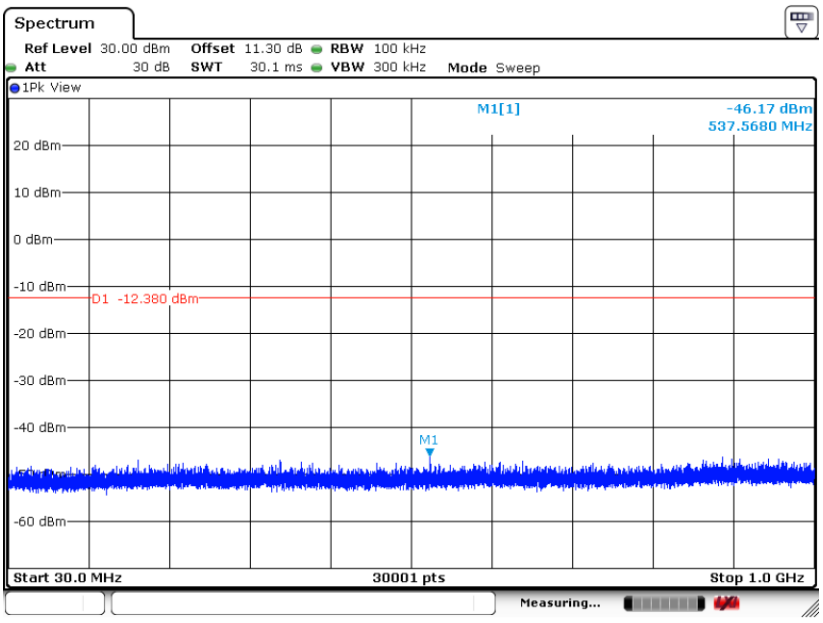
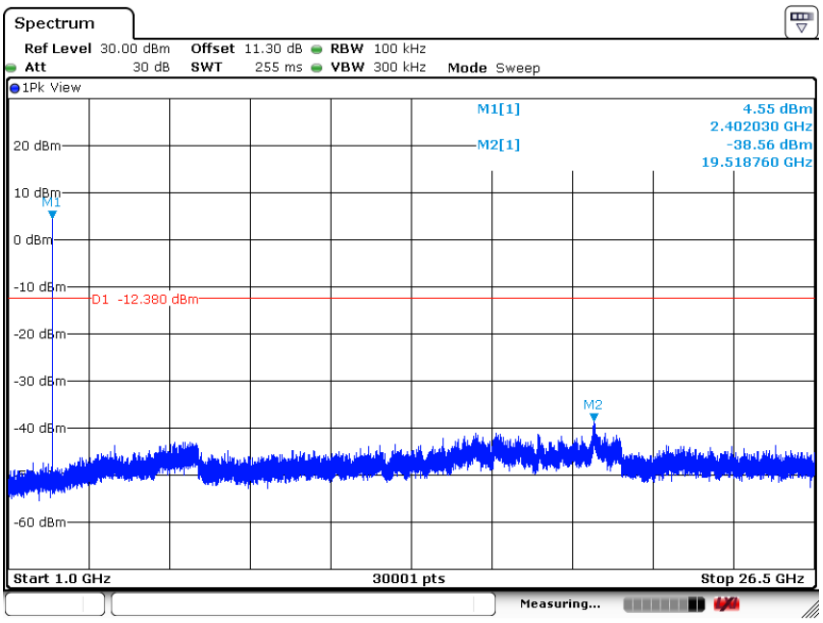
Bluetooth LE 125Kbps (Ant.5):

Conducted Spurious Emission Plot on Channel 00



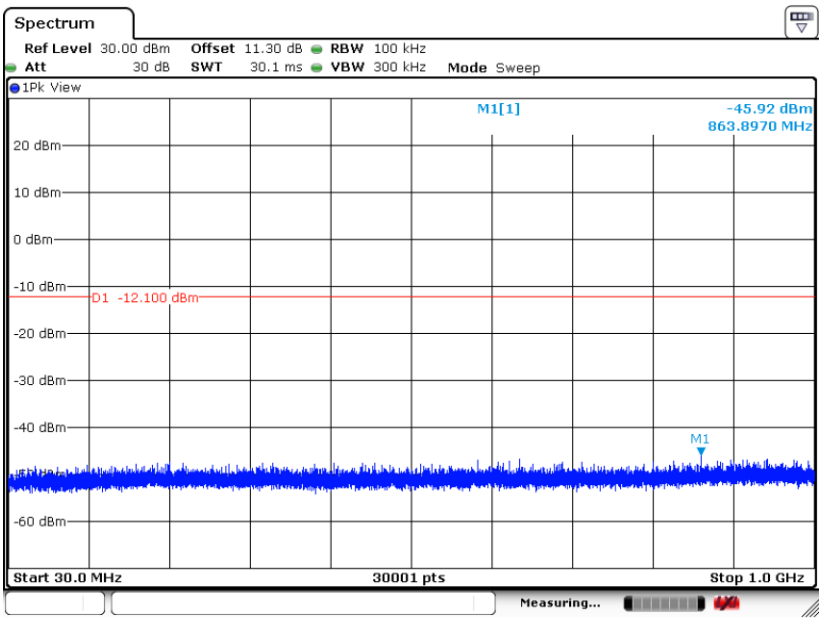
Date: 1.DEC.2023 10:41:16

Conducted Spurious Emission Plot on Channel 00



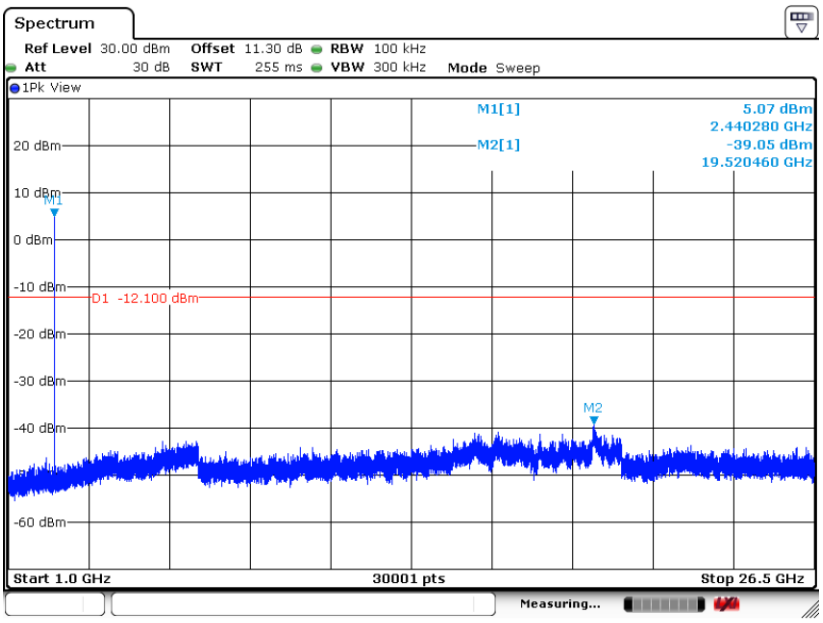
Date: 1.DEC.2023 10:41:32

Conducted Spurious Emission Plot on Channel 19



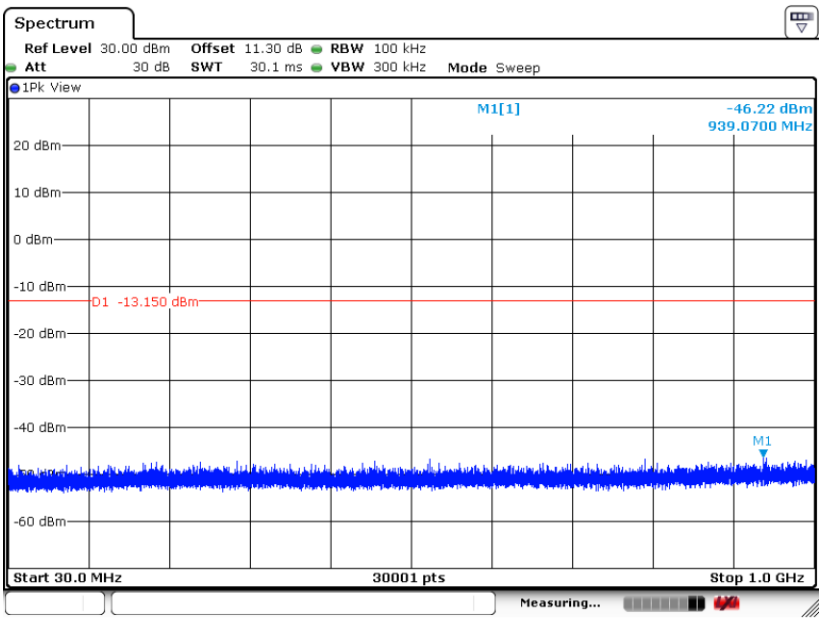
Date: 1.DEC.2023 10:44:38

Conducted Spurious Emission Plot on Channel 19



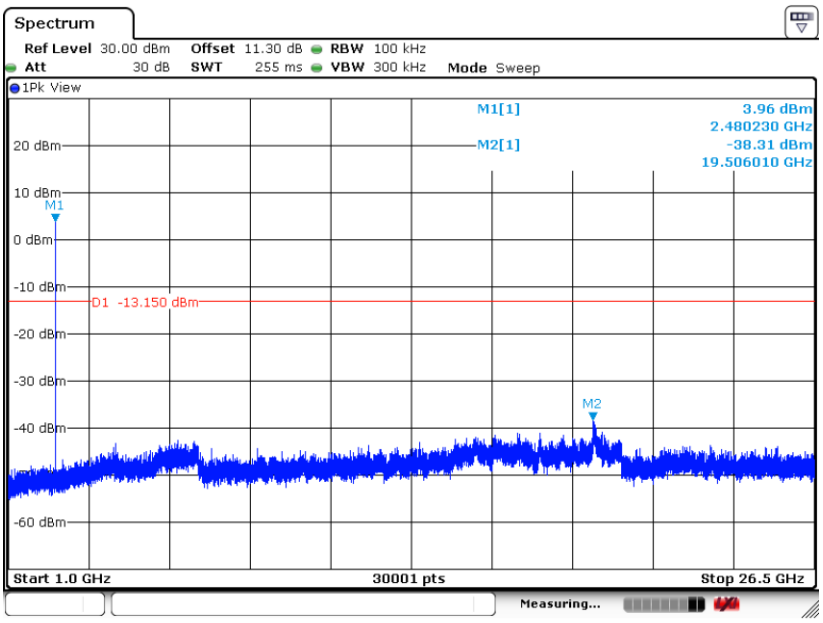
Date: 1.DEC.2023 10:44:53

Conducted Spurious Emission Plot on Channel 39



Date: 1.DEC.2023 10:47:36

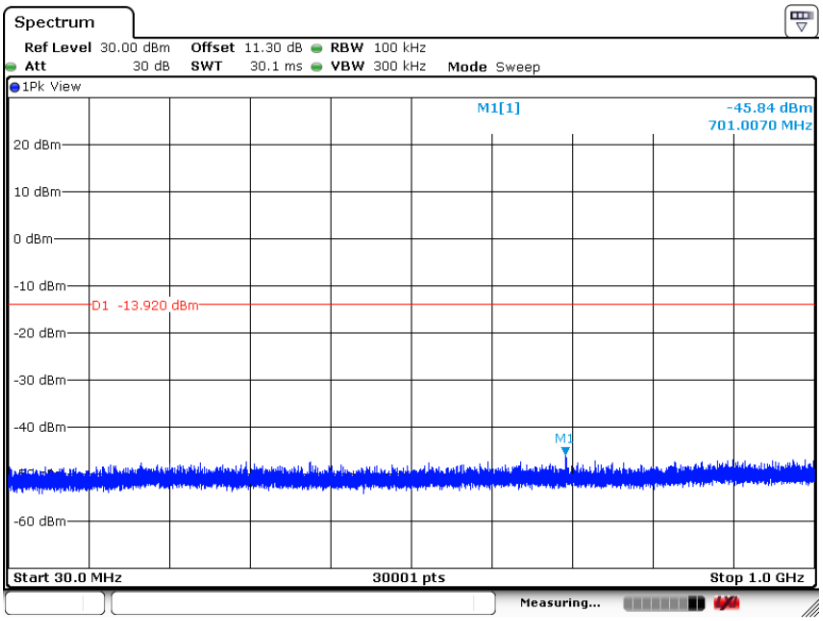
Conducted Spurious Emission Plot on Channel 39



Date: 1.DEC.2023 10:47:50

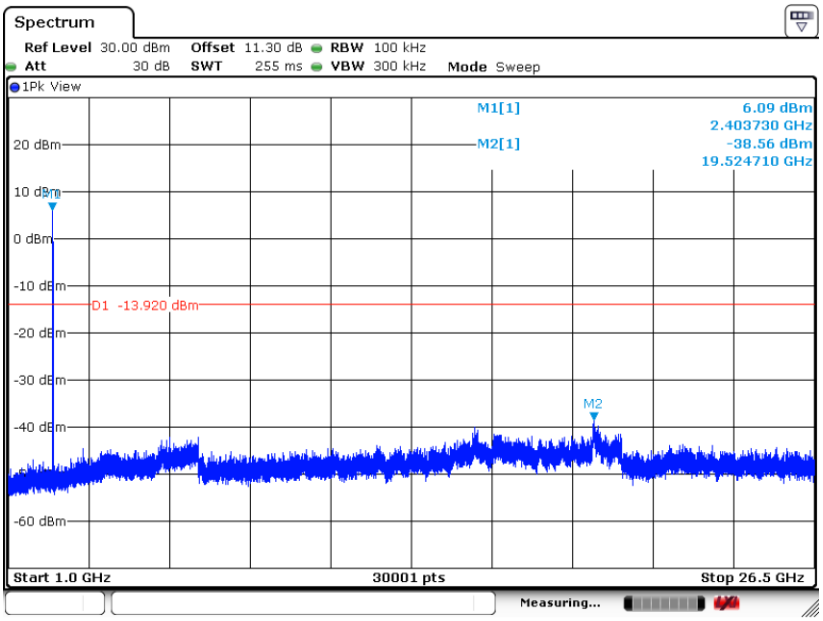
Bluetooth LE 2Mbps (Ant.4):

Conducted Spurious Emission Plot on Channel 01



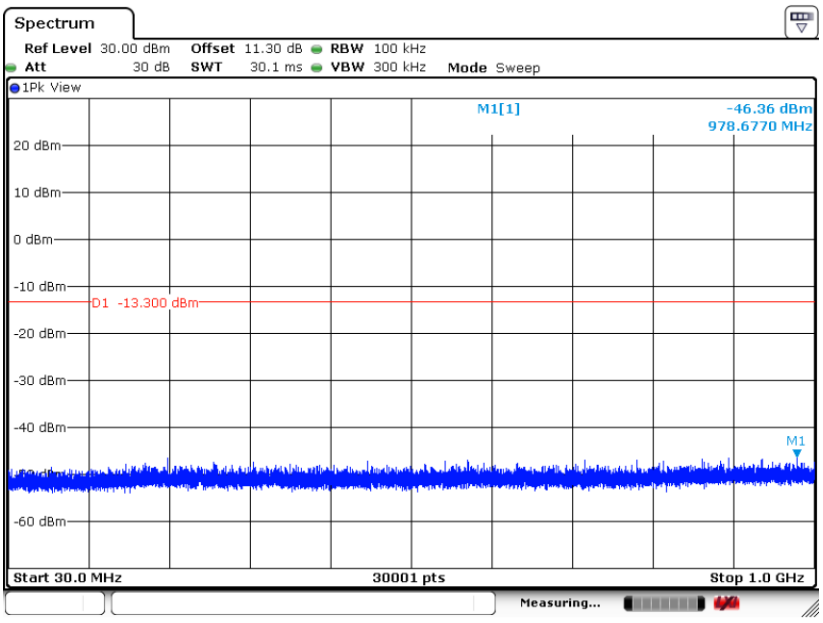
Date: 1.DEC.2023 11:04:23

Conducted Spurious Emission Plot on Channel 01



Date: 1.DEC.2023 11:04:38

Conducted Spurious Emission Plot on Channel 19



Date: 1.DEC.2023 11:08:21

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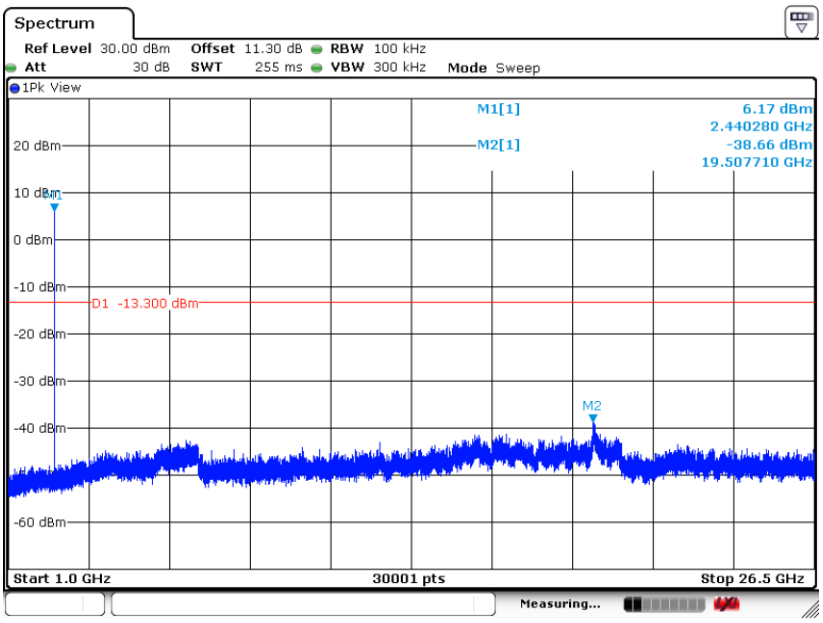
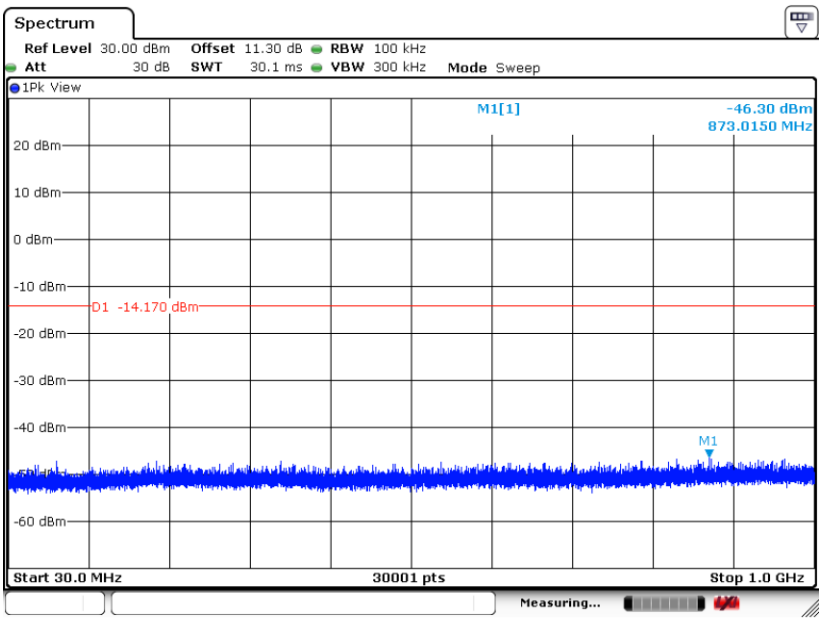


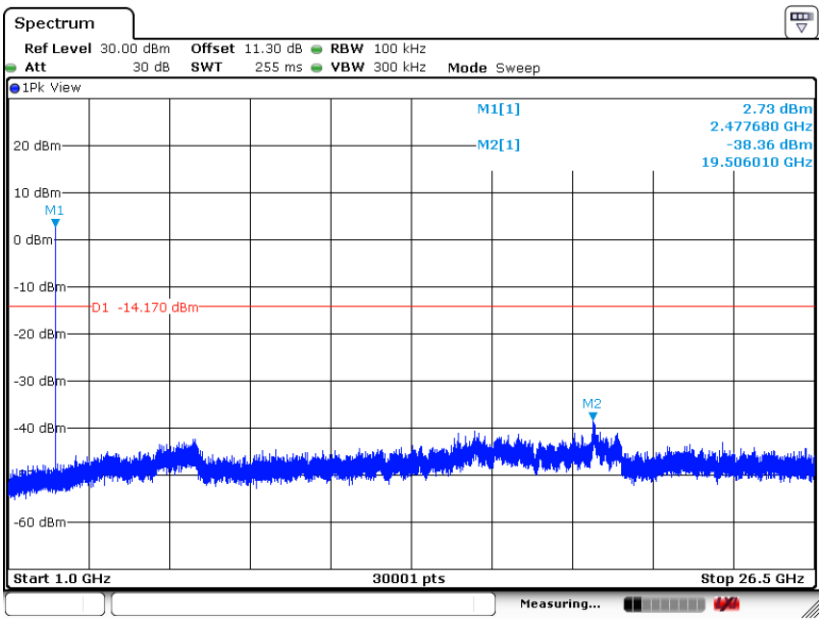
Date: 1.DEC.2023 11:08:43

Conducted Spurious Emission Plot on Channel 38



Date: 1.DEC.2023 11:10:57

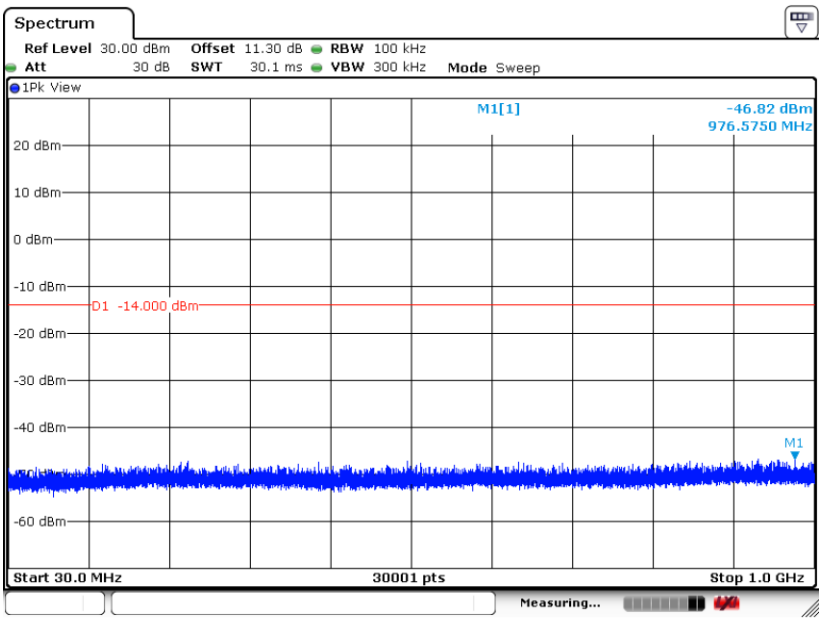
Conducted Spurious Emission Plot on Channel 38



Date: 1.DEC.2023 11:11:13

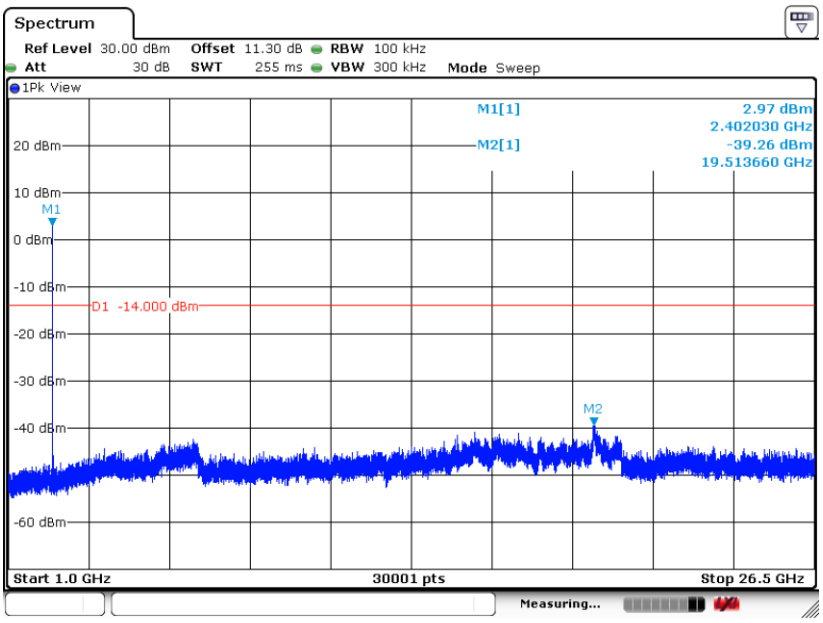
Bluetooth LE 125Kbps (Ant.4):

Conducted Spurious Emission Plot on Channel 00



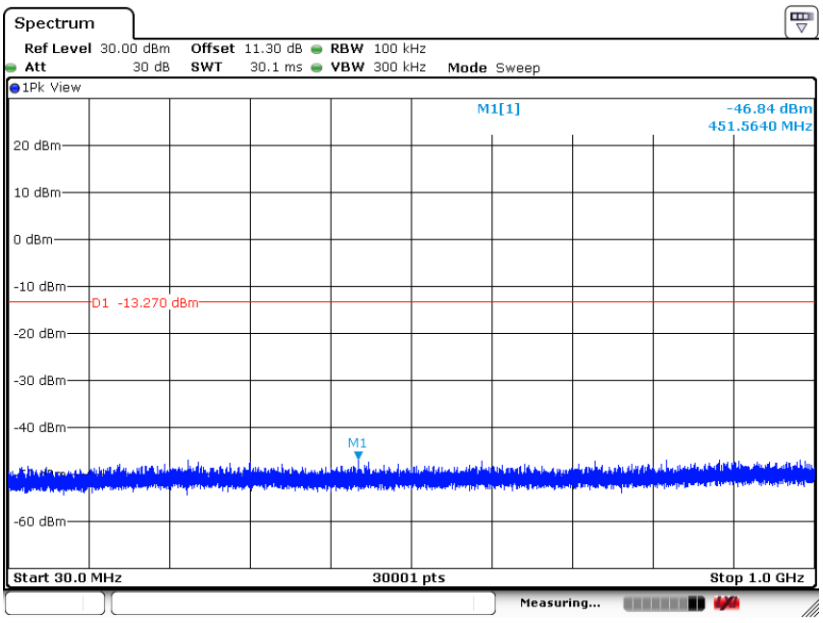
Date: 1.DEC.2023 11:22:26

Conducted Spurious Emission Plot on Channel 00



Date: 1.DEC.2023 11:22:43

Conducted Spurious Emission Plot on Channel 19



Date: 1.DEC.2023 11:25:48

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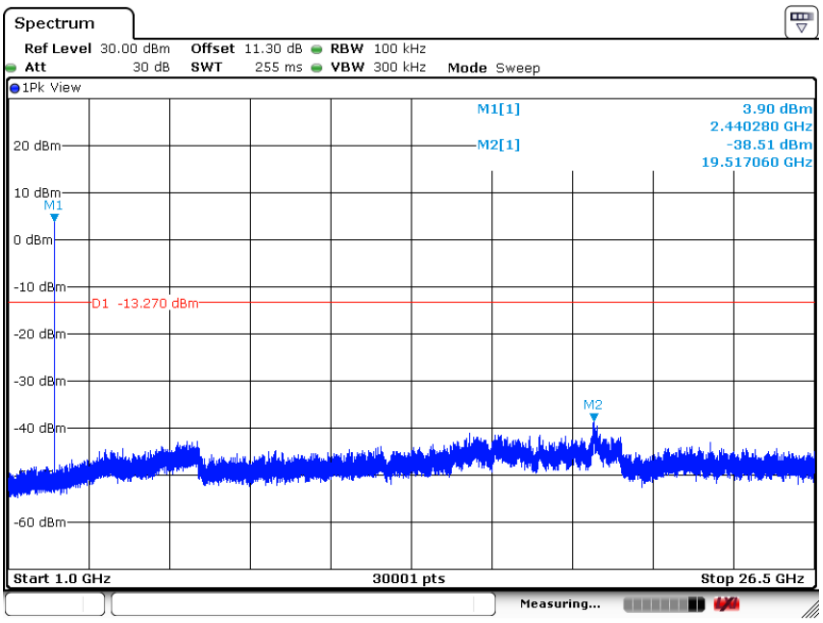
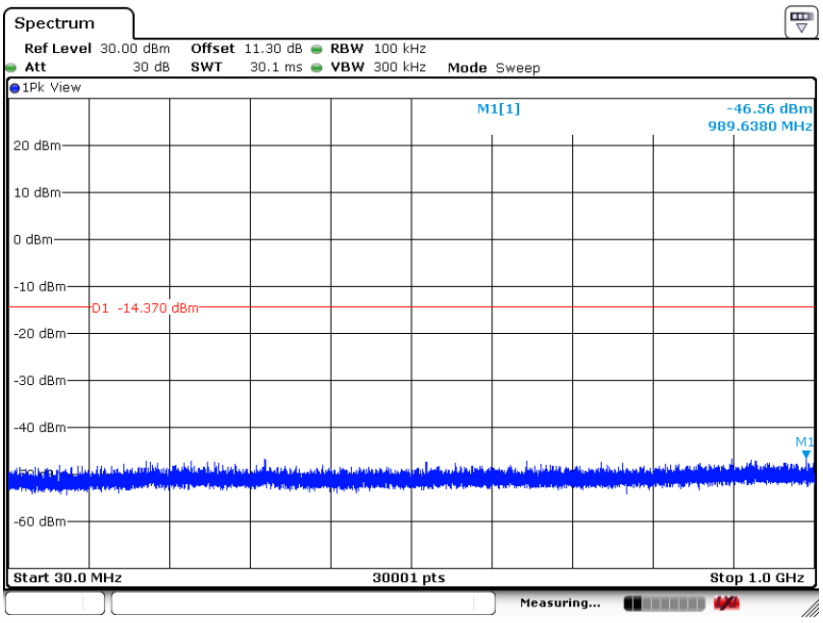


