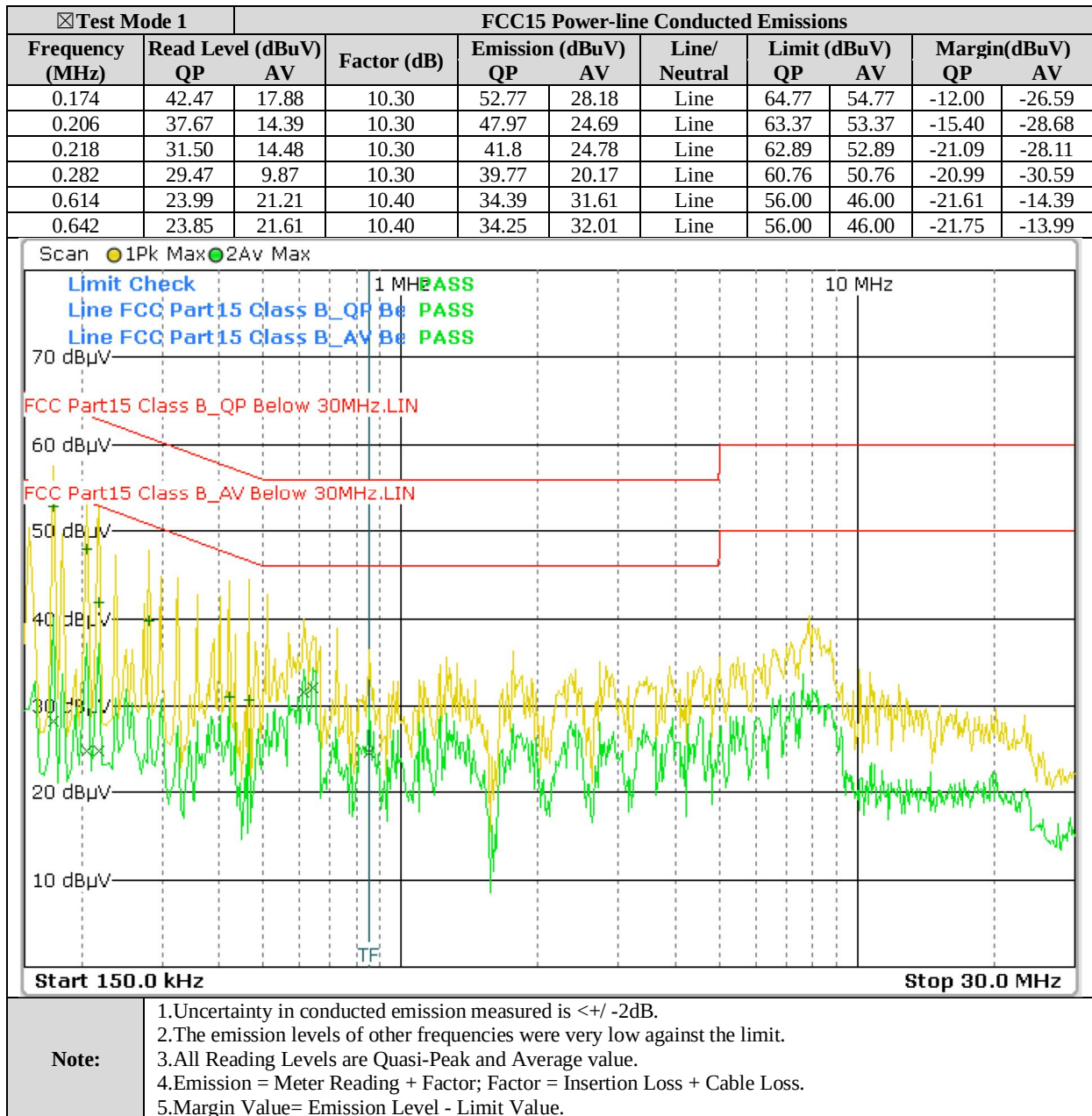
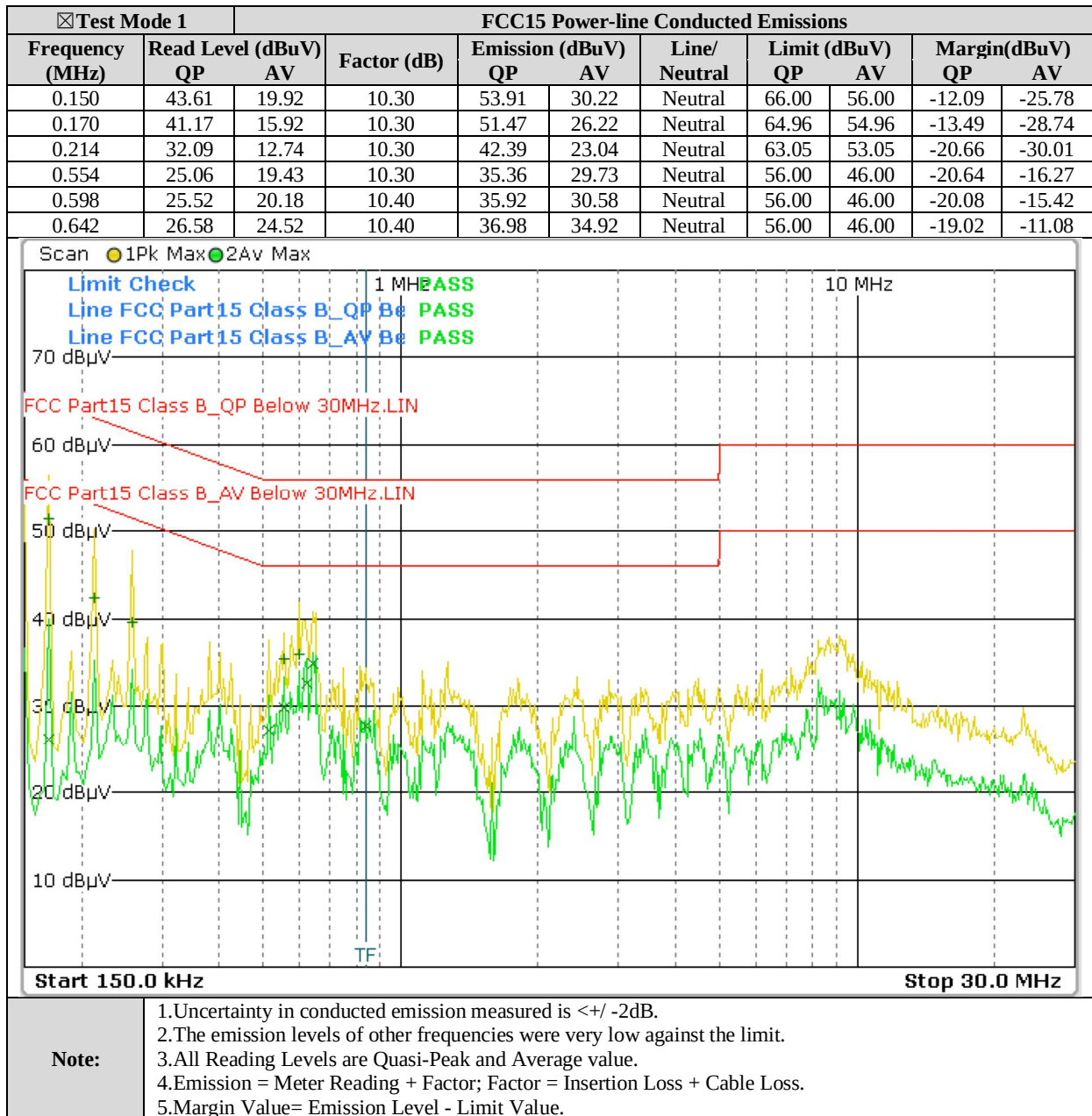


4. Conducted Power Line Test
4. 7 Conducted Power Line Test Result



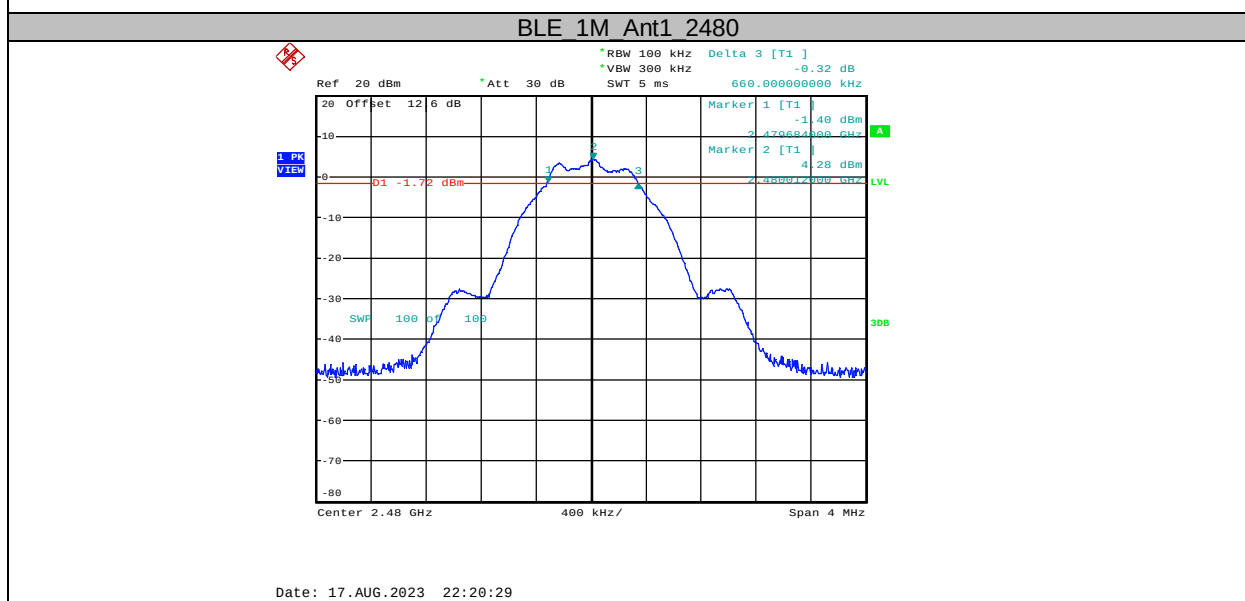
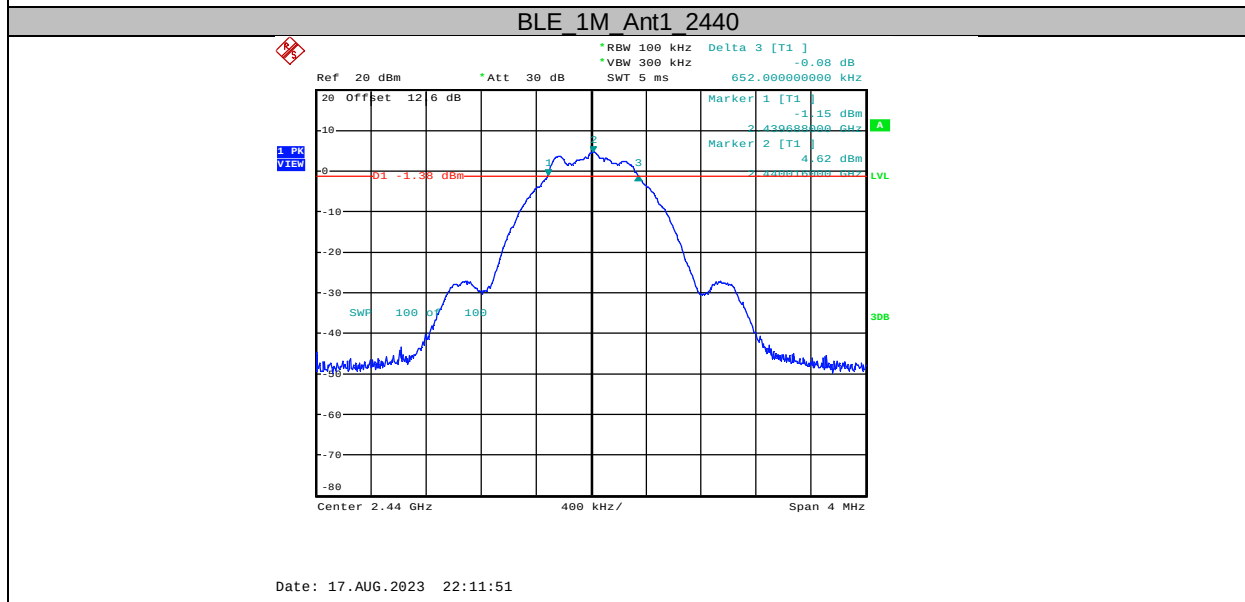
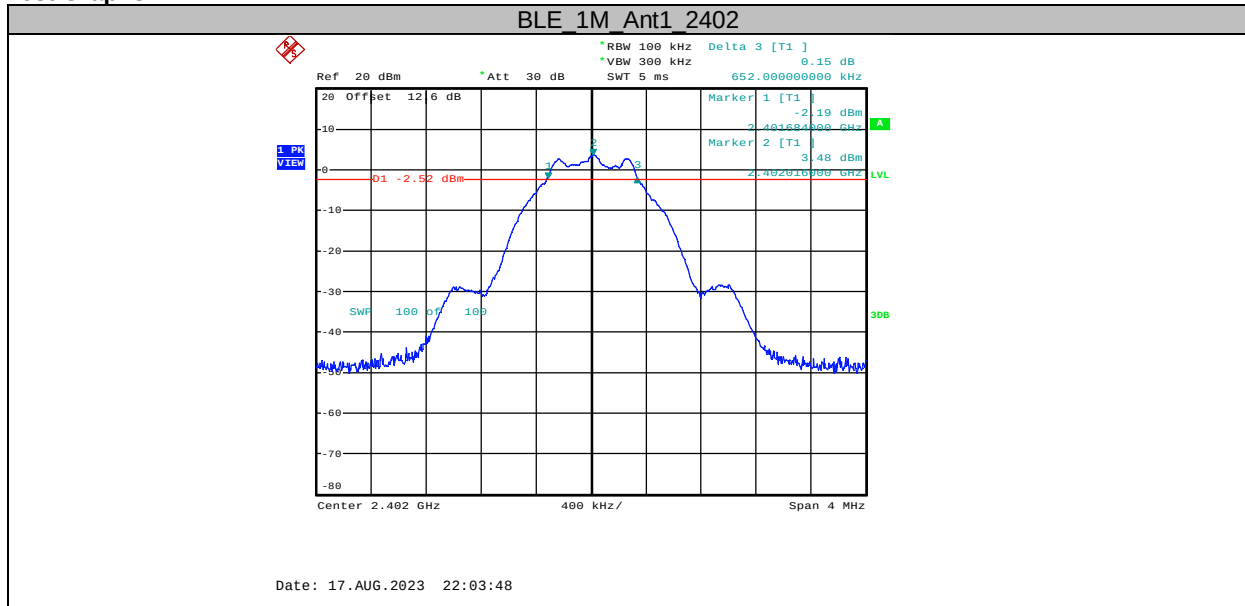


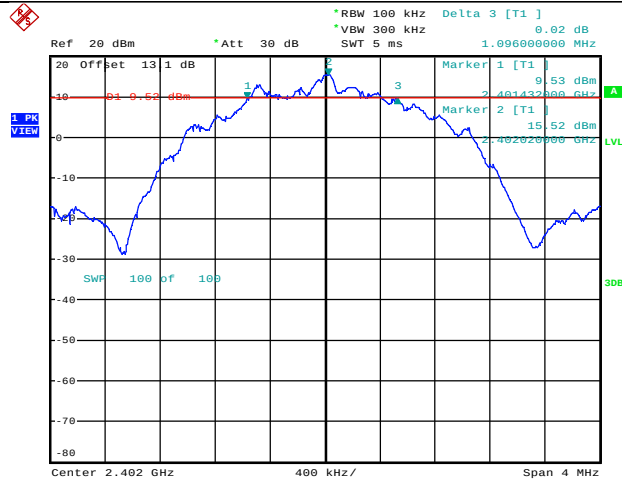
5. FCC Part 15.247 Requirements for DTS Systems
5. 7 Test Result

