

**GRAPHICAL SECTION PART 1
FOR RFI TEST REPORT SERIAL NO:
RFI/MPTB3/RP45398JD01A**

Test Of: PipeHawk plc.
Ground Probing Radar

To: FCC Part 15: 2002,
Section 15.509

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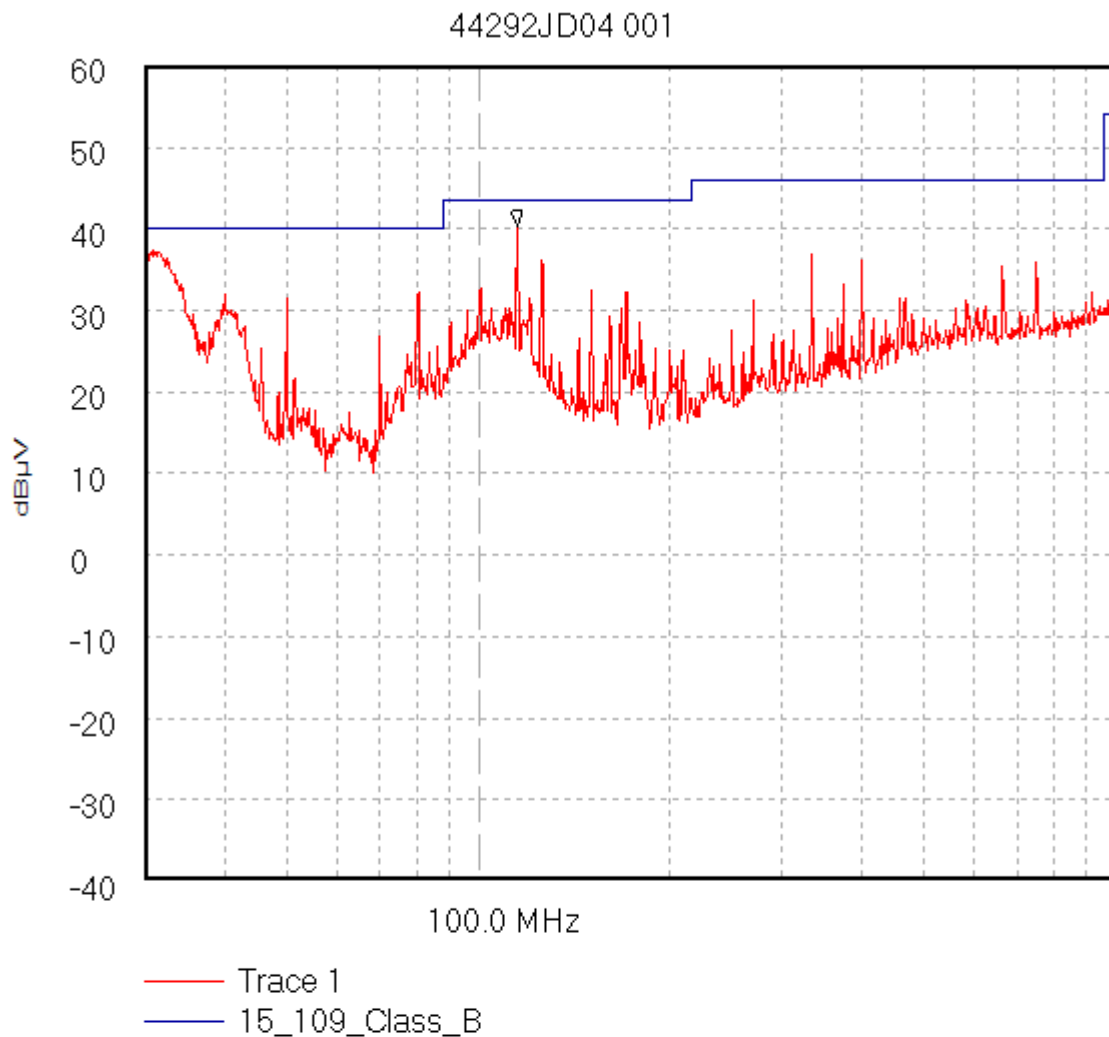
Test Of: PipeHawk plc.
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To: FCC Part 15: 2002, Section 15.509

Graphical Test Results

Graph Reference Number	Title
GPH\44292JD04\001	Radiated Spurious Emissions EUT powered up in standby mode (30.0 MHz to 1.0 GHz)
GPH\44292JD04\002	Radiated Spurious Emissions EUT powered up in standby mode (1.0 GHz to 2.0 GHz)
GPH\44292JD04\003	Radiated Spurious Emissions EUT powered up in standby mode (2.0 GHz to 4.0 GHz)
GPH\44292JD04\004	Radiated Spurious Emissions Cross Polar Antenna (30.0 MHz to 960.0 MHz)
GPH/44292JD04/HC/008	Radiated Spurious Emissions Cross Polar Antenna (0.960 GHz to 2.0 GHz)
GPH/44292JD04/HC/005A	Radiated Spurious Emissions Cross Polar Antenna (2.0 GHz to 4.0 GHz)
GPH/44292JD04/HC/009	Radiated Spurious Emissions Cross Polar Antenna (4.0 GHz to 6.0 GHz)
GPH/44292JD04/HC/010	Radiated Spurious Emissions Cross Polar Antenna (6.0 GHz to 8.0 GHz)
GPH/44292JD04/HC/011	Radiated Spurious Emissions Cross Polar Antenna (8.0 GHz to 12.5 GHz)

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GPH\44292JD04\001
Radiated Emissions.
EUT powered up in standby.



