

5 TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS30	847793/022	Mar. 12, 2003
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH2-Z5	828075/003	July 23, 2003
ROHDE & SCHWARZ 200-A Four-line V-Network	ENV4200	830326/018	Oct. 30, 2003
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Nov. 29, 2003
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/018	Nov. 29, 2003
EMCO-L.I.S.N. (for peripheral)	3825/2	90031627	July 23, 2003
Software	Cond-V2M1	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C05.01	July 19, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-305	Feb. 23, 2004
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 23, 2004

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. “*”: These equipment are used for conducted telecom port test only (if tested).
3. The test was performed in ADT Shielded Room No. 5.
4. The VCCI Site Registration No. is C-1093.



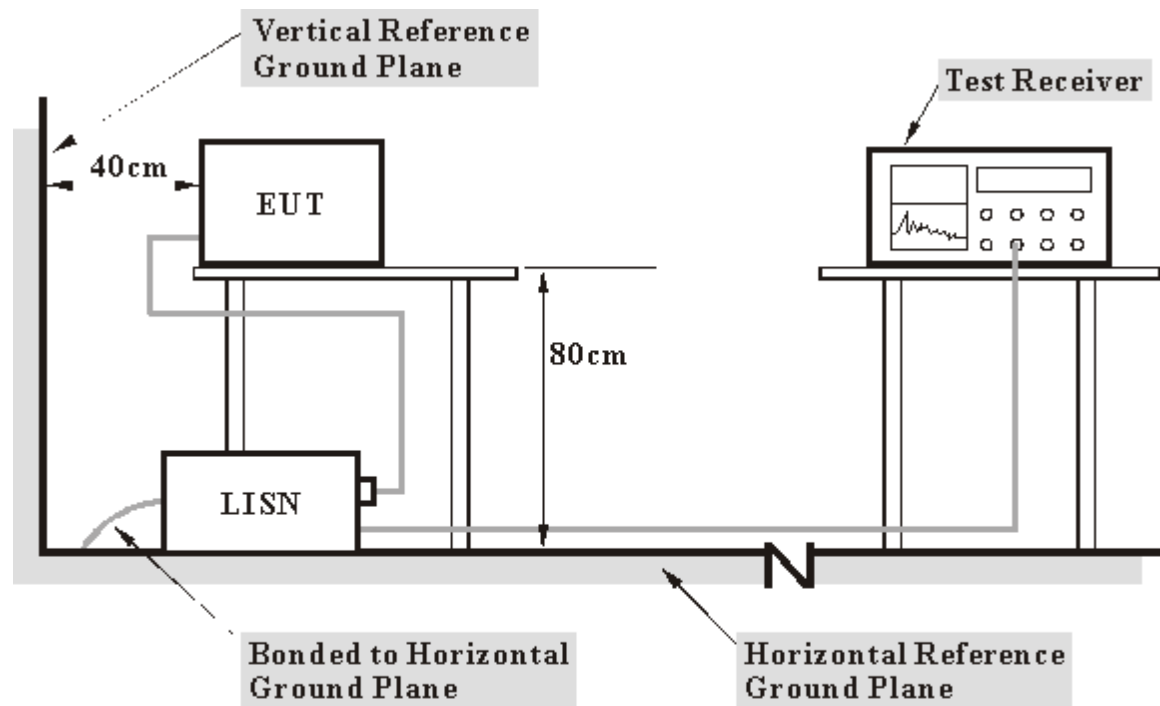
5.1.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP



- Note:**
1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.1.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

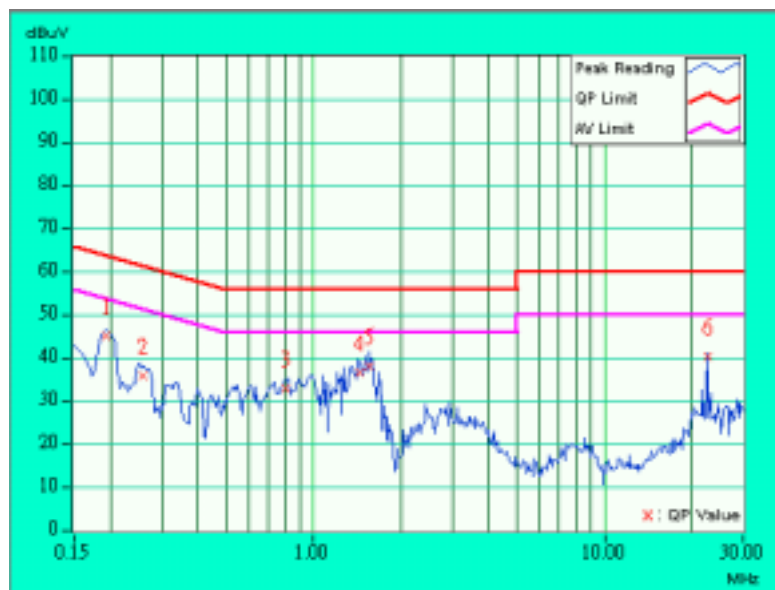
5.1.7 TEST RESULTS (TRANSMITTING)

EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 1005 hPa	TESTED BY: Cody Chang	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.193	0.10	43.95	-	44.05	-	63.91	53.91	-19.86	-
2	0.259	0.10	34.64	-	34.74	-	61.45	51.45	-26.71	-
3	0.806	0.17	31.81	-	31.98	-	56.00	46.00	-24.02	-
4	1.445	0.20	35.44	-	35.64	-	56.00	46.00	-20.36	-
5	1.563	0.20	37.17	-	37.37	-	56.00	46.00	-18.63	-
6	22.570	1.15	39.30	-	40.45	-	60.00	50.00	-19.55	-

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

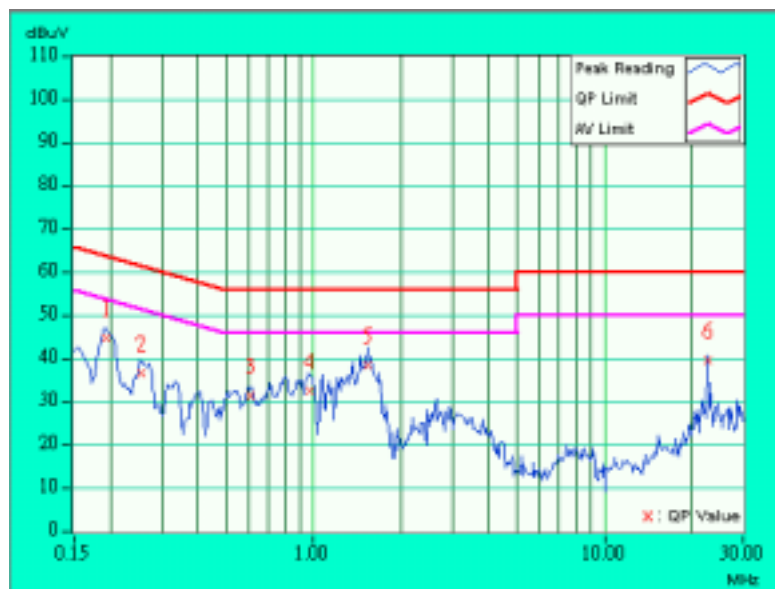


EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 1005 hPa	TESTED BY: Cody Chang	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.193	0.10	44.09	-	44.19	-	63.91	53.91	-19.72	-
2	0.255	0.10	35.86	-	35.96	-	61.58	51.58	-25.62	-
3	0.607	0.13	30.75	-	30.88	-	56.00	46.00	-25.12	-
4	0.974	0.20	31.94	-	32.14	-	56.00	46.00	-23.86	-
5	1.535	0.20	37.89	-	38.09	-	56.00	46.00	-17.91	-
6	22.570	0.75	38.96	-	39.71	-	60.00	50.00	-20.29	-

NOTE:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



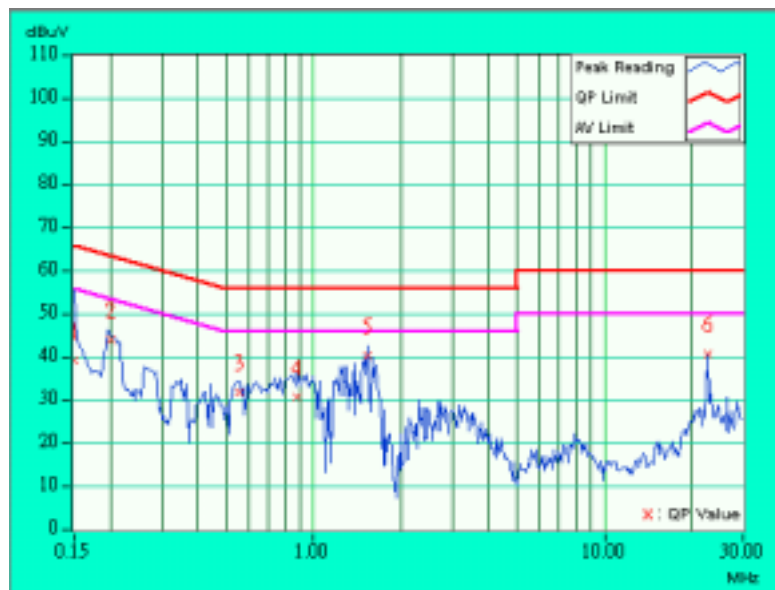
5.1.8 TEST RESULTS (RECEIVING)

EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 1005 hPa	TESTED BY: Cody Chang	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	38.13	-	38.23	-	66.00	56.00	-27.77	-
2	0.201	0.10	42.89	-	42.99	-	63.58	53.58	-20.59	-
3	0.552	0.13	30.57	-	30.70	-	56.00	46.00	-25.30	-
4	0.877	0.18	29.60	-	29.78	-	56.00	46.00	-26.22	-
5	1.531	0.20	39.04	-	39.24	-	56.00	46.00	-16.76	-
6	22.570	1.15	39.52	-	40.67	-	60.00	50.00	-19.33	-

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2."-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3.The emission levels of other frequencies were very low against the limit.
- 4.Margin value = Emission level - Limit value
- 5.Correction factor = Insertion loss + Cable loss
- 6.Emission Level = Correction Factor + Reading Value

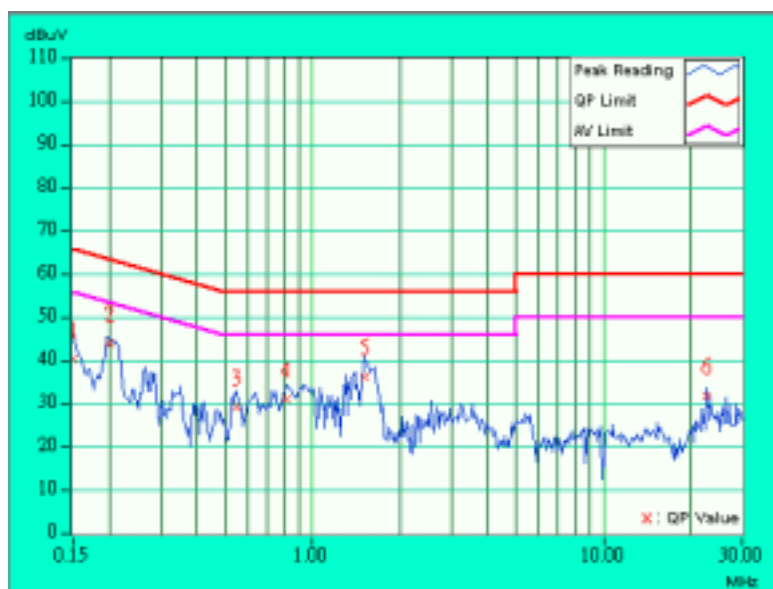


EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	21deg. C, 65%RH, 1005 hPa	TESTED BY: Cody Chang	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.150	0.10	39.80	-	39.90	-	66.00	56.00	-26.10	-
2	0.201	0.10	43.15	-	43.25	-	63.58	53.58	-20.33	-
3	0.548	0.12	28.68	-	28.80	-	56.00	46.00	-27.20	-
4	0.814	0.17	30.53	-	30.70	-	56.00	46.00	-25.30	-
5	1.516	0.20	35.66	-	35.86	-	56.00	46.00	-20.14	-
6	22.570	0.75	31.23	-	31.98	-	60.00	50.00	-28.02	-

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2."-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
- 3.The emission levels of other frequencies were very low against the limit.
- 4.Margin value = Emission level - Limit value
- 5.Correction factor = Insertion loss + Cable loss
- 6.Emission Level = Correction Factor + Reading Value





5.2 RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands and falling in the restricted band, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

- 1.The lower limit shall apply at the transition frequencies.
- 2.Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 3.As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m) *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts)}$$



5.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	May 13, 2003
* HP Preamplifier	8447D	2944A08485	Apr. 29, 2003
* HP Preamplifier	8449B	3008A01201	Dec. 01, 2003
* HP Preamplifier	8449B	3008A01292	Aug. 07, 2003
*Spectrum Analyzer	8593E	3926A04191	Mar. 28, 2003
*Test Receiver	ESI7	838496/016	Feb. 21, 2003
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 02, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 03, 2003
* EMCO Horn Antenna	3115	9312-4192	Apr. 09, 2003
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	ADT_Radiated _V5.09	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Jul. 11. 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	Jul. 11. 2003

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.

