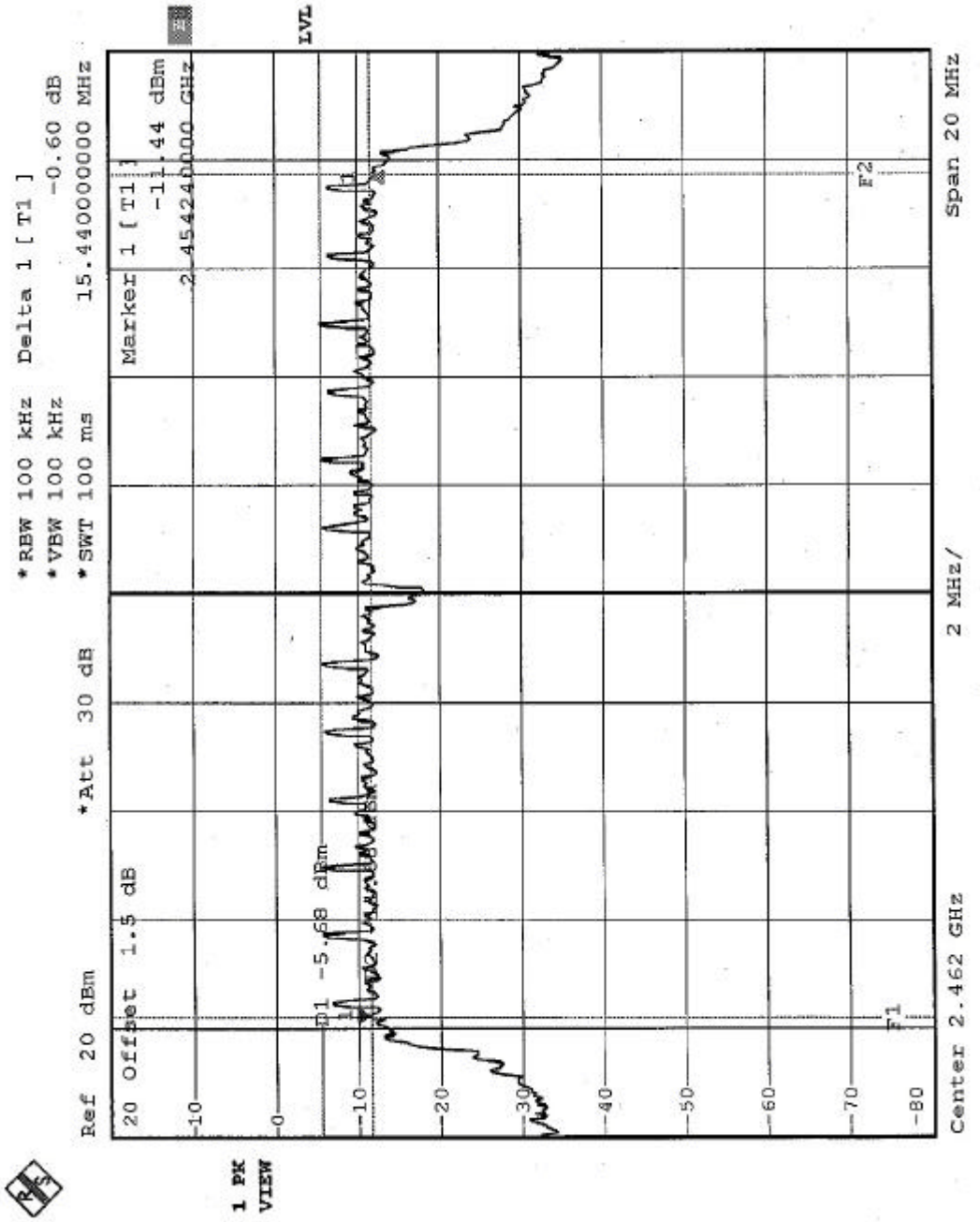
CH11

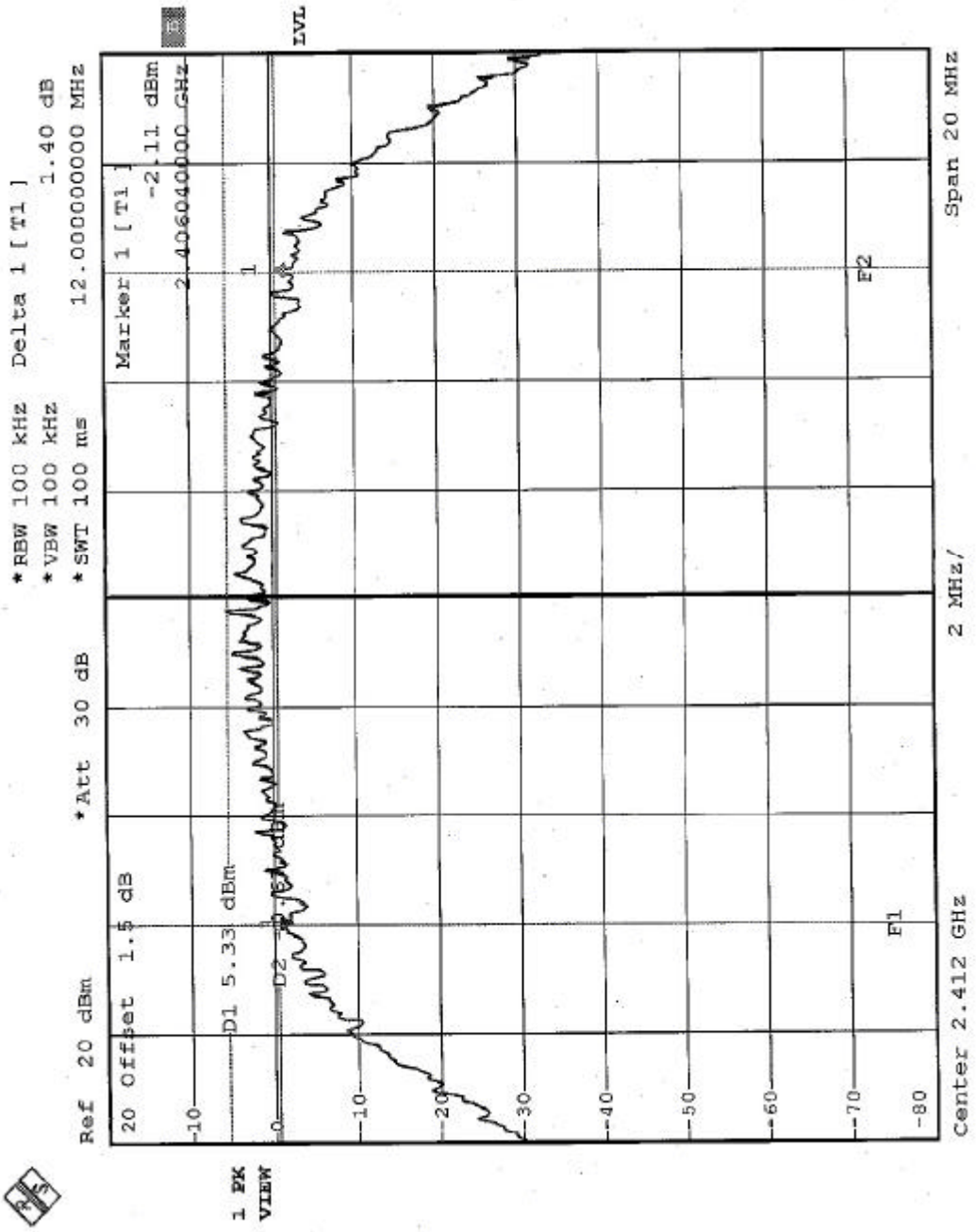

RBW 100 kHz
VBW 100 kHz
SWT 100 ms
Delta 1 [T1]
-0.60 dB
15.440000000 MHz
Marker 1 [T1]
-11.44 dBm
2.454240000 GHz
Ref 20 dBm
20 Offset 1.5 dB
Att 30 dB
D1 -5.68 dBm
1 PK VIEW
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2

