

FCC TEST REPORT

REPORT NO.: RF910909R01

MODEL NO.: DI-754

RECEIVED: Sept. 9, 2002

TESTED: Sept. 9, 2002 ~ Jan. 13, 2003

APPLICANT: D-Link Corporation

ADDRESS: No.8,Li-shing Rd VII, Science-based Industrial
Park, Hsin-Chu, Taiwan, R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei,
Taiwan, R.O.C.

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Lab Code: 200102-0

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1. CERTIFICATION

PRODUCT : Multimode 5GHz Wireless Router
BRAND NAME : D-Link
MODEL NO. : DI-754
APPLICANT : D-Link Corporation
STANDARDS : 47 CFR Part 15, Subpart E (Section 15.407),
ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Sept. 9, 2002 ~ Jan. 13, 2003. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

CHECKED BY: Rennie Wang, **DATE:** January 24, 2003
Rennie Wang

APPROVED BY: Dr. Alan Lane, **DATE:** January 24, 2003
Dr. Alan Lane
Manager



2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart E			
Standard Section	Test Type	Result	REMARK
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit Minimum passing margin is -13.02dBuV at 0.22MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30 MHz – 40000 MHz	PASS	Meet the requirement of limit Minimum passing margin is -2.00dBuV at 748.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Multimode 5GHz Wireless Router
MODEL NO.	DI-754
POWER SUPPLY	5VDC from power adapter
MODULATION	OFDM
TRANSFER RATE	6 to 54Mbps
FREQUENCY RANGE	5.15GHz ~ 5.35GHz
NUMBER OF CHANNEL	8
CHANNEL SPACING	20MHz
OUTPUT POWER	18.92dBm
DATA CABLE	NA
ANTENNA TYPE	Dipole Antenna
I/O PORTS	WAN port, LAN port
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT was powered by the following AC adapter:

BRAND :	HIGH POWER
MODEL :	HPW-2005U
INPUT :	100-240V MAX 2A 50/60Hz
OUTPUT :	5.0V--3A

2. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eight channels are provided to this EUT.

Channel	Frequency	Channel	Frequency
1	5180 MHz	7	5300 MHz
2	5200 MHz	8	5320 MHz
3	5220 MHz		
4	5240 MHz		
5	5260 MHz		
6	5280 MHz		

NOTE:

1. The EUT was transmitting at full power on the specified channel with a duty cycle of 99% (maximum allowed).
2. The EUT allows data rates of up to 54Mbps and was tested at 6Mbps data rate that produced the highest output power.
3. Channel 1, 4, 5 and 8 are the closest frequencies to the band edge, were chosen for final test.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Multimode 5GHz Wireless Router. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart E (15.407).

ANSI C63.4 : 1992

All tests have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PERSONAL COMPUTER	HP	Brio BA410	SG12902766	FCC DoC APPROVED
2	MODEM	ACEEX	1414	980020503	IFAXDM1414
3	PRINTER	EPSON	LQ-300+	DCGY017096	FCC DoC APPROVED
4	COLOR MONITOR	ADI	CM100	026058T102006 11 A	FCC DoC APPROVED
5	PS/2 KEYBOARD	BTC	5121W	A00801156	E5XKB5121WTH01 10
6	PS/2 MOUSE	LOGITECH	M-S43	LZE00703207	DZL211106
7	WLAN card	D-Link	DWL-650+	NA	O7J-GL242201

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
3	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
4	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core
5	1.6 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.
6	1.8 m foil shielded wire, terminated with PS/2 connector via drain wire, w/o core.
7	NA

NOTE: All power cords of the above support units are non shielded (1.8m).

4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	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. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 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. 20, 2003
LYNICS Terminator (For EMCO LISN)	0900510	E1-01-306	Feb. 20, 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 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.



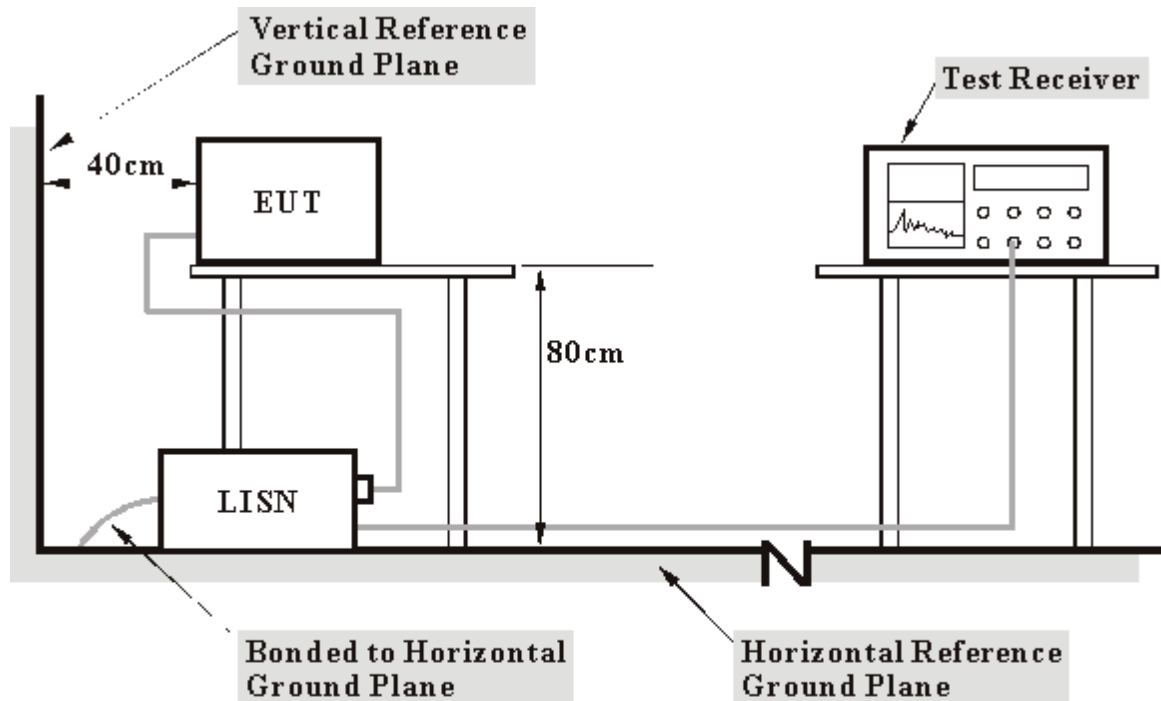
4.1.3 TEST PROCEDURES

- 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

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 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.



4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT (with a computer system) on the testing table.
- b. The computer system sent data to EUT by command "PIN" via an RJ 45 cable.
- c. The computer system sent "H" messages to Color Monitor and Monitor displayed "H" patterns on its screen.
- d. The computer system sent "H" messages to modem.
- e. The computer system sent "H" messages to printer, and the printer prints them on paper.
- f. Prepared another computer system to act as a communication partner and placed it outside of testing area.
- g. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
- h. The communication partner sent data to EUT by command "PIN".

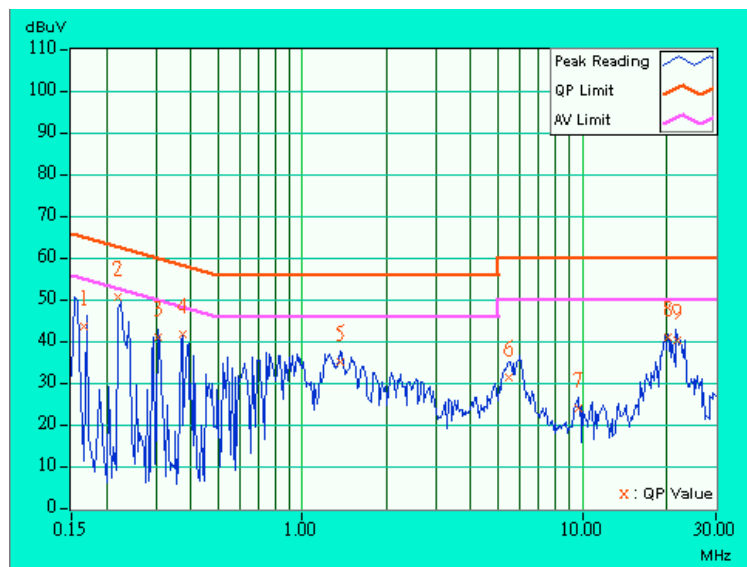
4.1.7 TEST RESULTS

EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY: Eric Lee	

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	0.166	0.10	42.56	-	42.66	-	65.18	55.18	-22.52	-
2	0.220	0.10	49.69	-	49.79	-	62.81	52.81	-13.02	-
3	0.306	0.10	40.01	-	40.11	-	60.07	50.07	-19.96	-
4	0.373	0.10	40.63	-	40.73	-	58.44	48.44	-17.71	-
5	1.367	0.20	34.24	-	34.44	-	56.00	46.00	-21.56	-
6	5.488	0.45	30.26	-	30.71	-	60.00	50.00	-29.29	-
7	9.695	0.59	22.89	-	23.48	-	60.00	50.00	-36.52	-
8	20.258	1.01	40.05	-	41.06	-	60.00	50.00	-18.94	-
9	21.910	1.08	39.45	-	40.53	-	60.00	50.00	-19.47	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.

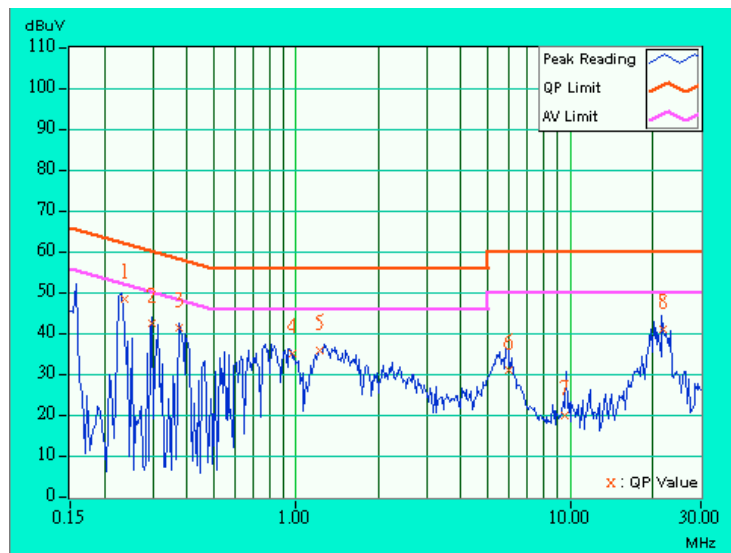


EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL CONDITIONS	35deg. C, 50%RH, 1005 hPa	TESTED BY: Eric Lee	

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	0.236	0.10	47.78	-	47.88	-	62.24	52.24	-14.36	-
2	0.298	0.10	42.01	-	42.11	-	60.29	50.29	-18.18	-
3	0.373	0.10	40.57	-	40.67	-	58.44	48.44	-17.77	-
4	0.966	0.19	34.25	-	34.44	-	56.00	46.00	-21.56	-
5	1.223	0.20	35.01	-	35.21	-	56.00	46.00	-20.79	-
6	5.957	0.33	30.43	-	30.76	-	60.00	50.00	-29.24	-
7	9.512	0.39	19.38	-	19.77	-	60.00	50.00	-40.23	-
8	21.910	0.76	40.30	-	41.06	-	60.00	50.00	-18.94	-

NOTE:

1. QP. and AV. are abbreviations of quasi-peak and average individually.
2. "-": NA
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Emission Level = Reading Value + Correction Factor.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, 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.

4.2.2 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

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



4.2.3 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
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHAFFNER Tunable Dipole Antenna	VHBA 9123	459	Nov. 22, 2003
SCHWARZBECK Tunable Dipole Antenna	UHA 9105	977	
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2003
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 3, 2003
* EMCO Horn Antenna	3115	9312-4192	April 9, 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	July 11, 2003
* TIMES RF cable	LMR-600	CABLE-ST5-01	July. 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.



