

RADIATED TEST REPORT

FROM



Test of: SensThys Inc., SensArray+

To: FCC Subpart C 15.247 (FHSS), ISED RSS-247

Test Report Serial No.: TIME01-U2_Radiated Rev A

Issue Date: 5th September 2017

As a result of the 6 Mbyte FCC file size limitation potentially large test reports require to be split into smaller components. This document is the Master document controlling Addendum reports as listed below. This Master document combined with the Addendums demonstrate compliance with the standard

Master Document Number	Addendum Reports
TIME01-U2_Master	TIME01-U2_Conducted
	TIME01-U2_Radiated

This Test Report is Issued Under the Authority of:

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MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

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1. TEST RESULTS

1.1. Emissions

1.1.1. Radiated Emissions

Radiated Test Conditions for Radiated Spurious and Band-Edge Emissions (Restricted Bands)			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	20.0 - 24.5
Test Heading:	Radiated Spurious and Band-Edge Emissions	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.205, 15.209	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Spurious and Band-Edge Emissions (Restricted Bands)

Radiated emissions for restricted bands above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode. Depending on the frequency band spanned a notch filter and waveguide filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned. Measurements on any restricted band frequency or frequencies above 1 GHz are based on the use of measurement instrumentation employing peak and average detectors. All measurements were performed using a resolution bandwidth of 1 MHz.

Test configuration and setup for Radiated Spurious and Band-Edge Measurement were per the Radiated Test Set-up specified in this document.

Limits for Restricted Bands

Peak emission: 74 dB_uV/m

Average emission: 54 dB_uV/m

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.

$$FS = R + AF + CORR - FO$$

where:

FS = Field Strength

R = Measured Spectrum analyzer Input Amplitude

AF = Antenna Factor

CORR = Correction Factor = CL - AG + NFL

CL = Cable Loss

AG = Amplifier Gain

FO = Distance Falloff Factor

NFL = Notch Filter Loss or Waveguide Loss

Example:

Given receiver input reading of 51.5 dBmV; Antenna Factor of 8.5 dB; Cable Loss of 1.3 dB; Falloff Factor of 0 dB, an Amplifier Gain of 26 dB and Notch Filter Loss of 1 dB. The Field Strength (FS) of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3 \text{ dBmV/m}$$

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are as follows:

$$\text{Level (dBmV/m)} = 20 * \log (\text{level (mV/m)})$$

$$40 \text{ dBmV/m} = 100 \text{ mV/m}$$

$$48 \text{ dBmV/m} = 250 \text{ mV/m}$$

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Restricted Bands of Operation (15.205)

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

Frequency Band			
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

(b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

(c) Except as provided in paragraphs (d) and (e) of this section, regardless of the field strength limits specified elsewhere in this subpart, the provisions of this section apply to emissions from any intentional radiator.

(d) The following devices are exempt from the requirements of this section:

- (1) Swept frequency field disturbance sensors operating between 1.705 and 37 MHz provided their emissions only sweep through the bands listed in paragraph (a) of this section, the sweep is never stopped with the fundamental emission within the bands listed in paragraph (a) of this section, and the fundamental emission is outside of the bands listed in paragraph (a) of this section more than 99% of the time the device is actively transmitting, without compensation for duty cycle.
- (2) Transmitters used to detect buried electronic markers at 101.4 kHz which are employed by telephone companies.
- (3) Cable locating equipment operated pursuant to §15.213.
- (4) Any equipment operated under the provisions of §15.253, 15.255, and 15.256 in the frequency band 75-85 GHz, or §15.257 of this part.

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(5) Biomedical telemetry devices operating under the provisions of §15.242 of this part are not subject to the restricted band 608-614 MHz but are subject to compliance within the other restricted bands.

(6) Transmitters operating under the provisions of subparts D or F of this part.

(7) Devices operated pursuant to §15.225 are exempt from complying with this section for the 13.36-13.41 MHz band only.

(8) Devices operated in the 24.075-24.175 GHz band under §15.245 are exempt from complying with the requirements of this section for the 48.15-48.35 GHz and 72.225-72.525 GHz bands only, and shall not exceed the limits specified in §15.245(b).

(9) Devices operated in the 24.0-24.25 GHz band under §15.249 are exempt from complying with the requirements of this section for the 48.0-48.5 GHz and 72.0-72.75 GHz bands only, and shall not exceed the limits specified in §15.249(a).

(e) Harmonic emissions appearing in the restricted bands above 17.7 GHz from field disturbance sensors operating under the provisions of §15.245 shall not exceed the limits specified in §15.245(b).



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To: FCC Subpart C 15.247, ISED RSS-247
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1.1.1.1. TX Spurious & Restricted Band Emissions

Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1805.55	64.86	2.45	-13.63	53.68	Peak (NRB)	Vertical	151	0	--	--	Pass		
#2	2708.30	57.29	2.86	-11.37	48.78	Max Peak	Horizontal	152	248	74.0	-25.2	Pass		
#3	2708.30	53.98	2.86	-11.37	45.47	Max Avg	Horizontal	152	248	54.0	-8.5	Pass		
#4	3610.95	61.06	3.13	-11.14	53.05	Max Peak	Horizontal	166	146	74.0	-21.0	Pass		
#5	3610.95	58.85	3.13	-11.14	50.84	Max Avg	Horizontal	166	146	54.0	-3.2	Pass		
#6	4513.74	57.78	3.54	-11.55	49.77	Max Peak	Horizontal	114	232	74.0	-24.2	Pass		
#7	4513.74	54.14	3.54	-11.55	46.13	Max Avg	Horizontal	114	232	54.0	-7.9	Pass		
#8	5416.54	61.30	3.73	-11.18	53.85	Max Peak	Horizontal	146	54	74.0	-20.2	Pass		
#9	5416.54	58.38	3.73	-11.18	50.93	Max Avg	Horizontal	146	54	54.0	-3.1	Pass		
#10	6319.33	60.81	3.94	-8.33	56.42	Peak (NRB)	Horizontal	151	213	--	--	Pass		
#11	7221.99	51.36	4.30	-7.35	48.31	Peak (NRB)	Horizontal	151	178	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1830.27	61.81	2.45	-13.53	50.73	Peak (NRB)	Vertical	100	19	--	--	Pass		
#2	2745.73	58.70	2.84	-11.35	50.19	Max Peak	Horizontal	177	246	74.0	-23.8	Pass		
#3	2745.73	55.79	2.84	-11.35	47.28	Max Avg	Horizontal	177	246	54.0	-6.7	Pass		
#4	3661.04	60.91	3.17	-11.04	53.04	Max Peak	Horizontal	151	210	74.0	-21.0	Pass		
#5	3661.04	58.60	3.17	-11.04	50.73	Max Avg	Horizontal	151	210	54.0	-3.3	Pass		
#6	4576.22	57.21	3.48	-11.39	49.30	Max Peak	Horizontal	120	228	74.0	-24.7	Pass		
#7	4576.22	53.05	3.48	-11.39	45.14	Max Avg	Horizontal	120	228	54.0	-8.9	Pass		
#8	6406.80	62.45	3.97	-8.03	58.39	Peak (NRB)	Horizontal	151	191	--	--	Pass		
#9	7321.90	51.04	4.26	-7.26	48.04	Max Peak	Horizontal	152	120	74.0	-26.0	Pass		
#10	7321.90	41.47	4.26	-7.26	38.47	Max Avg	Horizontal	152	120	54.0	-15.5	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1854.47	60.79	2.49	-13.42	49.86	Peak (NRB)	Horizontal	151	0	--	--	Pass		
#2	2781.72	59.21	2.85	-11.33	50.73	Max Peak	Horizontal	159	251	74.0	-23.3	Pass		
#3	2781.72	56.27	2.85	-11.33	47.79	Max Avg	Horizontal	159	251	54.0	-6.2	Pass		
#4	3708.99	58.46	3.19	-10.93	50.72	Max Peak	Horizontal	156	145	74.0	-23.3	Pass		
#5	3708.99	55.46	3.19	-10.93	47.72	Max Avg	Horizontal	156	145	54.0	-6.3	Pass		
#6	6490.70	66.18	4.00	-7.92	62.26	Peak (NRB)	Horizontal	151	174	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1847.46	63.80	2.46	-13.46	52.80	Peak (NRB)	Horizontal	151	0	--	--	Pass		
#2	2756.36	55.69	2.82	-11.35	47.16	Max Peak	Horizontal	156	266	74.0	-26.8	Pass		
#3	2756.36	48.76	2.82	-11.35	40.23	Max Avg	Horizontal	156	266	54.0	-13.8	Pass		
#4	3658.74	57.83	3.17	-11.04	49.96	Max Peak	Horizontal	132	134	74.0	-24.0	Pass		
#5	3658.74	51.52	3.17	-11.04	43.65	Max Avg	Horizontal	132	134	54.0	-10.4	Pass		
#6	4591.33	57.91	3.55	-11.38	50.08	Max Peak	Horizontal	136	220	74.0	-23.9	Pass		
#7	4591.33	52.42	3.55	-11.38	44.59	Max Avg	Horizontal	136	220	54.0	-9.4	Pass		
#8	5419.51	62.78	3.74	-11.18	55.34	Max Peak	Horizontal	98	179	74.0	-18.7	Pass		
#9	5419.51	58.89	3.74	-11.18	51.45	Max Avg	Horizontal	98	179	54.0	-2.6	Pass		
#10	6469.83	61.24	3.98	-7.94	57.28	Peak (NRB)	Vertical	150	220	--	--	Pass		
#11	7250.11	55.09	4.20	-7.33	51.96	Max Peak	Vertical	154	196	74.0	-22.0	Pass		
#12	7250.11	44.65	4.20	-7.33	41.52	Max Avg	Vertical	154	196	54.0	-12.5	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1805.55	63.40	2.45	-13.63	52.22	Peak (NRB)	Horizontal	151	24	--	--	Pass		
#2	2708.23	60.47	2.86	-11.37	51.96	Max Peak	Vertical	124	181	74.0	-22.0	Pass		
#3	2708.23	58.19	2.86	-11.37	49.68	Max Avg	Vertical	124	181	54.0	-4.3	Pass		
#4	3611.01	60.25	3.13	-11.14	52.24	Max Peak	Horizontal	170	237	74.0	-21.8	Pass		
#5	3611.01	58.13	3.13	-11.14	50.12	Max Avg	Horizontal	170	237	54.0	-3.9	Pass		
#6	5416.49	59.83	3.73	-11.18	52.38	Max Peak	Vertical	148	159	74.0	-21.6	Pass		
#7	5416.49	56.51	3.73	-11.18	49.06	Max Avg	Vertical	148	159	54.0	-4.9	Pass		
#8	6319.14	57.21	3.94	-8.33	52.82	Peak (NRB)	Vertical	151	191	--	--	Pass		
#9	7222.06	56.51	4.30	-7.35	53.46	Peak (NRB)	Vertical	151	191	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1830.49	58.98	2.45	-13.53	47.90	Peak (NRB)	Horizontal	151	198	--	--	Pass		
#2	3661.02	57.84	3.17	-11.04	49.97	Max Peak	Horizontal	184	234	74.0	-24.0	Pass		
#3	3661.02	54.26	3.17	-11.04	46.39	Max Avg	Horizontal	184	234	54.0	-7.6	Pass		
#4	5491.55	53.14	3.71	-11.18	45.67	Peak (NRB)	Vertical	151	198	--	--	Pass		
#5	6406.71	56.52	3.97	-8.03	52.46	Peak (NRB)	Vertical	151	198	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	1854.47	57.76	2.49	-13.42	46.83	Peak (NRB)	Vertical	151	360	--	--	Pass	
#2	6490.85	55.68	4.00	-7.92	51.76	Peak (NRB)	Vertical	151	360	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1847.53	65.33	2.46	-13.46	54.33	Peak (NRB)	Horizontal	151	0	--	--	Pass		
#2	2709.80	55.15	2.85	-11.37	46.63	Max Peak	Horizontal	189	11	74.0	-27.4	Pass		
#3	2709.80	49.42	2.85	-11.37	40.90	Max Avg	Horizontal	189	11	54.0	-13.1	Pass		
#4	3631.10	61.87	3.17	-11.11	53.93	Max Peak	Horizontal	197	238	74.0	-20.1	Pass		
#5	3631.10	56.78	3.17	-11.11	48.84	Max Avg	Horizontal	197	238	54.0	-5.2	Pass		
#6	4526.25	55.93	3.47	-11.49	47.91	Max Peak	Horizontal	103	222	74.0	-26.1	Pass		
#7	4526.25	50.62	3.47	-11.49	42.60	Max Avg	Horizontal	103	222	54.0	-11.4	Pass		
#8	5437.69	62.28	3.74	-11.21	54.81	Max Peak	Vertical	146	160	74.0	-19.2	Pass		
#9	5437.69	58.84	3.74	-11.21	51.37	Max Avg	Vertical	146	160	54.0	-2.6	Pass		
#10	6490.85	59.52	4.00	-7.92	55.60	Peak (NRB)	Horizontal	151	157	--	--	Pass		
#11	7277.96	54.93	4.28	-7.32	51.89	Max Peak	Vertical	135	207	74.0	-22.1	Pass		
#12	7277.96	40.83	4.28	-7.32	37.79	Max Avg	Vertical	135	207	54.0	-16.2	Pass		
#13	7355.59	47.44	4.37	-7.20	44.61	Max Peak	Horizontal	98	56	74.0	-29.4	Pass		
#14	7355.59	34.25	4.37	-7.20	31.42	Max Avg	Horizontal	98	56	54.0	-22.6	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1805.55	64.93	2.45	-13.63	53.75	Peak (NRB)	Vertical	151	0	--	--	Pass		
#2	2708.19	58.17	2.86	-11.37	49.66	Max Peak	Vertical	98	161	74.0	-24.3	Pass		
#3	2708.19	54.41	2.86	-11.37	45.90	Max Avg	Vertical	98	161	54.0	-8.1	Pass		
#4	3610.95	61.06	3.13	-11.14	53.05	Max Peak	Vertical	197	202	74.0	-21.0	Pass		
#5	3610.95	56.24	3.13	-11.14	48.23	Max Avg	Vertical	197	202	54.0	-5.8	Pass		
#6	5416.52	63.05	3.73	-11.18	55.60	Max Peak	Vertical	140	140	74.0	-18.4	Pass		
#7	5416.52	59.31	3.73	-11.18	51.86	Max Avg	Vertical	140	140	54.0	-2.1	Pass		
#8	6319.37	62.25	3.94	-8.33	57.86	Peak (NRB)	Vertical	151	158	--	--	Pass		
#9	7222.02	52.40	4.30	-7.35	49.35	Peak (NRB)	Vertical	151	158	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1830.49	62.12	2.45	-13.53	51.04	Peak (NRB)	Vertical	149	0	--	--	Pass		
#2	2745.71	58.44	2.84	-11.35	49.93	Max Peak	Horizontal	184	248	74.0	-24.1	Pass		
#3	2745.71	54.90	2.84	-11.35	46.39	Max Avg	Horizontal	184	248	54.0	-7.6	Pass		
#4	3661.01	61.19	3.17	-11.04	53.32	Max Peak	Horizontal	114	141	74.0	-20.7	Pass		
#5	3661.01	57.91	3.17	-11.04	50.04	Max Avg	Horizontal	114	141	54.0	-4.0	Pass		
#6	4576.27	57.21	3.48	-11.39	49.30	Max Peak	Horizontal	98	223	74.0	-24.7	Pass		
#7	4576.27	52.71	3.48	-11.39	44.80	Max Avg	Horizontal	98	223	54.0	-9.2	Pass		
#8	6406.69	62.87	3.97	-8.03	58.81	Peak (NRB)	Vertical	149	172	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1854.54	61.16	2.49	-13.42	50.23	Peak (NRB)	Vertical	100	0	--	--	Pass		
#2	2781.79	55.92	2.85	-11.33	47.44	Max Peak	Horizontal	129	78	74.0	-26.6	Pass		
#3	2781.79	51.48	2.85	-11.33	43.00	Max Avg	Horizontal	129	78	54.0	-11.0	Pass		
#4	3708.96	58.59	3.19	-10.93	50.85	Max Peak	Horizontal	118	141	74.0	-23.2	Pass		
#5	3708.96	55.49	3.19	-10.93	47.75	Max Avg	Horizontal	118	141	54.0	-6.3	Pass		
#6	4636.30	54.39	3.57	-11.30	46.66	Max Peak	Horizontal	123	230	74.0	-27.3	Pass		
#7	4636.30	48.47	3.57	-11.30	40.74	Max Avg	Horizontal	123	230	54.0	-13.3	Pass		
#8	5563.56	55.02	3.85	-11.22	47.65	Peak (NRB)	Horizontal	100	159	--	--	Pass		
#9	6490.81	67.72	4.00	-7.92	63.80	Peak (NRB)	Vertical	100	159	--	--	Pass		
#10	7417.99	50.92	4.33	-7.14	48.11	Max Peak	Vertical	188	154	74.0	-25.9	Pass		
#11	7417.99	42.02	4.33	-7.14	39.21	Max Avg	Vertical	188	154	54.0	-14.8	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	1841.51	65.57	2.45	-13.48	54.54	Peak (NRB)	Vertical	150	0	--	--	Pass	
#2	2723.18	57.35	2.80	-11.37	48.78	Max Peak	Vertical	148	177	74.0	-25.2	Pass	
#3	2723.18	52.86	2.80	-11.37	44.29	Max Avg	Vertical	148	177	54.0	-9.7	Pass	
#4	3613.08	60.13	3.13	-11.14	52.12	Max Peak	Horizontal	195	151	74.0	-21.9	Pass	
#5	3613.08	54.13	3.13	-11.14	46.12	Max Avg	Horizontal	195	151	54.0	-7.9	Pass	
#6	4596.29	56.54	3.55	-11.38	48.71	Max Peak	Horizontal	150	226	74.0	-25.3	Pass	
#7	4596.29	49.29	3.55	-11.38	41.46	Max Avg	Horizontal	150	226	54.0	-12.5	Pass	
#8	5419.56	62.65	3.74	-11.18	55.21	Max Peak	Vertical	157	129	74.0	-18.8	Pass	
#9	5419.56	57.60	3.74	-11.18	50.16	Max Avg	Vertical	157	129	54.0	-3.8	Pass	
#10	6469.79	60.14	3.98	-7.94	56.18	Peak (NRB)	Vertical	150	219	--	--	Pass	
#11	7354.04	54.65	4.38	-7.21	51.82	Max Peak	Vertical	145	208	74.0	-22.2	Pass	
#12	7354.04	43.03	4.38	-7.21	40.20	Max Avg	Vertical	145	208	54.0	-13.8	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1805.45	62.96	2.45	-13.63	51.78	Peak (NRB)	Vertical	151	11	--	--	Pass		
#2	2708.24	58.17	2.86	-11.37	49.66	Max Peak	Vertical	98	160	74.0	-24.3	Pass		
#3	2708.24	55.01	2.86	-11.37	46.50	Max Avg	Vertical	98	160	54.0	-7.5	Pass		
#4	3611.03	61.06	3.13	-11.14	53.05	Max Peak	Horizontal	142	137	74.0	-21.0	Pass		
#5	3611.03	56.32	3.13	-11.14	48.31	Max Avg	Horizontal	142	137	54.0	-5.7	Pass		
#6	5416.48	63.18	3.73	-11.18	55.73	Max Peak	Vertical	147	134	74.0	-18.3	Pass		
#7	5416.48	59.87	3.73	-11.18	52.42	Max Avg	Vertical	147	134	54.0	-1.6	Pass		
#8	6319.17	56.33	3.94	-8.33	51.94	Peak (NRB)	Vertical	151	227	--	--	Pass		
#9	7221.94	50.85	4.30	-7.35	47.80	Peak (NRB)	Vertical	151	227	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1830.15	59.40	2.45	-13.53	48.32	Peak (NRB)	Vertical	151	0	--	--	Pass		
#2	2745.78	60.09	2.84	-11.35	51.58	Max Peak	Horizontal	190	253	74.0	-22.4	Pass		
#3	2745.78	57.37	2.84	-11.35	48.86	Max Avg	Horizontal	190	253	54.0	-5.1	Pass		
#4	3661.07	61.19	3.17	-11.04	53.32	Max Peak	Horizontal	151	210	74.0	-20.7	Pass		
#5	3661.07	58.74	3.17	-11.04	50.87	Max Avg	Horizontal	151	210	54.0	-3.1	Pass		
#6	4576.27	57.59	3.48	-11.39	49.68	Max Peak	Horizontal	108	230	74.0	-24.3	Pass		
#7	4576.27	53.44	3.48	-11.39	45.53	Max Avg	Horizontal	108	230	54.0	-8.5	Pass		
#8	5491.50	56.30	3.71	-11.18	48.83	Peak (NRB)	Vertical	151	202	--	--	Pass		
#9	6406.74	63.16	3.97	-8.03	59.10	Peak (NRB)	Vertical	151	202	--	--	Pass		
#10	7321.97	54.40	4.26	-7.26	51.40	Max Peak	Vertical	185	182	74.0	-22.6	Pass		
#11	7321.97	48.30	4.26	-7.26	45.30	Max Avg	Vertical	185	182	54.0	-8.7	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1854.46	60.65	2.49	-13.42	49.72	Peak (NRB)	Vertical	100	0	--	--	Pass		
#2	2781.69	60.23	2.85	-11.33	51.75	Max Peak	Vertical	109	186	74.0	-22.3	Pass		
#3	2781.69	57.38	2.85	-11.33	48.90	Max Avg	Vertical	109	186	54.0	-5.1	Pass		
#4	3709.00	58.71	3.20	-10.93	50.98	Max Peak	Horizontal	128	138	74.0	-23.0	Pass		
#5	3709.00	55.72	3.20	-10.93	47.99	Max Avg	Horizontal	128	138	54.0	-6.0	Pass		
#6	4636.30	54.65	3.57	-11.30	46.92	Max Peak	Horizontal	112	230	74.0	-27.1	Pass		
#7	4636.30	48.73	3.57	-11.30	41.00	Max Avg	Horizontal	112	230	54.0	-13.0	Pass		
#8	5563.52	55.53	3.85	-11.22	48.16	Peak (NRB)	Horizontal	100	178	--	--	Pass		
#9	6490.76	66.91	4.00	-7.92	62.99	Peak (NRB)	Vertical	100	178	--	--	Pass		
#10	7417.99	49.47	4.33	-7.14	46.66	Max Peak	Vertical	116	353	74.0	-27.3	Pass		
#11	7417.99	37.71	4.33	-7.14	34.90	Max Avg	Vertical	116	353	54.0	-19.1	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	1847.59	60.74	2.46	-13.46	49.74	Peak (NRB)	Horizontal	151	188	--	--	Pass	
#2	2756.24	58.98	2.82	-11.35	50.45	Max Peak	Vertical	136	172	74.0	-23.6	Pass	
#3	2756.24	54.45	2.82	-11.35	45.92	Max Avg	Vertical	136	172	54.0	-8.1	Pass	
#4	3659.18	58.47	3.17	-11.04	50.60	Max Peak	Horizontal	134	138	74.0	-23.4	Pass	
#5	3659.18	54.23	3.17	-11.04	46.36	Max Avg	Horizontal	134	138	54.0	-7.6	Pass	
#6	4591.22	56.14	3.55	-11.38	48.31	Max Peak	Horizontal	136	207	74.0	-25.7	Pass	
#7	4591.22	49.85	3.55	-11.38	42.02	Max Avg	Horizontal	136	207	54.0	-12.0	Pass	
#8	5431.27	60.50	3.74	-11.20	53.04	Max Peak	Vertical	137	155	74.0	-21.0	Pass	
#9	5431.27	51.52	3.74	-11.20	44.06	Max Avg	Vertical	137	155	54.0	-9.9	Pass	
#10	6476.81	68.35	3.99	-7.94	64.40	Peak (NRB)	Vertical	151	157	--	--	Pass	
#11	7390.04	52.57	4.29	-7.17	49.69	Max Peak	Vertical	139	208	74.0	-24.3	Pass	
#12	7390.04	43.46	4.29	-7.17	40.58	Max Avg	Vertical	139	208	54.0	-13.4	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	1805.42	53.89	2.45	-13.63	42.71	Peak (NRB)	Vertical	151	181	--	--	Pass	
#2	2708.27	59.82	2.86	-11.37	51.31	Max Peak	Vertical	175	149	74.0	-22.7	Pass	
#3	2708.27	57.75	2.86	-11.37	49.24	Max Avg	Vertical	175	149	54.0	-4.8	Pass	
#4	3610.95	60.79	3.13	-11.14	52.78	Max Peak	Horizontal	196	209	74.0	-21.2	Pass	
#5	3610.95	58.63	3.13	-11.14	50.62	Max Avg	Horizontal	196	209	54.0	-3.4	Pass	
#6	5416.54	59.20	3.73	-11.18	51.75	Max Peak	Horizontal	98	166	74.0	-22.3	Pass	
#7	5416.54	55.52	3.73	-11.18	48.07	Max Avg	Horizontal	98	166	54.0	-5.9	Pass	
#8	6319.28	52.64	3.94	-8.33	48.25	Peak (NRB)	Vertical	151	181	--	--	Pass	
#9	7221.99	56.76	4.30	-7.35	53.71	Peak (NRB)	Vertical	151	181	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	1830.49	58.79	2.45	-13.53	47.71	Peak (NRB)	Vertical	150	0	--	--	Pass	
#2	2745.74	59.71	2.84	-11.35	51.20	Max Peak	Vertical	186	156	74.0	-22.8	Pass	
#3	2745.74	57.14	2.84	-11.35	48.63	Max Avg	Vertical	186	156	54.0	-5.4	Pass	
#4	3660.94	56.05	3.17	-11.03	48.19	Max Peak	Vertical	197	155	74.0	-25.8	Pass	
#5	3660.94	51.52	3.17	-11.03	43.66	Max Avg	Vertical	197	155	54.0	-10.3	Pass	
#6	6406.80	57.09	3.97	-8.03	53.03	Peak (NRB)	Horizontal	150	182	--	--	Pass	
#7	7322.00	53.87	4.26	-7.26	50.87	Max Peak	Vertical	149	204	74.0	-23.1	Pass	
#8	7322.00	47.83	4.26	-7.26	44.83	Max Avg	Vertical	149	204	54.0	-9.2	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1854.47	58.99	2.49	-13.42	48.06	Peak (NRB)	Horizontal	151	183	--	--	Pass		
#2	2781.76	59.97	2.85	-11.33	51.49	Max Peak	Vertical	191	153	74.0	-22.5	Pass		
#3	2781.76	57.22	2.85	-11.33	48.74	Max Avg	Vertical	191	153	54.0	-5.3	Pass		
#4	3709.00	52.82	3.19	-10.93	45.08	Max Peak	Vertical	150	318	74.0	-28.9	Pass		
#5	3709.00	46.50	3.19	-10.93	38.76	Max Avg	Vertical	150	318	54.0	-15.2	Pass		
#6	6490.73	56.02	4.00	-7.92	52.10	Peak (NRB)	Vertical	151	183	--	--	Pass		
#7	8345.31	54.06	4.55	-7.14	51.47	Max Peak	Horizontal	171	170	74.0	-22.5	Pass		
#8	8345.31	48.68	4.55	-7.14	46.09	Max Avg	Horizontal	171	170	54.0	-7.9	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1812.41	60.99	2.43	-13.60	49.82	Peak (NRB)	Vertical	151	0	--	--	Pass		
#2	2754.69	56.83	2.82	-11.35	48.30	Max Peak	Vertical	141	154	74.0	-25.7	Pass		
#3	2754.69	48.33	2.82	-11.35	39.80	Max Avg	Vertical	141	154	54.0	-14.2	Pass		
#4	3615.06	53.63	3.13	-11.13	45.63	Max Peak	Vertical	136	308	74.0	-28.4	Pass		
#5	3615.06	46.99	3.13	-11.13	38.99	Max Avg	Vertical	136	308	54.0	-15.0	Pass		
#6	6480.16	58.59	3.99	-7.93	54.65	Peak (NRB)	Vertical	151	180	--	--	Pass		
#7	7262.01	55.21	4.23	-7.33	52.11	Max Peak	Vertical	132	218	74.0	-21.9	Pass		
#8	7262.01	43.97	4.23	-7.33	40.87	Max Avg	Vertical	132	218	54.0	-13.1	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1805.55	59.15	2.45	-13.63	47.97	Peak (NRB)	Vertical	150	39	--	--	Pass		
#2	2708.29	58.55	2.86	-11.37	50.04	Max Peak	Vertical	186	158	74.0	-24.0	Pass		
#3	2708.29	56.26	2.86	-11.37	47.75	Max Avg	Vertical	186	158	54.0	-6.3	Pass		
#4	3610.95	57.84	3.13	-11.14	49.83	Max Peak	Vertical	165	194	74.0	-24.2	Pass		
#5	3610.95	54.11	3.13	-11.14	46.10	Max Avg	Vertical	165	194	54.0	-7.9	Pass		
#6	5416.48	59.08	3.73	-11.18	51.63	Max Peak	Vertical	147	152	74.0	-22.4	Pass		
#7	5416.48	54.90	3.73	-11.18	47.45	Max Avg	Vertical	147	152	54.0	-6.6	Pass		
#8	6319.27	55.88	3.94	-8.33	51.49	Peak (NRB)	Horizontal	150	183	--	--	Pass		
#9	7221.99	54.68	4.30	-7.35	51.63	Peak (NRB)	Vertical	150	183	--	--	Pass		
#10	8124.78	51.10	4.75	-7.31	48.54	Max Peak	Horizontal	163	188	74.0	-25.5	Pass		
#11	8124.78	44.61	4.75	-7.31	42.05	Max Avg	Horizontal	163	188	54.0	-12.0	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1830.51	57.64	2.45	-13.53	46.56	Peak (NRB)	Horizontal	151	35	--	--	Pass		
#2	2745.77	60.22	2.84	-11.35	51.71	Max Peak	Vertical	184	160	74.0	-22.3	Pass		
#3	2745.77	58.24	2.84	-11.35	49.73	Max Avg	Vertical	184	160	54.0	-4.3	Pass		
#4	3660.99	55.93	3.17	-11.03	48.07	Max Peak	Horizontal	151	132	74.0	-25.9	Pass		
#5	3660.99	51.54	3.17	-11.03	43.68	Max Avg	Horizontal	151	132	54.0	-10.3	Pass		
#6	5491.47	55.92	3.71	-11.18	48.45	Peak (NRB)	Horizontal	151	178	--	--	Pass		
#7	6406.79	56.20	3.97	-8.03	52.14	Peak (NRB)	Horizontal	151	178	--	--	Pass		
#8	7321.99	54.14	4.26	-7.26	51.14	Max Peak	Vertical	149	202	74.0	-22.9	Pass		
#9	7321.99	48.70	4.26	-7.26	45.70	Max Avg	Vertical	149	202	54.0	-8.3	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	2781.70	59.34	2.85	-11.33	50.86	Max Peak	Vertical	172	156	74.0	-23.1	Pass	
#2	2781.70	55.75	2.85	-11.33	47.27	Max Avg	Vertical	172	156	54.0	-6.7	Pass	
#3	3709.03	56.56	3.20	-10.93	48.83	Max Peak	Horizontal	125	183	74.0	-25.2	Pass	
#4	3709.03	53.18	3.20	-10.93	45.45	Max Avg	Horizontal	125	183	54.0	-8.6	Pass	
#5	5563.44	54.45	3.85	-11.22	47.08	Peak (NRB)	Horizontal	151	189	--	--	Pass	
#6	6490.70	56.75	4.00	-7.92	52.83	Peak (NRB)	Vertical	151	189	--	--	Pass	
#7	7417.92	52.43	4.33	-7.14	49.62	Max Peak	Vertical	164	204	74.0	-24.4	Pass	
#8	7417.92	46.16	4.33	-7.14	43.35	Max Avg	Vertical	164	204	54.0	-10.7	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for TX Spurious & Restricted Band Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	1807.53	61.36	2.44	-13.62	50.18	Peak (NRB)	Vertical	151	0	--	--	Pass		
#2	2777.40	56.05	2.84	-11.33	47.56	Max Peak	Horizontal	179	201	74.0	-26.4	Pass		
#3	2777.40	49.61	2.84	-11.33	41.12	Max Avg	Horizontal	179	201	54.0	-12.9	Pass		
#4	3631.02	57.70	3.17	-11.11	49.76	Max Peak	Horizontal	185	203	74.0	-24.2	Pass		
#5	3631.02	53.22	3.17	-11.11	45.28	Max Avg	Horizontal	185	203	54.0	-8.7	Pass		
#6	5446.51	58.85	3.76	-11.23	51.38	Max Peak	Horizontal	160	159	74.0	-22.6	Pass		
#7	5446.51	54.28	3.76	-11.23	46.81	Max Avg	Horizontal	160	159	54.0	-7.2	Pass		
#8	6480.23	59.41	3.99	-7.93	55.47	Peak (NRB)	Vertical	151	182	--	--	Pass		
#9	7282.01	54.28	4.27	-7.32	51.23	Max Peak	Vertical	129	232	74.0	-22.8	Pass		
#10	7282.01	44.40	4.27	-7.32	41.35	Max Avg	Vertical	129	232	54.0	-12.7	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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1.1.2. Digital Emissions (0.03 - 1 GHz)

