CERTIFICATION TEST REPORT

Report Number. : 12968657-E3V3

Applicant	:	SPIRE, INC. 2030 HARRISON STREET 2nd FLOOR SAN FRANCISCO, CA 94110, U.S.A.
Model	:	800100
FCC ID	:	2ACF5800100
EUT Description	:	SPIRE MEDICAL HEALTH TAG
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date of Issue:
November 22, 2019

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	10/29/2019	Initial Issue	--
V2	11/13/2019	Inserted Below 30MHz and above 18G Data	E.Yu
V3	11/23/2019	Updated Section 9.2	E.Yu

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UL VERIFICATION SERVICES INC.
47173 Benicia Street, Fremont, CA 94538; USA TEL:(510) 319-4000 FAX:(510) 661-0888

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SPIRE, INC.
2030 HARRISON STREET 2nd FLOOR
SAN FRANCISCO, CA 98052, U.S.A.

EUT DESCRIPTION: SPIRE MEDICAL HEALTH TAG

MODEL NUMBER: SPIRE MEDICAL HEALTH TAG

SERIAL NUMBER: 64F7DB2440A1100C

DATE TESTED: October 10, 2019 - November 13, 2019

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Frank Ibrahim
Operations Leader
Consumer Technology Division
UL Verification Services Inc.

Prepared By:

Oren Stoelting
Test Engineer
Consumer Technology Division
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd
☐ Chamber A	☐ Chamber D	☒ Chamber I
☐ Chamber B	☐ Chamber E	☐ Chamber J
☐ Chamber C	☐ Chamber F	☐ Chamber K
	☐ Chamber G	☐ Chamber L
	☐ Chamber H	☐ Chamber M

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers above are covered under Industry Canada company address and respective code: 2324A.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.17 dB

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a Medical Health Tag that monitors the patient while connected to a phone app.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	4.94	3.12

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes one chip antenna type with a maximum gain of 2.5dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware version is (Test Bridge v1.0.0), and the software version is 1.1.2(12872).

5.5. WORST-CASE CONFIGURATION AND MODE

For radiated emissions the fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

BLE: 1 Mbps.

EUT is non-adaptive equipment.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List			
Description	Manufacturer	Model	Serial Number
Support Laptop	Lenovo	ThinkPad L480	PF1H0N14
Laptop AC Adapter	Lenovo	ADLX65YDC2A	8SSA10M13944D1SG8C40F6A

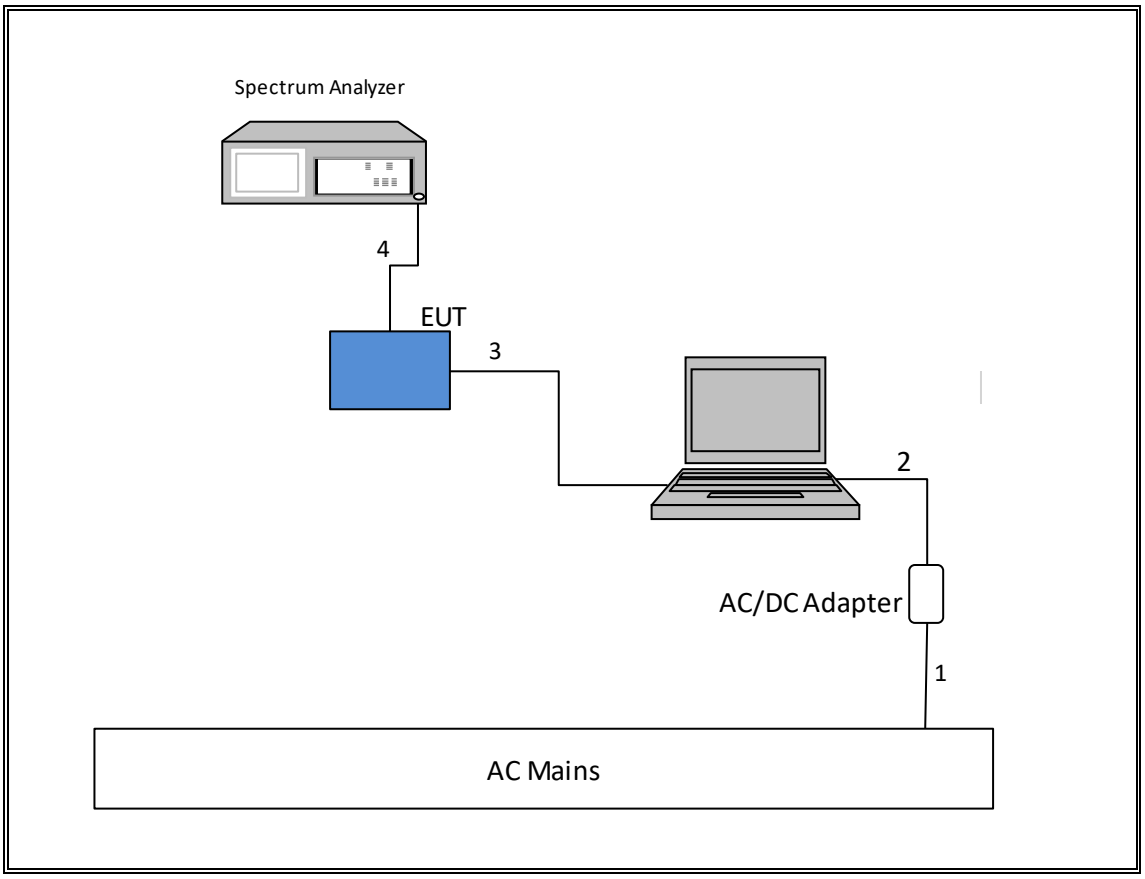
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC Power	1	AC	Unshielded	1	AC Mains to AC/DC Adapter
2	DC Power	1	DC	Shielded	1	AC/DC Adapter to Laptop
3	USB	1	USB	Unshielded	1	USB to EUT
4	Antenna	1	SMA	Unshielded	0.5	EUT to Analyzer

TEST SETUP

The EUT was connected to the test laptop via USB cable. Test software exercised the EUT.

SETUP DIAGRAM FOR ANTENNA PORT CONDUCTED TESTS



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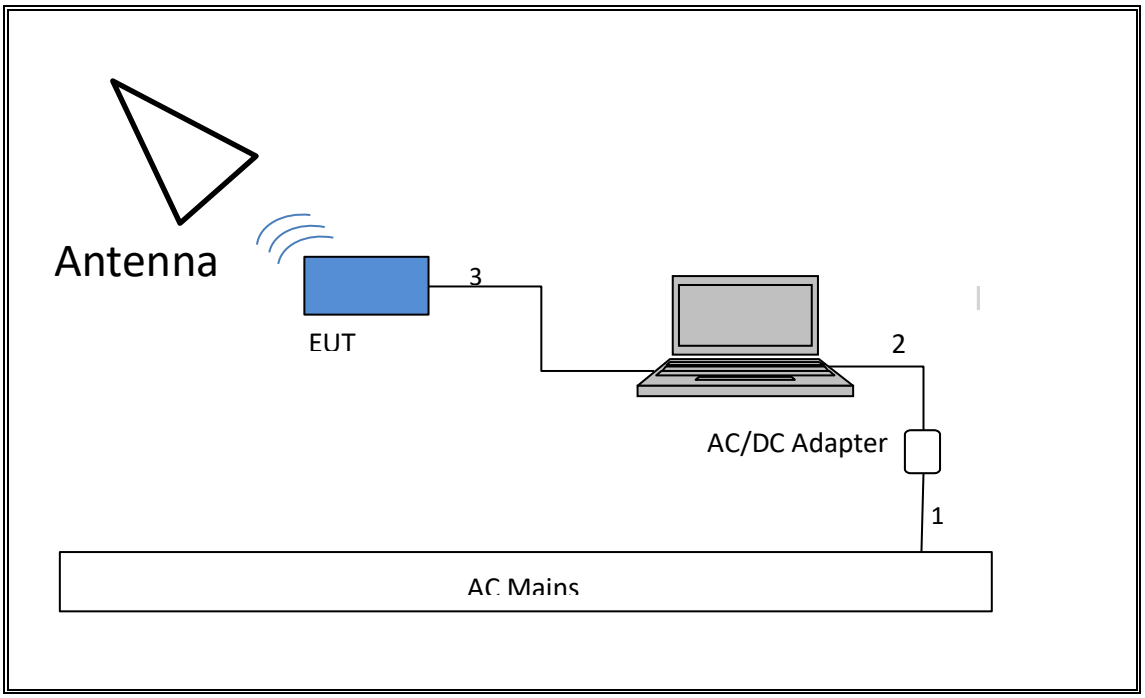
ETUP DIAGRAM FOR RADIATED TESTS



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6. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 558074 D01 v05r02, Section 6.

6 dB BW: KDB 558074 D01 v05r02, Section 8.1.

99% BW: ANSI C63.10-2013, Section 6.9.3.

Output Power: KDB 558074 D01 v05r02, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v05r02, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v05r02, Section 11.1 a)

Out-of-band emissions in restricted bands: KDB 558074 D01 v05r02, Section 12.1.

Band-edge: KDB 558074 D01 v05r02, Section 12.1.

