HERMON LABORATORIES

839.01
Electrical

Hermon Laboratories Ltd.
Harakevet Industrial Zone, Binyamina 30500,
Israel
Tel. +972-4-6288001
Fax. +972-4-6288277
E-mail: mail@hermonlabs.com

TEST REPORT

ACCORDING TO: FCC 47 CFR PART 15 subpart C, section 15.253

FOR:

Xsight Systems
FOD Detect System with Radar
Operating in 76-77 GHz band
Model: SDU-600-CR

Report ID: XSIRAD_FCC.22853.doc
Date of Issue: 8/14/2012

Table of contents

HERMON LABORATORIES

1 Applicant information

Client name:	Xsight Systems
Address:	11 Havoda street, Rosh Ha'ayin 48017, Israel
Telephone:	+972 3910 2562
Fax:	+972 3903 0590
E-mail:	afux@xsightsys.com
Contact name:	Mr. Arik Fux

2 Equipment under test attributes

Product:	FOD Detect System with Radar operating in 76-77 GHz band
Product name:	FODetect™ consists of 2 units:
1) Sensor (Upper Unit):	model SDU-600-CR/U, Upper Unit, ver 6.2, P/N XT0020000061, S/N FX1143000010 including Radar, model SDU-600/UR, Radar Assy, ver 6.2, rev 02-00, P/N XT0070000009,

5 Tests summary

Test	Status
Transmitter characteristics	
Section 15.253(d), Radiated emissions within assigned band	Pass
Section 15. 253(e)(1), Radiated emissions below 40 GHz	Pass
Section 15. 253(e)(2)/(3), Radiated emissions outside assigned band and above 40 GHz up to 220 GHz	Pass
Section 15. 253(e)(4), Radiated emissions outside assigned band in 220-231 GHz	Not tested
Section 15.253(f), Frequency stability	Pass
Section 15.215(c), Occupied bandwidth	Pass
Section 15.207(a), Conducted emission	Pass
Section 15.253(g), RF radiation exposure	Pass

The results obtained indicate that the product under test complies with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

	Name and Title	Date	Signature
Tested by:	Mr. S. Samokha, test engineer	January 19, 2012	
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	August 14, 2012	
Approved by:	Mr. M.Nikishin, EMC and Radio group manager	August 15, 2012	

HERMON LABORATORIES

6 EUT description

6.1 General information

The EUT is a system containing 3 units: the upper unit (sensor), which includes the W- band radar, is located near an edge runway lamp, the lower unit (processor), which includes the host computer. In real-life operation (i. e., on an airport runway/taxiway), the EUT is powered by a constant current power series. This power series is generated by a CCR (constant-current regulator), and then transformed to 12 VDC by external AC/DC power supply. The CCR power source was not available in the coressponding tests. For testing purposes the EUT was powered by the external 12 VDC power supply (provided by test lab, which is not a part of the EUT, but an auxiliary equipement).

6.2 EUT options/configurations

Number	Operating mode description	Configuration
1	Radar transmitting with endless frequency sweep (linear FM)	Normal operation in real-life installation
2	A frequency sweep stopped at the lowest, middle and highest declared frequncies (CW unmodulated)	For test purposes only

6.3 Ports and lines

Port type	Port description	Connected from	Connected to	Qty.	Cable type	Cable length
Power	12 VDC	External power supply	Processor	1	Unshielded	3 m
Signal	LAN fiberoptic	Ethernet to fiberoptic converter	Processor	1	Unshielded	10 m
Power	Ground	Processor	Ground	1	Shielded	1.5 m

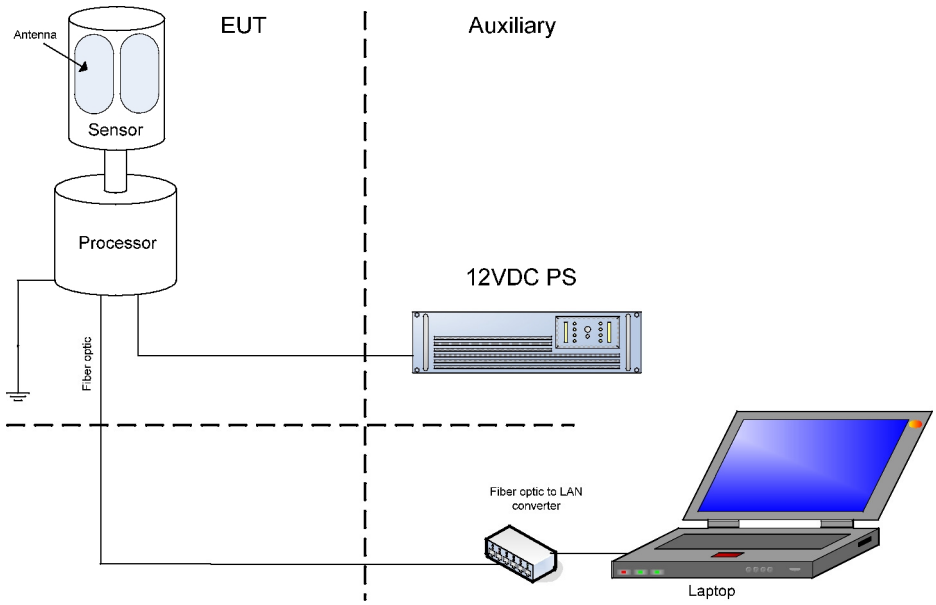
6.4 Operating frequencies

Source	Frequency, MHz		
Tx	76020 - 76980		
VCO	10		NA
LO	7280	2000	9502.5-9622.5
Clock	25		NA

6.5 Changes made in EUT

No changes were implemented in the EUT.

