TEST REPORT
On behalf of

Savant Technologies LLC, dba GE Lighting, a Savant company

Product Name: Direct Connect Full Color BR30,
Direct Connect Reveal Full Color BR30

Model No.: CLEDR309CD1@, CLEDR309CDRV@

FCC ID: PUU-BR30-DMFCVII

Prepared For: Savant Technologies LLC, dba GE Lighting, a Savant company
1975 Noble Road Cleveland, Ohio United States 44112

Prepared By: Audix Technology (Shanghai) Co., Ltd.
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TESTING
NVLAP LAB CODE 200371-0

File No.	:	C1D2408016
Report No.	:	ACI-F24164
Date of Test	:	2024.09.24-10.13
Date of Report	:	2024.10.17

The statement is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

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TEST REPORT

Applicant	:	Savant Technologies LLC, dba GE Lighting, a Savant company
EUT Description	:	Direct Connect Full Color BR30,
		Direct Connect Reveal Full Color BR30
	(A) Model No.	: Refer to Sec.2.1
	(B) Power Supply	: 120V AC 60Hz
	(C) Test Voltage	: 120V/60Hz, DC 3.3V from test fixture

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART C
AND ANSI C63.10-2013

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: Refer to Sec2.1), which was tested is technically compliance with the FCC limits.

This report applies to above tested Sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

The test results for EUT's WIFI function are contained in No.ACI-F24163 report.

Date of Test : 2024.09.24-10.13 Date of Report : 2024.10.17

Producer : Mindy Wang
MINDY WANG / Assistant

Review : Jarey Lu
JAREY LU / Supervisor

AUDIX®
For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : Kamp. Chen.
Authorized Signature(s) KAMP CHEN / Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The result is determined according to the decision rules of customer selection in the ASC-403 application service form.
1. According to IEC GUIDE 115 Procedure 2 and ILAC-G8, the uncertainties value is not used in determining the PASS/FAIL results.
2. If the required specification or standard already contains the decision rules, it will be carried out in accordance with the regulations or standard documents or the requirements of the competent units. If the required specification or standard does not contain a decision rule, the same paragraph 1.
3. If your company has a required decision rule, it will be implemented in accordance with the requirements and ISO/IEC Guide 98-4 specifications.

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.207
Radiated Emission	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.209(a) 15.205(a)(c)
6 dB Bandwidth Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(a)(2)
Maximum Peak Output Power Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(b)(3)
Emission Limitations Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(d)
Band Edge Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(d)
Power Spectral Density Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.247(e)
Antenna Requirement	FCC RULES AND REGULATIONS PART 15 SUBPART C AND ANSI C63.10:2013	Pass	15.203
N/A is an abbreviation for Not Applicable.			

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	Direct Connect Full Color BR30, Direct Connect Reveal Full Color BR30
Type of EUT	:	☑ Production ☐ Pre-product ☐ Pro-type
Model Number	:	CLEDR309CD1@, CLEDR309CDRV@
Note	:	@ represents different package type or CCT, The models are the same except for model name as sale purpose.
Test Model	:	CLEDR309CD1MS
Radio Tech	:	BLE 5.0; IEEE 802.11 b/g/n.
Channel Freq.	:	BLE: 2402MHz-2480MHz; 802.11b/g/n20: 2412MHz-2462MHz; 802.11n40: 2422MHz-2452MHz.
Modulation	:	BLE: GFSK; 802.11b: DSSS (CCK, DQPSK, DBPSK); 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK).
Antenna Info.	:	Antenna Type: PCB Antenna Antenna Gain: -0.99dBi
Applicant	:	Savant Technologies LLC, dba GE Lighting, a Savant company 1975 Noble Road Cleveland, Ohio United States 44112
Manufacturer	:	same as Applicant
Factory	:	Foshan Electrical and Lighting Co., Ltd. 64 North of Fenjiang Rd, Foshan, Guangdong, China

2.2 EUT Specifications Assessed in Current Report

Mode	Modulation	Data Rate(Mbps)
BLE	GFSK	Up to 2

Channel List			
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
…	…	…	…
…	…	…	…
…	…	…	…
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

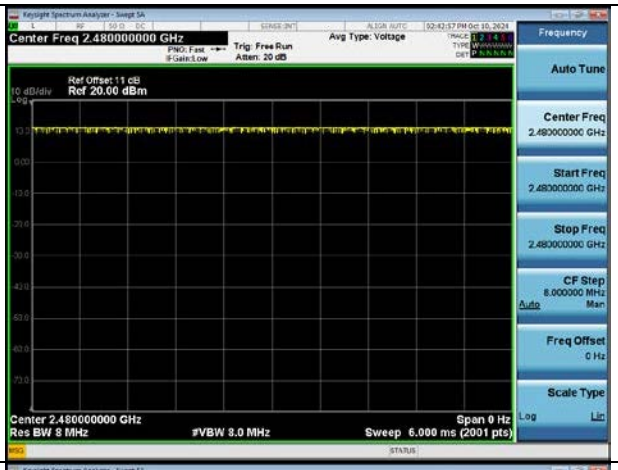
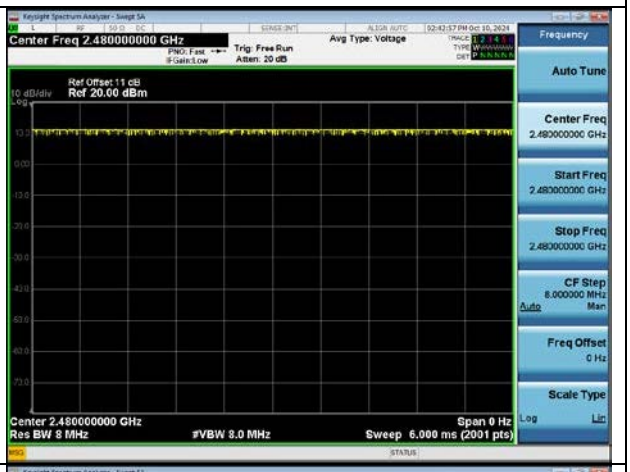
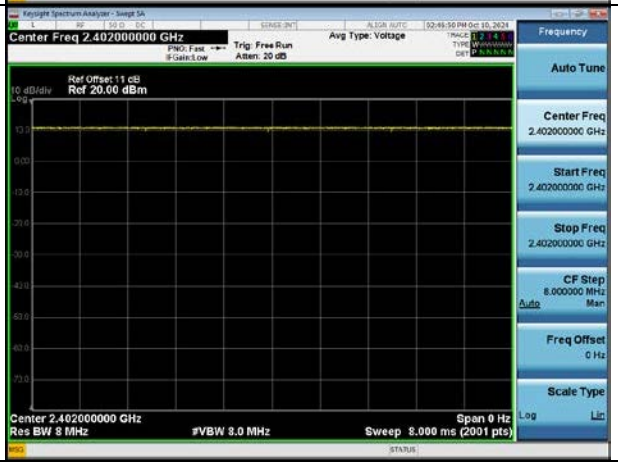
2.3 Test Information

The test software " sscom5.13.1.exe" was used to control EUT work in TX mode, Power Setting and select test channel.

Mode	data rate (Mbps)	Power Setting	Test Channel		Frequency (MHz)
BLE 1M	1	12	Low:	00	2402
		12	Middle:	20	2442
		12	High:	39	2480
BLE 2M	2	12	Low:	00	2402
		12	Middle:	20	2442
		12	High:	39	2480

2.4 Duty Cycle Check

Mode	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)
BLE 1M	1	1	100
BLE 2M	1	1	100

Mode	Ton	Ton+off
BLE 1M		
BLE 2M		

2.5 Sample Description

Test Item	Model Number	Sample Number	Date of receipted
Conducted Emission	CLEDR309CD1MS	E20240911651-03/03	2024.09.11
Radiated Emission	CLEDR309CD1MS	E20240911651-02/03	2024.09.11
Conducted RF Test	CLEDR309CD1MS	E20240911651-01/03	2024.09.11

2.6 Supported equipment

Brand	:	Acer
Product Name:	:	Notebook PC
Model Name	:	TravelMate P238 series
Model Number	:	N15W8
Product Name	:	Test Fixture
Mode Number	:	WSTK JLINK
Product Function	:	USB to TTL

2.7 Description of Test Facility

Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F, Building 34, No. 680 Guiping Rd., Caohejing, Hi-Tech Park, Shanghai 200233, China
Accredited by NVLAP, Lab Code	:	200371-0
FCC Designation Number	:	CN5027
Test Firm Registration Number	:	954668

3 CONDUCTED EMISSION TEST

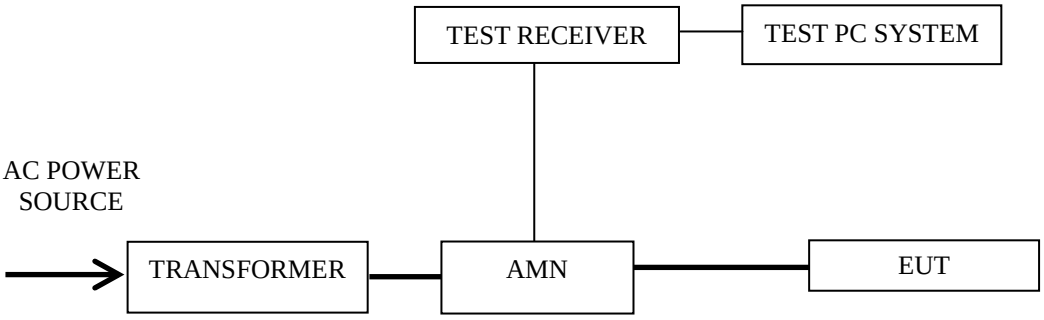
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESCI	101302	2024.02.22	1 Year
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	2024.02.22	1 Year
3.	Fixed Attenuator	SHYL	TTS-1	001	2024.02.22	1 Year
4.	50Ω Coaxial Switch	Anritsu	MP59B	6200655085	2024.02.22	1 Year
5.	Coaxial Cable	Audix	CE Cable	CE-SH1-001	2024.02.22	1 Year
6.	Software	Audix	e3	e3.v9.210616	--	--

3.2 Block Diagram of Test Setup

3.2.1 Conducted Disturbance Test Setup



—— : Signal Line
—— : Power Line

3.3 Conducted Emission Limits (§15.207)

Frequency Range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 – The lower limit shall apply at the transition frequencies.

NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz

3.4 Test Configuration

The EUT (listed in Sec.2.1) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner which tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipment.

3.5.3 Turn the EUT on the test mode, and then test.

3.6 Test Procedures

The EUT was placed upon a non-metallic table, which is 0.8 m above the horizontal conducting ground plane and 0.4 m from a vertical reference plane. The EUT was connected to the power mains through an Artificial Mains Network (AMN) to provide a 50 Ω coupling impedance for the measuring equipment. Both sides of AC line (Line & Neutral) were checked to find out the maximum conducted emission according to FCC Part 15 Subpart C and ANSI C63.10: 2013 requirements during conducted disturbance test.

The I.F. bandwidth of Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

Test with a dummy load in lieu of the antenna to determine compliance with Section 15.207 limits within the transmitter's fundamental emission band. (According to KDB 174176 D01 Line Conducted FAQ)

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Worst case emission:

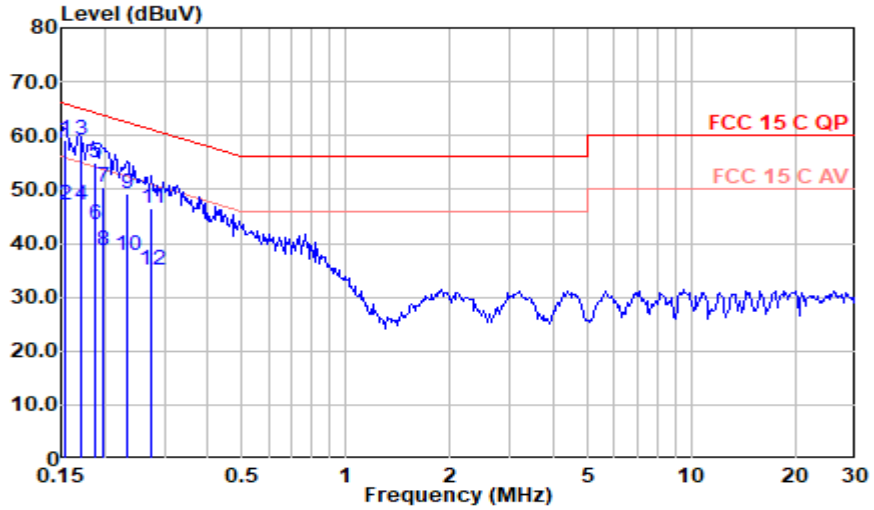
No.	Operation	Mode	Channel	Frequency (MHz)	Data Page
1.	Transmitting	BLE1M	00	2402	P13-14

NOTE 1 – Emission Level = Read Level + AMN Factor +Aux Factor + Cable Loss Margin = Limits - Emission Level
NOTE 2 – "QP" means "Quasi-Peak" values
NOTE 3 – The emission levels which not reported are too low against the official limit.

