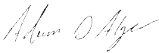
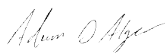
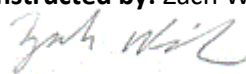


Test Report # 3432 A

Equipment Under Test:	LaceClips
Requirement(s):	FCC 15.247, RSS-247
Test Date(s):	July 27 th , 2021 to August 11 th , 2021
Prepared for:	LaceClips, LLC Attn: Jonathan Nussbaum 100 South Pointe Drive Apartment 1903 Miami Beach, FL 33139

Report Issued by: Adam Alger, Laboratory Manager	
Signature: 	Date: 8/9/2022
Report Reviewed by: Adam Alger, Laboratory Manager	
Signature: 	Date: 8/16/2021
Report Constructed by: Zach Wilson, EMC Engineer	
Signature: 	Date: 8/15/2021

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Laird Connectivity Test Services in Review

The Laird Connectivity, Inc. laboratory located at W66 N220 Commerce Court Cedarburg, Wisconsin, 53012 USA is recognized through the following organizations:



A2LA – American Association for Laboratory Accreditation

Accreditation based on ISO/IEC 17025:2017 with Electrical (EMC) Scope

A2LA Certificate Number: 1255.01

Scope of accreditation includes all test methods listed herein unless otherwise noted



Federal Communications Commission (FCC) – USA

Accredited Test Firm Registration Number: 953492

Recognition of two 3 meter Semi-Anechoic Chambers



**Government
of Canada**

Innovation, Science and Economic Development Canada

Accredited U.S. Identification Number: US0218

Recognition of two 3 meter Semi-Anechoic Chambers

Company: LaceClips, LLC	Page 3 of 33	Name: LaceClips
Report: TR3432 A		Model: LACECLIPS-F
Quote: 319293		Serial: Engineering Sample

1 TEST REPORT SUMMARY

During **July 27th, 2021 to August 11th, 2021** the Equipment Under Test (EUT), **LaceClips**, as provided by **LaceClips, LLC** was tested to the following requirements of the **Federal Communications Commission** and **Innovation, Science and Economic Development Canada**:

FCC 15.247, RSS-247, DTS

Requirement	Description	Specification	Method	Result
FCC: 15.247 (a)(2) IC: RSS-247 5.2 (1)	Digital Modulation System 6 dB bandwidth	500 kHz	ANSI C63.10	Pass
FCC: 2.1049 IC: RSS-GEN 6.6	Occupied Bandwidth	Reported	ANSI C63.10	Pass
FCC: 15.247 (b)(3) IC: RSS-247 5.4 (4)	Maximum Conducted Output Power	30 dBm	ANSI C63.10	Pass
FCC: 15.247 (e) IC: RSS-247 5.2 (2)	Digital Modulation System Power Spectral Density	8 dBm / 3 kHz	ANSI C63.10	Pass
FCC: 15.247 (d) IC: RSS-247 5.5	RF Spurious Emissions at the Transmitter Antenna Terminal	20 dBc	ANSI C63.10	Pass
FCC: 15.247 (d) IC: RSS-GEN 8.10	Spurious Radiated Emissions in Restricted Bands	FCC 15.209 RSS-GEN 8.9	ANSI C63.10	Pass
FCC: 2.1055 (d) IC: RSS-GEN 6.11	Frequency Stability	Reported	ANSI C63.10	Pass

Notice:

The results relate only to the item tested as configured and described in this report. Any additional configurations, modes of operation, or modifications made to the equipment under test after the specified test date(s) are at the decision of the client and may not apply to the data seen in this test report.

The decision rule for Pass / Fail assessment to the specification or standard listed in this test report has been agreed upon by the client and laboratory to be as follows:

Measurement Type	Rule
Emissions – Amplitude	1 dB below specified limit
Emissions – Frequency	1% less than the specification
Immunity	Tested at specified level

2 CLIENT INFORMATION

Company Name	LaceClips, LLC
Contact Person	Jonathan Nussbaum
Address	100 South Pointe Drive Apartment 1903 Miami Beach, FL 33139

2.1 Equipment Under Test (EUT) Information

The following information has been supplied by the client

Product Name	LaceClips
Model Number	LACECLIPS-F
Serial Number	Engineering Sample
FCC ID	2A534-LACECLIPSF
IC ID	28515-LACECLIPSF

2.2 Product Description

The EUT is a module containing a STMicro radio with a chip down design. The radio is BLE only. The device is powered by a 3.7VDC internal battery.

2.3 Modifications Incorporated for Compliance

None noted at time of test

2.4 Deviations and Exclusions from Test Specifications

None noted at time of test

2.5 Radio Programming

Radio was programmed using STSW-BLUENRG-DK1, v 3.2.1. Power setting “6” was used for all transmitter testing.

2.6 Antenna Information

The EUT has the ceramic SMD loop antenna with a maximum peak gain of -1.45 dBi @ 2.4 GHz.

Company: LaceClips, LLC	Page 5 of 33	Name: LaceClips
Report: TR3432 A		Model: LACECLIPS-F
Quote: 319293		Serial: Engineering Sample

2.7 Data Rates and Channels

Radio	Channel	Data Rate
BLE	0	GFSK 1Mbps
BLE	19	GFSK 1Mbps
BLE	39	GFSK 1Mbps

3 REFERENCES

Publication	Edition	Date
FCC eCFR	-	2021
RSS-247	2	2017
RSS-Gen	5	2018
ANSI C63.10	-	2013

4 UNCERTAINTY SUMMARY

Using the guidance of the following publications the calculated measurement uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of $k = 2$.

References	Version / Date
CISPR 16-4-1	Ed. 2 (2009-02)
CISPR 16-4-2	Ed. 2 (2011-06)
CISPR 32	Ed. 1 (2012-01)
ANSI C63.23	2012
A2LA P103	February 4, 2016
A2LA P103c	August 10, 2015
ETSI TR 100-028	V1.3.1 (2001-03)

Measurement Type	Configuration	Uncertainty $\pm$
Radiated Emissions	Biconical Antenna	5.0 dB
Radiated Emissions	Log Periodic Antenna	5.3 dB
Radiated Emissions	Horn Antenna	4.7 dB
AC Line Conducted Emissions	Artificial Mains Network	3.4 dB
Telecom Conducted Emissions	Asymmetric Artificial Network	4.9 dB
Disturbance Power Emissions	Absorbing Clamp	4.1 dB
Radiated Immunity	3 Volts/meter	2.2 dB
Conducted Immunity	CDN/EM/BCI	2.4/3.5/3.4 dB
EFT Burst/Surge	Peak pulse voltage	164 volts
ESD Immunity	15 kV level	1377 Volts

