Appendix: Bluetooth LE

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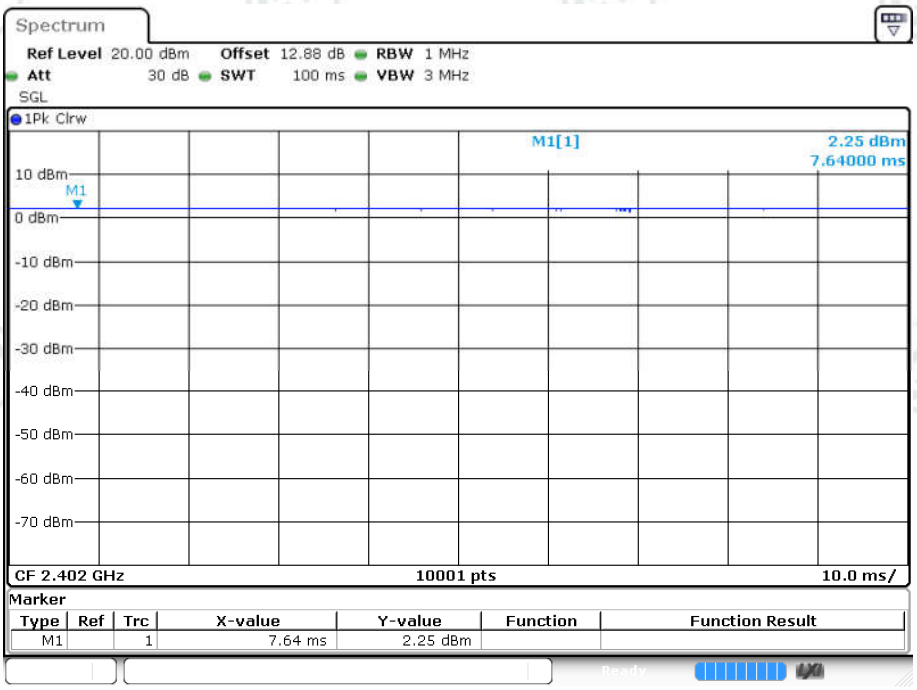
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	100	0	0
NVNT	BLE 1M	2440	Ant1	100	0	0
NVNT	BLE 1M	2480	Ant1	100	0	0