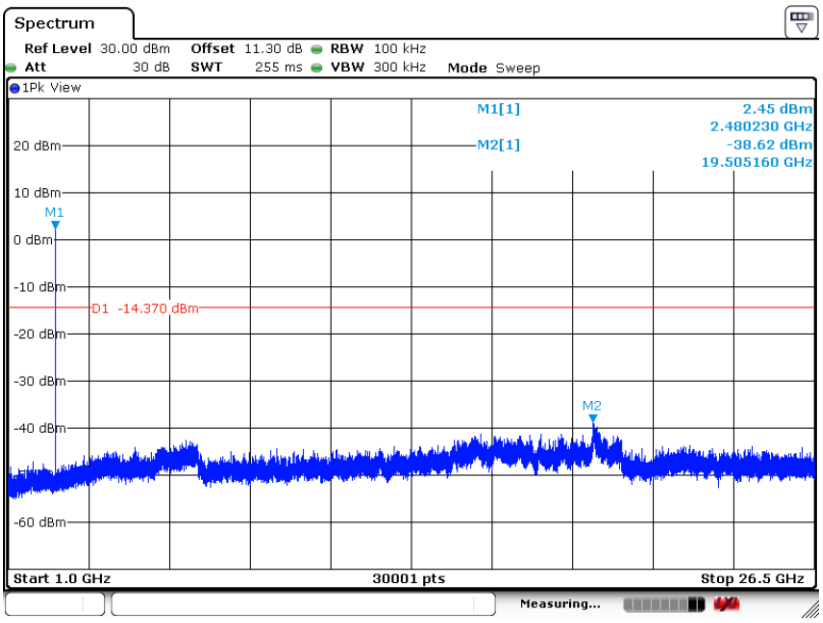
Date: 1.DEC.2023 11:26:05

Conducted Spurious Emission Plot on Channel 39



Date: 1.DEC.2023 11:28:33

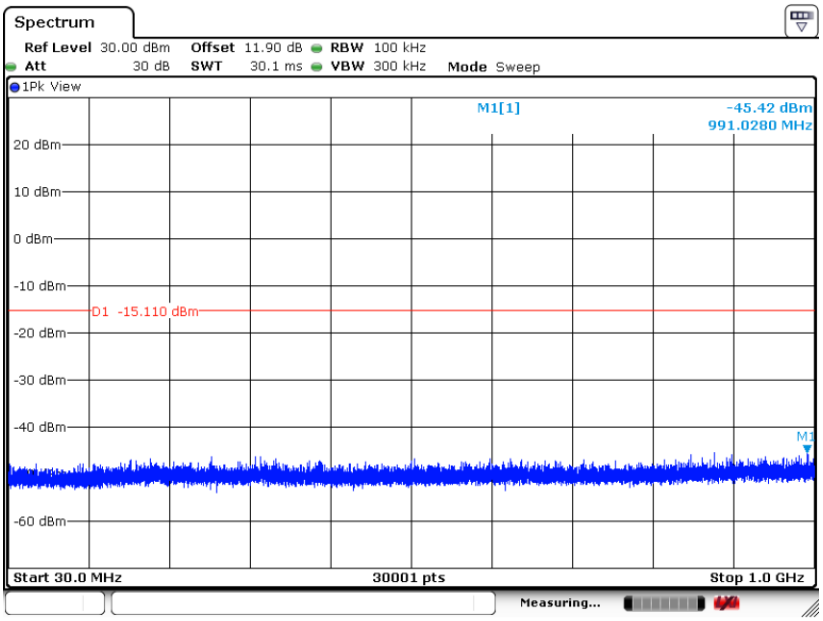
Conducted Spurious Emission Plot on Channel 39



Date: 1.DEC.2023 11:28:48

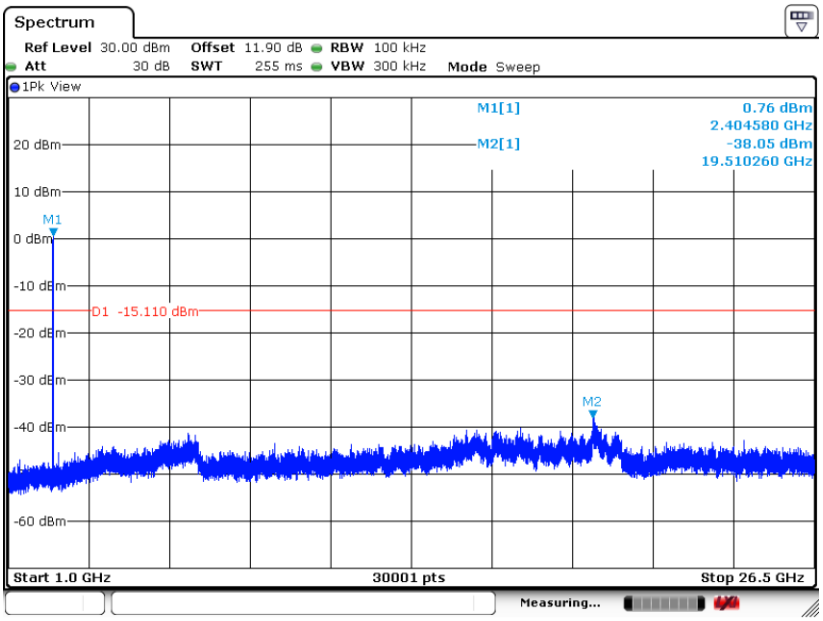
Bluetooth LE 2Mbps (Ant.6):

Conducted Spurious Emission Plot on Channel 01



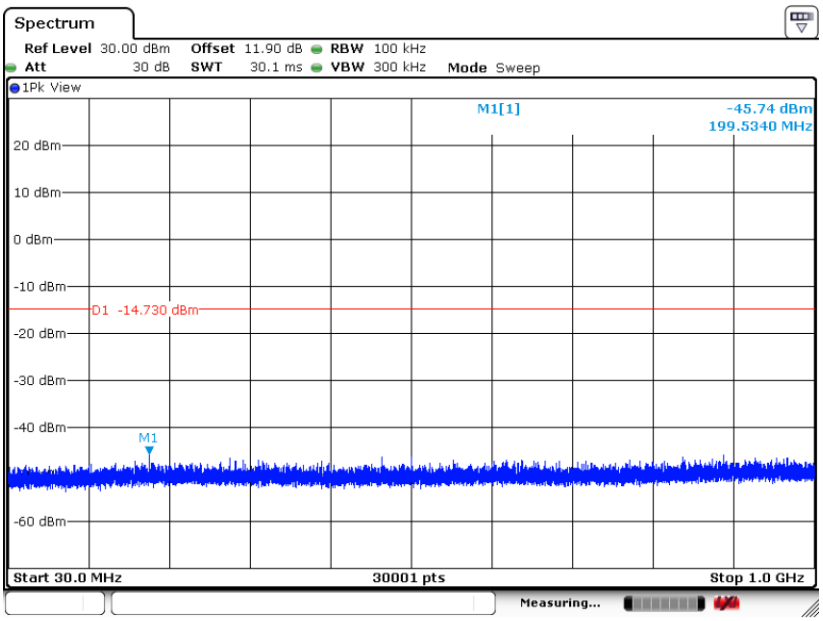
Date: 1.DEC.2023 12:14:45

Conducted Spurious Emission Plot on Channel 01



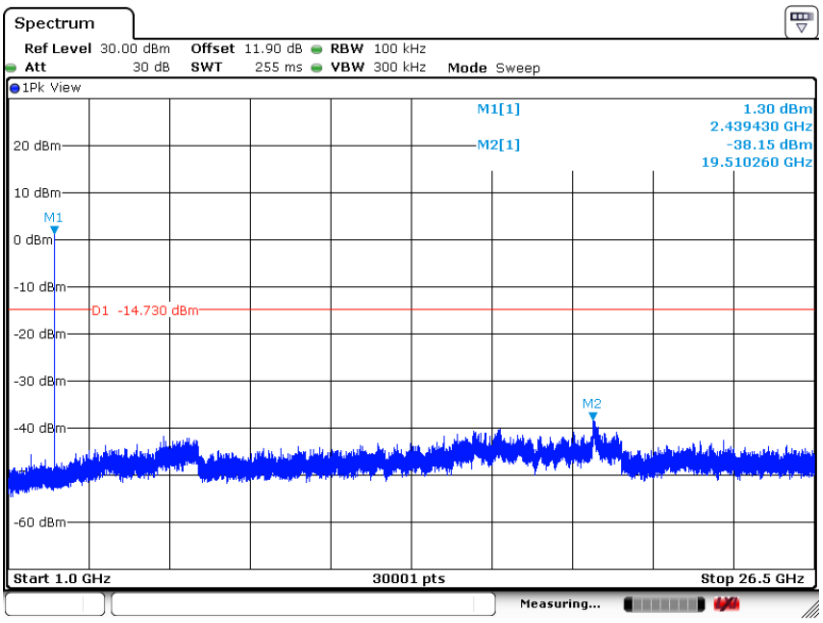
Date: 1.DEC.2023 12:15:02

Conducted Spurious Emission Plot on Channel 19



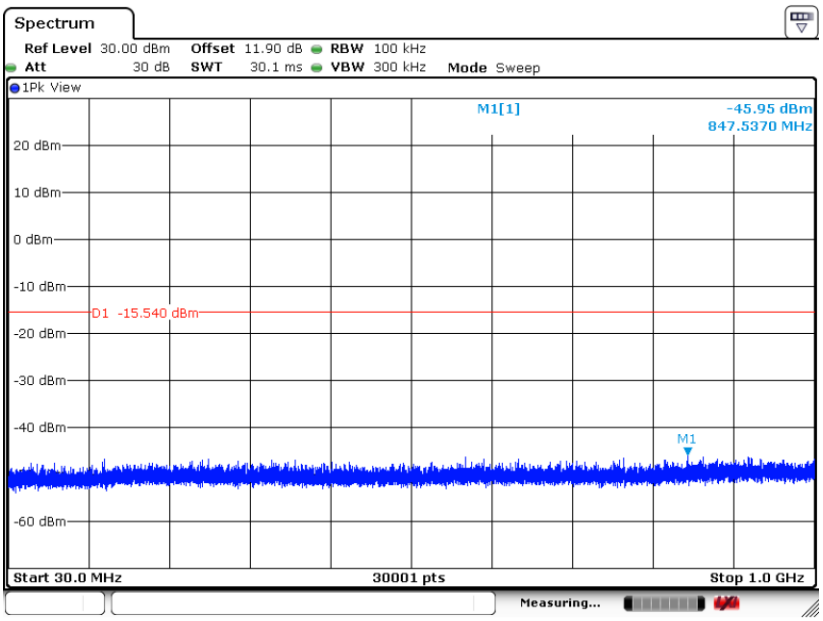
Date: 1.DEC.2023 12:17:46

Conducted Spurious Emission Plot on Channel 19



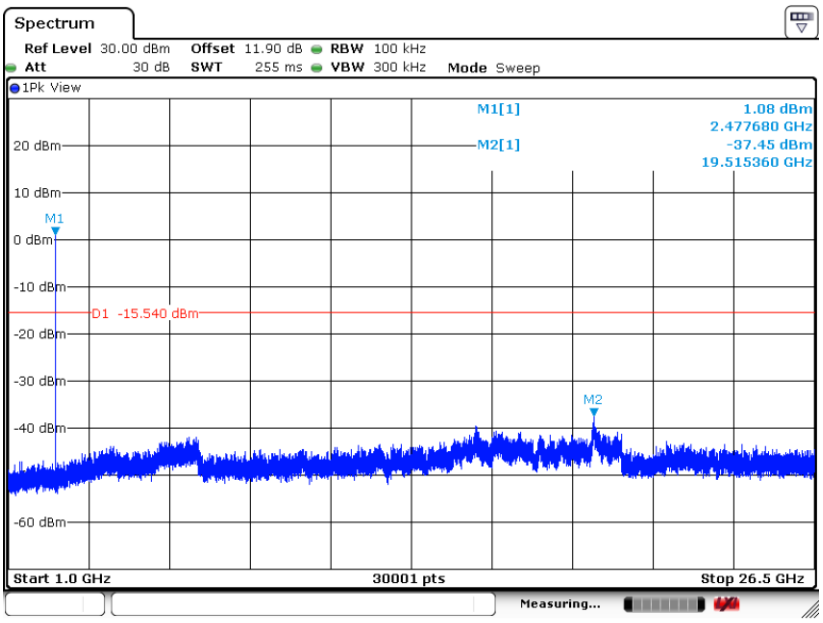
Date: 1.DEC.2023 12:18:01

Conducted Spurious Emission Plot on Channel 38



Date: 1.DEC.2023 12:19:21

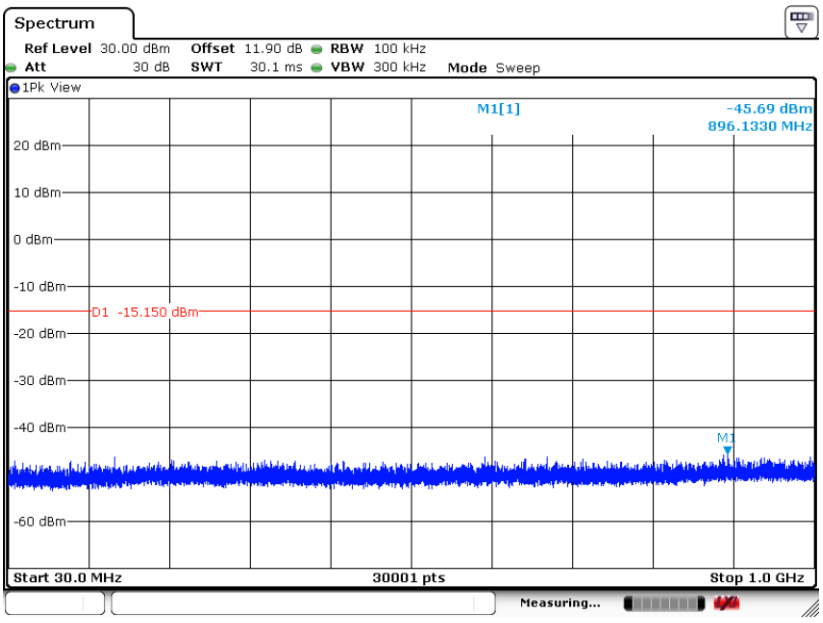
Conducted Spurious Emission Plot on Channel 38



Date: 1.DEC.2023 12:19:38

Bluetooth LE 125Kbps (Ant.6):

Conducted Spurious Emission Plot on Channel 00



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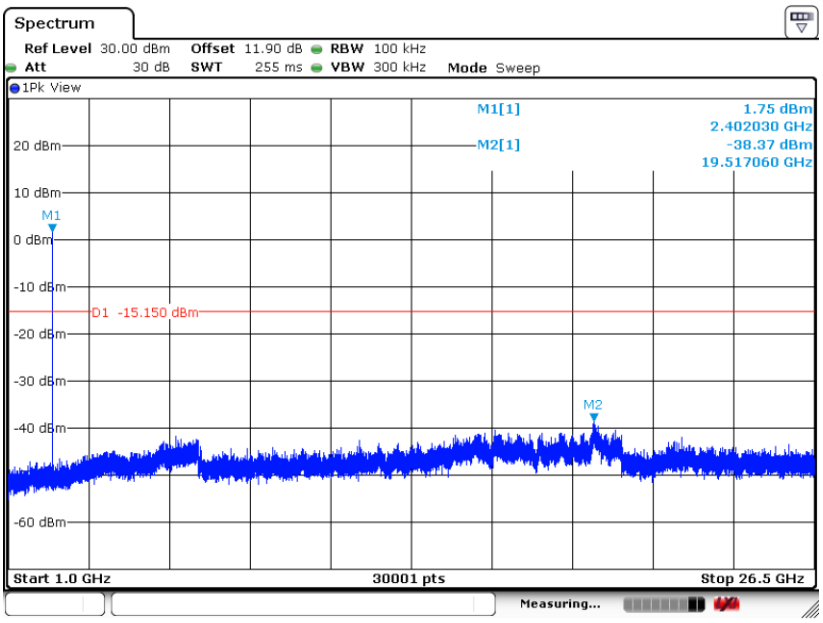
Conducted Spurious Emission Plot on Channel 00



Date: 1.DEC.2023 11:56:05

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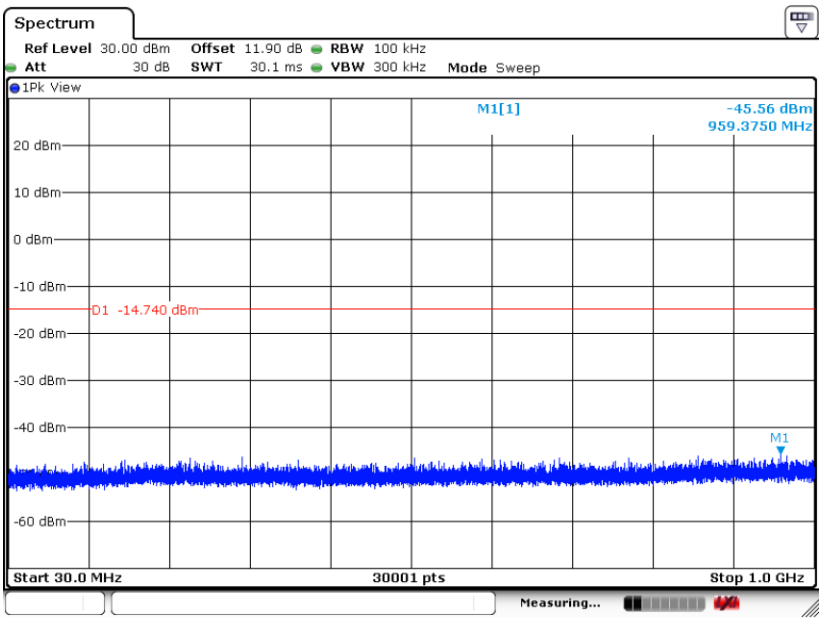
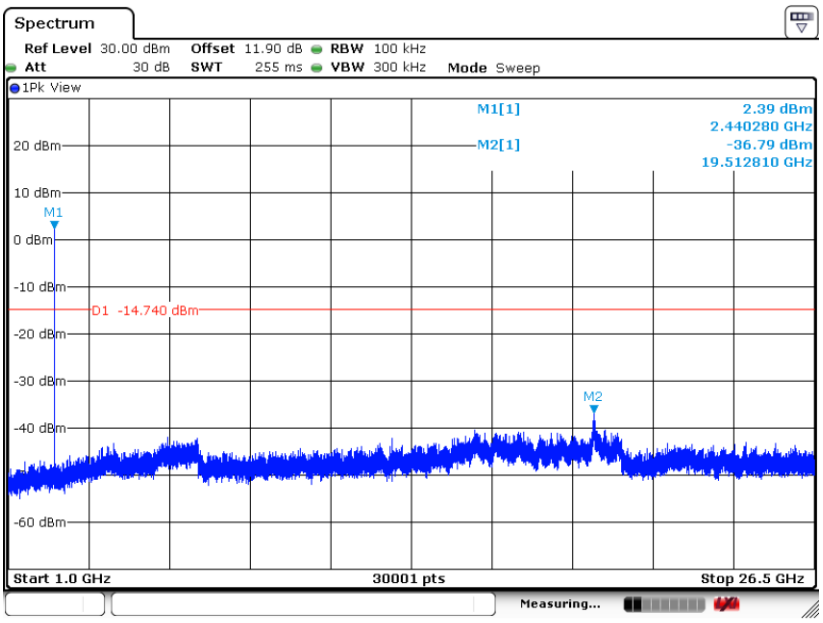


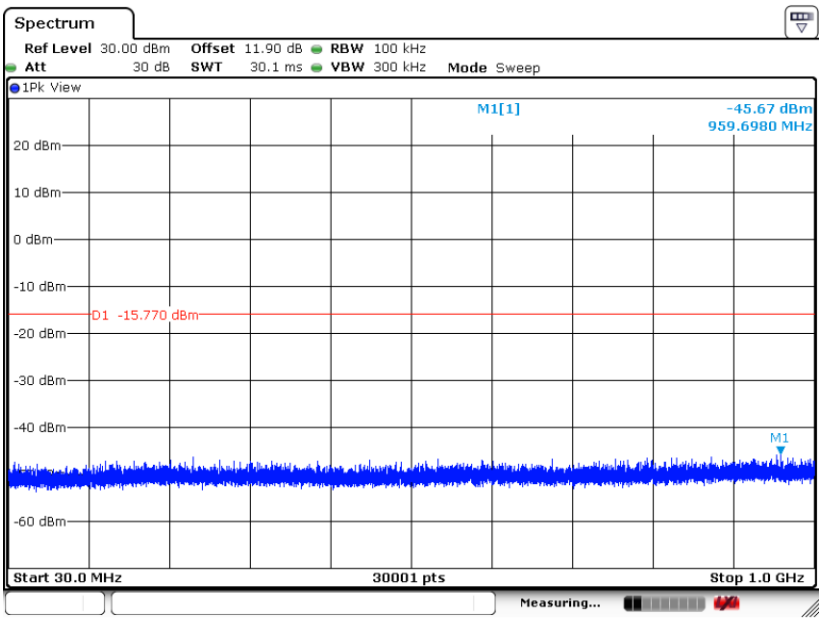
Date: 1.DEC.2023 12:02:53

Conducted Spurious Emission Plot on Channel 19



Date: 1.DEC.2023 12:03:10

Conducted Spurious Emission Plot on Channel 39



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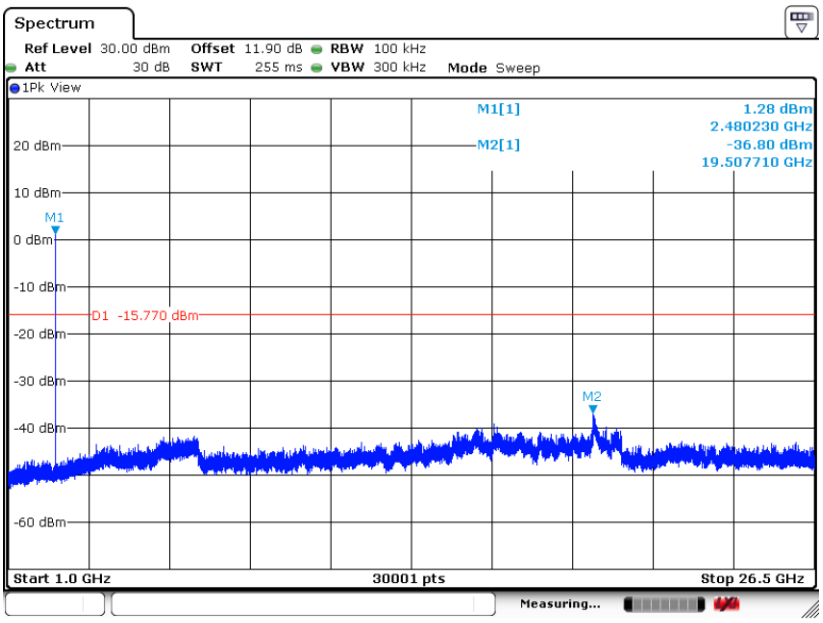
Conducted Spurious Emission Plot on Channel 39



Date: 1.DEC.2023 12:07:07

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

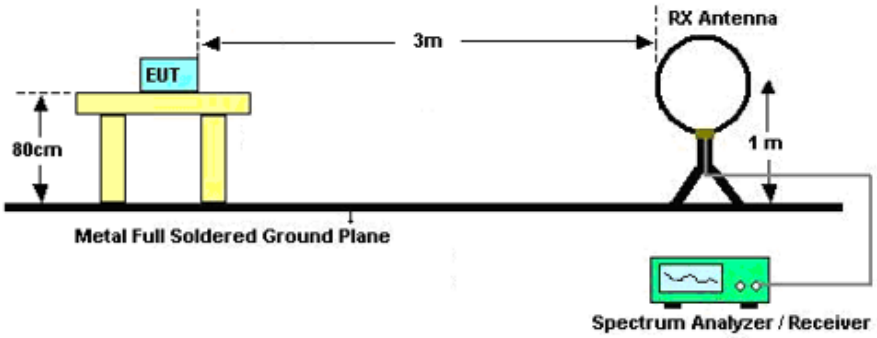
The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.5.3 Test Procedures

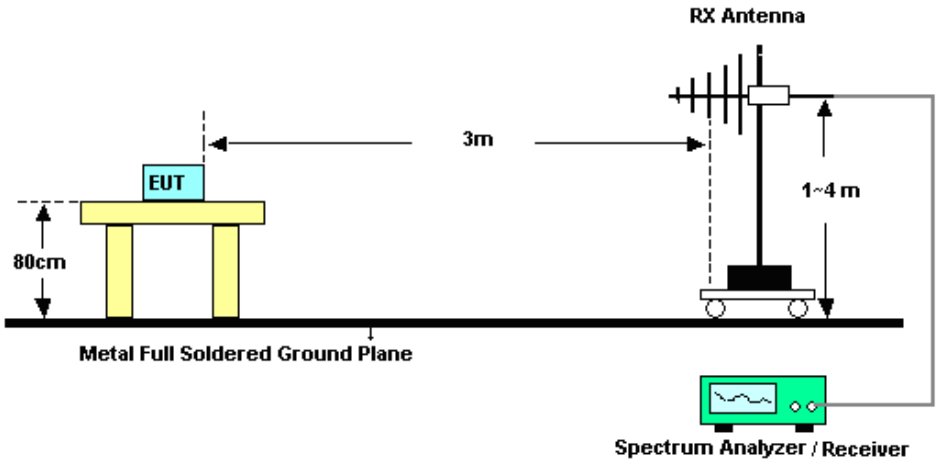
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

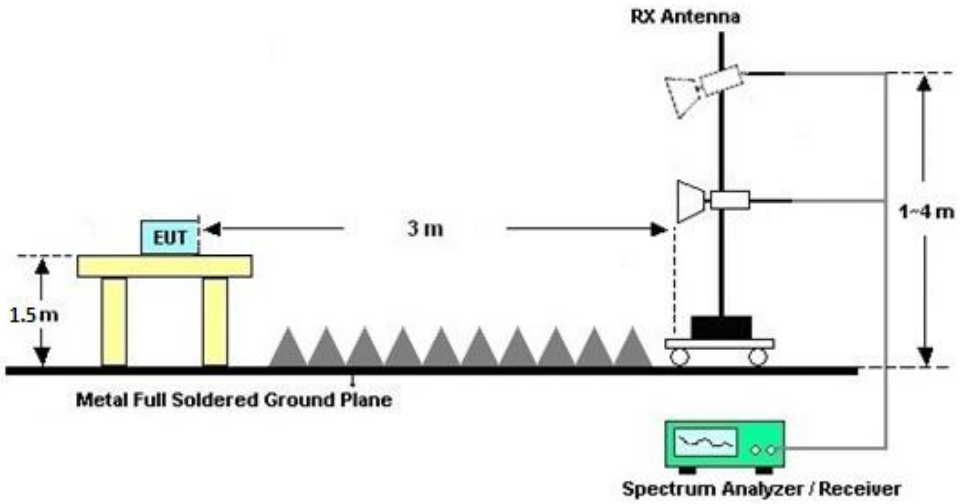
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.5.7 Duty Cycle

