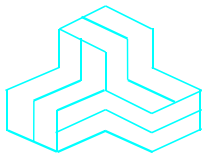


ENGINEERING TEST REPORT



900 MHz OEM DTS Module
Model No.: ASP-000030-00
FCC ID: YTGG1XX08P25DRCM

Applicant:

Aeryon Labs Inc
584 Colby Drive Unit 1
Waterloo, Ontario
Canada N2V 1A2

In Accordance With

Federal Communications Commission (FCC)
Part 15, Subpart C, Section 15.247
Digital Modulation Systems (DTS) Operating in 902 - 928 MHz Band

UltraTech's File No.: AERY-005AF15C247

This Test report is Issued under the Authority of
Tri M. Luu, BAsC
Vice President of Engineering
UltraTech Group of Labs

Date: November 11, 2010

Report Prepared by: Dan Huynh

Tested by: Mr. Hung Trinh

Issued Date: November 11, 2010

Test Dates: July 14 & November 11, 2010

*The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.
This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government.*

UltraTech

3000 Bristol Circle, Oakville, Ontario, Canada, L6H 6G4
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NvLap Lab Code 200093-0



SL2-IN-E-1119R



Korea KCC-RRL
CA2049

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EXHIBIT 1. INTRODUCTION

1.1. SCOPE

| | |
|--------------------------------------|--|
| Reference: | FCC Part 15, Subpart C, Section 15.247 |
| Title: | Code of Federal Regulations (CFR), Title 47 – Telecommunication, Part 15 |
| Purpose of Test: | Class II Permissive Change filing for additional antenna and co-location with FCC ID: YTGG1XXDRCM08P25 and operating in DTS mode only. |
| Test Procedures: | American National Standards Institute ANSI C63.10 - American National Standard for Testing Unlicensed Wireless Devices |
| Environmental Classification: | [x] Commercial, industrial or business environment [] Residential environment |

1.2. RELATED SUBMITTAL(S)/GRANT(S)

None.

1.3. NORMATIVE REFERENCES

| Publication | Year | Title |
|----------------------------|------------------------------|---|
| 47 CFR Parts 0-19 | 2009 | Code of Federal Regulations (CFR), Title 47 – Telecommunication |
| ANSI C63.10 | 2009 | American National Standard for Testing Unlicensed Wireless Devices |
| ANSI C63.4 | 2003 | 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 |
| CISPR 22 & EN 55022 | 2008-09, Edition 6.0 2006 | Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement |
| CISPR 16-1-1 +A1 +A2 | 2006 2006 2007 | Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-1: Measuring Apparatus |
| CISPR 16-1-2 +A1 +A2 | 2003 2004 2006 | Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-2: Conducted disturbances |
| KDB Publication No. 558074 | 2005 | Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247) |

EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1. CLIENT INFORMATION

| APPLICANT | |
|------------------------|---|
| Name: | Aeryon Labs Inc. |
| Address: | 584 Colby Drive Unit 1 Waterloo, Ontario Canada N2V 1A2 |
| Contact Person: | Mr. Stephen Marchetti Phone #: 519-489-6726 x213 Fax #: 519-489-6726 Email Address: stephen@aeryon.com |

| MANUFACTURER | |
|------------------------|--|
| Name: | Microhard Systems Inc. |
| Address: | #17, 2135 - 32nd Avenue N.E. Calgary, Alberta Canada T2E 6Z3 |
| Contact Person: | Mr. Hany Shenouda Phone #: 403 248-0028 Fax #: 403 248-2762 Email Address: shenouda@microhardcorp.com |

2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

| | |
|---------------------------------------|----------------------------------|
| Brand Name: | Aeryon Labs Inc. |
| Product Name: | 900 MHz OEM DTS Module |
| Model Name or Number: | ASP-000030-00 |
| Serial Number: | Test Sample |
| Type of Equipment: | Digital Transmission System |
| Input Power Supply Type: | External Regulated DC Sources |
| Primary User Functions of EUT: | Spread Spectrum OEM Transceiver. |

ULTRATECH GROUP OF LABS

3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4
Tel. #: 905-829-1570, Fax. #: 905-829-8050, Email: vic@ultratech-labs.com, Website: <http://www.ultratech-labs.com>

File #: AERY-005AF15C247
November 11, 2010

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

2.3. EUT'S TECHNICAL SPECIFICATIONS

| TRANSMITTER | |
|--|--|
| Equipment Type: | <ul style="list-style-type: none"> ▪ Mobile ▪ Base Station (fixed use) |
| Intended Operating Environment: | Commercial, industrial or business environment |
| Power Supply Requirement: | 3.3 VDC |
| RF Output Power Rating: | 0.001 to 1 W |
| Operating Frequency Range: | 903.75 - 926.25 MHz |
| RF Output Impedance: | 50 Ω |
| Duty Cycle: | Continuous |
| Antenna Connector Type: | MMCX |

2.4. ANTENNA DESCRIPTION

| | |
|-------------------------|-----------------------|
| Manufacturer: | Aeryon Labs Inc |
| Type: | 900 MHz Sleeve Dipole |
| Model: | Aeryon Scout 900Mhz |
| Frequency Range: | 915 MHz +/- 15 MHz |
| Impedance: | 50 Ω |
| Gain (dBi): | 2 |