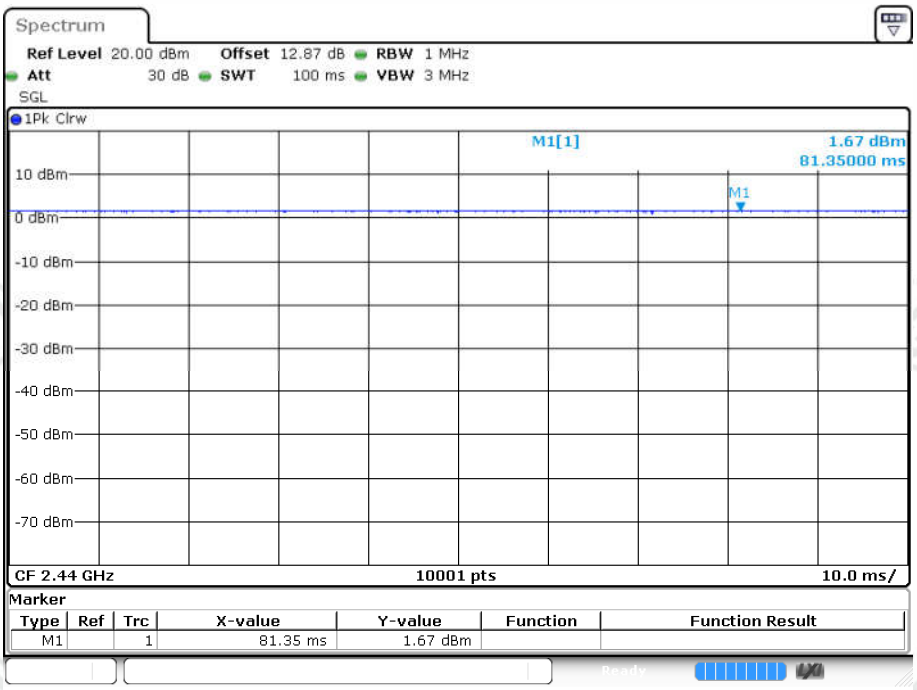
Test Graphs

Duty Cycle NVNT BLE 1M 2402MHz Ant1



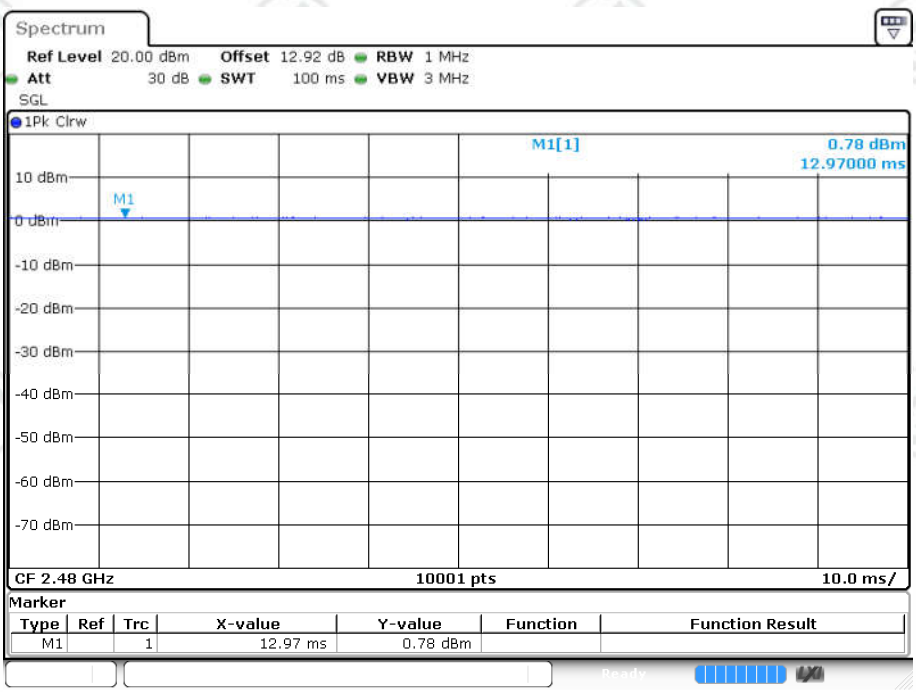
Date: 13.JAN.2023 20:22:35

Duty Cycle NVNT BLE 1M 2440MHz Ant1



Date: 13.JAN.2023 20:25:21

Duty Cycle NVNT BLE 1M 2480MHz Ant1

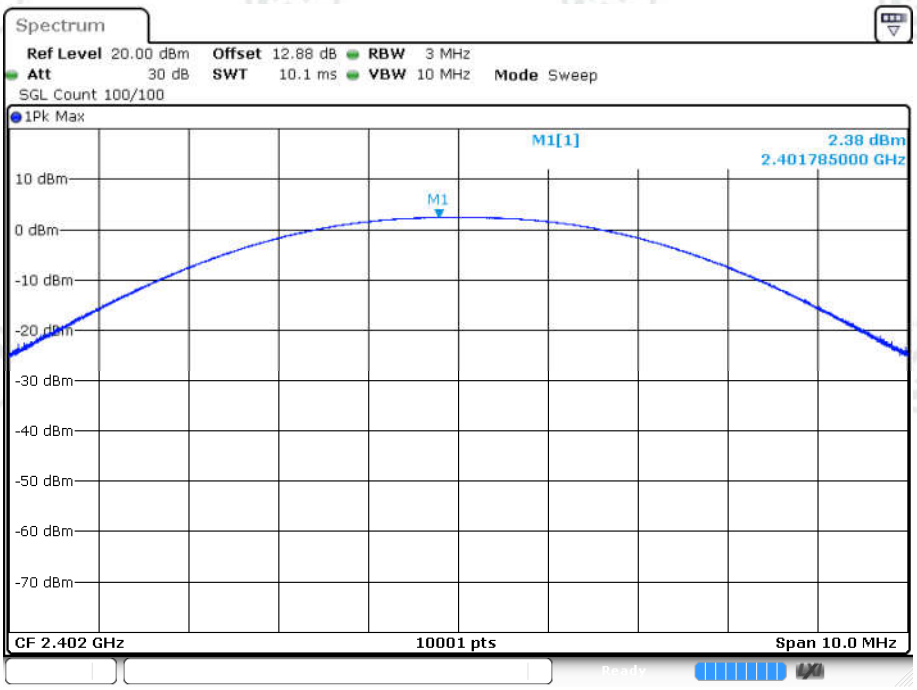


Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	2.38	30	Pass
NVNT	BLE 1M	2440	Ant1	1.8	30	Pass
NVNT	BLE 1M	2480	Ant1	0.94	30	Pass

