Appendix: Bluetooth LE

Contents

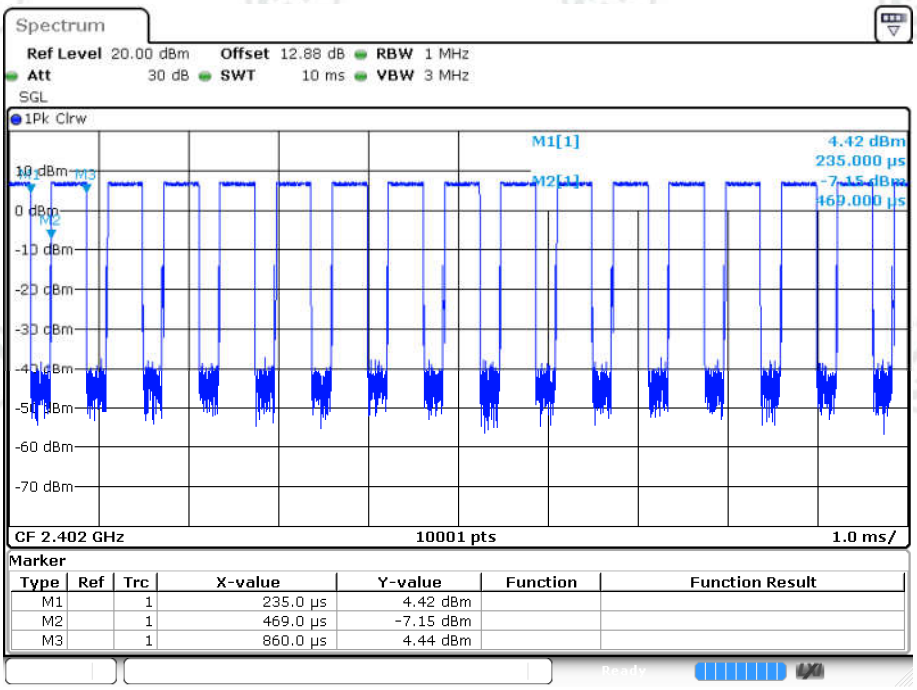
Contents 2
Duty Cycle 3
Maximum Peak Conducted Output Power 6
-6dB Bandwidth 9
Occupied Channel Bandwidth 12
Maximum Power Spectral Density Level 15
Band Edge 18
Conducted RF Spurious Emission 21

Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	62.56	2.04	2.56
NVNT	BLE 1M	2440	Ant1	62.56	2.04	2.56
NVNT	BLE 1M	2480	Ant1	62.56	2.04	2.56

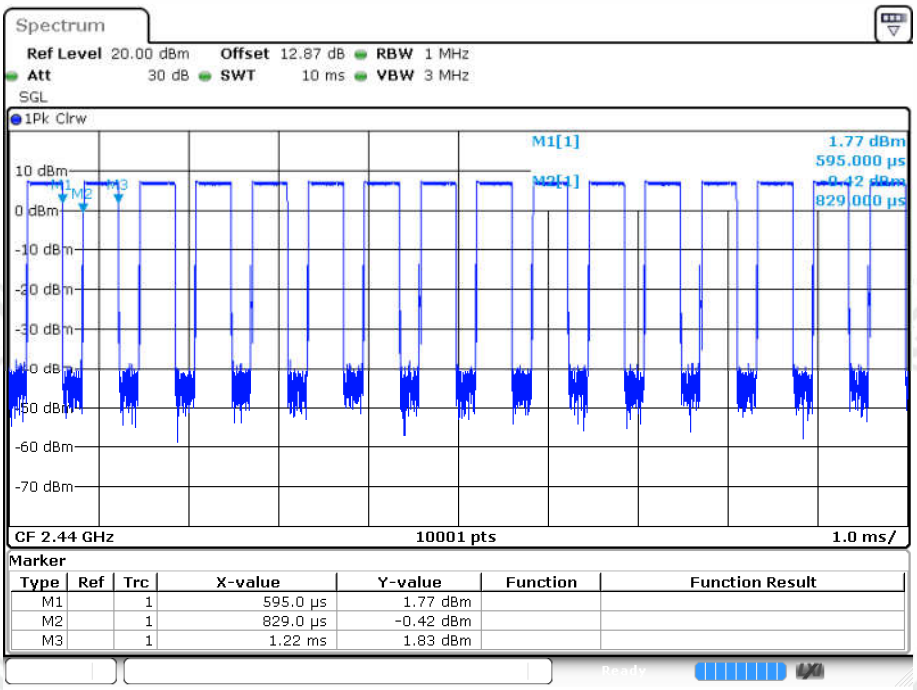
Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



