Exhibit 11

OATS Radiated Emissions Test Report - Exhibit 11 Radiated Emissions_test report

To Whom It May Concern:
Hyper Corporation is an A2LA accredited laboratory for Antenna Conducted test methods. For radiated emissions however, Hyper Corp has contracted Compliance Certification Services (561F Monterey Road, Morgan Hill, CA 95037-9001 - CCS) to perform OATS radiated measurements between 30 to 1000MHz. Hyper has contracted Stratest Labs (1533 California Circle Milpitas, CA 95035) for testing between 1000 to 25000MHz. Stratest and CCS are FCC registered Test Facilities. CCS is the test lab of record used on the 731 form.

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"Wireless that Works"SM

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EMC Test Report

Prepared for:

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Hyper Corp is a BLUETOOTH Qualification Test Facility (BQTF) for RF Conformance Testing and an Associate Member of the SIG

ACCREDITED

Certificate Number 1708-1

Hyper Corp is an Accredited Laboratory by The American Association For Laboratory Accreditation (A2LA) to ISO/IEC 17025-for the scope of BLUETOOTH Testing.

Signature Page

The below listed Hyper Corporation Personnel takes responsibility for the contents of this Test Report.

Signatures

Test Engineer(s):

	Original signed	**07.22.02**
	William Elliott	**Date**

Reviewed by Technical Manager:

	Original signed	**07.22.02**
	Kevin Marquess	**Date**

1. List of Revisions

Version	Date	Author(s)	Description
001	July 22, 2002	Elliott, William	Initial Version
002	July 23, 2002	Jean Chin	Editorial Change
003	July 24, 2002	Jean Chin	Adding RSS210 IC Specification
004	July 31, 2002	Jean Chin	Adding Restricted Band Measurement Result

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2. Disclaimer Notice

This test report applies only to the EUT (Equipment Under Test) and the results of the specifications called out in this report.

The test results contained herein relate only to the model(s) identified. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

This Report must not be used to claim product endorsement by A2LA or any agency of the U.S. Government.

3. Reproduction Clause

4. Description of Test Item

Date received:	June 13, 2002
Date(s) tested	June 14-16, 2002; July 18-20, 2002
Description of EUT	Microsoft Cyan – Bluetooth Enabled Mouse
Condition of EUT:	Operational / Good Condition
Product ID/Model Number	Cyan
Serial number	0050F27D0545 [DUT] 0050F27E8A4F [radiated] 0050F27E8A4E [conducted] 0050F27D0543 [conducted] 0050F27E8A43 [radiated] – Lapis 0050F27E8A4D [conducted] – Lapis
Hardware Version	0.07
Software Version	0.07

5. Test Summary

This test report is prepared for the project of Microsoft Cyan (Bluetooth-enabled mouse).

5.1 Summary of Test Results

Specification	Description	Result
15.247 (C) Test Method: ANSI 63.4-1992	Radiated Spurious Emissions 1-25GHz American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	Compliant
15.247 (C)	Radiated Spurious Emissions < 1GHz	Compliant
IC RSS210 6.2.2(o)(e1)	Out of Band Emission	Compliant

6. Documentation of test device

Documentation of the tested device has been reviewed by Hyper Corporation Engineers and found to be in compliance with applicable test specifications. All documentation is kept at Hyper Corporation's Quality Department in the Microsoft Cyan EMC Test Folder.

7. General and Special Conditions

The EUT was tested using a fully charged battery. Battery voltages were checked often and changed if not at full capacity.

For all transmitter tests a Bluetooth link was established using an Agilent E1852B Bluetooth Test Set which allowed continuous transmission of the EUT at low, middle, or high channels at maximum power. The link was checked after each test scan to make sure that it was still established and the EUT had been transmitting during the entire period.

For receiver / standby scans the EUT was put into Connect mode which brought the receiver up until a timeout period was realized. Testing periods were limited to times less than the EUT timeout period and a new Connect mode was initiated before the next test scan.

All testing was done in an indoor controlled environment with an average temperature of 24º C and relative humidity of 40%.

8. Equipment and Cable Configurations / Test Setup

The EUT was tested in a stand-alone configuration that is representative of typical use.

As a stand-alone device there are no cabling considerations.