2. "*" = These equipment are used for the final measurement.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The test was performed in ADT Open Site No. 5.
5. The VCCI Site Registration No. is R-1039.



5.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

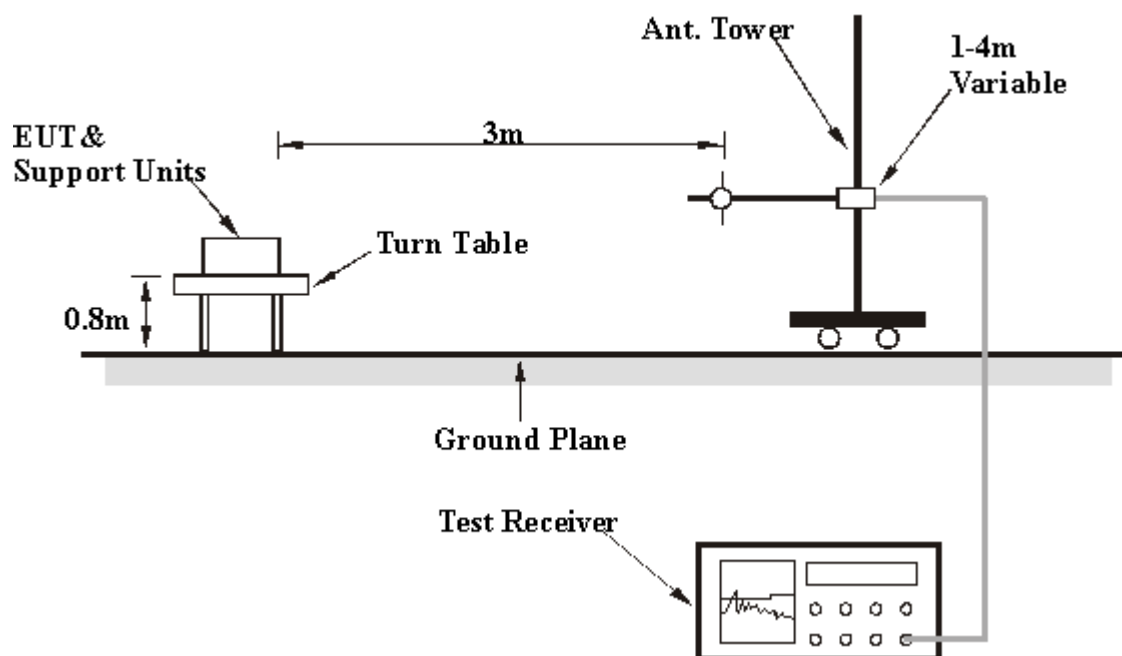
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

5.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6.



5.2.8 TEST RESULTS (TRANSMITTING)

EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	85.59	29.2 QP	40.00	-10.80	1.34 H	96	20.30	8.90
2	125.02	32.2 QP	43.50	-11.30	1.50 H	48	19.00	13.20
3	200.03	32.4 QP	43.50	-11.10	1.03 H	190	21.40	11.00
4	250.03	42.7 QP	46.00	-3.30	1.20 H	197	27.10	15.60
5	331.80	34.4 QP	46.00	-11.60	1.46 H	32	17.10	17.40
6	364.99	38.2 QP	46.00	-7.80	1.15 H	113	20.10	18.10
7	375.04	37.9 QP	46.00	-8.10	1.34 H	317	19.50	18.40
8	398.17	40.9 QP	46.00	-5.10	1.11 H	187	21.80	19.10
9	431.34	43.6 QP	46.00	-2.40	1.06 H	72	24.10	19.50
10	530.87	36.5 QP	46.00	-9.50	1.58 H	225	15.40	21.10
11	550.06	33.1 QP	46.00	-12.90	1.13 H	208	12.00	21.10
12	564.06	40.9 QP	46.00	-5.10	1.63 H	2	19.40	21.50
13	597.24	39.5 QP	46.00	-6.50	1.51 H	85	16.90	22.60
14	630.44	32.7 QP	46.00	-13.30	1.17 H	260	9.90	22.80
15	796.40	43.5 QP	46.00	-2.50	1.12 H	33	18.70	24.80
16	875.07	39.3 QP	46.00	-6.70	1.03 H	276	14.20	25.20
17	995.41	39.8 QP	54.00	-14.20	1.68 H	342	14.60	25.20

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	65.65	34.0 QP	40.00	-6.00	1.52 V	75	27.10	6.90
2	83.23	34.2 QP	40.00	-5.80	1.42 V	60	25.70	8.50
3	125.02	37.0 QP	43.50	-6.50	1.32 V	45	23.80	13.20
4	150.01	32.8 QP	43.50	-10.70	1.15 V	180	21.30	11.50
5	165.96	40.8 QP	43.50	-2.70	1.08 V	162	30.10	10.80
6	200.00	34.6 QP	43.50	-8.90	1.22 V	284	23.60	11.00
7	240.00	31.8 QP	46.00	-14.20	1.16 V	39	17.20	14.70
8	250.03	38.5 QP	46.00	-7.50	1.38 V	3	22.90	15.60
9	364.96	34.5 QP	46.00	-11.50	1.49 V	121	16.40	18.10
10	398.20	35.8 QP	46.00	-10.20	1.35 V	27	16.80	19.10
11	456.83	37.9 QP	46.00	-8.10	1.36 V	251	17.90	20.00
12	497.73	42.7 QP	46.00	-3.30	1.28 V	155	21.60	21.10
13	524.50	35.3 QP	46.00	-10.70	1.10 V	165	14.20	21.10
14	564.09	34.9 QP	46.00	-11.10	1.04 V	61	13.40	21.50
15	600.07	34.4 QP	46.00	-11.60	1.27 V	3	11.70	22.70
16	630.44	35.4 QP	46.00	-10.60	1.06 V	117	12.60	22.80
17	663.60	36.3 QP	46.00	-9.70	1.00 V	359	13.40	22.90
18	796.35	42.4 QP	46.00	-3.60	1.57 V	117	17.50	24.80
19	895.80	43.2 QP	46.00	-2.80	1.20 V	3	18.00	25.20
20	995.42	44.0 QP	54.00	-10.00	1.60 V	25	18.70	25.20

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4144.00	45.0 PK	74.00	-29.00	1.20 H	54	9.70	35.30
2	*5180.00	92.3 PK			1.18 H	105	54.60	37.70
2	*5180.00	85.5 AV			1.18 H	105	47.80	35.30
3	10360.00	62.1 PK	68.30	-6.20	1.36 H	54	17.60	44.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4144.00	47.6 PK	74.00	-26.40	1.62 V	27	12.30	35.30
2	*5180.00	103.1 PK			1.21 V	153	65.40	37.70
2	*5180.00	94.2 AV			1.21 V	153	56.50	35.30
3	10360.00	66.4 PK	68.30	-1.90	1.62 V	27	21.90	44.50

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*": Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4192.00	47.6 PK	74.00	-26.40	1.52 H	74	12.30	35.30
2	*5240.00	102.2 PK			1.34 H	77	64.50	37.70
2	*5240.00	93.6 AV			1.34 H	77	56.00	35.30
3	10480.00	61.6 PK	68.30	-6.70	1.22 H	45	16.60	45.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4192.00	48.9 PK	74.00	-25.10	1.35 V	74	13.50	35.30
2	*5240.00	110.5 PK			1.17 V	78	72.80	37.70
2	*5240.00	100.9 AV			1.17 V	78	63.20	35.30
3	10480.00	66.5 PK	68.30	-1.80	1.28 V	14	21.50	45.00

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*": Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4208.00	44.7 PK	74.00	-29.30	1.34 H	124	9.40	35.40
2	*5260.00	102.2 PK			1.46 H	74	64.50	37.70
2	*5260.00	94.7 AV			1.46 H	74	57.10	35.40
3	10520.00	62.8 PK	68.30	-5.50	1.52 H	85	17.70	45.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4208.00	48.6 PK	74.00	-25.40	1.53 V	11	13.30	35.40
2	*5260.00	106.3 PK			1.00 V	209	68.60	37.70
2	*5260.00	99.2 AV			1.00 V	209	61.50	35.40
3	10520.00	66.2 PK	68.30	-2.10	1.24 V	245	21.10	45.10

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. "*": Fundamental frequency
6. "#": The radiated frequency falling in the restricted band.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4256.00	82.0 PK	74.00	8.00	1.33 H	17	46.50	35.40
2	*5320.00	95.9 PK			1.25 H	99	58.20	37.70
2	*5320.00	87.5 AV			1.25 H	99	49.80	37.70
3	#10640.00	61.6 PK	74.00	-12.40	1.36 H	75	16.30	45.20
3	#10640.00	46.1 AV	54.00	-7.90	1.36 H	75	0.90	45.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#4256.00	54.7 PK	74.00	-19.30	1.24 V	57	19.30	35.40
1	#4256.00	51.7 AV	54.00	-2.30	1.24 V	57	16.30	35.40
2	*5320.00	103.7 PK			1.14 V	54	66.00	37.70
2	*5320.00	94.7 AV			1.14 V	54	57.00	37.70
3	#10640.00	63.2 PK	74.00	-10.80	1.28 V	14	17.90	45.20
3	#10640.00	51.2 AV	54.00	-2.80	1.28 V	14	5.90	45.20

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.
5. “*”: Fundamental frequency
6. “#”: The radiated frequency falling in the restricted band.



5.2.9 TEST RESULTS (RECEIVING)

EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	85.59	29.2 QP	40.00	-10.80	1.34 H	96	20.30	8.90
2	125.02	32.2 QP	43.50	-11.30	1.50 H	48	19.00	13.20
3	200.03	32.4 QP	43.50	-11.10	1.03 H	190	21.40	11.00
4	250.03	42.7 QP	46.00	-3.30	1.20 H	197	27.10	15.60
5	331.80	34.4 QP	46.00	-11.60	1.46 H	32	17.10	17.40
6	364.99	38.2 QP	46.00	-7.80	1.15 H	113	20.10	18.10
7	375.04	37.9 QP	46.00	-8.10	1.34 H	317	19.50	18.40
8	398.17	40.9 QP	46.00	-5.10	1.11 H	187	21.80	19.10
9	431.34	43.6 QP	46.00	-2.40	1.06 H	72	24.10	19.50
10	530.87	36.5 QP	46.00	-9.50	1.58 H	225	15.40	21.10
11	550.06	33.1 QP	46.00	-12.90	1.13 H	208	12.00	21.10
12	564.06	40.9 QP	46.00	-5.10	1.63 H	2	19.40	21.50
13	597.24	39.5 QP	46.00	-6.50	1.51 H	85	16.90	22.60
14	630.44	32.7 QP	46.00	-13.30	1.17 H	260	9.90	22.80
15	796.40	43.5 QP	46.00	-2.50	1.12 H	33	18.70	24.80
16	875.07	39.3 QP	46.00	-6.70	1.03 H	276	14.20	25.20
17	995.41	39.8 QP	54.00	-14.20	1.68 H	342	14.60	25.20

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60 Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	65.65	34.0 QP	40.00	-6.00	1.52 V	75	27.10	6.90
2	83.23	34.2 QP	40.00	-5.80	1.42 V	60	25.70	8.50
3	125.02	37.0 QP	43.50	-6.50	1.32 V	45	23.80	13.20
4	150.01	32.8 QP	43.50	-10.70	1.15 V	180	21.30	11.50
5	165.96	40.8 QP	43.50	-2.70	1.08 V	162	30.10	10.80
6	200.00	34.6 QP	43.50	-8.90	1.22 V	284	23.60	11.00
7	240.00	31.8 QP	46.00	-14.20	1.16 V	39	17.20	14.70
8	250.03	38.5 QP	46.00	-7.50	1.38 V	3	22.90	15.60
9	364.96	34.5 QP	46.00	-11.50	1.49 V	121	16.40	18.10
10	398.20	35.8 QP	46.00	-10.20	1.35 V	27	16.80	19.10
11	456.83	37.9 QP	46.00	-8.10	1.36 V	251	17.90	20.00
12	497.73	42.7 QP	46.00	-3.30	1.28 V	155	21.60	21.10
13	524.50	35.3 QP	46.00	-10.70	1.10 V	165	14.20	21.10
14	564.09	34.9 QP	46.00	-11.10	1.04 V	61	13.40	21.50
15	600.07	34.4 QP	46.00	-11.60	1.27 V	3	11.70	22.70
16	630.44	35.4 QP	46.00	-10.60	1.06 V	117	12.60	22.80
17	663.60	36.3 QP	46.00	-9.70	1.00 V	359	13.40	22.90
18	796.35	42.4 QP	46.00	-3.60	1.57 V	117	17.50	24.80
19	895.80	43.2 QP	46.00	-2.80	1.20 V	3	18.00	25.20
20	995.42	44.0 QP	54.00	-10.00	1.60 V	25	18.70	25.20

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	1
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4144.00	41.0 PK	74.00	-33.00	1.52 H	32	5.70	35.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4144.00	43.0 PK	74.00	-31.00	1.12 V	74	7.70	35.30

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	4
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4192.00	40.2 PK	74.00	-33.80	1.22 H	74	4.90	35.30

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4192.00	43.8 PK	74.00	-30.20	1.35 V	65	8.50	35.30

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	5
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4208.00	41.2 PK	74.00	-32.80	1.12 H	27	5.80	35.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4208.00	44.0 PK	74.00	-30.00	1.42 V	64	8.60	35.40

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal Mode	CHANNEL	8
FREQUENCY RANGE	Above 1000 MHz	DETECTOR FUNCTION	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Gary Chang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4256.00	43.0 PK	74.00	-31.00	1.52 H	66	7.60	35.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	4256.00	44.8 PK	74.00	-29.20	1.14 V	32	9.40	35.40

NOTE:

1. Emission level = Raw value - Correction Factor
2. Correction Factor = Pre-Amp. Factor - Ant. Factor - Cable loss
(Pre-Amp. Factor = 0, when a Pre-Amplifier is not used for the test.)
3. Margin value = Emission level - Limit value
4. The other emission levels were very low against the limit.