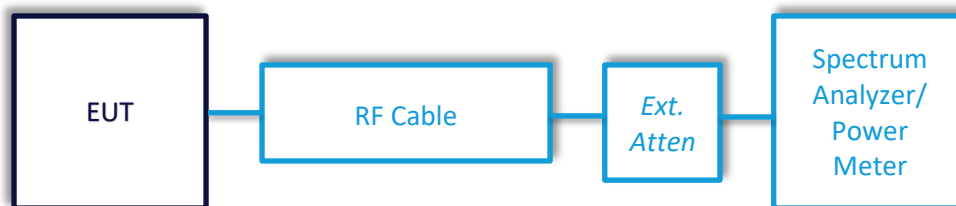
Parameter	ETSI U.C. $\pm$	U.C. $\pm$
Radio Frequency, from F0	1×10^{-7}	0.55×10^{-7}
Occupied Channel Bandwidth	5 %	2 %
RF conducted Power (Power Meter)	1.5 dB	1.2 dB
RF conducted emissions (Spectrum Analyzer)	3.0 dB	1.7 dB
All emissions, radiated	6.0 dB	5.3 dB
Temperature	1° C	0.65° C
Humidity	5 %	2.9 %
Supply voltages	3 %	1 %

5 TEST DATA

5.1 Antenna Port Conducted Emissions

Description of Measurement	The direct measurement of emissions at the antenna port of the EUT is achieved by use of a RF connection to a spectrum analyzer or power meter. The cable and attenuator factors are loaded into the analyzer or power meter allowing for direct measurement readings without the need for further corrections.
Example Calculations	Measurement (dBm) + Cable factor (dB) + External Attenuator (dB) = Corrected Reading (dBm) Margin (dB) = Limit (dBm) – Corrected Reading (dBm)

Block Diagram



5.1.1 DTS Bandwidth

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 15.247, RSS-247	Method	ANSI C63.10 §11.8.2

Limits: BW Greater than 500 kHz

Test Parameters

Frequency	2402, 2440, 2480 MHz	Setup	Conducted
RBW	100 kHz	VBW	300 kHz
Detector(s)	Max peak hold	Sweep Time	Auto

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

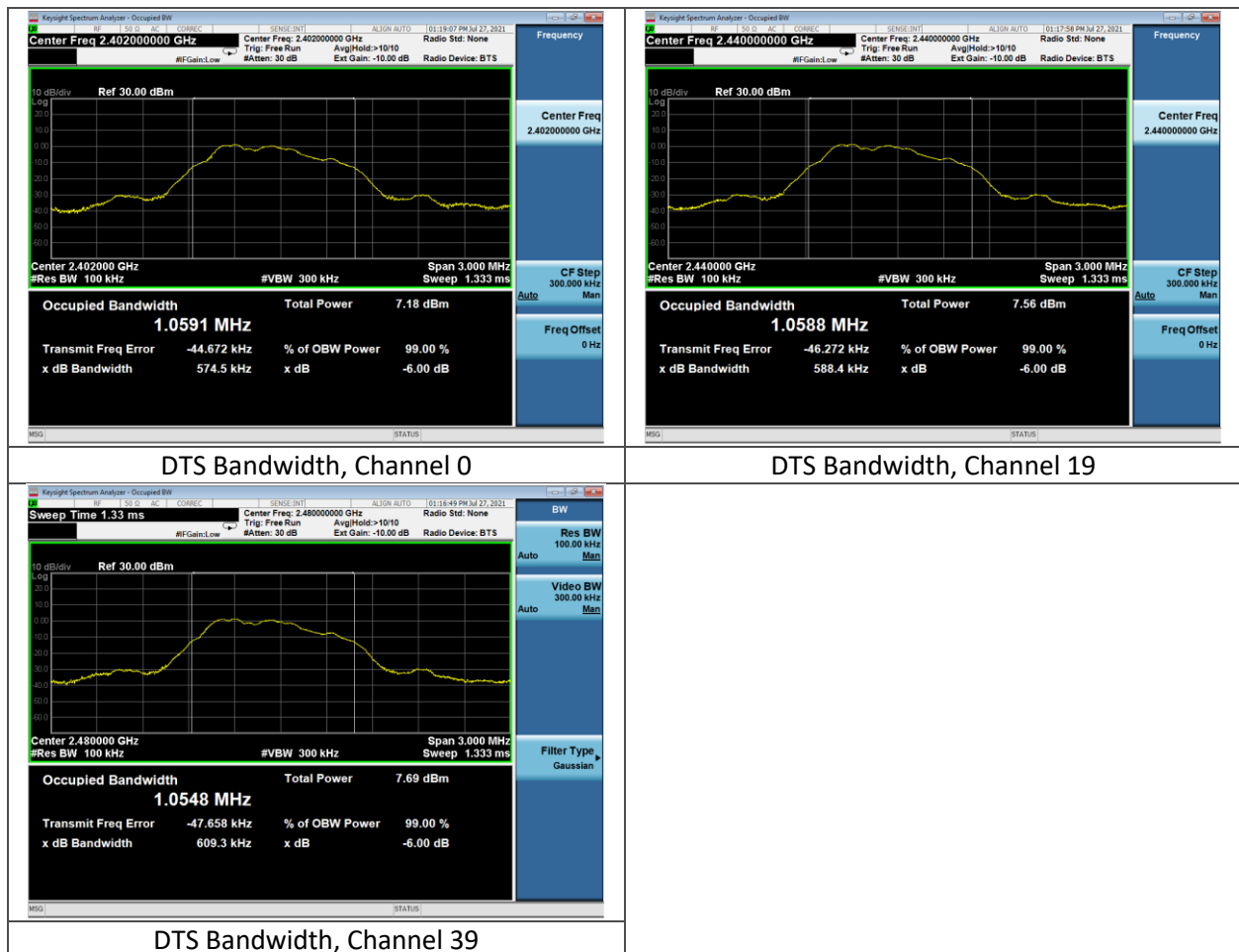
EUT Parameters

Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

Data Table

Channel	DTS BW(kHz)	Limit (kHz)	Margin (kHz)
0	574.5	500.0	74.5
19	588.4	500.0	88.4
39	609.3	500.0	109.3

Plots



5.1.2 99% Occupied Bandwidth

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 2.1049	Method	ANSI C63.10 §11.8.2

Limits: Reported

Test Parameters

Frequency	2402, 2440, 2480 MHz	Setup	Conducted
RBW	10 kHz	VBW	30 kHz
Detector(s)	Max peak hold	Sweep Time	Auto

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

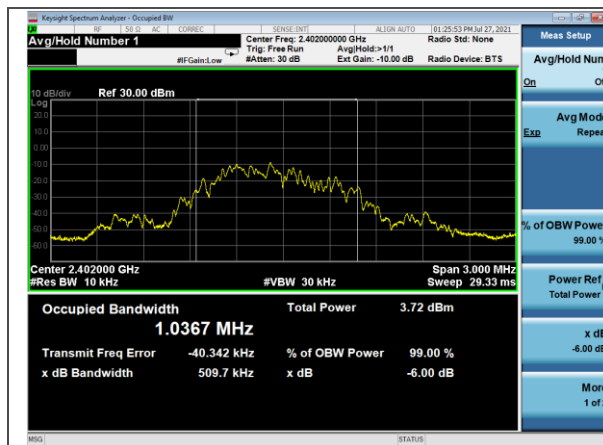
EUT Parameters

Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

Data Table

Channel	99% OBW (kHz)
0	1036.7
19	1036.9
39	1041.7

Plots



99% Occupied Bandwidth, Channel 0



99% Occupied Bandwidth, Channel 19



99% Occupied Bandwidth, Channel 39

5.1.3 Peak Output Power

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 15.247, RSS-247	Method	ANSI C63.10 §11.9.1.1

