Test Report

Curtis-Straus LLC, *a wholly owned subsidiary of BV CPS*

Report No	EK1062-2
Client	DogWatch Inc.
Address	10 Michigan Drive Natick, MA 01760
Phone	508 - 650 - 0600
Items tested	BL100H Handheld Unit
FCC ID	L66DWHBLSH2
FRN	0018536615
Equipment Type	Part 15.247 Frequency Hopper
Equipment Code	DSS
FCC/IC Rule Parts	47 CFR 15.247, RSS 210 issue 7 and RSS GEN issue 2
Test Dates	August 24-25, 2010
Results	As detailed within this report
Prepared by	Matthew Burman – Test Engineer
Authorized by	Mairaj Hussain – EMC Supervisor
Issue Date	October 25, 2010
Conditions of Issue	This Test Report is issued subject to the conditions stated in the '*Conditions of Testing*' section on page 34 of this report.

Contents

Form Final Report REV 7-20-07 (DW)

Summary

This test report supports an application for certification of a transmitter operating pursuant to 47 CFR 15.247 and RSS-210. The product is the BL100H Handheld Unit. It is a frequency hopping transmitter that operates in the range 917-927MHz.

We found that the product met the above requirements without modification. Fred Peterson from DogWatch Inc. was present during the testing. The test sample was received in good condition.

The EUT does not operate while in charging mode. Charging mode was tested for verification.

Test Methodology

Radiated emission and AC Line conducted testing was performed according to the procedures specified in ANSI C63.10 (2009) and C63.4 (2009) and RSS-GEN Issue 2. Radiated Emissions were maximized by rotating the device around three orthogonal axes as well as varying the test antenna's height and polarity. The device antenna cannot be maximized separately.

Conducted emission at the antenna port was performed, as required by rule section.

EUT charges at 120Vac 60Hz, but normal operation is battery powered.

Low operating channel frequency = 917MHz
Mid operating channel frequency = 922MHz
High operating channel frequency = 927MHz

The following bandwidths were used during radiated spurious and line conducted emissions.

Frequency	RBW	VBW
0.15-30MHz	9kHz	30kHz
30-1000MHz	120kHz	1MHz
1-25GHz	1MHz	3MHz

Release Control Record

Issue No.	Reason for change	Date Issued
1	Original Release	October 25, 2010

Product Tested - Configuration Documentation

EUT Configuration

Work Order: K1062
Company: DogWatch Inc.
Company Address: 10 Michigan Drive
Natick, MA 01760
Contact: Fred Peterson
Person Present: Fred Peterson

	MN	PN	SN
EUT:	BL100H		O (conducted sample) R (radiated sample) sample 1
Power supply:	SP5-0501000-NA		
EUT Description:	Handheld Unit		
EUT TX Frequency:	917-927MHz		

Support Equipment:	**MN**	**SN**
None		

EUT Ports:

Port Label	Port Type	No. of ports	No. Populated	Cable Type	Shielded	Ferrites	Length	Max Length	In/Out NEBS Type	Unpopulated Reason
DC Charging Port	DC	1	All	DC	No	None	8ft	8ft	In	NA

Software / Operating Mode Description:

Running diag software to set channel, TX/RX mode, hopping mode.

Statement of Conformity

The BL100H has been found to conform to the following parts of 47 CFR and RSS 210 as detailed below:

RSS-GEN	RSS 210	Part 15	Comments
5.3		15.15(b)	There are no controls accessible to the user that varies the output power.
5.2		15.19	The label is shown in the label exhibit.
7.1.5		15.21	Information to the user is shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
		15.31	The EUT was tested in accordance with the measurement standards in this section.
		15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
		15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
7.1.4		15.203	The antenna for this device is non detachable
	2.6	15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209.
7.2.2		15.207	EUT meets AC Line conducted emissions requirements of 15.207
	Annex 8	15.247	The unit complies with the requirements of 15.247
4.6.1			Occupied Bandwidth measurements were made.

Test Results

20dB Bandwidth

Limit

"The maximum allowed 20dB bandwidth of the hopping channel is 500kHz."
[15.247(a)(i)(1)]

MEASUREMENTS / RESULTS

20dB Bandwidth

Test Engineer: Evan Gould
Spectrum Analyzer: Gold
Site: 3m Indoor OATS
Temp: 21.6℃
Humidity: 50%
Pressure: 1002mbar

	Channel	Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Result
	Low	917	117.124	500	Pass
	Mid	922	117.675	500	Pass
	High	927	118.305	500	Pass

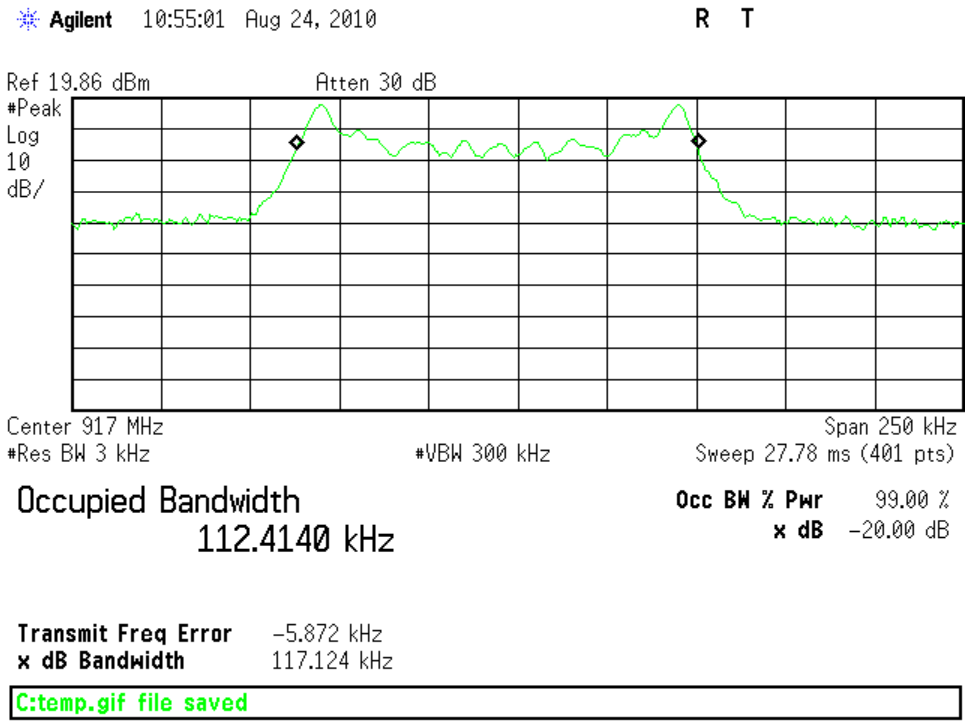
Rev: 31-Aug-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011

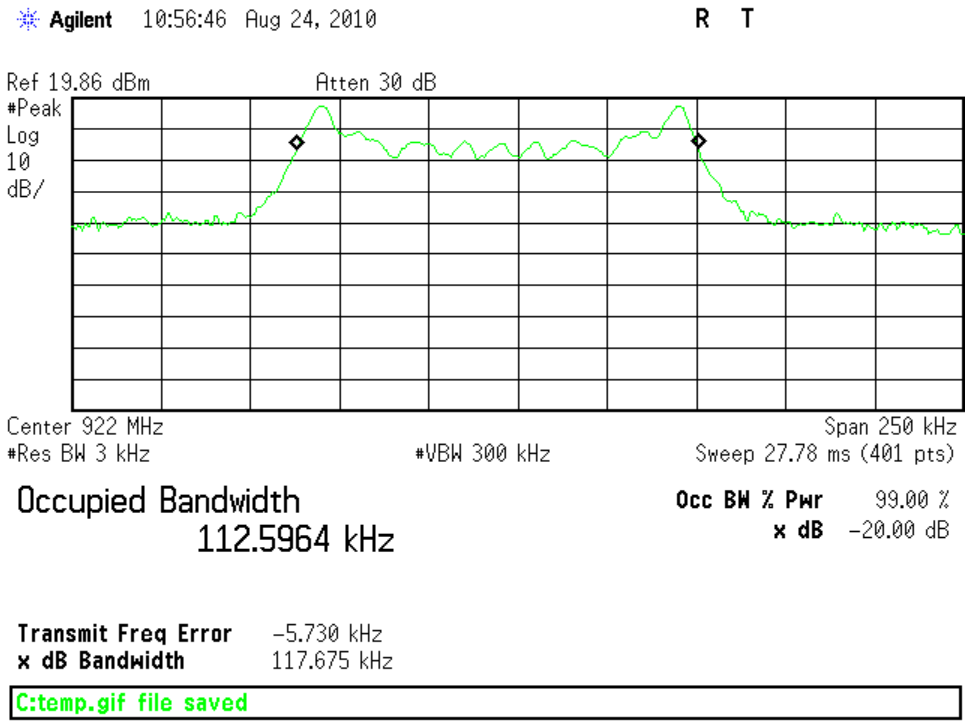
Meteorological Meters	MN	Mfr	SN	Asset	Cat	Calibration Due
Temp./Humidity/Atm. Pressure Gauge	7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer	35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

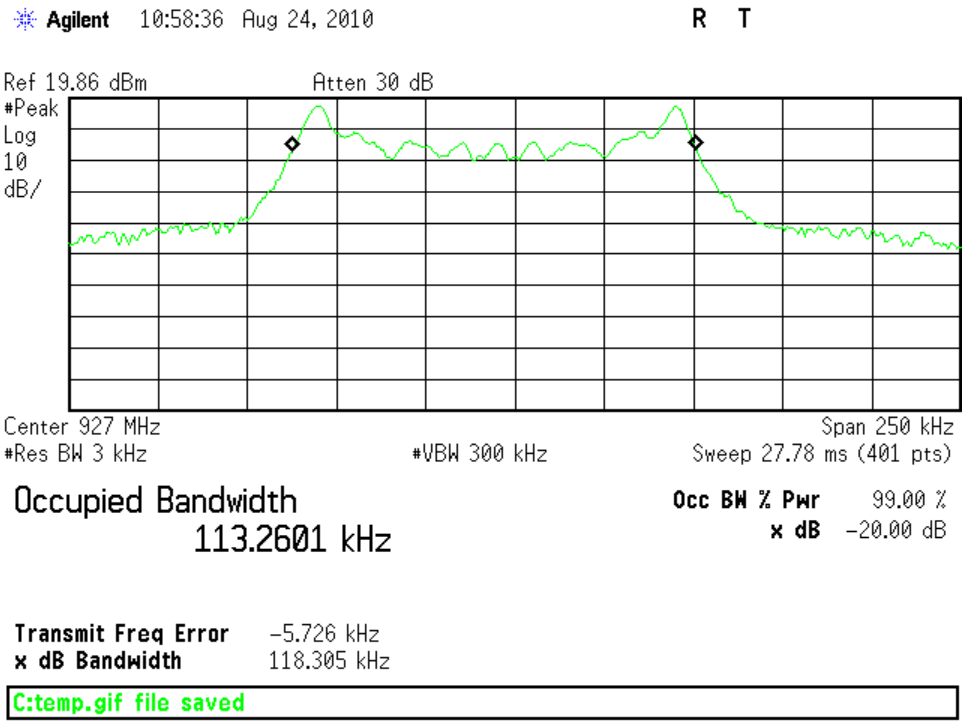
Low Channel



Mid Channel



High Channel



Peak Power

LIMIT

Conducted Output Power
1 Watt
[15.247(b) (2)]

MEASUREMENTS / RESULTS

DATA TABLE

30dB = 1Watt
Power Option 1

Peak Output Power

Test Engineer: Evan Gould
Spectrum Analyzer: Gold
Site: 3m Indoor OATS
Temp: 21.6℃
Humidity: 50%
Pressure: 1002mbar

	Channel	Frequency (MHz)	Reading (dBm)	Limit (dBm)	Result
	Low	917	17.31	30	Pass
	Mid	922	17.12	30	Pass
	High	927	16.94	30	Pass

