

# TEST REPORT

**Equipment Under Test** : PRO-711 Wireless Transmitter/Camera  
**Model No.** : 3001112, 3001113, 3001114

**Applicant** : TALITOR(FAR EAST) COMPANY LIMITED  
**Address of Applicant** : 2FL., 48-1, CHUANG CHIN ROAD, PAN CHIAO 220,  
TAIPEI, TAIWAN R.O.C.

Standards:

## FCC Part 15 subpart C

In the configuration tested, the EUT complied with the standards specified above.

**Remarks:**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan E&E Services or testing done by SGS Taiwan E&E Services in connection with distribution or use of the product described in this report must be approved by SGS Taiwan E&E Services in writing.

**Tested by** : Alex Hsieh **Date** : 2003/5/16

**Approved by** : Robert Chang **Date** : 2003/8/12

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## 1. General Information

### 1.1 Testing Laboratory

SGS Taiwan Ltd. ( FCC Registration number: 573967 )  
1F, No. 134, Wukung Road, Wuku industrial zone  
Taipei county , Taiwan , R.O.C.  
Telephone : +886-2-2299-3279  
Fax : +886-2-2298-2698  
Internet : <http://www.sgs.com.tw>

### 1.2 Details of Applicant

Name : TALITOR(FAR EAST) COMPANY LIMITED  
Address : 2FL., 48-1, CHUANG CHIN ROAD, PAN CHIAO 220,  
TAIPEI, TAIWAN R.O.C.

### 1.3 Description of EUT(s)

1	Product name	PRO-711 Wireless Transmitter/Camera
2	Product ID	3001112, 3001113, 3001114
3	Supply Voltage	AC 110V
4	Carrier Frequency	2414MHz, 2430Mhz, 2450Mhz, 2468MHz

## **1.4 Operation Procedure**

The EUT is a wireless transmitting module with camera and micorphone, powered by 110V AC to 9V DC adaptor. We put the EUT in the center of Turntable, power on. The distance from receiving antenna to EUT is 3 meter. The testing method follows FCC 47 CFR part 15 subpart C and ANSI C63.4 1992.

Different model number means different lens (focus length)attached, there is no difference with the transmitter's performance.

## 2. Summary of Results

subclause	Parameter to be measures	Verdict	Page
15.207	Conducted Limits	<i>PASS</i>	7
15.209	Radiated emission Limits, general requirement	<i>PASS</i>	9
15.249(a)(1)	Field strength of fundamental	<i>PASS</i>	34
15.249(d)(1)(ii)	Band-Edge Emission	<i>PASS</i>	39

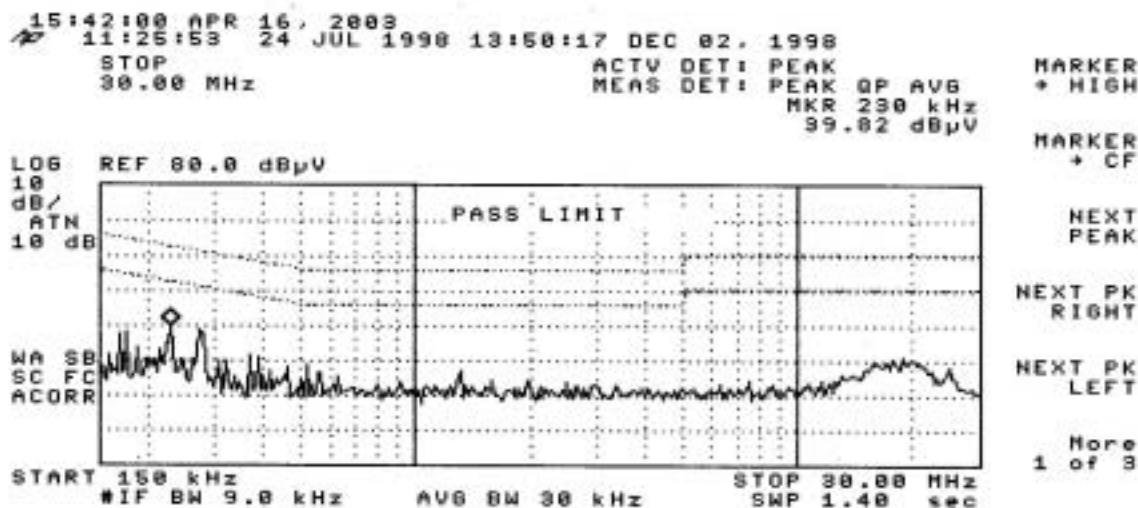
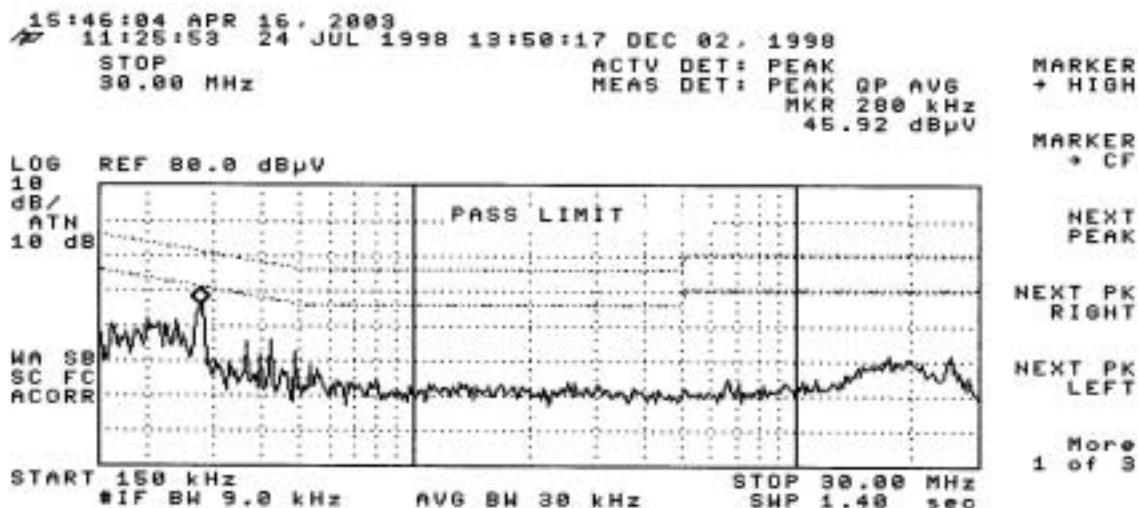
### 3. Instruments List

Instrument	Model	Serial number	Calibration date
Desktop PC	HP723D	TW23420337	N/A
Spectrum Analyzer	Agilent 7405A	US40240202	Jun. 1, 2002
Pre-amplifier	HP 8449B	3008A00578	Feb. 23, 2003
Anternna	Schwarzbeck BBHA9170A	184 / 185	July 01, 2002
Antenna	Schwarzbeck BBHA9120A	309/320	July 01, 2002
Antenna	Schwarzbeck VULB9163	152	July 01, 2002
RF Signal generator	Agilent 83752A	3601A02720	Sep. 04, 2002
EMC Analyzer	HP 8594EM	3624A00203	Dec. 13, 2002
EMI Test Receiver	R&S ESCS 30	828985/004	Oct. 11, 2002
Transient Limiter	HP 11947A	3107A02062	Jul. 24, 2002
L.I.S.N	Rolf-Heine NNB-2/16Z	99012	Oct. 08, 2002

## 4. Measurements

### 4.1 Conducted Limits

SUBCLAUSE 15.207

*Line**Neural*

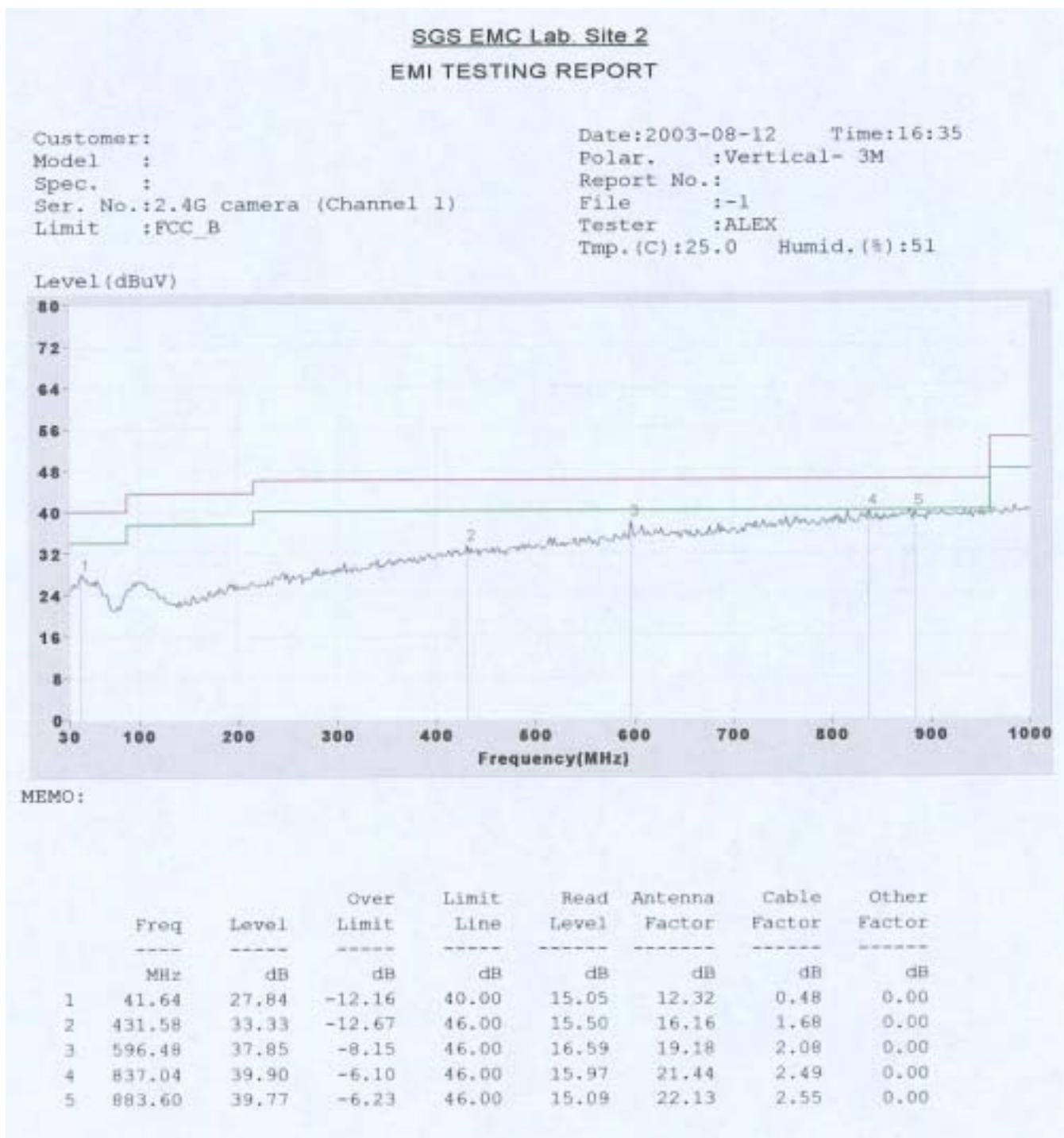
**4.1.1 Limits (EN55022)**

Frequency range Mhz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

**4.2 Radiated emission Limits, general requirement SUBCLAUSE 15.209**

Part 1: Transmit at channel 1 , 30Mhz to 1Ghz

Vertical



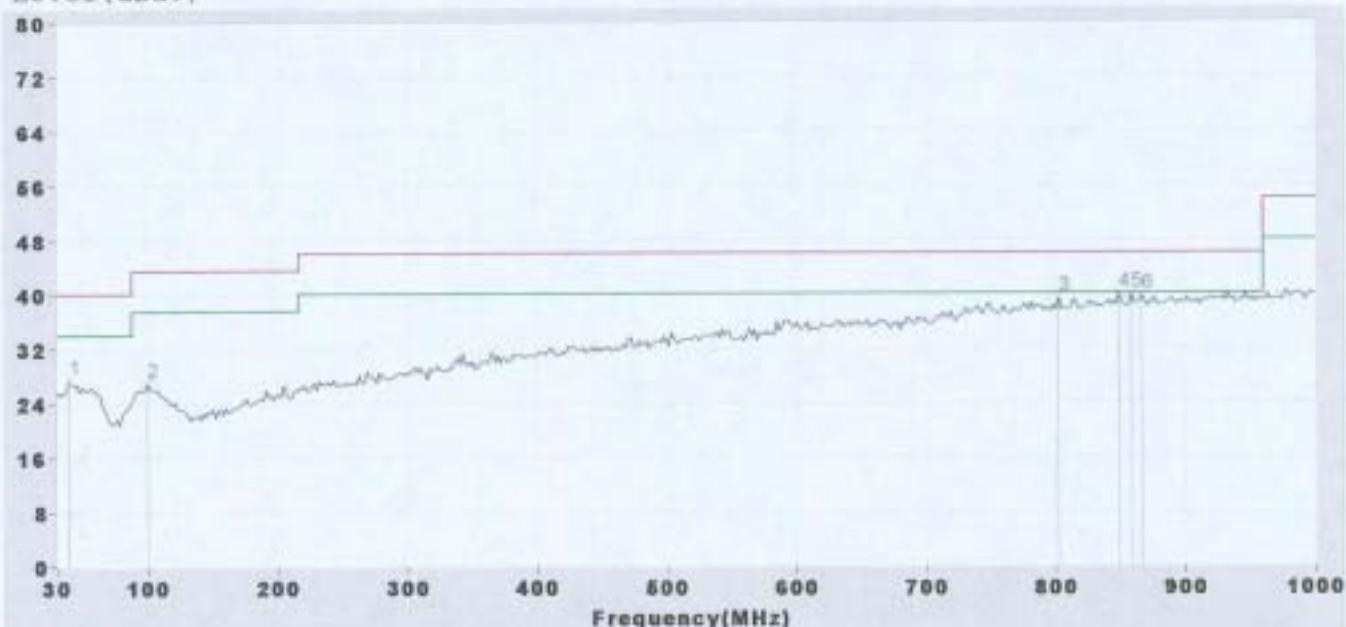
Horizontal

SGS EMC Lab. Site 2  
**EMI TESTING REPORT**

Customer:  
 Model :  
 Spec. :  
 Ser. No.:2.4G camera (Channel 1)  
 Limit :FCC\_B

Date:2003-08-12 Time:16:35  
 Polar. :Horizontal- 3M  
 Report No.:  
 File :-1  
 Tester :ALEX  
 Tmp.(C):25.0 Humid.(%):51

Level(dBuV)

