

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Wireless Remote Controller
Test Model:	CG546X
Sample ID:	HC-C-202508-0175-01-01
Environmental Conditions	
Temperature:	25.6℃
Relative Humidity:	52.6%
Test Voltage:	DC 3.7V
Test Engineer:	Gold zhang
Note: For a more detailed features description, please refer to the report TBR-C-202508-0175-12 The report only show the worst case data.	

Contents

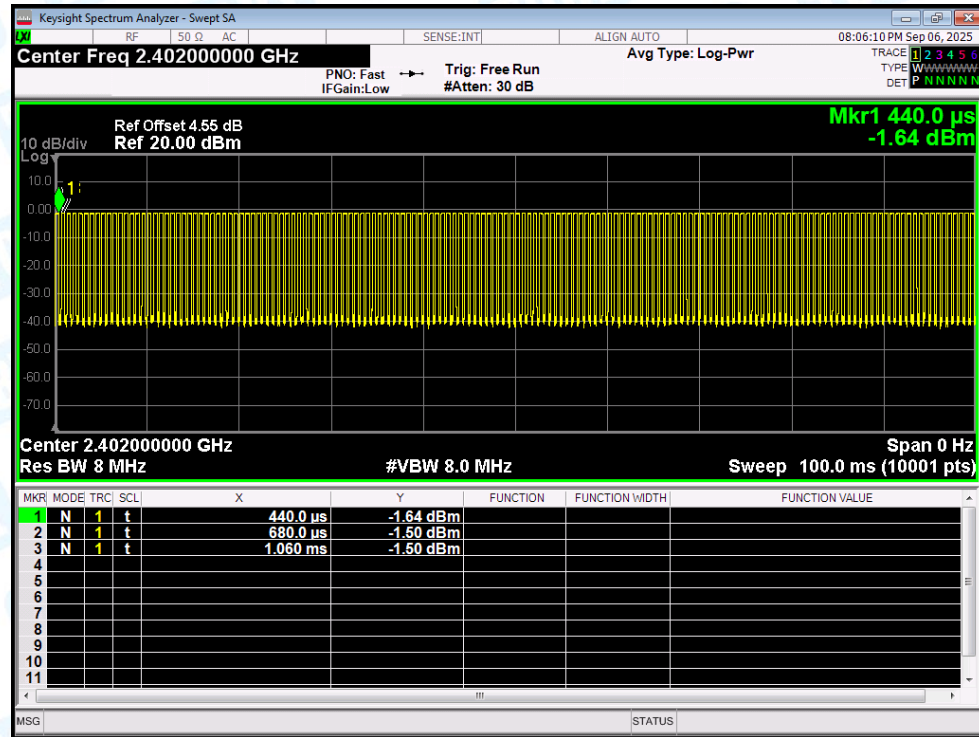
1. Duty Cycle	3
2. Maximum Conducted Output Power	7
3. -6dB Bandwidth	11
4. Occupied Channel Bandwidth	15
5. Maximum Power Spectral Density Level	19
5. Band Edge	23
6. Conducted RF Spurious Emission	28

1. Duty Cycle

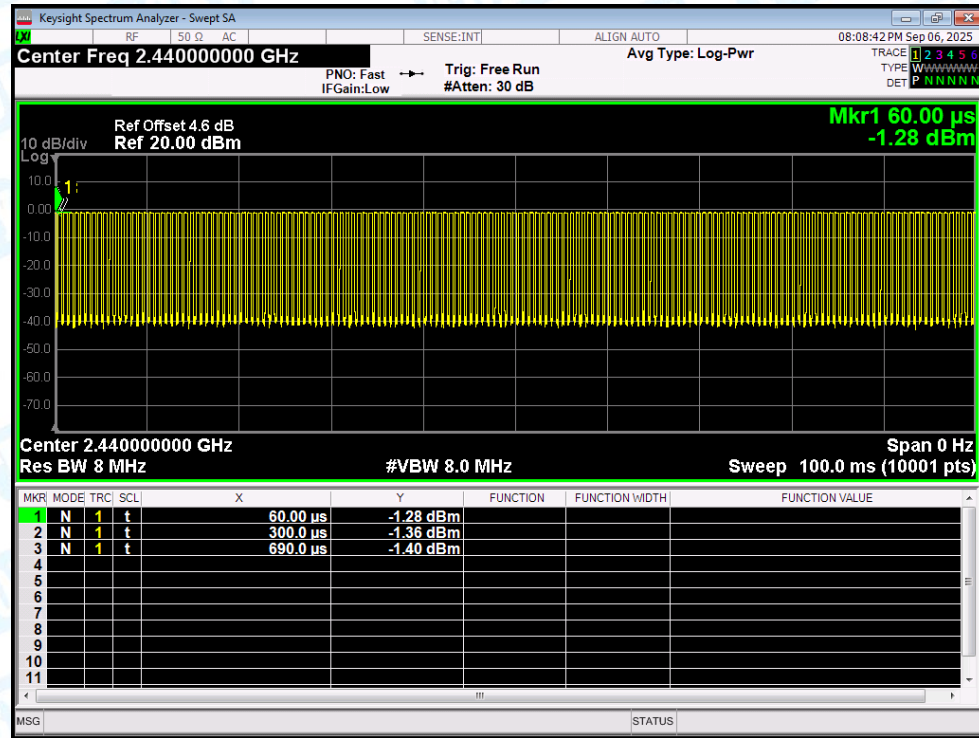
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	61.29	2.13	2.63
NVNT	BLE 1Mbps	2440	Ant1	61.9	2.08	2.56
NVNT	BLE 1Mbps	2480	Ant1	61.9	2.08	2.56
NVNT	BLE 2Mbps	2402	Ant1	33.33	4.77	4.76
NVNT	BLE 2Mbps	2440	Ant1	31.75	4.98	5.00
NVNT	BLE 2Mbps	2480	Ant1	33.33	4.77	4.76

Test Graphs

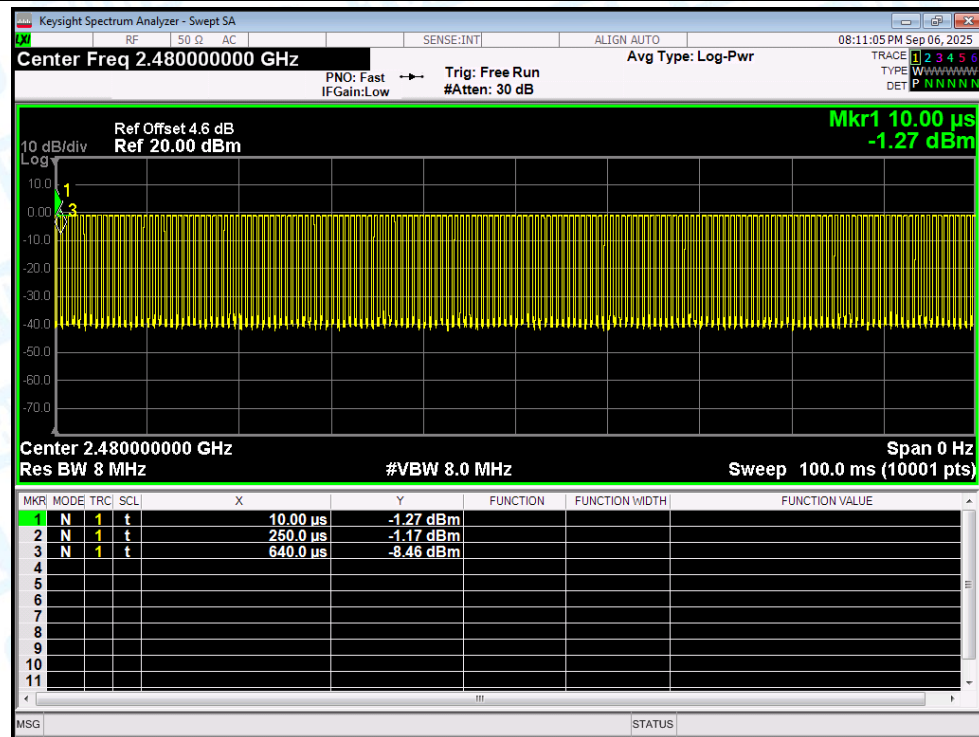
Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