Start 30.0 MHz; Stop 1.0 GHz - Log Scale

Ref 60 dBµV; Ref Offset 0.0 dB; 10 dB/div

RBW 120.052 kHz; VBW 100.0 kHz; Att 0 dB; Swp 220.0 mS

Peak 115.051272 MHz, 40.38 dBµV

Limit/Mask: 15_109_Class_B;

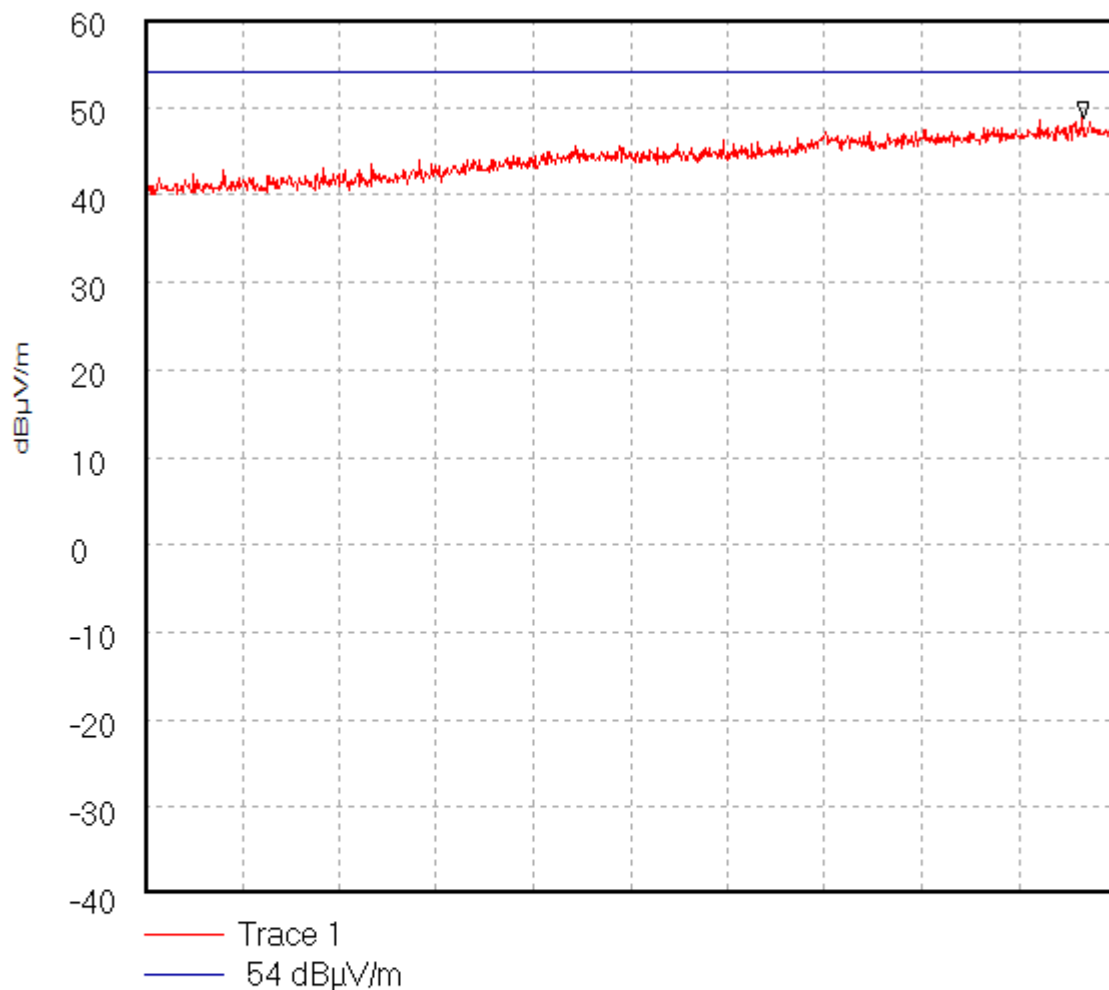
Transducer Factors: A490

10/04/2003 10:34:25

Test Of: PipeHawk plc.
Ground Probing Radar
To: FCC Part 15: 2002, Section 15.509

GPH\44292JD04\002
Radiated Emissions.
EUT powered up in standby.

