CERTIFICATION TEST REPORT

Report Number. : U-4791549163-FR1V2

Applicant	:	OSANG Healthcare Co., Ltd. 132, Anyangcheongdong-ro, dongan-gu, Anyang-si Gyeonggido South Korea 14040
Model	:	OG-SH01-GDM
FCC ID	:	WSX-OG-SH01-GDM
EUT Description	:	Blood Glucose/Blood β-Ketone Test meter
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
2025-02-20

Prepared by:
UL Korea, Ltd.
26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

Uiwang Test Site: UL Korea, Ltd. Uiwang Laboratory
42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea,

TEL: (031) 389-9603
FAX: (031) 462-8355

IAS ACCREDITED Testing Laboratory TL-1087

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	2025-02-13	Initial issue	Jaehyeok Bang
V2	2025-02-20	Updated to address TCB`s question	Jaehyeok Bang

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TABLE OF CONTENTS

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: OSANG Healthcare Co., Ltd.

EUT DESCRIPTION: Bluetooth LE

MODEL NUMBER: OG-SH01-ODM

SERIAL NUMBER: G01GD24I2000161 (CONDUCTED);
G01GD24I2000162 (RADIATED);

DATE TESTED: 2024-12-04 ~ 2024-12-30

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
47 CFR Part 15 Subpart C	Complies

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. 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 IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL KOREA LTD. By:

Changmin Kim
Senior Laboratory Engineer
UL Korea, Ltd.

Tested By:

Jaehyeok Bang
Laboratory Test Engineer
UL Korea, Ltd.

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2. TEST METHODOLOGY

1. FCC 47 CFR Part 2.
2. FCC 47 CFR Part 15.247
3. KDB 558074 D01 15.247 Meas Guidance v05r02.
4. KDB 662911 D01 v02r01
5. ANSI C63.10-2020.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 42, Obongsandan 1-ro, Uiwang-si, Gyeonggi-do, Republic of Korea. Line conducted emissions are measured only at the 218 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.

42, Obongsandan 1-ro
☒ Chamber 1
☒ Chamber 2

Used ISED Test Site Reg.(company number): 32001
CAB Identifier: KR0161

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-1087. The full scope of accreditation can be viewed at https://www.iasonline.org/wp-content/uploads/2022/05/TL-1087-Cert-New.pdf

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4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

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

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)
28.9 dBuV/m = 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB

AC Corrected Reading (dBuV) = Measured Voltage (dBuV) + Extension Cord Loss (dB) + Cable Loss (dB)
44.72 dBuV = 34.72 dBuV + 9.9 dB + 0.1 dB

4.3. MEASUREMENT UNCERTAINTY

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

Common Items

PARAMETER	UNCERTAINTY
RF Output Power	0.94 dB
Power Spectral Density	0.85 dB
Occupied Bandwidth	0.07 %
Conducted Spurious Emissions	1.21 dB

Uncertainty figures are valid to a confidence level of 95%, k=2

Chamber 1

PARAMETER	UNCERTAINTY
Radiated Disturbance, 30 MHz to 1 GHz	3.64 dB
Radiated Disturbance, 1 GHz to 18 GHz	5.38 dB
Radiated Disturbance, Above 18 GHz	6.23 dB

Uncertainty figures are valid to a confidence level of 95%, k=2

Chamber 2

PARAMETER	UNCERTAINTY
Radiated Disturbance, 9 kHz to 30 MHz	1.66 dB

Uncertainty figures are valid to a confidence level of 95%, k=2

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4.4. DECISION RULES

Decision rule for statement(s) of conformity is based on Clause 4.3.3 in IEC Guide 115:2023. Measurement Uncertainty is not applied when providing statements of conformity in accordance with IEC Guide 115:2023, 4.3.3

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a Bluetooth LE(1M)
This test report addresses the DTS (BLE) operational mode.

5.2. MAXIMUM OUTPUT POWER

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

Frequency Range[MHz]	Mode	Detector	Output Power [dBm]	Output Power [mW]
2 402 ~ 2 480	1 Mbps (255 pkt)	Peak	-3.30	0.47
		Average	-3.43	0.45

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5.3. DESCRIPTION OF AVAILABLE ANTENNAS

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

The internal antenna was Permanently attached.
Therefore this E.U.T Complies with the requirement of §15.203.

The radio utilizes a internal antenna, with a maximum gain of:

Freq. [MHz]	ANT Gain [dBi]
2 400 – 2 483.5	2.36

5.4. WORST-CASE CONFIGURATION AND MODE

The fundamentals of the EUT were investigated in three orthogonal orientations X, Y and Z.
It was determined that below table's orientation was the worst-case orientation.
Mode Worst-case Axis

Mode	Worst-case Axis		
	X	Y	Z
BLE 1 M	O	-	-

Power verification

The Output Power of all data rate are all investigated, the 1 Mbps(255 pkt) power is the worst case for symbol rate. All tests were performed in these one modes.

Symbol Rate [Ms/s]	Mode	Freq. [MHz]	Conducted Burst Avg [dBm]
1	1 Mbps 37 pkt	2 402	-3.30
		2 440	-3.83
		2 480	-4.01
	1 Mbps 255 pkt	2 402	-3.30
		2 440	-3.82
		2 480	-3.99

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
-	-	-	-	-

I/O CABLE

I/O Cable List						
Cable No.	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
-	-	-	-	-	-	-

TEST SETUP

The EUT is a stand-alone unit during the tests.
Test software exercised the EUT to enable BLE mode.