**Appendix A: DTS Bandwidth
Test Result**

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.65	2401.68	2402.34	0.5	PASS
		2440	0.65	2439.69	2440.34	0.5	PASS
		2480	0.66	2479.68	2480.34	0.5	PASS
BLE_2M	Ant1	2402	1.10	2401.43	2402.53	0.5	PASS
		2440	1.12	2439.46	2440.58	0.5	PASS
		2480	1.11	2479.47	2480.58	0.5	PASS

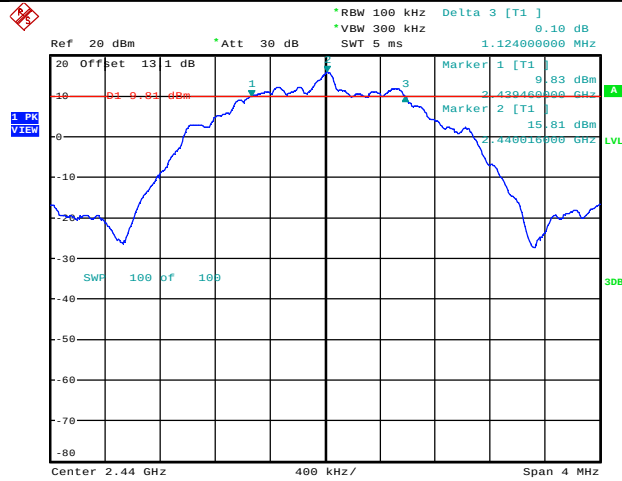
Test Graphs





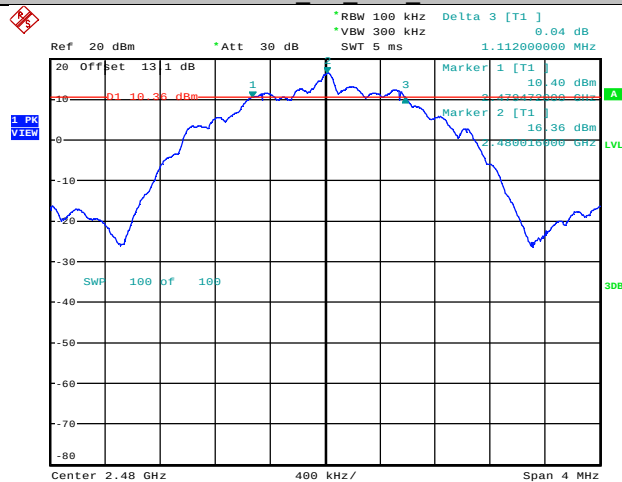
Date: 14.AUG.2023 12:56:06

BLE 2M_Ant1_2440



Date: 14.AUG.2023 13:02:34

BLE 2M_Ant1_2480

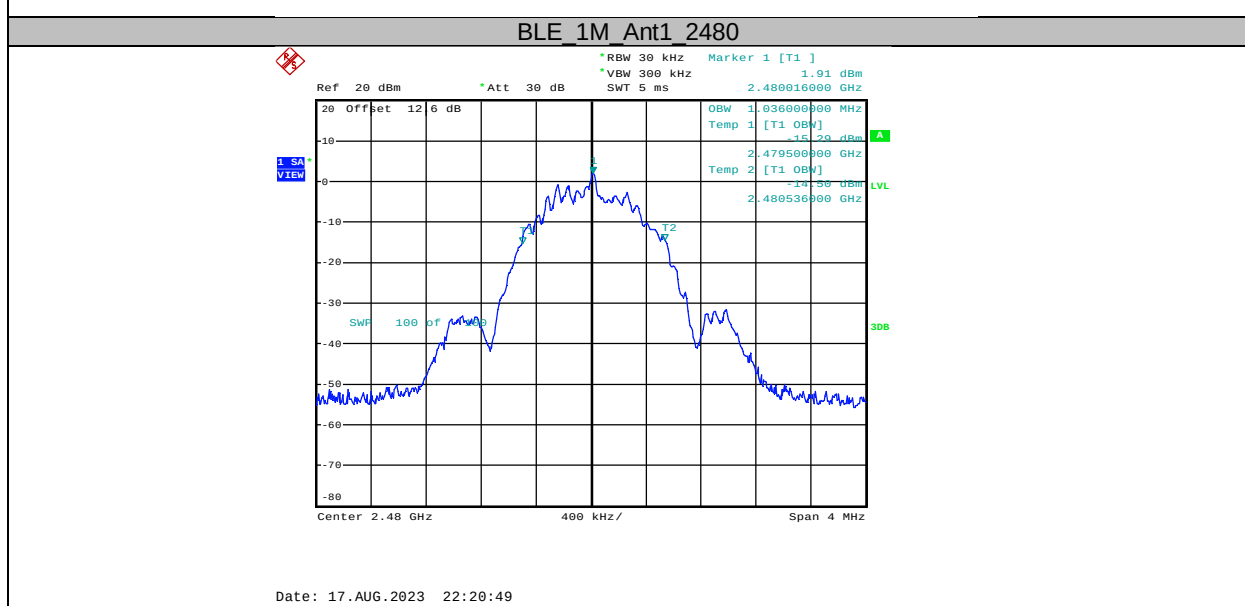
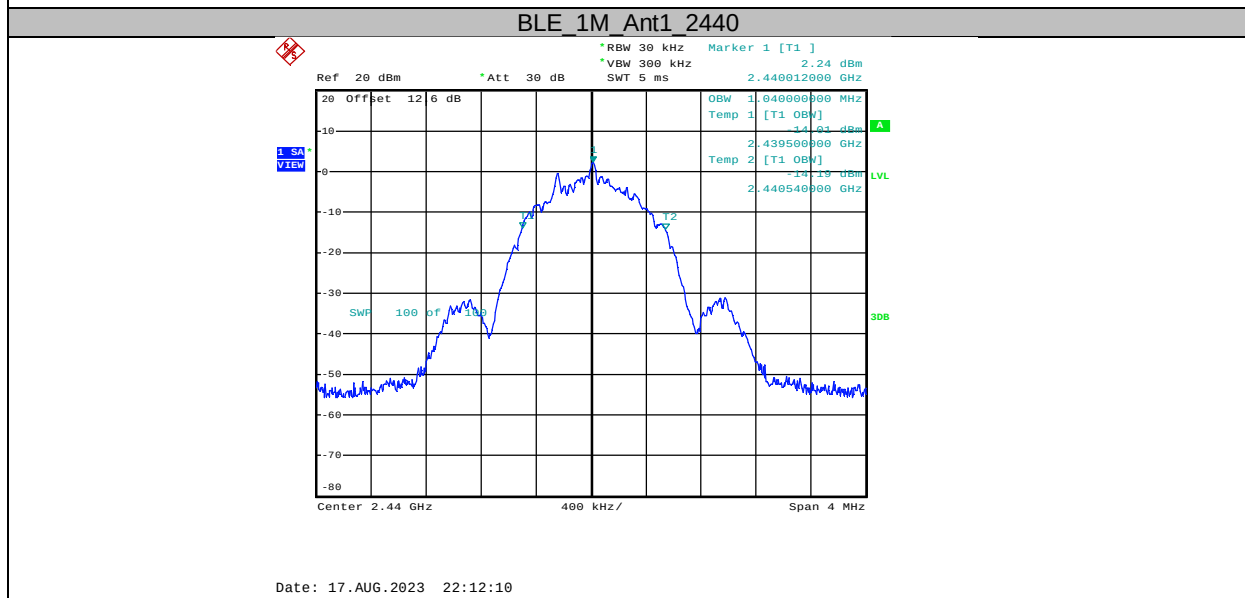
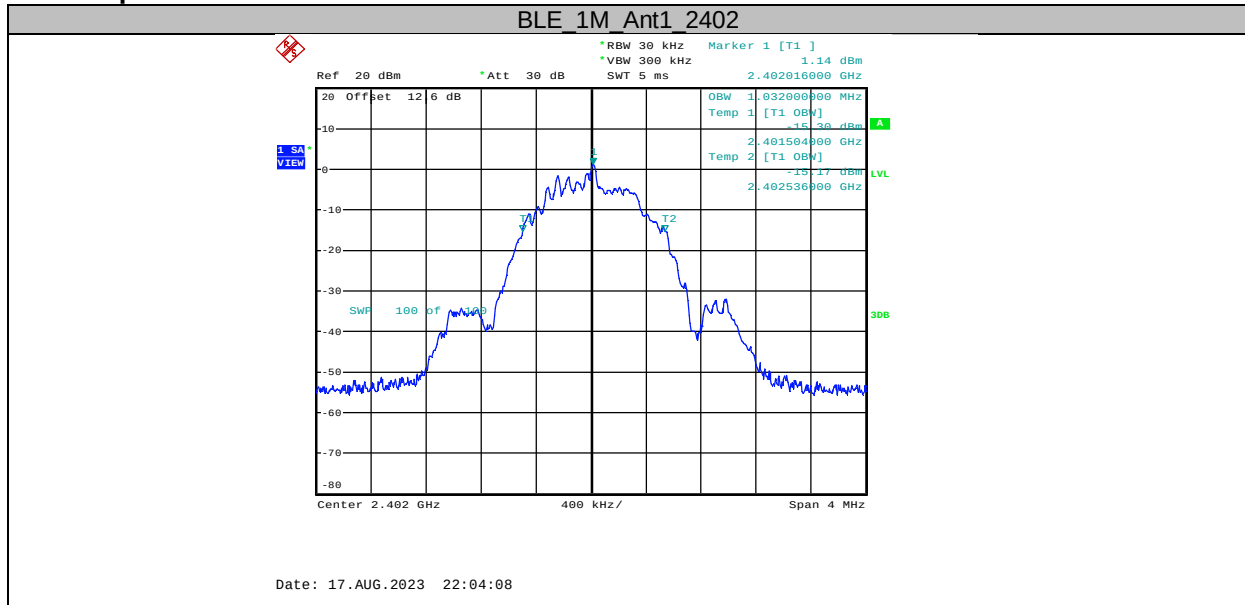


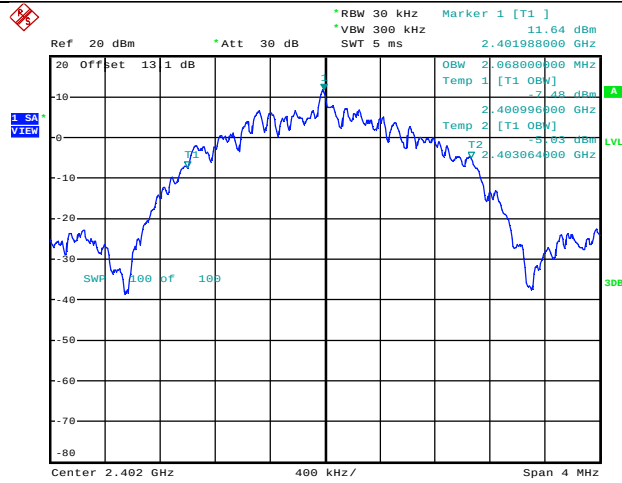
Date: 14.AUG.2023 13:11:07

**Appendix B: Occupied Channel Bandwidth
Test Result**

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.032	2401.504	2402.536	---	---
		2440	1.04	2439.500	2440.540	---	---
		2480	1.036	2479.500	2480.536	---	---
BLE_2M	Ant1	2402	2.068	2400.996	2403.064	---	---
		2440	2.04	2439.020	2441.060	---	---
		2480	2.076	2478.992	2481.068	---	---