44292JD04 002



Start 1.0 GHz; Stop 2.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1.0 MHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 1.96667 GHz, 48.7 dBµV/m

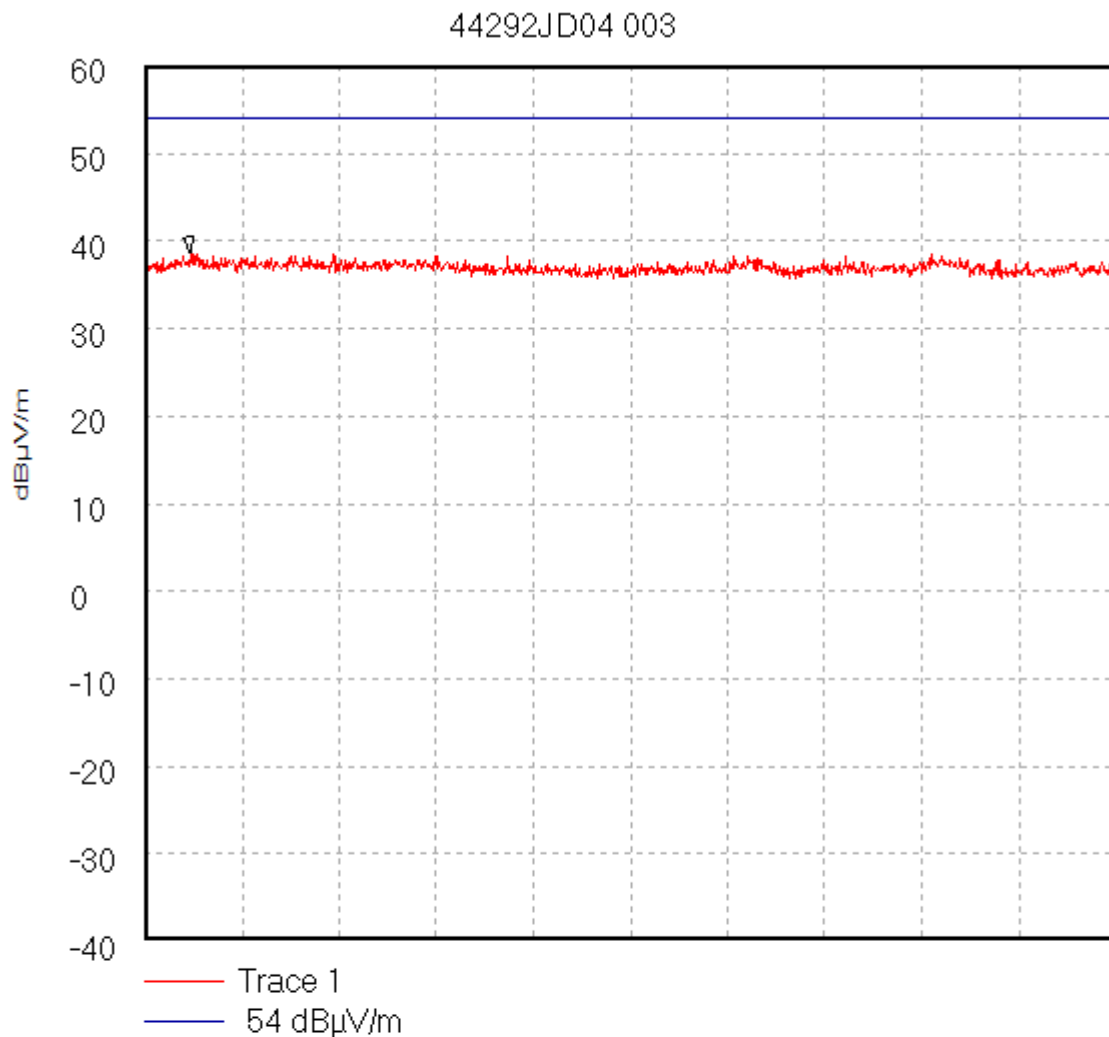
Display Line: 54 dBµV/m;

Transducer Factors: 1 to 2

10/04/2003 10:37:54

Test Of: PipeHawk plc.
Ground Probing Radar
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GPH\44292JD04\003
Radiated Emissions.
EUT powered up in standby.



Start 2.0 GHz; Stop 4.0 GHz

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 1.0 MHz; VBW 1.0 MHz; Att 0 dB; Swp 20.0 mS