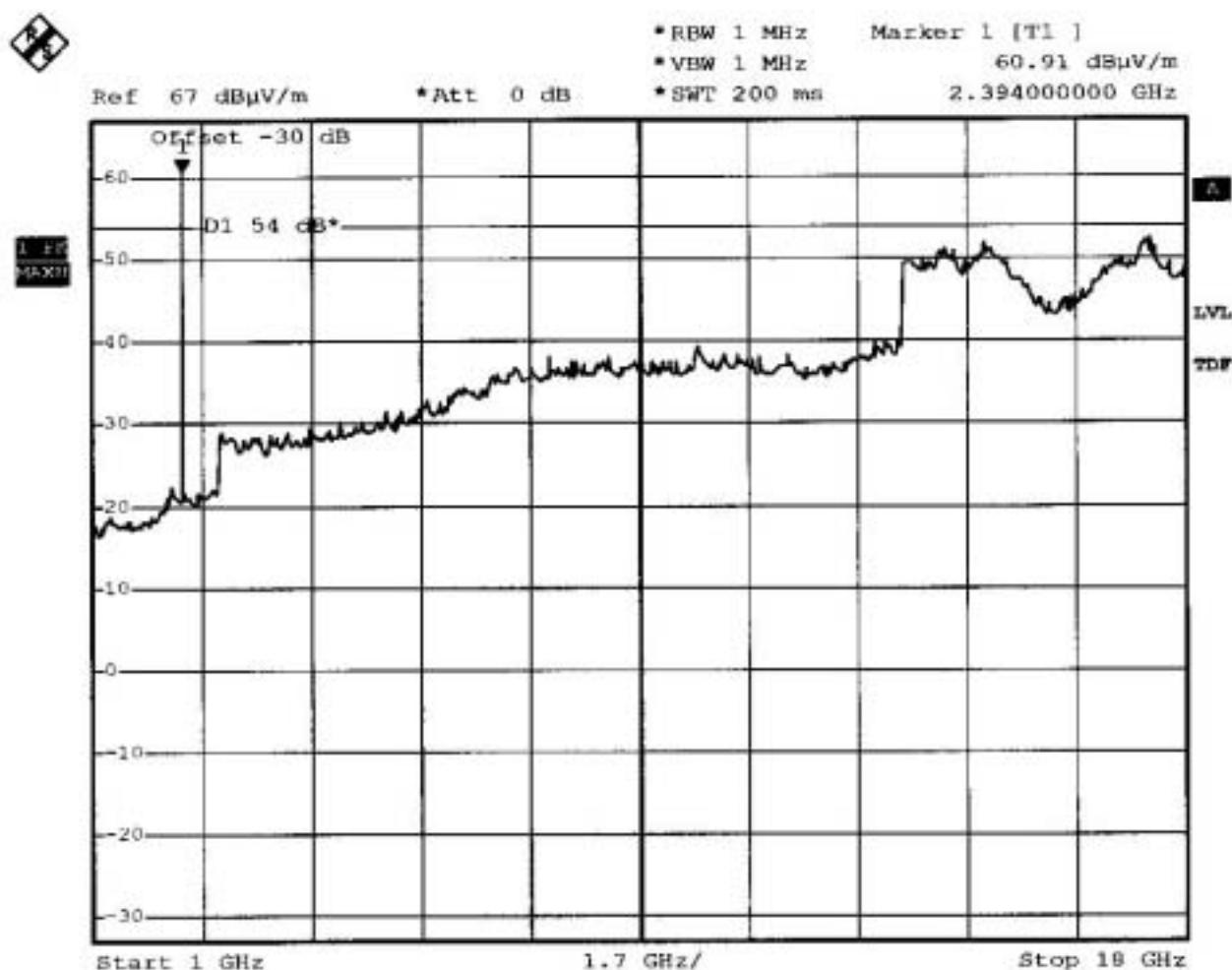


MEMO:

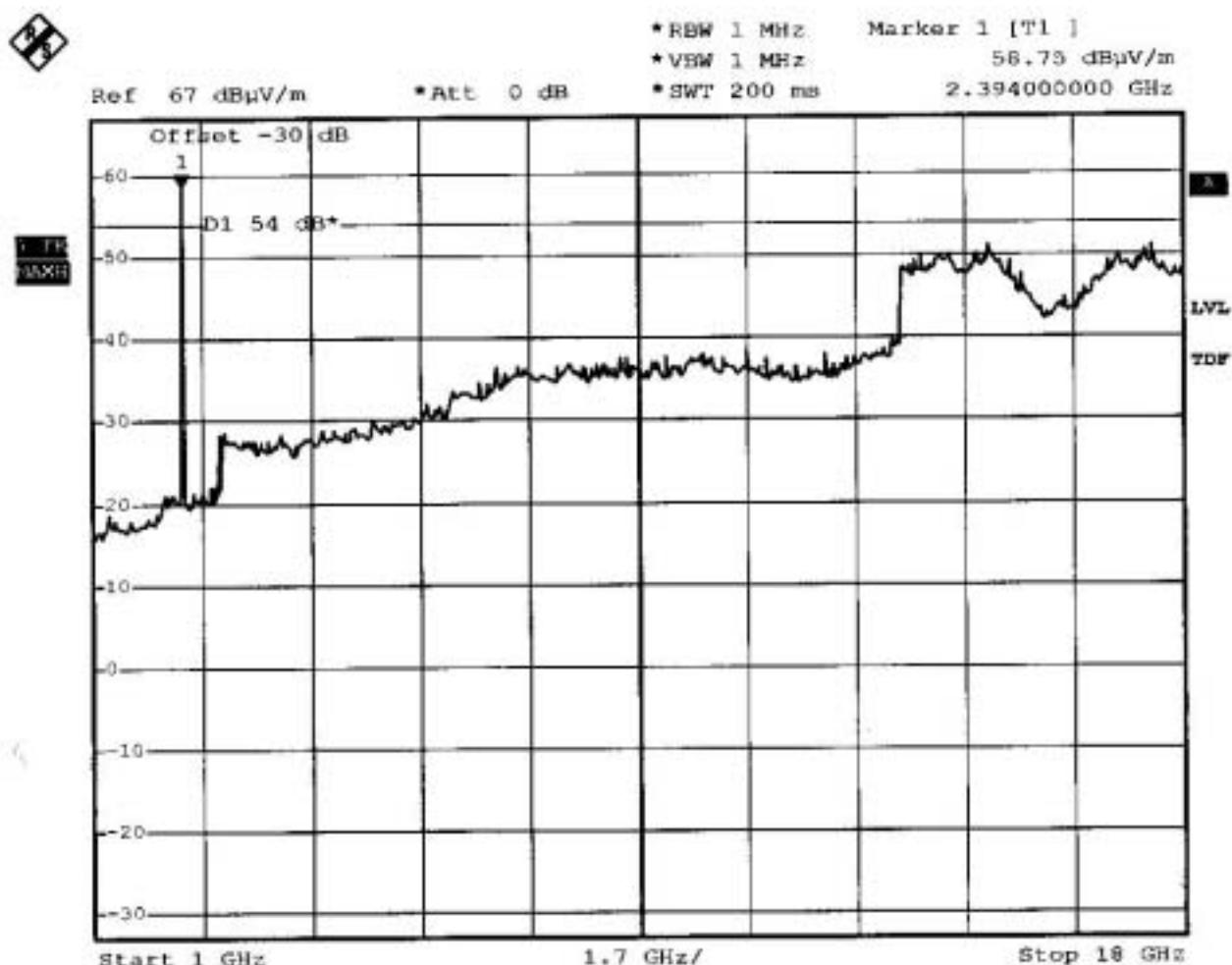
	Freq	Level	Over Limit	Limit	Read Line	Antenna Level	Cable Factor	Other Factor
	MHz	dB	dB	dB	dB	dB	dB	dB
1	39.70	27.43	-12.57	40.00	14.71	12.25	0.47	0.00
2	99.84	26.91	-16.59	43.50	14.28	11.90	0.74	0.00
3	802.12	39.34	-6.66	46.00	15.81	21.09	2.44	0.00
4	848.68	39.85	-6.15	46.00	15.72	21.63	2.50	0.00
5	858.38	39.80	-6.20	46.00	15.48	21.80	2.52	0.00
6	866.14	39.60	-6.40	46.00	15.16	21.92	2.53	0.00

