Shenzhen Huatongwei International Inspection Co., Ltd.
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CNASL1225

# FCC PART 15 SUBPART B TEST REPORT

| | |
|---|---|
| **Report Reference No.**.....: | **TRE12020078** |
| **FCC ID**..... **:** | **AYQTSC100RA** |
| Compiled by ( position+printed name+signature)..: | File administrators Eric Zhang |
| Supervised by ( position+printed name+signature)..: | Test Engineer Tim Zhang |
| Approved by ( position+printed name+signature)..: | Manager Wenliang Li |
| Date of issue.....: | Mar 29, 2012 |
| **Testing Laboratory Name** .....: | **Shenzhen Huatongwei International Inspection Co., Ltd** |
| Address .....: | Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China |
| **Applicant's name**.....: | **TTI TECH(SHENZHEN)CO.,LTD** |
| Address .....: | A Unit，6th Floor, Block A，Huayuan Plot，Fenghuang 1st Industrial Zone，Fuyong Street, Shenzhen City, China |
| **Test specification:** | |
| Standard .....: | **FCC Part 15.121 , 15.109 , 15.111** |
| TRF Originator.....: | Shenzhen Huatongwei International Inspection CO., Ltd |
| Master TRF.....: | Dated 2006-06 |



| | |
|---|---|
| **Test item description .....:** | Wideband Receiver |
| Trade Mark .....: | / |
| Model/Type reference.....: | TSC100RA |
| Listed Models .....: | / |
| Result.....: | **Positive** |

# T E S T R E P O R T

| Test Report No. : | TRE12020078 | Mar 29, 2012<br>Date of issue |
|---|---|---|

| | | |
|---|---|---|
| Equipment under Test | : | Wideband Receiver |
| Model /Type | : | TSC100RA |
| Listed Models | : | / |
| **Applicant** | : | **TTI TECH(SHENZHEN)CO.,LTD** |
| Address | : | A Unit，6th Floor, Block A，Huayuan Plot，Fenghuang 1st Industrial Zone，Fuyong Street, Shenzhen City, China |
| **Manufacturer** | **:** | **TTI TECH(SHENZHEN)CO.,LTD** |
| Address | : | A Unit，6th Floor, Block A，Huayuan Plot，Fenghuang 1st Industrial Zone，Fuyong Street, Shenzhen City, China |

| | |
|---|---|
| **Test Result** according to the standards on page 4: | **Positive** |

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

# Contents

# 1. TEST STANDARDS

The tests were performed according to following standards:

**FCC Rules Part 15.121: Scanning receivers and fre-quency converters used with scan-ning receivers.**

**ANSI C63.4-2009: 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.**

# 2 . SUMMARY

## 2.1. General Remarks

Date of receipt of test sample : Feb 15, 2012

Testing commenced on : Feb 15, 2012

Testing concluded on : Mar 29, 2012

## 2.2. Equipment Under Test

## Power supply system utilised

Power supply voltage : ○ 120V / 60 Hz ○ 115V / 60Hz
○ 12 V DC ○ 24 V DC
● Other (specified in blank below)

DC 4.5V from battery

## 2.3. Short description of the Equipment under Test (EUT)

Wideband Receiver (M/N:TSC100RA)

For more details, refer to the user's manual of the EUT.

Serial number: Prototype

## 2.4. EUT operation mode

The EUT has been tested under typical operating condition. It is wide receiving mode.The EUT can staying in continous receiving mode for testing. There are three modulation methods for EUT, and the test carried out at the lowest channel, middle channel and highest channel in each mode .

| | |
|---|---|
| Frequency Range: | FM:66-87.475 MHz |
| | WMF:87.5-108 MHz |
| | AM:108.025-135.975 MHz |
| | FM:136-174 MHz |
| | Weather Band:162.400-162.550 MHz |
| Modulation type: | FM,WFM,AM |
| Antenna: | SMA Antenna |

## 2.5. EUT configuration

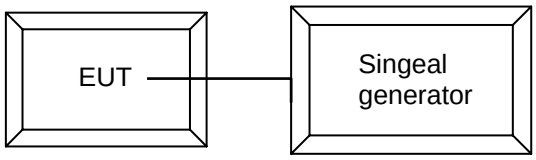
### EUT Exercise Software

The Applicant provides communication tools software.

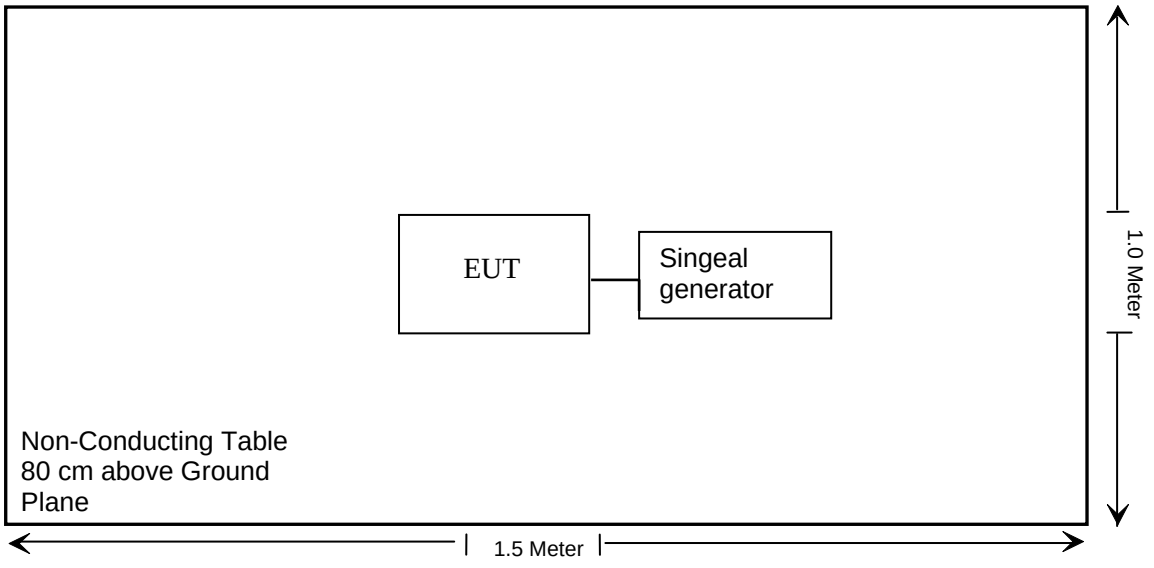
### Local Support Equipment List and Details

| Manufacturer | Description | Model | Serial Number | FCC ID |
|---|---|---|---|---|
| IFR | SIGNAL GENERATOR | 2032 | 203002/100 | N/A |

## 2.6. Configuration of Test System




**Block Diagram of Test Setup**




## 2.7. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: AYQTSC100RA** filing to comply with f the FCC Part 15, Subpart B Rules.

## 2.8. Modifications

No modifications were implemented to meet testing criteria.

## 2.9. NOTE

1. The functions of the EUT are listed as below:

| Test Standards | Reference Report |
|---|---|
| FCC Part 15 Subpart B | TRE12020078 |

2. The frequency bands used in this EUT are listed as follows:

| Frequency Band(MHz) | 66-87.475 | 87.5-108 | 108.025-135.975 | 136-174 | 162.400-162.550 |
|---|---|---|---|---|---|
| EUT | √ | √ | √ | √ | √ |

## 2.10. Test Methodology

Both conducted (if applicable) and radiated emission measurements were performed according to the procedures in ANSI C63.4. All radiated measurements were performed in a semi-anechoic chamber. Radiated tests were performed at an antenna to EUT distance of 3 meters。

# 3. TEST ENVIRONMENT

## 3.1. Address of the test laboratory

Shenzhen Huatongwei International Inspection Co., Ltd
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2009) and CISPR Publication 22.

## 3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: Mar. 29, 2012. Valid time is until Feb. 28, 2015.

### A2LA-Lab Cert. No. 2243.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is until Sept. 30, 2013.

### FCC-Registration No.: 662850

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date Jul. 01, 2009, valid time is until Jun. 30, 2012.

### IC-Registration No.: 5377A

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377A on Jan. 25, 2011, valid time is until Jan. 24, 2014.

### ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

### NEMKO-Aut. No.: ELA125

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10, the authorization is valid through July 07, 2013

### VCCI

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-292. Date of Registration: Dec. 24, 2010. Valid time is until Dec. 23, 2013.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: Dec. 20, 2009. Valid time is until Dec. 19, 2012.

Telecommunication Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-1837. Date of Registration: May 07, 2010. Valid time is until May 06, 2013.

### DNV

Shenzhen Huatongwei International Inspection Co., Ltd. has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025 (2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until Aug. 24, 2013.

## 3.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

| | |
|---|---|
| Temperature: | 15-35 ° C |
| Humidity: | 30-60 % |
| Atmospheric pressure: | 950-1050mbar |

## 3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

| Test Items | Measurement Uncertainty | Notes |
|---|---|---|
| Frequency stability | 150 Hz | (1) |
| Transmitter power conducted | 0.30 dB | (1) |
| Transmitter power Radiated | 2.20 dB | (1) |
| Conducted spurious emission 9KHz-12.75 GHz | 1.60 dB | (1) |
| Radiated spurious emission 9KHz-12.75 GHz | 2.20 dB | (1) |
| Conducted Emission 9KHz-30MHz | 3.39 dB | (1) |
| Radiated Emission 30~1000MHz | 4.24 dB | (1) |
| Radiated Emissio 1~18GHz | 5.16 dB | (1) |
| Radiated Emissio 18-40GHz | 5.54 dB | (1) |
| Occupied Bandwidth | --------- | (1) |
| Emission Mask | --------- | (1) |
| Modulation Characteristic | --------- | (1) |
| Transmitter Frequency Behavior | --------- | (1) |

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

## 3.5. Test Description

| Description of Test | REFERENCE | RESULTS |
|---|---|---|
| Radiated Emission | 15.109 | PASS |
| AC Line Conducted Emission | 15.107 | Not Applicable |
| Antenna Conducted Emission | 15.111 | PASS |
| FCC Part 15.121 Requirement | 15.121 | PASS |

Remark: 1.The equipment is battery powered.
2.The measurement uncertainty is not included in the test result.

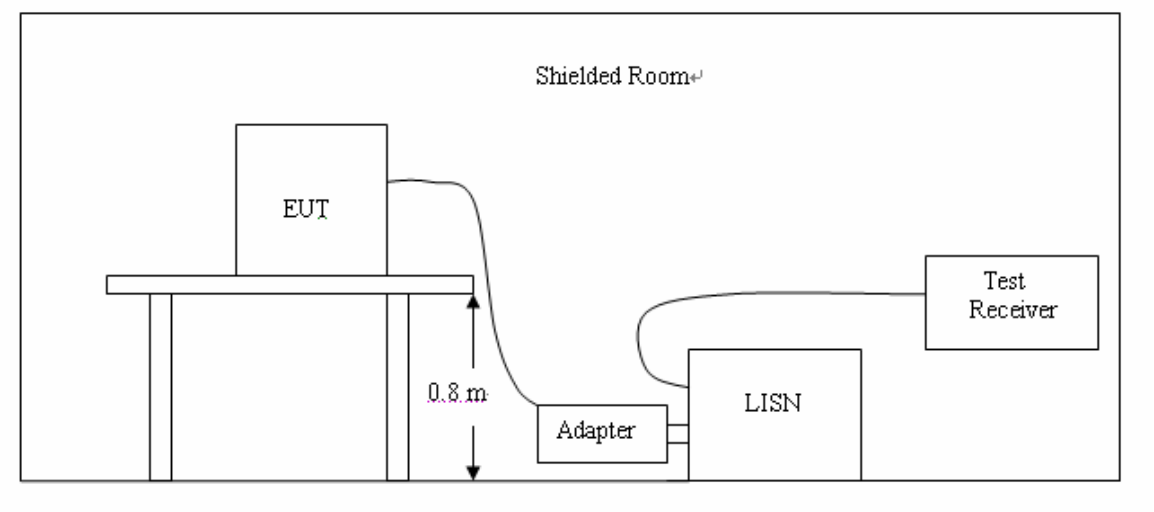
## 3.6. Equipments Used during the Test

| Test euquipments | | | | | |
|---|---|---|---|---|---|
| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
| 1 | ULTRA-BROADBAND ANTENNA | ROHDE & SCHWARZ | HL562 | 100015 | 2011/10/23 |
| 2 | EMI TEST RECEIVER | ROHDE & SCHWARZ | ESI 26 | 100009 | 2011/10/23 |
| 3 | Spectrum Analyzer | AGILENT | E4407B | MY44210775 | 2011/10/23 |
| 4 | RF TEST PANEL | ROHDE & SCHWARZ | TS / RSP | 335015/ 0017 | 2011/10/23 |
| 5 | TURNTABLE | ETS | 2088 | 2149 | 2011/10/23 |
| 6 | ANTENNA MAST | ETS | 2075 | 2346 | 2011/10/23 |
| 7 | EMI TEST SOFTWARE | ROHDE & SCHWARZ | ESK1 | N/A | 2011/10/23 |
| 8 | HORN ANTENNA | ROHDE &SCHWARZ | HF906 | 100039 | 2011/10/23 |
| 9 | Broad-Band Horn Antenna | SCHWARZBECK | BBHA9170 | 470 | 2011/10/23 |
| 10 | Amplifer | Sonoma | 310N | E009-13 | 2011/10/23 |
| 11 | JS amplifer | ROHDE &SCHWARZ | JS4-00101800-28-5A | F201504 | 2011/10/23 |
| 12 | High pass filter | Compliance Direction systems | BSU-6 | 34202 | 2011/10/23 |
| 13 | EMI Test Receiver | ROHDE & SCHWARZ | ESCI | 100106 | 2011/10/23 |
| 14 | Artificial Mains | ROHDE & SCHWARZ | ESH2-Z5 | 100028 | 2011/10/23 |
| 15 | Pulse Limiter | ROHDE & SCHWARZ | ESHSZ2 | 100044 | 2011/10/23 |
| 16 | EMI Test Software | ROHDE & SCHWARZ | ESK1 | N/A | 2011/10/23 |
| 17 | Loop Antenna | ROHDE & SCHWARZ | HFH2-Z2 | 100020 | 2011/10/23 |
| 18 | EMI Test Receiver | ROHDE & SCHWARZ | ESCS30 | 100038 | 2011/10/23 |
| 19 | Single Balanced Telecom Pair ISN | FCC | FCC-TLISN-T2-02 | 20371 | 2011/10/23 |
| 20 | Two Balanced Telecom Pairs ISN | FCC | FCC-TLISN-T4-02 | 20373 | 2011/10/23 |

# 4. TEST CONDITIONS AND RESULTS

## 4.1. AC Power Conducted Emission

**TEST CONFIGURATION**




**TEST PROCEDURE**

1 The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2009.
2 Support equipment, if needed, was placed as per ANSI C63.10-2009
3 All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2009
4 The EUT received DC5V power from the adapter, the adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5 All support equipments received AC power from a second LISN, if any.
6 The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7 Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8 During the above scans, the emissions were maximized by cable manipulation.

**AC Power Conducted Emission Limit**

For intentional device, according to § 15.207(a) AC Power Conducted Emission Limits is as following：

| Frequency (MHz) | Maximum RF Line Voltage (dBμV) | | | |
|---|---|---|---|---|
| | CLASS A | | CLASS B | |
| | Q.P. | Ave. | Q.P. | Ave. |
| 0.15 - 0.50 | 79 | 66 | 66-56* | 56-46* |
| 0.50 - 5.00 | 73 | 60 | 56 | 46 |
| 5.00 - 30.0 | 73 | 60 | 60 | 50 |

* Decreasing linearly with the logarithm of the frequency

**TEST RESULTS**

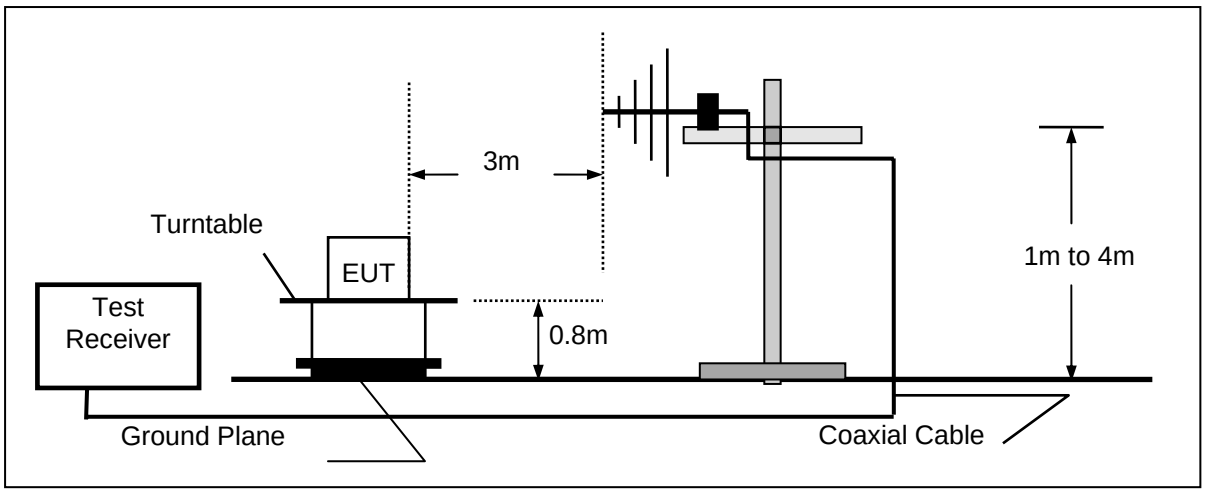
**Not applicable to this device .**

## 4.2. Radiated Emission

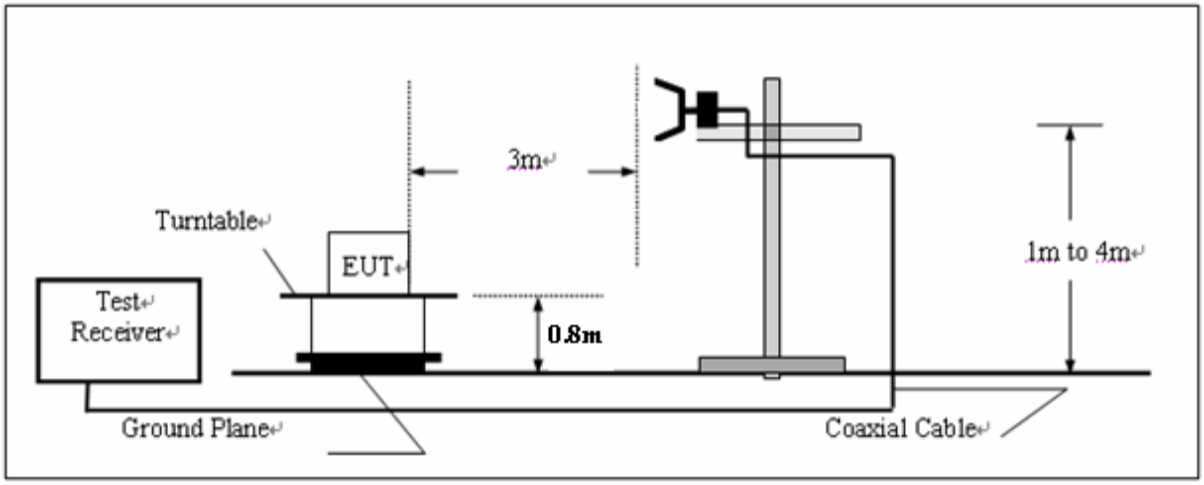
**TEST CONFIGURATION**

Radiated Emission Test Set-Up

Frequency range 30MHz – 1000MHz




Frequency range above 1GHz-25GHz




**TEST PROCEDURE**

1 The EUT was placed on a turn table which is 0.8m above ground plane.
2 Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0℃ to 360℃ to acquire the highest emissions from EUT
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measurements have been completed.
5. the fundamental frequency is 66-174MHz, So the radiation emissions frequency range were tested from 30MHz to 2GHz.

**Field Strength Calculation**

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

**FS = RA + AF + CL – AG**

| | |
|---|---|
| Where FS = Field Strength | CL = Cable Attenuation Factor (Cable Loss) |
| RA = Reading Amplitude | AG = Amplifier Gain |
| AF = Antenna Factor | |

For example

| Frequency (MHz) | FS (dBµV/m) | RA (dBµV/m) | AF (dB) | CL (dB) | AG (dB) | Transd (dB) |
|---|---|---|---|---|---|---|
| 300.00 | 40 | 58.1 | 12.2 | 1.6 | 31.90 | -18.1 |

Transd=AF +CL-AG

**RADIATION LIMIT**

For intentional device, according to § 15.109(a), the general requirement of field strength of radiated emission from intentional radiators at a distance of 3 meters shall not exceed the following table. According to § 15.121, in any 100kHz bandwidth outside the frequency band in which the EUT is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the100kHz bandwidth within the band that contains the highest level of desired power.

The frequency spectrum above 1 GHz for Receiver was investigated. All emission not reported are much lower than the prescribed limits. Set the RBW=1MHz,VBW=3MHz for Peak Detector . The pre-test have done for the EUT in three axes and found the worst emission at position shown in test setup photos.

| Frequency (MHz) | Distance (Meters) | Radiated (dBµV/m) | Radiated (µV/m) |
|---|---|---|---|
| 30-88 | 3 | 40.0 | 100 |
| 88-216 | 3 | 43.5 | 150 |
| 216-960 | 3 | 46.0 | 200 |
| Above 960 | 3 | 54.0 | 500 |

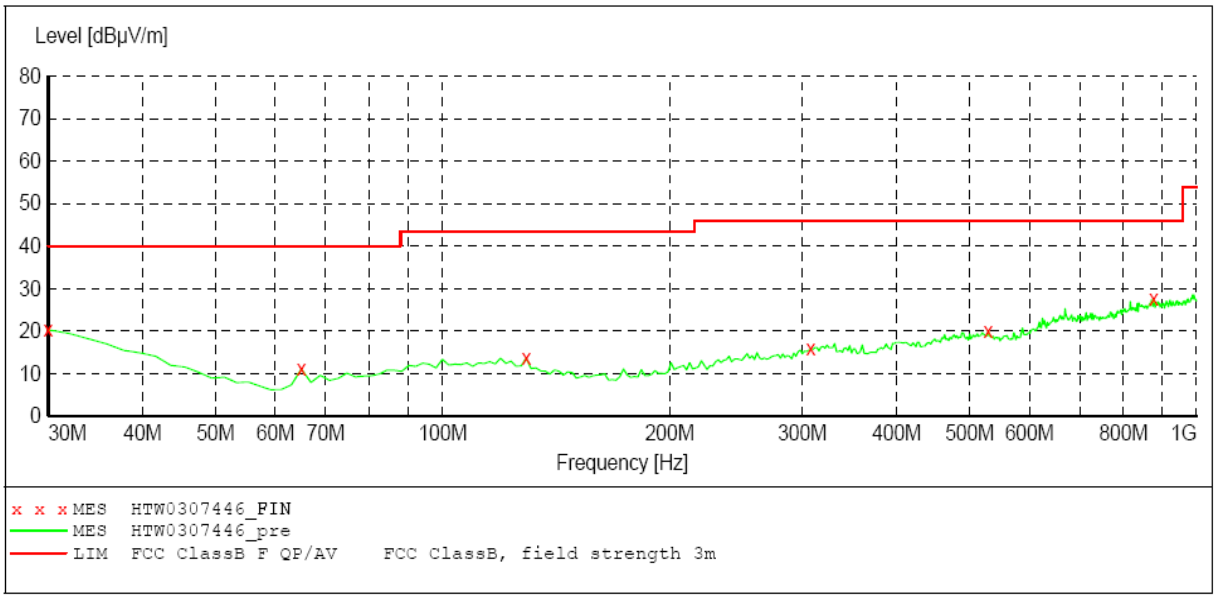
**TEST RESULTS**

**below 1GHz**

**FM 66MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307446_FIN"***

3/7/2012 8:40AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.30 | -11.3 | 40.0 | 19.7 | QP | 100.0 | 13.00 | HORIZONTAL |
| 64.989980 | 11.10 | -23.8 | 40.0 | 28.9 | QP | 100.0 | 47.00 | HORIZONTAL |
| 129.138277 | 13.60 | -20.3 | 43.5 | 29.9 | QP | 100.0 | 75.00 | HORIZONTAL |
| 307.975952 | 15.80 | -16.4 | 46.0 | 30.2 | QP | 100.0 | 180.00 | HORIZONTAL |
| 529.579158 | 20.10 | -13.1 | 46.0 | 25.9 | QP | 100.0 | 27.00 | HORIZONTAL |
| 877.535070 | 27.80 | -7.0 | 46.0 | 18.2 | QP | 100.0 | 125.00 | HORIZONTAL |

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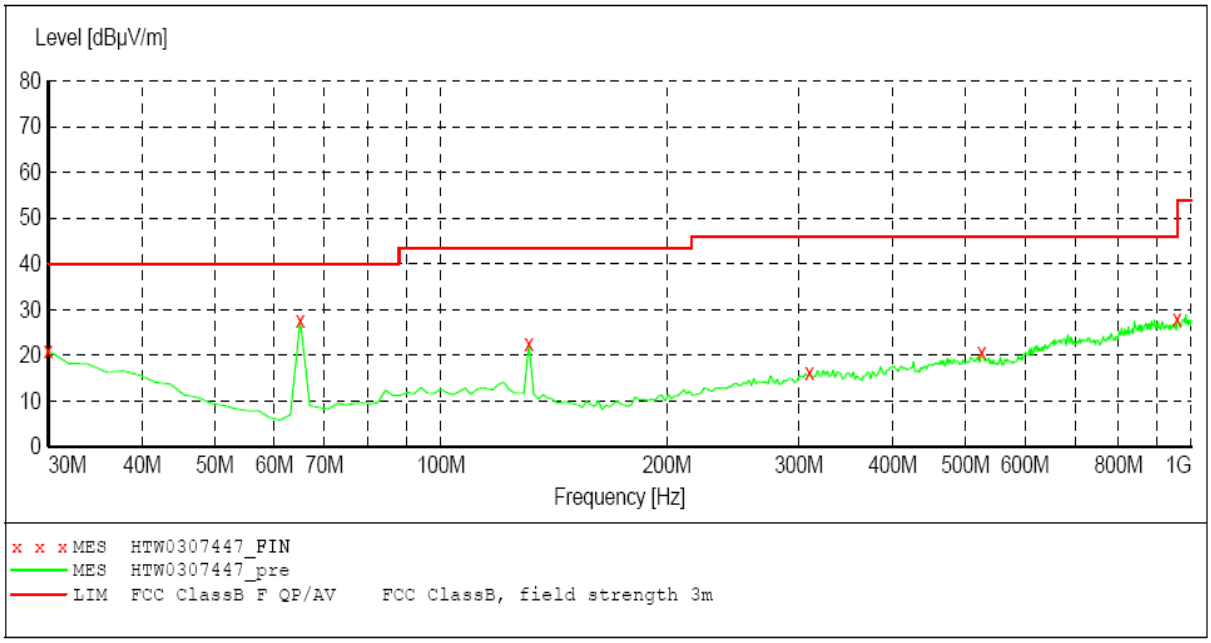
Test Conditions: Rx mode (FM 66.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307447_FIN"***

3/7/2012 8:42AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 21.00 | -11.3 | 40.0 | 19.0 | QP | 100.0 | 359.00 | VERTICAL |
| 64.989980 | 27.60 | -23.8 | 40.0 | 12.4 | QP | 100.0 | 276.00 | VERTICAL |
| 131.082164 | 22.60 | -20.5 | 43.5 | 20.9 | QP | 100.0 | 80.00 | VERTICAL |
| 309.919840 | 16.20 | -16.3 | 46.0 | 29.8 | QP | 100.0 | 255.00 | VERTICAL |
| 525.691383 | 20.60 | -13.0 | 46.0 | 25.4 | QP | 100.0 | 33.00 | VERTICAL |
| 957.234469 | 27.90 | -7.0 | 46.0 | 18.1 | QP | 100.0 | 234.00 | VERTICAL |