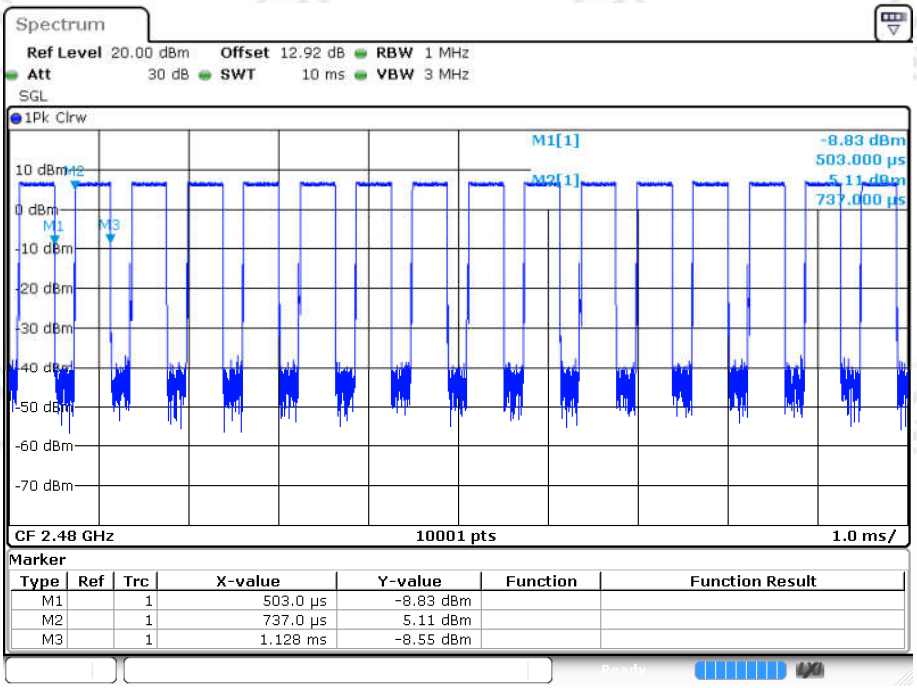
Date: 13.MAR.2023 15:36:48

Duty Cycle NVNT BLE 1M 2440MHz Ant1



Date: 13.MAR.2023 15:39:08

Duty Cycle NVNT BLE 1M 2480MHz Ant1

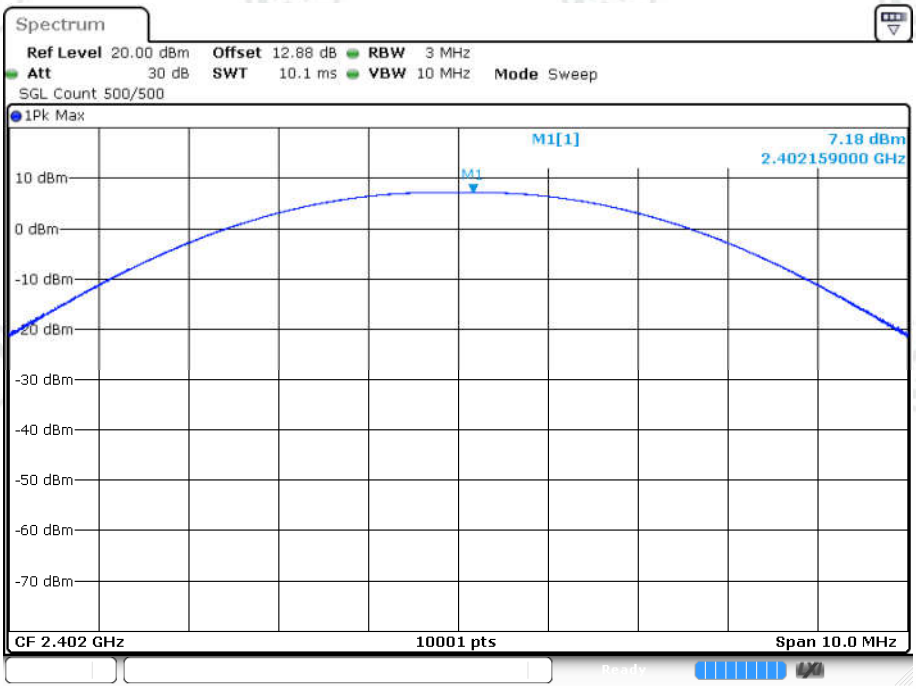


Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	7.18	0	7.18	30	Pass
NVNT	BLE 1M	2440	Ant1	7.29	0	7.29	30	Pass
NVNT	BLE 1M	2480	Ant1	6.93	0	6.93	30	Pass

