TÜV

TUV Rheinland
of North America

Emissions
Test Report

EUT Name: Hot Rod Metal (High Power)

EUT Model: HOTRODMETALV1

FCC Title 47, Part 15, Subpart C

Prepared for:

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Report/Issue Date: 28 July 2005
Report Number: 30462511.002

Statement of Compliance

Manufacturer:	Hersey Meters 10210 Statesville Blvd. Cleveland NC 27013 704-278-2221
Requester / Applicant:	Scottt Linkel
Name of Equipment:	Hot Rod Metal (High Power) Model No. HOTRODMETALV1
Type of Equipment:	RF Transmitter
Class of Equipment:	FCC Part 15.249
Application of Regulations:	FCC Title 47, Part 15, Subpart C
Test Dates:	11 November 2004 - 17 November 2004

Guidance Documents:

Emissions: FCC 47 CFR Part 15

Test Methods:

Emissions: FCC 47 Part 15, ANSI C63.4:2003

The electromagnetic compatibility test and documented data described in this report has been performed and recorded by TUV Rheinland of North America, in accordance with the standards and procedures listed herein. As the responsible authorized agent of the EMC laboratory, I hereby declare that a sample of one, of the equipment described above, has been shown to be compliant with the EMC requirements of the stated regulations and standards based on these results. If any special accessories and/or modifications were required for compliance, they are listed in the Executive Summary of this report.

This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report contains data that are not covered by NVLAP accreditation. This report shall not be reproduced except in full, without the written authorization of the laboratory.

NVLAP Signatory

28 July 2005
Date

1 Executive Summary

1.1 Scope

This report is intended to document the status of conformance with the requirements of the FCC Title 47, Part 15, Subpart C based on the results of testing performed on *11 November* 2004 - 17 November 2004 on the *Hot Rod Metal (High Power)* Model No. *HOTRODMETALV1* manufactured by Hersey Meters. This report only applies to the specific samples tested under the stated test conditions. It is the responsibility of the manufacturer to assure that additional production units of this model are manufactured with identical or EMI equivalent electrical and mechanical components. This report is further intended to document changes and modifications to the EUT throughout its life cycle. All documentation will be included as a supplement.

1.2 Purpose

Testing was performed to evaluate the EMC performance of the EUT in accordance with the applicable requirements, procedures, and criteria defined in the application of regulations and application of standards listed in this report.

1.3 Summary of Test Results

Table 1 - Summary of Test Results

Emission	Test Method(s)	Test Parameters	Result
Radiated Emissions	47 CFR 15.209 and 15.249, ANSI C63.4:2003	30 MHz to 1000 MHz, Class B	compliant
Conducted Emissions	47 CFR 15, ANSI C63.4:2003	150 kHz to 30 MHz	Not Required
Band Edge Bandwidth	47 CFR 15.209 and 15.249, ANSI C63.4:2003		Compliant

1.4 Special Accessories

No special accessories were necessary in order to achieve compliance.

1.5 Equipment Modifications

No modifications were found to be necessary in order to achieve compliance.

2 Laboratory Information

2.1 Accreditations & Endorsements

2.1.1 US Federal Communications Commission

TUV Rheinland of North America at the 762 Park Ave. Youngsville, N.C 27596 address is accredited by the commission for performing testing services for the general public on a fee basis. This laboratory test facilities have been fully described in reports submitted to and accepted by the FCC (Registration No 90552 and 100881). The laboratory scope of accreditation includes: Title 47 CFR Part 15, 18, and 90. The accreditation is updated every 3 years.

2.1.2 NIST / NVLAP

TUV Rheinland of North America is accredited by the National Voluntary Laboratory Accreditation Program, which is administered under the auspices of the National Institute of Standards and Technology. The laboratory has been assessed and accredited in accordance with ISO Guide 17025:1999 and ISO 9002 (Lab code 200094-0). The scope of laboratory accreditation includes emission and immunity testing. The accreditation is updated annually.

2.1.3 Japan - VCCI

The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) is a group that consists of Information Technology Equipment (ITE) manufacturers and EMC test laboratories. The purpose of the Council is to take voluntary control measures against electromagnetic interference from Information Technology Equipment, and thereby contribute to the development of a socially beneficial and responsible state of affairs in the realm of Information Technology Equipment in Japan. TUV Rheinland of North America at the 762 Park Ave. Youngsville, N.C 27596 address has been assessed and approved in accordance with the Regulations for Voluntary Control Measures. (Registration No. R-1174, R-1679, C-1790 and C-1791).

2.1.4 Acceptance By Mutual Recognition Arrangement

The United States has an established agreement with specific countries under the Asia Pacific Laboratory Accreditation Corporation (APLAC) Mutual Recognition Arrangement. Under this agreement, all TUV Rheinland of North America at the 762 Park Ave. Youngsville, N.C 27596 address test results and test reports within the scope of the laboratory NIST / NVLAP accreditation will be accepted by each member country.

2.2 Test Facilities

All of the test facilities are located at 762 Park Ave., Youngsville, North Carolina 27596, USA.

2.2.1 Emission Test Facility

The Open Area Test Site and AC Line Conducted measurement facility used to collect the radiated and conducted data has been constructed in accordance with ANSI C63.7:1992. The site has been measured in accordance with and verified to comply with the theoretical normalized site attenuation requirements of ANSI C63.4:1992, at a test distance of 3 and 10 meters. This site has been described in reports dated May 12, 1997, submitted to the FCC, and accepted by letter dated June 25, 1997 (31040/SIT 1300F2).

The site is listed with the FCC and accredited by NVLAP (code 200094-0). The 5m semi-anechoic chamber used to collect the radiated data has been verified to comply with the theoretical normalized site attenuation requirements of ANSI C63.4:1992, at a test distance of 3 meters. A report detailing this site can be obtained from TUV Rheinland of North America.

2.2.2 Immunity Test Facility

ESD, EFT, Surge, PQF: These tests are performed in an environmentally controlled room with a 3.7m x 3.7m x 3.175mm thick aluminum floor connected to PE ground. For ESD testing, tabletop equipment is placed on an insulated mat with a surface resistivity of 10^9 Ohms/square on a 1.6m x 0.8m x 0.8m high non-conductive table with a 3.175mm aluminum top (Horizontal Coupling Plane). The HCP is connected to the main ground plane via a low impedance ground strap through two 470 kΩ resistors. The Vertical Coupling Plane consists of an aluminum plate 50cm x 50cm x 3.175mm thick. The VCP is connected to the main ground plane via a low impedance ground strap through two 470 kΩ resistors. For each of the other tests, the HCP is removed.

RF Field Immunity testing is performed in a 7.3m x 3.7m x 3.2m anechoic chamber.

RF Conducted and Magnetic Field Immunity testing is performed on a 4.9m x 3.7m x 3.175mm thick aluminum ground plane which is connected to one end of the anechoic chamber.

All test areas allow a minimum distance of 1 meter from the EUT to walls or conducting objects.

2.3 Measurement Uncertainty

Two types of measurement uncertainty are expressed in this report, per *ISO Guide To The Expression Of Uncertainty In Measurement*, 1st addition, 1995.

The Combined Standard Uncertainty is the standard uncertainty of the result of a measurement when that result is obtained from the values of a number of other quantities, equal to the positive square root of a sum of terms, the terms being the variances or co-variances of these other quantities weighted according to how the measurement result varies with changes in these quantities. The term standard uncertainty is the result of a measurement expressed as a standard deviation.

The Expanded Uncertainty defines an interval about the result of a measurement that may be expected to encompass a large fraction of the distribution of values that could reasonably be attributed to the measurand. The fraction may be viewed as the coverage probability or level of confidence of the interval.

The test system for conducted emissions is defined as the LISN, spectrum analyzer, coaxial cables, and pads. The test system for radiated emissions is defined as the antenna, spectrum analyzer, pre-amplifier, coaxial cables, and pads. The conducted test system has a combined standard uncertainty of ± 1.2 dB. The radiated test system has a combined standard uncertainty of ± 1.6 dB. The expanded uncertainty at a level of 95% confidence is obtained by multiplying the combined standard uncertainty by a coverage factor of 2. Compliance criteria are not based on measurement uncertainty.

2.4 Calibration Traceability

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Measurement method complies with ANSI/NCSL Z540-1-1994 and ISO Guide 17025:1999.