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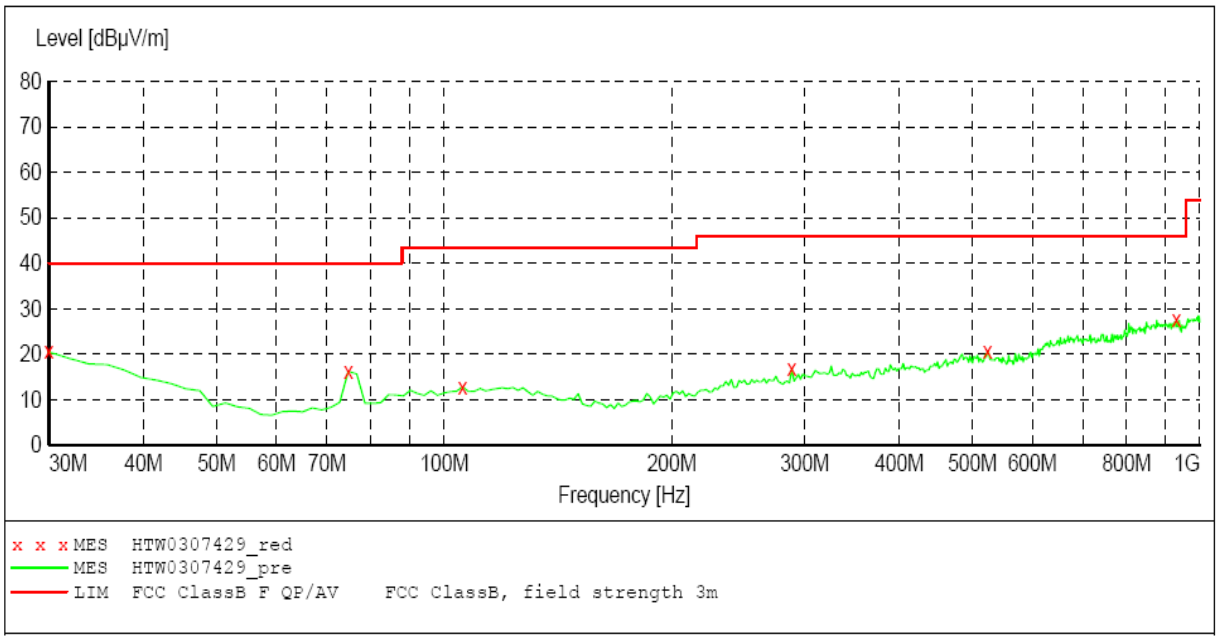
Test Conditions: Rx mode (FM 66.0 MHz, 60 dBµV CW input to ANT)

**FM 76.5MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307429_red"***

3/7/2012 7:57AM

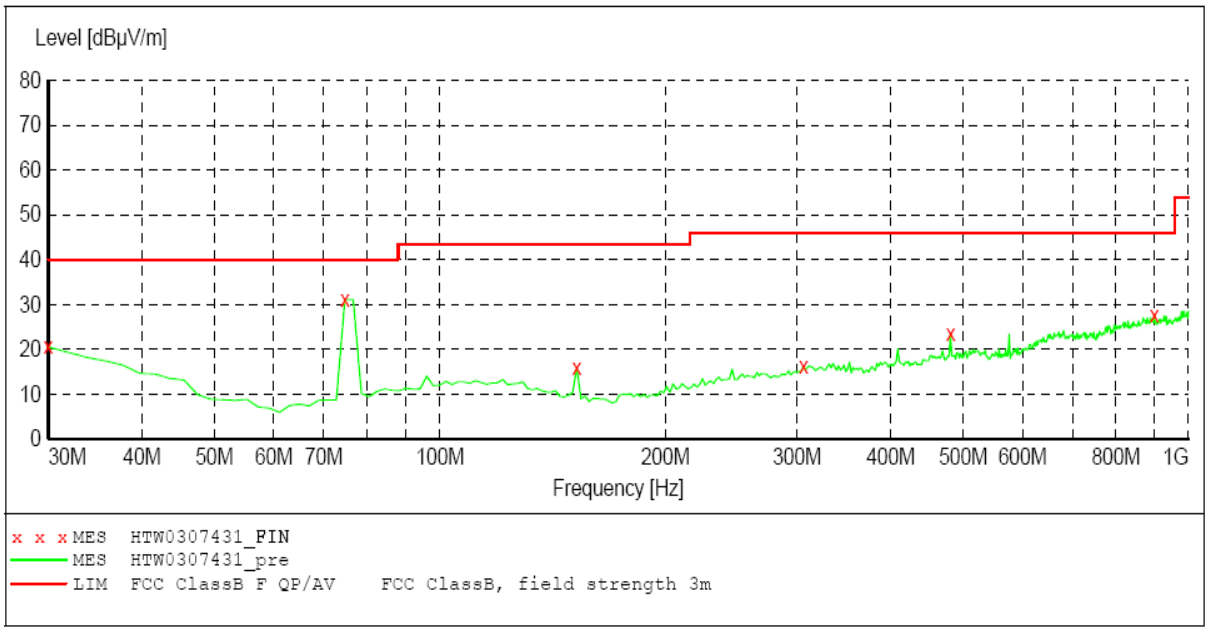
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.50 | -11.3 | 40.0 | 19.5 | --- | 100.0 | 195.00 | HORIZONTAL |
| 74.709419 | 16.20 | -22.4 | 40.0 | 23.8 | --- | 100.0 | 352.00 | HORIZONTAL |
| 105.811623 | 12.80 | -19.6 | 43.5 | 30.7 | --- | 100.0 | 92.00 | HORIZONTAL |
| 288.537074 | 16.90 | -17.6 | 46.0 | 29.1 | --- | 100.0 | 98.00 | HORIZONTAL |
| 523.747495 | 20.50 | -13.0 | 46.0 | 25.5 | --- | 100.0 | 154.00 | HORIZONTAL |
| 931.963928 | 27.50 | -7.2 | 46.0 | 18.5 | --- | 100.0 | 290.00 | HORIZONTAL |

Page 1/1 3/7/2012 7:57AM HTW0307429

Test Conditions: Rx mode (FM 76.5 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307431_FIN"***

3/7/2012 8:03AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.50 | -11.3 | 40.0 | 19.5 | QP | 100.0 | 198.00 | VERTICAL |
| 74.709419 | 31.10 | -22.4 | 40.0 | 8.9 | QP | 100.0 | 47.00 | VERTICAL |
| 152.464930 | 16.00 | -22.6 | 43.5 | 27.5 | QP | 100.0 | 264.00 | VERTICAL |
| 306.032064 | 16.10 | -16.6 | 46.0 | 29.9 | QP | 100.0 | 42.00 | VERTICAL |
| 480.981964 | 23.60 | -13.6 | 46.0 | 22.4 | QP | 100.0 | 305.00 | VERTICAL |
| 900.861723 | 27.70 | -7.3 | 46.0 | 18.3 | QP | 100.0 | 109.00 | VERTICAL |

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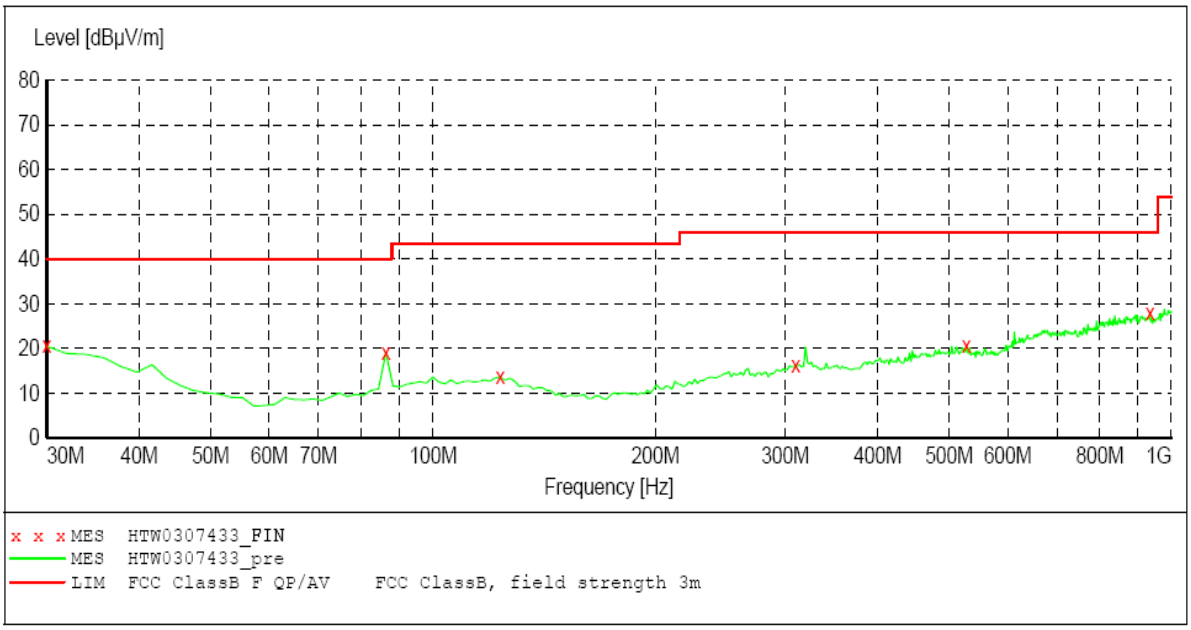
Test Conditions: Rx mode (FM 76.5 MHz, 60 dBµV CW input to ANT)

**FM 87MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307433_FIN"***

3/7/2012 8:10AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.50 | -11.3 | 40.0 | 19.5 | QP | 100.0 | 3.00 | HORIZONTAL |
| 86.372745 | 19.10 | -20.8 | 40.0 | 20.9 | QP | 100.0 | 346.00 | HORIZONTAL |
| 123.306613 | 13.60 | -19.5 | 43.5 | 29.9 | QP | 300.0 | 152.00 | HORIZONTAL |
| 309.919840 | 16.10 | -16.3 | 46.0 | 29.9 | QP | 100.0 | 196.00 | HORIZONTAL |
| 527.635271 | 20.50 | -13.0 | 46.0 | 25.5 | QP | 300.0 | 250.00 | HORIZONTAL |
| 935.851703 | 28.00 | -7.2 | 46.0 | 18.0 | QP | 300.0 | 166.00 | HORIZONTAL |

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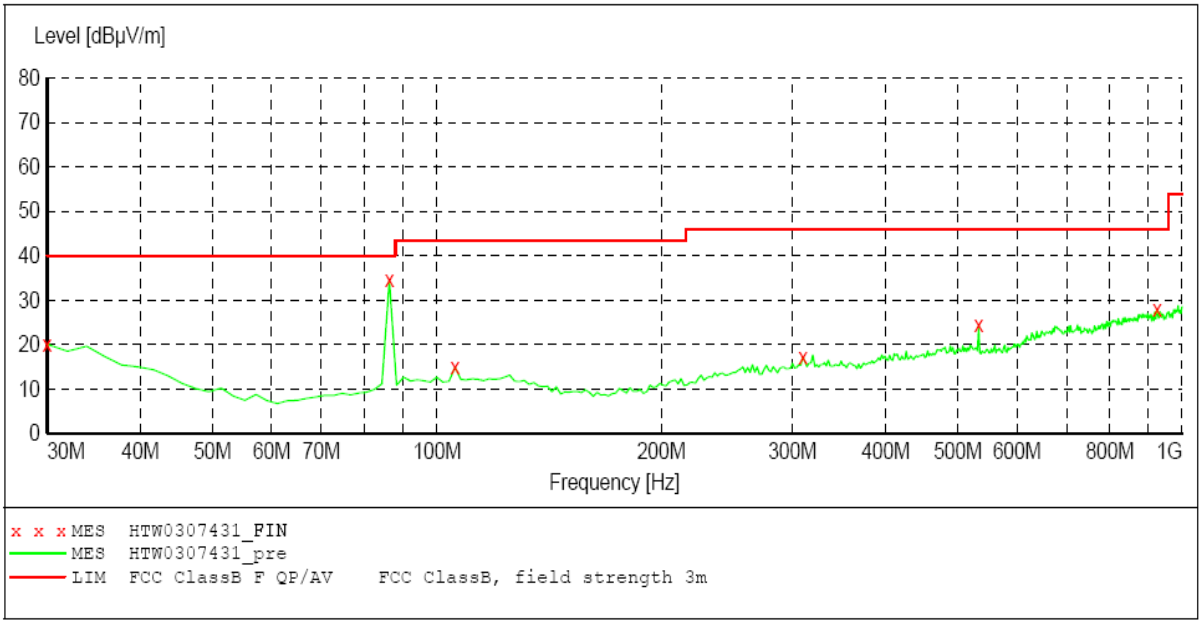
Test Conditions: Rx mode (FM 87.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307431_FIN"***

3/7/2012 8:06AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.10 | -11.3 | 40.0 | 19.9 | QP | 100.0 | 331.00 | VERTICAL |
| 86.372745 | 34.50 | -20.8 | 40.0 | 5.5 | QP | 100.0 | 280.00 | VERTICAL |
| 105.811623 | 14.90 | -19.6 | 43.5 | 28.6 | QP | 100.0 | 195.00 | VERTICAL |
| 309.919840 | 17.30 | -16.3 | 46.0 | 28.7 | QP | 100.0 | 310.00 | VERTICAL |
| 533.466934 | 24.40 | -13.3 | 46.0 | 21.6 | QP | 100.0 | 295.00 | VERTICAL |
| 926.132265 | 28.10 | -7.1 | 46.0 | 17.9 | QP | 100.0 | 56.00 | VERTICAL |

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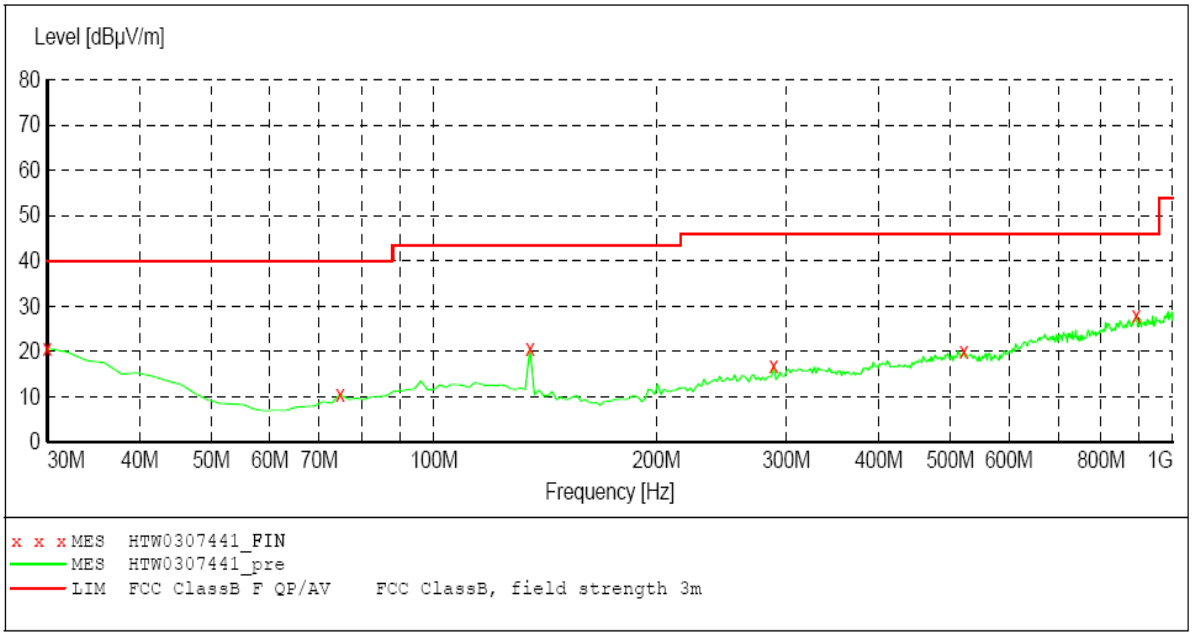
Test Conditions: Rx mode (FM 87.0 MHz, 60 dBµV CW input to ANT)

**FM 136MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307441_FIN"***

3/7/2012 8:29AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.70 | -11.3 | 40.0 | 19.3 | QP | 100.0 | 116.00 | HORIZONTAL |
| 74.709419 | 10.50 | -22.4 | 40.0 | 29.5 | QP | 100.0 | 285.00 | HORIZONTAL |
| 134.969940 | 20.70 | -21.0 | 43.5 | 22.8 | QP | 100.0 | 310.00 | HORIZONTAL |
| 288.537074 | 16.80 | -17.6 | 46.0 | 29.2 | QP | 100.0 | 265.00 | HORIZONTAL |
| 521.803607 | 20.00 | -13.0 | 46.0 | 26.0 | QP | 100.0 | 351.00 | HORIZONTAL |
| 893.086172 | 28.10 | -6.8 | 46.0 | 17.9 | QP | 100.0 | 101.00 | HORIZONTAL |

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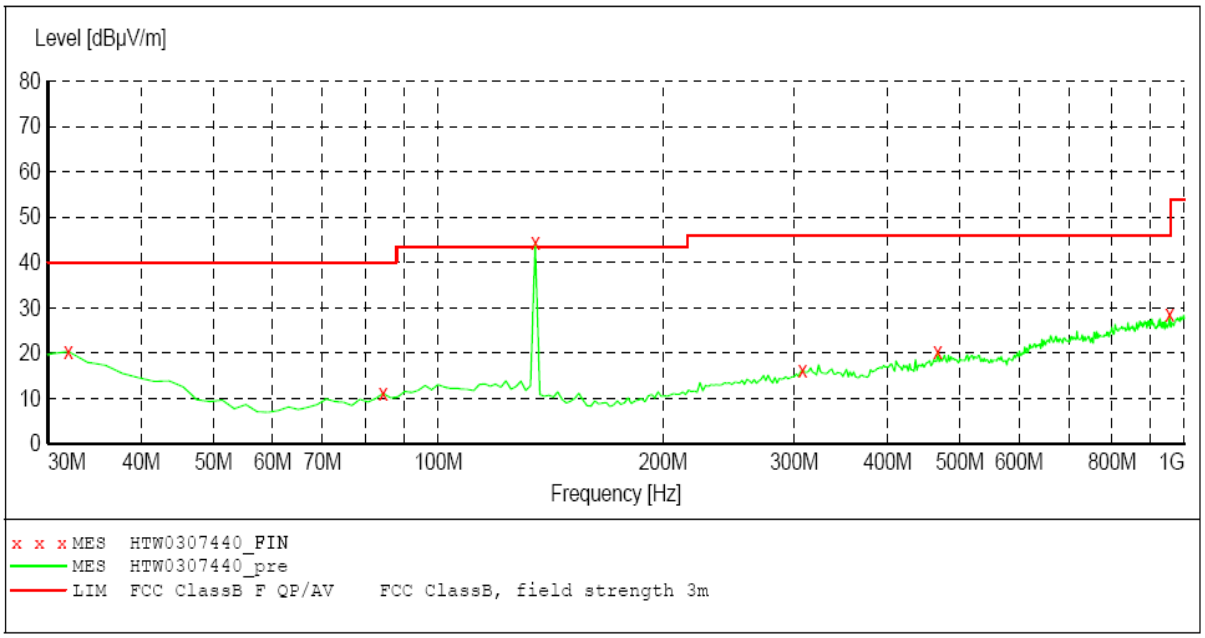
Test Conditions: Rx mode (FM 136.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307440_FIN"***

3/7/2012 8:27AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 31.943888 | 20.40 | -12.3 | 40.0 | 19.6 | QP | 100.0 | 172.00 | VERTICAL |
| 84.428858 | 11.10 | -21.2 | 40.0 | 28.9 | QP | 100.0 | 80.00 | VERTICAL |
| 134.969940 | 44.60 | -21.0 | 43.5 | -1.1 | QP | 100.0 | 121.00 | VERTICAL |
| 307.975952 | 16.20 | -16.4 | 46.0 | 29.8 | QP | 100.0 | 254.00 | VERTICAL |
| 467.374749 | 20.40 | -13.8 | 46.0 | 25.6 | QP | 100.0 | 130.00 | VERTICAL |
| 955.290581 | 28.60 | -7.1 | 46.0 | 17.4 | QP | 100.0 | 44.00 | VERTICAL |

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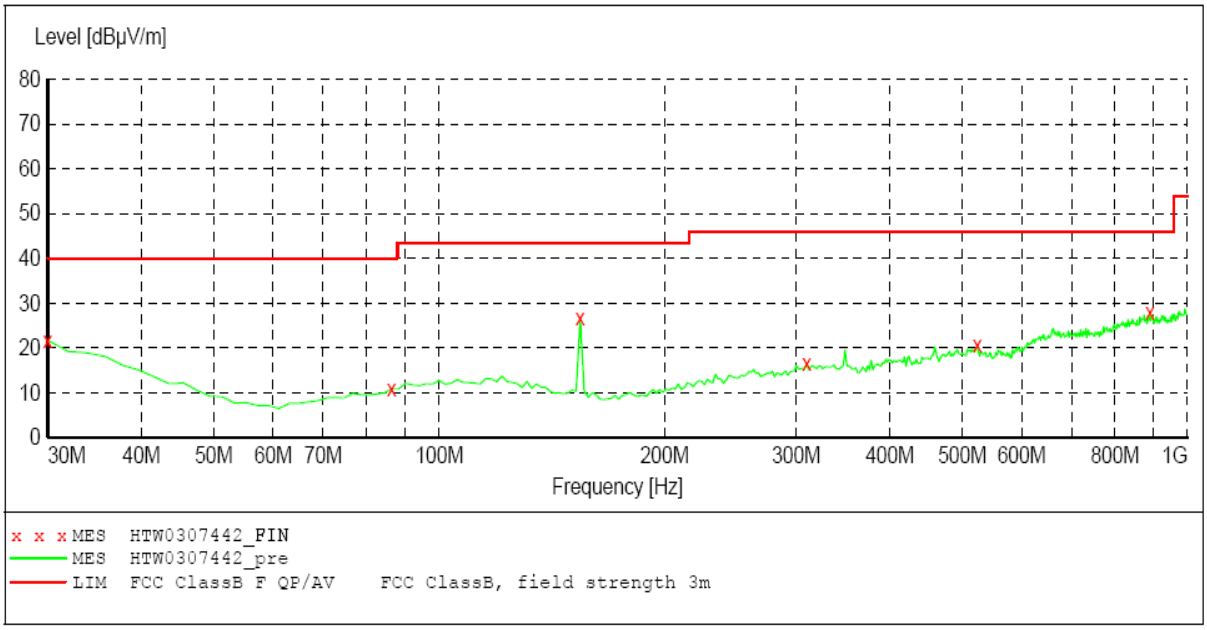
Test Conditions: Rx mode (FM 136.0 MHz, 60 dBµV CW input to ANT)

**FM 155MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307442_FIN"***

3/7/2012 8:31AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 21.70 | -11.3 | 40.0 | 18.3 | QP | 100.0 | 148.00 | HORIZONTAL |
| 86.372745 | 10.80 | -20.8 | 40.0 | 29.2 | QP | 100.0 | 320.00 | HORIZONTAL |
| 154.408818 | 26.60 | -22.7 | 43.5 | 16.9 | QP | 100.0 | 154.00 | HORIZONTAL |
| 309.919840 | 16.60 | -16.3 | 46.0 | 29.4 | QP | 100.0 | 308.00 | HORIZONTAL |
| 523.747495 | 20.60 | -13.0 | 46.0 | 25.4 | QP | 100.0 | 242.00 | HORIZONTAL |
| 891.142285 | 28.10 | -6.7 | 46.0 | 17.9 | QP | 100.0 | 175.00 | HORIZONTAL |

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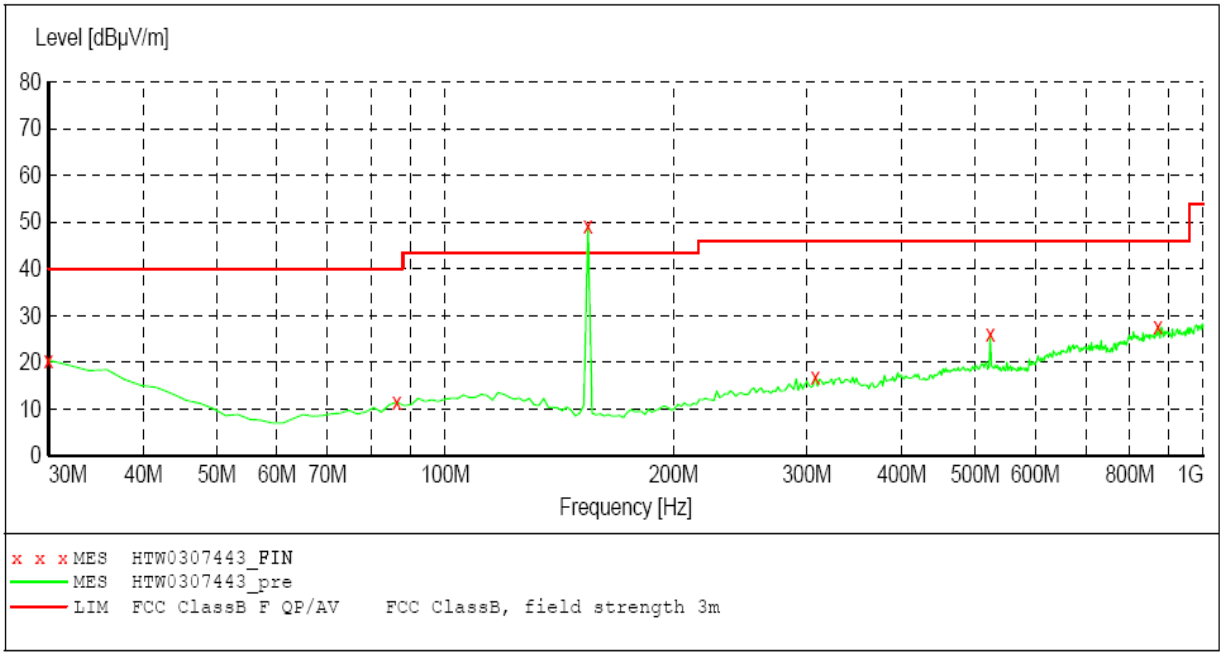
Test Conditions: Rx mode (FM 155.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307443_FIN"***

3/7/2012 8:33AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.40 | -11.3 | 40.0 | 19.6 | QP | 100.0 | 254.00 | VERTICAL |
| 86.372745 | 11.40 | -20.8 | 40.0 | 28.6 | QP | 100.0 | 65.00 | VERTICAL |
| 154.408818 | 49.30 | -22.7 | 43.5 | -5.8 | QP | 100.0 | 293.00 | VERTICAL |
| 307.975952 | 16.90 | -16.4 | 46.0 | 29.1 | QP | 100.0 | 0.00 | VERTICAL |
| 523.747495 | 26.10 | -13.0 | 46.0 | 19.9 | QP | 100.0 | 349.00 | VERTICAL |
| 871.703407 | 27.80 | -6.9 | 46.0 | 18.2 | QP | 100.0 | 320.00 | VERTICAL |

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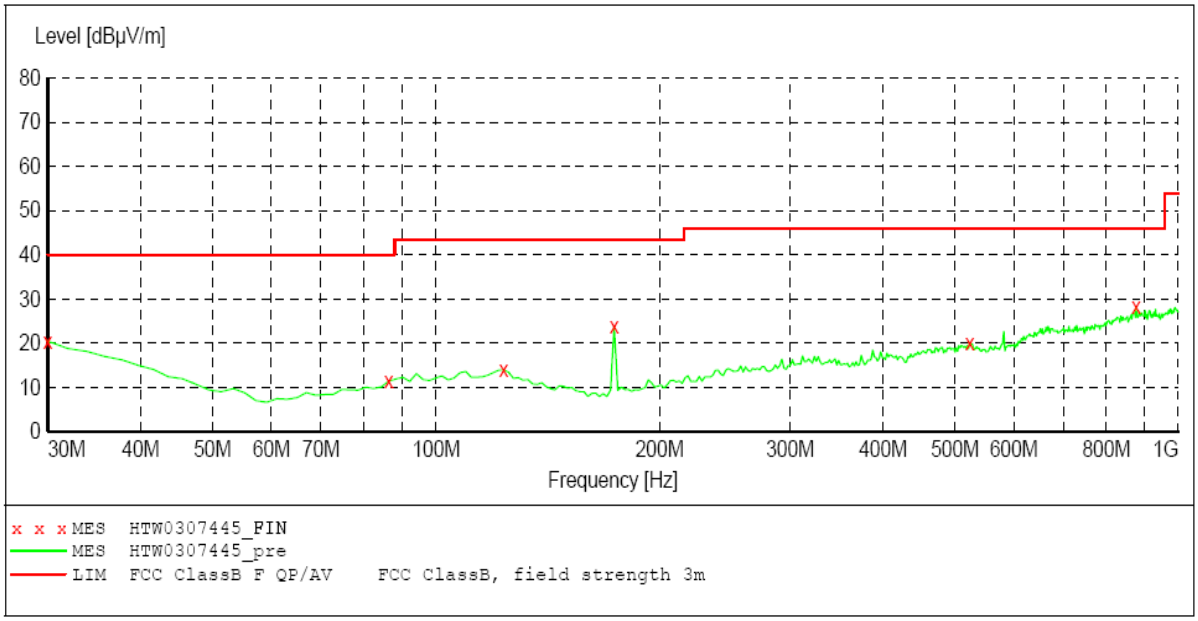
Test Conditions: Rx mode (FM 155.0 MHz, 60 dBµV CW input to ANT)