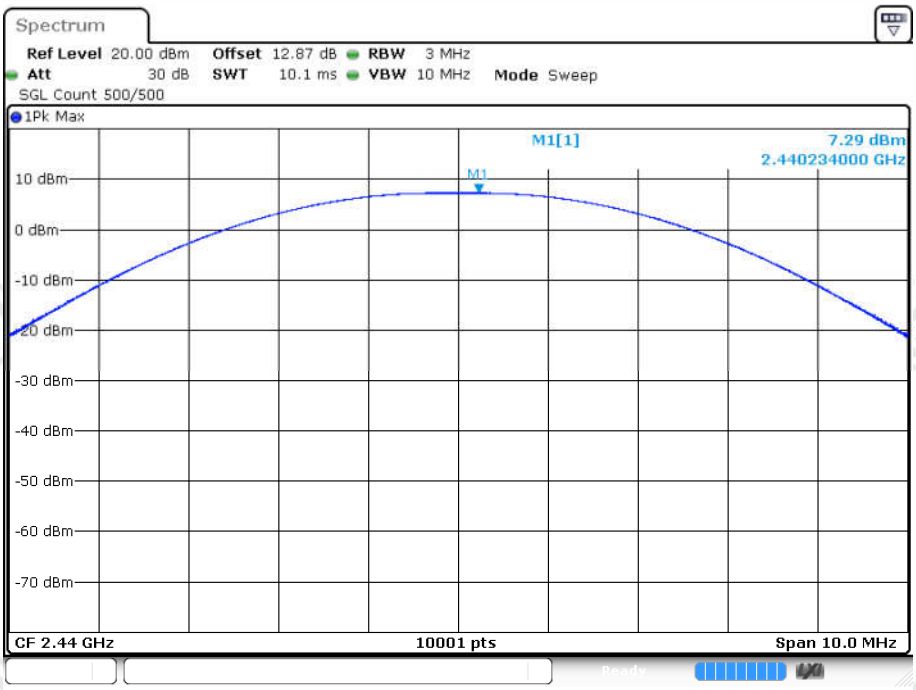
Test Graphs

Peak Power NVNT BLE 1M 2402MHz Ant1



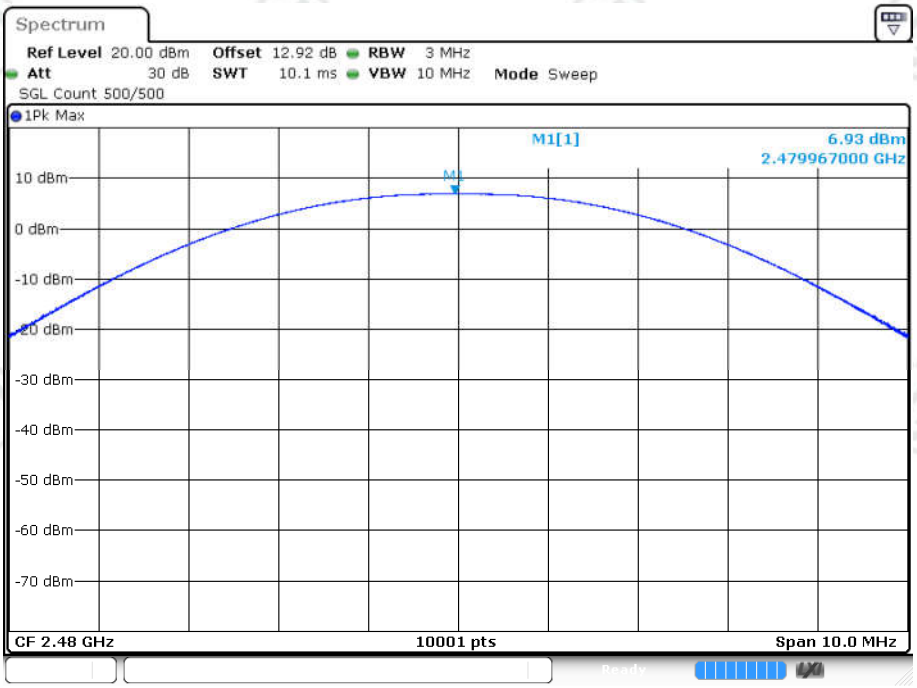
Date: 13.MAR.2023 15:37:01

Peak Power NVNT BLE 1M 2440MHz Ant1



Date: 13.MAR.2023 15:39:23

Peak Power NVNT BLE 1M 2480MHz Ant1

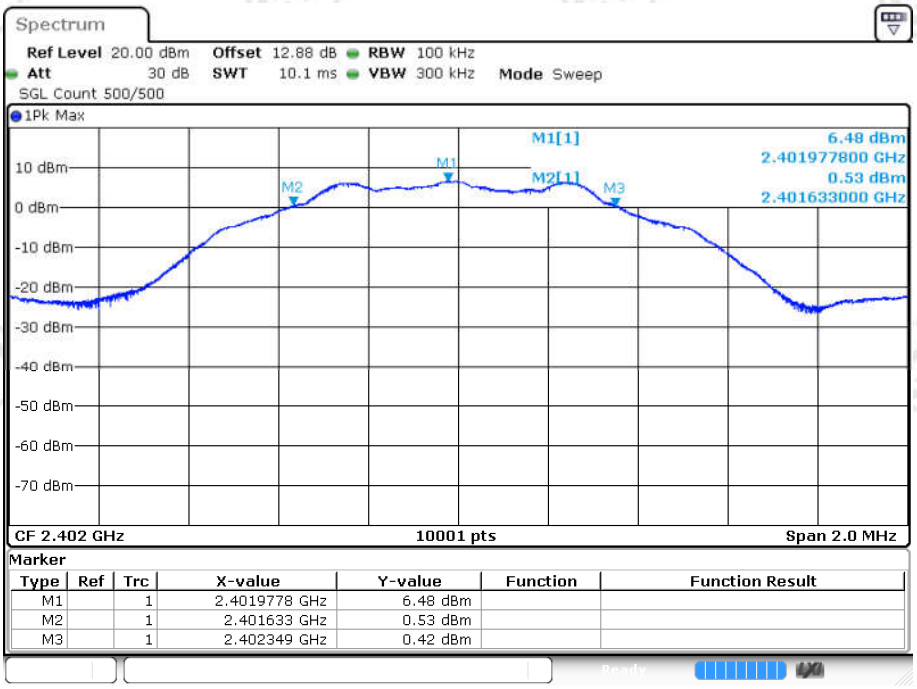


-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.716	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.711	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.715	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



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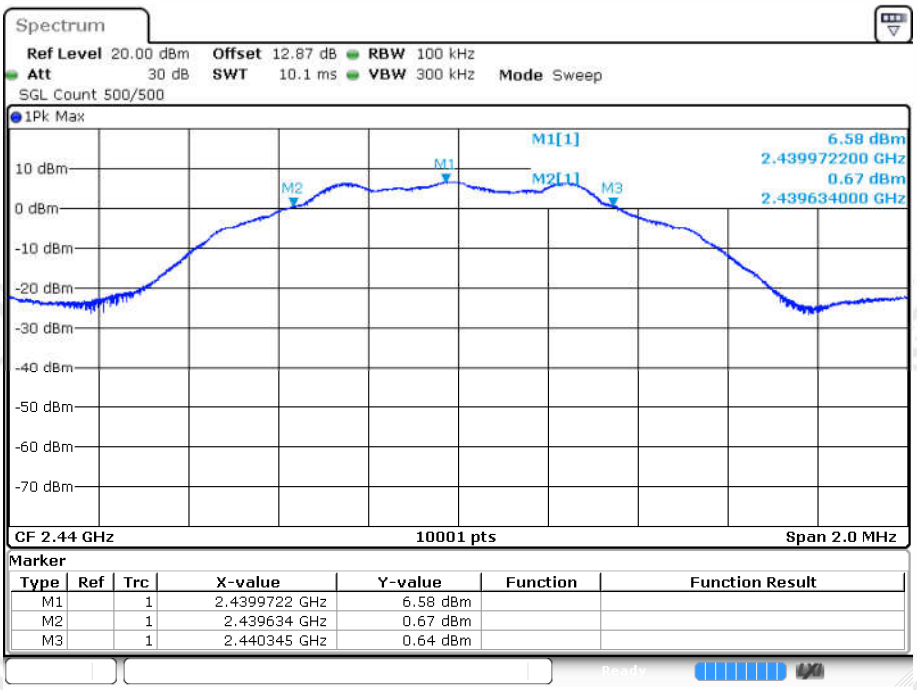
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



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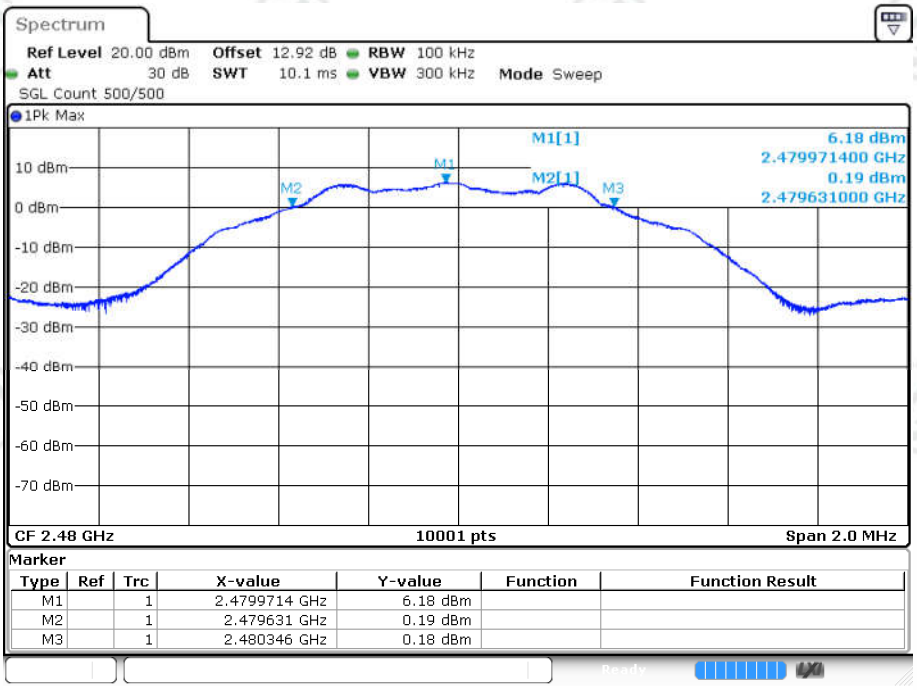
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4799714 GHz	6.18 dBm		
M2		1	2.479631 GHz	0.19 dBm		
M3		1	2.480346 GHz	0.18 dBm		

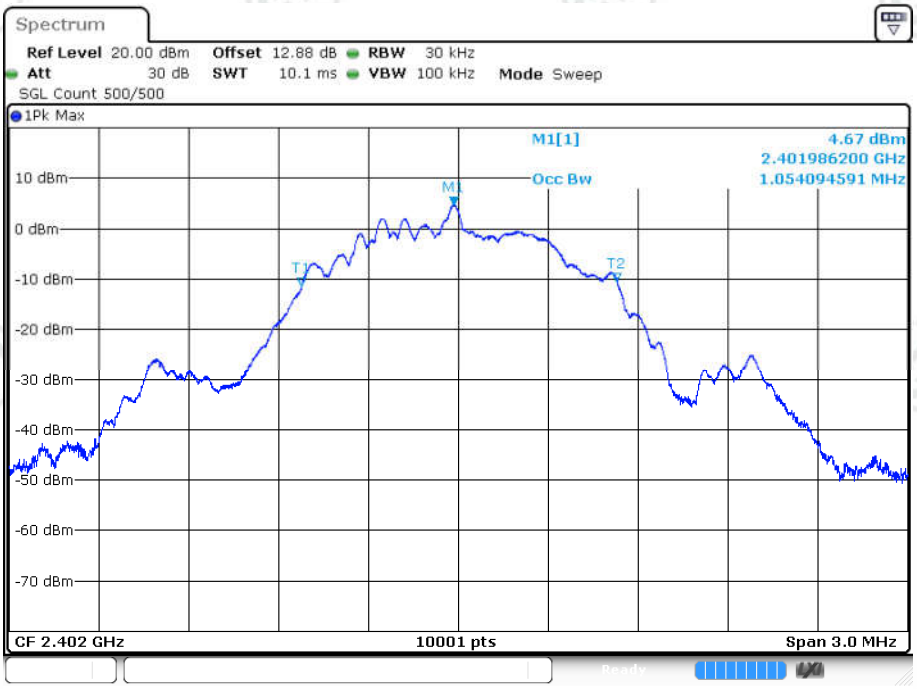
Date: 13.MAR.2023 15:45:45

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.054
NVNT	BLE 1M	2440	Ant1	1.055
NVNT	BLE 1M	2480	Ant1	1.054

