Appendix: Bluetooth LE

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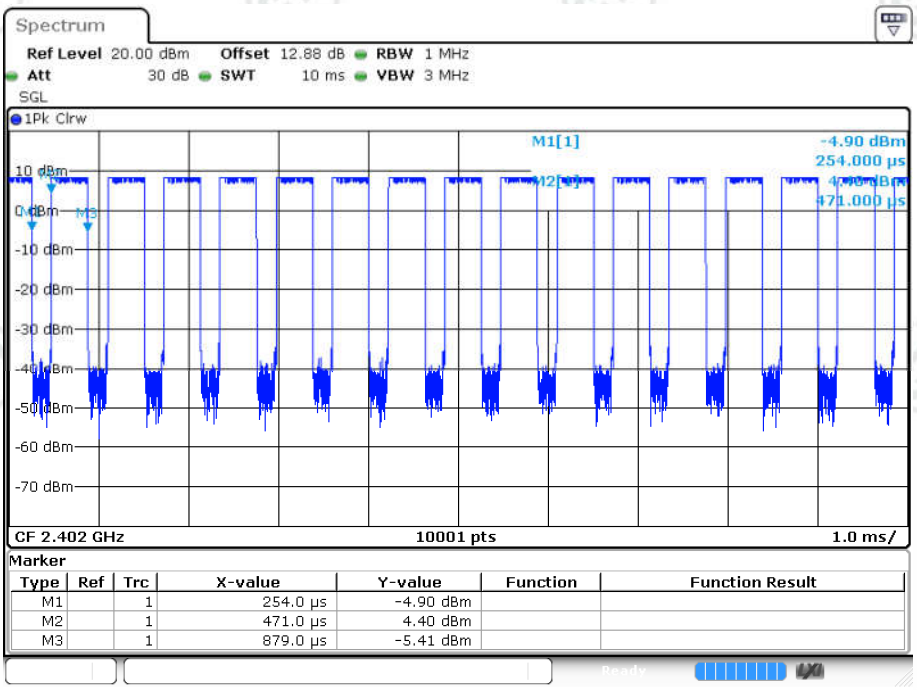
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	65.28	1.85	2.45
NVNT	BLE 1M	2440	Ant1	65.12	1.86	2.46
NVNT	BLE 1M	2480	Ant1	65.28	1.85	2.45

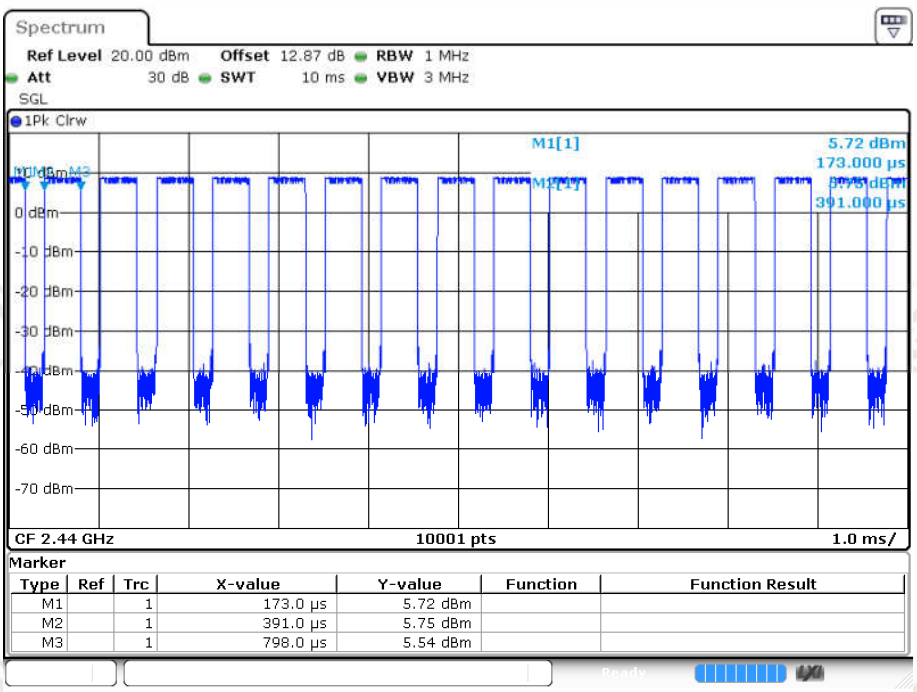
Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



Date: 9.AUG.2023 13:37:06

Duty Cycle NVNT BLE 1M 2440MHz Ant1



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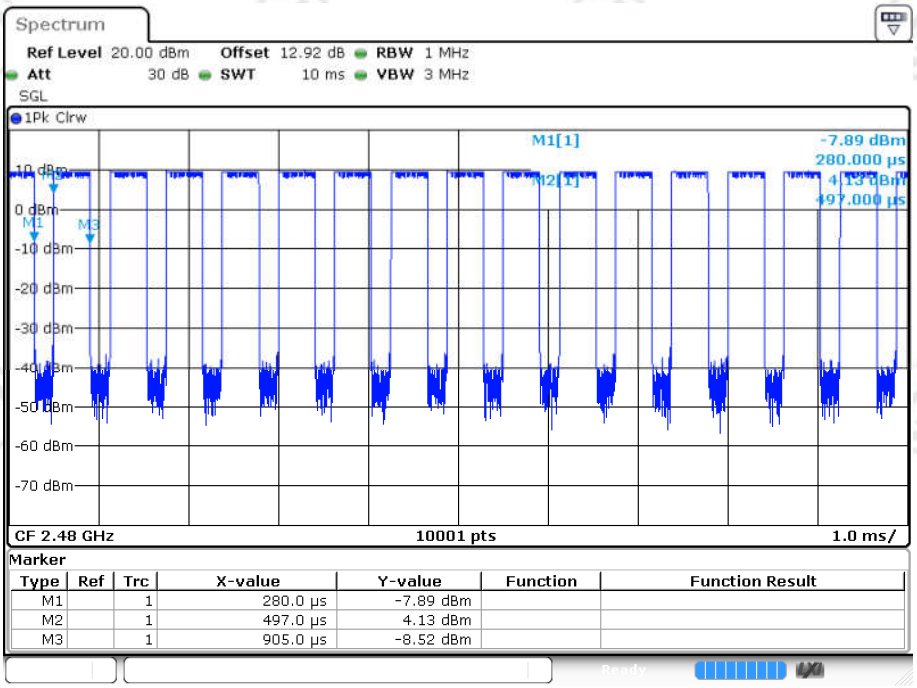
Duty Cycle NVNT BLE 1M 2480MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	280.0 µs	-7.89 dBm		
M2		1	497.0 µs	4.13 dBm		
M3		1	905.0 µs	-8.52 dBm		