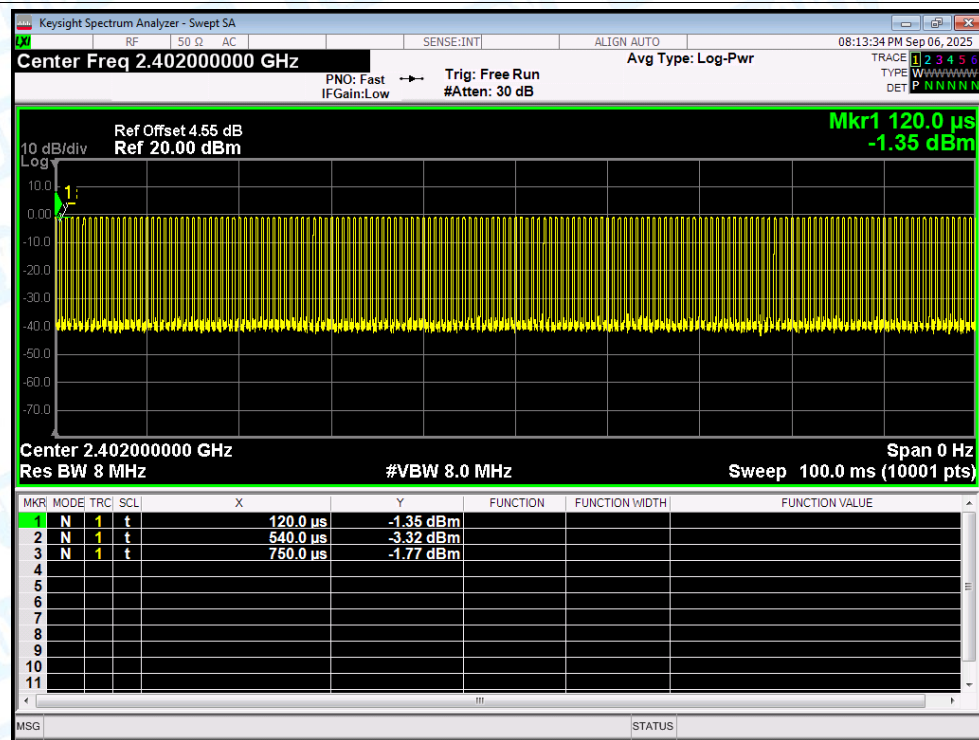
Duty Cycle NVNT BLE 1Mbps 2440MHz Ant1



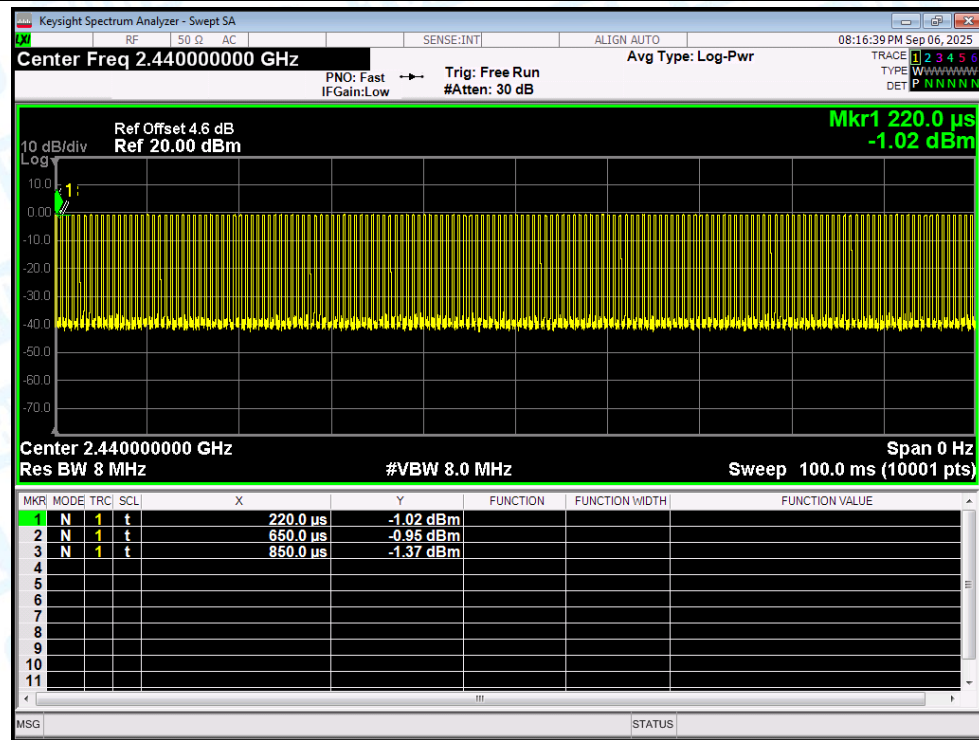
Duty Cycle NVNT BLE 1Mbps 2480MHz Ant1



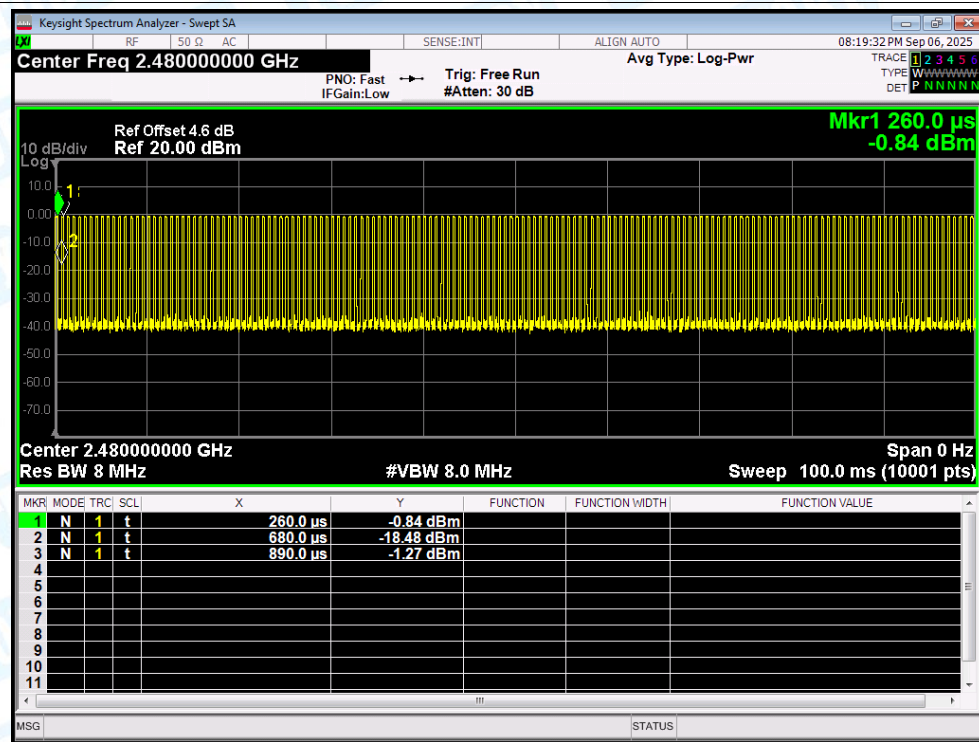
Duty Cycle NVNT BLE 2Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2440MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2480MHz Ant1

