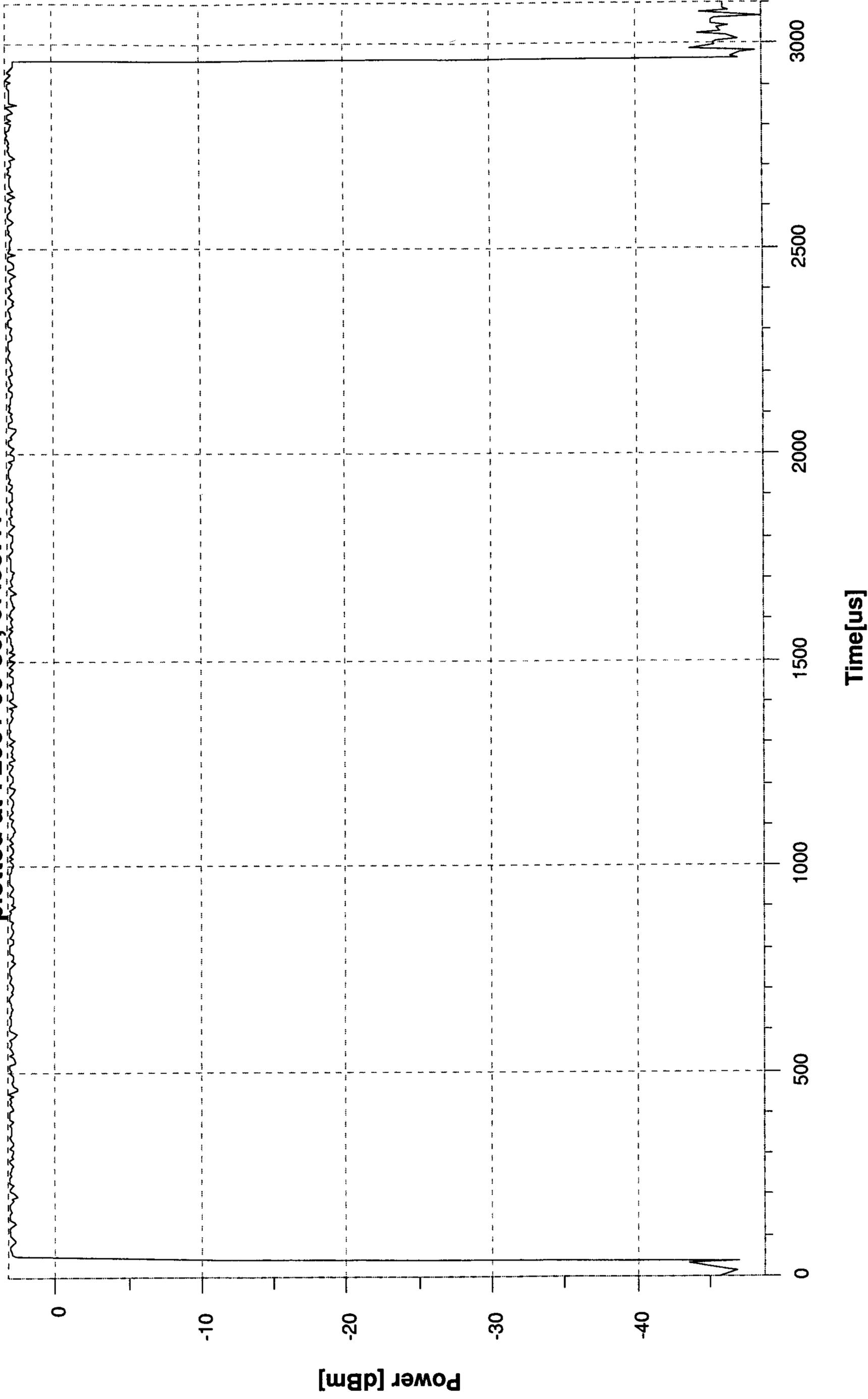
=====
 All selected Output Power tests are completed
 =====

```
#####
# Duration 00:01:59
# Final Test Case verdict: PASS
# Report file closed at 2001-06-30, 07:34:05
#####
```

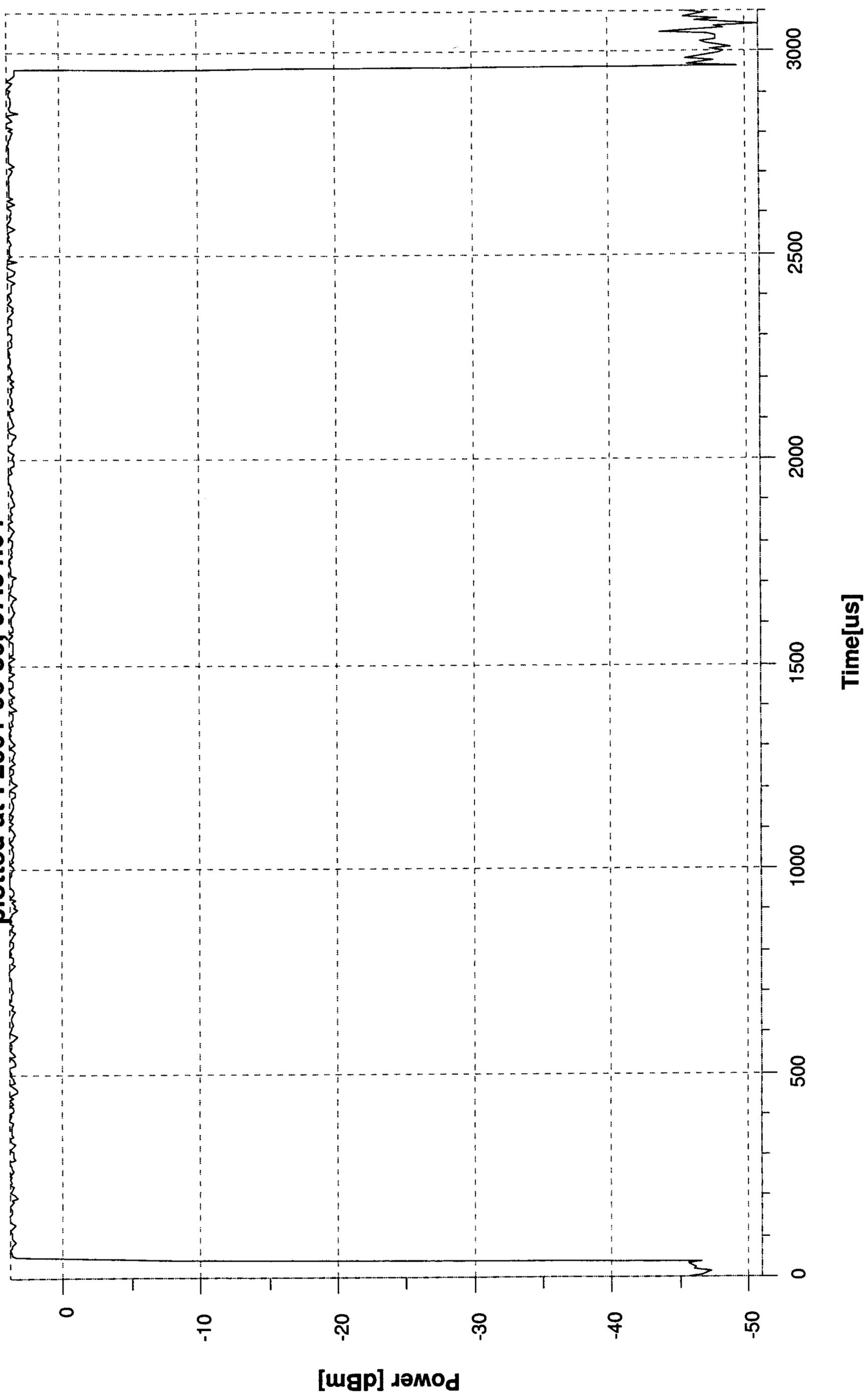
**Measured Burst TC Output Power -Measured EUT: BTA-NW1 -EUT TX Frequency 2402.000 MHz
plotted at : 2001-06-30, 07:32:57**



**Measured Burst TC Output Power -Measured EUT: BTA-NW1 -EUT TX Frequency 2441.000 MHz
plotted at : 2001-06-30, 07:33:41**

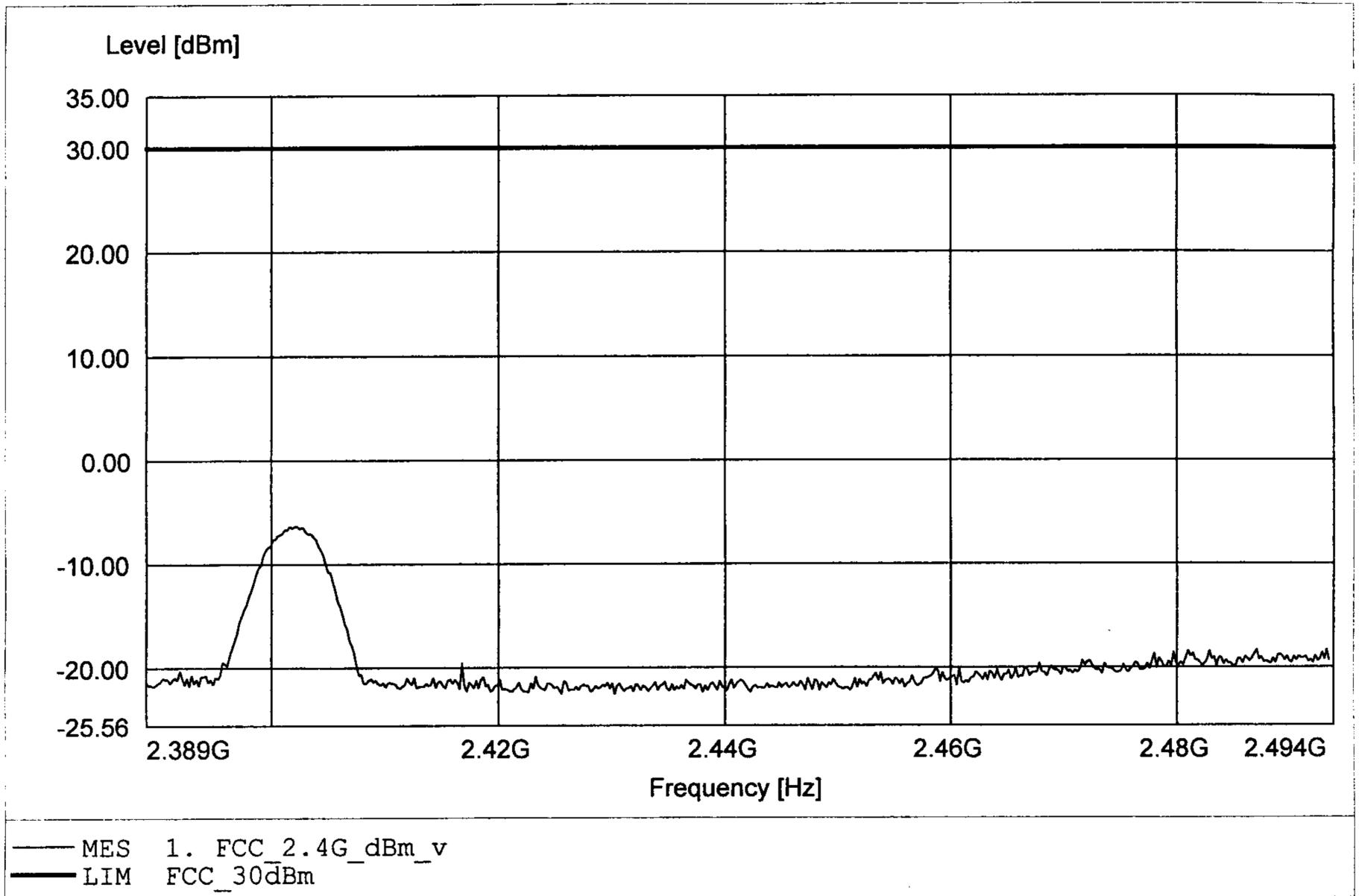


**Measured Burst TC Output Power -Measured EUT: BTA-NW1 -EUT TX Frequency 2480.000 MHz
plotted at : 2001-06-30, 07:34:04**



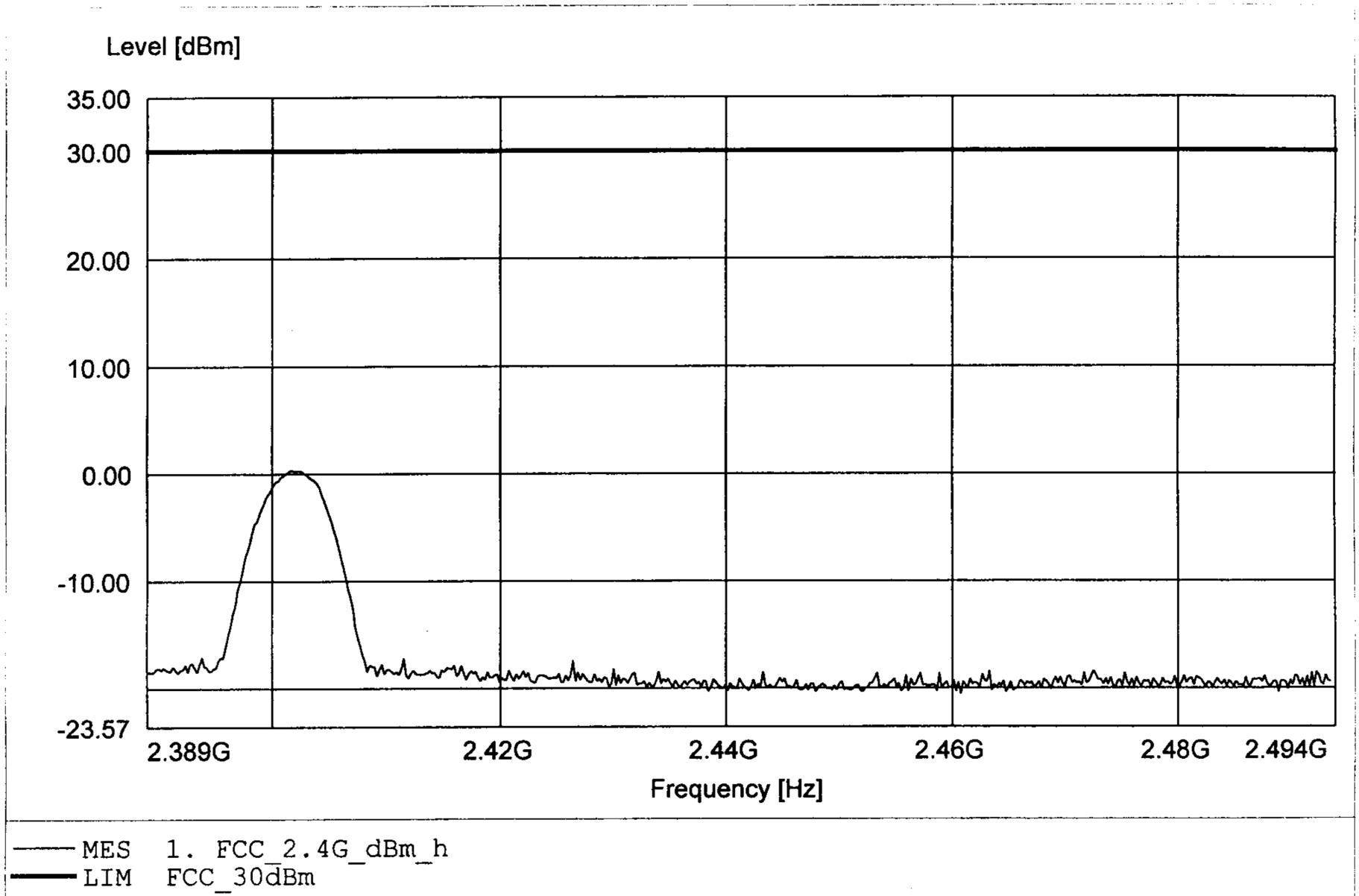
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025
Comment 2: Freq:2.402GHz Pmax:-6.30dBm RBW:5MHz



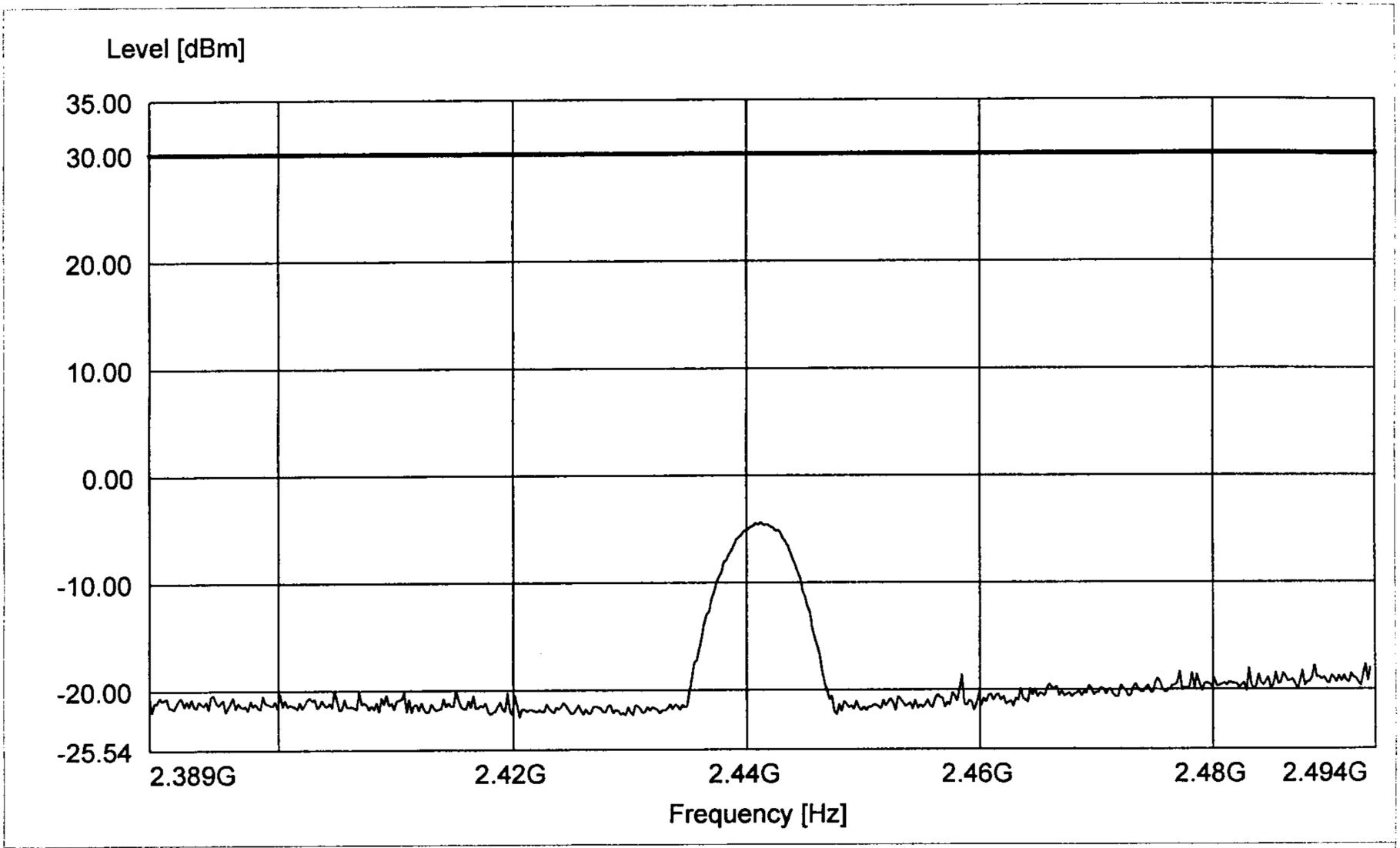
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2402 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.402GHz Pmax:0.29dBm RBW:5MHz



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

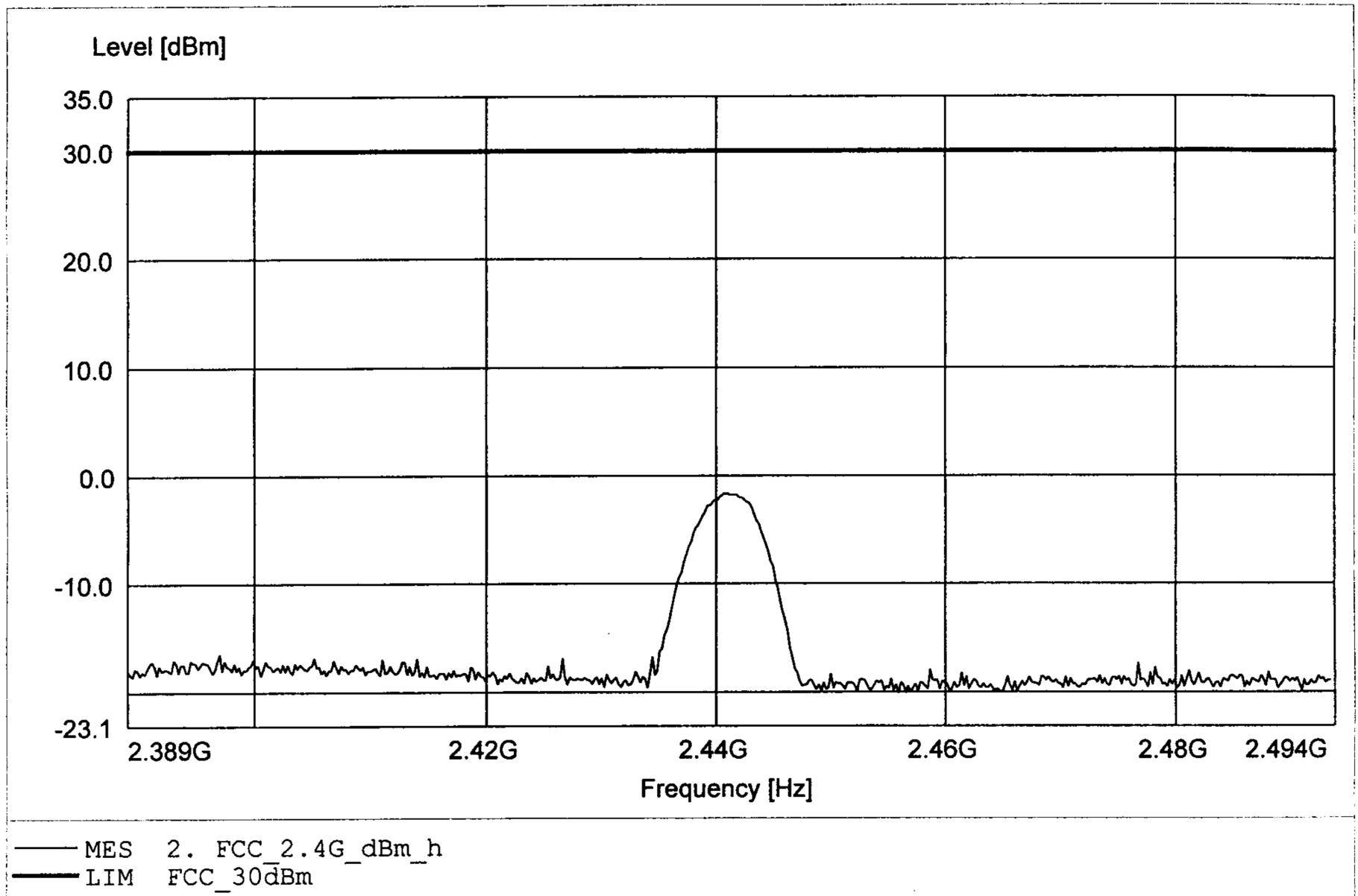
EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2441 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.441GHz Pmax:-4.34dBm RBW:5MHz



— MES 2. FCC_2.4G_dBm_v
 — LIM FCC_30dBm

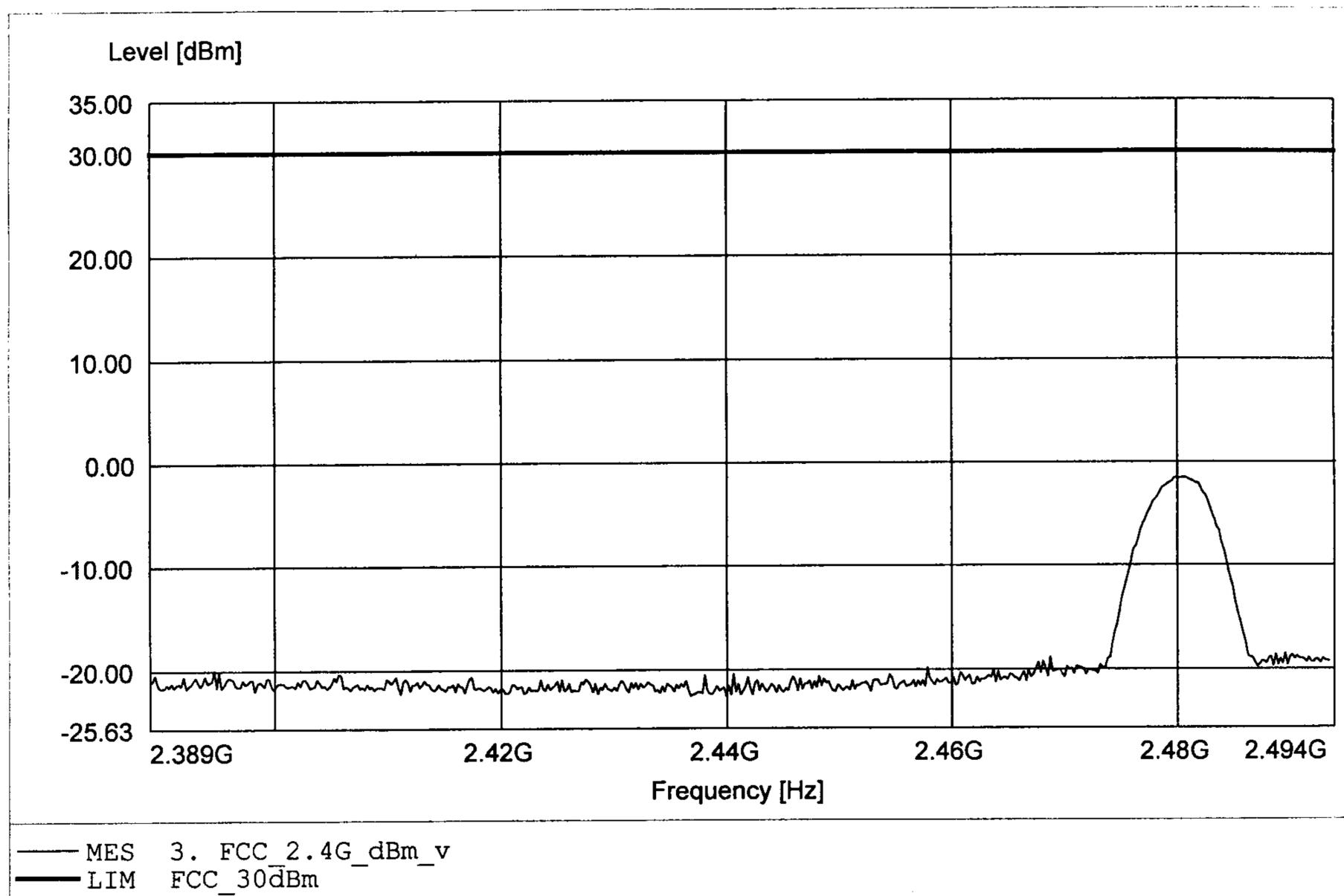
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025
Comment 2: Freq:2.441GHz Pmax:-1.62dBm RBW:5MHz



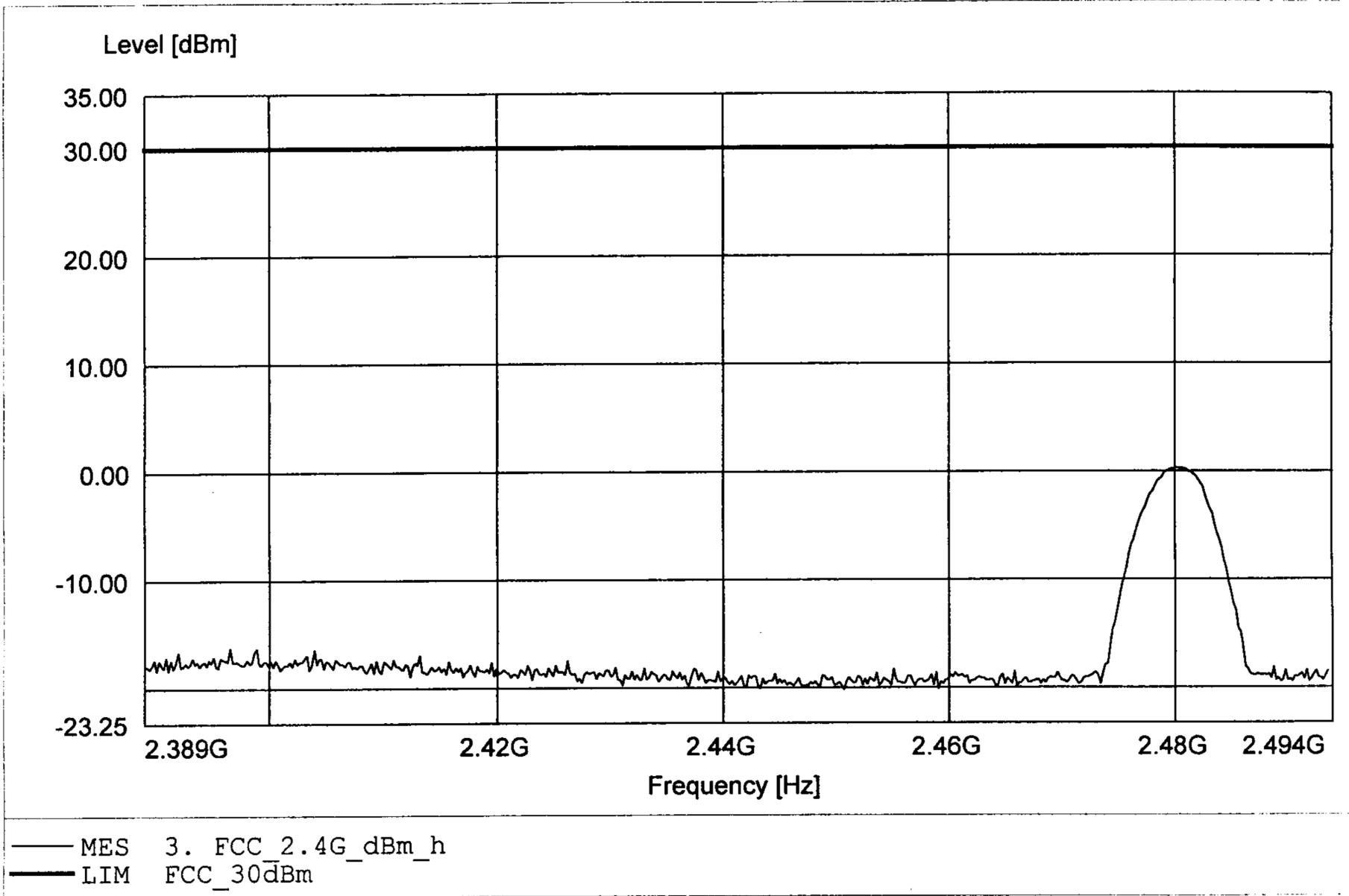
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2480 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.481GHz Pmax:-1.48dBm RBW:5MHz



