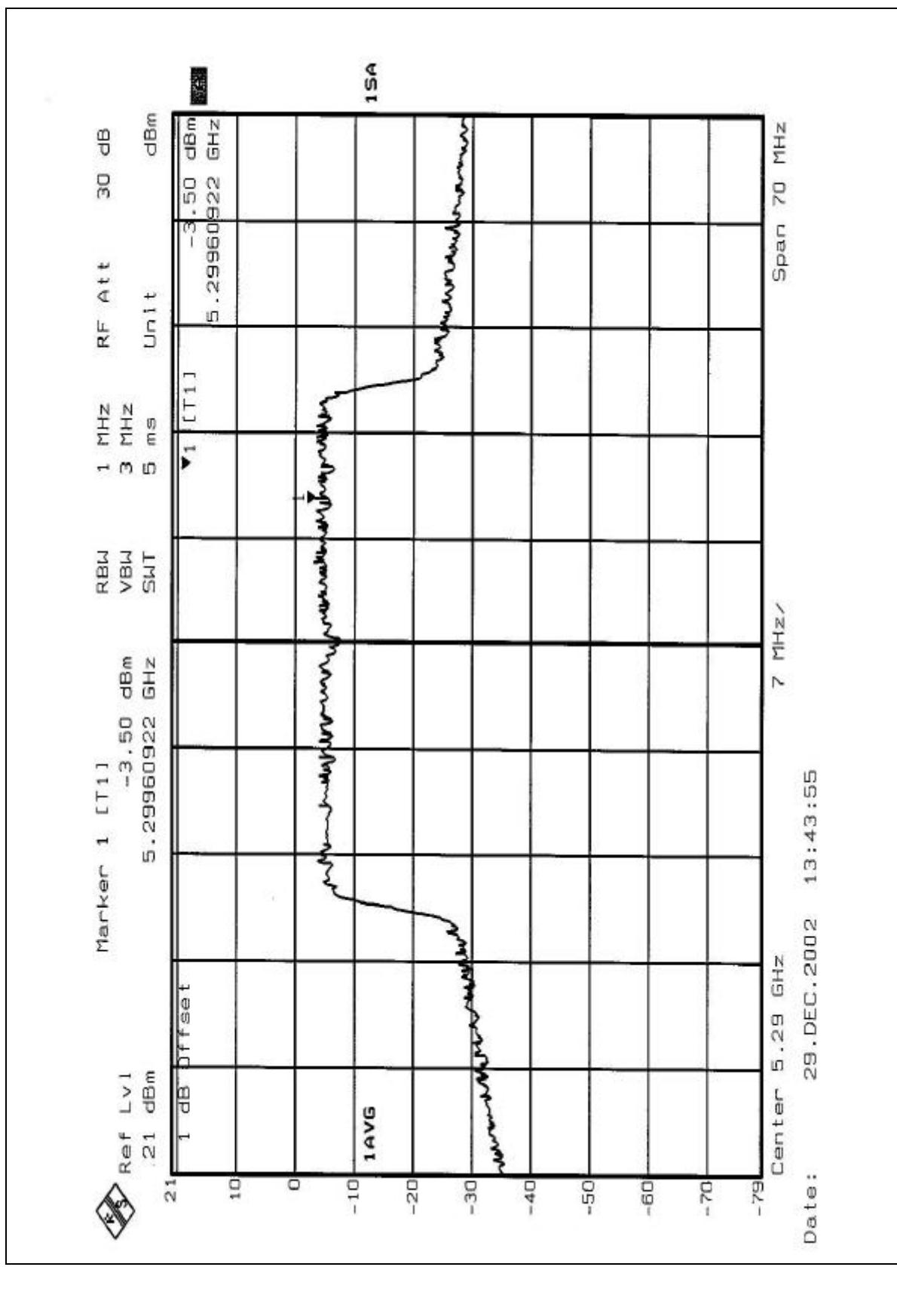
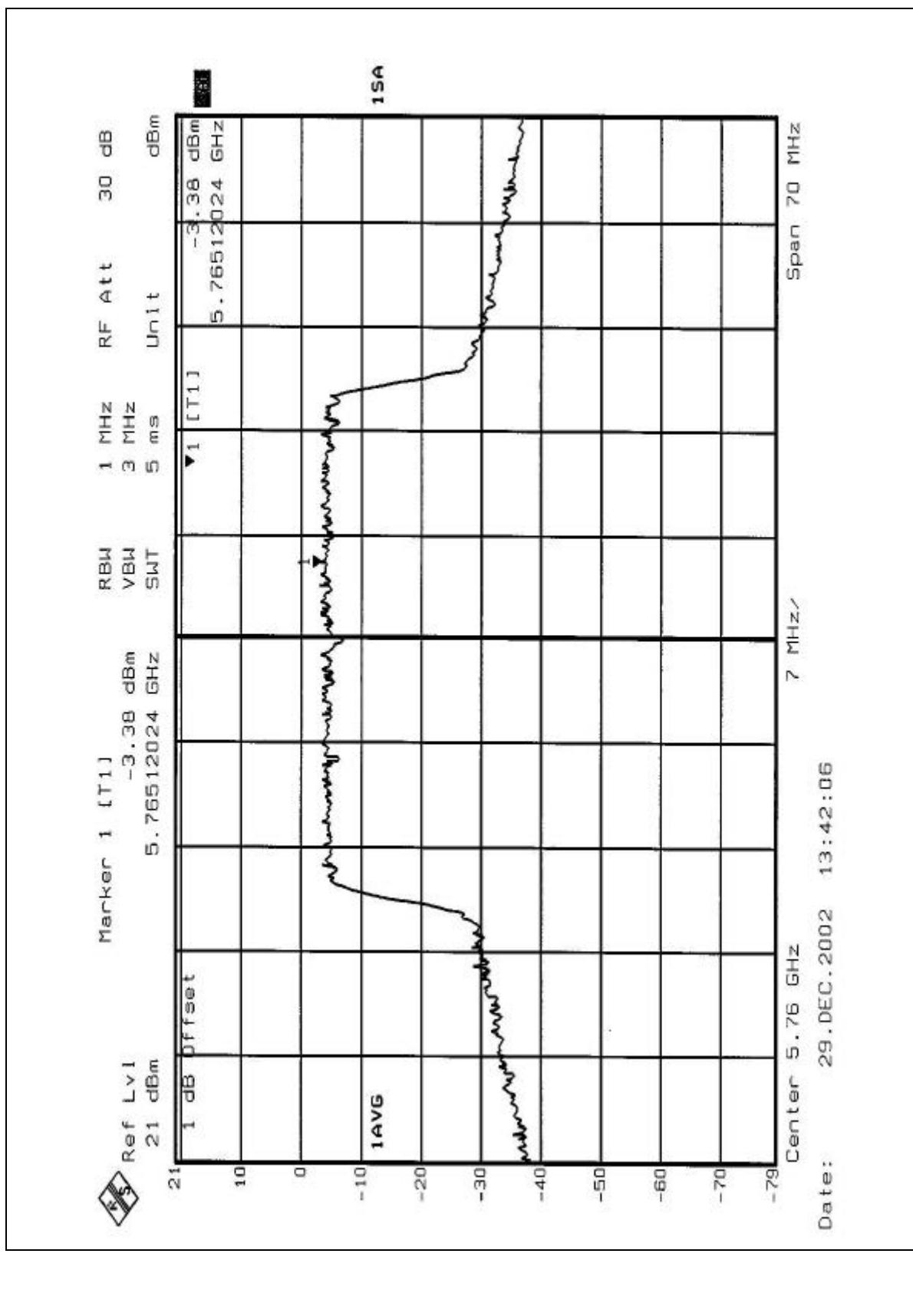