Worst case emission

Test Date:	2024.09.24	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

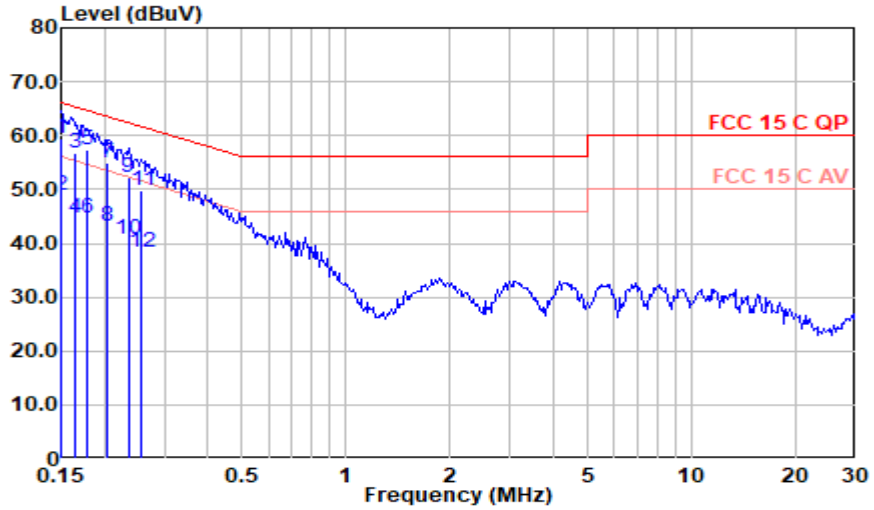
Mode: BLE1M CH2402MHz



Polarization at Line

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.155	49.33	0.10	9.49	0.10	59.02	65.75	6.73	QP
0.155	37.46	0.10	9.49	0.10	47.15	55.75	8.60	Average
0.171	49.33	0.10	9.49	0.10	59.02	64.93	5.90	QP
0.171	37.46	0.10	9.49	0.10	47.15	54.93	7.78	Average
0.189	45.32	0.10	9.49	0.10	55.01	64.10	9.09	QP
0.189	33.76	0.10	9.49	0.10	43.45	54.10	10.65	Average
0.199	40.84	0.10	9.49	0.10	50.53	63.65	13.12	QP
0.199	28.87	0.10	9.49	0.10	38.56	53.65	15.09	Average
0.232	39.46	0.10	9.49	0.10	49.15	62.37	13.22	QP
0.232	28.01	0.10	9.49	0.10	37.70	52.37	14.66	Average
0.275	36.74	0.10	9.49	0.10	46.43	60.96	14.54	QP
0.275	25.24	0.10	9.49	0.10	34.93	50.96	16.03	Average

Mode: BLE1M CH2402MHz



Polarization at Neutral

Frequency (MHz)	Meter Reading dB (μV)	AMN Factor (dB)	Aux Factor (dB)	Cable Loss (dB)	Emission Level dB (μV)	Limits dB (μV)	Margin (dB)	Remark
0.150	49.66	0.10	9.49	0.10	59.35	66.00	6.65	QP
0.150	39.07	0.10	9.49	0.10	48.76	56.00	7.24	Average
0.164	47.02	0.10	9.49	0.10	56.71	65.26	8.55	QP
0.164	34.89	0.10	9.49	0.10	44.58	55.26	10.67	Average
0.179	47.63	0.10	9.49	0.10	57.32	64.51	7.19	QP
0.179	35.12	0.10	9.49	0.10	44.81	54.51	9.70	Average
0.204	45.26	0.10	9.49	0.10	54.95	63.44	8.50	QP
0.204	33.43	0.10	9.49	0.10	43.12	53.44	10.32	Average
0.235	42.58	0.10	9.49	0.10	52.27	62.28	10.02	QP
0.235	31.17	0.10	9.49	0.10	40.86	52.28	11.42	Average
0.257	40.10	0.10	9.49	0.10	49.79	61.54	11.75	QP
0.257	28.79	0.10	9.49	0.10	38.48	51.54	13.06	Average

4 RADIATED EMISSION TEST

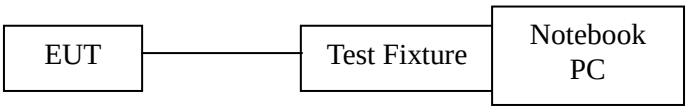
4.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

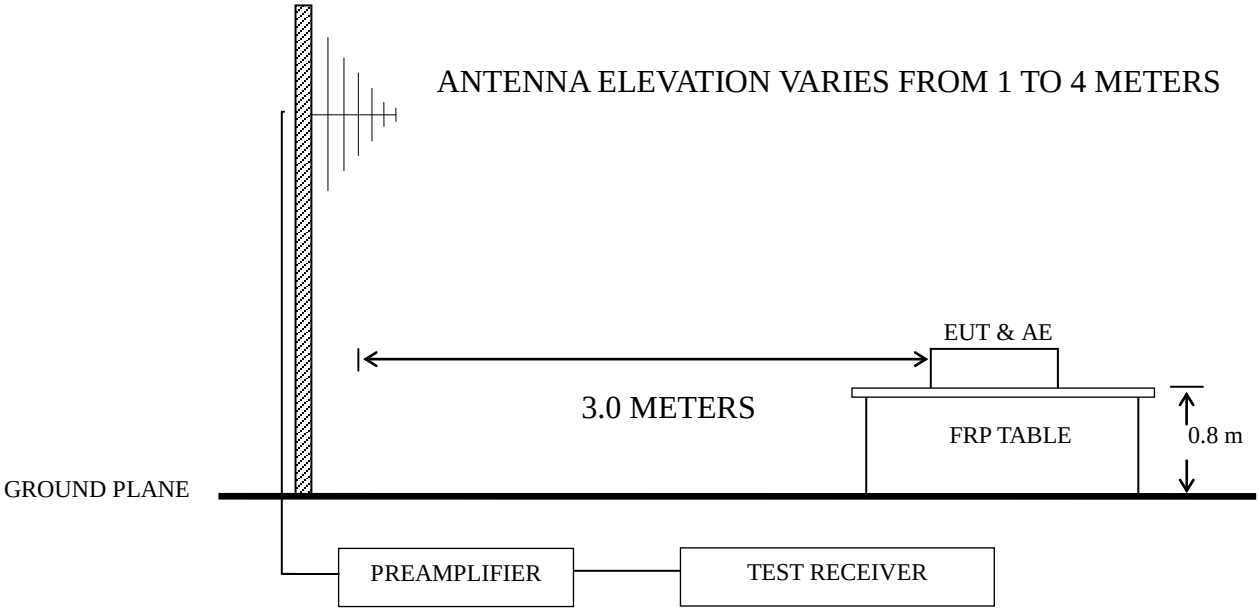
Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Preamplifier	Agilent	8447D	2944A10548	2024.02.22	1 Year
2.	Preamplifier	HP	8449B	3008A00864	2024.02.22	1 Year
3.	EXA Signal Analyzer	Agilent	N9010A	MY52221182	2024.08.09	1 Year
4.	Test Receiver	R&S	ESCI	101303	2024.02.22	1 Year
5.	Bilog Antenna+ 6dB Attenuator	Schwarzbeck	VULB 9168+ EMCI-N-6-06	708+AT-N0638	2024.03.08	1 Year
6.	Horn Antenna	EMCO	3115	96074878	2024.07.25	1 Year
7.	Horn Antenna	EMCO	3116	00062643	2024.01.30	2 Year
8.	Cavity Band Rejection Filter	Microwave	WT-A3882-R10	WT200312-1-1	2024.02.22	1 Year
9.	Coaxial Switch	Anritsu	MP59B	6200655086	2024.02.22	1 Year
10.	Coaxial Cable	SCHAFFNER	RG 212U-MIL C 17+N1K50-EW06 30-N1K50-15m-1	RE-10m-001/ RE-15m-002	2024.02.22	1 Year
11.	Software	Audix	e3	v9.210616	--	--

4.2 Block Diagram of Test Setup

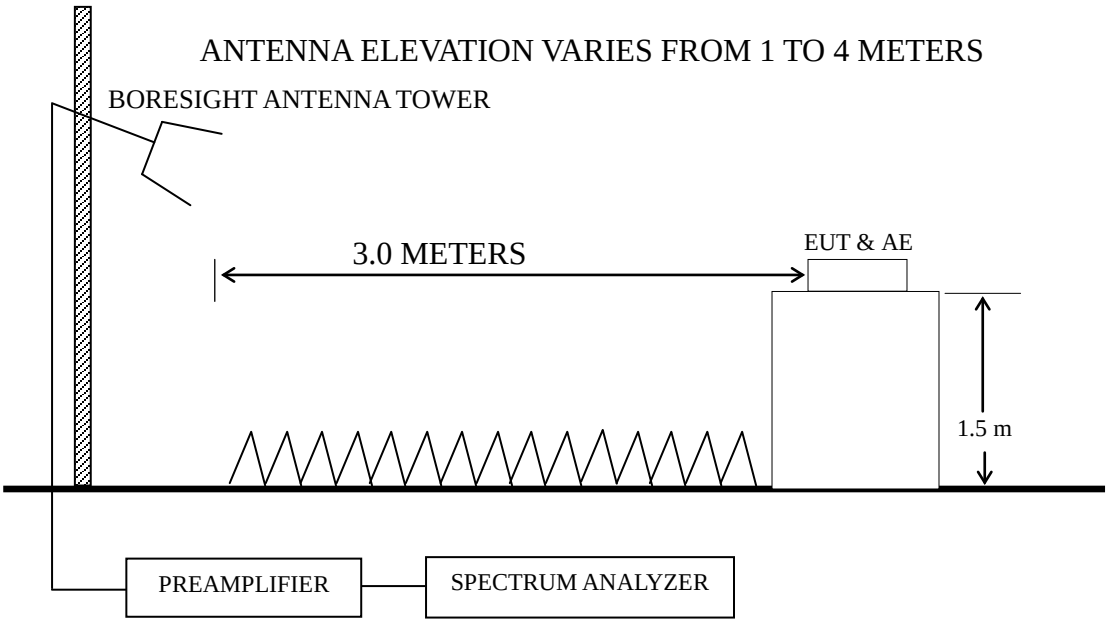
4.2.1 EUT & Peripherals



4.2.2 Below 1GHz



4.2.3 Above 1GHz



4.3 Radiated Emission Limit (§15.209)

Frequency (MHz)	Distance (m)	Field strength limits (μV/m)	
		(μV/m)	dB(μV/m)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB (μV/m) = 20 log Emission Level (μV/m)
NOTE 2 - The tighter limit applies at the band edges.
NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.4.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 3.2.

4.5.2 Turn the EUT on.

4.5.3 Connect the EUT and the TTL terminal of Test Fixture through three HCI cables of EUT, as follows (TX to RXD, RX to TXD, GND to GND). Plug the USB terminal of Test Fixture to the USB port of Notebook PC.

4.5.4 Use the software as section 2.3 to select the test mode, then test.

4.5.5 Repeat step 3.5.2 and 3.5.5, until the test of all modes finished.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a turntable. Below 1 GHz, the table height is 80 cm above the reference ground plane. Above 1 GHz, the table height is 1.5 m. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as

receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.10: 2013 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of Agilent N9010A was set at 1MHz for above 1GHz.

The frequency range from 30 MHz to 25 GHz (Up to 10^{th} harmonics from fundamental frequency) was checked.

All the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Frequency range: below 1GHz (Worst case emission)

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	BLE 1M	00	2402 MHz	P20-21

Frequency range: above 1GHz

No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	BLE 1M	00	2402 MHz	P22-23
2.			20	2442 MHz	P24-25
3.			39	2480 MHz	P26-27
4.	Transmitting	BLE 2M	00	2402 MHz	P28-29

Band-Edge and Restricted bands:

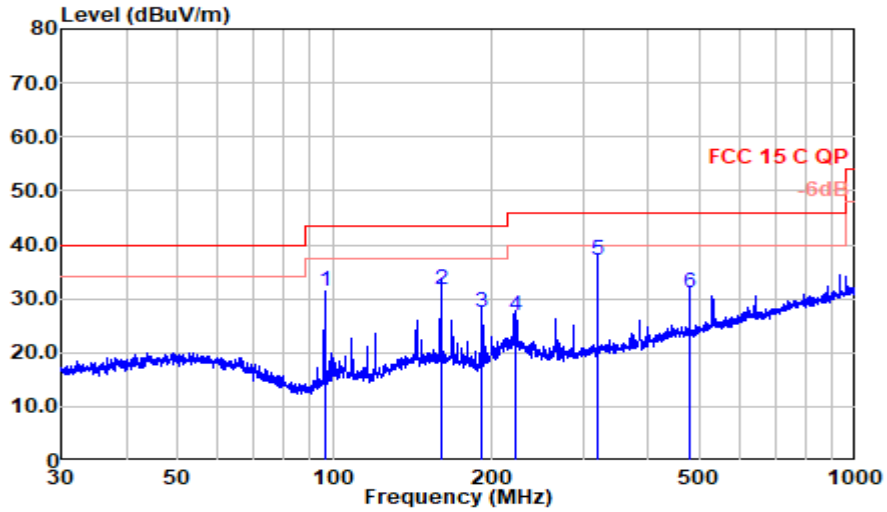
No.	Operation	Mode	Channel	Frequency	Data Page
1.	Transmitting	BLE 1M	00	2402 MHz	P30-31
2.			39	2480 MHz	P32-33
4.		BLE 2M	00	2402 MHz	P34-35
5.			39	2480 MHz	P36-37

NOTE 1 – Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin = Limits - Emission Level.
NOTE 2 – “QP” means “Quasi-Peak” values.
NOTE 3 – 0°was the table front facing the antenna. Degree is calculated from 0°clockwise facing the antenna.
NOTE 4 – The emission levels which not reported are too low against the official limit.
NOTE 5 – The emission levels recorded below is data of EUT configured in Standing direction, for this direction was the maximum emission direction during the test. The data of Side & Lying direction are too low against the official limit to be reported.
NOTE 6 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.
For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.
NOTE 7 – The frequency range 2310-2390MHz & 2483.5-2500MHz were tested for Restricted bands.

Radiated emission < 1GHz

Test Date:	2024.10.13	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

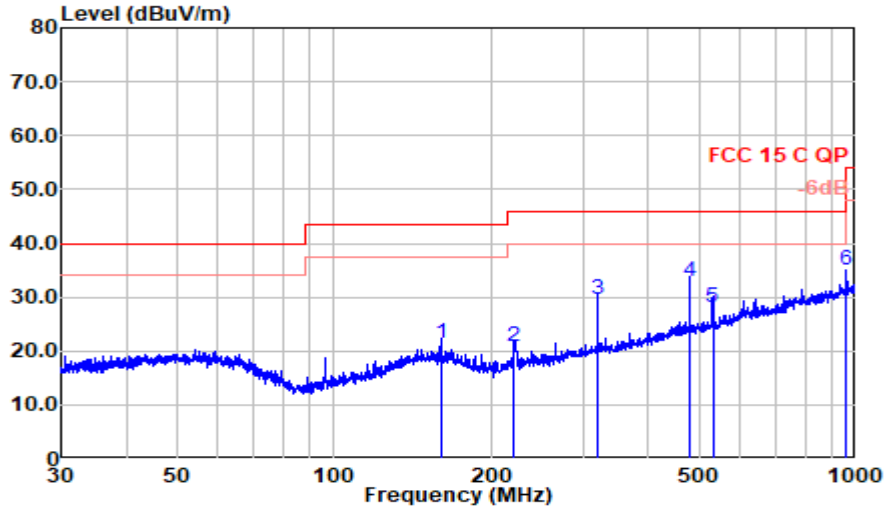
Mode: BLE1M CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
96.099	45.33	14.21	1.17	29.32	31.39	43.50	12.11	QP
160.065	40.15	19.10	1.47	29.16	31.56	43.50	11.94	QP
192.419	38.57	16.26	1.61	28.97	27.47	43.50	16.03	QP
223.733	38.23	15.57	1.74	28.80	26.75	46.00	19.25	QP
319.937	43.76	19.90	2.12	28.78	37.00	46.00	9.00	QP
480.528	34.98	23.11	2.59	29.69	31.00	46.00	15.00	QP

