

NETRONIX,INC.

TEST REPORT

Model:

N257

REPORT NUMBER

250700311THC-001

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Radio Spectrum TEST REPORT

Applicant:	NETRONIX,INC. No.945, Boai St., Jubei City, Hsinchu, 30265, Taiwan
Product:	Remote
Model No.:	N257
FCC ID:	NOIKBN257
Test Method/ Standard:	47 CFR FCC Part 15.247 & ANSI C63.10 2013 KDB 558074 D01 v05r02
Test By:	Intertek Testing Services Taiwan Ltd., Hsinchu Laboratory No. 17, Ln. 246, Niupu S. Rd., Xiangshan Dist, Hsinchu City 300075, Taiwan



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Revision History

Report No.	Issue Date	Revision Summary
250700311THC-001	Sep. 03, 2025	Original report

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Summary of Test Data

Test Requirement	Applicable Rule (Section 15.247)	Result
Minimum 6 dB Bandwidth	15.247(a)(2)	Pass
Maximum Peak Conducted Output Power	15.247(b)(3)	Pass
Power Spectral Density	15.247(e)	Pass
Emissions In Non-Restricted Frequency Bands	15.247(d)	Pass
Emissions In Restricted Frequency Bands (Radiated emission measurements)	15.247(d), 15.205, 15.209	Pass
Emission On The Band Edge	15.247(d), 15.205	Pass
AC Power Line Conducted Emission	15.207	N/A
Antenna Requirement	15.203	Pass

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.

Other Testing: the specification, standard and not taking into account the measurement uncertainty.

1. General Information

1.1 Identification of the EUT

Product:	Remote
Model No.:	N257
Operating Frequency:	2402 MHz ~ 2480 MHz
Channel Number:	40 channels
Frequency of Each Channel:	2402+2 k, k=0 ~ 39
Rating:	DC 1.5V
Power Cord:	N/A
Sample receiving date:	2025/07/28
Sample condition:	Workable
Test Date(s):	2025/07/31

1.2 Antenna description

Antenna Gain:	3.37dBi
Antenna Type:	CERAMIC Antenna
Connector Type:	Fixed
Remark:	Antenna information provided by the client.

1.3 Operation mode

Connected to Notebook via USB Cable, executing “SmartRF Studio 8” to select different frequency and modulation.

Mode	Channel	Frequency (MHz)	Signal on time(ms)	Signal on & off time(ms)	Duty cycle	Duty Cycle factor
BLE 1M	19	2440	100.00	100.00	1.00	0.00
BLE 2M	19	2440	100.00	100.00	1.00	0.00

The signal is maximized through rotation and placement in the two orthogonal axes.



X axis



Y axis



Z axis

After verifying three axes, we found the maximum electromagnetic field occurred at X-axis. The final test data was executed under this configuration.

1.4 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Data cable
Notebook PC	HP	HP ProBook 440 G3	5CD8021S9H	N/A
LaunchPad (Provide by client)	TEXAS INSTRUMENTS	LP-XDS110	N/A	N/A
Battery (Provide by client)	maxell	LR03(GD)	N/A	N/A

Peripherals name	Length	Shielded(Y/N)	Brand	Model No.
USB Cable (Provide by client)	0.6m	Y	TI	LP-XDS110-Kit001
USB Cable	1.5m	Y	UGREEN	20276

2. Minimum 6 dB Bandwidth

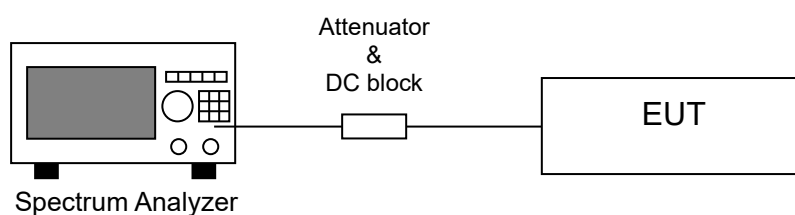
2.1 Instrument Setting

Spectrum Parameter	Setting
Detector	Peak
RBW	100kHz
VBW	$\geq 3 \times \text{RBW}$
Sweep	Auto couple
Trace	Allow the trace to stabilize.
Span	Between two times and five times the occupied bandwidth
Attenuation	Auto

2.2 Test Procedure

Step 1	The transmitter output was connected to the spectrum analyzer.
Step 2	Test was performed accordance with ANSI C63.10.
Step 3	Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

2.3 Test Diagram



2.4 Limit

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

2.5 Test Results

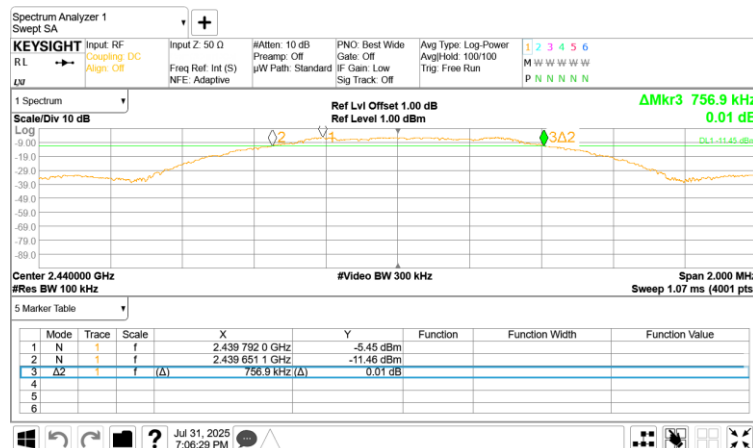
Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
BLE 1M	0	2402	0.76	>0.5	Pass
	19	2440	0.76	>0.5	Pass
	39	2480	0.76	>0.5	Pass
BLE 2M	0	2402	1.40	>0.5	Pass
	19	2440	1.41	>0.5	Pass
	39	2480	1.41	>0.5	Pass

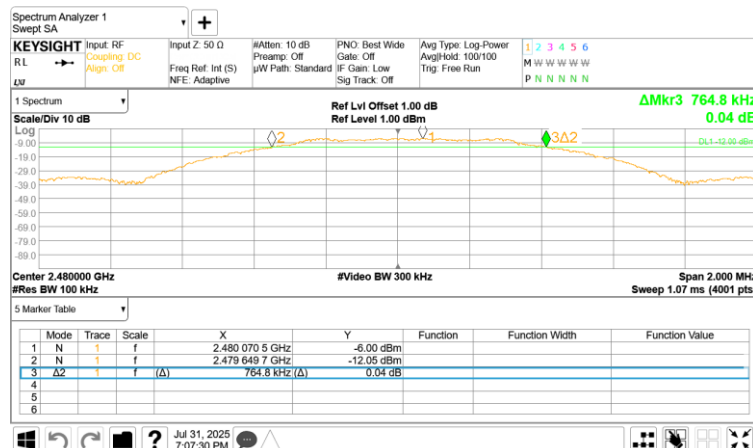
Chain0 : 6dB Bandwidth @ BLE 1M Mode Ch 0



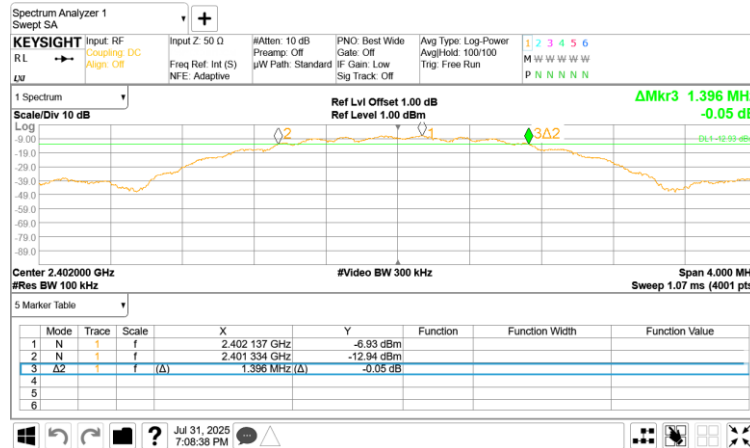
Chain0 : 6dB Bandwidth @ BLE 1M Mode Ch 19



Chain0 : 6dB Bandwidth @ BLE 1M Mode Ch 39



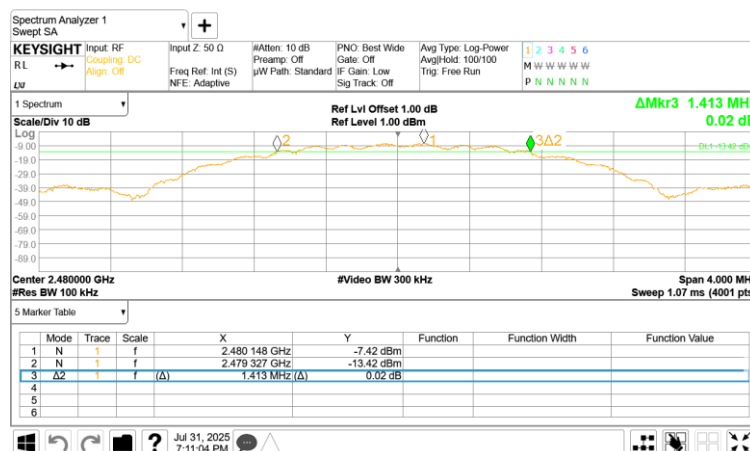
Chain0 : 6dB Bandwidth @ BLE 2M Mode Ch 0



Chain0 : 6dB Bandwidth @ BLE 2M Mode Ch 19



Chain0 : 6dB Bandwidth @ BLE 2M Mode Ch 39



3. Maximum Peak Conducted Output Power

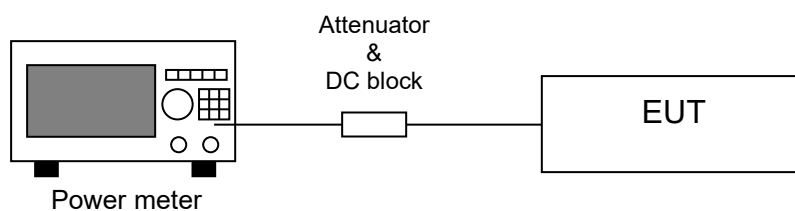
3.1 Instrument Setting

Power Meter Parameter	Setting
Bandwidth	65MHz bandwidth is greater than the EUT emission bandwidth
Detector	Peak & Average

3.2 Test Procedure

The preferred methodology is to use integrated average power measurements, as described in 11.9.2 and 11.13.3 of ANSI C63.10. The peak integrated band power methods of 11.9.1.2 and 11.13.3.2 of ANSI C63.10 are not applicable for FCC compliance testing purposes.