Peak 2.093333 GHz, 38.6 dBµV/m

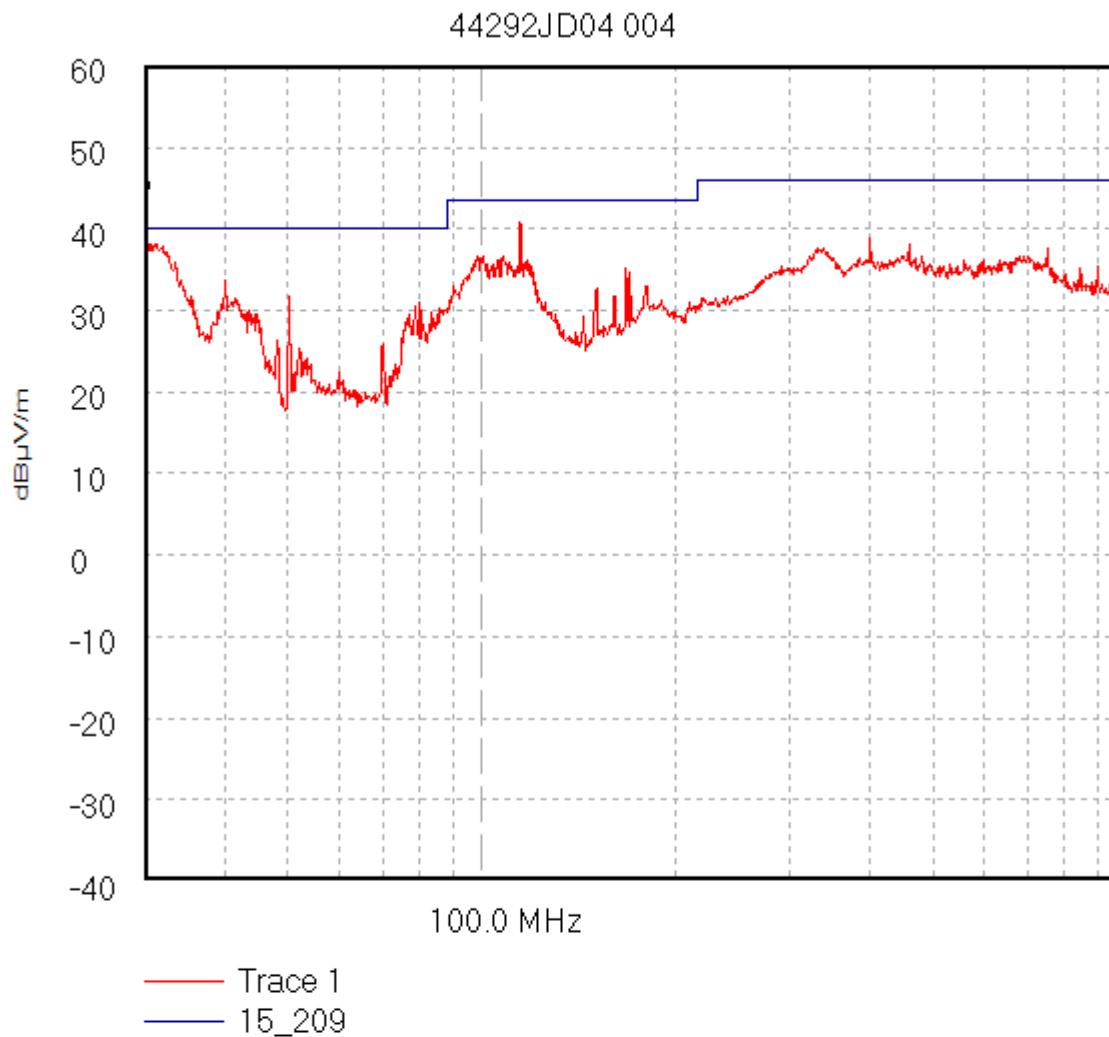
Display Line: 54 dBµV/m; ; Limit Test Failed

Transducer Factors: 2 to 4

10/04/2003 10:45:27

Test Of: PipeHawk plc.
Ground Probing Radar
To: FCC Part 15: 2002, Section 15.509

GPH\44292JD04\004
Radiated Emissions.
Tx with X polar antenna.



Start 30.0 MHz; Stop 960.0 MHz - Log Scale

Ref 60 dBµV/m; Ref Offset 0.0 dB; 10 dB/div

RBW 120.052 kHz; VBW 100.0 kHz; Att 0 dB; Swp 240.0 mS

Peak 30.0 MHz, 43.63 dBµV/m

Limit/Mask: 15_209;

