

EXHIBIT 6. Test Report

FCC ID: AZ489FT5805

HDT502 Hand Held Data Terminal

Certification Under Part 90

Prepared On Behalf Of

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Prepared

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Exhibit 6

CERTIFICATION

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* Please refer to the original Certification data for FCC ID: AZ489FT5796 for Exhibits 6A and 6H.

EXHIBIT 6E TEST: OCCUPIED BANDWIDTH

FCC ID: AZ489FT5805
 Grantee: Motorola, Inc.
 Minimum Standard Specified: Para. 90.210 (g)
 Test Results: Equipment is Compliant with Standard
 Equipment Authorization Procedure: Para. 2.1049

The transmitter modulation scheme is QPSK, Quad-16QAM, and Quad-64QAM. The transmitter was modulated with iDEN time division multiplexed (TDM) pseudo random data. The reference level was taken with no modulation and a 100 kHz RBW and VBW to ensure all of the transmitted energy is measured. The unmodulated carrier and the modulated signal level are plotted on the same graph as the upper and lower Trace A and B respectively.

For additional information and detail concerning this complex modulation scheme please refer to the original exhibit data on file for the FCC ID: AZ489FT5796.

MEASUREMENT DATA

Spectrum Analyzer: Hewlett Packard 8562A

| Test Plots Located of the following pages. | | <u>Pg. 2</u> | <u>Low Power</u> | <u>Pg. 3</u> | <u>High Power</u> |
|--|--|--------------|------------------|--------------|-------------------|
| Settings: | Upper Trace A Carrier Only | RBW: | 100 | 100 | kHz |
| | | VBW: | 100 | 100 | kHz |
| | Lower Trace B Modulated (pseudo random data) | RBW: | 300 | 300 | Hz |
| | | VBW: | 300 | 300 | Hz |
| | Scan Time: | | 100 | 100 | sec. |
| | Scan Width: | | 100 | 100 | kHz |
| | Center Frequency: | | 813.5125 | 813.5125 | MHz |