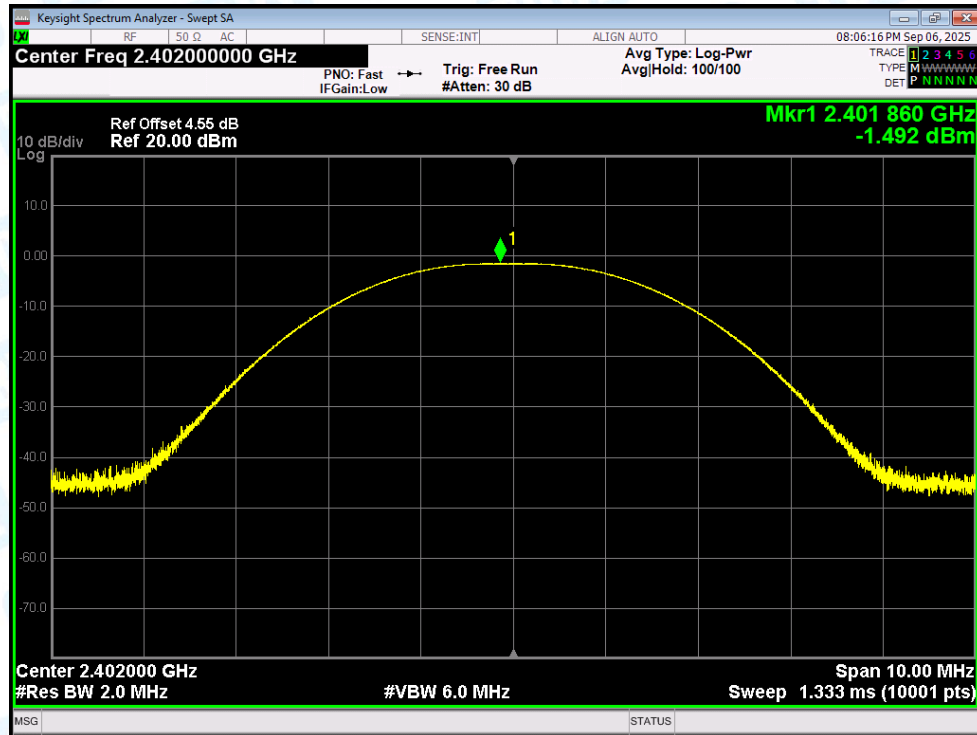


2. Maximum Conducted Output Power

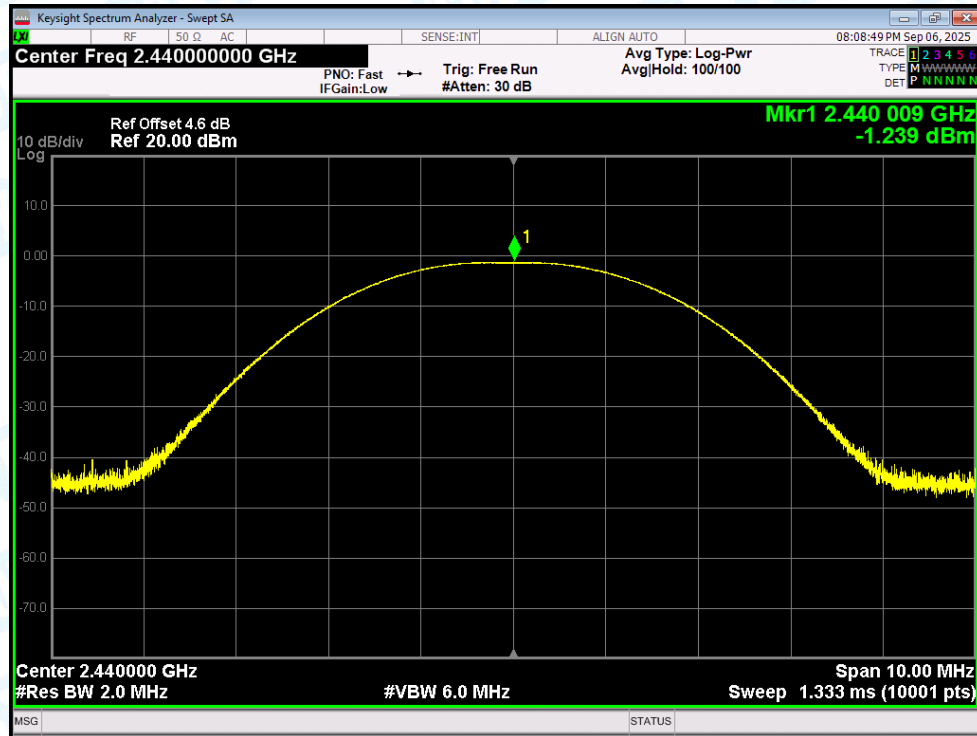
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-1.492	30	Pass
NVNT	BLE 1Mbps	2440	Ant1	-1.239	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	-1.145	30	Pass
NVNT	BLE 2Mbps	2402	Ant1	-1.473	30	Pass
NVNT	BLE 2Mbps	2440	Ant1	-1.188	30	Pass
NVNT	BLE 2Mbps	2480	Ant1	-1.097	30	Pass