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 26 dB 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.

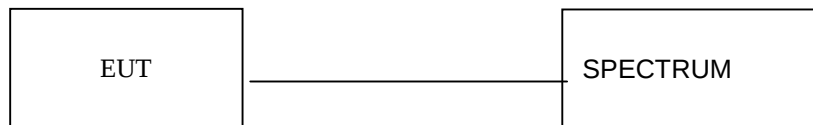
5.3.3 TEST PROCEDURE

2. The transmitter output was connected to the spectrum analyzer.
3. Set span to encompass the entire emission bandwidth of the signal.
4. Set RBW to 1MHz, VBW to 300kHz.
5. Using the spectrum analyzer's band 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	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22 deg. C, 66%RH, 1005 hPa	TESTED BY	Ansen Lei

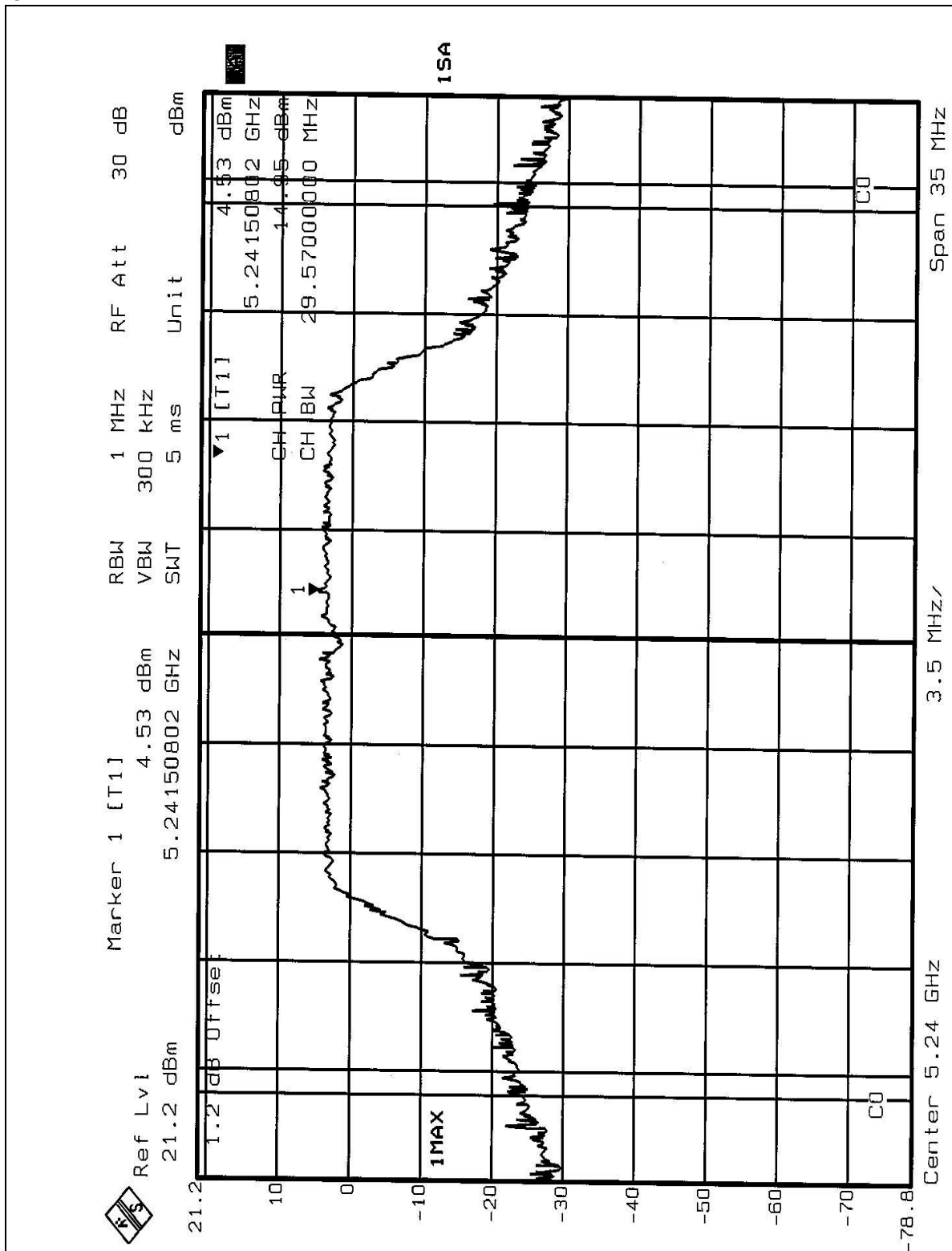
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	13.06	17.00	26.37	PASS
4	5240	14.95	17.00	29.58	PASS
5	5260	18.23	24.00	36.63	PASS
8	5320	14.62	24.00	28.46	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to pages 88 ~91.

The image shows a spectrum analyzer display with a grid. The vertical axis (Y-axis) represents power in dBm, ranging from -78.8 to 21.2. The horizontal axis (X-axis) represents frequency in MHz, with a center frequency of 5.18 GHz and a span of 35 MHz. A signal trace is visible, showing a peak at approximately 5.18 GHz. The peak is labeled '1MAX' and has a value of 1.2 dB. The trace is noisy and shows some distortion. The display includes various parameters and settings:

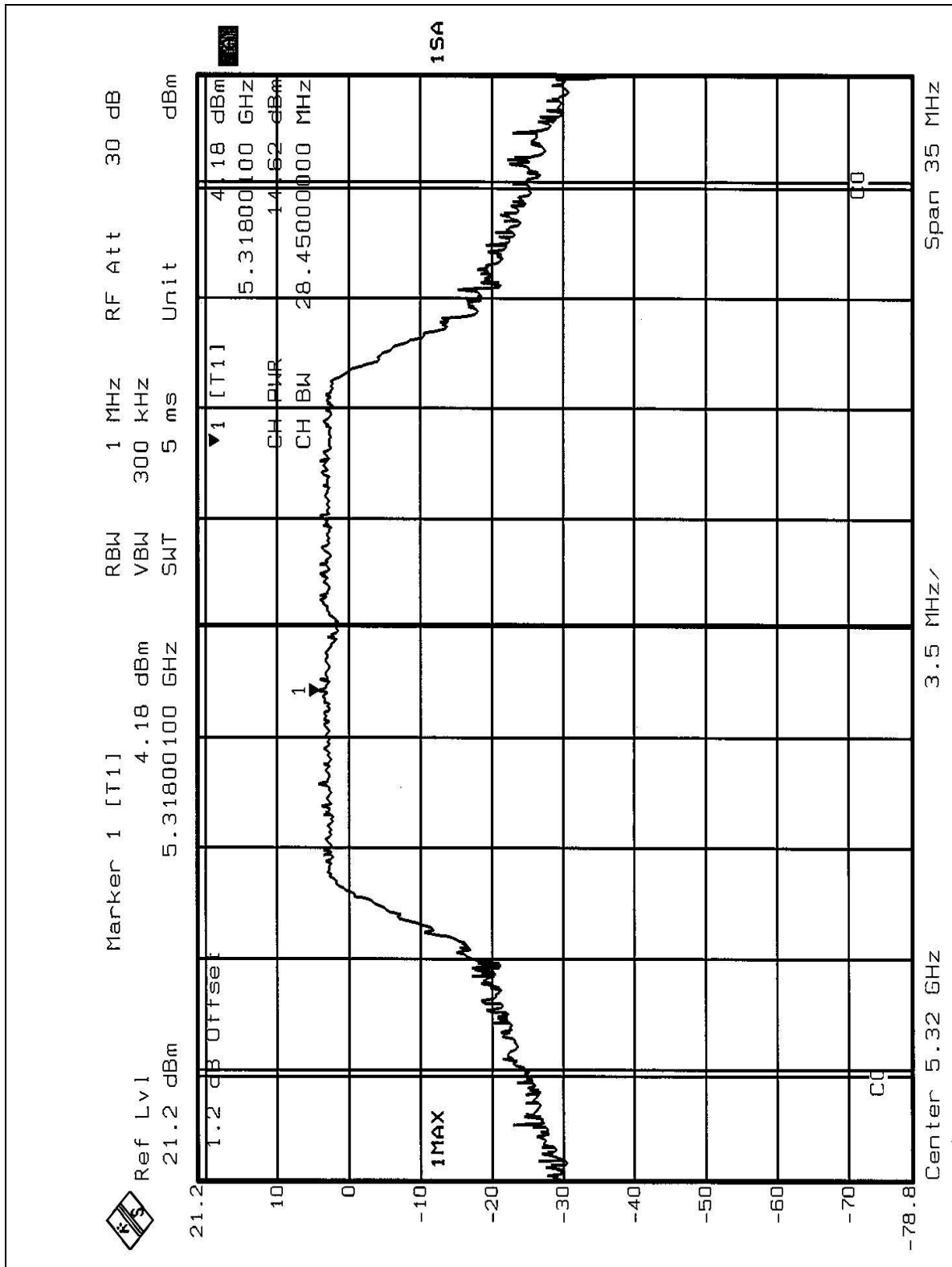
- Marker 1 [T1]: 2.95 dBm, 5.18284068 GHz
- Ref Lvl: 21.2 dBm
- RBW: 1 MHz
- VBW: 300 kHz
- SWT: 5 ms
- RF Att: 30 dB
- Unit: dBm
- CH PWR: 13.06 dBm
- CH BW: 26.37000000 MHz
- Offset: 1.2 dB
- 1SA
- Span 35 MHz
- Center 5.18 GHz