MKR 5.50dBm

813.5125MHZ

MOTOROLA
HDT502

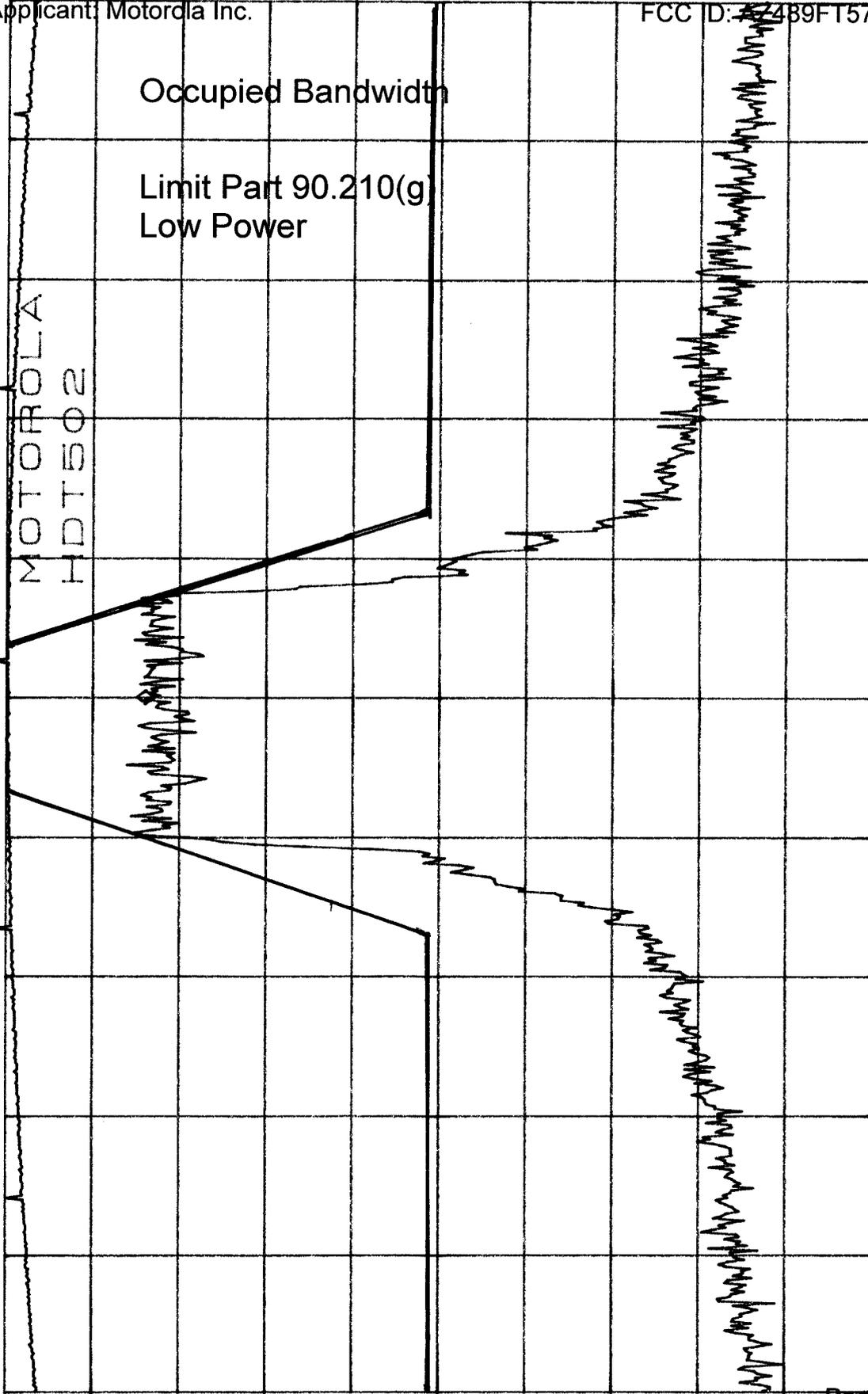
Occupied Bandwidth

Limit Part 90.210(g)
Low Power

*ATTEN 40dB

RL 22.5dBm

10dB/



913/00

CENTER 813.5125MHZ
SPAN 100.0KHZ

*RBW 300HZ
VBW 300HZ

*ATTEN 40dB
RL 22.5dBm

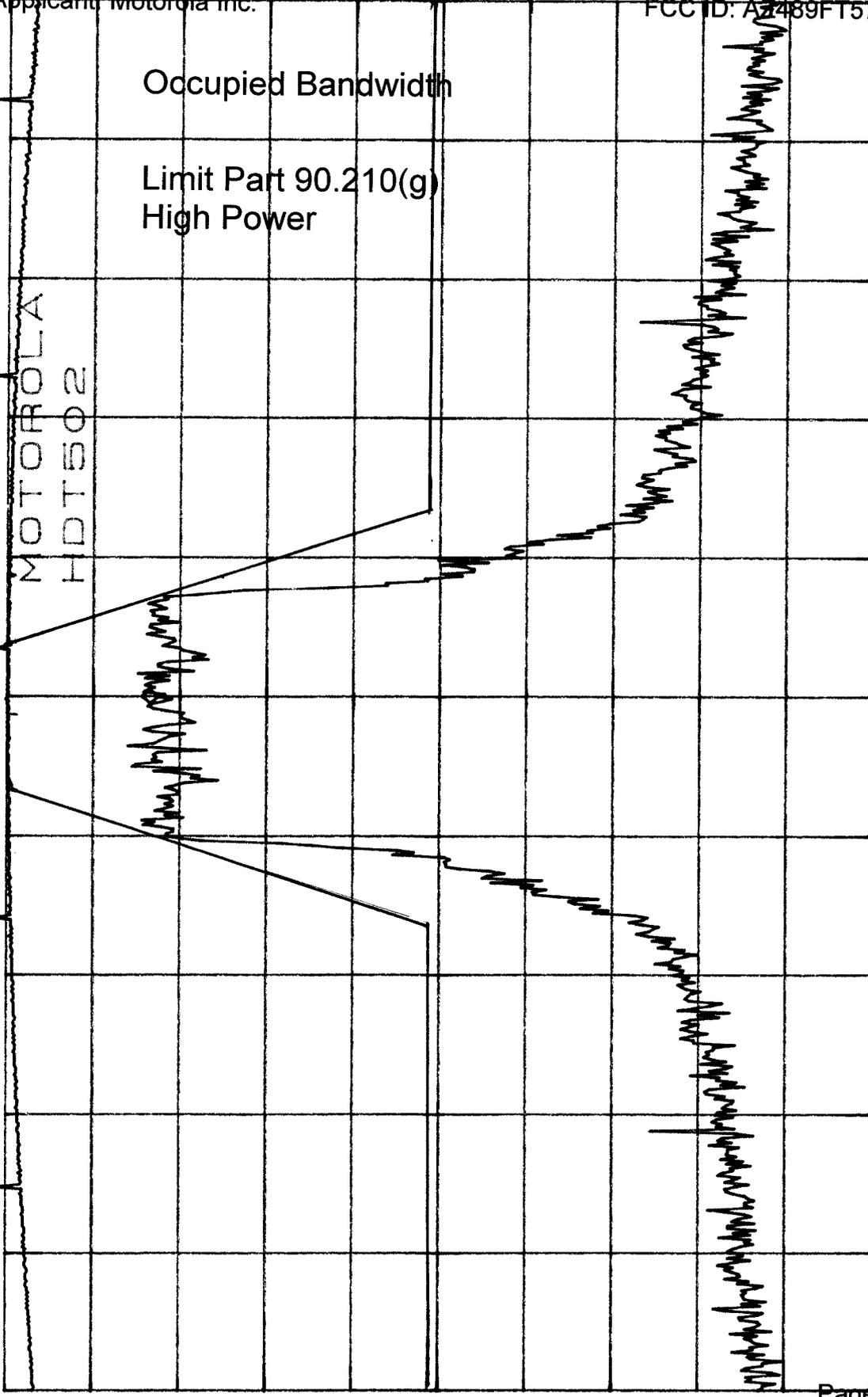
*ATTEN 10dB
MKR -25.16dBm

RL -7.7dBm
813.5125MHZ

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40dB/

Occupied Bandwidth
Limit Part 90.210(g)
High Power



9/3/00
SPAN 100.0KHZ