2.5. LIST OF EUT'S PORTS

| Port Number | EUT's Port Description | Number of Identical Ports | Connector Type | Cable Type (Shielded/Non-shielded) |
|-------------|------------------------|---------------------------|----------------|--|
| 1 | RF IN/OUT Port | 1 | MMCX | Shielded coaxial cable with unique coupling connectors |
| 2 | DC Supply & I/O Port | 1 | Pin Header | No cable, direct connection |

2.6. ANCILLARY EQUIPMENT

The EUT was tested while connected to the following representative configuration of ancillary equipment necessary to exercise the ports during tests:

| Ancillary Equipment # 1 | |
|--------------------------------|------------------|
| Description: | Test Jig |
| Brand name: | Aeryon Labs Inc. |
| Connected to EUT's Port: | I/O Port |

EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

| | |
|---------------------|---------|
| Temperature: | 21°C |
| Humidity: | 51% |
| Pressure: | 102 kPa |
| Power Input Source: | 3.3 VDC |

3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TESTS

| | |
|--|--|
| Operating Modes: | Each of lowest, middle and highest channel frequencies transmits continuously for emissions measurements. |
| Special Test Software & Hardware: | Special software provided by the applicant was installed to allow the EUT to operate at each channel frequency continuously. For example, the transmitter will be operated at each of lowest, middle and highest frequencies individually continuously during testing. |
| Transmitter Test Antenna: | The EUT is tested with the antenna fitted in a manner typical of normal intended use. |

| | |
|---|-------------------------------|
| Transmitter Test Signals | |
| Frequency Band(s): | 903.75 - 926.25 MHz |
| Frequency(ies) Tested: (Near lowest, near middle & near highest frequencies in the frequency range of operation.) | 903.75, 915.75 and 926.25 MHz |
| RF Power Output: (measured maximum output power at antenna terminals) | 1 Watt (conducted) |
| Normal Test Modulation: | 2-level FSK at 1.3 Mbps |
| Modulating Signal Source: | Internal |

EXHIBIT 4. SUMMARY OF TEST RESULTS

4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- AC Power Line Conducted Emissions were performed in UltraTech's shielded room, 24'(L) by 16'(W) by 8'(H).
- Radiated Emissions were performed at the Ultratech's 3-10 TDK Semi-Anechoic Chamber situated in the Town of Oakville, province of Ontario. This test site been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville 3-10 TDK Semi-Anechoic Chamber has been filed with FCC office (FCC File No.: 91038) and Industry Canada office (Industry Canada File No.: 2049A-3). Expiry Date: 2011-05-01.

4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

| FCC Section(s) | Test Requirements | Compliance (Yes/No) |
|---|---|---------------------|
| 15.207(a) | Power Line Conducted Emissions | See note |
| 15.247(a)(2) | 6 dB Bandwidth | See note |
| 15.247(b)(3) | Peak Conducted Output Power - DTS | Yes |
| 15.247(d) | Band-Edge and RF Conducted Spurious Emissions at the Transmitter Antenna Terminal | See note |
| 15.247(d), 15.209 & 15.205 | Transmitter Spurious Radiated Emissions | Yes |
| 15.247(e), (f) | Power Spectral Density | See note |
| 15.247(i), 1.1307, 1.1310, 2.1091 & 2.1093 | RF Exposure | Yes |
| NOTE: Tests are not required for this Class II Permissive Change. | | |

4.3. MODIFICATIONS INCORPORATED IN THE EUT FOR COMPLIANCE PURPOSES

None.

ULTRATECH GROUP OF LABS

3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4
Tel. #: 905-829-1570, Fax. #: 905-829-8050, Email: vic@ultratech-labs.com, Website: <http://www.ultratech-labs.com>

File #: AERY-005AF15C247
November 11, 2010

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

EXHIBIT 5. MEASUREMENTS, EXAMINATIONS & TEST DATA FOR EMC EMISSIONS

5.1. TEST PROCEDURES

This section contains test results only. Details of test methods and procedures can be found in ANSI C63.10 and KDB Publication No. 558074: Guidance on Measurements for Digital Transmission Systems.

5.2. MEASUREMENT UNCERTAINTIES

The measurement uncertainties stated were calculated in accordance with the requirements of CISPR 16-4-2 @ IEC:2003 and JCGM 100:2008 (GUM 1995) – Guide to the Expression of Uncertainty in Measurement. Please refer to Exhibit 7 for Measurement Uncertainties.

5.3. MEASUREMENT EQUIPMENT USED

The measurement equipment used complied with the requirements of the Standards referenced in the Methods & Procedures ANSI C63.4 and CISPR 16-1-1.

5.4. ESSENTIAL/PRIMARY FUNCTIONS AS DECLARED BY THE MANUFACTURER

The ASP-000030-00 is a high-performance embedded wireless data transceiver. Operating in the 902 - 928 MHz ISM band, this module is capable of providing reliable wireless data transfer between almost any type of equipment which uses an asynchronous serial interface. The small-size and superior RF performance of this module make it ideal for many applications.