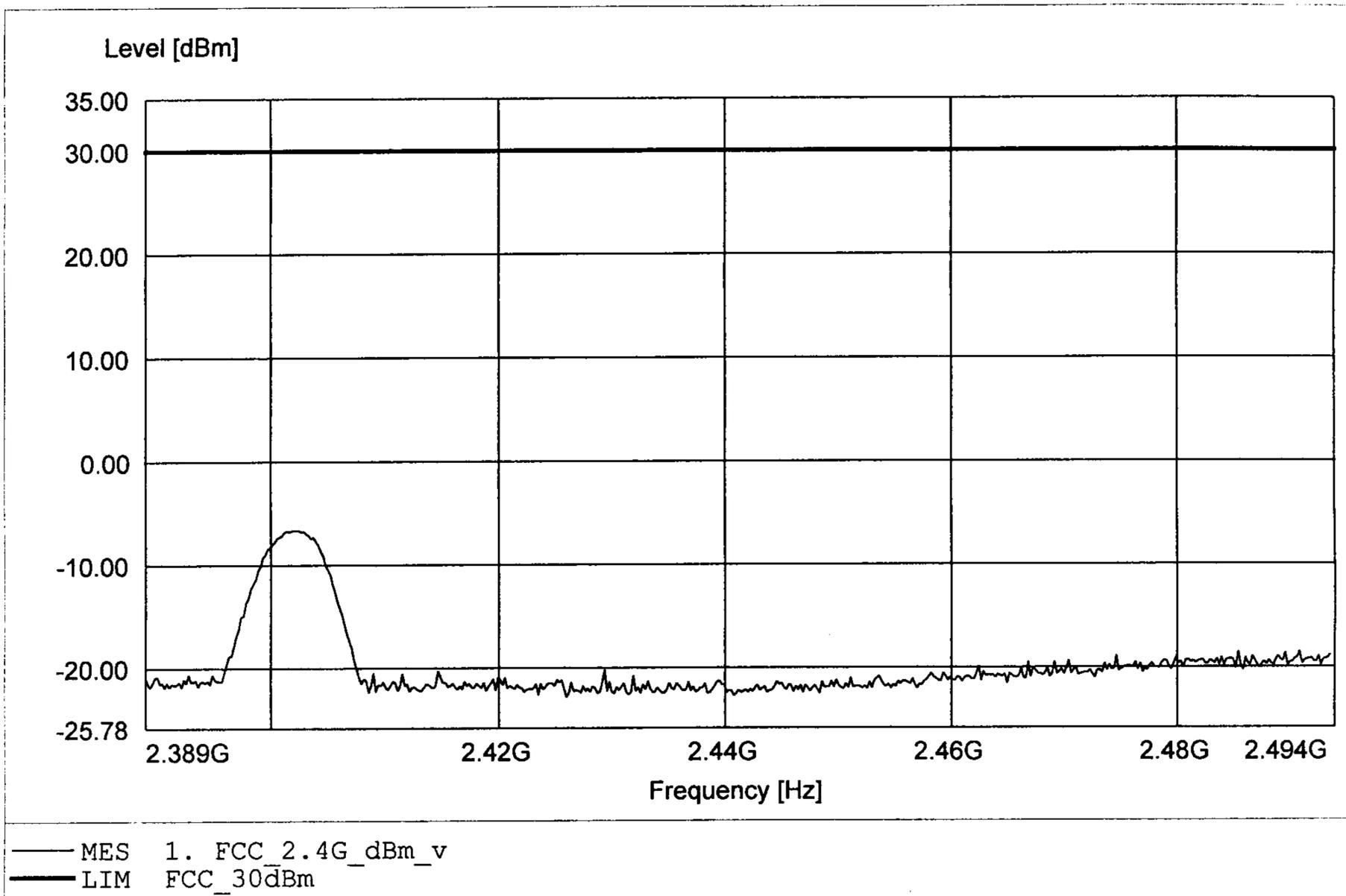
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Umax= 120V AC -15% (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025
Comment 2: Freq:2.480GHz Pmax:0.32dBm RBW:5MHz



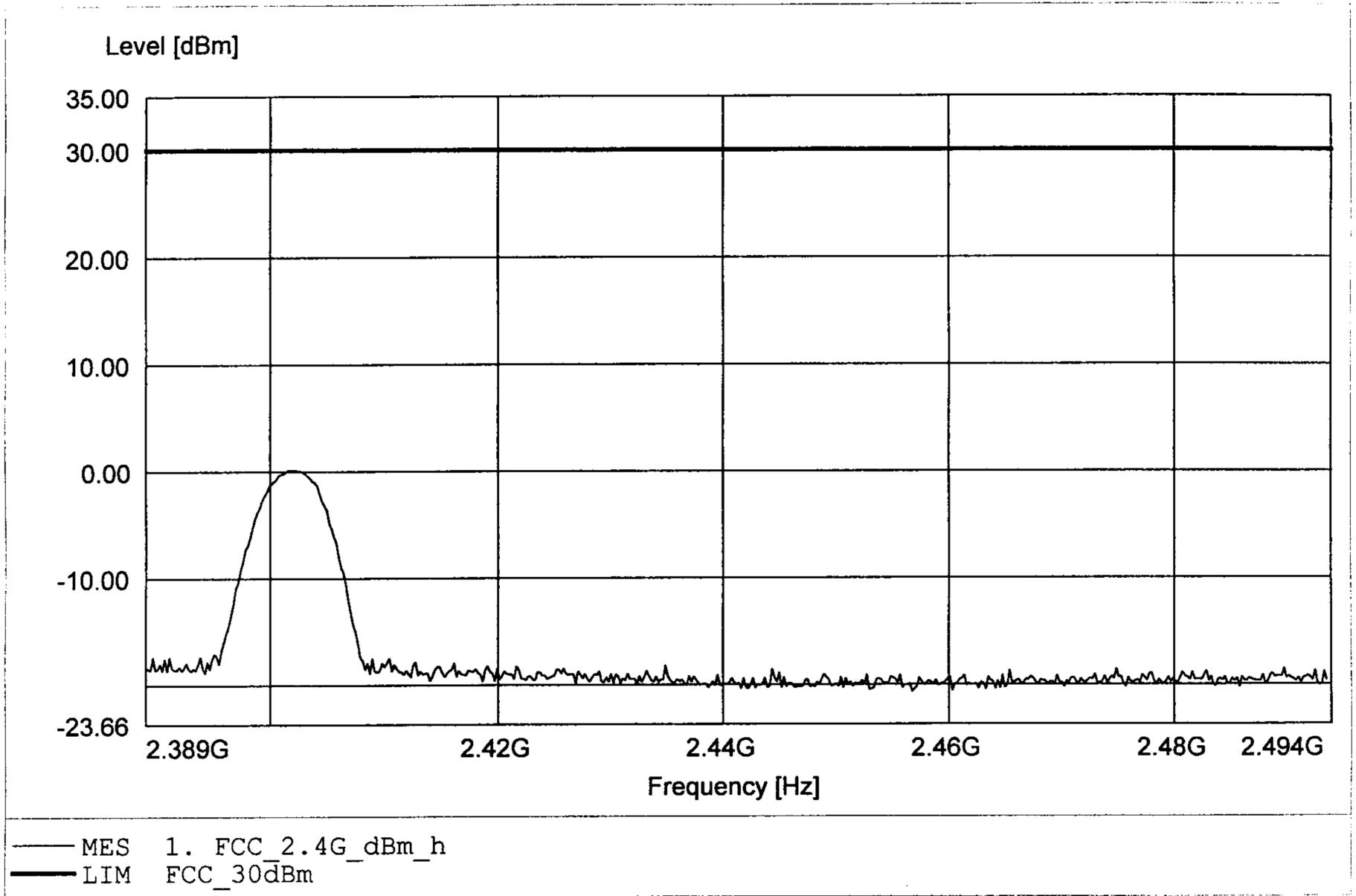
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2402 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.402GHz Pmax:-6.64dBm RBW:5MHz



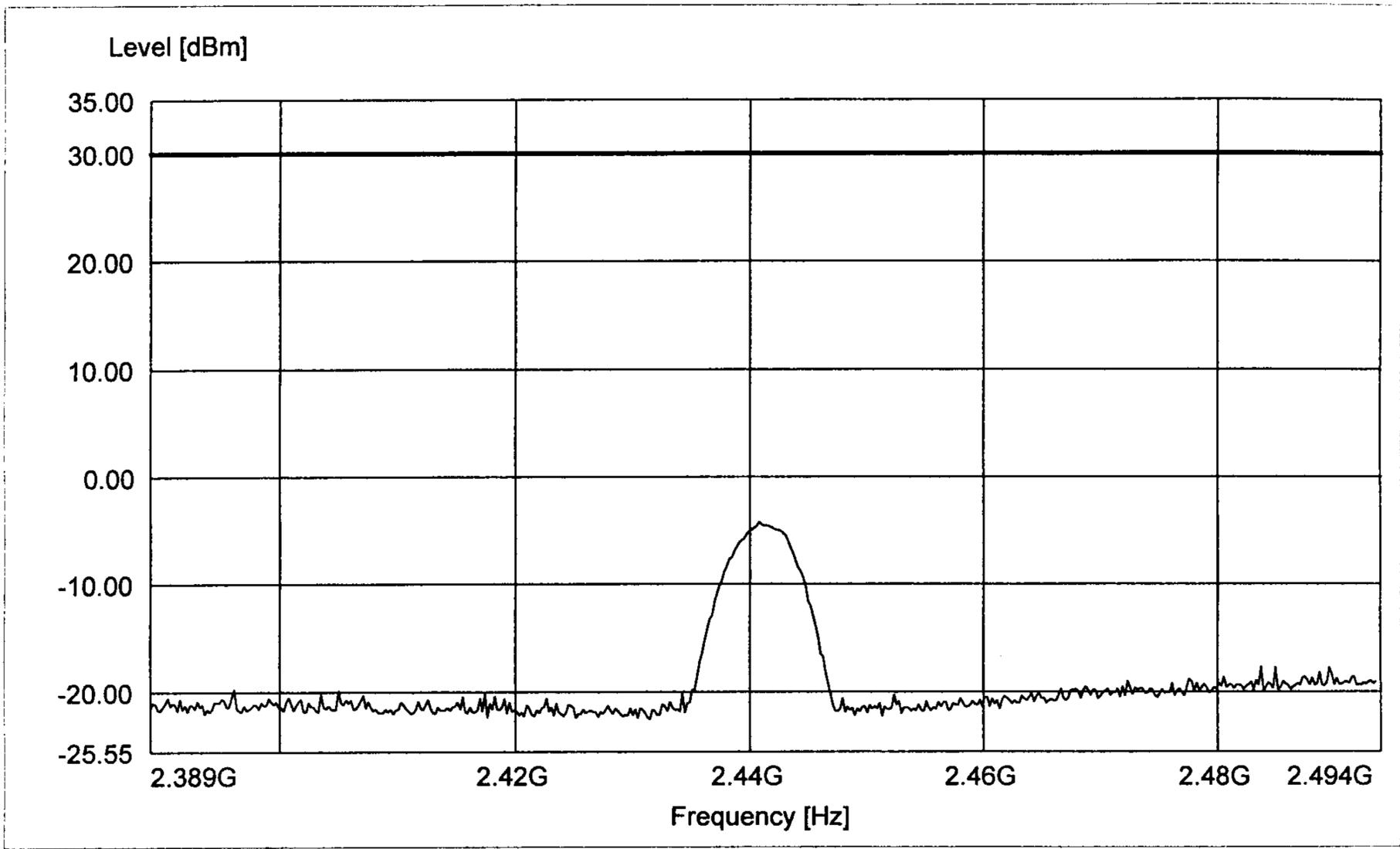
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2402 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.402GHz Pmax:0.16dBm RBW:5MHz



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

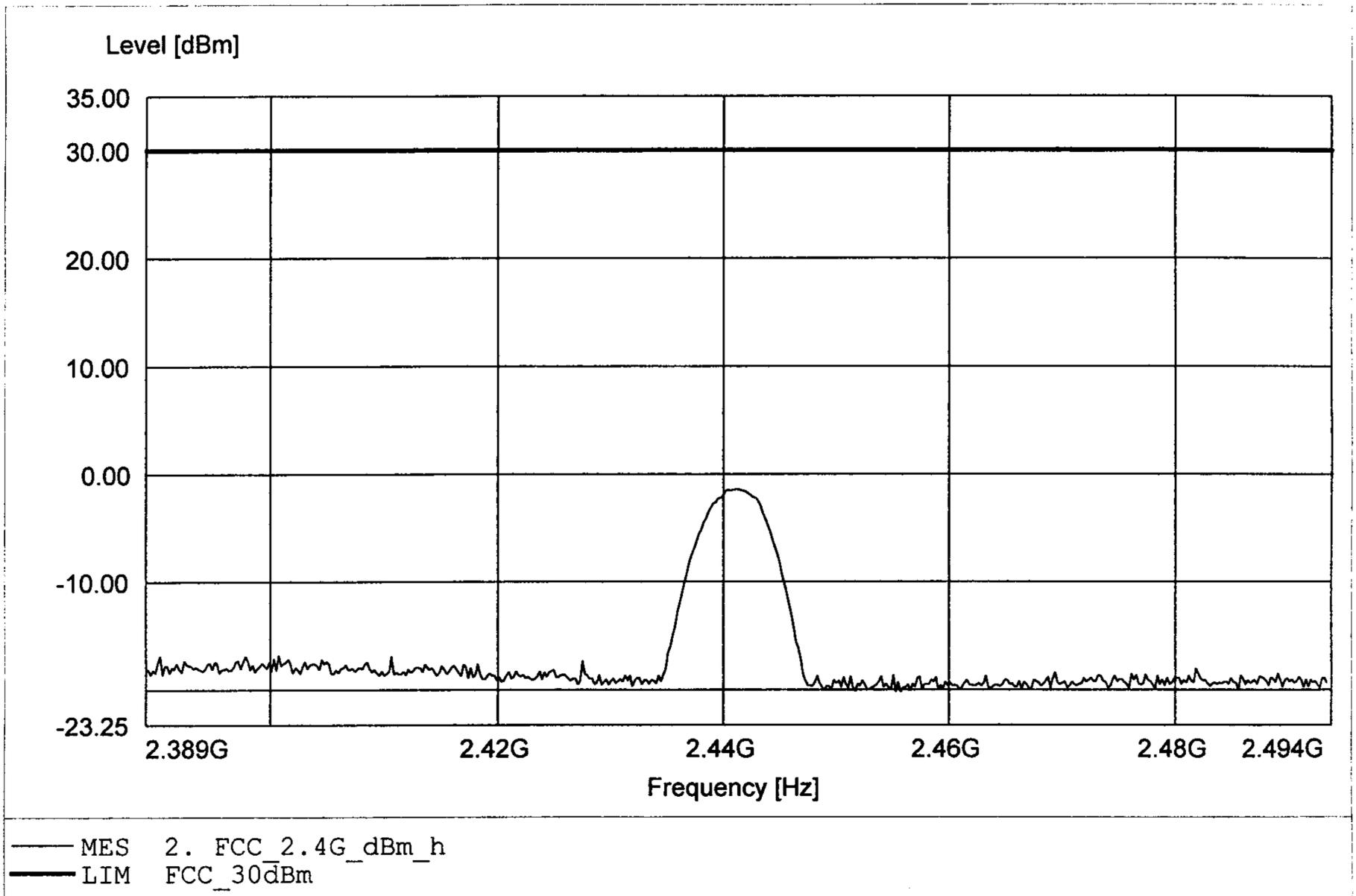
EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2441 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.441GHz Pmax:-4.22dBm RBW:5MHz



— MES 2. FCC_2.4G_dBm_v
 — LIM FCC_30dBm

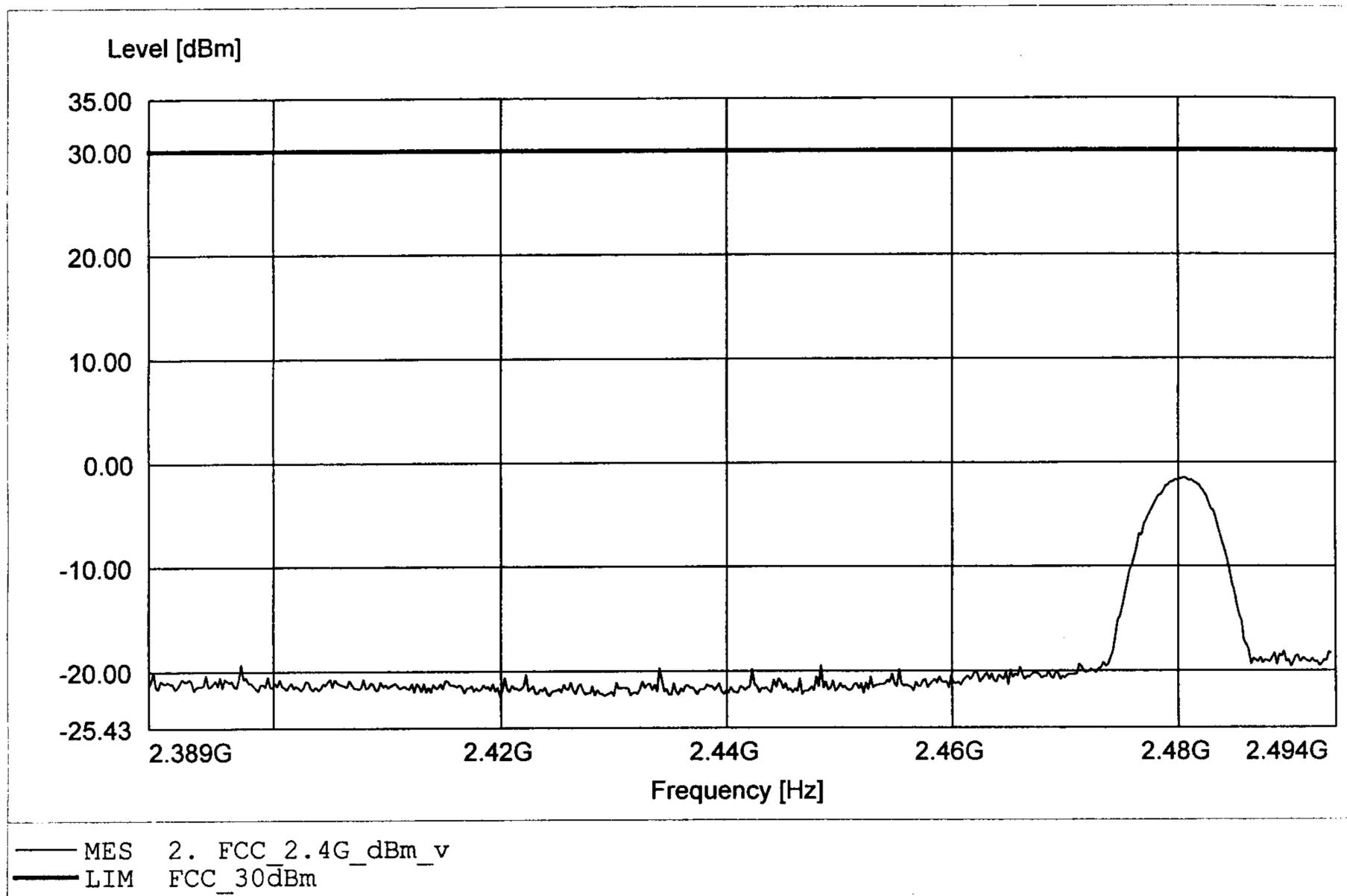
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025
Comment 2: Freq:2.441GHz Pmax:-1.43dBm RBW:5MHz



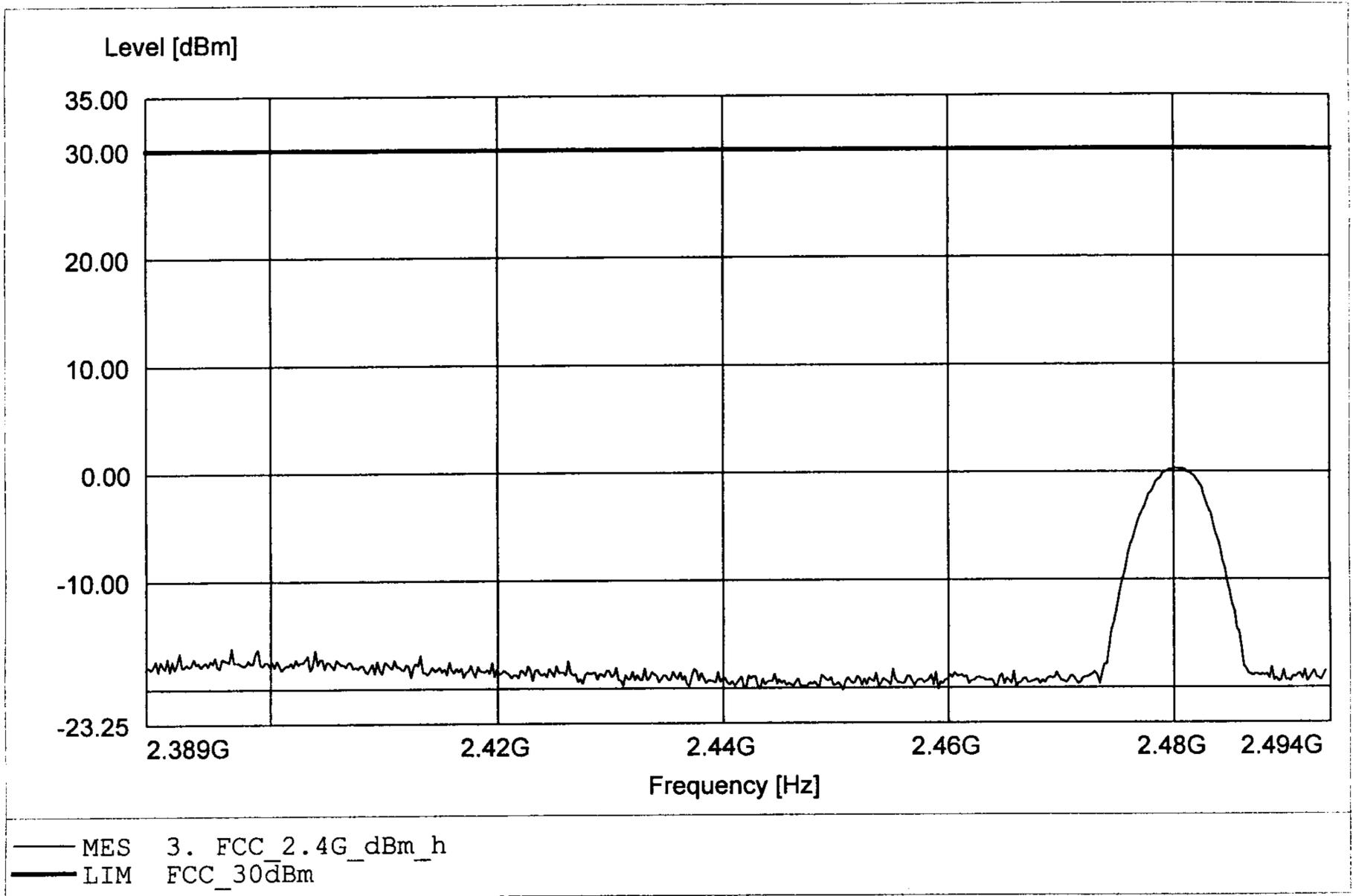
Carrier power (dBm)
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2480 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.481GHz Pmax:-1.48dBm RBW:5MHz



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

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
 Applicant: SONY Corporation
 Model: BTA-NW1 (Tx 2480 MHz)
 Temperature/ Voltage: t nom=25°C / Umax= 120V AC +15% (adaptor AC/DC 6V)
 Test Site / Operator: ETS / Mr. Treffke
 Test Specification: according to § 15.247
 Comment 1: Dist.: 3m, Ant.: HL025
 Comment 2: Freq:2.480GHz Pmax:0.26dBm RBW:5MHz



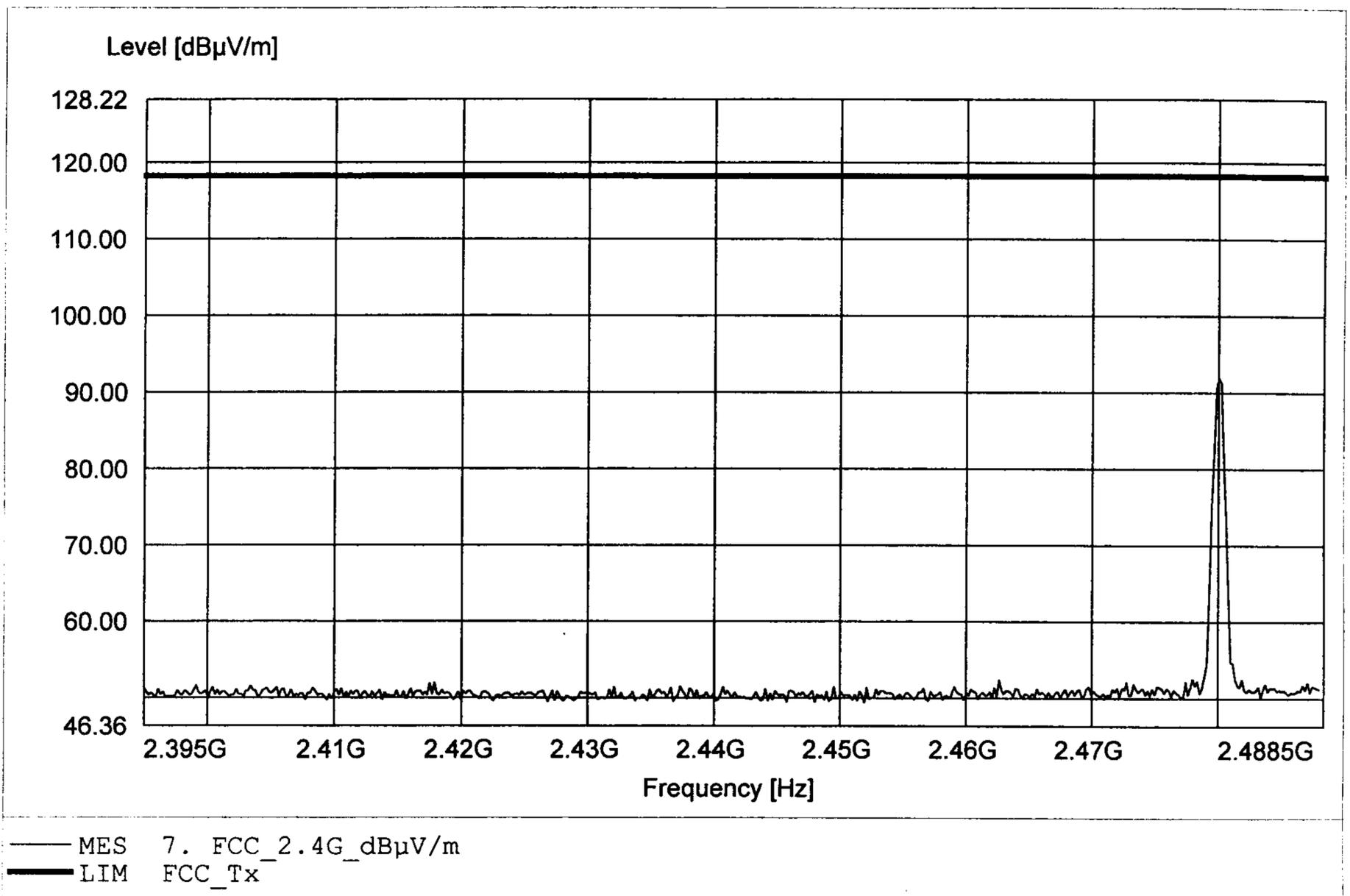


Appendix C

Spurious Emissions radiated - Transmitter operating

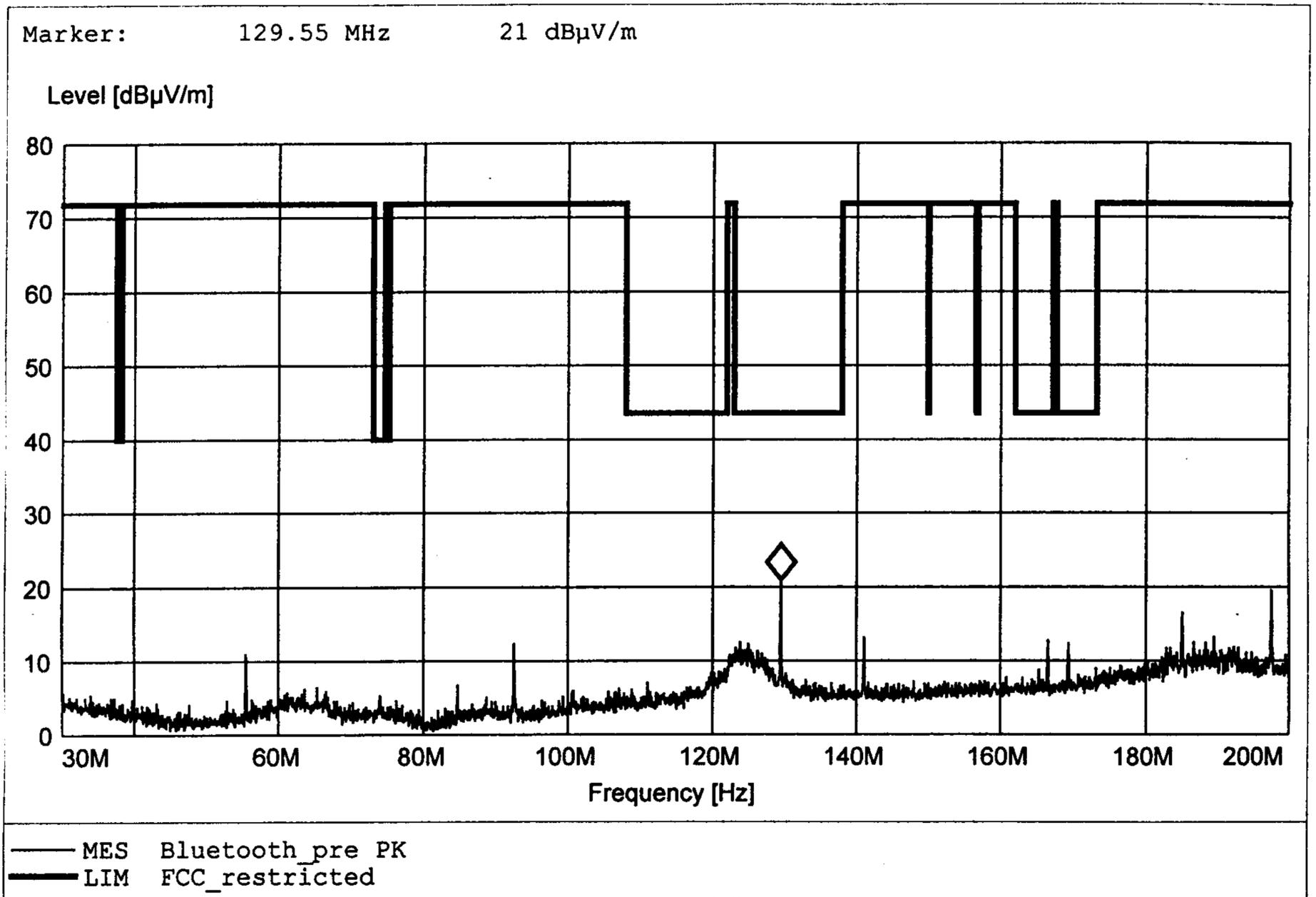
**Carrier power Field Strength
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D
Comment 2: Freq:2.480GHz Emax:91.86dBµV/m RBW:1MHz