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7. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment were utilized for the tests documented in this report:

Test Equipment List					
Description	**Manufacturer**	**Model**	**ID No.**	**Cal Date**	**Cal Due**
CHAMBER	Thermotron Industries	SE-600-10-10	T80	11/13/18	11/13/19
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1450	01/23/19	01/23/20
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	PRE0181575	09/05/19	09/05/20
Horn Antenna	AR	AMPL-ATH1G18	PRE0189055	04/20/19	04/20/20
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	05/16/19	05/16/20
Amplifier, 1 to 18GHz, 35dB	AMPLICAL	AMP1G18-35	T1571	05/28/19	05/28/20
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	PRE0180174	06/01/19	06/01/20
Power Sensor	ETS-Lindgren	7002-006	T1022	01/22/19	01/22/20
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies (Formerly Agilent)	N9030A	T917	01/24/19	01/24/20
Antenna, Passive Loop 30Hz to 1MHz	ELETRO METRICS	EM-6871	PRE0179465	05/31/19	05/31/2020
Antenna, Passive Loop 100kHz to 30MHz	ELETRO METRICS	EM-6872	PRE0179467	05/31/19	05/31/2020
Antenna, Horn 18 to 26.5GHz	ARA	MWH-1826/B	T447	08/13/19	08/13/20
Rf Amplifier, 18-26.5GHz	Keysight Technologies (Formerly Agilent)	8449B	T404	03/23/19	03/23/20
Test Software List					
Radiated Software	UL	UL EMC	Ver 9.5, June 22, 2018		
Antenna Port Software	UL	UL RF	Ver 9.6, April 18, 2019		

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8. ANTENNA PORT TEST RESULTS (BLE 1 Mbps)

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
BLE	0.220	0.625	0.352	35.20%	4.53	4.545

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DUTY CYCLE PLOTS

DUTY CYCLE BLE

8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

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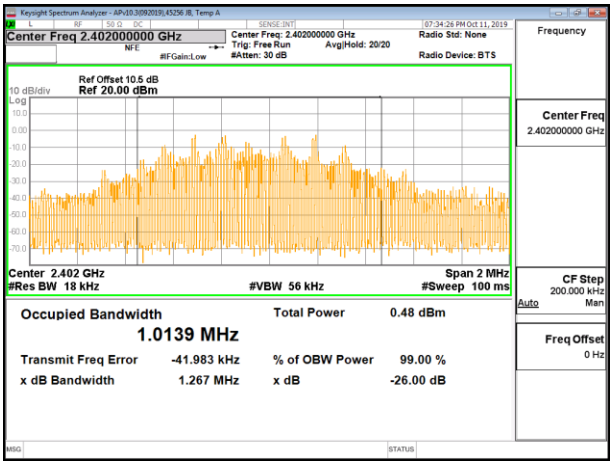
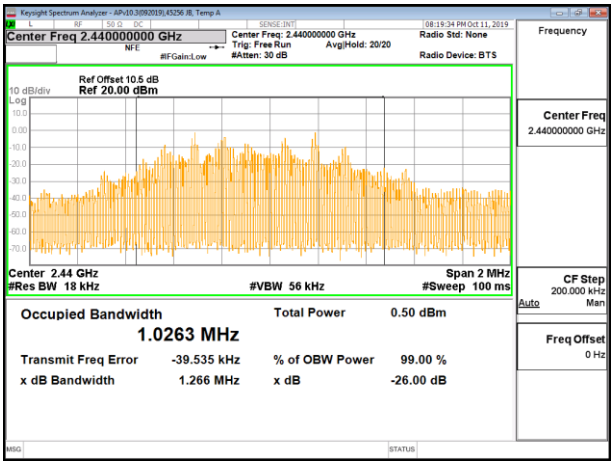
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0139
Middle	2440	1.0263
High	2480	1.0145



LOW CHANNEL



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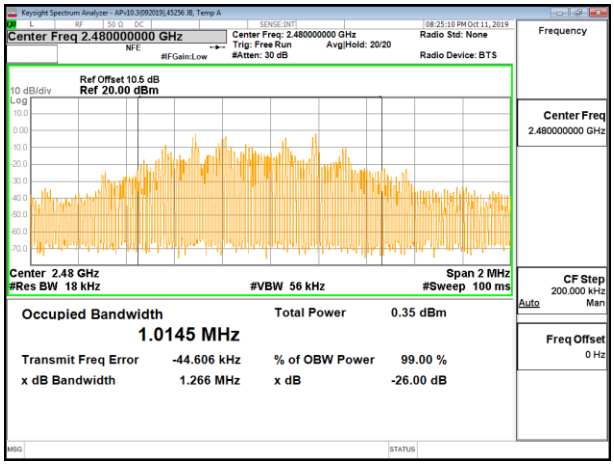

HIGH CHANNEL

8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

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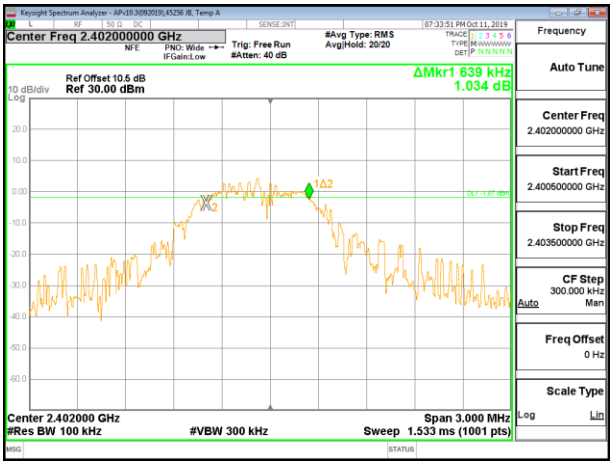
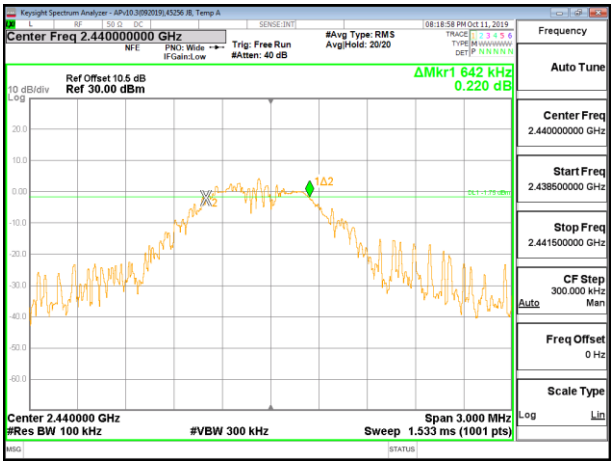
RESULTS

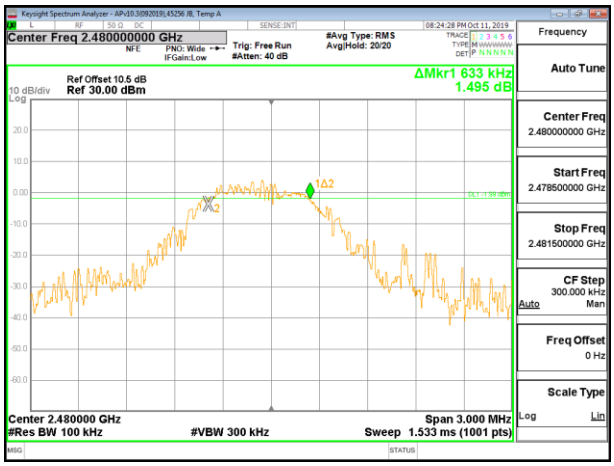
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.6390	0.5
Middle	2440	0.6420	0.5
High	2480	0.6330	0.5



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.5 dB (including 10 dB pad and 0.5 dB cable) was entered as an offset in the power meter to allow for a gated peak reading of power.

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RESULTS

Tested By:	45256 JB
Date:	10/11/2019

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	4.940	30	-25.060
Middle	2440	4.940	30	-25.060
High	2480	4.840	30	-25.160

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8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

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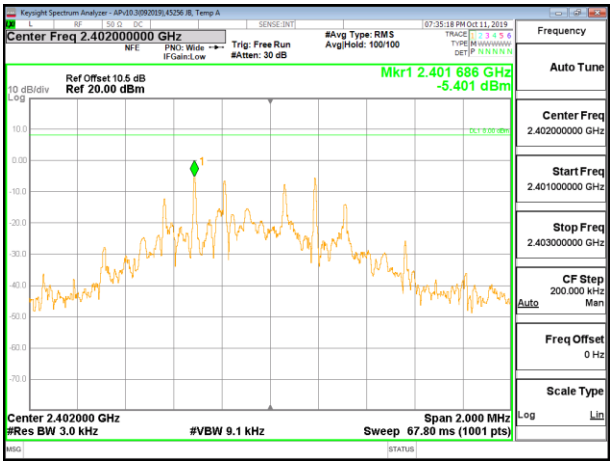
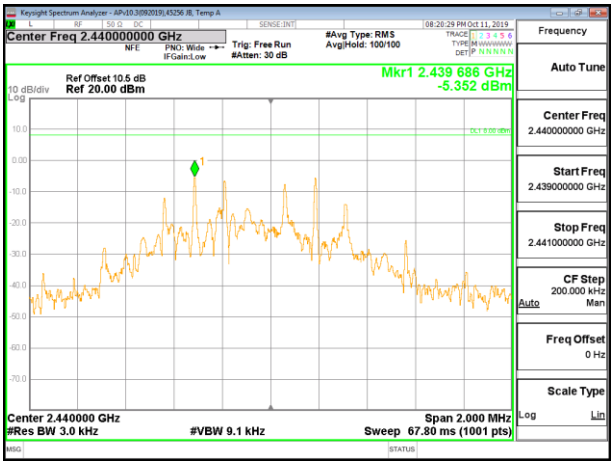
RESULTS

