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

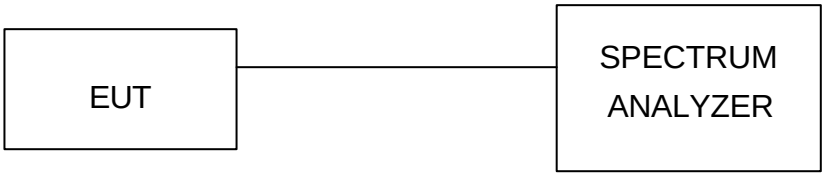
NOTE:

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



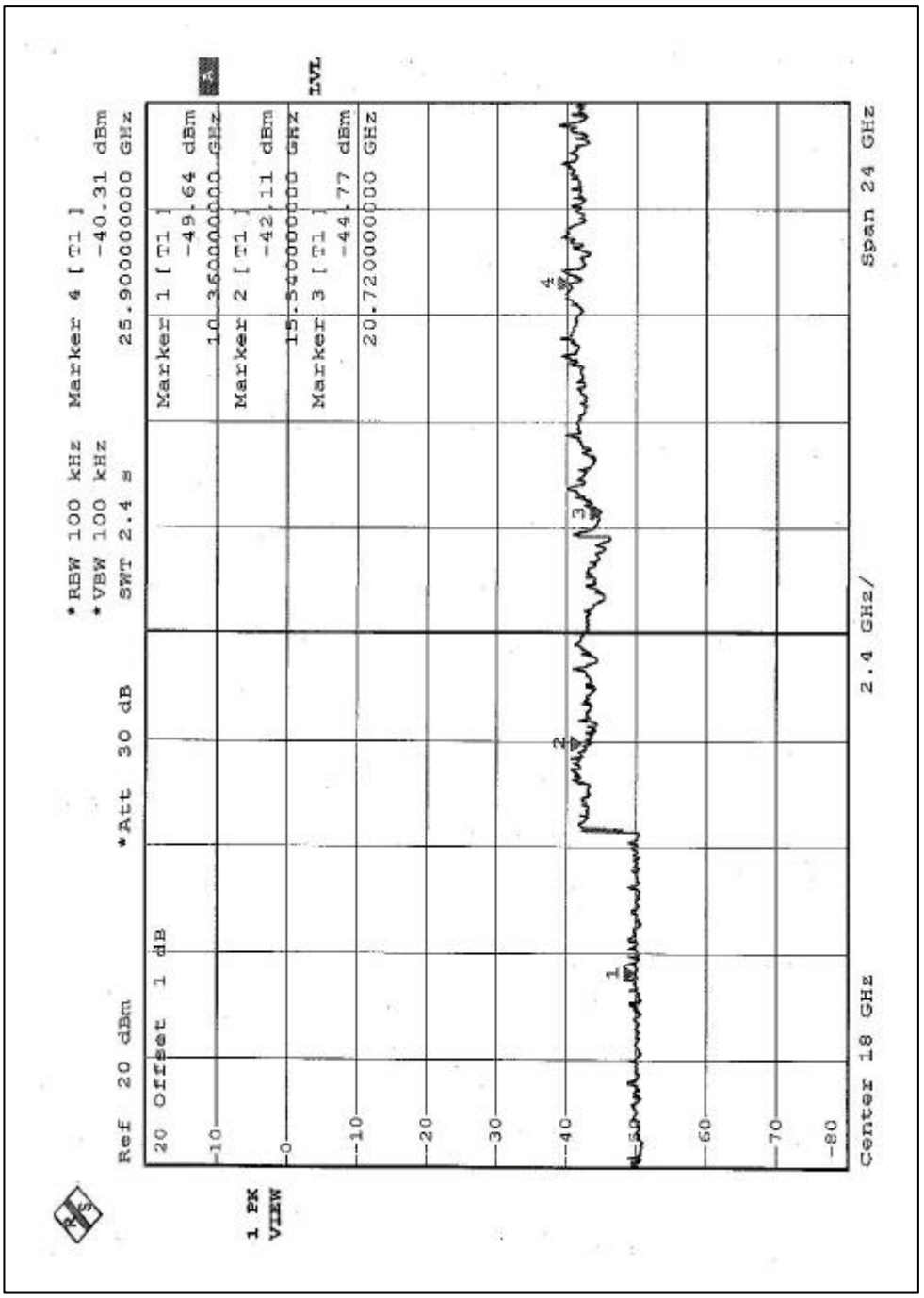
5. EUT OPERATING CONDITIONS

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

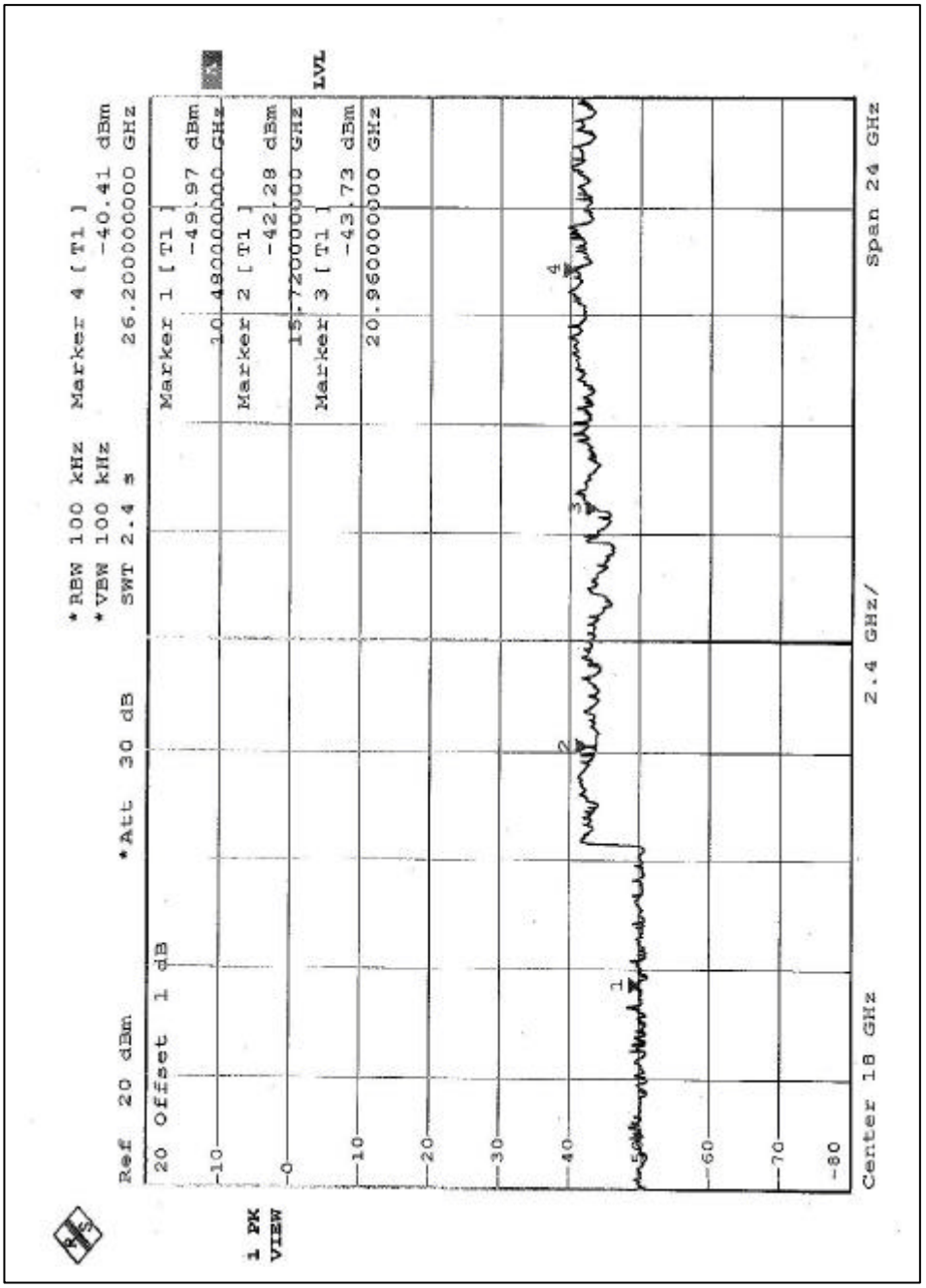
TEST RESULTS – For 802.11a, Normal mode

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.