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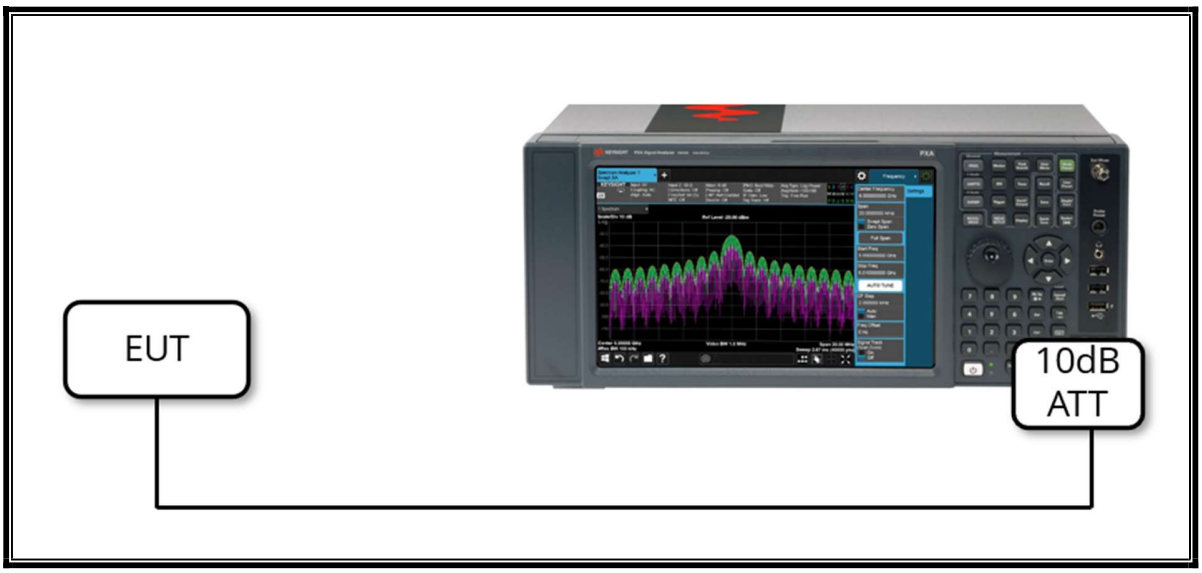
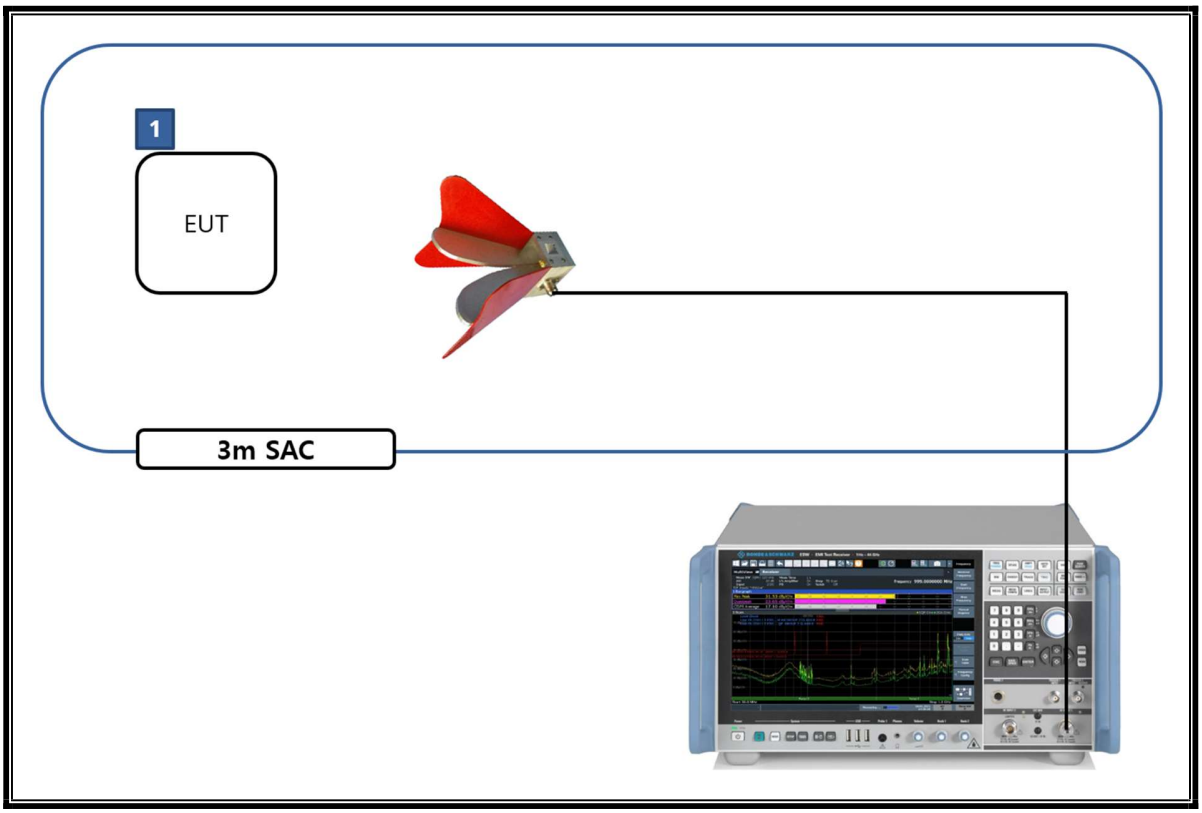
SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



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6. MEASUREMENT METHOD

6 dB BW : ANSI C63.10-2020, Section 11.8.1 Option 1

OUTPUT POWER : ANSI C63.10-2020, Section 11.9.1.1 RBW ≥ DTS bandwidth

POWER SPECTRAL DENSITY : ANSI C63.10-2020, Section 11.10.2 Method PKPSD (peak PSD)

Out-of-band Emissions (Conducted) : ANSI C63.10-2020, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Non-restricted Bands: ANSI C63.10-2020, Section 11.11 Emissions in nonrestricted frequency bands

Out-of-band Emissions in Restricted Bands : ANSI C63.10-2020, Section 11.12 Emissions in restricted frequency bands

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7. TEST AND MEASUREMENT EQUIPMENT

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

Description	Manufacturer	Model	Identifier	Cal. Due	Next Cal. Due
Spectrum Analyzer	Rohde & Schwarz	N9030B	MY57143717	2024-07-23	2025-07-23
Signal Generator	Rohde & Schwarz	SMB100A	184060	2024-07-18	2025-07-18
Signal Generator	Rohde & Schwarz	SMB100B	103196	2024-07-18	2025-07-18
Attenuator	Centric RF	C040-10	N/A	2024-01-11	2025-01-11
EMI test Receiver	Rohde & Schwarz	ESW44	103350	2024-04-08	2025-04-08
EMI test Receiver	Rohde & Schwarz	ESW44	103313	2024-01-29	2025-01-29
Power Sensor	Rohde & Schwarz	NRP8S	104521	2024-07-25	2025-07-25
Loop Antenna	TESEQ	HLA6121	65111	2024-08-01	2025-08-01
TRILOG BROADBAND ANTENNA	Schwarzbeck	VULB9163	01670	2023-10-17	2025-10-17
Amplifier	EXYNOD	ELNA03-40D	631509	2024-07-18	2025-07-18
Double-Ridged Guide Antenna	ETS Lindgren	3117	00261223	2024-09-24	2025-09-24
Amplifier	BNZ	BZR-01001800-231040-181515	31049	2024-07-18	2025-07-18
High Pass Filter	Micro-Tronics	HPM17543	021	2024-07-18	2025-07-18
High Pass Filter	Micro-Tronics	HPS17542	020	2024-07-18	2025-07-18
DOUBLE-RIDGED WAVEGUIDE HORN ANTENNA	ETS LINDGREN	3116C	00261440	2024-09-20	2025-09-20
Amplifier	ETS LINDGREN	3116C-PA	00261440	2024-09-20	2025-09-20
Digital Multimeter	Fluke Corporation	17B+	51260820WS	2024-07-18	2025-07-18
Humidity/Baro/Temp DATA RECORDER	Lutron	MHB-382SD	AL.92208	2024-07-23	2025-07-23
Humidity/Baro/Temp DATA RECORDER	Lutron	MHB-382SD	AM.00227	2024-01-11	2025-01-11
Humidity/Baro/Temp DATA RECORDER	Lutron	MHB-382SD	AM.00223	2024-01-11	2025-01-11

