

TEST REPORT

Report Number: R16227428-E1

Applicant : TydenBrooks SPG
180 Mays St.
Tallapoosa, GA 30176, USA

Model : -BLES-2L-12

FCC ID : 2BU3D-BLES-2L-12

IC : 35332-BLES2L12

EUT Description : High Security Seal

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 4
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:

2026-05-04

Prepared by:

UL LLC

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2026-04-21	Initial Issue	Sarah Kuhaneck
V2	2026-04-28	Revised Model	Charles Moody
V3	2026-05-04	Updated Model	Chandler Stanley

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: TydenBrooks SPG
180 Mays St.
Tallapoosa, GA 30176, USA

EUT DESCRIPTION: High Security Seal

MODEL: -BLES-2L-12

SERIAL NUMBER: N/A

SAMPLE RECEIPT DATE: 2026-01-27, 2026-03-23

DATE TESTED: 2026-02-20 TO 2026-04-16

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Refer to Section 2
ISED RSS-247 Issue 4	Refer to Section 2
ISED RSS-GEN Issue 5 + A1 + A2	Refer to Section 2

UL LLC 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document.

Approved & Released
For UL LLC By:

Prepared By:



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UL LLC

2. TEST RESULTS SUMMARY

This report contains info provided by the customer which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

Below is a list of the data/info provided by the customer:

- 1) Antenna gain and type (see section 6.3)
- 2) Worst-case data rates (see section 6.5)

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 6.3.1 (a)	6dB BW	Compliant	None
15.247 (b) (3)	RSS-247 6.3.2	Output Power		
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 6.3.1 (b)	PSD	Compliant	None
15.247 (d)	RSS-247 6.6	Conducted Spurious Emissions		
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions		
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	N/A	EUT is battery powered.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47 CFR Part 2, FCC 47 CFR Part 15, FCC ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024, ISED ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5 + A1 + A2, and RSS-247 Issue 4.

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification # 0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr Durham, NC 27713, U.S.A	US0067	2180C	825374
☒	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A		27265	

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	1.22%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	1.94 dB
All emissions, radiated	6.01 dB
Conducted Emissions (0.150-30MHz) - LISN	3.40 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%
Time	3.39%

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

5.4. 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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

BLESecure 2.0 is a one-time use security seal that uses BLE to inform the user of the status of the seal. This report covers testing on the BLE radio.

6.2. 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	-3.88	0.41

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna gain and type, as provided by the manufacturer, are as follows:

The radio utilizes a PIFA antenna, with a maximum gain as below table:

Frequency Band (GHz)	Antenna Gain (dBi)
2402-2480	-2.9

6.4. SOFTWARE AND FIRMWARE

The EUT Software/Firmware version used for testing was Vrs. 42.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed with the EUT set to transmit at the channel and mode with the highest PSD as the worst-case scenario.

Emissions from 9kHz-30 MHz found no noticeable emissions within 20 dB of the limit and therefore are not included in this report.

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels. The EUT supports 1 Mbps.

The EUT was investigated in three orthogonal orientations X, Y, and Z. It was determined that the X orientation was worst-case; therefore, all final radiated testing was performed with the EUT in the X orientation.

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Support Laptop	Lenovo	Yoga 7 16IAP7	PF49W8MM	PD9AX211NG
Support Laptop	HP	15-FD0113DX	1H85306666	TX2- RTL8852BE
Laptop Power supply	HP	L25296-312	WTRPV0B3JLJUX2	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB-C	1	Serial	Shielded	<1m	Used to program EUT.

TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card. In normal operation, the EUT is only powered by a battery.

SETUP DIAGRAMS

Please refer to R16227428-EP1 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10 Section 11.6

6 dB BW: ANSI C63.10-2020 Subclause -11.8.2

Occupied BW (99%): ANSI C63.10-2020 Section 6.9.3

Output Power: ANSI C63.10-2020 Subclause -11.9.1.2 Method PKPM1 Peak-reading power meter
ANSI C63.10-2020 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10-2020 Subclause -11.10.2 Method PKPSD (peak PSD)

Conducted emissions non-restricted frequency bands: ANSI C63.10-2020 Subclause -11.11 and 6.10.4

Radiated emissions restricted frequency bands: ANSI C63.10-2020 Subclause -11.12.1 and 6.10.5

General radiated emissions: ANSI C63.10-2020 Subclause - 6.3-6.6

8. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 1				
90416	Spectrum Analyzer MY54490254	Keysight Technologies	N9030A	2025-07-31	2026-07-31
211058	Real-Time Peak Power Sensor 50MHz to 8GHz 11997	Boonton	RTP5000	2025-07-30	2026-07-30
179892	Environmental Meter 161024885	Fisher Scientific	15-077-963	2025-08-05	2026-08-05
-	DC Power Supply MY62176088	Keysight Technologies	E3633A	-	-
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	-	-
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	-	-

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 1)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	18-40 GHz				
91186	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2024-05-16	2026-05-16
	Gain-Loss Chains				
135999	Gain-loss string: 18-40GHz	Various	Various	2025-05-31	2026-05-31
	Receiver & Software				
90411	Spectrum Analyzer	Keysight	N9030A	2025-07-30	2026-07-30
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
241205	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 2)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
0.009-30MHz					
8939	Passive Loop Antenna	EMCO	EM-6872	2024-11-18	2026-11-18
30-1000 MHz					
85717	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-04-09	2026-04-30
1-18 GHz					
86408	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2025-07-15	2027-07-15
Gain-Loss Chains					
91975	Gain-loss string: 0.009-30MHz	Various	Various	2025-05-31	2026-05-31
91978	Gain-loss string: 25-1000MHz	Various	Various	2025-05-31	2026-05-31
91977	Gain-loss string: 1-18GHz	Various	Various	2025-05-31	2026-05-31
Receiver & Software					
206496	Spectrum Analyzer	Rohde & Schwarz	ESW44	2025-07-29	2026-07-29
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
Additional Equipment used					
239540	Environmental Meter	Fisher Scientific	15-077-963	2025-08-05	2027-08-05

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

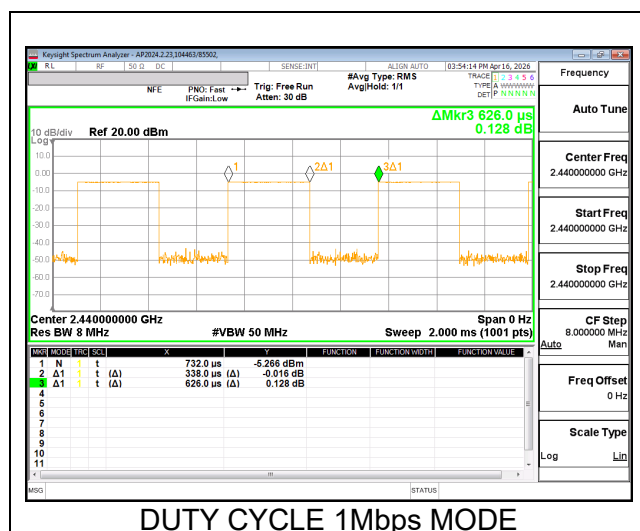
PROCEDURE

ANSI C63.10 Section 11.6

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 1Mbps	0.338	0.626	0.540	53.99	5.35	2.959

DUTY CYCLE PLOTS



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. BLE (1Mbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0325
Middle	2440	1.0352
High	2480	1.0430



