



FCC / IC Test Report

For

SIXMINICT

**Accolade #: 20359-B
FCC ID: CFS8DLRF6MCT
IC ID: 573F-RF6MCT**

Report Completion Date: 2017-04-10

Revised Date: 2017-04-26

Prepared by and for:
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NVLAP Lab Code: 600110

Document Introduction

Honeywell tested the above equipment in accordance with the requirements set forth in the listed standards. All indications of Pass/Fail in the report are opinions expressed by Honeywell based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

This document is a record of the FCC/IC Test Report for Honeywell products. It demonstrates the data required to be analyzed to certify a product according to the requirements of the FCC & IC.

The results in the report reflect only the model of the items under test unless noted otherwise. This document may not be altered or revised in any way unless done so by Honeywell and all revisions are duly noted in the revisions section. Any alterations of this document not carried out by Honeywell will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Test Report Revision History				
Revision	Prepared By	Reviewed By	Revision	Release Date
-	M. Antola	A. Roussin	Original release	2017-04-10
A	M. Antola	-	Output Power & Power Spectral Density - Clarified test method Power Spectral Density - Updated plots/results Radiated Emissions - Added AV data for 6 th harmonic for low/middle channels	2017-04-17
B	M. Antola	-	Updated Output Power plots/results	2017-04-26

Report Authorization

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Applicable Test Standards

Test Standard/FCC Rule Part	Result	Dates Tested
ANSI C63.10: 2013	Compliant	01/23/2017 to 04/10/2017
RSS-247, Issue 1	Compliant	01/23/2017 to 04/10/2017
RSS-GEN, Issue 4	Compliant	01/23/2017 to 04/10/2017
CFR 47 Part 15 Subpart C, Section 15.247	Compliant	01/23/2017 to 04/10/2017

Deviations from Test Methods

#	Deviation Description
	None

Facilities and Accreditation

The test site and measurement facility used to collect data are located at 2 Corporate Center Drive, Melville, NY 11747, USA. Honeywell International is accredited by NVLAP, Laboratory Code 600110. The full scope of accreditation can be view at the NVLAP website.

Test Item Description

The EUT is a battery powered portable transceiver and is part of a wireless alarm system. The EUT was supplied with test firmware with a low, middle, and high channel for testing. The EUT was provided with software to continuously transmit during testing. The carrier was also checked to verify that information was being transmitted. The test results reported relate only to the item tested.

Worse-Case Configuration & Mode

Radiated emissions was performed with the EUT set to transmit at the channel with the highest output power as worst-case scenario. The EUT was tested in all three orthogonal planes in order to determine the worst-case emissions. It was determined that the Y axis orientation was the worst-case orientation. Therefore, all final radiated test was performed with the EUT in the Y axis orientation. See setup photos for details.

Test Sample Identification

Sample ID Number	Sample Serial Number	Date Received
MEL-162-166	Non-serialized production unit	2017-01-23
MEL-203	Non-serialized production unit	2017-03-10

Calibration & Measurement Uncertainty

- Measuring Instrument Calibration – The measuring equipment utilized to perform the tests documented in this report have been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.
- Sample Calculation – Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

[i.e.] 37 dBuV/m = 30 dBuV + 18.5 dB/m + 0.5 dB – 12 dB

- Uncertainty - Figures are valid to a confidence level of 95%.

Test	Standard Uncertainty
Radiated Emissions (30-200MHz Horizontal)	+/- 5.24 dB
Radiated Emissions (30-200MHz Vertical)	+/- 5.46 dB
Radiated Emissions (200-1000MHz Horizontal)	+/- 5.34 dB
Radiated Emissions (200-1000MHz Vertical)	+/- 5.33 dB
Radiated Emissions (1-6GHz)	+/- 4.01 dB
Radiated Emissions (6-18GHz)	+/- 4.27 dB
Conducted Emissions (150KHz-30MHz)	+/- 4.44 dB

Opinions / Interpretations

None

Test Summary

All tests described below are required, unless otherwise noted. Notes should be described in detail in the "Additional notes" section.

#	Test Description	Status
1	99% Bandwidth	PASS
2	6 dB Occupied Bandwidth	PASS
3	Conducted Spurious Emissions	PASS
4	Radiated Emissions (Intentional)	PASS
5	Radiated Emissions (Unintentional)	PASS
6	Restricted Band Edge	PASS
7	Maximum Conducted Output Power (Average)	PASS
8	Maximum Power Spectral Density (Average)	PASS

6dB Occupied Bandwidth (DTS Bandwidth)

Test Description

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Criteria

Reference	Limit
CFR 47 Subpart C 15.247 (a)(2) RSS-247 Section 5.2 (1)	$\geq 500\text{kHz}$

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
AG	RF Test Lab	02/01/17	23.5	55.6	1012	P

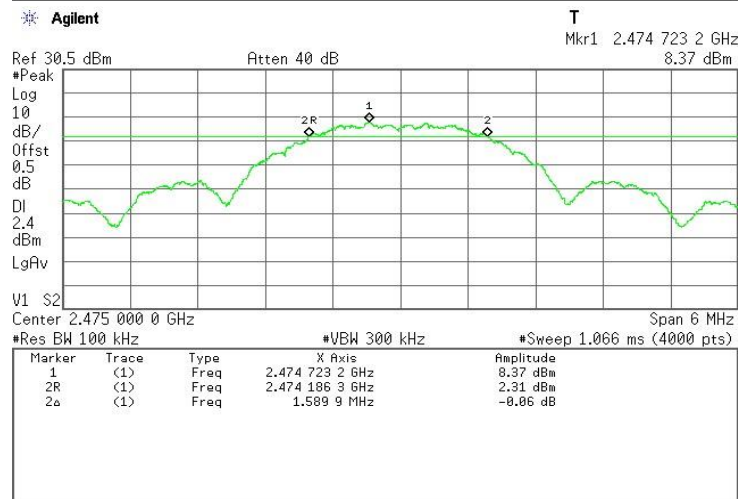
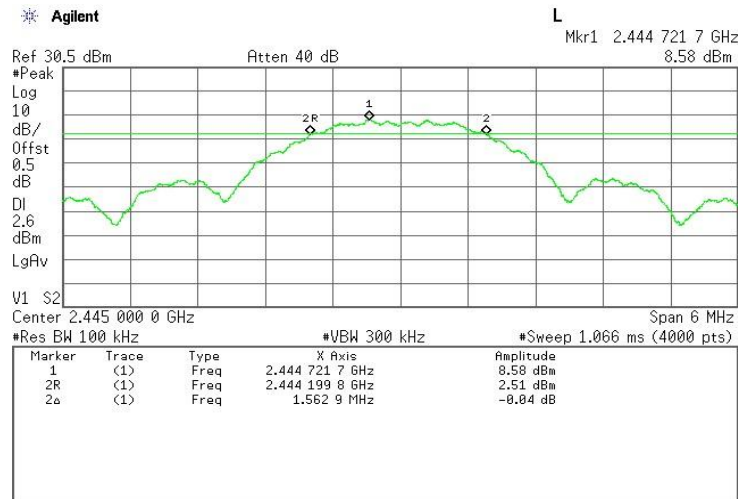
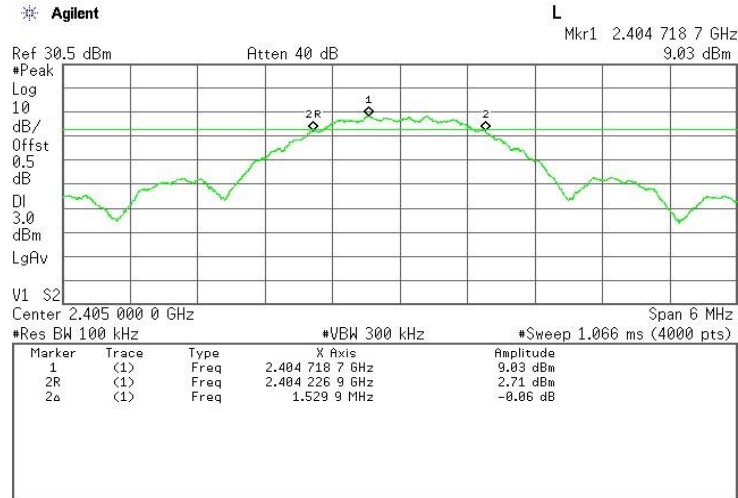
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-05-18	2017-05-18

Test Results

Channel	Frequency (GHz)	6dB Bandwidth (in MHz)	
		Antenna 1	Antenna 2
11	2.405	1.5299	NA
19	2.445	1.5629	NA
25	2.475	1.5899	NA

