

FCC Appendix RF Test Data for BLE

Product Name: Automotive Diagnostic Tool

Test Model: VD700

Environmental Conditions

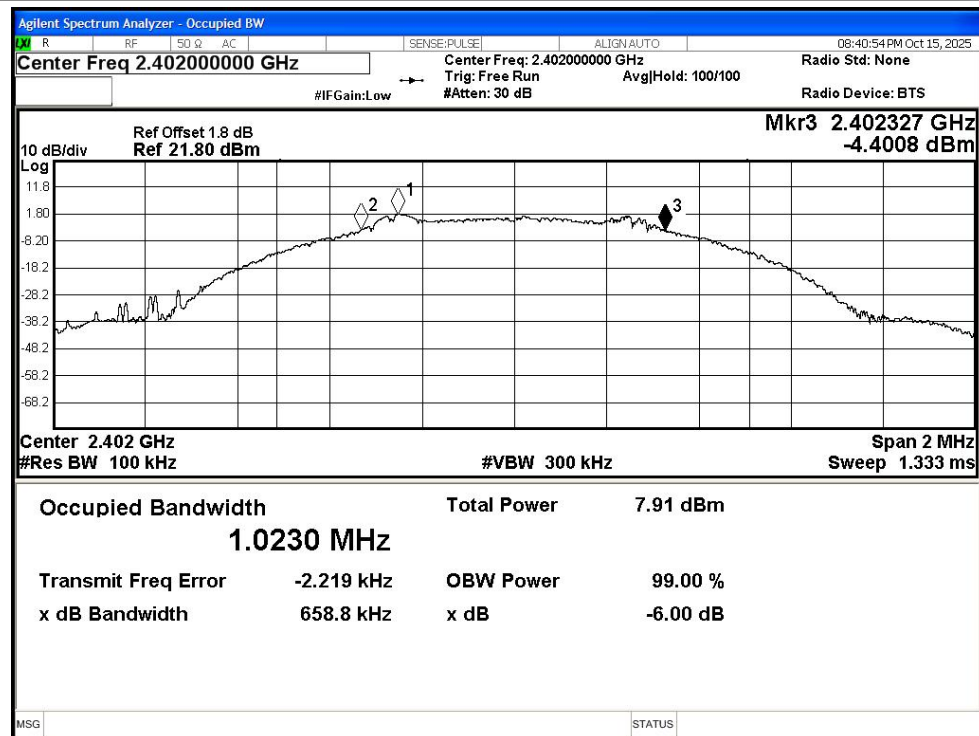
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -6dB Bandwidth

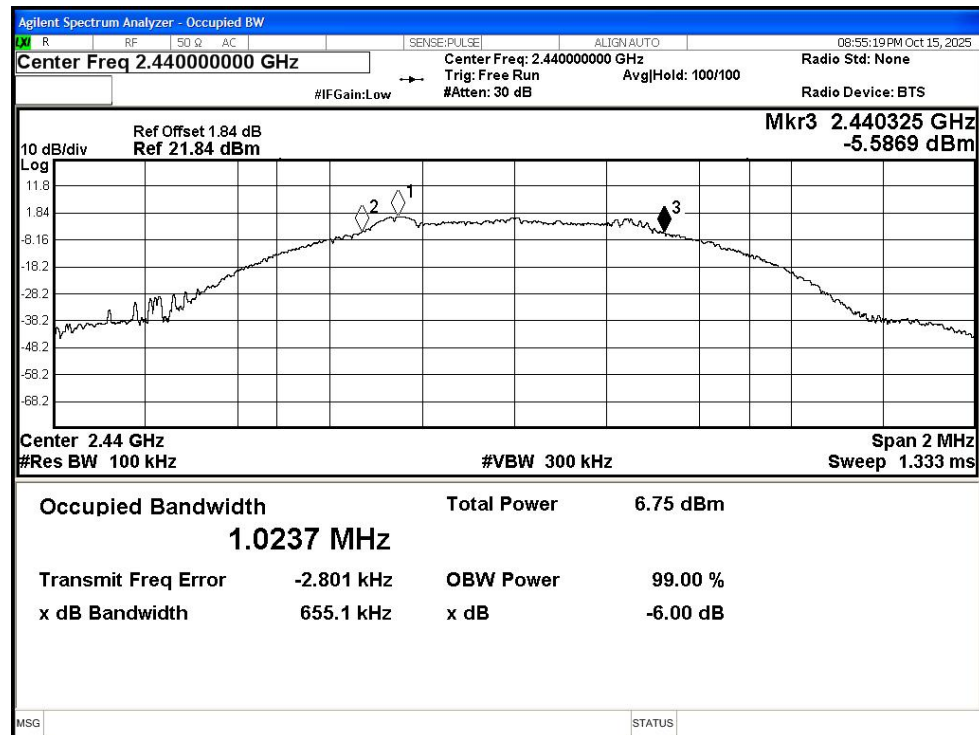
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.659	≥ 0.5	Pass
NVNT	BLE 1M	2440	Ant1	0.655	≥ 0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.649	≥ 0.5	Pass

