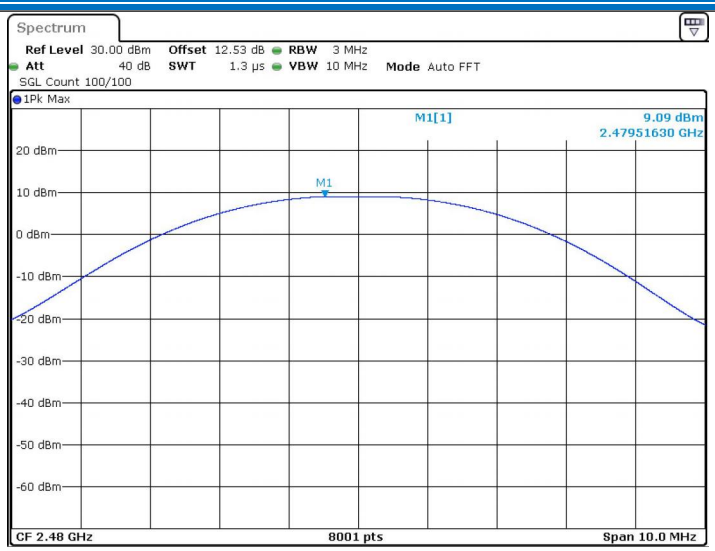
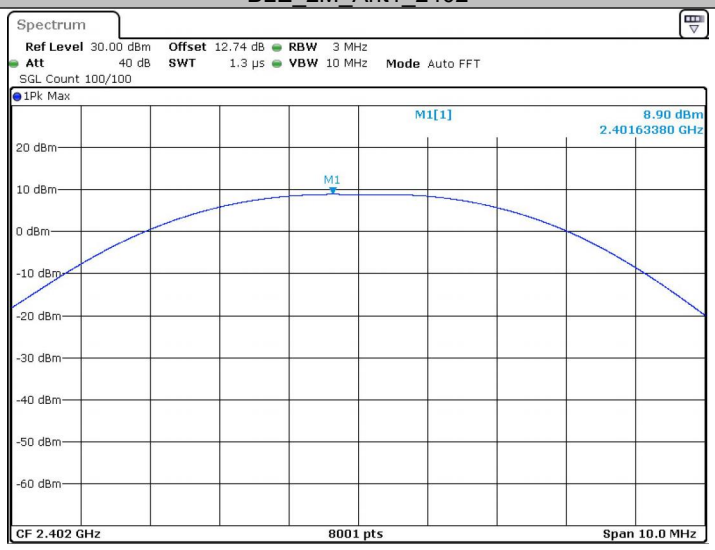


