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Test Report:	96743-3TRFWL
Applicant:	BelAir Networks Inc 603 March Road, Ottawa, ON K2K 2M5
Apparatus:	ERM1
FCC ID:	RAR20021001
In Accordance With:	FCC Part 90 Private Land Mobile Radio Services
Tested By:	Nemko Canada Inc. 303 River Road Ottawa, Ontario K1V 1H2
Authorized By:	 Jason Nixon, Wireless/Telecom Specialist
Date:	April 22, 2008
Total Number of Pages:	66

Report Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 90. Conducted measurements were performed in accordance with ANSI TIA-603-B-2002. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

The assessment summary is as follows:

Apparatus Assessed: ERM1

Specification: FCC Part 90 Private Land Mobile Radio Services

Compliance Status: Complies

Exclusions: None

Non-compliances: None

Report Release History: Original Release

Author: Andrey Adelberg, EMC/Wireless Specialist

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

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Section 1 : Equipment Under Test

1.1 Product Identification

The Equipment Under Test was identified as follows:

BelAir ERM1 Enhanced Radio Module

1.2 Samples Submitted for Assessment

The following samples of the apparatus have been submitted for type assessment:

Sample No.	Description	Serial No.
1	ERM1 Enhanced Radio Module	K002100736
2	Host Unit: BelAir100	AABFQ7296
3	Ethernet Hub, Airlink ASW105/A4	S/N: 0526A4A20149
4	Laptop PC, Toshiba Satellite A10 (M/N:PSA10C-00REH)	S/N: 63042093J

The first samples were received on: February 4, 2008

1.3 Theory of Operation

The ERM1 radio is an OFDM broadband wireless infrastructure communication device operating in the 4.94 – 4.99GHz band, designed to provide wireless high-speed Ethernet connection.

1.4 Technical Specifications of the EUT

Operating Frequency:	4.945– 4.985 GHz (Channel Bandwidth: 5MHz and 10MHz) 4.950 – 4.980 GHz (Channel Bandwidth: 20MHz)		
Emission Designator:	5MHz: 5M00W7D, 10MHz: 10M0W7D and 20MHz: 20M0W7D		
Rated Power:	23 dBm (1)		
Measured Power:	Channel Bandwidth: 5MHz:	Conducted: Radiated:	26.79 dBm 51.79 dBm (EIRP)
	Channel Bandwidth: 10MHz:	Conducted: Radiated:	29.02 dBm 54.02 dBm (EIRP)
	Channel Bandwidth: 20MHz:	Conducted: Radiated:	30.70 dBm 55.70 dBm (EIRP)
Modulation:	OFDM		
Antenna Data:	See in clause 1.5 below		
Power Source:	100-240VAC		

Note (1): Manufacturer's rated power is software/GUI power setting representing average (mean) RF power based on conducted measurement with a thermocouple detector and a wide-band power meter.

1.5 List of antenna types

Omni Antennas:

MTI MT-462008-N-A; 10dBi (direct connect omni antenna) (450mm tall)
MTI MT-462008-N; 10dBi (cable connected omni antenna) (450mm tall)
MTI MT-462007-N-A; 7dBi (direct connect omni antenna) (330mm tall)
MTI MT-462007-N; 7dBi (cable connected omni) (330mm tall)
MTI MT-462002/N; 9 dBi (cable connected Omni) (450mm tall)
MAXRAD MFB49009; 9 dBi (cable connected Omni antenna) (512mm tall)
MAXRAD BMEFC49005; 5.5 dBi Elevated Feed antenna
MAXRAD MH05158010NM; 10 dBi Omni Antenna
Mobile Mark ECOM6-4900; 6 dBi Magnetic Mount Antenna
Mobile Mark ECOM6-4900; 9 dBi Magnetic Mount Antenna
Mobile Mark ECOM6-4900-TEF; 6 dBi Elevated feed Magnetic Mount Antenna
Mobile Mark ECOT6-4900PT; 6 dBi Mount Antenna
Mobile Mark ECOT6-4900PT; 9 dBi Mount Antenna
Mobile Mark RM3-4900; 3 dBi Omni Antenna
Mobile Mark DM2-4900; 3 dBi Omni Antenna
Mobile Mark SCR14-4900; 14 dBi Corner Reflector Antenna
Laird Phantom Antenna; 3 dBi Omni Antenna

High Gain Directional Antennas:

MTI MT-465005/N; 21 dBi high gain directional (1’ panel)
MTI MT-466004/N; 25 dBi high gain directional (1.5’ panel)

Sector Antennas:

MTI MT-464002/NV; 16 dBi 60˚ sector (V)
MTI MT-464003/NV; 15.5 dBi 90˚ sector (V)
MTI MT-444003/NV; 15 dBi 120˚ sector (V)
Mobile Mark PN16-4900-120; 16 dBi 120˚ sector
Mobile Mark PN17-4900-90; 17 dBi 90˚ sector
Mobile Mark PN22-4900-30; 22 dBi 30˚ sector

Section 2 : Test Conditions

2.1 Specifications

The apparatus was assessed against the following specifications:

FCC Part 2 Subpart J, Equipment Authorization Procedures
FCC Part 90 Private Land Mobile Radio Services, Subpart Y (Regulations Governing Licensing and Use of Frequencies in the 4940–4990 MHz Band)

2.2 Deviations From Laboratory Test Procedures

No deviations were made from laboratory test procedures.

2.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range	:	15 – 30 ^{o}C
Humidity range	:	20 - 75 %
Pressure range	:	860 - 1060 hPa
Power supply range	:	+/- 5% of rated voltages

2.4 Test Equipment

Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
Spectrum Analyzer	Rohde & Schwarz	FSU46	FA001877	Jan 23/09
RF AMP	Narda	5 - 18GHz	FA001409	COU
Attenuator	Narda	769-20	FA001394	COU
Temperature Chamber	Thermotron	SM-16C	FA001030	NCR
Multimeter	Fluke	16	FA001831	Jan 14/09
Electro-Magnetic Interference Test Chamber	TDK	SAC-3	FA002047	May 19/08
Bilog	Sunol	JB3	FA002108	Jan. 21/09
Flush Mount Turntable	Sunol	FM2022	FA002082	NCR
Controller	Sunol	SC104V	FA002060	NCR
Mast	Sunol	TLT2	FA002061	NCR
Spectrum Analyzer	Rohde & Schwarz	FSP	FA001920	Mar. 19/08
Horn Antenna #1	EMCO	3115	FA000649	Feb 13/09
18.0 – 40.0GHz Horn Antenna	EMCO	3116	FA001847	May 9/08
1 – 18 GHz Amplifier	JCA	JCA118-503	FA002091	Oct 2/08
50 Coax cable	HUBER + SUHNER	None	FA002022	Sept. 19/08
50 Coax cable	HUBER + SUHNER	None	FA002015	Sept. 19/08

COU – Calibrate on Use
NCR – No Calibration Required

2.5 Measurement Uncertainty

Nemko Canada measurement uncertainty has been calculated using guidance of UKAS LAB 34:2003 and TIA-603-B Nov 7, 2002. All calculations have been performed to provide a confidence level of 95% and can be found in Nemko Canada document MU-003.

Section 3 : Observations

3.1 Modifications Performed During Assessment

No modifications were performed during assessment.

3.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

3.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

3.4 Test Deleted

No Tests were deleted from this assessment.

3.5 Additional Observations

There were no additional observations made during this assessment.

Section 4 : Results Summary

This section contains the following:

FCC Part 90: Test Results

The column headed 'Required' indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

N	No : not applicable / not relevant.
Y	Yes : Mandatory i.e. the apparatus shall conform to these tests.
N/T	Not Tested, mandatory but not assessed. (See section 3.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

4.1 FCC Part 90 Subpart Y: Test Results

Section	Clause	Test Description	Required	Result
1	90.1215	Occupied Bandwidth	Y	PASS
2	90.1215	Peak Output Power	Y	PASS
3	90.1215	Peak Power Spectrum Density	Y	PASS
4	90.210(m)	Spurious Emissions at the Antenna Terminals	Y	PASS
5	90.210(m)	Radiated Spurious Emissions	Y	PASS
6	90.213	Frequency Stability	Y	PASS

Appendix A: Test Results

Section 1. Occupied Bandwidth

Criteria: Clause 90.1215

(d) The peak power spectral density is measured as conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total power over the measurement bandwidth. If the resolution bandwidth is approximately equal to the measurement bandwidth, and much less than the emission bandwidth of the equipment under test, the measured results shall be corrected to account for any difference between the resolution bandwidth of the test instrument and its actual noise bandwidth

Test Conditions:

Sample Number:	1	**Temperature:**	21 ºC
Date:	February 28, 2008	**Humidity:**	30 %
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

Test Results: Complies

Test Data: See attached tables and plots

Additional Observations: Occupied Bandwidth was measured at the highest rated power level

20dB Occupied Bandwidth:

Nominal Channel Bandwidth (MHz)	Channel frequency (MHz)	Measured Occupied Bandwidth (MHz)
5	4.965	4.475
10	4.965	8.850
20	4.965	18.375

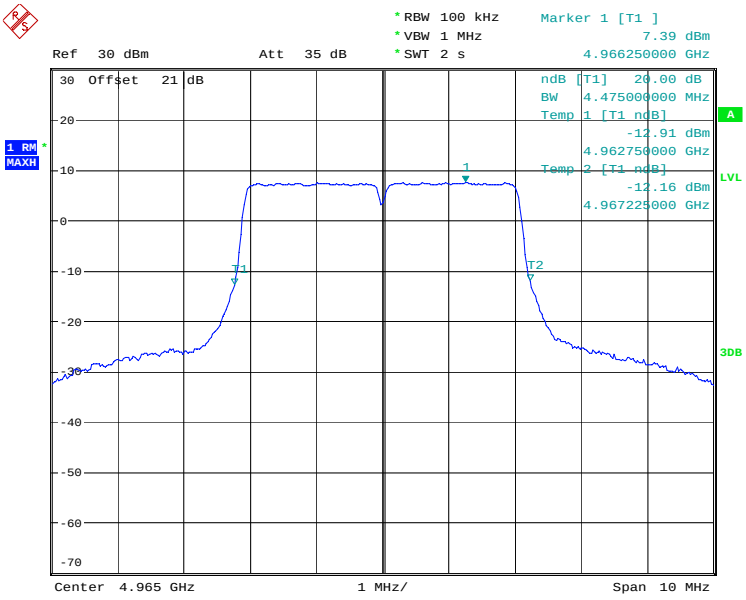
26dB Occupied Bandwidth:

Nominal Channel Bandwidth (MHz)	Channel frequency (MHz)	Measured Occupied Bandwidth (MHz)
5	4.945	4.744
	4.965	4.744
	4.985	4.776
10	4.945	9.423
	4.965	9.391
	4.985	9.455
20	4.950	18.668
	4.965	18.669
	4.980	18.669

99% Occupied Bandwidth:

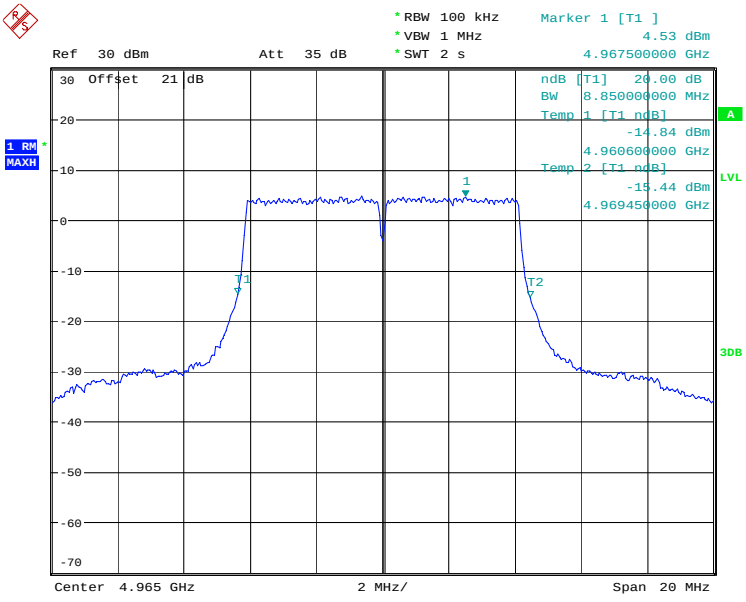
Nominal Channel Bandwidth (MHz)	Channel frequency (MHz)	Measured Occupied Bandwidth (MHz)
5	4.945	4.135
	4.965	4.135
	4.985	4.135
10	4.945	8.237
	4.965	8.237
	4.985	8.237
20	4.950	16.506
	4.965	16.506
	4.980	16.506

20 dB Bandwidth sample
Channel Bandwidth 5 MHz



Date: 26.MAR.2008 18:50:51

20 dB Bandwidth sample
Channel Bandwidth 10 MHz



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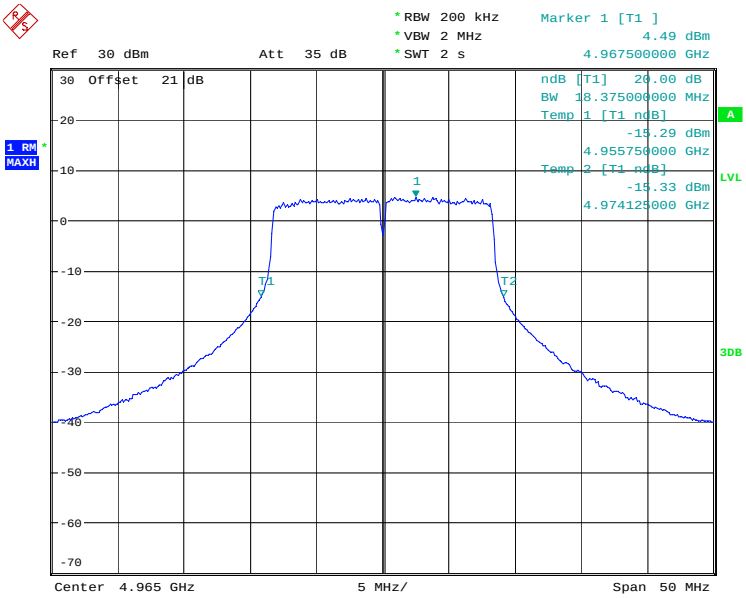
20 dB Bandwidth sample

Channel Bandwidth 20 MHz



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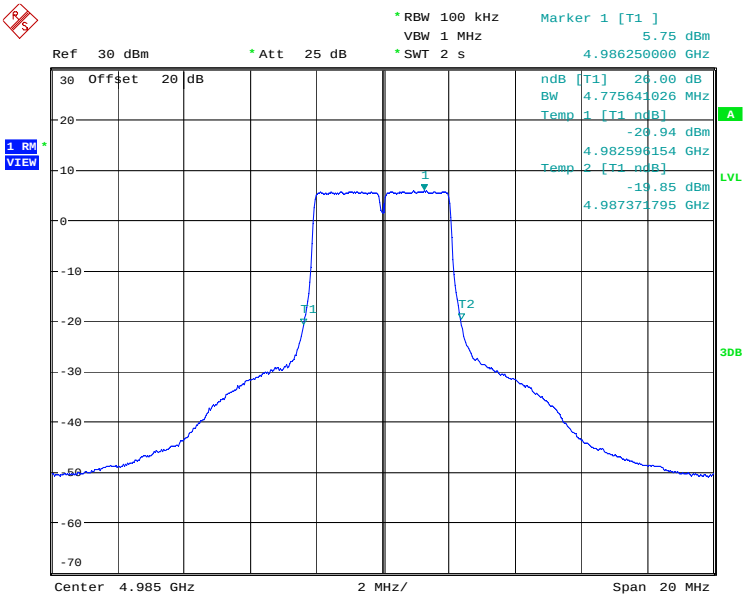
26 dB Bandwidth of High frequency

