Appendix: Bluetooth LE

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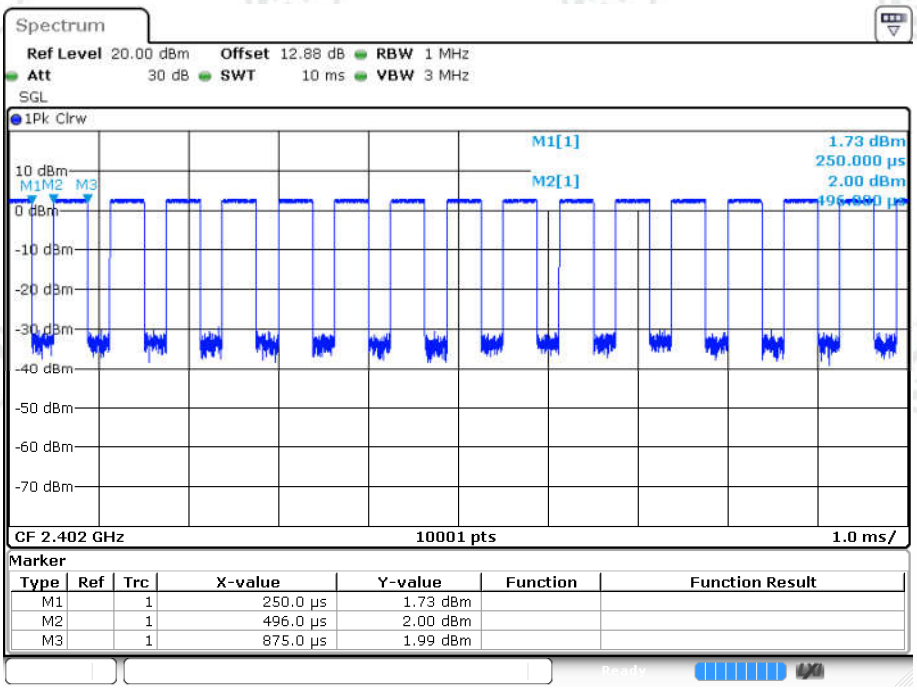
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	60.64	2.17	2.64
NVNT	BLE 1M	2440	Ant1	60.64	2.17	2.64
NVNT	BLE 1M	2480	Ant1	60.8	2.16	2.63

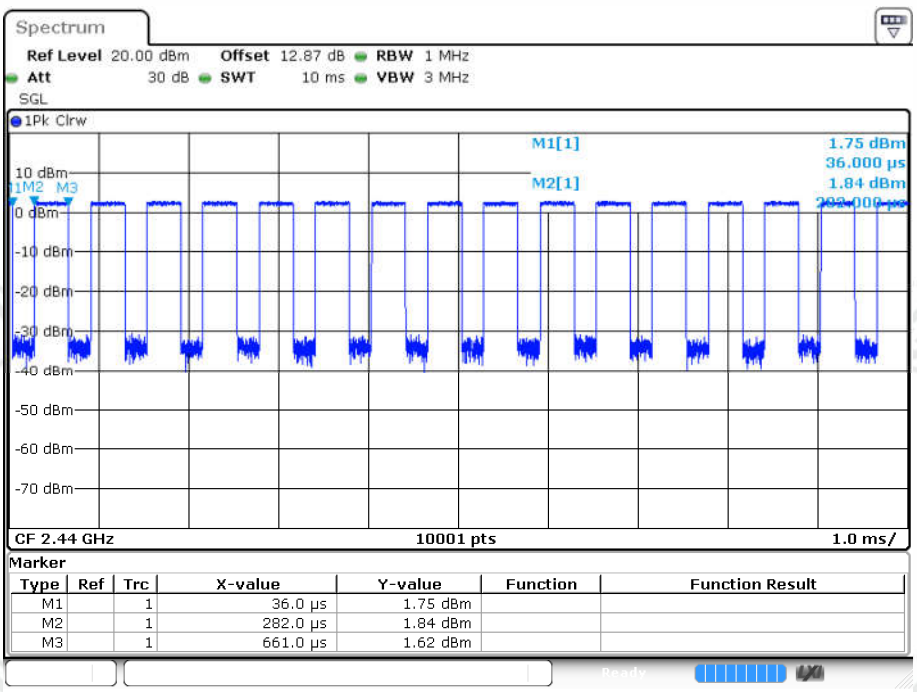
Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