Rev: 31-Aug-2010

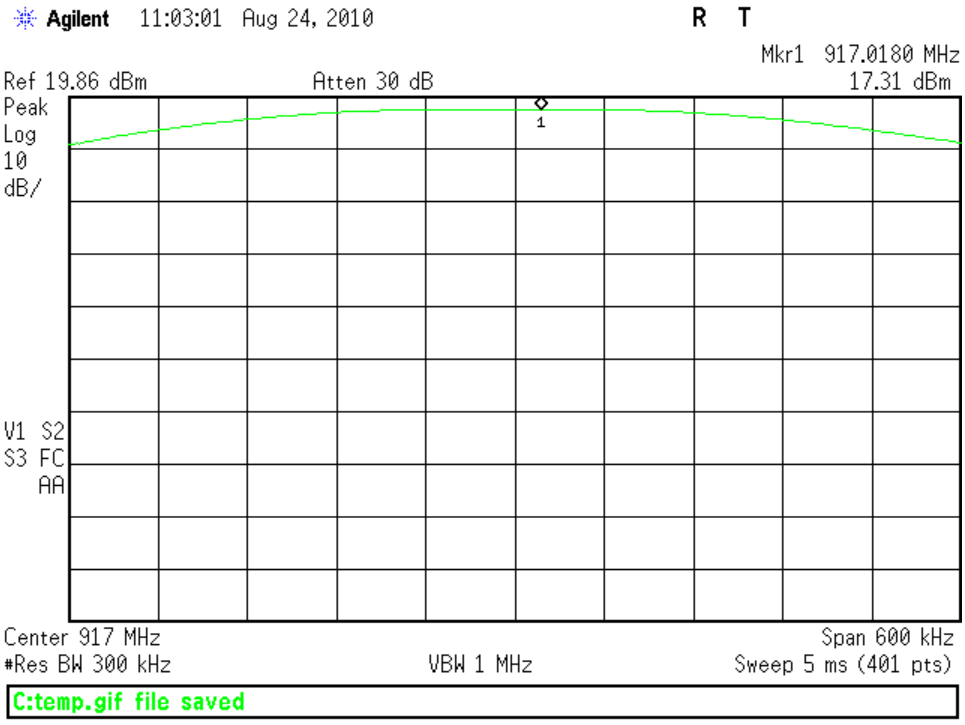
Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011

Meteorological Meters	MN	Mfr	SN	Asset	Cat	Calibration Due
Temp./Humidity/Atm. Pressure Gauge	7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer	35519-044	Control Company	72457635	1334	II	18-Aug-2011

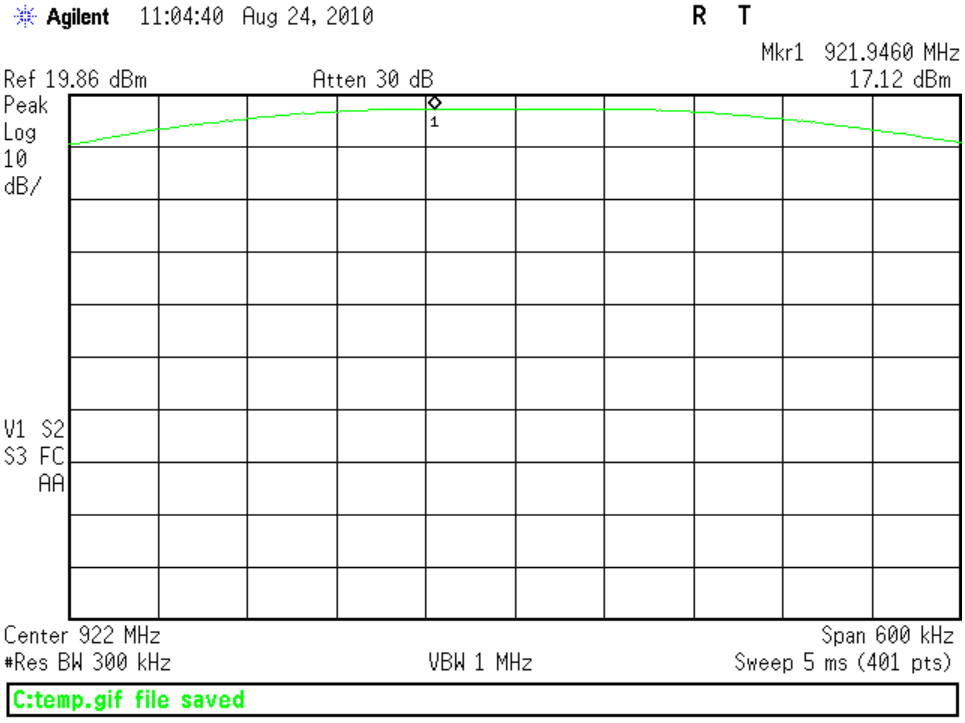
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

PLOTS

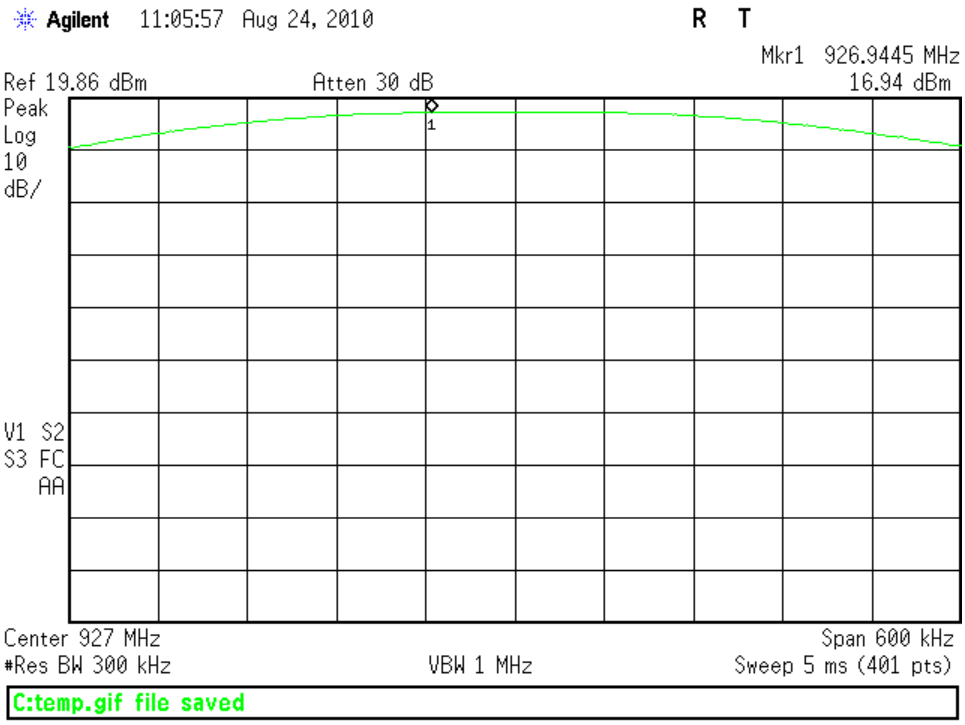
Low Channel



Mid Channel



High Channel



Band Edge Measurements

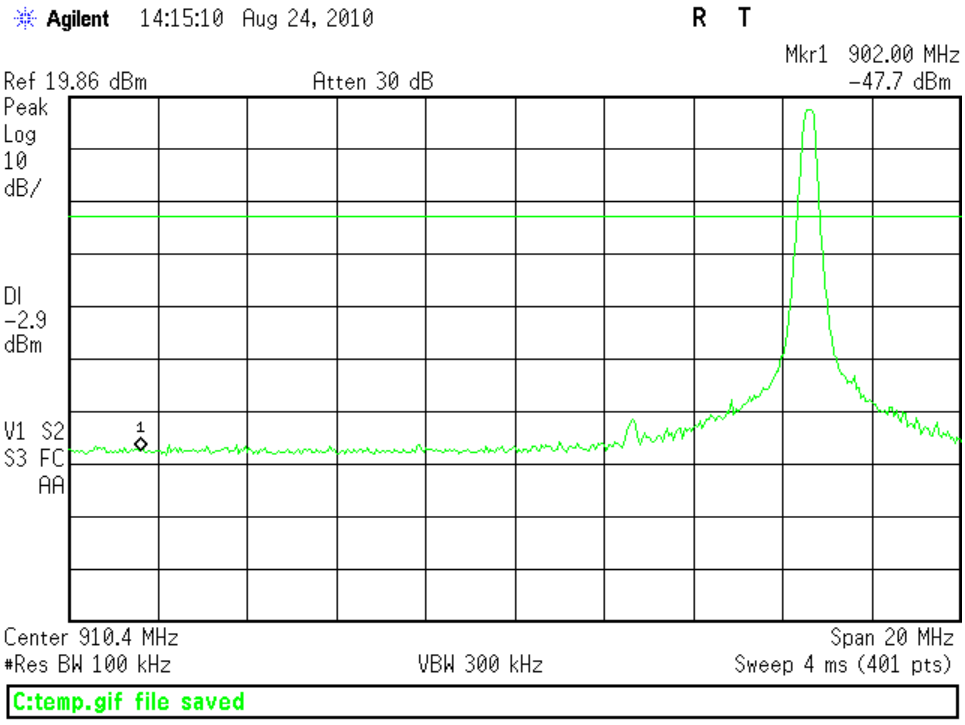
LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that...the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval,…the attenuation required under this paragraph shall be 30dB..
[15.247(d)]