CENTER 813.5125MHZ

*RBW 300HZ

Page 3

*SWP 100SEC

EXHIBIT 6F TEST: TRANSMITTER CONDUCTED SPURIOUS EMISSIONS

FCC ID: AZ489FT5805

Manufacturer: Motorola, Inc.

Serial No.: none

Minimum Standard Specified: Para. 90.210 (g)

Test Results: Equipment complies with standard

Equipment Authorization Procedure: Para. 2.1051

Frequency Range Observed: 0 to 10 GHz

Operating Frequency: 813.5125 MHz

Power Output: 0.0024 variable to 0.7 Watts
+3.8 dBm variable to 28.45 dBm

Spurious Limit = $43 \text{ dB} + 10\text{Log}_{10} \text{ PO} = 41.45 \text{ dB}$ below the carrier

Six plots of the spurious emissions measured at the antenna terminals follow:

Low Power

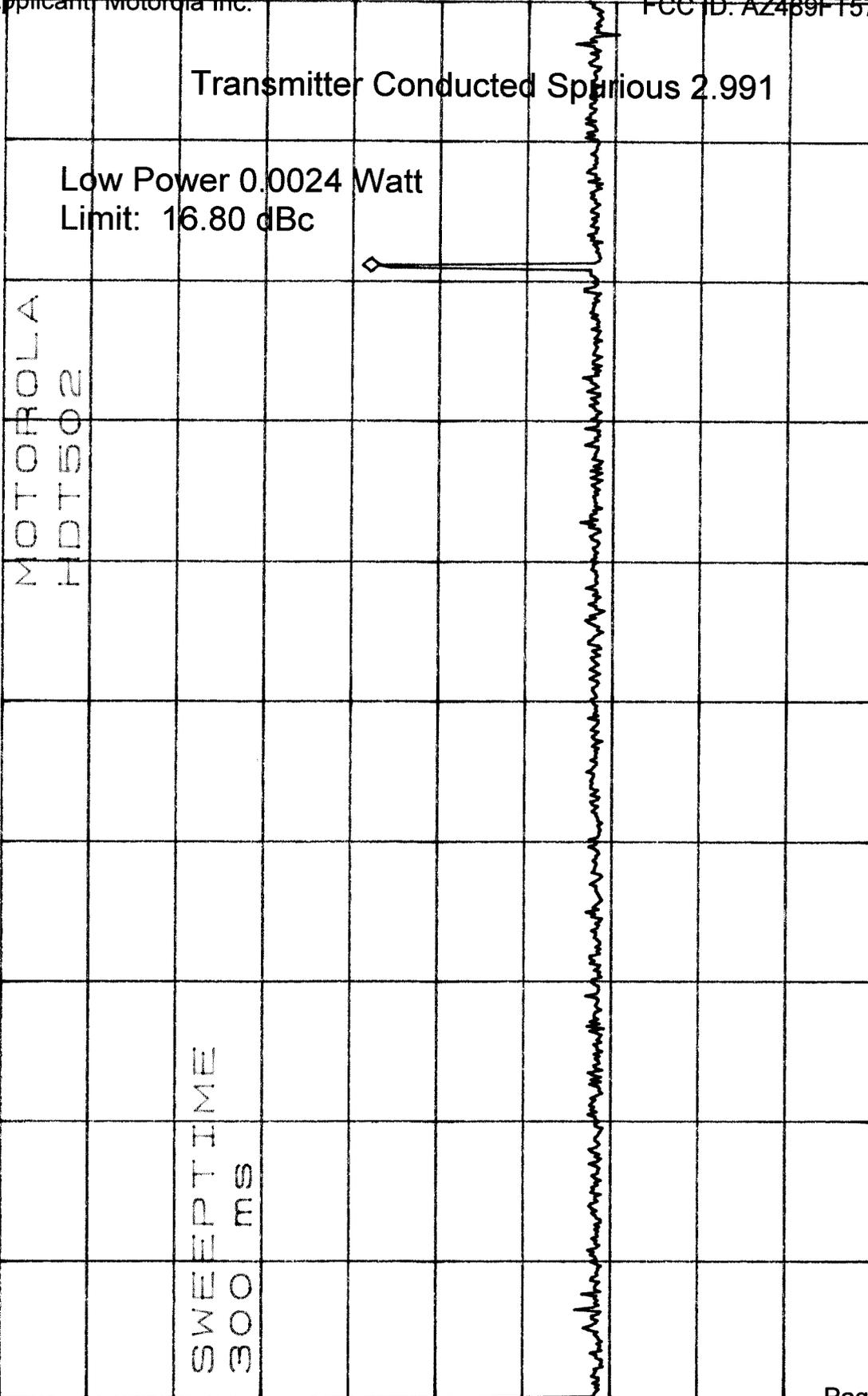
| | | |
|--------------------|---------|--------------------------------|
| Span 0 – 1.0 GHz, | 100kHz | Resolution and Video Bandwidth |
| Span 0 – 2.9 GHz | 1.0 MHz | Resolution and Video Bandwidth |
| Span 2.75 – 10 GHz | 1.0 MHz | Resolution and Video Bandwidth |

