GRAPHICAL TEST RESULTS
FOR RFI TEST REPORT SERIAL NO:
RFI/MICB2/RP42589JD02A

Test Of: Raymarine Ltd.
2D Light Marine Radome Radar Scanner

To: FCC Part 80: 1998 and FCC Part 2: 1998

Radio Frequency Investigation Ltd, Ewhurst Park, Ramsdell,
Basingstoke, Hampshire, RG26 5RQ, ENGLAND.
Tel: +44 (0) 1256 851193 Fax: +44 (0) 1256 851192

Registered in England, No. 211 7901.
Registered Office: Ewhurst Park, Ramsdell,
Basingstoke, Hampshire RG26 5RQ

Graphical Test Results

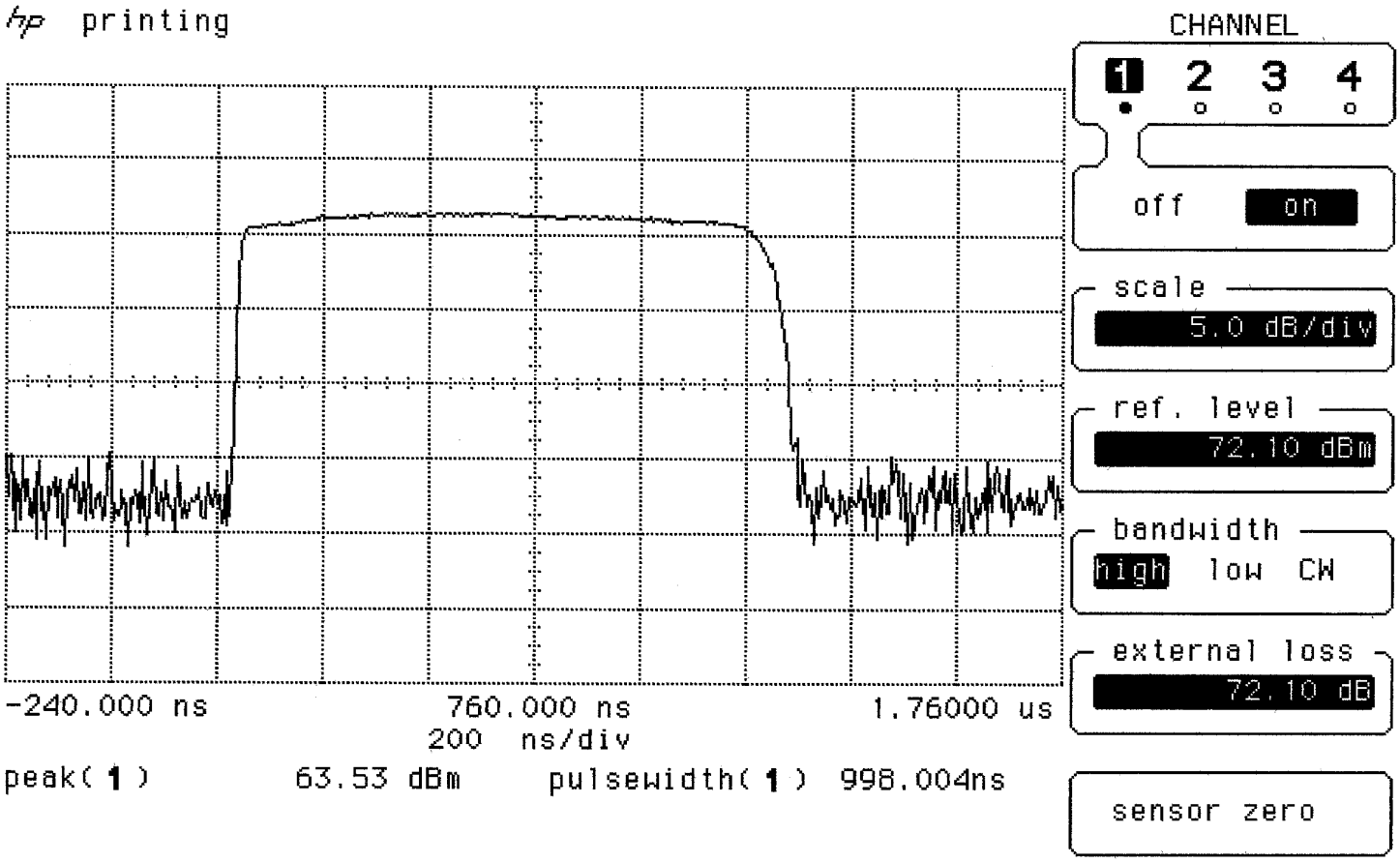
This appendix contains the following graphs:

Graph Reference Number	Measured Pulse
GPH/42589JD02/001	1000ns Pulse Width, 6 mile range
GPH/42589JD02/002	600ns Pulse Width, 3 mile range, Pulse Expansion On
GPH/42589JD02/003	450ns Pulse Width, 3 mile range
GPH/42589JD02/004	350ns Pulse Width, 1 ½ mile range
GPH/42589JD02/005	250ns Pulse Width, ¾ mile range, Pulse Expansion On
GPH/42589JD02/006	150ns Pulse Width, ¾ mile range
GPH/42589JD02/007	90ns Pulse Width, ½ mile range
GPH/42589JD02/008	65ns Pulse Width, ¼ mile range
Graph Reference Number	**Measured Pulse Repetition**
GPH/42589JD02/009	6 mile range
GPH/42589JD02/010	3 mile range, Pulse Expansion On
GPH/42589JD02/011	3 mile range
GPH/42589JD02/012	1 ½ mile range
GPH/42589JD02/013	¾ mile range, Pulse Expansion On
GPH/42589JD02/014	? ¼ ½ mile range
Graph Reference Number	**Occupied Bandwidth**
GPH/42589/02/02/022	1000ns Pulse Width, 6 mile range
GPH/42589/02/02/021	600ns Pulse Width, 3 mile range, Pulse Expansion On
GPH/42589/02/02/020	450ns Pulse Width, 3 mile range
GPH/42589/02/02/019	350ns Pulse Width, 1 ½ mile range
GPH/42589/02/02/018	250ns Pulse Width, ¾ mile range, Pulse Expansion On,
GPH/42589/02/02/017	150ns Pulse Width, ¾ mile range
GPH/42589/02/02/016	90ns Pulse Width, ½ mile range
GPH/42589/02/02/015	65ns Pulse Width, ¼ mile range

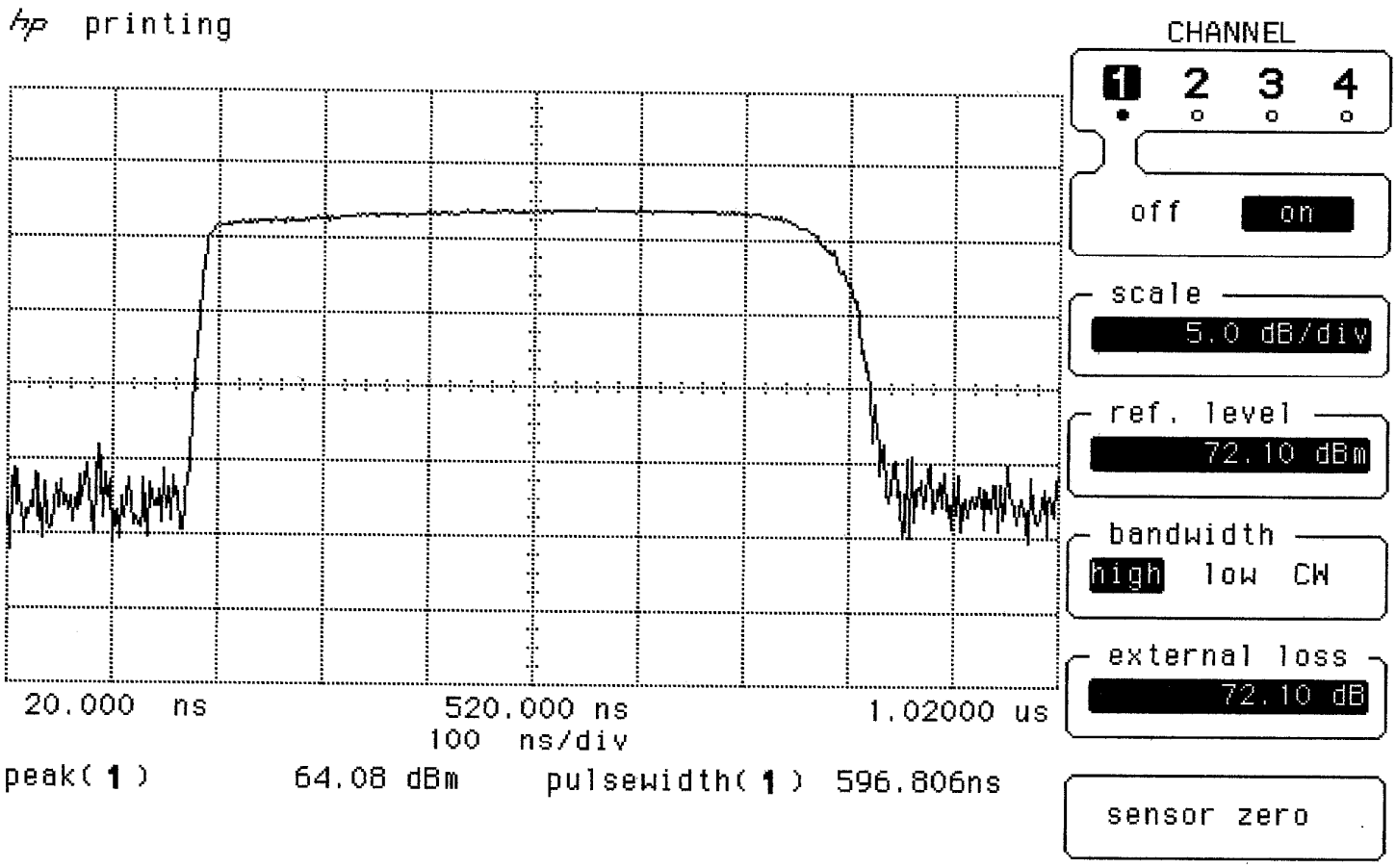
Graph Reference Number	Conducted Antenna Port Spurious Emissions
GPH/42589/02/02/024	6.00GHz to 8.91GHz, 450ns Pulse Width
GPH/42589/02/02/025	8.91GHz to 9.35GHz, 450ns Pulse Width
GPH/42589/02/02/026	8.91GHz to 9.35GHz, 65ns Pulse Width
GPH/42589/02/02/027	8.91GHz to 9.35GHz, 1000ns Pulse Width
GPH/42589/02/02/028	9.45GHz to 9.91GHz, 1000ns Pulse Width
GPH/42589/02/02/029	9.45GHz to 9.91GHz, 65ns Pulse Width
GPH/42589/02/02/030	9.45GHz to 9.91GHz, 450ns Pulse Width
GPH/42589/02/02/023	9.91GHz to 26.50GHz, 450ns Pulse Width
42589JD02/001	26.50 to 40.00GHz, 450ns Pulse Width

These pages are not included in the total number of pages for this report.

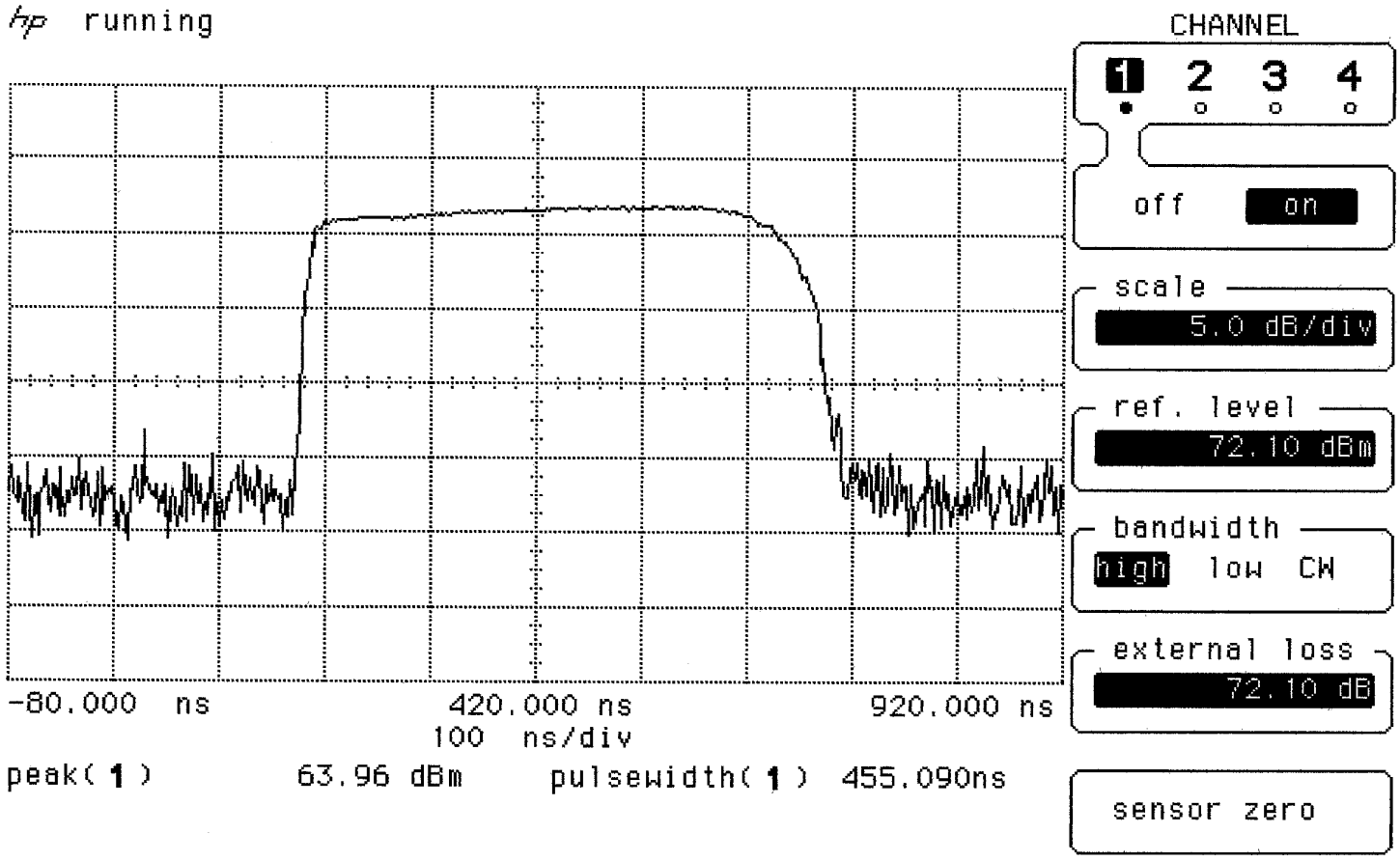
This page has been left intentionally blank.



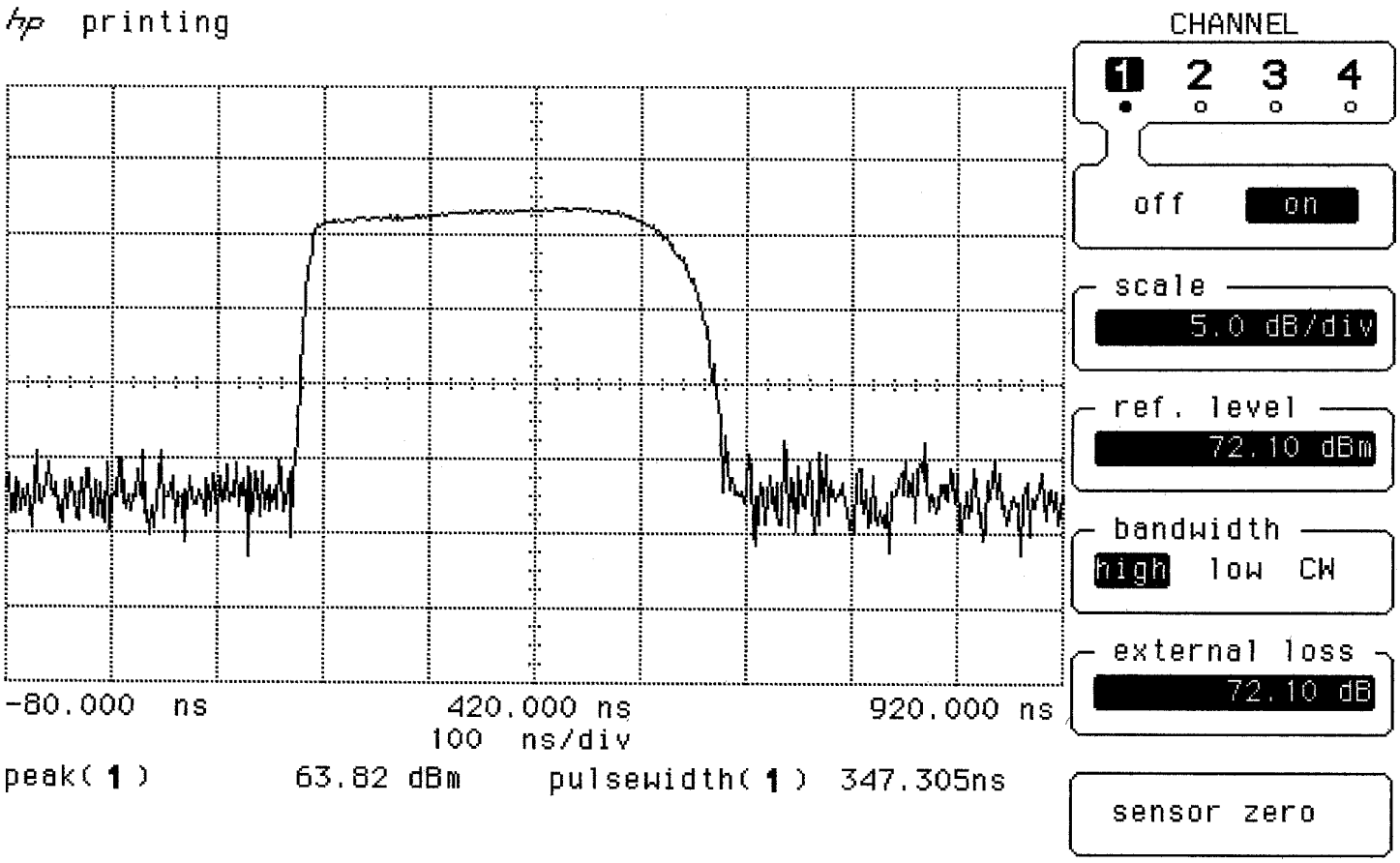
GPH 42589 JD02 /001.



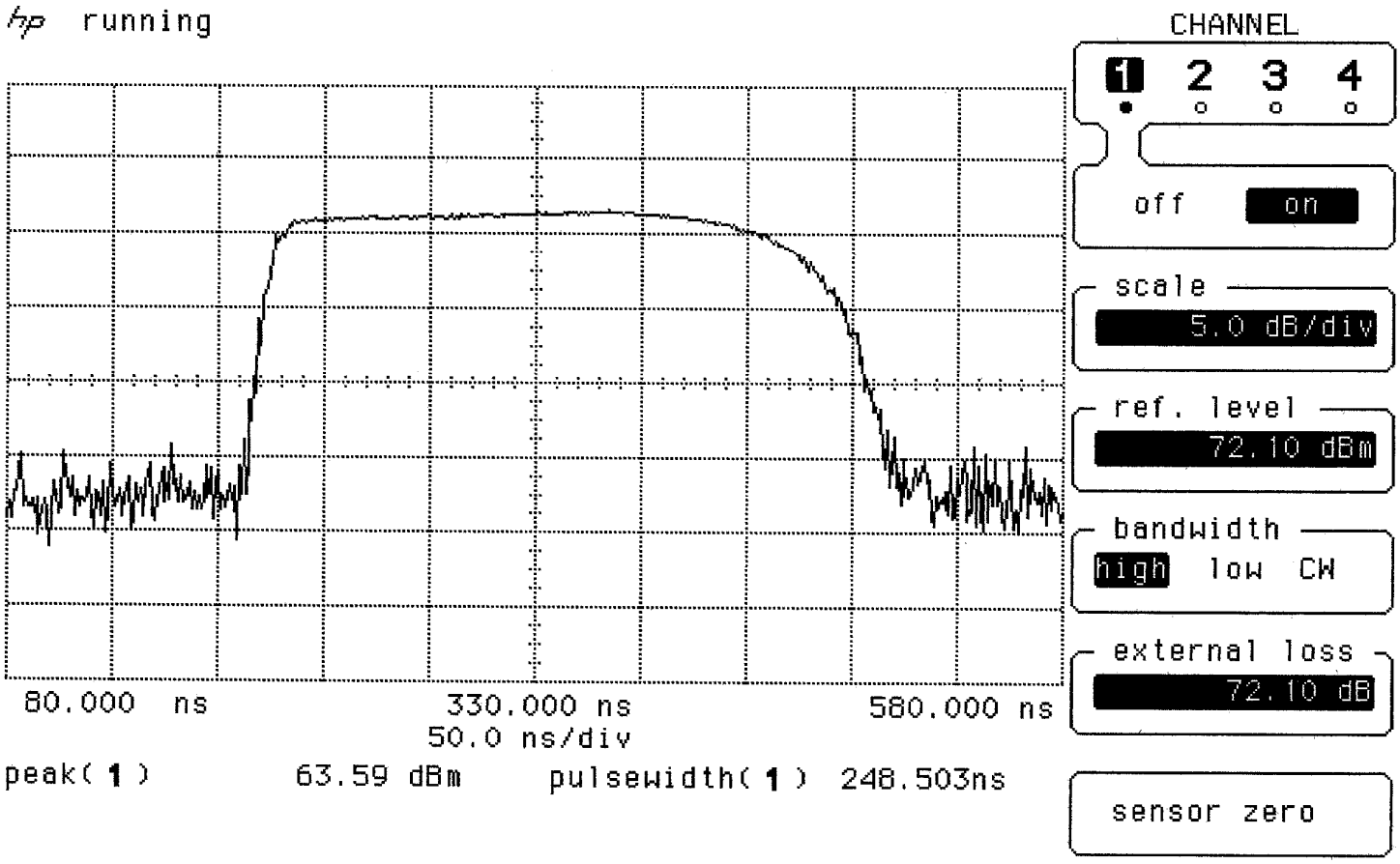
GPH 42589 5002/00R.



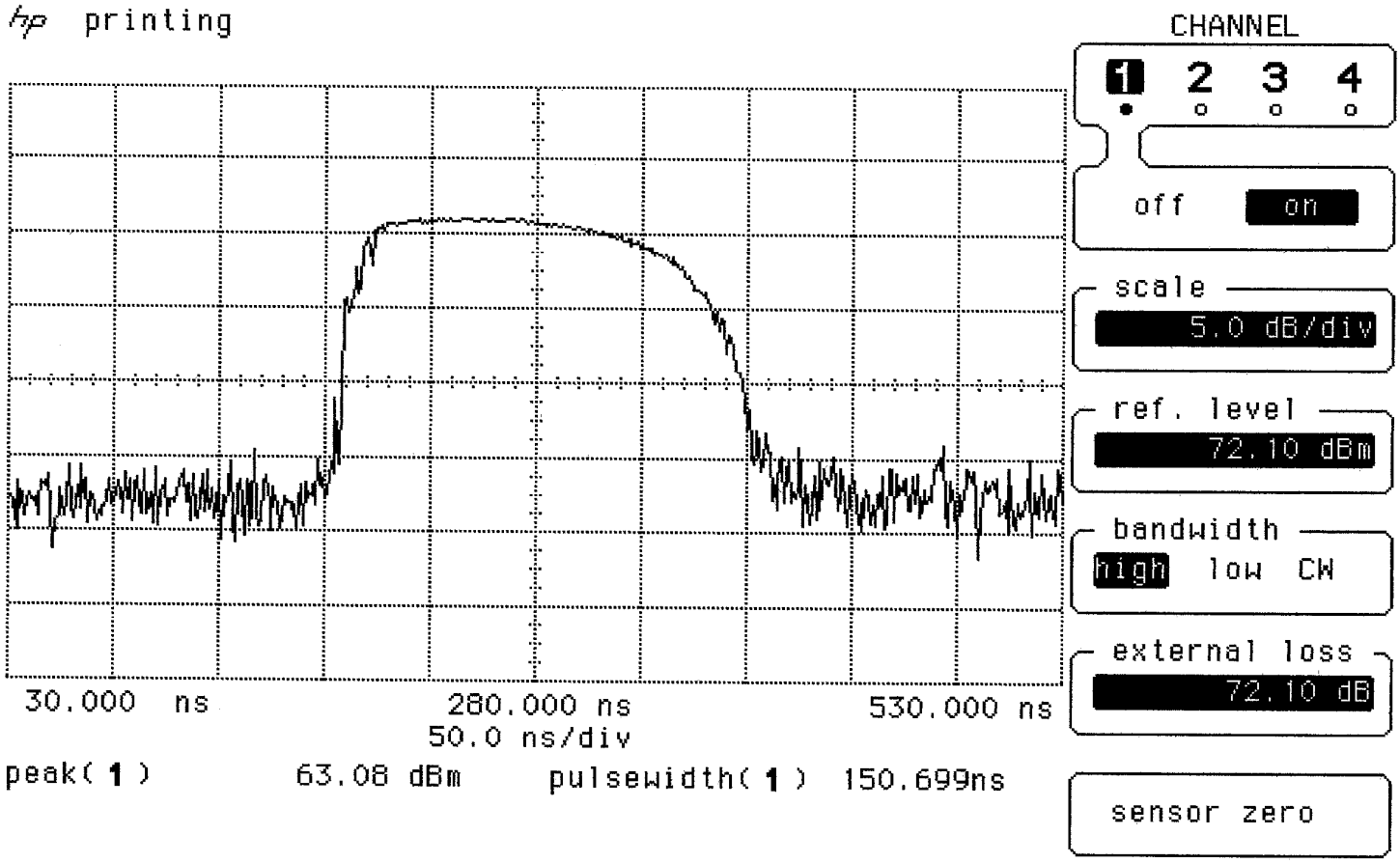
GPU 42589 #002/003.



GPN 42589 SD02 1004.

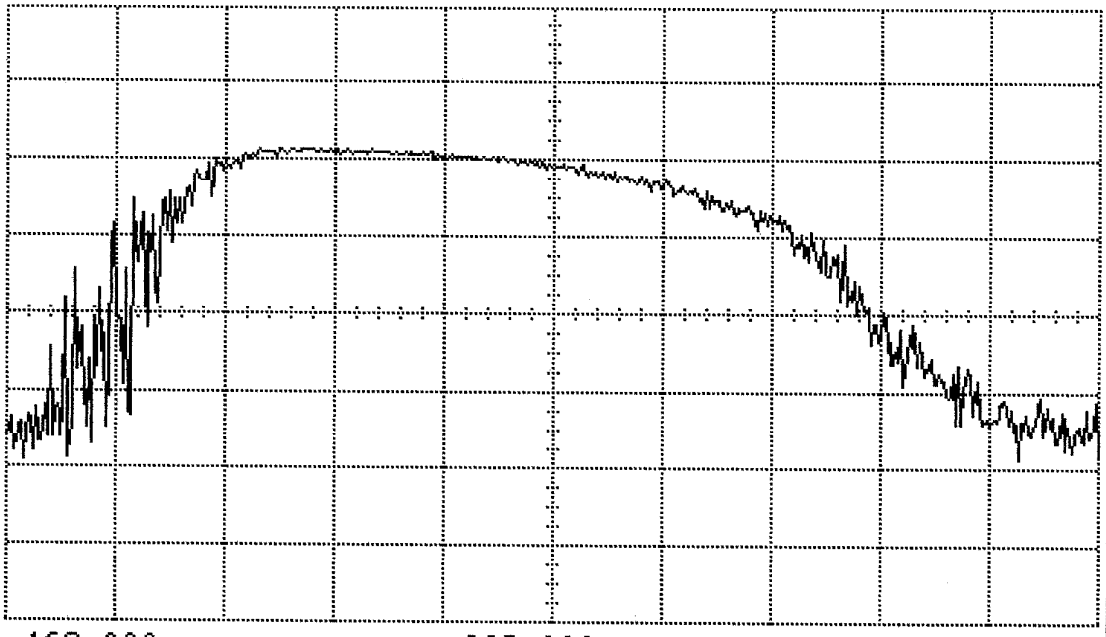


GPH 42589 3002 1005.