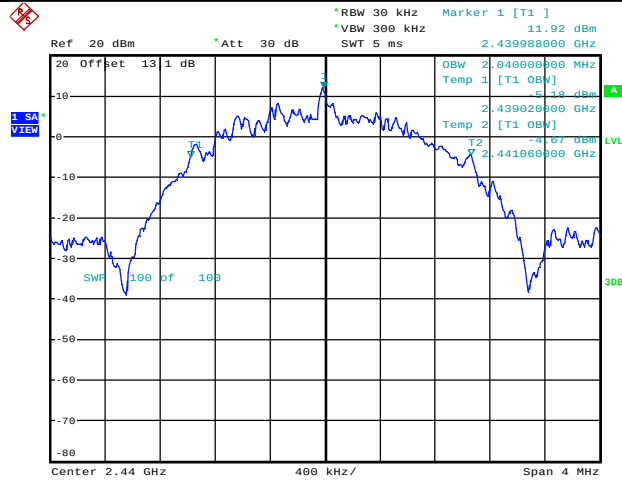
Test Graphs





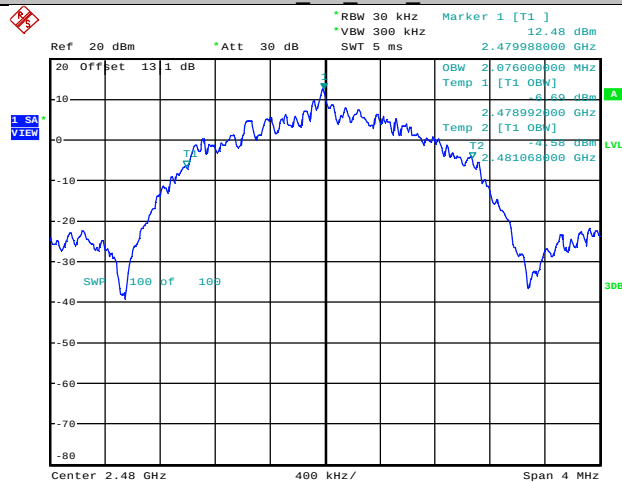
Date: 14.AUG.2023 12:56:26

BLE 2M Ant1 2440



Date: 14.AUG.2023 13:02:54

BLE 2M Ant1 2480



Date: 14.AUG.2023 13:11:27

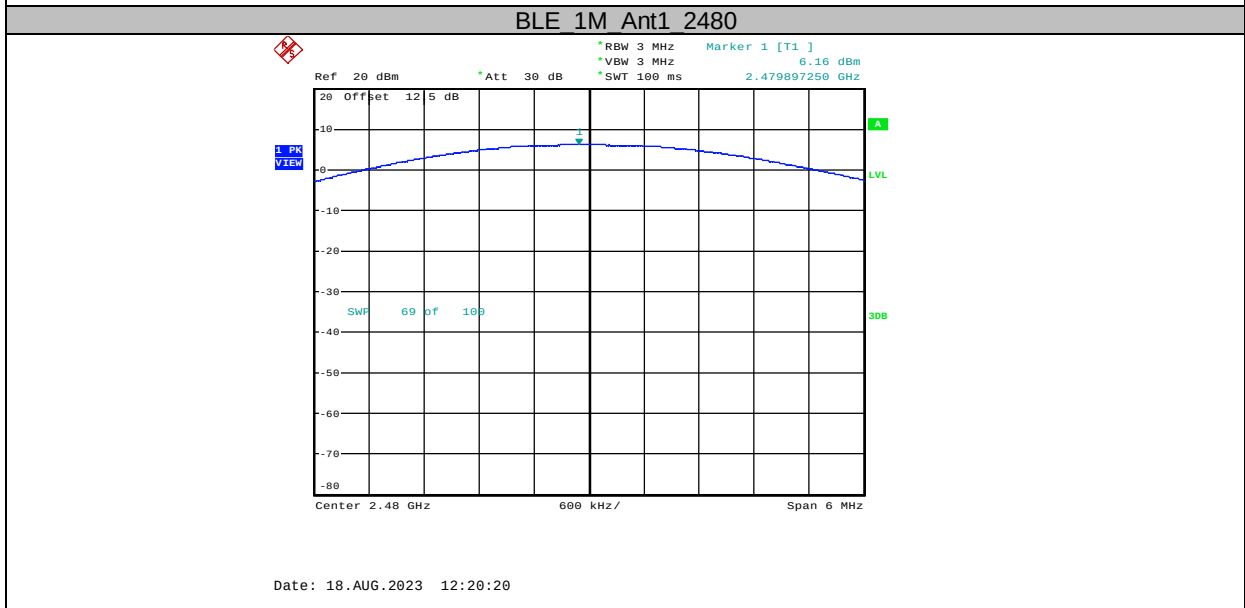
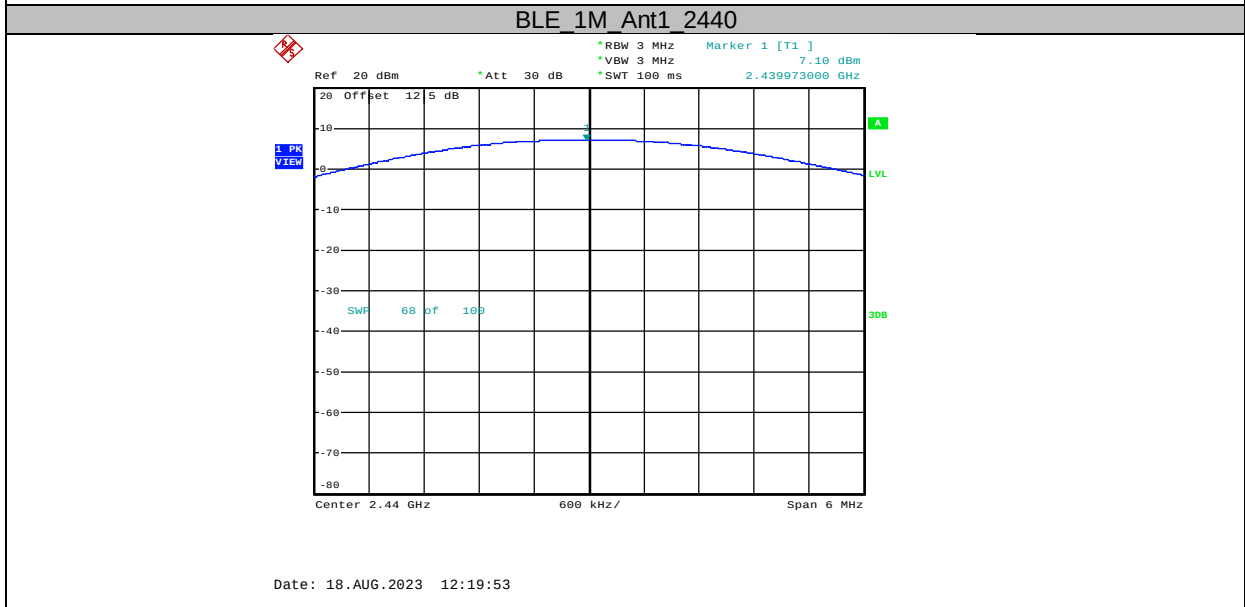
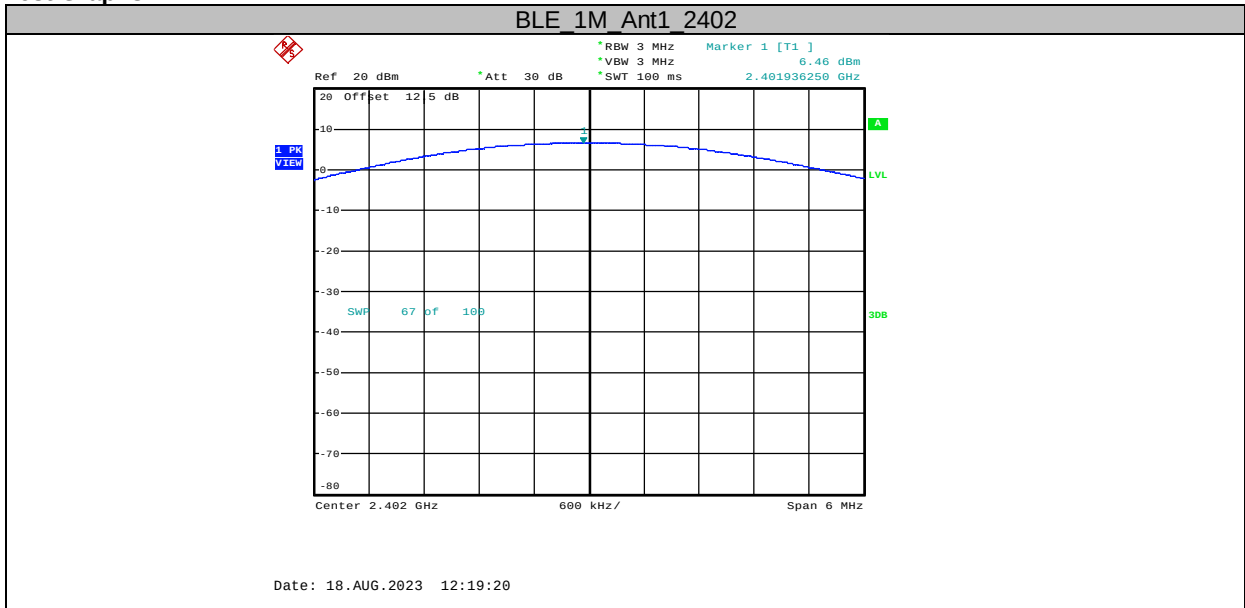
Appendix C: Maximum conducted output power

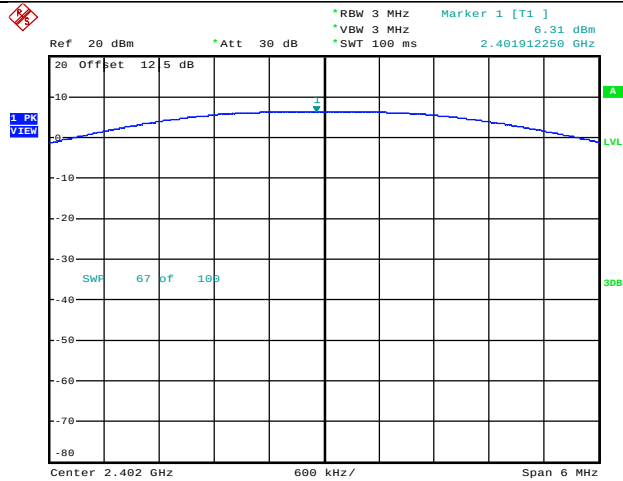
Test Result

TestMode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	6.46	≤30	9.23	≤36	PASS
		2440	7.1	≤30	9.87	≤36	PASS
		2480	6.16	≤30	8.93	≤36	PASS
BLE_2M	Ant1	2402	6.31	≤30	9.08	≤36	PASS
		2440	7.03	≤30	9.80	≤36	PASS
		2480	6.1	≤30	8.87	≤36	PASS

Test Mode	Antenna	Frequency [MHz]	Conducted Sensor power[dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
BLE_1M	Ant1	2402	3.45	63.49	1.97	5.42	≤30.00	2.77	8.19	≤36.00	PASS
		2440	4.16	63.49	1.97	6.13	≤30.00	2.77	8.90	≤36.00	PASS
		2480	3.27	63.49	1.97	5.24	≤30.00	2.77	8.01	≤36.00	PASS
BLE_2M	Ant1	2402	0.61	33.33	4.77	5.38	≤30.00	2.77	8.15	≤36.00	PASS
		2440	1.28	33.33	4.77	6.05	≤30.00	2.77	8.82	≤36.00	PASS
		2480	0.37	33.33	4.77	5.14	≤30.00	2.77	7.91	≤36.00	PASS

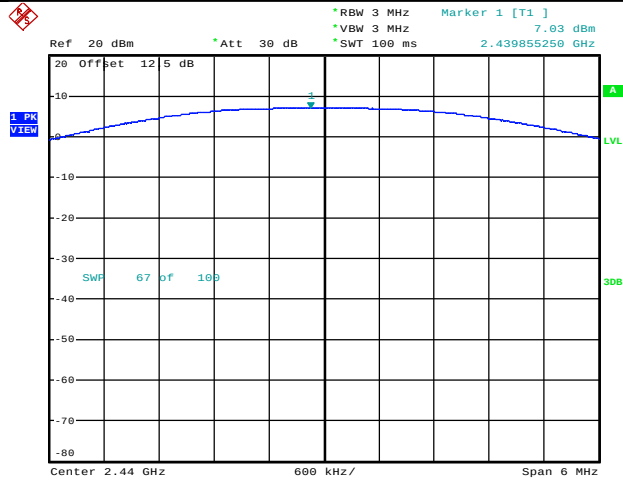
Test Graphs





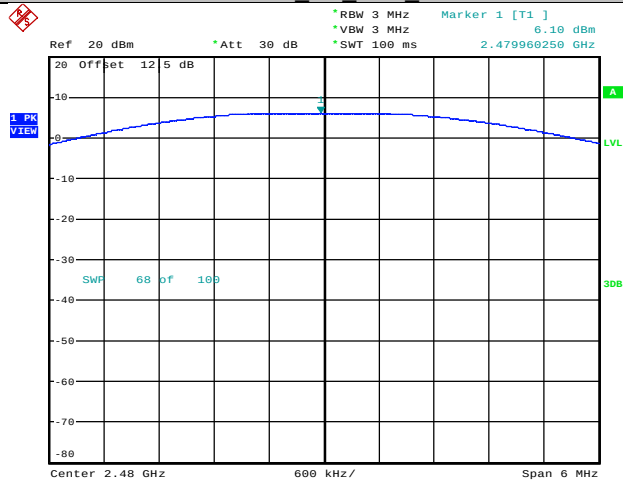
Date: 18.AUG.2023 12:20:50

BLE_2M_Ant1_2440



Date: 18.AUG.2023 12:21:17

BLE_2M_Ant1_2480

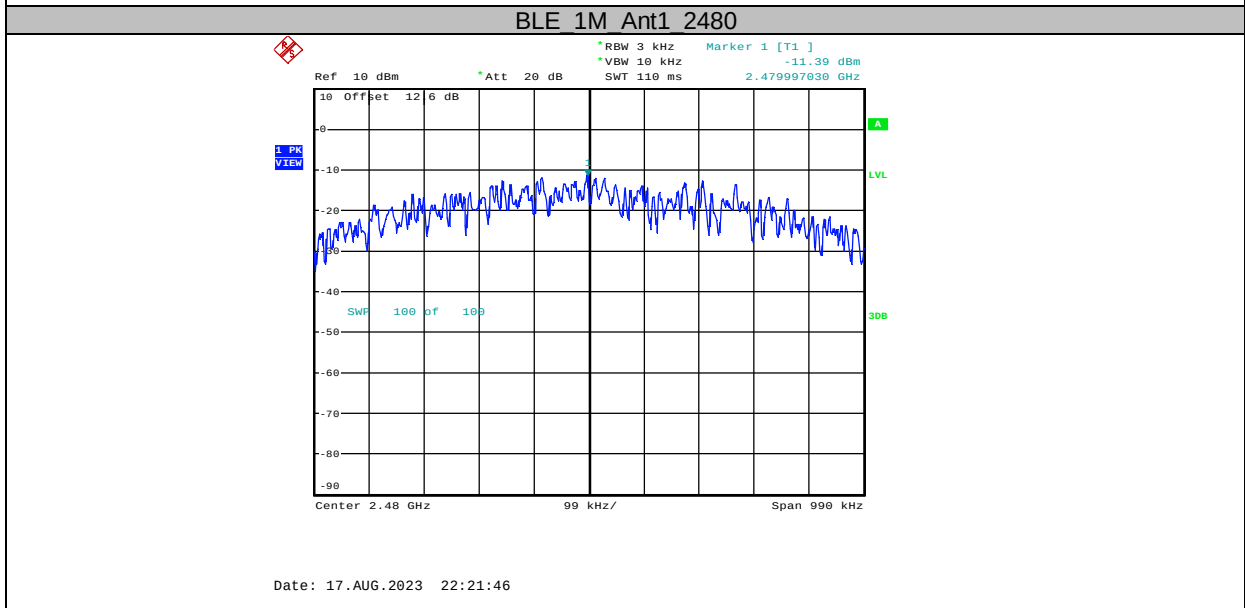
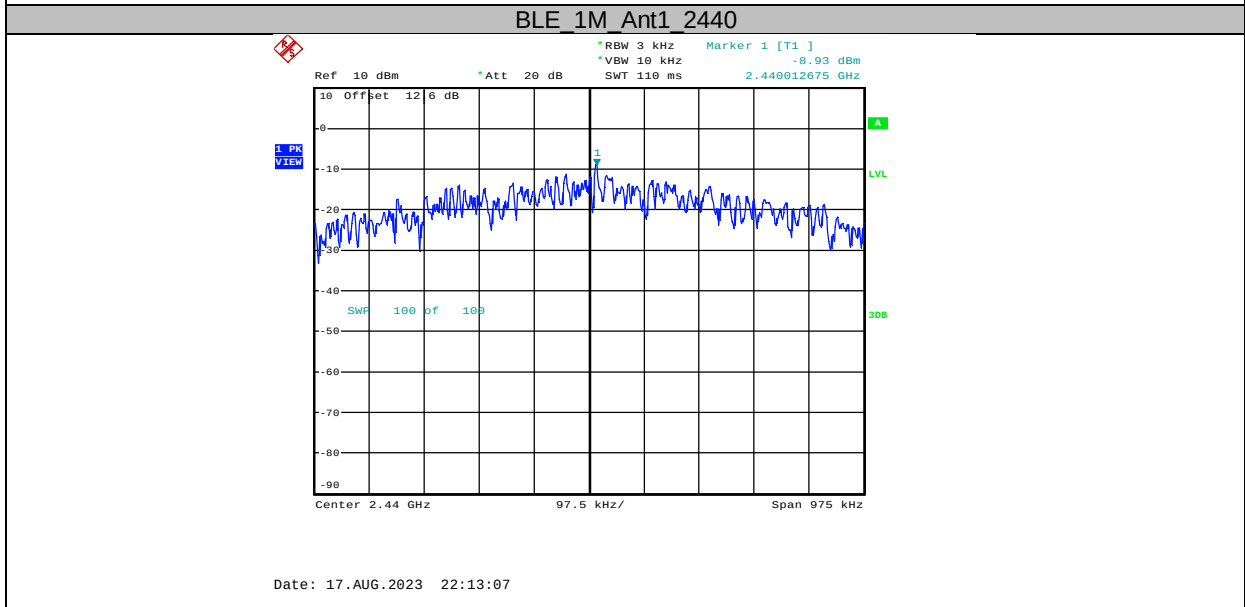
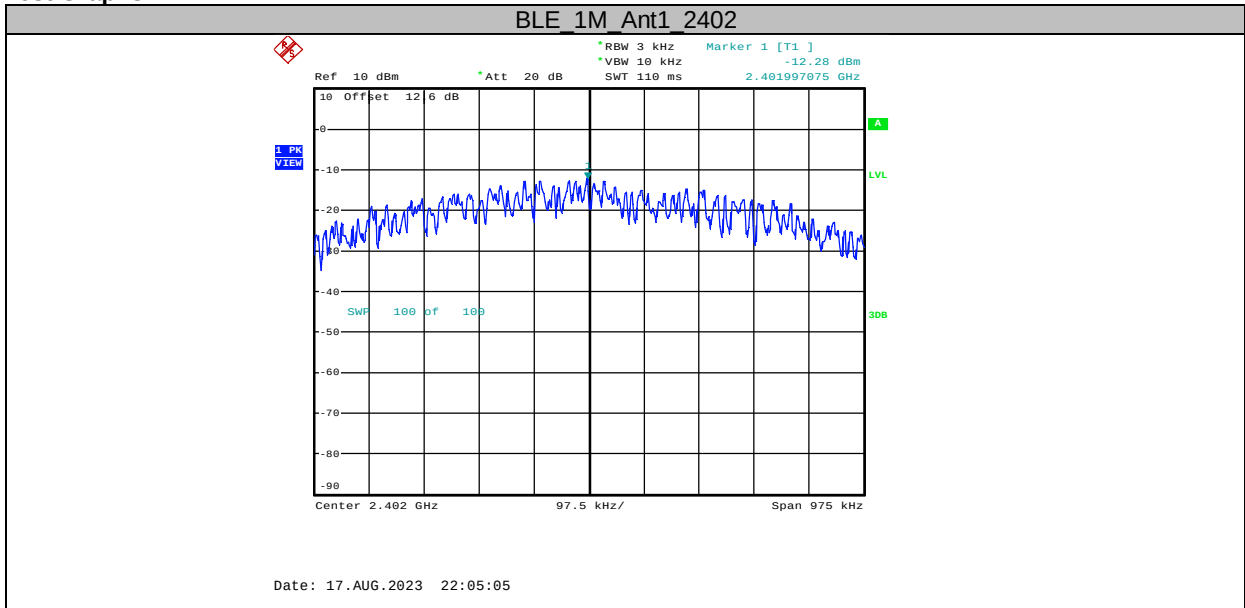