3.3 Test Diagram



3.4 Limit

For systems using digital modulation in the 2400-2483.5 MHz: 1 Watt (30dBm)

3.5 Test Results

Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

Mode	Channel	Frequency (MHz)	Output Power [AV] (dBm)	Total Power [AV] (mW)	Maximum Power [PK] (dBm)	Maximum Power [PK] (mW)	Limit (dBm)	Margin (dB)
BLE 1M	0	2402	-3.50	0.45	-3.38	0.46	30	-33.38
	19	2440	-3.60	0.44	-3.46	0.45	30	-33.46
	39	2480	-3.92	0.41	-3.74	0.42	30	-33.74
BLE 2M	0	2402	-3.52	0.44	-3.40	0.46	30	-33.40
	19	2440	-3.61	0.44	-3.48	0.45	30	-33.48
	39	2480	-3.90	0.41	-3.75	0.42	30	-33.75

4. Power Spectral Density

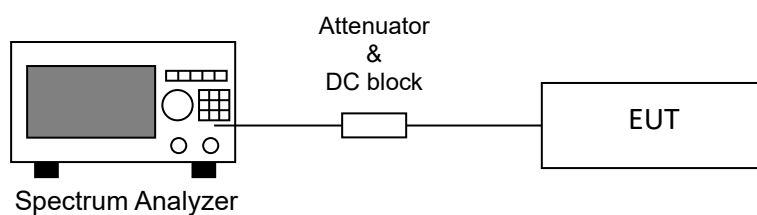
4.1 Instrument Setting

Spectrum Function	Setting
Detector	Peak
RBW	≥ 3 kHz
VBW	$\geq 3 \times$ RBW
Sweep	Auto couple
Trace	Max hold
Span	1.5 times x 6dB bandwidth
Attenuation	Auto

4.2 Test Procedure

Step 1	Test procedure refer to subclause 11.10 of ANSI C63.10.
Step 2	Using the maximum conducted output power in the fundamental emission demonstrates compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
Step 3	Use the peak marker function to determine the maximum amplitude level within the RBW.

4.3 Test Diagram



4.4 Limit

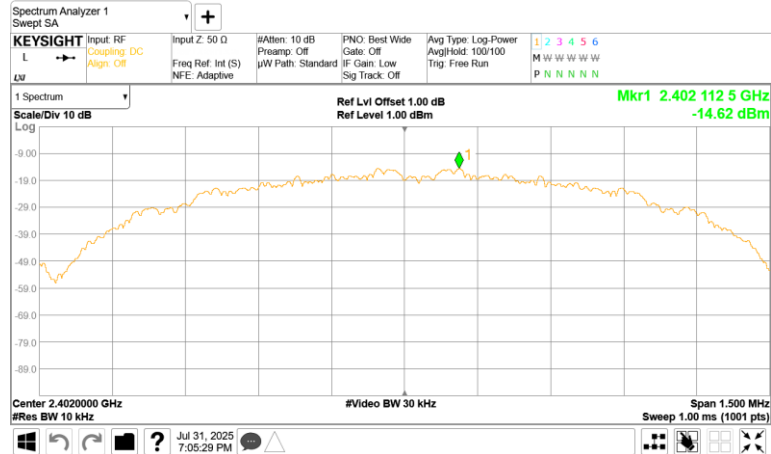
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission

4.5 Test Results

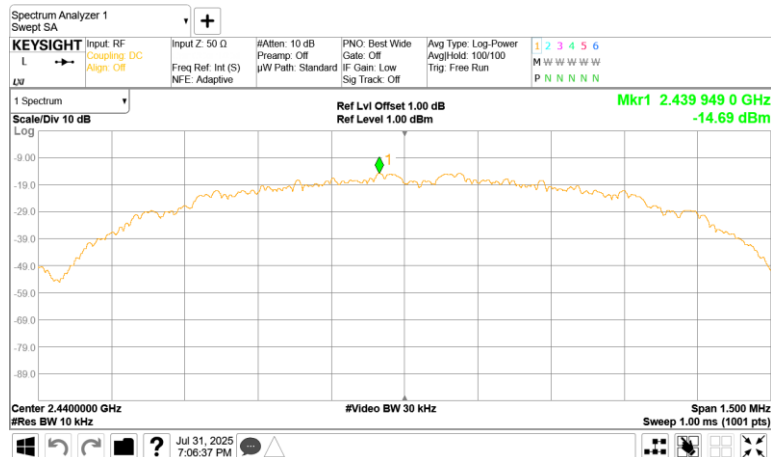
Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

Mode	Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
BLE 1M	0	2402	-14.62	8	-22.62
	19	2440	-14.69	8	-22.69
	39	2480	-15.09	8	-23.09
BLE 2M	0	2402	-19.15	8	-27.15
	19	2440	-19.48	8	-27.48
	39	2480	-19.61	8	-27.61

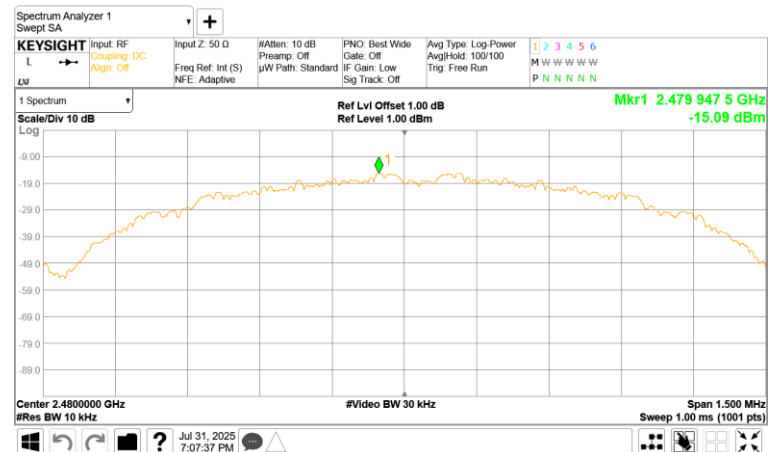
Chain0 : Power Spectral Density @ BLE 1M Mode Ch 0



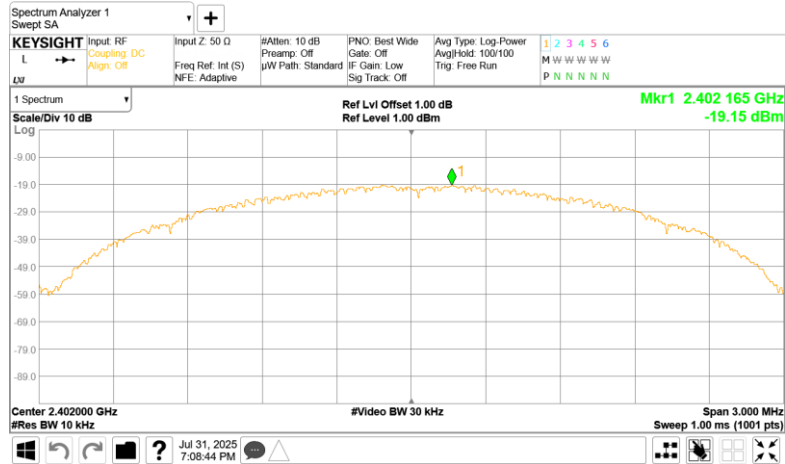
Chain0 : Power Spectral Density @ BLE 1M Mode Ch 19