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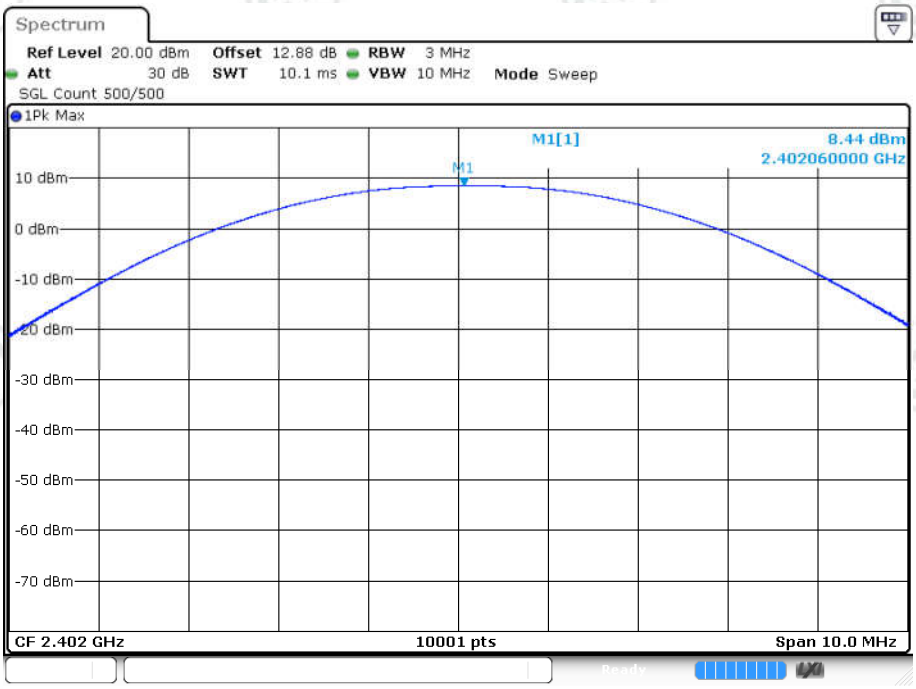
Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	8.44	30	Pass
NVNT	BLE 1M	2440	Ant1	8.78	30	Pass
NVNT	BLE 1M	2480	Ant1	9.61	30	Pass

Test Graphs

Peak Power NVNT BLE 1M 2402MHz Ant1



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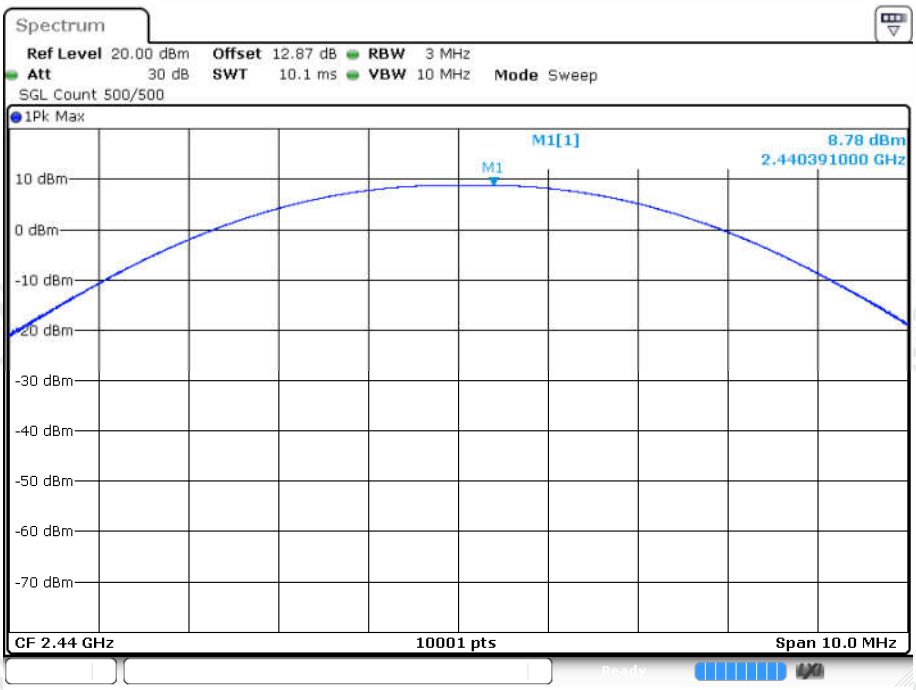
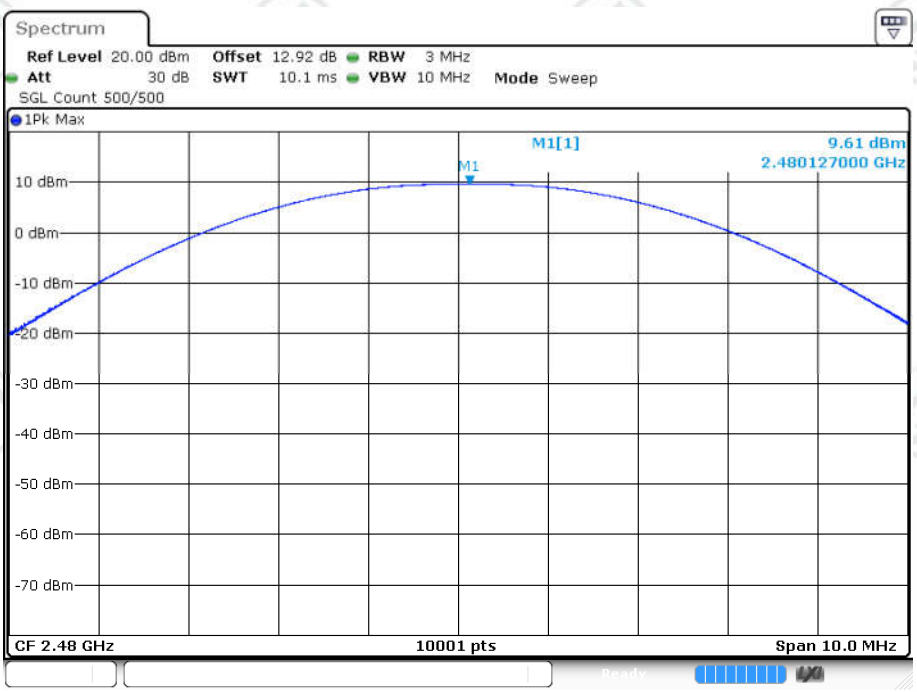
Peak Power NVNT BLE 1M 2440MHz Ant1



