

TEST REPORT

Report Number: R15379127-E1

Applicant : Abbott Diabetes Care Inc.
1360 South Loop Rd
Alameda, CA 94502, United States

Model : Project 44100

FCC ID : QXS-LIBDC1

IC : 12106A-LIBDC1

EUT Description : Libre Duo

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:
2026-03-13

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2025-08-29	Initial Issue	Charles Moody
V2	2025-09-12	Editorial Revisions	Charles Moody
V3	2026-01-06	Revised Antenna Gain	Charles Moody
V4	2026-03-13	Updated Antenna Gain	Chandler Stanley

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Abbott Diabetes Care Inc.
1360 South Loop Rd.
Alameda, CA 94502, United States

EUT DESCRIPTION: Libre Duo

MODEL: Project 44100

SERIAL NUMBER: E07A0403D7B22B50, E07A0403D7B22B4D,
E07A0403D7B21349, E07A0403D7B21367,
E07A040AD82D124A, E07A040AD82D1548,
E07A040AD82D127B, E07A0403D7B2145E,
E07A040AD82D141E

SAMPLE RECEIPT DATE: 2025-08-05

DATE TESTED: 2025-08-08 TO 2025-08-14

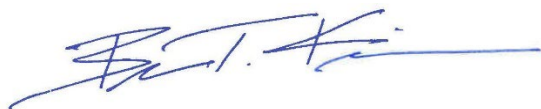
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Refer to Section 2
ISED RSS-247 Issue 4	Refer to Section 2
ISED RSS-GEN Issue 5 + A1 + A2	Refer to Section 2

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:



Brian Kiewra
Project Engineer
Consumer, Medical and IT Segment
UL LLC

Prepared By:



Charles Moody
Lead Project Engineer
Consumer, Medical and IT Segment
UL LLC

2. TEST RESULTS SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL LLC is only responsible for correctly integrating customer-provided data with measurements performed by UL LLC.

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

- 1.) Antenna gain and type (see section 6.3)
- 2.) Supported data rates (see section 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		None.
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		None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions		None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Not Performed	EUT is battery powered

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2020+Cor. 1-2023+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 3.

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 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Libre Duo that contains a BLE radio. This report covers the full emissions testing of 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 - 1 Mbps	3.43	2.20

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

The radio utilizes an PIFA antenna, with a maximum gain of -11.75 dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 1.10.1.1.

The test utility software used during testing was PTUGen4.

6.5. WORST-CASE CONFIGURATION AND MODE

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

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low and high channels as well as mid channel for the spurious emissions.

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

Worst-case data rates, as provided by the client, were:

BLE mode: 1 Mbps

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
EVM Board	Texas Instruments	TRF7960	-	-
Laptop	HP	14-dq1039wm	5CD941FN64	-

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB A Extension Cord	Shielded	<1m	Used from Laptop to EVM Board

TEST SETUP

The EUT is placed on the EVM board in order to configure the radio prior to testing. For radiated testing, the EUT is removed from the board and tested without the use of any additional support equipment.

SETUP DIAGRAMS

Please refer to R15379127-EP1 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2020 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 Subclause - 6.3-6.6

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was 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 2				
248881	Environmental Meter	Control Company	06-662-4	2024-04-10	2026-04-10
90410	Spectrum Analyzer	Keysight Technologies	N9030A	2025-07-10	2026-07-10
211055	Real-Time Peak Power Sensor 50MHz to 8GHz	Boonton	RTP5000	2025-07-30	2026-07-30
91212	True RMS Multimeter	Keysight Technologies	U1232A	2025-07-30	2026-07-30
-	DC Power Supply	Keysight Technologies	E3633A	-	-
Power Software	Boonton Power Analyzer	Boonton	Version 3.0.13.0	NA	NA
SOFTEMI	Antenna Port Software	UL	Version 2024.2.23	NA	NA

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz				
135144	Active Loop Antenna	ETS-Lindgren	6502	2024-10-02	2025-10-02
	30-1000 MHz				
159203	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2024-03-05	2026-03-05
	1-18 GHz				
88761	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2023-10-05	2025-10-05
	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

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville – Chamber 4)

Equip. ID	Description	Manufacturer/Brand	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				
225795	Gain-loss string: 18-40GHz	Various	Various	2025-06-13	2026-06-13
	Receiver & Software				
90416	Spectrum Analyzer	Keysight	N9030A	2024-09-23	2025-09-23
SOFTEMI	EMI Software	UL	Version 9.5 (18 Oct 2021)		
	Additional Equipment used				
241204	Environmental Meter	Fisher Scientific	15-077-963	2023-09-05	2025-09-05

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

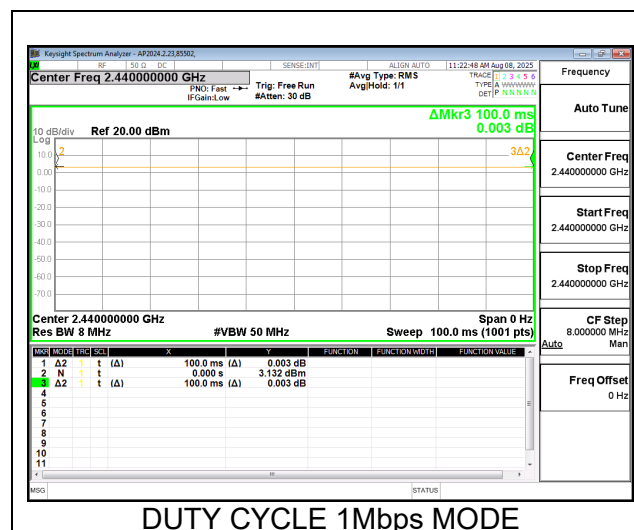
PROCEDURE

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 1Mbps	100.000	100.000	1.000	100.00	0.00	0.010

DUTY CYCLE PLOTS



9.2. 99% BANDWIDTH

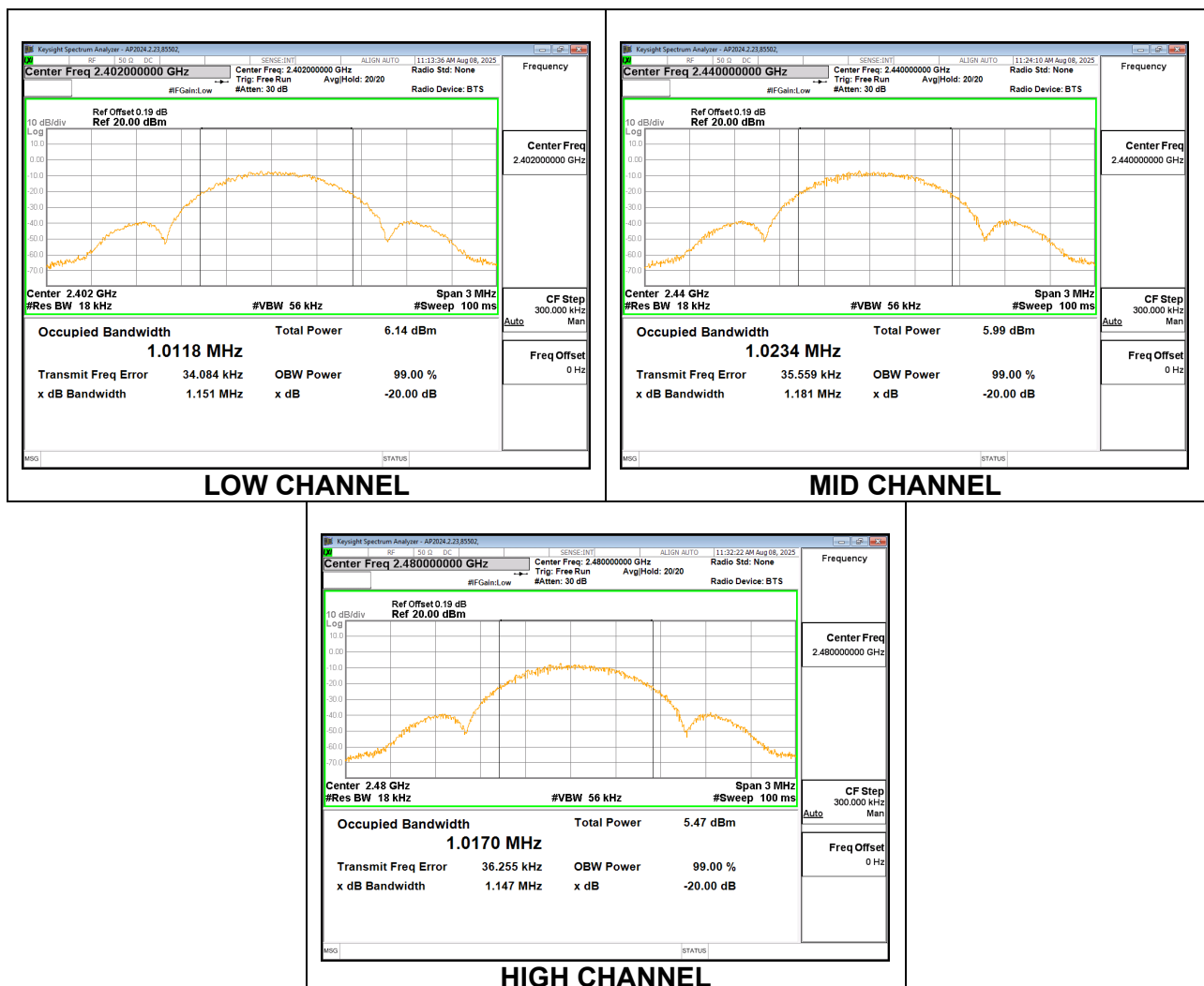
LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. BLE (1Mbps)