6.6 Test configuration



6.7 Transmitter characteristics

Type of equipment					
X	Stand-alone (Equipment with or without its own control provisions)				
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)				
	Plug-in card (Equipment intended for a variety of host systems)				
Intended use		**Condition of use**			
X	fixed	Always at a distance more than 2 m from all people			
	mobile	Always at a distance more than 20 cm from all people			
	portable	May operate at a distance closer than 20 cm to human body			
Assigned frequency range		76.0 – 77.0 GHz			
Operating frequency range		76.020 – 76.980 GHz			
RF channel spacing		NA			
Maximum field strength at 3 m distance		141.6 dB(µV/m) - Peak value 97.67 dB(µV/m) - Average value			
Is transmitter output power variable?	X	No			
		Yes	continuous variable		
			stepped variable with stepsize	dB	
			minimum RF power	dBm	
			maximum RF power	dBm	
Antenna connection					
X	unique coupling	standard connector		with temporary RF connector	
			X	without temporary RF connector	
Antenna/s technical characteristics					
Type		Manufacturer	Model number	Gain	
Front-fed reflector, one for Tx, one for Rx		Xsight Systems	NA	32 dBi	
Transmitter 99% power bandwidth		973.75 MHz			
Type of modulation		Linear FMCW			
Transmitter duty cycle supplied for test		100 %			
Transmitter power source					
	Battery	**Nominal rated voltage**	VDC	Battery type	
X	DC	**Nominal rated voltage**	12 VDC		
	AC mains	**Nominal rated current**		Frequency	
Common power source for transmitter and receiver			X	yes	no

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 °C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

7 Transmitter tests according to 47CFR part 15 subpart C requirements

7.1 Radiated emission within assigned band

7.1.1 General

This test was performed to measure field strength of fundamental emission from the EUT within the assigned band. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Radiated emission limits

Frequency, MHz	Power density at 3 m distance, μw/cm2		Field strength at 3 m distance dB(μV/m)	
	Peak	Average	Peak	Average
76000 – 77000	279	88	150.2*	145.2*

*- The field strength was calculated as follows:

P_d (W/m^2) = E^2 (V/m) / 120$_{7c}$

E [dB(μV/m)] = 20 log (P_d x 120$_{7c}$) + 120, where

P_d (W/m^2) – power density

E(V/m) –field strength at 3 m distance.

7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and the performance check was conducted.

7.1.2.2 The EUT was set to produce an unmodulated carrier at the lowest, middle and highest frequencies of the wanted signal.

7.1.2.3 To find maximum radiation the turntable was rotated 360^0, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

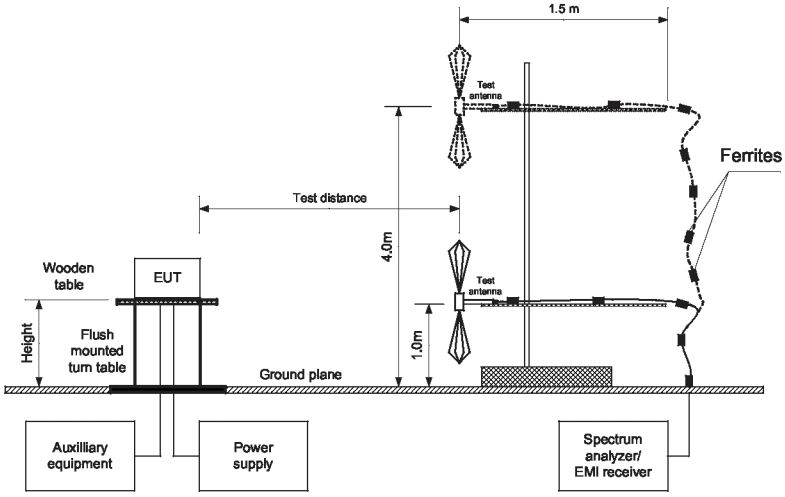
7.1.2.4 The peak values were obtained using RBW = 1 MHz and VBW = 3 MHz and recorded in Table 7.1.2.

7.1.2.5 The EUT was set to produce a normal modulated signal and average values were measured using RBW = 1 MHz and VBW = 1 kHz.

7.1.2.6 The worst test results (the lowest margins) were recorded in Table 7.1.2 and shown in the associated plots.

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 ˚C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Figure 7.1.1 Setup for in band radiated emission measurements



Photograph 7.1.1 Setup for in band radiated emission measurements

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 °C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Table 7.1.2 Radiated emission within assigned band test results

TEST DISTANCE: 3 m
EUT POZITION: Typical
MODULATION: FM
MODULATING SIGNAL: Linear Chirp
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
INVESTIGATED FREQUENCY RANGE: 76000 – 77000 MHz
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength(VBW=3 MHz)			Average field strength(VBW=1 kHz)			Verdict
	Polariz.	He g ht, m		Measured, dB(µV/m)	Limit, dB(pV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB***	
76020.00	Vertical	1.5	005	140.6	150.2	-9.6	97.67	145.2	-47.43	Pass
76499.97	Vertical	1.5	005	141.6	150.2	-8.6	95.75	145.2	-49.45	
76980.02	Vertical	1.5	005	139.0	150.2	-11.2	97.29	145.2	-47.49	

***-** Margin = Measured emission - specification limit.

****-** EUT front panel refer to 0 degrees position of turntable.

EUT was configured to produce a continuous frequency sweep within the specified frequency range hence no average factor was considered.

Reference numbers of test equipment used

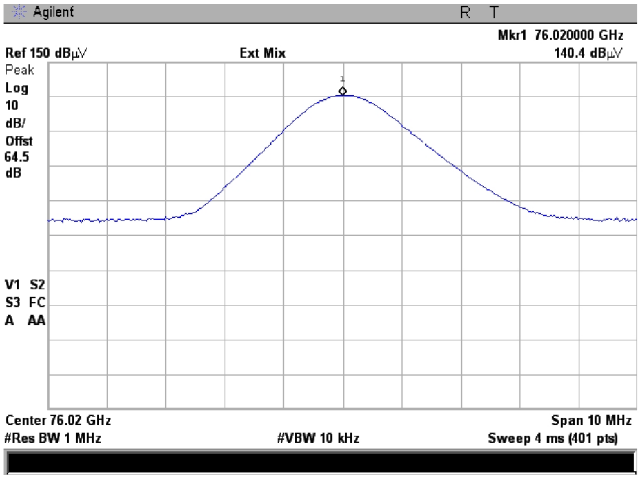
HL 0772 HL 2909 HL 3306 HL 3433 HL 3434

Full description is given in Appendix A.