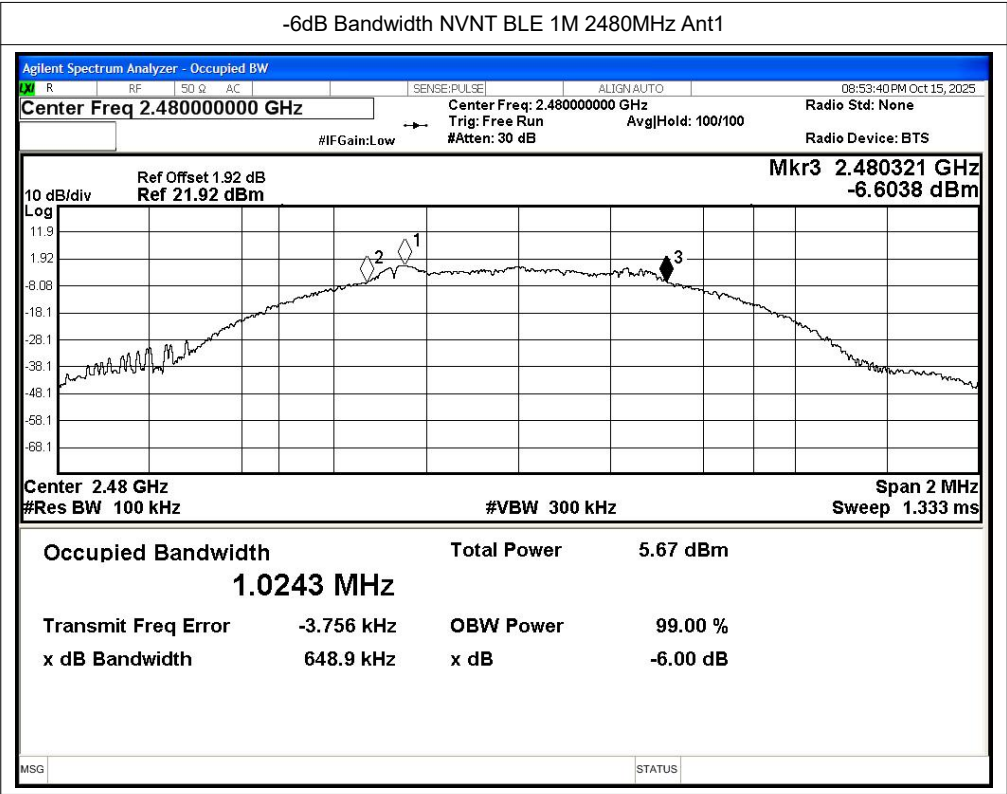
Test Graphs

-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1





2. Maximum Conducted Output Power

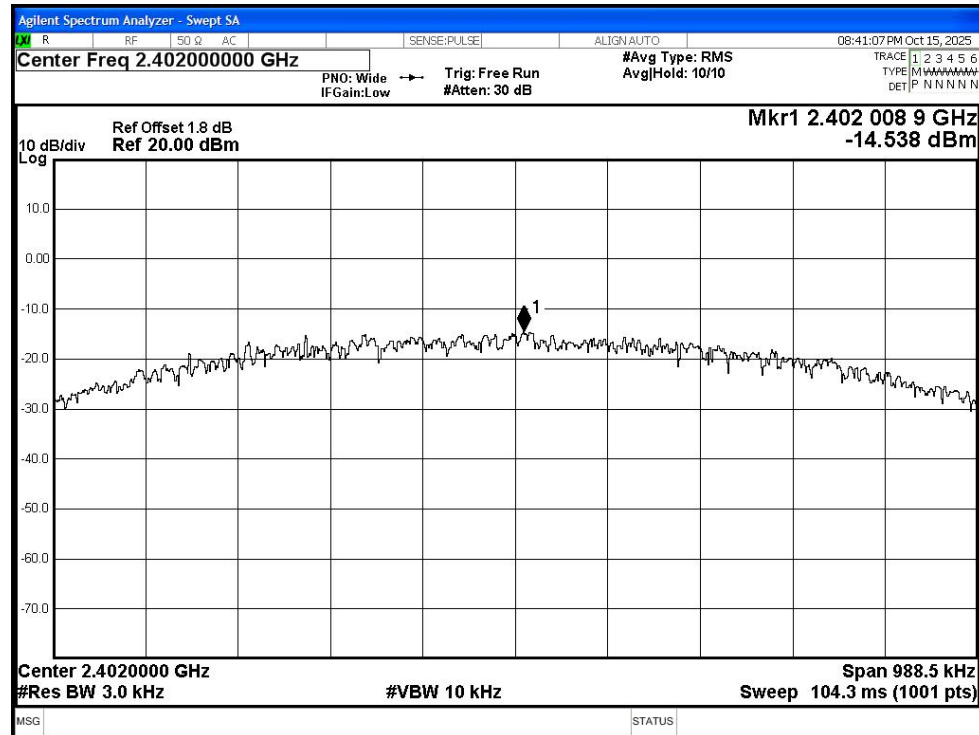
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	2.06	30	Pass
NVNT	BLE 1M	2440	Ant1	0.94	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.17	30	Pass