Channel Bandwidth 5 MHz



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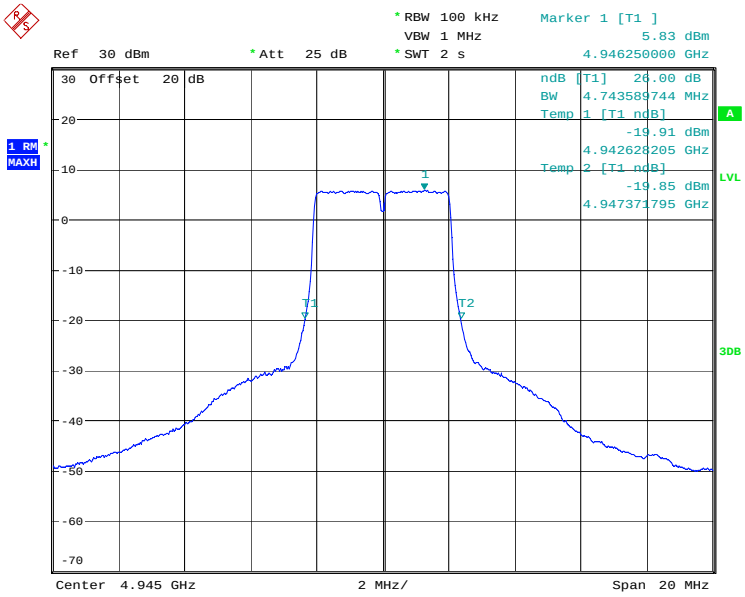
26 dB Bandwidth of Low frequency
Channel Bandwidth 5 MHz



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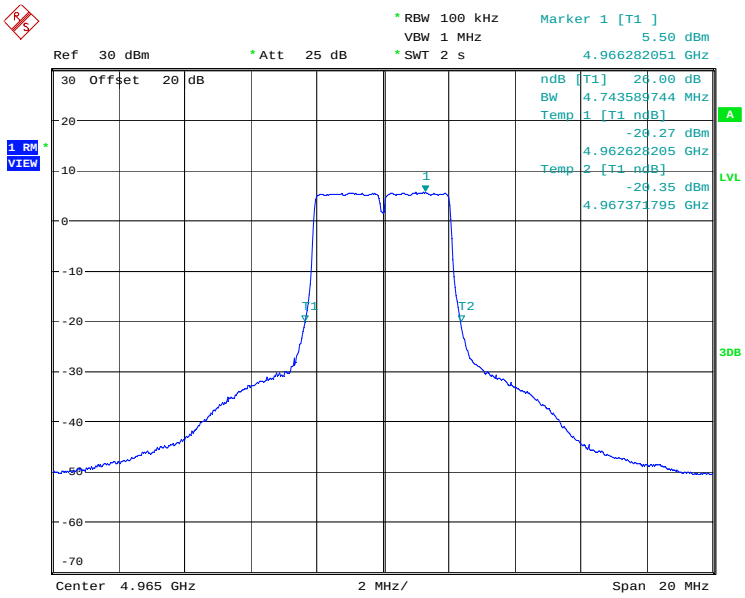
26 dB Bandwidth of Mid frequency
Channel Bandwidth 5 MHz



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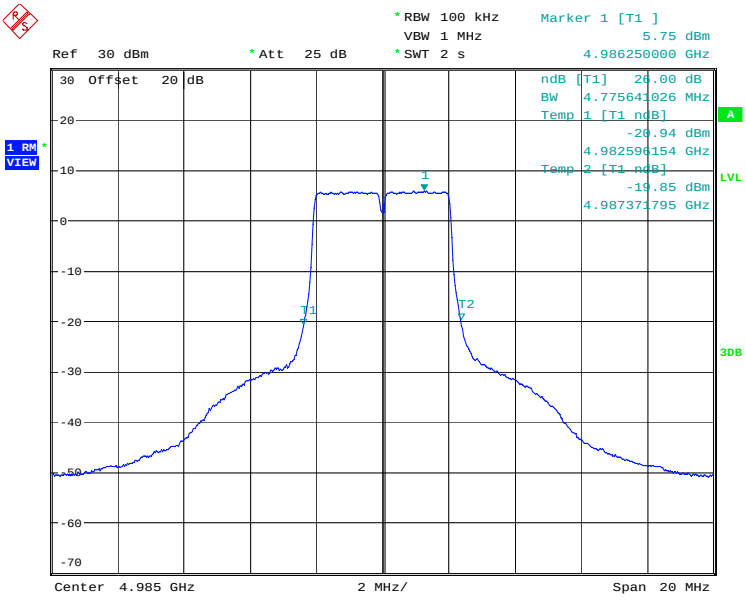
26 dB Bandwidth of High frequency
Channel Bandwidth 5 MHz



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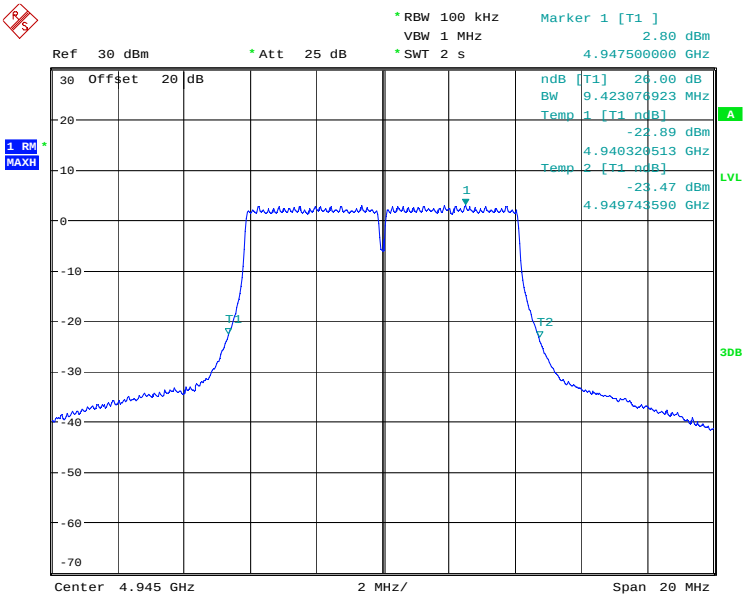
26 dB Bandwidth of Low frequency
Channel Bandwidth 10 MHz



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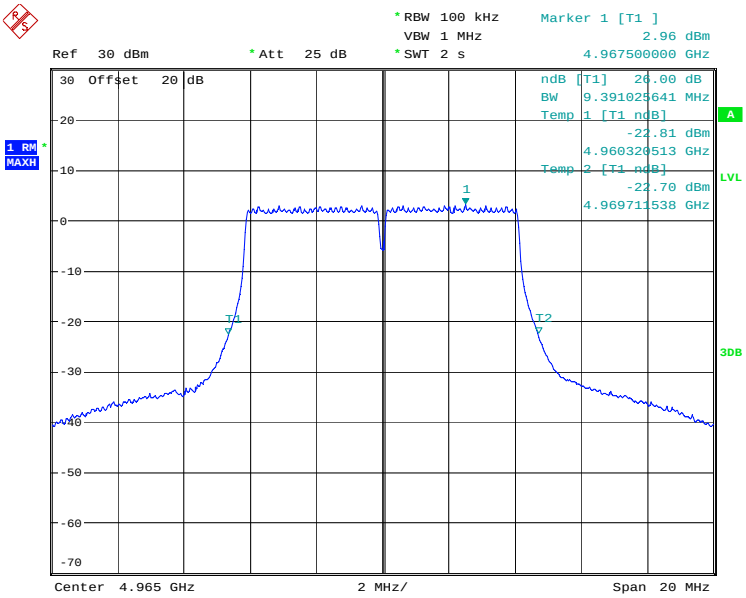
26 dB Bandwidth of Mid frequency

Channel Bandwidth 10 MHz



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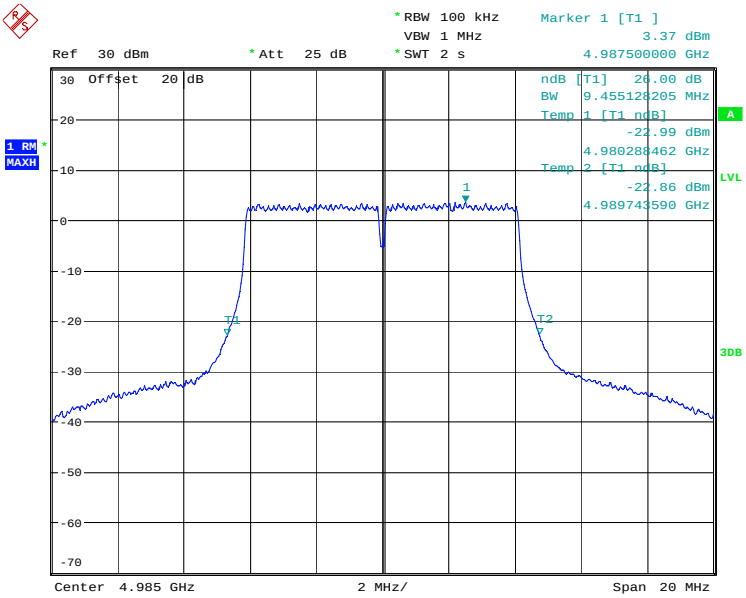
26 dB Bandwidth of High frequency

Channel Bandwidth 10 MHz



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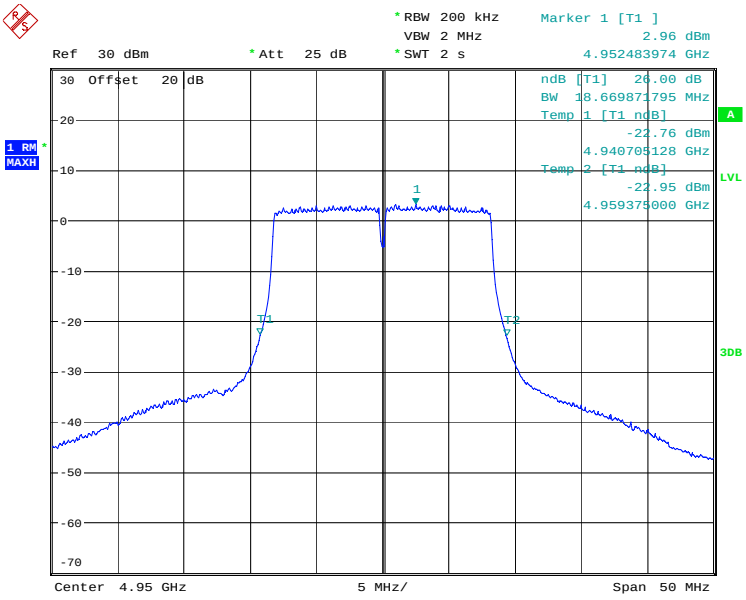
26 dB Bandwidth of Low frequency
Channel Bandwidth 20 MHz



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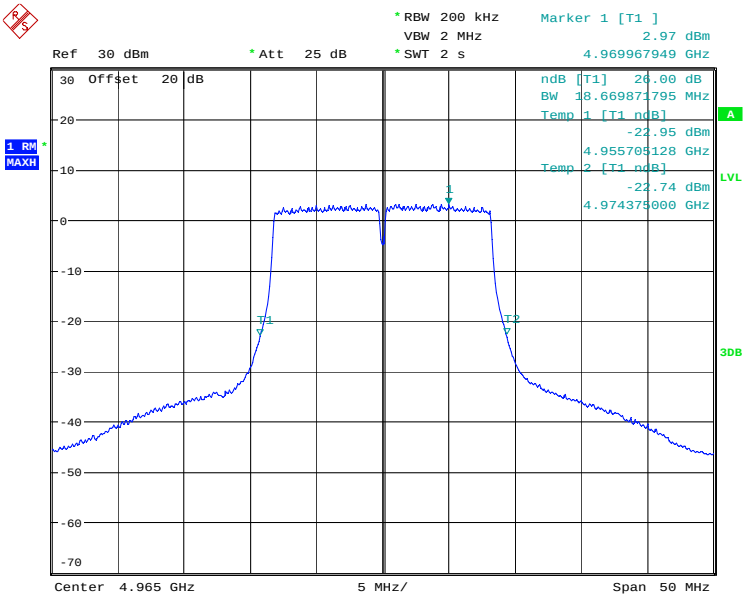
26 dB Bandwidth of Mid frequency
Channel Bandwidth 20 MHz



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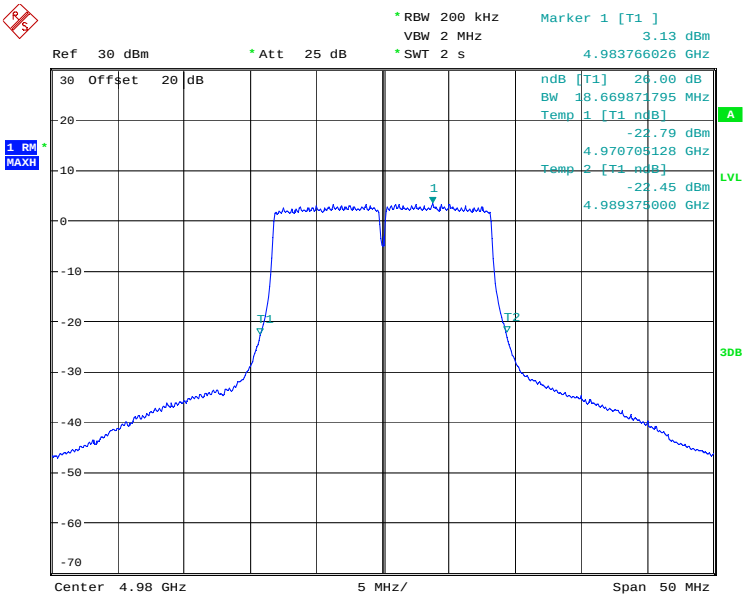
26 dB Bandwidth of High frequency
Channel Bandwidth 20 MHz



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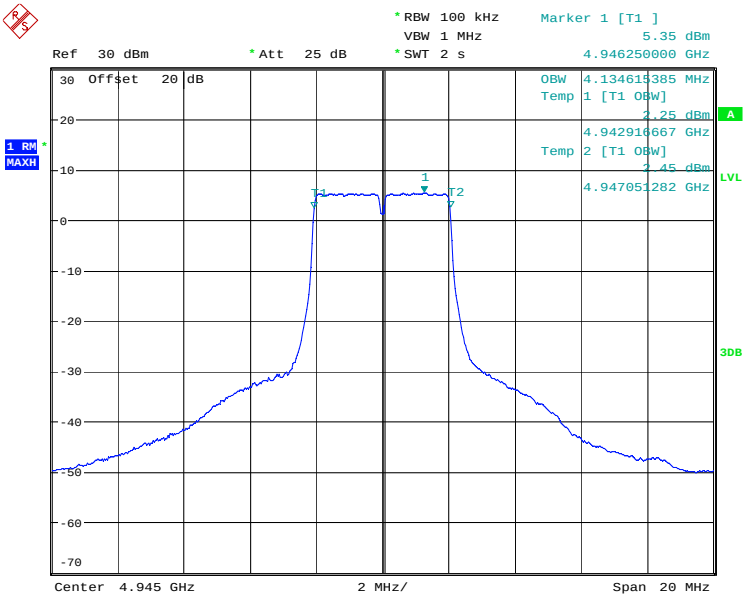
99% Bandwidth of Low frequency
Channel Bandwidth 5 MHz