Plots



Above (Top to Bottom): Channel 11, 19, 25

99% Bandwidth

Test Description

The emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

Test Criteria

Reference	Limit
RSS-GEN	N/A

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
AG	RF Test Lab	02/02/17	23.5	55.6	1012	P

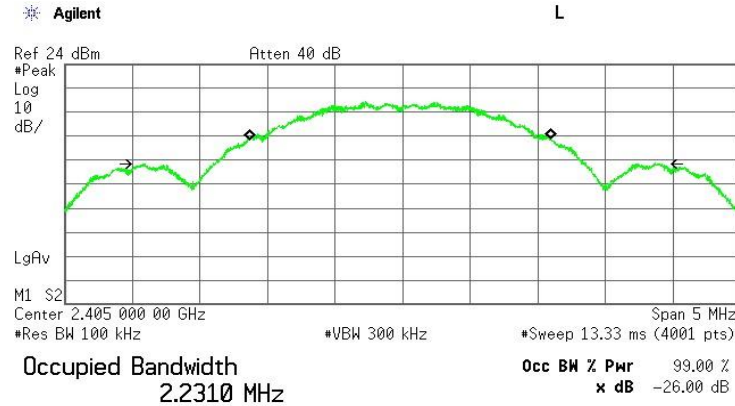
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-05-18	2017-05-18

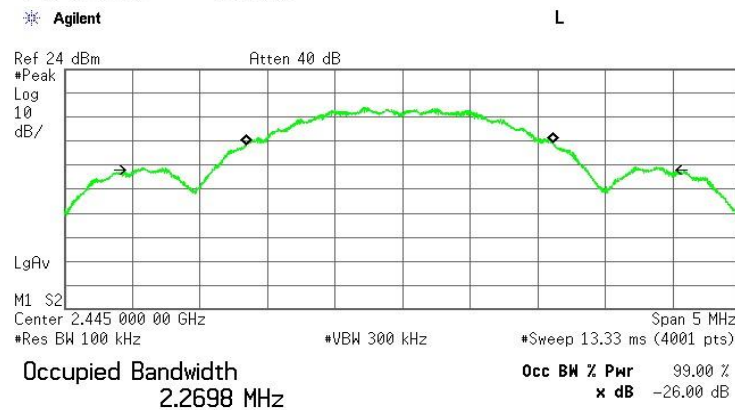
Test Results

Channel	Frequency (GHz)	99% Bandwidth (in MHz)	
		Antenna 1	Antenna 2
11	2.405	2.23	NA
19	2.445	2.27	NA
25	2.475	2.31	NA

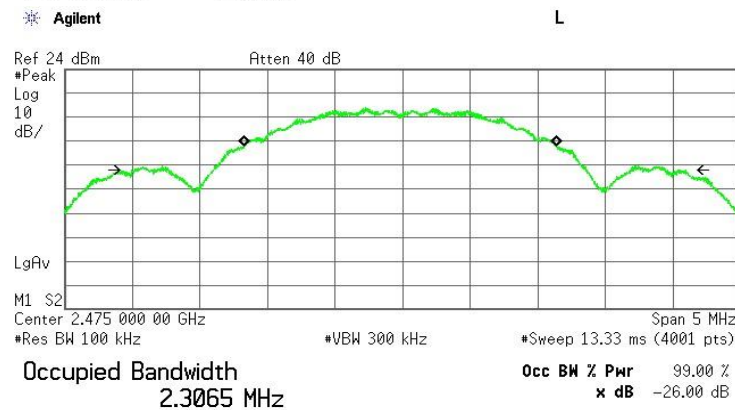
Plots



Transmit Freq Error -15.867 kHz
x dB Bandwidth 3.817 MHz



Transmit Freq Error -17.428 kHz
x dB Bandwidth 3.902 MHz



Transmit Freq Error -17.293 kHz
x dB Bandwidth 4.098 MHz

Above (Top to Bottom): Channel 11, 19, 25

Conducted Spurious Emissions (Transmit)

Test Description

Conducted spurious emissions measures all emissions from the antenna port between 30 MHz and 26GHz, while the transmitter is in transmit mode. The UUT is to be tested on all three channels on each antenna port. The fundamental and the next highest emissions need to be marked on the analyzer.

Test Criteria

Reference	Limit
CFR 47 Subpart C 15.247 (d) RSS-247 Section 5.5	30dB Below the Fundamental

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
AG	RF Test Lab	02/03/17	23.5	55.6	1012	P

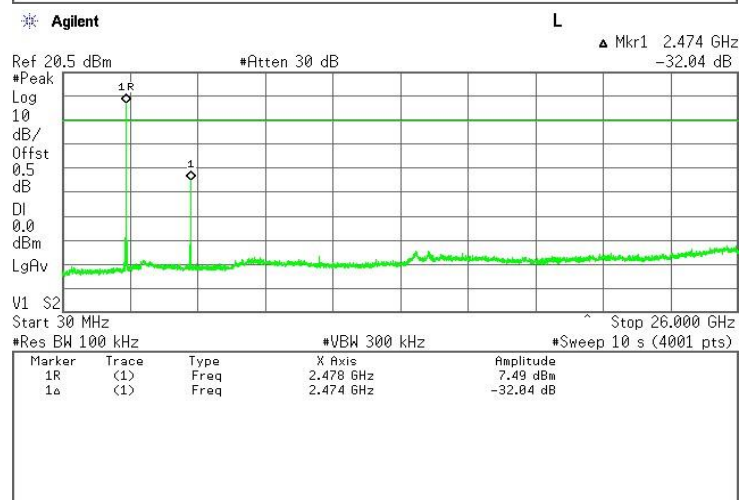
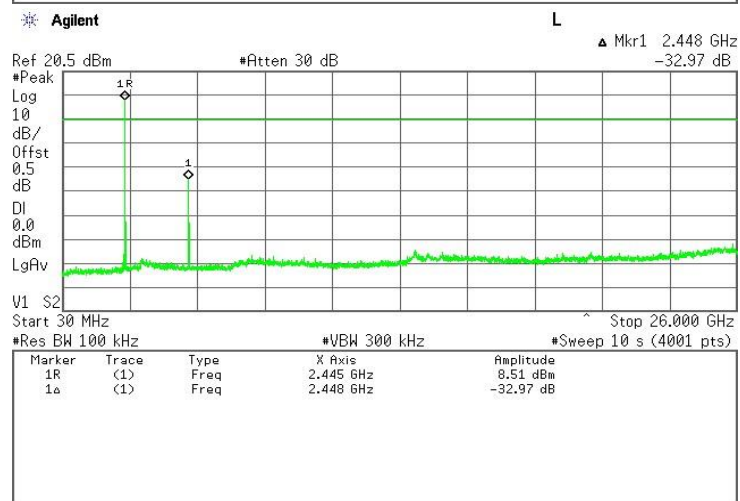
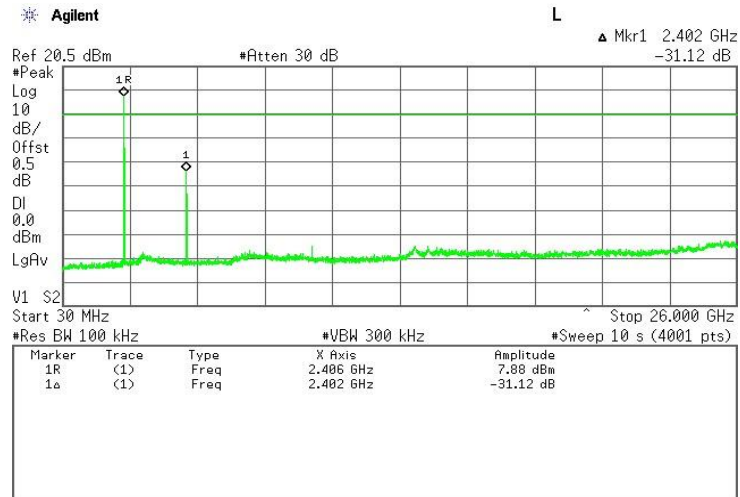
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-05-18	2017-05-18

Test Results

Channel	Frequency (GHz)	Highest Spurious Emission (Delta dBc)	
		Antenna 1	Antenna 2
11	2.405	-31.12	NA
19	2.445	-32.97	NA
25	2.475	-32.04	NA

Plots



Above (Top to Bottom): Channel 11, 19, 25

Maximum Conducted Output Power (Average)

Test Description

Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum. Method AVGSA-1 per C63.10 and KDB 558074 was utilized for this test program.