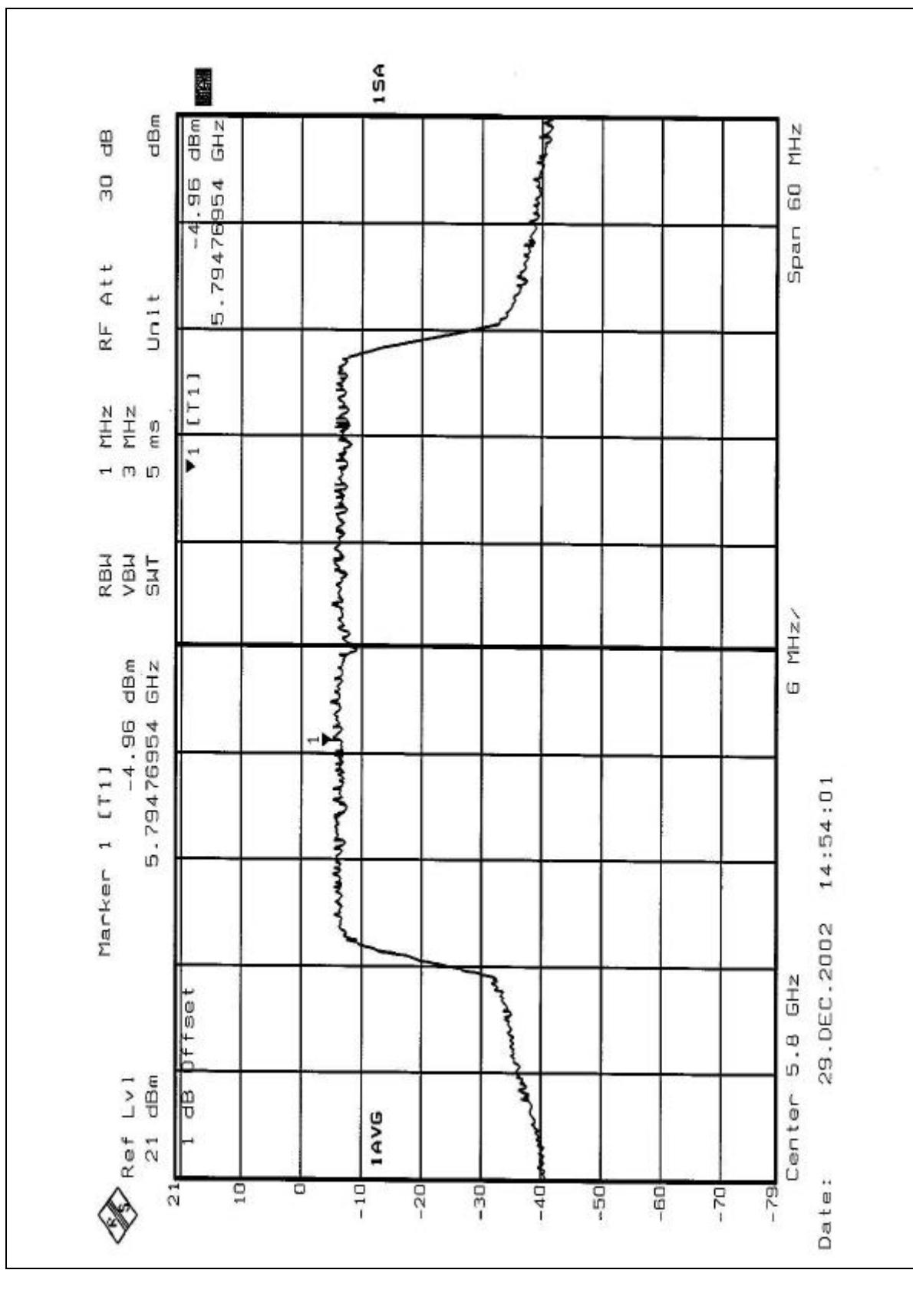
CHANNEL 3



CHANNEL 4



CHANNEL 5



5.6 FREQUENCY STABILITY

5.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 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.