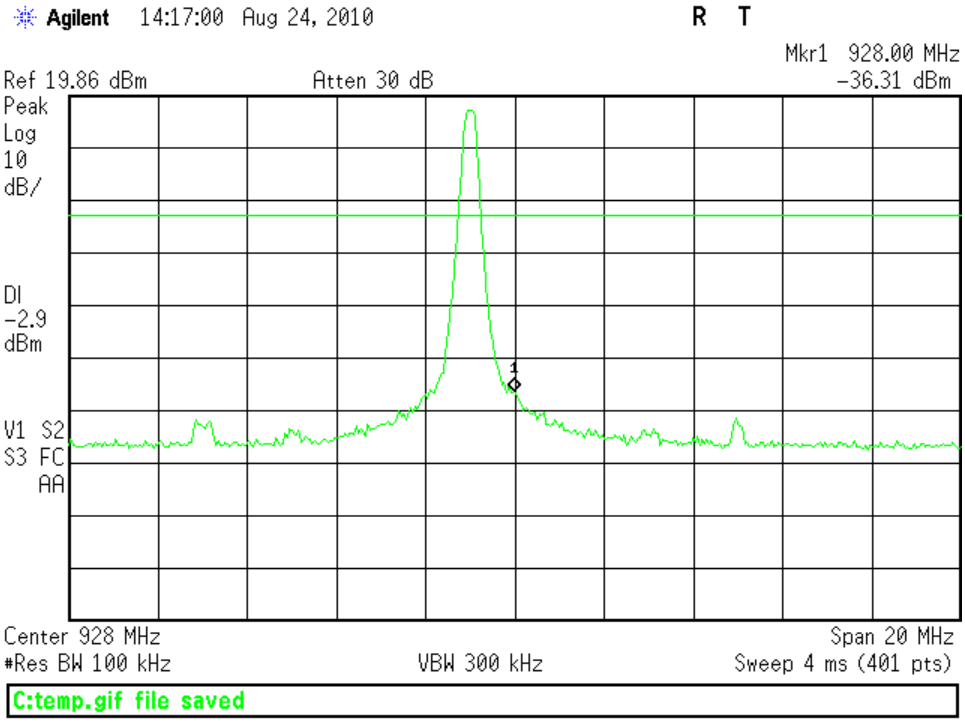
MEASUREMENTS / RESULTS

PLOTS

Low Channel



High Channel

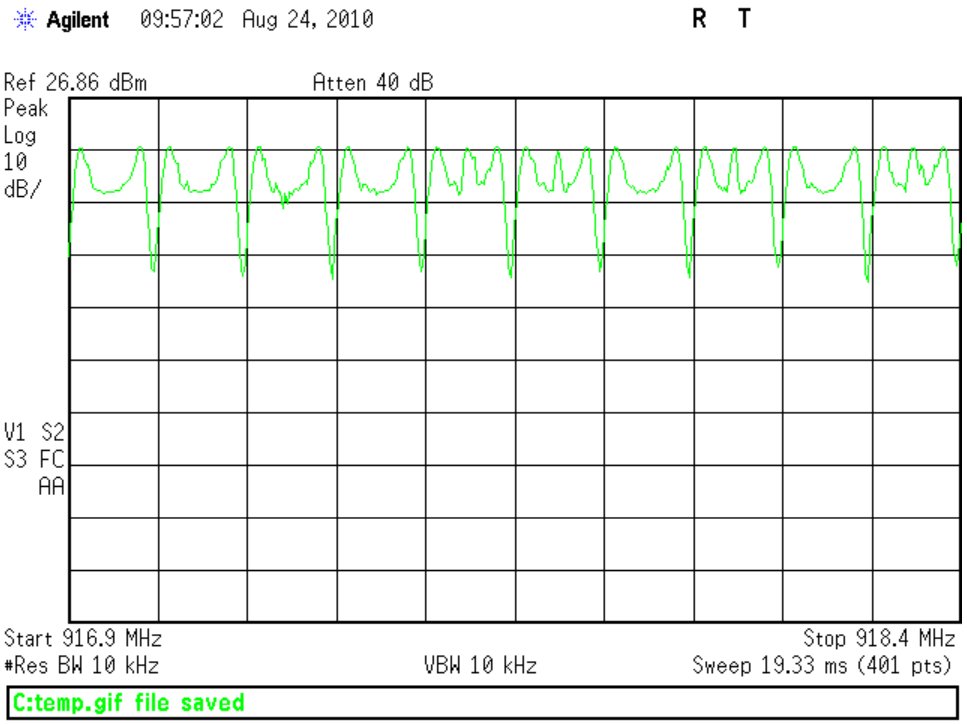


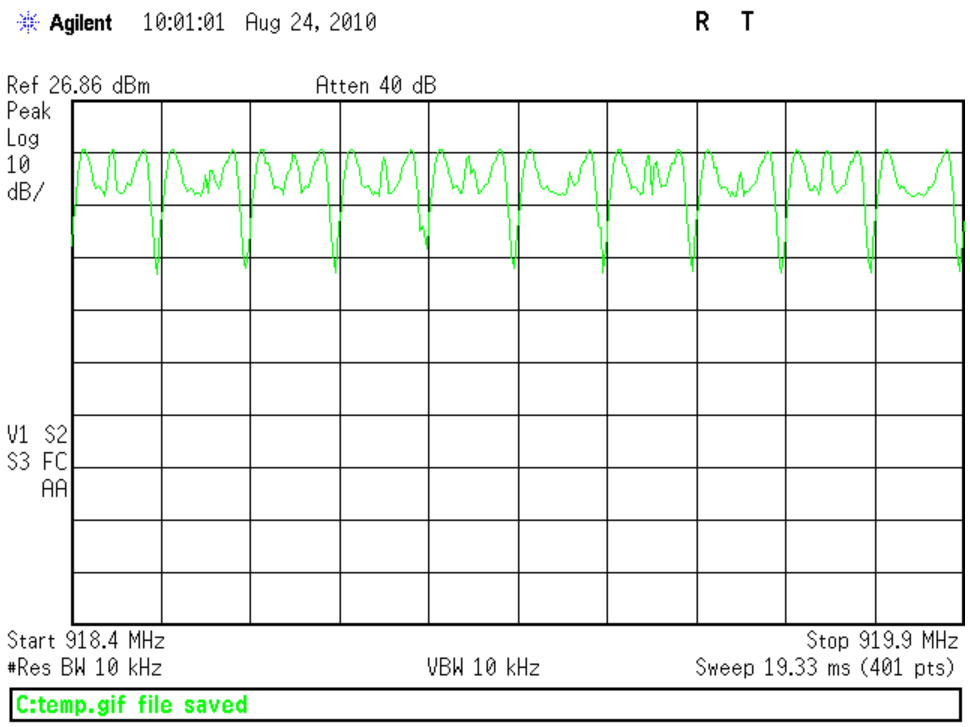
Number of Hopping Channels

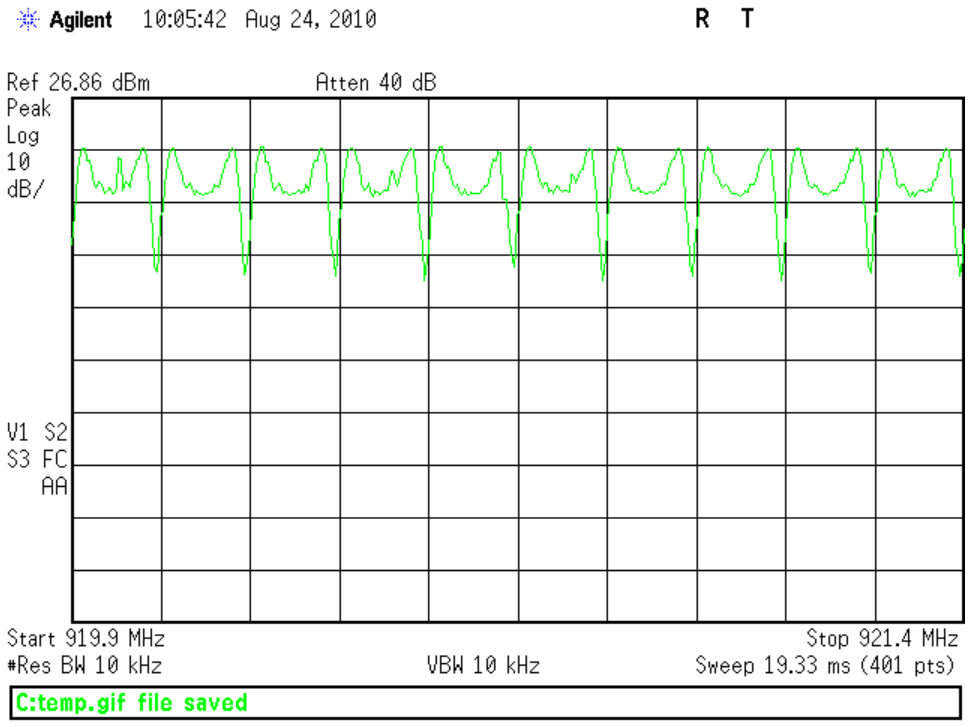
"For frequency hopping systems operating in the 902-928MHz band: if the 20dB bandwidth of the hopping channel is less than 250kHz, the system shall use at least 50 hopping frequencies." [15.247(a)(1)(i)]

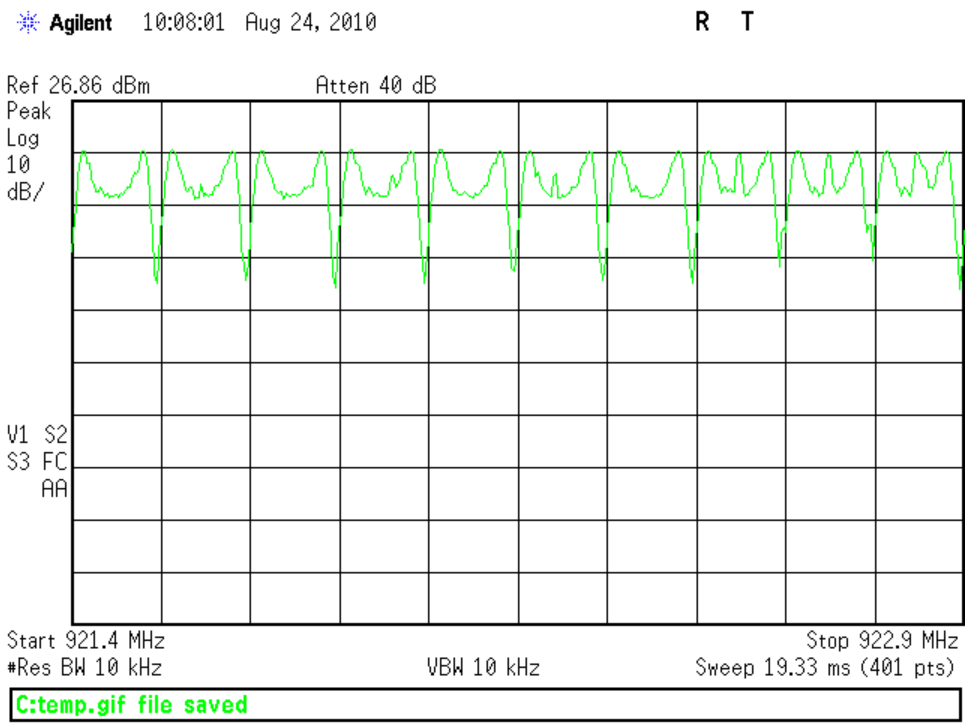
Plots

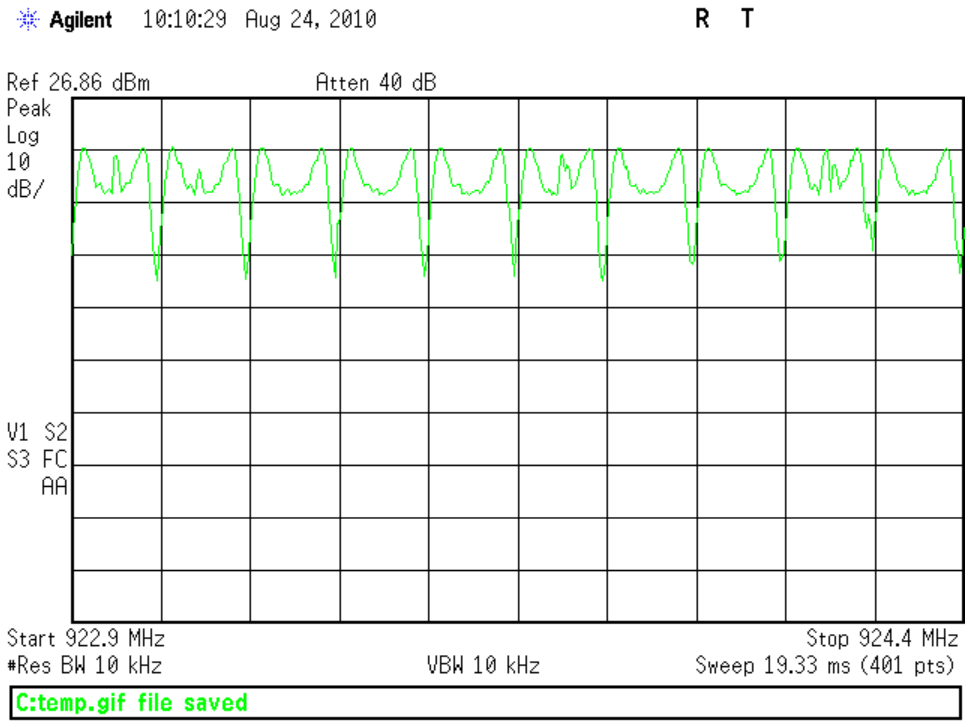
The system employs 64 hopping frequencies