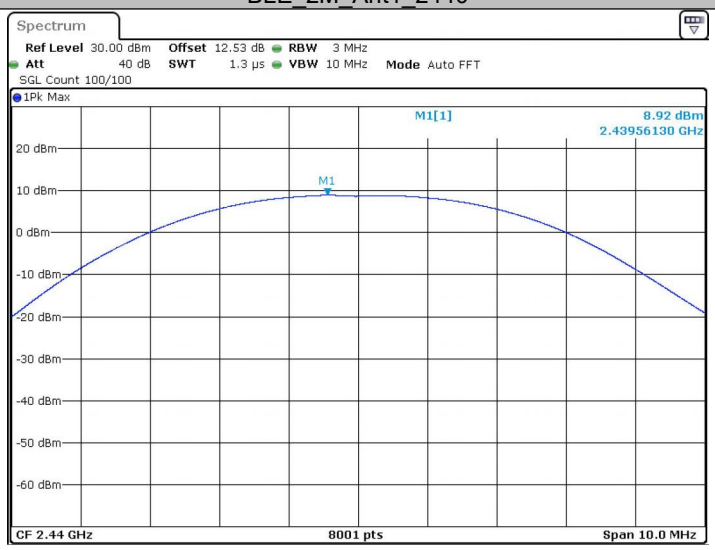
Date: 26.MAR.2025 11:38:43

BLE_2M_Ant1_2402



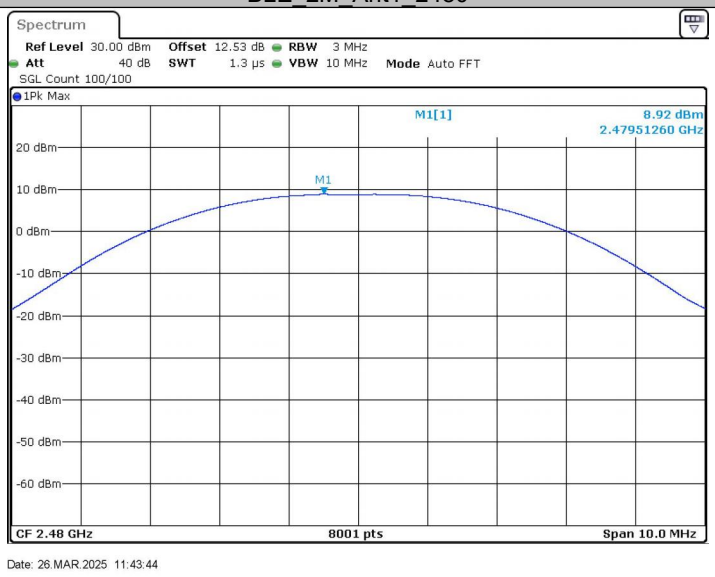
Date: 26.MAR.2025 11:40:33

BLE_2M_Ant1_2440

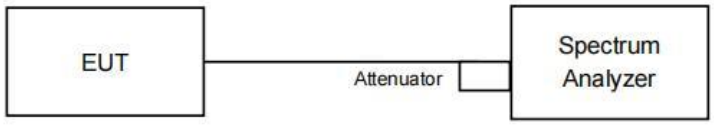


Date: 26.MAR.2025 11:42:25

BLE_2M_Ant1_2480



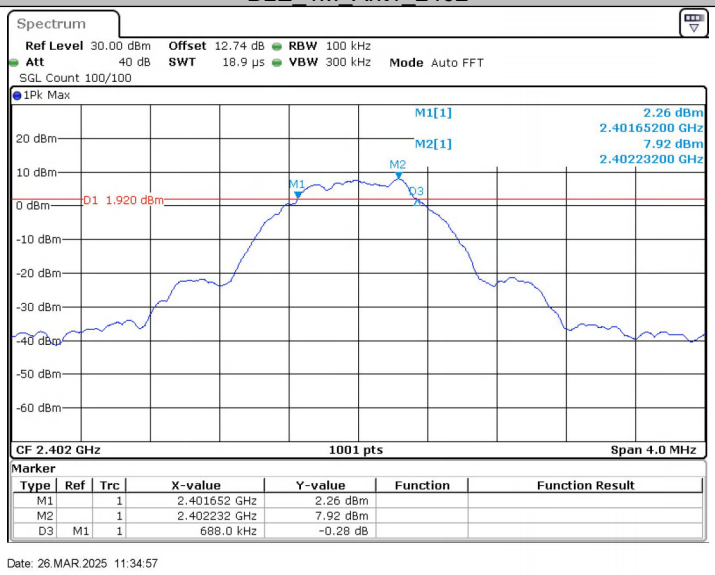
5.4 6dB Occupy Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	ANSI C63.10 2013
Test Setup:	 *Remark: Offset=Cable loss+ attenuation factor.*
Limit:	≥ 500 kHz
Instruments Used:	Refer to section 4.11 for details.
Test Results:	Pass

Measurement Data

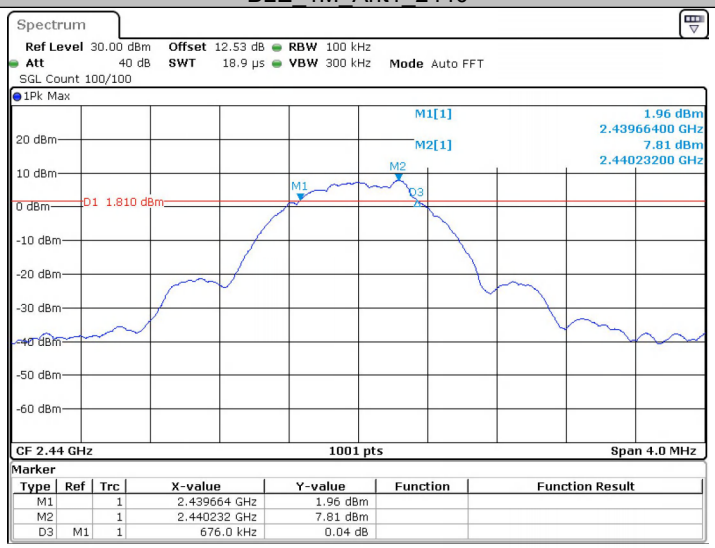
GFSK mode (1Mbps)			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	0.69	≥500	Pass
Middle	0.68	≥500	Pass
Highest	0.70	≥500	Pass
GFSK mode (2Mbps)			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	1.36	≥500	Pass
Middle	1.38	≥500	Pass
Highest	1.36	≥500	Pass