Test Graphs

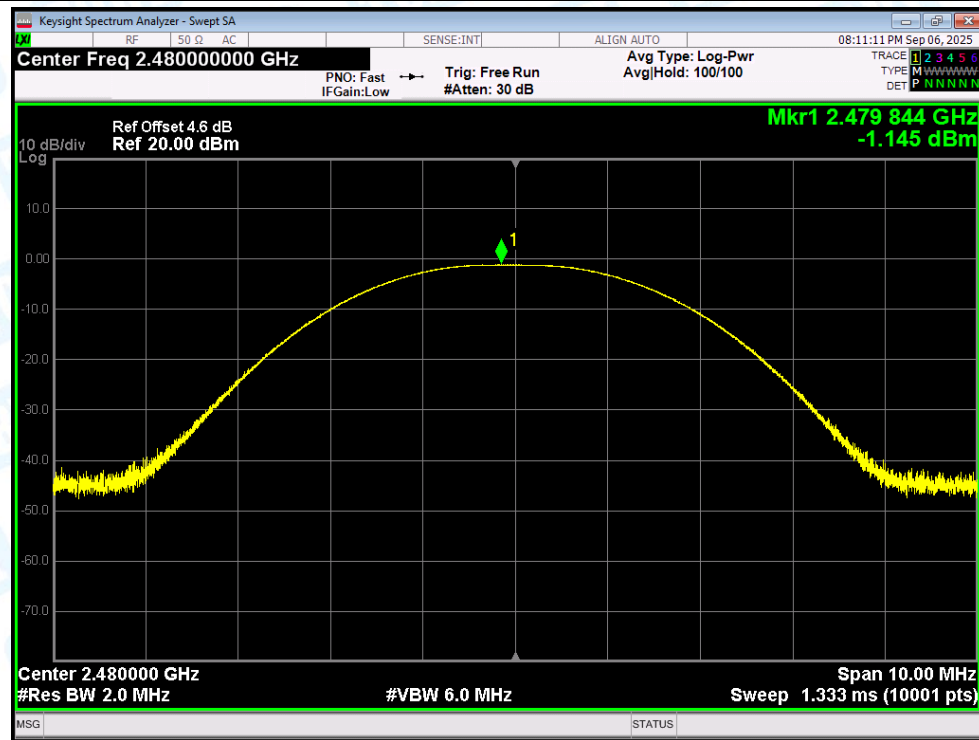
Power NVNT BLE 1Mbps 2402MHz Ant1



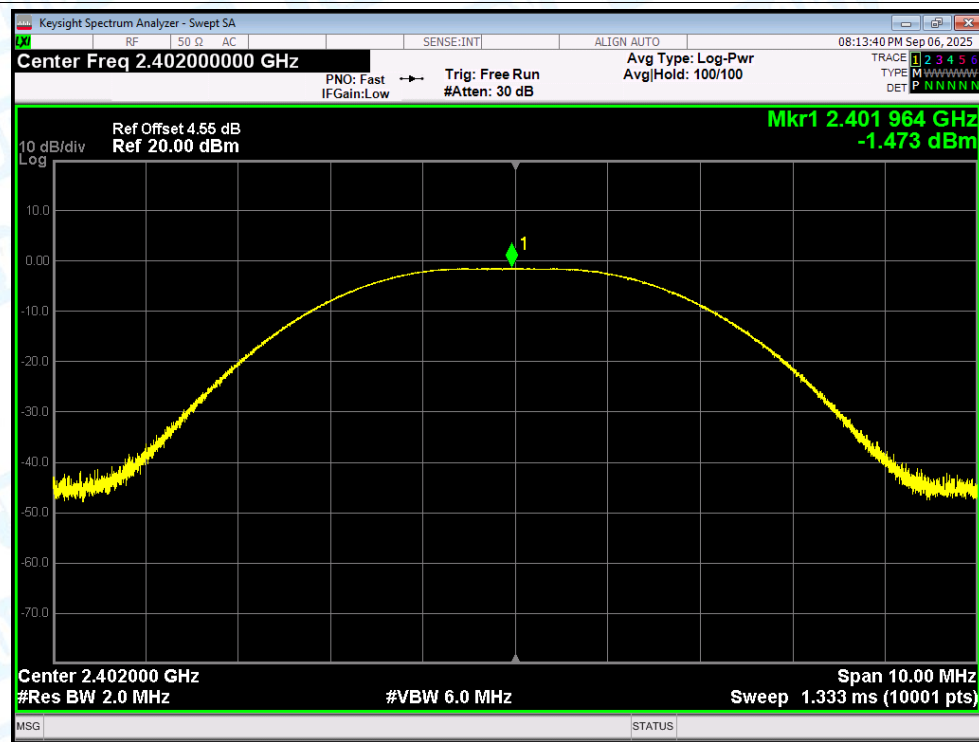
Power NVNT BLE 1Mbps 2440MHz Ant1



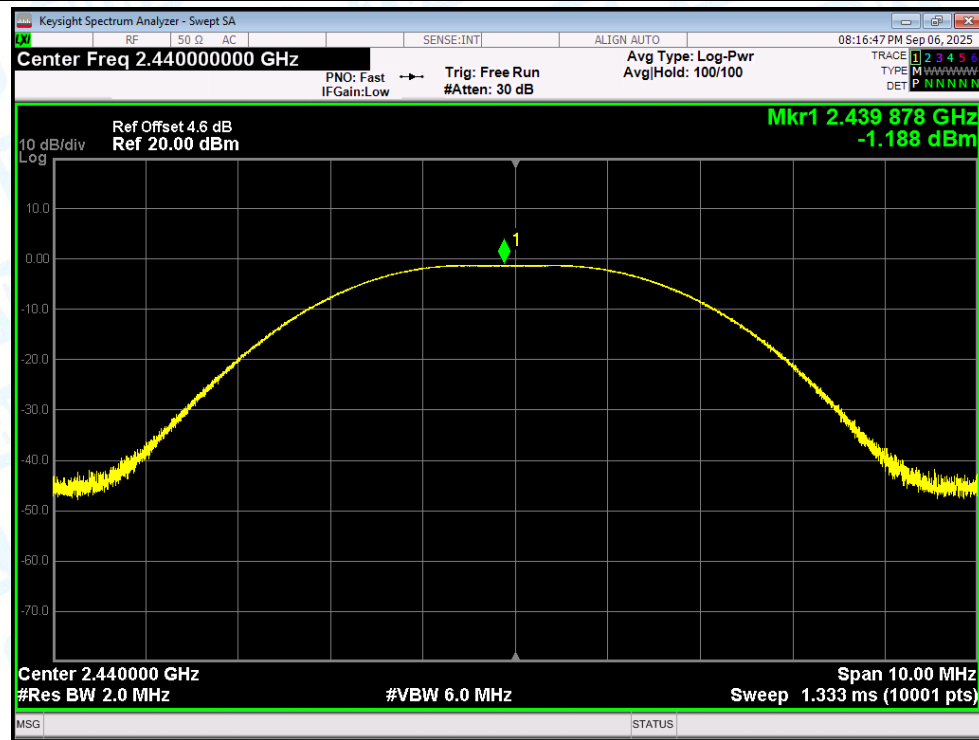
Power NVNT BLE 1Mbps 2480MHz Ant1



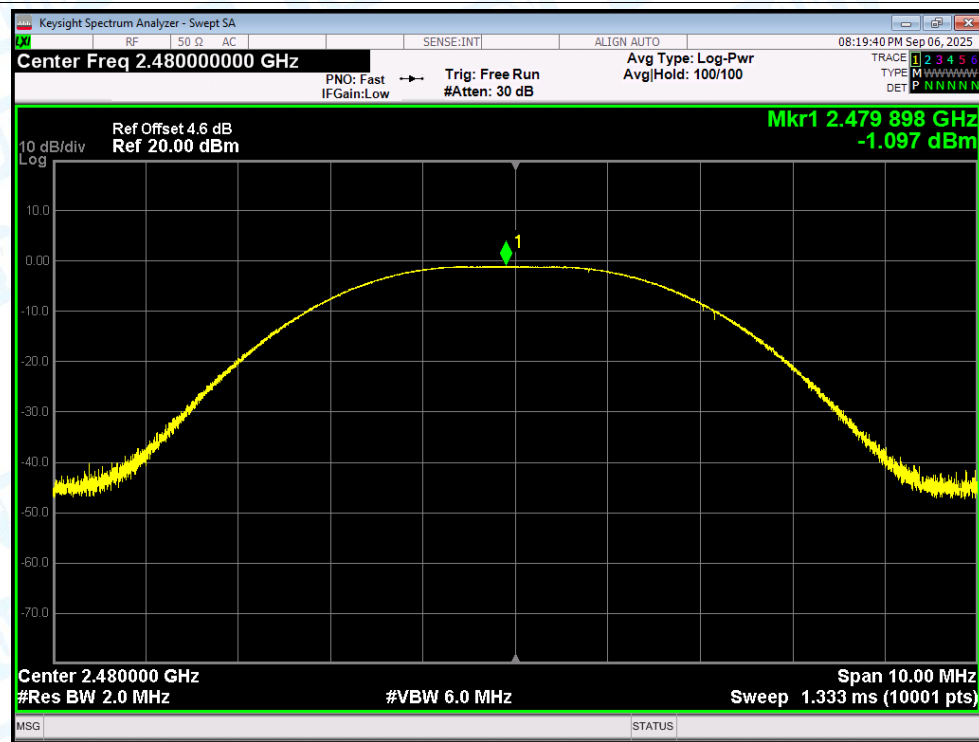
Power NVNT BLE 2Mbps 2402MHz Ant1



Power NVNT BLE 2Mbps 2440MHz Ant1



Power NVNT BLE 2Mbps 2480MHz Ant1

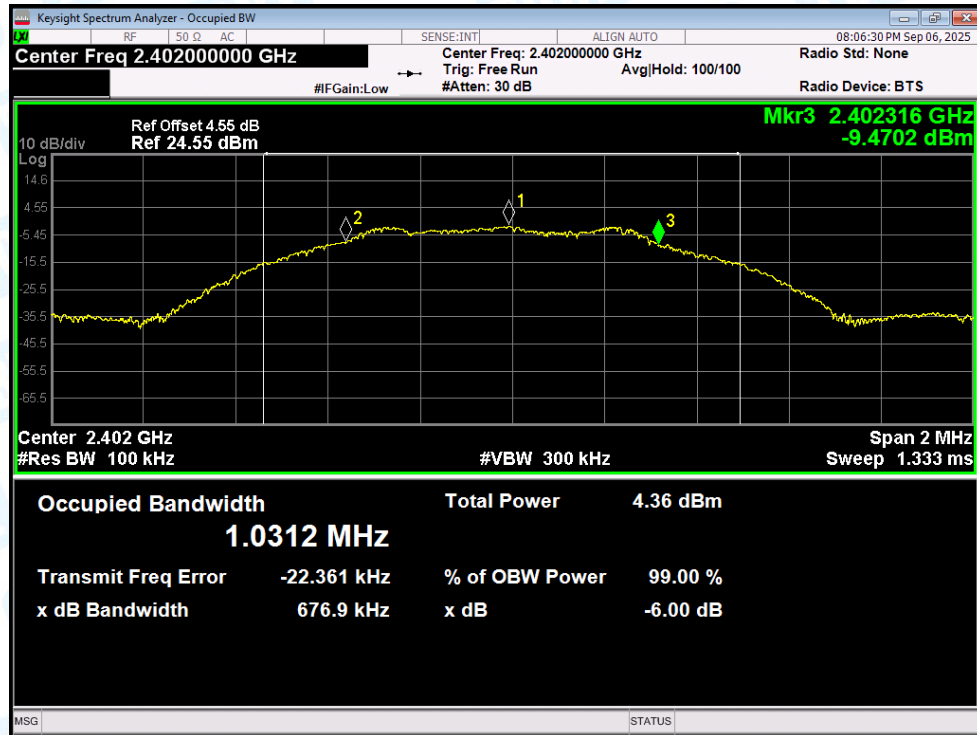


3. -6dB Bandwidth

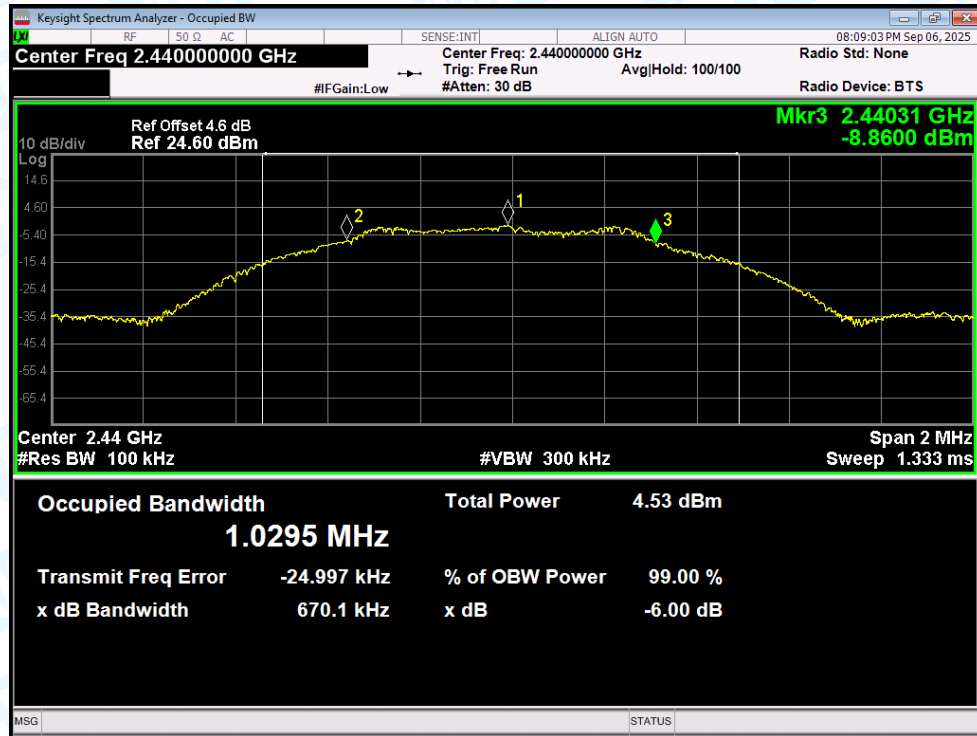
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.68	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.67	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.7	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	1.17	0.5	Pass
NVNT	BLE 2Mbps	2440	Ant1	1.14	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.11	0.5	Pass