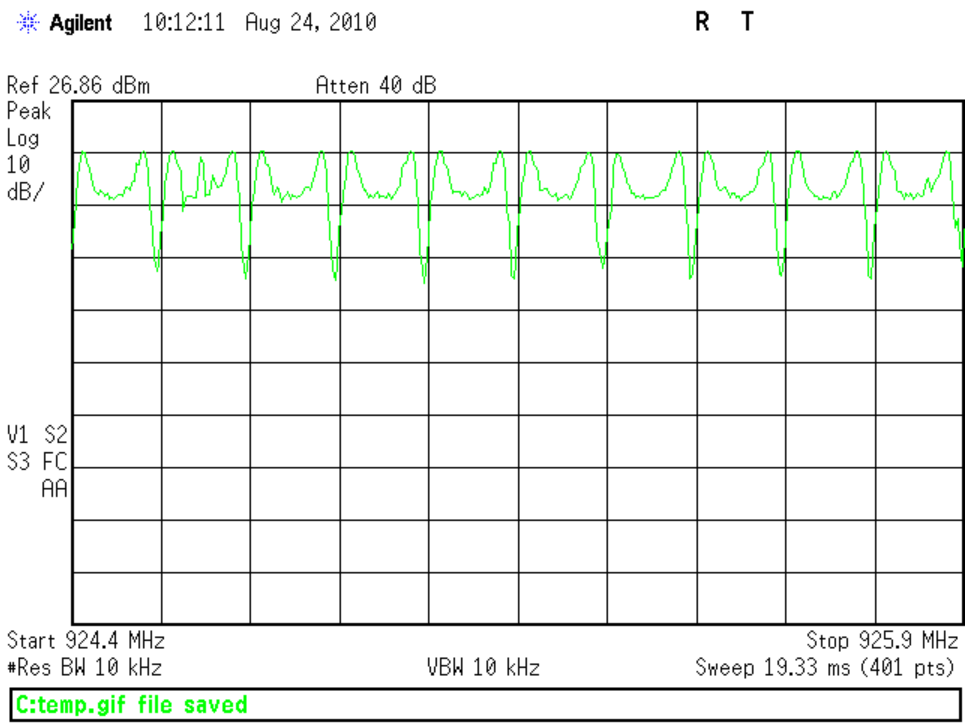


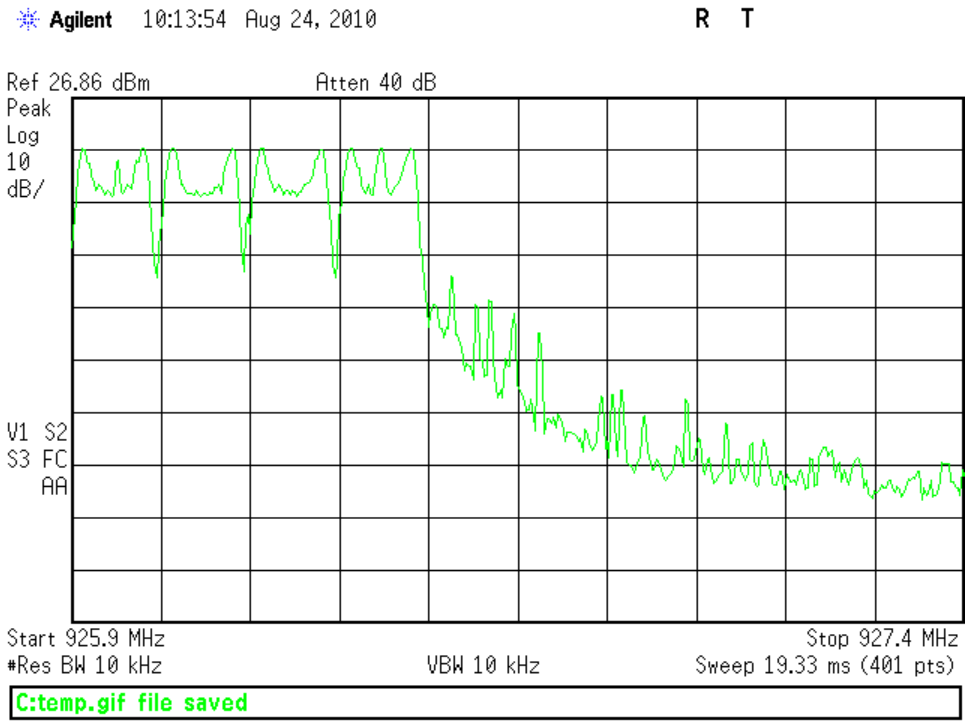

Agilent 10:01:01 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 918.4 MHz
Stop 919.9 MHz
#Res BW 10 kHz
VBW 10 kHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved


Agilent 10:05:42 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 919.9 MHz
Stop 921.4 MHz
#Res BW 10 kHz
VBW 10 kHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved


Agilent 10:08:01 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 921.4 MHz
#Res BW 10 kHz
VBW 10 kHz
Stop 922.9 MHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved

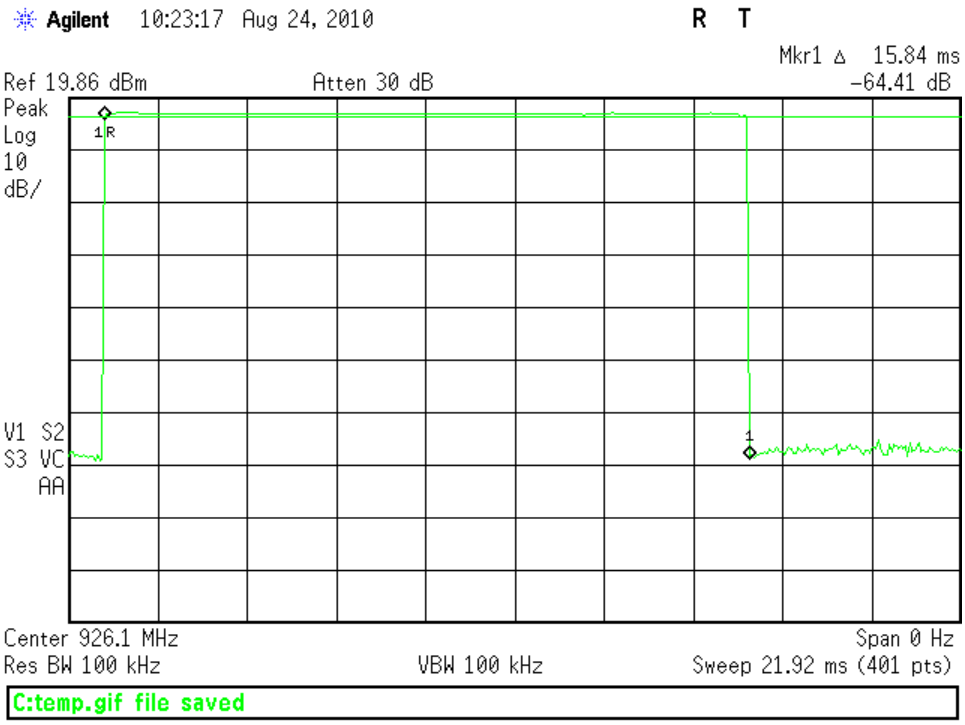

Agilent 10:10:29 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 922.9 MHz
#Res BW 10 kHz
VBW 10 kHz
Stop 924.4 MHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved


Agilent 10:12:11 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 924.4 MHz
#Res BW 10 kHz
VBW 10 kHz
Stop 925.9 MHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved


Agilent 10:13:54 Aug 24, 2010
R T
Ref 26.86 dBm
Atten 40 dB
Peak
Log
10
dB/
V1 S2
S3 FC
AA
Start 925.9 MHz
#Res BW 10 kHz
VBW 10 kHz
Stop 927.4 MHz
Sweep 19.33 ms (401 pts)
C:temp.gif file saved

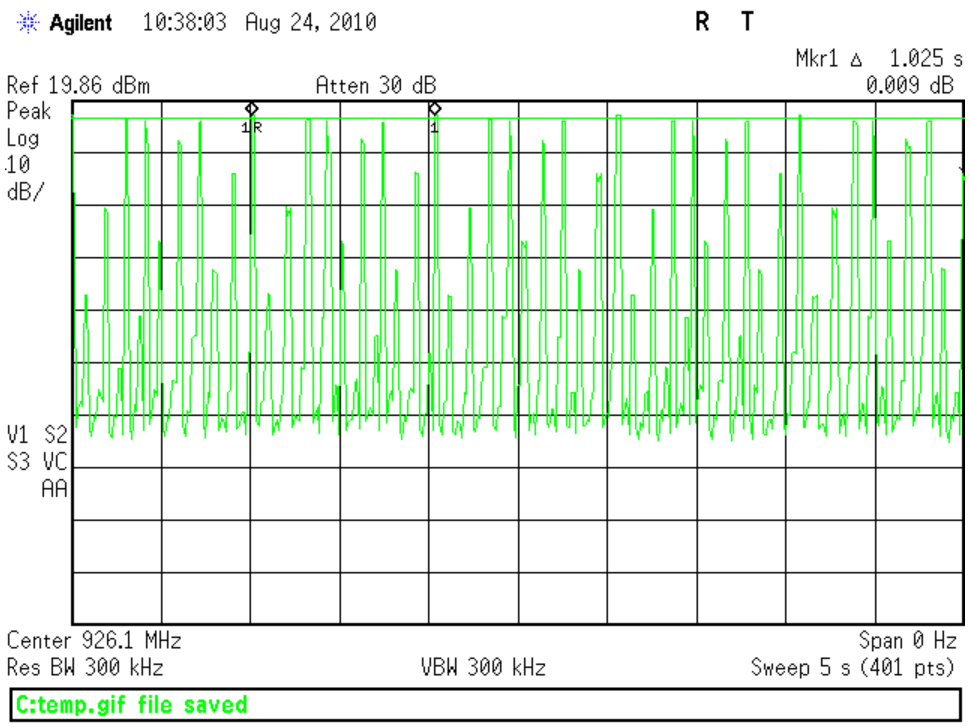
Frequency Hopping Timing Requirements

"For a system using a 20dB bandwidth of less than 250kHz … the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period."
[15.247(a)(1)(i)]

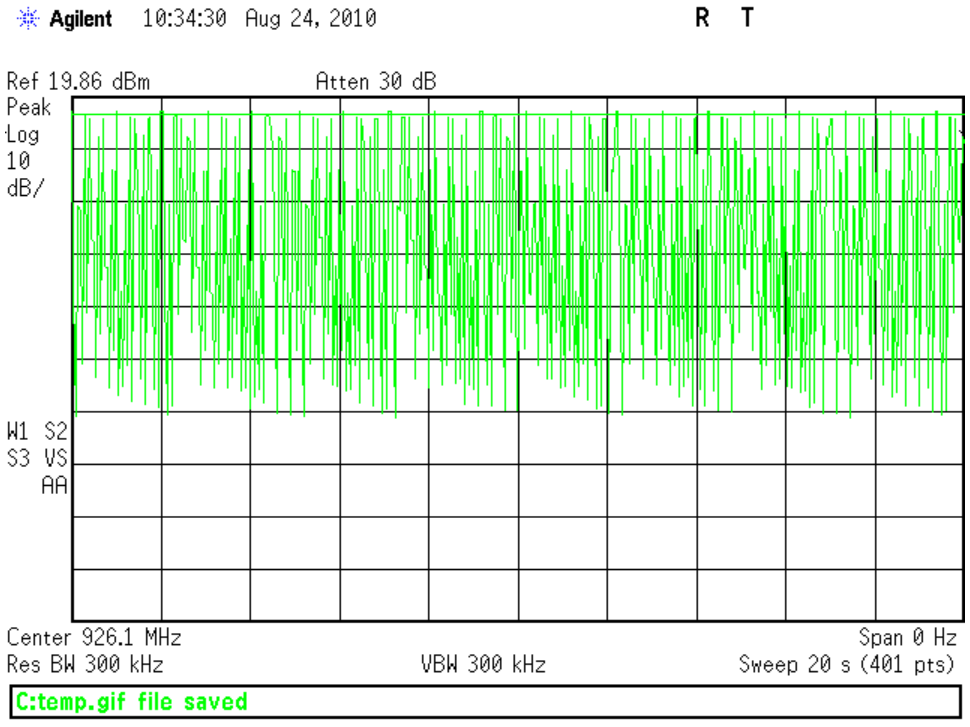


The duration for a single transmission is 15.84ms

The bandwidth for measuring was reduced to try and clarify the transmissions. The pulses that are above the display line are of the frequency under measurement.



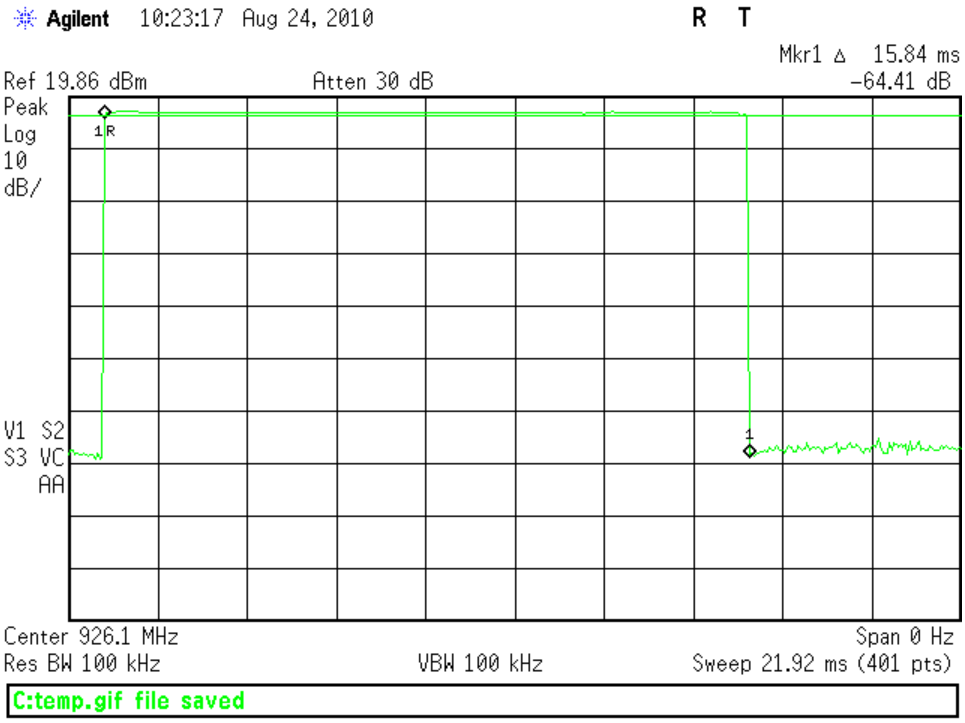
In a 5 second window, 5 pulses occur
In 20 seconds, 20 transmissions would occur