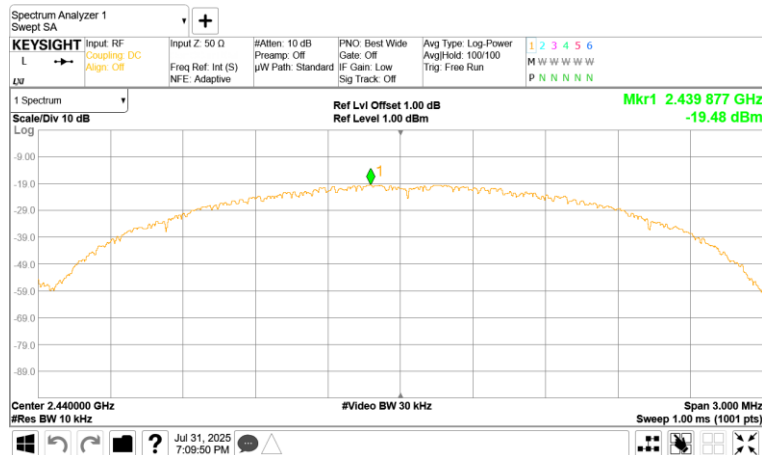
Chain0 : Power Spectral Density @ BLE 1M Mode Ch 39



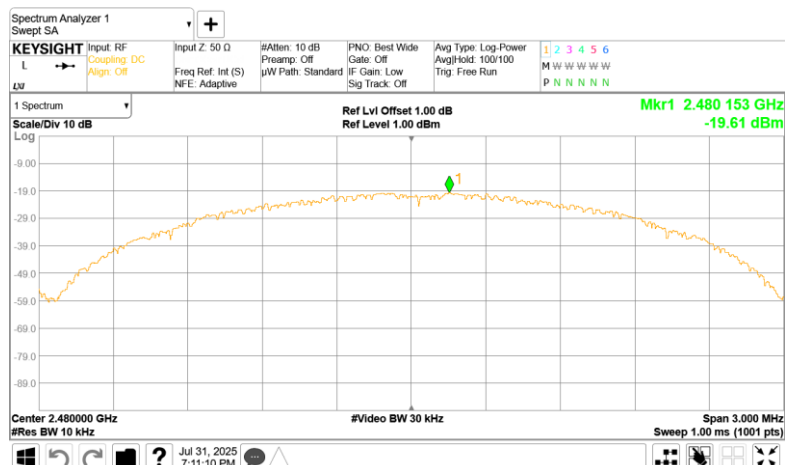
Chain0 : Power Spectral Density @ BLE 2M Mode Ch 0



Chain0 : Power Spectral Density @ BLE 2M Mode Ch 19



Chain0 : Power Spectral Density @ BLE 2M Mode Ch 39



5. Emissions in Non-Restricted Frequency Bands

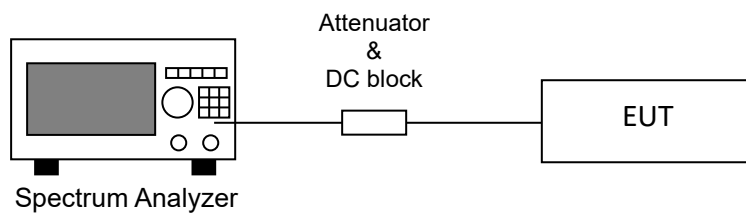
5.1 Instruments Setting

Spectrum Function	Setting (Reference Level)	Setting (Emission Level)
Detector	Peak	Peak
RBW	≥ 100 kHz	≥ 100 kHz
VBW	$\geq 3 \times$ RBW	$\geq 3 \times$ RBW
Sweep	Auto couple	Auto couple
Trace	Max hold	Max hold
Span	≥ 1.5 time 6dB bandwidth	
Attenuation	Auto	Auto

5.2 Test Procedure

- Step 1 The procedure was used in antenna-port conducted and connected to the spectrum analyzer.
- Step 2 Set instrument center frequency to center frequency.
- Step 3 Use the parameter configured in subclause 11.11 of ANSI C63.10 to measure.
- Step 4 Use the peak marker function to determine the maximum amplitude level.

5.3 Test Diagram



5.4 Limit

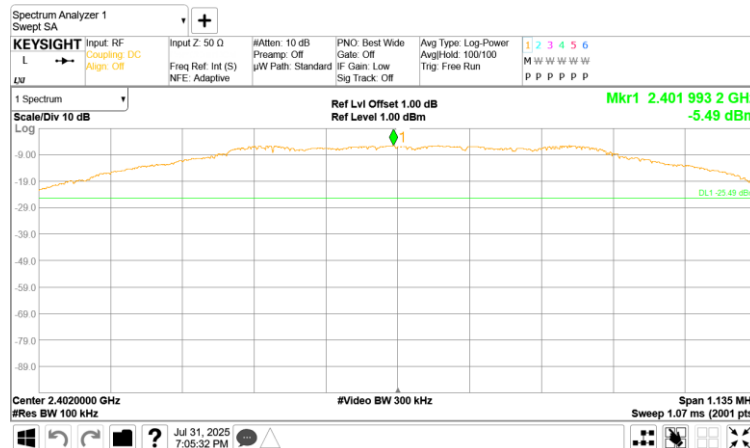
The peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz

5.5 Test Results

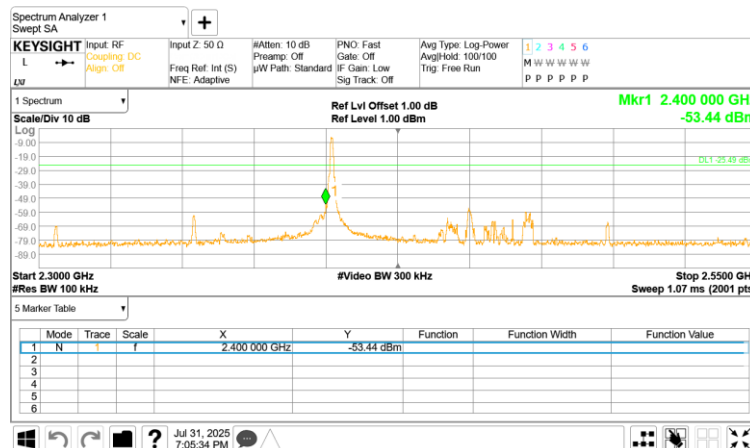
Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

Mode	Channel	Frequency (MHz)	Delta (dBc)	Limit (dBc)
BLE 1M	0	2402	40.53	>20
	19	2440	39.72	>20
	39	2480	39.61	>20
BLE 2M	0	2402	31.13	>20
	19	2440	33.74	>20
	39	2480	38.85	>20

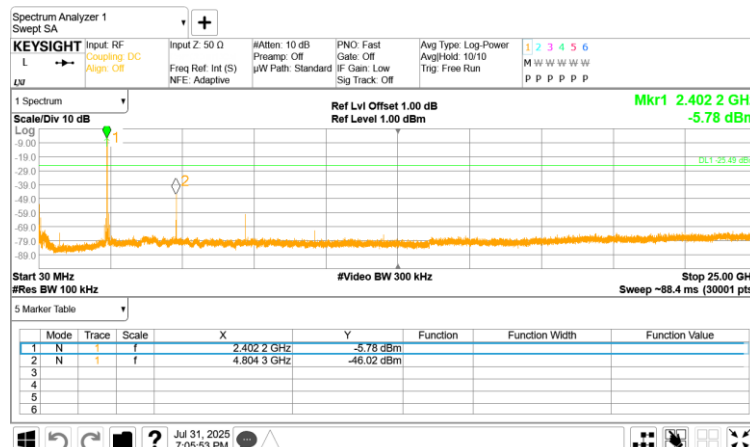
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 0



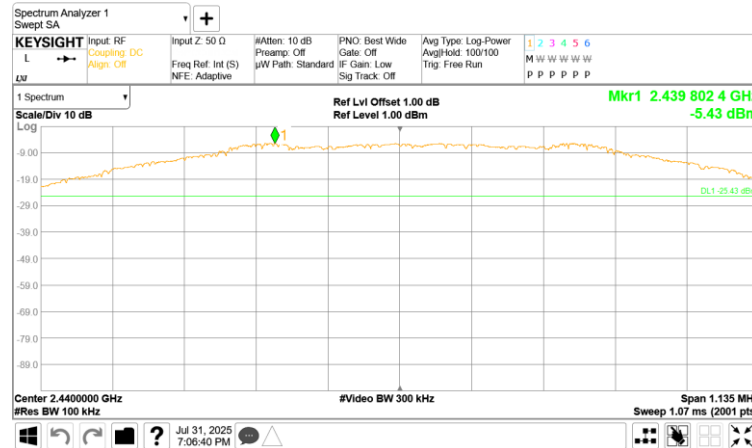
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 0



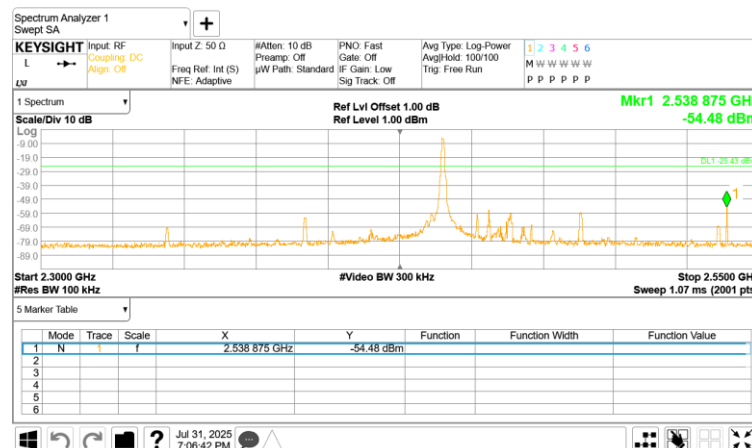
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 0