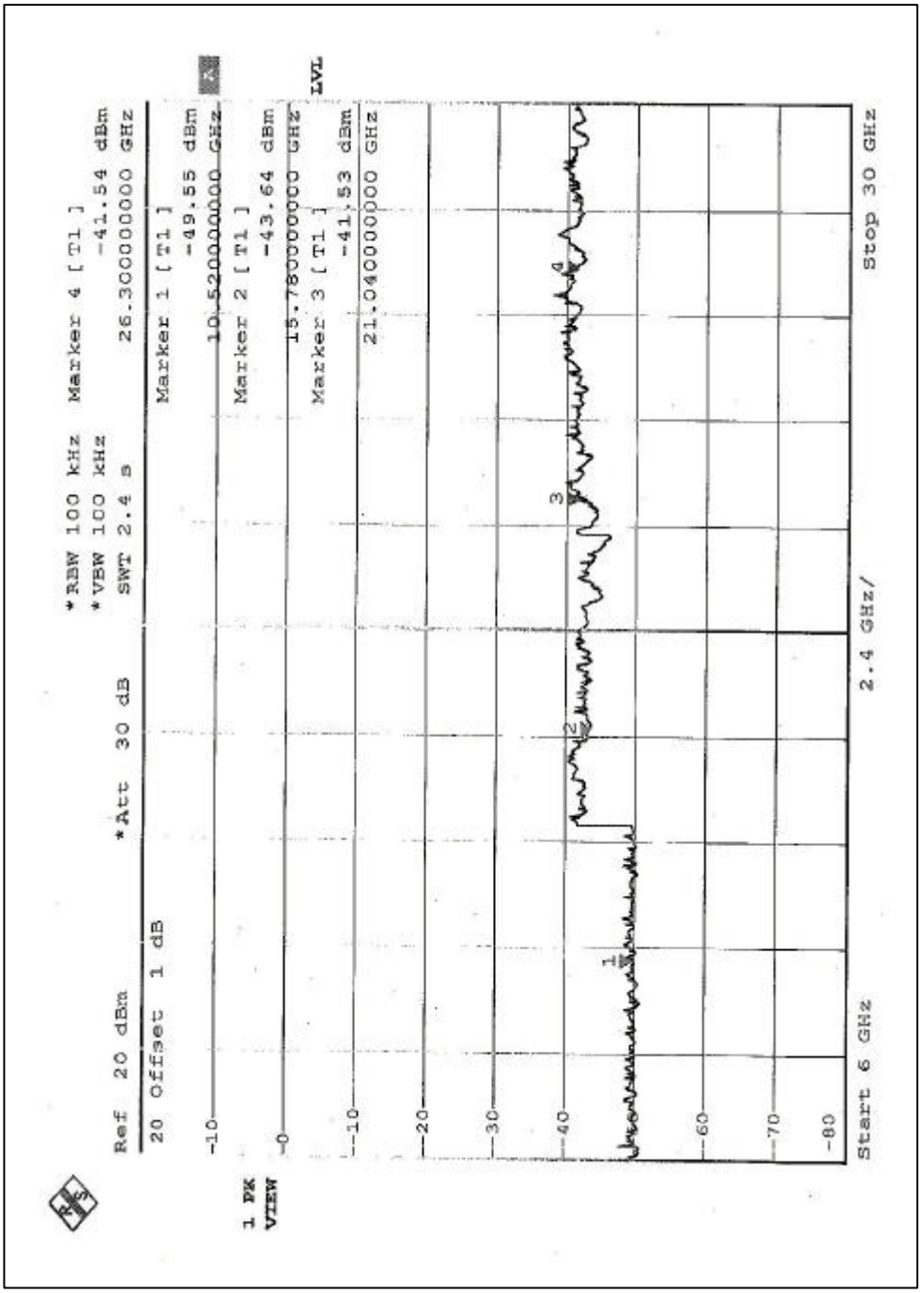
Ch1


Ref 20 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-40.31 dBm
25.900000000 GHz
20 Offset 1 dB
1 PK
VIEW
Marker 1 [T1]
-49.64 dBm
10.360000000 GHz
Marker 2 [T1]
-42.11 dBm
15.540000000 GHz
Marker 3 [T1]
-44.77 dBm
20.720000000 GHz
Center 18 GHz
2.4 GHz/
Span 24 GHz