3 Product Information

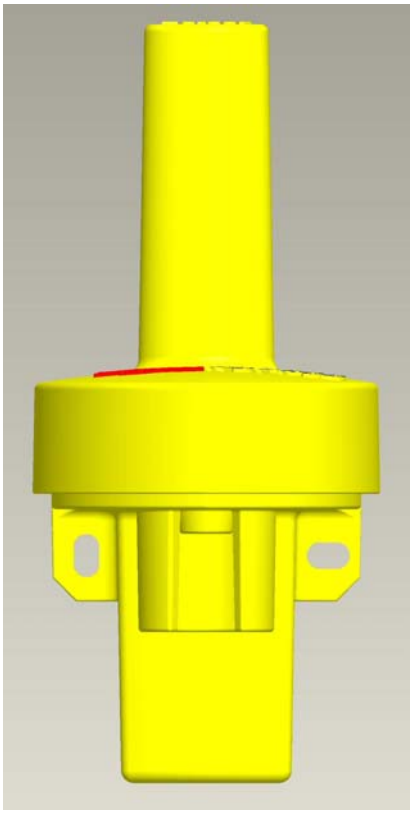

Figure 1 – Photo of EUT

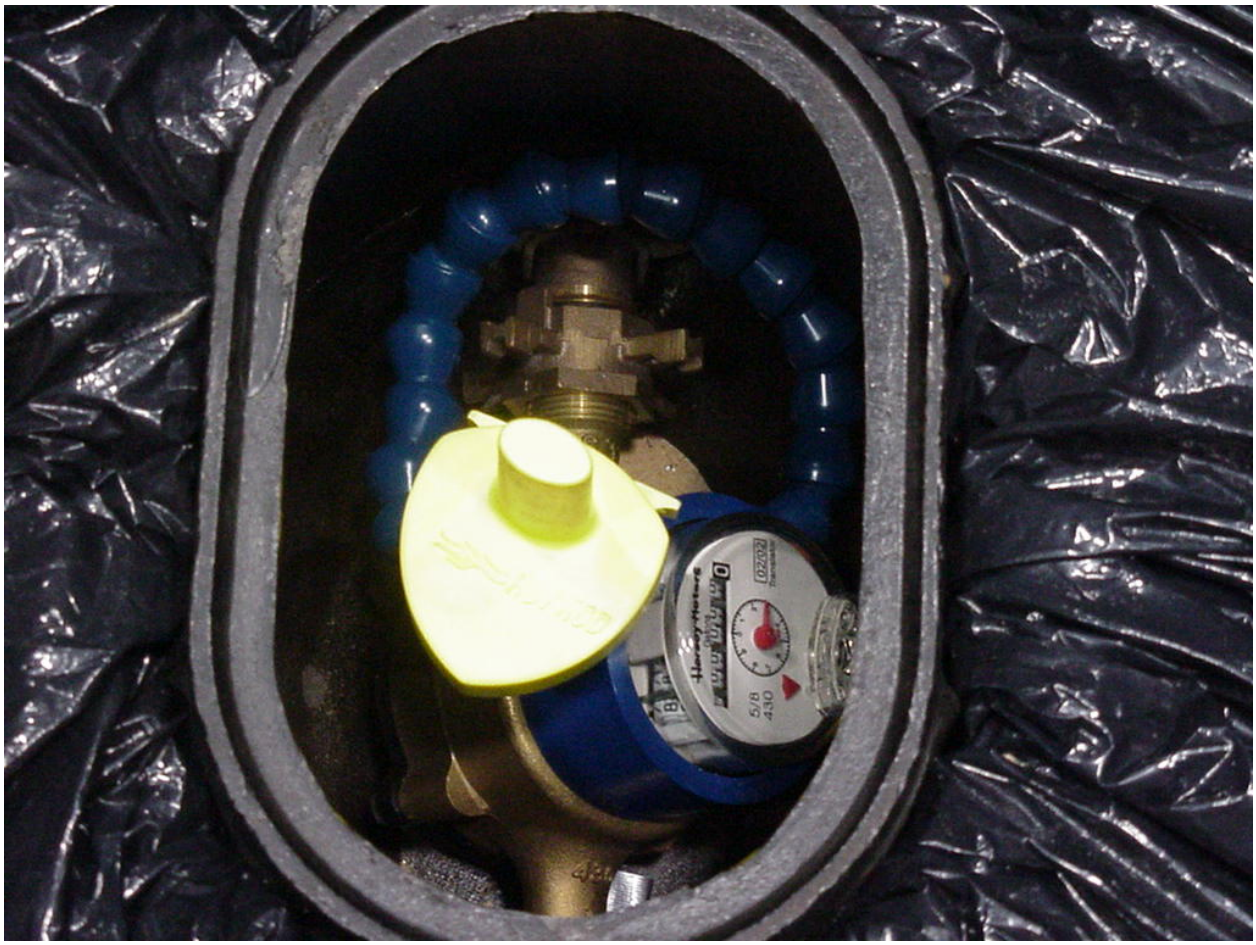

Figure 2 – Photo of EUT Installed in Meter

3.1 Product Description

The information for all equipment used in the tested system, including: descriptions of cables, clock and microprocessor frequencies, EMI critical components, and accessory equipment has been supplied by the manufacturer and is listed in the EMC Test Plan found in Section 6.

3.2 Equipment Configuration

A description and justification of the equipment configuration is given in the EMC Test Plan. The EUT was tested as described in the EMC Test Plan and was configured and operated in a manner consistent with its intended use. The EUT was connected to rated power and allowed to warm up to normal operating conditions. The placement of the EUT system components was guided by the test standard and selected to represent typical installation conditions.

In the case of an EUT that can operate in more than one configuration, preliminary testing was performed to determine the configuration that produced maximum radiation.

The final configuration was selected to produce worse case radiation and place the EUT in the most susceptible state. There were no deviations from the description of the Equipment Configuration given in the EMC Test Plan.

3.3 Operation Mode

A description and justification of the operation mode is given in the EMC Test Plan.

In the case of an EUT that can operate in more than one state, preliminary testing was performed to determine the operating mode that produced maximum radiation.

The final operating mode was selected to produce worse case radiation and place the EUT in the most susceptible state. There were no deviations from the description of the Operation Mode given in the EMC Test Plan.

4 Emissions

4.1 Radiated Emissions

Testing was performed in accordance with 47 CFR 15.209 and 15.249, ANSI C63.4:2003. These test methods are listed under the laboratory's NVLAP Scope of Accreditation. This test measures the levels emanating from the EUT, thus evaluating the potential for the EUT to cause radio frequency interference to other electronic devices.

4.1.1 Test Methodology

4.1.1.1 Preliminary Test

A test program that controls instrumentation and data logging was used to automate the preliminary RF emission test procedure. The frequency range of interest was divided into sub-ranges to yield a frequency resolution of approximately 300 kHz and provide a reading at each frequency for no more than 12° of turntable rotation. For each frequency sub-range the turntable was rotated 360° while peak emission data was recorded and plotted over the frequency range of interest in horizontal and vertical antenna polarization's.

Preliminary emission profile testing was performed inside the anechoic chamber. The EUT was placed on a 1.0m x 1.5m non-conductive table 80cm above the floor. The EUT was positioned as shown in the setup photographs. The receiving antenna was placed at a distance of 3m at a fixed height of 1m. Measurement equipment was located outside of the chamber. A video camera was placed inside the chamber to view the EUT.

4.1.1.2 Final Test

For each frequency measured, the peak emission was maximized by manipulating the receiving antenna from 1 to 4 meters above the ground plane and placing it at the position that produced the maximum signal strength reading. The turntable was then rotated through 360° while observing the peak signal and placing the EUT at the position that produced maximum radiation. The six highest emissions relative to the limit were measured unless such emissions were more than 20 dB below the limit. If less than six emissions are within 20 dB of the limit, than the noise level of the receiver is measured at frequencies where emissions are expected. Multiples of all oscillator and microprocessor frequencies were also checked.

Final testing was performed on an NSA compliant test site. The EUT was placed on a 1.0m x 1.5m non-conductive table 80cm above the ground plane. The placement of EUT and cables were the same as for preliminary testing and is shown in the setup photographs.

4.1.1.3 Deviations

There were no deviations from this test methodology.

4.1.2 Test Results

Section 4.1.2.1 lists the final measurement data under the worst case operating modes, configurations, and/or cable positions. It also reflects the results including any modifications and/or special accessories listed in Sections 1.4 and 1.5.

As originally tested, the EUT was found to be compliant to the requirements of the test standard(s).

4.1.2.1 Final Data

The data recorded in this section contains the final results under the worst-case conditions and with any modifications or special accessories implemented as the manufacturer intends.

SOP 1 Radiated Emissions

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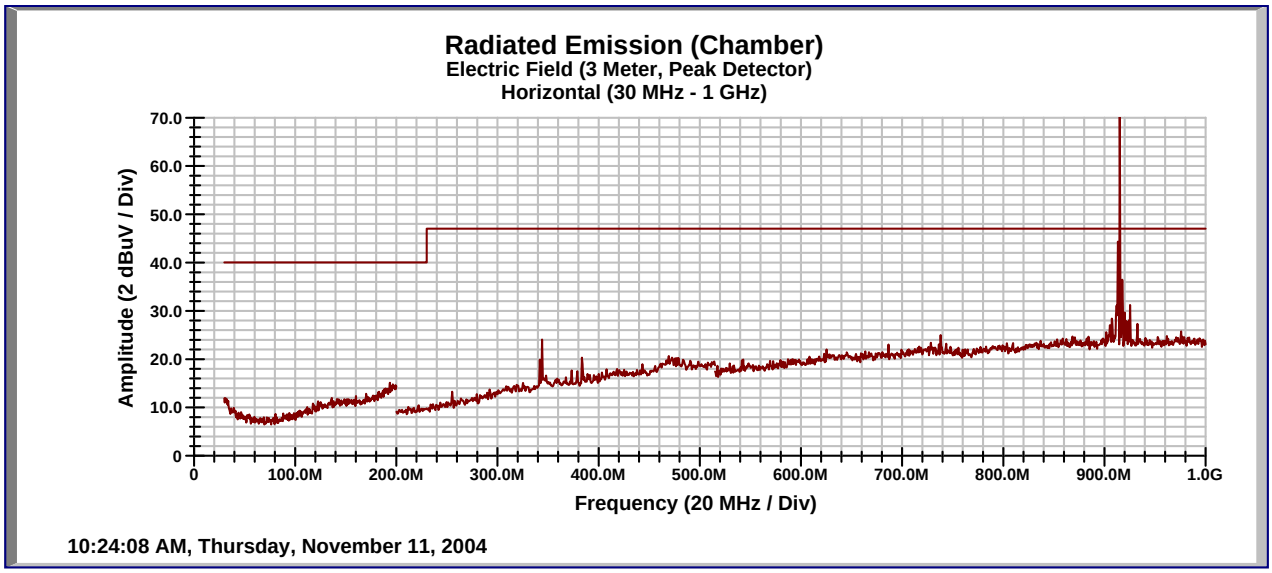
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses

Configuration Unit 04HP, 915 MHz, Power Level OB, 3.5ms burst every 131 ms. Wires in conduit used to connect to meter. Cast Pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
344.10	H	1.24	101	5.53	0.00	1.48	16.05	23.05	47.00	-23.95