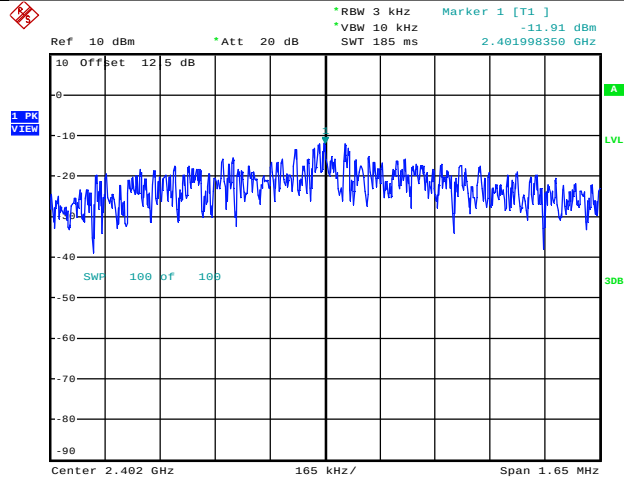
Date: 18.AUG.2023 12:21:44

**Appendix D: Maximum power spectral density
Test Result**

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-12.28	≤8.00	PASS
		2440	-8.93	≤8.00	PASS
		2480	-11.39	≤8.00	PASS
BLE_2M	Ant1	2402	-11.91	≤8.00	PASS
		2440	-10.74	≤8.00	PASS
		2480	-12.88	≤8.00	PASS

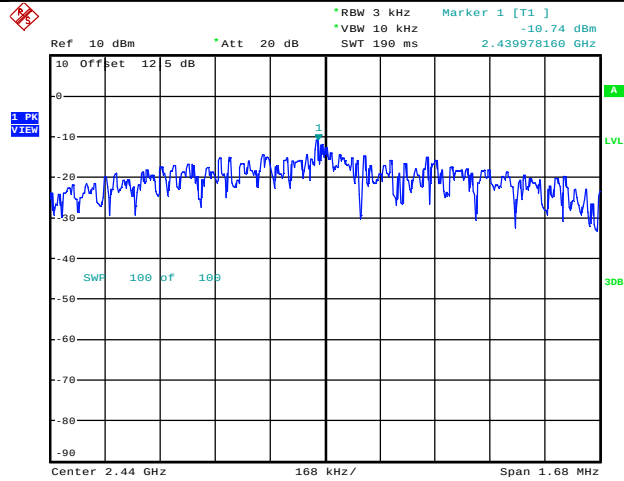
Test Graphs





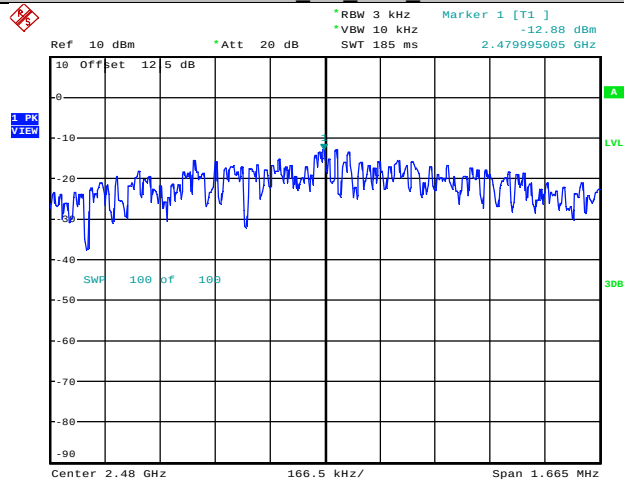
Date: 18.AUG.2023 12:32:23

BLE_2M_Ant1_2440



Date: 18.AUG.2023 12:33:53

BLE_2M_Ant1_2480



Date: 18.AUG.2023 12:34:57

Appendix E: Band edge measurements

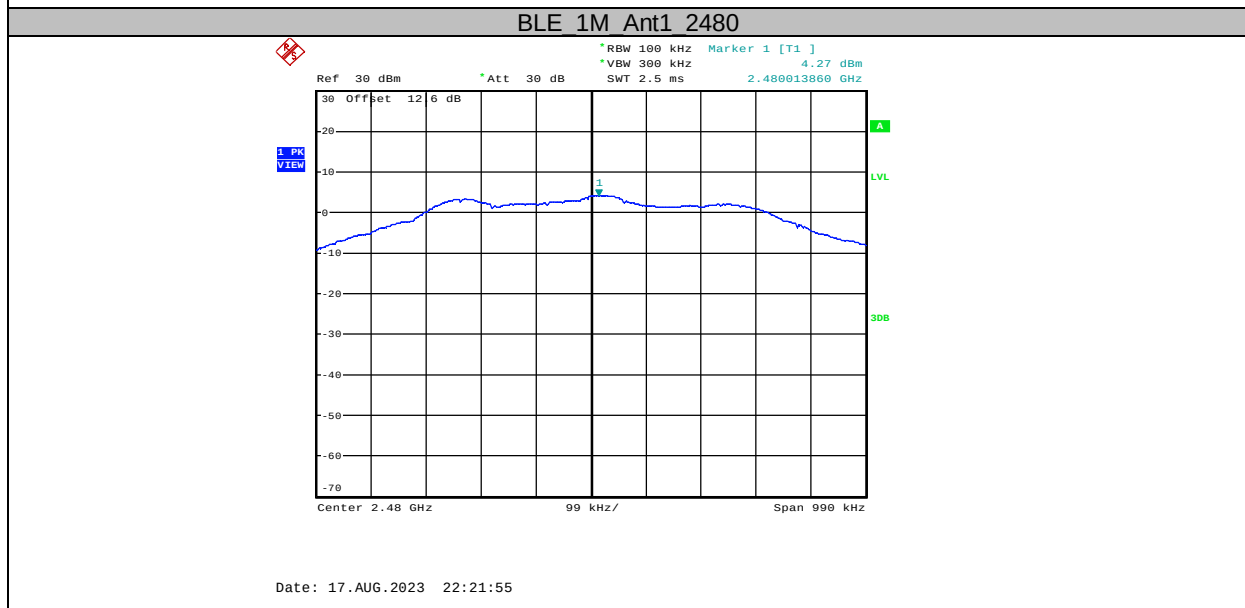
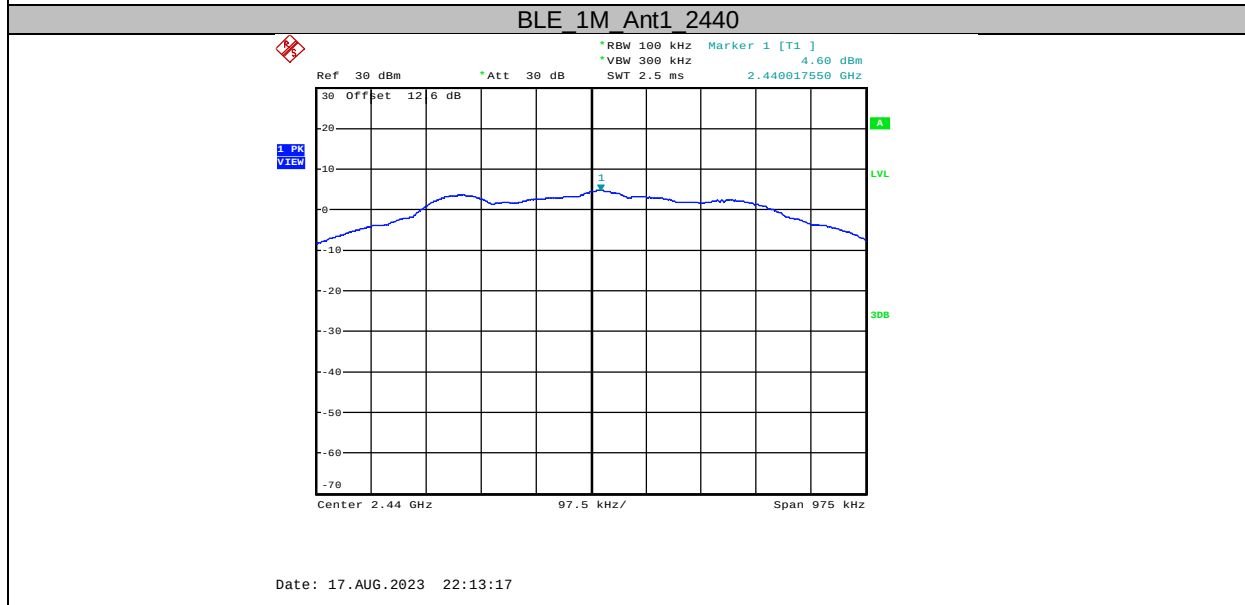
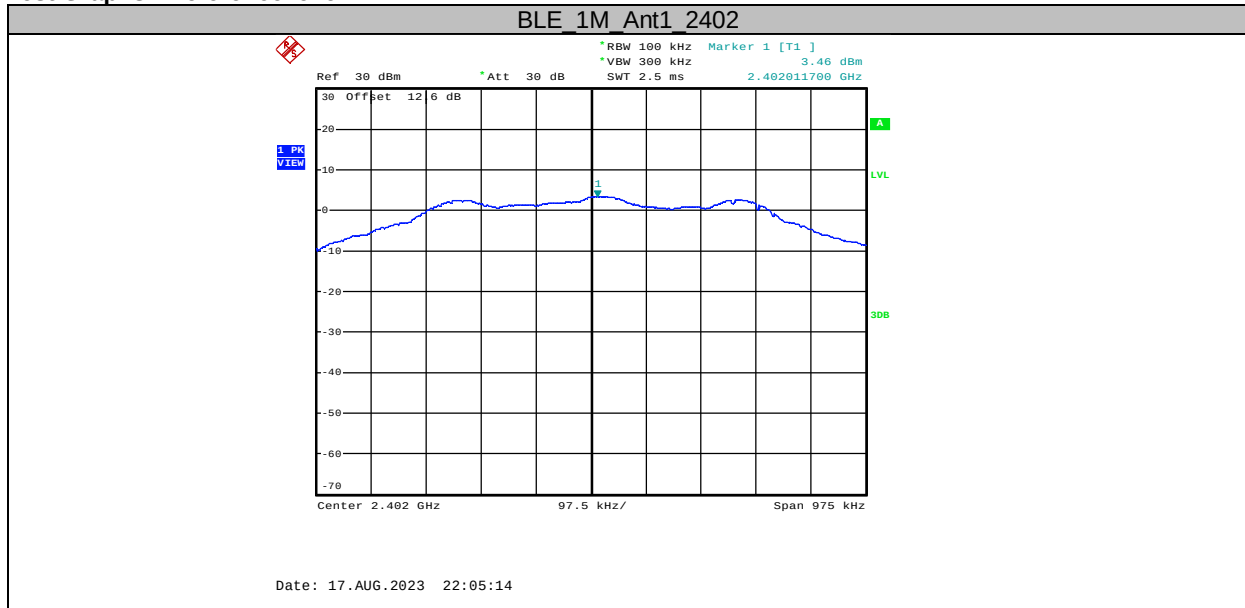
Test Result - Reference level

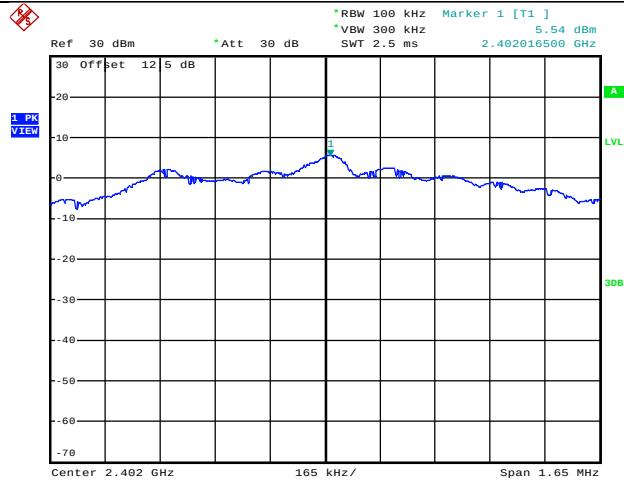
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2402.01	3.46
		2440	2440.02	4.60
		2480	2480.01	4.27
BLE_2M	Ant1	2402	2402.02	5.54
		2440	2440.02	6.31
		2480	2480.02	5.38

Test Result - Band edge

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.46	-45.79	≤-16.54	PASS
		High	2480	4.27	-45.98	≤-15.73	PASS
BLE_2M	Ant1	Low	2402	5.54	-31.85	≤-14.46	PASS
		High	2480	5.38	-46.17	≤-14.62	PASS