Mode: BLE1M CH2402MHz



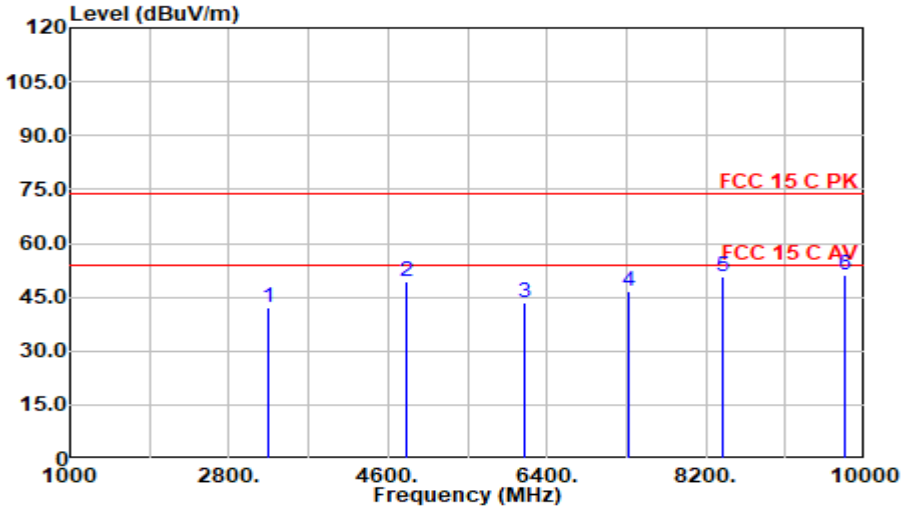
Polarization at Vertical

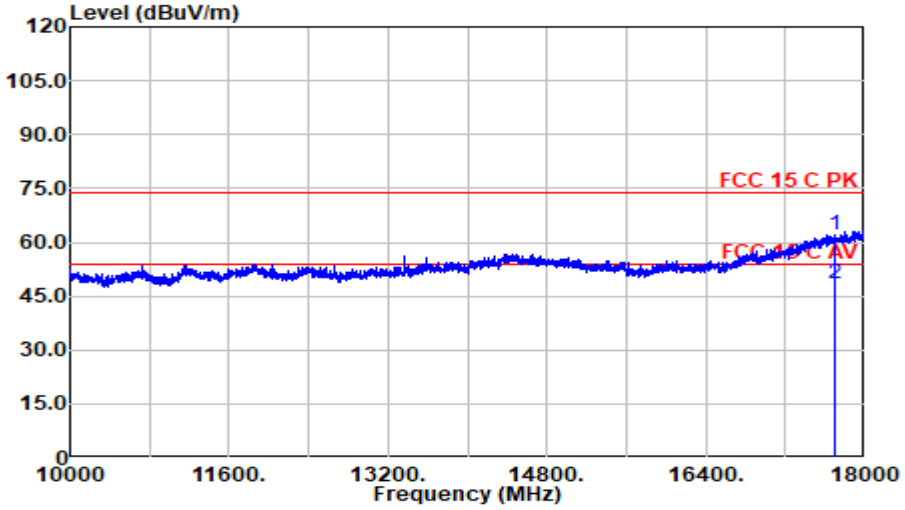
Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
160.065	29.93	19.10	1.47	29.16	21.34	43.50	22.16	QP
221.781	32.25	15.54	1.73	28.80	20.72	46.00	25.28	QP
319.937	36.44	19.90	2.12	28.78	29.68	46.00	16.32	QP
480.528	36.94	23.11	2.59	29.69	32.96	46.00	13.04	QP
531.964	31.42	23.84	2.75	29.80	28.21	46.00	17.79	QP
960.477	31.06	29.41	3.64	28.96	35.15	54.00	18.85	QP

Radiated Emission > 1GHz

Test Date:	2024.10.13	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

Mode: BLE1M CH2402MHz

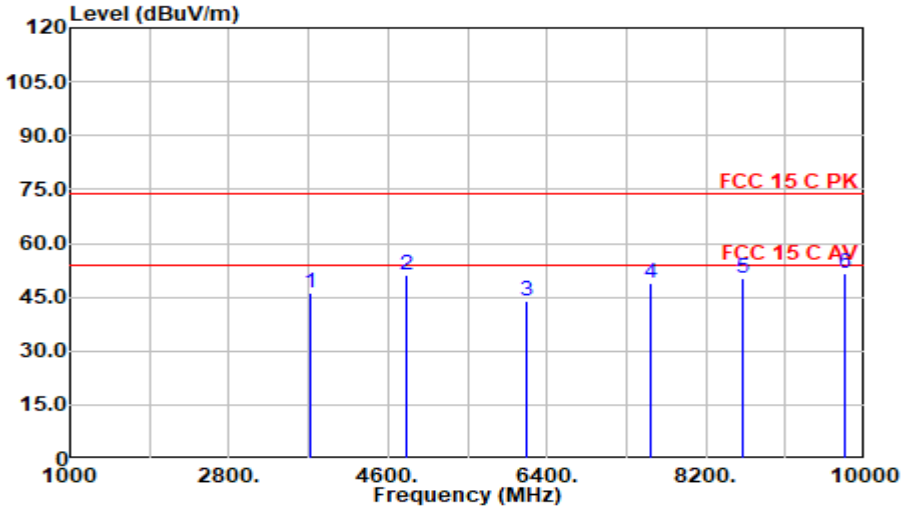


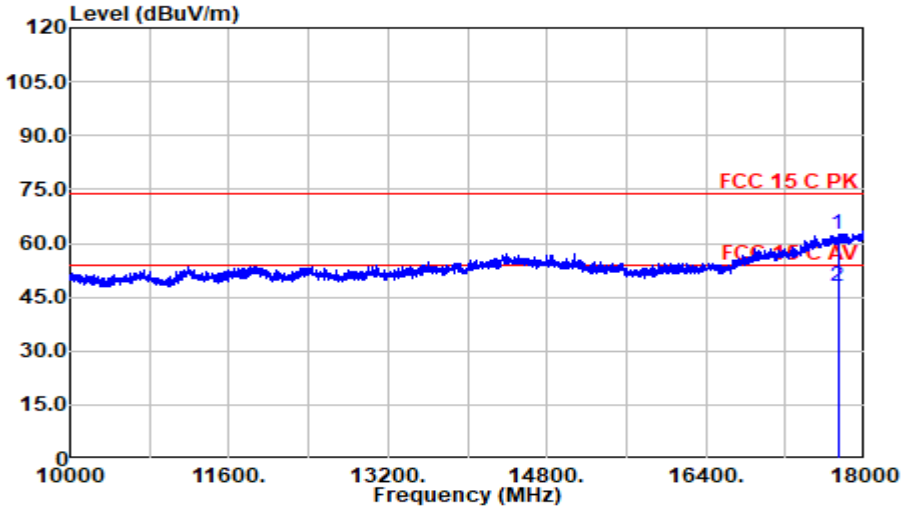


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3244.000	41.18	31.28	5.96	36.19	42.23	74.00	31.77	Peak
4803.750	43.84	33.29	7.47	35.41	49.20	74.00	24.80	Peak
6151.000	35.84	34.40	8.42	35.33	43.33	74.00	30.67	Peak
7326.125	35.69	36.90	9.48	35.53	46.53	74.00	27.47	Peak
8382.250	37.78	38.23	10.31	35.60	50.72	74.00	23.28	Peak
9780.500	37.14	38.24	11.15	35.36	51.17	74.00	22.83	Peak
17700.380	34.34	45.20	15.72	33.09	62.18	74.00	11.82	Peak
17700.380	20.43	45.20	15.72	33.09	48.27	54.00	5.73	Average

Mode: BLE1M CH2402MHz

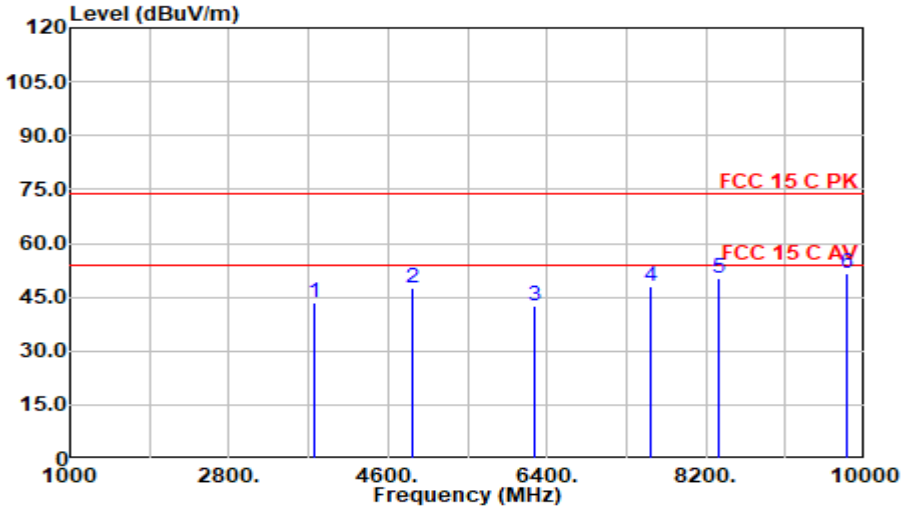


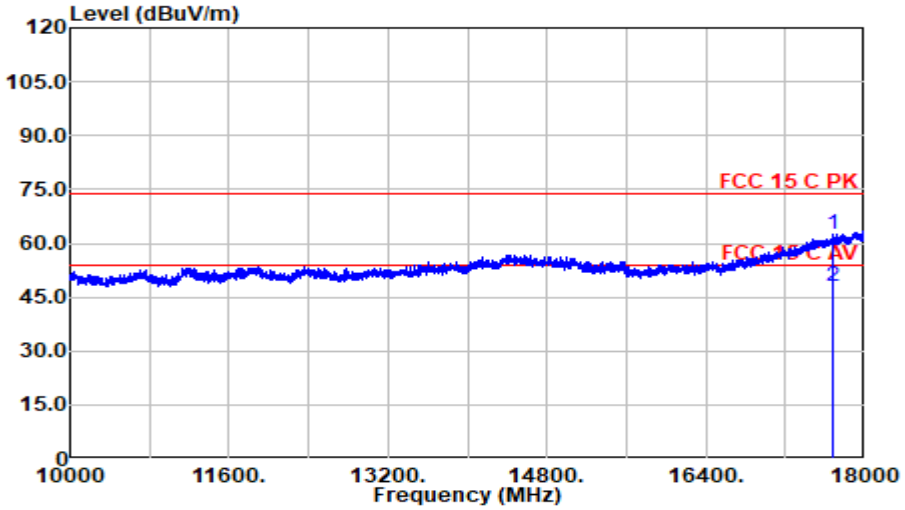


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3715.750	43.52	32.19	6.38	36.00	46.09	74.00	27.91	Peak
4803.750	45.60	33.29	7.47	35.41	50.96	74.00	23.04	Peak
6174.375	36.35	34.50	8.44	35.34	43.95	74.00	30.05	Peak
7570.500	37.57	37.00	9.73	35.56	48.74	74.00	25.26	Peak
8626.625	37.22	38.40	10.39	35.60	50.41	74.00	23.59	Peak
9763.500	37.83	38.11	11.14	35.37	51.70	74.00	22.30	Peak
17728.000	34.41	45.28	15.76	33.08	62.38	74.00	11.62	Peak
17728.000	19.84	45.28	15.76	33.08	47.81	54.00	6.19	Average

Mode: BLE1M CH2442MHz

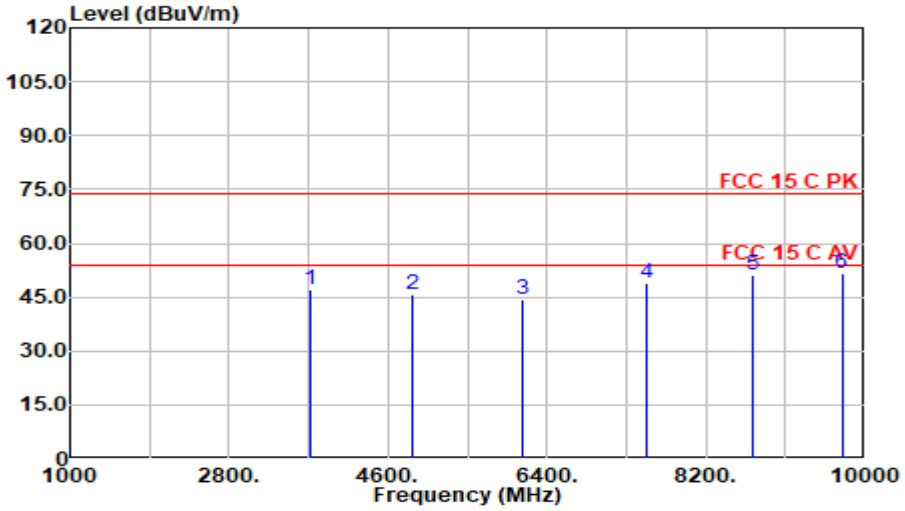


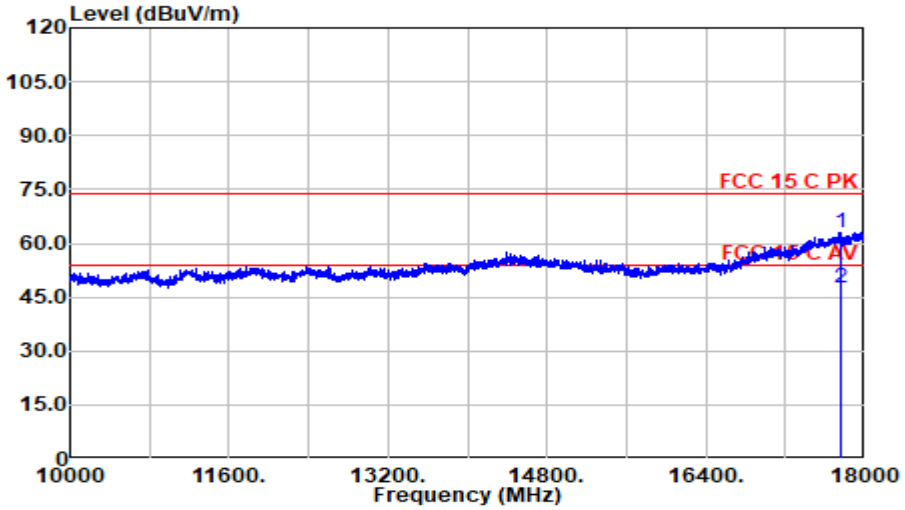


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3756.125	40.53	32.41	6.42	35.99	43.37	74.00	30.63	Peak
4882.375	42.23	33.26	7.56	35.36	47.69	74.00	26.31	Peak
6261.500	35.05	34.52	8.51	35.36	42.73	74.00	31.27	Peak
7581.125	36.73	37.00	9.75	35.56	47.92	74.00	26.08	Peak
8335.500	37.68	38.07	10.30	35.60	50.45	74.00	23.55	Peak
9806.000	37.44	38.41	11.17	35.36	51.66	74.00	22.34	Peak
17672.750	34.86	45.04	15.68	33.10	62.48	74.00	11.52	Peak
17672.750	20.49	45.04	15.68	33.10	48.11	54.00	5.89	Average