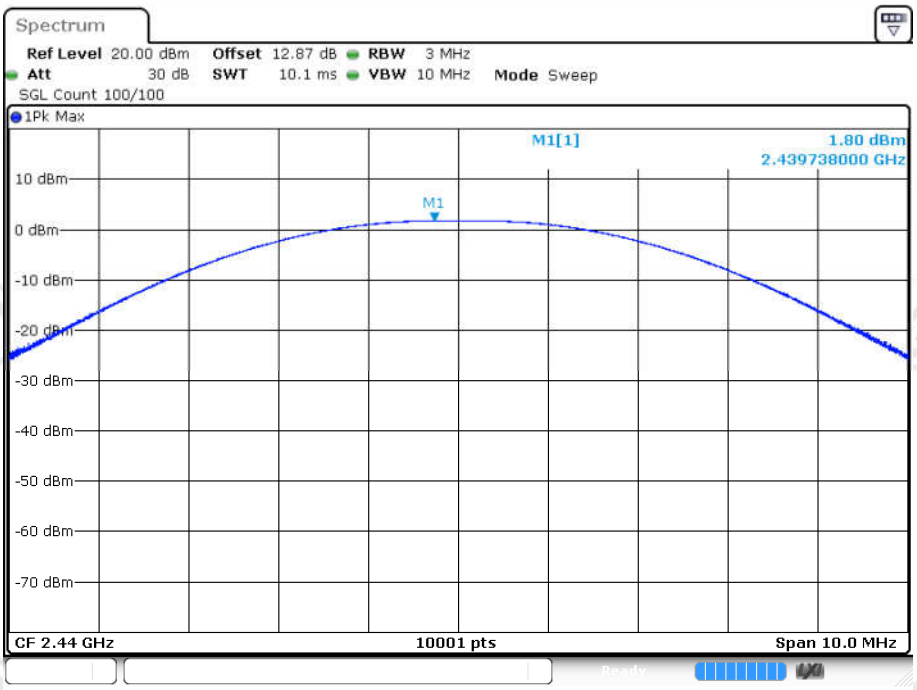
Test Graphs

Peak Power NVNT BLE 1M 2402MHz Ant1



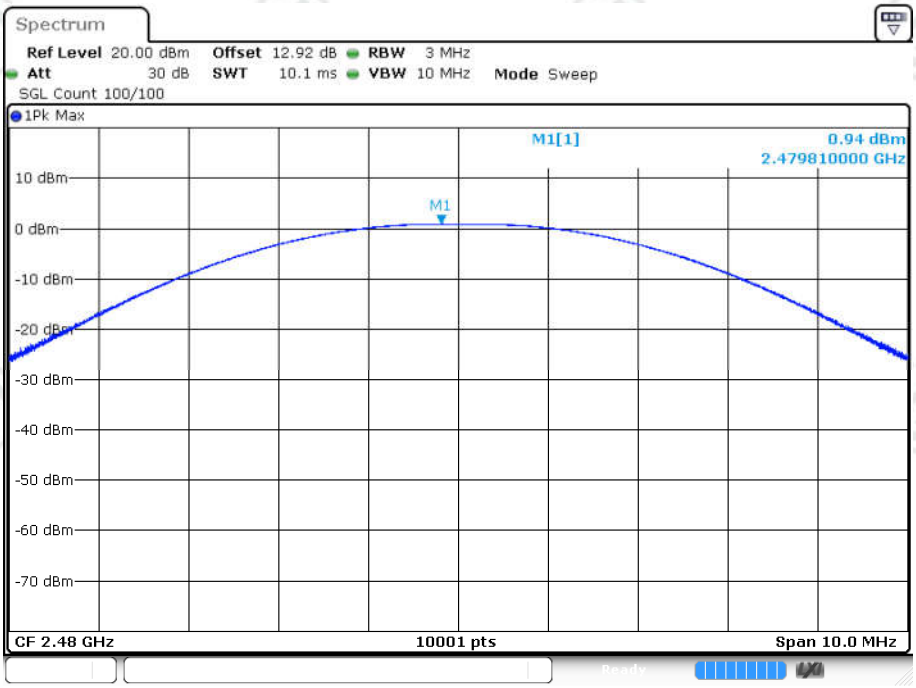
Date: 13.JAN.2023 20:22:40

Peak Power NVNT BLE 1M 2440MHz Ant1



Date: 13.JAN.2023 20:25:26

Peak Power NVNT BLE 1M 2480MHz Ant1

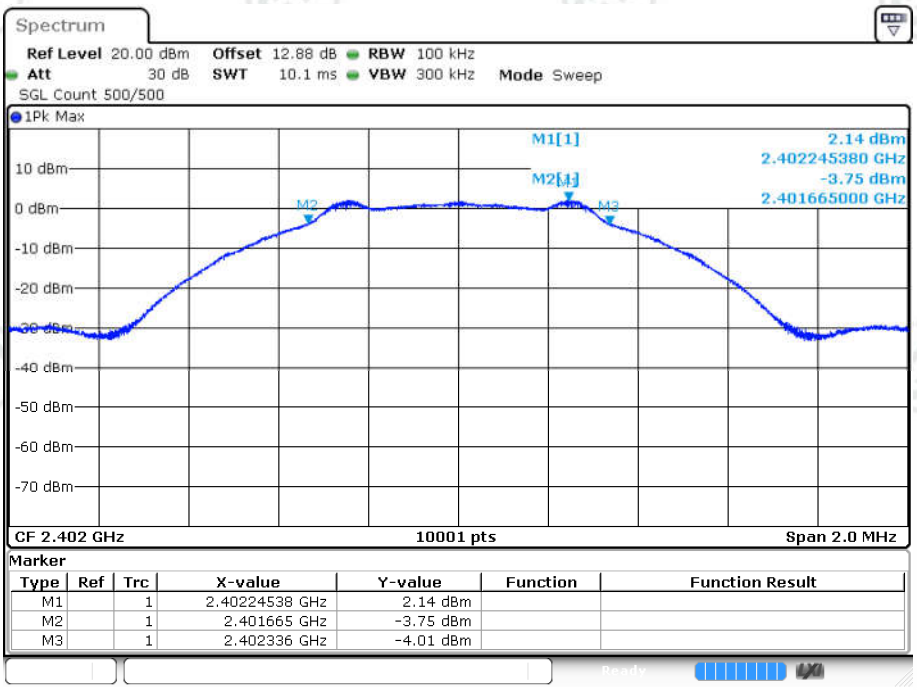


-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.671	0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.676	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.673	0.5	Pass

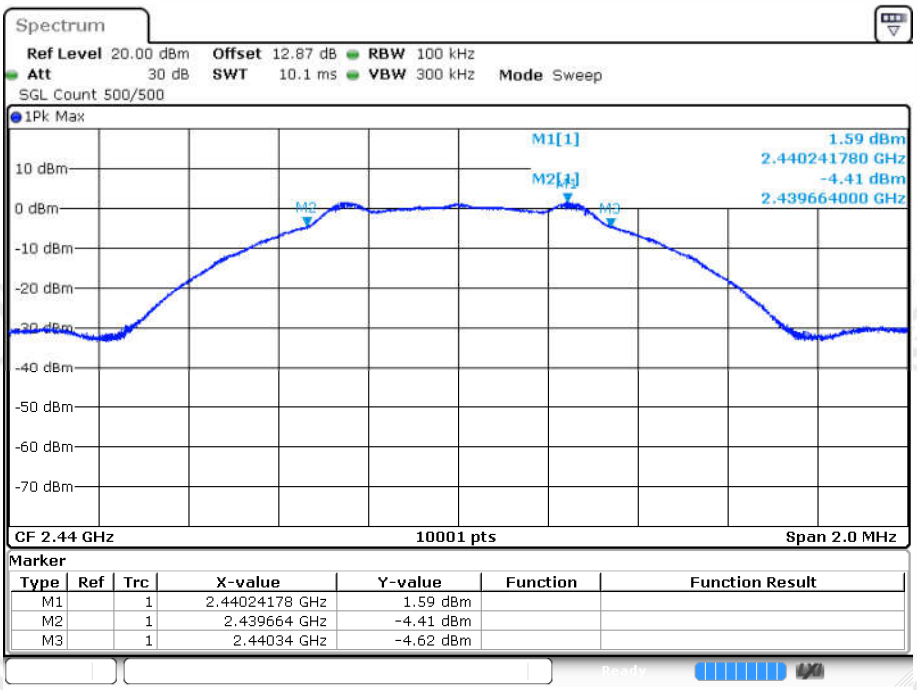
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