8.1 Measuring Equipment and Calibration Information

Manufacturer Name	**Description**	**Model Number**	**Serial Number**	**Cal Due Date**
Agilent Technology, Inc.	PSA Series Spec. Analyzer	E4440A	US40420768	04.23.03
Com Power	Pre-Amplifier	PA-122	181910	11.07.02
EMCO	1-18 GHz Horn Antenna	3115	2335	06.21.02
Microtronics	2.4 GHz Notch Antenna	BRM50701	2	06.14.03
Control Co.	Humidity / Temp. Meter	PA-122	181910	05.02.03
EMCO	1-18 GHz Horn Antenna	3115	9205-3882	10.21.02
Hewlett Packard Company	Synth Sweeper	83640A	3036A00294	03.28.03
Agilent	BluetoothTest Set	E1852B	DK42070183	N/A
Hewlett Packard Company	Spectrum Analyzer	8568B	2732A03661	05.16.03
Hewlett Packard Company	Quasi Peak Adapter	85650A	2811A01155	05.16.03
Hewlett Packard Company	Spectrum Display	85662A	2816A16696	05.16.03
Hewlett Packard Company	HP 100kHz – 1.3 GHZ Ant. Preamplifier	8447D	2944A06833	08.21.02
EMCO	Log Periodic Antenna	3146	9107-3163	03.30.03
Eaton	Antenna, Bicon	94455-1	1197	03.30.03