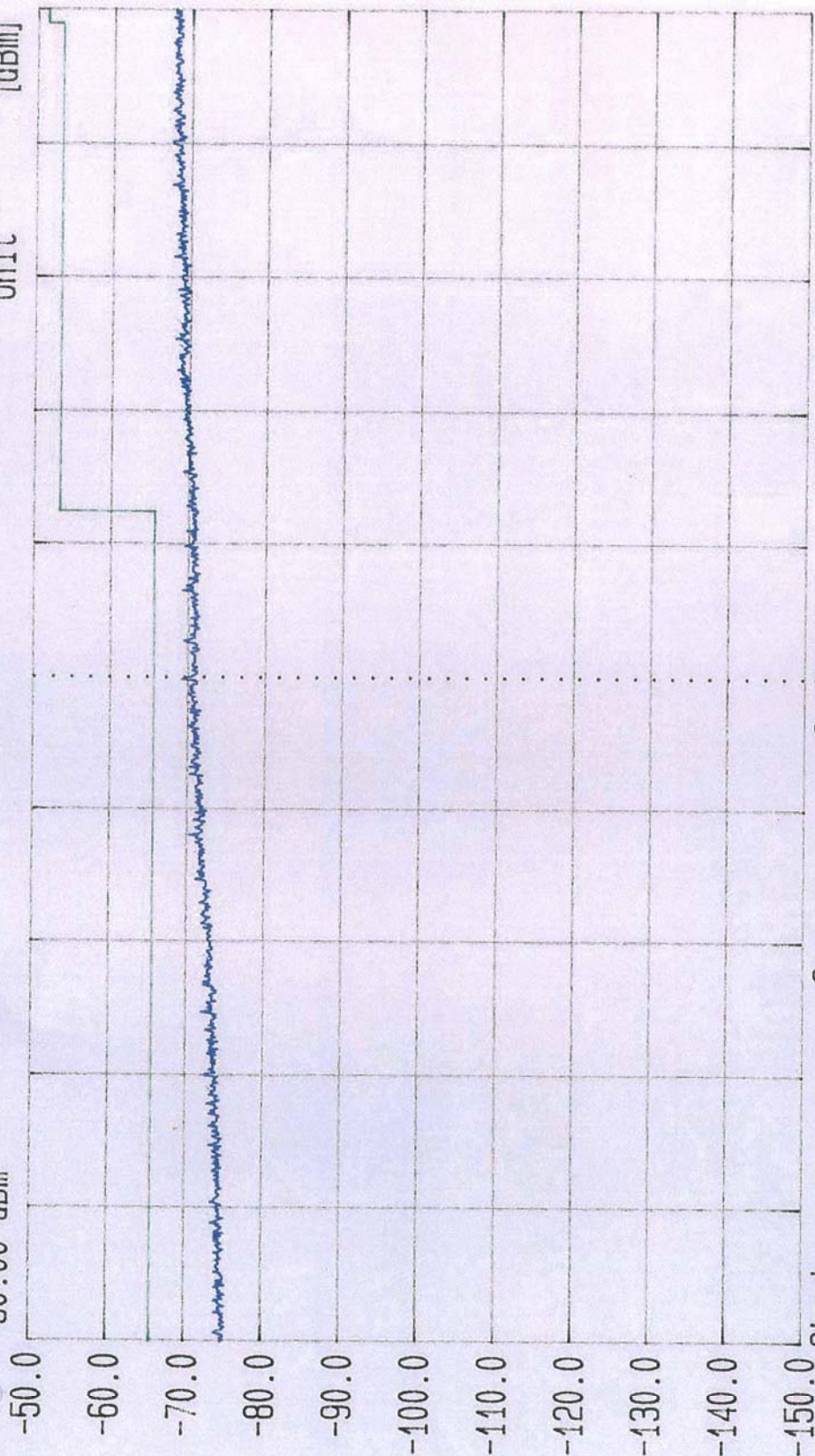
Transducer Factors: A490

10/04/2003 11:34:56

Test Of: PipeHawk plc.
Ground Probing Radar
To: FCC Part 15: 2002, Section 15.509

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LVLOFF
 Date 14 April 2003 Time 09:32:48
 Ref.Lvl -50.00 dBm
 Res.Bw 1.0 MHz [3dB] Vid.Bw 3 MHz
 TG.Lvl off
 CF.Stp 104.000 MHz RF.Att 0 dB
 Unit [dBm]



Start 0.960 GHz Center 1.48 GHz Stop 2 GHz
 Span 1.04 GHz Sweep 20 ms
 Test for Pipe Hawk of Ground Probing RADAR. SPEC FCC Part 15.509. ENG : AMT Operati
 ng Condition : Tx with x-Polar Antenna 44292JD04/HC/008