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

SOP 1 Radiated Emissions

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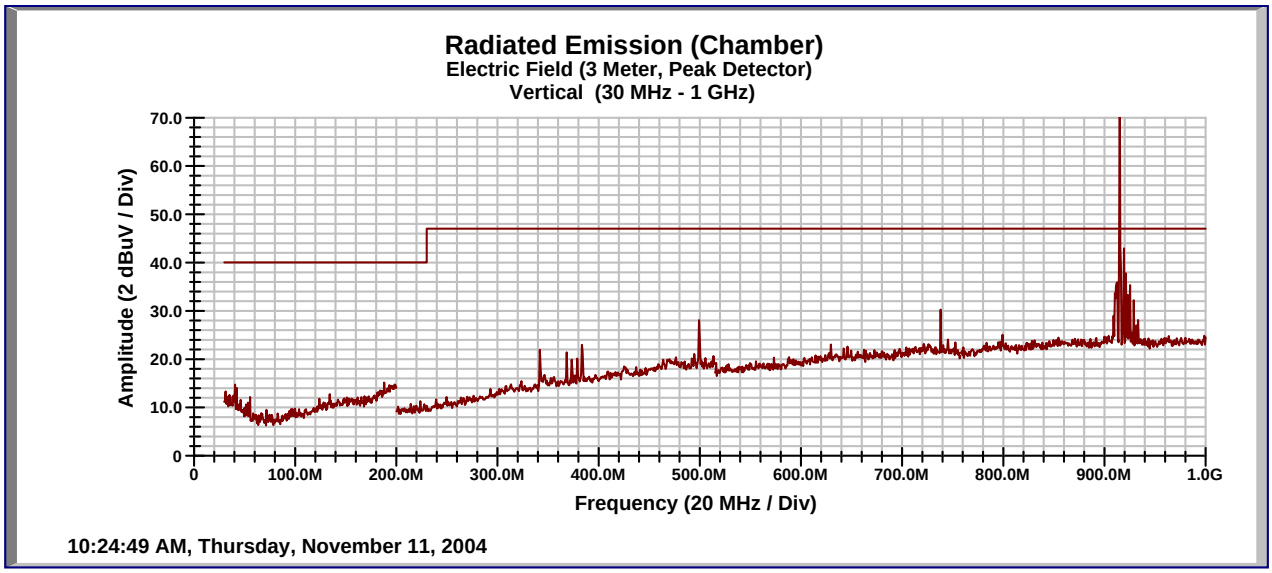
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses

Configuration Unit 04HP, 915 MHz, Power Level OB, 3.5ms burst every 131 ms. Wires in conduit used to connect to meter. Cast Pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
499.00	V	1	90	8.08	0.00	1.79	16.44	26.31	47.00	-20.69
738.00	V	1	222	5.30	0.00	2.21	19.78	27.29	47.00	-19.71

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

SOP 1 Radiated Emissions

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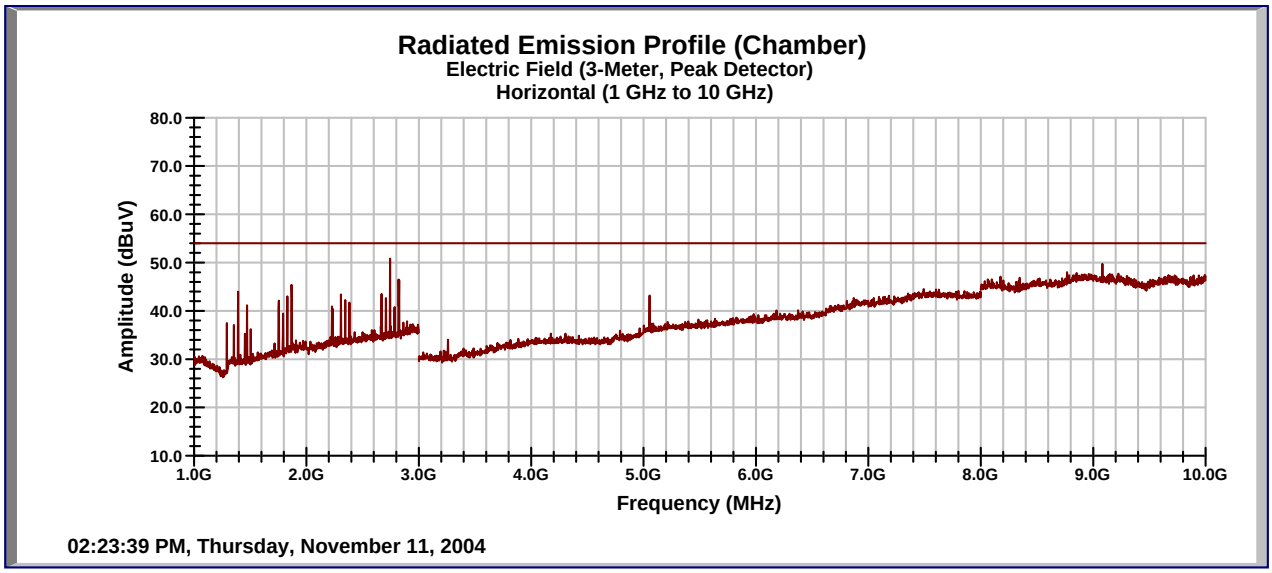
EUT Name	Hot Rod Metal (High Power)	**Date**	11 Novmeber 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses

Configuration Unit 04HP, 915 MHz, Power Level OB, 3.5ms burst every 131 ms. Wires in conduit used to connect to meter. Cast Pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

SOP 1 Radiated Emissions

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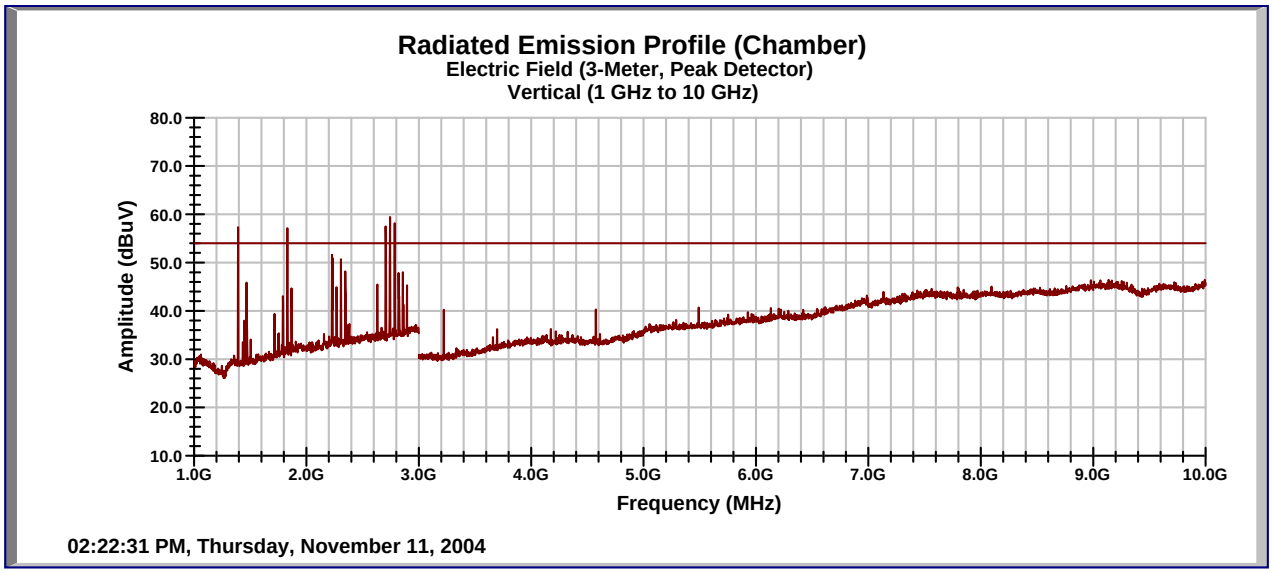
EUT Name	Hot Rod Metal (High Power)	**Date**	11 Novmeber 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses

Configuration Unit 04HP, 915 MHz, Power Level OB, 3.5ms burst every 131 ms. Wires in conduit used to connect to meter. Cast Pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
1391.00	V	1	23 avg	35.90	35.78	4.27	26.33	30.71	54.00	-23.29
2704.00	V	1	162 avg	29.30	35.34	6.15	29.43	29.54	54.00	-24.46
2785.00	V	1	176 avg	31.76	35.30	6.24	29.64	32.34	54.00	-21.66

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:Peak value for 1391.00 was 63.05. Peak for 2704.00 was 58.72. Peak value for 2785.00 was 57.00

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EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used	3m / SAS-516, 3115-5770	**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 915 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast Pit RBW 120 KHz, VBW 300 KHz										
915.00	V	1.03	127	66.28	0.00	2.47	21.80	90.55	94.00	-3.45
915.00	H	1	211	60.68	0.00	2.47	23.40	86.55	94.00	-7.45
Unit 04HP 915 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast Pit. RBW 1 MHz, VBW 3 MHz										
1830.00	H	1	70 pk	61.08	35.43	4.98	27.76	58.39	74.00	-15.61
1830.00	H	1	70 avg	34.87	35.43	4.98	27.76	32.18	54.00	-21.82
1830.00	V	1	317 pk	63.62	35.43	4.98	27.82	60.99	74.00	-13.01
1830.00	V	1	317 avg	35.80	35.43	4.98	27.82	33.17	54.00	-20.83
2745.00	H	1	47 pk	66.58	35.34	6.25	29.63	67.12	74.00	-6.88
2745.00	H	1	47 avg	33.42	35.34	6.25	29.63	33.96	54.00	-20.04
2745.00	V	1	358 pk	65.84	35.34	6.25	29.54	66.28	74.00	-7.72
2745.00	V	1	358 avg	32.08	35.34	6.25	29.54	32.52	54.00	-21.48
3660.00	H	1	0 pk	32.34	34.90	7.27	31.78	36.49	74.00	-37.06
3660.00	H	1	0 avg	20.26	34.90	7.27	31.78	24.41	54.00	-29.59
3660.00	V	1	336 pk	41.67	34.90	7.27	31.72	45.76	74.00	-28.24
3660.00	V	1	336 avg	20.37	34.90	7.27	31.72	24.46	54.00	-29.54
4575.00	H	1.09	138 pk	39.61	35.18	8.27	33.07	45.78	74.00	-28.22
4575.00	H	1.09	138 avg	22.18	35.18	8.27	33.07	28.35	54.00	-25.65
4575.00	V	1	52 pk	36.45	35.18	8.27	33.01	42.56	74.00	-31.44
4575.00	V	1	52 avg	19.87	35.18	8.27	33.01	25.98	54.00	-28.02
5490.00	H	1	330 pk	37.23	34.81	9.21	34.70	46.33	74.00	-27.67
5490.00	H	1	330 avg	21.74	34.81	9.21	34.70	30.84	54.00	-23.16
5490.00	V	1	33 pk	38.78	34.81	9.21	34.59	47.77	74.00	-26.23
5490.00	V	1	33 avg	21.87	34.81	9.21	34.59	30.86	54.00	-23.14
6405.00	H	1	0 pk	34.21	35.04	10.59	35.12	44.89	74.00	-29.11
6405.00	H	1	0 avg	21.67	35.04	10.59	35.12	32.35	54.00	-21.65
6405.00	V	1	200 pk	35.00	35.04	10.59	34.86	45.42	74.00	-28.58
6405.00	V	1	200 avg	21.70	35.04	10.59	34.86	32.12	54.00	-21.88