BLE_1M_Ant1_2402



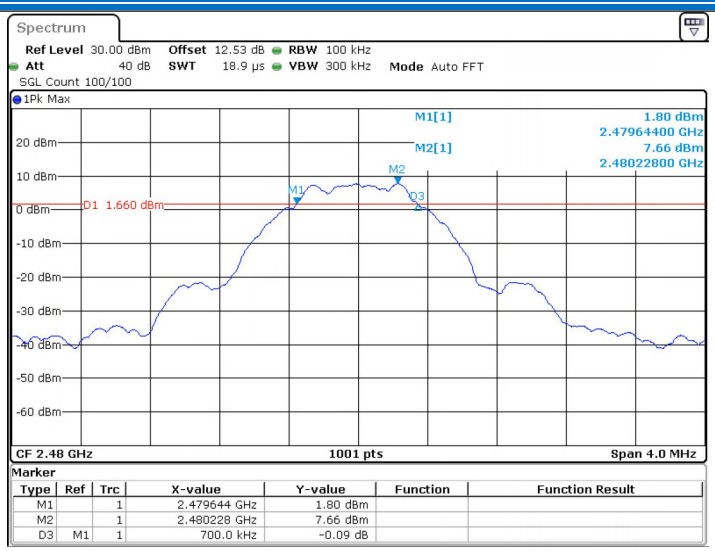
Date: 26.MAR.2025 11:34:57

BLE_1M_Ant1_2440



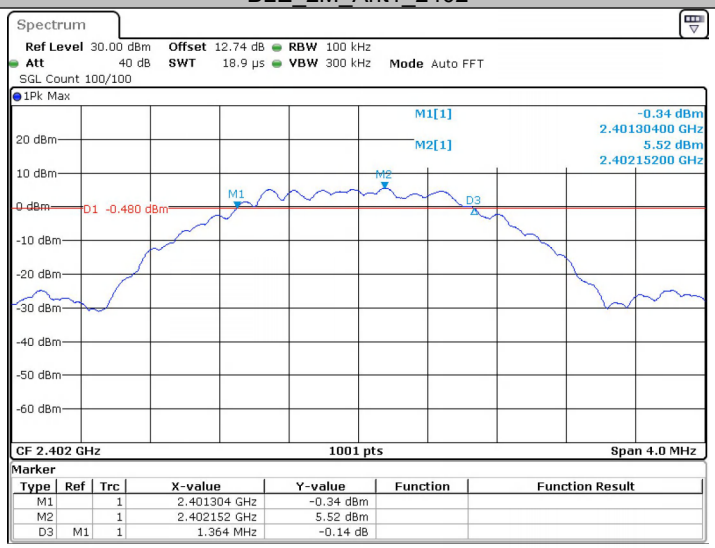
Date: 26.MAR.2025 11:36:36

BLE_1M_Ant1_2480



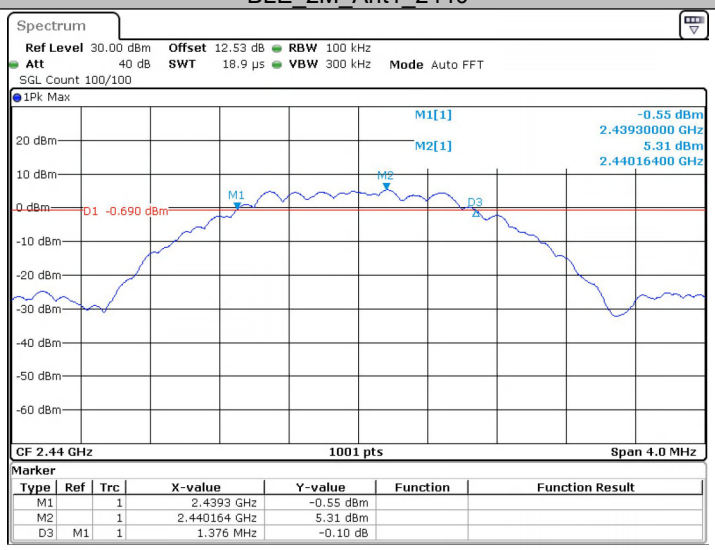
Date: 26.MAR.2025 11:38:35

BLE_2M_Ant1_2402



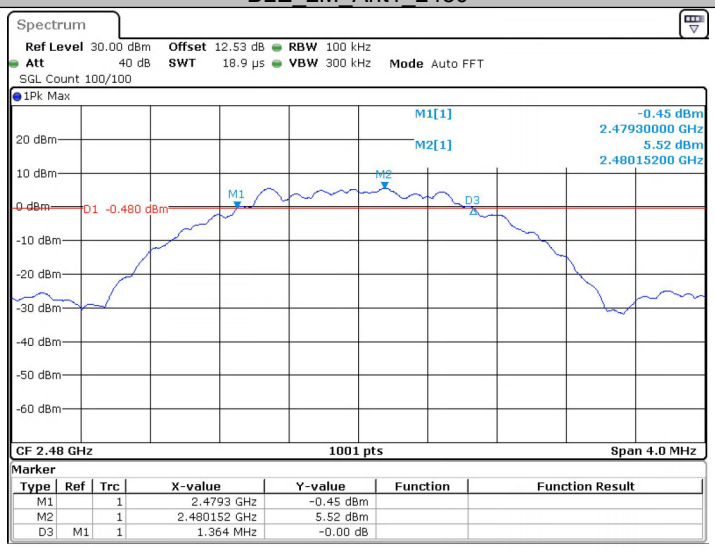
Date: 26.MAR.2025 11:40:24

BLE_2M_Ant1_2440

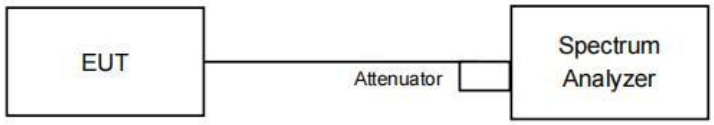


Date: 26.MAR.2025 11:42:16

BLE_2M_Ant1_2480



5.5 Power Spectral Density

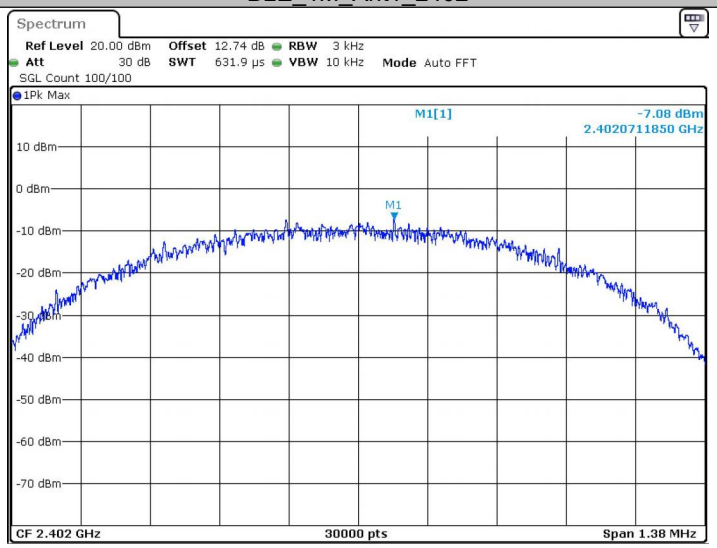
Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	ANSI C63.10 2013
Test Setup:	 *Remark: Offset=Cable loss+ attenuation factor.*
Limit:	≤8.00dBm/3kHz
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

Measurement Data

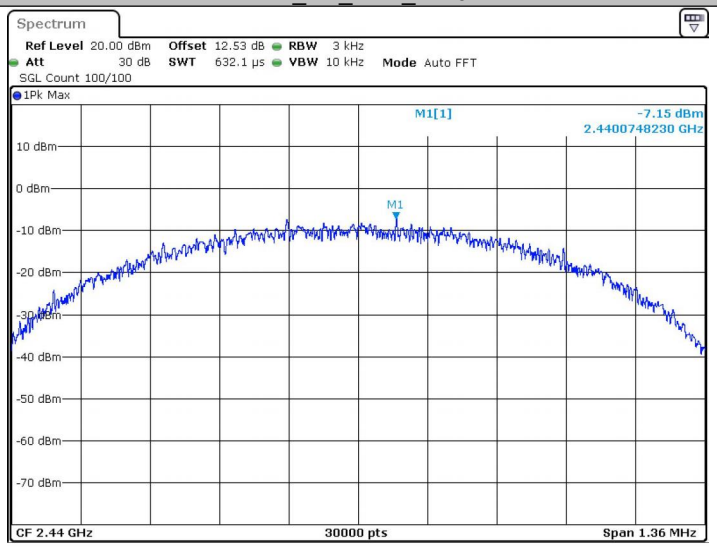
GFSK mode (1Mbps)			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-7.08	≤8.00	Pass
Middle	-7.15	≤8.00	Pass
Highest	-7.21	≤8.00	Pass
GFSK mode (2Mbps)			
Test channel	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Lowest	-10.59	≤8.00	Pass
Middle	-10.72	≤8.00	Pass
Highest	-10.37	≤8.00	Pass

Test plot as follows:

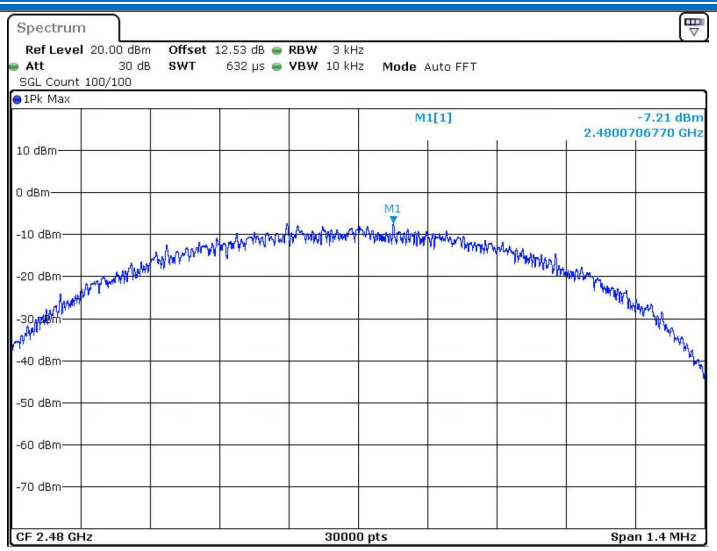
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440