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.012
Middle	2440	1.023
High	2480	1.017



9.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

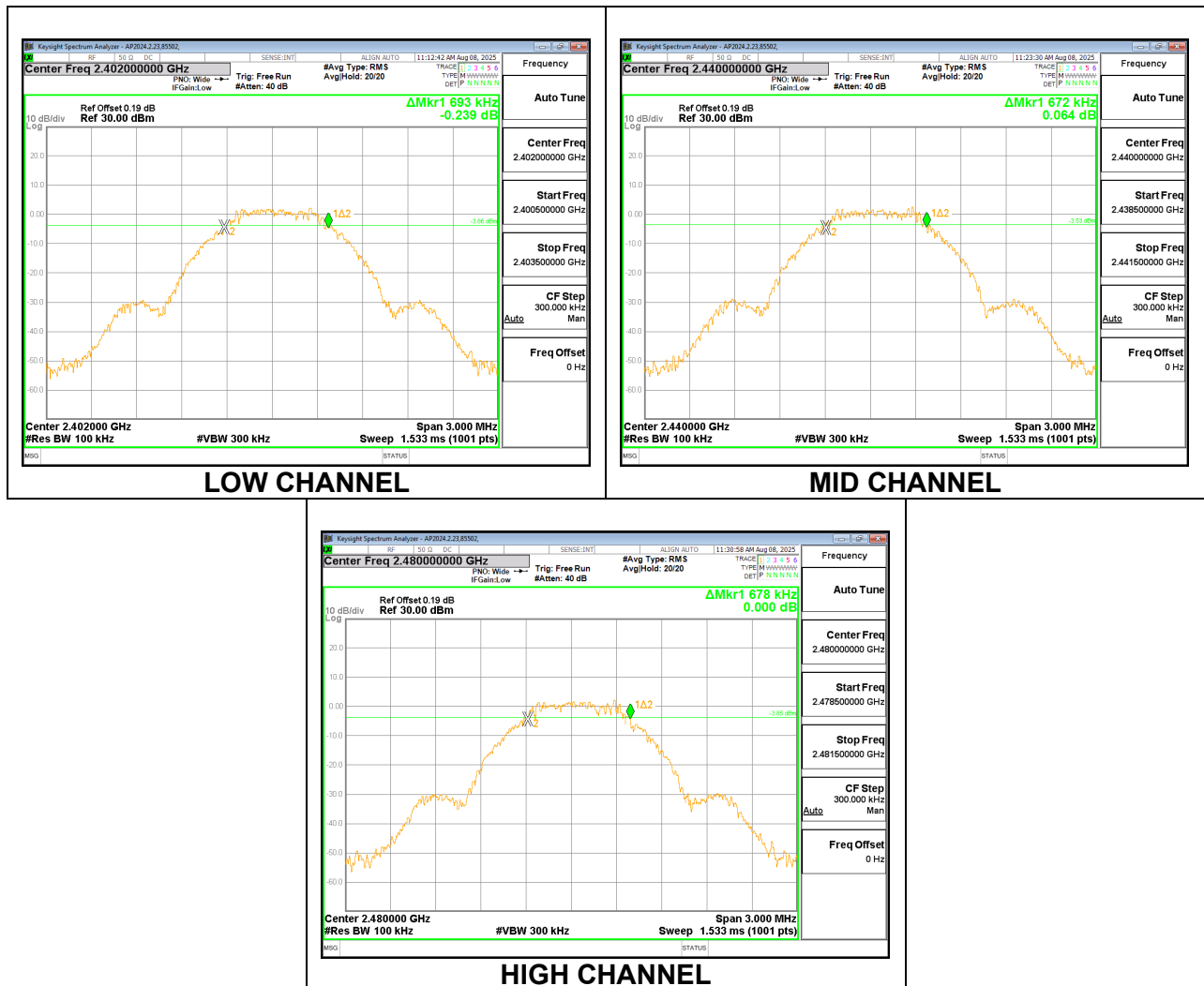
RSS-247 6.3.1 (a)

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	0.693	0.5
Middle	2440	0.672	0.5
High	2480	0.678	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 0.19 dB (including 0.19 dB EUT cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port connected to a power meter via wideband power sensor. Peak output power was read directly from power meter.

RESULTS

9.4.1. BLE (1Mbps)

Tested By:	85502
Date:	2025-08-08

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	3.43	30	-26.567
Middle	2440	3.28	30	-26.721
High	2480	3.22	30	-26.782

9.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 0.19 dB (including 0.19 dB EUT cable) was entered as an offset in the power meter.

The power output was measured on the EUT antenna port connected to a power meter via wideband power sensor. Gated average output power was read directly from power meter.

RESULTS

9.5.1. BLE (1Mbps)

Tested By:	85502
Date:	2025-08-08

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	3.17
Middle	2440	3.07
High	2480	2.98

9.6. POWER SPECTRAL DENSITY LIMITS

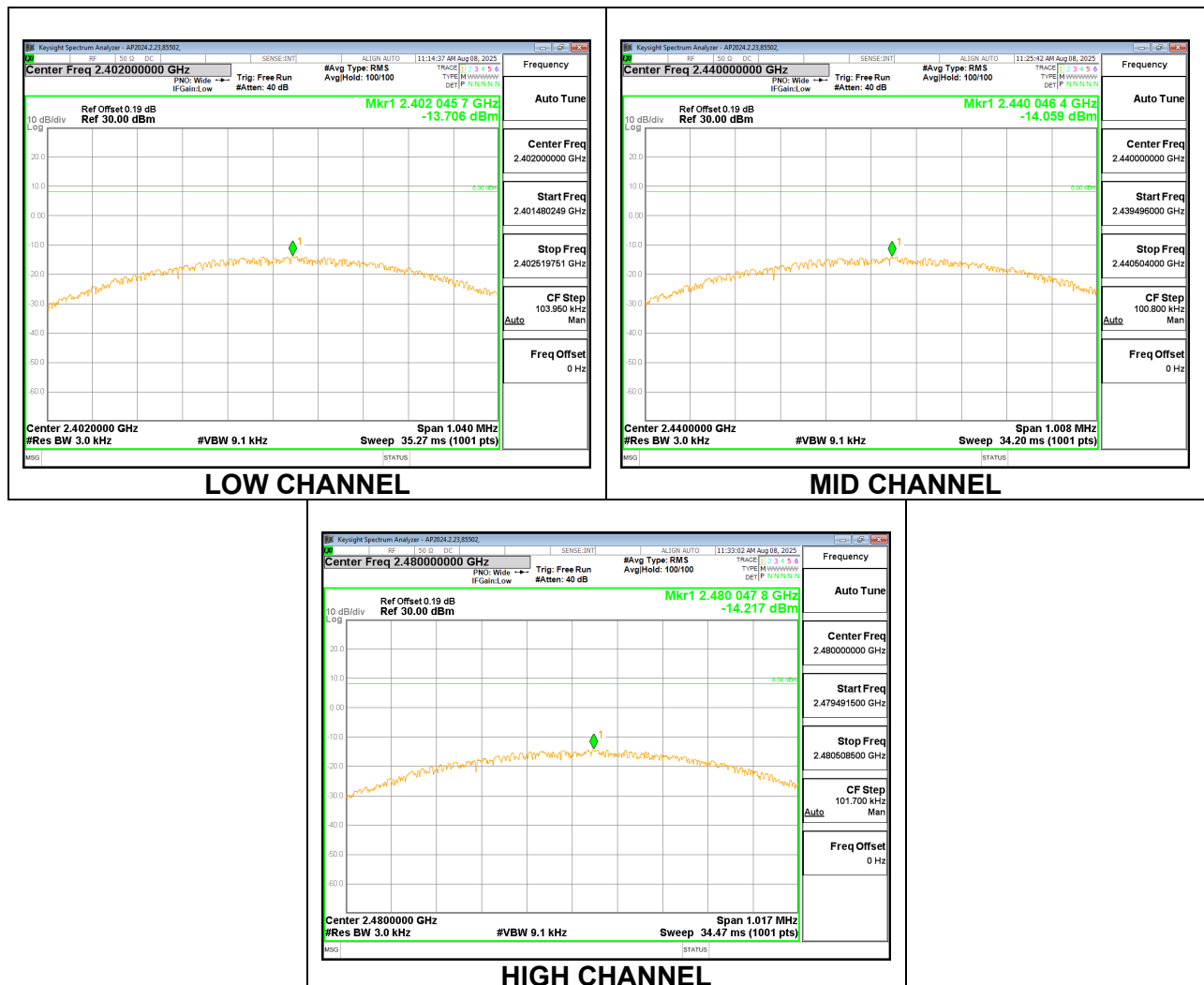
FCC §15.247 (e)
RSS-247 6.3.1 (b)

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	-13.71	8	-21.71
Middle	2440	-14.06	8	-22.06
High	2480	-14.22	8	-22.22



