The Measurement of Conducted Spurious Emissions

CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

1. LIMITS OF CONDUCTED SPURIOUS EMISSIONS EASUREMENT

Below 20dB of the highest emission level of operating band (in 100KHz Resolution Bandwidth, see Section 15.247(c)). Emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the limits specified in Section 15.209(a) (see Section 15.205(c)).

2. TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSP	1093.4495.30	Dec. 19, 2003

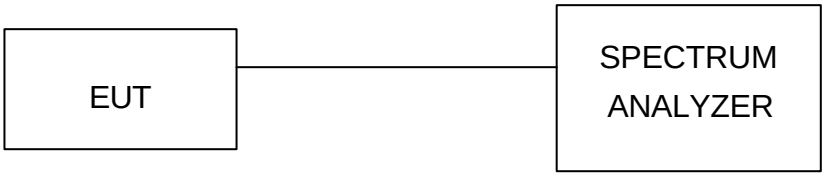
NOTE:

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

3. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz with suitable frequency span including 100 kHz bandwidth from band edge. The band edges was measured and recorded.

4. TEST SETUP



5. EUT OPERATING CONDITIONS

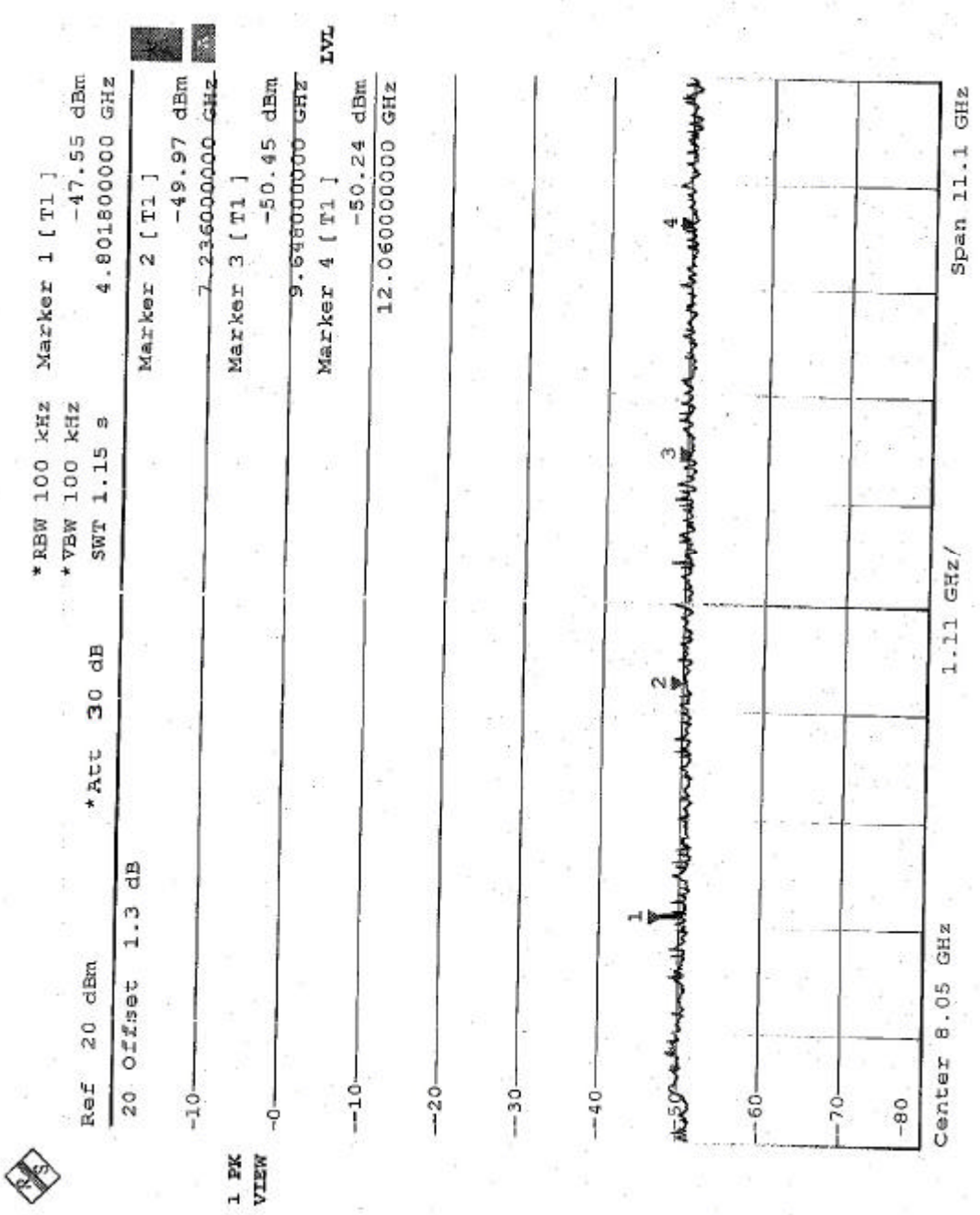
The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

TEST RESULTS (A)-DSSS

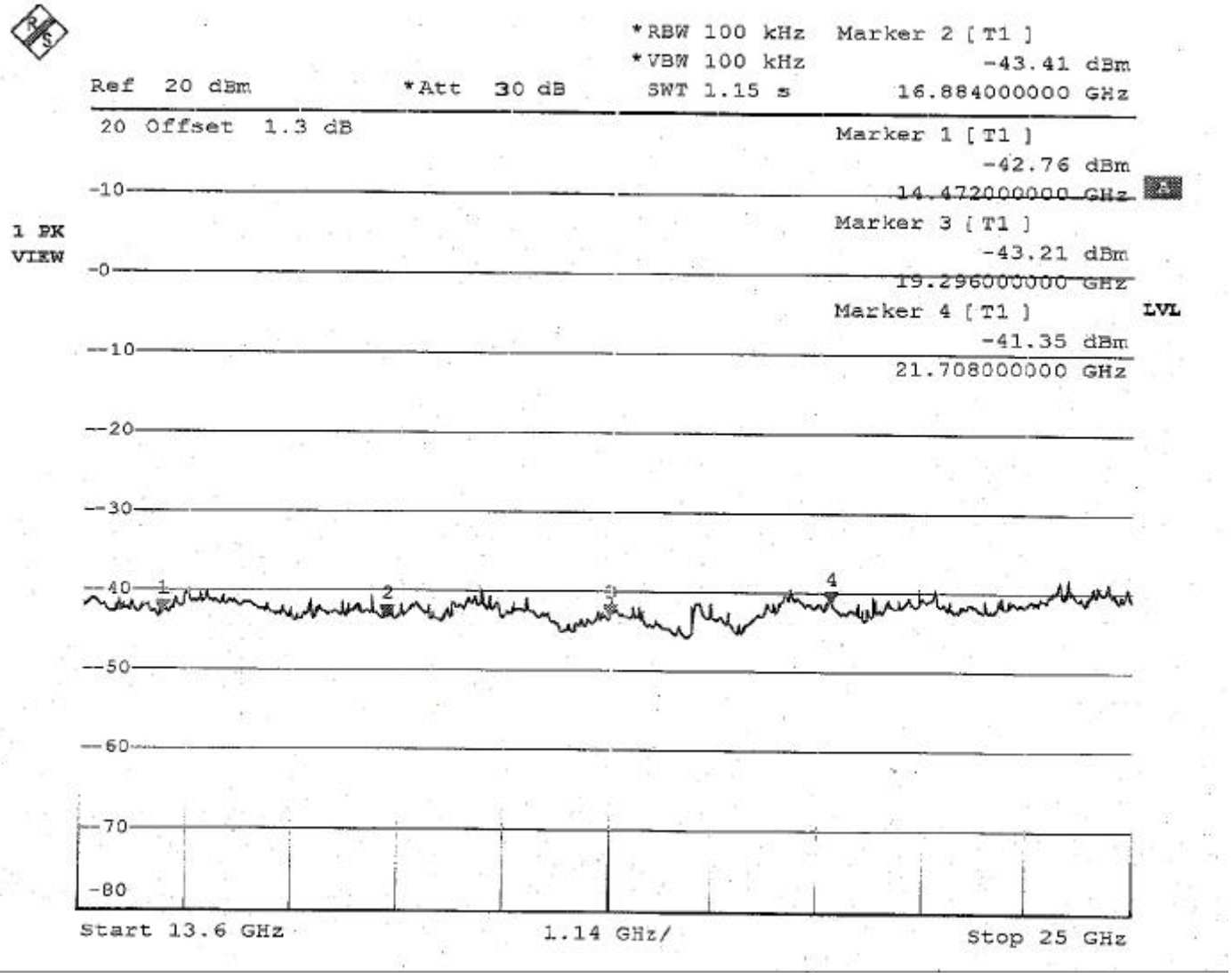
TEST MODE: Antenna 1

The spectrum plots are attached on the following 6 pages. It shows compliance with the requirement in part 15.247(C),.15.205 and 15.209.