4.3.8 TEST RESULTS(B)-DSSS

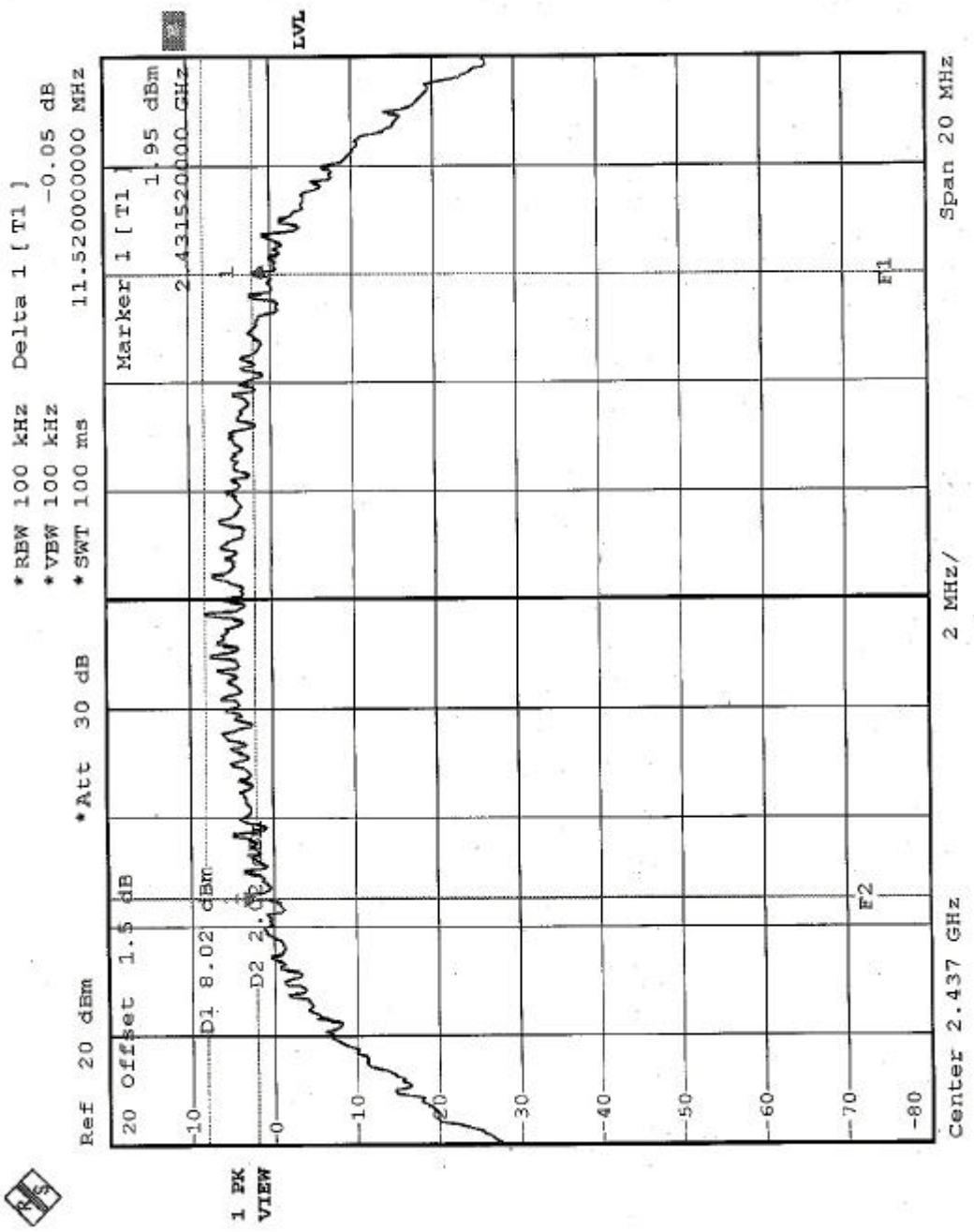
EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 2	**TESTED BY**	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.00	0.5	PASS
6	2437	11.52	0.5	PASS
11	2462	11.48	0.5	PASS

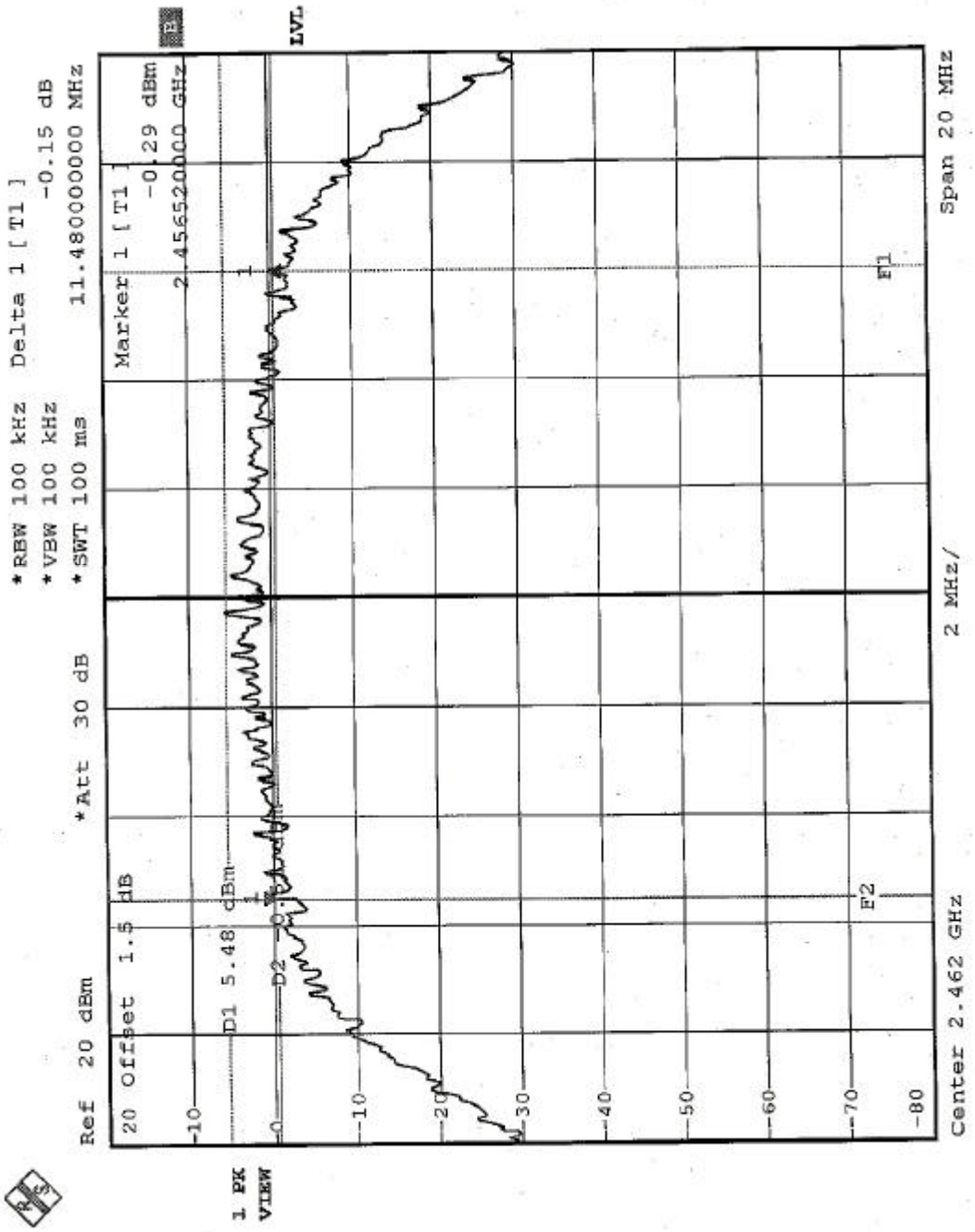
CH1


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
1.40 dB
12.000000000 MHz
Marker 1 [T1]
-2.11 dBm
2.406040000 GHz
D1 5.33 dBm
D2 -3.67 dBm
1 PK
VIEW
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
-0.05 dB
11.52000000 MHz
Marker 1 [T1]
1.95 dBm
2.43152000 GHz
D1 8.02 dBm
D2 2.0
LVL
1 PK
VIEW
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