Measurement Software			
Description	**Manufacturer**	**Model**	**Version**
Radiated software	UL	UL EMC	Ver 9.5

8. TEST RESULTS SUMMARY

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Status Note 1
15.247 (a)(2)	Occupied Bandwidth (6dB & 99 % BW)	> 500kHz	Conducted	C
2.1051, 15.247(d)	Band Edge / Conducted Spurious Emission	-20 dBc		C
15.247 (b)(3)	TX Conducted Output Power	< 30 dBm		C
15.247(e)	PSD	< 8 dBm/3kHz		C
15.207(a)	AC Power Line conducted emissions	Section 11	Power Line Conducted	NA
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m(AV)	Radiated	C

Note 1: **C**=Comply **NC**=Not Comply **NT**=Not Tested **NA**=Not Applicable
Note 2: For radiated emission tests below 30 MHz were performed on semi-anechoic chamber which is correlated with OATS.
Note 3: This test item was performed in three orthogonal EUT positions and the worst case data was reported.
Note 4: This product is a battery-operated device.

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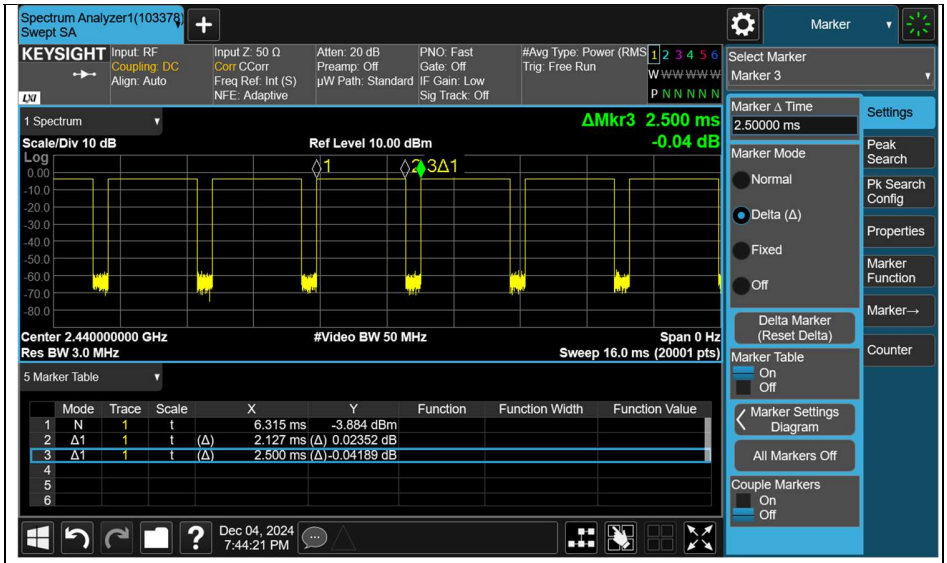
9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

Mode	On time [msec]	Period [msec]	Duty cycle x [Linear]	Duty Cycle [%]	Duty Cycle Correction Factor [dB]	1/T Minimum VBW [kHz]
1 Mbps [255 pkt]	2.127	2.500	0.851	85.08	0.70	0.470



1 Mbps (255 pkt)

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9.2. 6 dB BANDWIDTH & 99% BANDWIDTH

LIMITS

FCC §15.247 (a)(2)

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

Occupied Bandwidth:
None; for reporting purposes only.

RESULTS

9.2.1. Test data

Mode	Channel	Frequency [MHz]	6 dB Bandwidth [kHz]	Minimum Limit [kHz]
1 Mbps (255pkt)	0	2 402	715.6	500.0
	19	2 440	714.1	
	39	2 480	716.1	

Mode	Channel	Frequency [MHz]	99% Bandwidth [kHz]	Minimum Limit [kHz]
1 Mbps (255pkt)	0	2 402	1.076	N/A
	19	2 440	1.078	
	39	2 480	1.075	

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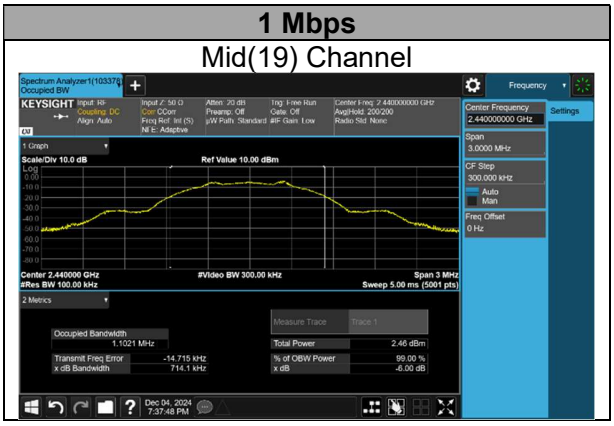
9.2.2. 6 dB BANDWIDTH PLOTS

1 Mbps

Low(0) Channel

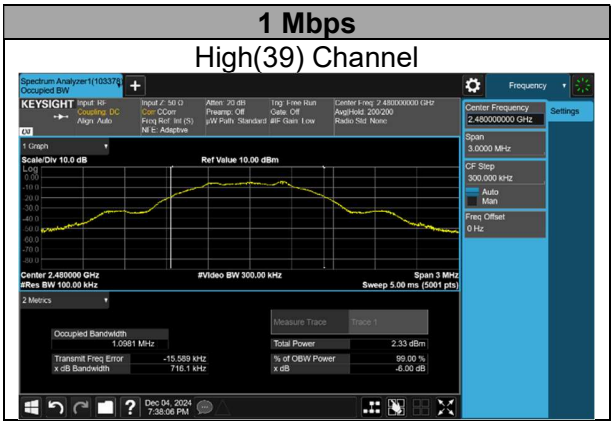
1 Mbps

Mid(19) Channel



1 Mbps

High(39) Channel



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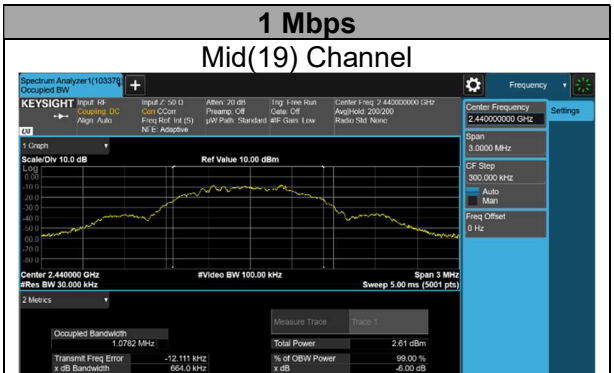
9.2.3. 99% BANDWIDTH PLOTS