9.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

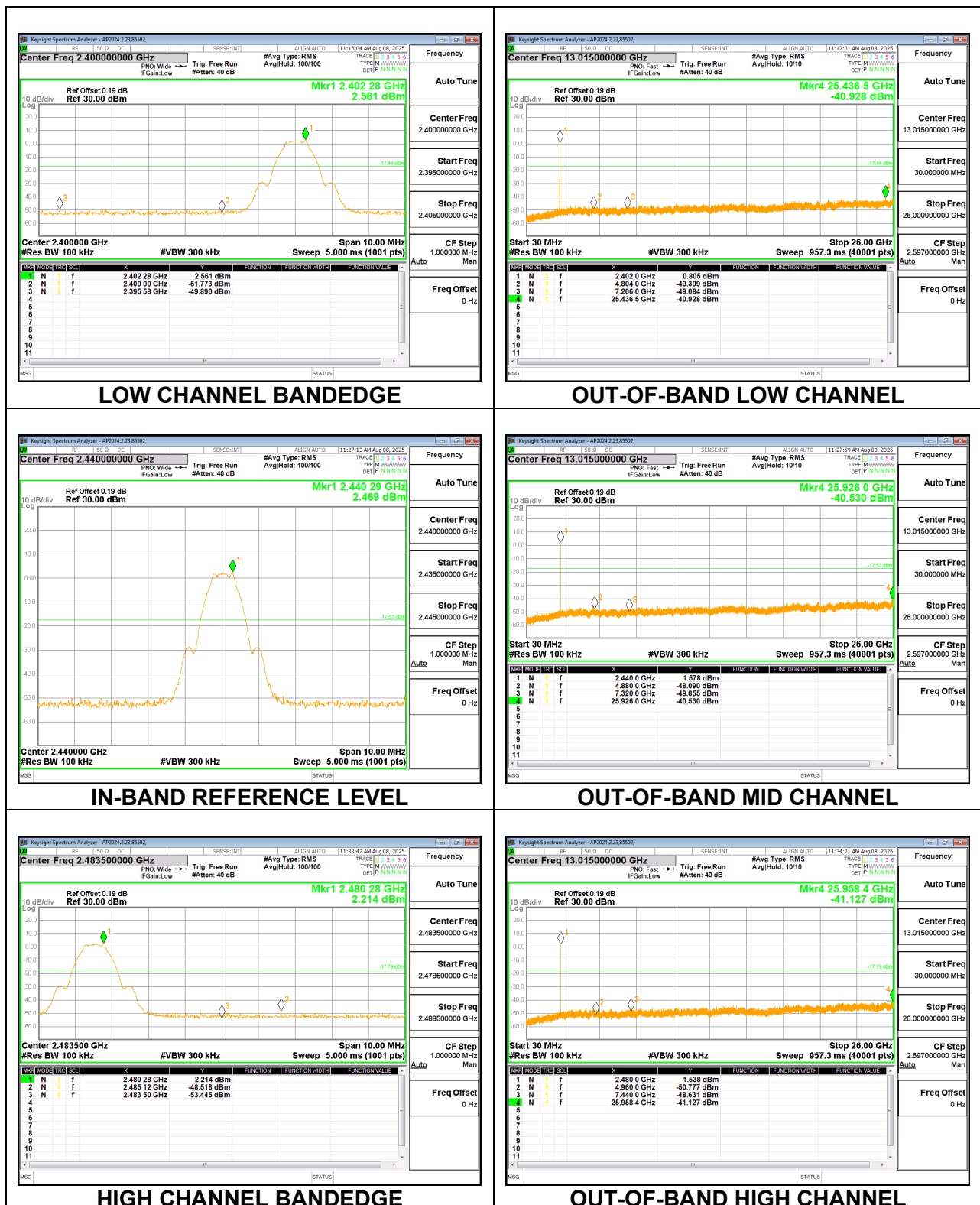
FCC §15.247 (d)

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

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 3 MHz 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 Linear 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 power spectral density 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

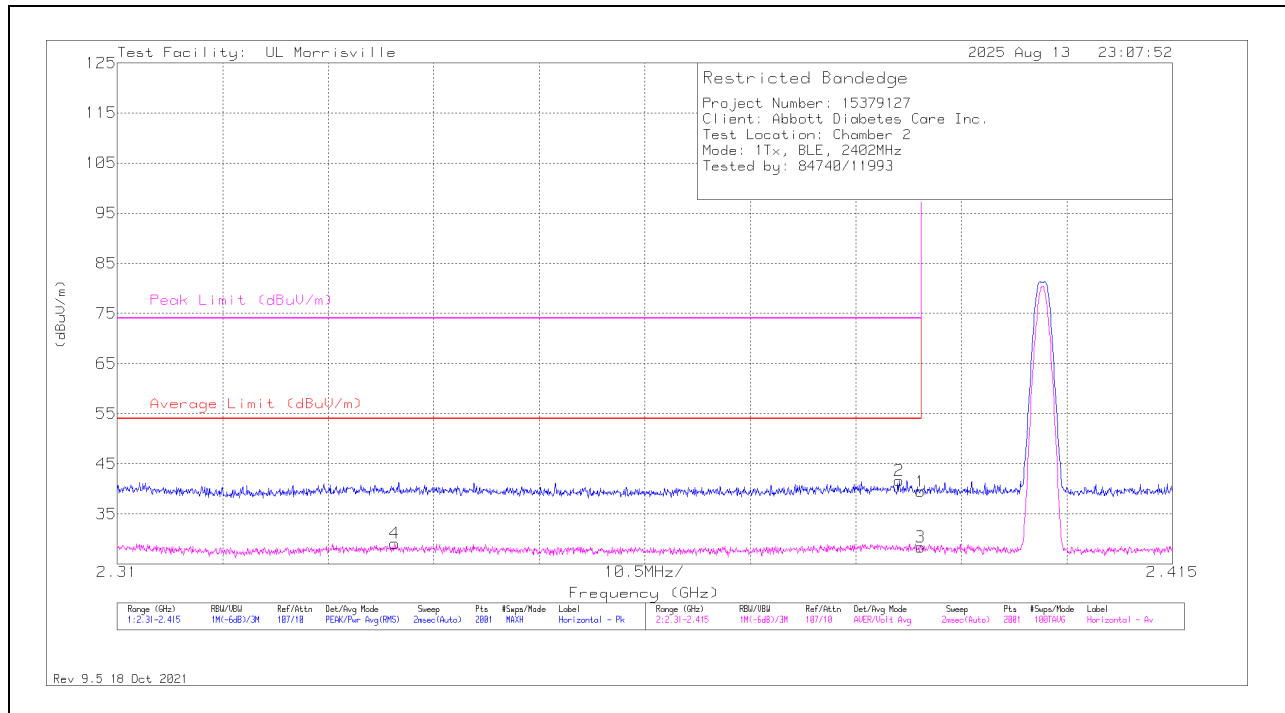
OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. BLE (1Mbps)

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	32.76	Pk	31.8	-25.1	39.46	-	-	74	-34.54	70	134	H
2	* ** 2.38781	34.81	Pk	31.8	-25	41.61	-	-	74	-32.39	70	134	H
3	* ** 2.38996	21.66	ADV	31.8	-25.1	28.36	54	-25.64	-	-	70	134	H
4	* ** 2.33762	22.09	ADV	31.7	-24.7	29.09	54	-24.91	-	-	70	134	H

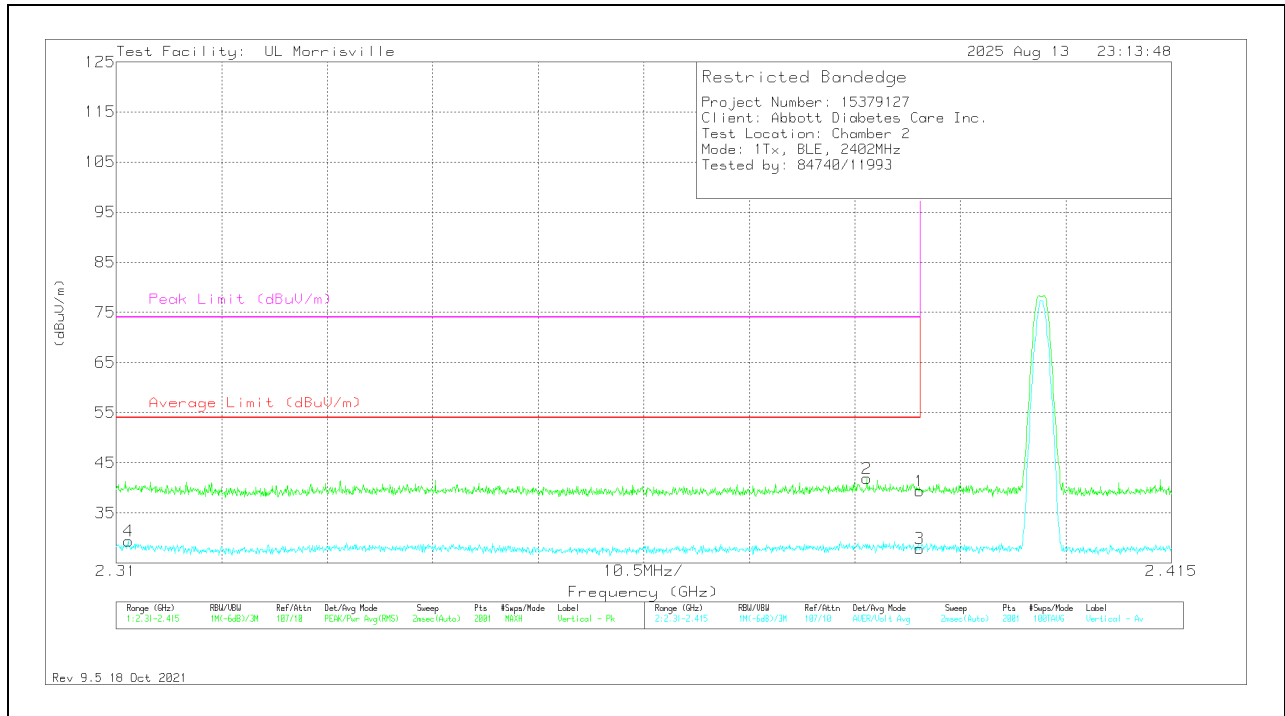
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38996	32.63	Pk	31.8	-25.1	39.33	-	-	74	-34.67	172	123	V
2	* ** 2.38471	34.93	Pk	31.8	-24.9	41.83	-	-	74	-32.17	172	123	V
3	* ** 2.38996	21.22	ADV	31.8	-25.1	27.92	54	-26.08	-	-	172	123	V
4	* ** 2.31121	22.02	ADV	31.8	-24.4	29.42	54	-24.58	-	-	172	123	V