**FM 174MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307445_FIN"***

3/7/2012 8:37AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.40 | -11.3 | 40.0 | 19.6 | QP | 100.0 | 121.00 | HORIZONTAL |
| 86.372745 | 11.40 | -20.8 | 40.0 | 28.6 | QP | 100.0 | 255.00 | HORIZONTAL |
| 123.306613 | 14.00 | -19.5 | 43.5 | 29.5 | QP | 100.0 | 255.00 | HORIZONTAL |
| 173.847695 | 23.90 | -22.9 | 43.5 | 19.6 | QP | 100.0 | 314.00 | HORIZONTAL |
| 523.747495 | 20.20 | -13.0 | 46.0 | 25.8 | QP | 100.0 | 314.00 | HORIZONTAL |
| 877.535070 | 28.20 | -7.0 | 46.0 | 17.8 | QP | 100.0 | 314.00 | HORIZONTAL |

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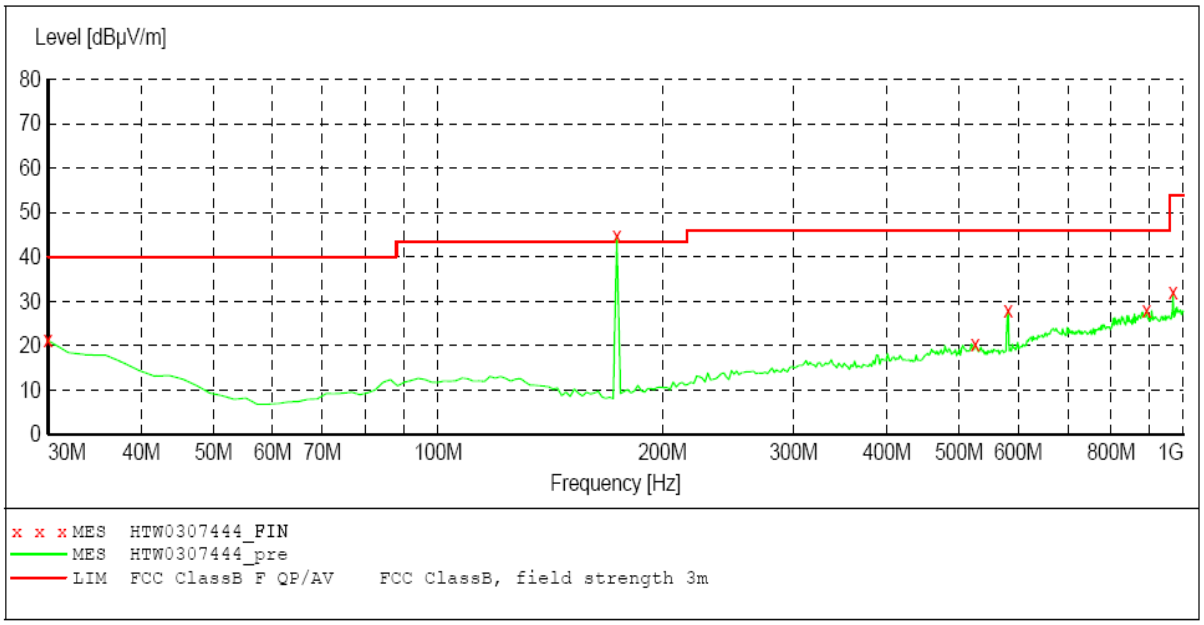
Test Conditions: Rx mode (FM 174.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307444_FIN"***

3/7/2012 8:36AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 21.20 | -11.3 | 40.0 | 18.8 | QP | 100.0 | 88.00 | VERTICAL |
| 173.847695 | 44.70 | -22.9 | 43.5 | -1.2 | QP | 100.0 | 274.00 | VERTICAL |
| 525.691383 | 20.40 | -13.0 | 46.0 | 25.6 | QP | 100.0 | 224.00 | VERTICAL |
| 582.064128 | 27.90 | -13.5 | 46.0 | 18.1 | QP | 100.0 | 0.00 | VERTICAL |
| 893.086172 | 28.00 | -6.8 | 46.0 | 18.0 | QP | 100.0 | 187.00 | VERTICAL |
| 968.897796 | 32.10 | -6.8 | 53.9 | 21.8 | QP | 100.0 | 210.00 | VERTICAL |

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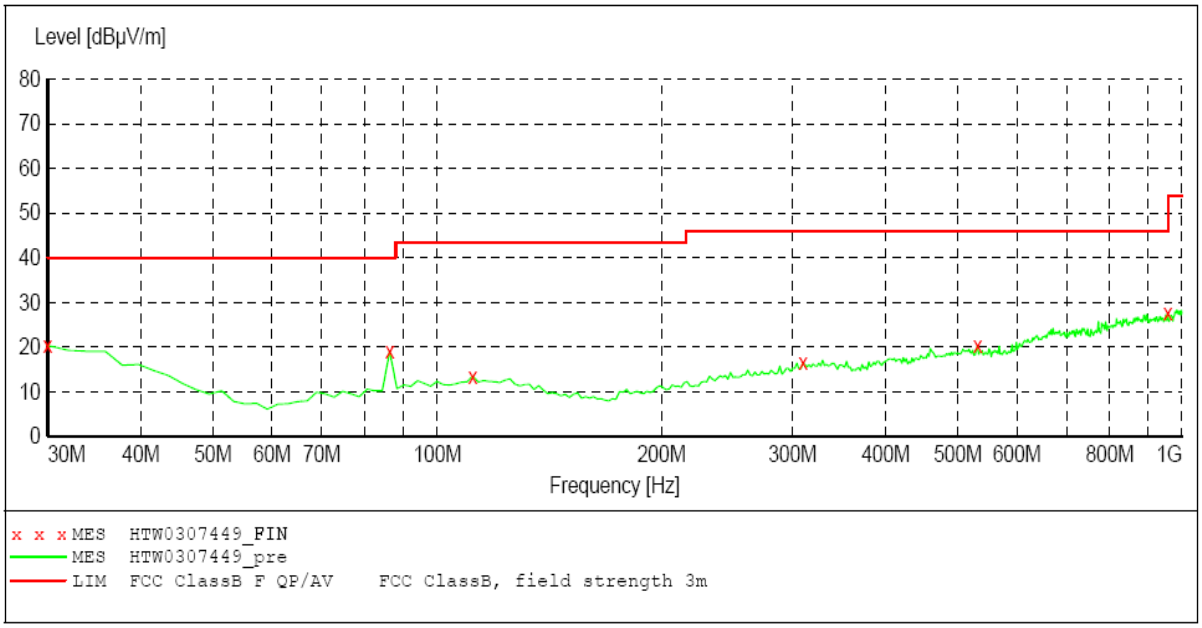
Test Conditions: Rx mode (FM 174.0 MHz, 60 dBµV CW input to ANT)

**WFM 88MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307449_FIN"***

3/7/2012 8:48AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.40 | -11.3 | 40.0 | 19.6 | QP | 100.0 | 262.00 | HORIZONTAL |
| 86.372745 | 19.10 | -20.8 | 40.0 | 20.9 | QP | 100.0 | 297.00 | HORIZONTAL |
| 111.643287 | 13.50 | -19.5 | 43.5 | 30.0 | QP | 100.0 | 0.00 | HORIZONTAL |
| 309.919840 | 16.50 | -16.3 | 46.0 | 29.5 | QP | 100.0 | 247.00 | HORIZONTAL |
| 531.523046 | 20.30 | -13.2 | 46.0 | 25.7 | QP | 100.0 | 185.00 | HORIZONTAL |
| 957.234469 | 27.60 | -7.0 | 46.0 | 18.4 | QP | 100.0 | 283.00 | HORIZONTAL |

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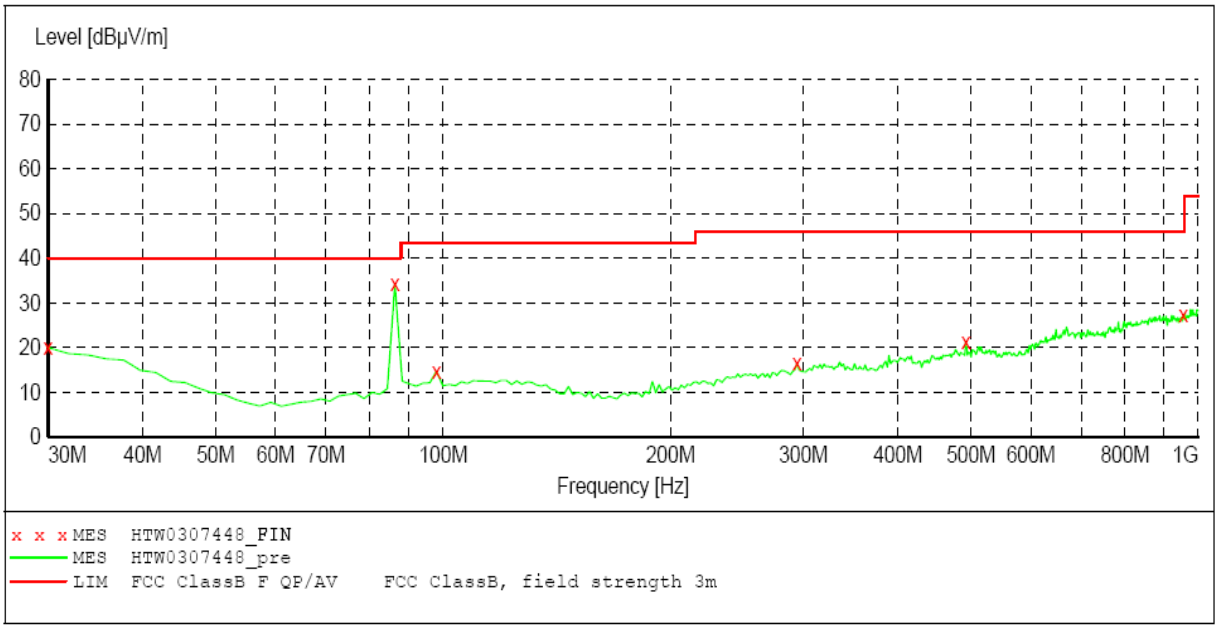
Test Conditions: Rx mode (WFM 88.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307448_FIN"***

3/7/2012 8:45AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.00 | -11.3 | 40.0 | 20.0 | QP | 100.0 | 278.00 | VERTICAL |
| 86.372745 | 34.20 | -20.8 | 40.0 | 5.8 | QP | 100.0 | 255.00 | VERTICAL |
| 98.036072 | 14.70 | -19.9 | 43.5 | 28.8 | QP | 100.0 | 14.00 | VERTICAL |
| 294.368737 | 16.40 | -17.4 | 46.0 | 29.6 | QP | 100.0 | 338.00 | VERTICAL |
| 492.645291 | 21.40 | -13.6 | 46.0 | 24.6 | QP | 100.0 | 62.00 | VERTICAL |
| 955.290581 | 27.20 | -7.1 | 46.0 | 18.8 | QP | 100.0 | 66.00 | VERTICAL |

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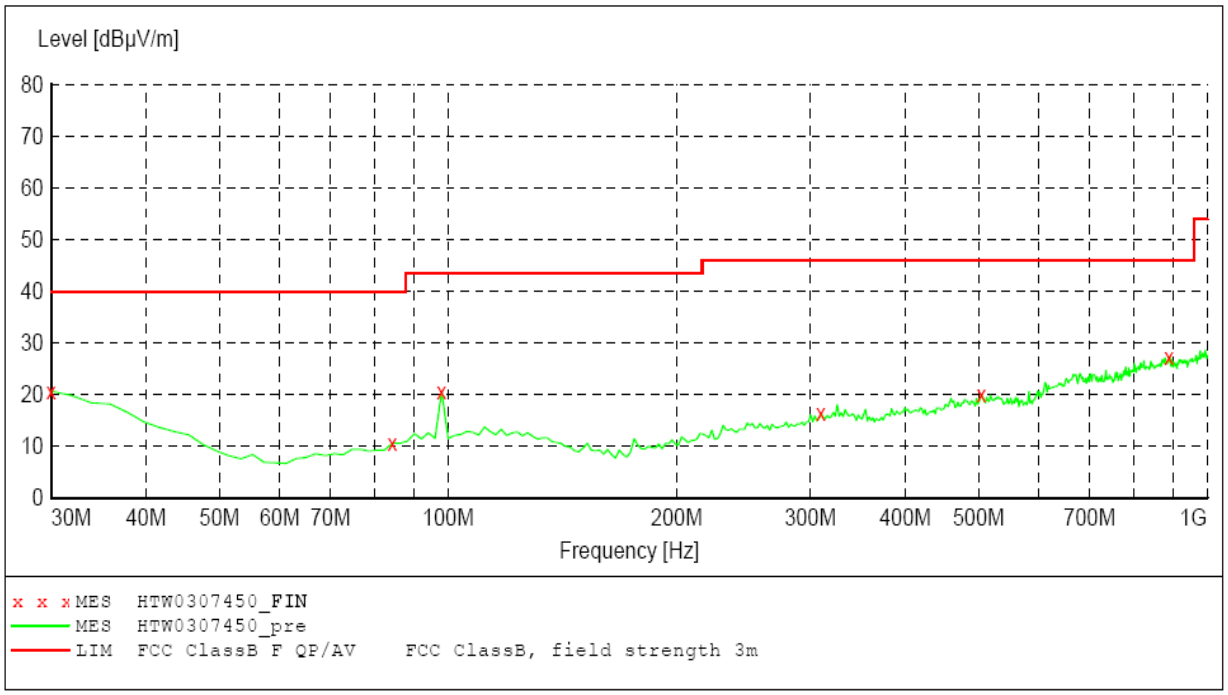
Test Conditions: Rx mode (WFM 88.0 MHz, 60 dBµV CW input to ANT)

**WFM 98MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307450_FIN"***

3/7/2012 8:50AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.60 | -11.3 | 40.0 | 19.4 | QP | 100.0 | 42.00 | HORIZONTAL |
| 84.428858 | 10.60 | -21.2 | 40.0 | 29.4 | QP | 100.0 | 272.00 | HORIZONTAL |
| 98.036072 | 20.60 | -19.9 | 43.5 | 22.9 | QP | 100.0 | 320.00 | HORIZONTAL |
| 309.919840 | 16.40 | -16.3 | 46.0 | 29.6 | QP | 100.0 | 281.00 | HORIZONTAL |
| 504.308617 | 20.00 | -13.5 | 46.0 | 26.0 | QP | 100.0 | 142.00 | HORIZONTAL |
| 891.142285 | 27.30 | -6.7 | 46.0 | 18.7 | QP | 100.0 | 234.00 | HORIZONTAL |

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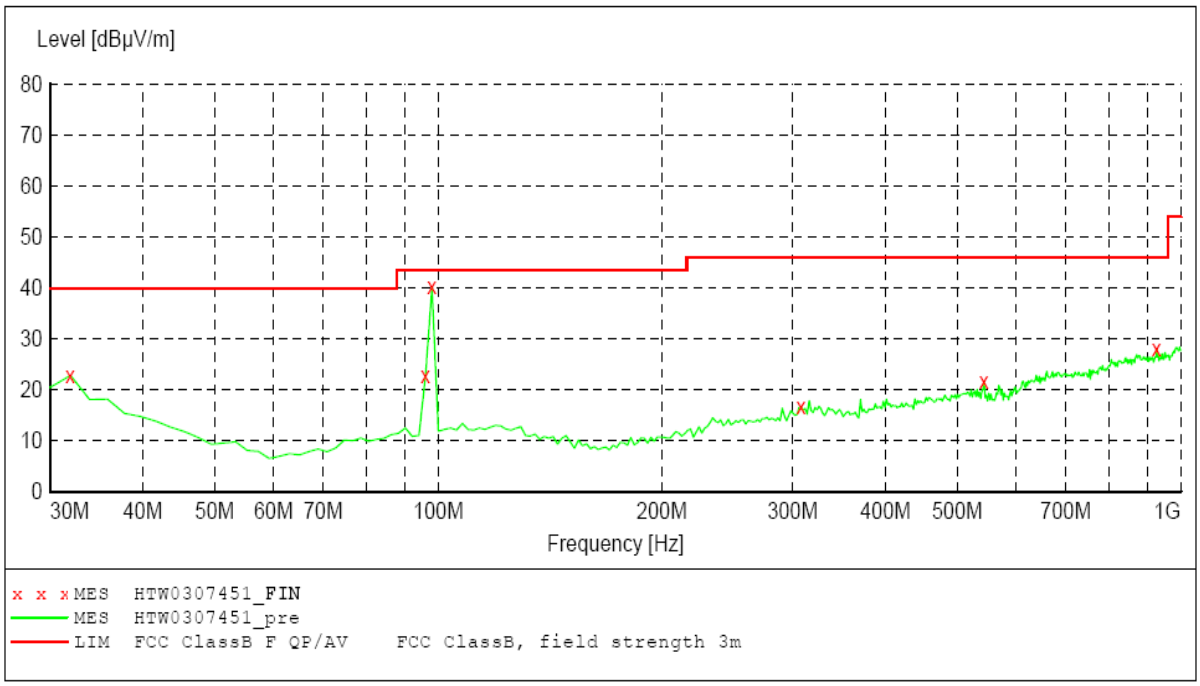
Test Conditions: Rx mode (WFM 98.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307451_FIN"***

3/7/2012 8:52AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 31.943888 | 22.80 | -12.3 | 40.0 | 17.2 | QP | 100.0 | 21.00 | VERTICAL |
| 96.092184 | 22.80 | -19.9 | 43.5 | 20.7 | QP | 100.0 | 86.00 | VERTICAL |
| 98.036072 | 40.20 | -19.9 | 43.5 | 3.3 | QP | 100.0 | 272.00 | VERTICAL |
| 307.975952 | 16.60 | -16.4 | 46.0 | 29.4 | QP | 100.0 | 39.00 | VERTICAL |
| 543.186373 | 21.60 | -13.7 | 46.0 | 24.4 | QP | 100.0 | 306.00 | VERTICAL |
| 928.076152 | 28.00 | -7.1 | 46.0 | 18.0 | QP | 100.0 | 21.00 | VERTICAL |

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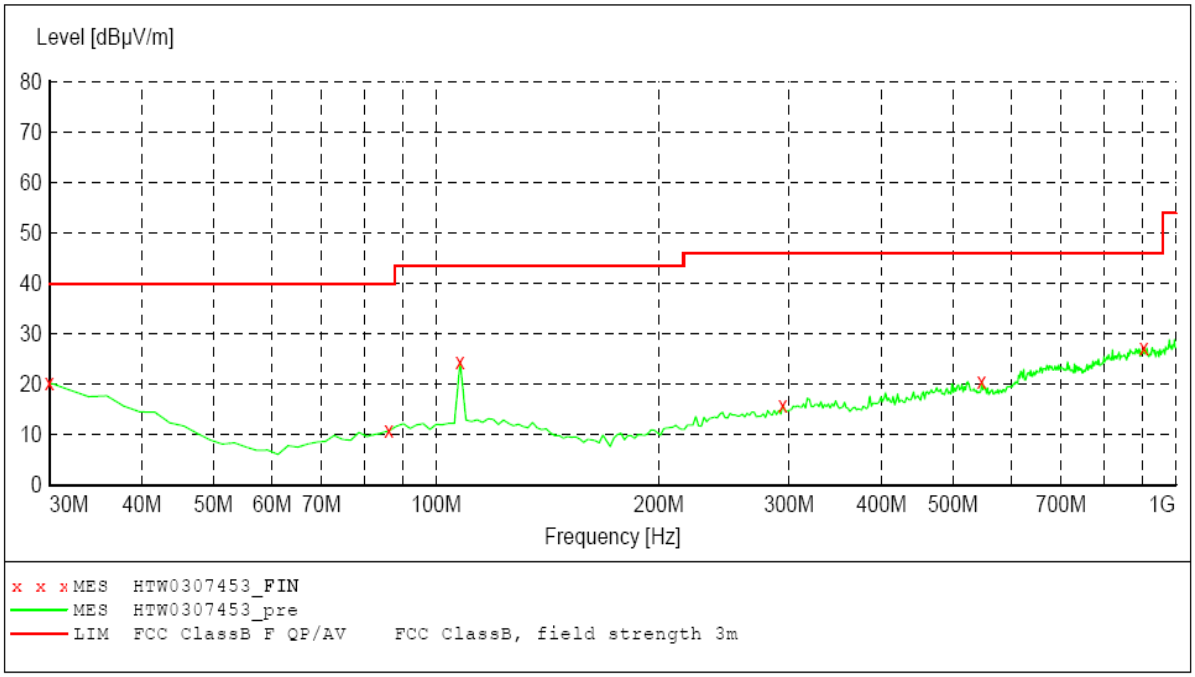
Test Conditions: Rx mode (WFM 98.0 MHz, 60 dBµV CW input to ANT)

**WFM 108MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307453_FIN"***

3/7/2012 8:57AM

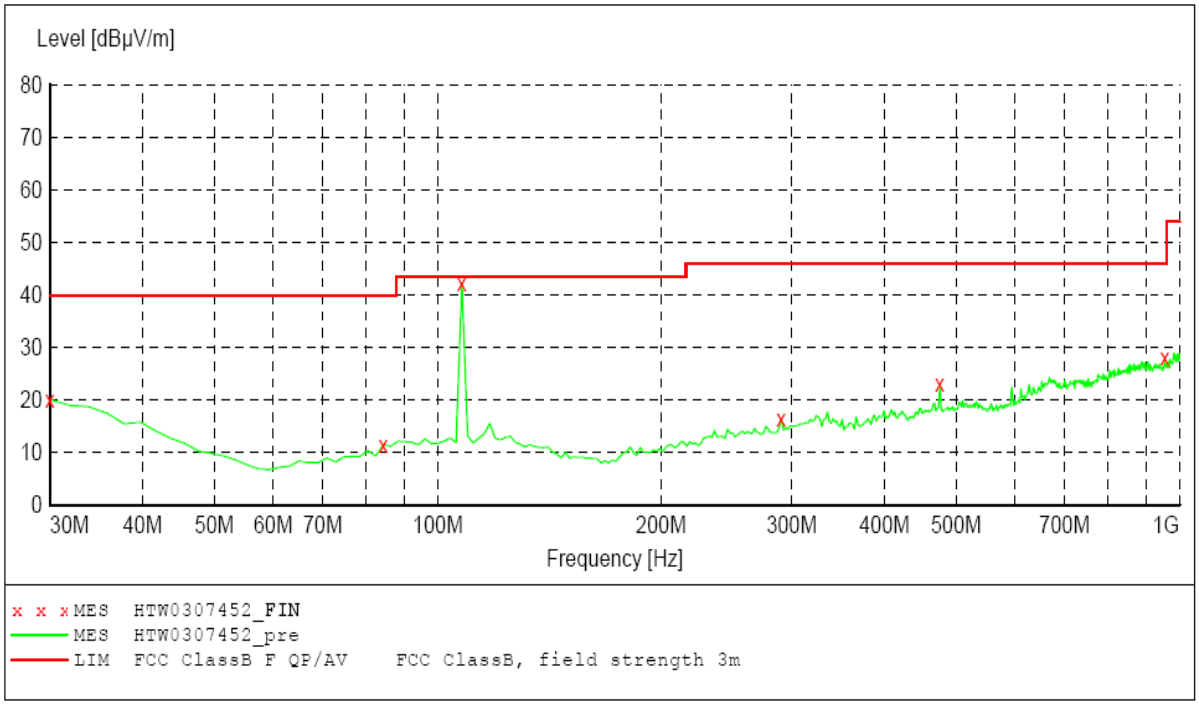
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.30 | -11.3 | 40.0 | 19.7 | QP | 100.0 | 75.00 | HORIZONTAL |
| 86.372745 | 10.80 | -20.8 | 40.0 | 29.2 | QP | 100.0 | 3.00 | HORIZONTAL |
| 107.755511 | 24.50 | -19.6 | 43.5 | 19.0 | QP | 100.0 | 352.00 | HORIZONTAL |
| 294.368737 | 15.80 | -17.4 | 46.0 | 30.2 | QP | 100.0 | 325.00 | HORIZONTAL |
| 547.074148 | 20.60 | -13.7 | 46.0 | 25.4 | QP | 100.0 | 107.00 | HORIZONTAL |
| 906.693387 | 27.30 | -7.3 | 46.0 | 18.7 | QP | 100.0 | 354.00 | HORIZONTAL |

Page 1/1 3/7/2012 8:57AM HTW0307453

Test Conditions: Rx mode (WFM 108.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307452_FIN"***

3/7/2012 8:54AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.00 | -11.3 | 40.0 | 20.0 | QP | 100.0 | 131.00 | VERTICAL |
| 84.428858 | 11.50 | -21.2 | 40.0 | 28.5 | QP | 100.0 | 319.00 | VERTICAL |
| 107.755511 | 42.10 | -19.6 | 43.5 | 1.4 | QP | 100.0 | 291.00 | VERTICAL |
| 290.480962 | 16.30 | -17.5 | 46.0 | 29.7 | QP | 100.0 | 219.00 | VERTICAL |
| 475.150301 | 23.00 | -13.7 | 46.0 | 23.0 | QP | 100.0 | 204.00 | VERTICAL |
| 955.290581 | 28.20 | -7.1 | 46.0 | 17.8 | QP | 100.0 | 48.00 | VERTICAL |

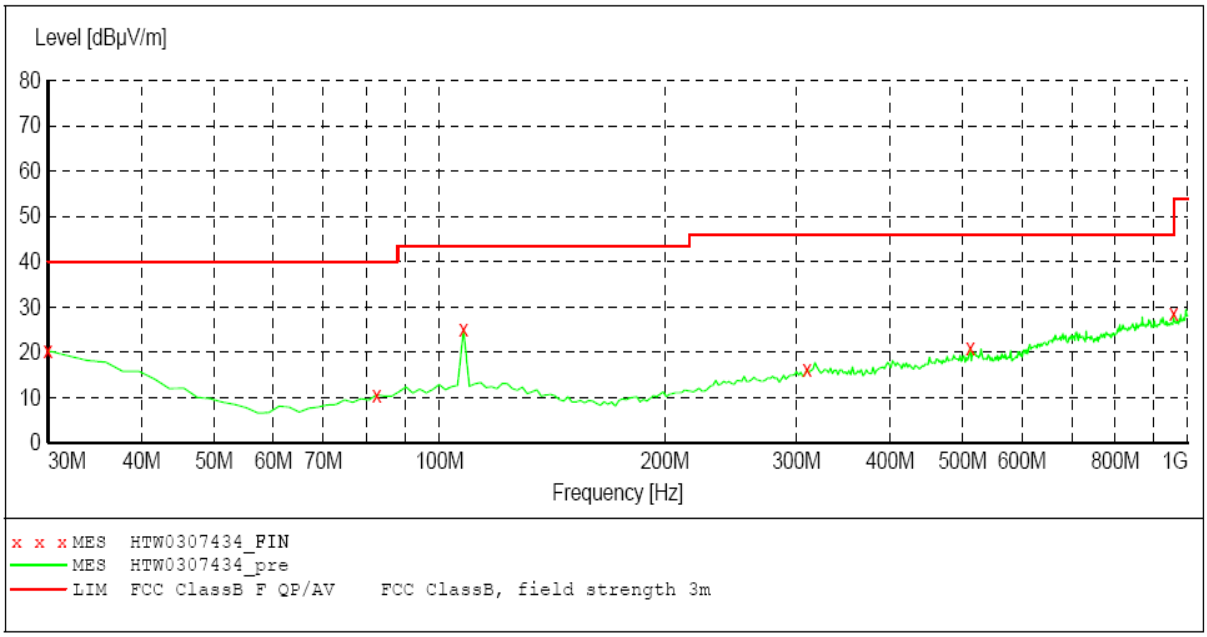
Page 1/1 3/7/2012 8:54AM HTW0307452

Test Conditions: Rx mode (WFM 108.0 MHz, 60 dBµV CW input to ANT)