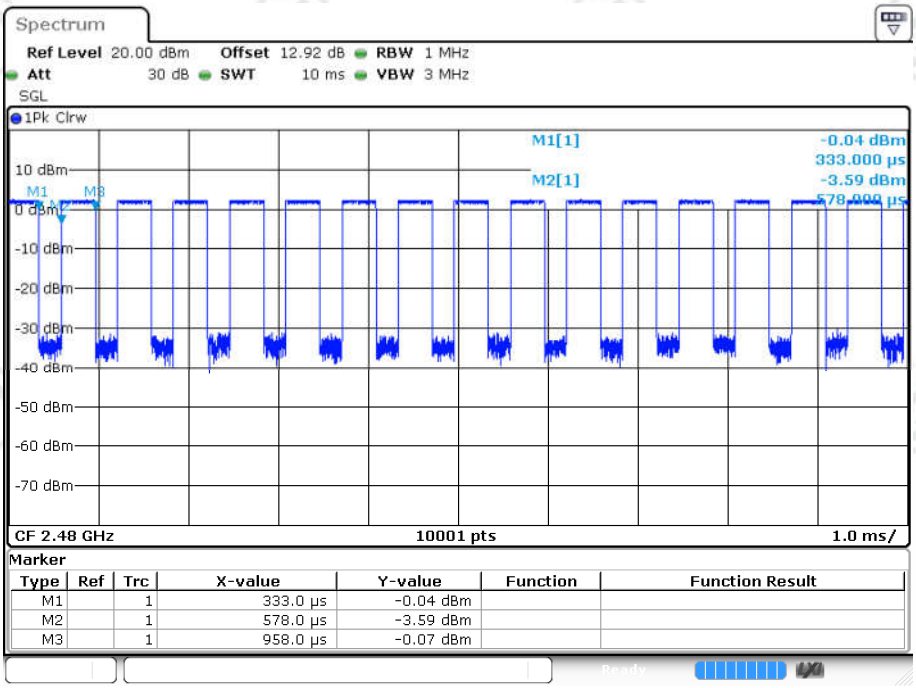
Date: 15.NOV.2023 15:11:37

Duty Cycle NVNT BLE 1M 2440MHz Ant1



Date: 15.NOV.2023 15:13:16

Duty Cycle NVNT BLE 1M 2480MHz Ant1



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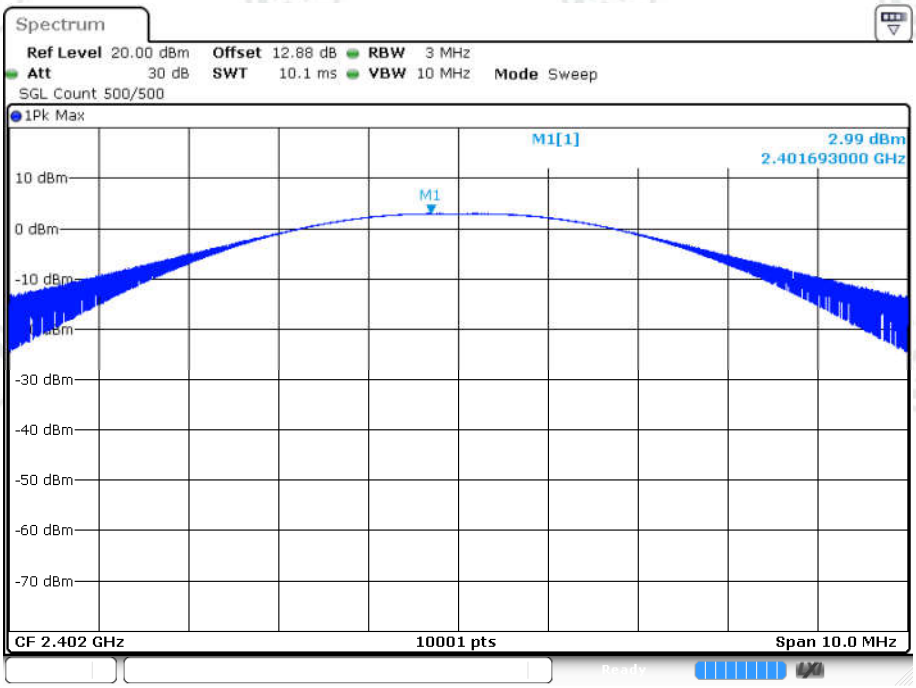
Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	2.99	30	Pass
NVNT	BLE 1M	2440	Ant1	2.89	30	Pass
NVNT	BLE 1M	2480	Ant1	2.61	30	Pass