Transmit at channel 1 , 1Ghz to 18 Ghz

Vertical

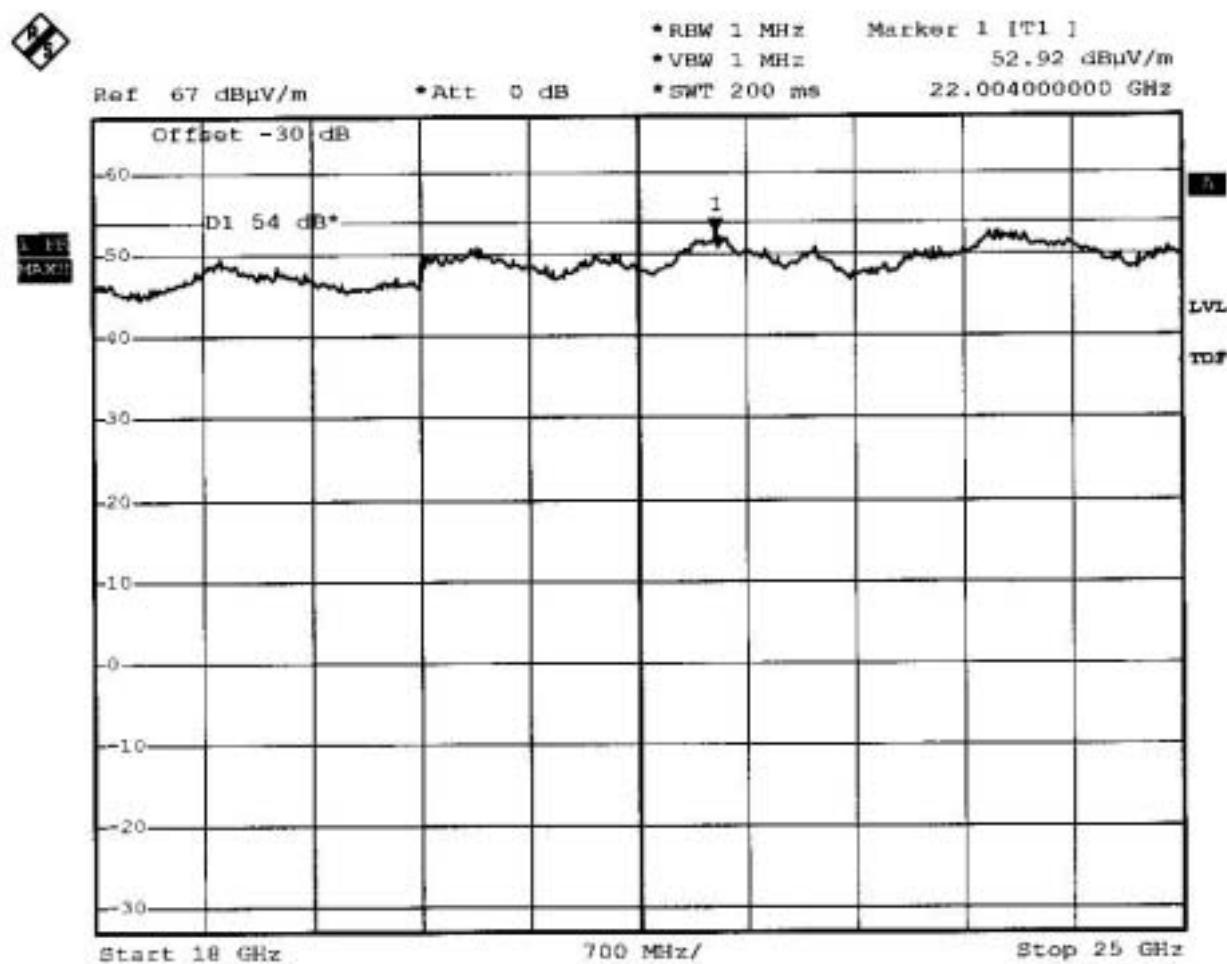


Horizontal

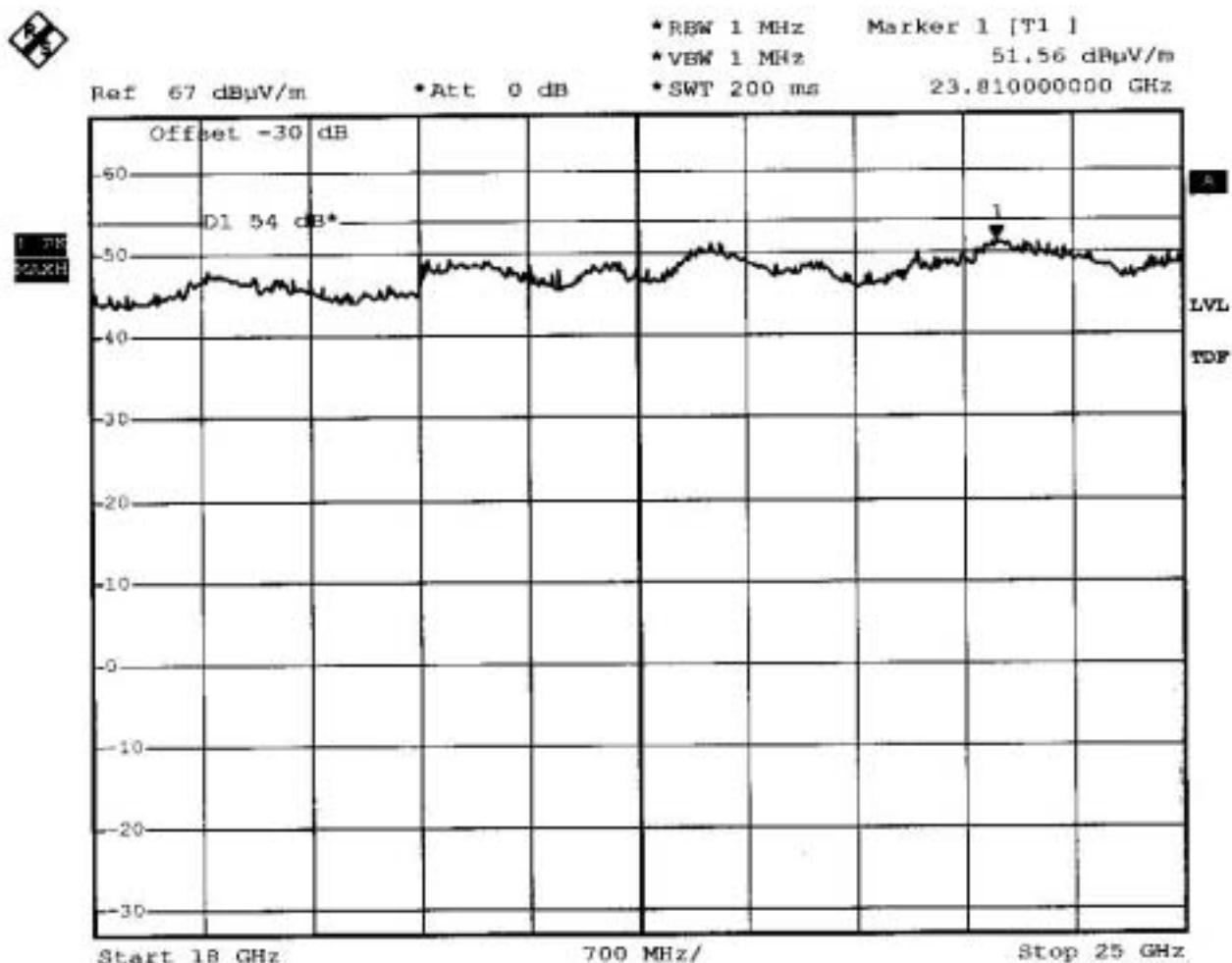


Transmit at channel 1 , 18Ghz to 25Ghz

Vertical



Horizontal



Part2: Transmit at channel 2 , 30Mhz to 1Ghz

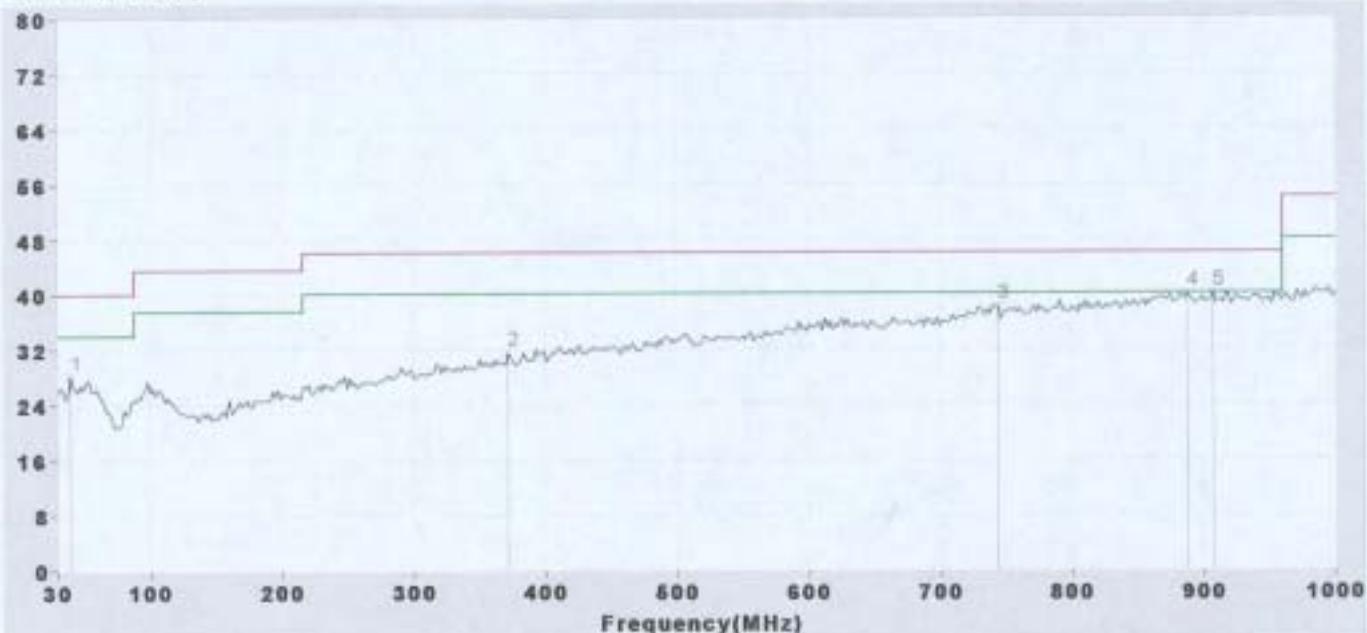
Vertical

SGS EMC Lab. Site 2  
**EMI TESTING REPORT**

Customer:  
 Model :  
 Spec. :  
 Ser. No.:2.4G camera (Channel 2)  
 Limit :FCC\_B

Date:2003-08-12 Time:16:40  
 Polar. :Vertical- 3M  
 Report No.:  
 File : -1  
 Tester :ALEX  
 Tmp. (C):25.0 Humid. (%):51

Level(dBuV)



MEMO:

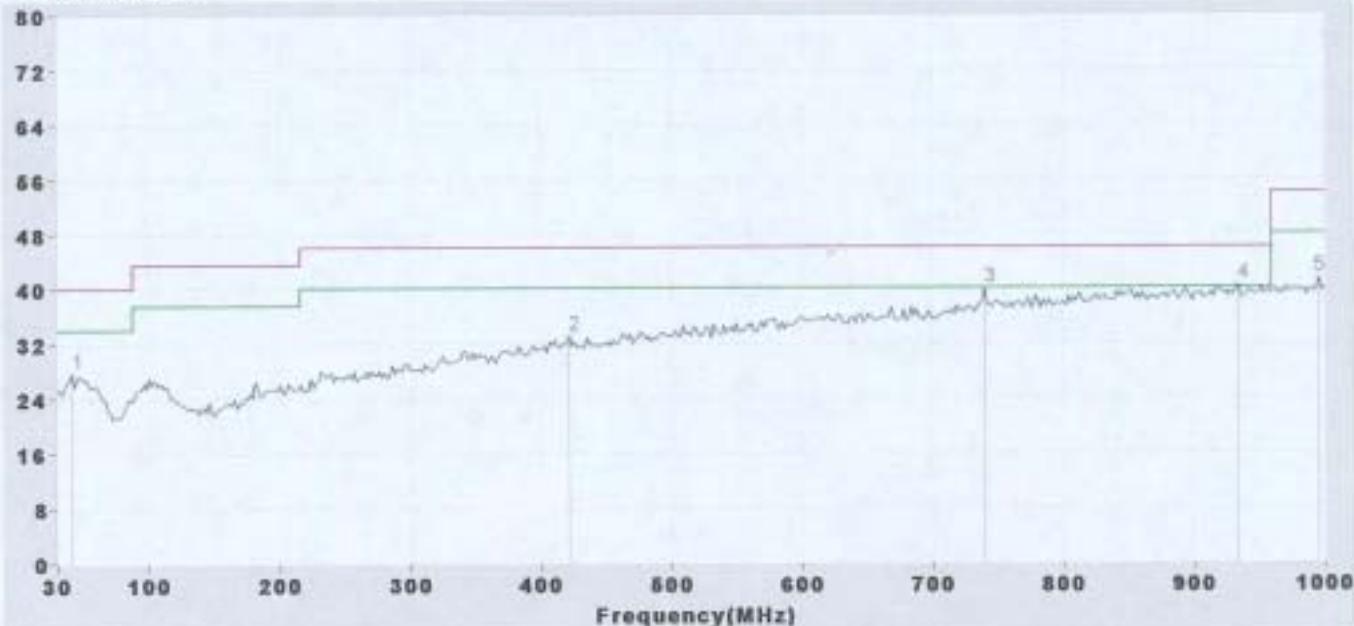
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Factor	Other Factor
	MHz	dB	dB	dB	dB	dB	dB	dB
1	39.70	28.24	-11.76	40.00	15.52	12.25	0.47	0.00
2	371.44	31.52	-14.48	46.00	15.00	15.02	1.50	0.00
3	743.92	38.19	-7.81	46.00	14.97	20.91	2.32	0.00
4	887.48	39.99	-6.01	46.00	15.30	22.13	2.55	0.00
5	906.88	40.06	-5.94	46.00	15.21	22.26	2.58	0.00

Horizontal

SGS EMC Lab. Site 2  
EMI TESTING REPORT

Customer: Date:2003-08-12 Time:16:39  
 Model : Polar. :Horizontal- 3M  
 Spec. : Report No.:-  
 Ser. No.:2.4G camera (Channel 2) File : -1  
 Limit : FCC\_B Tester : ALEX  
 Tmp. (C):25.0 Humid. (%):51

Level (dBuV)

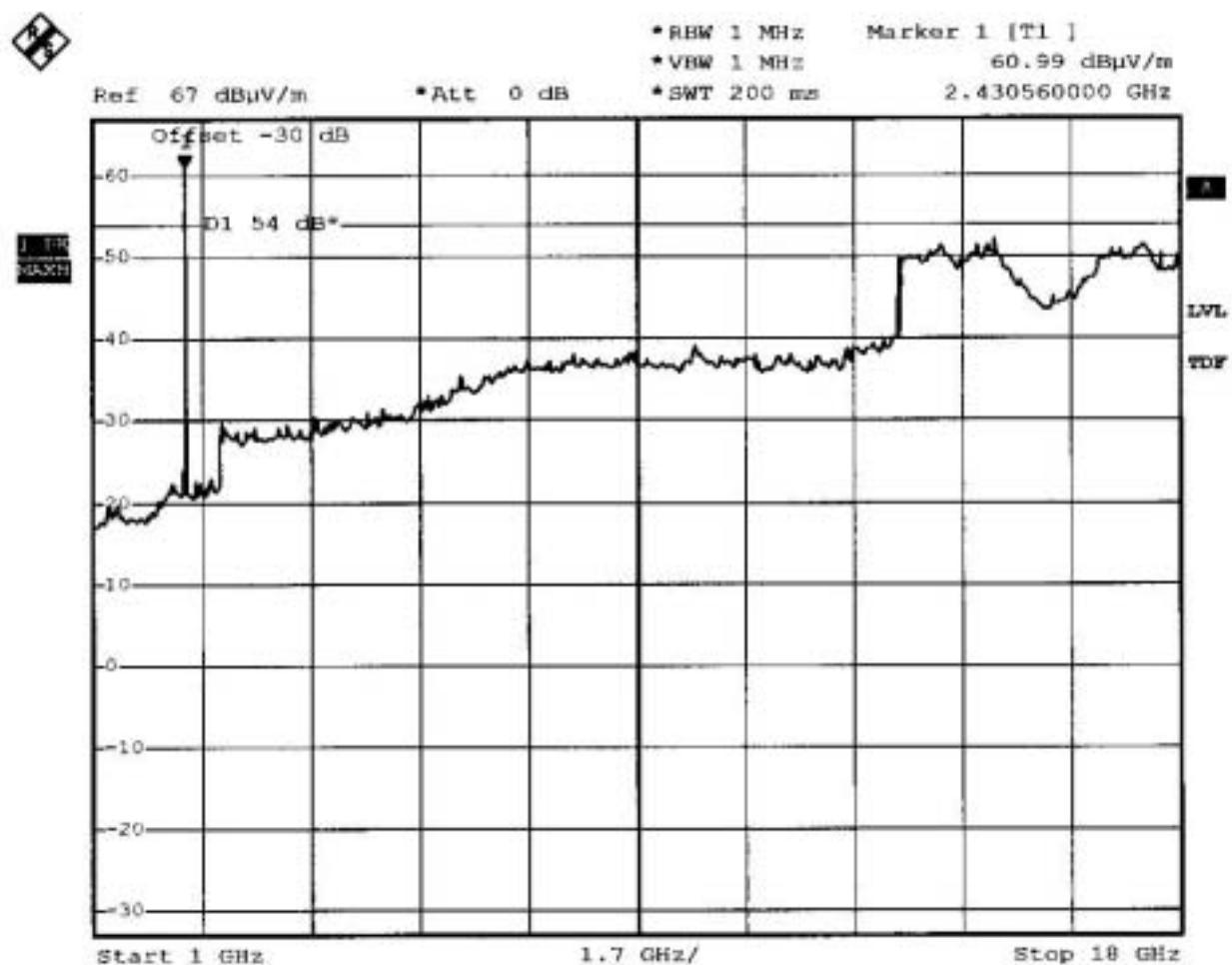


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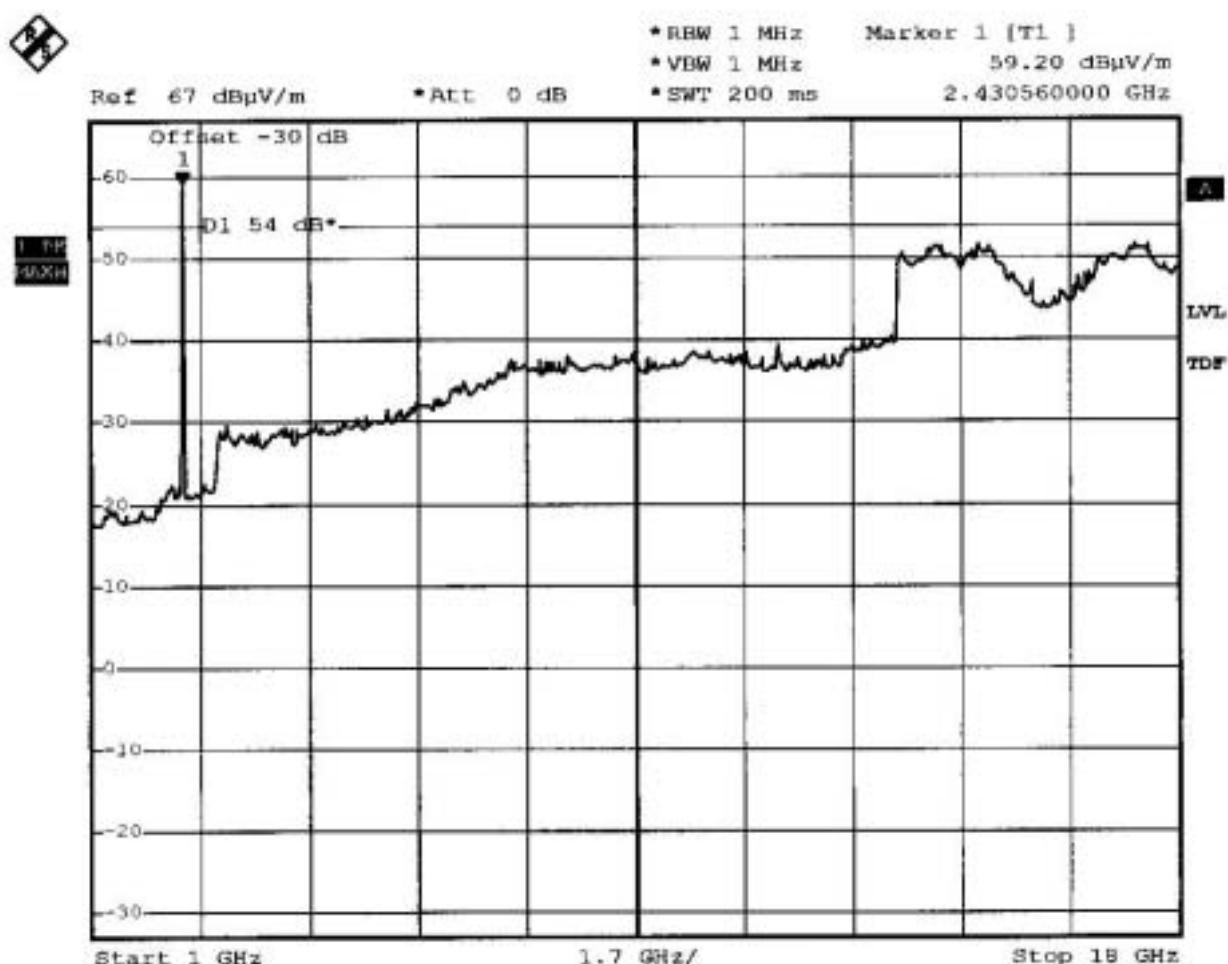
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Factor	Other Factor
	-----	-----	-----	-----	-----	-----	-----	-----
	MHz	dB	dB	dB	dB	dB	dB	dB
1	41.64	27.64	-12.36	40.00	14.85	12.32	0.48	0.00
2	421.88	32.98	-13.02	46.00	15.23	16.09	1.65	0.00
3	740.04	39.76	-6.24	46.00	16.54	20.91	2.31	0.00
4	934.04	40.27	-5.73	46.00	15.20	22.43	2.64	0.00
5	996.12	41.19	-12.81	54.00	15.59	22.83	2.77	0.00