5.5. PEAK CONDUCTED OUTPUT POWER - DTS [§ 15.247(b)(3)]

5.5.1. Limit(s)

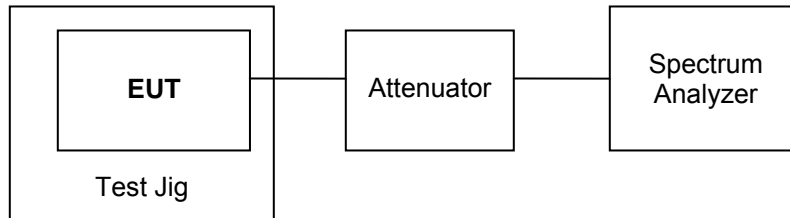
§ 15.247(b)(3): For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the *maximum conducted output power* is the highest total transmit power occurring in any mode.

§15.247(b)(4): The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.5.2. Method of Measurements & Test Arrangement

KDB Publication No. 558074: Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)

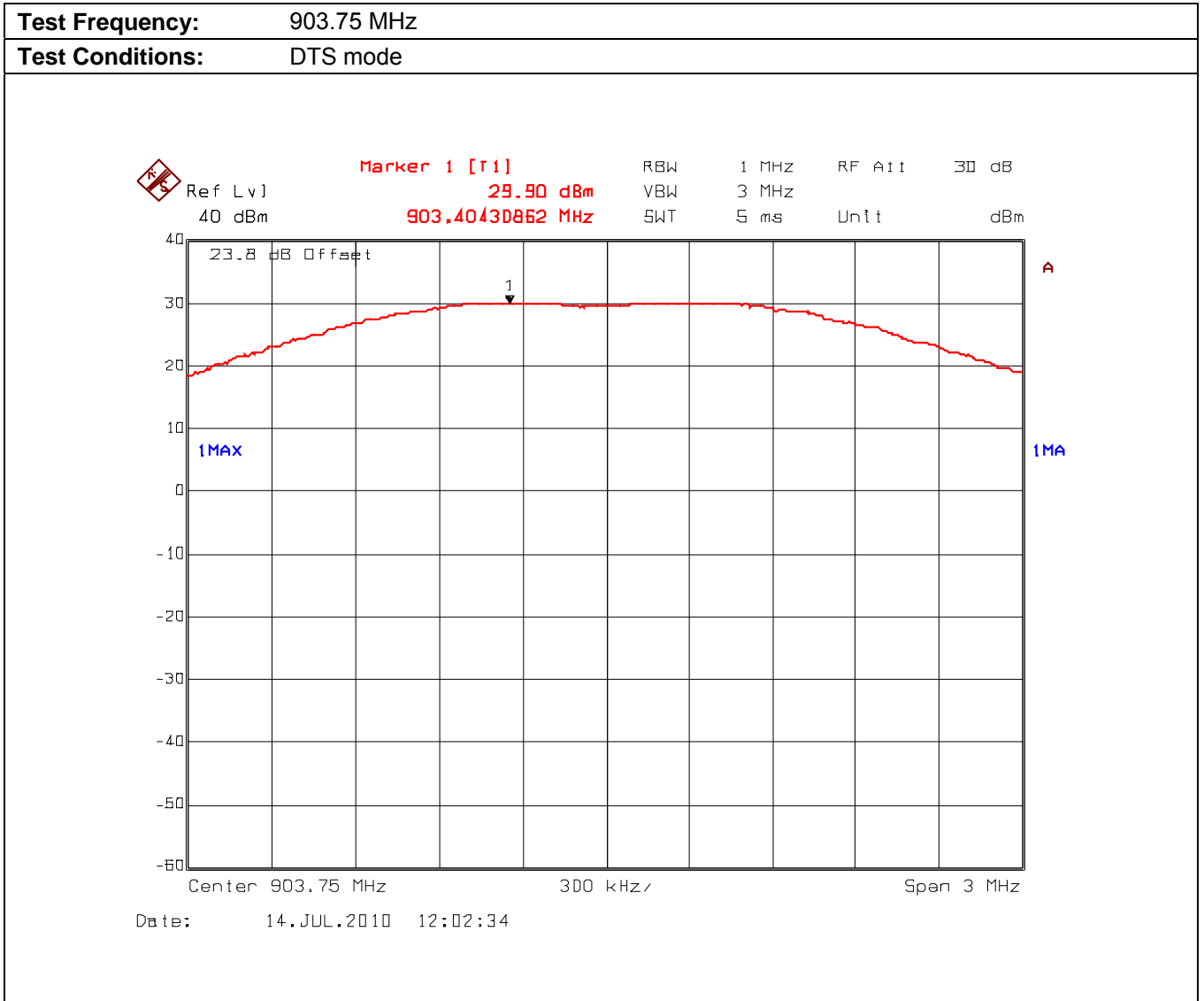
5.5.3. Test Arrangement