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 °C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.1 Peak output power measurements

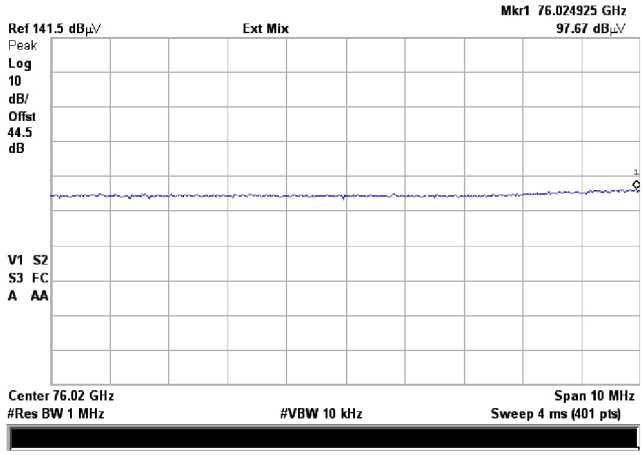
TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: 76020.0 MHz
POLARIZATION: Vertical
DETECTOR: Peak



Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Plot 7.1.2 Peak output power measurements

TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Sweep mode
POLARIZATION: Vertical
DETECTOR: Average

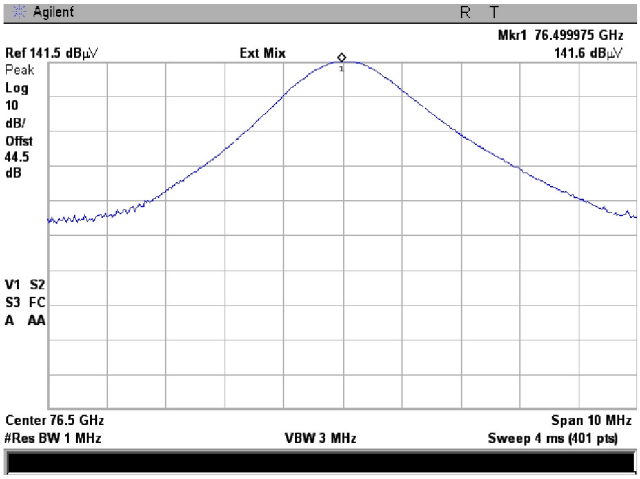


Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 °C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.3 Peak output power measurements

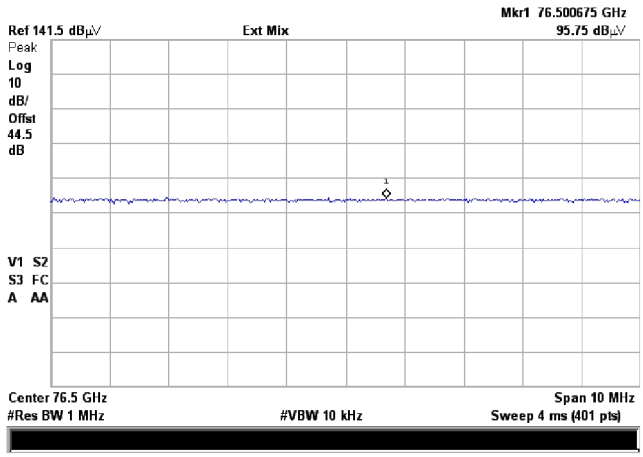
TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: 76500.0 MHz
POLARIZATION: Vertical
DETECTOR: Peak



Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Plot 7.1.4 Peak output power measurements

TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Sweep mode
POLARIZATION: Vertical
DETECTOR: Average

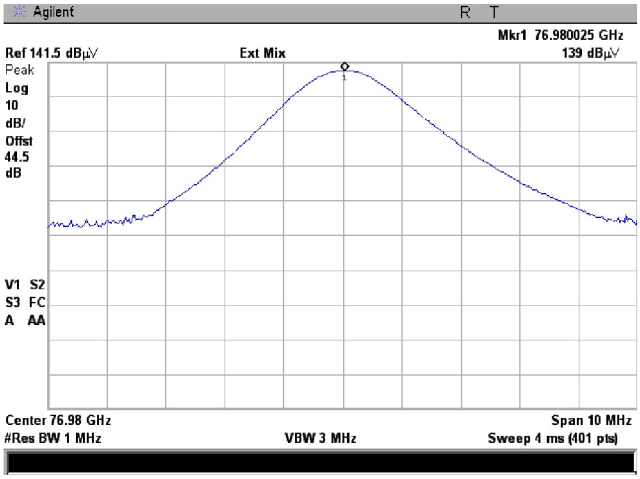


Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Test specification:	Section 15.253(d), Radiated emission within assigned band		
Test procedure:	Millimeter wave test procedure accepted by FCC Lab		
Test mode:	Compliance	Verdict:	PASS
Date:	8/14/2012		
Temperature: 21.2 °C	Air Pressure: 1015 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.5 Peak output power measurements

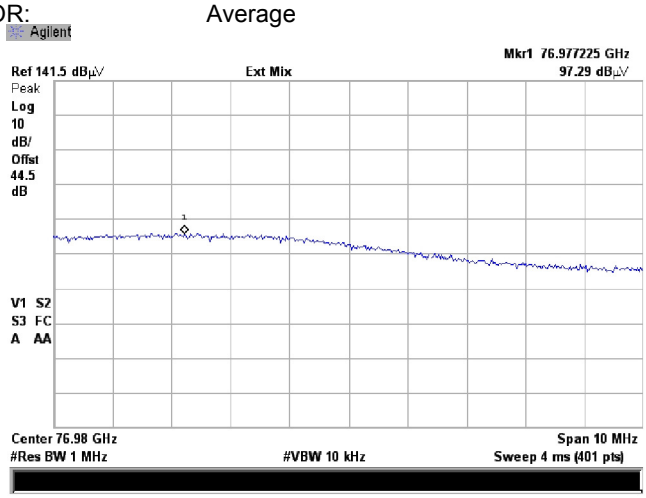
TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: 76980.0 MHz
POLARIZATION: Vertical
DETECTOR: Peak



Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Plot 7.1.6 Peak output power measurements

TEST SITE: OATS
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Sweep mode
POLARIZATION: Vertical
DETECTOR: Average



Amplitude value dBV corresponds to dBV/m
Reference level offset = Antenna factor = 44.50 dB

Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

7.2 Out of band radiated emissions below 40 GHz

7.2.1 General

This test was performed to measure field strength of spurious emissions from the EUT. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Radiated emission limits

Frequency, MHz	Field strength at 3 m within restricted bands, dB(μV/m)***		
	Peak	Quasi Peak	Average
0.009 – 0.090	148.5 – 128.5	NA	128.5 – 108.5**
0.090 – 0.110	NA	108.5 – 106.8**	NA
0.110 – 0.490	126.8 – 113.8	NA	106.8 – 93.8**
0.490 – 1.705	NA	73.8 – 63.0**	NA
1.705 – 30.0*		69.5**	
30 – 88		40.0	
88 – 216		43.5	
216 – 960		46.0	
960 - 40000	74.0	NA	54.0

*- The above field strength limits applied from the lowest radio frequency generated in the device, without going below 9 kHz up to the tenth harmonic of the highest fundamental frequency.

**- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$Lim_{S2} = Lim_{S1} + 40 \log (S_1/S_2),$$

where S_1 and S_2 – standard defined and test distance respectively in meters.

***- The limit decreases linearly with the logarithm of frequency.

7.2.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and the performance check was conducted.

7.2.2.2 The specified frequency range was investigated with loop antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0, the measuring antenna was rotated around its vertical axis and the measuring antenna polarization was switched from vertical to horizontal.

7.2.2.3 The worst test results (the lowest margins) were recorded in Table 7.2.2 and shown in the associated plots.

7.2.3 Test procedure for spurious emission field strength measurements above 30 MHz

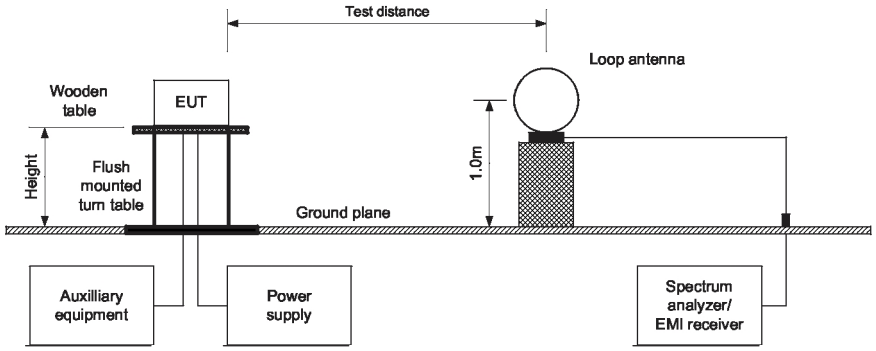
7.2.3.1 The EUT was set up as shown in Figure 7.2.2, energized and the performance check was conducted.

7.2.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

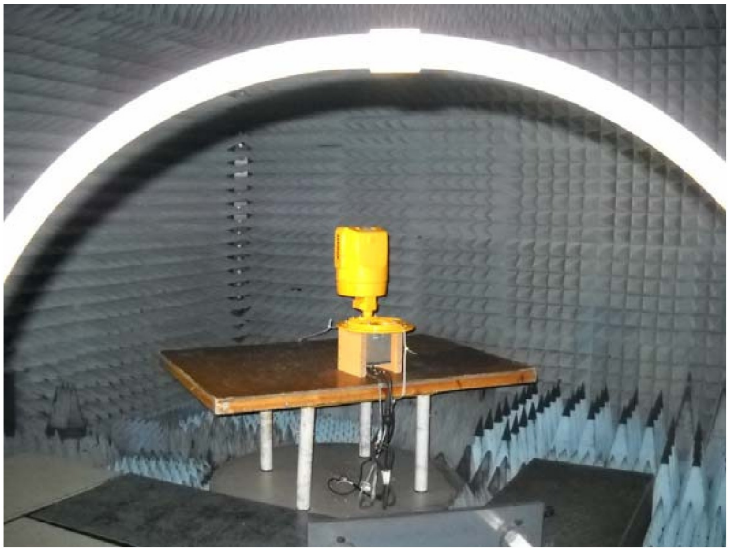
7.2.3.3 The worst test results (the lowest margins) were recorded in Table 7.2.2 and shown in the associated plots.

Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 ˚C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Figure 7.2.1 Radiated emissions below 30 MHz test set up