Date: 9.AUG.2023 13:39:15

Peak Power NVNT BLE 1M 2480MHz Ant1



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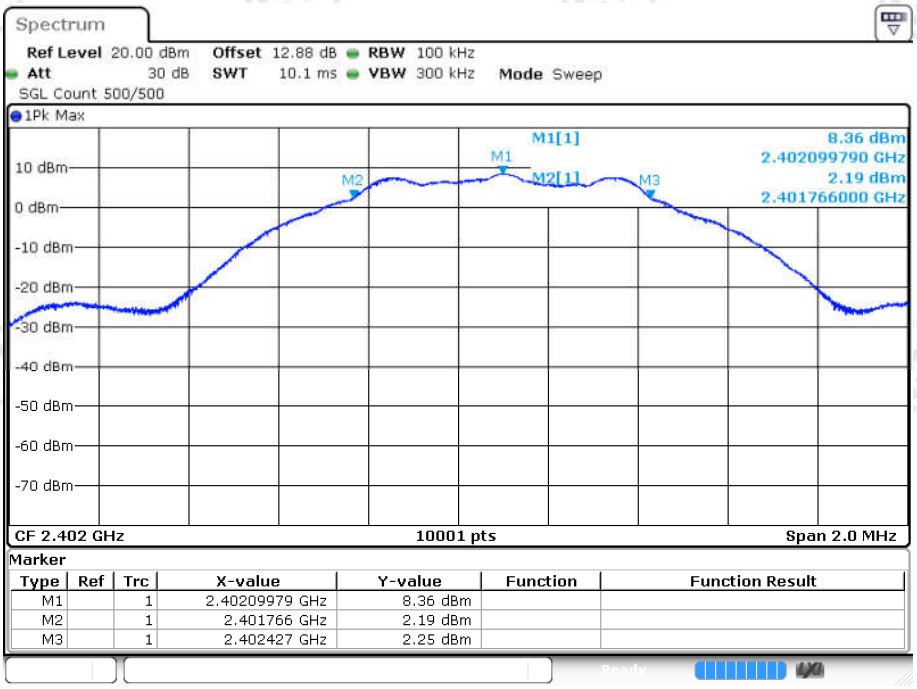
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.661	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.662	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.665	0.5	Pass

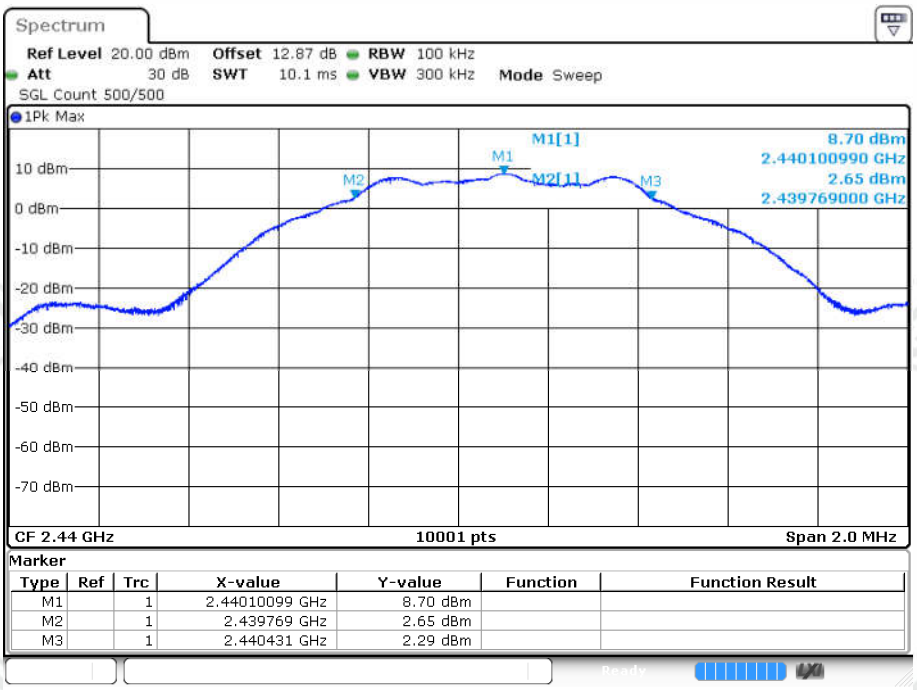
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



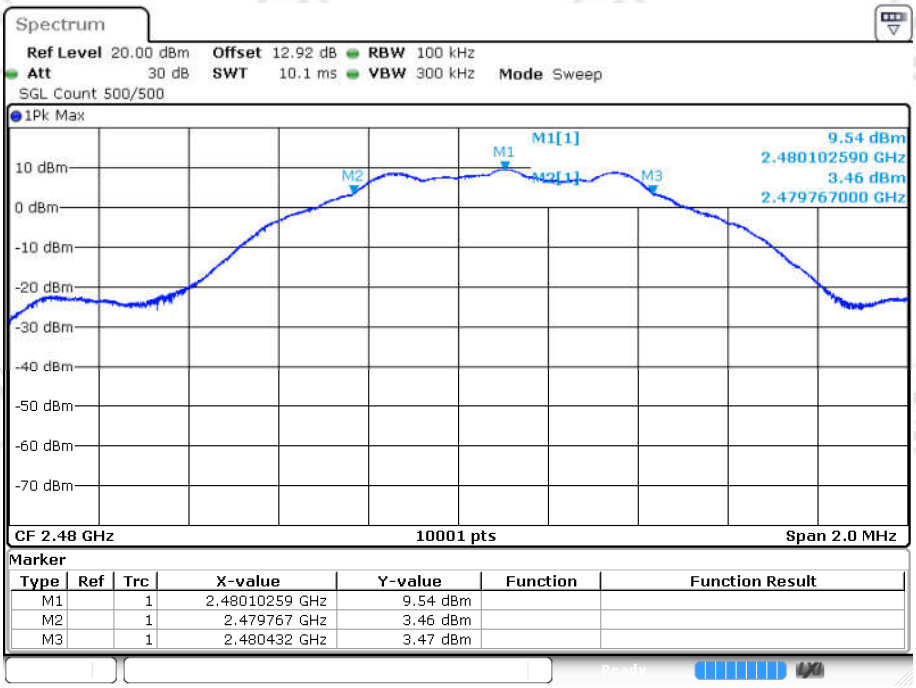
Date: 9.AUG.2023 13:37:39

-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



Date: 9.AUG.2023 13:39:38

-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.48010259 GHz	9.54 dBm		
M2		1	2.479767 GHz	3.46 dBm		
M3		1	2.480432 GHz	3.47 dBm		

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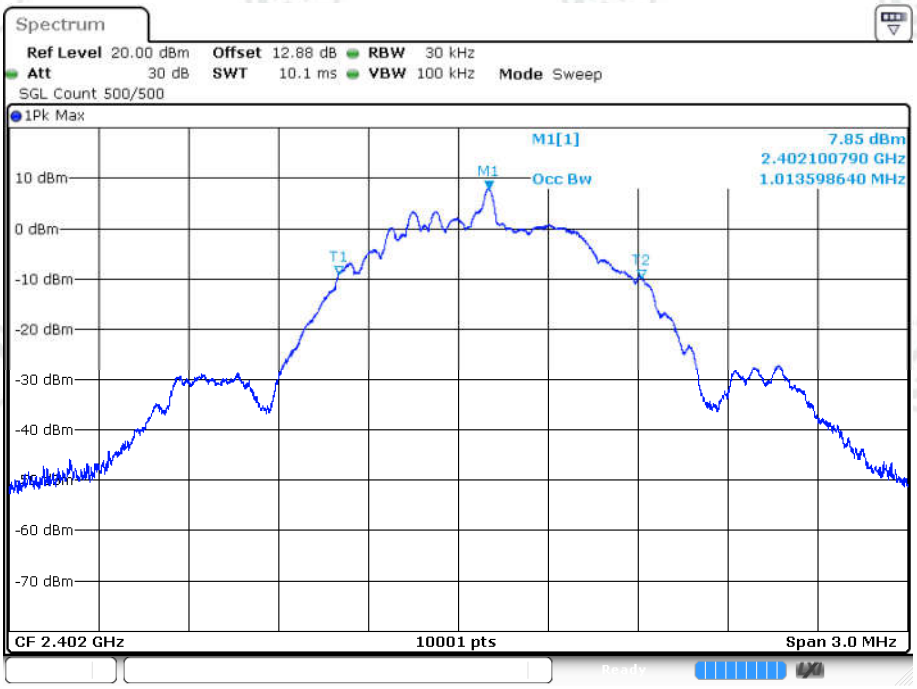
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.014
NVNT	BLE 1M	2440	Ant1	1.012
NVNT	BLE 1M	2480	Ant1	1.016