9.3. 6 dB BANDWIDTH

LIMITS

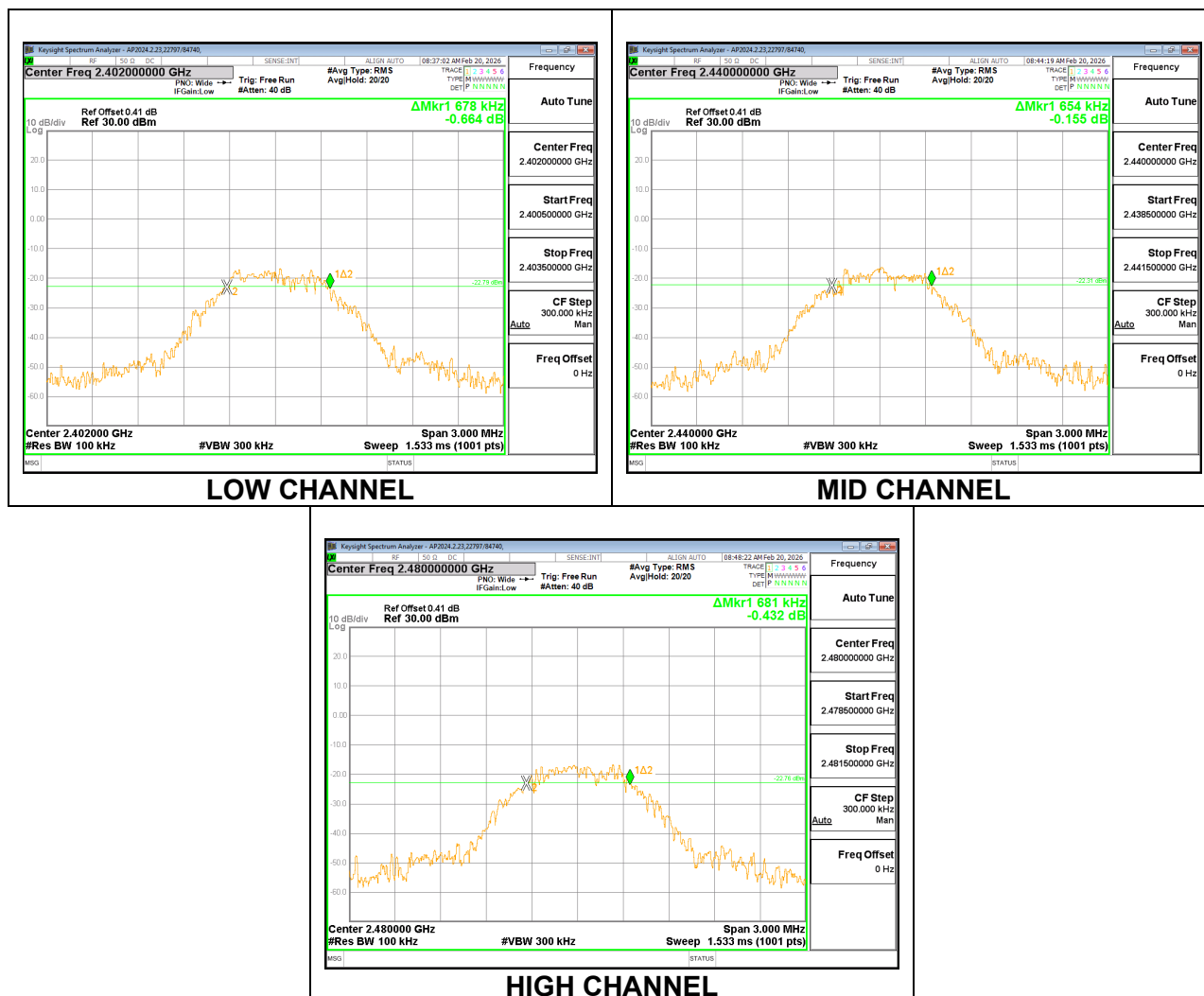
FCC §15.247 (a) (2)
RSS-247 6.3.1 (a)

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

RESULTS

9.3.1. BLE (1Mbps)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.6780	0.5
Middle	2440	0.6540	0.5
High	2480	0.6810	0.5



9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)
RSS-247 6.3.2

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 0.41 dB (including 0.41 dB cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using an SMA cable and attenuator connected to a power meter via a wideband power sensor. Peak output power was read directly from power meter.

RESULTS

9.4.1. BLE (1Mbps)

Tested By:	104463/85502
Date:	2026-04-13

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-5.020	30	-35.020
Middle	2440	-4.550	30	-34.550
High	2480	-3.880	30	-33.880

9.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The cable assembly insertion loss of 0.41 dB (including 0.41 dB cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port using an SMA cable and attenuator connected to a power meter via a wideband power sensor. Gated average output power was read directly from the power meter.

RESULTS

9.5.1. BLE (1Mbps)

Tested By:	104463/85502
Date:	2026-04-13

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	-5.61
Middle	2440	-5.159
High	2480	-4.407

9.6. POWER SPECTRAL DENSITY

LIMITS

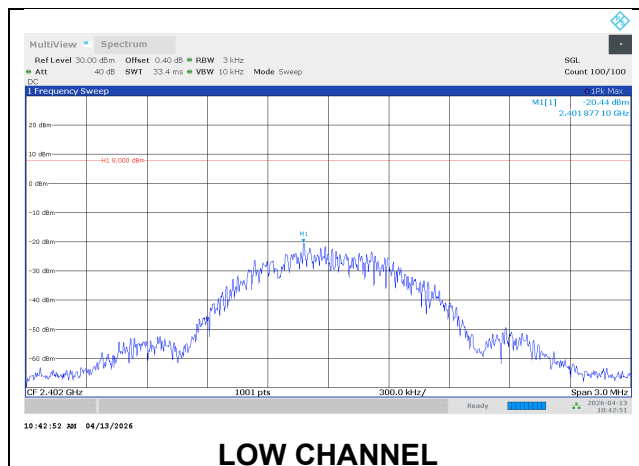
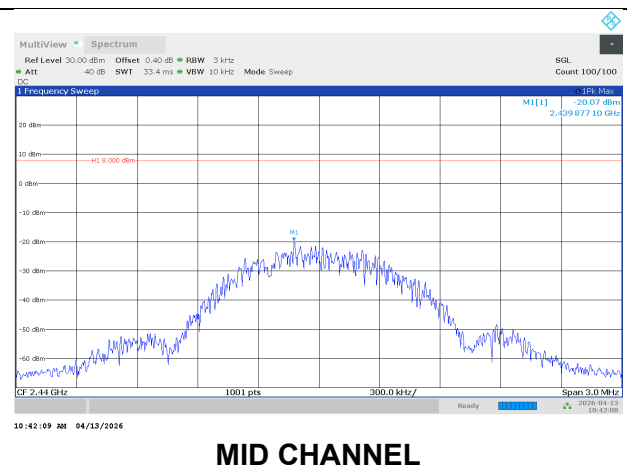
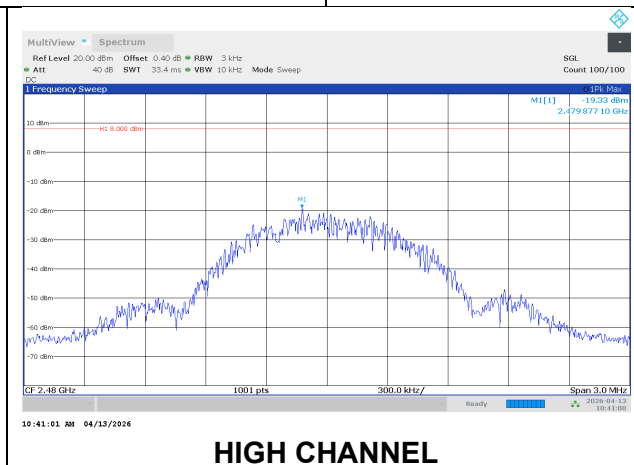
FCC §15.247 (e)
RSS-247 6.3.1 (b)

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.

RESULTS

9.6.1. BLE (1Mbps)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2402	-20.440	8	-28.440
Middle	2440	-20.070	8	-28.070
High	2480	-19.330	8	-27.330