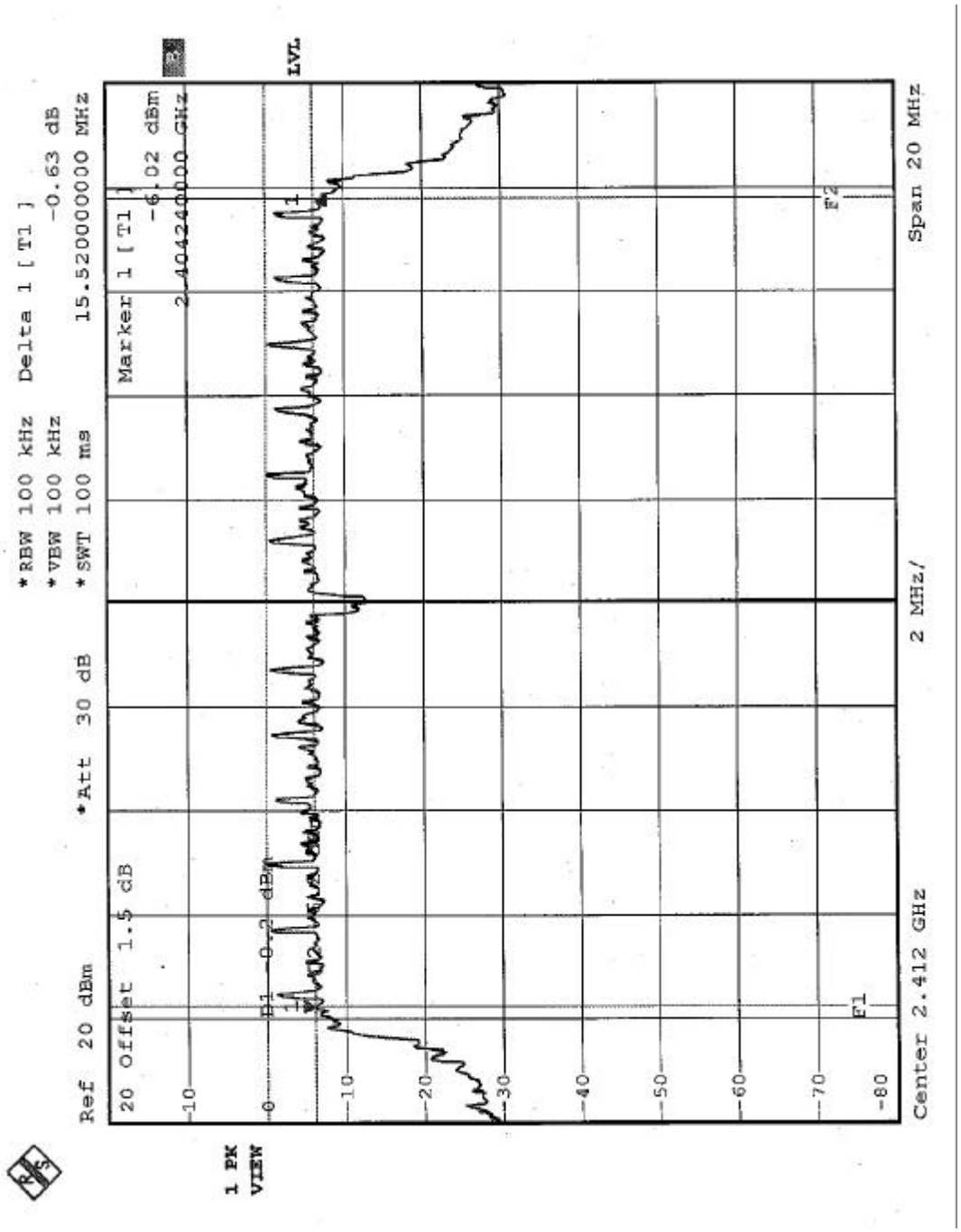

RBW 100 kHz
VBW 100 kHz
SWT 100 ms
Delta 1 [T1]
-0.15 dB
11.480000000 MHz
Marker 1 [T1]
-0.29 dBm
2.456520000 GHz
Att 30 dB
Ref 20 dBm
Offset 1.5 dB
D1 5.48 dBm
D2 -0.52 dBm
Center 2.462 GHz
2 MHz/
Span 20 MHz
1 PK
VIEW

4.3.9 TEST RESULTS(B)-OFDM

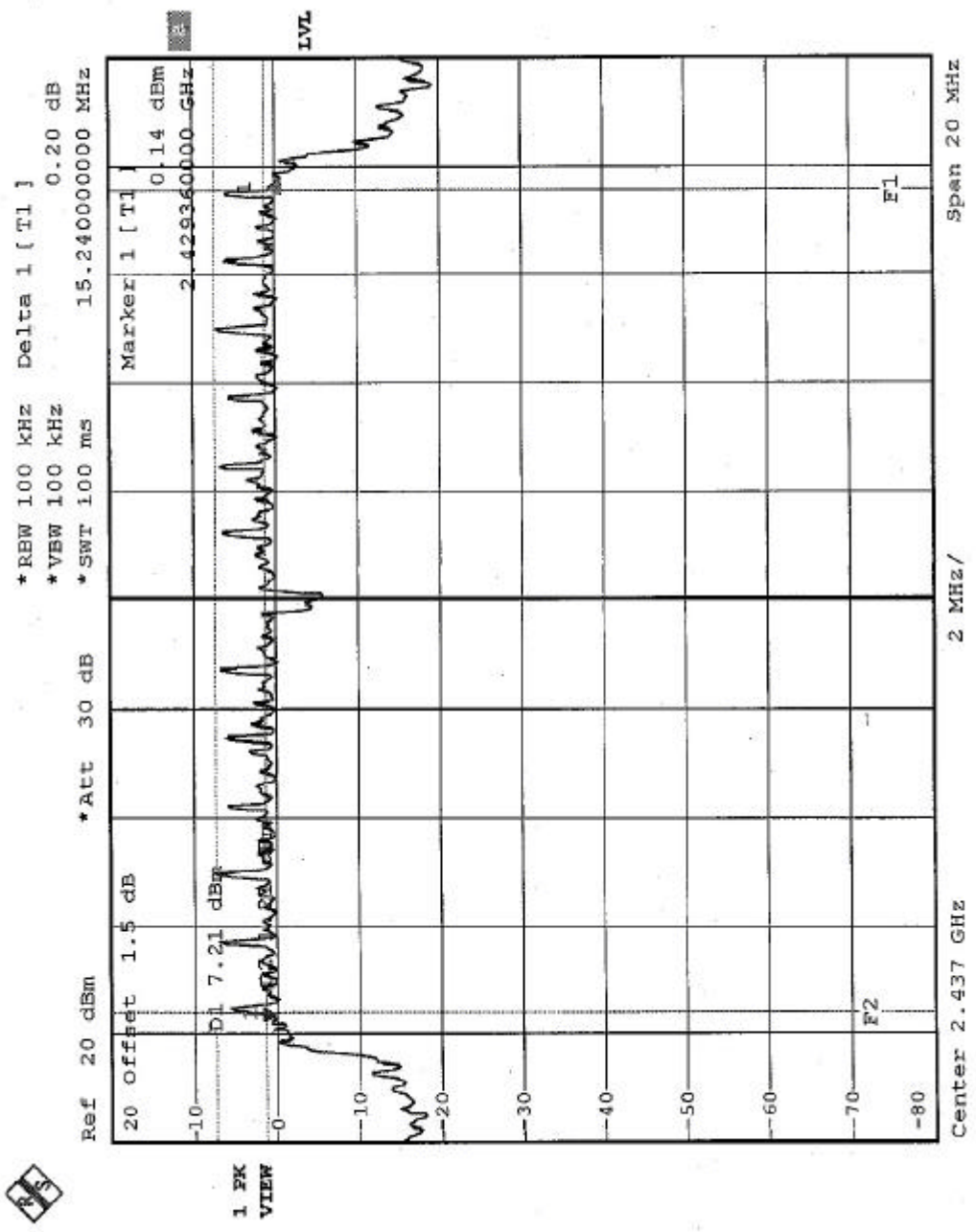
EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 2	**TESTED BY**	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	15.52	0.5	PASS
6	2437	15.24	0.5	PASS
11	2462	15.48	0.5	PASS