8.2 Test Setup Block Diagram 1- 18 GHz

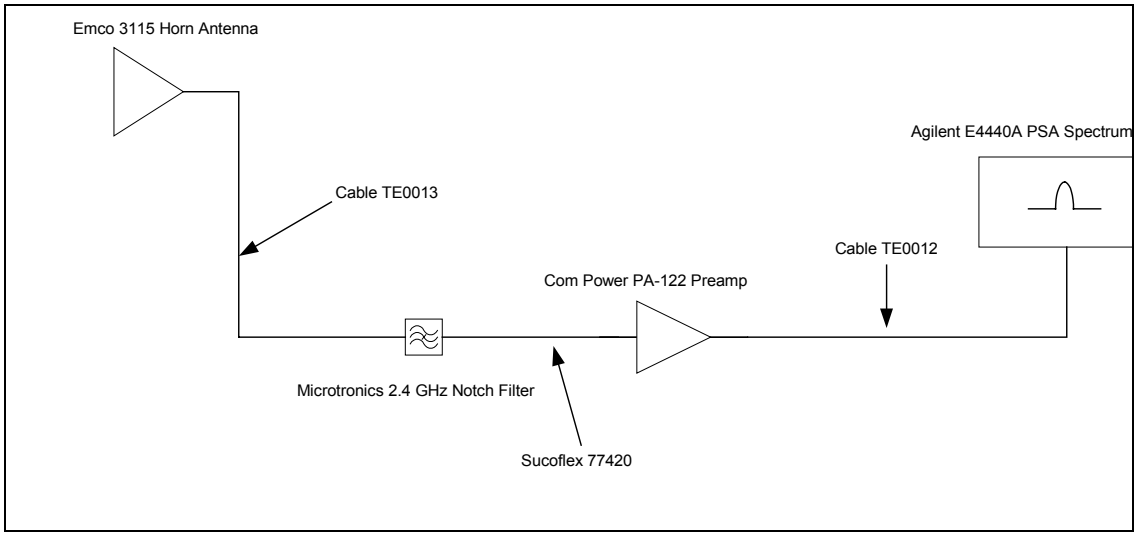

Figure 1. Receive System Setup – 1GHz – 18GHz

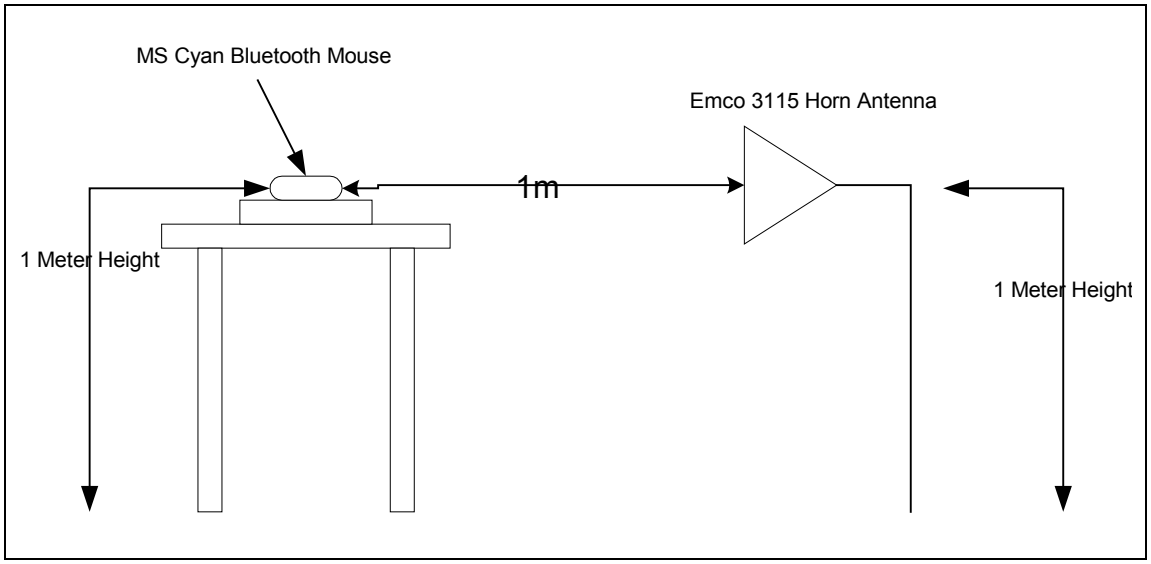

Figure 2. EUT / Receive System Description – 1GHz – 18GHz

8.3 Test Setup Block Diagram 30 MHz - 1GHz

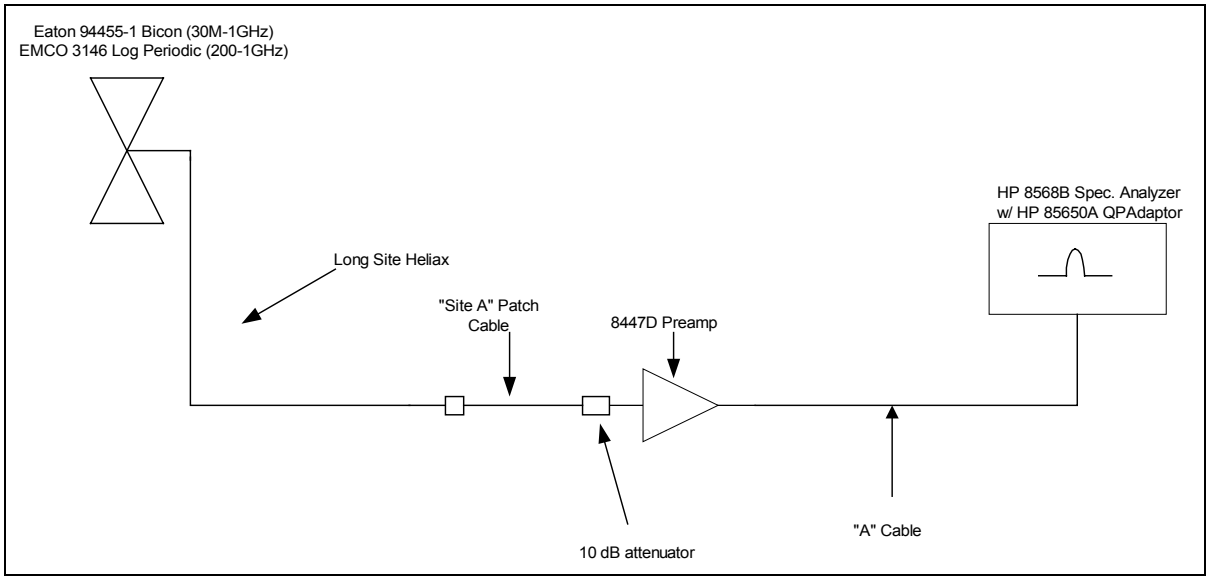

Figure 3. Receive System Setup – 30MHz – 1GHz

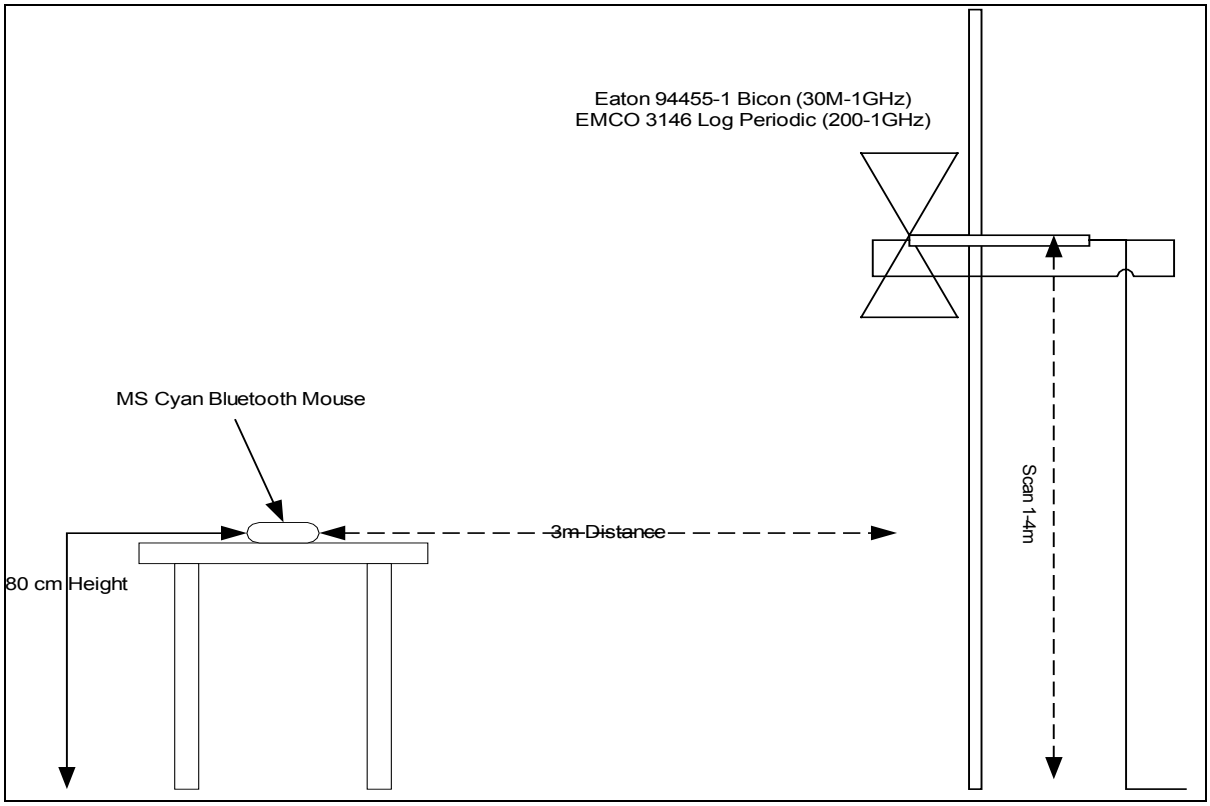

Figure 4. EUT / Receive System Description – 30MHz – 1GHz

8.4 Test Setup Photos

Photo 1 – EUT Bluetooth Test Set -1m High – 1m from Horn 1-18GHz Testing

Photo 2 – Picture of EUT Test Configuration – 1-18GHz Testing

Photo 3 – Test Setup at Compliance Certification Services OATS (30MHz 1GHz)

9. General Testing Information

9.1 Test Facility

Company	**Location**	**Parts Tested**
Stratest Labs	1533 California Circle Milpitas, CA 95035	FCC Part 15
Compliance Certification Services	561F Monterey Road San Jose, CA 95037-9001	FCC Part 15

9.2 Test Environment

Nominal Temperature	22°C – 24°C
Nominal Humidity	35% – 45%

10. Test Procedure

10.1 Measurement Procedure (1-18 GHz)

The testing was performed according to the procedures in ANSI C63.4-1992. Testing was performed at the Stratest Lab anechoic chamber located in Milpitas, California by the Hyper Corporation engineering staff identified in this report.

10.1.1 System Characterizations / EUT Maximum Power Output Verification