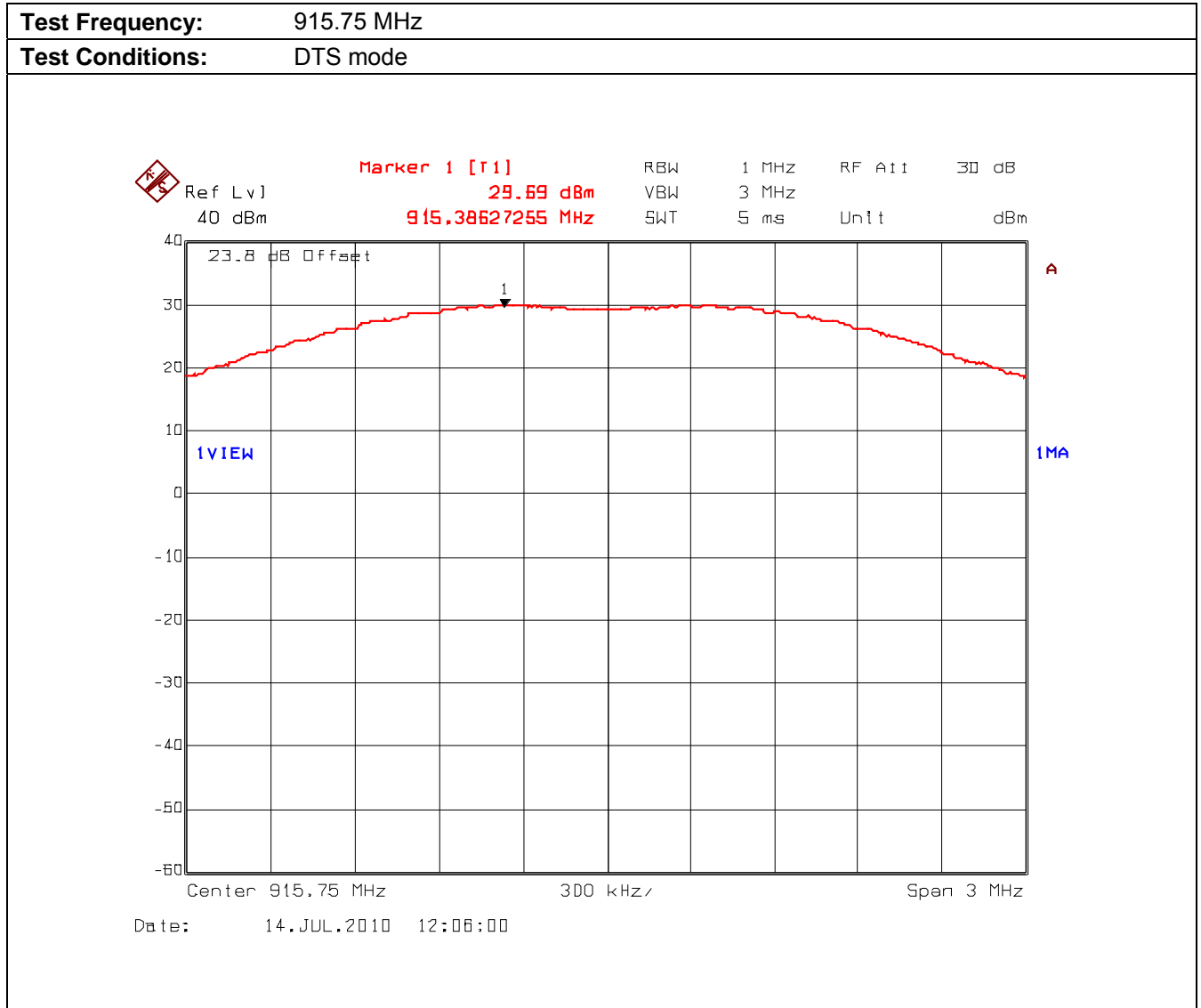
5.5.4. Test Data

| Frequency (MHz) | Peak Conducted Power (dBm) | Peak EIRP (dBm) (see note) | Peak Conducted Power Limit (dBm) | EIRP Limit (dBm) |
|--|----------------------------|----------------------------|----------------------------------|------------------|
| 903.75 | 29.90 | 31.90 | 30 | 36 |
| 915.75 | 29.69 | 31.69 | 30 | 36 |
| 926.25 | 29.49 | 31.49 | 30 | 36 |
| Note: The EIRP value shall be derived by adding the maximum antenna gain to measured peak conduct power value. | | | | |