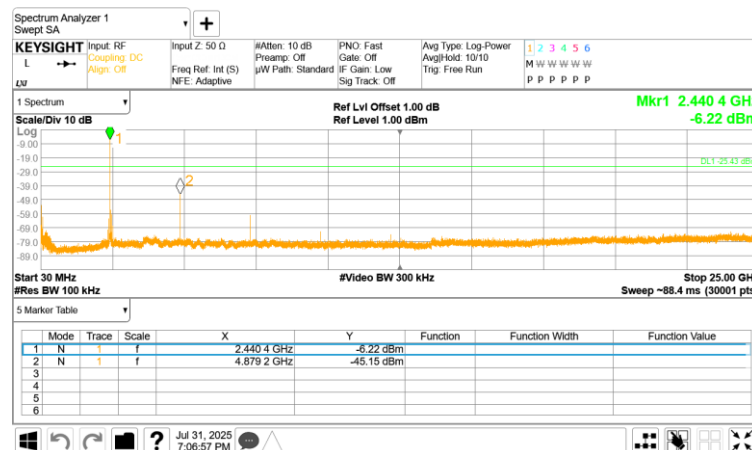
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 19



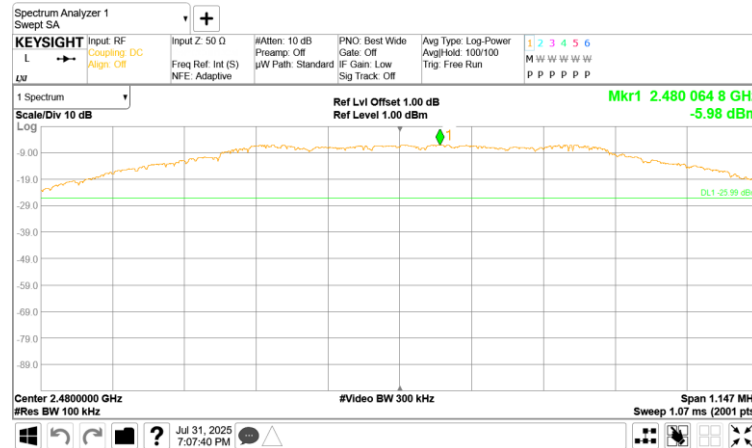
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 19



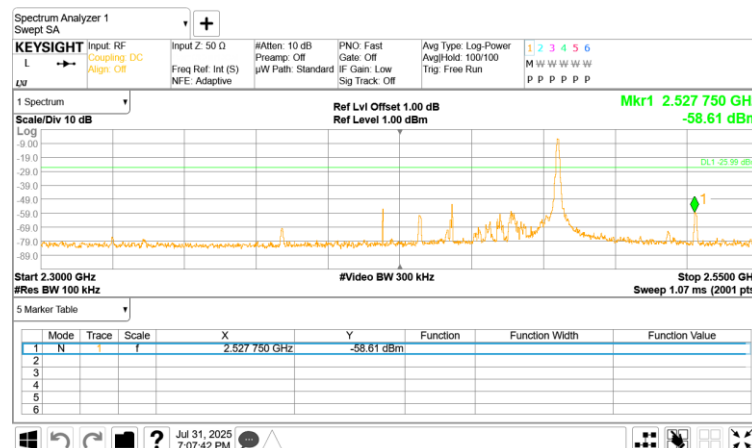
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 19



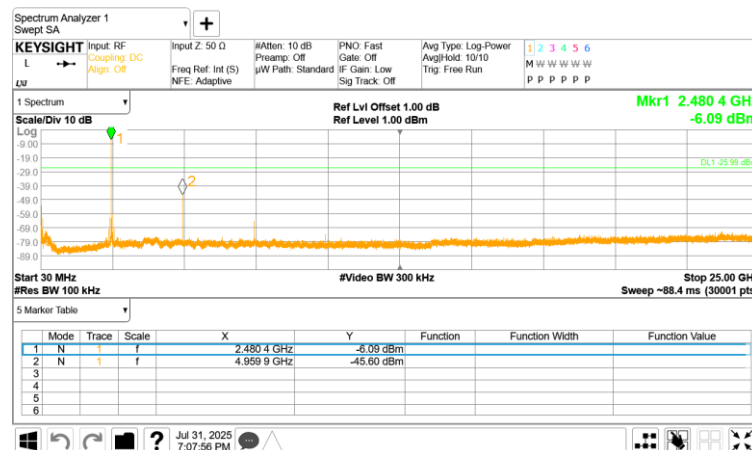
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 39



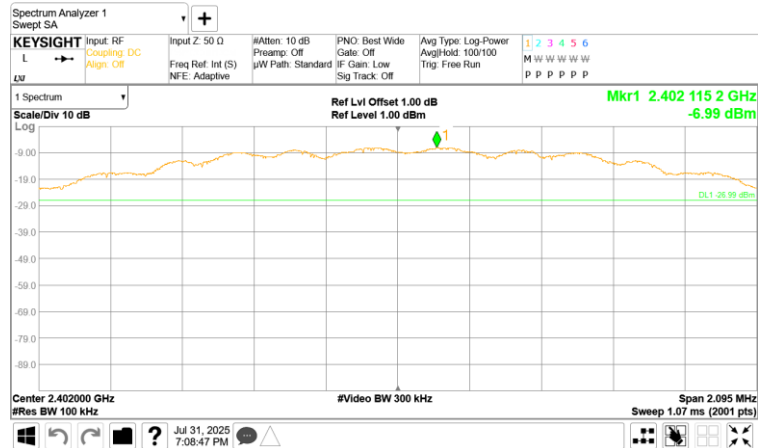
Chain0 : Conducted Spurious @ BLE 1M Mode Ch 39



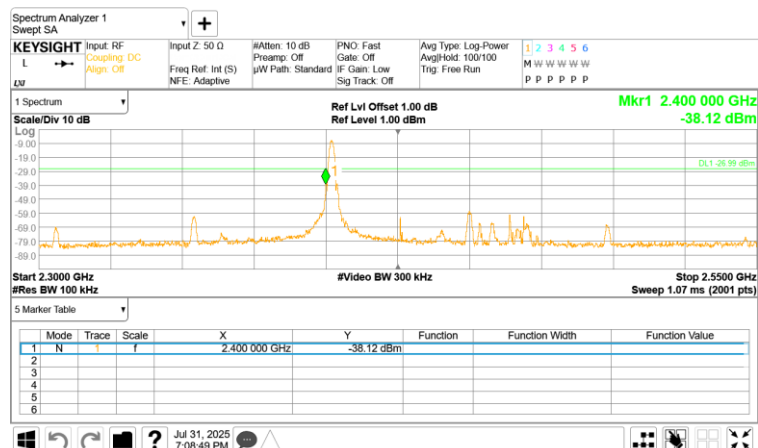
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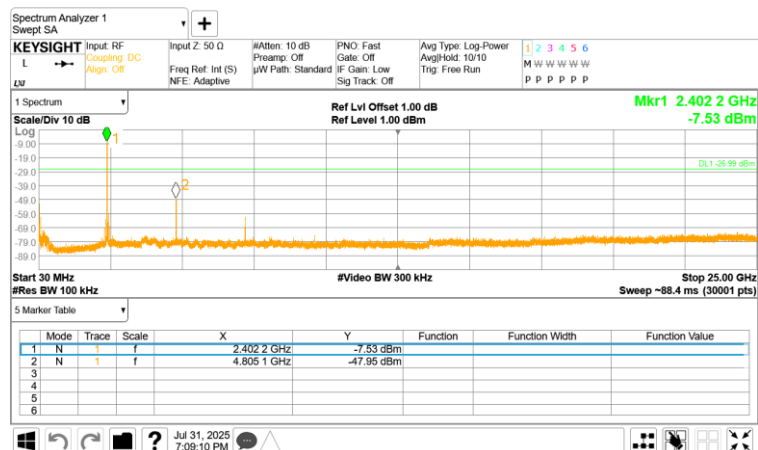
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 0



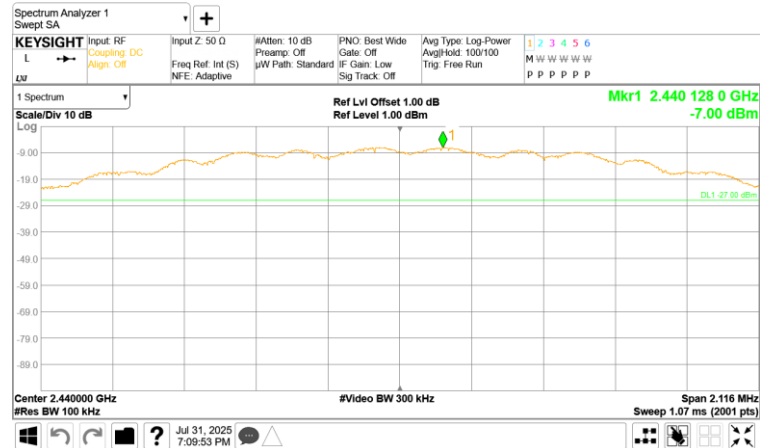
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 0