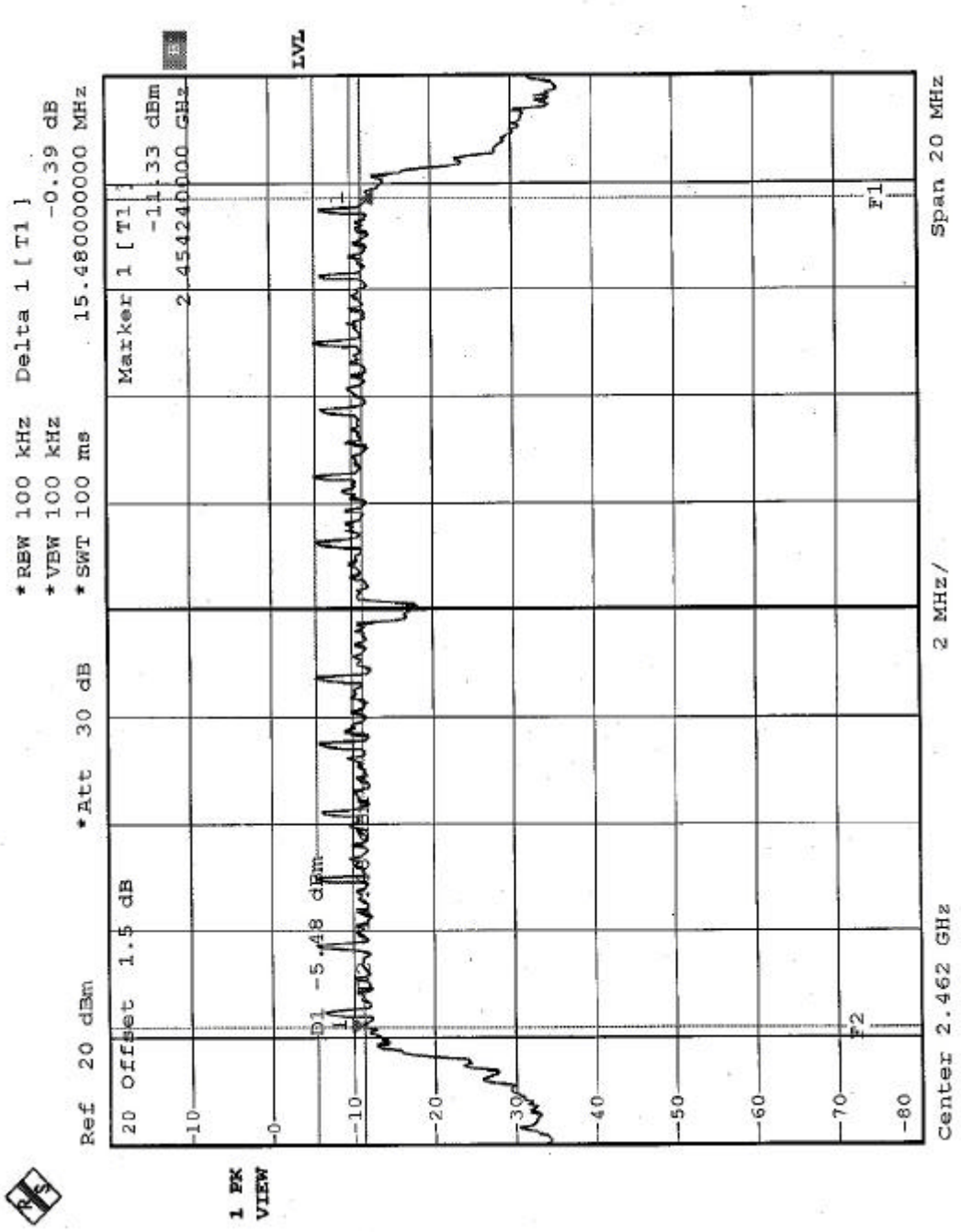
CH1


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
-0.63 dB
15.520000000 MHz
Marker 1 [T1]
-6.02 dBm
2.404240000 GHz
1 PK
VIEW
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
0.20 dB
15.240000000 MHz
Marker 1 [T1]
0.14 dBm
2.429360000 GHz
D1 7.21 dBm
F1
F2
LVL
1 PK
VIEW
Center 2.437 GHz
2 MHz/
Span 20 MHz