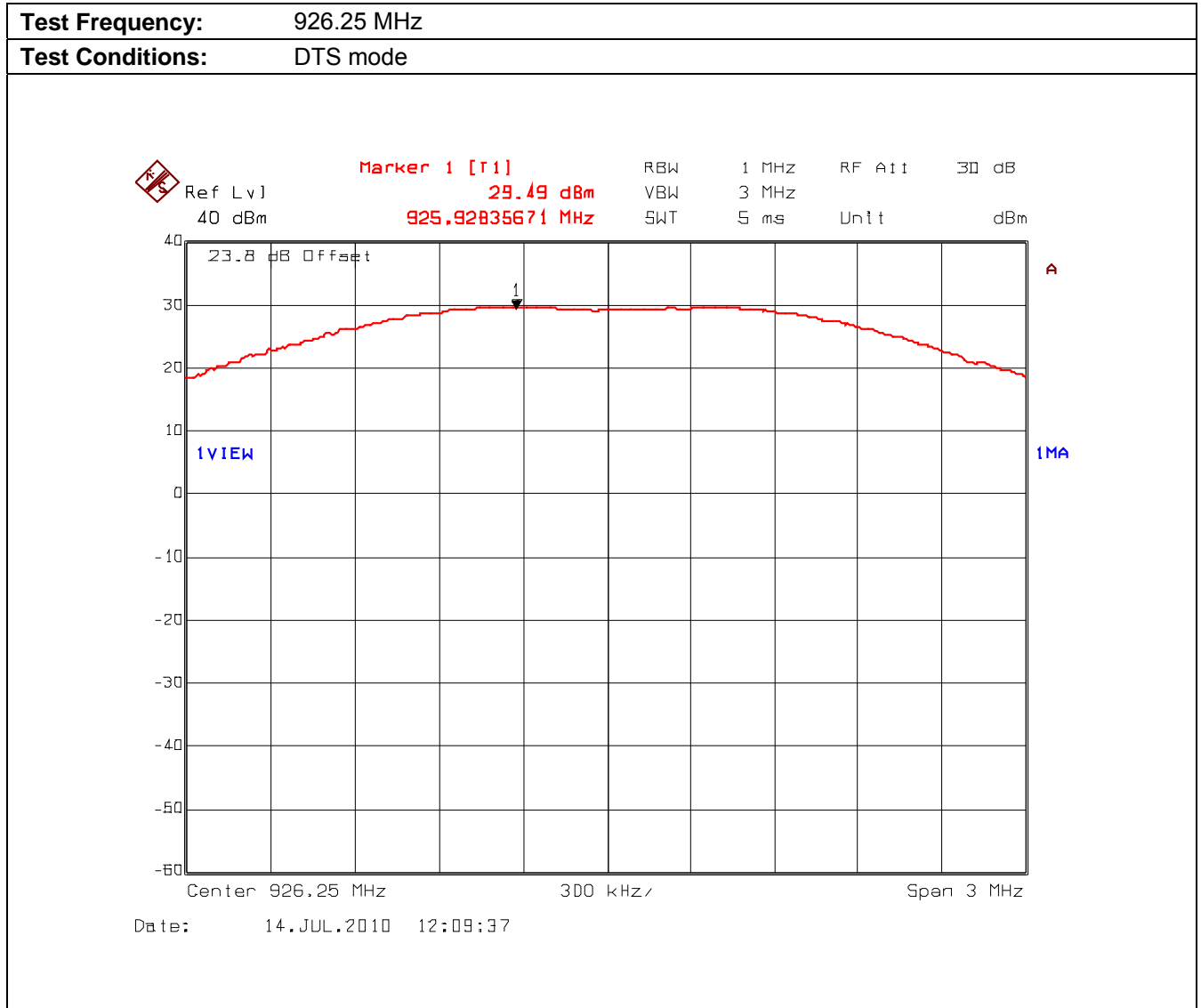
Plot 5.5.4.1. Peak Conducted Output Power



Plot 5.5.4.2. Peak Conducted Output Power



Plot 5.5.4.3. Peak Conducted Output Power



5.6. TRANSMITTER SPURIOUS RADIATED EMISSIONS AT 3 METERS [§§ 15.247(d), 15.209 & 15.205]

5.6.1. Limit

§ 15.247 (d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Section 15.205(a) - Restricted Bands of Operation

| MHz | MHz | MHz | GHz |
|--------------------------------|---------------------|---------------|------------------|
| 0.090–0.110 | 16.42–16.423 | 399.9–410 | 4.5–5.15 |
| ¹ 0.495–0.505 | 16.69475–16.69525 | 608–614 | 5.35–5.46 |
| 2.1735–2.1905 | 16.80425–16.80475 | 960–1240 | 7.25–7.75 |
| 4.125–4.128 | 25.5–25.67 | 1300–1427 | 8.025–8.5 |
| 4.17725–4.17775 | 37.5–38.25 | 1435–1626.5 | 9.0–9.2 |
| 4.20725–4.20775 | 73–74.6 | 1645.5–1646.5 | 9.3–9.5 |
| 6.215–6.218 | 74.8–75.2 | 1660–1710 | 10.6–12.7 |
| 6.26775–6.26825 | 108–121.94 | 1718.8–1722.2 | 13.25–13.4 |
| 6.31175–6.31225 | 123–138 | 2200–2300 | 14.47–14.5 |
| 8.291–8.294 | 149.9–150.05 | 2310–2390 | 15.35–16.2 |
| 8.362–8.366 | 156.52475–156.52525 | 2483.5–2500 | 17.7–21.4 |
| 8.37625–8.38675 | 156.7–156.9 | 2655–2900 | 22.01–23.12 |
| 8.41425–8.41475 | 162.0125–167.17 | 3260–3267 | 23.6–24.0 |
| 12.29–12.293 | 167.72–173.2 | 3332–3339 | 31.2–31.8 |
| 12.51975–12.52025 | 240–285 | 3345.8–3358 | 36.43–36.5 |
| 12.57675–12.57725 | 322–335.4 | 3600–4400 | (²) |
| 13.36–13.41. | | | |

¹ Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz.