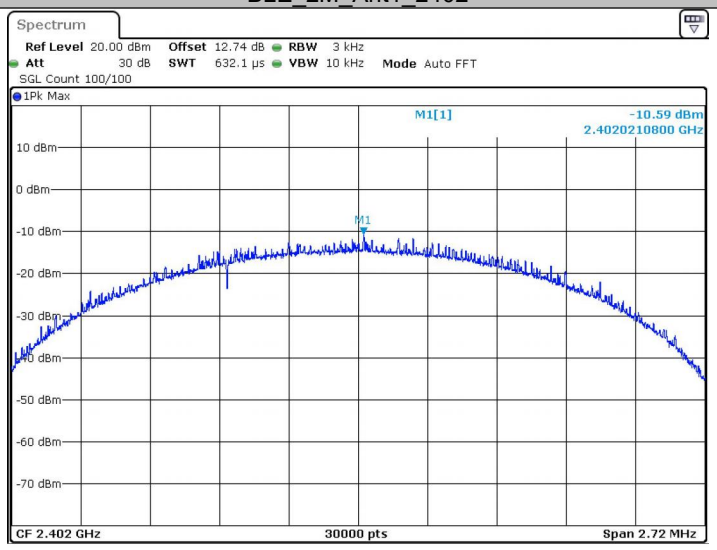


BLE_1M_Ant1_2480



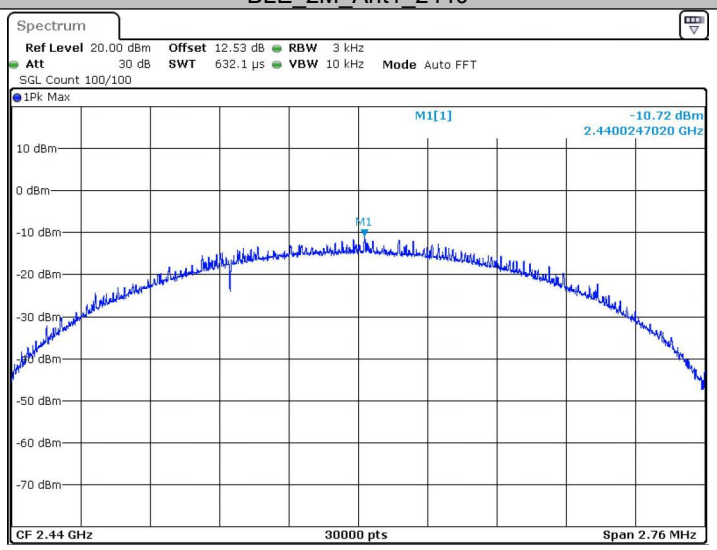
Date: 26.MAR.2025 11:38:48

BLE_2M_Ant1_2402



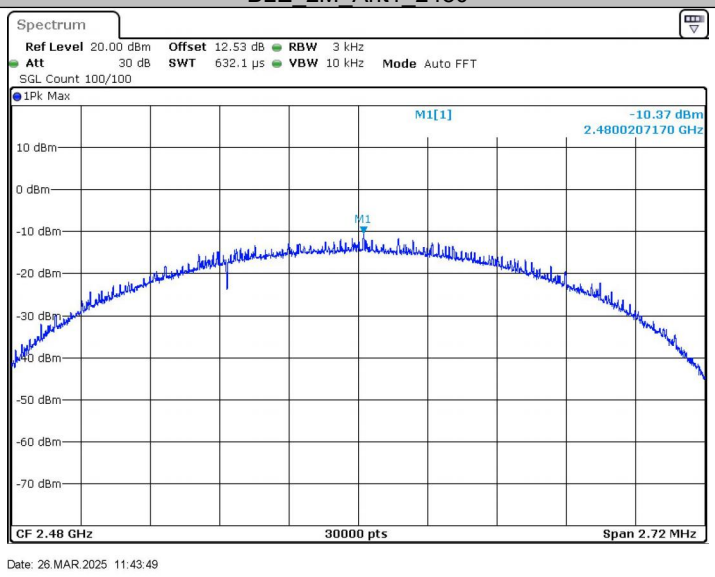
Date: 26.MAR.2025 11:40:38

BLE_2M_Ant1_2440

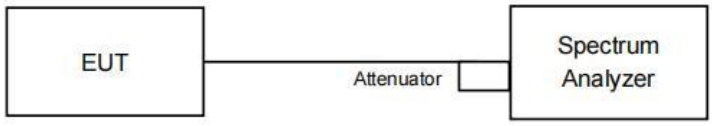


Date: 26.MAR.2025 11:42:30

BLE_2M_Ant1_2480



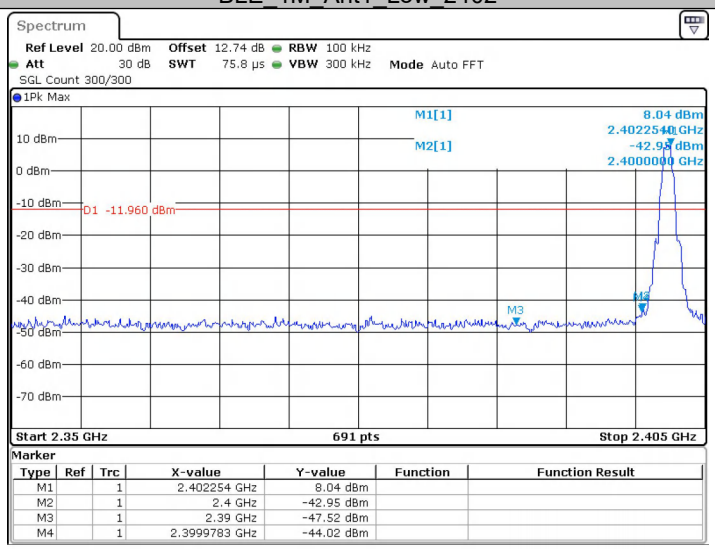
5.6 Band-edge for RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 *Remark: Offset=Cable loss+ attenuation factor.*
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