Test Graphs

OBW NVNT BLE 1M 2402MHz Ant1



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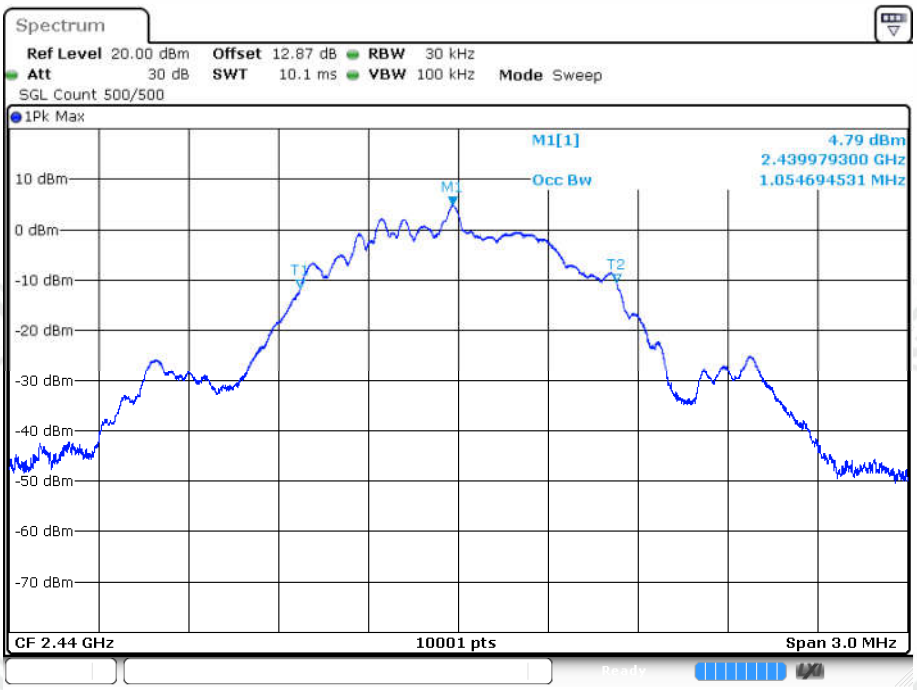
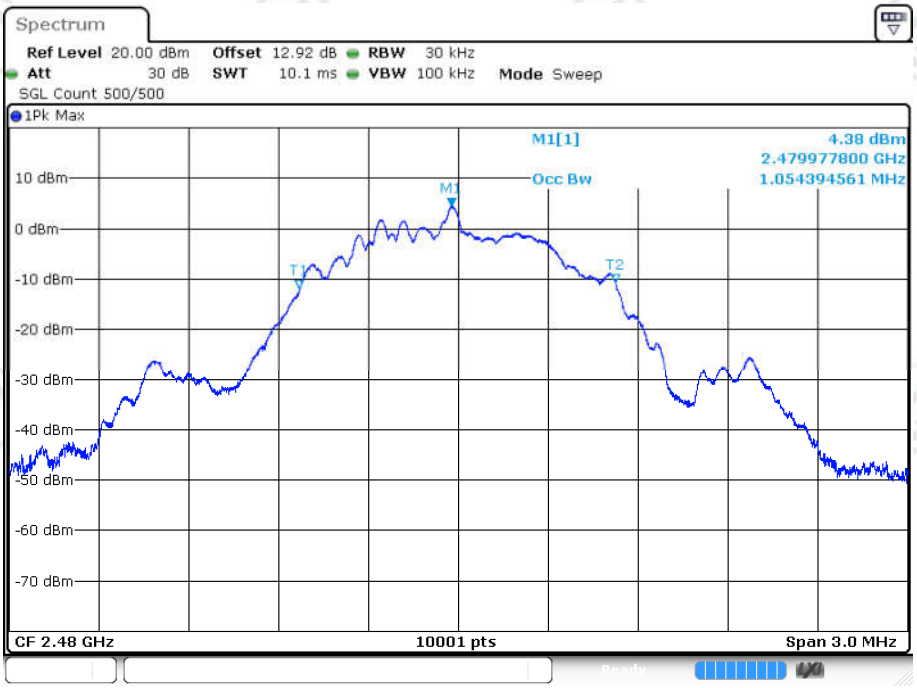
OBW NVNT BLE 1M 2440MHz Ant1



Date: 13.MAR.2023 15:39:34

OBW NVNT BLE 1M 2480MHz Ant1



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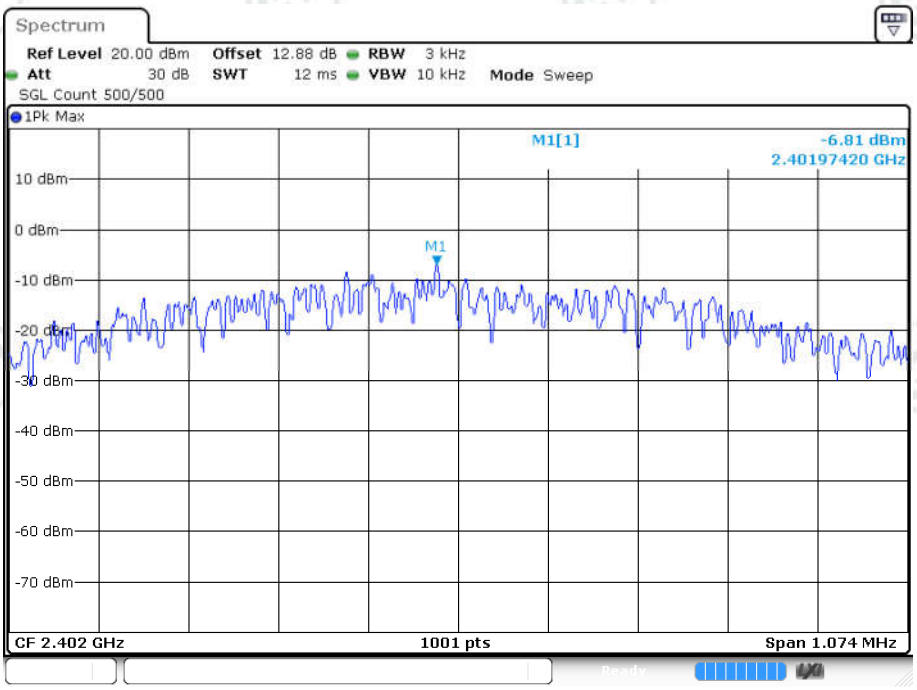
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-6.81	0	-6.81	8	Pass
NVNT	BLE 1M	2440	Ant1	-6.69	0	-6.69	8	Pass
NVNT	BLE 1M	2480	Ant1	-7.2	0	-7.2	8	Pass

