

## TEST REPORT

Report Number: 3193438ATL-001

October 27, 2009

**Product Designation: 99600**

Standard: 47 CFR Part 15, Subpart C (15.231 - Periodic operation in the band 40.66-40.70 MHz and above 70 MHz)  
RSS-210, Issue 7, 2007

**Tested by:**

Intertek Testing Services NA Inc.  
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Duluth, GA 30096

**Client:**

Hunter Fan  
7130 Goodlett Farms Pkwy  
Suite 400  
Memphis, TN 38016  
Contact: Robert Davis  
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**Tests performed by:**



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## 1.0 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 3.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested complies with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested.

## 2.0 Test Summary

Section	Test Full Name	Test Date	Result
4.0	System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)		
5.0	Overview of EUT (Low Power Transmitters) (FCC 15C - EUT Overview)		
6.0	Restrictions (FCC 15C - 15.231(a))	10/21/2009	PASS
7.0	Duty Cycle Determination (FCC 15A - 15.35(c))	10/21/2009	PASS
8.0	Radiated Emissions (FCC 15C - 15.231(b))	10/21/2009	PASS
9.0	Bandwidth Requirements (FCC 15C - 15.231(c))	10/21/2009	PASS
NA	Conducted emissions on AC power lines (Conducted Emissions) was waived due to the EUT is a battery operated device		
NA	Conducted Emissions for Intentional Radiators (FCC 15C - 15.207) was waived due to the EUT is a battery operated device		

### 3.0 Description of Equipment Under Test

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
Remote Control	Hunter Fan	99600	NA

EUT receive date:	10/20/2009
EUT receive condition:	Good

Description of EUT provided by Client:

The 99600 is a ceiling fan and light remote control.

Description of EUT exercising:

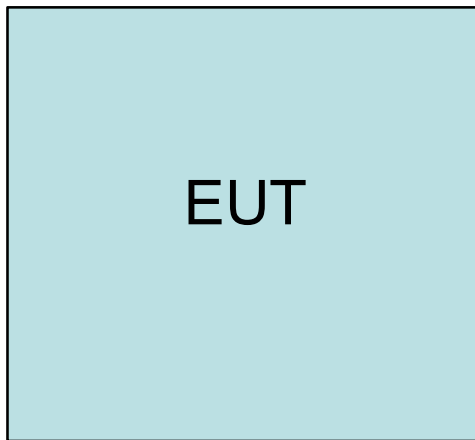
The EUT was placed in a continuous transmit state by depressing a button. Normal modulation was used during the testing.

## 4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

### Method:

Record the details of EUT cabling, document the support equipment, and show the interconnections in a block diagram.

### Drawing:



Setup Diagram

**4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)**

**Data:**

EUT Cabling						
ID	Description	Length	Shielding	Ferrites	Connection	
					From	To
No cabling required						

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
No support equipment required			

## 5.0 Overview of EUT (Low Power Transmitters) (FCC 15C - EUT Overview)

**Method:**

Complete the overview spreadsheet.

Related Submittal(s) Grants: This report is for use with an application for certification of a low power transmitter. One transmitter is included in the application.

**Data:**

Applicant	Hunter Fan
	7130 Goodlett Farms Pkwy Ste. 400
	Memphis TN 38016
Trade Name & Model No.	99600
FCC Identifier	IN2TX28
IC Identifier	3558A-TX28
Frequency Range (MHz)	350
Antenna Type (15.203)	Internal
Manufacturer name & address	Hunter Fan
	7130 Goodlett Farms Pkwy Ste. 400
	Memphis TN 38016

Related Submittals and Grants:	This report is for use with an application for certification of a low power transmitter. One transmitter is included in the application.
Additions, deviations and exclusions from standards	None

## 6.0 Restrictions (FCC 15C - 15.231(a))

### Method:

15.231(a) The provisions of this section are restricted to periodic operation within the band 40.66-40.70 MHz and above 70 MHz. Except as shown in paragraph (e) of this section, the intentional radiator is restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. Continuous transmissions, voice, video and the radio control of toys are not permitted. Data is permitted to be sent with a control signal. The following conditions shall be met to comply with the provisions for this periodic operation:

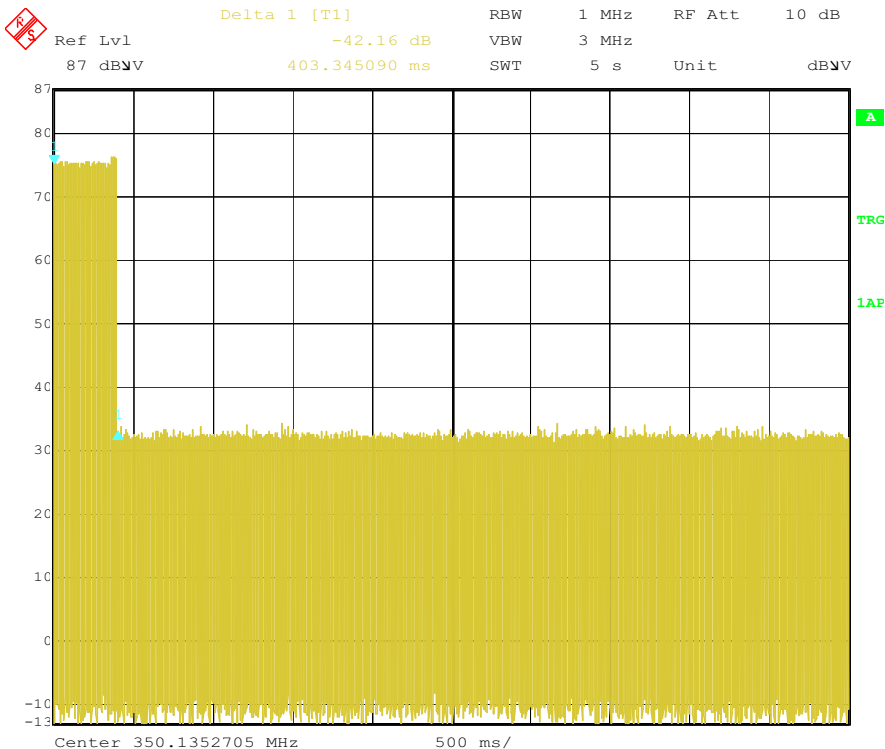
- (1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.
- (2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.
- (3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.
- (4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition
- (5) Transmission of set-up information for security systems may exceed the transmission duration limits in paragraphs (a)(1) and (a)(2) of this section, provided such transmissions are under the control of a professional installer and do not exceed ten seconds after a manually operated switch is released or a transmitter is activated automatically. Such set-up information may include data.

### Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Cable TT1, 6ft, N(Male) to N(Male)	Mini-Circuits	CBL-6FT-NMNM	TT1	05/04/2009	05/04/2010
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/19/2009	10/19/2010

**Results: The sample tested was found to Comply.**

### Plot:



Date: 21.OCT.2009 11:00:21

Auto deactivation plot

## 6.0 Restrictions (FCC 15C - 15.231(a))

## Data:

15.231(a)	Response	Requirement
Frequency Range (Mhz, max)	350	40.66-40.70 MHz and > 70MHz
Frequency Range (MHz, min)	350	40.66-40.70 MHz and > 70MHz
Transmit only control signal?	Yes	Only control signal allowed
Continuous transmission?	No	No
Voice transmission?	No	No
Video transmission?	No	No
Radio control of toy?	No	No

## 15.231(a)(1)

Manually operated?	Yes	
Deactivates within 5 seconds?	Yes	Yes
Show plot (10 second sweep)	Yes	

## 15.231(a)(2)

Automatically operated?	NA	
Deactivates within 5 seconds?	NA	
Show plot (10 second sweep)	NA	

## 15.231(a)(3)

Periodically transmits at predetermined intervals?	No	Allowed, with restrictions
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## 7.0 Duty Cycle Determination (FCC 15A - 15.35(c))

### Method:

(c) Unless otherwise specified, e.g. §15.255(b), when the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

Determine the period of the pulse train, T, in mSec and record the results. T is defined as the time from the beginning of one pulse train to the beginning of the next pulse train.

Count the number of different types of pulses, N and record the results.

For each of the different types of pulses, count the number of occurrences within one pulse train.

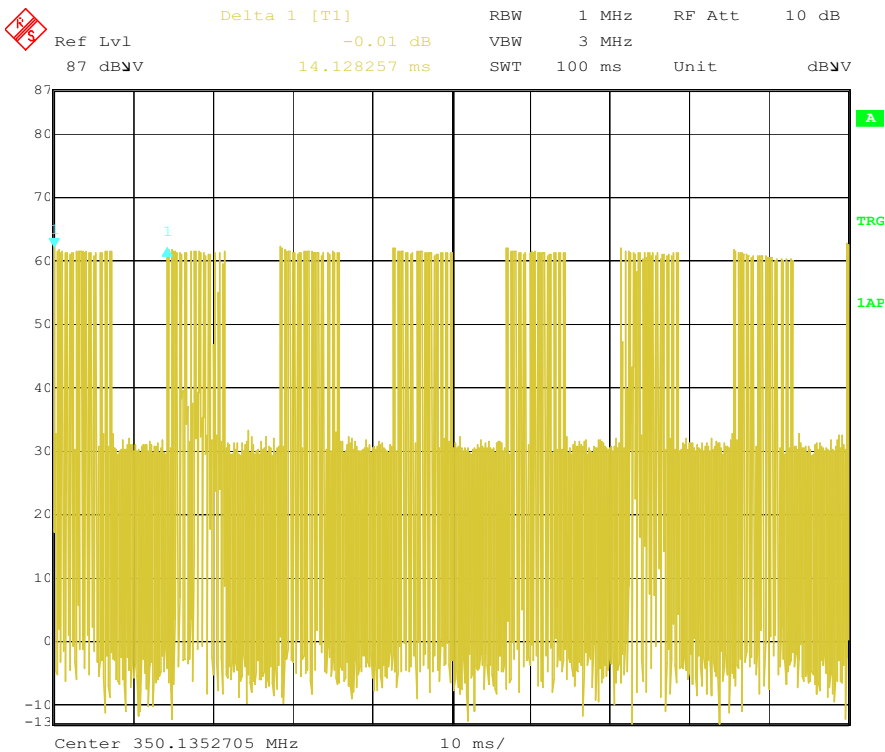
Use the Duty Cycle Correction Factor, DCCF, from the results table and use it to adjust the field strength measurements recorded for radiated emissions.

### Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Cable TT1, 6ft, N(Male) to N(Male)	Mini-Circuits	CBL-6FT-NMNM	TT1	05/04/2009	05/04/2010
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/19/2009	10/19/2010

### Results: The sample tested was found to Comply.

### Plot:

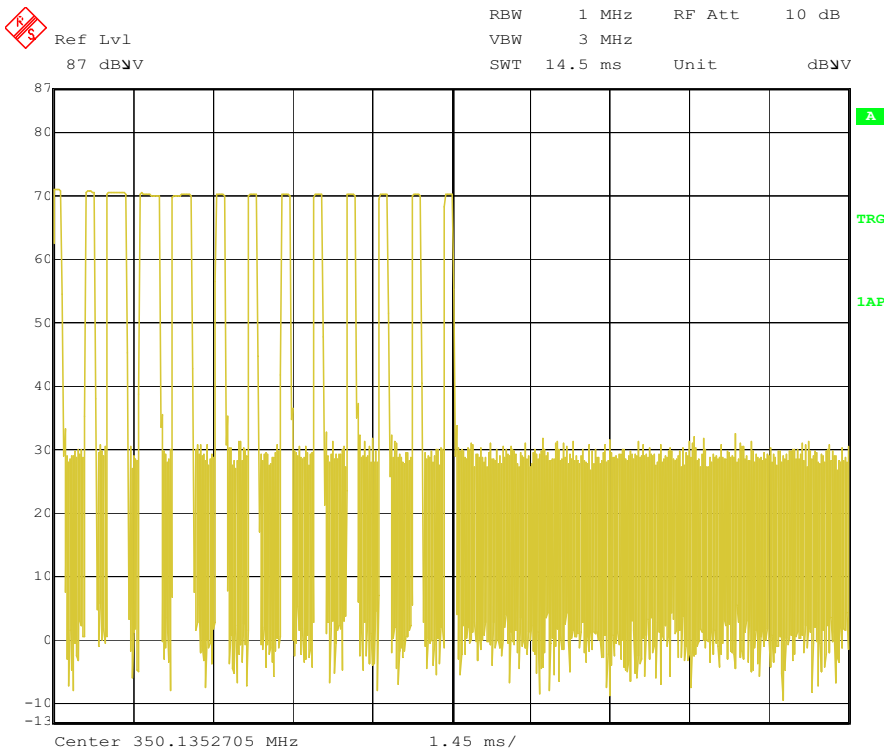


Date: 21.OCT.2009 10:15:15

100ms sweep

### 7.0 Duty Cycle Determination (FCC 15A - 15.35(c))

**Plot:**

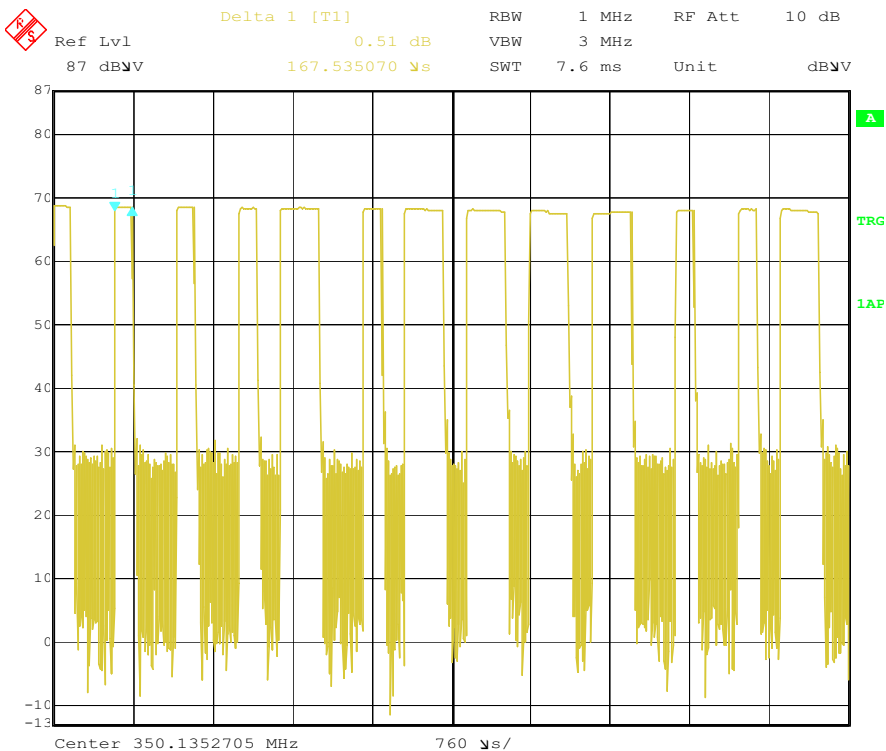


Date: 21.OCT.2009 10:17:47

14.5ms single pulse

### 7.0 Duty Cycle Determination (FCC 15A - 15.35(c))

**Plot:**

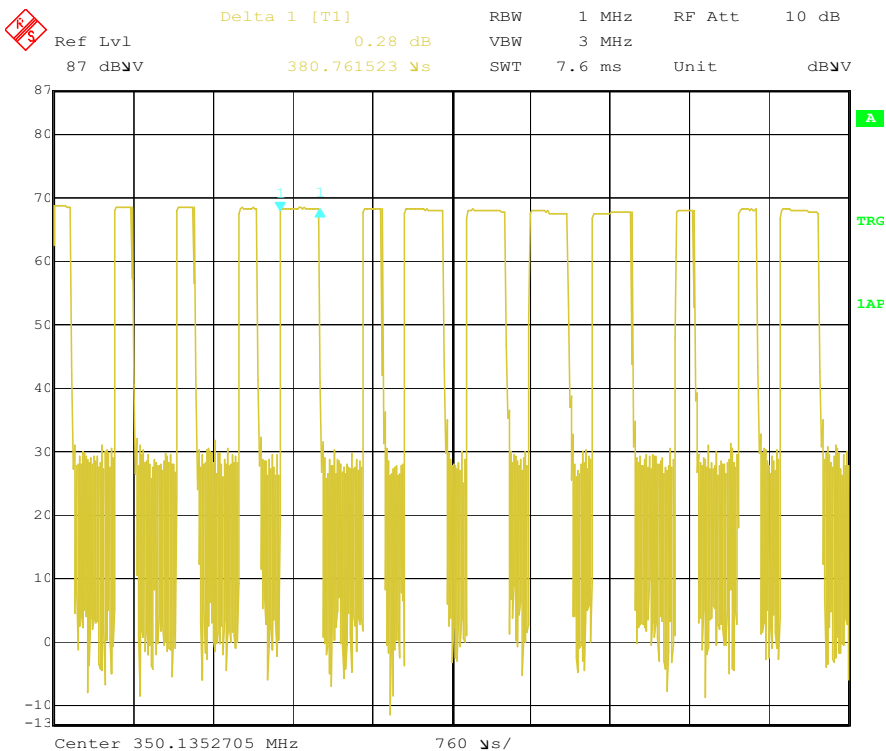


Date: 21.OCT.2009 10:25:53

Pulse 1 - 0.167ms

### 7.0 Duty Cycle Determination (FCC 15A - 15.35(c))

**Plot:**



Date: 21.OCT.2009 10:26:36

Pulse 1 - 0.380ms

**7.0 Duty Cycle Determination (FCC 15A - 15.35(c))**

**Data:**

Duration of Pulse Train, T (mSec): 14.128  
 Averaging Interval, A<sub>I</sub> (mSec): 14.128  
 Number of different Pulses, N: 2

	Number (#P <sub>x</sub> )	Pulse Width, mSec (PW <sub>x</sub> )	Product (#P <sub>x</sub> )*(PW <sub>x</sub> )
Pulse Width 1	7	0.167535	1.172745
Pulse Width 2	6	0.380761	2.284566
Pulse Width 3			
Pulse Width 4			
Pulse Width 5			
Pulse Width 6			
Pulse Width 7			
Pulse Width 8			
Pulse Width 9			
Pulse Width 10			

Duty Cycle: 0.244713406  
 Duty Cycle Correction Factor, dB: -12.2

$$T_{on} = (PW_1 * \#P_1) + (PW_2 * \#P_2) + \dots + (PW_n * \#P_n)$$

$$DutyCycle = T_{on} \div A_I$$

$$DCCF = 20 * \text{Log}_{10}(DutyCycle)$$

## 8.0 Radiated Emissions (FCC 15C - 15.231(b))

### Method:

(b) In addition to the provisions of §15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the limits specified in FCC Part 15.231(b).

Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in §15.35 for averaging pulsed emissions and for limiting peak emissions apply. Further, compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in §15.209, whichever limit permits a higher field strength.

For radiated emission measurements, the EUT is attached to a styro-foam block and placed on a non-conductive table whose top is 80cm above the ground plane. If the EUT is handheld, the signal shall be aximized through rotation and placement in the three orthogonal axes.

During the test the EUT is rotated and the antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance. All readings are extrapolated back to the equivalent 3-meter reading using inverse scaling with distance.

Radiated emission measurements were performed from 30 MHz to 10 times the highest frequency generated in the EUT. When provided, emissions plots are taken with a peak detector unless otherwise indicated.

Analyzer resolution is:

- 100 kHz or greater for frequencies 1000 MHz and below,
- 1 MHz for frequencies above 1000 MHz.

Equipment setup for radiated disturbance tests shall follow the guidelines of ANSI C63.4:2003.

The Peak value of the Field Strength was measured. The Average value was obtained from the Peak by subtracting the Duty Cycle Correction Factor or by using an average detector.

### Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Antenna, BiLog, 20-2000MHz	Chase	CBL6112A	211518	12/24/2008	12/24/2009
Antenna, Horn, <18 GHz	EMCO	3115	213061	04/30/2009	04/30/2010
Cable E01, <18GHz	Pasternack	RG214/U	E01	05/04/2009	05/04/2010
Cable E201, 18 GHz, N, 3m	Megaphase	TM18 NKNK 118	E201	01/29/2009	01/29/2010
Cable MP3, 18 GHz, N, 10m	Megaphase	G919-NKNK-394	MP3	05/04/2009	05/04/2010
Cable, 7 meters, 1-18GHz	Storm Products Co.	PR90-241-7MTR	ST-2	08/18/2009	08/18/2010
Cable, N-N 3 meters, 18GHz	Megaphase	TM18 NKNK 118	E203	05/12/2009	05/12/2010
EMI Receiver	Hewlett Packard	8546A	213109	10/12/2009	10/12/2010
EMI Receiver, Preselector section	Hewlett Packard	85460A	213108	10/12/2009	10/12/2010
Excel spreadsheet for radiated emissions	Software	Excel - RE Worksh	SW004	12/08/2008	12/08/2009
Preamplifier, 10 MHz to 2000 MHz, 30 dB gain	Mini-Circuits	ZKL-2	200069	01/30/2009	01/30/2010
Preamplifier, 20 MHz to 18 GHz, 40 dB	A.H. Systems	PAM-0118	200108	04/07/2009	04/07/2010
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/19/2009	10/19/2010
Tile - software profile for radiated and conducted emissions testing.	Software	Tile - Emissions	SW006	12/08/2008	12/08/2009

**Results: The sample tested was found to Comply.**

**8.0 Radiated Emissions (FCC 15C - 15.231(b))**

**Photo:**



Test Setup - Front View

8.0 Radiated Emissions (FCC 15C - 15.231(b))

Photo:

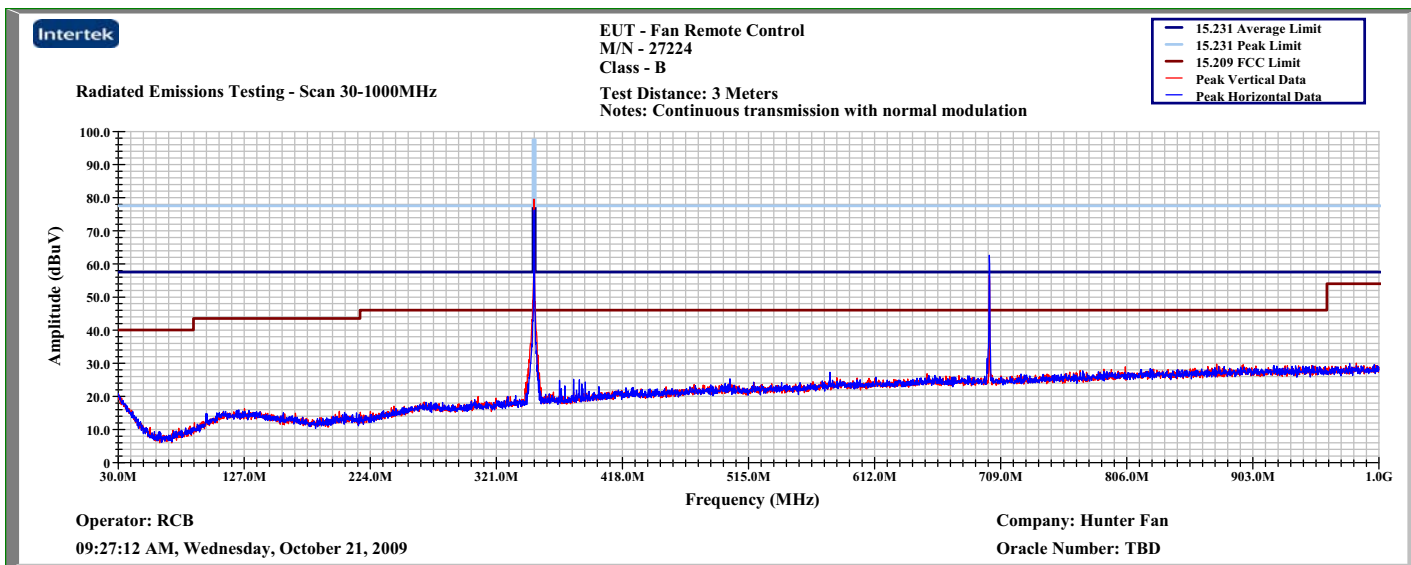


Test Setup - Rear View



### 8.0 Radiated Emissions (FCC 15C - 15.231(b))

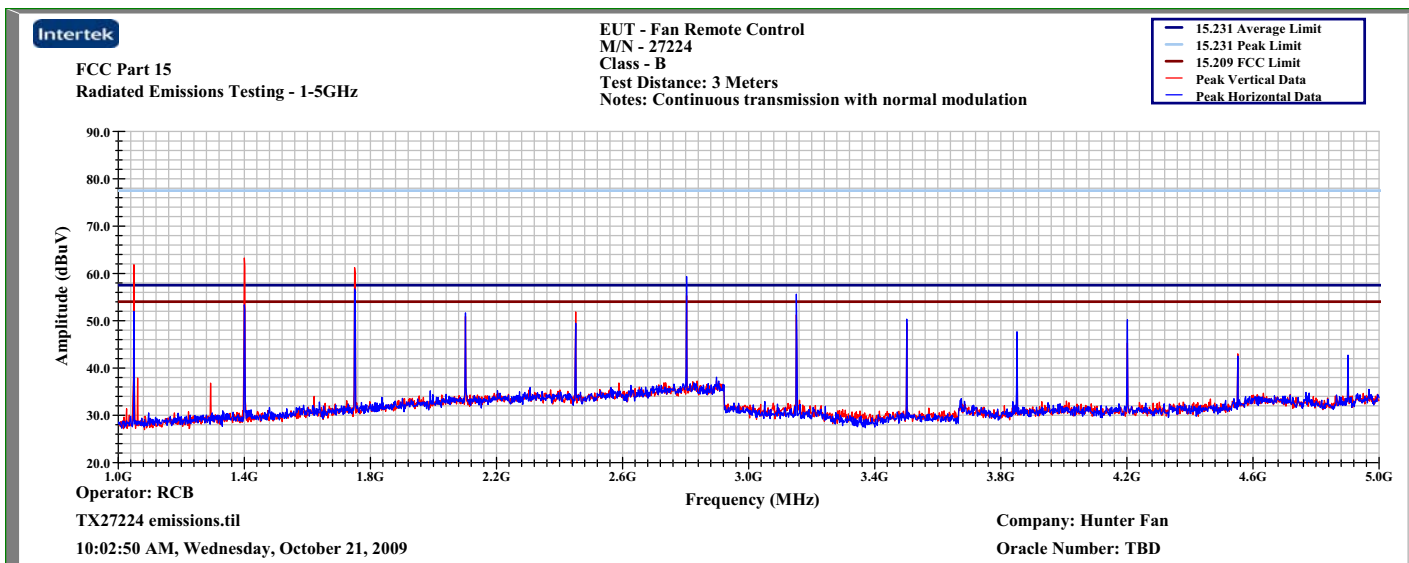
Plot:



Radiated Emissions from 30-1000MHz

### 8.0 Radiated Emissions (FCC 15C - 15.231(b))

Plot:



Radiated Emissions from 1-5GHz

## 8.0 Radiated Emissions (FCC 15C - 15.231(b))

## Data:

Frequency Range (MHz): 30-1000

Test Distance (m): 3

Input power: new 12Vdc battery

Modifications for compliance (y/n): n

## Notes:

A	B	C	D	E	F	G	H	I	J	K
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Duty Cycle Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Axis / Detector
V	350.145	92.4	15.0	3.6	27.8	0.0	83.2	97.5	-14.4	XP
V	350.145	92.4	15.0	3.6	27.8	12.2	71.0	77.5	-6.6	XA
H	350.145	84.6	15.0	3.6	27.8	0.0	75.3	97.5	-22.2	XP
H	350.145	84.6	15.0	3.6	27.8	12.2	63.1	77.5	-14.4	XA
V	700.263	65.5	19.2	5.8	27.6	0.0	62.9	77.5	-14.7	XP
V	700.263	65.5	19.2	5.8	27.6	12.2	50.7	57.5	-6.9	XA
H	700.263	63.2	19.8	5.8	27.6	0.0	61.2	77.5	-16.3	XP
H	700.263	63.2	19.8	5.8	27.6	12.2	49.0	57.5	-8.5	XA
V	350.150	85.7	15.0	3.6	27.8	0.0	76.5	97.5	-21.0	YP
V	350.150	85.7	15.0	3.6	27.8	12.2	64.3	77.5	-13.2	YA
H	350.150	92.6	15.0	3.6	27.8	0.0	83.4	97.5	-14.1	YP
H	350.150	92.6	15.0	3.6	27.8	12.2	71.2	77.5	-6.3	YA
V	700.222	59.1	19.2	5.8	27.6	0.0	56.5	77.5	-21.0	YP
V	700.222	59.1	19.2	5.8	27.6	12.2	44.3	57.5	-13.2	YA
H	700.222	65.6	19.8	5.8	27.6	0.0	63.6	77.5	-13.9	YP
H	700.222	65.6	19.8	5.8	27.6	12.2	51.4	57.5	-6.1	YA
V	350.117	91.8	15.0	3.6	27.8	0.0	82.6	97.5	-14.9	ZP
V	350.117	91.8	15.0	3.6	27.8	12.2	70.4	77.5	-7.1	ZA
H	350.117	88.9	15.0	3.6	27.8	0.0	79.7	97.5	-17.8	ZP
H	350.117	88.9	15.0	3.6	27.8	12.2	67.5	77.5	-10.0	ZA
V	700.260	62.6	19.2	5.8	27.6	0.0	60.0	77.5	-17.6	ZP
V	700.260	62.6	19.2	5.8	27.6	12.2	47.8	57.5	-9.8	ZA
H	700.260	68.7	19.8	5.8	27.6	0.0	66.7	77.5	-10.8	ZP
H	700.260	68.7	19.8	5.8	27.6	12.2	54.5	57.5	-3.0	ZA
<b>Calculations</b>		G=C+D+E-F			I=G-H					