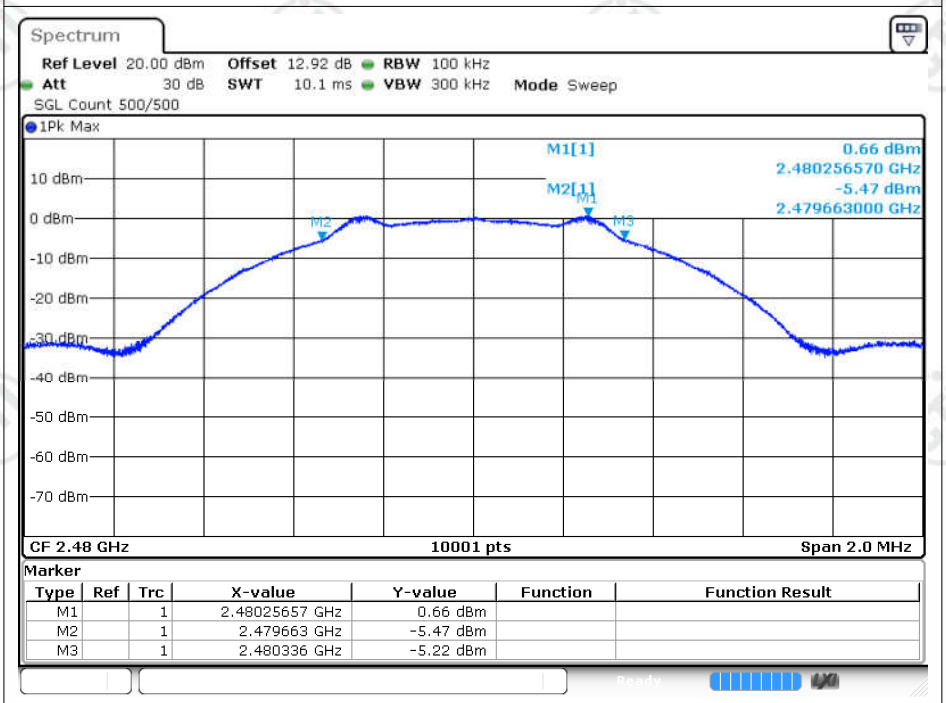
Date: 13.JAN.2023 20:23:02

-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



Date: 13.JAN.2023 20:25:48

-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1

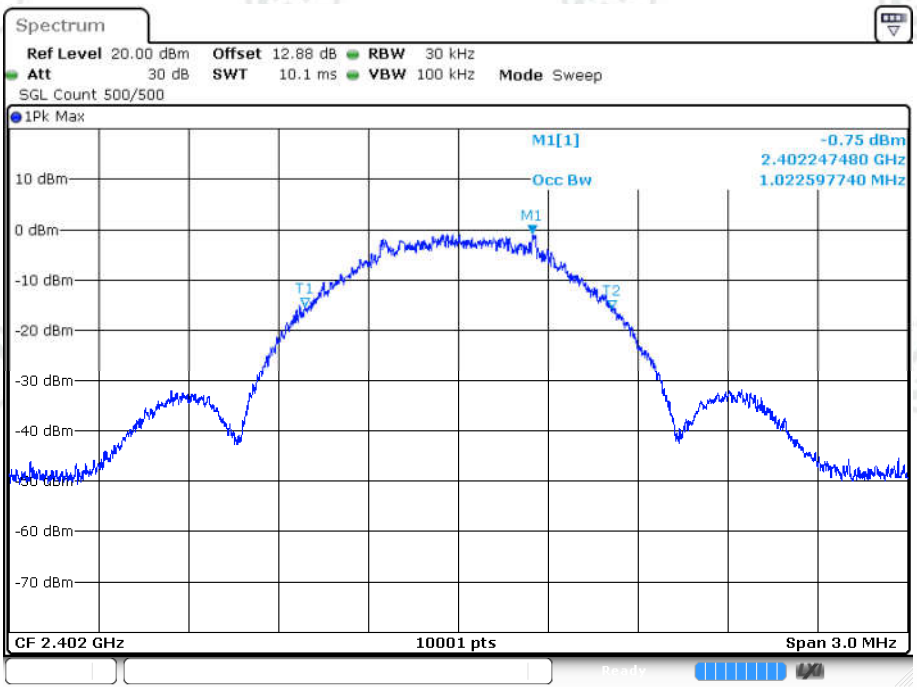


Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.023
NVNT	BLE 1M	2440	Ant1	1.025
NVNT	BLE 1M	2480	Ant1	1.017

Test Graphs

OBW NVNT BLE 1M 2402MHz Ant1



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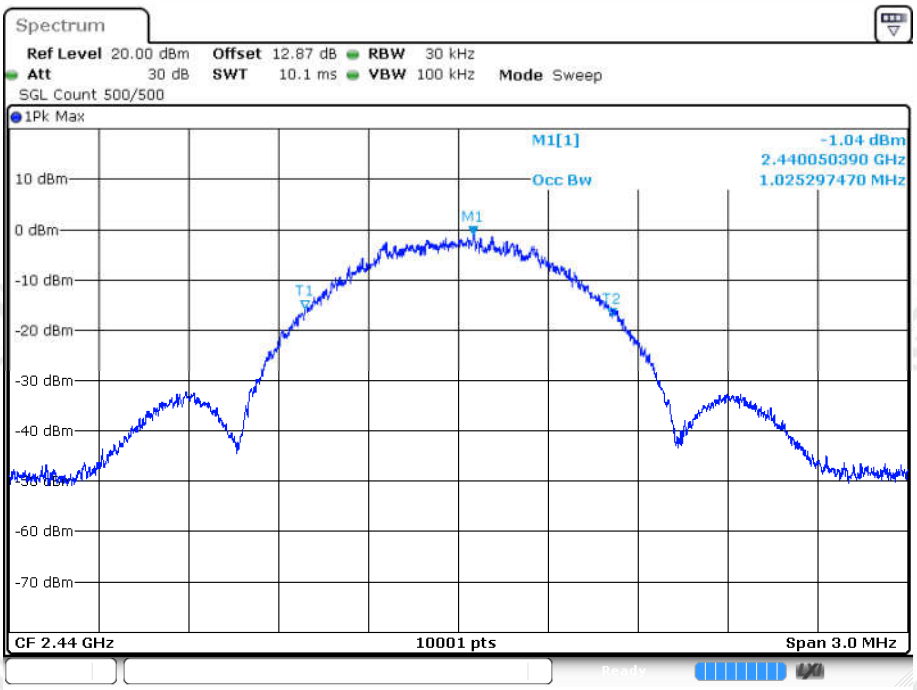
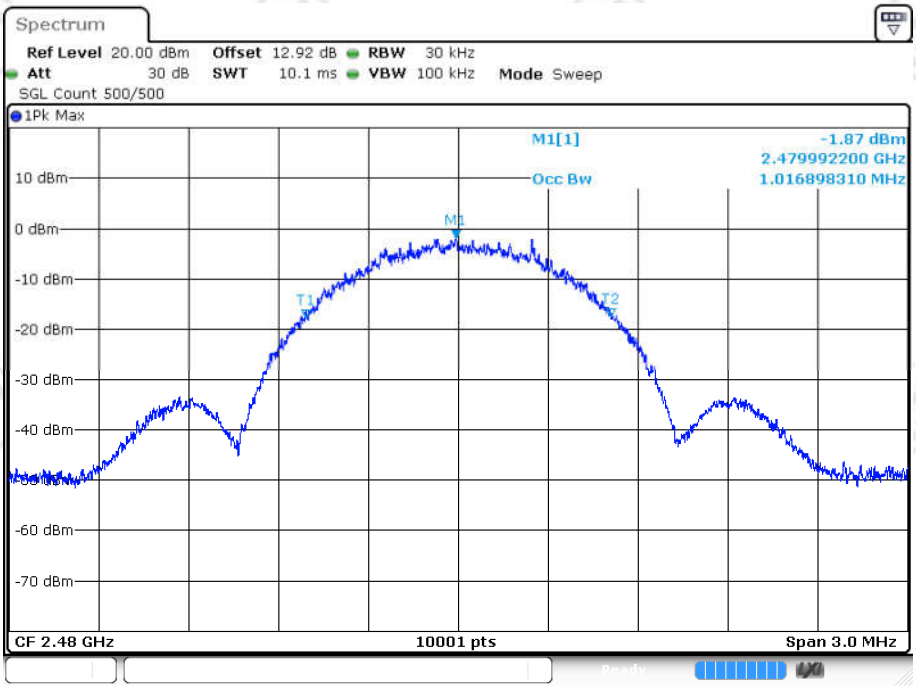
OBW NVNT BLE 1M 2440MHz Ant1



Date: 13.JAN.2023 20:25:37

OBW NVNT BLE 1M 2480MHz Ant1

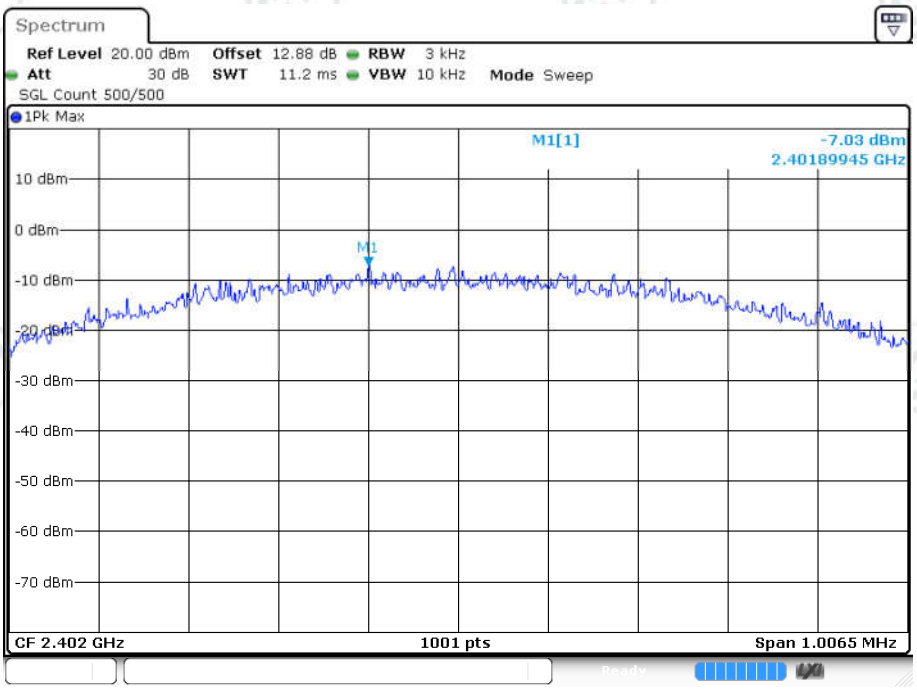


Maximum Power Spectral Density Level

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	-7.03	0	-7.03	8	Pass
NVNT	BLE 1M	2440	Ant1	-7.33	0	-7.33	8	Pass
NVNT	BLE 1M	2480	Ant1	-9.92	0	-9.92	8	Pass