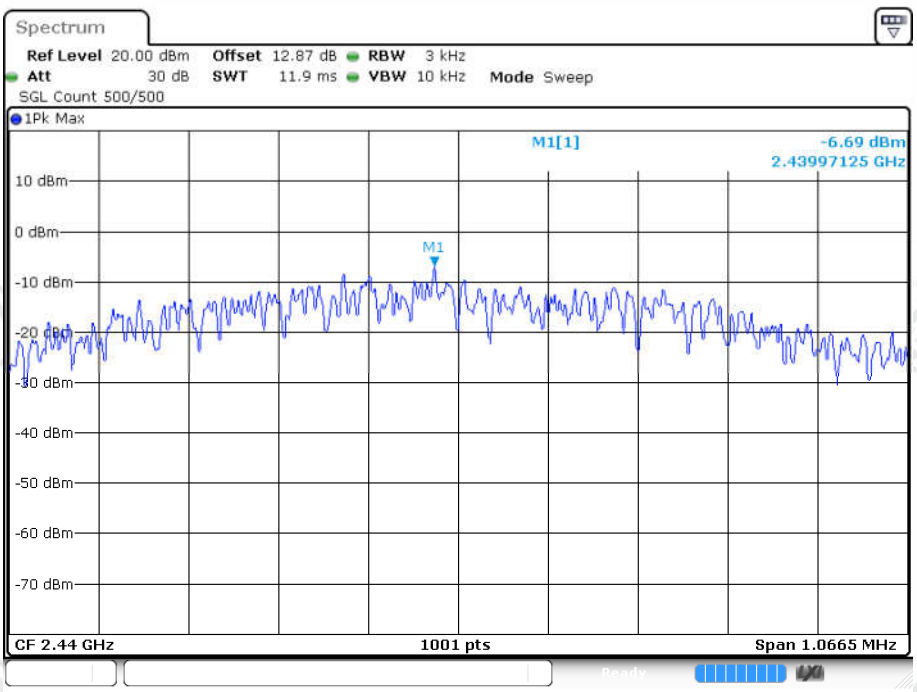
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



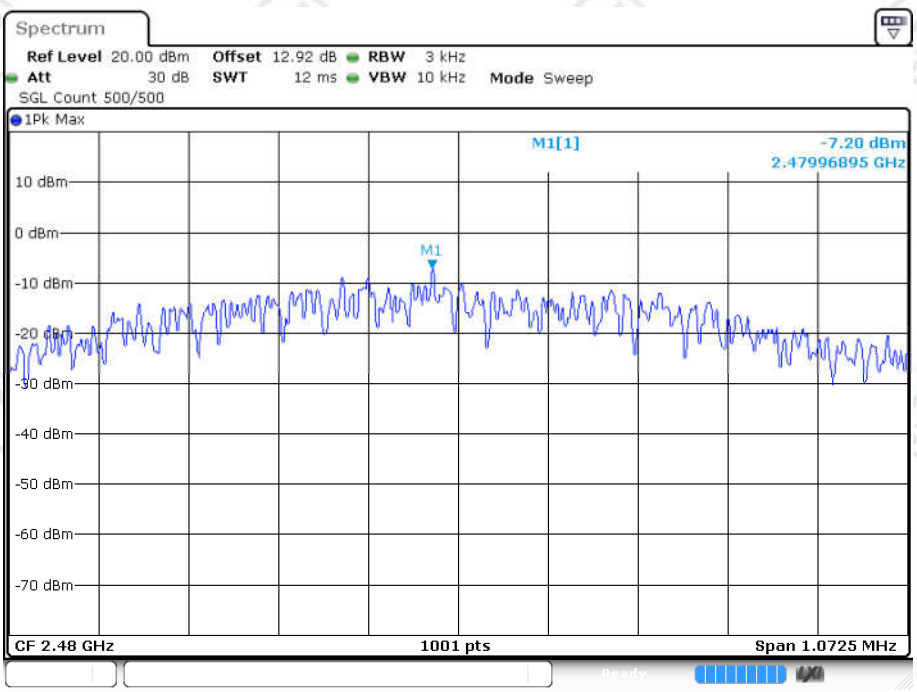
Date: 13.MAR.2023 15:35:21

PSD NVNT BLE 1M 2440MHz Ant1



Date: 13.MAR.2023 15:40:03

PSD NVNT BLE 1M 2480MHz Ant1



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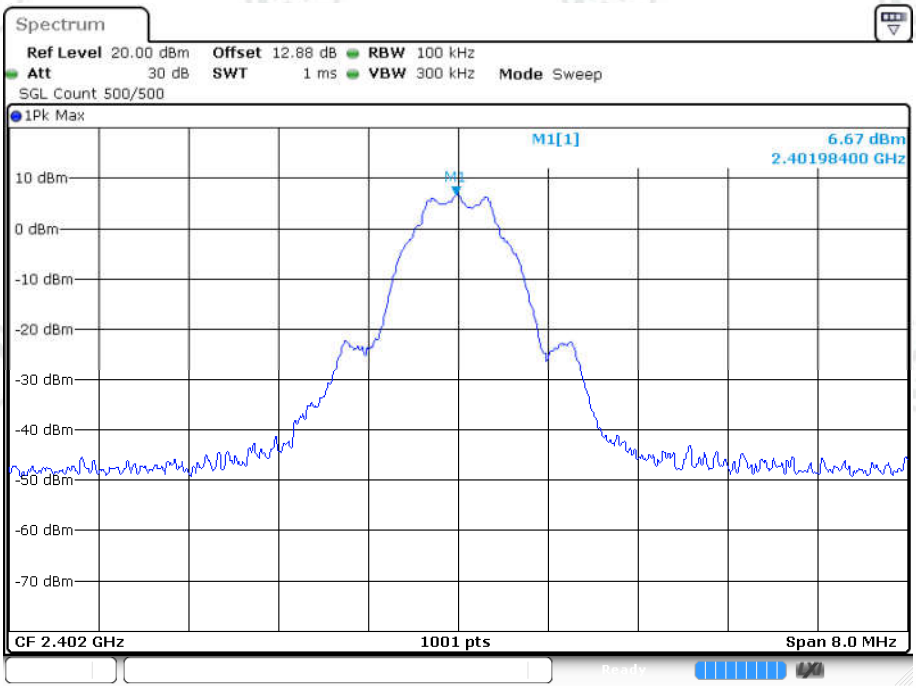
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-51.2	-20	Pass
NVNT	BLE 1M	2480	Ant1	-51.75	-20	Pass