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

SOP 1 Radiated Emissions **Tracking #** 30462511.002 Page 6 of 18

EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 915 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 1 MHz, VBW 3 MHz										
7320.00	H	1	0 pk	37.57	35.01	10.82	36.48	49.86	74.00	-24.14
7320.00	H	1	0 avg	25.21	35.01	10.82	36.48	37.50	54.00	-16.50
7320.00	V	1	0 pk	37.77	35.01	10.82	36.21	49.78	74.00	-24.22
7320.00	V	1	0 avg	25.23	35.01	10.82	36.21	37.24	54.00	-16.76
8235.00	H	1	0 pk	37.02	35.37	11.69	38.12	51.47	74.00	-22.53
8235.00	H	1	0 avg	24.73	35.37	11.69	38.12	39.18	54.00	-14.82
8235.00	V	1	0 pk	37.12	35.37	11.69	38.07	51.51	74.00	-22.49
8235.00	V	1	0 avg	24.73	35.37	11.69	38.07	39.12	54.00	-14.88
9150.00	H	1	0 pk	38.57	35.54	12.29	38.39	53.71	74.00	-20.29
9150.00	H	1	0 avg	24.68	35.54	12.29	38.39	39.82	54.00	-14.18
9150.00	V	1	0 pk	37.49	35.54	12.29	38.38	52.62	74.00	-21.38
9150.00	V	1	0 avg	24.68	35.54	12.29	38.38	39.81	54.00	-14.19

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

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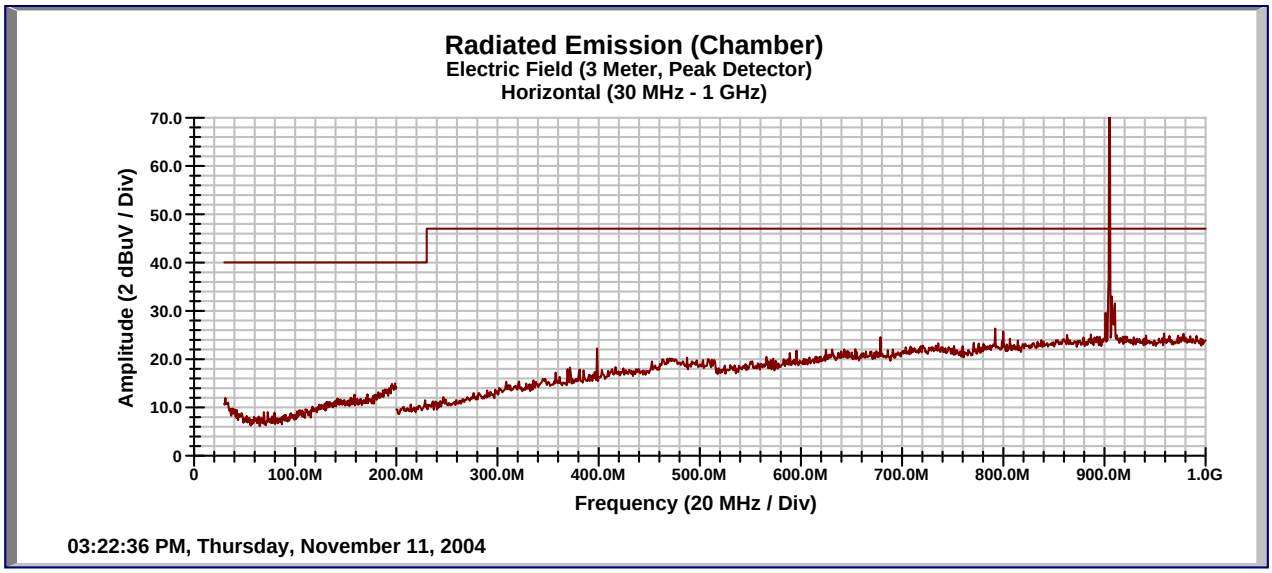
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses

Configuration Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

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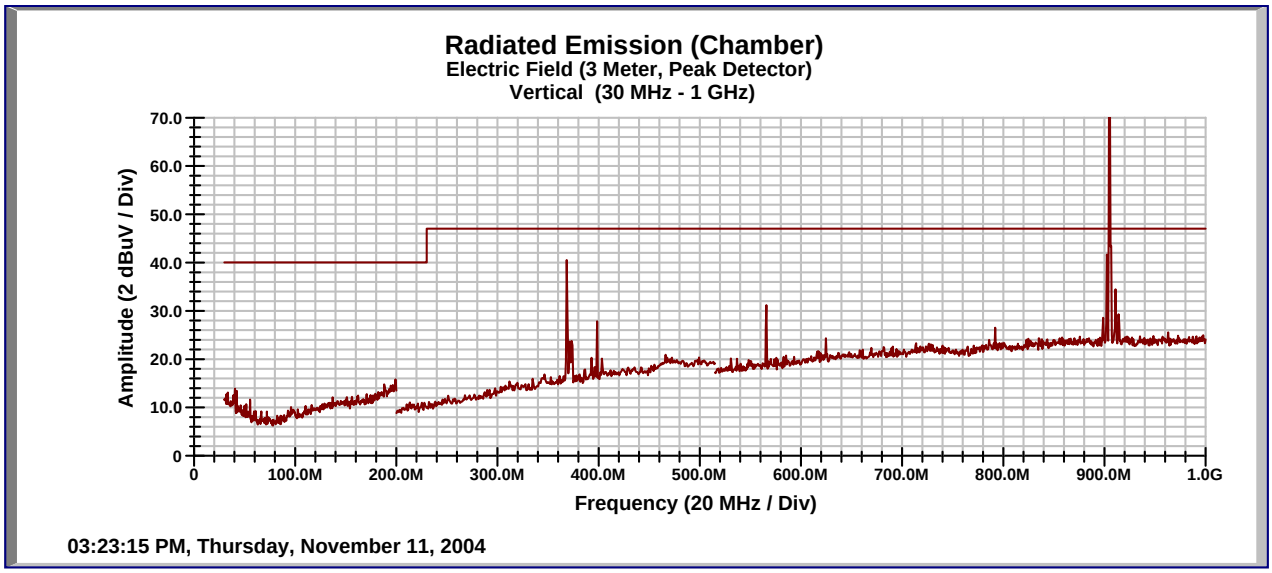
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses

Configuration Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
368.74	V	1	219	22.59	0.00	1.52	15.37	39.49	47.00	-7.51
565.80	V	1	97	7.22	0.00	1.92	18.18	27.33	47.00	-19.67

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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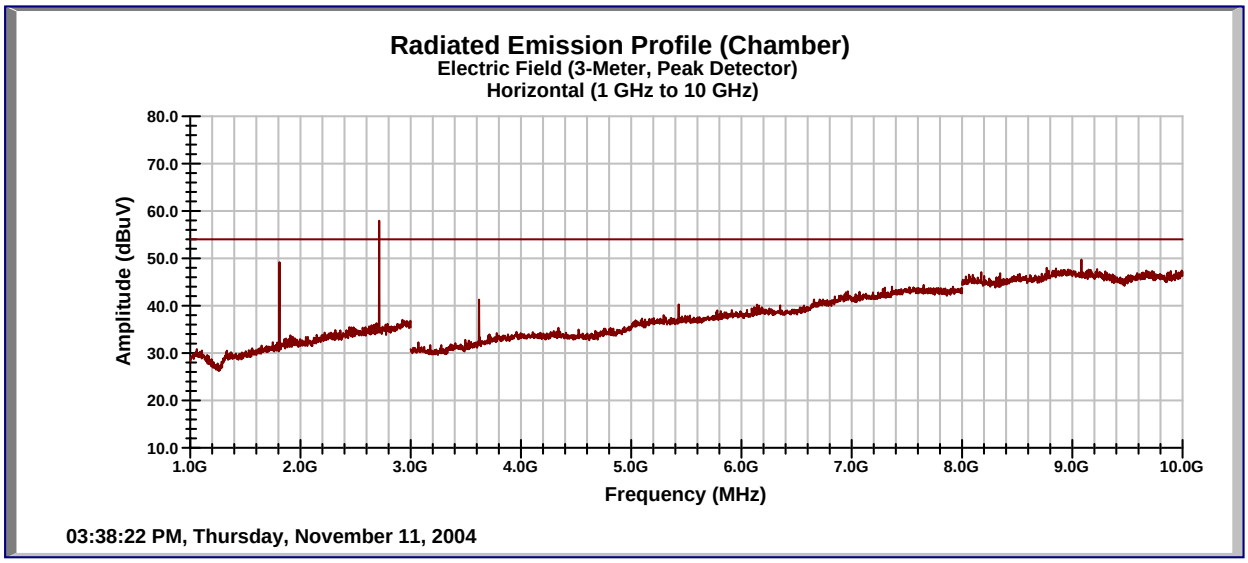
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses
Configuration	Unit 04HP, 905 MHz, power OB, 3.5ms burst every 131 ms. Wires in conduit. Final. Cast pit.		