Limits: 30 dBm

Test Parameters

Frequency	2402, 2440, 2480 MHz	Setup	Conducted
RBW	1 MHz	VBW	3 MHz
Detector(s)	Max peak hold	Sweep Time	Auto

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

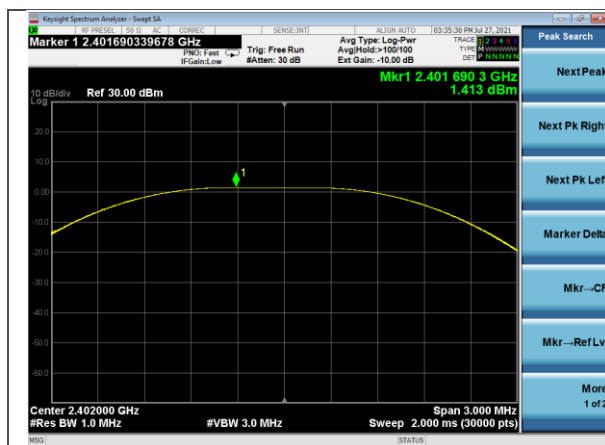
EUT Parameters

Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

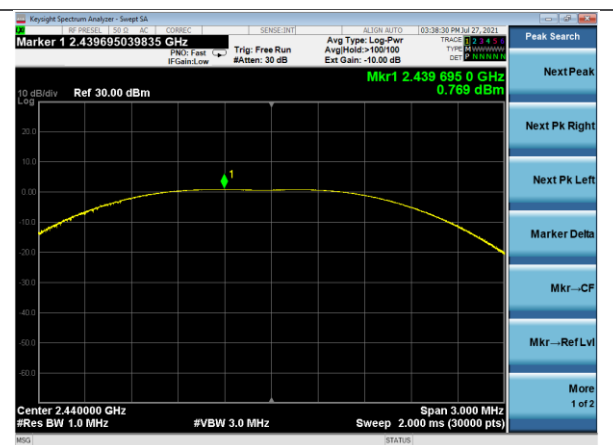
Data Table

Channel	Power (dBm)	Limit (dBm)	Margin (dBm)
0	1.413	30.0	28.6
19	0.769	30.0	29.2
39	-0.271	30.0	30.3

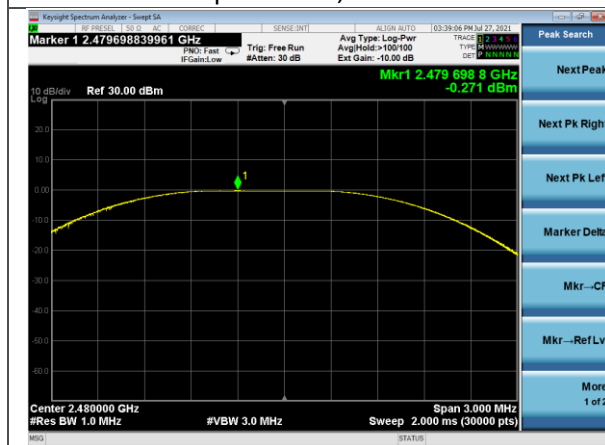
Plots



Output Power, Channel 0



Output Power, Channel 19



Output Power, Channel 39

5.1.4 Peak Power Spectral Density

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 15.247, RSS-247	Method	ANSI C63.10 §11.10.2

Limits: 8dBm/3kHz

Test Parameters

Frequency	2402, 2440, 2480 MHz	Setup	Conducted
RBW	3 kHz	VBW	9.1 kHz
Detector(s)	Max peak hold	Sweep Time	Auto

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

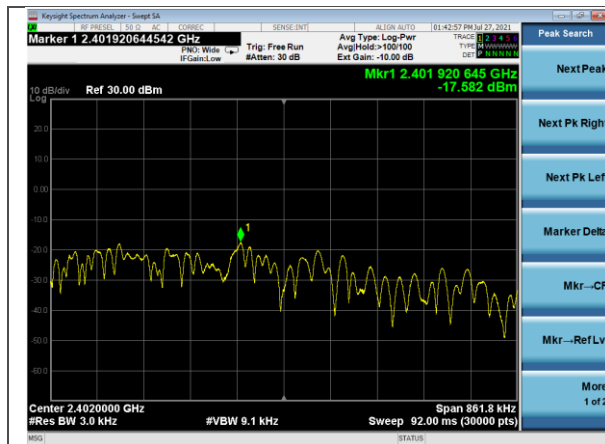
EUT Parameters

Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

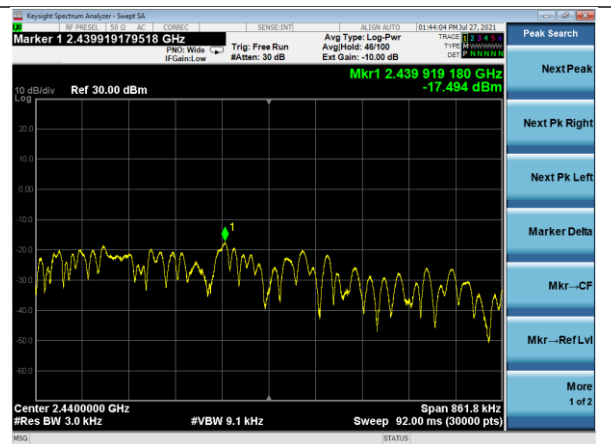
Data Table

Channel	Peak PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
0	-17.6	8.0	25.6
19	-17.5	8.0	25.5
39	-17.6	8.0	25.6

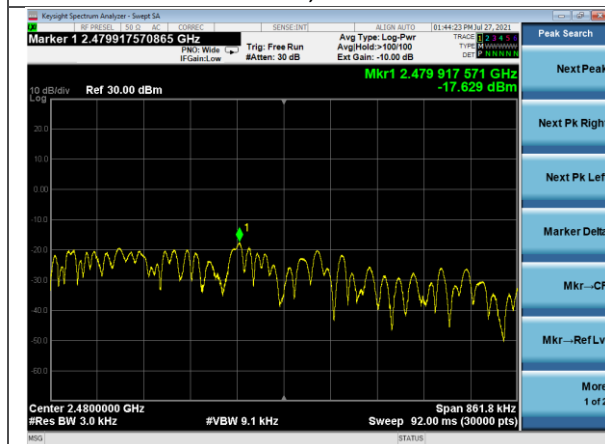
Plots



Peak PSD, Channel 0



Peak PSD, Channel 19



Peak PSD, Channel 39

5.1.5 Duty Cycle

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 15.247, RSS-247	Method	ANSI C63.10

Limits: Reported

Test Parameters

Frequency	2480 MHz	Setup	Conducted
RBW	8 MHz	VBW	50 MHz
Detector(s)	Max peak hold	Sweep Time	Auto