**AM 108MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307434_FIN"***

3/7/2012 8:13AM

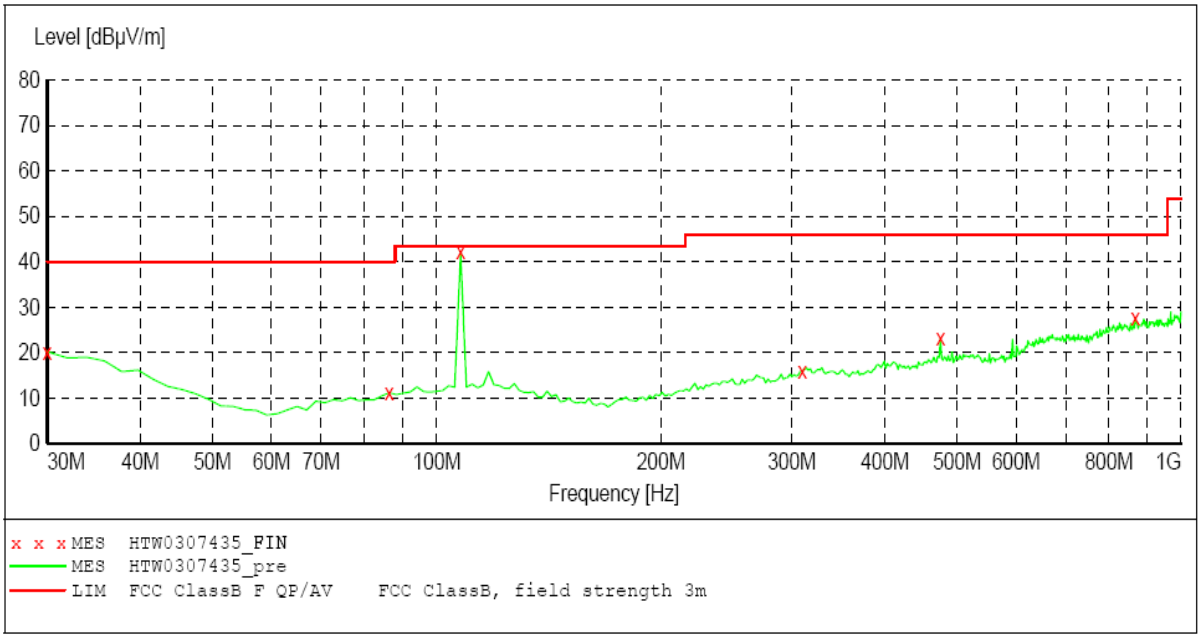
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.30 | -11.3 | 40.0 | 19.7 | QP | 100.0 | 160.00 | HORIZONTAL |
| 82.484970 | 10.60 | -21.6 | 40.0 | 29.4 | QP | 100.0 | 207.00 | HORIZONTAL |
| 107.755511 | 25.00 | -19.6 | 43.5 | 18.5 | QP | 100.0 | 351.00 | HORIZONTAL |
| 309.919840 | 16.30 | -16.3 | 46.0 | 29.7 | QP | 100.0 | 91.00 | HORIZONTAL |
| 512.084168 | 21.00 | -13.1 | 46.0 | 25.0 | QP | 100.0 | 213.00 | HORIZONTAL |
| 957.234469 | 28.50 | -7.0 | 46.0 | 17.5 | QP | 100.0 | 186.00 | HORIZONTAL |

Page 1/1 3/7/2012 8:13AM HTW0307434

Test Conditions: Rx mode (AM 108.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307435_FIN"***

3/7/2012 8:15AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.20 | -11.3 | 40.0 | 19.8 | QP | 100.0 | 27.00 | VERTICAL |
| 86.372745 | 11.20 | -20.8 | 40.0 | 28.8 | QP | 100.0 | 318.00 | VERTICAL |
| 107.755511 | 42.10 | -19.6 | 43.5 | 1.4 | QP | 100.0 | 260.00 | VERTICAL |
| 309.919840 | 15.90 | -16.3 | 46.0 | 30.1 | QP | 100.0 | 309.00 | VERTICAL |
| 475.150301 | 23.10 | -13.7 | 46.0 | 22.9 | QP | 100.0 | 111.00 | VERTICAL |
| 867.815631 | 27.50 | -7.1 | 46.0 | 18.5 | QP | 100.0 | 0.00 | VERTICAL |

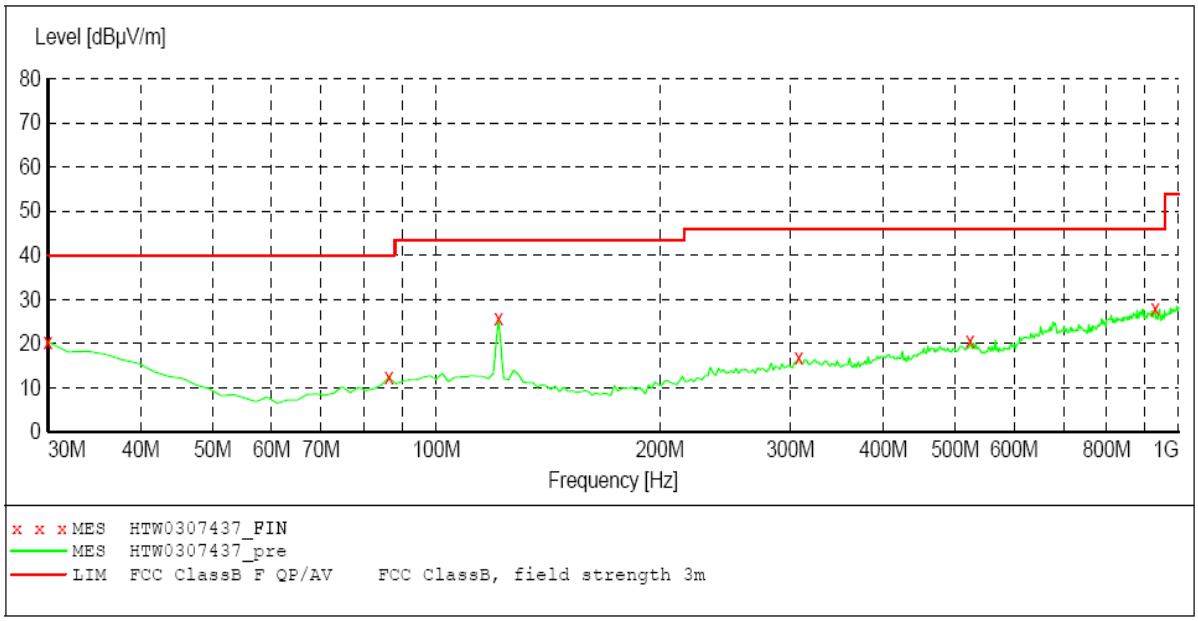
Page 1/1 3/7/2012 8:15AM HTW0307435

Test Conditions: Rx mode (AM 108.0 MHz, 60 dBµV CW input to ANT)

**AM 122MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307437_FIN"***

3/7/2012 8:20AM

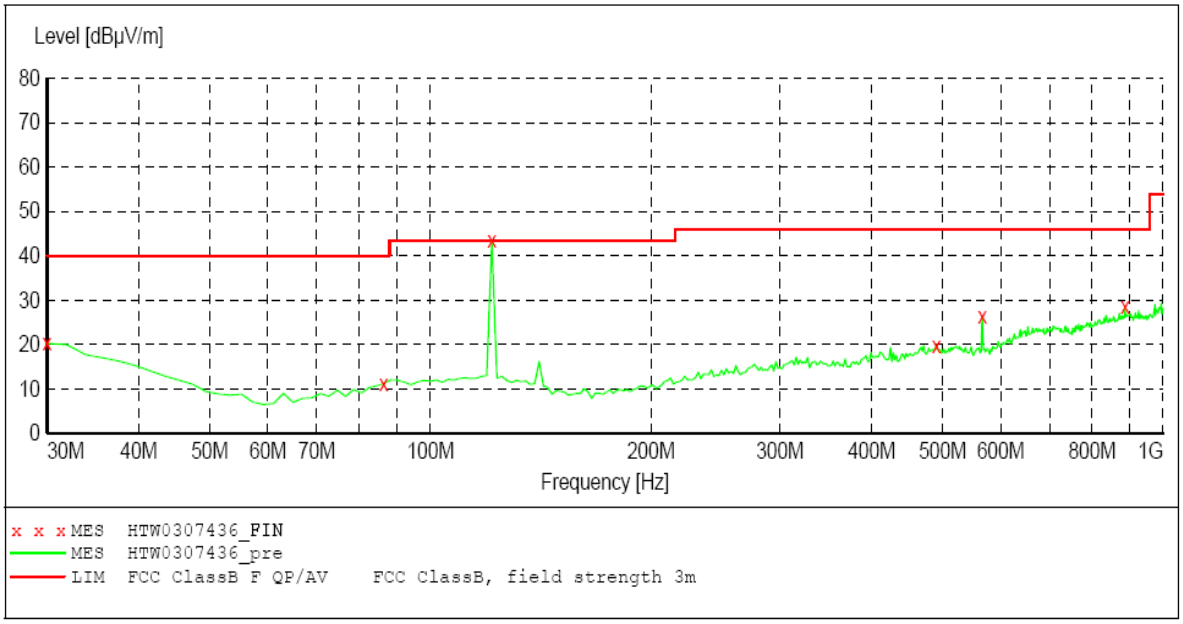
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.40 | -11.3 | 40.0 | 19.6 | QP | 100.0 | 113.00 | HORIZONTAL |
| 86.372745 | 12.30 | -20.8 | 40.0 | 27.7 | QP | 100.0 | 0.00 | HORIZONTAL |
| 121.362725 | 25.80 | -19.4 | 43.5 | 17.7 | QP | 100.0 | 127.00 | HORIZONTAL |
| 307.975952 | 16.80 | -16.4 | 46.0 | 29.2 | QP | 100.0 | 195.00 | HORIZONTAL |
| 523.747495 | 20.50 | -13.0 | 46.0 | 25.5 | QP | 100.0 | 201.00 | HORIZONTAL |
| 930.020040 | 28.00 | -7.1 | 46.0 | 18.0 | QP | 100.0 | 48.00 | HORIZONTAL |

Page 1/1 3/7/2012 8:20AM HTW0307437

Test Conditions: Rx mode (AM 122.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307436_FIN"***

3/7/2012 8:18AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.30 | -11.3 | 40.0 | 19.7 | QP | 100.0 | 22.00 | VERTICAL |
| 86.372745 | 11.10 | -20.8 | 40.0 | 28.9 | QP | 100.0 | 147.00 | VERTICAL |
| 121.362725 | 43.40 | -19.4 | 43.5 | 0.1 | QP | 100.0 | 278.00 | VERTICAL |
| 490.701403 | 19.80 | -13.6 | 46.0 | 26.2 | QP | 100.0 | 314.00 | VERTICAL |
| 566.513026 | 26.40 | -13.4 | 46.0 | 19.6 | QP | 100.0 | 245.00 | VERTICAL |
| 887.254509 | 28.50 | -6.7 | 46.0 | 17.5 | QP | 100.0 | 154.00 | VERTICAL |

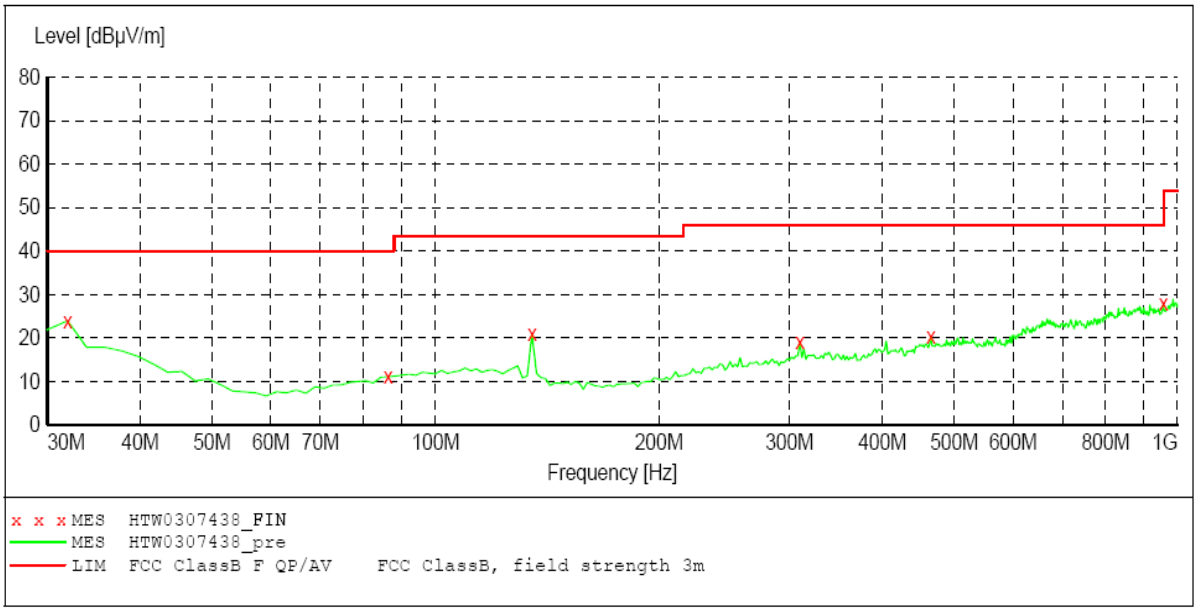
Page 1/1 3/7/2012 8:18AM HTW0307436

Test Conditions: Rx mode (AM 122.0 MHz, 60 dBµV CW input to ANT)

**AM 135.5MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307438_FIN"***

3/7/2012 8:22AM

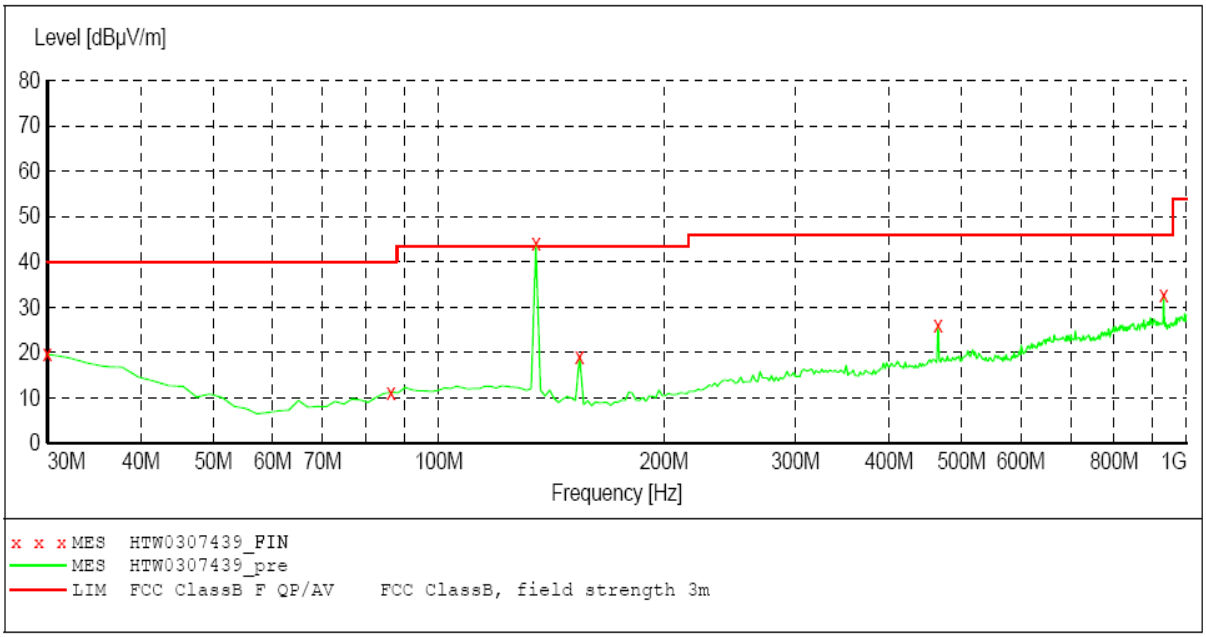
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 31.943888 | 23.90 | -12.3 | 40.0 | 16.1 | QP | 100.0 | 217.00 | HORIZONTAL |
| 86.372745 | 11.10 | -20.8 | 40.0 | 28.9 | QP | 100.0 | 45.00 | HORIZONTAL |
| 134.969940 | 20.90 | -21.0 | 43.5 | 22.6 | QP | 100.0 | 143.00 | HORIZONTAL |
| 309.919840 | 19.00 | -16.3 | 46.0 | 27.0 | QP | 100.0 | 92.00 | HORIZONTAL |
| 465.430862 | 20.40 | -13.9 | 46.0 | 25.6 | QP | 100.0 | 51.00 | HORIZONTAL |
| 957.234469 | 27.90 | -7.0 | 46.0 | 18.1 | QP | 100.0 | 217.00 | HORIZONTAL |

Page 1/1 3/7/2012 8:22AM HTW0307438

Test Conditions: Rx mode (AM 135.5 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0307439_FIN"***

3/7/2012 8:24AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 19.60 | -11.3 | 40.0 | 20.4 | QP | 100.0 | 54.00 | VERTICAL |
| 86.372745 | 11.20 | -20.8 | 40.0 | 28.8 | QP | 100.0 | 152.00 | VERTICAL |
| 134.969940 | 44.00 | -21.0 | 43.5 | -0.5 | QP | 100.0 | 119.00 | VERTICAL |
| 154.408818 | 19.20 | -22.7 | 43.5 | 24.3 | QP | 100.0 | 146.00 | VERTICAL |
| 465.430862 | 26.00 | -13.9 | 46.0 | 20.0 | QP | 100.0 | 0.00 | VERTICAL |
| 931.963928 | 32.70 | -7.2 | 46.0 | 13.3 | QP | 100.0 | 167.00 | VERTICAL |

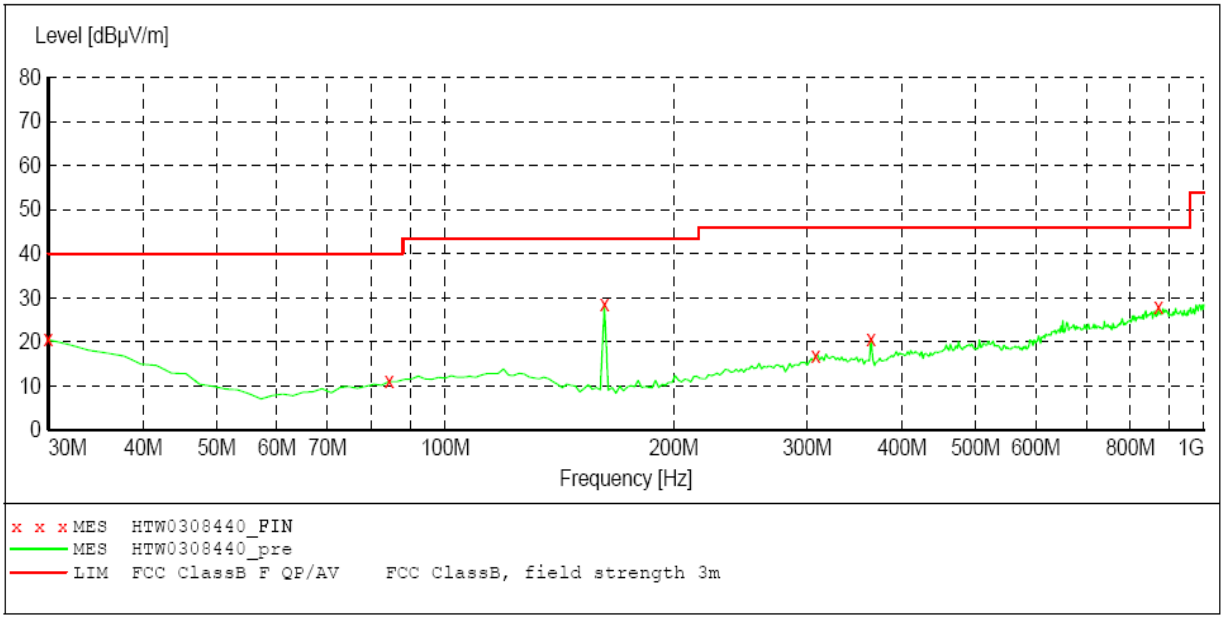
Page 1/1 3/7/2012 8:24AM HTW0307439

Test Conditions: Rx mode (AM 135.5 MHz, 60 dBµV CW input to ANT)

**Weather Band 162.475MHz**

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0308440_FIN"***

3/8/2012 6:49PM

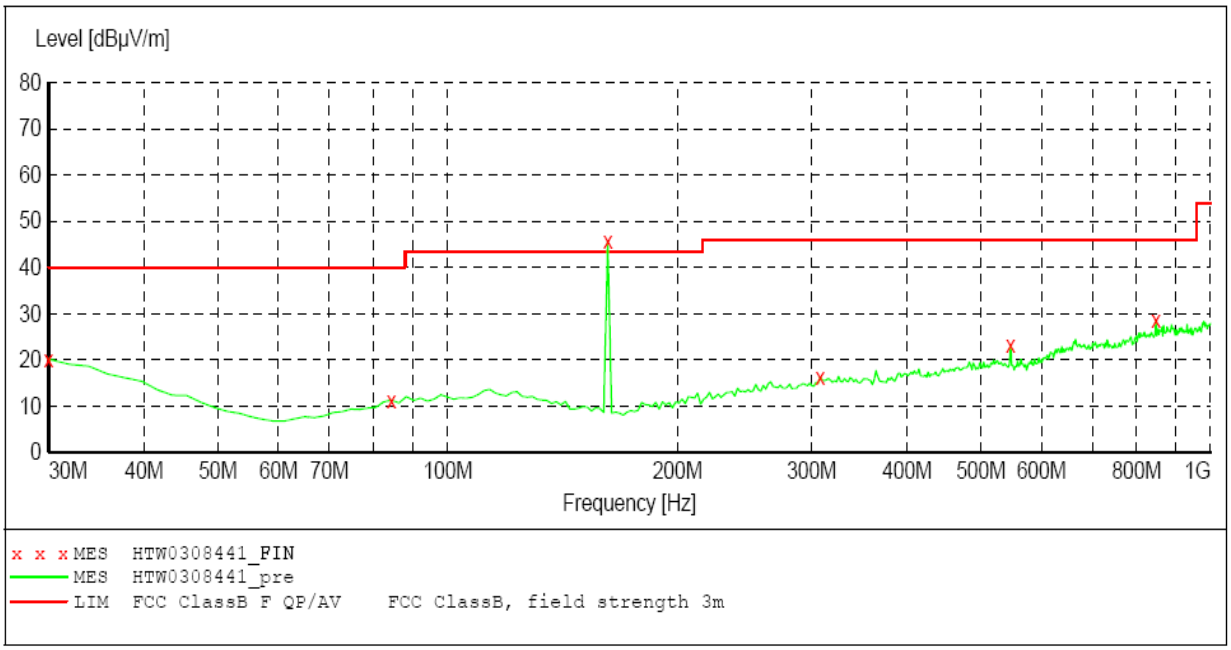
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.50 | -11.3 | 40.0 | 19.5 | QP | 100.0 | 96.00 | HORIZONTAL |
| 84.428858 | 11.00 | -21.2 | 40.0 | 29.0 | QP | 300.0 | 325.00 | HORIZONTAL |
| 162.184369 | 28.50 | -23.1 | 43.5 | 15.0 | QP | 100.0 | 96.00 | HORIZONTAL |
| 307.975952 | 16.90 | -16.4 | 46.0 | 29.1 | QP | 300.0 | 90.00 | HORIZONTAL |
| 364.348697 | 20.80 | -16.8 | 46.0 | 25.2 | QP | 100.0 | 309.00 | HORIZONTAL |
| 871.703407 | 27.90 | -6.9 | 46.0 | 18.1 | QP | 300.0 | 1.00 | HORIZONTAL |

Page 1/1 3/8/2012 6:49PM HTW0308440

Test Conditions: Rx mode (Weather Band 162.475 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (30M-1G)"***

| Short Description: | | | Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | MaxPeak | Coupled | 120 kHz | HL562 201106 |




***MEASUREMENT RESULT: "HTW0308441_FIN"***

3/8/2012 6:51PM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 20.10 | -11.3 | 40.0 | 19.9 | QP | 100.0 | 143.00 | VERTICAL |
| 84.428858 | 11.30 | -21.2 | 40.0 | 28.7 | QP | 100.0 | 241.00 | VERTICAL |
| 162.184369 | 45.70 | -23.1 | 43.5 | -2.2 | QP | 100.0 | 306.00 | VERTICAL |
| 307.975952 | 16.30 | -16.4 | 46.0 | 29.7 | QP | 100.0 | 272.00 | VERTICAL |
| 547.074148 | 23.30 | -13.7 | 46.0 | 22.7 | QP | 100.0 | 299.00 | VERTICAL |
| 848.376754 | 28.60 | -7.5 | 46.0 | 17.4 | QP | 100.0 | 235.00 | VERTICAL |

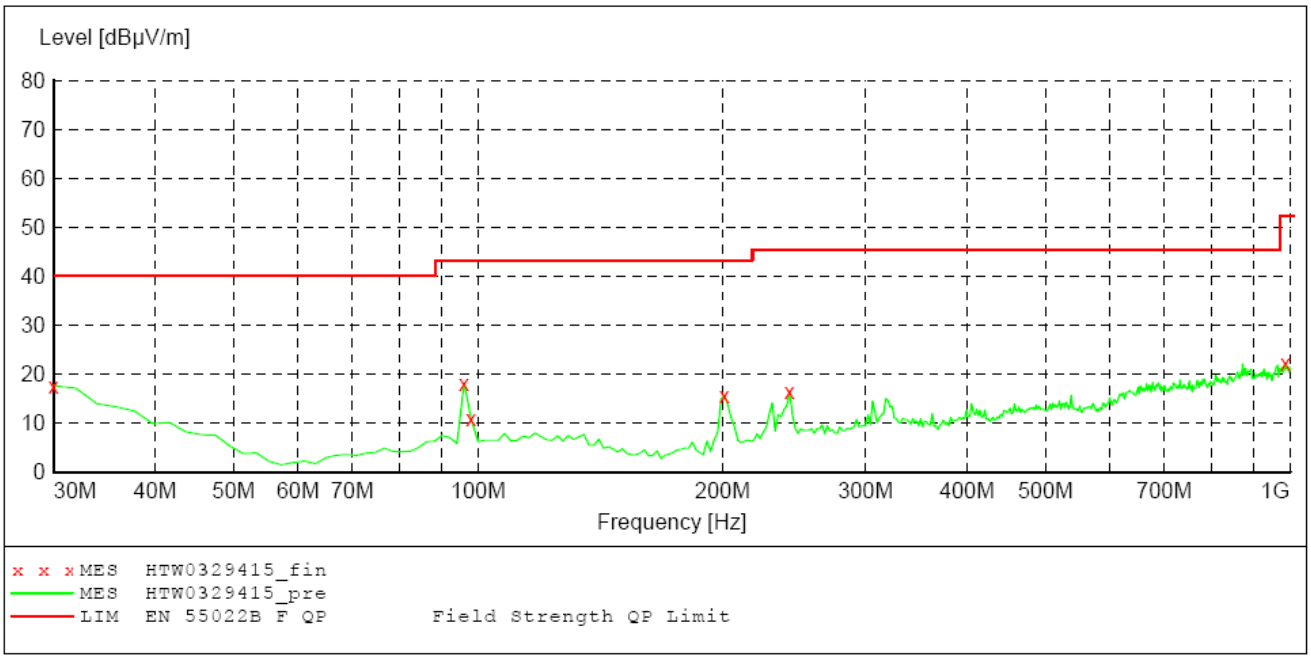
Page 1/1 3/8/2012 6:51PM HTW0308441

Test Conditions: Rx mode (Weather Band 162.475 MHz, 60 dBµV CW input to ANT)

**Scan Mode**

***SCAN TABLE: "test Field(30M-1G)QP"***

| Short Description: | | | Field Strength(30M-1G) | | | |
|---|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | 60.0 kHz | QuasiPeak | 1.0 s | 120 kHz | HL562 |