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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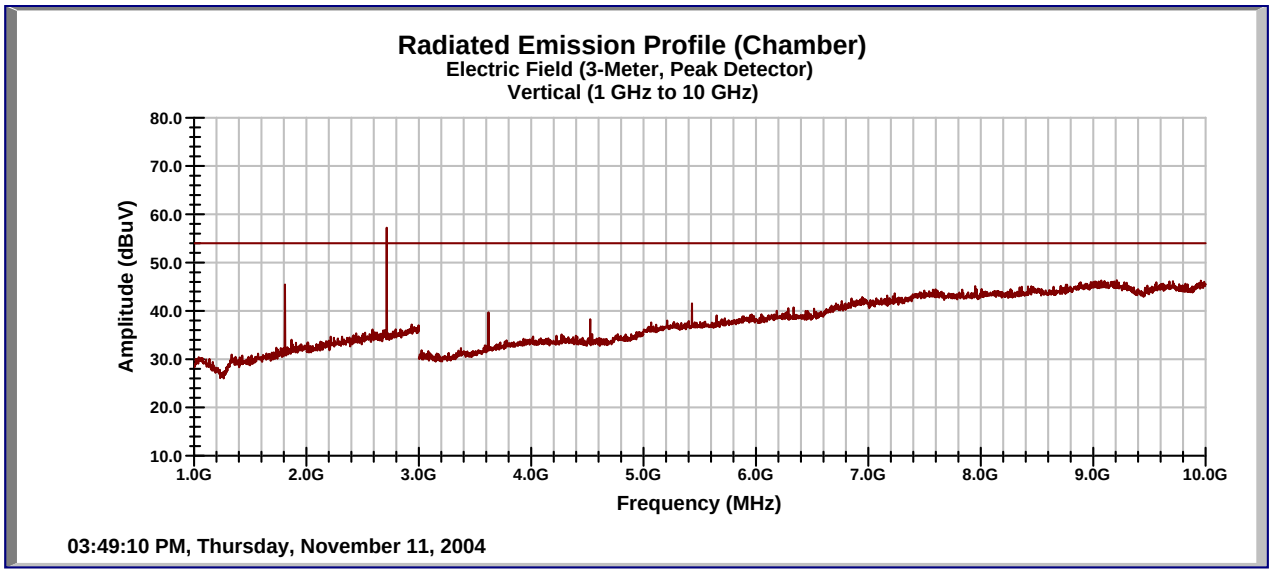
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses
Configuration	Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.		



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used	3m / SAS-516, 3115-5770	**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 120 KHz VBW 300 KHz										
905.00	H	1	248 pk	59.97	0.00	2.47	23.50	85.94	94.00	-8.06
905.00	V	1	118 pk	67.05	0.00	2.47	21.30	90.82	94.00	-3.18
Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 1 MHz VBW 3 MHz.										
1810.00	H	1	299 pk	55.43	35.48	4.96	27.71	52.62	74.00	-21.38
1810.00	H	1	299 avg	33.21	35.48	4.96	27.71	30.40	54.00	-23.60
1810.00	V	1	36 pk	59.66	35.48	4.96	27.75	56.90	74.00	-17.10
1810.00	V	1	36 avg	34.15	35.48	4.96	27.75	31.39	54.00	-22.61
2715.00	H	1.08	48 pk	62.57	35.34	6.18	29.54	62.95	74.00	-11.05
2715.00	H	1.08	48 avg	32.25	35.34	6.18	29.54	32.63	54.00	-21.37
2715.00	V	1	184 pk	66.43	35.34	6.18	29.46	66.73	74.00	-7.27
2715.00	V	1	184 avg	34.07	35.34	6.18	29.46	34.37	54.00	-19.63
3620.00	H	1.07	55 pk	41.18	34.98	7.24	31.66	45.10	74.00	-28.90
3620.00	H	1.07	55 avg	19.79	34.98	7.24	31.66	23.71	54.00	-30.29
3620.00	V	1	23 pk	43.46	34.98	7.24	31.61	47.33	74.00	-26.67
3620.00	V	1	23 avg	20.35	34.98	7.24	31.61	24.22	54.00	-29.78
4525.00	H	1	241 pk	37.59	35.11	8.22	32.89	43.59	74.00	-30.41
4525.00	H	1	241 avg	19.11	35.11	8.22	32.89	25.11	54.00	-28.89
4525.00	V	1	338 pk	38.42	35.11	8.22	32.87	44.40	74.00	-29.60
4525.00	V	1	338 avg	19.22	35.11	8.22	32.87	25.20	54.00	-28.80
5430.00	H	1	313 pk	37.29	34.75	9.09	34.69	46.32	74.00	-27.68
5430.00	H	1	313 avg	18.91	34.75	9.09	34.69	27.94	54.00	-26.06
5430.00	V	1	38 pk	35.67	34.75	9.09	34.54	44.55	74.00	-29.45
5430.00	V	1	38 avg	18.43	34.75	9.09	34.54	27.31	54.00	-26.69
6335.00	H	1.08	1 pk	33.98	35.06	10.48	35.07	44.47	74.00	-29.53
6335.00	H	1.08	1 avg	18.47	35.06	10.48	35.07	28.96	54.00	-25.04
6335.00	V	1.78	190 pk	36.08	35.06	10.48	34.83	46.34	74.00	-27.66
6335.00	V	1.78	190 avg	18.67	35.06	10.48	34.83	28.93	54.00	-25.07

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor $\pm$ Uncertainty

Combined Standard Uncertainty $u_c(y) = \pm 1.6$dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence

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EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used	3m / SAS-516, 3115-5770	**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 905 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. . RBW 1 MHz VBW 3 MHz.										
7240.00	H	1	0 pk	33.13	35.05	10.82	36.56	45.46	74.00	-28.54
7240.00	H	1	0 avg	20.79	35.05	10.82	36.56	33.12	54.00	-20.88
7240.00	V	1	0 pk	33.40	35.05	10.82	36.26	45.43	74.00	-28.57
7240.00	V	1	0 avg	20.77	35.05	10.82	36.26	32.80	54.00	-21.20
8145.00	H	1	0 pk	33.78	35.33	11.64	38.27	48.36	74.00	-25.64
8145.00	H	1	0 avg	21.17	35.33	11.64	38.27	35.75	54.00	-18.25
8145.00	V	1	0 pk	34.09	35.33	11.64	38.20	48.60	74.00	-25.40
8145.00	V	1	0 avg	21.18	35.33	11.64	38.20	35.69	54.00	-18.31
9050.00	H	1	0 pk	33.88	35.53	12.24	38.53	49.12	74.00	-24.88
9050.00	H	1	0 avg	21.10	35.53	12.24	38.53	36.34	54.00	-17.66
9050.00	V	1	0 pk	33.45	35.53	12.24	38.46	48.62	74.00	-25.38
9050.00	V	1	0 avg	21.11	35.53	12.24	38.46	36.28	54.00	-17.72

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor $\pm$ Uncertainty

Combined Standard Uncertainty $u_c(y) = \pm 1.6$dB Expanded Uncertainty $U = ku_c(y)$ $k = 2$ for 95% confidence

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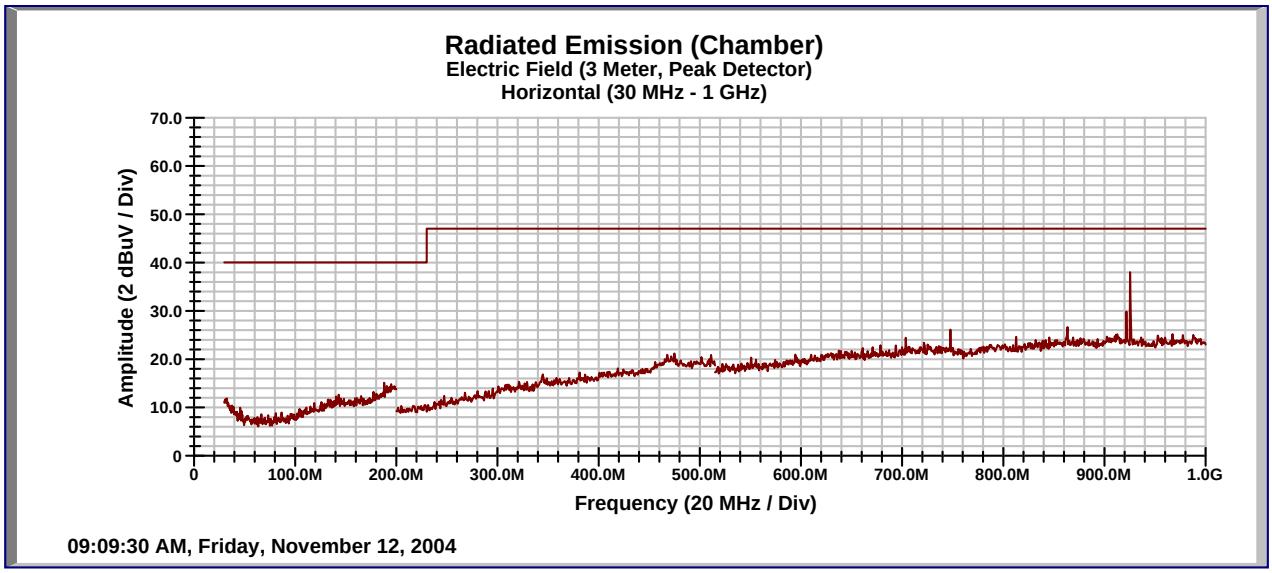
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses
Configuration	Unit 04 HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.		