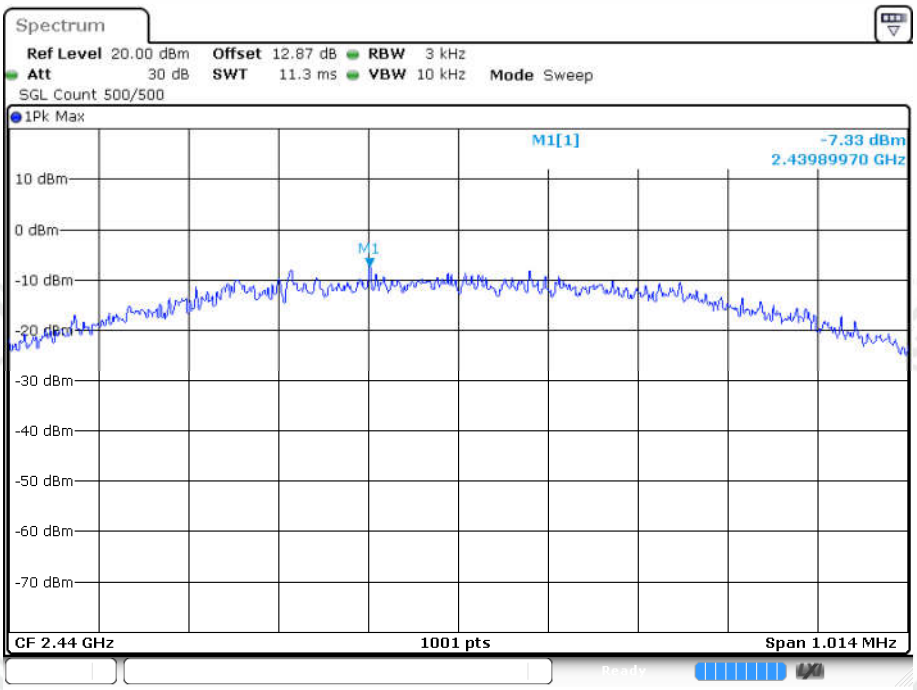
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



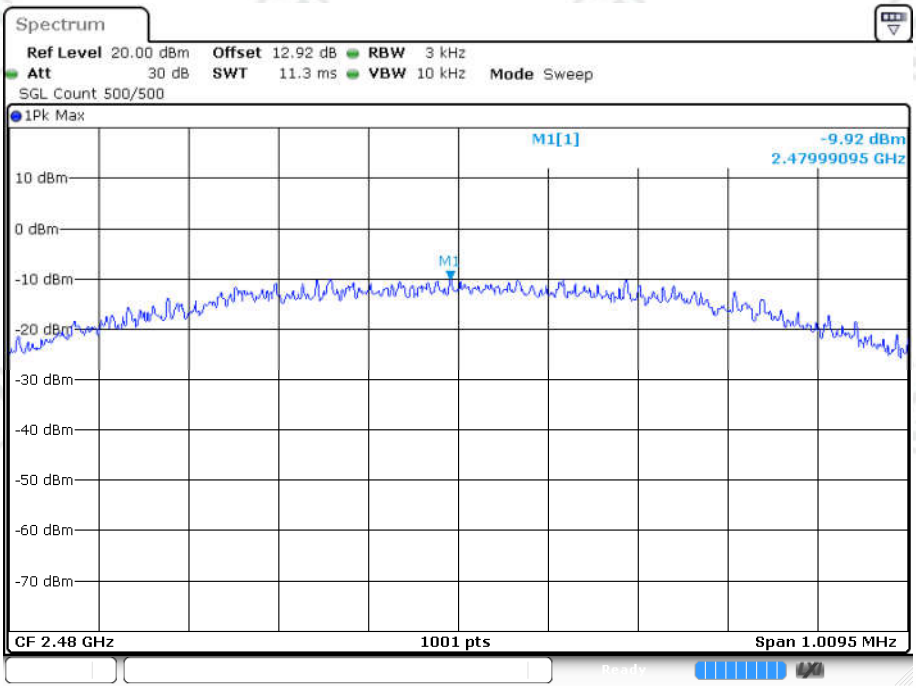
Date: 13.JAN.2023 20:23:20

PSD NVNT BLE 1M 2440MHz Ant1



Date: 13.JAN.2023 20:26:06

PSD NVNT BLE 1M 2480MHz Ant1

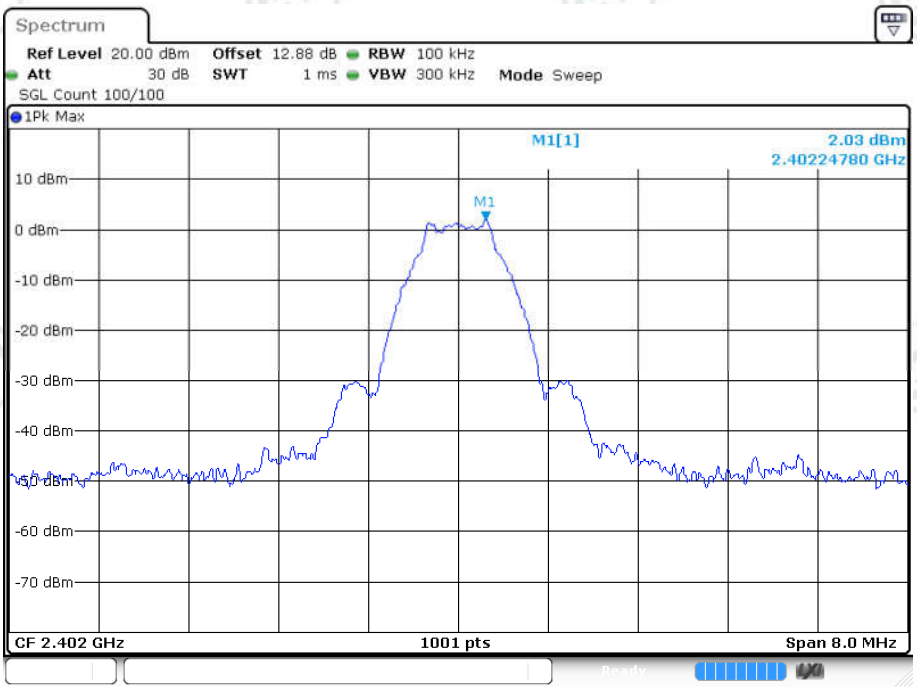


Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-45.89	-20	Pass
NVNT	BLE 1M	2480	Ant1	-44.81	-20	Pass