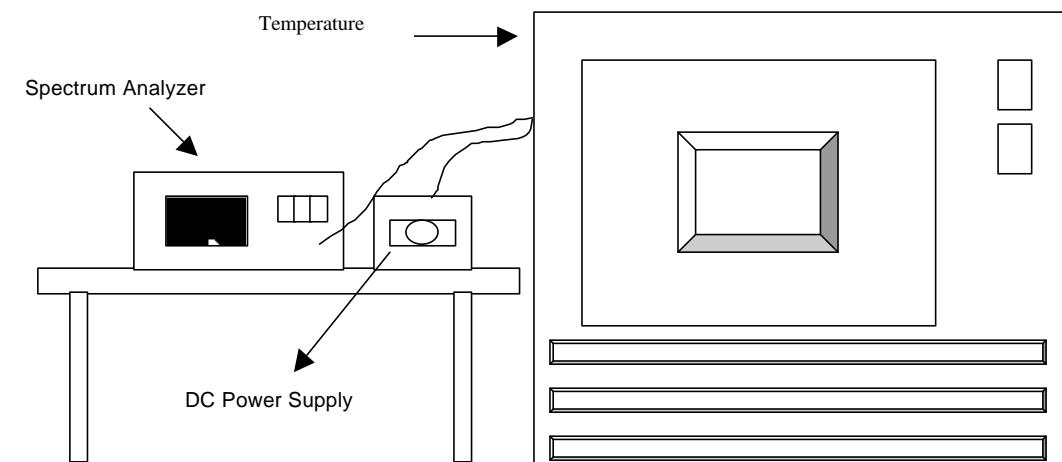
5.6.3 TEST PROCEDURE

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: 5180MHz						Limit : $\pm 0.02\%$	
Temp. ()	Power supply (VDC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5179.9870	-0.000251	5179.9868	-0.000255	5179.9860	-0.000270
	110.0	5179.9872	-0.000247	5179.9868	-0.000255	5179.9862	-0.000266
	93.5	5179.9870	-0.000251	5179.9868	-0.000255	5179.9860	-0.000270
40	126.5	5179.9886	-0.000220	5179.9882	-0.000228	5179.9880	-0.000232
	110.0	5179.9888	-0.000216	5179.9884	-0.000224	5179.9880	-0.000232
	93.5	5179.9888	-0.000216	5179.9882	-0.000228	5179.9880	-0.000232
30	126.5	5179.9912	-0.000170	5179.9904	-0.000185	5179.9902	-0.000189
	110.0	5179.9914	-0.000166	5179.9904	-0.000185	5179.9904	-0.000185
	93.5	5179.9912	-0.000170	5179.9904	-0.000185	5179.9902	-0.000189
20	126.5	5179.9940	-0.000116	5179.9932	-0.000131	5179.9928	-0.000139
	110.0	5179.9945	-0.000106	5179.9934	-0.000127	5179.993	-0.000135
	93.5	5179.9943	-0.000110	5179.9932	-0.000131	5179.9928	-0.000139
10	126.5	5179.9924	-0.000147	5179.9914	-0.000166	5179.9908	-0.000178
	110.0	5179.9924	-0.000147	5179.9914	-0.000166	5179.9908	-0.000178
	93.5	5179.9924	-0.000147	5179.9914	-0.000166	5179.9908	-0.000178
0	126.5	5179.9874	-0.000243	5179.9852	-0.000286	5179.9846	-0.000297
	110.0	5179.9874	-0.000243	5179.9852	-0.000286	5179.9846	-0.000297
	93.5	5179.9872	-0.000247	5179.9852	-0.000286	5179.9846	-0.000297
-10	126.5	5179.9832	-0.000324	5179.9828	-0.000332	5179.9826	-0.000336
	110.0	5179.9832	-0.000324	5179.9830	-0.000328	5179.9828	-0.000332
	93.5	5179.9832	-0.000324	5179.9828	-0.000332	5179.9826	-0.000336
-20	126.5	5179.9814	-0.000359	5179.9812	-0.000363	5179.9810	-0.000367
	110.0	5179.9814	-0.000359	5179.9814	-0.000359	5179.9810	-0.000367
	93.5	5179.9814	-0.000359	5179.9812	-0.000363	5179.9810	-0.000367
-30	126.5	5179.9806	-0.000375	5179.9804	-0.000378	5179.9802	-0.000382
	110.0	5179.9806	-0.000375	5179.9804	-0.000378	5179.9802	-0.000382
	93.5	5179.9806	-0.000375	5179.9802	-0.000382	5179.9802	-0.000382

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 was 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.