1 Mbps

Low(0) Channel

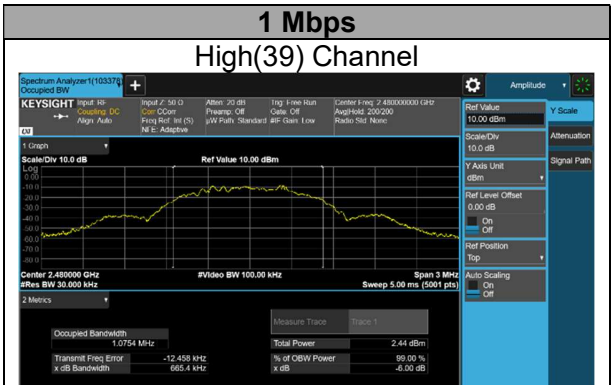
1 Mbps

Mid(19) Channel



1 Mbps

High(39) Channel



9.3. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

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

TEST PROCEDURE

Peak power is measured using ANSI C63.10(2013) under section 11.9.1.1 utilizing spectrum analyzer(RBW ≧ DTS bandwidth).

RESULTS

9.3.1. PEAK POWER TEST DATA

Mode	Channel	Frequency [MHz]	Peak Output Power [dBm]	Limit [dBm]	Margin [dB]
1 Mbps (255 pkt)	0	2 402	**-3.30**	30.00	**33.30**
	19	2 440	-3.82		33.82
	39	2 480	-3.99		33.99

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9.3.2. PEAK POWER PLOTS

1 Mbps

Low(0) Channel

1 Mbps

Mid(19) Channel

1 Mbps

High(39) Channel

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9.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Measurements perform using a wideband RF frame average power sensor.
The cable assembly insertion loss and duty cycle correction factor were entered as an offset in the power meter to allow for direct reading of power.

RESULTS

9.4.1. AVERAGE POWER TEST DATA

Mode	Channel	Frequency [MHz]	Average Output Power [dBm]	Average Output Power [mW]
1 Mbps (255 pkt)	0	2 402	**-3.43**	**0.45**
	19	2 440	-3.95	0.40
	39	2 480	-4.13	0.39

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9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

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.

TEST PROCEDURE

ANSI C63.10-2020, Section 11.10.2 Method PKPSD (peak PSD)

RESULTS

9.5.1. Test data

Mode	Channel	Frequency [MHz]	PSD [dBm/3kHz]	Limit [dBm/3kHz]	Margin [dB]
1 Mbps (255pkt)	0	2 402	**-20.20**	8.00	**28.20**
	19	2 440	-20.60		28.60
	39	2 480	-20.88		28.88

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9.5.2. PSD TEST PLOTS

1 Mbps

Low(0) Channel

1 Mbps

Mid(19) Channel

1 Mbps

High(39) Channel

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9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

Output power was measured based on the use of a peak measurement.
Therefore, spurious emissions are required to be 20 dBc.

RESULTS

See the following pages

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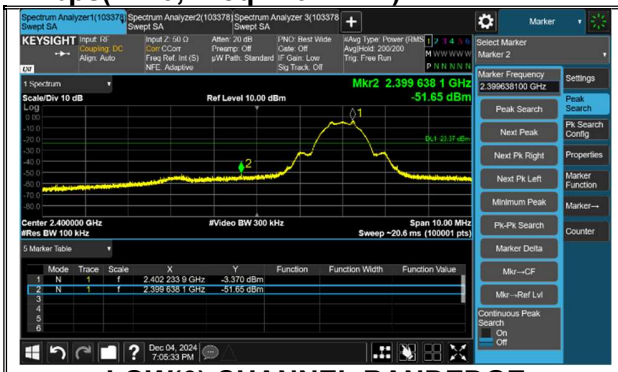
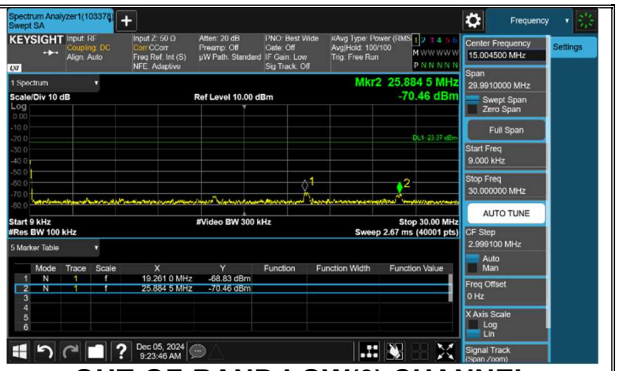
9.6.1. Test plot

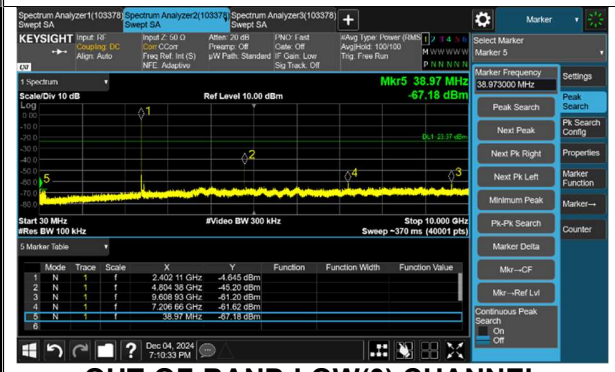
1 Mbps(CH0, Freq 2402 MHz)



LOW(0) CHANNEL BANDEDGE



OUT-OF-BAND LOW(0) CHANNEL (9 kHz ~ 30 MHz)



OUT-OF-BAND LOW(0) CHANNEL (30 MHz ~ 10 GHz)

OUT-OF-BAND LOW(0) CHANNEL (10 GHz ~ 26.5 GHz)