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

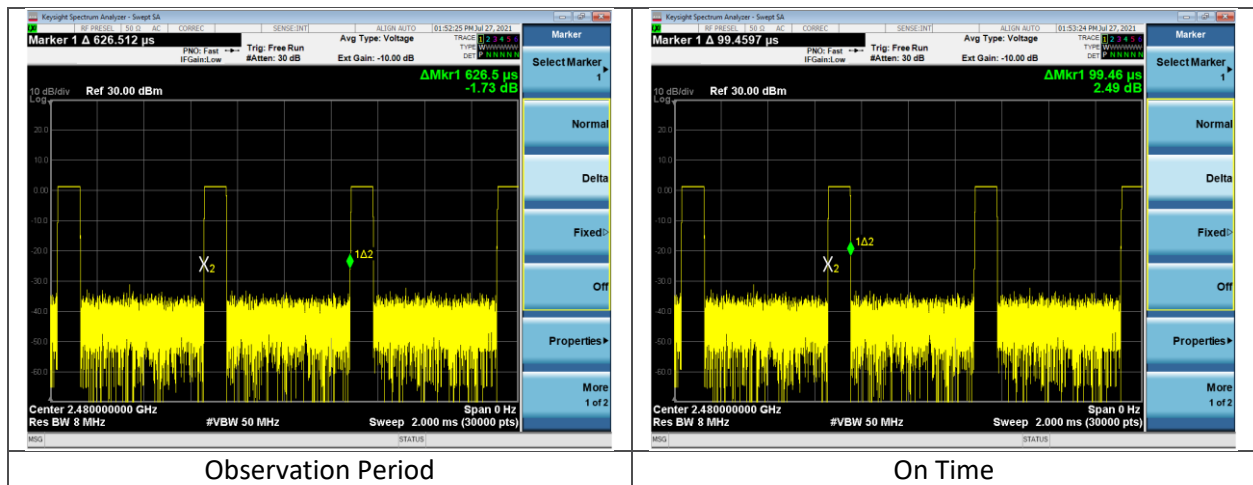
EUT Parameters

Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2480 MHz	Channel	39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

Data Table

Observation Period (us)	On Time (us)	Duty Cycle (%)
626.5	99.5	15.9%

Plots



5.1.6 Conducted Spurious Emissions

Operator	Braden Smith	QA	Zach Wilson
Temperature	21.6° C	R.H. %	43.30%
Test Date	7/27/2021	Location	Conducted Bench
Requirement	FCC 15.247, RSS-247	Method	ANSI C63.10 §11.11, §11.12

Limits: 20 dBc

Reference Level = 1.5 dBm

Limit = -18.5 dBm

Test Parameters

Frequency	30 MHz – 25 GHz	Setup	Conducted
RBW	100 kHz	VBW	300 kHz
Detector(s)	Max peak hold	Sweep Time	Auto
Limit Calculation	Reference Level (dBm) – 20 dB = Limit (dBm)		