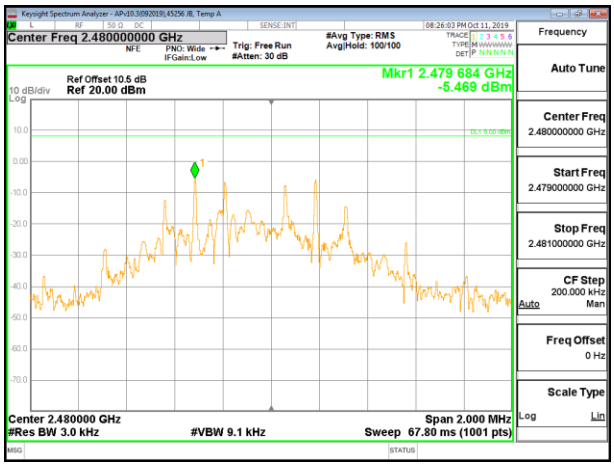
Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2402	-5.40	8	-13.40
Middle	2440	-5.35	8	-13.35
High	2480	-5.47	8	-13.47



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

RSS-247 5.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

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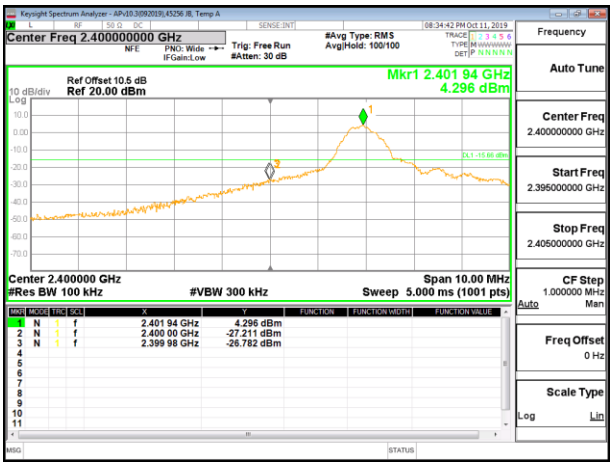
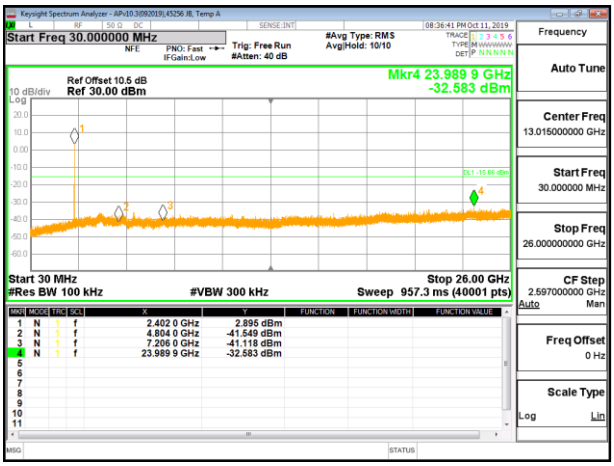
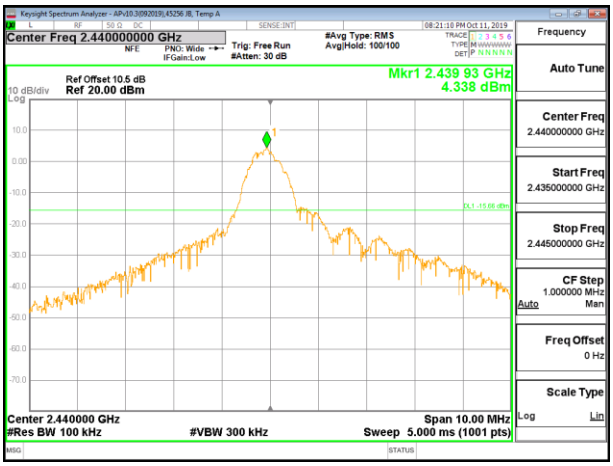
RESULTS



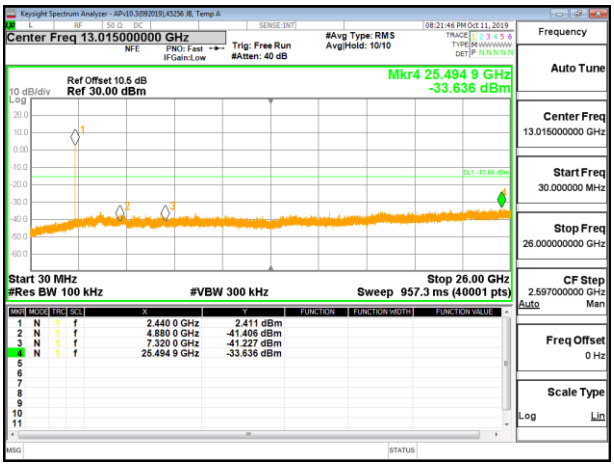
LOW CHANNEL BANDEDGE



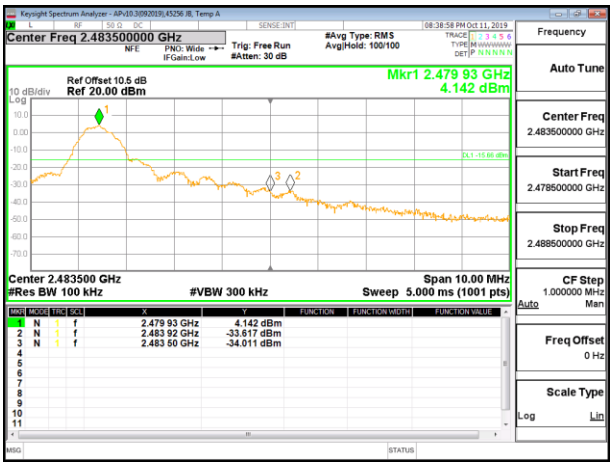
OUT-OF-BAND LOW CHANNEL



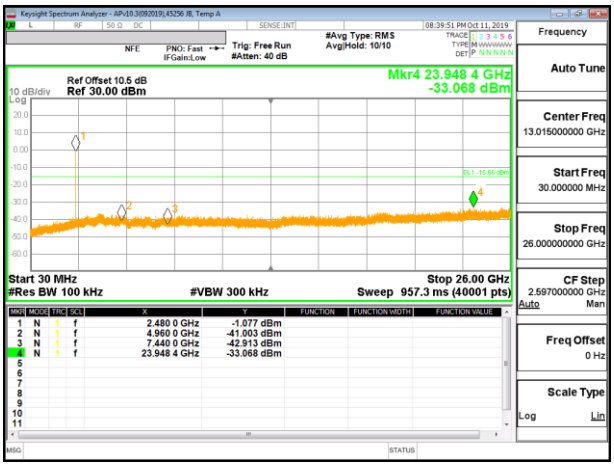
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL BANDEDGE



OUT-OF-BAND HIGH CHANNEL

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9. RADIATED TEST RESULTS (BLE 1 Mbps)

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

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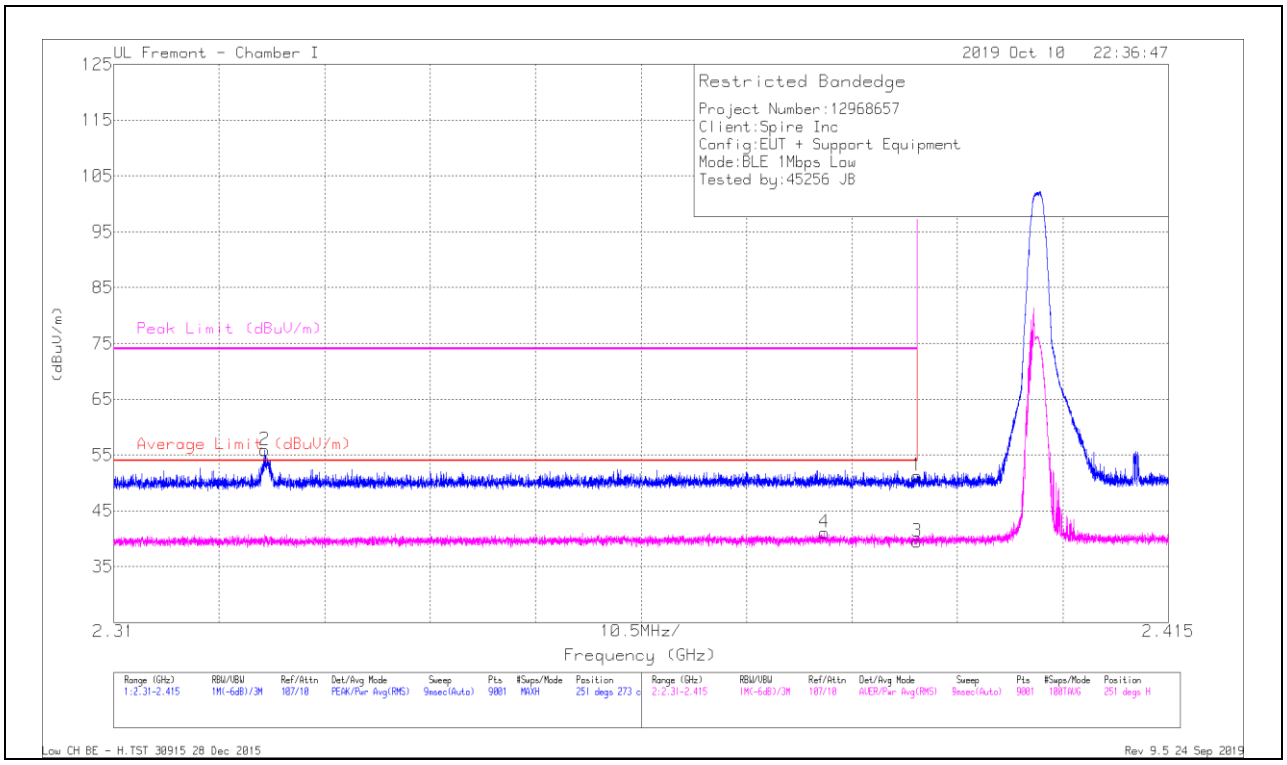
9.2. TRANSMITTER ABOVE 1 GHz