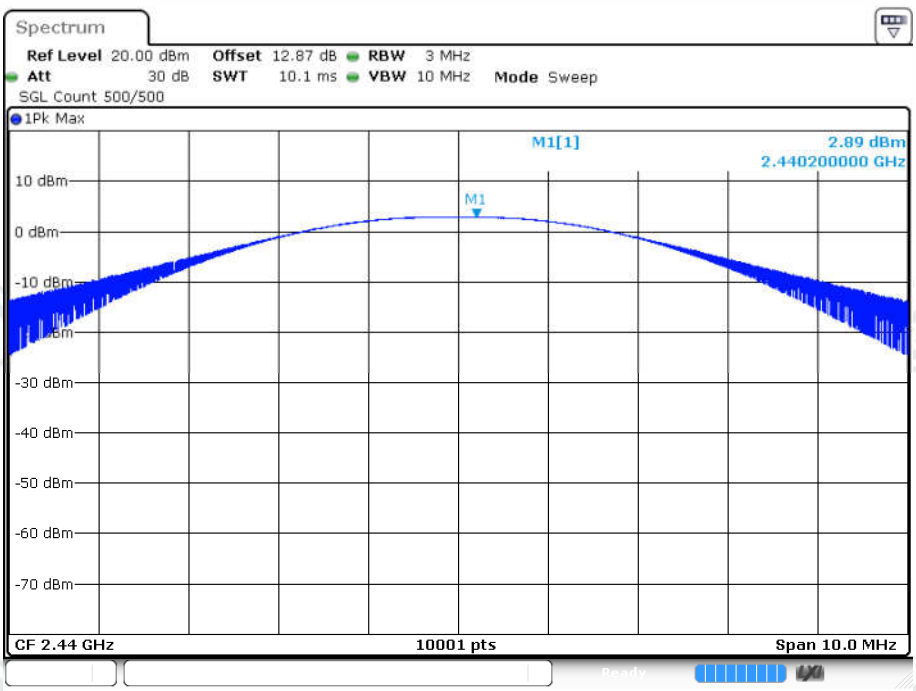
Test Graphs

Peak Power NVNT BLE 1M 2402MHz Ant1



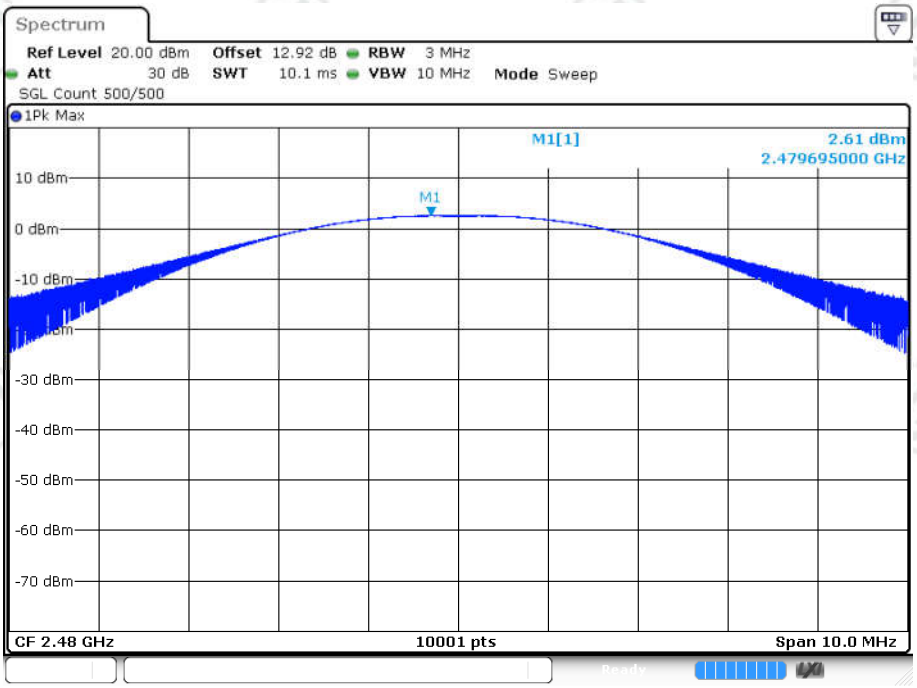
Date: 15.NOV.2023 15:11:47

Peak Power NVNT BLE 1M 2440MHz Ant1



Date: 15.NOV.2023 15:13:26

Peak Power NVNT BLE 1M 2480MHz Ant1



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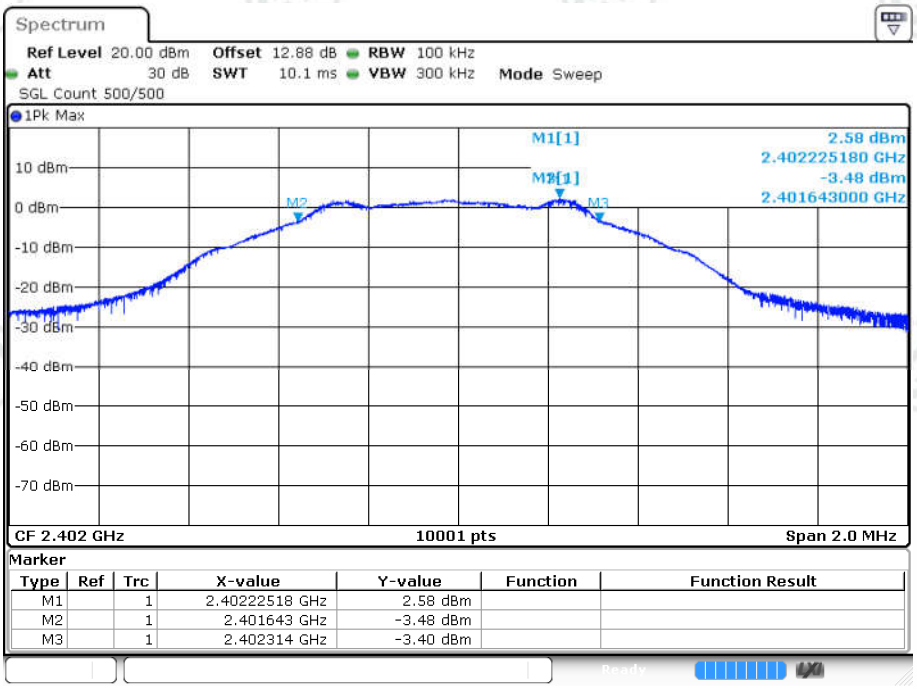
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.671	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.697	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.693	0.5	Pass

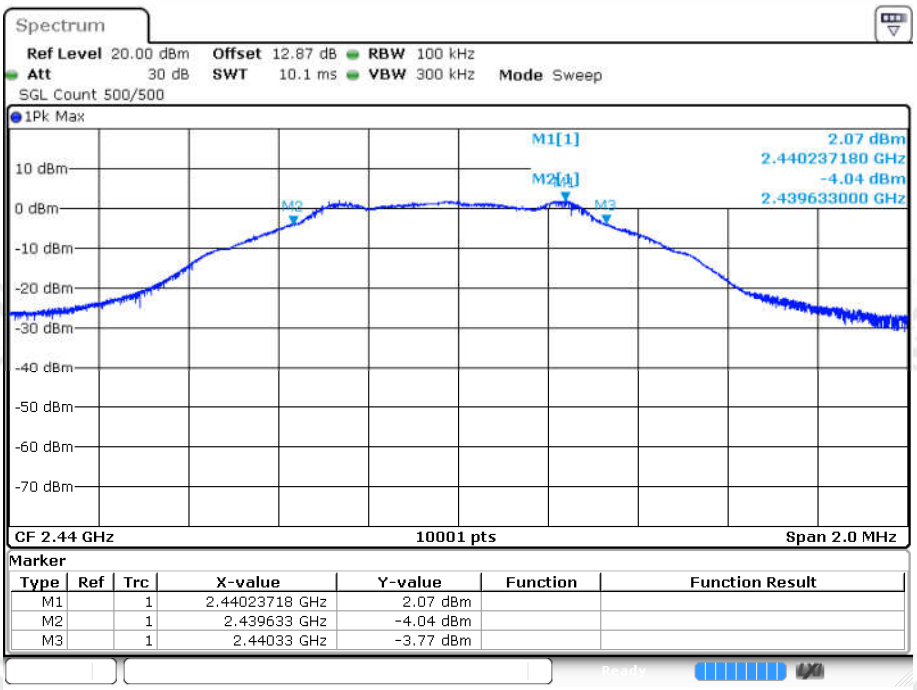
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



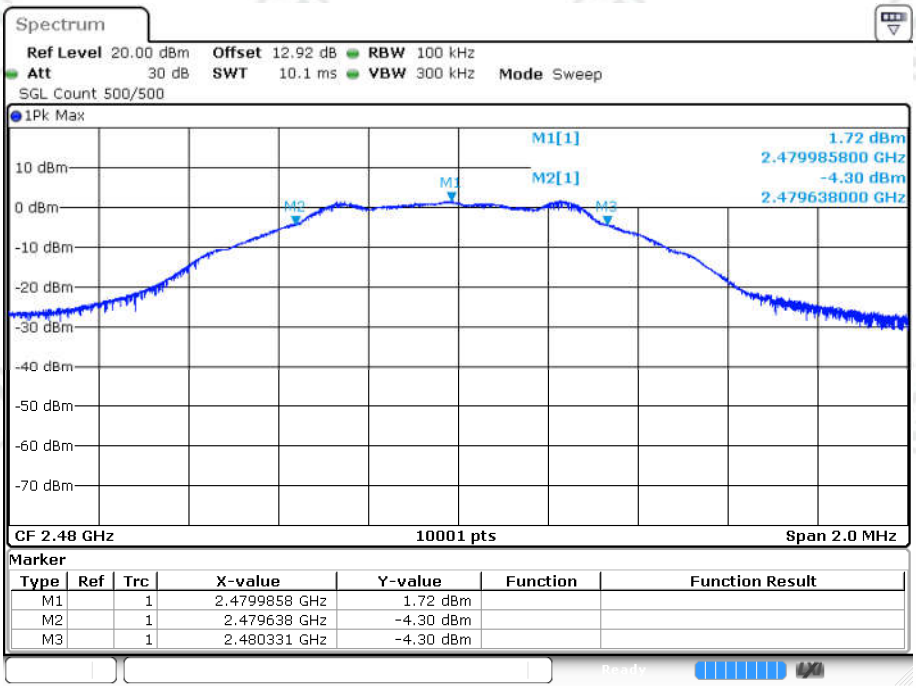
Date: 15.NOV.2023 15:12:10

-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



Date: 15.NOV.2023 15:13:49

-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



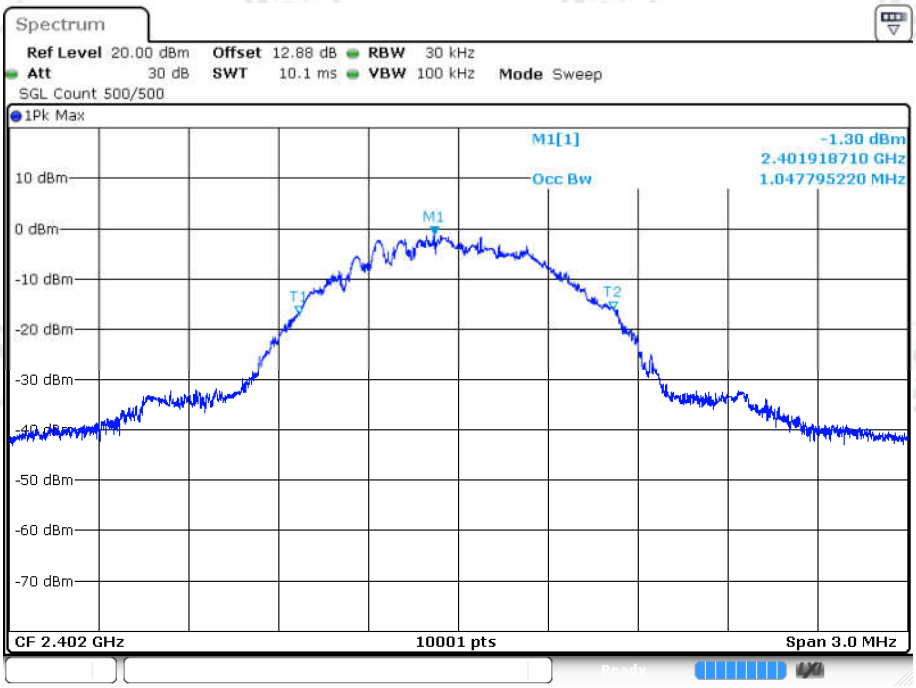
Date: 15.NOV.2023 15:16:17

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.048
NVNT	BLE 1M	2440	Ant1	1.047
NVNT	BLE 1M	2480	Ant1	1.045