CHANNEL 4

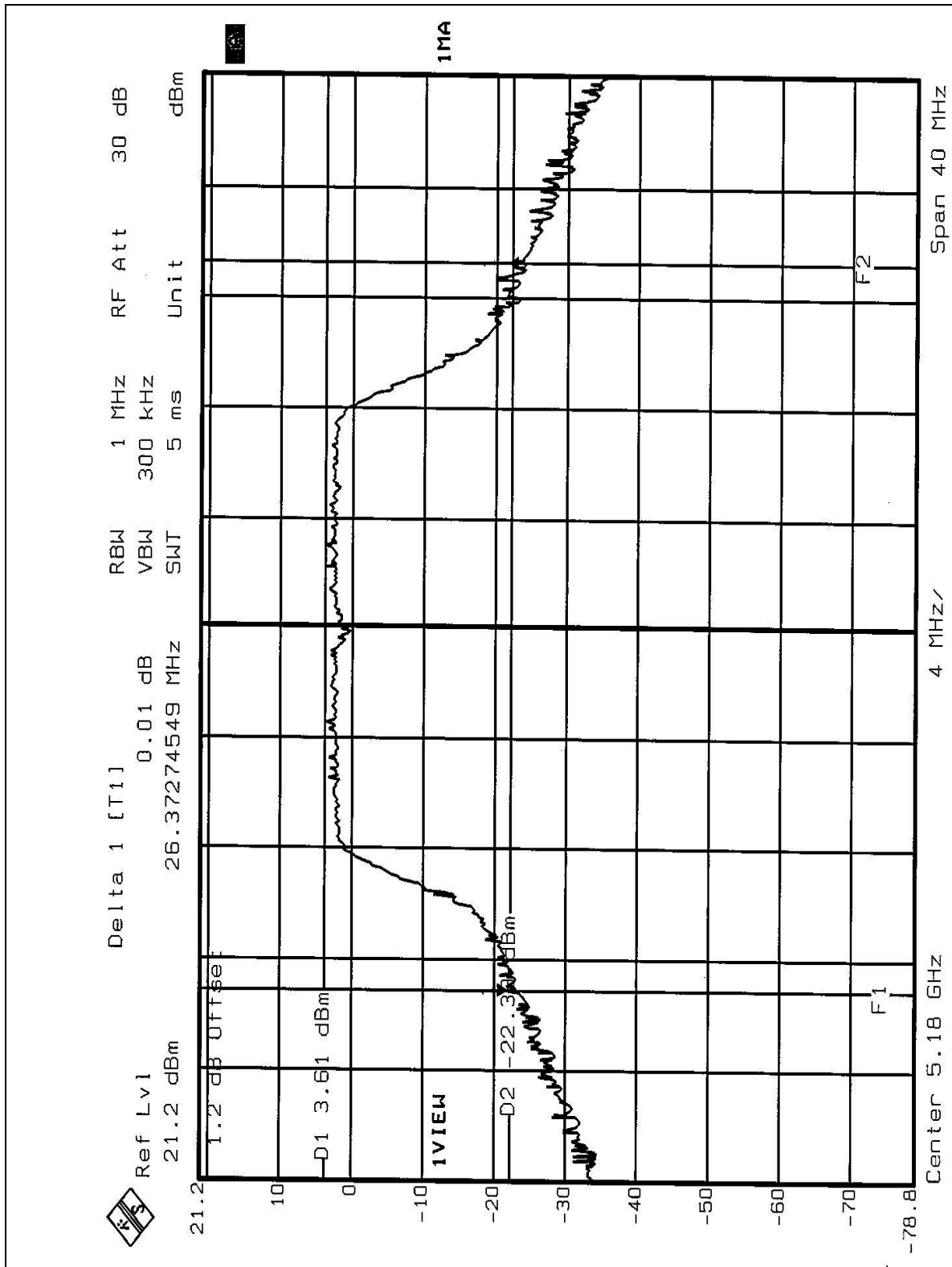


Marker 1 [T1]
 8.08 dBm
 5.26102806 GHz
 1 MHz RBW
 300 kHz VBW
 5 ms SWT
 1.2 dB Offset
 30 dB RF Att
 38 MHz Span
 5.26 GHz Center
 1 SA

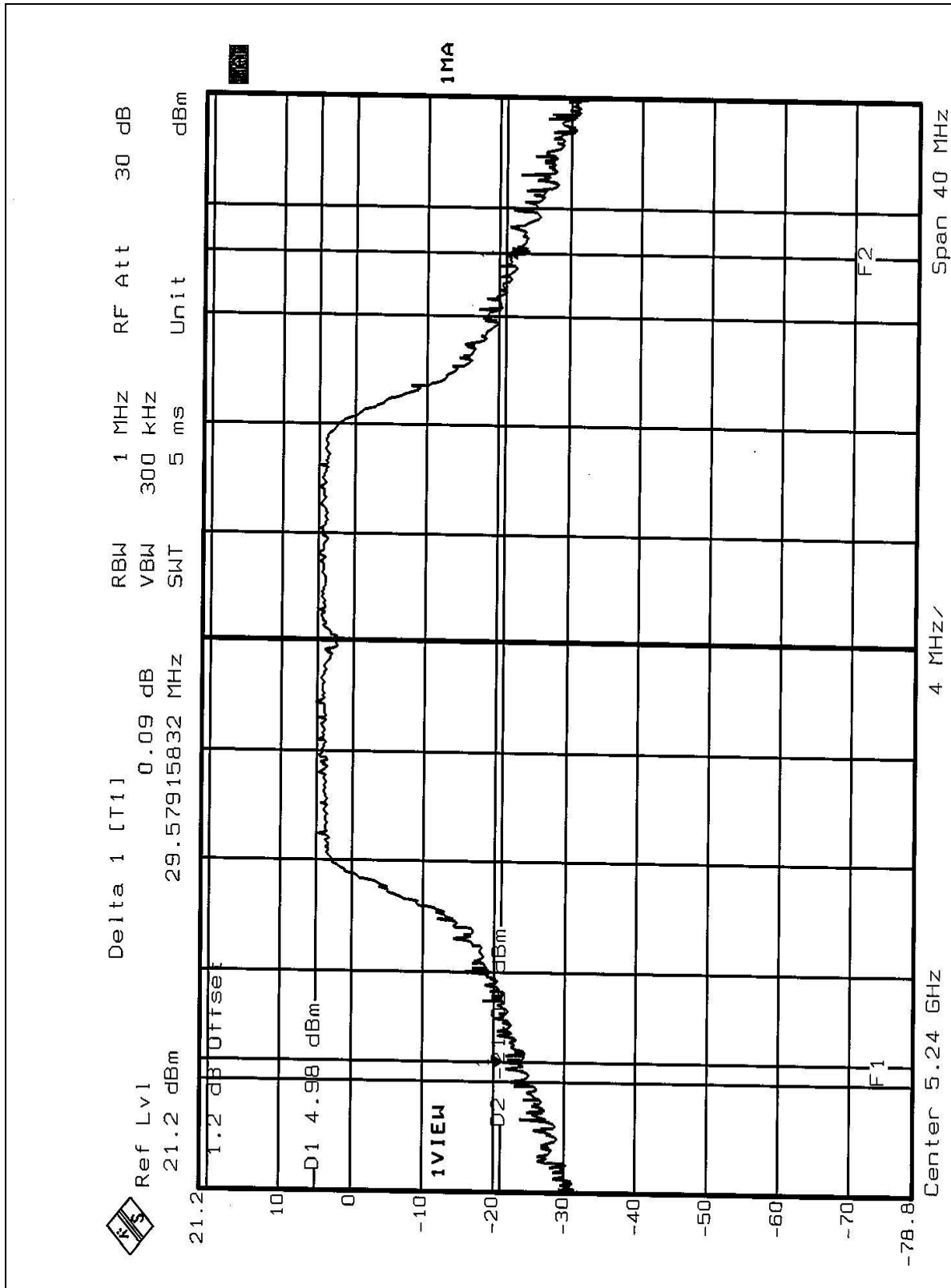
CHANNEL 8



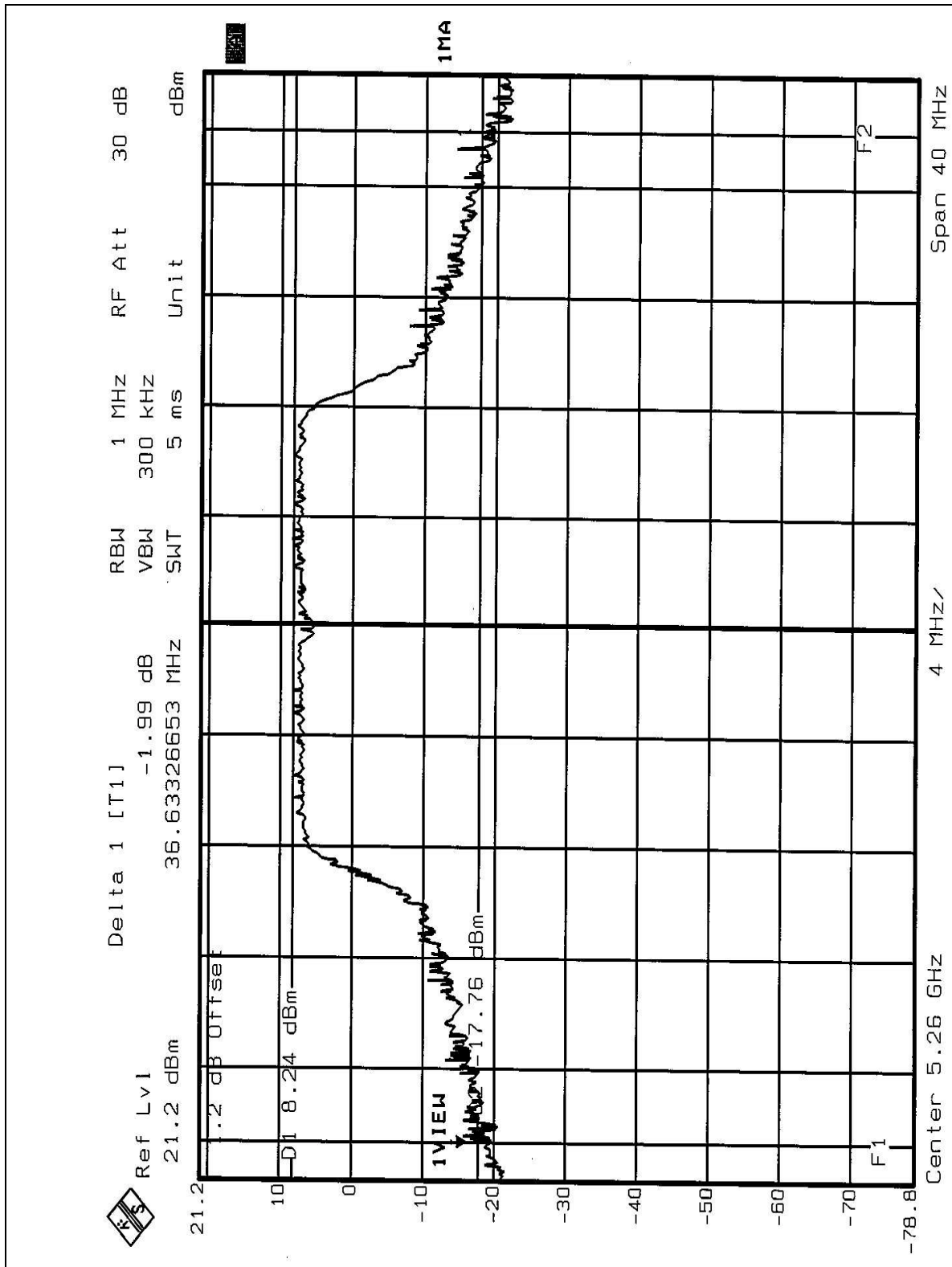
CHANNEL 1



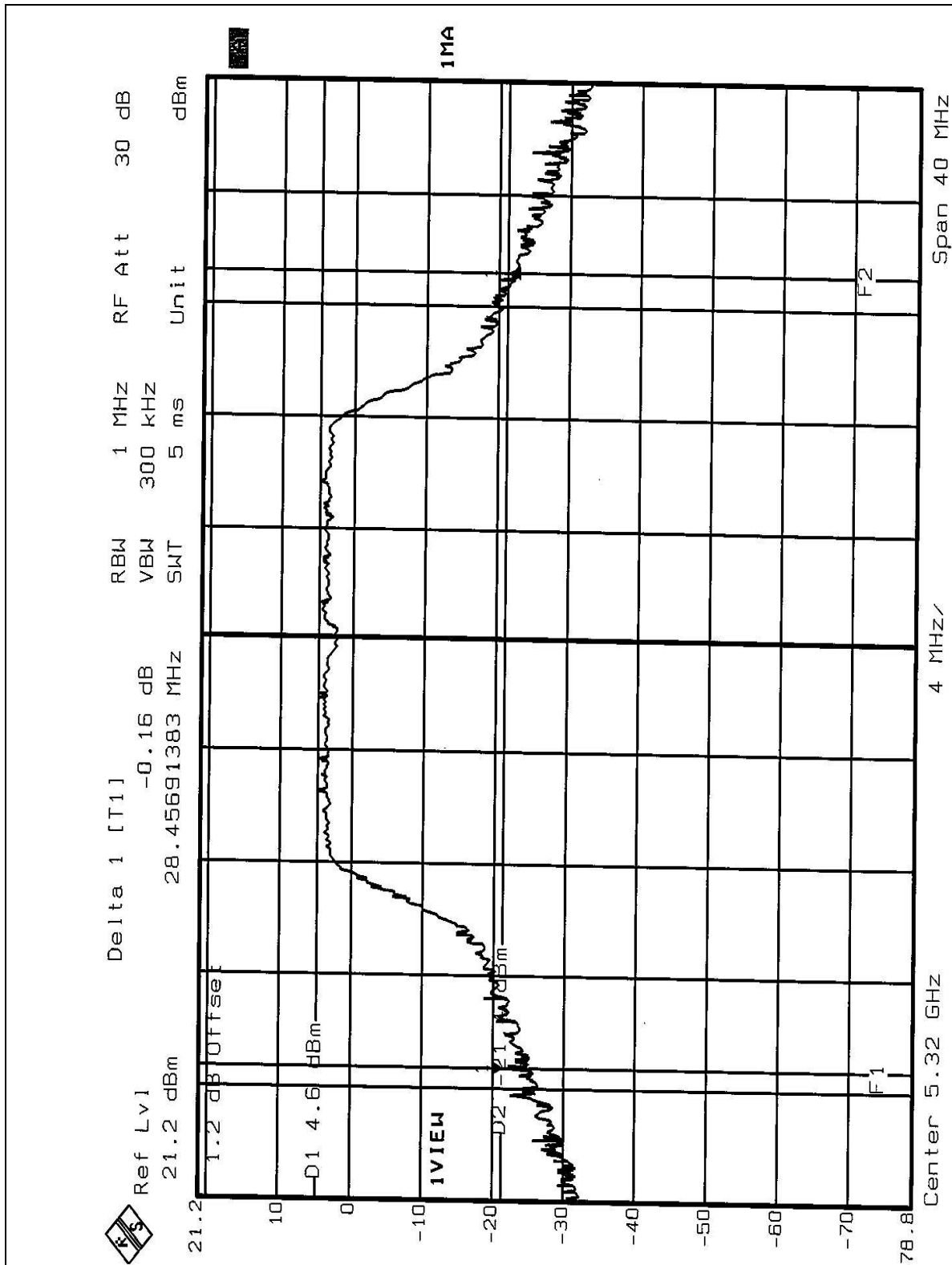
CHANNEL 4



CHANNEL 5



CHANNEL 8



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
ROHDE&SCHWARZ 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=300-KHz).
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.