BANDEDGE (LOW CHANNEL)

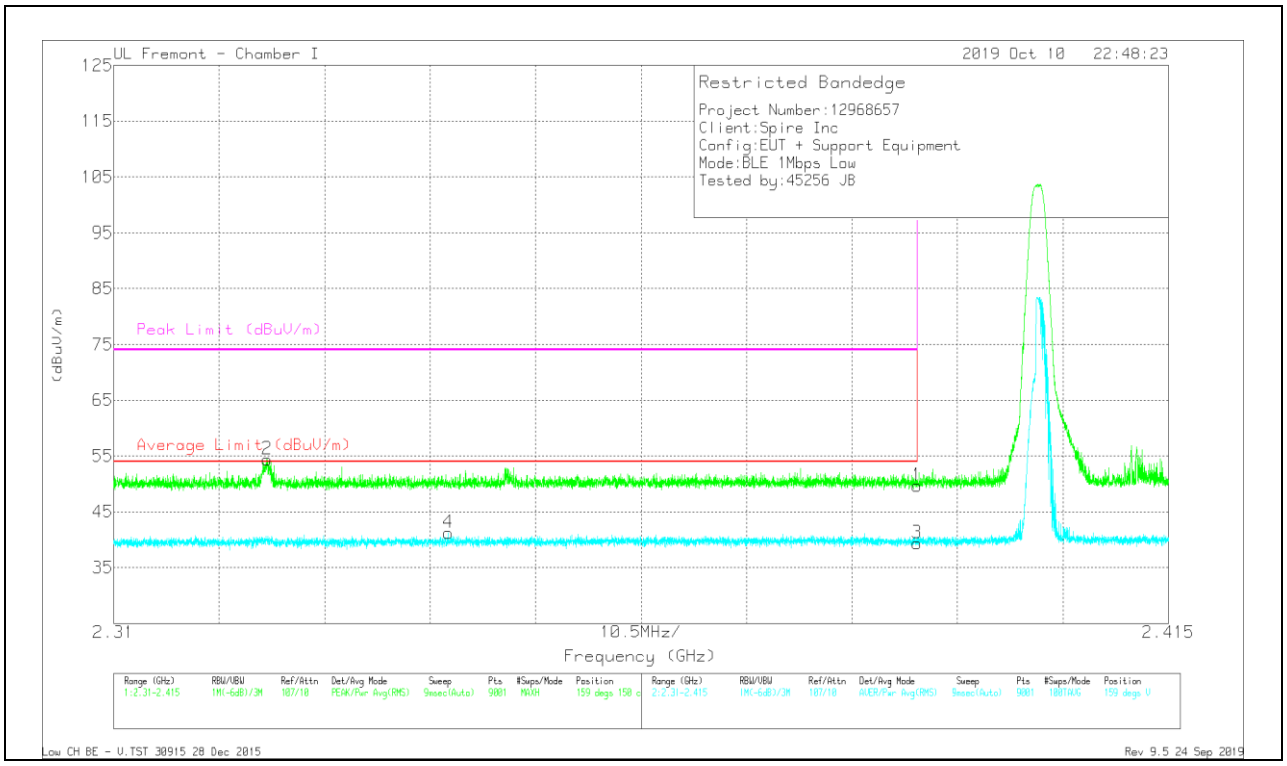
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	39.04	Pk	31.9	-19.7		51.24	-	-	74	-22.76	251	273	H
2	* 2.32502	43.73	Pk	31.5	-19.4		55.83	-	-	74	-18.17	251	273	H
3	* 2.38999	27.25	RMS	31.9	-19.7	4.53	43.98	54	-10.02	-	-	251	273	H
4	* 2.38076	28.65	RMS	31.9	-19.5	4.53	46.58	54	-8.42	-	-	251	273	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

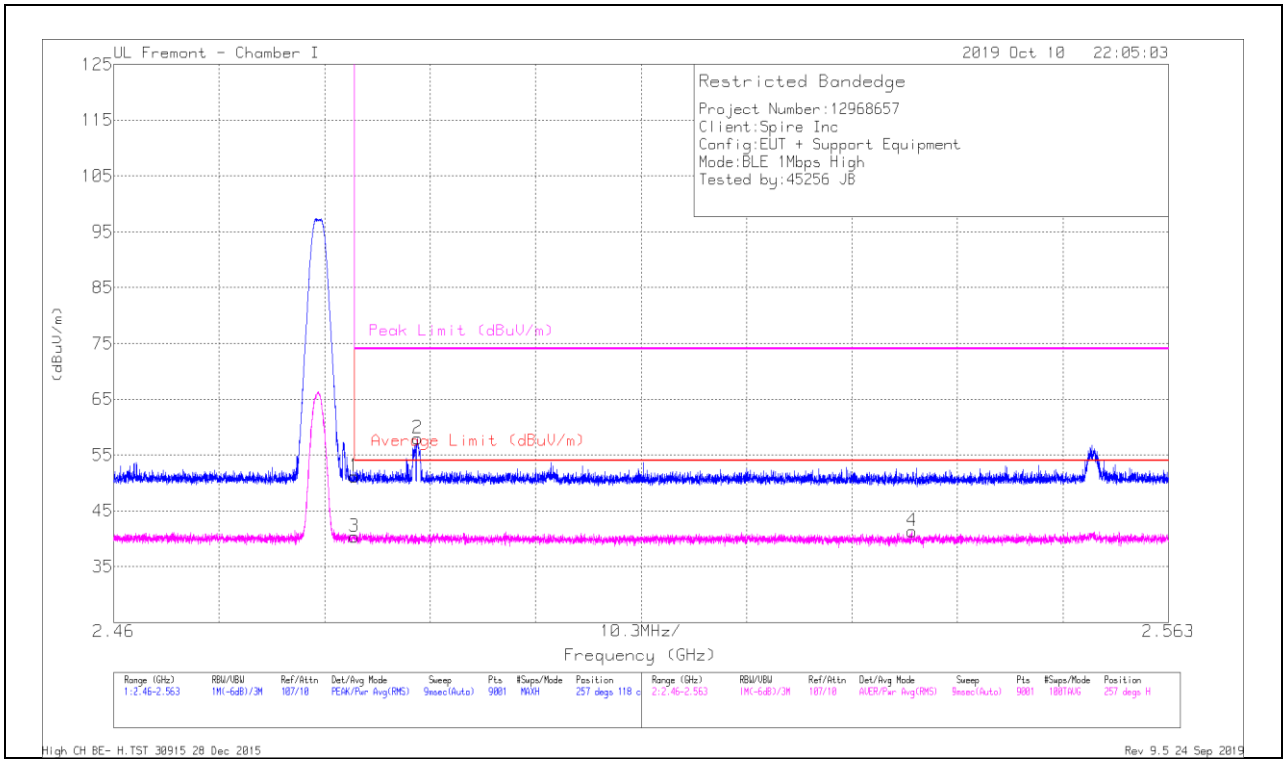


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.38999	37.52	Pk	31.9	-19.7		49.72	-	-	74	-24.28	159	150	V
2	* 2.32525	42.33	Pk	31.5	-19.4		54.43	-	-	74	-19.57	159	150	V
3	* 2.38999	27.14	RMS	31.9	-19.7	4.53	43.87	54	-10.13	-	-	159	150	V
4	* 2.34331	29.02	RMS	31.6	-19.4	4.53	45.75	54	-8.25	-	-	159	150	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL)