Test Criteria

Reference	Limit
CFR 47 Subpart C 15.247 (b)(3) RSS-247 Section 5.4 (4)	1W (30dBm)

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
MA	RF Test Lab	04/26/17	23.5	55.6	1012	P

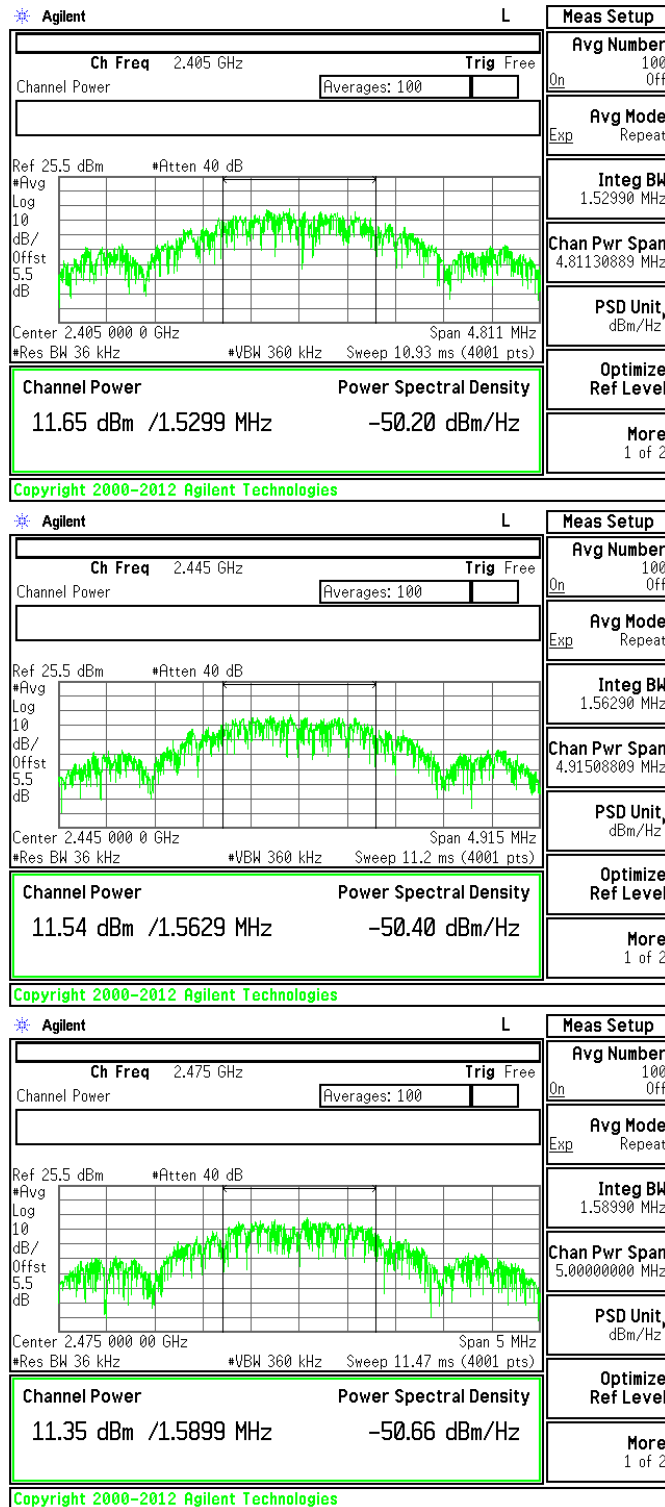
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-18-05	2017-18-05

Test Results

Channel	Frequency (GHz)	Tx Channel BW Power (dBm)	
		Antenna 1	Antenna 2
11	2.405	11.65	NA
19	2.445	11.54	NA
25	2.475	11.35	NA

Plots



Above (Left to Right): Channel 11, 19, 25

Maximum Power Spectral Density (Average)

Test Description

This is the baseline method for determining the maximum (average) conducted PSD level. If the instrument has a power averaging (rms) detector, then it must be used; otherwise, use the sample detector. The EUT must be configured to transmit continuously ($D \geq 98\%$), or else sweep triggering/signal gating must be implemented to ensure that measurements are made only when the EUT is transmitting at its maximum power control level (no transmitter OFF time to be considered). Method AVGPS-1 per C63.10 and KDB 558074 was utilized for this test program.

Test Criteria

Reference	Limit
CFR 47 Subpart C 15.247 (e) RSS-247 Section 5.2 (2)	< 8 dBm in any 3 kHz Band

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
MA	RF Test Lab	04/17/17	23.5	55.6	1012	P

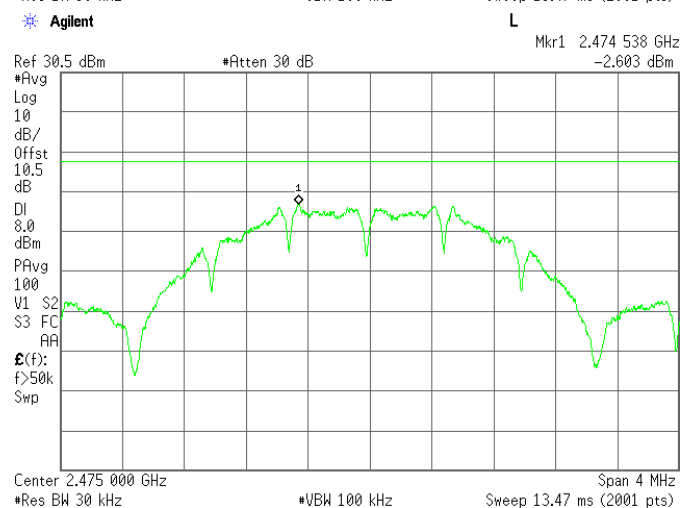
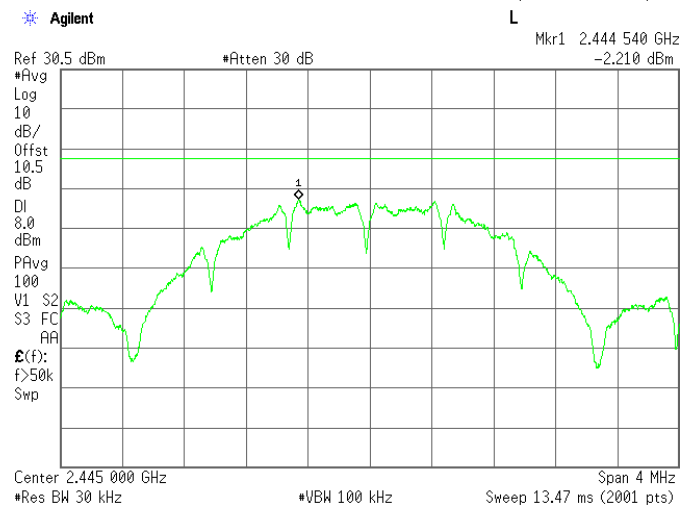
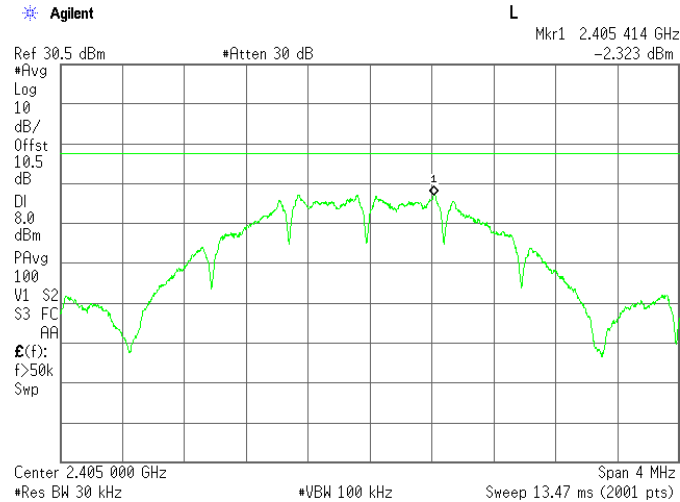
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-18-05	2017-18-05

Test Results

Channel	Frequency (GHz)	Max Power (dBm)	
		Antenna 1	Antenna 2
11	2.405	-2.323	NA
19	2.445	-2.210	NA
25	2.475	-2.603	NA

Plots



Above (Left to Right): Channel 11, 19, 25

Restricted Band Edge (FCC 15.247 (d) Intentional Radiator)

Test Description

RF Restricted Band Edge measurements measures the emissions of the fundamental operating frequency to ensure that there are no intentional radiations within the restricted bands. The Conducted Measurements should be done first on a spectrum analyzer, with the RBW at 100 kHz, and the Video Bandwidth (VBW) at 300 kHz. All other settings should be put to AUTO. This will show how much of the energy was inside and outside of the band. In the OATS test site, the DUT is measured on all antenna planes (Horizontal, Vertical) and DUT orientations (Horizontal, Vertical, and Oblique). Once you have found the maximum power out, leave the unit in that position and set up the Spectrum Analyzer for 1 MHz RBW, and 10 Hz for VBW. Subtract the Conducted Delta from the newly recorded envelope peak. The difference is the final level of the out of band energy.