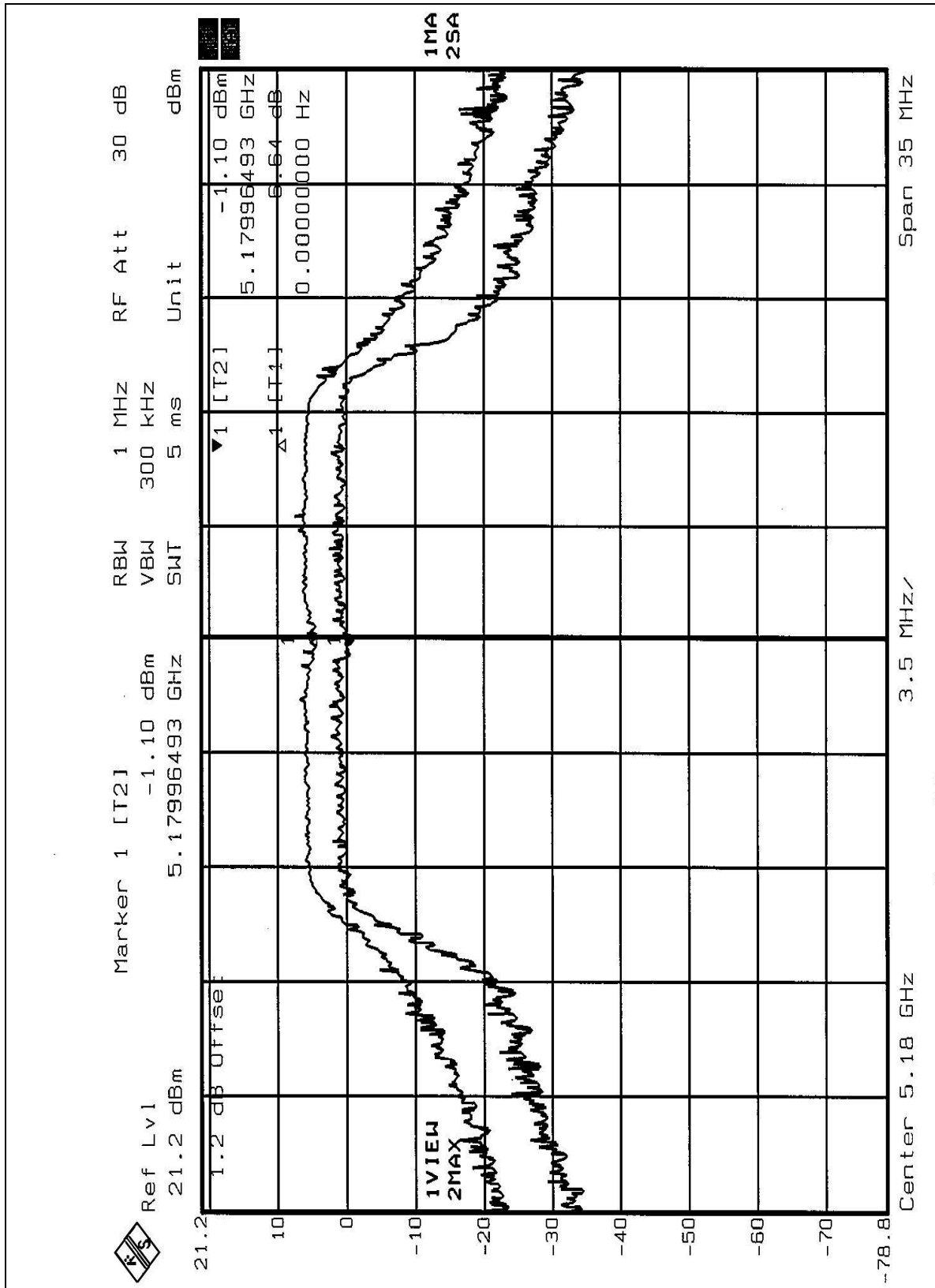
5.4.7 TEST RESULTS

EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22 deg. C, 66%RH, 1005 hPa	TESTED BY	Ansen Lei

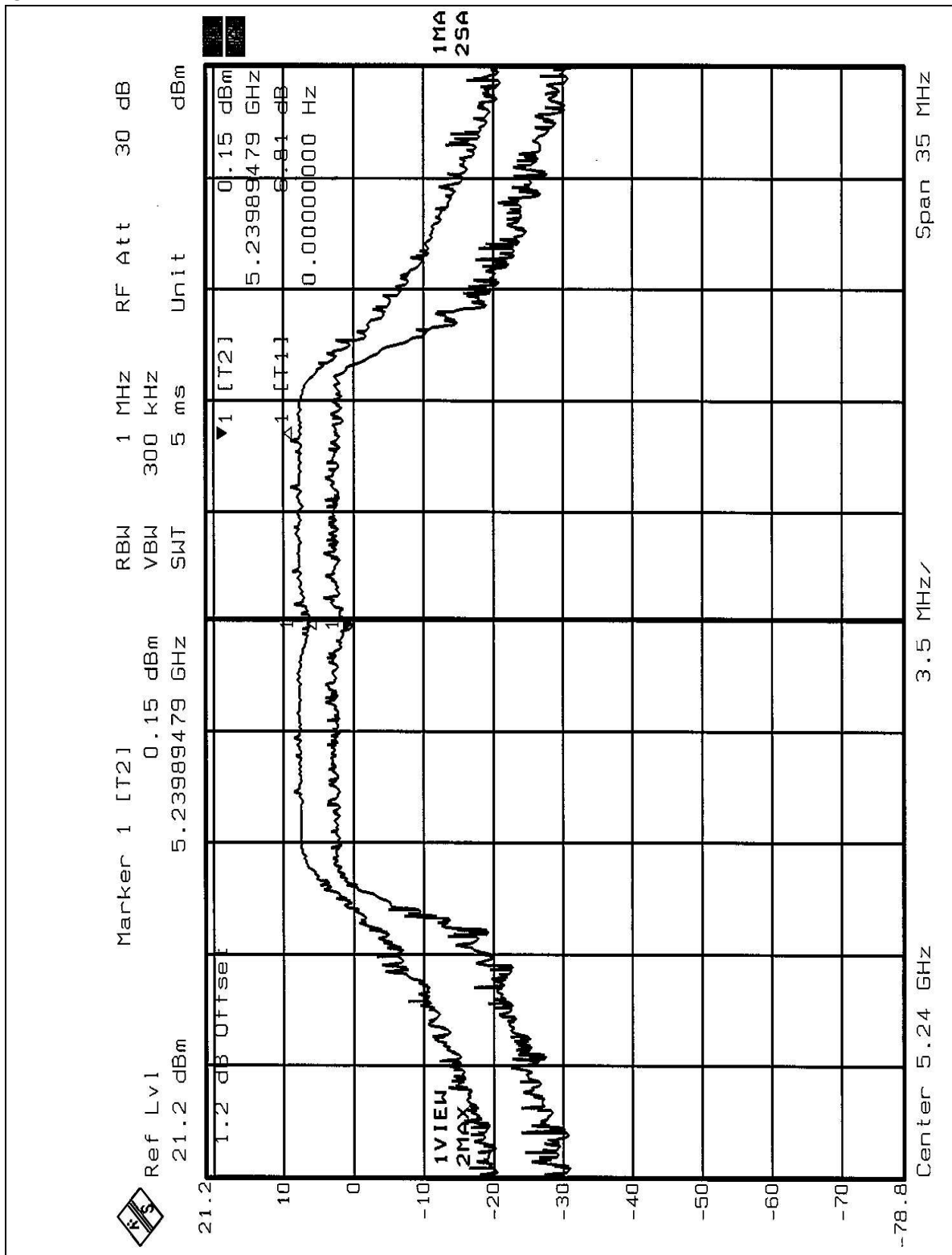
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	6.64	13	PASS
4	5240	6.81	13	PASS
5	5260	5.91	13	PASS
8	5320	5.73	13	PASS



CHANNEL 1



CHANNEL 4



Delta 1 [T1] 1 MHz 30 dB

Ref Lvl 21.2 dBm 1 MHz 300 kHz 5 ms 1 MHz 30 dB

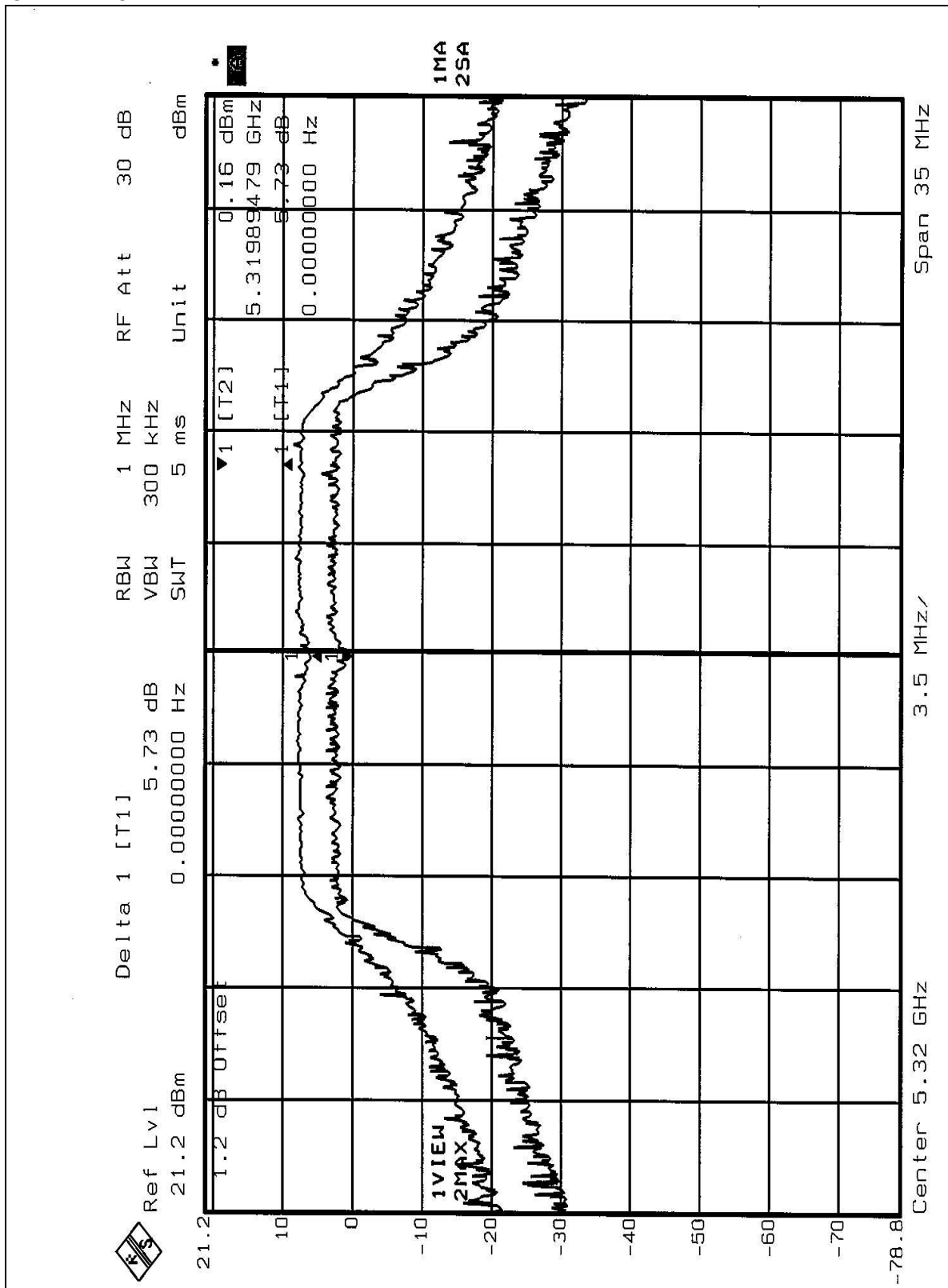
1

V1 [T2]

1MA 25A

Center 5.26 GHz Span 35 MHz

CHANNEL 8



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
ROHDE&SCHWARZ 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.