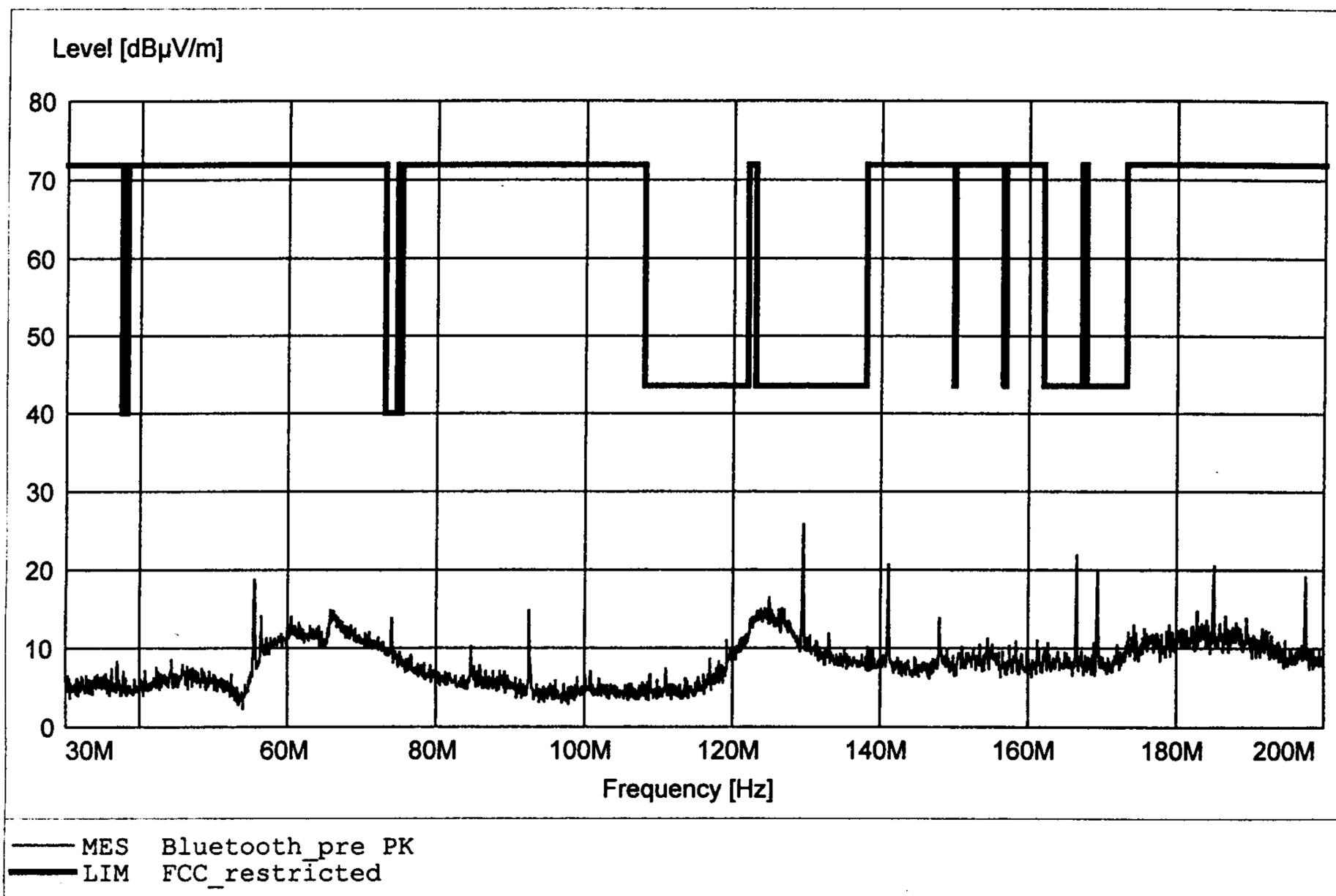
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, horizontal
Comment: BTA-NW1 (Tx2480 MHz)



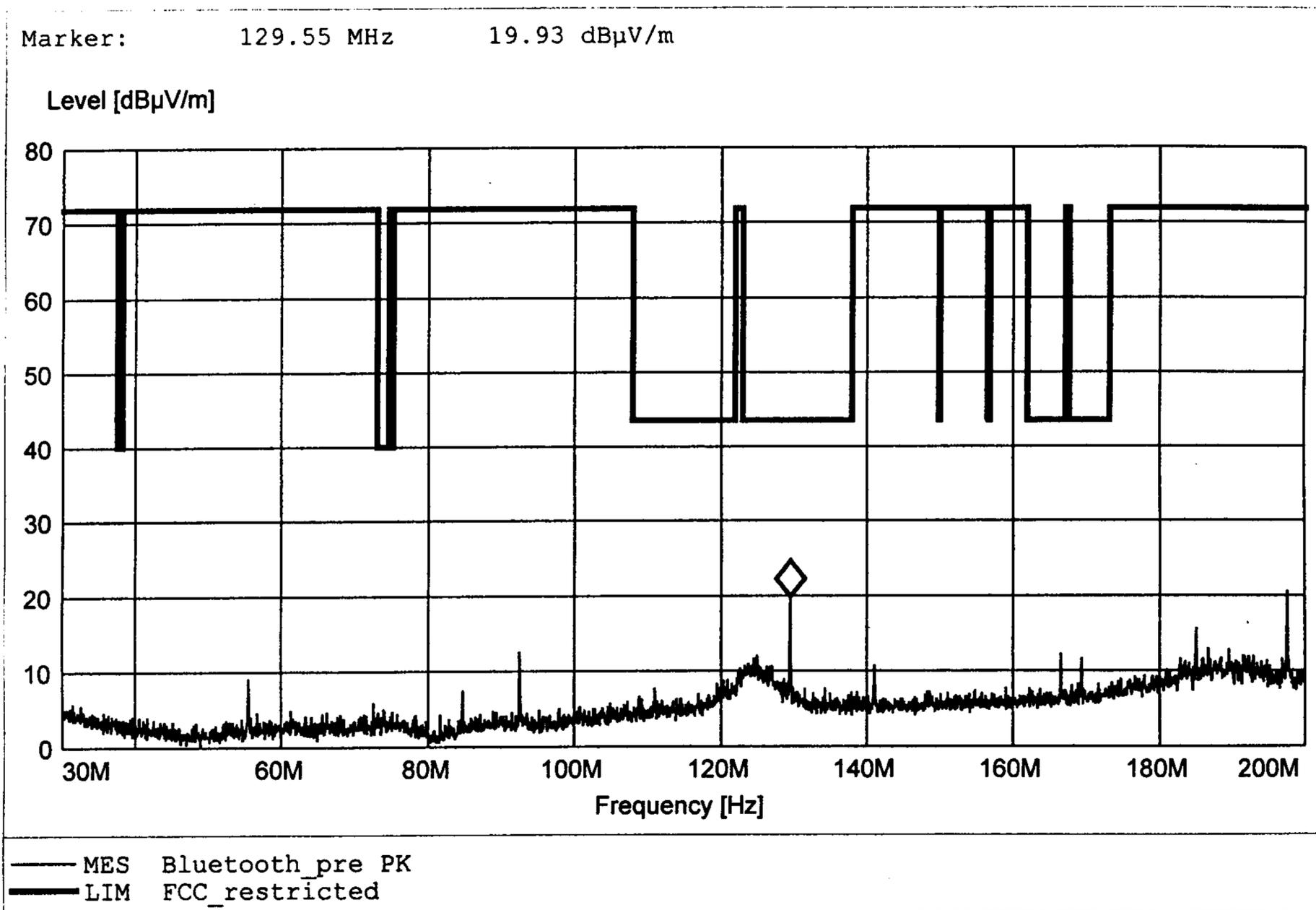
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, vertical
Comment: BTA-NW1 (Tx2480 MHz)



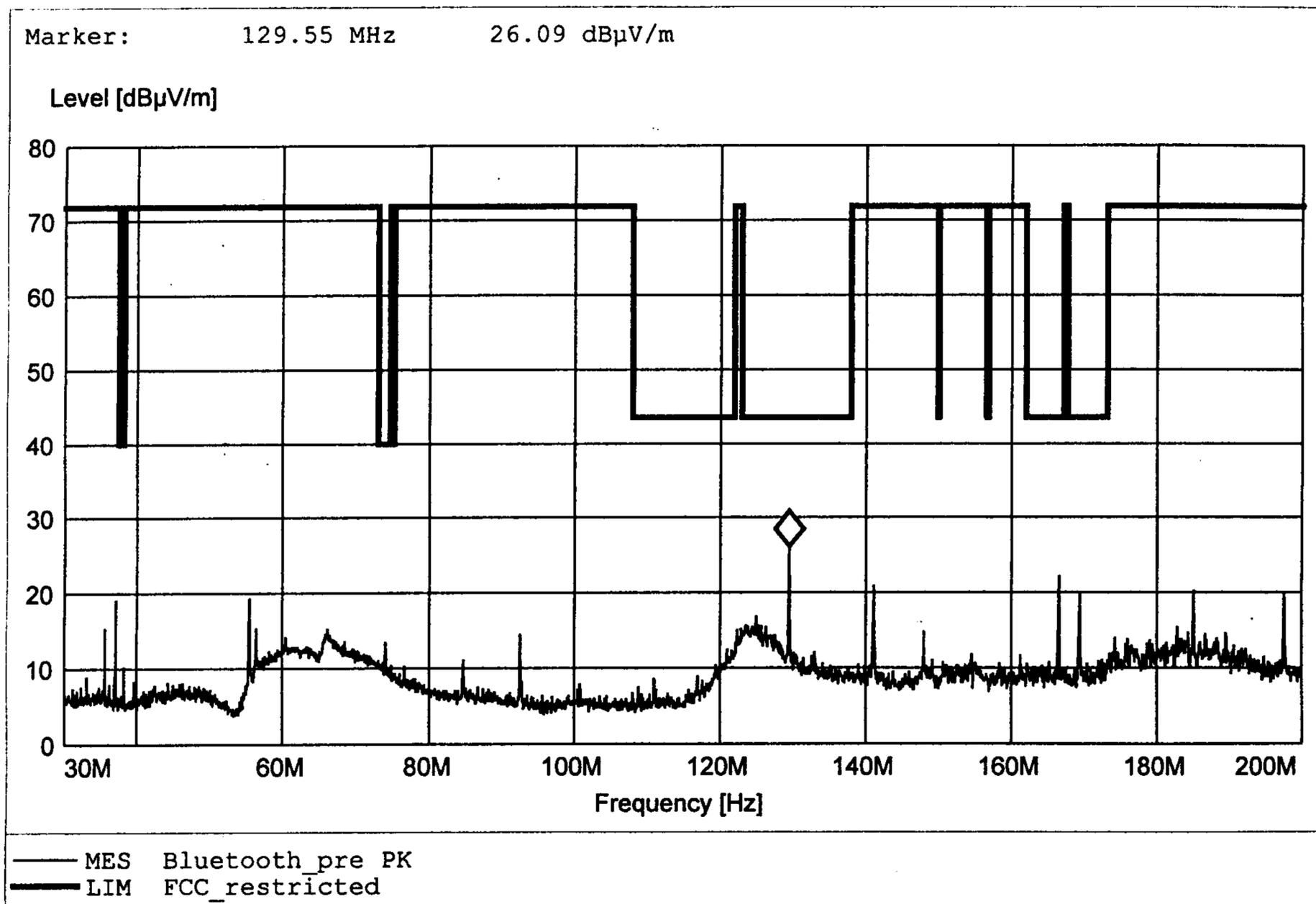
Spurious emission under normal conditions according to FCC part 15.247

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, horizontal
Comment: BTA-NW1 (Tx2441 MHz)



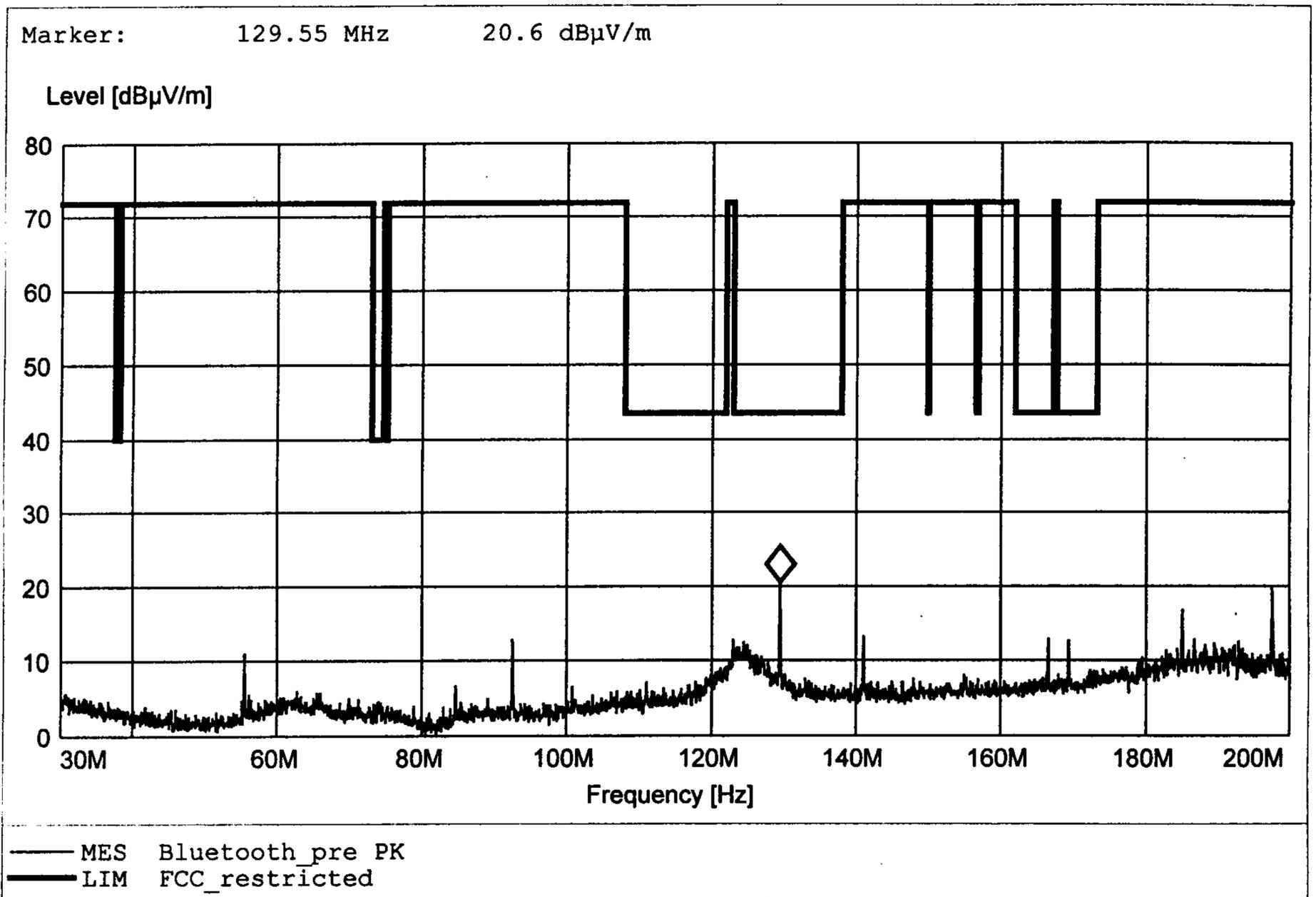
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, vertical
Comment: BTA-NW1 (Tx2441 MHz)



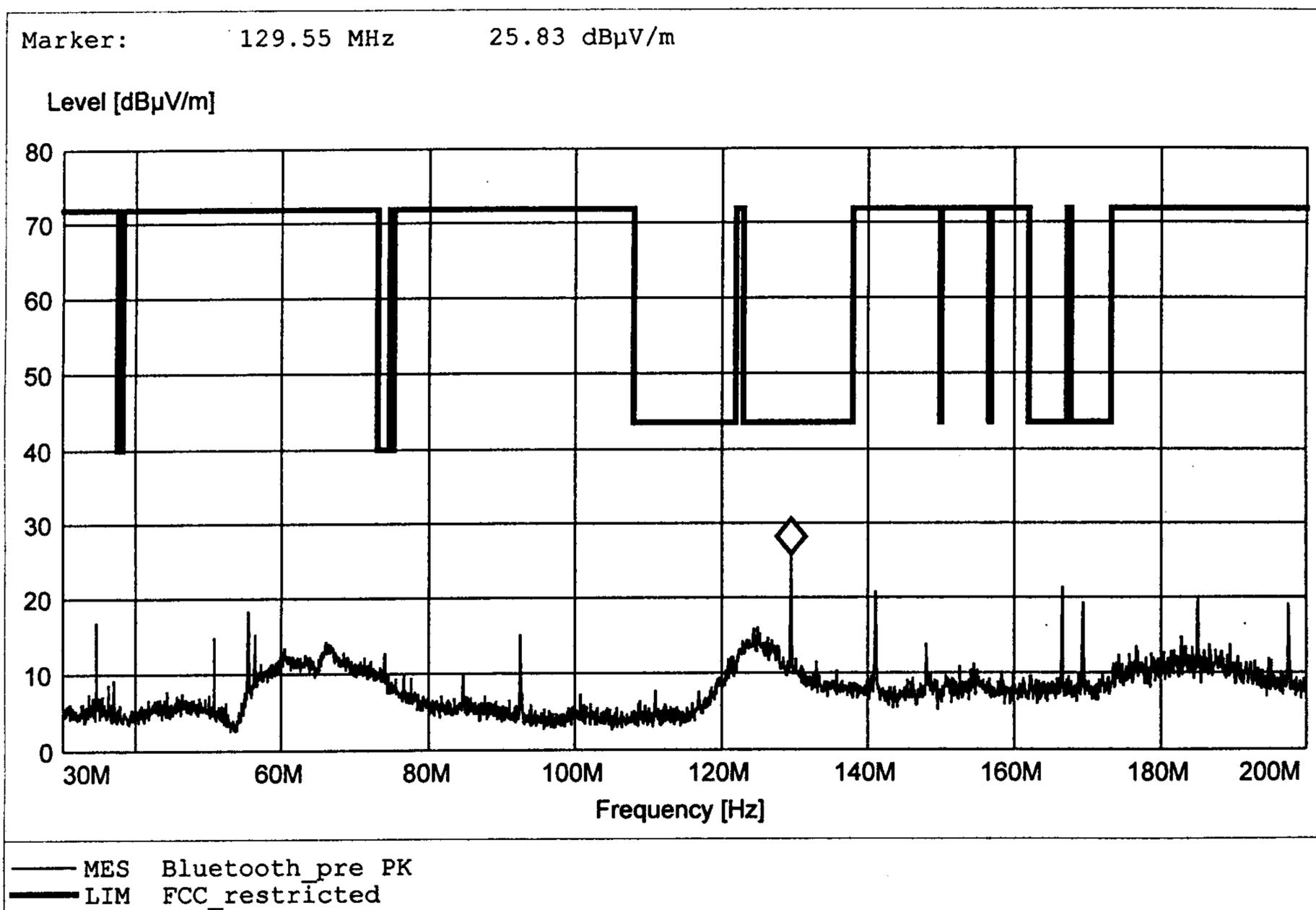
Spurious emission under normal conditions according to FCC part 15.247

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, horizontal
Comment: BTA-NW1 (Tx2402 MHz)



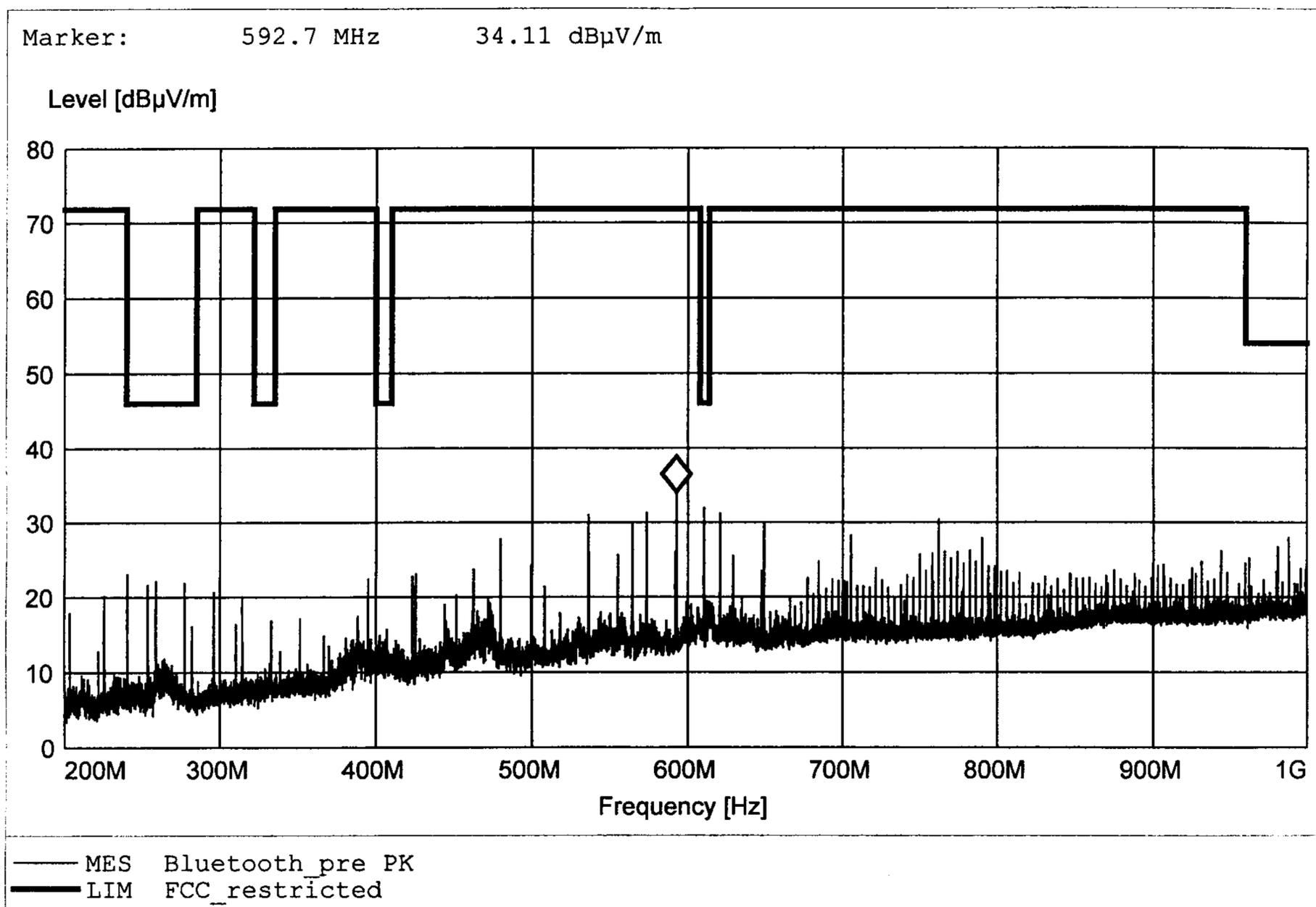
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HK 116, vertical
Comment: BTA-NW1 (Tx2402 MHz)



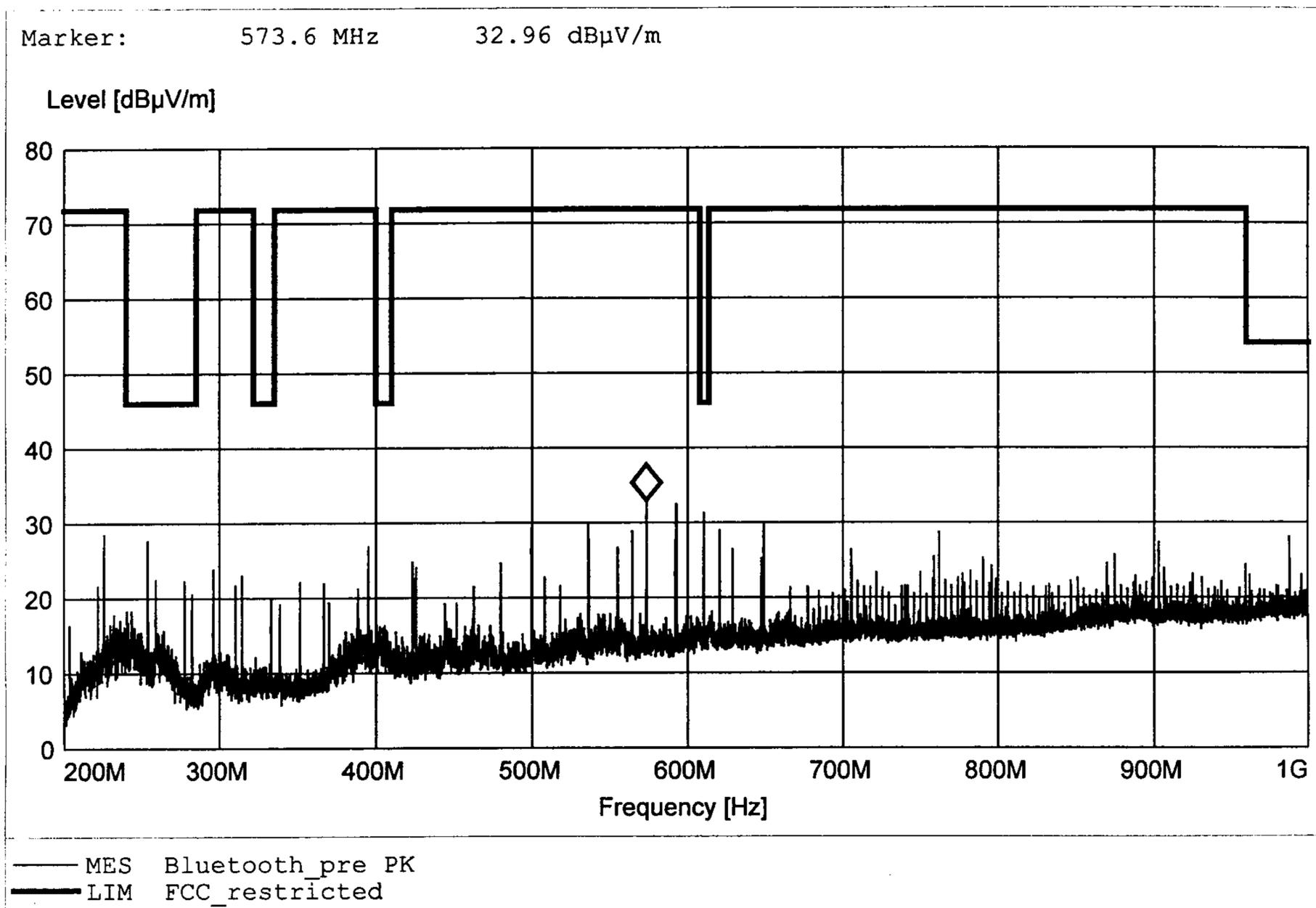
Spurious emission under normal conditions according to FCC part 15.247

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, horizontal
Comment: BTA-NW1 (Tx2402 MHz)



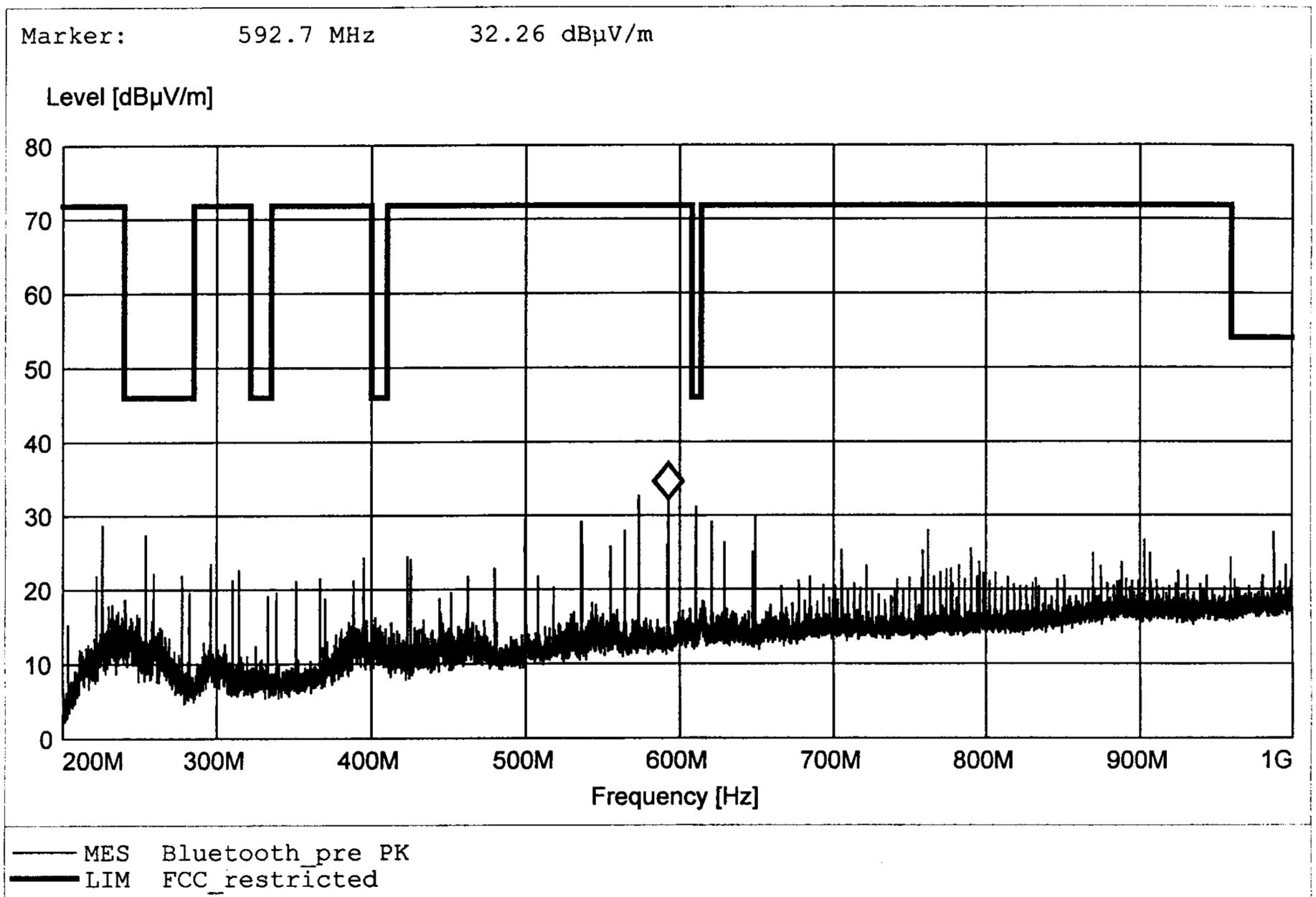
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, vertical
Comment: BTA-NW1