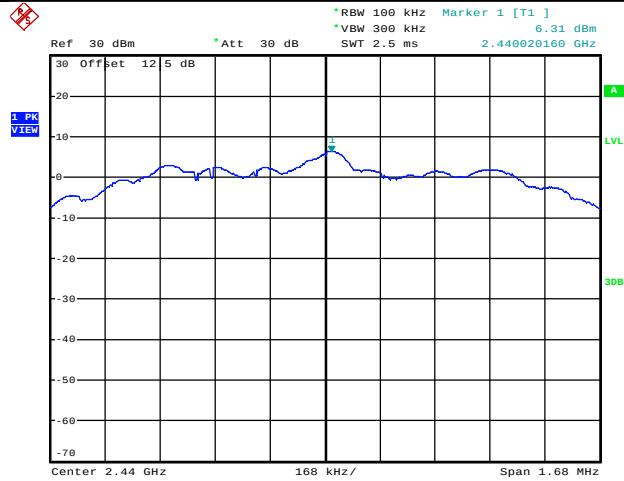
Test Graphs - Reference level





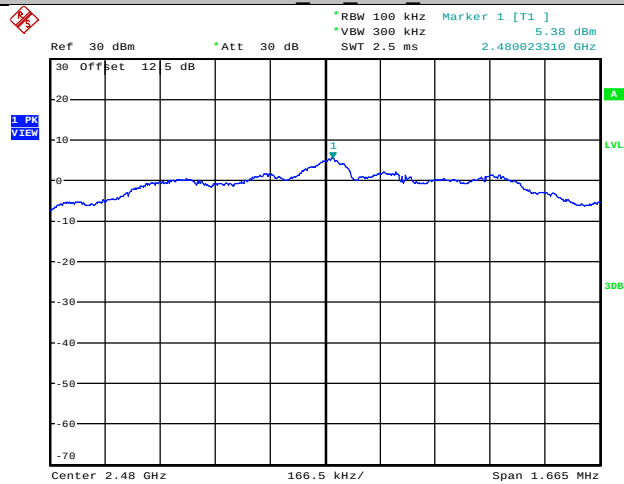
Date: 18.AUG.2023 12:32:32

BLE_2M_Ant1_2440



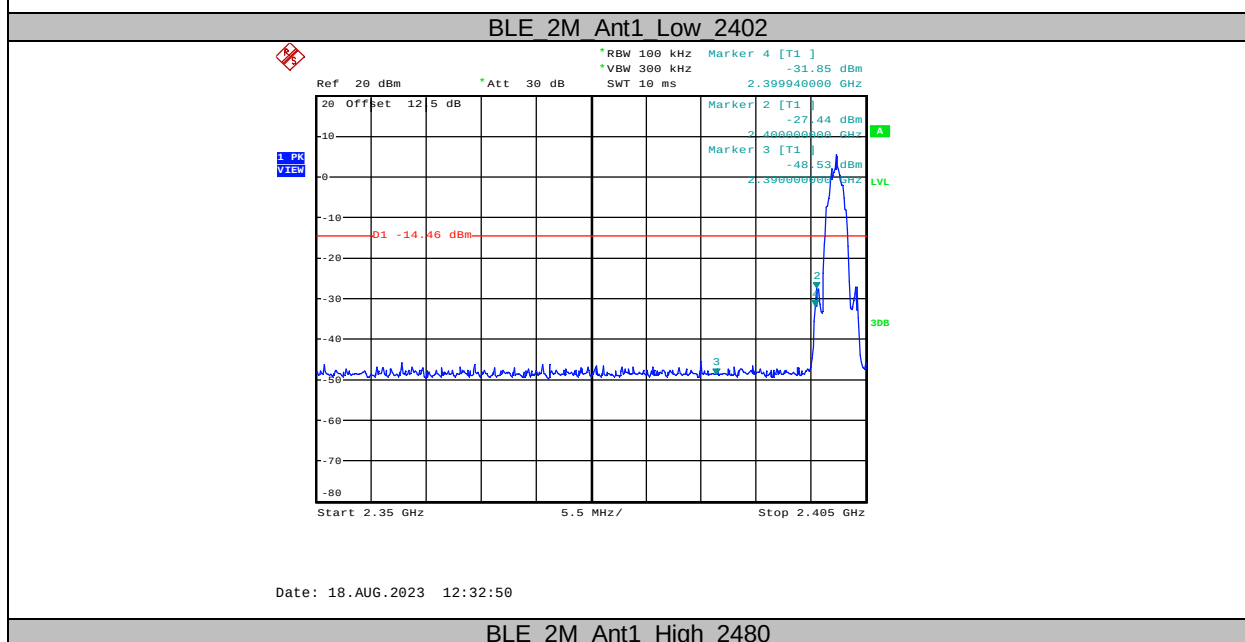
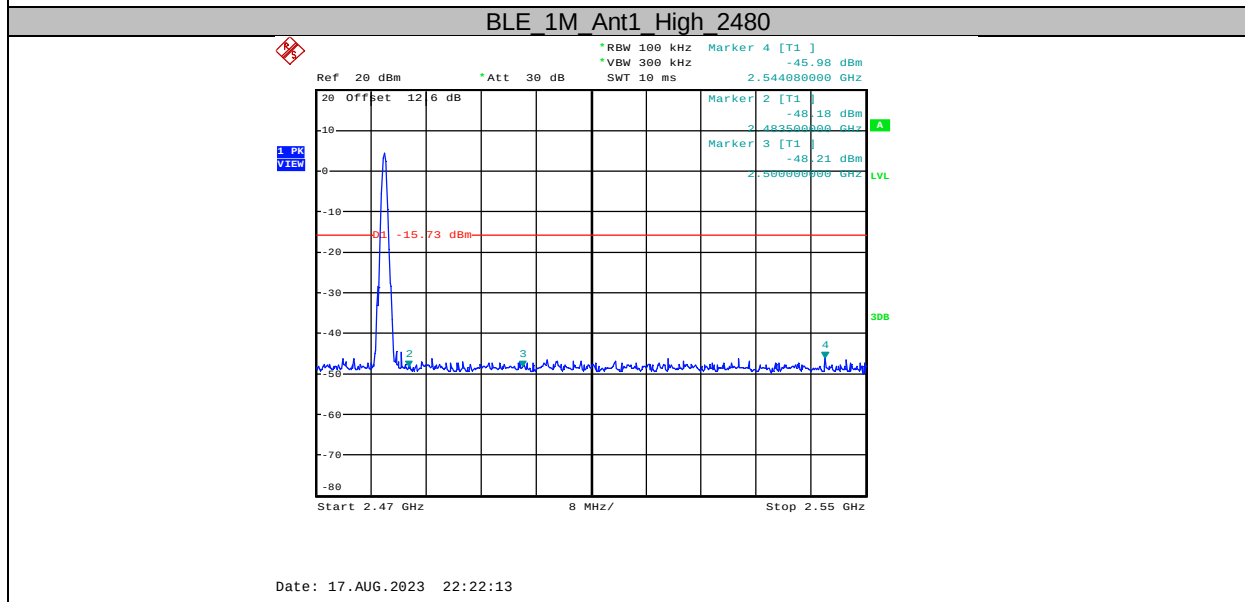
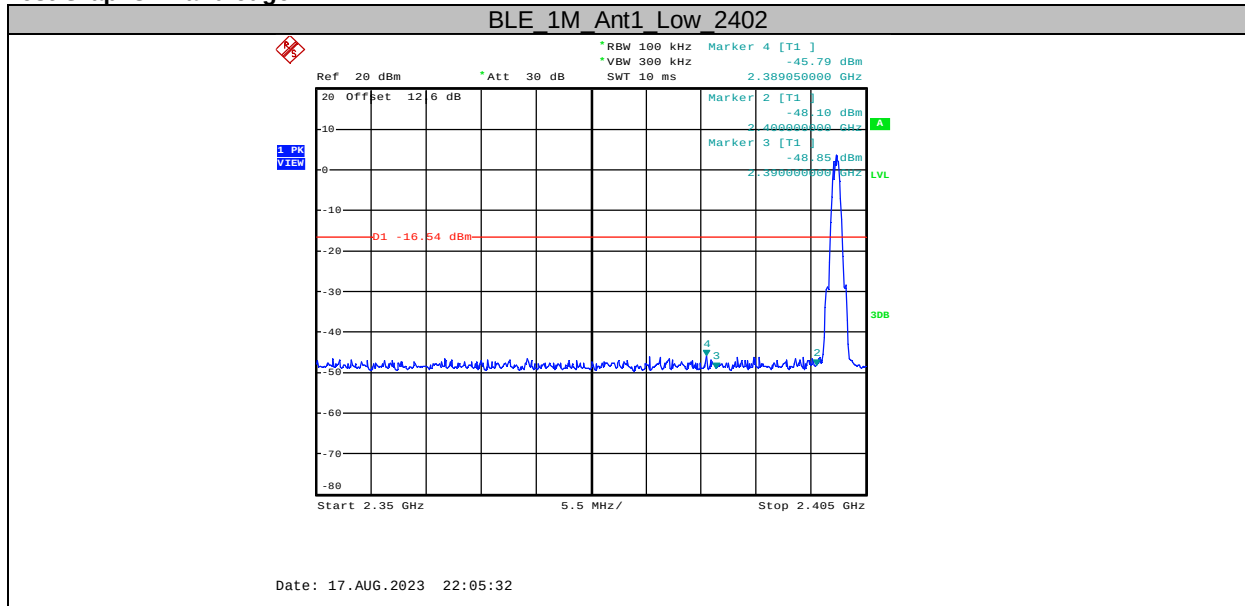
Date: 18.AUG.2023 12:34:02

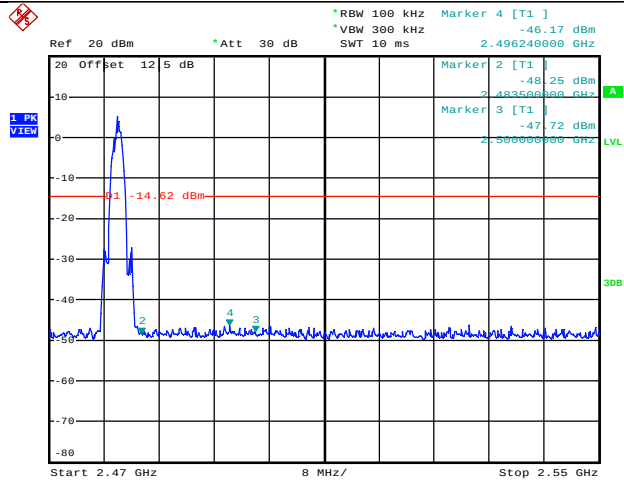
BLE_2M_Ant1_2480



Date: 18.AUG.2023 12:35:06

Test Graphs - Band edge



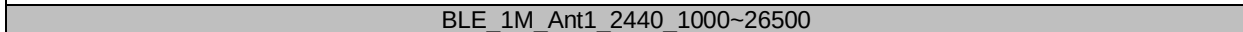
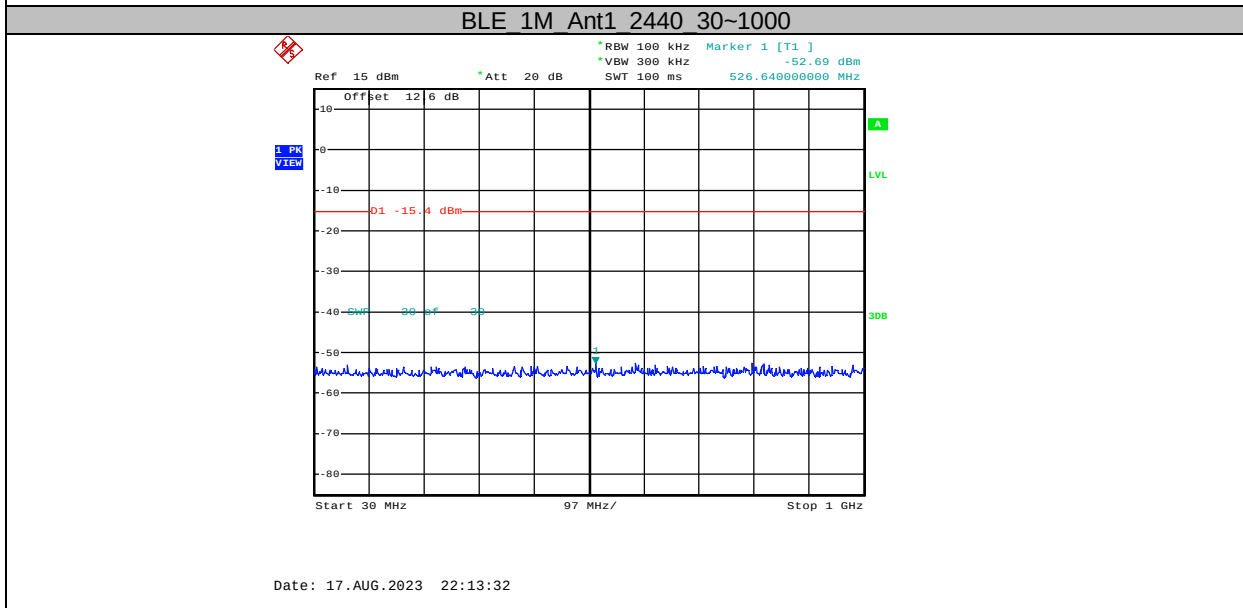
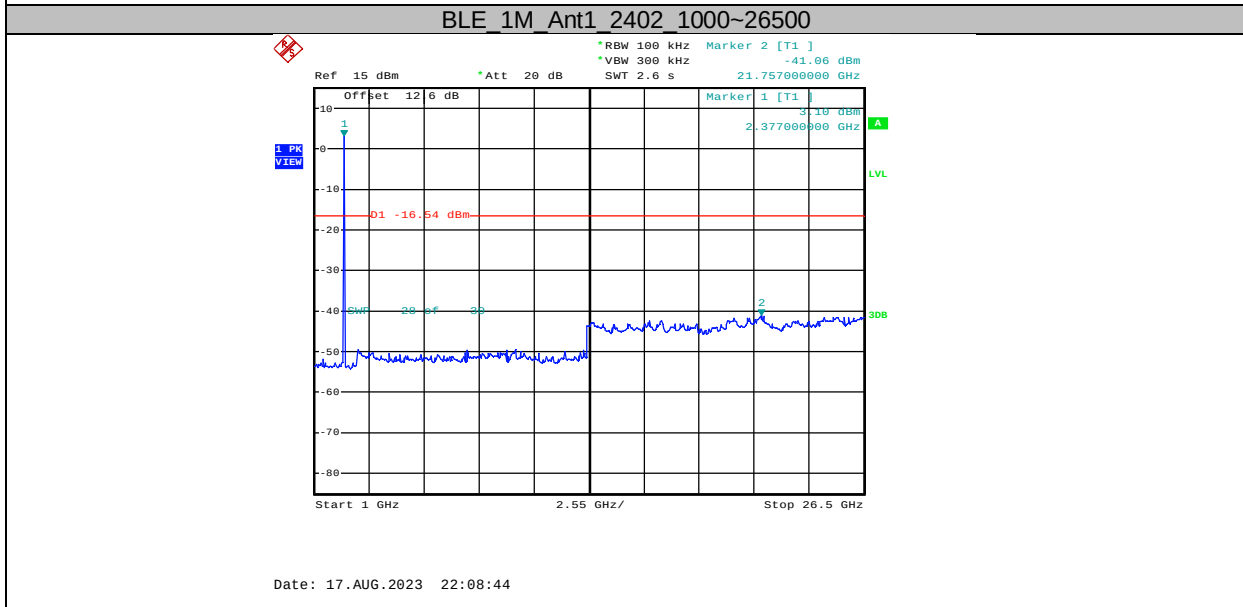
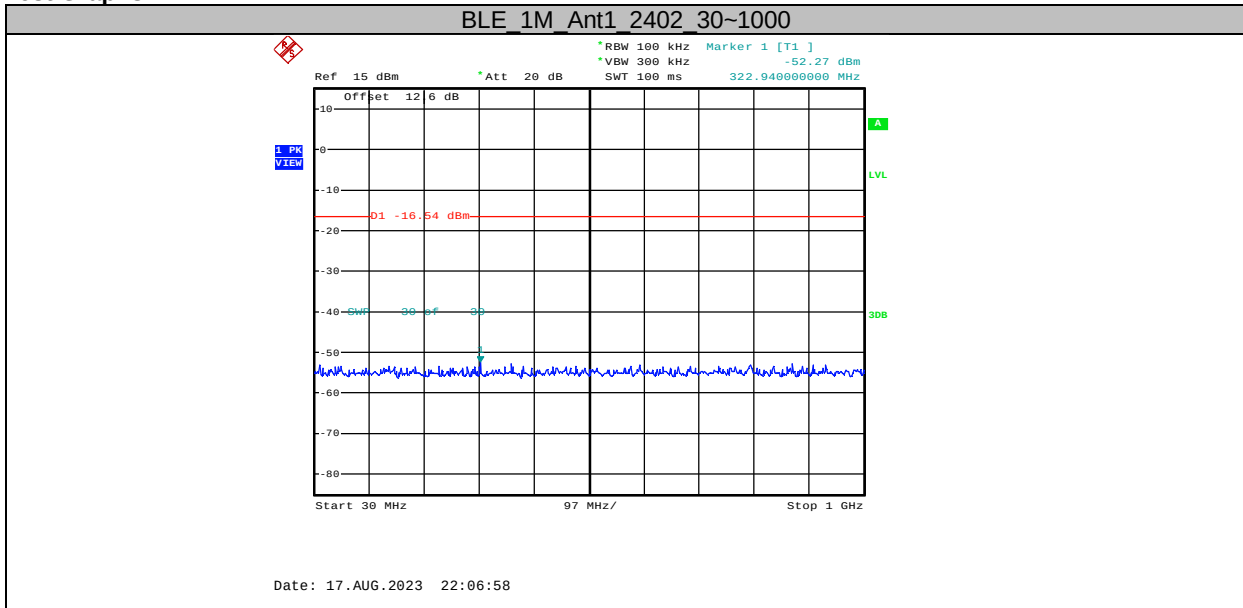