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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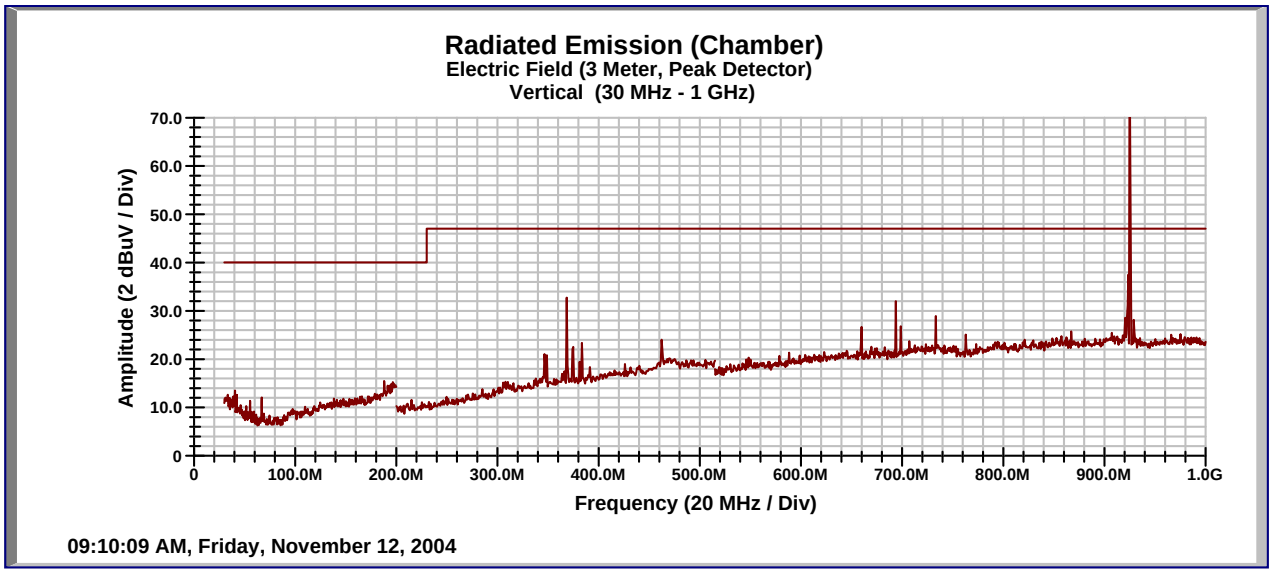
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	120 KHz / 300 KHz
Dist/Ant Used	3m / 3110B, SAS-516	**Performed by**	Eugene Moses

Configuration Unit 04 HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
368.70	V	1.33	228	14.28	0.00	1.52	15.37	31.18	47.00	-15.82

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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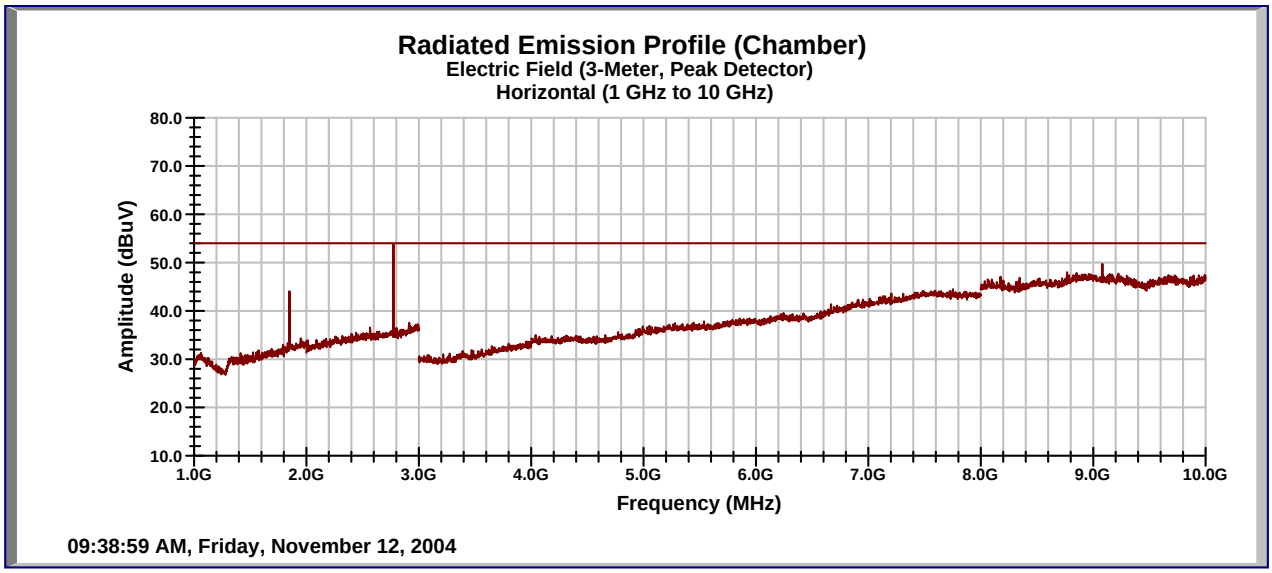
EUT Name	Hot Rod Metal (High Power)	**Date**	11 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses
Configuration	Unit 04 HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.		



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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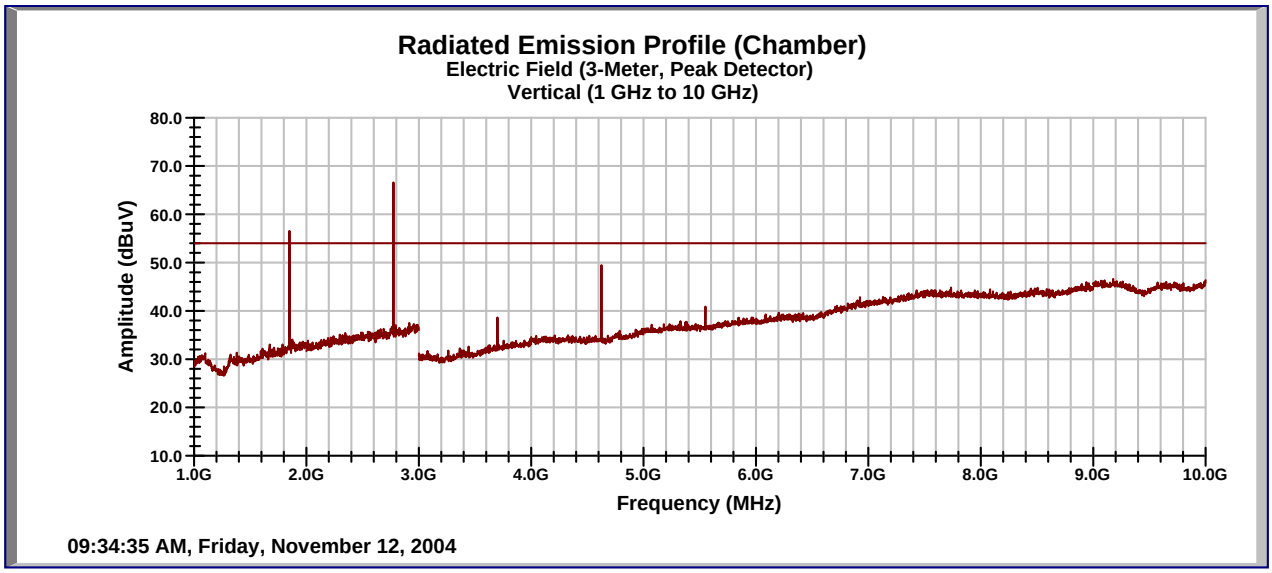
EUT Name	Hot Rod Metal (High Power)	**Date**	11 Novmeber 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	70 Deg. F / 35% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC**	N/A
		RBW / VBW	1 MHz / 3 MHz
Dist/Ant Used	3m / 3115-5770	**Performed by**	Eugene Moses

Configuration Unit 04 HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit.



Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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EUT Name	Hot Rod Metal (High Power)	**Date**	12 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	72 Deg. F / 38% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used		**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 120 KHz VBW 300 KHz										
925.00	H	1.34	245 pk	59.09	0.00	2.47	23.20	84.76	94.00	-9.24
925.00	V	1.06	127 pk	65.11	0.00	2.47	22.00	89.58	94.00	-4.42
Unit 04HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 1 MHz VBW 3 MHz										
1850.00	H	1	262 pk	64.59	35.39	5.01	28.44	62.65	74.00	-11.35
1850.00	H	1	262 avg	35.87	35.39	5.01	28.44	33.93	54.00	-20.07
1850.00	V	1	241 pk	65.16	35.39	5.01	28.38	63.16	74.00	-10.84
1850.00	V	1	241 avg	35.36	35.39	5.01	28.38	33.36	54.00	-20.64
2775.00	H	1	222 pk	58.57	35.31	6.24	31.60	61.10	74.00	-12.90
2775.00	H	1	222 avg	32.39	35.31	6.24	31.60	34.92	54.00	-19.08
2775.00	V	1	187 pk	65.42	35.31	6.24	31.39	67.75	74.00	-6.25
2775.00	V	1	187 avg	34.71	35.31	6.24	31.39	37.04	54.00	-16.96
3700.00	H	1	318 pk	35.80	34.86	7.29	33.62	41.85	74.00	-32.15
3700.00	H	1	318 avg	18.26	34.86	7.29	33.62	24.31	54.00	-29.69
3700.00	V	1	152 pk	41.56	34.86	7.29	33.48	47.47	74.00	-26.53
3700.00	V	1	152 avg	18.55	34.86	7.29	33.48	24.46	54.00	-29.54
4625.00	H	1	55 pk	47.13	35.23	8.25	34.20	54.35	74.00	-19.65
4625.00	H	1	55 avg	20.92	35.23	8.25	34.20	28.14	54.00	-25.86
4625.00	V	1.03	354 pk	43.88	35.23	8.25	34.20	51.10	74.00	-22.90
4625.00	V	1.03	354 avg	19.49	35.23	8.25	34.20	26.71	54.00	-27.29
5550.00	H	1	4 pk	38.03	34.84	9.30	36.18	48.67	74.00	-25.33
5550.00	H	1	4 avg	18.92	34.84	9.30	36.18	29.56	54.00	-24.44
5550.00	V	1	38 pk	31.50	34.84	9.30	36.31	42.27	74.00	-31.73
5550.00	V	1	38 avg	17.98	34.84	9.30	36.31	28.75	54.00	-25.25

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

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EUT Name	Hot Rod Metal (High Power)	**Date**	12 November 2004
EUT Model	HOTRODMETALV1	**Temp / Hum in**	72 Deg. F / 38% RH
EUT Serial	None	**Temp / Hum out**	N/A
Standard	FCC 47 CFR Part 15	**Line AC / Freq**	N/A
Dist/Ant Used		**Performed by**	Eugene Moses