4.2.4 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 10dB 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 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

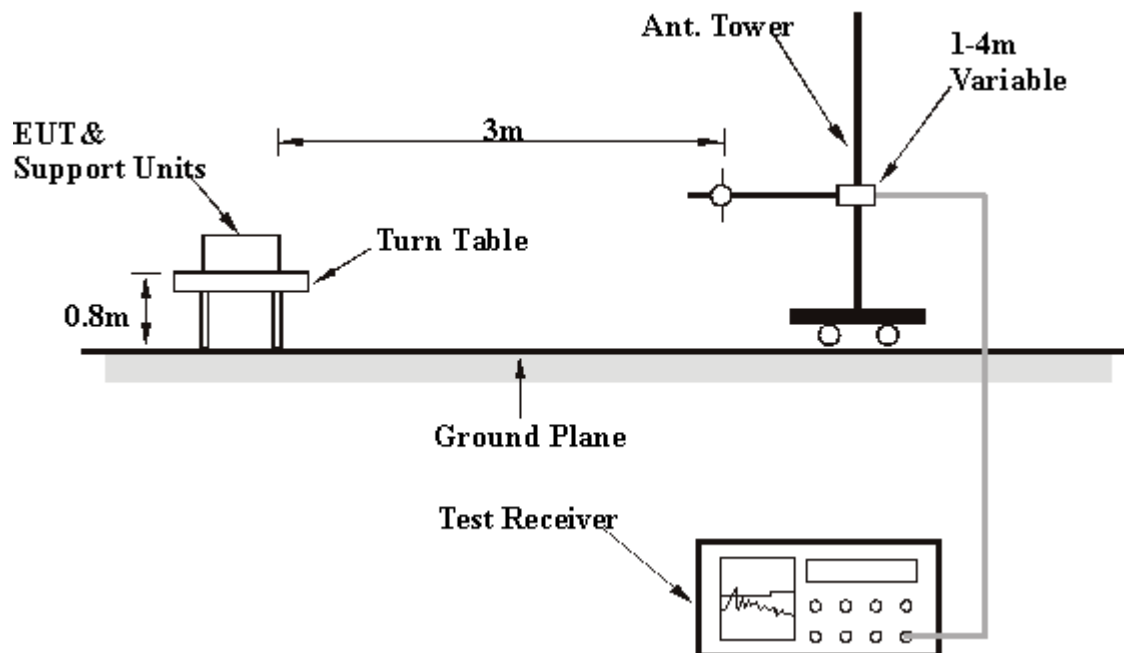
NOTE:

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.

4.2.5 DEVIATION FROM TEST STANDARD

No deviation

4.2.6 TEST SETUP



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

4.2.7 EUT OPERATING CONDITIONS

Same as 4.1.6

4.2.8 TEST RESULTS

EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	125.00	31.0 QP	43.50	-12.50	1.83H	116	18.55	11.47	0.97	0.00	-12.44
2	250.00	34.9 QP	46.00	-11.10	1.28H	66	21.58	12.02	1.29	0.00	-13.31
3	264.00	30.9 QP	46.00	-15.10	1.65H	65	16.70	12.89	1.31	0.00	-14.20
4	275.00	35.7 QP	46.00	-10.30	1.28H	257	21.76	12.59	1.37	0.00	-13.96
5	300.00	36.4 QP	46.00	-9.60	1.53H	221	21.80	13.18	1.45	0.00	-14.64
6	352.00	34.0 QP	46.00	-12.00	1.38H	2	18.24	14.31	1.46	0.00	-15.76
7	375.00	33.6 QP	46.00	-12.40	1.11H	83	16.96	15.13	1.50	0.00	-16.64
8	396.00	35.3 QP	46.00	-10.70	1.11H	80	17.80	15.96	1.54	0.00	-17.51
9	440.00	38.0 QP	46.00	-8.00	1.17H	358	20.10	16.32	1.59	0.00	-17.90
10	484.00	38.9 QP	46.00	-7.10	1.76H	77	20.24	16.96	1.70	0.00	-18.66
11	500.00	30.7 QP	46.00	-15.30	1.00H	189	11.69	17.26	1.75	0.00	-19.01
12	525.00	31.0 QP	46.00	-15.00	1.56H	37	11.62	17.59	1.79	0.00	-19.38
13	528.00	37.9 QP	46.00	-8.10	1.82H	43	18.48	17.62	1.79	0.00	-19.43
14	528.00	42.0 QP	46.00	-4.00	1.82H	359	22.58	17.62	1.79	0.00	-19.43
15	550.00	30.0 QP	46.00	-16.00	1.96H	102	10.25	17.93	1.83	0.00	-19.75
16	572.00	36.9 QP	46.00	-9.10	1.87H	133	16.77	18.25	1.88	0.00	-20.14
17	600.00	33.0 QP	46.00	-13.00	1.64H	39	12.46	18.61	1.93	0.00	-20.55
18	616.00	40.9 QP	46.00	-5.10	1.43H	118	20.12	18.82	1.96	0.00	-20.79
19	625.00	32.9 QP	46.00	-13.10	1.62H	129	12.02	18.91	1.97	0.00	-20.88
20	650.00	30.0 QP	46.00	-16.00	1.79H	264	8.76	19.23	2.01	0.00	-21.25
21	660.00	40.9 QP	46.00	-5.10	1.17H	8	19.64	19.25	2.01	0.00	-21.26
22	704.00	40.2 QP	46.00	-5.80	1.17H	327	18.78	19.38	2.04	0.00	-21.43
23	748.00	44.0 QP	46.00	-2.00	2.09H	311	21.68	20.14	2.17	0.00	-22.33
24	750.00	31.9 QP	46.00	-14.10	2.35H	269	9.54	20.18	2.18	0.00	-22.37
25	800.00	30.0 QP	46.00	-16.00	1.66H	178	7.02	20.69	2.29	0.00	-22.99
26	875.00	30.9 QP	46.00	-15.10	1.75H	55	7.87	20.63	2.40	0.00	-23.04
27	999.90	33.6 QP	54.00	-20.40	1.54H	35	9.57	21.36	2.67	0.00	-24.04

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 5GHz Wireless Router	MODEL	DI-754
FREQUENCY RANGE	Below 1000 MHz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	INPUT POWER (SYSTEM)	120Vac, 60Hz
TESTED BY	Eric Lee		

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)
1	125.00	28.6 QP	43.50	-14.90	1.27V	266	16.16	11.47	0.97	0.00	-12.44
2	176.00	33.5 QP	43.50	-10.00	1.42V	41	23.34	9.08	1.09	0.00	-10.16
3	250.00	33.0 QP	46.00	-13.00	1.05V	101	19.69	12.02	1.29	0.00	-13.31
4	264.00	24.5 QP	46.00	-21.50	1.21V	73	10.30	12.89	1.31	0.00	-14.20
5	300.00	29.0 QP	46.00	-17.00	1.54V	99	14.37	13.18	1.45	0.00	-14.63
6	308.00	28.0 QP	46.00	-18.00	1.09V	177	13.17	13.38	1.45	0.00	-14.83
7	352.00	33.0 QP	46.00	-13.00	1.42V	184	17.24	14.31	1.46	0.00	-15.76
8	400.00	28.0 QP	46.00	-18.00	1.30V	175	10.34	16.11	1.55	0.00	-17.66
9	440.00	34.6 QP	46.00	-11.40	1.00V	64	16.70	16.32	1.59	0.00	-17.91
10	484.00	31.8 QP	46.00	-14.20	1.07V	75	13.14	16.96	1.70	0.00	-18.67
11	500.00	31.8 QP	46.00	-14.20	1.22V	45	12.79	17.26	1.75	0.00	-19.02
12	525.00	32.0 QP	46.00	-14.00	1.27V	30	12.62	17.59	1.79	0.00	-19.39
13	528.00	41.9 QP	46.00	-4.10	1.33V	32	22.46	17.62	1.79	0.00	-19.43
14	550.00	28.6 QP	46.00	-17.40	1.12V	155	8.85	17.93	1.83	0.00	-19.76
15	572.00	33.5 QP	46.00	-12.50	1.99V	93	13.41	18.25	1.88	0.00	-20.14
16	600.00	30.0 QP	46.00	-16.00	1.01V	119	9.46	18.61	1.93	0.00	-20.55
17	616.00	35.5 QP	46.00	-10.50	1.70V	79	14.72	18.82	1.96	0.00	-20.79
18	660.00	33.8 QP	46.00	-12.20	1.54V	196	12.54	19.25	2.01	0.00	-21.26
19	700.00	32.4 QP	46.00	-13.60	1.01V	216	11.06	19.31	2.03	0.00	-21.34
20	704.00	35.6 QP	46.00	-10.40	1.02V	319	14.18	19.38	2.04	0.00	-21.42
21	748.00	41.9 QP	46.00	-4.10	1.00V	313	19.58	20.14	2.17	0.00	-22.32
22	750.00	30.1 QP	46.00	-15.90	1.31V	184	7.74	20.18	2.18	0.00	-22.36
23	800.00	32.0 QP	46.00	-14.00	1.54V	79	9.02	20.69	2.29	0.00	-22.99
24	999.90	32.8 QP	54.00	-21.20	1.03V	268	8.77	21.36	2.67	0.00	-24.03

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 5GHz Wireless Router	MODEL	DI-754
CHANNEL	1	DETECTOR FUNCTION	Peak(PK) Average (AV)
FREQUENCY RANGE	Above 1000 MHz	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5180.00	83.4 AV			1.26H	59	84.20	31.87	3.95	36.63	0.82	
2	*5180.00	92.8 PK			1.26H	59	93.60	31.87	3.95	36.63	0.82	
3	10360.00	65.9 PK	68.30	-2.40	1.17H	72	57.50	39.16	6.69	37.42	-8.43	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5180.00	92.8 AV			1.06V	219	93.60	31.87	3.95	36.63	0.82	
2	*5180.00	103.2 PK			1.06V	219	104.00	31.87	3.95	36.63	0.82	
3	10360.00	65.9 PK	68.30	-2.40	1.12V	324	57.50	39.16	6.69	37.42	-8.43	

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 5GHz Wireless Router	MODEL	DI-754
CHANNEL	4	DETECTOR FUNCTION	Peak(PK) Average (AV)
FREQUENCY RANGE	Above 1000 MHz	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5240.00	95.7 PK			1.52H	127	96.50	31.90	3.86	36.60	0.84	
2	*5240.00	86.2 AV			1.52H	127	87.00	31.90	3.86	36.60	0.84	
3	10480.00	65.2 PK	68.30	-3.10	1.05H	4	56.00	39.36	7.14	37.32	-9.19	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5240.00	92.2 AV			1.19V	227	93.00	31.90	3.86	36.60	0.84	
2	*5240.00	101.2 PK			1.19V	227	102.00	31.90	3.86	36.60	0.84	
3	10480.00	65.7 PK	68.30	-2.60	1.35V	159	56.50	39.36	7.14	37.32	-9.19	

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 5GHz Wireless Router	MODEL	DI-754
CHANNEL	5	DETECTOR FUNCTION	Peak(PK) Average (AV)
FREQUENCY RANGE	Above 1000 MHz	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5260.00	82.4 AV			1.02H	50	83.20	31.90	3.86	36.60	0.84	
2	*5260.00	93.2 PK			1.02H	50	94.00	31.90	3.86	36.60	0.84	
3	10520.00	62.4 PK	68.30	-5.90	1.58H	84	53.00	39.43	7.22	37.28	-9.36	

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5260.00	92.7 AV			1.21V	219	93.50	31.90	3.86	36.60	0.84	
2	*5260.00	102.2 PK			1.21V	219	103.00	31.90	3.86	36.60	0.84	
3	10520.00	63.9 PK	68.30	-4.40	1.35V	37	54.50	39.43	7.22	37.28	-9.37	

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 5GHz Wireless Router	MODEL	DI-754
CHANNEL	8	DETECTOR FUNCTION	Peak(PK) Average (AV)
FREQUENCY RANGE	Above 1000 MHz	INPUT POWER (SYSTEM)	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	25 deg. C, 60%RH, 1050 hPa	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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5320.00	93.6 PK			1.10H	251	94.50	31.93	3.77	36.57	0.86	
2	*5320.00	84.1 AV			1.10H	251	85.00	31.93	3.77	36.57	0.86	
3	10640.00	49.6 AV	54.00	-4.40	1.40H	86	40.00	39.61	7.22	37.18	-9.64	NOTE6
4	10640.00	62.6 PK	74.00	-11.40	1.40H	86	53.00	39.61	7.22	37.18	-9.64	NOTE6

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)	Antenna Factor (dB)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB)	Remark
1	*5320.00	90.1 AV			1.22V	193	91.00	31.93	3.77	36.57	0.86	
2	*5320.00	100.1 PK			1.22V	193	101.00	31.93	3.77	36.57	0.86	
3	10640.00	51.8 AV	54.00	-2.20	1.08V	336	42.20	39.61	7.22	37.18	-9.64	NOTE6
4	10640.00	63.6 PK	74.00	-10.40	1.08V	336	54.00	39.61	7.22	37.18	-9.64	NOTE6

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.

4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 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.

4.3.2 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.