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

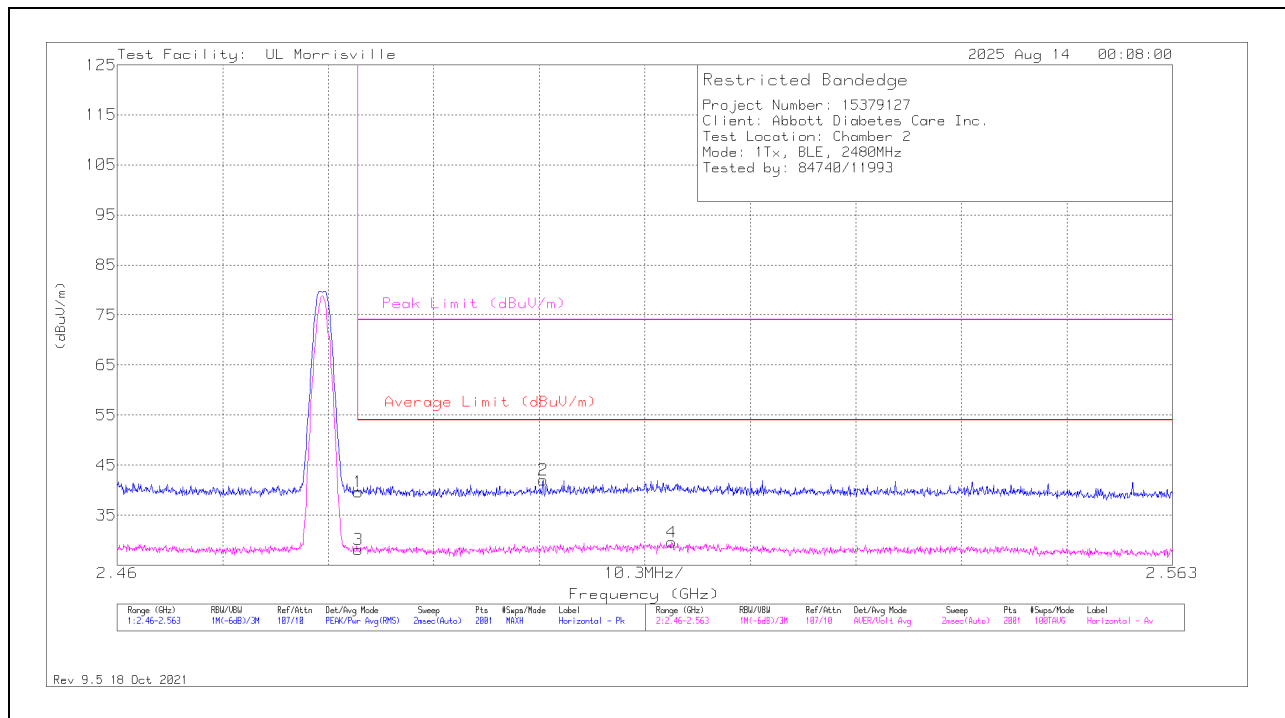
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	32.93	Pk	32.2	-25.5	39.63	-	-	74	-34.37	85	129	H
2	** 2.50156	35.51	Pk	32.3	-25.8	42.01	-	-	74	-31.99	85	129	H
3	* ** 2.48354	21.47	ADV	32.2	-25.5	28.17	54	-25.83	-	-	85	129	H
4	** 2.51413	22.67	ADV	32.4	-25.5	29.57	54	-24.43	-	-	85	129	H

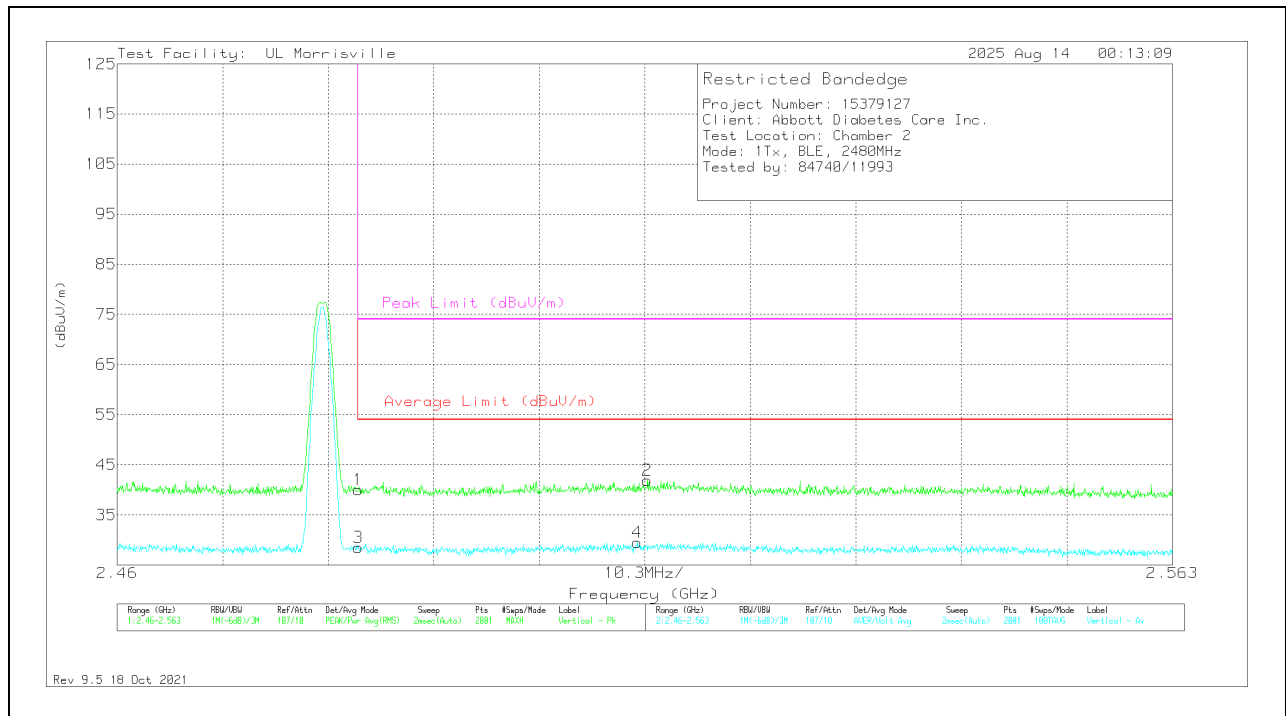
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.48354	33.29	Pk	32.2	-25.5	39.99	-	-	74	-34.01	179	134	V
2	** 2.51176	34.96	Pk	32.4	-25.5	41.86	-	-	74	-32.14	179	134	V
3	* ** 2.48354	21.83	ADV	32.2	-25.5	28.53	54	-25.47	-	-	179	134	V
4	** 2.51078	22.66	ADV	32.4	-25.6	29.46	54	-24.54	-	-	179	134	V