Transmit at channel 2 , 1Ghz to 18Ghz

Vertical

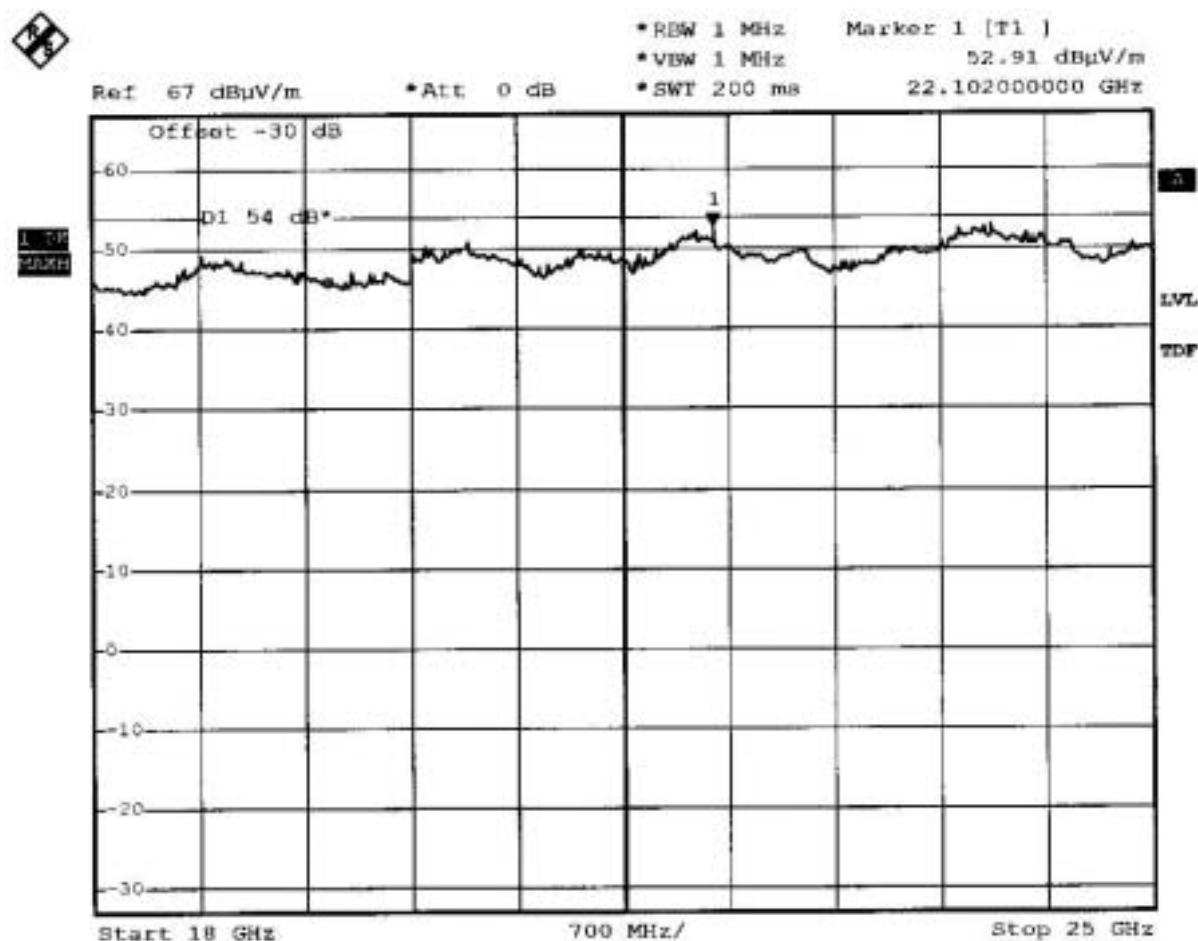


Horizontal

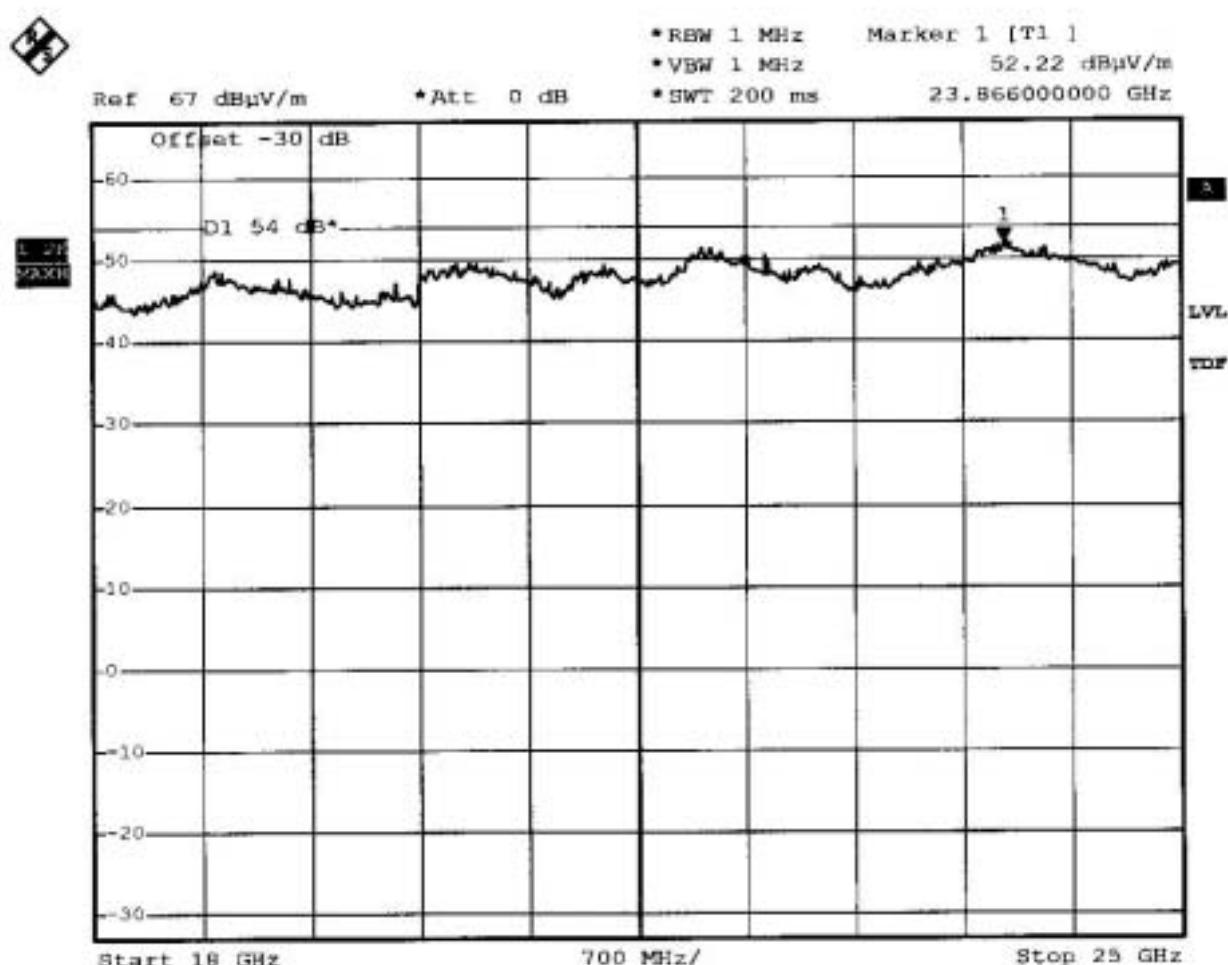


Transmit at channel 2 , 18Ghz to 25Ghz

Vertical

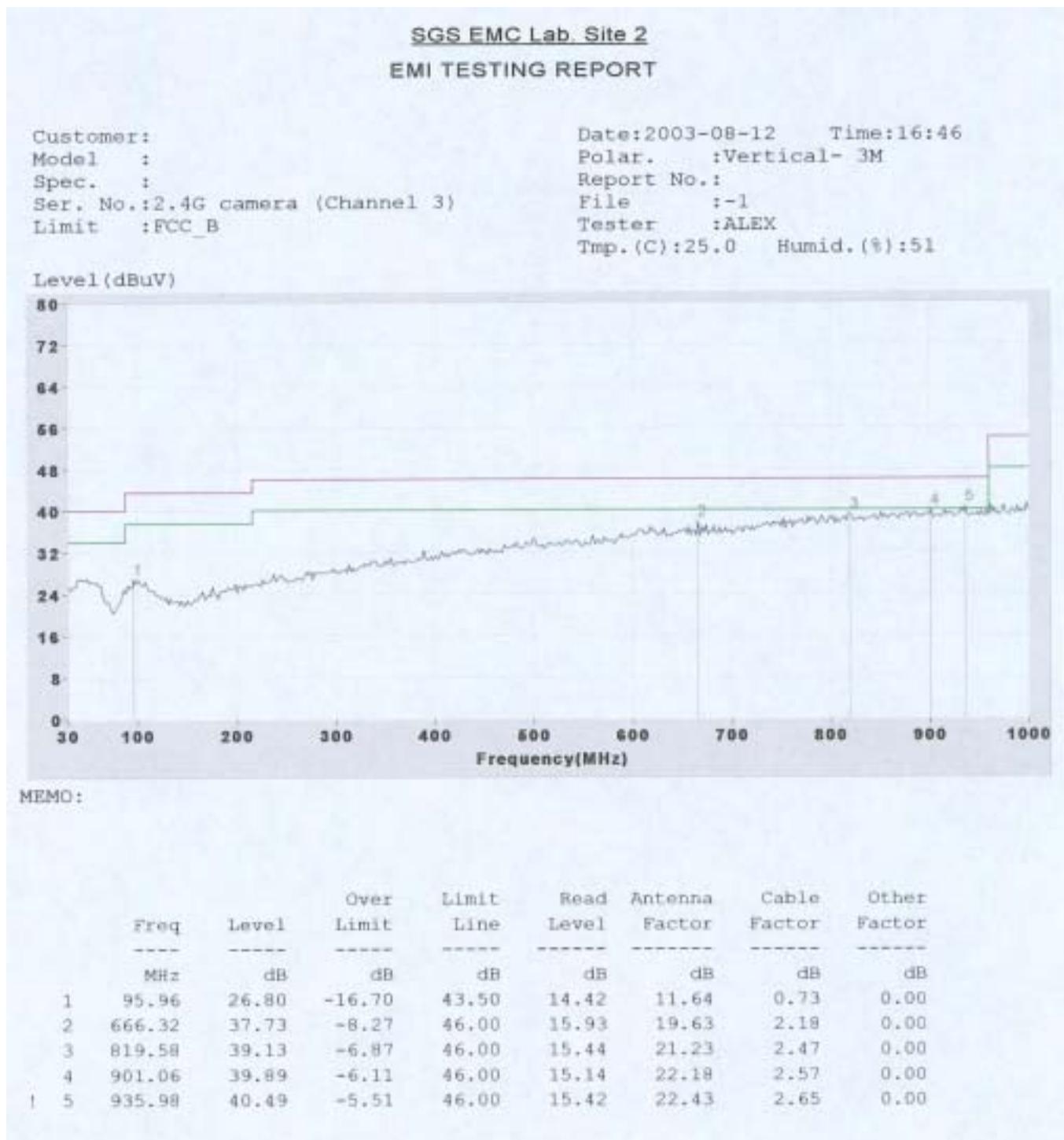


Horizontal

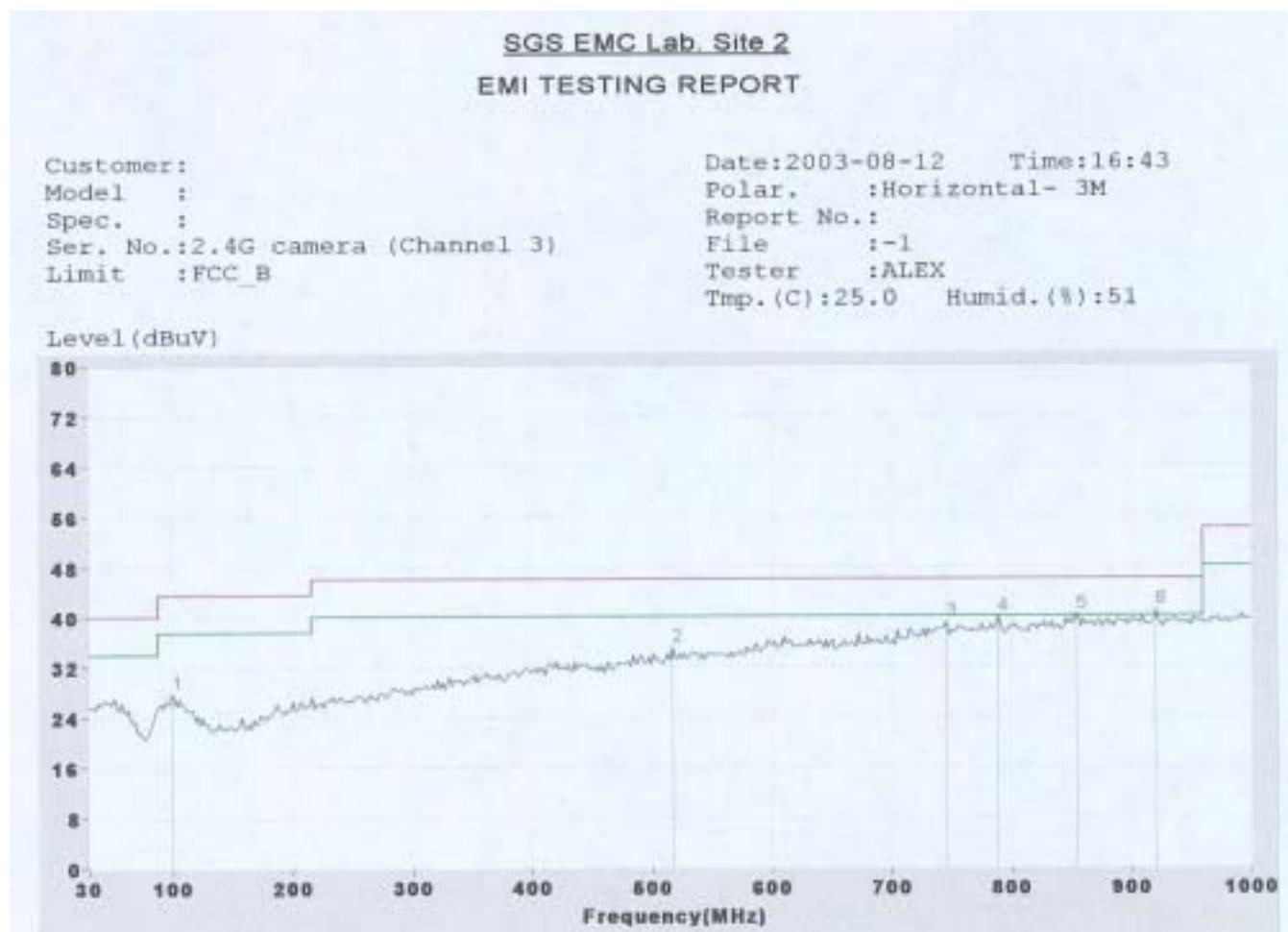


Part3: Transmit at channel 3 , 30Mhz to 1Ghz

Vertical



Horizontal

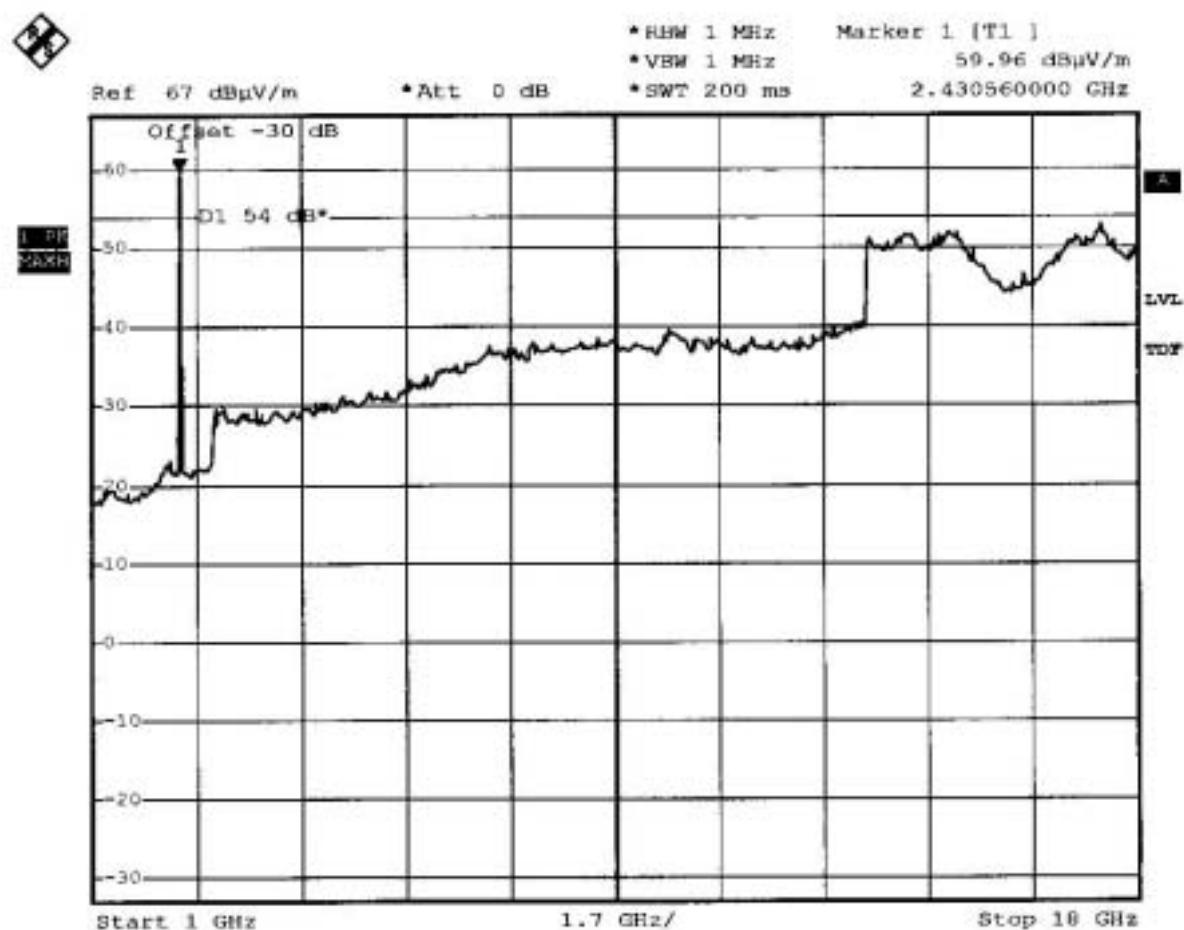


