5.3 PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35 GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825 GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

Note: Where B is the 26dB emission bandwidth in MHz.

5.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

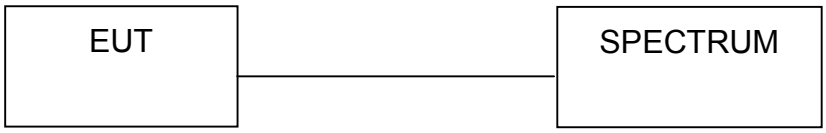
5.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 100kHz.
4. Using the spectrum analyzer's channel power measurement function to measure the output power.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

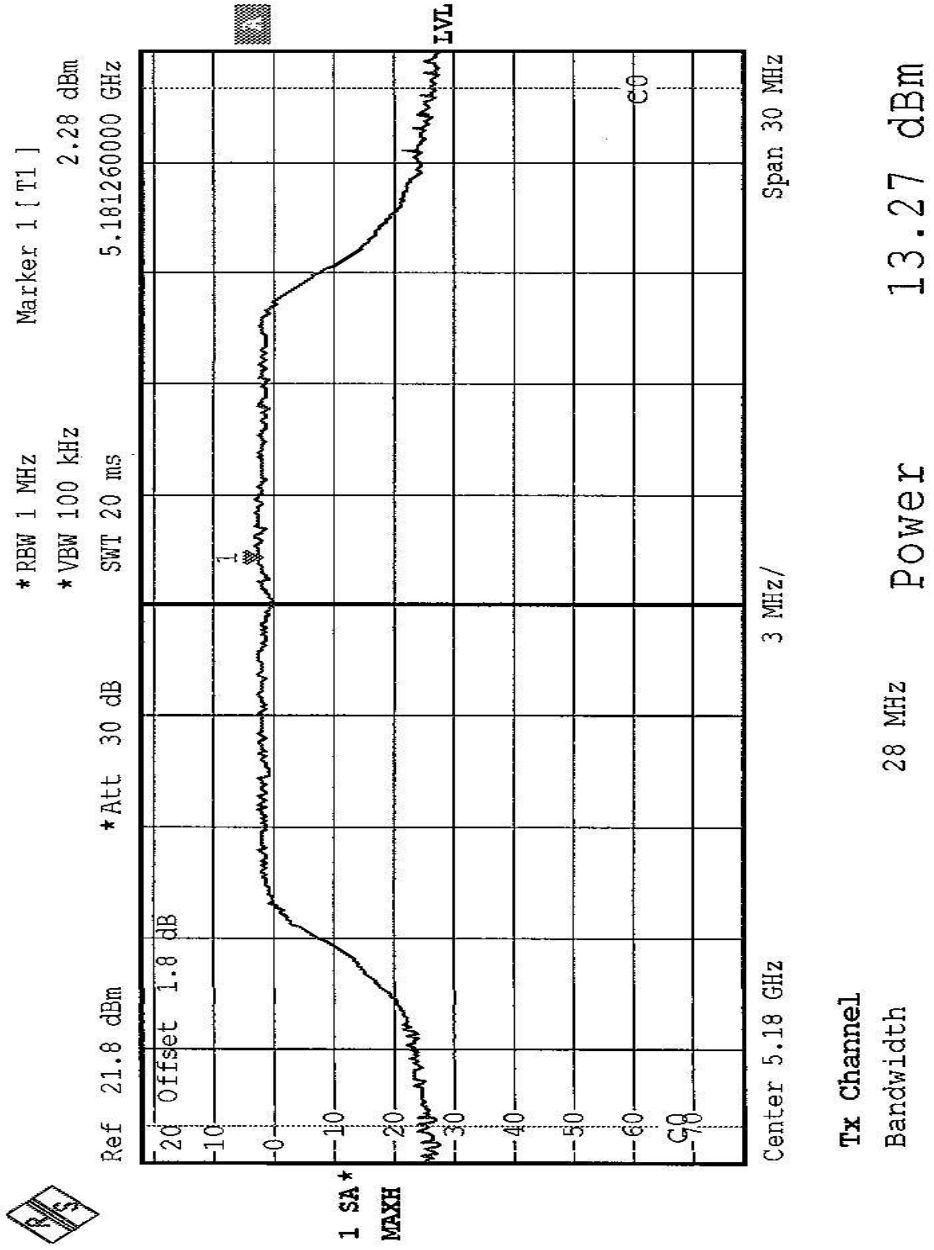
5.3.7 TEST RESULTS

EUT	Dual-Band Wireless A+G Access Point	**MODEL**	WAP55AG
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 64%RH, 1005hPa	**TESTED BY**	Steven Lu

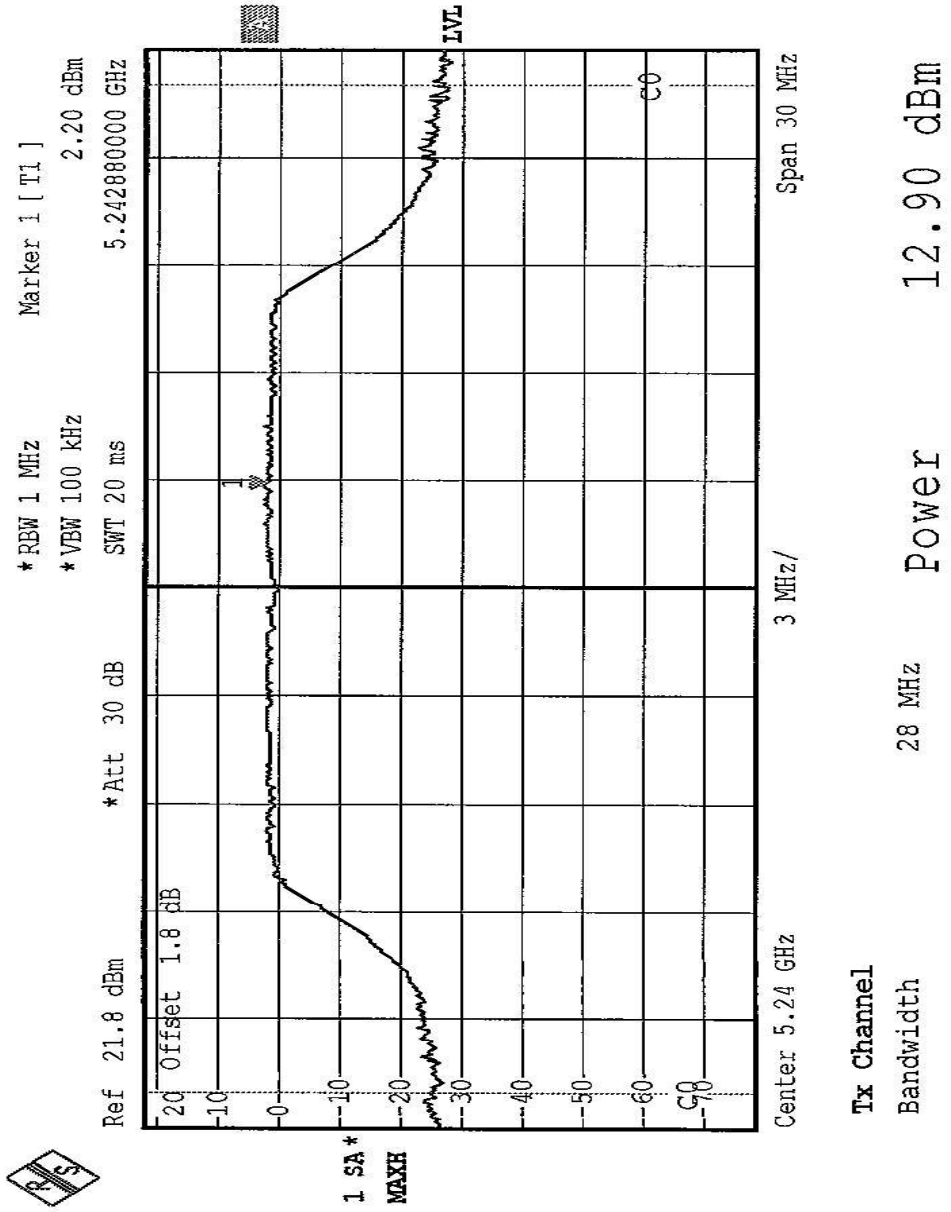
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	13.27	17.00	33.60	PASS
4	5240	12.90	17.00	32.00	PASS
5	5260	14.99	24.00	36.48	PASS
8	5320	13.39	24.00	33.28	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

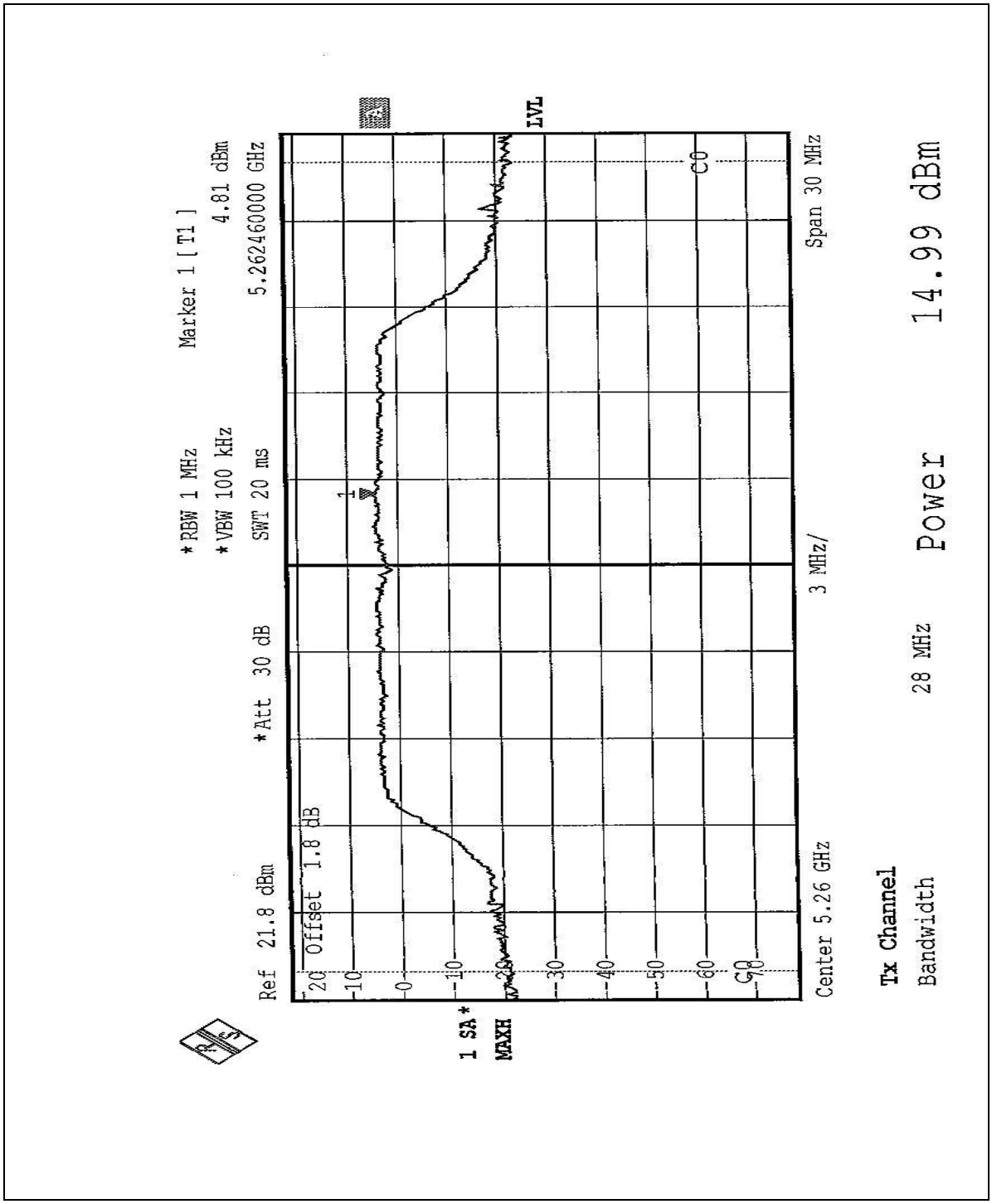
CHANNEL 1


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
2.28 dBm
5.181260000 GHz
1 SA*
MAXH
IVL
Center 5.18 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
28 MHz
Power
13.27 dBm