Radiated Test Conditions for Radiated Digital Emissions (0.03 – 1 GHz)			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	20.0 - 24.5
Test Heading:	Digital Emissions	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.209	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Radiated Digital Emissions (0.03 – 1 GHz)

Testing 30M-1 GHz was performed in a 3-meter anechoic chamber using a CISPR compliant receiver. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. To further maximize emissions the receive antenna was varied between 1 and 4 meters. The emissions are recorded with receiver in peak hold mode. Emissions closest to the limits are measured in the quasi-peak mode with the tuned receiver using a bandwidth of 120 kHz. Only the highest emissions relative to the limit are listed.

Test configuration and setup for Radiated Spurious and Band-Edge Measurement were per the Radiated Test Set-up specified in this document.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. In this test facility, the Antenna Factor, Cable Loss, and Amplifier Gains are loaded into the Rohde & Schwarz Receiver and the corrected field strength can be read directly on the receiver.

$$FS = R + AF + CORR$$

where:

FS = Field Strength

R = Measured Receiver Input Amplitude

AF = Antenna Factor

CORR = Correction Factor = CL – AG + NFL

CL = Cable Loss

AG = Amplifier Gain

For example:

Given a Receiver input reading of 51.5dBmV; Antenna Factor of 8.5dB; Cable Loss of 1.3dB; Falloff Factor of 0dB, an Amplifier Gain of 26dB and Notch Filter Loss of 1dB. The Field Strength of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3\text{dBmV/m}$$

Conversion between dBmV/m (or dBmV) and mV/m (or mV) are done as:

$$\text{Level (dBmV/m)} = 20 * \text{Log}(\text{level (mV/m)})$$

$$40 \text{ dBmV/m} = 100\text{mV/m}$$

$$48 \text{ dBmV/m} = 250\text{mV/m}$$

Limits for Radiated Digital Emissions (0.03 – 1 GHz)

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

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Frequency (MHz)	Field Strength		Measurement Distance (m)
	µV/m (microvolts/meter)	dBµV/m (dB microvolts/meter)	
0.009-0.490	2400/F(kHz)	--	300
0.490-1.705	24000/F(kHz)	--	30
1.705-30.0	30	29.5	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46.0	3
Above 960	500	54.0	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241. (b) In the emission table above, the tighter limit applies at the band edges. (c) The level of any unwanted emissions from an intentional radiator operating under these general provisions shall not exceed the level of the fundamental emission. For intentional radiators which operate under the provisions of other sections within this part and which are required to reduce their unwanted emissions to the limits specified in this table, the limits in this table are based on the frequency of the unwanted emission and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. (d) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. (e) The provisions in §§15.31, 15.33, and 15.35 for measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part. (f) In accordance with §15.33(a), in some cases the emissions from an intentional radiator must be measured to beyond the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator because of the incorporation of a digital device. If measurements above the tenth harmonic are so required, the radiated emissions above the tenth harmonic shall comply with the general radiated emission limits applicable to the incorporated digital device, as shown in §15.109 and as based on the frequency of the emission being measured, or, except for emissions contained in the restricted frequency bands shown in §15.205, the limit on spurious emissions specified for the intentional radiator, whichever is the higher limit. Emissions which must be measured above the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator and which fall within the restricted bands shall comply with the general radiated emission limits in §15.109 that are applicable to the incorporated digital device. (g) Perimeter protection systems may operate in the 54-72 MHz and 76-88 MHz bands under the provisions of this section. The use of such perimeter protection systems is limited to industrial, business and commercial applications.



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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.35	49.06	3.48	-16.06	36.48	Peak (NRB)	Vertical	100	0	--	--	Pass		
#2	104.04	50.08	3.91	-19.93	34.06	Peak (NRB)	Horizontal	100	242	--	--	Pass		
#3	192.24	54.36	4.32	-19.24	39.44	Peak (NRB)	Horizontal	100	242	--	--	Pass		
#4	902.75	62.60	6.34	-7.75	61.19	Fundamental	Horizontal	100	0	--	--			

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.37	49.33	3.48	-16.06	36.75	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	104.19	49.33	3.91	-19.93	33.31	Digital Emissions	Horizontal	100	360	--	--	Pass	
#3	192.24	51.06	4.32	-19.24	36.14	Digital Emissions	Horizontal	100	52	--	--	Pass	
#4	915.26	45.33	6.40	-7.74	43.99	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.37	48.82	3.48	-16.06	36.24	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	105.29	48.84	3.91	-19.63	33.12	Digital Emissions	Horizontal	100	360	--	--	Pass	
#3	192.21	50.08	4.32	-19.24	35.16	Digital Emissions	Horizontal	100	360	--	--	Pass	
#4	927.26	56.43	6.43	-7.44	55.42	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	250 PR-ASK
Antenna Gain (dBi):	8.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.37	48.23	3.48	-16.06	35.65	MaxQP	Vertical	98	138	40.0	-4.4	Pass	
#2	104.76	51.32	3.91	-19.93	35.30	MaxQP	Horizontal	166	202	43.0	-7.7	Pass	
#3	192.20	54.92	4.32	-19.24	40.00	MaxQP	Horizontal	167	271	43.0	-3.0	Pass	
#4	890.30	25.69	6.31	-8.00	24.00	MaxQP	Horizontal	98	28	46.0	-22.0	Pass	
#5	902.75	64.04	6.34	-7.75	62.63	Fundamental	Horizontal	100	0	--	--		
#6	927.33	54.65	6.43	-7.44	53.64	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.38	49.45	3.48	-16.06	36.87	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	104.15	49.03	3.91	-19.93	33.01	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	192.24	51.95	4.32	-19.24	37.03	Digital Emissions	Horizontal	100	0	--	--	Pass	
#4	902.74	63.22	6.34	-7.75	61.81	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.53	48.43	3.48	-16.06	35.85	Fundamental	Vertical	100	0	40.0	-4.2	Pass	
#2	104.18	48.76	3.91	-19.93	32.74	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	192.22	51.18	4.32	-19.24	36.26	Digital Emissions	Horizontal	100	0	--	--	Pass	
#4	915.26	45.86	6.40	-7.74	44.52	Digital Emissions	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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To: FCC Subpart C 15.247, ISED RSS-247
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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.37	48.88	3.48	-16.06	36.30	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	105.27	49.83	3.91	-19.63	34.11	Digital Emissions	Horizontal	100	176	--	--	Pass	
#3	192.20	52.20	4.32	-19.24	37.28	Digital Emissions	Horizontal	100	0	--	--	Pass	
#4	927.24	57.74	6.43	-7.44	56.73	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-8698	Variant:	40 DSB-AFK
Antenna Gain (dBi):	8.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	27	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.35	49.13	3.48	-16.06	36.55	MaxQP	Vertical	98	83	40.0	-3.5	Pass		
#2	104.02	50.39	3.91	-19.93	34.37	MaxQP	Horizontal	179	174	43.0	-8.6	Pass		
#3	192.17	54.73	4.32	-19.24	39.81	MaxQP	Horizontal	181	267	43.0	-3.2	Pass		
#4	902.75	63.02	6.34	-7.75	61.61	Fundamental	Vertical	100	0	--	--			
#5	927.33	57.16	6.43	-7.44	56.15	Fundamental	Vertical	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.53	49.82	3.48	-16.06	37.24	Digital Emissions	Vertical	100	0	40.0	-2.8	Pass	
#2	174.20	55.75	4.23	-19.85	40.13	Digital Emissions	Vertical	100	0	--	--	Pass	
#3	204.22	49.26	4.36	-19.60	34.02	Digital Emissions	Vertical	100	126	--	--	Pass	
#4	902.74	66.17	6.34	-7.75	64.76	Fundamental	Horizontal	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.35	50.65	3.48	-16.06	38.07	Peak (NRB)	Vertical	100	0	--	--	Pass		
#2	173.66	56.55	4.23	-19.75	41.03	Peak (NRB)	Horizontal	100	0	--	--	Pass		
#3	204.23	52.26	4.36	-19.60	37.02	Peak (NRB)	Horizontal	100	325	--	--	Pass		
#4	915.26	50.37	6.40	-7.74	49.03	Peak (NRB)	Horizontal	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.40	50.60	3.48	-16.06	38.02	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	173.70	54.34	4.23	-19.75	38.82	Digital Emissions	Vertical	100	0	--	--	Pass	
#3	204.24	50.52	4.36	-19.60	35.28	Digital Emissions	Vertical	100	0	--	--	Pass	
#4	927.24	60.20	6.43	-7.44	59.19	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	250 PR-ASK
Antenna Gain (dBi):	3.00	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.38	49.38	3.48	-16.06	36.80	MaxQP	Vertical	98	109	40.0	-3.2	Pass		
#2	173.88	53.22	4.23	-19.75	37.70	MaxQP	Horizontal	178	12	43.0	-5.3	Pass		
#3	204.24	50.02	4.36	-19.60	34.78	MaxQP	Vertical	101	49	43.0	-8.2	Pass		
#4	878.68	30.27	6.28	-8.18	28.37	MaxQP	Horizontal	104	318	46.0	-17.6	Pass		
#5	883.90	29.46	6.29	-8.05	27.70	MaxQP	Vertical	113	358	46.0	-18.3	Pass		
#6	902.75	65.27	6.34	-7.75	63.86	Fundamental	Vertical	100	0	--	--			
#7	927.24	61.44	6.43	-7.44	60.43	Fundamental	Horizontal	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.38	50.92	3.48	-16.06	38.34	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	174.09	57.33	4.23	-19.85	41.71	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	902.74	67.10	6.34	-7.75	65.69	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.52	48.84	3.48	-16.06	36.26	Digital Emissions	Vertical	100	0	40.0	-3.7	Pass	
#2	174.15	57.47	4.23	-19.85	41.85	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	915.25	49.76	6.40	-7.74	48.42	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.38	49.85	3.48	-16.06	37.27	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	173.73	56.37	4.23	-19.75	40.85	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	927.25	60.15	6.43	-7.44	59.14	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Alien ALR-A0501-F	Variant:	40 DSB-AFK
Antenna Gain (dBi):	3.00	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.39	48.71	3.48	-16.06	36.13	MaxQP	Vertical	98	85	40.0	-3.9	Pass		
#2	173.65	55.57	4.23	-19.75	40.05	MaxQP	Horizontal	136	21	43.0	-3.0	Pass		
#3	204.22	48.54	4.36	-19.60	33.30	MaxQP	Vertical	101	48	43.0	-9.7	Pass		
#4	882.65	28.64	6.28	-8.08	26.84	MaxQP	Vertical	100	357	46.0	-19.2	Pass		
#5	888.21	25.02	6.30	-8.00	23.32	MaxQP	Vertical	100	68	46.0	-22.7	Pass		
#6	902.74	67.25	6.34	-7.75	65.84	Fundamental	Horizontal	100	0	--	--			
#7	927.24	60.96	6.43	-7.44	59.95	Fundamental	Vertical	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	39.50	45.44	3.50	-17.56	31.38	MaxQP	Vertical	103	116	40.0	-8.6	Pass	
#2	77.22	43.26	3.76	-23.37	23.65	MaxQP	Vertical	191	76	40.0	-16.4	Pass	
#3	196.31	47.47	4.33	-18.66	33.14	MaxQP	Vertical	174	223	43.0	-9.9	Pass	
#4	201.32	38.33	4.35	-18.77	23.91	MaxQP	Vertical	193	210	43.0	-19.1	Pass	
#5	874.29	25.26	6.27	-8.09	23.44	MaxQP	Vertical	98	357	46.0	-22.6	Pass	
#6	881.03	28.26	6.28	-8.12	26.42	MaxQP	Horizontal	138	7	46.0	-19.6	Pass	
#7	884.48	28.02	6.29	-8.01	26.30	MaxQP	Vertical	110	14	46.0	-19.7	Pass	
#8	902.81	65.02	6.34	-7.75	63.61	Fundamental	Vertical	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.34	49.21	3.48	-16.06	36.63	MaxQP	Vertical	98	137	40.0	-3.4	Pass	
#2	103.37	51.54	3.90	-20.13	35.31	MaxQP	Horizontal	192	193	43.0	-7.7	Pass	
#3	192.19	54.62	4.32	-19.24	39.70	MaxQP	Horizontal	117	274	43.0	-3.3	Pass	
#4	915.26	48.11	6.39	-7.75	46.75	Fundamental	Vertical	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.38	48.77	3.48	-16.06	36.19	MaxQP	Vertical	98	110	40.0	-3.8	Pass		
#2	103.34	52.40	3.90	-20.13	36.17	MaxQP	Horizontal	181	187	43.0	-6.8	Pass		
#3	193.75	49.88	4.32	-19.10	35.10	MaxQP	Horizontal	170	288	43.0	-7.9	Pass		
#4	927.25	56.95	6.43	-7.44	55.94	Fundamental	Vertical	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	250 PR-ASK
Antenna Gain (dBi):	5.50	Modulation:	PR-ASK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.37	48.83	3.48	-16.06	36.25	MaxQP	Vertical	101	75	40.0	-3.8	Pass		
#2	104.77	49.66	3.91	-19.93	33.64	MaxQP	Horizontal	178	178	43.0	-9.4	Pass		
#3	192.24	54.62	4.32	-19.24	39.70	MaxQP	Horizontal	143	275	43.0	-3.3	Pass		
#4	880.74	25.57	6.28	-8.16	23.69	MaxQP	Horizontal	170	0	46.0	-22.3	Pass		
#5	890.28	25.23	6.31	-8.00	23.54	MaxQP	Vertical	120	350	46.0	-22.5	Pass		
#6	903.30	62.39	6.34	-7.75	60.98	Fundamental	Vertical	100	0	--	--			
#7	927.19	56.75	6.43	-7.44	55.74	Fundamental	Vertical	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
Page: 52 of 105

Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	902.75	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.38	50.78	3.48	-16.06	38.20	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	103.91	49.64	3.90	-20.13	33.41	Digital Emissions	Horizontal	100	0	--	--	Pass	
#3	193.58	51.82	4.32	-19.10	37.04	Digital Emissions	Horizontal	100	0	--	--	Pass	
#4	902.75	65.27	6.34	-7.75	63.86	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
Page: 53 of 105

Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	915.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	37.37	49.86	3.48	-16.06	37.28	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	104.18	51.43	3.91	-19.93	35.41	Digital Emissions	Horizontal	100	212	--	--	Pass	
#3	193.56	52.06	4.32	-19.10	37.28	Digital Emissions	Horizontal	100	20	--	--	Pass	
#4	915.26	48.21	6.40	-7.74	46.87	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	927.25	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
#1	39.48	49.56	3.50	-17.56	35.50	Digital Emissions	Vertical	100	0	--	--	Pass	
#2	104.15	51.20	3.91	-19.93	35.18	Digital Emissions	Horizontal	100	207	--	--	Pass	
#3	192.25	54.13	4.32	-19.24	39.21	Digital Emissions	Horizontal	100	240	--	--	Pass	
#4	927.24	56.08	6.43	-7.44	55.07	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
Issue Date: 5th September 2017
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Equipment Configuration for Radiated Digital Emissions

Antenna:	Integral	Variant:	40 DSB-AFK
Antenna Gain (dBi):	5.50	Modulation:	DSB-AFK
Beam Forming Gain (Y):	Not Applicable	Duty Cycle (%):	99
Channel Frequency (MHz):	Hopping	Data Rate:	0.00 MBit/s
Power Setting:	30	Tested By:	JMH

Test Measurement Results

30.00 - 1000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
#1	37.37	49.03	3.48	-16.06	36.45	MaxQP	Vertical	98	131	40.0	-3.6	Pass		
#2	103.34	55.04	3.90	-20.13	38.81	MaxQP	Horizontal	161	193	43.0	-4.2	Pass		
#3	192.25	54.63	4.32	-19.24	39.71	MaxQP	Horizontal	134	273	43.0	-3.3	Pass		
#4	881.25	29.93	6.28	-8.12	28.09	MaxQP	Vertical	111	6	46.0	-17.9	Pass		
#5	883.96	24.83	6.29	-8.05	23.07	MaxQP	Vertical	195	309	46.0	-22.9	Pass		
#6	902.75	60.07	6.34	-7.75	58.66	Fundamental	Horizontal	100	0	--	--			
#7	927.33	51.10	6.43	-7.44	50.09	Peak (NRB)	Horizontal	100	0	--	--	Pass		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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Title: SensThys, Inc. SensArray+
To: FCC Subpart C 15.247, ISED RSS-247
Serial #: TIME01-U2_Radiated Rev A
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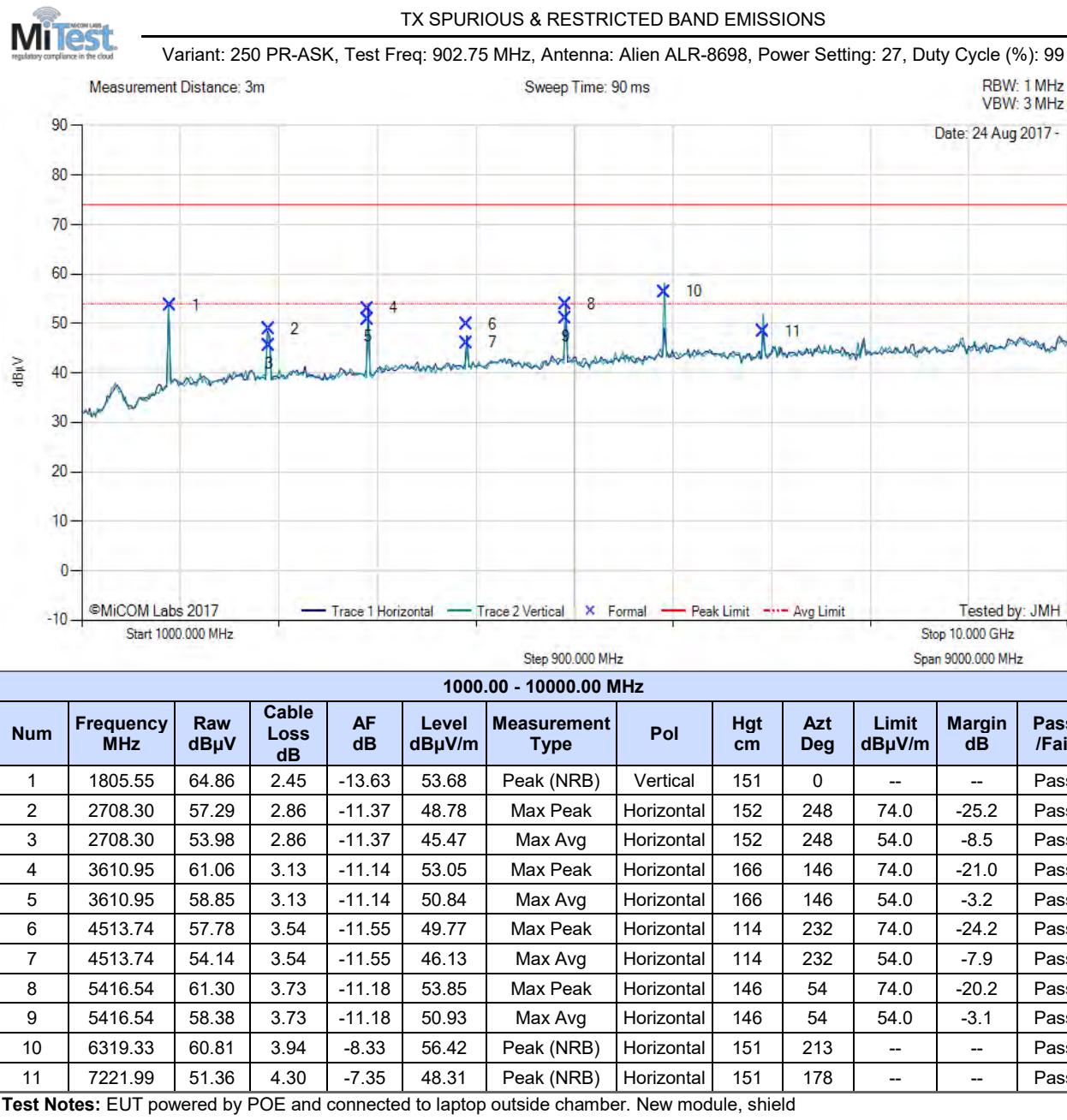
A. APPENDIX - GRAPHICAL IMAGES