High Power

| | | |
|--------------------|---------|--------------------------------|
| Span 0 – 1.0 GHz, | 100kHz | Resolution and Video Bandwidth |
| Span 0 – 2.9 GHz | 1.0 MHz | Resolution and Video Bandwidth |
| Span 2.75 – 10 GHz | 1.0 MHz | Resolution and Video Bandwidth |

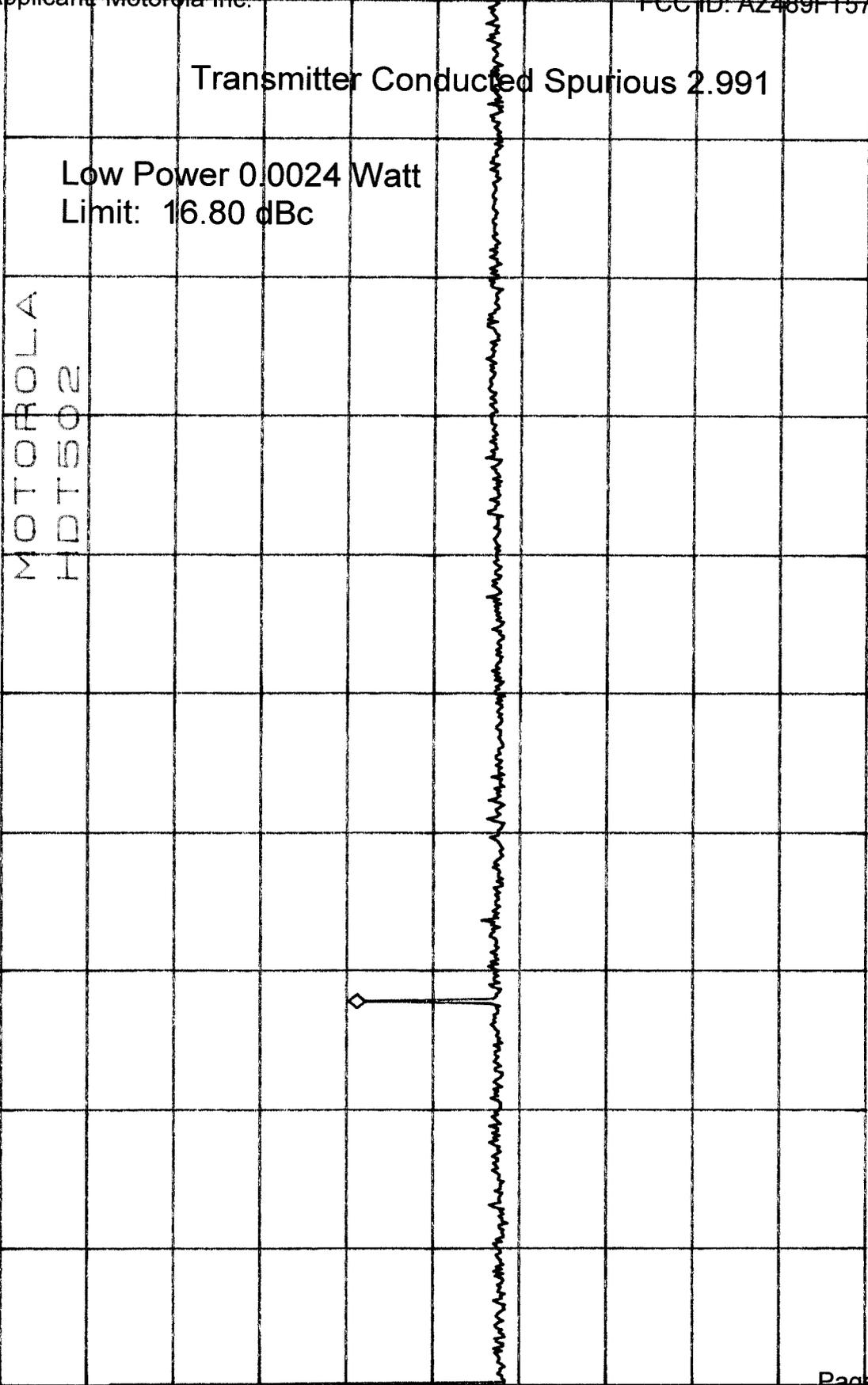
A high pass filter was used to reduce the level of Fo 36 dB and avoid overloading the front end of the analyzer. All conducted harmonic and spurious emissions were at least 20 dB below the limit for both low and high power operation.