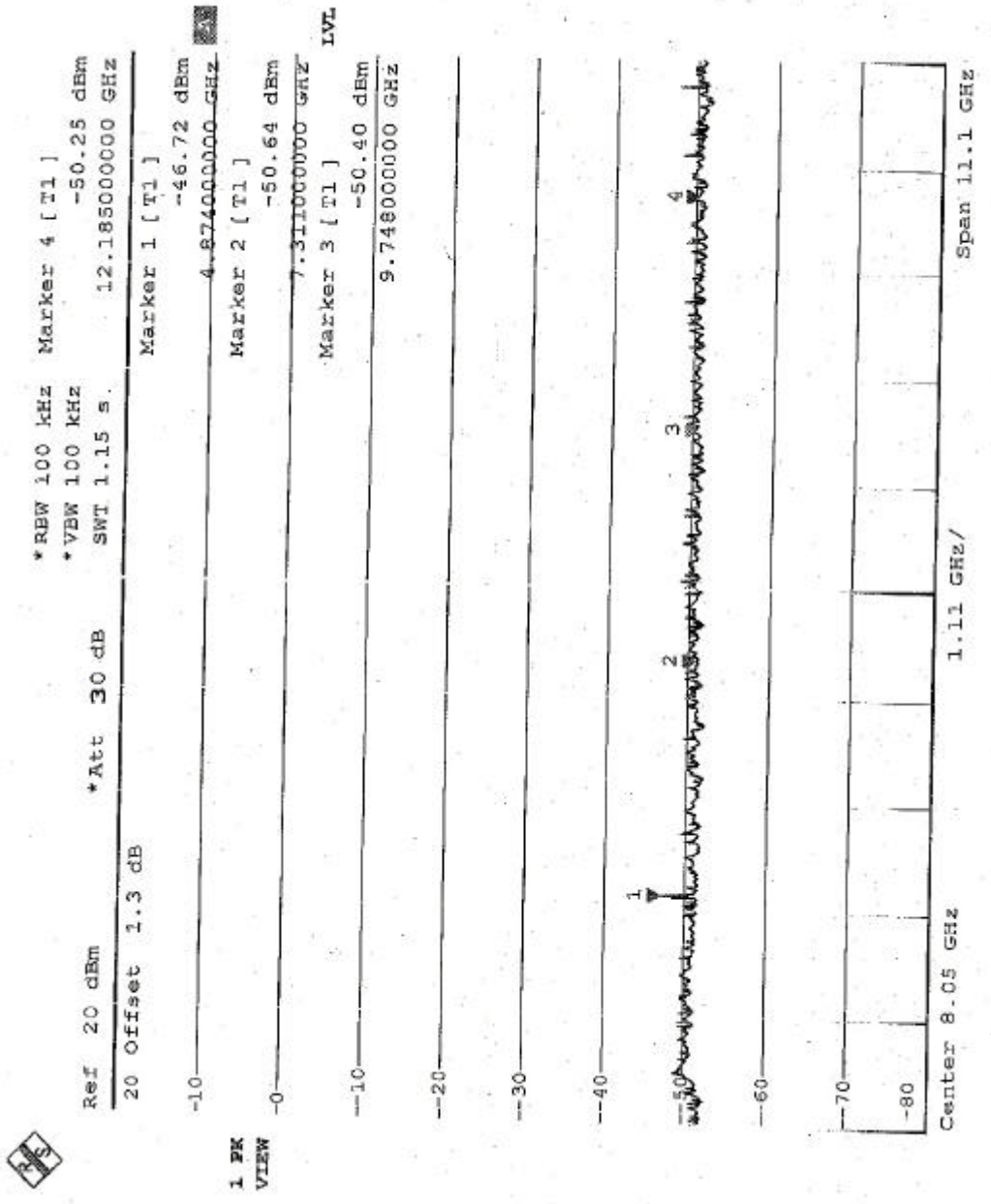
Ch1

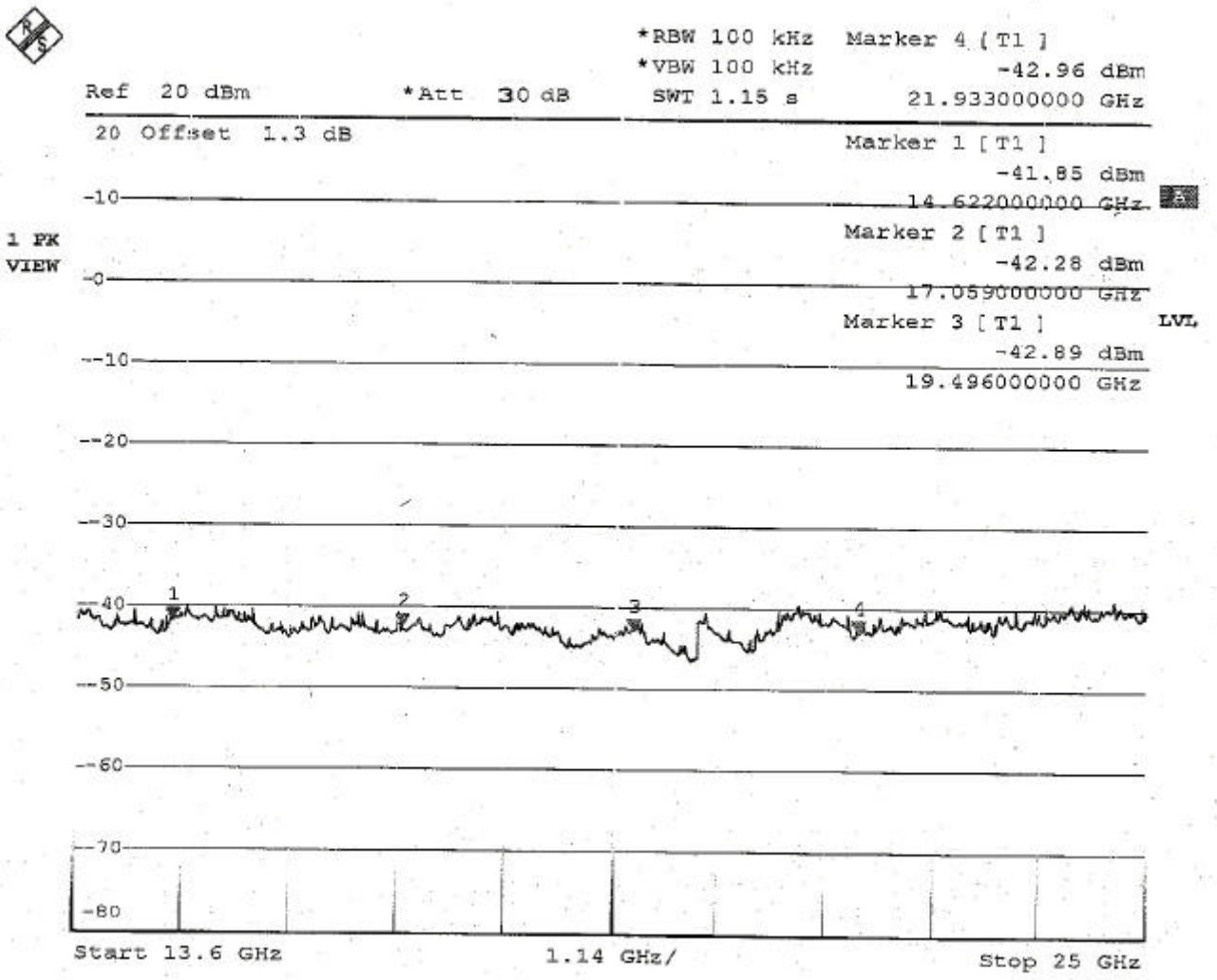


Report No.920218H04

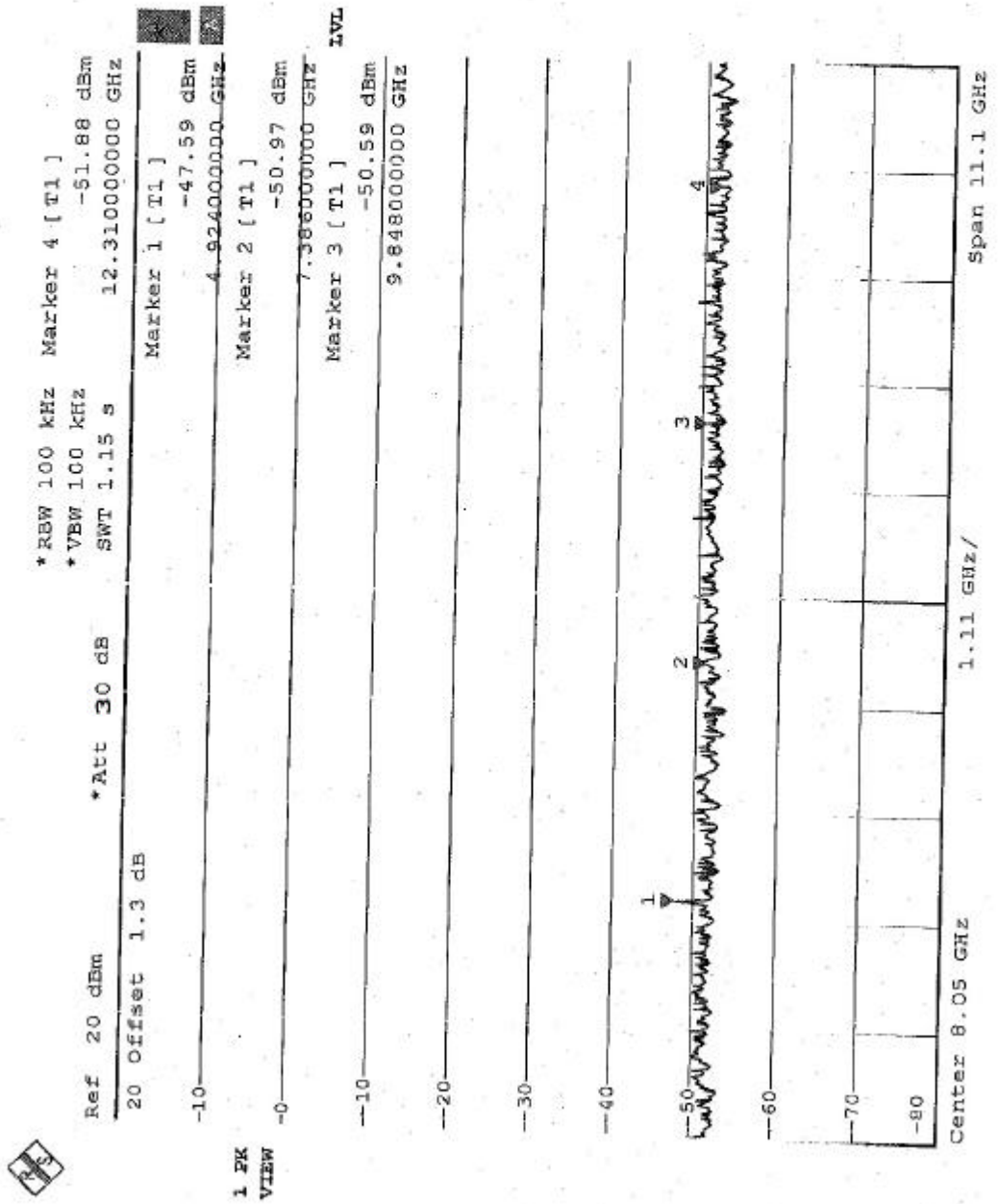

*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 2 [T1]
-43.41 dBm
16.884000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-42.76 dBm
14.472000000 GHz
1 PK
VIEW
Marker 3 [T1]
-43.21 dBm
19.296000000 GHz
Marker 4 [T1]
-41.35 dBm
21.708000000 GHz
LVL
A
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch6

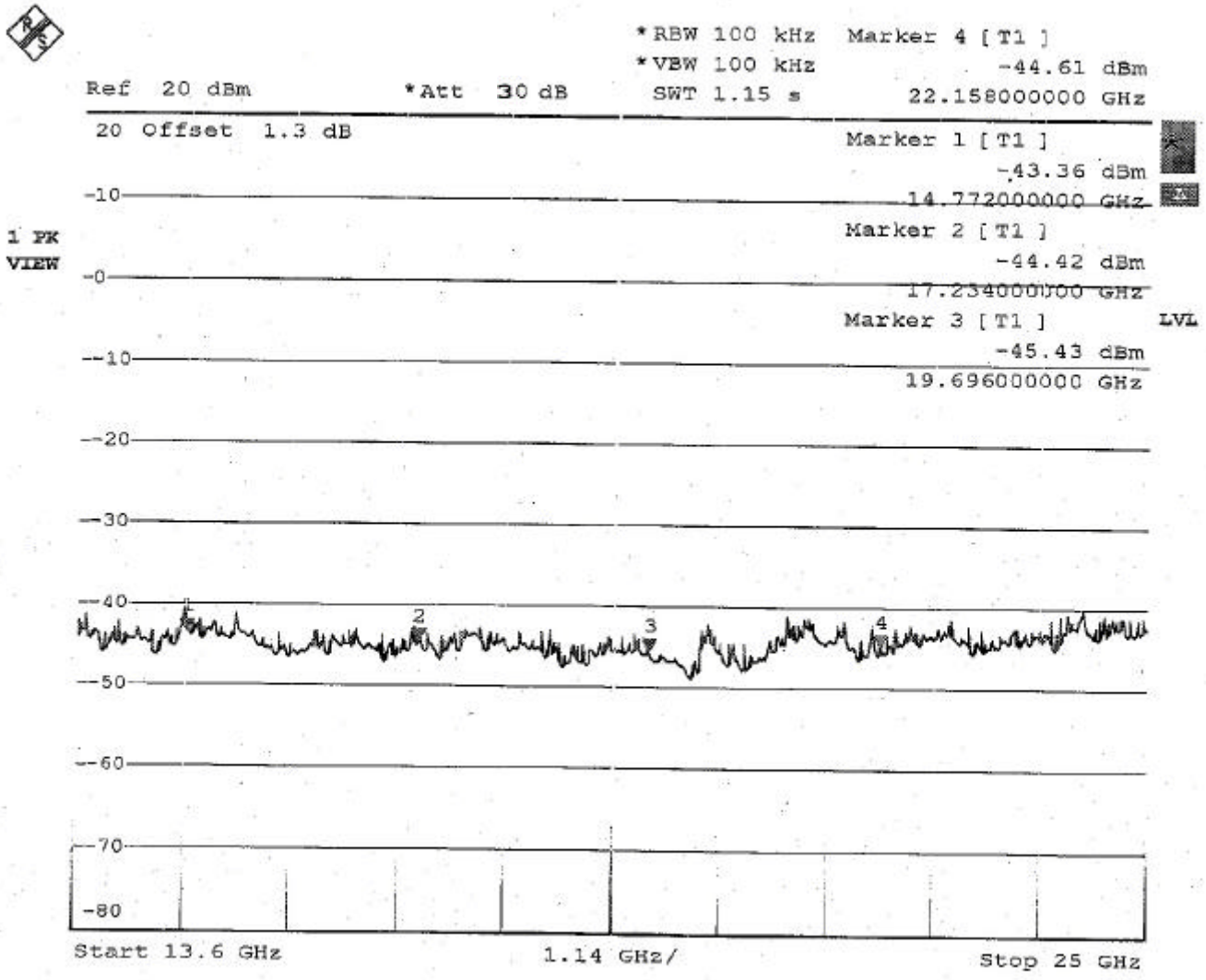

*RBW 100 kHz
*VBW 100 kHz
SWT 1.15 s
Marker 4 [T1]
-50.25 dBm
12.185000000 GHz
Ref 20 dBm
*Att 30 dB
Offset 1.3 dB
Marker 1 [T1]
-46.72 dBm
4.874000000 GHz
Marker 2 [T1]
-50.64 dBm
7.311000000 GHz
Marker 3 [T1]
-50.40 dBm
9.748000000 GHz
1 PK