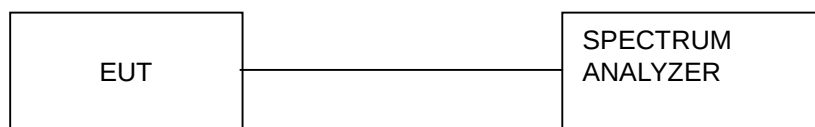
5.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

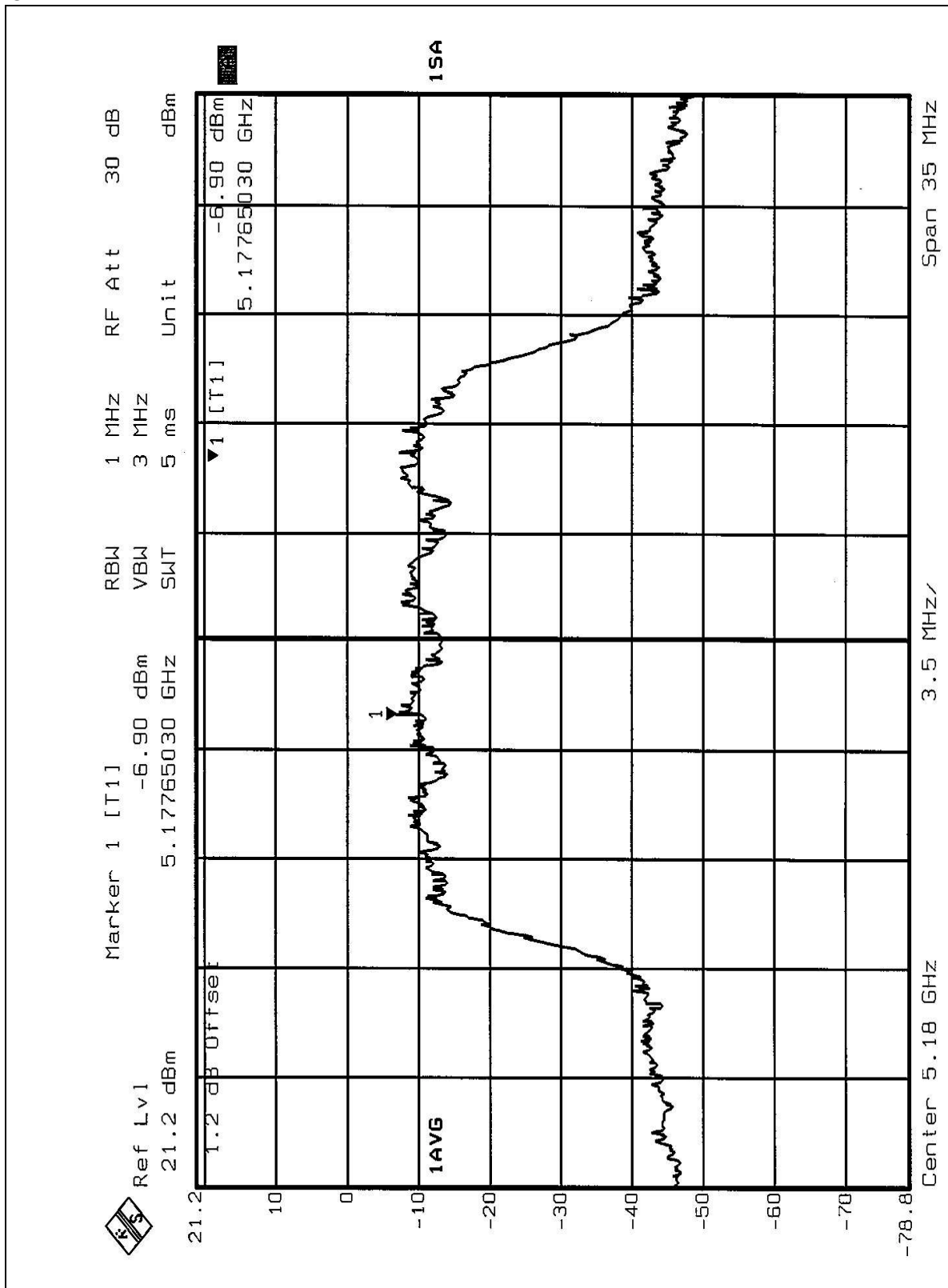


5.5.7 TEST RESULTS

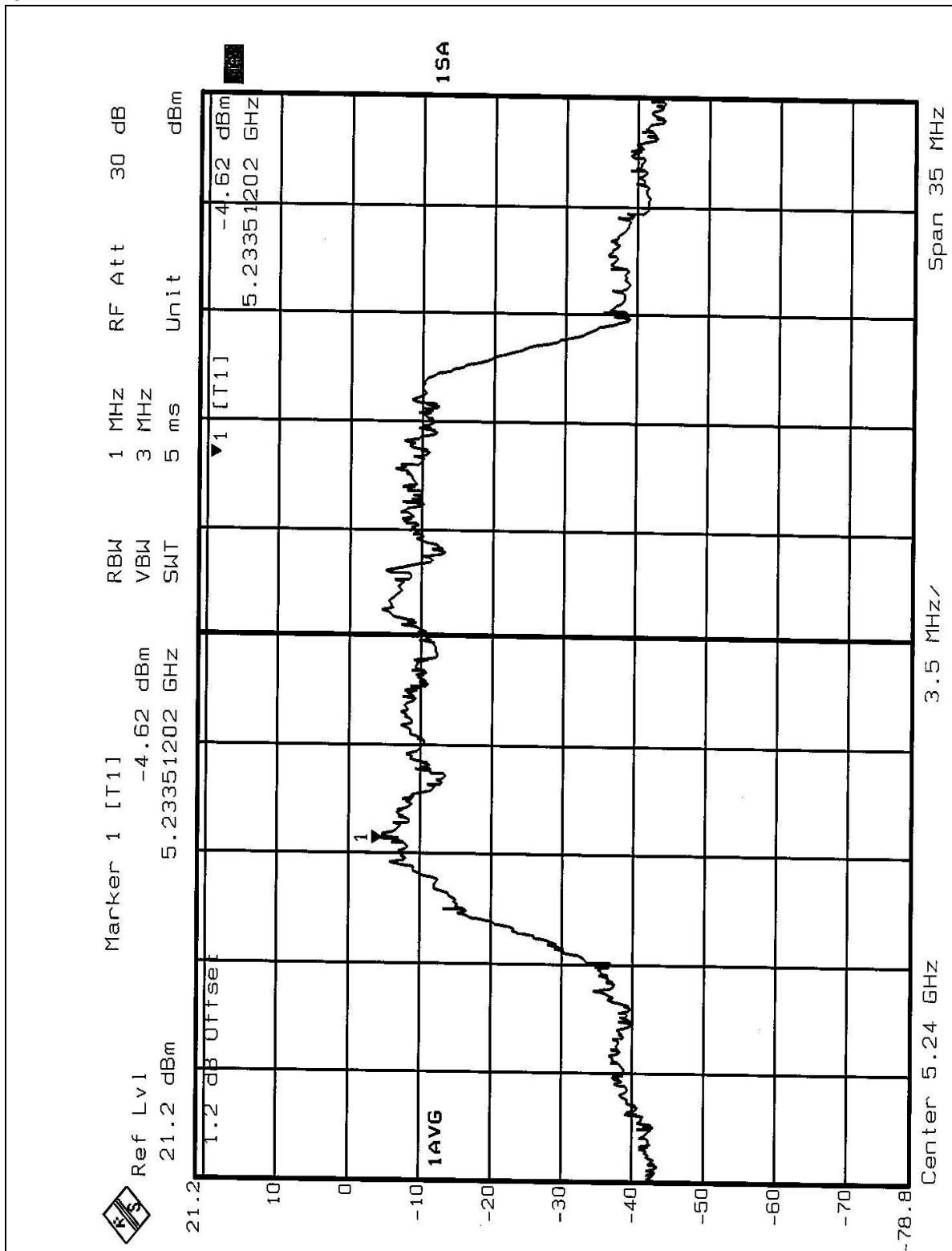
EUT	Multimode 2.4/5GHz Wireless Router	MODEL	DI-764
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	22 deg. C, 66%RH, 1005 hPa	TESTED BY	Ansen Lei

CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-6.90	4	PASS
4	5240	-4.62	4	PASS
5	5260	-1.65	11	PASS
8	5320	-5.39	11	PASS