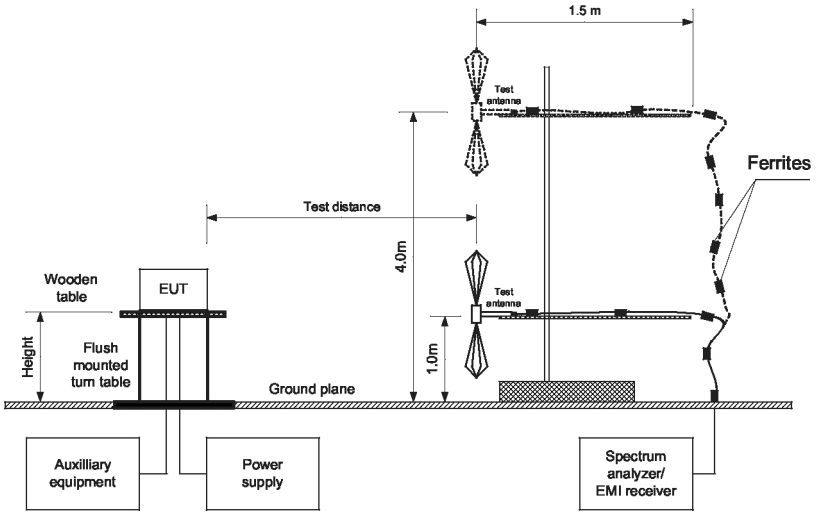


Photograph 7.2.1 Setup for radiated emissions measurements below 30 MHz

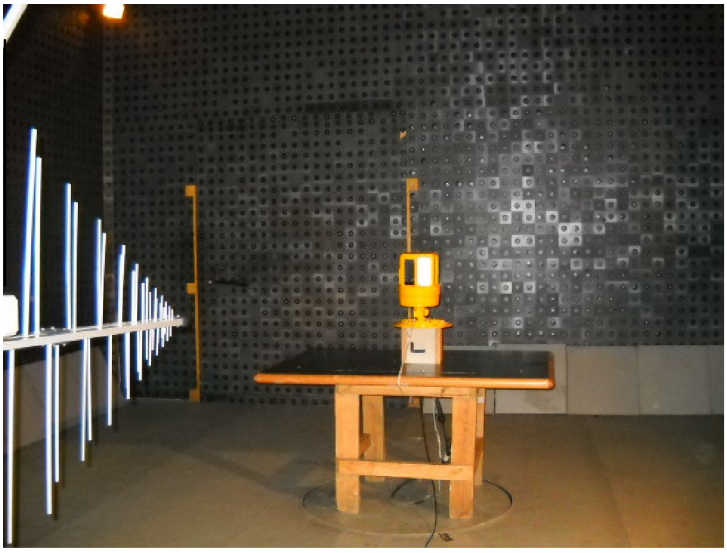


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Figure 7.2.2 Radiated emissions above 30 MHz test set up



Photograph 7.2.2 Setup for radiated emissions measurements above 30 MHz



Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 ˚C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Photograph 7.2.3 Setup for radiated emissions measurements above 1000 MHz

Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Table 7.2.2 Radiated emissions test results below 1000 MHz

TEST DISTANCE:	3 m
EUT POSITION:	Typical (Vertical)
MODULATION:	FM
MODULATING SIGNAL:	Linear Chirp
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
INVESTIGATED FREQUENCY RANGE:	0.009 – 1000 MHz
RESOLUTION BANDWIDTH:	1.0 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz) Z
VIDEO BANDWIDTH:	Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilo[g] (30 MHz – 1000 MHz

Frequency, MHz	Peak emission, dB(µV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
32.5067	31.7	29.9	40.0	-10.1	Vert	1.0	180	Pass
162.0035	40.3	39.4	43.5	-4.1	Hor	2.2	180	
216.0000	36.2	34.1	43.5	-9.4	Vert	1.6	270	
240.0105	45.4	43.3	46.0	-2.7	Vert	1.0	150	
480.0217	43.4	41.5	46.0	-4.5	Vert	1.6	150	
625.0277	41.9	39.3	46.0	-6.7	Vert	1.5	160	

***-** Margin = Measured emission - specification limit.

****-** EUT front panel refer to 0 degrees position of turntable.

Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Table 7.2.3 Radiated emissions test results in 1000 – 40000 MHz range

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
EUT POSITION: Typical (Vertical)
MODULATION: FM
MODULATING SIGNAL: Linear Chirp
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
INVESTIGATED FREQUENCY RANGE: 1000 – 40000 MHz
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: Z Resolution bandwidth Double-
TEST ANTENNA TYPE: Rid[9]ed Wave[9]uide Horn

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength (VBW=3 MHz)			Average field strength (VBW=3kHz)			Verdict
	Polariz.	Height, m		Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	
Sweep mode										
7280.2125	Vertical	1.2	30	53.71	74.0	-20.29	47.74	54.0	-6.26	
9619.0000	Vertical	1.2	0	56.76	74.0	-17.24	39.13	54.0	-14.87	Pass
14560.0500	Vertical	1.2	40	58.87	74.0	-15.13	51.19	54.0	-2.81	

*EUT front panel refer to 0 degrees position of turntable **-
Margin = Measured emission - specification limit.

TEST SITE: OATS
TEST DISTANCE: 3 m
EUT POSITION: Typical (Vertical)
MODULATION: FM
MODULATING SIGNAL: Linear Chirp
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
INVESTIGATED FREQUENCY RANGE: 1000 – 40000 MHz
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: Z Resolution bandwidth Double-
TEST ANTENNA TYPE: Rid[9]ed Wave[9]uide Horn

Frequency, MHz	Antenna		Azimuth, degrees*	Peak field strength (VBW=3 MHz)			Average field strength (VBW=3kHz)			Verdict
	Polariz.	Height, m		Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	
Sweep mode										
38324.70	Vertical	1.2	50	58.33	74.0	-15.67	46.00	54.0	-8.00	Pass

*EUT front panel refer to 0 degrees position of turntable
**- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