Test Graphs

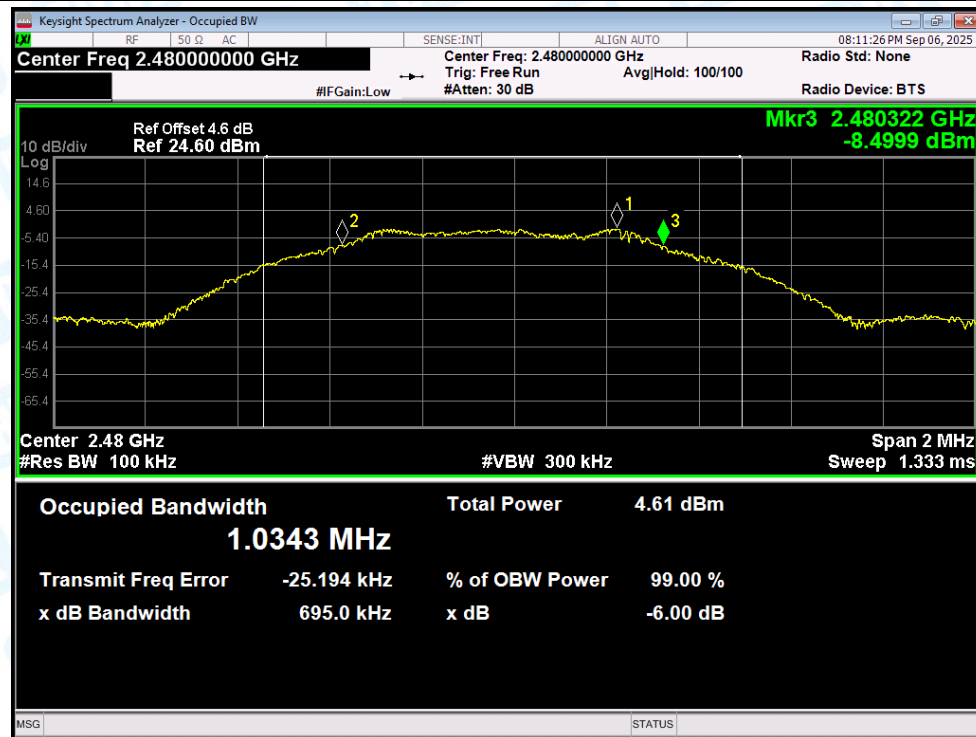
-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



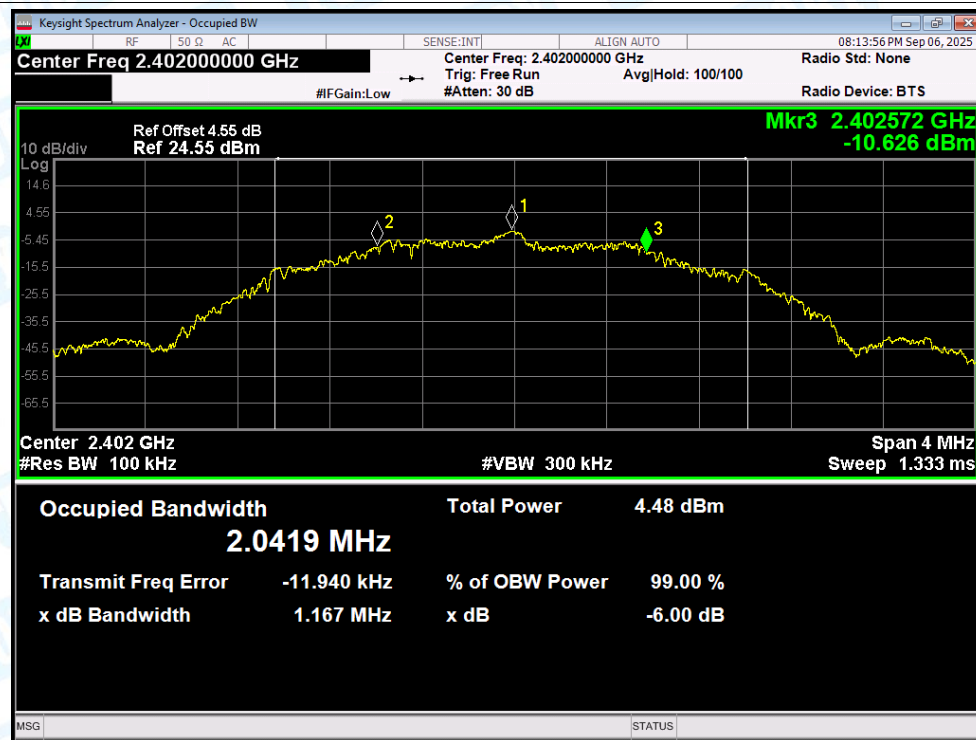
-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1



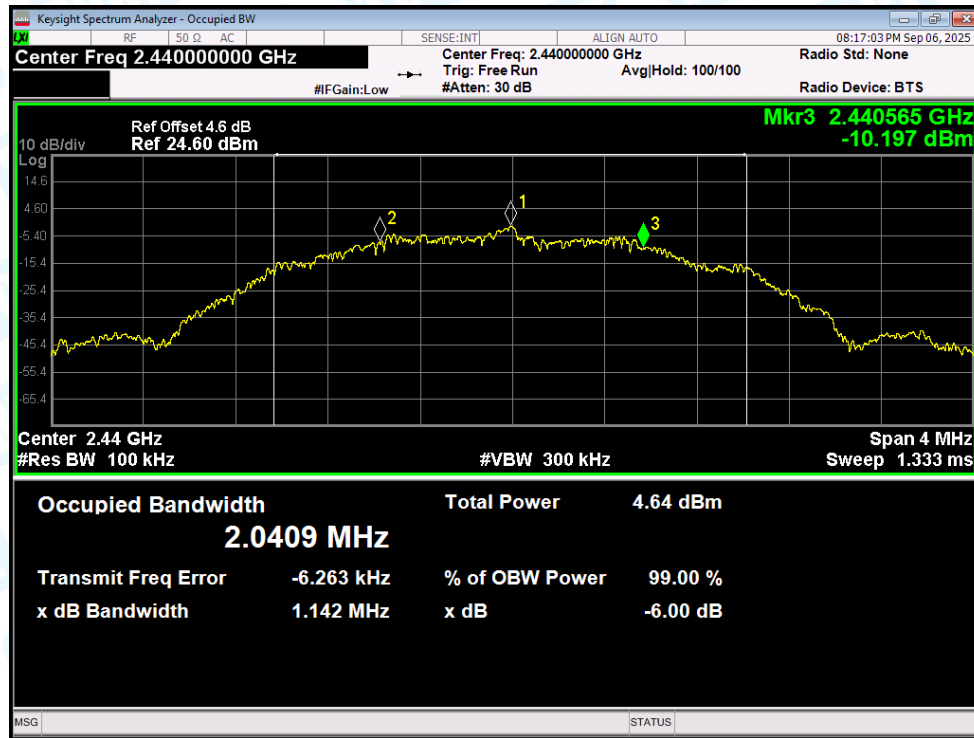
-6dB Bandwidth NVNT BLE 1Mbps 2480MHz Ant1



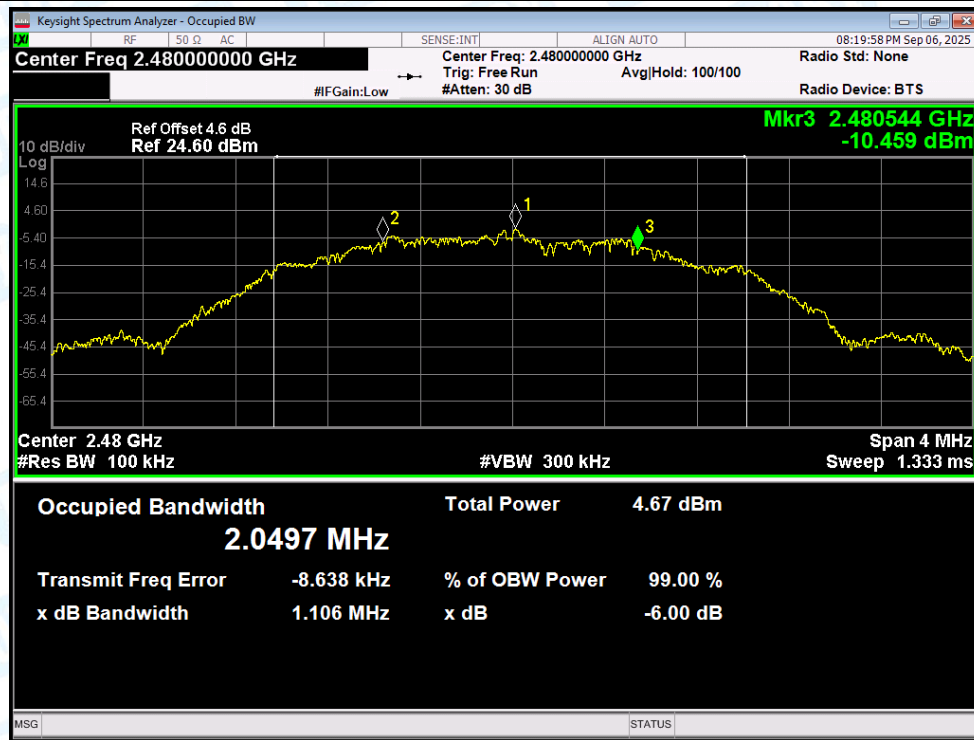
-6dB Bandwidth NVNT BLE 2Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2480MHz Ant1