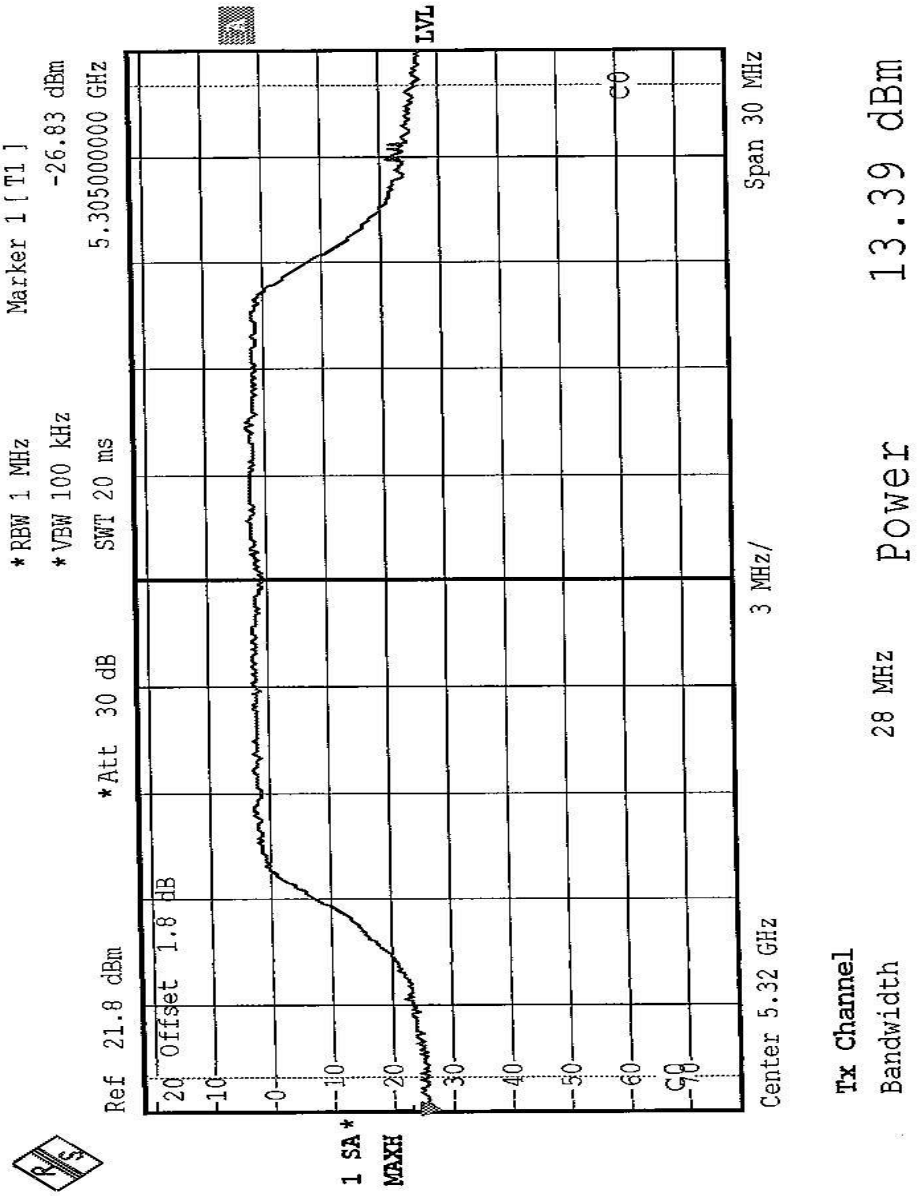
CHANNEL 4


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
2.20 dBm
5.242880000 GHz
1 SA *
MAXH
IVL
Center 5.24 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
28 MHz
Power
12.90 dBm

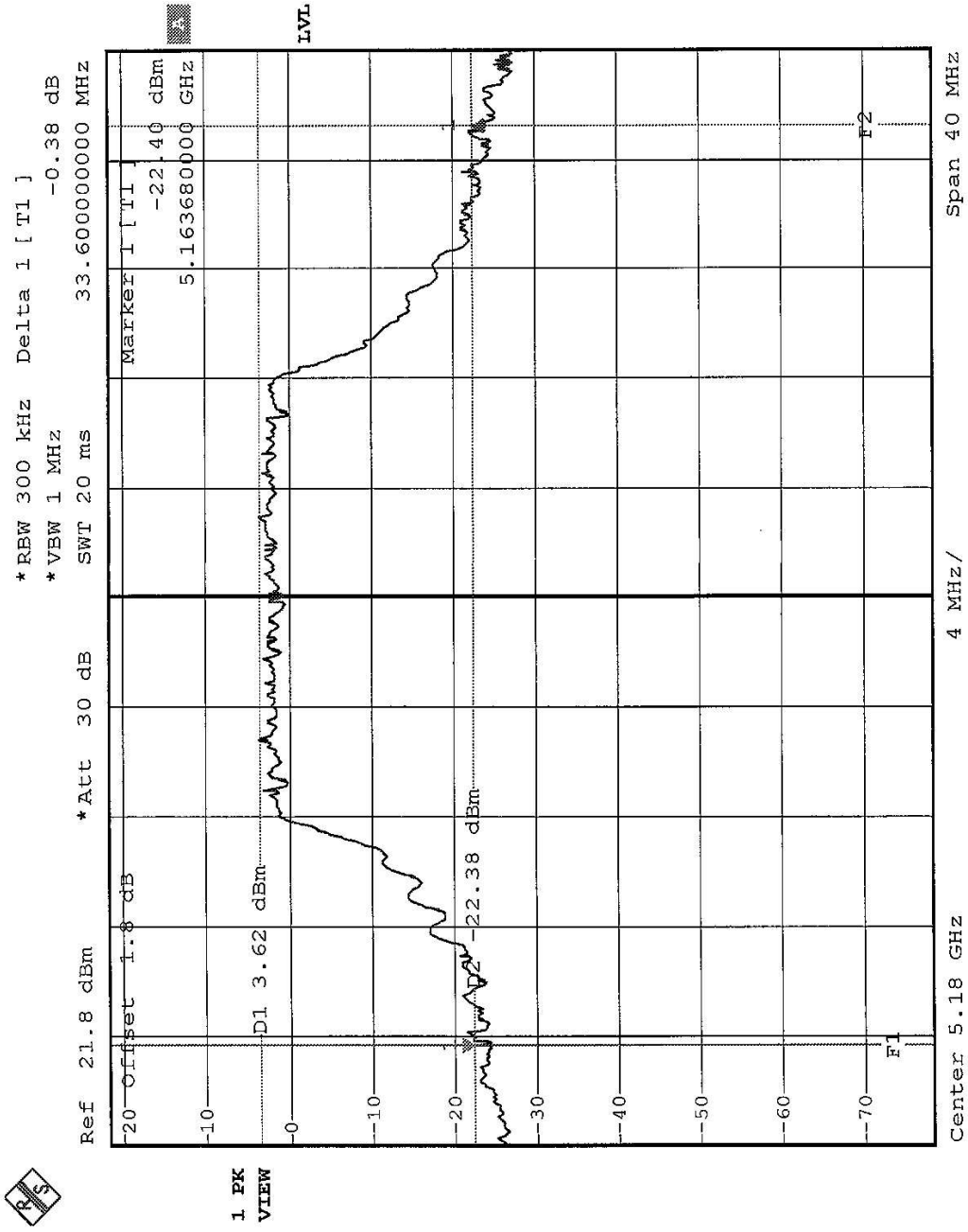
CHANNEL 5


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
4.81 dBm
5.262460000 GHz
1 SA*
MAXH
IVL
Center 5.26 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
28 MHz
Power
14.99 dBm