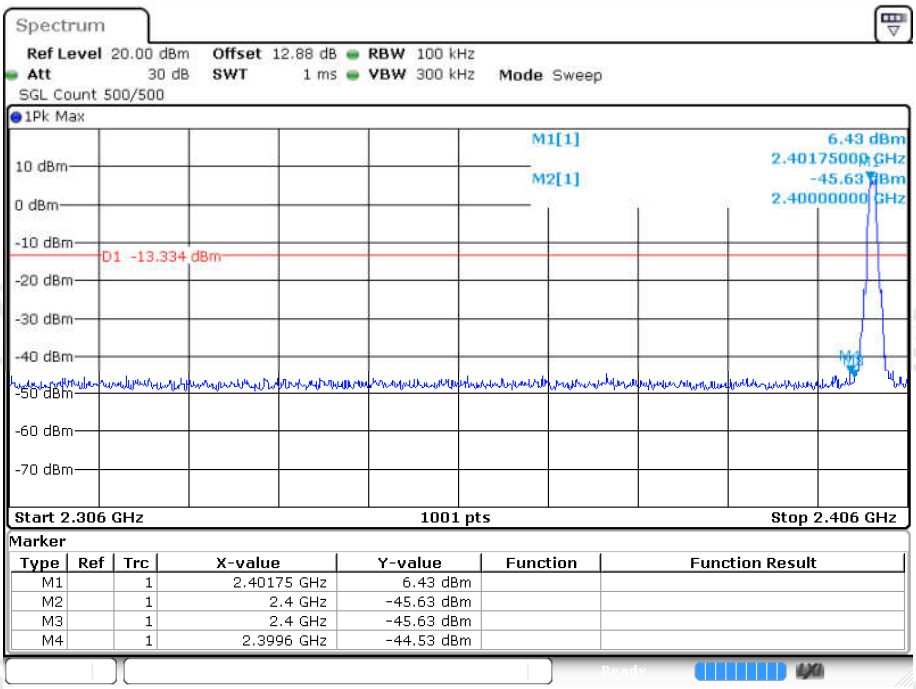
Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Date: 13.MAR.2023 15:35:24

Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

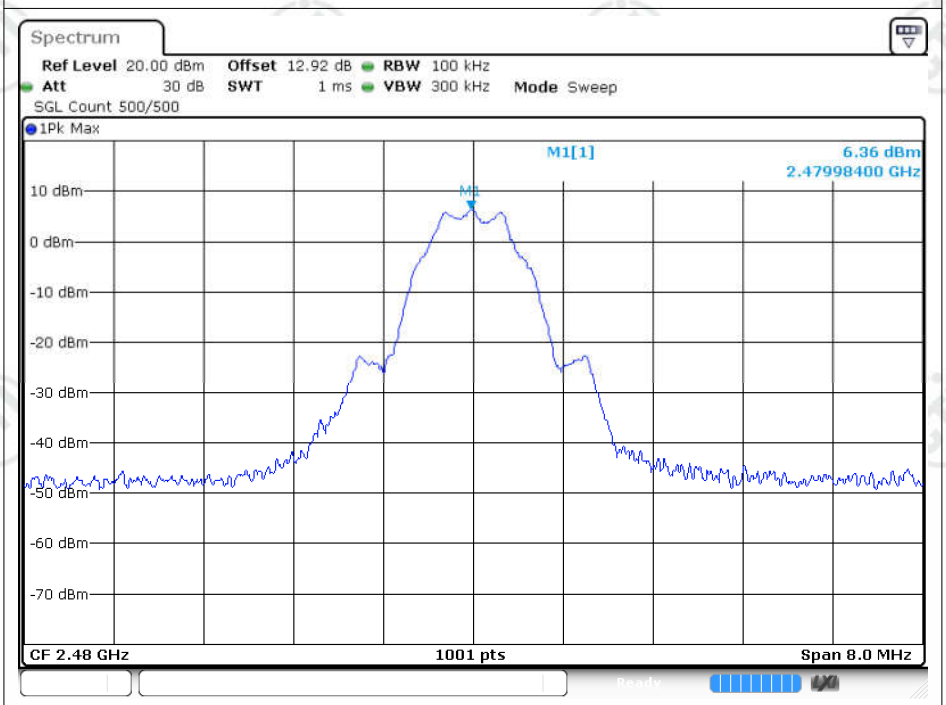


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40175 GHz	6.43 dBm		
M2		1	2.4 GHz	-45.63 dBm		
M3		1	2.4 GHz	-45.63 dBm		
M4		1	2.3996 GHz	-44.53 dBm		

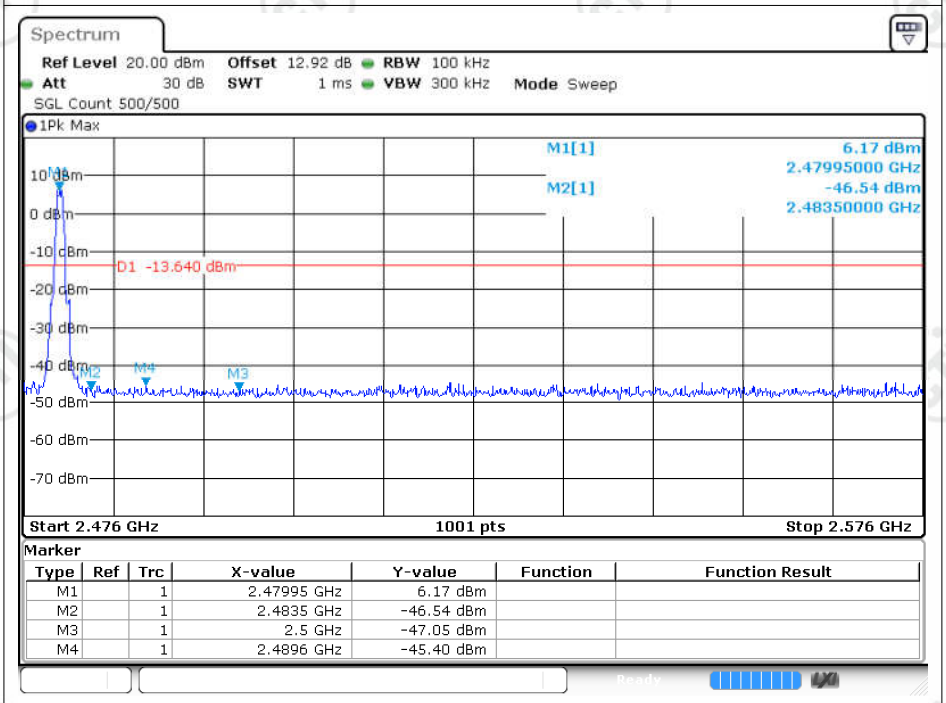
Date: 13.MAR.2023 15:35:28

Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Date: 13.MAR.2023 15:46:06

Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.47995 GHz	6.17 dBm		
M2		1	2.4835 GHz	-46.54 dBm		
M3		1	2.5 GHz	-47.05 dBm		
M4		1	2.4896 GHz	-45.40 dBm		