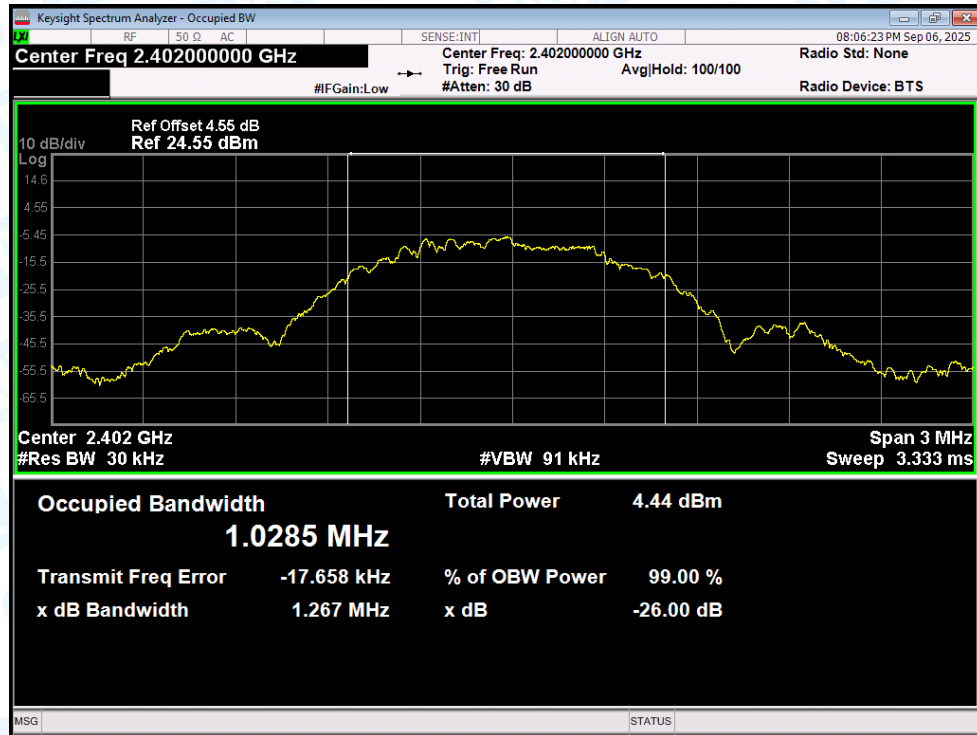


4. Occupied Channel Bandwidth

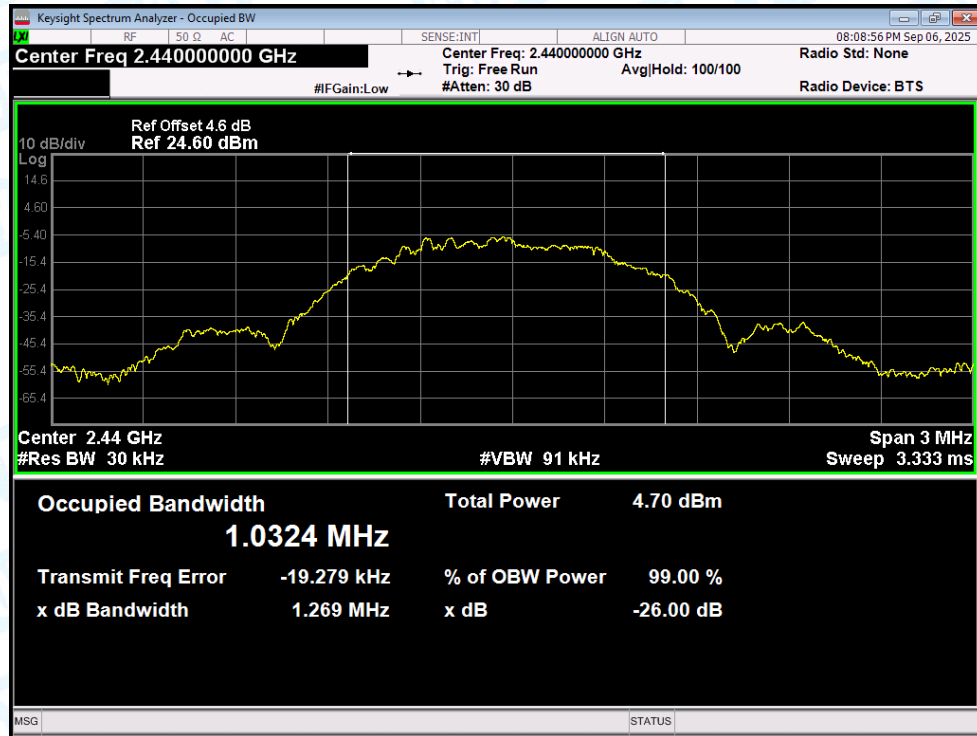
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.029
NVNT	BLE 1Mbps	2440	Ant1	1.032
NVNT	BLE 1Mbps	2480	Ant1	1.029
NVNT	BLE 2Mbps	2402	Ant1	2.029
NVNT	BLE 2Mbps	2440	Ant1	2.022
NVNT	BLE 2Mbps	2480	Ant1	2.038