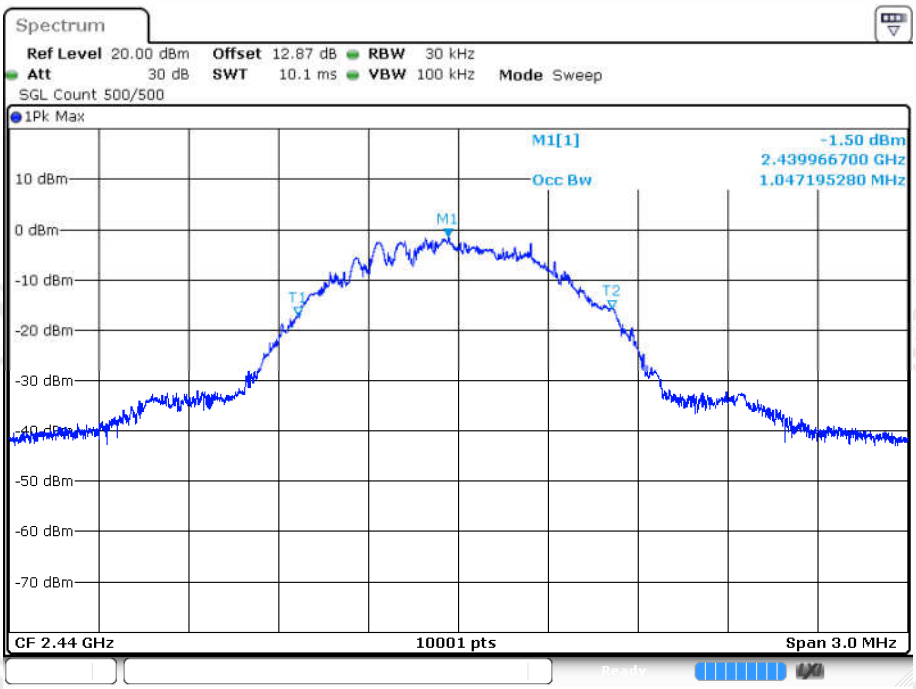
Test Graphs

OBW NVNT BLE 1M 2402MHz Ant1



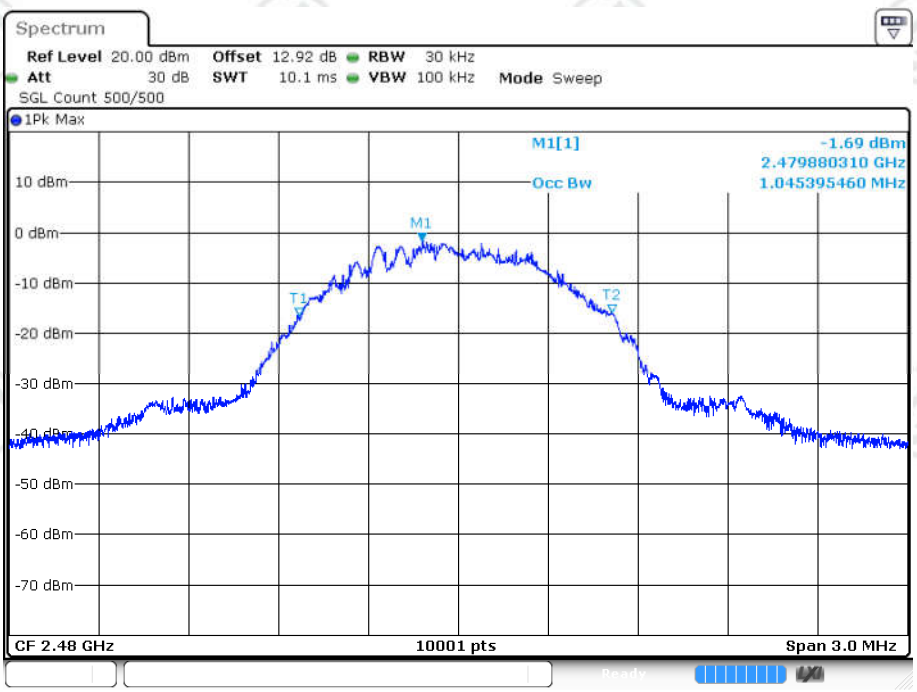
Date: 15.NOV.2023 15:11:59

OBW NVNT BLE 1M 2440MHz Ant1



Date: 15.NOV.2023 15:13:37

OBW NVNT BLE 1M 2480MHz Ant1



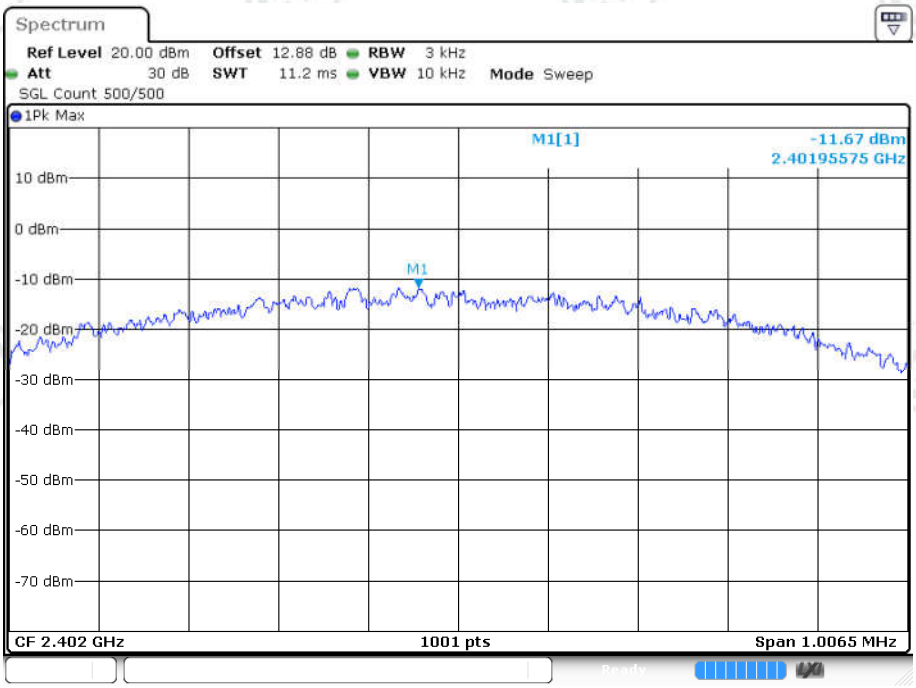
Date: 15.NOV.2023 15:16:06

Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-11.67	8	Pass
NVNT	BLE 1M	2440	Ant1	-10.94	8	Pass
NVNT	BLE 1M	2480	Ant1	-12.24	8	Pass