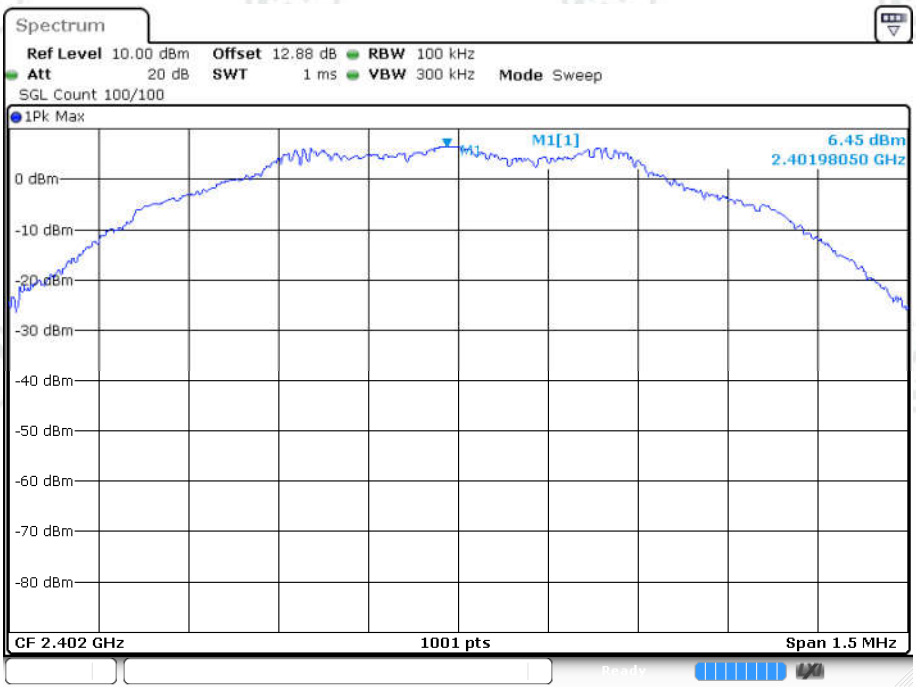
Date: 13.MAR.2023 15:46:08

Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-54.81	-20	Pass
NVNT	BLE 1M	2440	Ant1	-54.18	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.22	-20	Pass

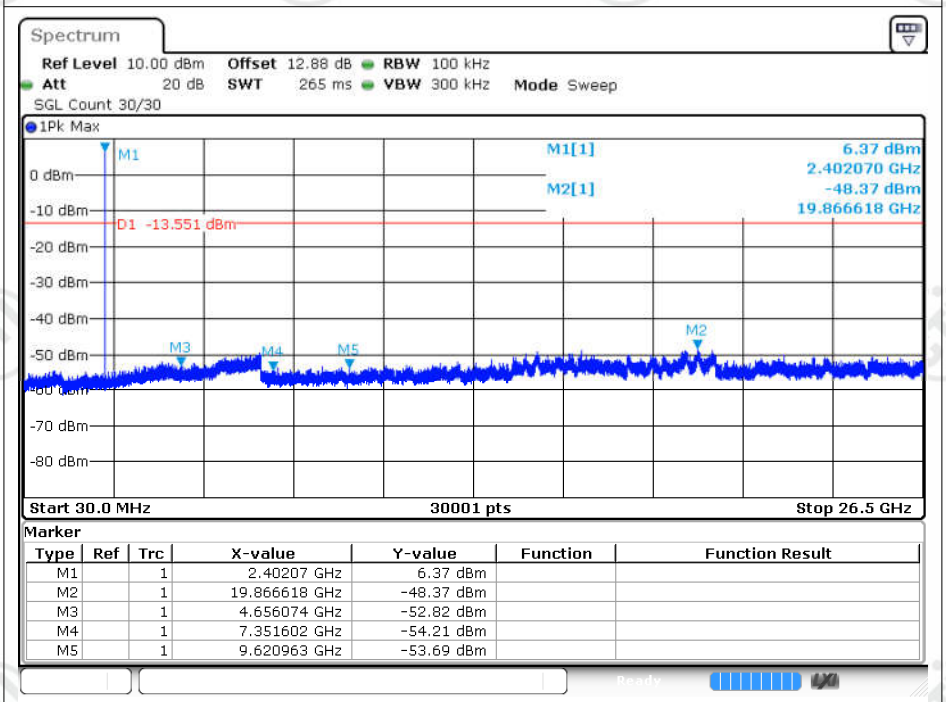
Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Date: 13.MAR.2023 15:35:31

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

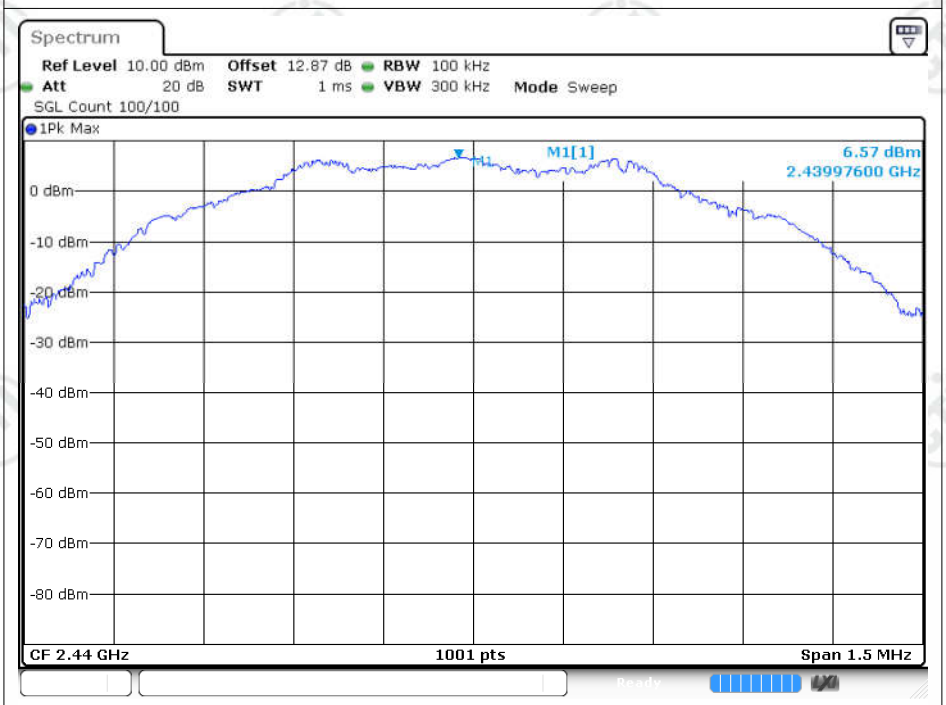


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	6.37 dBm		
M2		1	19.866618 GHz	-48.37 dBm		
M3		1	4.656074 GHz	-52.82 dBm		
M4		1	7.351602 GHz	-54.21 dBm		
M5		1	9.620963 GHz	-53.69 dBm		