9.7. CONDUCTED SPURIOUS EMISSIONS

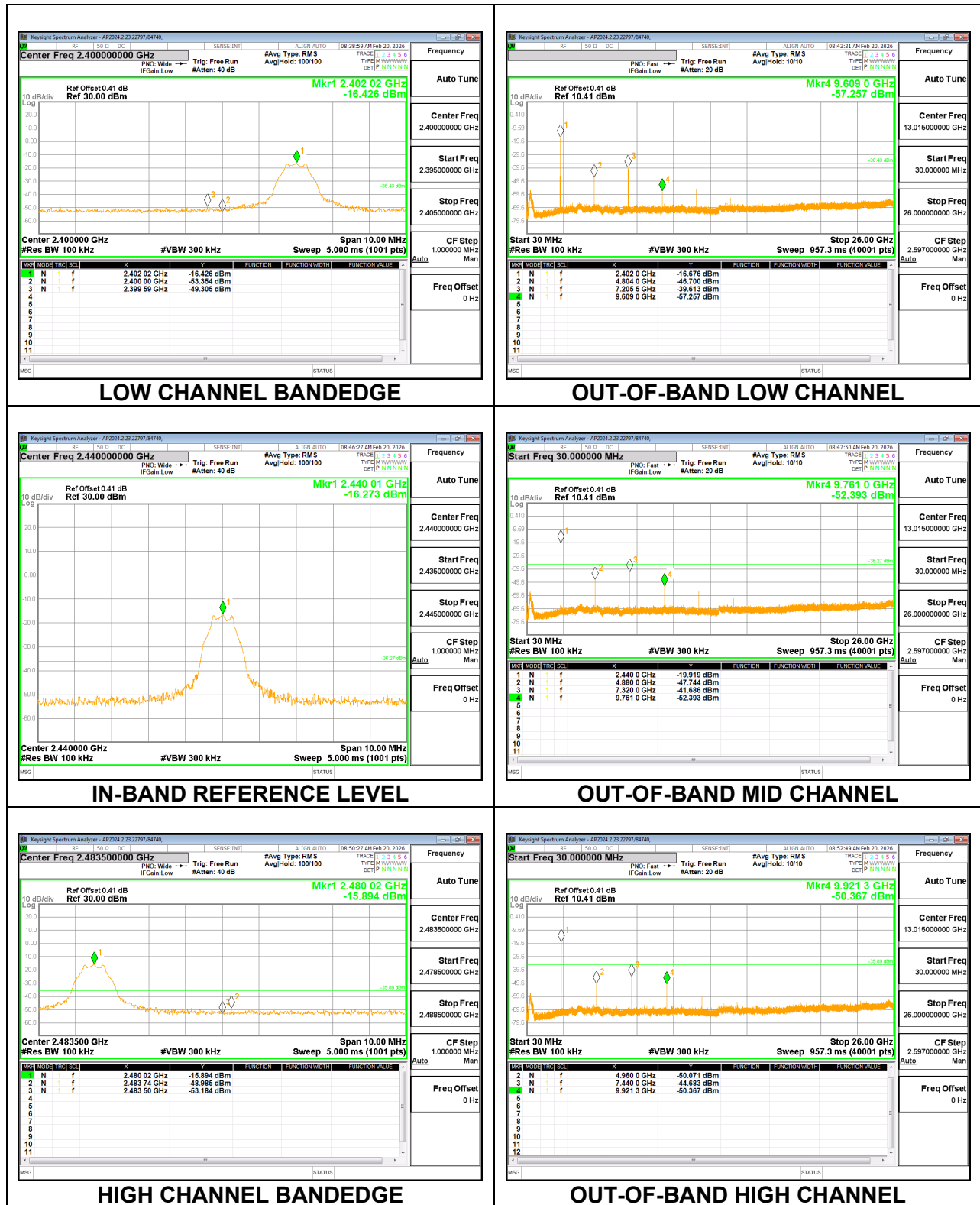
LIMITS

FCC §15.247 (d)
RSS-247 6.6

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

RESULTS

9.7.1. BLE (1Mbps)



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

IC RSS-GEN Clause 8.9 and 8.10

Frequency Range (kHz)	Field Strength Limit (uA/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	6.37/F(kHz) @ 300 m	-
0.490-1.705	63.7/F(kHz) @ 30 m	-
1.705 - 30	0.08 @ 30m	-
Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3MHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for voltage average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

KDB 414788 Open Field Site (OFS) and Chamber Correlation Justification

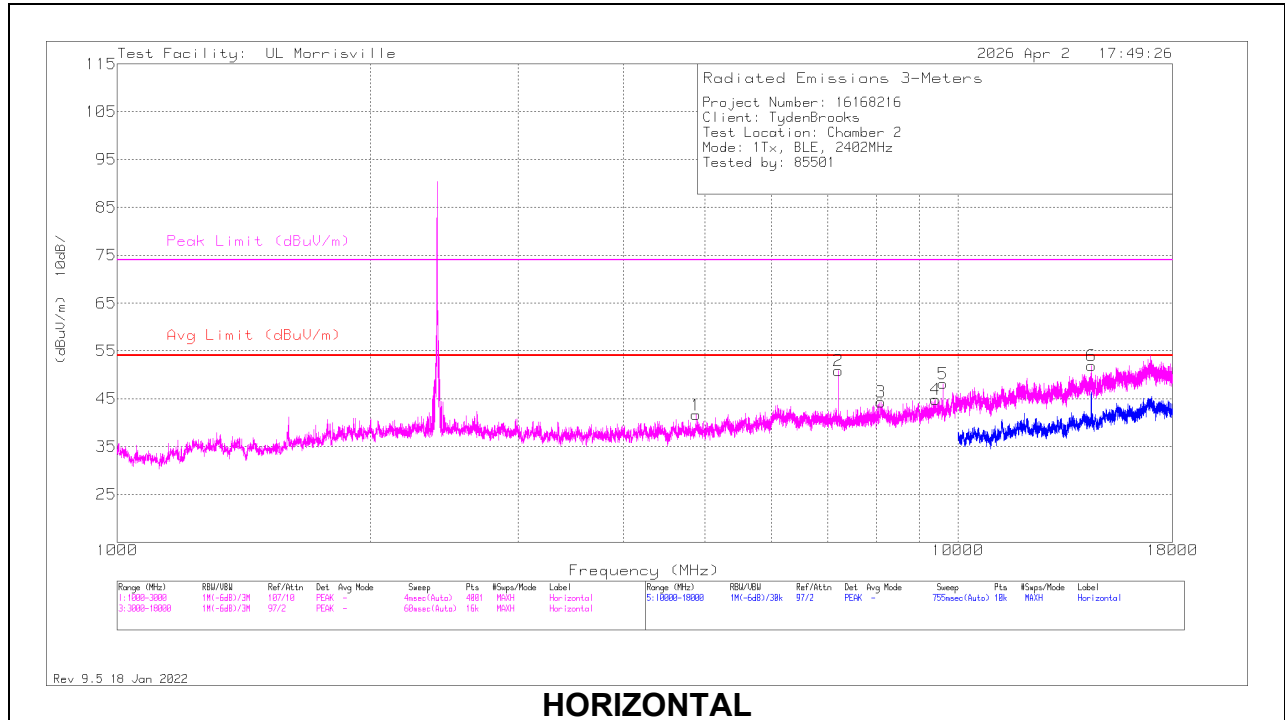
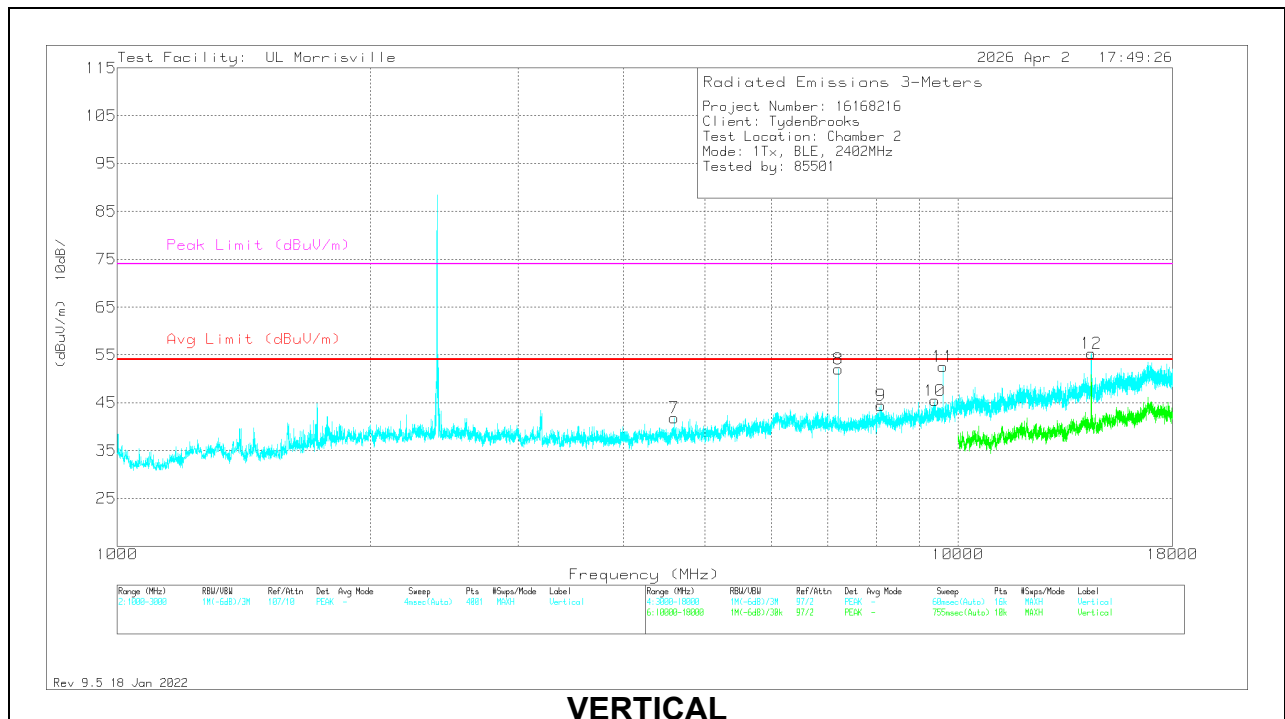
OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. BLE (1Mbps)