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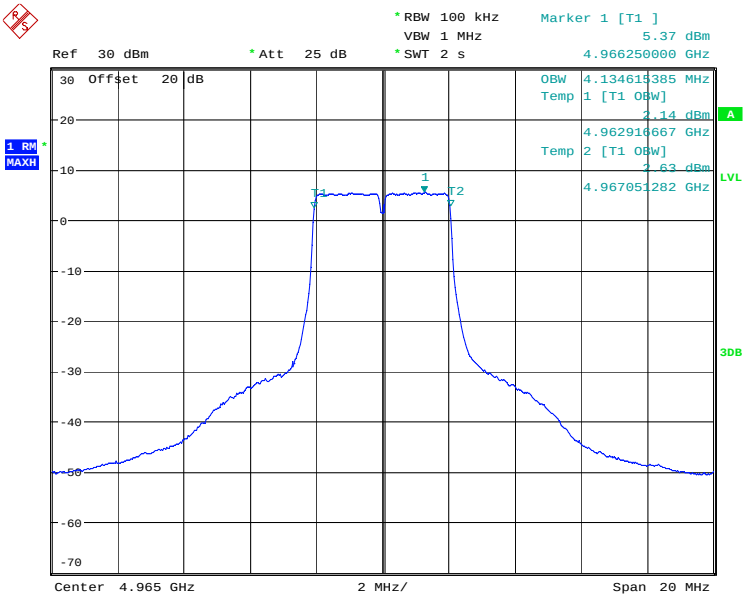
99% Bandwidth of Mid frequency
Channel Bandwidth 5 MHz



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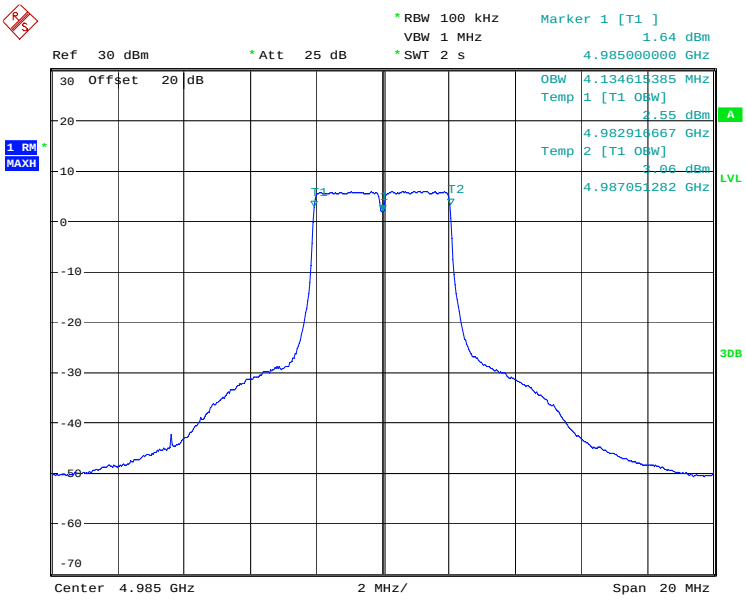
99% Bandwidth of High frequency
Channel Bandwidth 5 MHz



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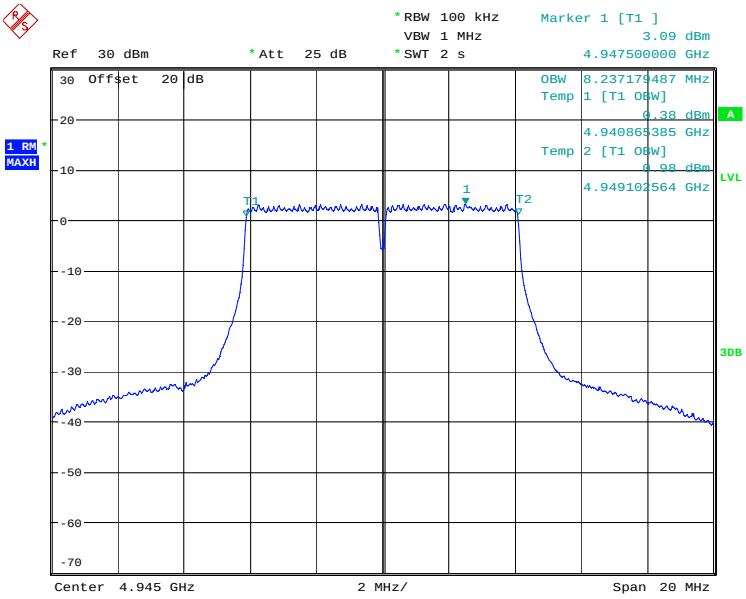
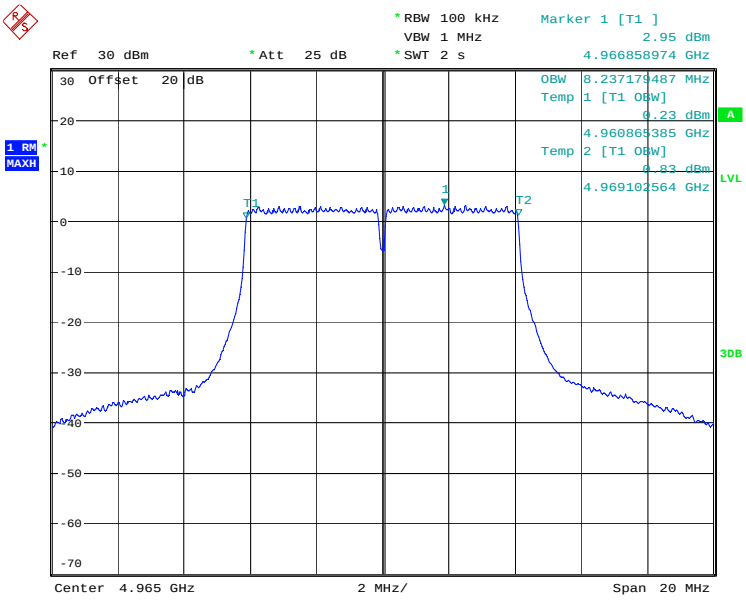
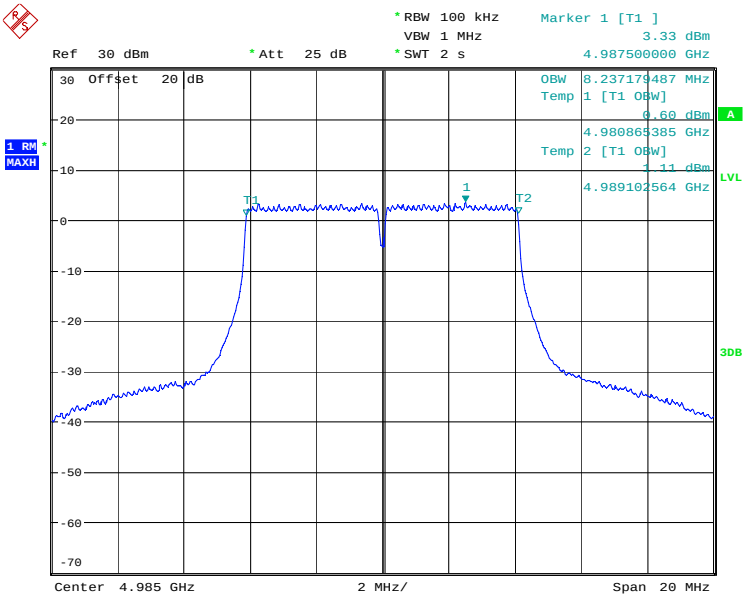
99% Bandwidth of Low frequency
Channel Bandwidth 10 MHz



99% Bandwidth of Mid frequency
Channel Bandwidth 10 MHz



99% Bandwidth of High frequency
Channel Bandwidth 10 MHz



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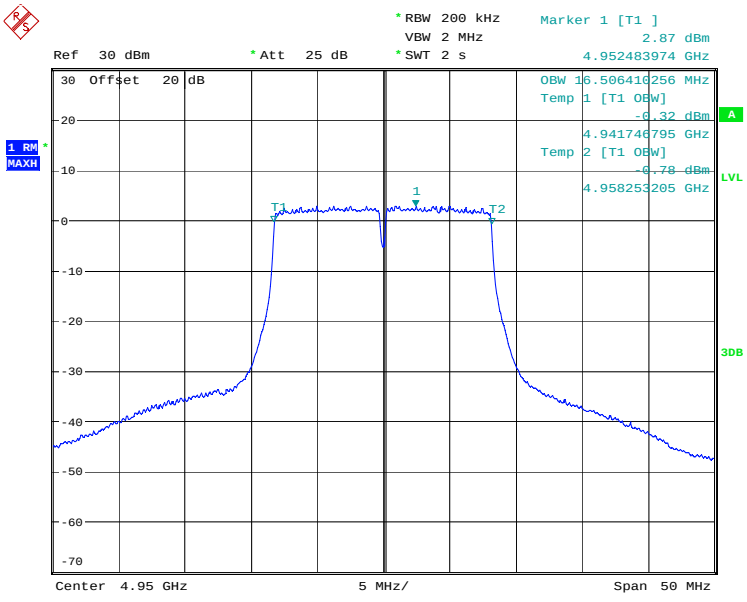
99% Bandwidth of Low frequency
Channel Bandwidth 20 MHz



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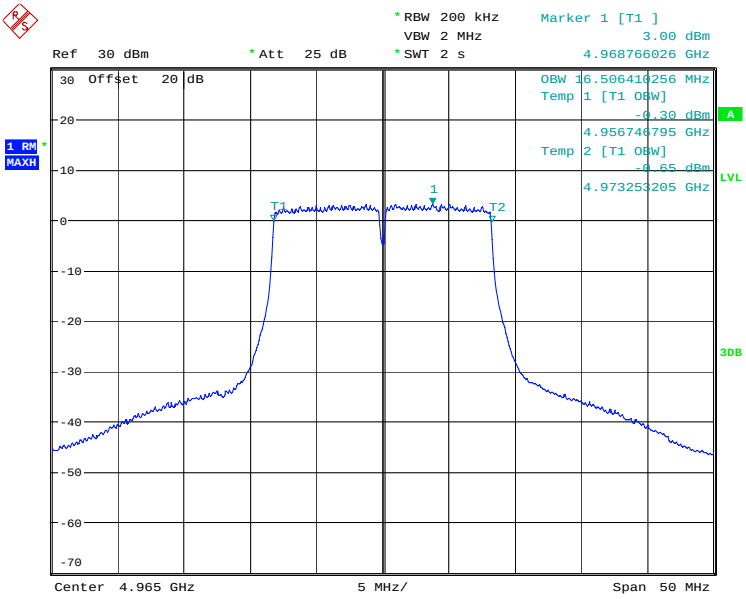
Channel Bandwidth 20 MHz



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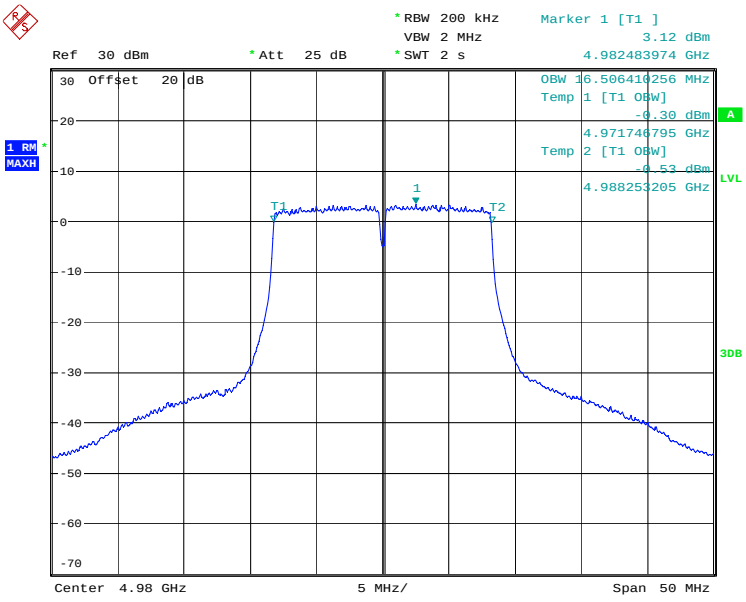
99% Bandwidth of High frequency
Channel Bandwidth 20 MHz



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Section 2. Peak Output Power

Criteria: 90.1215(a)

Power limits. - The transmitting power of stations operating in the 4940-4990 MHz band must not exceed the maximum limits in this section.
(a) The peak transmit power should not exceed:

Channel Bandwidth (MHz)	Low-power peak transmitter power (dBm)	High-power peak transmitter power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

However, high power point-to-point or point-to-multipoint operation (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the transmitter power or spectral density. Corresponding reduction in the peak transmit power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

Test Conditions:

Sample Number:	1	**Temperature:**	21 ºC
Date:	February 28, 2008	**Humidity:**	35 %
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

Test Results: Complies

Test Data: See attached tables and plots.

Additional Observations: The EUT designed for high power point-to-point and point-to-multipoint operations.

Omni Antennas:

Antenna Gain: 3 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	3	22	26.20	27.00	0.80	29.20	53.00	23.80
4.965	3	22	26.57	27.00	0.43	29.57	53.00	23.43
4.985	3	22	26.79	27.00	0.21	29.79	53.00	23.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	3	28	28.89	30.00	1.11	31.89	56.00	24.11
4.965	3	28	28.83	30.00	1.17	31.83	56.00	24.17
4.985	3	28	29.02	30.00	0.98	32.02	56.00	23.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	3	35	30.53	33.00	2.47	33.53	59.00	25.47
4.965	3	35	30.50	33.00	2.50	33.50	59.00	25.50
4.980	3	35	30.70	33.00	2.30	33.70	59.00	25.30

Antenna Gain: 6 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	6	22	26.20	27.00	0.80	32.20	53.00	20.80
4.965	6	22	26.57	27.00	0.43	32.57	53.00	20.43
4.985	6	22	26.79	27.00	0.21	32.79	53.00	20.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	6	28	28.89	30.00	1.11	34.89	56.00	21.11
4.965	6	28	28.83	30.00	1.17	34.83	56.00	21.17
4.985	6	28	29.02	30.00	0.98	35.02	56.00	20.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	6	35	30.53	33.00	2.47	36.53	59.00	22.47
4.965	6	35	30.50	33.00	2.50	36.50	59.00	22.50
4.980	6	35	30.70	33.00	2.30	36.70	59.00	22.30

Omni Antennas:

Antenna Gain: 7 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	7	22	26.20	27.00	0.80	33.20	53.00	19.80
4.965	7	22	26.57	27.00	0.43	33.57	53.00	19.43
4.985	7	22	26.79	27.00	0.21	33.79	53.00	19.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	7	28	28.89	30.00	1.11	35.89	56.00	20.11
4.965	7	28	28.83	30.00	1.17	35.83	56.00	20.17
4.985	7	28	29.02	30.00	0.98	36.02	56.00	19.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	7	35	30.53	33.00	2.47	37.53	59.00	21.47
4.965	7	35	30.50	33.00	2.50	37.50	59.00	21.50
4.980	7	35	30.70	33.00	2.30	37.70	59.00	21.30

Antenna Gain: 14 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	14	22	26.20	27.00	0.80	40.20	53.00	12.80
4.965	14	22	26.57	27.00	0.43	40.57	53.00	12.43
4.985	14	22	26.79	27.00	0.21	40.79	53.00	12.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	14	28	28.89	30.00	1.11	42.89	56.00	13.11
4.965	14	28	28.83	30.00	1.17	42.83	56.00	13.17
4.985	14	28	29.02	30.00	0.98	43.02	56.00	12.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	14	35	30.53	33.00	2.47	44.53	59.00	14.47
4.965	14	35	30.50	33.00	2.50	44.50	59.00	14.50
4.980	14	35	30.70	33.00	2.30	44.70	59.00	14.30

Omni Antennas:

Antenna Gain: 5.5 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	5.5	22	26.20	27.00	0.80	31.70	53.00	21.30
4.965	5.5	22	26.57	27.00	0.43	32.07	53.00	20.93
4.985	5.5	22	26.79	27.00	0.21	32.29	53.00	20.71

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	5.5	28	28.89	30.00	1.11	34.39	56.00	21.61
4.965	5.5	28	28.83	30.00	1.17	34.33	56.00	21.67
4.985	5.5	28	29.02	30.00	0.98	34.52	56.00	21.48

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	5.5	35	30.53	33.00	2.47	36.03	59.00	22.97
4.965	5.5	35	30.50	33.00	2.50	36.00	59.00	23.00
4.980	5.5	35	30.70	33.00	2.30	36.20	59.00	22.80