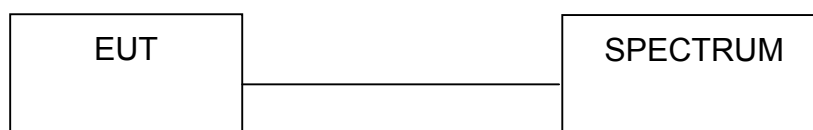
4.3.3 TEST PROCEDURE

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 100kHz.
5. Using the spectrum analyzer's channel power measurement function to measure the output power.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

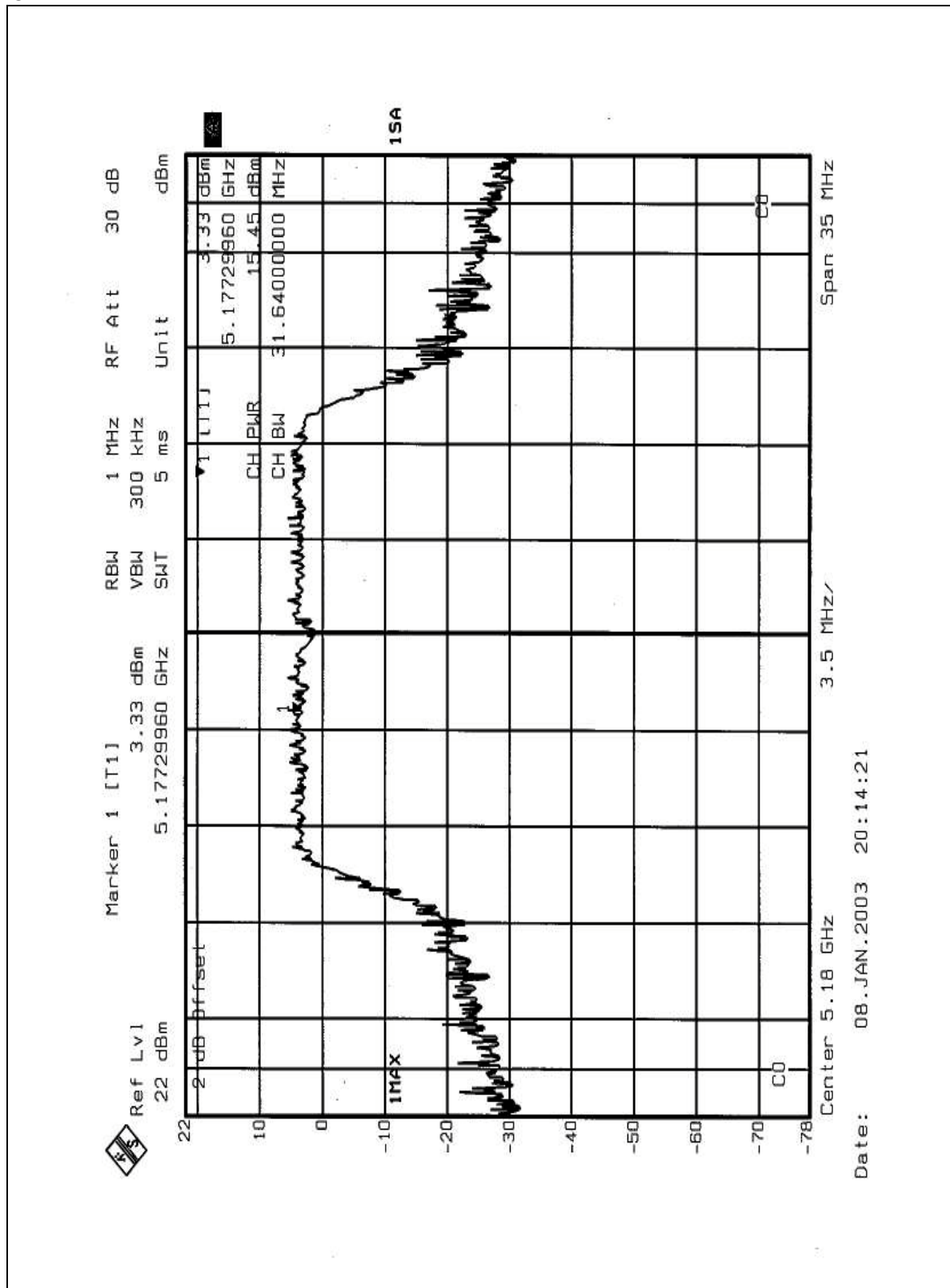
4.3.7 TEST RESULTS

EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 68%RH, 1005 hPa	TESTED BY	Ansen Lei

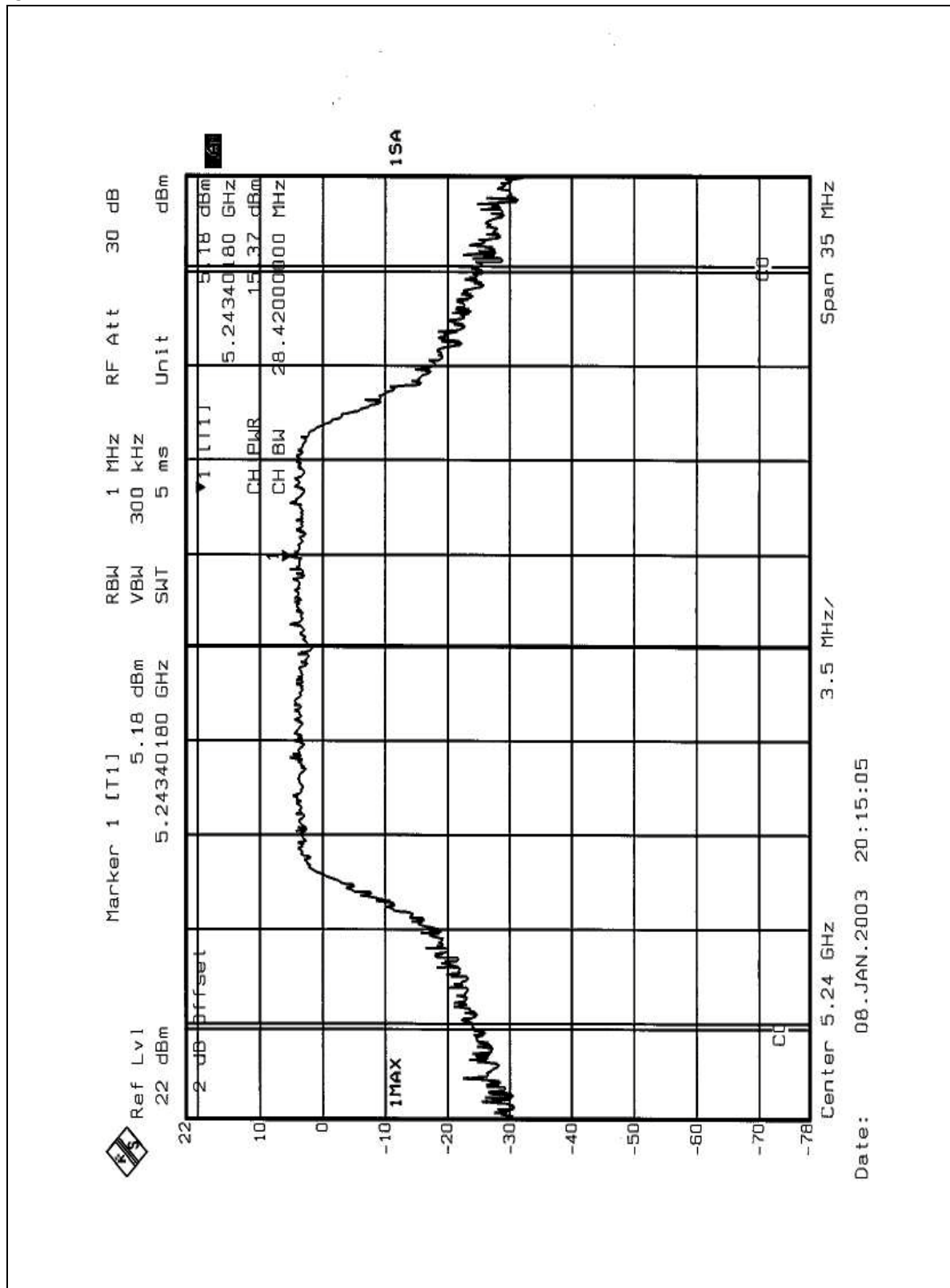
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	15.45	17.00	31.64	PASS
4	5240	15.37	17.00	28.42	PASS
5	5260	18.92	24.00	29.33	PASS
8	5320	18.52	24.00	29.19	PASS