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

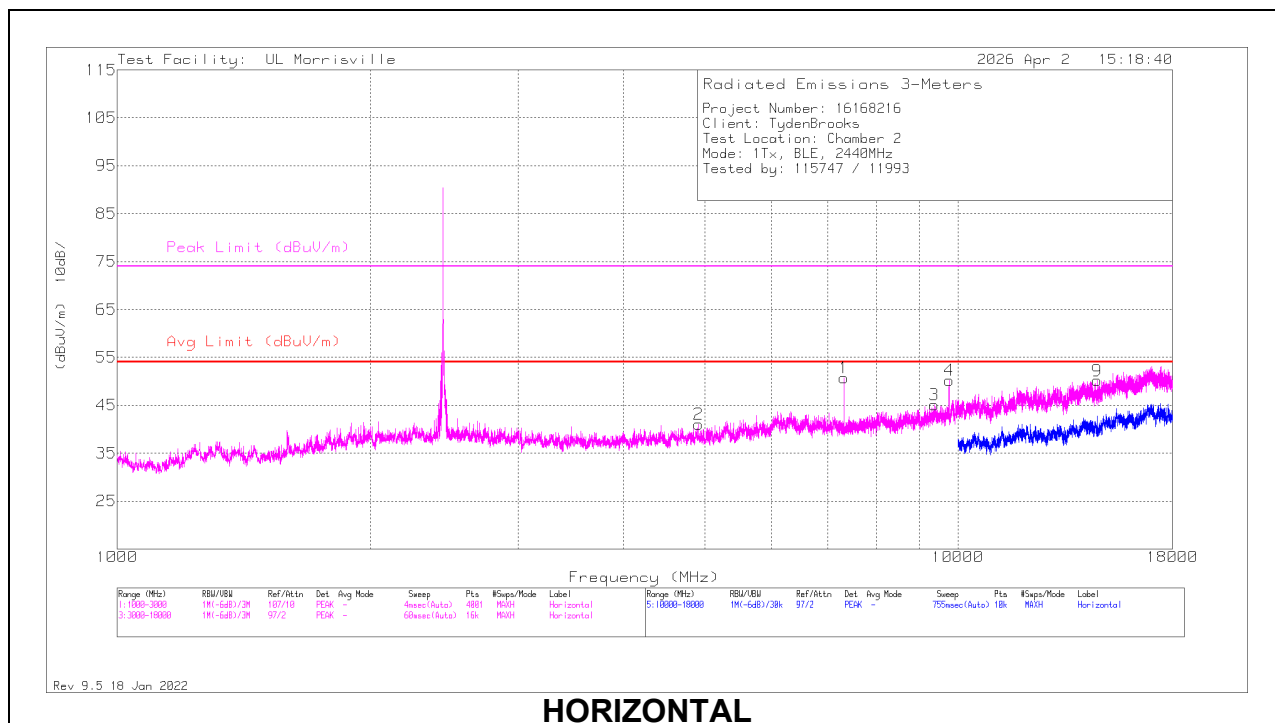
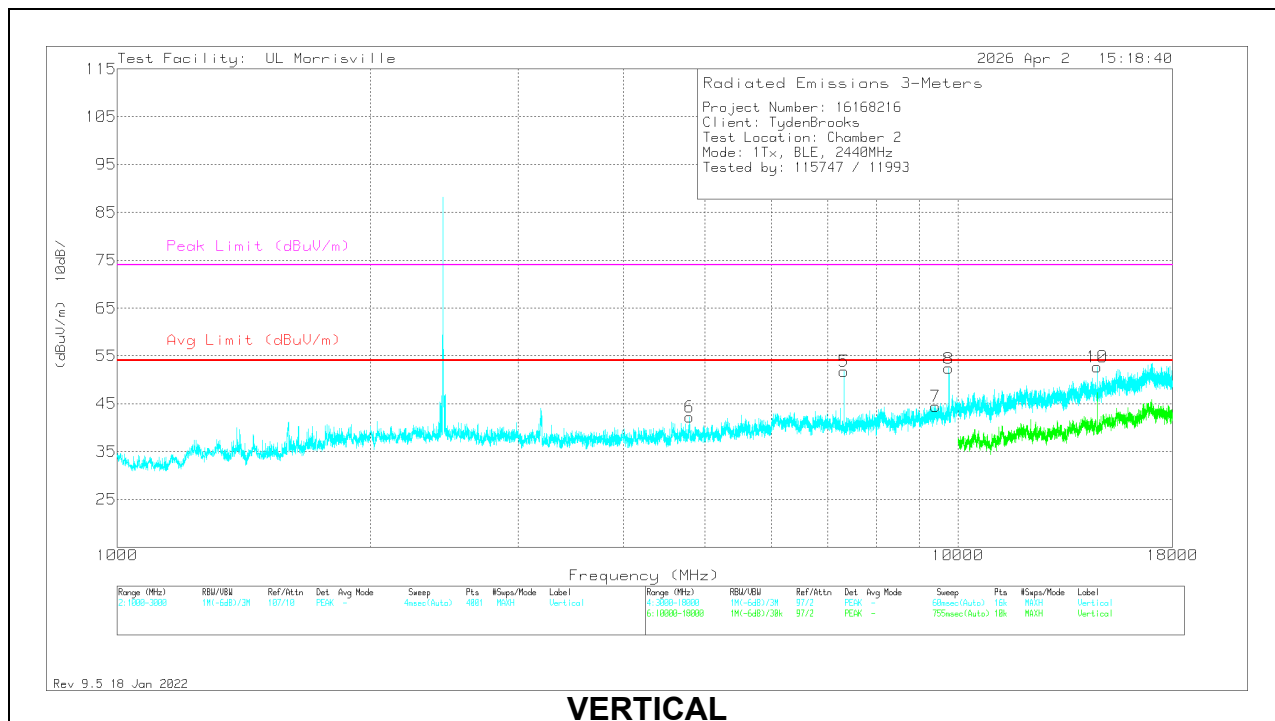
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4879.688	51.83	Pk	34.2	-44.4	41.63	54	-12.37	74	-32.37	0-360	199	H
3	* ** 8106.563	49.59	Pk	36	-41.3	44.29	54	-9.71	74	-29.71	0-360	199	H
4	* ** 9404.063	49.07	Pk	36.4	-40.6	44.87	54	-9.13	74	-29.13	0-360	199	H
7	* ** 4595.625	53.02	Pk	34	-45.2	41.82	54	-12.18	74	-32.18	0-360	101	V
9	* ** 8107.5	49.67	Pk	36	-41.2	44.47	54	-9.53	74	-29.53	0-360	199	V
10	* ** 9387.188	50.44	Pk	36.4	-41.4	45.44	54	-8.56	74	-28.56	0-360	199	V
2	7205.625	57.98	Pk	35.5	-42.6	50.88	-	-	74	-23.12	0-360	199	H
8	7206.563	59.18	Pk	35.5	-42.6	52.08	-	-	74	-21.92	0-360	101	V
5	9609.375	52.47	Pk	36.7	-41	48.17	-	-	74	-25.83	0-360	101	H
11	9609.375	56.84	Pk	36.7	-41	52.54	-	-	74	-21.46	0-360	199	V
12	14411.25	54.79	Pk	39.2	-38.7	55.29	-	-	74	-18.71	0-360	101	V
6	14414.063	51.31	Pk	39.2	-38.6	51.91	-	-	74	-22.09	0-360	101	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 7319.229	60.02	PK2	35.4	-43.2	0	52.22	-	-	74	-21.78	31	103	H
	* ** 7319.628	49.06	ADV	35.4	-43.3	5.35	46.51	54	-7.49	-	-	31	103	H
2	* ** 4920	52.23	Pk	34.1	-45.3	0	41.03	54	-12.97	74	-32.97	0-360	200	H
3	* ** 9375	49.26	Pk	36.4	-40.6	0	45.06	54	-8.94	74	-28.94	0-360	101	H
5	* ** 7320.705	62.05	PK2	35.4	-43.3	0	54.15	-	-	74	-19.85	168	109	V
	* ** 7320.633	51.89	ADV	35.4	-43.3	5.35	49.34	54	-4.66	-	-	168	109	V
6	* ** 4795.313	52.97	Pk	34.2	-44.9	0	42.27	54	-11.73	74	-31.73	0-360	101	V
7	* ** 9399.375	49.03	Pk	36.4	-41	0	44.43	54	-9.57	74	-29.57	0-360	101	V
8	9759.375	56.77	Pk	37	-41.4	0	52.37	-	-	-	-	0-360	101	V
4	9761.25	54.68	Pk	37	-41.5	0	50.18	-	-	-	-	0-360	101	H
10	14639.063	51.56	Pk	39.4	-38.3	0	52.66	-	-	-	-	0-360	101	V
9	14640.938	49.04	Pk	39.4	-38.3	0	50.14	-	-	-	-	0-360	101	H