LVLOFF



Date 14 April 2003

Time 07:50:00

Ref.Lvl

-45.00 dBm

Res.Bw

1 MHz [imp]

off

Vid.Bw

3 MHz

RF.Att

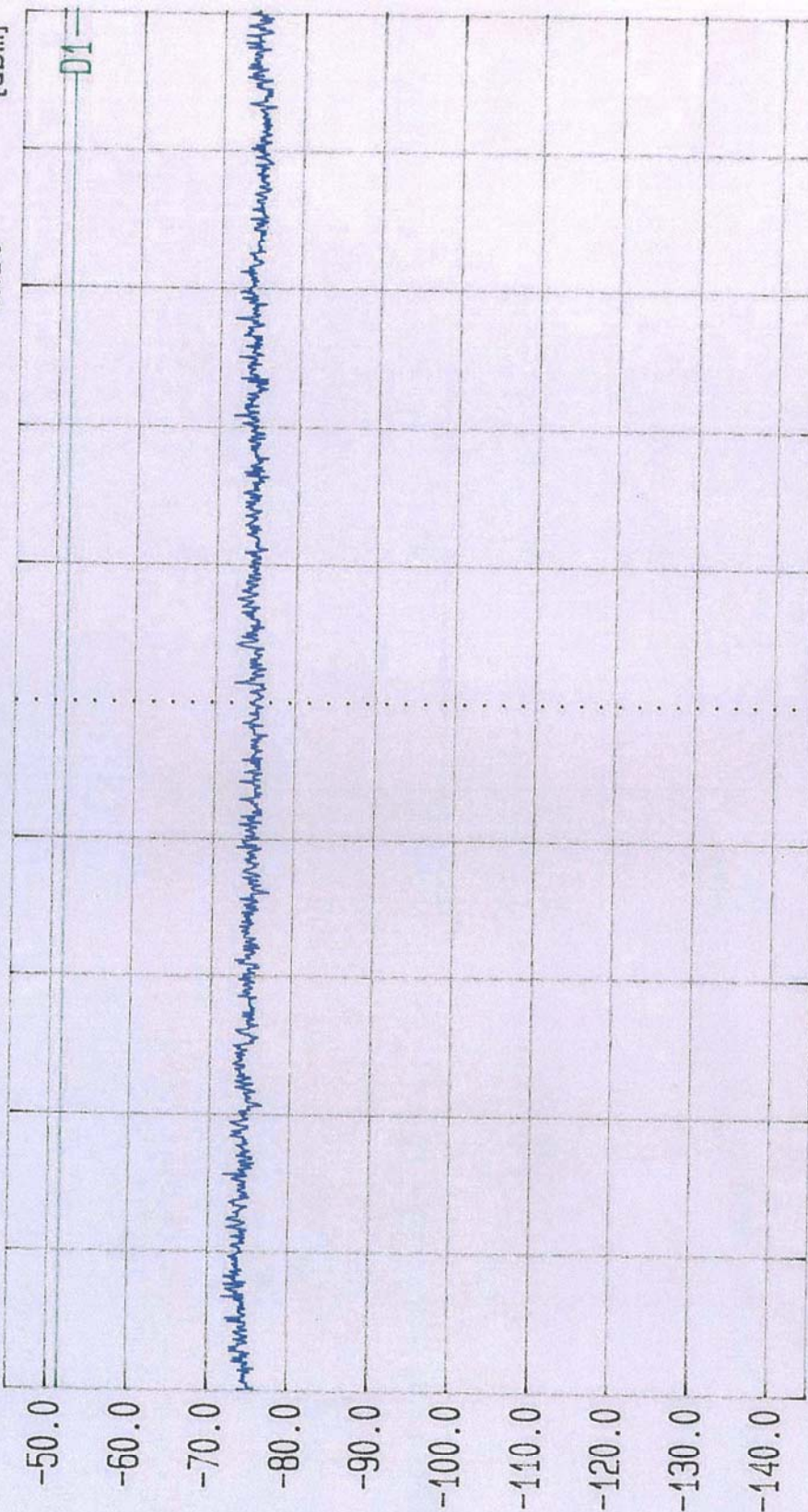
0 dB

CF.Stp

200.000 MHz

Unit

[dBm]



Start
2 GHz

Span
2.000 GHz

Center
3.000 GHz

Sweep
20 ms

Stop
4.000 GHz

Test for Pipe Hawk of Ground Probing RADAR. SPEC : FCC Part 15.509. ENG : AMT Operat
ing Condition : Tx with x-Polar Antenna 44292JD04/HC/005A