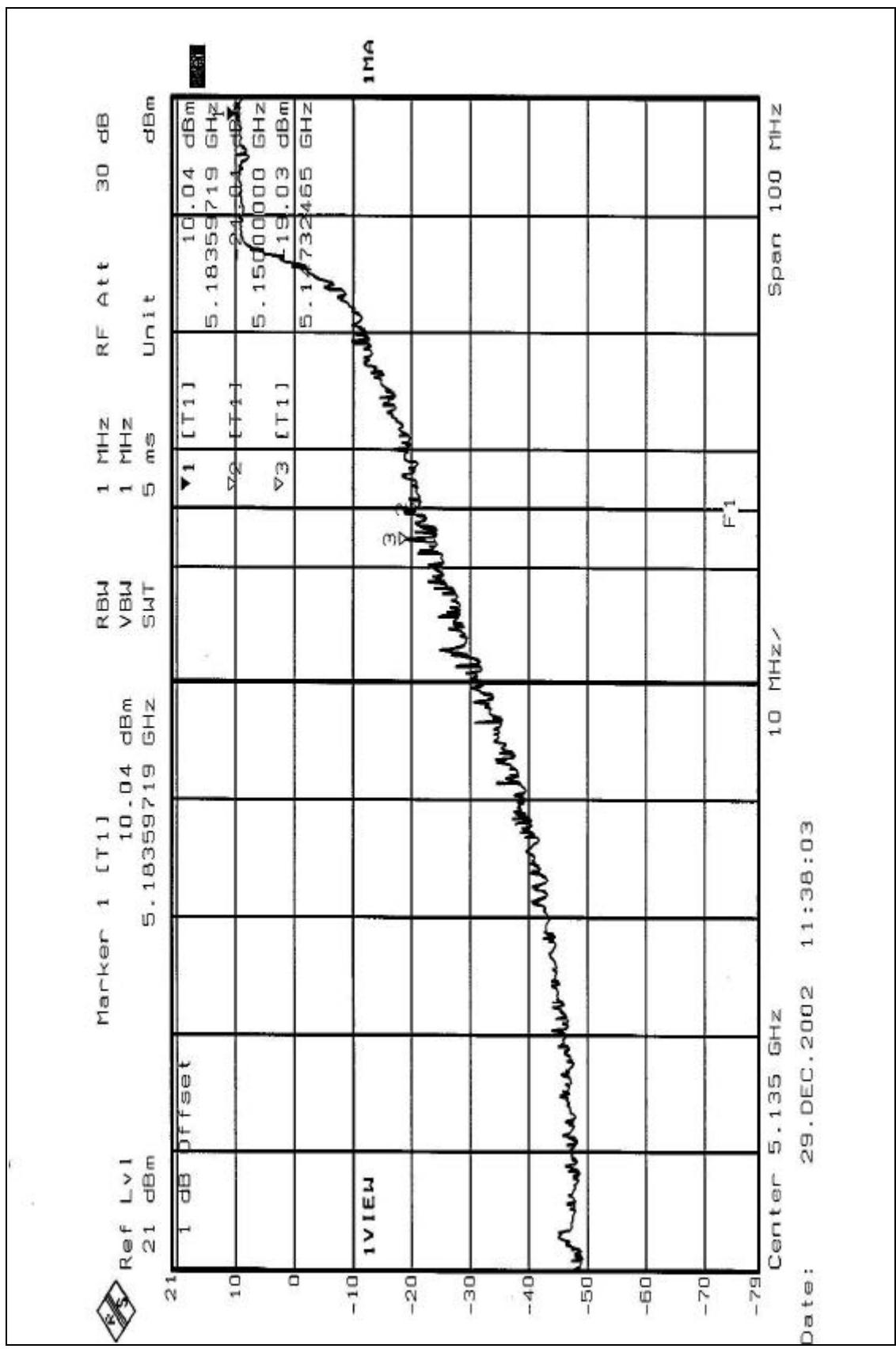
5.7.4 TEST RESULTS

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.

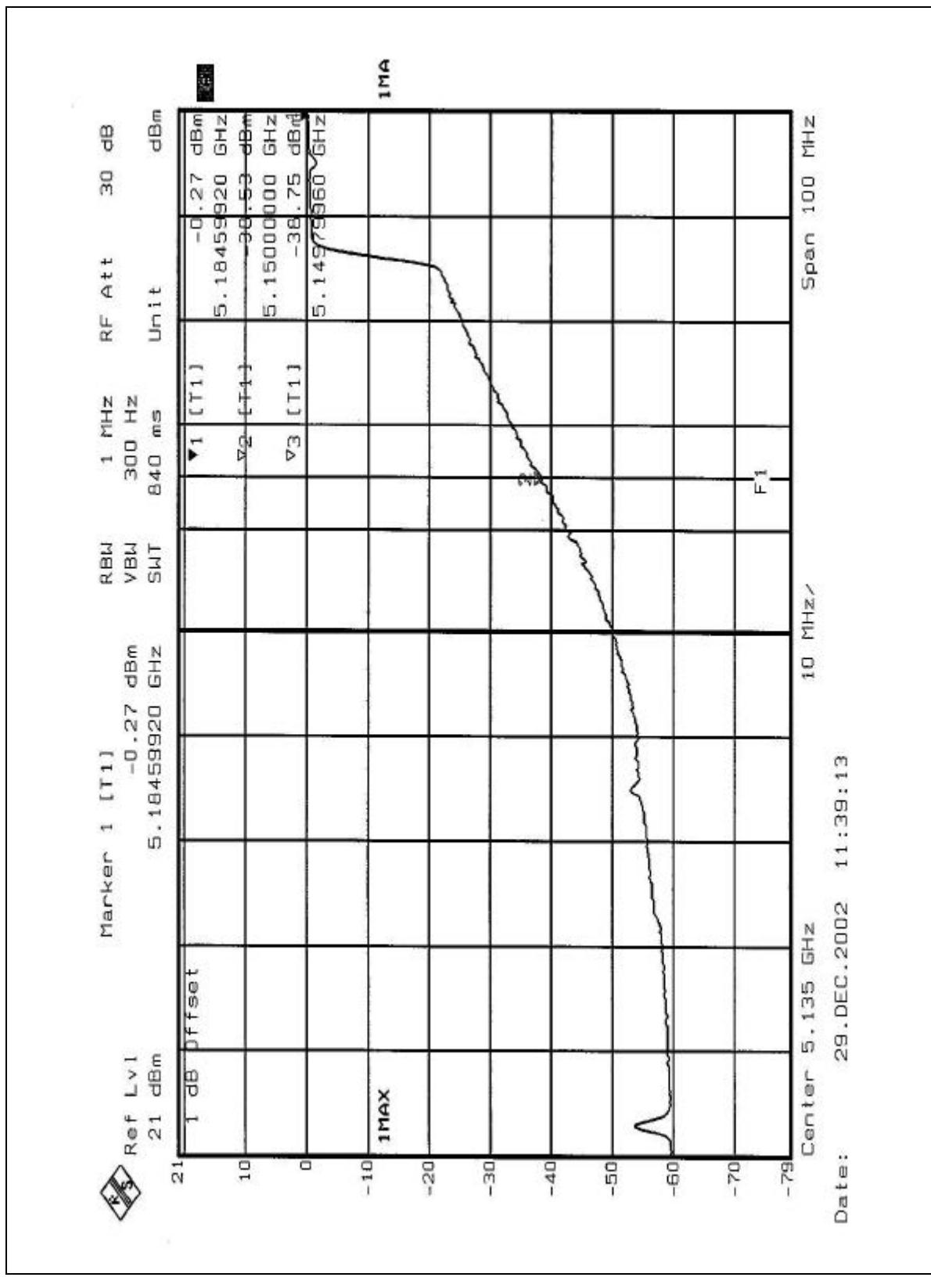
Normal Mode: Channel 1 (5180 MHz)

The band edge emission plot on the following 2 pages shows 29.07dBc (Peak) / 38.80dBc (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 91.1dBuV/m, so the maximum field strength in restrict band is $91.1 - 38.80 = 52.30$ dBuV/m which is under 54dBuV/m limit.