VIEW
LVL
Center 8.05 GHz
1.11 GHz/
Span 11.1 GHz


*RBW 100 kHz
*VBW 100 kHz
SWT 1.15 s
Marker 4 [T1]
-42.96 dBm
21.933000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1.3 dB
Marker 1 [T1]
-41.85 dBm
14.622000000 GHz
Marker 2 [T1]
-42.28 dBm
17.059000000 GHz
Marker 3 [T1]
-42.89 dBm
19.496000000 GHz
1 PK
VIEW
LVL
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch11



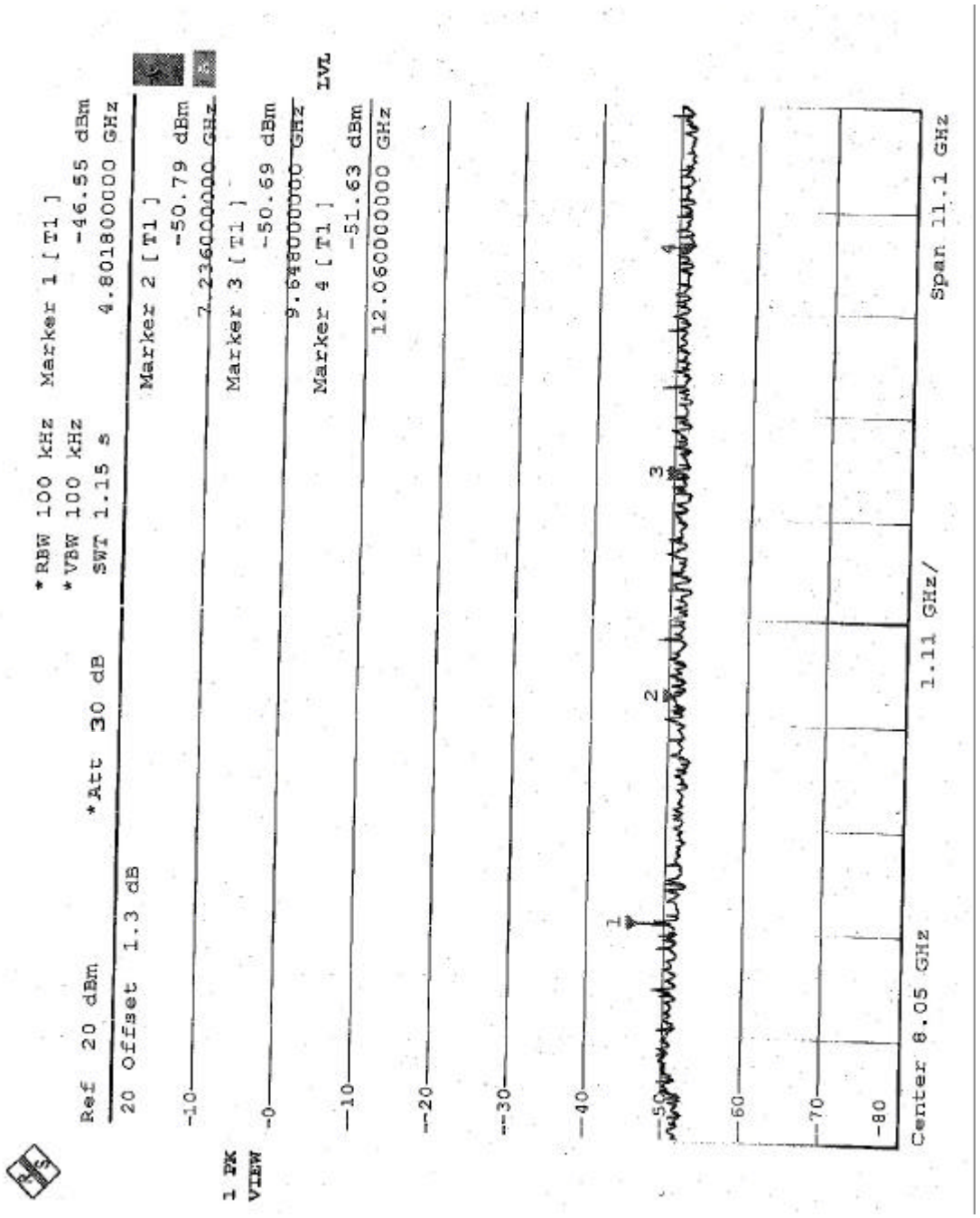
Report No.920218H04


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 4 [T1]
-44.61 dBm
22.158000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-43.36 dBm
14.772000000 GHz
1 PK
VIEW
Marker 2 [T1]
-44.42 dBm
17.234000000 GHz
Marker 3 [T1]
-45.43 dBm
19.696000000 GHz
LVL
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