Please refer to Appendix D.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

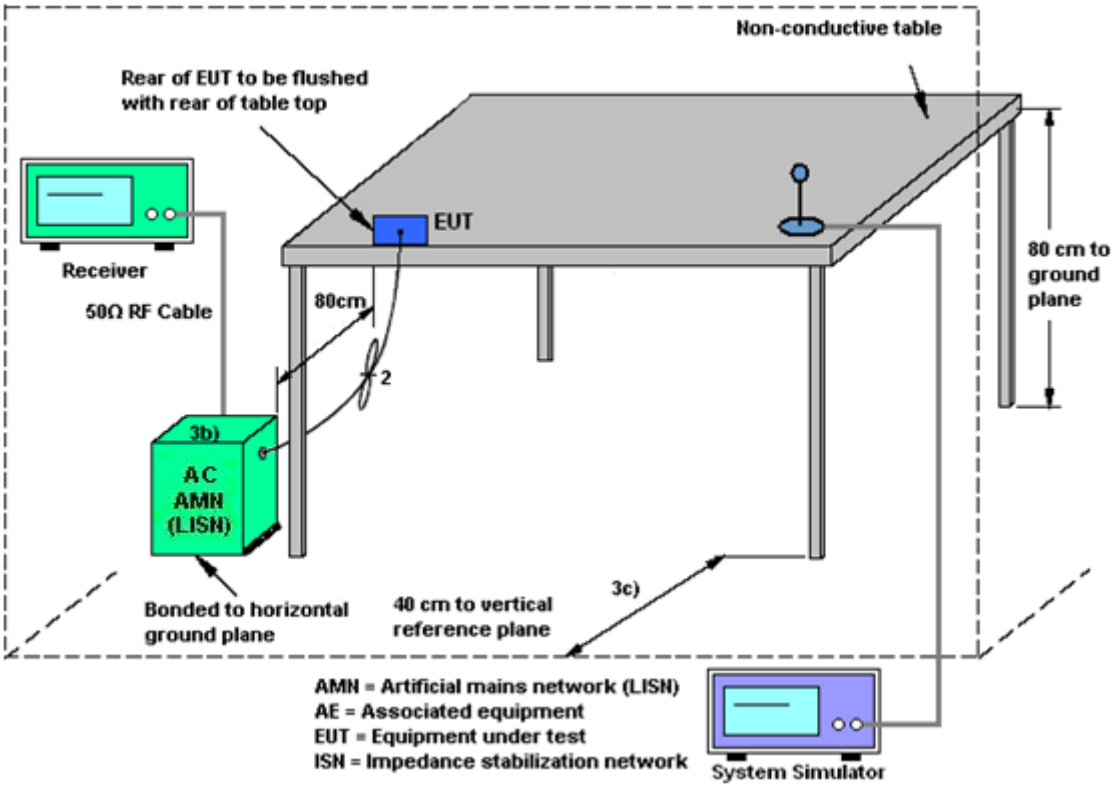
3.6.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. 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 rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 06, 2023	Dec. 01, 2023	Apr. 05, 2024	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 27, 2022	Dec. 01, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 27, 2022	Dec. 01, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 18, 2023	Nov. 29, 2023~ Jan. 03, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2023	Nov. 29, 2023~ Jan. 03, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Nov. 29, 2023~ Jan. 03, 2024	Jun. 27, 2024	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	May 14, 2023	Nov. 29, 2023~ Jan. 03, 2024	May 13, 2024	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 07, 2023	Nov. 29, 2023~ Jan. 03, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 08, 2023	Nov. 29, 2023~ Jan. 03, 2024	Jul. 07, 2024	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 18, 2023	Nov. 29, 2023~ Jan. 03, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2023	Nov. 29, 2023~ Jan. 03, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 07, 2023	Nov. 29, 2023~ Jan. 03, 2024	Jul. 06, 2024	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Aug. 21, 2023	Nov. 29, 2023~ Jan. 03, 2024	Aug. 20, 2024	Radiation (03CH04-SZ)
AC Power Source	APC	AFV-S-600B	F119050019	N/A	Oct. 18, 2023	Nov. 29, 2023~ Jan. 03, 2024	Oct. 17, 2024	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Nov. 29, 2023~ Jan. 03, 2024	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Nov. 29, 2023~ Jan. 03, 2024	NCR	Radiation (03CH04-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Jul. 06, 2023	Nov. 02, 2023	Jul. 05, 2024	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Aug. 21, 2023	Nov. 02, 2023	Aug. 20, 2024	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 16, 2023	Nov. 02, 2023	Oct. 15, 2024	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 07, 2023	Nov. 02, 2023	Jul. 06, 2024	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±1.34 dB
Occupied Channel Bandwidth	±0.012 MHz
Conducted Power	±1.34 dB
Conducted Power Spectral Density	±1.32 dB
Frequency	±1.3 Hz

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.7dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.8dB

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

---------- THE END ----------

Appendix A. Conducted Test Results

<SISO Ant.5>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	125Kbps	5	0	2402	1.045	0.609	0.50	Pass
BLE	125Kbps	5	19	2440	1.047	0.613	0.50	Pass
BLE	125Kbps	5	39	2480	1.041	0.615	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	125Kbps	5	0	2402	8.43	30.00	-3.60	4.83	36.00	Pass
BLE	125Kbps	5	19	2440	8.81	30.00	-3.60	5.21	36.00	Pass
BLE	125Kbps	5	39	2480	8.03	30.00	-3.60	4.43	36.00	Pass
BLE	500Kbps	5	0	2402	8.27	30.00	-3.60	4.67	36.00	Pass
BLE	500Kbps	5	19	2440	8.65	30.00	-3.60	5.05	36.00	Pass
BLE	500Kbps	5	39	2480	7.86	30.00	-3.60	4.26	36.00	Pass
BLE	1Mbps	5	0	2402	8.40	30.00	-3.60	4.80	36.00	Pass
BLE	1Mbps	5	19	2440	8.73	30.00	-3.60	5.13	36.00	Pass
BLE	1Mbps	5	39	2480	7.98	30.00	-3.60	4.38	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	125Kbps	5	0	2402	7.62	1.96	-3.60	8.00	Pass
BLE	125Kbps	5	19	2440	7.90	2.38	-3.60	8.00	Pass
BLE	125Kbps	5	39	2480	6.85	1.43	-3.60	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

<SISO Ant.4>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	125Kbps	4	0	2402	1.047	0.611	0.50	Pass
BLE	125Kbps	4	19	2440	1.045	0.613	0.50	Pass
BLE	125Kbps	4	39	2480	1.043	0.613	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	125Kbps	4	0	2402	6.94	30.00	-3.82	3.12	36.00	Pass
BLE	125Kbps	4	19	2440	7.72	30.00	-3.82	3.90	36.00	Pass
BLE	125Kbps	4	39	2480	6.39	30.00	-3.82	2.57	36.00	Pass
BLE	500Kbps	4	0	2402	6.88	30.00	-3.82	3.06	36.00	Pass
BLE	500Kbps	4	19	2440	7.70	30.00	-3.82	3.88	36.00	Pass
BLE	500Kbps	4	39	2480	6.30	30.00	-3.82	2.48	36.00	Pass
BLE	1Mbps	4	0	2402	6.92	30.00	-3.82	3.10	36.00	Pass
BLE	1Mbps	4	19	2440	7.57	30.00	-3.82	3.75	36.00	Pass
BLE	1Mbps	4	39	2480	6.37	30.00	-3.82	2.55	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	125Kbps	4	0	2402	6.00	0.43	-3.82	8.00	Pass
BLE	125Kbps	4	19	2440	6.73	1.13	-3.82	8.00	Pass
BLE	125Kbps	4	39	2480	5.63	0.10	-3.82	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

<SISO Ant.5>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	2Mbps	5	1	2404	2.034	1.160	0.50	Pass
BLE	2Mbps	5	19	2440	2.030	1.160	0.50	Pass
BLE	2Mbps	5	38	2478	2.030	1.168	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	5	1	2404	8.42	30.00	-3.60	4.82	36.00	Pass
BLE	2Mbps	5	19	2440	8.86	30.00	-3.60	5.26	36.00	Pass
BLE	2Mbps	5	38	2478	8.19	30.00	-3.60	4.59	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	5	1	2404	7.59	-9.43	-3.60	8.00	Pass
BLE	2Mbps	5	19	2440	7.80	-9.31	-3.60	8.00	Pass
BLE	2Mbps	5	38	2478	7.27	-9.52	-3.60	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

<SISO Ant.4>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	2Mbps	4	1	2404	2.018	1.164	0.50	Pass
BLE	2Mbps	4	19	2440	2.022	1.168	0.50	Pass
BLE	2Mbps	4	38	2478	2.026	1.164	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	4	1	2404	7.07	30.00	-3.82	3.25	36.00	Pass
BLE	2Mbps	4	19	2440	7.73	30.00	-3.82	3.91	36.00	Pass
BLE	2Mbps	4	38	2478	6.58	30.00	-3.82	2.76	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	4	1	2404	6.08	-10.85	-3.82	8.00	Pass
BLE	2Mbps	4	19	2440	6.70	-10.23	-3.82	8.00	Pass
BLE	2Mbps	4	38	2478	5.83	-10.94	-3.82	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

<SISO Ant.6>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	125kbps	6	0	2402	1.045	0.611	0.50	Pass
BLE	125kbps	6	19	2440	1.047	0.613	0.50	Pass
BLE	125kbps	6	39	2480	1.045	0.611	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	1Mbps	1	0	2402	4.98	30.00	-4.88	0.10	36.00	Pass
BLE	1Mbps	1	19	2440	5.66	30.00	-4.88	0.78	36.00	Pass
BLE	1Mbps	1	39	2480	4.54	30.00	-4.88	-0.34	36.00	Pass
BLE	125kbps	1	0	2402	5.09	30.00	-4.88	0.21	36.00	Pass
BLE	125kbps	1	19	2440	5.68	30.00	-4.88	0.80	36.00	Pass
BLE	125kbps	1	39	2480	4.65	30.00	-4.88	-0.23	36.00	Pass
BLE	500kbps	1	0	2402	4.96	30.00	-4.88	0.08	36.00	Pass
BLE	500kbps	1	19	2440	5.56	30.00	-4.88	0.68	36.00	Pass
BLE	500kbps	1	39	2480	4.57	30.00	-4.88	-0.31	36.00	Pass

TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	125kbps	6	0	2402	4.85	-0.76	-4.88	8.00	Pass
BLE	125kbps	6	19	2440	5.26	-0.34	-4.88	8.00	Pass
BLE	125kbps	6	39	2480	4.23	-1.36	-4.88	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

<SISO Ant.6>

Test Engineer:	Sam Zheng	Temperature:	24~26	°C
Test Date:	2023/12/1	Relative Humidity:	50~53	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
BLE	2Mbps	6	1	2404	2.018	1.164	0.50	Pass
BLE	2Mbps	6	19	2440	2.022	1.164	0.50	Pass
BLE	2Mbps	6	38	2478	2.026	1.168	0.50	Pass

TEST RESULTS DATA
Peak Power Table

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
BLE	2Mbps	1	1	2404	5.17	30.00	-4.88	0.29	36.00	Pass
BLE	2Mbps	1	19	2440	5.67	30.00	-4.88	0.79	36.00	Pass
BLE	2Mbps	1	38	2478	4.77	30.00	-4.88	-0.11	36.00	Pass

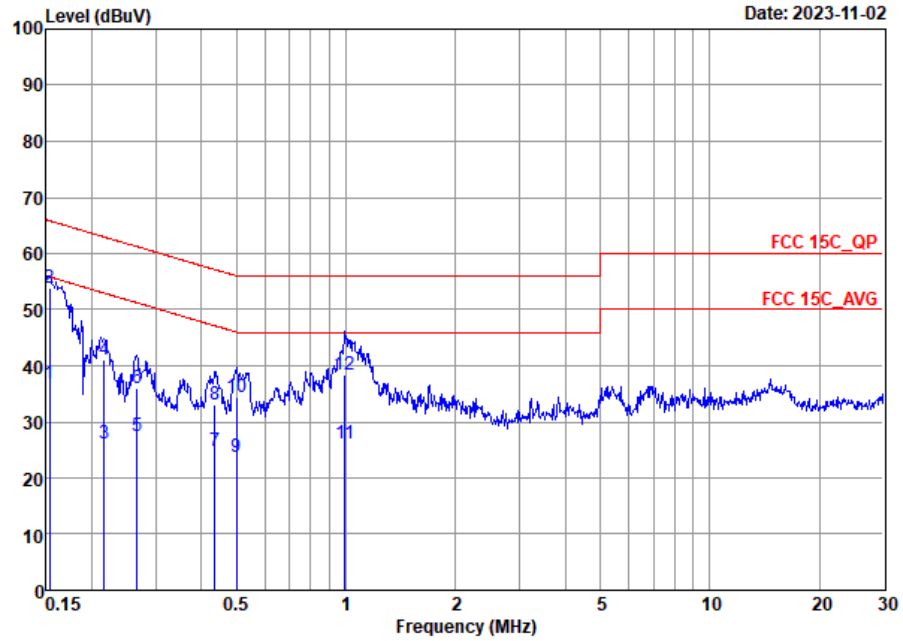
TEST RESULTS DATA
Peak Power Density

Mod.	Data Rate	ANT	CH.	Freq. (MHz)	Peak PSD (dBm /100kHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
BLE	2Mbps	6	1	2404	4.89	-12.12	-4.88	8.00	Pass
BLE	2Mbps	6	19	2440	5.27	-11.67	-4.88	8.00	Pass
BLE	2Mbps	6	38	2478	4.46	-12.38	-4.88	8.00	Pass

Note: PSD (dBm/ 100kHz) is a reference level used for Conducted Band Edges and Conducted Spurious Emission 20dBc limit.

Appendix B. AC Conducted Emission Test Results

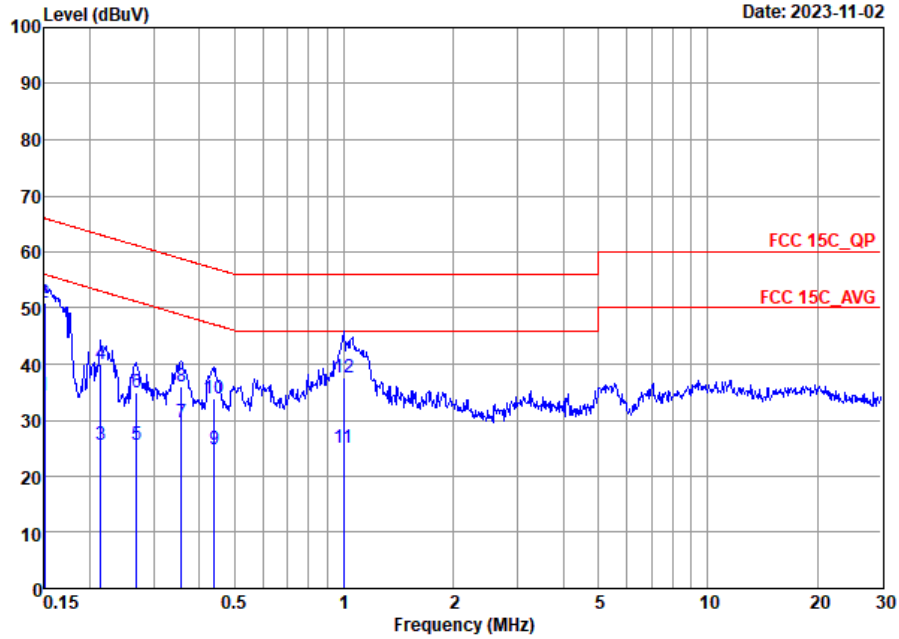
Test Engineer :	FangMing Liang	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15C_QP AC LISN 100063_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	36.70	-19.12	55.82	16.21	10.36	10.13	Average
2	*	0.15	53.80	-12.02	65.82	33.31	10.36	10.13	QP
3		0.22	26.11	-26.85	52.96	5.60	10.36	10.15	Average
4		0.22	41.01	-21.95	62.96	20.50	10.36	10.15	QP
5		0.27	27.45	-23.80	51.25	7.20	10.10	10.15	Average
6		0.27	36.05	-25.20	61.25	15.80	10.10	10.15	QP
7		0.44	24.84	-22.31	47.15	4.30	10.38	10.16	Average
8		0.44	33.14	-24.01	57.15	12.60	10.38	10.16	QP
9		0.50	23.62	-22.39	46.01	3.20	10.26	10.16	Average
10		0.50	34.42	-21.59	56.01	14.00	10.26	10.16	QP
11		0.99	26.02	-19.98	46.00	5.60	10.26	10.16	Average
12		0.99	38.42	-17.58	56.00	18.00	10.26	10.16	QP

Test Engineer :	FangMing Liang	**Temperature :**	22~24℃
		Relative Humidity :	44~50%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15C_QP AC LISN 100063_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	34.46	-21.54	56.00	14.20	10.13	10.13	Average
2	*	0.15	51.06	-14.94	66.00	30.80	10.13	10.13	QP
3		0.21	25.58	-27.47	53.05	5.20	10.23	10.15	Average
4		0.21	40.08	-22.97	63.05	19.70	10.23	10.15	QP
5		0.27	25.64	-25.52	51.16	5.21	10.28	10.15	Average
6		0.27	35.04	-26.12	61.16	14.61	10.28	10.15	QP
7		0.36	29.52	-19.26	48.78	9.10	10.26	10.16	Average
8		0.36	35.92	-22.86	58.78	15.50	10.26	10.16	QP
9		0.44	24.77	-22.30	47.07	4.60	10.01	10.16	Average
10		0.44	33.77	-23.30	57.07	13.60	10.01	10.16	QP
11		1.00	24.98	-21.02	46.00	4.60	10.22	10.16	Average
12		1.00	37.68	-18.32	56.00	17.30	10.22	10.16	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

Test Engineer :	Wenbo Xiao	Relative Humidity :	48~49%
		Temperature :	24~25℃

Radiated Spurious Emission Test Modes

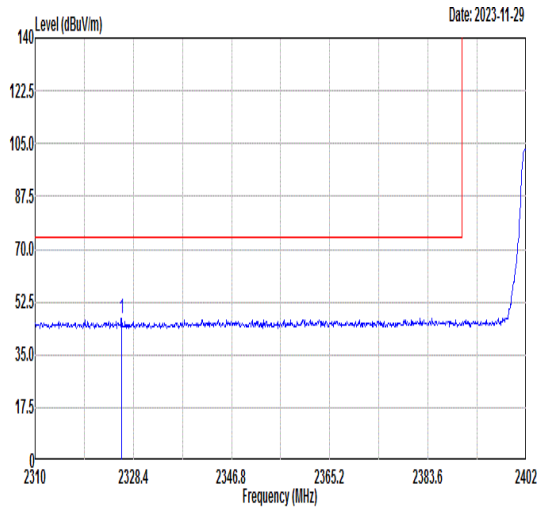
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	4	Bluetooth-LE	00	2402	125kbps	-	-
Mode 2	2400-2483.5	4	Bluetooth-LE	19	2440	125kbps	-	-
Mode 3	2400-2483.5	4	Bluetooth-LE	39	2480	125kbps	-	-
Mode 4	2400-2483.5	4	Bluetooth-LE	01	2404	2Mbps	-	-
Mode 5	2400-2483.5	4	Bluetooth-LE	38	2478	2Mbps	-	-
Mode 6	2400-2483.5	4	Bluetooth-LE	38	2478	125kbps	-	LF
Mode 7	2400-2483.5	5	Bluetooth-LE	00	2402	125kbps	-	-
Mode 8	2400-2483.5	5	Bluetooth-LE	19	2440	125kbps	-	-
Mode 9	2400-2483.5	5	Bluetooth-LE	39	2480	125kbps	-	-
Mode 10	2400-2483.5	5	Bluetooth-LE	01	2404	2Mbps	-	-
Mode 11	2400-2483.5	5	Bluetooth-LE	38	2478	2Mbps	-	-
Mode 12	2400-2483.5	5	Bluetooth-LE	38	2478	2Mbps	-	LF
Mode 13	2400-2483.5	6	Bluetooth-LE	00	2402	125kbps	-	-
Mode 14	2400-2483.5	6	Bluetooth-LE	19	2440	125kbps	-	-
Mode 15	2400-2483.5	6	Bluetooth-LE	39	2480	125kbps	-	-
Mode 16	2400-2483.5	6	Bluetooth-LE	01	2404	2Mbps	-	-
Mode 17	2400-2483.5	6	Bluetooth-LE	38	2478	2Mbps	-	-
Mode 18	2400-2483.5	6	Bluetooth-LE	38	2478	2Mbps	-	LF
Mode 19	2400-2483.5	6	Bluetooth-LE	38	2478	2Mbps	-	sample 2

Summary of each worse mode

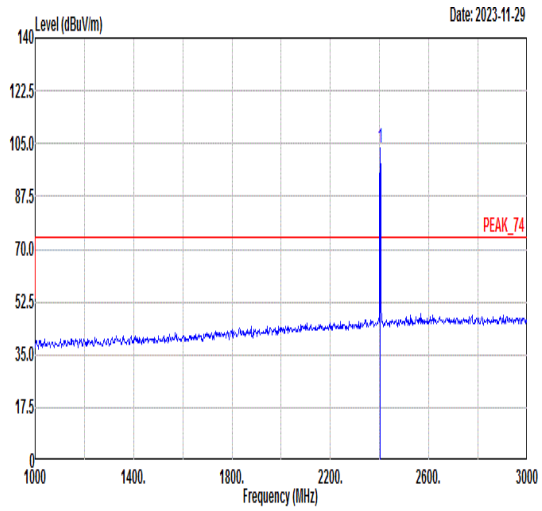
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	Remark
1	Bluetooth-LE	00	2386.54	36.66	54.00	-17.34	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	00	4804.00	43.43	74.00	-30.57	H	Peak	Pass	Harmonic
2	Bluetooth-LE	19	-	-	-	-	-	-	-	Band Edge
	Bluetooth-LE	19	7320.00	45.40	74.00	-28.60	H	Peak	Pass	Harmonic
3	Bluetooth-LE	39	2493.64	36.93	54.00	-17.07	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	39	7440.00	44.70	74.00	-29.30	H	Peak	Pass	Harmonic
4	Bluetooth-LE	01	2360.48	39.04	54.00	-14.96	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	01	-	-	-	-	-	-	-	Harmonic
5	Bluetooth-LE	38	2484.73	39.32	54.00	-14.68	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	38	7434.00	44.42	74.00	-29.58	H	Peak	Pass	Harmonic
6	Bluetooth-LE	38	93.05	34.97	43.50	-8.53	H	Peak	Pass	LF
7	Bluetooth-LE	00	2385.35	36.20	54.00	-17.80	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	00	4804.00	44.31	74.00	-29.69	V	Peak	Pass	Harmonic
8	Bluetooth-LE	19	-	-	-	-	-	-	-	Band Edge
	Bluetooth-LE	19	7320.00	45.15	74.00	-28.85	V	Peak	Pass	Harmonic
9	Bluetooth-LE	39	2483.82	37.52	54.00	-16.48	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	39	7440.00	45.31	74.00	-28.69	H	Peak	Pass	Harmonic
10	Bluetooth-LE	01	2382.76	38.93	54.00	-15.07	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	01	-	-	-	-	-	-	-	Harmonic
11	Bluetooth-LE	38	2487.09	39.25	54.00	-14.75	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	38	7434.00	44.53	74.00	-29.47	V	Peak	Pass	Harmonic
12	Bluetooth-LE	38	54.25	32.24	40.00	-7.76	V	Peak	Pass	LF
13	Bluetooth-LE	00	2387.28	36.46	54.00	-17.54	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	00	4804.00	43.59	74.00	-30.41	H	Peak	Pass	Harmonic
14	Bluetooth-LE	19	-	-	-	-	-	-	-	Band Edge
	Bluetooth-LE	19	7320.00	45.19	74.00	-28.81	V	Peak	Pass	Harmonic
15	Bluetooth-LE	39	2483.62	37.54	54.00	-16.46	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	39	7440.00	44.65	74.00	-29.35	V	Peak	Pass	Harmonic
16	Bluetooth-LE	01	2327.20	39.36	54.00	-14.64	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	01	-	-	-	-	-	-	-	Harmonic
17	Bluetooth-LE	38	2483.59	39.79	54.00	-14.21	V	AVERAGE	Pass	Band Edge
	Bluetooth-LE	38	4956.00	44.85	74.00	-29.15	V	Peak	Pass	Harmonic
18	Bluetooth-LE	38	51.34	32.21	40.00	-7.79	V	Peak	Pass	LF
19	Bluetooth-LE	38	2486.01	39.13	54.00	-14.87	H	AVERAGE	Pass	Band Edge
	Bluetooth-LE	38	7434.00	43.73	74.00	-30.27	H	PEAK	Pass	Harmonic

Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	4	
Pol.	Horizontal	Fundamental

Peak

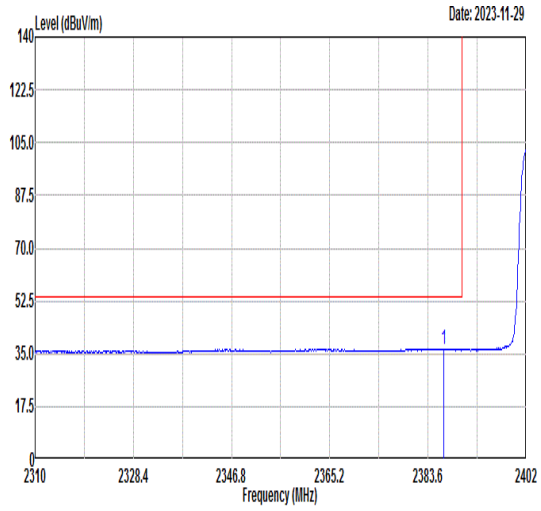


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2326.19	46.96	74.00	-27.04	41.84	33.15	5.31	33.34	291	134	PEAK

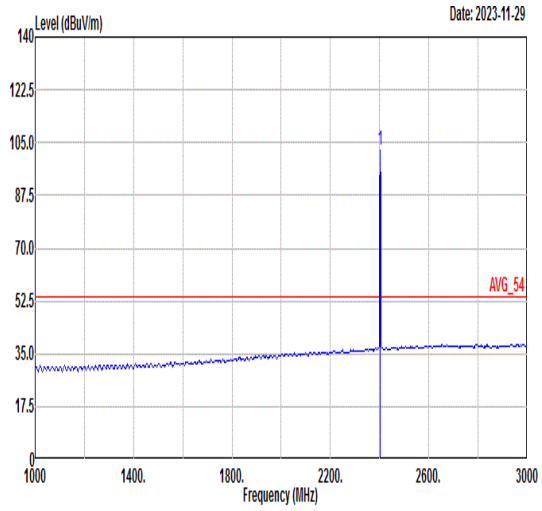


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	103.58	------	------	98.10	33.35	5.37	33.24	291	134	PEAK

Avg



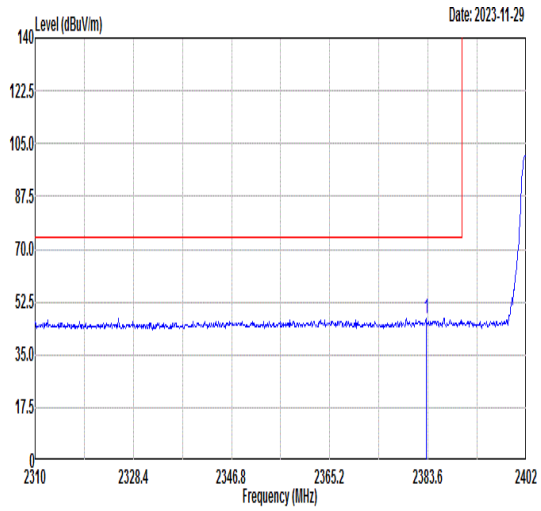
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2386.54	36.66	54.00	-17.34	31.25	33.31	5.36	33.26	291	134	AVERAGE



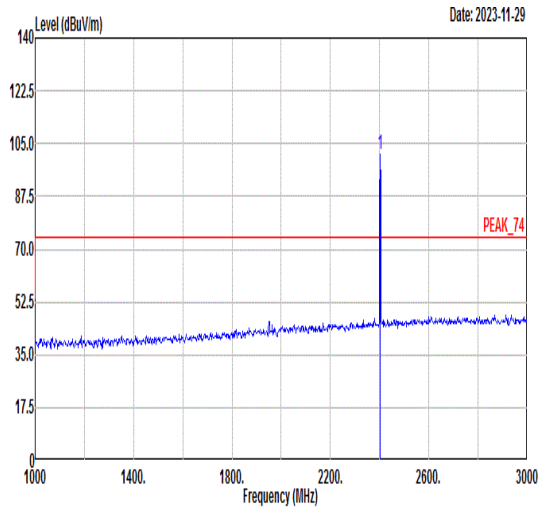
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	102.30	------	------	96.82	33.35	5.37	33.24	291	134	AVERAGE

Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	4	
Pol.	Vertical	Fundamental

Peak

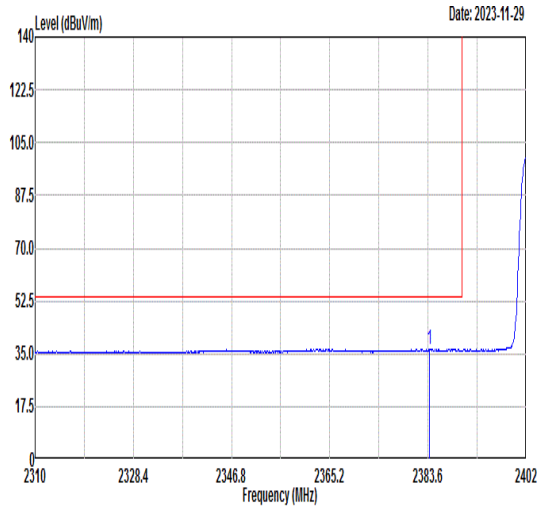


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2383.23	47.02	74.00	-26.98	41.63	33.30	5.35	33.26	326	273	PEAK

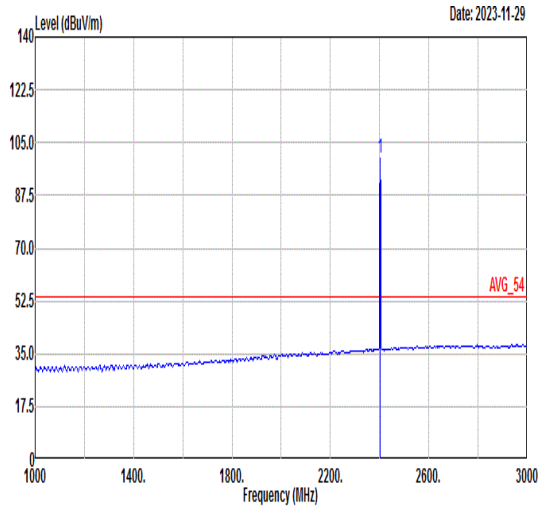


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	101.22	------	------	95.74	33.35	5.37	33.24	326	273	PEAK