TestMode	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Low	2402	8.04	-44.02	≤-11.96	PASS
	High	2480	7.98	-43.38	≤-12.02	PASS
BLE_2M	Low	2402	7.30	-27.7	≤-12.7	PASS
	High	2480	7.20	-43.42	≤-12.8	PASS

Test plot as follows:

BLE_1M_Ant1_Low_2402

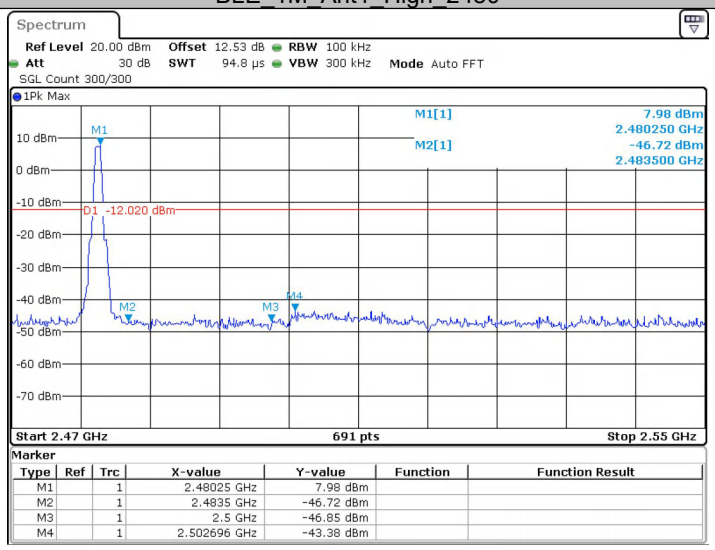


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.402254 GHz	8.04 dBm		
M2		1	2.4 GHz	-42.95 dBm		
M3		1	2.39 GHz	-47.52 dBm		
M4		1	2.3999783 GHz	-44.02 dBm		

Date: 26.MAR.2025 11:35:18

BLE_1M_Ant1_High_2480

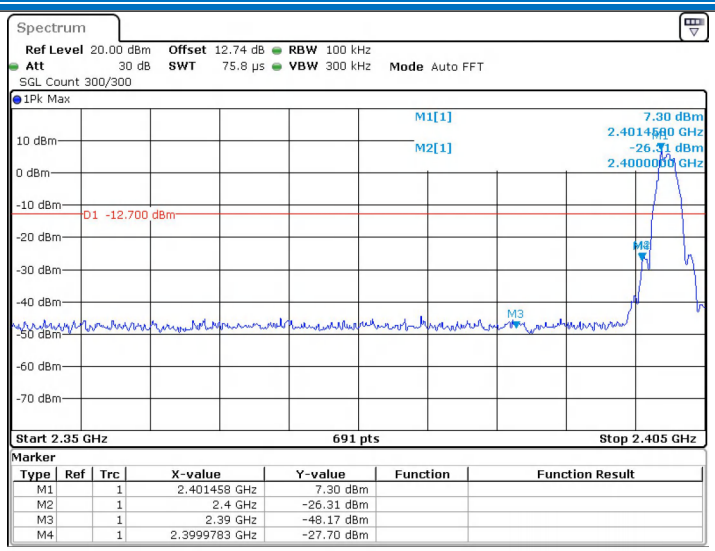


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.48025 GHz	7.98 dBm		
M2		1	2.4835 GHz	-46.72 dBm		
M3		1	2.5 GHz	-46.85 dBm		
M4		1	2.502696 GHz	-43.38 dBm		

Date: 26.MAR.2025 11:38:55

BLE_2M_Ant1_Low_2402

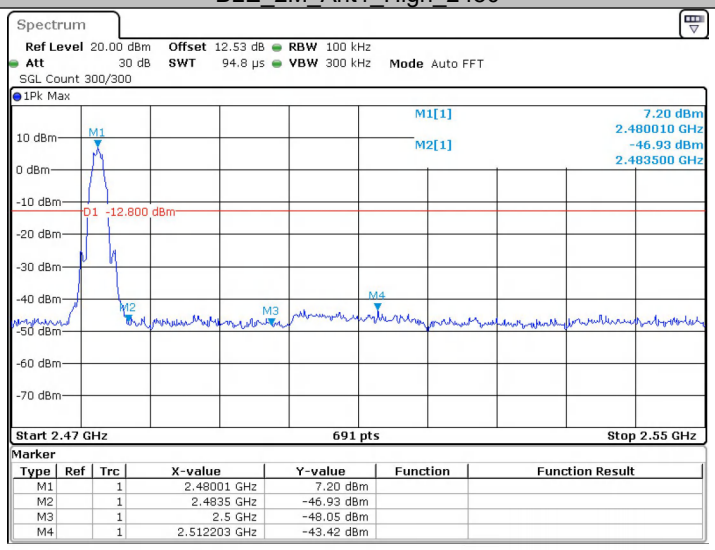


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.401458 GHz	7.30 dBm		
M2		1	2.4 GHz	-26.31 dBm		
M3		1	2.39 GHz	-48.17 dBm		
M4		1	2.3999783 GHz	-27.70 dBm		

Date: 26.MAR.2025 11:40:44

BLE_2M_Ant1_High_2480

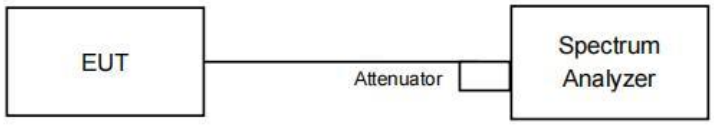


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.48001 GHz	7.20 dBm		
M2		1	2.4835 GHz	-46.93 dBm		
M3		1	2.5 GHz	-48.05 dBm		
M4		1	2.512203 GHz	-43.42 dBm		