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

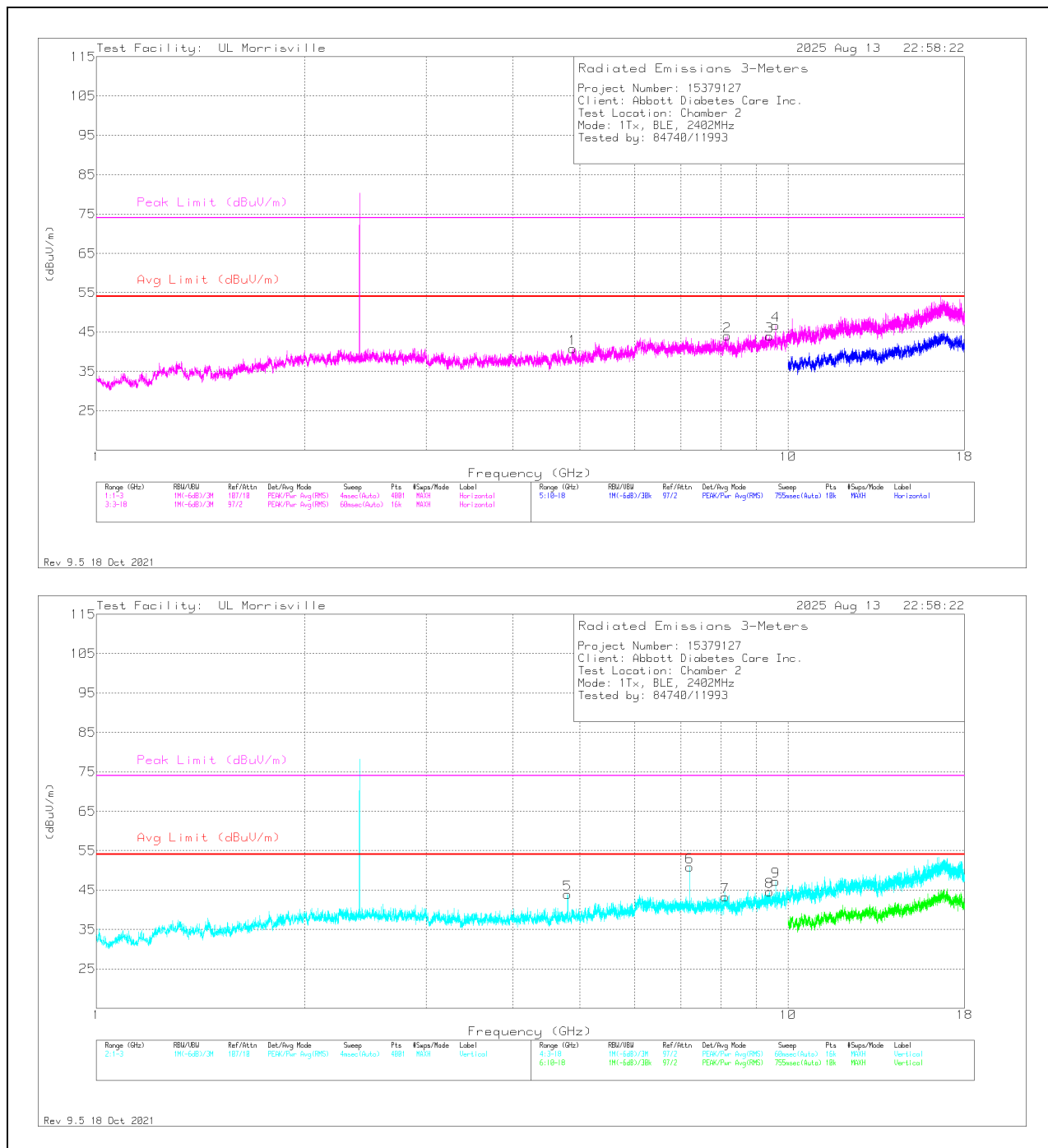
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



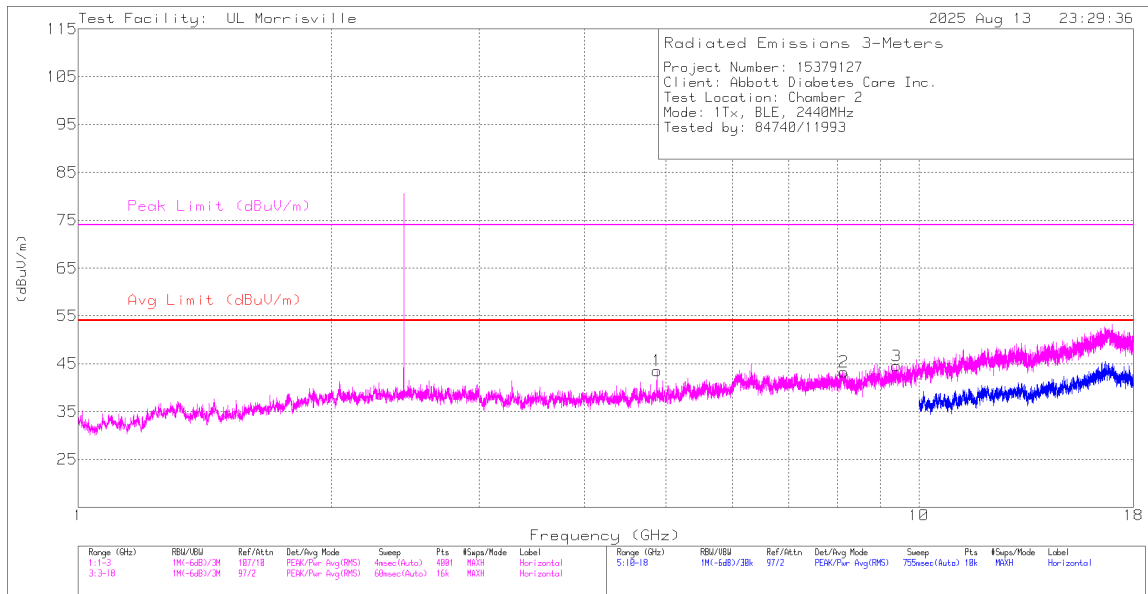
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	88761 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.88344	51.42	Pk	34	-44.6	40.82	54	-13.18	74	-33.18	0-360	200	H
2	* ** 8.17031	49.89	Pk	35.8	-41.7	43.99	54	-10.01	74	-30.01	0-360	200	H
3	* ** 9.40875	47.88	Pk	36.6	-40.5	43.98	54	-10.02	74	-30.02	0-360	101	H
5	* ** 4.80281	55	Pk	34	-45.1	43.9	54	-10.1	74	-30.1	0-360	101	V
7	* ** 8.12063	48.78	Pk	35.8	-41.3	43.28	54	-10.72	74	-30.72	0-360	200	V
8	* ** 9.40688	48.36	Pk	36.6	-40.4	44.56	54	-9.44	74	-29.44	0-360	200	V
6	7.20656	57.97	Pk	35.5	-42.6	50.87	-	-	-	-	0-360	101	V
4	9.6075	50.78	Pk	36.8	-40.9	46.68	-	-	-	-	0-360	200	H
9	9.6075	51.3	Pk	36.8	-40.9	47.2	-	-	-	-	0-360	101	V

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

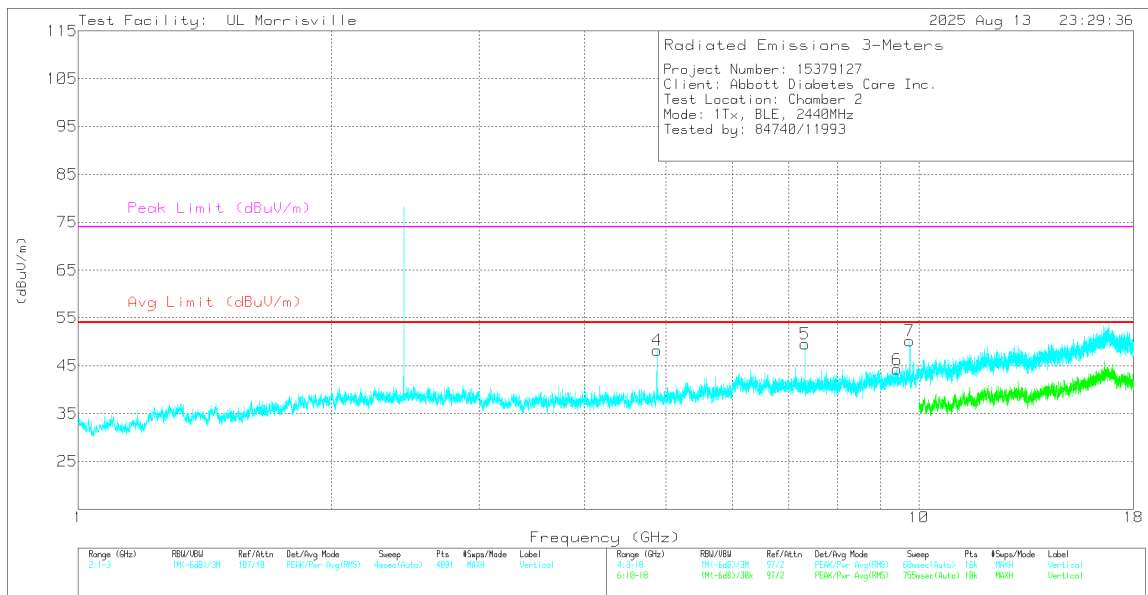
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

MID CHANNEL RESULTS



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Marker	Frequency (GHz)	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	* ** 4.88063	54.01	Pk	34	-44.5	43.51	54	-10.49	74	-30.49	0-360	101	H
2	* ** 8.14875	49.32	Pk	35.8	-41.8	43.32	54	-10.68	74	-30.68	0-360	101	H
3	* ** 9.40688	48.32	Pk	36.6	-40.4	44.52	54	-9.48	74	-29.48	0-360	199	H
4	* ** 4.88012	60.18	PK2	34	-44.5	49.68	-	-	74	-24.32	213	119	V
	* ** 4.87989	53.68	ADV	34	-44.4	43.28	54	-10.72	-	-	213	119	V
5	* ** 7.32079	59.57	PK2	35.6	-43.4	51.77	-	-	74	-22.23	33	101	V
	* ** 7.31946	52.35	ADV	35.6	-43.2	44.75	54	-9.25	-	-	33	101	V
6	* ** 9.42	49.15	Pk	36.6	-41.5	44.25	54	-9.75	74	-29.75	0-360	200	V
7	9.75938	54.78	Pk	36.8	-41.4	50.18	-	-	-	-	0-360	101	V