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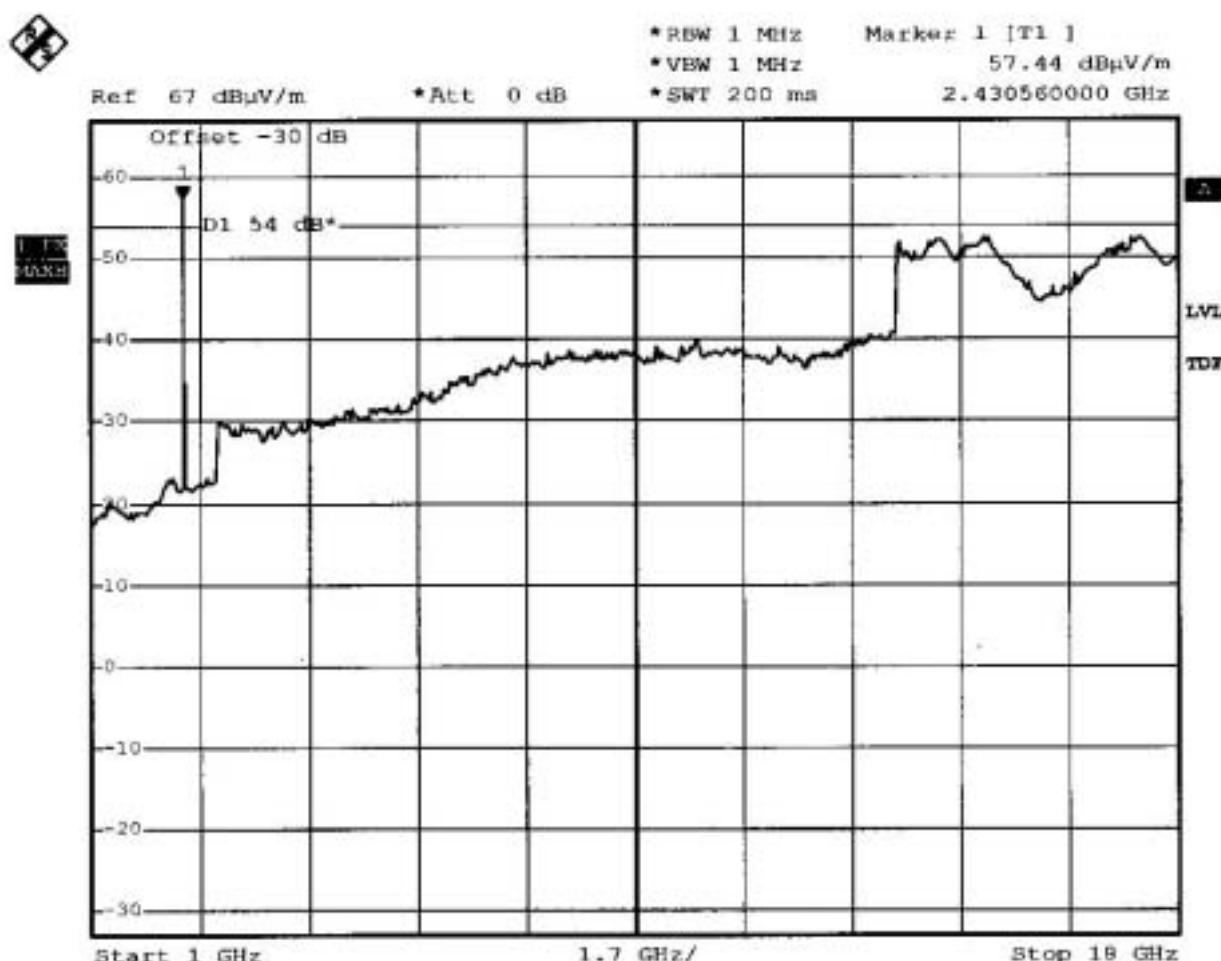
Freq	Level	Over Limit	Limit	Read Line	Antenna Factor	Cable Factor	Other Factor
MHz	dB	dB	dB	dB	dB	dB	dB
1 99.84	27.72	-15.78	43.50	15.08	11.90	0.74	0.00
2 516.94	34.95	-11.05	46.00	15.58	17.48	1.89	0.00
3 745.86	38.93	-7.07	46.00	15.70	20.90	2.32	0.00
4 788.54	39.81	-6.19	46.00	16.36	21.04	2.41	0.00
5 854.50	40.09	-5.91	46.00	15.84	21.73	2.51	0.00
6 920.46	40.72	-5.28	46.00	15.66	22.45	2.61	0.00