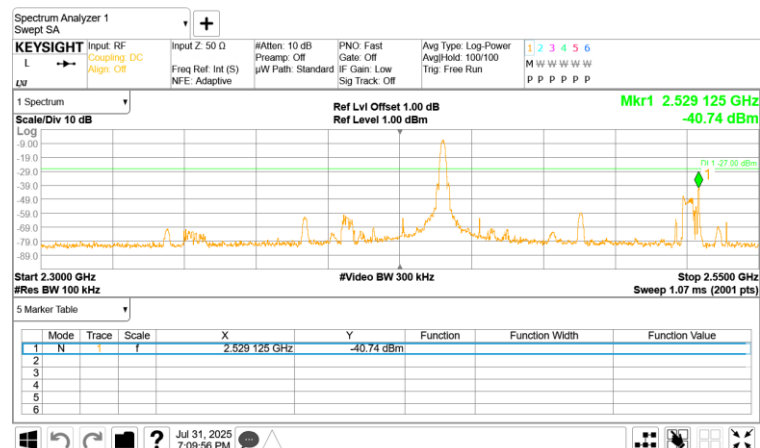
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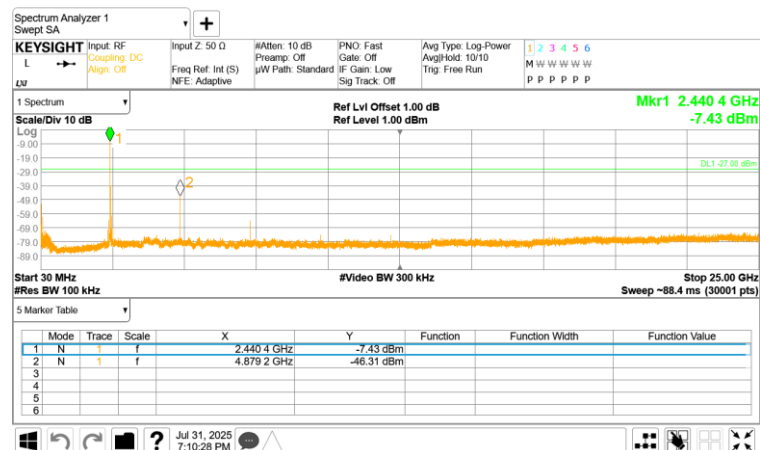
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 19



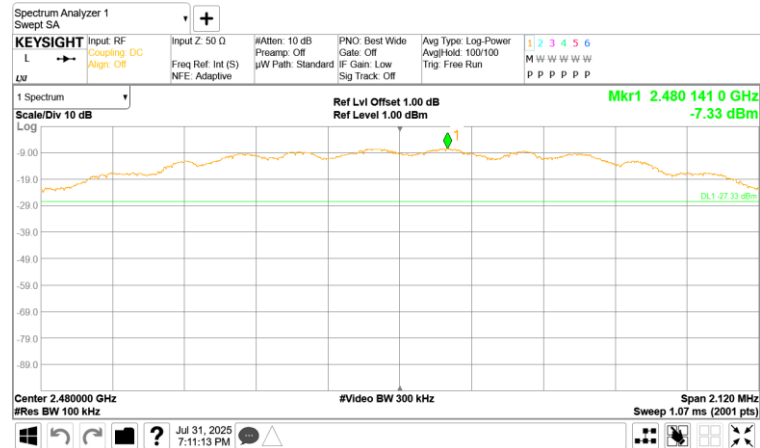
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 19



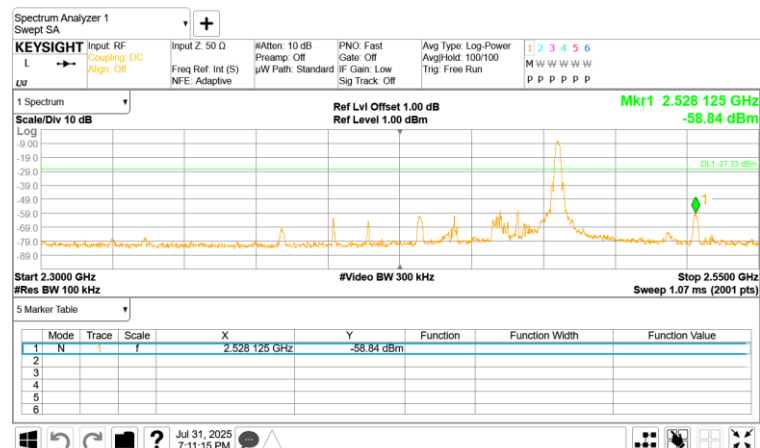
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 19



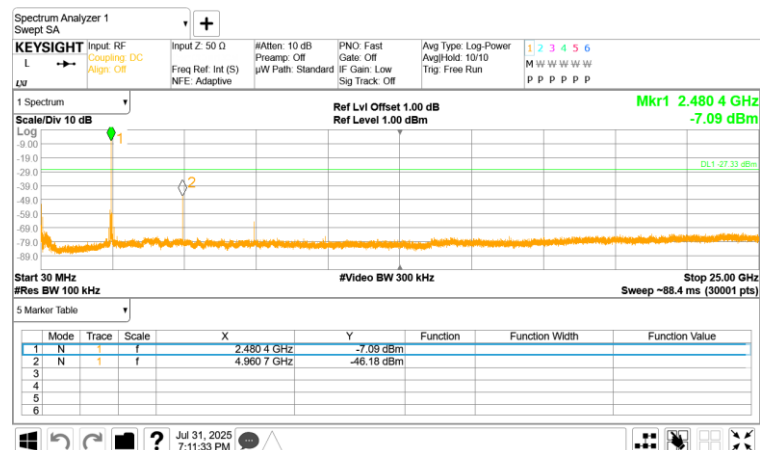
Chain0 : Conducted Spurious @ BLE 2M Mode Ch 39



Chain0 : Conducted Spurious @ BLE 2M Mode Ch 39



Chain0 : Conducted Spurious @ BLE 2M Mode Ch 39



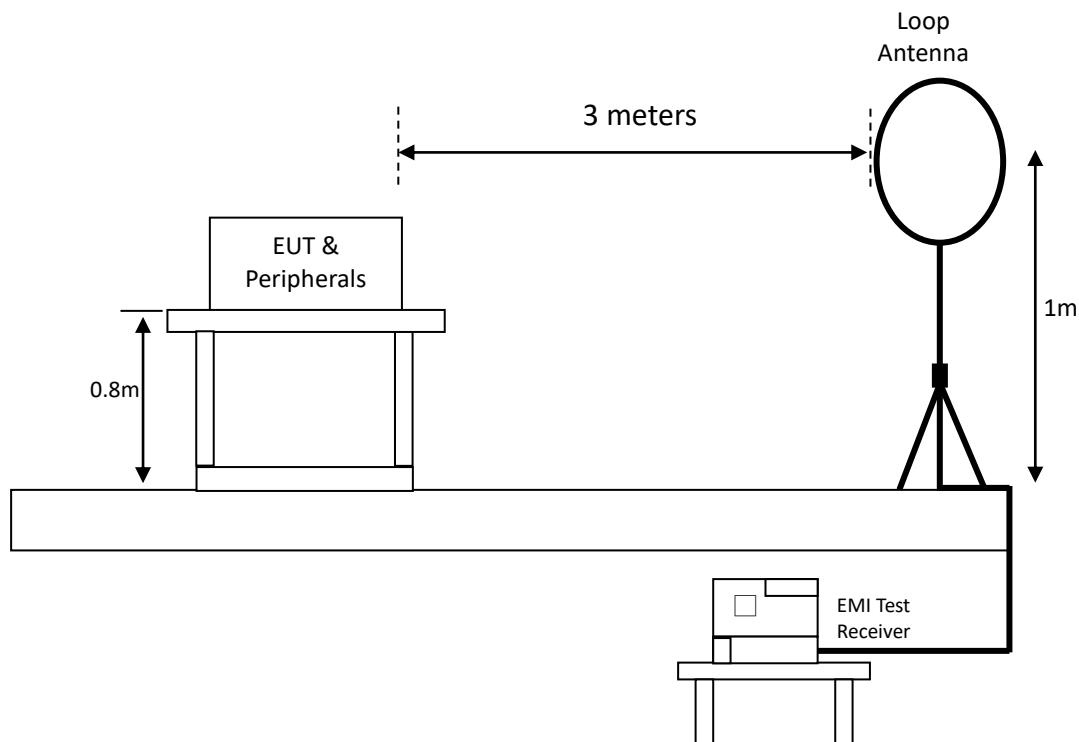
6. Emissions in Restricted Frequency Bands (Radiated emission measurements)