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A.1. Emissions

A.1.1. Radiated Emissions

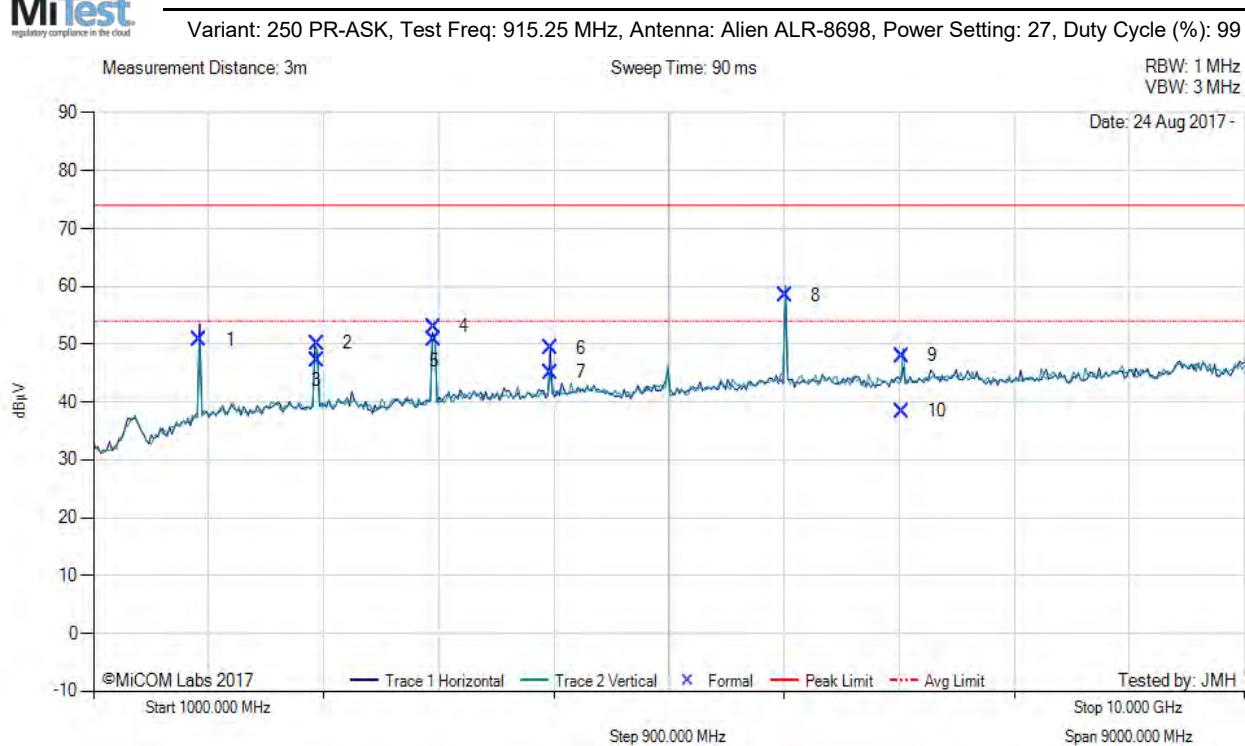
A.1.1.1. TX Spurious & Restricted Band Emissions



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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1830.27	61.81	2.45	-13.53	50.73	Peak (NRB)	Vertical	100	19	--	--	Pass	
2	2745.73	58.70	2.84	-11.35	50.19	Max Peak	Horizontal	177	246	74.0	-23.8	Pass	
3	2745.73	55.79	2.84	-11.35	47.28	Max Avg	Horizontal	177	246	54.0	-6.7	Pass	
4	3661.04	60.91	3.17	-11.04	53.04	Max Peak	Horizontal	151	210	74.0	-21.0	Pass	
5	3661.04	58.60	3.17	-11.04	50.73	Max Avg	Horizontal	151	210	54.0	-3.3	Pass	
6	4576.22	57.21	3.48	-11.39	49.30	Max Peak	Horizontal	120	228	74.0	-24.7	Pass	
7	4576.22	53.05	3.48	-11.39	45.14	Max Avg	Horizontal	120	228	54.0	-8.9	Pass	
8	6406.80	62.45	3.97	-8.03	58.39	Peak (NRB)	Horizontal	151	191	--	--	Pass	
9	7321.90	51.04	4.26	-7.26	48.04	Max Peak	Horizontal	152	120	74.0	-26.0	Pass	
10	7321.90	41.47	4.26	-7.26	38.47	Max Avg	Horizontal	152	120	54.0	-15.5	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

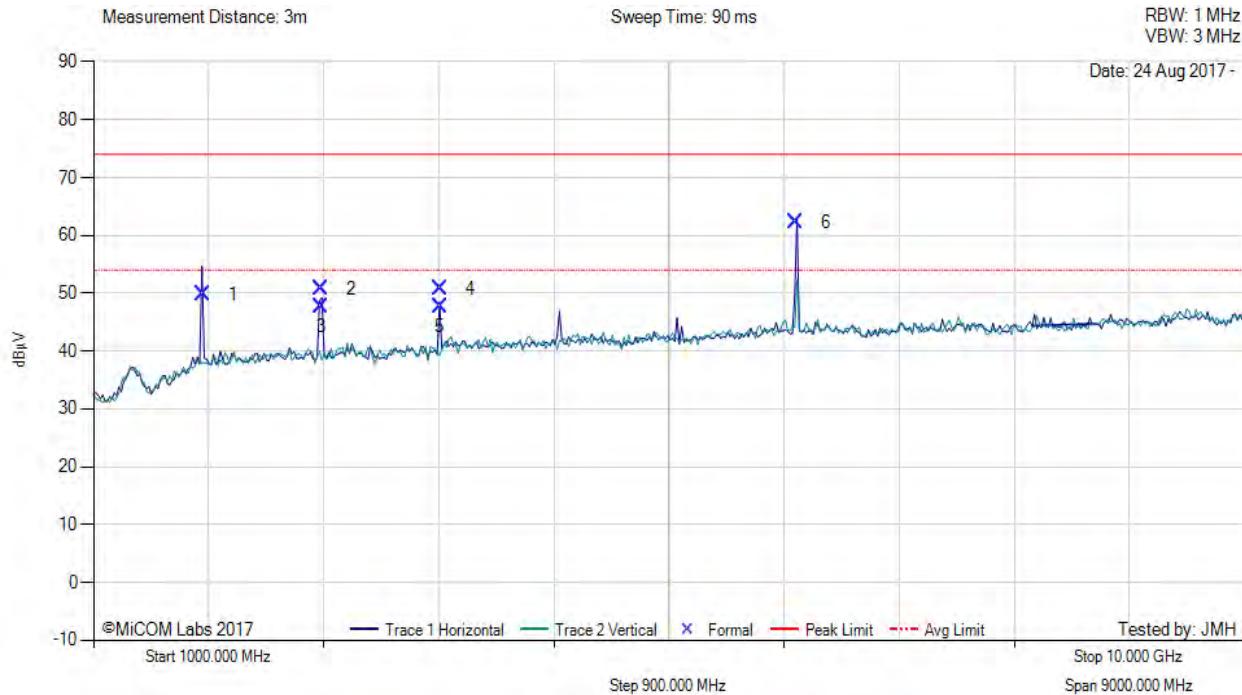
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: 927.25 MHz, Antenna: Alien ALR-8698, Power Setting: 27, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1854.47	60.79	2.49	-13.42	49.86	Peak (NRB)	Horizontal	151	0	--	--	Pass	
2	2781.72	59.21	2.85	-11.33	50.73	Max Peak	Horizontal	159	251	74.0	-23.3	Pass	
3	2781.72	56.27	2.85	-11.33	47.79	Max Avg	Horizontal	159	251	54.0	-6.2	Pass	
4	3708.99	58.46	3.19	-10.93	50.72	Max Peak	Horizontal	156	145	74.0	-23.3	Pass	
5	3708.99	55.46	3.19	-10.93	47.72	Max Avg	Horizontal	156	145	54.0	-6.3	Pass	
6	6490.70	66.18	4.00	-7.92	62.26	Peak (NRB)	Horizontal	151	174	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: Hopping, Antenna: Alien ALR-8698, Power Setting: 27, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1847.46	63.80	2.46	-13.46	52.80	Peak (NRB)	Horizontal	151	0	--	--	Pass	
2	2756.36	55.69	2.82	-11.35	47.16	Max Peak	Horizontal	156	266	74.0	-26.8	Pass	
3	2756.36	48.76	2.82	-11.35	40.23	Max Avg	Horizontal	156	266	54.0	-13.8	Pass	
4	3658.74	57.83	3.17	-11.04	49.96	Max Peak	Horizontal	132	134	74.0	-24.0	Pass	
5	3658.74	51.52	3.17	-11.04	43.65	Max Avg	Horizontal	132	134	54.0	-10.4	Pass	
6	4591.33	57.91	3.55	-11.38	50.08	Max Peak	Horizontal	136	220	74.0	-23.9	Pass	
7	4591.33	52.42	3.55	-11.38	44.59	Max Avg	Horizontal	136	220	54.0	-9.4	Pass	
8	5419.51	62.78	3.74	-11.18	55.34	Max Peak	Horizontal	98	179	74.0	-18.7	Pass	
9	5419.51	58.89	3.74	-11.18	51.45	Max Avg	Horizontal	98	179	54.0	-2.6	Pass	
10	6469.83	61.24	3.98	-7.94	57.28	Peak (NRB)	Vertical	150	220	--	--	Pass	
11	7250.11	55.09	4.20	-7.33	51.96	Max Peak	Vertical	154	196	74.0	-22.0	Pass	
12	7250.11	44.65	4.20	-7.33	41.52	Max Avg	Vertical	154	196	54.0	-12.5	Pass	

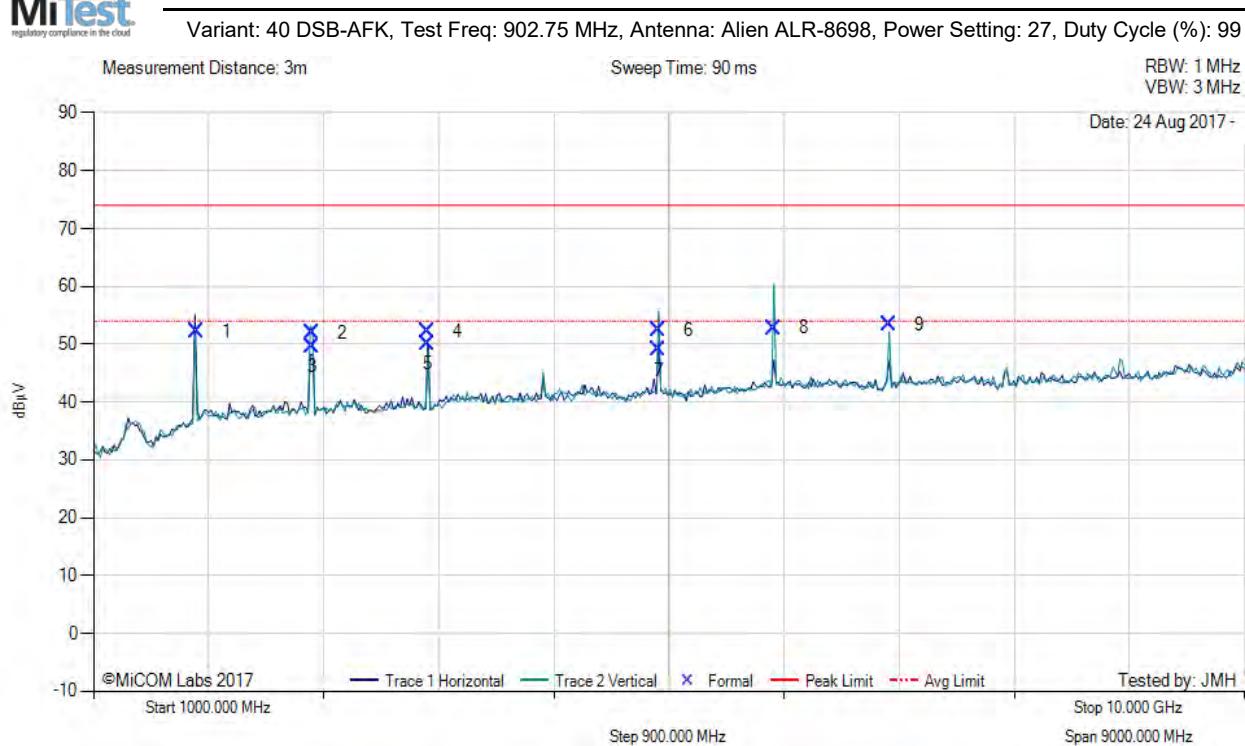
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	1805.55	63.40	2.45	-13.63	52.22	Peak (NRB)	Horizontal	151	24	--	--	Pass	
2	2708.23	60.47	2.86	-11.37	51.96	Max Peak	Vertical	124	181	74.0	-22.0	Pass	
3	2708.23	58.19	2.86	-11.37	49.68	Max Avg	Vertical	124	181	54.0	-4.3	Pass	
4	3611.01	60.25	3.13	-11.14	52.24	Max Peak	Horizontal	170	237	74.0	-21.8	Pass	
5	3611.01	58.13	3.13	-11.14	50.12	Max Avg	Horizontal	170	237	54.0	-3.9	Pass	
6	5416.49	59.83	3.73	-11.18	52.38	Max Peak	Vertical	148	159	74.0	-21.6	Pass	
7	5416.49	56.51	3.73	-11.18	49.06	Max Avg	Vertical	148	159	54.0	-4.9	Pass	
8	6319.14	57.21	3.94	-8.33	52.82	Peak (NRB)	Vertical	151	191	--	--	Pass	
9	7222.06	56.51	4.30	-7.35	53.46	Peak (NRB)	Vertical	151	191	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

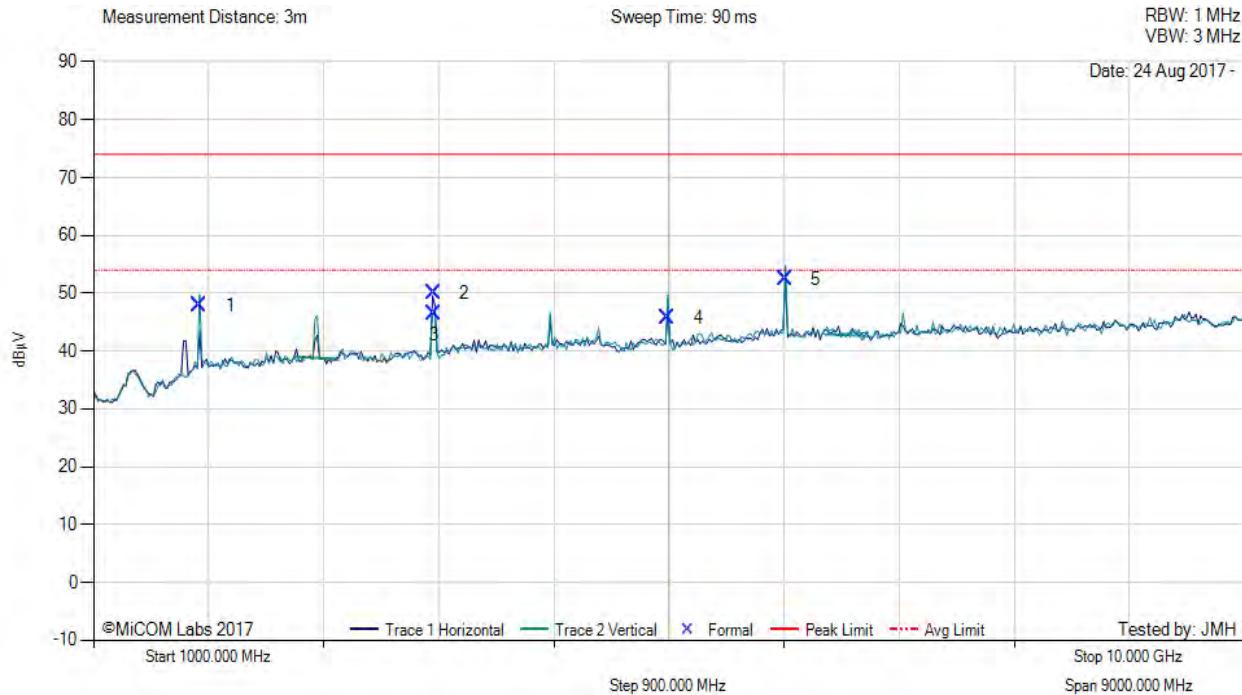
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 915.25 MHz, Antenna: Alien ALR-8698, Power Setting: 27, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1830.49	58.98	2.45	-13.53	47.90	Peak (NRB)	Horizontal	151	198	--	--	Pass	
2	3661.02	57.84	3.17	-11.04	49.97	Max Peak	Horizontal	184	234	74.0	-24.0	Pass	
3	3661.02	54.26	3.17	-11.04	46.39	Max Avg	Horizontal	184	234	54.0	-7.6	Pass	
4	5491.55	53.14	3.71	-11.18	45.67	Peak (NRB)	Vertical	151	198	--	--	Pass	
5	6406.71	56.52	3.97	-8.03	52.46	Peak (NRB)	Vertical	151	198	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

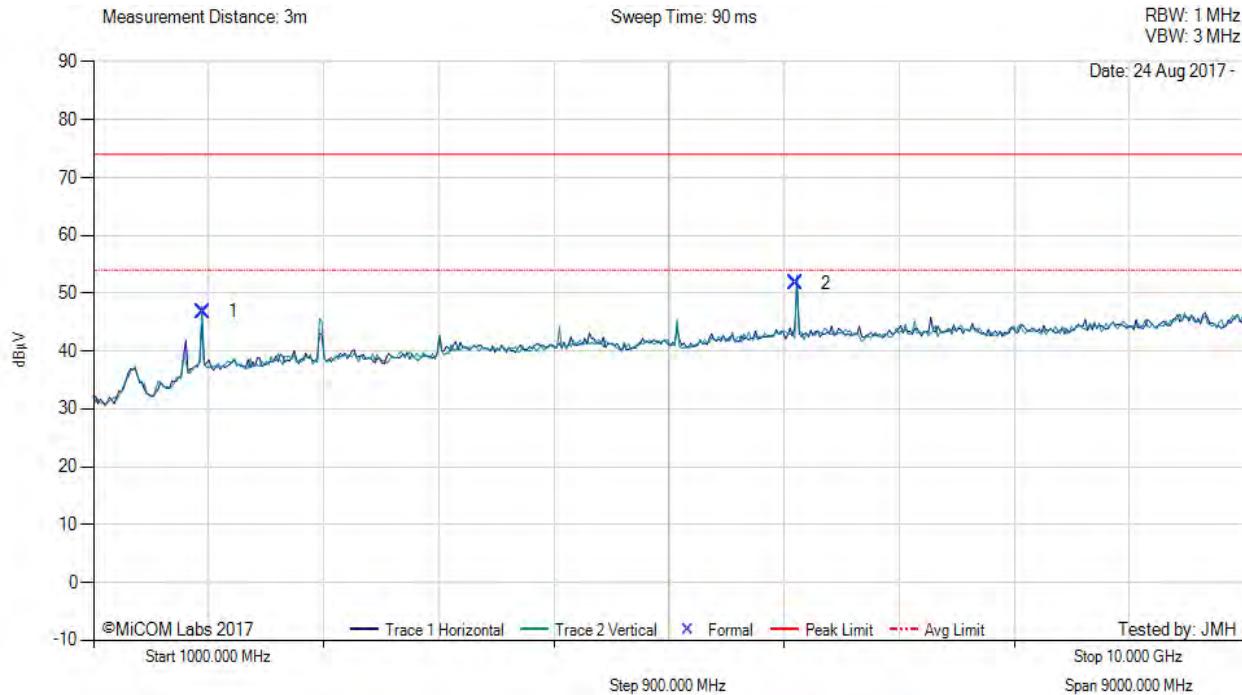
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 927.25 MHz, Antenna: Alien ALR-8698, Power Setting: 27, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1854.47	57.76	2.49	-13.42	46.83	Peak (NRB)	Vertical	151	360	--	--	Pass	
2	6490.85	55.68	4.00	-7.92	51.76	Peak (NRB)	Vertical	151	360	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

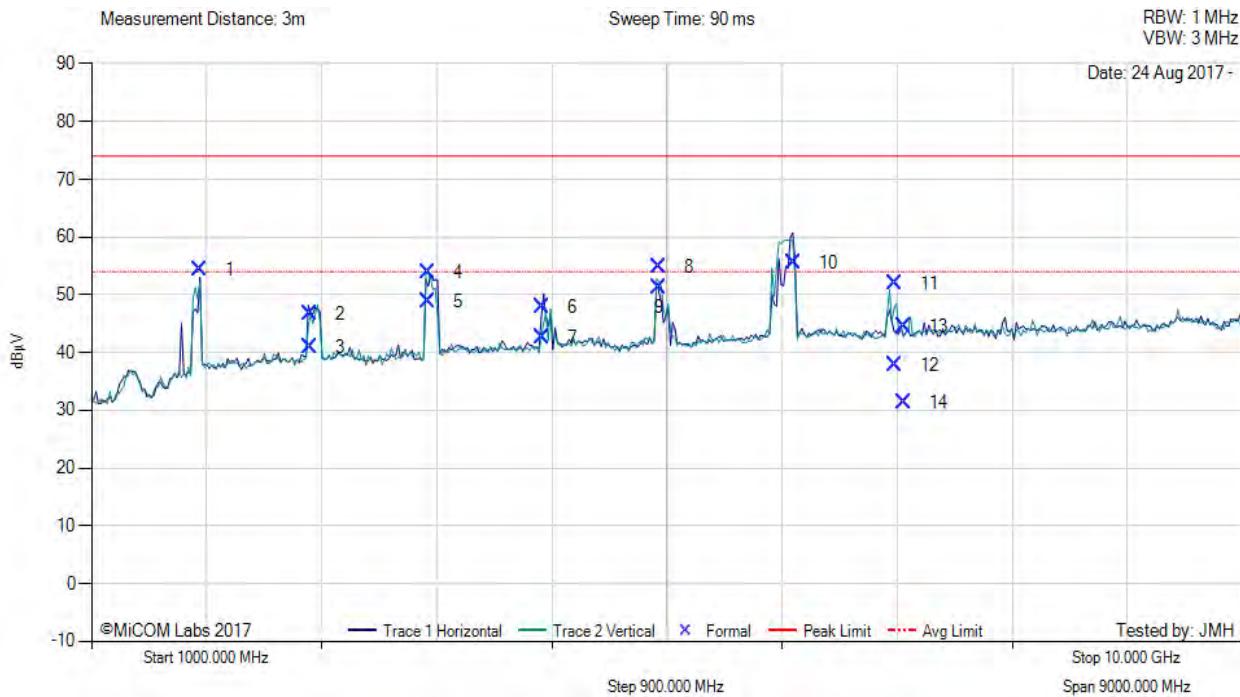
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: Hopping, Antenna: Alien ALR-8698, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1847.53	65.33	2.46	-13.46	54.33	Peak (NRB)	Horizontal	151	0	--	--	Pass	
2	2709.80	55.15	2.85	-11.37	46.63	Max Peak	Horizontal	189	11	74.0	-27.4	Pass	
3	2709.80	49.42	2.85	-11.37	40.90	Max Avg	Horizontal	189	11	54.0	-13.1	Pass	
4	3631.10	61.87	3.17	-11.11	53.93	Max Peak	Horizontal	197	238	74.0	-20.1	Pass	
5	3631.10	56.78	3.17	-11.11	48.84	Max Avg	Horizontal	197	238	54.0	-5.2	Pass	
6	4526.25	55.93	3.47	-11.49	47.91	Max Peak	Horizontal	103	222	74.0	-26.1	Pass	
7	4526.25	50.62	3.47	-11.49	42.60	Max Avg	Horizontal	103	222	54.0	-11.4	Pass	
8	5437.69	62.28	3.74	-11.21	54.81	Max Peak	Vertical	146	160	74.0	-19.2	Pass	
9	5437.69	58.84	3.74	-11.21	51.37	Max Avg	Vertical	146	160	54.0	-2.6	Pass	
10	6490.85	59.52	4.00	-7.92	55.60	Peak (NRB)	Horizontal	151	157	--	--	Pass	
11	7277.96	54.93	4.28	-7.32	51.89	Max Peak	Vertical	135	207	74.0	-22.1	Pass	
12	7277.96	40.83	4.28	-7.32	37.79	Max Avg	Vertical	135	207	54.0	-16.2	Pass	
13	7355.59	47.44	4.37	-7.20	44.61	Max Peak	Horizontal	98	56	74.0	-29.4	Pass	
14	7355.59	34.25	4.37	-7.20	31.42	Max Avg	Horizontal	98	56	54.0	-22.6	Pass	