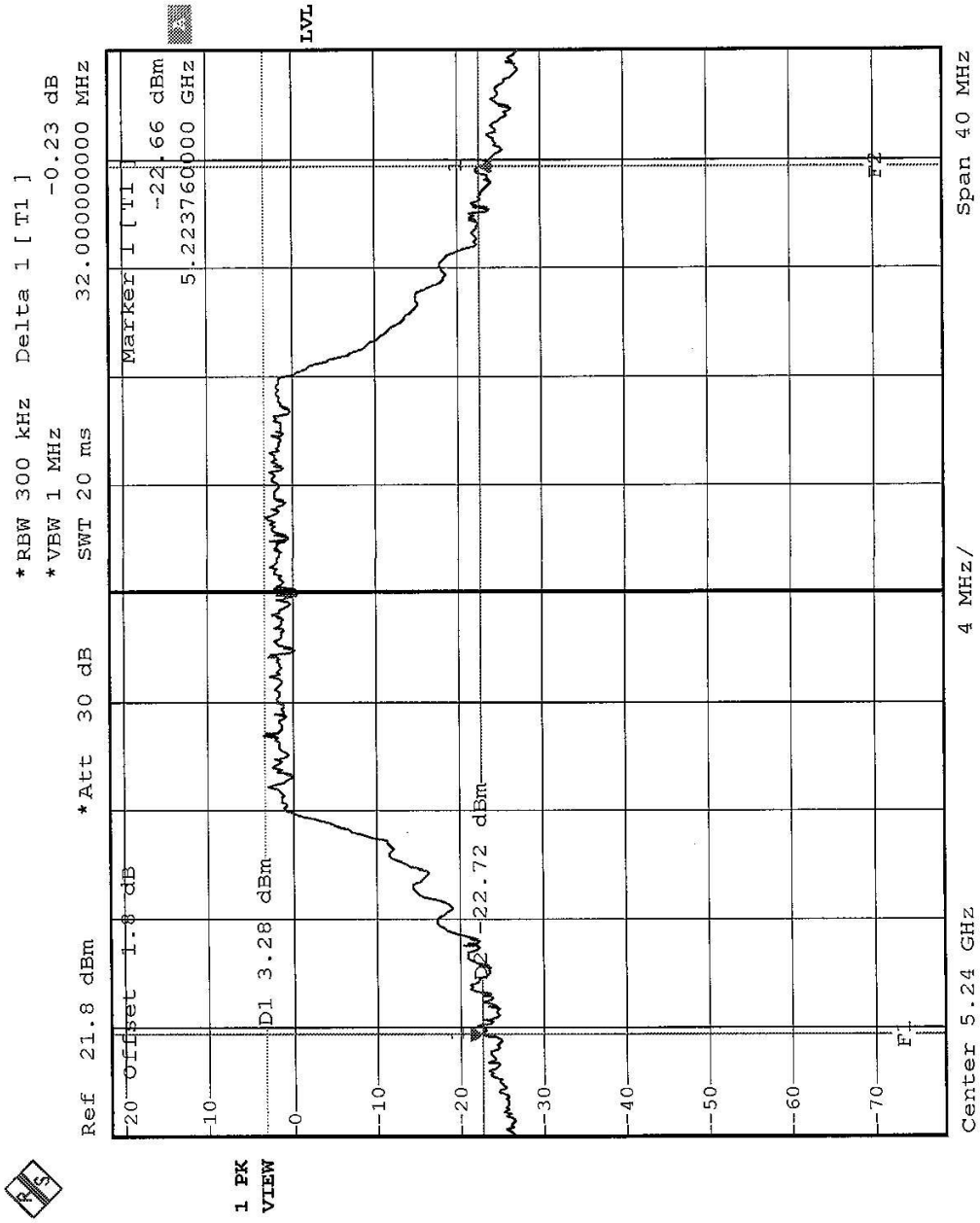
CHANNEL 8


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
-26.83 dBm
5.305000000 GHz
1 SA*
MAXH
LVL
Center 5.32 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
28 MHz
Power
13.39 dBm

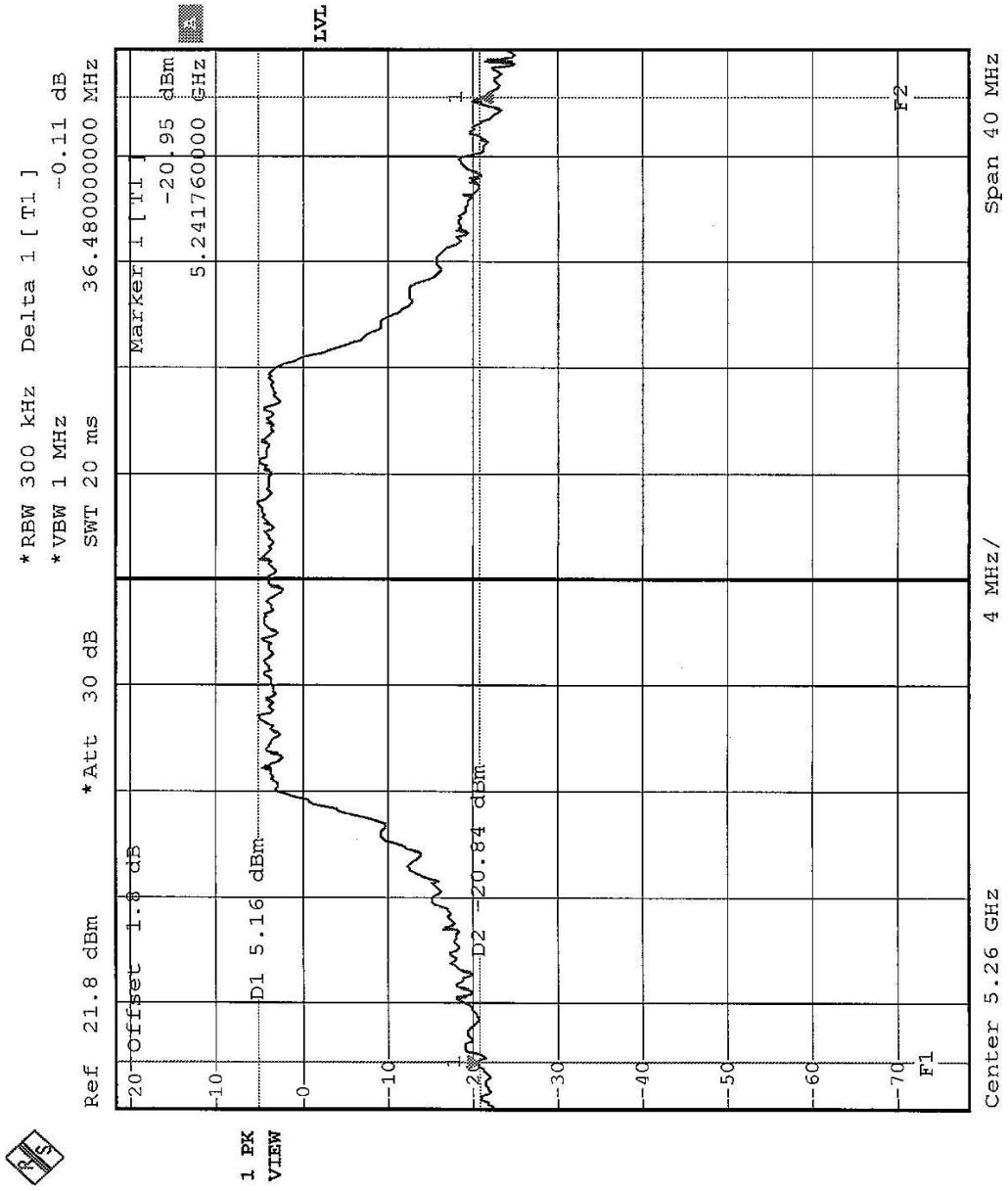
CHANNEL 1


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.38 dB
33.60000000 MHz
Marker 1 [T1]
-22.40 dBm
5.16368000 GHz
D1 3.62 dBm
D2 -22.38 dBm
1 PK
VIEW
LVL
F1
F2
Center 5.18 GHz
4 MHz/
Span 40 MHz

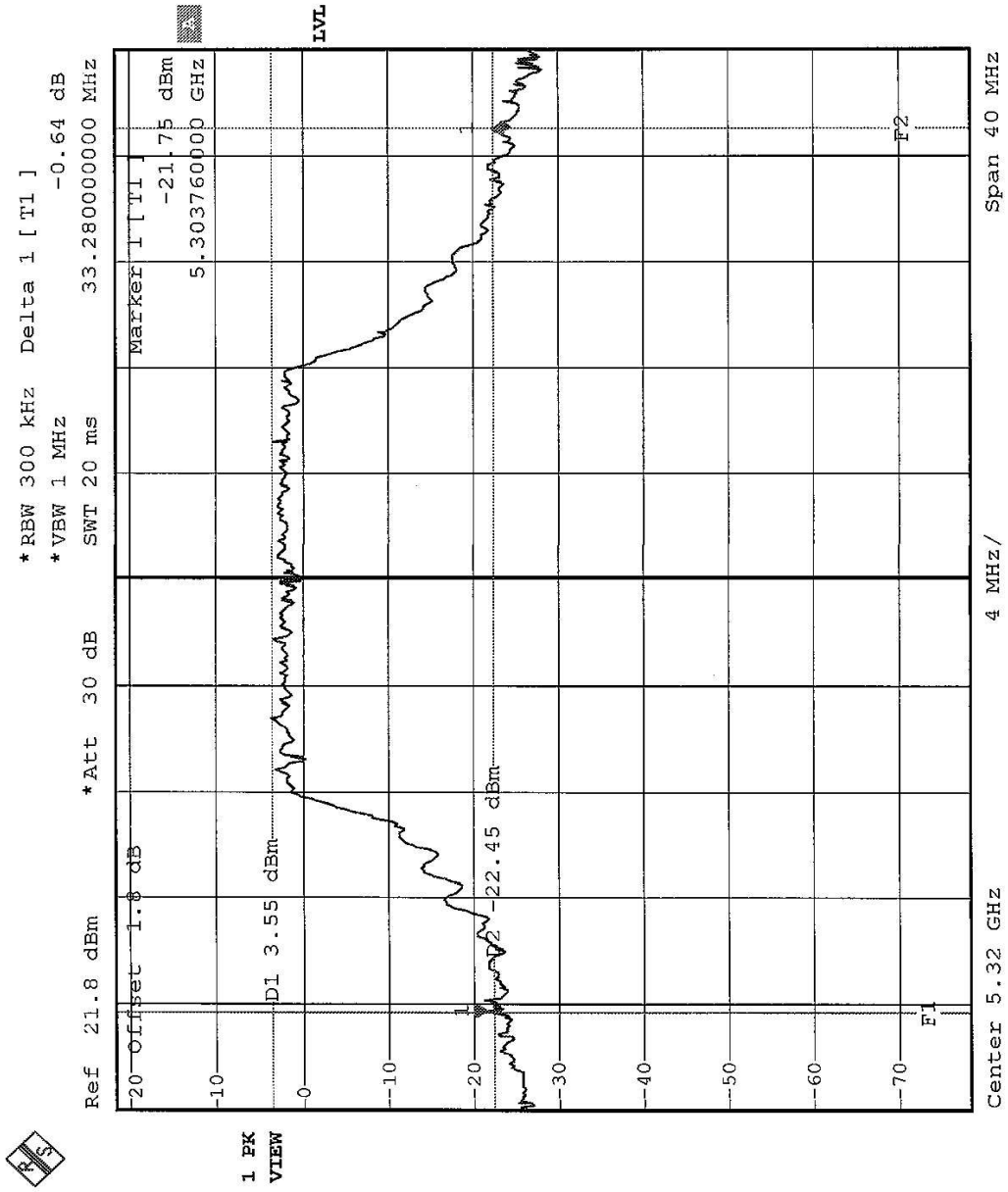
CHANNEL 4


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.23 dB
32.000000000 MHz
Marker 1 [T1]
-22.66 dBm
5.223760000 GHz
D1 3.28 dBm
D2 -22.72 dBm
1 PK
VIEW
LVL
Center 5.24 GHz
4 MHz/
Span 40 MHz

CHANNEL 5


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.11 dB
36.48000000 MHz
Marker 1 [T1]
-20.95 dBm
5.241760000 GHz
D1 5.16 dBm
D2 -20.84 dBm
1 PK
VIEW
LVL
Center 5.26 GHz
4 MHz/
Span 40 MHz
F1
F2