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

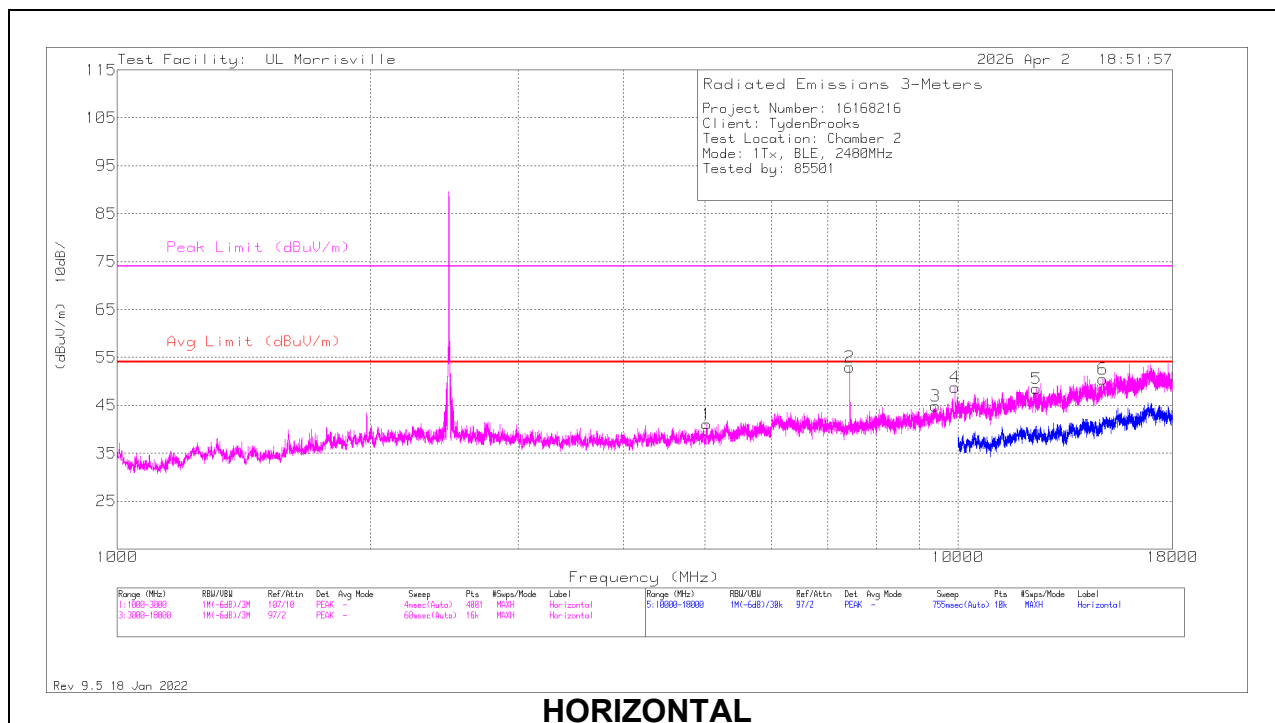
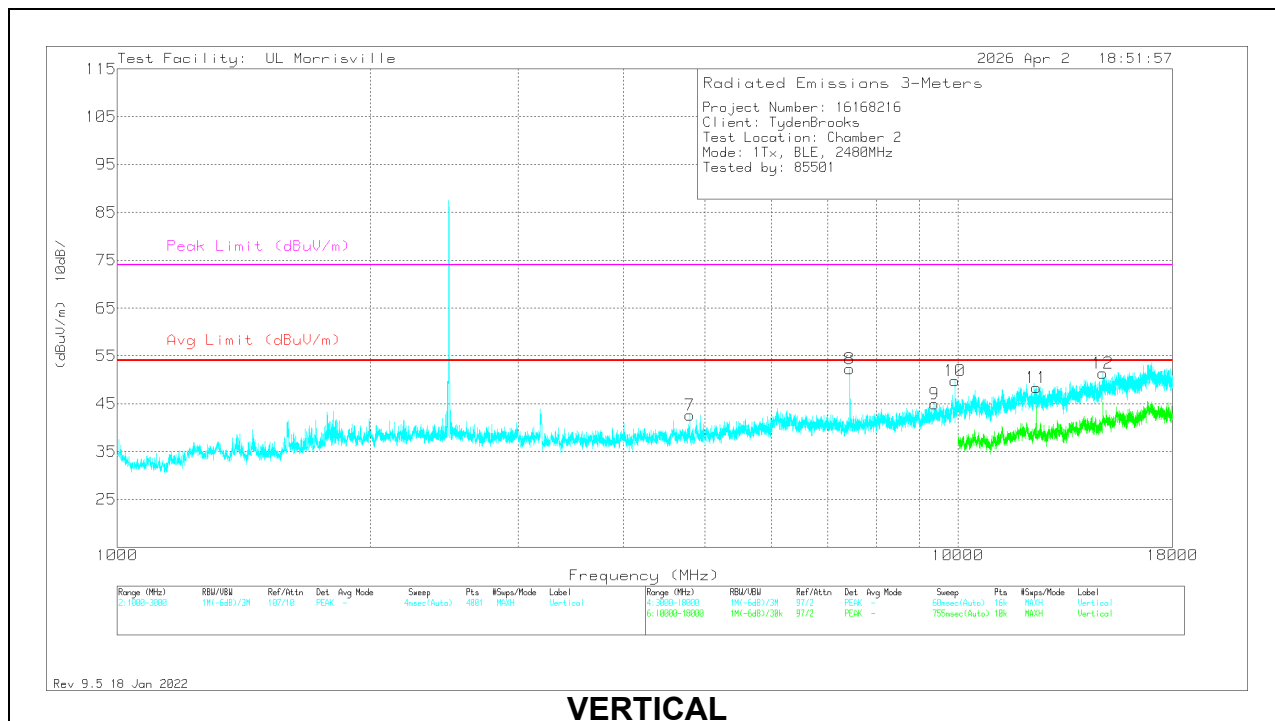
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5030.625	51.6	Pk	34.1	-44.6	0	41.1	54	-12.9	74	-32.9	0-360	101	H
2	* ** 7439.282	61.07	PK2	35.5	-42.5	0	54.07	-	-	74	-19.93	34	116	H
	* ** 7440.561	51.29	ADV	35.5	-42.6	5.35	49.54	54	-4.46	-	-	34	116	H
3	* ** 9401.25	49.36	Pk	36.4	-40.9	0	44.86	54	-9.14	74	-29.14	0-360	101	H
5	* ** 12389.917	48.92	PK2	38.8	-38.1	0	49.62	-	-	74	-24.38	297	309	H
	* ** 12393.398	36.51	ADV	38.8	-38.7	5.35	41.96	54	-12.04	-	-	297	309	H
7	* ** 4796.25	53.36	Pk	34.2	-44.9	0	42.66	54	-11.34	74	-31.34	0-360	199	V
8	* ** 7440.177	61.3	PK2	35.5	-42.6	0	54.2	-	-	74	-19.8	61	305	V
	* ** 7440.741	51.13	ADV	35.5	-42.6	5.35	49.38	54	-4.62	-	-	61	305	V
9	* ** 9382.5	49.71	Pk	36.4	-41.1	0	45.01	54	-8.99	74	-28.99	0-360	101	V
11	* ** 12399.179	50.57	PK2	38.8	-39.6	0	49.77	-	-	74	-24.23	40	213	V
	* ** 12398.908	38.02	ADV	38.8	-39.5	5.35	42.67	54	-11.33	-	-	40	213	V
10	9918.75	55.76	Pk	37.2	-43.1	0	49.86	-	-	74	-24.14	0-360	199	V
4	9920.625	54.71	Pk	37.3	-43.2	0	48.81	-	-	74	-25.19	0-360	101	H
6	14870.625	47.83	Pk	39.9	-37.3	0	50.43	-	-	74	-23.57	0-360	199	H
12	14880	49.63	Pk	39.9	-38.1	0	51.43	-	-	74	-22.57	0-360	101	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

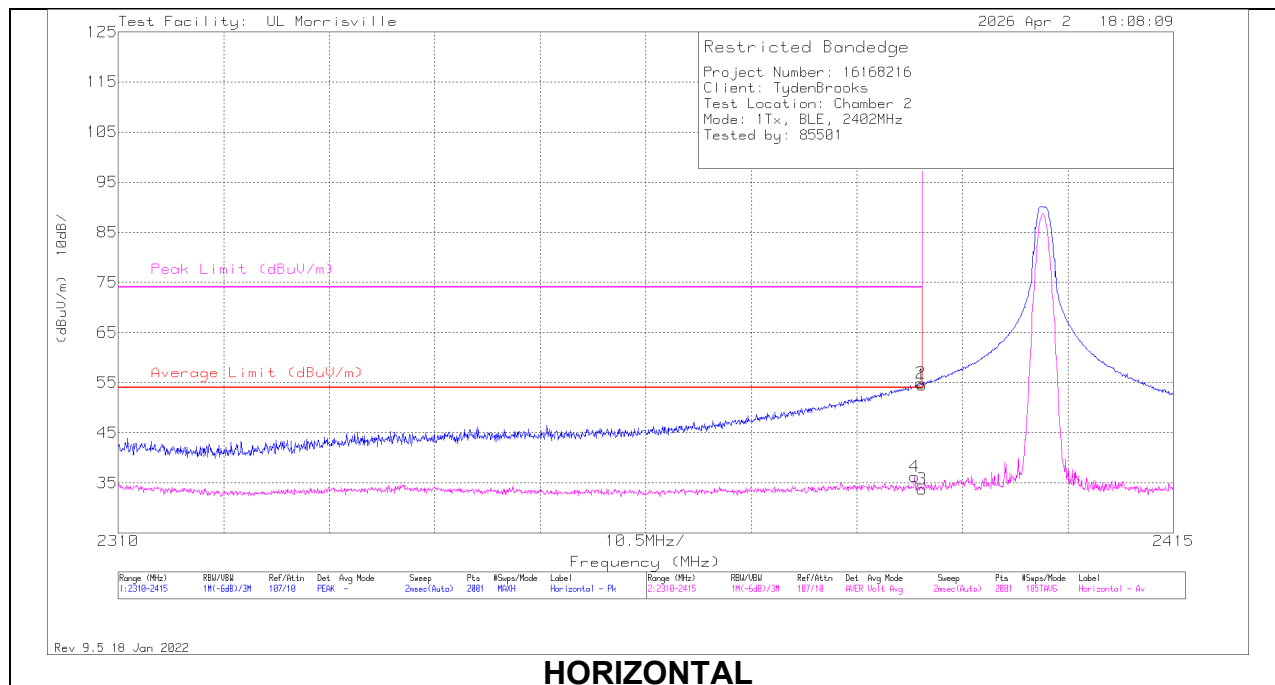
Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