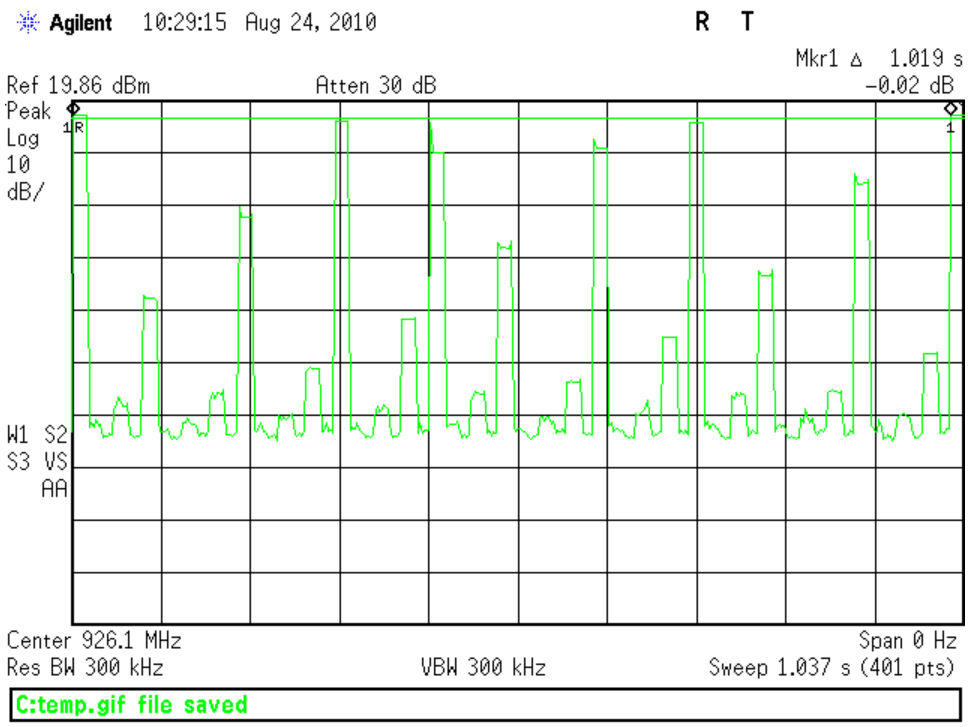
In a 20 second window, the transmission occurs 20 times.
15.84ms x 20 = 316.8ms = 0.317seconds

Duty Cycle Correction Calculation

PLOTS



The duration for a single transmission is 15.84ms



The system takes 1.02 seconds to repeat transmitting frequency.
In 100ms, only a single transmission occurs

DCCF = 20 x log (15.84/100)
DCCF = -16.005dB

Radiated Spurious Emissions

LIMITS

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
[15.247(d)]

MEASUREMENTS / RESULTS

Radiated Emissions Table

Date: 25-Aug-10 **Company:** Dog Watch **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** Big Leash **EUT Operating Voltage/Frequency:** Battery Powered
Temp: 24.3°C **Humidity:** 43% **Pressure:** 998mBar
Frequency Range: 30-1000MHz **Measurement Distance:** 3 m
Notes: No emissions found
Noise Floor

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	--- Limit (dBµV/m)	--- Margin (dB)	--- Result (Pass/Fail)	FCC Class B Limit (dBµV/m)	FCC Class B Margin (dB)	FCC Class B Result (Pass/Fail)
v	117.0	27.0	21.8	12.7	1.9	19.8	---	---	---	43.5	-23.7	Pass
v	250.0	37.0	21.7	13.1	3.3	31.7	---	---	---	46.0	-14.3	Pass
v	333.0	20.0	21.3	14.9	4.2	17.8	---	---	---	46.0	-28.2	Pass
v	400.0	20.0	21.5	16.5	4.7	19.7	---	---	---	46.0	-26.3	Pass
v	610.0	18.0	20.6	19.5	5.5	22.4	---	---	---	46.0	-23.6	Pass
v	970.0	19.0	20.6	22.5	6.9	27.8	---	---	---	54.0	-26.2	Pass

Table Result: Pass by -14.3 dB ***Worst Freq:*** 250.0 MHz

Test Site: 1DCC-OATS-3M-I **Cable 1:** EMIR-11 **Cable 2:** --- **Cable 3:** ---
Analyzer: Gold **Preamp:** Red **Antenna:** Green **Preselector:** ---

Rev: 31-Aug-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**			**Cat**	**Calibration Due**
1DCC-OATS-3M-I	719150	2762A-8	R-3109			II	7-Jul-2011
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Red	0.009-2000MHz	ZFL-1000-LN	CS	N/A	798	II	6-Apr-2011
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Green Bilog	30-2000MHz	CBL6112B	Chase	2742	620	I	17-Dec-2010
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer		35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Spurious Emissions

Date: 25-Aug-10 **Company:** Dog Watch **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** Big Leash - Handheld **EUT Operating Voltage/Frequency:** Battery Powered
Temp: 24.3°C **Humidity:** 43% **Pressure:** 998mBar
Frequency Range: 1-7GHz **Measurement Distance:** 3 m
Notes: Duty Cycle Correction Factor = 16.0dB

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Filter Factor (dB)	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	Peak Margin (dB)	Peak Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	Average Margin (dB)	Average Result (Pass/Fail)
h - handheld	2766.25	60.0	44.0	22.3	29.3	0.5	2.2	69.7	53.7	74.0	-4.3	Pass	54.0	-0.3	Pass
v - handheld	3687.965	44.76	28.8	21.5	31.7	0.5	2.5	58.0	42.0	74.0	-16.0	Pass	54.0	-12.0	Pass
v - handheld	4609.965	48.39	32.4	20.8	32.6	0.5	3.1	63.8	47.8	74.0	-10.2	Pass	54.0	-6.2	Pass
v - handheld	6453.965	47.14	31.1	20.3	34.5	0.5	3.8	65.6	49.6	74.0	-8.4	Pass	54.0	-4.4	Pass

Table Result: Pass by -0.3 dB ***Worst Freq:*** 2766.25 MHz

Test Site: 1DCC-OATS-3M-I **Cable 1:** EMIR-HIGH-13 **High Pass Filter:** Asset #1310, #1311 **Cable 3:** ---
Analyzer: Gold **Preamp:** Brown **Antenna:** Yellow Horn **Preselector:** ---

Rev: 31-Aug-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**			**Cat**	**Calibration Due**
1DCC-OATS-3M-I	719150	2762A-8	R-3109			II	7-Jul-2011
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Brown	1-18GHz	CS	CS	N/A	1523	II	30-Jul-2011
High Pass Filter	0.03-14.5 GHz	11SH10-3000/T9000-0/0	K&L	1	1311	II	22-Dec-2011
High Pass Filter	0.03-6.5 GHz	11SH10-1000/T3000-0/0	K&L	1	1310	II	22-Dec-2011
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Yellow Horn	1-18GHz	3115	EMCO	9608-4898	37	I	27-May-2011
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer		35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Spurious Emissions

Date: 25-Aug-10 **Company:** Dog Watch **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** Big Leash - handheld **EUT Operating Voltage/Frequency:** Battery Powered
Temp: 24.3°C **Humidity:** 43% **Pressure:** 998mBar
Frequency Range: 7-10GHz **Measurement Distance:** 1 m
Notes: Duty Cycle Correction Factor = 16.0dB

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Filter Factor	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
v - handheld	7335.965	41.27	25.3	20.2	37.3	0.6	4.0	63.0	47.0	83.5	-20.5	Pass	63.5	-16.5	Pass
v - handheld	8297.965	47.24	31.2	20.0	38.5	0.7	4.1	70.5	54.5	83.5	-13.0	Pass	63.5	-9.0	Pass
v - handheld	9219.89	31.2	15.2	19.5	38.7	0.8	4.2	55.4	39.4	83.5	-28.1	Pass	63.5	-24.1	Pass

Table Result: Pass by -9.0 dB ***Worst Freq:*** 8297.965 MHz

Test Site: 1DCC-OATS-3M-I **Cable 1:** EMIR-HIGH-13 **High Pass Filter:** Asset #0817 **Cable 3:** ---
Analyzer: Gold **Preamp:** Brown **Antenna:** Yellow Horn **Preselector:** ---

Rev: 31-Aug-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**			**Cat**	**Calibration Due**
1DCC-OATS-3M-I	719150	2762A-8	R-3109			II	7-Jul-2011
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Brown	1-18GHz	CS	CS	N/A	1523	II	30-Jul-2011
High Pass Filter	0.03-20 GHz	SPA-F-55204	K&L	36	817	II	22-Dec-2011
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Yellow Horn	1-18GHz	3115	EMCO	9608-4898	37	I	27-May-2011
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer		35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Spurious Emissions

Date: 25-Aug-10 **Company:** Dog Watch **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** Big Leash **EUT Operating Voltage/Frequency:** Battery Powered
Temp: 24.3°C **Humidity:** 43% **Pressure:** 998mBar
Frequency Range: 1-10GHz **Measurement Distance:** 1 m
Notes: Duty Cycle Correction Factor = 16.48dB
Receive Mode

Antenna Polarization (H / V)	Frequency (MHz)	Peak Reading (dBµV)	Average Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Filter Factor	Cable Factor (dB)	Adjusted Peak Reading (dBµV/m)	Adjusted Avg Reading (dBµV/m)	FCC Class B High Frequency - Peak Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)	FCC Class B High Frequency - Average Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
no emissions found				---	---	---	---								

Test Site: 1DCC-OATS-3M-I **Cable 1:** EMIR-HIGH-13 **High Pass Filter:** --- **Cable 3:** ---
Analyzer: Gold **Preamp:** Brown **Antenna:** Yellow Horn **Preselector:** ---

Rev: 31-Aug-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Gold	100Hz-26.5 GHz	E4407B	Agilent	MY45113816	1284	I	9-Apr-2011
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**			**Cat**	**Calibration Due**
1DCC-OATS-3M-I	719150	2762A-8	R-3109			II	7-Jul-2011
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Brown	1-18GHz	CS	CS	N/A	1523	II	30-Jul-2011
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Yellow Horn	1-18GHz	3115	EMCO	9608-4898	37	I	27-May-2011
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
1DCC-OATS-3M-I Thermohygrometer		35519-044	Control Company	72457635	1334	II	18-Aug-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Radiated Emissions Table

Date: 27-Sep-10 **Company:** Dogwatch, Inc. **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** Big Leash - Handheld **EUT Operating Voltage/Frequency:** 120Vac 60Hz
Temp: 25.6°C **Humidity:** 36% **Pressure:** 998mBar
Frequency Range: 30-1000MHz **Measurement Distance:** 3 m
Notes: Charging Mode

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	--- Limit (dBµV/m)	--- Margin (dB)	--- Result (Pass/Fail)	FCC Class B Limit (dBµV/m)	FCC Class B Margin (dB)	FCC Class B Result (Pass/Fail)
v	49.4	37.5	22.6	9.1	0.5	24.5	---	---	---	40.0	-15.5	Pass
v	61.5	35.4	22.6	7.8	0.5	21.1	---	---	---	40.0	-18.9	Pass
v	165.8	30.8	22.6	12.5	0.8	21.5	---	---	---	43.5	-22.0	Pass
h	270.1	26.6	22.6	13.6	1.0	18.6	---	---	---	46.0	-27.4	Pass
h	466.5	27.3	22.6	17.4	1.3	23.4	---	---	---	46.0	-22.6	Pass
h	883.6	26.9	22.5	22.4	2.0	28.8	---	---	---	46.0	-17.2	Pass

Table Result: Pass by -15.5 dB ***Worst Freq:*** 49.4 MHz

Test Site: EMI Chamber 2 **Cable 1:** Asset #1506 **Cable 2:** Asset #1508 **Cable 3:** ---
Analyzer: Asset #1328 **Preamp:** Blue **Antenna:** Red-White **Preselector:** ---

Rev: 23-Sep-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
SA EMI Chamber (1328)	9kHz-13.2 GHz	E4405B	Agilent	MY44210241	1328	I	16-Dec-2010
Radiated Emissions Sites	**FCC Code**	**IC Code**	**VCCI Code**			**Cat**	**Calibration Due**
EMI Chamber 2	719150	2762A-7	R-3033, G-107			I	15-Feb-2011
Preamps /Couplers Attenuators / Filters	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Blue	0.009-2000MHz	ZFL-1000-LN	CS	N/A	759	II	6-Apr-2011
Antennas	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Red-White Bilog	30-2000MHz	JB1	Sunol	A091604-1	1105	I	17-Dec-2010
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
CHAMBER2 Thermohygrometer		35519-044	Control Company	72457639	1347	II	18-Aug-2011
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**
Asset #1506	9kHz - 18GHz		Florida RF			II	16-Aug-2011
Asset #1508	9kHz - 26.5GHz		Florida RF			II	20-Apr-2011