CHANNEL 8

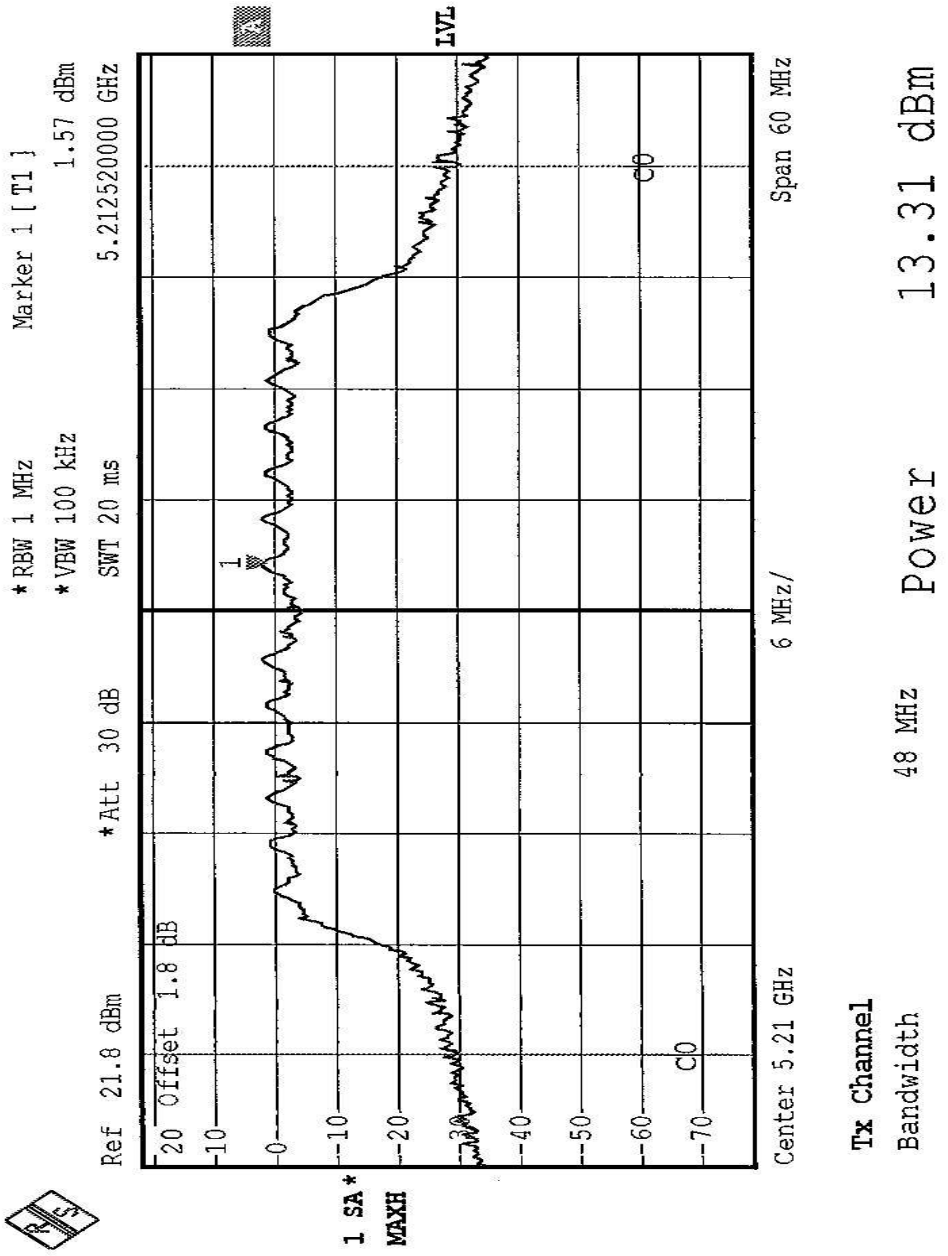

Ref 21.8 dBm
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.64 dB
33.28000000 MHz
Marker 1 [T1]
-21.75 dBm
5.30376000 GHz
Offset 1.8 dB
D1 3.55 dBm
-22.45 dBm
1 PK
VIEW
LVL
Center 5.32 GHz
4 MHz/
Span 40 MHz

EUT	Dual-Band Wireless A+G Access Point	**MODEL**	WAP55AG
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 1005hPa	**TESTED BY**	Steven Lu

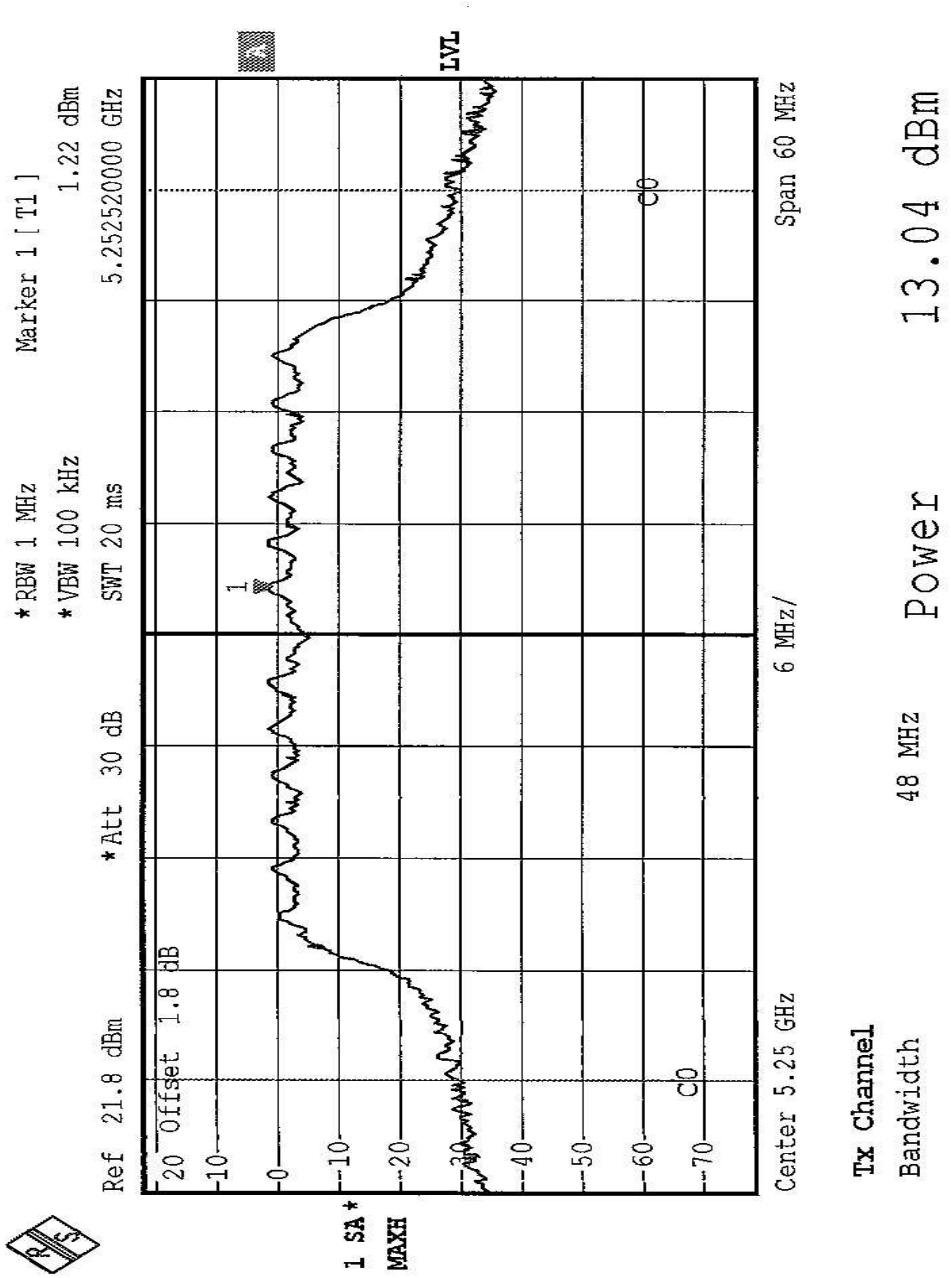
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	13.31	17.00	48.84	PASS
2	5250	13.04	17.00	48.84	PASS
3	5290	12.75	24.00	47.40	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

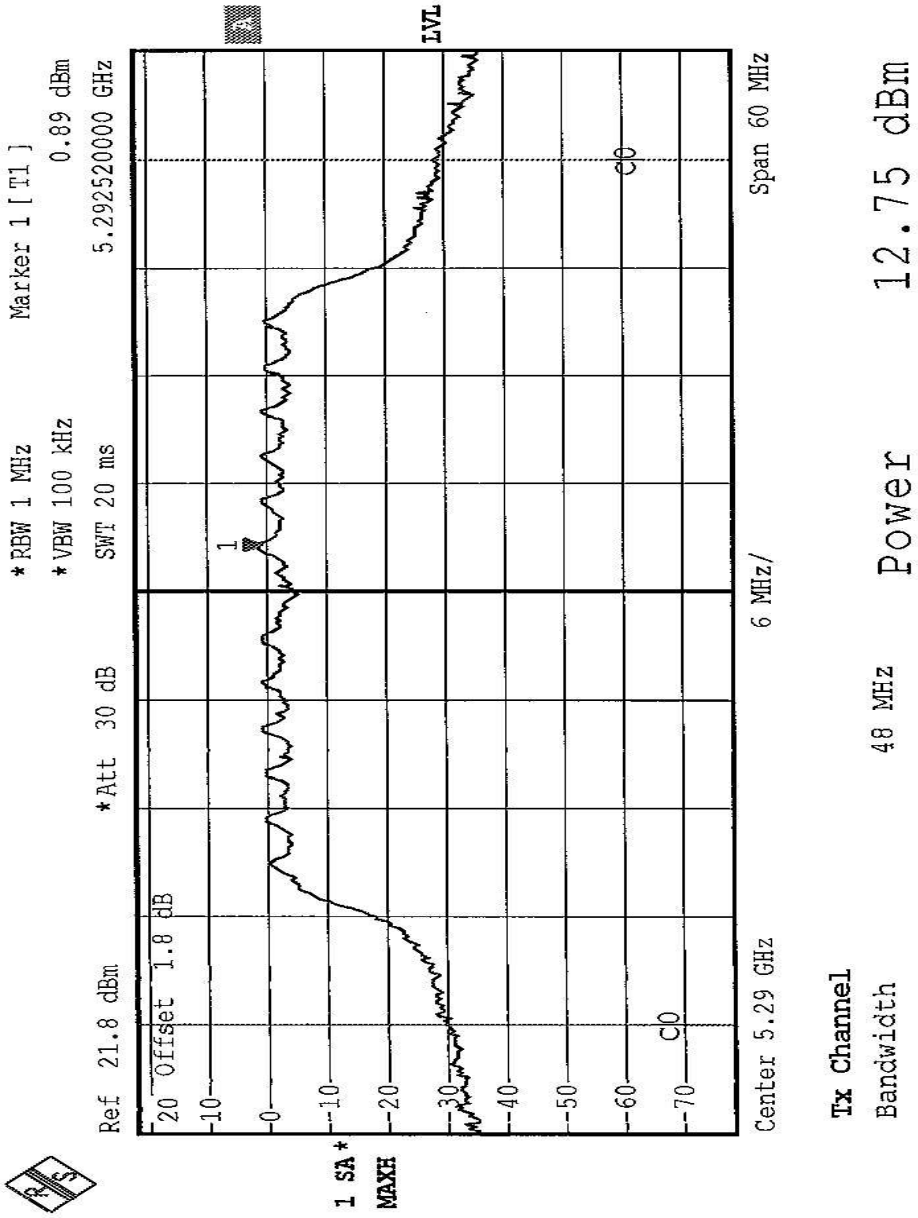
CHANNEL 1


Ref 21.8 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
1.57 dBm
5.212520000 GHz
Offset 1.8 dB
1 SA*
MAXH
LVL
Center 5.21 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth
48 MHz
Power
13.31 dBm