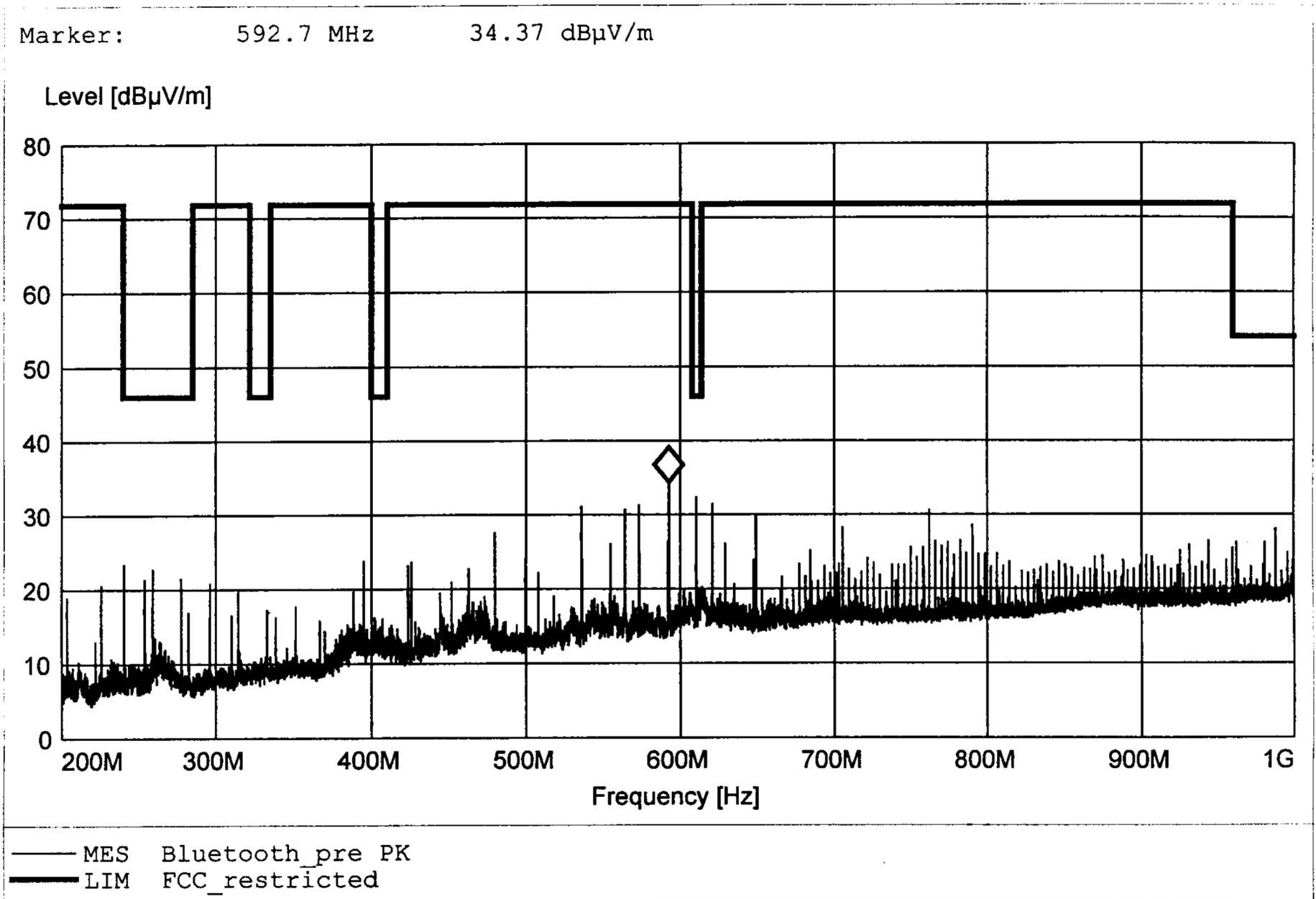
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, vertical
Comment: BTA-NW1 (Tx2441 MHz)



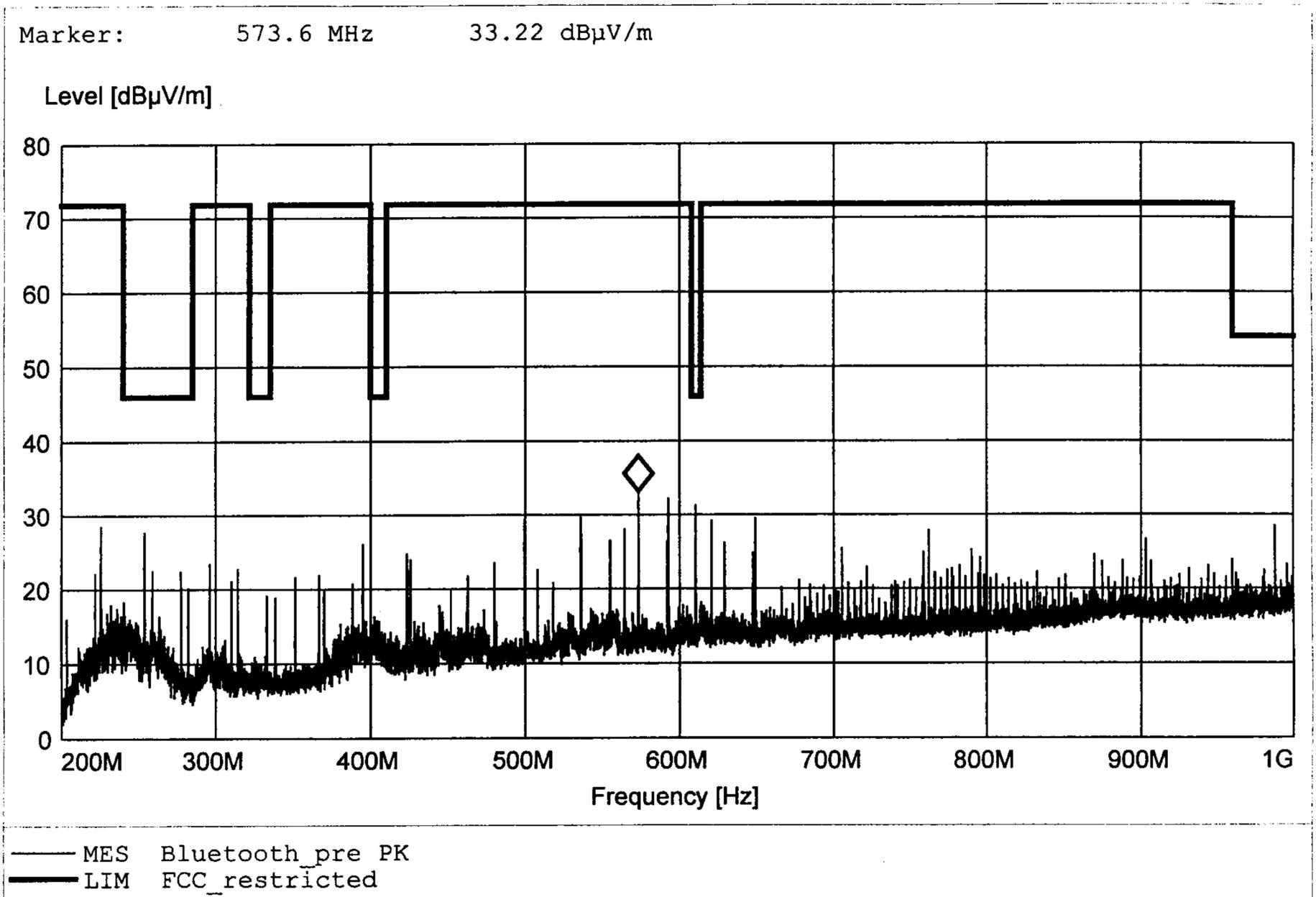
**Spurious emission under normal conditions
according to FCC part 15.247**

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, horizontal
Comment: BTA-NW1 (Tx2441 MHz)



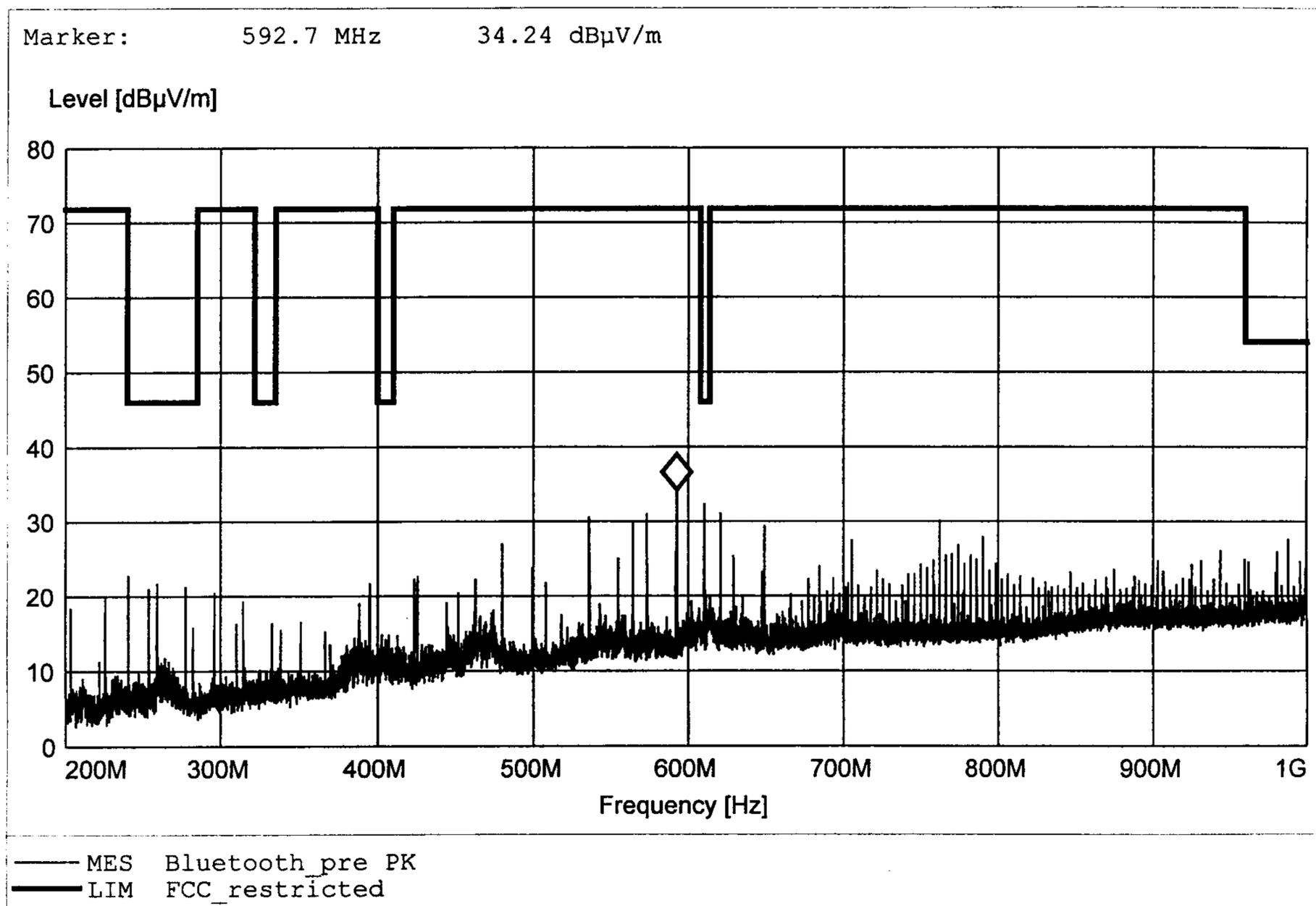
Spurious emission under normal conditions according to FCC part 15.247

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, vertical
Comment: BTA-NW1 (Tx2480 MHz)



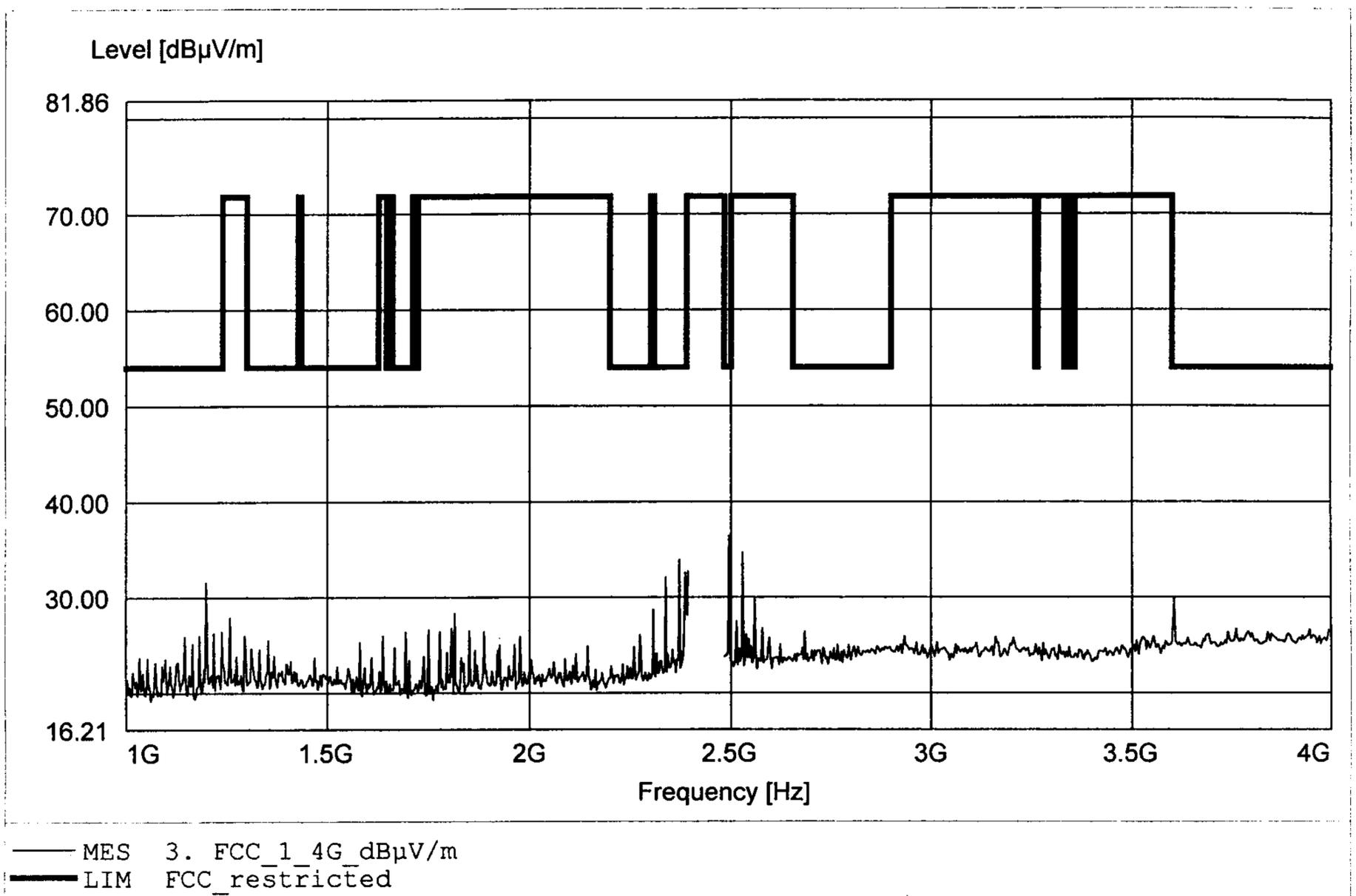
Spurious emission under normal conditions according to FCC part 15.247

EUT: MODEM ADAPTER with BLUETOOTH FUNKTION
Manufacturer: SONY Corporation
Operating Condition: Unom: 120V AC, Tnom:25°C
Test Site: ETS
Operator: Mr. Treffke
Test Specification: Ant: HL 223, horizontal
Comment: BTA-NW1 (Tx2480 MHz)



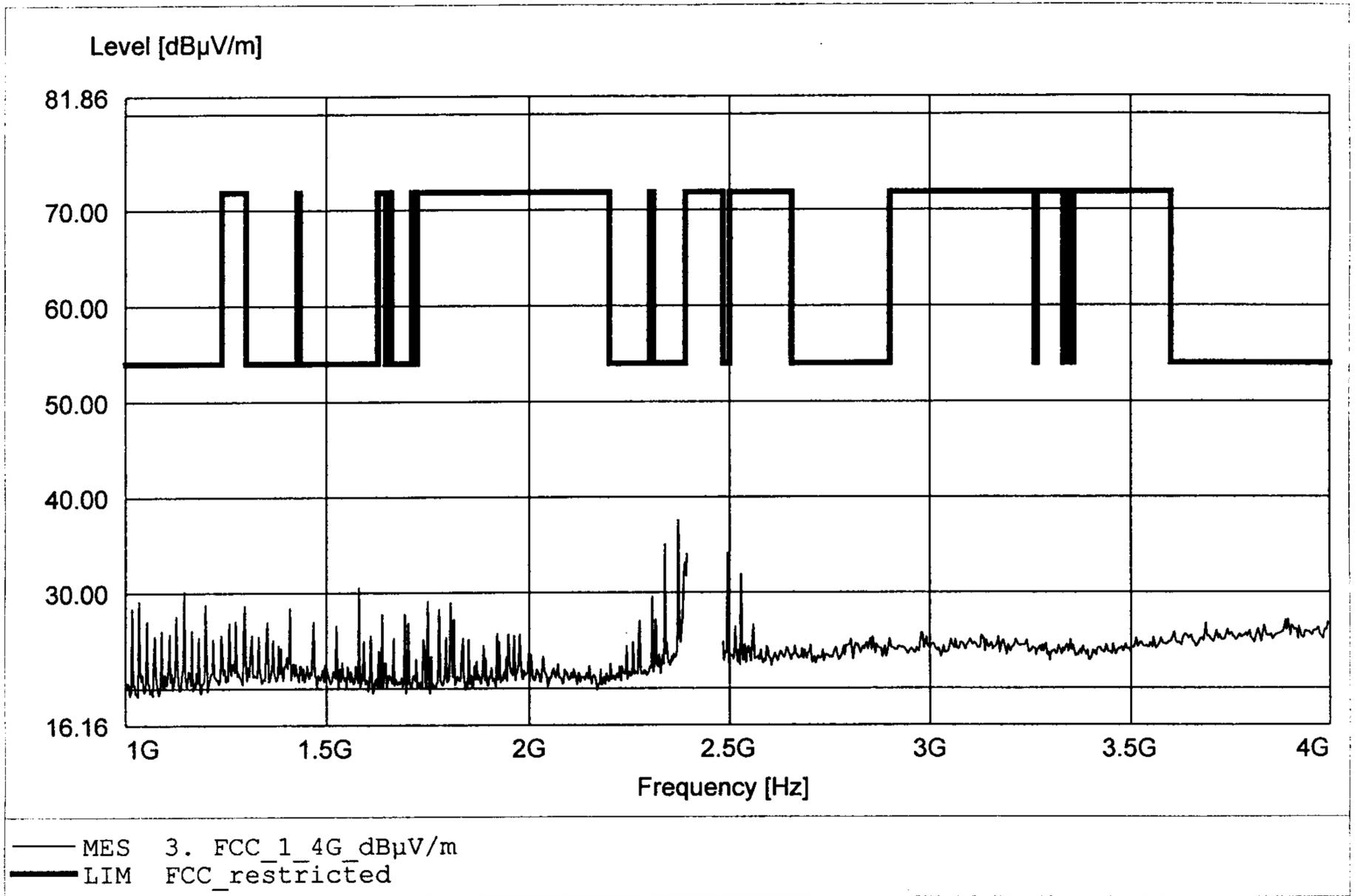
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.496GHz Emax:36.48dBµV/m RBW:1MHz



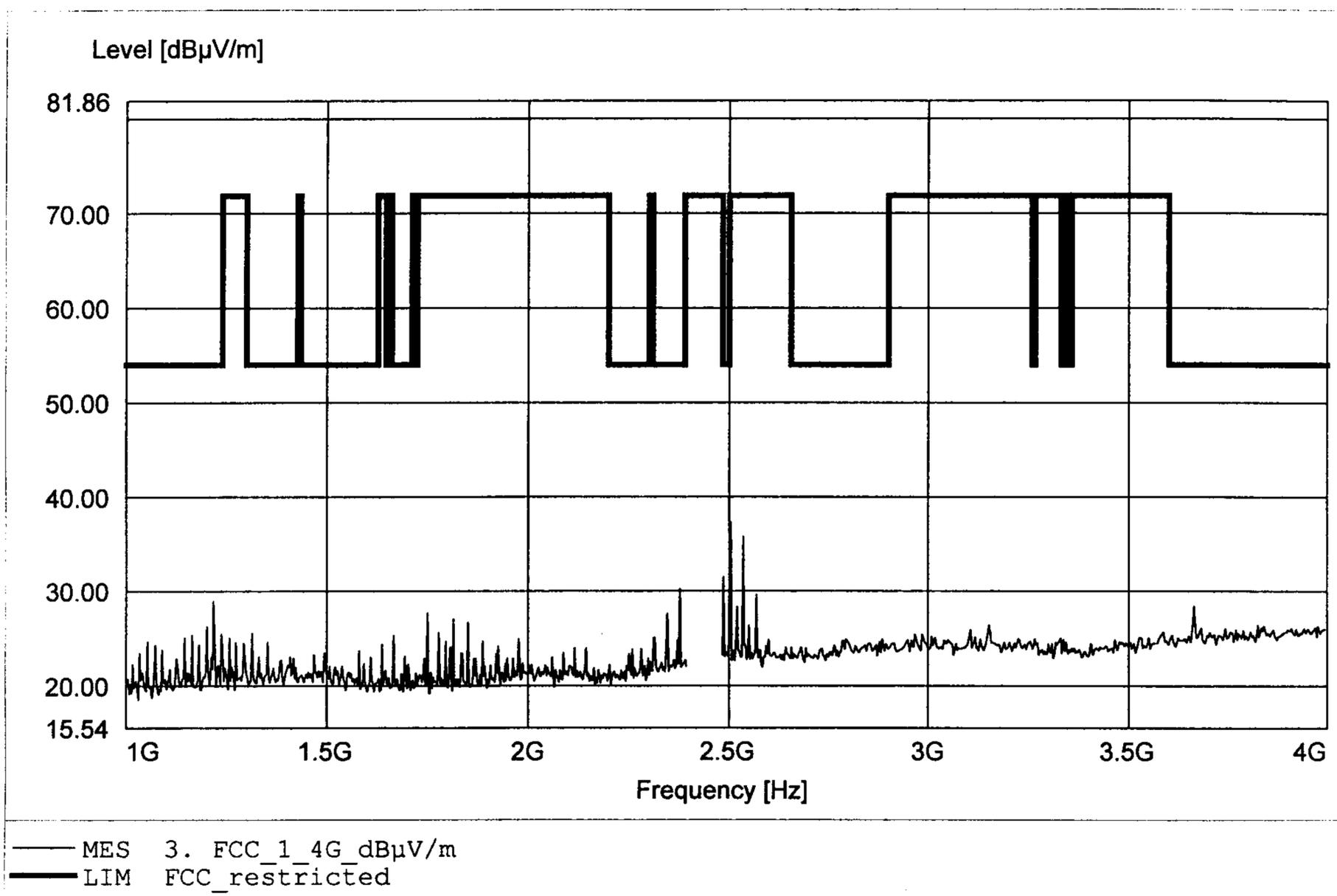
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.372GHz Emax:37.60dBµV/m RBW:1MHz



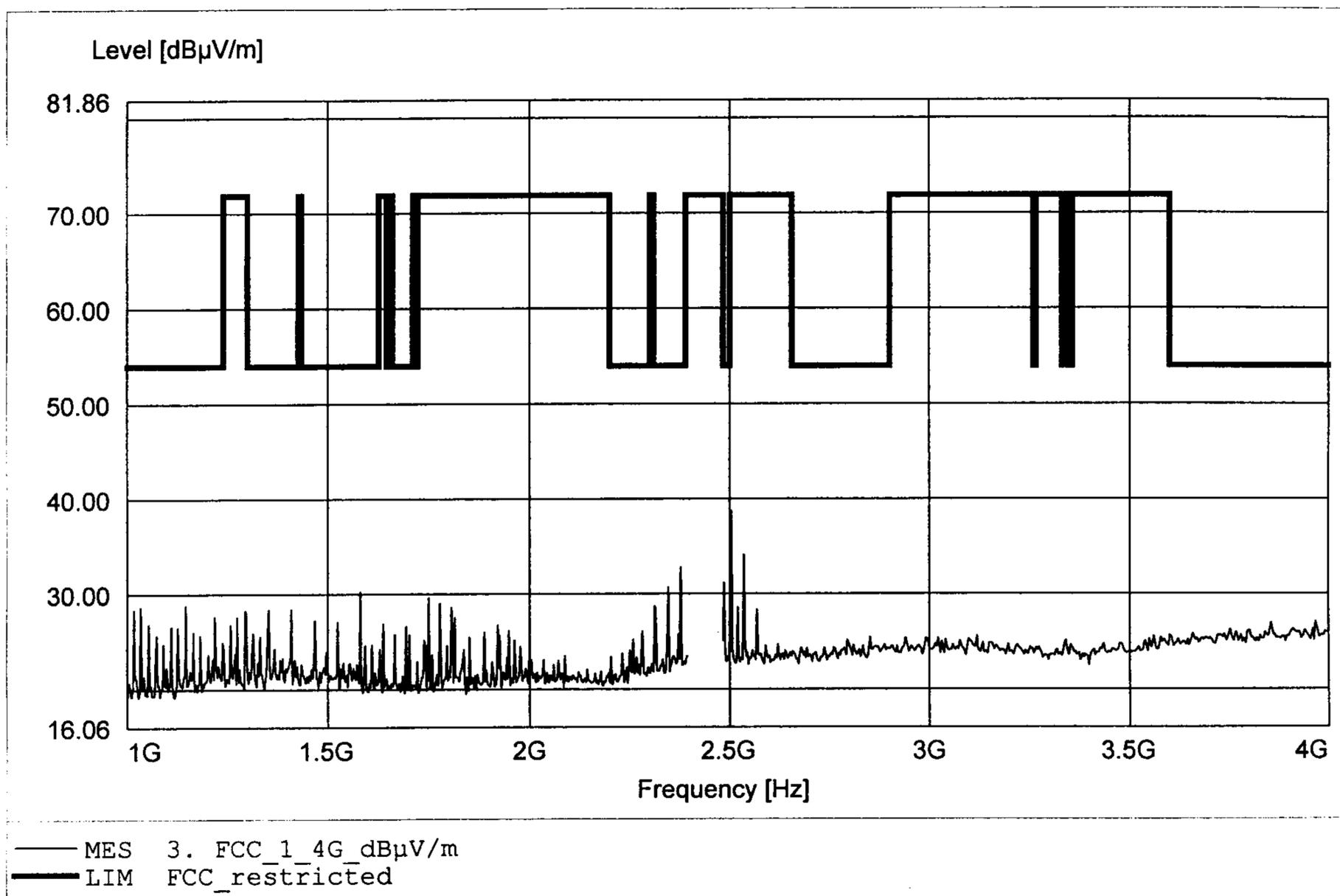
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.505GHz Emax:37.34dBµV/m RBW:1MHz



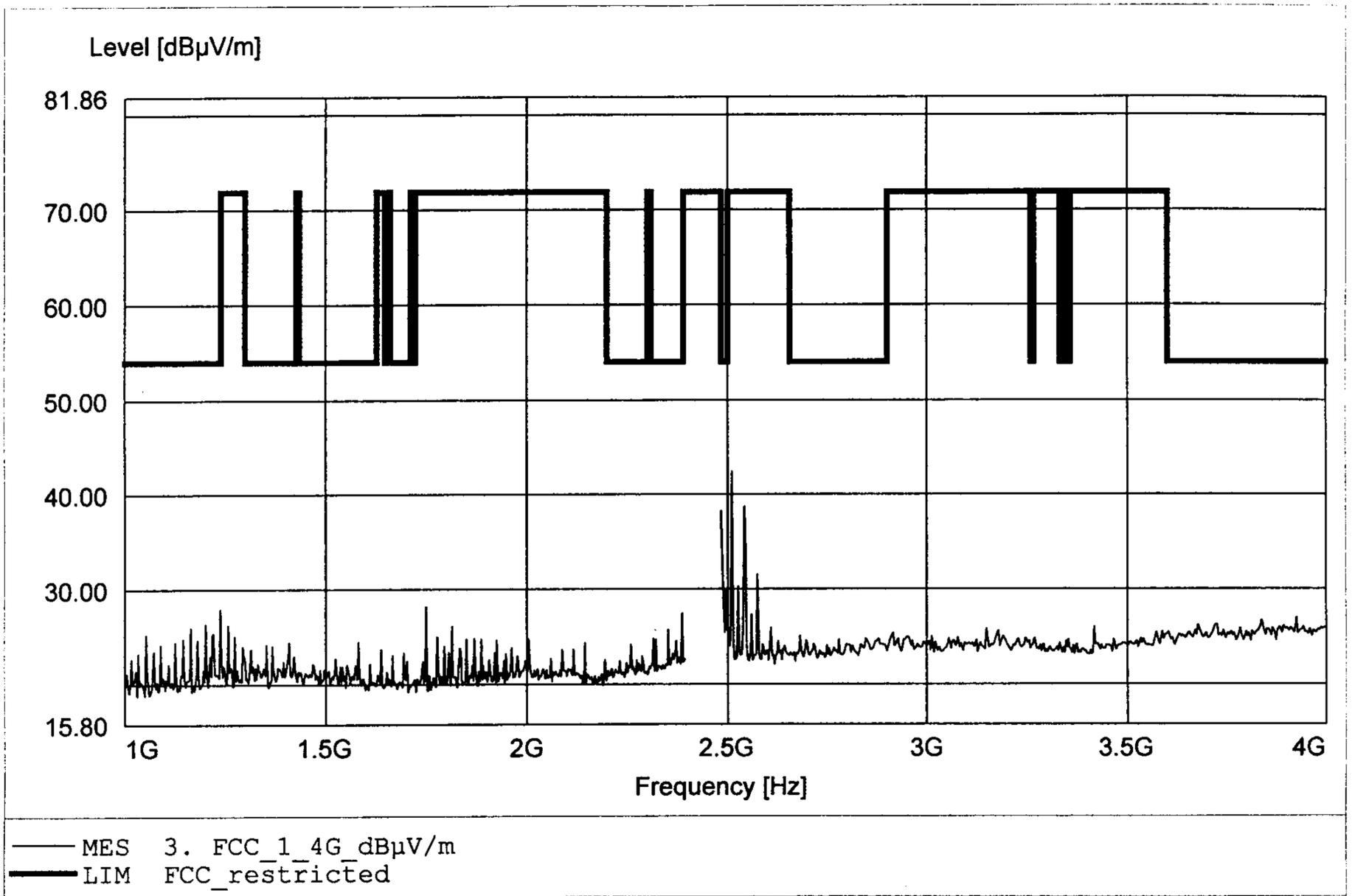
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.505GHz Emax:38.79dBµV/m RBW:1MHz