6.1 Instrument Setting

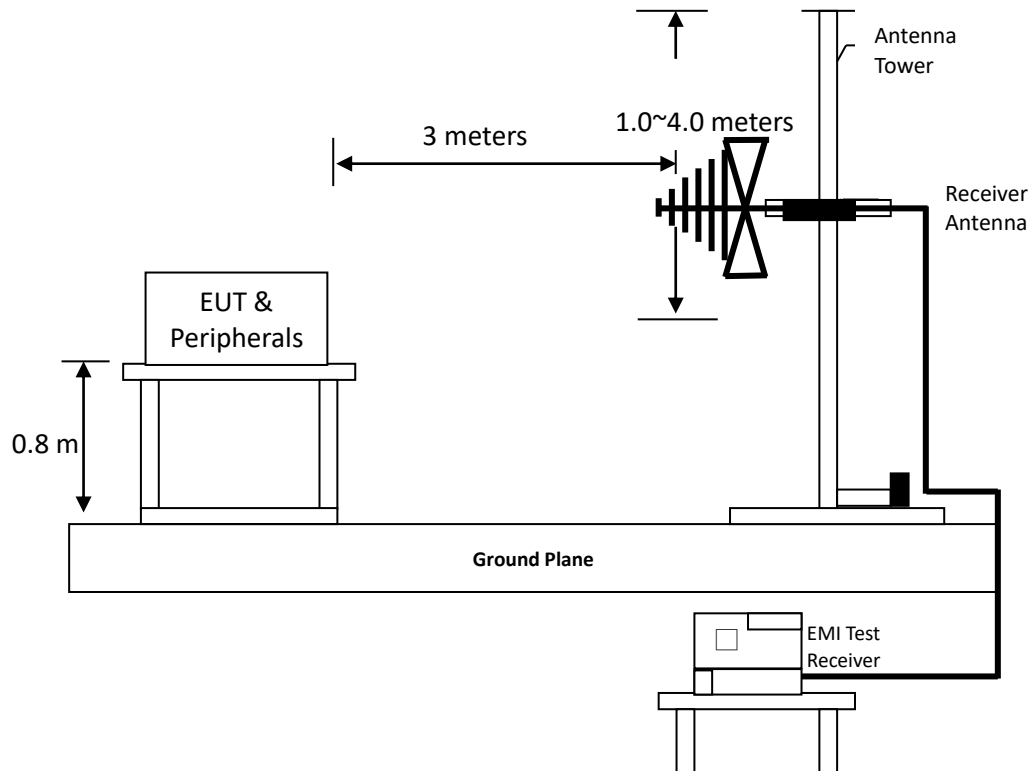
Receiver Function	Setting (Below 1GHz)	Setting (Above 1GHz)
Detector	QP	Peak and Average
RBW	9-150 kHz ; 200-300 Hz 0.15-30 MHz; 9-10 kHz 30-1000 MHz; 100-120 kHz	1MHz
VBW	$\geq 3 \times \text{RBW}$	3MHz & 1/T Minimum VBW
Sweep	Auto couple	Auto couple
Start Frequency	9 kHz	1GHz
Stop Frequency	1 GHz	Tenth harmonic
Attenuation	Auto	Auto

6.2 Test setup & procedure

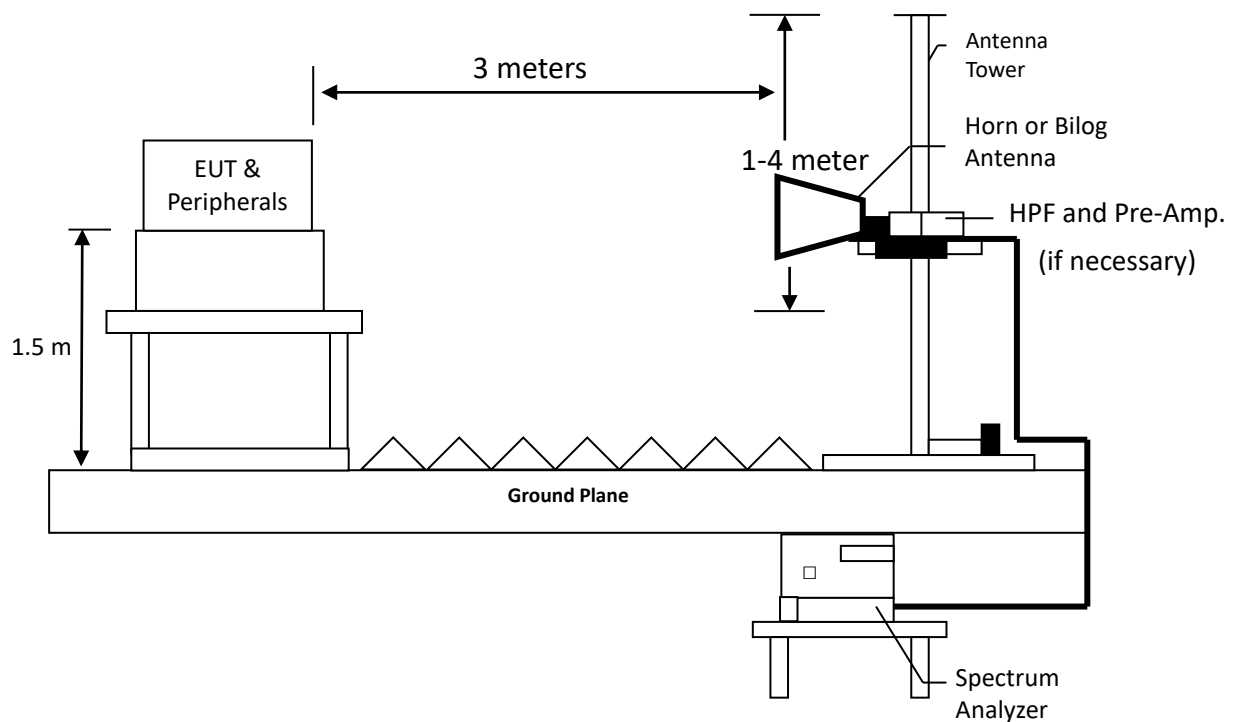
Radiated emission from 9kHz to 30MHz uses Loop Antenna:



Radiated emission below 1GHz using Bilog Antenna



Radiated emission above 1GHz using Horn Antenna



TEST REPORT

Radiated emissions were investigated cover the frequency range from 30MHz to 1000MHz using a receiver RBW of 120kHz record QP reading, and the frequency over 1GHz using a spectrum analyzer RBW of 1MHz and 10Hz VBW record Average reading. (15.209 paragraph), the Peak reading (1 MHz RBW/ 3 MHz VBW) recorded also on the report.

The EUT for testing is arranged on a turntable. If some peripherals apply to the EUT, the peripherals will be connected to EUT and the whole system. During the test, all cables were arranged to produce worst-case emissions. The signal is maximized through rotation. The height of antenna and polarization is changing constantly for exploring for maximum signal level. The height of antenna can be up to 4 meters and down to 1 meter.

The measurement for radiated emission will be done at the distance of three meters unless the signal level is too low to measure at that distance. In the case of the reading under noise floor, a pre-amplifier is used and/or the test is conducted at a closer distance. And then all readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

6.3 Limit

Frequency (MHz)	Field Strength (uV/m)	Measurement distance (meter)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark:

1. In the above table, the tighter limit applies at the band edges.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system

6.4 Test Result

6.4.1 Measurement results: frequencies 9kHz to 30MHz

Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

The test was performed on EUT under continuously transmitting mode. The worst case occurred at BLE 1M, Ch_0.

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Perpendicular	0.25	PK	16.95	28.85	45.80	99.68	-53.88
Perpendicular	0.61	PK	17.40	32.90	50.30	71.91	-21.61
Perpendicular	1.21	PK	17.38	26.64	44.02	65.96	-21.94
Perpendicular	1.72	PK	17.33	21.60	38.93	69.54	-30.61
Perpendicular	3.04	PK	17.52	16.11	33.63	69.54	-35.91
Perpendicular	3.64	PK	17.76	12.81	30.57	69.54	-38.97

Remark: Corr. Factor = Antenna Factor + Cable Loss

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Parallel	0.07	PK	16.91	30.36	47.27	110.83	-63.56
Parallel	0.58	PK	17.38	28.39	45.77	72.35	-26.58
Parallel	1.24	PK	17.38	27.14	44.52	65.74	-21.22
Parallel	1.84	PK	17.32	21.83	39.15	69.54	-30.39
Parallel	2.41	PK	17.38	17.30	34.68	69.54	-34.86
Parallel	3.61	PK	17.74	14.14	31.88	69.54	-37.66

Remark: Corr. Factor = Antenna Factor + Cable Loss

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Ground-parallel	0.25	PK	16.95	27.47	44.42	99.68	-55.26
Ground-parallel	0.61	PK	17.40	32.67	50.07	71.91	-21.84
Ground-parallel	1.21	PK	17.38	26.67	44.05	65.96	-21.91
Ground-parallel	1.81	PK	17.32	19.13	36.45	69.54	-33.09
Ground-parallel	2.38	PK	17.38	19.41	36.79	69.54	-32.75
Ground-parallel	8.80	PK	19.28	10.68	29.96	69.54	-39.58

Remark: Corr. Factor = Antenna Factor + Cable Loss

6.4.2 Measurement results: frequencies below 1 GHz

Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

The test was performed on EUT under continuously transmitting mode. The worst case occurred at BLE 1M, Ch_0.