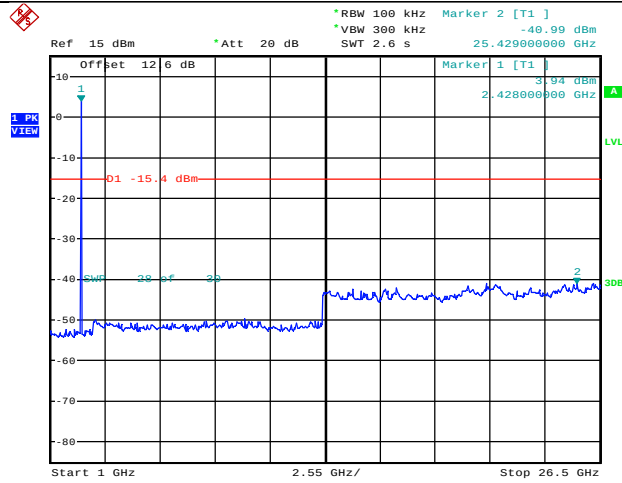
Date: 18.AUG.2023 12:35:24

**Appendix F: Conducted Spurious Emission
Test Result**

TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	3.46	-52.27	≤-16.54	PASS
			1000~26500	3.46	-41.06	≤-16.54	PASS
		2440	30~1000	4.60	-52.69	≤-15.4	PASS
			1000~26500	4.60	-40.99	≤-15.4	PASS
		2480	30~1000	4.27	-51.73	≤-15.73	PASS
			1000~26500	4.27	-40.58	≤-15.73	PASS
BLE_2M	Ant1	2402	30~1000	15.51	-52.6	≤-4.49	PASS
			1000~26500	15.51	-40.47	≤-4.49	PASS
		2440	30~1000	15.79	-52.11	≤-4.21	PASS
			1000~26500	15.79	-40	≤-4.21	PASS
		2480	30~1000	16.33	-51.82	≤-3.67	PASS
			1000~26500	16.33	-40.16	≤-3.67	PASS