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

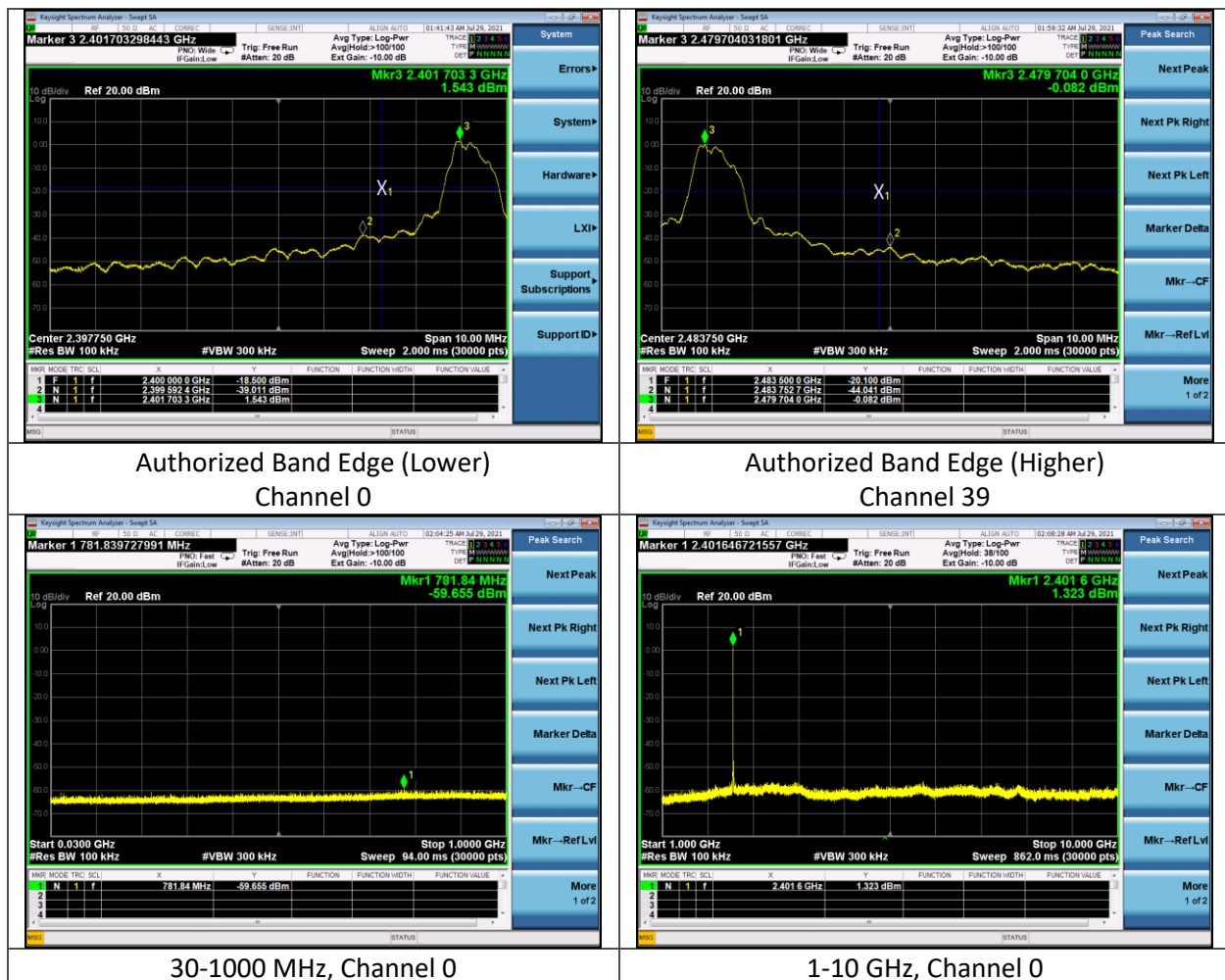
EUT Parameters

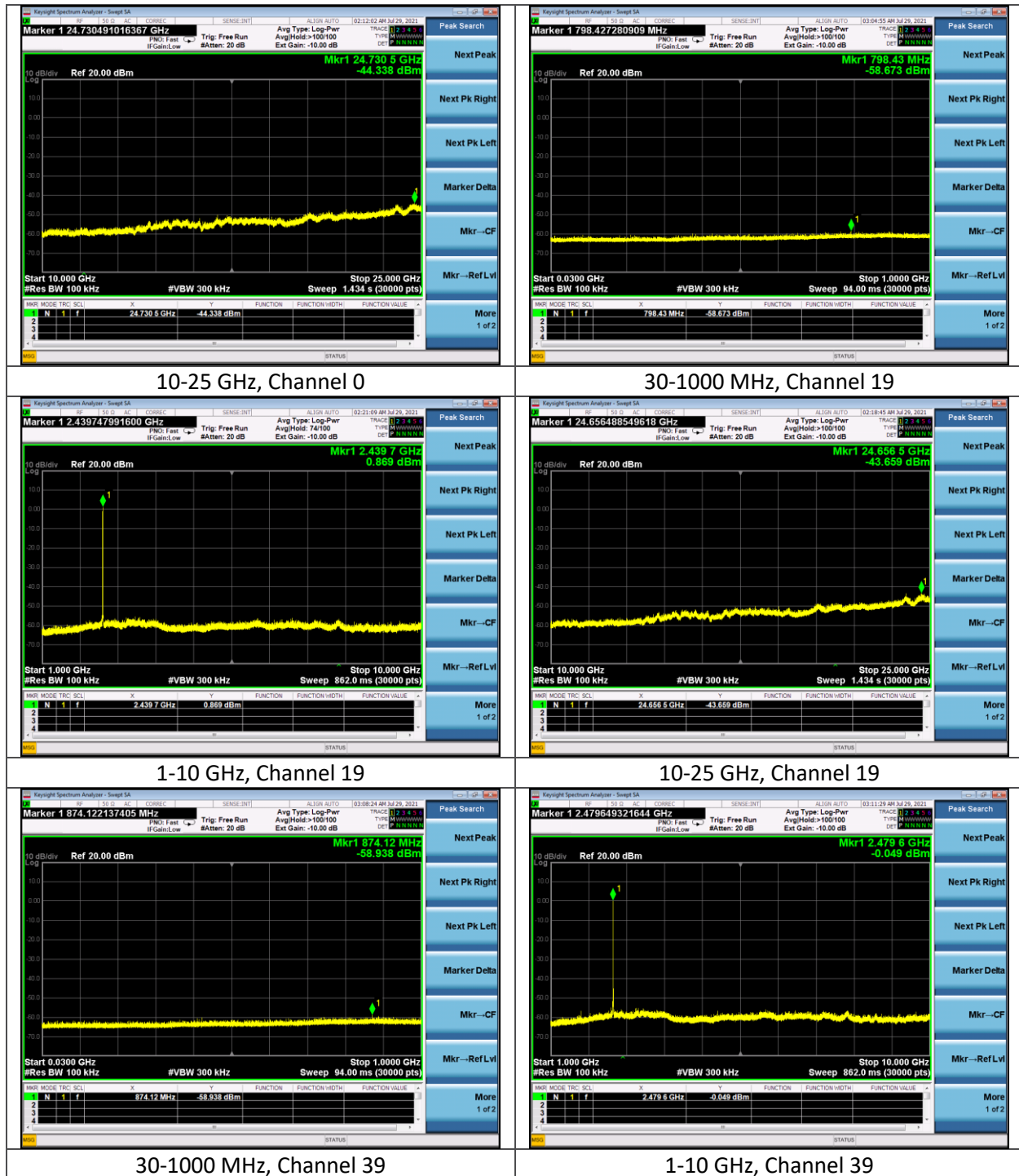
Input Power	5VDC via USB	Mode	BLE Transmit
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39
Data Rate/Modulation	GFSK 1 Mbps	Power Setting	6

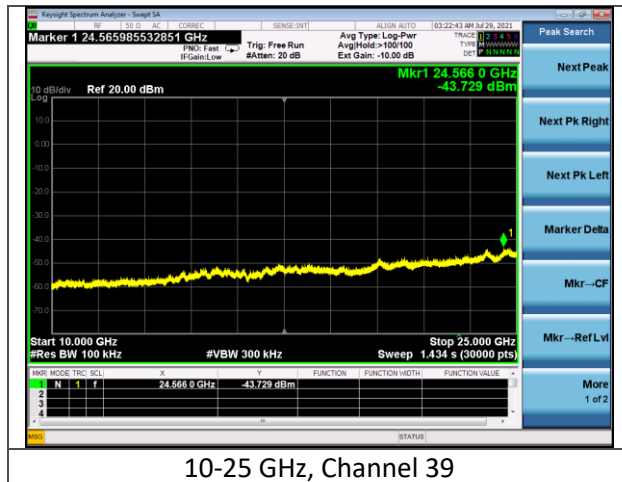
Data Tables

Emission Frequency (MHz)	Channel	Limit (dBm)	Peak Measurement (dBm)	Margin (dB)
2399.6	0	-18.5	-39.0	20.5
2483.8	39	-18.5	-44.0	25.5
24566	39	-18.5	-43.7	25.2
24656.5	19	-18.5	-43.7	25.2
24730.5	0	-18.5	-44.3	25.8

Plots







10-25 GHz, Channel 39

Company: LaceClips, LLC	Page 23 of 33	Name: LaceClips
Report: TR3432 A		Model: LACECLIPS-F
Quote: 319293		Serial: Engineering Sample

5.1.7 Frequency Stability

Operator	Braden Smith	QA	Adam Alger
Temperature	21.6° C	R.H. %	51%%
Test Date	8/11/2021	Location	Conducted Bench
Requirement	FCC 2.1055	Method	ANSI C63.10

Limits: Reported

Test Parameters

Frequency	2402, 2440, 2480 MHz	Setup	Conducted
RBW	1 kHz	VBW	3 kHz

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	4/21/2021	4/21/2022	Active Calibration
2	AA 960143	Cable	Gore	EKD01D01048.0	5546519	2/3/2021	2/3/2022	Active Calibration

EUT Parameters

Input Power	2.8, 3.7, 4.3 VDC via DC Lab Supply	Mode	BLE CW
Frequency	2402, 2440, 2480 MHz	Channel	0, 19, 39

Data Table

Channel	Input Power (VDC)	Center Frequency (Hz)
0	2.8	2401700899
0	3.7	2401700841
0	4.3	2401700860
19	2.8	2439700178
19	3.7	2439700093
19	4.3	2439700067
39	2.8	2479699583
39	3.7	2479699293
39	4.3	2479699202

5.2 Radiated Emissions

Description of Measurement	The frequency spectrum is investigated for intentional and / or unintentional signals emanating from the EUT by use of a standardized test site and measurement antenna. The antenna, cable, pre-amp, and other necessary measurement system correction factors are loaded onto the EMI receiver / spectrum analyzer when the measurements are performed allowing the data to be gathered and reported as corrected values. The maximum emissions from the EUT are determined by turn-table azimuth rotation (360°) and scanning of the measurement antenna. Maximized levels are noted at degree values of azimuth, measurement antenna height, and measurement antenna polarity.
Example Calculations	Measurement (dBμV) + Cable factor (dB) + Other (dB) + Antenna Factor (dB/m) = Corrected Reading (dBμV/m) Margin (dB) = Limit (dBμV/m) - Corrected Reading (dBμV/m) Example at 4000 MHz: Reading = 40 dBμV + 3.4 dB + 0.9 dB + 6.5 dB/m = 50.8 dBμV/m Average Limit = 20 log (500) = 54 dBμV/m Margin = 54 dBμV/m - 50.8 dBμV/m = 3.2 dB