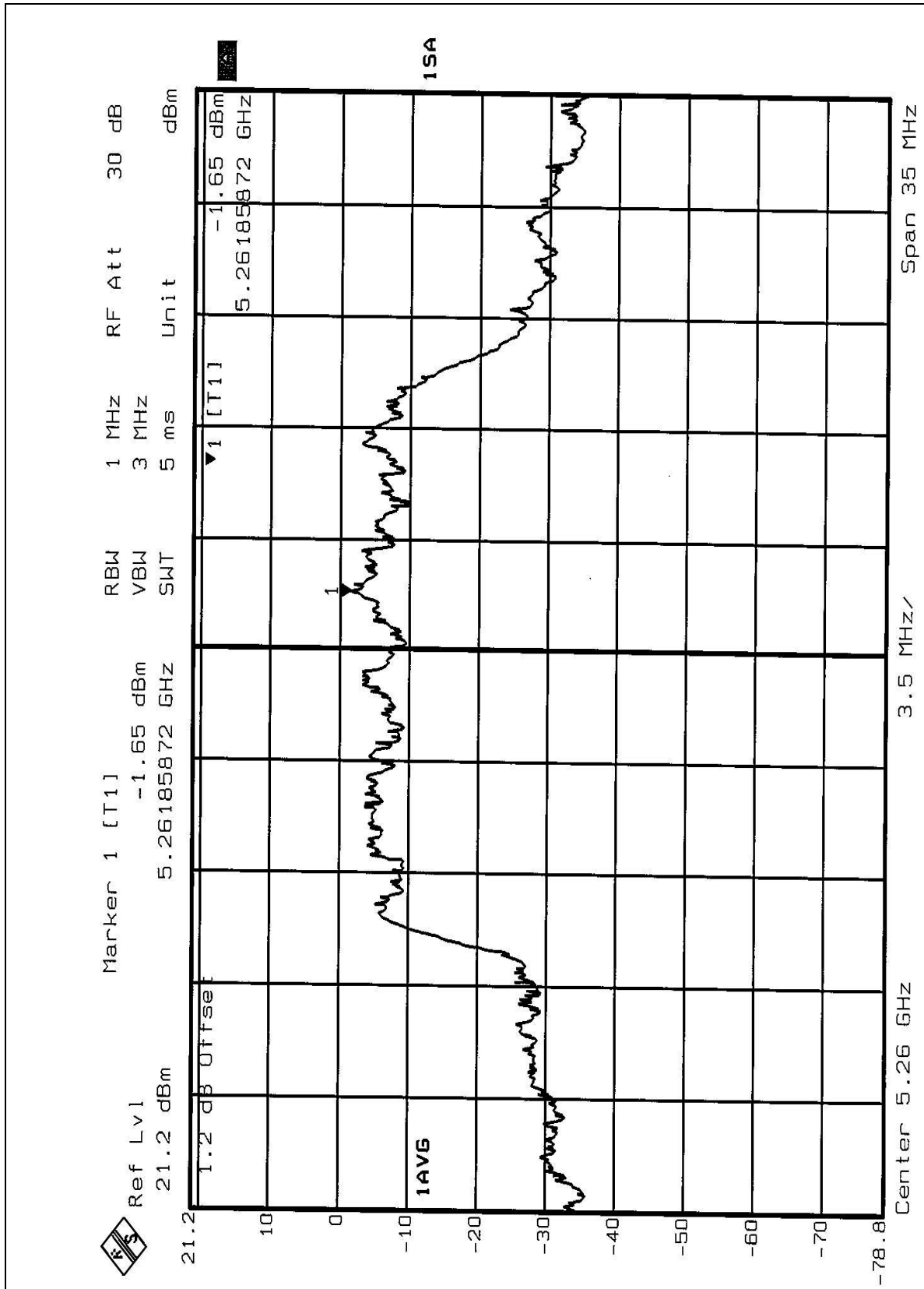
CHANNEL 1



CHANNEL 4

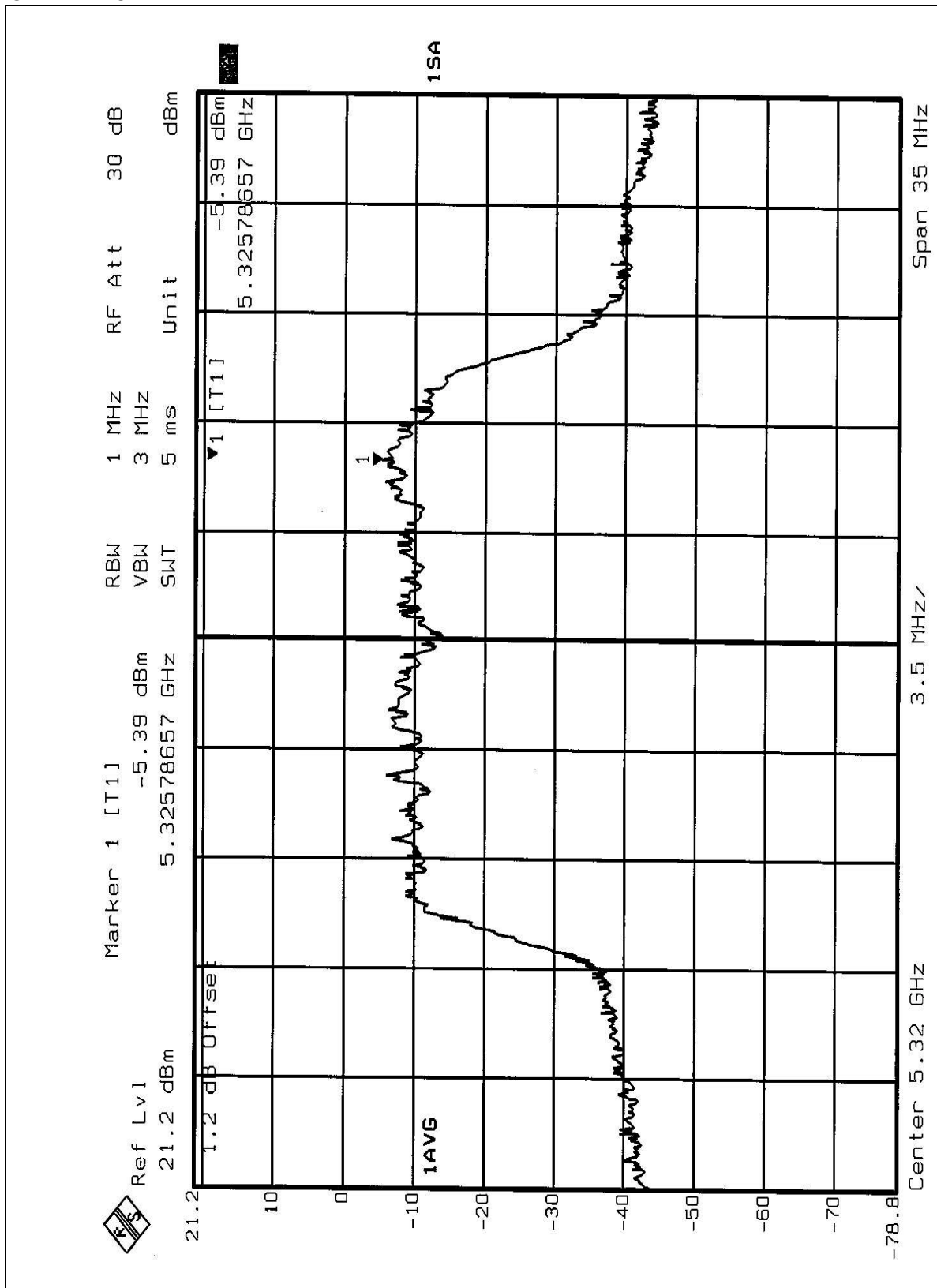


CHANNEL 5





CHANNEL 8





5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.02\%$ of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

5.6.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ANRITSU SPECTRUM ANALYZER	MS2667C	M10281	Mar. 15, 2003
WIT STANDARD TEMPERATURE AND HUMIDITY CHAMBER	TH-4S-C	W901030	Jun. 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.

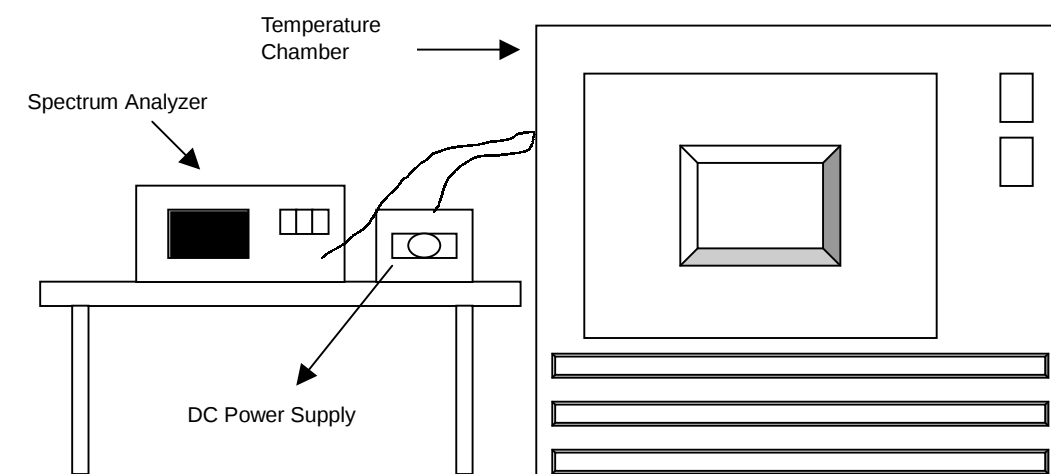
5.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at $+20$ degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

5.6.4 DEVIATION FROM TEST STANDARD

No deviation

5.6.5 TEST SETUP



5.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

5.6.7 TEST RESULTS

Operating frequency: 5320MHz				Limit : $\pm 0.02\%$			
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5319.9848	-0.000286	5319.9843	-0.000295	5319.9842	-0.000297
	110.0	5319.9845	-0.000291	5319.9844	-0.000293	5319.9845	-0.000291
	93.5	5319.9842	-0.000297	5319.9845	-0.000291	5319.9848	-0.000286
40	126.5	5319.9405	-0.001118	5319.9428	-0.001075	5319.9442	-0.001049
	110.0	5319.9408	-0.001113	5319.9432	-0.001068	5319.9448	-0.001038
	93.5	5319.9412	-0.001105	5319.9438	-0.001056	5319.9455	-0.001024
30	126.5	5319.9312	-0.001293	5319.9328	-0.001263	5319.9348	-0.001226
	110.0	5319.9325	-0.001269	5319.9332	-0.001256	5319.9352	-0.001218
	93.5	5319.9322	-0.001274	5319.9335	-0.001250	5319.9362	-0.001199
20	126.5	5319.9315	-0.001288	5319.9302	-0.001312	5319.9302	-0.001312
	110.0	5319.9318	-0.001282	5319.9298	-0.001320	5319.9303	-0.001310
	93.5	5319.9305	-0.001306	5319.9306	-0.001305	5319.9307	-0.001303
10	126.5	5319.9322	-0.001274	5319.9328	-0.001263	5319.9325	-0.001269
	110.0	5319.9325	-0.001269	5319.9332	-0.001256	5319.9324	-0.001271
	93.5	5319.9323	-0.001273	5319.9332	-0.001256	5319.9325	-0.001269
0	126.5	5319.9348	-0.001226	5319.9362	-0.001199	5319.9368	-0.001188
	110.0	5319.9355	-0.001212	5319.9358	-0.001207	5319.9365	-0.001194
	93.5	5319.9352	-0.001218	5319.9362	-0.001199	5319.9362	-0.001199
-10	126.5	5319.9478	-0.000981	5319.9498	-0.000944	5319.9512	-0.000917
	110.0	5319.9495	-0.000949	5319.9505	-0.000930	5319.9508	-0.000925
	93.5	5319.9488	-0.000962	5319.9502	-0.000936	5319.9512	-0.000917
-20	126.5	5319.9365	-0.001194	5319.9365	-0.001194	5319.9361	-0.001201
	110.0	5319.9368	-0.001188	5319.9365	-0.001194	5319.9364	-0.001195
	93.5	5319.9362	-0.001199	5319.9362	-0.001199	5319.9366	-0.001192
-30	126.5	5319.9324	-0.001271	5319.9321	-0.001276	5319.9321	-0.001276
	110.0	5319.9321	-0.001276	5319.9321	-0.001276	5319.9320	-0.001278
	93.5	5319.9321	-0.001276	5319.9321	-0.001276	5319.9320	-0.001278



5.7 BAND EDGES MEASUREMENT

5.7.1 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.

5.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set both RBW and VBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges were measured and recorded.