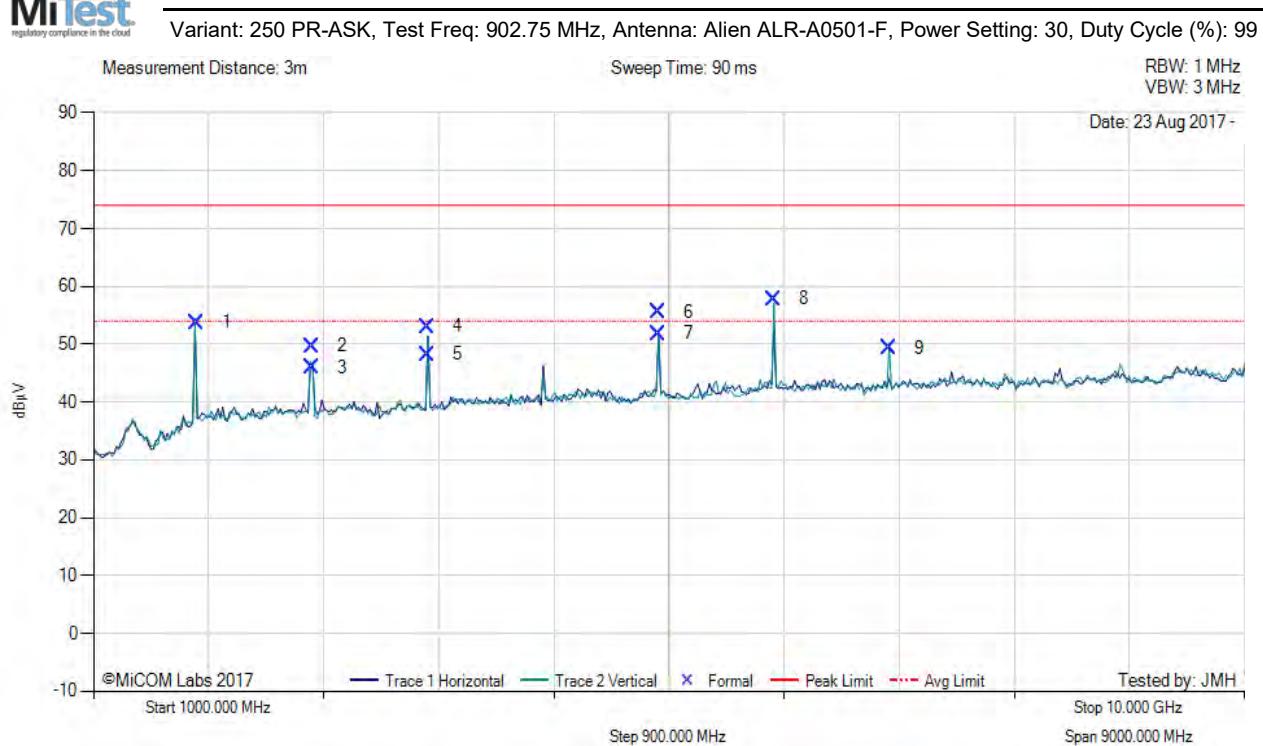
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1805.55	64.93	2.45	-13.63	53.75	Peak (NRB)	Vertical	151	0	--	--	Pass	
2	2708.19	58.17	2.86	-11.37	49.66	Max Peak	Vertical	98	161	74.0	-24.3	Pass	
3	2708.19	54.41	2.86	-11.37	45.90	Max Avg	Vertical	98	161	54.0	-8.1	Pass	
4	3610.95	61.06	3.13	-11.14	53.05	Max Peak	Vertical	197	202	74.0	-21.0	Pass	
5	3610.95	56.24	3.13	-11.14	48.23	Max Avg	Vertical	197	202	54.0	-5.8	Pass	
6	5416.52	63.05	3.73	-11.18	55.60	Max Peak	Vertical	140	140	74.0	-18.4	Pass	
7	5416.52	59.31	3.73	-11.18	51.86	Max Avg	Vertical	140	140	54.0	-2.1	Pass	
8	6319.37	62.25	3.94	-8.33	57.86	Peak (NRB)	Vertical	151	158	--	--	Pass	
9	7222.02	52.40	4.30	-7.35	49.35	Peak (NRB)	Vertical	151	158	--	--	Pass	

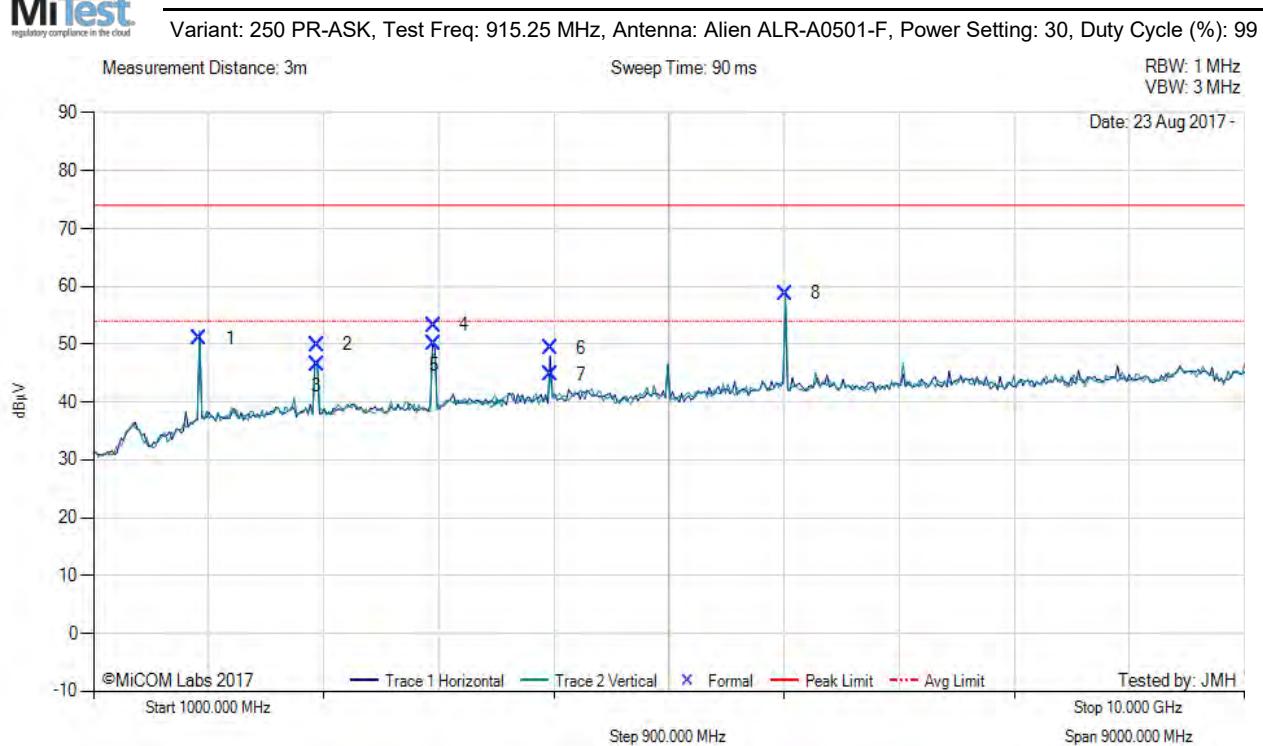
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1830.49	62.12	2.45	-13.53	51.04	Peak (NRB)	Vertical	149	0	--	--	Pass	
2	2745.71	58.44	2.84	-11.35	49.93	Max Peak	Horizontal	184	248	74.0	-24.1	Pass	
3	2745.71	54.90	2.84	-11.35	46.39	Max Avg	Horizontal	184	248	54.0	-7.6	Pass	
4	3661.01	61.19	3.17	-11.04	53.32	Max Peak	Horizontal	114	141	74.0	-20.7	Pass	
5	3661.01	57.91	3.17	-11.04	50.04	Max Avg	Horizontal	114	141	54.0	-4.0	Pass	
6	4576.27	57.21	3.48	-11.39	49.30	Max Peak	Horizontal	98	223	74.0	-24.7	Pass	
7	4576.27	52.71	3.48	-11.39	44.80	Max Avg	Horizontal	98	223	54.0	-9.2	Pass	
8	6406.69	62.87	3.97	-8.03	58.81	Peak (NRB)	Vertical	149	172	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

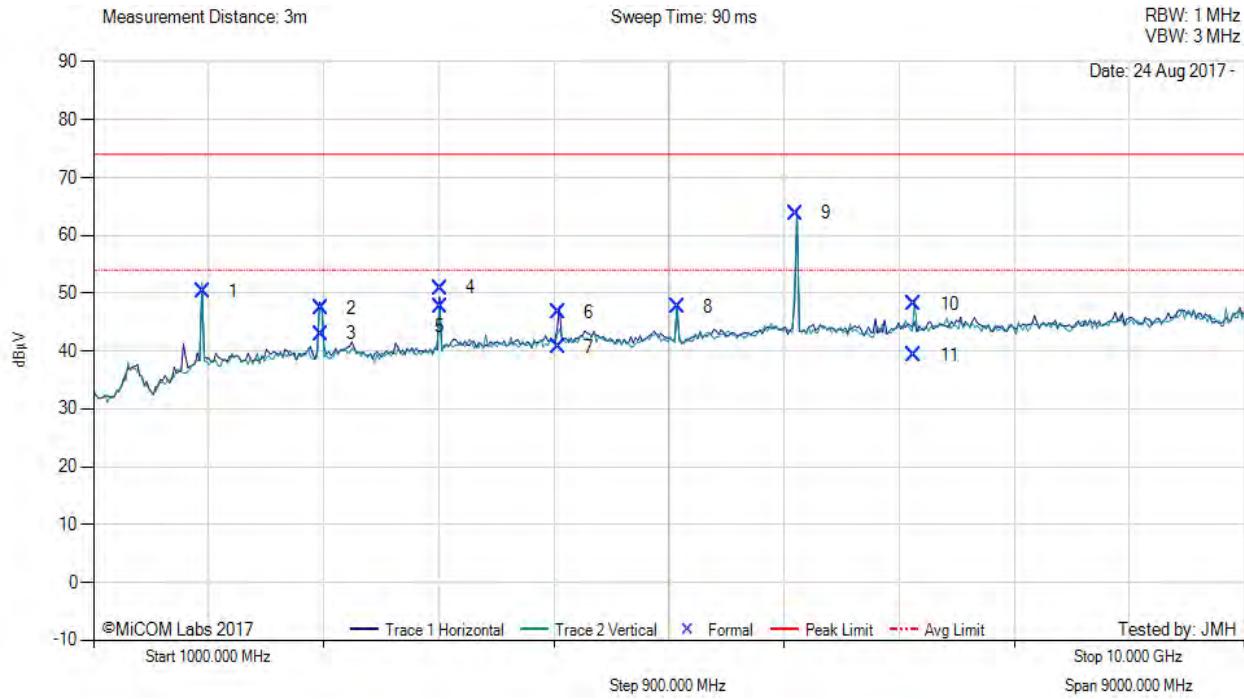
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: 927.25 MHz, Antenna: Alien ALR-A0501-F, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz														
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail		
1	1854.54	61.16	2.49	-13.42	50.23	Peak (NRB)	Vertical	100	0	--	--	Pass		
2	2781.79	55.92	2.85	-11.33	47.44	Max Peak	Horizontal	129	78	74.0	-26.6	Pass		
3	2781.79	51.48	2.85	-11.33	43.00	Max Avg	Horizontal	129	78	54.0	-11.0	Pass		
4	3708.96	58.59	3.19	-10.93	50.85	Max Peak	Horizontal	118	141	74.0	-23.2	Pass		
5	3708.96	55.49	3.19	-10.93	47.75	Max Avg	Horizontal	118	141	54.0	-6.3	Pass		
6	4636.30	54.39	3.57	-11.30	46.66	Max Peak	Horizontal	123	230	74.0	-27.3	Pass		
7	4636.30	48.47	3.57	-11.30	40.74	Max Avg	Horizontal	123	230	54.0	-13.3	Pass		
8	5563.56	55.02	3.85	-11.22	47.65	Peak (NRB)	Horizontal	100	159	--	--	Pass		
9	6490.81	67.72	4.00	-7.92	63.80	Peak (NRB)	Vertical	100	159	--	--	Pass		
10	7417.99	50.92	4.33	-7.14	48.11	Max Peak	Vertical	188	154	74.0	-25.9	Pass		
11	7417.99	42.02	4.33	-7.14	39.21	Max Avg	Vertical	188	154	54.0	-14.8	Pass		

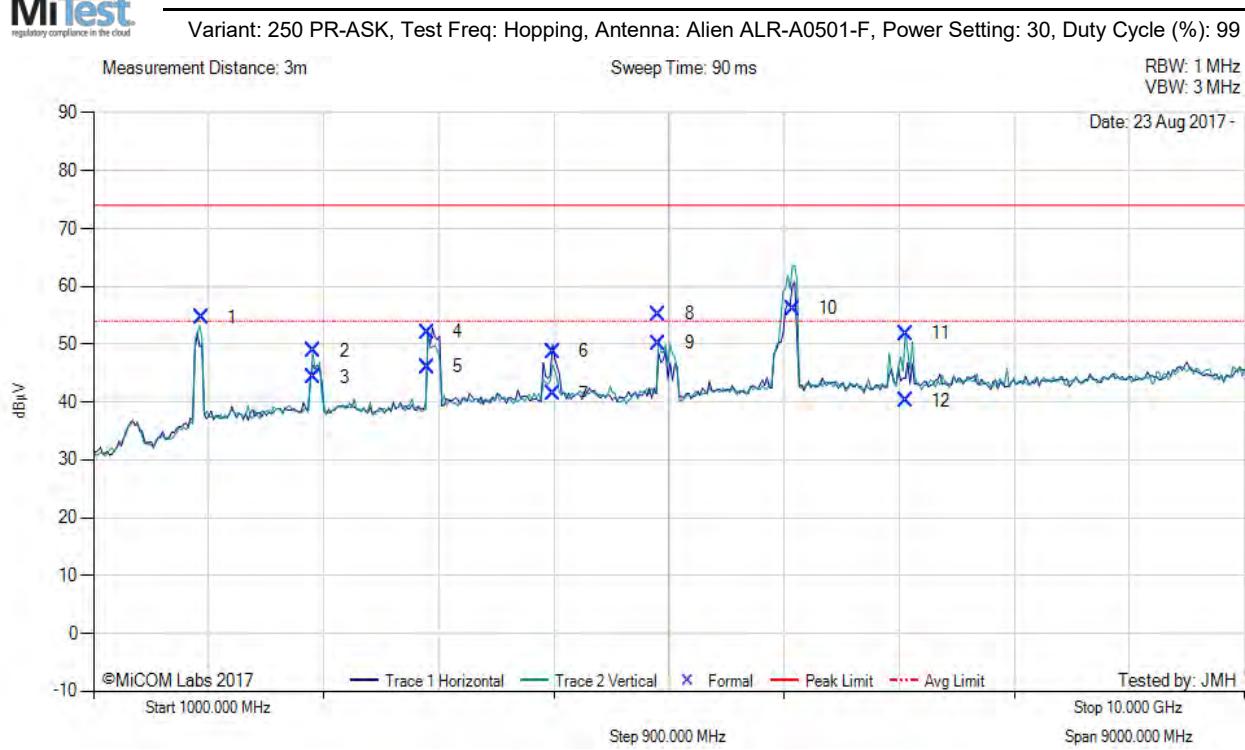
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1841.51	65.57	2.45	-13.48	54.54	Peak (NRB)	Vertical	150	0	--	--	Pass	
2	2723.18	57.35	2.80	-11.37	48.78	Max Peak	Vertical	148	177	74.0	-25.2	Pass	
3	2723.18	52.86	2.80	-11.37	44.29	Max Avg	Vertical	148	177	54.0	-9.7	Pass	
4	3613.08	60.13	3.13	-11.14	52.12	Max Peak	Horizontal	195	151	74.0	-21.9	Pass	
5	3613.08	54.13	3.13	-11.14	46.12	Max Avg	Horizontal	195	151	54.0	-7.9	Pass	
6	4596.29	56.54	3.55	-11.38	48.71	Max Peak	Horizontal	150	226	74.0	-25.3	Pass	
7	4596.29	49.29	3.55	-11.38	41.46	Max Avg	Horizontal	150	226	54.0	-12.5	Pass	
8	5419.56	62.65	3.74	-11.18	55.21	Max Peak	Vertical	157	129	74.0	-18.8	Pass	
9	5419.56	57.60	3.74	-11.18	50.16	Max Avg	Vertical	157	129	54.0	-3.8	Pass	
10	6469.79	60.14	3.98	-7.94	56.18	Peak (NRB)	Vertical	150	219	--	--	Pass	
11	7354.04	54.65	4.38	-7.21	51.82	Max Peak	Vertical	145	208	74.0	-22.2	Pass	
12	7354.04	43.03	4.38	-7.21	40.20	Max Avg	Vertical	145	208	54.0	-13.8	Pass	

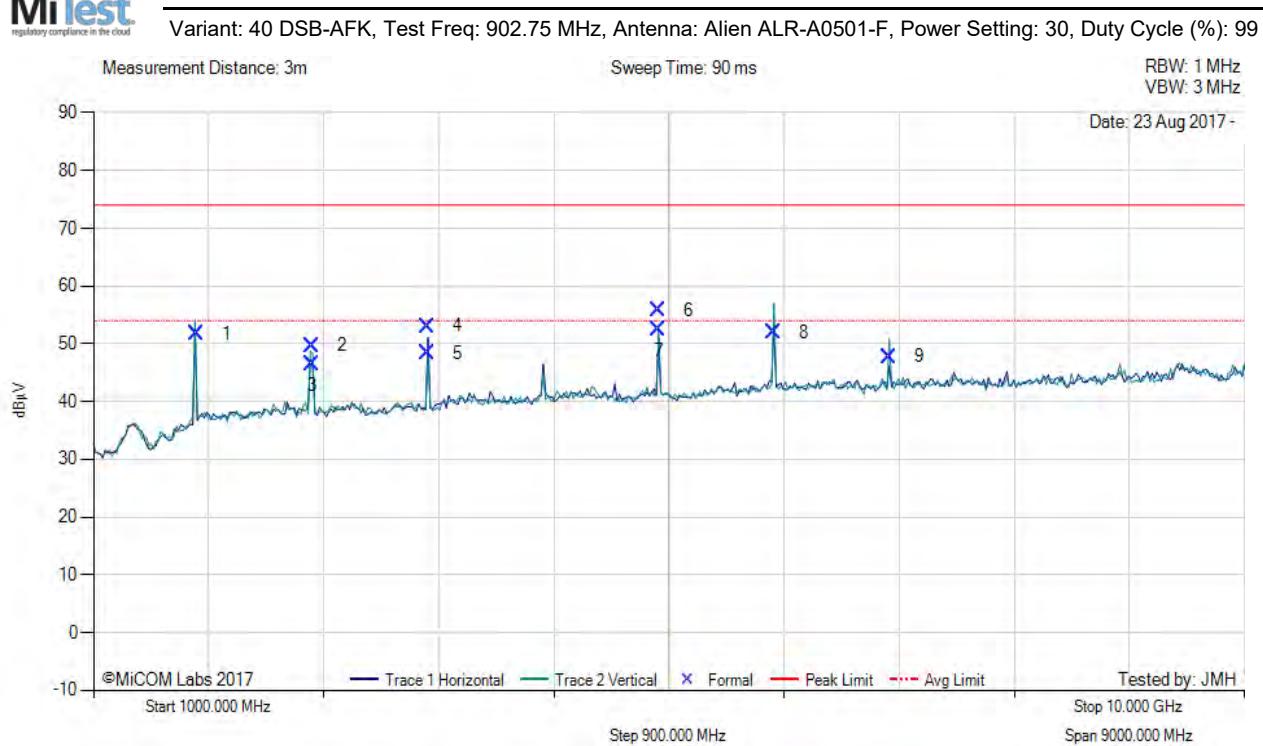
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1805.45	62.96	2.45	-13.63	51.78	Peak (NRB)	Vertical	151	11	--	--	Pass	
2	2708.24	58.17	2.86	-11.37	49.66	Max Peak	Vertical	98	160	74.0	-24.3	Pass	
3	2708.24	55.01	2.86	-11.37	46.50	Max Avg	Vertical	98	160	54.0	-7.5	Pass	
4	3611.03	61.06	3.13	-11.14	53.05	Max Peak	Horizontal	142	137	74.0	-21.0	Pass	
5	3611.03	56.32	3.13	-11.14	48.31	Max Avg	Horizontal	142	137	54.0	-5.7	Pass	
6	5416.48	63.18	3.73	-11.18	55.73	Max Peak	Vertical	147	134	74.0	-18.3	Pass	
7	5416.48	59.87	3.73	-11.18	52.42	Max Avg	Vertical	147	134	54.0	-1.6	Pass	
8	6319.17	56.33	3.94	-8.33	51.94	Peak (NRB)	Vertical	151	227	--	--	Pass	
9	7221.94	50.85	4.30	-7.35	47.80	Peak (NRB)	Vertical	151	227	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

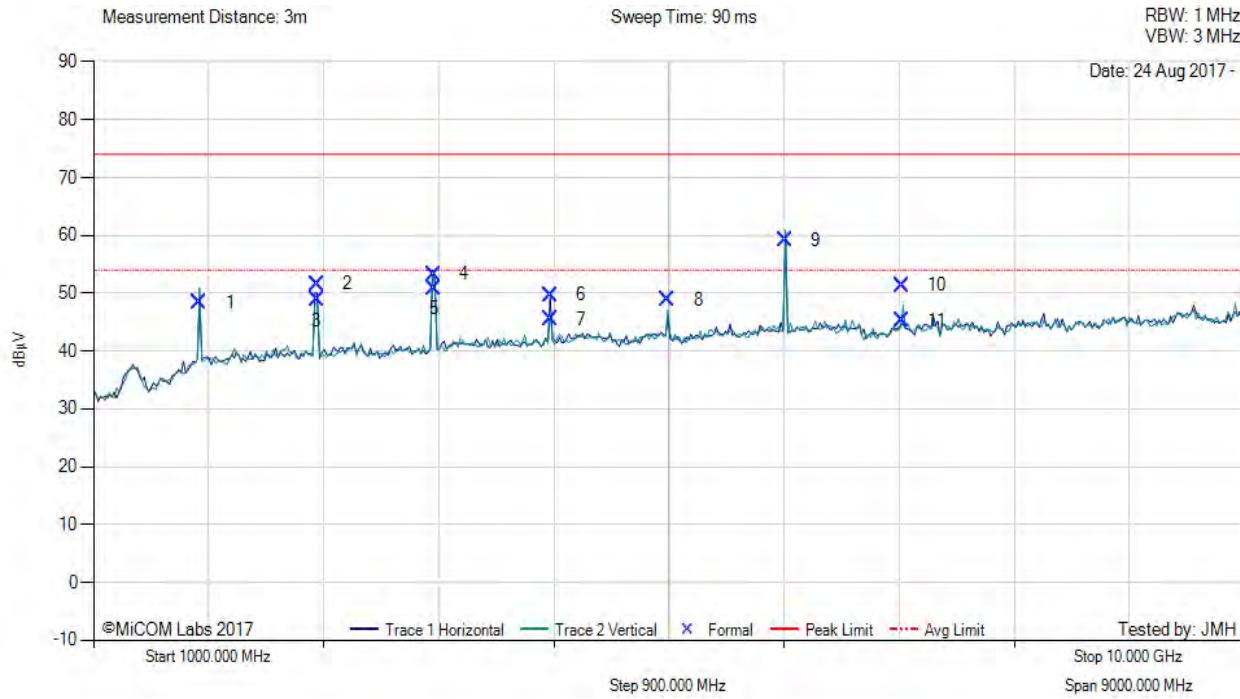
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 915.25 MHz, Antenna: Alien ALR-A0501-F, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1830.15	59.40	2.45	-13.53	48.32	Peak (NRB)	Vertical	151	0	--	--	Pass	
2	2745.78	60.09	2.84	-11.35	51.58	Max Peak	Horizontal	190	253	74.0	-22.4	Pass	
3	2745.78	57.37	2.84	-11.35	48.86	Max Avg	Horizontal	190	253	54.0	-5.1	Pass	
4	3661.07	61.19	3.17	-11.04	53.32	Max Peak	Horizontal	151	210	74.0	-20.7	Pass	
5	3661.07	58.74	3.17	-11.04	50.87	Max Avg	Horizontal	151	210	54.0	-3.1	Pass	
6	4576.27	57.59	3.48	-11.39	49.68	Max Peak	Horizontal	108	230	74.0	-24.3	Pass	
7	4576.27	53.44	3.48	-11.39	45.53	Max Avg	Horizontal	108	230	54.0	-8.5	Pass	
8	5491.50	56.30	3.71	-11.18	48.83	Peak (NRB)	Vertical	151	202	--	--	Pass	
9	6406.74	63.16	3.97	-8.03	59.10	Peak (NRB)	Vertical	151	202	--	--	Pass	
10	7321.97	54.40	4.26	-7.26	51.40	Max Peak	Vertical	185	182	74.0	-22.6	Pass	
11	7321.97	48.30	4.26	-7.26	45.30	Max Avg	Vertical	185	182	54.0	-8.7	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