3. Maximum Power Spectral Density Level

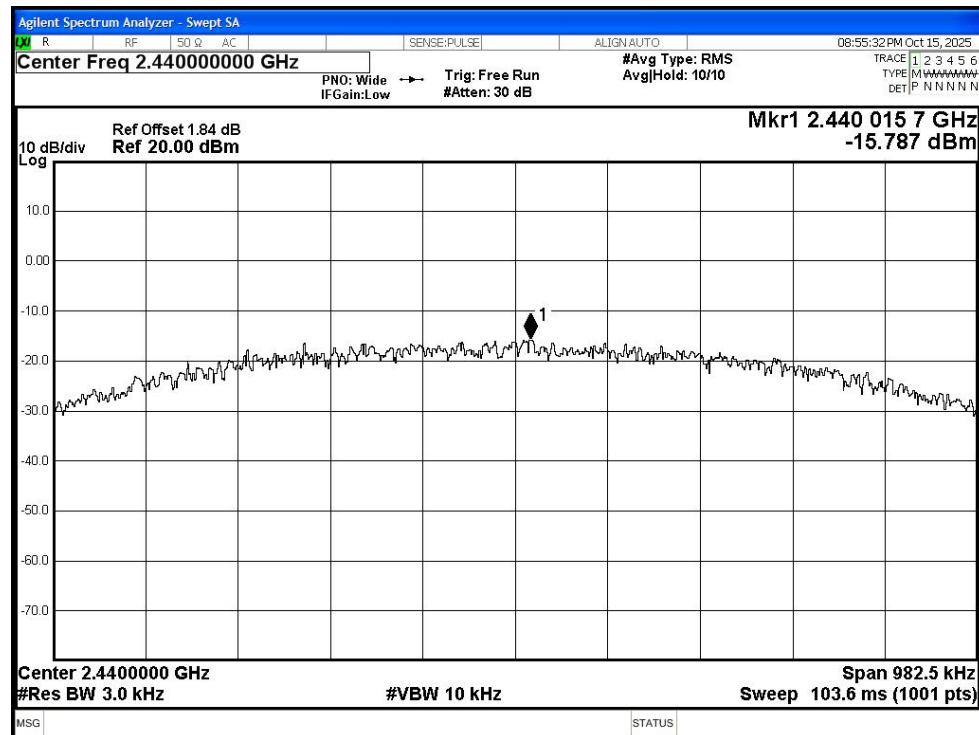
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	Ant1	-14.54	8	Pass
NVNT	BLE 1M	2440	Ant1	-15.79	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.86	8	Pass