EIRP data was taken on the EUT by measuring the carrier (low, middle, and high bands) without the notch filter inline and maximizing the received signal by rotating the EUT. This was performed for both vertical and horizontal polarizations of the receive antenna. This was not done to fulfill any regulatory requirement, just to ensure that the EUT was tuned for and operating at maximum power. A fully charged battery was used for the supply voltage.

The EUT was replaced with a substitution antenna fed by a signal generator. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved. The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole.

The results, as shown below, indicate that the EUT is operating with maximum power output.

Frequency (MHz)	Max. Emission Level (dBm)	Sub. Gen Level	Corr. Factor	EIRP (dBm)
2402	-33	-5.8	4.2	**-1.6**
2441	-34	-6.9	4.7	**-2.2**
2480	-31.83	-6.1	5	**-1.1**

Table 1. Results of Output Power Verification of EUT

10.1.2 EUT Testing Procedure 1-18GHz

The EUT was tested per ANSI C63.4-1992 at low, middle, and high channels (continuous transmit mode) for spurious emissions. For each channel emissions were maximized by rotating the EUT through 360 degrees for both vertical and horizontal orientations of the receive antenna. The EUT was also tested in Standby mode to check spurious emissions coming off the receiver to verify compliance with unintentional radiator requirements. The receiver bandwidth was set to 1MHz per CFR requirements and the detection mode was peak.