Mode: BLE1M CH2442MHz

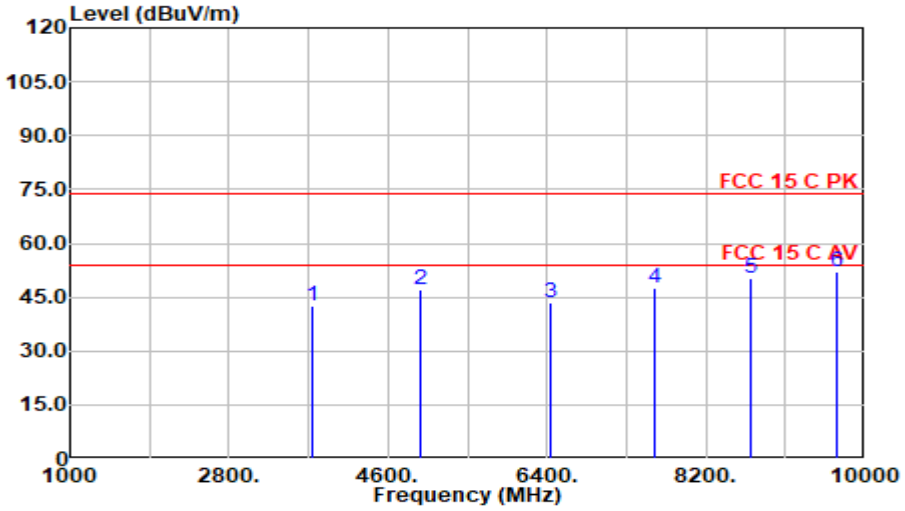


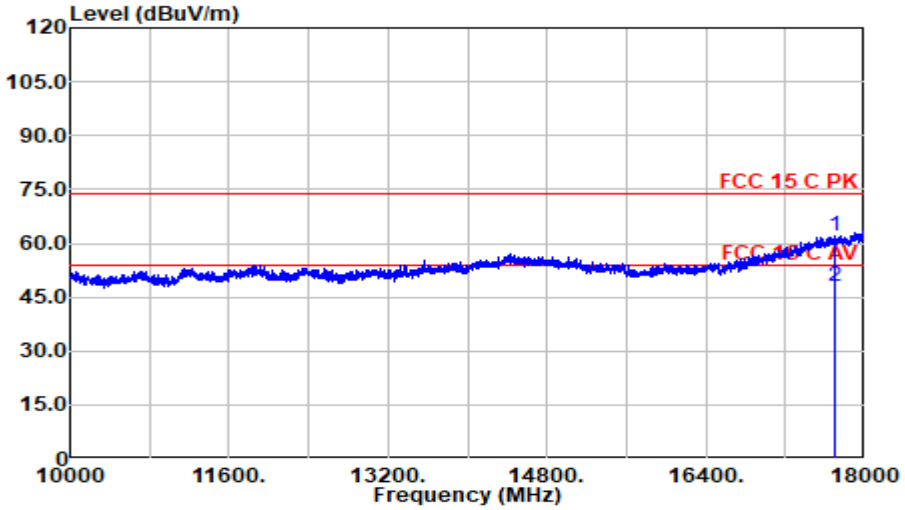


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3717.875	44.56	32.21	6.38	36.00	47.14	74.00	26.86	Peak
4884.500	40.36	33.27	7.56	35.36	45.82	74.00	28.18	Peak
6121.250	36.83	34.29	8.39	35.33	44.18	74.00	29.82	Peak
7530.125	37.59	37.04	9.69	35.55	48.77	74.00	25.23	Peak
8726.500	37.83	38.33	10.42	35.60	50.98	74.00	23.02	Peak
9740.125	37.80	38.04	11.12	35.37	51.58	74.00	22.42	Peak
17762.000	34.99	45.39	15.81	33.07	63.12	74.00	10.88	Peak
17762.000	19.54	45.39	15.81	33.07	47.67	54.00	6.33	Average

Mode: BLE1M CH2480MHz

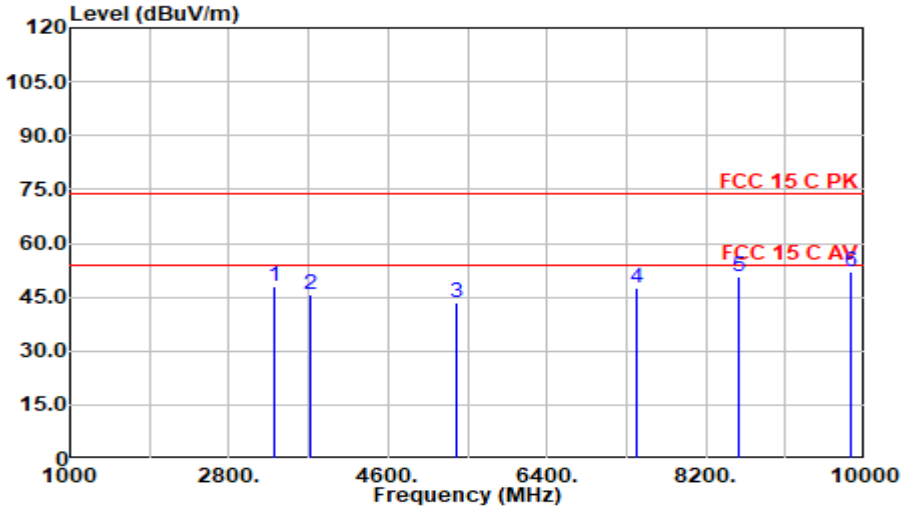


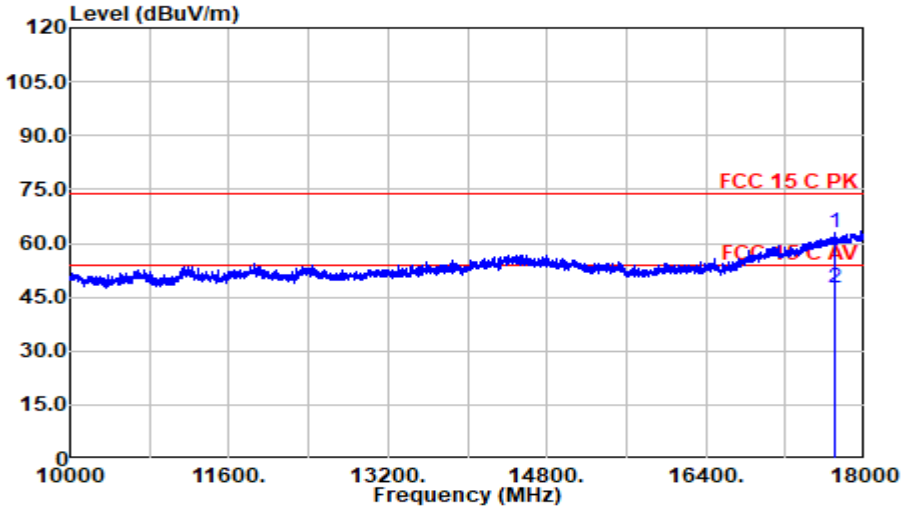


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3747.625	39.79	32.39	6.41	35.99	42.60	74.00	31.40	Peak
4958.875	41.10	33.48	7.64	35.32	46.90	74.00	27.10	Peak
6440.000	35.67	34.52	8.66	35.39	43.45	74.00	30.55	Peak
7617.250	36.40	37.00	9.78	35.56	47.62	74.00	26.38	Peak
8709.500	36.89	38.50	10.42	35.60	50.21	74.00	23.79	Peak
9674.250	38.34	38.20	11.06	35.39	52.21	74.00	21.79	Peak
17706.750	34.22	45.22	15.73	33.09	62.08	74.00	11.92	Peak
17706.750	20.12	45.22	15.73	33.09	47.99	54.00	6.01	Average

Mode: BLE1M CH2480MHz

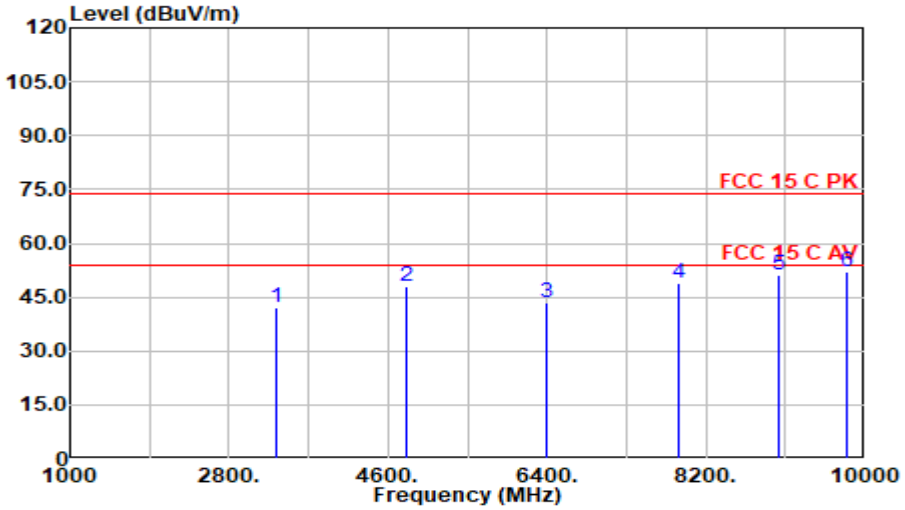


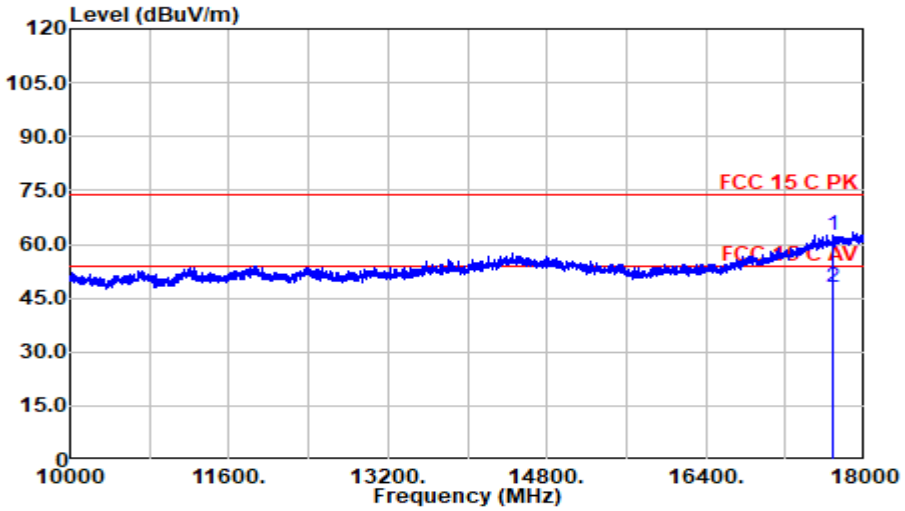


Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3318.375	46.71	31.34	6.03	36.16	47.92	74.00	26.08	Peak
3722.125	43.12	32.23	6.39	36.00	45.74	74.00	28.26	Peak
5381.750	36.53	34.21	7.91	35.30	43.36	74.00	30.64	Peak
7413.250	36.56	37.00	9.57	35.54	47.59	74.00	26.41	Peak
8571.375	37.41	38.40	10.37	35.60	50.58	74.00	23.42	Peak
9848.500	37.67	38.50	11.21	35.34	52.03	74.00	21.97	Peak
17696.130	35.13	45.18	15.71	33.09	62.93	74.00	11.07	Peak
17696.130	19.71	45.18	15.71	33.09	47.51	54.00	6.49	Average

Mode: BLE2M CH2402MHz

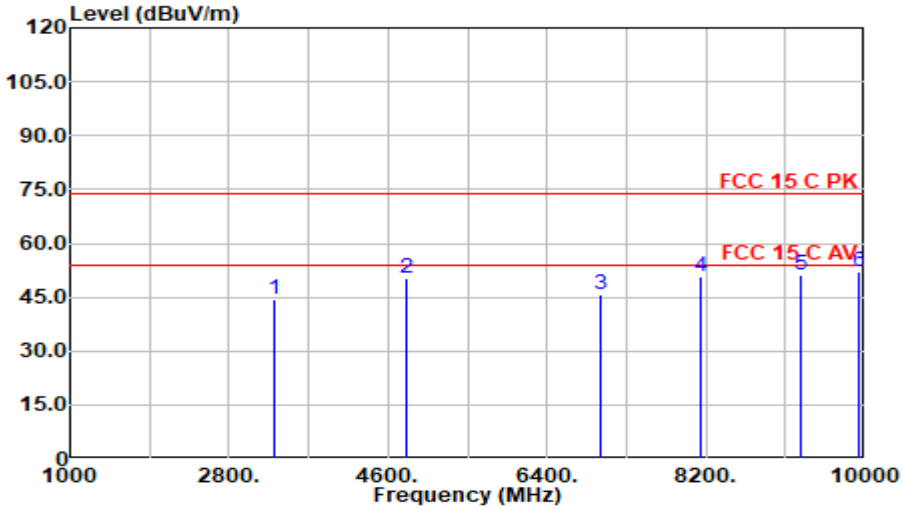


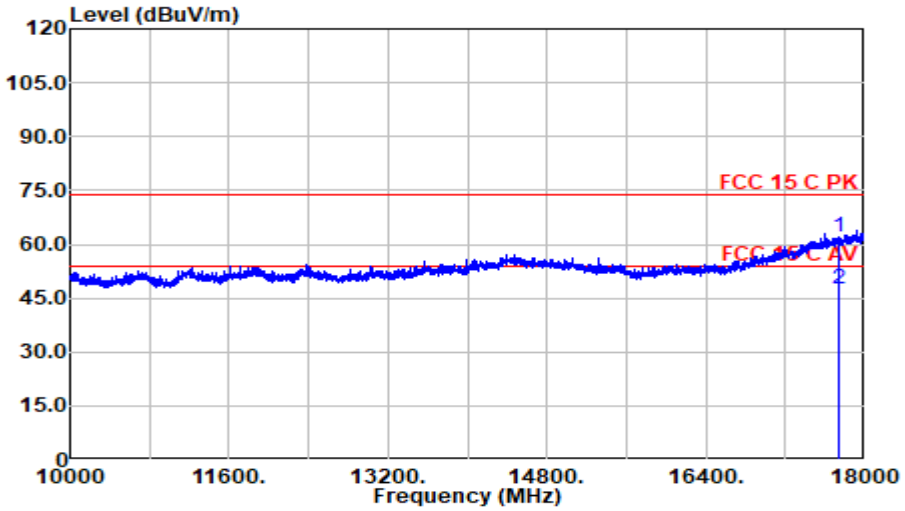


Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3339.625	40.89	31.38	6.05	36.15	42.17	74.00	31.83	Peak
4803.750	42.43	33.29	7.47	35.41	47.79	74.00	26.21	Peak
6403.875	35.55	34.59	8.63	35.38	43.39	74.00	30.61	Peak
7885.000	37.16	37.37	10.07	35.59	49.01	74.00	24.99	Peak
9034.625	37.57	38.43	10.54	35.59	50.95	74.00	23.05	Peak
9806.000	37.75	38.41	11.17	35.36	51.98	74.00	22.02	Peak
17685.500	34.84	45.11	15.70	33.09	62.56	74.00	11.44	Peak
17685.500	20.48	45.11	15.70	33.09	48.20	54.00	5.80	Average