HL 0446	HL 0521	HL 0604	HL 0768	HL 0769	HL 2883	HL 2909	HL 3390
HL 3531	HL 3535	HL 3901	HL 4114	HL 4160	HL 4278	HL 4279	

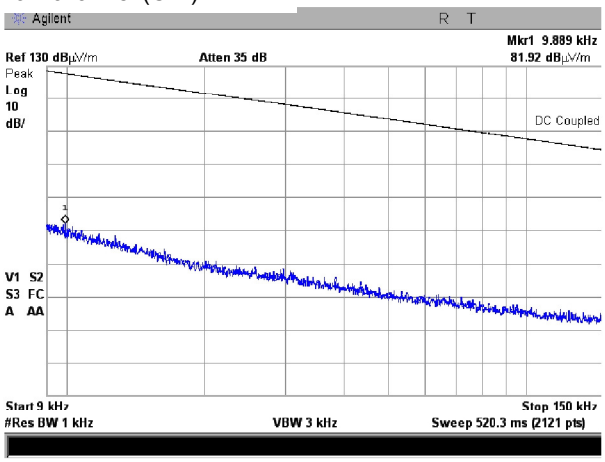
Full description is given in Appendix A

Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

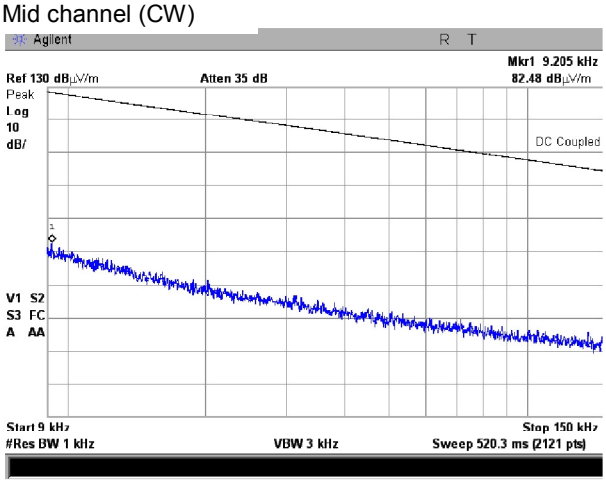
Plot 7.2.1 Radiated emission measurements from 9 to 150 kHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
DETECTOR: Peak hold

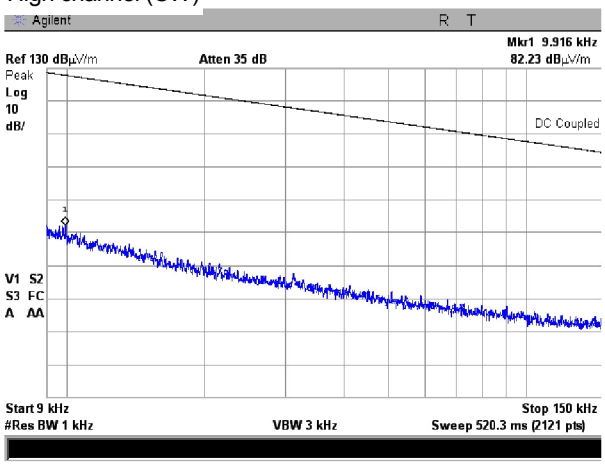
Low channel (CW)



Mid channel (CW)



High channel (CW)

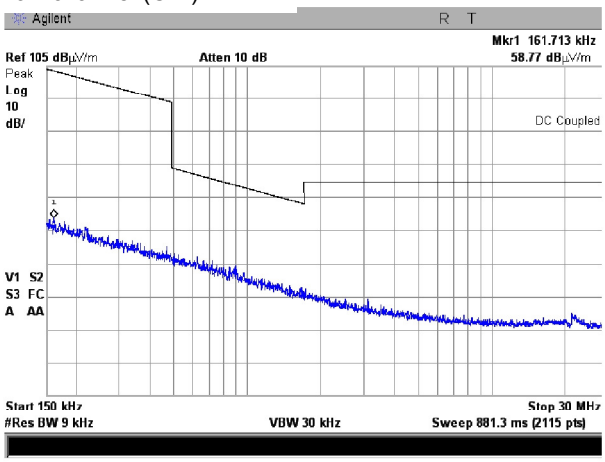


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

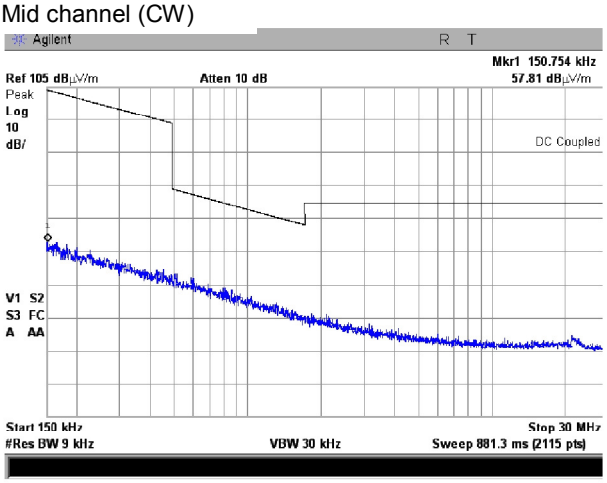
Plot 7.2.2 Radiated emission measurements from 0.15 to 30 MHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
DETECTOR: Peak hold

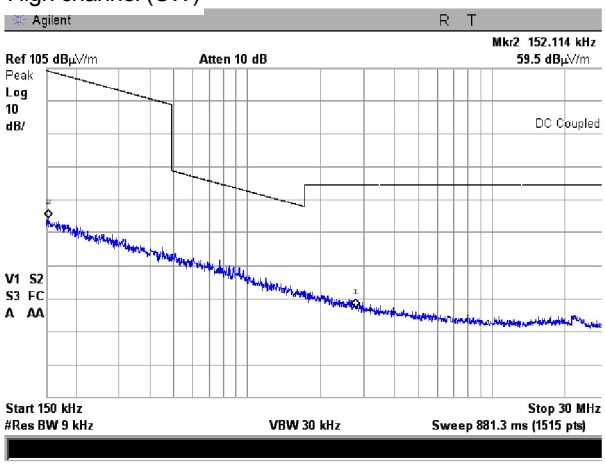
Low channel (CW)



Mid channel (CW)



High channel (CW)