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Horizontal	223.03	PK	18.00	9.51	27.51	46.00	-18.49
Horizontal	249.22	PK	19.89	8.58	28.47	46.00	-17.53
Horizontal	264.74	PK	20.15	8.42	28.57	46.00	-17.43
Horizontal	288.99	PK	20.82	9.35	30.17	46.00	-15.83
Horizontal	409.27	PK	23.64	5.29	28.93	46.00	-17.07
Horizontal	451.95	PK	24.96	4.49	29.45	46.00	-16.55

Remark: Corr. Factor = Antenna Factor + Cable Loss

Antenna Polarity	Frequency (MHz)	Spectrum Analyzer Detector	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
Vertical	61.04	PK	19.84	6.38	26.22	40.00	-13.78
Vertical	71.71	PK	18.12	10.56	28.68	40.00	-11.32
Vertical	124.09	PK	17.71	6.39	24.10	43.50	-19.40
Vertical	148.34	PK	20.17	4.12	24.29	43.50	-19.21
Vertical	254.07	PK	19.92	4.70	24.62	46.00	-21.38
Vertical	389.87	PK	23.33	3.74	27.07	46.00	-18.93

Remark: Corr. Factor = Antenna Factor + Cable Loss

TEST REPORT

6.4.3 Measurement results: frequency above 1GHz to 25GHz

Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
BLE 1M , Ch0	4804	PK	H	-6.89	53.70	46.81	74	-27.19
	7206	PK	H	2.94	50.19	53.13	74	-20.87
	12010	PK	H	14.14	38.34	52.48	74	-21.52
	4005	PK	V	-10.65	53.45	42.80	74	-31.20
	4245	PK	V	-9.61	51.52	41.91	74	-32.09
	4804	PK	V	-6.89	49.66	42.77	74	-31.23
	7206	PK	V	2.94	47.30	50.24	74	-23.76
	12010	PK	V	14.14	38.17	52.31	74	-21.69
BLE 1M , Ch19	4880	PK	H	-6.94	55.77	48.83	74	-25.17
	7320	PK	H	2.85	51.66	54.51	74	-19.49
	7320	AV	H	2.85	46.88	49.73	54	-4.27
	12200	PK	H	14.22	39.87	54.09	74	-19.91
	12200	AV	H	14.22	34.34	48.56	54	-5.44
	4260	PK	V	-9.47	58.12	48.65	74	-25.35
	4880	PK	V	-6.94	51.46	44.52	74	-29.48
	7320	PK	V	2.85	47.53	50.38	74	-23.62
	9760	PK	V	8.58	41.64	50.22	74	-23.78
	12200	PK	V	14.22	40.45	54.67	74	-19.33
	12200	AV	V	14.22	34.76	48.98	54	-5.02
BLE 1M , Ch39	4960	PK	H	-6.52	54.03	47.51	74	-26.49
	7440	PK	H	2.87	52.77	55.64	74	-18.36
	7440	AV	H	2.87	49.00	51.87	54	-2.13
	12400	PK	H	13.78	45.44	59.22	74	-14.78
	12400	AV	H	13.78	39.75	53.53	54	-0.47
	3990	PK	V	-10.66	53.84	43.18	74	-30.82
	4245	PK	V	-9.61	52.05	42.44	74	-31.56
	4960	PK	V	-6.52	52.98	46.46	74	-27.54
	5310	PK	V	-4.87	46.42	41.55	74	-32.45
	7440	PK	V	2.87	50.16	53.03	74	-20.97
	8505	PK	V	5.65	42.72	48.37	74	-25.63
	12400	PK	V	13.78	46.13	59.91	74	-14.09
	12400	AV	V	13.78	37.51	51.29	54	-2.71

Remark: 1. Correction Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Pre_Amplifier Gain

2. The emissions were very low against the limit above 18 GHz.

TEST REPORT

Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)
BLE 2M , Ch0	4804	PK	H	-6.89	54.08	47.19	74	-26.81
	7206	PK	H	2.94	49.86	52.80	74	-21.20
	12010	PK	H	14.14	38.89	53.03	74	-20.97
	3975	PK	V	-10.71	53.69	42.98	74	-31.02
	4260	PK	V	-9.47	58.60	49.13	74	-24.87
	4804	PK	V	-6.89	48.15	41.26	74	-32.74
	7206	PK	V	2.94	47.75	50.69	74	-23.31
	12010	PK	V	14.14	38.07	52.21	74	-21.79
BLE 2M , Ch19	4880	PK	H	-6.94	55.04	48.10	74	-25.90
	7320	PK	H	2.85	50.13	52.98	74	-21.02
	12200	PK	H	14.22	39.54	53.76	74	-20.24
	12200	AV	H	14.22	31.41	45.63	54	-8.37
	3195	PK	V	-14.65	57.39	42.74	74	-31.26
	3990	PK	V	-10.66	50.40	39.74	74	-34.26
	4260	PK	V	-9.47	53.19	43.72	74	-30.28
	4880	PK	V	-6.94	51.28	44.34	74	-29.66
	5310	PK	V	-4.87	50.14	45.27	74	-28.73
	7320	PK	V	2.85	47.54	50.39	74	-23.61
	12200	PK	V	14.22	39.78	54.00	74	-20.00
	12200	AV	V	14.22	34.26	48.48	54	-5.52
BLE 2M , Ch39	4960	PK	H	-6.52	53.60	47.08	74	-26.92
	7440	PK	H	2.87	52.30	55.17	74	-18.83
	7440	AV	H	2.87	47.20	50.07	54	-3.93
	12400	PK	H	13.78	44.17	57.95	74	-16.05
	12400	AV	H	13.78	34.44	48.22	54	-5.78
	3990	PK	V	-10.66	56.99	46.33	74	-27.67
	4960	PK	V	-6.52	52.48	45.96	74	-28.04
	5325	PK	V	-4.73	47.74	43.01	74	-30.99
	6375	PK	V	-0.04	44.27	44.23	74	-29.77
	7440	PK	V	2.87	49.73	52.60	74	-21.40
	12400	PK	V	13.78	46.38	60.16	74	-13.84
	12400	AV	V	13.78	36.37	50.15	54	-3.85

Remark: 1. Correction Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Pre_Amplifier Gain

2. The emissions were very low against the limit above 18 GHz.

7. Emission on Band Edge

7.1 Instrument Setting

Spectrum Function	Setting
Detector	Peak and Average
RBW	1MHz
VBW	3MHz & 1/T Minimum VBW
Sweep	Auto couple
Restrict bands	2310 MHz ~ 2390 MHz 2483.5 MHz ~ 2500 MHz
Attenuation	Auto

7.2 Test Procedure

The test procedure is the same as Emissions in Restricted Frequency Bands (Radiated emission measurements).

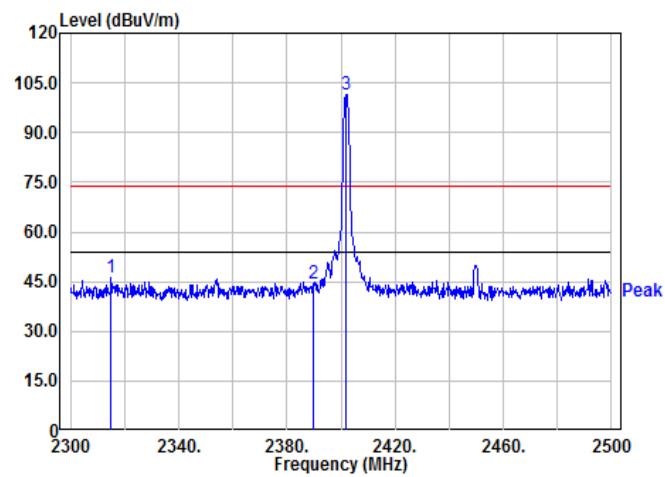
7.3 Test Results

Temperature (°C) :	23
Relative Humidity (%) :	72
Test date :	2025/07/31

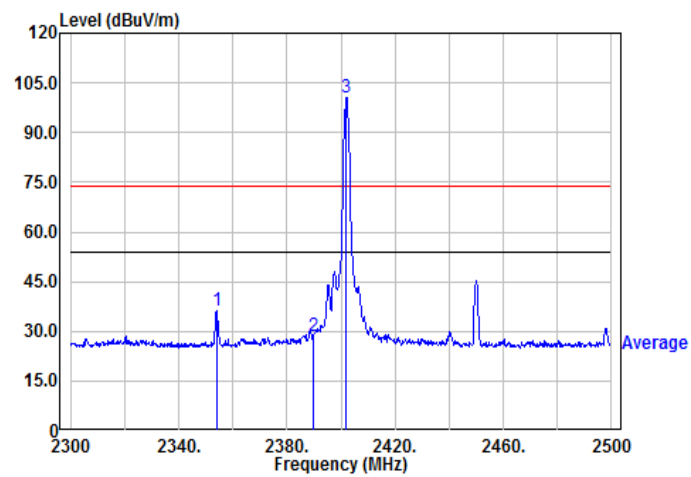
Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)	Restricted band (MHz)
BLE 1M	2315.00	PK	H	32.75	13.43	46.18	74	-27.82	2310~2390
	2354.00	AV	H	32.32	4.03	36.35	54	-17.65	
	2484.40	PK	H	32.51	15.89	48.40	74	-25.60	2483.5~2500
	2484.40	AV	H	32.51	3.98	36.49	54	-17.51	
BLE 2M	2318.40	PK	H	32.71	12.94	45.65	74	-28.35	2310~2390
	2354.00	AV	H	32.32	-0.66	31.66	54	-22.34	
	2483.50	PK	H	32.51	16.88	49.39	74	-24.61	2483.5~2500
	2483.50	AV	H	32.51	7.31	39.82	54	-14.18	