Test Criteria

Reference	Limit
CFR 47 Subpart C 15.247 (d) RSS-247 Section 5.5	30dB Below the Fundamental

Test Information

Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
AG	RF Test Lab	02/06/17	23.5	55.6	1012	P

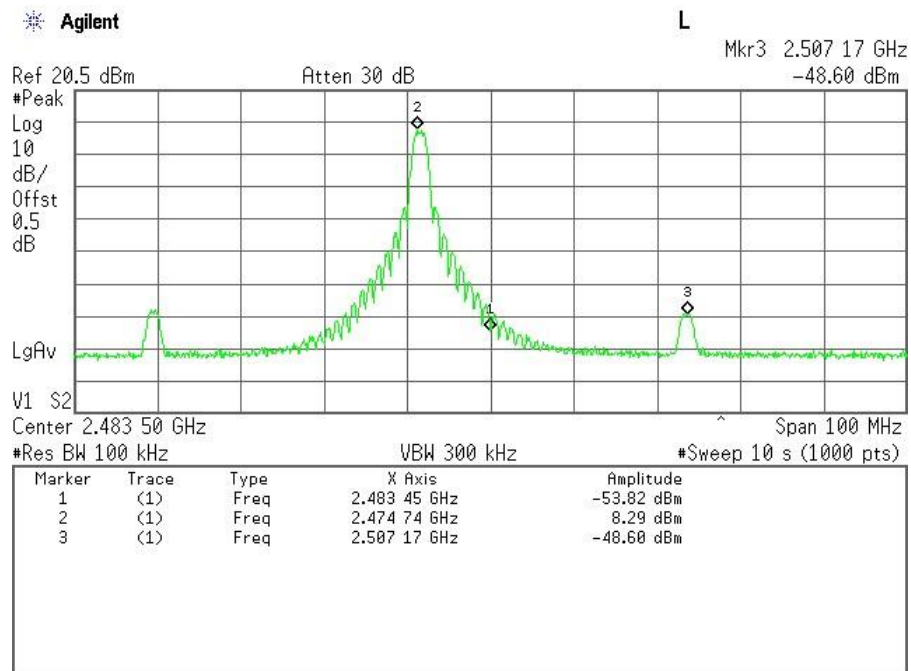
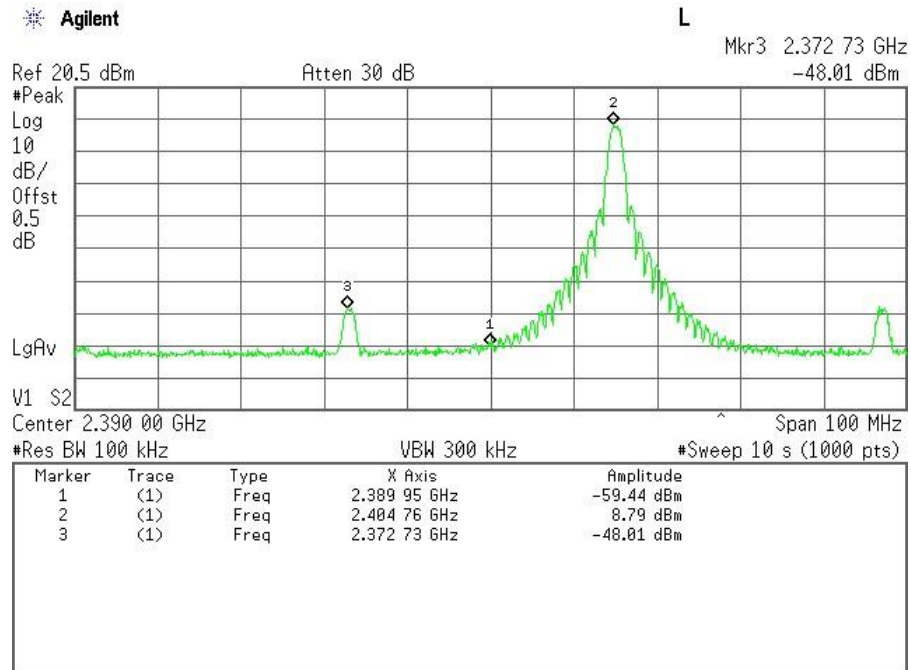
Equipment List

Instrument Type	Serial #	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	MY41000078	Agilent	E4440A	2016-18-05	2017-18-05

Test Results

Conducted			
Channel	Frequency (GHz)	Amplitude at Band edge (dBm)	
		Antenna 1	Antenna 2
11	2.405	-56.8	NA
25	2.475	-62.11	NA

Plots – Conducted



Above (Left to Right): Channel 11, 25

Radiated Emissions (Part 15 Unintentional Radiator)

Test Description

The Radiated Emissions (Part 15 Unintentional Radiator) measurement is a test of the whole UUT during normal operation. It is a Radiated Emissions measurement done on the UUT from 30 MHz to 1 GHz, typically done in a 3 meter anechoic chamber. The UUT is positioned on a turntable in the manner for which the device will be normally used, with all peripherals connected in idle, with all cables typically used with the UUT dressed appropriately. A scan is taken, and checked if it passes over the limits as shown in FCC Part 15.109.

Test Criteria

Reference	Limit		
	Frequency Range	Field Strength Limit (uV/m) at 3M	Field Strength Limit (dBuV/m) at 3M
CFR 47 Subpart B, 15.109 ICES-003	30-88	100	40
	88-216	150	43.5
	216-960	200	46
	Above 960	500	54

Test Information

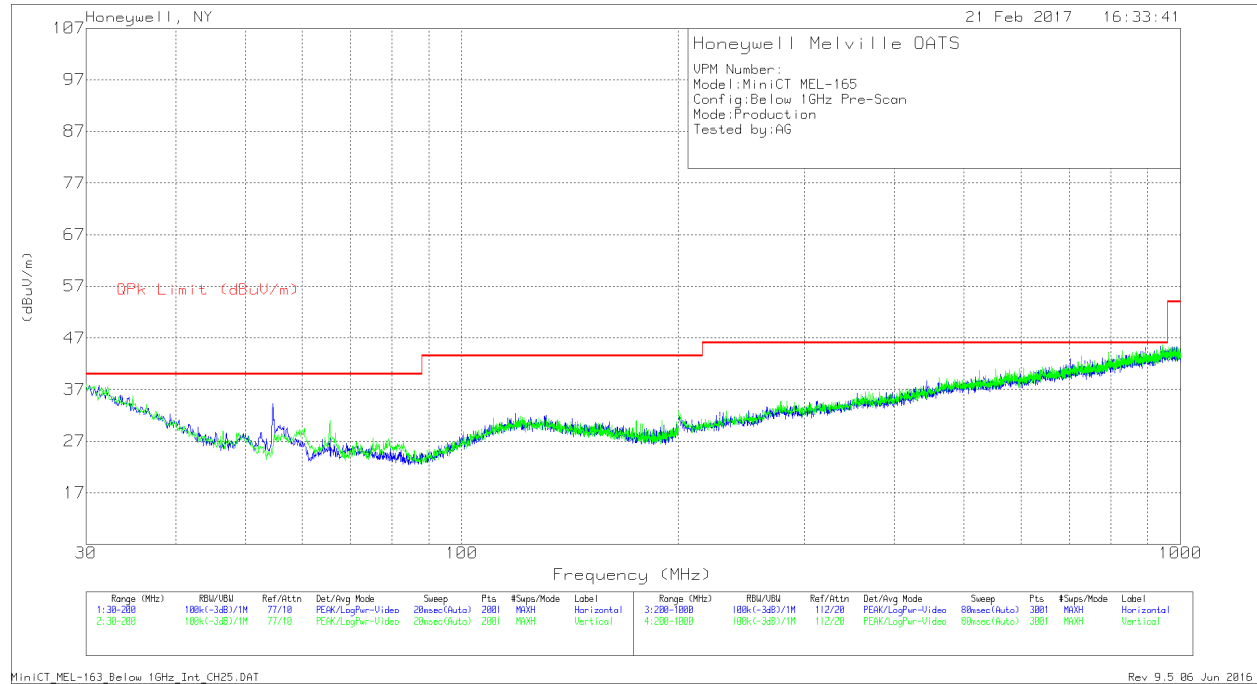
Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
CL/JB	RF Chamber / OATS	02/21/2017- 04/06/2017	0-10	20-50	NR	P