GPN 42589 0002/006.

hp printing



168.000 ns 268.000 ns 368.000 ns
20.0 ns/div

peak(1) 62.73 dBm pulsewidth(1) 97.804 ns

CHANNEL
1 2 3 4

off on

scale
5.0 dB/div

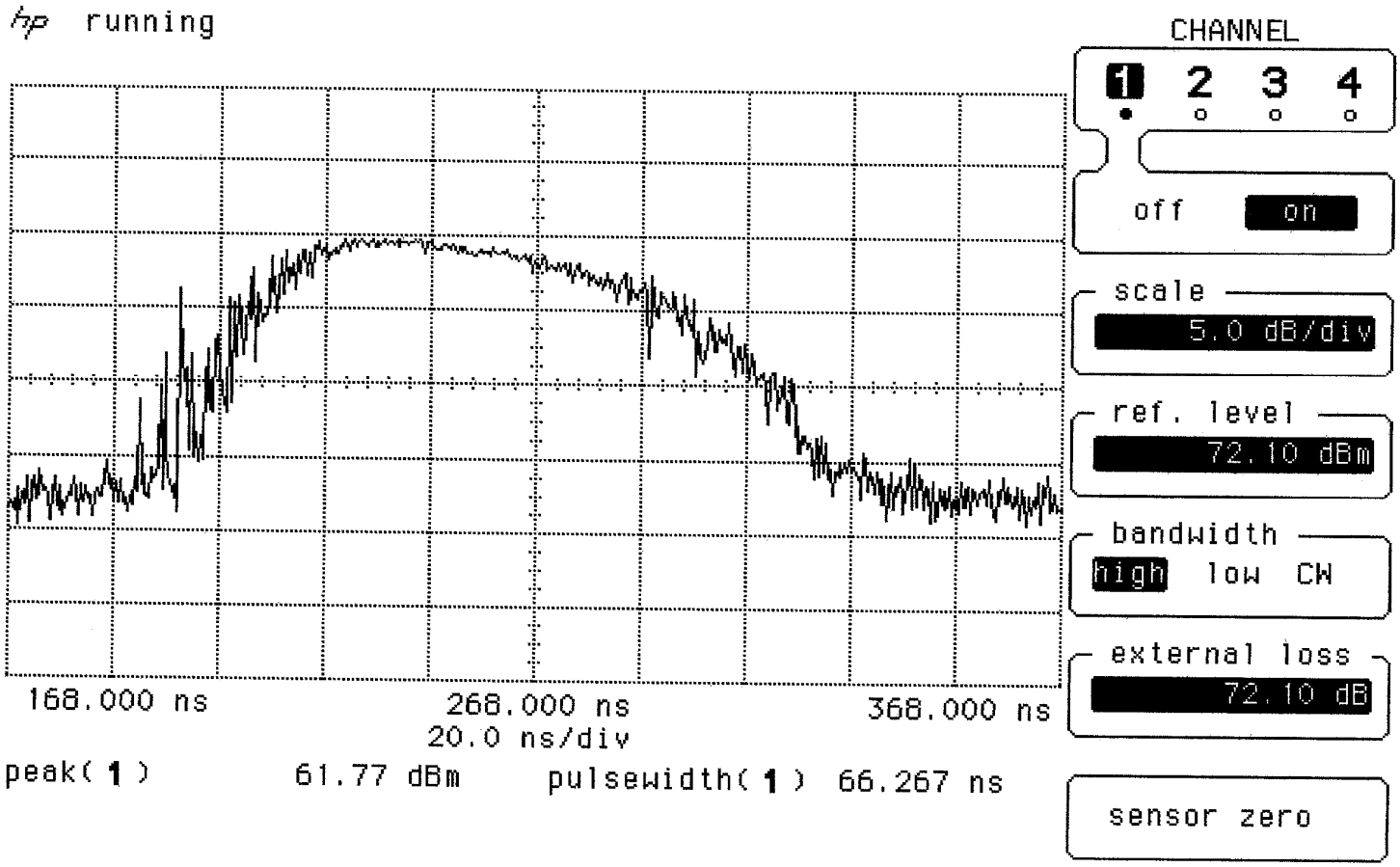
ref. level
72.10 dBm

bandwidth
high low CW

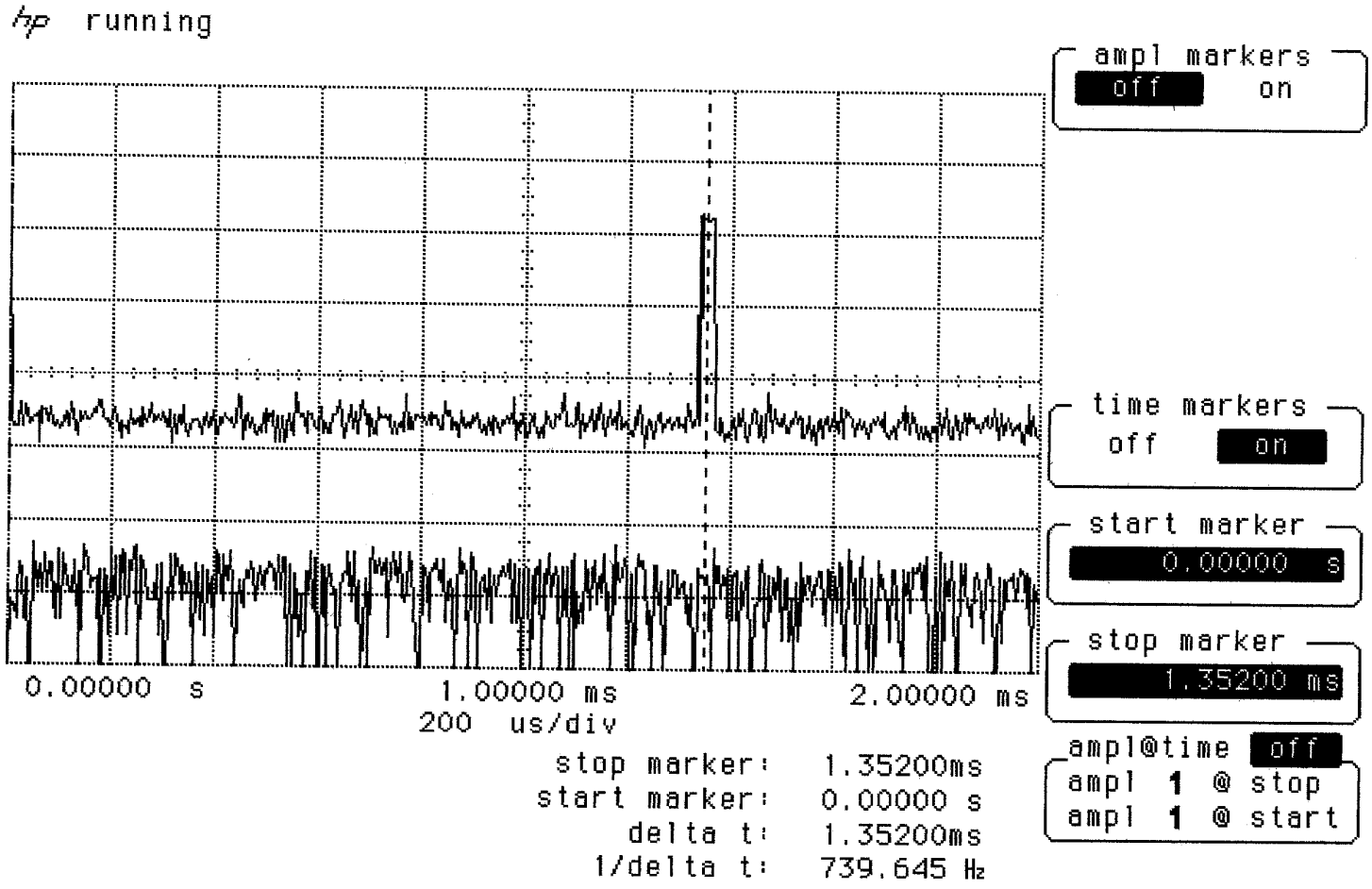
external loss
72.10 dB

sensor zero

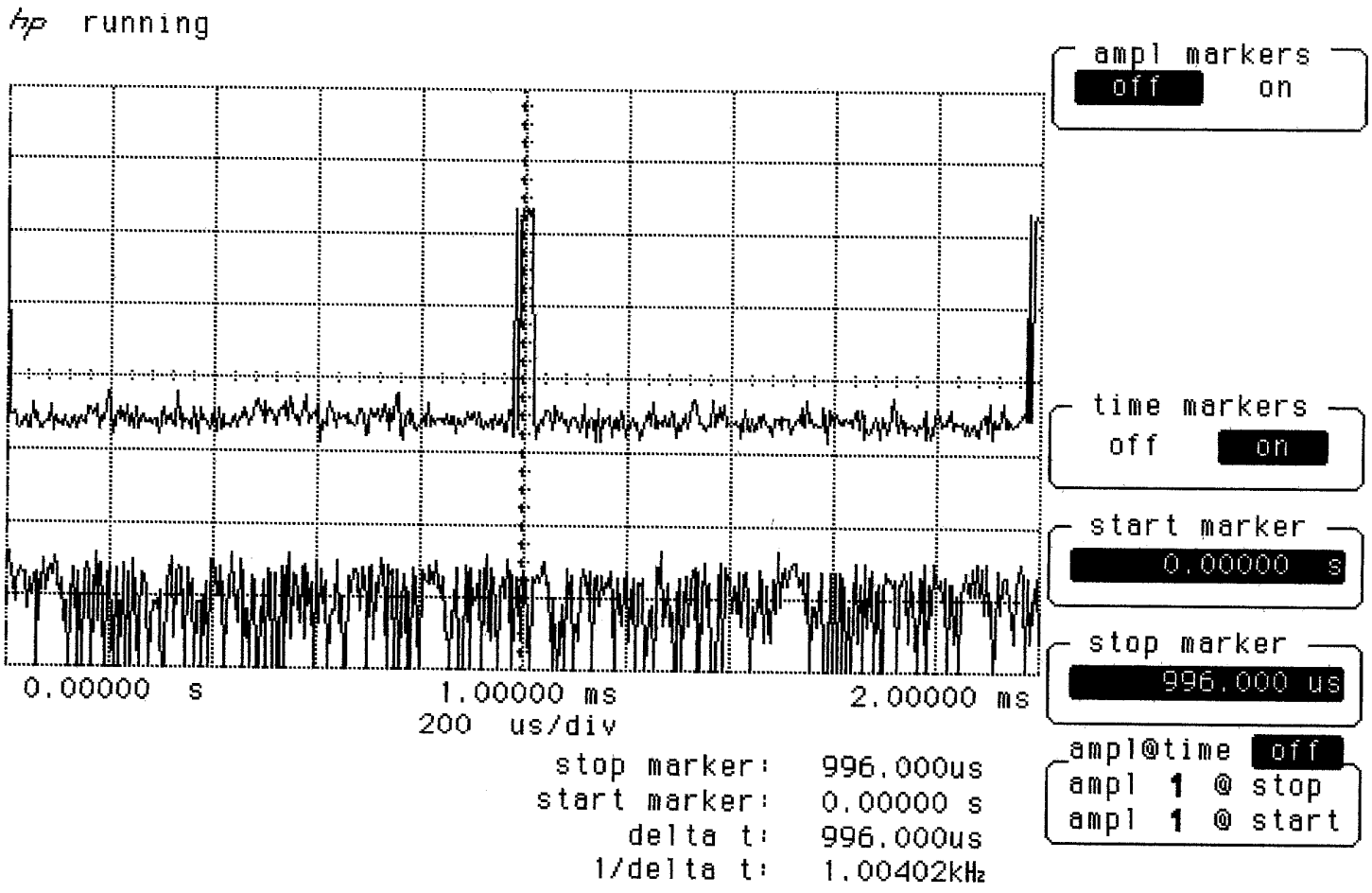
GPH 42589 SDO 2/007.



GPH 42589 0002/0008

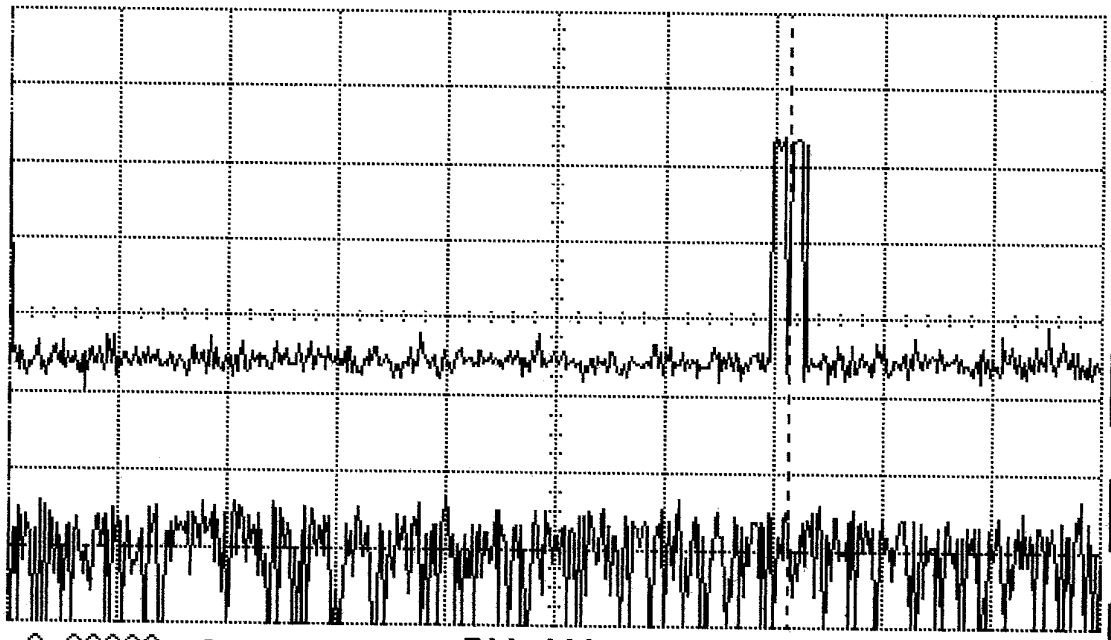


APH 42589002/009.



UPH 42589 3002/010

hp running



ampl markers
off on

time markers
off on

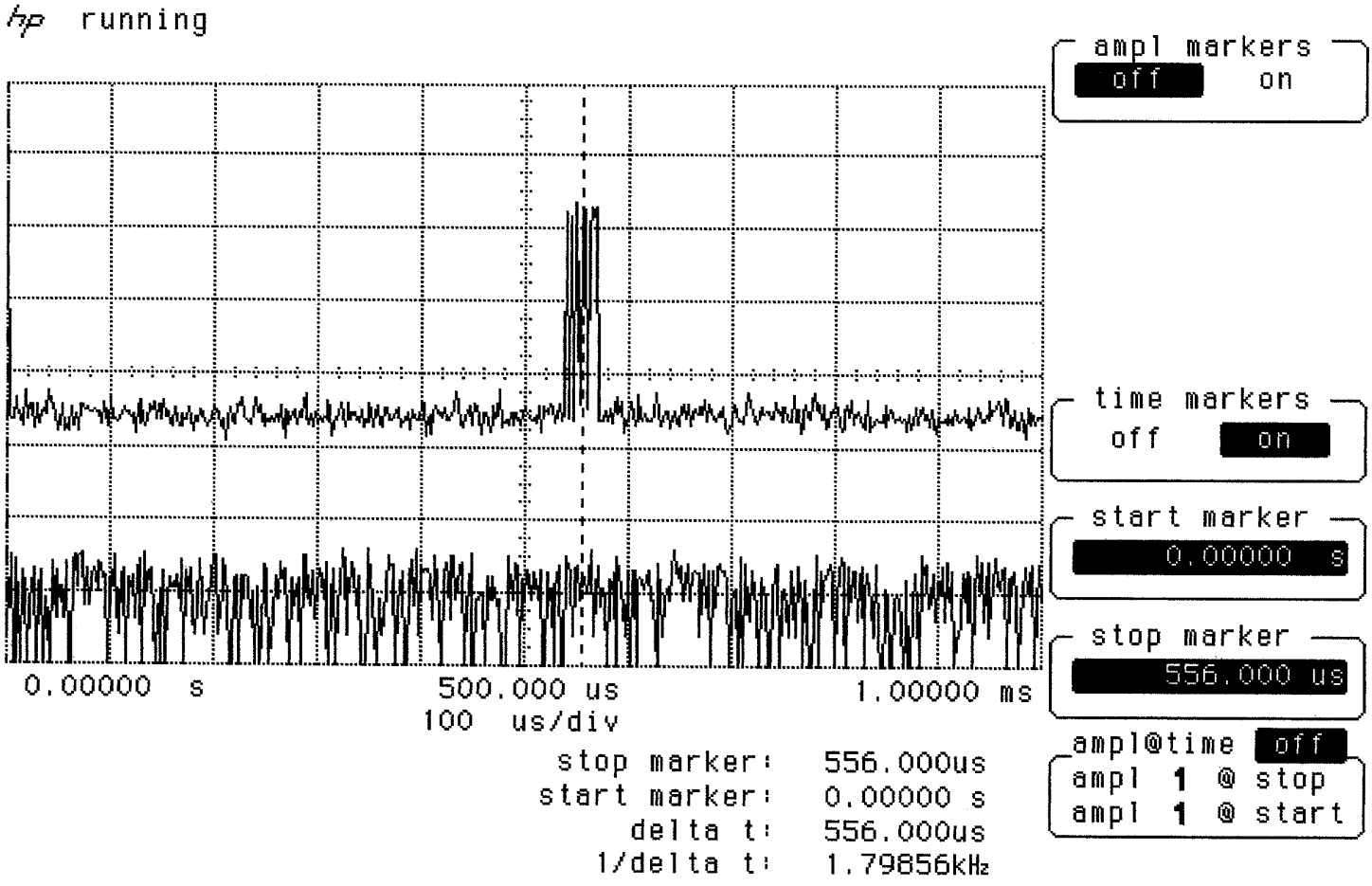
start marker
0.00000 s

stop marker
714.000 us

ampl@time off
ampl 1 @ stop
ampl 1 @ start

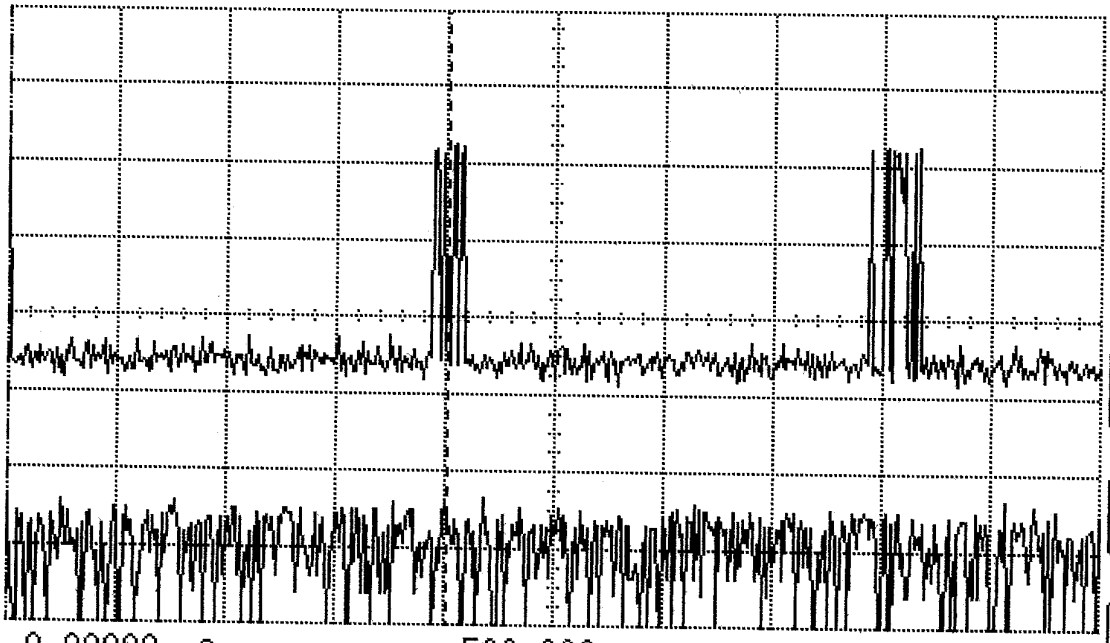
stop marker: 714.000us
start marker: 0.00000 s
delta t: 714.000us
1/delta t: 1.40056kHz

GPH 42589 JDO2 /011



GPH 42589 0002 / 012.

hp running



ampl markers
off on

time markers
off on

start marker
0.00000 s

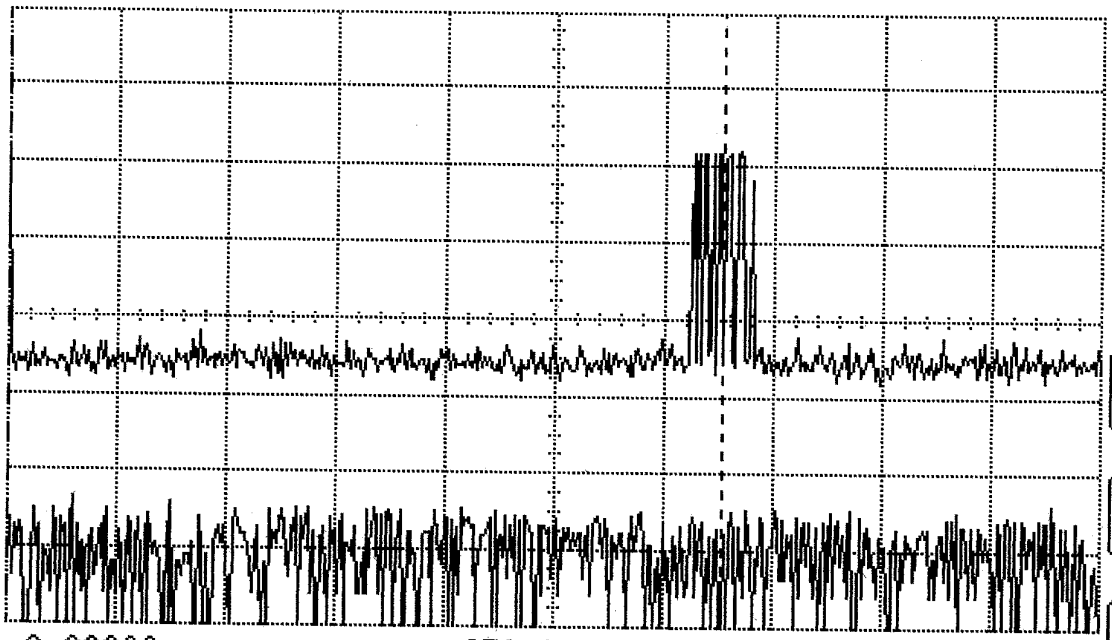
stop marker
402.000 us

ampl@time off
ampl 1 @ stop
ampl 1 @ start

stop marker: 402.000us
start marker: 0.00000 s
delta t: 402.000us
1/delta t: 2.48756kHz

GPH 42589 0002 /013.