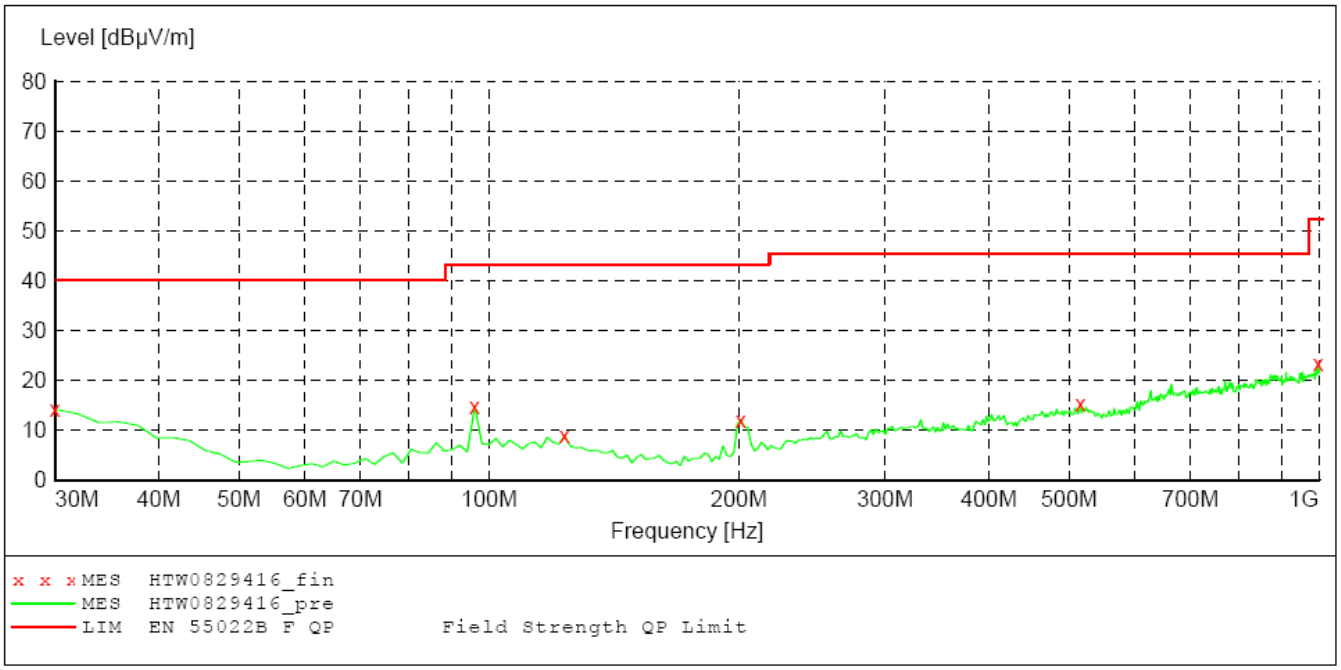

***MEASUREMENT RESULT: "HTW0329415_fin"***

3/29/2012 10:58PM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 17.60 | -22.2 | 40.0 | 22.4 | QP | 100.0 | 111.00 | VERTICAL |
| 96.090000 | 18.20 | -30.9 | 43.5 | 25.3 | QP | 100.0 | 0.00 | VERTICAL |
| 98.030000 | 10.80 | -30.9 | 43.5 | 32.7 | QP | 100.0 | 202.00 | VERTICAL |
| 201.060000 | 15.70 | -32.5 | 43.5 | 27.8 | QP | 100.0 | 192.00 | VERTICAL |
| 241.880000 | 16.50 | -29.9 | 46.0 | 29.5 | QP | 100.0 | 75.00 | VERTICAL |
| 988.330000 | 22.20 | -17.3 | 46.0 | 23.8 | QP | 100.0 | 242.00 | VERTICAL |

***SCAN TABLE: "test Field(30M-1G)QP"***

| Short Description: | | | Field Strength(30M-1G) | | | |
|---|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Step Width | Detector | Meas. Time | IF Bandw. | Transducer |
| 30.0 MHz | 1.0 GHz | 60.0 kHz | QuasiPeak | 1.0 s | 120 kHz | HL562 |




***MEASUREMENT RESULT: "HTW0329416_fin"***

3/29/2012 11:12PM

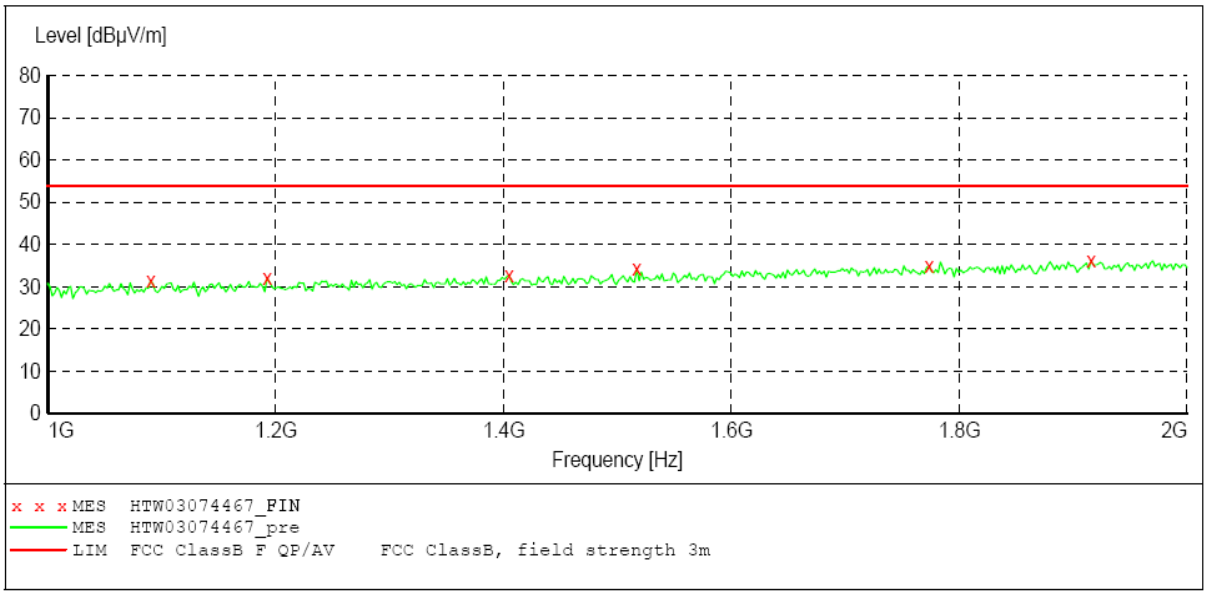
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 30.000000 | 14.20 | -22.2 | 40.0 | 25.8 | QP | 100.0 | 96.00 | HORIZONTAL |
| 96.090000 | 14.90 | -30.9 | 43.5 | 28.6 | QP | 100.0 | 193.00 | HORIZONTAL |
| 123.300000 | 8.90 | -30.6 | 43.5 | 34.6 | QP | 100.0 | 289.00 | HORIZONTAL |
| 201.060000 | 12.10 | -32.5 | 43.5 | 31.4 | QP | 300.0 | 219.00 | HORIZONTAL |
| 515.970000 | 15.20 | -24.0 | 46.0 | 30.8 | QP | 100.0 | 304.00 | HORIZONTAL |
| 998.050000 | 23.40 | -17.2 | 46.0 | 22.6 | QP | 300.0 | 55.00 | HORIZONTAL |

**Above 1GHz**

**FM 136MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074467_FIN"***

3/7/2012 9:28AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1090.180361 | 31.50 | -26.1 | 53.9 | 22.4 | Peak | 100.0 | 187.00 | HORIZONTAL |
| 1192.384770 | 32.00 | -25.5 | 53.9 | 21.9 | Peak | 100.0 | 5.00 | HORIZONTAL |
| 1404.809619 | 32.80 | -24.2 | 53.9 | 21.1 | Peak | 100.0 | 0.00 | HORIZONTAL |
| 1517.034068 | 34.30 | -23.6 | 53.9 | 19.6 | Peak | 100.0 | 101.00 | HORIZONTAL |
| 1773.547094 | 35.00 | -21.4 | 53.9 | 18.9 | Peak | 100.0 | 137.00 | HORIZONTAL |
| 1915.831663 | 36.20 | -20.5 | 53.9 | 17.7 | Peak | 100.0 | 320.00 | HORIZONTAL |

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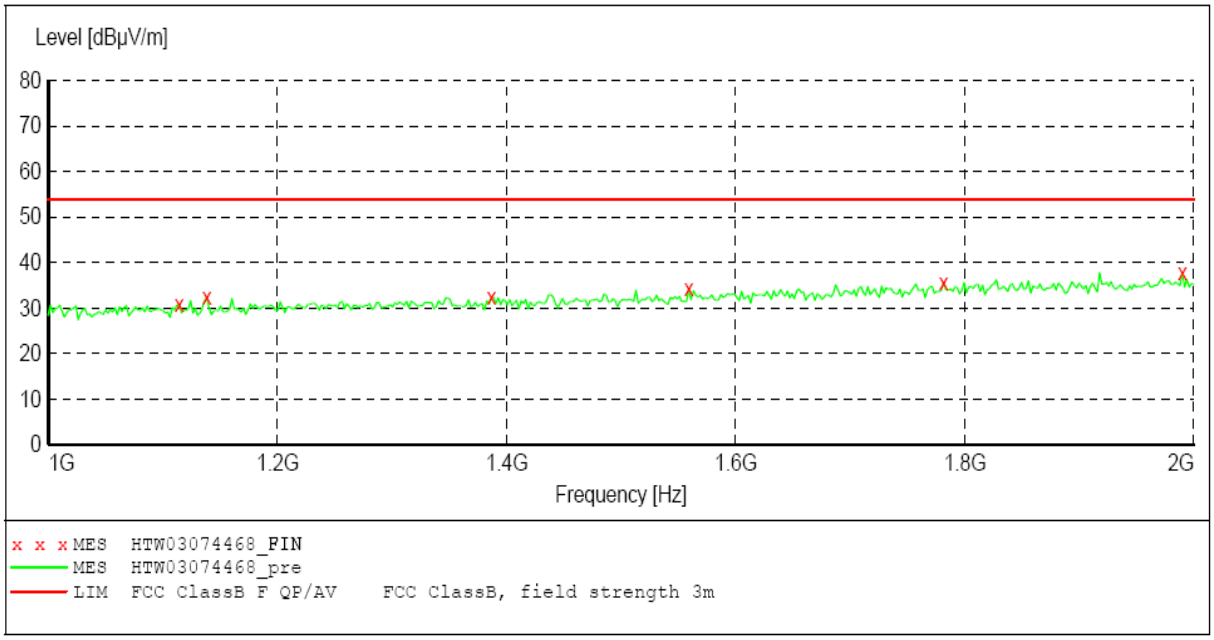
Test Conditions: Rx mode (FM 136.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074468_FIN"***

3/7/2012 9:30AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1114.228457 | 30.70 | -26.0 | 53.9 | 23.2 | Peak | 100.0 | 320.00 | VERTICAL |
| 1138.276553 | 32.30 | -25.8 | 53.9 | 21.6 | Peak | 100.0 | 239.00 | VERTICAL |
| 1386.773547 | 32.50 | -24.3 | 53.9 | 21.4 | Peak | 100.0 | 125.00 | VERTICAL |
| 1559.118236 | 34.20 | -23.2 | 53.9 | 19.7 | Peak | 100.0 | 189.00 | VERTICAL |
| 1781.563126 | 35.70 | -21.4 | 53.9 | 18.2 | Peak | 100.0 | 284.00 | VERTICAL |
| 1989.979960 | 37.90 | -19.9 | 53.9 | 16.0 | Peak | 100.0 | 226.00 | VERTICAL |

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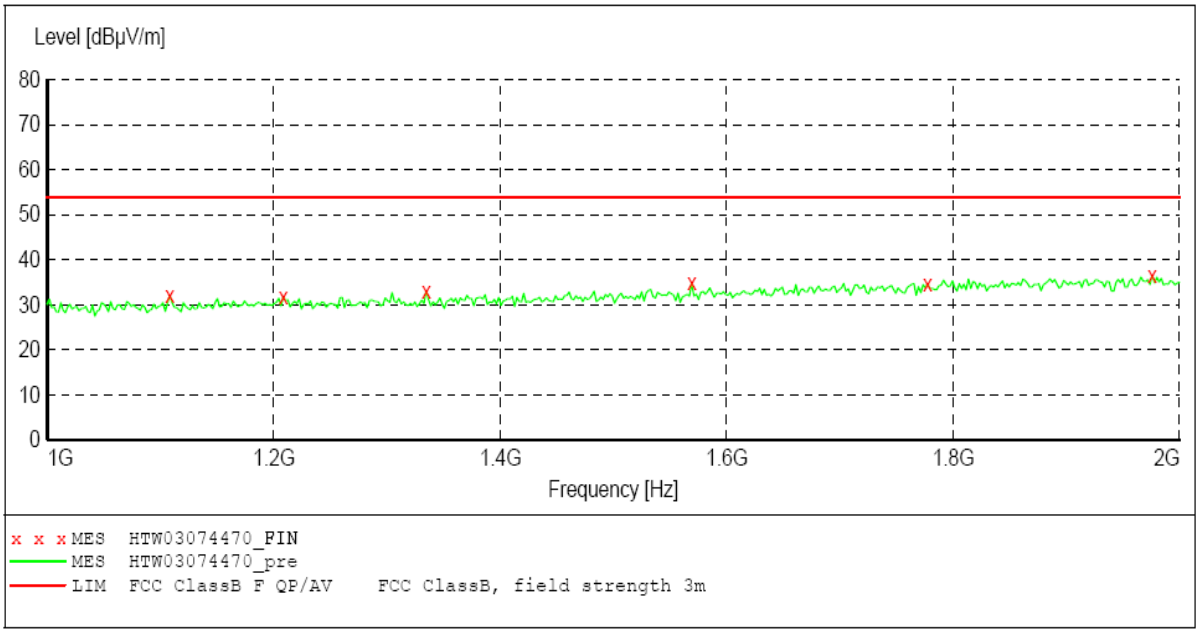
Test Conditions: Rx mode (FM 136.0 MHz, 60 dBµV CW input to ANT)

**FM 155MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074470_FIN"***

3/7/2012 9:33AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1108.216433 | 32.00 | -26.0 | 53.9 | 21.9 | Peak | 100.0 | 7.00 | HORIZONTAL |
| 1208.416834 | 31.90 | -25.4 | 53.9 | 22.0 | Peak | 100.0 | 356.00 | HORIZONTAL |
| 1334.669339 | 33.10 | -24.6 | 53.9 | 20.8 | Peak | 100.0 | 0.00 | HORIZONTAL |
| 1569.138277 | 34.90 | -23.2 | 53.9 | 19.0 | Peak | 100.0 | 285.00 | HORIZONTAL |
| 1777.555110 | 34.70 | -21.4 | 53.9 | 19.2 | Peak | 100.0 | 314.00 | HORIZONTAL |
| 1975.951904 | 36.60 | -20.0 | 53.9 | 17.3 | Peak | 100.0 | 210.00 | HORIZONTAL |

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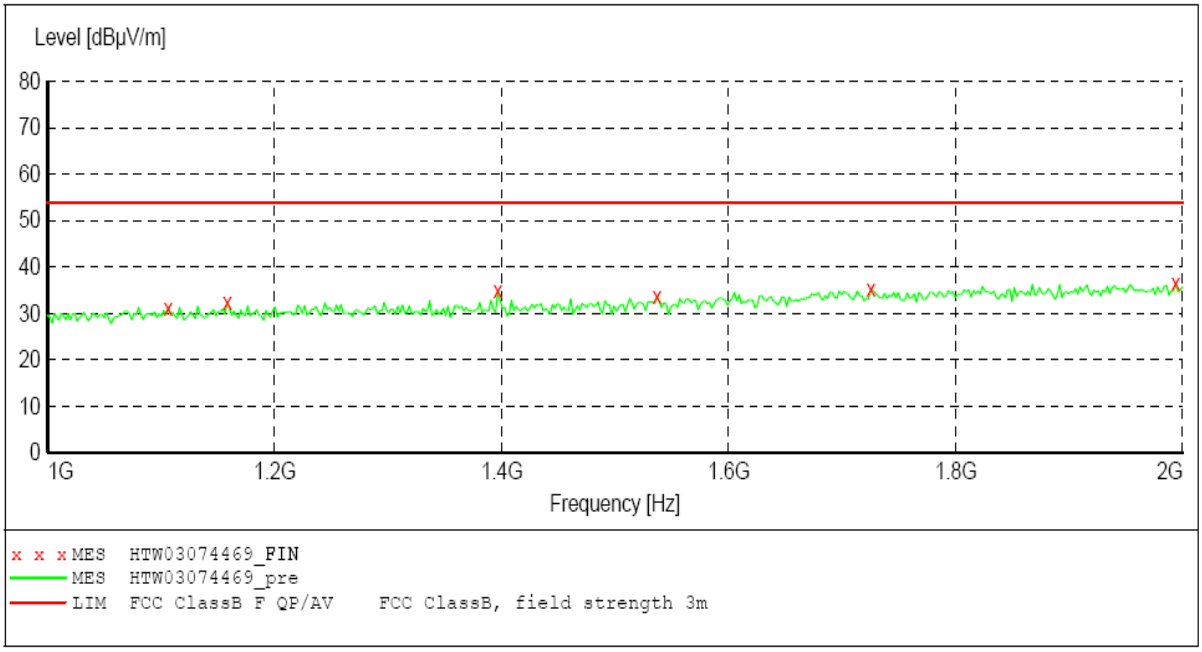
Test Conditions: Rx mode (FM 155.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | | EN 55022 Field Strength | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074469_FIN"***

3/7/2012 9:31AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1106.212425 | 31.30 | -26.0 | 53.9 | 22.6 | Peak | 100.0 | 62.00 | VERTICAL |
| 1158.316633 | 32.40 | -25.7 | 53.9 | 21.5 | Peak | 100.0 | 353.00 | VERTICAL |
| 1396.793587 | 34.90 | -24.3 | 53.9 | 19.0 | Peak | 100.0 | 190.00 | VERTICAL |
| 1537.074148 | 33.70 | -23.4 | 53.9 | 20.2 | Peak | 100.0 | 276.00 | VERTICAL |
| 1725.450902 | 35.30 | -21.8 | 53.9 | 18.6 | Peak | 100.0 | 356.00 | VERTICAL |
| 1993.987976 | 36.50 | -19.9 | 53.9 | 17.4 | Peak | 100.0 | 347.00 | VERTICAL |

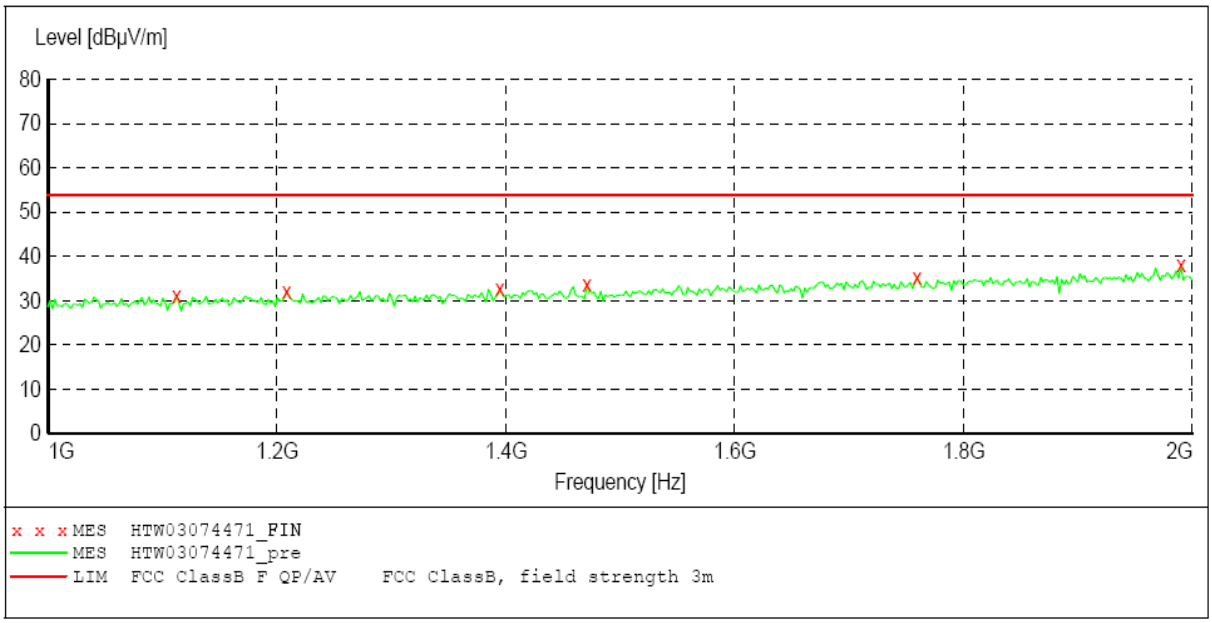
Page 1/1 3/7/2012 9:31AM HTW03074469

Test Conditions: Rx mode (FM 155.0 MHz, 60 dBµV CW input to ANT)

**FM 174MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074471_FIN"***

3/7/2012 9:35AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1112.224449 | 31.30 | -26.0 | 53.9 | 22.6 | Peak | 100.0 | 296.00 | HORIZONTAL |
| 1208.416834 | 32.20 | -25.4 | 53.9 | 21.7 | Peak | 100.0 | 121.00 | HORIZONTAL |
| 1394.789579 | 32.70 | -24.3 | 53.9 | 21.2 | Peak | 100.0 | 334.00 | HORIZONTAL |
| 1470.941884 | 33.60 | -23.9 | 53.9 | 20.3 | Peak | 100.0 | 178.00 | HORIZONTAL |
| 1759.519038 | 35.20 | -21.5 | 53.9 | 18.7 | Peak | 100.0 | 174.00 | HORIZONTAL |
| 1989.979960 | 38.00 | -19.9 | 53.9 | 15.9 | Peak | 100.0 | 50.00 | HORIZONTAL |

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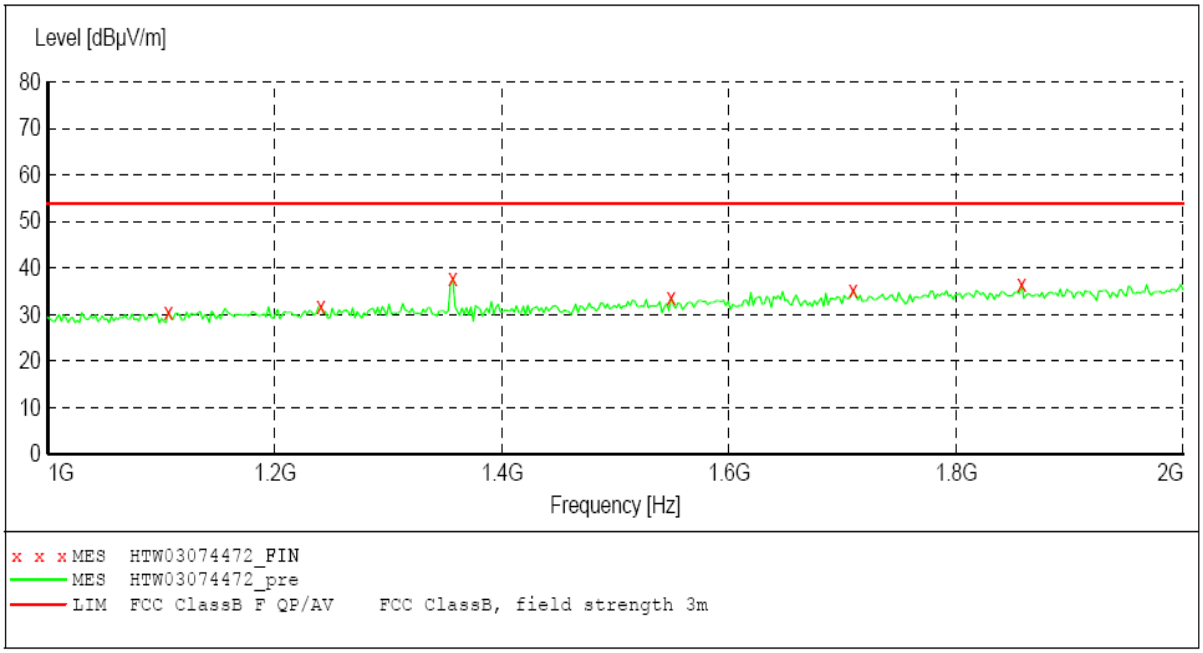
Test Conditions: Rx mode (FM 174.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074472_FIN"***

3/7/2012 9:37AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1106.212425 | 30.60 | -26.0 | 53.9 | 23.3 | Peak | 100.0 | 114.00 | VERTICAL |
| 1240.480962 | 31.80 | -25.2 | 53.9 | 22.1 | Peak | 100.0 | 211.00 | VERTICAL |
| 1356.713427 | 37.70 | -24.5 | 53.9 | 16.2 | Peak | 100.0 | 171.00 | VERTICAL |
| 1549.098196 | 33.70 | -23.3 | 53.9 | 20.2 | Peak | 100.0 | 175.00 | VERTICAL |
| 1709.418838 | 35.30 | -21.9 | 53.9 | 18.6 | Peak | 100.0 | 3.00 | VERTICAL |
| 1857.715431 | 36.60 | -20.9 | 53.9 | 17.3 | Peak | 100.0 | 164.00 | VERTICAL |

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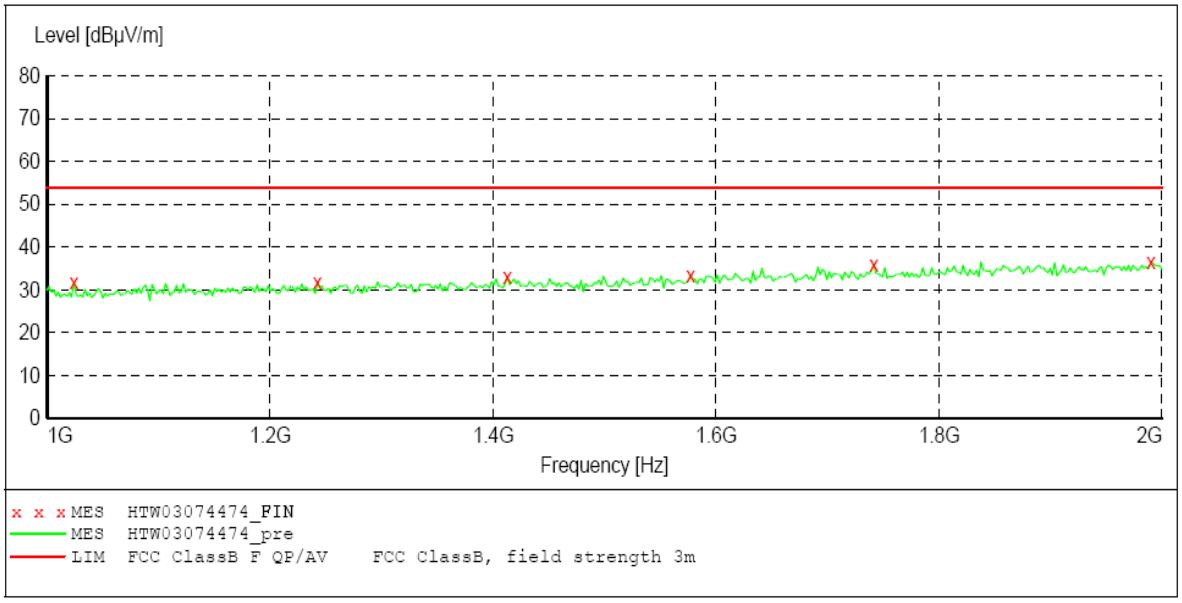
Test Conditions: Rx mode (FM 174.0 MHz, 60 dBµV CW input to ANT)

**WFM 108MHz**

***SWEEP TABLE: "test (1G-18G) P"***

Short Description: EN 55022 Field Strength

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|---|---|---|---|---|---|
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074474_FIN"***