² Above 38.6

Section 15.209(a)

-- Field Strength Limits within Restricted Frequency Bands --

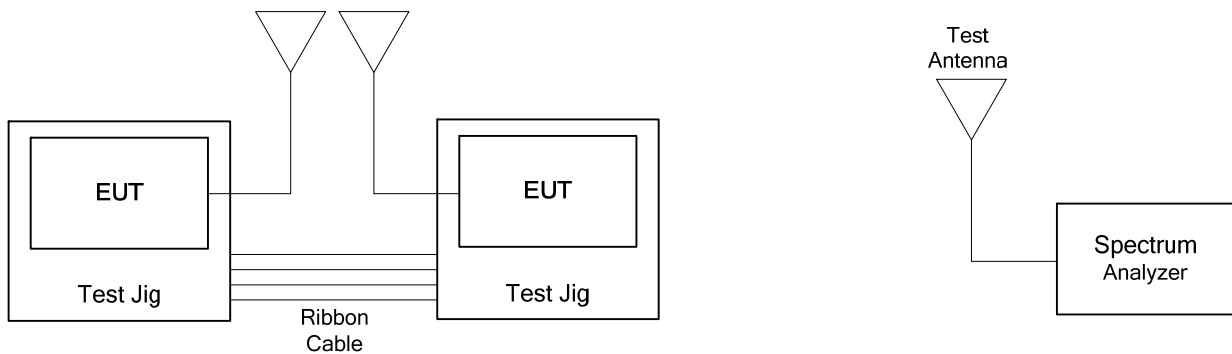
| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|-----------------|-----------------------------------|-------------------------------|
| 0.009 - 0.490 | 2,400 / F (kHz) | 300 |
| 0.490 - 1.705 | 24,000 / F (kHz) | 30 |
| 1.705 - 30.0 | 30 | 30 |
| 30 – 88 | 100 | 3 |
| 88 – 216 | 150 | 3 |
| 216 – 960 | 200 | 3 |
| Above 960 | 500 | 3 |

5.6.2. Method of Measurements

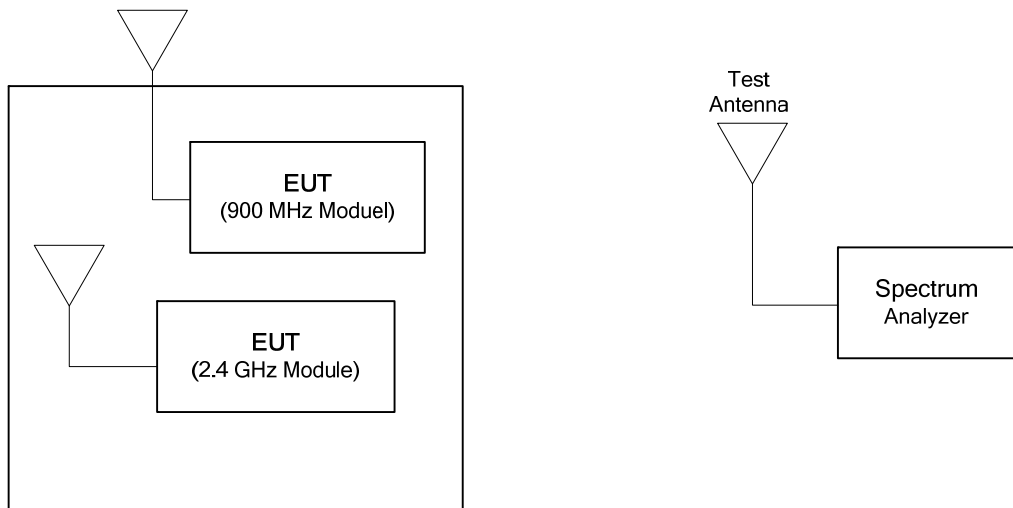
KDB Publication No. 558074 - Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247) and ANSI C63.10.

5.6.3. Test Arrangement

5.6.3.1. General Test Configuration for Transmitters Radiated Spurious Emissions and Co-location, Opened Enclosure



5.6.3.2. Test Configuration for Co-location Transmitters Radiated Emissions, Closed Enclosure



5.6.4. Test Data

5.6.4.1. Simultaneous Transmission Data (900 MHz Module with 2 dBi 900MHz Sleeve Antenna and 2.4 GHz WLAN Module with 2 dBi 2.4 GHz Folding Dipole Board Mount Antenna)

| Test Frequencies: | | 915.75 MHz and 2437 MHz | | | | | |
|---|------------------------|---|---------------------|-----------------------|-----------------------|-------------|-----------|
| Power Setting: | | Highest power setting for both modules | | | | | |
| Frequency Test Range: | | 30 MHz – 25 GHz | | | | | |
| Comments: | | Tests were performed in the configurations specified in sections 5.6.3.1 and 5.6.3.2 of the present document. | | | | | |
| Frequency (MHz) | RF Peak Level (dBµV/m) | RF Avg Level (dBµV/m) | Antenna Plane (H/V) | Limit 15.209 (dBµV/m) | Limit 15.247 (dBµV/m) | Margin (dB) | Pass/Fail |
| No intermodulation product levels were detected in excess of 20 dB below the specified limit. | | | | | | | |