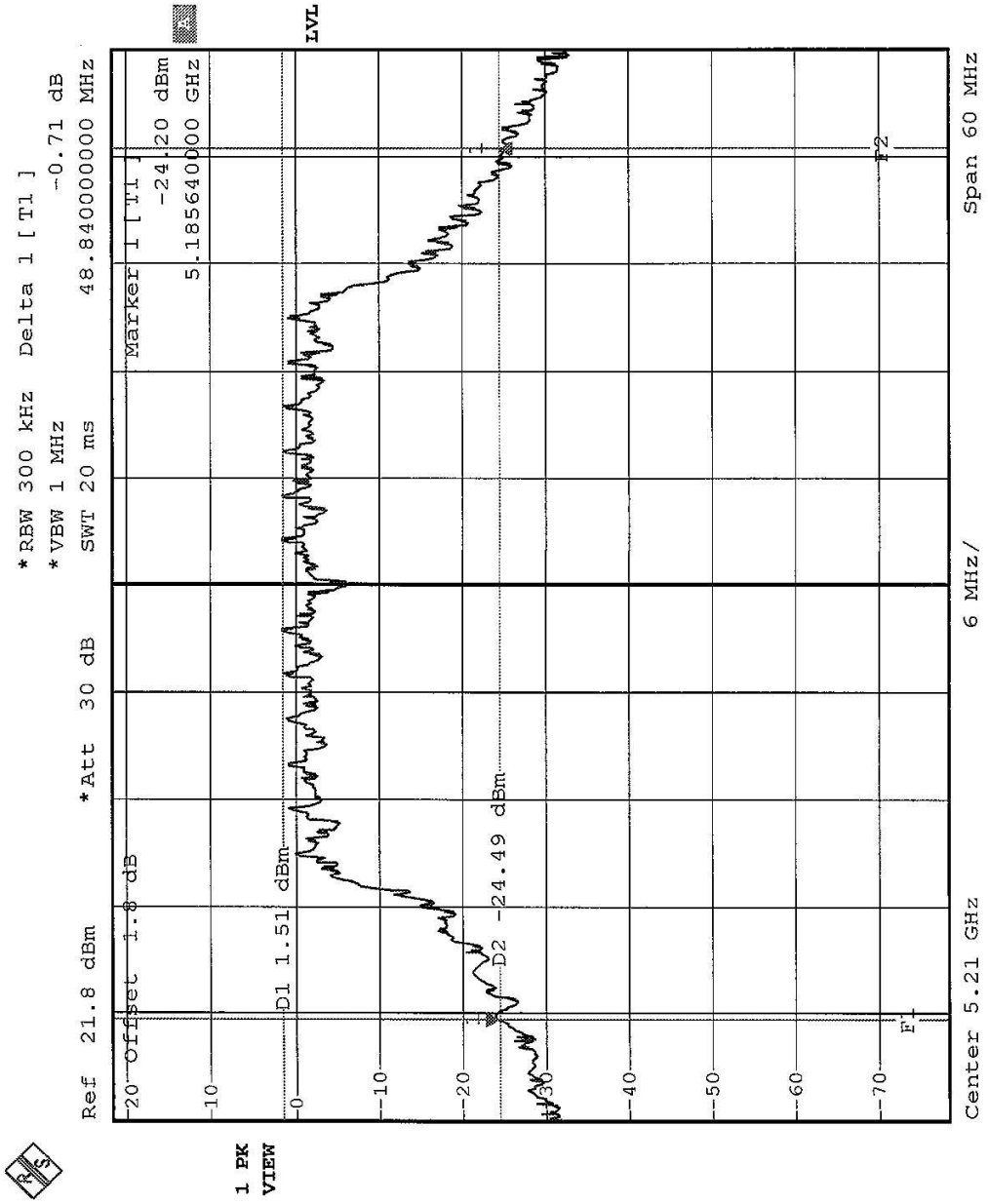
CHANNEL 2


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
1.22 dBm
5.252520000 GHz
1 SA *
MAXH
LVL
Center 5.25 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth
48 MHz
Power
13.04 dBm

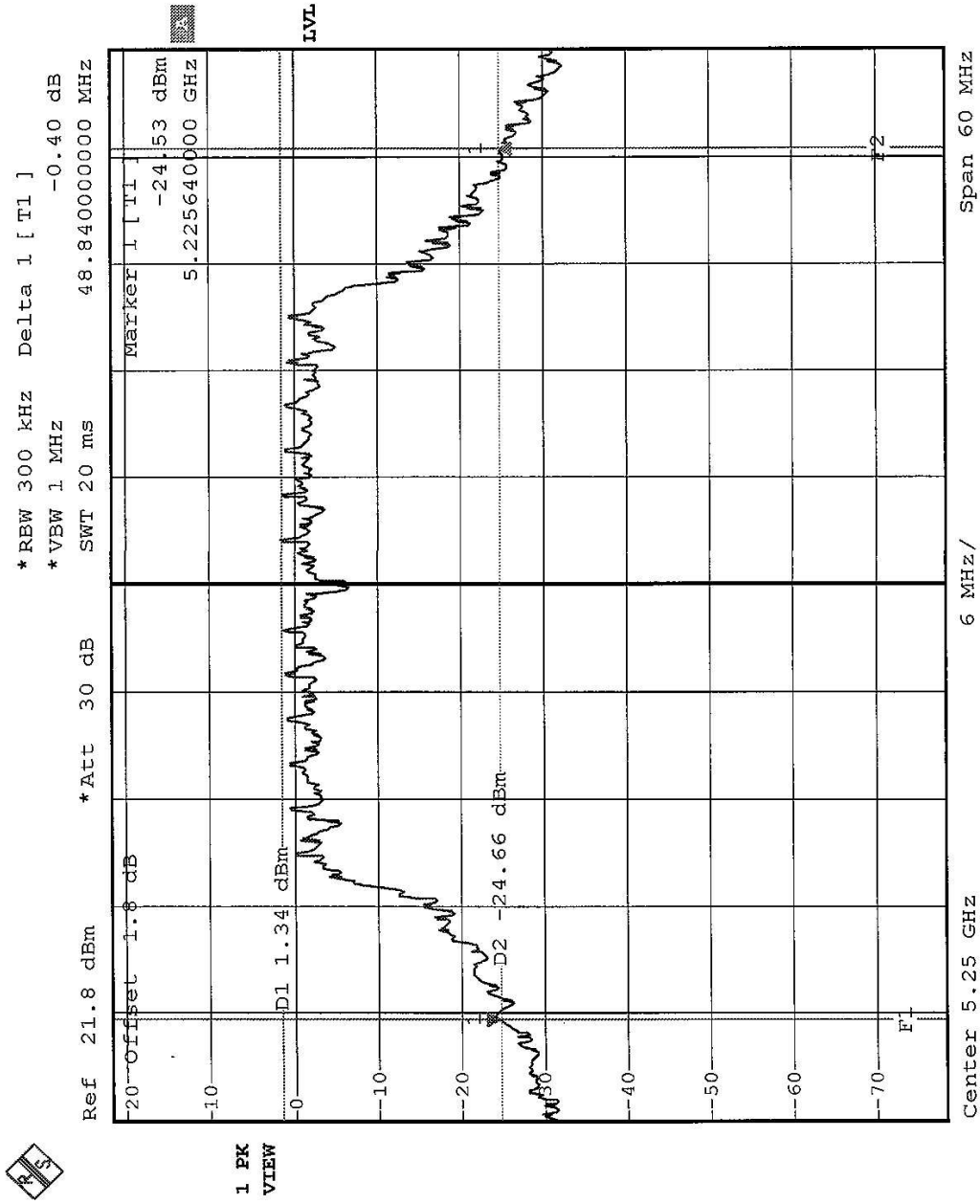
CHANNEL 3


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Marker 1 [T1]
0.89 dBm
5.292520000 GHz
1 SA *
MAXH
LVL
Center 5.29 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth
48 MHz
Power
12.75 dBm