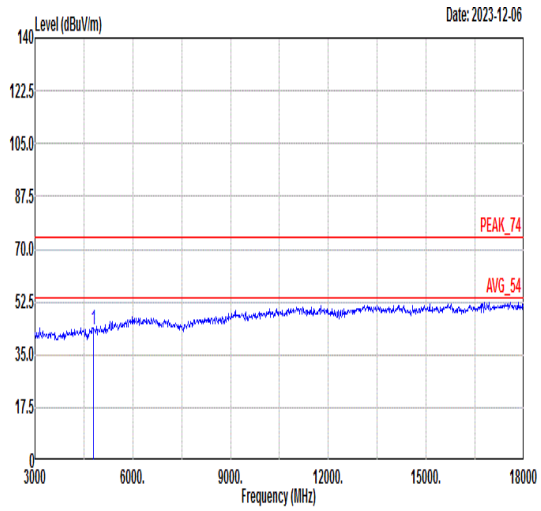
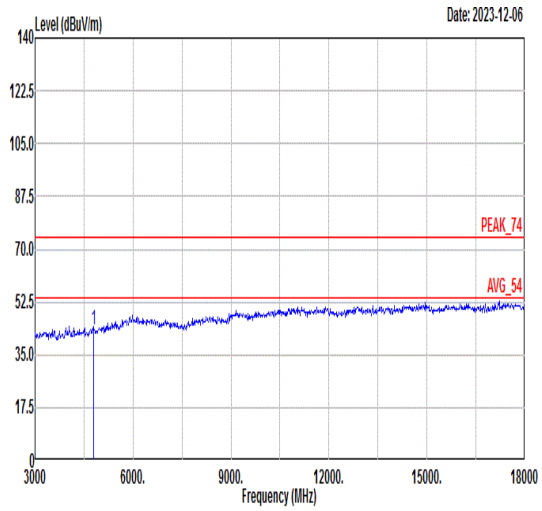
Avg

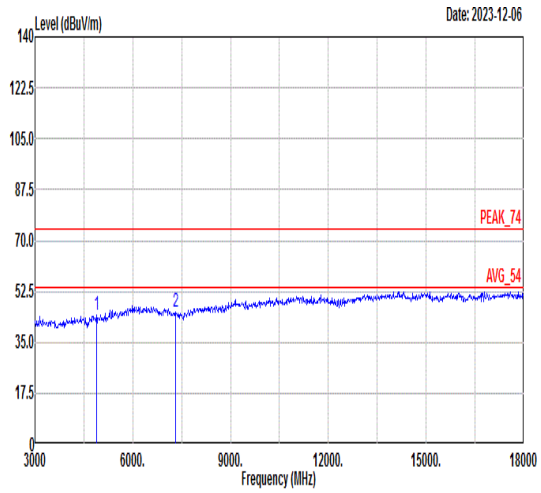
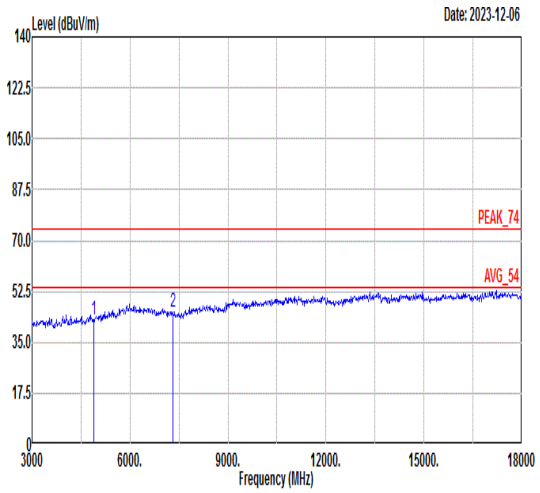


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2383.88	36.60	54.00	-17.40	31.21	33.30	5.35	33.26	326	273	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	99.95	------	------	94.47	33.35	5.37	33.24	326	273	AVERAGE

Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	4	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 43.43 74.00 -30.57 63.25 36.08 8.94 64.84 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 43.14 74.00 -30.86 62.96 36.08 8.94 64.84 --- --- Peak

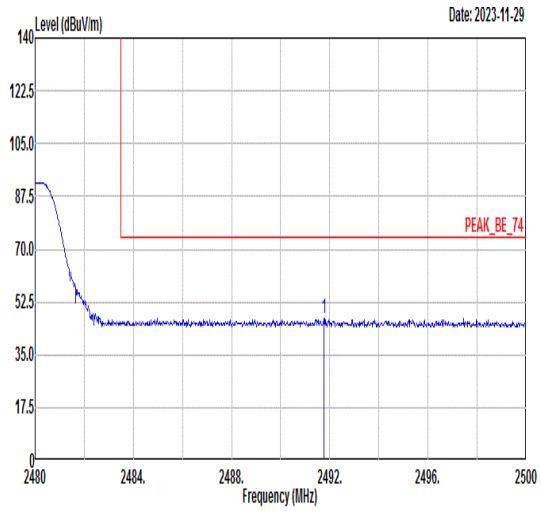
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH19_2440MHz	
ANT	4	
Pol.	Horizontal	Vertical
Peak Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	44.60	74.00	-29.40	64.63	36.13	8.71	64.87	---	---	Peak
2	7320.00	45.40	74.00	-28.60	63.88	36.20	10.18	64.86	---	---	Peak

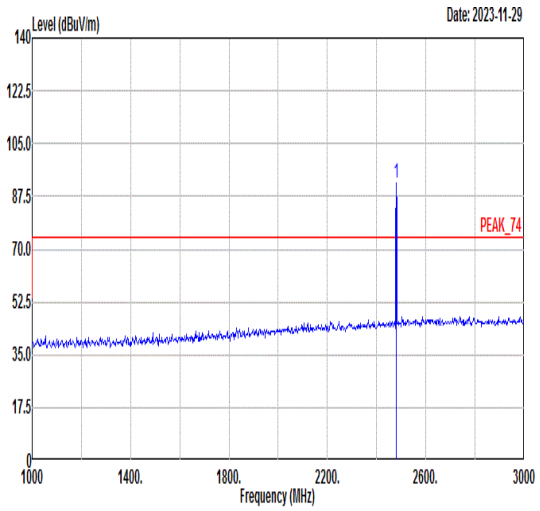
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	42.84	74.00	-31.16	62.87	36.13	8.71	64.87	---	---	Peak
2	7320.00	45.36	74.00	-28.64	63.84	36.20	10.18	64.86	---	---	Peak

Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	4	
Pol.	Horizontal	Fundamental

Peak

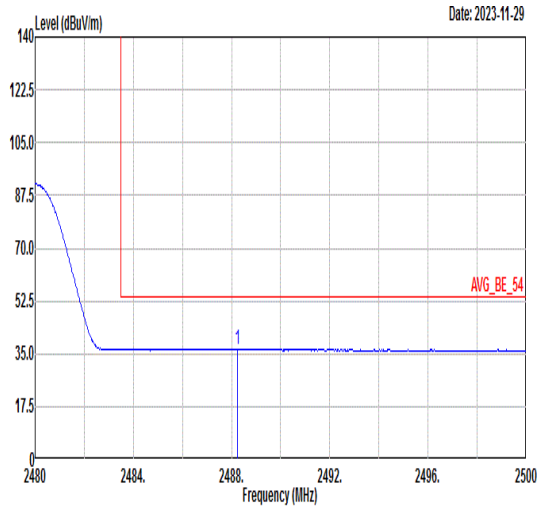


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2491.76	46.81	74.00	-27.19	40.87	33.58	5.47	33.11	112	306	PEAK

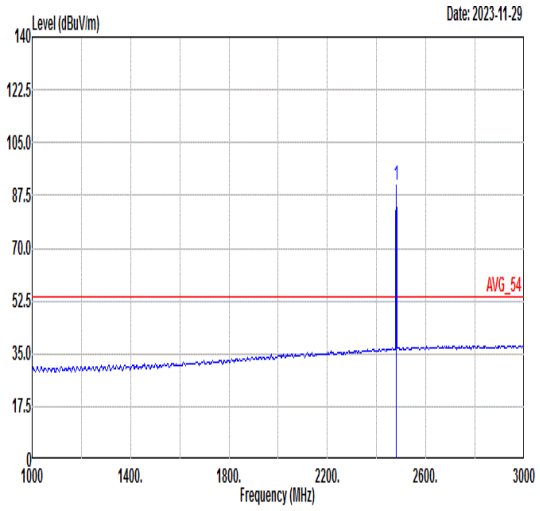


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	92.14	------	------	86.26	33.55	5.46	33.13	112	306	PEAK

Avg



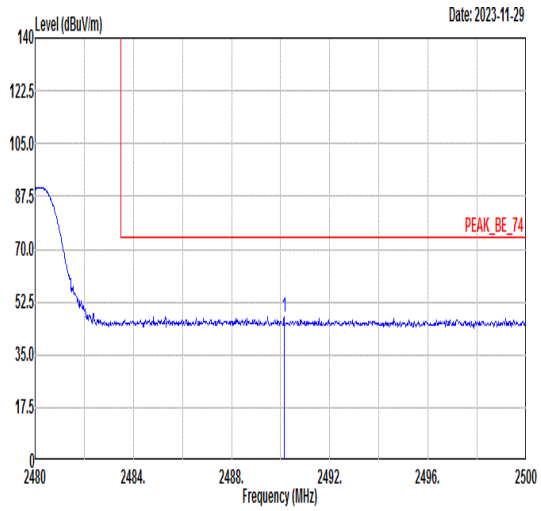
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2488.24	36.66	54.00	-17.34	30.74	33.57	5.47	33.12	112	306	AVERAGE



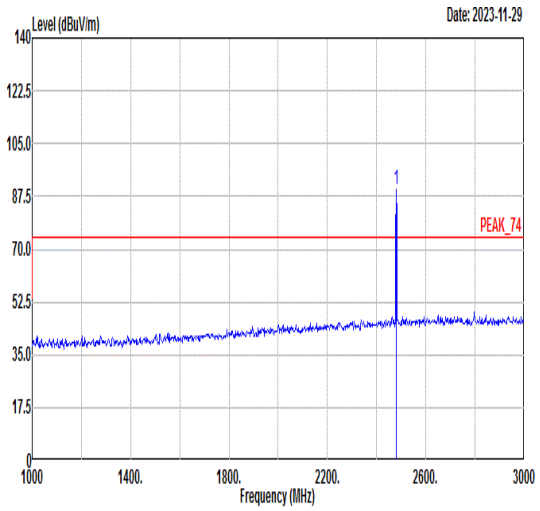
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	90.94	------	------	85.06	33.55	5.46	33.13	112	306	AVERAGE

Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	4	
Pol.	Vertical	Fundamental

Peak

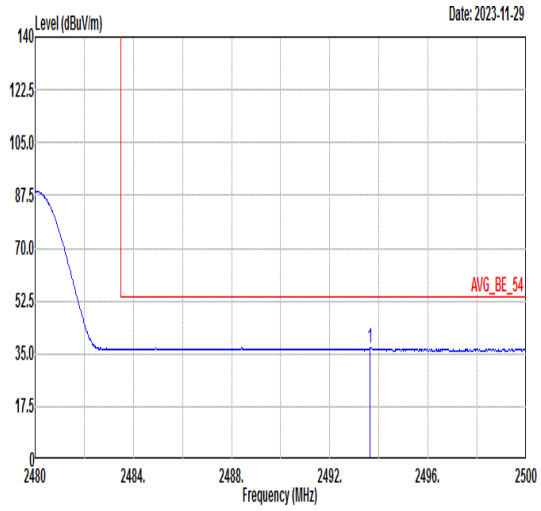


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2490.14	47.76	74.00	-26.24	41.83	33.57	5.47	33.11	251	348	PEAK

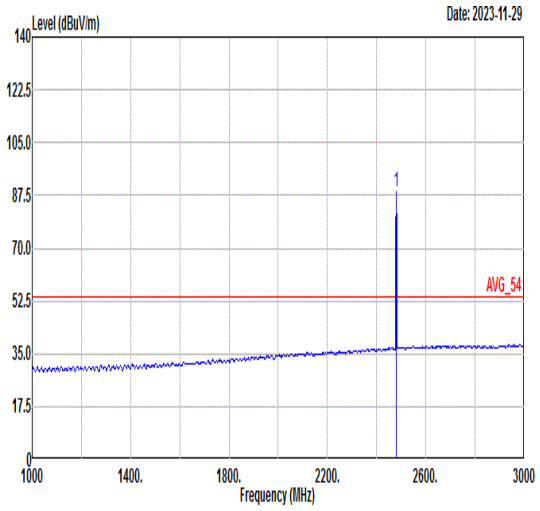


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	90.03	------	------	84.15	33.55	5.46	33.13	251	348	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2493.64	36.93	54.00	-17.07	30.99	33.58	5.47	33.11	251	348	AVERAGE

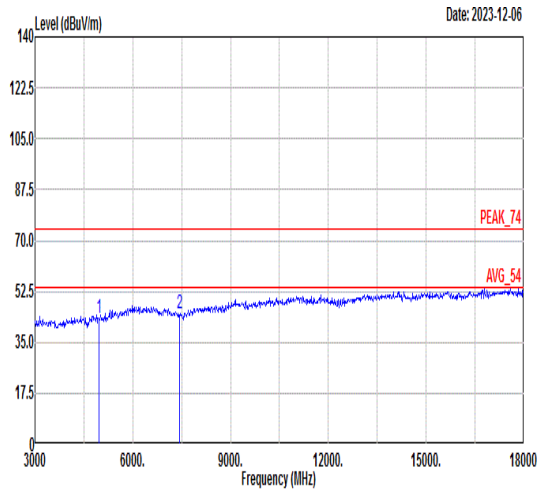


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	88.98	------	------	83.10	33.55	5.46	33.13	251	348	AVERAGE

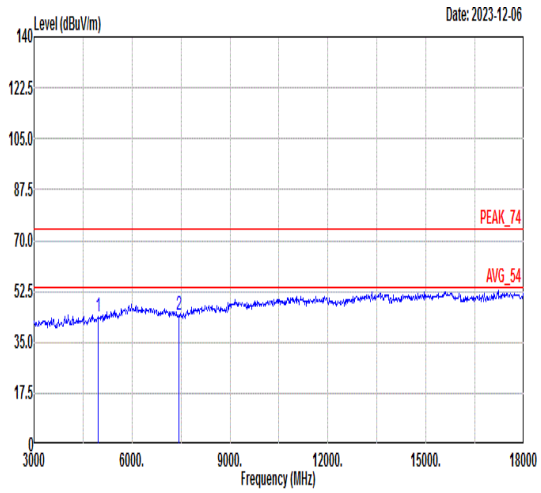
Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	4	
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	43.40	74.00	-30.60	63.66	36.18	8.46	64.90	---	---	Peak
2	7440.00	44.70	74.00	-29.30	63.46	35.93	10.17	64.86	---	---	Peak

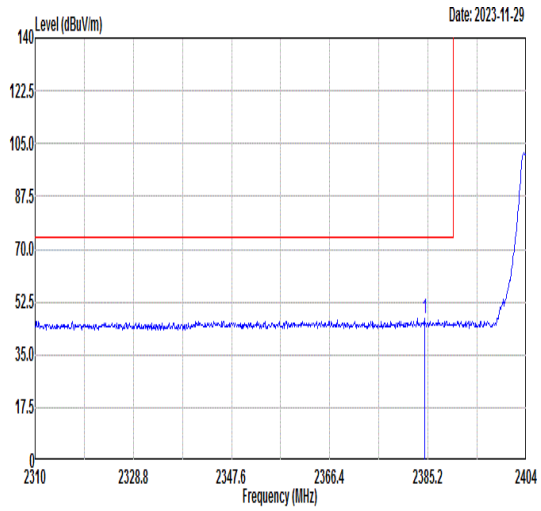


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	43.74	74.00	-30.26	64.00	36.18	8.46	64.90	---	---	Peak
2	7440.00	44.39	74.00	-29.61	63.15	35.93	10.17	64.86	---	---	Peak

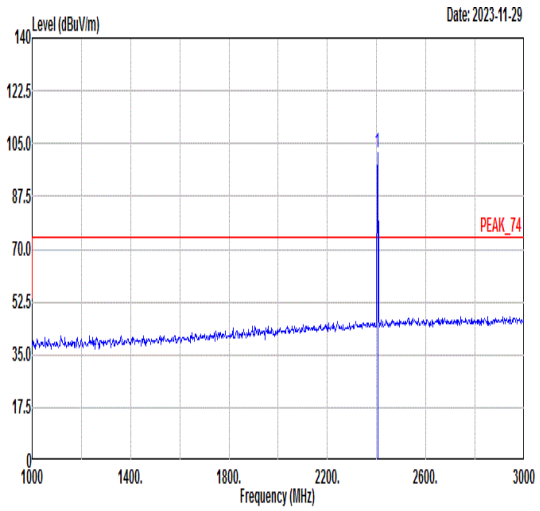
Mode	4
	Band Edge
	2400-2483.5_Bluetooth-LE _CH01_2404MHz
ANT	4

Pol.	Horizontal	Fundamental

Peak

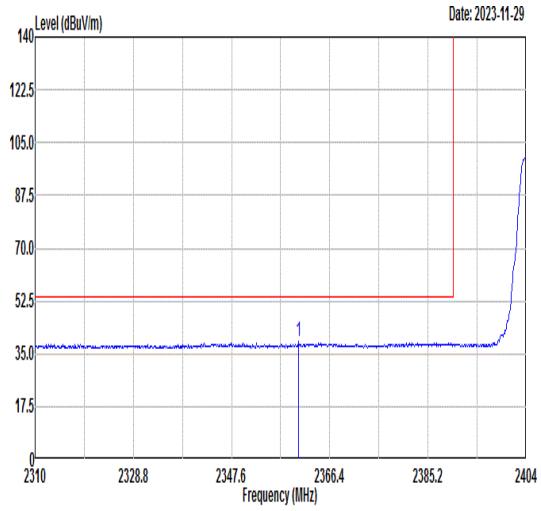


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2384.54	47.19	74.00	-26.81	41.80	33.30	5.35	33.26	265	214	PEAK

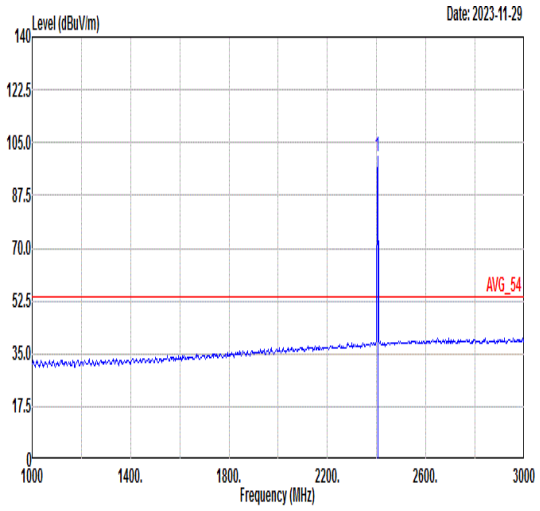


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	101.82	------	------	96.33	33.35	5.37	33.23	265	214	PEAK

Avg



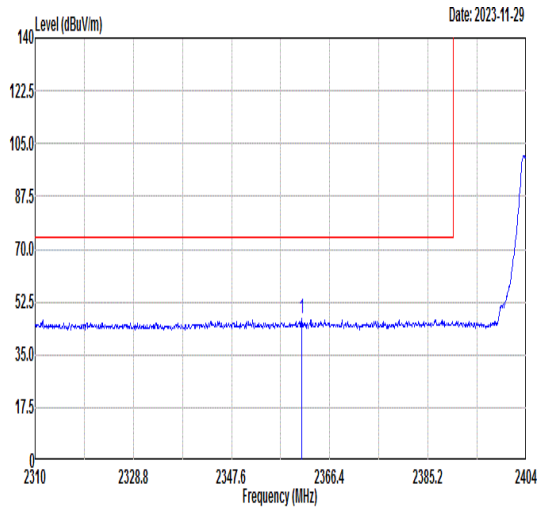
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2360.48	39.04	54.00	-14.96	33.77	33.24	5.33	33.30	265	214	AVERAGE



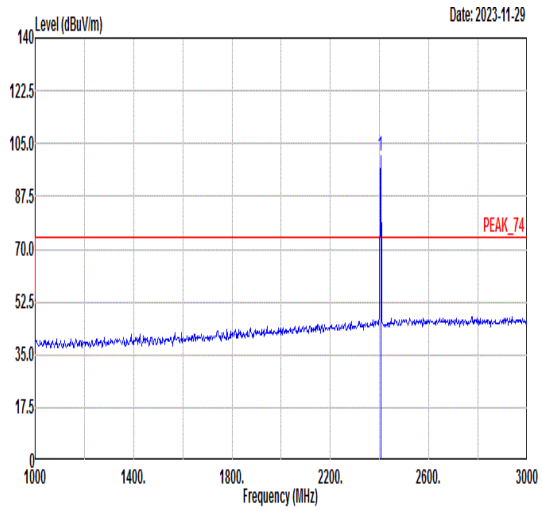
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	100.59	------	------	95.10	33.35	5.37	33.23	265	214	AVERAGE

Mode	4	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH01_2404MHz	
ANT	4	
Pol.	Vertical	Fundamental

Peak

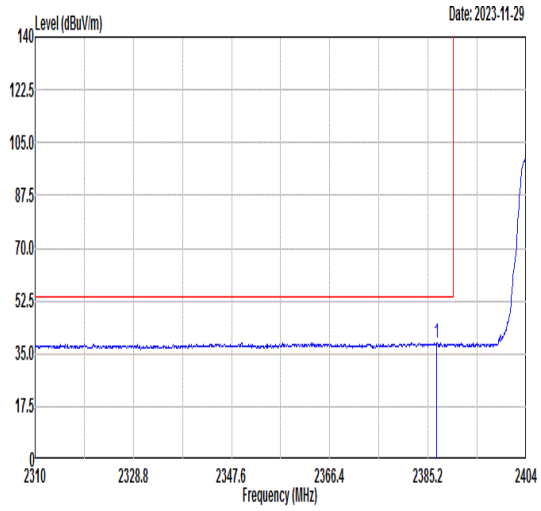


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2361.04	47.09	74.00	-26.91	41.81	33.24	5.33	33.29	253	258	PEAK

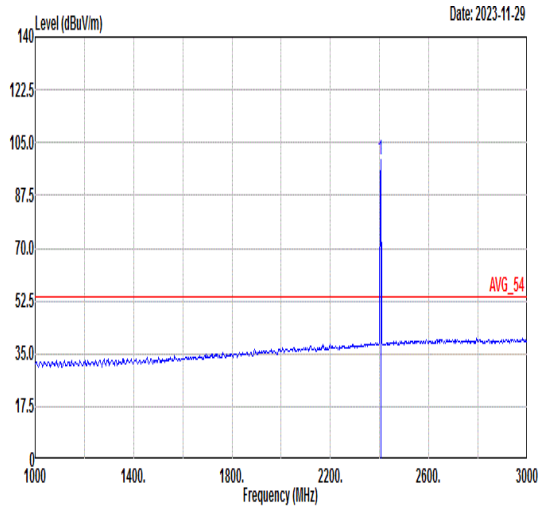


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	100.87	------	------	95.38	33.35	5.37	33.23	253	258	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2386.89	38.77	54.00	-15.23	33.36	33.31	5.36	33.26	253	258	AVERAGE

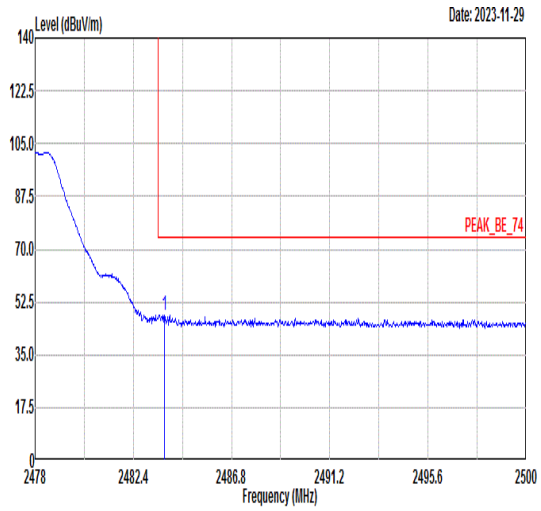


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	99.55	------	------	94.06	33.35	5.37	33.23	253	258	AVERAGE

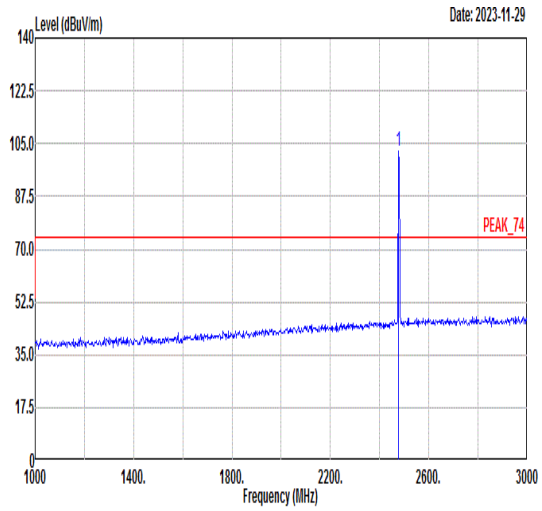
Mode	5
	Band Edge
	2400-2483.5_Bluetooth-LE _CH38_2478MHz
ANT	4

Pol.	Horizontal	Fundamental

Peak

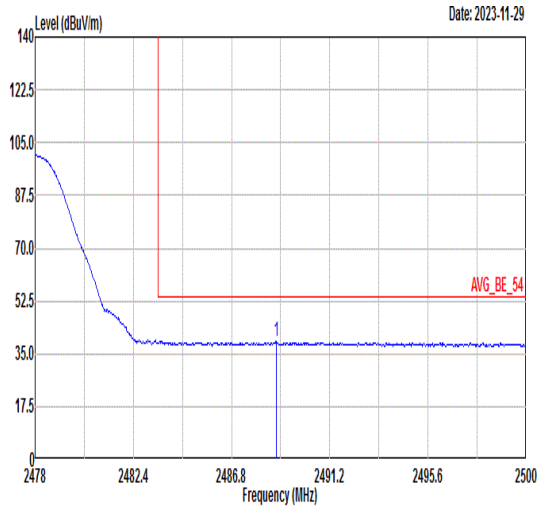


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.79	48.26	74.00	-25.74	42.36	33.56	5.46	33.12	282	208	PEAK

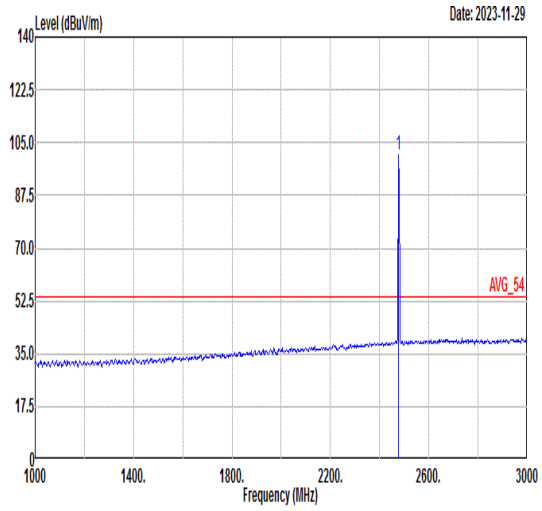


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	102.33	------	------	96.47	33.54	5.45	33.13	282	208	PEAK

Avg



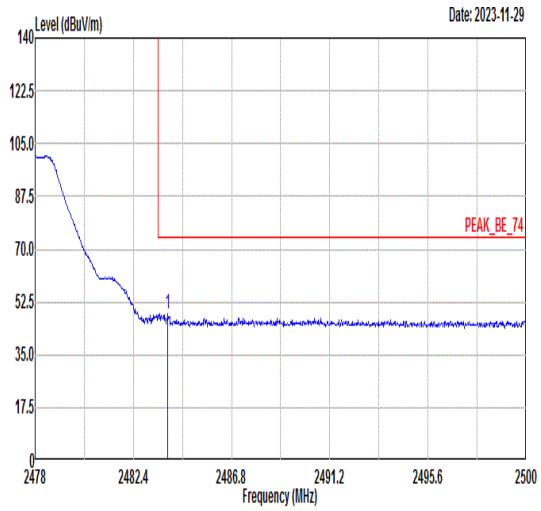
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2488.80	39.02	54.00	-14.98	33.10	33.57	5.47	33.12	282	208	AVERAGE



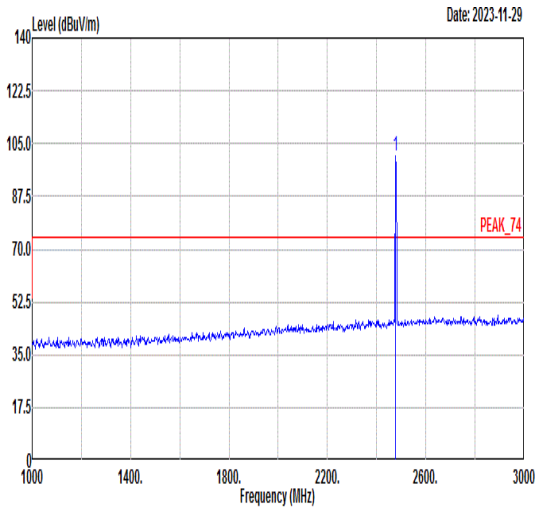
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	100.92	------	------	95.06	33.54	5.45	33.13	282	208	AVERAGE

Mode	5	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	4	
Pol.	Vertical	Fundamental

Peak

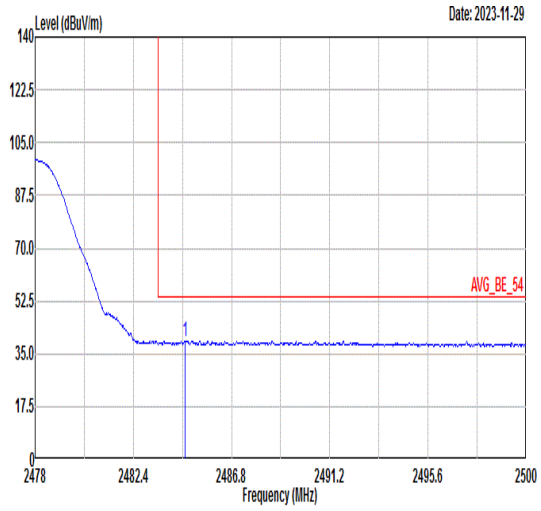


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.94	48.40	74.00	-25.60	42.50	33.56	5.46	33.12	345	295	PEAK