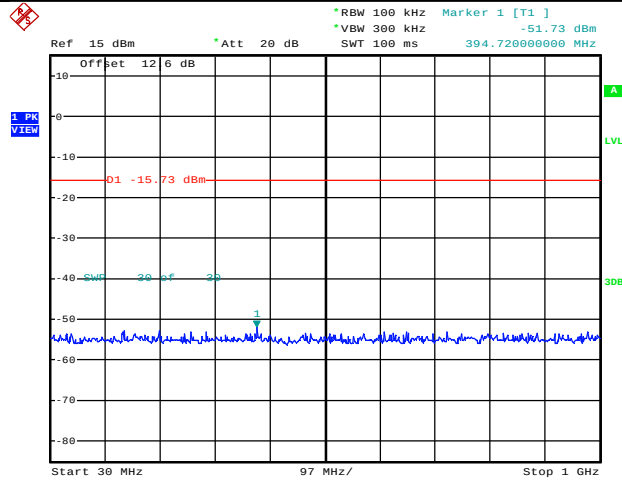
Test Graphs





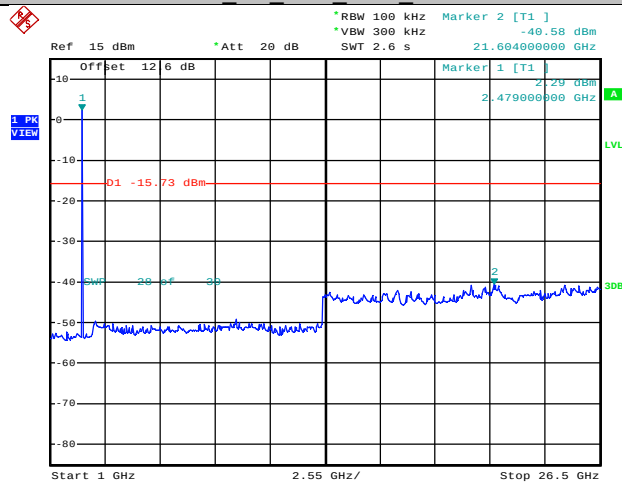
Date: 17.AUG.2023 22:15:17

BLE 1M Ant1 2480 30-1000



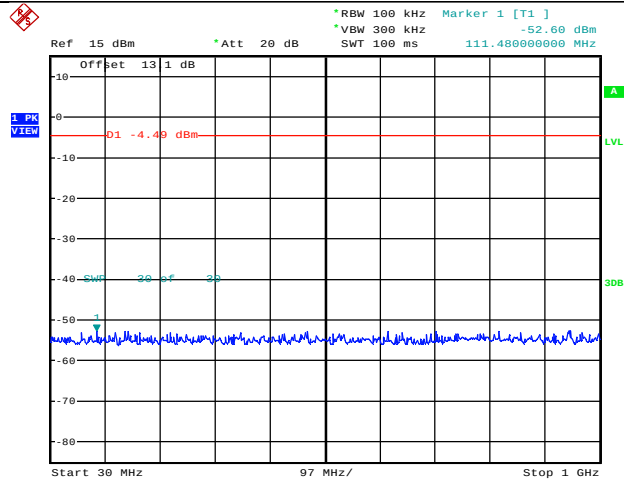
Date: 17.AUG.2023 22:23:39

BLE 1M Ant1 2480 1000~26500



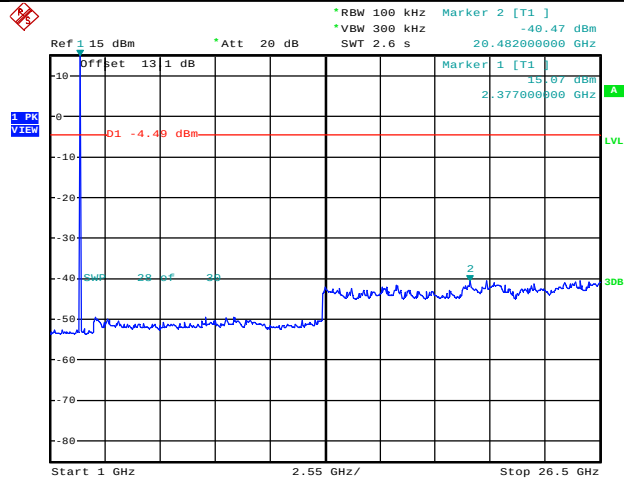
Date: 17.AUG.2023 22:25:24

BLE 2M Ant1 2402 30-1000



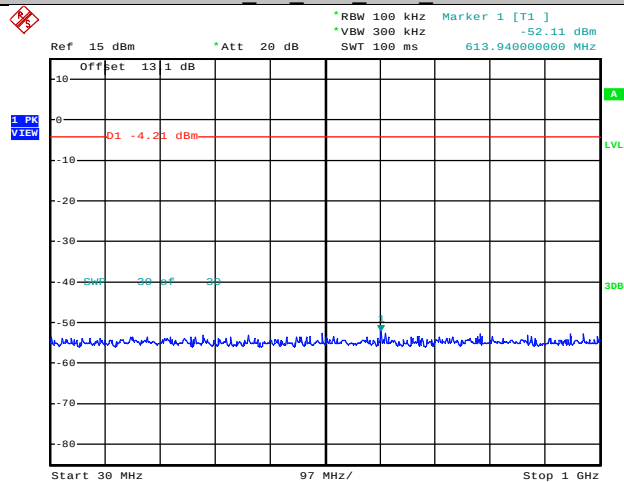
Date: 14.AUG.2023 12:59:23

BLE 2M Ant1 2402 1000~26500



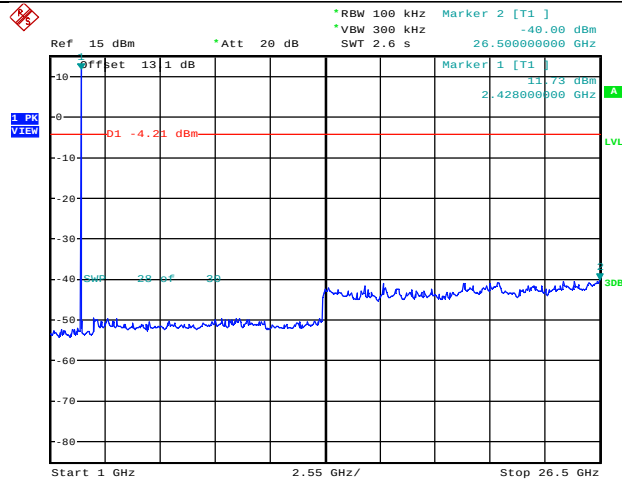
Date: 14.AUG.2023 13:01:09

BLE 2M Ant1 2440 30~1000



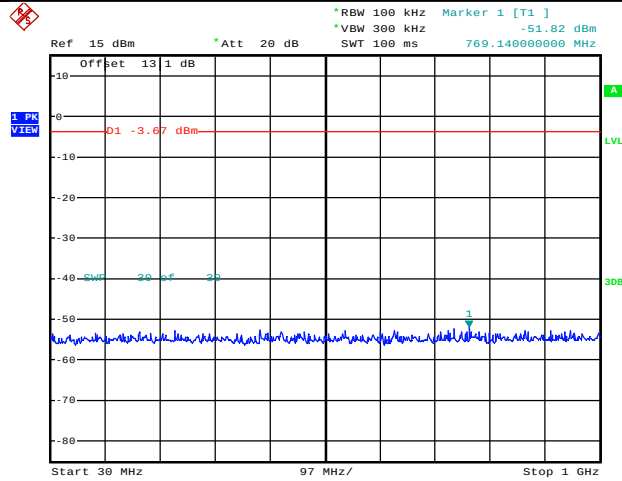
Date: 14.AUG.2023 13:04:22

BLE 2M Ant1 2440 1000~26500



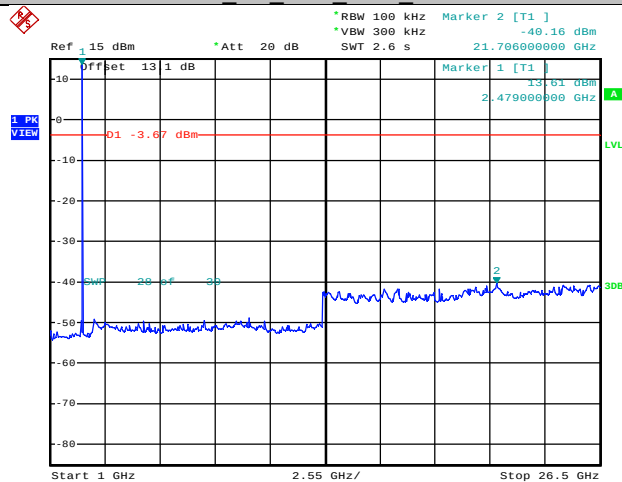
Date: 14.AUG.2023 13:06:08

BLE 2M Ant1 2480 30~1000



Date: 14.AUG.2023 13:14:25

BLE_2M_Ant1_2480_1000~2650

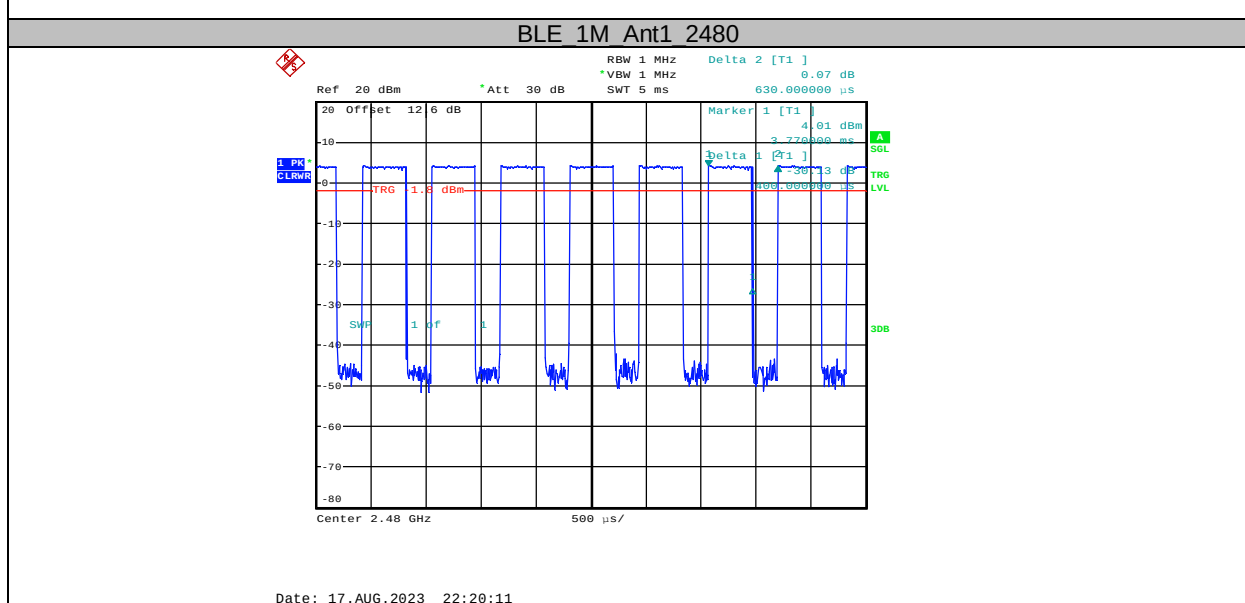
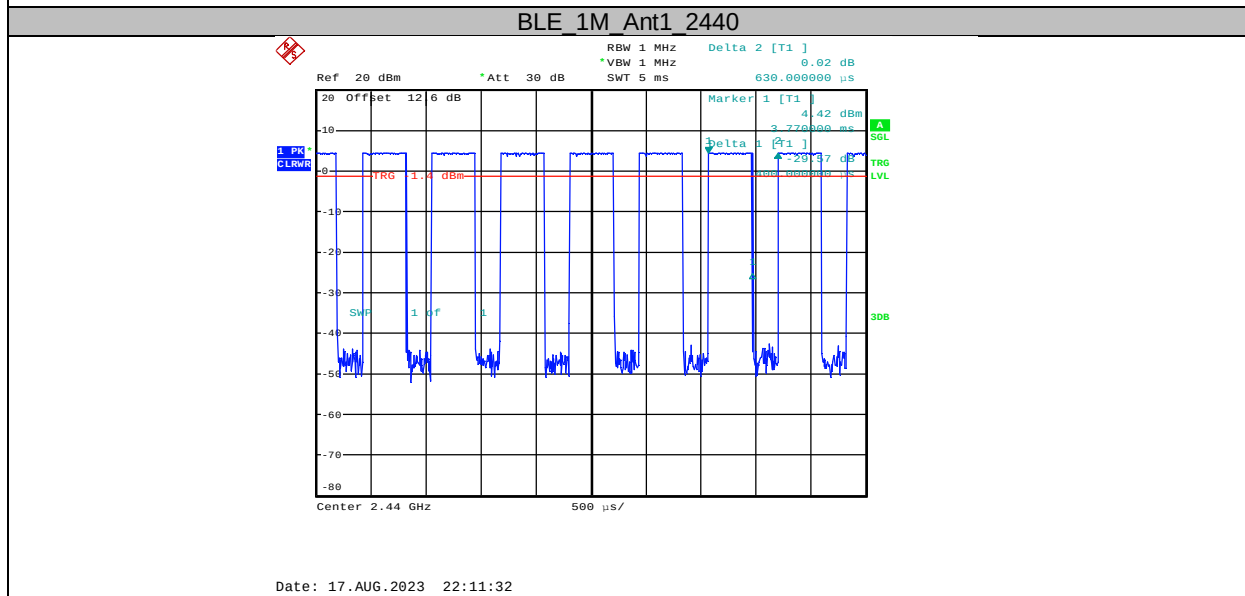
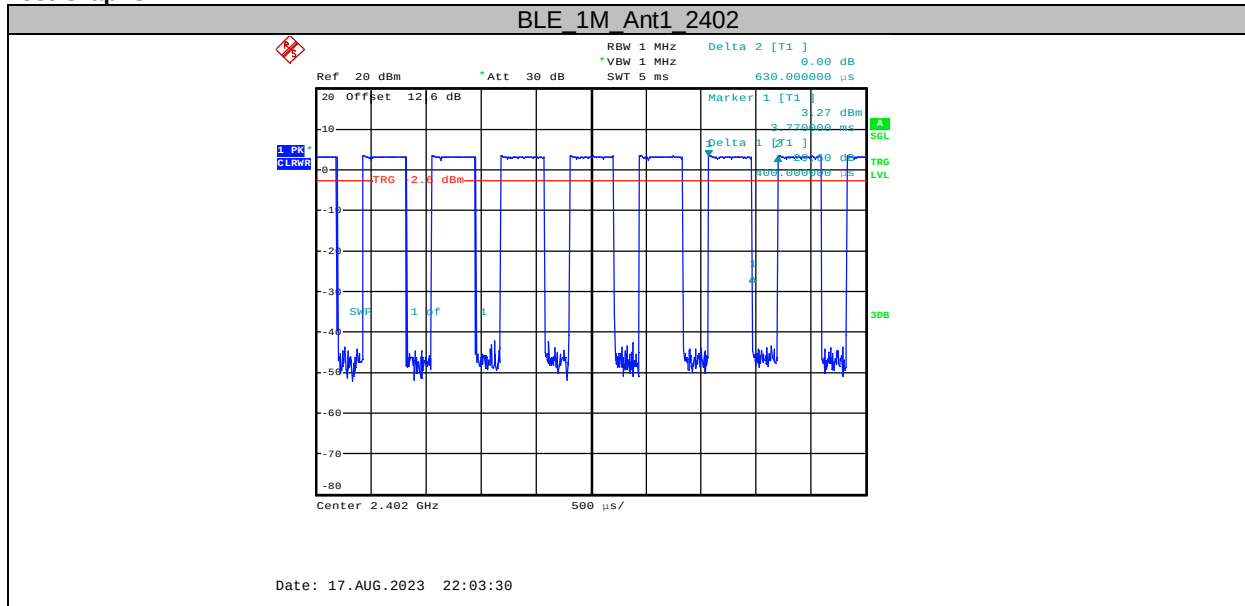


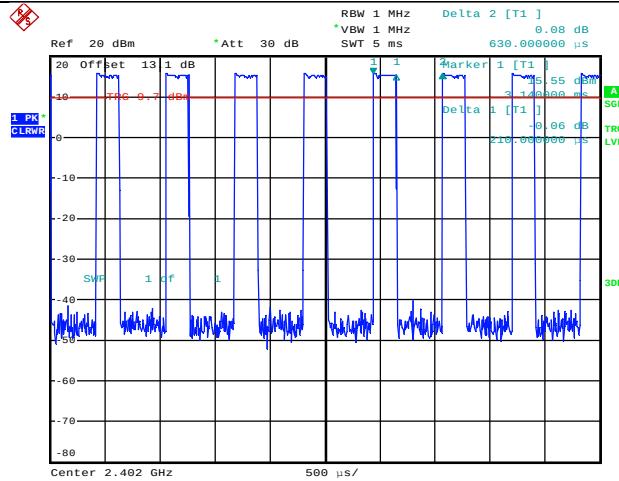
Date: 14.AUG.2023 13:16:10

**Appendix G: Duty Cycle
Test Result**

TestMode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.40	0.63	63.49	1.97
		2440	0.40	0.63	63.49	1.97
		2480	0.40	0.63	63.49	1.97
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.77
		2440	0.21	0.63	33.33	4.77
		2480	0.21	0.63	33.33	4.77

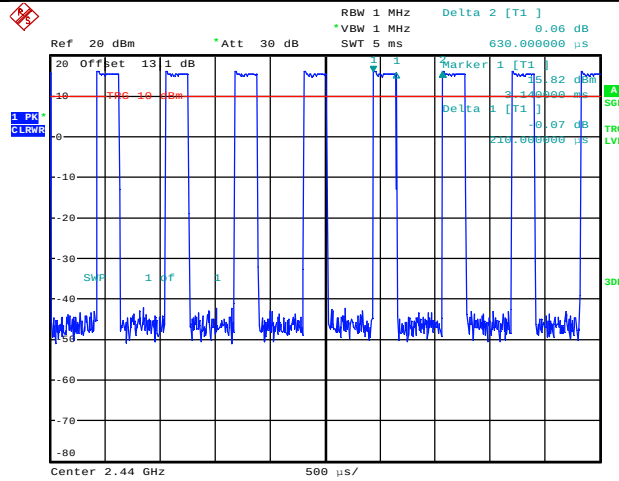
Test Graphs





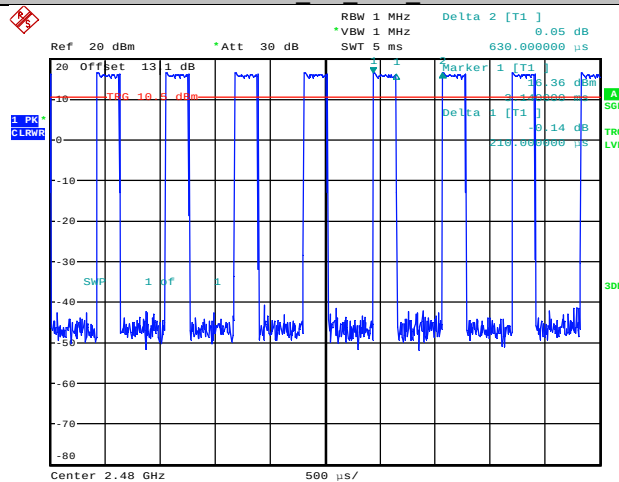
Date: 14.AUG.2023 12:55:48

BLE 2M_Ant1_2440



Date: 14.AUG.2023 13:02:15

BLE 2M_Ant1_2480



Date: 14.AUG.2023 13:10:49

6. Transmitter Spurious Radiated Emission
6. 7 Transmitter Spurious Radiated Emission Test Result

Test Mode 1										
Restricted Frequency Bands Data_BT LE / 1Mbps GFSKCH Low										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
2390.000	56.63	45.39	0.90	57.53	46.29	Horiz./	74.0	54.0	-16.47	-7.71
2390.000	56.57	44.78	0.90	57.47	45.68	Vert.	74.0	54.0	-16.53	-8.32
Restricted Frequency Bands Data_BT LE / 1Mbps GFSK CH High										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
2483.500	59.64	47.40	0.90	60.54	48.3	Horiz./	74.0	54.0	-13.46	-5.70
2483.500	59.97	47.47	0.90	60.87	48.37	Vert.	74.0	54.0	-13.13	-5.63

Test Mode 2										
Restricted Frequency Bands Data_BT LE / 2Mbps GFSKCH Low										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
2390.000	58.88	47.02	0.90	59.78	47.92	Horiz./	74.0	54.0	-14.22	-6.08
2390.000	59.71	47.04	0.90	60.61	47.94	Vert.	74.0	54.0	-13.39	-6.06
Restricted Frequency Bands Data_BT LE / 2Mbps GFSK CH High										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
2483.500	58.87	47.38	0.90	59.77	48.28	Horiz./	74.0	54.0	-14.23	-5.72
2483.500	60.40	47.44	0.90	61.30	48.34	Vert.	74.0	54.0	-12.70	-5.66

Test Mode 1										
Harmonics Radiated Emission Data_BT LE / 1Mbps GFSK CH Low										
Frequency (MHz)	Read Level (dBUV)		Factor (dB)	Emission (dBUV/m)		Horiz./ Vert.	Limit (dBUV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4959.835	39.37	28.36	0.90	40.27	29.26	Horiz./	74.0	54.0	-33.73	-24.74
4956.750	40.40	29.50	0.90	41.30	30.40	Vert.	74.0	54.0	-32.70	-23.60
7440.850	42.58	30.67	0.90	43.48	31.57	Horiz./	74.0	54.0	-30.52	-22.43
7440.250	42.78	30.44	0.90	43.68	31.34	Vert.	74.0	54.0	-30.32	-22.66
24020.00	-	-	-	-	-	-	-	-	-	-
24020.00	-	-	-	-	-	-	-	-	-	-
Harmonics Radiated Emission Data_BT LE / 1Mbps GFSK CH Mid										
Frequency (MHz)	Read Level (dBUV)		Factor (dB)	Emission (dBUV/m)		Horiz./ Vert.	Limit (dBUV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4880.500	38.11	26.04	0.90	39.01	26.94	Horiz./	74.0	54.0	-34.99	-27.06
4880.650	38.50	27.52	0.90	39.40	28.42	Vert.	74.0	54.0	-34.60	-25.58
7320.400	41.74	29.57	0.90	42.64	30.47	Horiz./	74.0	54.0	-31.36	-23.53
7320.500	41.37	29.69	0.90	42.27	30.59	Vert.	74.0	54.0	-31.73	-23.41
24400.00	-	-	-	-	-	-	-	-	-	-
24400.00	-	-	-	-	-	-	-	-	-	-
Harmonics Radiated Emission Data_BT LE / 1Mbps GFSK CH High										
Frequency (MHz)	Read Level (dBUV)		Factor (dB)	Emission (dBUV/m)		Horiz./ Vert.	Limit (dBUV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4963.750	39.33	27.91	0.90	40.23	28.81	Horiz./	74.0	54.0	-33.77	4963.750
4960.300	40.06	27.62	0.90	40.96	28.52	Vert.	74.0	54.0	-33.04	4960.300
7440.450	43.24	30.57	0.90	44.14	31.47	Horiz./	74.0	54.0	-29.86	7440.450
7443.800	43.39	30.55	0.90	44.29	31.45	Vert.	74.0	54.0	-29.71	7443.800
24800.00	-	-	-	-	-	-	-	-	-	-
24800.00	-	-	-	-	-	-	-	-	-	-

Note:	(1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value. (2) Emission Level = Reading Level + Probe Factor + Cable Loss. (3) Span shall wide enough to fully capture the emission being measured; 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. (4) The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied. (5) Where an emission level is indicated by a -, levels had a margin greater than 20 dB when compared to the limit.
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Test Mode 2										
Harmonics Radiated Emission Data_BT LE / 2Mbps GFSK CH Low										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4804.750	40.22	27.34	0.90	41.12	28.24	Horiz./	74.0	54.0	-32.88	-25.76
4809.700	39.80	27.63	0.90	40.70	28.53	Vert.	74.0	54.0	-33.30	-25.47
7206.700	42.66	30.87	0.90	43.56	31.77	Horiz./	74.0	54.0	-30.44	-22.23
7320.150	42.64	30.84	0.90	43.54	31.74	Vert.	74.0	54.0	-30.46	-22.26
24020.00	-	-	-	-	-	-	-	-	-	-
24020.00	-	-	-	-	-	-	-	-	-	-
Harmonics Radiated Emission Data_BT LE / 2Mbps GFSK CH Mid										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4881.350	39.44	27.65	0.90	40.34	28.55	Horiz./	74.0	54.0	-33.66	-25.45
4884.250	38.15	26.99	0.90	39.05	27.89	Vert.	74.0	54.0	-34.95	-26.11
7320.500	42.05	29.69	0.90	42.95	30.59	Horiz./	74.0	54.0	-31.05	-23.41
7320.000	41.03	29.44	0.90	41.93	30.34	Vert.	74.0	54.0	-32.07	-23.66
24400.00	-	-	-	-	-	-	-	-	-	-
24400.00	-	-	-	-	-	-	-	-	-	-
Harmonics Radiated Emission Data_BT LE / 2Mbps GFSK CH High										
Frequency (MHz)	Read Level (dBuV)		Factor (dB)	Emission (dBuV/m)		Horiz./ Vert.	Limit (dBuV/m)		Margin(dB)	
	PK	AV		PK	AV		PK	AV	PK	AV
4965.250	39.68	27.86	0.90	40.58	28.76	Horiz./	74.0	54.0	-33.42	-25.24
4957.600	40.26	27.77	0.90	41.16	28.67	Vert.	74.0	54.0	-32.84	-25.33
7443.200	42.27	30.65	0.90	43.17	31.55	Horiz./	74.0	54.0	-30.83	-22.45
7440.900	42.66	30.52	0.90	43.56	31.42	Vert.	74.0	54.0	-30.44	-22.58
24800.00	-	-	-	-	-	-	-	-	-	-
24800.00	-	-	-	-	-	-	-	-	-	-