Antenna Gain: 9 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	9	22	26.20	27.00	0.80	35.20	53.00	17.80
4.965	9	22	26.57	27.00	0.43	35.57	53.00	17.43
4.985	9	22	26.79	27.00	0.21	35.79	53.00	17.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	9	28	28.89	30.00	1.11	37.89	56.00	18.11
4.965	9	28	28.83	30.00	1.17	37.83	56.00	18.17
4.985	9	28	29.02	30.00	0.98	38.02	56.00	17.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	9	35	30.53	33.00	2.47	39.53	59.00	19.47
4.965	9	35	30.50	33.00	2.50	39.50	59.00	19.50
4.980	9	35	30.70	33.00	2.30	39.70	59.00	19.30

Omni Antennas:

Antenna Gain: **10 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	10	22	26.20	27.00	0.80	36.20	53.00	16.80
4.965	10	22	26.57	27.00	0.43	36.57	53.00	16.43
4.985	10	22	26.79	27.00	0.21	36.79	53.00	16.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	10	28	28.89	30.00	1.11	38.89	56.00	17.11
4.965	10	28	28.83	30.00	1.17	38.83	56.00	17.17
4.985	10	28	29.02	30.00	0.98	39.02	56.00	16.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	10	35	30.53	33.00	2.47	40.53	59.00	18.47
4.965	10	35	30.50	33.00	2.50	40.50	59.00	18.50
4.980	10	35	30.70	33.00	2.30	40.70	59.00	18.30

High Gain Directional Antennas:

Antenna Gain: 21 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	21	22	26.20	27.00	0.80	47.20	53.00	5.80
4.965	21	22	26.57	27.00	0.43	47.57	53.00	5.43
4.985	21	22	26.79	27.00	0.21	47.79	53.00	5.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	21	28	28.89	30.00	1.11	49.89	56.00	6.11
4.965	21	28	28.83	30.00	1.17	49.83	56.00	6.17
4.985	21	28	29.02	30.00	0.98	50.02	56.00	5.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	21	35	30.53	33.00	2.47	51.53	59.00	7.47
4.965	21	35	30.50	33.00	2.50	51.50	59.00	7.50
4.980	21	35	30.70	33.00	2.30	51.70	59.00	7.30

Antenna Gain: 25 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	25	22	26.20	27.00	0.80	51.20	53.00	1.80
4.965	25	22	26.57	27.00	0.43	51.57	53.00	1.43
4.985	25	22	26.79	27.00	0.21	51.79	53.00	1.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	25	28	28.89	30.00	1.11	53.89	56.00	2.11
4.965	25	28	28.83	30.00	1.17	53.83	56.00	2.17
4.985	25	28	29.02	30.00	0.98	54.02	56.00	1.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	25	35	30.53	33.00	2.47	55.53	59.00	3.47
4.965	25	35	30.50	33.00	2.50	55.50	59.00	3.50
4.980	25	35	30.70	33.00	2.30	55.70	59.00	3.30

Sector Antennas:

Antenna Gain: **15 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	22	26.20	27.00	0.80	41.20	53.00	11.80
4.965	15	22	26.57	27.00	0.43	41.57	53.00	11.43
4.985	15	22	26.79	27.00	0.21	41.79	53.00	11.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	28	28.89	30.00	1.11	43.89	56.00	12.11
4.965	15	28	28.83	30.00	1.17	43.83	56.00	12.17
4.985	15	28	29.02	30.00	0.98	44.02	56.00	11.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15	35	30.53	33.00	2.47	45.53	59.00	13.47
4.965	15	35	30.50	33.00	2.50	45.50	59.00	13.50
4.980	15	35	30.70	33.00	2.30	45.70	59.00	13.30

Antenna Gain: **15.5 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15.5	22	26.20	27.00	0.80	41.70	53.00	11.30
4.965	15.5	22	26.57	27.00	0.43	42.07	53.00	10.93
4.985	15.5	22	26.79	27.00	0.21	42.29	53.00	10.71

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15.5	28	28.89	30.00	1.11	44.39	56.00	11.61
4.965	15.5	28	28.83	30.00	1.17	44.33	56.00	11.67
4.985	15.5	28	29.02	30.00	0.98	44.52	56.00	11.48

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15.5	35	30.53	33.00	2.47	46.03	59.00	12.97
4.965	15.5	35	30.50	33.00	2.50	46.00	59.00	13.00
4.980	15.5	35	30.70	33.00	2.30	46.20	59.00	12.80

Sector Antennas:

Antenna Gain: **16 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	16	22	26.20	27.00	0.80	42.20	53.00	10.80
4.965	16	22	26.57	27.00	0.43	42.57	53.00	10.43
4.985	16	22	26.79	27.00	0.21	42.79	53.00	10.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	16	28	28.89	30.00	1.11	44.89	56.00	11.11
4.965	16	28	28.83	30.00	1.17	44.83	56.00	11.17
4.985	16	28	29.02	30.00	0.98	45.02	56.00	10.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	16	35	30.53	33.00	2.47	46.53	59.00	12.47
4.965	16	35	30.50	33.00	2.50	46.50	59.00	12.50
4.980	16	35	30.70	33.00	2.30	46.70	59.00	12.30

Antenna Gain: **17 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	22	26.20	27.00	0.80	41.20	53.00	11.80
4.965	15	22	26.57	27.00	0.43	41.57	53.00	11.43
4.985	15	22	26.79	27.00	0.21	41.79	53.00	11.21

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	28	28.89	30.00	1.11	43.89	56.00	12.11
4.965	15	28	28.83	30.00	1.17	43.83	56.00	12.17
4.985	15	28	29.02	30.00	0.98	44.02	56.00	11.98

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15	35	30.53	33.00	2.47	45.53	59.00	13.47
4.965	15	35	30.50	33.00	2.50	45.50	59.00	13.50
4.980	15	35	30.70	33.00	2.30	45.70	59.00	13.30

Sector Antennas:

Antenna Gain: **22 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	22	22	26.20	27.00	0.80	48.20	53.00	4.80
4.965	22	22	26.57	27.00	0.43	48.57	53.00	4.43
4.985	22	22	26.79	27.00	0.21	48.79	53.00	4.21

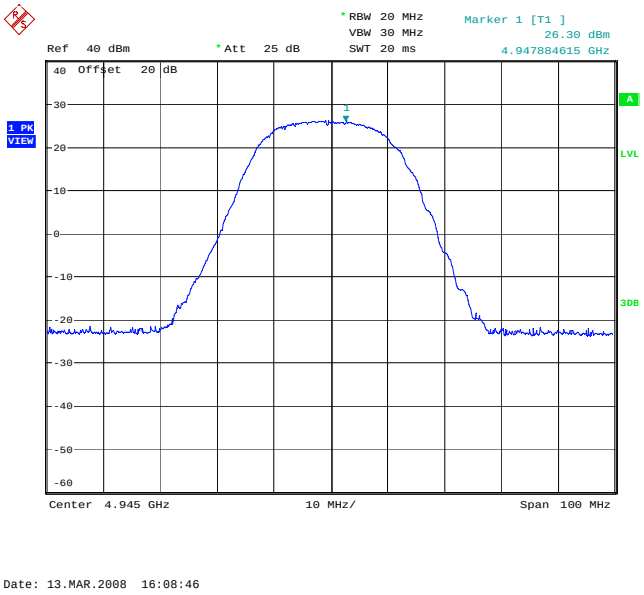
Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.945	22	28	28.89	30.00	1.11	50.89	56.00	5.11
4.965	22	28	28.83	30.00	1.17	50.83	56.00	5.17
4.985	22	28	29.02	30.00	0.98	51.02	56.00	4.98

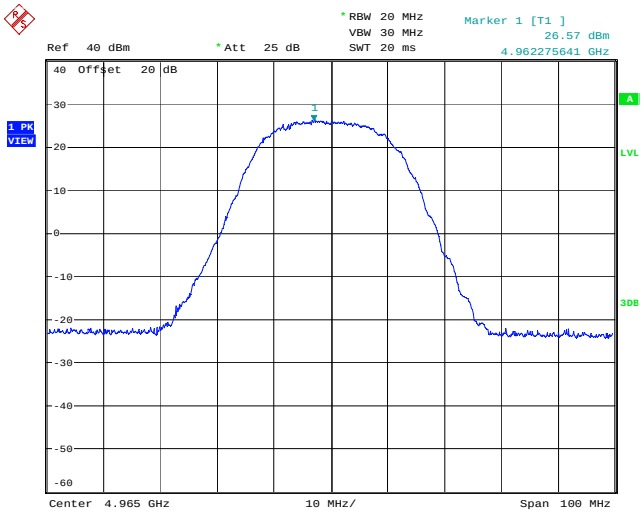
Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**Peak P_{TX} Cond. (dBm)**	Peak P_{TX} Limit (dBm)	P_{TX} Margin (dB)	**Peak EIRP (dBm)**	Peak EIRP Limit (dBm)	EIRP Margin (dB)
4.950	22	35	30.53	33.00	2.47	52.53	59.00	6.47
4.965	22	35	30.50	33.00	2.50	52.50	59.00	6.50
4.980	22	35	30.70	33.00	2.30	52.70	59.00	6.30

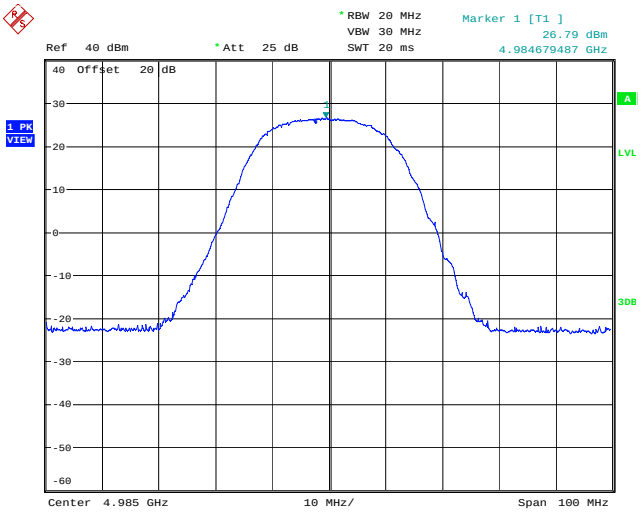
Peak Power measurement of Low Frequency
Channel Bandwidth 5 MHz



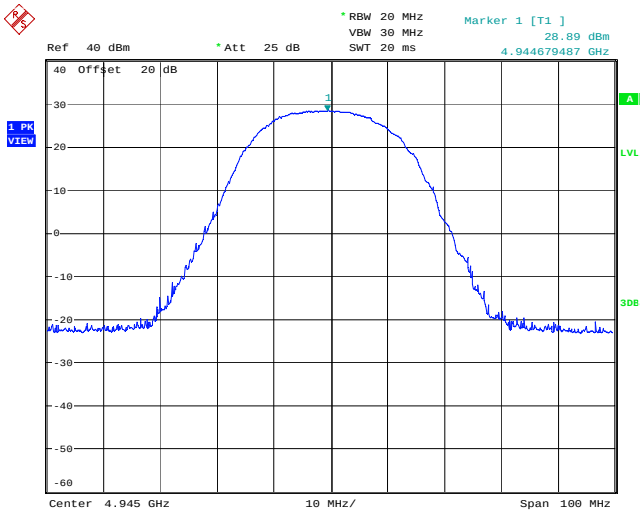
Peak Power measurement of Mid Frequency
Channel Bandwidth 5 MHz



Peak Power measurement of High Frequency
Channel Bandwidth 5 MHz



Peak Power measurement of Low Frequency
Channel Bandwidth 10 MHz



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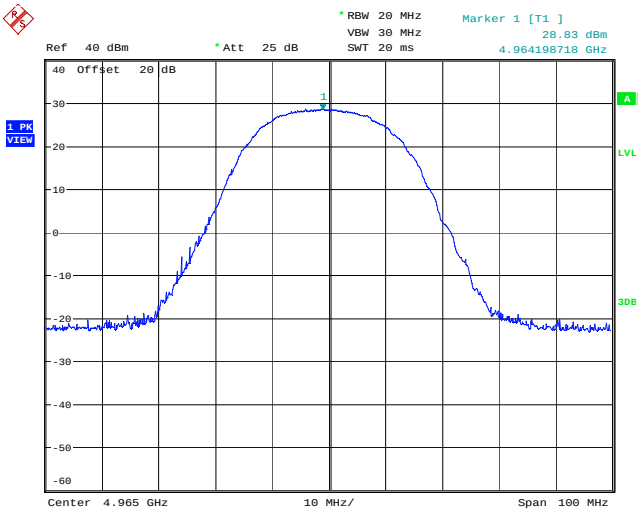
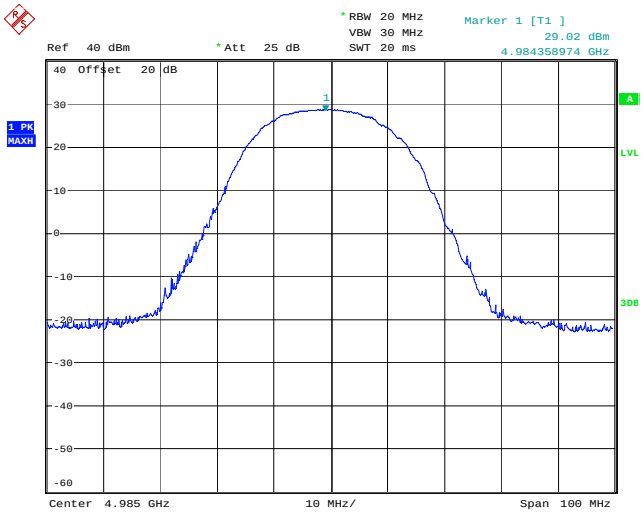
Peak Power measurement of Mid Frequency
Channel Bandwidth 10 MHz



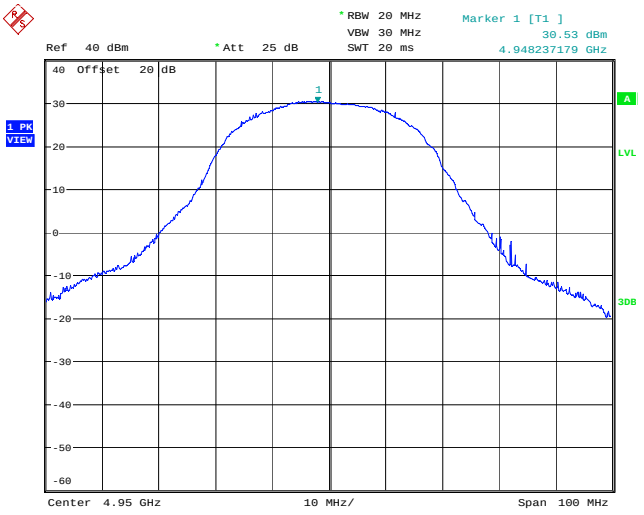
Date: 13.MAR.2008 16:06:32

Peak Power measurement of High Frequency
Channel Bandwidth 10 MHz



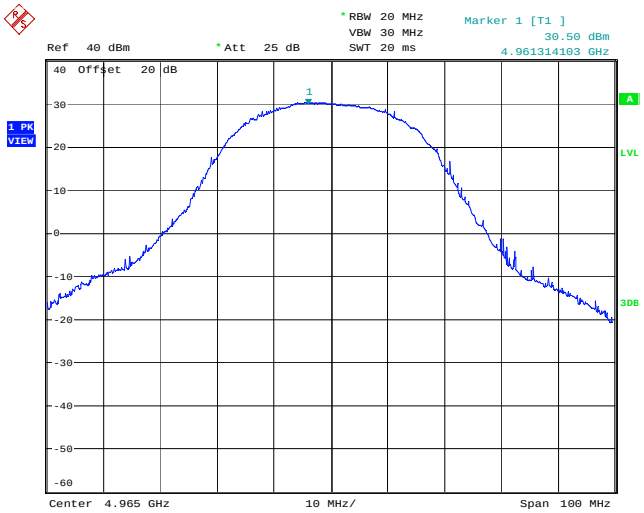
Date: 13.MAR.2008 16:00:29

Peak Power measurement of Low Frequency
Channel Bandwidth 20 MHz



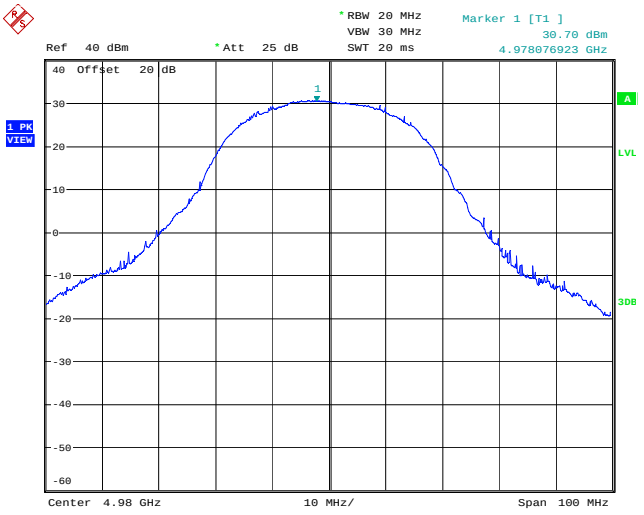
Date: 13.MAR.2008 16:04:35

Peak Power measurement of Mid Frequency
Channel Bandwidth 20 MHz



Date: 13.MAR.2008 16:03:53

Peak Power measurement of High Frequency
Channel Bandwidth 20 MHz



Date: 13.MAR.2008 16:02:55

Section 3. Peak Power Spectrum Density

Criteria: Clause 90.1215

High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the peak transmit power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point or point-to-multipoint operation (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the transmitter power or spectral density. Corresponding reduction in the peak transmit power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(d) The peak power spectral density is measured as conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements are made over a bandwidth of one MHz or the 26 dB emission bandwidth of the device, whichever is less. A resolution bandwidth less than the measurement bandwidth can be used, provided that the measured power is integrated to show total power over the measurement bandwidth. If the resolution bandwidth is approximately equal to the measurement bandwidth, and much less than the emission bandwidth of the equipment under test, the measured results shall be corrected to account for any difference between the resolution bandwidth of the test instrument and its actual noise bandwidth.