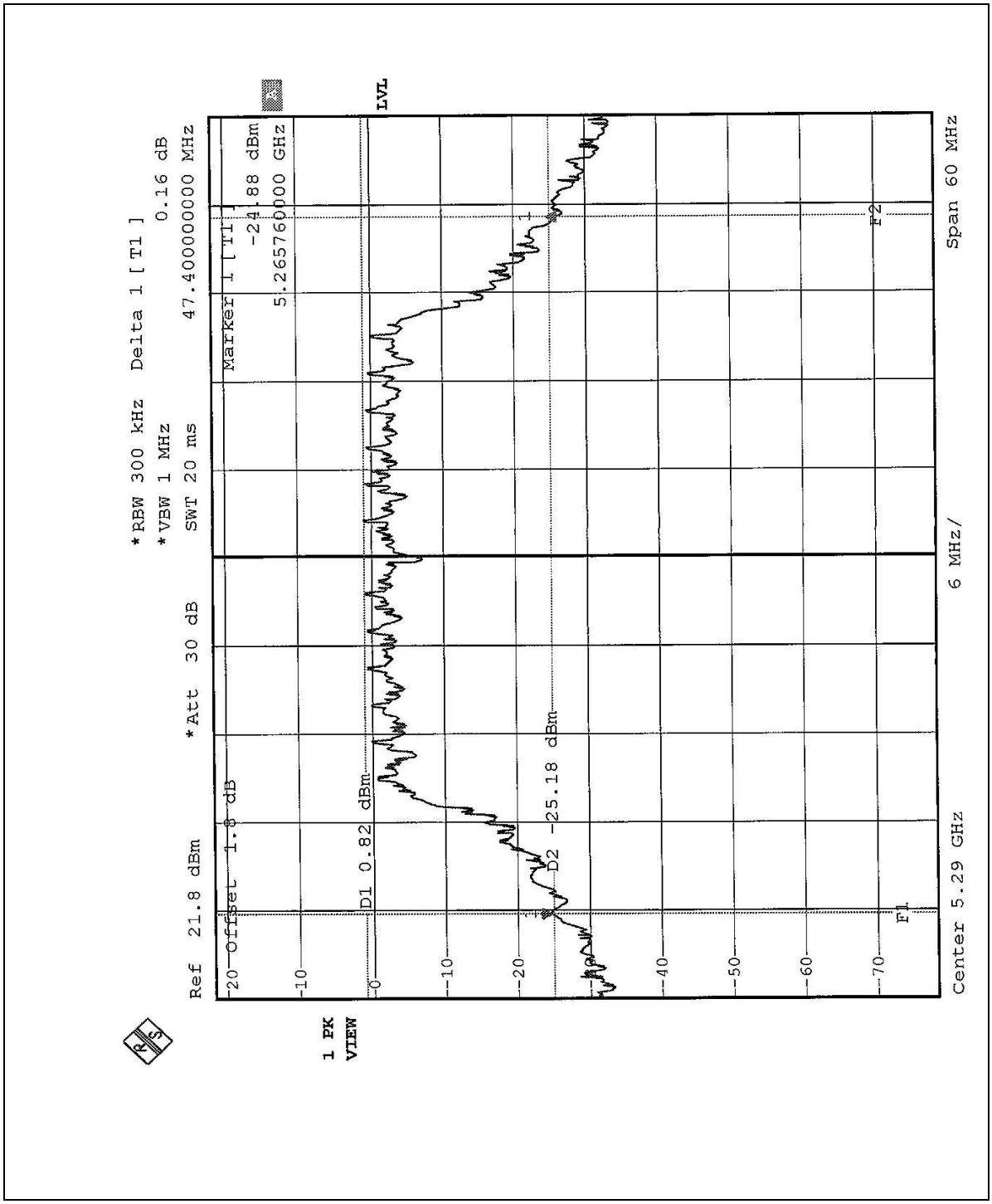
CHANNEL 1


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
* RBW 300 kHz
* VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.71 dB
48.840000000 MHz
Marker 1 [T1]
-24.20 dBm
5.185640000 GHz
D1 1.51 dBm
D2 -24.49 dBm
LVL
1 PK
VIEW
Center 5.21 GHz
6 MHz/
Span 60 MHz

CHANNEL 2


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
-0.40 dB
48.84000000 MHz
Marker 1 [T1]
-24.53 dBm
5.22564000 GHz
D1 1.34 dBm
D2 -24.66 dBm
1 PK
VIEW
LVL
Center 5.25 GHz
6 MHz/
Span 60 MHz

CHANNEL 3


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 300 kHz
*VBW 1 MHz
SWT 20 ms
Delta 1 [T1]
0.16 dB
47.40000000 MHz
Marker 1 [T1]
-24.88 dBm
5.26576000 GHz
D1 0.82 dBm
D2 -25.18 dBm
LVL
1 PK
VIEW
Center 5.29 GHz
6 MHz/
Span 60 MHz

5.4 PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

5.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

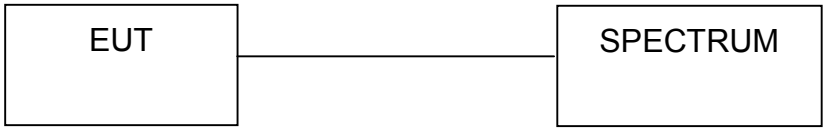
5.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=100KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

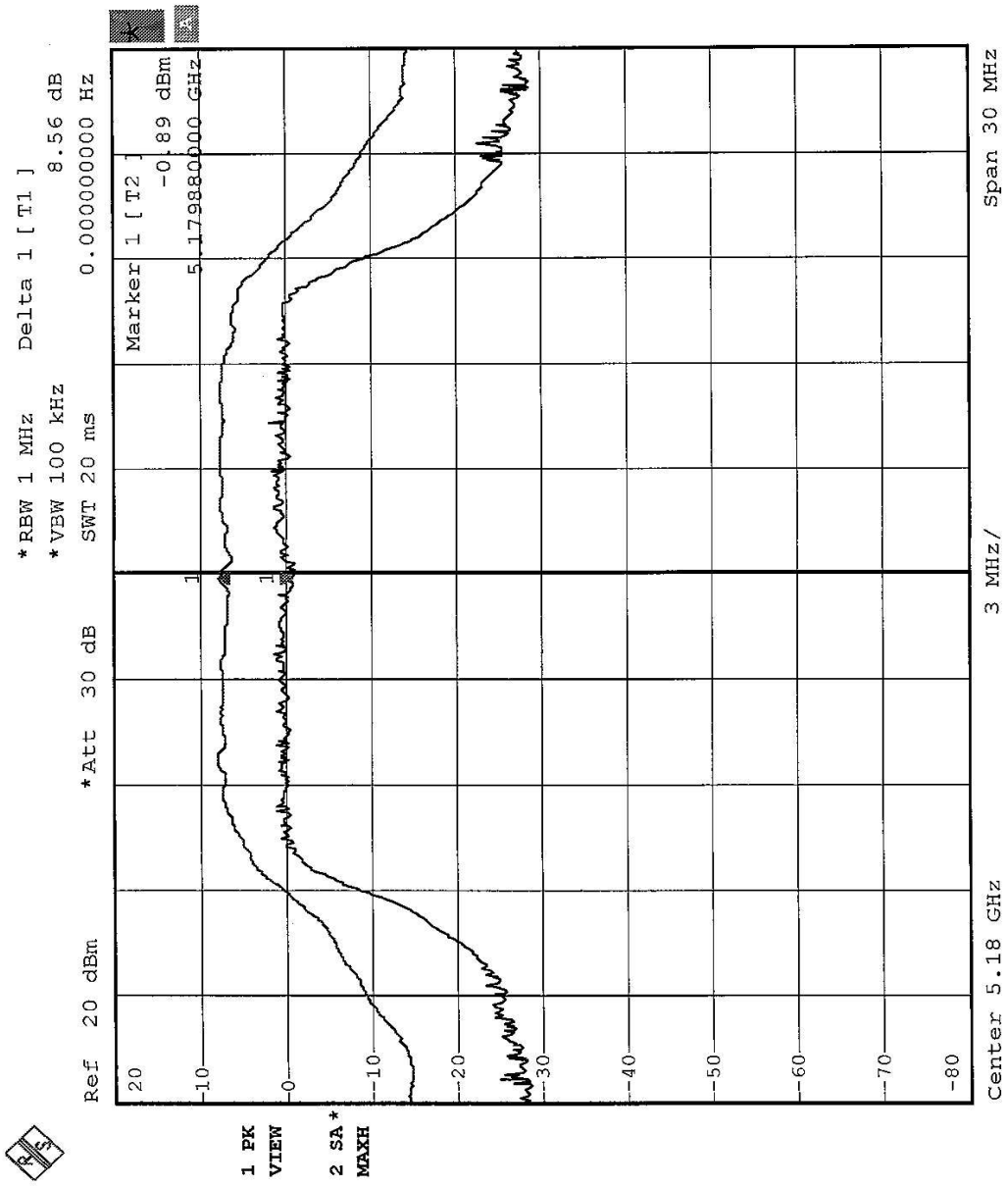
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

5.4.7 TEST RESULTS

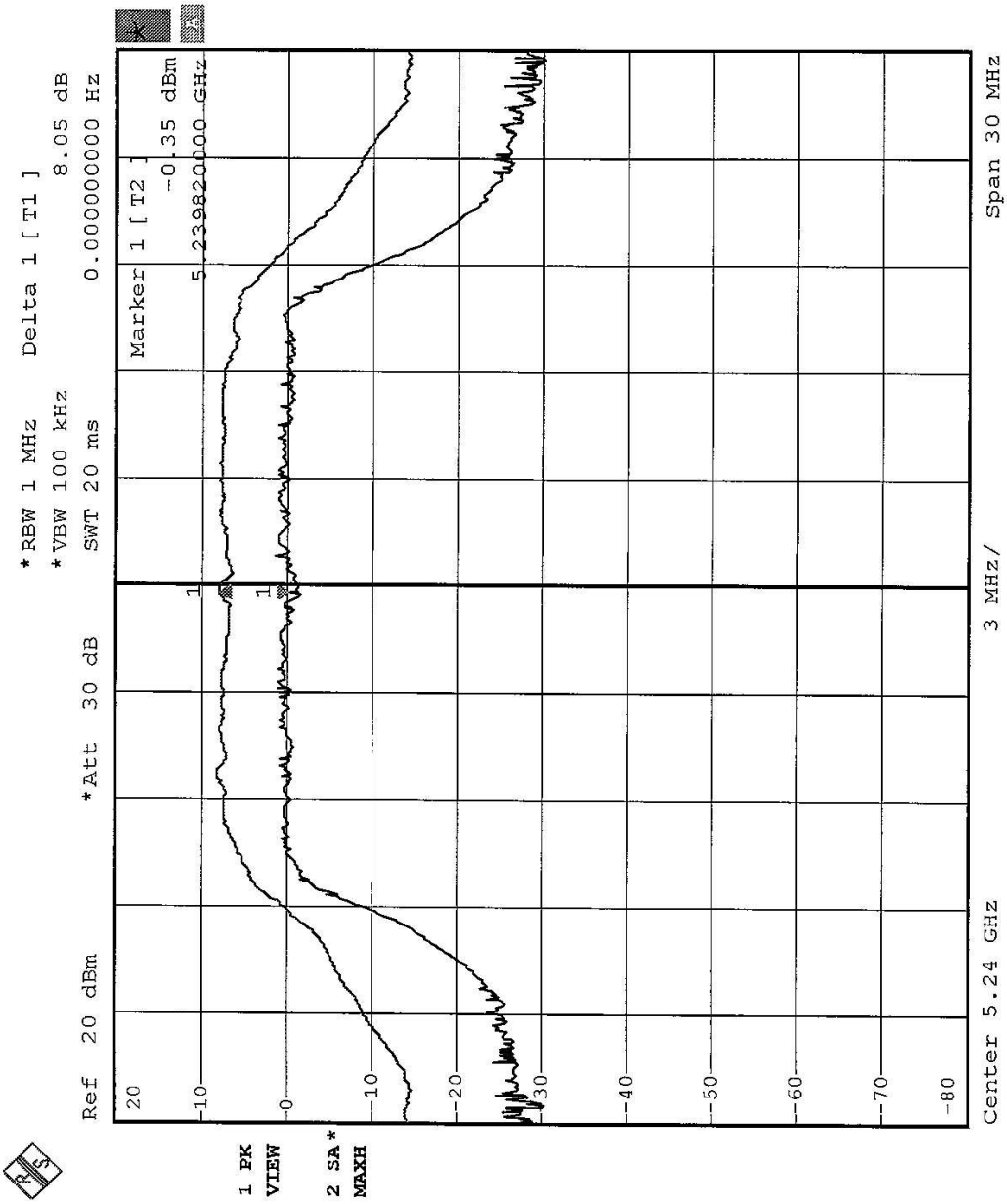
EUT	Dual-Band Wireless A+G Access Point	**MODEL**	WAP55AG
MODE	Normal	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	23deg. C, 64%RH, 1005hPa	**TESTED BY**	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	8.56	13	PASS
4	5240	8.05	13	PASS
5	5260	8.81	13	PASS
8	5320	9.22	13	PASS