3/7/2012 9:41AM

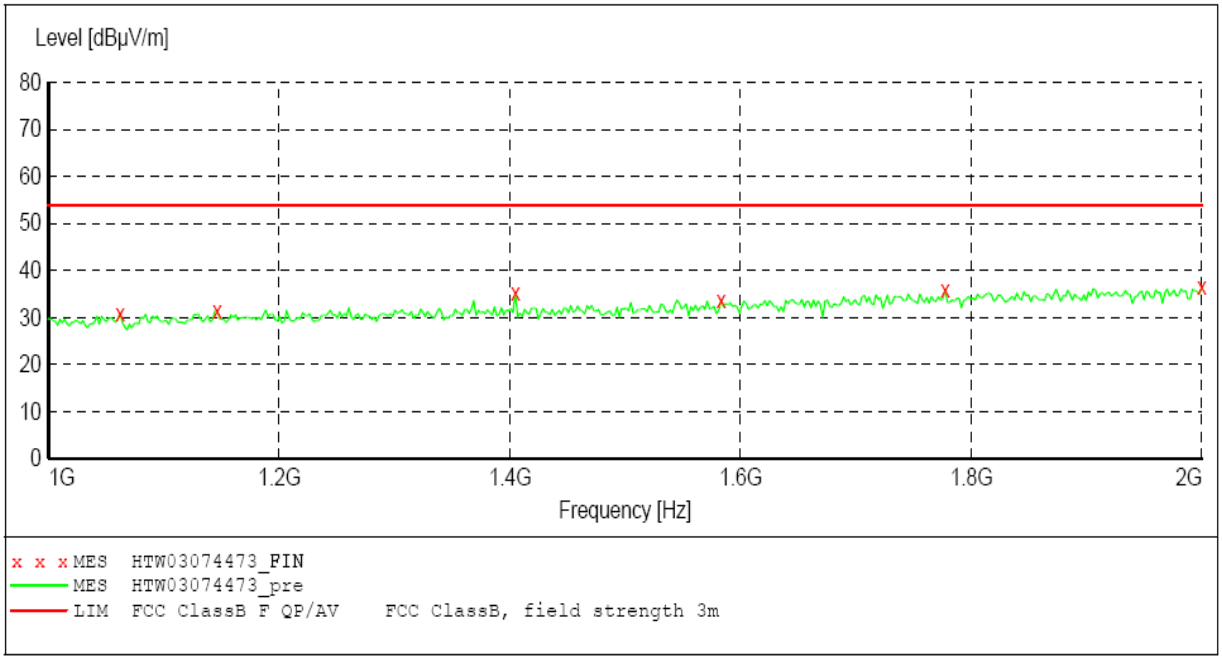
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1024.048096 | 31.90 | -26.6 | 53.9 | 22.0 | Peak | 100.0 | 175.00 | HORIZONTAL |
| 1242.484970 | 31.70 | -25.1 | 53.9 | 22.2 | Peak | 100.0 | 164.00 | HORIZONTAL |
| 1412.825651 | 32.90 | -24.2 | 53.9 | 21.0 | Peak | 100.0 | 178.00 | HORIZONTAL |
| 1577.154309 | 33.50 | -23.1 | 53.9 | 20.4 | Peak | 100.0 | 321.00 | HORIZONTAL |
| 1741.482966 | 35.90 | -21.7 | 53.9 | 18.0 | Peak | 100.0 | 164.00 | HORIZONTAL |
| 1989.979960 | 36.50 | -19.9 | 53.9 | 17.4 | Peak | 100.0 | 3.00 | HORIZONTAL |

Page 1/1 3/7/2012 9:41AM HTW03074474

Test Conditions: Rx mode (WFM 108.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074473_FIN"***

3/7/2012 9:39AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1062.124248 | 30.90 | -26.3 | 53.9 | 23.0 | Peak | 100.0 | 122.00 | VERTICAL |
| 1146.292585 | 31.60 | -25.8 | 53.9 | 22.3 | Peak | 100.0 | 187.00 | VERTICAL |
| 1404.809619 | 35.40 | -24.2 | 53.9 | 18.5 | Peak | 100.0 | 155.00 | VERTICAL |
| 1583.166333 | 33.80 | -23.0 | 53.9 | 20.1 | Peak | 100.0 | 166.00 | VERTICAL |
| 1777.555110 | 35.80 | -21.4 | 53.9 | 18.1 | Peak | 100.0 | 334.00 | VERTICAL |
| 2000.000000 | 36.50 | -19.8 | 53.9 | 17.4 | Peak | 100.0 | 9.00 | VERTICAL |

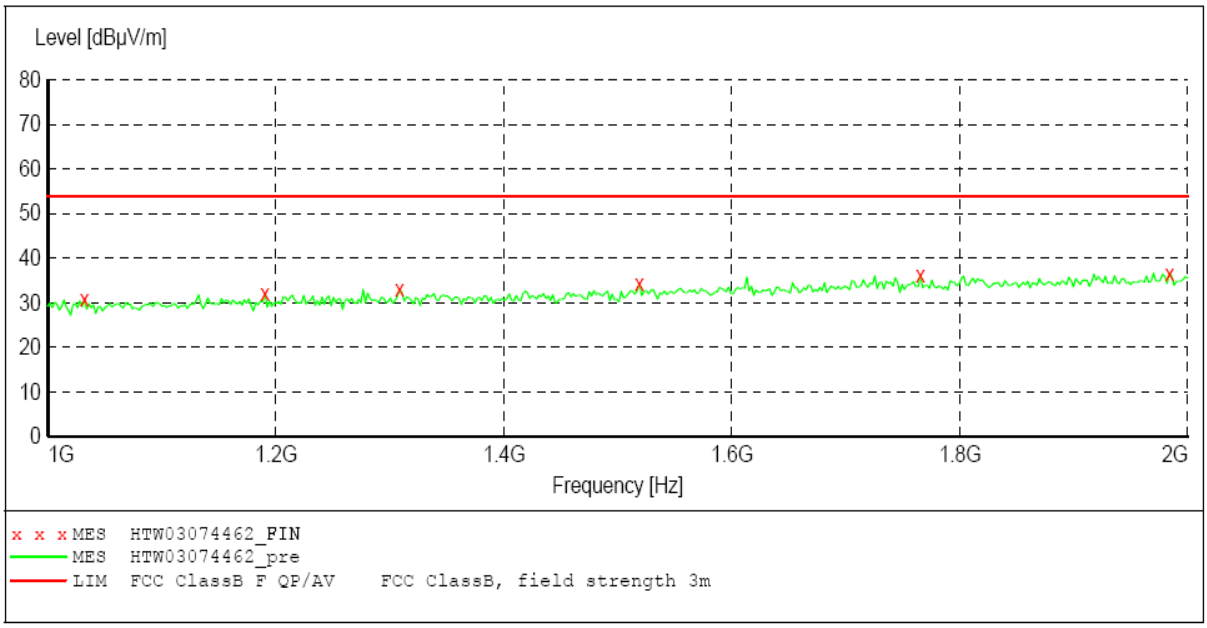
Page 1/1 3/7/2012 9:39AM HTW03074473

Test Conditions: Rx mode (WFM 108.0 MHz, 60 dBµV CW input to ANT)

**AM 108MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074462_FIN"***

3/7/2012 9:18AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1032.064128 | 30.80 | -26.6 | 53.9 | 23.1 | Peak | 100.0 | 245.00 | HORIZONTAL |
| 1190.380762 | 32.10 | -25.5 | 53.9 | 21.8 | Peak | 100.0 | 175.00 | HORIZONTAL |
| 1308.617234 | 33.00 | -24.7 | 53.9 | 20.9 | Peak | 100.0 | 56.00 | HORIZONTAL |
| 1519.038076 | 34.40 | -23.6 | 53.9 | 19.5 | Peak | 100.0 | 196.00 | HORIZONTAL |
| 1765.531062 | 36.20 | -21.5 | 53.9 | 17.7 | Peak | 100.0 | 95.00 | HORIZONTAL |
| 1983.967936 | 36.60 | -19.9 | 53.9 | 17.3 | Peak | 100.0 | 15.00 | HORIZONTAL |

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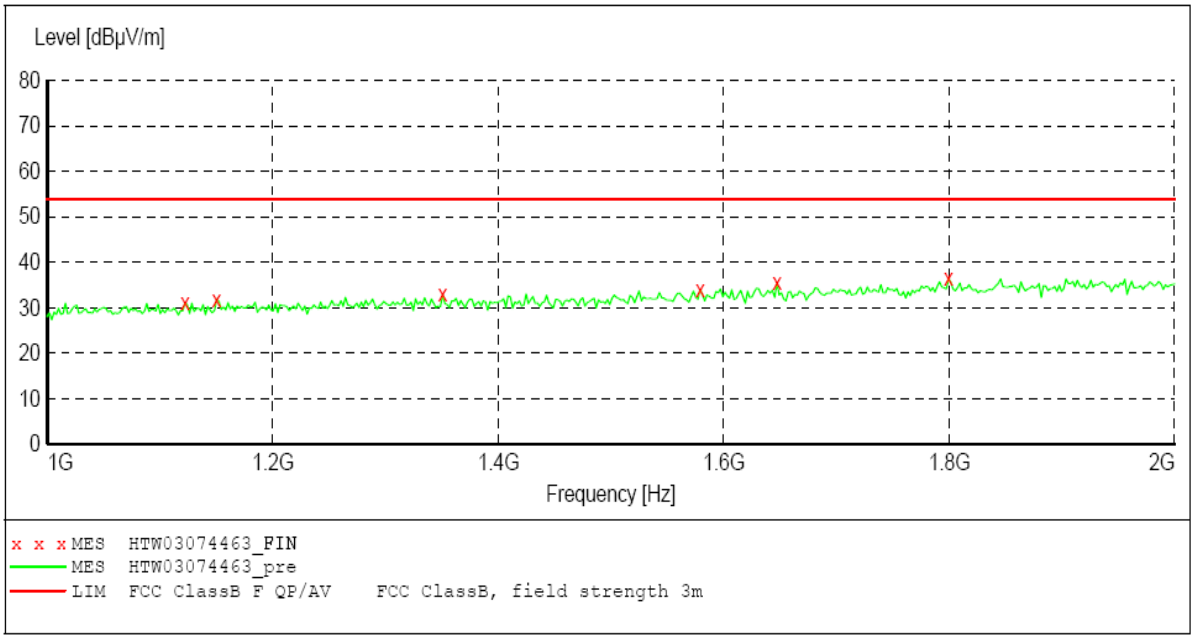
Test Conditions: Rx mode (AM 108.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074463_FIN"***

3/7/2012 9:20AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1122.244489 | 31.20 | -25.9 | 53.9 | 22.7 | Peak | 100.0 | 319.00 | VERTICAL |
| 1150.300601 | 31.90 | -25.7 | 53.9 | 22.0 | Peak | 100.0 | 262.00 | VERTICAL |
| 1350.701403 | 33.00 | -24.5 | 53.9 | 20.9 | Peak | 100.0 | 340.00 | VERTICAL |
| 1579.158317 | 34.10 | -23.1 | 53.9 | 19.8 | Peak | 100.0 | 242.00 | VERTICAL |
| 1647.294589 | 35.60 | -22.5 | 53.9 | 18.3 | Peak | 100.0 | 3.00 | VERTICAL |
| 1799.599198 | 36.40 | -21.2 | 53.9 | 17.5 | Peak | 100.0 | 290.00 | VERTICAL |

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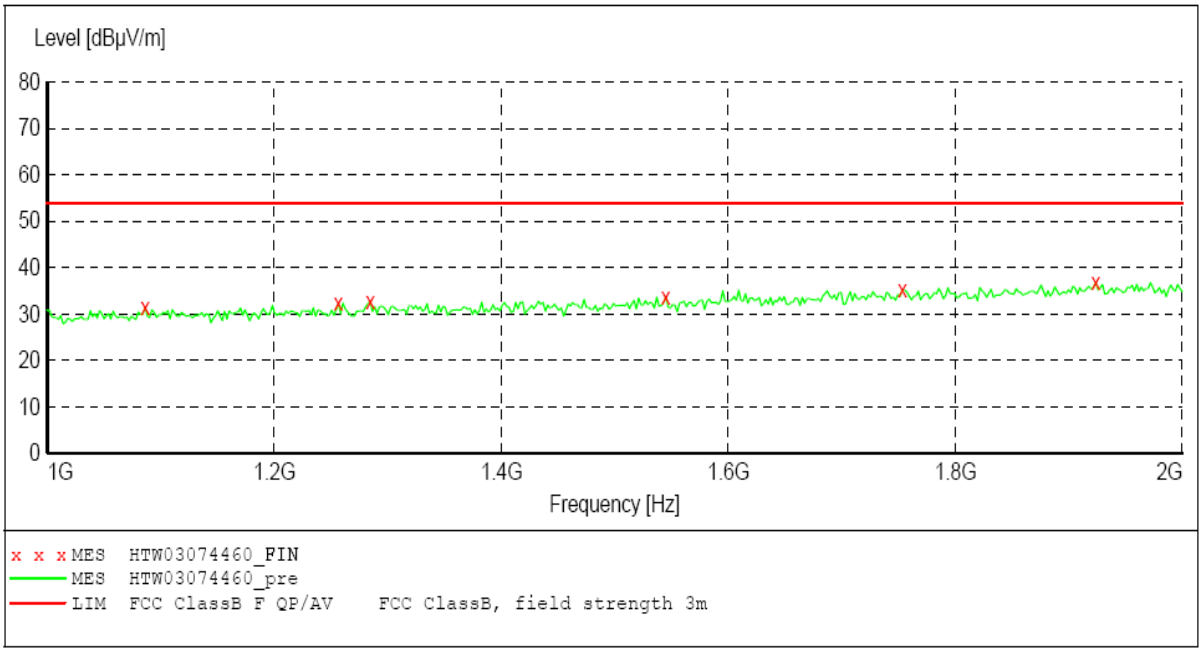
Test Conditions: Rx mode (AM 108.0 MHz, 60 dBµV CW input to ANT)

**AM 122MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074460_FIN"***

3/7/2012 9:14AM

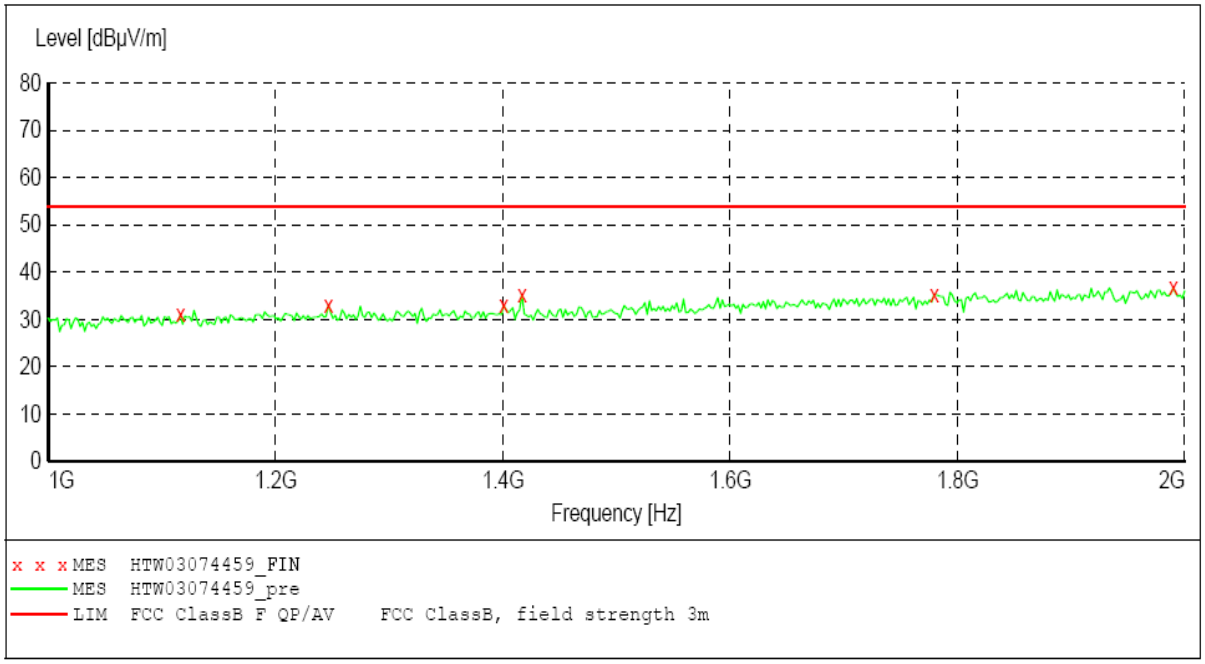
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1086.172345 | 31.40 | -26.2 | 53.9 | 22.5 | Peak | 100.0 | 300.00 | HORIZONTAL |
| 1256.513026 | 32.30 | -25.1 | 53.9 | 21.6 | Peak | 100.0 | 44.00 | HORIZONTAL |
| 1284.569138 | 32.80 | -24.9 | 53.9 | 21.1 | Peak | 100.0 | 0.00 | HORIZONTAL |
| 1545.090180 | 33.80 | -23.4 | 53.9 | 20.1 | Peak | 100.0 | 352.00 | HORIZONTAL |
| 1753.507014 | 35.20 | -21.6 | 53.9 | 18.7 | Peak | 100.0 | 63.00 | HORIZONTAL |
| 1923.847695 | 36.90 | -20.4 | 53.9 | 17.0 | Peak | 100.0 | 232.00 | HORIZONTAL |

Page 1/1 3/7/2012 9:14AM HTW03074460

Test Conditions: Rx mode (AM 122.0 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074459_FIN"***

3/7/2012 9:12AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1116.232465 | 31.00 | -26.0 | 53.9 | 22.9 | Peak | 100.0 | 292.00 | VERTICAL |
| 1246.492986 | 33.10 | -25.1 | 53.9 | 20.8 | Peak | 100.0 | 313.00 | VERTICAL |
| 1400.801603 | 32.90 | -24.2 | 53.9 | 21.0 | Peak | 100.0 | 158.00 | VERTICAL |
| 1416.833667 | 35.40 | -24.2 | 53.9 | 18.5 | Peak | 100.0 | 182.00 | VERTICAL |
| 1779.559118 | 35.40 | -21.4 | 53.9 | 18.5 | Peak | 100.0 | 201.00 | VERTICAL |
| 1989.979960 | 36.70 | -19.9 | 53.9 | 17.2 | Peak | 100.0 | 33.00 | VERTICAL |

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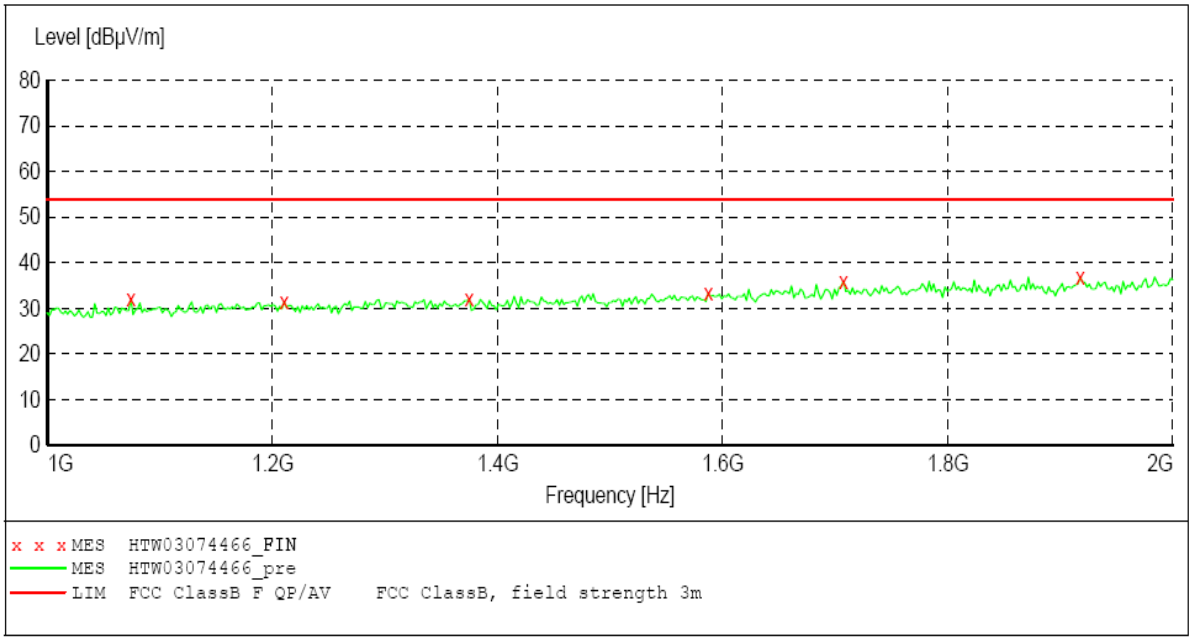
Test Conditions: Rx mode (AM 122.0 MHz, 60 dBµV CW input to ANT)

**AM 135.5MHz**

***SWEEP TABLE: "test (1G-18G) P"***

Short Description: EN 55022 Field Strength

| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
|---|---|---|---|---|---|
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074466_FIN"***

3/7/2012 9:25AM

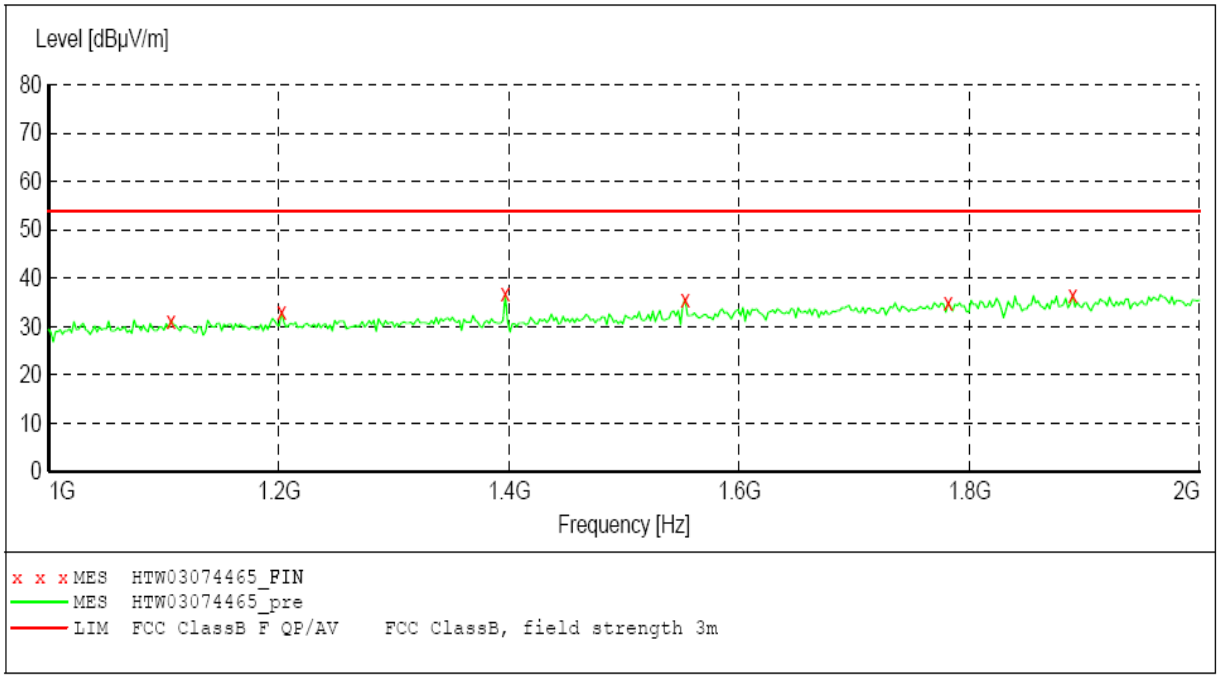
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1074.148297 | 32.00 | -26.3 | 53.9 | 21.9 | Peak | 100.0 | 6.00 | HORIZONTAL |
| 1210.420842 | 31.50 | -25.3 | 53.9 | 22.4 | Peak | 100.0 | 358.00 | HORIZONTAL |
| 1374.749499 | 32.00 | -24.4 | 53.9 | 21.9 | Peak | 100.0 | 110.00 | HORIZONTAL |
| 1587.174349 | 33.40 | -23.0 | 53.9 | 20.5 | Peak | 100.0 | 343.00 | HORIZONTAL |
| 1707.414830 | 36.00 | -21.9 | 53.9 | 17.9 | Peak | 100.0 | 93.00 | HORIZONTAL |
| 1917.835671 | 36.90 | -20.5 | 53.9 | 17.0 | Peak | 100.0 | 47.00 | HORIZONTAL |

Page 1/1 3/7/2012 9:25AM HTW03074466

Test Conditions: Rx mode (AM 135.5 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03074465_FIN"***

3/7/2012 9:23AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1106.212425 | 31.30 | -26.0 | 53.9 | 22.6 | Peak | 100.0 | 217.00 | VERTICAL |
| 1202.404810 | 33.10 | -25.4 | 53.9 | 20.8 | Peak | 100.0 | 57.00 | VERTICAL |
| 1396.793587 | 36.70 | -24.3 | 53.9 | 17.2 | Peak | 100.0 | 172.00 | VERTICAL |
| 1553.106212 | 35.70 | -23.3 | 53.9 | 18.2 | Peak | 100.0 | 157.00 | VERTICAL |
| 1781.563126 | 35.00 | -21.4 | 53.9 | 18.9 | Peak | 100.0 | 247.00 | VERTICAL |
| 1889.779559 | 36.60 | -20.7 | 53.9 | 17.3 | Peak | 100.0 | 291.00 | VERTICAL |

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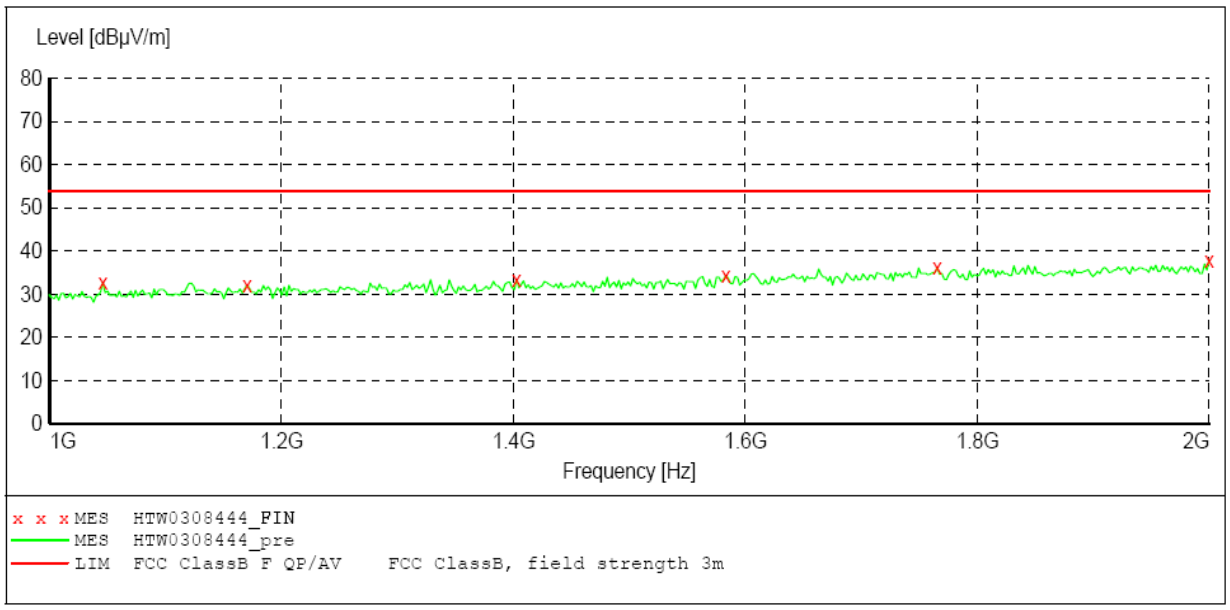
Test Conditions: Rx mode (AM 135.5 MHz, 60 dBµV CW input to ANT)

**Weather Band 162.475MHz**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW0308444_FIN"***

3/8/2012 6:55PM

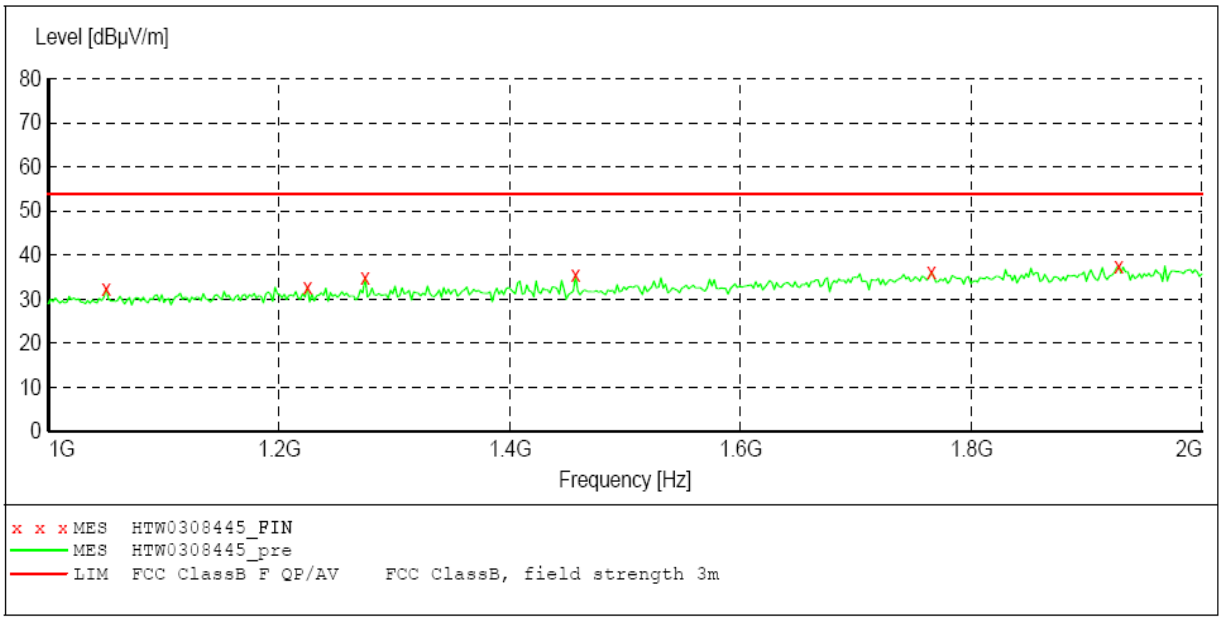
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1046.092184 | 32.80 | -26.5 | 53.9 | 21.1 | Peak | 100.0 | 225.00 | HORIZONTAL |
| 1170.340681 | 32.10 | -25.6 | 53.9 | 21.8 | Peak | 100.0 | 174.00 | HORIZONTAL |
| 1402.805611 | 33.50 | -24.2 | 53.9 | 20.4 | Peak | 100.0 | 353.00 | HORIZONTAL |
| 1583.166333 | 34.30 | -23.0 | 53.9 | 19.6 | Peak | 100.0 | 289.00 | HORIZONTAL |
| 1765.531062 | 36.20 | -21.5 | 53.9 | 17.7 | Peak | 100.0 | 3.00 | HORIZONTAL |
| 2000.000000 | 37.90 | -19.8 | 53.9 | 16.0 | Peak | 100.0 | 3.00 | HORIZONTAL |