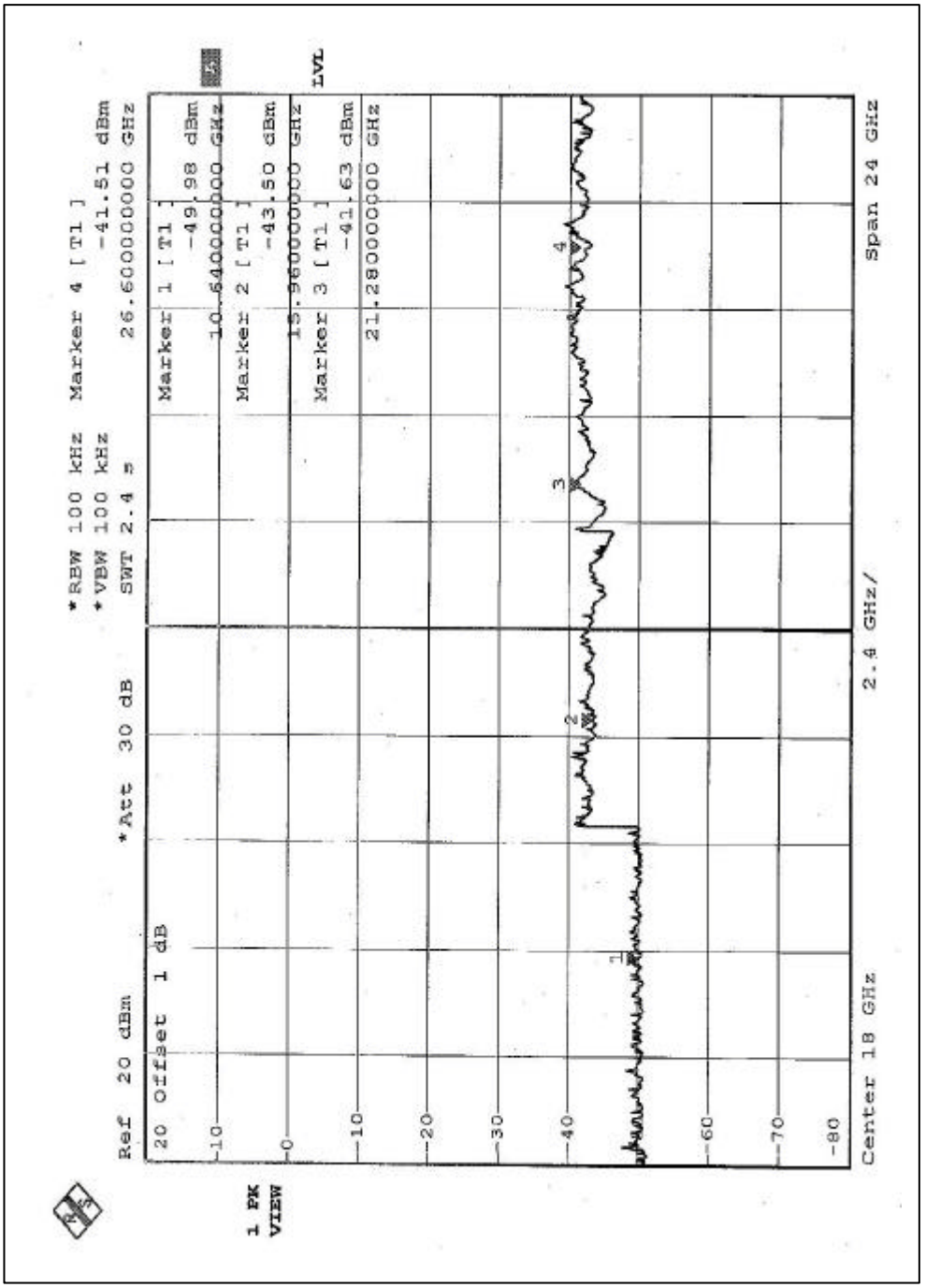
Ch4


Ref 20 dBm
Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-40.41 dBm
26.20000000 GHz
Marker 1 [T1]
-49.97 dBm
1.480000000 GHz
Marker 2 [T1]
-42.28 dBm
15.720000000 GHz
Marker 3 [T1]
-43.73 dBm
20.960000000 GHz
1 PK
VIEW
LVL
Center 18 GHz
2.4 GHz/
Span 24 GHz