LVLOFF

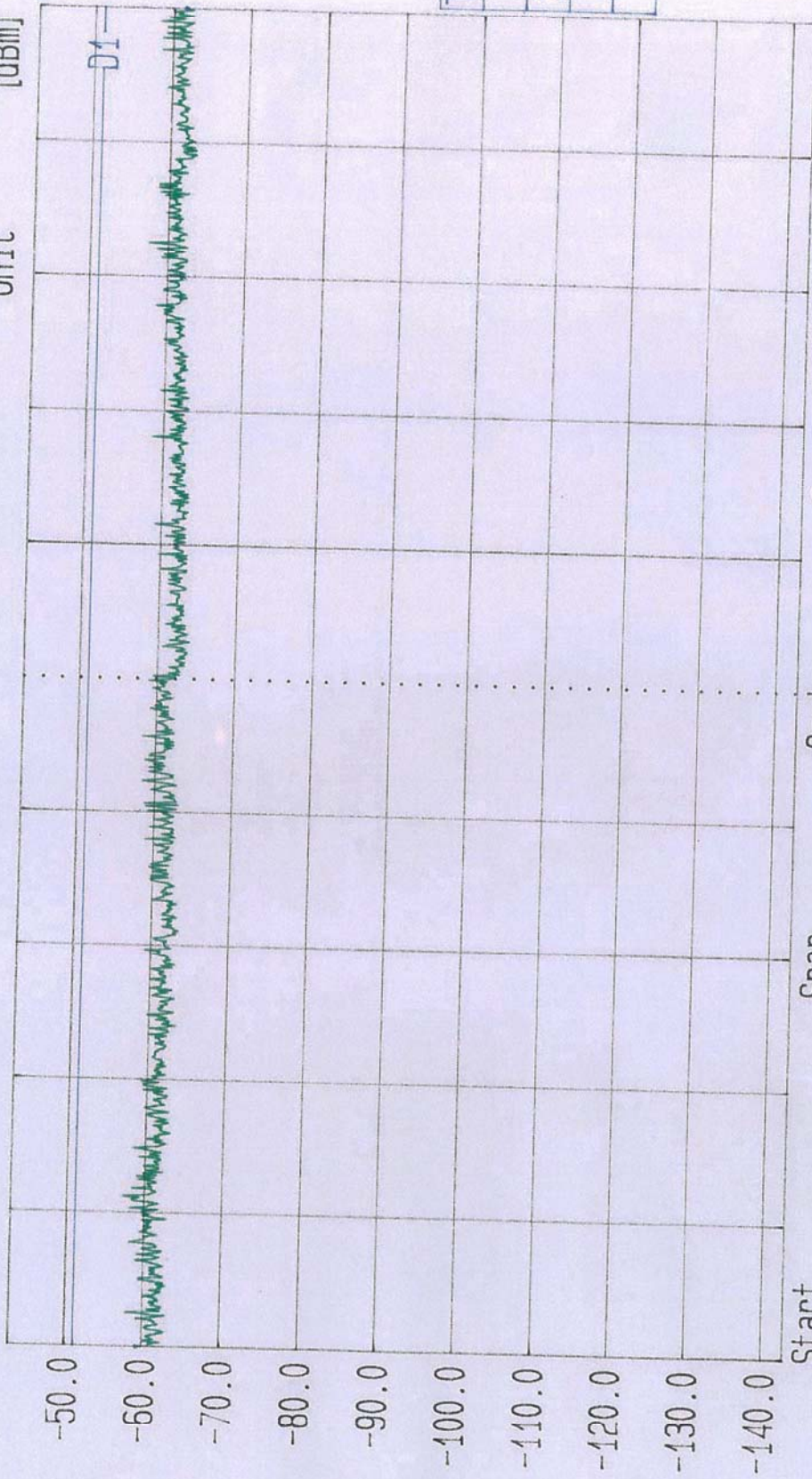
Date 14 April 2003 Time 05:48:28

Ref.Lvl

-43.00 dBm

Res.Bw 1.0 MHz [3dB] Vid.Bw 3 MHz

CF.Stp 200.000 MHz RF.Att 5 dB
Unit [dBm]



TT
2

Start 4 GHz Center 5 GHz Stop 6 GHz
Span 2 GHz Sweep 20 ms
TEST FOR PIPEHAWK OF GROUND PROBING RADAR. SPEC FCC PART 15.509. ENG: JPH 00PCOND:
TX XPOLAR ANTENNA 4429 JD04/HC/009



LVLOFF

Date 14 April 2003

Time 05:56:06

Ref.Lvl

-46.00 dBm

Res.Bw 1.0 MHz [3dB]

Vid.Bw

3 MHz

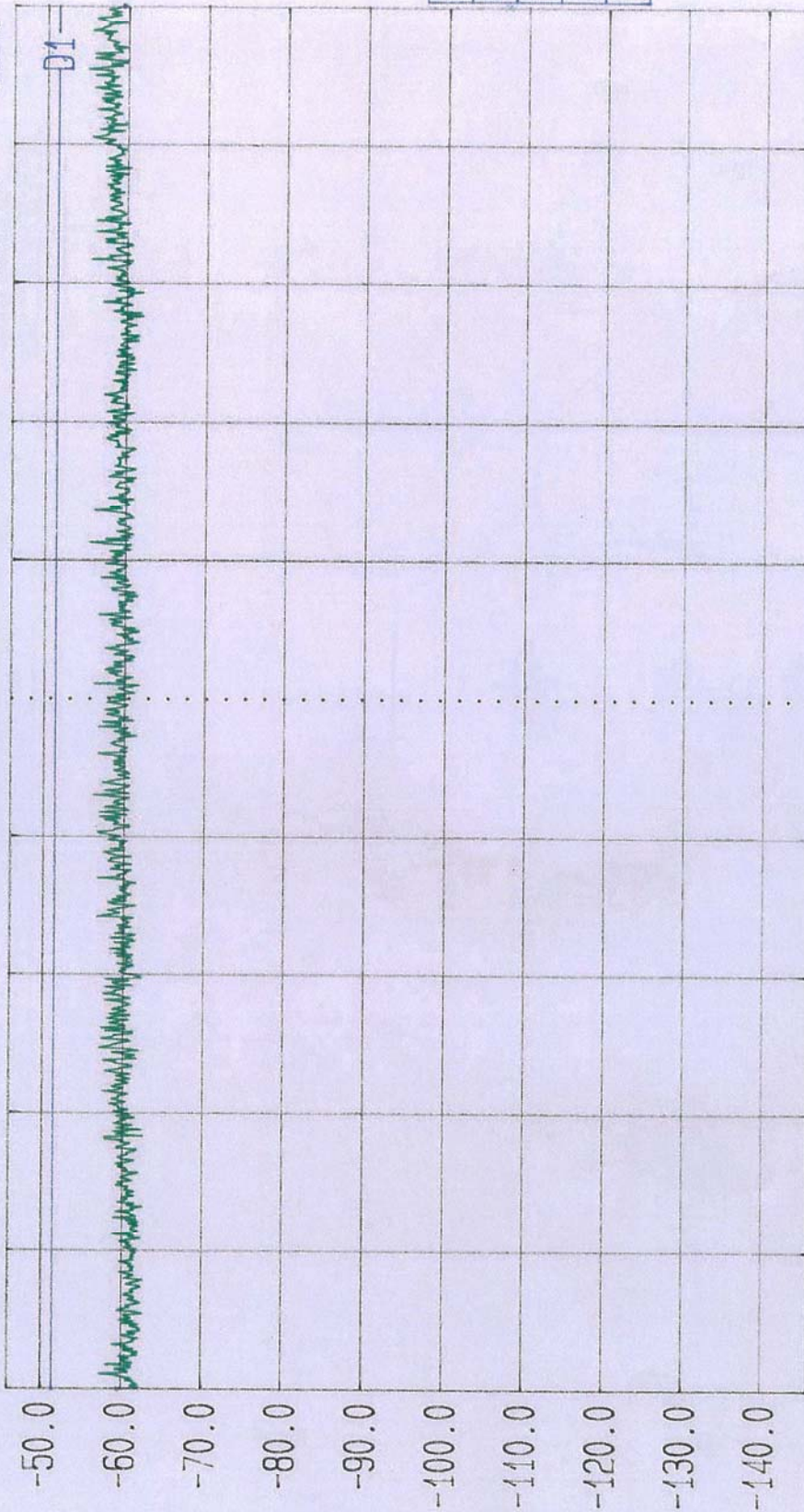
CF.Stp 200.000 MHz

5 dB

[dBm]