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

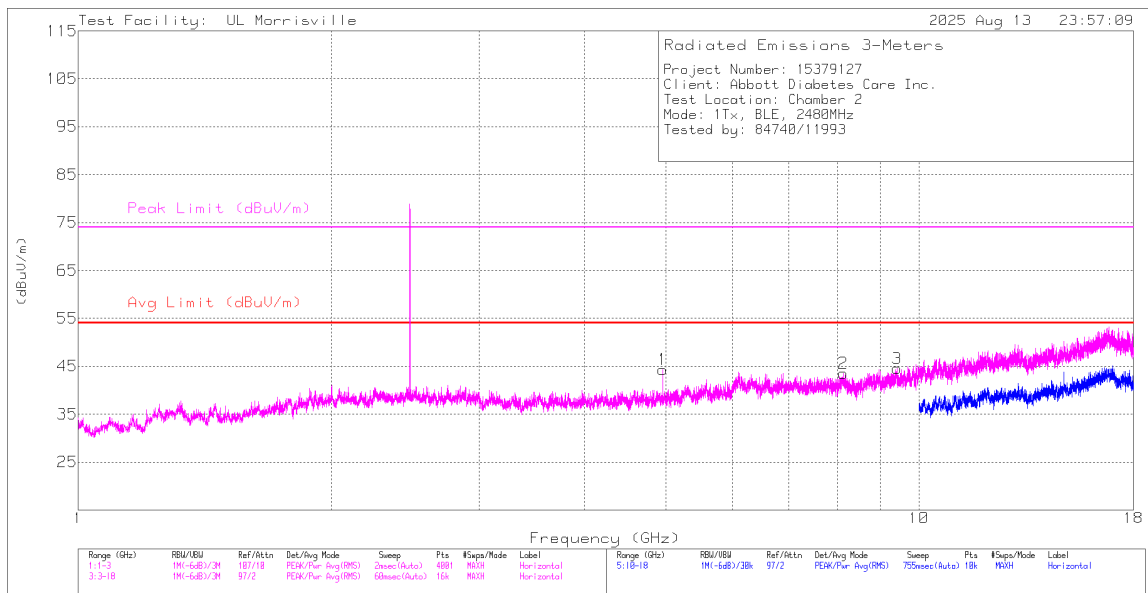
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

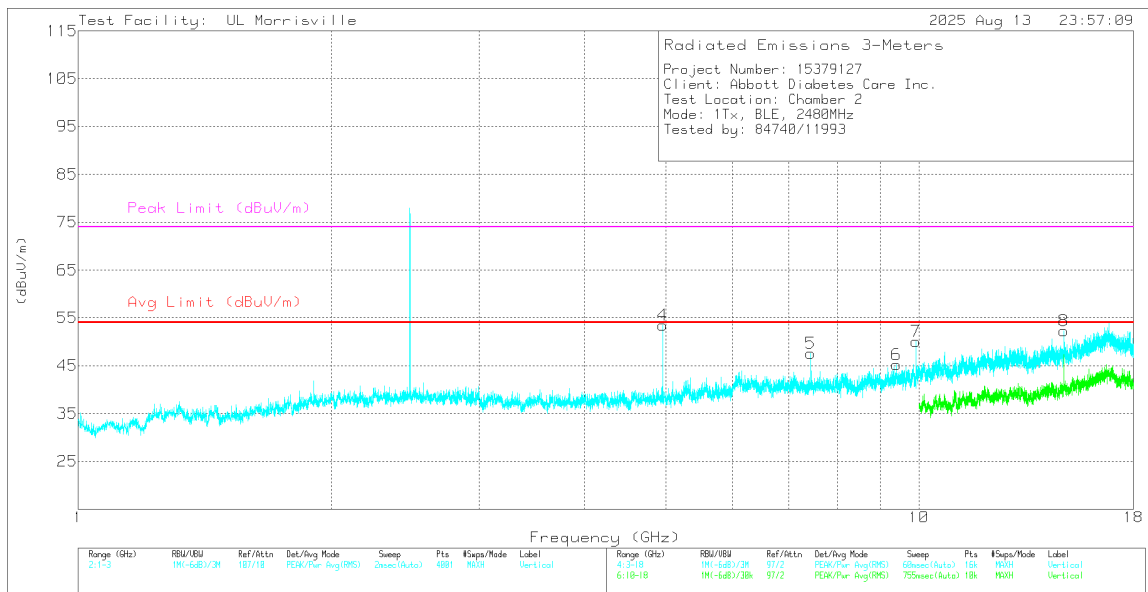
PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



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Marker	Frequency (GHz)	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	* ** 4.95938	55.68	Pk	33.9	-45.3	44.28	54	-9.72	74	-29.72	0-360	101	H
2	* ** 8.13281	49.82	Pk	35.8	-42.1	43.52	54	-10.48	74	-30.48	0-360	199	H
3	* ** 9.41906	49.42	Pk	36.6	-41.5	44.52	54	-9.48	74	-29.48	0-360	199	H
4	* ** 4.96056	65.41	PK2	33.9	-45.3	54.01	-	-	74	-19.99	214	116	V
	* ** 4.96012	60.82	ADV	33.9	-45.3	49.42	54	-4.58	-	-	214	116	V
5	* ** 7.43906	54.47	Pk	35.6	-42.5	47.57	54	-6.43	74	-26.43	0-360	101	V
6	* ** 9.40781	49.01	Pk	36.6	-40.4	45.21	54	-8.79	74	-28.79	0-360	101	V
7	9.91969	56.16	Pk	37.1	-43.2	50.06	-	-	74	-23.94	0-360	199	V
8	14.87906	50.67	Pk	39.7	-38.1	52.27	-	-	74	-21.73	0-360	199	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

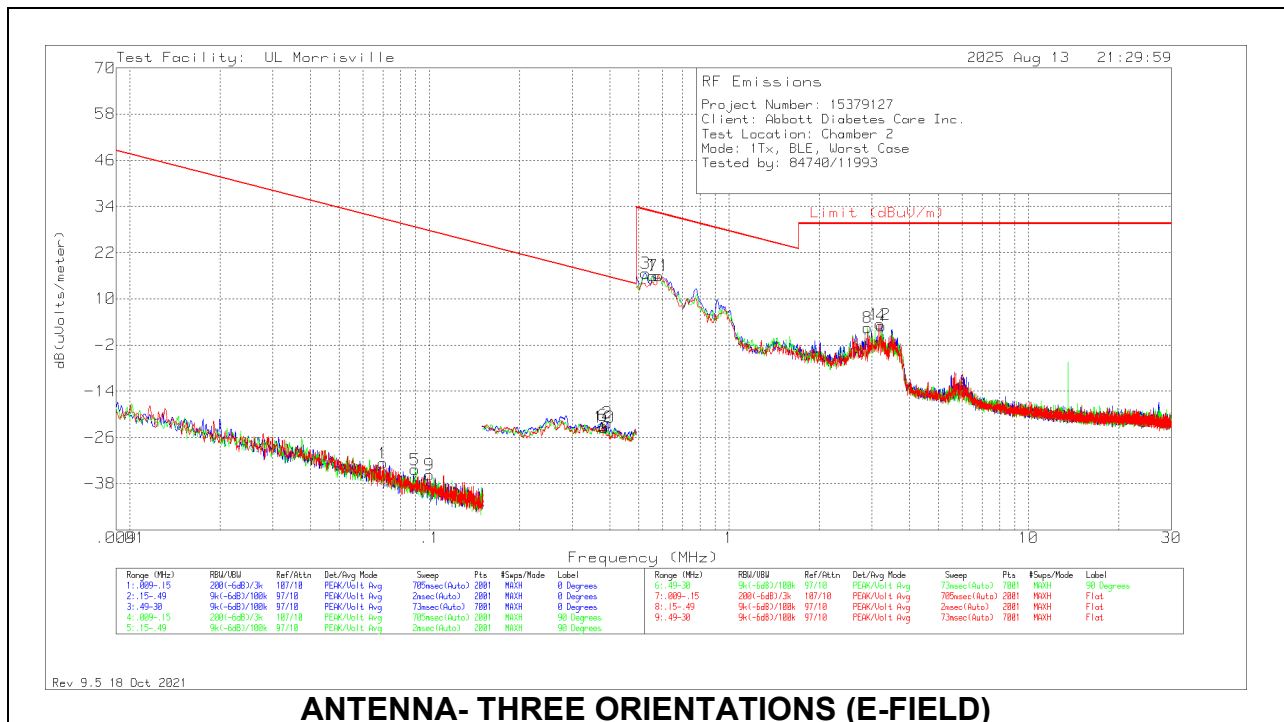
PK2 - Maximum Peak

ADV - Linear Voltage Average

10.3. WORST CASE BELOW 30MHz

Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{test distance} / \text{specification distance})$.