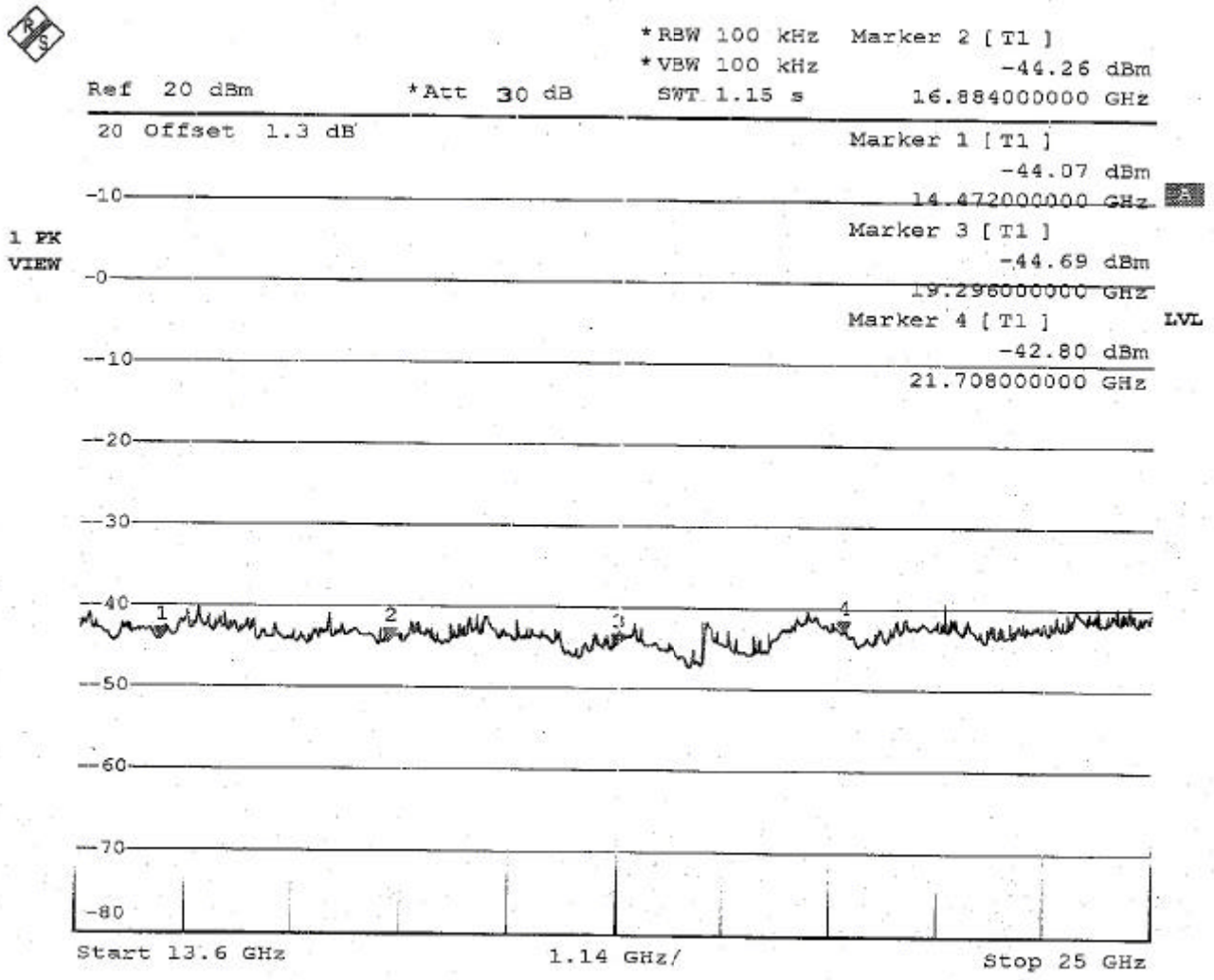
TEST MODE: Antenna 2

The spectrum plots are attached on the following 6 pages. It shows compliance with the requirement in part 15.247(C),.15.205 and 15.209.