Test Conditions:

Sample Number:	1	**Temperature:**	20 °C
Date:	February 28, 2008	**Humidity:**	36 %
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

Test Result: Complies.

Test Data: See attached tables and plots.

Omni Antennas:

Antenna Gain: 3 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	3	22	20.44	21.00	0.56	23.44	47.00	23.56
4.965	3	22	20.77	21.00	0.23	23.77	47.00	23.23
4.985	3	22	20.70	21.00	0.30	23.70	47.00	23.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	3	28	20.76	21.00	0.24	23.76	47.00	23.24
4.965	3	28	20.72	21.00	0.28	23.72	47.00	23.28
4.985	3	28	20.99	21.00	0.01	23.99	47.00	23.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	3	35	20.70	21.00	0.30	23.70	47.00	23.30
4.965	3	35	20.81	21.00	0.19	23.81	47.00	23.19
4.980	3	35	20.89	21.00	0.11	23.89	47.00	23.11

Antenna Gain: 6 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	6	22	20.44	21.00	0.56	26.44	47.00	20.56
4.965	6	22	20.77	21.00	0.23	26.77	47.00	20.23
4.985	6	22	20.70	21.00	0.30	26.70	47.00	20.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	6	28	20.76	21.00	0.24	26.76	47.00	20.24
4.965	6	28	20.72	21.00	0.28	26.72	47.00	20.28
4.985	6	28	20.99	21.00	0.01	26.99	47.00	20.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	6	35	20.70	21.00	0.30	26.70	47.00	20.30
4.965	6	35	20.81	21.00	0.19	26.81	47.00	20.19
4.980	6	35	20.89	21.00	0.11	26.89	47.00	20.11

Omni Antennas:

Antenna Gain: 7 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	7	22	20.44	21.00	0.56	27.44	47.00	19.56
4.965	7	22	20.77	21.00	0.23	27.77	47.00	19.23
4.985	7	22	20.70	21.00	0.30	27.70	47.00	19.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	7	28	20.76	21.00	0.24	27.76	47.00	19.24
4.965	7	28	20.72	21.00	0.28	27.72	47.00	19.28
4.985	7	28	20.99	21.00	0.01	27.99	47.00	19.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	7	35	20.70	21.00	0.30	27.70	47.00	19.30
4.965	7	35	20.81	21.00	0.19	27.81	47.00	19.19
4.980	7	35	20.89	21.00	0.11	27.89	47.00	19.11

Antenna Gain: 14 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	14	22	20.44	21.00	0.56	34.44	47.00	12.56
4.965	14	22	20.77	21.00	0.23	34.77	47.00	12.23
4.985	14	22	20.70	21.00	0.30	34.70	47.00	12.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	14	28	20.76	21.00	0.24	34.76	47.00	12.24
4.965	14	28	20.72	21.00	0.28	34.72	47.00	12.28
4.985	14	28	20.99	21.00	0.01	34.99	47.00	12.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	14	35	20.70	21.00	0.30	34.70	47.00	12.30
4.965	14	35	20.81	21.00	0.19	34.81	47.00	12.19
4.980	14	35	20.89	21.00	0.11	34.89	47.00	12.11

Omni Antennas:

Antenna Gain: **5.5 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	5.5	22	20.44	21.00	0.56	25.94	47.00	21.06
4.965	5.5	22	20.77	21.00	0.23	26.27	47.00	20.73
4.985	5.5	22	20.70	21.00	0.30	26.20	47.00	20.80

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	5.5	28	20.76	21.00	0.24	26.26	47.00	20.74
4.965	5.5	28	20.72	21.00	0.28	26.22	47.00	20.78
4.985	5.5	28	20.99	21.00	0.01	26.49	47.00	20.51

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	5.5	35	20.70	21.00	0.30	26.20	47.00	20.80
4.965	5.5	35	20.81	21.00	0.19	26.31	47.00	20.69
4.980	5.5	35	20.89	21.00	0.11	26.39	47.00	20.61

Antenna Gain: **9 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	9	22	20.44	21.00	0.56	29.44	47.00	17.56
4.965	9	22	20.77	21.00	0.23	29.77	47.00	17.23
4.985	9	22	20.70	21.00	0.30	29.70	47.00	17.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	9	28	20.76	21.00	0.24	29.76	47.00	17.24
4.965	9	28	20.72	21.00	0.28	29.72	47.00	17.28
4.985	9	28	20.99	21.00	0.01	29.99	47.00	17.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	9	35	20.70	21.00	0.30	29.70	47.00	17.30
4.965	9	35	20.81	21.00	0.19	29.81	47.00	17.19
4.980	9	35	20.89	21.00	0.11	29.89	47.00	17.11

Omni Antennas:

Antenna Gain: **10 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	10	22	20.44	21.00	0.56	30.44	47.00	16.56
4.965	10	22	20.77	21.00	0.23	30.77	47.00	16.23
4.985	10	22	20.70	21.00	0.30	30.70	47.00	16.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	10	28	20.76	21.00	0.24	30.76	47.00	16.24
4.965	10	28	20.72	21.00	0.28	30.72	47.00	16.28
4.985	10	28	20.99	21.00	0.01	30.99	47.00	16.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	10	35	20.70	21.00	0.30	30.70	47.00	16.30
4.965	10	35	20.81	21.00	0.19	30.81	47.00	16.19
4.980	10	35	20.89	21.00	0.11	30.89	47.00	16.11

High Gain Directional Antennas:

Antenna Gain: **21 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	21	22	20.44	21.00	0.56	41.44	47.00	5.56
4.965	21	22	20.77	21.00	0.23	41.77	47.00	5.23
4.985	21	22	20.70	21.00	0.30	41.70	47.00	5.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	21	28	20.76	21.00	0.24	41.76	47.00	5.24
4.965	21	28	20.72	21.00	0.28	41.72	47.00	5.28
4.985	21	28	20.99	21.00	0.01	41.99	47.00	5.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	21	35	20.70	21.00	0.30	41.70	47.00	5.30
4.965	21	35	20.81	21.00	0.19	41.81	47.00	5.19
4.980	21	35	20.89	21.00	0.11	41.89	47.00	5.11

Antenna Gain: **25 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	25	22	20.44	21.00	0.56	45.44	47.00	1.56
4.965	25	22	20.77	21.00	0.23	45.77	47.00	1.23
4.985	25	22	20.70	21.00	0.30	45.70	47.00	1.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	25	28	20.76	21.00	0.24	45.76	47.00	1.24
4.965	25	28	20.72	21.00	0.28	45.72	47.00	1.28
4.985	25	28	20.99	21.00	0.01	45.99	47.00	1.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	25	35	20.70	21.00	0.30	45.70	47.00	1.30
4.965	25	35	20.81	21.00	0.19	45.81	47.00	1.19
4.980	25	35	20.89	21.00	0.11	45.89	47.00	1.11

Sector Antennas:

Antenna Gain: 15 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	22	20.44	21.00	0.56	35.44	47.00	11.56
4.965	15	22	20.77	21.00	0.23	35.77	47.00	11.23
4.985	15	22	20.70	21.00	0.30	35.70	47.00	11.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	28	20.76	21.00	0.24	35.76	47.00	11.24
4.965	15	28	20.72	21.00	0.28	35.72	47.00	11.28
4.985	15	28	20.99	21.00	0.01	35.99	47.00	11.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15	35	20.70	21.00	0.30	35.70	47.00	11.30
4.965	15	35	20.81	21.00	0.19	35.81	47.00	11.19
4.980	15	35	20.89	21.00	0.11	35.89	47.00	11.11

Antenna Gain: 15.5 dBi

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15.5	22	20.44	21.00	0.56	35.94	47.00	11.06
4.965	15.5	22	20.77	21.00	0.23	36.27	47.00	10.73
4.985	15.5	22	20.70	21.00	0.30	36.20	47.00	10.80

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15.5	28	20.76	21.00	0.24	36.26	47.00	10.74
4.965	15.5	28	20.72	21.00	0.28	36.22	47.00	10.78
4.985	15.5	28	20.99	21.00	0.01	36.49	47.00	10.51

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15.5	35	20.70	21.00	0.30	36.20	47.00	10.80
4.965	15.5	35	20.81	21.00	0.19	36.31	47.00	10.69
4.980	15.5	35	20.89	21.00	0.11	36.39	47.00	10.61

Sector Antennas:

Antenna Gain: **16 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	16	22	20.44	21.00	0.56	36.44	47.00	10.56
4.965	16	22	20.77	21.00	0.23	36.77	47.00	10.23
4.985	16	22	20.70	21.00	0.30	36.70	47.00	10.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	16	28	20.76	21.00	0.24	36.76	47.00	10.24
4.965	16	28	20.72	21.00	0.28	36.72	47.00	10.28
4.985	16	28	20.99	21.00	0.01	36.99	47.00	10.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	16	35	20.70	21.00	0.30	36.70	47.00	10.30
4.965	16	35	20.81	21.00	0.19	36.81	47.00	10.19
4.980	16	35	20.89	21.00	0.11	36.89	47.00	10.11

Antenna Gain: **17 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	22	20.44	21.00	0.56	35.44	47.00	11.56
4.965	15	22	20.77	21.00	0.23	35.77	47.00	11.23
4.985	15	22	20.70	21.00	0.30	35.70	47.00	11.30

Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	15	28	20.76	21.00	0.24	35.76	47.00	11.24
4.965	15	28	20.72	21.00	0.28	35.72	47.00	11.28
4.985	15	28	20.99	21.00	0.01	35.99	47.00	11.01

Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	15	35	20.70	21.00	0.30	35.70	47.00	11.30
4.965	15	35	20.81	21.00	0.19	35.81	47.00	11.19
4.980	15	35	20.89	21.00	0.11	35.89	47.00	11.11

Sector Antennas:

Antenna Gain: **22 dBi**

Channel Spacing: 5 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	22	22	20.44	21.00	0.56	42.44	47.00	4.56
4.965	22	22	20.77	21.00	0.23	42.77	47.00	4.23
4.985	22	22	20.70	21.00	0.30	42.70	47.00	4.30

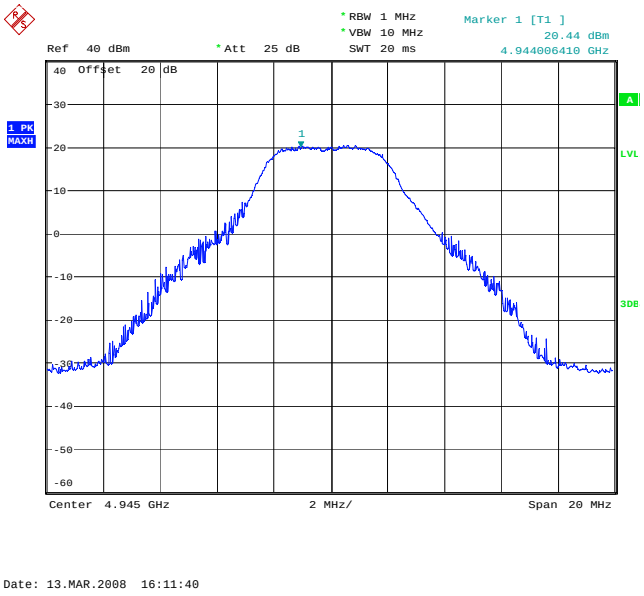
Channel Spacing: 10 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.945	22	28	20.76	21.00	0.24	42.76	47.00	4.24
4.965	22	28	20.72	21.00	0.28	42.72	47.00	4.28
4.985	22	28	20.99	21.00	0.01	42.99	47.00	4.01

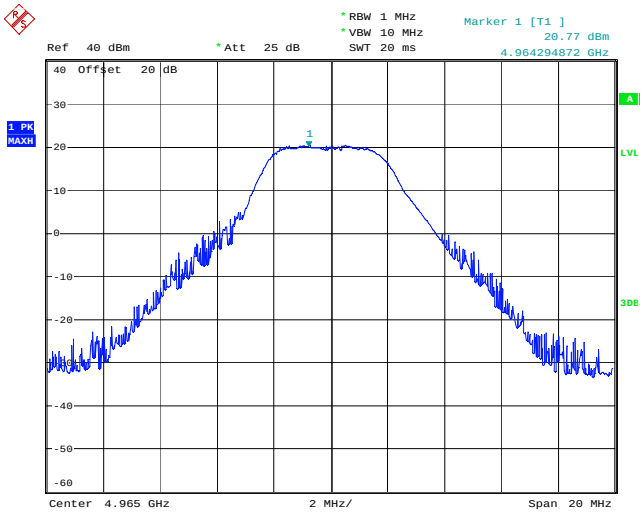
Channel Spacing: 20 MHz

Freq. (GHz)	G_{ANT} (dBi)	GUI Setting (dBm)	**PPSD Cond. (dBm)**	PPSD Limit (dBm)	PPSD Margin (dB)	**PPSD EIRP (dBm)**	PPSD EIRP Limit (dBm)	EIRP Margin (dB)
4.950	22	35	20.70	21.00	0.30	42.70	47.00	4.30
4.965	22	35	20.81	21.00	0.19	42.81	47.00	4.19
4.980	22	35	20.89	21.00	0.11	42.89	47.00	4.11

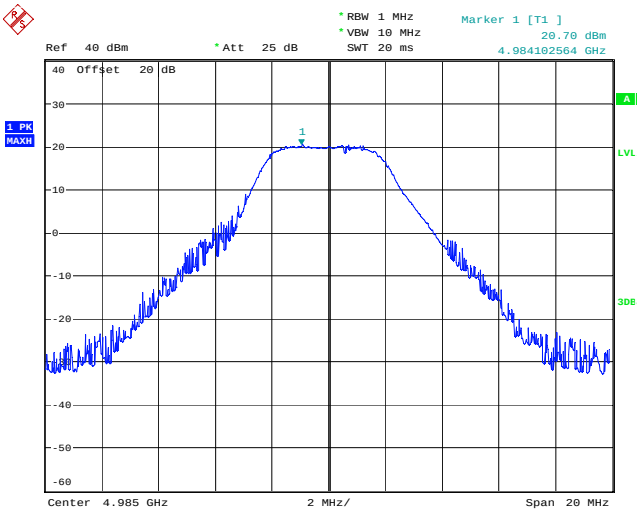
Peak Power Spectral Density measurement of Low Frequency Channel Bandwidth 5 MHz