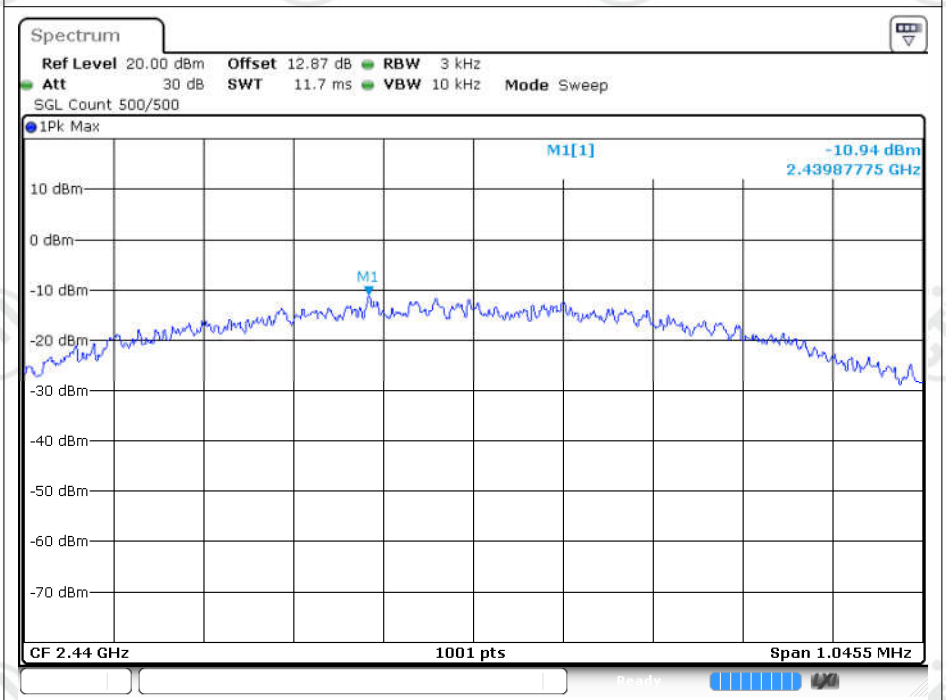
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



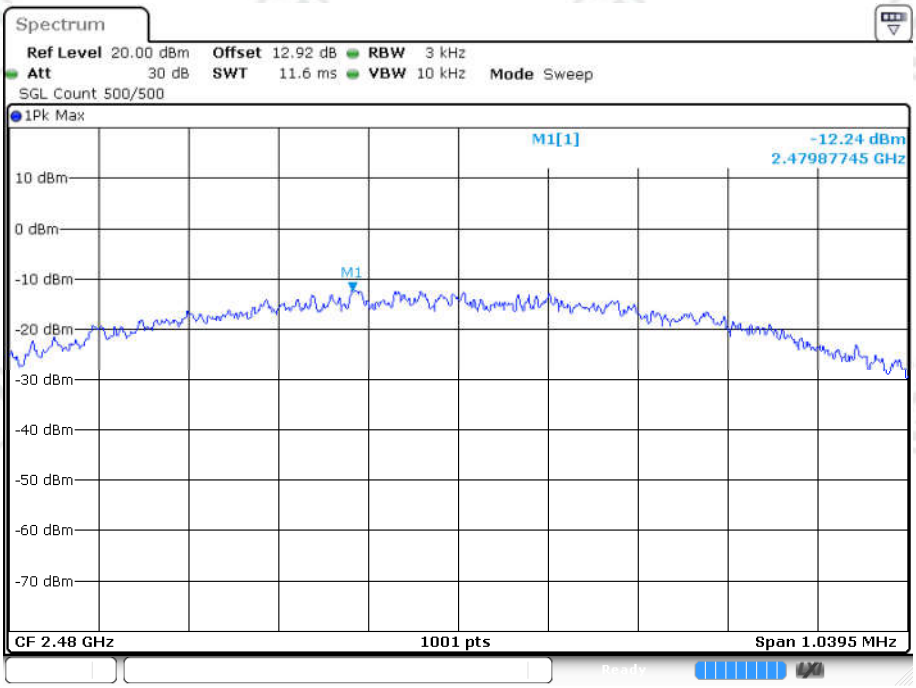
Date: 15.NOV.2023 15:12:28

PSD NVNT BLE 1M 2440MHz Ant1



Date: 15.NOV.2023 15:14:07

PSD NVNT BLE 1M 2480MHz Ant1

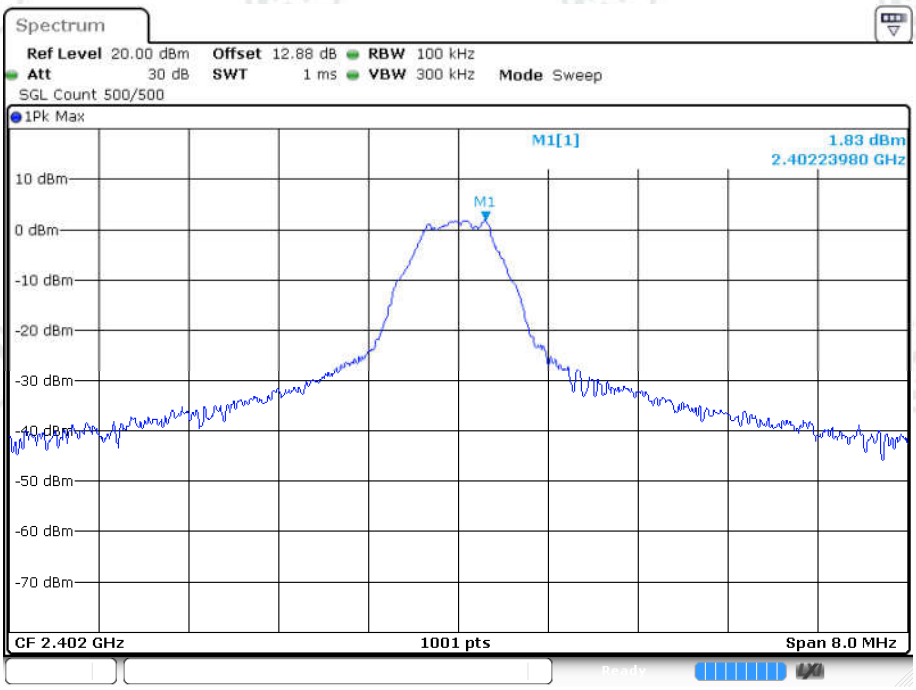


Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-36.18	-20	Pass
NVNT	BLE 1M	2480	Ant1	-41.42	-20	Pass