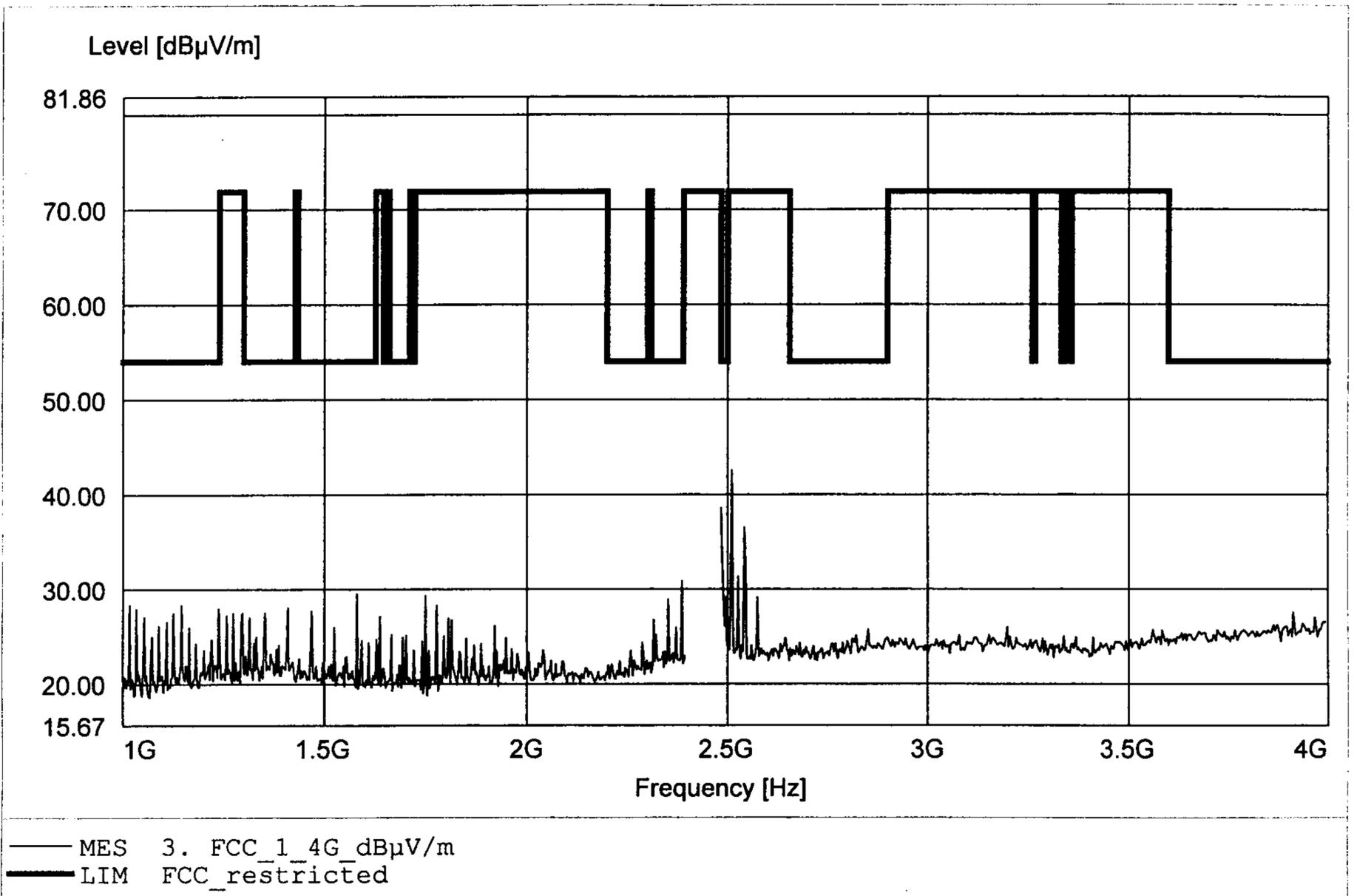
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.511GHz Emax:42.42dBµV/m RBW:1MHz



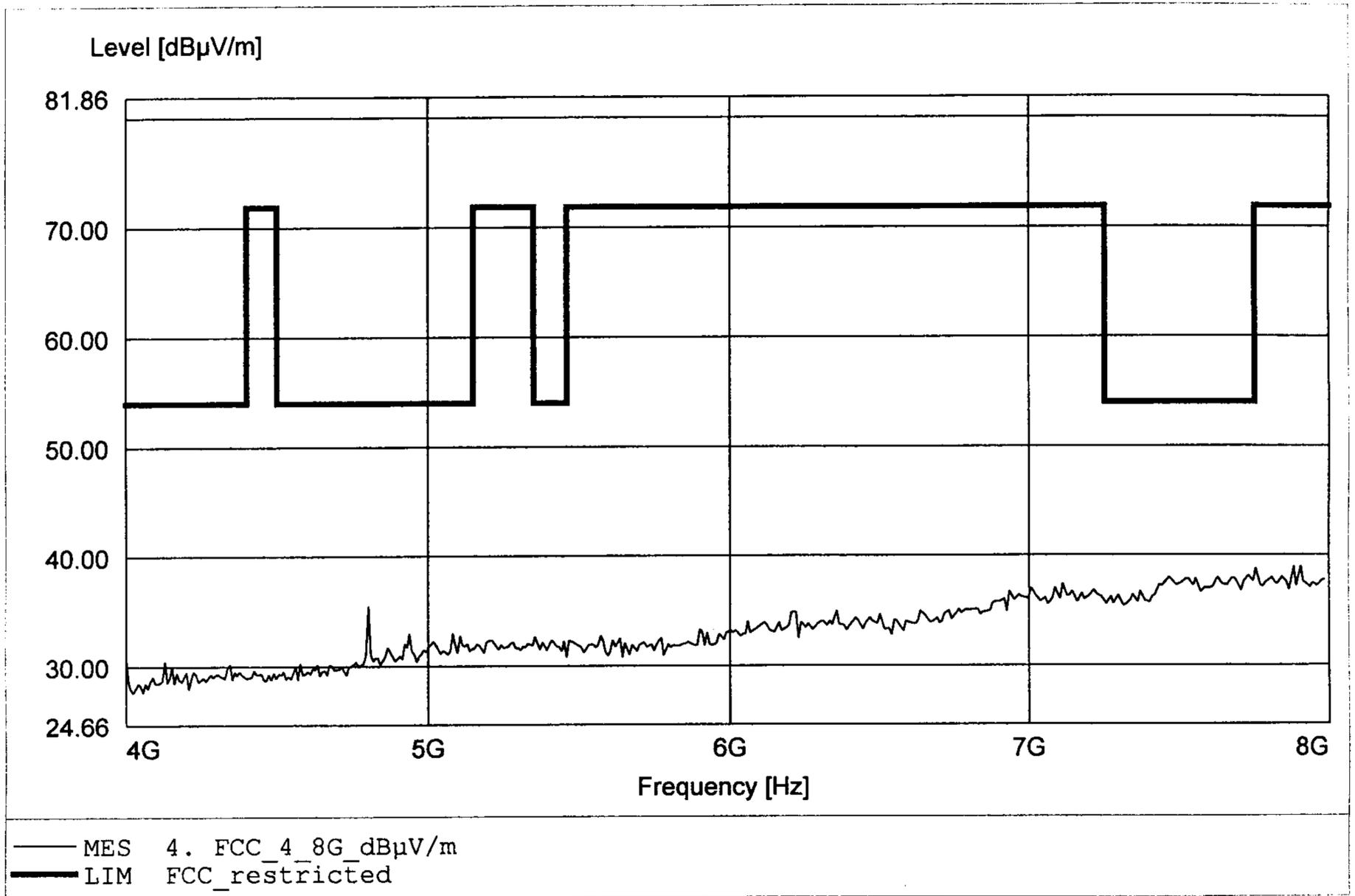
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:2.511GHz Emax:42.61dBµV/m RBW:1MHz



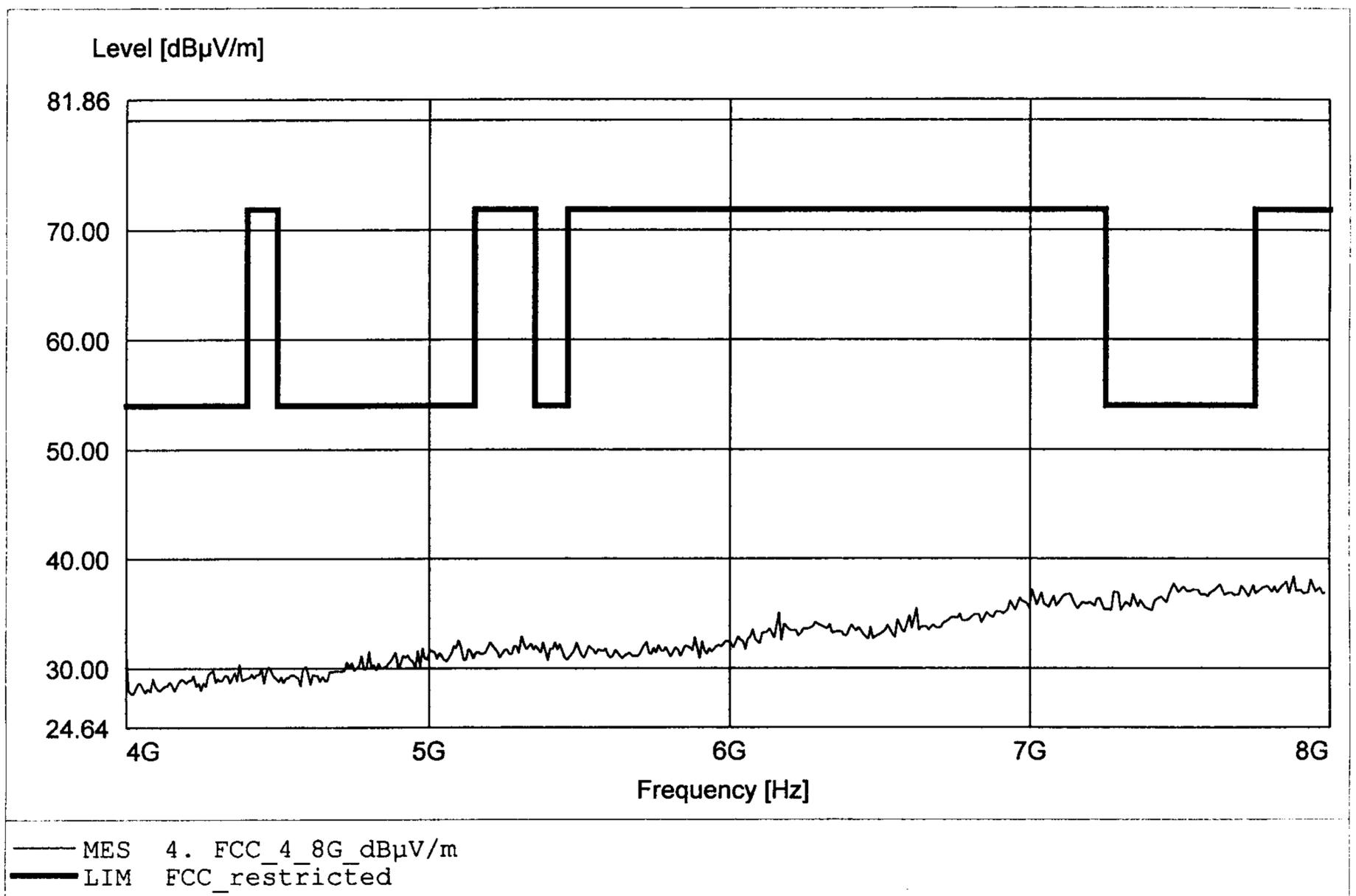
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:7.904GHz Emax:39.00dBµV/m RBW:1MHz



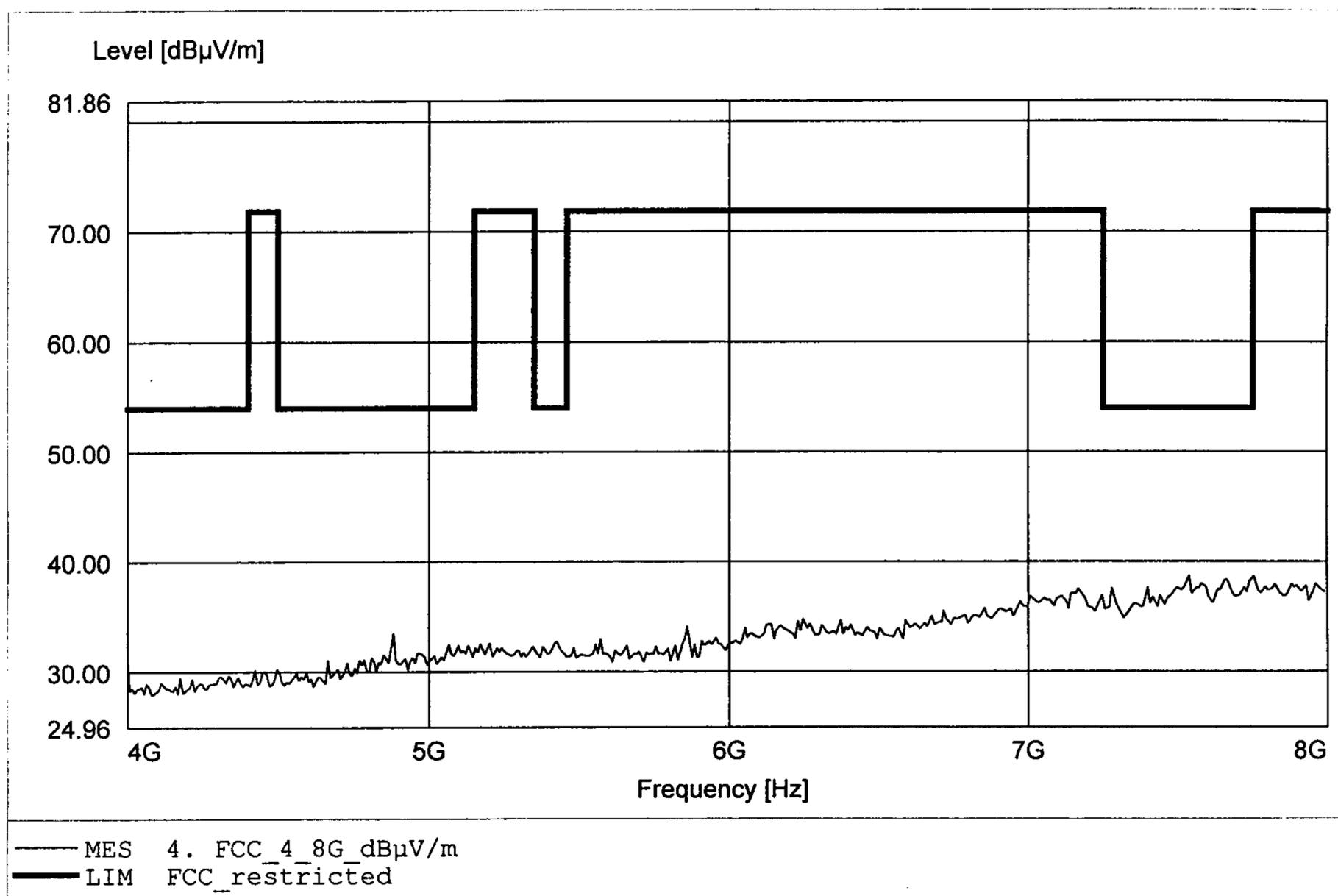
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:7.880GHz Emax:38.41dBµV/m RBW:1MHz



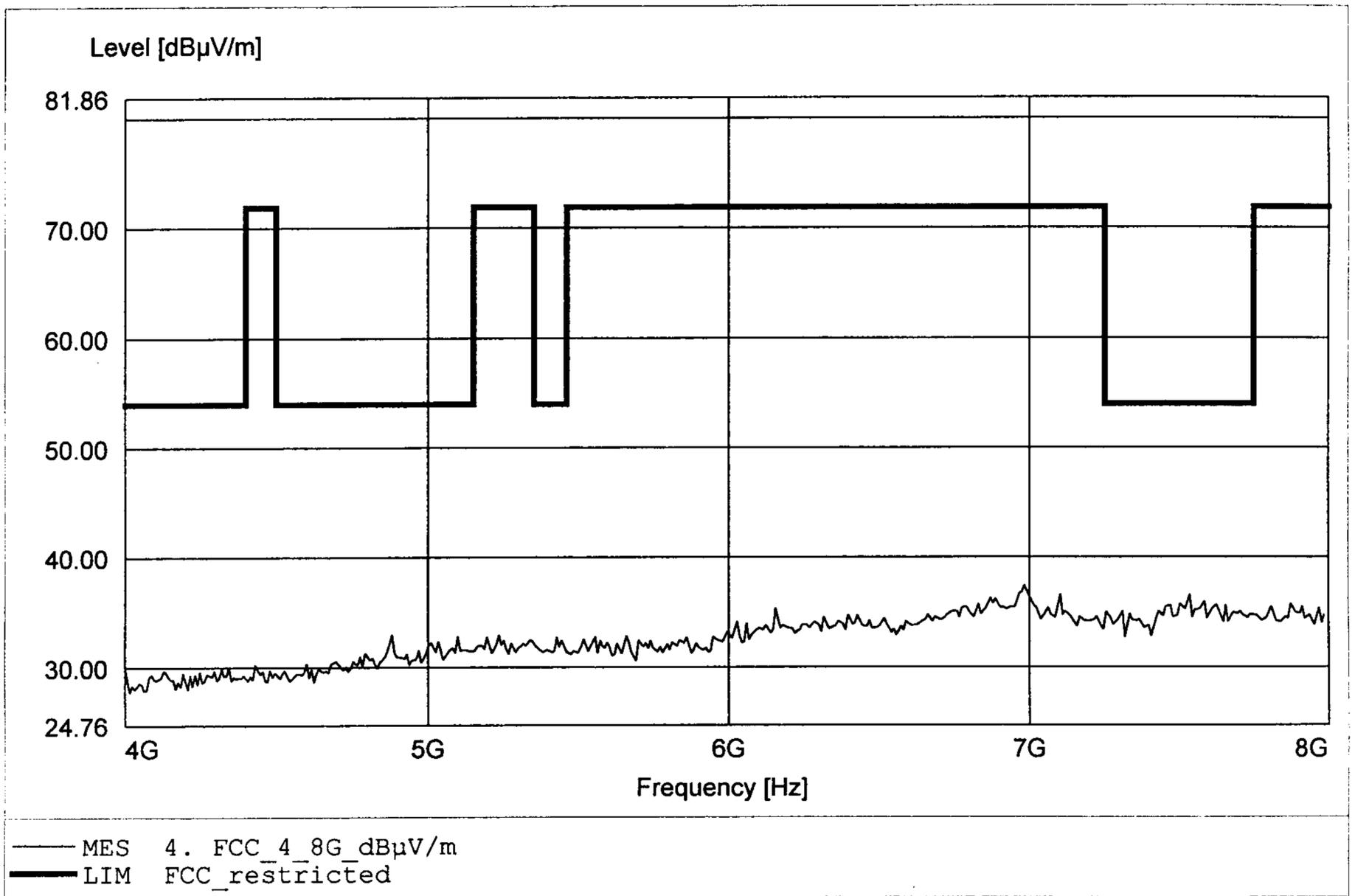
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:7.535GHz Emax:38.72dBµV/m RBW:1MHz



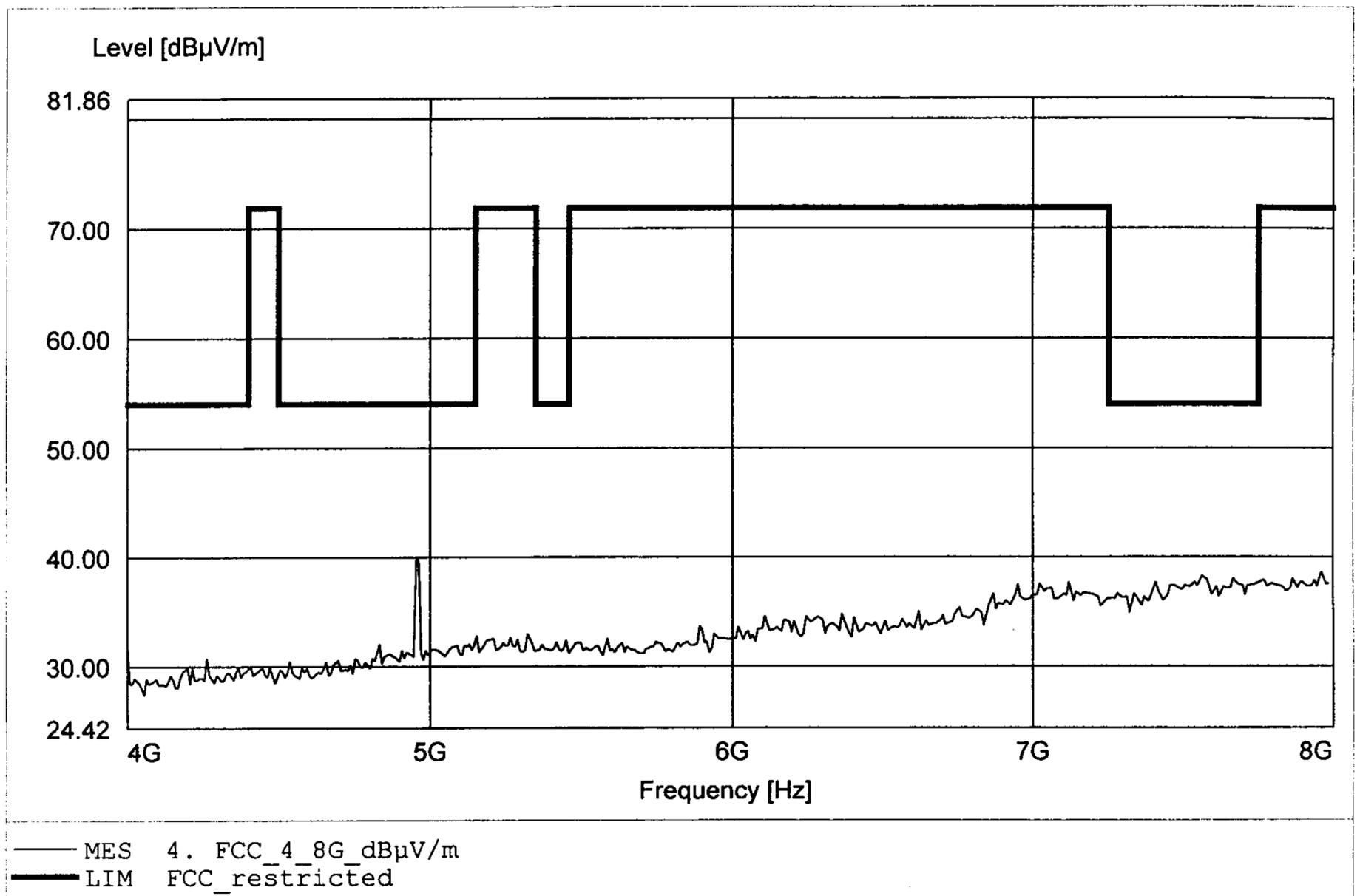
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:6.982GHz Emax:37.43dBµV/m RBW:1MHz



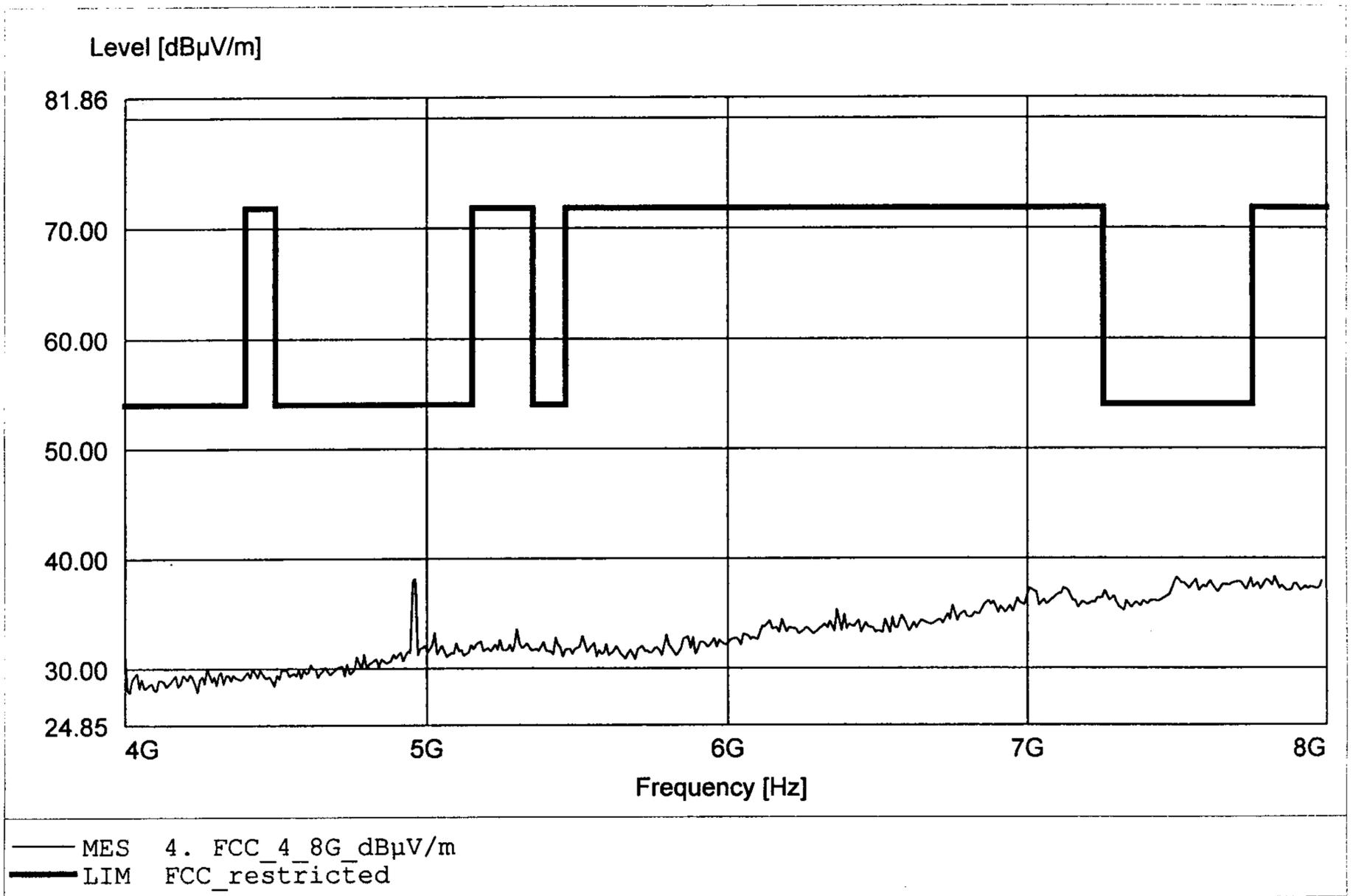
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:4.954GHz Emax:40.09dBµV/m RBW:1MHz



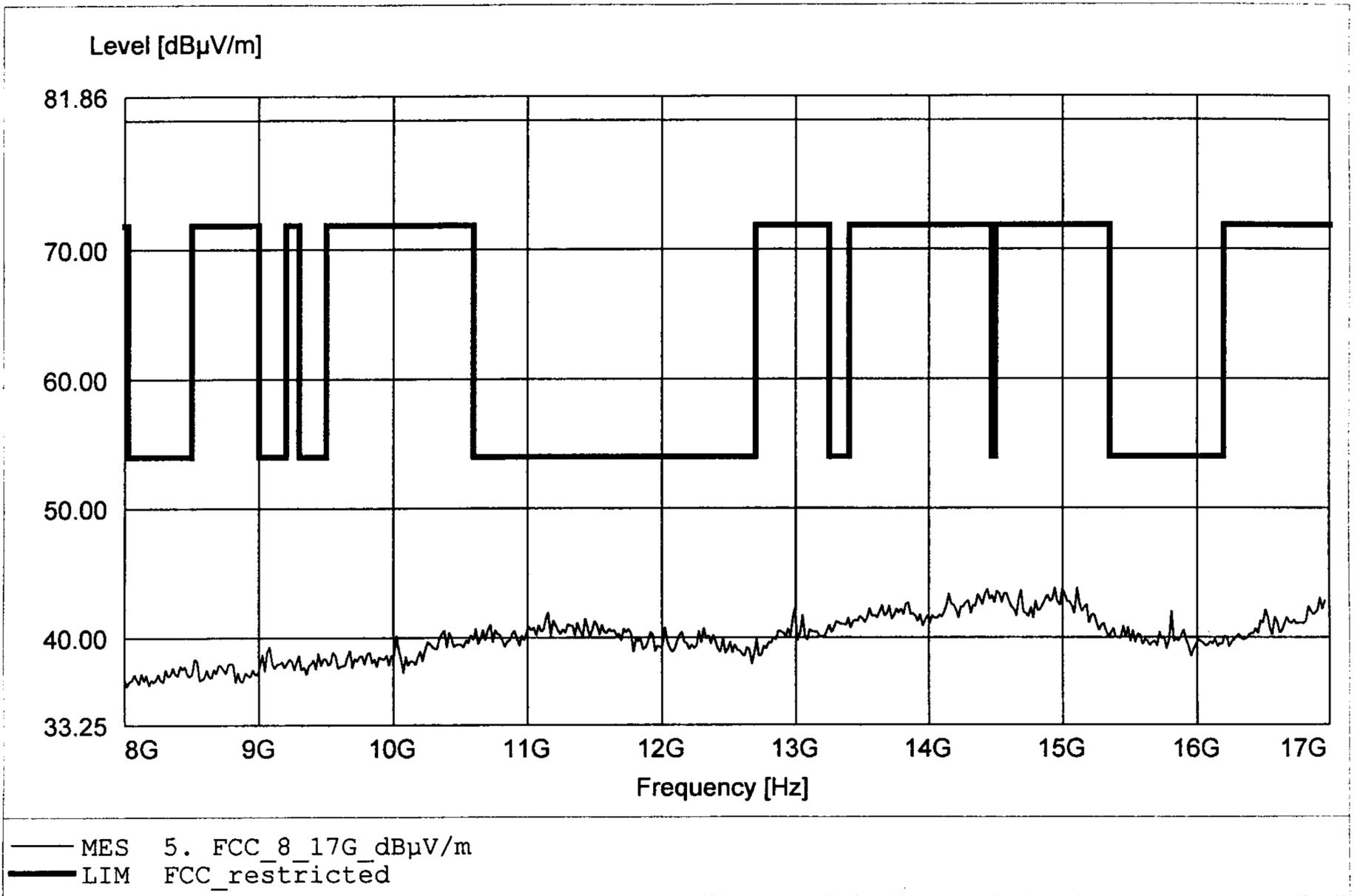
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:7.824GHz Emax:38.32dBµV/m RBW:1MHz