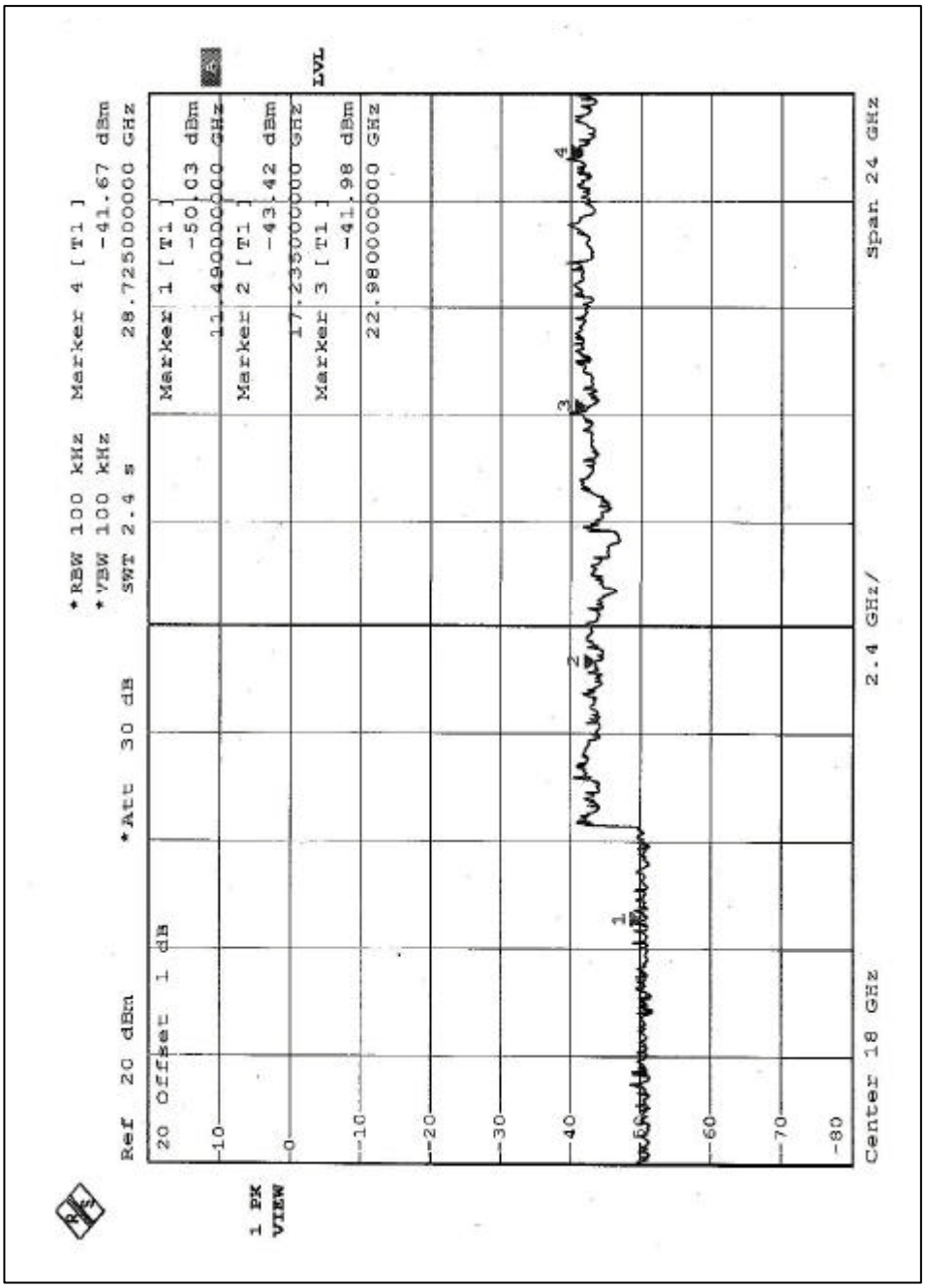
Ch5


Ref 20 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.54 dBm
26.300000000 GHz
20 Offset 1 dB
Marker 1 [T1]
-49.55 dBm
10.520000000 GHz
Marker 2 [T1]
-43.64 dBm
15.780000000 GHz
Marker 3 [T1]
-41.53 dBm
21.040000000 GHz
1 PK
VIEW
LVL
Start 6 GHz
2.4 GHz/
Stop 30 GHz