hp running



0.00000 s
250.000 us
50.0 us/div
500.000 us

ampl markers
off on

time markers
off on

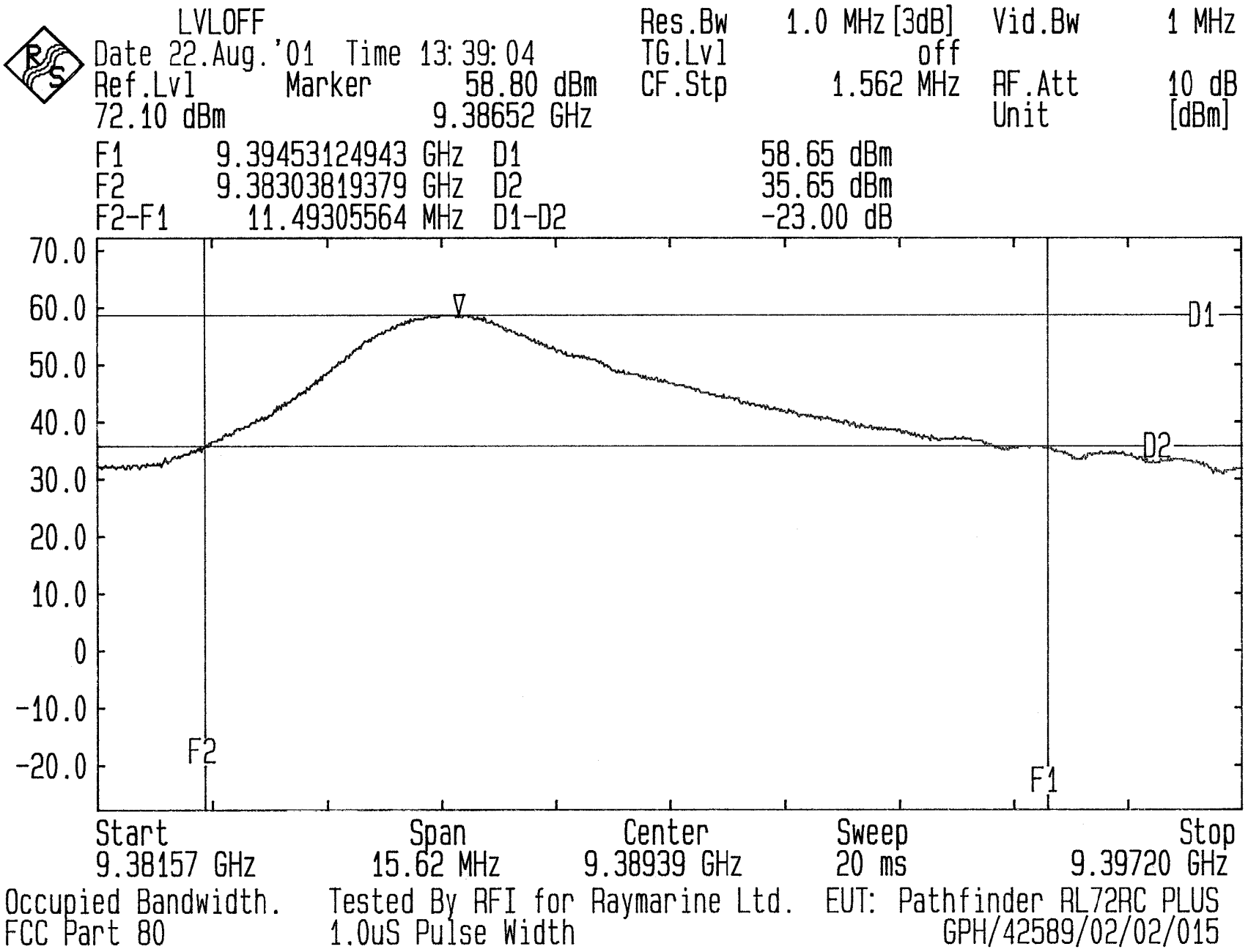
start marker
0.00000 s

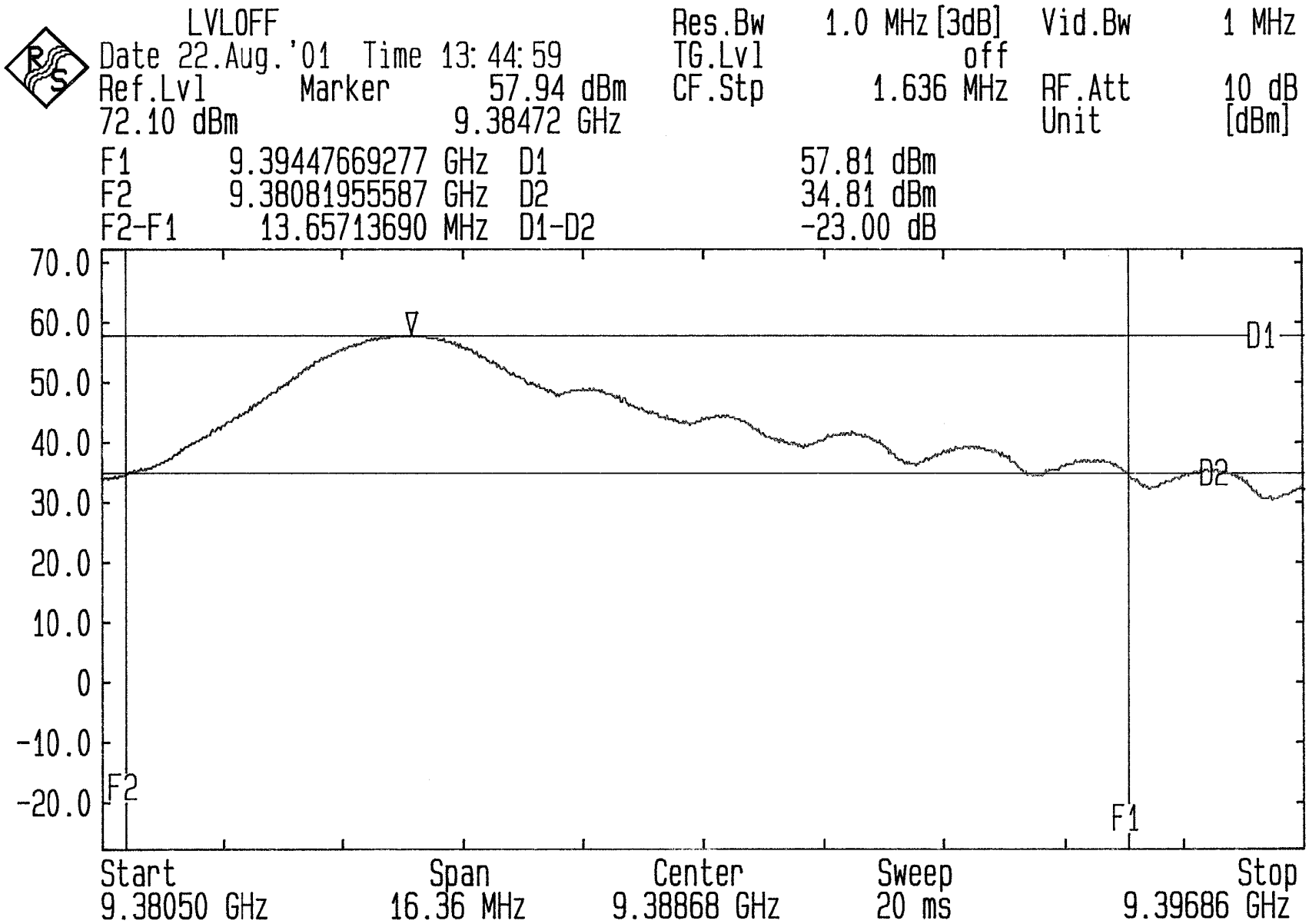
stop marker
327.000 us

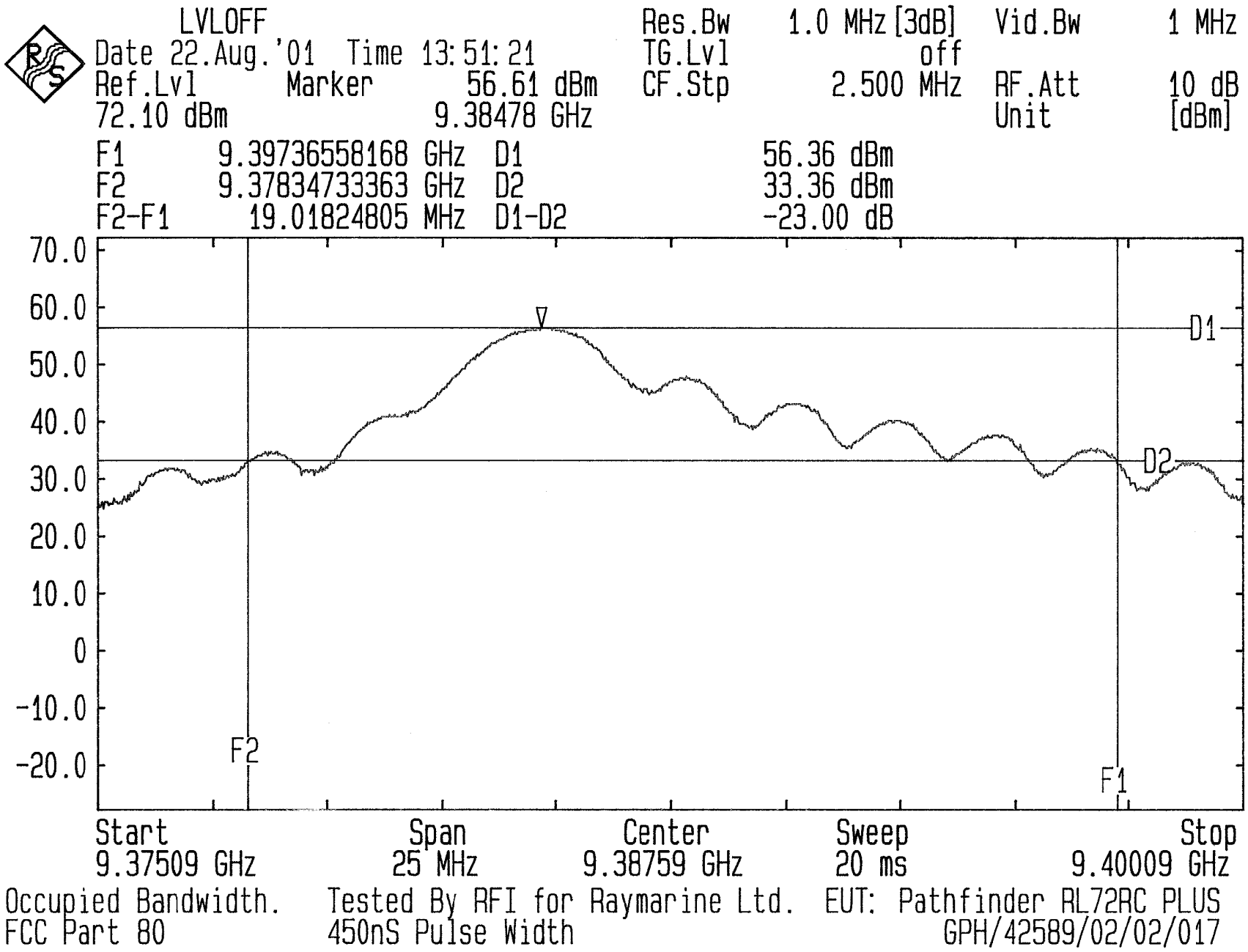
ampl@time off
ampl 1 @ stop
ampl 1 @ start

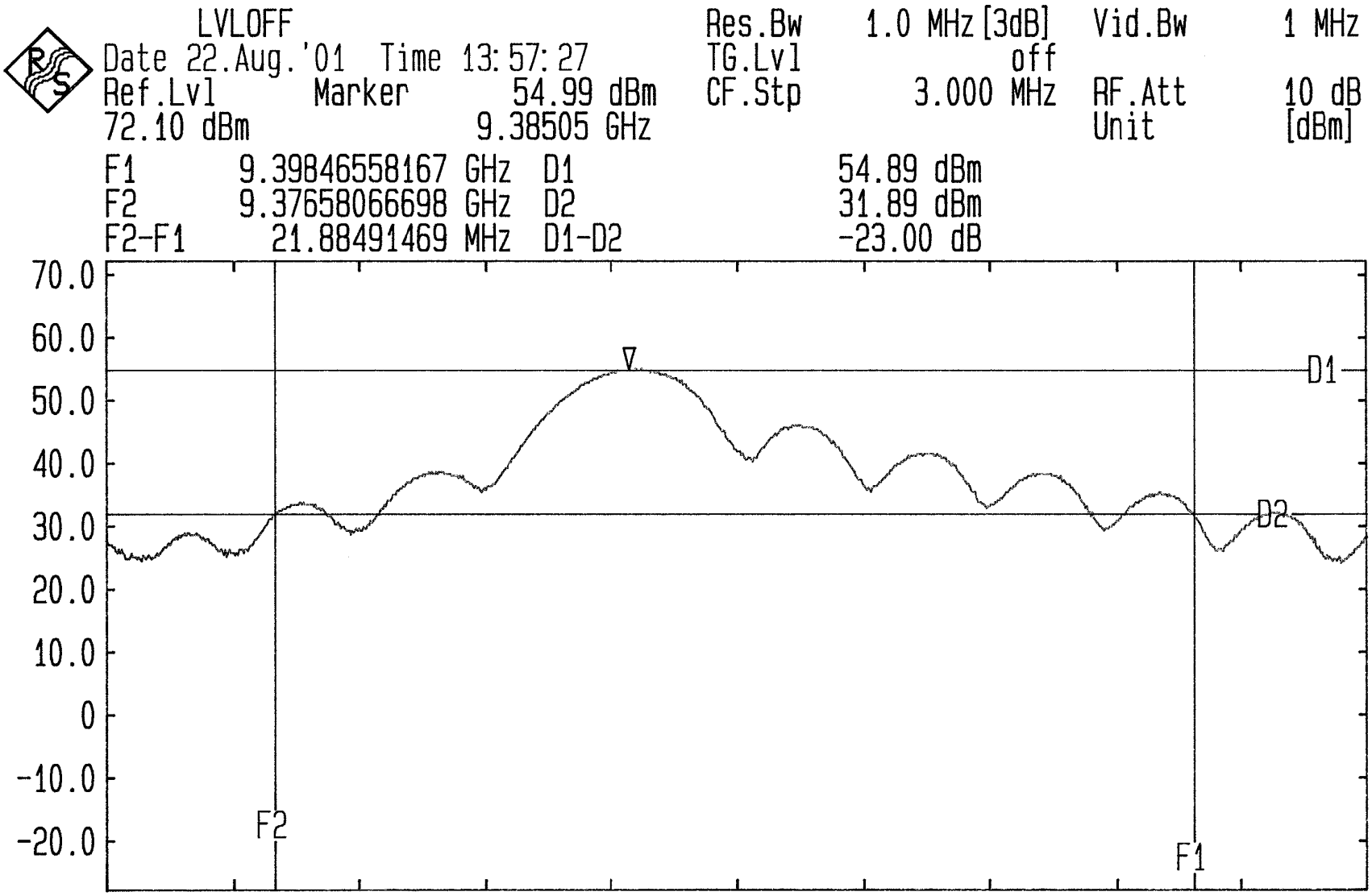
stop marker:	327.000us
start marker:	0.00000 s
delta t:	327.000us
1/delta t:	3.05810kHz

GPH 42589 8002/014.

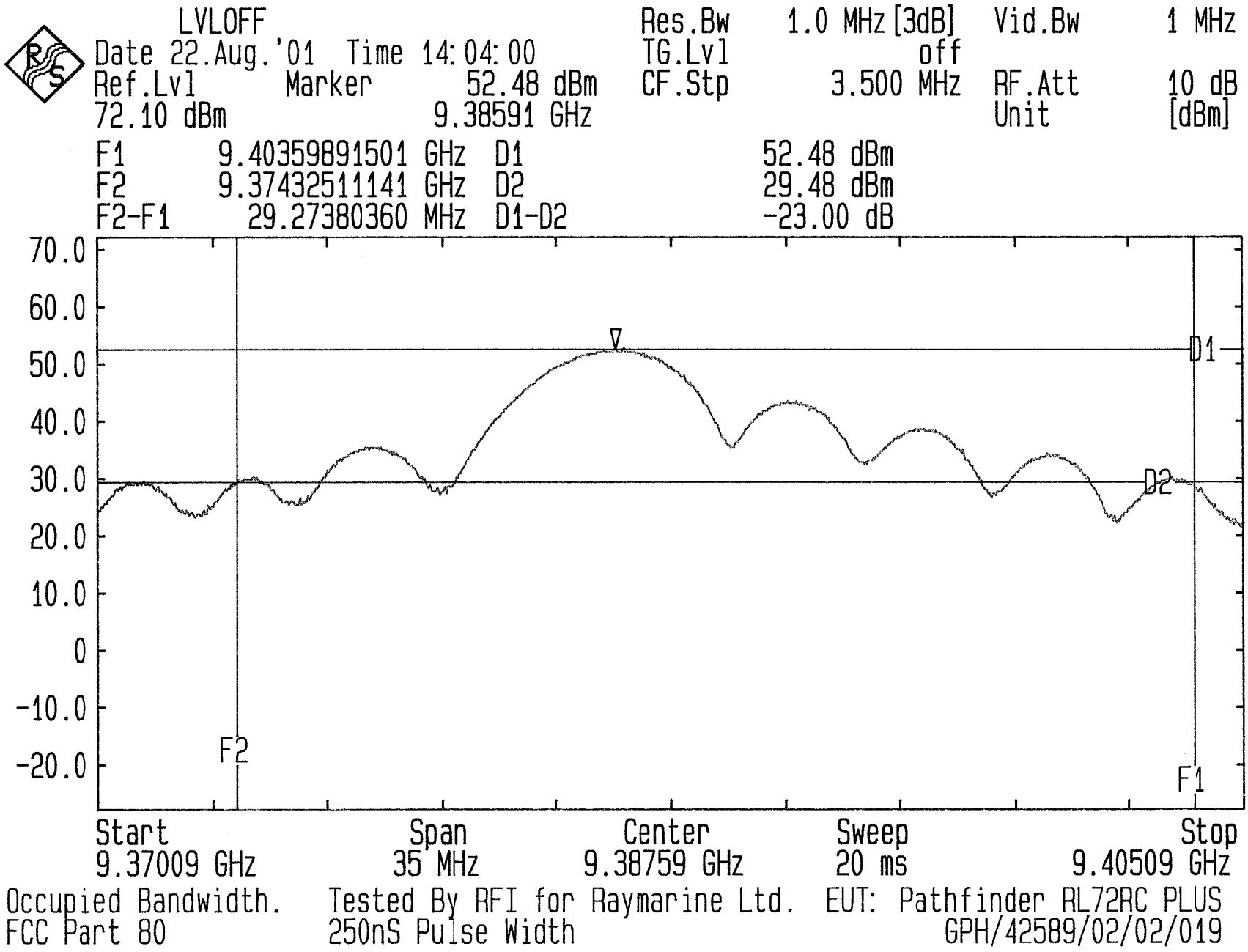

LVLOFF
Res.Bw 1.0 MHz [3dB]
Vid.Bw 1 MHz
Date 22.Aug.'01 Time 13:39:04
TG.Lvl off
Ref.Lvl Marker 58.80 dBm
CF.Stp 1.562 MHz
RF.Att 10 dB
72.10 dBm 9.38652 GHz
Unit [dBm]
F1 9.39453124943 GHz D1 58.65 dBm
F2 9.38303819379 GHz D2 35.65 dBm
F2-F1 11.49305564 MHz D1-D2 -23.00 dB
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
-10.0
-20.0
D1
D2
F2
F1
Start 9.38157 GHz
Span 15.62 MHz
Center 9.38939 GHz
Sweep 20 ms
Stop 9.39720 GHz
Occupied Bandwidth.
FCC Part 80
Tested By RFI for Raymarine Ltd.
1.0uS Pulse Width
EUT: Pathfinder RL72RC PLUS
GPH/42589/02/02/015


LVLOFF
Res.Bw 1.0 MHz [3dB]
Vid.Bw 1 MHz
Date 22.Aug.'01 Time 13:44:59
TG.Lvl off
Ref.Lvl Marker 57.94 dBm
CF.Stp 1.636 MHz
RF.Att 10 dB
72.10 dBm 9.38472 GHz
Unit [dBm]
F1 9.39447669277 GHz D1 57.81 dBm
F2 9.38081955587 GHz D2 34.81 dBm
F2-F1 13.65713690 MHz D1-D2 -23.00 dB
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
-10.0
-20.0
D1
D2
F2
F1
Start 9.38050 GHz
Span 16.36 MHz
Center 9.38868 GHz
Sweep 20 ms
Stop 9.39686 GHz
Occupied Bandwidth.
FCC Part 80
Tested By RFI for Raymarine Ltd.
600nS Pulse Width
EUT: Pathfinder RL72RC PLUS
GPH/42589/02/02/016

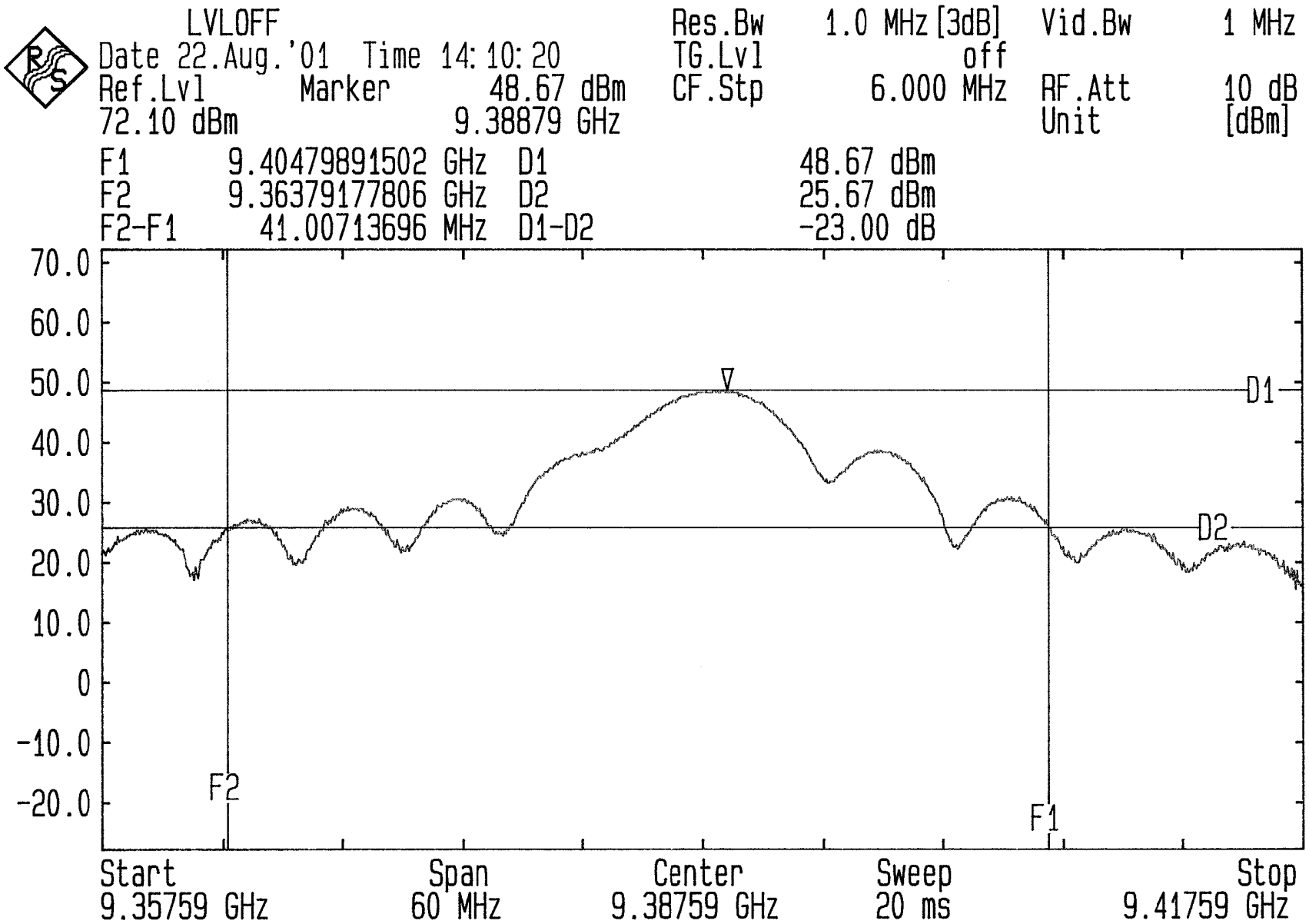

LVLOFF
Res.Bw 1.0 MHz [3dB]
Vid.Bw 1 MHz
Date 22.Aug.'01 Time 13:51:21
TG.Lvl off
Ref.Lvl Marker 56.61 dBm
CF.Stp 2.500 MHz
RF.Att 10 dB
72.10 dBm 9.38478 GHz
Unit [dBm]
F1 9.39736558168 GHz D1 56.36 dBm
F2 9.37834733363 GHz D2 33.36 dBm
F2-F1 19.01824805 MHz D1-D2 -23.00 dB
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0
-10.0
-20.0
D1
D2
F2
F1
Start 9.37509 GHz
Span 25 MHz
Center 9.38759 GHz
Sweep 20 ms
Stop 9.40009 GHz
Occupied Bandwidth.
FCC Part 80
Tested By RFI for Raymarine Ltd.
450nS Pulse Width
EUT: Pathfinder RL72RC PLUS
GPH/42589/02/02/017



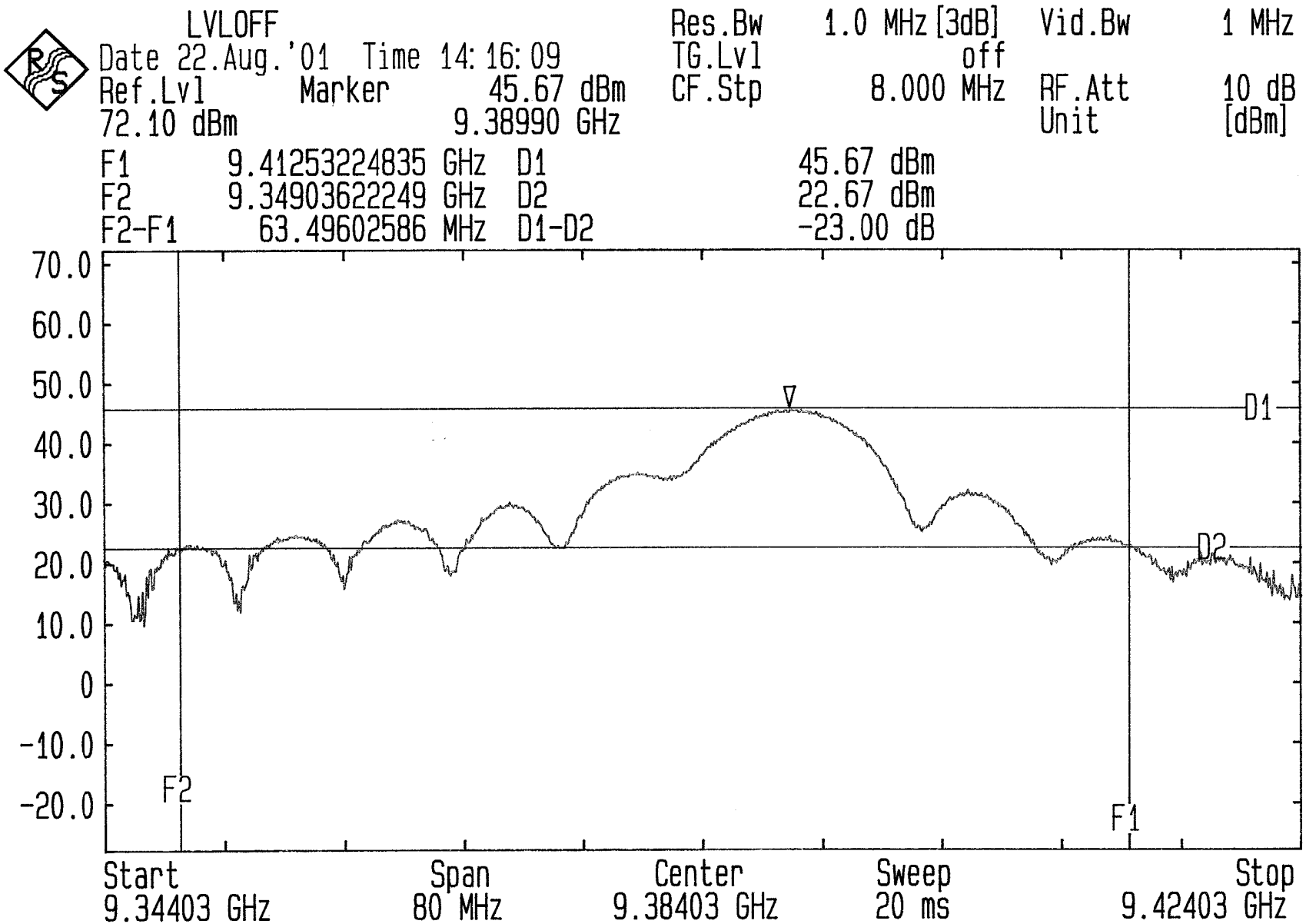
Occupied Bandwidth. Tested By RFI for Raymarine Ltd. EUT: Pathfinder RL72RC PLUS
FCC Part 80 350nS Pulse Width GPH/42589/02/02/018