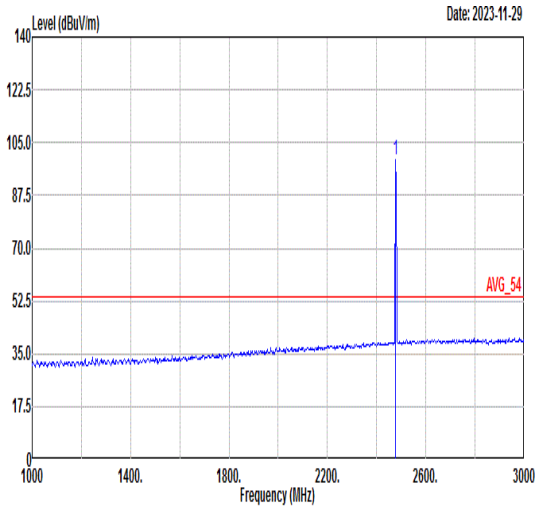


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	100.85	------	------	94.99	33.54	5.45	33.13	345	295	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2484.73	39.32	54.00	-14.68	33.42	33.56	5.46	33.12	345	295	AVERAGE



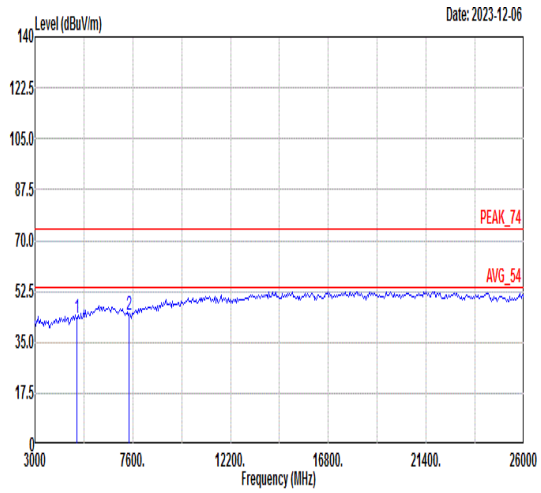
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	99.53	------	------	93.67	33.54	5.45	33.13	345	295	AVERAGE

Mode	5
	Harmonic
	2400-2483.5_Bluetooth-LE _CH38_2478MHz
ANT	4

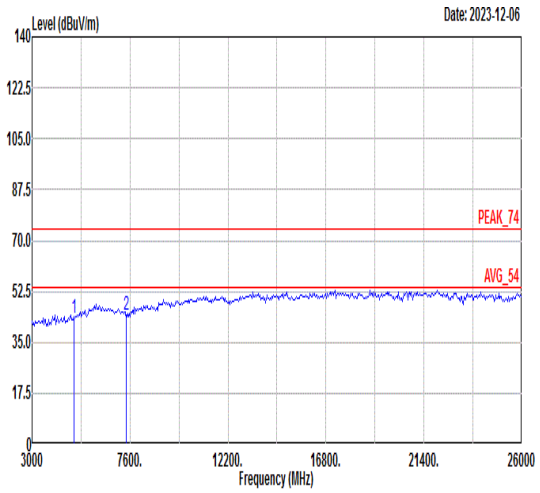
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	43.40	74.00	-30.60	63.65	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.42	74.00	-29.58	63.16	35.95	10.17	64.86	---	---	Peak

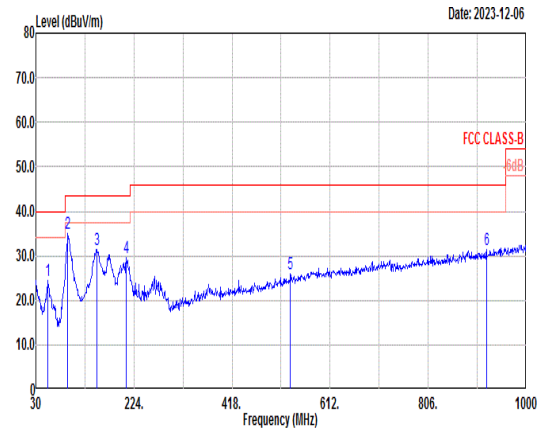


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	43.49	74.00	-30.51	63.74	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.39	74.00	-29.61	63.13	35.95	10.17	64.86	---	---	Peak

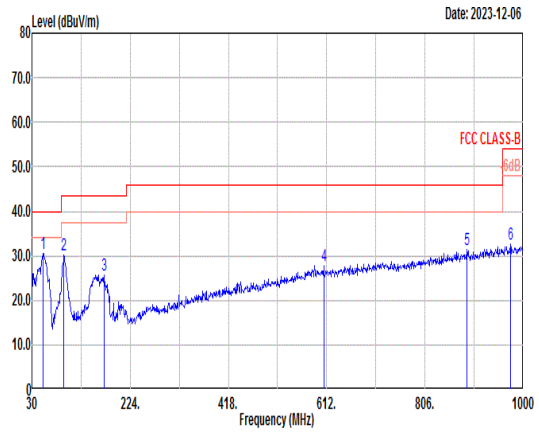
Mode	6
	LF
	2400-2483.5_Bluetooth-LE _CH39_2480MHz
ANT	4

Pol.	Horizontal	Vertical

QP/ Peak



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	54.25	24.38	40.00	-15.62	42.66	12.80	0.73	31.81	---	---	Peak
2	93.05	34.97	43.50	-8.53	50.50	15.30	0.97	31.80	---	---	Peak
3	150.28	31.39	43.50	-12.11	44.74	17.10	1.25	31.70	---	---	Peak
4	208.48	29.65	43.50	-13.85	44.81	14.97	1.47	31.60	---	---	Peak
5	533.43	25.93	46.00	-20.07	30.61	24.17	2.42	31.27	---	---	Peak
6	921.43	31.40	46.00	-14.60	29.55	29.52	3.19	30.86	---	---	Peak

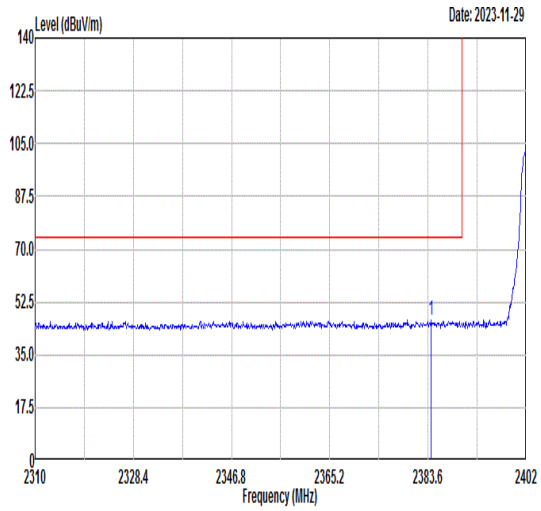


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	52.31	30.60	40.00	-9.40	48.13	13.60	0.72	31.85	---	---	Peak
2	93.05	30.24	43.50	-13.26	45.77	15.30	0.97	31.80	---	---	Peak
3	172.59	25.67	43.50	-17.83	40.48	15.50	1.34	31.65	---	---	Peak
4	606.18	27.77	46.00	-18.23	30.51	25.80	2.57	31.11	---	---	Peak
5	888.45	31.37	46.00	-14.63	30.09	29.10	3.13	30.95	---	---	Peak
6	974.78	32.73	54.00	-21.27	29.11	31.20	3.27	30.85	---	---	Peak

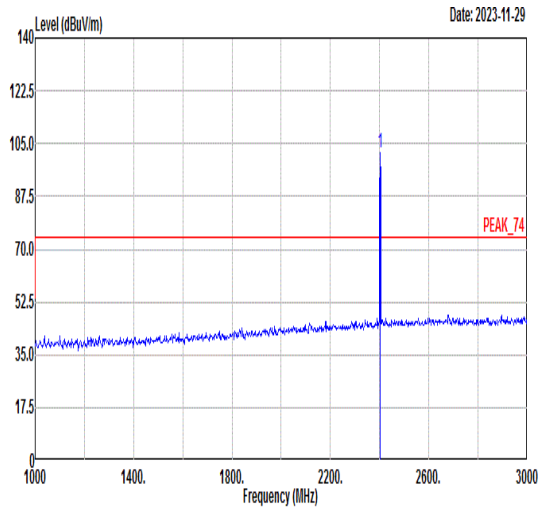
Mode	7
	Band Edge
	2400-2483.5_Bluetooth-LE _CH00_2402MHz
ANT	5

Pol.	Horizontal	Fundamental

Peak

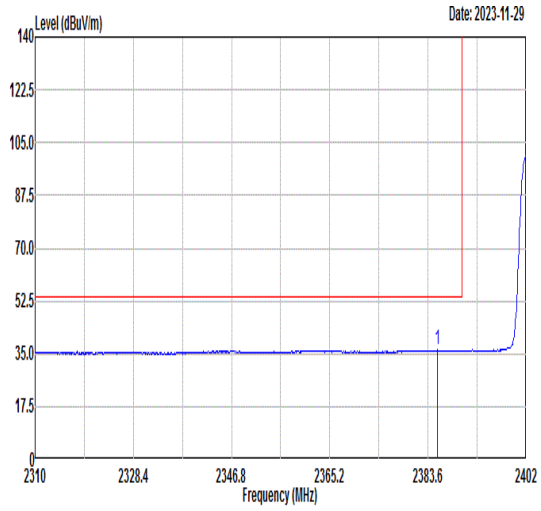


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2384.15	46.68	74.00	-27.32	41.29	33.30	5.35	33.26	346	329	PEAK

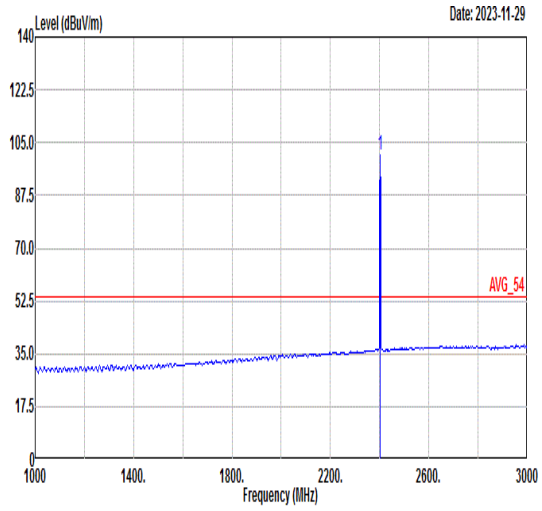


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	102.19	------	------	96.71	33.35	5.37	33.24	346	329	PEAK

Avg



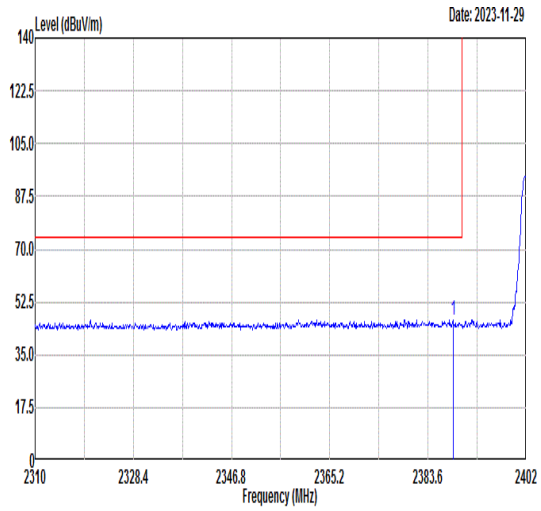
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2385.35	36.20	54.00	-17.80	30.81	33.30	5.35	33.26	346	329	AVERAGE



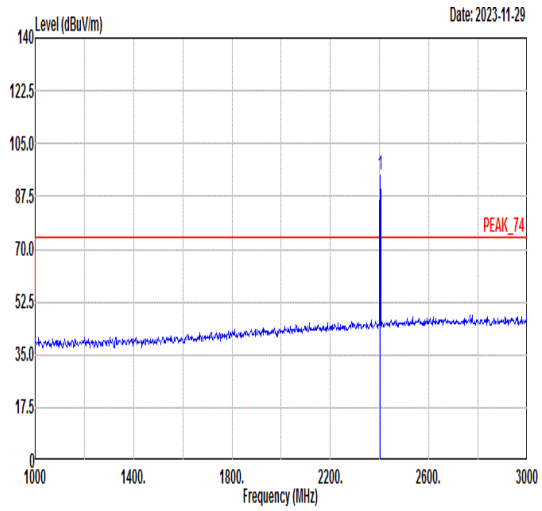
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	100.97	------	------	95.49	33.35	5.37	33.24	346	329	AVERAGE

Mode	7	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	5	
Pol.	Vertical	Fundamental

Peak

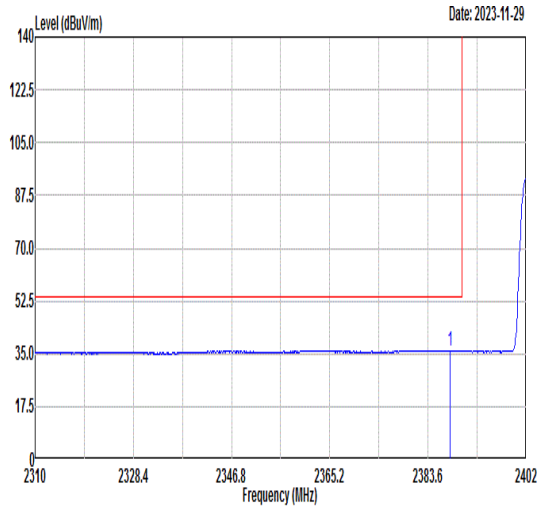


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2388.29	46.61	74.00	-27.39	41.20	33.31	5.36	33.26	345	17	PEAK

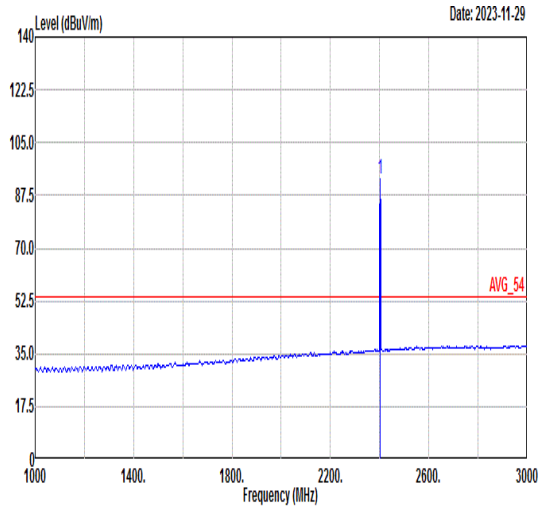


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	94.72	------	------	89.24	33.35	5.37	33.24	345	17	PEAK

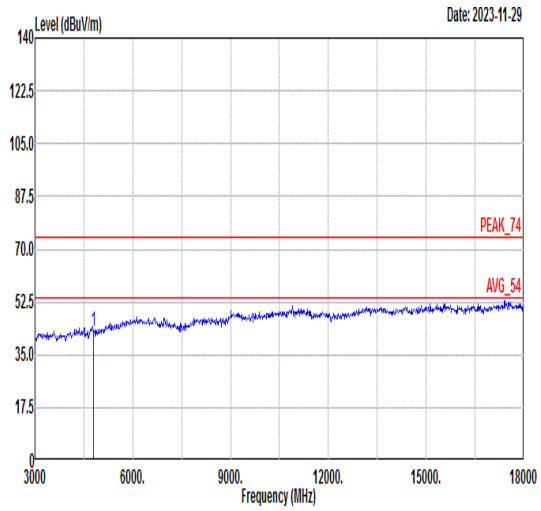
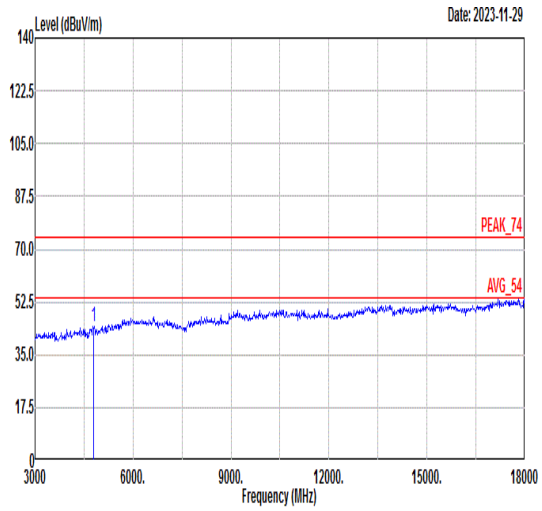
Avg

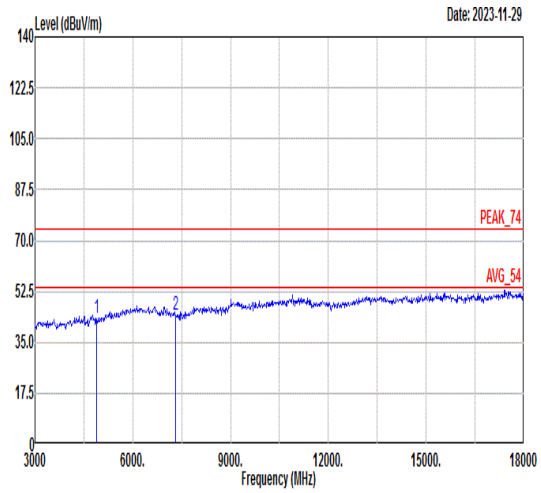
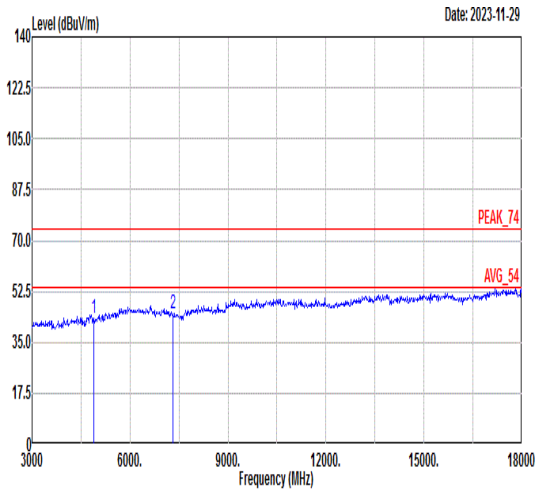


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2387.74	36.12	54.00	-17.88	30.71	33.31	5.36	33.26	345	17	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	93.22	------	------	87.74	33.35	5.37	33.24	345	17	AVERAGE

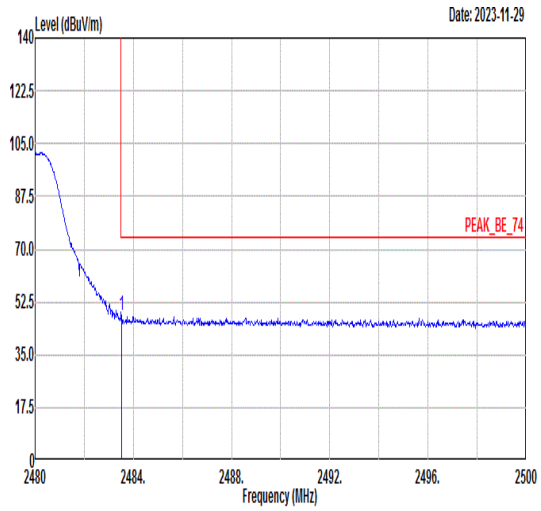
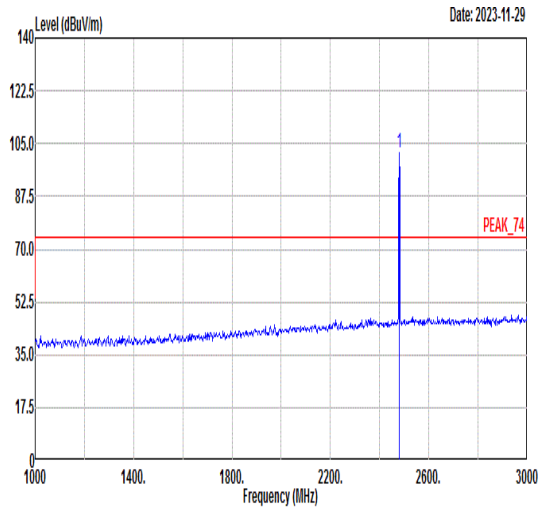
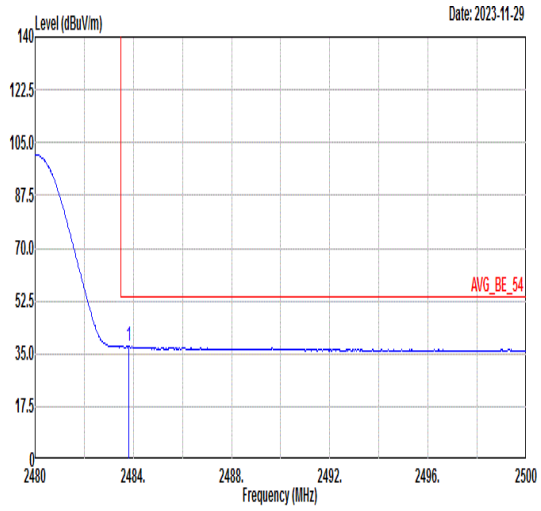
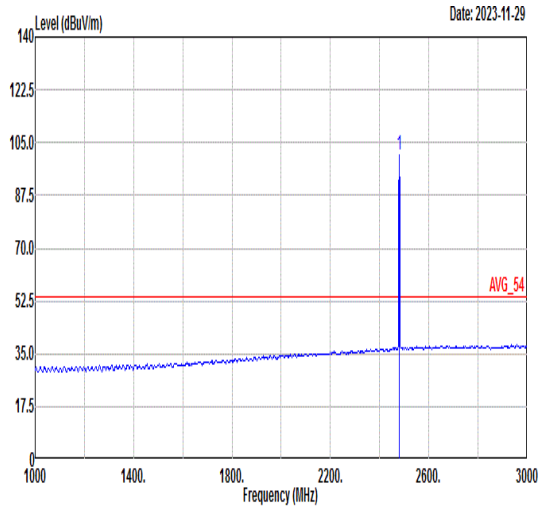
Mode	7	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 42.66 74.00 -31.34 62.48 36.08 8.94 64.84 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 44.31 74.00 -29.69 64.13 36.08 8.94 64.84 --- --- Peak

Mode	8	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH19_2440MHz	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	43.09	74.00	-30.91	63.12	36.13	8.71	64.87	---	---	Peak
2	7320.00	44.60	74.00	-29.40	63.08	36.20	10.18	64.86	---	---	Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	43.57	74.00	-30.43	63.60	36.13	8.71	64.87	---	---	Peak
2	7320.00	45.15	74.00	-28.85	63.63	36.20	10.18	64.86	---	---	Peak

Mode	9
	Band Edge
	2400-2483.5_Bluetooth-LE _CH39_2480MHz
ANT	5

Pol.	Horizontal	Fundamental
Peak		
Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.52	48.29	74.00	-25.71	42.39	33.56	5.46	33.12	312	131	PEAK

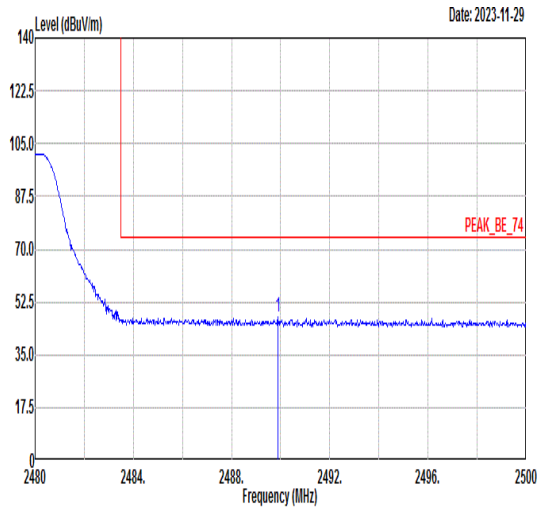
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	102.07	------	------	96.19	33.55	5.46	33.13	312	131	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.82	37.52	54.00	-16.48	31.62	33.56	5.46	33.12	312	131	AVERAGE

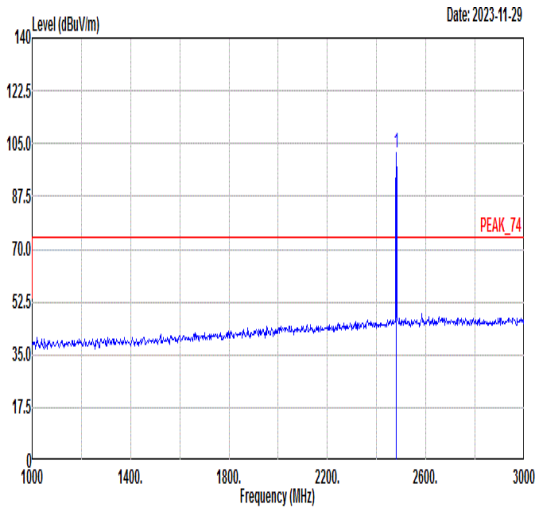
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	100.80	------	------	94.92	33.55	5.46	33.13	312	131	AVERAGE

Mode	9	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	5	
Pol.	Vertical	Fundamental

Peak

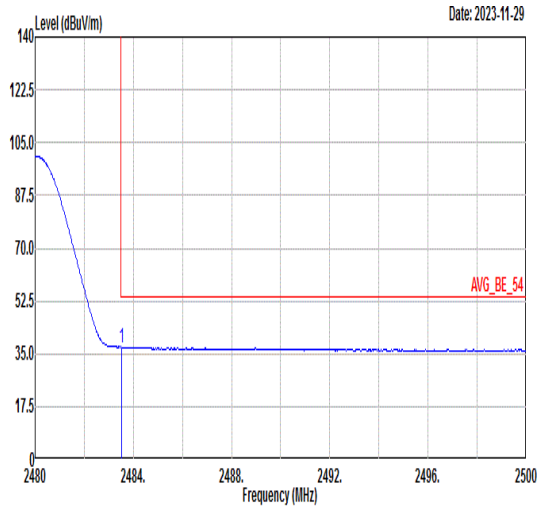


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2489.88	47.33	74.00	-26.67	41.40	33.57	5.47	33.11	345	266	PEAK

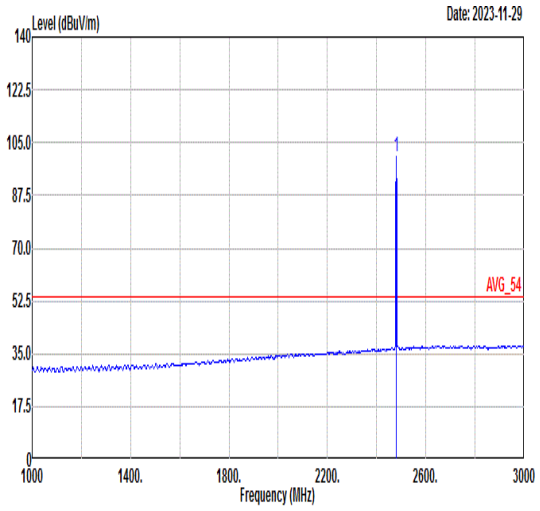


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	101.74	------	------	95.86	33.55	5.46	33.13	345	266	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.52	37.22	54.00	-16.78	31.32	33.56	5.46	33.12	345	266	AVERAGE



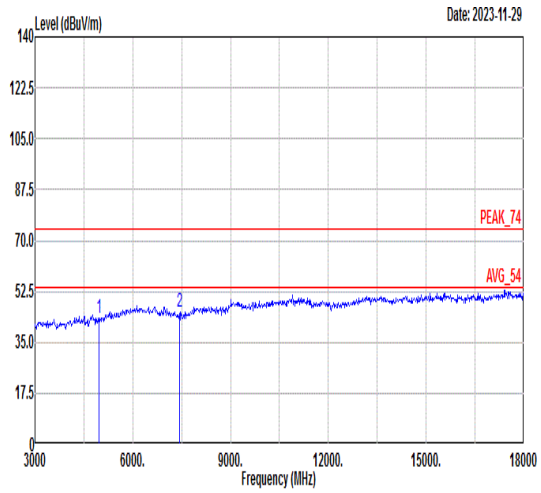
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	100.48	------	------	94.60	33.55	5.46	33.13	345	266	AVERAGE

Mode	9
	Harmonic
	2400-2483.5_Bluetooth-LE _CH39_2480MHz
ANT	5

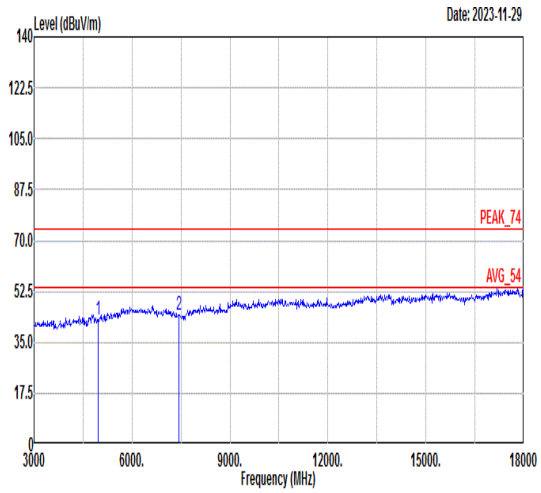
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	43.14	74.00	-30.86	63.40	36.18	8.46	64.90	---	---	Peak
2	7440.00	45.31	74.00	-28.69	64.07	35.93	10.17	64.86	---	---	Peak