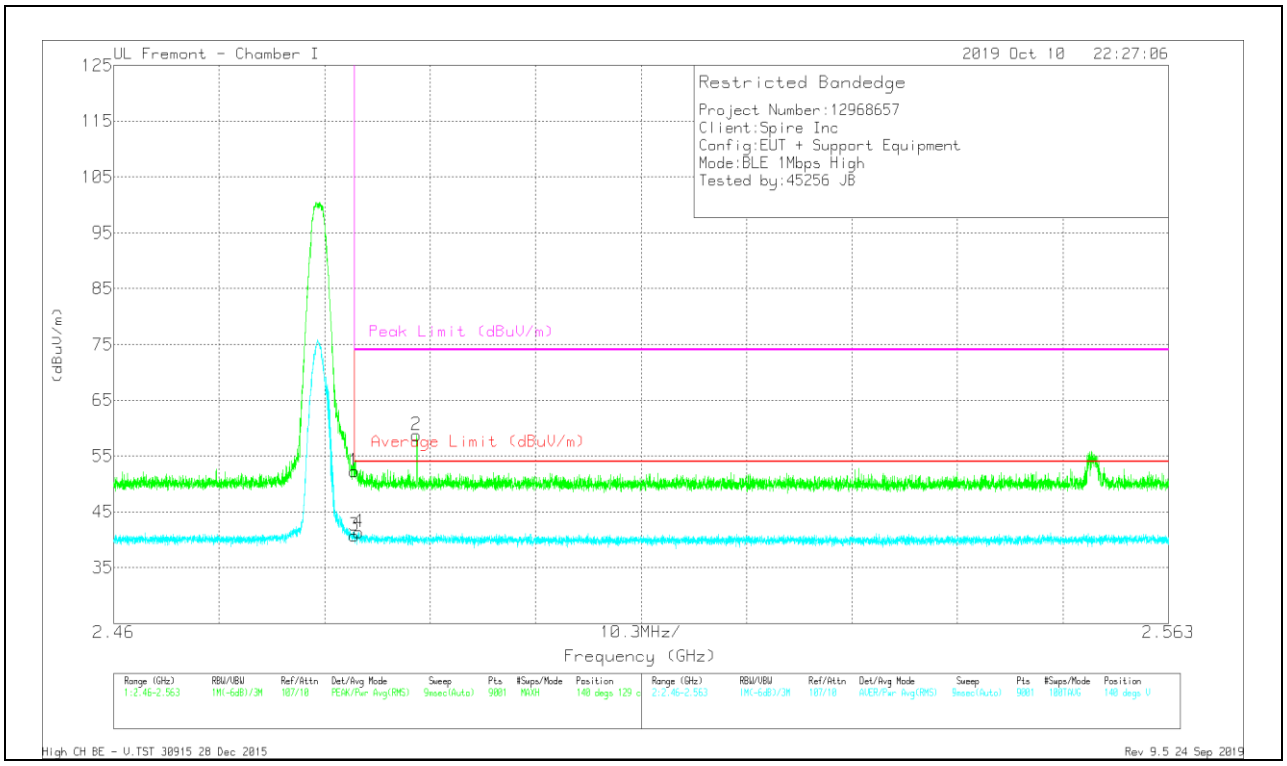
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	38.81	Pk	32.4	-20		51.21	-	-	74	-22.79	257	118	H
2	* 2.48967	45.78	Pk	32.3	-20.1		57.98	-	-	74	-16.02	257	118	H
3	* 2.48351	27.96	RMS	32.4	-20	4.53	44.89	54	-9.11	-	-	257	118	H
4	2.53795	29.22	RMS	32.2	-20.1	4.53	45.85	54	-8.15	-	-	257	118	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

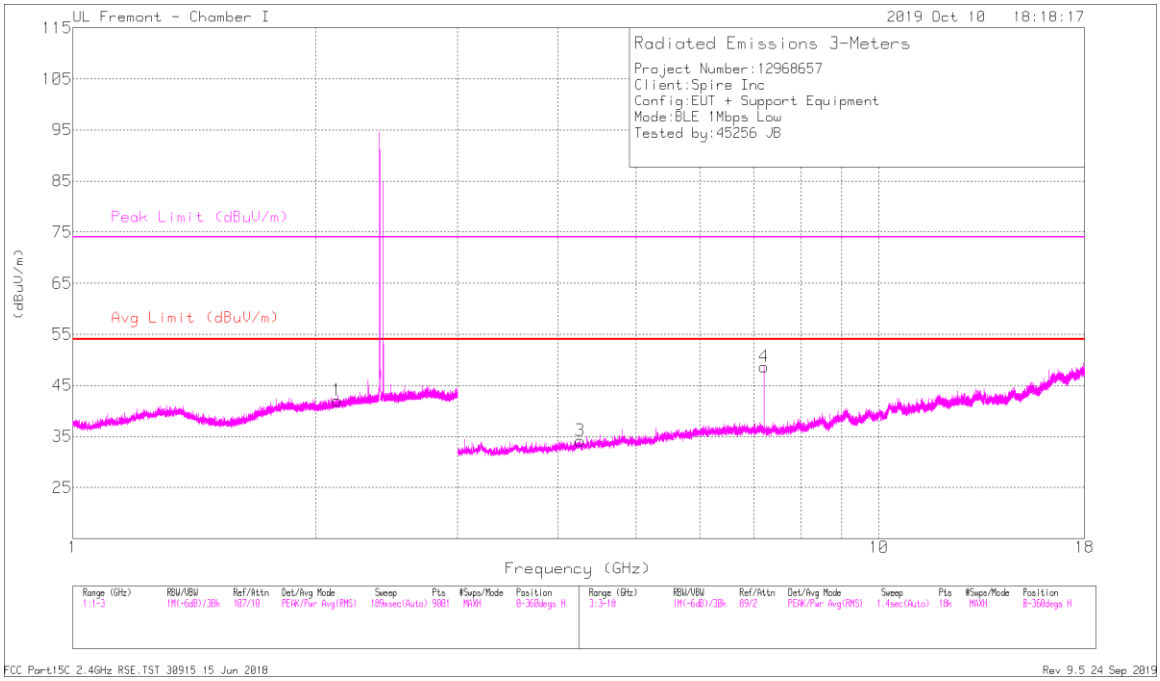


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.48351	39.86	Pk	32.4	-20		52.26	-	-	74	-21.74	140	129	V
2	* 2.48957	46.59	Pk	32.3	-20.1		58.79	-	-	74	-15.21	140	129	V
3	* 2.48351	28.3	RMS	32.4	-20	4.53	45.23	54	-8.77	-	-	140	129	V
4	* 2.48395	28.98	RMS	32.4	-20	4.53	45.91	54	-8.09	-	-	140	129	V