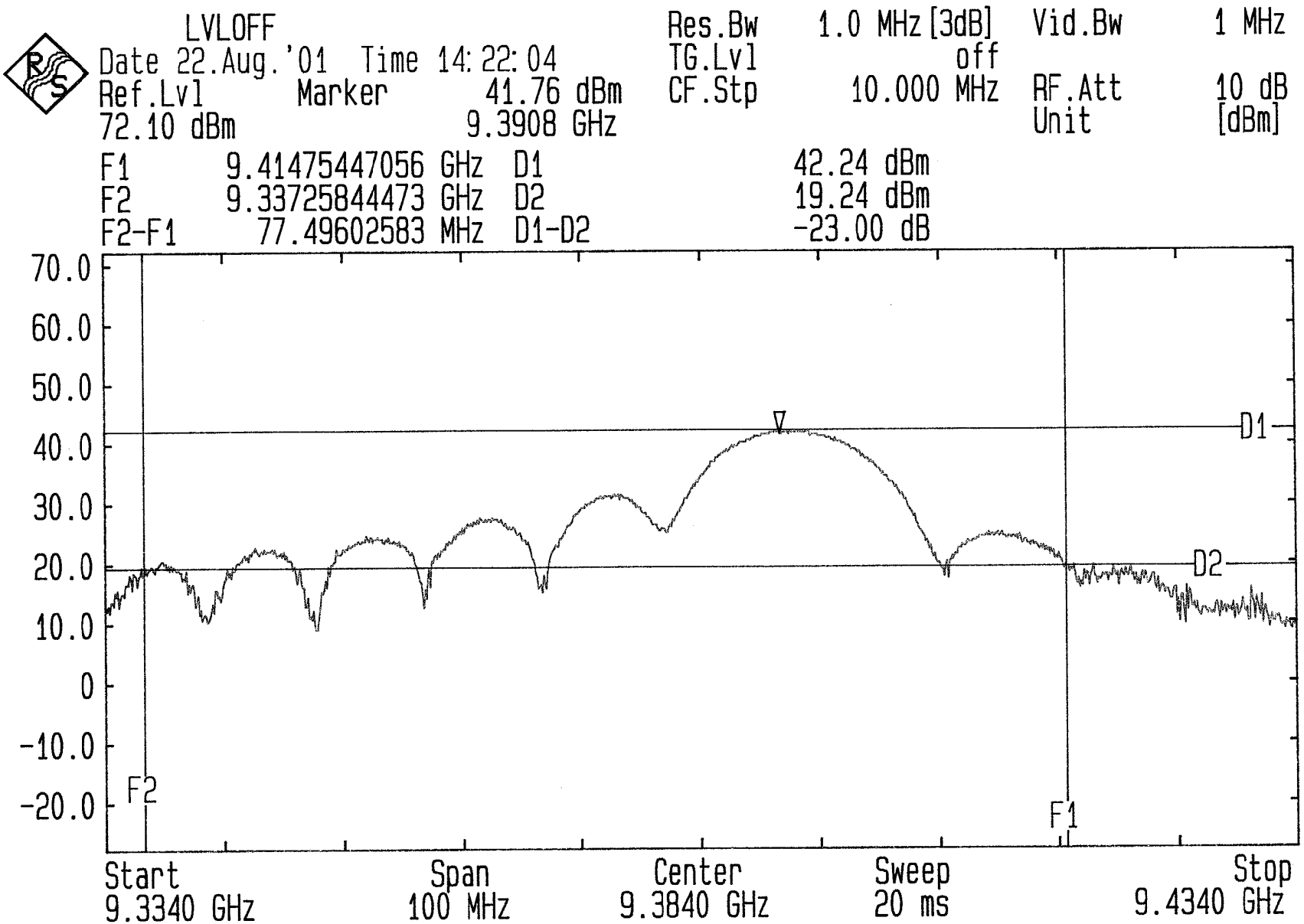
Occupied Bandwidth. Tested By RFI for Raymarine Ltd. EUT: Pathfinder RL72RC PLUS
FCC Part 80 250nS Pulse Width GPH/42589/02/02/019



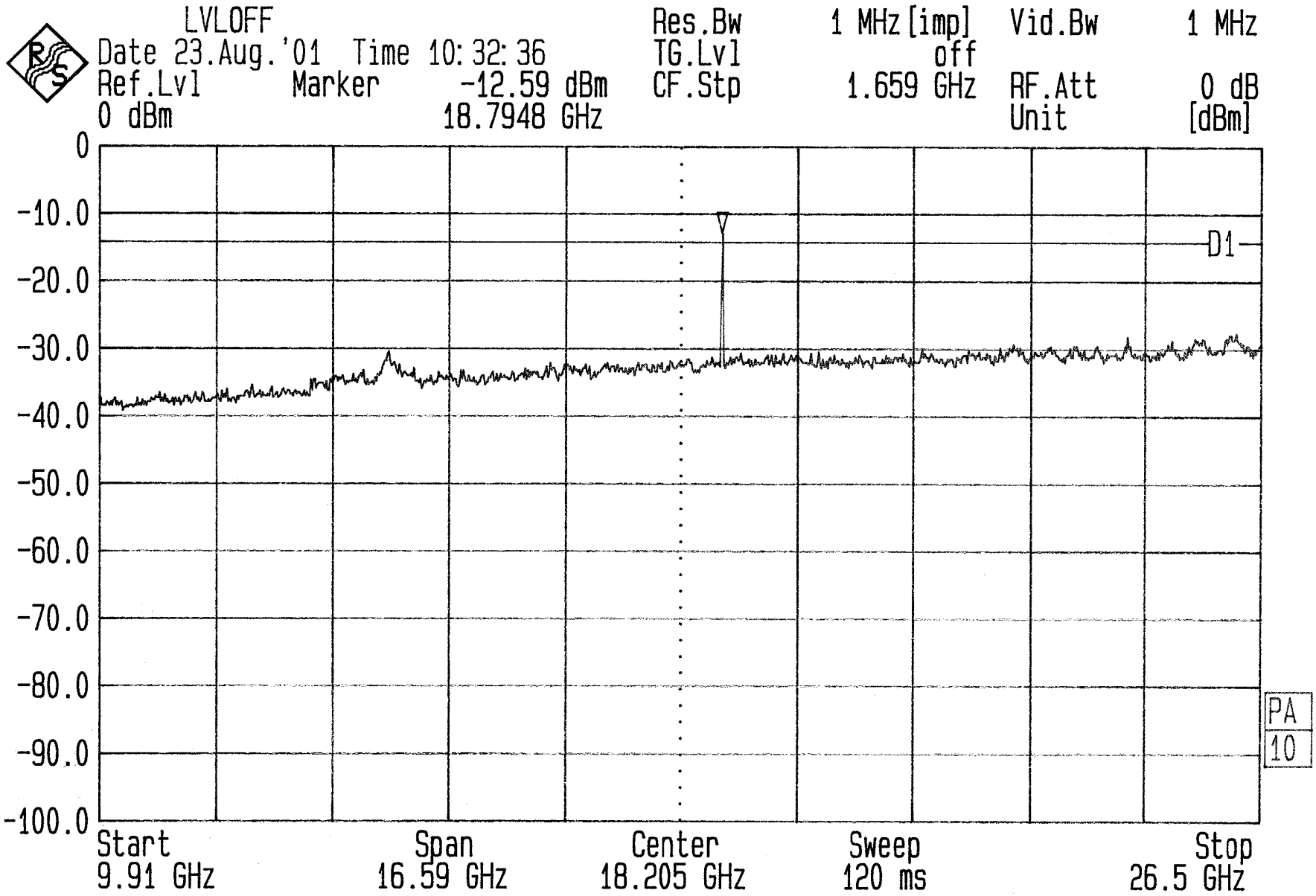
Occupied Bandwidth. Tested By RFI for Raymarine Ltd. EUT: Pathfinder RL72RC PLUS
FCC Part 80 150nS Pulse Width GPH/42589/02/02/020



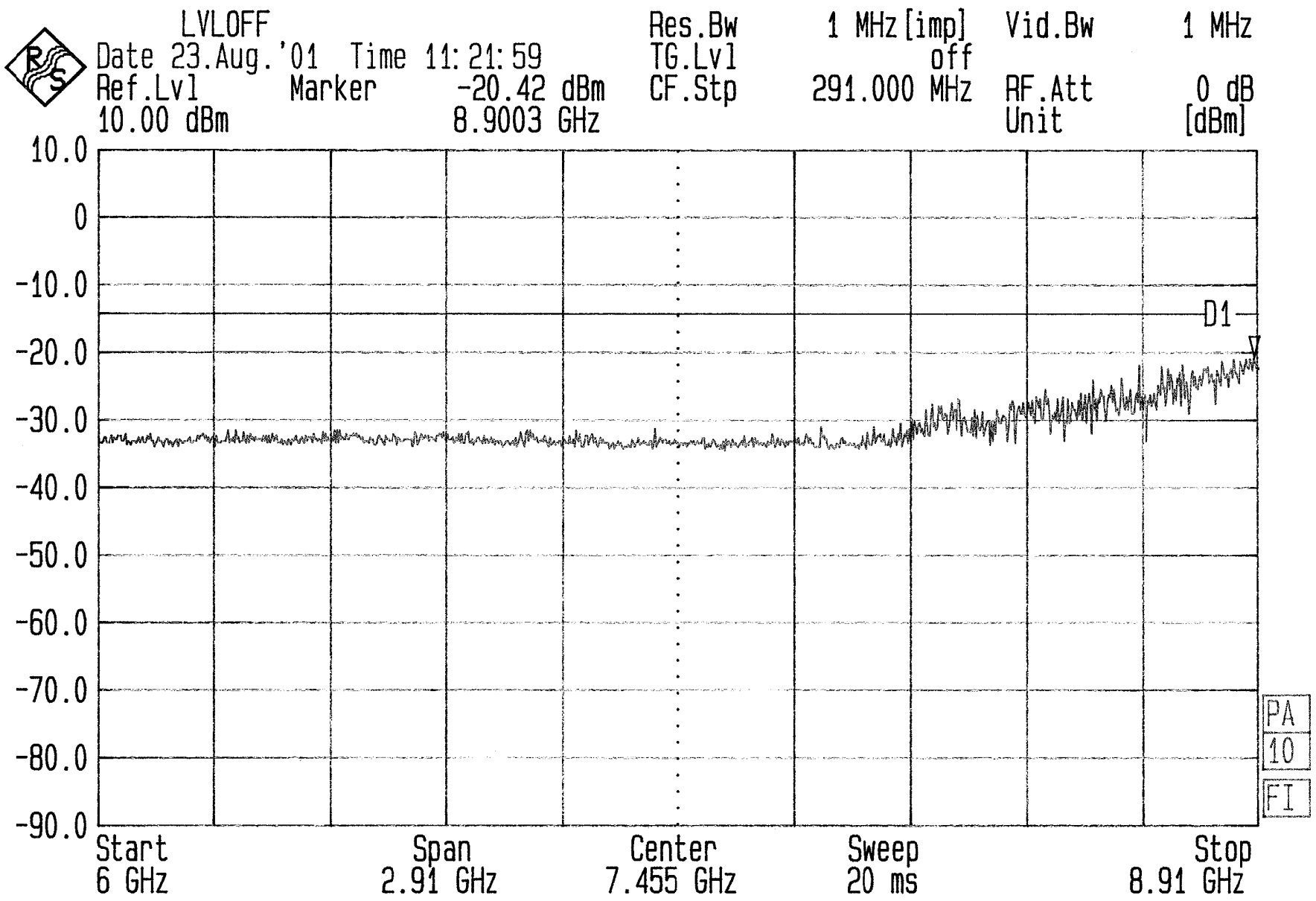
Occupied Bandwidth. Tested By RFI for Raymarine Ltd. EUT: Pathfinder RL72RC PLUS
FCC Part 80 90nS Pulse Width GPH/42589/02/02/021



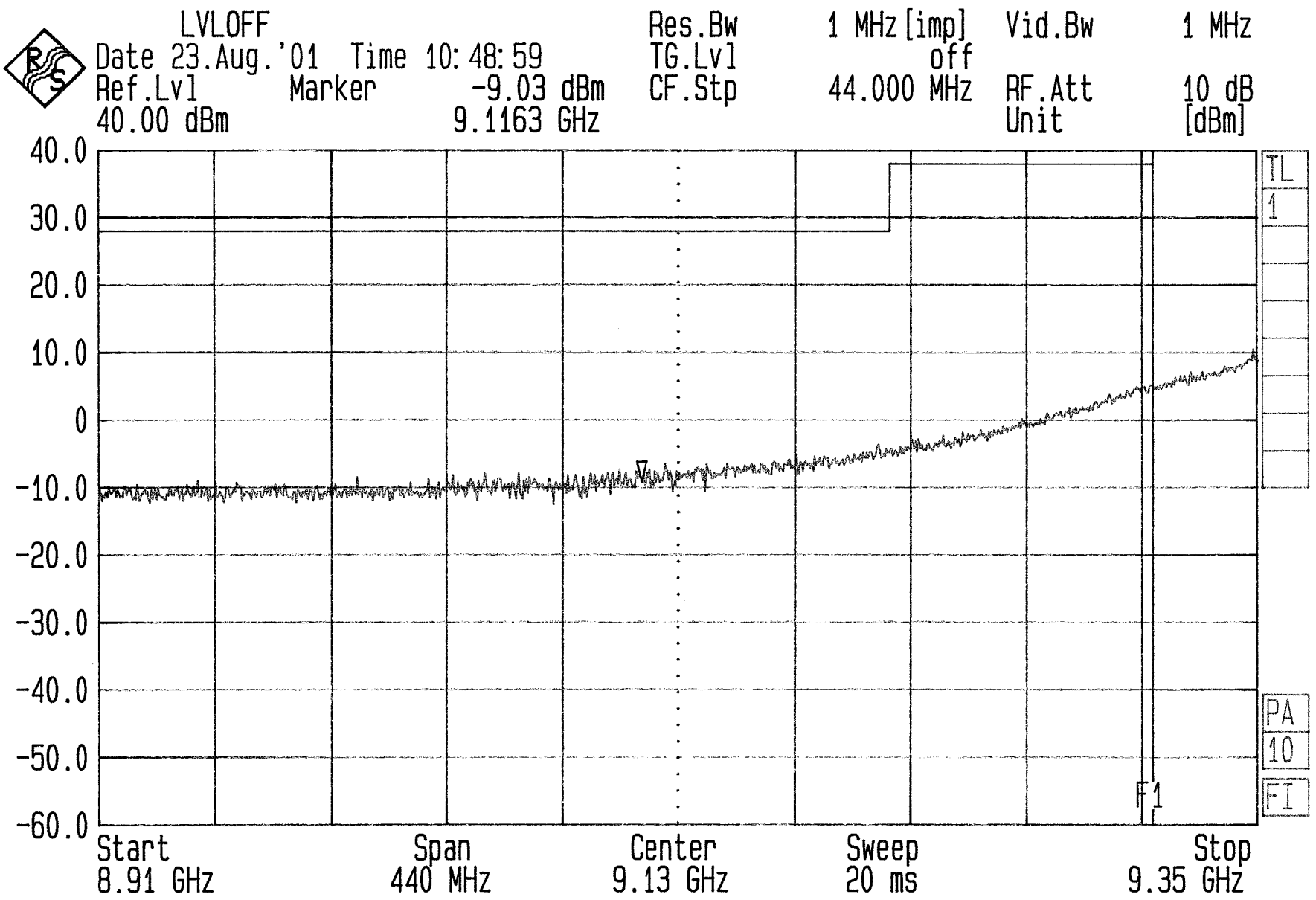
Occupied Bandwidth. Tested By RFI for Raymarine Ltd. EUT: Pathfinder RL72RC PLUS
FCC Part 80 65nS Pulse Width GPH/42589/02/02/022



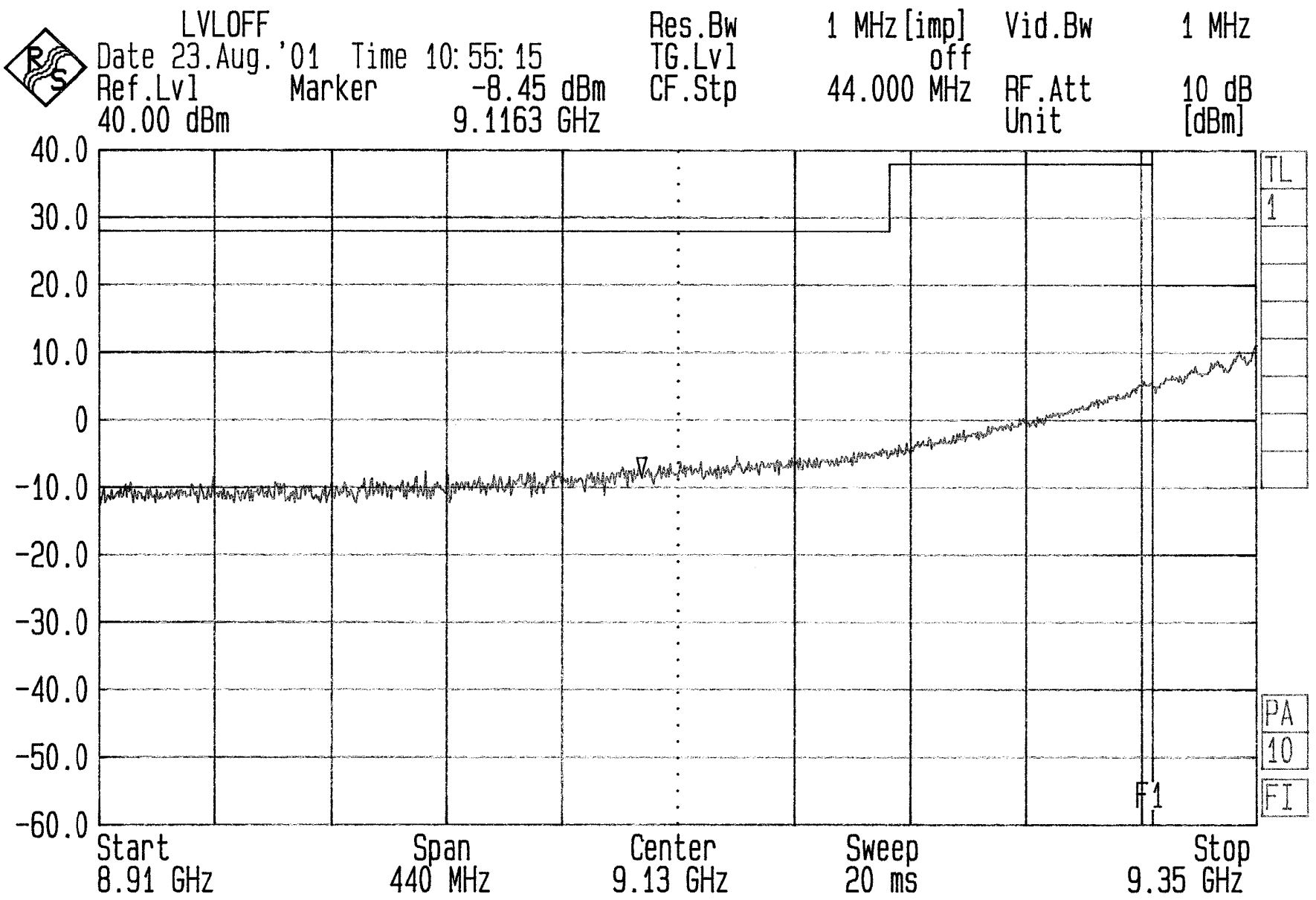
Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 450nS Pulse Width GPH/42589/02/02/023



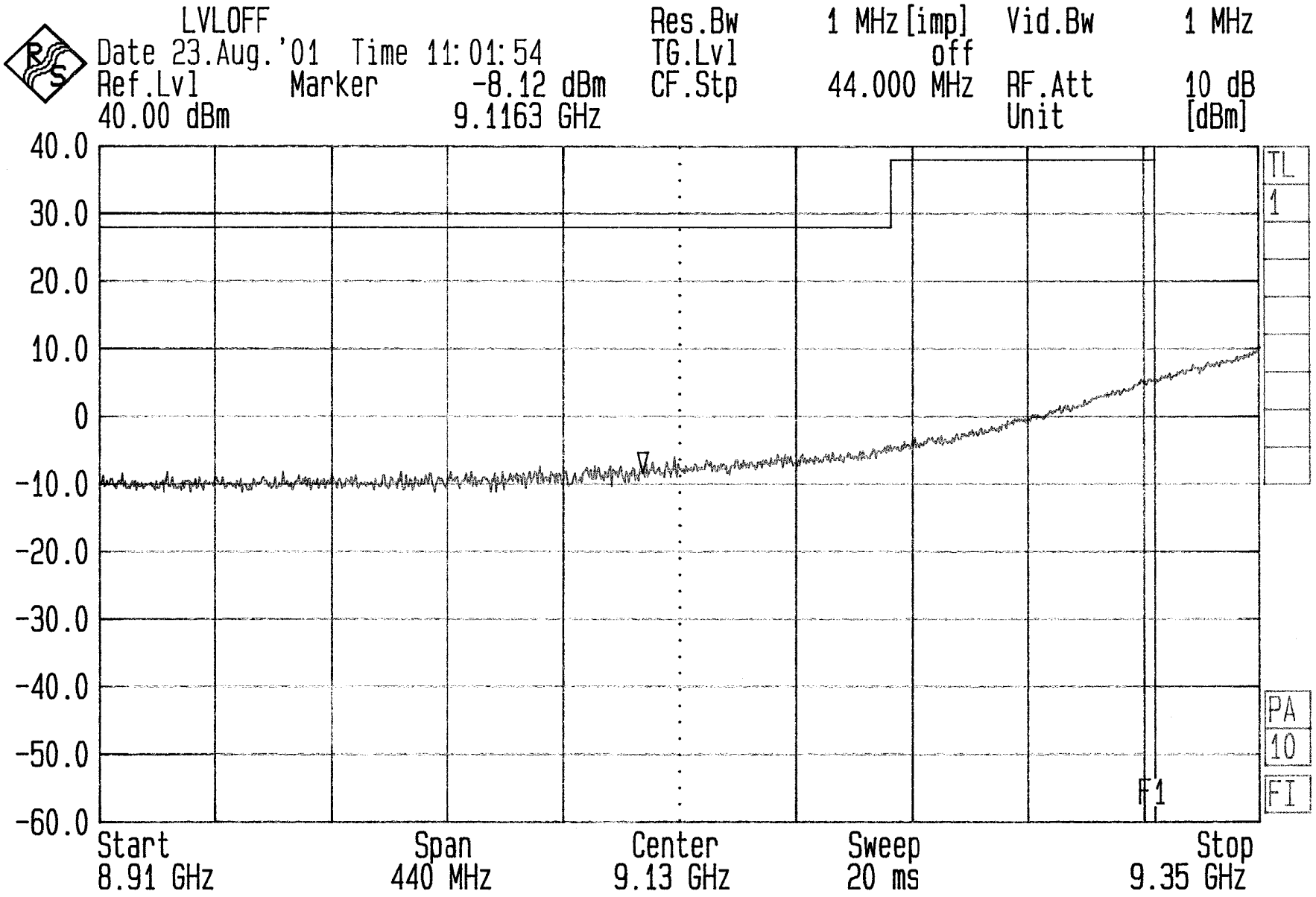
Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 450nS Pulse Width GPH/42589/02/02/024



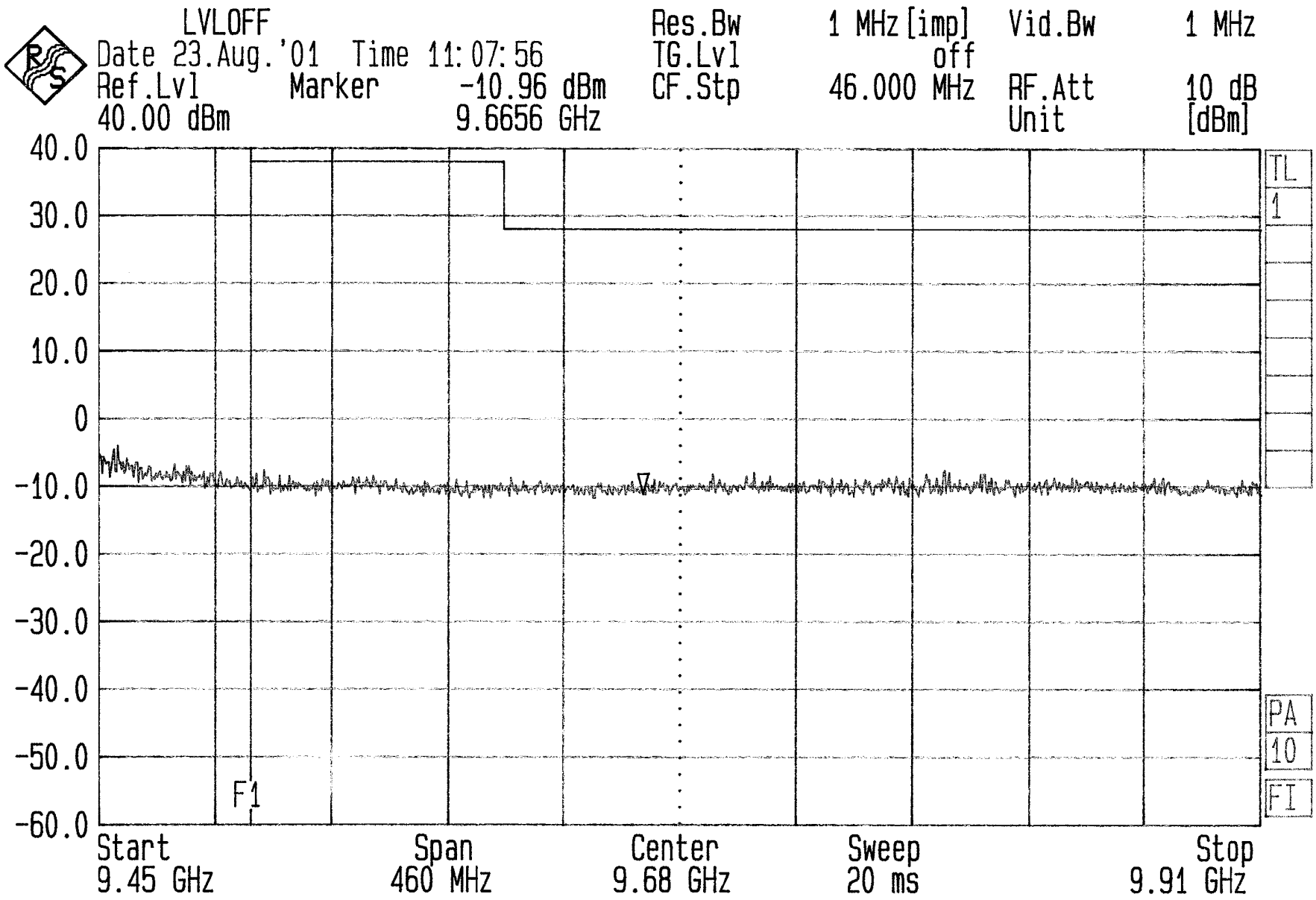
Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 450nS Pulse Width GPH/42589/02/02/025



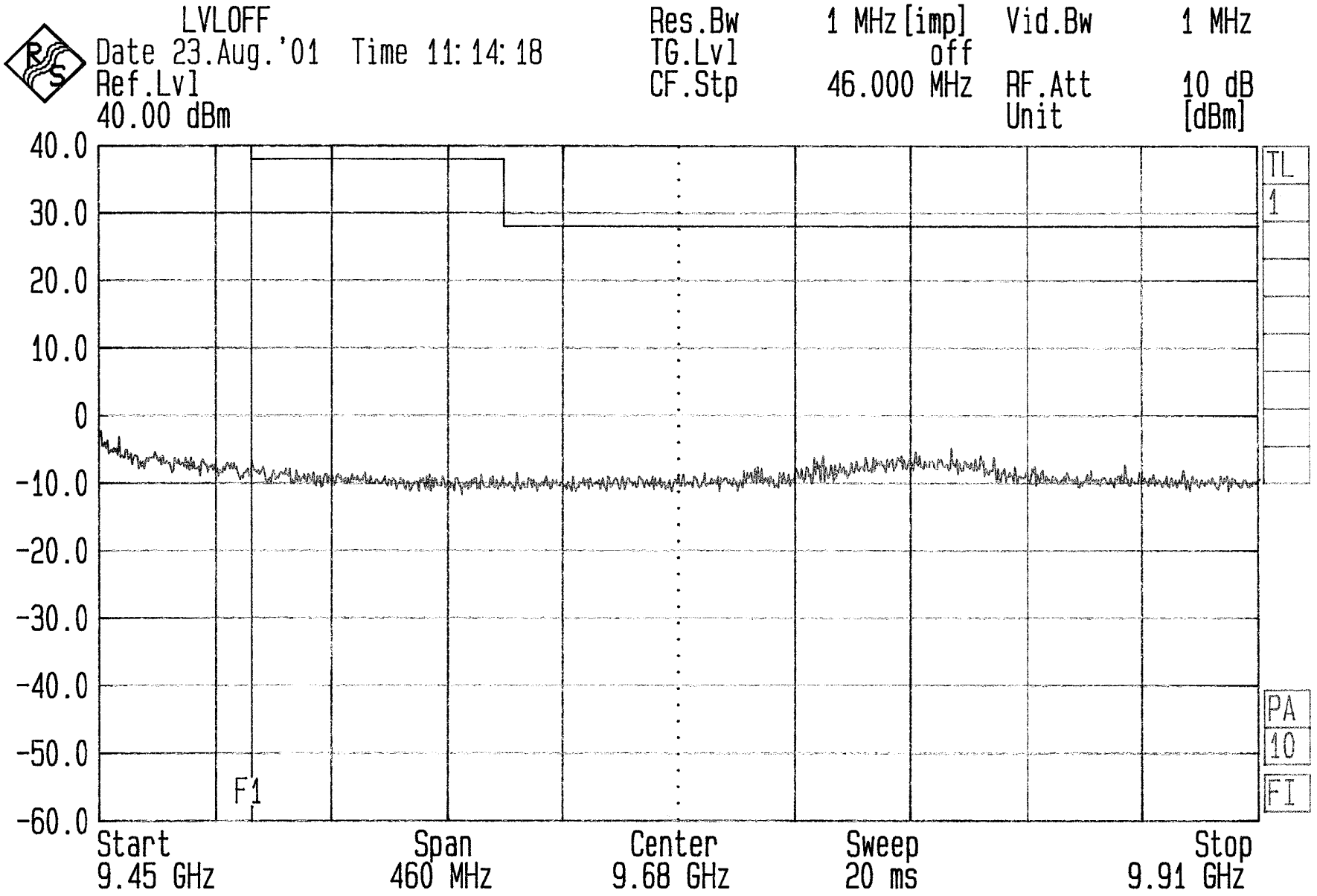
Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 65nS Pulse Width GPH/42589/02/02/026