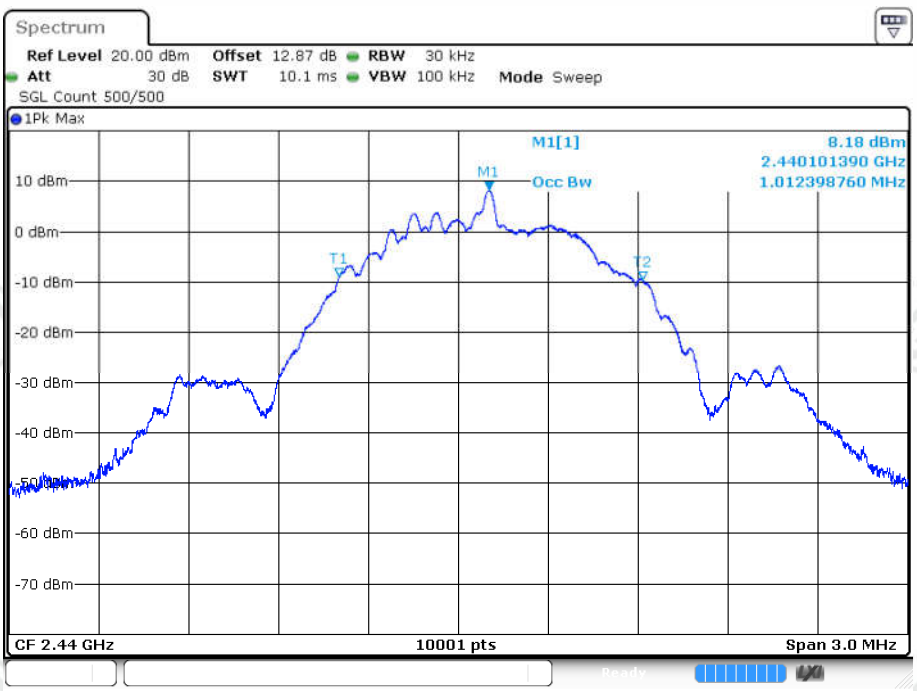
Test Graphs

OBW NVNT BLE 1M 2402MHz Ant1



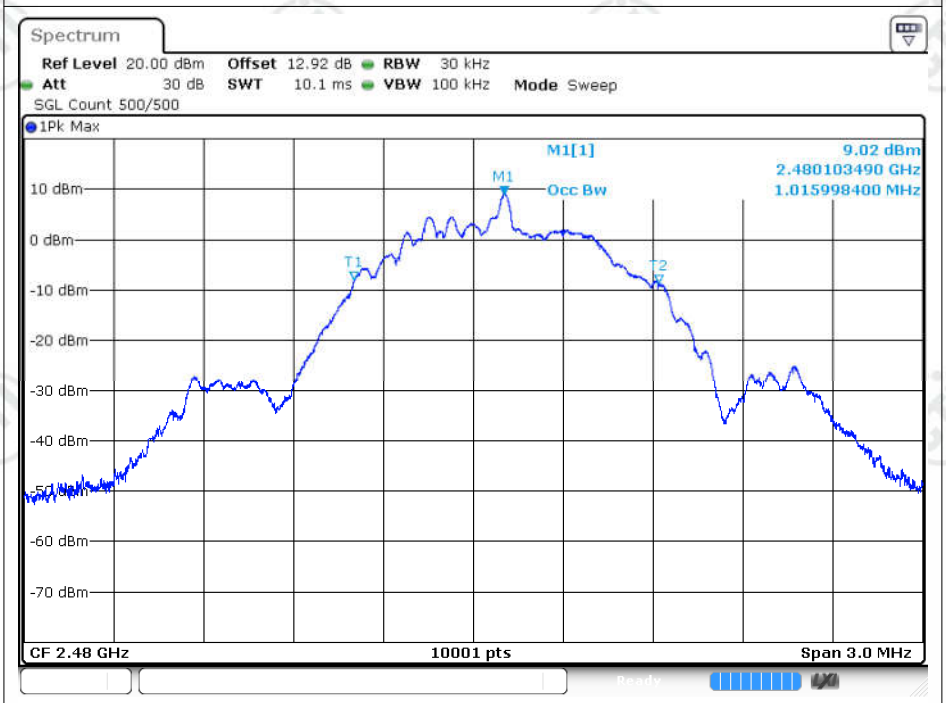
Date: 9.AUG.2023 13:37:27

OBW NVNT BLE 1M 2440MHz Ant1



Date: 9.AUG.2023 13:39:27

OBW NVNT BLE 1M 2480MHz Ant1



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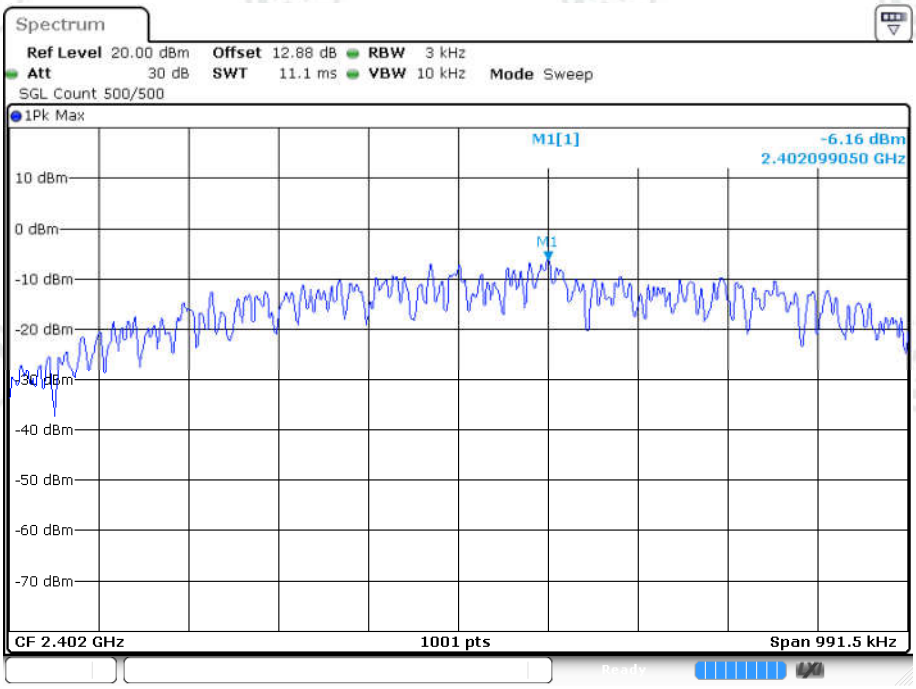
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-6.16	8	Pass
NVNT	BLE 1M	2440	Ant1	-5.74	8	Pass
NVNT	BLE 1M	2480	Ant1	-5.07	8	Pass