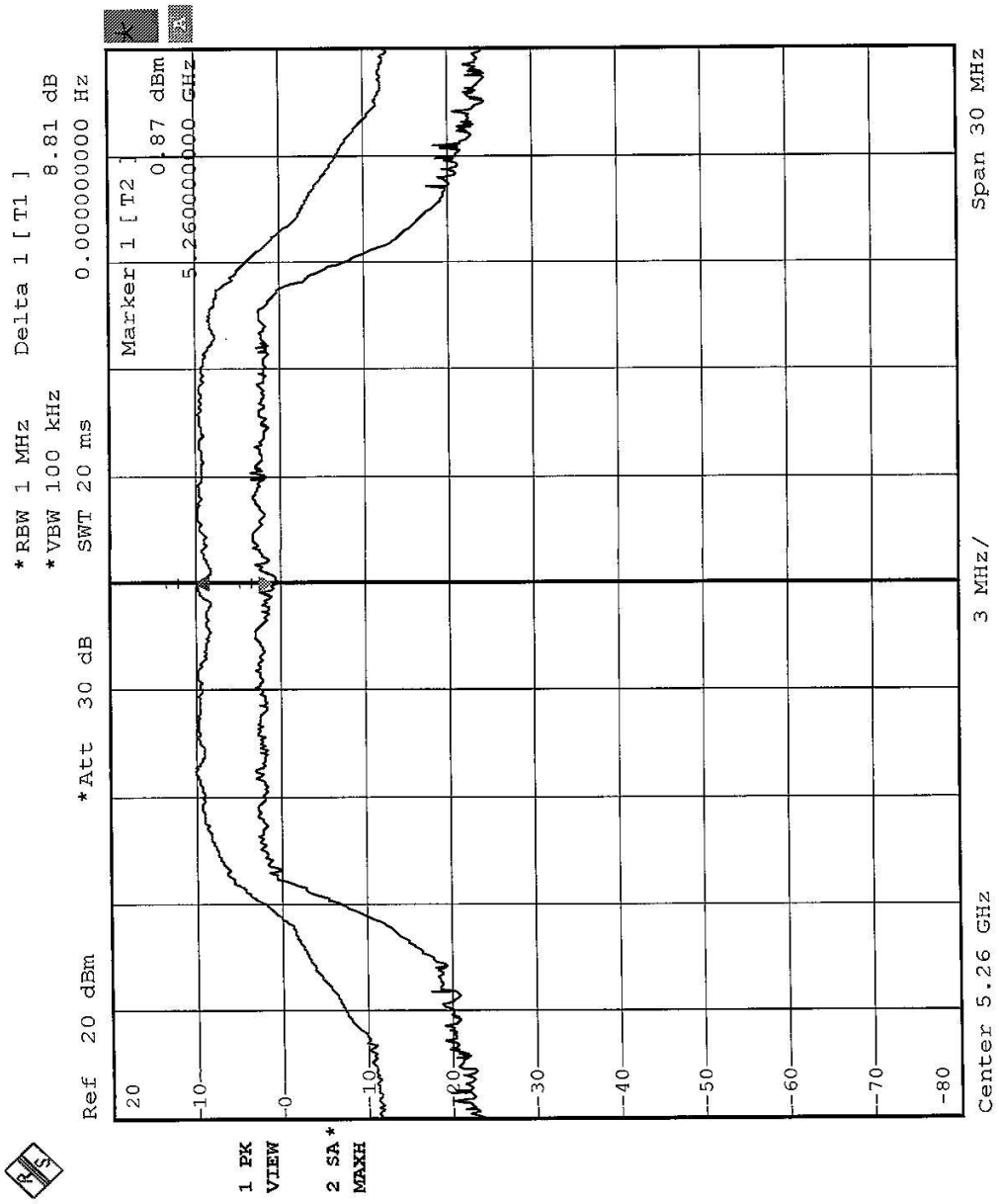
CHANNEL 1


Ref 20 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
8.56 dB
0.00000000 Hz
Marker 1 [T2]
-0.89 dBm
5.17980000 GHz
1 PK
VIEW
2 SA*
MAXH
Center 5.18 GHz
3 MHz/
Span 30 MHz

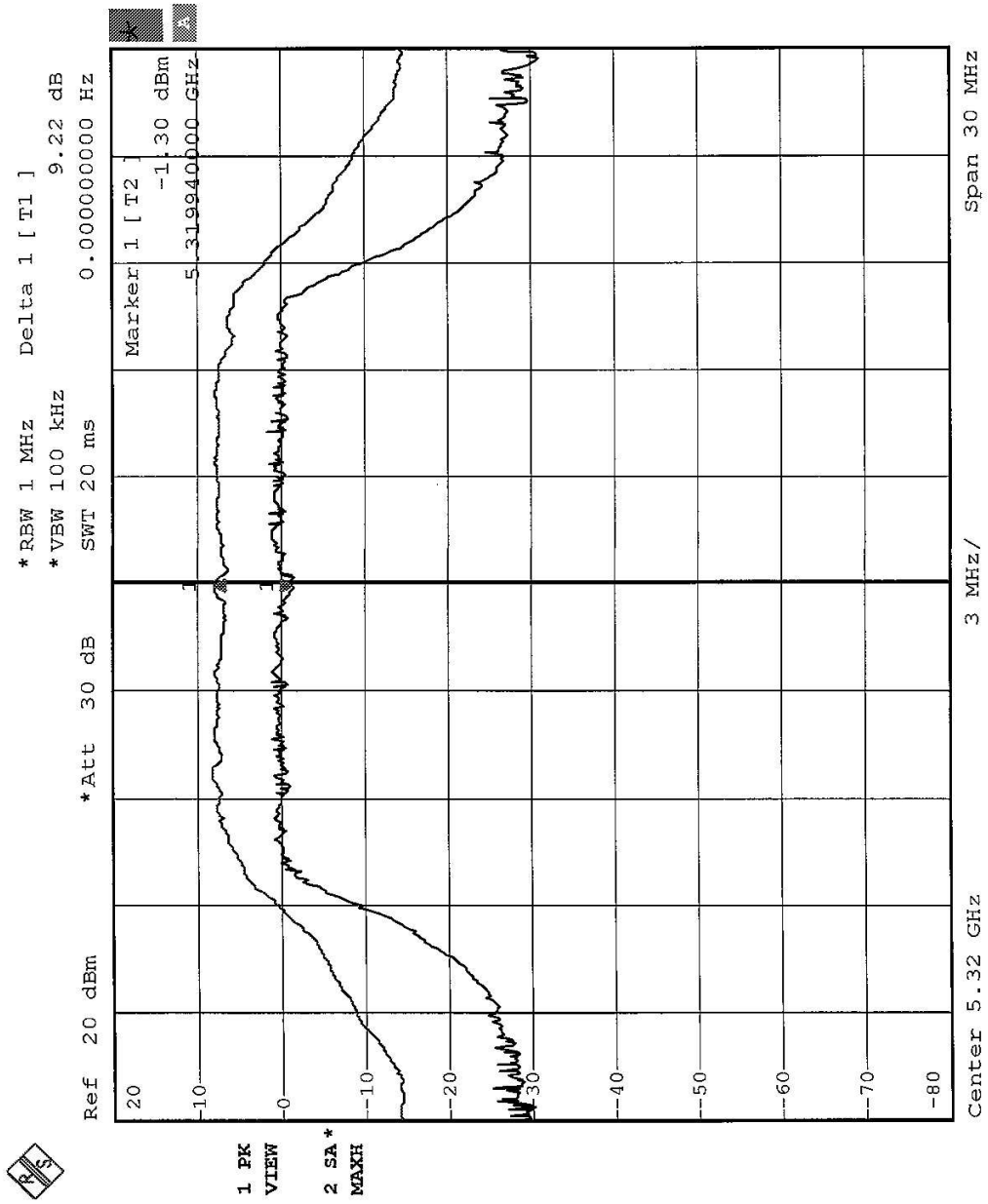
CHANNEL 4


Ref 20 dBm
*Att 30 dB
SWT 20 ms
*RBW 1 MHz
*VBW 100 kHz
Delta 1 [T1]
8.05 dB
0.00000000 Hz
Marker 1 [T2]
-0.35 dBm
5.23982000 GHz
1 PK
VIEW
2 SA *
MAXH
Center 5.24 GHz
3 MHz/
Span 30 MHz

CHANNEL 5


Ref 20 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
8.81 dB
0.00000000 Hz
Marker 1 [T2]
0.87 dBm
5.26000000 GHz
1 PK
VIEW
2 SA *
MAXH
Center 5.26 GHz
3 MHz/
Span 30 MHz