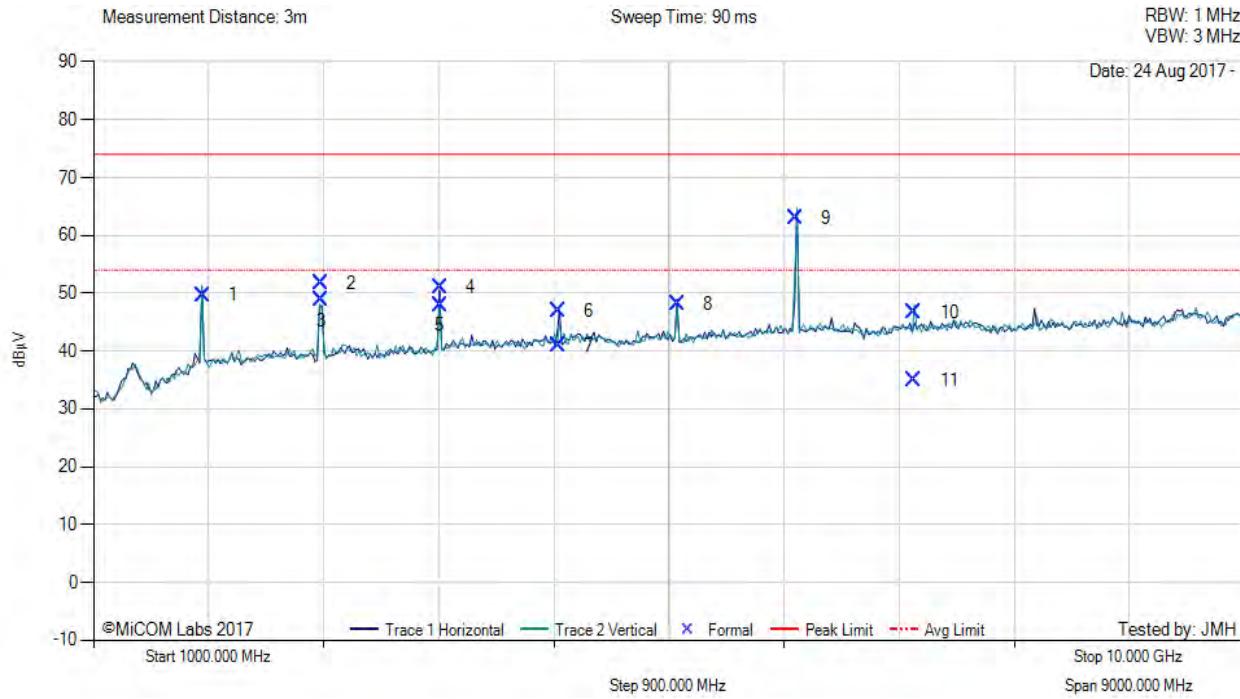
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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 927.25 MHz, Antenna: Alien ALR-A0501-F, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1854.46	60.65	2.49	-13.42	49.72	Peak (NRB)	Vertical	100	0	--	--	Pass	
2	2781.69	60.23	2.85	-11.33	51.75	Max Peak	Vertical	109	186	74.0	-22.3	Pass	
3	2781.69	57.38	2.85	-11.33	48.90	Max Avg	Vertical	109	186	54.0	-5.1	Pass	
4	3709.00	58.71	3.20	-10.93	50.98	Max Peak	Horizontal	128	138	74.0	-23.0	Pass	
5	3709.00	55.72	3.20	-10.93	47.99	Max Avg	Horizontal	128	138	54.0	-6.0	Pass	
6	4636.30	54.65	3.57	-11.30	46.92	Max Peak	Horizontal	112	230	74.0	-27.1	Pass	
7	4636.30	48.73	3.57	-11.30	41.00	Max Avg	Horizontal	112	230	54.0	-13.0	Pass	
8	5563.52	55.53	3.85	-11.22	48.16	Peak (NRB)	Horizontal	100	178	--	--	Pass	
9	6490.76	66.91	4.00	-7.92	62.99	Peak (NRB)	Vertical	100	178	--	--	Pass	
10	7417.99	49.47	4.33	-7.14	46.66	Max Peak	Vertical	116	353	74.0	-27.3	Pass	
11	7417.99	37.71	4.33	-7.14	34.90	Max Avg	Vertical	116	353	54.0	-19.1	Pass	

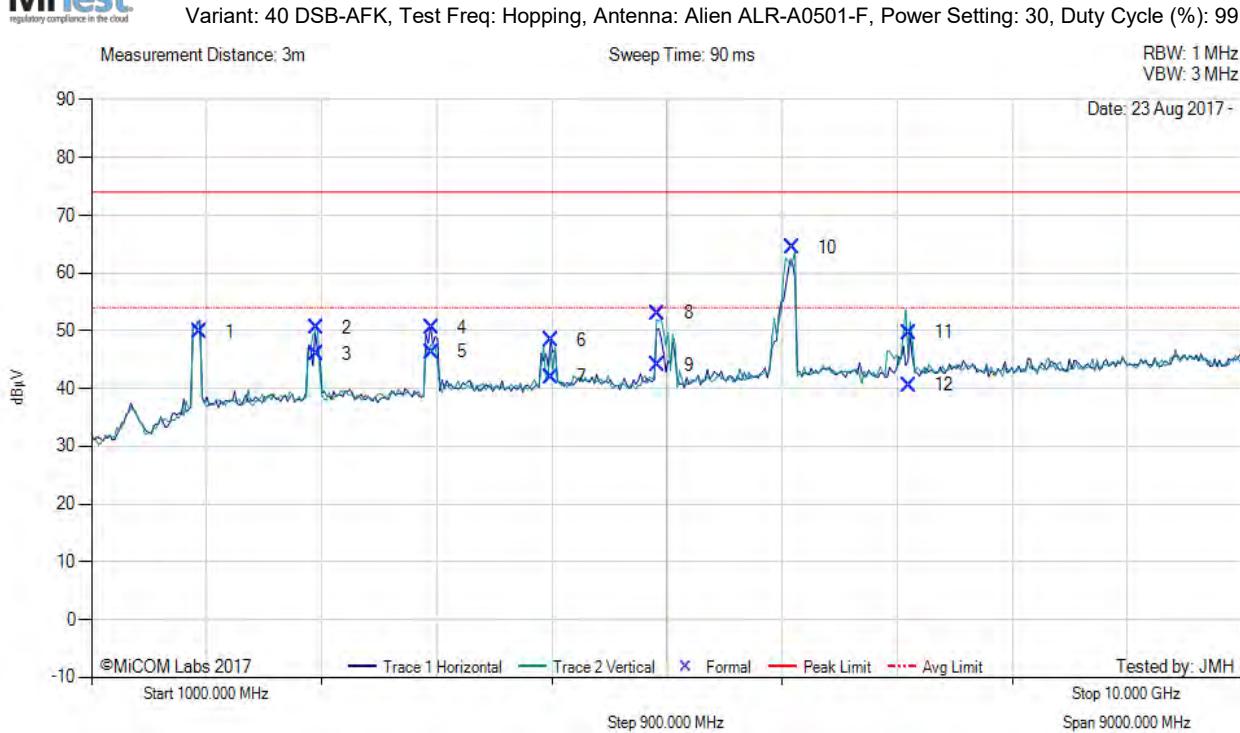
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1847.59	60.74	2.46	-13.46	49.74	Peak (NRB)	Horizontal	151	188	--	--	Pass	
2	2756.24	58.98	2.82	-11.35	50.45	Max Peak	Vertical	136	172	74.0	-23.6	Pass	
3	2756.24	54.45	2.82	-11.35	45.92	Max Avg	Vertical	136	172	54.0	-8.1	Pass	
4	3659.18	58.47	3.17	-11.04	50.60	Max Peak	Horizontal	134	138	74.0	-23.4	Pass	
5	3659.18	54.23	3.17	-11.04	46.36	Max Avg	Horizontal	134	138	54.0	-7.6	Pass	
6	4591.22	56.14	3.55	-11.38	48.31	Max Peak	Horizontal	136	207	74.0	-25.7	Pass	
7	4591.22	49.85	3.55	-11.38	42.02	Max Avg	Horizontal	136	207	54.0	-12.0	Pass	
8	5431.27	60.50	3.74	-11.20	53.04	Max Peak	Vertical	137	155	74.0	-21.0	Pass	
9	5431.27	51.52	3.74	-11.20	44.06	Max Avg	Vertical	137	155	54.0	-9.9	Pass	
10	6476.81	68.35	3.99	-7.94	64.40	Peak (NRB)	Vertical	151	157	--	--	Pass	
11	7390.04	52.57	4.29	-7.17	49.69	Max Peak	Vertical	139	208	74.0	-24.3	Pass	
12	7390.04	43.46	4.29	-7.17	40.58	Max Avg	Vertical	139	208	54.0	-13.4	Pass	

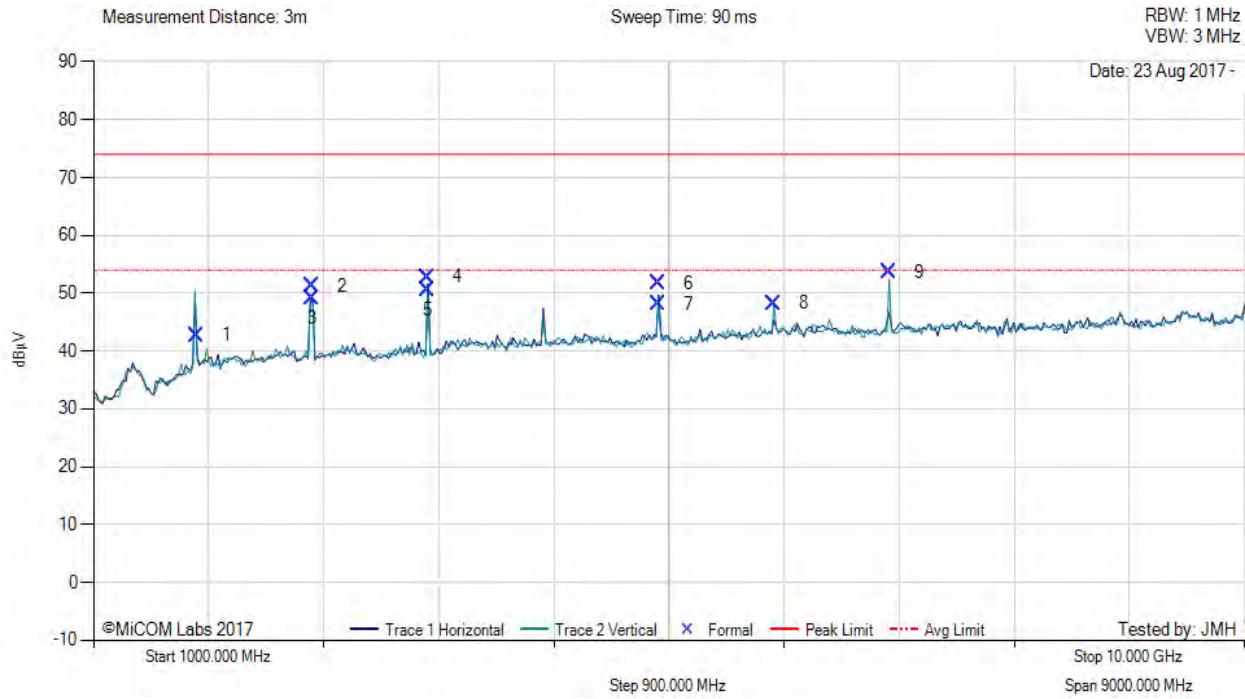
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: 902.75 MHz, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1805.42	53.89	2.45	-13.63	42.71	Peak (NRB)	Vertical	151	181	--	--	Pass	
2	2708.27	59.82	2.86	-11.37	51.31	Max Peak	Vertical	175	149	74.0	-22.7	Pass	
3	2708.27	57.75	2.86	-11.37	49.24	Max Avg	Vertical	175	149	54.0	-4.8	Pass	
4	3610.95	60.79	3.13	-11.14	52.78	Max Peak	Horizontal	196	209	74.0	-21.2	Pass	
5	3610.95	58.63	3.13	-11.14	50.62	Max Avg	Horizontal	196	209	54.0	-3.4	Pass	
6	5416.54	59.20	3.73	-11.18	51.75	Max Peak	Horizontal	98	166	74.0	-22.3	Pass	
7	5416.54	55.52	3.73	-11.18	48.07	Max Avg	Horizontal	98	166	54.0	-5.9	Pass	
8	6319.28	52.64	3.94	-8.33	48.25	Peak (NRB)	Vertical	151	181	--	--	Pass	
9	7221.99	56.76	4.30	-7.35	53.71	Peak (NRB)	Vertical	151	181	--	--	Pass	

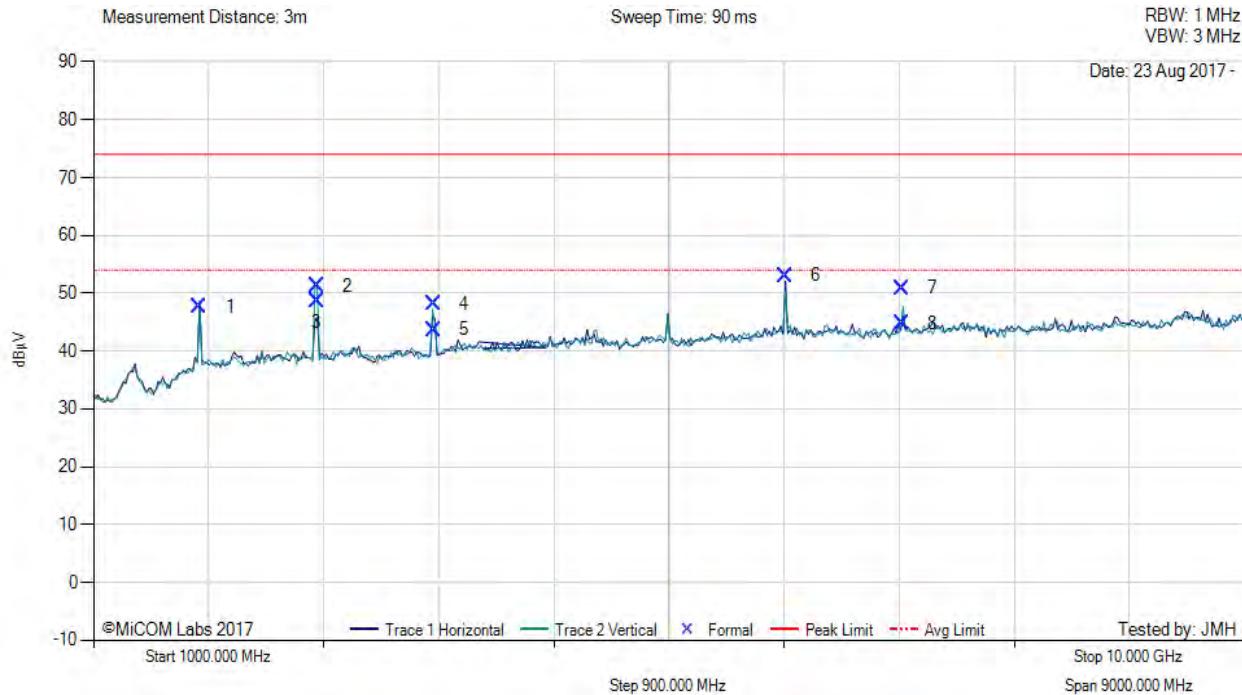
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: 915.25 MHz, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1830.49	58.79	2.45	-13.53	47.71	Peak (NRB)	Vertical	150	0	--	--	Pass	
2	2745.74	59.71	2.84	-11.35	51.20	Max Peak	Vertical	186	156	74.0	-22.8	Pass	
3	2745.74	57.14	2.84	-11.35	48.63	Max Avg	Vertical	186	156	54.0	-5.4	Pass	
4	3660.94	56.05	3.17	-11.03	48.19	Max Peak	Vertical	197	155	74.0	-25.8	Pass	
5	3660.94	51.52	3.17	-11.03	43.66	Max Avg	Vertical	197	155	54.0	-10.3	Pass	
6	6406.80	57.09	3.97	-8.03	53.03	Peak (NRB)	Horizontal	150	182	--	--	Pass	
7	7322.00	53.87	4.26	-7.26	50.87	Max Peak	Vertical	149	204	74.0	-23.1	Pass	
8	7322.00	47.83	4.26	-7.26	44.83	Max Avg	Vertical	149	204	54.0	-9.2	Pass	

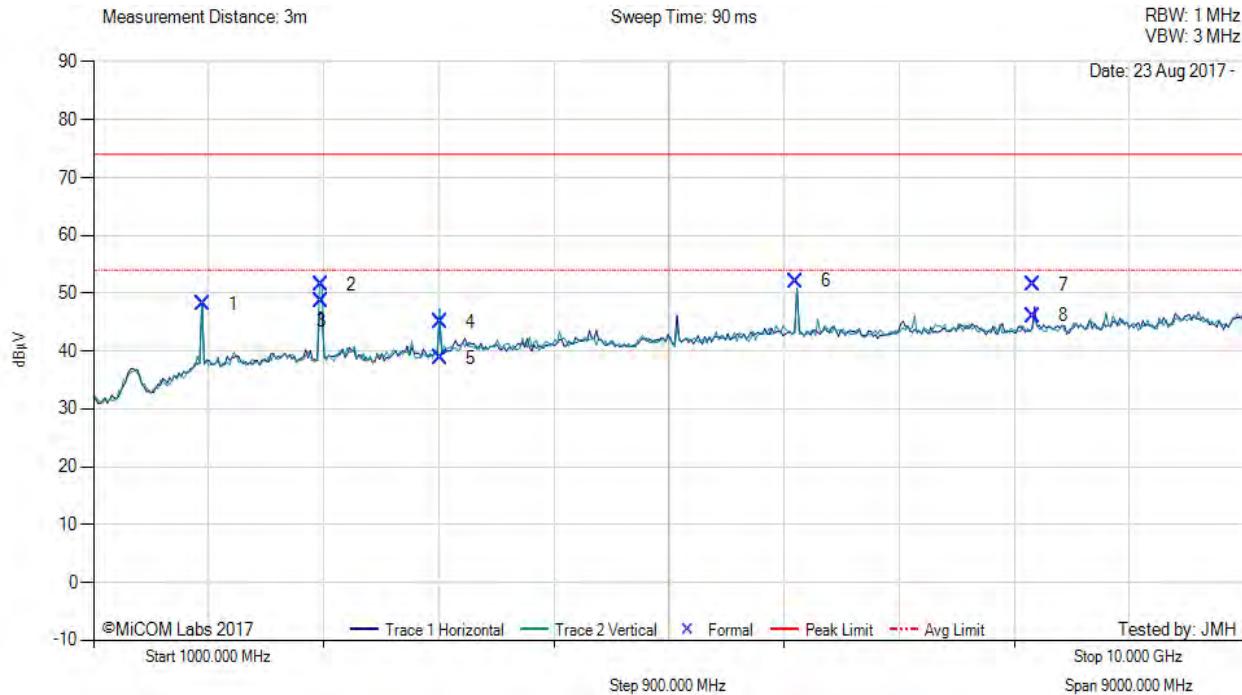
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: 927.25 MHz, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	1854.47	58.99	2.49	-13.42	48.06	Peak (NRB)	Horizontal	151	183	--	--	Pass	
2	2781.76	59.97	2.85	-11.33	51.49	Max Peak	Vertical	191	153	74.0	-22.5	Pass	
3	2781.76	57.22	2.85	-11.33	48.74	Max Avg	Vertical	191	153	54.0	-5.3	Pass	
4	3709.00	52.82	3.19	-10.93	45.08	Max Peak	Vertical	150	318	74.0	-28.9	Pass	
5	3709.00	46.50	3.19	-10.93	38.76	Max Avg	Vertical	150	318	54.0	-15.2	Pass	
6	6490.73	56.02	4.00	-7.92	52.10	Peak (NRB)	Vertical	151	183	--	--	Pass	
7	8345.31	54.06	4.55	-7.14	51.47	Max Peak	Horizontal	171	170	74.0	-22.5	Pass	
8	8345.31	48.68	4.55	-7.14	46.09	Max Avg	Horizontal	171	170	54.0	-7.9	Pass	

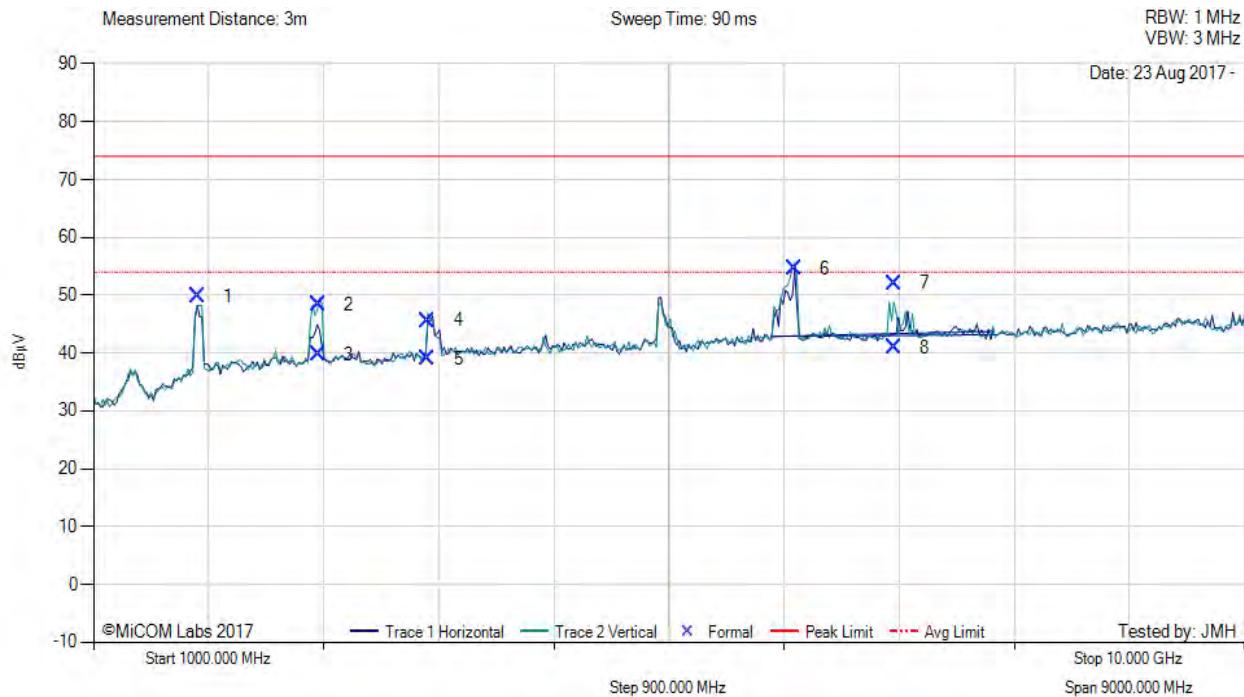
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 250 PR-ASK, Test Freq: Hopping, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1812.41	60.99	2.43	-13.60	49.82	Peak (NRB)	Vertical	151	0	--	--	Pass	
2	2754.69	56.83	2.82	-11.35	48.30	Max Peak	Vertical	141	154	74.0	-25.7	Pass	
3	2754.69	48.33	2.82	-11.35	39.80	Max Avg	Vertical	141	154	54.0	-14.2	Pass	
4	3615.06	53.63	3.13	-11.13	45.63	Max Peak	Vertical	136	308	74.0	-28.4	Pass	
5	3615.06	46.99	3.13	-11.13	38.99	Max Avg	Vertical	136	308	54.0	-15.0	Pass	
6	6480.16	58.59	3.99	-7.93	54.65	Peak (NRB)	Vertical	151	180	--	--	Pass	
7	7262.01	55.21	4.23	-7.33	52.11	Max Peak	Vertical	132	218	74.0	-21.9	Pass	
8	7262.01	43.97	4.23	-7.33	40.87	Max Avg	Vertical	132	218	54.0	-13.1	Pass	

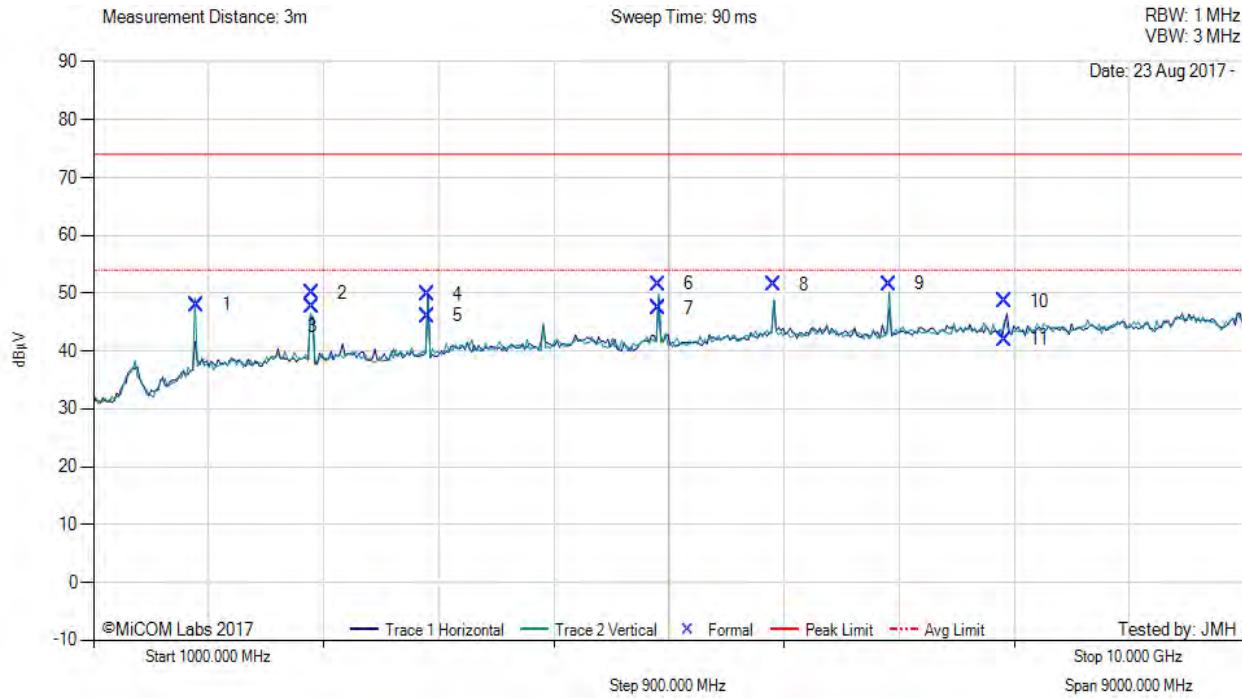
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 902.75 MHz, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