Transmit at channel 3 , 1Ghz to 18Ghz

Vertical

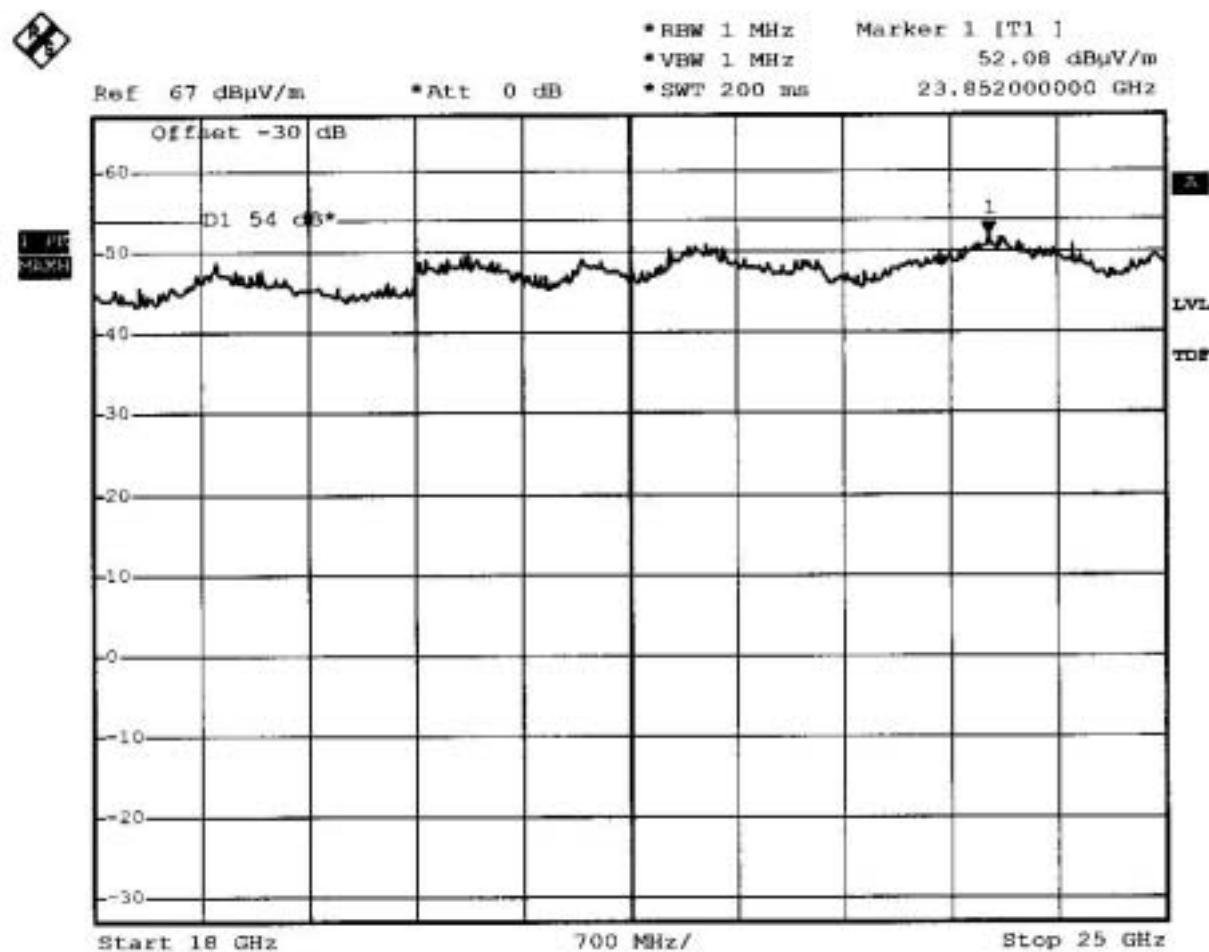


Horizontal

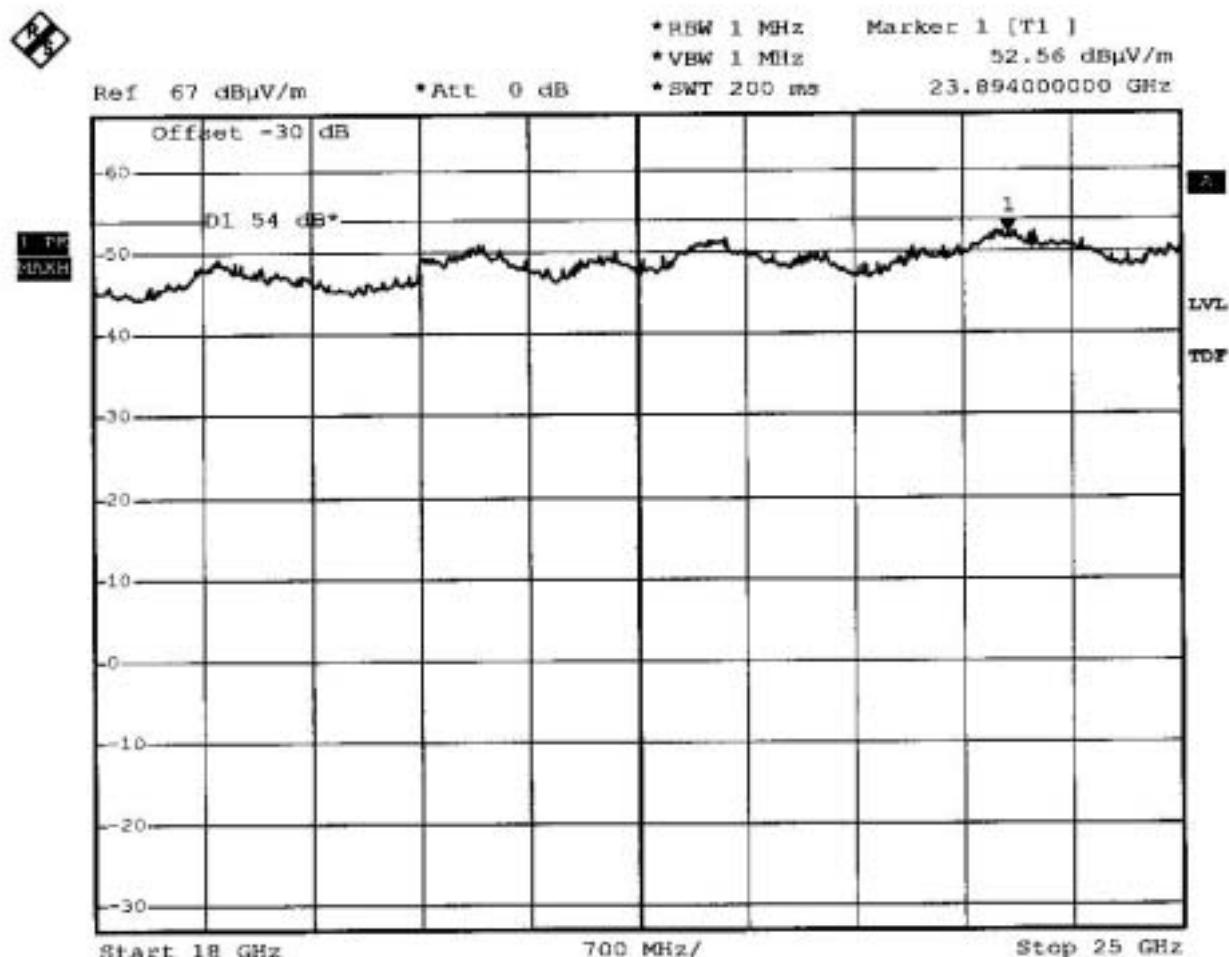


Transmit at channel 3 , 18Ghz to 25Ghz

Vertical

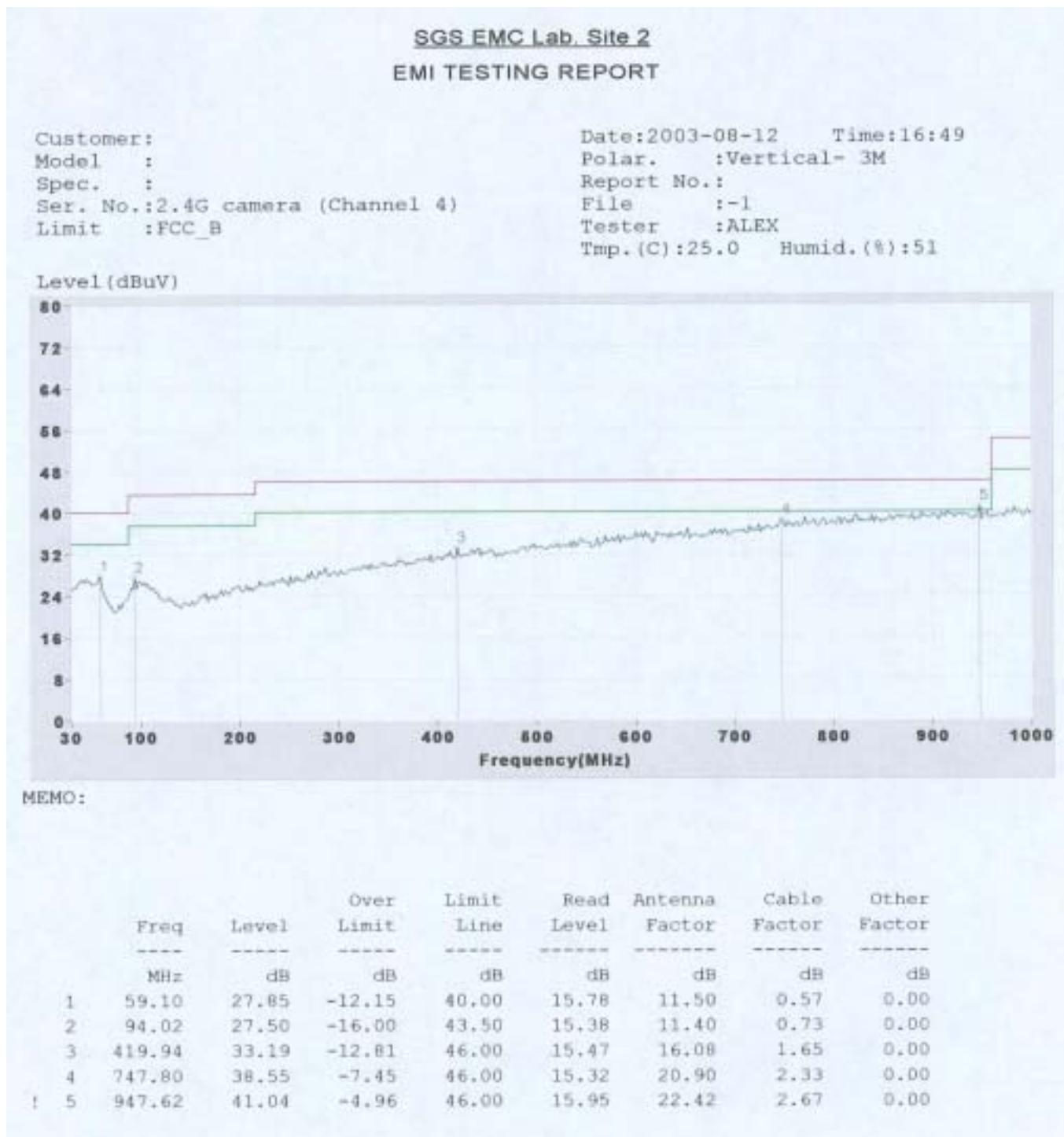


Horizontal



Part4: Transmit at channel 4 , 30Mhz to 1Ghz

Vertical

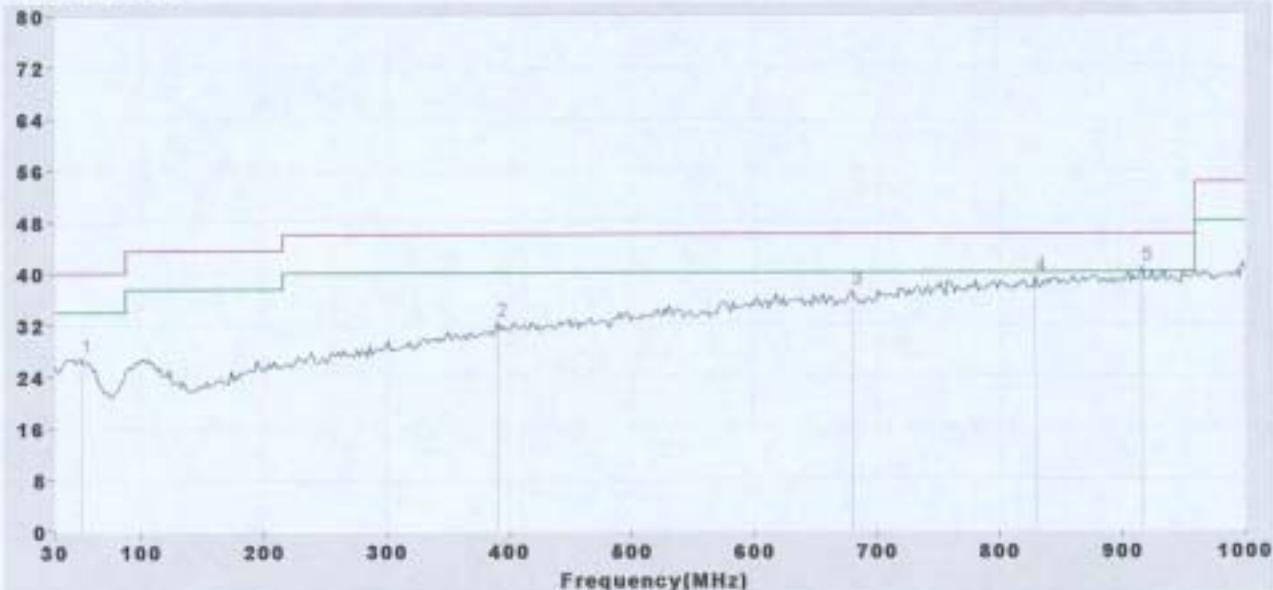


Horizontal

SGS EMC Lab Site 2  
EMI TESTING REPORT

Customer: Date:2003-08-12 Time:16:48  
 Model : Polar. :Horizontal- 3M  
 Spec. : Report No.:-  
 Ser. No.:2.4G camera (Channel 4) File : -1  
 Limit :FCC\_B Tester :ALEX  
 Tmp.(C):25.0 Humid.(%):51

Level (dBuV)

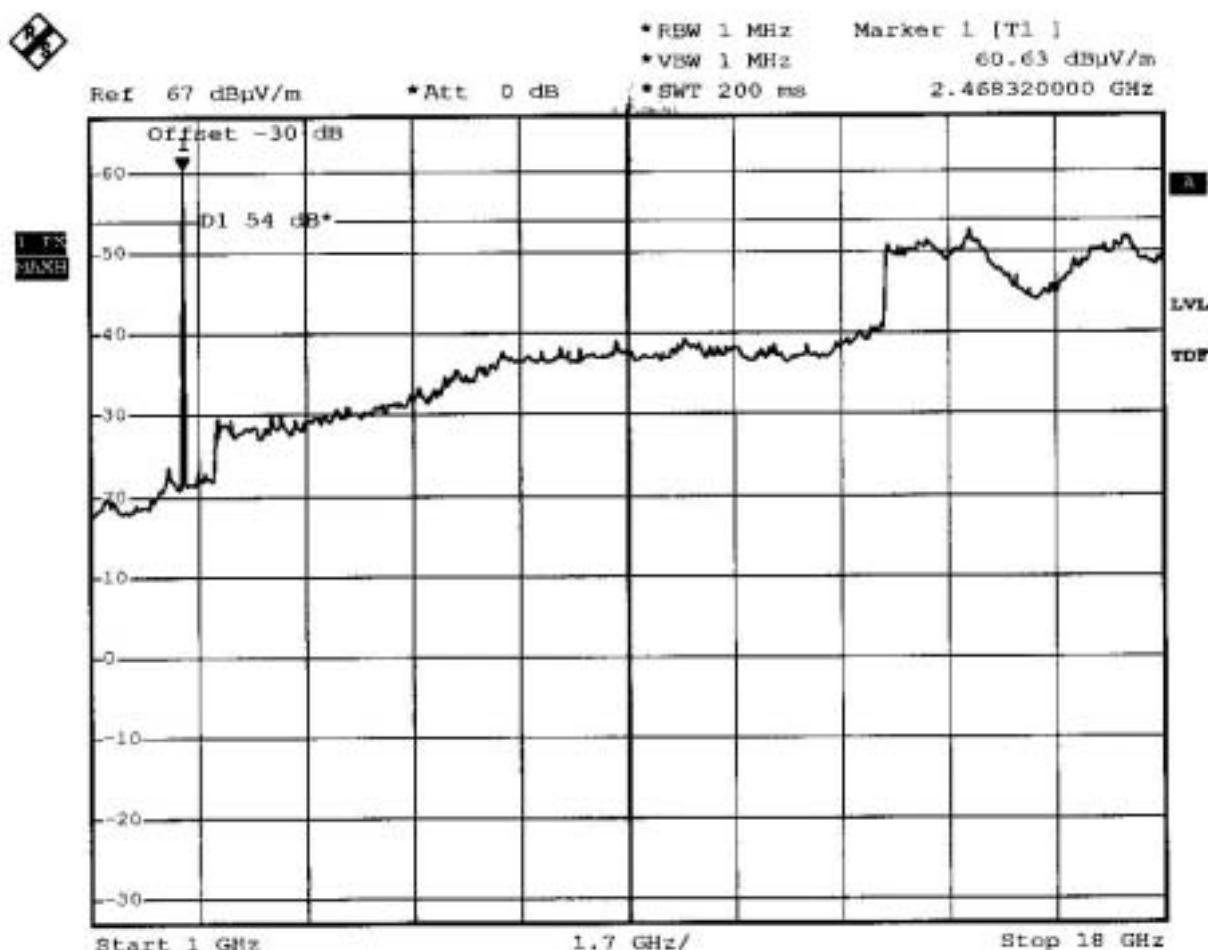


MEMO:

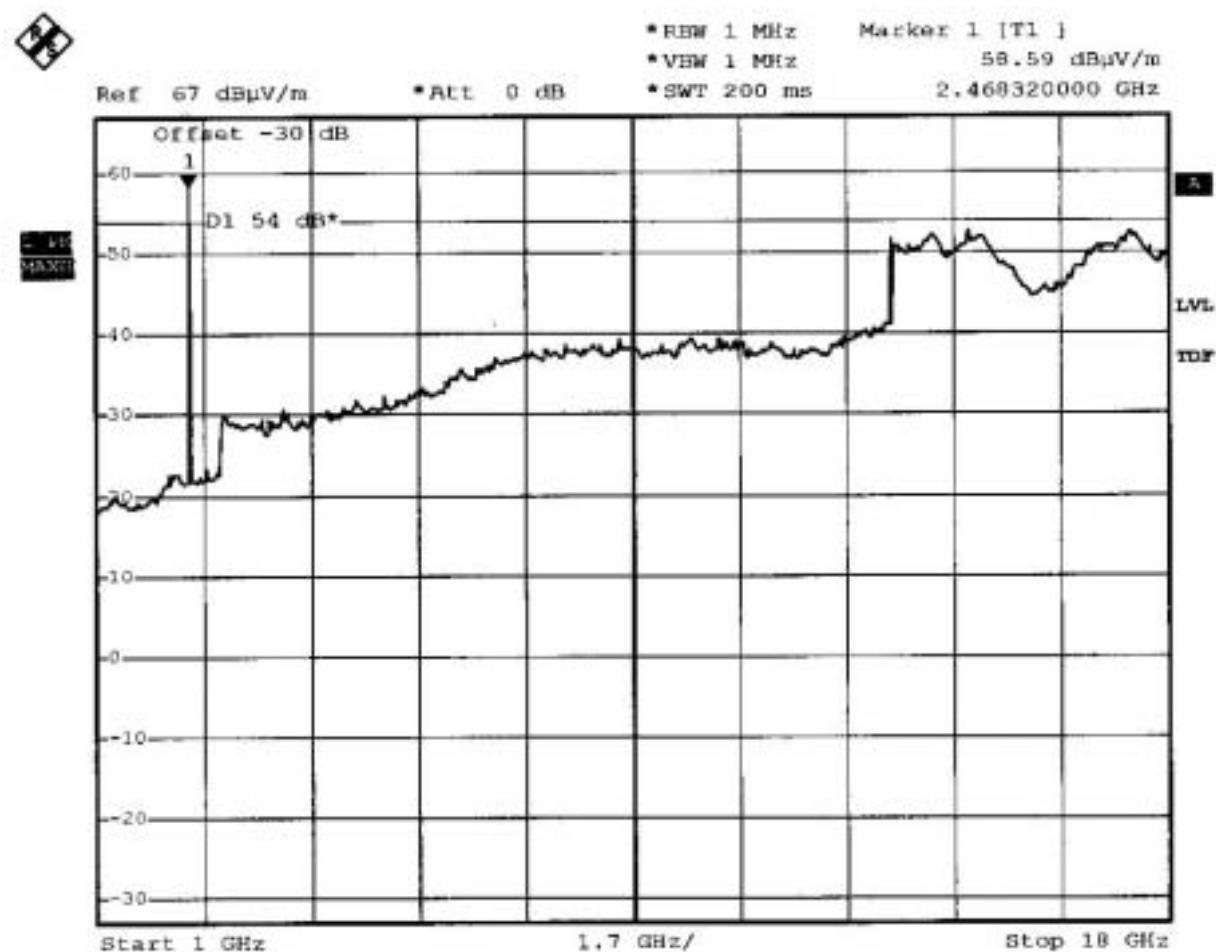
	Freq	Level	Over Limit	Limit	Read Line	Antenna Factor	Cable Factor	Other Factor
	MHz	dB	dB	dB	dB	dB	dB	dB
1	51.34	26.89	-13.11	40.00	14.43	11.94	0.53	0.00
2	390.84	32.32	-13.68	46.00	15.36	15.39	1.57	0.00
3	679.90	37.03	-8.97	46.00	15.07	19.77	2.19	0.00
4	829.28	39.18	-6.82	46.00	15.36	21.35	2.48	0.00
5	916.58	40.65	-5.35	46.00	15.64	22.40	2.60	0.00

Transmit at channel 4 , 1Ghz to 18Ghz

Vertical

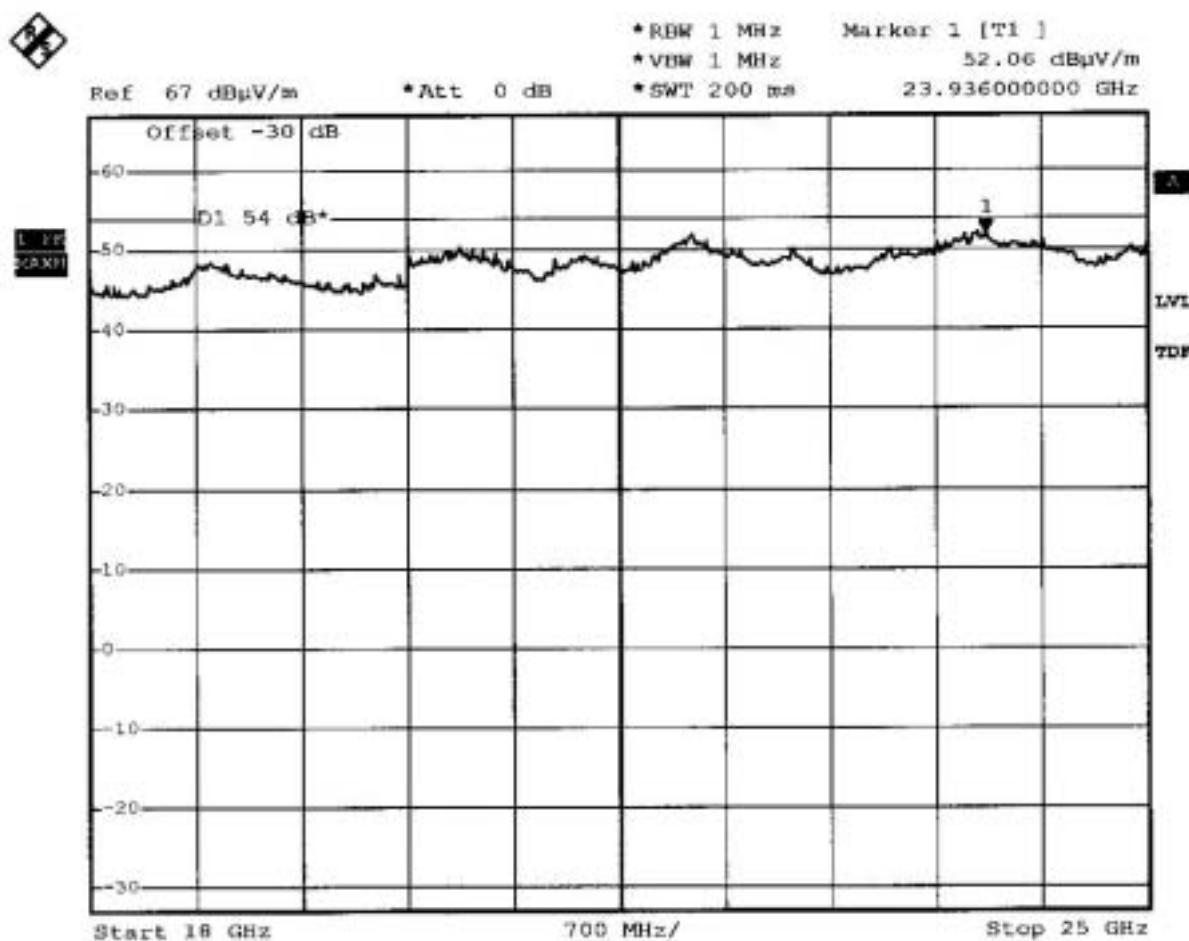


Horizontal

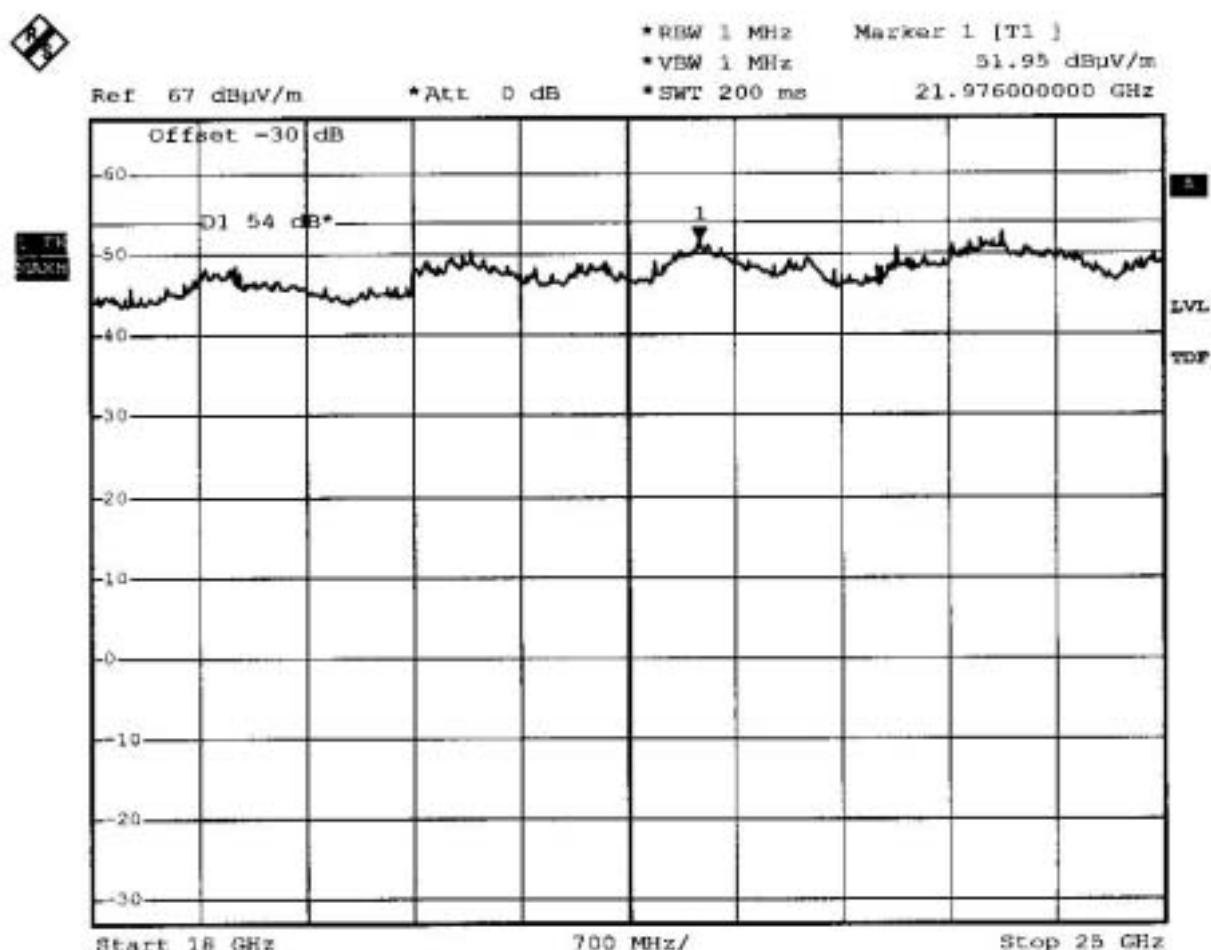


Transmit at channel 4 , 18Ghz to 25Ghz

Vertical



Horizontal

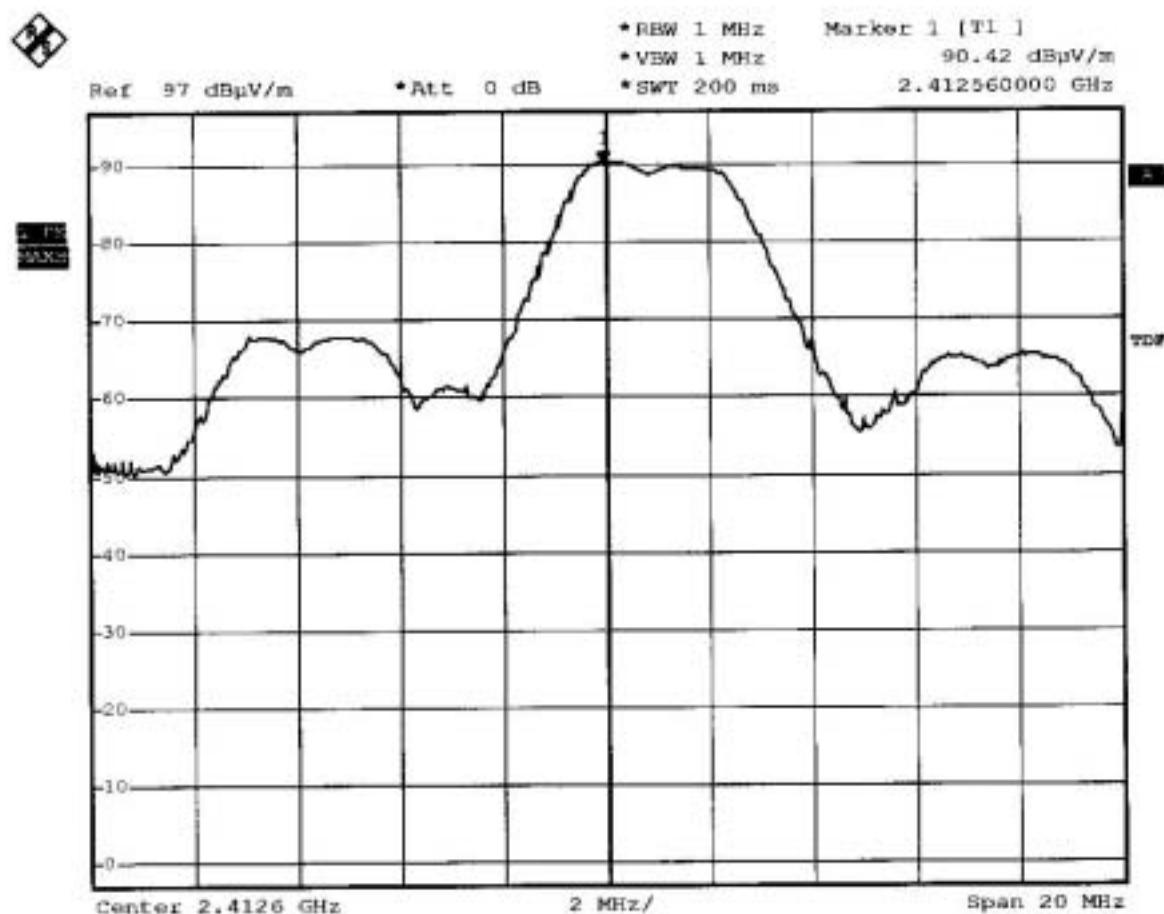


**4.2.1 Limits**

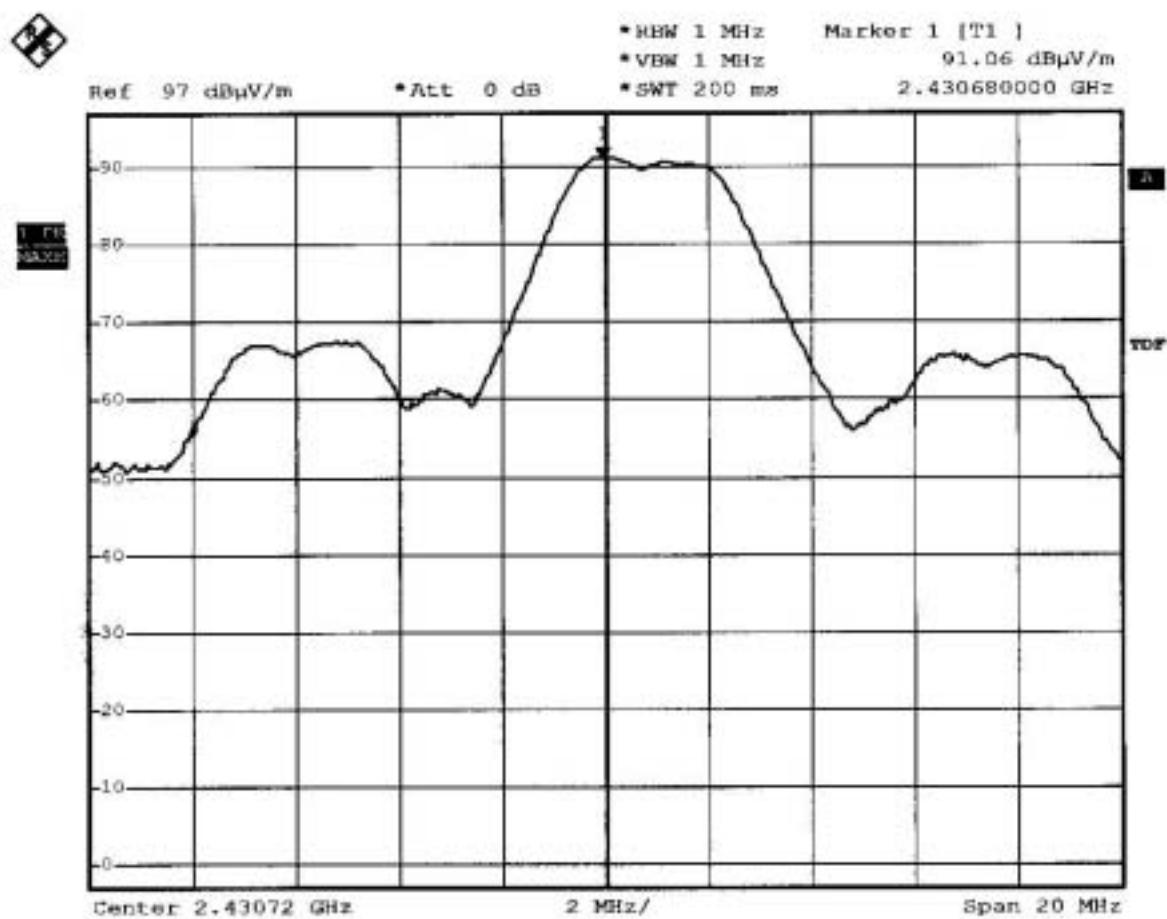
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