Page 1/1 3/8/2012 6:55PM HTW0308444

Test Conditions: Rx mode (Weather Band 162.475 MHz, 60 dBµV CW input to ANT)

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | | EN 55022 Field Strength | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW0308445_FIN"***

3/8/2012 6:57PM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1050.100200 | 32.50 | -26.4 | 53.9 | 21.4 | Peak | 100.0 | 34.00 | VERTICAL |
| 1224.448898 | 32.80 | -25.3 | 53.9 | 21.1 | Peak | 100.0 | 42.00 | VERTICAL |
| 1274.549098 | 35.00 | -24.9 | 53.9 | 18.9 | Peak | 100.0 | 83.00 | VERTICAL |
| 1456.913828 | 35.50 | -24.0 | 53.9 | 18.4 | Peak | 100.0 | 239.00 | VERTICAL |
| 1765.531062 | 36.20 | -21.5 | 53.9 | 17.7 | Peak | 100.0 | 87.00 | VERTICAL |
| 1927.855711 | 37.60 | -20.4 | 53.9 | 16.3 | Peak | 100.0 | 13.00 | VERTICAL |

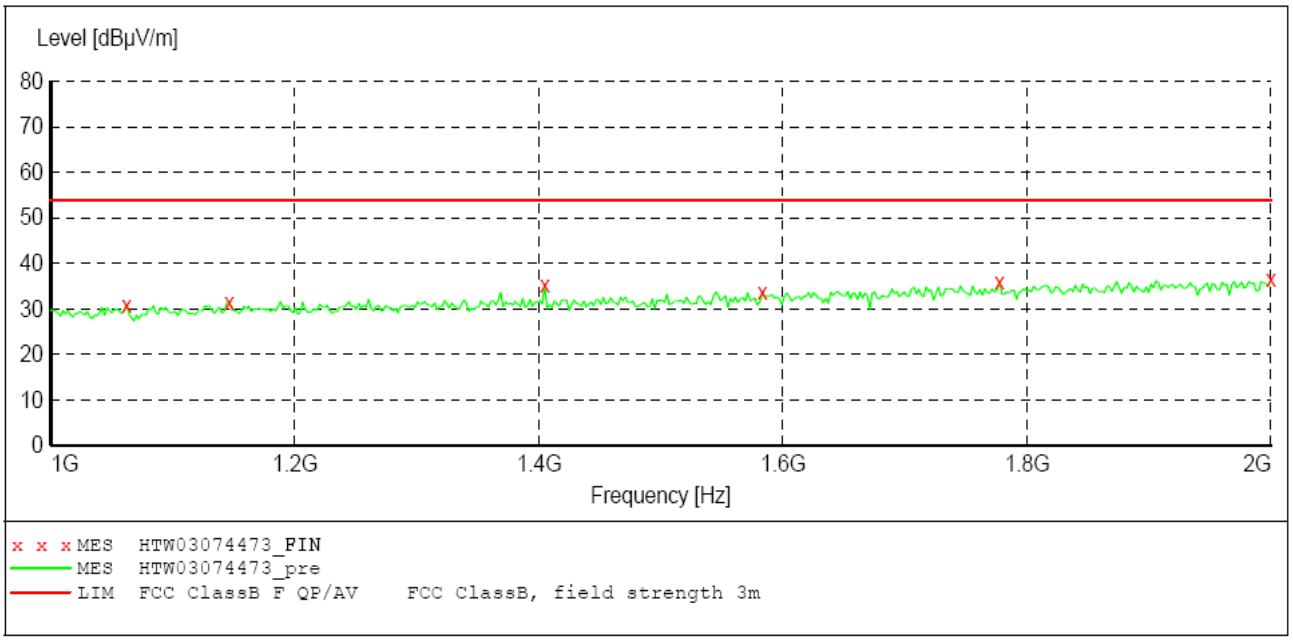
Page 1/1 3/8/2012 6:57PM HTW0308445

Test Conditions: Rx mode (Weather Band 162.475 MHz, 60 dBµV CW input to ANT)

**Scan Mode**

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |



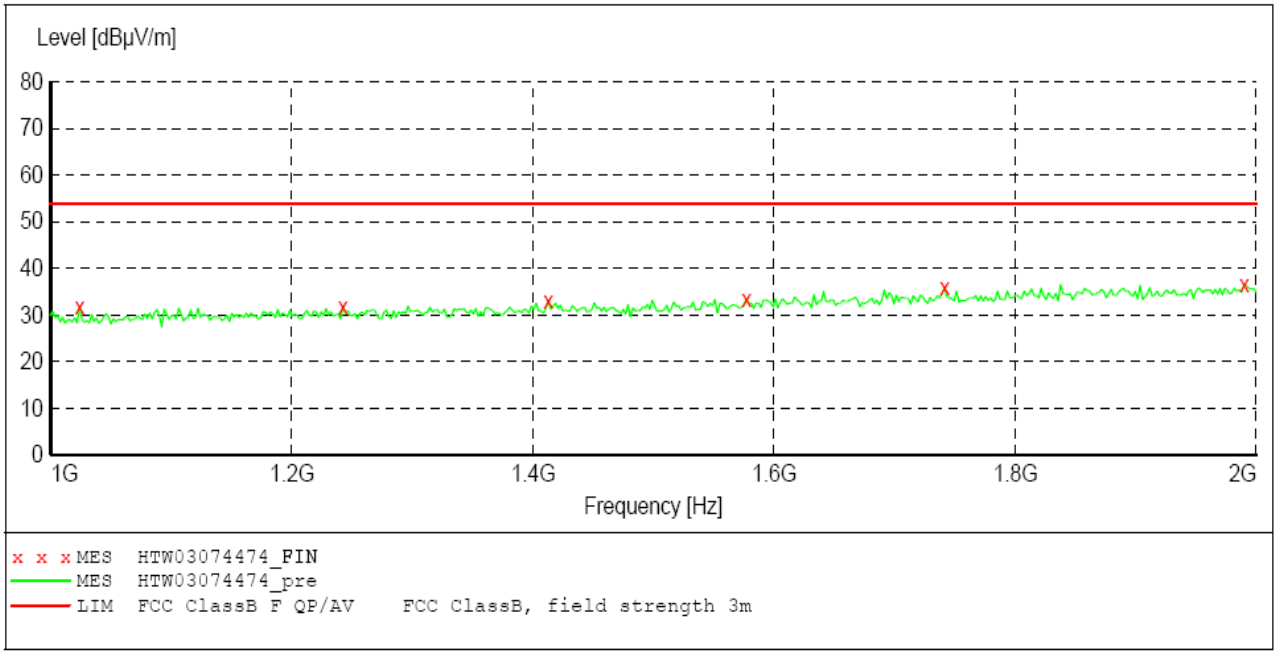

***MEASUREMENT RESULT: "HTW03274478_FIN"***

3/27/2012 7:41AM

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1062.124248 | 31.10 | -26.3 | 53.9 | 22.9 | Peak | 100.0 | 122.00 | VERTICAL |
| 1146.292585 | 31.60 | -25.8 | 53.9 | 22.3 | Peak | 100.0 | 187.00 | VERTICAL |
| 1404.809619 | 35.40 | -24.2 | 53.9 | 18.5 | Peak | 100.0 | 155.00 | VERTICAL |
| 1583.166333 | 33.80 | -23.0 | 53.9 | 20.1 | Peak | 100.0 | 166.00 | VERTICAL |
| 1777.555110 | 35.80 | -21.4 | 53.9 | 18.1 | Peak | 100.0 | 334.00 | VERTICAL |
| 2000.000000 | 36.50 | -19.8 | 53.9 | 17.4 | Peak | 100.0 | 9.00 | VERTICAL |

***SWEEP TABLE: "test (1G-18G) P"***

| Short Description: | | EN 55022 Field Strength | | | |
|---|---|---|---|---|---|
| Start Frequency | Stop Frequency | Detector | Meas. Time | IF Bandw. | Transducer |
| 1.0 GHz | 18.0 GHz | MaxPeak | Coupled | 1 MHz | HF906 2011 |




***MEASUREMENT RESULT: "HTW03274476_FIN"***

3/27/2012 7:03AM

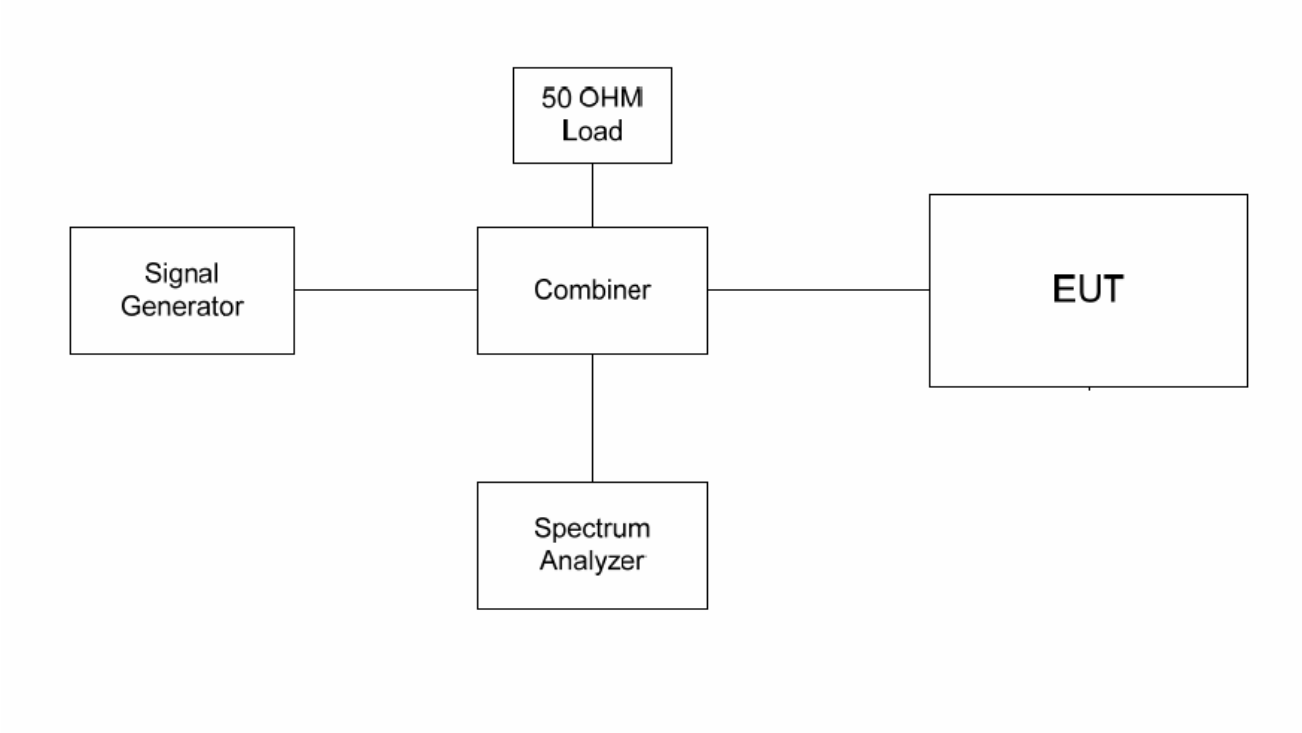
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Det. | Height cm | Azimuth deg | Polarization |
|---|---|---|---|---|---|---|---|---|
| 1024.048096 | 32.00 | -26.6 | 53.9 | 21.9 | Peak | 100.0 | 175.00 | HORIZONTAL |
| 1242.484970 | 31.80 | -25.1 | 53.9 | 22.1 | Peak | 100.0 | 164.00 | HORIZONTAL |
| 1412.825651 | 33.00 | -24.2 | 53.9 | 20.9 | Peak | 100.0 | 178.00 | HORIZONTAL |
| 1577.154309 | 33.40 | -23.1 | 53.9 | 20.3 | Peak | 100.0 | 321.00 | HORIZONTAL |
| 1741.482966 | 35.80 | -21.7 | 53.9 | 17.9 | Peak | 100.0 | 164.00 | HORIZONTAL |
| 1989.979960 | 36.49 | -19.9 | 53.9 | 17.5 | Peak | 100.0 | 3.00 | HORIZONTAL |

## 4.3. Antenna Conducted Emission

**Limits**

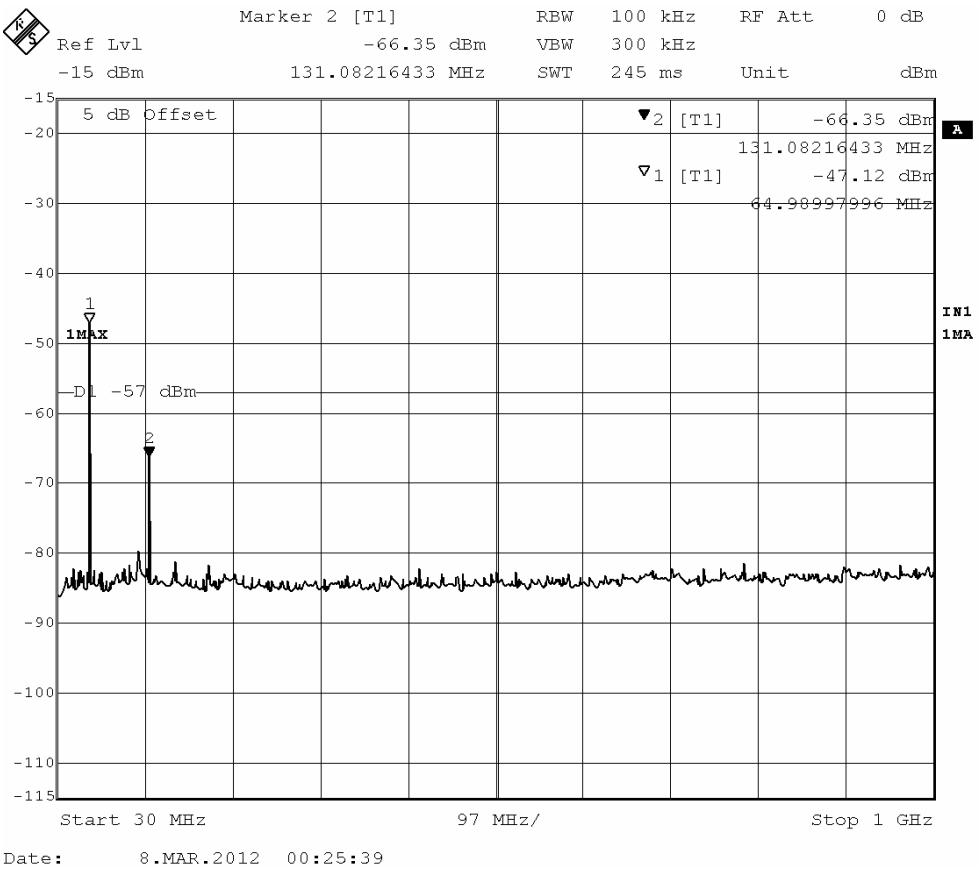
In addition to the radiated emis-sion limits, receivers that operate (tune) in the frequency range 30 to 960 MHz and CB receivers that provide ter-minals for the connection of an exter-nal receiving antenna may be tested to demonstrate compliance with the pro-visions of §15.109 with the antenna ter-minals shielded and terminated with a resistive termination equal to the im-pedance specified for the antenna, pro-vided these receivers also comply with the following: With the receiver an-tenna terminal connected to a resistive termination equal to the impedance specified or employed for the antenna, the power at the antenna terminal at any frequency within the range of measurements specified in §15.33 shall not exceed 2.0 nanowatts.