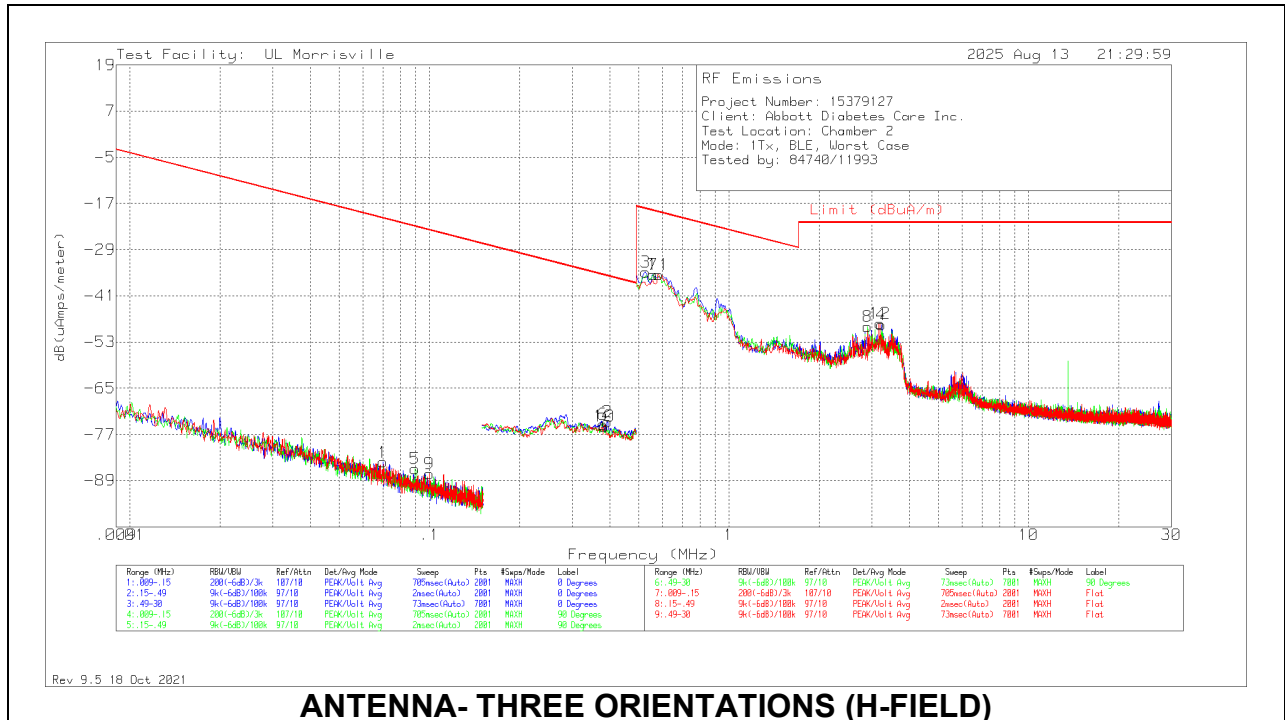
SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



ANTENNA- THREE ORIENTATIONS (E-FIELD)

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	QP/AV Limit (dBuV/m)	PK Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
1	.06999	35.89	Pk	11.3	.1	-80	-32.71	30.7	50.7	-63.41	0-360	0 degs
5	.08941	34.45	Pk	11.1	.1	-80	-34.35	28.58	48.58	-62.93	0-360	90 degs
9	.10009	33.13	Pk	11.1	.1	-80	-35.67	27.6	-	-63.27	0-360	Flat
6	.37933	46.05	Pk	11	.1	-80	-22.85	16.02	36.02	-38.87	0-360	90 degs
10	.38256	45.59	Pk	11	.1	-80	-23.31	15.95	35.95	-39.26	0-360	Flat
2	.39302	46.67	Pk	11	.1	-80	-22.23	15.72	35.72	-37.95	0-360	0 degs
3	.52794	45.59	Pk	11	.1	-40	16.69	33.15	-	-16.46	0-360	0 degs
7	.55746	44.88	Pk	11	.1	-40	15.98	32.68	-	-16.7	0-360	90 degs
11	.58275	44.96	Pk	11	.1	-40	16.06	32.29	-	-16.23	0-360	Flat
8	2.90577	31.11	Pk	11.1	.3	-40	2.51	29.54	-	-27.03	0-360	90 degs
12	3.19246	31.99	Pk	11.1	.3	-40	3.39	29.54	-	-26.15	0-360	Flat
4	3.22618	31.61	Pk	11.1	.3	-40	3.01	29.54	-	-26.53	0-360	0 degs

Pk - Peak detector

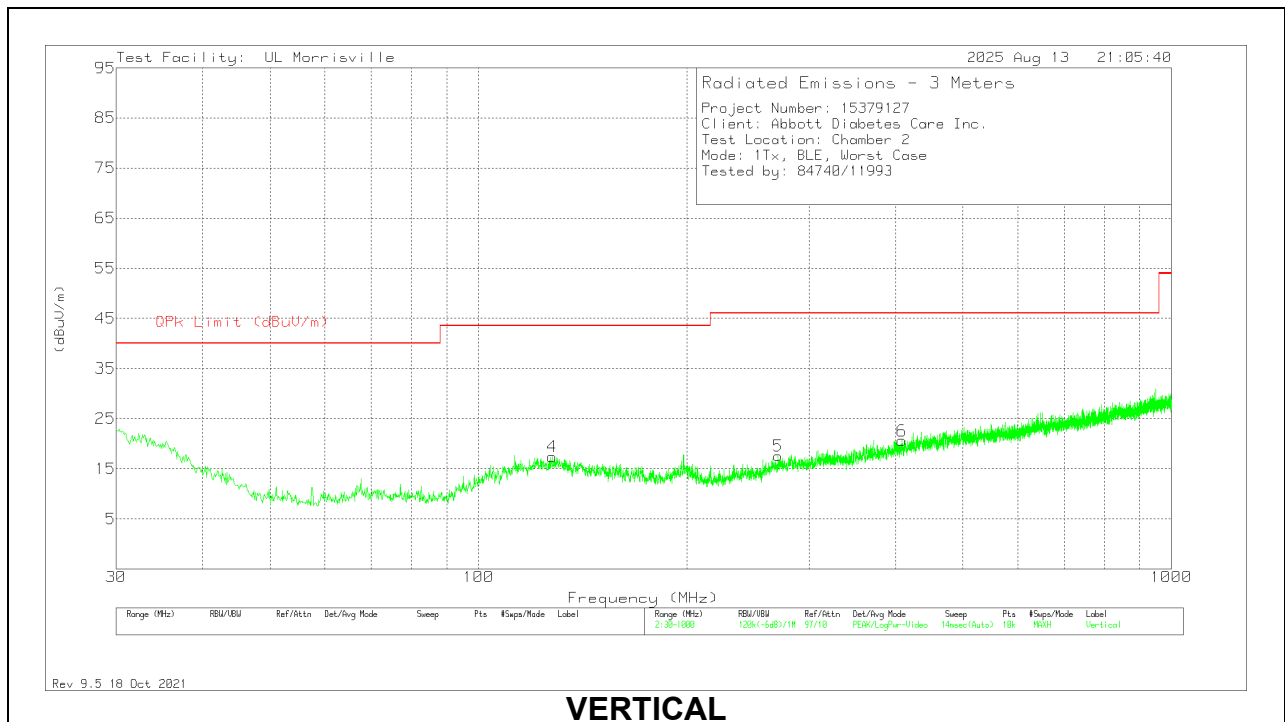
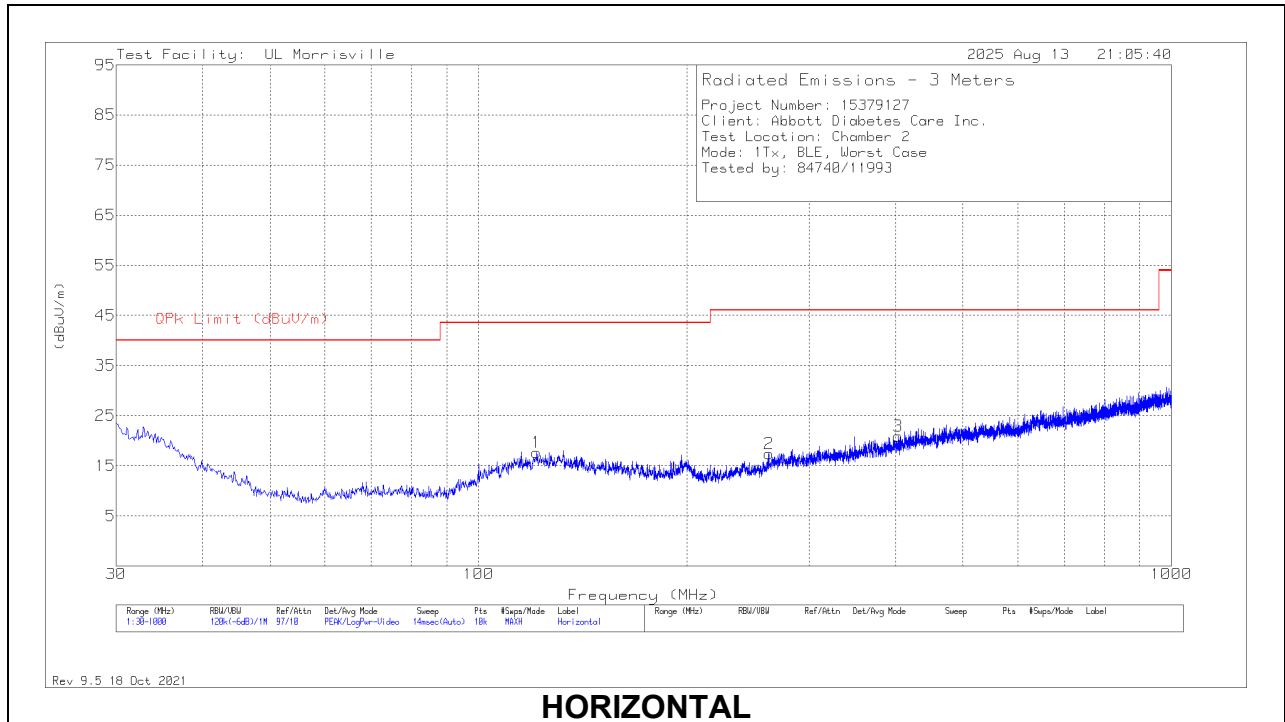


Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	ANT (dB/m)	Gain/Loss (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	QP/AV Limit (dBuA/m)	PK Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)	Loop Angle
1	.06999	35.89	Pk	-40.2	.1	-80	-84.21	-20.8	-0.8	-63.41	0-360	0 degs
5	.08941	34.45	Pk	-40.4	.1	-80	-85.85	-22.92	-2.92	-62.93	0-360	90 degs
9	.10009	33.13	Pk	-40.4	.1	-80	-87.17	-23.9	-	-63.27	0-360	Flat
6	.37933	46.05	Pk	-40.5	.1	-80	-74.35	-35.48	-15.48	-38.87	0-360	90 degs
10	.38256	45.59	Pk	-40.5	.1	-80	-74.81	-35.55	-15.55	-39.26	0-360	Flat
2	.39302	46.67	Pk	-40.5	.1	-80	-73.73	-35.78	-15.78	-37.95	0-360	0 degs
3	.52794	45.59	Pk	-40.5	.1	-40	-34.81	-18.35	-	-16.46	0-360	0 degs
7	.55746	44.88	Pk	-40.5	.1	-40	-35.52	-18.82	-	-16.7	0-360	90 degs
11	.58275	44.96	Pk	-40.5	.1	-40	-35.44	-19.21	-	-16.23	0-360	Flat
8	2.90577	31.11	Pk	-40.4	.3	-40	-48.99	-21.96	-	-27.03	0-360	90 degs
12	3.19246	31.99	Pk	-40.4	.3	-40	-48.11	-21.96	-	-26.15	0-360	Flat
4	3.22618	31.61	Pk	-40.4	.3	-40	-48.49	-21.96	-	-26.53	0-360	0 degs

Pk - Peak detector

10.4. WORST CASE BELOW 1 GHZ

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



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	159203 (dB/m)	Gain/Loss (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 121.374	27.76	Pk	20.2	-30.3	17.66	43.52	-25.86	0-360	99	H
2	* ** 262.412	27.75	Pk	19	-29.3	17.45	46.02	-28.57	0-360	399	H
3	* ** 403.547	27.51	Pk	22.3	-28.9	20.91	46.02	-25.11	0-360	399	H
4	* ** 127.679	27.78	Pk	20.3	-30.7	17.38	43.52	-26.14	0-360	299	V
5	* ** 270.657	27.58	Pk	19.8	-29.8	17.58	46.02	-28.44	0-360	101	V
6	* ** 408.494	26.49	Pk	22.5	-28.4	20.59	46.02	-25.43	0-360	299	V

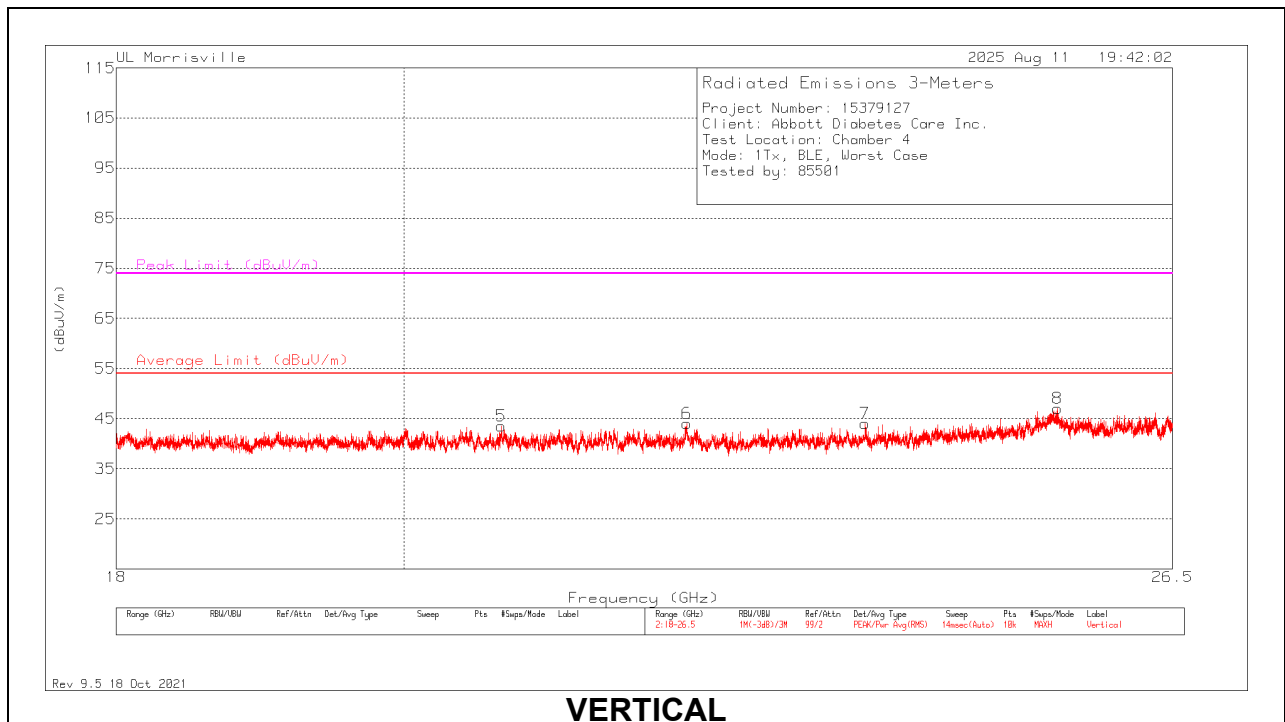
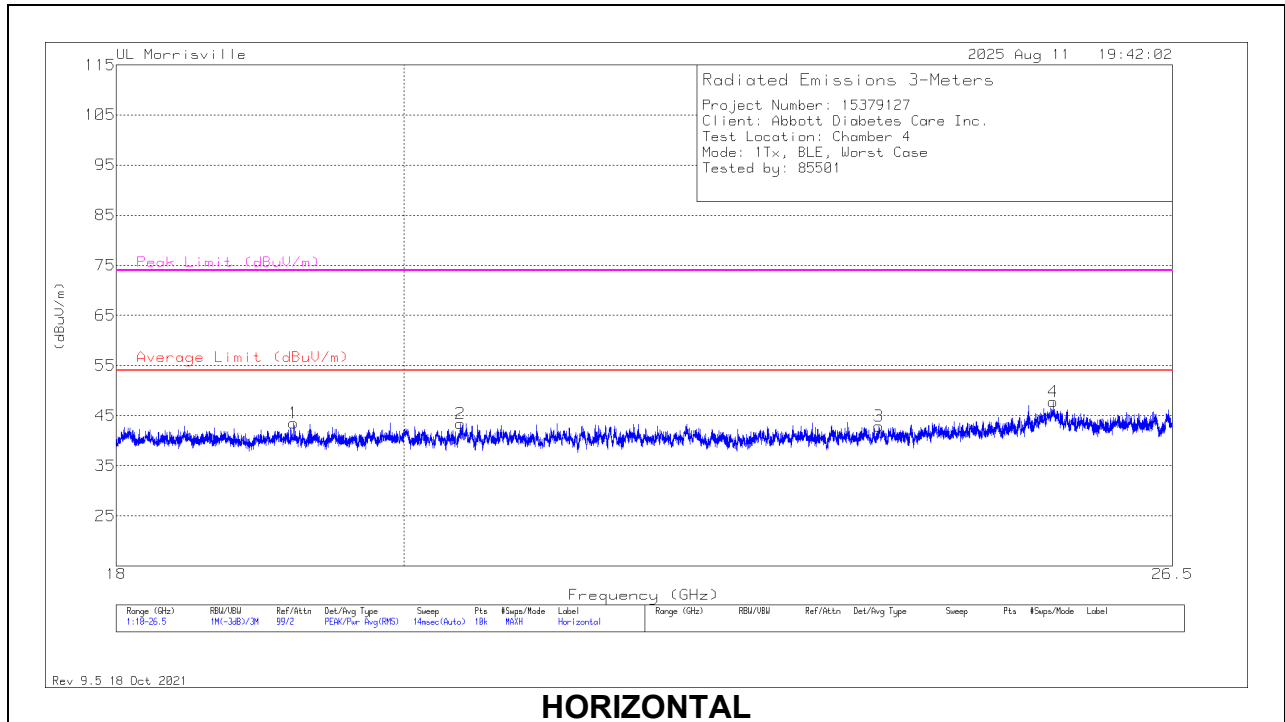
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

10.5. WORST CASE 18-26 GHZ

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



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	* ** 19.20967	50.57	Pk	32.6	-39.6	0	43.57	54	-10.43	74	-30.43	0-360	100	H
2	* ** 20.41594	49.82	Pk	32.8	-39.2	0	43.42	54	-10.58	74	-30.58	0-360	250	H
3	* ** 23.80098	46.71	Pk	34	-37.8	0	42.91	54	-11.09	74	-31.09	0-360	100	H
5	* ** 20.72707	49.59	Pk	32.7	-38.8	0	43.49	54	-10.51	74	-30.51	0-360	300	V
6	* ** 22.18157	48.42	Pk	33.4	-37.8	0	44.02	54	-9.98	74	-29.98	0-360	300	V
7	* ** 23.68112	47.71	Pk	33.9	-37.6	0	44.01	54	-9.99	74	-29.99	0-360	150	V
4	25.36854	45.33	Pk	34.1	-31.6	0	47.83	-	-	-	-	0-360	100	H
8	25.40764	45.09	Pk	34	-32.1	0	46.99	-	-	-	-	0-360	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 Pk - Peak detector

11. SETUP PHOTOS

Please refer to R15379127-EP1 for setup photos

END OF TEST REPORT