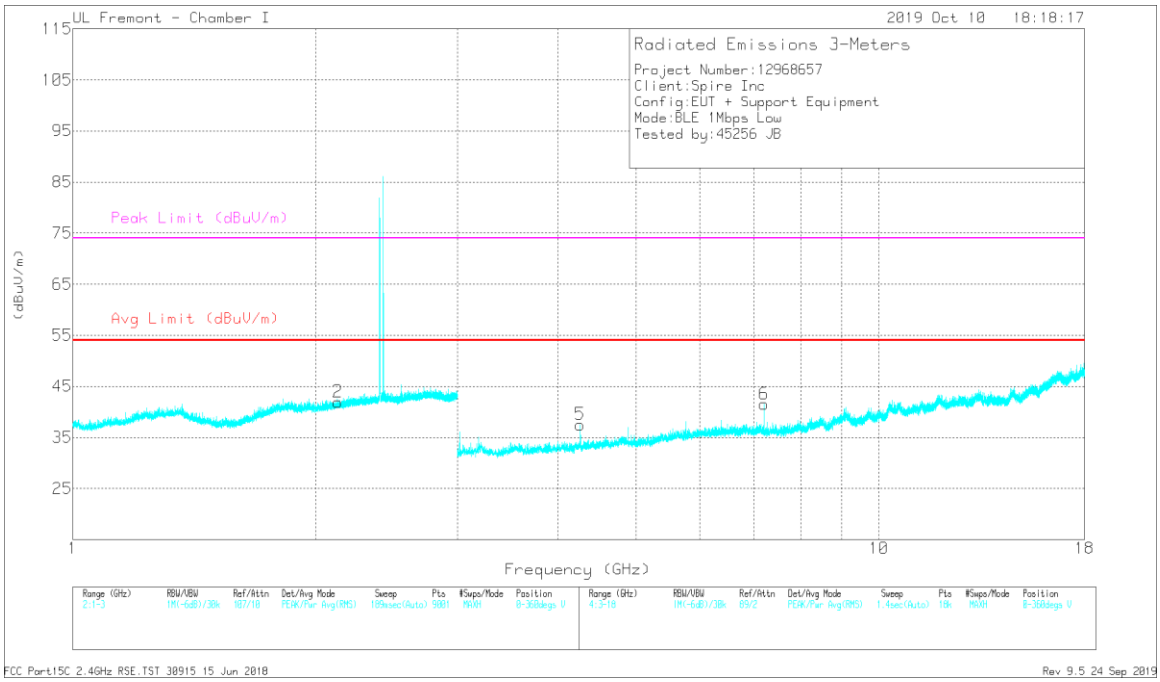
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.25807	34.82	PK2	33.5	-27.1	-	41.22	-	-	74	-32.78	4	287	H
* 4.25963	25.29	MAv1	33.5	-27.1	4.53	36.22	54	-17.78	-	-	4	287	H
* 4.26205	36.93	PK2	33.5	-27	-	43.43	-	-	74	-30.57	341	228	V
* 4.26367	25.44	MAv1	33.5	-27.1	4.53	36.37	54	-17.63	-	-	341	228	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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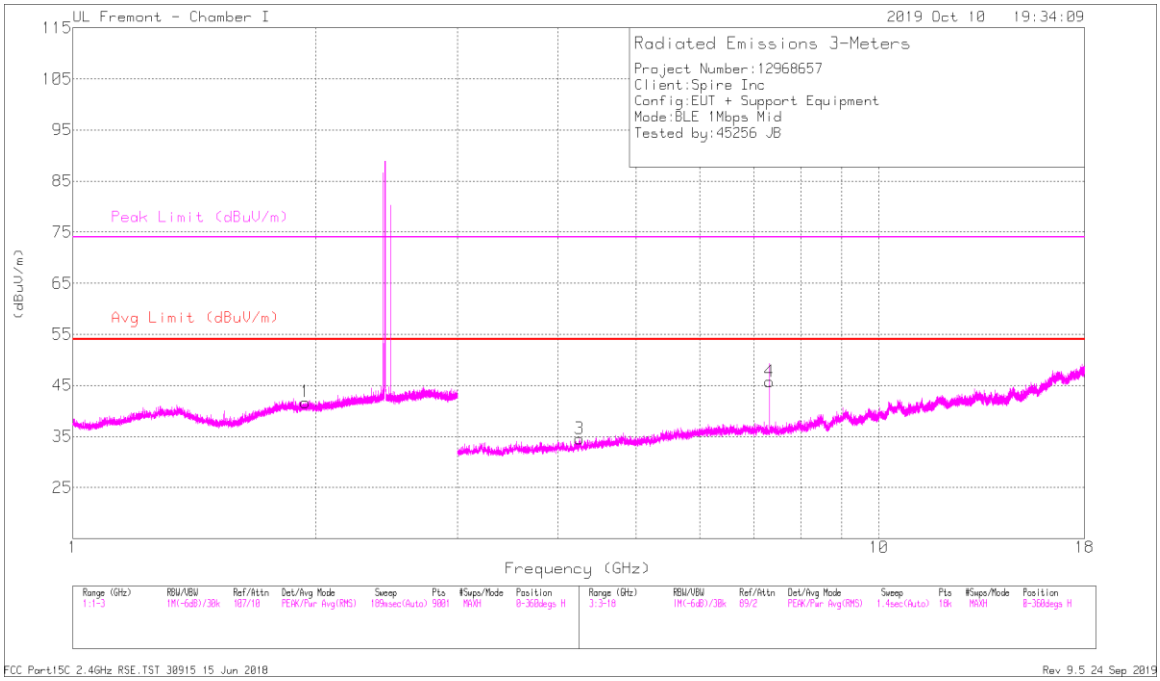
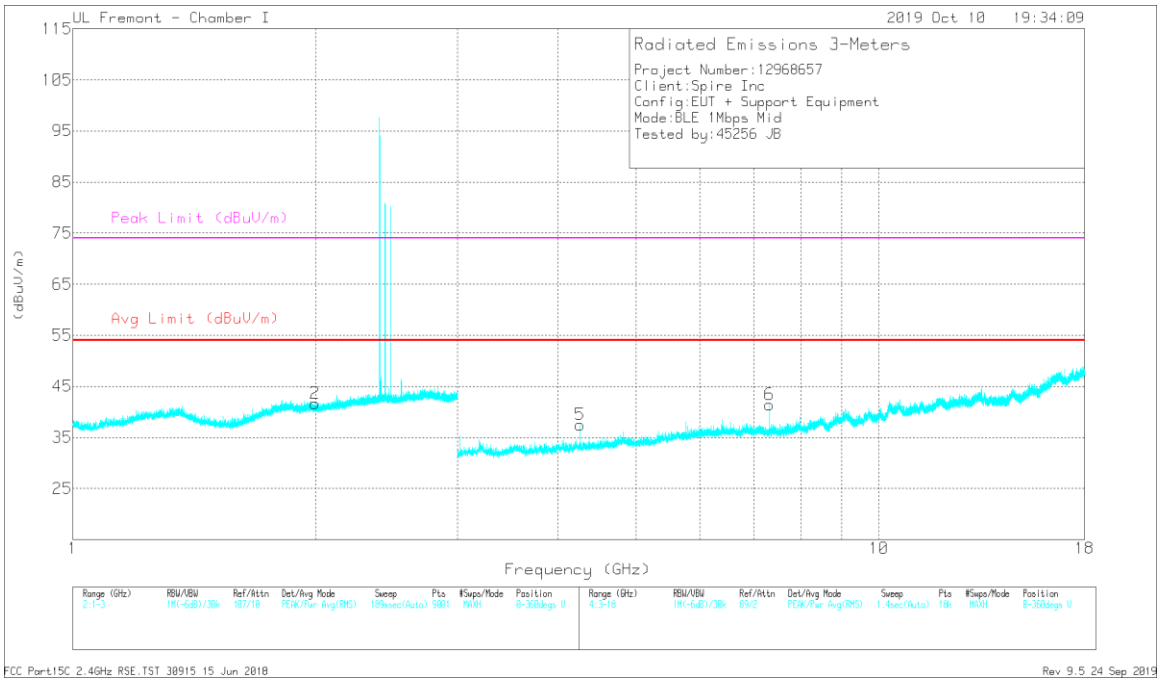
MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.25427	35.62	PK2	33.4	-27.2	-	41.82	-	-	74	-32.18	7	182	H
* 4.25387	25.59	MAv1	33.4	-27.2	4.53	36.32	54	-17.68	-	-	7	182	H
* 7.32047	42.8	PK2	35.5	-24.1	-	54.2	-	-	74	-19.8	11	102	H
* 7.31918	29.91	MAv1	35.5	-24.1	4.53	45.84	54	-8.16	-	-	11	102	H
* 4.26092	40.04	PK2	33.5	-27.1	-	46.44	-	-	74	-27.56	278	229	V
* 4.25974	25.19	MAv1	33.5	-27.1	4.53	36.12	54	-17.88	-	-	278	229	V
* 7.32057	37.35	PK2	35.5	-24.1	-	48.75	-	-	74	-25.25	197	108	V
* 7.31921	26.81	MAv1	35.5	-24.1	4.53	42.74	54	-11.26	-	-	197	108	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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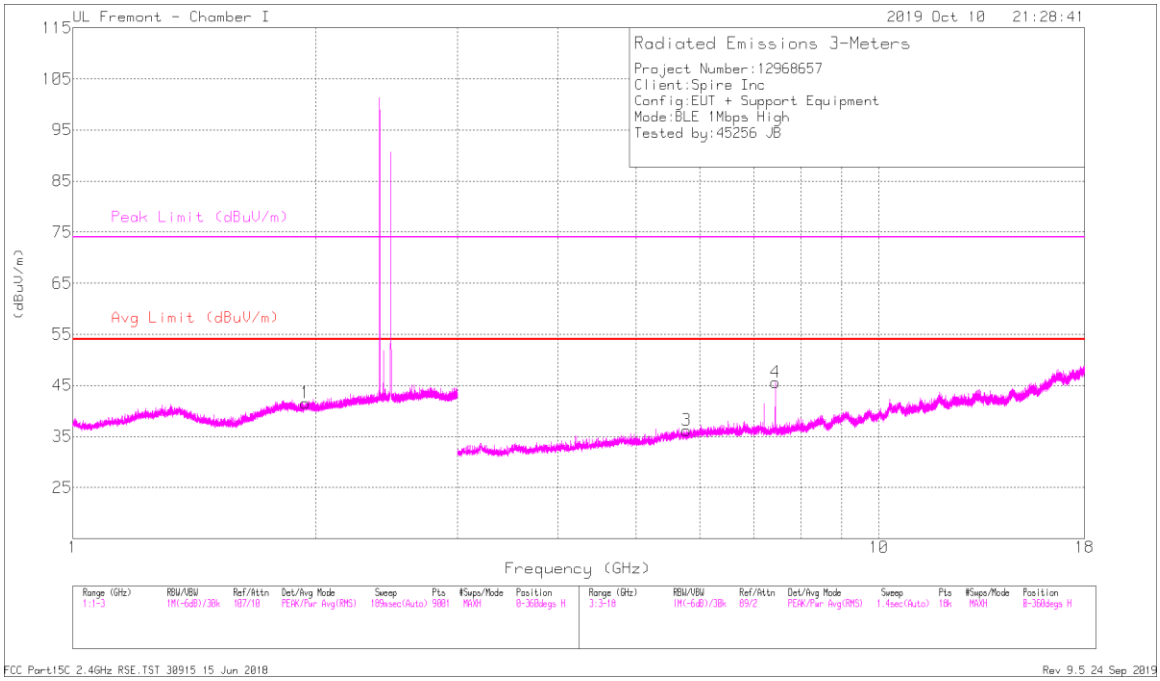
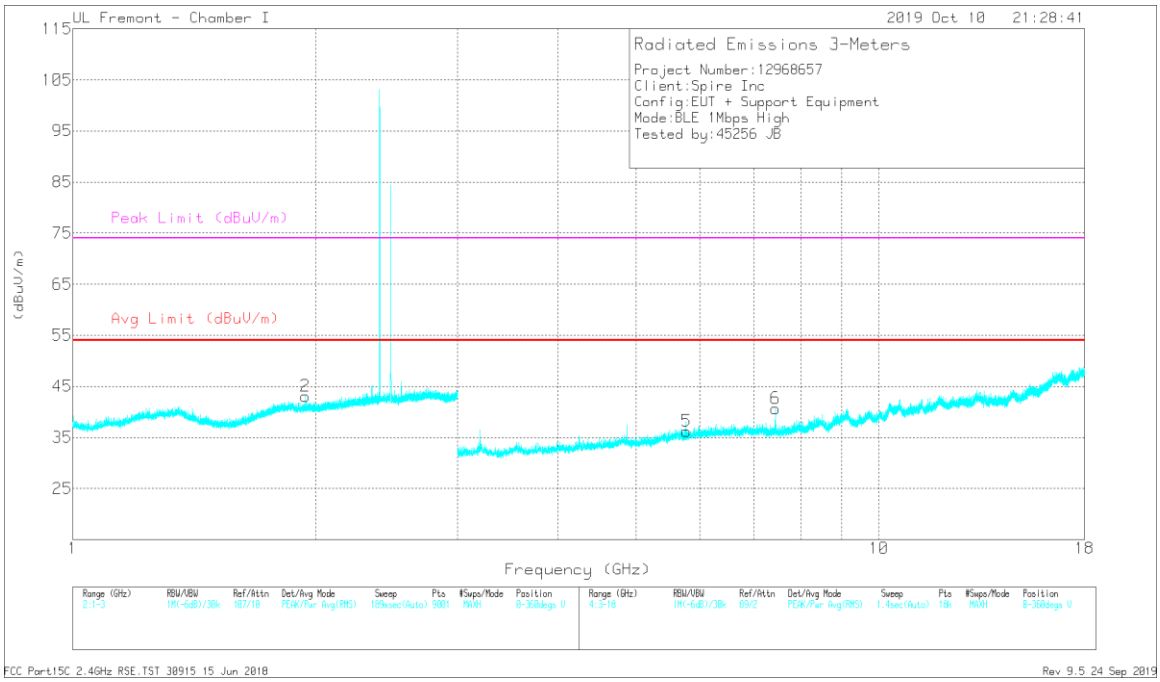
HIGH CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DCCF (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 7.43912	39.69	PK2	35.6	-22.9	-	52.39	-	-	74	-21.61	14	111	H
* 7.44046	25.05	MAv1	35.6	-23	4.53	42.18	54	-11.82	-	-	14	111	H
* 7.4392	36.11	PK2	35.6	-22.9	-	48.81	-	-	74	-25.19	202	102	V
* 7.43904	25.03	MAv1	35.6	-22.9	4.53	42.26	54	-11.74	-	-	202	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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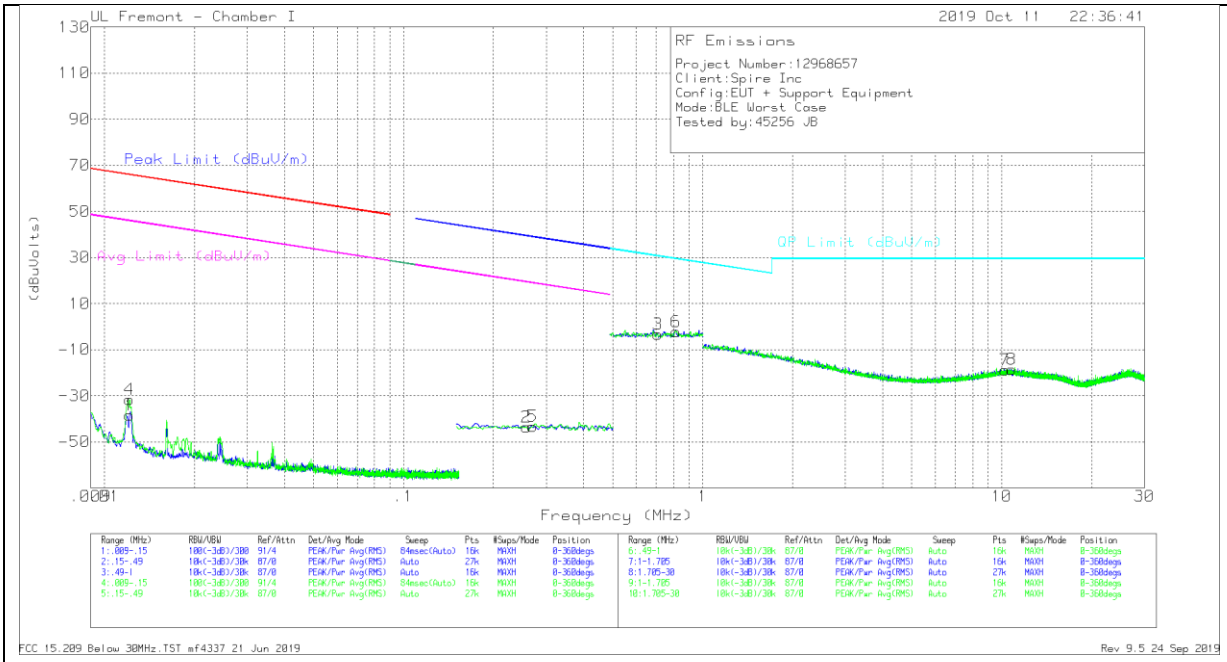
9.3. WORST CASE BELOW 30MHZ