Block Diagram



5.2.1 Radiated Emissions

Operator	Ivan Alvarez	QA	Jonathan Dilley
Temperature	20.9°C to 24.7°C	R.H. %	44.20% to 51.60%
Test Date	7/30/2021, 8/2/2021	Location	Chamber 3 (30MHz-18GHz) Chamber 5 (18GHz-25GHz)
Requirement	FCC 15.209	Method	ANSI C63.10

Limits:

Frequency (MHz)	Quasi-Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)
30-88	40.0	-	-
88-216	43.5	-	-
216-960	46.0	-	-
960-1000	54.0	-	-
1000-25000	-	54.0	74.0

Test Parameters

Frequency	30 MHz to 25 GHz	Distance	3m
Detector(s)	Quasi peak detector for measurements under 1 GHz. Average measurements made with a reduced VBW of 11 kHz. Max peak hold for plots.	Table height	80cm (below 1 GHz) 150cm (above 1 GHz)
RBW	120 kHz (below 1 GHz) 1 MHz (above 1 GHz)	VBW	1.2 MHz (below 1 GHz) 3 MHz (above 1 GHz peak) 11 kHz (above 1 GHz average) 30 kHz for emission identification
Plots	Worst case plots shown.	EUT Orientations	Flat, Vertical, Horizontal

Instrumentation

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	AA 960158	Antenna - Double Ridge Horn	ETS Lindgren	3117	109300	4/21/2021	4/21/2022	Active Calibration
2	AA 960154	Filter - High Pass 2.4 GHz	KWM	HPF-L-14186	7272-02	4/21/2021	4/21/2022	Active Calibration
3	AA 960176	Cable	A.H. Systems, Inc	SAC-26G-6	395	2/3/2021	2/3/2022	Active Verification
4	EE 960085	Analyzer - EMI Receiver	Agilent	N9038A	MY51210148	4/20/2021	4/20/2022	Active Calibration
5	EE 960196	Meter - Hygro-Thermometer	Control Company	90080-03	180045462	3/13/2020	3/14/2022	Active Calibration
6	AA 960005	Antenna - Biconical	EMCO	93110B	9601-2280	9/21/2020	9/22/2021	Active Calibration
7	AA 960195	Antenna - Log Periodic	A.H. Systems, Inc	SAS-512-2	557	7/27/2020	7/24/2022	Active Calibration
8	LSC-300	Cable	Chamber 3 Emiss -	-	-	8/9/2020	8/9/2021	Active Verification

Company: LaceClips, LLC	Page 27 of 33	Name: LaceClips
Report: TR3432 A		Model: LACECLIPS-F
Quote: 319293		Serial: Engineering Sample

EUT Parameters

Input Power	3.7VDC via battery	Mode	BLE Transmit
Channel	0, 19, 39	Data Rate/Modulation	GFSK 1Mbps

Data Tables

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Quasi-Peak Reading (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	EUT Orientation
97.3	Vertical	100	0	23.5	43.5	20.1	Vertical
97.3	Vertical	100	0	24.6	43.5	18.9	Flat
97.3	Vertical	100	0	24.3	43.5	19.2	Side
182.8	Horizontal	100	0	22.9	43.5	20.6	Side
909.1	Vertical	100	0	25.1	46.0	20.9	Side
946.6	Vertical	100	0	25.7	46.0	20.3	Flat

Emission Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)	Channel
2388.7	Horizontal	150	285	41.4	54.0	12.6	0
2483.8	Horizontal	150	260	47.0	54.0	7.0	39

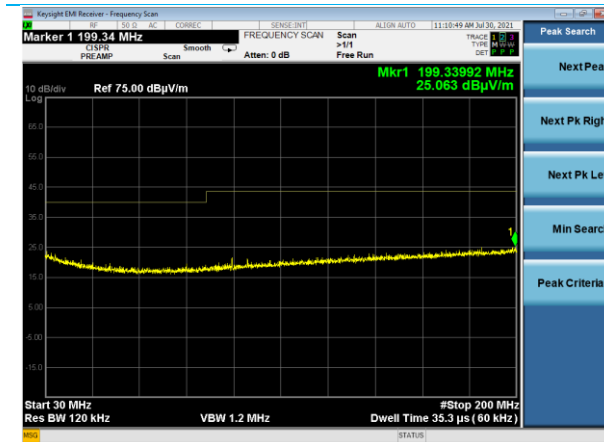
Emission Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)	Channel
2389.9	Horizontal	150	285	52.7	74.0	21.3	0
2483.5	Horizontal	150	260	63.6	74.0	10.4	39

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	EUT Orientation	Channel	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
4879.5	Vertical	150	0	Vertical	19	43.8	54.0	10.2
4879.4	Horizontal	100	0	Vertical	19	45.2	54.0	8.8
4879.5	Horizontal	100	45	Horizontal	19	44.9	54.0	9.2
4879.4	Vertical	100	0	Horizontal	19	45.0	54.0	9.0
4879.5	Vertical	100	220	Flat	19	44.2	54.0	9.8
4879.4	Horizontal	100	130	Flat	19	47.4	54.0	6.6
4803.4	Horizontal	100	130	Flat	0	46.3	54.0	7.7
4959.5	Horizontal	100	130	Flat	39	47.0	54.0	7.0

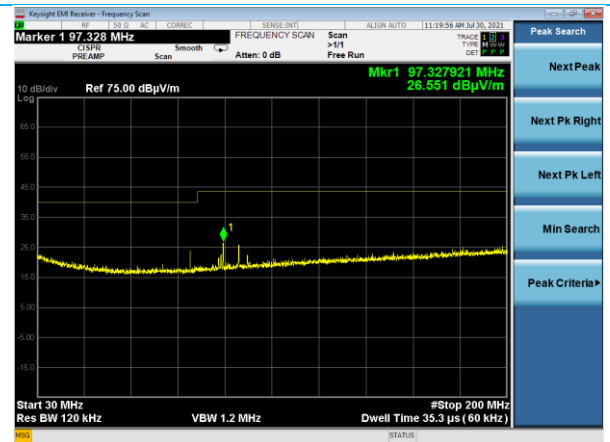
Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	EUT Orientation	Channel	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)
4879.2	Vertical	150	0	Vertical	19	47.6	74.0	26.4
4880.4	Horizontal	100	0	Vertical	19	48.6	74.0	25.4
4879.4	Horizontal	100	45	Horizontal	19	48.5	74.0	25.5
4879.4	Vertical	100	0	Horizontal	19	48.3	74.0	25.7
4879.4	Vertical	100	220	Flat	19	47.8	74.0	26.2
4879.1	Horizontal	100	130	Flat	19	50.5	74.0	23.5
4804.3	Horizontal	100	130	Flat	0	49.5	74.0	24.5
4959.3	Horizontal	100	130	Flat	39	49.6	74.0	24.4