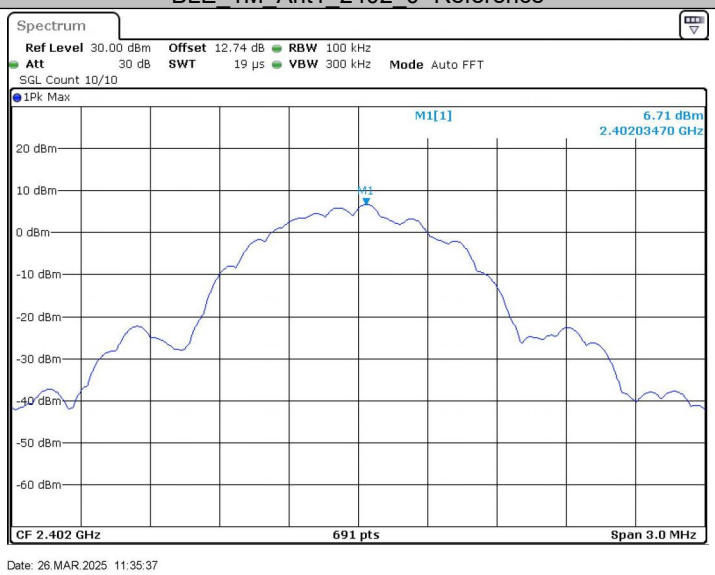
Date: 26.MAR.2025 11:43:56

5.7 Spurious RF Conducted Emissions

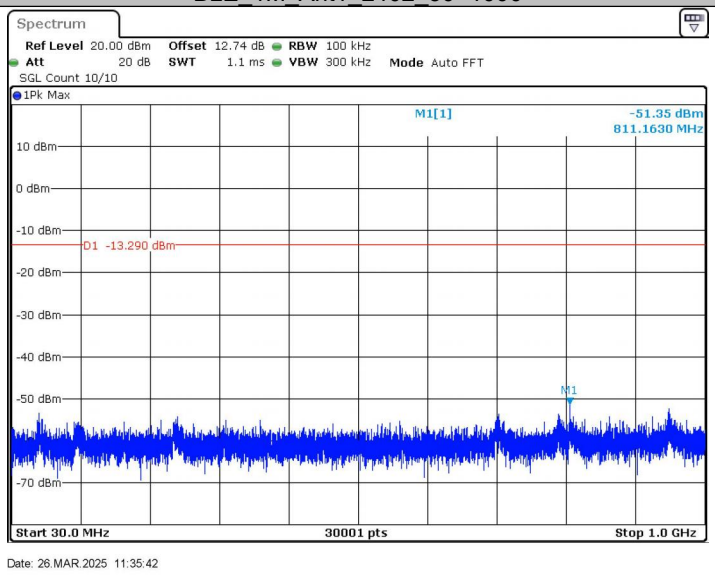
Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10 2013
Test Setup:	 *Remark: Offset=Cable loss+ attenuation factor.*
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test Mode:	Transmitting with GFSK modulation.
Test Results:	Pass

Test plot as follows:

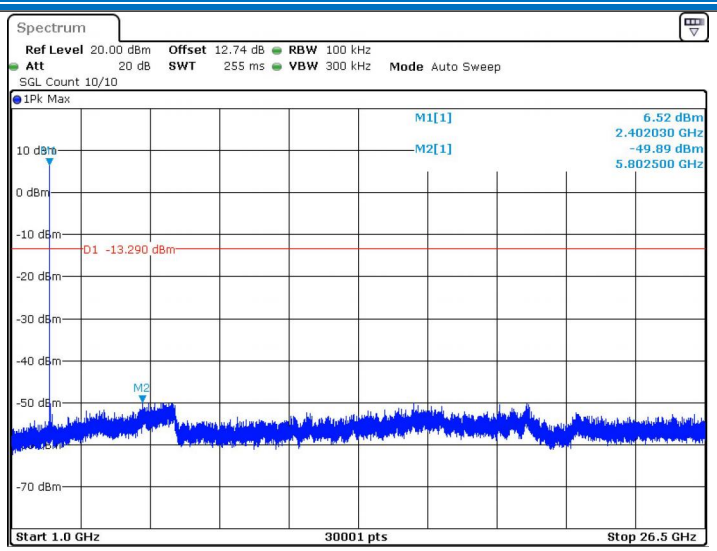
BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000