All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

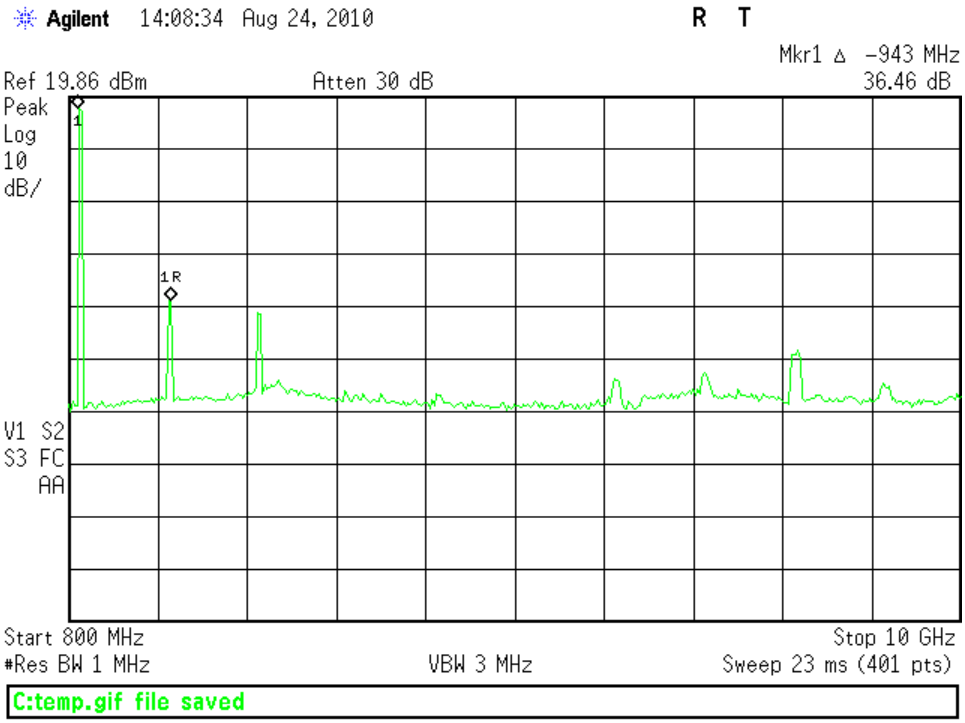
Conducted Spurious Emissions

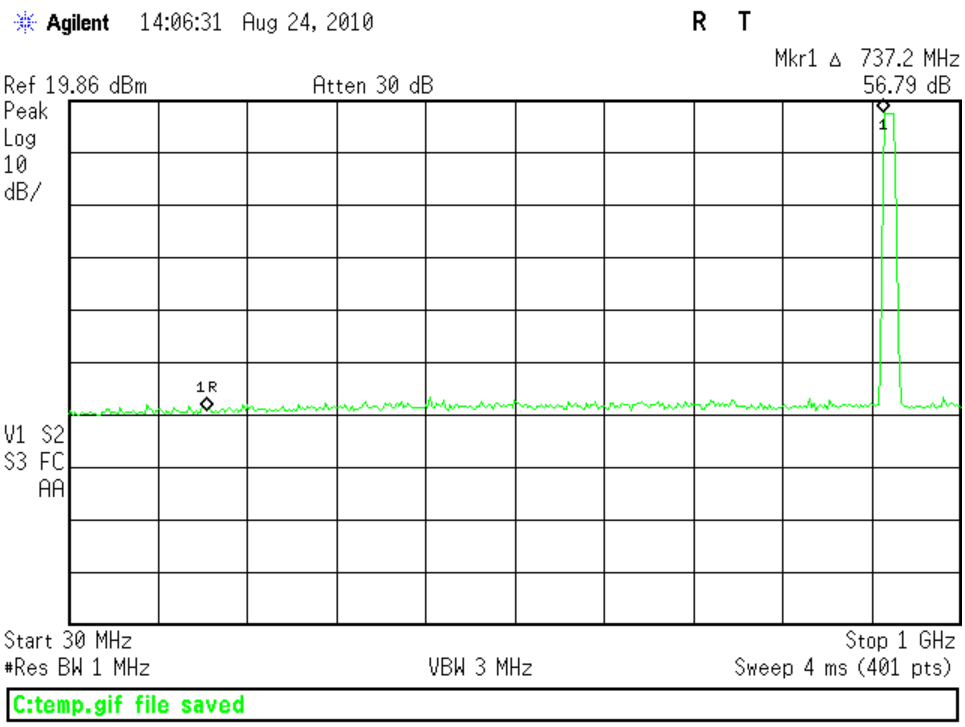
LIMITS

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth that contains the highest level of desired power…
[15.247(d)]

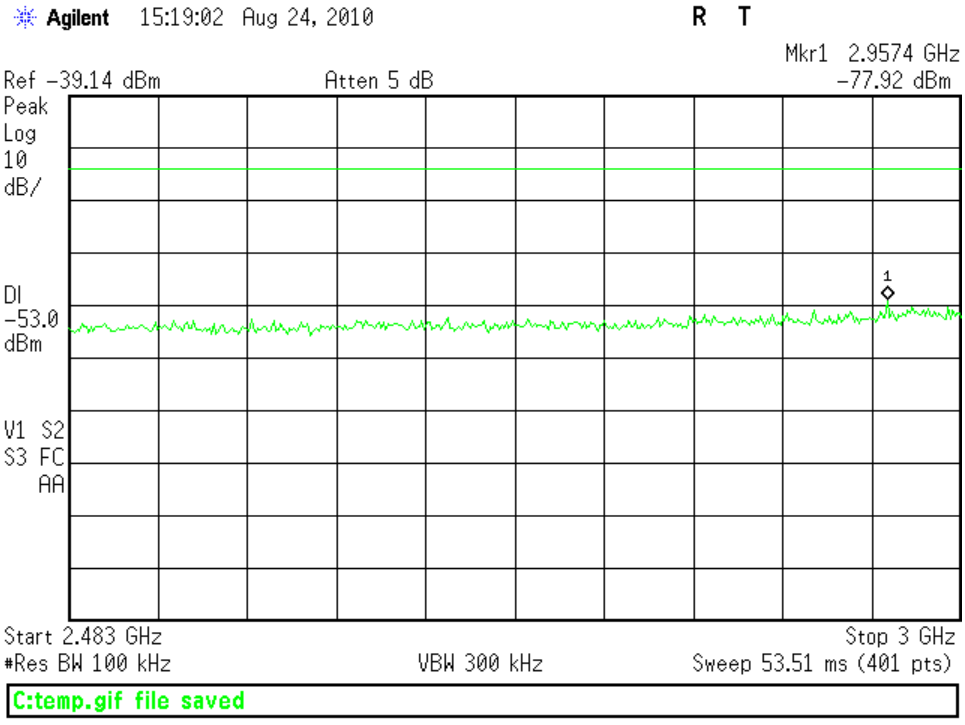
MEASUREMENTS / RESULTS

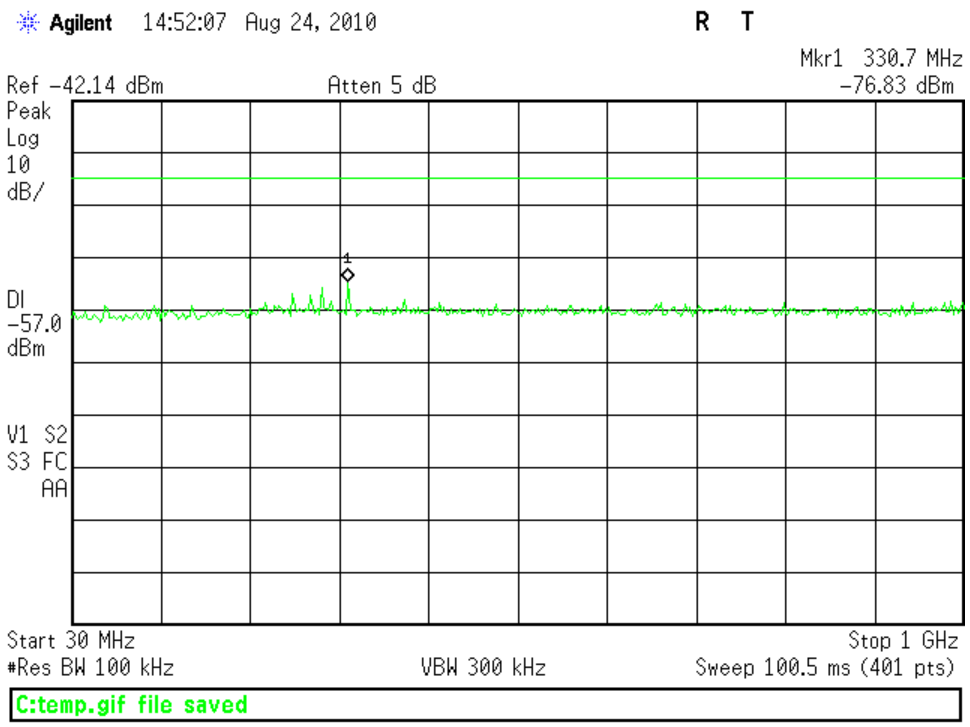
Transmit

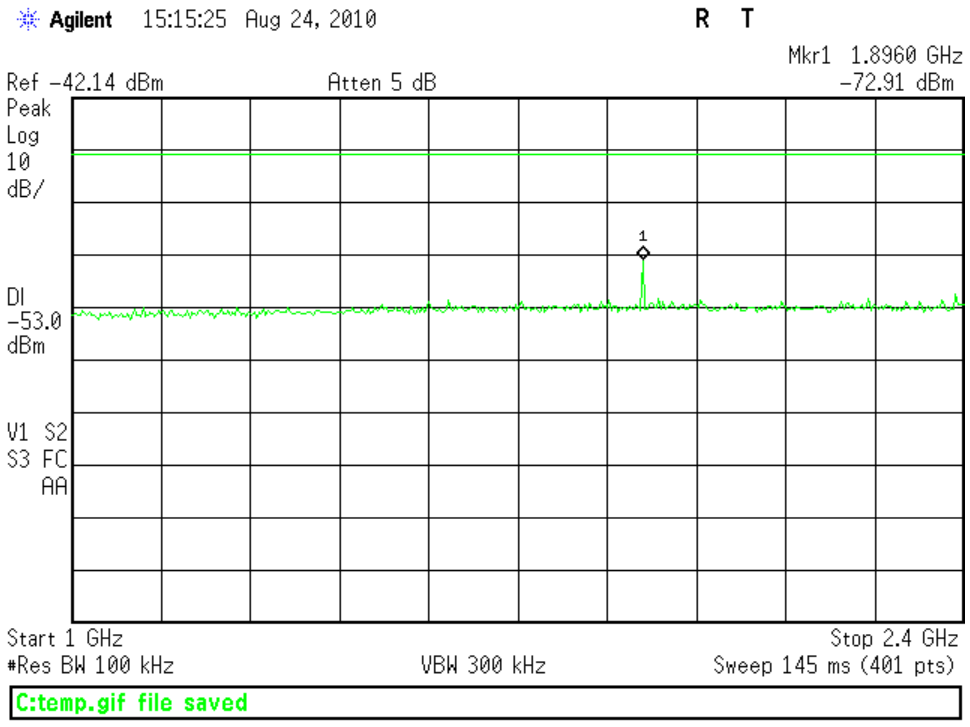



Agilent 14:06:31 Aug 24, 2010
R T
Mkr1 Δ 737.2 MHz
56.79 dB
Ref 19.86 dBm
Atten 30 dB
Peak
Log
10
dB/
1R
1
V1 S2
S3 FC
AA
Start 30 MHz
#Res BW 1 MHz
VBW 3 MHz
Stop 1 GHz
Sweep 4 ms (401 pts)
C:temp.gif file saved