Mode: BLE2M CH2402MHz





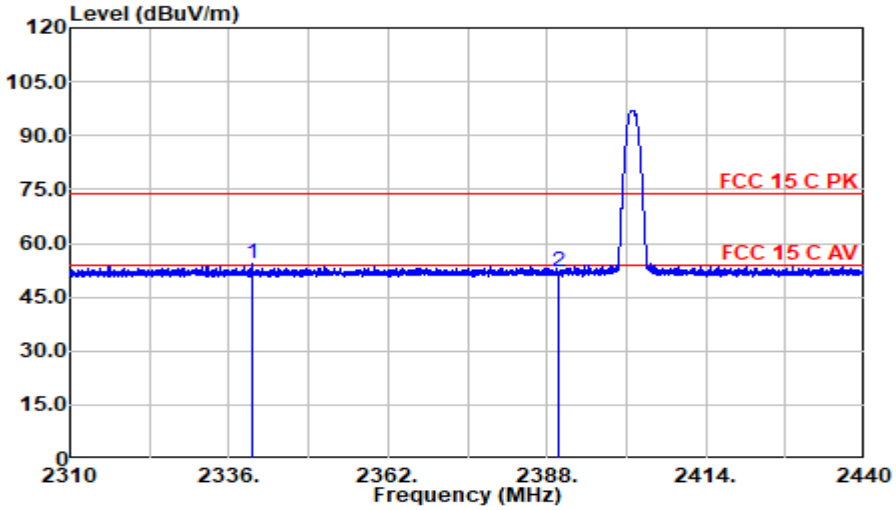
Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
3318.375	43.29	31.34	6.03	36.16	44.50	74.00	29.50	Peak
4801.625	44.89	33.30	7.47	35.41	50.25	74.00	23.75	Peak
7005.250	36.49	35.51	9.14	35.50	45.64	74.00	28.36	Peak
8131.500	38.55	37.60	10.23	35.60	50.79	74.00	23.21	Peak
9266.250	37.57	38.17	10.73	35.52	50.95	74.00	23.05	Peak
9927.125	37.80	38.32	11.27	35.32	52.06	74.00	21.94	Peak
17742.880	33.95	45.33	15.78	33.08	61.98	74.00	12.02	Peak
17742.880	19.59	45.33	15.78	33.08	47.63	54.00	6.37	Average

Band-Edge and Restricted bands:

Test Date:	2024.10.13	Temp./Hum.:	22℃/51%RH	Test By:	Jarey

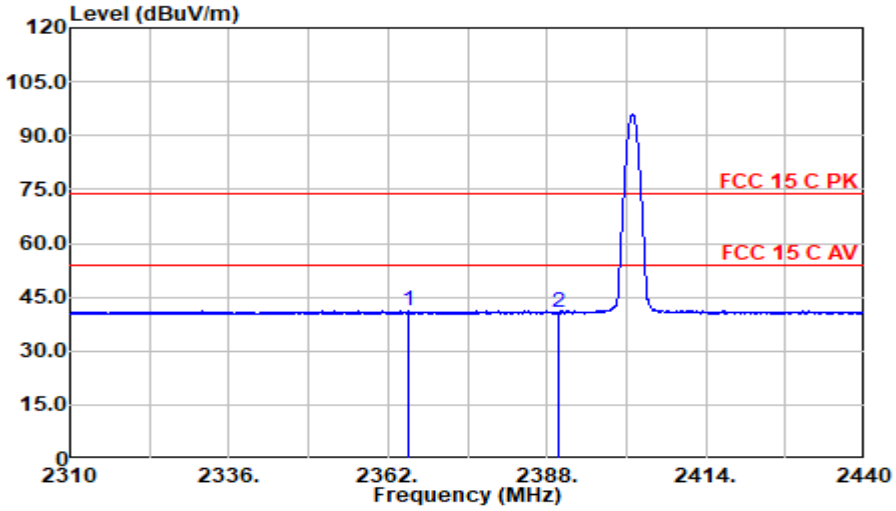
Mode: BLE1M CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2339.802	57.71	28.44	5.18	36.91	54.42	74.00	19.58	Peak
2390.000	55.04	28.58	5.23	36.86	51.98	74.00	22.02	Peak

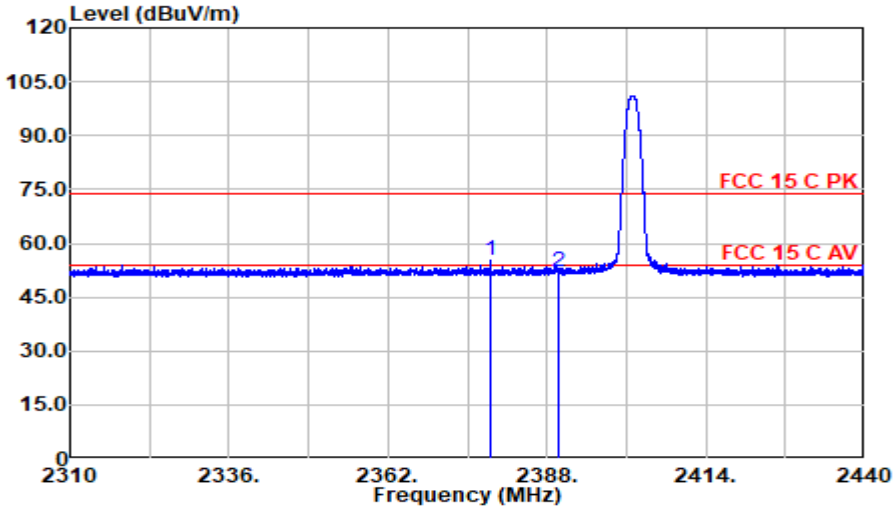
Mode: BLE1M CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2365.250	44.27	28.53	5.20	36.89	41.12	54.00	12.88	Average
2390.000	43.83	28.58	5.23	36.86	40.78	54.00	13.22	Average

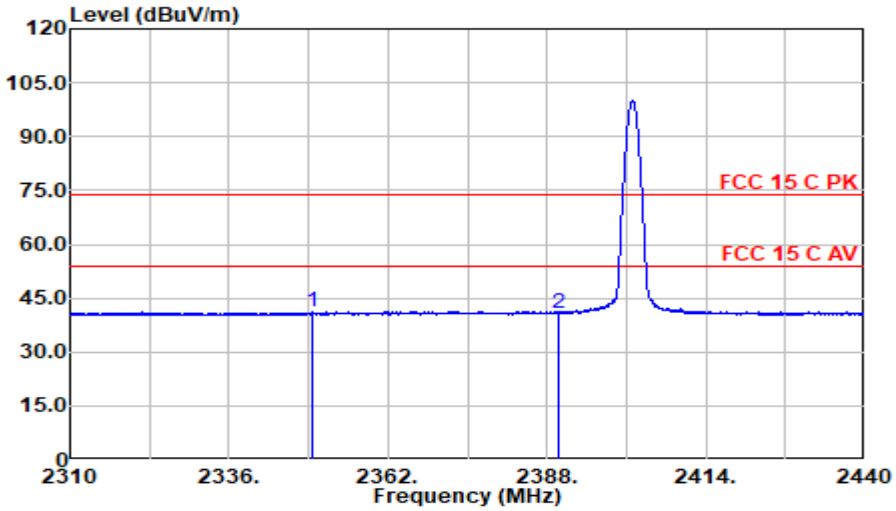
Mode: BLE1M CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2378.640	58.12	28.56	5.22	36.87	55.02	74.00	18.98	Peak
2390.000	55.02	28.58	5.23	36.86	51.96	74.00	22.04	Peak

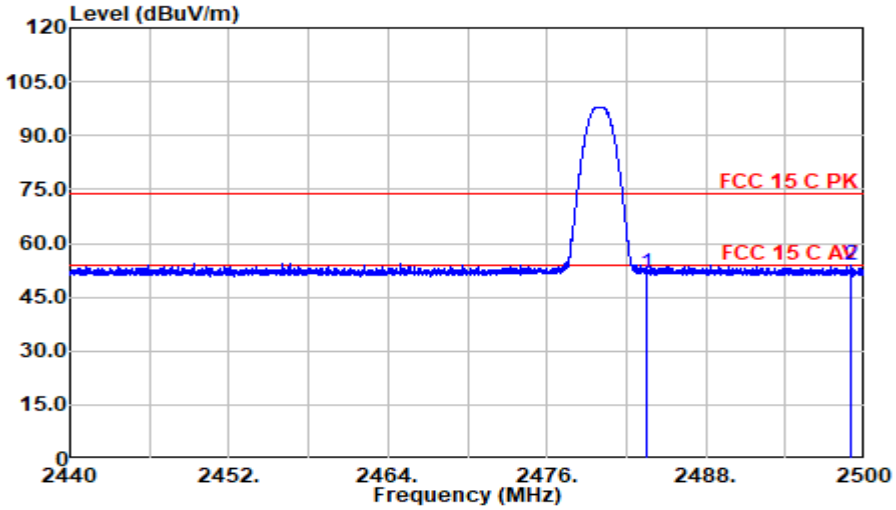
Mode: BLE1M CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2349.780	44.43	28.50	5.19	36.90	41.22	54.00	12.78	Average
2390.000	43.85	28.58	5.23	36.86	40.79	54.00	13.21	Average

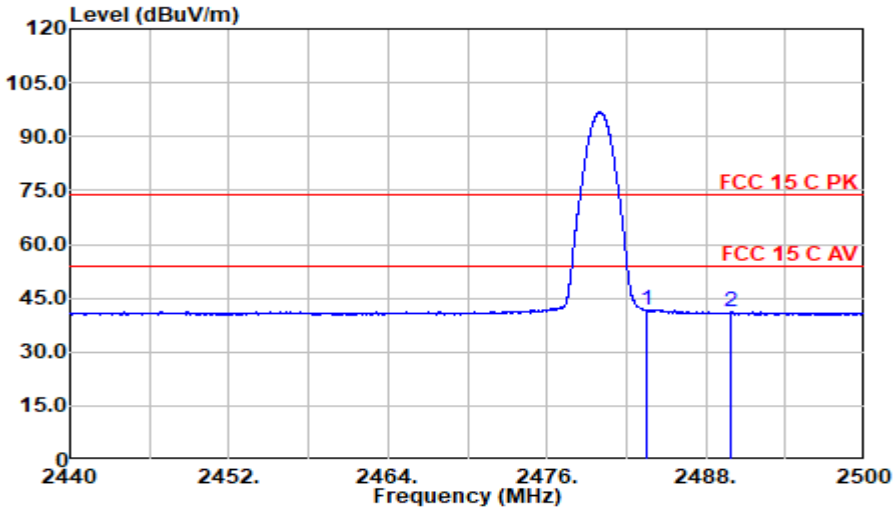
Mode: BLE1M CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	54.64	28.50	5.31	36.77	51.68	74.00	22.32	Peak
2499.010	56.72	28.50	5.32	36.75	53.79	74.00	20.21	Peak

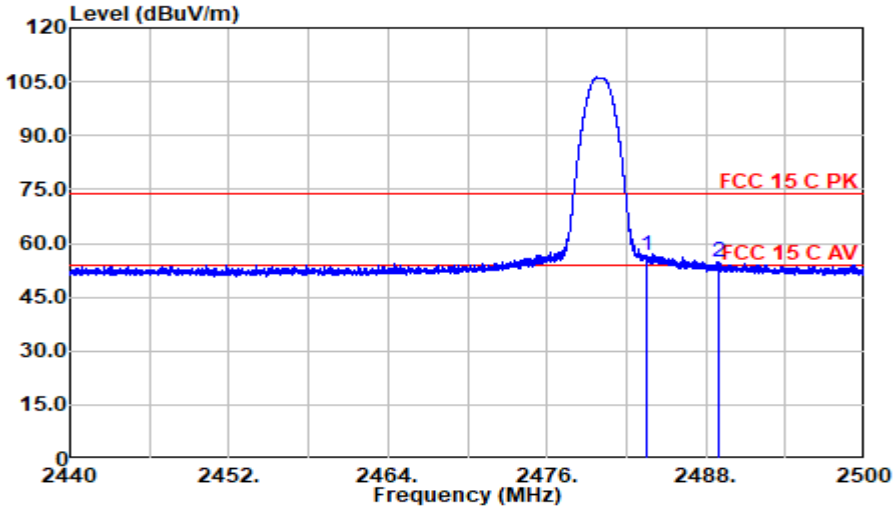
Mode: BLE1M CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	44.45	28.50	5.31	36.77	41.49	54.00	12.51	Average
2489.860	44.25	28.50	5.31	36.76	41.30	54.00	12.70	Average

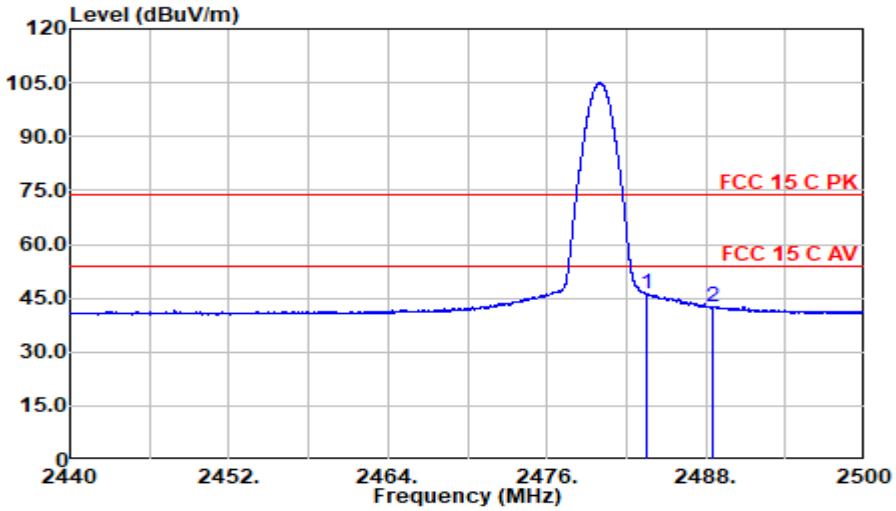
Mode: BLE1M CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	59.64	28.50	5.31	36.77	56.68	74.00	17.32	Peak
2488.960	57.71	28.50	5.31	36.76	54.76	74.00	19.24	Peak