5.7.3 EUT OPERATING CONDITION

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

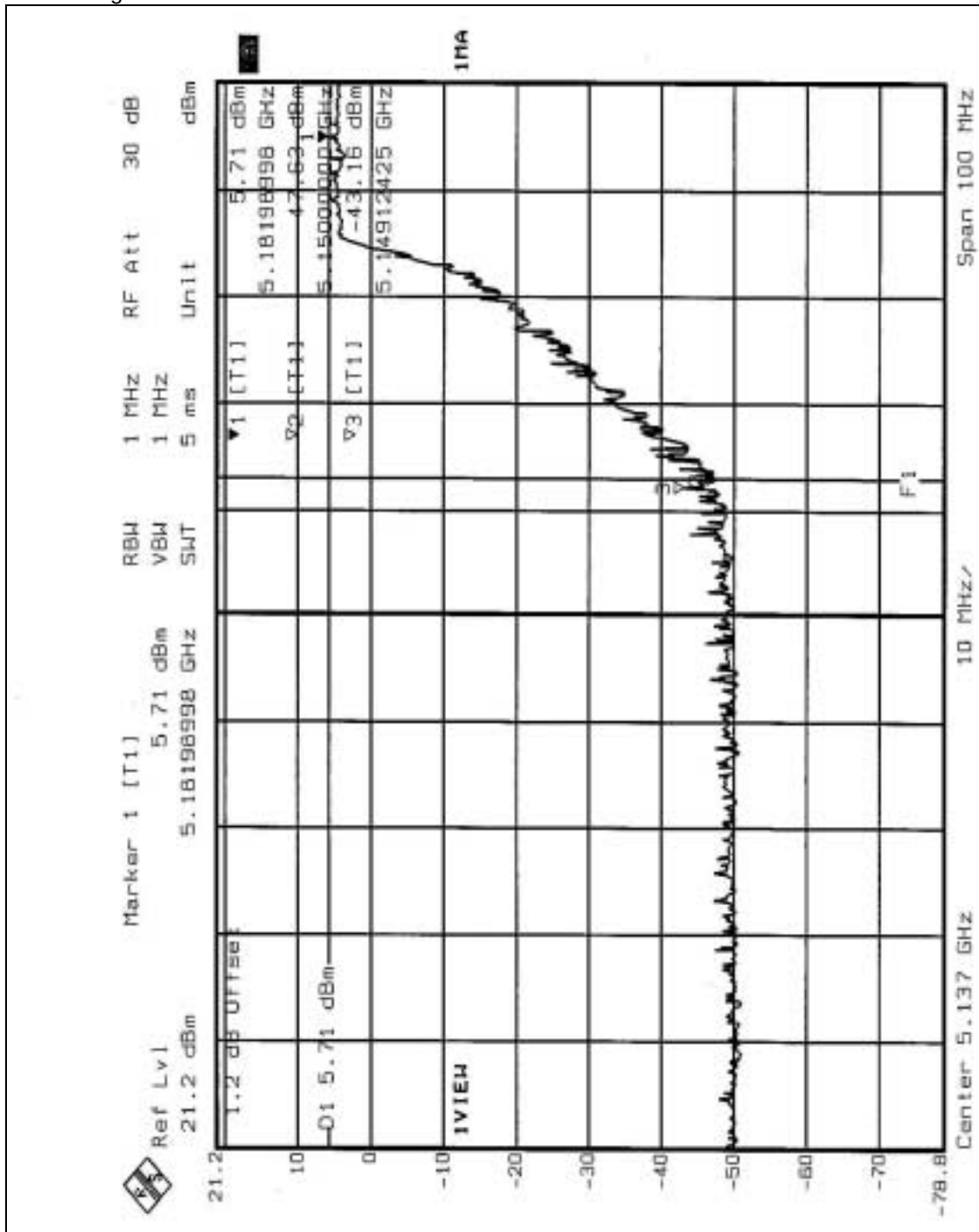
5.7.4 TEST RESULTS

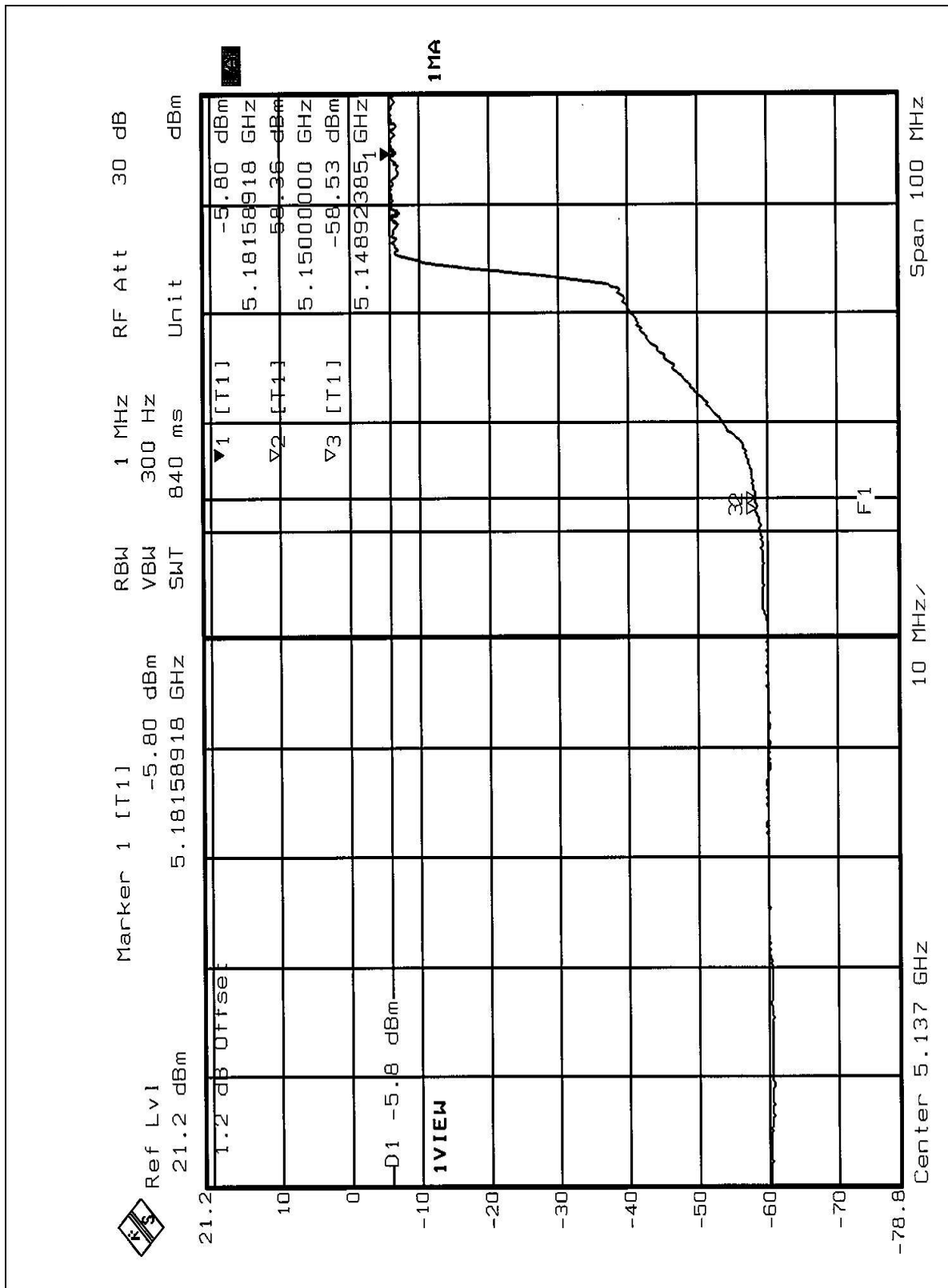
For signals in the restricted bands above and below the 5.15 to 5.35 GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal made on the OATS to calculate the field strength of the unintentional signals.

The spectrum plots (Peak RBW=VBW=1MHz; Average RBW=1MHz, VBW=300Hz) are attached on the following 8 pages.

Normal Mode: Channel 1 (5180 MHz)

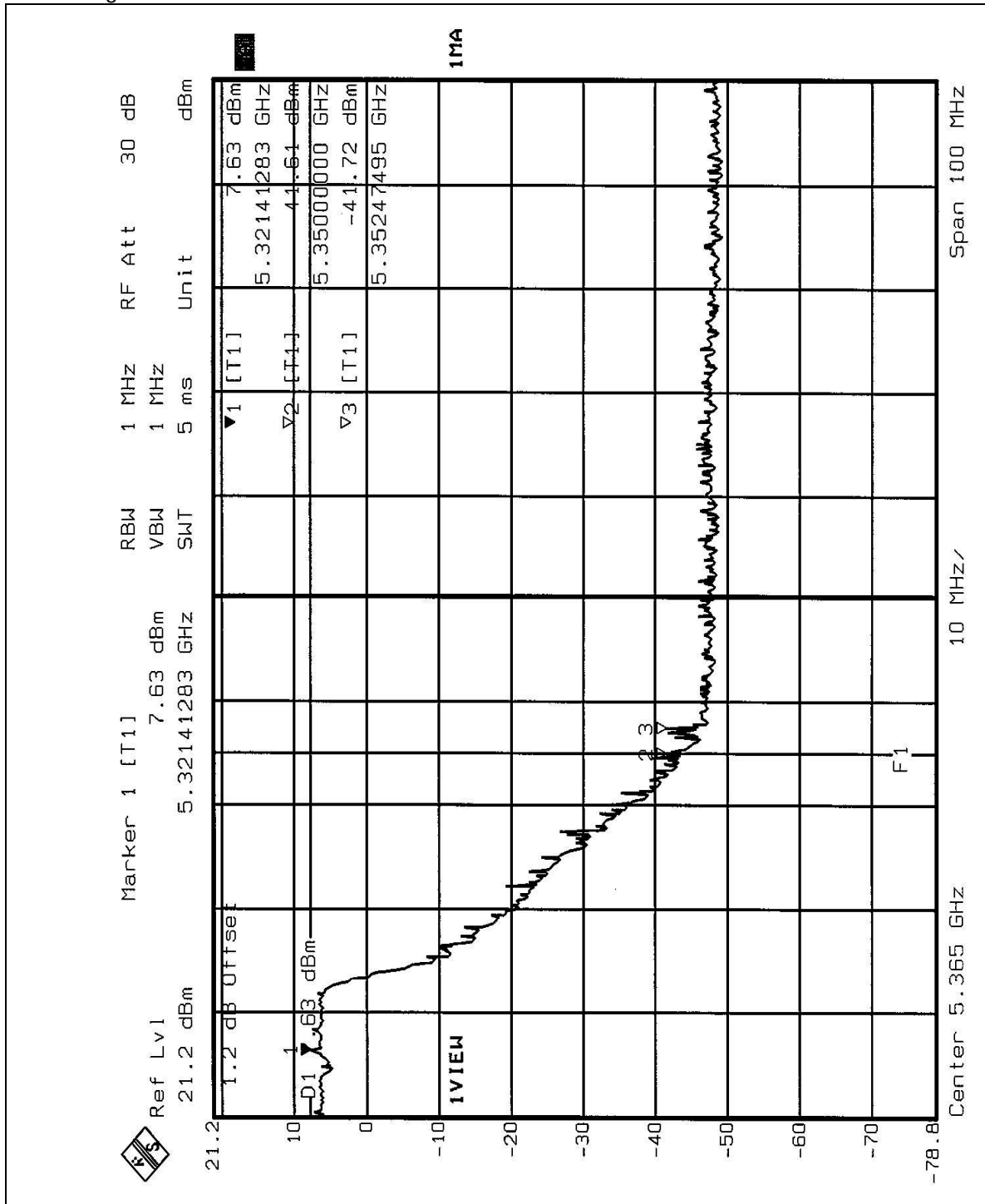
The band edge emission plot on the following 2 pages shows 48.87dBc (Peak) / 52.56dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 94.2dBuV/m, so the maximum field strength in restrict band is $94.2 - 52.56 = 41.64$ dBuV/m which is under 54dBuV/m limit.

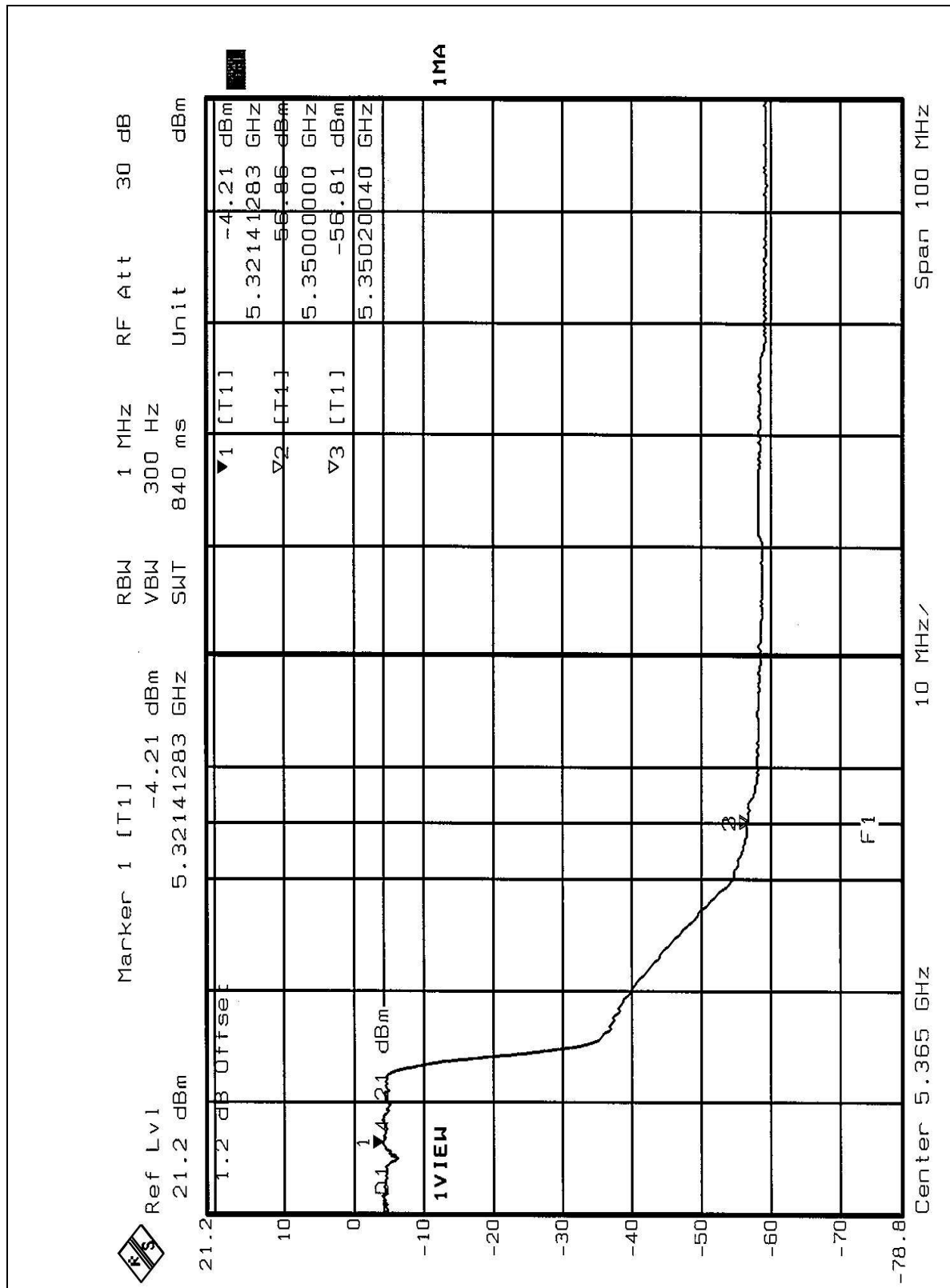




Normal Mode: Channel 8 (5320 MHz)

The band edge emission plot on the following 2 pages shows 49.24dBc (Peak) / 52.60dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 94.7dBuV/m, so the maximum field strength in restrict band is $94.7 - 52.60 = 42.10$ dBuV/m which is under 54dBuV/m limit.







5.8 ANTENNA REQUIREMENT

5.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.8.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole Antenna without connector. The maximum Gain of the antenna is 5dBi only.

6 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST





7 INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

USA	FCC, NVLAP, UL
Germany	TUV Rheinland
Japan	VCCI
New Zealand	MoC
Norway	NEMKO
R.O.C.	BSMI, DGT, CNLA

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:

www.adt.com.tw/index.5/phtml.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC Lab:

Tel: 886-35-935343

Fax: 886-35-935342

Lin Kou Safety Lab:

Tel: 886-2-26093195

Fax: 886-2-26093184

Lin Kou RF&Telecom Lab

Tel: 886-3-3270910

Fax: 886-3-3270892

Email: service@mail.adt.com.tw

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.