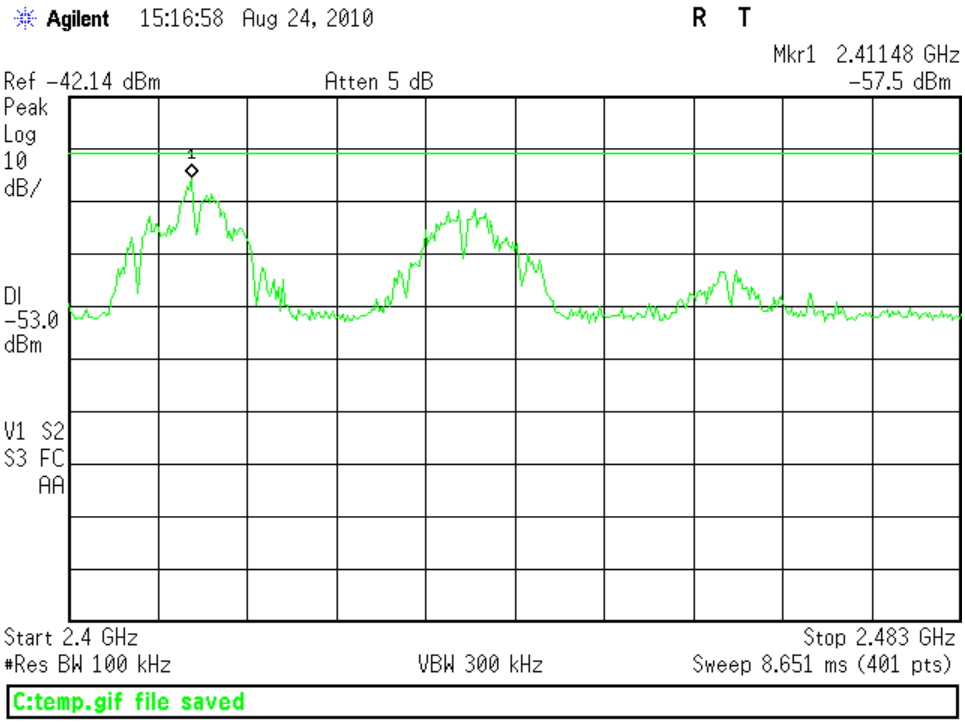
Receive


Agilent 15:19:02 Aug 24, 2010
R T
Mkr1 2.9574 GHz
-77.92 dBm
Ref -39.14 dBm
Atten 5 dB
Peak
Log
10
dB/
1
Dl
-53.0
dBm
V1 S2
S3 FC
AA
Start 2.483 GHz
#Res BW 100 kHz
VBW 300 kHz
Stop 3 GHz
Sweep 53.51 ms (401 pts)
C:temp.gif file saved


Agilent 14:52:07 Aug 24, 2010
R T
Mkr1 330.7 MHz
-76.83 dBm
Ref -42.14 dBm
Atten 5 dB
Peak
Log
10
dB/
Dl
-57.0
dBm
V1 S2
S3 FC
AA
Start 30 MHz
#Res BW 100 kHz
VBW 300 kHz
Stop 1 GHz
Sweep 100.5 ms (401 pts)
C:temp.gif file saved


Agilent 15:15:25 Aug 24, 2010
R T
Mkr1 1.8960 GHz
-72.91 dBm
Ref -42.14 dBm
Atten 5 dB
Peak
Log
10
dB/
Dl
-53.0
dBm
V1 S2
S3 FC
AA
Start 1 GHz
#Res BW 100 kHz
VBW 300 kHz
Stop 2.4 GHz
Sweep 145 ms (401 pts)
C:temp.gif file saved

Ambient at 2.4GHz



AC Line Conducted Emissions

LIMITS

Frequency of emission (MHz)	Quasi-peak limit (dBµV)	Average limit (dBµV)
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

[47 CFR 15.207(a)]

MEASUREMENTS / RESULTS

AC Mains Conducted Emissions

Date: 27-Sep-10 **Company:** Dogwatch, Inc. **Work Order:** K1062
Engineer: Matthew Burman **EUT Desc:** BigLeash - Handheld **Test Site:** CEMI1
Temp: 23.8°C **Humidity:** 46% **Pressure:** 998mBar
Notes: Charging Mode
Measurement Device: Red LISN **EUT Operating Voltage/Frequency:** 120Vac 60Hz

Range: 0.15-30MHz **Spectrum Analyzer:** Yellow

	Q.P. Readings		Ave. Readings		Impedance Factor	FCC/CISPR B		FCC/CISPR B		Overall
Frequency (MHz)	QP1 (dBµV)	QP2 (dBµV)	AV1 (dBµV)	AV2 (dBµV)	(dB)	qp Limit (dBµV)	qp Margin dB	AVE Limit (dBµV)	AVE Margin dB	Result (Pass/Fail)
0.18	22.7	22.3	15.2	13.5	20.2	64.4	-21.5	54.4	-19.0	Pass
0.30	23.3	24.7	17.5	14.4	20.1	60.2	-15.4	50.2	-12.6	Pass
0.60	21.9	17.5	16.2	9.9	20.1	56.0	-14.0	46.0	-9.7	Pass
0.66	23.3	21.0	17.7	12.5	20.1	56.0	-12.6	46.0	-8.2	Pass
0.96	22.0	18.5	16.2	10.4	20.1	56.0	-13.9	46.0	-9.8	Pass
2.34	22.3	14.1	15.7	8.4	20.1	56.0	-13.6	46.0	-10.2	Pass

Table Result: Pass by -8.20 dB ***Worst Freq:*** 0.66 MHz

Rev: 23-Sep-2010

Spectrum Analyzers / Receivers /Preselectors	Range	MN	Mfr	SN	Asset	Cat	Calibration Due
Yellow	9kHz-2.9GHz	8594E	Agilent	3523A01958	100	I	10-Feb-2011
LISNs/Measurement Probes	**Range**	**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Red LISN	9kHz-50MHz	8012-50-R-24-BNC	Solar	956348	753	I	9-Jul-2011
Conducted Test Sites (Mains / Telco)	**FCC Code**		**VCCI Code**			**Cat**	**Calibration Due**
CEMI 1	719150		C-3360, T-1575			III	NA
Meteorological Meters		**MN**	**Mfr**	**SN**	**Asset**	**Cat**	**Calibration Due**
Temp./Humidity/Atm. Pressure Gauge		7400 Perception II	Davis	N/A	965	I	6-Apr-2011
CEMI1 Thermohygrometer		35519-044	Control Company	72457738	1335	II	18-Aug-2011
Cables	**Range**		**Mfr**			**Cat**	**Calibration Due**
CEMI-02	9kHz - 2GHz		C-S			II	6-Apr-2011

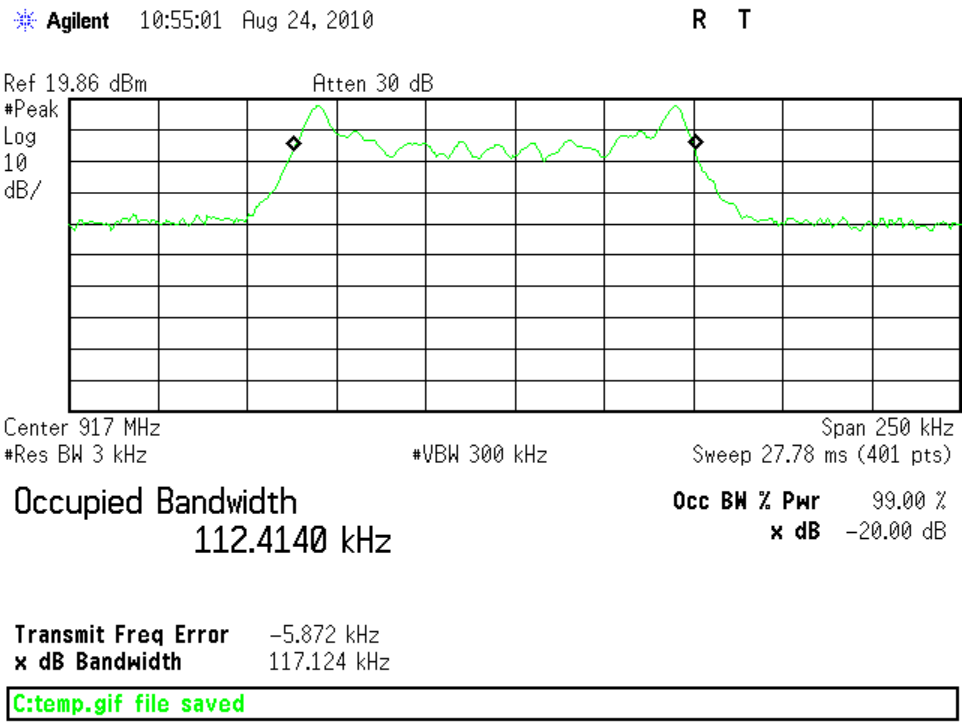
All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

Occupied Bandwidth

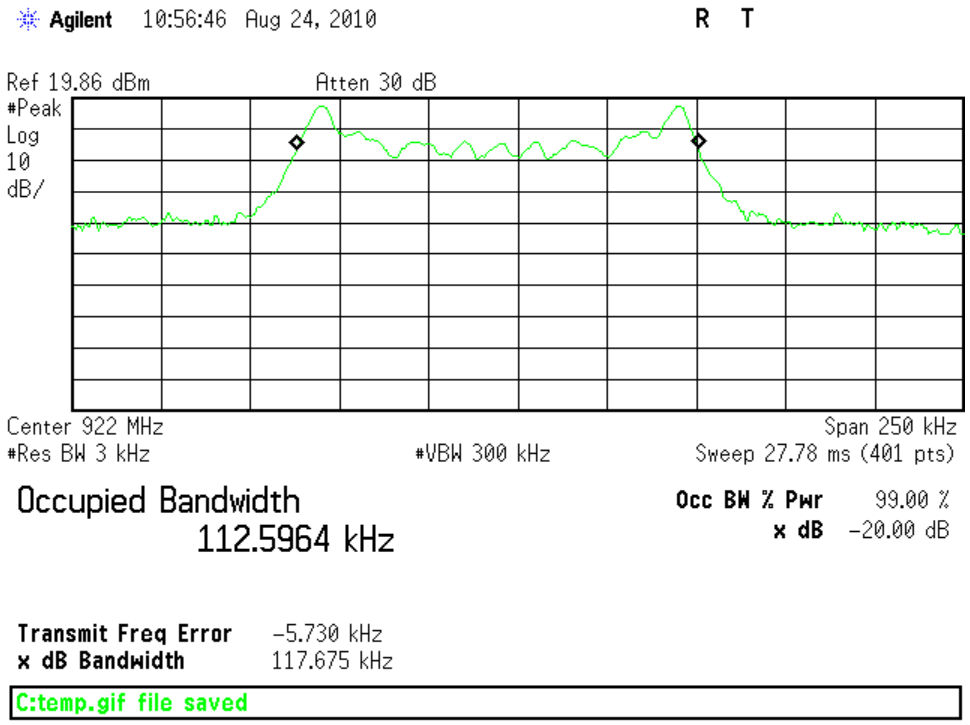
REQUIREMENT

When an occupied bandwidth is no specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured. [RSS-GEN 4.6.1]