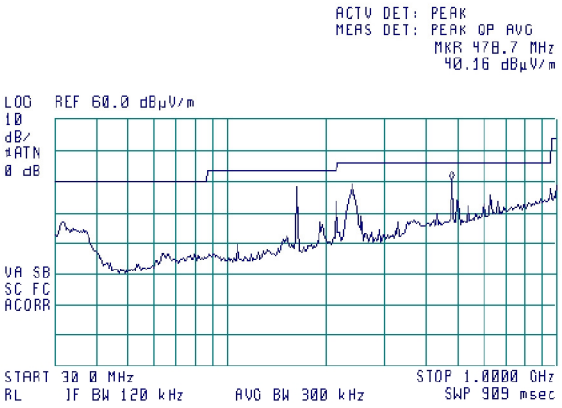


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

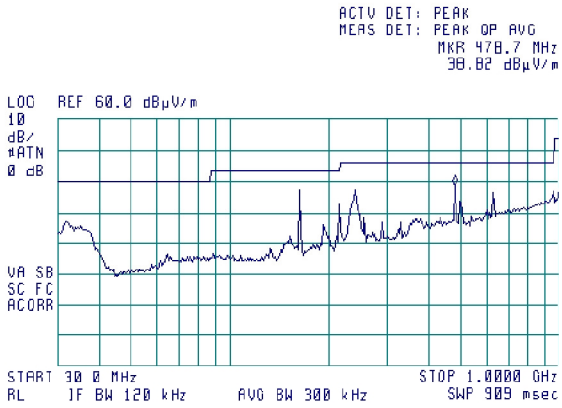
Plot 7.2.3 Radiated emission measurements from 30 to 1000 MHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak hold

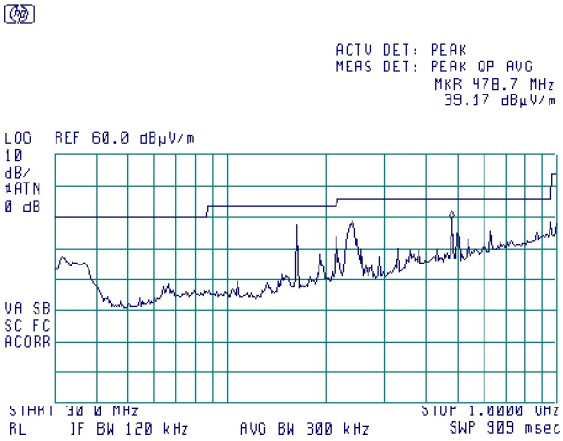
Low channel (CW)



Mid channel (CW)



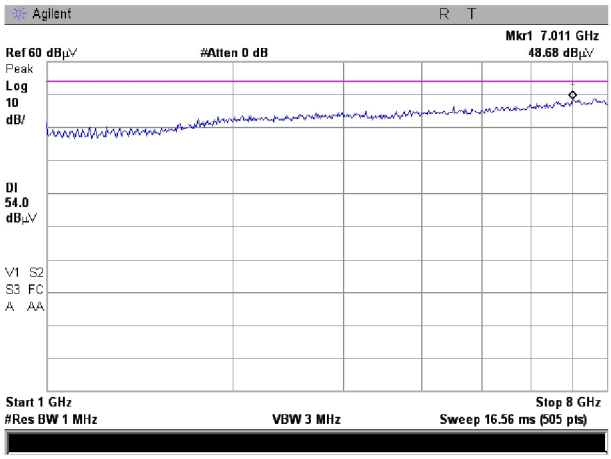
High channel (CW)

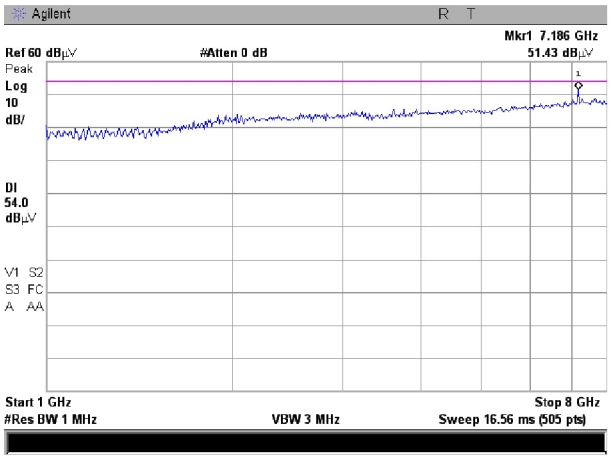


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.4 Radiated emission measurements from 1000 to 8000 MHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak hold

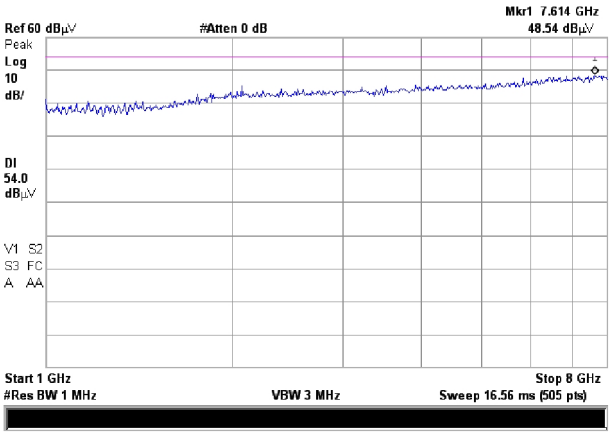




High channel (CW)

Low channel (CW)

Mid channel (CW)

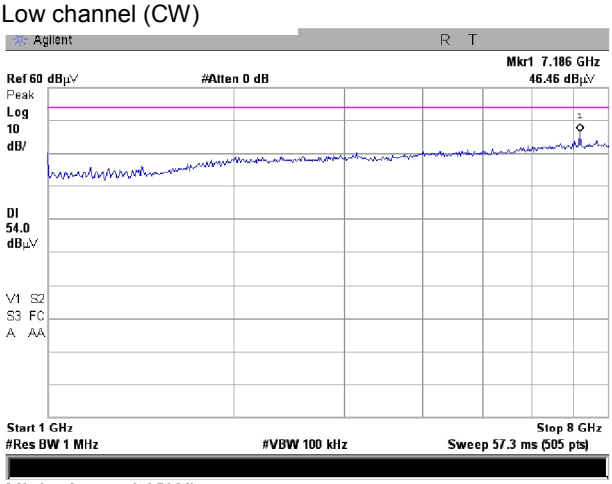


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance	Verdict:	PASS
Date:	1/16/2012		
Temperature: 21.2 °C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