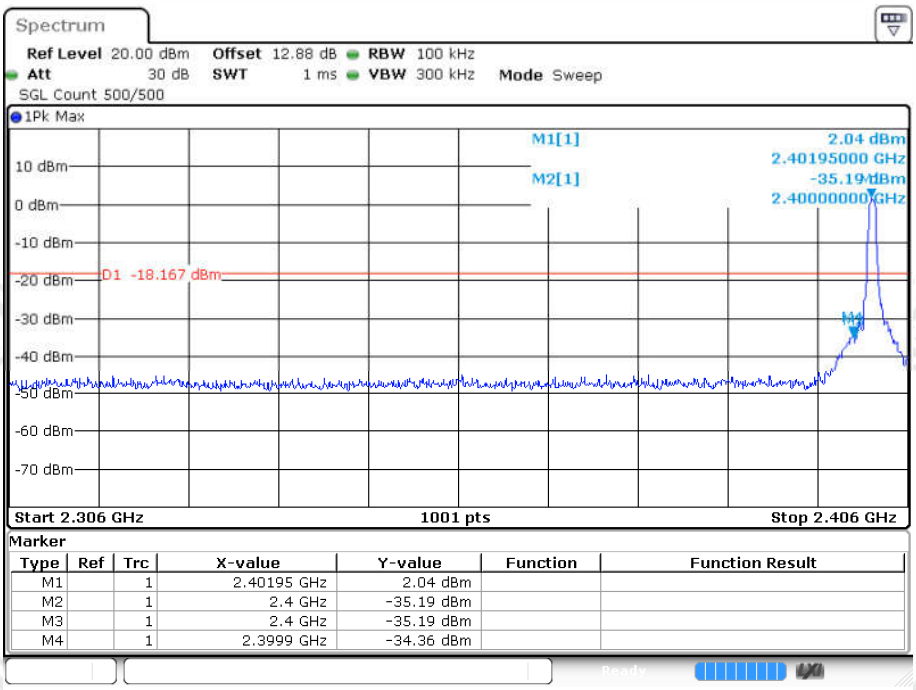
Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Date: 15.NOV.2023 15:12:31

Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40195 GHz	2.04 dBm		
M2		1	2.4 GHz	-35.19 dBm		
M3		1	2.4 GHz	-35.19 dBm		
M4		1	2.3999 GHz	-34.36 dBm		

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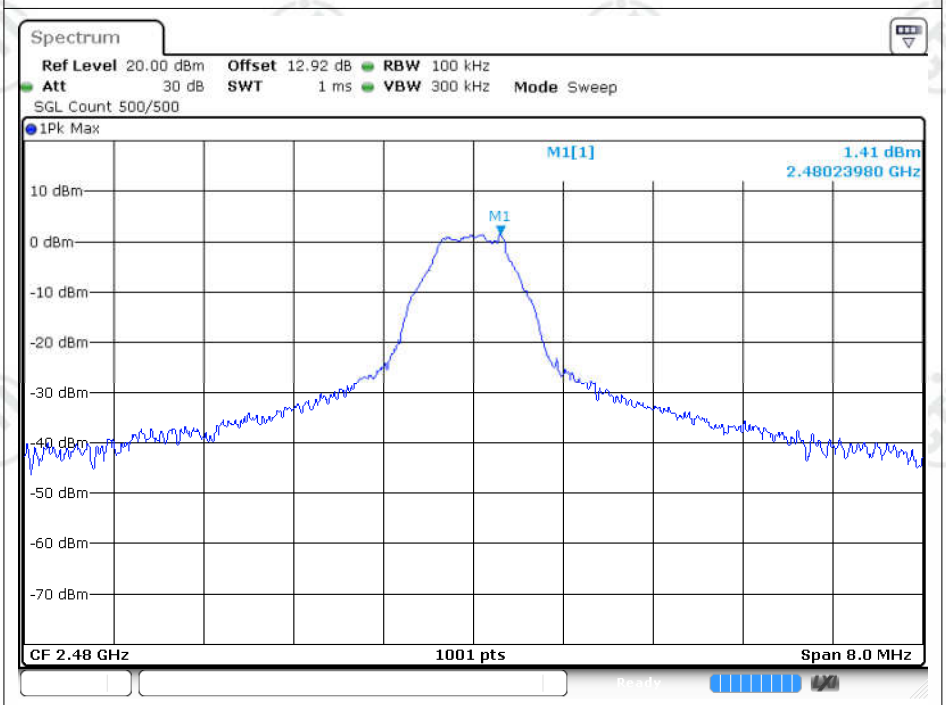
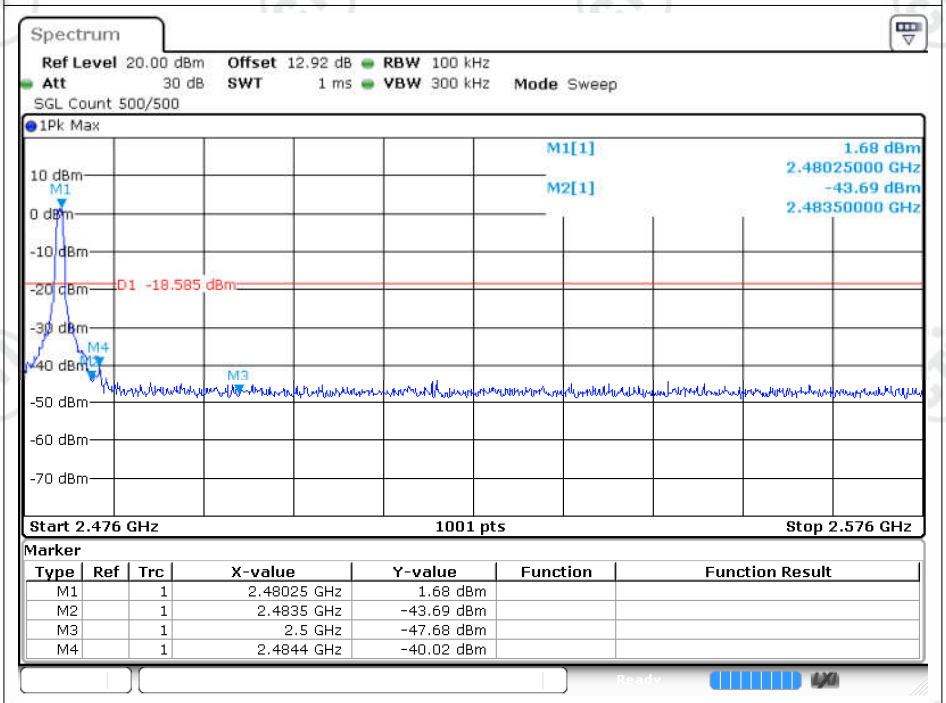
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Date: 15.NOV.2023 15:16:37

Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.48025 GHz	1.68 dBm		
M2		1	2.4835 GHz	-43.69 dBm		
M3		1	2.5 GHz	-47.68 dBm		
M4		1	2.4844 GHz	-40.02 dBm		