Frequency (MHz)	Antenna Polarity	Height (cm)	Azimuth (degree)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)	Note
23835.4	Horizontal	150	0	40.0	54.0	14.1	52.5	74.0	21.5	Noise Floor

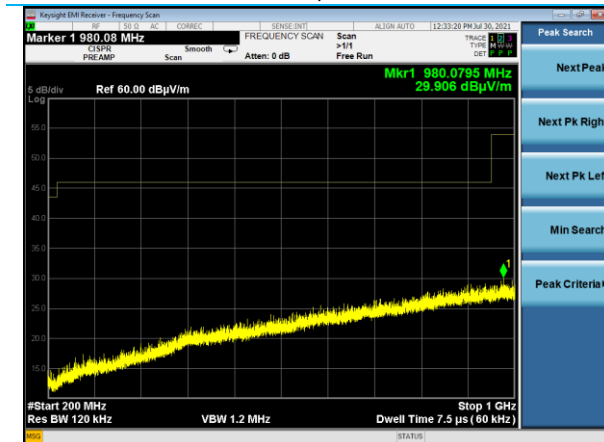
Plots



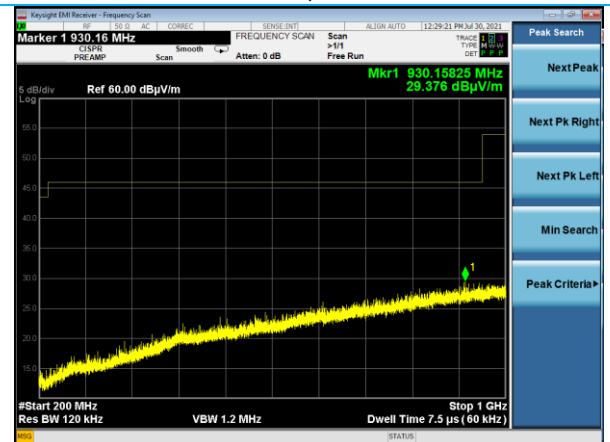
30-200 MHz, Horizontal Antenna
Vertical EUT, Channel 39



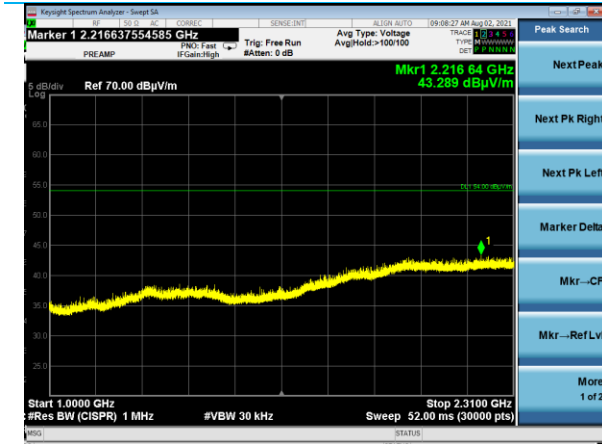
30-200 MHz, Vertical Antenna
Vertical EUT, Channel 39



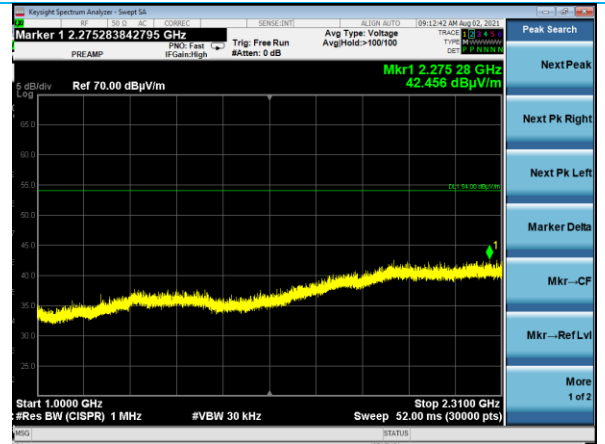
200-1000 MHz, Horizontal Antenna
Vertical EUT, Channel 39



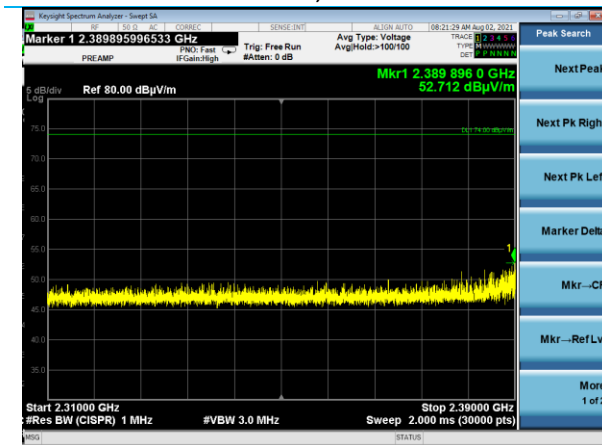
200-1000 MHz, Vertical Antenna
Vertical EUT, Channel 39



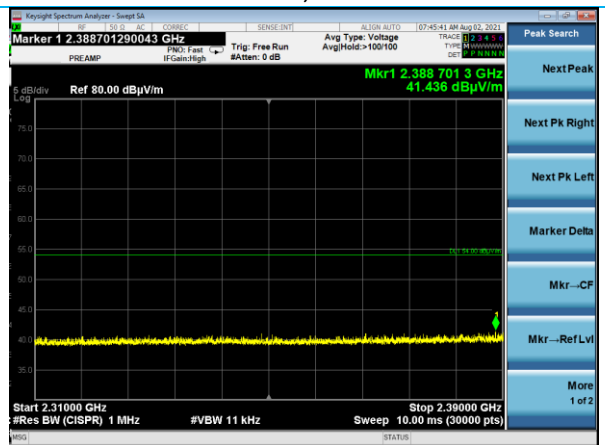
1-2.31 GHz, Horizontal Antenna
Vertical EUT, Channel 19



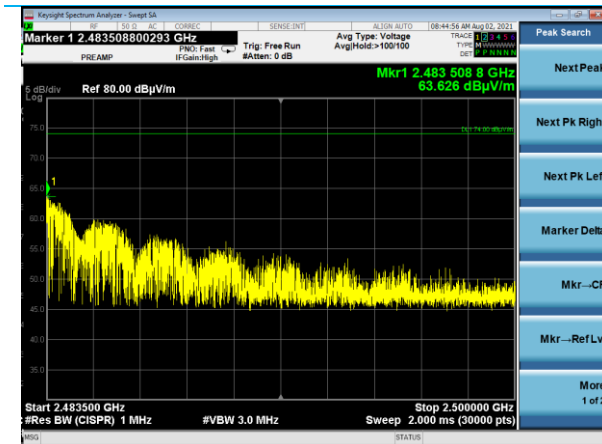
1-2.31 GHz, Vertical Antenna
Vertical EUT, Channel 19