Emission Freq (MHz)	ANT Polar (H/V)	ANT Pos (m)	Table Pos (deg)	FIM Value (dBuV)	Amp Gain (dB)	Cable Loss (dB)	ANT Factor (dB/m)	E-Field Value (dBuV/m)	Spec Limit (dBuV/m)	Spec Margin (dB)
Unit 04HP 925 MHz power OB 3.5ms max tx time every 131 ms. Wires in conduit. Final. Cast pit. RBW 1 MHz VBW 3 MHz										
6475.00	H	1	0 pk	30.50	35.01	11.38	36.43	43.29	74.00	-30.71
6475.00	H	1	0 avg	17.89	35.01	11.38	36.43	30.68	54.00	-23.32
6475.00	V	1	0 pk	30.45	35.01	11.38	36.82	43.64	74.00	-30.36
6475.00	V	1	0 avg	17.91	35.01	11.38	36.82	31.10	54.00	-22.90
7400.00	H	1	0 pk	33.22	35.01	10.91	37.86	46.98	74.00	-27.02
7400.00	H	1	0 avg	20.96	35.01	10.91	37.86	34.72	54.00	-19.28
7400.00	V	1	0 pk	33.52	35.01	10.91	38.18	47.60	74.00	-26.40
7400.00	V	1	0 avg	20.96	35.01	10.91	38.18	35.04	54.00	-18.96
8325.00	H	1	0 pk	33.43	35.41	11.77	38.03	47.81	74.00	-26.19
8325.00	H	1	0 avg	20.53	35.41	11.77	38.03	34.91	54.00	-19.09
8325.00	V	1	0 pk	32.88	35.41	11.77	38.06	47.30	74.00	-26.70
8325.00	V	1	0 avg	20.52	35.41	11.77	38.06	34.94	54.00	-19.06
9250.00	H	1	0 pk	34.18	35.61	12.40	39.10	50.07	74.00	-23.93
9250.00	H	1	0 avg	21.52	35.61	12.40	39.10	37.41	54.00	-16.59
9250.00	V	1	0 pk	33.91	35.61	12.40	39.00	49.70	74.00	-24.30
9250.00	V	1	0 avg	21.50	35.61	12.40	39.00	37.29	54.00	-16.71

Spec Margin = E-Field Value - Limit, E-Field Value = FIM Value - Amp Gain + Cable Loss + ANT Factor ± Uncertainty

Combined Standard Uncertainty $u_c(y)$ = ± 1.6dB Expanded Uncertainty $U = ku_c(y)$ k = 2 for 95% confidence

Notes:

4.1.3 Photos

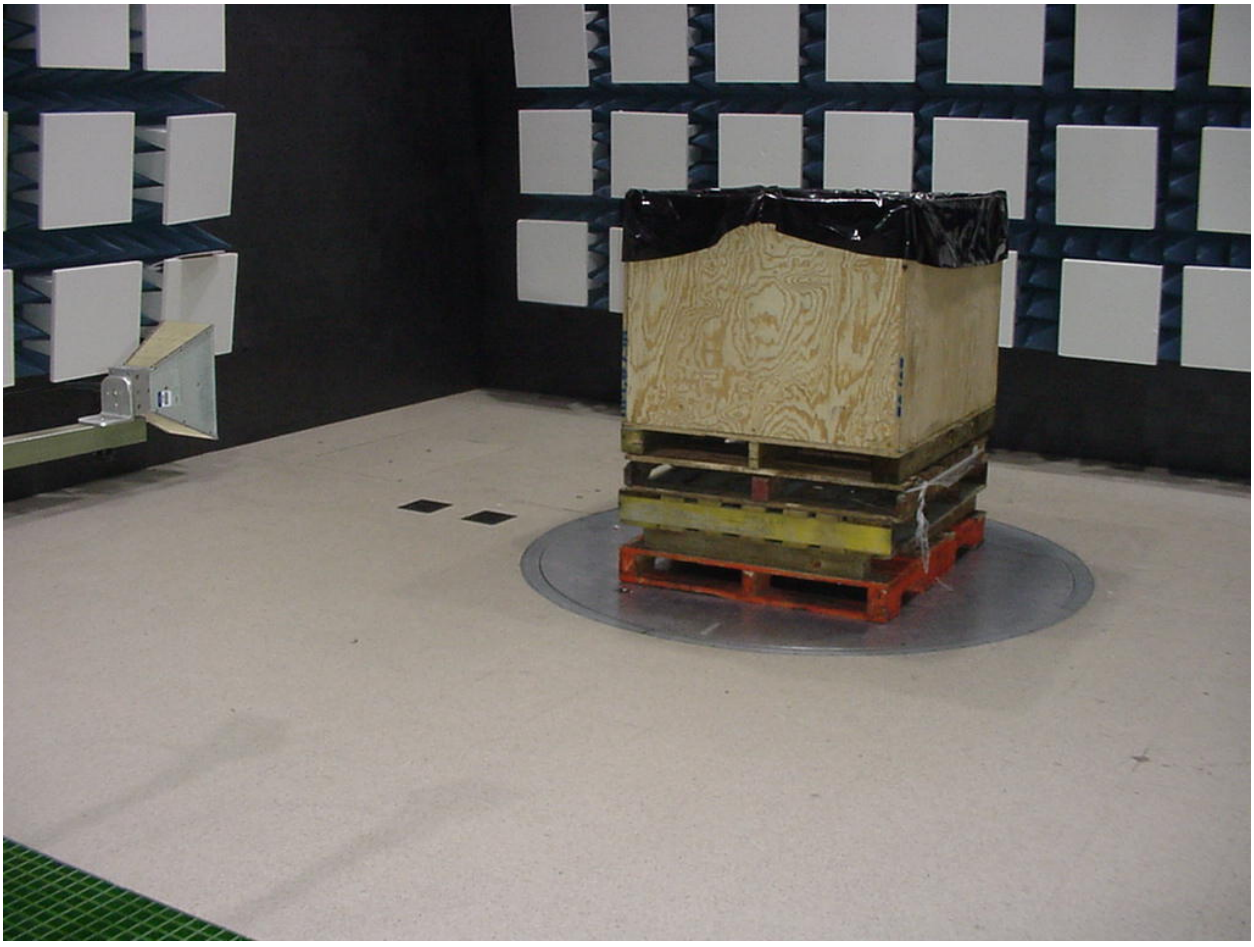

Figure 3 - Radiated Emissions Test Setup (Chamber - Front)

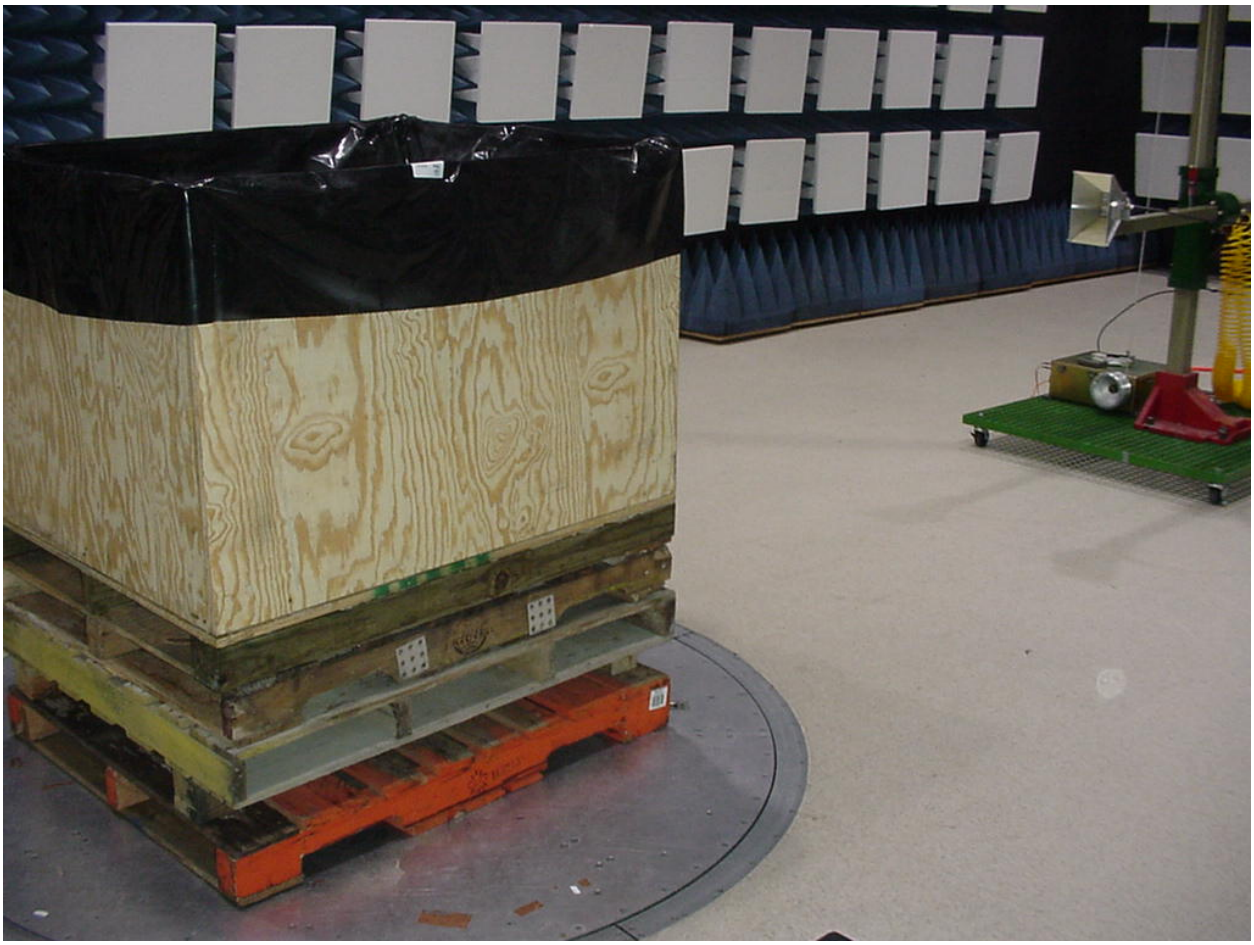

Figure 4 - Radiated Emissions Test Setup (Chamber - Back)

4.1.4 Sample Calculation

The field strength is calculated by subtracting the Amplifier Gain and adding the Cable Loss and Antenna Correction Factor to the measured reading. The basic equation is as follows:

Field Strength (dBμV/m) = FIM - AMP + CBL + ACF

Where: FIM = Field Intensity Meter (dBμV)
AMP = Amplifier Gain (dB)
CBL = Cable Loss (dB)
ACF = Antenna Correction Factor (dB/m)

$$\mu V/m = 10^{\frac{dB\mu V/m}{20}}$$

4.2 Conducted Emissions

This test measures the levels emanating from the EUT, thus evaluating the potential for the EUT to cause radio frequency interference to other electronic devices, in accordance with 47 CFR 15, ANSI C63.4:2003.