BANDEDGE

LOW CHANNEL RESULTS



HORIZONTAL

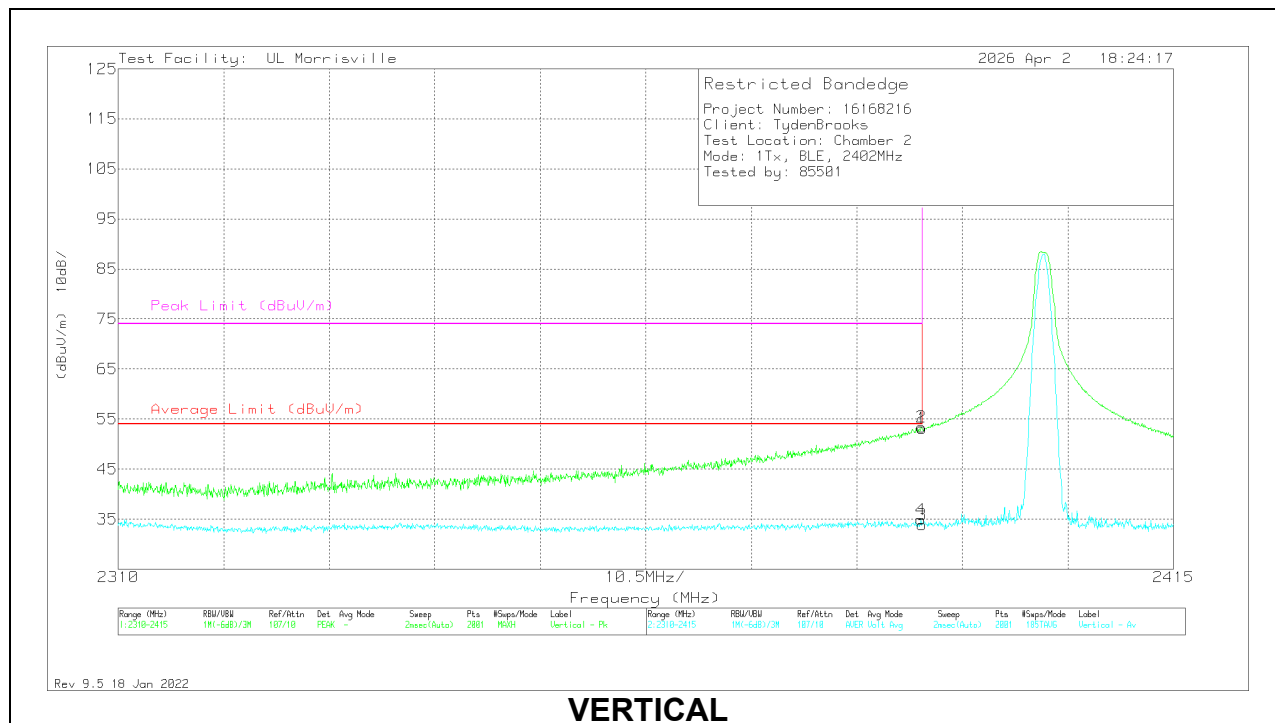
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2390	47.45	Pk	32.2	-25.1	0	54.55	-	-	74	-19.45	39	124	H
2	*** 2389.853	47.69	Pk	32.2	-25	0	54.89	-	-	74	-19.11	39	124	H
3	*** 2390	21.34	ADV	32.2	-25.1	5.35	33.79	54	-20.21	-	-	39	124	H
4	*** 2389.223	23.68	ADV	32.2	-25	5.35	36.23	54	-17.77	-	-	39	124	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2390	46.09	Pk	32.2	-25.1	0	53.19	-	-	74	-20.81	114	101	V
2	* ** 2389.905	46.19	Pk	32.2	-25	0	53.39	-	-	74	-20.61	114	101	V
3	* ** 2390	21.4	ADV	32.2	-25.1	5.35	33.85	54	-20.15	-	-	114	101	V
4	* ** 2389.853	22.39	ADV	32.2	-25	5.35	34.94	54	-19.06	-	-	114	101	V

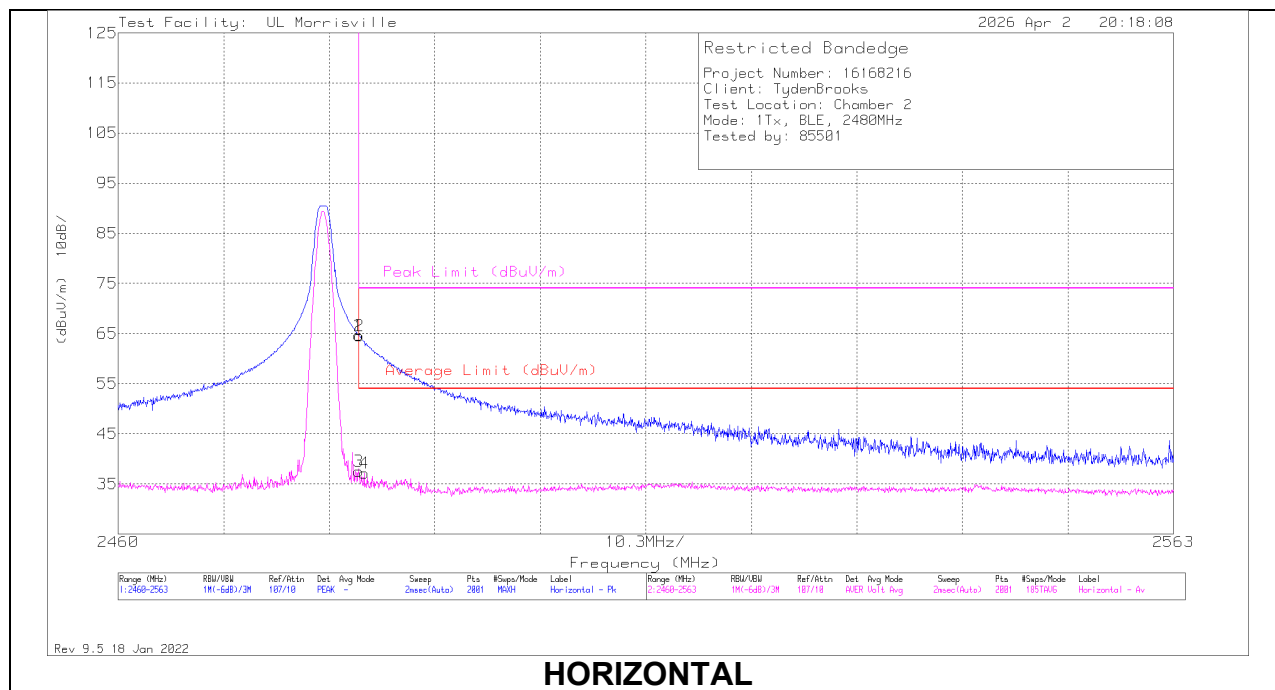
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