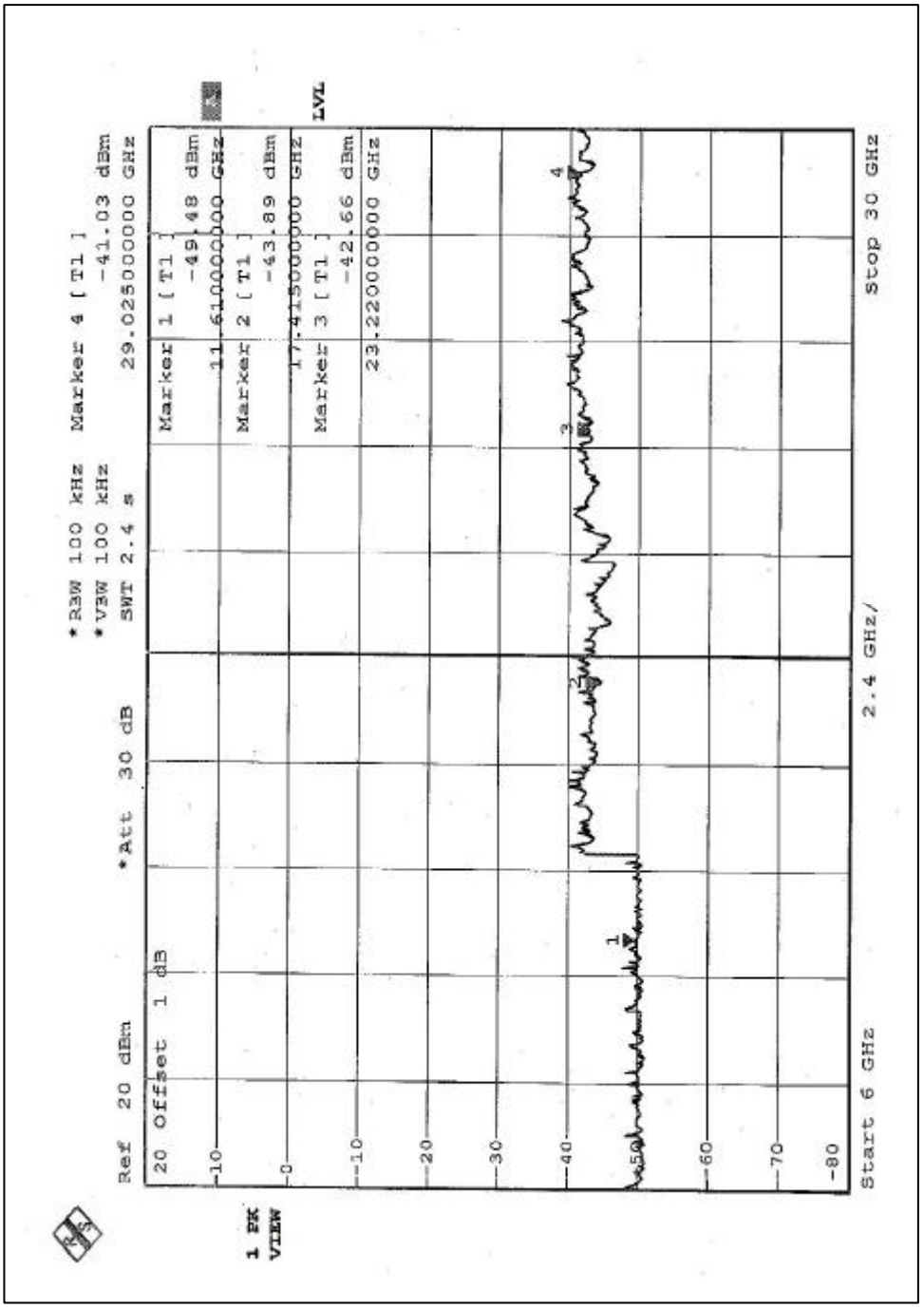
Ch8


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.51 dBm
26.600000000 GHz
Marker 1 [T1]
-49.98 dBm
10.640000000 GHz
Marker 2 [T1]
-43.50 dBm
15.960000000 GHz
Marker 3 [T1]
-41.63 dBm
21.280000000 GHz
1 PK
VIEW
LVL
Center 18 GHz
2.4 GHz/
Span 24 GHz

Ch9


Ref 20 dBm
Att 30 dB
RBW 100 kHz
VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.67 dBm
28.725000000 GHz
Marker 1 [T1]
-50.03 dBm
11.490000000 GHz
Marker 2 [T1]
-43.42 dBm
17.235000000 GHz
Marker 3 [T1]
-41.98 dBm
22.980000000 GHz
1 PK
VIEW
Center 18 GHz
2.4 GHz/
Span 24 GHz