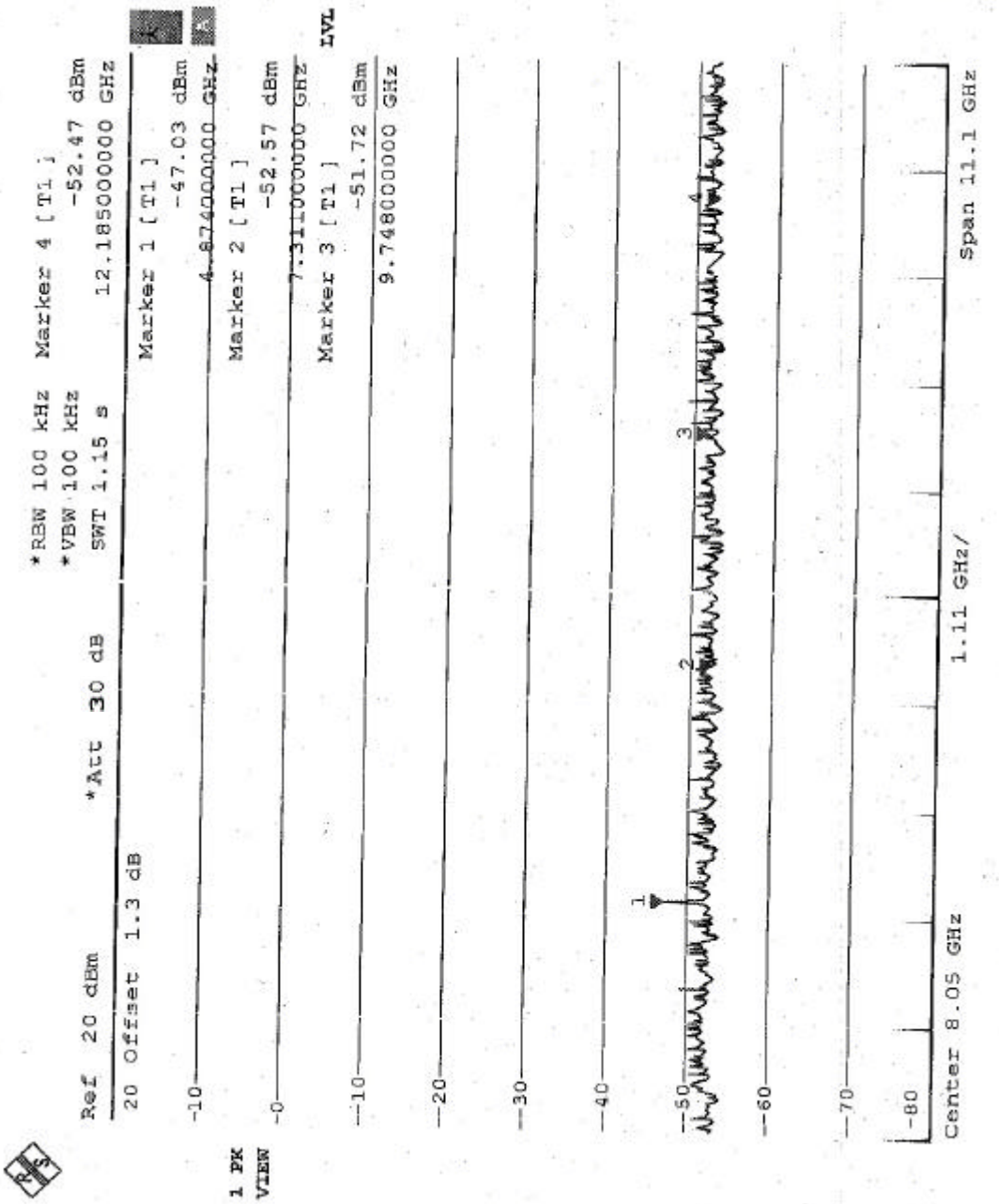
Ch1

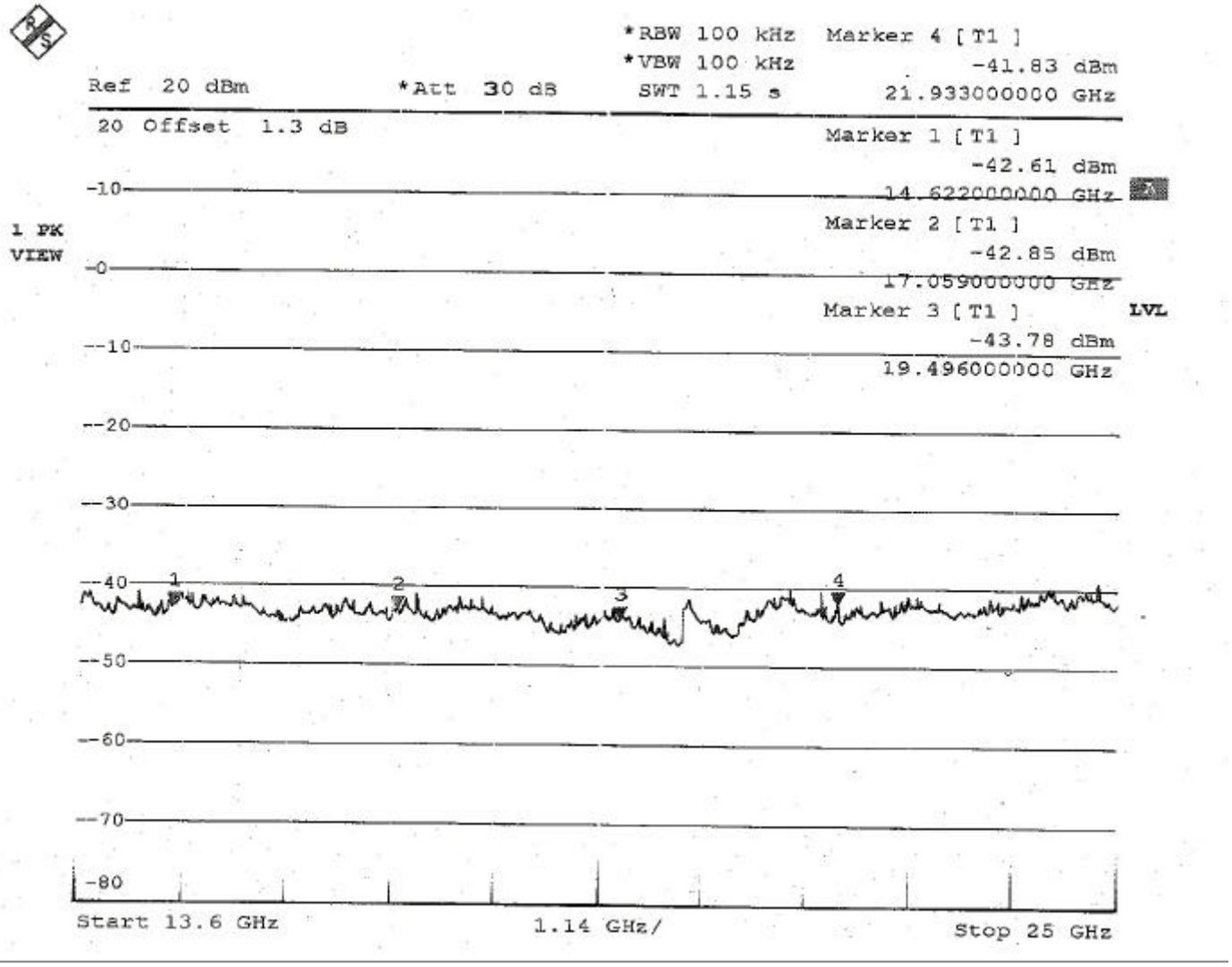


Report No.920218H04

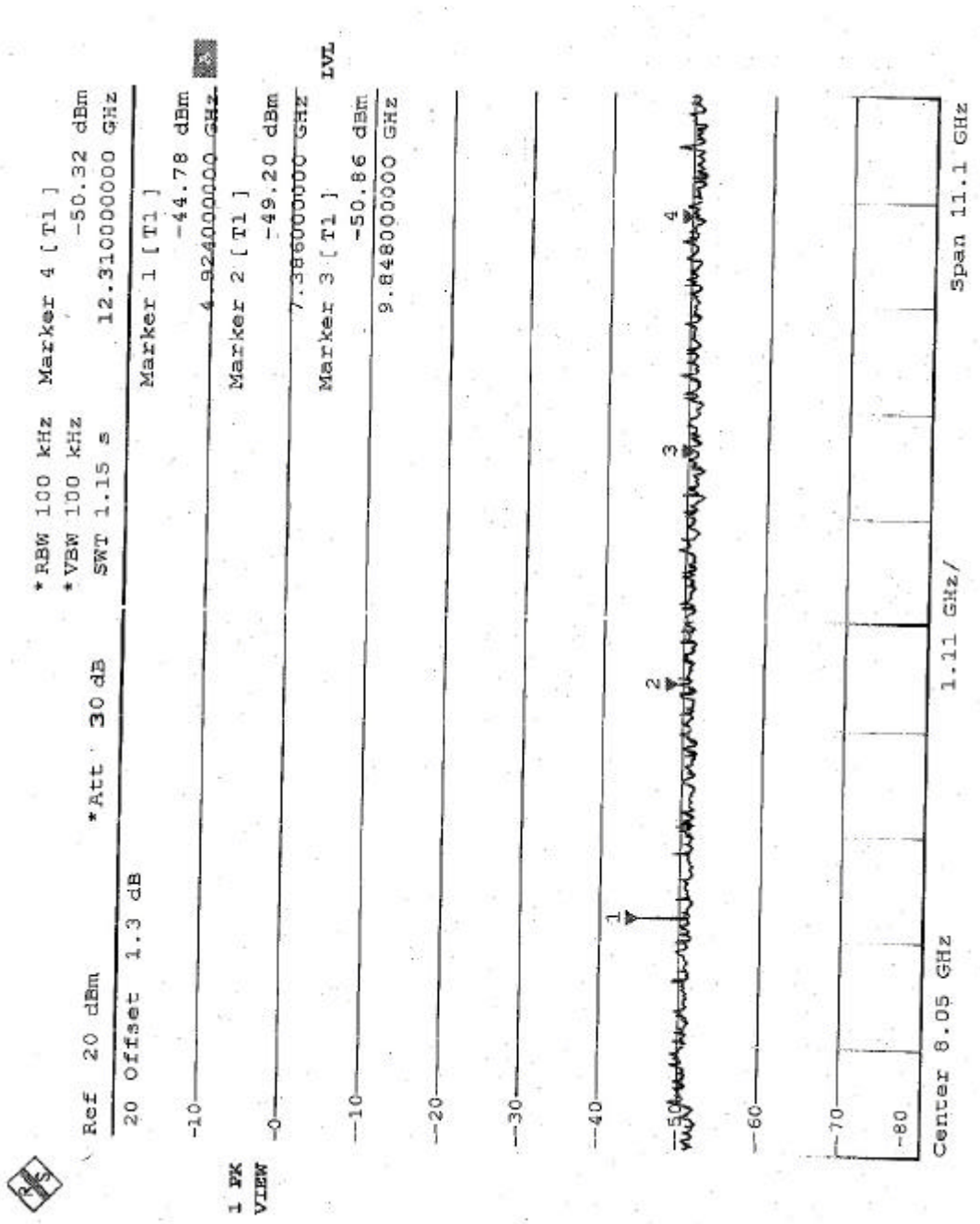

*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 2 [T1]
-44.26 dBm
16.884000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-44.07 dBm
14.472000000 GHz
1 PK
VIEW
Marker 3 [T1]
-44.69 dBm
19.296000000 GHz
LVL
Marker 4 [T1]
-42.80 dBm
21.708000000 GHz
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch6