Test Graphs

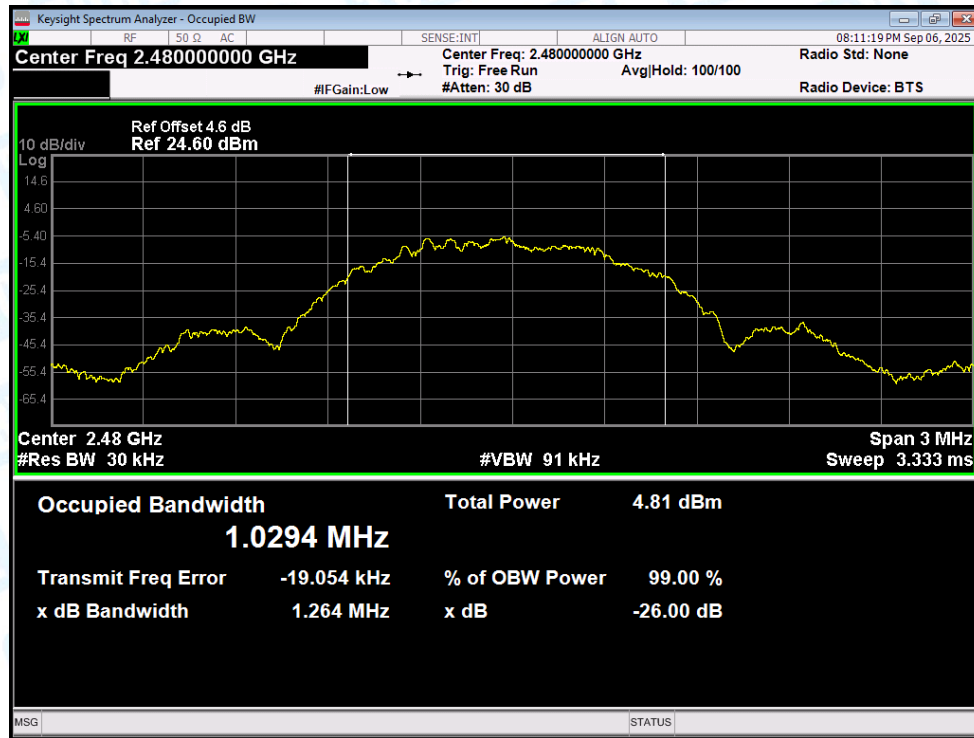
OBW NVNT BLE 1Mbps 2402MHz Ant1



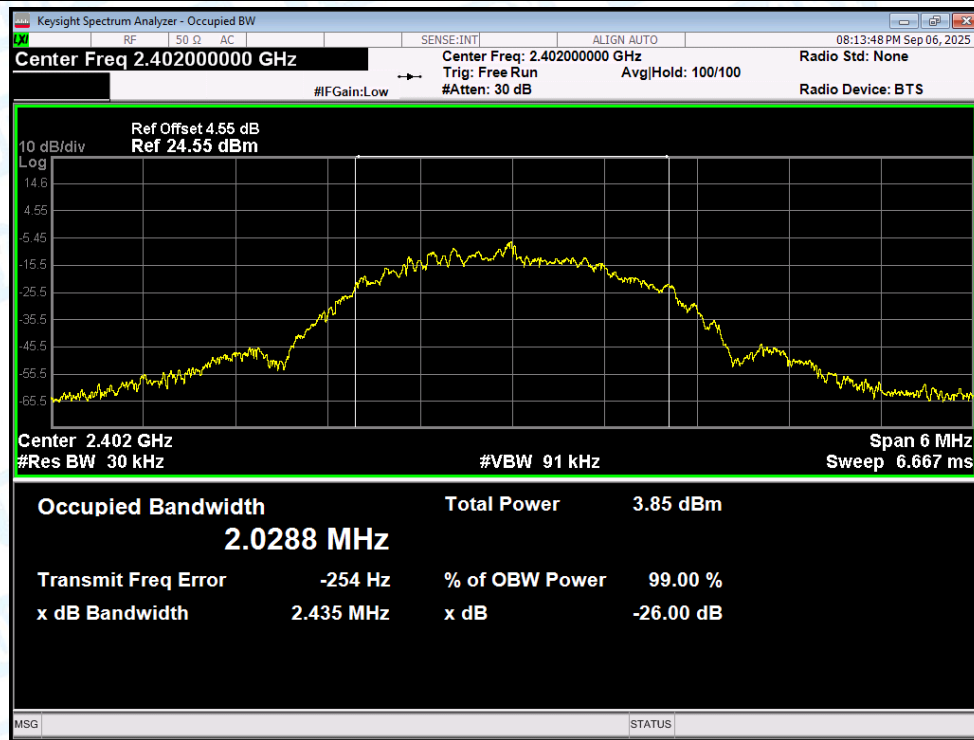
OBW NVNT BLE 1Mbps 2440MHz Ant1



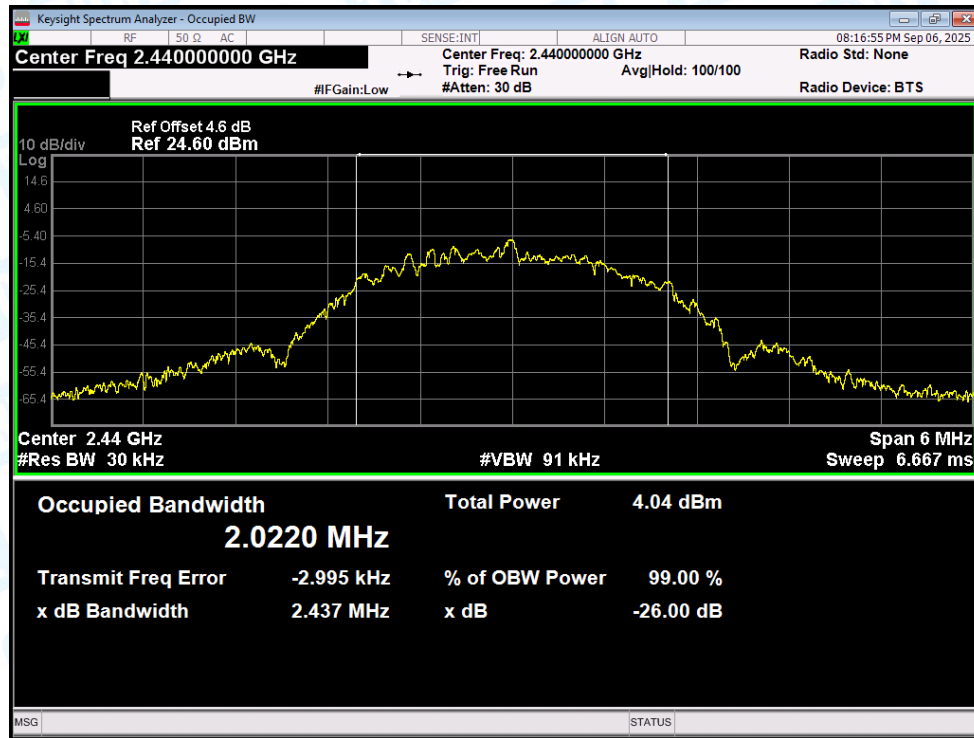
OBW NVNT BLE 1Mbps 2480MHz Ant1



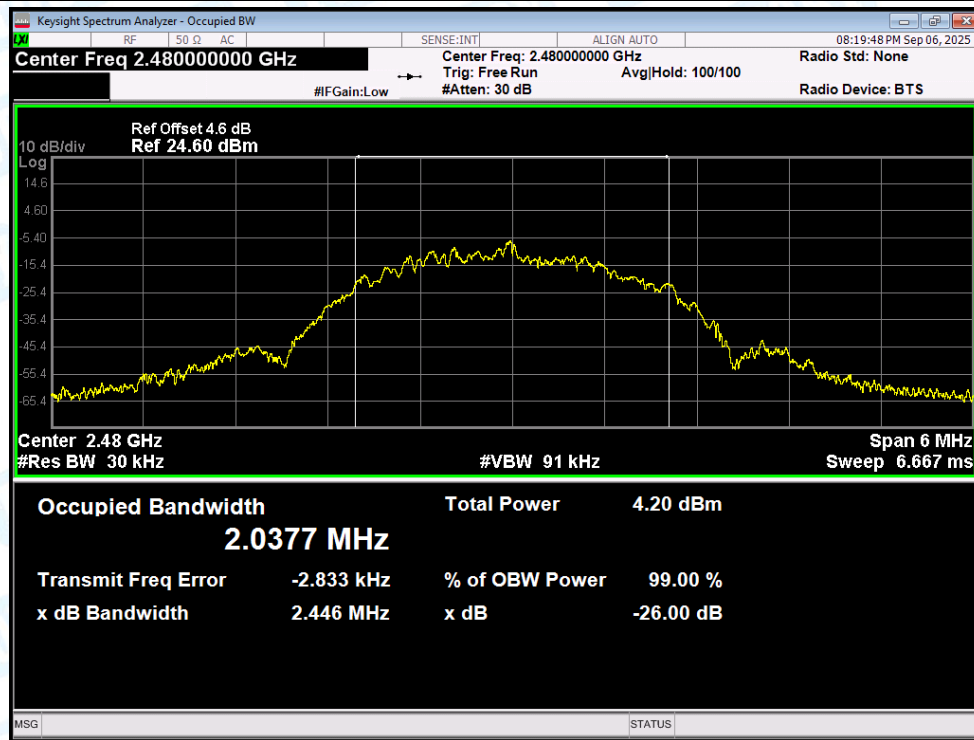
OBW NVNT BLE 2Mbps 2402MHz Ant1



OBW NVNT BLE 2Mbps 2440MHz Ant1



OBW NVNT BLE 2Mbps 2480MHz Ant1

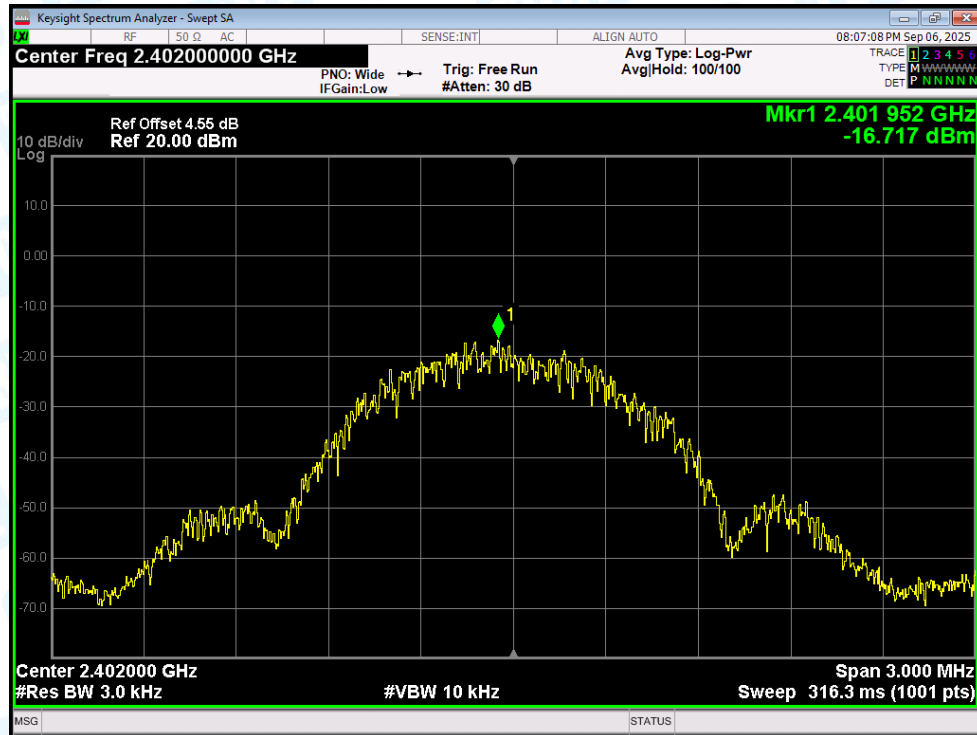


5.Maximum Power Spectral Density Level

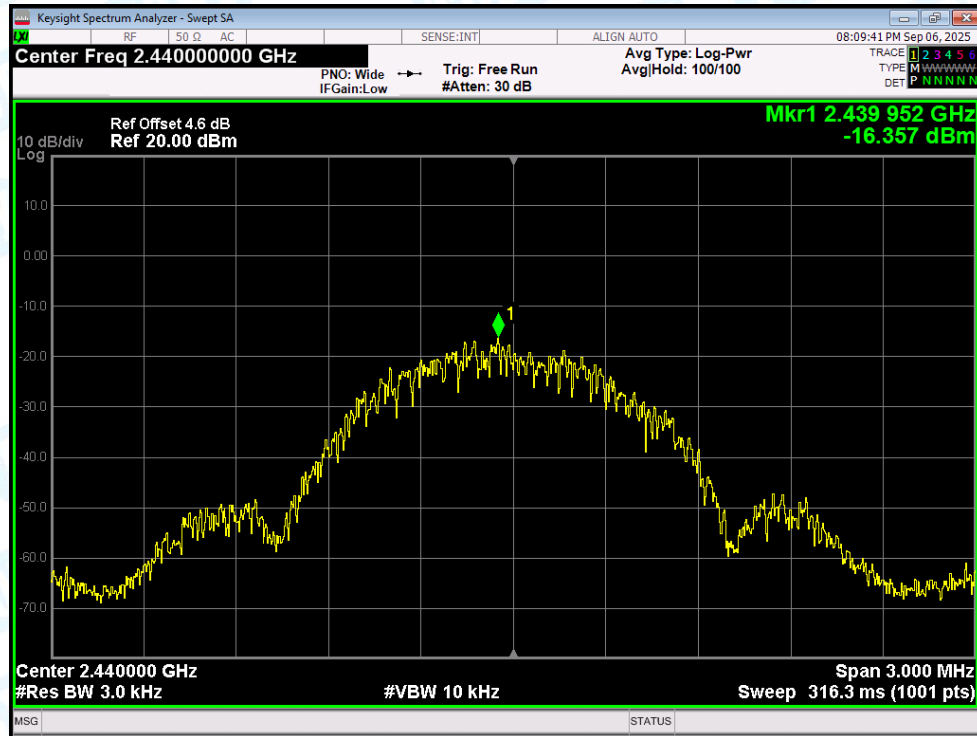