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



ANTENNA- TWO ORIENTATIONS FACE ON/FACE OFF

Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Cables w/ PRE0181775 (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01214	14.14	Pk	59.9	-32.4	-80	-38.36	65.9	-104.26	45.9	-84.26	-	-	-	-	0-360
2	.25733	12.2	Pk	56.1	-31.9	-80	-43.6	-	-	-	-	39.4	-83	19.4	-63	0-360
4	.01215	20.89	Pk	59.9	-32.4	-80	-31.61	65.89	-97.5	45.89	-77.5	-	-	-	-	0-360
5	.27067	12.54	Pk	56.1	-31.9	-80	-43.26	-	-	-	-	38.96	-82.22	18.96	-62.22	0-360

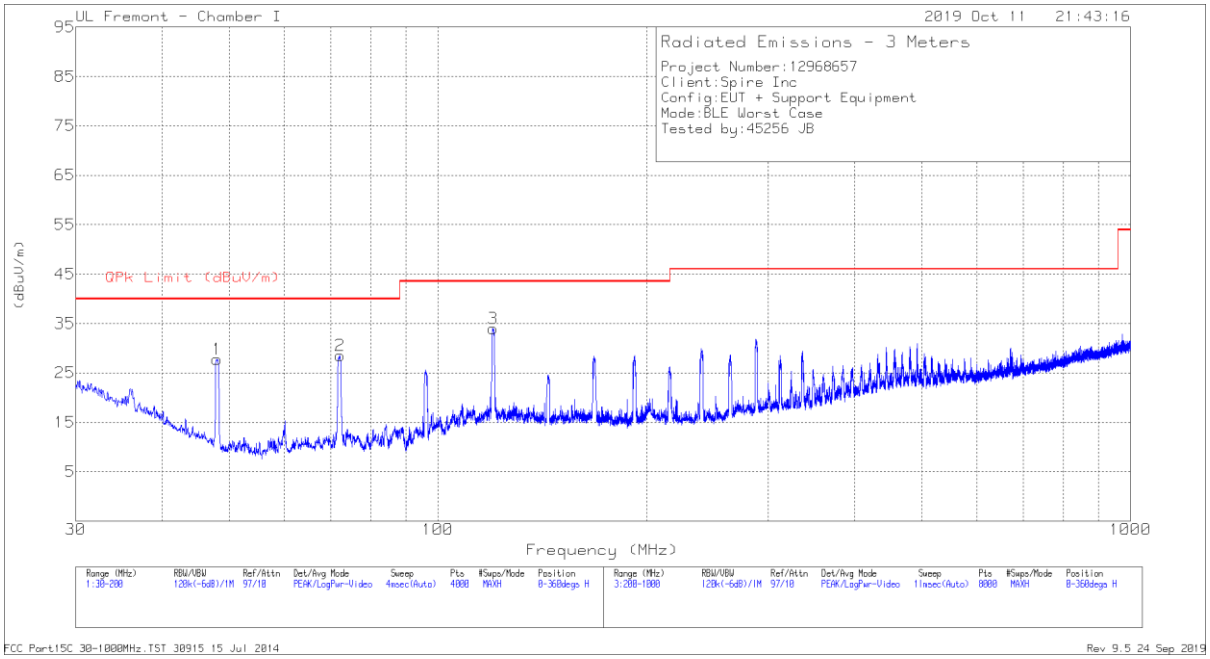
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (ACF)	Cables w/ PRE0180175 (dB)	Dist Corr 30m (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.7084	12.35	Pk	56.1	-31.8	-40	-3.35	30.61	-33.96	0-360
6	.81477	13.57	Pk	56.1	-31.8	-40	-2.13	29.4	-31.53	0-360
7	10.2221	18.19	Pk	34.4	-31.5	-40	-18.91	29.5	-48.41	0-360
8	10.80636	18.7	Pk	34.4	-31.5	-40	-18.4	29.5	-47.9	0-360