HORIZONTAL

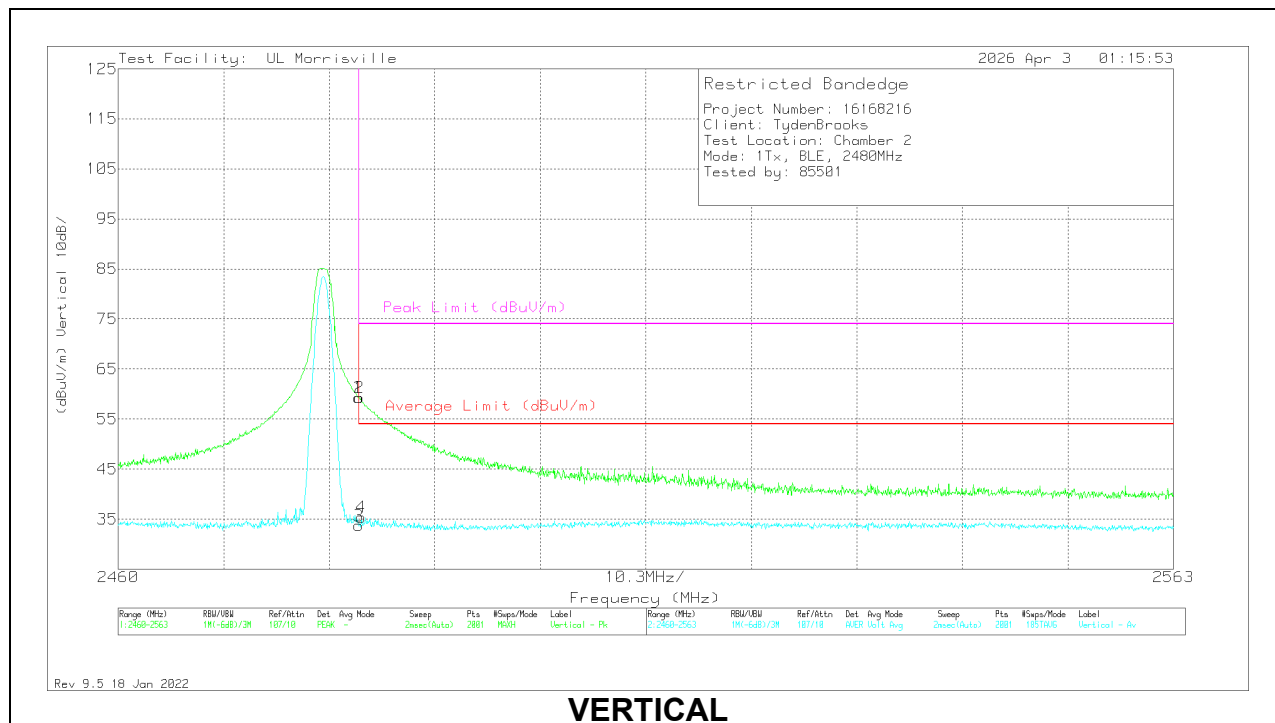
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2483.5	57.41	Pk	32.7	-25.5	0	64.61	-	-	74	-9.39	4	152	H
2	*** 2483.536	57.31	Pk	32.7	-25.5	0	64.51	-	-	74	-9.49	4	152	H
3	*** 2483.5	24.95	ADV	32.7	-25.5	5.35	37.5	54	-16.5	-	-	4	152	H
4	*** 2483.999	24.71	ADV	32.7	-25.6	5.35	37.16	54	-16.84	-	-	4	152	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2483.5	52.11	Pk	32.7	-25.5	0	59.31	-	-	74	-14.69	140	223	V
2	*** 2483.536	52.08	Pk	32.7	-25.5	0	59.28	-	-	74	-14.72	140	223	V
3	*** 2483.5	21.14	ADV	32.7	-25.5	5.35	33.69	54	-20.31	-	-	140	223	V
4	*** 2483.742	22.85	ADV	32.7	-25.5	5.35	35.4	54	-18.6	-	-	140	223	V

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

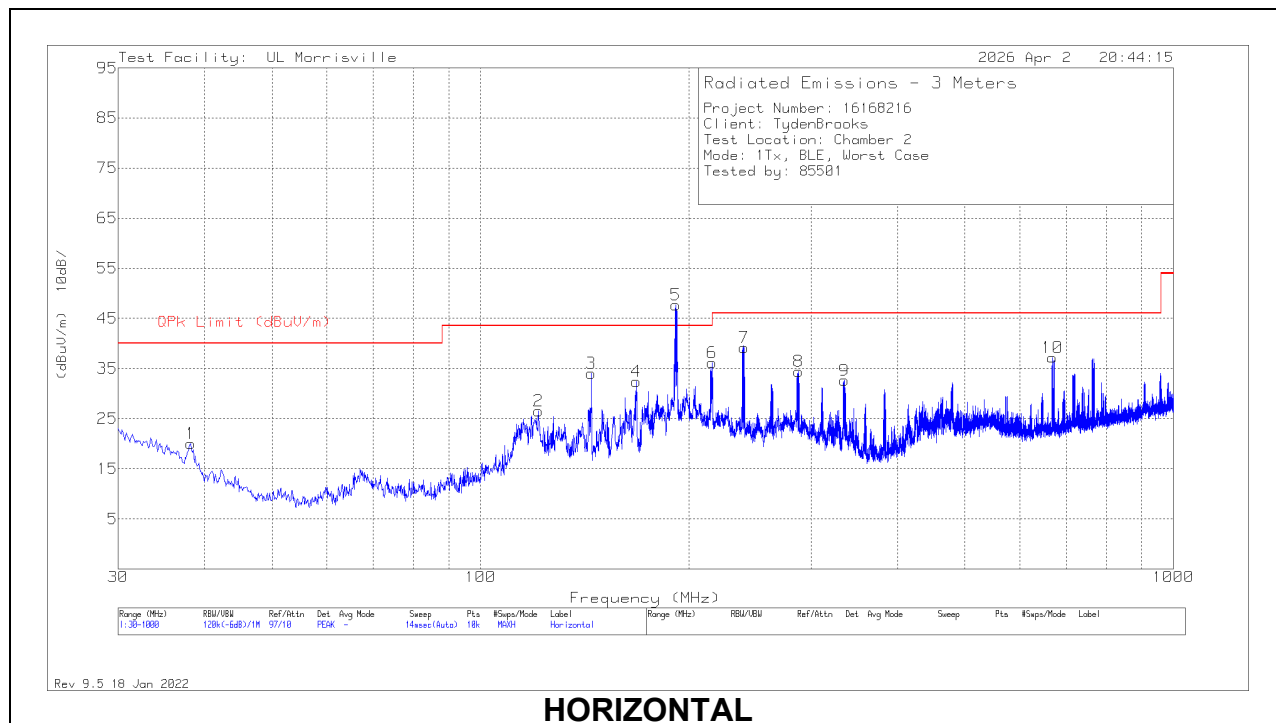
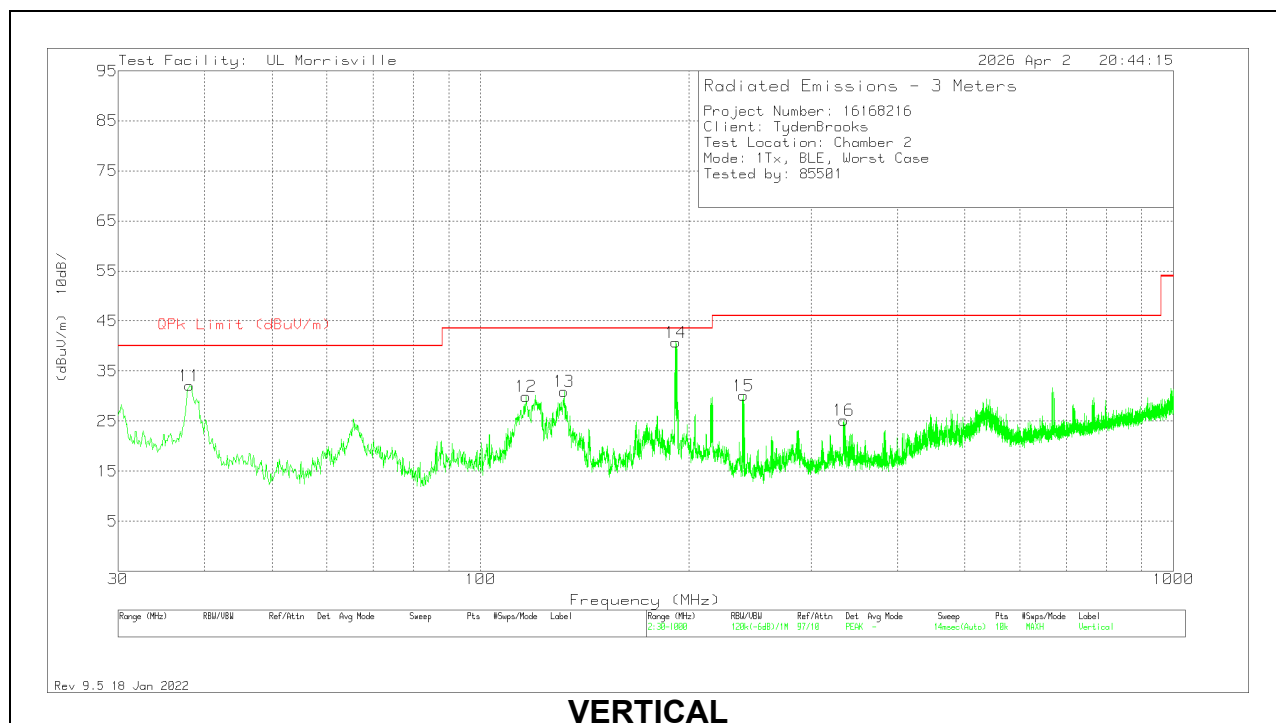
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