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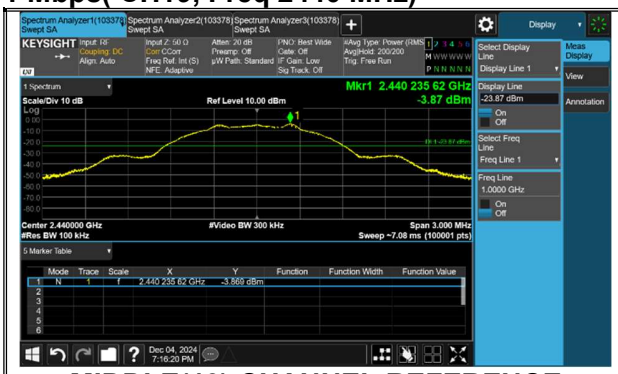
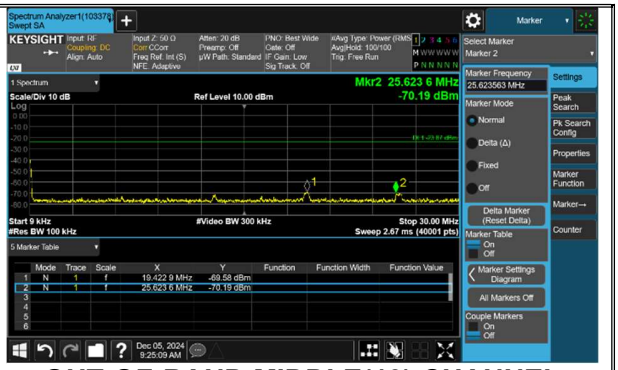
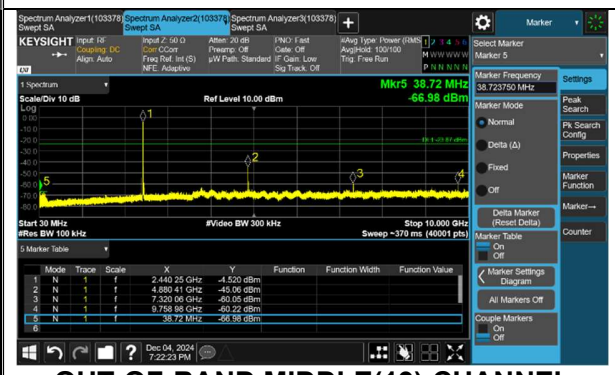
1 Mbps(CH19, Freq 2440 MHz)



MIDDLE(19) CHANNEL REFERENCE



OUT-OF-BAND MIDDLE(19) CHANNEL (9 kHz ~ 30 MHz)



OUT-OF-BAND MIDDLE(19) CHANNEL (30 MHz ~ 10 GHz)

OUT-OF-BAND MIDDLE(19) CHANNEL (10 GHz ~ 26.5 GHz)

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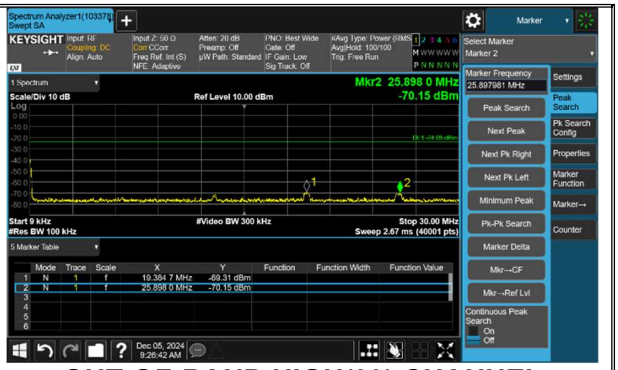
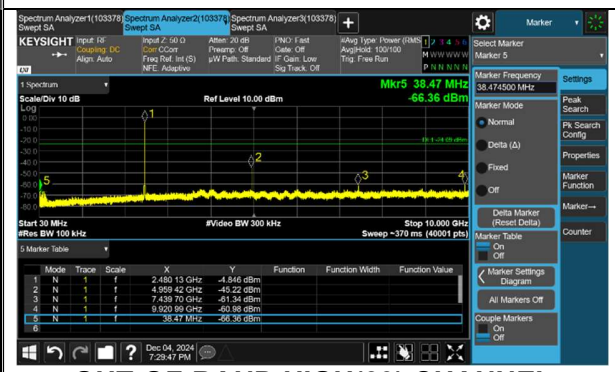
1 Mbps(CH39, Freq 2480 MHz)

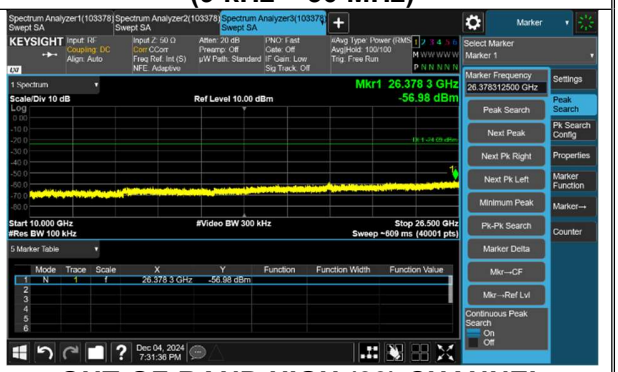
HIGH(39) CHANNEL BANDEDGE



OUT-OF-BAND HIGH(39) CHANNEL (9 kHz ~ 30 MHz)



OUT-OF-BAND HIGH(39) CHANNEL (30 MHz ~ 10 GHz)



OUT-OF-BAND HIGH (39) CHANNEL (10 GHz ~ 26.5 GHz)

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10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC § 15.247(d), FCC §15.205, FCC § 15.209

Frequency (MHz)	FCC Limit (uV/m)	Measurement Distance (m)
0.009 – 0.490	2 400 / F (kHz)	300
0.490 – 1.705	24 000 / F (kHz)	30
1.705 – 30.0	30	30

Frequency (MHz)	FCC Limit (uV/m)	Measurement Distance (m)
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

FCC § 15.205(a): Restricted band of operation

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~ 12.52025	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.57675 ~ 12.57725	156.52475 ~	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	13.36 ~ 13.41	156.52525	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	16.42 ~ 16.423	156.7 ~ 156.9	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.69475 ~ 16.69525	162.0125 ~ 167.17	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.80425 ~ 16.80475	167.72 ~ 173.2	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	25.5 ~ 25.67	240 ~ 285	2655 ~ 2900		
8.291 ~ 8.294	37.5 ~ 38.25	322 ~ 335.4	3260 ~ 3267		
8.362 ~ 8.366	73 ~ 74.6	399.90 ~ 410	3332 ~ 3339		
8.37625 ~ 8.38675	74.8 ~ 75.2	608 ~ 614	3345.8 ~ 3358		
		960 ~ 1240	3600 ~ 4400		

FCC Part 15.205(b) : The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

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TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for 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. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. (Restricted band-edge, Final detection of spurious harmonic emissions)
Duty cycle factor = 10 log (1/x). For this sample: For 1 Mbps, DCF = 10log(1/0.851)=0.70 dB.

Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 kHz for peak measurements.

The spectrum from 1 GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9kHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

Although these tests were performed other than open field test site, adequate comparison measurements were confirmed against 30 m open are test site.
Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the one of tests made in an open field based on KDB 414788.

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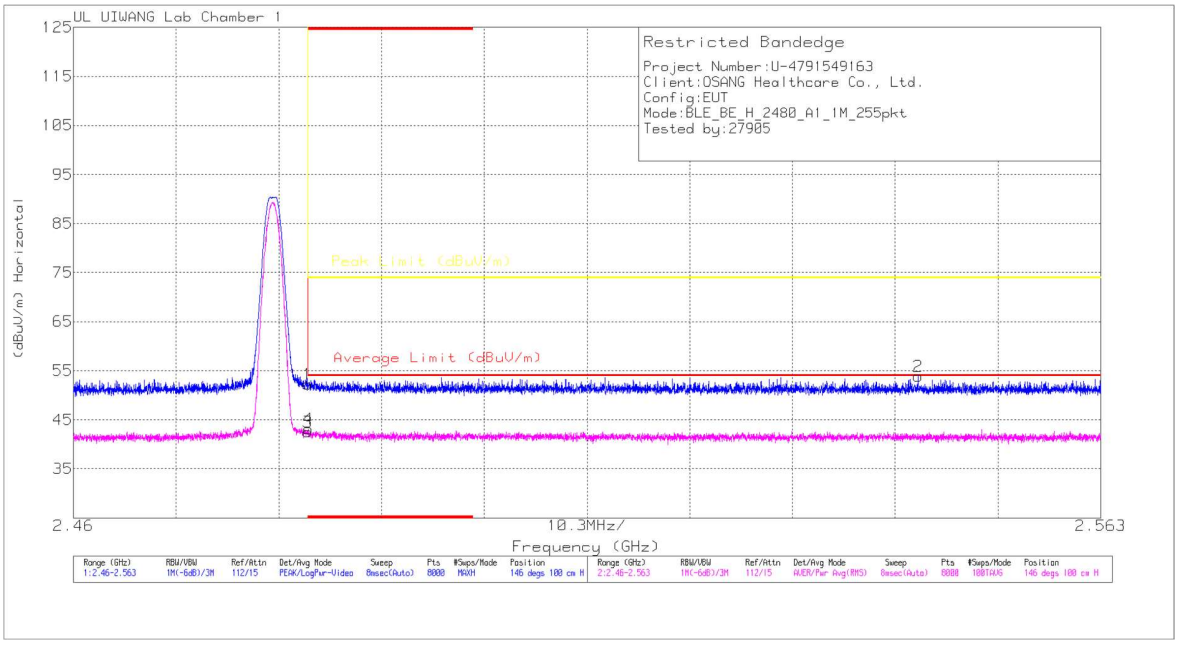
10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. TX ABOVE 1 GHz BLUETOOTH LE 1 Mbps

BANDEDGE (WORST CASE: 2 480 MHz)

HORIZONTAL RESULT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1-18G_3117_240924(dB/m)	FB1_PL_1-18G_10dB_240718(dB)	CH1_CL_1-40G_Thru_241104 (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	*2.4835	43.45	Pk	32.1	-30.5	7.2	0	52.25	-	-	74	-21.75	146	100	H
2	2.54468	45.02	Pk	32.2	-30.5	7.2	0	53.92	-	-	74	-20.08	146	100	H
3	*2.4835	32.98	RMS	32.1	-30.5	7.2	0.7	42.48	54	-11.52	-	-	146	100	H
4	*2.48356	33.64	RMS	32.1	-30.5	7.2	0.7	43.14	54	-10.86	-	-	146	100	H

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

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BANDEDGE TEST DATA

Freq. [MHz]	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	* 2.39	40.95	Pk	31.90	-30.50	6.90	0.00	49.25	-	-	74.00	-24.75	63	100	H
	* 2.38158	44.23	Pk	31.90	-30.50	6.90	0.00	52.53	-	-	74.00	-21.47	63	100	H
	* 2.39	31.59	RMS	31.90	-30.50	6.90	0.70	40.59	54.00	-13.41	-	-	63	100	H
	* 2.36547	32.76	RMS	31.90	-30.50	6.90	0.70	41.76	54.00	-12.24	-	-	63	100	H
	* 2.39	41.06	Pk	31.90	-30.50	6.90	0.00	49.36	-	-	74.00	-24.64	99	397	V
	* 2.33351	44.74	Pk	31.80	-30.50	6.90	0.00	52.94	-	-	74.00	-21.06	99	397	V
	* 2.39	31.03	RMS	31.90	-30.50	6.90	0.70	40.03	54.00	-13.97	-	-	99	397	V
	* 2.38377	33.09	RMS	31.90	-30.50	6.90	0.70	42.09	54.00	-11.91	-	-	99	397	V
2480	* 2.48350	43.45	Pk	32.10	-30.50	7.20	0.00	52.25	-	-	74.00	-21.75	146	100	H
	2.54468	45.02	Pk	32.20	-30.50	7.20	0.00	53.92	-	-	74.00	**-20.08**	146	100	H
	* 2.48350	32.98	RMS	32.10	-30.50	7.20	0.70	42.48	54.00	-11.52	-	-	146	100	H
	* 2.48356	33.64	RMS	32.10	-30.50	7.20	0.70	43.14	54.00	**-10.86**	-	-	146	100	H
	* 2.48350	41.65	Pk	32.10	-30.50	7.20	0.00	50.45	-	-	74.00	-23.55	107	367	V
	2.51966	44.98	Pk	32.20	-30.50	7.20	0.00	53.88	-	-	74.00	-20.12	107	367	V
	* 2.48350	32.44	RMS	32.10	-30.50	7.20	0.70	41.94	54.00	-12.06	-	-	107	367	V
	* 2.48599	33.33	RMS	32.20	-30.50	7.20	0.70	42.93	54.00	-11.07	-	-	107	367	V