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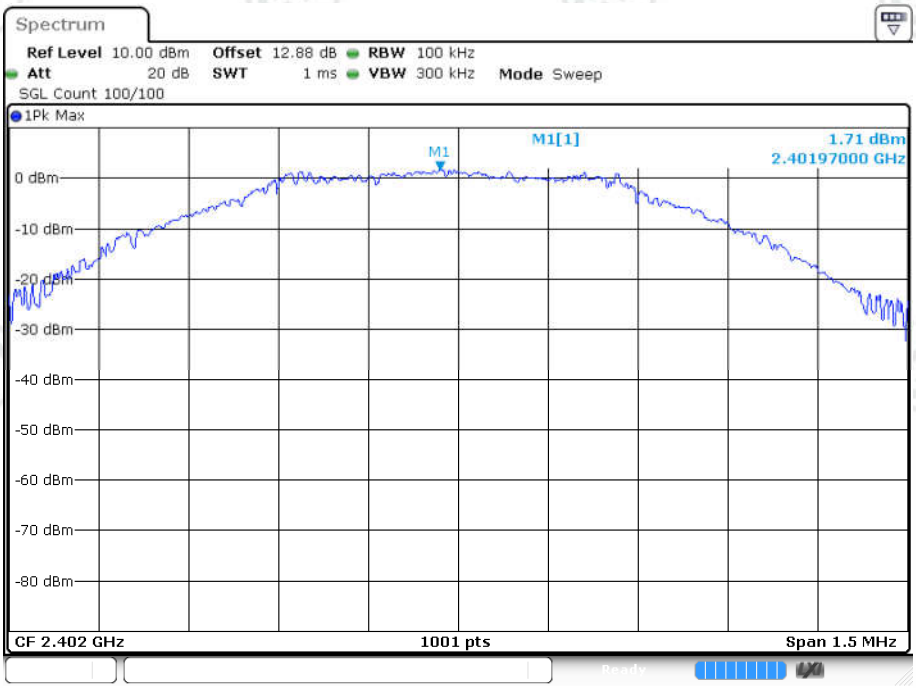
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-50.16	-20	Pass
NVNT	BLE 1M	2440	Ant1	-49.52	-20	Pass
NVNT	BLE 1M	2480	Ant1	-46.94	-20	Pass

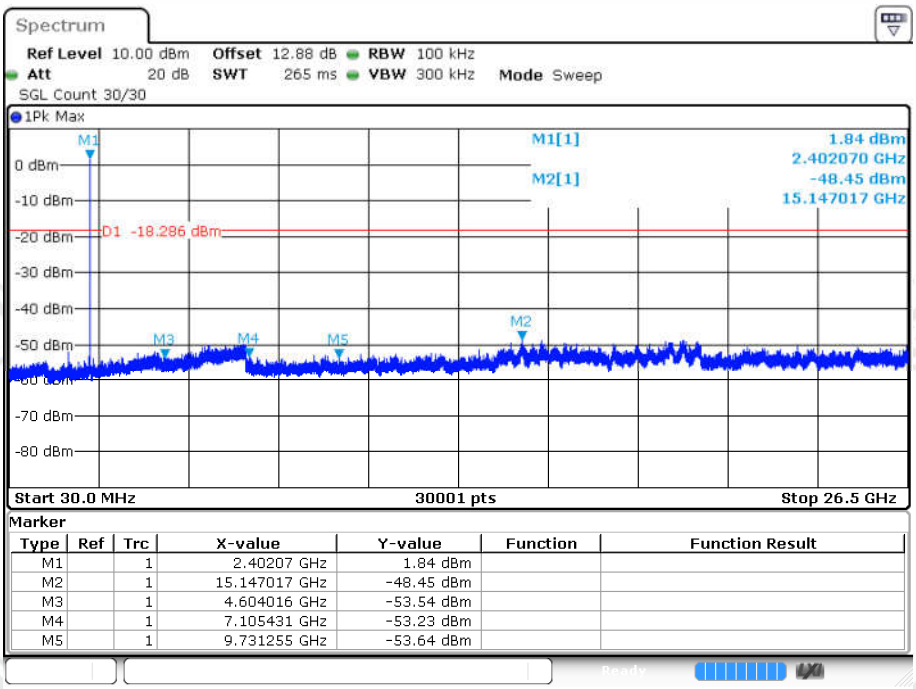
Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Date: 15.NOV.2023 15:12:38

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

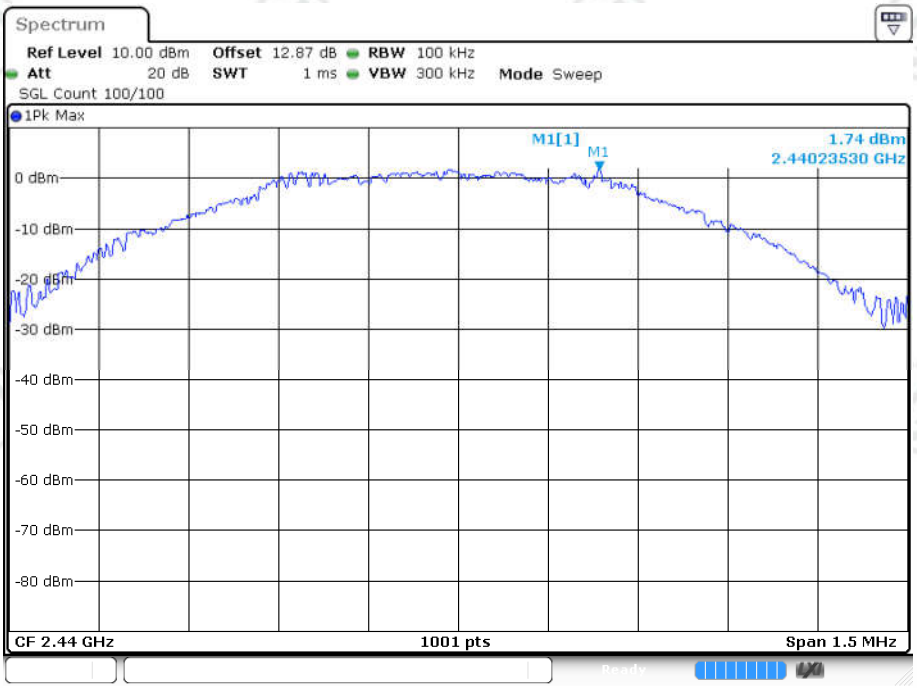


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	1.84 dBm		
M2		1	15.147017 GHz	-48.45 dBm		
M3		1	4.604016 GHz	-53.54 dBm		
M4		1	7.105431 GHz	-53.23 dBm		
M5		1	9.731255 GHz	-53.64 dBm		