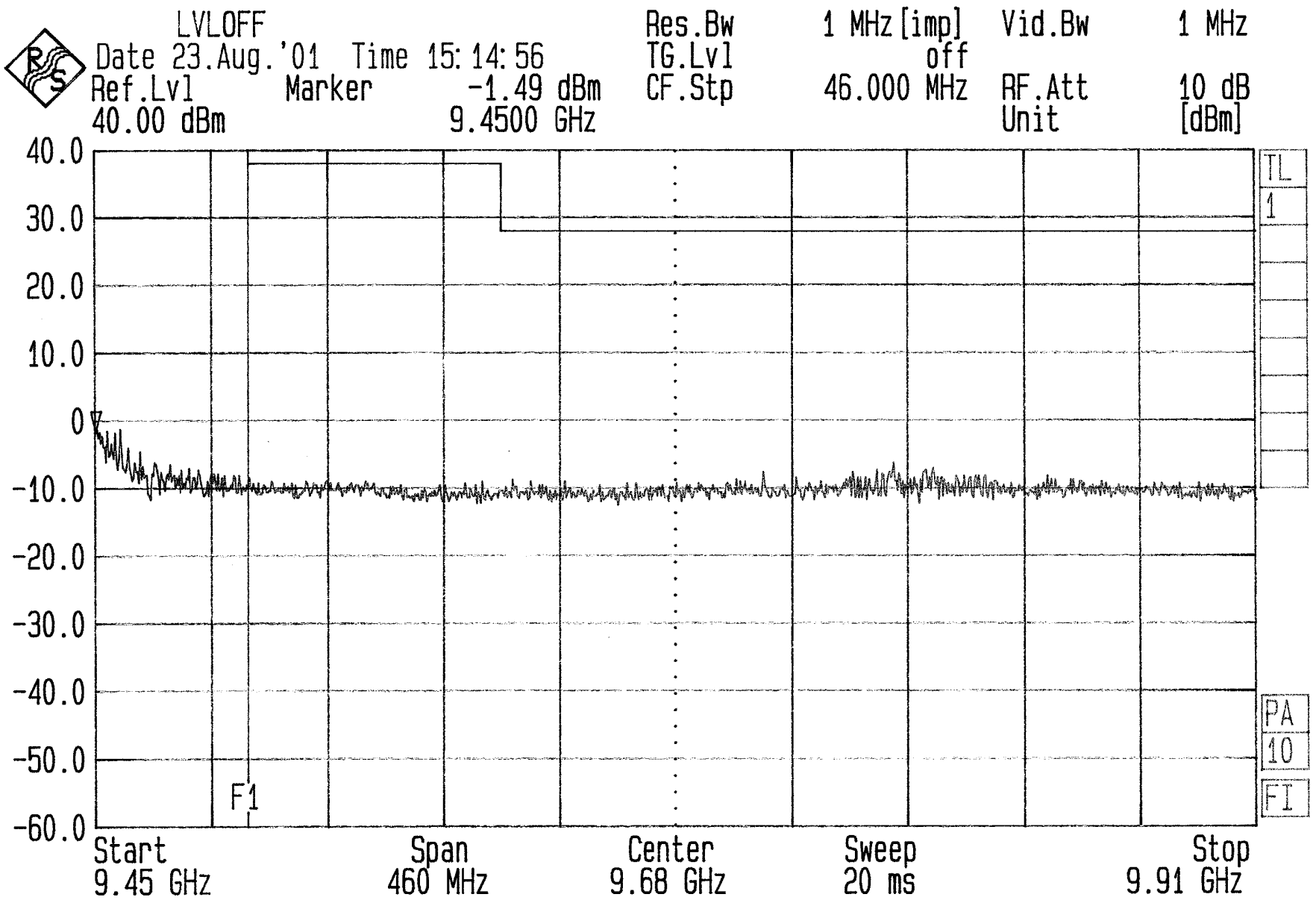
Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 1.0uS Pulse Width GPH/42589/02/02/027



Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 1.0uS Pulse Width GPH/42589/02/02/028



Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 65nS Pulse Width GPH/42589/02/02/029

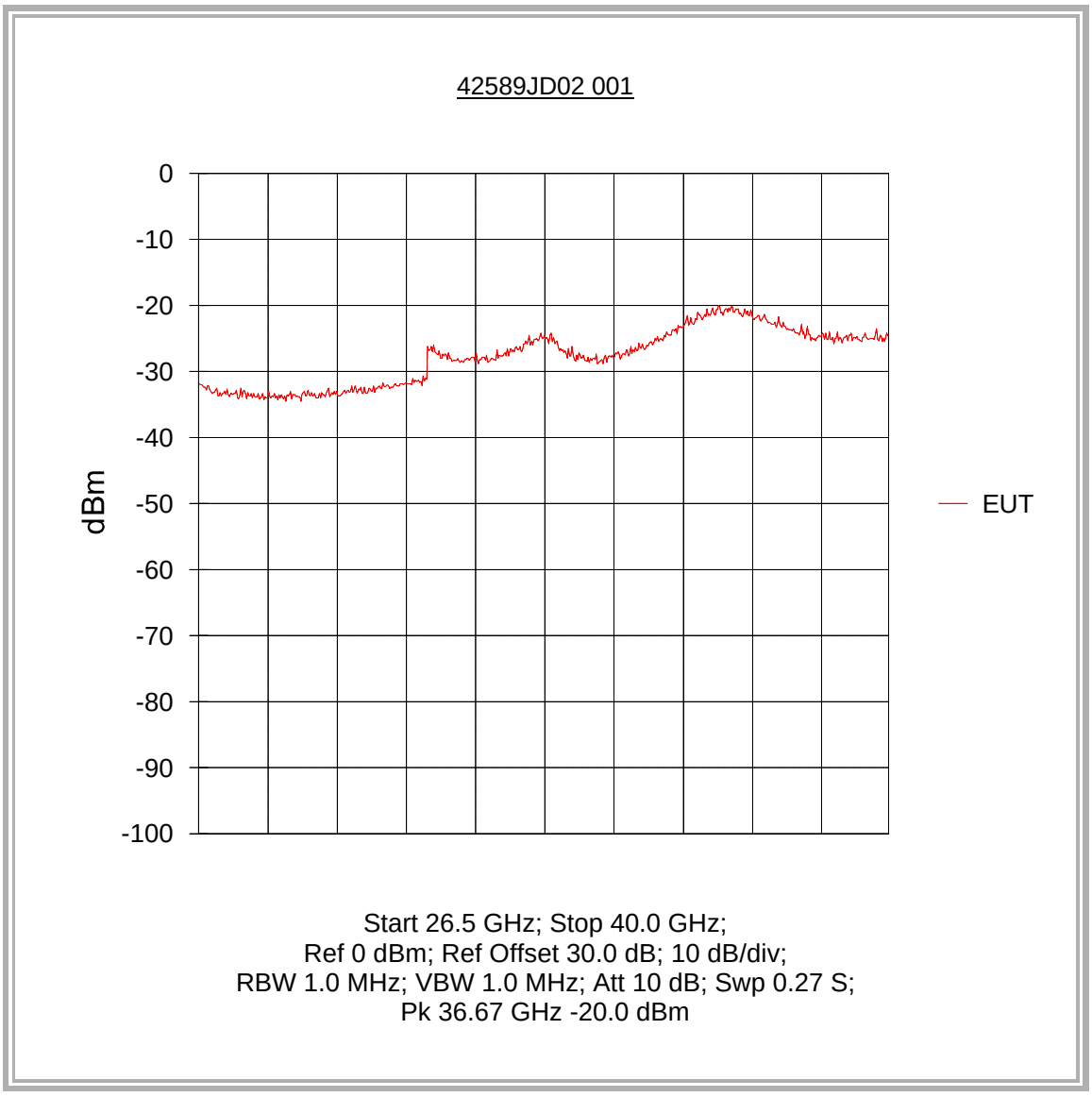


Antenna Port Cond. Emission Tested By RFI for Raymarine EUT: Pathfinder RL72RC PLUS
FCC Part 80 450nS Pulse Width GPH/42589/02/02/030

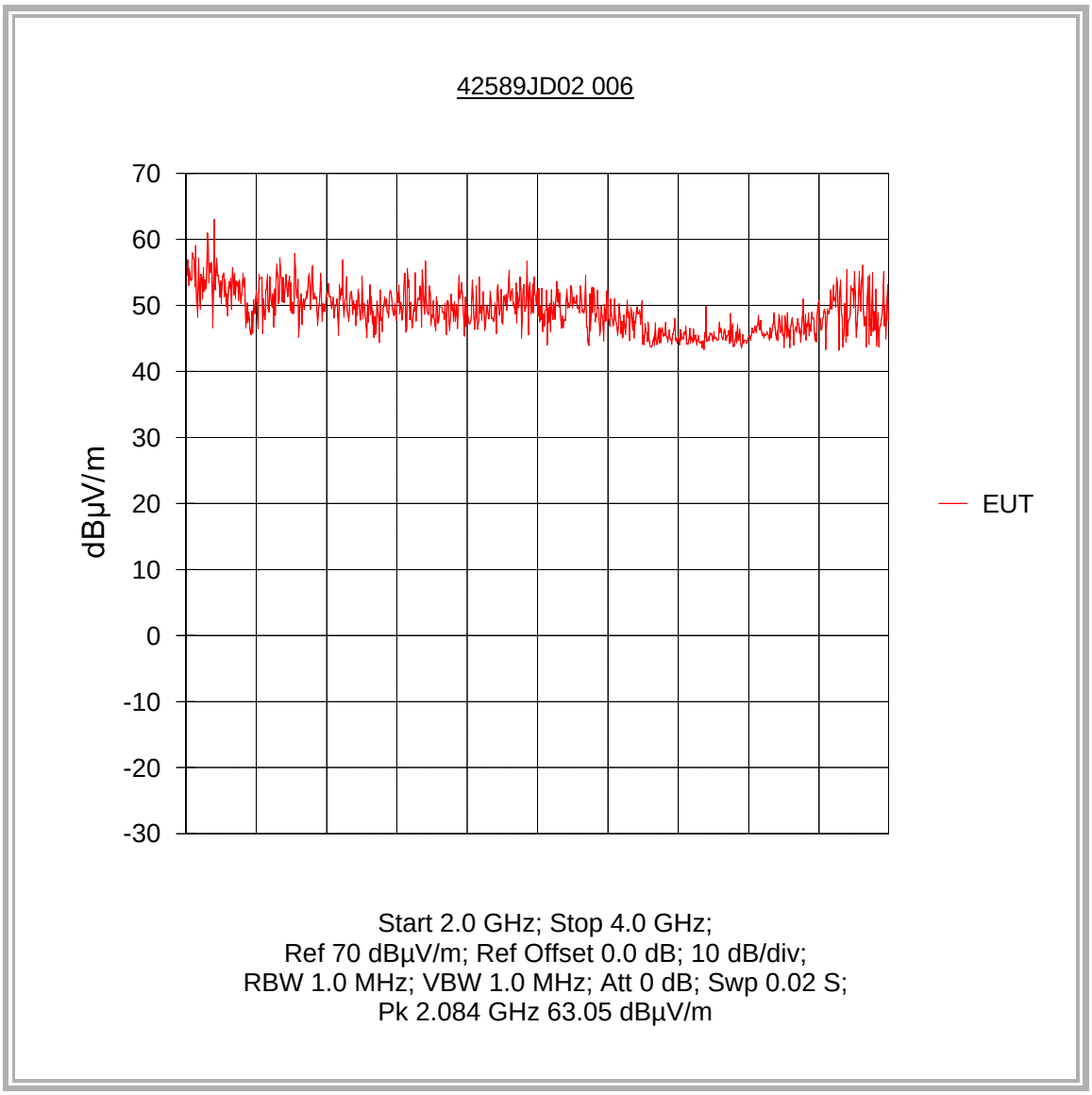
Graph Reference Number	Radiated Spurious Emissions
42589JD02 006	2.000GHz to 4.000GHz, Pulse Width 450ns
42589JD02 005	1.000GHz to 2.000GHz, Pulse Width 450ns
42589JD02 002	30.000MHz to 1.000GHz, Pulse Width 450ns
42589JD02 003	9.000kHz to 150.000kHz, Pulse Width 450ns
42589JD02 004	150.000kHz to 30.000MHz, Pulse Width 450ns
42589JD01 003	33.000GHz to 40.000GHz, Pulse Width 450ns
42589JD01 002	26.500GHz to 33.000GHz, Pulse Width 450ns
42589JD01 001	18.000GHz to 26.500GHz, Pulse Width 450ns
42589JD02 026	18.768GHz, Pulse Width 450ns
42589JD02 024	12.000GHz to 18.000GHz, Pulse Width 450ns
42589JD02 020	9.910GHz to 12.000GHz, Pulse Width 450ns
42589JD02 018	9.610GHz to 9.910GHz, Pulse Width 450ns
42589JD02 019	9.610GHz to 9.910GHz, Pulse Width 6.5ns
42589JD02 017	9.610GHz to 9.910GHz, Pulse Width 1000ns
42589JD02 013	9.210GHz to 9.312GHz, Pulse Width 6.5ns
42589JD02 012	9.210GHz to 9.312GHz, Pulse Width 450ns
42589JD02 011	9.210GHz to 9.312GHz, Pulse Width 1000ns
42589JD02 010	8.910GHz to 9.210GHz, Pulse Width 1000ns
42589JD02 008	8.910GHz to 9.210GHz, Pulse Width 450ns
42589JD02 009	8.910GHz to 9.210GHz, Pulse Width 65ns
42589JD02 007	8.000GHz to 8.910GHz, Pulse Width 450ns
42589JD02 023	6.000GHz to 8.000GHz, Pulse Width 450ns
42589JD02 022	4.000GHz to 6.000GHz, Pulse Width 450ns
42589JD02 014	9.506GHz to 9.610GHz, Pulse Width 65ns
42589JD02 015	9.506GHz to 9.610GHz, Pulse Width 450ns
42589JD02 016	9.506GHz to 9.610GHz, Pulse Width 1000ns

This page has been left intentionally blank.

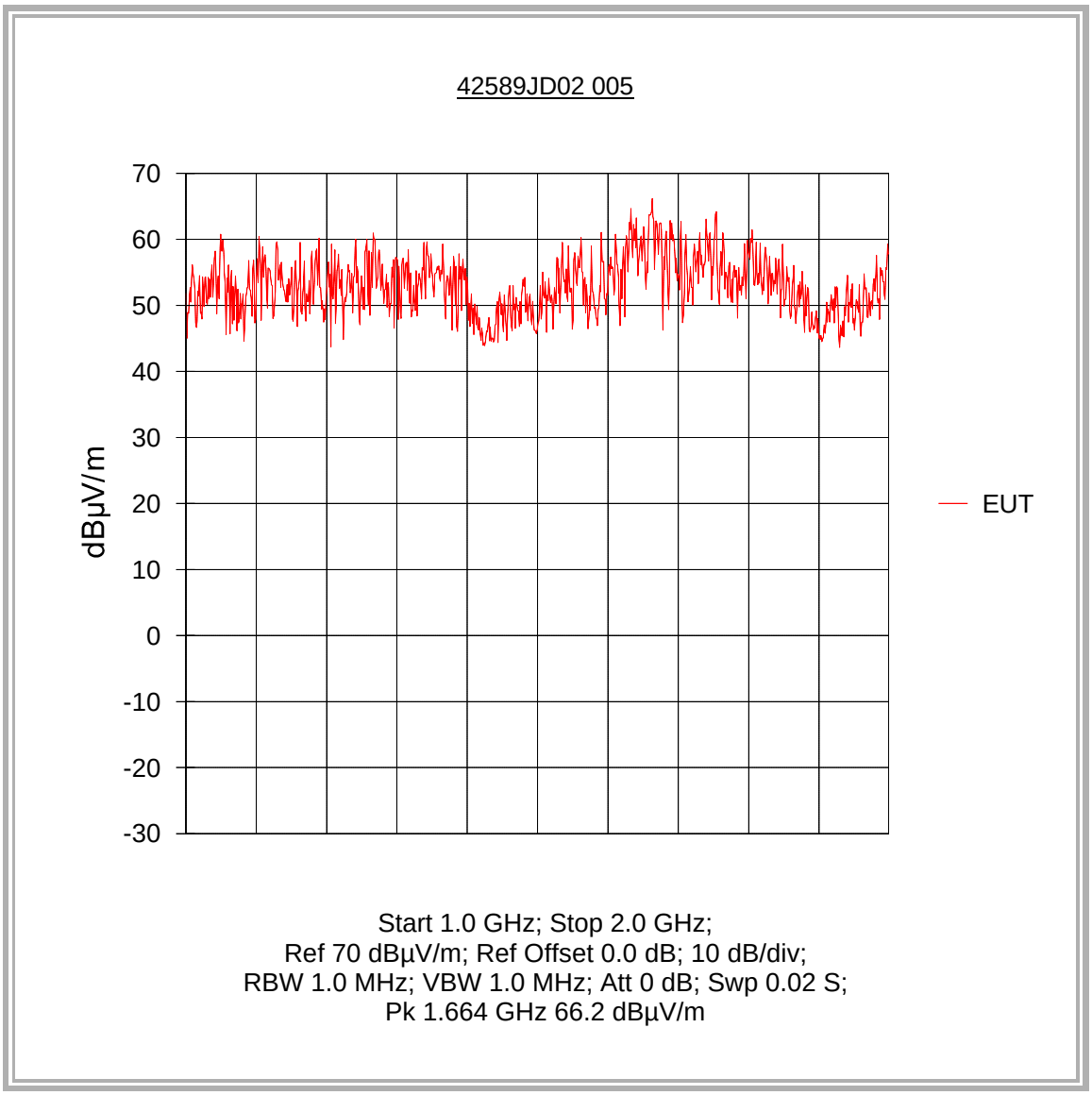
42589JD02 001 Conducted Antenna Port Emissions 26.50 to 40.00GHz, 450ns Pulse Width



42589JD02 006 Radiated Emissions
2.000GHz to 4.000GHz, 450ns Pulse Width

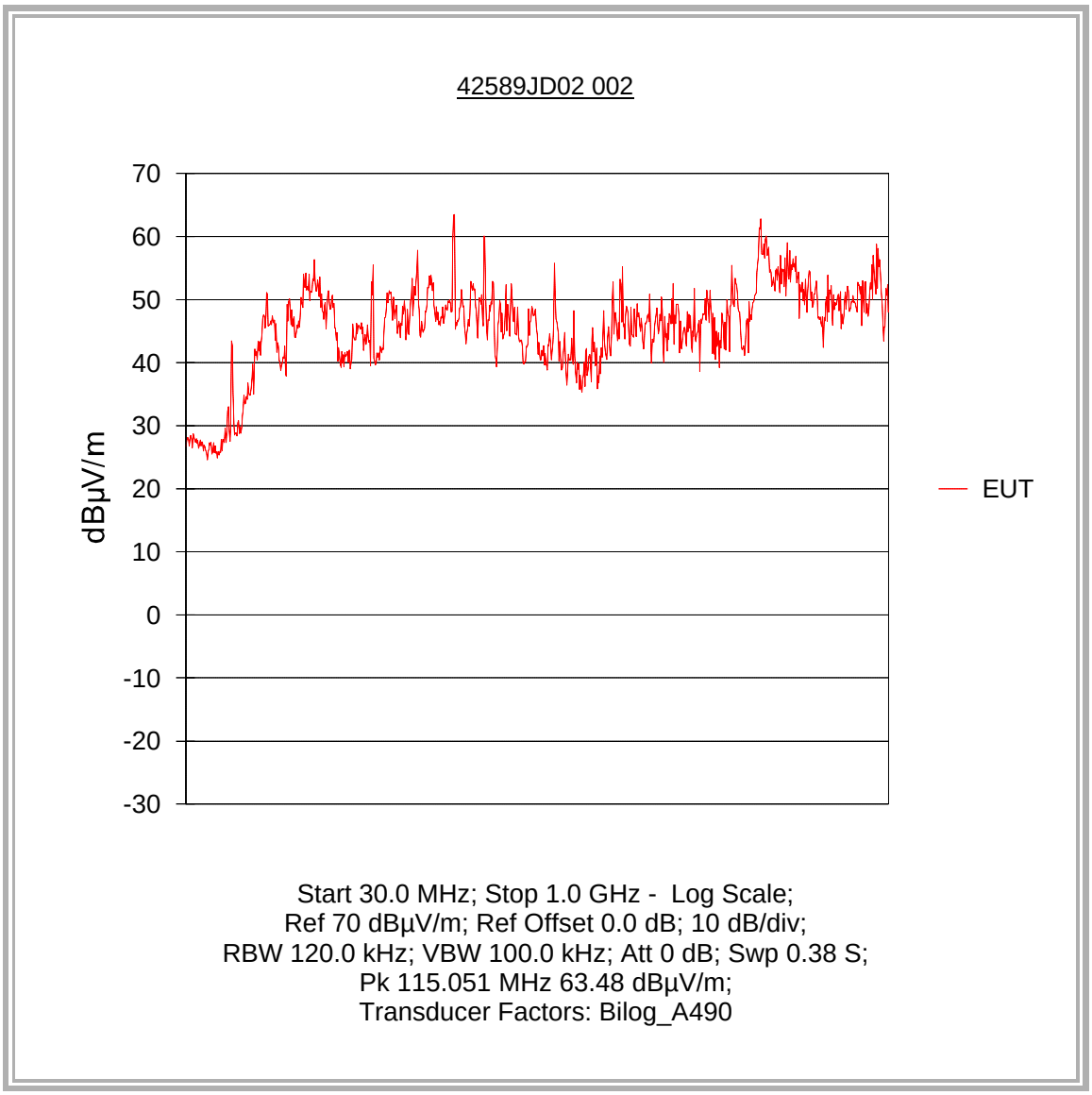


42589JD02 005 Radiated Emissions
1.000GHz to 2.000GHz, 450ns Pulse Width

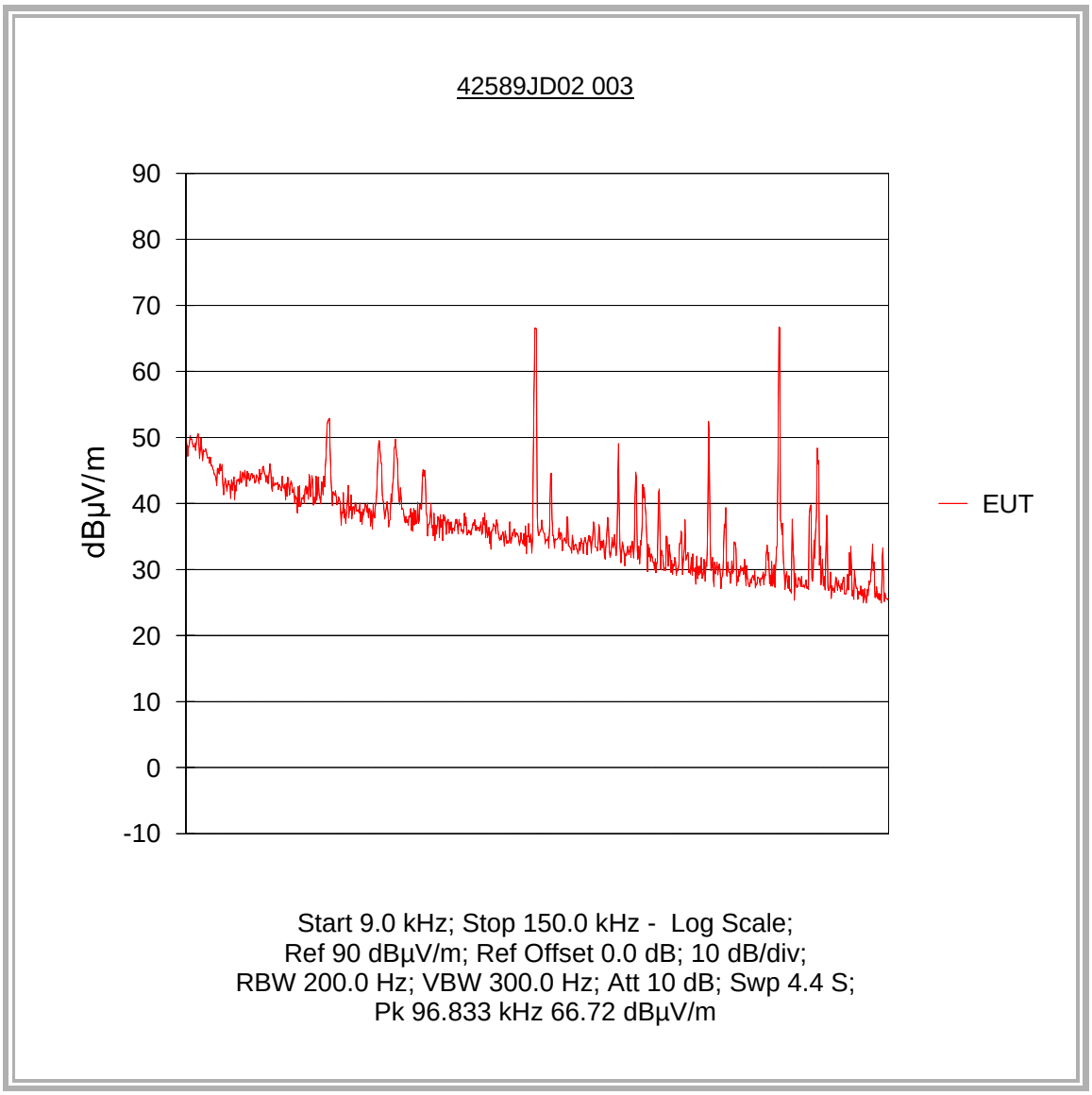


Start 1.0 GHz; Stop 2.0 GHz;
Ref 70 dBµV/m; Ref Offset 0.0 dB; 10 dB/div;
RBW 1.0 MHz; VBW 1.0 MHz; Att 0 dB; Swp 0.02 S;
Pk 1.664 GHz 66.2 dBµV/m