RF,Att

Unit



Start
6 GHz

Span
2 GHz

Center
7 GHz

Sweep
20 ms

Stop
8 GHz

TEST FOR PIPEHAWK OF GROUND PROBING RADAR. SPEC FCC PART 15.509. ENG: JPH 00PCOND:
TX XPOLAR ANTENNA 4429 JD04/HC/010

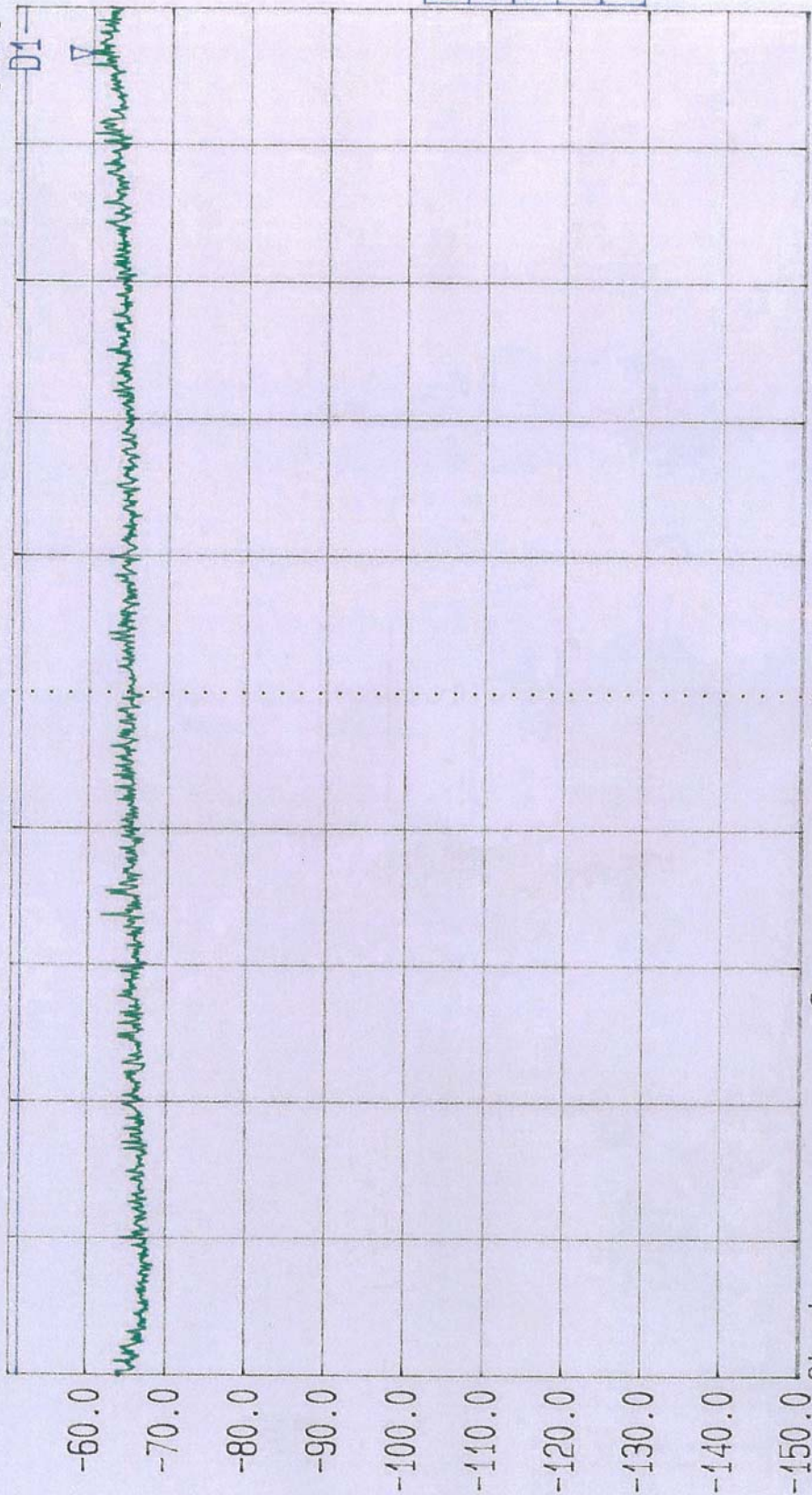


LVLOFF

Date 14 April 2003 Time 06:11:10

Ref.Lvl -50.40 dBm
Marker -60.37 dBm
12.3450 GHz

Res.Bw 1.0 MHz [3dB] Vid.Bw 3 MHz
CF.Stp 450.000 MHz RF.Att 10 dB
Unit [dBm]



TT
2

Start 8 GHz Center 10.25 GHz Stop 12.5 GHz
Span 4.5 GHz Sweep 20 ms

TEST FOR PIPEHAWK OF GROUND PROBING RADAR. SPEC FCC PART 15.509. ENG: JPH 00PCOND:
TX XPOLAR ANTENNA 4429 JD04/HC/011