CH11

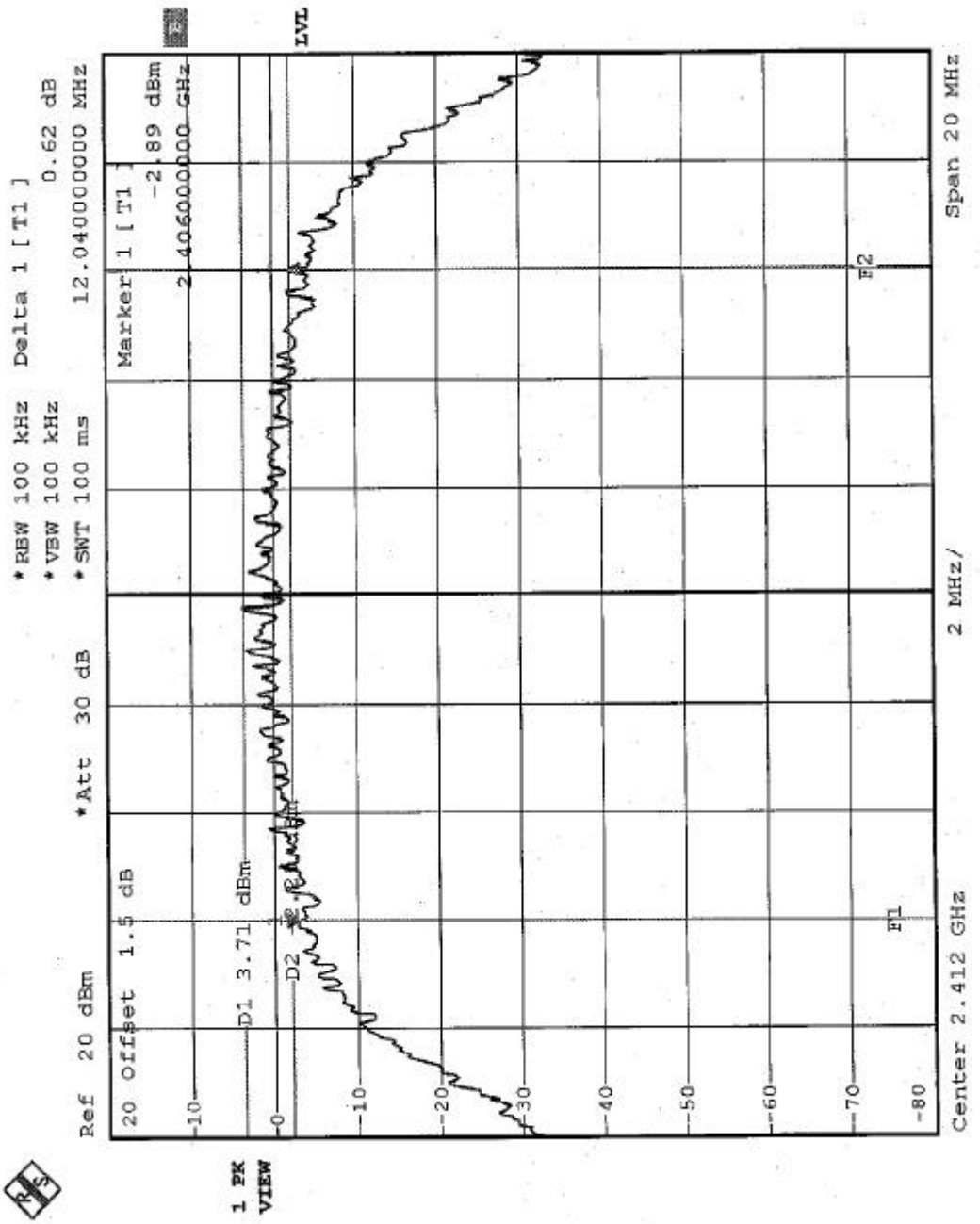

*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
-0.39 dB
15.480000000 MHz
Marker 1 [T1]
-11.33 dBm
2.454240000 GHz
*Att 30 dB
Ref 20 dBm
20 Offset 1.5 dB
-5.48 dBm
1 PK VIEW
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2

4.3.10 TEST RESULTS(C)-DSSS

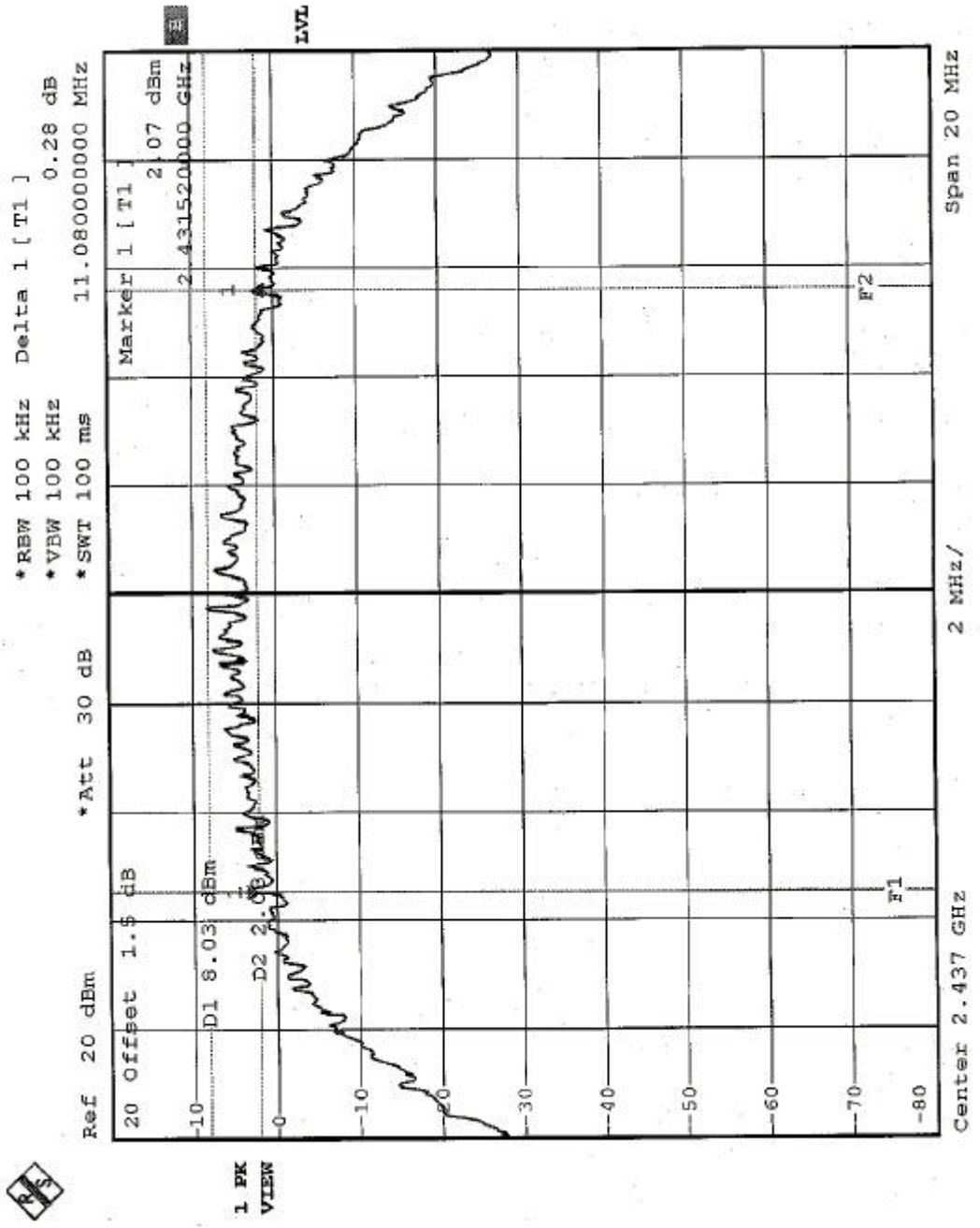
EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 3	**TESTED BY**	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	12.04	0.5	PASS
6	2437	11.08	0.5	PASS
11	2462	11.48	0.5	PASS