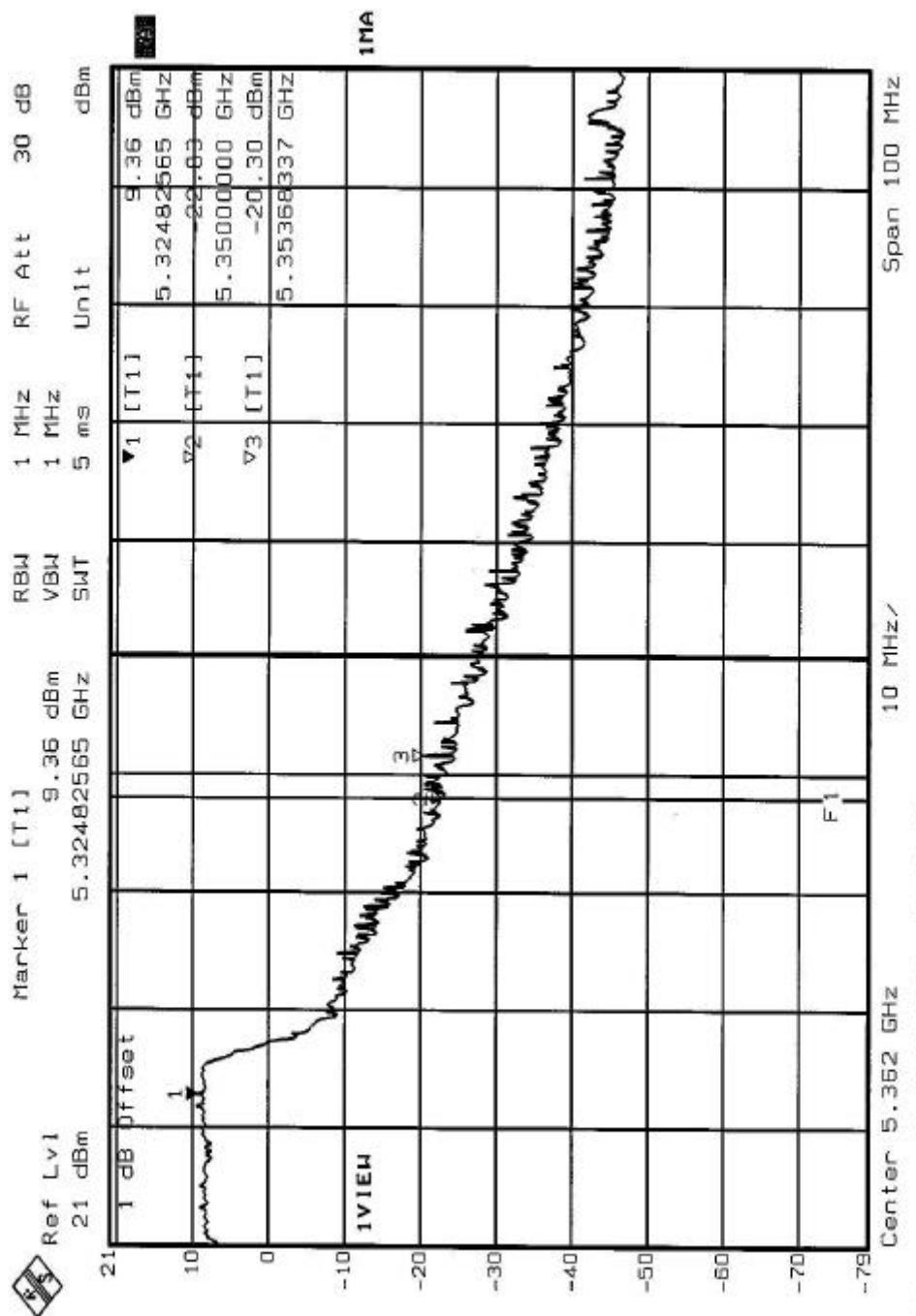
Date : 29.DEC.2002 11:38:03

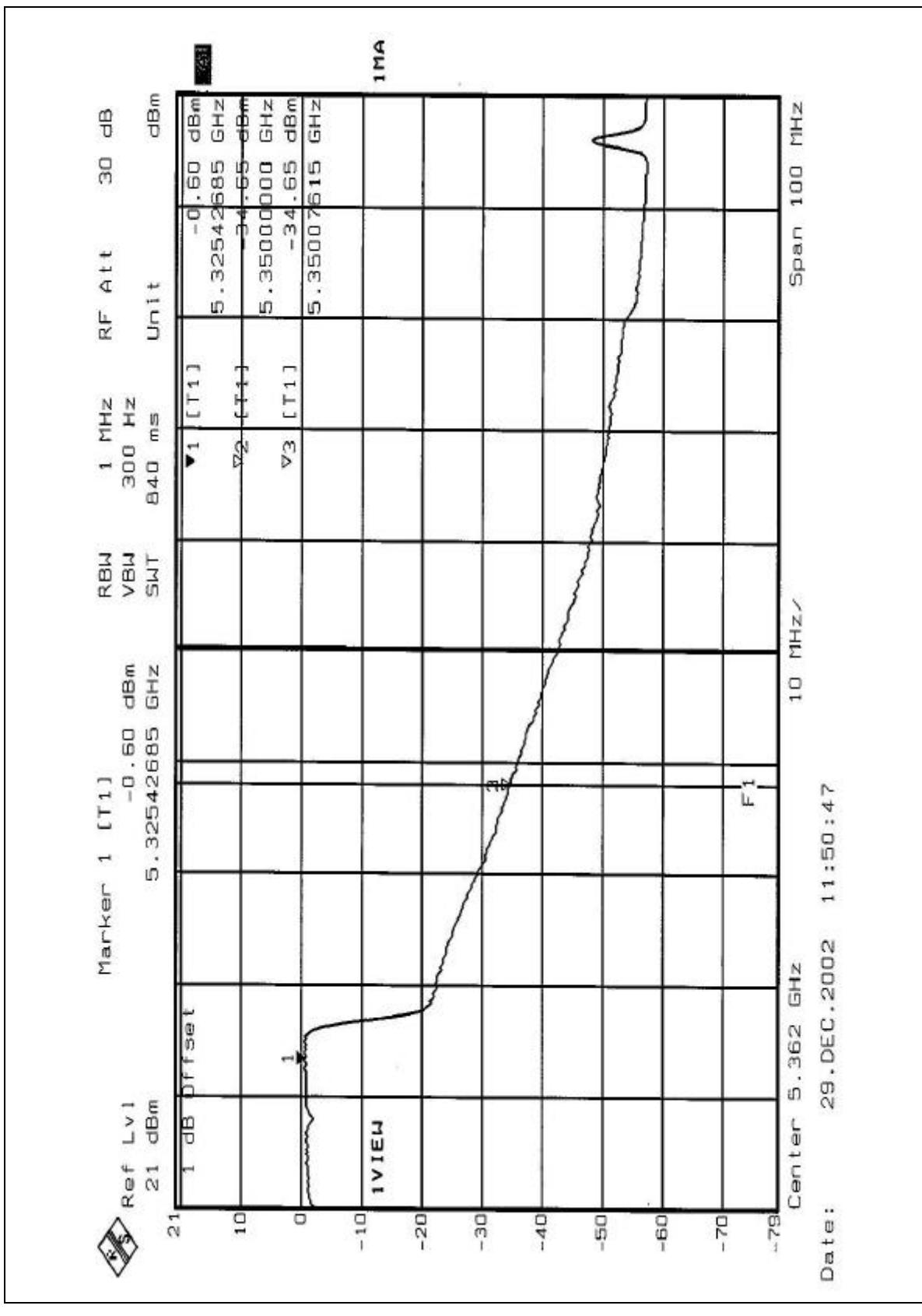
Issued: Jan. 05, 2003



Normal Mode: Channel 8 (5320 MHz)

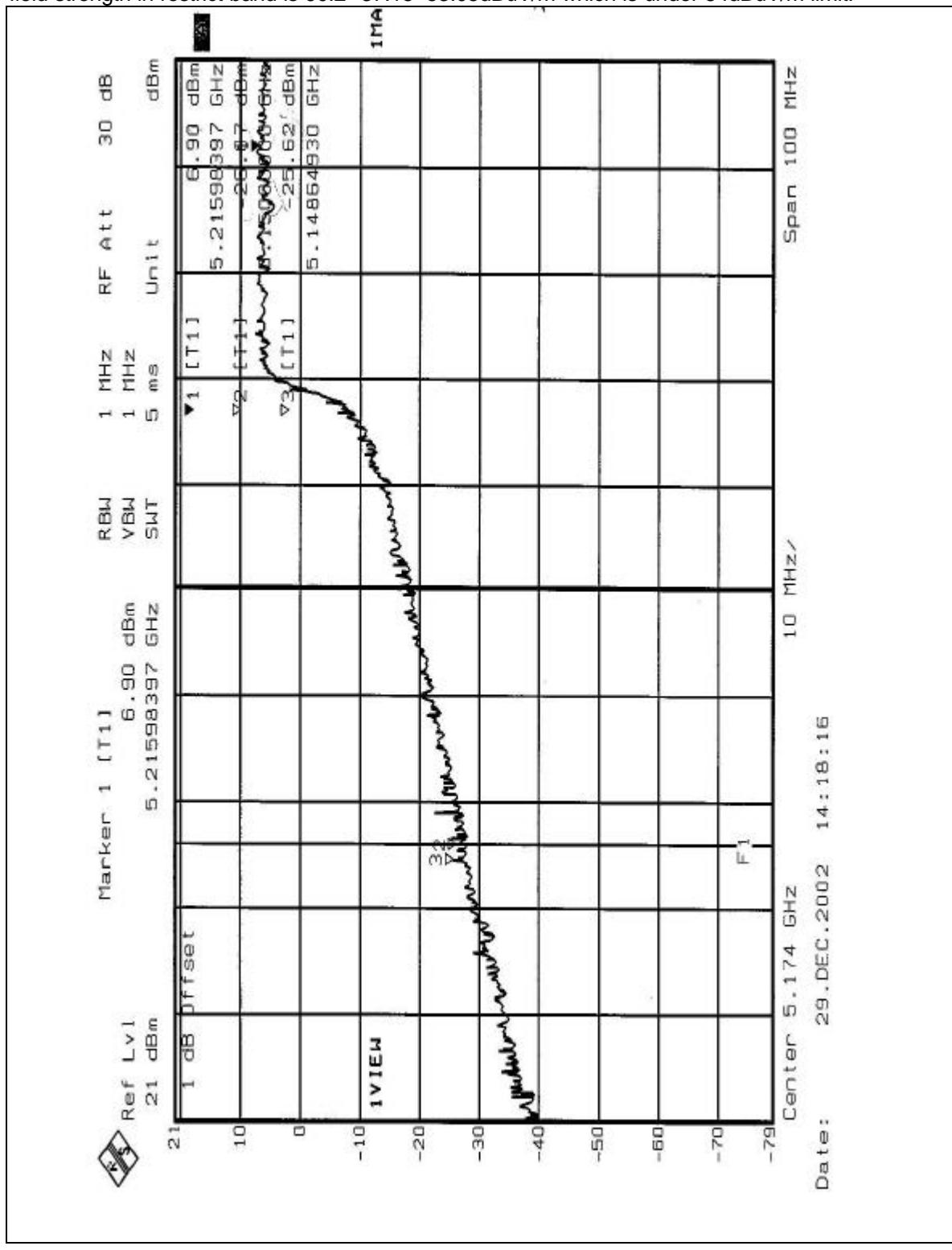
The band edge emission plot on the following 2 pages shows 29.66dBc (Peak) / 34.05dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 8 (normal mode) is 86.7dBuV/m, so the maximum field strength in restrict band is $86.7 - 34.05 = 52.65$ dBuV/m which is under 54dBuV/m limit.