Note:	(1) All Reading Levels below 1GHz are Quasi-Peak, above are peak and average value. (2) Emission Level = Reading Level + Probe Factor + Cable Loss. (3) Span shall wide enough to fully capture the emission being measured; 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. $VBW \geq 1/T$, 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. (4) The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied. (5) Where an emission level is indicated by a -, levels had a margin greater than 20 dB when compared to the limit.
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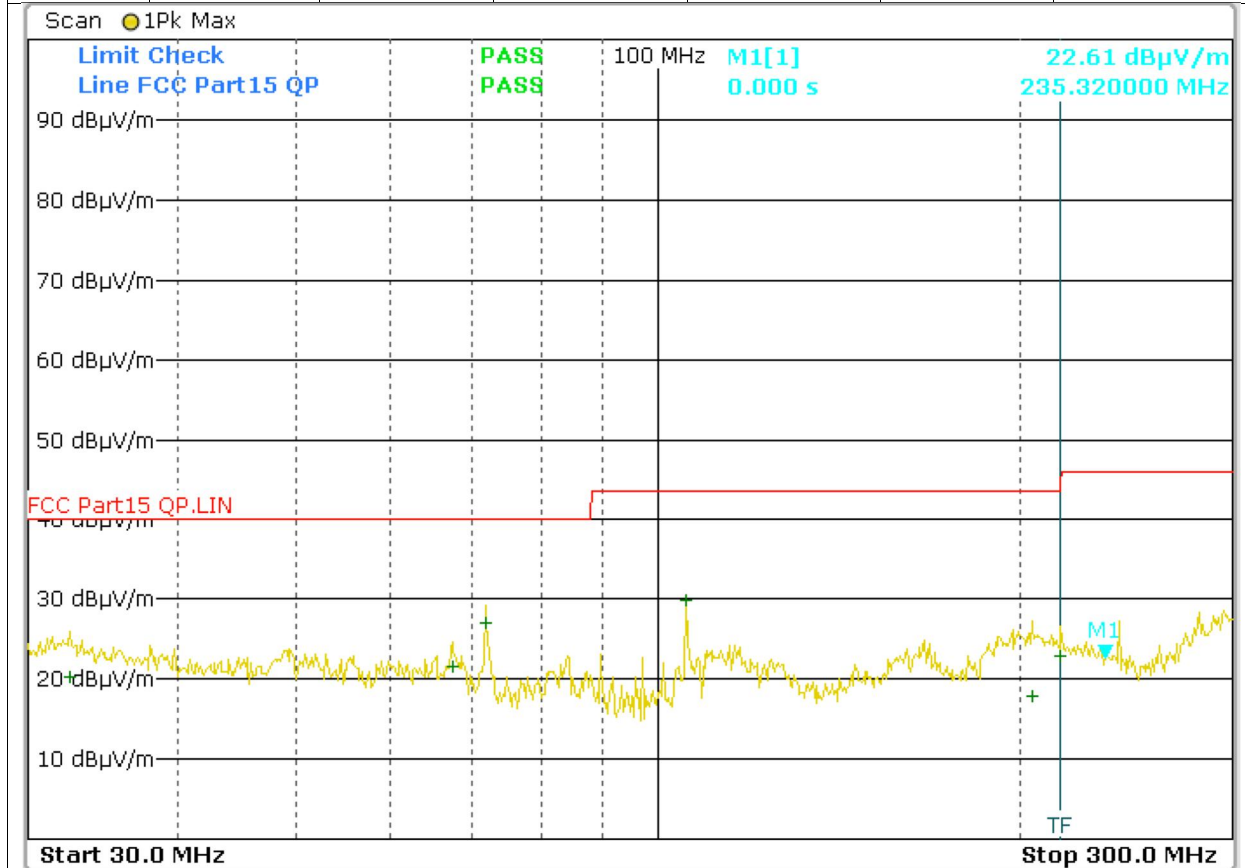
**General Radiated Emission Data
For Frequency below 30MHz**

Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Emission (dBuV/m)	Horiz./ Vert.	Limit (dBuV/m)	Margin (dB)
N/A						
N/A						
N/A						
N/A						
N/A						
N/A						

Note:	(1) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary. (2) “N/A” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that’s already beyond the background noise floor. (3) Emission Level = Reading Level + Probe Factor + Cable Loss.
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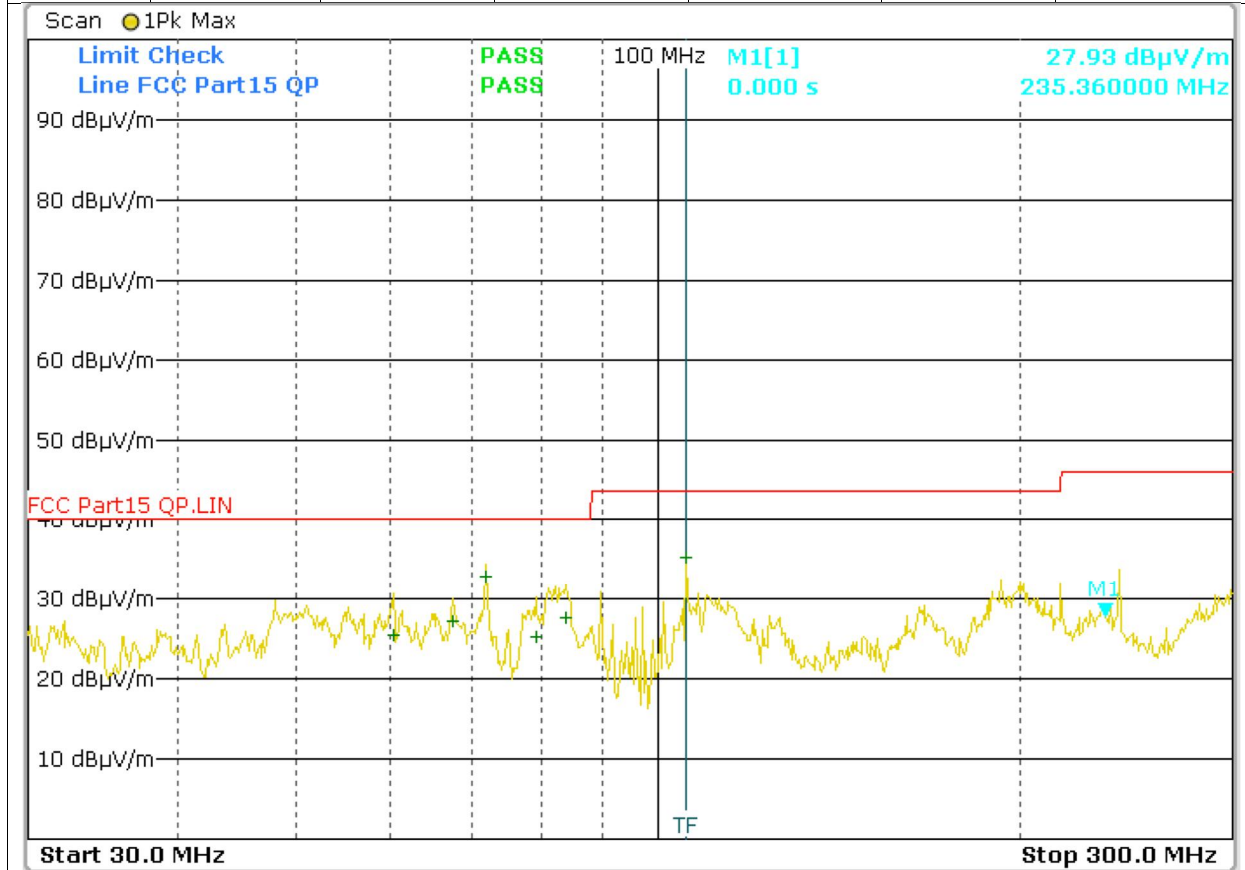
For Frequency from 30MHz to 1GHz

☑ Test Mode_01		FCC Radiated Emission for Frequency from 30MHz to 300MHz				
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Emission (dBuV/m)	H/V	Limit (dBuV/m)	Margin (dB)
32.480	8.31	12.06	20.37	H	40.0	-19.63
67.600	12.79	8.81	21.60	H	40.0	-18.40
72.000	19.67	7.24	26.91	H	40.0	-13.09
105.680	21.12	8.67	29.79	H	43.5	-13.71
204.320	2.62	18.19	20.81	H	43.5	-22.69
216.000	4.71	18.19	22.90	H	43.5	-20.60



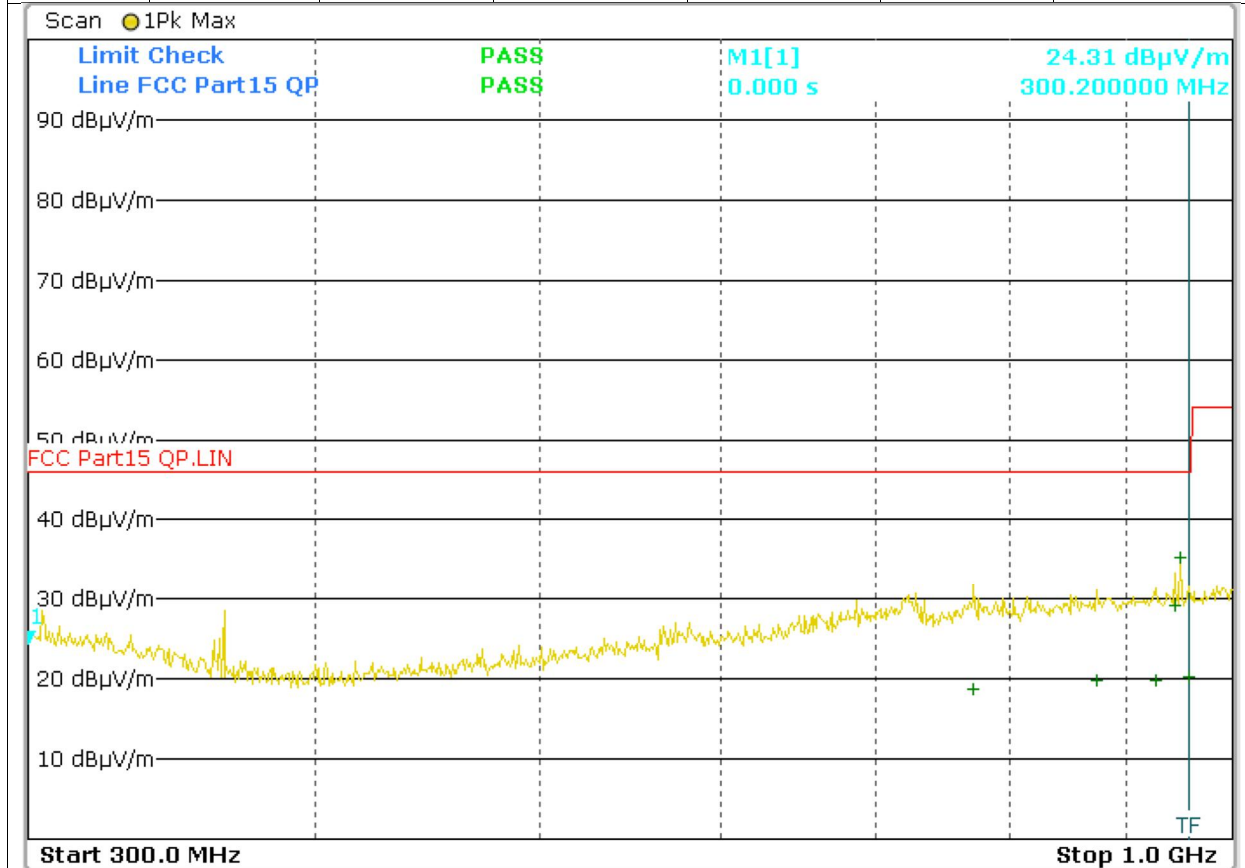
For Frequency from 30MHz to 1GHz

☒ Test Mode_01		FCC Radiated Emission for Frequency from 30MHz to 300MHz				
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Emission (dBuV/m)	H/V	Limit (dBuV/m)	Margin (dB)
60.240	16.76	8.81	25.57	V	40.0	-14.43
67.640	18.47	8.81	27.28	V	40.0	-12.72
72.000	21.63	7.24	28.87	V	40.0	-11.13
79.240	18.12	7.24	25.36	V	40.0	-14.64
83.800	20.25	7.43	27.68	V	40.0	-12.32
105.680	22.58	8.67	31.25	V	43.5	-12.25



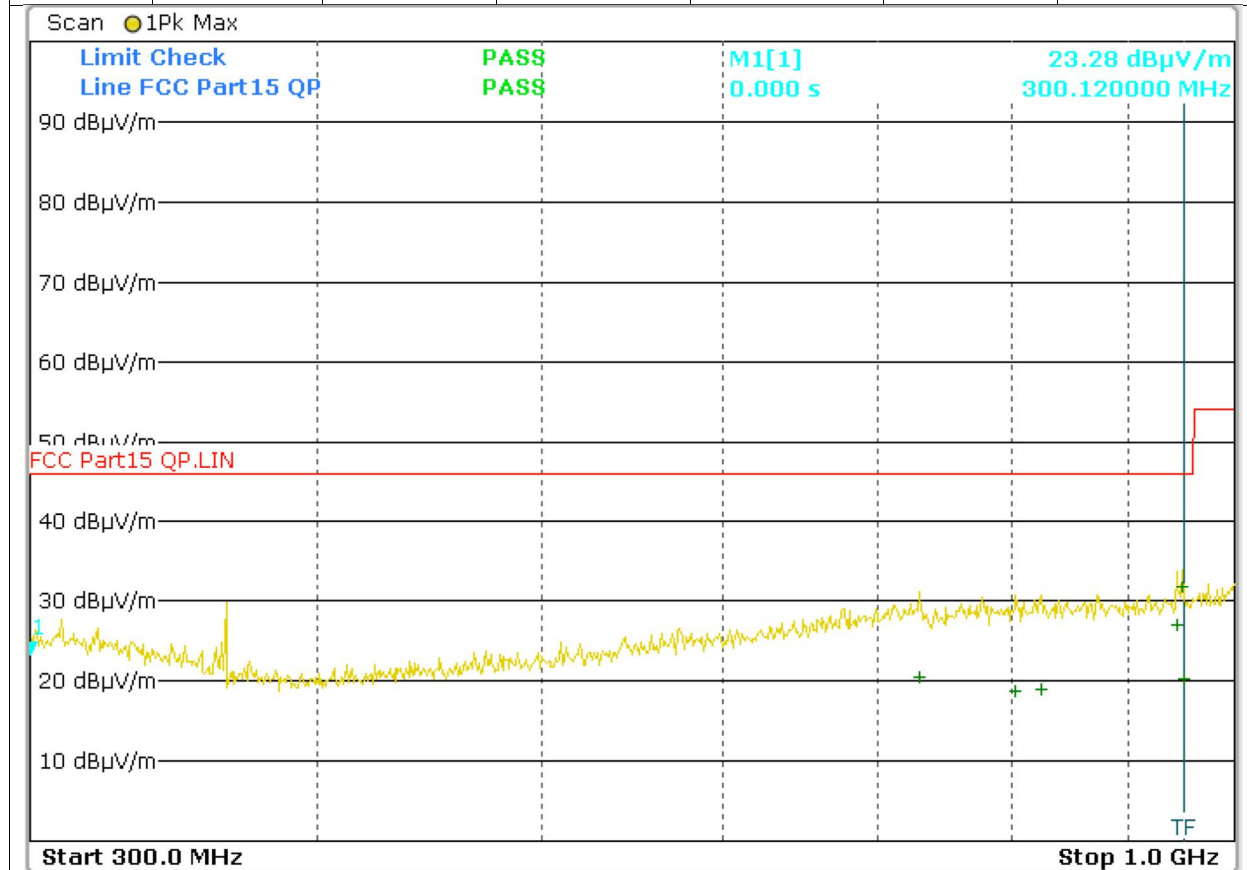
For Frequency from 30MHz to 1GHz

☑ Test Mode_01		FCC Radiated Emission for Frequency from 300MHz to 1GHz				
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Emission (dBuV/m)	H/V	Limit (dBuV/m)	Margin (dB)
771.880	-2.11	20.89	18.78	H	46.0	-27.22
873.120	-2.86	22.68	19.82	H	46.0	-26.18
926.480	-3.15	22.99	19.84	H	46.0	-26.16
944.800	6.30	22.99	29.29	H	46.0	-16.71
948.400	10.23	22.99	33.22	H	46.0	-12.78
957.320	-2.66	22.99	20.33	H	46.0	-25.67



For Frequency from 30MHz to 1GHz

☒ Test Mode_01		FCC Radiated Emission for Frequency from 300MHz to 1GHz				
Frequency (MHz)	Read Level (dBuV)	Factor (dB)	Emission (dBuV/m)	H/V	Limit (dBuV/m)	Margin (dB)
729.680	-0.43	20.89	20.46	V	46.0	-25.54
803.360	-3.85	22.68	18.83	V	46.0	-27.17
823.960	-3.63	22.68	19.05	V	46.0	-26.95
944.800	4.07	22.99	27.06	V	46.0	-18.94
948.440	8.71	22.99	31.70	V	46.0	-14.30
950.640	-2.74	22.99	20.25	V	46.0	-25.75



Note:	(1) All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
	(2) "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
	(3) Emission Level = Reading Level + Probe Factor + Cable Loss.

-----End of Report -----