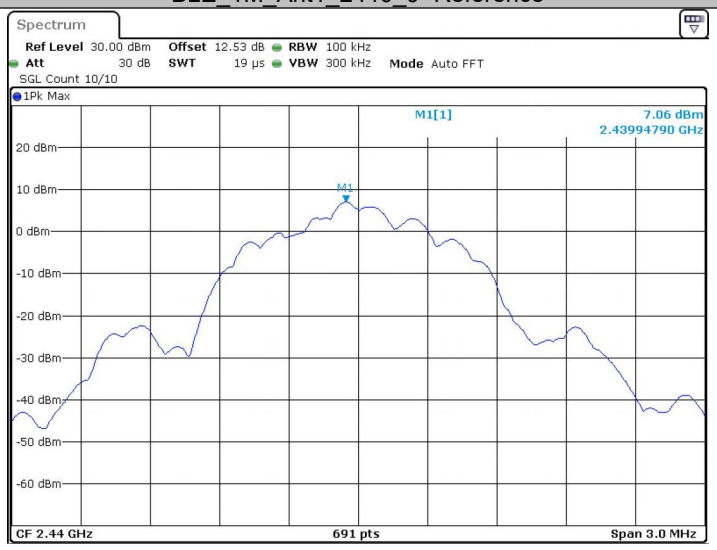


BLE_1M_Ant1_2402_1000~26500



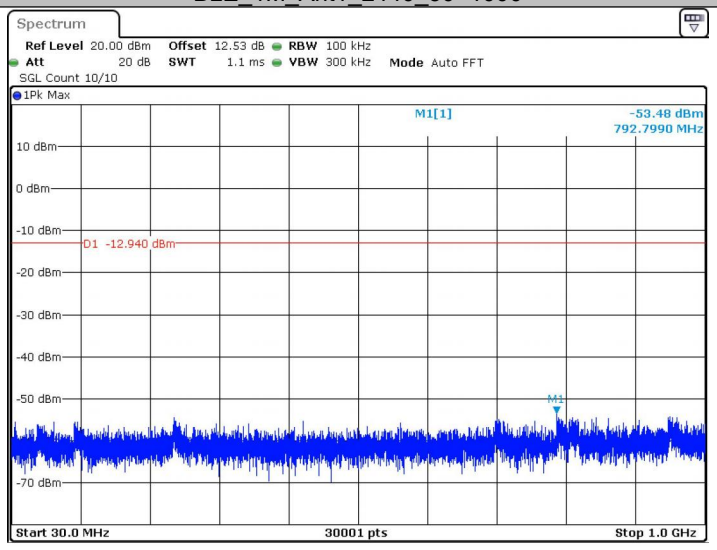
Date: 26.MAR.2025 11:35:53

BLE_1M_Ant1_2440_0~Reference



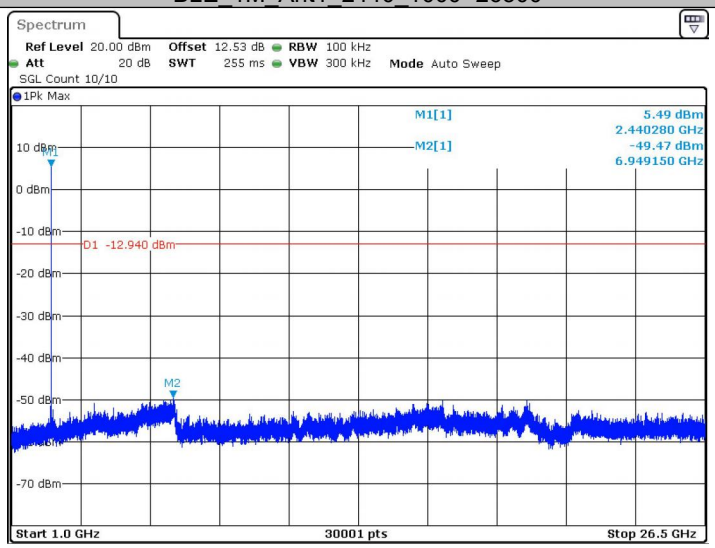
Date: 26.MAR.2025 11:36:54

BLE_1M_Ant1_2440_30~1000



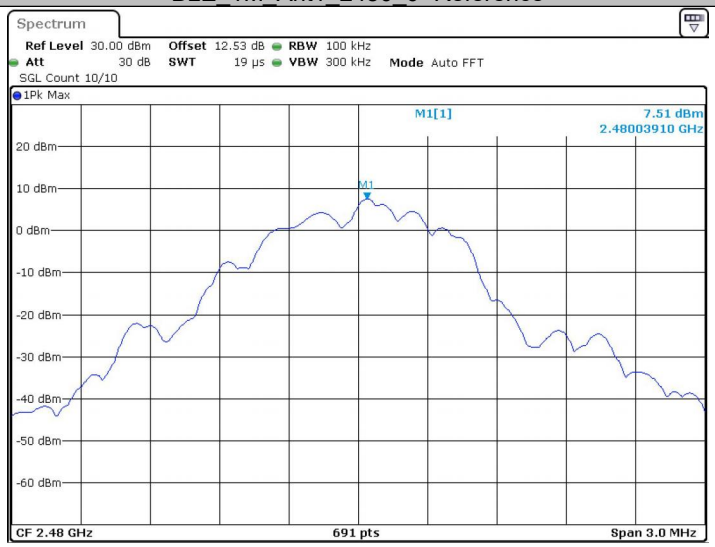
Date: 26.MAR.2025 11:36:58

BLE_1M_Ant1_2440_1000~26500



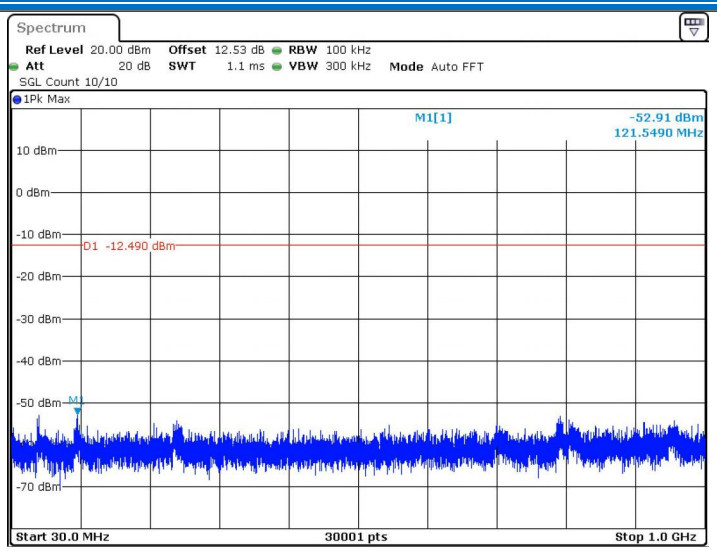
Date: 26.MAR.2025 11:37:09

BLE_1M_Ant1_2480_0~Reference



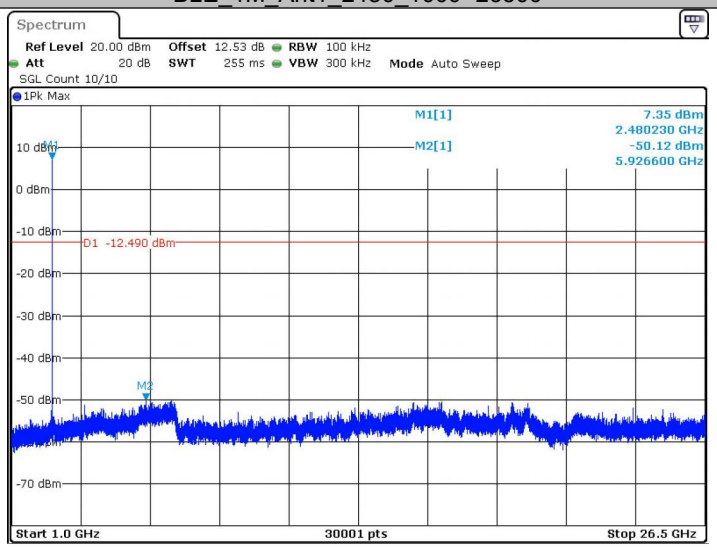
Date: 26.MAR.2025 11:39:13

BLE_1M_Ant1_2480_30~1000



Date: 26.MAR.2025 11:39:17