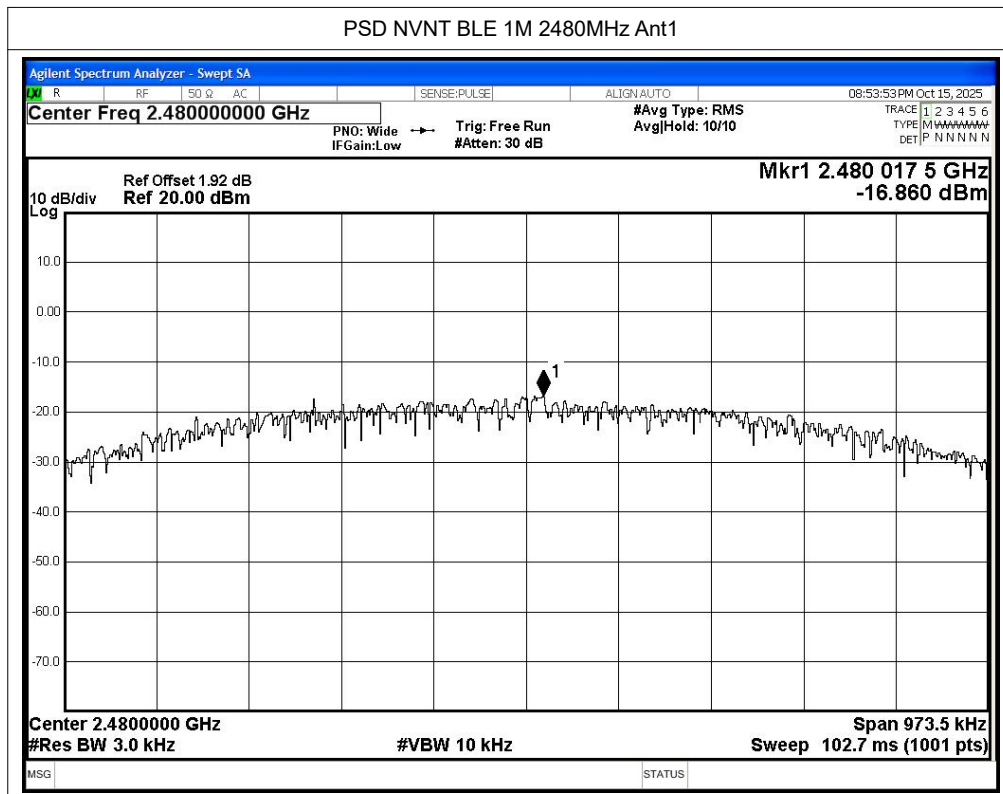
Test Graphs

PSD NVNT BLE 1M 2402MHz Ant1



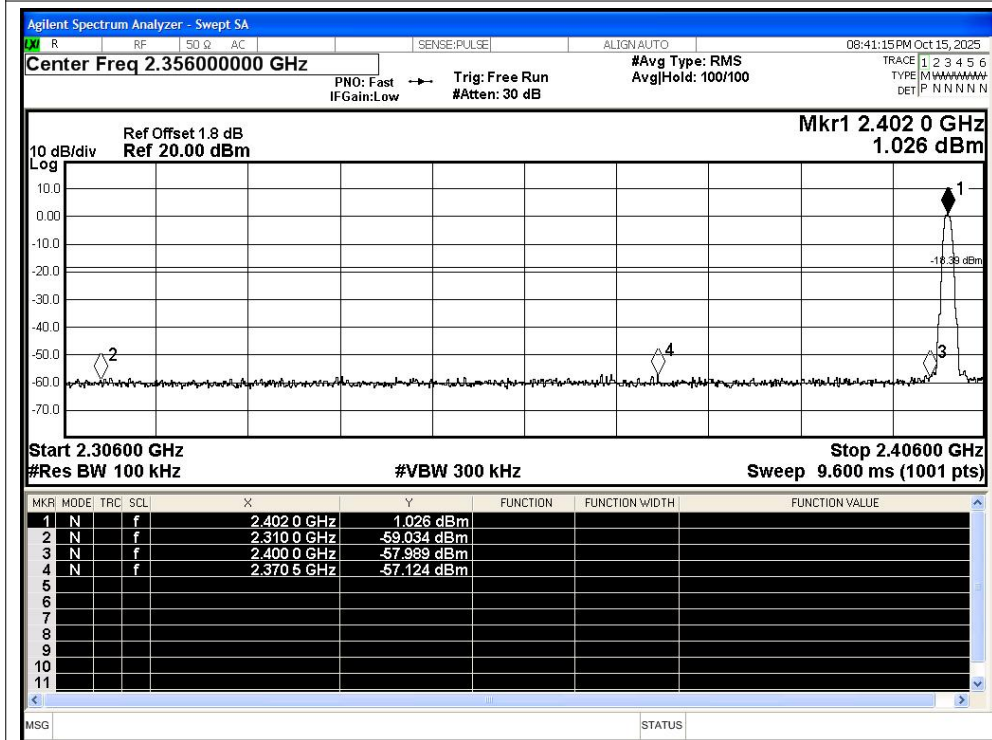
PSD NVNT BLE 1M 2440MHz Ant1



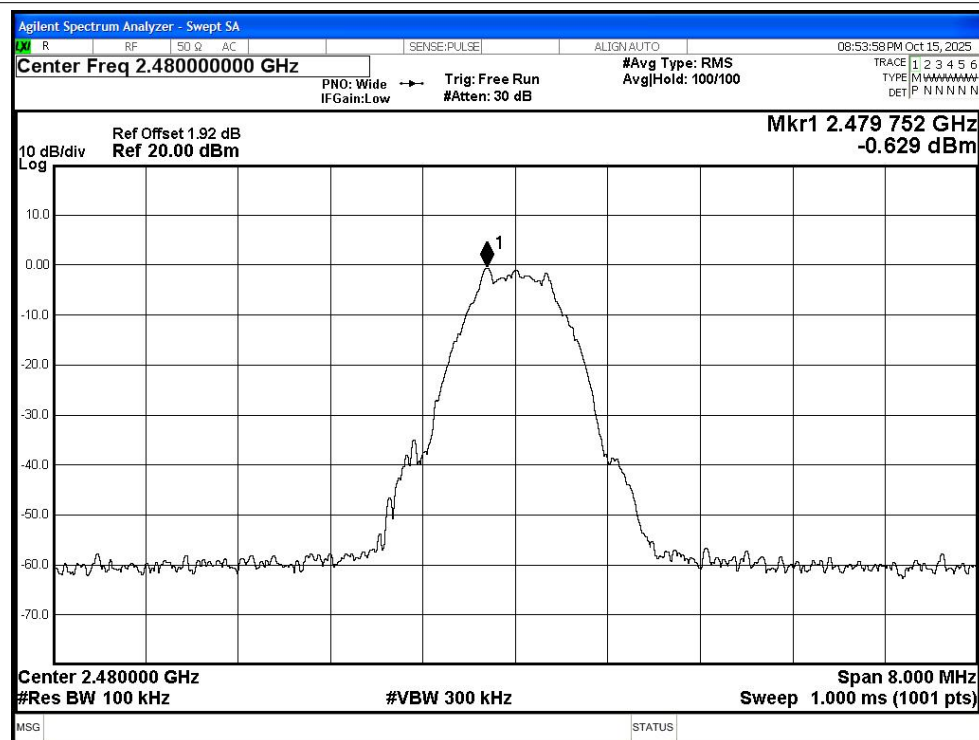


4. Band Edge