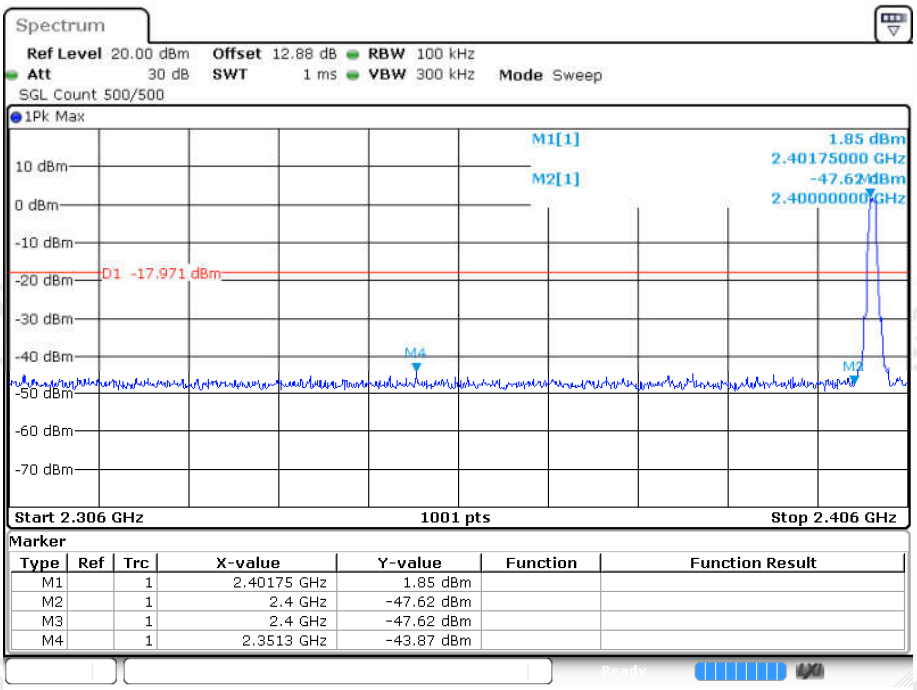
Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



Date: 13.JAN.2023 20:23:23

Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

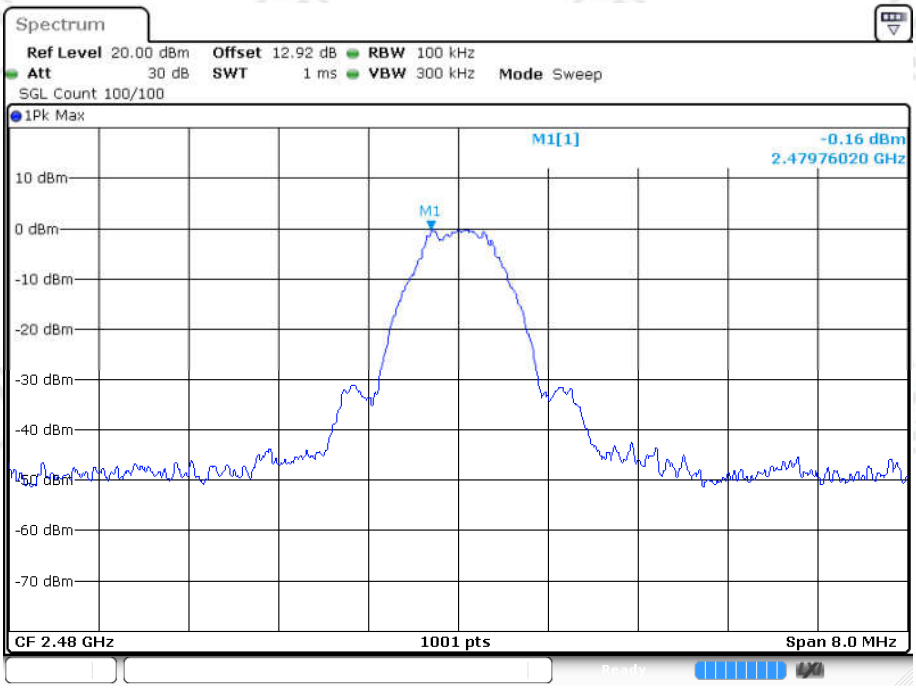


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40175 GHz	1.85 dBm		
M2		1	2.4 GHz	-47.62 dBm		
M3		1	2.4 GHz	-47.62 dBm		
M4		1	2.3513 GHz	-43.87 dBm		

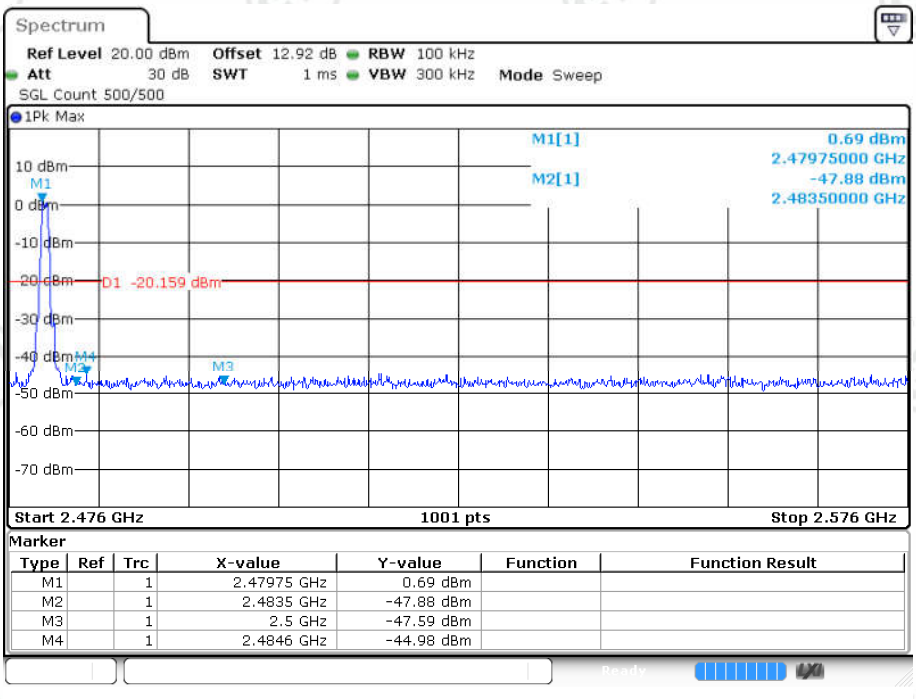
Date: 13.JAN.2023 20:23:26

Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Date: 13.JAN.2023 20:28:17

Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.47975 GHz	0.69 dBm		
M2		1	2.4835 GHz	-47.88 dBm		
M3		1	2.5 GHz	-47.59 dBm		
M4		1	2.4846 GHz	-44.98 dBm		