However, since the EUT is battery powered, this test is not required.

4.3 Band Edge Compliance for FCC Part 15.209 and 15.249

Testing was performed in accordance with FCC Parts 15.209 and 15.249, ANSI C63.4:2003.

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

The EUT is powered from an internal battery during operation. The unit was tested with the battery fully charged.

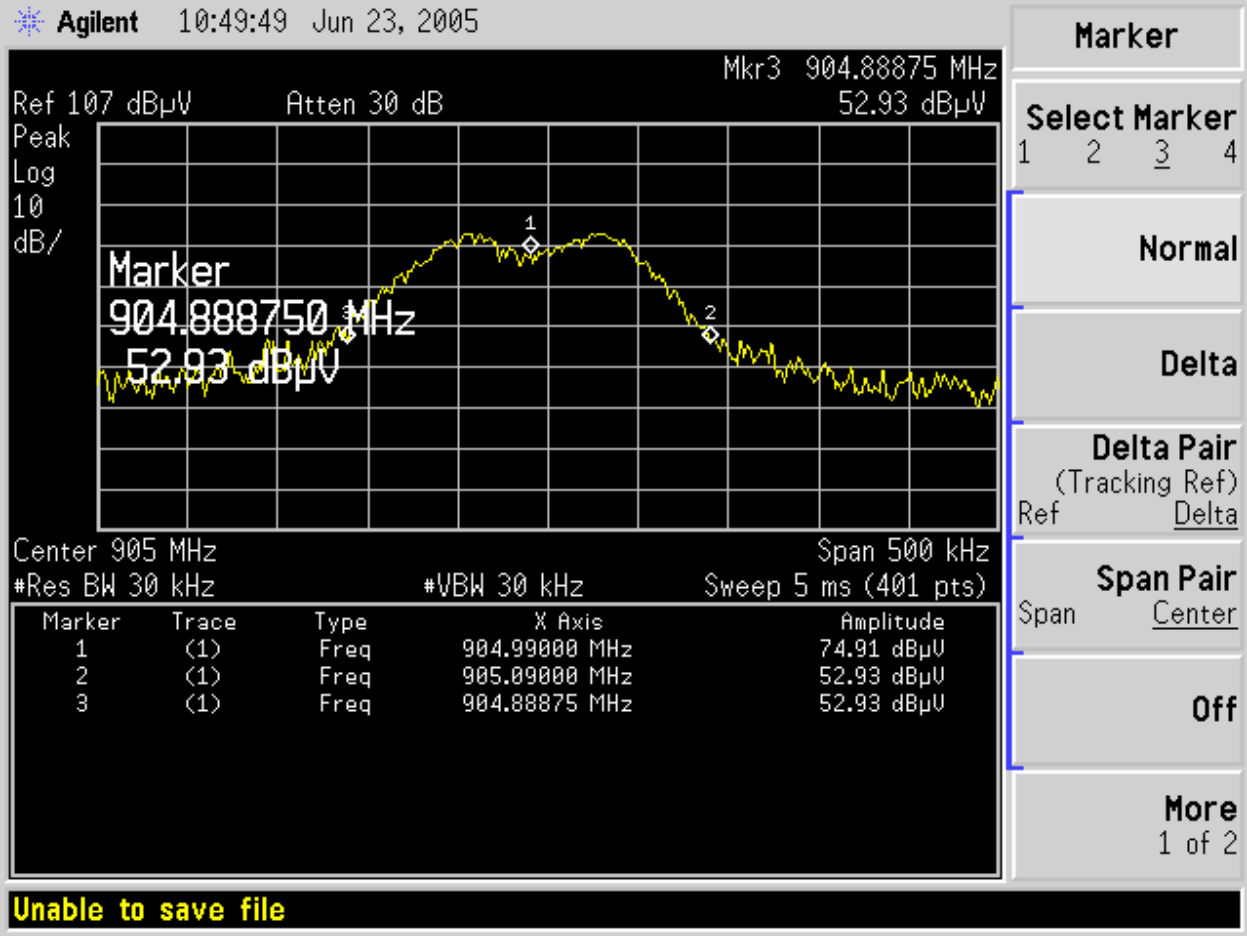

Figure 5 – Fundamental Frequency (905 MHz), FCC Part 15.209 and 15.249, 20 DB Bandwidth

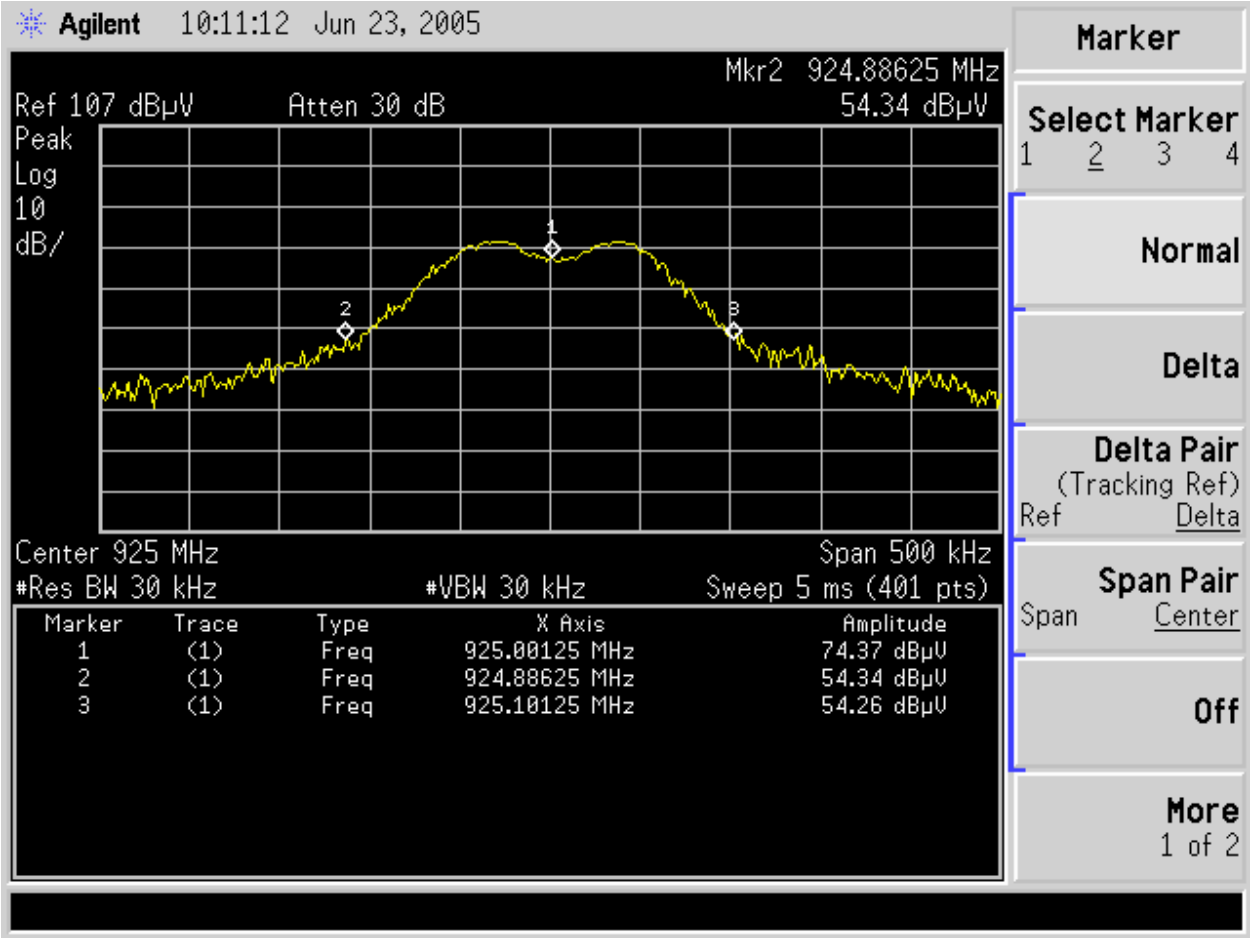

Figure 6 – Fundamental Frequency (925 MHz), FCC Part 15.209 and 15.249, 20 DB Bandwidth

5 Test Equipment Use List

Equipment	Manufacturer	Model #	Serial/Inst #	Last Cal dd/mm/yy	Next Cal dd/mm/yy
SOP 1 - Radiated Emissions (5 Meter Chamber)					
Amplifier, preamp	Agilent Technologies	8449B	3008A01480	10-May-04	10-May-05
Ant. Biconical	EMCO	3110B	3367	4-Feb-05	4-Feb-06
Ant. Log Periodic	AH Systems	SAS-516	133	19-Jan-04	19-Jan-05
Antenna Horn	EMCO	3115	5770	23-Dec-04	23-Dec-05
Cable, Coax	Andrew	FSJ1-50A	003	15-Jan-05	15-Jan-06
Cable, Coax	Andrew	FSJ1-50A	042	15-Jan-05	15-Jan-06

Cable, Coax	Andrew	FSJ1-50A	045	15-Jan-05	15-Jan-06
Chamber, Semi-Anechoic	Braden Shielding	5 meter	A67631	27-Jan-05	27-Jan-06
Data Table, EMCWin	TUV Rheinland	EMCWin.dll	002	6-Jan-02	6-Jan-06
Spectrum Analyzer	Agilent Tec.	E7405A	US39440157	6-Aug-04	6-Aug-05

General Laboratory Equipment					
Filter, 1.5 GHz High Pass	Bonn Elektronik	BHF 1500	025155	07/22/04	07/22/05
Meter, Multi	Fluke	79-3	69200606	5-Aug-04	5-Aug-05

* Calibration of equipment past due for re-calibration will be performed expeditiously. If any equipment is found to be out of tolerance at that time, affected customers will be notified accordingly.

6 EMC Test Plan

A test plan was not provided by the manufacturer for this testing. EUT operation and configuration was based on the applicable test standards and actual application of the EUT.