Once the maximum emissions from the EUT were determined, their value was determined by the following relationship:

Spur (dBμV/m) = Receive power(dBm)+cable loss(dB)-preamp gain(dB)+filter attenuation+Antenna Factor(dB/m)+107

The spurious emission level could then be compared to the FCC limit to determine compliance. Since the testing distance was less than 3m, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance. In this case, since the test distance is 1m, a correction factor of:

20 * log(3/1) = 9.5 dB was used.

The FCC limit at 1m was determined to be 53.9 dBμV/m + 9.5 dB = 63.4 dBμV/m

The results are presented as Appendix 1.

10.1.3 Measurement Procedure / Results (18-25 GHz)

Above 18 GHz the range of the test system at Stratest Labs was determined to be insufficient. Engineering tests were performed at Hyper Corp. to determine whether or not any signals were present that would need to be quantified. A bench test in an open area of the lab was set up and a small standard gain horn with a short high frequency cable was connected to the PSA Spectrum Analyzer. The loss of the cables and antenna factor of the horn were taken into account to determine the range needed on the spectrum analyzer to measure emissions to the limit at 1m. The necessary range was achieved and emissions could be measured with 6 dB to the limit.

The EUT was exercised in each channel and the device was “sniffed” with the horn (i.e. the horn was oriented in every possible fashion at a close distance to the device) to discern if there were any frequencies that may be an issue and need to be quantified.

No signals were present. This was expected as the signals present at Stratest labs diminished after the second harmonic. Repeating data on

emissions measured in the chamber at lower frequencies validated the test system performance.

10.1.4 Measurement Result – Restricted Bands (FCC 15.205(a))

All emissions in restriced bands as specified in FCC15.205 (a) were compliant with the FCC15.209 (a) average detector function limits using the peak detector function.

All results reported were measured using peak detector function and were compliant with the average detection limits of 53.9dBuV/M(@3m). Therefore, the peak measurements were compliant with the requirements of FCC15.35 (b).

10.2 Measurement Procedure (30 MHz - 1GHz)

The testing was performed according to the procedures in ANSI C63.4-1992. Testing was performed at the Compliance Certification Services (CCS) 3m OATS (Site A) in San Jose CA. Testing was done by the engineering staff of CCS under the supervision of the EMC engineer identified in this report. The chamber meets the site attenuation requirements of ANSI C63.4-1992. A detailed description of the test facility was submitted to the Commission on May 27,1994 (site ref. 90518).

The EUT was tested per ANSI C63.4-1992 at low, middle, and high channels (continuous transmit mode) for spurious emissions. The EUT was placed on a 1*1.5m wooden tabletop at 80 cm height. The EUT was 3m away from the measurement antenna. For each channel emissions were maximized by rotating the EUT through 360 degrees and scanning the antenna 1-4m for both vertical and horizontal orientations of the receive antenna.

The EUT was also tested in Standby mode to check spurious emissions coming off the receiver to verify compliance with unintentional radiator requirements. The resolution bandwidth of the receiver was 120 kHz and the detector mode was peak. Once the maximum emissions from the EUT were determined, their value was determined by the following relationship:

Spur (dBμV/m) = Receive power(dBm)+cable loss(dB)-preamp gain(dB) +Antenna Factor(dB/m)+107

The unit complied with the FCC limits at all frequencies in the peak mode.

The results are presented as Appendix 2.

Appendix 1 – Test Data 1-25GHz Worst Case Emissions

Radiated Emissions Testing FCC TESTING **FINAL RESULTS**
Microsoft Cyan
1GHz - 25GHz See Test Setup Sheet for Details on Configuration

Worst Case Orientations

0V = Vertical Standby	1H = Horizontal Lo Channel	3H = Horizontal Mid Channel
0H = Horizontal Standby	2V = Vertical Hi Channel	3V = Vertical Mid Channel
1V = Vertical Lo Channel	2H = Horizontal Hi Channel	

FCC Limit Above 1GHz **@ 1m = 63.4 dBuV/m** (53.9 + 9.5 corr. Factor at 20 dB / decade)