Equipment List

Instrument Type	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	Rohde & Schwarz	FSW26	2017-02-14	2018-02-14
Bilog Antenna	Sunol	JB5	2017-01-30	2018-01-30
Horn Antenna (1-18GHz)	EMCO	3115	2017-02-03	2018-02-03
Preamplifier (30-1000MHz)	HP	8447D	2016-09-27	2017-09-27
Preamplifier (1-18GHz)	Mini Circuits	ZVA-213-S+	2016-09-28	2017-09-28

Test Results

Below 1GHz

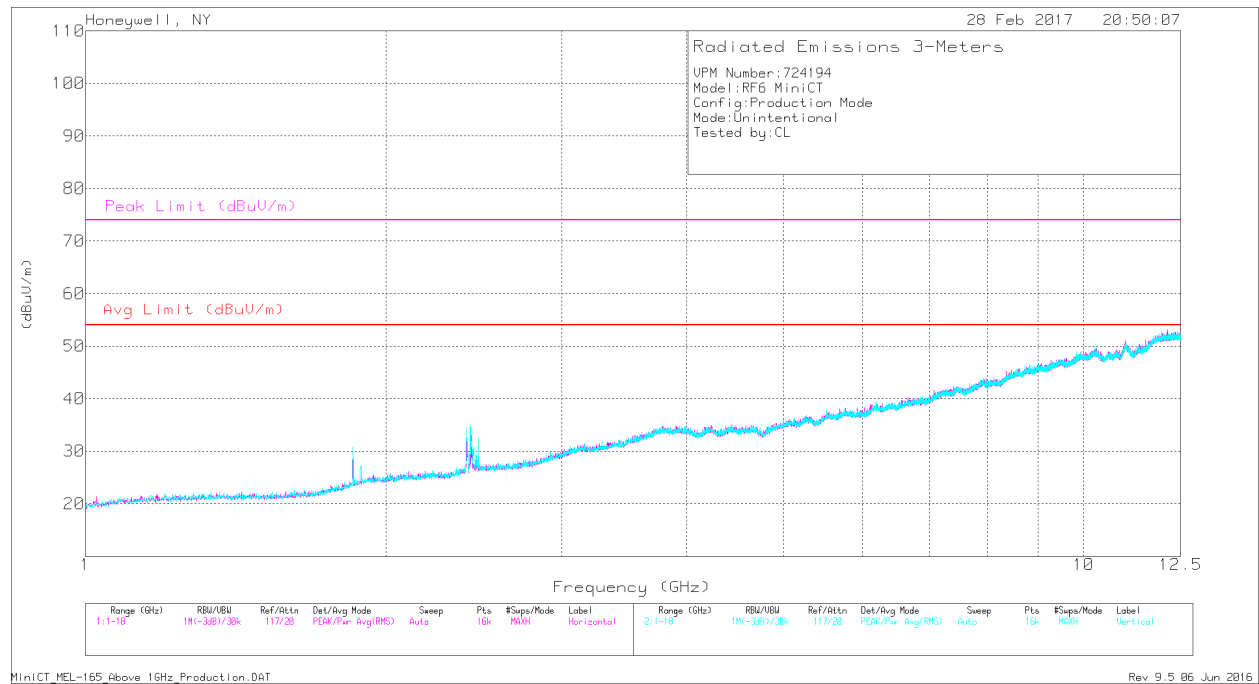


Frequency (MHz)	Meter Reading (dBuV)	Det	AF [dB/m] JB6 w/4dB pad	Pre Amp #1	RDE #1	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
54.565	41.59	Qp	11.9	-29	1.1	25.59	40	-14.41	51	379	H
* 118.325	24.03	Qp	17.4	-28.8	1.5	14.13	43.52	-29.39	270	159	H
65.53	48.9	Qp	12.1	-29	1.2	33.2	40	-6.8	139	154	V
174.925	42.63	Qp	16	-28.5	1.9	32.03	43.52	-11.49	35	120	V
443.7336	21.66	Qp	21.2	-28.6	3.4	17.66	46.02	-28.36	283	329	H
524.8337	41.34	Qp	22.8	-29	3.9	39.04	46.02	-6.98	249	301	V

Qp - Quasi-Peak detector

Note: Prescans performed in a RF chamber & final measurements are performed on an OATS.

Above 1GHz



Frequency (GHz)	Meter Reading (dBuV)	Det	AF [dB/m] Horn#1	Above 1G Preamp(miniC)	SMA7 CF	SMA6 CF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.852	22.83	Av	27.4	-26.9	2.3	1.1	26.73	54	-27.27	270	191	H
2.411	45.37	Av	28.6	-27	2.6	1.1	50.67	54	-3.33	107	123	H
2.435	30.19	Av	28.6	-27	2.6	1.2	35.59	54	-18.41	5	363	H
1.854	22.64	Av	27.5	-26.9	2.3	1.1	26.64	54	-27.36	183	140	V
2.409	27.89	Av	28.6	-27	2.6	1.1	33.19	54	-20.81	295	107	V
2.425	22.78	Av	28.6	-27	2.6	1.2	28.18	54	-25.82	18	184	V

Note: Prescans performed in a RF chamber & final measurements are performed on an OATS.

Radiated Emissions (FCC 15.209 Intentional Radiator)

Test Description

Intentional Radiator Radiated Emissions are a test of the emissions, and harmonics on the UUT. The UUT is positioned to get the maximum emissions after a series of prescan measurements.

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1 GHz measurements and 1.5 m above the ground plane for above 1 GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Test Criteria

Reference	Limit		
	Frequency Range	Field Strength Limit (uV/m) at 3M	Field Strength Limit (dBuV/m) at 3M
CFR 47 Subpart C, 15.205 CFR 47 Subpart C, 15.209 RSS-GEN	30-88	100	40
	88-216	150	43.5
	216-960	200	46
	Above 960	500	54

Test Information

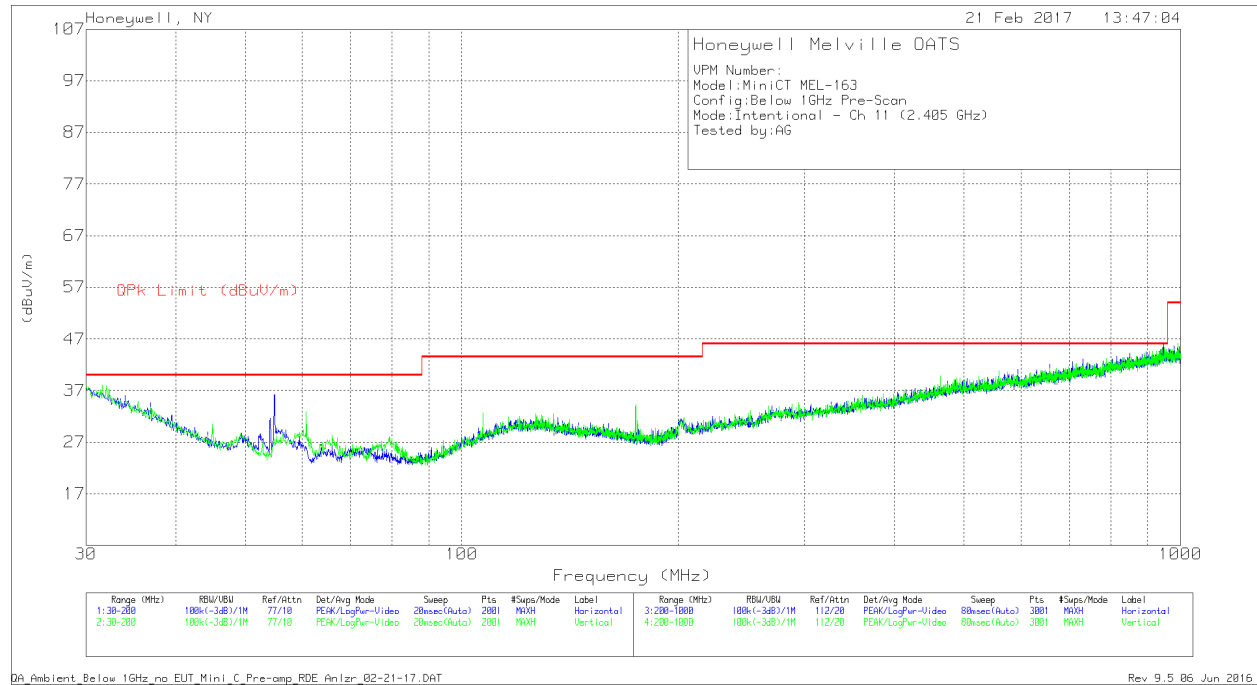
Tester	Test Location	Date	Temperature (°C)	Humidity (%RH)	Pressure (mbar)	Results (P/F)
CL/JB	RF Chamber / OATS	02/21/2017-04/10/2017	0-10	20-50	NR	P