42589JD02 002 Radiated Emissions
30.000MHz to 1.000GHz, 450ns Pulse Width

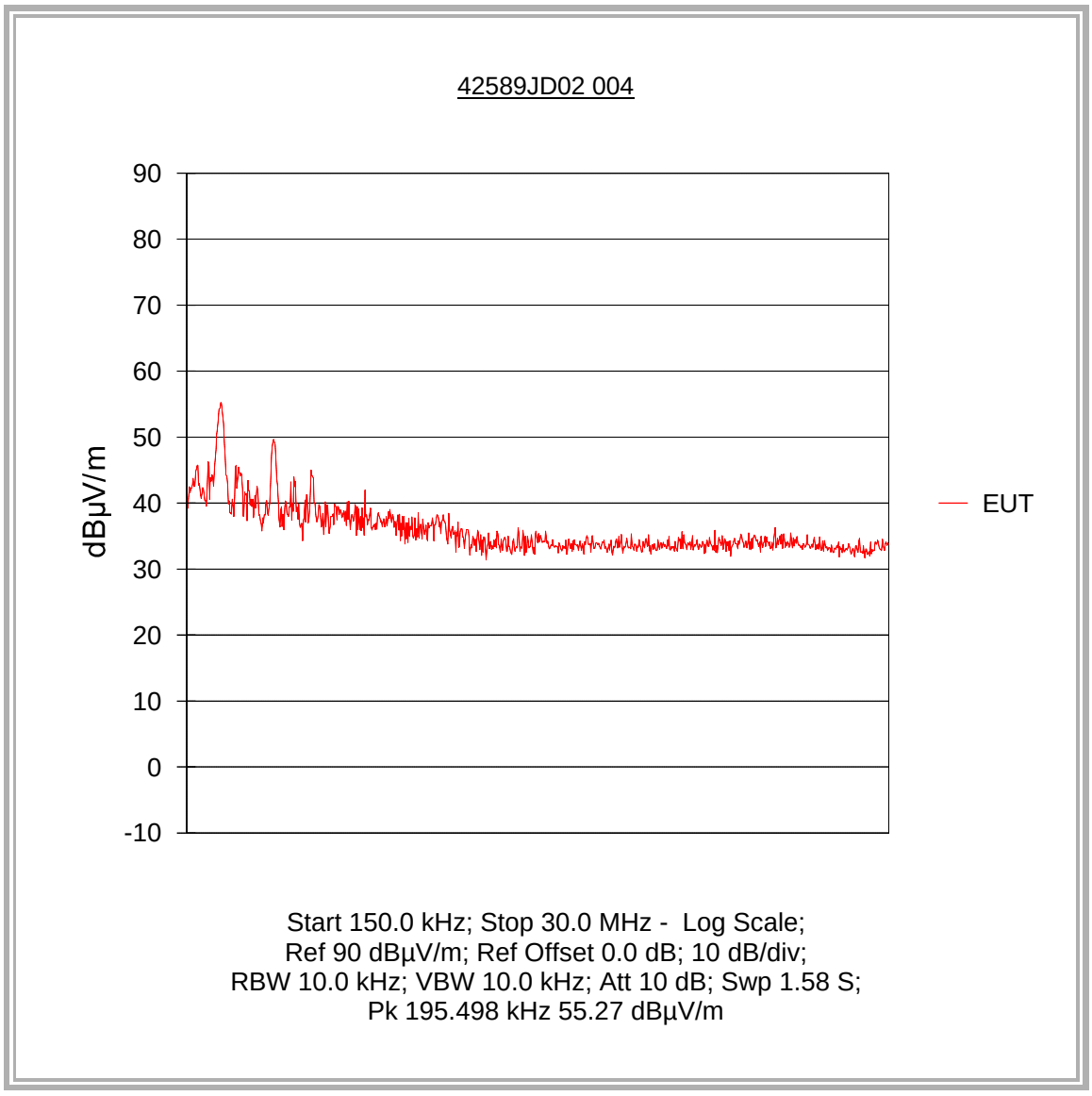


42589JD02 003 Radiated Emissions
9.000kHz to 150.000GHz, 450ns Pulse Width

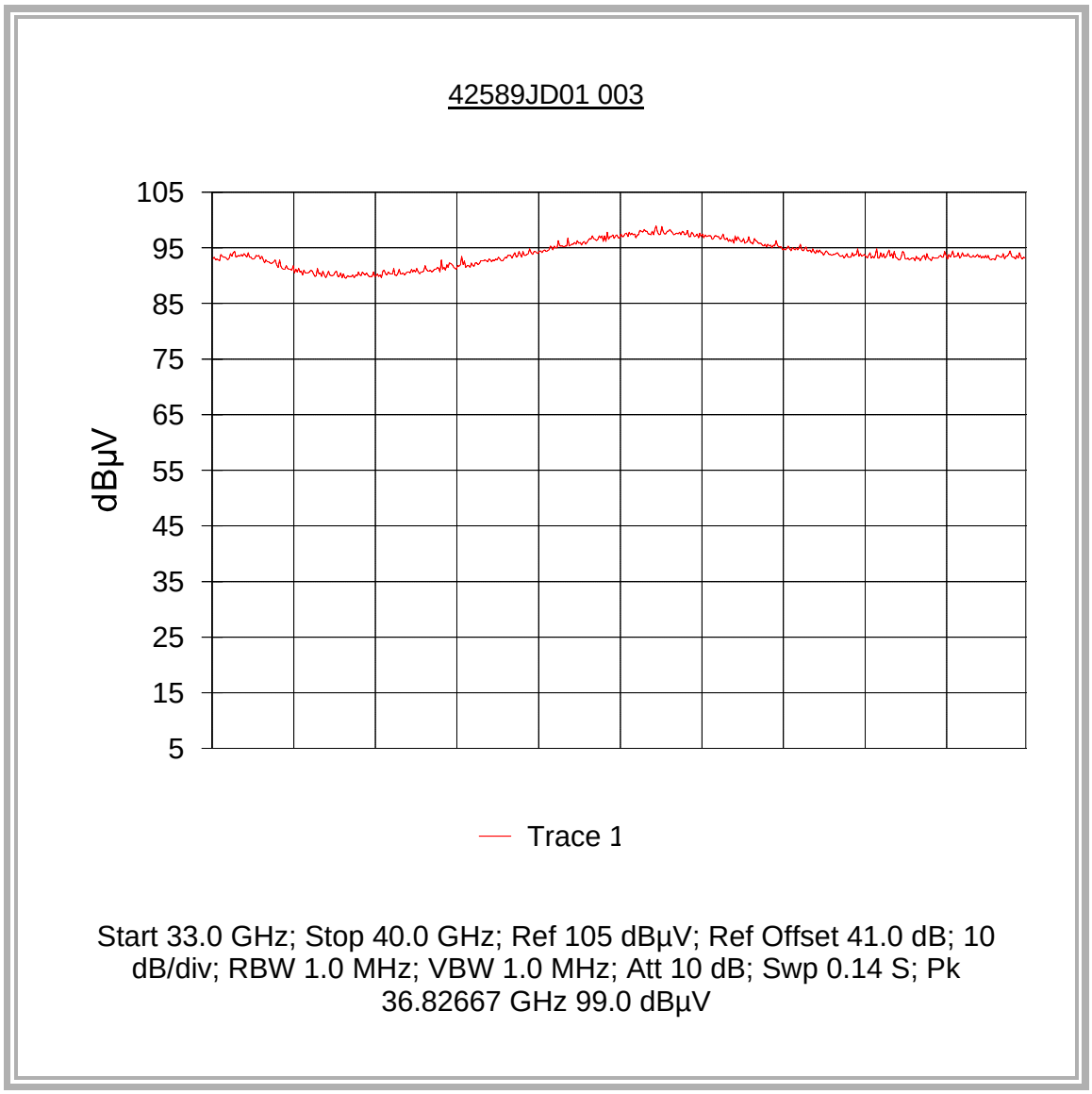


Start 9.0 kHz; Stop 150.0 kHz - Log Scale;
Ref 90 dBµV/m; Ref Offset 0.0 dB; 10 dB/div;
RBW 200.0 Hz; VBW 300.0 Hz; Att 10 dB; Swp 4.4 S;
Pk 96.833 kHz 66.72 dBµV/m

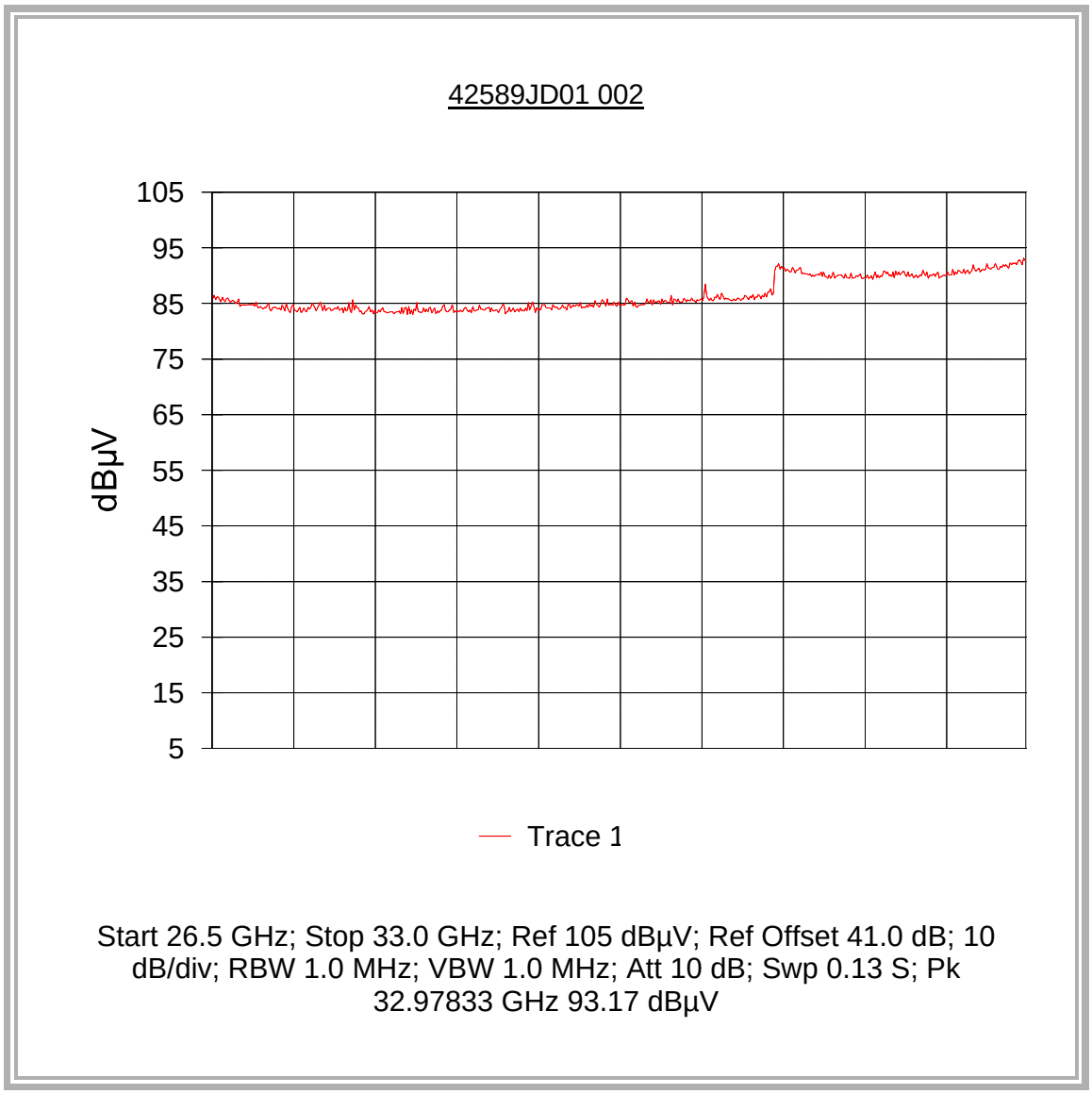
42589JD02 004 Radiated Emissions
150.000kHz to 30.000GHz, 450ns Pulse Width



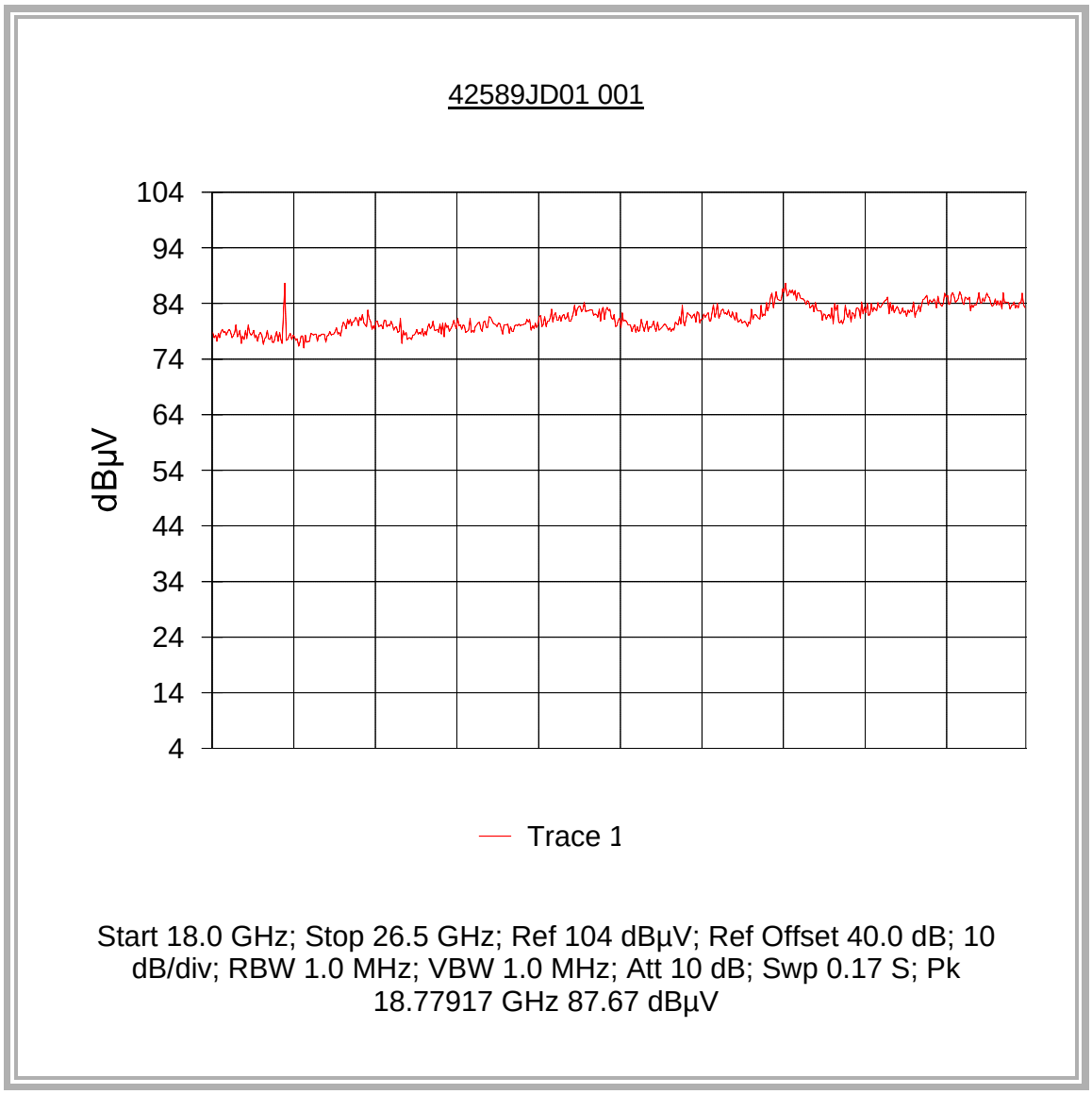
42589JD01 003b Radiated Emissions
33.000GHz to 40.000GHz, 450ns Pulse Width



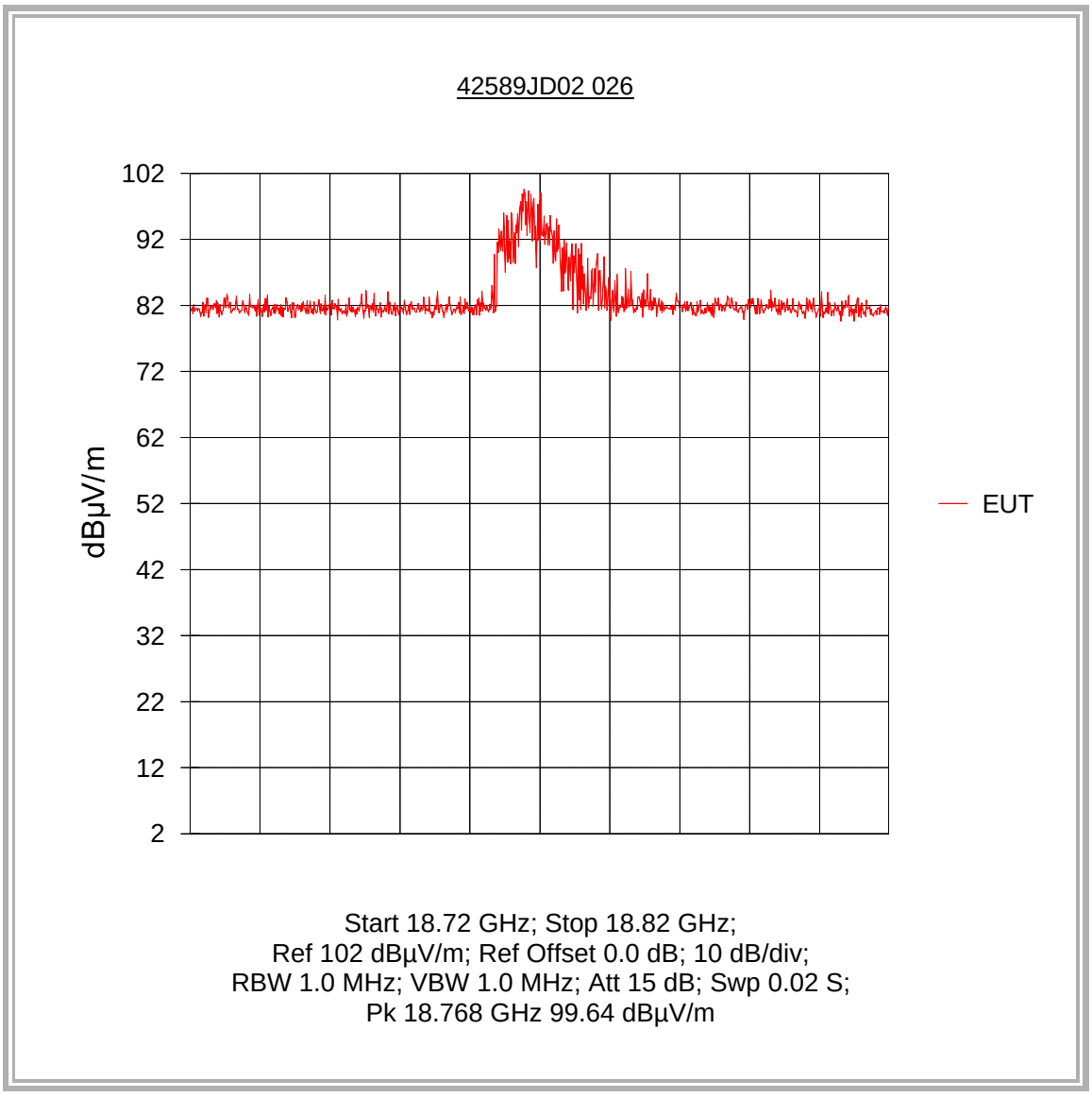
42589JD01 002b Radiated Emissions
26.500GHz to 33.000GHz, 450ns Pulse Width



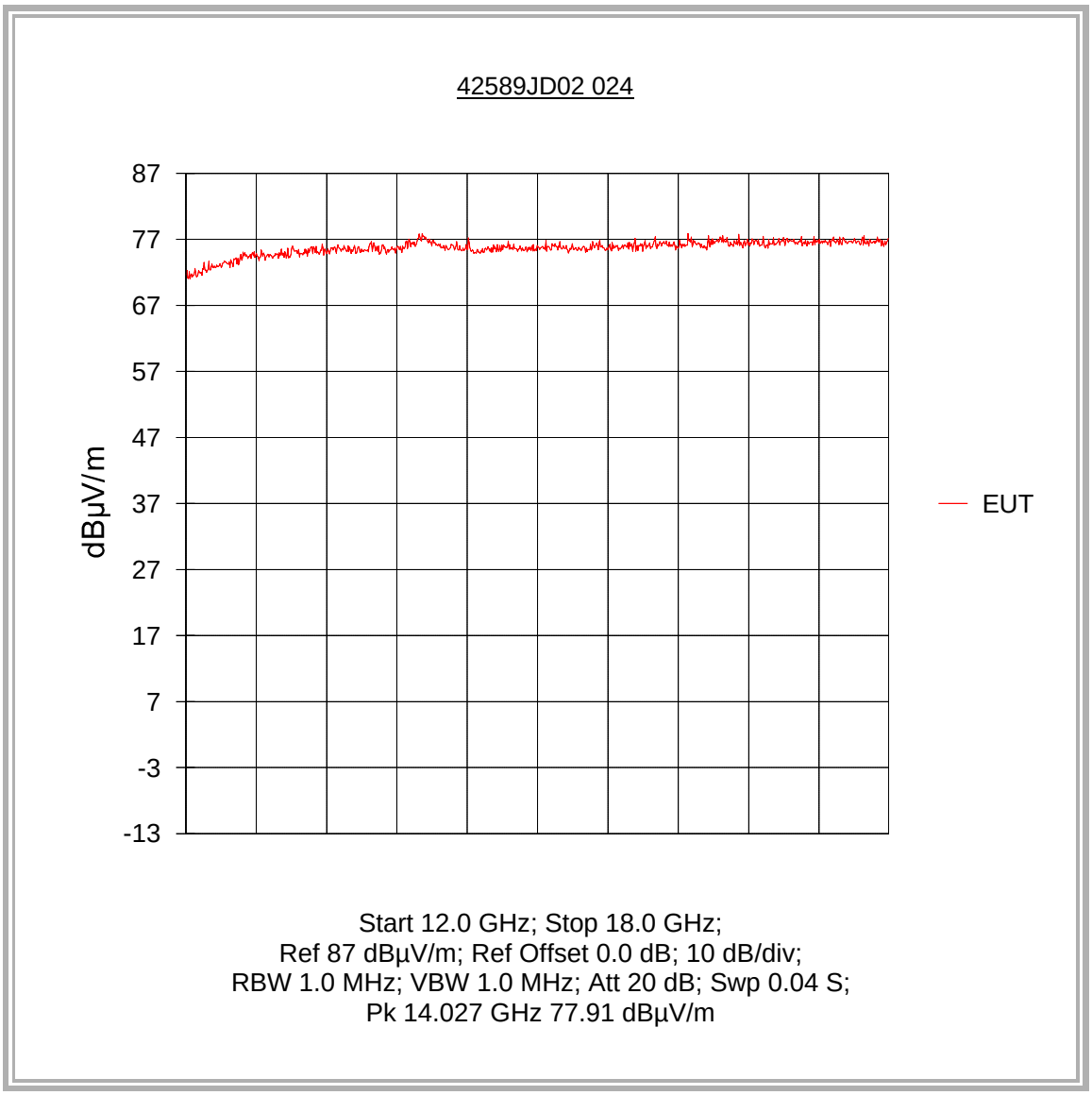
42589JD01 001b Radiated Emissions
18.000GHz to 26.500GHz, 450ns Pulse Width



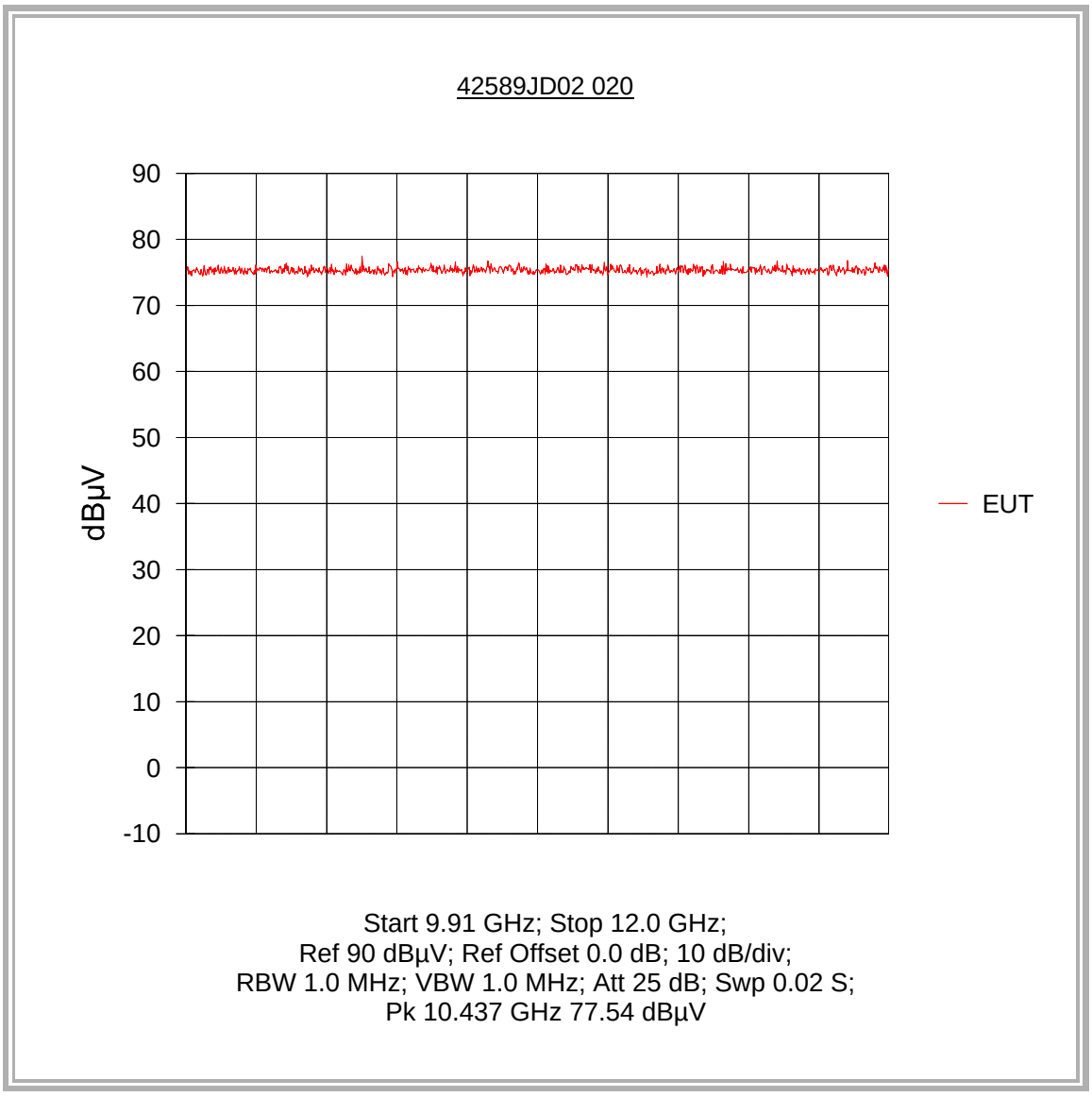
42589JD02 026 Radiated Emissions
18.768GHz, 450ns Pulse Width