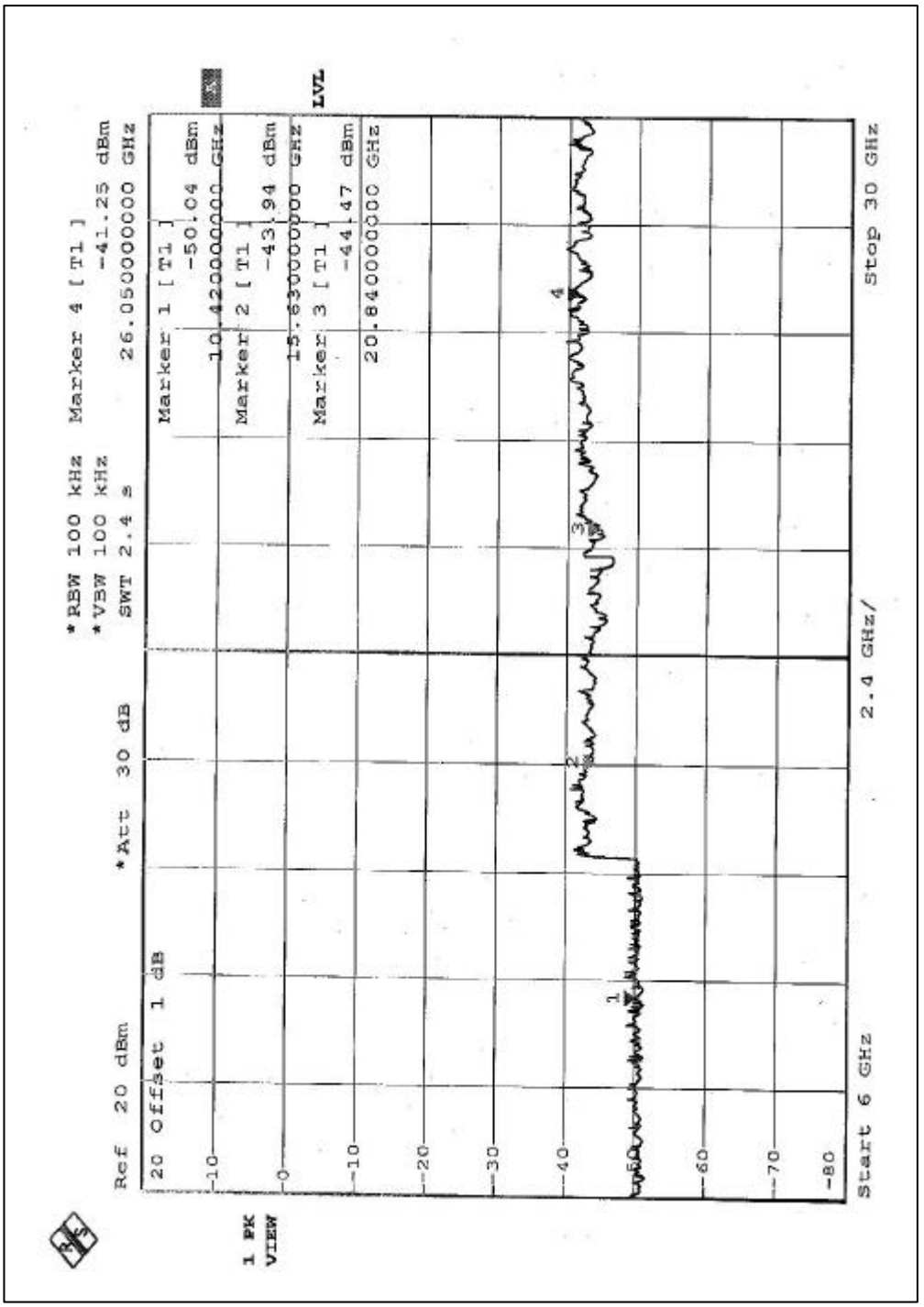
Ch12


Ref 20 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.03 dBm
29.025000000 GHz
20 Offset 1 dB
1 PK VIEW
Marker 1 [T1]
-49.48 dBm
11.610000000 GHz
Marker 2 [T1]
-43.89 dBm
17.415000000 GHz
Marker 3 [T1]
-42.66 dBm
23.220000000 GHz
LVL
Start 6 GHz
2.4 GHz/
Stop 30 GHz