Equipment List

Instrument Type	Manufacturer	Model	Cal Date	Cal Due Date
Spectrum Analyzer	Rohde & Schwarz	FSW26	2017-02-14	2018-02-14
Bilog Antenna	Sunol	JB5	2017-01-30	2018-01-30
Horn Antenna (1-18GHz)	EMCO	3115	2017-02-03	2018-02-03
Horn Antenna (18-26GHz)	EMCO	EM-6963	2017-02-06	2018-02-06
Preamplifier (30-1000MHz)	HP	8447D	2016-09-27	2017-09-27
Preamplifier (1-18GHz)	Mini Circuits	ZVA-213-S+	2016-09-28	2017-09-28
Preamplifier (18-26GHz)	Amplicon	AMP18G40-35	2016-10-07	2017-10-07

Test Results

Worst-Case Below 1GHz



Frequency (MHz)	Meter Reading (dBuV)	Det	AF [dB/m] JB6 w/4dB pad	Pre Amp #1	RDE #1	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
33.6679	26.27	Qp	23.3	-29.1	.8	21.27	40	-18.73	325	348	H
54.3204	45.79	Qp	12	-29	1.1	29.89	40	-10.11	344	398	H
174.3136	45.6	Qp	16.1	-28.5	1.9	35.1	43.52	-8.42	63	115	V
60.8287	50.01	Qp	11.9	-29	1.1	34.01	40	-5.99	63	115	V
658.3618	28.89	Qp	24.7	-28.7	4.5	29.39	46.02	-16.63	322	307	H
462.7003	36.28	Qp	21.7	-28.8	3.5	32.68	46.02	-13.34	81	370	V
559.2004	42.95	Qp	23	-29	4.1	41.05	46.02	-4.97	322	325	V

Qp - Quasi-Peak detector

Note: Prescans performed in a RF chamber & final measurements are performed on an OATS.

1-18GHz – Channel 11

Frequency (GHz)	Meter Reading (dBuV)	Det	AF [dB/m]	Preamp [dB]	SMA 7 CF	SMA 6 CF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
** 2.405	92.73	MAv1	28.6	-27	2.6	1.1	98.03	-	-	-	-	3	105	H
* 4.809	36.9	MAv1	33	-26.8	3.7	1.6	48.4	54	-5.6	-	-	188	115	H
* 12.023	23.09	MAv1	39.4	-25.8	6.5	2.8	45.99	54	-8.01	-	-	215	208	H
14.432	24.93	MAv1	42.6	-25.8	6.8	2.9	51.43	54	-2.57	-	-	16	253	H
** 2.405	82.39	MAv1	28.6	-27	2.6	1.1	87.69	-	-	-	-	296	400	V
* 4.809	34.32	MAv1	33	-26.8	3.7	1.6	45.82	54	-8.18	-	-	100	397	V
* 12.026	23.58	MAv1	39.4	-25.8	6.5	2.8	46.48	54	-7.52	-	-	318	115	V
14.431	25.03	MAv1	42.6	-25.8	6.8	2.9	51.53	54	-2.47	-	-	23	104	V
** 2.404	102.82	PK2	28.6	-27	2.6	1.1	108.12	-	-	-	-	3	105	H
* 4.809	48.3	PK2	33	-26.8	3.7	1.6	59.8	-	-	74	-14.2	188	115	H
7.216	32.32	PK2	36.2	-26.2	4.7	2	49.02	-	-	74	-24.98	162	115	H
9.621	31.91	PK2	37.8	-26.1	5.6	2.5	51.71	-	-	74	-22.29	124	130	H
* 12.027	34.45	PK2	39.4	-25.8	6.5	2.8	57.35	-	-	74	-16.65	215	208	H
14.429	34.6	PK2	42.6	-25.8	6.8	2.9	61.1	-	-	74	-12.9	16	253	H
16.835	35.52	PK2	40.3	-25.3	7.4	3.4	61.32	-	-	74	-12.68	229	278	H
** 2.405	95.88	PK2	28.6	-27	2.6	1.1	101.18	-	-	-	-	296	400	V
* 4.809	44.83	PK2	33	-26.8	3.7	1.6	56.33	-	-	74	-17.67	100	397	V
7.216	33.98	PK2	36.3	-26.2	4.7	2	50.78	-	-	74	-23.22	331	333	V
9.622	33.38	PK2	37.8	-26.1	5.6	2.5	53.18	-	-	74	-20.82	334	127	V
* 12.025	32.55	PK2	39.4	-25.8	6.5	2.8	55.45	-	-	74	-18.55	318	115	V
14.429	33.99	PK2	42.6	-25.8	6.8	2.9	60.49	-	-	74	-13.51	23	104	V
16.835	34.75	PK2	40.3	-25.3	7.4	3.4	60.55	-	-	74	-13.45	138	131	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates fundamental frequency

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

Note: Prescans performed in a RF chamber & final measurements are performed on an OATS. No additional emissions detected above the system noise floor besides harmonics.

1-18GHz – Channel 19

Frequency (GHz)	Meter Reading (dBuV)	Det	AF [dB/m]	Preampl [dB]	SMA 7 CF	SMA 6 CF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
** 2.445	90.54	MAv1	28.6	-27	2.6	1.2	95.94	-	-	-	-	182	186	H
* 4.89	23.65	MAv1	33.2	-26.9	3.7	1.6	35.25	54	-18.75	-	-	95	181	H
* 7.333	22.6	MAv1	36.7	-26.2	4.6	2	39.7	54	-14.3	-	-	137	362	H
* 12.227	23.63	MAv1	38.9	-25.6	6.5	3.5	46.93	54	-7.07	-	-	159	398	H
14.67	24.64	MAv1	42.4	-25.4	6.7	2.9	51.24	54	-2.76	-	-	141	287	H
** 2.445	88.43	MAv1	28.6	-27	2.6	1.2	93.83	-	-	-	-	262	385	V
* 4.891	31.05	MAv1	33.2	-26.9	3.7	1.6	42.65	54	-11.35	-	-	84	337	V
* 7.334	28.23	MAv1	36.7	-26.2	4.6	2	45.33	54	-8.67	-	-	7	113	V
* 12.223	23.81	MAv1	39	-25.6	6.5	3.5	47.21	54	-6.79	-	-	69	229	V
14.672	24.26	MAv1	42.4	-25.4	6.6	2.9	50.76	54	-3.24	-	-	186	203	V
** 2.445	101.03	PK2	28.6	-27	2.6	1.2	106.43	-	-	-	-	182	186	H
* 4.888	34.65	PK2	33.2	-26.9	3.7	1.6	46.25	-	-	74	-27.75	95	181	H
* 7.336	33.38	PK2	36.7	-26.2	4.6	2	50.48	-	-	74	-23.52	137	362	H
9.78	31.56	PK2	38.1	-26.1	5.5	2.4	51.46	-	-	74	-22.54	119	323	H
* 12.224	32.28	PK2	39	-25.6	6.5	3.5	55.68	-	-	74	-18.32	159	398	H
14.669	33.94	PK2	42.4	-25.4	6.7	2.9	60.54	-	-	74	-13.46	141	287	H
17.115	34.83	PK2	42.2	-25.3	7.5	3.2	62.43	-	-	74	-11.57	249	284	H
16.835	35.52	PK2	40.3	-25.3	7.4	3.4	61.32	-	-	74	-12.68	229	278	H
** 2.444	93.97	PK2	28.6	-27	2.6	1.2	99.37	-	-	-	-	262	385	V
* 4.889	43	PK2	33.2	-26.9	3.7	1.6	54.6	-	-	74	-19.4	84	337	V
* 7.336	37.74	PK2	36.7	-26.2	4.6	2	54.84	-	-	74	-19.16	7	113	V
9.782	39.61	PK2	38.1	-26.2	5.5	2.4	59.41	-	-	74	-14.59	338	137	V
* 12.227	32.46	PK2	38.9	-25.6	6.5	3.5	55.76	-	-	74	-18.24	69	229	V
14.671	34.89	PK2	42.4	-25.4	6.6	2.9	61.39	-	-	74	-12.61	186	203	V
17.115	35.7	PK2	42.2	-25.3	7.5	3.2	63.3	-	-	74	-10.7	183	222	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates fundamental frequency

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

Note: Prescans performed in a RF chamber & final measurements are performed on an OATS. No additional emissions detected above the system noise floor besides harmonics.