*ATTEN 40dB
RL -7.7dBm
MKR -50.66dBm
812MHz
10dB/



9/29/90
STOP 1.0000GHZ
*SWP 300ms
START 0HZ
VBW 100KHZ
*RBW 100KHZ

*ATTEN 10dB
*RL -7.7dBm
MKR -49.83dBm
807MHz



9/9/00 6:00pm
STOP 2.900GHZ *SWP 300ms
VBW 1.0MHZ
START 0HZ
*RBW 1.0MHZ

Exhibit VI

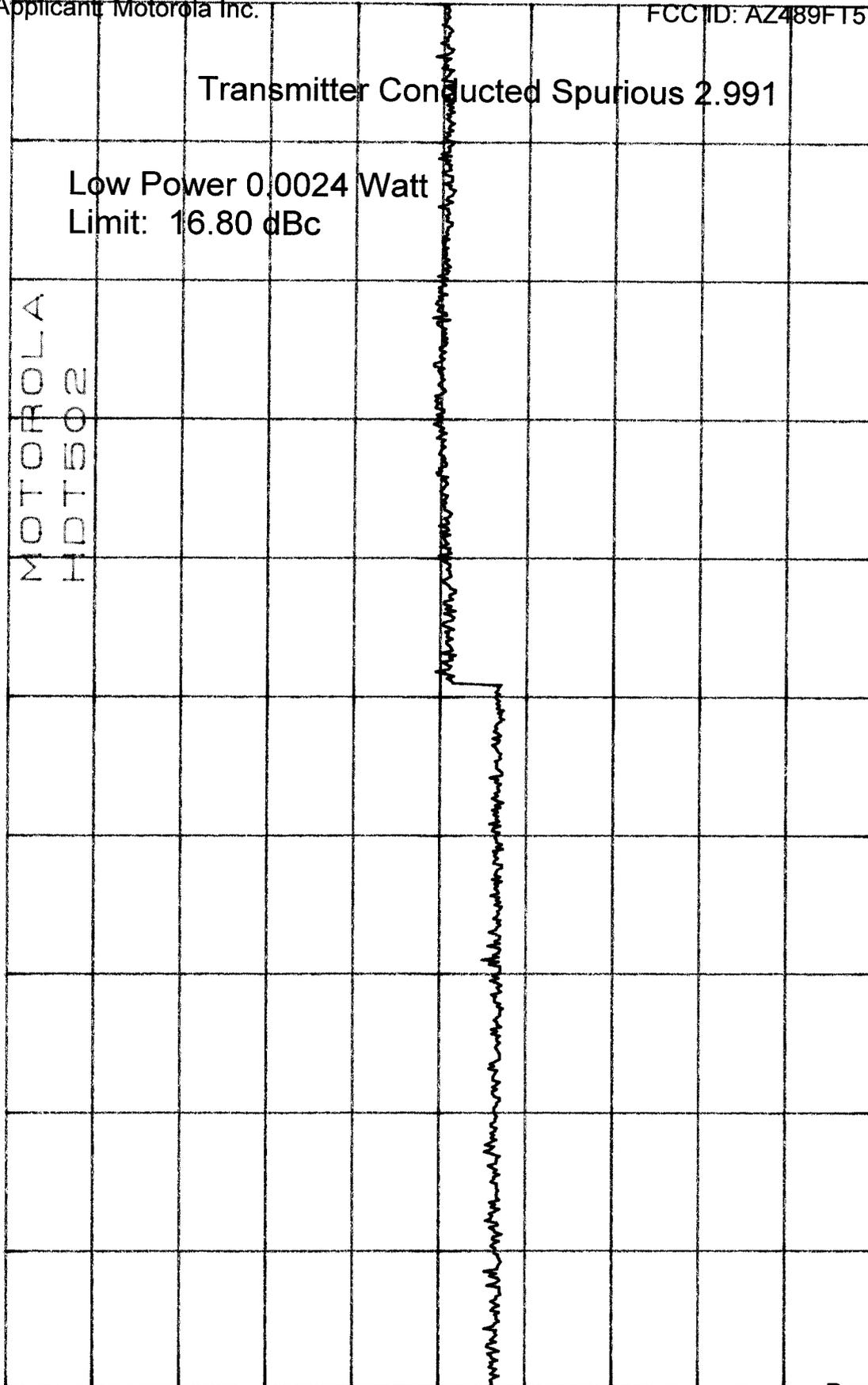
Transmitter Conducted Spurious 2.991

Low Power 0.0024 Watt
Limit: 16.80 dBc