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

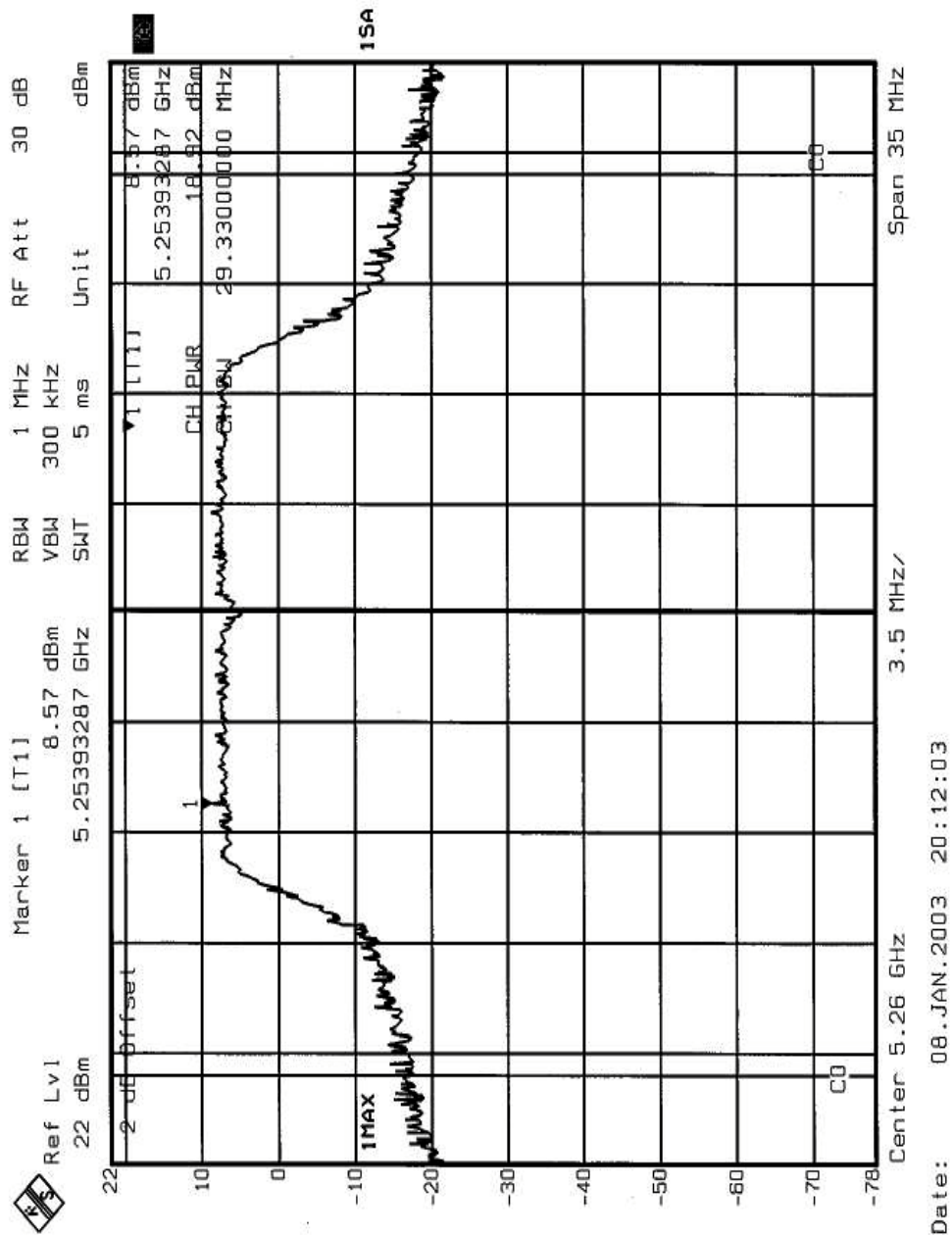
CHANNEL 1



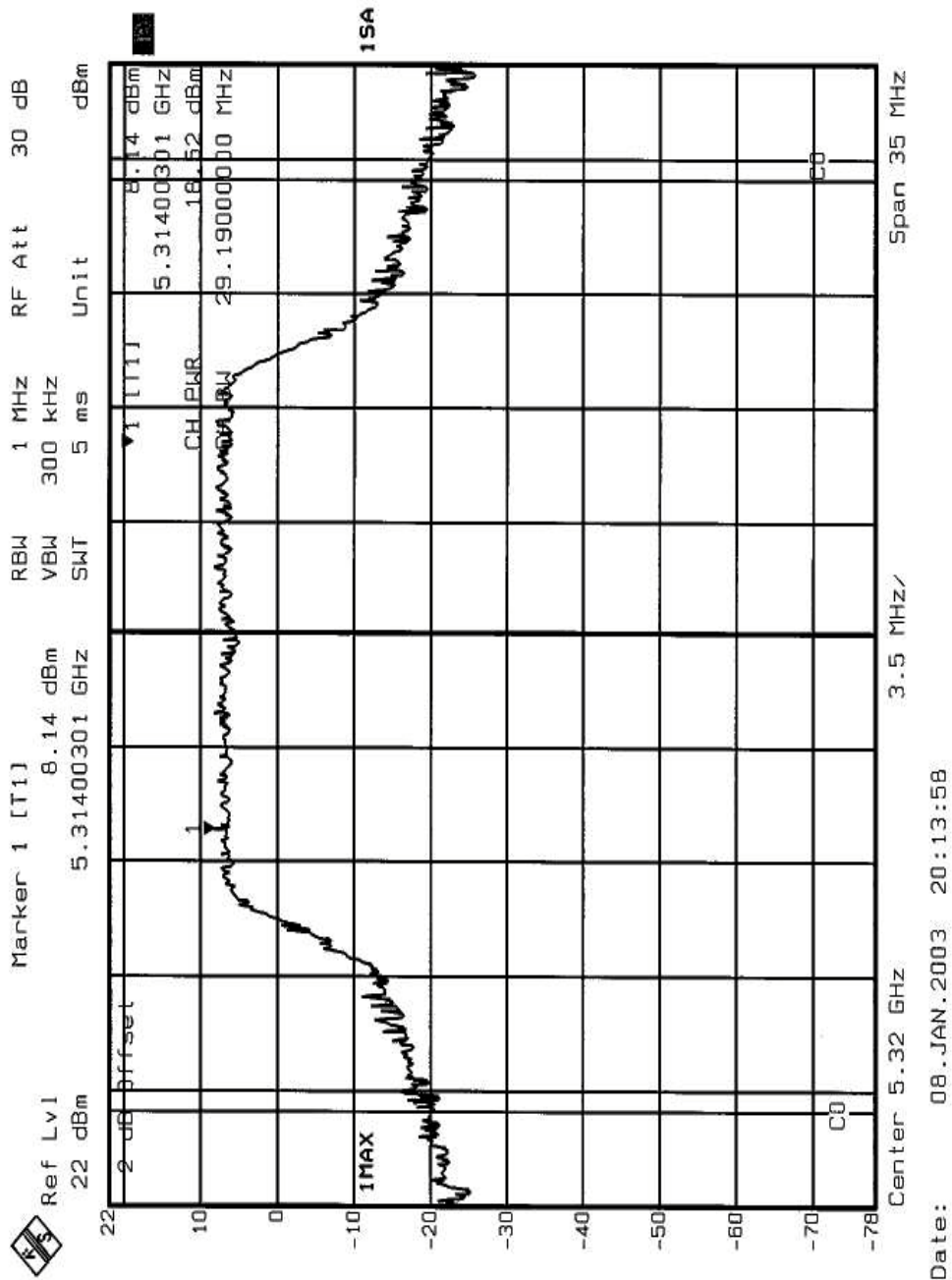
CHANNEL 4



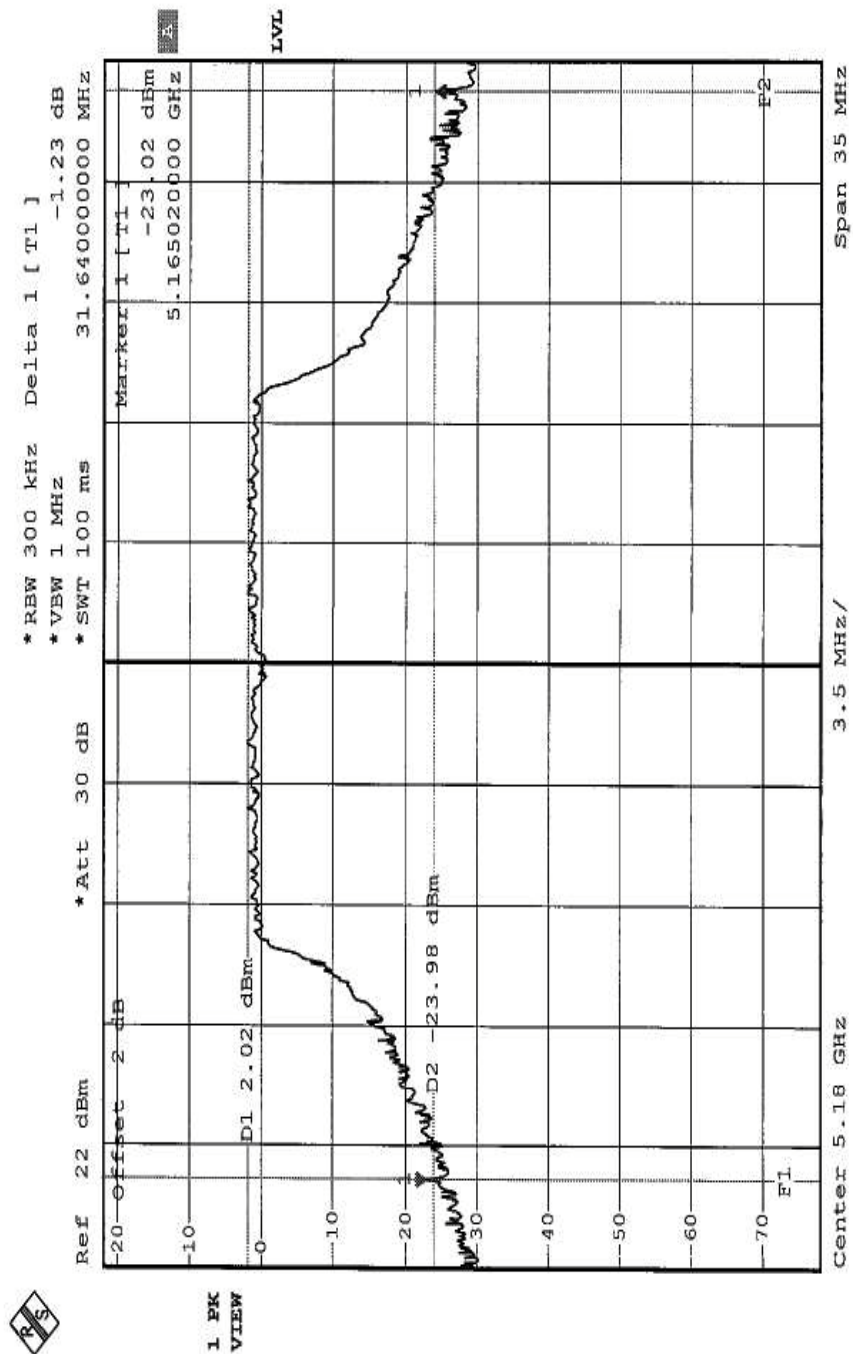
CHANNEL 5



CHANNEL 8

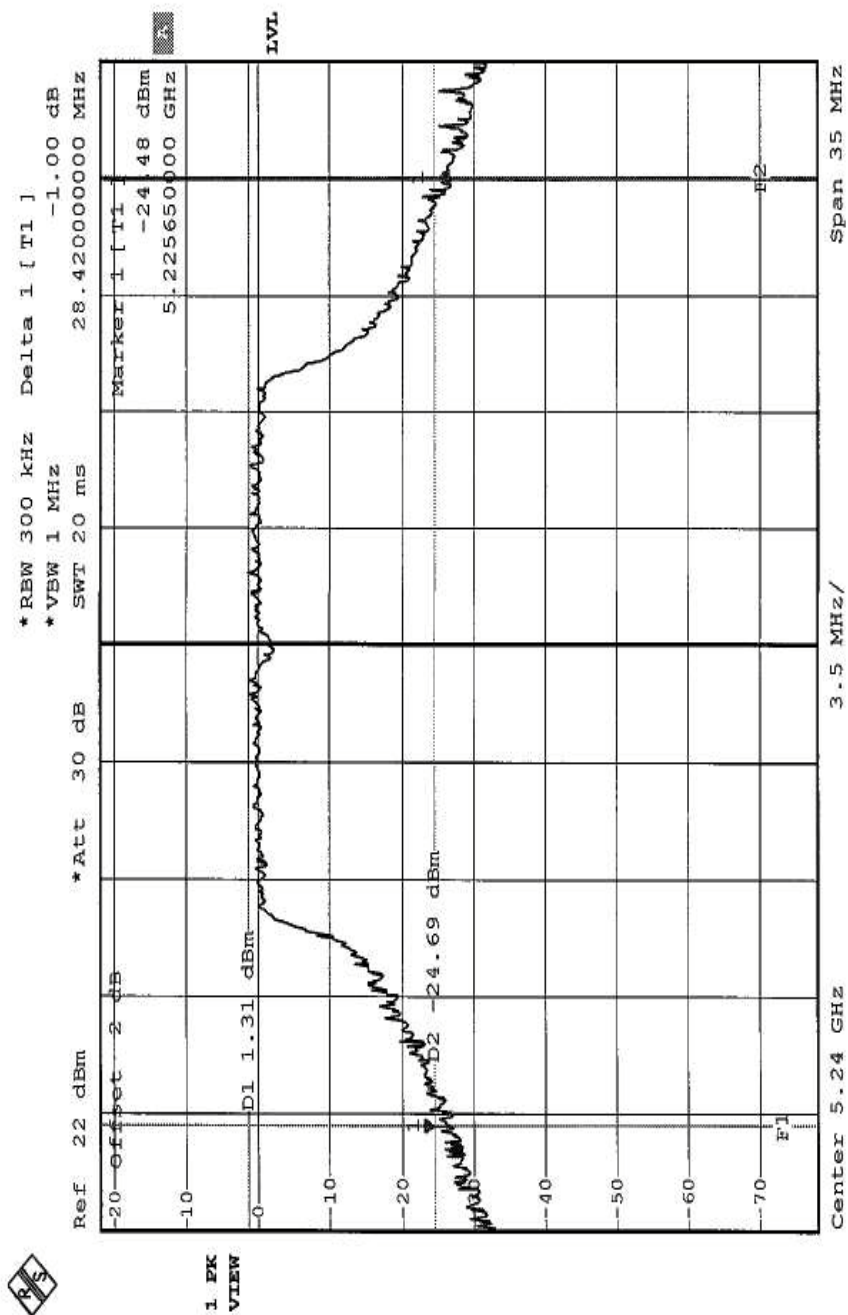


CHANNEL 1



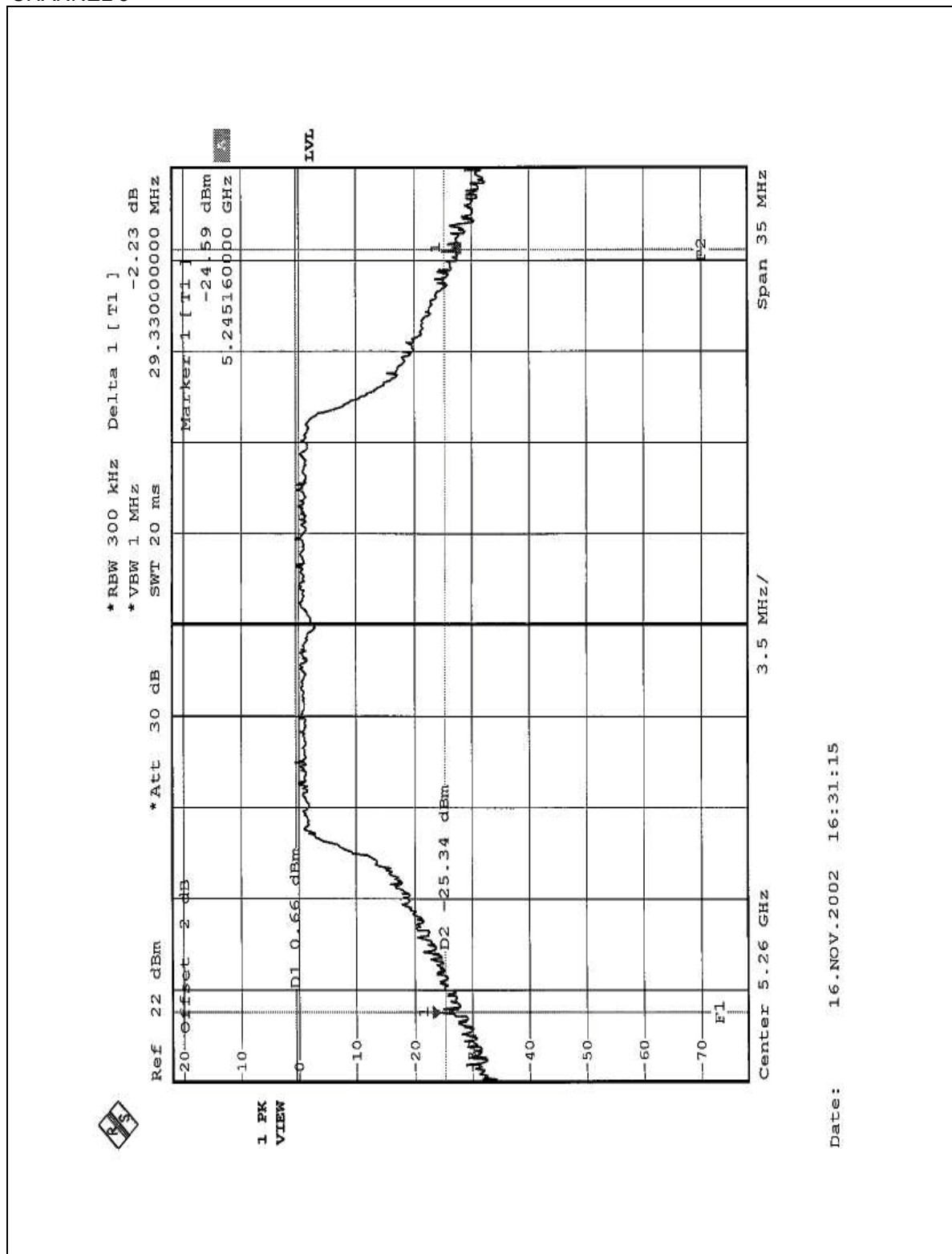
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CHANNEL 4