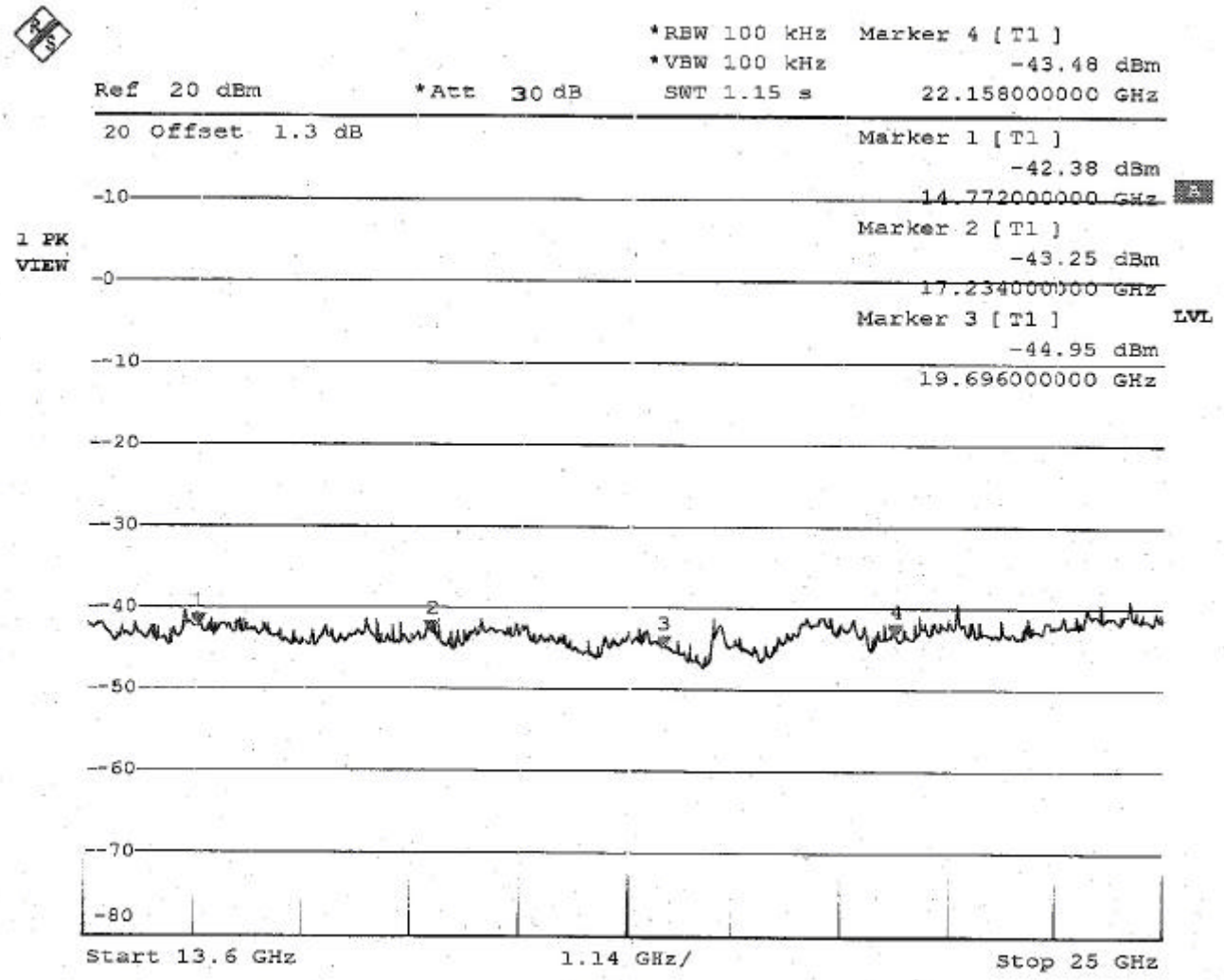

*RBW 100 kHz
*VBW 100 kHz
SWT 1.15 s
Marker 4 [T1]
-52.47 dBm
12.185000000 GHz
Ref 20 dBm
*Att 30 dB
Offset 1.3 dB
Marker 1 [T1]
-47.03 dBm
4.874000000 GHz
Marker 2 [T1]
-52.57 dBm
7.311000000 GHz
Marker 3 [T1]
-51.72 dBm
9.748000000 GHz
1 PK
VIEW
LVL
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 8.05 GHz
1.11 GHz/
Span 11.1 GHz


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 4 [T1]
-41.83 dBm
21.933000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-42.61 dBm
14.622000000 GHz
Marker 2 [T1]
-42.85 dBm
17.059000000 GHz
Marker 3 [T1]
-43.78 dBm
19.496000000 GHz
1 PK
VIEW
LVL
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch11



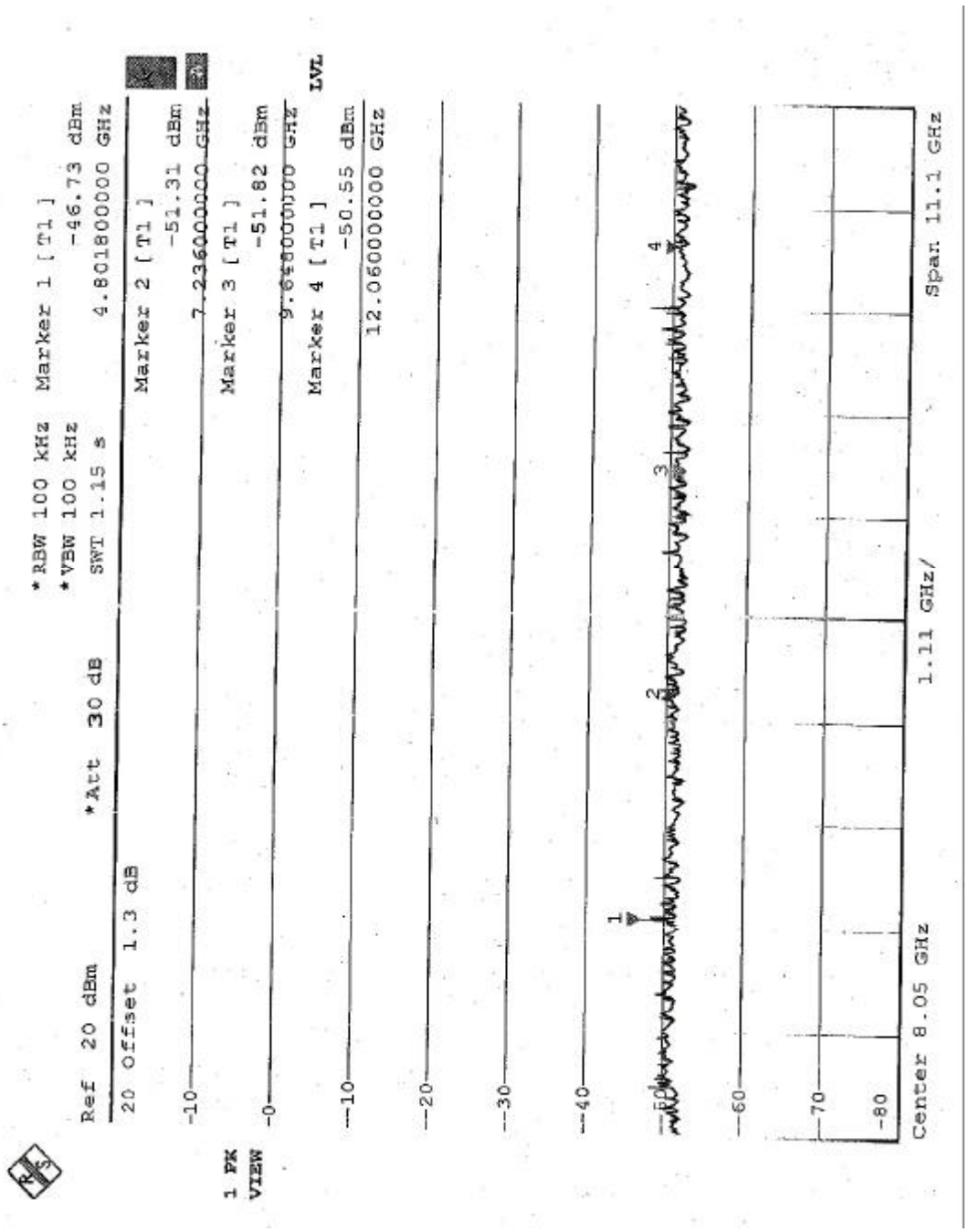
Report No.920218H04


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 4 [T1]
-43.48 dBm
22.158000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-42.38 dBm
14.772000000 GHz
Marker 2 [T1]
-43.25 dBm
17.234000000 GHz
Marker 3 [T1]
-44.95 dBm
19.696000000 GHz
1 PK
VIEW
LVL
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