Remark: Correction Factor = Antenna Factor + Cable Loss

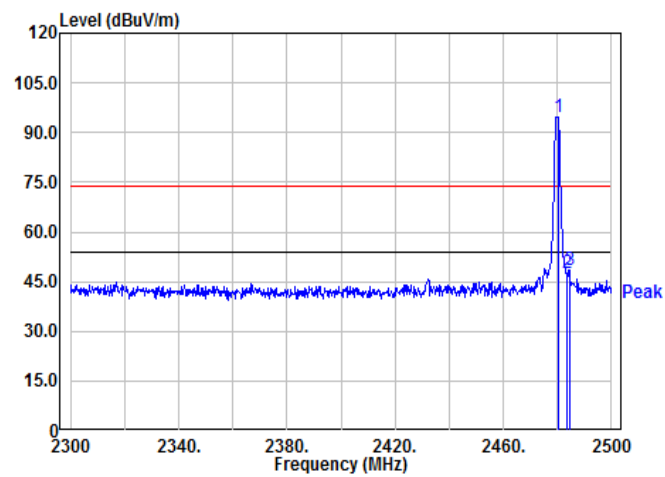
Restricted Band Bandedge @ BLE 1M Mode Ch0 PK



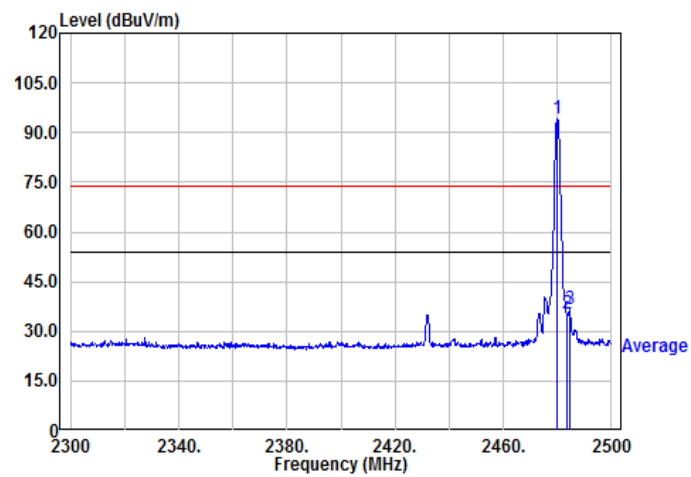
Restricted Band Bandedge @ BLE 1M Mode Ch0 AV



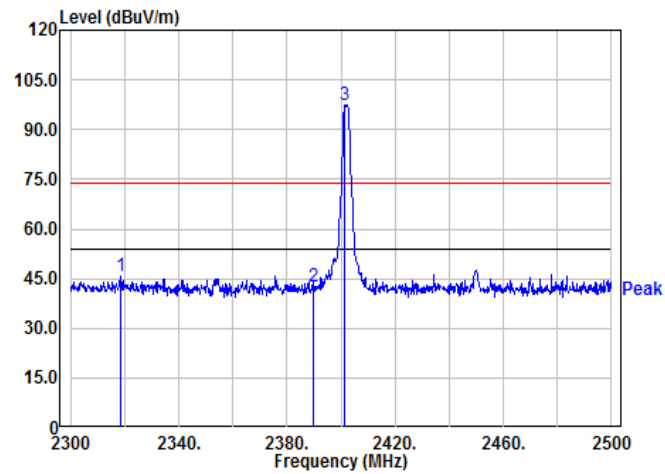
Restricted Band Bandedge @ BLE 1M Mode Ch39 PK



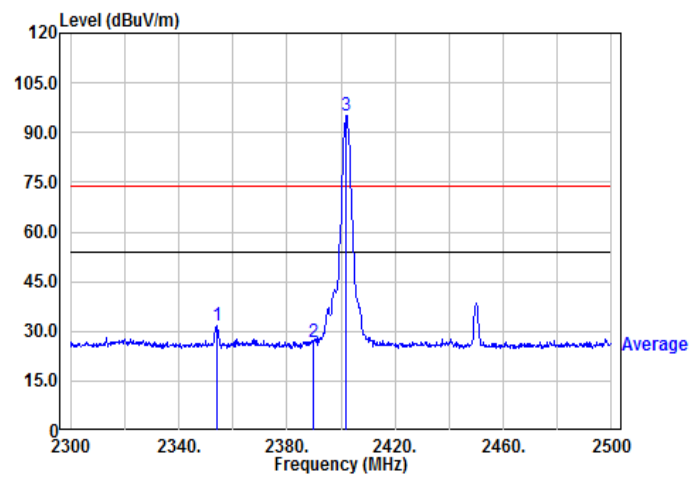
Restricted Band Bandedge @ BLE 1M Mode Ch39 AV



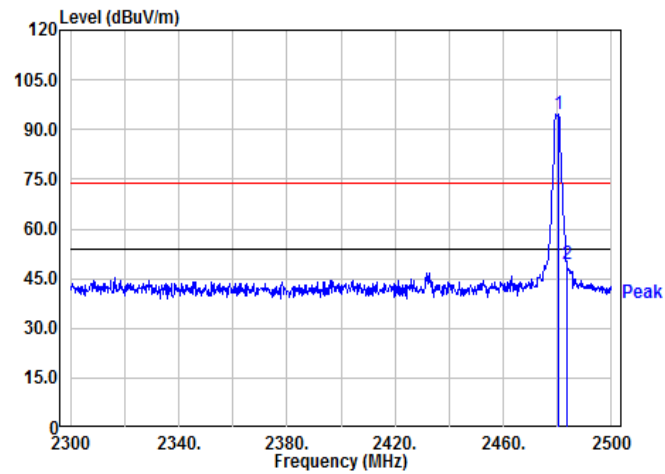
Restricted Band Bandedge @ BLE 2M Mode Ch0 PK



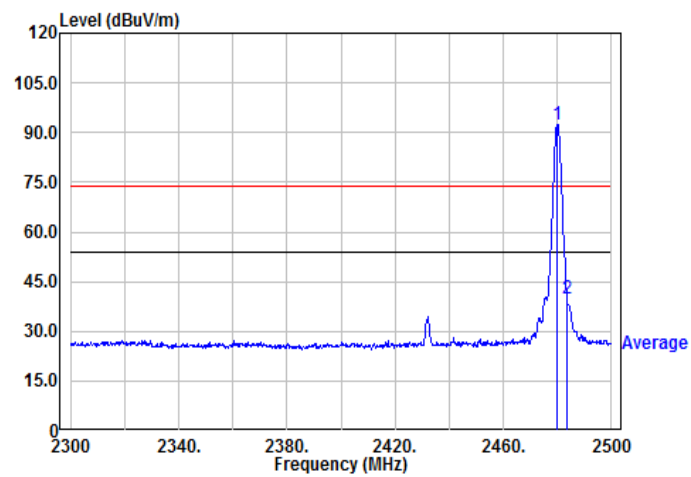
Restricted Band Bandedge @ BLE 2M Mode Ch0 AV



Restricted Band Bandedge @ BLE 2M Mode Ch39 PK



Restricted Band Bandedge @ BLE 2M Mode Ch39 AV



8. AC Power Line Conducted Emission

Since the EUT is not connected to AC source, therefore, the test can be waived.

Appendix A: Test equipment list

Test Equipment	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
Pre-Amplifier	SGH	SGH118	20220105-1	2025/01/14	2026/01/13
Broadband Antenna	SCHWARZBECK	VULB 9168	9168-172	2024/12/30	2025/12/29
966-2_3m Semi-Anechoic Chamber	CHANCE MOST	CEM-966_2	N/A	2025/07/29	2026/07/28
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170159	2024/08/12	2025/08/11
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-456	2024/12/10	2025/12/09
Power Meter	Anritsu	ML2495A	0844001	2024/12/07	2025/12/06
Power Sensor	Anritsu	MA2491A	031543	2024/12/07	2025/12/06
Cable	SUHNER	SUCOFLEX 104	295105/4	2025/02/27	2026/02/26
Cable	SUHNER	SUCOFLEX 104P	CB0005	2025/02/27	2026/02/26
Cable	SUHNER	SUCOFLEX 104P	9403 / 4P	2024/11/22	2025/11/21
Hight Pass Filter	Wainwright	WHKX3.0/18G-12SS	N/A	2025/05/22	2026/05/21
Active Loop Antenna	SCHWARZBECK	FMZB1519	1519-067	2024/12/11	2025/12/10
20dB Attenuator	PE	PE7001-20	N/A	2025/05/22	2026/05/21
Spectrum analyzer	KEYSIGHT	N9020B	MY63450146	2025/02/14	2026/02/13
EMI Test Receiver	KEYSIGHT	N9038B	MY63060107	2025/02/08	2026/02/07
Test software	Audix	e3	V9	NCR	NCR

Note: No Calibration Required (NCR).

Appendix B: Measurement Uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of $k=2.0$.

Item	Uncertainty
Radiated disturbances from 9kHz~30MHz in a semi-anechoic chamber at a distance of 3m	2.73 dB
Vertically polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.91 dB
Horizontally polarized radiated disturbances from 30MHz~1GHz in a semi-anechoic chamber at a distance of 3m	3.49 dB
Vertically polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Horizontally polarized Radiated disturbances from 1GHz~18GHz in a semi-anechoic chamber at a distance of 3m	3.71 dB
Vertically polarized Radiated disturbances from 18GHz~40GHz in a semi-anechoic chamber at a distance of 3m	3.26 dB
Horizontally polarized Radiated disturbances from 18GHz~40GHz in a semi-anechoic chamber at a distance of 3m	3.26 dB
Conducted Measurement	0.69 dB
AC Power Line Conducted Emission	1.31 dB