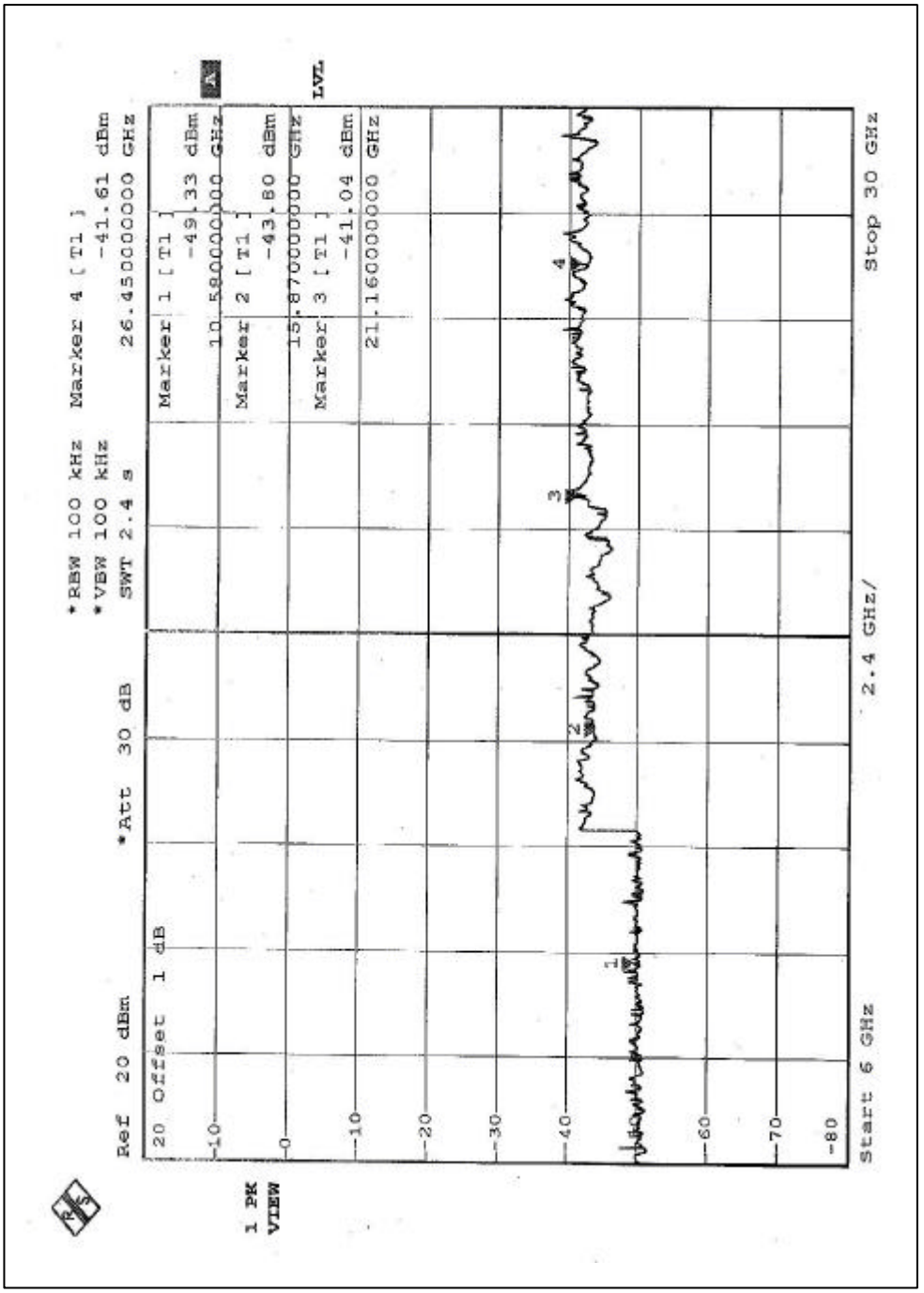
TEST RESULTS – For 802.11a, Turbo mode

The spectrum plots are attached on the following 5 pages. It shows compliance with the requirement in part 15.247(C),.15.205 and 15.209.

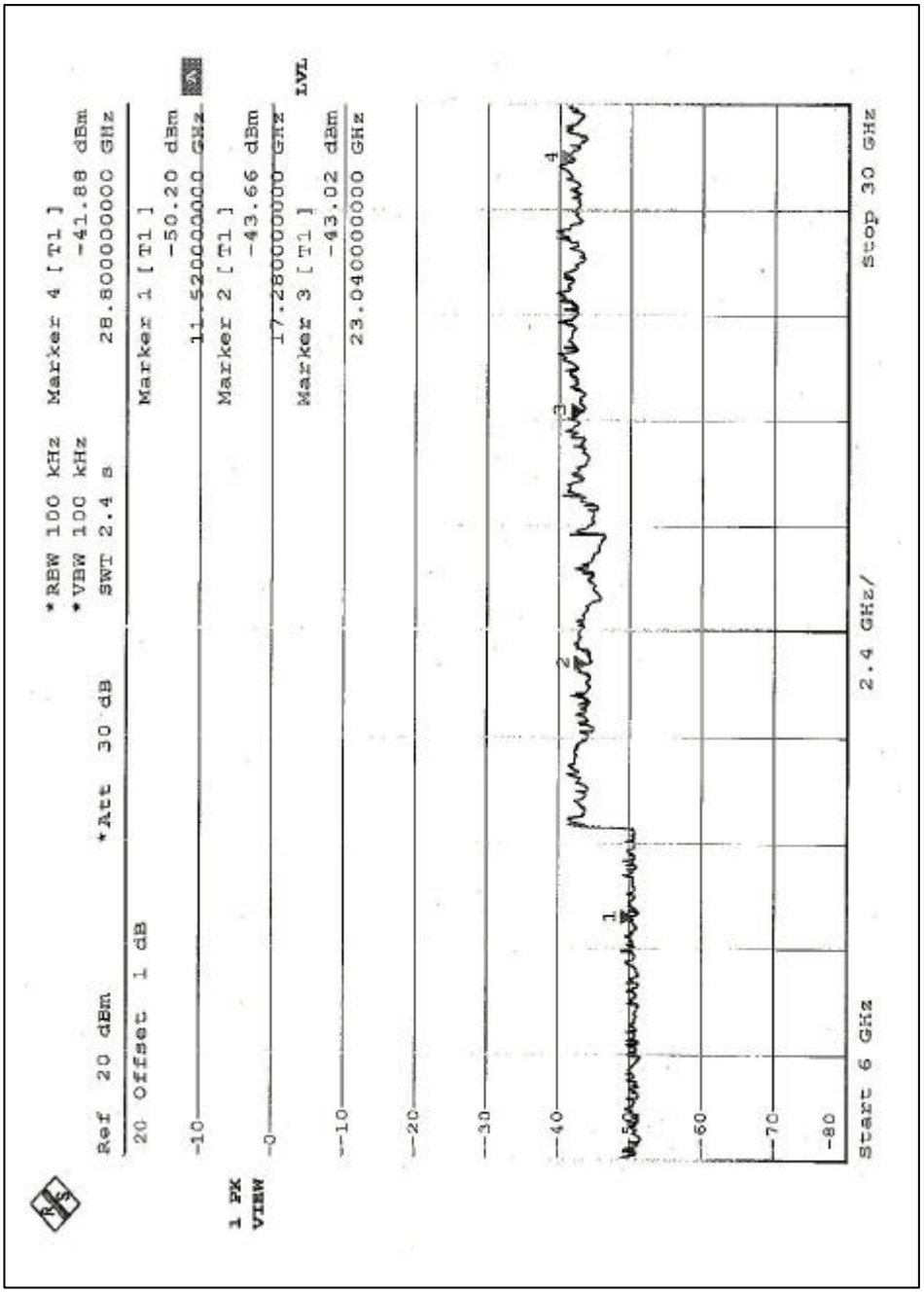
Ch1


Ref 20 dBm
Att 30 dB
RBW 100 kHz
VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.25 dBm
26.050000000 GHz
Marker 1 [T1]
-50.04 dBm
10.420000000 GHz
Marker 2 [T1]
-43.94 dBm
15.630000000 GHz
Marker 3 [T1]
-44.47 dBm
20.840000000 GHz
1 PK
VIEW
Start 6 GHz
2.4 GHz/
Stop 30 GHz