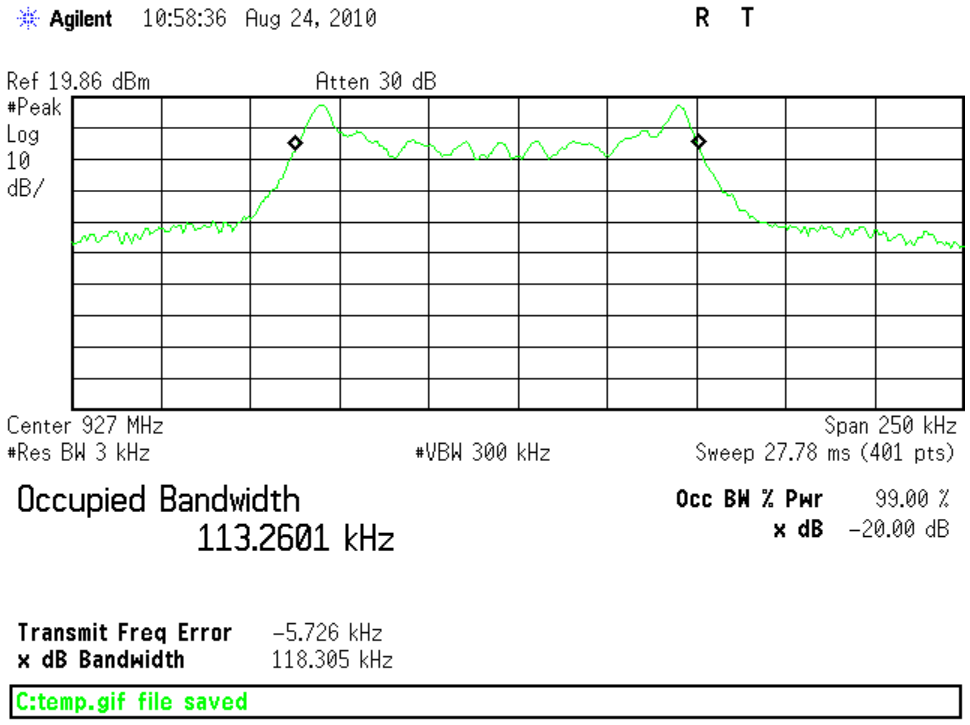
Low Channel



Mid Channel



High Channel



Measurement Uncertainty

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Expanded Uncertainty k=2	Maximum allowable uncertainty
Radiated Emissions (30-1000MHz) NIST CISPR	 5.6dB 4.6dB	 N/A 5.2dB (Ucispr)
Radiated Emissions (1-26.5GHz)	4.6dB	N/A
Radiated Emissions (above 26.5GHz)	4.9dB	N/A
Magnetic Radiated Emissions	5.6dB	N/A
Conducted Emissions NIST CISPR	 3.9dB 3.6dB	 N/A 3.6dB (Ucispr)
Telco Conducted Emissions (Current)	2.9dB	N/A
Telco Conducted Emissions (Voltage)	4.4dB	N/A
Electrostatic Discharge	11.5%	N/A
Radiated RF Immunity (Uniform Field)	1.6dB	N/A
Electrical Fast Transients	23.1%	N/A
Surge	23.1%	N/A
Conducted RF Immunity	3dB	N/A
Magnetic Immunity	12.8%	N/A
Dips and Interrupts	2.3V	N/A
Harmonics	3.5%	N/A
Flicker	3.5%	N/A
Radio frequency (@ 2.4GHz)	3.23×10^{-8}	1×10^{-7}
RF power, conducted	0.40dB	0.75dB
Maximum frequency deviation: • Within 300Hz and 6kHz of audio frequency / Within 6kHz and 25kHz of audio frequency	 3.4% 0.3dB	 5% 3dB
Adjacent channel power	1.9dB	3dB
Conducted spurious emission of transmitter, valid up to 12.75GHz	2.39dB	3dB
Conducted emission of receivers	1.3dB	3dB
Radiated emission of transmitter, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of transmitter, valid up to 80GHz	3.3dB	6dB
Radiated emission of receiver, valid up to 26.5GHz	3.9dB	6dB
Radiated emission of receiver, valid up to 80GHz	3.3dB	6dB
Humidity	2.37%	5%
Temperature	0.7°C	1.0°C
Time	4.1%	10%
RF Power Density, Conducted	0.4dB	3dB
DC and low frequency voltages	1.3%	3%
Voltage (AC, <10kHz)	1.3%	2%
Voltage (DC)	0.62%	1%
The above reflects a 95% confidence level		

Product Documentation

The following documentation has been provided by the client for inclusion in this report.

Conditions Of Testing

[Bureau Veritas Consumer Products Services, Inc., a Massachusetts corporation], and/or its affiliates (collectively, the "Company") will conduct, at the request of the Submitter ("**Client**"), the tests specified on the submitted Test Request Form or equivalent in accordance with, and subject to, the following terms and conditions (collectively, "**Conditions**"):

1. All orders for tests are subject to acceptance by the Company, and no order will constitute a binding commitment of the Company unless and until such order is accepted by it, as evidenced by the issuance of a written report ("**Test Report**") by the Company. The Test Report is issued solely by the Company, is intended for the exclusive use of Client and shall not be published, used for advertising purposes, copied or replicated for distribution to any other person or entity or otherwise publicly disclosed without the prior written consent of the Company. By submitting a request for services to the Company, Client consents to the disclosure to accreditation bodies of those records of Client relevant to the accreditation body's assessment of the Company's competence and compliance with relevant accreditation criteria. The Company shall not be liable for any loss or damage whatsoever resulting from the failure of the Company to provide its services within any time period for completion estimated by the Company. If Client anticipates using the Test Report in any legal proceeding, arbitration, dispute resolution forum or other proceeding, it shall so notify the Company prior to submitting the Test Report in such proceeding. The Company has no obligation to provide a fact or expert witness at such proceeding unless the Company agrees in advance to do so for a separate and additional fee.
2. The Test Report will set forth the findings of the Company solely with respect to the test samples identified therein. Unless specifically and expressly indicated in the Test Report, the results set forth in such Test Report are not intended to be indicative or representative of the quality or characteristics of the lot from which a test sample is taken, and Client shall not rely upon the Test Report as being so indicative or representative of the lot or of the tested product in general. The Test Report will reflect the findings of the Company at the time of testing only, and the Company shall have no obligation to update the Test Report after its issuance. The Test Report will set forth the results of the tests performed by the Company based upon the written information provided to the Company. The Test Report will be based solely on the samples and written information submitted to the Company by Client, and the Company shall not be obligated to conduct any independent investigation or inquiry with respect thereto.
3. The Company may, in its sole discretion, destroy samples which have been furnished to the Company for testing and which have not been destroyed in the course of testing. The Company may delegate the performance of all or a portion of the services contemplated hereunder to an affiliate, agent or subcontractor of the Company, and Client consents to such delegation.
4. These Conditions and the Test Report represent the entire understanding of the parties hereto with respect to the subject matter hereof and of the Test Report, and no modification, variance or extrapolation with respect thereto shall be permitted without the prior written consent of the Company.
5. The names, service marks, trademarks and copyrights of the Company and its affiliates, including the names "**BUREAU VERITAS**," "**BUREAU VERITAS CONSUMER PRODUCTS SERVICES**," "**BVCPS**", "**MTL**", "**ACTS**", "**MTL-ACTS**" and **CURTIS-STRAUS** (collectively, the "**Marks**") are and shall remain the sole property of the Company or its affiliates and shall not be used by Client except solely to the extent that Client obtains the prior written approval of the Company and then only in the manner prescribed by the Company. Client shall not contest the validity of the Marks or take any action that might impair the value or goodwill associated with the Marks or the image or reputation of the Company or its affiliates.
6. Payment in full shall be due 30 days after the date of invoice. Interest shall be due on overdue amounts from the due date until paid at an interest rate of 1.5% per month or, if less, the maximum rate permitted by law. The Company reserves the right, at any time and from time to time, to revoke any credit extended to Client. Client shall reimburse the Company for any costs it incurs in collecting past due amounts, including court costs and fees and expenses of attorneys and collection agencies. The Test Report may not be used or relied upon by Client if and for so long as Client fails to pay when due any invoice issued by the Company or any affiliate of it to Client or any affiliate or subsidiary of Client together with interest and penalties, if any, accrued thereon.
7. The Company disclaims any and all responsibility or liability arising out of or in connection with e-mail transmissions of such information.
8. Client understands and agrees that the Company is neither an insurer nor a guarantor, that the Company does not take the place of Client or any designer, manufacturer, agent, buyer, distributor or transportation or shipping company, and that the Company disclaims all liability in such capacities. Client further understands that if it seeks assurance against loss or damage, it should obtain appropriate insurance.
9. Client agrees that the Company, by providing the services, does not take the place of Client nor any third party, nor does the Company release them from any of their obligations, nor does the Company otherwise assume, abridge, abrogate or undertake to discharge any duty of any third party to Client or any duty of Client or any third party to any other third party, and Client will not release any third party from its obligations and duties with respect to the tested goods.
10. Client shall, on a timely basis, (a) provide adequate instructions to the Company in order to enable the Company to perform properly its services, (b) provide, or cause Client's suppliers and contractors to provide, the Company with all documents necessary to enable the Company to perform its services, (c) furnish the Company with all relevant information regarding Client's intended use and purposes of the tested goods, (d) advise the Company of essential dates and deadlines relevant to the tested goods and (e) fully exercise all rights and remedies available to Client against third parties in respect of the tested goods.
11. The Company shall undertake due care and ordinary skill in the performance of its services to Client, and the Company shall accept responsibility only were such skill has not been exercised and, even in such event, only to the extent of the limitation of liability set forth herein.
12. If Client desires to assert a claim arising from or relating to (i) the performance, purported performance or non-performance of any services by the Company or (ii) the sale, resale, manufacture, distribution or use of any tested goods, it must submit that claim to the Company in a writing that sets forth with particularity the basis for such claim within 60 days from discovery of the potential claim and not more than six months after the date of issuance of the Test Report to Client. Client waives any and all such claims including, without limitation, claims that the Test Report is inaccurate, incomplete or misleading or that additional or different testing is required, unless and then only to the extent that Client submits a written claim to the Company within both such time periods.

13. CLIENT SHALL, EXCEPT TO THE EXTENT OF COMPANY'S LIABILITY TO CLIENT HEREUNDER (WHICH IN NO EVENT SHALL EXCEED THE LIMITATION OF LIABILITY HEREIN), HOLD HARMLESS AND INDEMNIFY THE COMPANY, ITS AFFILIATES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ALL ACTUAL OR ALLEGED THIRD PARTY CLAIMS FOR LOSS, DAMAGE OR EXPENSE OF WHATSOEVER NATURE AND HOWSOEVER ARISING FROM OR RELATING TO (i) THE PERFORMANCE, PURPORTED PERFORMANCE OR NON-PERFORMANCE OF ANY SERVICES BY THE COMPANY OR (ii) THE SALE, RESALE, MANUFACTURE, DISTRIBUTION OR USE OF ANY TESTED GOODS.

14. EXCEPT AS MAY OTHERWISE BE EXPRESSLY AGREED TO IN WRITING BY THE COMPANY AND NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN OR IN ANY TEST REPORT, NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, IS MADE.

15. (A) IN NO EVENT WHATSOEVER SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE DAMAGES IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE TEST REPORT OR THE SERVICES PROVIDED BY THE COMPANY HEREUNDER, INCLUDING WITHOUT LIMITATION LOSS OF OR DAMAGE TO PROPERTY; LOSS OF INCOME, PROFIT OR USE; OR ANY CLAIMS OR DEMANDS MADE AGAINST CLIENT OR ANY OTHER PERSON BY ANY THIRD PARTY IN CONNECTION WITH, RELATING TO OR ARISING OUT OF THE SERVICES PROVIDED BY THE COMPANY HEREUNDER.

(B)NOTWITHSTANDING ANY PROVISION TO THE CONTRARY CONTAINED HEREIN, AND IN RECOGNITION OF THE RELATIVE RISKS AND BENEFITS TO CLIENT AND THE COMPANY ASSOCIATED WITH THE TESTING SERVICES CONTEMPLATED HEREBY, THE RISKS HAVE BEEN ALLOCATED SUCH THAT UNDER NO CIRCUMSTANCES WHATSOEVER SHALL THE LIABILITY OF THE COMPANY TO CLIENT OR ANY THIRD PARTY IN RESPECT OF ANY CLAIM FOR LOSS, DAMAGE OR EXPENSE, OF WHATSOEVER NATURE OR MAGNITUDE, AND HOWSOEVER ARISING, EXCEED AN AMOUNT EQUAL TO FIVE (5) TIMES THE AMOUNT OF THE FEES PAID TO THE COMPANY FOR THE SPECIFIC SERVICES WHICH GAVE RISE TO SUCH CLAIM OR U.S.$10,000, WHICHEVER IS THE LESSER AMOUNT.

16. The Company shall not be liable for any loss or damage resulting from any delay or failure in performance of its obligations hereunder resulting directly or indirectly from any event of force majeure or any event outside the control of the Company. If any such event occurs, the Company may immediately cancel or suspend its performance hereunder without incurring any liability whatsoever to Client.

17. Company's services, including these Conditions, shall be governed by, and construed in accordance with, the local laws of the country where the Company performs the tests or, in the case of tests performed in the United States of America, the laws of Massachusetts without regard to conflicts of laws principles. If any aspect(s) of these Conditions is found to be illegal or unenforceable, the validity, legality and enforceability of all remaining aspects of these Conditions shall not in any way be affected or impaired thereby. Any proceeding related to the subject matter hereof shall be brought, if at all, in the courts of the country where the Company performs the tests or, in the case of tests performed in the United States of America, in the courts of Massachusetts. Client waives the right to interpose any counterclaim or setoffs of any nature in any litigation arising hereunder.

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