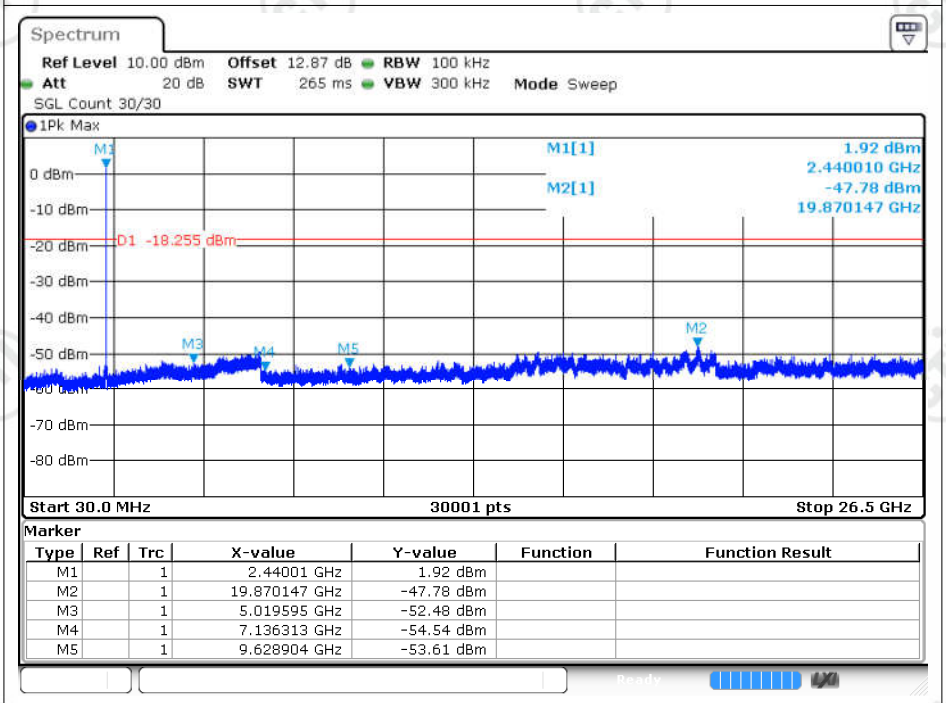
Date: 15.NOV.2023 15:13:07

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Date: 15.NOV.2023 15:14:09

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

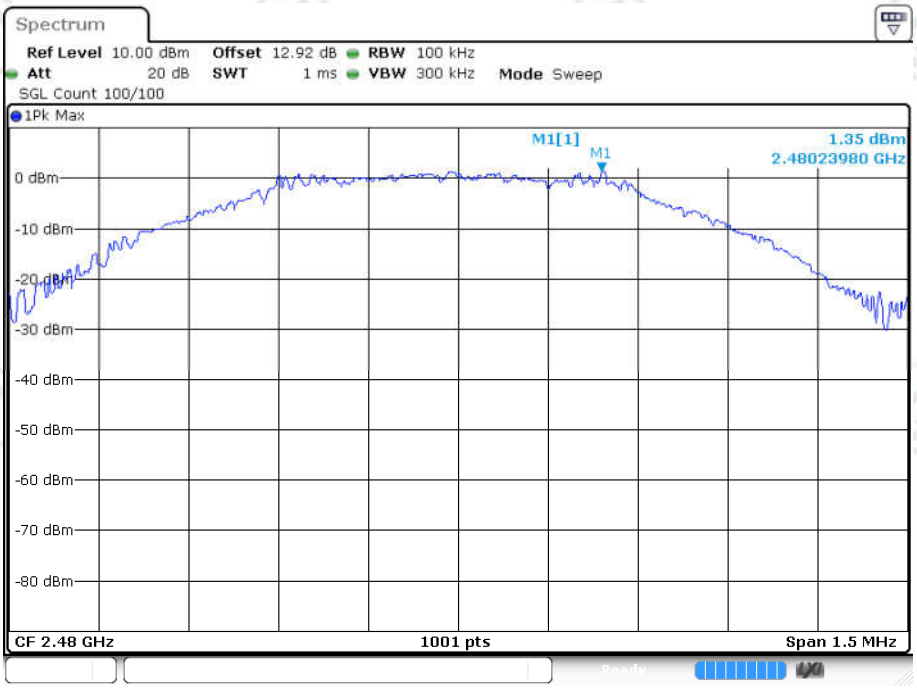


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.44001 GHz	1.92 dBm		
M2		1	19.870147 GHz	-47.78 dBm		
M3		1	5.019595 GHz	-52.48 dBm		
M4		1	7.136313 GHz	-54.54 dBm		
M5		1	9.628904 GHz	-53.61 dBm		

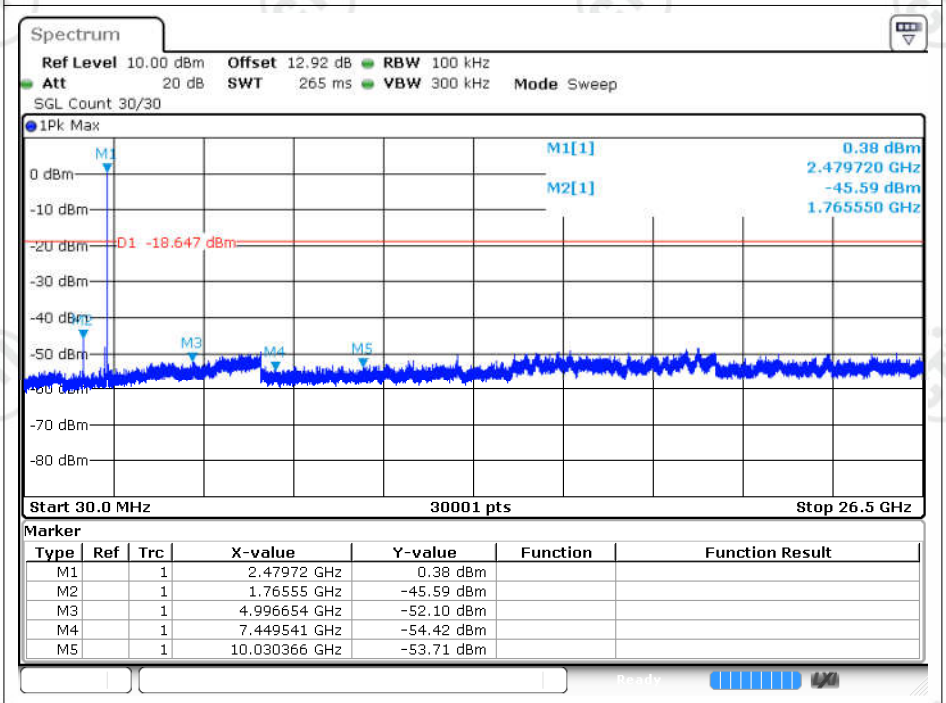
Date: 15.NOV.2023 15:14:39

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Date: 15.NOV.2023 15:16:42

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.47972 GHz	0.38 dBm		
M2		1	1.76555 GHz	-45.59 dBm		
M3		1	4.996654 GHz	-52.10 dBm		
M4		1	7.449541 GHz	-54.42 dBm		
M5		1	10.030366 GHz	-53.71 dBm		

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*** End of Report ***