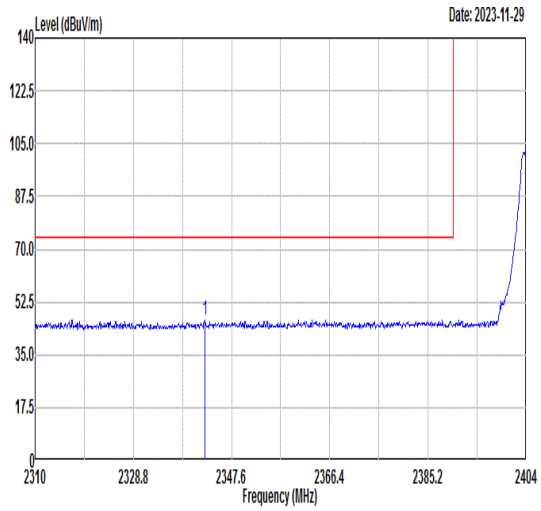


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	42.80	74.00	-31.20	63.06	36.18	8.46	64.90	---	---	Peak
2	7440.00	44.62	74.00	-29.38	63.38	35.93	10.17	64.86	---	---	Peak

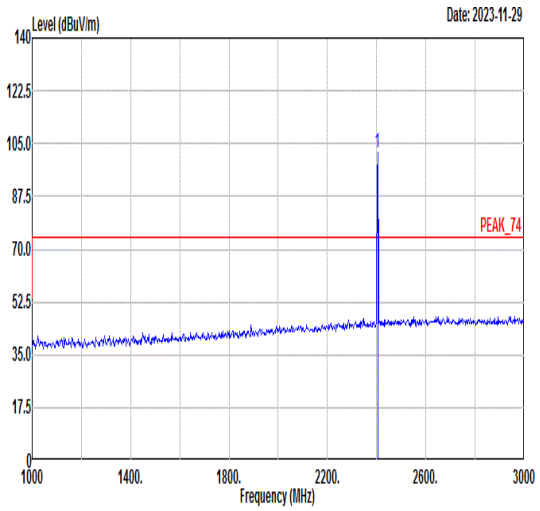
Mode	10
	Band Edge
	2400-2483.5_Bluetooth-LE _CH01_2404MHz
ANT	5

Pol.	Horizontal	Fundamental

Peak

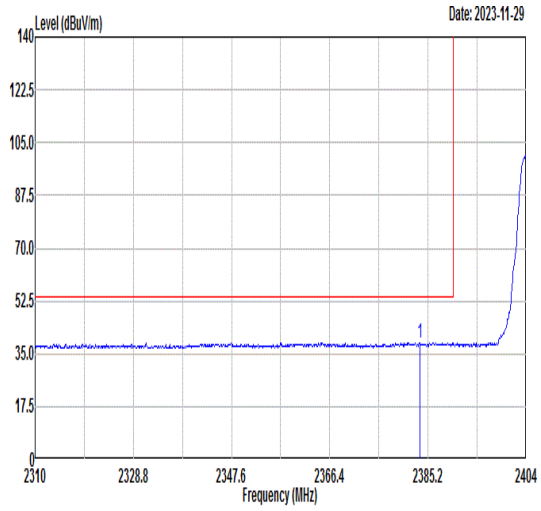


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2342.43	46.54	74.00	-27.46	41.35	33.19	5.32	33.32	348	332	PEAK

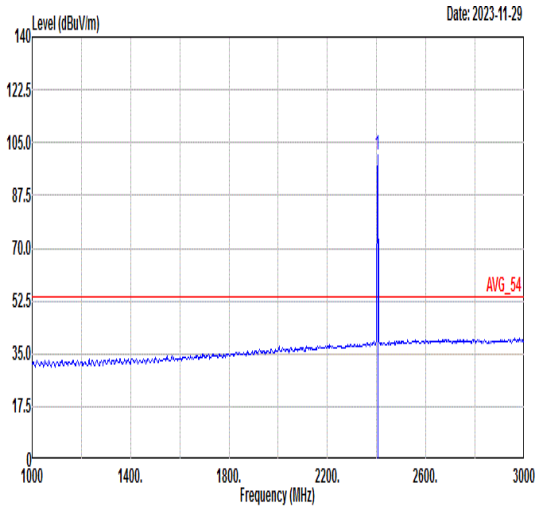


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	102.01	------	------	96.52	33.35	5.37	33.23	348	332	PEAK

Avg



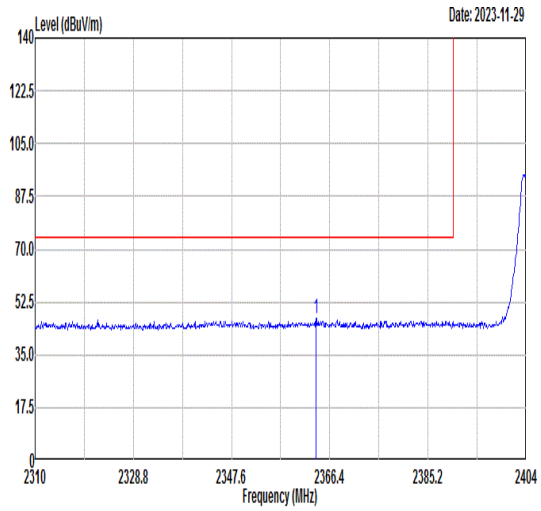
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2383.60	38.81	54.00	-15.19	33.42	33.30	5.35	33.26	348	332	AVERAGE



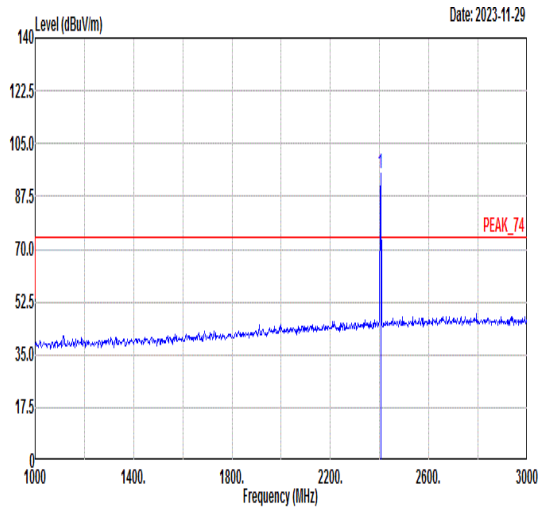
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	100.72	------	------	95.23	33.35	5.37	33.23	348	332	AVERAGE

Mode	10	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH01_2404MHz	
ANT	5	
Pol.	Vertical	Fundamental

Peak

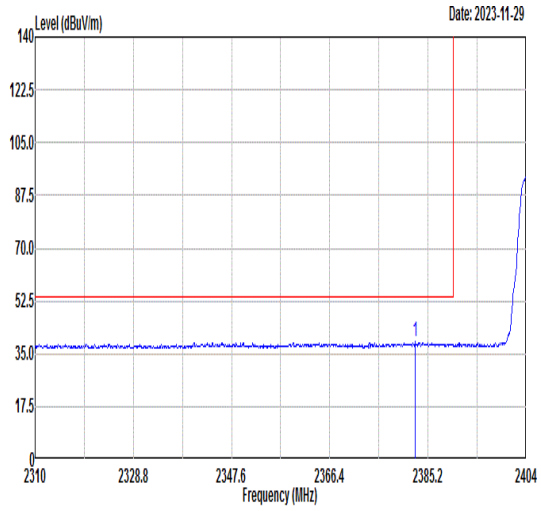


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2363.77	46.88	74.00	-27.12	41.58	33.25	5.34	33.29	347	15	PEAK

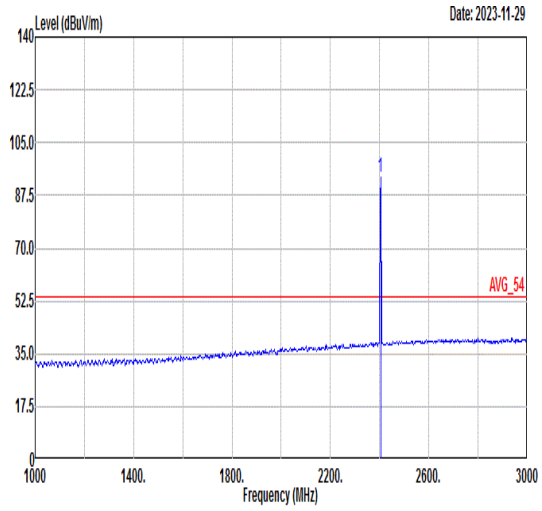


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	94.86	------	------	89.37	33.35	5.37	33.23	347	15	PEAK

Avg



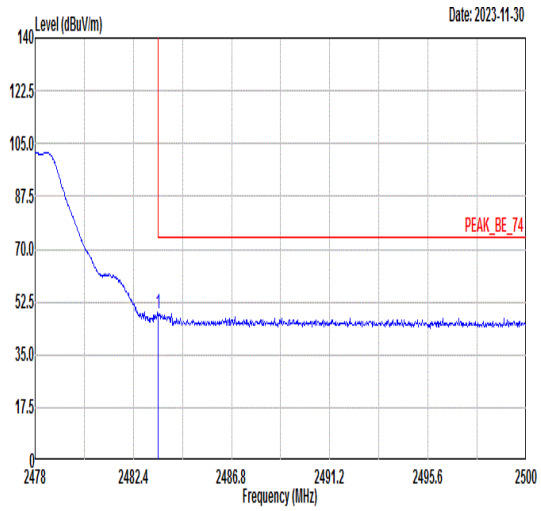
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2382.76	38.93	54.00	-15.07	33.54	33.30	5.35	33.26	347	15	AVERAGE



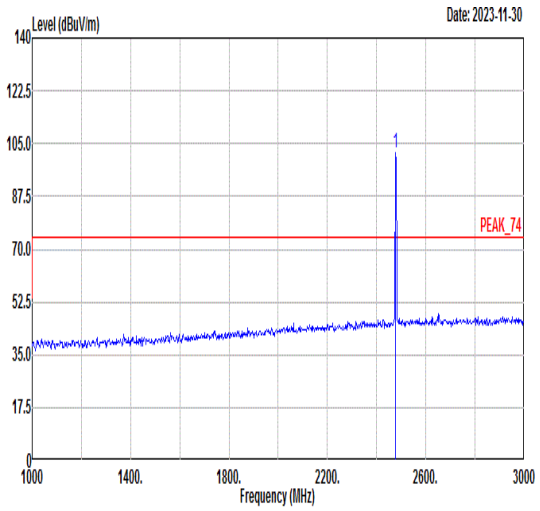
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	93.36	------	------	87.87	33.35	5.37	33.23	347	15	AVERAGE

Mode	11	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	5	
Pol.	Horizontal	Fundamental

Peak

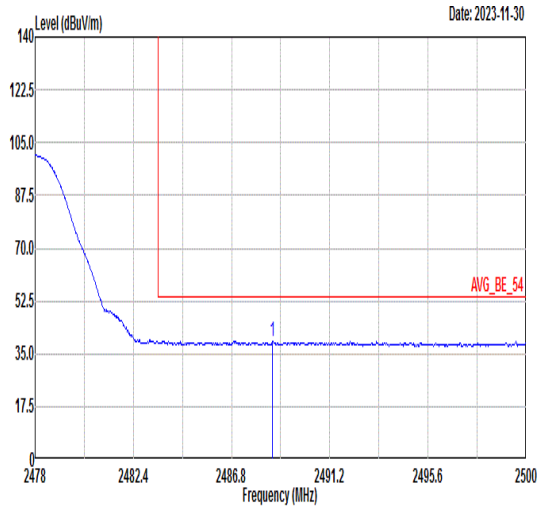


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.52	48.45	74.00	-25.55	42.55	33.56	5.46	33.12	359	216	PEAK

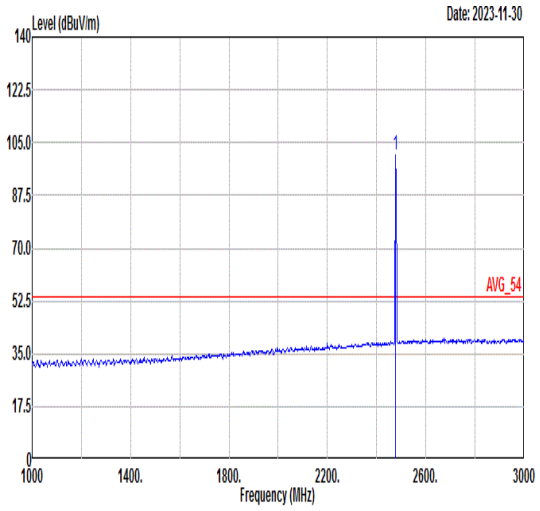


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	102.21	------	------	96.35	33.54	5.45	33.13	359	216	PEAK

Avg



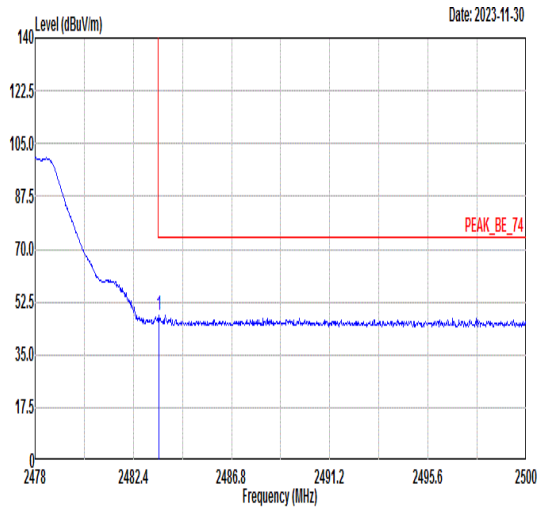
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2488.63	39.11	54.00	-14.89	33.19	33.57	5.47	33.12	359	216	AVERAGE



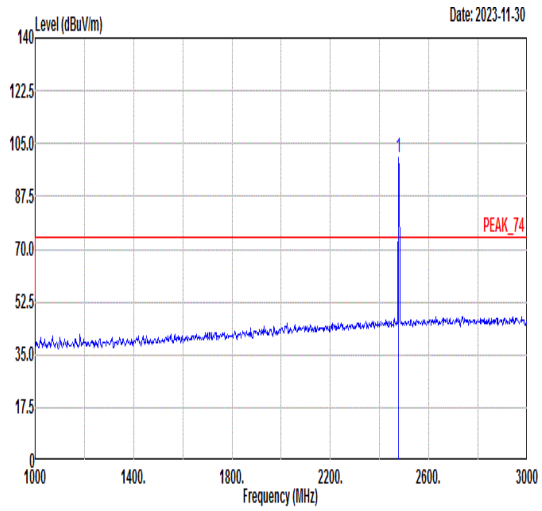
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	100.88	------	------	95.02	33.54	5.45	33.13	359	216	AVERAGE

Mode	11	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	5	
Pol.	Vertical	Fundamental

Peak

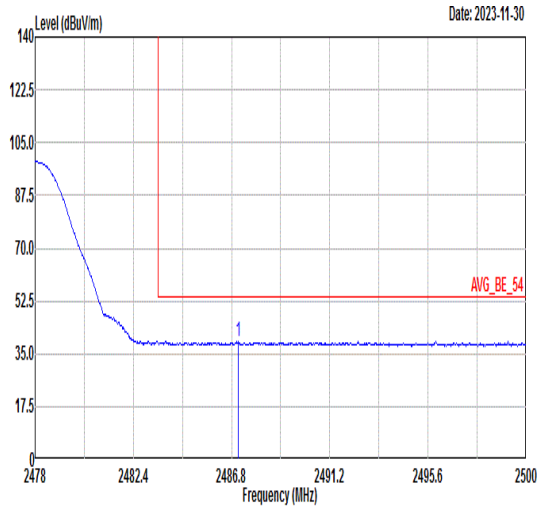


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.54	48.23	74.00	-25.77	42.33	33.56	5.46	33.12	246	315	PEAK

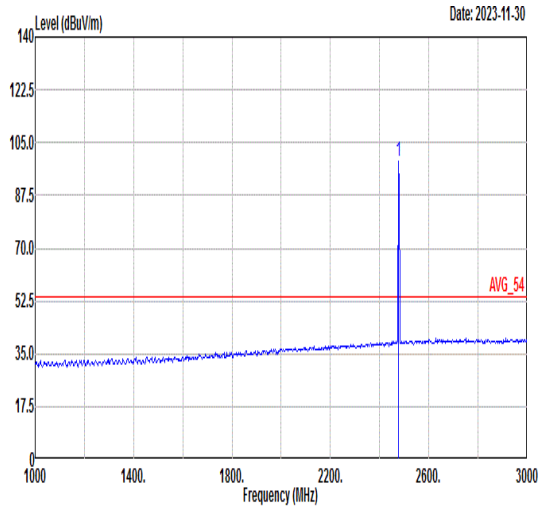


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	100.36	------	------	94.50	33.54	5.45	33.13	246	315	PEAK

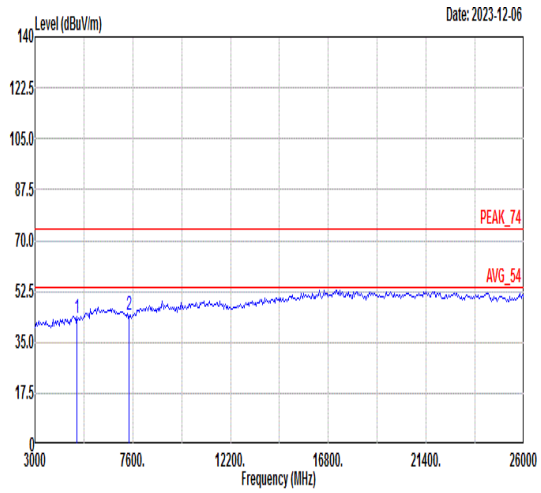
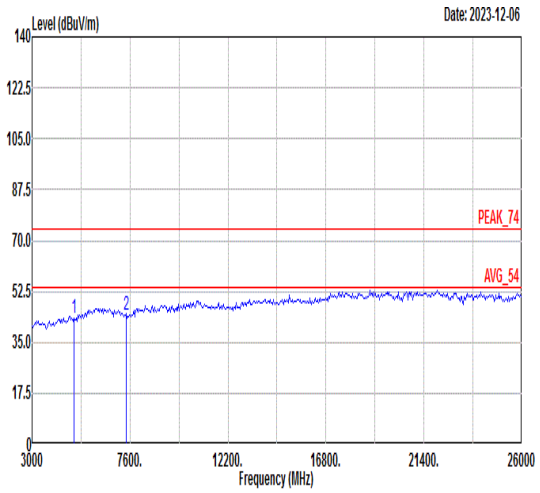
Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2487.09	39.25	54.00	-14.75	33.34	33.57	5.46	33.12	246	315	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	98.88	------	------	93.02	33.54	5.45	33.13	246	315	AVERAGE

Mode	11	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	5	
Pol.	Horizontal	Vertical
Peak Avg		

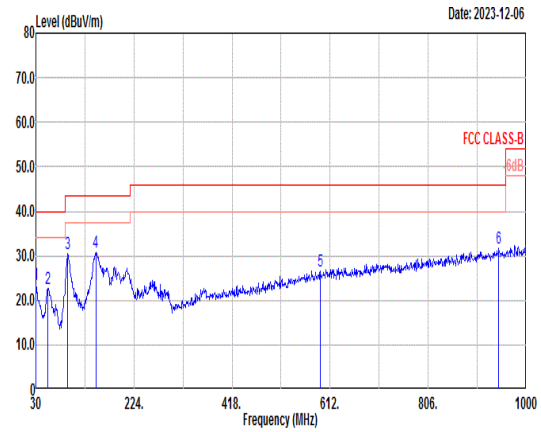
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	43.19	74.00	-30.81	63.44	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.31	74.00	-29.69	63.05	35.95	10.17	64.86	---	---	Peak

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	43.14	74.00	-30.86	63.39	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.53	74.00	-29.47	63.27	35.95	10.17	64.86	---	---	Peak

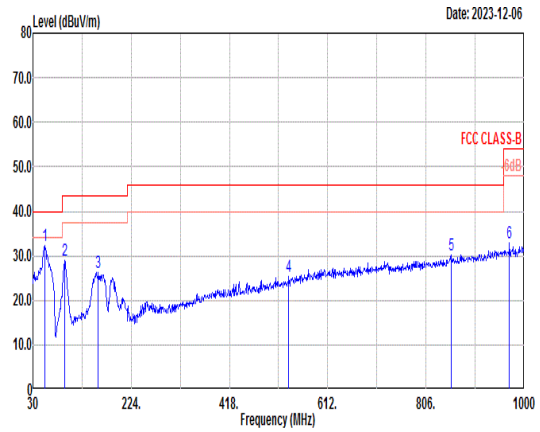
Mode	12
	LF
	2400-2483.5_Bluetooth-LE _CH39_2480MHz
ANT	5

Pol.	Horizontal	Vertical

QP/ Peak



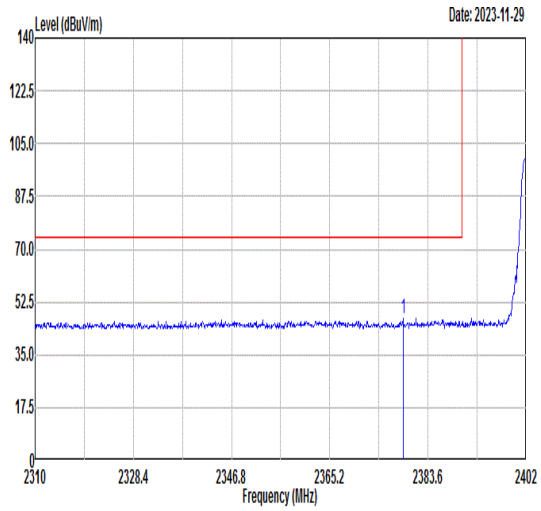
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	23.49	40.00	-16.51	29.36	25.20	0.53	31.60	---	---	Peak
2	54.25	22.78	40.00	-17.22	41.06	12.80	0.73	31.81	---	---	Peak
3	93.05	30.53	43.50	-12.97	46.06	15.30	0.97	31.80	---	---	Peak
4	148.34	30.72	43.50	-12.78	43.99	17.20	1.24	31.71	---	---	Peak
5	592.60	26.69	46.00	-19.31	29.36	25.90	2.54	31.11	---	---	Peak
6	945.68	31.64	46.00	-14.36	28.59	30.64	3.22	30.81	---	---	Peak



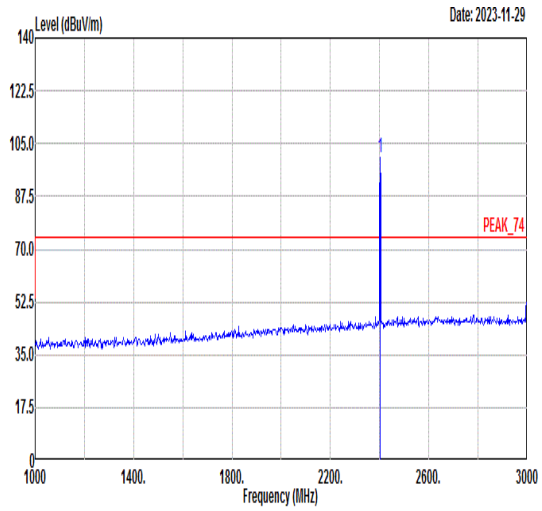
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	54.25	32.24	40.00	-7.76	50.52	12.80	0.73	31.81	---	---	Peak
2	93.05	28.93	43.50	-14.57	44.46	15.30	0.97	31.80	---	---	Peak
3	159.01	26.29	43.50	-17.21	40.08	16.60	1.29	31.68	---	---	Peak
4	535.37	25.30	46.00	-20.70	29.94	24.20	2.42	31.26	---	---	Peak
5	855.47	30.26	46.00	-15.74	28.98	29.30	3.06	31.08	---	---	Peak
6	970.90	32.97	54.00	-21.03	29.27	31.28	3.26	30.84	---	---	Peak

Mode	13	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

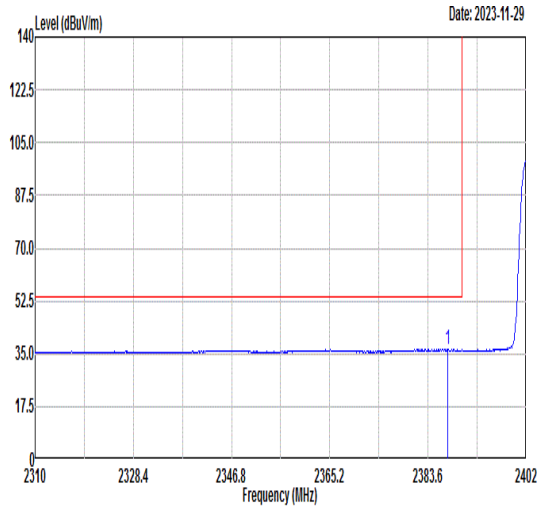


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2378.91	47.03	74.00	-26.97	41.66	33.29	5.35	33.27	348	154	PEAK

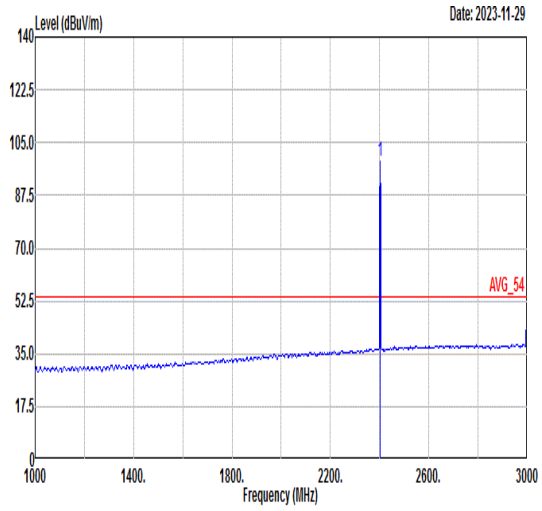


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	100.17	------	------	94.69	33.35	5.37	33.24	348	154	PEAK

Avg



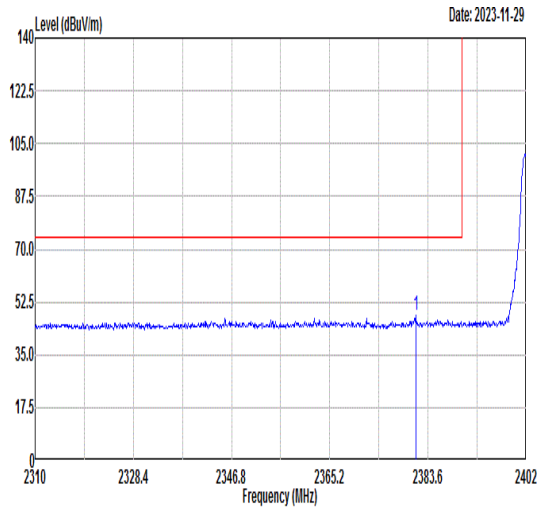
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2387.28	36.46	54.00	-17.54	31.05	33.31	5.36	33.26	348	154	AVERAGE



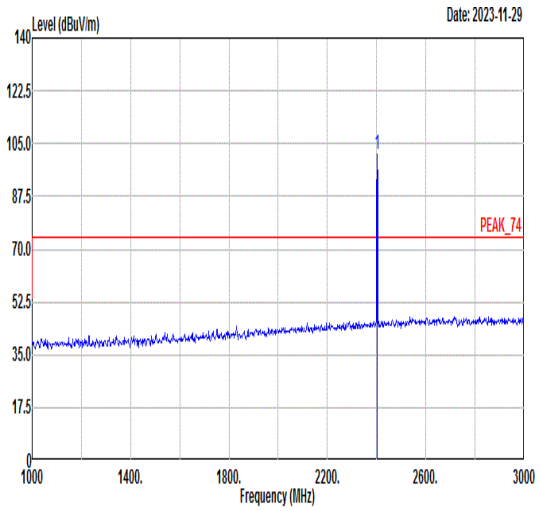
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	98.91	------	------	93.43	33.35	5.37	33.24	348	154	AVERAGE

Mode	13	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	6	
Pol.	Vertical	Fundamental

Peak

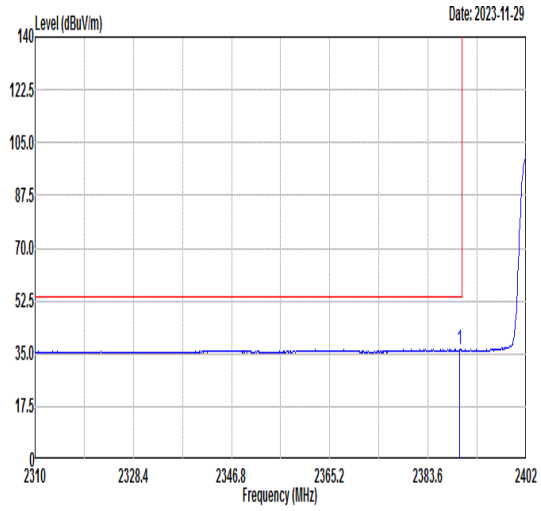


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2381.30	48.32	74.00	-25.68	42.95	33.29	5.35	33.27	281	327	PEAK

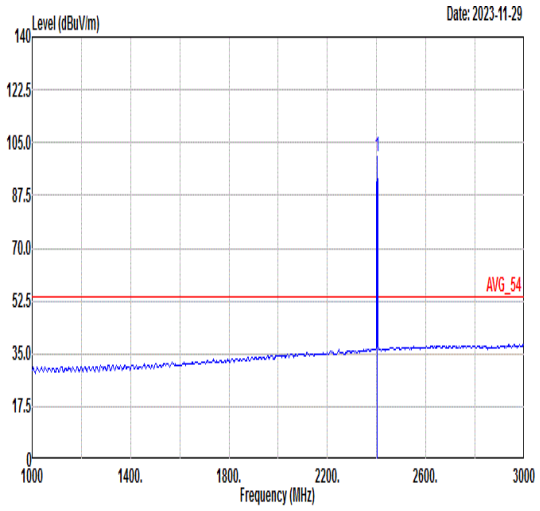


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	101.49	------	------	96.01	33.35	5.37	33.24	281	327	PEAK