Radiated Emissions from 30-1000MHz

## 8.0 Radiated Emissions (FCC 15C - 15.231(b))

## Data:

Frequency Range (MHz): 1000-5000

Test Distance (m): 3

Input power: new 12Vdc battery

Modifications for compliance (y/n): n

## Notes:

A	B	C	D	E	F	G	H	I	J	K
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Duty Cycle Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Axis / Detector
V	1050.300	75.3	23.7	5.9	40.3	0.0	64.5	77.5	-13.0	XP
V	1050.300	75.3	23.7	5.9	40.3	12.2	52.3	57.5	-5.2	XA
H	1050.330	67.4	23.7	5.9	40.3	0.0	56.7	77.5	-20.8	XP
H	1050.330	67.4	23.7	5.9	40.3	12.2	44.5	57.5	-13.0	XA
V	1400.440	77.2	23.7	6.5	40.4	0.0	67.1	77.5	-10.4	XP
V	1400.440	77.2	23.7	6.5	40.4	12.2	54.9	57.5	-2.6	XA
H	1400.410	66.4	23.7	6.5	40.4	0.0	56.2	77.5	-21.3	XP
H	1400.410	66.4	23.7	6.5	40.4	12.2	44.0	57.5	-13.5	XA
V	1750.508	67.9	25.1	6.5	40.4	0.0	59.2	77.5	-18.3	XP
V	1750.508	67.9	25.1	6.5	40.4	12.2	47.0	57.5	-10.5	XA
H	1750.525	67.1	25.1	6.5	40.4	0.0	58.4	77.5	-19.1	XP
H	1750.525	67.1	25.1	6.5	40.4	12.2	46.2	57.5	-11.3	XA
V	2800.858	61.1	28.0	7.9	40.7	0.0	56.3	77.5	-21.2	XP
V	2800.858	61.1	28.0	7.9	40.7	12.2	44.1	57.5	-13.4	XA
H	2800.840	67.7	28.0	7.9	40.7	0.0	62.9	77.5	-14.6	XP
H	2800.840	67.7	28.0	7.9	40.7	12.2	50.7	57.5	-6.8	XA
V	3150.978	54.5	29.3	9.3	40.8	0.0	52.3	77.5	-25.2	XP
V	3150.978	54.5	29.3	9.3	40.8	12.2	40.1	57.5	-17.4	XA
H	3150.965	60.4	29.3	9.3	40.8	0.0	58.2	77.5	-19.3	XP
H	3150.965	60.4	29.3	9.3	40.8	12.2	46.0	57.5	-11.5	XA
<b>Calculations</b>		G=C+D+E-F			I=G-H					

Radiated Emissions from 1-5GHz @ X-axis

## 8.0 Radiated Emissions (FCC 15C - 15.231(b))

## Data:

Frequency Range (MHz): 1000-5000

Test Distance (m): 3

Input power: new 12Vdc battery

Modifications for compliance (y/n): n

## Notes:

A	B	C	D	E	F	G	H	I	J	K
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Duty Cycle Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Axis / Detector
V	1050.330	65.0	23.7	5.9	40.3	0.0	54.2	77.5	-23.3	YP
V	1050.330	65.0	23.7	5.9	40.3	12.2	42.0	57.5	-15.5	YA
H	1050.310	70.7	23.7	5.9	40.3	0.0	60.0	77.5	-17.5	YP
H	1050.310	70.7	23.7	5.9	40.3	12.2	47.8	57.5	-9.7	YA
V	1400.420	69.8	23.7	6.5	40.4	0.0	59.7	77.5	-17.8	YP
V	1400.420	69.8	23.7	6.5	40.4	12.2	47.5	57.5	-10.0	YA
H	1400.400	76.2	23.7	6.5	40.4	0.0	66.1	77.5	-11.4	YP
H	1400.400	76.2	23.7	6.5	40.4	12.2	53.9	57.5	-3.6	YA
V	1750.500	62.0	25.1	6.5	40.4	0.0	53.3	77.5	-24.2	YP
V	1750.500	62.0	25.1	6.5	40.4	12.2	41.1	57.5	-16.4	YA
H	1750.513	69.8	25.1	6.5	40.4	0.0	61.0	77.5	-16.5	YP
H	1750.513	69.8	25.1	6.5	40.4	12.2	48.8	57.5	-8.7	YA
V	2800.838	60.6	28.0	7.9	40.7	0.0	55.9	77.5	-21.7	YP
V	2800.838	60.6	28.0	7.9	40.7	12.2	43.7	57.5	-13.9	YA
H	2800.853	62.2	28.0	7.9	40.7	0.0	57.4	77.5	-20.1	YP
H	2800.853	62.2	28.0	7.9	40.7	12.2	45.2	57.5	-12.3	YA
V	3150.963	53.2	29.3	9.3	40.8	0.0	50.9	77.5	-26.6	YP
V	3150.963	53.2	29.3	9.3	40.8	12.2	38.7	57.5	-18.8	YA
H	3150.955	56.8	29.3	9.3	40.8	0.0	54.6	77.5	-22.9	YP
H	3150.955	56.8	29.3	9.3	40.8	12.2	42.4	57.5	-15.1	YA
<b>Calculations</b>		G=C+D+E-F			I=G-H					