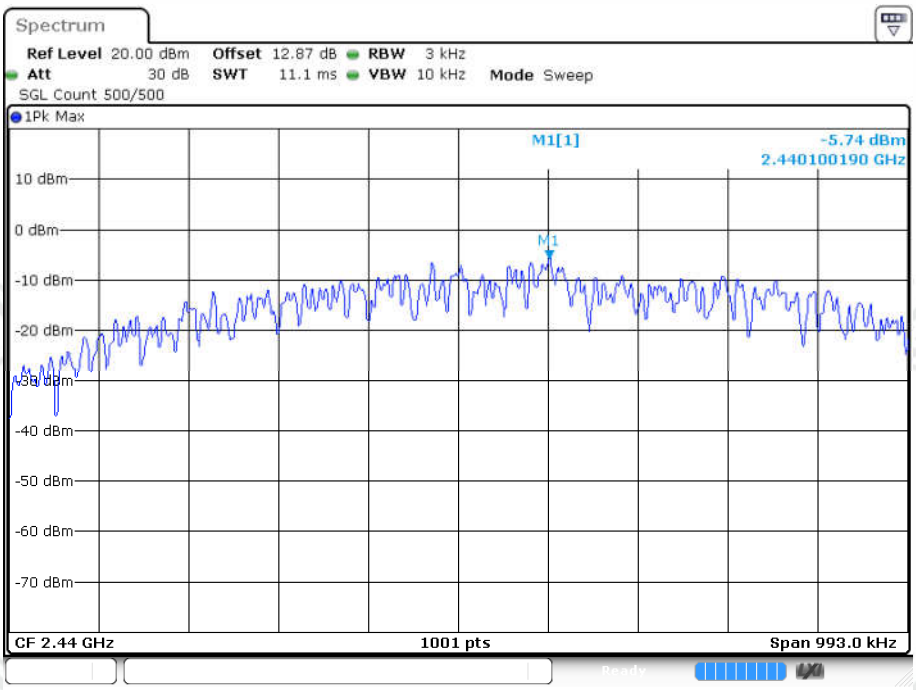
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



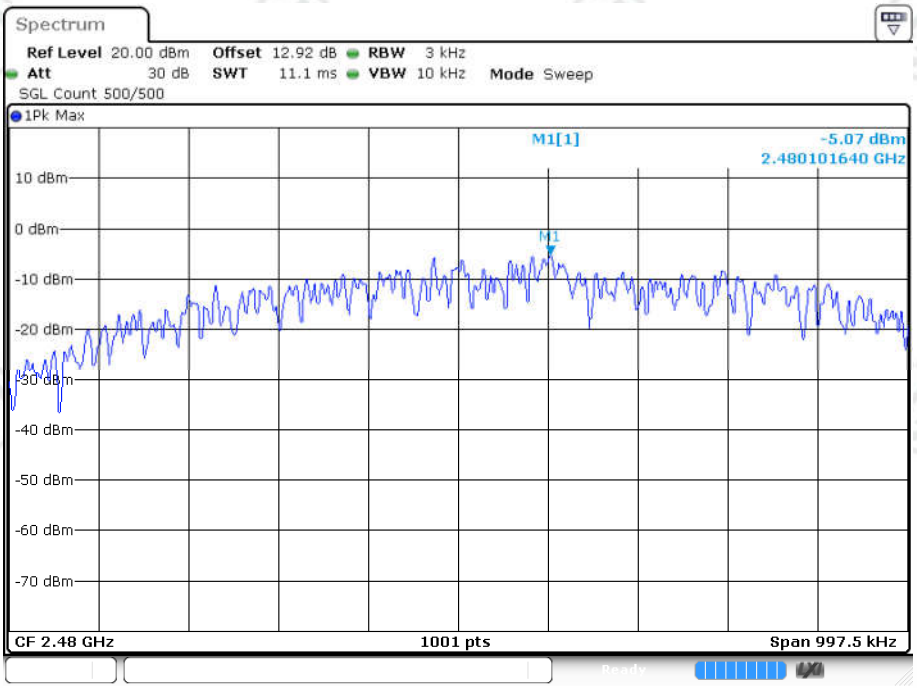
Date: 9.AUG.2023 13:37:52

PSD NVNT BLE 1M 2440MHz Ant1



Date: 9.AUG.2023 13:39:52

PSD NVNT BLE 1M 2480MHz Ant1



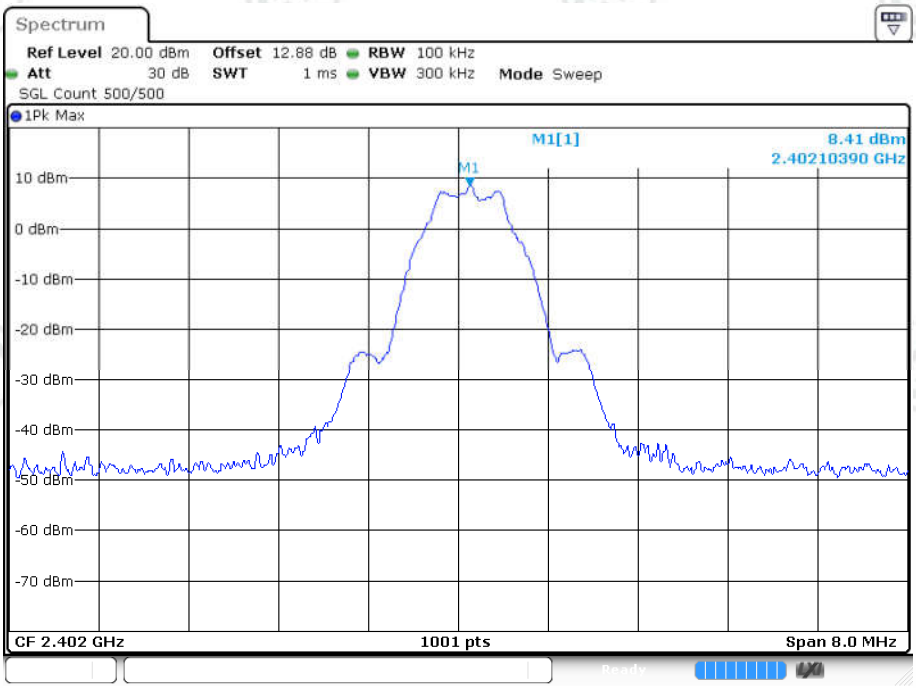
Date: 9.AUG.2023 13:50:50

Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-47.38	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.07	-20	Pass