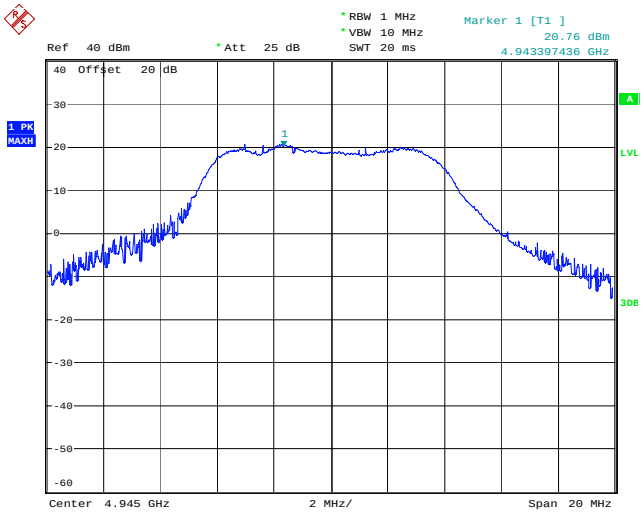
Peak Power Spectral Density measurement of Mid Frequency
Channel Bandwidth 5 MHz



Peak Power Spectral Density measurement of High Frequency
Channel Bandwidth 5 MHz

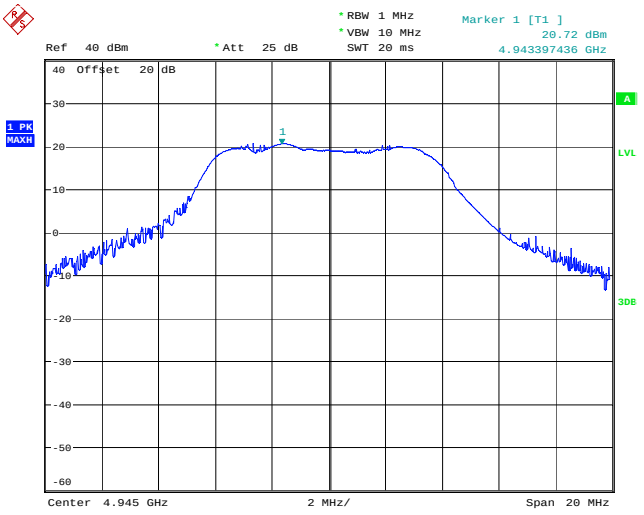


Peak Power Spectral Density measurement of Low Frequency
Channel Bandwidth 10 MHz



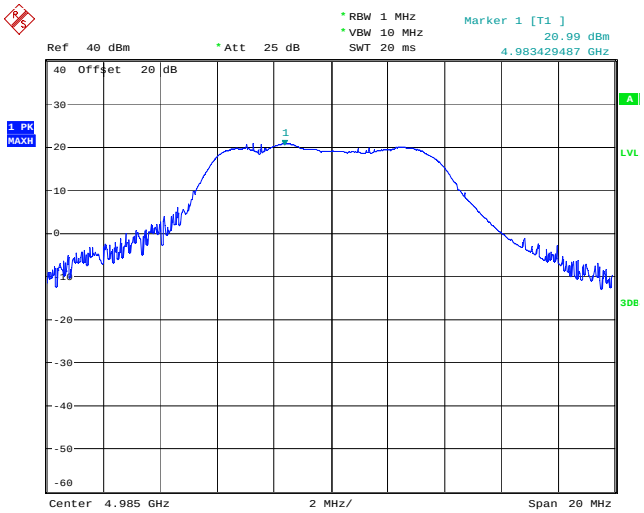
Date: 13.MAR.2008 16:14:57

Peak Power Spectral Density measurement of Mid Frequency
Channel Bandwidth 10 MHz



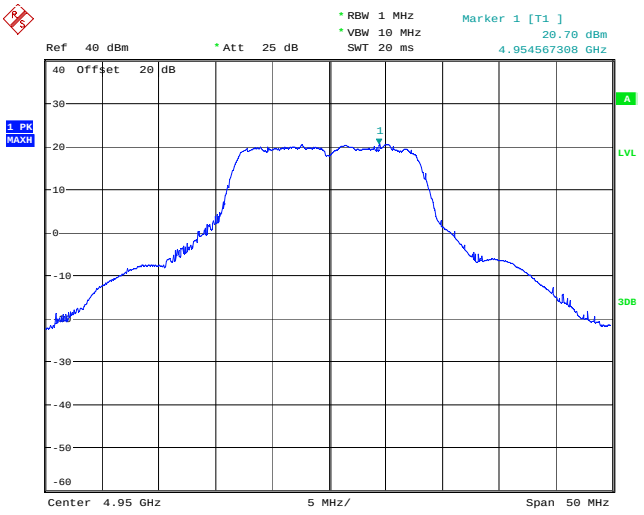
Date: 13.MAR.2008 16:17:29

Peak Power Spectral Density measurement of High Frequency
Channel Bandwidth 10 MHz



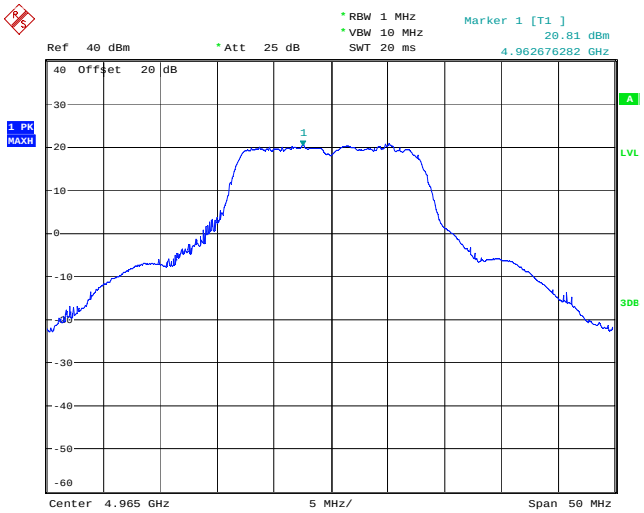
Date: 13.MAR.2008 16:18:16

Peak Power Spectral Density measurement of Low Frequency
Channel Bandwidth 20 MHz

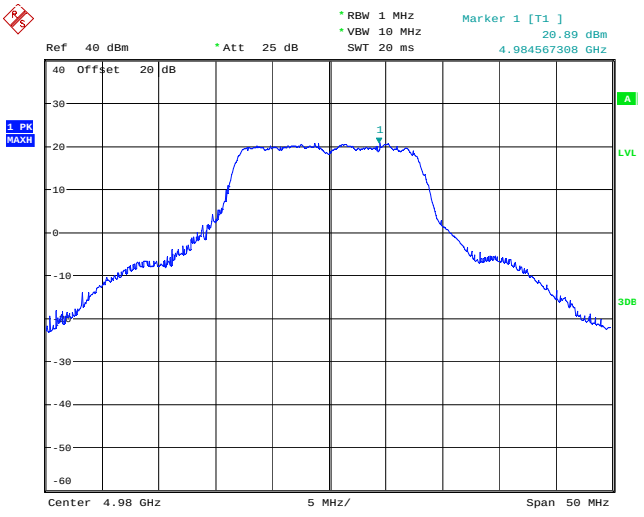


Date: 13.MAR.2008 16:21:59

Peak Power Spectral Density measurement of Mid Frequency
Channel Bandwidth 20 MHz



Peak Power Spectral Density measurement of High Frequency
Channel Bandwidth 20 MHz



Section 4. Spurious Emissions at the Antenna Terminals

Criteria: Clause 90.210(m)

(m) Emission Mask M. For high power transmitters (greater that 20 dBm) operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:
(1) On any frequency removed from the assigned frequency between 0-45% of the authorized bandwidth (BW): 0 dB.
(2) On any frequency removed from the assigned frequency between 45-50% of the authorized bandwidth: 568 log (% of (BW)/45) dB.
(3) On any frequency removed from the assigned frequency between 50-55% of the authorized bandwidth: 26 + 145 log (% of BW/50) dB.
(4) On any frequency removed from the assigned frequency between 55-100% of the authorized bandwidth: 32 + 31 log (% of BW)/55) dB.
(5) On any frequency removed from the assigned frequency between 100-150% of the authorized bandwidth: 40 + 57 log (% of (BW)/100) dB.
(6) On any frequency removed from the assigned frequency between above 150% of the authorized bandwidth: 50 dB or 55 + 10 log (P) dB, whichever is the lesser attenuation.
(7) The zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission and a video bandwidth of 30 kHz. The power spectral density is the power measured within the resolution bandwidth of the measurement device divided by the resolution bandwidth of the measurement device. Emission levels are also based on the use of measurement instrumentation employing a resolution bandwidth of at least one percent of the occupied bandwidth.

Test Conditions:

Sample Number:	1	**Temperature:**	20 ºC
Date:	February 28, 2008	**Humidity:**	37 %
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

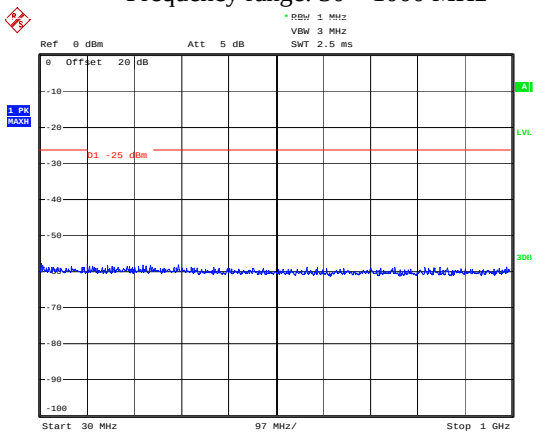
Test Results: Complies.

Test Data: See attached plots.

Additional Observations: The spectrum was searched from 30MHz to 40GHz.
The low, medium and high channel were evaluated.

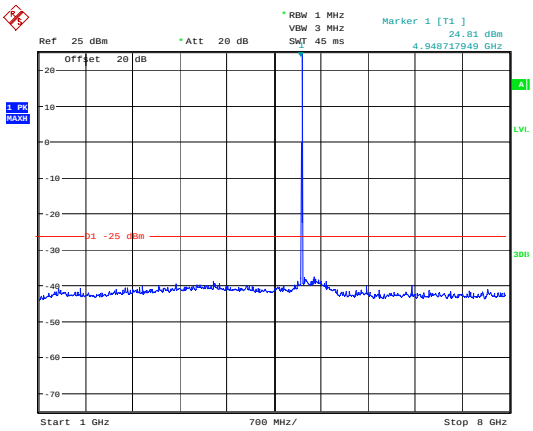
Channel Bandwidth: 5MHz
Channel Frequency: Low

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:08:04

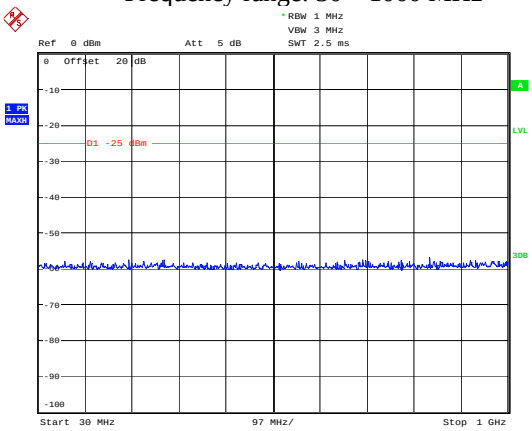
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:13:51

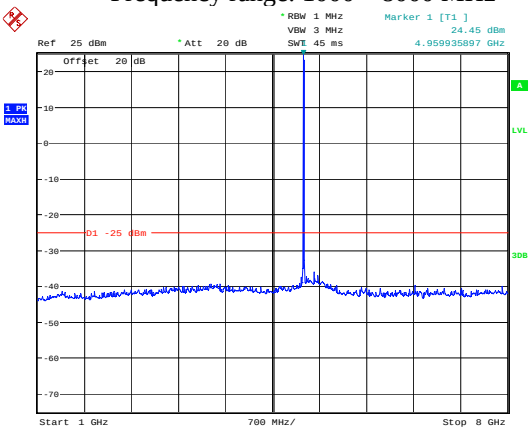
Channel Bandwidth: 5MHz
Channel Frequency: Mid

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:09:39

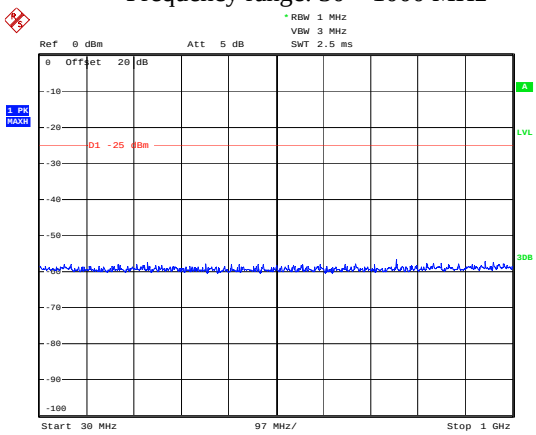
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:14:36

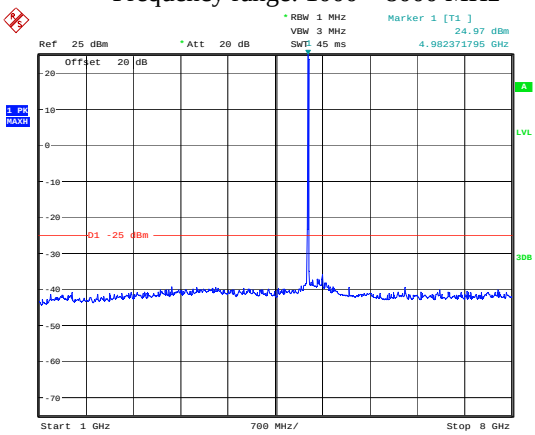
Channel Bandwidth: 5MHz
Channel Frequency: High

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:10:45

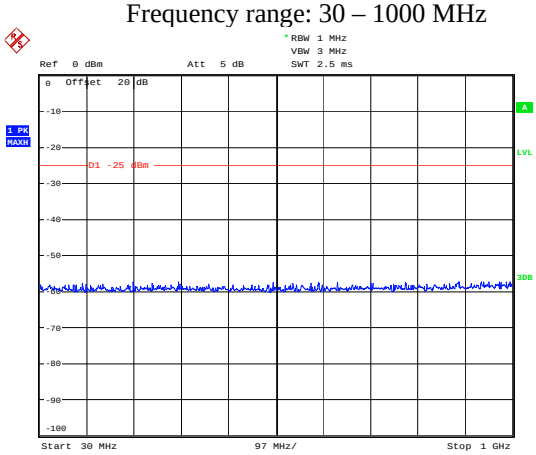
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:15:13

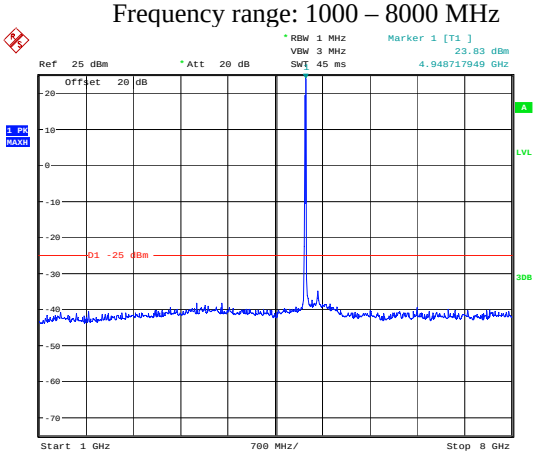
Channel Bandwidth: 10MHz
Channel Frequency: Low