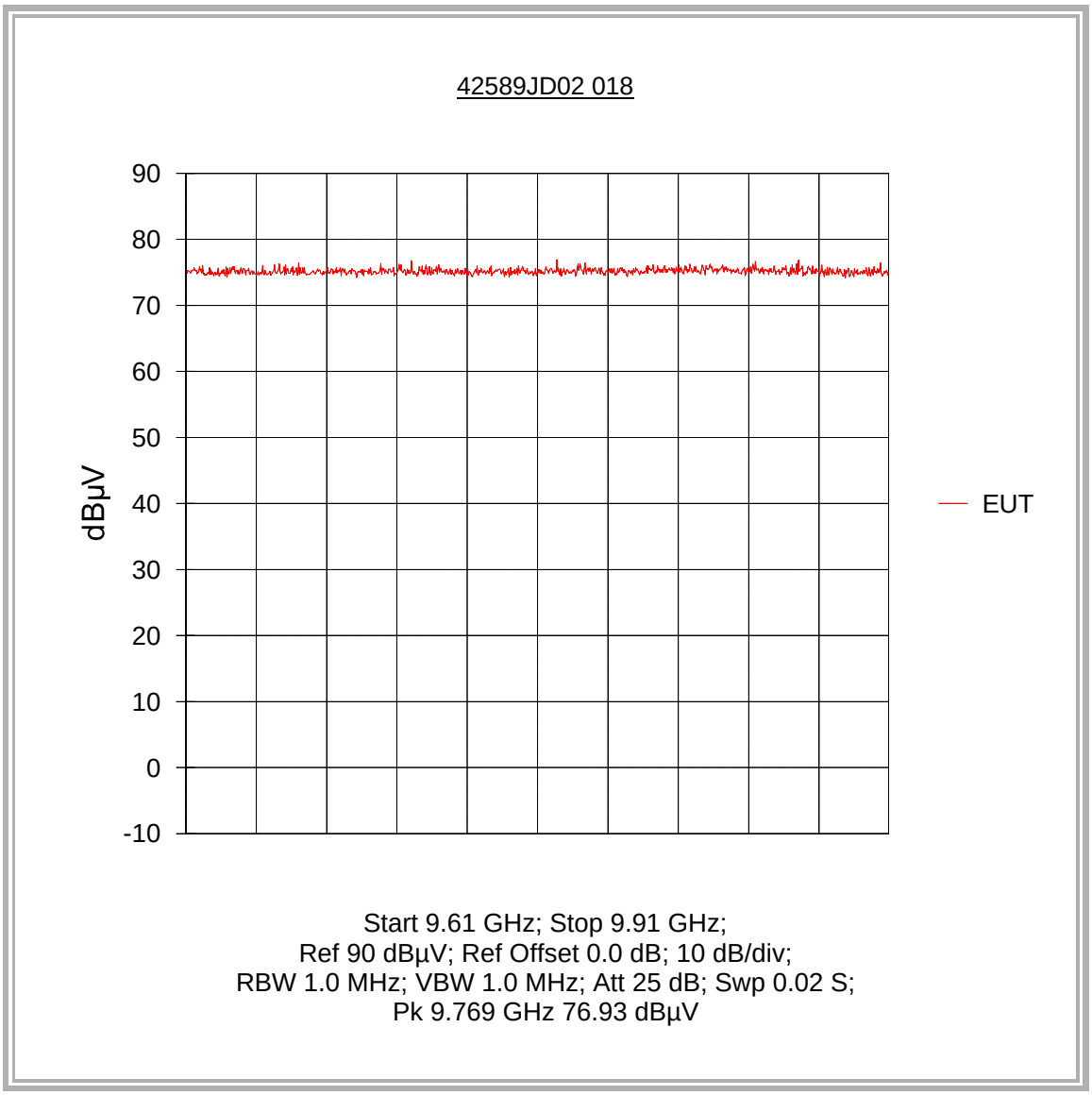
42589JD02 024 Radiated Emissions
12.000GHz to 18.000GHz, 450ns Pulse Width



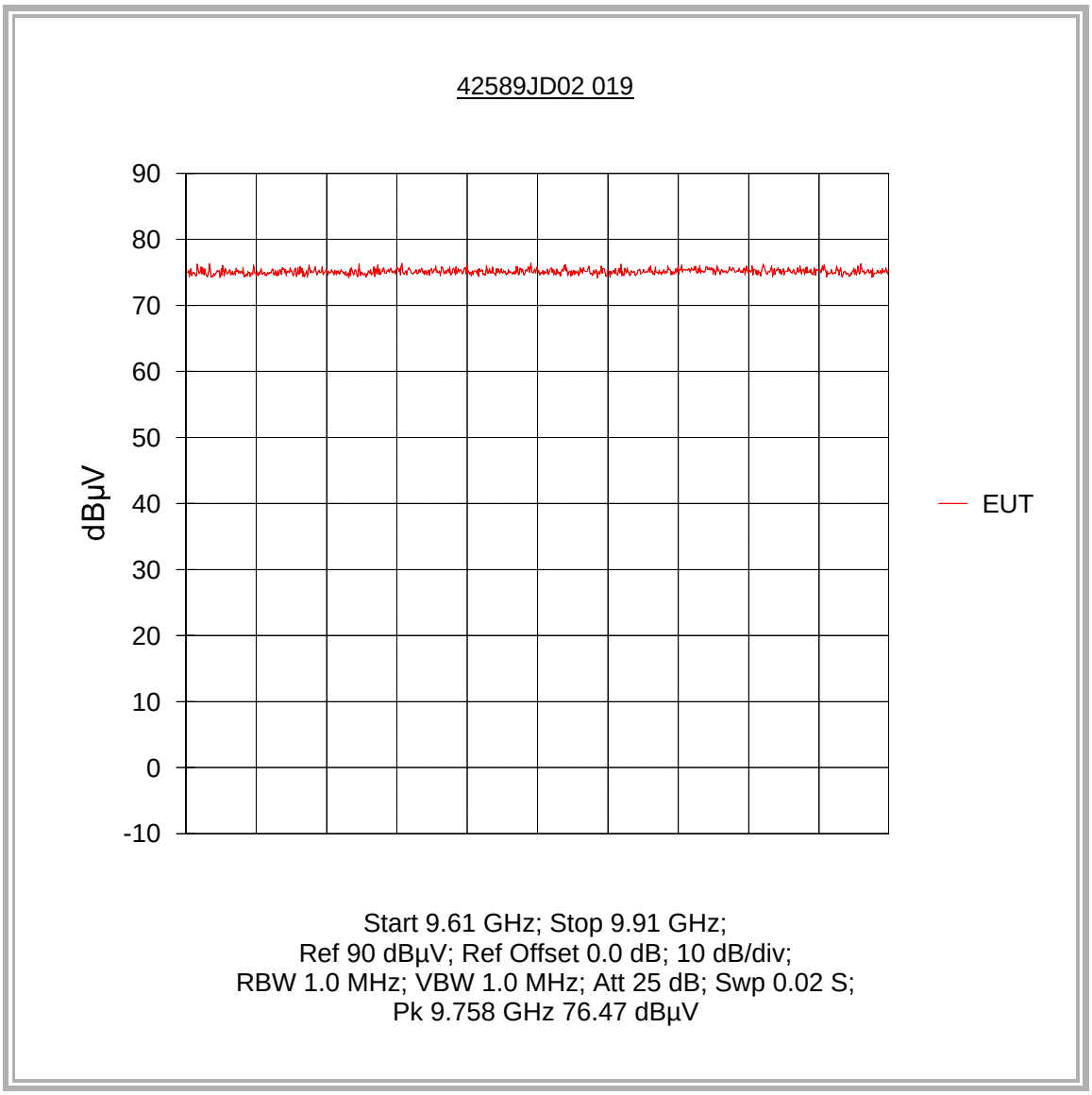
42589JD02 020 Radiated Emissions
9.910GHz to 12.000GHz, 450ns Pulse Width



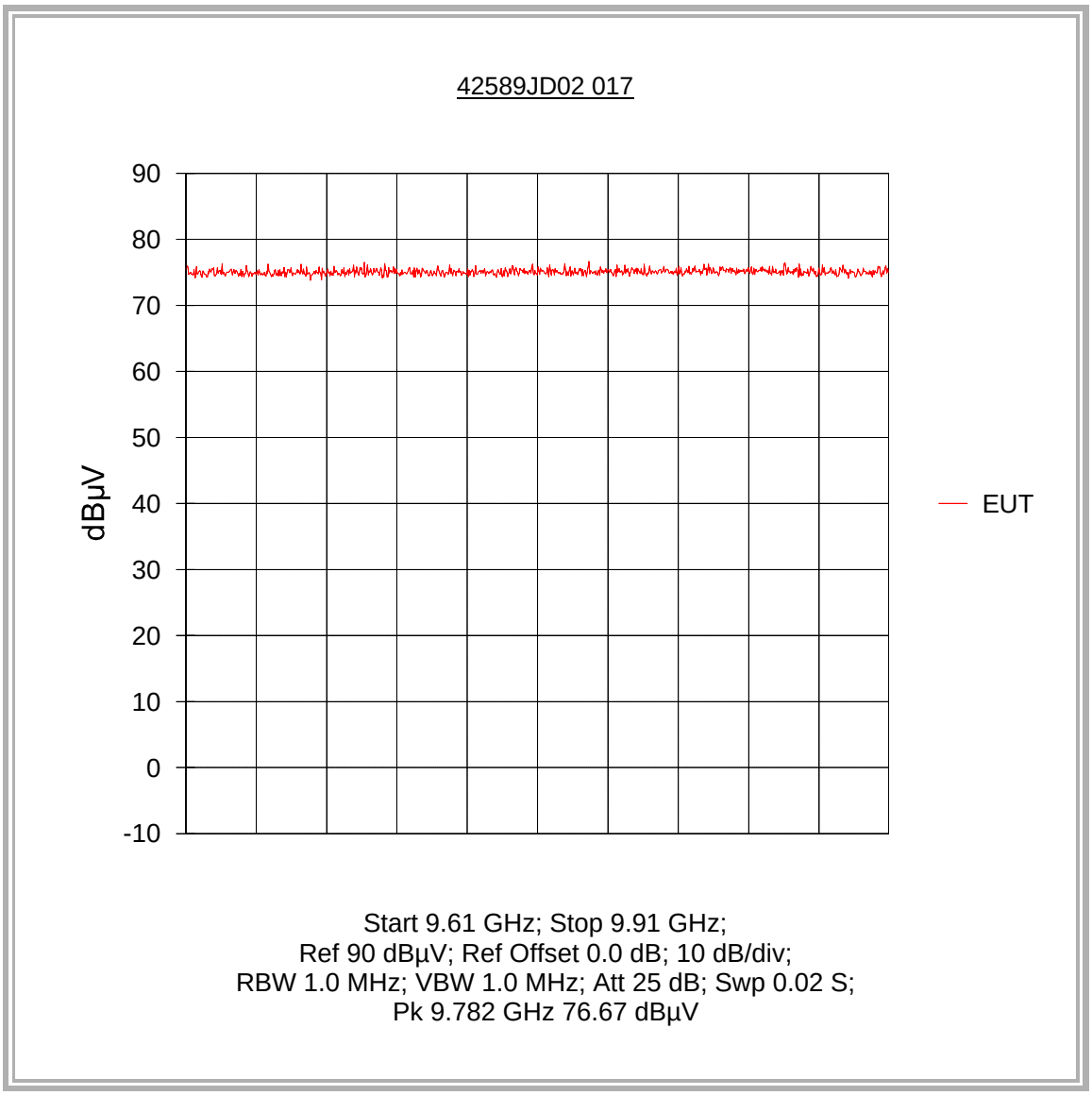
42589JD02 018 Radiated Emissions
9.610GHz to 9.910GHz, 450ns Pulse Width



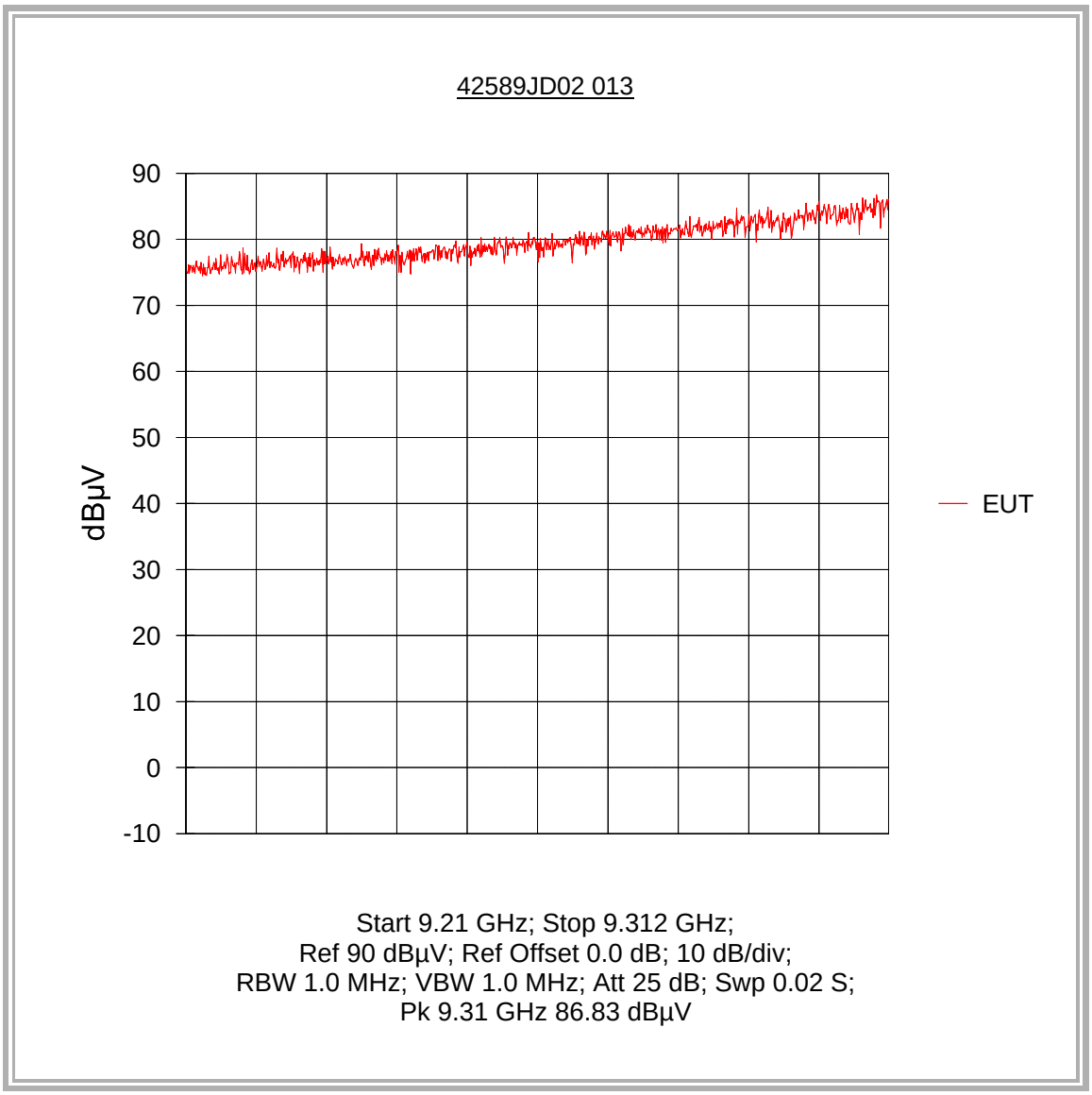
42589JD02 019 Radiated Emissions
9.610GHz to 9.910GHz, 6.5ns Pulse Width



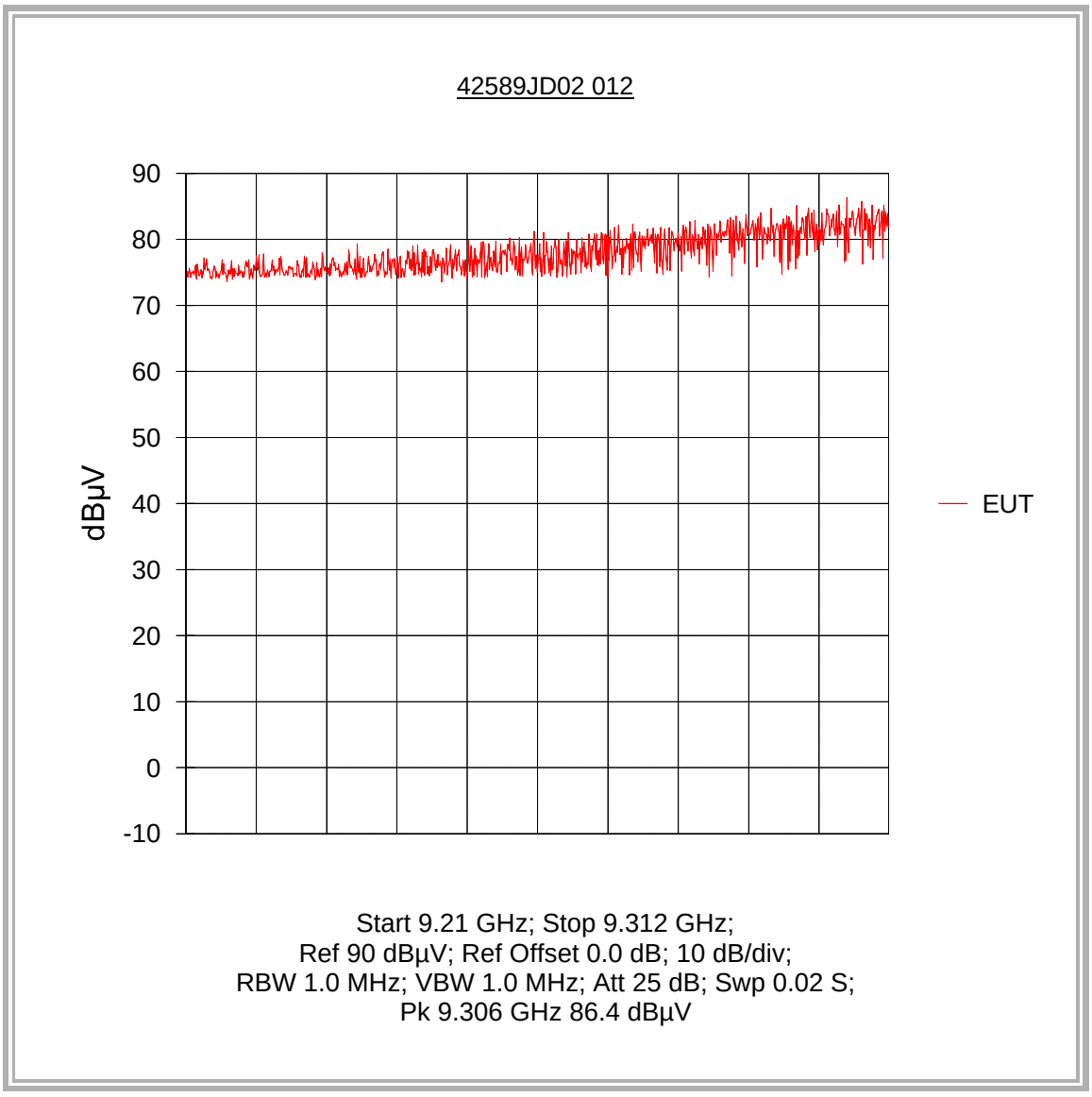
42589JD02 017 Radiated Emissions
9.610GHz to 9.910GHz, 1000ns Pulse Width



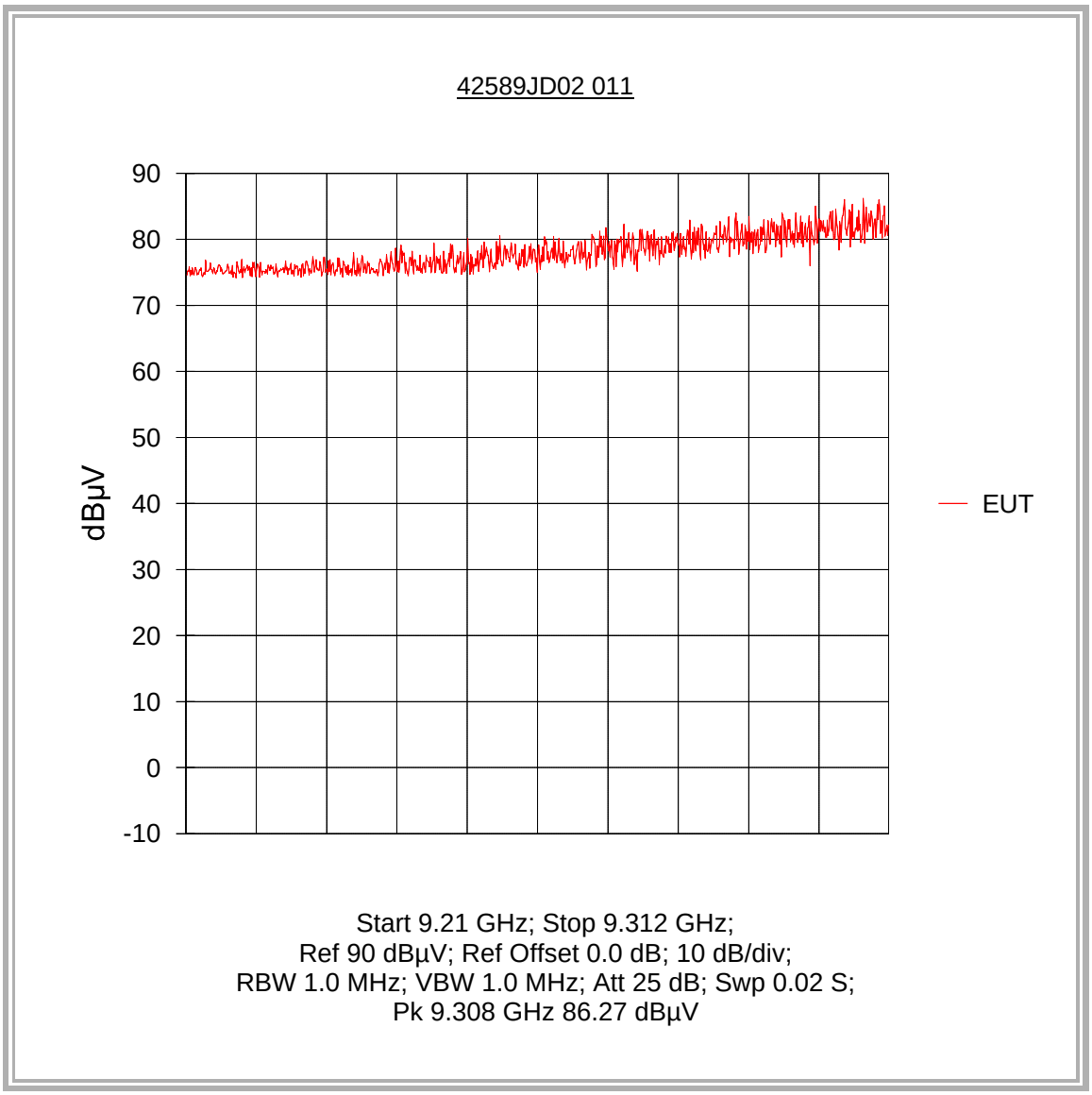
42589JD02 013 Radiated Emissions
9.210GHz to 9.312GHz, 6.5ns Pulse Width



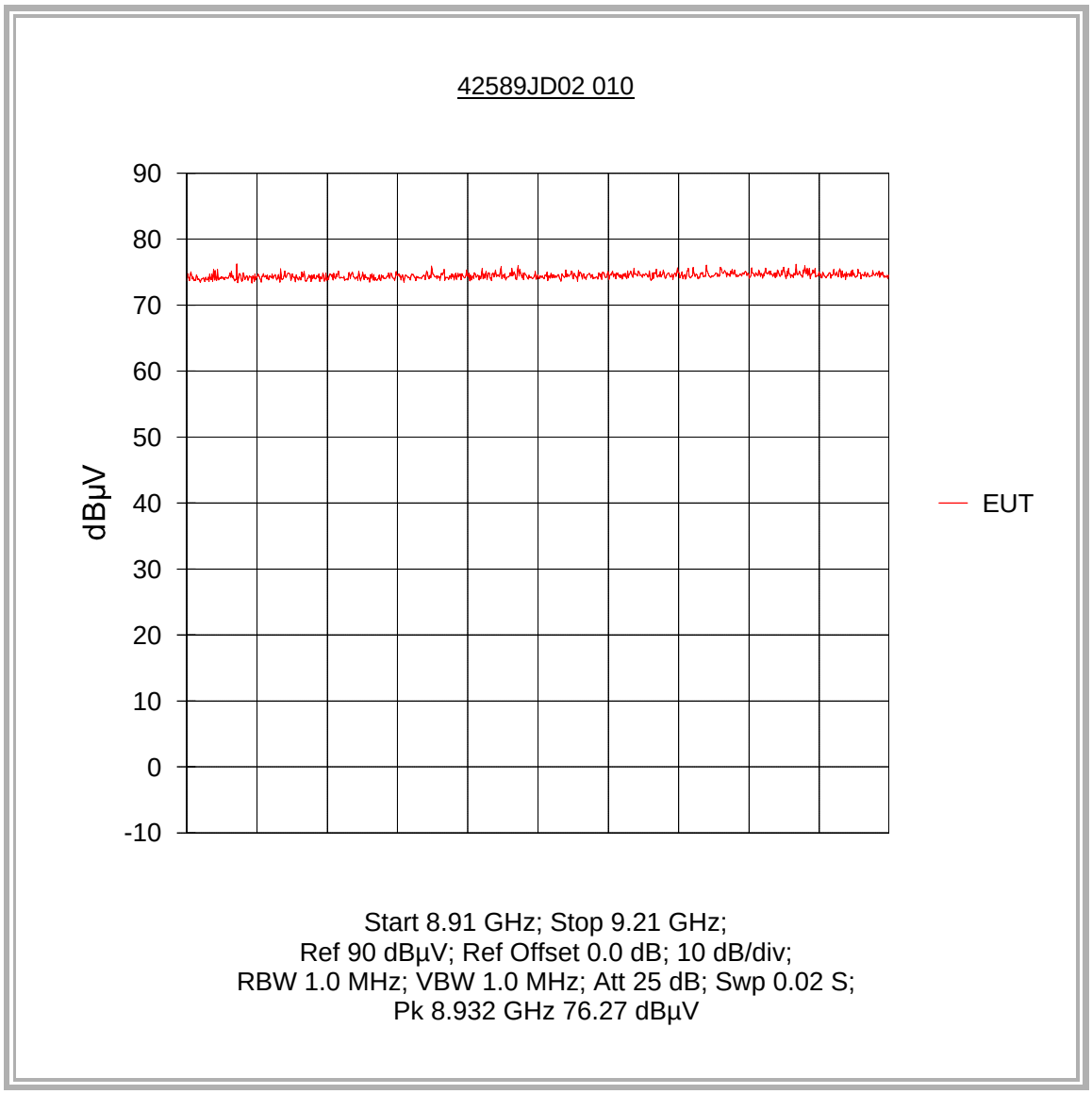
42589JD02 012 Radiated Emissions
9.610GHz to 9.910GHz, 450ns Pulse Width