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

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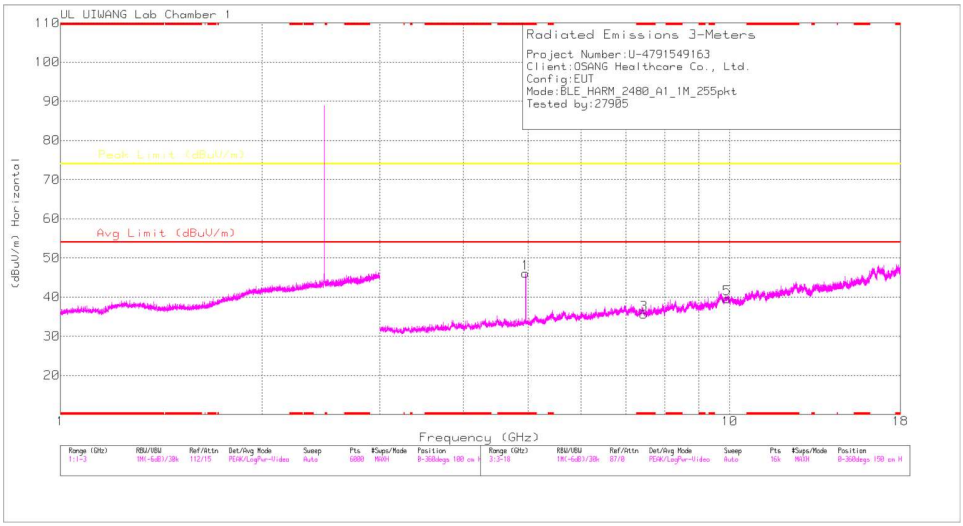
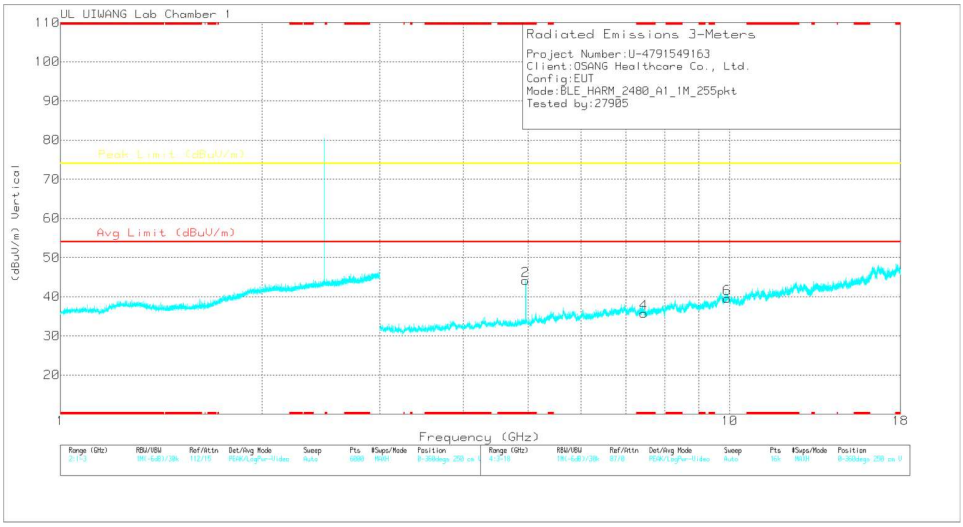
HARMONICS AND SPURIOUS EMISSIONS(WORST CASE: 2480 MHz)



HORIZONTAL



VERTICAL

Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	CH1_AF_1-18G_3117_240924(dB/m)	FB1_PL_1-18G_3G HP_240718(dB)	CH1_CL_1-40G_Thru_2411 04(dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96048	49.45	PK2	33.9	-39.6	9.9	0	53.65	-	-	74	-20.35	20	102	H
* 4.96038	43.91	MAv1	33.9	-39.6	9.9	.7	48.81	54	-5.19	-	-	20	102	H
* 4.95943	46.91	PK2	33.9	-39.6	9.9	0	51.11	-	-	74	-22.89	235	276	V
* 4.95955	40.2	MAv1	33.9	-39.6	9.9	.7	45.1	54	-8.9	-	-	235	276	V
* 7.44308	37.71	PK2	35.6	-39.1	12.2	0	46.41	-	-	74	-27.59	0	100	H
* 7.43922	37.38	PK2	35.6	-39.1	12.3	0	46.18	-	-	74	-27.82	0	100	V
9.92076	36.52	PK2	36.9	-37.8	14.5	0	50.12	-	-	74	-23.88	0	100	H
9.92035	36.63	PK2	36.9	-37.8	14.5	0	50.23	-	-	74	-23.77	0	100	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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HARMONICS AND SPURIOUS EMISSIONS TEST DATA

Freq. [MHz]	Frequency [GHz]	Reading [dBuV]	Detector Mode	ANT Factor [dB/m]	FB Gain [dB]	Loss [dB]	DC Corr [dB]	Result [dBuV/m]	AV Limit [dBuV/m]	AV Margin [dB]	PK Limit [dBuV/m]	PK Margin [dB]	Azimuth [Degs]	Height [cm]	Polarity
2402	* 4.80449	47.99	PK2	33.90	-39.40	9.60	0.00	52.09	-	-	74.00	-21.91	12	101	H
	* 4.80432	41.77	MAv1	33.90	-39.40	9.60	0.70	46.57	54.00	-7.43	-	-	12	101	H
	* 4.80444	46.22	PK2	33.90	-39.40	9.60	0.00	50.32	-	-	74.00	-23.68	234	307	V
	* 4.80344	39.60	MAv1	33.90	-39.40	9.60	0.70	44.40	54.00	-9.60	-	-	234	307	V
	7.20519	37.79	PK2	35.60	-39.00	12.60	0.00	46.99	-	-	74.00	-27.01	0	100	H
	7.21182	37.59	PK2	35.60	-39.10	12.50	0.00	46.59	-	-	74.00	-27.41	0	100	V
	9.60735	36.25	PK2	36.50	-37.90	14.40	0.00	49.25	-	-	74.00	-24.75	0	100	H
	9.60718	36.48	PK2	36.50	-37.90	14.40	0.00	49.48	-	-	74.00	-24.52	0	100	V
2440	* 4.88047	49.13	Pk	33.90	-39.40	9.70	0.00	53.33	-	-	74.00	-20.67	20	100	H
	* 4.87960	43.18	MAv1	33.90	-39.40	9.70	0.70	48.08	54.00	-5.92	-	-	20	100	H
	* 4.88030	46.97	PK2	33.90	-39.40	9.70	0.00	51.17	-	-	74.00	-22.83	230	280	V
	* 4.88033	40.65	MAv1	33.90	-39.40	9.70	0.70	45.55	54.00	-8.45	-	-	230	280	V
	* 7.31920	38.16	PK2	35.60	-39.30	12.20	0.00	46.66	-	-	74.00	-27.34	0	100	H
	* 7.31923	37.63	PK2	35.60	-39.30	12.20	0.00	46.13	-	-	74.00	-27.87	0	100	V
	9.76198	35.63	PK2	36.70	-37.70	14.40	0.00	49.03	-	-	74.00	-24.97	0	100	H
	9.75895	35.96	PK2	36.70	-37.60	14.40	0.00	49.46	-	-	74.00	-24.54	0	100	V
2480	* 4.96048	49.45	PK2	33.90	-39.60	9.90	0.00	53.65	-	-	74.00	**-20.35**	20	102	H
	* 4.96038	43.91	MAv1	33.90	-39.60	9.90	0.70	48.81	54.00	**-5.19**	-	-	20	102	H
	* 4.95943	46.91	PK2	33.90	-39.60	9.90	0.00	51.11	-	-	74.00	-22.89	235	276	V
	* 4.95955	40.20	MAv1	33.90	-39.60	9.90	0.70	45.10	54.00	-8.90	-	-	235	276	V
	* 7.44308	37.71	PK2	35.60	-39.10	12.20	0.00	46.41	-	-	74.00	-27.59	0	100	H
	* 7.43922	37.38	PK2	35.60	-39.10	12.30	0.00	46.18	-	-	74.00	-27.82	0	100	V
	9.92076	36.52	PK2	36.90	-37.80	14.50	0.00	50.12	-	-	74.00	-23.88	0	100	H
	9.92035	36.63	PK2	36.90	-37.80	14.50	0.00	50.23	-	-	74.00	-23.77	0	100	V