BLE_1M_Ant1_2480_1000~26500

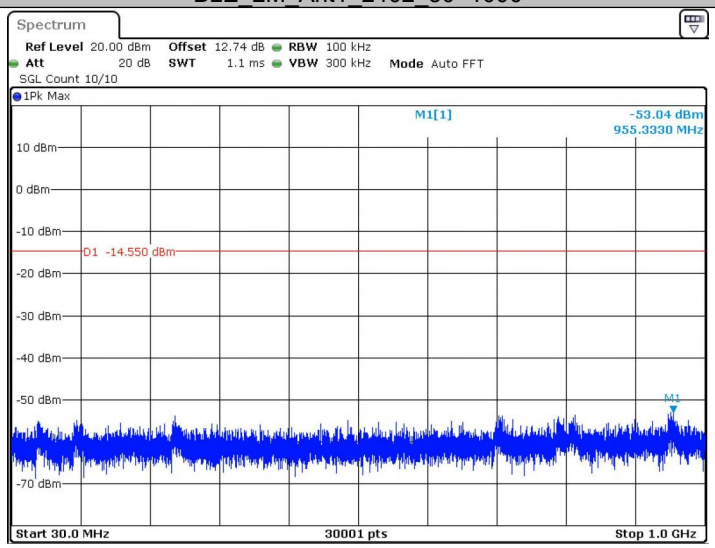


Date: 26.MAR.2025 11:39:28

BLE_2M_Ant1_2402_0~Reference

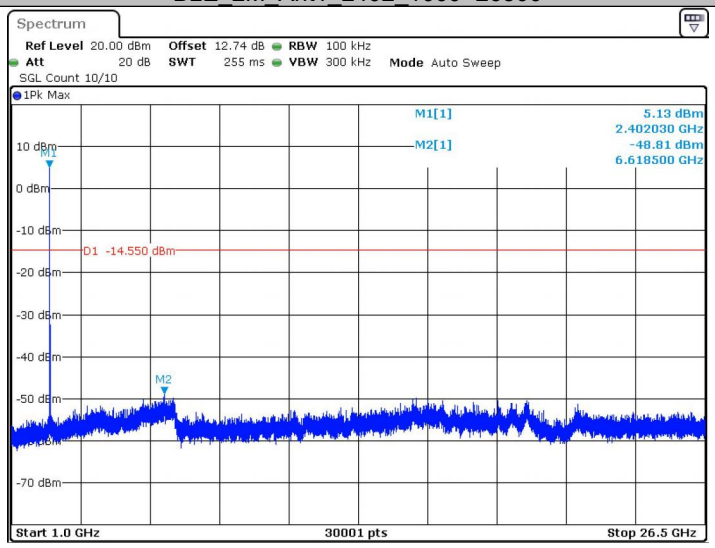
Date: 26.MAR.2025 11:41:03

BLE_2M_Ant1_2402_30~1000



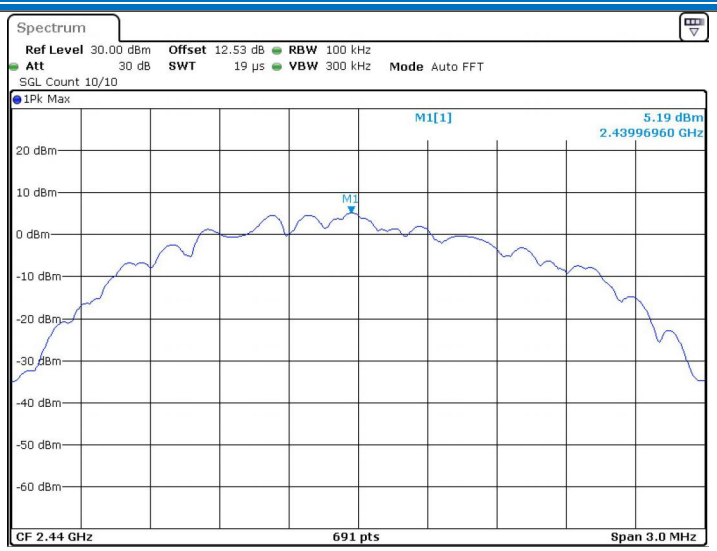
Date: 26.MAR.2025 11:41:07

BLE_2M_Ant1_2402_1000~26500



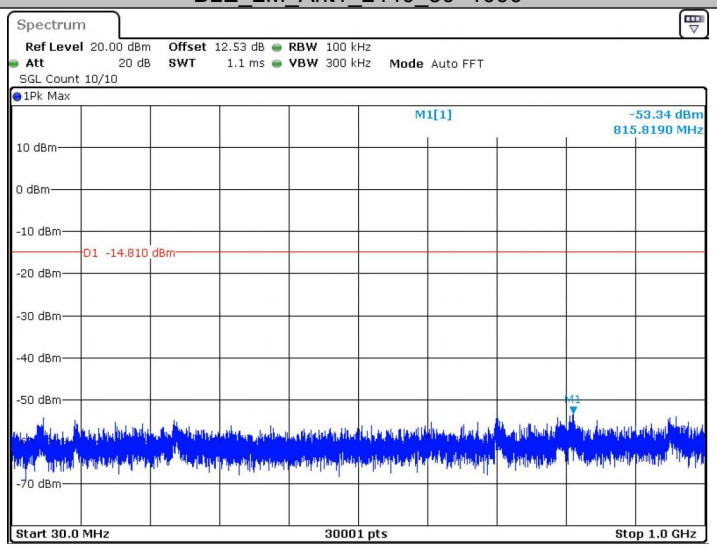
Date: 26.MAR.2025 11:41:18

BLE_2M_Ant1_2440_0~Reference



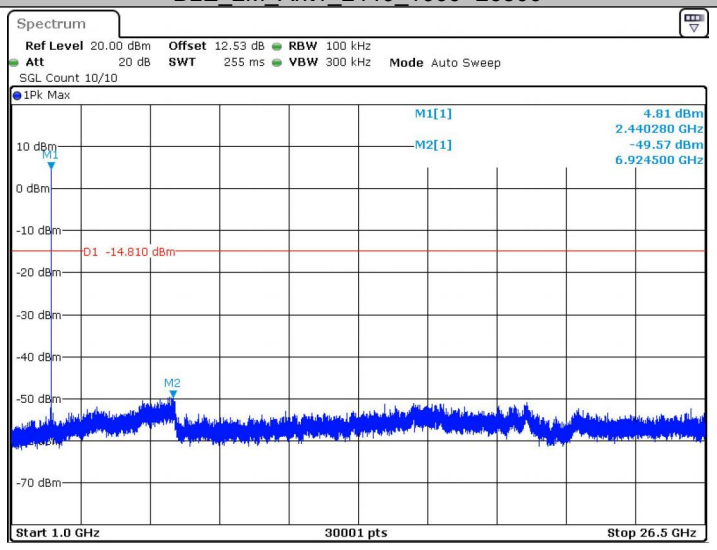
Date: 26.MAR.2025 11:42:34

BLE_2M_Ant1_2440_30~1000



Date: 26.MAR.2025 11:42:38

BLE_2M_Ant1_2440_1000~26500



Date: 26.MAR.2025 11:42:49