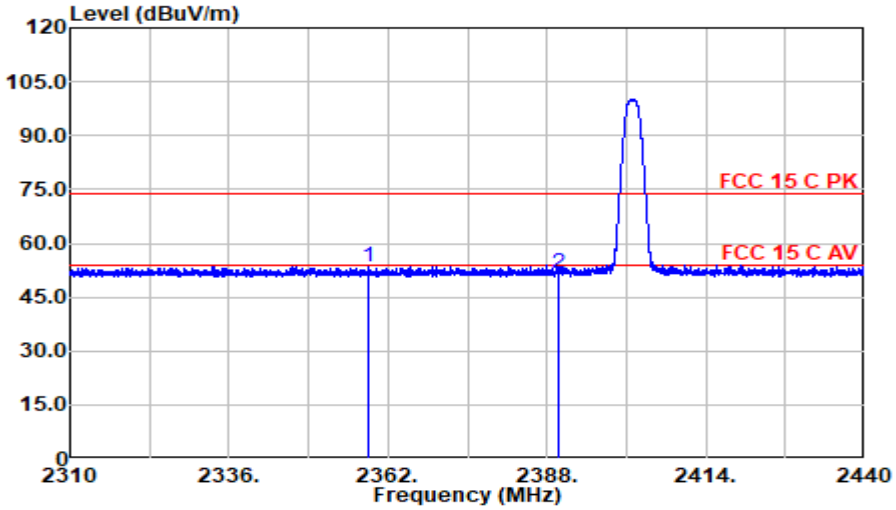
Mode: BLE1M CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	48.98	28.50	5.31	36.77	46.02	54.00	7.98	Average
2488.510	45.58	28.50	5.31	36.76	42.63	54.00	11.37	Average

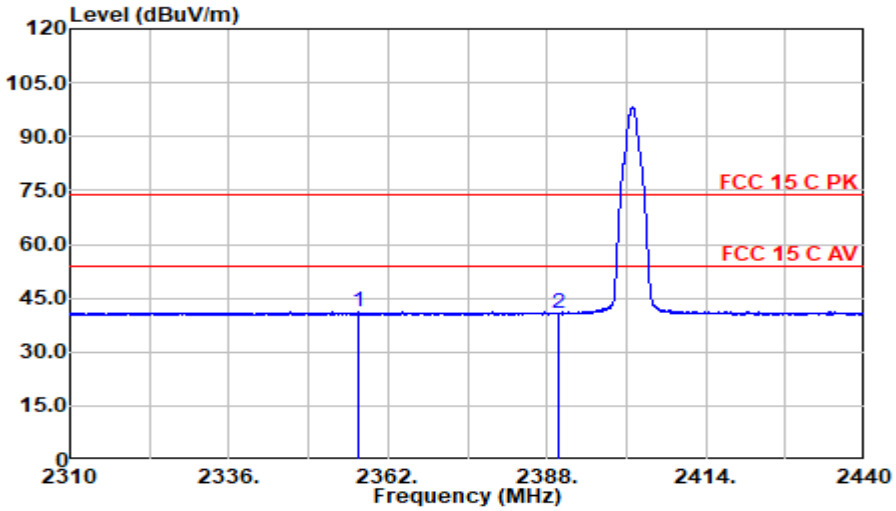
Mode: BLE2M CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2358.847	56.79	28.52	5.20	36.89	53.61	74.00	20.39	Peak
2390.000	54.82	28.58	5.23	36.86	51.76	74.00	22.24	Peak

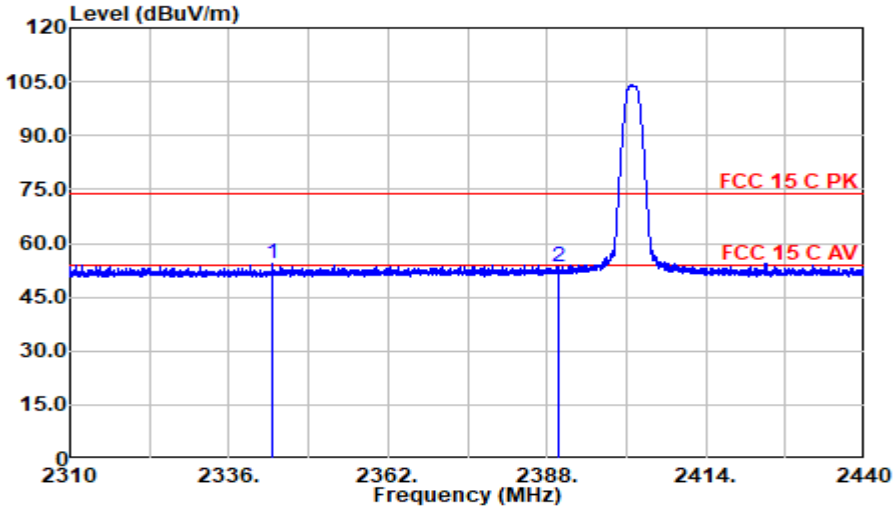
Mode: BLE2M CH2402MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2357.255	44.25	28.51	5.20	36.89	41.06	54.00	12.94	Average
2390.000	43.80	28.58	5.23	36.86	40.74	54.00	13.26	Average

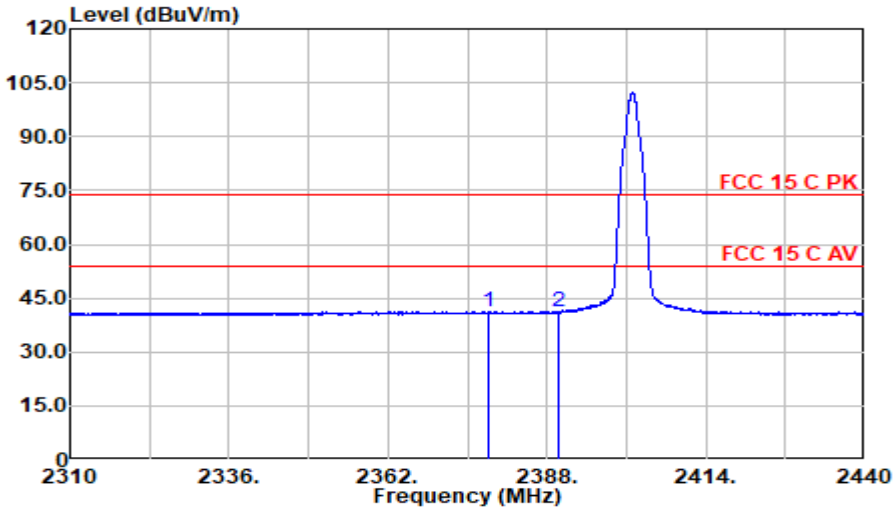
Mode: BLE2M CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2343.052	57.38	28.46	5.19	36.91	54.11	74.00	19.89	Peak
2390.000	56.44	28.58	5.23	36.86	53.38	74.00	20.62	Peak

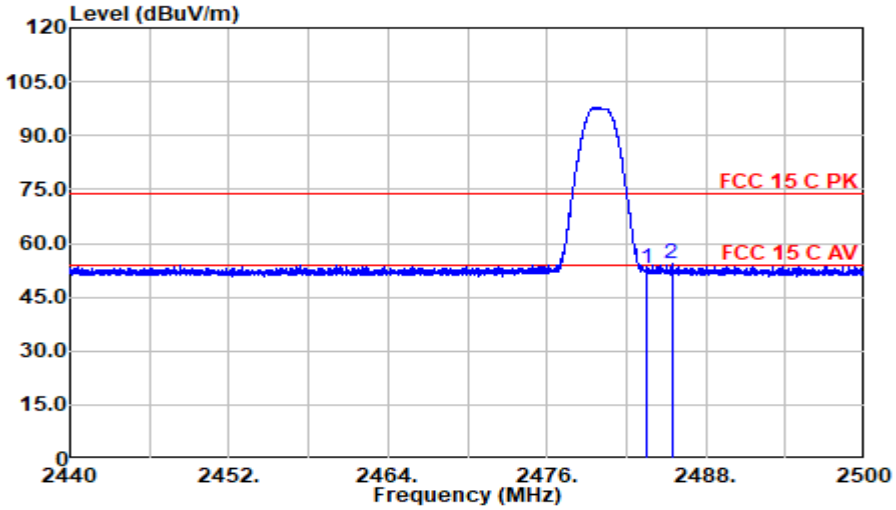
Mode: BLE2M CH2402MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2378.510	44.40	28.56	5.22	36.87	41.30	54.00	12.70	Average
2390.000	44.11	28.58	5.23	36.86	41.05	54.00	12.95	Average

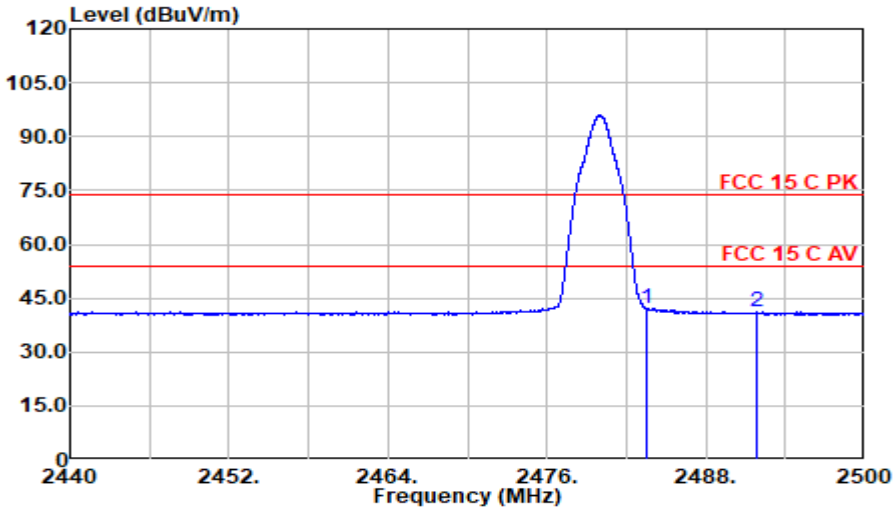
Mode: BLE2M CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	56.05	28.50	5.31	36.77	53.09	74.00	20.91	Peak
2485.420	57.14	28.50	5.31	36.76	54.18	74.00	19.82	Peak

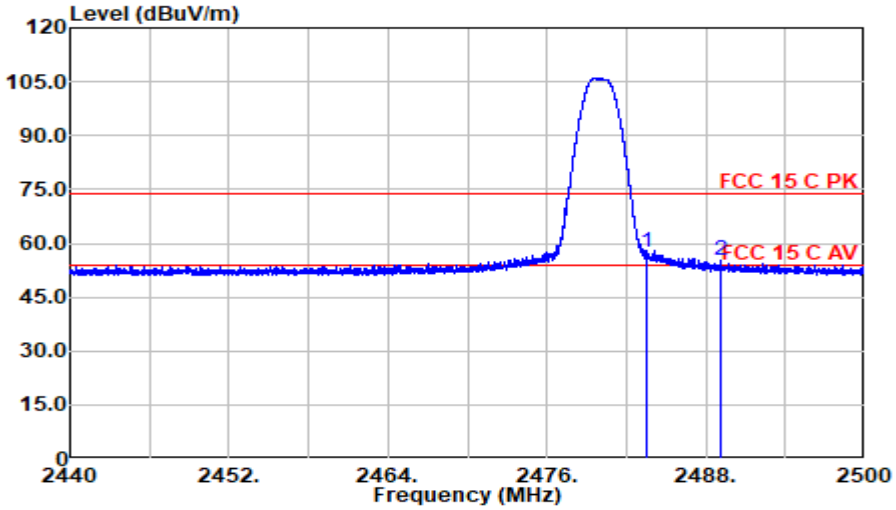
Mode: BLE2M CH2480MHz



Polarization at Horizontal

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	44.97	28.50	5.31	36.77	42.01	54.00	11.99	Average
2491.870	44.04	28.50	5.31	36.76	41.10	54.00	12.90	Average

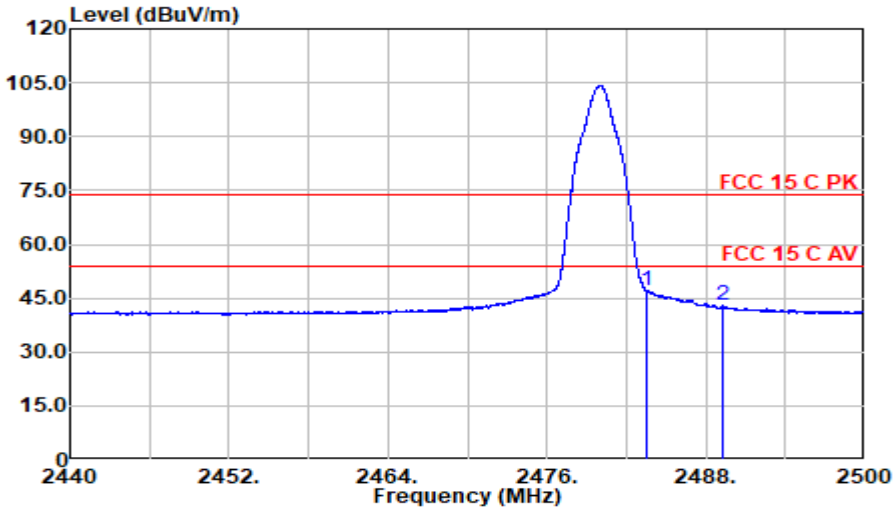
Mode: BLE2M CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	60.54	28.50	5.31	36.77	57.58	74.00	16.42	Peak
2489.170	58.09	28.50	5.31	36.76	55.14	74.00	18.86	Peak

Mode: BLE2M CH2480MHz



Polarization at Vertical

Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
2483.500	50.15	28.50	5.31	36.77	47.19	54.00	6.81	Average
2489.260	45.78	28.50	5.31	36.76	42.83	54.00	11.17	Average

5 6 dB BANDWIDTH MEASUREMENT

5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2024.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2024.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2024.09.21	1 Year

5.2 Block Diagram of Test Setup

5.3 Specification Limits (§15.247(a)(2))

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

5.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measure by spectrum analyzer with settings: RBW = 100kHz, VBW ≥ 3 × RBW.

The 6 dB bandwidth is defined as the total spectrum the power of which is lower than peak power minus 6 dB .

The test procedure is defined in ANSI C63.10-2013 (the 11.8.2 Measurement Procedure “Option 2” was used).

5.6 Test Results

PASSED.

All the test results are attached in next pages.

(Test Date: 2024.10.10 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	Frequency (MHz)	**6dB Bandwidth (kHz)**	Limit
BLE 1M	00	2402	**672.4**	500 kHz
	20	2442	**670.9**	500 kHz
	39	2480	**671.6**	500 kHz
BLE 2M	00	2402	**1349**	500 kHz
	20	2442	**1344**	500 kHz
	39	2480	**1347**	500 kHz

BLE 1M

CH2402

CH2442

CH2480

BLE 2M	
CH2402	CH2442
	
CH2480	
	

6 MAXIMUM PEAK OUTPUT POWER MEASUREMENT

6.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2024.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SM SM+	22022838	2024.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2024.09.21	1 Year

6.2 Block Diagram of Test Setup

The Same as Section. 5.2.

6.3 Specification Limits ((§15.247(b)(3))

The Limits of maximum Peak Output Power for digital modulation in 2400-2483.5 MHz is: 1 Watt. (30 dBm)

6.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

6.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:
a) RBW ≥ DTS Bandwidth.
b) VBW ≥ [3 × RBW].
c) Span ≥ [3 × RBW].
d) Sweep time = auto.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

The test procedure is defined in ANSI C63.10-2013 (11.9.1.1 Measurement Procedure " RBW □ DTS bandwidth" was used).