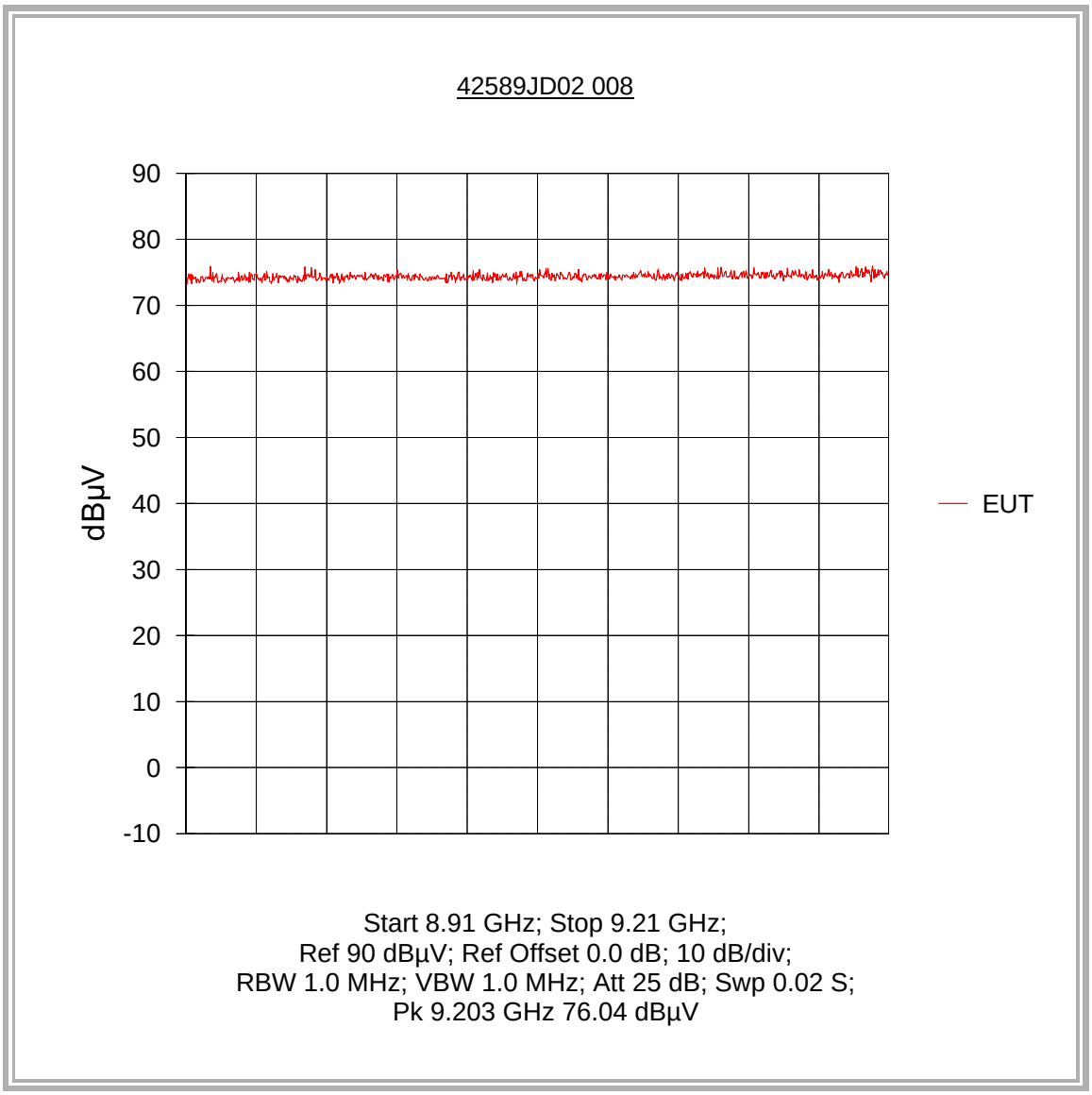
42589JD02 011 Radiated Emissions
9.610GHz to 9.910GHz, 1000ns Pulse Width



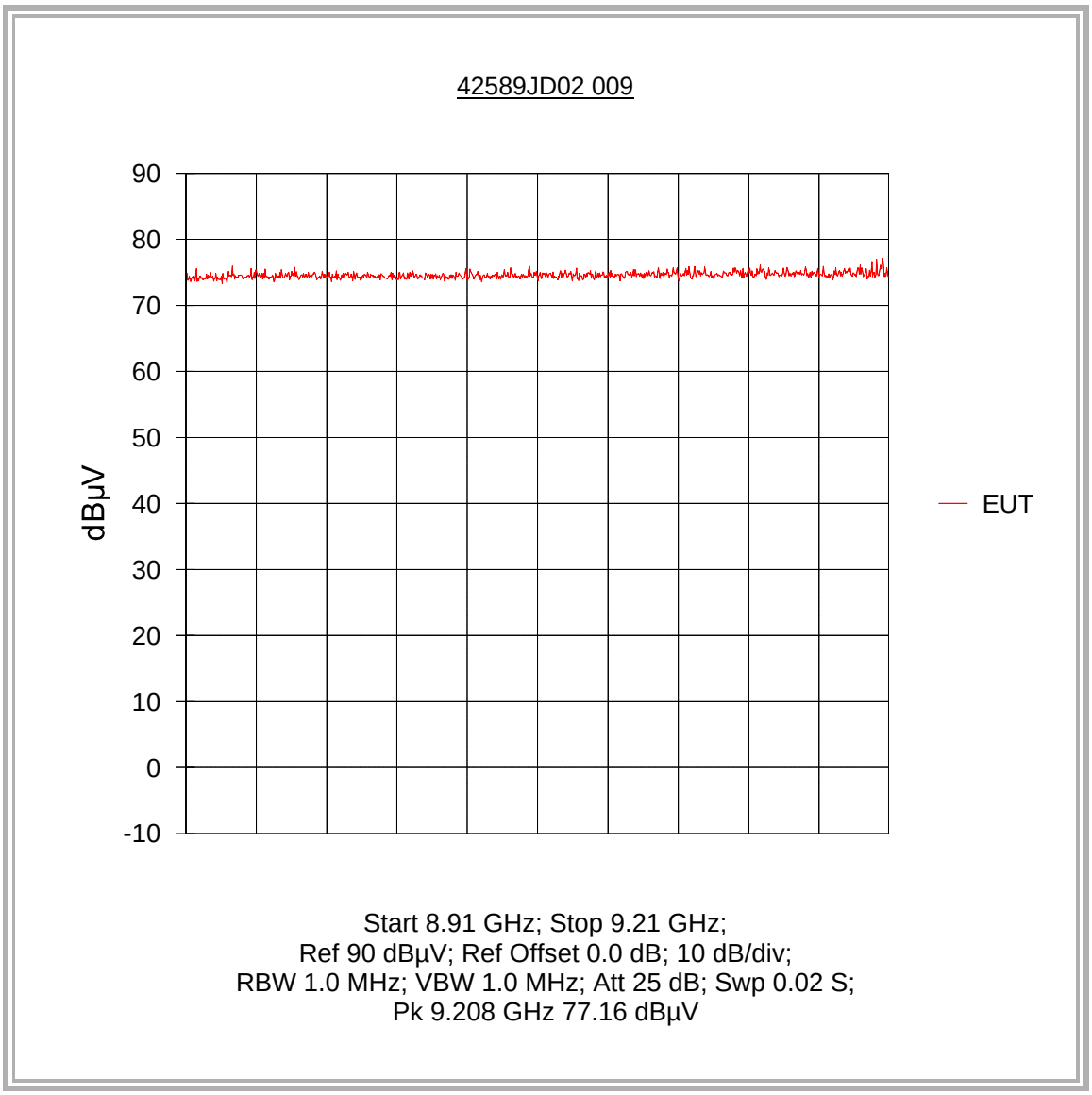
42589JD02 010 Radiated Emissions
8.910GHz to 9.210GHz, 1000ns Pulse Width



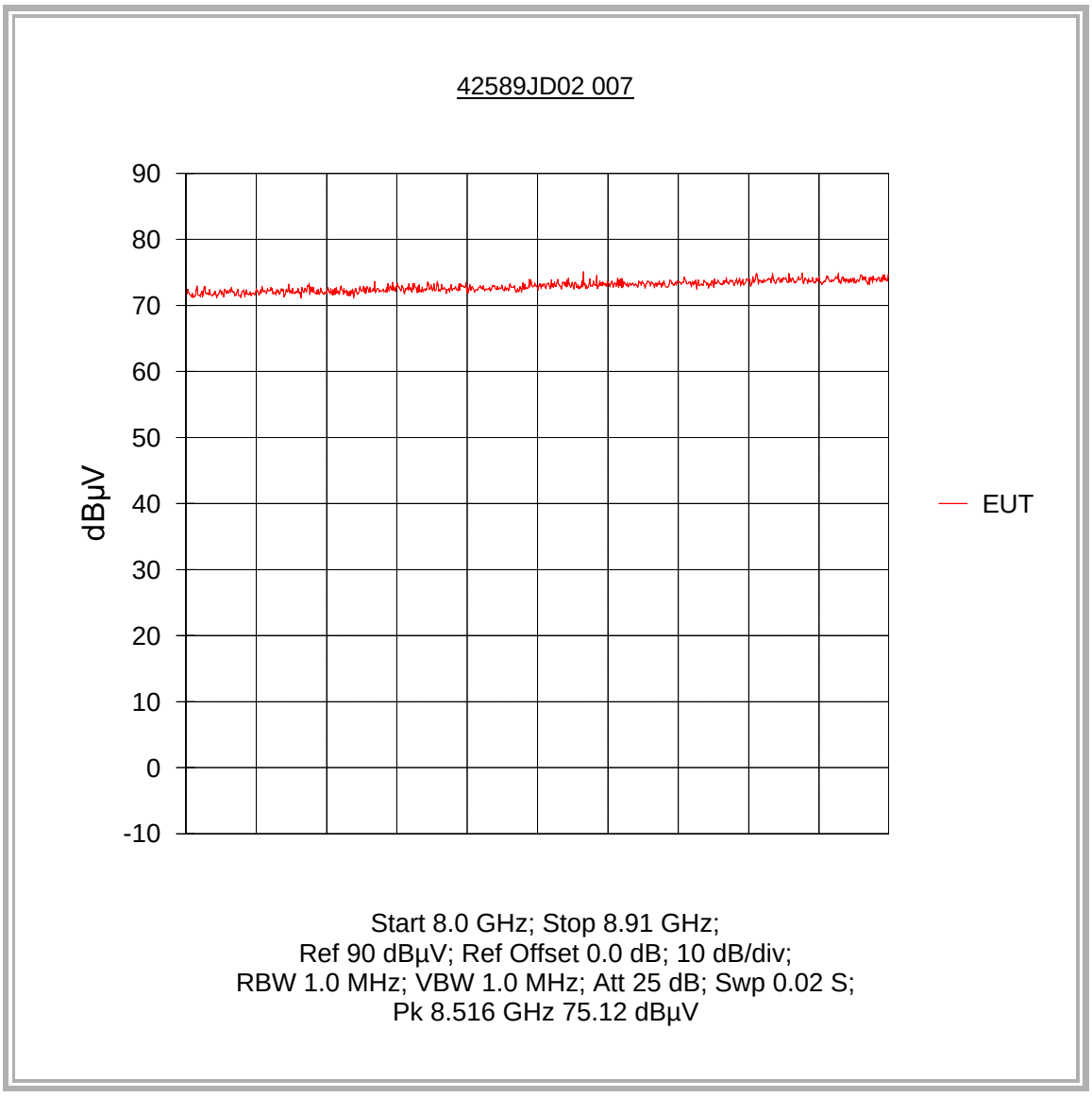
42589JD02 008 Radiated Emissions
8.910GHz to 9.210GHz, 450ns Pulse Width



42589JD02 009 Radiated Emissions
8.910GHz to 9.210GHz, 6.5ns Pulse Width

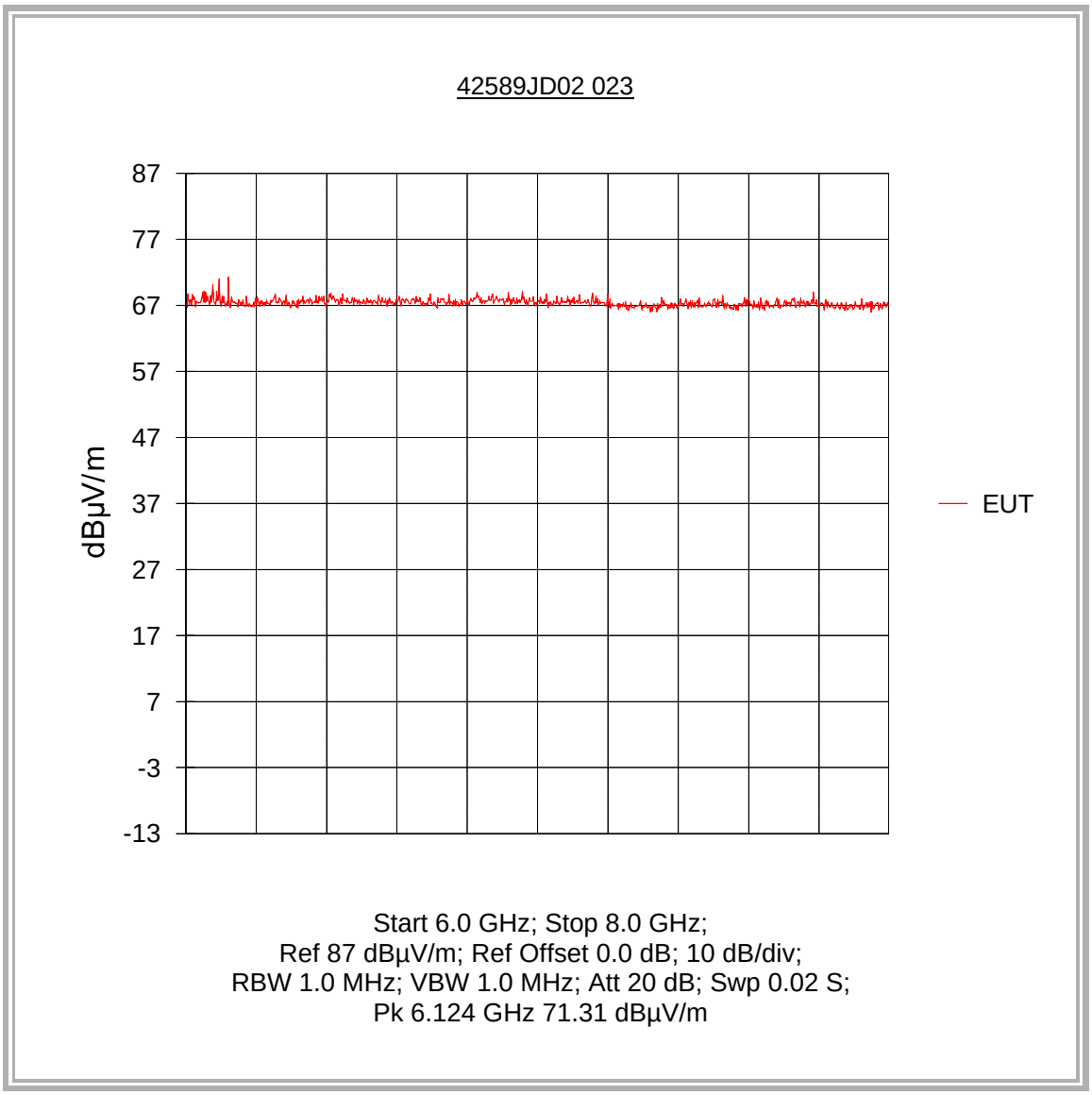


42589JD02 007 Radiated Emissions
8.000GHz to 8.910GHz, 450ns Pulse Width

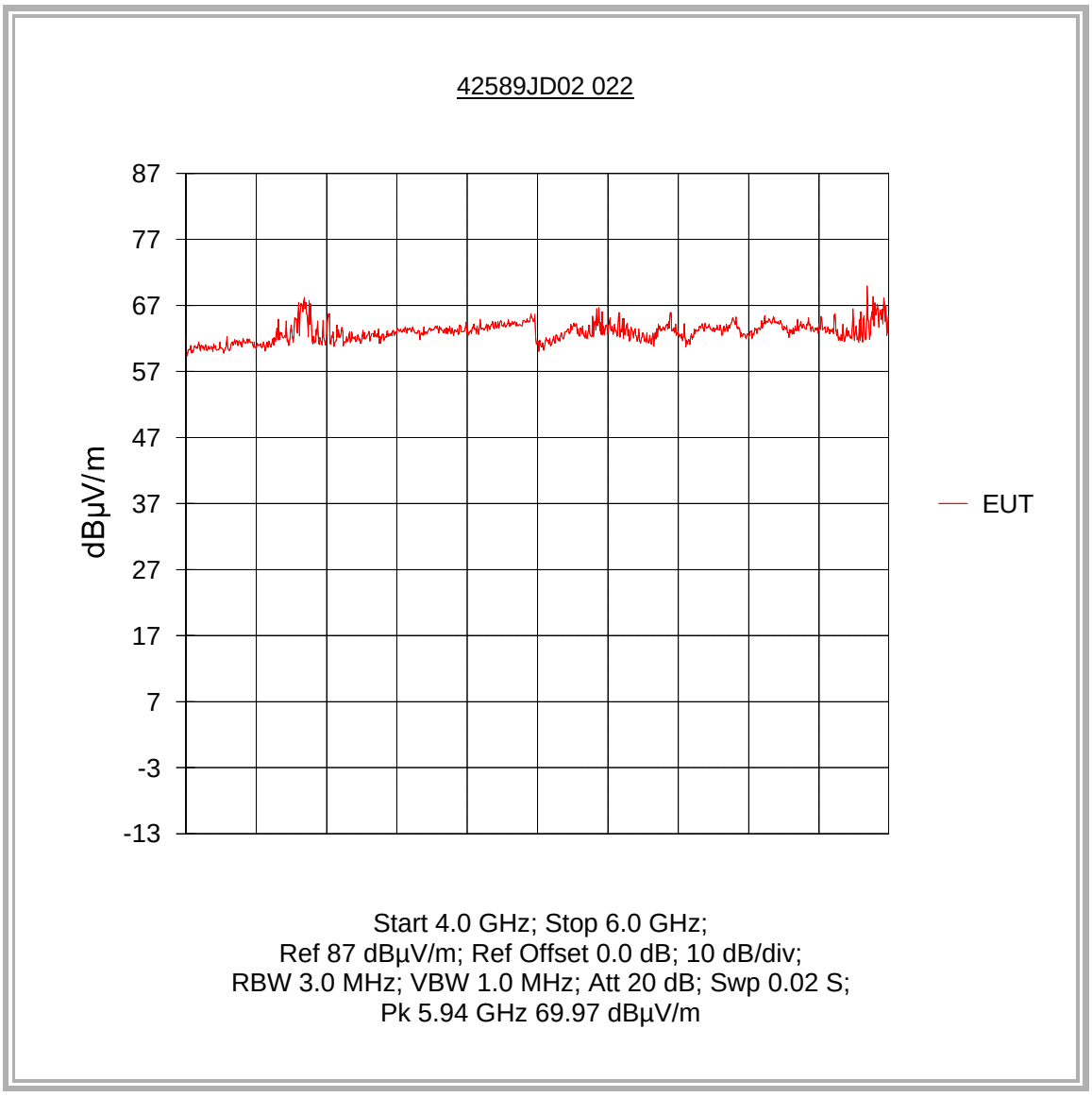


Start 8.0 GHz; Stop 8.91 GHz;
Ref 90 dBµV; Ref Offset 0.0 dB; 10 dB/div;
RBW 1.0 MHz; VBW 1.0 MHz; Att 25 dB; Swp 0.02 S;
Pk 8.516 GHz 75.12 dBµV

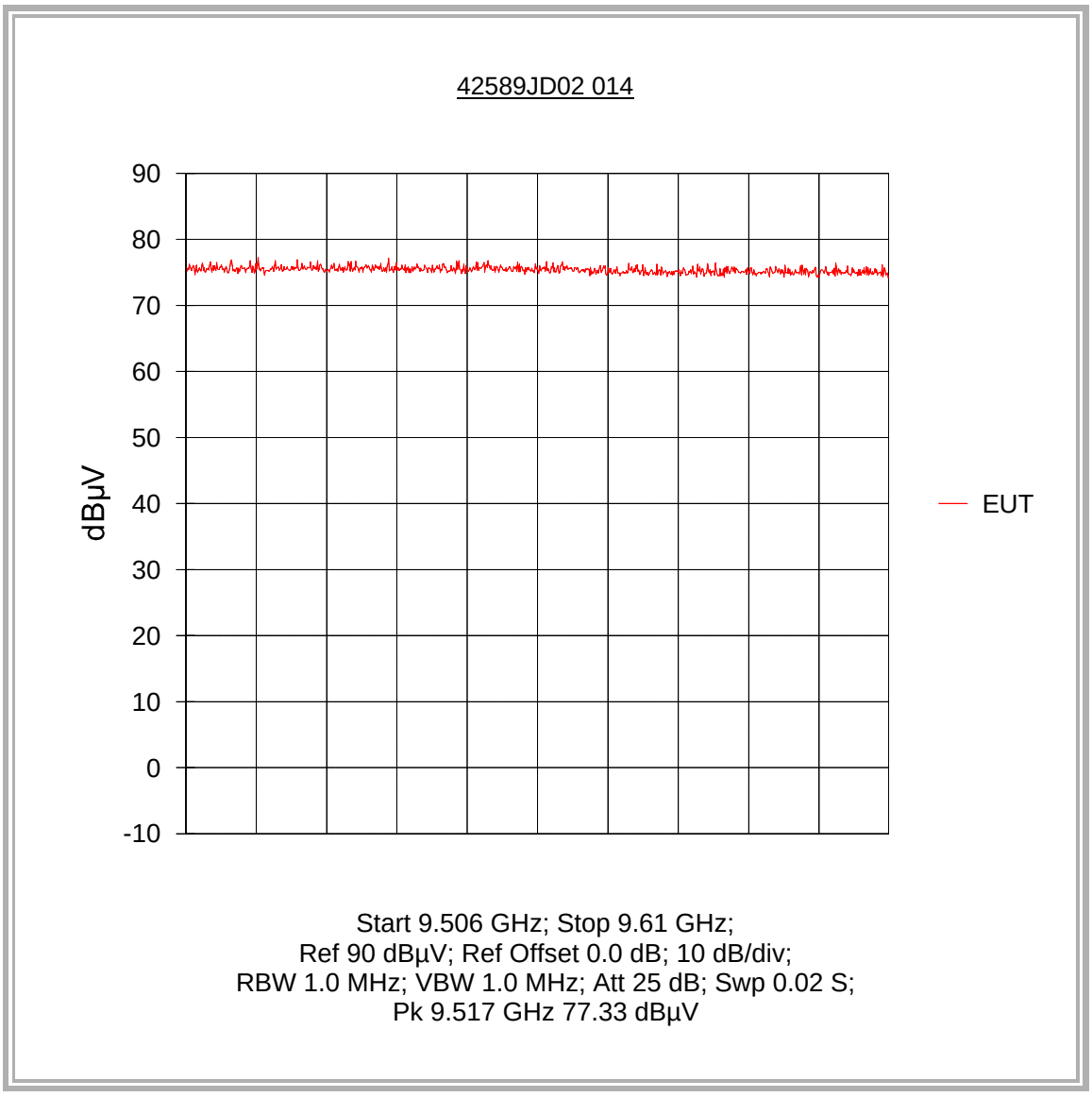
42589JD02 023 Radiated Emissions
6.000GHz to 8.000GHz, 450ns Pulse Width



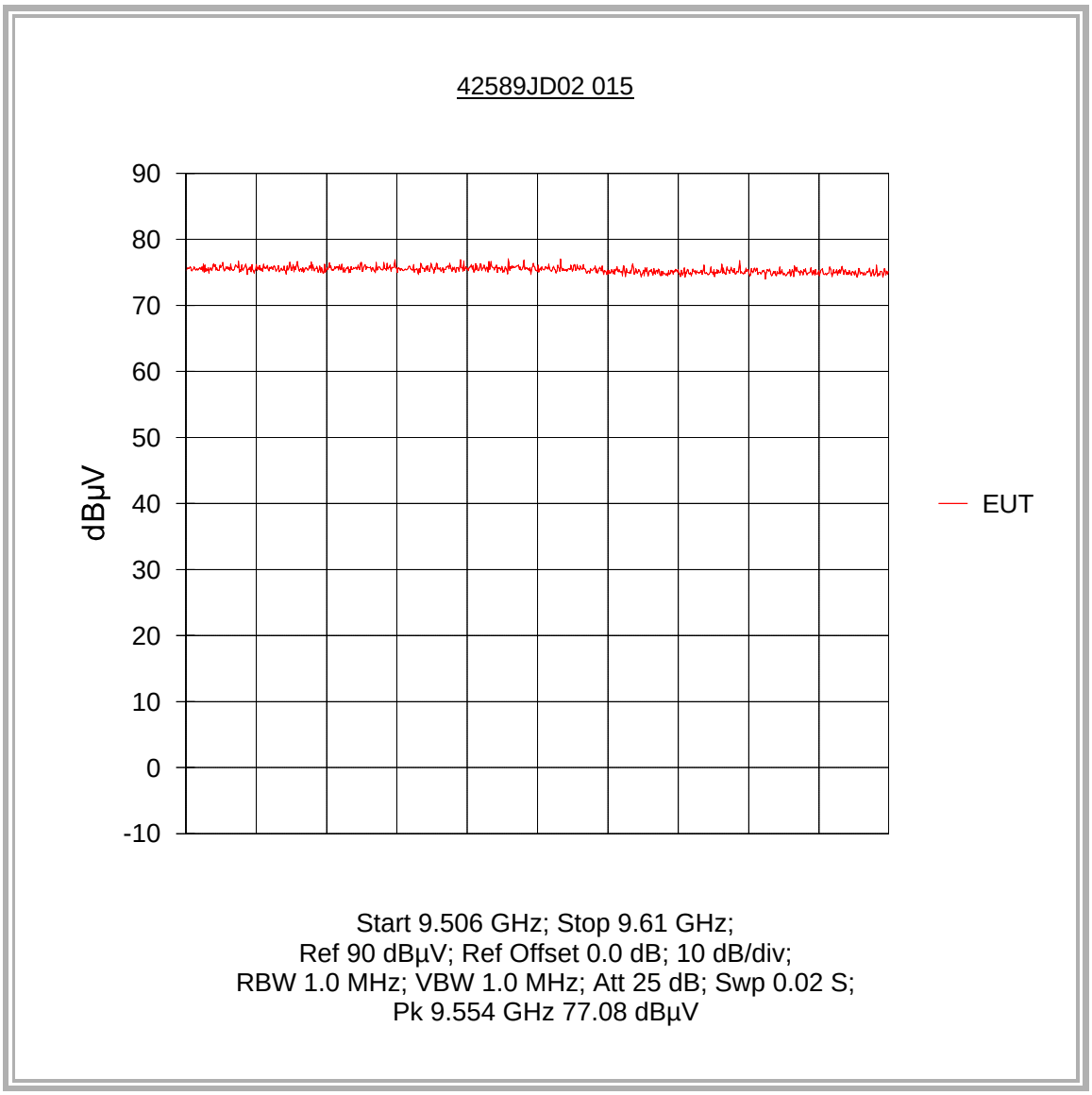
42589JD02 022 Radiated Emissions
4.000GHz to 6.000GHz, 450ns Pulse Width



42589JD02 014 Radiated Emissions
9.506GHz to 9.610GHz, 6.5ns Pulse Width



42589JD02 015 Radiated Emissions
9.506GHz to 9.610GHz, 450ns Pulse Width



Start 9.506 GHz; Stop 9.61 GHz;
Ref 90 dBµV; Ref Offset 0.0 dB; 10 dB/div;
RBW 1.0 MHz; VBW 1.0 MHz; Att 25 dB; Swp 0.02 S;
Pk 9.554 GHz 77.08 dBµV

42589JD02 016 Radiated Emissions
9.506GHz to 9.610GHz, 1000ns Pulse Width