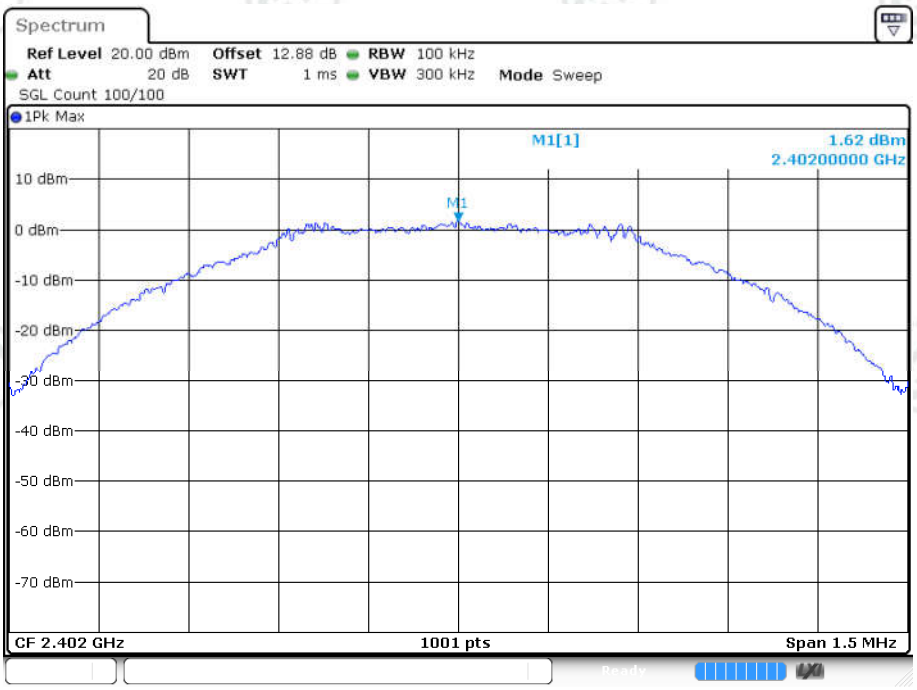
Date: 13.JAN.2023 20:28:19

Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-49.98	-20	Pass
NVNT	BLE 1M	2440	Ant1	-49.23	-20	Pass
NVNT	BLE 1M	2480	Ant1	-44.75	-20	Pass

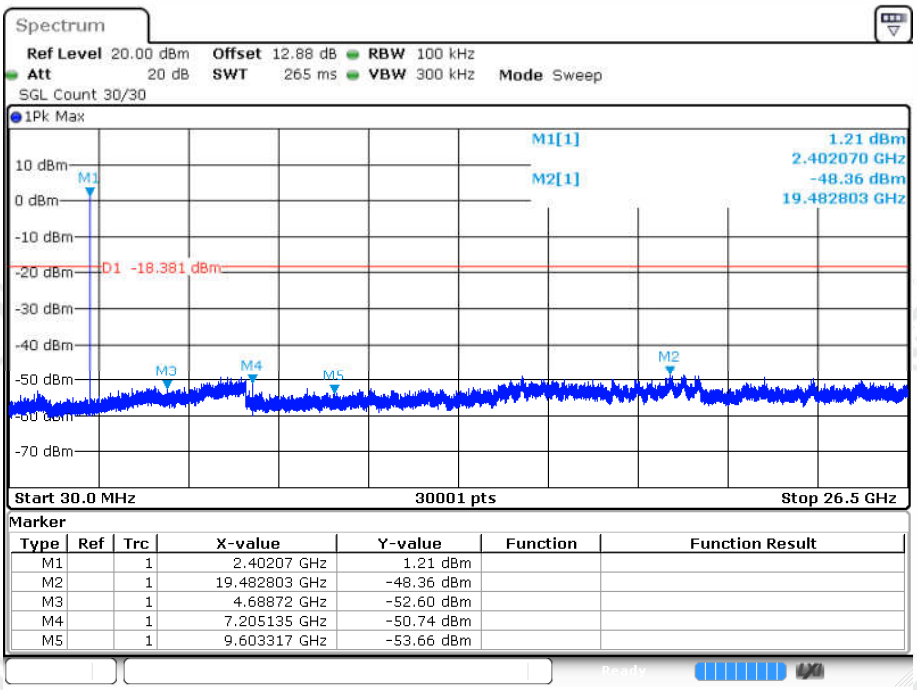
Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



Date: 13.JAN.2023 20:23:30

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

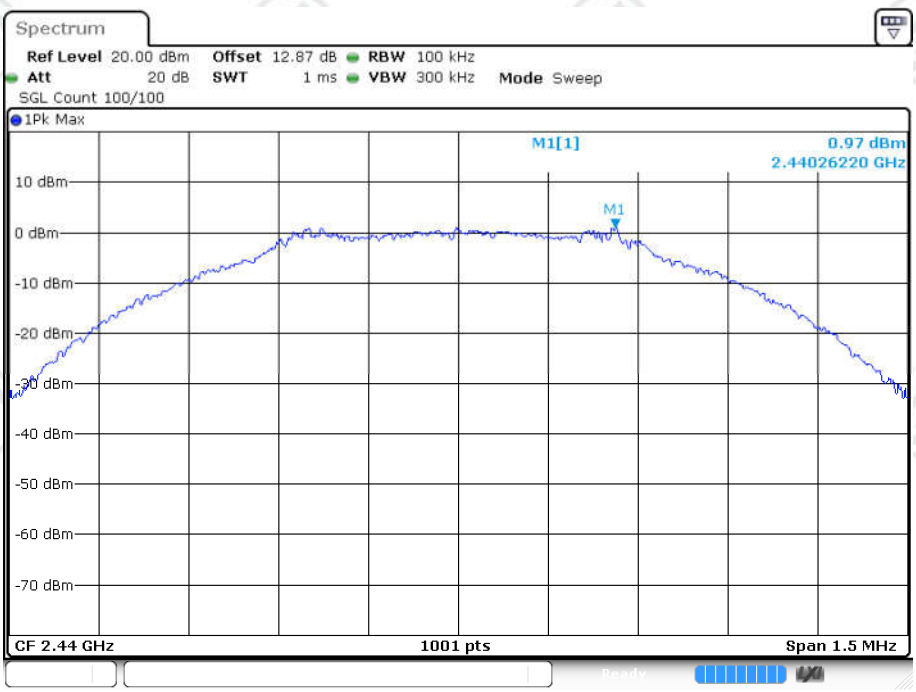


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40207 GHz	1.21 dBm		
M2		1	19.482803 GHz	-48.36 dBm		
M3		1	4.68872 GHz	-52.60 dBm		
M4		1	7.205135 GHz	-50.74 dBm		
M5		1	9.603317 GHz	-53.66 dBm		