6.6 Test Results

PASSED.

All the test results are listed below.

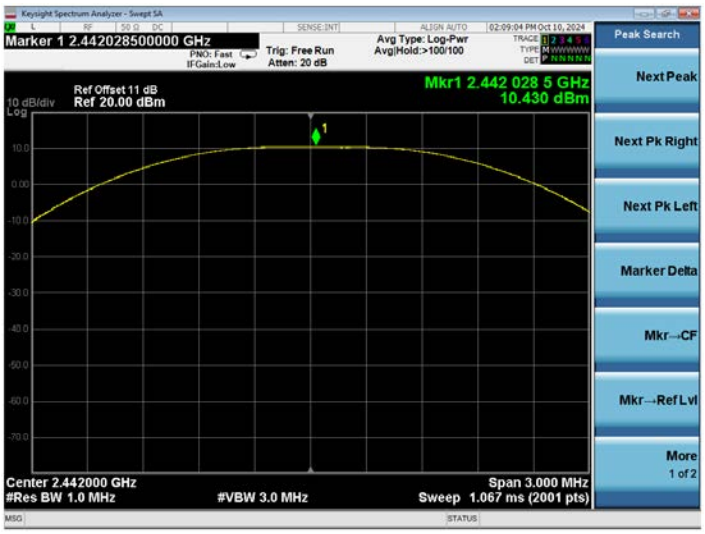
(Test Date: 2024.10.10 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	Frequency (MHz)	**Peak Output Power (dBm)**	Limit
BLE 1M	00	2402	**10.281**	30 dBm
	20	2442	**10.43**	30 dBm
	39	2480	**10.553**	30 dBm
BLE 2M	00	2402	**10.158**	30 dBm
	20	2442	**10.136**	30 dBm
	39	2480	**10.305**	30 dBm

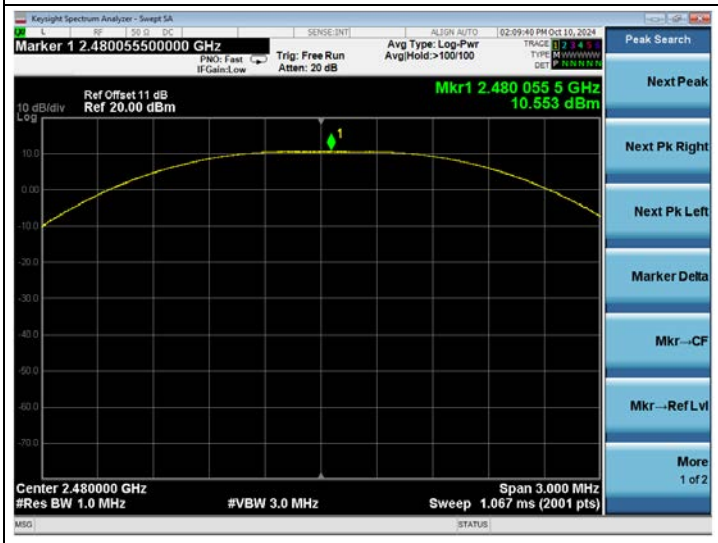
BLE 1M

CH2402

CH2442



CH2480



BLE 2M

CH2402

CH2442

CH2480

7 EMISSION LIMITATIONS MEASUREMENT

7.1 Test Equipment

The following test equipment was used during the emission limitations test:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2024.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SMSM+	22022838	2024.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2024.08.09	1 Year

7.2 Block Diagram of Test Setup

The Same as Section. 5.2.

7.3 Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.
In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)). (※This test result attaching to Section. 3.7)

7.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

7.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

Establish a reference level by using the following procedure:
a) Set instrument center frequency to DTS channel center frequency.
b) Set the span to ≥ 1.5 times the DTS bandwidth.
c) Set the RBW = 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum PSD level.
Note that the channel found to contain the maximum PSD level can be used to

establish the reference level.

Establish an emission level by using the following procedure:
a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

Scan up through 10^{th} harmonic.

The test procedure is defined in ANSI C63.10-2013 (11.11.2 Reference level measurement and 11.11.3 Emission level measurement was used).

7.6 Test Results

PASSED.

The test data was attached in the next pages.

(Test Date: 2024.10.10 Temperature: 23℃ Humidity: 51 %)

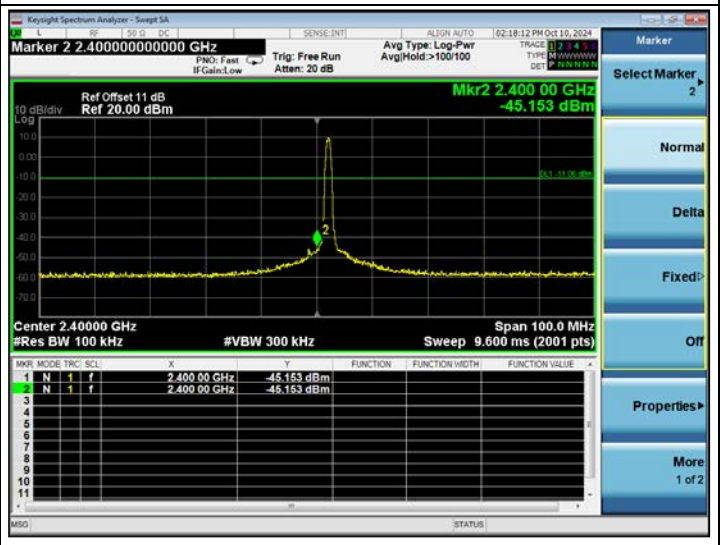
Mode	Channel	Frequency (MHz)	Data Page
BLE 1M	00	2402	P49
	20	2442	P50
	39	2480	P51
BLE 2M	00	2402	P52
	20	2442	P53
	39	2480	P54