**4.3 Field Strength of Fundamental****SUBCLAUSE 15.249(a)**

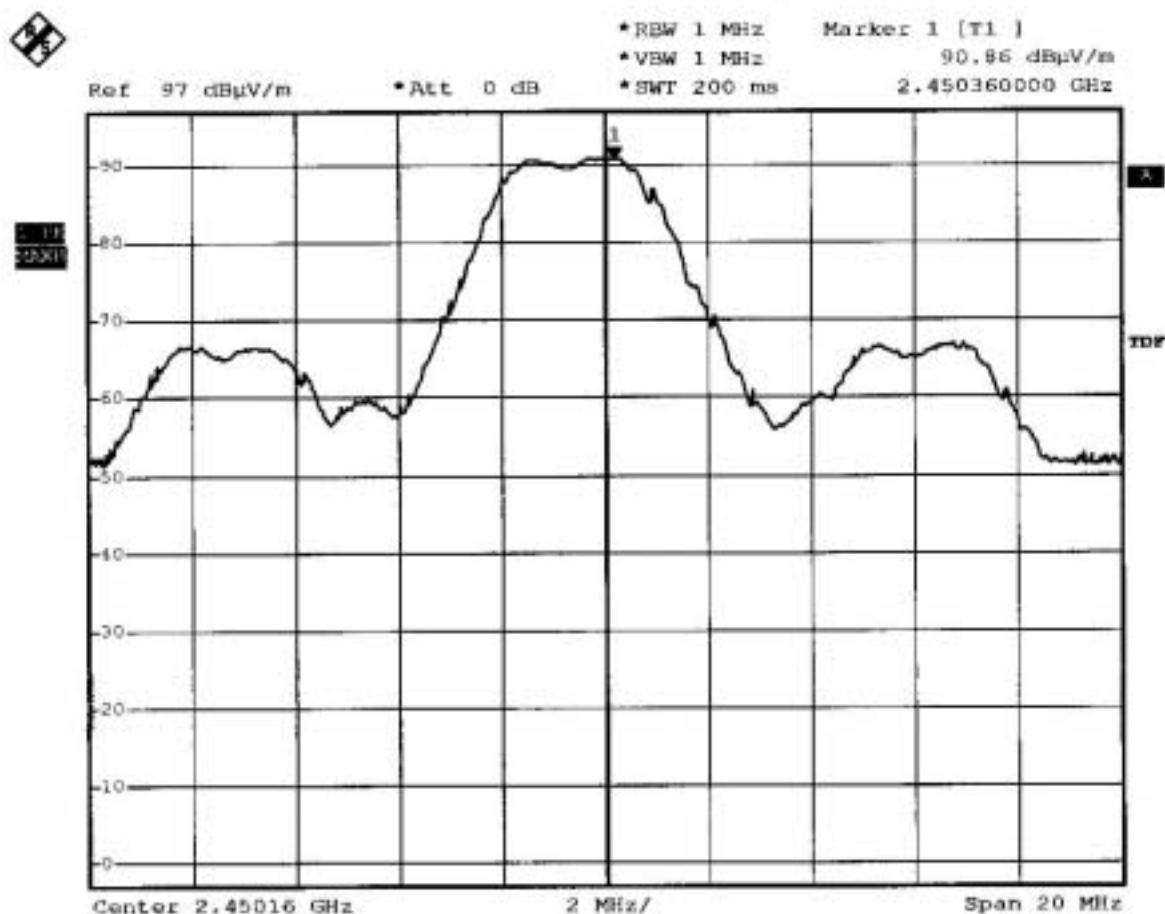
1. Channel 1



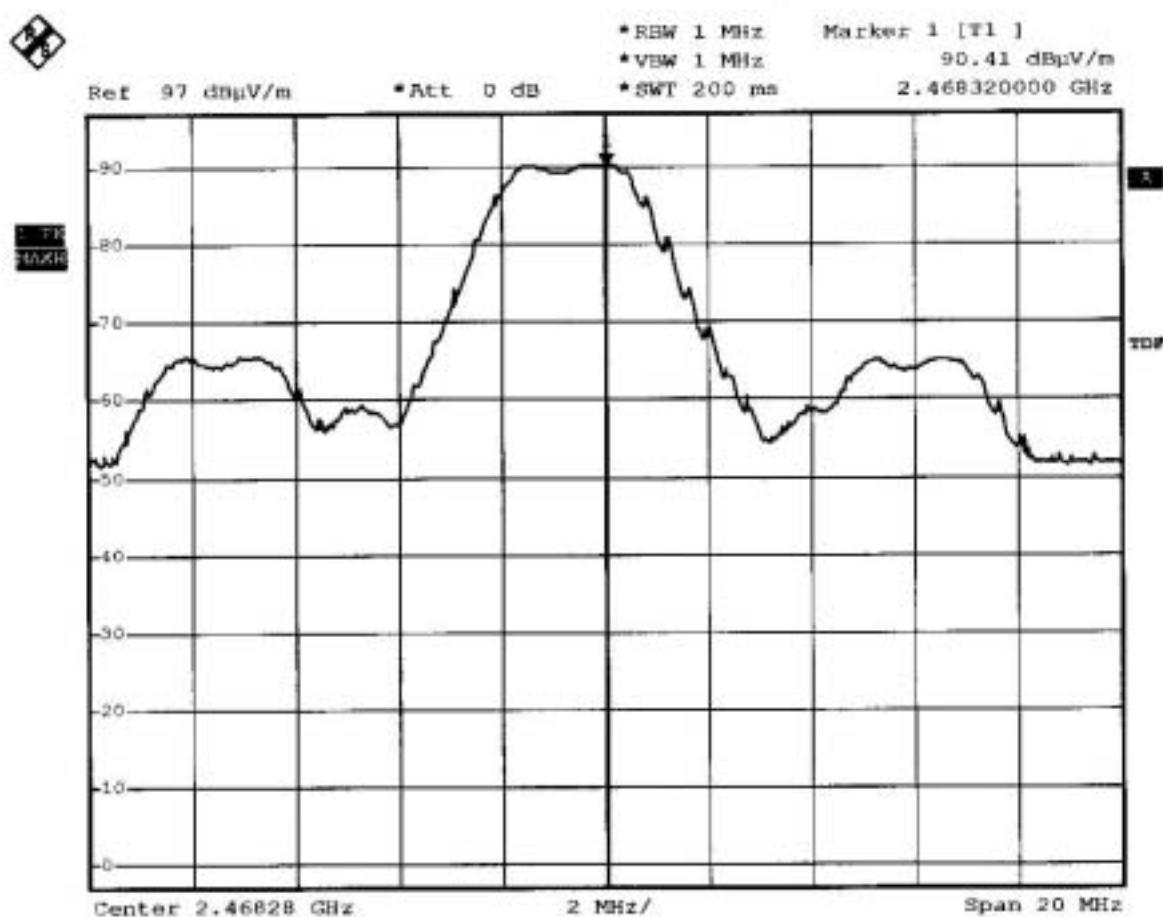
2. Channel 2



3. Channel 3



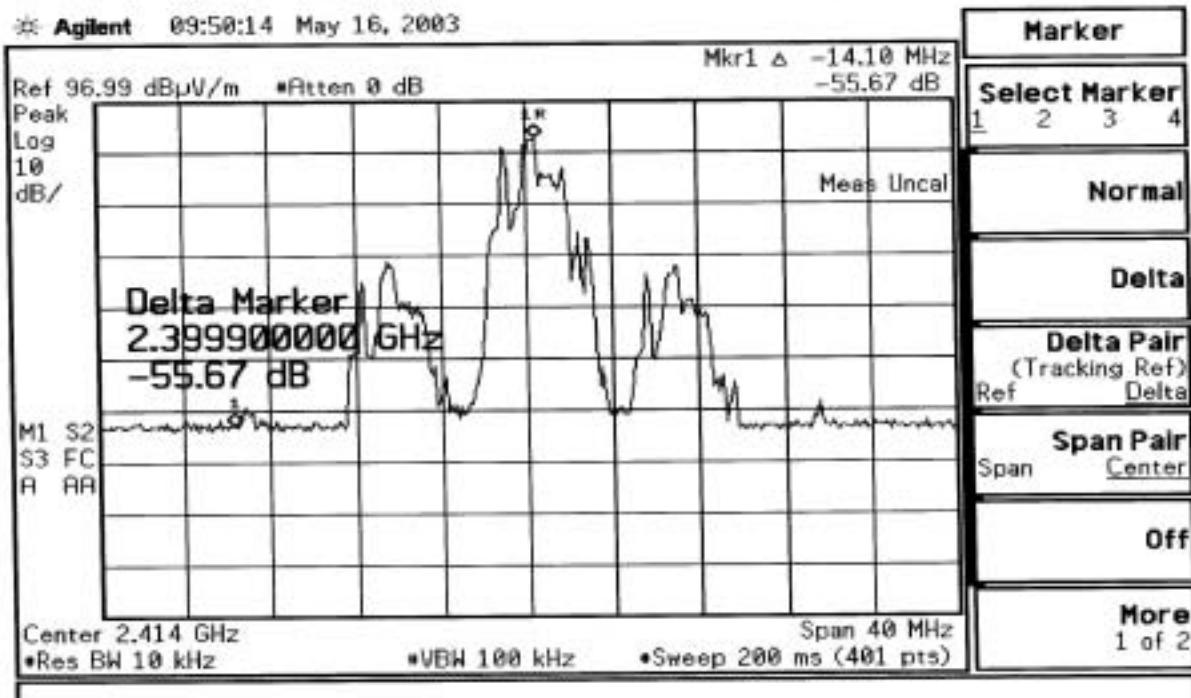
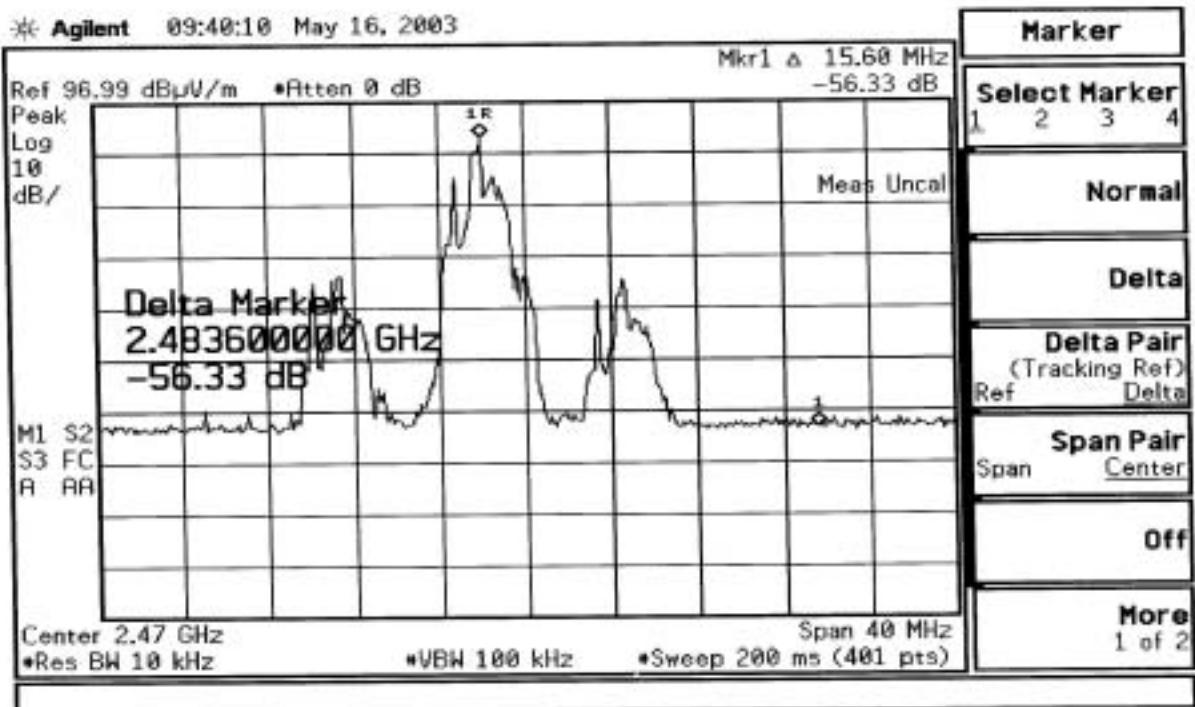
4. Channel 4



Channel	Channel 1	Channel 2	Channel 3	Channel 4
Field Strength(dbuV/m) at 3 meter	90.42	91.06	90.86	90.41

#### 4.3.1 Limit

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 - 928 MHz	50	500
2400 - 2483.5 MHz	50	500
5725 - 5875 MHz	50	500
24.0 - 24.25 GHz	250	2500



	<b>Lower edge (2400Mhz)</b>	<b>Upper edge (2483.5Mhz)</b>
<b>Peak to band edge</b>	<b>56.33 db</b>	<b>55.67 db</b>

#### 4.4.1 Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in section 15.209, whichever is the lesser attenuation.

**APPENDIX: Photographs of Test Setup**

**<Photos are saved separately>**

**APPENDIX : Photographs of EUT**

**Internal photos**

**<The Photos are saved separately >**

**External photos**

**<The Photos are saved separately >**