5.6.4.2. Transmitter Spurious Radiated Emissions from 900 MHz Module with 2 dBi 900MHz Sleeve Dipole Antenna

| Test Frequency: | | 903.75 MHz | | | | | |
|--|------------------------|-----------------------|---------------------|-----------------------|-----------------------|-------------|-----------|
| Test Conditions: | | DTS mode | | | | | |
| Test Frequency Range: | | 30 MHz – 10 GHz | | | | | |
| Frequency (MHz) | RF Peak Level (dBµV/m) | RF Avg Level (dBµV/m) | Antenna Plane (H/V) | Limit 15.209 (dBµV/m) | Limit 15.247 (dBµV/m) | Margin (dB) | Pass/Fail |
| 903.75 | 125.18 | -- | V | -- | -- | -- | -- |
| 903.75 | 123.53 | -- | H | -- | -- | -- | -- |
| 2711.25 | 48.87 | 34.69 | H | 54.0 | 105.2 | -19.3 | Pass* |
| 3615.00 | 49.78 | 36.37 | V | 54.0 | 105.2 | -17.6 | Pass* |
| 3615.00 | 47.99 | 35.18 | H | 54.0 | 105.2 | -18.8 | Pass* |
| NOTE 1: All other spurious emissions and harmonics are more than 20 dB below the applicable limit. | | | | | | | |
| NOTE 2: * = Emission within the restricted frequency bands. | | | | | | | |

| Test Frequency: | | 915.75 MHz | | | | | |
|--|------------------------|-----------------------|---------------------|-----------------------|-----------------------|-------------|-----------|
| Test Conditions: | | DTS mode | | | | | |
| Test Frequency Range: | | 30 MHz – 10 GHz | | | | | |
| Frequency (MHz) | RF Peak Level (dBµV/m) | RF Avg Level (dBµV/m) | Antenna Plane (H/V) | Limit 15.209 (dBµV/m) | Limit 15.247 (dBµV/m) | Margin (dB) | Pass/Fail |
| 915.75 | 122.05 | -- | V | -- | -- | -- | -- |
| 915.75 | 121.35 | -- | H | -- | -- | -- | -- |
| 3663.00 | 48.20 | 34.80 | V | 54.0 | 102.1 | -19.2 | Pass* |
| 3663.00 | 48.19 | 36.64 | H | 54.0 | 102.1 | -17.4 | Pass* |
| NOTE 1: All other spurious emissions and harmonics are more than 20 dB below the applicable limit. | | | | | | | |
| NOTE 2: * = Emission within the restricted frequency bands. | | | | | | | |

| Test Frequency: | | 927.6 MHz | | | | | |
|--|------------------------|-----------------------|---------------------|-----------------------|-----------------------|-------------|-----------|
| Test Conditions: | | DTS mode | | | | | |
| Test Frequency Range: | | 30 MHz – 10 GHz | | | | | |
| Frequency (MHz) | RF Peak Level (dBµV/m) | RF Avg Level (dBµV/m) | Antenna Plane (H/V) | Limit 15.209 (dBµV/m) | Limit 15.247 (dBµV/m) | Margin (dB) | Pass/Fail |
| 926.25 | 121.36 | -- | V | -- | -- | -- | -- |
| 926.25 | 119.12 | -- | H | -- | -- | -- | -- |
| 3705.00 | 50.71 | 37.57 | V | 54.0 | 101.4 | -16.4 | Pass* |
| 3705.00 | 48.16 | 36.00 | H | 54.0 | 101.4 | -18.0 | Pass* |
| NOTE 1: All other spurious emissions and harmonics are more than 20 dB below the applicable limit. | | | | | | | |
| NOTE 2: * = Emission within the restricted frequency bands. | | | | | | | |

5.7. RF EXPOSURE REQUIRMENTS [§§ 15.247(i), 1.1310 & 2.1091]

The criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation.

FCC 47 CFR § 1.1310:

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz) | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm ²) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (A) Limits for Occupational/Controlled Exposures | | | | |
| 0.3–3.0 | 614 | 1.63 | *(100) | 6 |
| 3.0–30 | 1842/f | 4.89/f | *(900/f ²) | 6 |
| 30–300 | 61.4 | 0.163 | 1.0 | 6 |
| 300–1500 | | | f/300 | 6 |
| 1500–100,000 | | | 5 | 6 |
| (B) Limits for General Population/Uncontrolled Exposure | | | | |
| 0.3–1.34 | 614 | 1.63 | *(100) | 30 |
| 1.34–30 | 824/f | 2.19/f | *(180/f ²) | 30 |
| 30–300 | 27.5 | 0.073 | 0.2 | 30 |
| 300–1500 | | | f/1500 | 30 |
| 1500–100,000 | | | 1.0 | 30 |

f = frequency in MHz

* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

5.7.1. Method of Measurements

Refer to Sections 1.1310, 2.1091

In order to demonstrate compliance with MPE requirements (see Section 2.1091), the following information is typically needed:

- (1) Calculation that estimates the minimum separation distance (20 cm or more) between an antenna and persons required to satisfy power density limits defined for free space.
- (2) Antenna installation and device operating instructions for installers (professional/unskilled users), and the parties responsible for ensuring compliance with the RF exposure requirement
- (3) Any caution statements and/or warning labels that are necessary in order to comply with the exposure limits
- (4) Any other RF exposure related issues that may affect MPE compliance

Calculation Method of RF Safety Distance:

$$S = \frac{P \cdot G}{4 \cdot \pi \cdot r^2} = \frac{EIRP}{4 \cdot \pi \cdot r^2}$$

Where: P: power input to the antenna in mW
 EIRP: Equivalent (effective) isotropic radiated power
 S: power density mW/cm²
 G: numeric gain of antenna relative to isotropic radiator
 r: distance to centre of radiation in cm