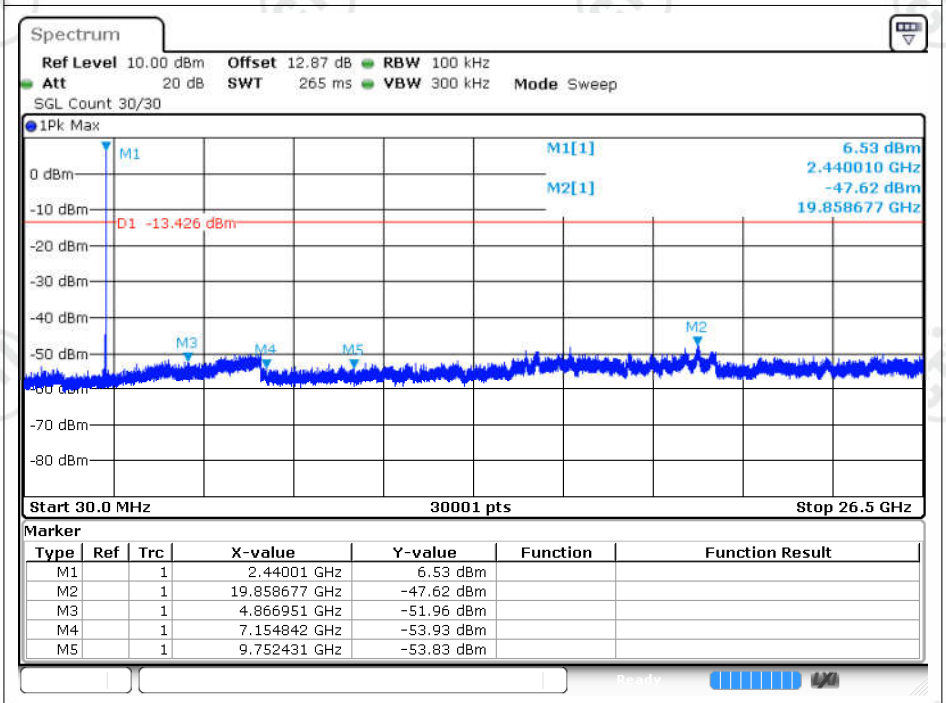
Date: 13.MAR.2023 15:36:00

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Date: 13.MAR.2023 15:40:07

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

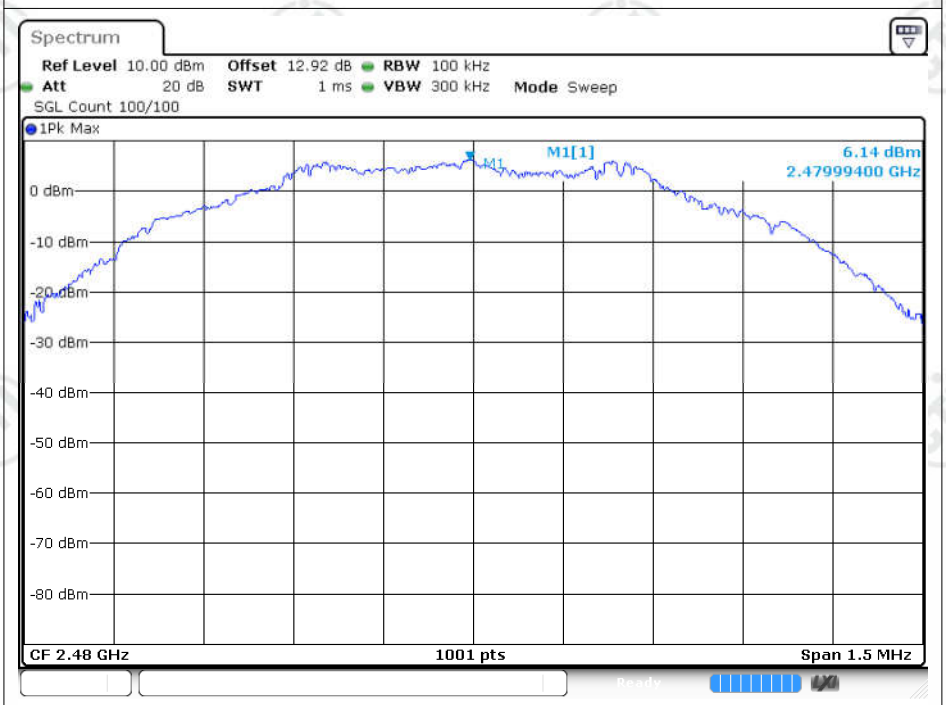


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.44001 GHz	6.53 dBm		
M2		1	19.858677 GHz	-47.62 dBm		
M3		1	4.866951 GHz	-51.96 dBm		
M4		1	7.154842 GHz	-53.93 dBm		
M5		1	9.752431 GHz	-53.83 dBm		

Date: 13.MAR.2023 15:40:36

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



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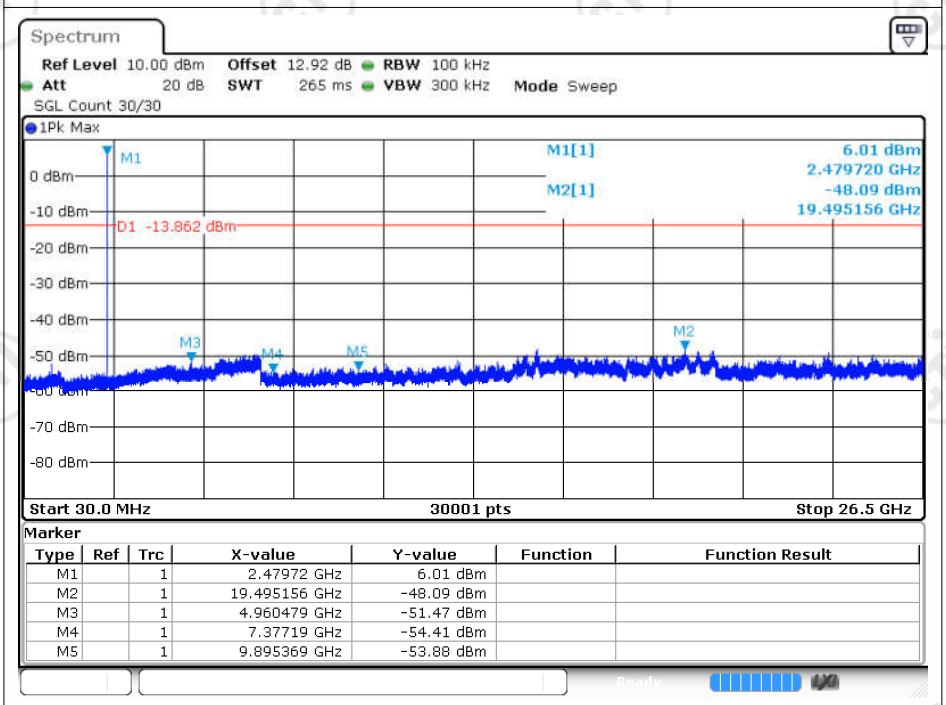
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.47972 GHz	6.01 dBm		
M2		1	19.495156 GHz	-48.09 dBm		
M3		1	4.960479 GHz	-51.47 dBm		
M4		1	7.37719 GHz	-54.41 dBm		
M5		1	9.895369 GHz	-53.88 dBm		

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*** End of Report ***