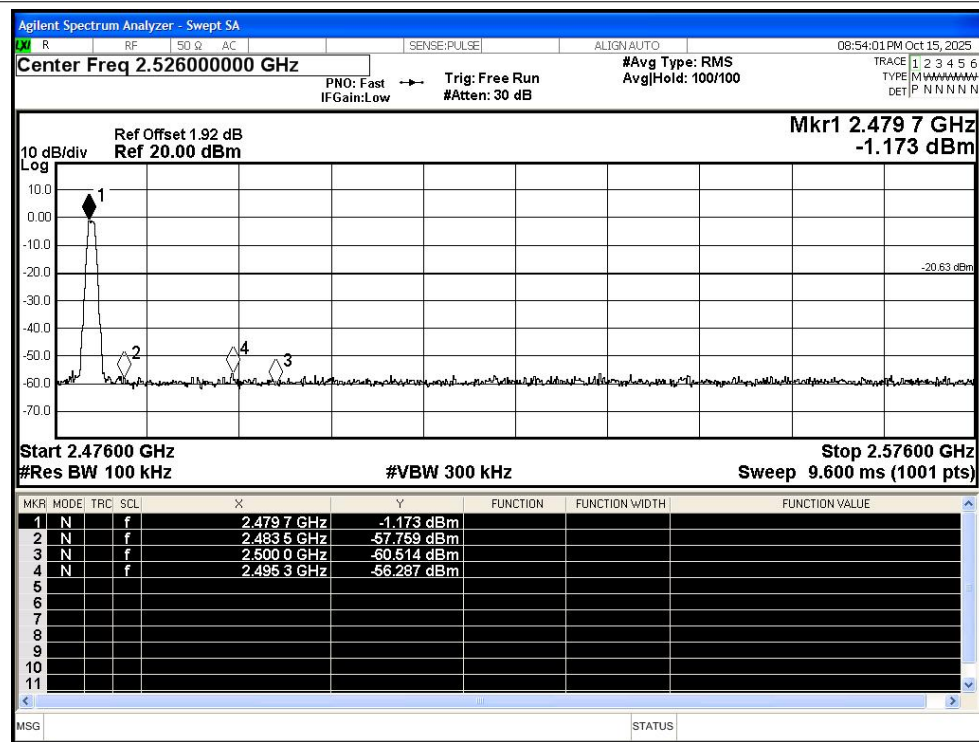
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-58.74	-20	Pass
NVNT	BLE 1M	2480	Ant1	-55.66	-20	Pass
NVNT	BLE 2M	2402	Ant1	-45.17	-20	Pass
NVNT	BLE 2M	2480	Ant1	-53.16	-20	Pass



Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



Band Edge NVNT BLE 1M 2480MHz Ant1 Emission

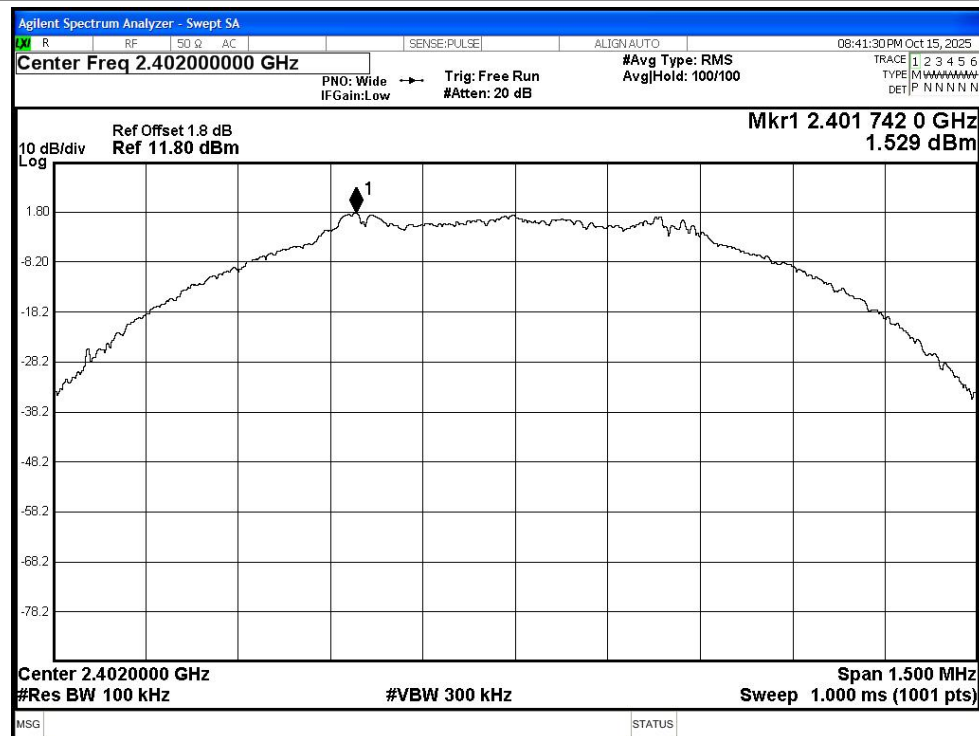


5. Conducted RF Spurious Emission

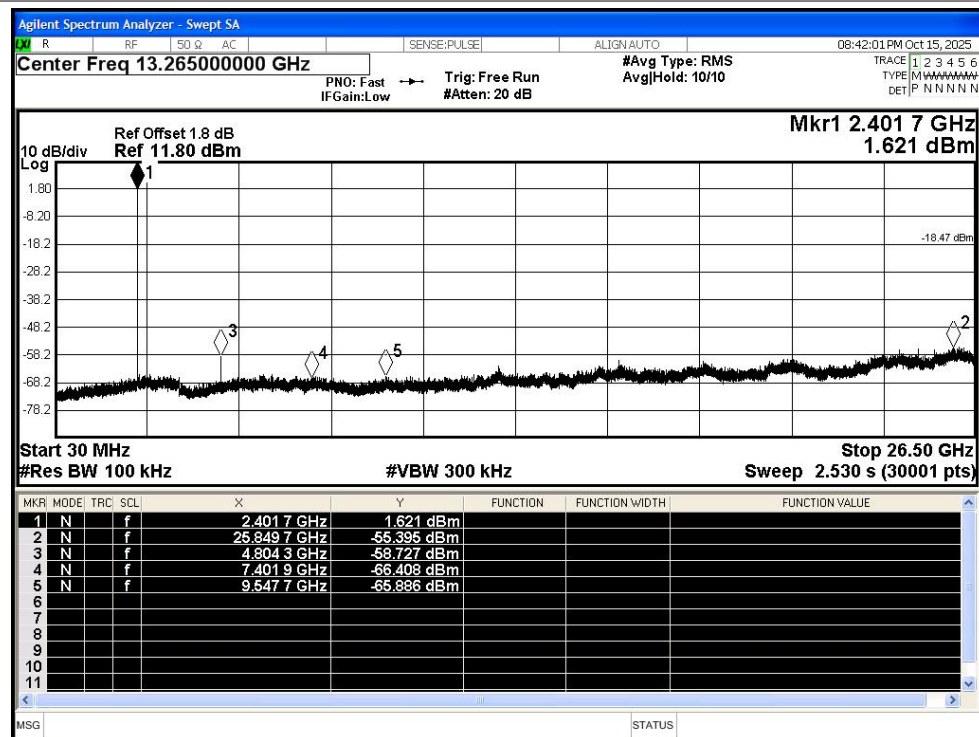
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-56.92	-20	Pass
NVNT	BLE 1M	2440	Ant1	-55.38	-20	Pass
NVNT	BLE 1M	2480	Ant1	-54.34	-20	Pass