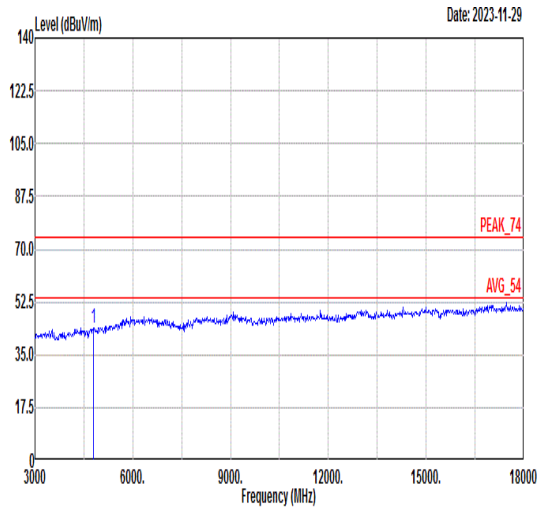
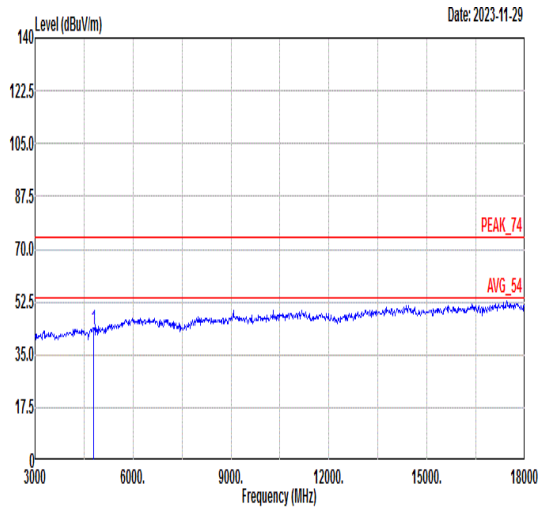
Avg

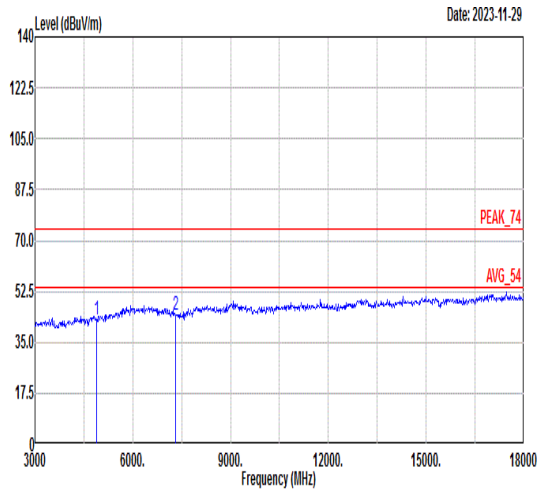
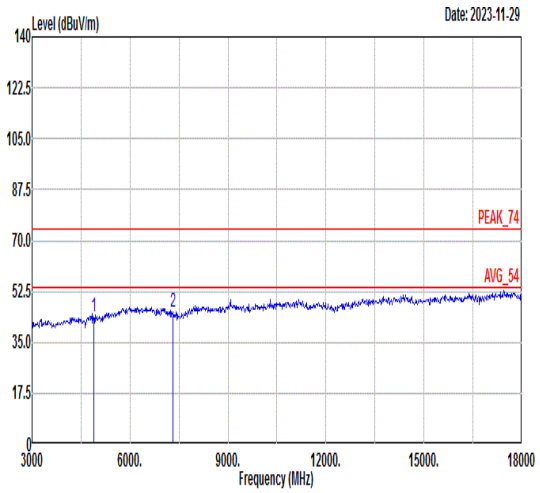


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2389.58	36.40	54.00	-17.60	30.98	33.31	5.36	33.25	281	327	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2402.00	100.23	------	------	94.75	33.35	5.37	33.24	281	327	AVERAGE

Mode	13	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH00_2402MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 43.59 74.00 -30.41 63.41 36.08 8.94 64.84 --- --- Peak	 Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB cm deg 1 4804.00 43.52 74.00 -30.48 63.34 36.08 8.94 64.84 --- --- Peak

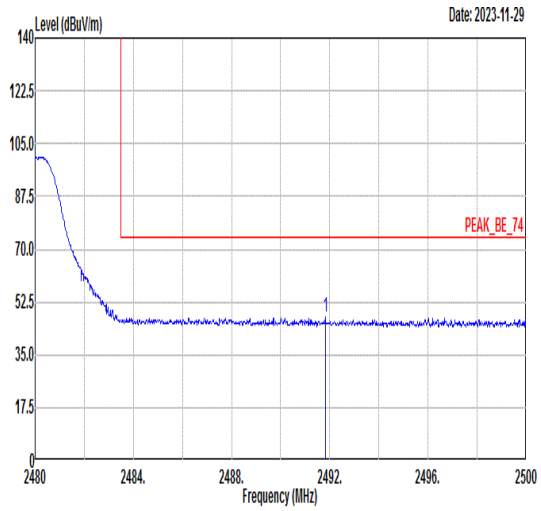
Mode	14	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH19_2440MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	42.83	74.00	-31.17	62.86	36.13	8.71	64.87	---	---	Peak
2	7320.00	44.47	74.00	-29.53	62.95	36.20	10.18	64.86	---	---	Peak

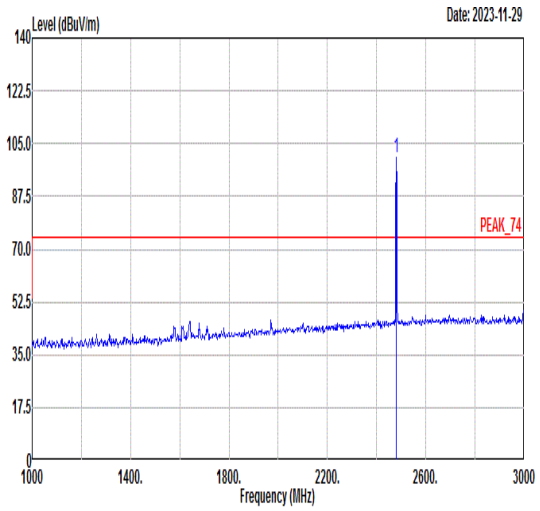
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4880.00	43.78	74.00	-30.22	63.81	36.13	8.71	64.87	---	---	Peak
2	7320.00	45.19	74.00	-28.81	63.67	36.20	10.18	64.86	---	---	Peak

Mode	15	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

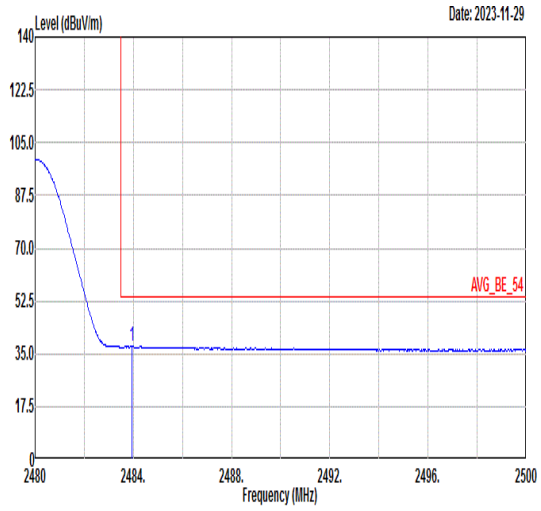


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2491.82	47.48	74.00	-26.52	41.54	33.58	5.47	33.11	330	46	PEAK

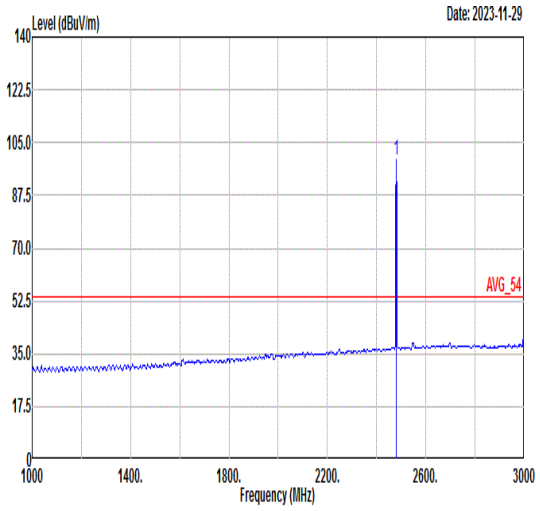


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	100.54	------	------	94.66	33.55	5.46	33.13	330	46	PEAK

Avg



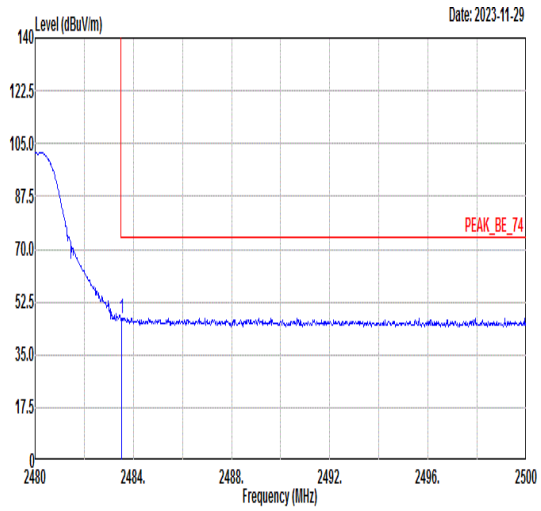
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.94	37.53	54.00	-16.47	31.63	33.56	5.46	33.12	330	46	AVERAGE



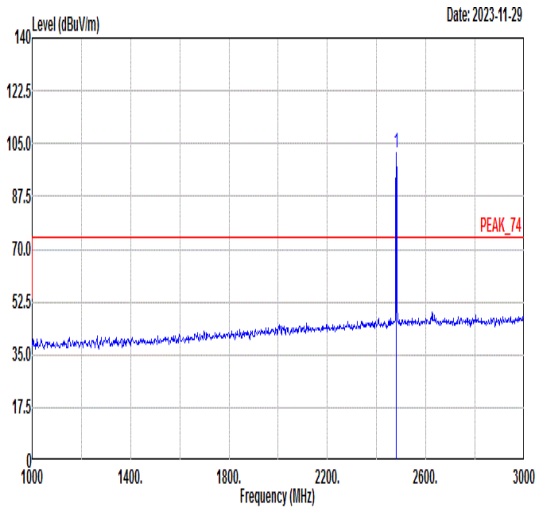
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	99.36	------	------	93.48	33.55	5.46	33.13	330	46	AVERAGE

Mode	15	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH39_2480MHz	
ANT	6	
Pol.	Vertical	Fundamental

Peak

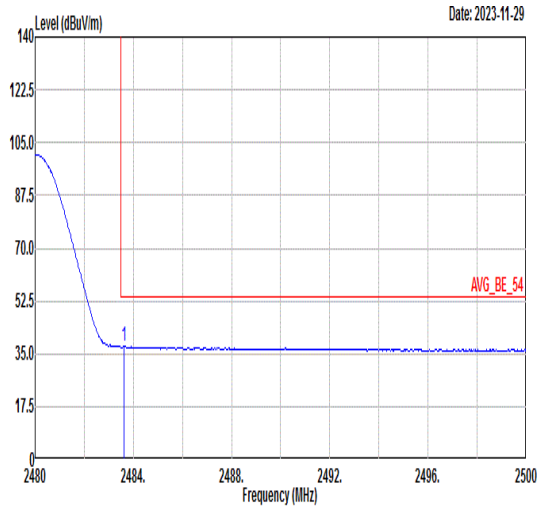


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.52	47.16	74.00	-26.84	41.26	33.56	5.46	33.12	325	271	PEAK

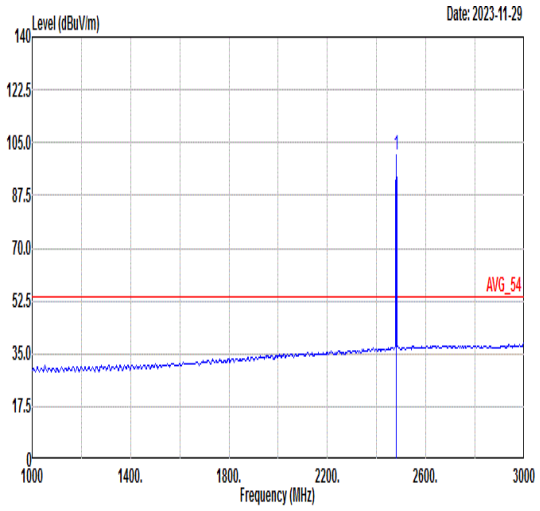


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	102.18	------	------	96.30	33.55	5.46	33.13	325	271	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.62	37.54	54.00	-16.46	31.64	33.56	5.46	33.12	325	271	AVERAGE



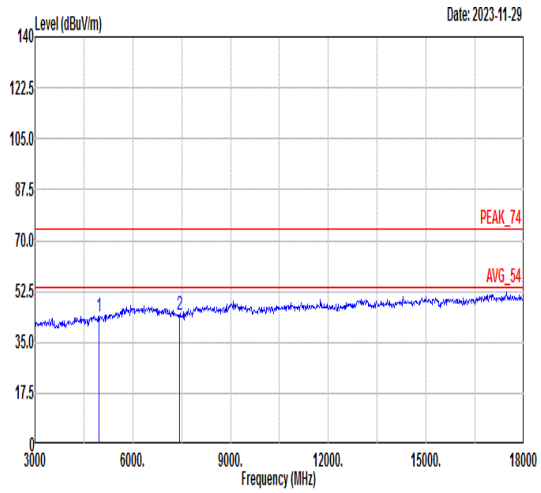
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	100.90	------	------	95.02	33.55	5.46	33.13	325	271	AVERAGE

Mode	15
	Harmonic
	2400-2483.5_Bluetooth-LE _CH39_2480MHz
ANT	6

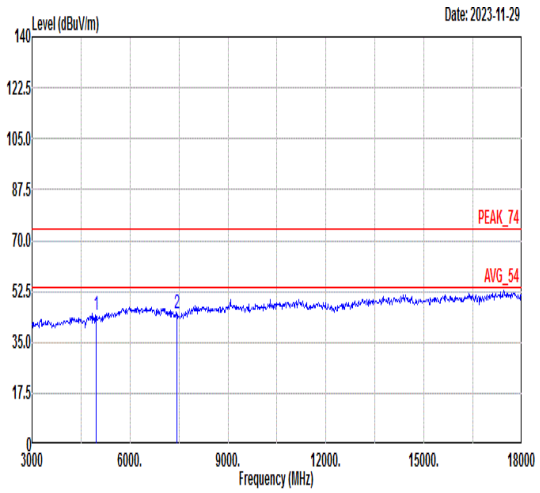
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	44.03	74.00	-29.97	64.29	36.18	8.46	64.90	---	---	Peak
2	7440.00	44.55	74.00	-29.45	63.31	35.93	10.17	64.86	---	---	Peak

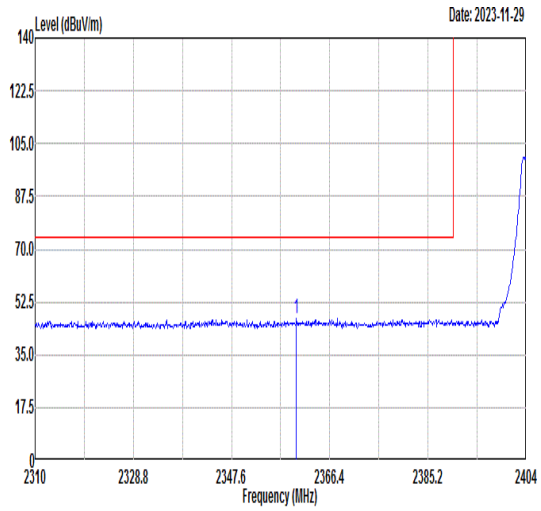


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4960.00	44.34	74.00	-29.66	64.60	36.18	8.46	64.90	---	---	Peak
2	7440.00	44.65	74.00	-29.35	63.41	35.93	10.17	64.86	---	---	Peak

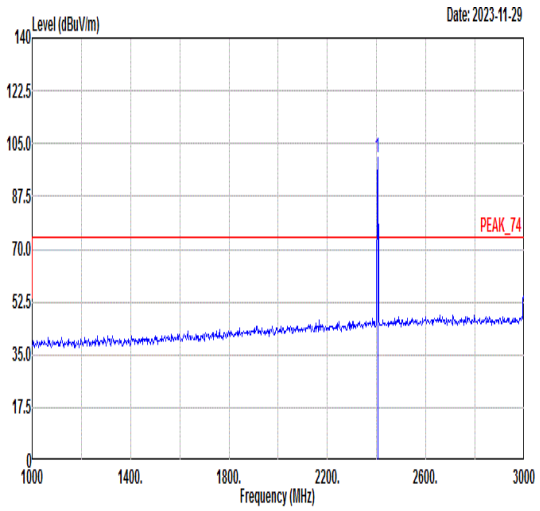
Mode	16
	Band Edge
	2400-2483.5_Bluetooth-LE _CH01_2404MHz
ANT	6

Pol.	Horizontal	Fundamental

Peak

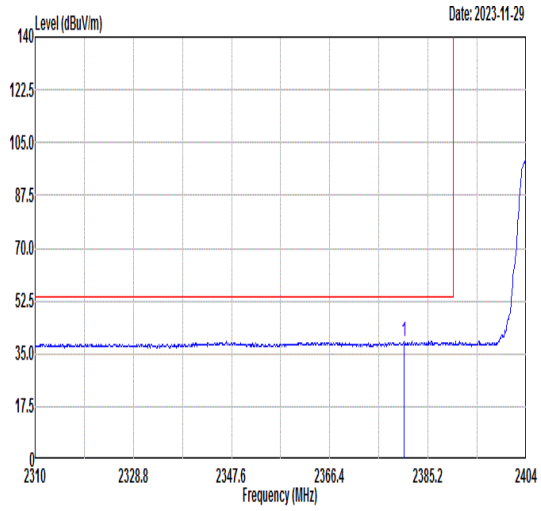


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2360.01	46.79	74.00	-27.21	41.52	33.24	5.33	33.30	321	19	PEAK

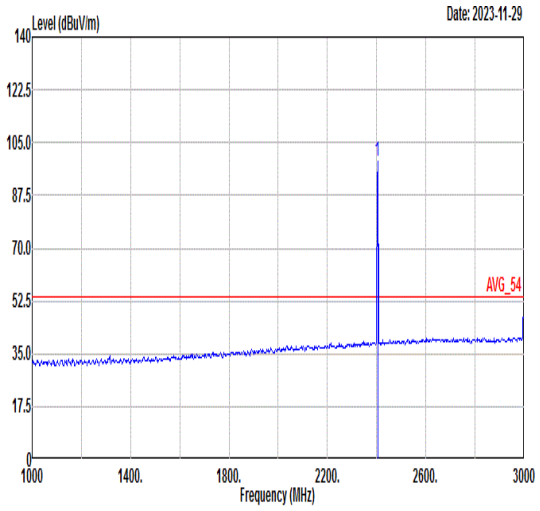


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	100.44	------	------	94.95	33.35	5.37	33.23	321	19	PEAK

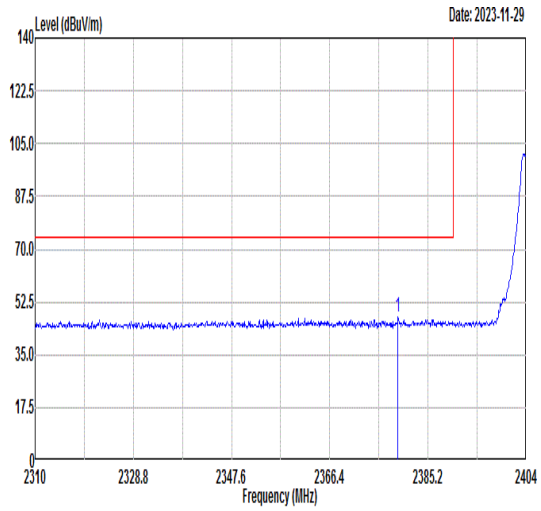
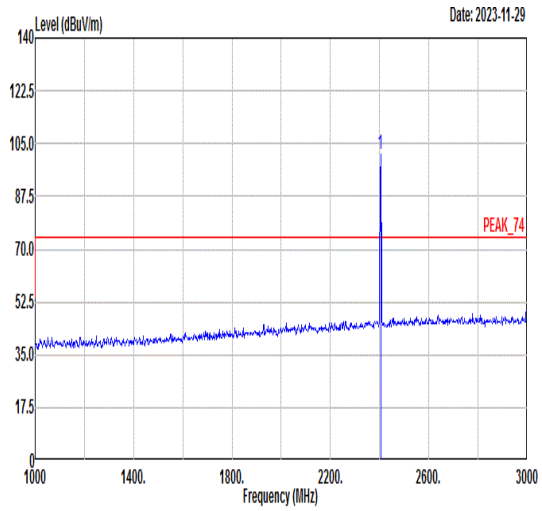
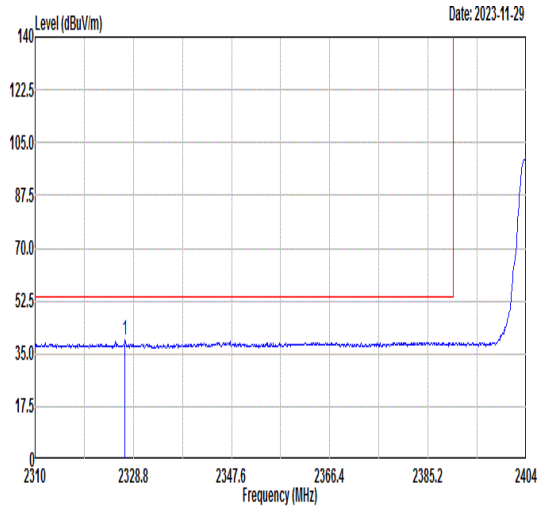
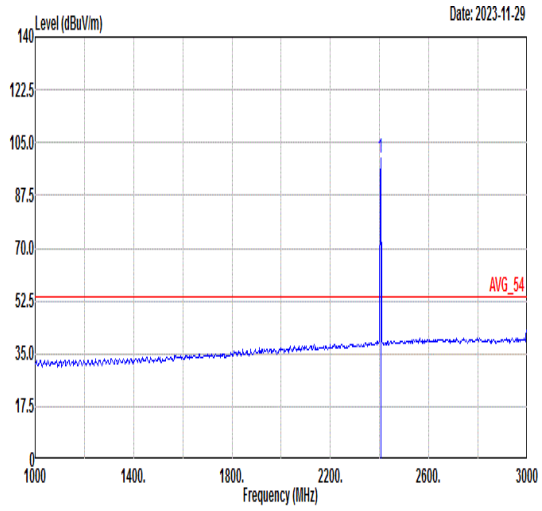
Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2380.59	39.23	54.00	-14.77	33.86	33.29	5.35	33.27	321	19	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	98.88	------	------	93.39	33.35	5.37	33.23	321	19	AVERAGE

Mode	16	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH01_2404MHz	
ANT	6	
Pol.	Vertical	Fundamental
Peak		
Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2379.47	47.48	74.00	-26.52	42.11	33.29	5.35	33.27	280	312	PEAK

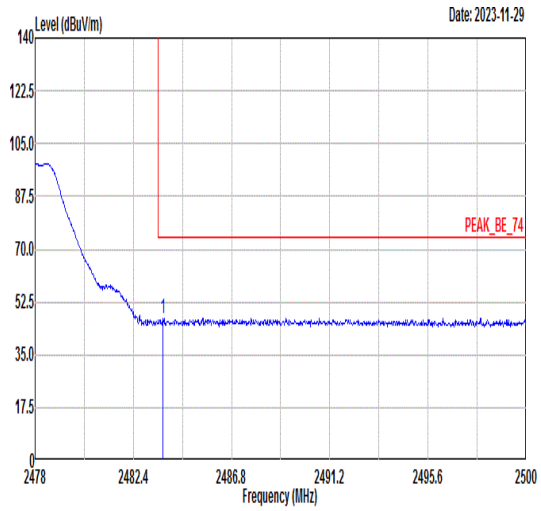
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	101.38	------	------	95.89	33.35	5.37	33.23	280	312	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2327.20	39.36	54.00	-14.64	34.24	33.15	5.31	33.34	280	312	AVERAGE

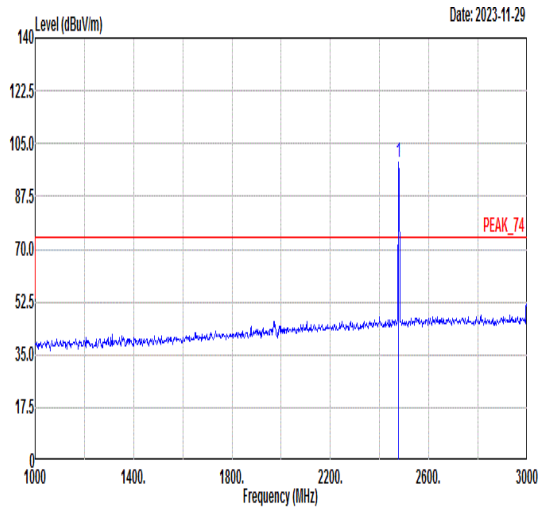
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2404.00	99.96	------	------	94.47	33.35	5.37	33.23	280	312	AVERAGE

Mode	17	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

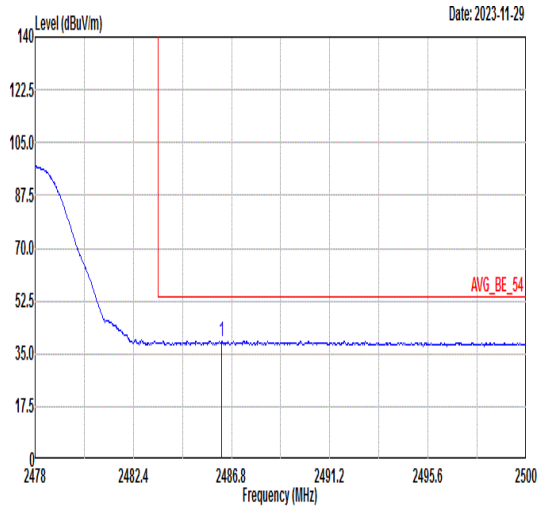


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.72	47.20	74.00	-26.80	41.30	33.56	5.46	33.12	185	13	PEAK

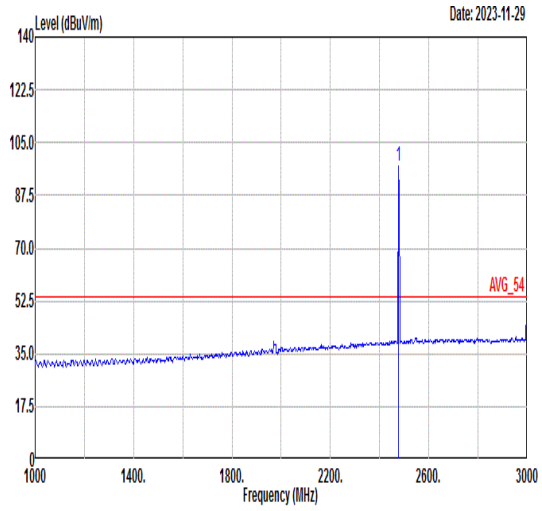


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	98.59	------	------	92.73	33.54	5.45	33.13	185	13	PEAK

Avg



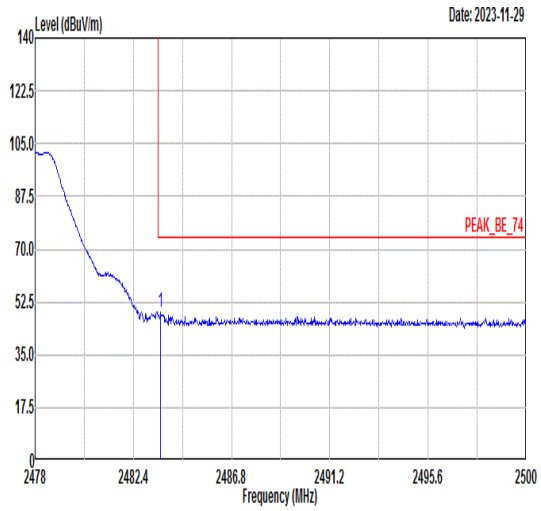
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2486.36	39.16	54.00	-14.84	33.26	33.56	5.46	33.12	185	13	AVERAGE



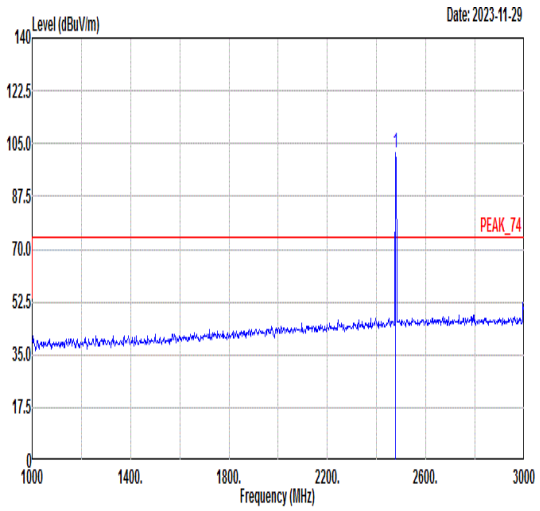
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	97.25	------	------	91.39	33.54	5.45	33.13	185	13	AVERAGE