1-18GHz – Channel 25

Frequency (GHz)	Meter Reading (dBuV)	Det	AF [dB/m]	Preamp [dB]	SMA 7 CF	SMA 6 CF	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
** 2.475	94.63	MAv1	28.7	-27	2.6	1.1	100.03	-	-	-	-	185	183	H
* 4.949	37.9	MAv1	33.3	-26.7	3.8	1.6	49.9	54	-4.1	-	-	17	142	H
* 7.426	28.06	MAv1	36.8	-26.2	4.7	2	45.36	54	-8.64	-	-	41	150	H
* 12.374	29.42	MAv1	38.7	-25.7	6.5	3.8	52.72	54	-1.28	-	-	64	163	H
** 2.475	87.48	MAv1	28.7	-27	2.6	1.1	92.88	-	-	-	-	82	330	V
* 4.949	35.94	MAv1	33.3	-26.7	3.8	1.6	47.94	54	-6.06	-	-	2	121	V
* 7.424	23.99	MAv1	36.8	-26.2	4.7	2	41.29	54	-12.71	-	-	37	134	V
* 12.376	23.81	MAv1	38.7	-25.7	6.5	3.8	47.11	54	-6.89	-	-	360	310	V
** 2.475	100.81	PK2	28.7	-27	2.6	1.1	106.21	-	-	-	-	185	183	H
* 4.949	47.94	PK2	33.3	-26.7	3.8	1.6	59.94	-	-	74	-14.06	17	142	H
* 7.424	37.95	PK2	36.8	-26.2	4.7	2	55.25	-	-	74	-18.75	41	150	H
9.9	37.83	PK2	38.4	-26.1	5.5	2.5	58.13	-	-	74	-15.87	144	228	H
* 12.375	39.5	PK2	38.7	-25.7	6.5	3.8	62.8	-	-	74	-11.2	64	163	H
14.85	39.54	PK2	41.8	-25.5	6.8	2.9	65.54	-	-	74	-8.46	315	368	H
17.325	41.92	PK2	43.8	-25	7.5	3.3	71.52	-	-	74	-2.48	284	298	H
** 2.475	93.74	PK2	28.7	-27	2.6	1.1	99.14	-	-	-	-	82	330	V
* 4.949	44.66	PK2	33.3	-26.7	3.8	1.6	56.66	-	-	74	-17.34	2	121	V
* 7.426	34.26	PK2	36.8	-26.2	4.7	2	51.56	-	-	74	-22.44	37	134	V
9.899	35.35	PK2	38.4	-26.1	5.5	2.5	55.65	-	-	74	-18.35	26	136	V
* 12.375	33.55	PK2	38.7	-25.7	6.5	3.8	56.85	-	-	74	-17.15	360	310	V
14.85	35.08	PK2	41.8	-25.5	6.8	2.9	61.08	-	-	74	-12.92	303	200	V
17.325	36.27	PK2	43.8	-25	7.5	3.3	65.87	-	-	74	-8.13	344	106	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

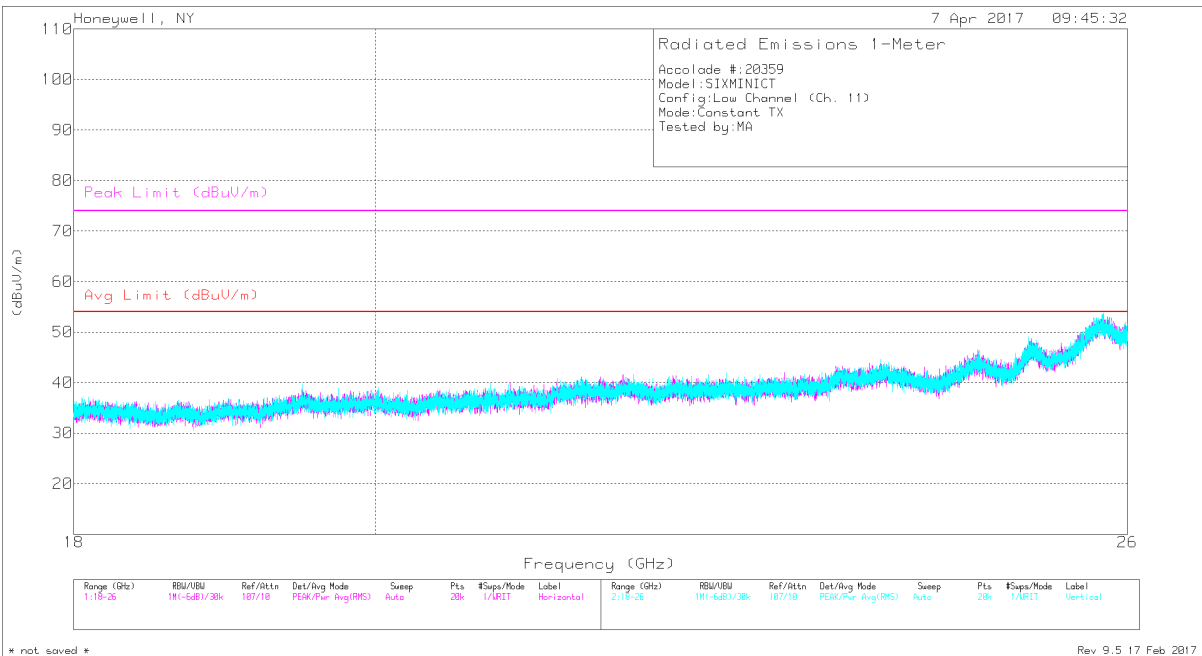
** - indicates fundamental frequency

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

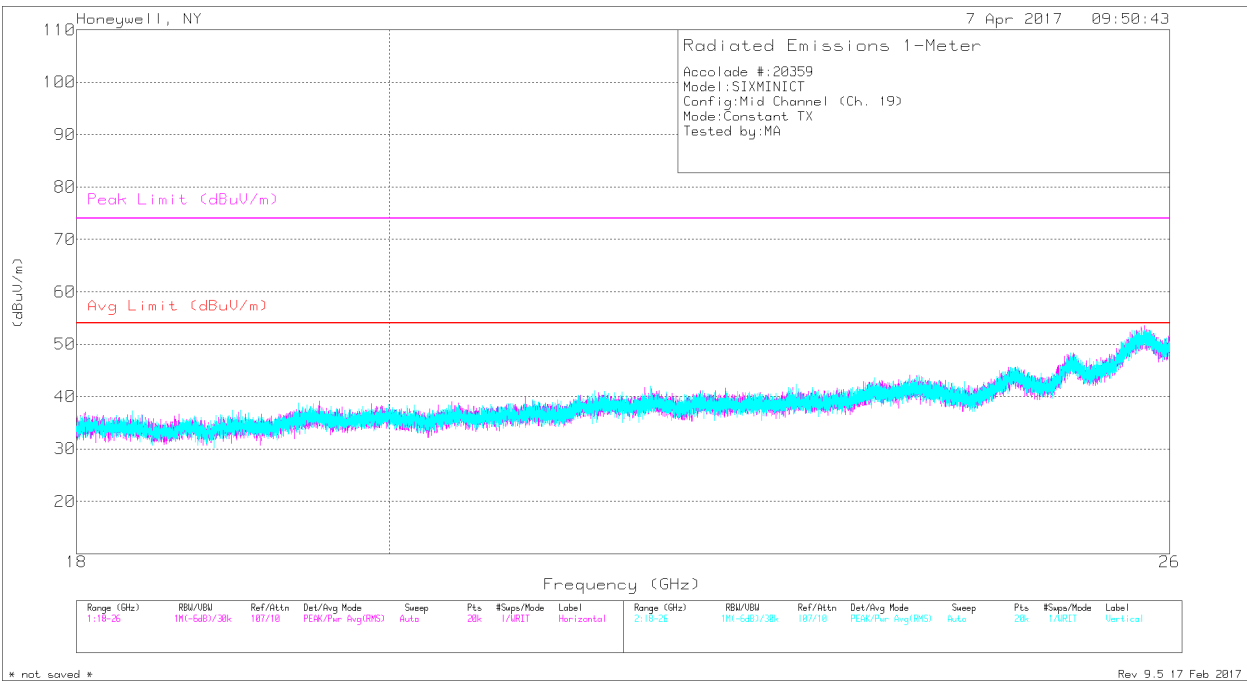
Note: Prescans performed in a RF chamber & final measurements are performed on an OATS. No additional emissions detected above the system noise floor besides harmonics.