**Test Arrangement**

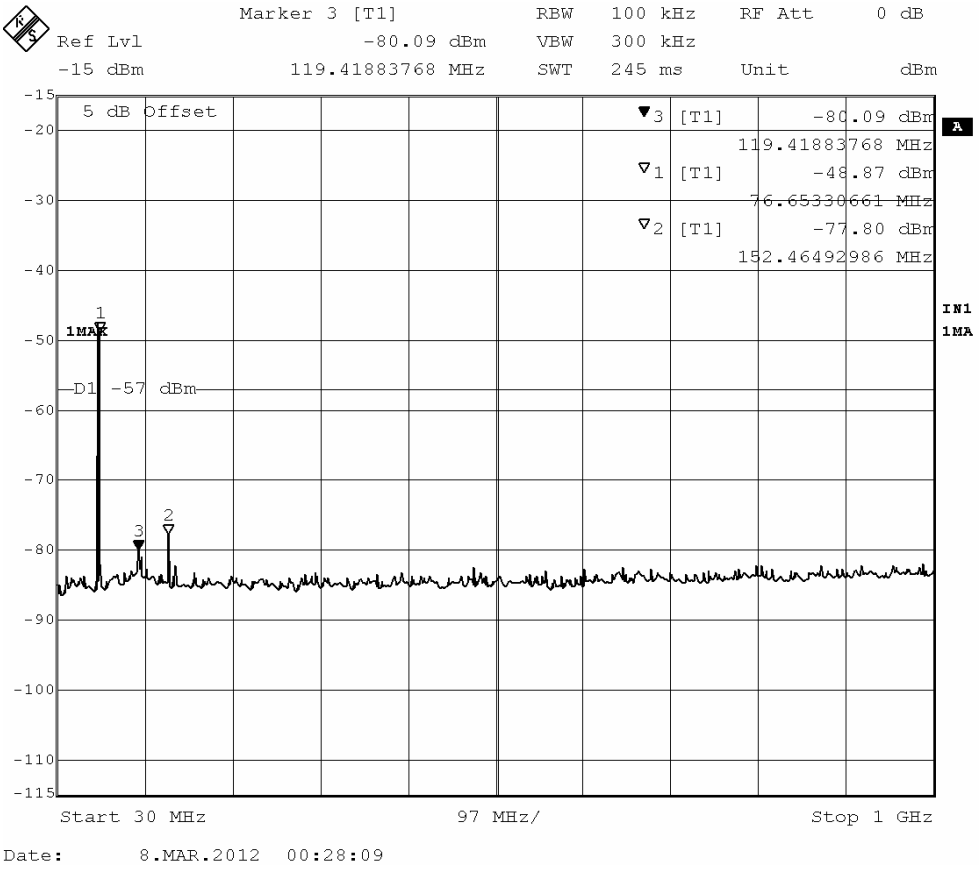


**TEST RESULTS**

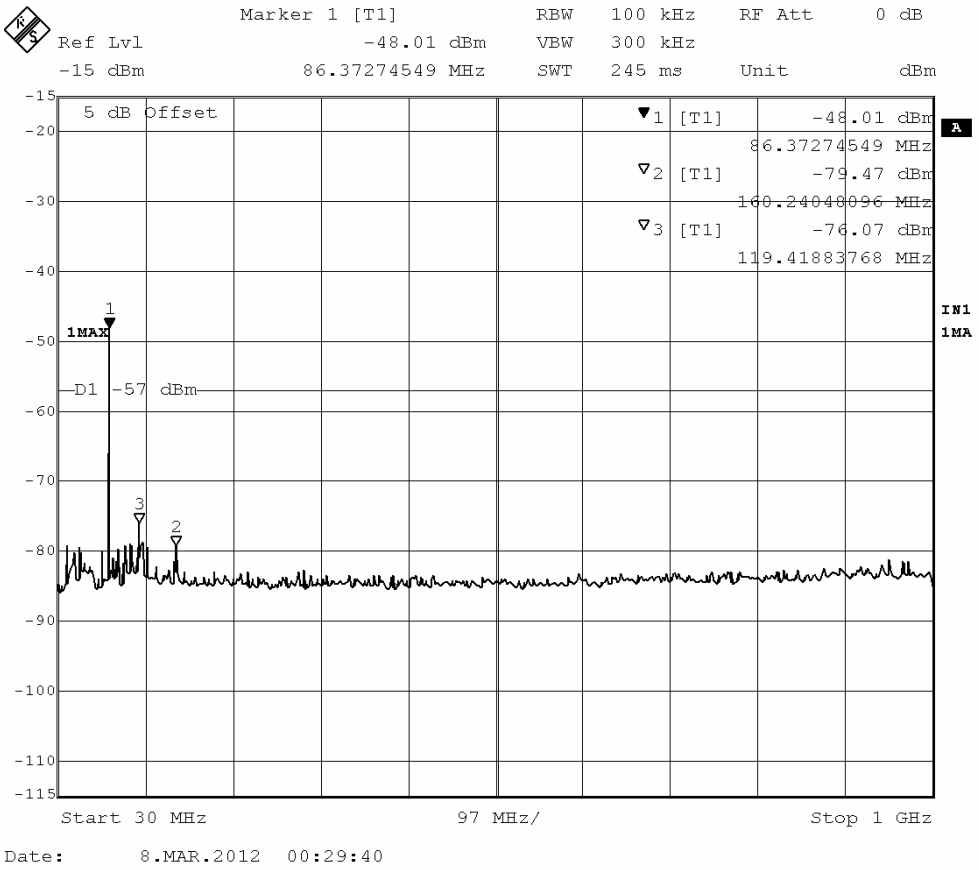
**FM 66MHz**



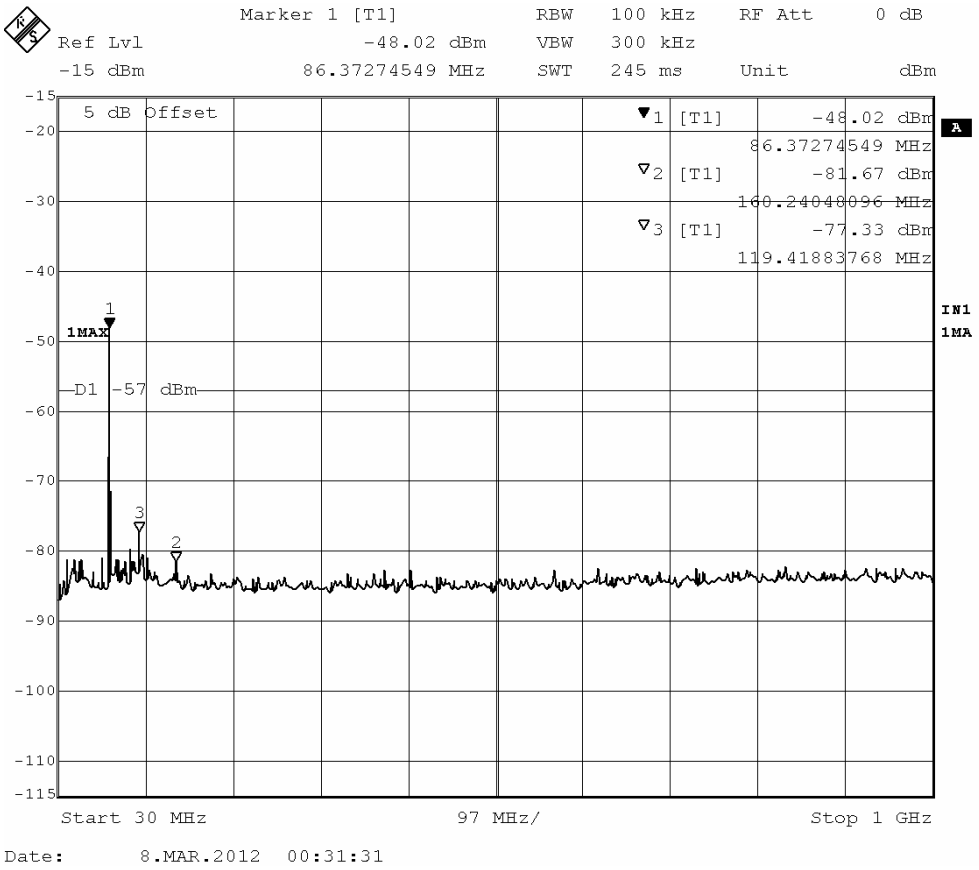

**FM 76.5MHz**



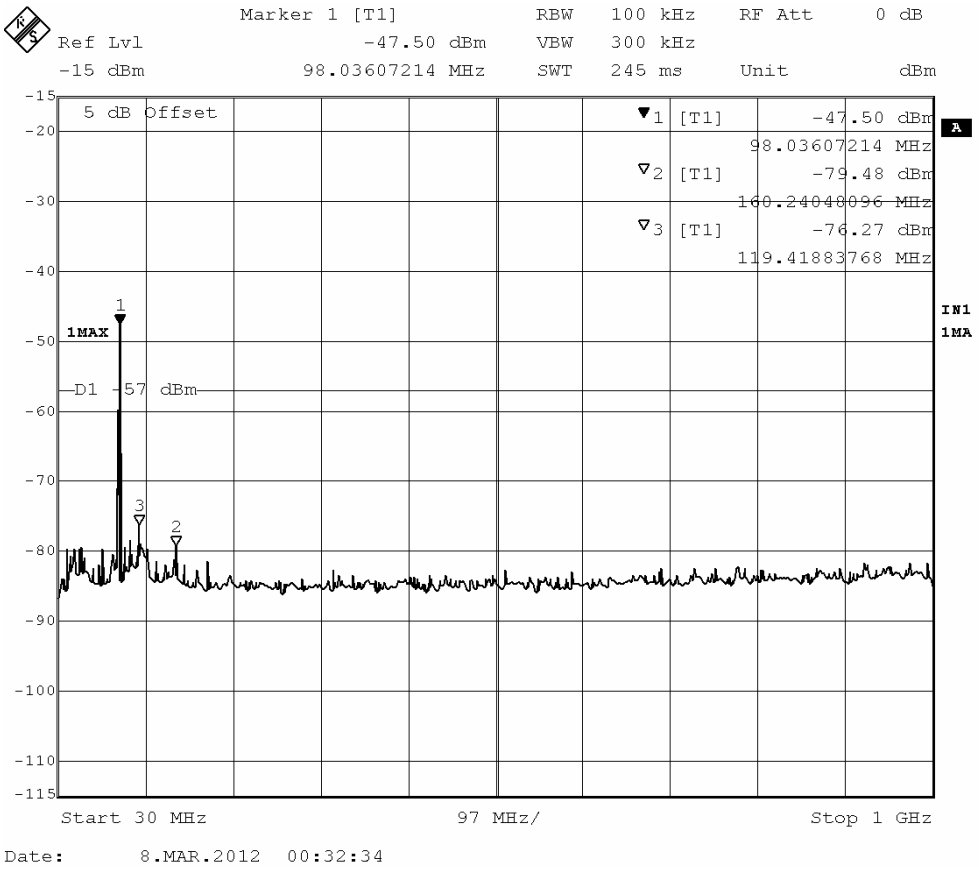
**FM 87MHz**



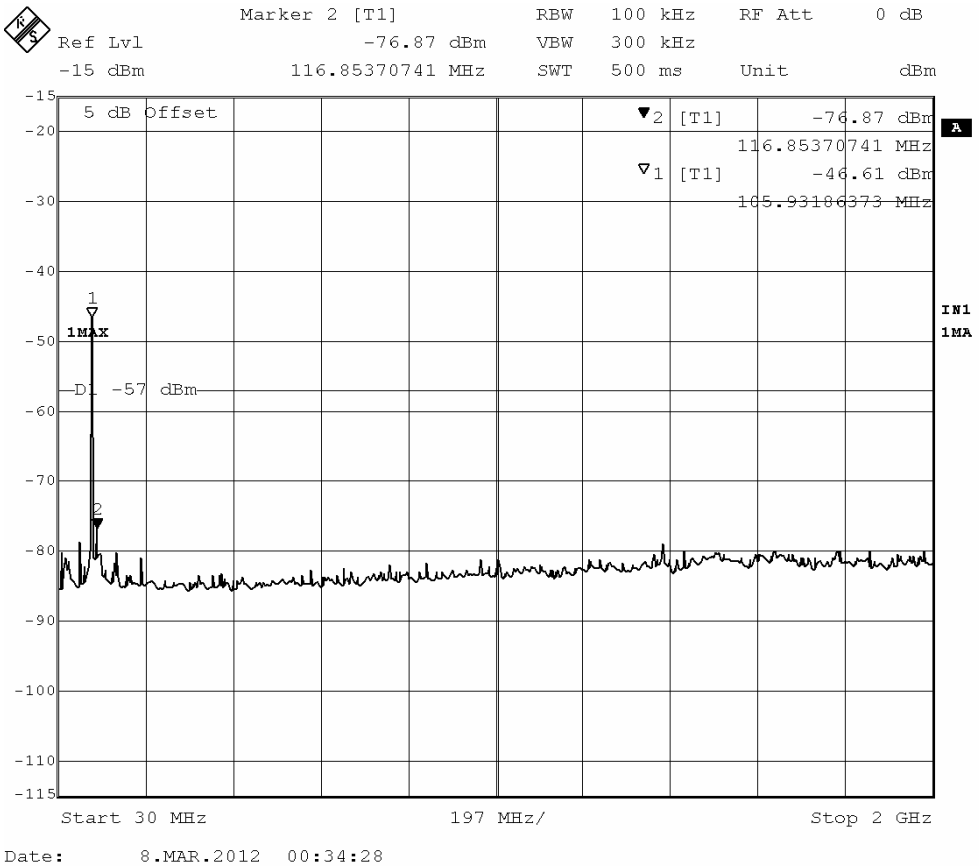

**WFM88**



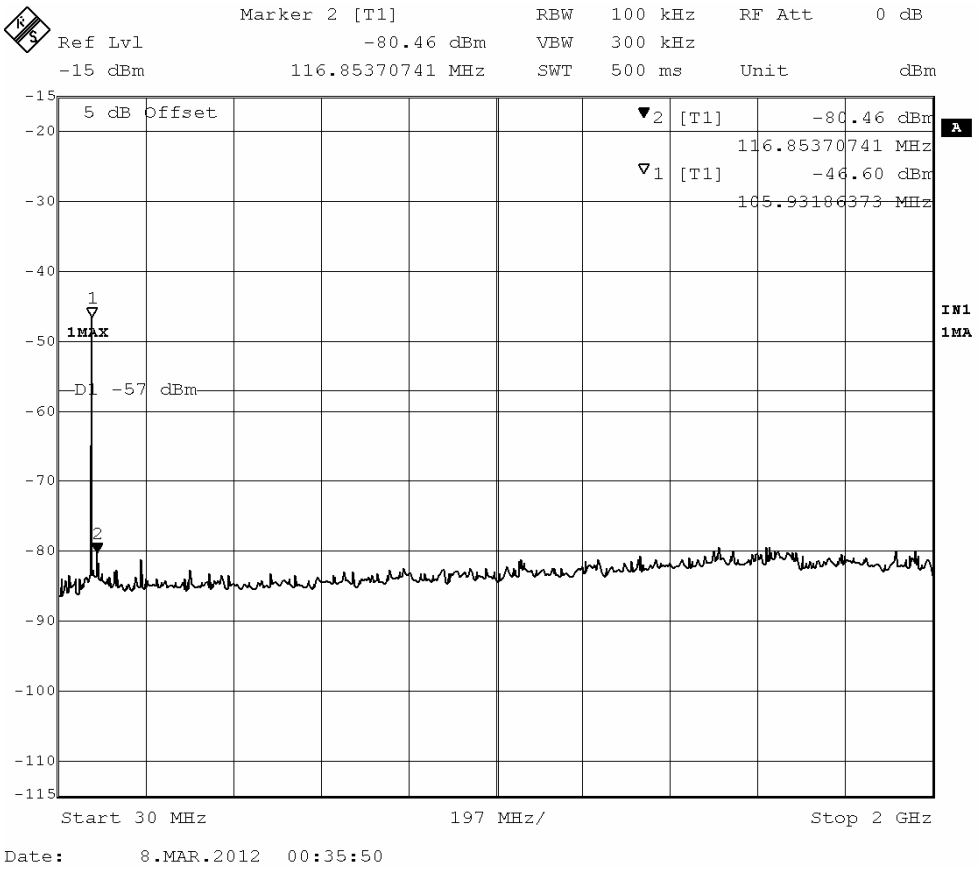
**WFM98**



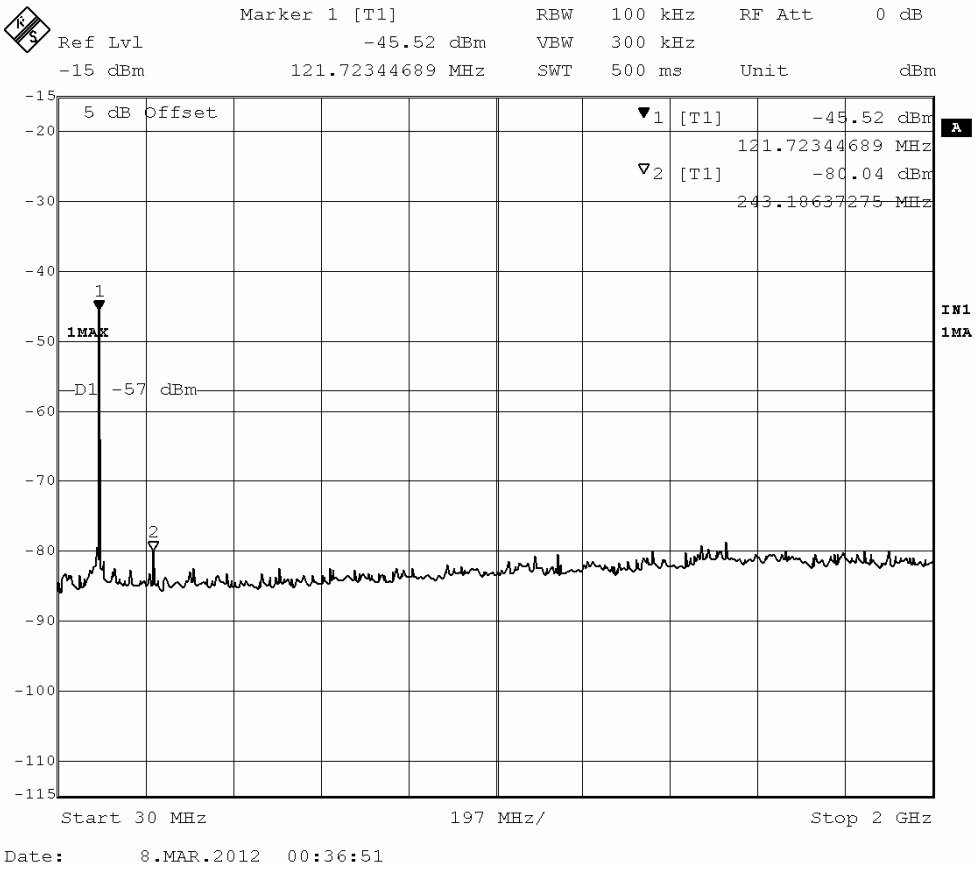

**WFM 108**



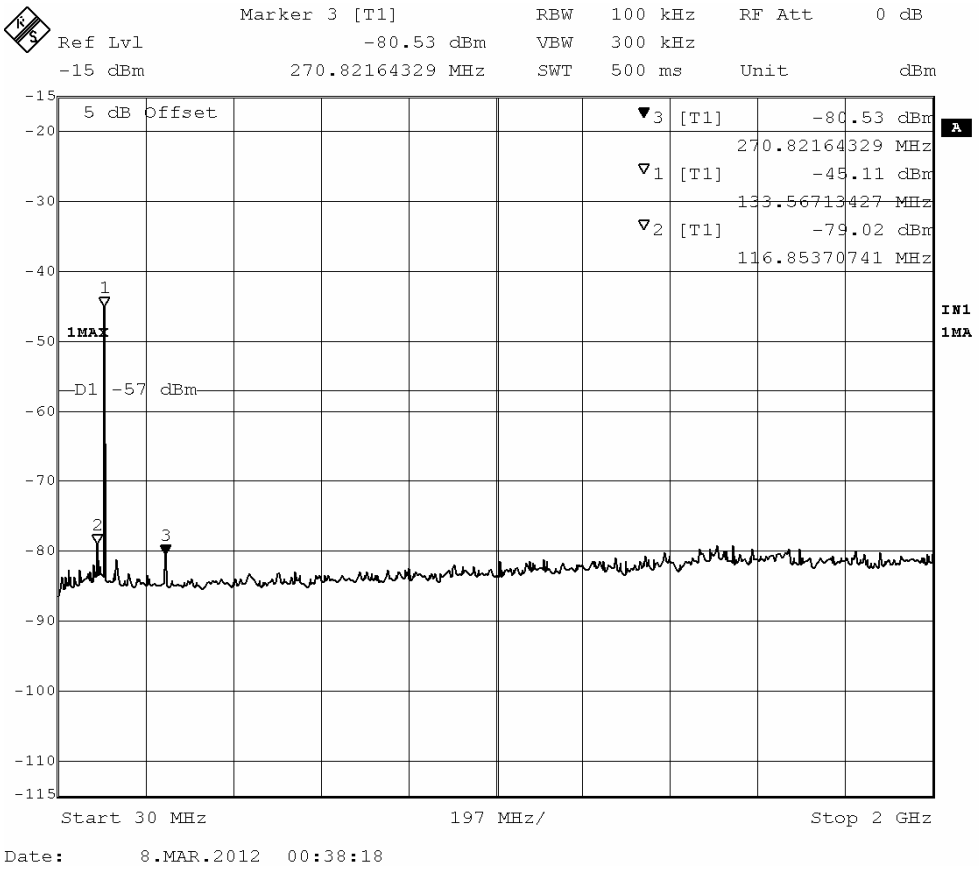
**AM108**


Marker 2 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-80.46 dBm
VBW 300 kHz
-15 dBm
116.85370741 MHz
SWT 500 ms
Unit dBm
5 dB Offset
2 [T1] -80.46 dBm
116.85370741 MHz
1 [T1] -46.60 dBm
105.93106373 MHz
1MAX
D1 -57 dBm
IN1
1MA
Start 30 MHz
197 MHz/
Stop 2 GHz
Date: 8.MAR.2012 00:35:50

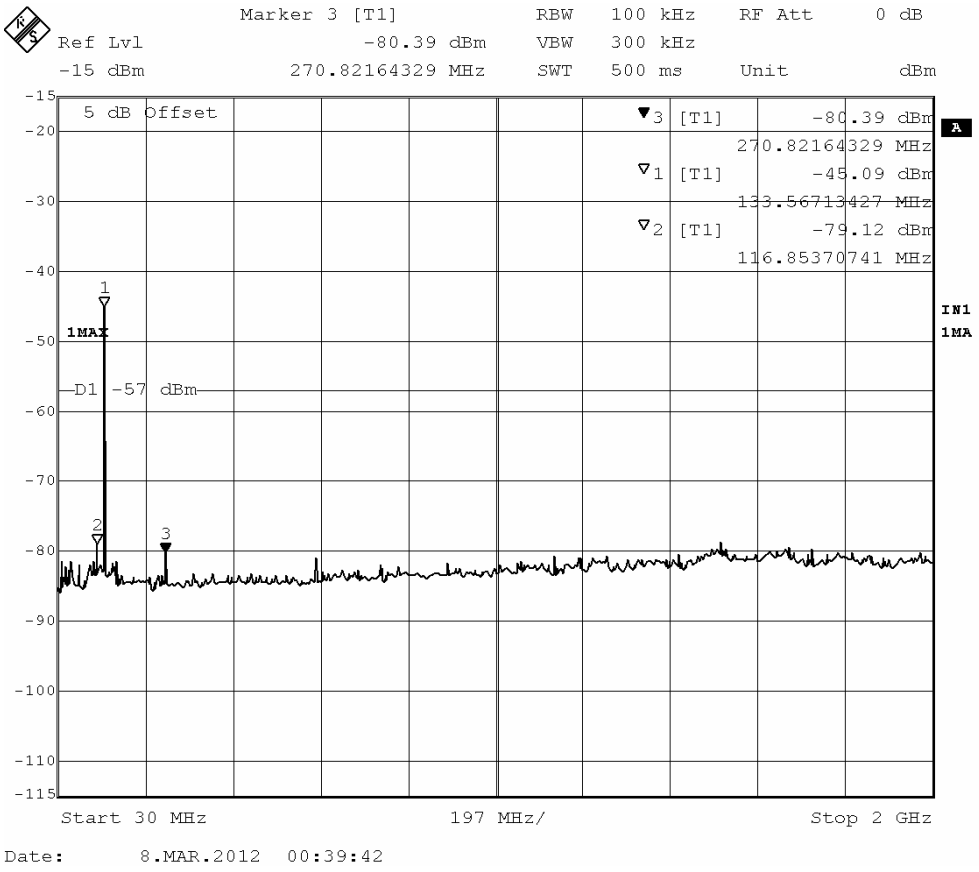
**AM122**


Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-45.52 dBm
VBW 300 kHz
-15 dBm
121.72344689 MHz
SWT 500 ms
Unit dBm
5 dB Offset
1 [T1] -45.52 dBm
121.72344689 MHz
2 [T1] -80.04 dBm
243.18637275 MHz
1MAX
D1 -57 dBm
IN1
1MA
Start 30 MHz
197 MHz/
Stop 2 GHz
Date: 8.MAR.2012 00:36:51

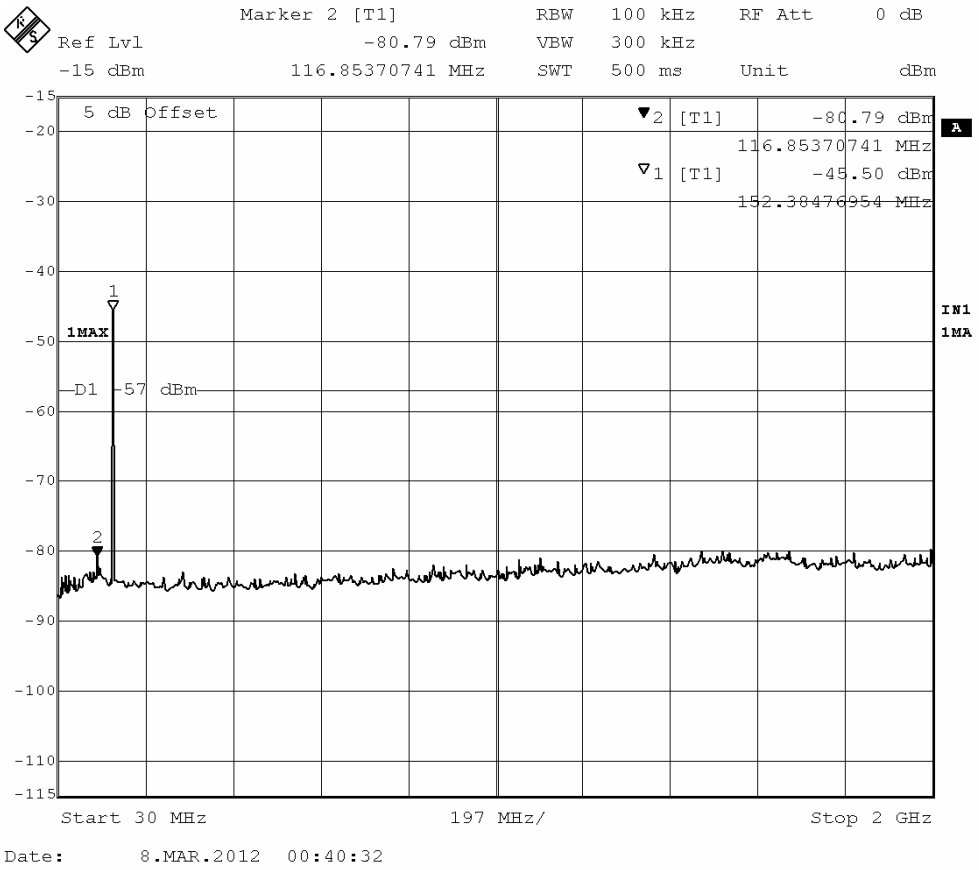
**AM135.5**



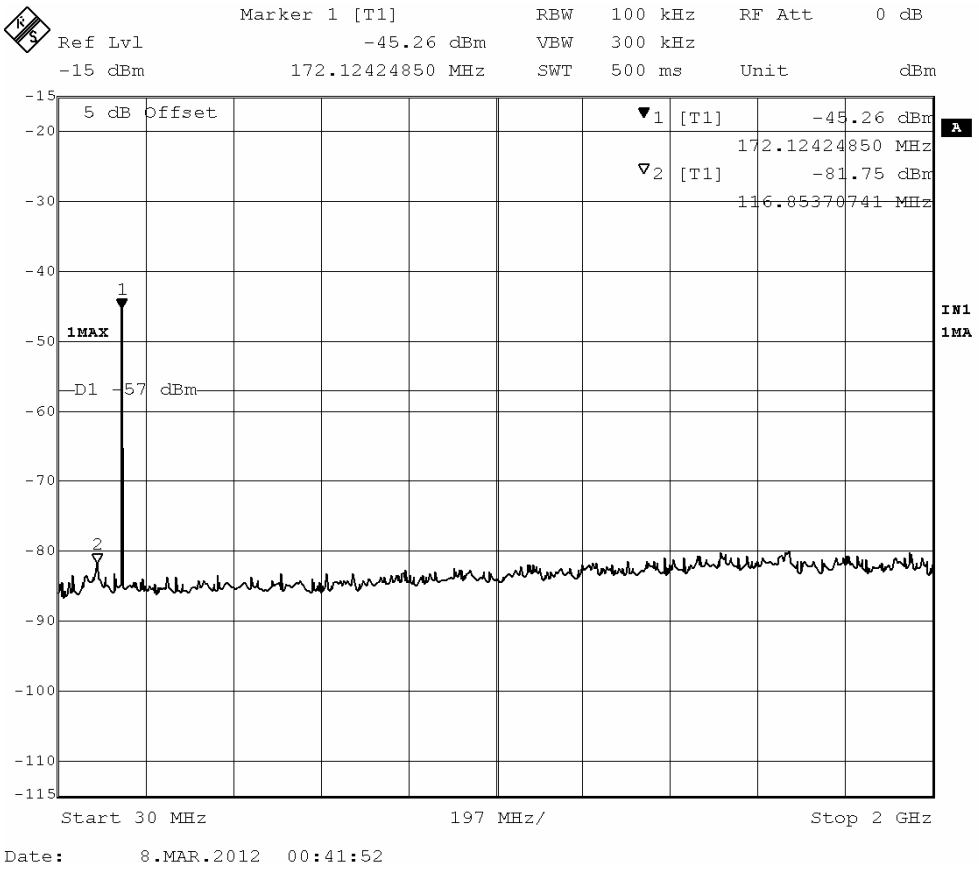

**FM136**



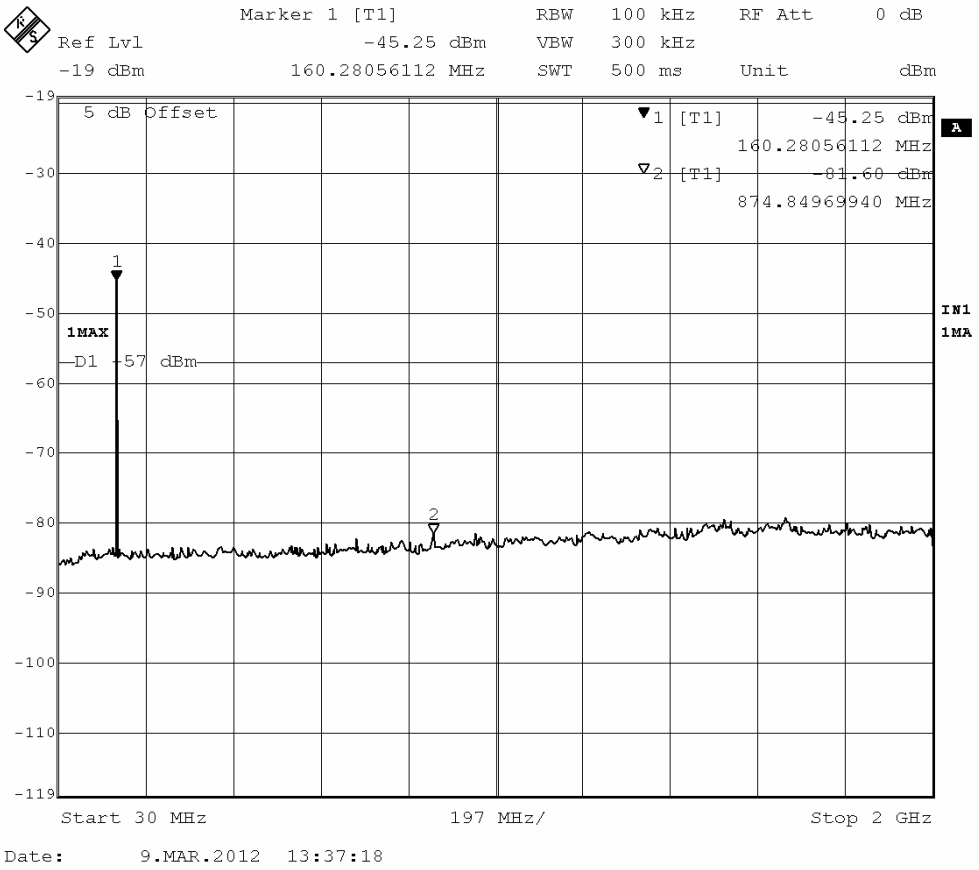
**FM155**


Marker 2 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-80.79 dBm
VBW 300 kHz
-15 dBm
116.85370741 MHz
SWT 500 ms
Unit dBm
5 dB Offset
▼2 [T1] -80.79 dBm
116.85370741 MHz
▽1 [T1] -45.50 dBm
152.38476954 MHz
1MAX
D1 -57 dBm
IN1
1MA
Start 30 MHz
197 MHz/
Stop 2 GHz
Date: 8.MAR.2012 00:40:32

**FM174**


Marker 1 [T1]
RBW 100 kHz
RF Att 0 dB
Ref Lvl
-45.26 dBm
VBW 300 kHz
-15 dBm
172.12424850 MHz
SWT 500 ms
Unit dBm
5 dB Offset
▼1 [T1] -45.26 dBm
172.12424850 MHz
▽2 [T1] -81.75 dBm
116.85370741 MHz
1MAX
D1 -57 dBm
IN1
1MA
Start 30 MHz
197 MHz/
Stop 2 GHz
Date: 8.MAR.2012 00:41:52

**Weather Band 162.475MHz**



# 5. CELLULAR BAND REJECTION

**Standard Applicable**

Scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38dB or lower based upon a 12 dB SINAD measurement,which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

**Test Method**

A modulated signal generator is set to each of the above cellular band frequencies.The RF output level is set to 60dBuV(66dB above the -6 dBuV level associated with the squelched threshold).The scanning receiver is set to scan all frequency ranges.Any image frequency that is detected by the scanning receiver is noted.The RF output of the signal generator is adjusted to achieve 12dB SINAD on the receiver headphone output. This RF level is noted.

The image rejection ratio is determined by:RF SG-(-6dBuV)

For example:IF the level required to produce an image emission that causes a 12dB SINAD response from the scanning receiver is 60dBuV,then the image rejection ratio would be:60-(-6)=66dB.

**Test results**

| Cellular Frequency (MHz) | Squelched Threshold (dBμV) | RF Input level (dBμV) | Image Rejection Rate(dB) | Limit (dB) |
|---|---|---|---|---|
| 824.04 | -6 | 54.4 | 60.4 | 38 |
| 836.00 | -6 | 56.2 | 62.2 | 38 |
| 848.97 | -6 | 59.7 | 65.7 | 38 |
| 869.04 | -6 | 60.4 | 66.4 | 38 |
| 881.00 | -6 | 60.2 | 66.2 | 38 |
| 893.97 | -6 | 60.7 | 66.7 | 38 |

# 6. REQUIREMENTS FOR SCANNING RECEIVERS [§ 15.121]

a. Except as provided in paragraph (c) of this section, scanning receivers and frequency converters designed or marketed for use with scanning receivers, shall:
(1) Be incapable of operating (tuning), or readily being altered by the user to operate, within the frequency bands allocated to the Cellular Radiotelephone Service in part 22 of this chapter (cellular telephone bands). Scanning receivers capable of ``readily being altered by the user'' include, but are not limited to, those for which the ability to receive transmissions in the cellular telephone bands can be added by clipping the leads of, or installing, a simple component such as a diode, resistor or jumper wire; replacing a plug-in semiconductor chip; or programming a semiconductor chip using special access codes or an external device, such as a personal computer. Scanning receivers, and frequency converters designed for use with scanning receivers, also shall be incapable of converting digital cellular communication transmissions to analog voice audio.
(2) Be designed so that the tuning, control and filtering circuitry is inaccessible. The design must be such that any attempts to modify the equipment to receive transmissions from the Cellular Radiotelephone Service likely will render the receiver inoperable.

b. Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

c. Scanning receivers and frequency converters designed or marketed for use with scanning receivers, are not subject to the requirements of paragraphs (a) and (b) of this section provided that they are manufactured exclusively for, and marketed exclusively to, entities described in 18 U.S.C. 2512(2), or are marketed exclusively as test equipment pursuant to Sec. 15.3(dd)

d. Modification of a scanning receiver to receive transmissions from Cellular Radiotelephone Service frequency bands will be considered to constitute manufacture of such equipment. This includes any individual, individuals, entity or organization that modifies one or more scanners. Any modification to a scanning receiver to receive transmissions from the Cellular Radiotelephone Service frequency bands voids the certification of the scanning receiver, regardless of the date of manufacture of the original unit. In addition, the provisions of Sec. 15.23 shall not be interpreted as permitting modification of a scanning receiver to receiver cellular radiotelephone service transmissions.

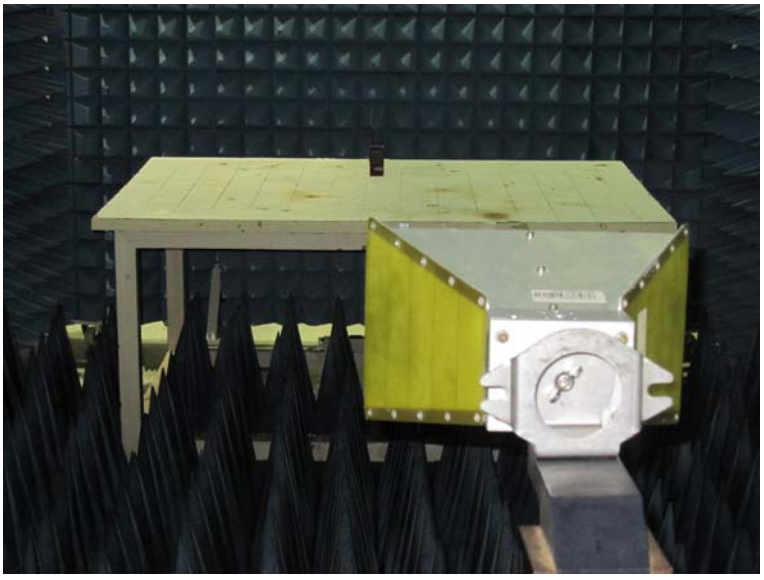
e. Scanning receivers and frequency converters designed for use with scanning receivers shall not be assembled from kits or marketed in kit form unless they comply with the requirements in paragraph (a) through (c) of this section.

f. Scanning receivers shall have a label permanently affixed to the product, and this label shall be readily visible to the purchaser at the time of purchase. The label shall read as follows: WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

(1) ``Permanently affixed'' means that the label is etched, engraved, stamped, silkscreened, indelible printed or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal, plastic or other material fastened to the equipment by welding, riveting, or permanent adhesive. The label shall be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable. The label shall not be a stick-on, paper label.
(2) When the device is so small that it is not practicable to place the warning label on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user and shall also be placed on the container in which the device is marketed. However, the FCC identifier must be displayed on the device.

This Scanning Receiver is Comply with FCC 121.

# 7. Test Setup Photos of the EUT



# 8. External Photos of the EUT

**External Photos**


DC 9V


E/VFO
MENU
STEP
MW
MR
SKIP
DW
tti


**.....End of Report.....**