Test Graphs

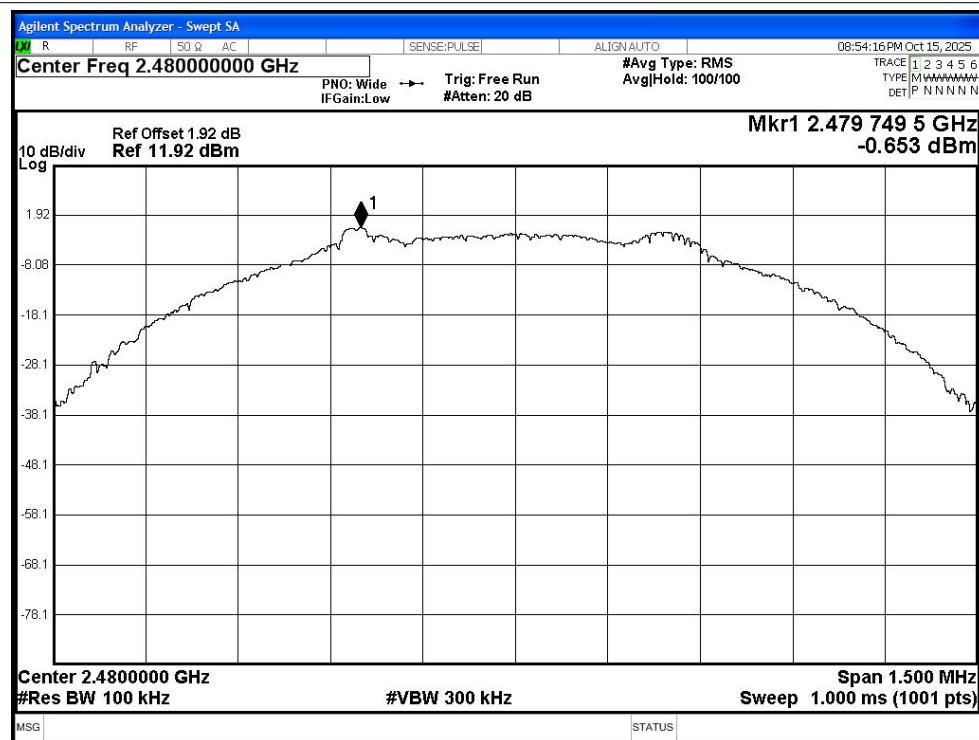
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



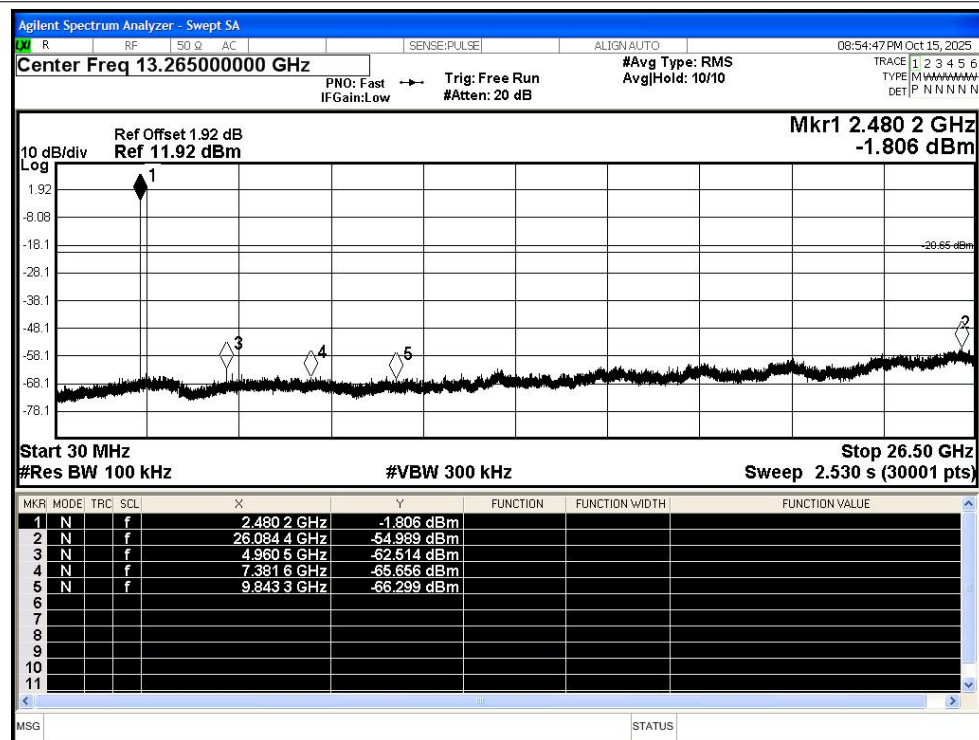
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



6. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	87.39	0.59	0.61
NVNT	BLE 1M	2440	Ant1	87.39	0.59	0.61
NVNT	BLE 1M	2480	Ant1	87.39	0.59	0.61

Agilent Spectrum Analyzer - Swept SA

08:55:06 PM Oct 15, 2025

Center Freq 2.440000000 GHz

Ref Offset 1.84 dB
Ref 20.00 dBm

PN0: Fast IF Gain: Low

Trig: Free Run
#Atten: 30 dB

#Avg Type: RMS

TRACE 1 2 3 4 5 6
TYPE W W W W W W
DET P N N N N N

10 dB/div
Log

Mkr1 284.5 μ s
-17.70 dBm

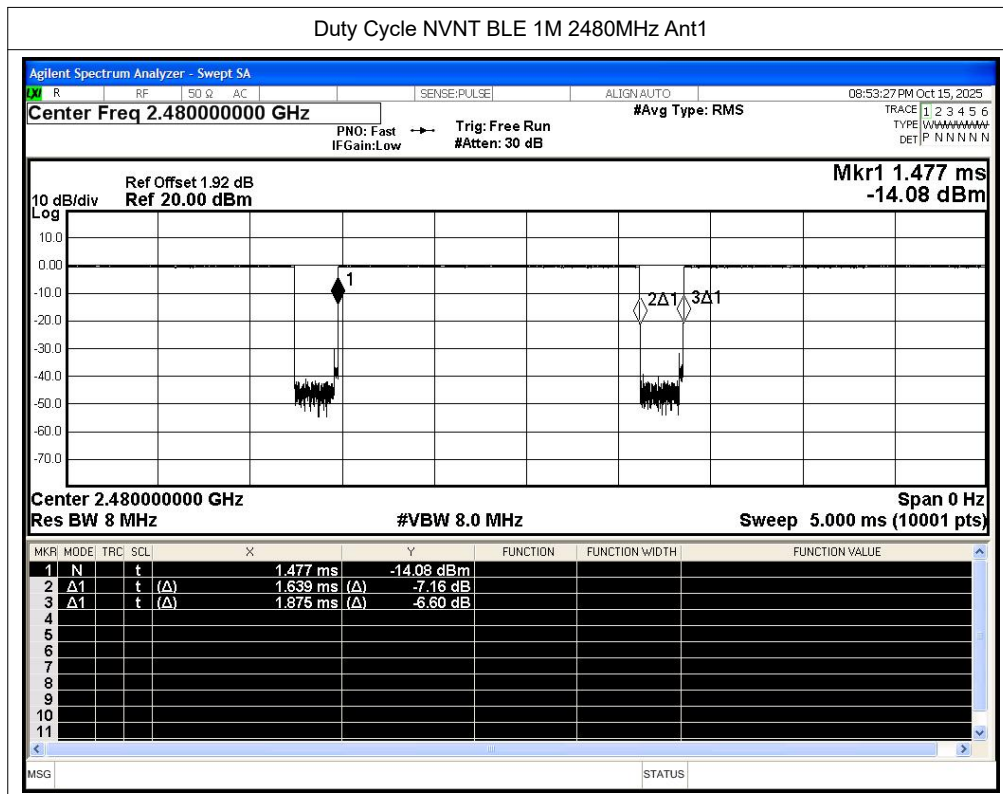
Center 2.440000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 5.000 ms (10001 pts)

Span 0 Hz

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		t	284.5 μ s	-17.70 dBm			
2	Δ 1		t (Δ)	1.639 ms (Δ)	-5.32 dB			
3	Δ 1		t (Δ)	1.876 ms (Δ)	7.82 dB			
4								
5								
6								
7								
8								
9								
10								
11								

MSG

STATUS



7. Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1M	2402	Ant1	2310	-51.3	3.27	-	47.23	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2310	-58.9	3.27	0.59	40.22	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2354.064	-47.19	3.27	-	51.34	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2384.016	-58.15	3.27	0.59	40.97	Average	54	Pass
NVNT	BLE 1M	2402	Ant1	2390	-50.5	3.27	-	48.03	Peak	74	Pass
NVNT	BLE 1M	2402	Ant1	2390	-58.63	3.27	0.59	40.49	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-48.56	3.27	-	49.97	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.5	-57.76	3.27	0.59	41.36	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2485.36	-45.71	3.27	-	52.82	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2483.752	-57.41	3.27	0.59	41.71	Average	54	Pass
NVNT	BLE 1M	2480	Ant1	2500	-49.97	3.27	-	48.56	Peak	74	Pass
NVNT	BLE 1M	2480	Ant1	2500	-57.83	3.27	0.59	41.29	Average	54	Pass