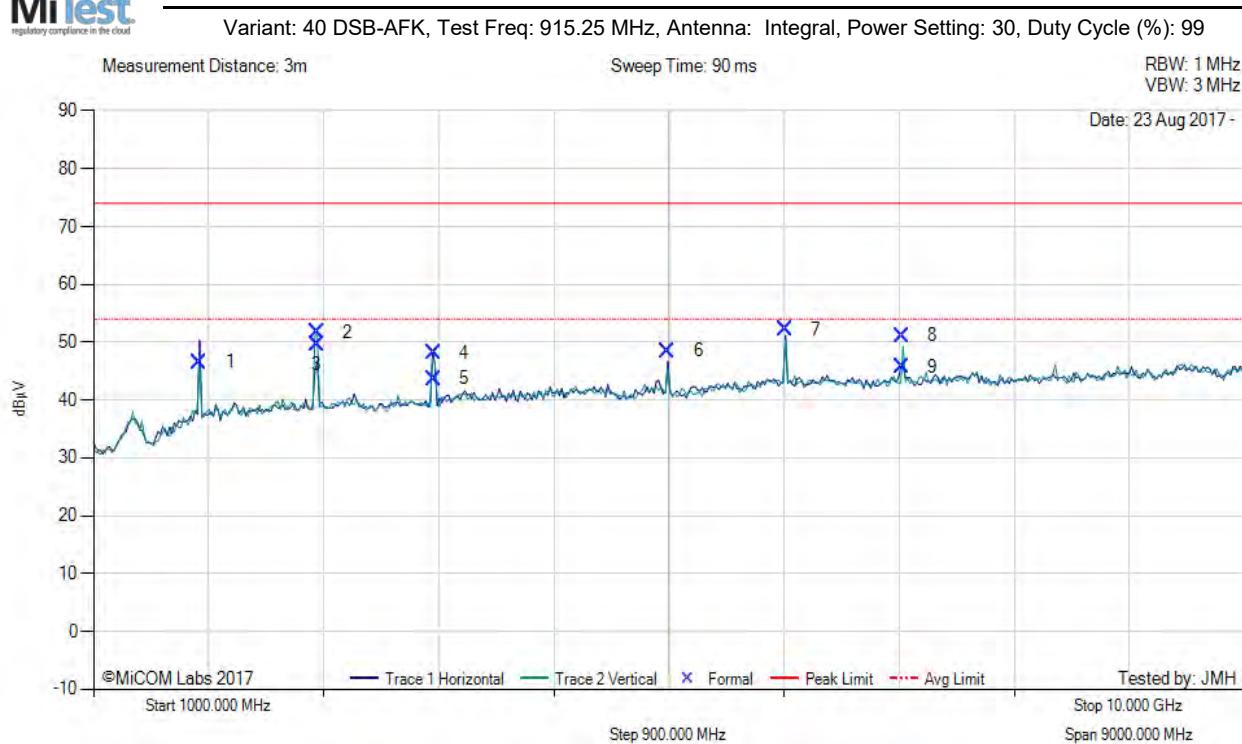
1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	1805.55	59.15	2.45	-13.63	47.97	Peak (NRB)	Vertical	150	39	--	--	Pass	
2	2708.29	58.55	2.86	-11.37	50.04	Max Peak	Vertical	186	158	74.0	-24.0	Pass	
3	2708.29	56.26	2.86	-11.37	47.75	Max Avg	Vertical	186	158	54.0	-6.3	Pass	
4	3610.95	57.84	3.13	-11.14	49.83	Max Peak	Vertical	165	194	74.0	-24.2	Pass	
5	3610.95	54.11	3.13	-11.14	46.10	Max Avg	Vertical	165	194	54.0	-7.9	Pass	
6	5416.48	59.08	3.73	-11.18	51.63	Max Peak	Vertical	147	152	74.0	-22.4	Pass	
7	5416.48	54.90	3.73	-11.18	47.45	Max Avg	Vertical	147	152	54.0	-6.6	Pass	
8	6319.27	55.88	3.94	-8.33	51.49	Peak (NRB)	Horizontal	150	183	--	--	Pass	
9	7221.99	54.68	4.30	-7.35	51.63	Peak (NRB)	Vertical	150	183	--	--	Pass	
10	8124.78	51.10	4.75	-7.31	48.54	Max Peak	Horizontal	163	188	74.0	-25.5	Pass	
11	8124.78	44.61	4.75	-7.31	42.05	Max Avg	Horizontal	163	188	54.0	-12.0	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	1830.51	57.64	2.45	-13.53	46.56	Peak (NRB)	Horizontal	151	35	--	--	Pass	
2	2745.77	60.22	2.84	-11.35	51.71	Max Peak	Vertical	184	160	74.0	-22.3	Pass	
3	2745.77	58.24	2.84	-11.35	49.73	Max Avg	Vertical	184	160	54.0	-4.3	Pass	
4	3660.99	55.93	3.17	-11.03	48.07	Max Peak	Horizontal	151	132	74.0	-25.9	Pass	
5	3660.99	51.54	3.17	-11.03	43.68	Max Avg	Horizontal	151	132	54.0	-10.3	Pass	
6	5491.47	55.92	3.71	-11.18	48.45	Peak (NRB)	Horizontal	151	178	--	--	Pass	
7	6406.79	56.20	3.97	-8.03	52.14	Peak (NRB)	Horizontal	151	178	--	--	Pass	
8	7321.99	54.14	4.26	-7.26	51.14	Max Peak	Vertical	149	202	74.0	-22.9	Pass	
9	7321.99	48.70	4.26	-7.26	45.70	Max Avg	Vertical	149	202	54.0	-8.3	Pass	

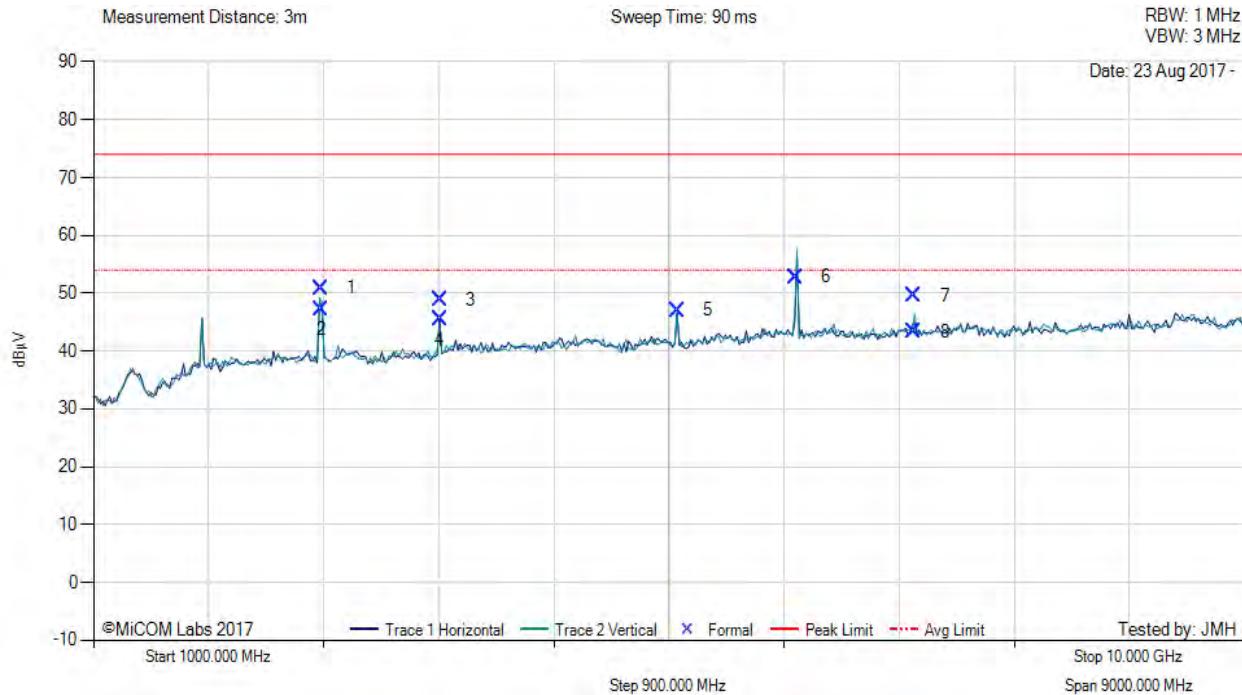
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: 927.25 MHz, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	2781.70	59.34	2.85	-11.33	50.86	Max Peak	Vertical	172	156	74.0	-23.1	Pass	
2	2781.70	55.75	2.85	-11.33	47.27	Max Avg	Vertical	172	156	54.0	-6.7	Pass	
3	3709.03	56.56	3.20	-10.93	48.83	Max Peak	Horizontal	125	183	74.0	-25.2	Pass	
4	3709.03	53.18	3.20	-10.93	45.45	Max Avg	Horizontal	125	183	54.0	-8.6	Pass	
5	5563.44	54.45	3.85	-11.22	47.08	Peak (NRB)	Horizontal	151	189	--	--	Pass	
6	6490.70	56.75	4.00	-7.92	52.83	Peak (NRB)	Vertical	151	189	--	--	Pass	
7	7417.92	52.43	4.33	-7.14	49.62	Max Peak	Vertical	164	204	74.0	-24.4	Pass	
8	7417.92	46.16	4.33	-7.14	43.35	Max Avg	Vertical	164	204	54.0	-10.7	Pass	

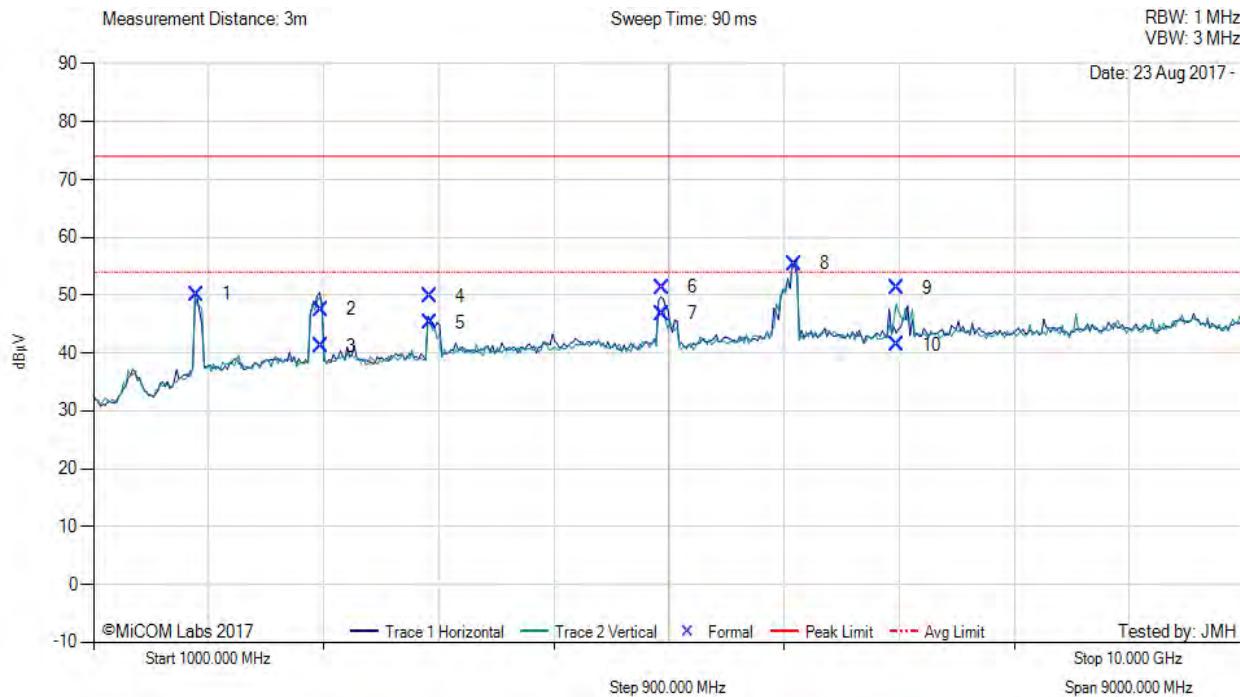
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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TX SPURIOUS & RESTRICTED BAND EMISSIONS

Variant: 40 DSB-AFK, Test Freq: Hopping, Antenna: Integral, Power Setting: 30, Duty Cycle (%): 99



1000.00 - 10000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	1807.53	61.36	2.44	-13.62	50.18	Peak (NRB)	Vertical	151	0	--	--	Pass	
2	2777.40	56.05	2.84	-11.33	47.56	Max Peak	Horizontal	179	201	74.0	-26.4	Pass	
3	2777.40	49.61	2.84	-11.33	41.12	Max Avg	Horizontal	179	201	54.0	-12.9	Pass	
4	3631.02	57.70	3.17	-11.11	49.76	Max Peak	Horizontal	185	203	74.0	-24.2	Pass	
5	3631.02	53.22	3.17	-11.11	45.28	Max Avg	Horizontal	185	203	54.0	-8.7	Pass	
6	5446.51	58.85	3.76	-11.23	51.38	Max Peak	Horizontal	160	159	74.0	-22.6	Pass	
7	5446.51	54.28	3.76	-11.23	46.81	Max Avg	Horizontal	160	159	54.0	-7.2	Pass	
8	6480.23	59.41	3.99	-7.93	55.47	Peak (NRB)	Vertical	151	182	--	--	Pass	
9	7282.01	54.28	4.27	-7.32	51.23	Max Peak	Vertical	129	232	74.0	-22.8	Pass	
10	7282.01	44.40	4.27	-7.32	41.35	Max Avg	Vertical	129	232	54.0	-12.7	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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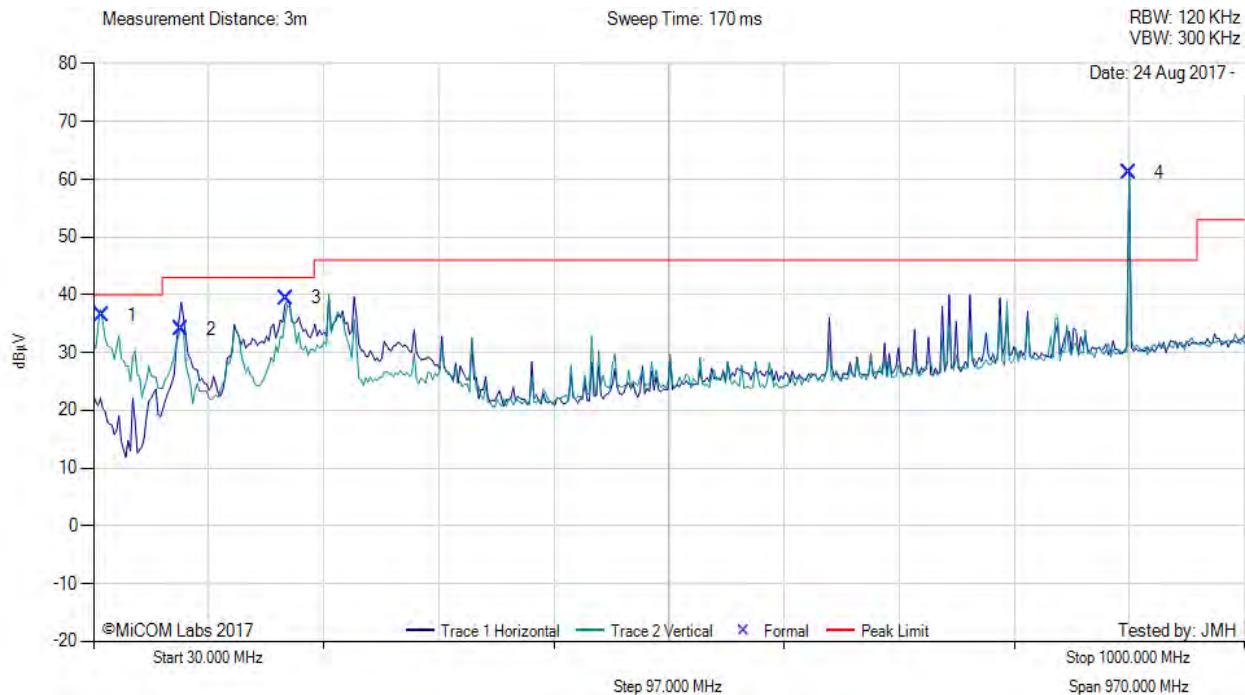
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A.1.2. Digital Emissions (0.03 - 1 GHz)



RADIATED DIGITAL EMISSIONS

Variant: 250 PR-ASK, Test Freq: 902.75 MHz, Antenna: Alien ALR-8698, Power Setting: 27, Duty Cycle (%): 99



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	37.35	49.06	3.48	-16.06	36.48	Digital Emissions	Vertical	100	0	--	--	Pass	
2	104.04	50.08	3.91	-19.93	34.06	Digital Emissions	Horizontal	100	242	--	--	Pass	
3	192.24	54.36	4.32	-19.24	39.44	Digital Emissions	Horizontal	100	242	--	--	Pass	
4	902.75	62.60	6.34	-7.75	61.19	Fundamental	Horizontal	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	37.37	49.33	3.48	-16.06	36.75	Digital Emissions	Vertical	100	0	--	--	Pass	
2	104.19	49.33	3.91	-19.93	33.31	Digital Emissions	Horizontal	100	360	--	--	Pass	
3	192.24	51.06	4.32	-19.24	36.14	Digital Emissions	Horizontal	100	52	--	--	Pass	
4	915.26	45.33	6.40	-7.74	43.99	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



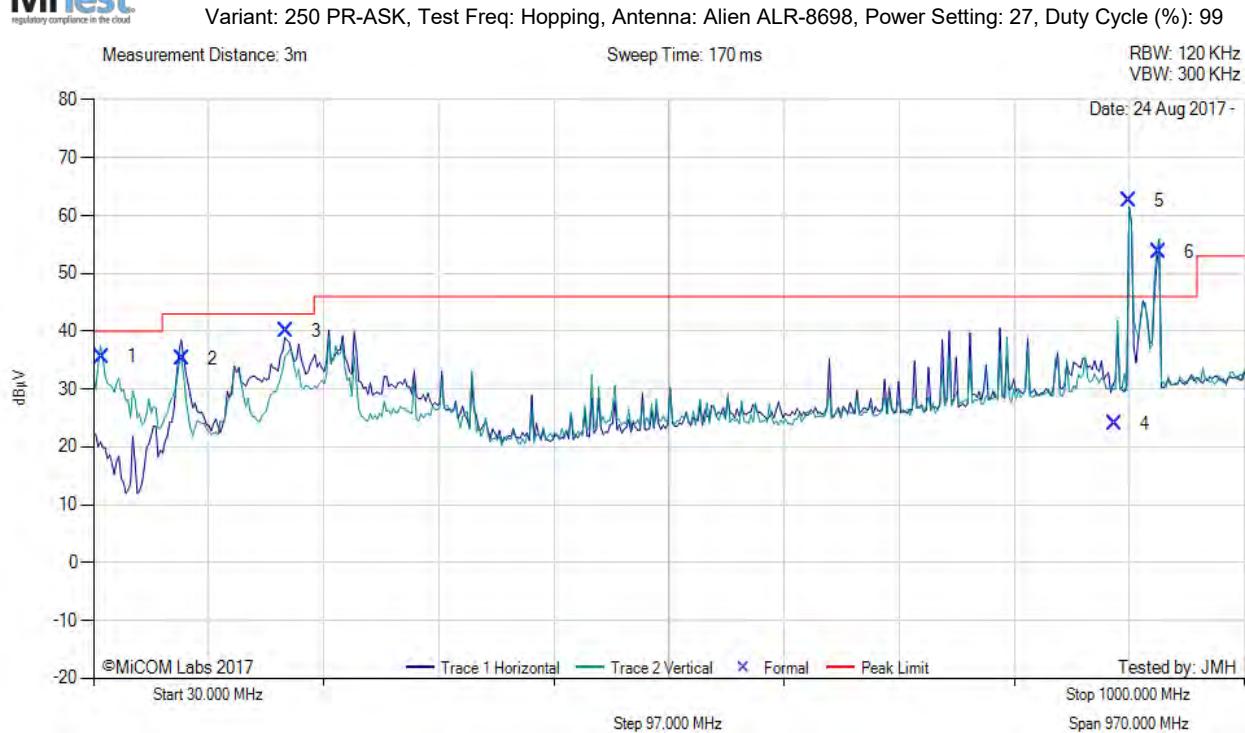
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	48.82	3.48	-16.06	36.24	Digital Emissions	Vertical	100	0	--	--	Pass	
2	105.29	48.84	3.91	-19.63	33.12	Digital Emissions	Horizontal	100	360	--	--	Pass	
3	192.21	50.08	4.32	-19.24	35.16	Digital Emissions	Horizontal	100	360	--	--	Pass	
4	927.26	56.43	6.43	-7.44	55.42	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	48.23	3.48	-16.06	35.65	MaxQP	Vertical	98	138	40.0	-4.4	Pass	
2	104.76	51.32	3.91	-19.93	35.30	MaxQP	Horizontal	166	202	43.0	-7.7	Pass	
3	192.20	54.92	4.32	-19.24	40.00	MaxQP	Horizontal	167	271	43.0	-3.0	Pass	
4	890.30	25.69	6.31	-8.00	24.00	MaxQP	Horizontal	98	28	46.0	-22.0	Pass	
5	902.75	64.04	6.34	-7.75	62.63	Fundamental	Horizontal	100	0	--	--		
6	927.33	54.65	6.43	-7.44	53.64	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.38	49.45	3.48	-16.06	36.87	Digital Emissions	Vertical	100	0	--	--	Pass	
2	104.15	49.03	3.91	-19.93	33.01	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	192.24	51.95	4.32	-19.24	37.03	Digital Emissions	Horizontal	100	0	--	--	Pass	
4	902.74	63.22	6.34	-7.75	61.81	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.53	48.43	3.48	-16.06	35.85	Fundamental	Vertical	100	0	40.0	-4.2	Pass	
2	104.18	48.76	3.91	-19.93	32.74	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	192.22	51.18	4.32	-19.24	36.26	Digital Emissions	Horizontal	100	0	--	--	Pass	
4	915.26	45.86	6.40	-7.74	44.52	Digital Emissions	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	48.88	3.48	-16.06	36.30	Digital Emissions	Vertical	100	0	--	--	Pass	
2	105.27	49.83	3.91	-19.63	34.11	Digital Emissions	Horizontal	100	176	--	--	Pass	
3	192.20	52.20	4.32	-19.24	37.28	Digital Emissions	Horizontal	100	0	--	--	Pass	
4	927.24	57.74	6.43	-7.44	56.73	Fundamental	Vertical	100	0	--	--	Pass	

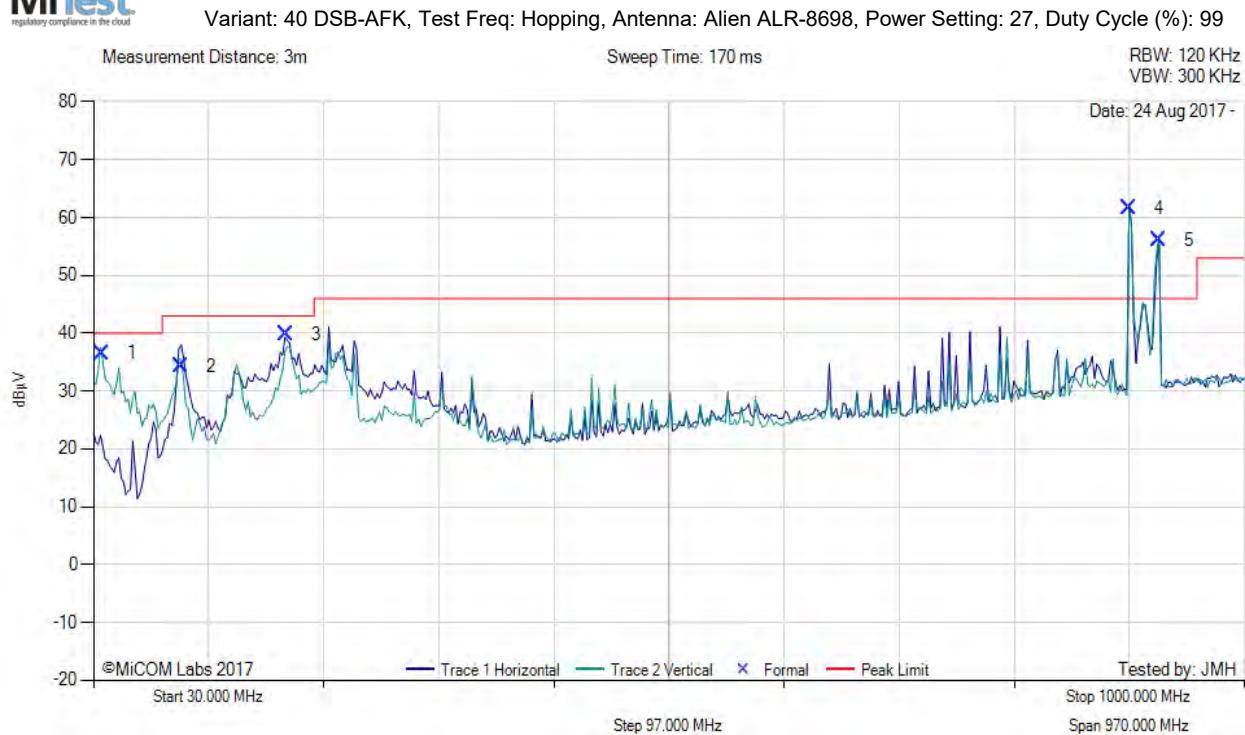
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.35	49.13	3.48	-16.06	36.55	MaxQP	Vertical	98	83	40.0	-3.5	Pass	
2	104.02	50.39	3.91	-19.93	34.37	MaxQP	Horizontal	179	174	43.0	-8.6	Pass	
3	192.17	54.73	4.32	-19.24	39.81	MaxQP	Horizontal	181	267	43.0	-3.2	Pass	
4	902.75	63.02	6.34	-7.75	61.61	Fundamental	Vertical	100	0	--	--		
5	927.33	57.16	6.43	-7.44	56.15	Fundamental	Vertical	100	0	--	--	Pass	