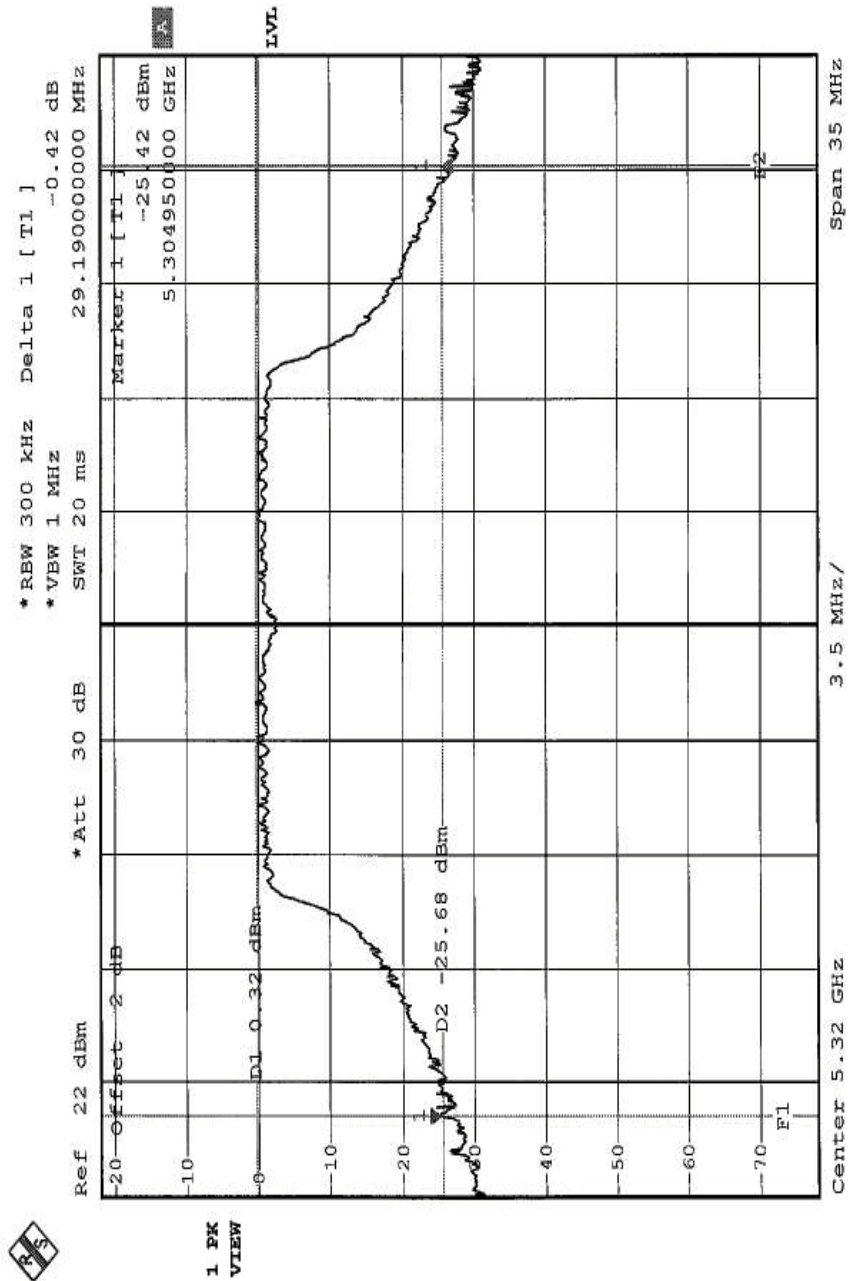


Date: 16.NOV.2002 16:51:51

CHANNEL 5



CHANNEL 8



Date: 16.NOV.2002 16:12:01

4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 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

4.4.2 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.

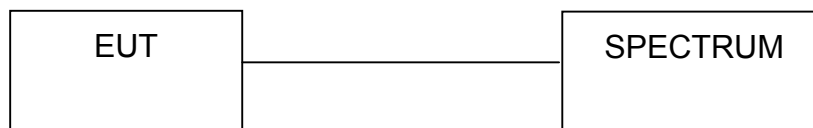
4.4.3 TEST PROCEDURE

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.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

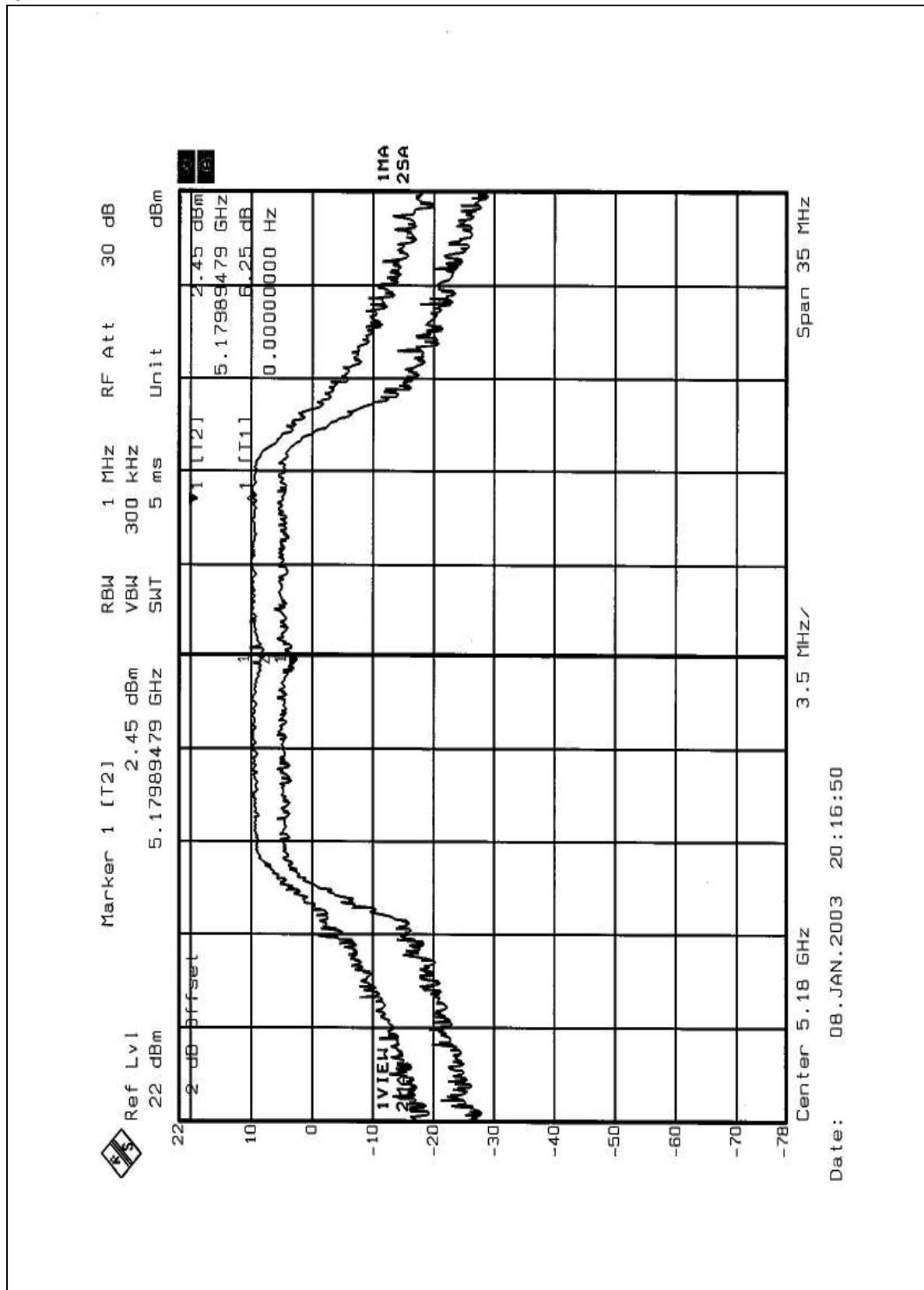
The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.4.7 TEST RESULTS

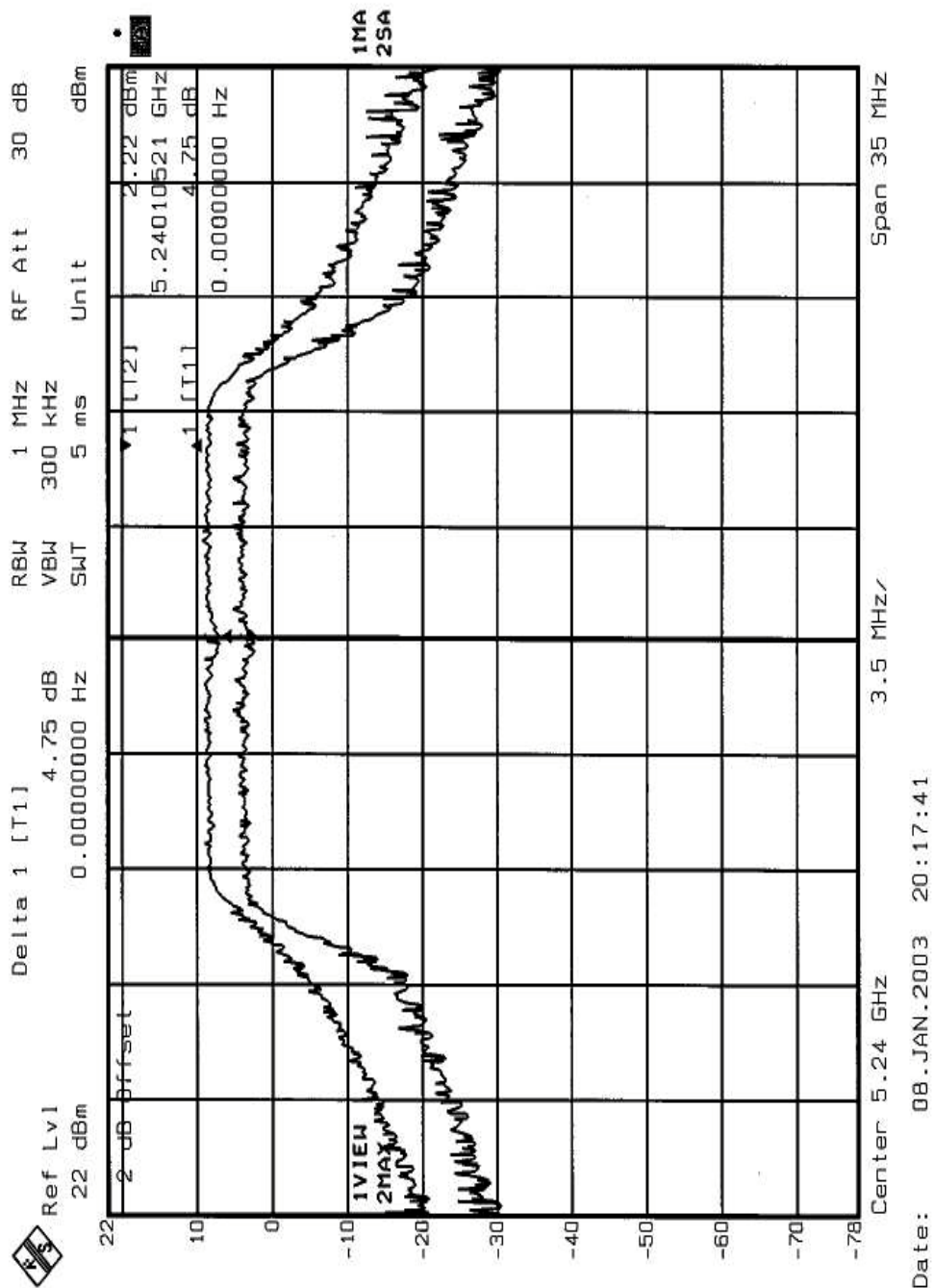
EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	20deg. C, 68%RH, 1005 hPa	TESTED BY	Ansen Lei

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	6.25	13	PASS
4	5240	4.75	13	PASS
5	5260	6.65	13	PASS
8	5320	6.73	13	PASS