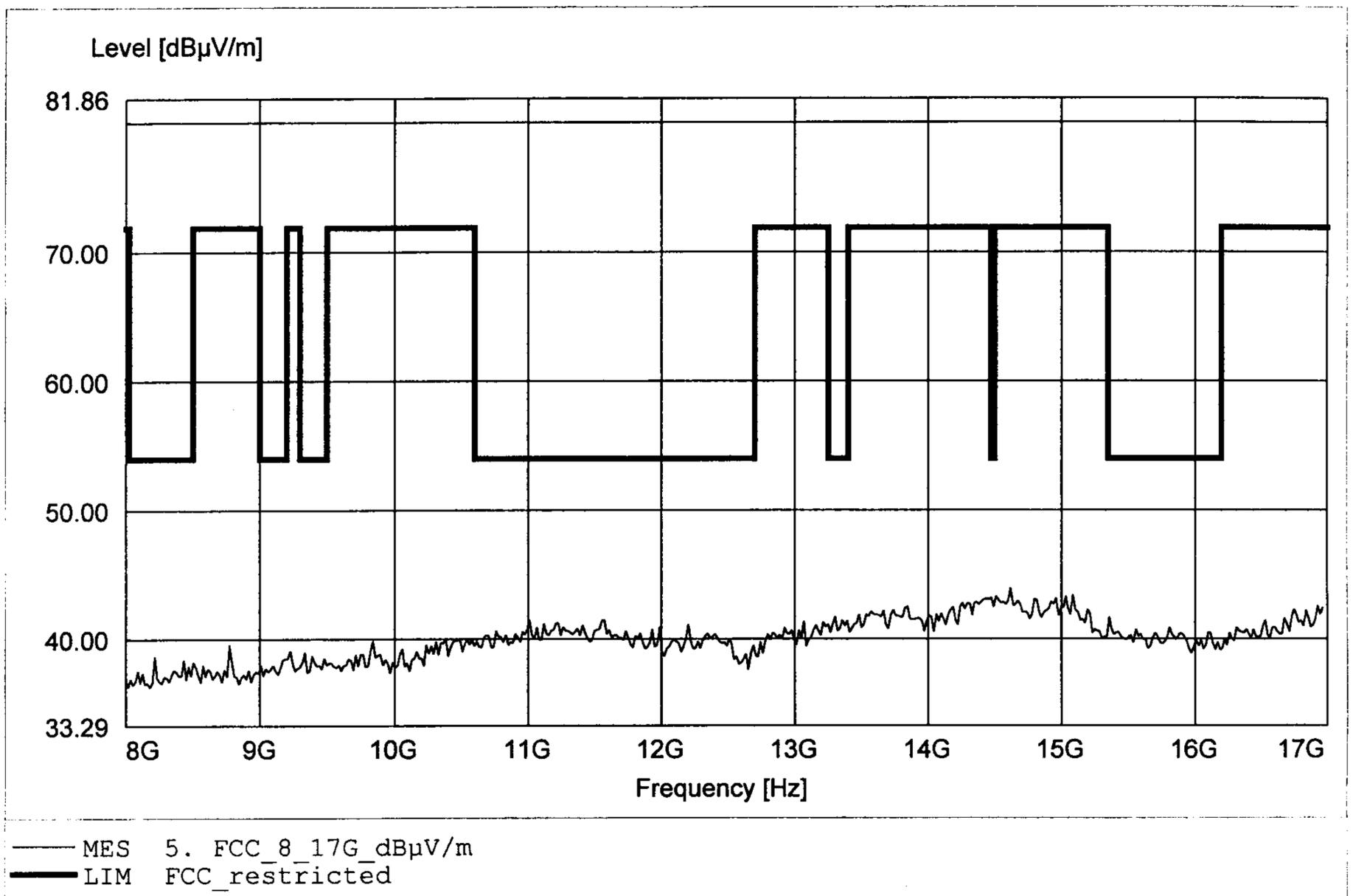
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:15.106GHz Emax:43.82dBµV/m RBW:1MHz



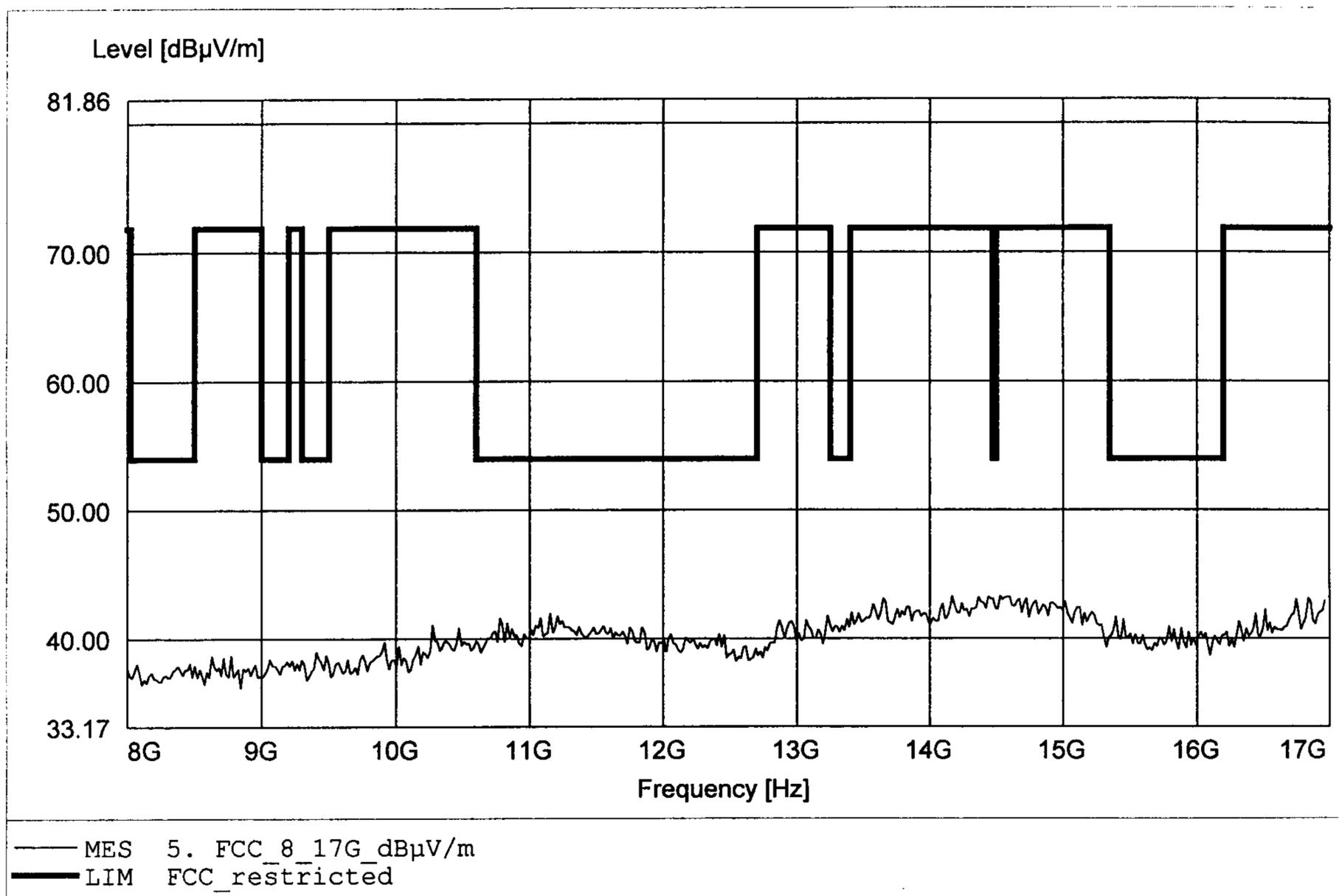
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:14.619GHz Emax:43.95dBµV/m RBW:1MHz



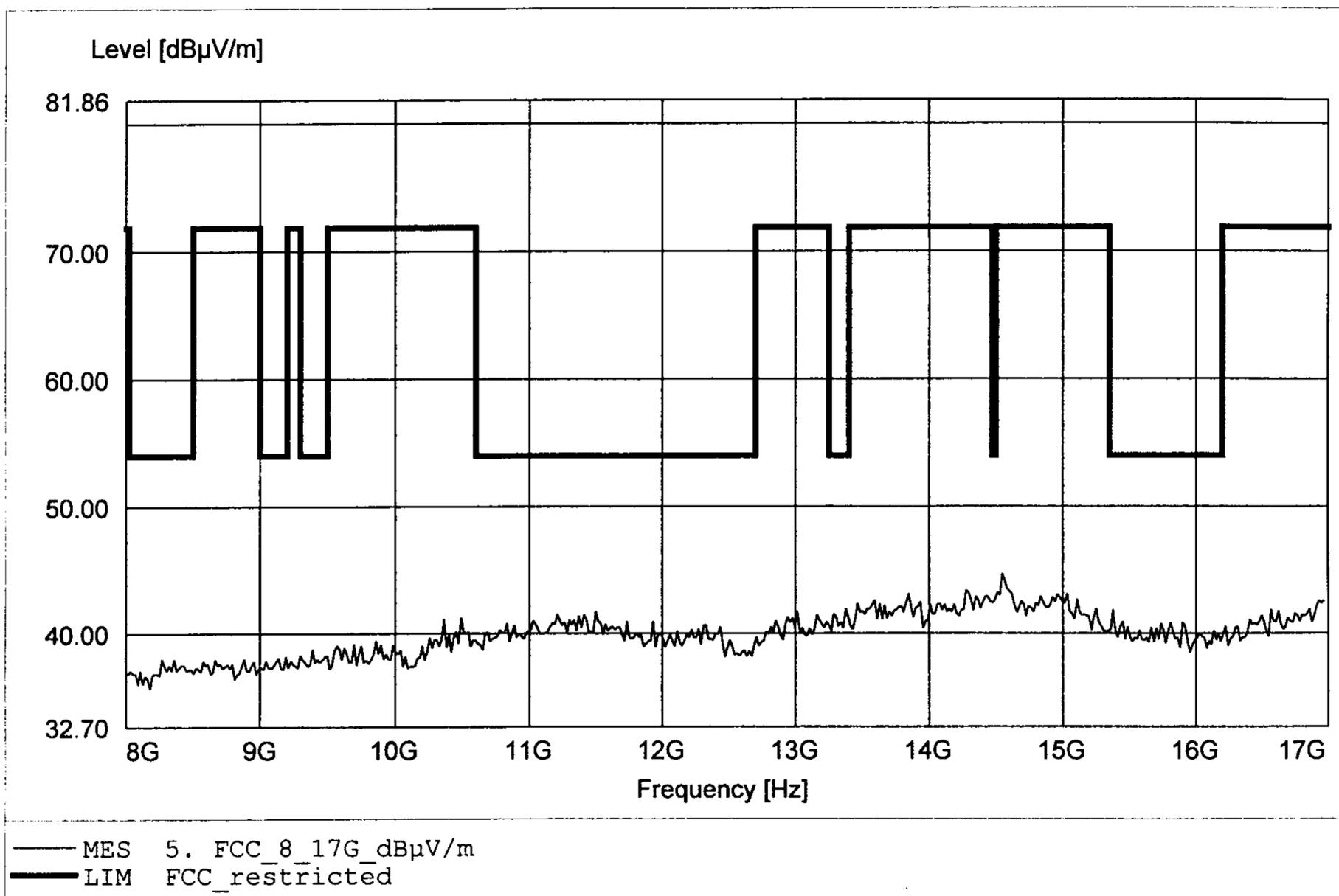
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:14.168GHz Emax:43.29dBµV/m RBW:1MHz



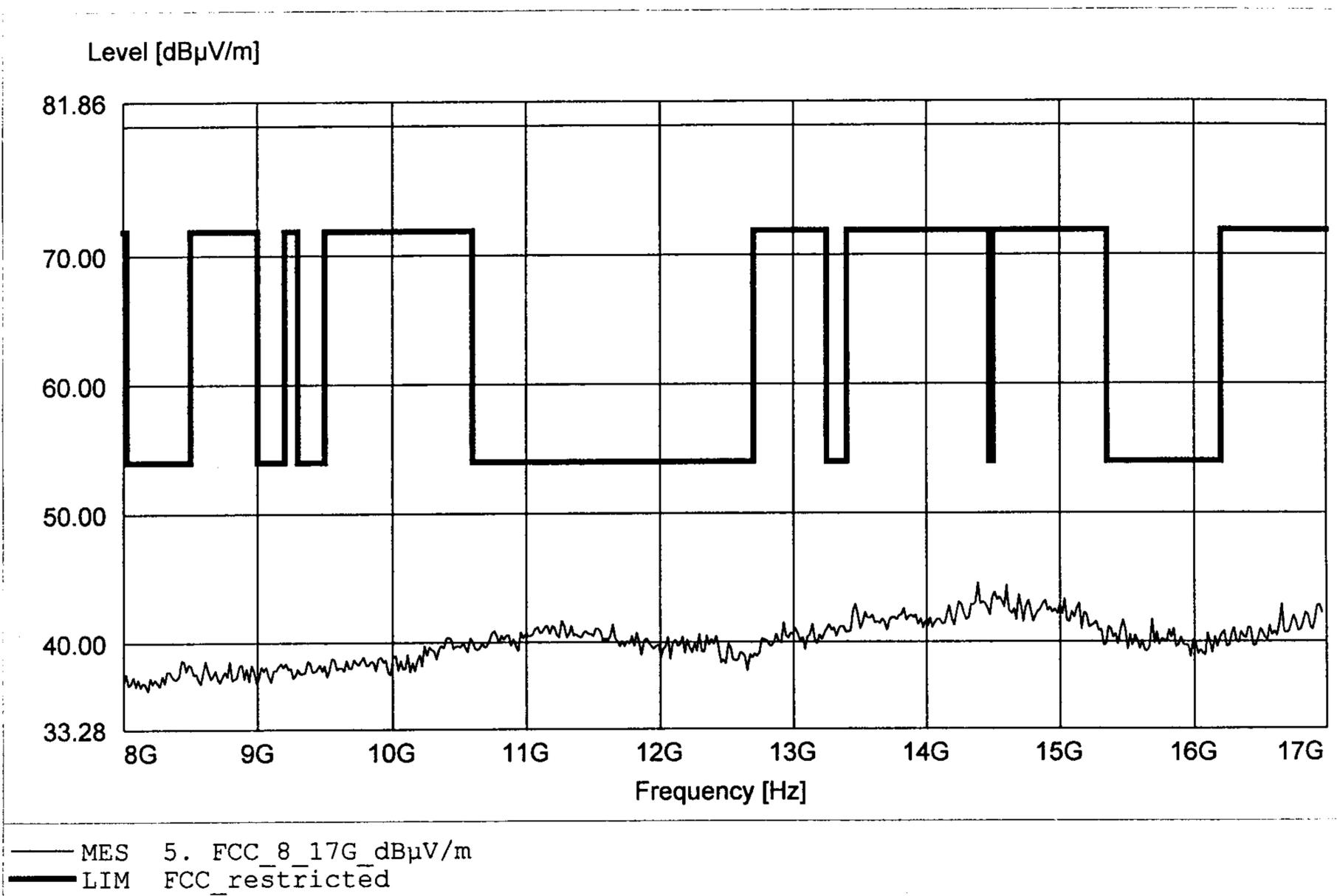
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:14.547GHz Emax:44.68dBµV/m RBW:1MHz



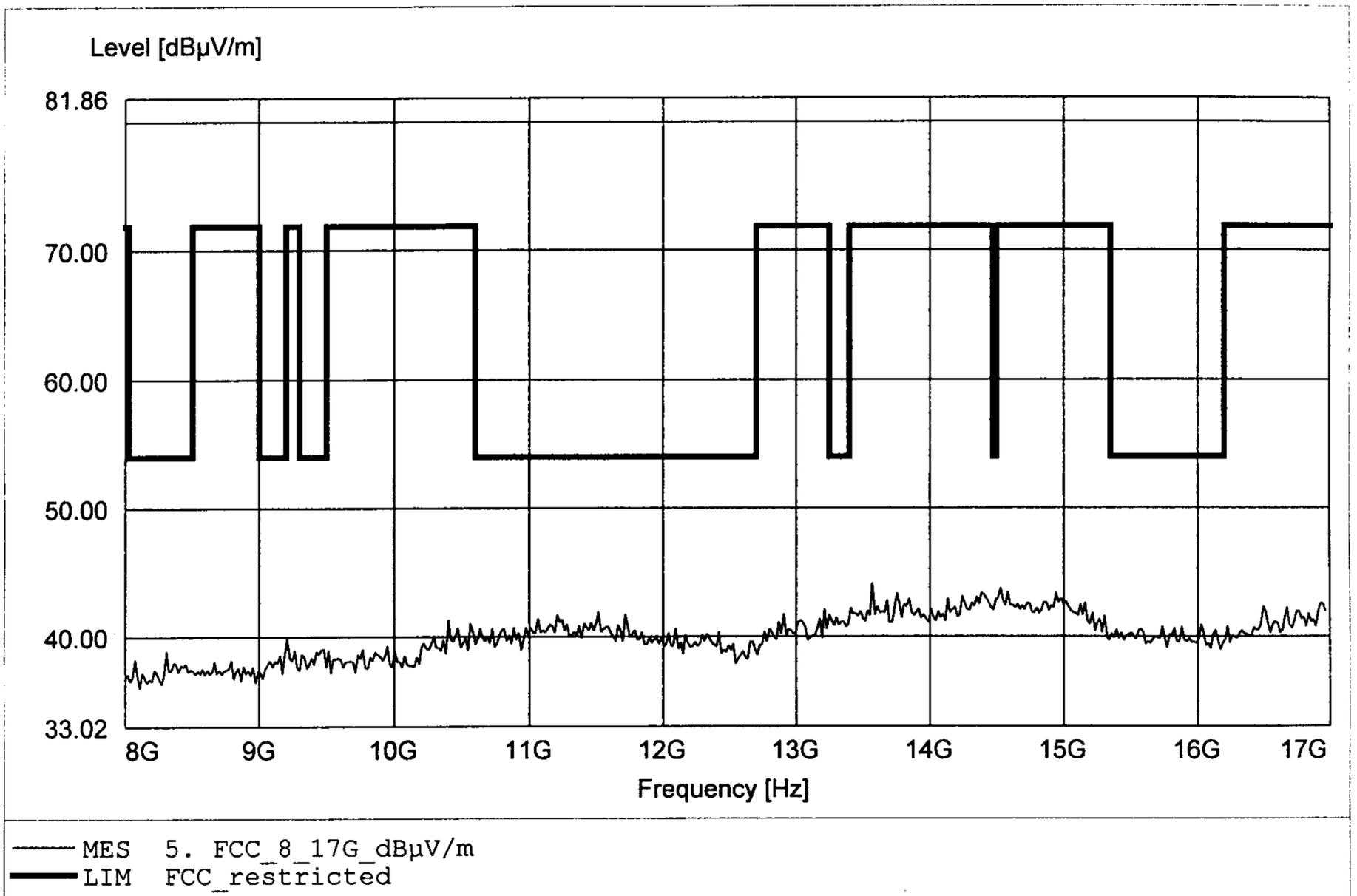
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:14.385GHz Emax:44.57dBµV/m RBW:1MHz



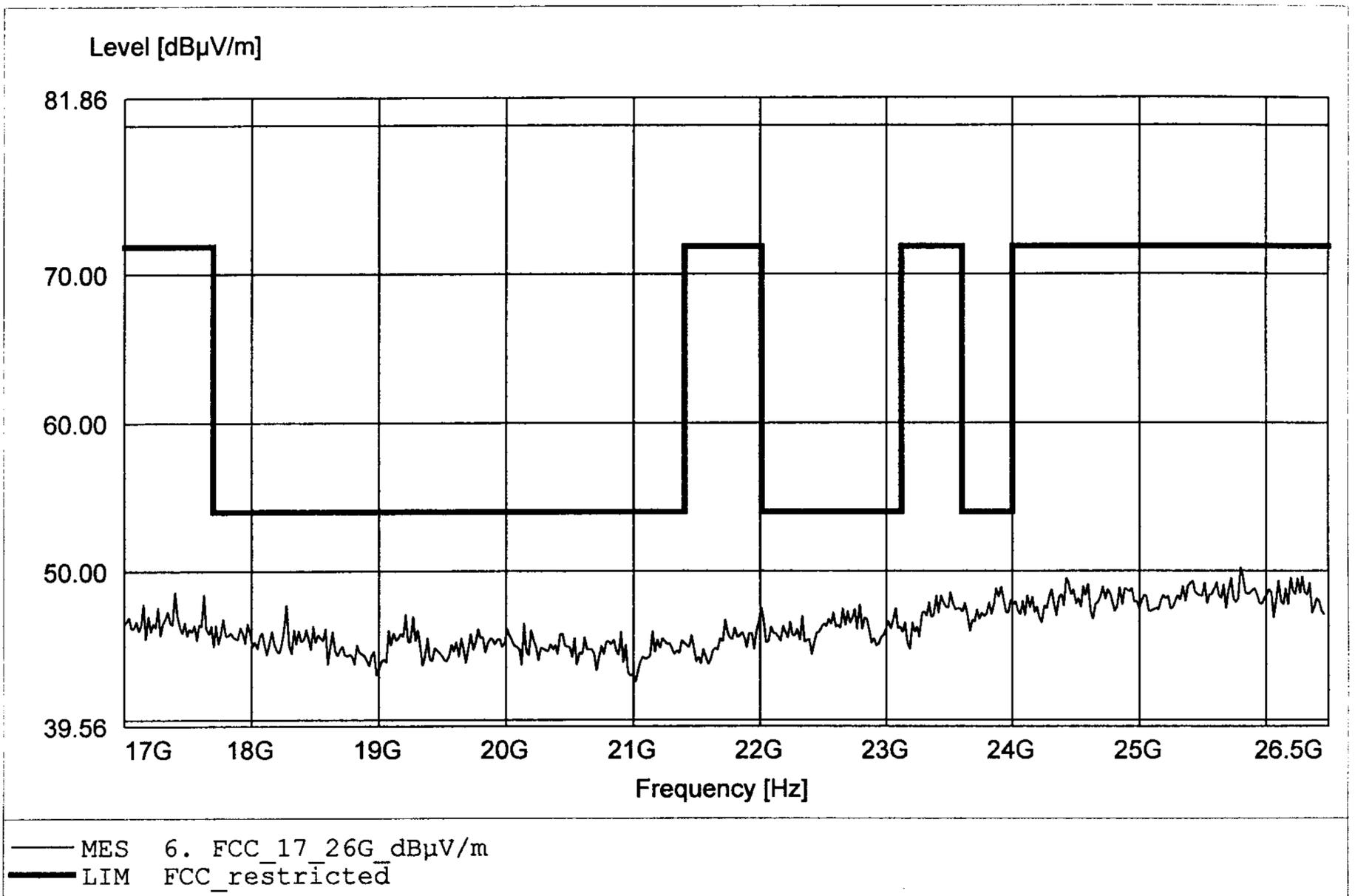
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: BBHA2190D, amplif.
Comment 2: Freq:13.573GHz Emax:44.17dBµV/m RBW:1MHz



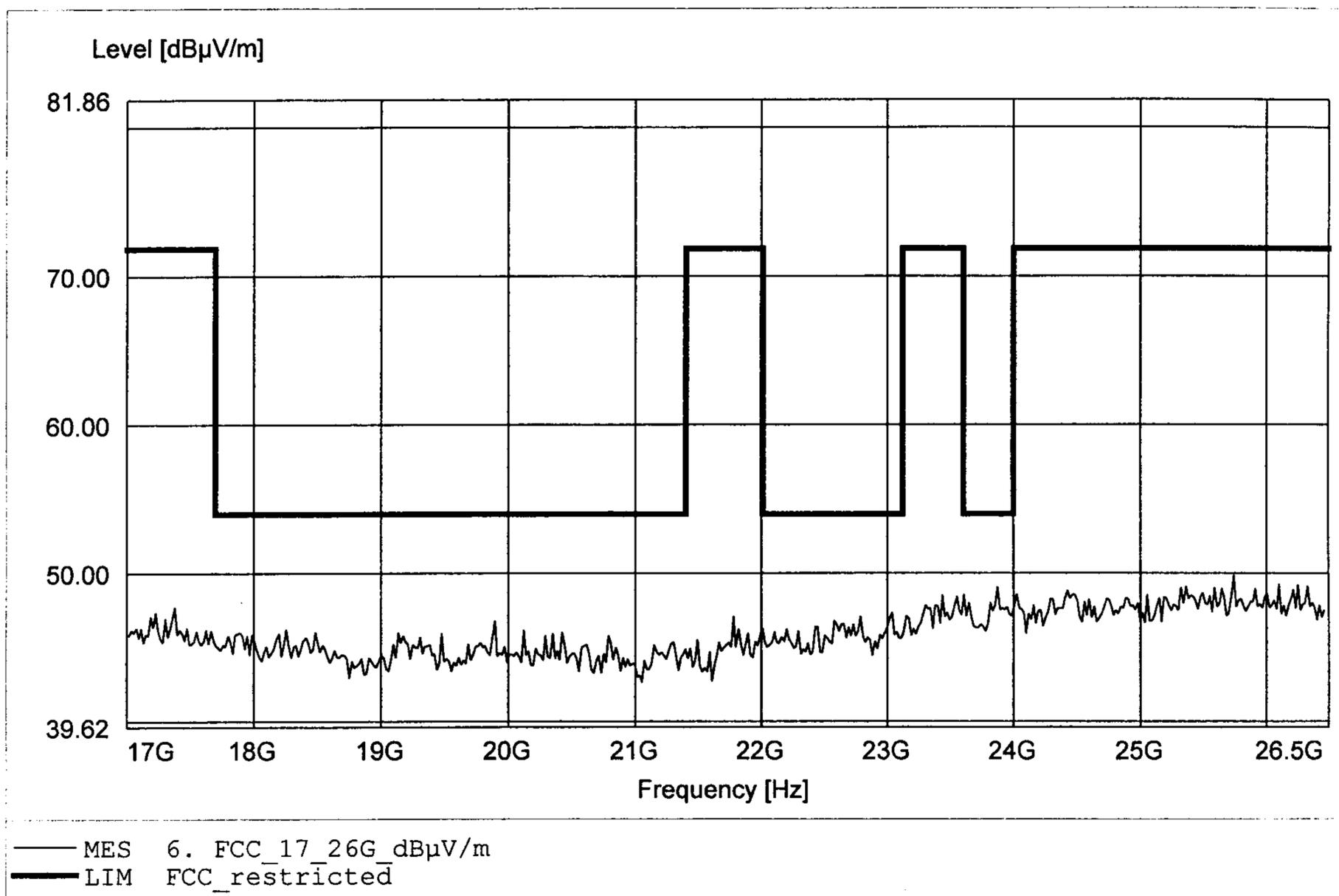
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:25.796GHz Emax:50.23dBµV/m RBW:1MHz



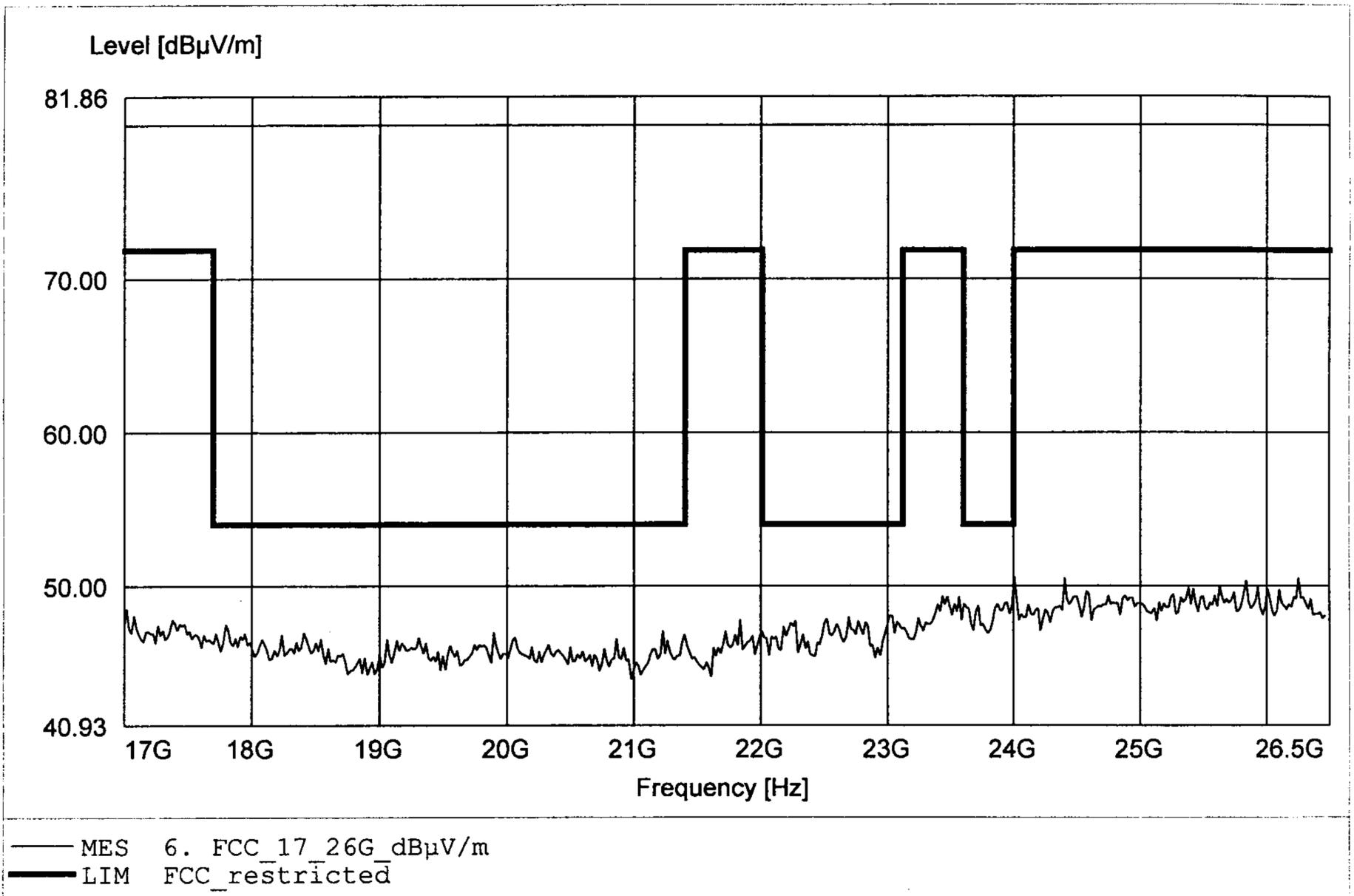
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2402 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:25.738GHz Emax:49.83dBµV/m RBW:1MHz