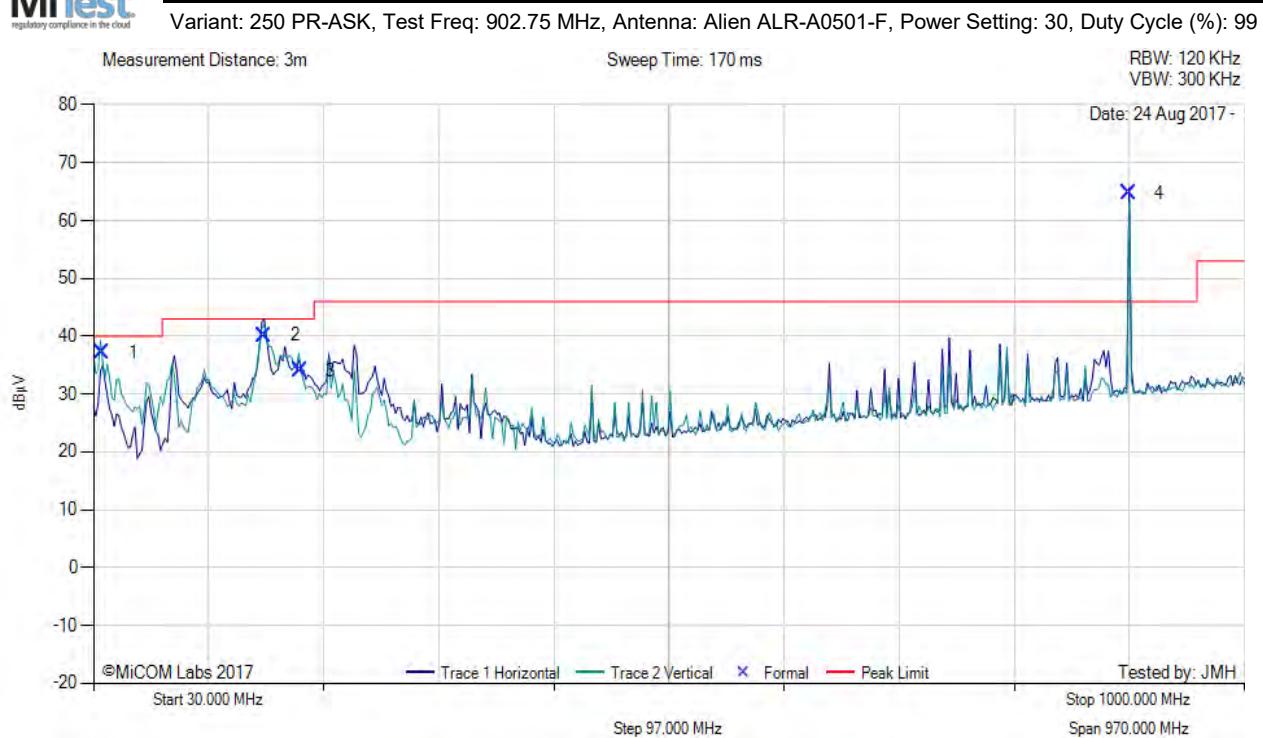
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.53	49.82	3.48	-16.06	37.24	Digital Emissions	Vertical	100	0	40.0	-2.8	Pass	
2	174.20	55.75	4.23	-19.85	40.13	Digital Emissions	Vertical	100	0	--	--	Pass	
3	204.22	49.26	4.36	-19.60	34.02	Digital Emissions	Vertical	100	126	--	--	Pass	
4	902.74	66.17	6.34	-7.75	64.76	Fundamental	Horizontal	100	0	--	--		

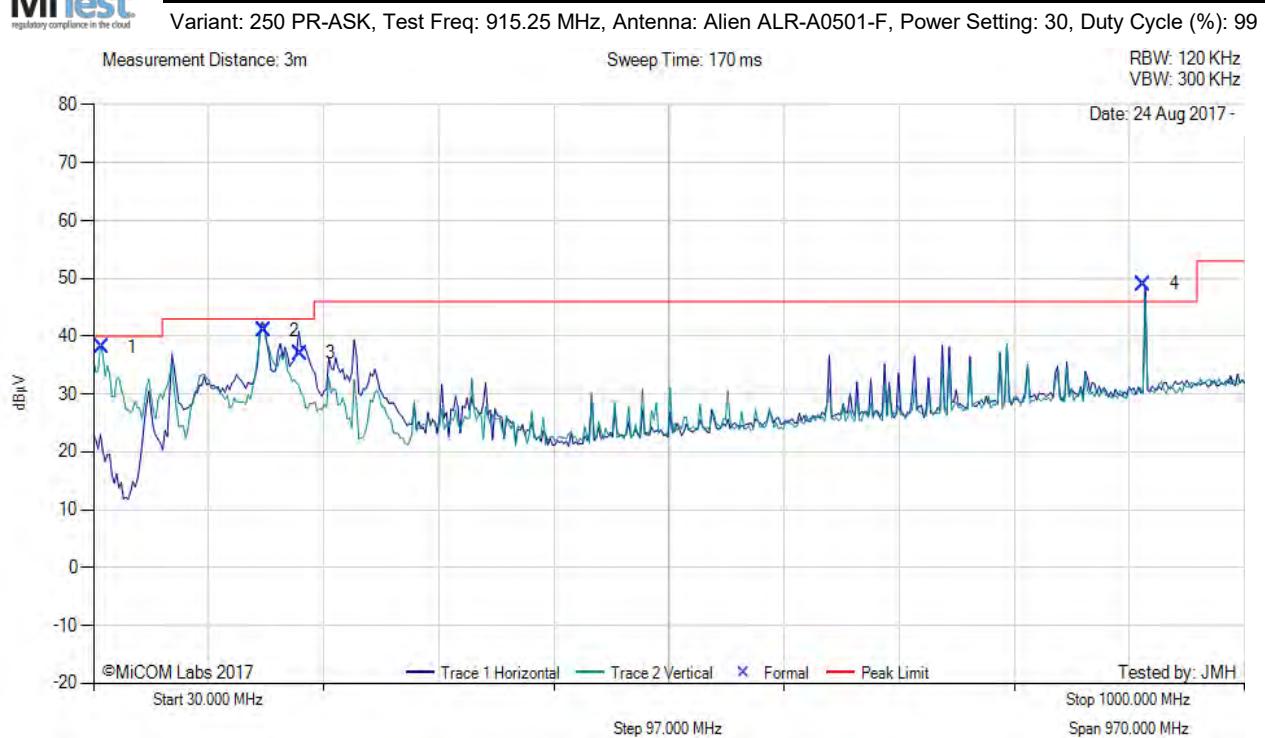
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.35	50.65	3.48	-16.06	38.07	Peak (NRB)	Vertical	100	0	--	--	Pass	
2	173.66	56.55	4.23	-19.75	41.03	Peak (NRB)	Horizontal	100	0	--	--	Pass	
3	204.23	52.26	4.36	-19.60	37.02	Peak (NRB)	Horizontal	100	325	--	--	Pass	
4	915.26	50.37	6.40	-7.74	49.03	Peak (NRB)	Horizontal	100	0	--	--	Pass	

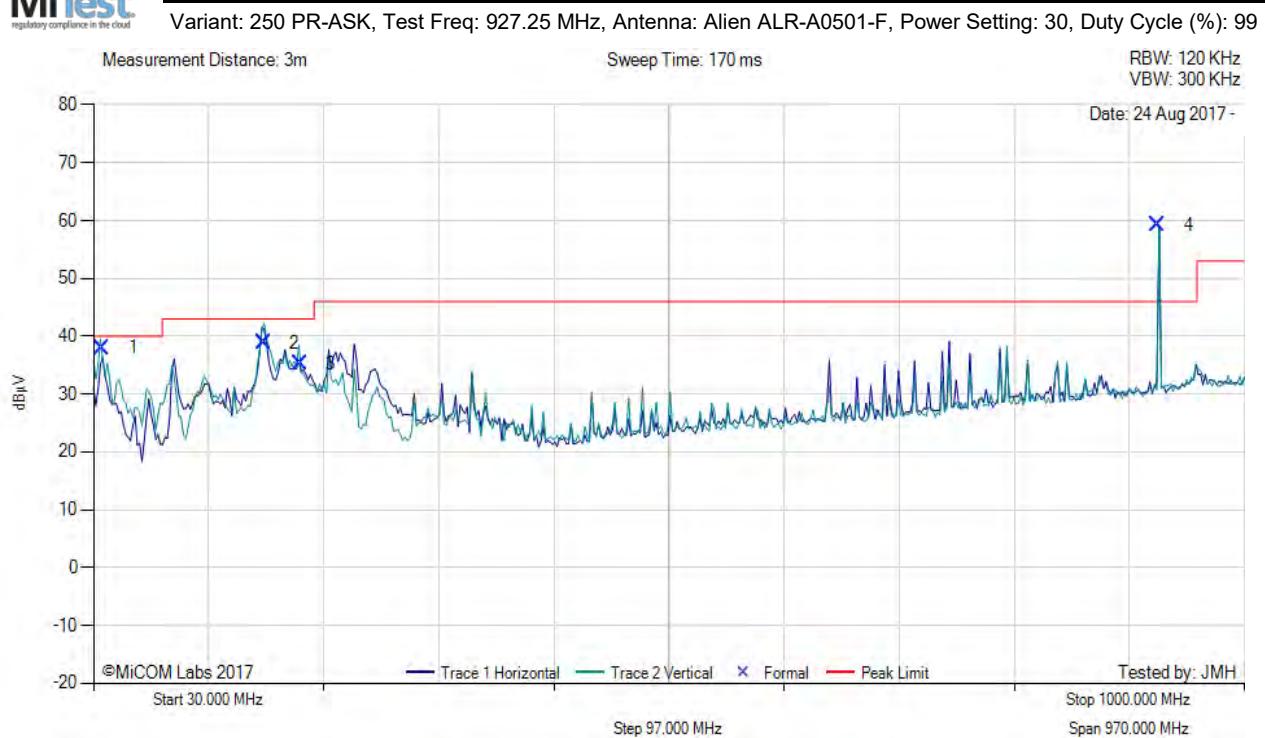
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	37.40	50.60	3.48	-16.06	38.02	Digital Emissions	Vertical	100	0	--	--	Pass	
2	173.70	54.34	4.23	-19.75	38.82	Digital Emissions	Vertical	100	0	--	--	Pass	
3	204.24	50.52	4.36	-19.60	35.28	Digital Emissions	Vertical	100	0	--	--	Pass	
4	927.24	60.20	6.43	-7.44	59.19	Fundamental	Horizontal	100	0	--	--	Pass	

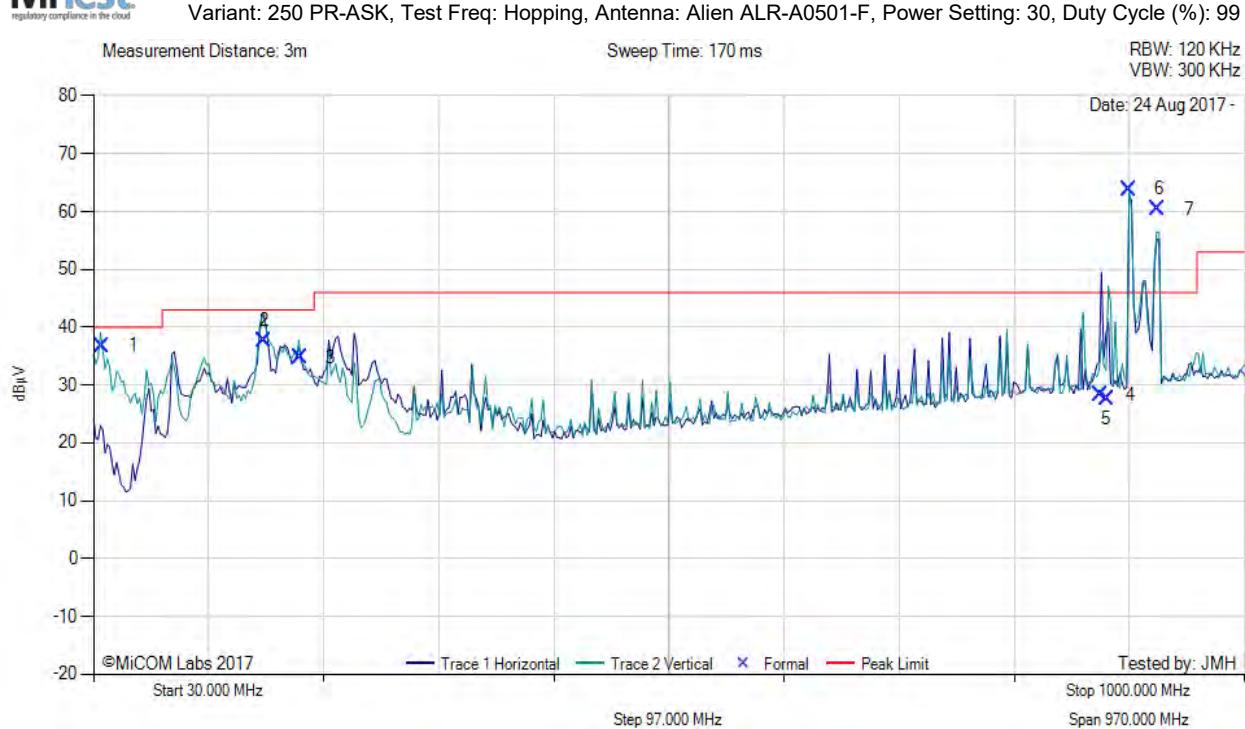
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.38	49.38	3.48	-16.06	36.80	MaxQP	Vertical	98	109	40.0	-3.2	Pass	
2	173.88	53.22	4.23	-19.75	37.70	MaxQP	Horizontal	178	12	43.0	-5.3	Pass	
3	204.24	50.02	4.36	-19.60	34.78	MaxQP	Vertical	101	49	43.0	-8.2	Pass	
4	878.68	30.27	6.28	-8.18	28.37	MaxQP	Horizontal	104	318	46.0	-17.6	Pass	
5	883.90	29.46	6.29	-8.05	27.70	MaxQP	Vertical	113	358	46.0	-18.3	Pass	
6	902.75	65.27	6.34	-7.75	63.86	Fundamental	Vertical	100	0	--	--		
7	927.24	61.44	6.43	-7.44	60.43	Fundamental	Horizontal	100	0	--	--	Pass	

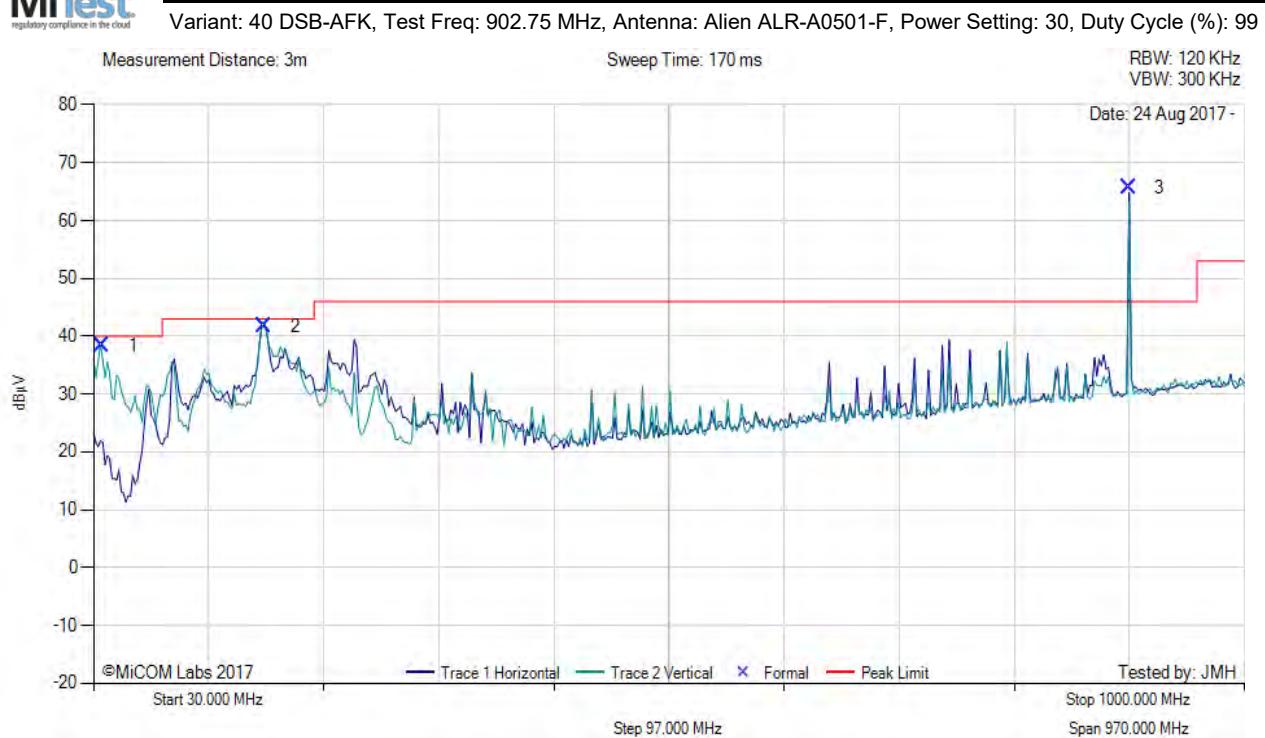
Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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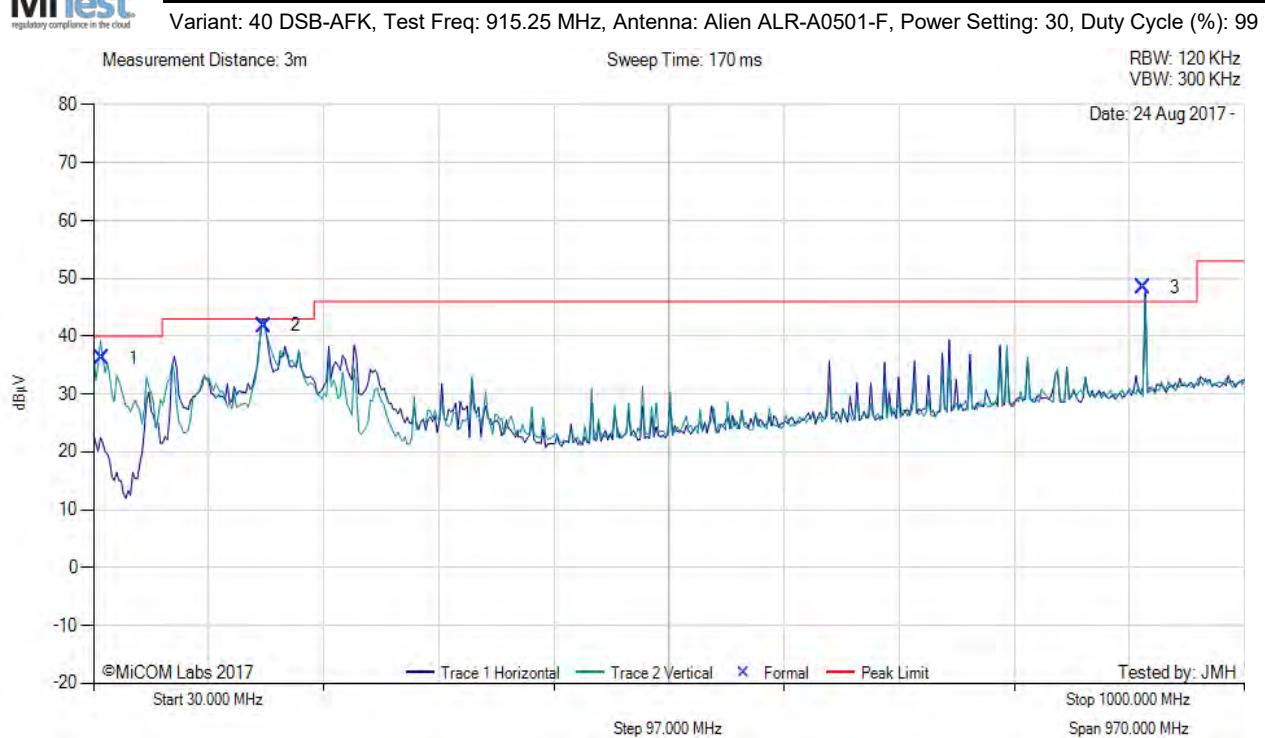
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	37.38	50.92	3.48	-16.06	38.34	Digital Emissions	Vertical	100	0	--	--	Pass	
2	174.09	57.33	4.23	-19.85	41.71	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	902.74	67.10	6.34	-7.75	65.69	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



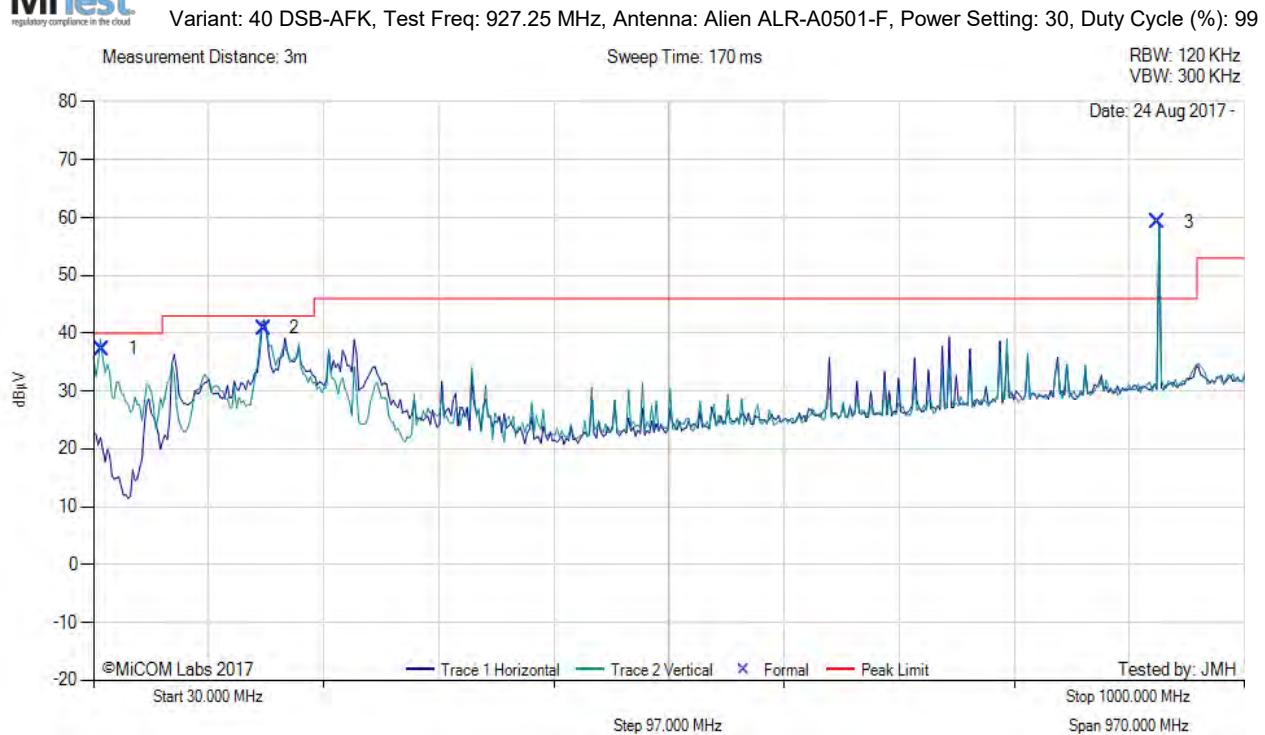
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.52	48.84	3.48	-16.06	36.26	Digital Emissions	Vertical	100	0	40.0	-3.7	Pass	
2	174.15	57.47	4.23	-19.85	41.85	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	915.25	49.76	6.40	-7.74	48.42	Fundamental	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS

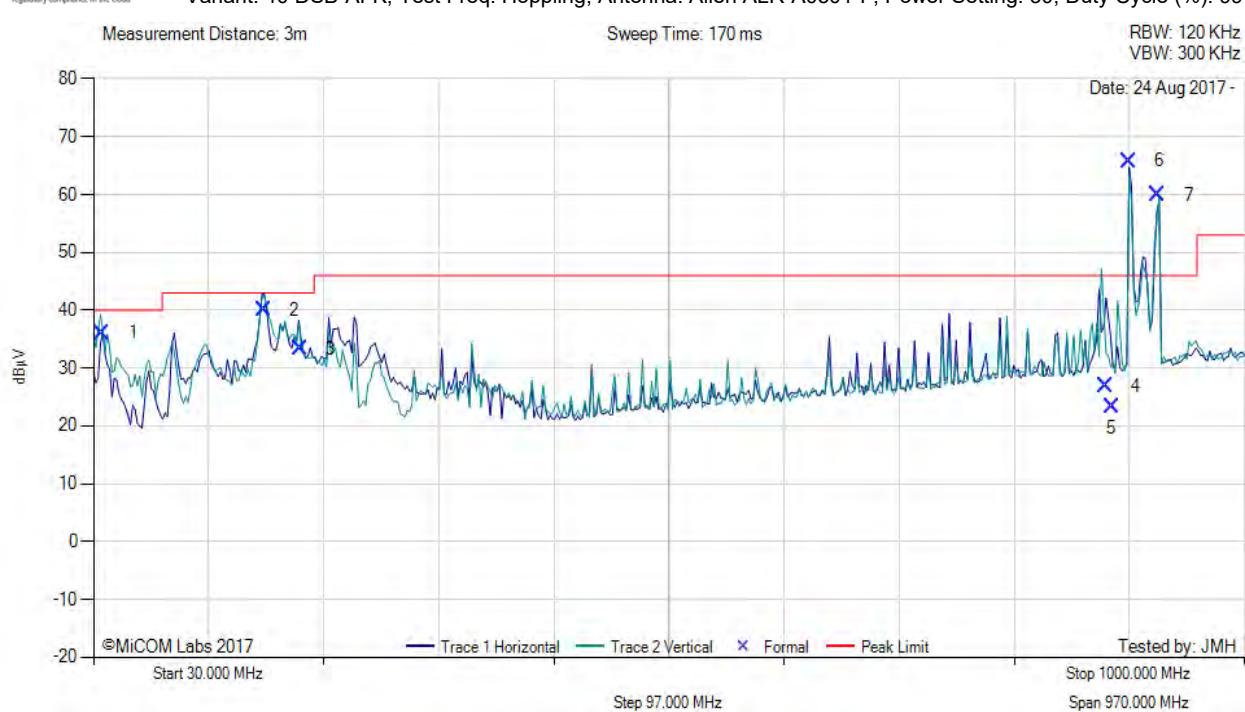


30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.38	49.85	3.48	-16.06	37.27	Digital Emissions	Vertical	100	0	--	--	Pass	
2	173.73	56.37	4.23	-19.75	40.85	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	927.25	60.15	6.43	-7.44	59.14	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



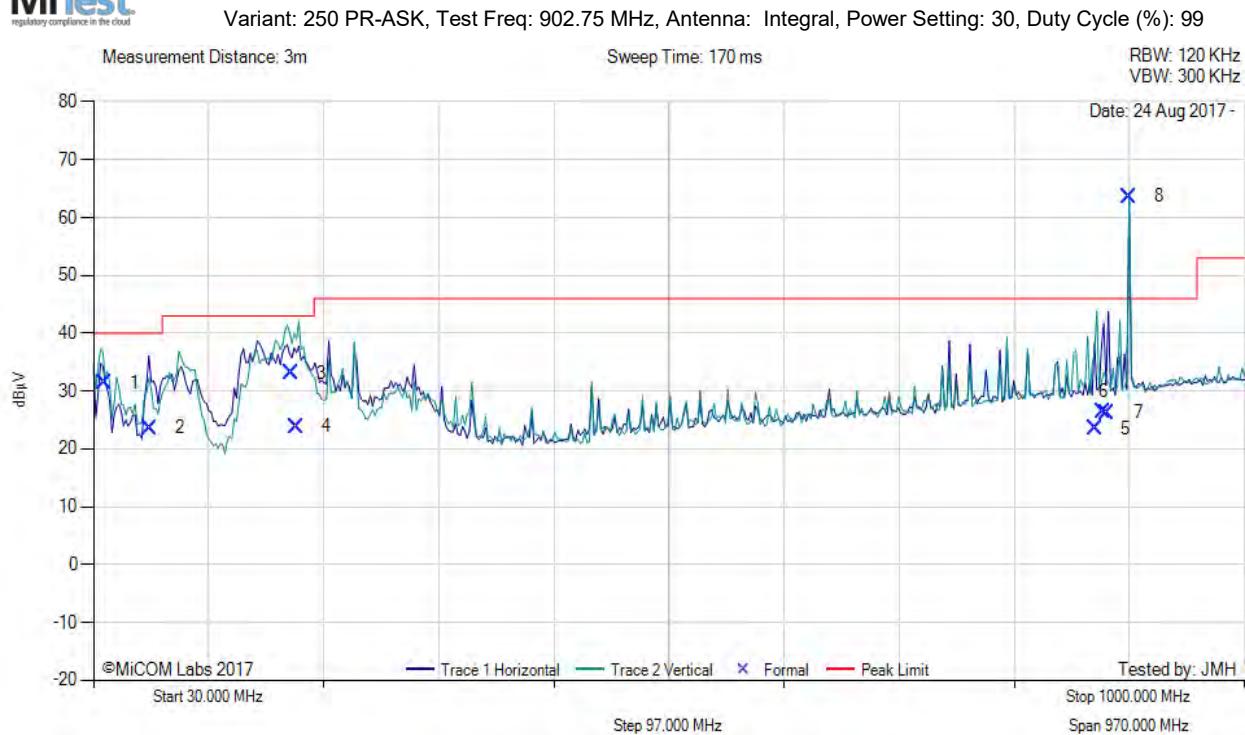
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.39	48.71	3.48	-16.06	36.13	MaxQP	Vertical	98	85	40.0	-3.9	Pass	
2	173.65	55.57	4.23	-19.75	40.05	MaxQP	Horizontal	136	21	43.0	-3.0	Pass	
3	204.22	48.54	4.36	-19.60	33.30	MaxQP	Vertical	101	48	43.0	-9.7	Pass	
4	882.65	28.64	6.28	-8.08	26.84	MaxQP	Vertical	100	357	46.0	-19.2	Pass	
5	888.21	25.02	6.30	-8.00	23.32	MaxQP	Vertical	100	68	46.0	-22.7	Pass	
6	902.74	67.25	6.34	-7.75	65.84	Fundamental	Horizontal	100	0	--	--		
7	927.24	60.96	6.43	-7.44	59.95	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS

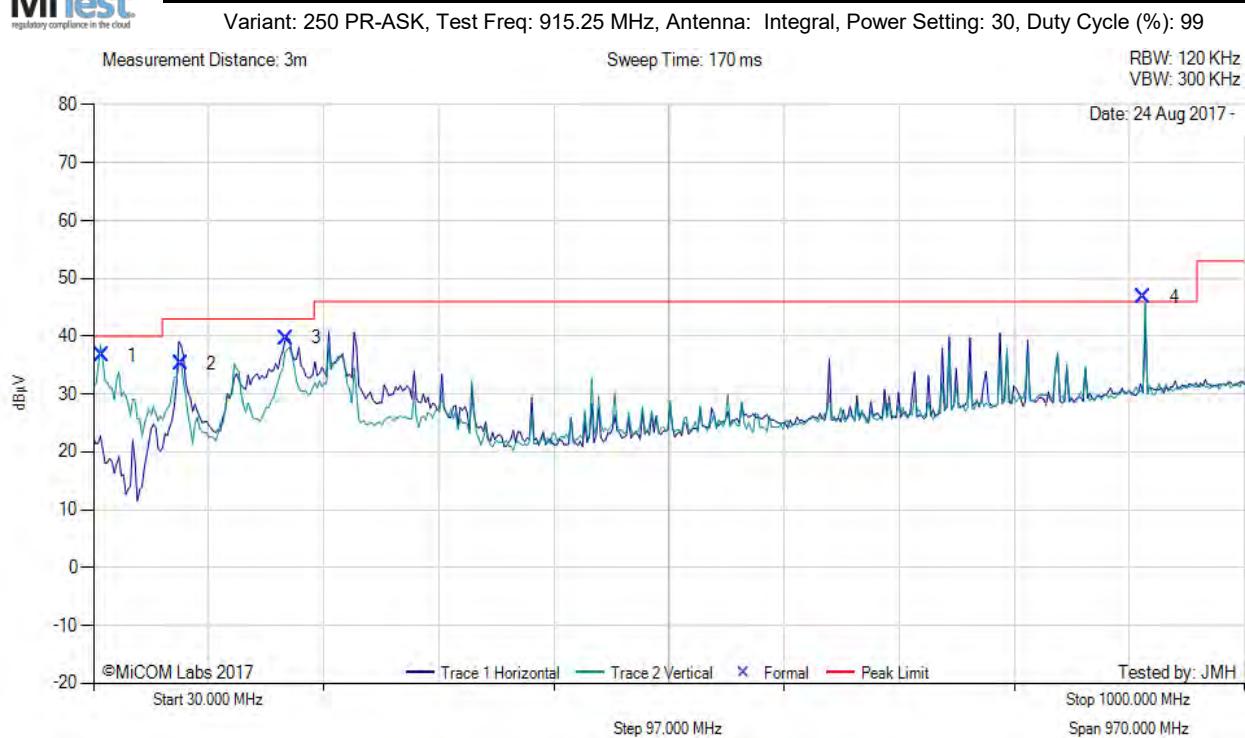


30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	39.50	45.44	3.50	-17.56	31.38	MaxQP	Vertical	103	116	40.0	-8.6	Pass	
2	77.22	43.26	3.76	-23.37	23.65	MaxQP	Vertical	191	76	40.0	-16.4	Pass	
3	196.31	47.47	4.33	-18.66	33.14	MaxQP	Vertical	174	223	43.0	-9.9	Pass	
4	201.32	38.33	4.35	-18.77	23.91	MaxQP	Vertical	193	210	43.0	-19.1	Pass	
5	874.29	25.26	6.27	-8.09	23.44	MaxQP	Vertical	98	357	46.0	-22.6	Pass	
6	881.03	28.26	6.28	-8.12	26.42	MaxQP	Horizontal	138	7	46.0	-19.6	Pass	
7	884.48	28.02	6.29	-8.01	26.30	MaxQP	Vertical	110	14	46.0	-19.7	Pass	
8	902.81	65.02	6.34	-7.75	63.61	Fundamental	Vertical	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.34	49.21	3.48	-16.06	36.63	MaxQP	Vertical	98	137	40.0	-3.4	Pass	
2	103.37	51.54	3.90	-20.13	35.31	MaxQP	Horizontal	192	193	43.0	-7.7	Pass	
3	192.19	54.62	4.32	-19.24	39.70	MaxQP	Horizontal	117	274	43.0	-3.3	Pass	
4	915.26	48.11	6.39	-7.75	46.75	Fundamental	Vertical	100	0	--	--		

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS

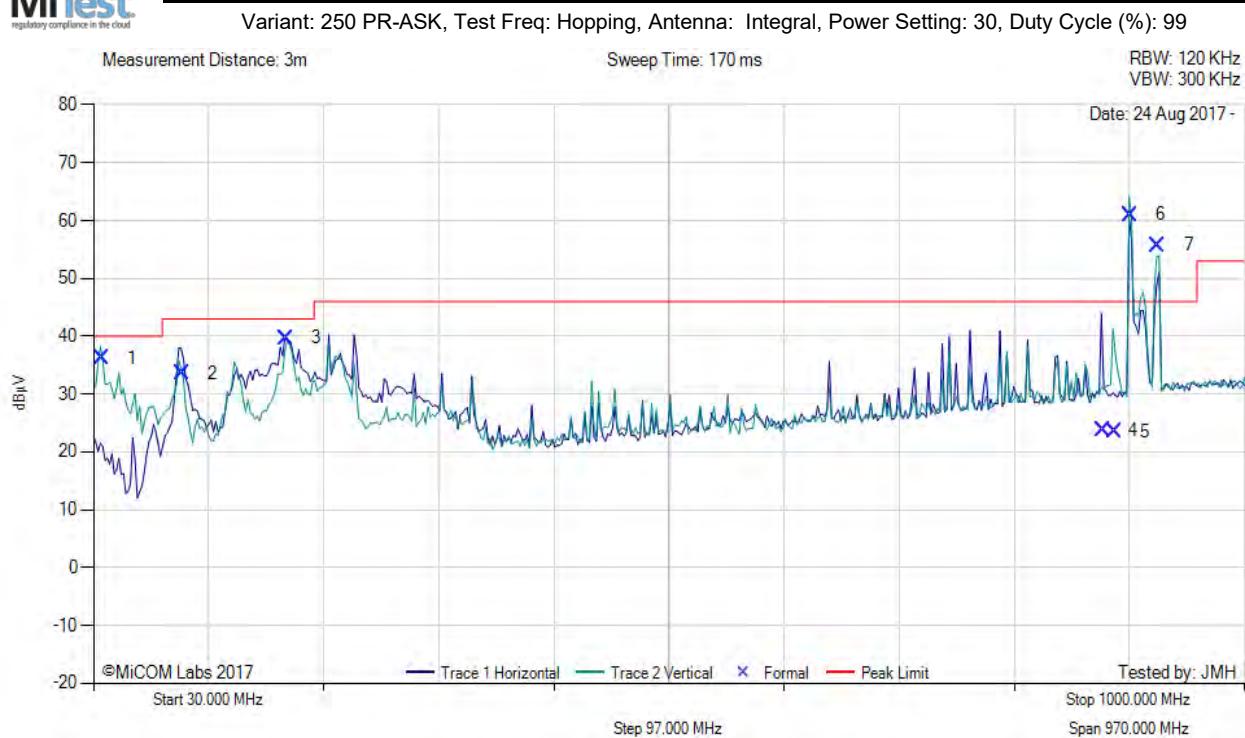


30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.38	48.77	3.48	-16.06	36.19	MaxQP	Vertical	98	110	40.0	-3.8	Pass	
2	103.34	52.40	3.90	-20.13	36.17	MaxQP	Horizontal	181	187	43.0	-6.8	Pass	
3	193.75	49.88	4.32	-19.10	35.10	MaxQP	Horizontal	170	288	43.0	-7.9	Pass	
4	927.25	56.95	6.43	-7.44	55.94	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



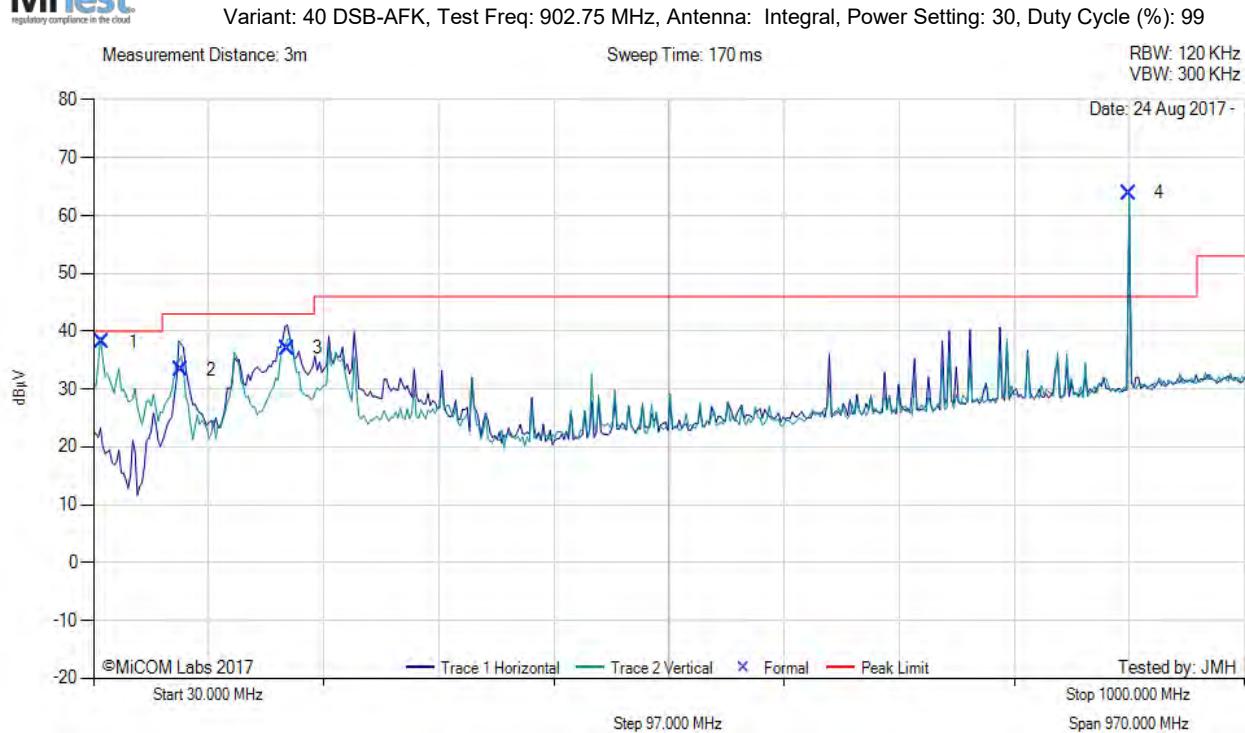
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	48.83	3.48	-16.06	36.25	MaxQP	Vertical	101	75	40.0	-3.8	Pass	
2	104.77	49.66	3.91	-19.93	33.64	MaxQP	Horizontal	178	178	43.0	-9.4	Pass	
3	192.24	54.62	4.32	-19.24	39.70	MaxQP	Horizontal	143	275	43.0	-3.3	Pass	
4	880.74	25.57	6.28	-8.16	23.69	MaxQP	Horizontal	170	0	46.0	-22.3	Pass	
5	890.28	25.23	6.31	-8.00	23.54	MaxQP	Vertical	120	350	46.0	-22.5	Pass	
6	903.30	62.39	6.34	-7.75	60.98	Fundamental	Vertical	100	0	--	--		
7	927.19	56.75	6.43	-7.44	55.74	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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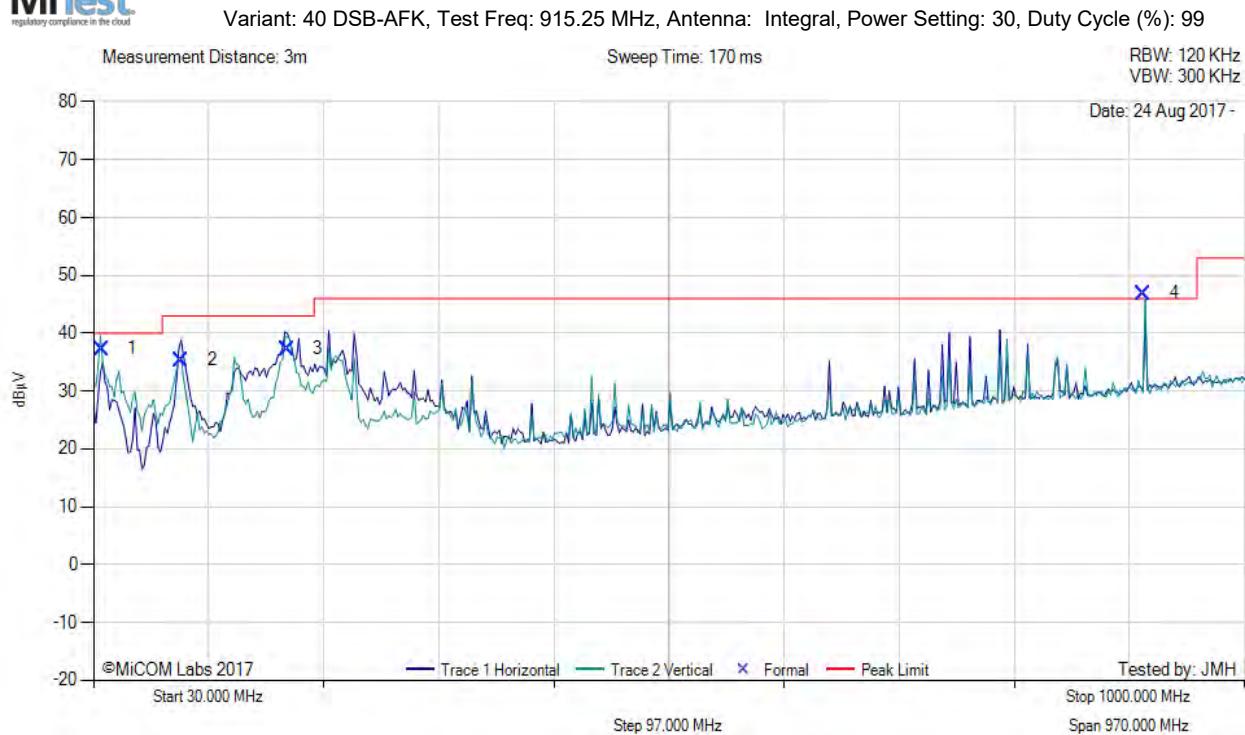
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dB μ V	Cable Loss dB	AF dB	Level dB μ V/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dB μ V/m	Margin dB	Pass /Fail	
1	37.38	50.78	3.48	-16.06	38.20	Digital Emissions	Vertical	100	0	--	--	Pass	
2	103.91	49.64	3.90	-20.13	33.41	Digital Emissions	Horizontal	100	0	--	--	Pass	
3	193.58	51.82	4.32	-19.10	37.04	Digital Emissions	Horizontal	100	0	--	--	Pass	
4	902.75	65.27	6.34	-7.75	63.86	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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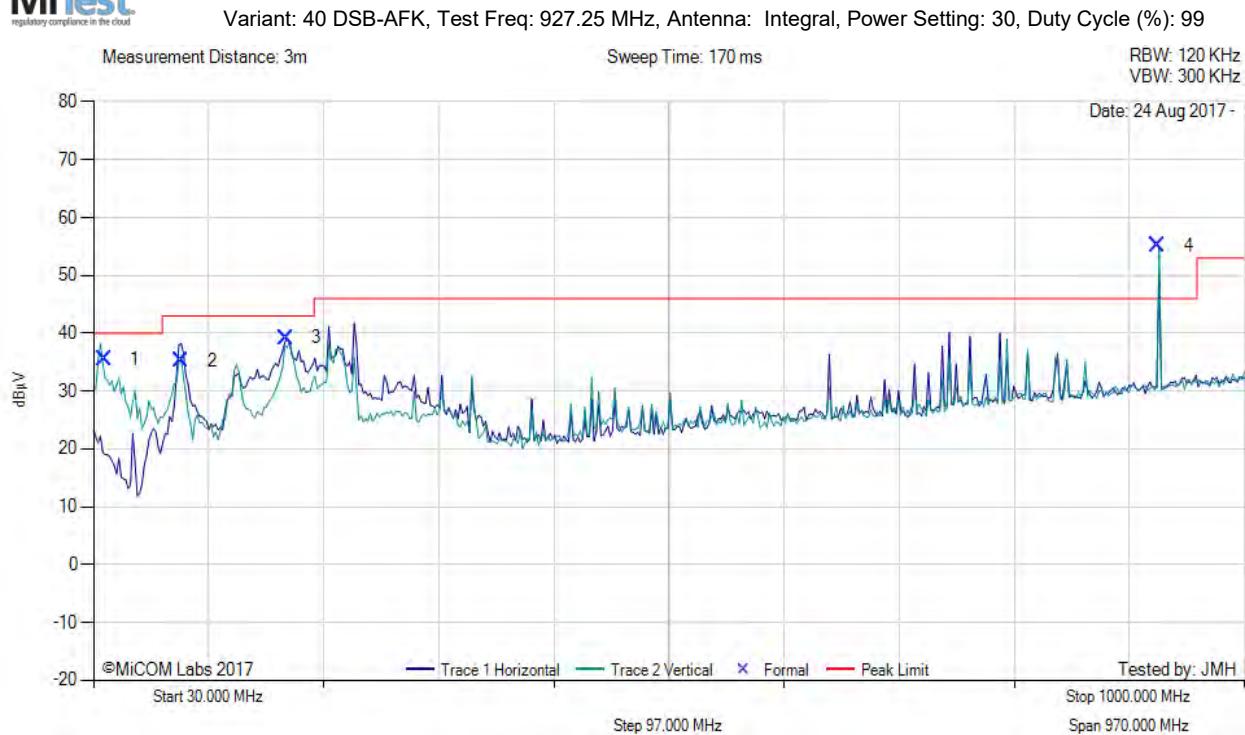
30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	49.86	3.48	-16.06	37.28	Digital Emissions	Vertical	100	0	--	--	Pass	
2	104.18	51.43	3.91	-19.93	35.41	Digital Emissions	Horizontal	100	212	--	--	Pass	
3	193.56	52.06	4.32	-19.10	37.28	Digital Emissions	Horizontal	100	20	--	--	Pass	
4	915.26	48.21	6.40	-7.74	46.87	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	39.48	49.56	3.50	-17.56	35.50	Digital Emissions	Vertical	100	0	--	--	Pass	
2	104.15	51.20	3.91	-19.93	35.18	Digital Emissions	Horizontal	100	207	--	--	Pass	
3	192.25	54.13	4.32	-19.24	39.21	Digital Emissions	Horizontal	100	240	--	--	Pass	
4	927.24	56.08	6.43	-7.44	55.07	Fundamental	Vertical	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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RADIATED DIGITAL EMISSIONS



30.00 - 1000.00 MHz													
Num	Frequency MHz	Raw dBµV	Cable Loss dB	AF dB	Level dBµV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBµV/m	Margin dB	Pass /Fail	
1	37.37	49.03	3.48	-16.06	36.45	MaxQP	Vertical	98	131	40.0	-3.6	Pass	
2	103.34	55.04	3.90	-20.13	38.81	MaxQP	Horizontal	161	193	43.0	-4.2	Pass	
3	192.25	54.63	4.32	-19.24	39.71	MaxQP	Horizontal	134	273	43.0	-3.3	Pass	
4	881.25	29.93	6.28	-8.12	28.09	MaxQP	Vertical	111	6	46.0	-17.9	Pass	
5	883.96	24.83	6.29	-8.05	23.07	MaxQP	Vertical	195	309	46.0	-22.9	Pass	
6	902.75	60.07	6.34	-7.75	58.66	Fundamental	Horizontal	100	0	--	--		
7	927.33	51.10	6.43	-7.44	50.09	Peak (NRB)	Horizontal	100	0	--	--	Pass	

Test Notes: EUT powered by POE and connected to laptop outside chamber. New module, shield

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