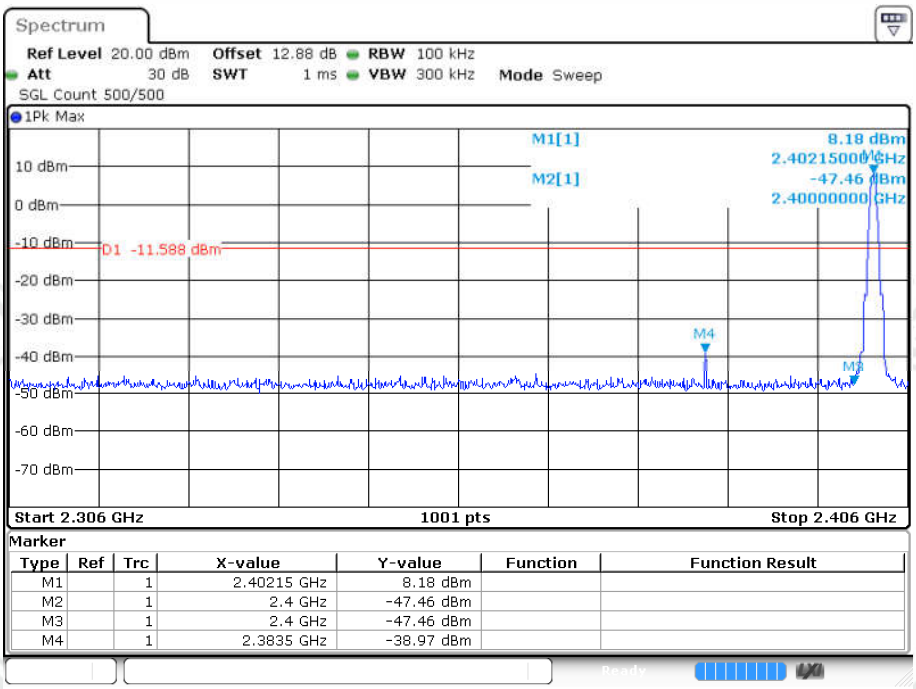
Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Date: 9.AUG.2023 13:37:56

Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40215 GHz	8.18 dBm		
M2		1	2.4 GHz	-47.46 dBm		
M3		1	2.4 GHz	-47.46 dBm		
M4		1	2.3835 GHz	-38.97 dBm		

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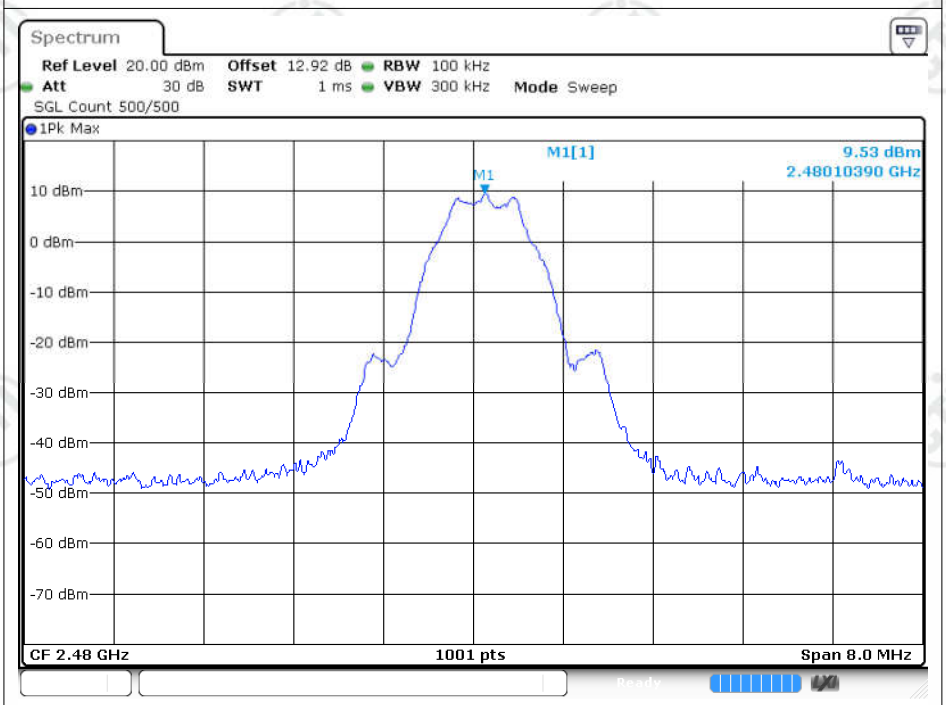
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



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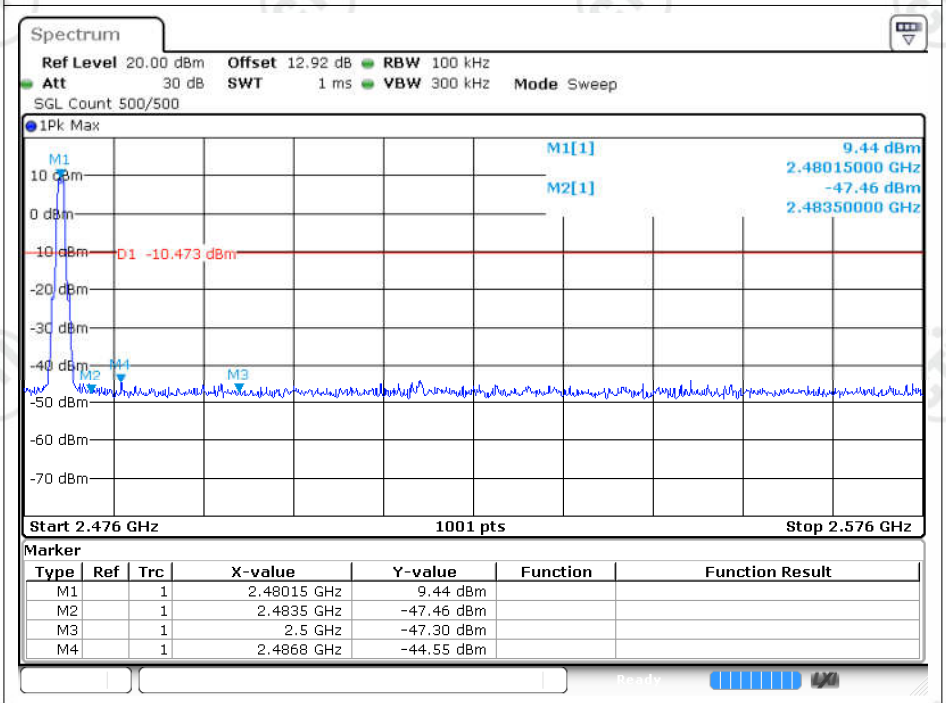
Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.48015 GHz	9.44 dBm		
M2		1	2.4835 GHz	-47.46 dBm		
M3		1	2.5 GHz	-47.30 dBm		
M4		1	2.4868 GHz	-44.55 dBm		