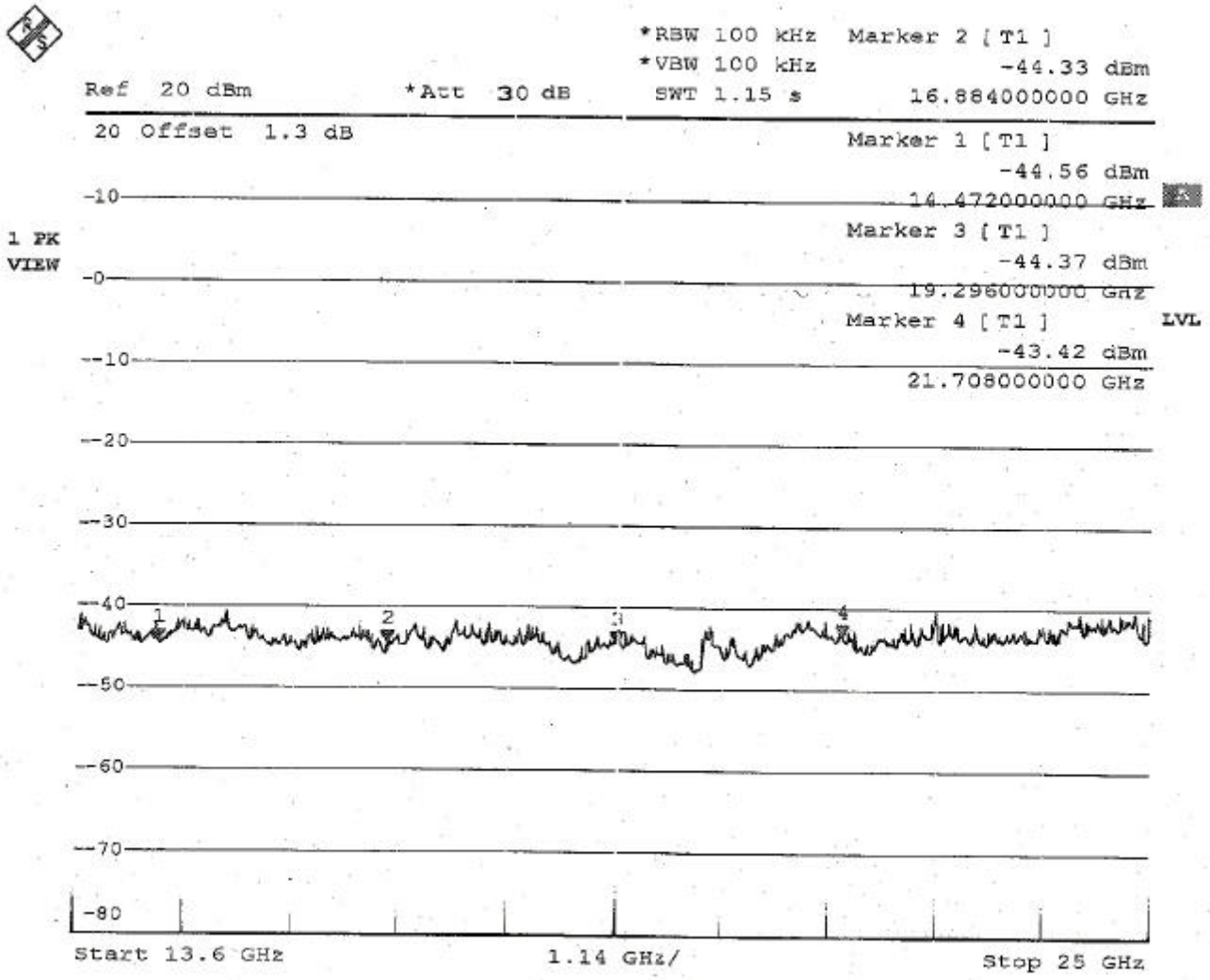
TEST MODE: Antenna 3

The spectrum plots are attached on the following 6 pages. It shows compliance with the requirement in part 15.247(C),.15.205 and 15.209.