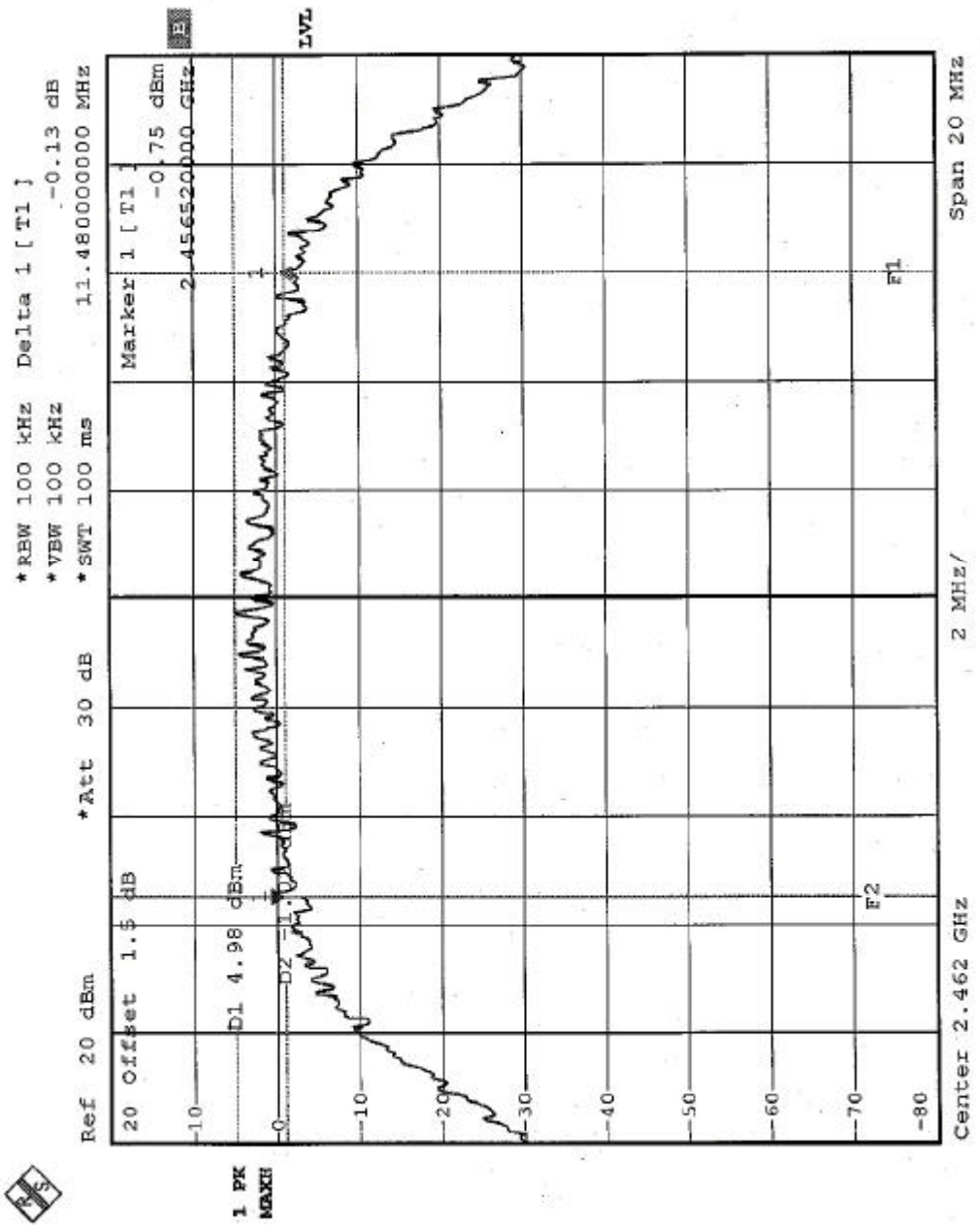
CH1


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
0.62 dB
12.040000000 MHz
Marker 1 [T1]
-2.89 dBm
2.406000000 GHz
D1 3.71 dBm
D2
1 PK
VIEW
LVL
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz

CH6


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*SWT 100 ms
*VBW 100 kHz
*RBW 100 kHz
Delta 1 [T1]
0.28 dB
11.080000000 MHz
Marker 1 [T1]
2.07 dBm
2.431520000 GHz
D1 8.03 dBm
D2 2.
1 PK
VIEW
Center 2.437 GHz
2 MHz/
Span 20 MHz
F1
F2

CH11

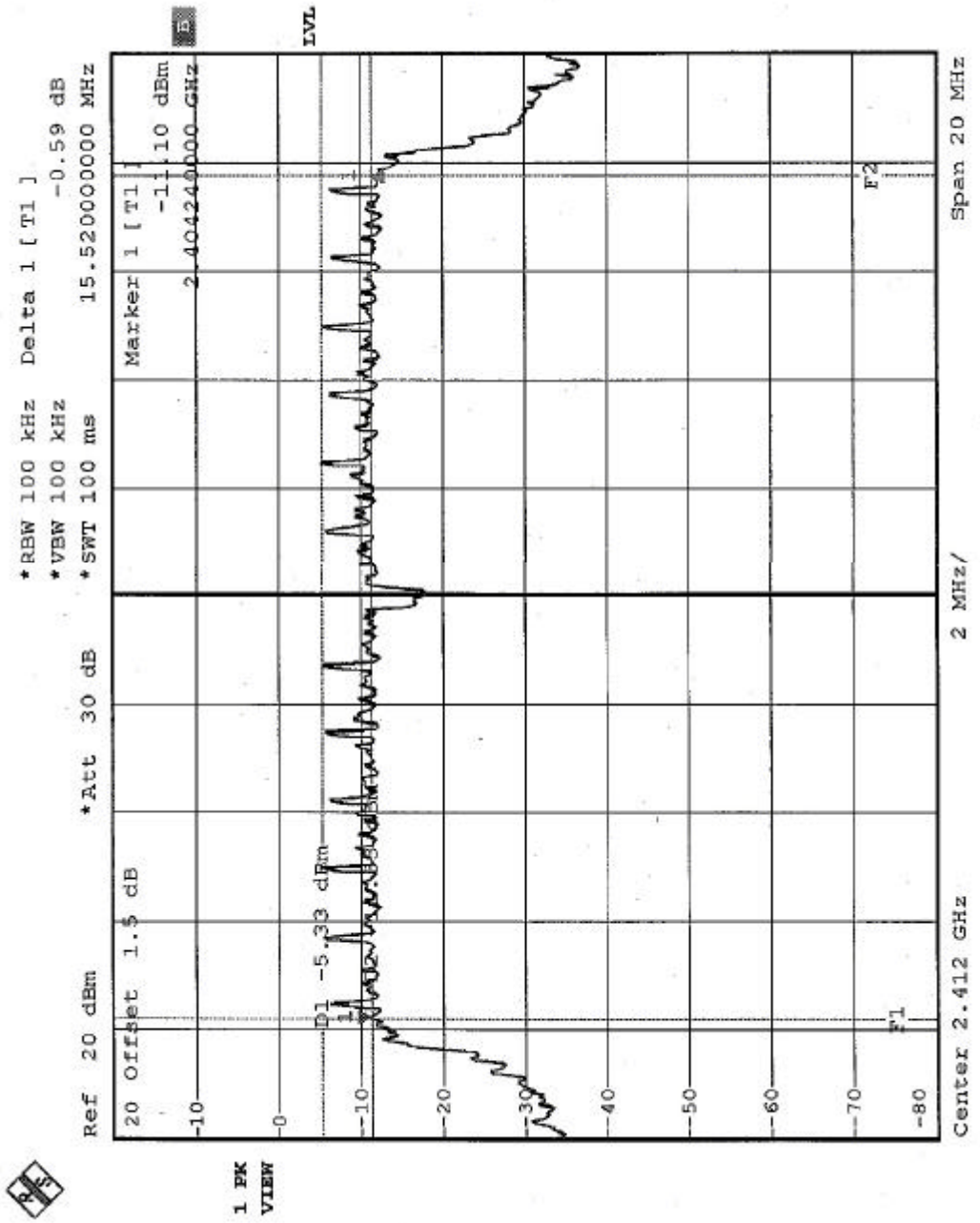

Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*SWT 100 ms
*VBW 100 kHz
*RBW 100 kHz
Delta 1 [T1]
-0.13 dB
11.480000000 MHz
Marker 1 [T1]
-0.75 dBm
2.456520000 GHz
D1 4.98 dBm
D2 -1.00 dBm
1 PK
MAXH
Center 2.462 GHz
2 MHz/
Span 20 MHz
F1
F2