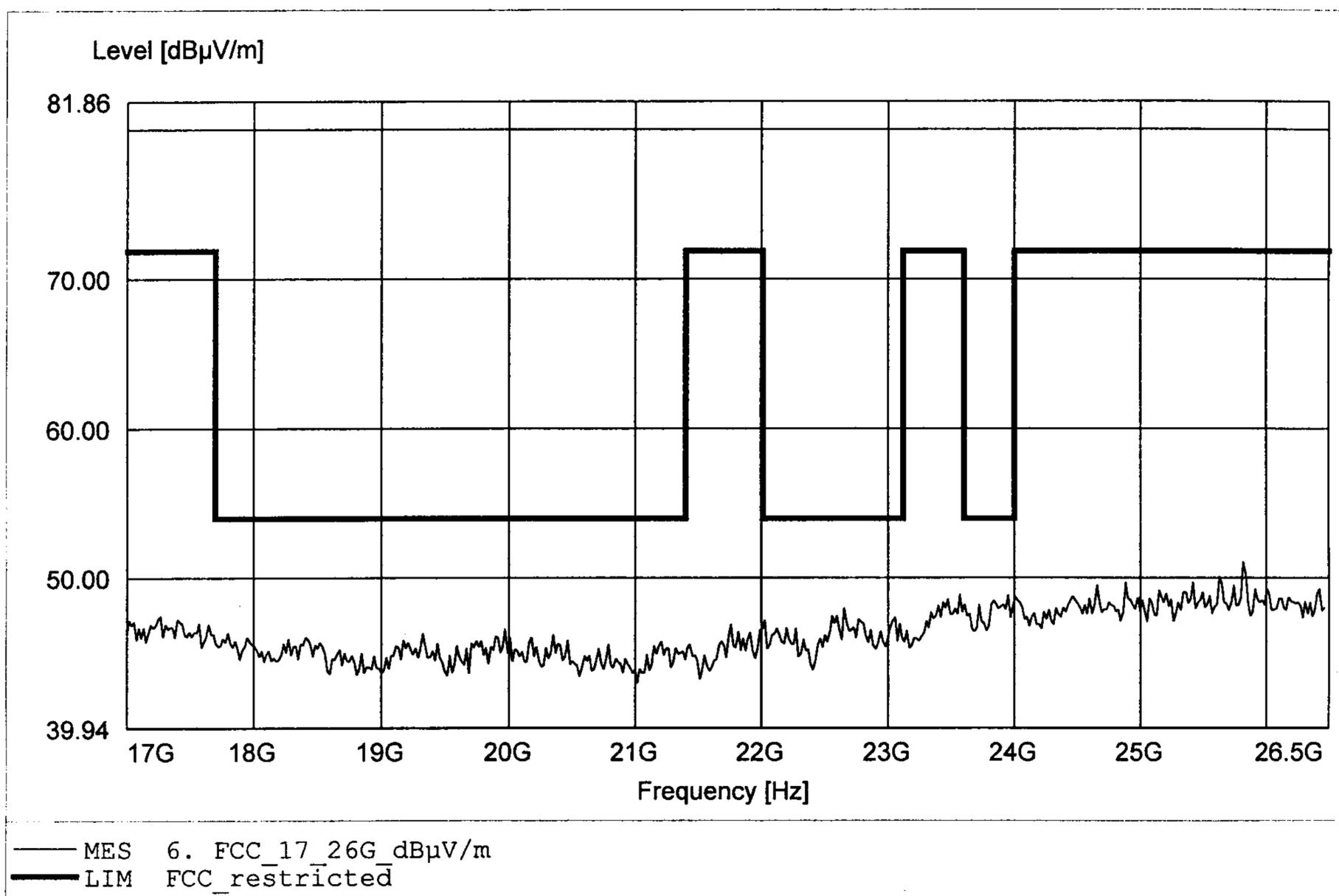
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:24.006GHz Emax:50.57dBµV/m RBW:1MHz



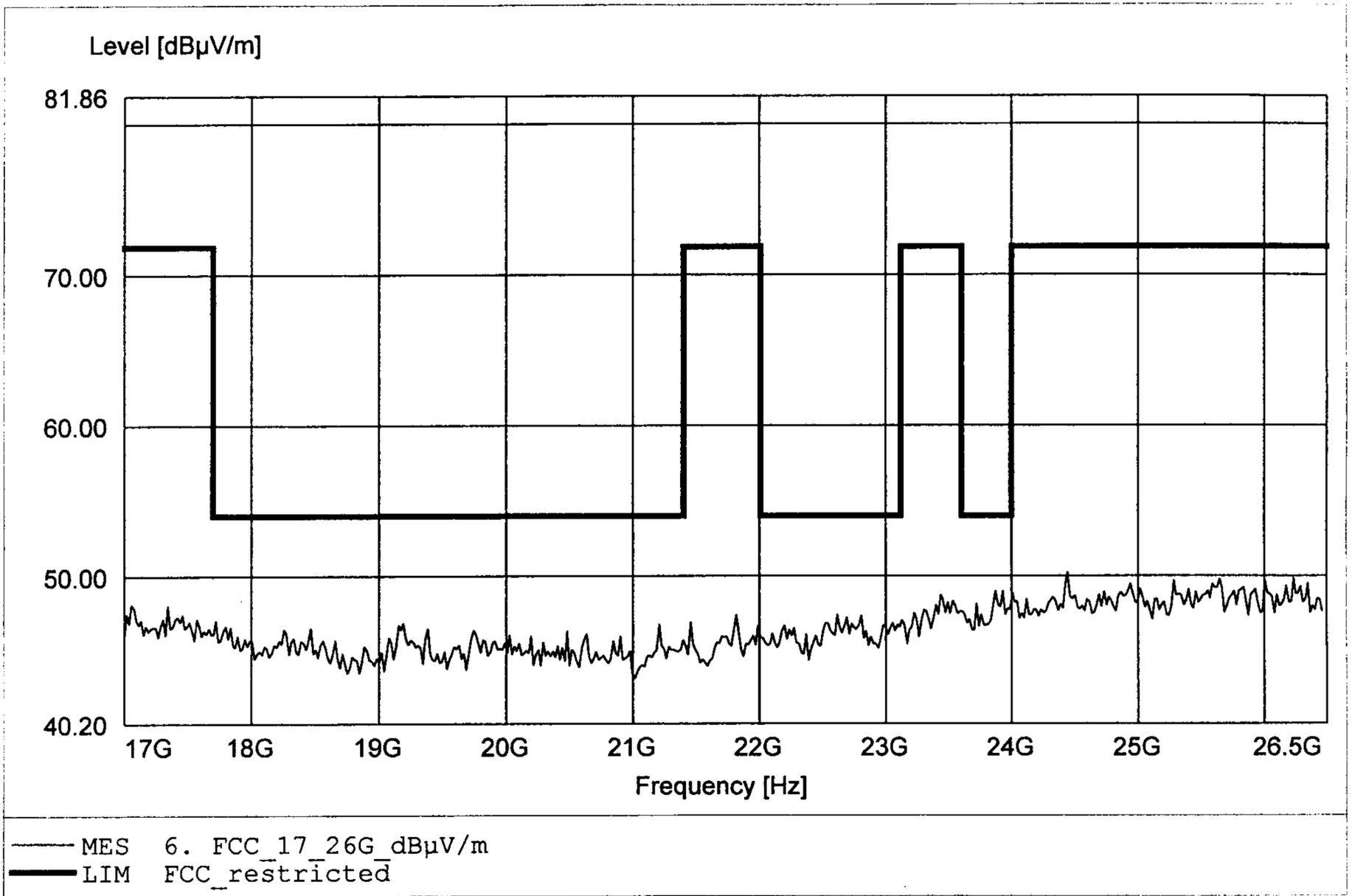
Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2441 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:25.815GHz Emax:51.06dBµV/m RBW:1MHz



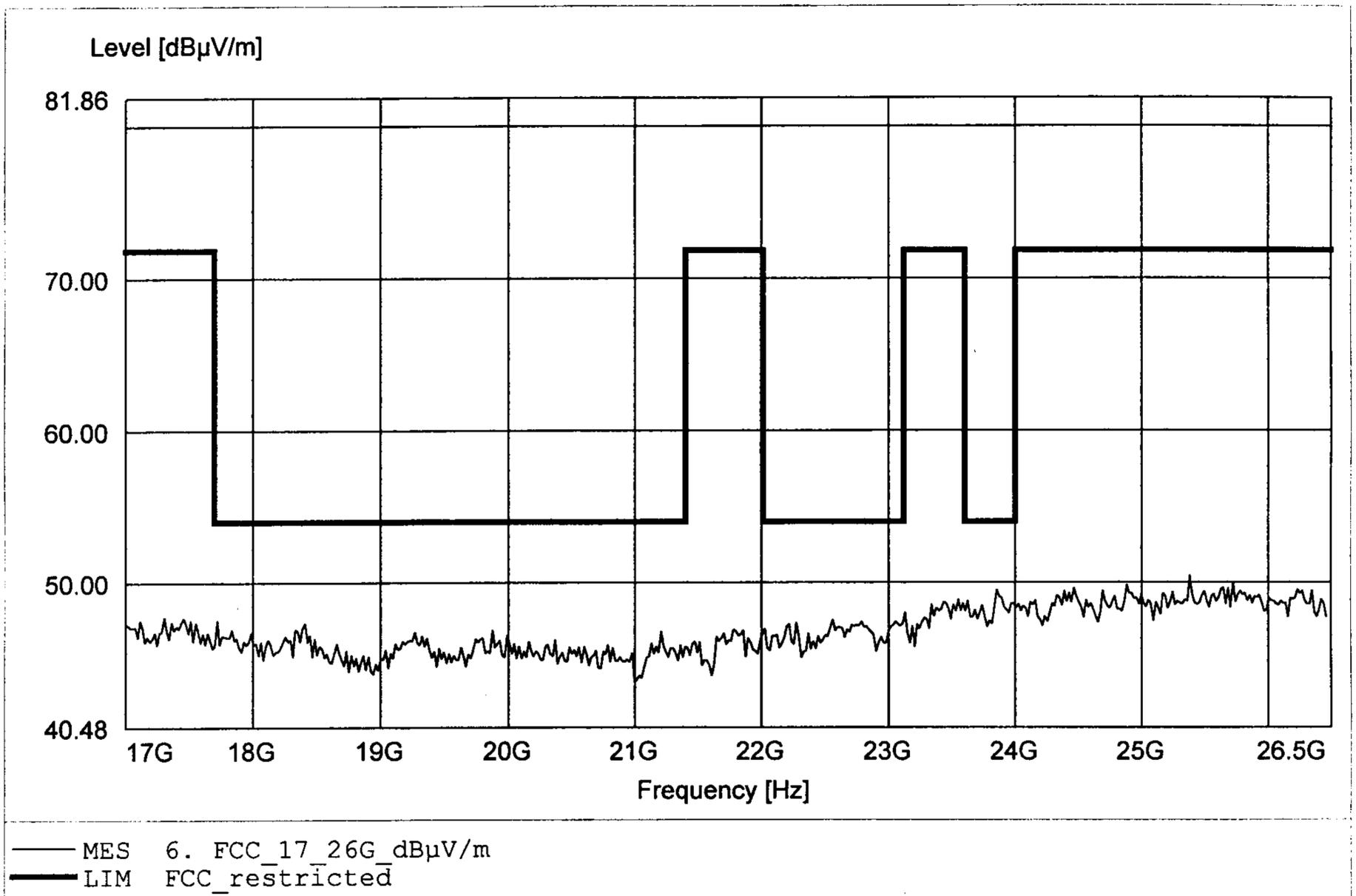
**Spurious emissions Field Strength Tx
FCC RULES PART 15, SUBPART C**

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:24.444GHz Emax:50.26dBµV/m RBW:1MHz



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

EUT: MODEM ADAPTER with BLUETOOTH FUNCTION
Applicant: SONY Corporation
Model: BTA-NW1 (Tx 2480 MHz)
Temperature/ Voltage: t nom=25°C / Unom= 120V AC (adaptor AC/DC 6V)
Test Site / Operator: ETS / Mr. Treffke
Test Specification: according to § 15.247
Comment 1: Dist.: 3m, Ant.: HL025, amplif.
Comment 2: Freq:25.377GHz Emax:50.44dBµV/m RBW:1MHz





Appendix D

Spurious Emissions conducted - Transmitter operating

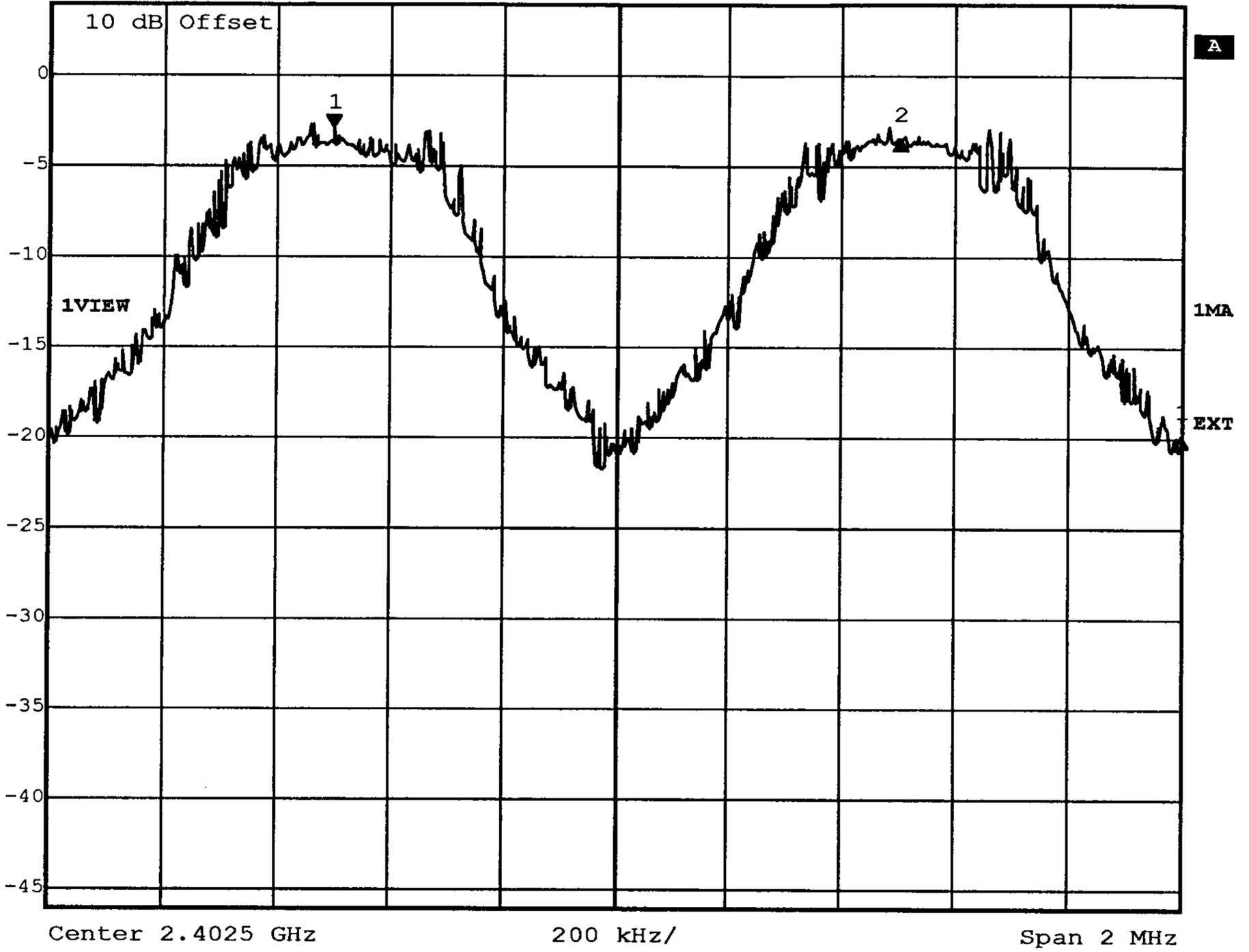


Appendix E

Carrier Frequency Separation



Delta 2 [T1] RBW 100 kHz RF Att 20 dB
Ref Lvl -0.60 dB VBW 100 kHz
4 dBm 1.00200401 MHz SWT 20 ms Unit dBm



Title: CHANNEL SEPARATION
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 10:05:05

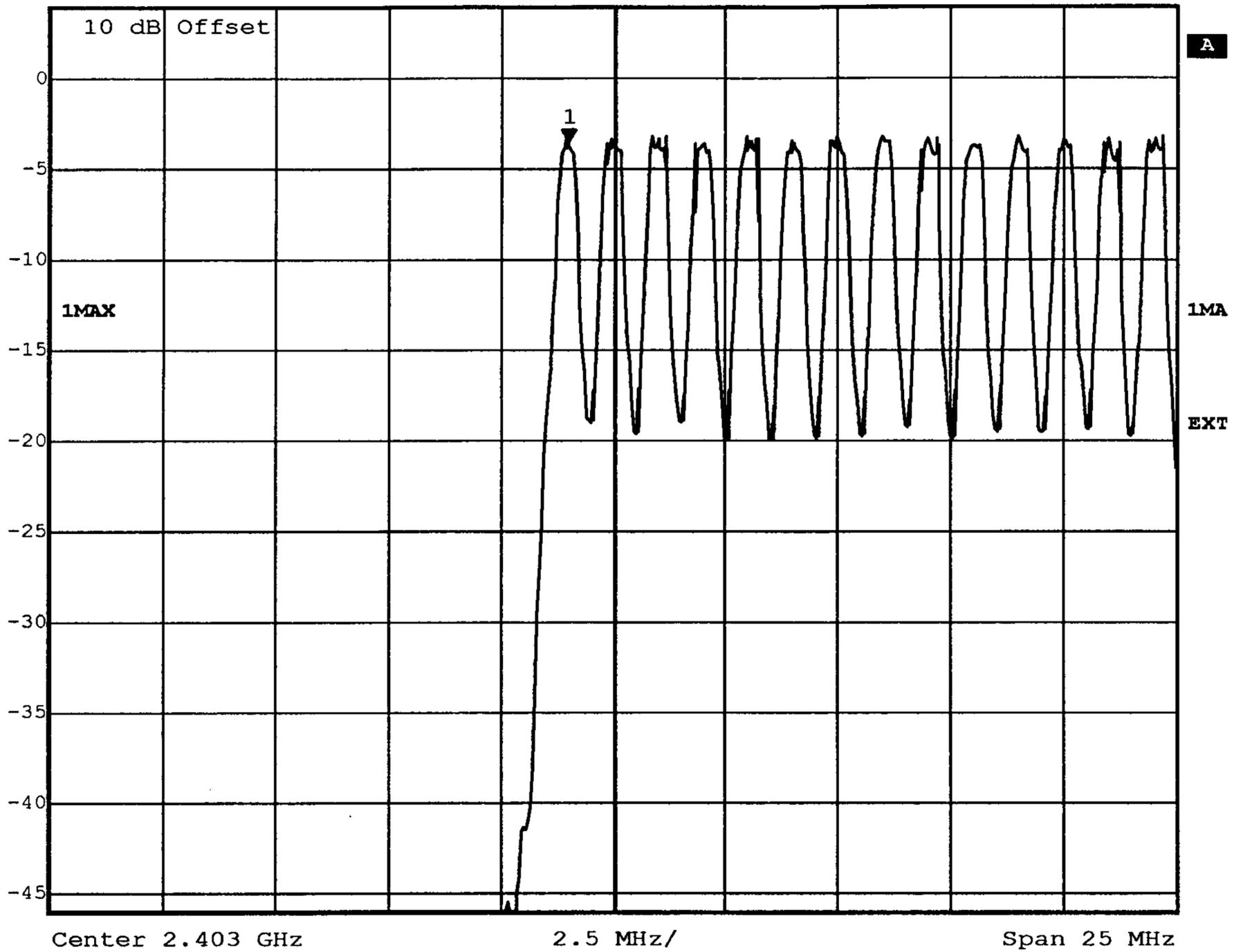


Appendix F

Number of Hopping Frequencies



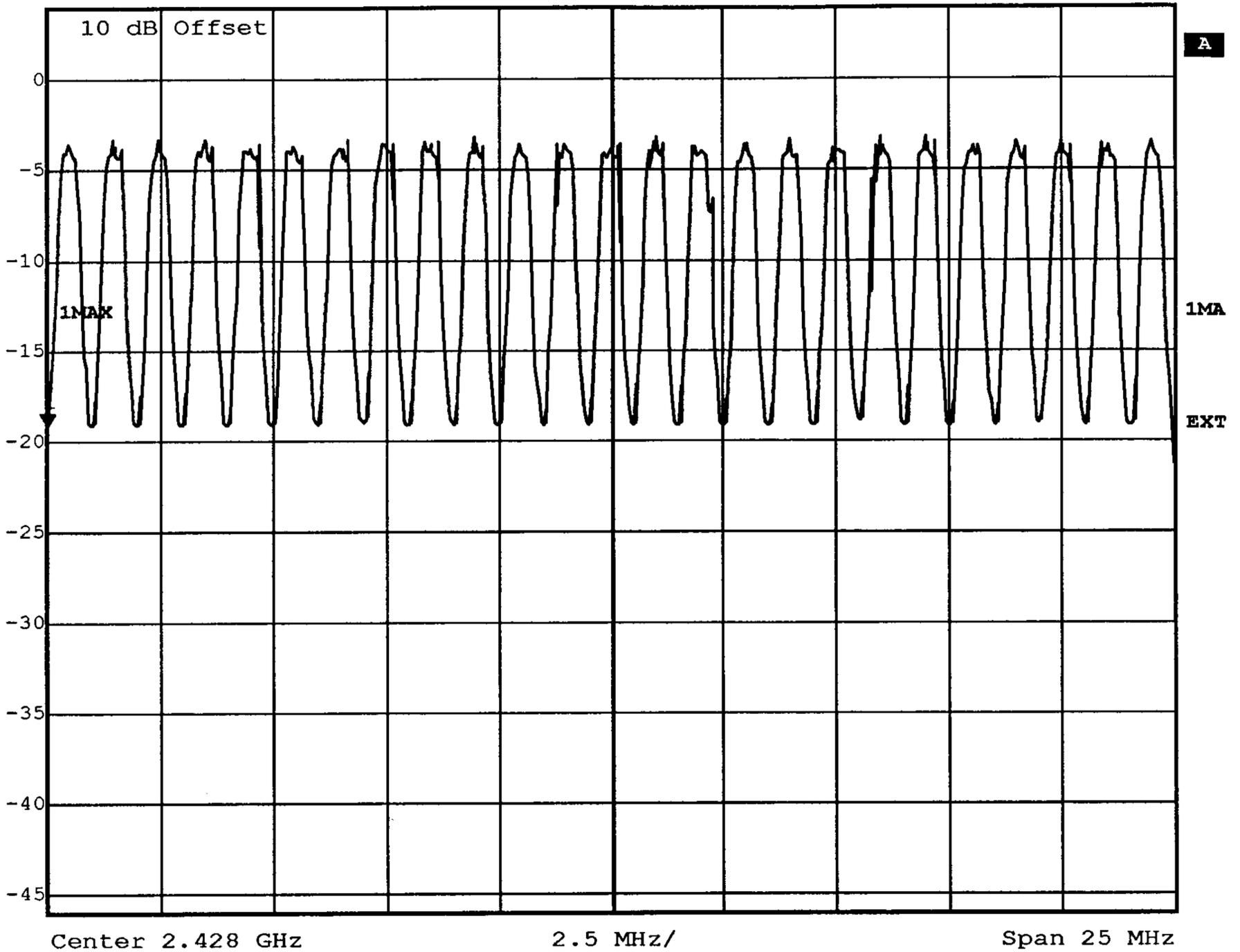
Marker 1 [T1] RBW 100 kHz RF Att 20 dB
Ref Lvl -3.55 dBm VBW 100 kHz
4 dBm 2.40200100 GHz SWT 20 ms Unit dBm



Title: Number of Hopping Frequencies
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 10:14:39



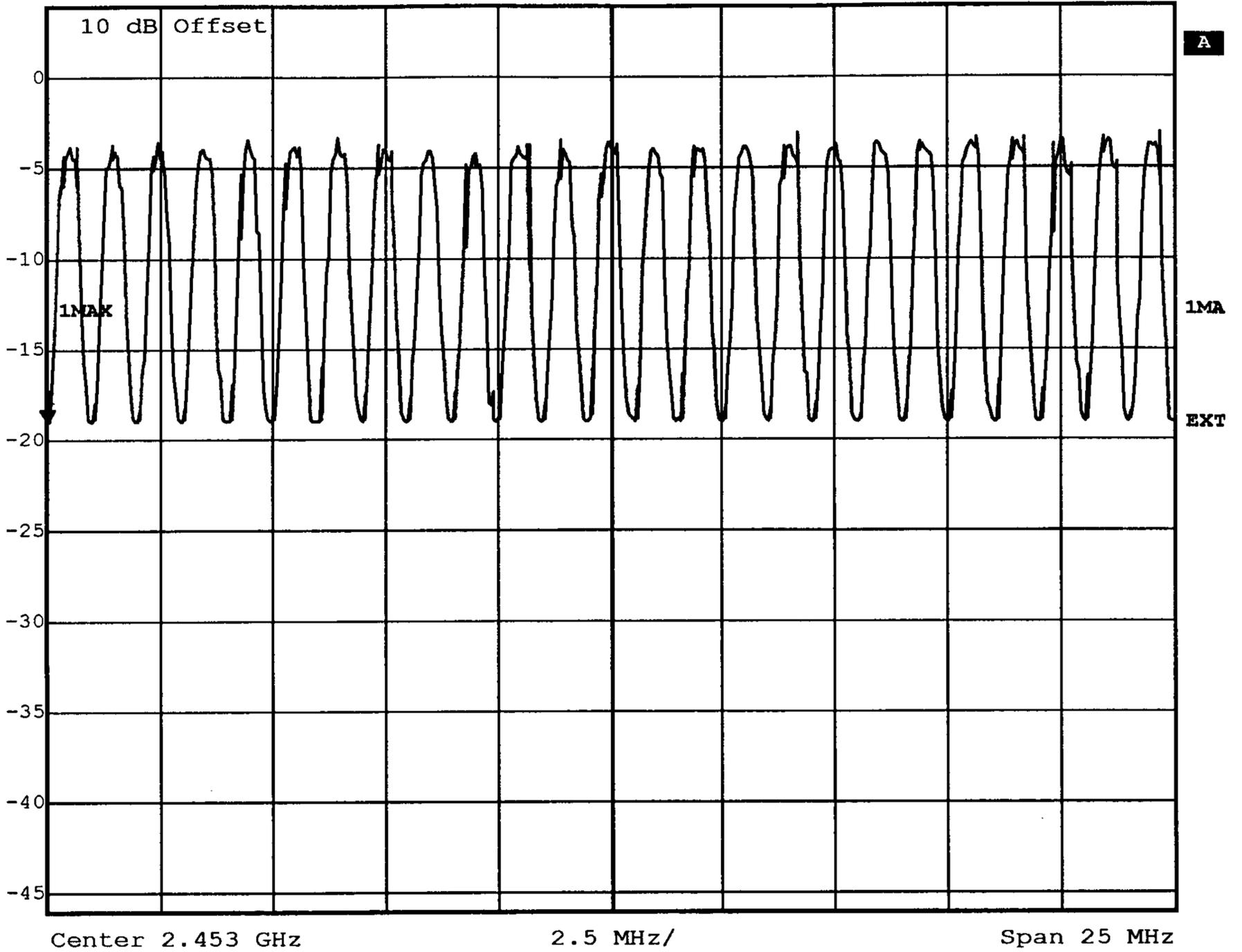
Ref Lvl 4 dBm
Marker 1 [T1] -19.20 dBm
2.41550000 GHz
RBW 100 kHz
RF Att 20 dB
VBW 100 kHz
SWT 20 ms
Unit dBm



Title: Number of Hopping Frequencies
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 10:21:24



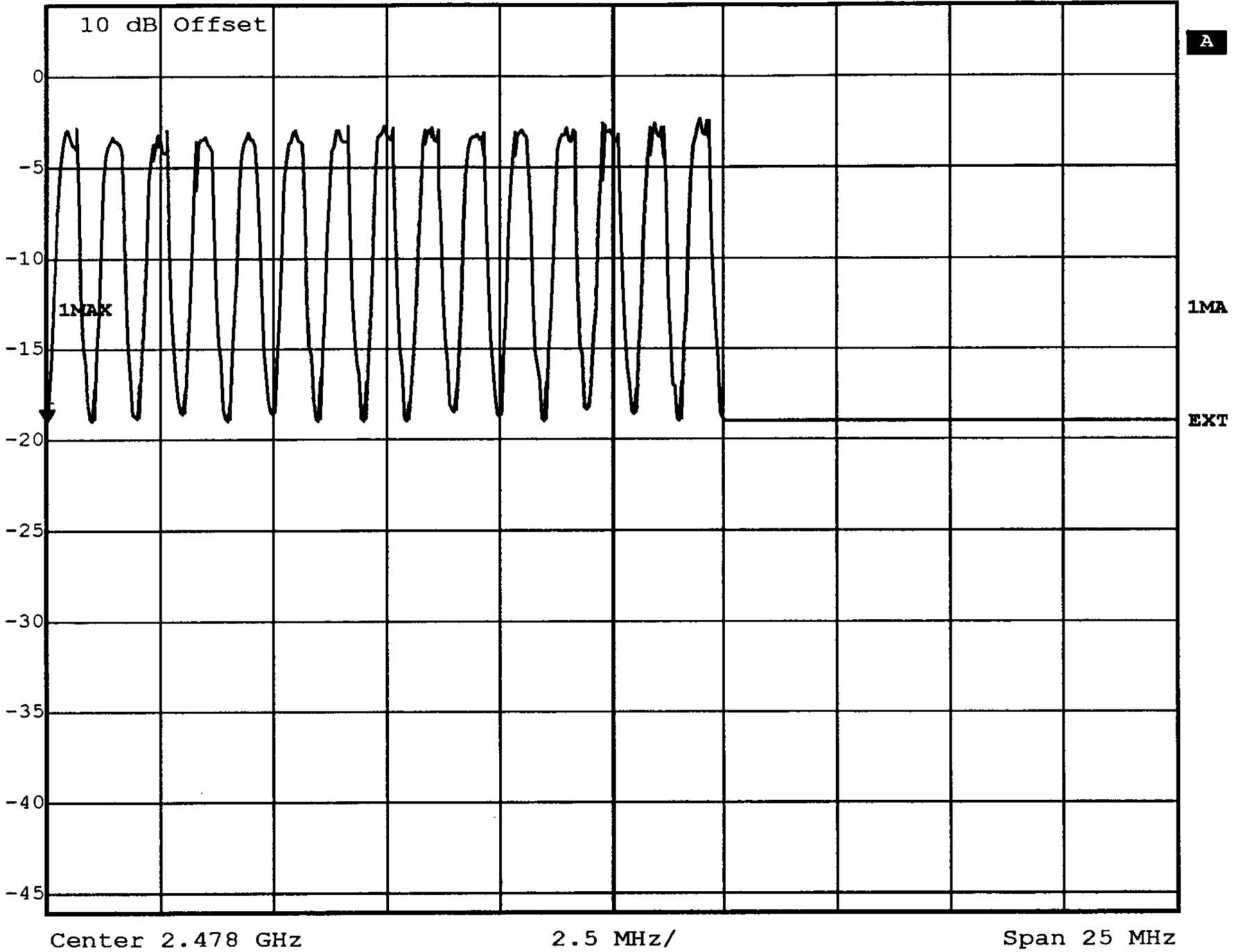
Marker 1 [T1] RBW 100 kHz RF Att 20 dB
Ref Lvl -19.01 dBm VBW 100 kHz
4 dBm 2.44050000 GHz SWT 20 ms Unit dBm



Title: Number of Hopping Frequencies
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 10:23:42



Ref Lvl 4 dBm
Marker 1 [T1] 2.46550000 GHz
RBW 100 kHz
RF Att 20 dB
VBW 100 kHz
SWT 20 ms
Unit dBm



Title: Number of Hopping Frequencies
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 10:33:14