Mode	17	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	6	
Pol.	Vertical	Fundamental

Peak

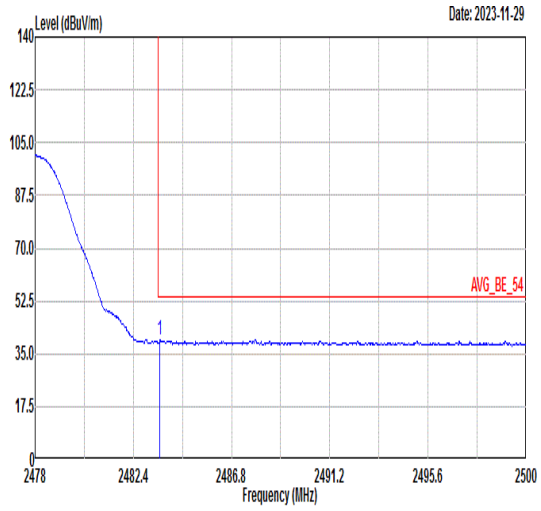


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.63	48.98	74.00	-25.02	43.08	33.56	5.46	33.12	321	275	PEAK

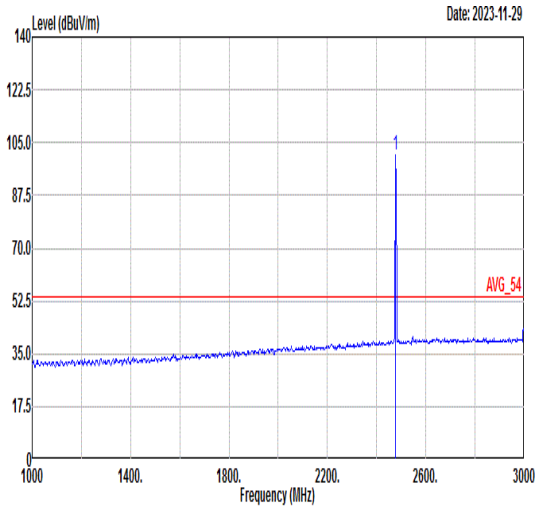


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	102.23	------	------	96.37	33.54	5.45	33.13	321	275	PEAK

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2483.59	39.79	54.00	-14.21	33.89	33.56	5.46	33.12	321	275	AVERAGE

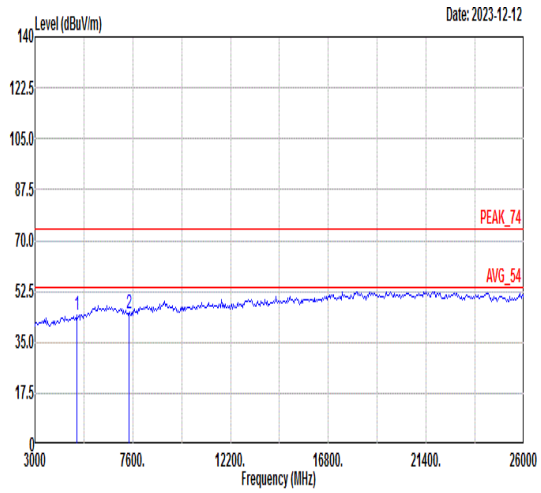


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	100.89	------	------	95.03	33.54	5.45	33.13	321	275	AVERAGE

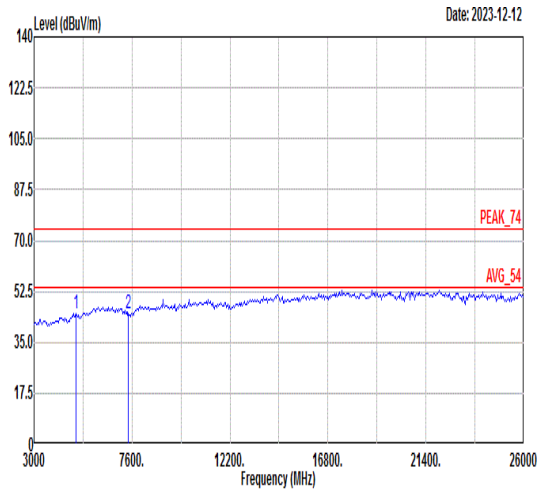
Mode	17	
	Harmonic	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	6	
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	44.27	74.00	-29.73	64.52	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.76	74.00	-29.24	63.50	35.95	10.17	64.86	---	---	Peak

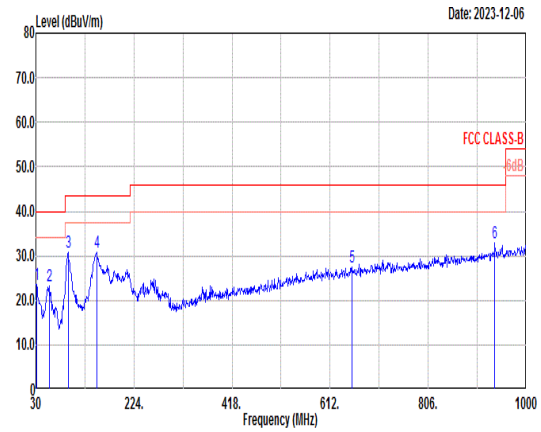


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	44.85	74.00	-29.15	65.10	36.17	8.48	64.90	---	---	Peak
2	7434.00	44.78	74.00	-29.22	63.52	35.95	10.17	64.86	---	---	Peak

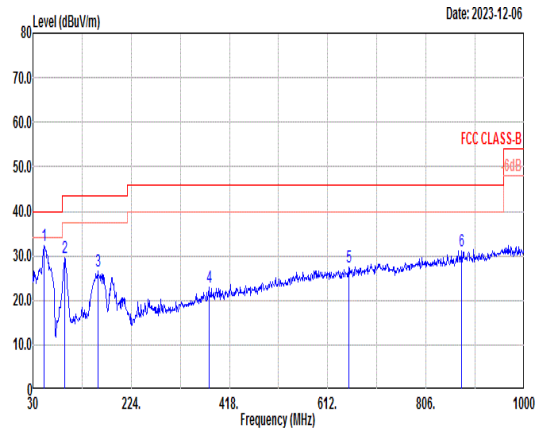
Mode	18
	LF
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz
ANT	6

Pol.	Horizontal	Vertical

QP/ Peak



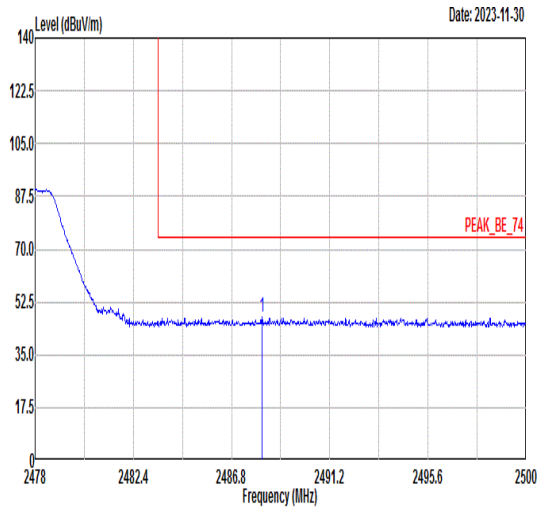
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	30.97	23.64	40.00	-16.36	30.02	24.70	0.54	31.62	---	---	Peak
2	56.19	23.21	40.00	-16.79	41.96	12.30	0.75	31.80	---	---	Peak
3	94.02	30.73	43.50	-12.77	46.16	15.40	0.97	31.80	---	---	Peak
4	150.28	30.81	43.50	-12.69	44.16	17.10	1.25	31.70	---	---	Peak
5	655.65	27.38	46.00	-18.62	29.52	26.40	2.66	31.20	---	---	Peak
6	937.92	33.04	46.00	-12.96	30.47	30.18	3.21	30.82	---	---	Peak



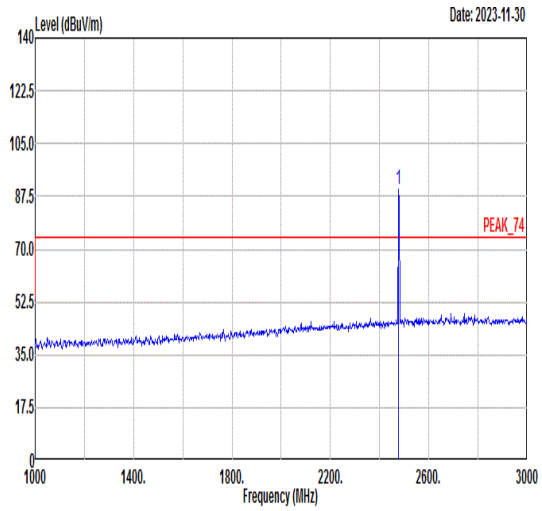
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	51.34	32.21	40.00	-7.79	49.36	14.00	0.72	31.87	---	---	Peak
2	93.05	29.44	43.50	-14.06	44.97	15.30	0.97	31.80	---	---	Peak
3	158.04	26.49	43.50	-17.01	40.19	16.70	1.28	31.68	---	---	Peak
4	377.26	22.89	46.00	-23.11	31.21	21.08	2.05	31.45	---	---	Peak
5	653.71	27.42	46.00	-18.58	29.54	26.42	2.66	31.20	---	---	Peak
6	875.84	30.99	46.00	-15.01	29.68	29.20	3.11	31.00	---	---	Peak

Mode	19	
	Band Edge	
	2400-2483.5_Bluetooth-LE _CH38_2478MHz	
ANT	6	
Pol.	Horizontal	Fundamental

Peak

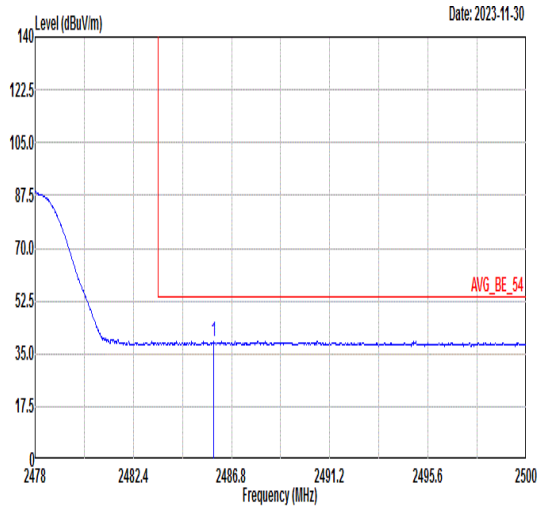


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2488.16	47.66	74.00	-26.34	41.75	33.57	5.46	33.12	108	310	PEAK

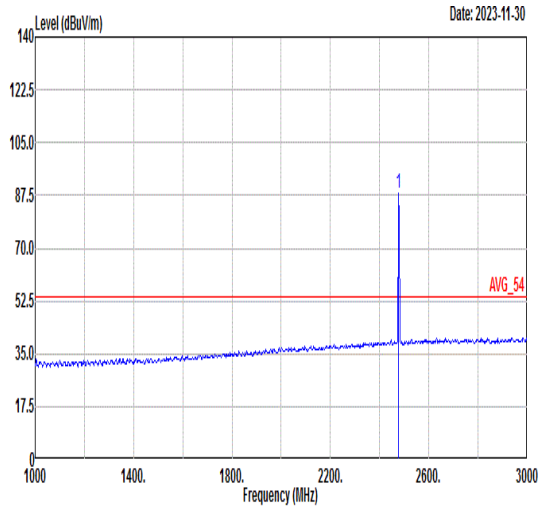


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	89.89	------	------	84.03	33.54	5.45	33.13	108	310	PEAK

Avg

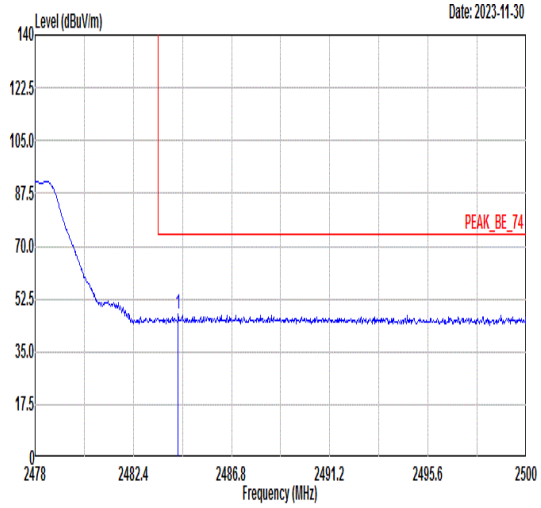
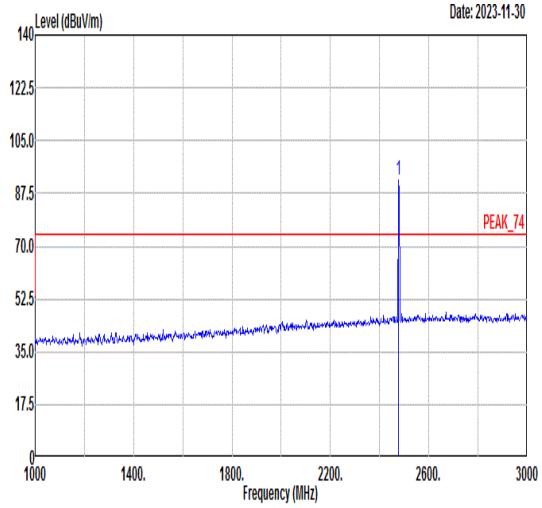
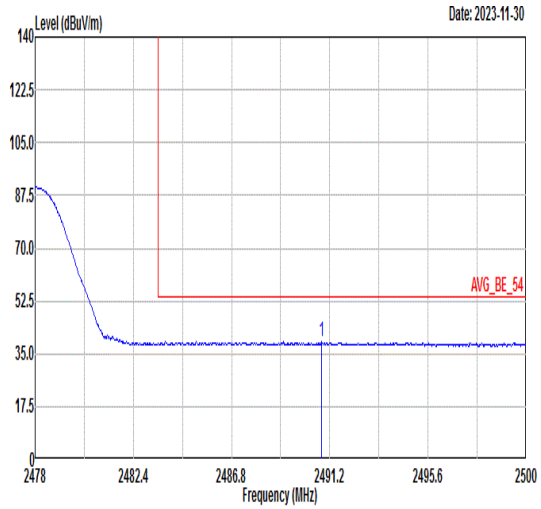
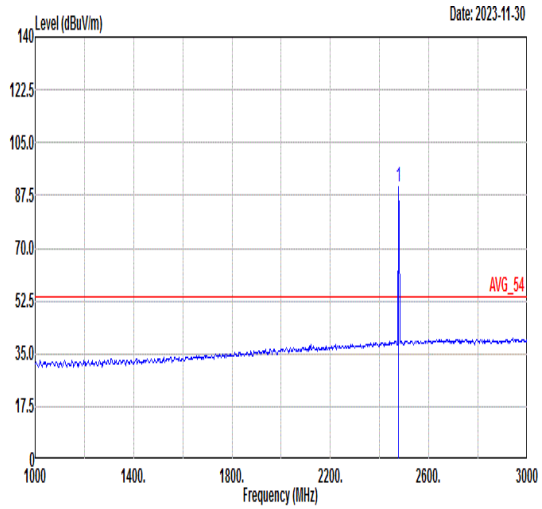


	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2486.01	39.13	54.00	-14.87	33.23	33.56	5.46	33.12	108	310	AVERAGE



	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	88.47	------	------	82.61	33.54	5.45	33.13	108	310	AVERAGE

Mode	19
	Band Edge
	2400-2483.5_Bluetooth-LE _CH38_2478MHz
ANT	6

Pol.	Vertical	Fundamental
Peak		
Avg		

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2484.40	47.52	74.00	-26.48	41.62	33.56	5.46	33.12	127	4	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	91.75	------	------	85.89	33.54	5.45	33.13	127	4	PEAK

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2490.83	39.01	54.00	-14.99	33.07	33.58	5.47	33.11	127	4	AVERAGE

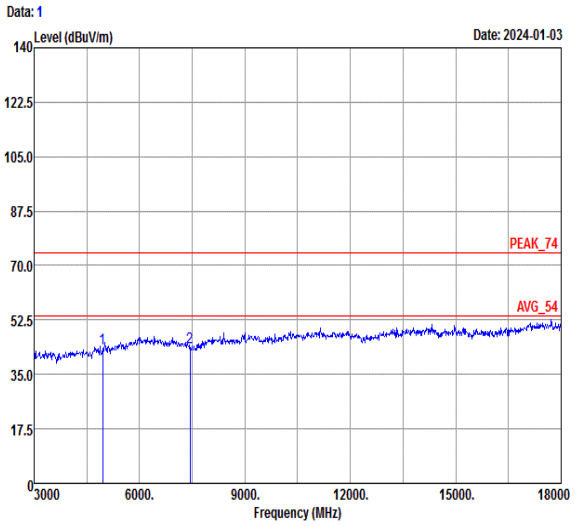
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	cm	deg	
1	2478.00	90.51	------	------	84.65	33.54	5.45	33.13	127	4	AVERAGE

Mode	19
	Harmonic
	2400-2483.5_Bluetooth-LE _CH38_2478MHz
ANT	6

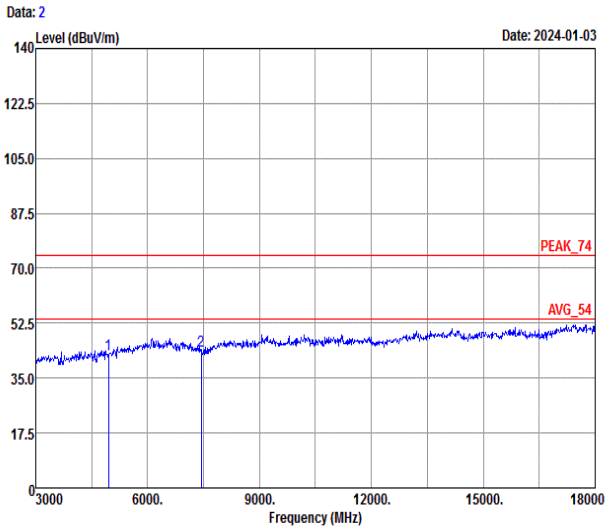
Pol.	Horizontal	Vertical

Peak

Avg



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	43.33	-30.67	74.00	63.53	36.17	8.53	64.90	---	---	Peak
2 *	7434.00	43.73	-30.27	74.00	62.47	35.95	10.17	64.86	---	---	Peak



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	4956.00	42.59	-31.41	74.00	62.79	36.17	8.53	64.90	---	---	Peak
2 *	7434.00	43.70	-30.30	74.00	62.44	35.95	10.17	64.86	---	---	Peak

Appendix D. Duty Cycle Plots

Ant.5:

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
Bluetooth LE 2Mbps	32.87	0.206	4.859	10KHz
Bluetooth LE-125Kbps	82.64	3.104	0.322	1KHz

Ant.4:

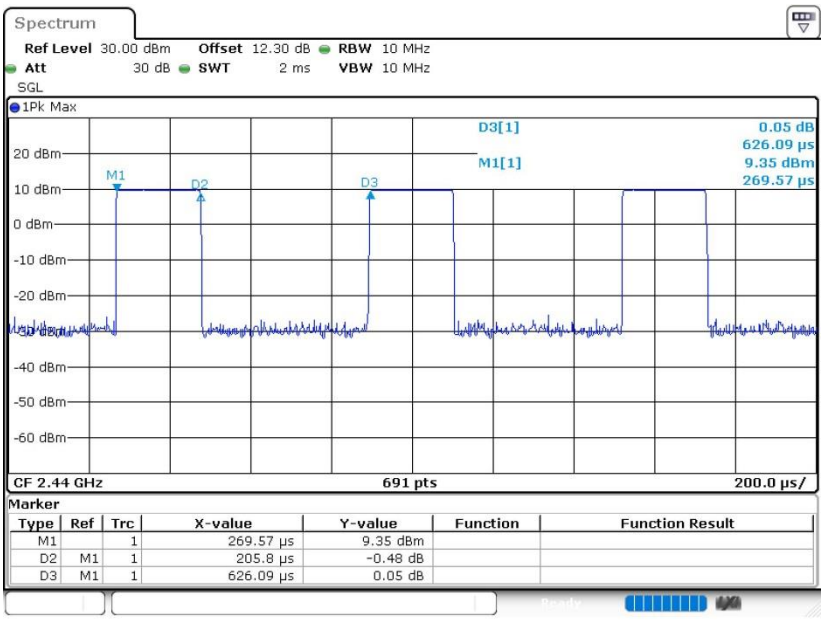
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
Bluetooth LE 2Mbps	33.03	0.207	4.825	10KHz
Bluetooth LE-125Kbps	83.09	3.112	0.321	1KHz

Ant.6:

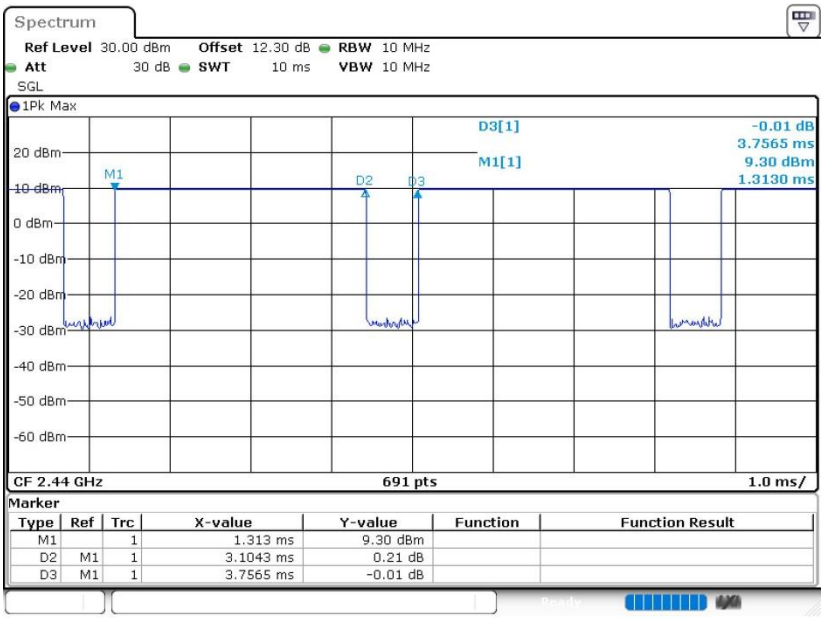
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
Bluetooth LE 2Mbps	33.33	0.209	4.792	10KHz
Bluetooth LE-125Kbps	82.73	3.110	0.322	1KHz

<Ant.5>:

Bluetooth LE 2Mbps



Bluetooth LE-125Kbps



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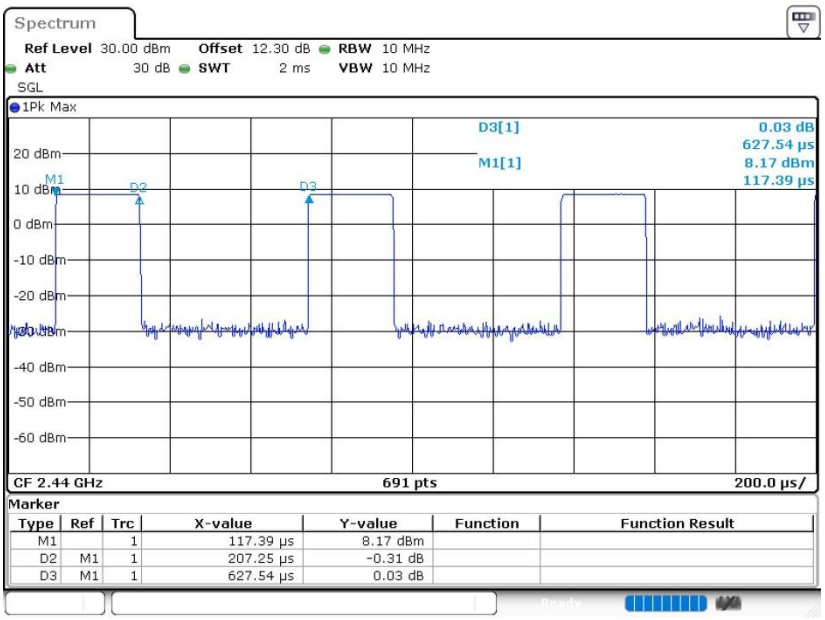
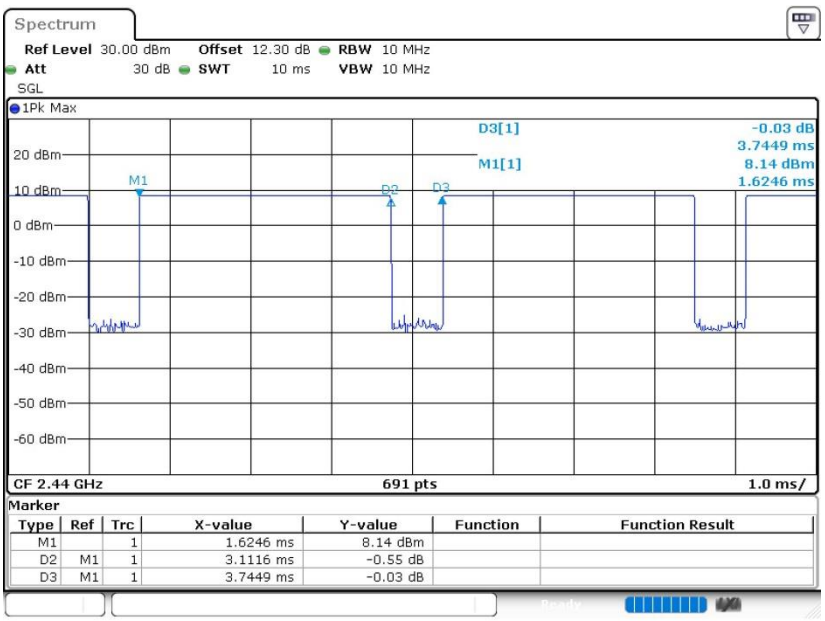
Bluetooth LE 2Mbps



Bluetooth LE-125Kbps



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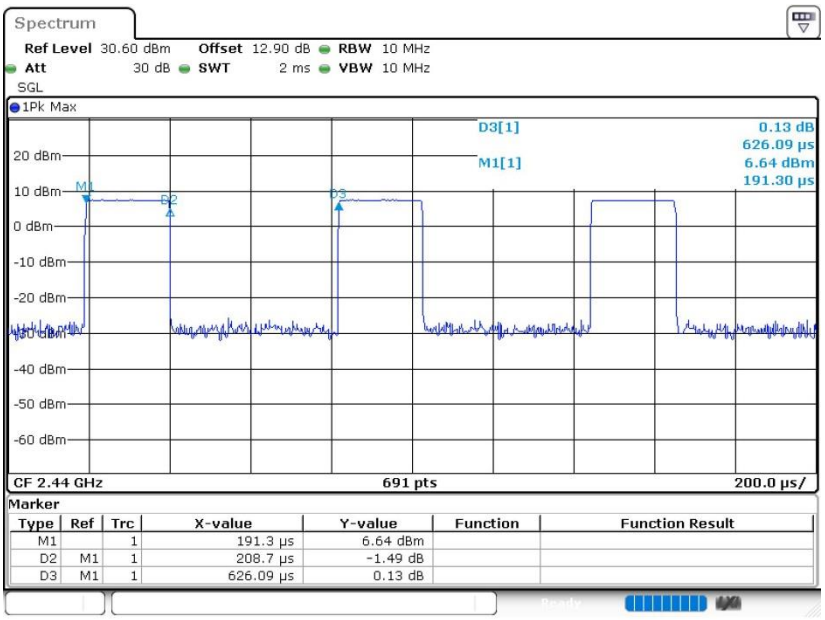
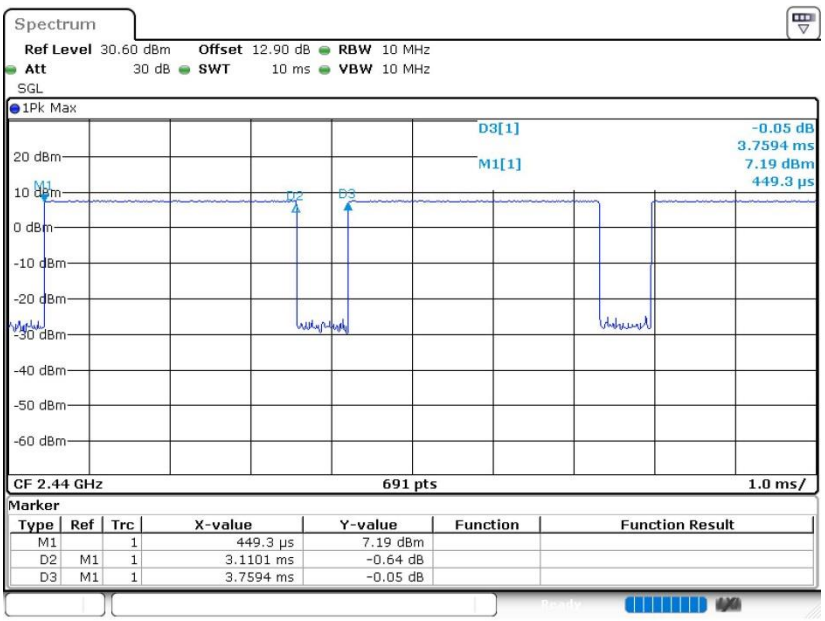
Bluetooth LE 2Mbps



Bluetooth LE-125Kbps