4.3.11 TEST RESULTS(C)-OFDM

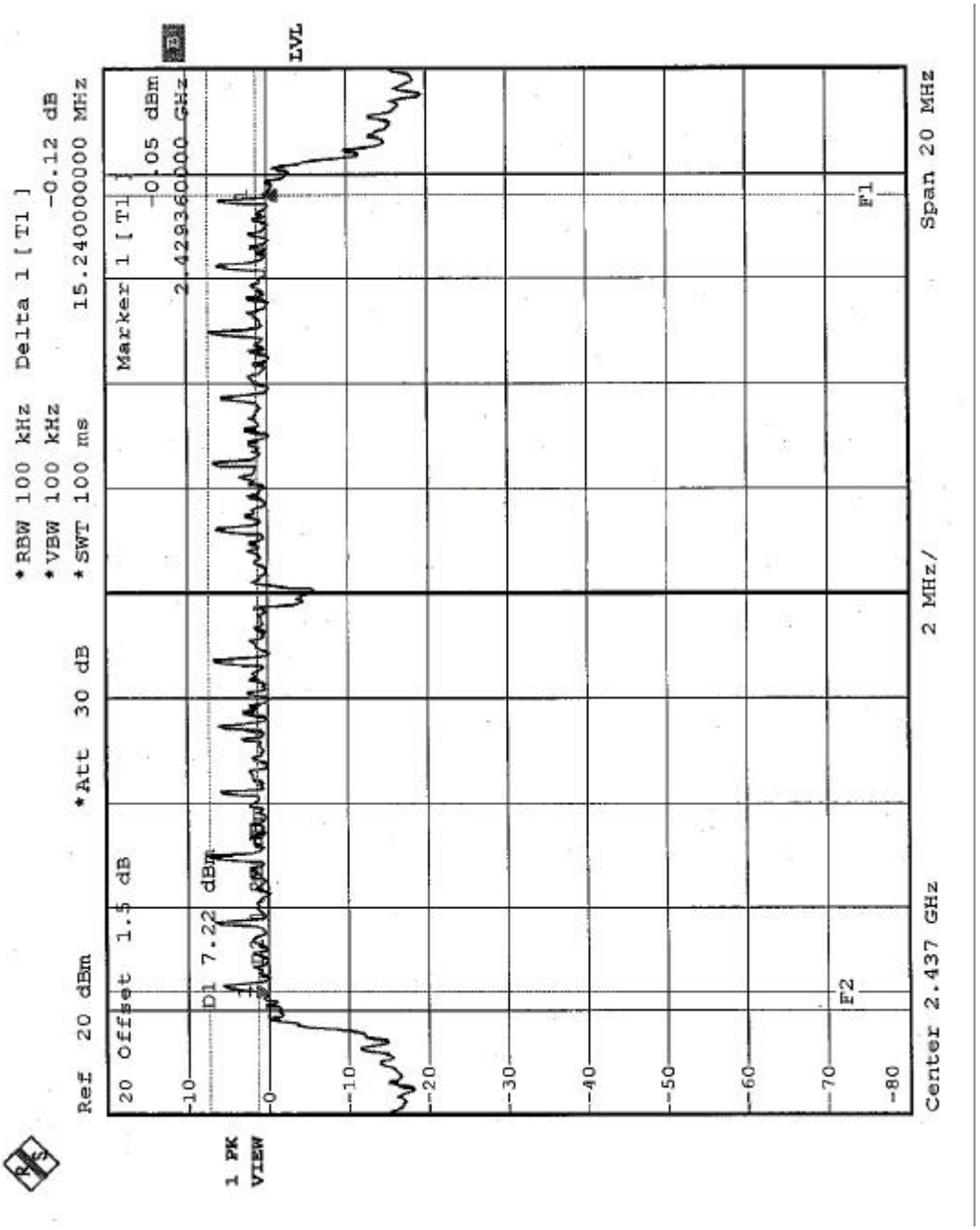
EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 3	**TESTED BY**	Hunk Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	6 dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS/FAIL
1	2412	15.52	0.5	PASS
6	2437	15.24	0.5	PASS
11	2462	15.60	0.5	PASS

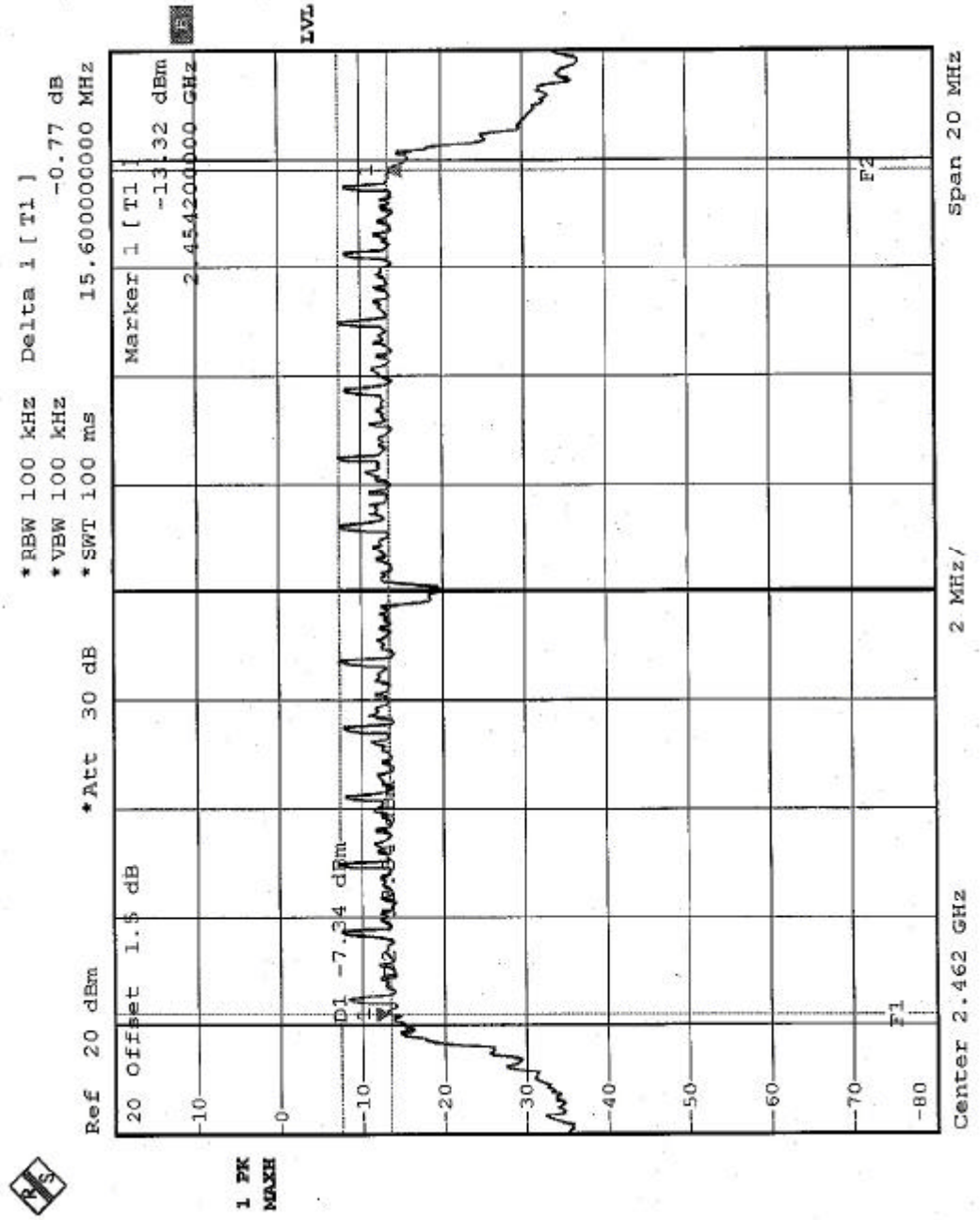
CH1


*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
-0.59 dB
15.520000000 MHz
Marker 1 [T1]
-11.10 dBm
2.404240000 GHz
Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
D1 -5.33 dBm
1 PK
VIEW
Center 2.412 GHz
2 MHz/
Span 20 MHz
F1
F2

CH6


*RBW 100 kHz
Delta 1 [T1]
-0.12 dB
*VBW 100 kHz
*SWT 100 ms
15.240000000 MHz
Marker 1 [T1]
-0.05 dBm
2.429360000 GHz
*Att 30 dB
Ref 20 dBm
Offset 1.5 dB
D1 7.22 dBm
F1
F2
Center 2.437 GHz
2 MHz/
Span 20 MHz
1 PK
VIEW
LVL

CH11


Ref 20 dBm
20 Offset 1.5 dB
*Att 30 dB
*RBW 100 kHz
*VBW 100 kHz
*SWT 100 ms
Delta 1 [T1]
-0.77 dB
15.60000000 MHz
Marker 1 [T1]
-13.32 dBm
2.45420000 GHz
D1 -7.24 dBm
1 PK
MAXH
Center 2.462 GHz
2 MHz/
Span 20 MHz
LVL
F1
F2

4.4 MAXIMUM PEAK OUTPUT POWER

4.4.1 LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
POWER METER	E4416A	GB41291118	July 30, 2003
PEAK POWER SENSOR	E9327A	US40440722	July 30, 2003

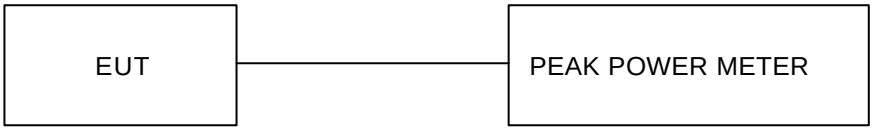
NOTE:

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.