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:07:16

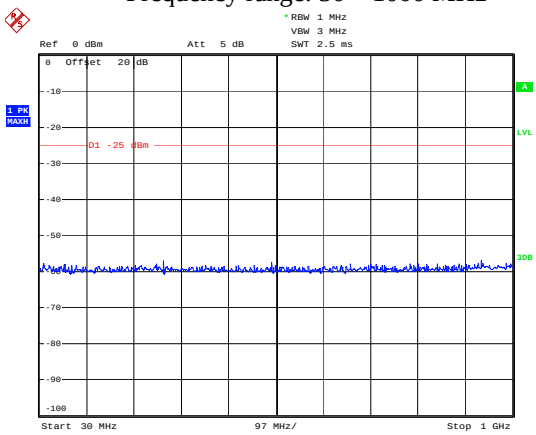
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:17:32

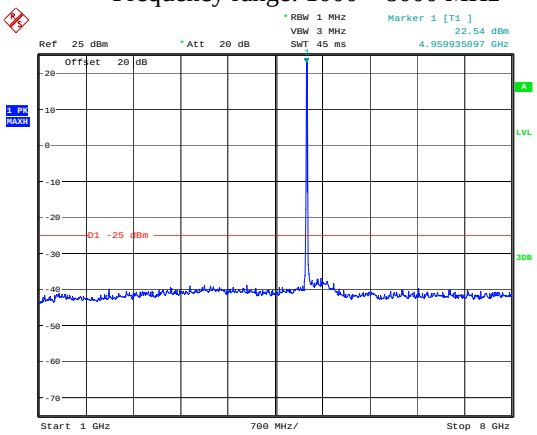
Channel Bandwidth: 10MHz
Channel Frequency: Mid

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:08:48

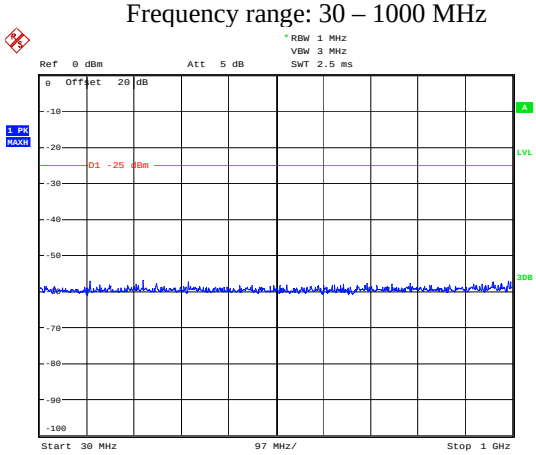
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:16:48

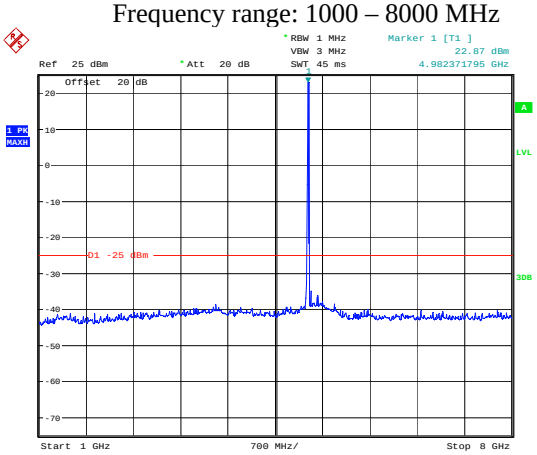
Channel Bandwidth: 10MHz
Channel Frequency: High

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:09:57

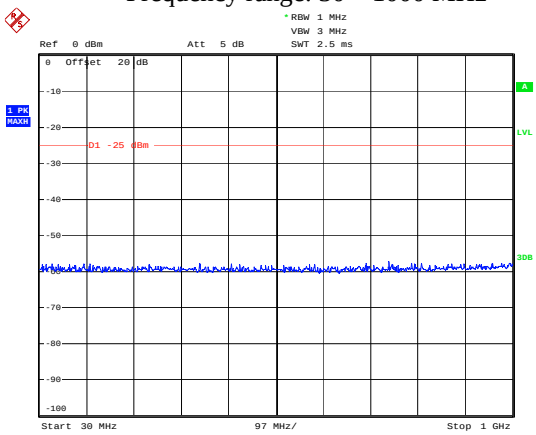
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:15:58

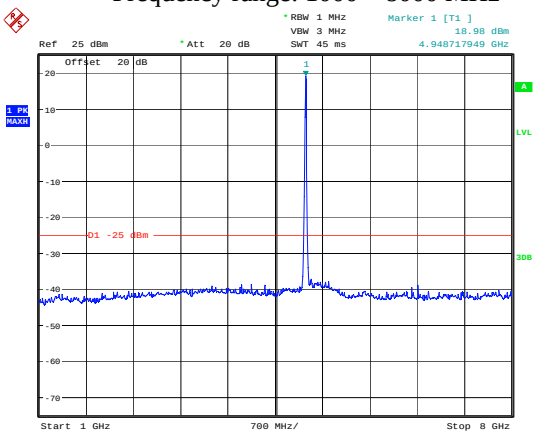
Channel Bandwidth: 20MHz
Channel Frequency: Low

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:08:27

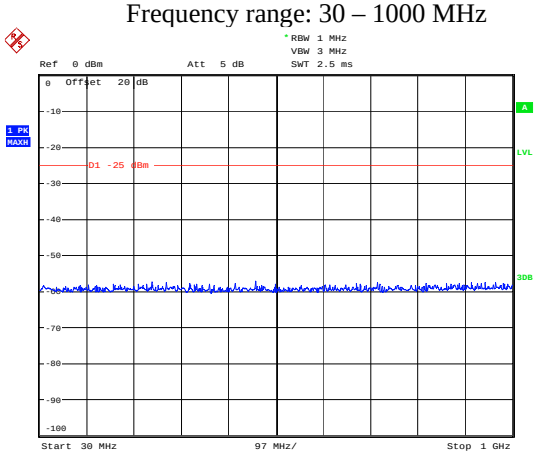
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:18:44

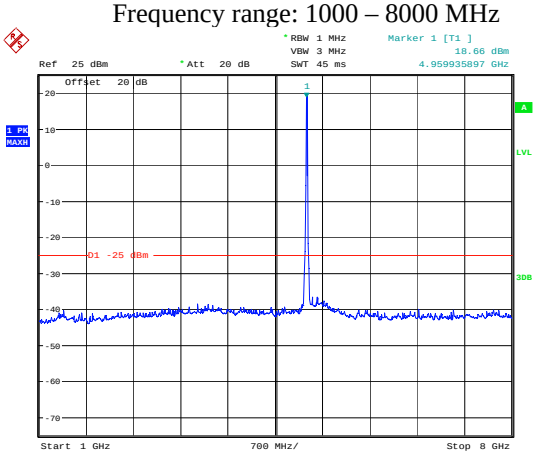
Channel Bandwidth: 20MHz
Channel Frequency: Mid

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:09:16

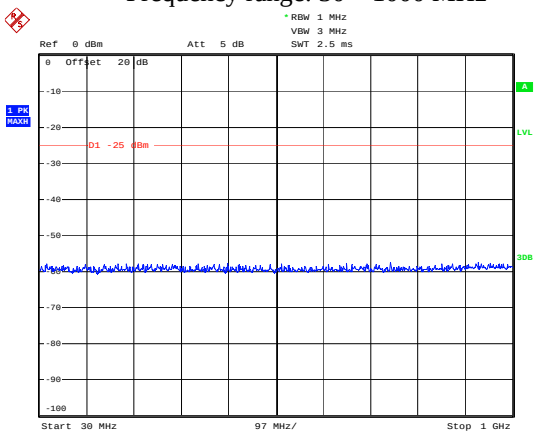
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:20:16

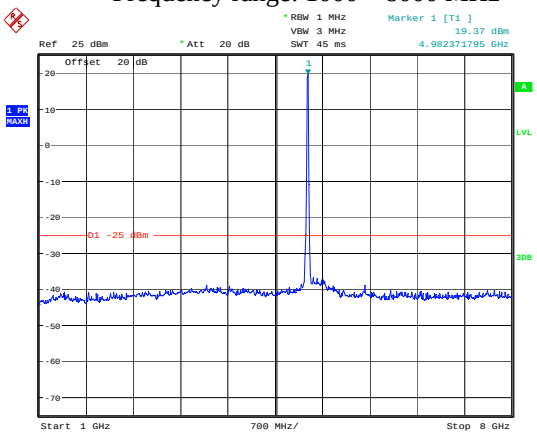
Channel Bandwidth: 20MHz
Channel Frequency: High

Frequency range: 30 – 1000 MHz



Date: 28.FEB.2008 21:10:24

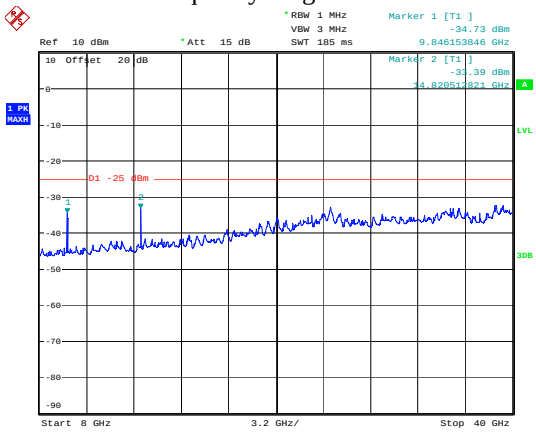
Frequency range: 1000 – 8000 MHz



Date: 28.FEB.2008 21:21:03

Channel Bandwidth: 5MHz
Channel Frequency: Low

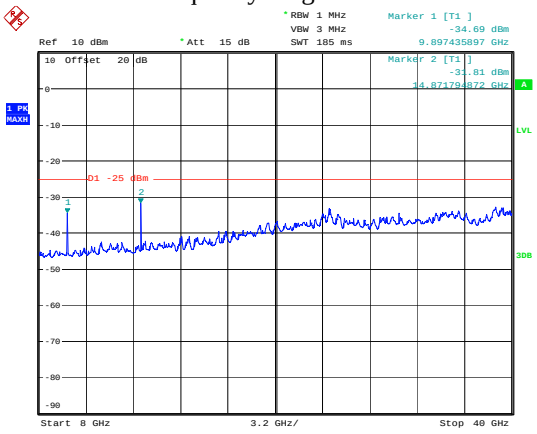
Frequency range: 8 – 40 GHz



Date: 13.MAR.2008 15:33:04

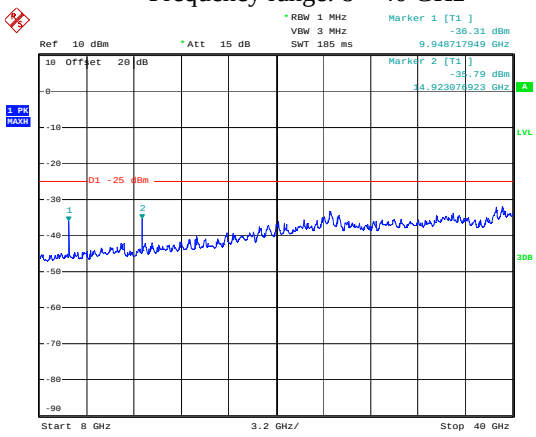
Channel Bandwidth: 5MHz
Channel Frequency: Mid

Frequency range: 8 – 40 GHz



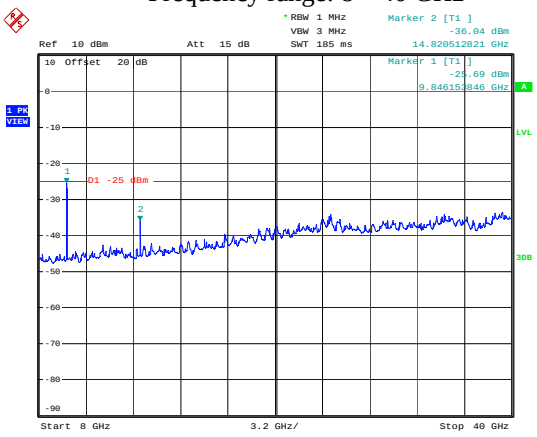
Date: 13.MAR.2008 15:34:32

Channel Bandwidth: 5MHz
Channel Frequency: High
Frequency range: 8 – 40 GHz



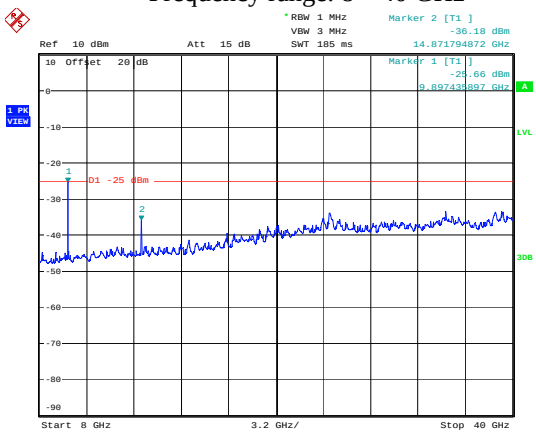
Date: 13.MAR.2008 15:35:58

Channel Bandwidth: 10MHz
Channel Frequency: Low
Frequency range: 8 – 40 GHz



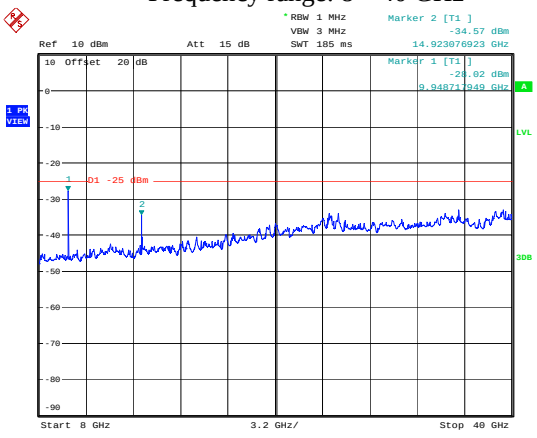
Date: 28.FEB.2008 21:42:34

Channel Bandwidth: 10MHz
Channel Frequency: Mid
Frequency range: 8 – 40 GHz



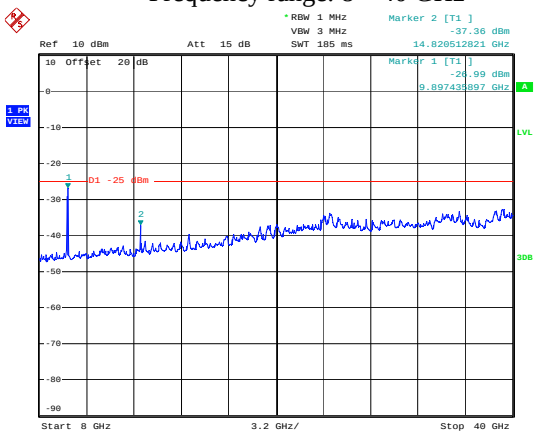
Date: 28.FEB.2008 21:43:38

Channel Bandwidth: 10MHz
Channel Frequency: High
Frequency range: 8 – 40 GHz



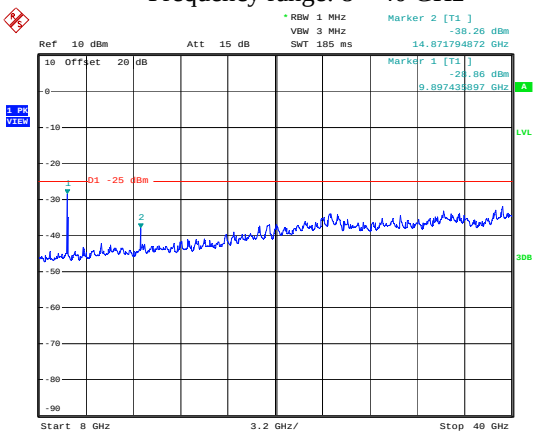
Date: 28.FEB.2008 21:44:28

Channel Bandwidth: 20MHz
Channel Frequency: Low
Frequency range: 8 – 40 GHz



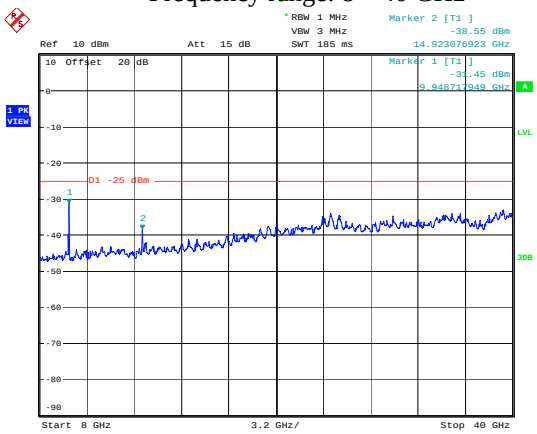
Date: 28.FEB.2008 21:45:25

Channel Bandwidth: 20MHz
Channel Frequency: Mid
Frequency range: 8 – 40 GHz



Date: 28.FEB.2008 21:46:15

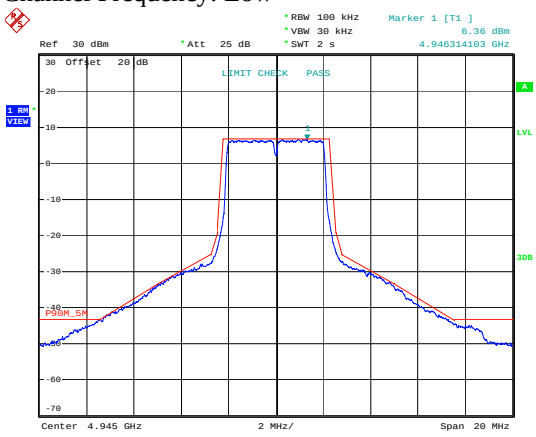
Channel Bandwidth: 20MHz
Channel Frequency: High
Frequency range: 8 – 40 GHz