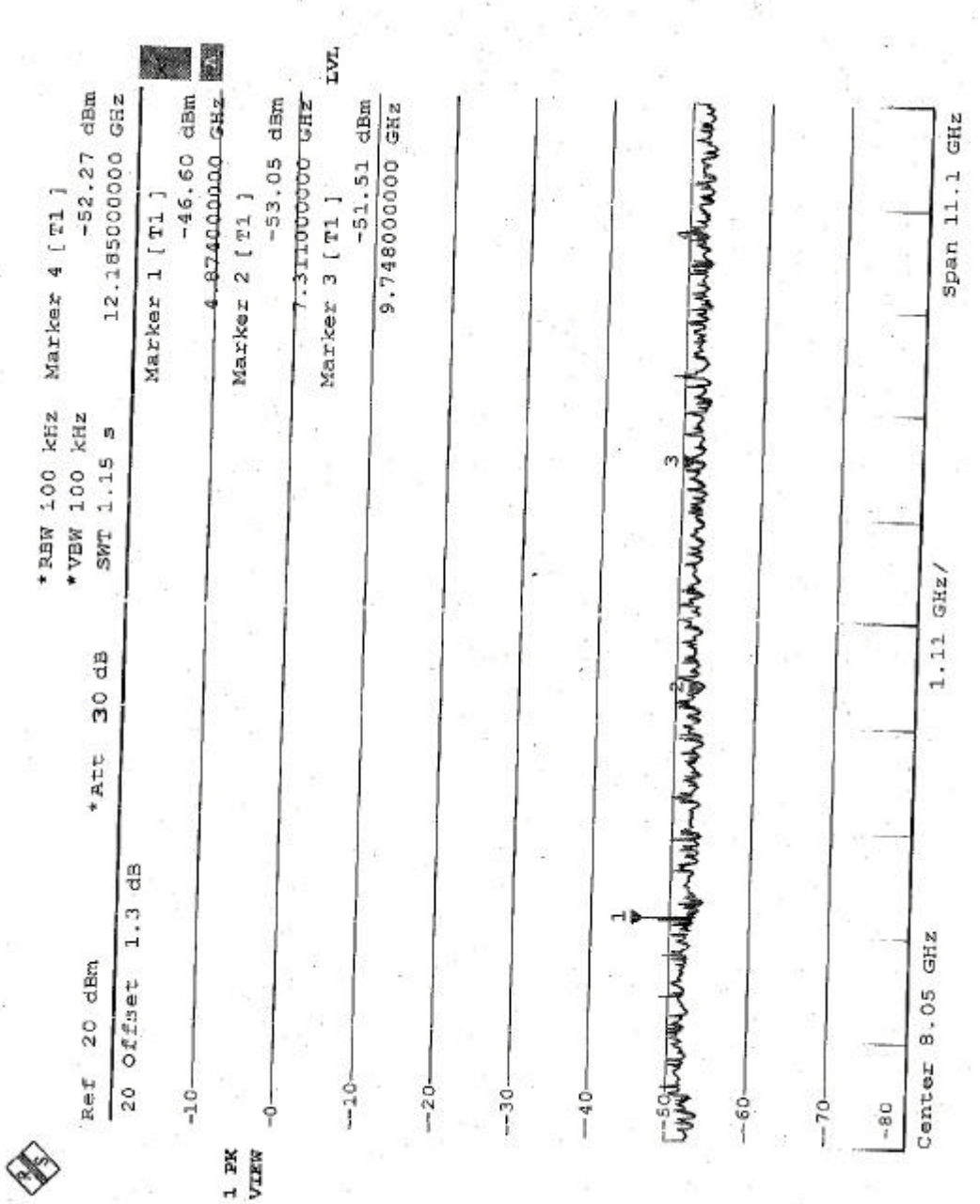
Ch1

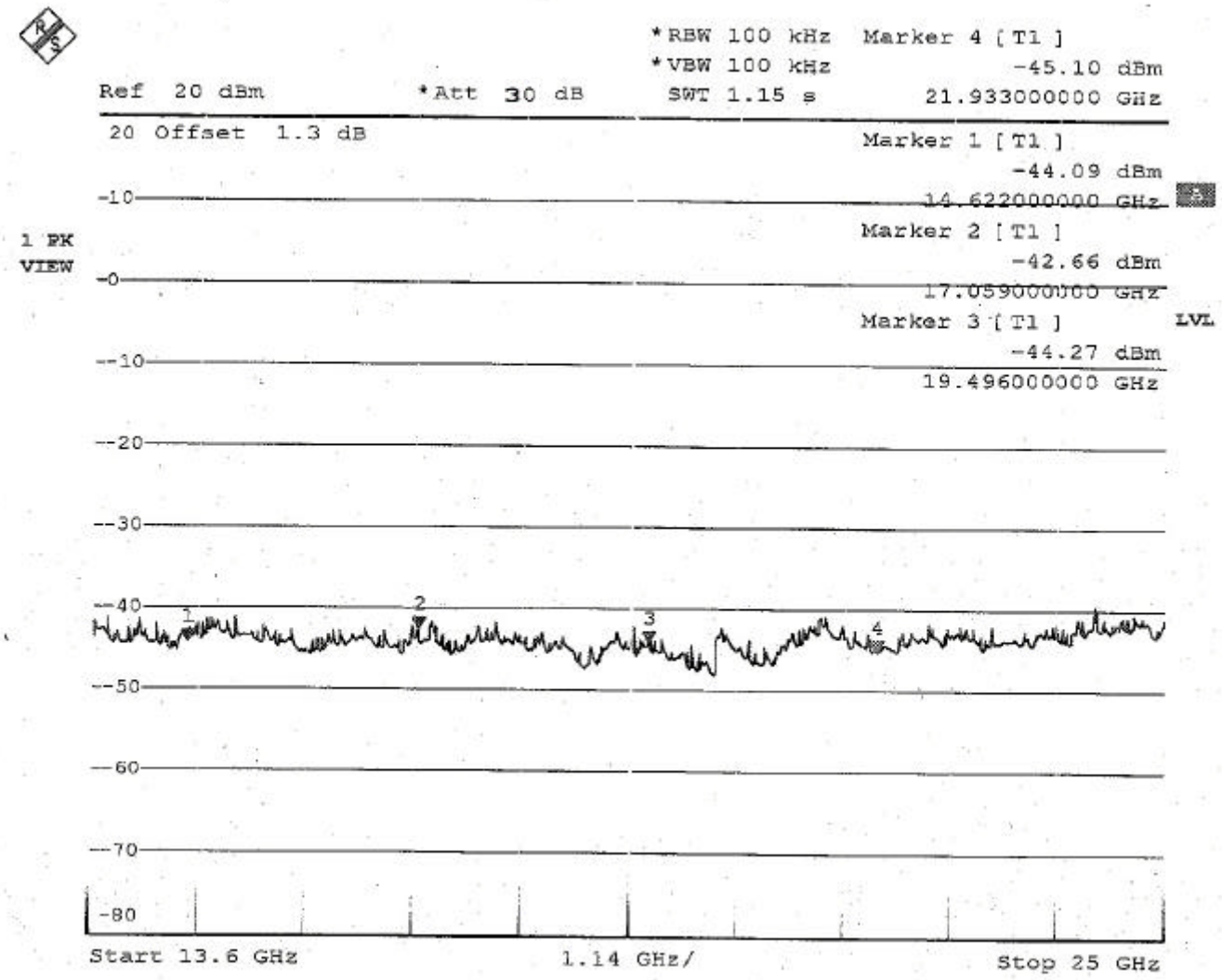


Report No.920218H04

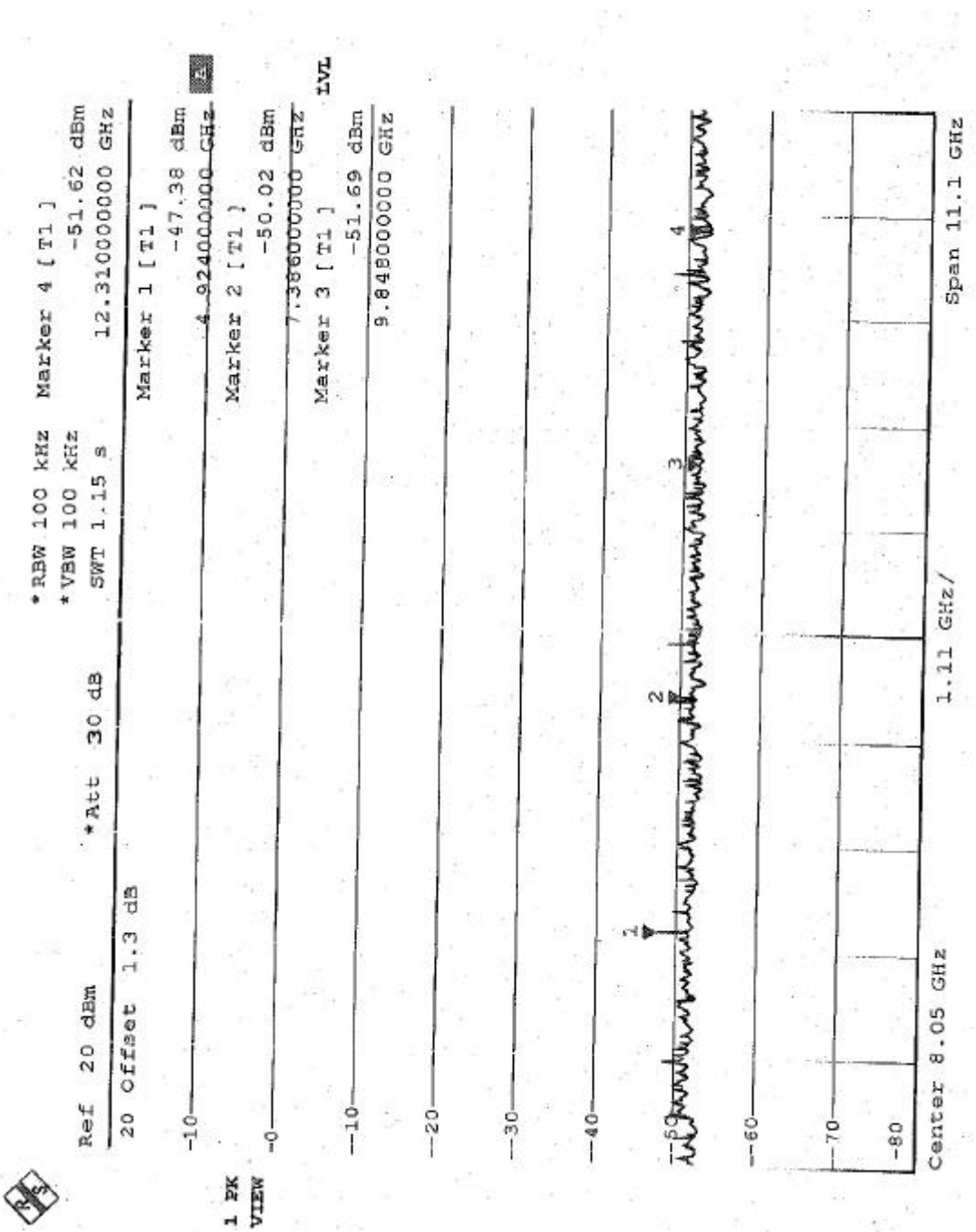

*RBW 100 kHz
*VBW 100 kHz
SWT 1.15 s
Marker 2 [T1]
-44.33 dBm
16.884000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1.3 dB
Marker 1 [T1]
-44.56 dBm
14.472000000 GHz
1 PK
VIEW
Marker 3 [T1]
-44.37 dBm
19.296000000 GHz
Marker 4 [T1]
-43.42 dBm
21.708000000 GHz
LVL
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch6

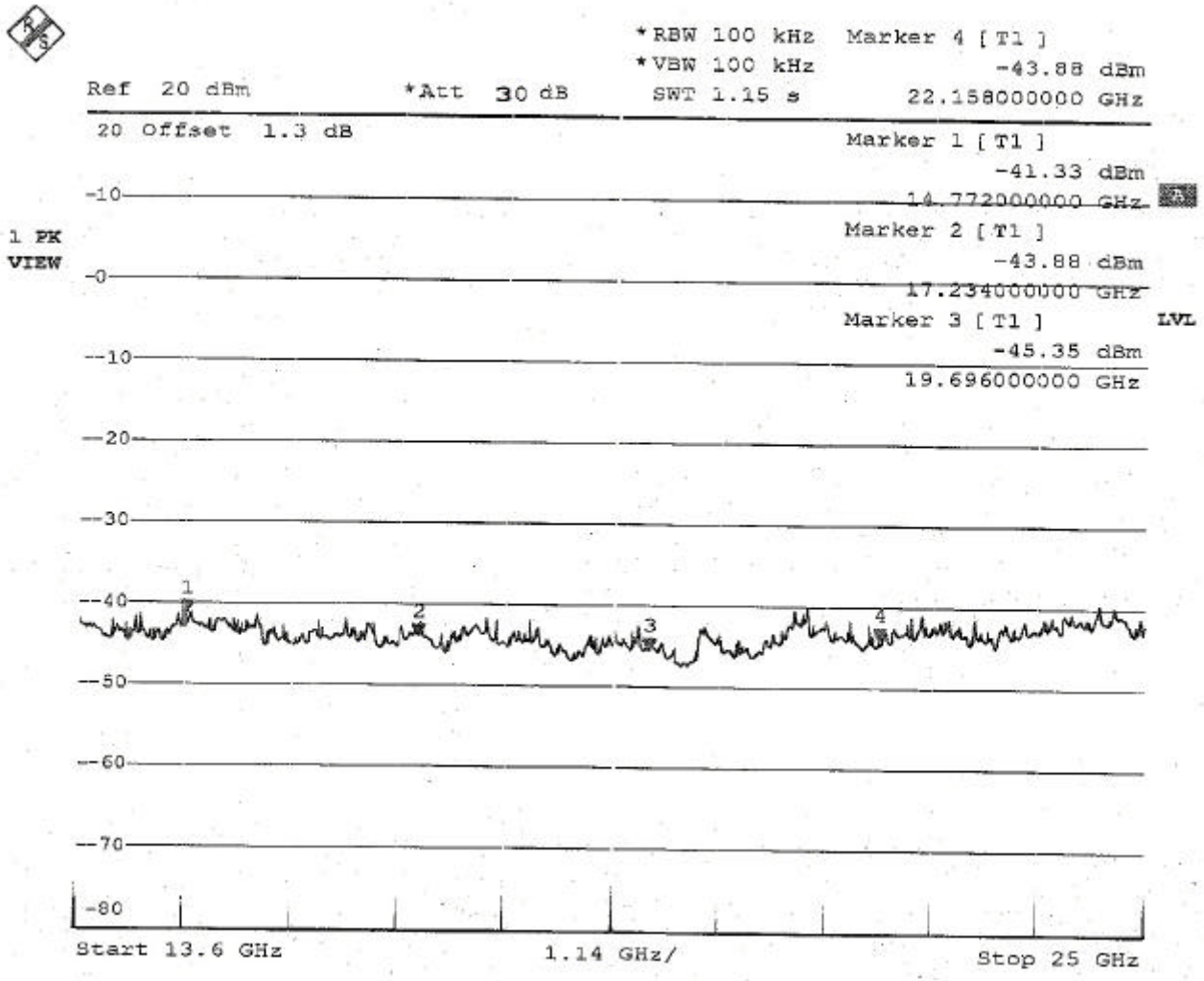

*RBW 100 kHz
*VBW 100 kHz
SWT 1.15 s
Marker 4 [T1]
-52.27 dBm
12.185000000 GHz
Ref 20 dBm
*Att 30 dB
20 Offset 1.3 dB
Marker 1 [T1]
-46.60 dBm
4.874000000 GHz
Marker 2 [T1]
-53.05 dBm
7.311000000 GHz
Marker 3 [T1]
-51.51 dBm
9.748000000 GHz
1 PK
VIEW
Center 8.05 GHz
1.11 GHz/
Span 11.1 GHz


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 4 [T1]
-45.10 dBm
21.933000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-44.09 dBm
14.622000000 GHz
1 PK
VIEW
Marker 2 [T1]
-42.66 dBm
17.059000000 GHz
LVL
Marker 3 [T1]
-44.27 dBm
19.496000000 GHz
-10
-0
--10
--20
--30
--40
--50
--60
--70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz

Ch11



Report No.920218H04


*RBW 100 kHz
*VBW 100 kHz
Ref 20 dBm
*Att 30 dB
SWT 1.15 s
Marker 4 [T1]
-43.88 dBm
22.158000000 GHz
20 Offset 1.3 dB
Marker 1 [T1]
-41.33 dBm
14.772000000 GHz
1 PK
VIEW
Marker 2 [T1]
-43.88 dBm
17.234000000 GHz
Marker 3 [T1]
-45.35 dBm
19.696000000 GHz
LVL
-10
-0
-10
-20
-30
-40
-50
-60
-70
-80
Start 13.6 GHz
1.14 GHz/
Stop 25 GHz