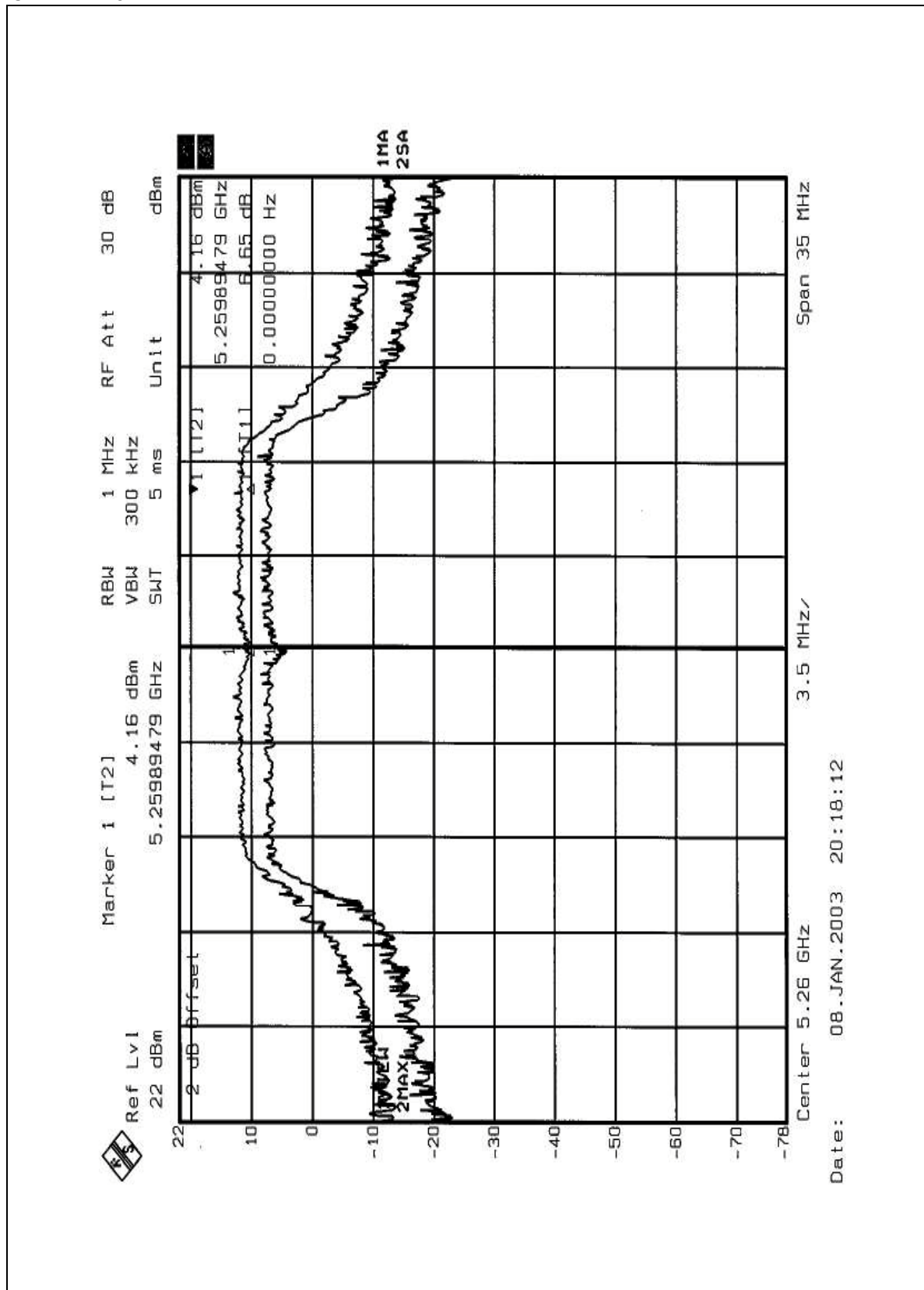
CHANNEL 1



CHANNEL 4



CHANNEL 5



Marker 1 [T2]
4.27 dBm
5.31989479 GHz

Ref Lvl
22 dBm

2 dB Offset

RBW 1 MHz
VBW 300 kHz
SWT 5 ms

RF Att 30 dB

Unit dBm

Span 35 MHz

Center 5.32 GHz

3.5 MHz

Date: 08.JAN.2003 20:18:56

1MA
2SA

4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 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

4.5.2 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.

4.5.3 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.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 5.3.6

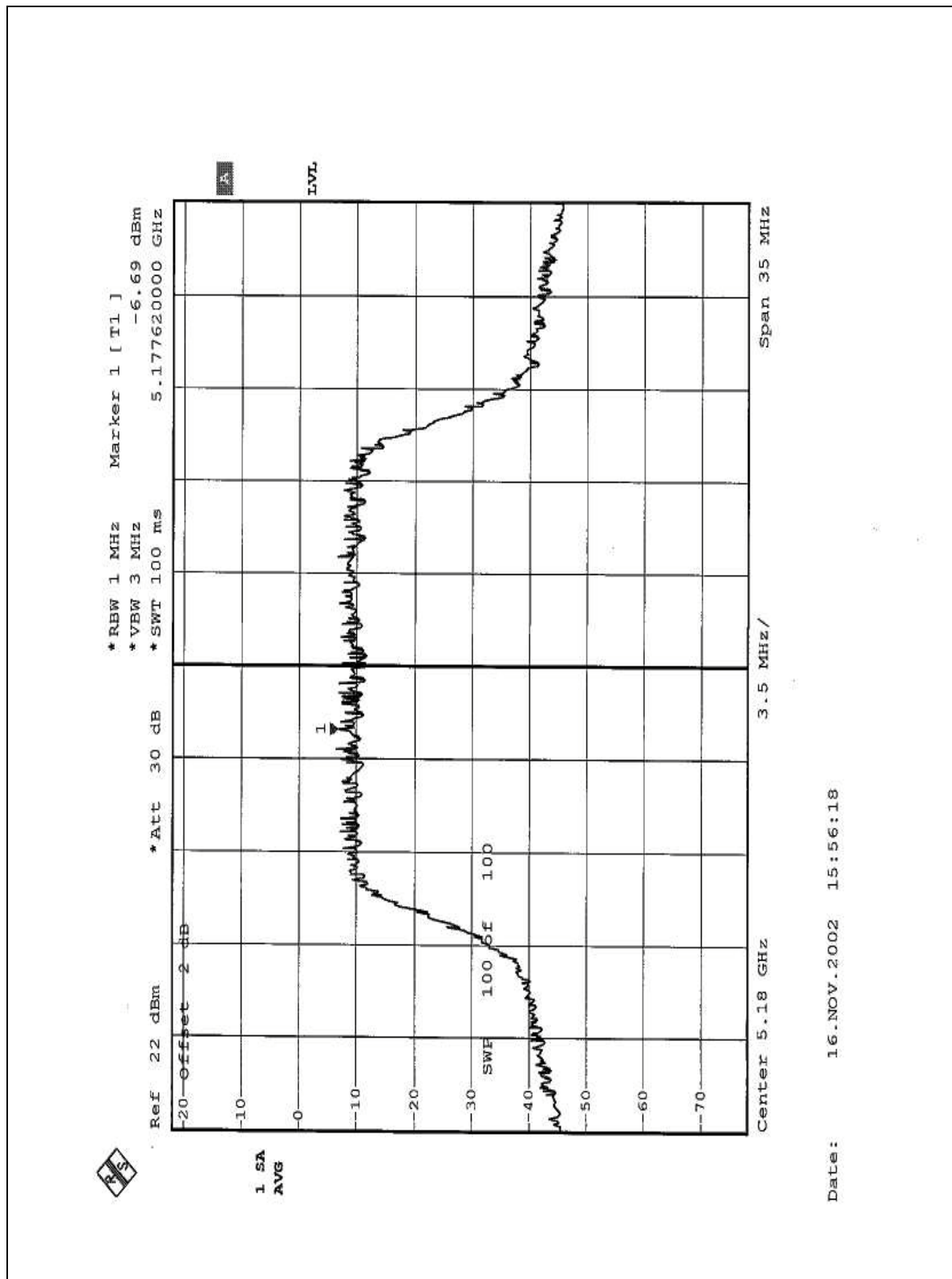


4.5.7 TEST RESULTS

EUT	Multimode 5GHz Wireless Router	MODEL	DI-754
MODE	Normal	INPUT POWER (SYSTEM)	120Vac, 60 Hz
ENVIRONMENTAL CONDITIONS	21deg. C, 67%RH, 1005 hPa	TESTED BY	Steven Lu

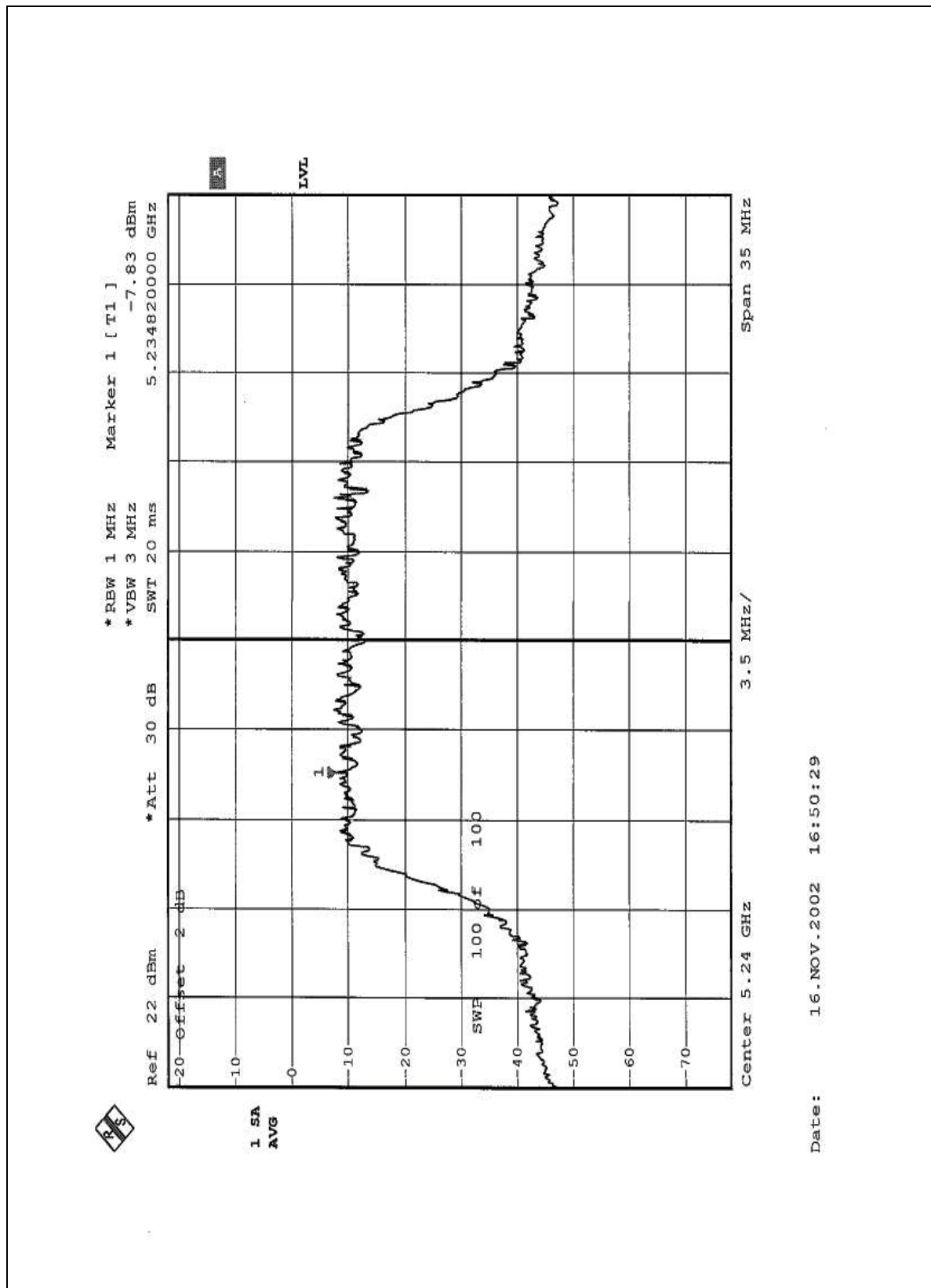
CHANNEL NUMBER	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1 MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	-6.69	4	PASS
4	5240	-7.83	4	PASS
5	5260	-7.24	11	PASS
8	5320	-8.00	11	PASS