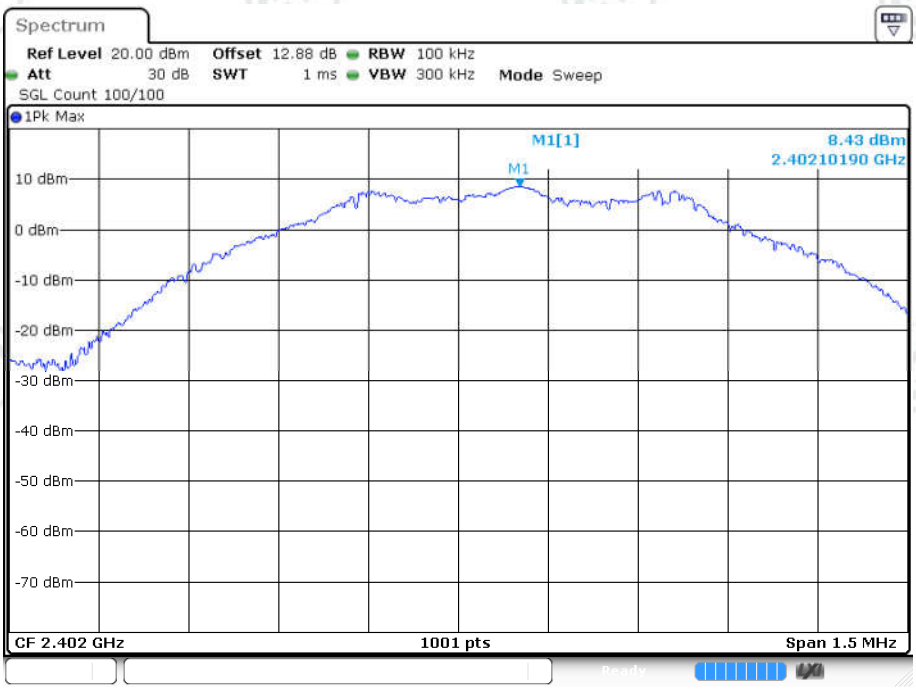
Date: 9.AUG.2023 13:50:56

Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-46.94	-20	Pass
NVNT	BLE 1M	2440	Ant1	-47.08	-20	Pass
NVNT	BLE 1M	2480	Ant1	-46.44	-20	Pass

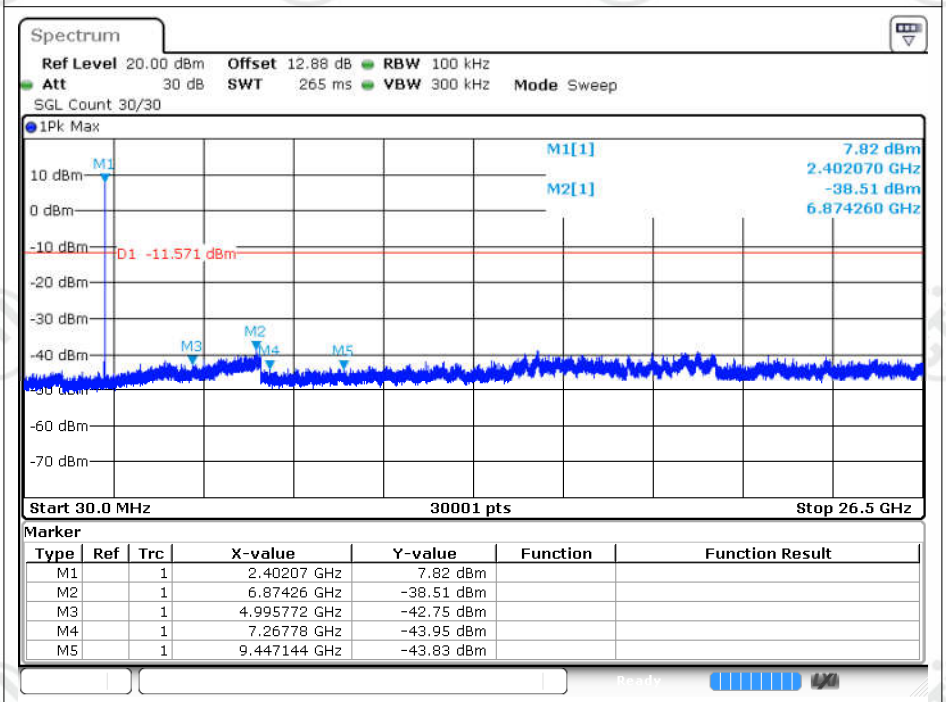
Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Date: 9.AUG.2023 13:54:48

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

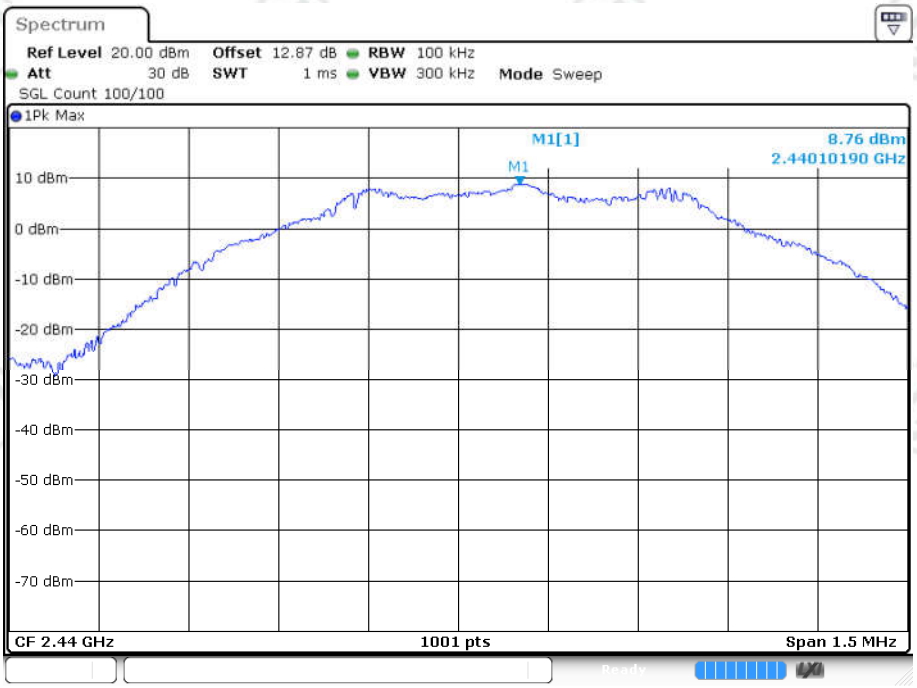


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	7.82 dBm		
M2		1	6.87426 GHz	-38.51 dBm		
M3		1	4.995772 GHz	-42.75 dBm		
M4		1	7.26778 GHz	-43.95 dBm		
M5		1	9.447144 GHz	-43.83 dBm		