Date: 28.FEB.2008 21:46:59

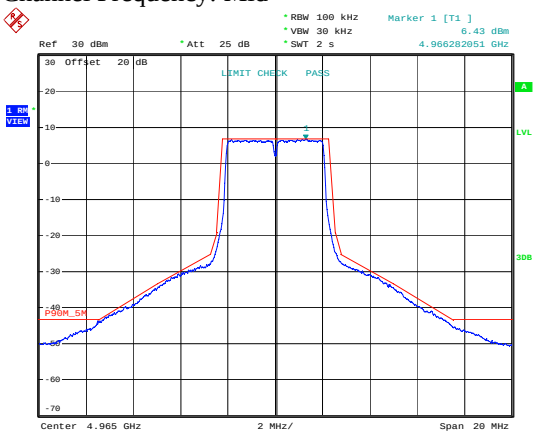
Emission Mask

Channel Bandwidth: 5MHz
Channel Frequency: Low



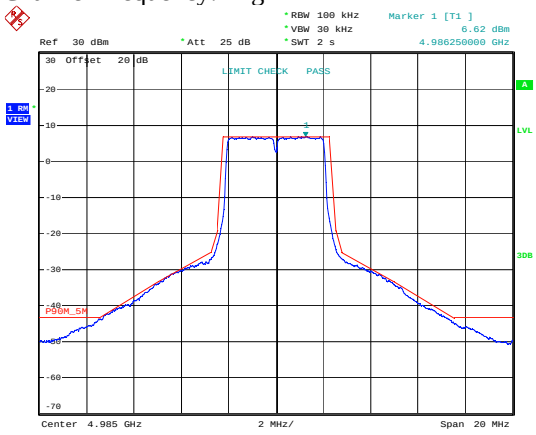
Date: 13.MAR.2008 15:46:48

Channel Bandwidth: 5MHz
Channel Frequency: Mid



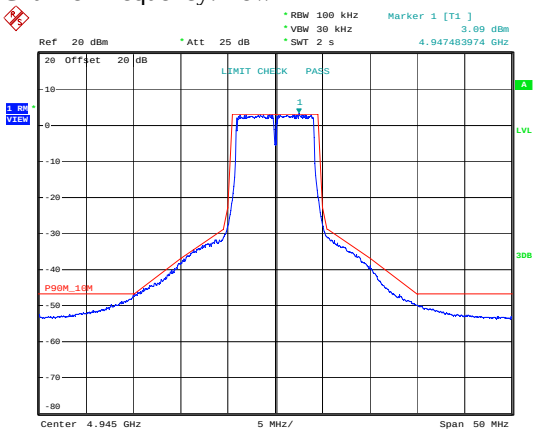
Date: 13.MAR.2008 15:48:00

Channel Bandwidth: 5MHz
Channel Frequency: High



Date: 13.MAR.2008 15:49:27

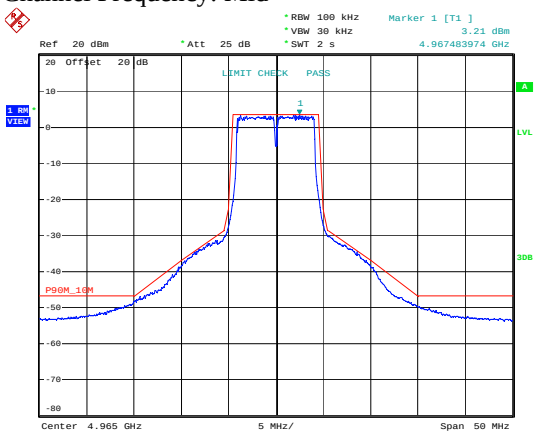
Channel Bandwidth: 10MHz
Channel Frequency: Low



Date: 28.FEB.2008 17:28:47

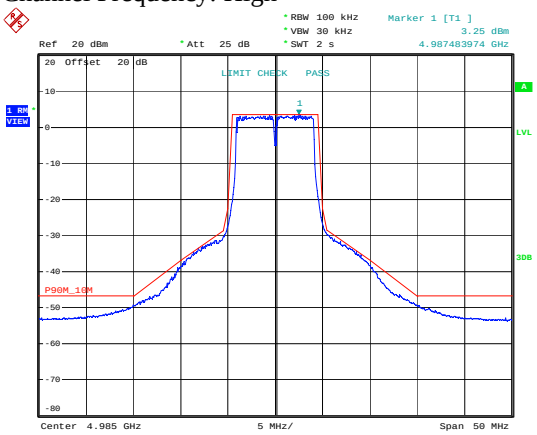
Emission Mask

Channel Bandwidth: 10MHz
Channel Frequency: Mid



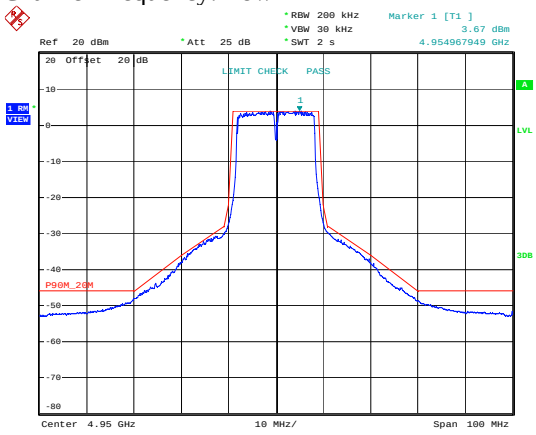
Date: 28.FEB.2008 17:26:52

Channel Bandwidth: 10MHz
Channel Frequency: High



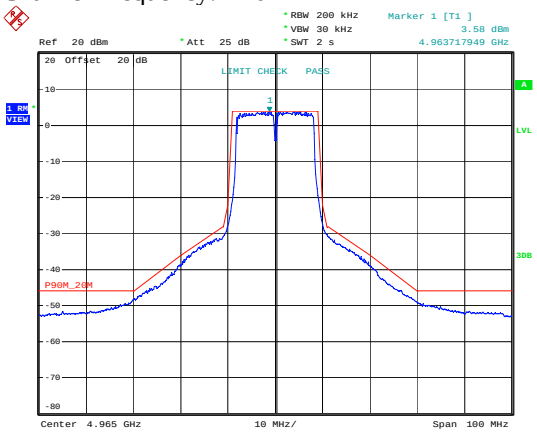
Date: 28.FEB.2008 17:24:59

Channel Bandwidth: 20MHz
Channel Frequency: Low



Date: 13.MAR.2008 16:25:55

Channel Bandwidth: 20MHz
Channel Frequency: Mid

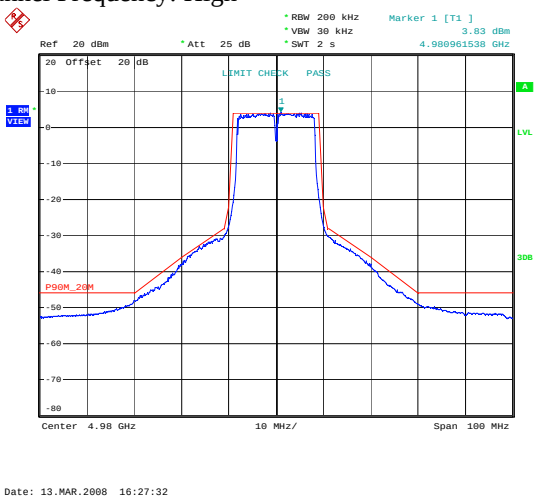


Date: 13.MAR.2008 16:26:37

Emission Mask

Channel Bandwidth: 20MHz

Channel Frequency: High



Section 5. Radiated Spurious Emissions

Criteria: Clause 90.210(m)

(m) Emission Mask M. For high power transmitters (greater that 20 dBm) operating in the 4940-4990 MHz frequency band, the power spectral density of the emissions must be attenuated below the output power of the transmitter as follows:
(1) On any frequency removed from the assigned frequency between 0-45% of the authorized bandwidth (BW): 0 dB.
(2) On any frequency removed from the assigned frequency between 45-50% of the authorized bandwidth: 568 log (% of (BW)/45) dB.
(3) On any frequency removed from the assigned frequency between 50-55% of the authorized bandwidth: 26 + 145 log (% of BW/50) dB.
(4) On any frequency removed from the assigned frequency between 55-100% of the authorized bandwidth: 32 + 31 log (% of BW)/55) dB.
(5) On any frequency removed from the assigned frequency between 100-150% of the authorized bandwidth: 40 + 57 log (% of (BW)/100) dB.
(6) On any frequency removed from the assigned frequency between above 150% of the authorized bandwidth: 50 dB or 55 + 10 log (P) dB, whichever is the lesser attenuation.
(7) The zero dB reference is measured relative to the highest average power of the fundamental emission measured across the designated channel bandwidth using a resolution bandwidth of at least one percent of the occupied bandwidth of the fundamental emission and a video bandwidth of 30 kHz. The power spectral density is the power measured within the resolution bandwidth of the measurement device divided by the resolution bandwidth of the measurement device. Emission levels are also based on the use of measurement instrumentation employing a resolution bandwidth of at least one percent of the occupied bandwidth.

Test Conditions:

Sample Number:	1	**Temperature:**	21 ºC
Date:	March 5, 2008	**Humidity:**	38 %
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

Test Results: Complies

Test Data:

The spectrum was searched from 30MHz to 40GHz for low, medium and high channels.

No emissions were found within 20dB below the limit.

All measurements were performed at a distance of 3 meters using a Peak detector with 100kHz RBW/VBW below 1GHz and RMS detector with 1MHz RBW/VBW settings above 1GHz.

Section 6. Frequency Stability

Clause 90.213 Frequency Stability

a) Unless noted elsewhere, transmitters used in the services governed by this part must have a minimum frequency stability as specified in the following Table.
Minimum Frequency Stability
parts per million (ppm)

Frequency range (MHz)	Fixed and base stations 2 watts output power	Mobile stations Over power	2 watts or less output
Below 25	100	100	200
25-50	20	20	50
72-76	5	---	50
150-174	50	5	50
216-220	1.0	---	1.0
220-222	0.1	1.5	1.5
421-512	2.5	5	5
806-809	1.0	1.5	1.5
809-824	1.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	0.1	1.5	1.5
902-928	2.5	2.5	2.5
929-930	1.5	---	---
935-940	0.1	1.5	1.5
1427-1435	300	300	300
Above 2450	---	---	---

Test Conditions:

Sample Number:	1	**Temperature:**	24
Date:	February 19, 2008	**Humidity:**	38
Modification State:	0	**Tester:**	Andrey Adelberg
		Laboratory:	Ottawa

Test Results: See Attached Table.

Test Conditions Ambient Temperature: 22°C
Extreme Temperature: -30°C to +50°C
Extreme Voltage Conditions: +/-15% of 120VAC

Power Line Supply Voltage: 120VAC

T (°C)	$F_{NOMINAL}$ (GHz)	ChSpc (MHz)	$F_{MEASURED}$ (GHz)	Deviation (ppm)
-30	4.965	10.0	4.964999541	-0.589
-20	4.965	10.0	4.964999501	-0.629
-10	4.965	10.0	4.964998662	-1.468
0	4.965	10.0	4.964999138	-0.992
10	4.965	10.0	4.965000111	-0.019
20	**4.965**	**10.0**	**4.965000130**	**0.000**
30	4.965	10.0	4.964994279	-5.851
40	4.965	10.0	4.964993094	-7.036
50	4.965	10.0	4.964990298	-9.832

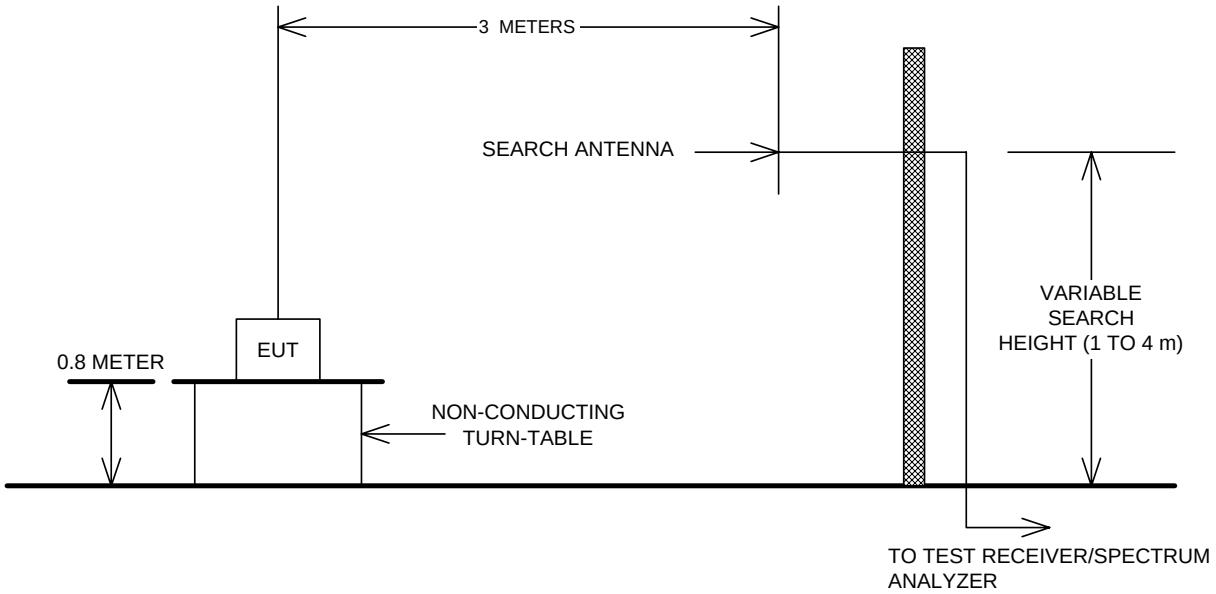
Note: The EUT was also tested under extreme power line voltage conditions: 102VAC and 138 VAC (±15% of 120 VAC). No measurable deviation of transmitting frequency was observed.

Appendix B : Setup Photographs

Radiated Spurious Emissions Setup:

Appendix C : Block Diagram of Test Setups

Test Site For Radiated Emissions



Conducted Emissions, Output power, Occupied Bandwidth