CHANNEL 1



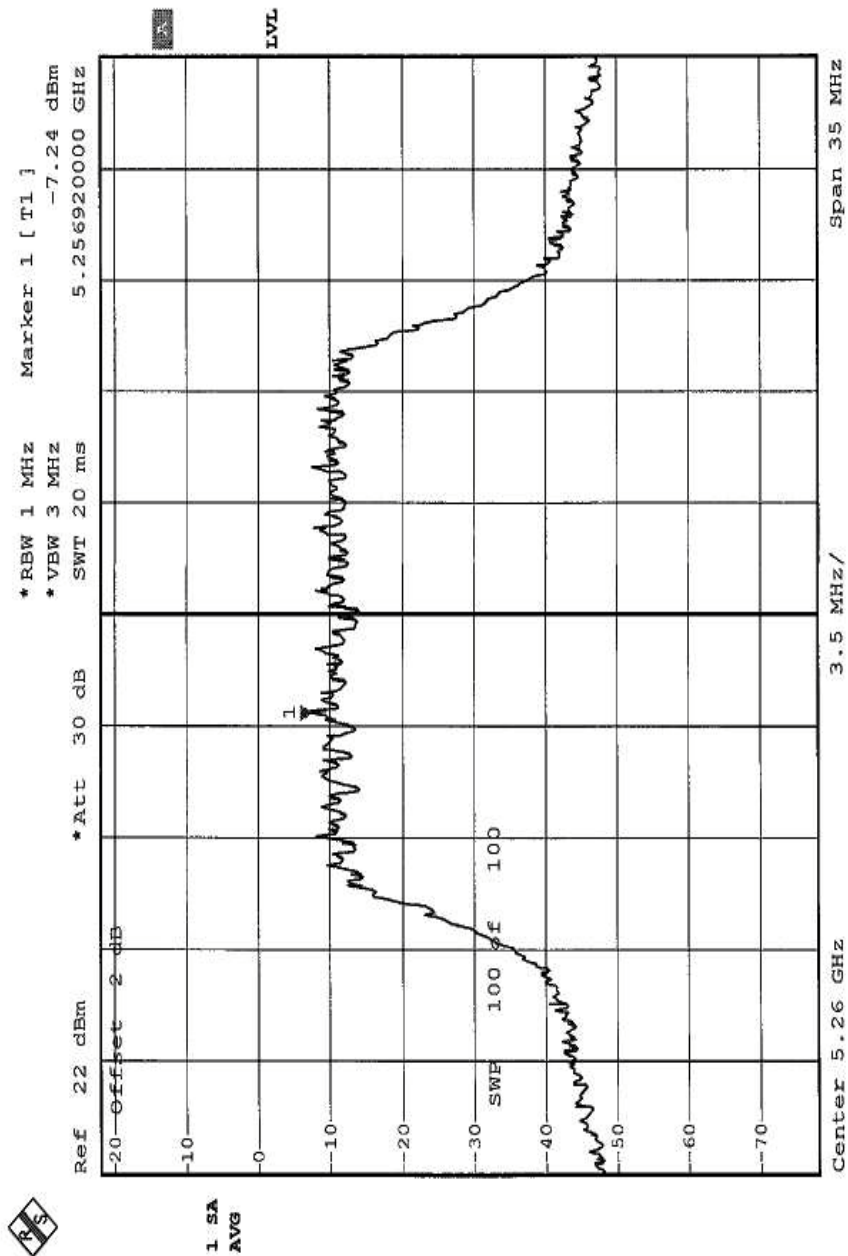
Date: 16.NOV.2002 15:56:18

CHANNEL 4



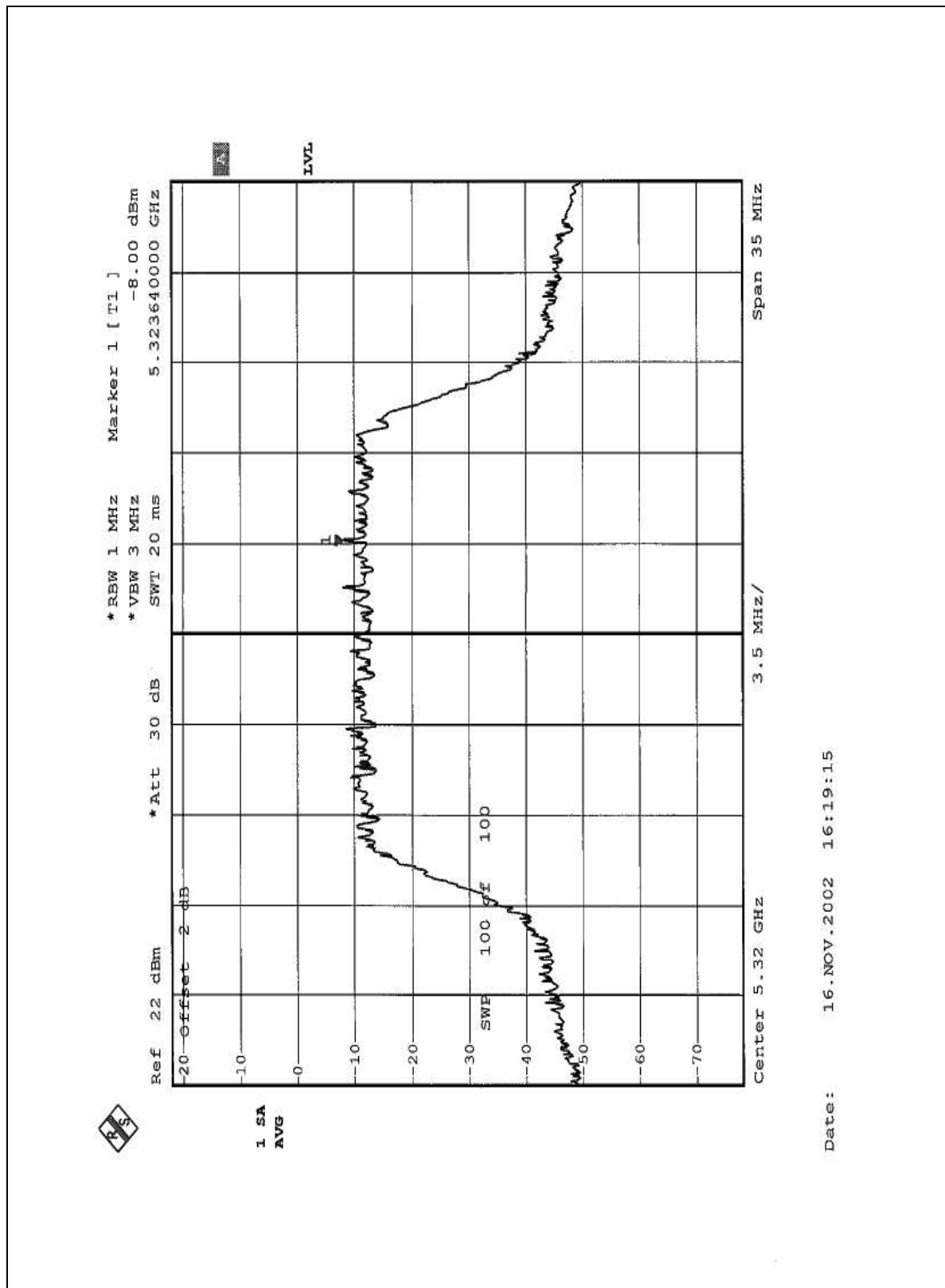
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CHANNEL 5



Date: 16.NOV.2002 16:49:01

CHANNEL 8





4.6 FREQUENCY STABILITY

4.6.1 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.

4.6.2 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.

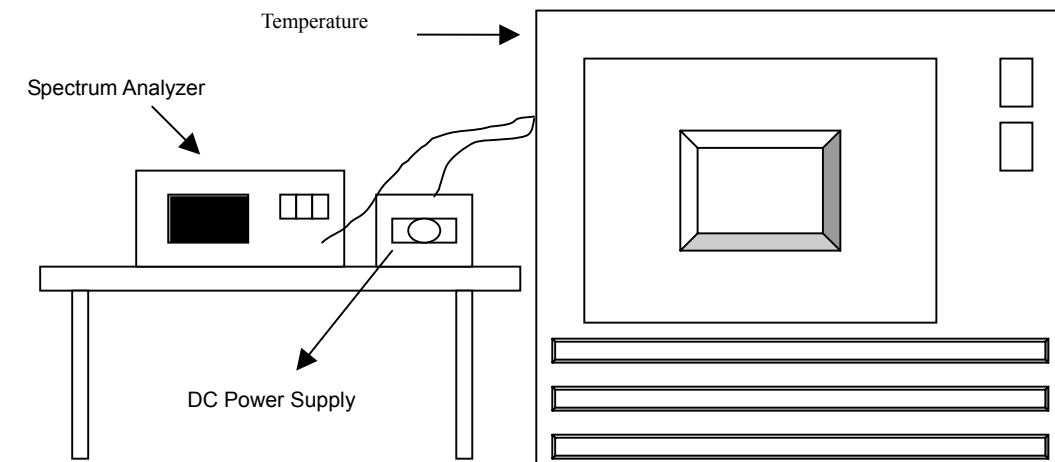
4.6.3 TEST PROCEDURE

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.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

Same as Item 4.1.6

4.6.7 TEST RESULTS

Operating frequency: 5180MHz				Limit : $\pm 0.02\%$			
Temp. (°C)	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5179.9527	-0.0009131	5179.9540	-0.0008880	5179.9558	-0.0008533
	110.0	5179.9525	-0.0009170	5179.9542	-0.0008842	5179.9550	-0.0008687
	93.5	5179.9533	-0.0009015	5179.9567	-0.0008359	5179.9552	-0.0008649
40	126.5	5179.9309	-0.0013340	5179.9308	-0.0013359	5179.9320	-0.0013127
	110.0	5179.9317	-0.0013185	5179.9300	-0.0013514	5179.9325	-0.0013031
	93.5	5179.9325	-0.0013031	5179.9319	-0.0013147	5179.9321	-0.0013108
30	126.5	5179.9333	-0.0012876	5179.9302	-0.0013475	5179.9311	-0.0013301
	110.0	5179.9300	-0.0013514	5179.9308	-0.0013359	5179.9317	-0.0013185
	93.5	5179.9309	-0.0013340	5179.9312	-0.0013282	5179.9323	-0.0013069
20	126.5	5179.9308	-0.0013359	5179.9340	-0.0012741	5179.9335	-0.0012838
	110.0	5179.9317	-0.0013185	5179.9342	-0.0012703	5179.9333	-0.0012876
	93.5	5179.9317	-0.0013185	5179.9342	-0.0012703	5179.9338	-0.0012780
10	126.5	5179.9471	-0.0010212	5179.9433	-0.0010946	5179.9451	-0.0010598
	110.0	5179.9475	-0.0010135	5179.9450	-0.0010618	5179.9458	-0.0010463
	93.5	5179.9478	-0.0010077	5179.9451	-0.0010598	5179.9461	-0.0010405
0	126.5	5179.9469	-0.0010251	5179.9471	-0.0010212	5179.9505	-0.0009556
	110.0	5179.9467	-0.0010290	5179.9475	-0.0010135	5179.9500	-0.0009653
	93.5	5179.9471	-0.0010212	5179.9479	-0.0010058	5179.9502	-0.0009614
-10	126.5	5179.9331	-0.0012915	5179.9361	-0.0012336	5179.9358	-0.0012394
	110.0	5179.9325	-0.0013031	5179.9367	-0.0012220	5179.9351	-0.0012529
	93.5	5179.9336	-0.0012819	5179.9375	-0.0012066	5179.9383	-0.0011911
-20	126.5	5179.9335	-0.0012838	5179.9347	-0.0012606	5179.9347	-0.0012606
	110.0	5179.9333	-0.0012876	5179.9342	-0.0012703	5179.9350	-0.0012548
	93.5	5179.9334	-0.0012857	5179.9346	-0.0012625	5179.9354	-0.0012471
-30	126.5	5179.9336	-0.0012819	5179.9345	-0.0012645	5179.9348	-0.0012587
	110.0	5179.9330	-0.0012934	5179.9347	-0.0012606	5179.9352	-0.0012510
	93.5	5179.9334	-0.0012857	5179.9351	-0.0012529	5179.9355	-0.0012452

4.7 BAND EDGES MEASUREMENT

4.7.1 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.

4.7.2 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 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