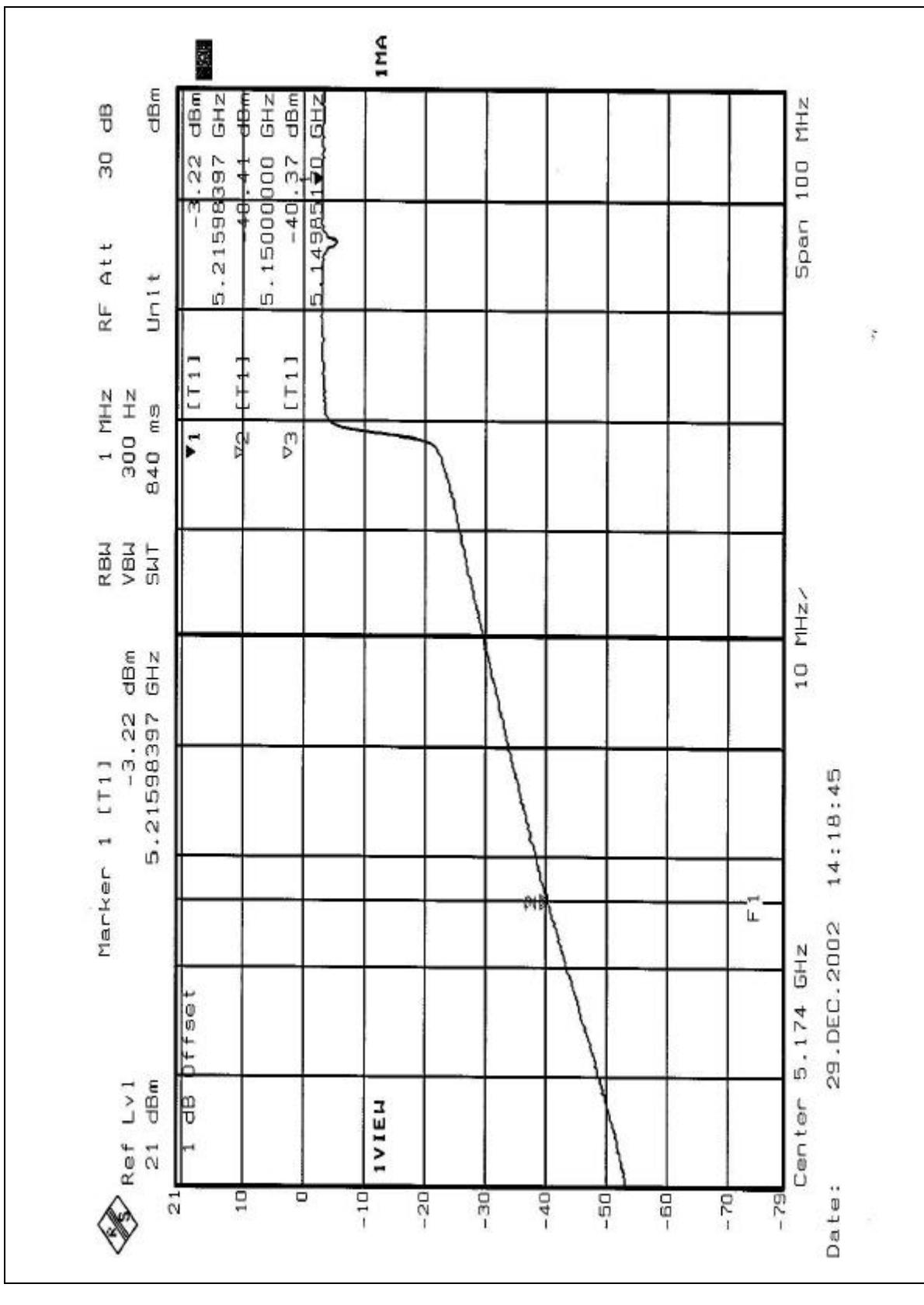




Turbo Mode: Channel 1 (5210 MHz)

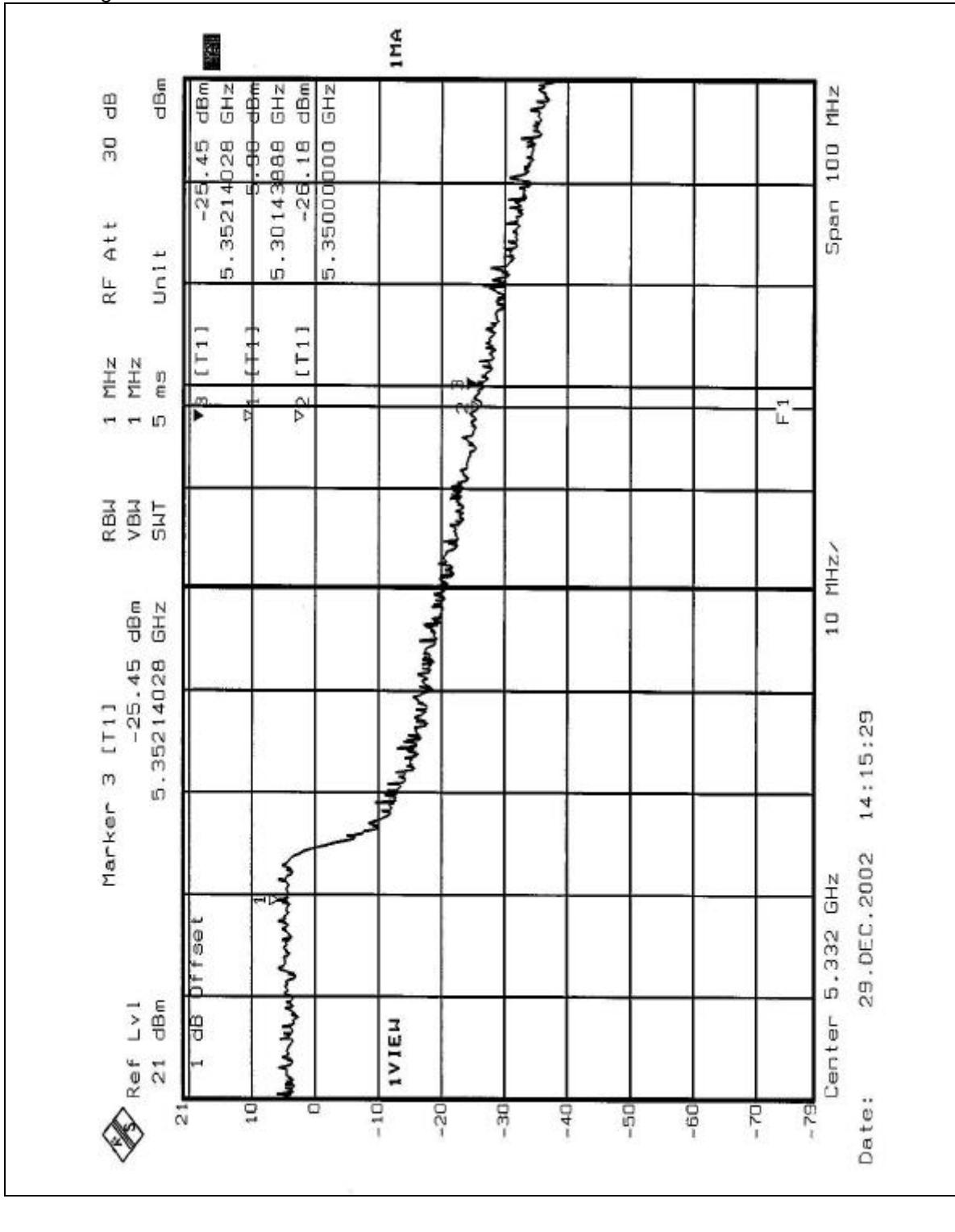
The band edge emission plot on the following 2 pages shows 32.52dBc (Peak) / 37.15dBc (Average) between carrier maximum power and local maximum emission in restrict band. The emission of carrier strength list in the test result of channel 1 (normal mode) is 90.2dBuV/m, so the maximum field strength in restrict band is $90.2 - 37.15 = 53.05$ dBuV/m which is under 54dBuV/m limit.