Radiated Emissions from 1-5GHz @ Y-axis

## 8.0 Radiated Emissions (FCC 15C - 15.231(b))

## Data:

Frequency Range (MHz): 1000-5000

Test Distance (m): 3

Input power: new 12Vdc battery

Modifications for compliance (y/n): n

## Notes:

A	B	C	D	E	F	G	H	I	J	K
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Duty Cycle Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Axis / Detector
V	1050.300	68.8	23.7	5.9	40.3	0.0	58.1	77.5	-19.4	ZP
V	1050.300	68.8	23.7	5.9	40.3	12.2	45.9	57.5	-11.6	ZA
H	1050.310	77.7	23.7	5.9	40.3	0.0	67.0	77.5	-10.5	ZP
H	1050.310	77.7	23.7	5.9	40.3	12.2	54.8	57.5	-2.7	ZA
V	1400.410	70.5	23.7	6.5	40.4	0.0	60.4	77.5	-17.1	ZP
V	1400.410	70.5	23.7	6.5	40.4	12.2	48.2	57.5	-9.3	ZA
H	1400.395	78.1	23.7	6.5	40.4	0.0	67.9	77.5	-9.6	ZP
H	1400.395	78.1	23.7	6.5	40.4	12.2	55.7	57.5	-1.8	ZA
V	1750.538	68.1	25.1	6.5	40.4	0.0	59.3	77.5	-18.2	ZP
V	1750.538	68.1	25.1	6.5	40.4	12.2	47.1	57.5	-10.4	ZA
H	1750.513	65.3	25.1	6.5	40.4	0.0	56.5	77.5	-21.0	ZP
H	1750.513	65.3	25.1	6.5	40.4	12.2	44.3	57.5	-13.2	ZA
V	2800.863	59.0	28.0	7.9	40.7	0.0	54.2	77.5	-23.3	ZP
V	2800.863	59.0	28.0	7.9	40.7	12.2	42.0	57.5	-15.5	ZA
H	2800.858	63.0	28.0	7.9	40.7	0.0	58.2	77.5	-19.3	ZP
H	2800.858	63.0	28.0	7.9	40.7	12.2	46.0	57.5	-11.5	ZA
V	3150.958	59.4	29.3	9.3	40.8	0.0	57.2	77.5	-20.3	ZP
V	3150.958	59.4	29.3	9.3	40.8	12.2	45.0	57.5	-12.5	ZA
H	3150.945	52.4	29.3	9.3	40.8	0.0	50.2	77.5	-27.4	ZP
H	3150.945	52.4	29.3	9.3	40.8	12.2	38.0	57.5	-19.6	ZA
<b>Calculations</b>		G=C+D+E-F			I=G-H					

Radiated Emissions from 1-5GHz @ Z-axis

## 9.0 Bandwidth Requirements (FCC 15C - 15.231(c))

### Method:

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

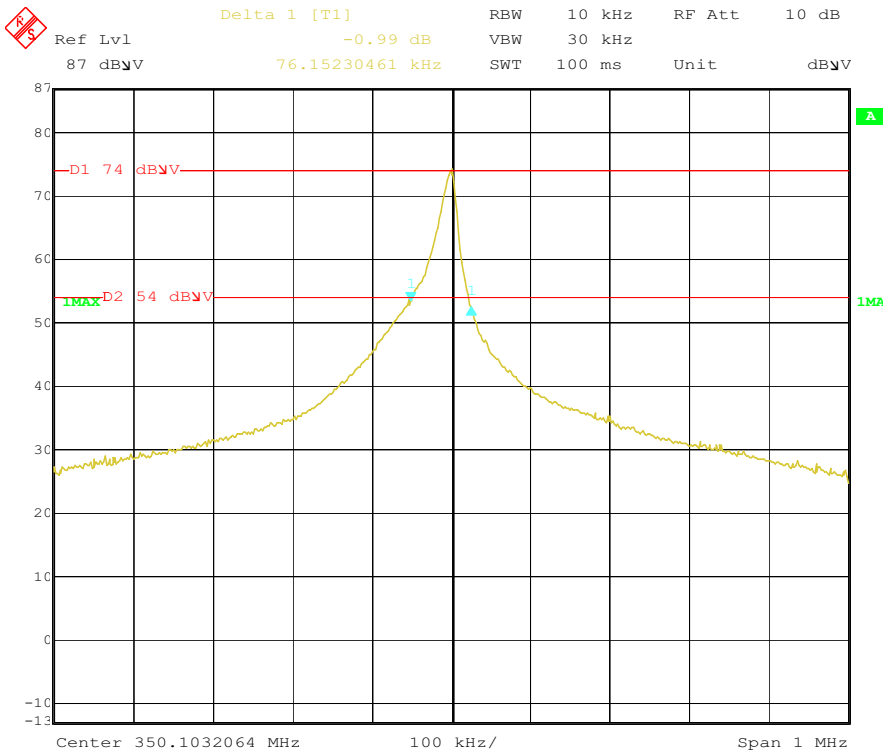
- Center Frequency is set to the fundamental of transmitter.
- Resolution Bandwidth is set to approximately 1% of the emission bandwidth.
- Video Bandwidth is set greater than or equal to the Resolution Bandwidth.

### Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Cable TT1, 6ft, N(Male) to N(Male)	Mini-Circuits	CBL-6FT-NMNM	TT1	05/04/2009	05/04/2010
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/19/2009	10/19/2010

**Results: The sample tested was found to Comply.**

### Plot:



Date: 21.OCT.2009 11:05:58

Bandwidth

**9.0 Bandwidth Requirements (FCC 15C - 15.231(c))**

**Data:**

Fundamental Frequency MHz	Measured Bandwidth MHz	Bandwidth Limit MHz
350	0.076152	0.875

Suggested Instrument Settings	
RBW (kHz):	9
VBW (kHz):	26
Span (MHz):	0.875
Sweep time (s):	>1