4.7.3 EUT OPERATING CONDITION

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



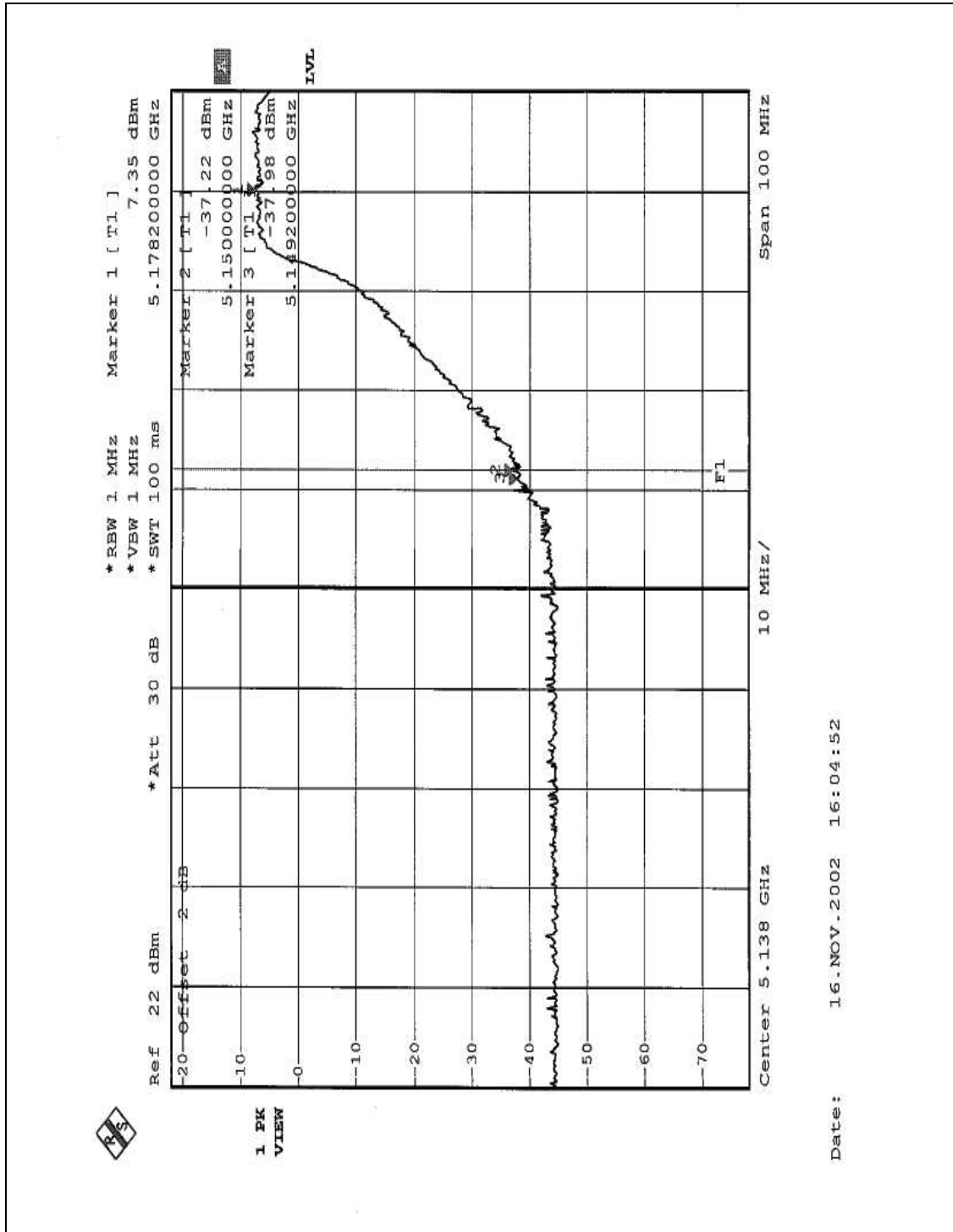
4.7.4 TEST RESULTS

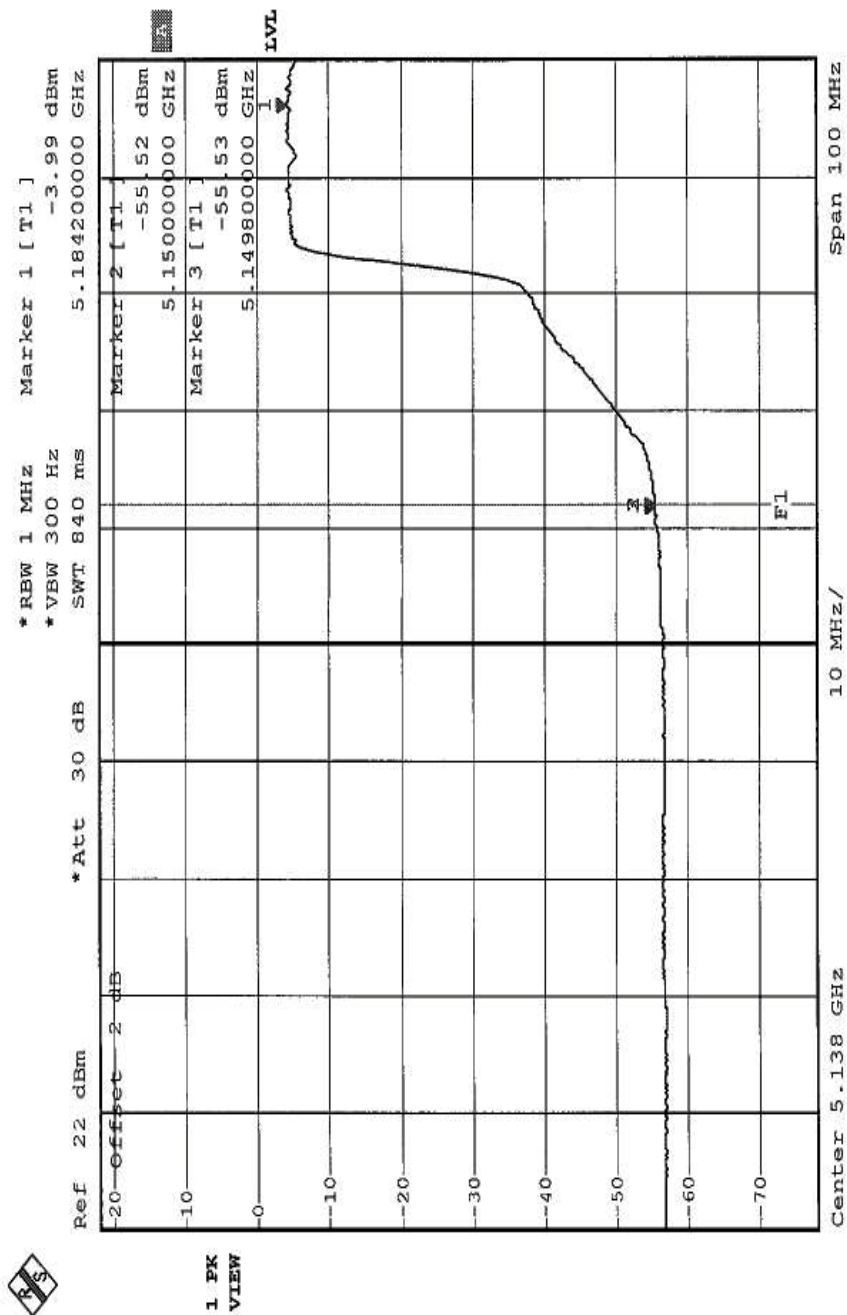
For signals in the restricted bands above and below the 5.15 to 5.35 GHz allocated band a measurement was made of the amplitude of the spurious emissions with respect to the intentional signals. The relative amplitude, in dBc, was applied to the average and peak field strength of the intentional signal 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 4 pages.

Channel 1 (5180 MHz)

The band edge emission plot on the following 2 pages shows 44.57dBc (Peak) / 51.53dBc (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 is 92.8dBuV/m, so the maximum field strength in restrict band is $92.8 - 51.53 = 41.27$ dBuV/m which is under 54dBuV/m limit.

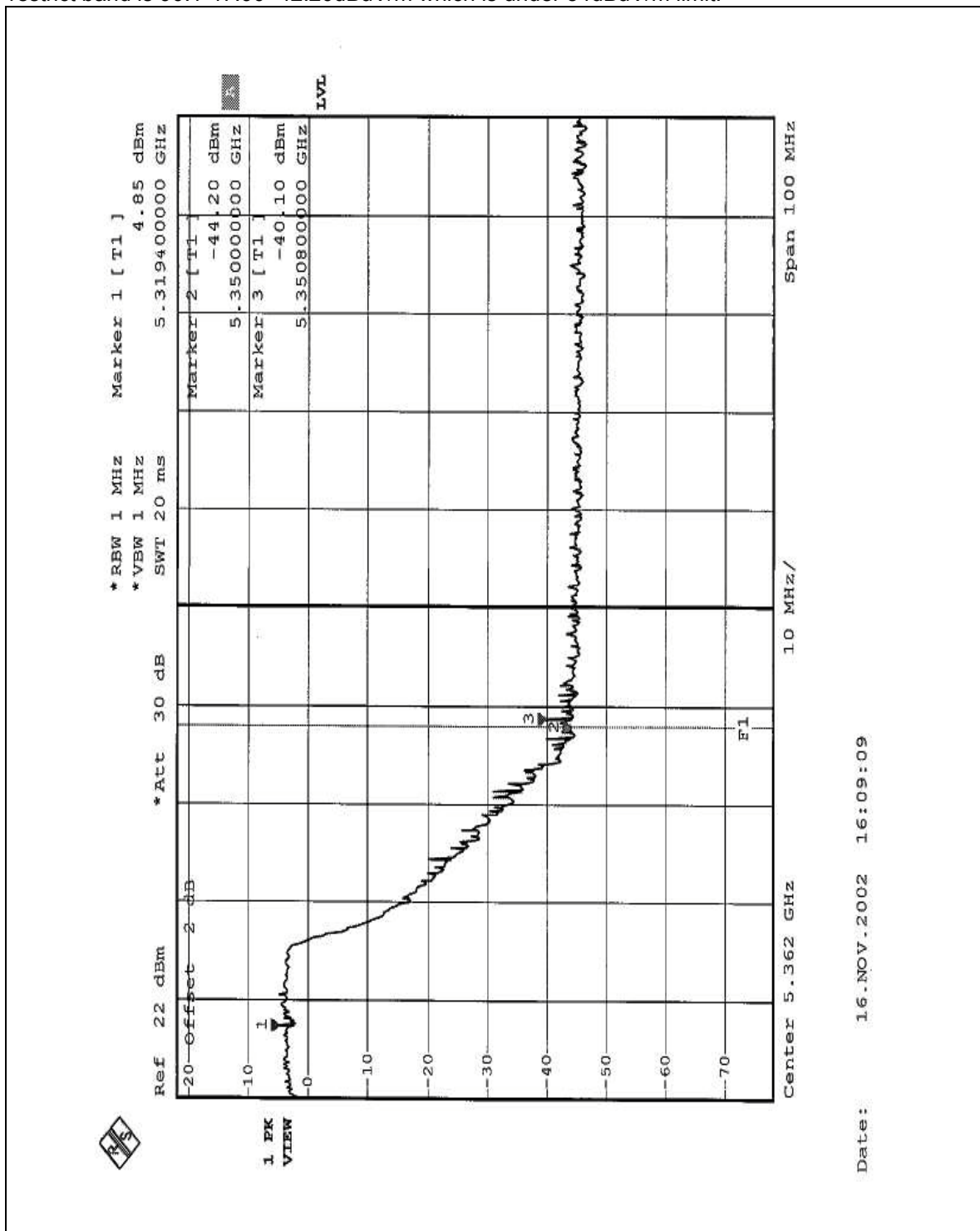


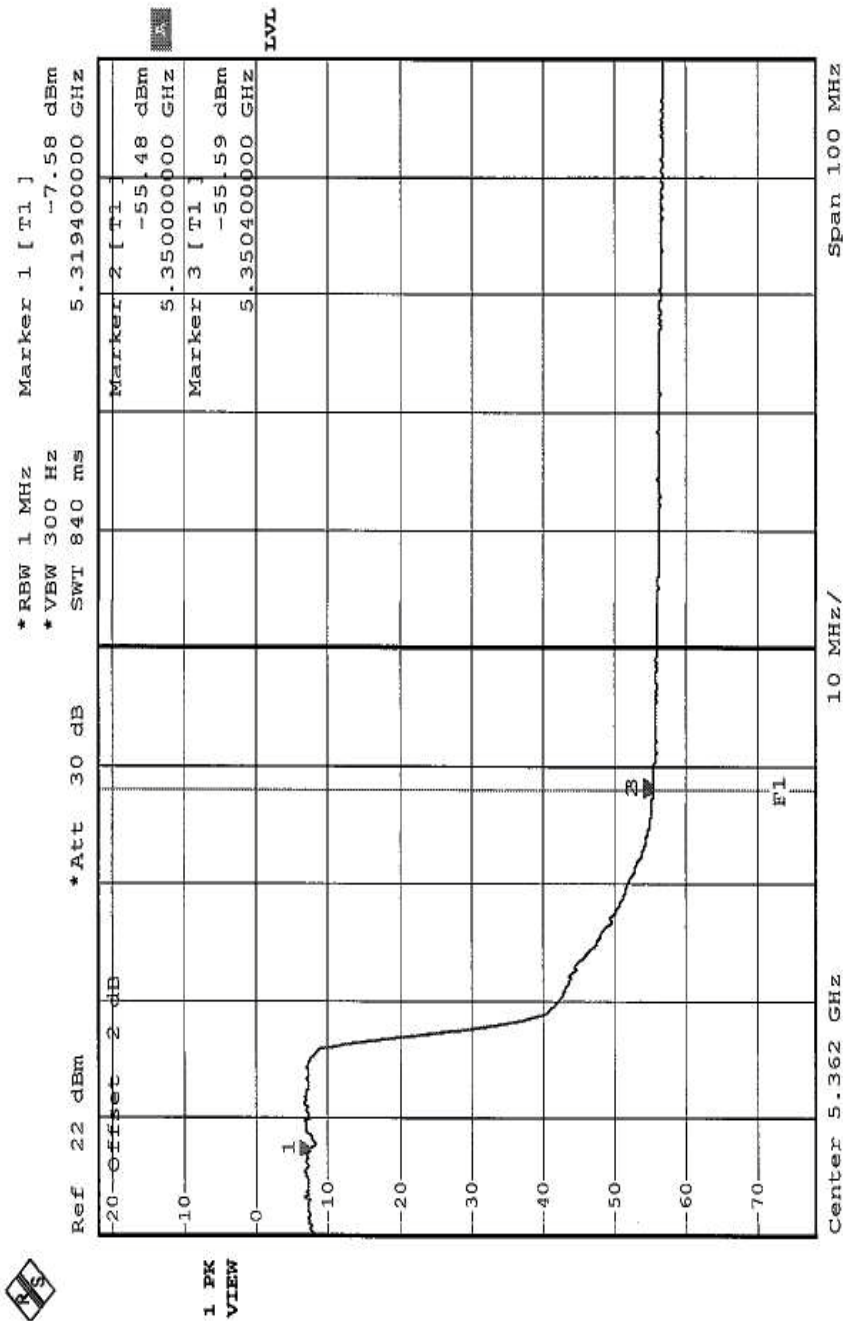


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Channel 8 (5320 MHz)

The band edge emission plot on the following 2 pages shows 44.95dBc (Peak) / 47.90dBc (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 is 90.1dBuV/m, so the maximum field strength in restrict band is $90.1 - 47.90 = 42.20$ dBuV/m which is under 54dBuV/m limit.





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4.8 ANTENNA REQUIREMENT

4.8.1 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.

4.8.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Dipole Antenna without antenna connector. The maximum Gain of the antenna is 2dBi only.

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST





6. 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.

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Email: service@mail.adt.com.tw

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