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HDT502

ATTEN 40dB
FL -7.7dBm
10dB/

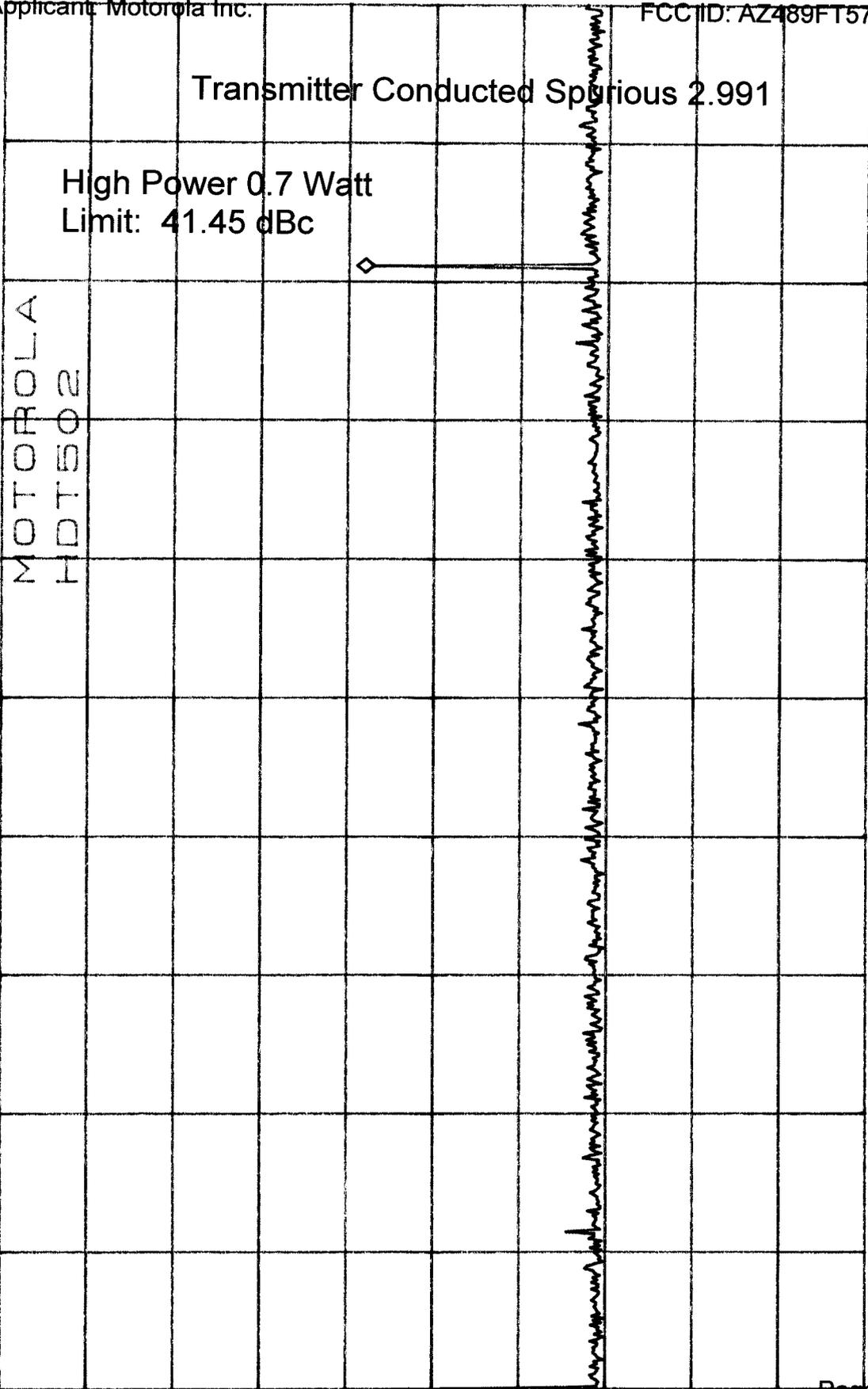
*ATTEN 40dB
FL -7.7dBm



9/13/00 WJ/ML/MS

START 2.750GHZ STOP 10.000GHZ
*RBW 1.0MHZ VBW 1.0MHZ *SWP 300MS

*ATTEN 40dB
PL 22.5dBm
MKR -20.33dBm
812MHZ
10dB/



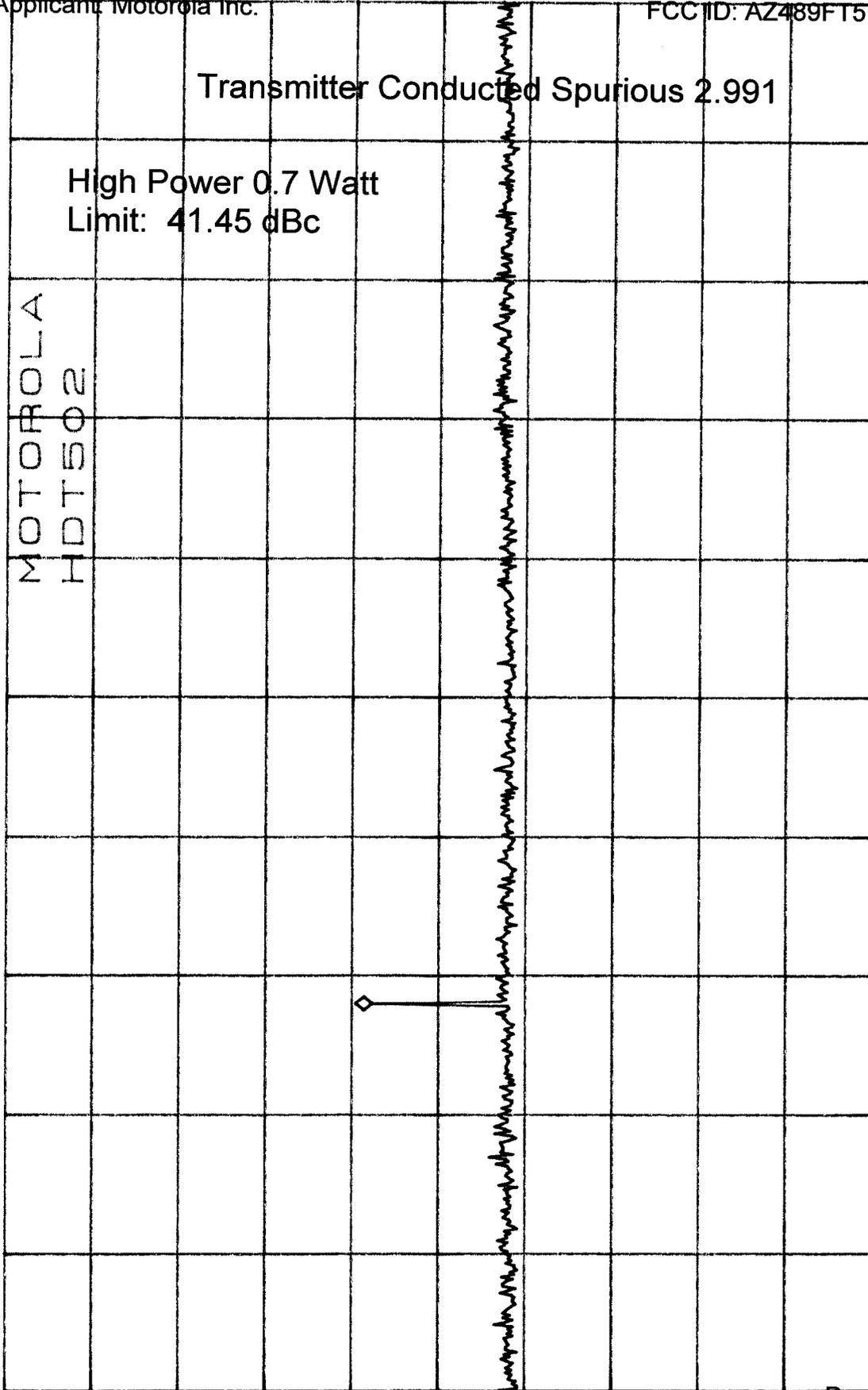
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9/15/00 5:00 PM