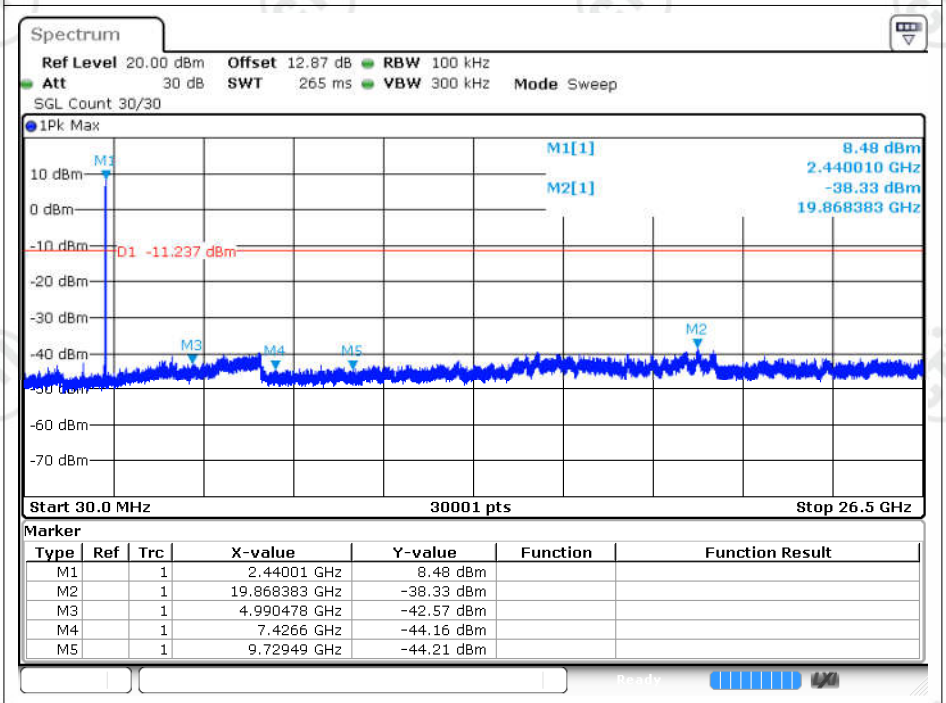
Date: 9.AUG.2023 13:55:17

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Date: 9.AUG.2023 13:54:02

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.44001 GHz	8.48 dBm		
M2		1	19.868383 GHz	-38.33 dBm		
M3		1	4.990478 GHz	-42.57 dBm		
M4		1	7.4266 GHz	-44.16 dBm		
M5		1	9.72949 GHz	-44.21 dBm		

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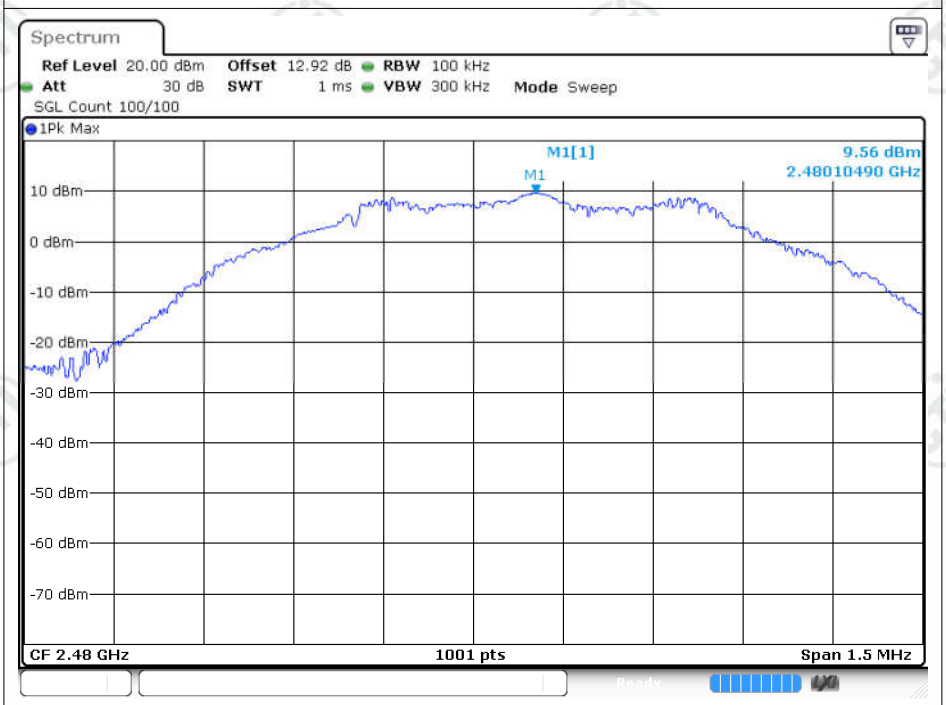
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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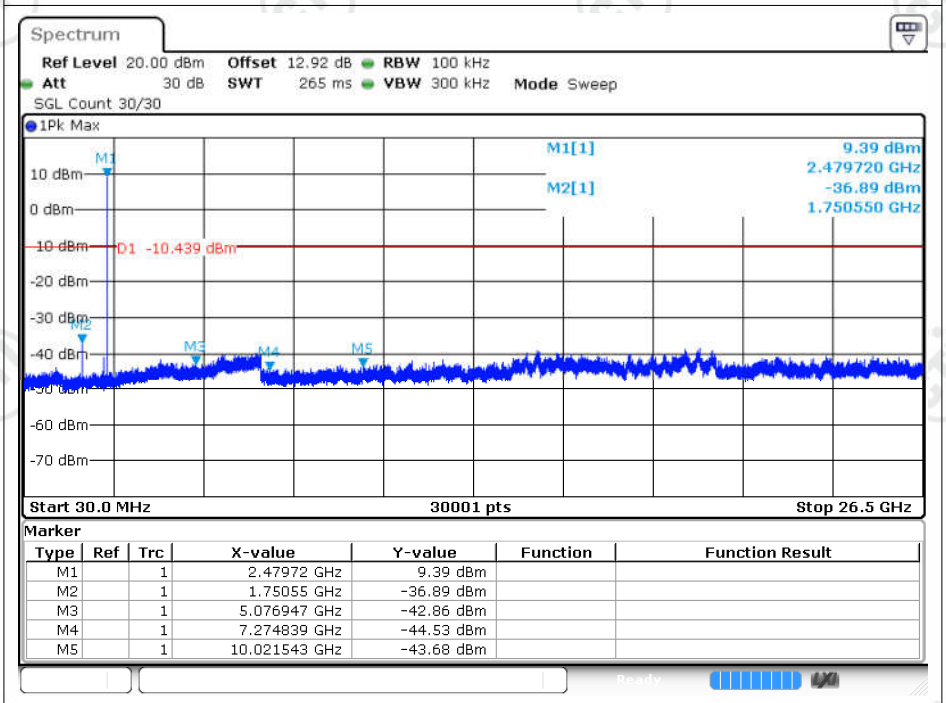
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.47972 GHz	9.39 dBm		
M2		1	1.75055 GHz	-36.89 dBm		
M3		1	5.076947 GHz	-42.86 dBm		
M4		1	7.274839 GHz	-44.53 dBm		
M5		1	10.021543 GHz	-43.68 dBm		

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*** End of Report ***