10.3. WORST CASE BELOW 1 GHZ

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



Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	85717 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBUV/m)	QPk Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 38.148	30.12	Pk	21.5	-31.6	20.02	40	-19.98	0-360	399	H
2	*** 121.18	37.22	Pk	19.6	-30.3	26.52	43.52	-17	0-360	199	H
4	*** 167.837	45.27	Pk	17.7	-30.6	32.37	43.52	-11.15	0-360	199	H
7	*** 240.199	51.25	Pk	17.4	-29.5	39.15	46.02	-6.87	0-360	101	H
9	*** 334.774	41.81	Pk	19.9	-29.1	32.61	46.02	-13.41	0-360	101	H
11	*** 38.051	42.1	Pk	21.6	-31.6	32.1	40	-7.9	0-360	101	V
12	*** 116.233	41.63	Pk	19.1	-30.8	29.93	43.52	-13.59	0-360	101	V
13	*** 131.947	41.57	Pk	19.7	-30.4	30.87	43.52	-12.65	0-360	101	V
16	*** 334.095	34.09	Pk	19.9	-28.8	25.19	46.02	-20.83	0-360	101	V
3	144.46	45.1	Pk	18.8	-29.9	34	-	-	0-360	199	H
5	191.311	59.27	Pk	17.7	-29.3	47.67	-	-	0-360	101	H
14	191.311	52.34	Pk	17.7	-29.3	40.74	-	-	0-360	199	V
6	215.755	49.14	Pk	16.4	-29.4	36.14	-	-	0-360	101	H
15	239.714	42.2	Pk	17.4	-29.5	30.1	-	-	0-360	199	V
8	287.632	45	Pk	19.3	-29.9	34.4	-	-	0-360	101	H
10	669.521	38.73	Pk	25.9	-27.4	37.23	-	-	0-360	101	H

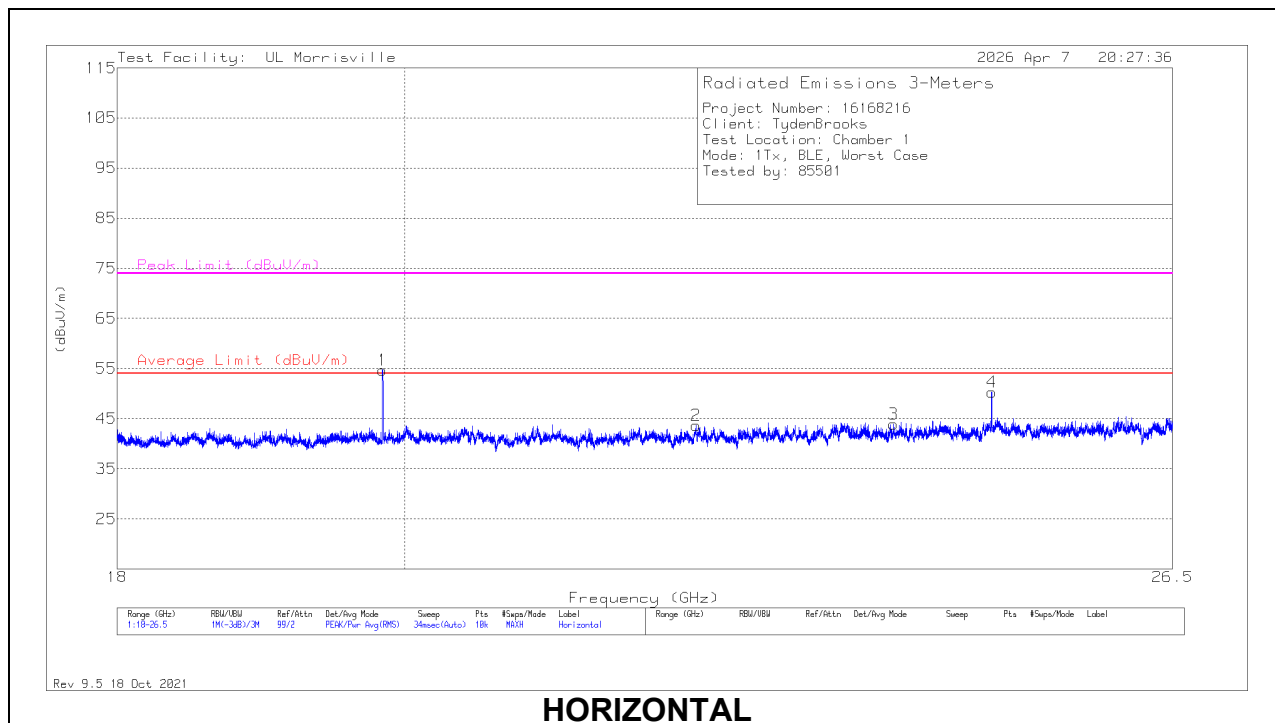
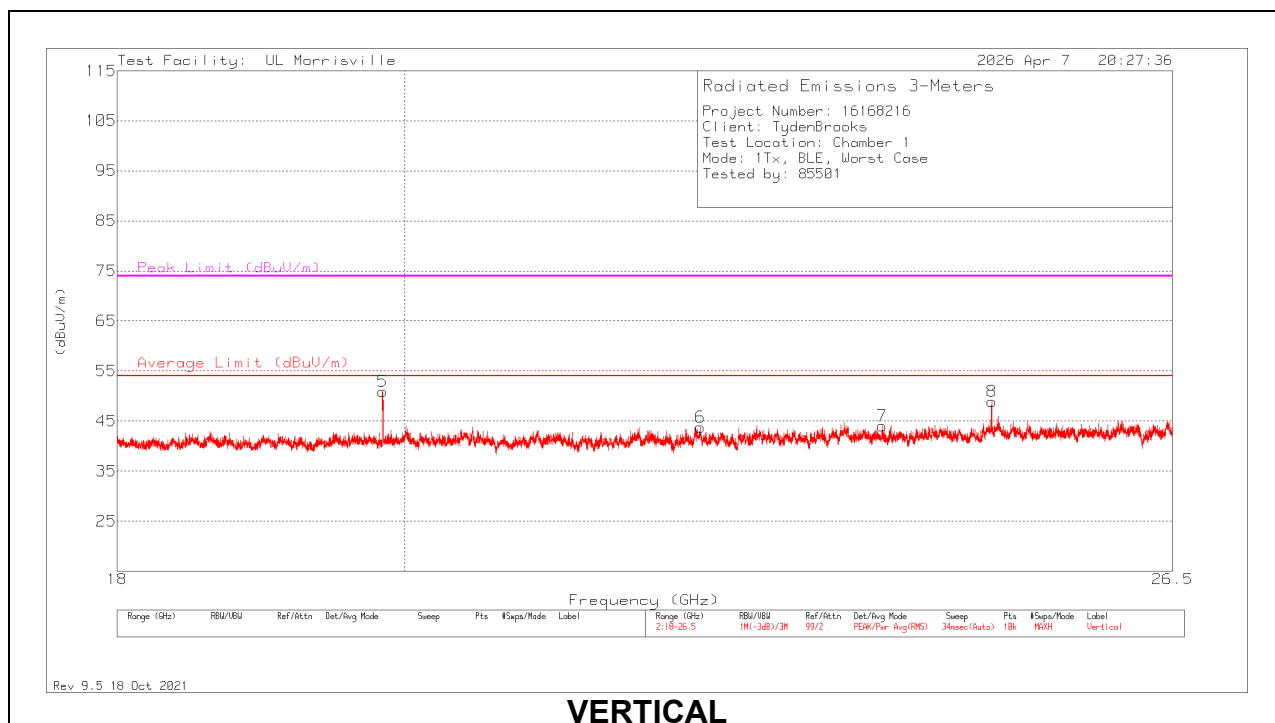
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

10.4. WORST CASE ABOVE 18 GHZ

SPURIOUS EMISSIONS 18000 to 26500 MHz (WORST-CASE CONFIGURATION)



Above 18GHz Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	91186 (dB/m)	Gain/Loss (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 19.83816	64.13	PK2	32.5	-39.8	0	56.83	-	-	74	-17.17	280	262	H
	* ** 19.83811	53.09	ADV	32.5	-39.8	5.35	51.14	54	-2.86	-	-	280	262	H
2	* ** 22.25638	50.17	Pk	33.4	-39.9	0	43.67	54	-10.33	74	-30.33	0-360	249	H
3	* ** 23.92679	49.05	Pk	33.7	-38.8	0	43.95	54	-10.05	74	-30.05	0-360	249	H
5	* ** 19.84199	59.5	PK2	32.6	-39.8	0	52.3	-	-	74	-21.7	306	265	V
	* ** 19.84187	47.33	ADV	32.6	-39.8	5.35	45.48	54	-8.52	-	-	306	265	V
6	* ** 22.29293	50.07	Pk	33.4	-39.7	0	43.77	54	-10.23	74	-30.23	0-360	151	V
7	* ** 23.82478	49.37	Pk	33.9	-39.2	0	44.07	54	-9.93	74	-29.93	0-360	250	V
4	24.80238	54.69	Pk	34.1	-38.5	0	50.29	-	-	-	-	0-360	101	H
8	24.80323	53.26	Pk	34.1	-38.4	0	48.96	-	-	-	-	0-360	300	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

ADV - Linear Voltage Average

11. SETUP PHOTOS

Please refer to R16227428-EP1 for setup photos

END OF TEST REPORT