18-26GHz – Channel 11



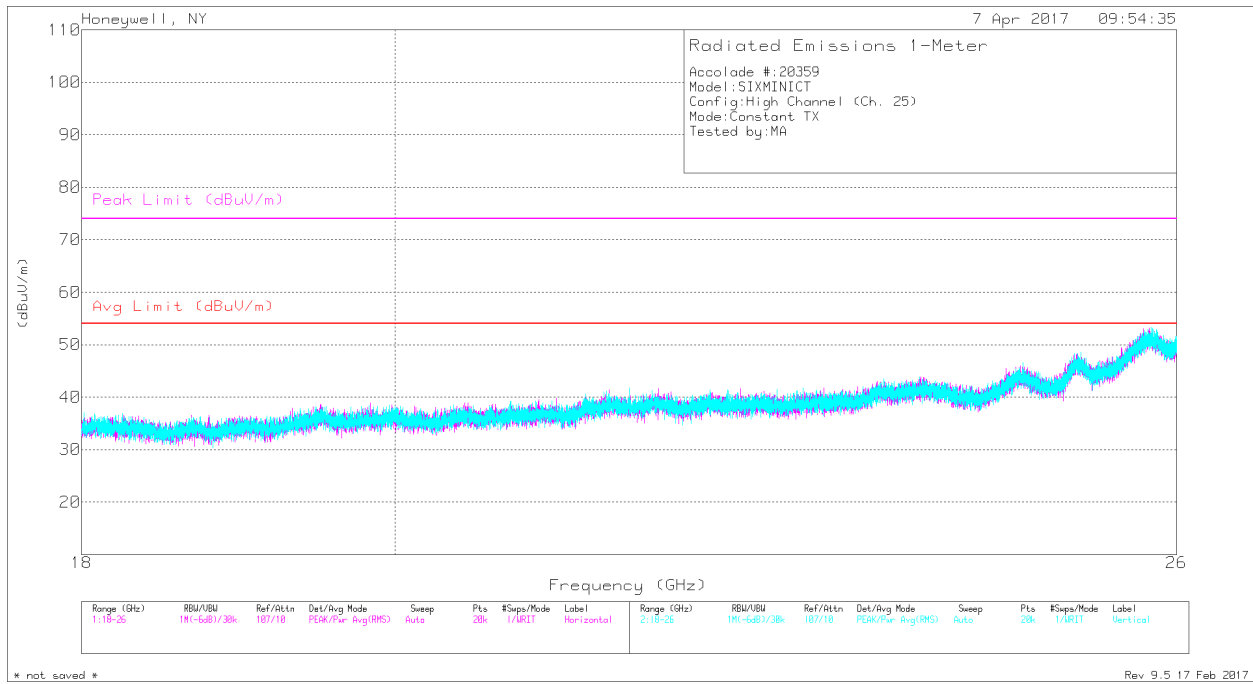
Note: No emissions detected above the system noise floor.

18-26GHz – Channel 19



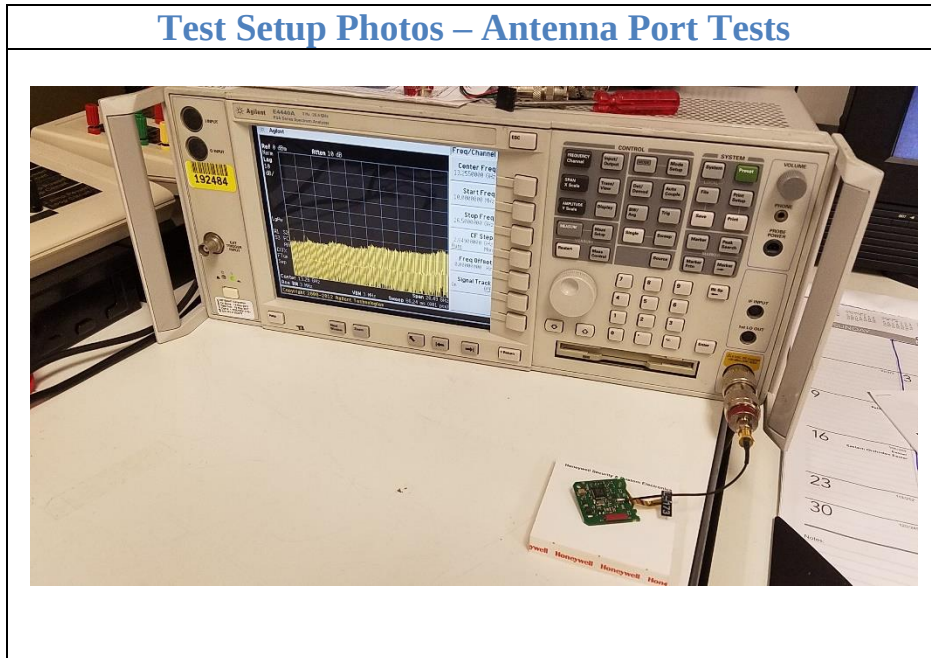
Note: No emissions detected above the system noise floor.

18-26GHz – Channel 25



Note: No emissions detected above the system noise floor.

Setup Photos



Test Setup Photos – Radiated Emissions below 1GHz



Test Setup Photos – Radiated Emissions above 1GHz



1-18GHz



1-18GHz

Test Setup Photos – Radiated Emissions above 1GHz



18-26GHz

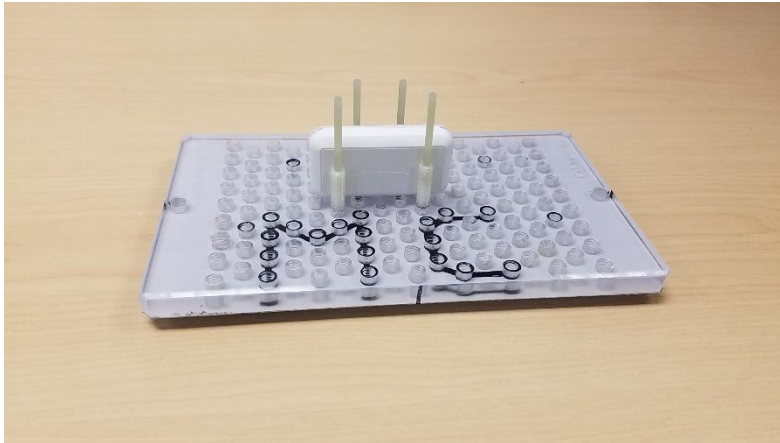


18-26GHz

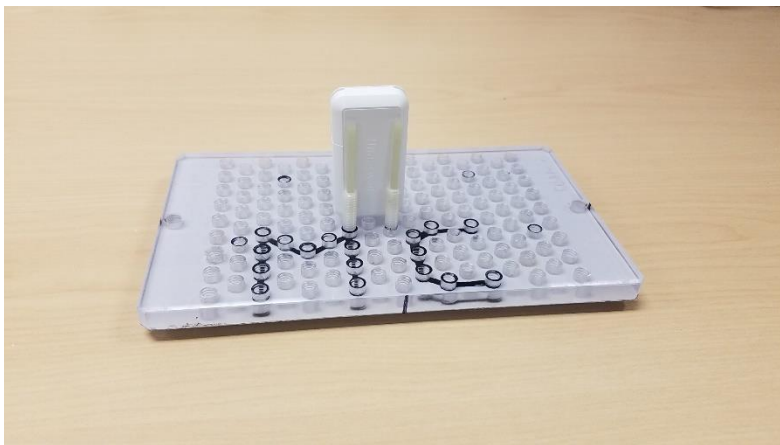
Test Setup Photos – X/Y/Z Orientation Setup



X-Axis



Y-Axis



Z-Axis

END OF REPORT