Frequency (GHz)	Worst Case Orientation	Spur Level (dBuV/m)	FCC Limit	Margin to Limit	P / F
1.04	1V	48.81	63.4	14.59	**P**
1.08	1V	53.02	63.4	10.38	**P**
1.11	1V	49.96	63.4	13.44	**P**
1.125	1V	47.22	63.4	16.18	**P**
1.13	1V	53.44	63.4	9.96	**P**
1.155	1V	51.60	63.4	11.80	**P**
1.17	1V	49.17	63.4	14.23	**P**
1.173	1V	53.28	63.4	10.12	**P**
1.206	1V	53.96	63.4	9.44	**P**
1.208	1V	53.12	63.4	10.28	**P**
1.21	1V	53.34	63.4	10.06	**P**
1.22	3H	53.18	63.4	10.22	**P**
1.23	0V	51.71	63.4	11.69	**P**
1.25	1V	46.27	63.4	17.13	**P**
1.254	1V	46.41	63.4	16.99	**P**
1.265	1V	47.83	63.4	15.57	**P**
1.24	2H	53.91	63.4	9.49	**P**
1.297	1V	47.24	63.4	16.16	**P**
1.307	1V	46.06	63.4	17.34	**P**
1.32	3V	52.99	63.4	10.41	**P**
1.326	1V	52.05	63.4	11.35	**P**

Frequency (GHz)	Worst Case Orientation	Spur Level (dBuV/m)	FCC Limit	Margin to Limit	P / F
1.331	1V	52.77	63.4	10.63	**P**
1.338	1V	52.39	63.4	11.01	**P**
1.346	1V	46.93	63.4	16.47	**P**
1.39	1V	49.43	63.4	13.97	**P**
1.397	1V	49.87	63.4	13.53	**P**
1.43	1V	51.05	63.4	12.35	**P**
1.465	1V	50.22	63.4	13.18	**P**
1.495	2V	53.06	63.4	10.34	**P**
1.53	1V	44.81	63.4	18.59	**P**
1.56	3V	58.88	63.4	4.52	**P**
1.59	1V	54.49	63.4	8.91	**P**
1.6	0V	55.57	63.4	7.83	**P**
1.63	1V	47.40	63.4	16.00	**P**
1.67	1V	47.97	63.4	15.43	**P**
1.69	3V	51.19	63.4	12.21	**P**
1.797	1V	52.63	63.4	10.77	**P**
1.86	2H	51.01	63.4	12.39	**P**
1.887	3H	47.67	63.4	15.73	**P**
1.93	2H	45.68	63.4	17.72	**P**
1.95	3V	42.75	63.4	20.65	**P**
2.27	1V	54.50	63.4	8.90	**P**
3.41	1H	49.06	63.4	14.34	**P**
4.54	1V	50.00	63.4	13.40	**P**
4.62	3V	50.92	63.4	12.48	**P**
4.695	2H	50.95	63.4	12.45	**P**
4.8	1V	55.14	63.4	8.26	**P**
4.88	3V	55.58	63.4	7.82	**P**
4.96	2H	61.69	63.4	1.71	P