START 0HZ
*RBW 100KHZ
STOP 1.000GHZ
VBW 100KHZ
SWP 300ms

Exhibit VI

*ATTEN 40dB
RL 22.5dBm
MKR -19.83dBm
812MHz
10dB/



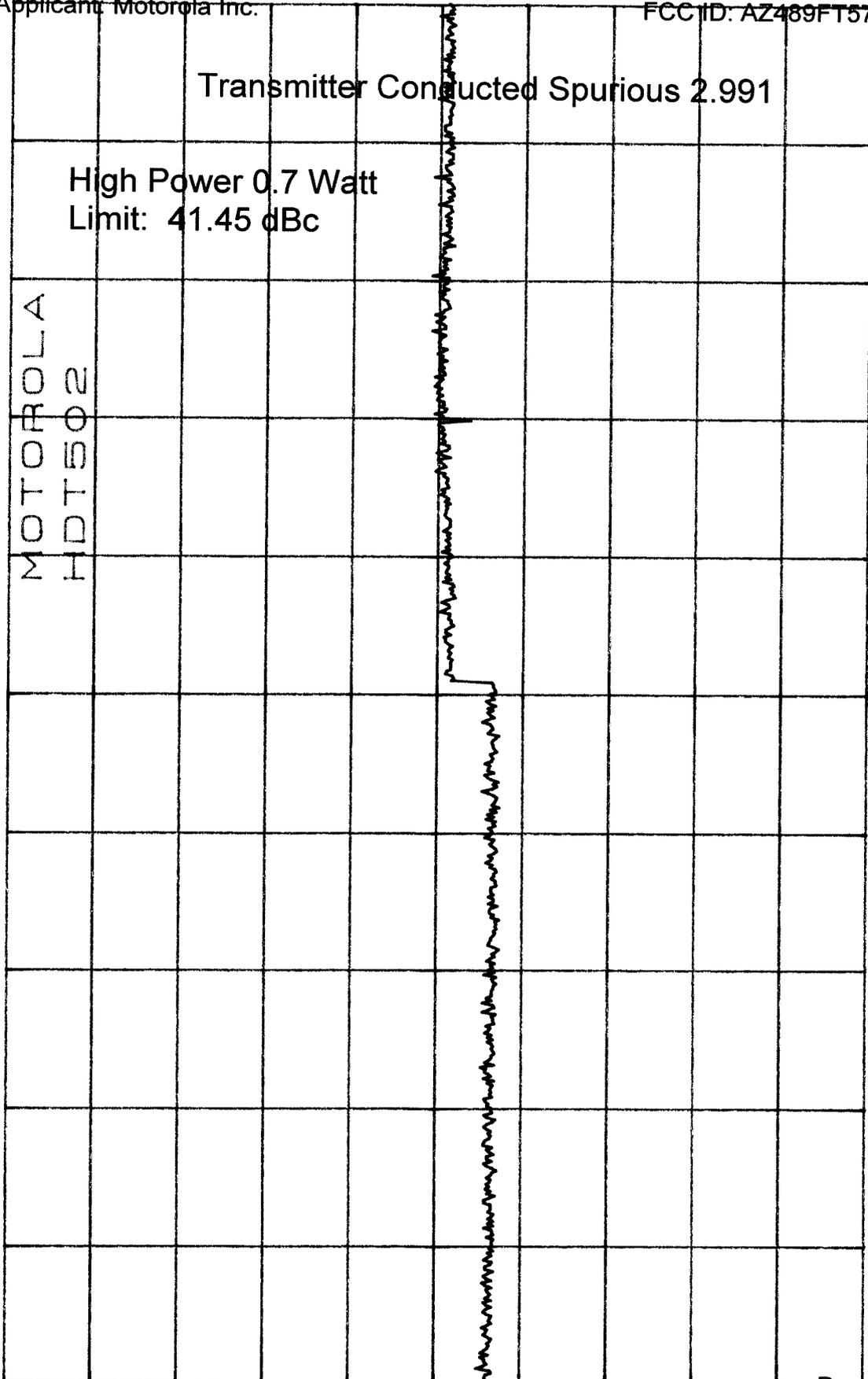
913100 W/CPM
STOP 2.900GHZ
VBW 1.0MHZ
SWP 60MS
START 0HZ
*RBW 1.0MHZ

Transmitter Conducted Spurious 2.991

High Power 0.7 Watt
Limit: 41.45 dBc

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HDT502

*ATTEN 40dB
RL 22.5dBm
10dB/



9/13/00 W/CP/MS

START 2.750GHZ STOP 10.000GHZ
*RBW 1.0MHZ VBW 1.0MHZ SWP 200ms

EXHIBIT 6G TEST: TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: AZ489FT5805

Manufacturer: Motorola, Inc.

Serial No.: ESN

Minimum Standard Specified: Para. 90.210 (g)

Test Results: Equipment complies with standard

Equipment Authorization Procedure: Para. 2.1053

Test Equipment Set Up: See Block Diagram

Frequency Range Observed: 0 to 10 GHz

Operating Frequency: 813.5125 MHz

Power Output: 0.0024 Watt to 0.7-Watt power

Spurious Limit = $43 + 10\text{Log}_{10} \text{PO} =$ = 41.45 dB below the carrier

| <u>FORMULA</u> | <u>FREQUENCY IN MHz</u> | <u>Low Power Level (dB below carrier)</u> | <u>High Power Level (dB below carrier)</u> |
|----------------|-------------------------|---|--|
| Fo | 813.5125 | -0- | -0- |
| 2Fo | 1627.025 | ----- | -59.48 |
| 4Fo | 3254.050 | ----- | -54.60 |

At 3 meters with 1 MHz RBW and VBW all harmonic and spurious emissions up to 10 GHz were at least 20 dB below the limit for both low and high power settings.