5.7.2. RF Evaluation

| Evaluation of RF Exposure Compliance Requirements | |
|--|---|
| RF Exposure Requirements | Compliance with FCC Rules |
| Minimum calculated separation distance between antenna and persons required: *15 cm (see note) | Manufacturer' instruction for separation distance between antenna and persons required: 23 cm. |
| Antenna installation and device operating instructions for installers (professional/unskilled users), and the parties responsible for ensuring compliance with the RF exposure requirement | Antenna installation and device operating instructions shall be provided to installers to maintain and ensure compliance with RF exposure requirements. |
| Caution statements and/or warning labels that are necessary in order to comply with the exposure limits | Refer to User's Manual for RF Exposure Information. |
| Any other RF exposure related issues that may affect MPE compliance | None. |

NOTE:

| Antenna No. | 1 | 2 | Total |
|---------------------------------|--------|-------|-------|
| Frequency (MHz) | 903.75 | 2412 | |
| MPE Limit (mW/cm ²) | 0.60 | 1.00 | |
| Power (W) | 1.000 | 0.063 | 1.063 |
| Antenna Gain (dBi) | 2.00 | 2.00 | |
| EIRP (W) | 1.585 | 0.099 | 1.68 |

The minimum separation distance between the antenna and bodies of users are calculated using the following formula:

$$r = \sqrt{\frac{P \cdot G}{4 \cdot \pi \cdot S}} = \sqrt{\frac{EIRP}{4 \cdot \pi \cdot S}}$$

S = 0.60 mW/cm² (Worst Case); EIRP = 1.68 W = 1680 mW

$$\text{(Minimum Safe Distance, r)} = \sqrt{\frac{EIRP}{4 \cdot \pi \cdot S}} = \sqrt{\frac{1680}{4 \cdot \pi \cdot (0.60)}} \approx 15\text{cm}$$

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EXHIBIT 6. TEST EQUIPMENT LIST

| Test Instruments | Manufacturer | Model No. | Serial No. | Frequency Range | Cal. Due Date |
|--------------------|-----------------|--------------------|------------|---------------------------------------|---------------|
| Spectrum Analyzer | Rohde & Schwarz | FSEK30 | 100077 | 20 Hz – 40 GHz with external mixer | 10 Aug 2010 |
| Power Meter | Hewlett Packard | 8900D | 2131A01044 | 100 kHz – 18 GHz | 24 Jun 2011 |
| Spectrum Analyzer | Hewlett Packard | 8593EM | 3412A00103 | 9 kHz – 26.5 GHz | 5 Oct 2010 |
| RF Amplifier | Com-Power | PA-103A | 161243 | 10 MHz – 1 GHz | 2 Nov 2011 |
| RF Amplifier | Hewlett Packard | 84498 | 3008A00769 | 1 – 26.5 GHz | 2 Nov 2011 |
| Horn Antenna | ETS-Lindgren | 360-09 | 00118385 | 18 – 26.5 GHz | 1 Jul 2011 |
| Horn Antenna | Emco | 3155 | 9701-6570 | 1 – 18 GHz | 20 Nov 2010 |
| Biconnilog Antenna | ETS-Lindgren | 3142B | 1575 | 26 MHz – 2 GHz | 25 Apr 2011 |
| High Pass Filter | K & L | 11SH10-1500/T8000 | 2 | Cut off 900 MHz | Cal.on use |
| High Pass Filter | K & L | 11SH10-4000/T12000 | 4 | Cut off 2.4 GHz | Cal.on use |
| Attenuator | Narda | 4768-20 | - | DC - 40 GHz | Cal.on use |

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EXHIBIT 7. MEASUREMENT UNCERTAINTY

The measurement uncertainties stated were calculated in accordance with the requirements of CISPR 16-4-2 @ IEC:2003 and JCGM 100:2008 (GUM 1995) – Guide to the Expression of Uncertainty in Measurement.

7.1. LINE CONDUCTED EMISSION MEASUREMENT UNCERTAINTY

| | Line Conducted Emission Measurement Uncertainty (150 kHz – 30 MHz): | Measured | Limit |
|----------------------|--|---------------|--------------|
| u_c | Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$ | ± 1.57 | ± 1.8 |
| U | Expanded uncertainty U: $U = 2u_c(y)$ | ± 3.14 | ± 3.6 |

7.2. RADIATED EMISSION MEASUREMENT UNCERTAINTY

| | Radiated Emission Measurement Uncertainty @ 3m, Horizontal (30-1000 MHz): | Measured | Limit |
|----------------------|--|---------------|--------------|
| u_c | Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$ | ± 2.15 | ± 2.6 |
| U | Expanded uncertainty U: $U = 2u_c(y)$ | ± 4.30 | ± 5.2 |

| | Radiated Emission Measurement Uncertainty @ 3m, Vertical (30-1000 MHz): | Measured | Limit |
|----------------------|--|---------------|--------------|
| u_c | Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$ | ± 2.39 | ± 2.6 |
| U | Expanded uncertainty U: $U = 2u_c(y)$ | ± 4.78 | ± 5.2 |

| | Radiated Emission Measurement Uncertainty @ 3 m, Horizontal & Vertical (1 – 18 GHz): | Measured | Limit |
|----------------------|--|---------------|---------------------|
| u_c | Combined standard uncertainty: $u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)}$ | ± 1.87 | Under consideration |
| U | Expanded uncertainty U: $U = 2u_c(y)$ | ± 3.75 | Under consideration |

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