Table 2. Results of Spurious Emissions Testing 1-25GHz

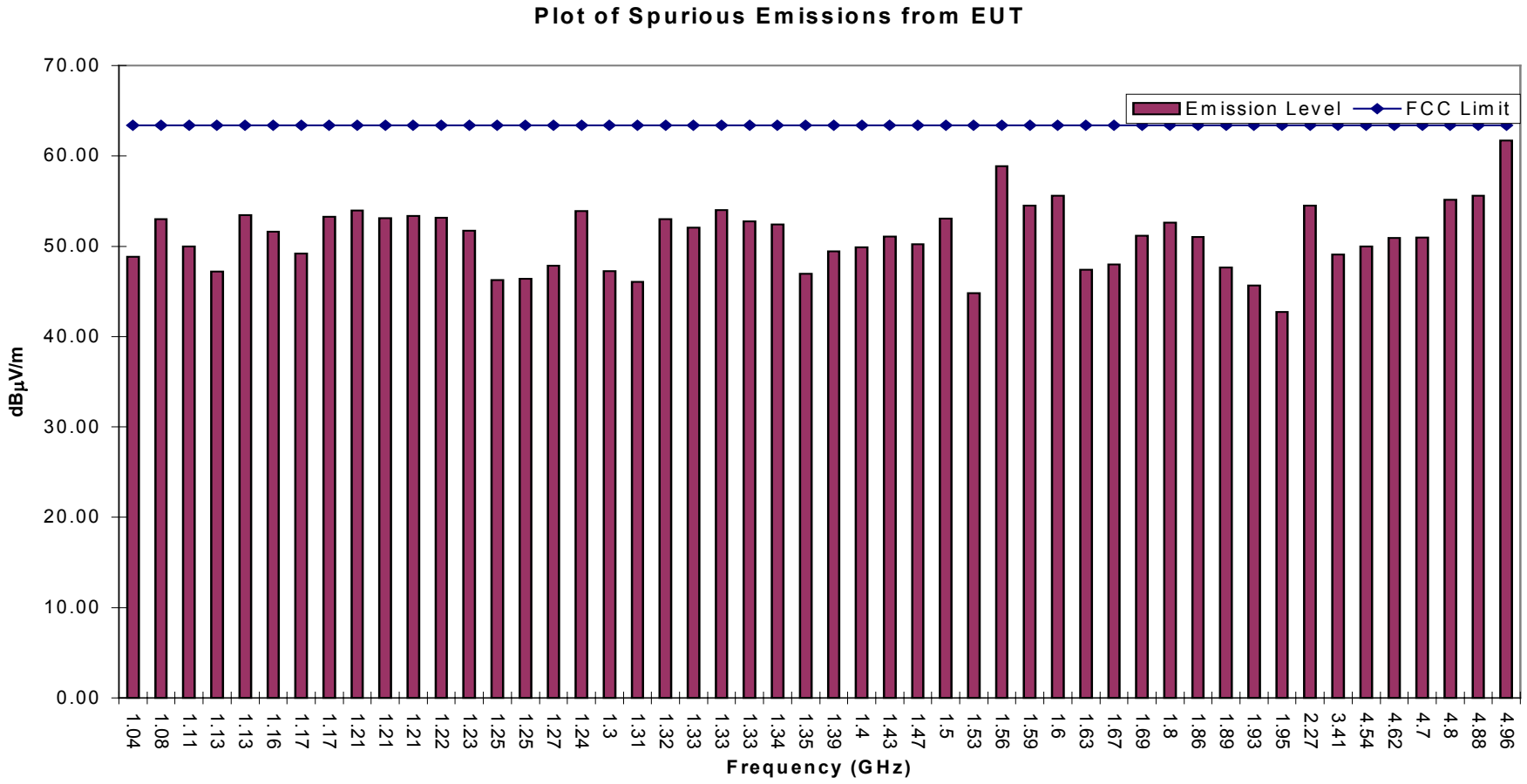

Figure 3. Plot of Spurious Emissions vs. FCC Limit @1m – 1-25GHz

Appendix 2 – Test Data 30 MHz -1GHz Worst Case Emissions

Radiated Emissions Testing FCC TESTING **FINAL RESULTS - TX**
MS CYAN
30MHz - 1GHz Tested at Compliance Consulting Services

Worst Case Orientations

Rcvr-Hor : Receiver On - Horizontal Polarization
Rcvr-Vert : Receiver On - Vertical Polarization
Lo-Vert : Lo Channel TX - Vertical Polarization
Lo-Hor : Lo Channel TX - Horizontal Polariz
Mid-Hor : Mid-Channel TX - Horizontal Polarization
Mid-Vert : Mid-Channel TX - Vertical Polarization
Hi-Vert : Hi Channel TX - Vertical Polarization
Hi-Hor : Hi Channel TX - Horizontal Polarization

Frequency (MHz)	Worst Case Orientation	Spur Level (dBuV/m)	FCC Limit	Margin to Limit	P / F
31.8	Lo-Vert	29.80	40.0	10.20	P
32.8	Mid-Vert	30.50	40.0	9.50	P
32.8	Hi-Vert	29.01	40.0	10.99	P
37.0	Rcvr-Vert	26.35	40.0	13.65	P
42.8	Hi-Vert	27.63	40.0	12.37	P
53.6	Mid-Vert	27.63	40.0	12.37	P
54.0	Lo-Vert	25.72	40.0	14.28	P
74.0	Rcvr-Vert	20.96	40.0	19.04	P
132.1	Lo-Vert	27.88	43.5	15.62	P
133.0	Hi-Vert	30.62	43.5	12.88	P
145.4	Lo-Vert	33.91	43.5	9.59	P
152.0	Rcvr-Vert	30.81	43.5	12.69	P
153.3	Lo-Vert	35.38	43.5	8.12	P
157.8	Rcvr-Vert	29.64	43.5	13.86	P
167.2	Lo-Vert	36.88	43.5	6.62	P
169.7	Mid-Vert	34.41	43.5	9.09	P
175.0	Rcvr-Vert	29.75	43.5	13.75	P
195.1	Rcvr-Vert	29.28	43.5	14.22	P
220.0	Lo-Vert	32.87	46.0	13.13	P
229.6	Lo-Vert	38.73	46.0	7.27	P
244.6	Lo-Vert	31.76	46.0	14.24	P
248.1	Hi-Vert	29.23	46.0	16.77	P
259.6	Mid-Vert	31.92	46.0	14.08	P
259.6	Hi-Vert	31.22	46.0	14.78	P
266.0	Mid-Vert	33.12	46.0	12.88	P
384.0	Hi-Vert	38.16	46.0	7.84	P