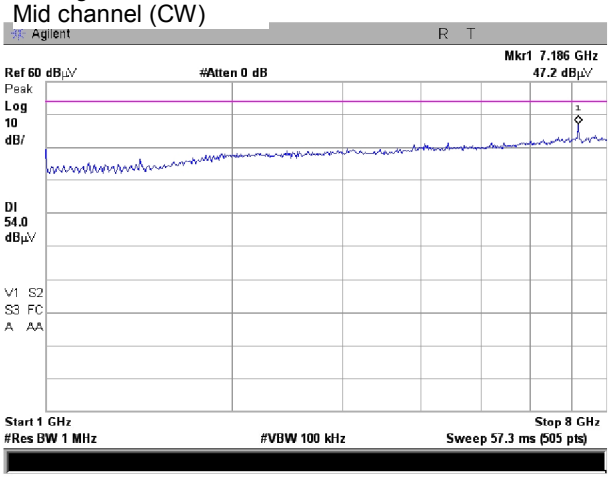
Plot 7.2.5 Radiated emission measurements from 1000 to 8000 MHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average

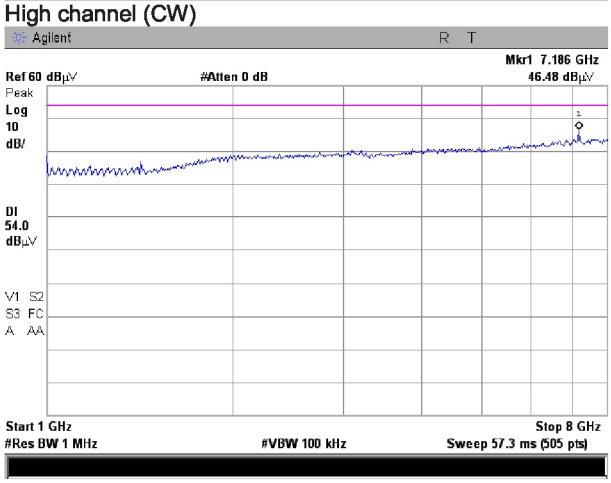
Low channel (CW)



Mid channel (CW)



High channel (CW)

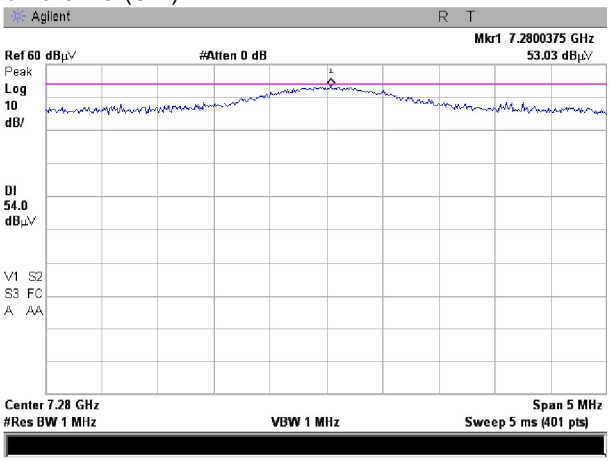


Test specification:	Section 15.253(e)(1), Radiated emissions below 40 GHz		
Test procedure:	ANSI C63.4, Sections 8.3.2, 13.2, 13.4		
Test mode:	Compliance		
Date:	1/16/2012	Verdict:	PASS
Temperature: 21.2 ˚C	Air Pressure: 1021 hPa	Relative Humidity: 43 %	Power Supply: 120 VAC
Remarks:			

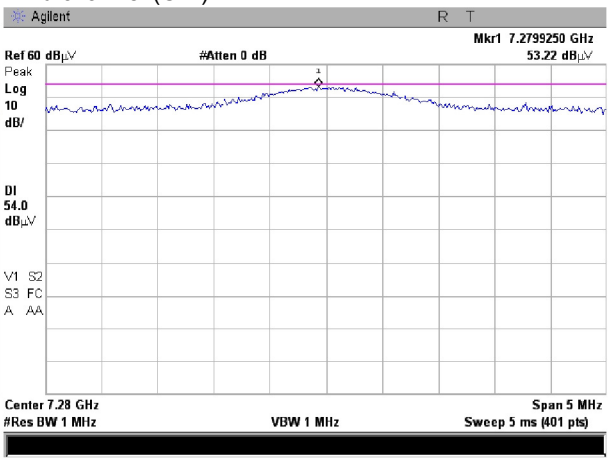
Plot 7.2.6 Radiated emission measurements at frequency 7280 MHz

TEST SITE: Semi-anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak hold

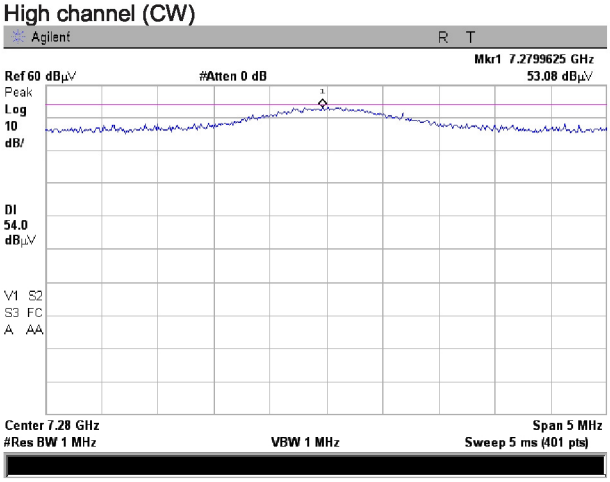
Low channel (CW)



Mid channel (CW)



High channel (CW)



Sweep