



Engineering Solutions & Electromagnetic Compatibility Services

**FCC 15.231 Radiated Test Data**

**for**

**Model: RE310P**

**433 MHz PIR**

(RTL barcode: 020058)

**for**

**Resolution Engineering**

**RTL Project Number 2011044**

**Test Engineer: Jon Wilson**

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These tests are accredited and meet the requirements of ISO/IEC 17025 as verified by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AT-1445.

**Radiated Emissions Test Data – FCC Limits / 3m Distance**

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pass/Fail
433.95	Pk	H	66.1	30.5	96.6	100.8	-4.2	Pass
867.833	Pk	H	75.2	-4.6	70.6	80.8	-10.2	Pass
1301.773	Pk	H	67.1	2.4	69.5	74.0	-4.5	Pass
1735.693	Pk	V	54.8	6.0	60.8	80.8	-20.0	Pass
2169.605	Pk	V	79.2	-3.4	76.4	80.8	-4.4	Pass
2603.525	Pk	V	76.1	-2.2	73.9	80.8	-6.9	Pass
3037.445	Pk	V	63.3	-1.6	61.7	80.8	-19.1	Pass
3471.365	Pk	H	69.6	-1.5	68.1	80.8	-12.7	Pass
3905.285	Pk	H	49.8	0.0	49.8	74.0	-24.2	Pass
4339.205	Pk	H	51.9	4.6	56.5	74.0	-17.5	Pass

**Test Procedure**

Radiated emissions of the harmonics were tested at three meters. The EUT was tested in the three orthogonal planes with the receive antenna in both polarities. The emissions were maximized per ANSI C63.4:2003 8.3.1.2; that is, the measurement antenna height was varied between 1 and 4 m, and the EUT was rotated through 360° on a rotating turntable until the maximum emissions were found. Both horizontal and vertical measurement antenna polarizations were used. A resolution bandwidth of 100 kHz was used for frequencies less than 1000 MHz, and a resolution bandwidth of 1 MHz was used for frequencies greater than or equal to 1000 MHz. The video bandwidth was set to a value at least three times greater than the resolution bandwidth.


**EUT Disposition**

The EUT was adapted to continuously transmit for testing purposes.

**Radiated Emissions Test Equipment**

Part	Manufacturer	Model	Serial Number	RTL Bar Code	Calibration Due Date
Amplifier (20 MHz-2 GHz)	Rhein Tech Laboratories, Inc.	PR-1040	900905	900905	4/10/2011
Bilog Periodic Antenna (25 MHz-2 GHz)	Antenna Research Associates, Inc	LPB-2520	1037	900724	7/12/2011
EMI Receiver RF Section (9 kHz-6.5 GHz)	Hewlett Packard	85462A	3325A00159	900913	6/8/2011
RF Filter Section (100 kHz-6.5 GHz)	Hewlett Packard	85460A	3330A00107	900914	6/8/2011
Spectrum Analyzer	Hewlett Packard	8596EM	3826A00144	901215	1/13/2012
Amplifier	RTL	1003	N/A	901364	2/22/2012
Horn Antenna 2-4 GHz	EMCO	3161-02	9804-1044	900772	6/13/2012
Horn Antenna 4-8.2 GHz	EMCO	3161-03	9508-1020	900321	6/13/2012
Emissions Testing Software	Rhein Tech Laboratories, Inc.	Automated Emission Tester	Rev. 14.0.2	N/A	N/A

**Test Personnel:**

Jon Wilson		April 2, 2011
Test Engineer	Signature	Date of Test

### Test Configuration Photographs

#### X-axis



**Y-axis**



**Z-axis**



### EUT Photograph