4.4.3 TEST PROCEDURES

The transmitter output was connected to the peak power meter.

4.4.4 TEST SETUP



4.4.5 EUT OPERATING CONDITIONS

Same as Item 4.3.5

4.4.6 TEST RESULTS(A)-DSSS

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 1	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	11.97	30	PASS
6	2437	17.84	30	PASS
11	2462	13.55	30	PASS

4.4.7 TEST RESULTS(A)-OFDM

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 1	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	6.34	30	PASS
6	2437	18.09	30	PASS
11	2462	5.27	30	PASS

4.4.8 TEST RESULTS(B)-DSSS

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 2	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	15.05	30	PASS
6	2437	17.85	30	PASS
11	2462	15.38	30	PASS

4.4.9 TEST RESULTS(B)-OFDM

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 2	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	10.48	30	PASS
6	2437	18.07	30	PASS
11	2462	5.40	30	PASS

4.4.10 TEST RESULTS(C)-DSSS

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 3	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	13.50	30	PASS
6	2437	17.86	30	PASS
11	2462	14.94	30	PASS

4.4.11 TEST RESULTS(C)-OFDM

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 3	**TESTED BY**	Hank Chung

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
1	2412	5.83	30	PASS
6	2437	18.10	30	PASS
11	2462	3.80	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 TEST INSTRUMENTS

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

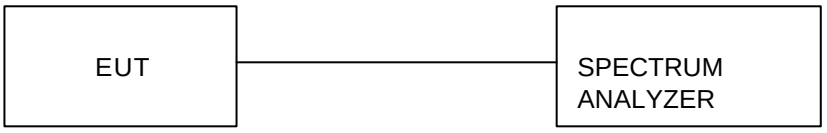
NOTE:

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.

4.5.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3 kHz RBW and 30 kHz VBW, set sweep time=span/3kHz. The power spectral density was measured and recorded.
The sweep time is allowed to be longer than span/3KHz for a full response of the mixer in the spectrum analyzer.

4.5.4 TEST SETUP



4.5.5 EUT OPERATING CONDITIONS

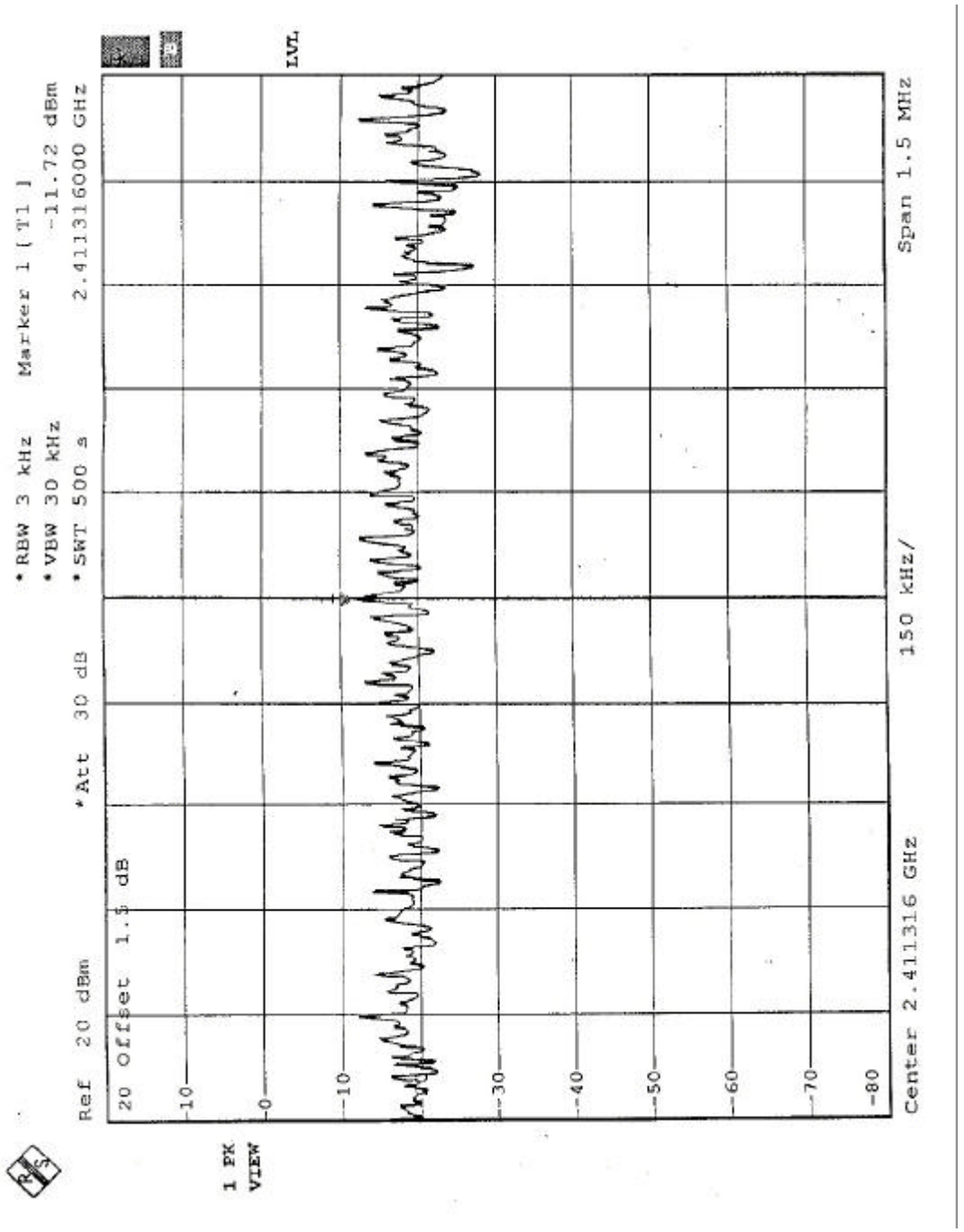
Same as 4.3.5

4.5.6 TEST RESULTS(A)-DSSS

EUT	IEEE 802.11g miniPCI	**MODEL**	WN4401
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	20 deg. C, 60 %RH, 979 hPa
TEST MODE	Antenna 1	**TESTED BY**	Hank Chung

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 3 KHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	2412	-11.72	8	PASS
6	2437	-6.15	8	PASS
11	2462	-10.56	8	PASS

CH1


RBW 3 kHz
VBW 30 kHz
SWT 500 s
Marker 1 [T1]
-11.72 dBm
2.41316000 GHz
Ref 20 dBm
Offset 1.5 dB
Att 30 dB
LVL
1 PK
VIEW
Center 2.411316 GHz
150 kHz/
Span 1.5 MHz