Frequency (MHz)	Worst Case Orientation	Spur Level (dBuV/m)	FCC Limit	Margin to Limit	P / F
266.0	Mid-Vert	33.12	46.0	12.88	**P**
384.0	Hi-Vert	38.16	46.0	7.84	**P**
384.5	Mid-Vert	37.07	46.0	8.93	**P**
404.9	Hi-Vert	31.97	46.0	14.03	**P**
540.0	Rcvr-Vert	33.77	46.0	12.23	**P**
635.0	Rcvr-Vert	32.56	46.0	13.44	**P**

Table 3 – Worst Case Peak Spurious Emissions 30MHz – 1GHz

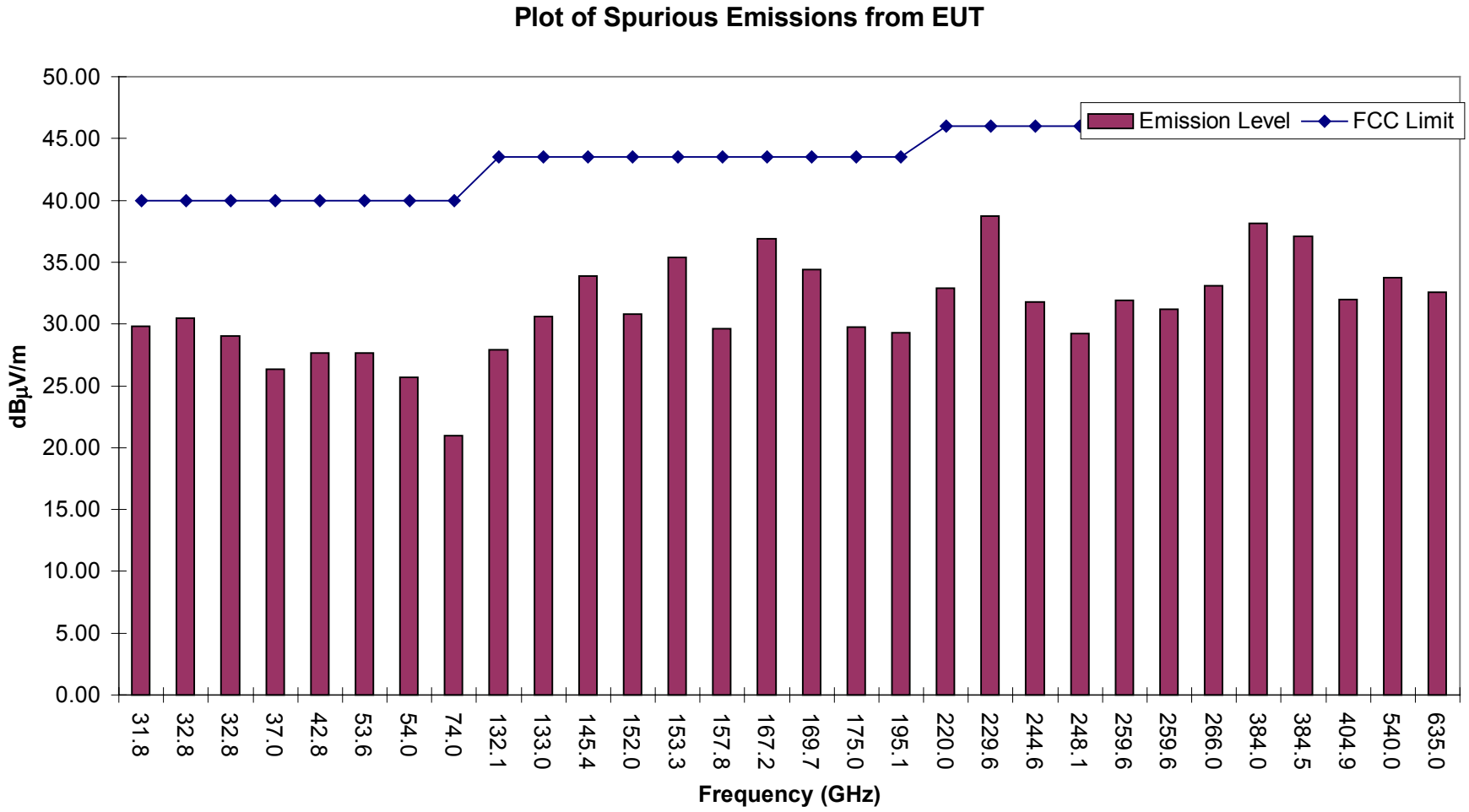

Figure 4. Plot of Spurious Emissions vs. FCC Limit 30MHz-1GHz