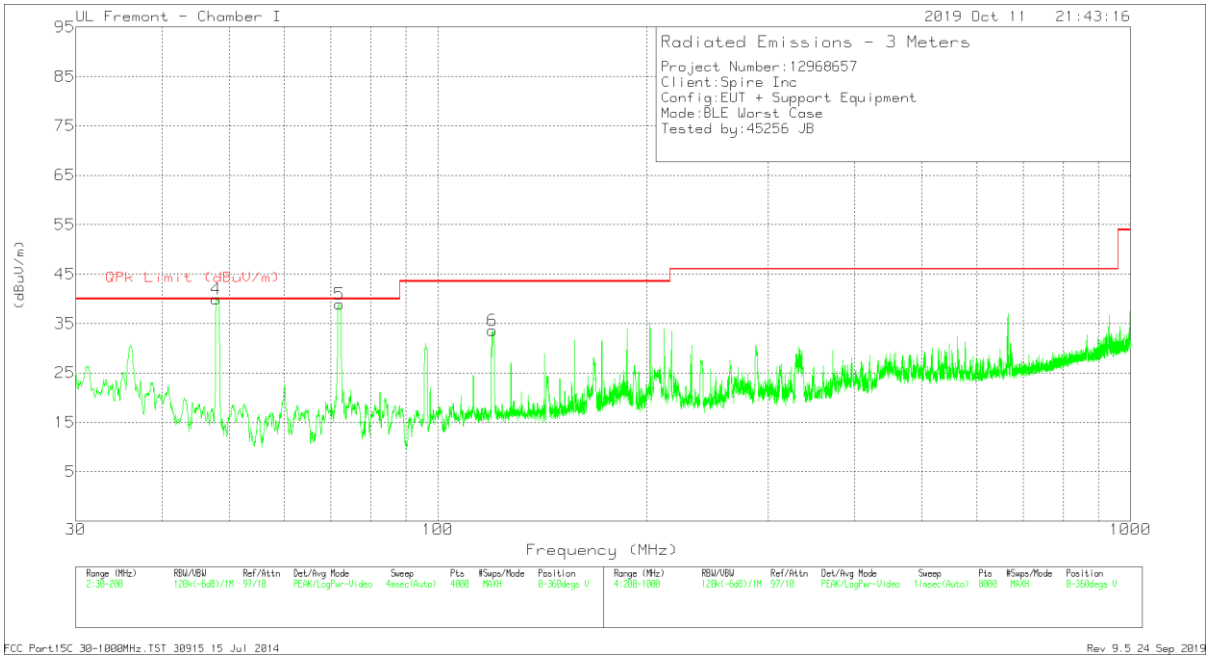
Pk - Peak detector

9.4. WORST CASE BELOW 1 GHZ

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0184971 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	47.9822	44.69	Pk	14.3	-31.2	27.79	40	-12.21	0-360	399	H
2	72.2559	45.67	Pk	13.9	-31	28.57	40	-11.43	0-360	299	H
3	120.0808	45.03	Pk	19.6	-30.7	33.93	43.52	-9.59	0-360	199	H
4	47.8546	56.77	Pk	14.4	-31.2	39.97	40	-.03	0-360	102	V
	47.8829	55.6	Qp	14.4	-31.2	38.8	40	-1.2	272	102	V
5	72.0859	56	Pk	13.9	-31	38.9	40	-1.1	0-360	102	V
	72.0288	55.64	Qp	13.9	-31	38.54	40	-1.46	269	100	V
6	119.9108	44.64	Pk	19.6	-30.7	33.54	43.52	-9.98	0-360	102	V

Pk - Peak detector
Qp - Quasi-Peak detector

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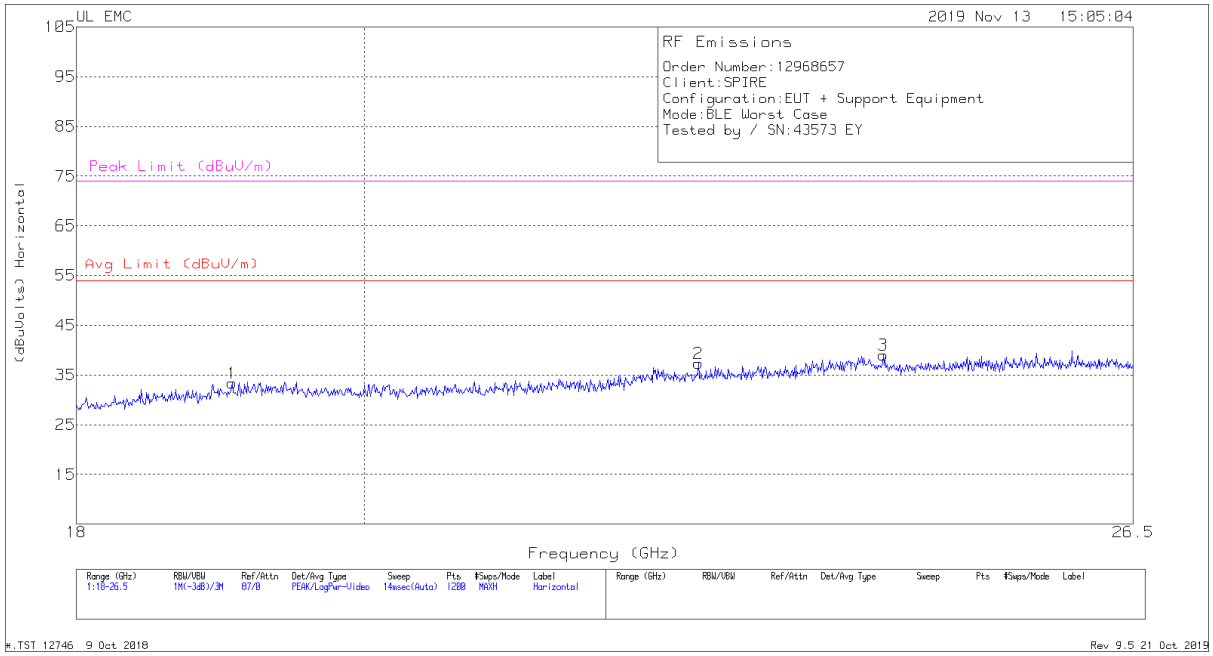
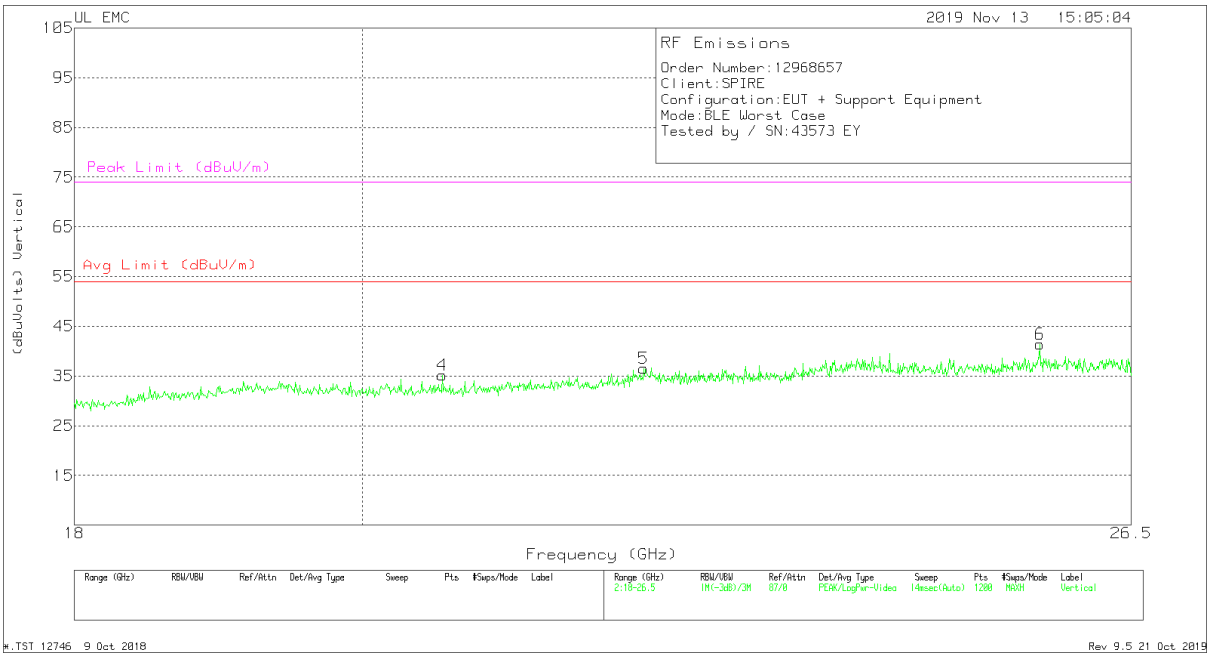
9.5. WORST CASE 18-26 GHZ

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



HORIZONTAL



VERTICAL

DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T447 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.0563	31.78	Pk	32.6	-21.5	-9.5	33.38	54	-20.62	74	-40.62
2	22.60092	33.42	Pk	33.5	-20.1	-9.5	37.32	54	-16.68	74	-36.68
3	24.18182	33.51	Pk	34.2	-19.2	-9.5	39.01	54	-14.99	74	-34.99
4	20.59466	32.88	Pk	33	-21.2	-9.5	35.18	54	-18.82	74	-38.82
5	22.16847	32.8	Pk	33.4	-20.2	-9.5	36.5	54	-17.5	74	-37.5
6	25.62802	36.38	Pk	34.4	-19.9	-9.5	41.38	54	-12.62	74	-32.62

Pk - Peak detector