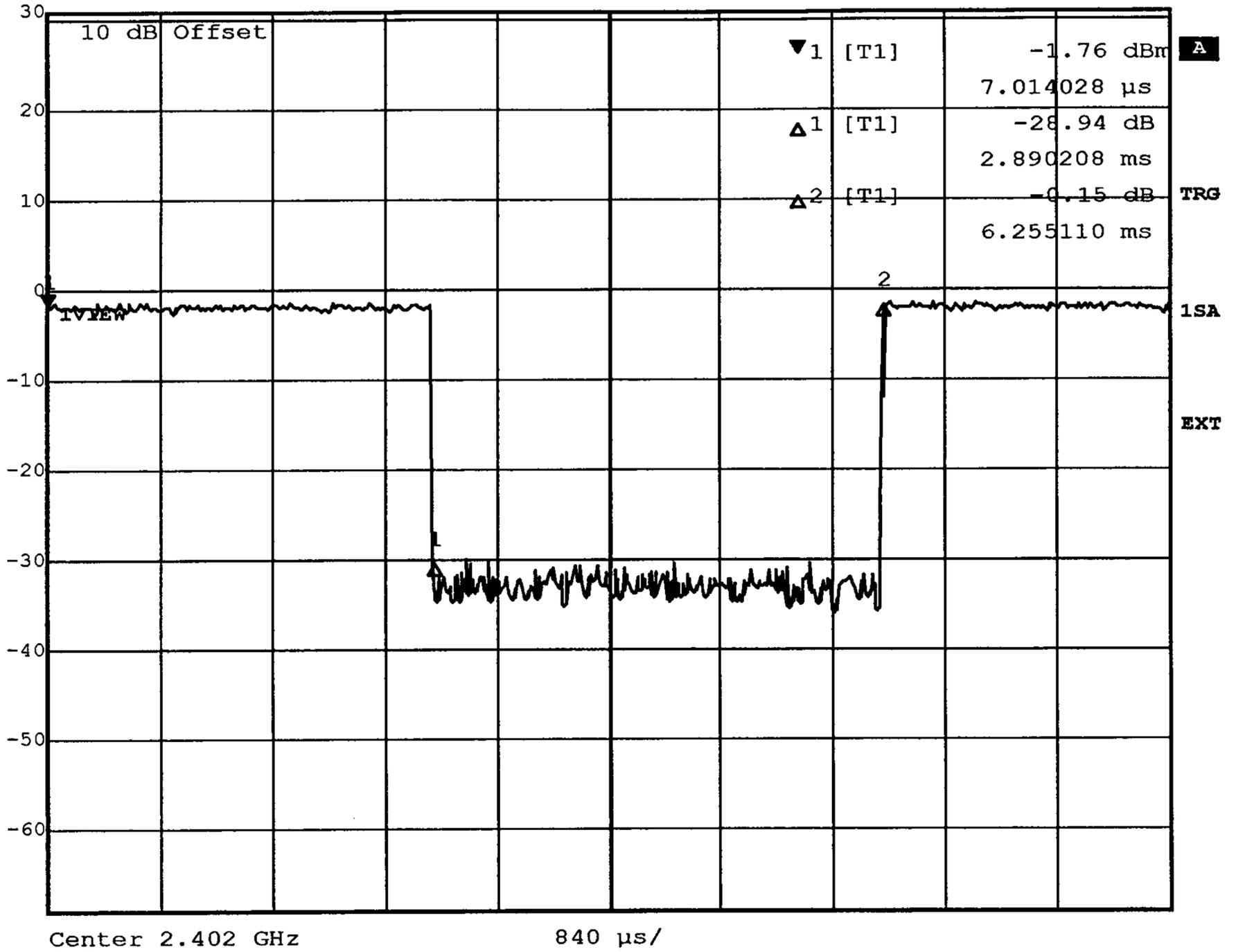


Appendix G

Time of Occupancy (Dwell Time)



Marker 1 [T1] RBW 1 MHz RF Att 50 dB
Ref Lvl -1.76 dBm VBW 1 MHz
31 dBm 7.014028 μ s SWT 8.4 ms Unit dBm



Title: DWELL TIME
Comment A: SONY CORPORATION, BTA-NW1
Date: 26.JUN.2001 09:57:09



Appendix H

20dB Bandwidth

```

=====
# ROHDE & SCHWARZ Certific. Bluetooth Test System TS8960 SW Version: b1_23
#
# Program name: tc_AllPower          program revision: 1.1.1
#
# All Power Measurement Test Cases
#
#-----
# Test Case started: 2001-06-30, 07:38:17 (ets_1)
# Report File: /home/ts8960/project/ts8960/sw/ALE/tc/dat/BTA-NW1/BTA-NW1.mmm.rep
# Eut File: BTA-NW1
# 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 2001-06-30, 07:38:18
Intervention Type 'Please reset the EUT'
Operator intervention end at 2001-06-30, 07:38:35

```

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:      SONY Corporatio
Model:             Modem Adaptor with Bluetooth Funktion / BTA-NW1
Serial No:         None
Comment:           Class 2
                  Blue Test (Power: Ext.=96 Int.=29)
                  Interim Testing
                  Every Parameter Set
                  All
                  EUT Address: 00026BC6967E hex
Setup mode:
Test Mode Handle:
Country:

```

```

Tester Address:      00806BC6967E hex
Active Member Address: 00000007 hex
Access Code from EUT: AD59E5328A41120D5 hex
Access Code from SU: AB7CC2D999F9A58F2A hex
Burst Distance:     2 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:    120.000 Volt
Voltage Value 2:    0.000 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
B1 Data From File: No
B1 Signal Packet Type: DH1
B1 Signal Pattern: PRBS 9
Whitening:         No
EUT Tx Frequency:  2402.000 MHz
EUT Rx Frequency:  2402.000 MHz
B1 Signalling Level: -55.000 dBm

```

```

Operator intervention start at 2001-06-30, 07:38:37
Intervention Type 'Please bring the EUT into test mode TX TEST'
Operator intervention end at 2001-06-30, 07:38:41
Operator intervention start at 2001-06-30, 07:38:42
Intervention Type 'Please set the EUT Pattern to PRBS'
Operator intervention end at 2001-06-30, 07:38:44
Operator intervention start at 2001-06-30, 07:38:45
Intervention Type 'Please set the EUT Packet Type to DH1'
Operator intervention end at 2001-06-30, 07:38:45
Operator intervention start at 2001-06-30, 07:38:46
Intervention Type 'Please set the EUT TX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-06-30, 07:38:46
Operator intervention start at 2001-06-30, 07:38:47
Intervention Type 'Please set the EUT RX Frequency to 2402.000000 MHz'
Operator intervention end at 2001-06-30, 07:38:47

```

TX [MHz]	RX [MHz]	START [MHz]	STOP [MHz]	LOW [MHz]	HIGH [MHz]	BW [MHz]	LIMIT [MHz]	VERDICT
2402	2402	2401.0	2403.0	2401.536	2402.476	0.940	<= 1.000	PASS
2441	2441	2440.0	2442.0	2440.560	2441.484	0.924	<= 1.000	PASS
2480	2480	2479.0	2481.0	2479.556	2480.480	0.924	<= 1.000	PASS

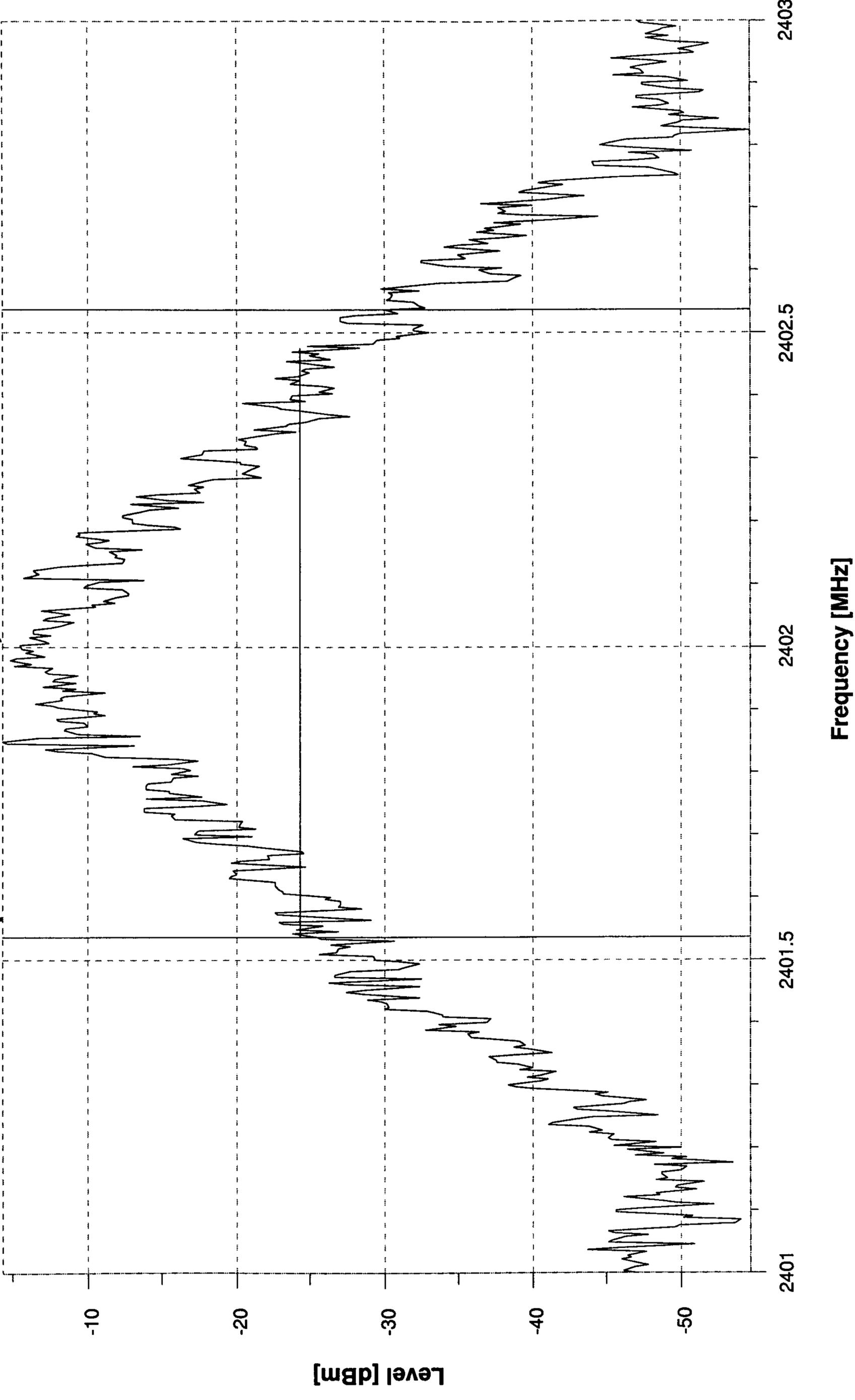
All selected TX Output Spectrum - 20 dB Bandwidth tests are completed

```

=====
# Duration 00:02:16
# Final Test Case verdict: PASS
# Report file closed at 2001-06-30, 07:40:33
#-----

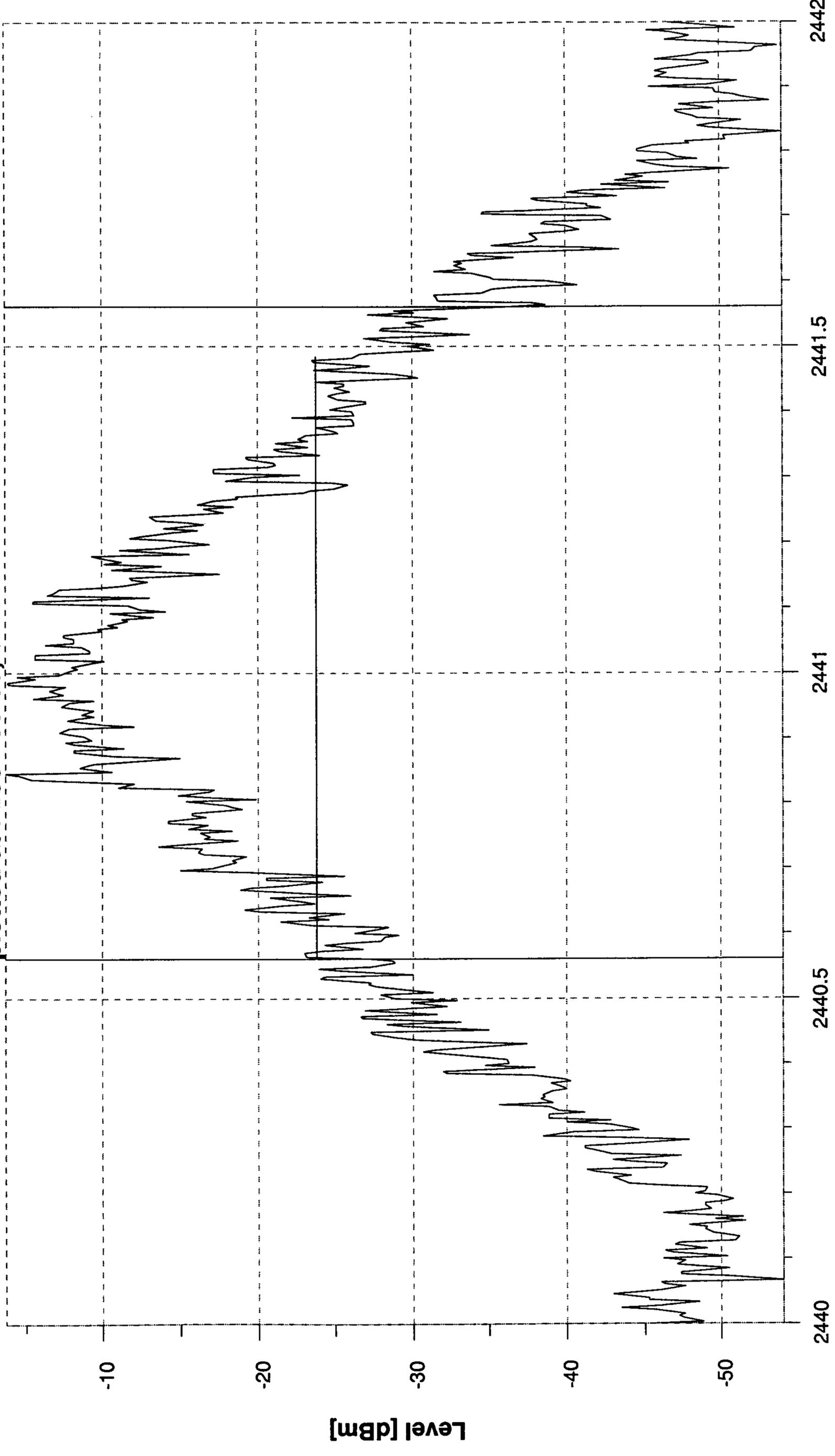
```

**Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2402.000 MHz
plotted at : 2001-06-30, 07:38:59**



Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2441.000 MHz

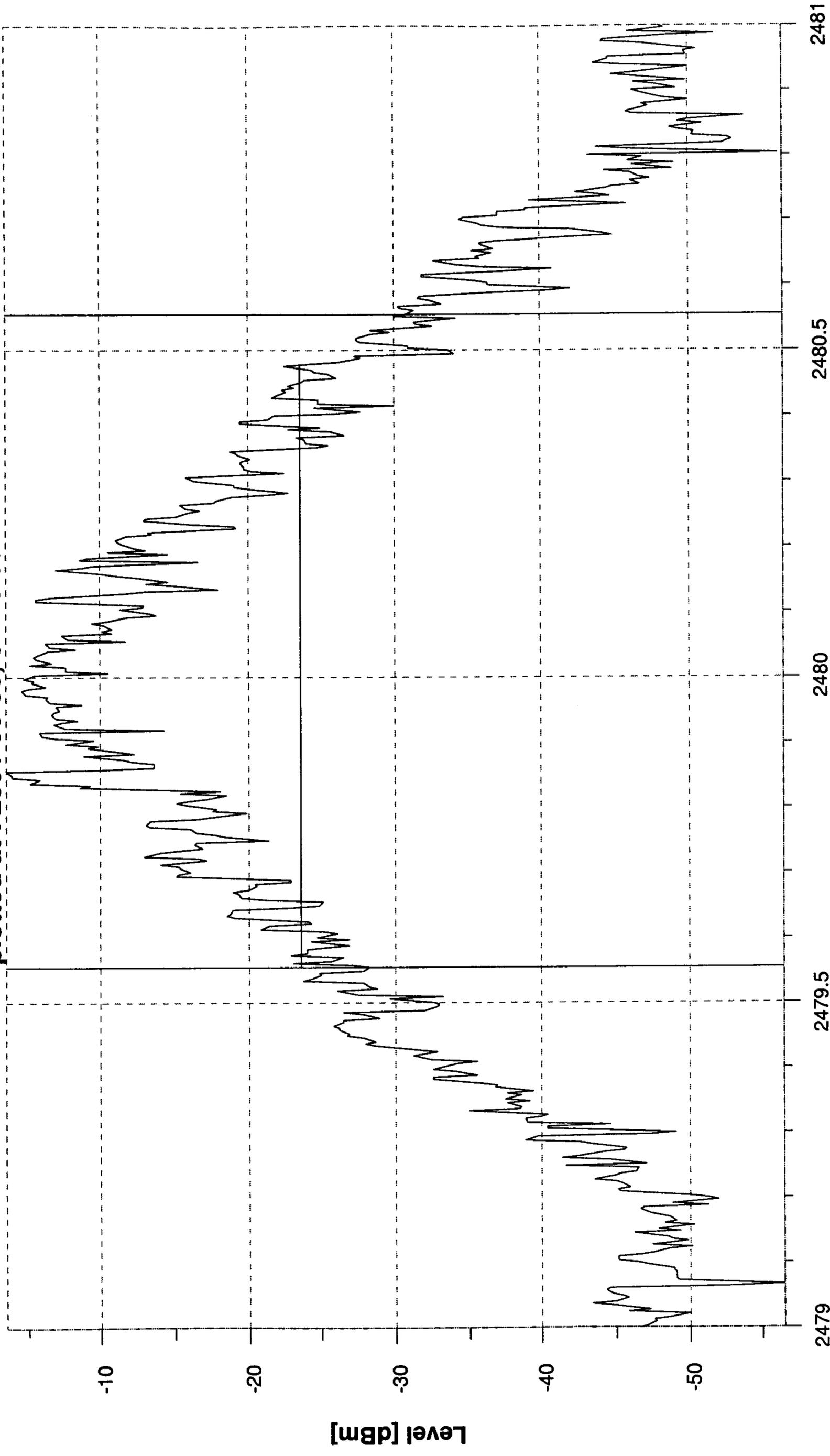
plotted at : 2001-06-30, 07:39:43



Frequency [MHz]

Results TC TX Output Spectrum - 20 dB Bandwidth -EUT TX Frequency 2480.000 MHz

plotted at : 2001-06-30, 07:40:33



Frequency [MHz]

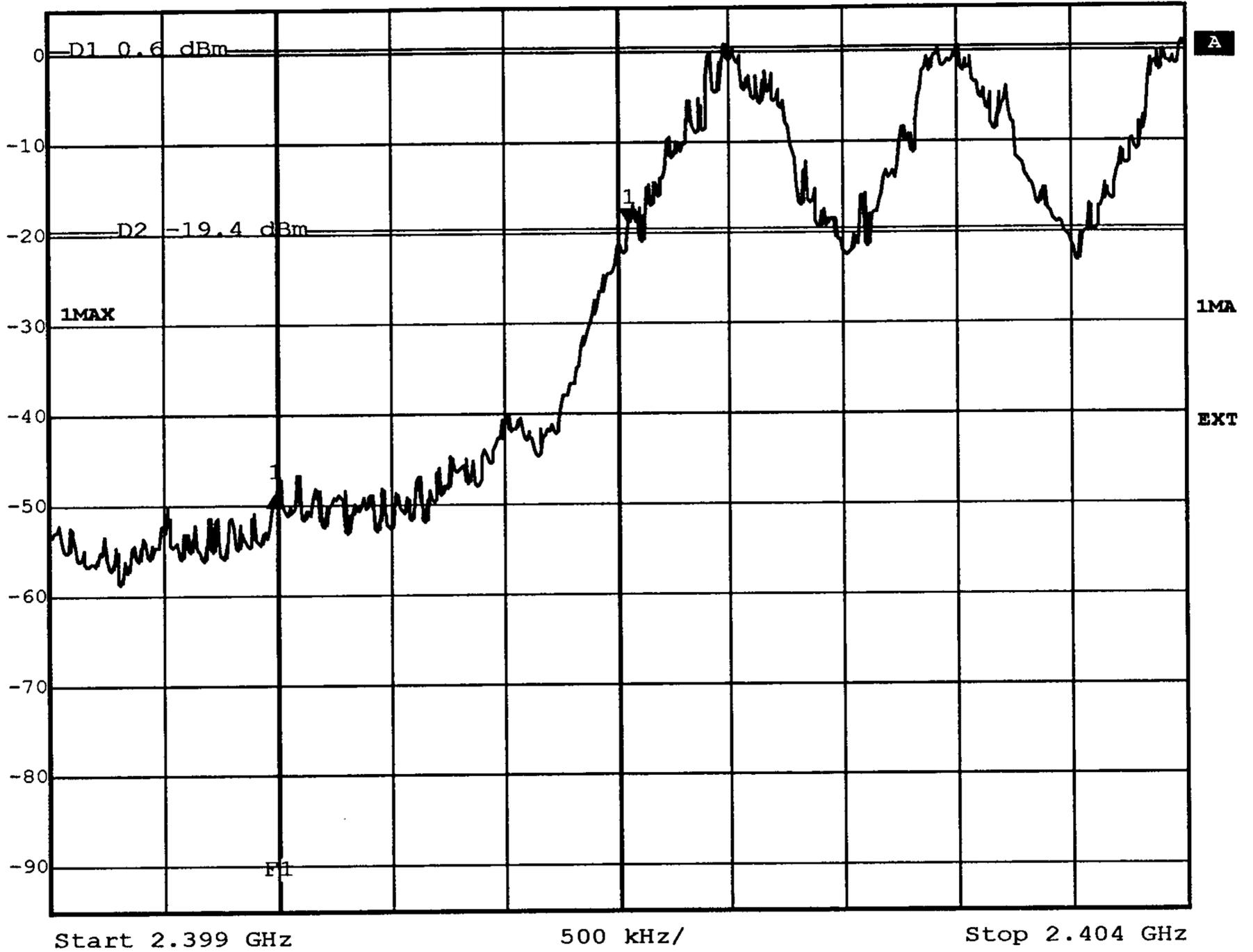


Appendix I

Band-edge Compliance of RF Emissions



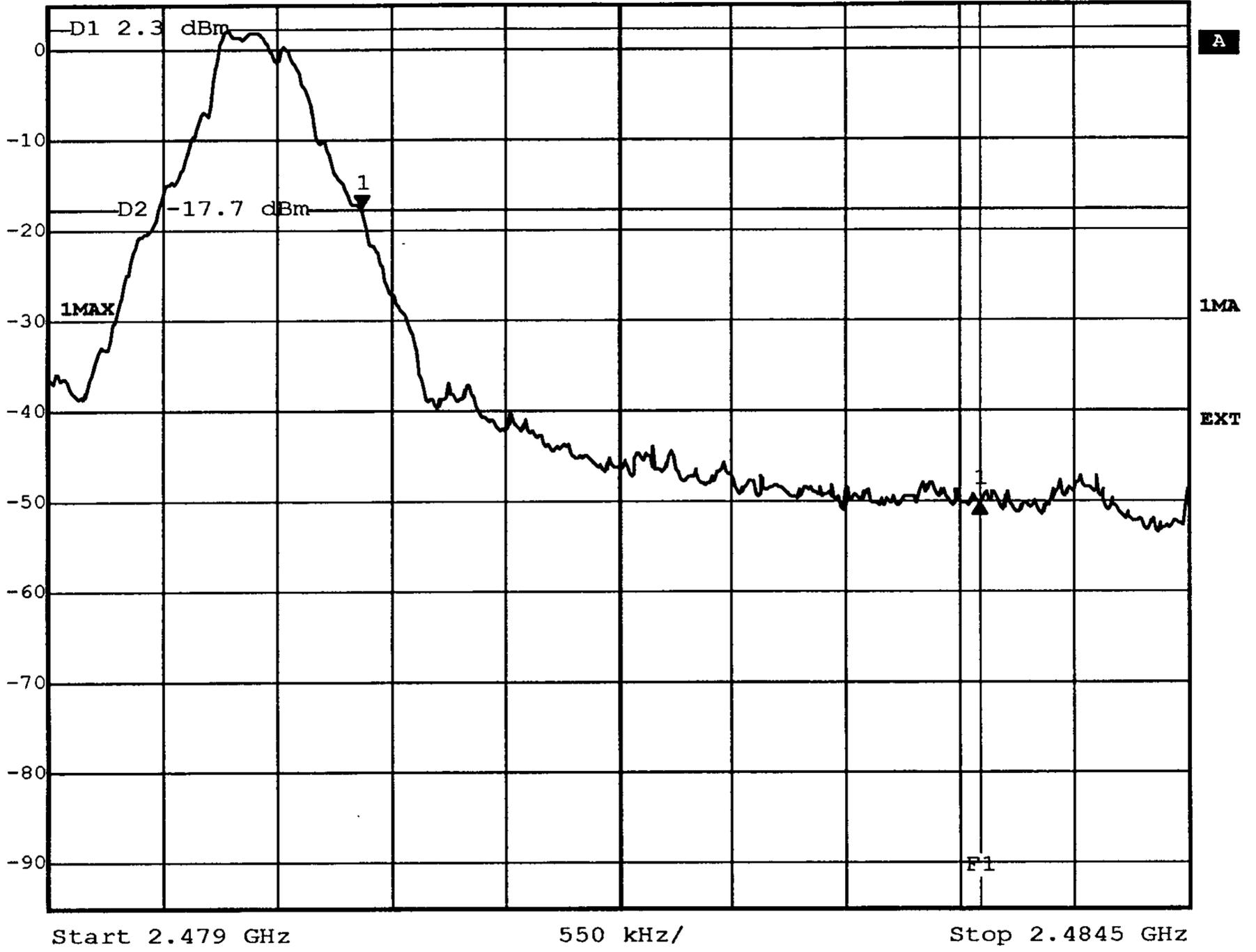
Delta 1 [T1] RBW 50 kHz RF Att 30 dB
Ref Lvl -30.38 dB VBW 50 kHz
5 dBm -1.56312625 MHz SWT 5 ms Unit dBm



Title: Band-edge Compliance of RF Conducted Emissions (Hopping on)
Comment A: BTA-NW1
Date: 30.JUN.2001 09:37:13



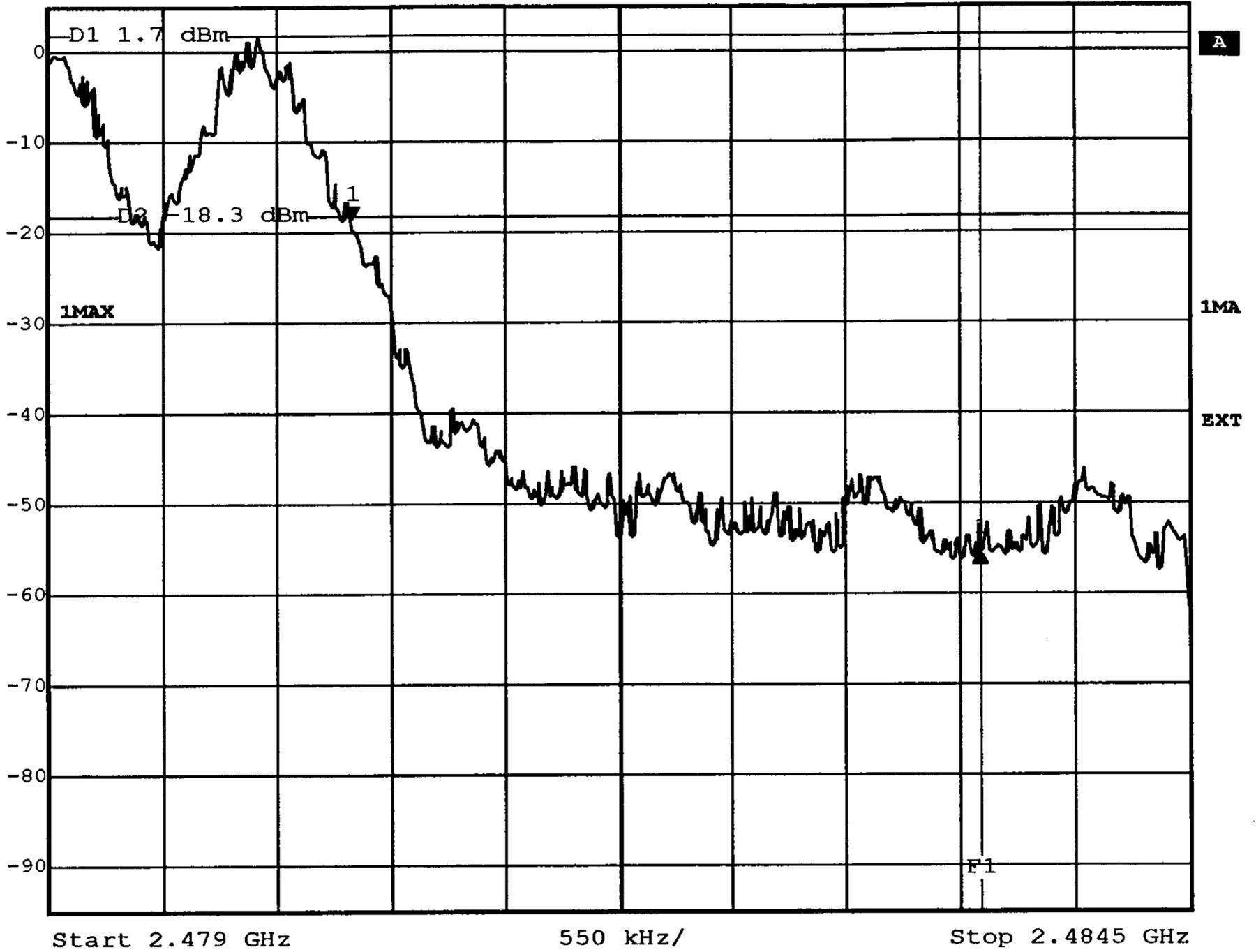
Delta 1 [T1] RBW 50 kHz RF Att 30 dB
Ref Lvl -32.61 dB VBW 50 kHz
5 dBm 2.98697395 MHz SWT 5.5 ms Unit dBm



Title: Band-edge Compliance of RF Conducted Emissions (Tx 2480 MHz)
Comment A: BTA-NW1
Date: 30.JUN.2001 09:23:40



Delta 1 [T1] RBW 50 kHz RF Att 30 dB
Ref Lvl -36.95 dB VBW 50 kHz
5 dBm 3.03106212 MHz SWT 5.5 ms Unit dBm



Title: Band-edge Compliance of RF Conducted Emissions (Hopping on)
Comment A: BTA-NW1
Date: 30.JUN.2001 09:27:55



Appendix J

Conducted Measurement at (AC) Power Line

EMI voltage test in the ac-mains according to FCC part 15

EUT: MODEM ADAPTER WITH BLUETOOTH FUNCTION
 Manufacturer: SONY CORPORATION
 Operating Condition: Unom: 120 VAC (AC/DC adaptor) , Tnom: 23°C
 Test Site: ETS
 Operator: Mr. Marquardt
 Test Specification: V-Network: ESH3-Z5
 Comment: model: BTA-NW1 mode: active
 (US type)