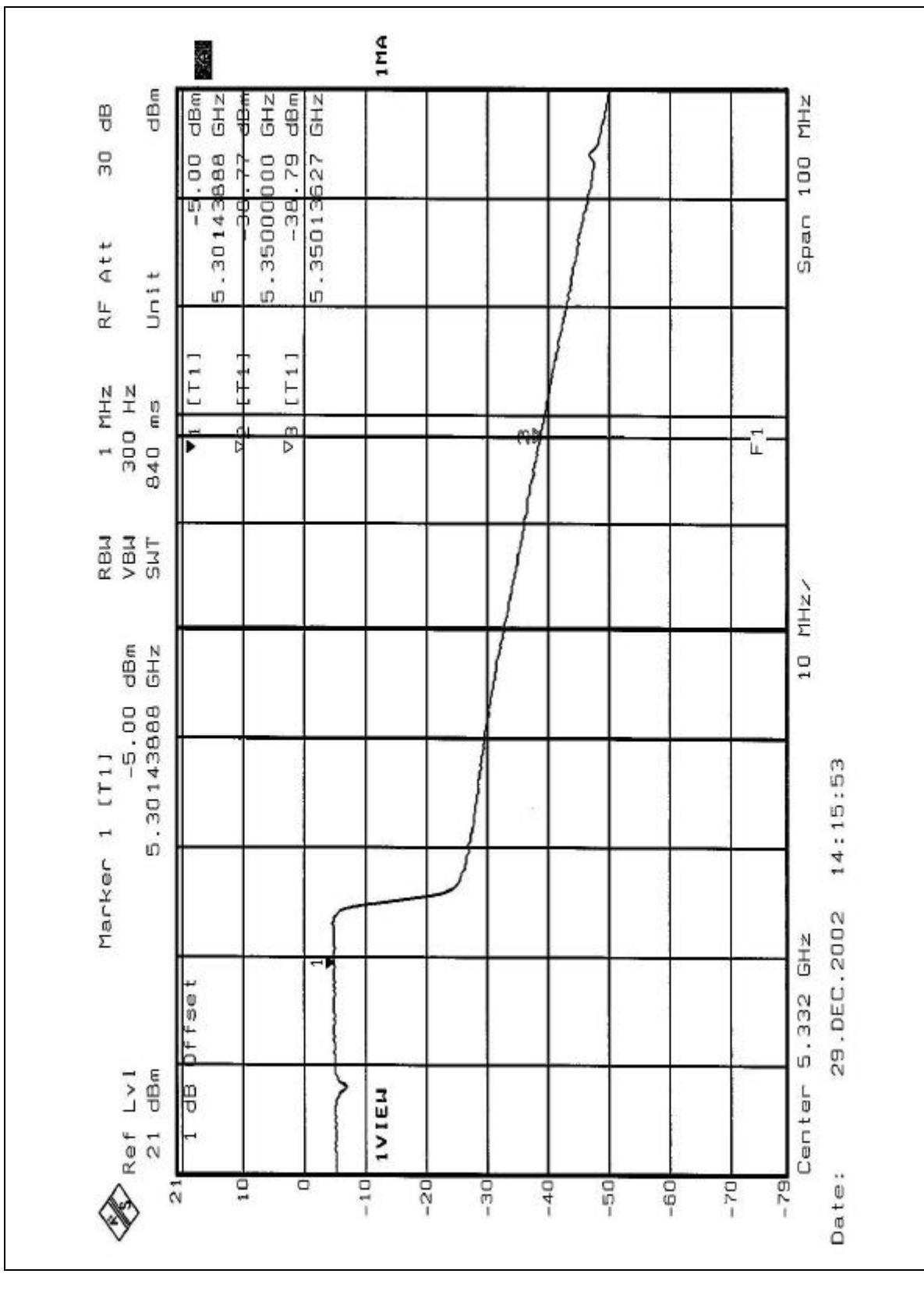




Turbo Mode: Channel 3 (5290 MHz)

The band edge emission plot on the following 2 pages shows 31.35dBc (Peak) / 33.77dBc (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 85.2dBuV/m, so the maximum field strength in restrict band is $85.2 - 33.77 = 51.43$ 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 Printed Inverted F antenna with UFL connector. The maximum Gain of the antenna is -0.44dBi

6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST





RADIATED EMISSION TEST



FCC ID: H8NWLL220



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.