BLE 1M

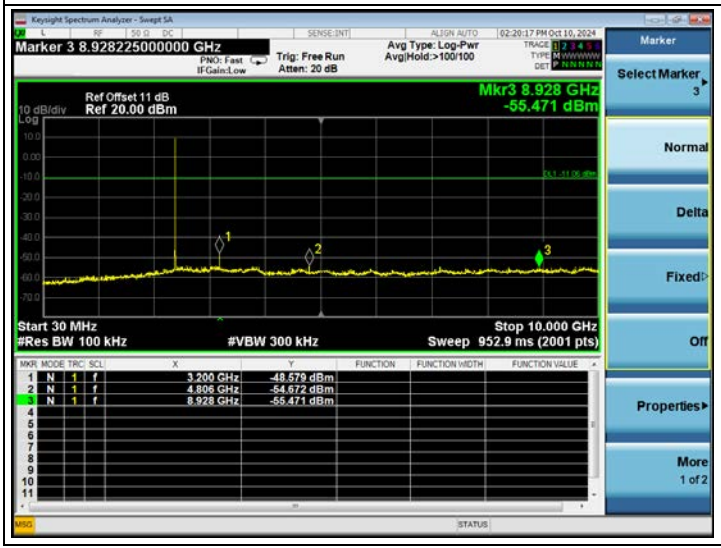
CH2402

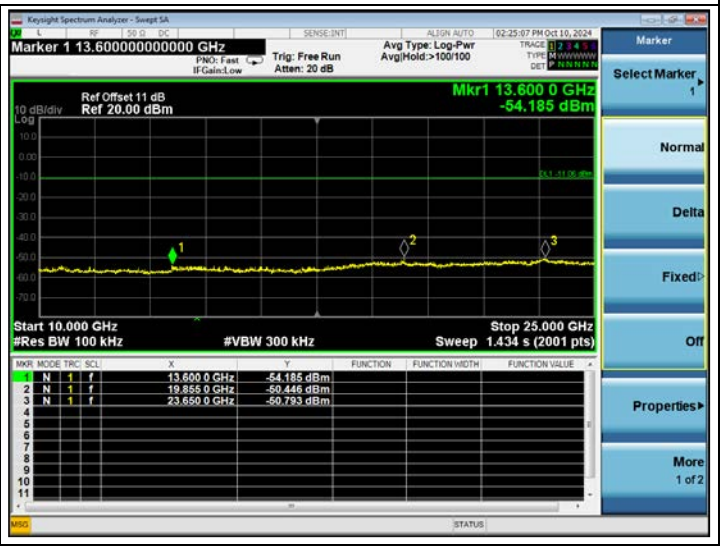
Reference Level

Lower Edge



Emission Level



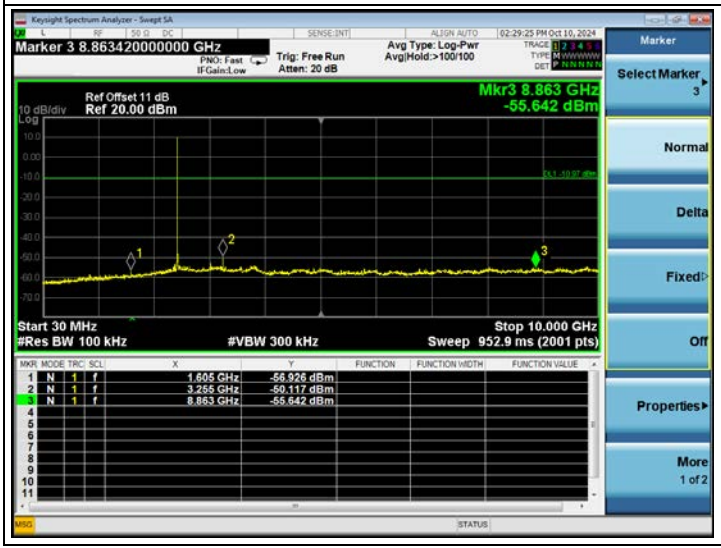


BLE 1M

CH2442

Reference Level

Emission Level

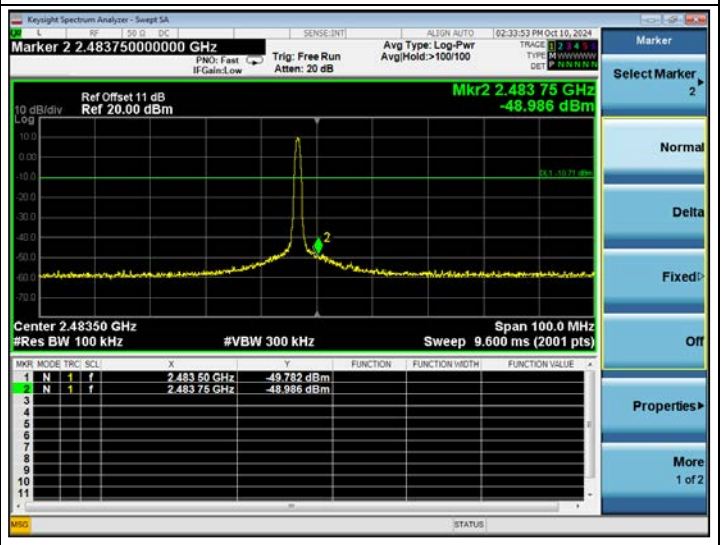


BLE 1M

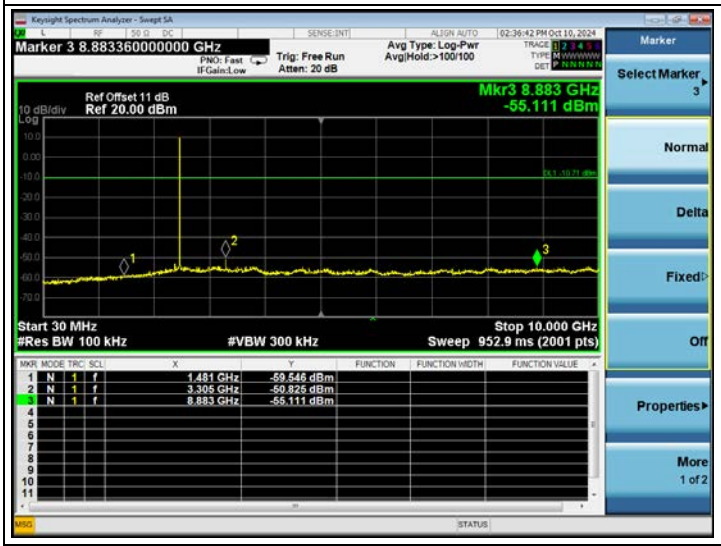
CH2480

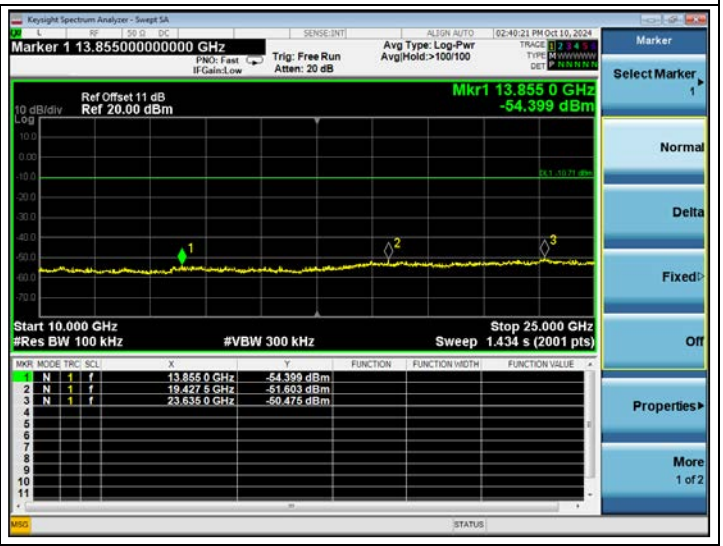
Reference Level

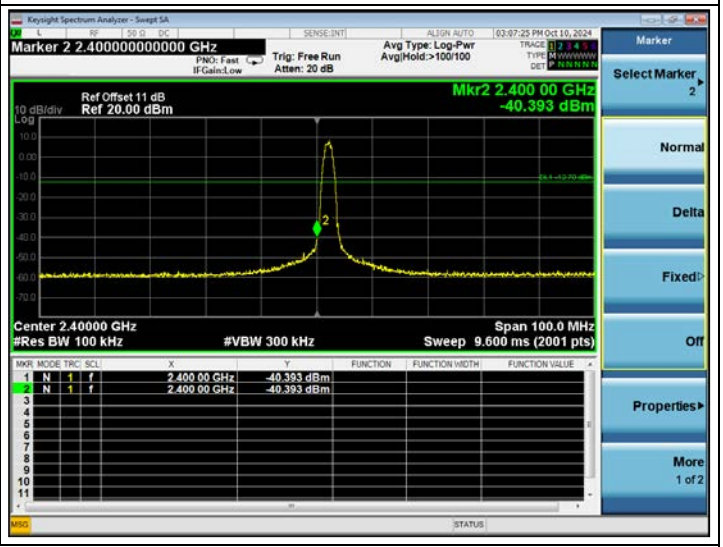
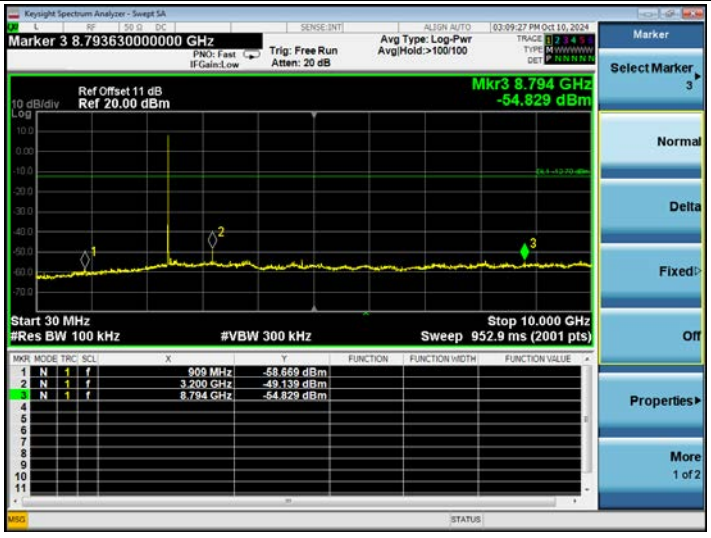
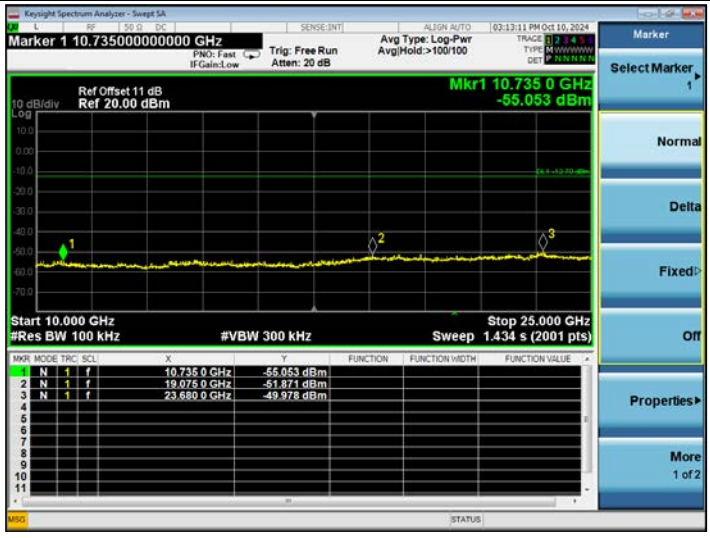
Higher Edge



Emission Level





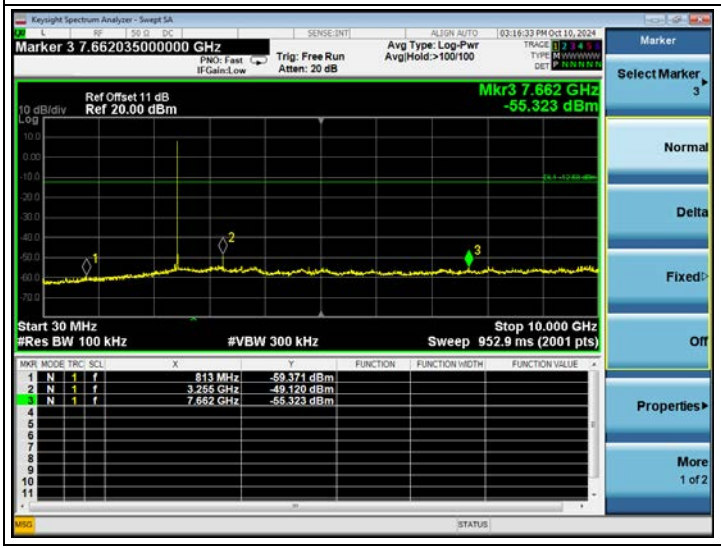
BLE 2M	
CH2402	
Reference Level	Lower Edge
	
Emission Level	
	

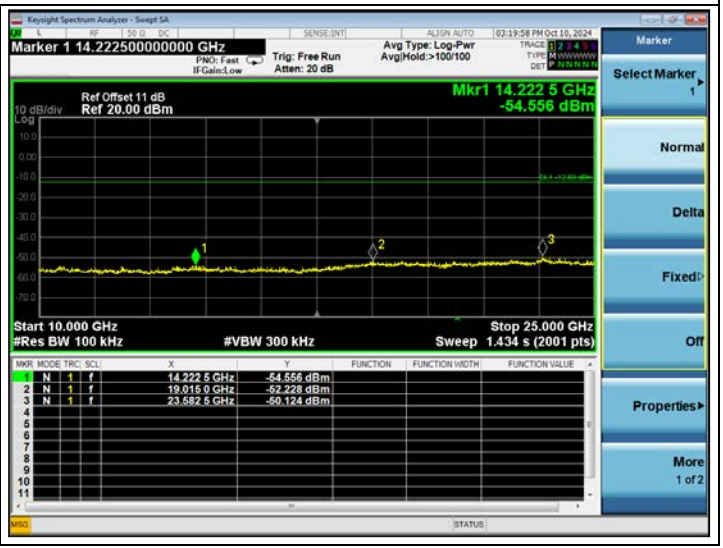
BLE 2M

CH2442

Reference Level

Emission Level



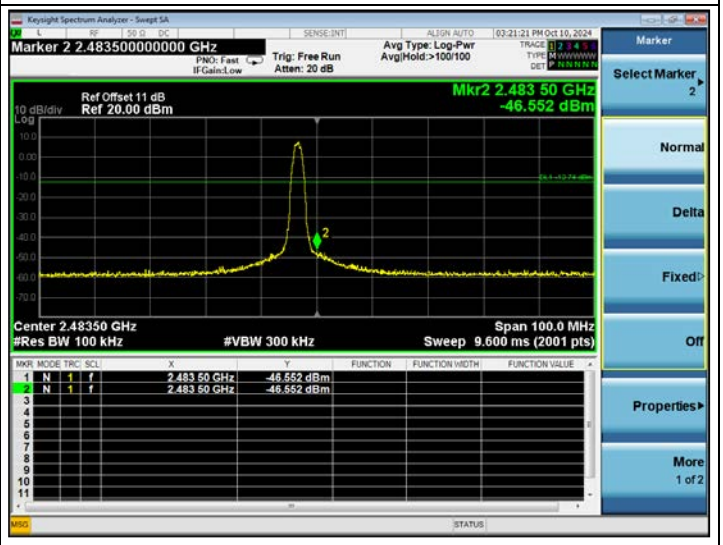


BLE 2M

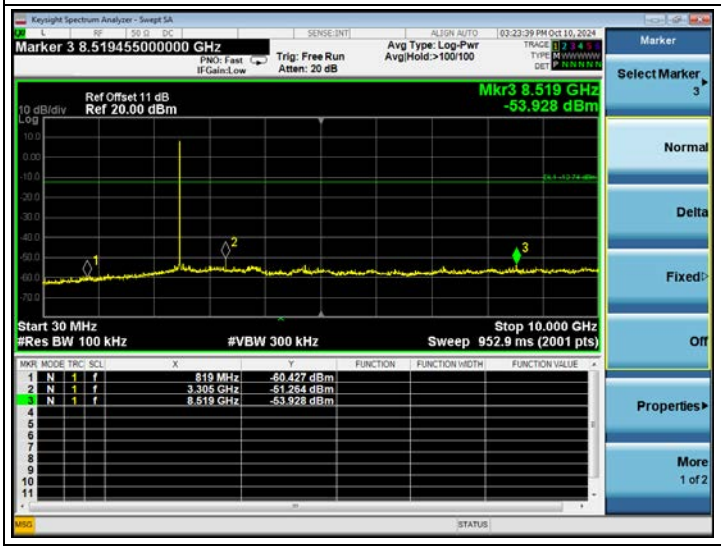
CH2480

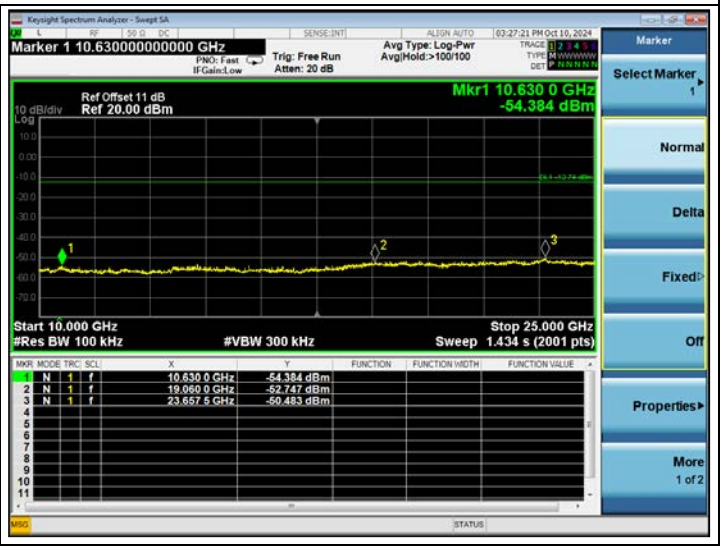
Reference Level

Higher Edge



Emission Level





8 POWER SPECTRAL DENSITY MEASUREMENT

8.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2024.08.09	1 Year
2.	RF Cable	Mini-Circuits	FLC-3FT-SMSM+	22022838	2024.08.09	1 Year
3.	10 dB Attenuator	Mini-Circuits	BW-S10W2+	001	2024.09.21	1 Year

8.2 Block Diagram of Test Setup

The Same as section 5.2.

8.3 Specification Limits (§15.247(e))

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band.

8.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

8.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

The test procedure is defined in ANSI C63.10-2013 (11.10.2 Measurement Procedure “Method PKPSD (peak PSD)” was used).

8.6 Test Results

PASSED.

All the test results are attached in next pages.

(Test Date: 2024.10.10 Temperature: 23℃ Humidity: 51 %)

Mode	Channel	Frequency (MHz)	**Power Spectral Density (dBm)**	Limit
BLE 1M	00	2402	**-6.04**	8 dBm
	20	2442	**-5.887**	8 dBm
	39	2480	**-5.467**	8 dBm
BLE 2M	00	2402	**-10.933**	8 dBm
	20	2442	**-10.687**	8 dBm
	39	2480	**-10.287**	8 dBm

BLE 1M

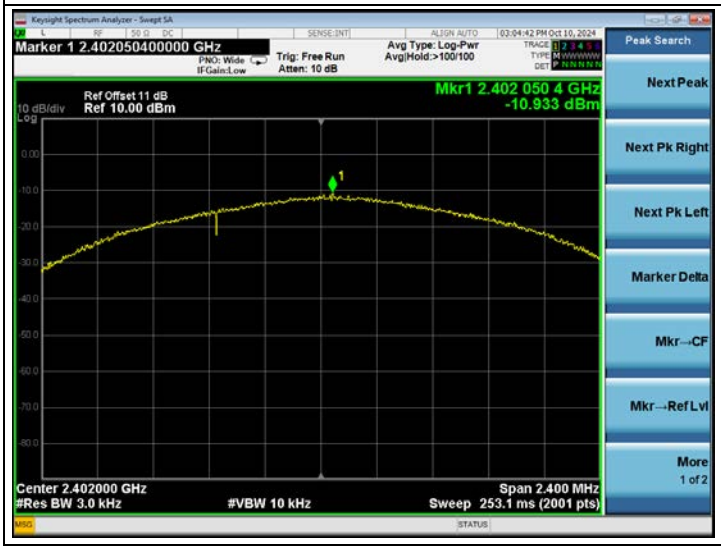
CH2402

CH2442

CH2480

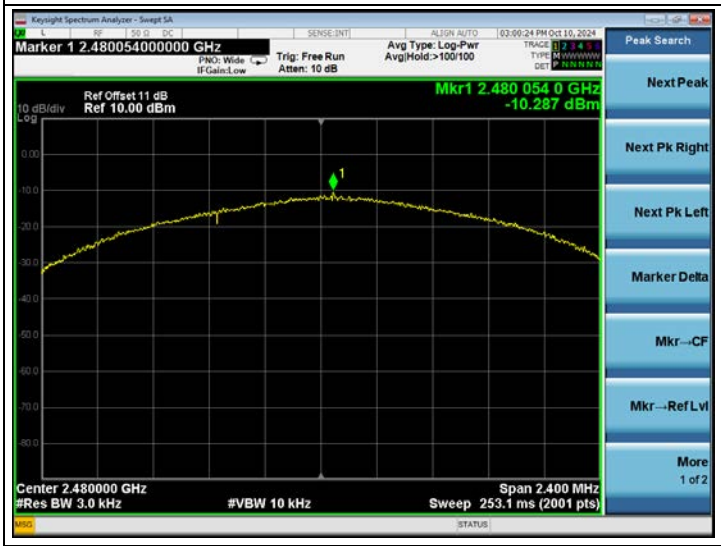
BLE 2M

CH2402



CH2442

CH2480



9 ANTENNA REQUIREMENT

9.1 Specification Limits (§15.203)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2 Result

According to KDB 353028 D1, the following describes the three ways that can be used to demonstrate compliance to Section 15.203: a) Antenna permanently attached. b) Unique (non-standard) antenna connector. c) Professional installation.
For this product, the antenna is: ☑ Antenna permanently attached ☐ Unique (non-standard) antenna connector ☐ Professional installation ☐ not meet any of ways list above that ☑ compliant ☐ not compliant with the requirement of Section 15.203.

10 DEVIATION TO TEST SPECIFICATIONS

None.

11 MEASUREMENT UNCERTAINTY LIST

The measurement uncertainty was estimated for test on the EUT according to CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of K=2.
The uncertainties value is not used in determining the PASS/FAIL results.

Test Items/Facilities	Frequency/Equipment/Unit	Uncertainty
Conducted Emission No.1 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Conducted Emission No.3 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Radiated Emission	30MHz~200MHz, Horizontal	±3.8 dB
	30MHz~200MHz, Vertical	±4.1 dB
	200MHz~1000MHz, Horizontal	±3.6 dB
	200MHz~1000MHz, Vertical	±5.1 dB
	1GHz~6GHz	±5.3 dB
	6GHz~18GHz	±5.3 dB
	18GHz~40GHz	±3.5 dB
Output Power Test	50MHz~18GHz	0.77 dB
Power Density Test	9kHz~6GHz	1.08 dB
RF Frequency Test	9kHz~40GHz	$6*10^{-4}$
Bandwidth Test	9kHz~6GHz	$1.5*10^{-3}$
RF Radiated Power Test	30MHz~1000MHz	3.06 dB
Conducted Output Power Test	50MHz~18GHz	0.83 dB
AC Voltage(<10kHz) Test	120V~230V	0.04 %
DC Power Test	0V~30V	0.4 %
Temperature	-40℃~+100℃	0.52 ℃
Humidity	30%~95%	2.6 %