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

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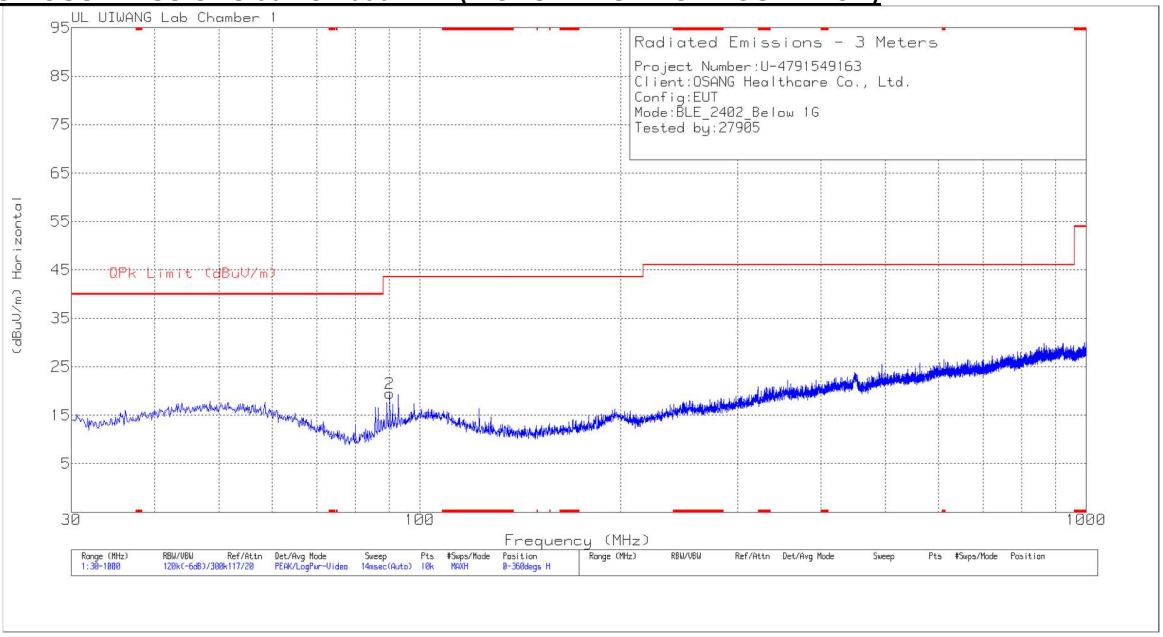
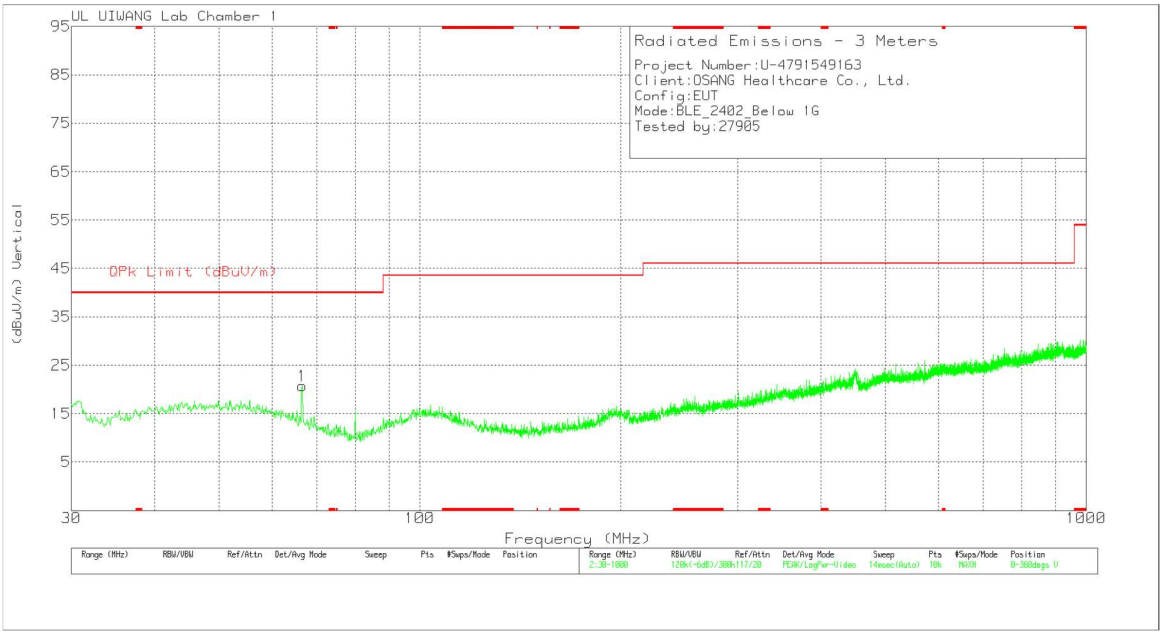
10.3. WORST CASE BELOW 1 GHz

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



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB 9163 (dB/m)	1Cham_30M-1000M_AMP(ELNA03-40D(dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	66.5728	44.04	Pk	16.50	-39.80	20.74	40.00	-19.26	0-360	100	V
2	90.1462	43.46	Pk	15.70	-39.60	19.56	43.52	-23.96	0-360	100	H

Pk - Peak detector

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11. AC POWER LINE CONDUCTED EMISSIONS

11.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.207 (a)

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5.0	56	46
5 ~ 30	60	50

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

N/A (This product is a battery-operated device.)

END OF TEST REPORT

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