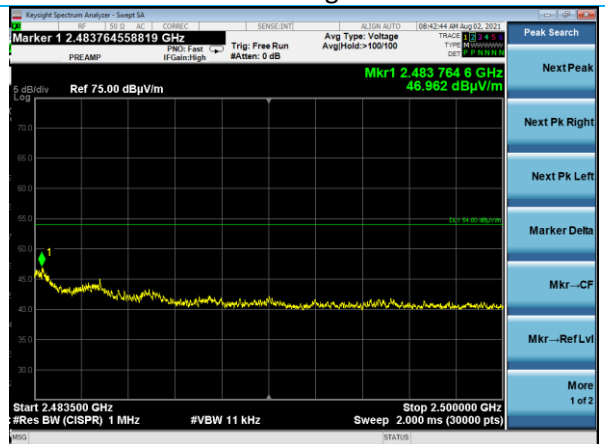
2.31-2.39 GHz, Horizontal Antenna
Flat EUT, Channel 0
Peak



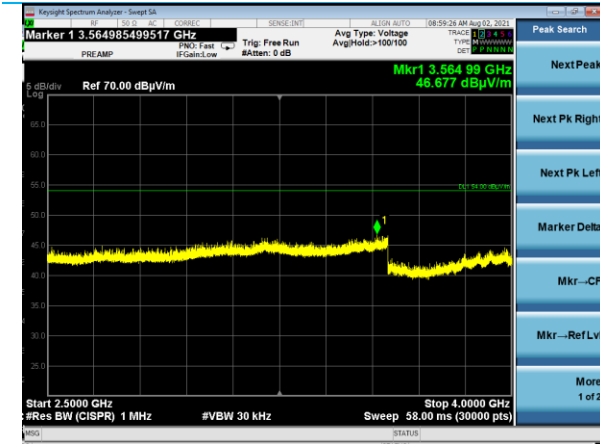
2.31-2.39 GHz, Horizontal Antenna
Flat EUT, Channel 0
Average



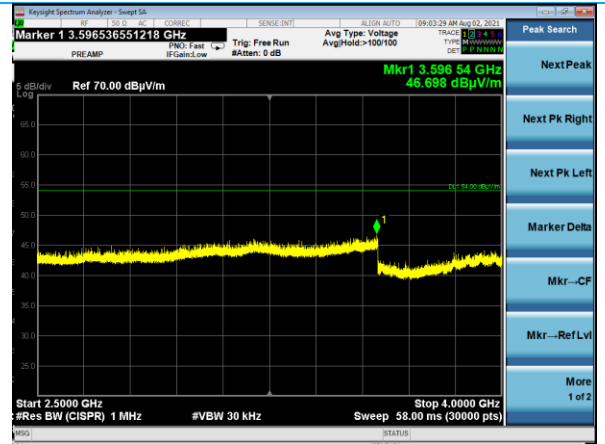
2.4835-2.5 GHz, Horizontal Antenna
Flat EUT, Channel 0
Peak



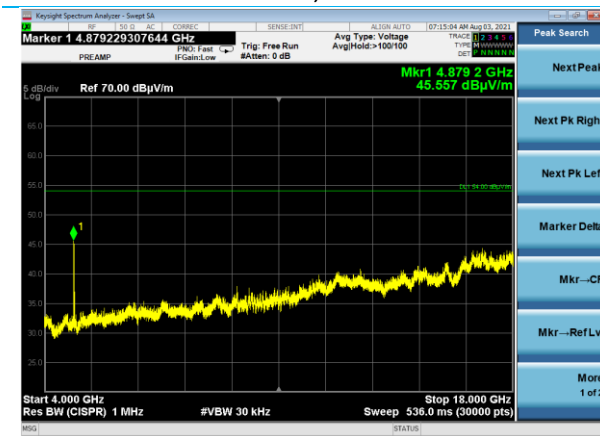
2.4835-2.5 GHz, Horizontal Antenna
Flat EUT, Channel 0
Average



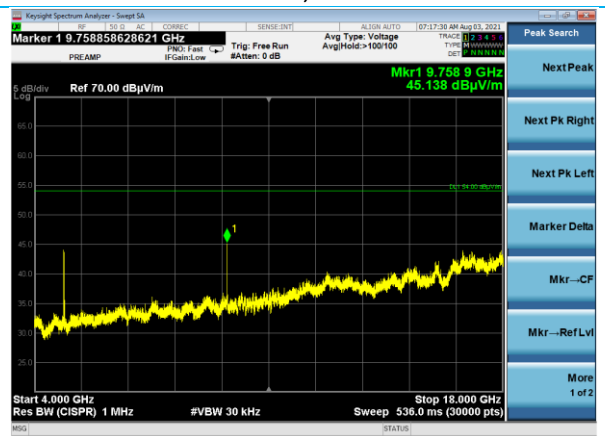
2.5-4 GHz, Horizontal Antenna
Vertical EUT, Channel 19



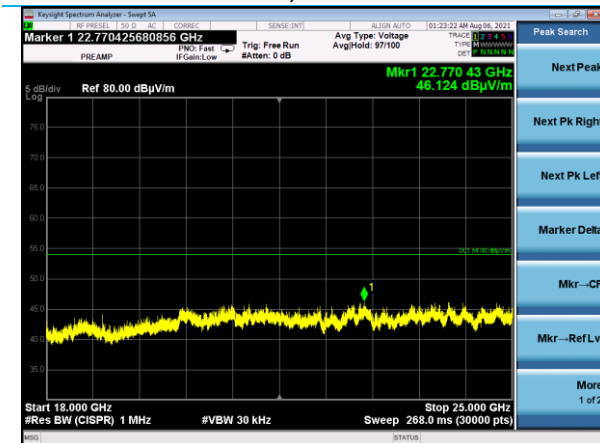
2.5-4 GHz, Vertical Antenna
Vertical EUT, Channel 19



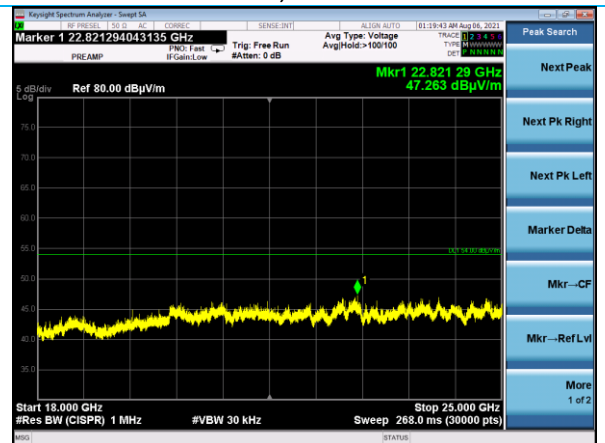
4-18 GHz, Horizontal Antenna
Flat EUT, Channel 19



4-18 GHz, Vertical Antenna
Flat EUT, Channel 19



18-25 GHz, Horizontal Antenna
Flat EUT, Channel 39



18-25 GHz, Vertical Antenna
Flat EUT, Channel 39

6 REVISION HISTORY

Version	Date	Notes	Person
0	8/16/2021	Initial Draft	Zach Wilson
1	6/29/2022	Final	Zach Wilson
2	8/1/2022	Revised per TCB comments	Adam Alger
3	8/9/2022	Revised per TCB comments	Adam Alger

END OF REPORT