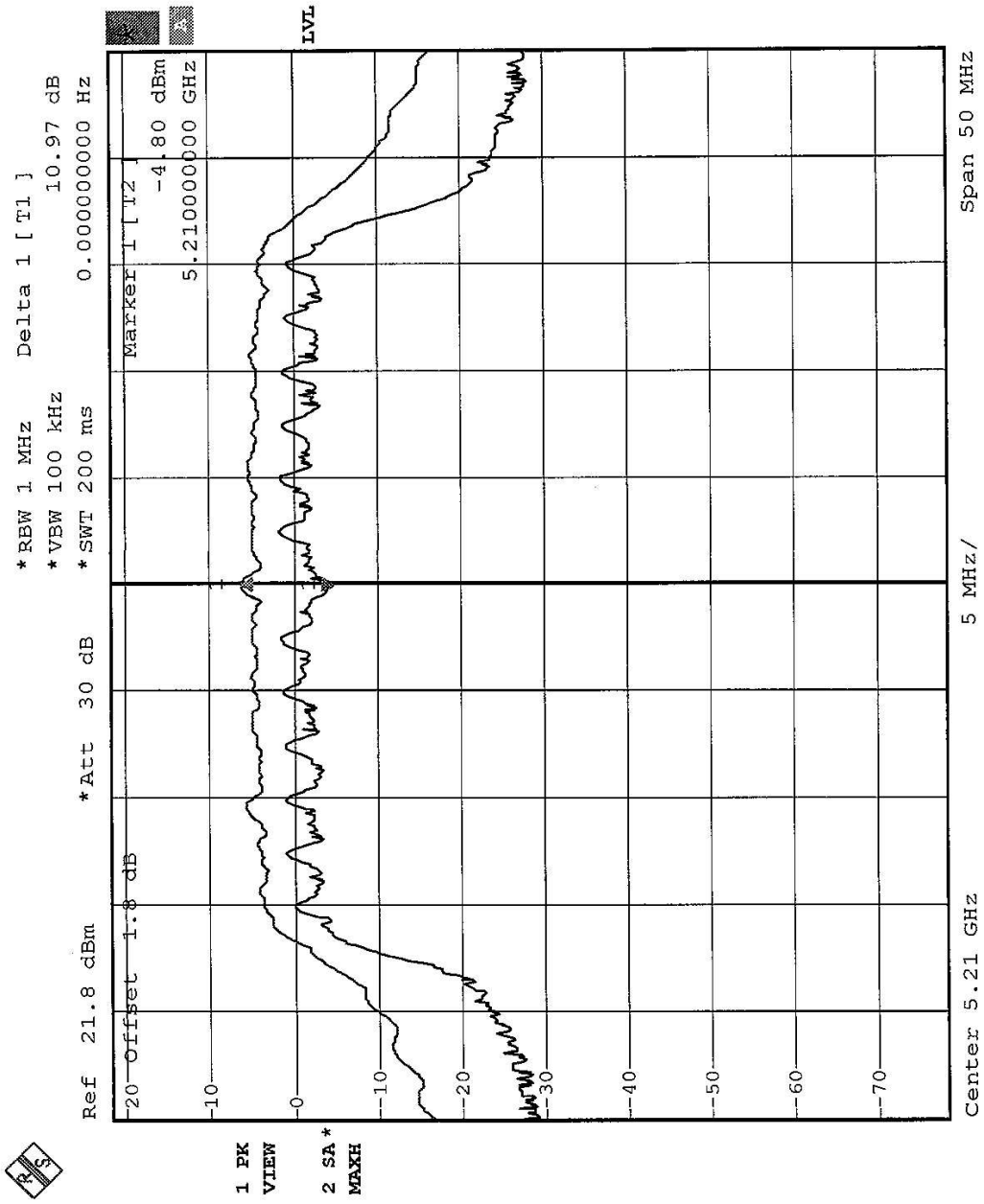
CHANNEL 8


Ref 20 dBm
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
SWT 20 ms
Delta 1 [T1]
9.22 dB
0.000000000 Hz
Marker 1 [T2]
-1.30 dBm
5.319940000 GHz
1 PK
VIEW
2 SA *
MAXH
Center 5.32 GHz
3 MHz/
Span 30 MHz

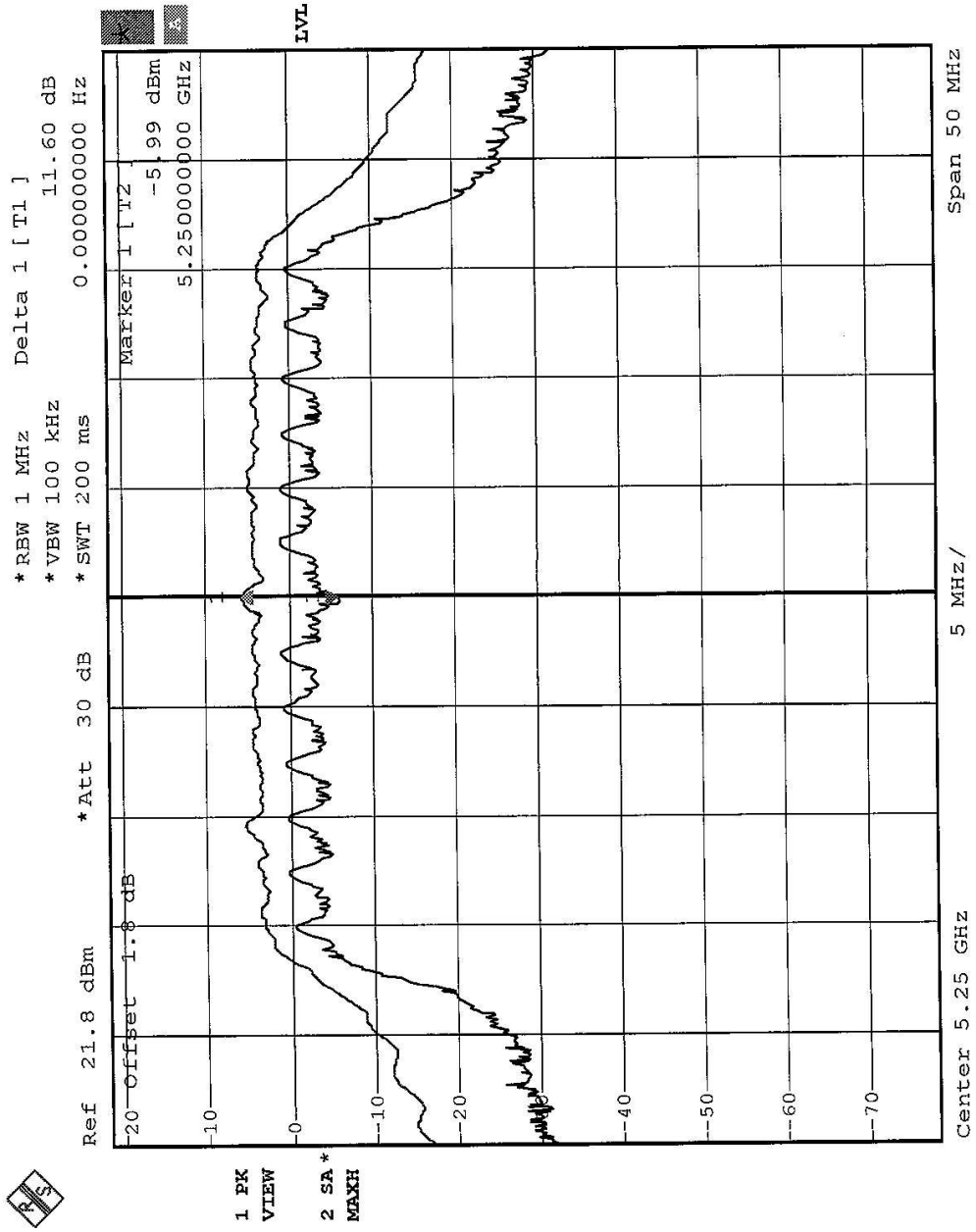
EUT	Dual-Band Wireless A+G Access Point	**MODEL**	WAP55AG
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH, 1005hPa	**TESTED BY**	Steven Lu

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	10.97	13	PASS
2	5250	11.60	13	PASS
3	5290	11.76	13	PASS

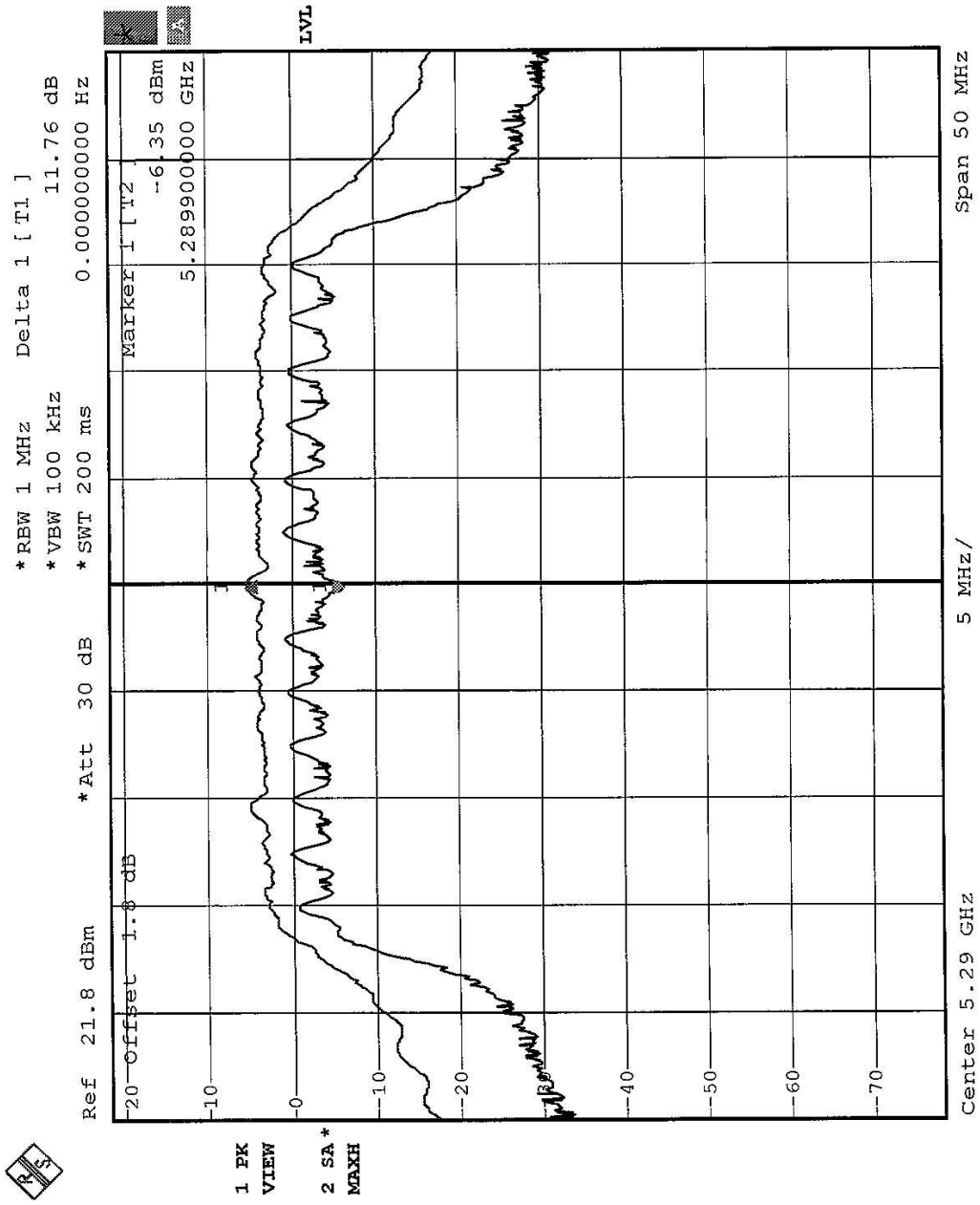
CHANNEL 1


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
*SWT 200 ms
Delta 1 [T1]
10.97 dB
0.000000000 Hz
Marker 1 [T2]
-4.80 dBm
5.210000000 GHz
1 PK VIEW
2 SA* MAXH
LVL
Center 5.21 GHz
5 MHz/
Span 50 MHz

CHANNEL 2


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
*SWT 200 ms
Delta 1 [T1]
11.60 dB
0.000000000 Hz
Marker 1 [T2]
-5.99 dBm
5.250000000 GHz
1 PK VIEW
2 SA * MAXH
LVL
Center 5.25 GHz
5 MHz/
Span 50 MHz

CHANNEL 3


Ref 21.8 dBm
Offset 1.8 dB
*Att 30 dB
*RBW 1 MHz
*VBW 100 kHz
*SWT 200 ms
Delta 1 [T1]
11.76 dB
0.00000000 Hz
Marker 1 [T2]
-6.35 dBm
5.28990000 GHz
LVL
1 PK
VIEW
2 SA*
MAXH
Center 5.29 GHz
5 MHz/
Span 50 MHz

5.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	4dBm
5.25 – 5.35 GHz	11dBm
5.725 – 5.825 GHz	17dBm

5.5.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	July 24, 2003

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.