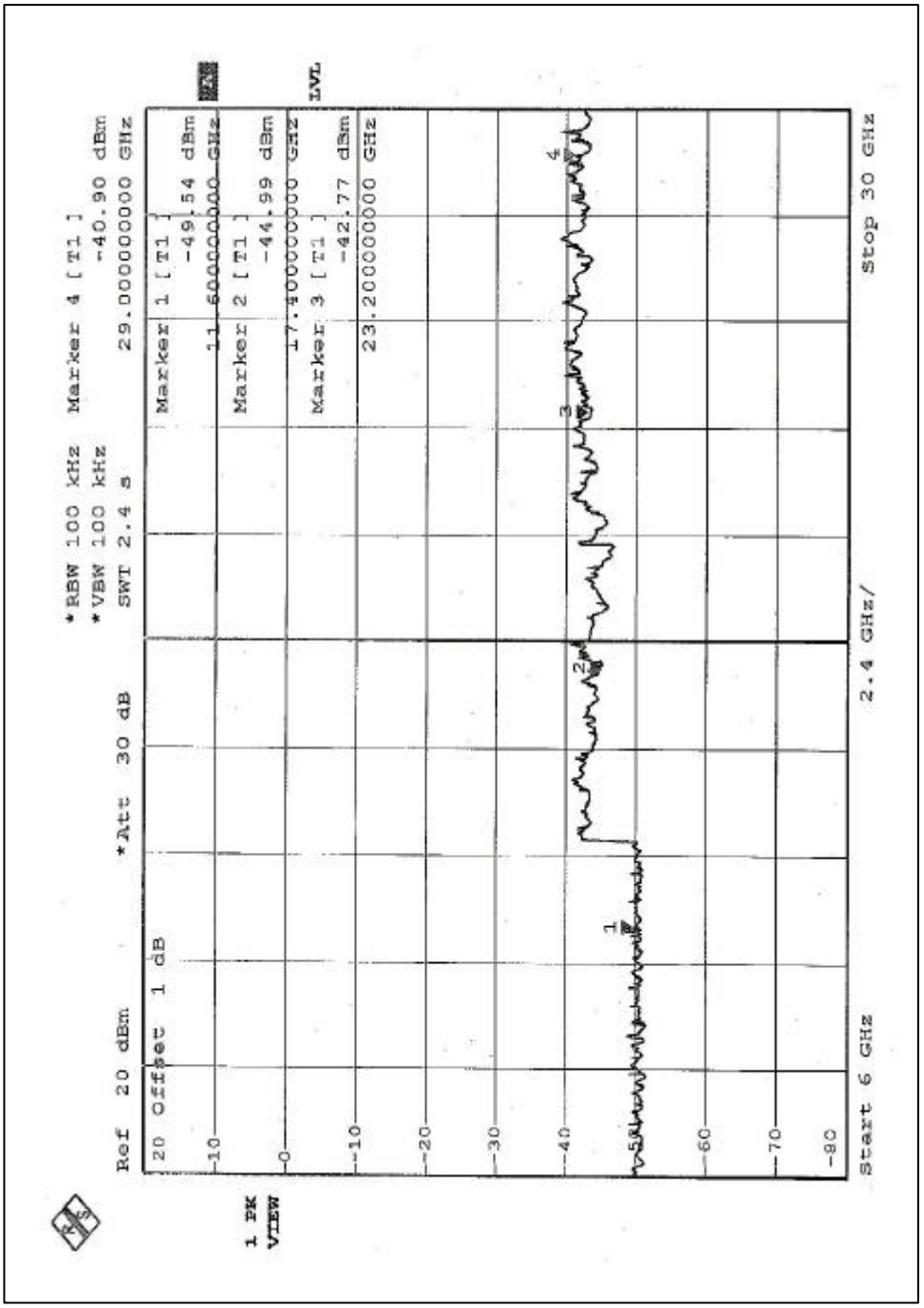
Ch3


Ref 20 dBm
20 Offset 1 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.61 dBm
26.450000000 GHz
Marker 1 [T1]
-49.33 dBm
10.580000000 GHz
Marker 2 [T1]
-43.80 dBm
15.870000000 GHz
Marker 3 [T1]
-41.04 dBm
21.160000000 GHz
1 PK
VIEW
LVL
Start 6 GHz
2.4 GHz/
Stop 30 GHz

Ch4


Ref 20 dBm
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-41.88 dBm
28.800000000 GHz
20 Offset 1 dB
Marker 1 [T1]
-50.20 dBm
11.520000000 GHz
Marker 2 [T1]
-43.66 dBm
17.280000000 GHz
Marker 3 [T1]
-43.02 dBm
23.040000000 GHz
1 PK
VIEW
LVL
-10
-0
-10
-20
-30
-40
-50
-60
-70
-80
Start 6 GHz
2.4 GHz/
Stop 30 GHz

Ch5


Ref 20 dBm
Att 30 dB
RBW 100 kHz
VBW 100 kHz
SWT 2.4 s
Marker 4 [T1]
-40.90 dBm
29.000000000 GHz
Marker 1 [T1]
-49.54 dBm
11.600000000 GHz
Marker 2 [T1]
-44.99 dBm
17.400000000 GHz
Marker 3 [T1]
-42.77 dBm
23.200000000 GHz
1 PK
VIEW
Start 6 GHz
2.4 GHz/
Stop 30 GHz