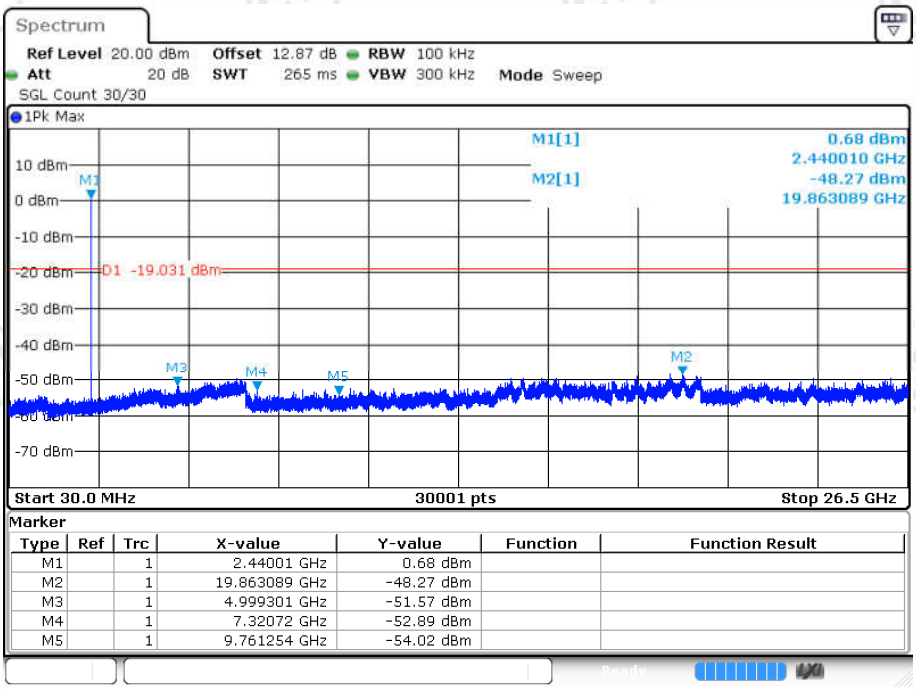
Date: 13.JAN.2023 20:23:58

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



Date: 13.JAN.2023 20:26:08

Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

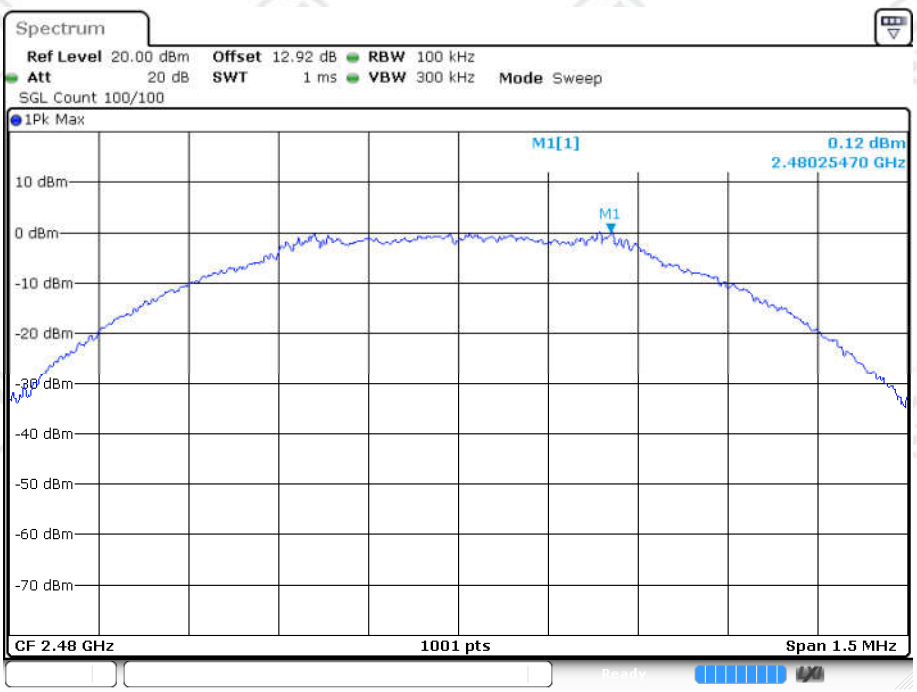


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.44001 GHz	0.68 dBm		
M2		1	19.863089 GHz	-48.27 dBm		
M3		1	4.999301 GHz	-51.57 dBm		
M4		1	7.32072 GHz	-52.89 dBm		
M5		1	9.761254 GHz	-54.02 dBm		

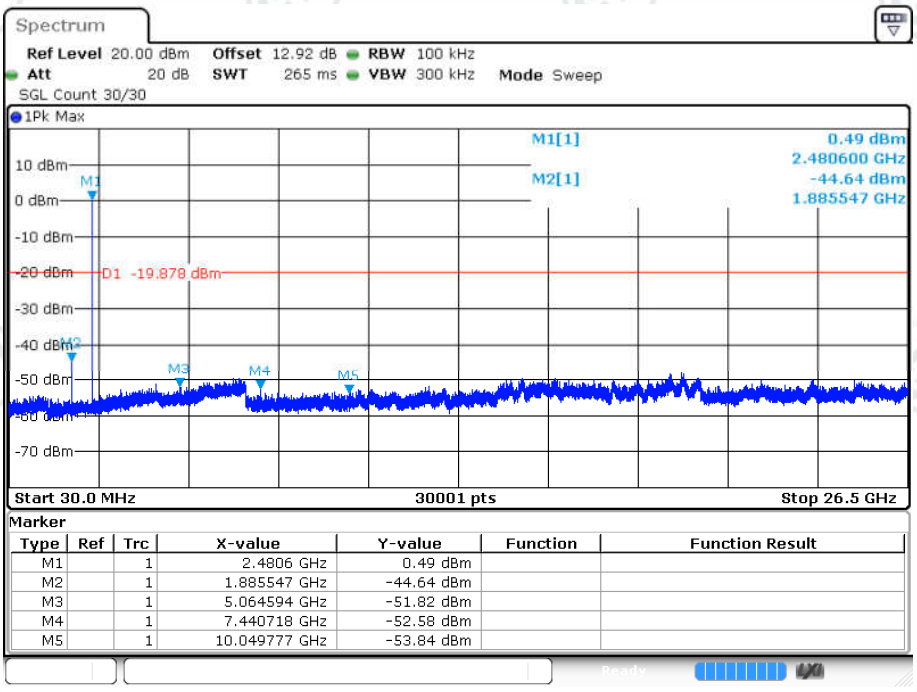
Date: 13.JAN.2023 20:26:37

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Date: 13.JAN.2023 20:28:22

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4806 GHz	0.49 dBm		
M2		1	1.885547 GHz	-44.64 dBm		
M3		1	5.064594 GHz	-51.82 dBm		
M4		1	7.440718 GHz	-52.58 dBm		
M5		1	10.049777 GHz	-53.84 dBm		

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*** End of Report ***