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3KHz)	Limit (dBm/3KHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-16.717	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-16.357	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-16.324	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-19.906	8	Pass
NVNT	BLE 2Mbps	2440	Ant1	-19.835	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-19.67	8	Pass

Test Graphs

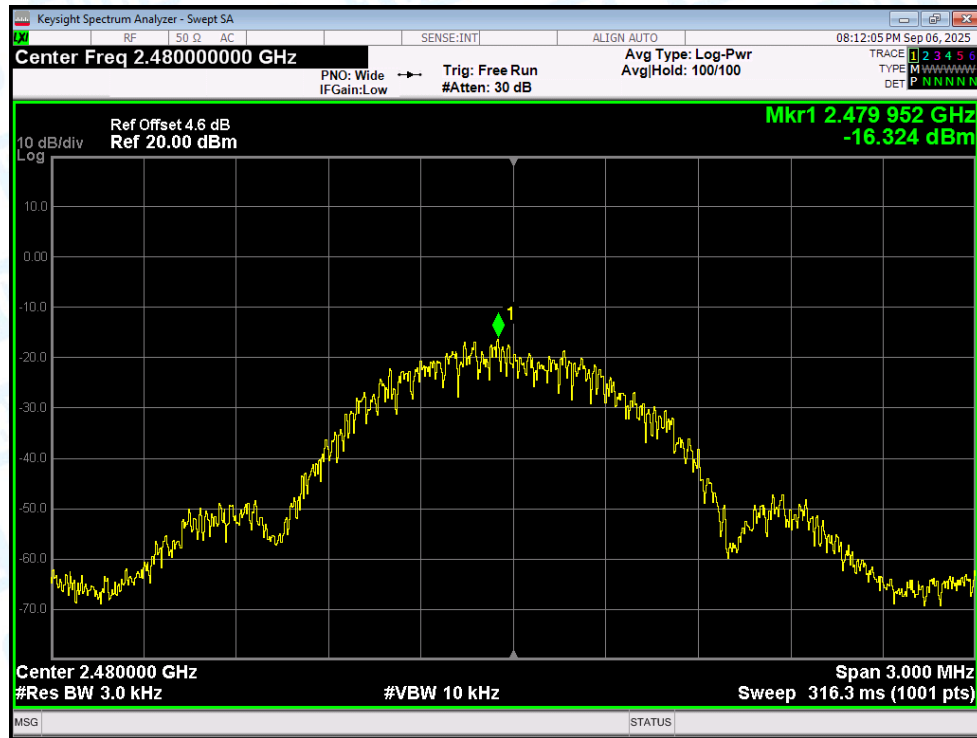
PSD NVNT BLE 1Mbps 2402MHz Ant1



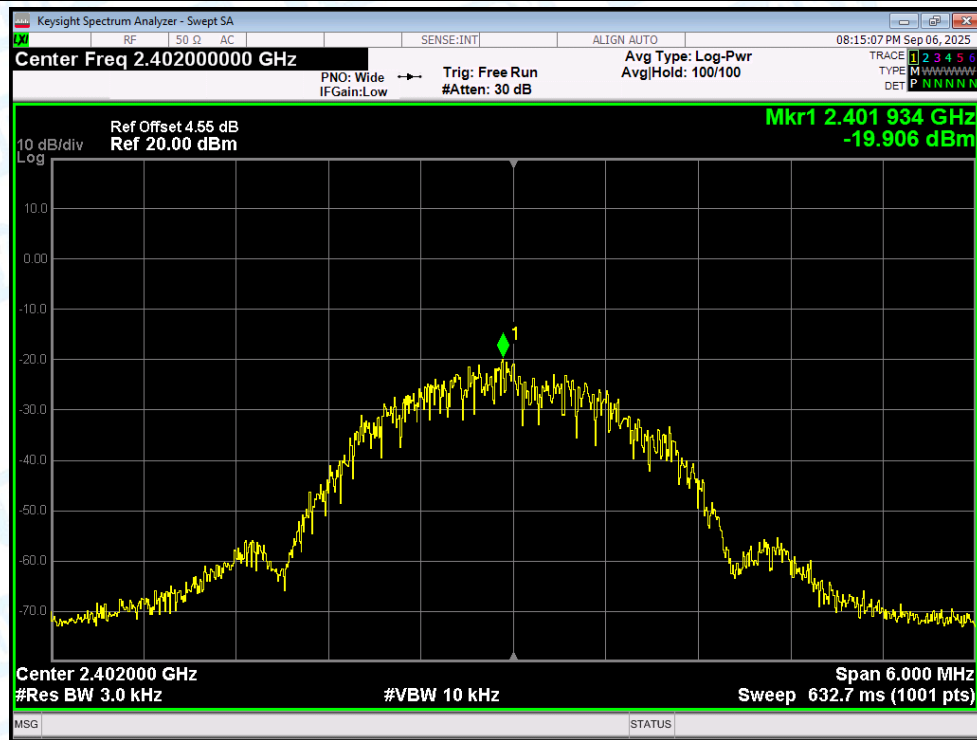
PSD NVNT BLE 1Mbps 2440MHz Ant1



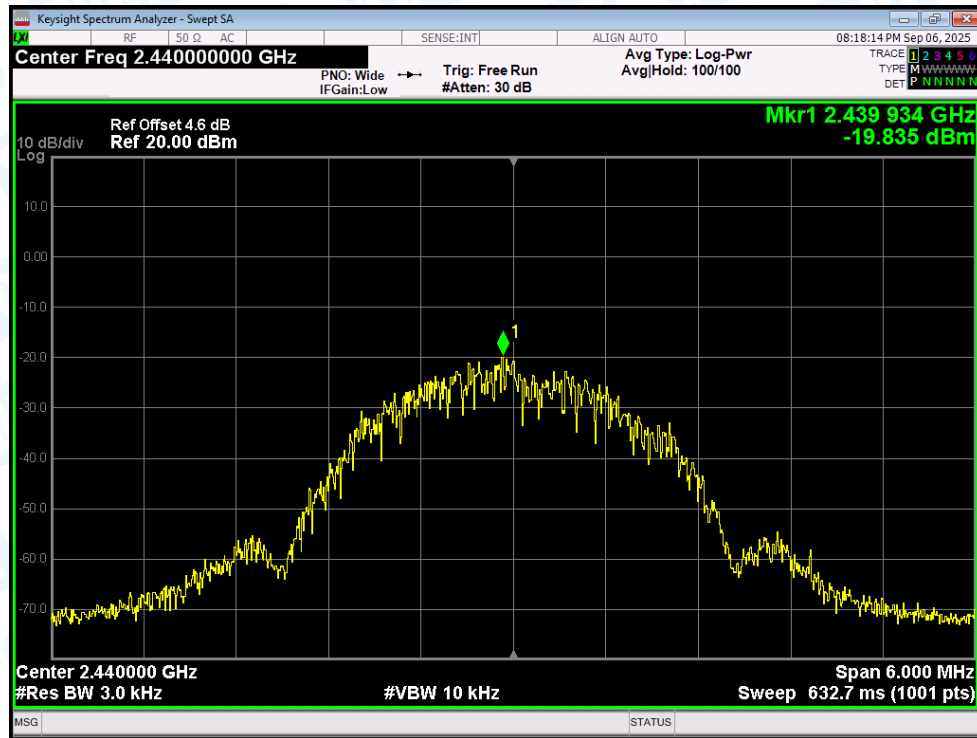
PSD NVNT BLE 1Mbps 2480MHz Ant1



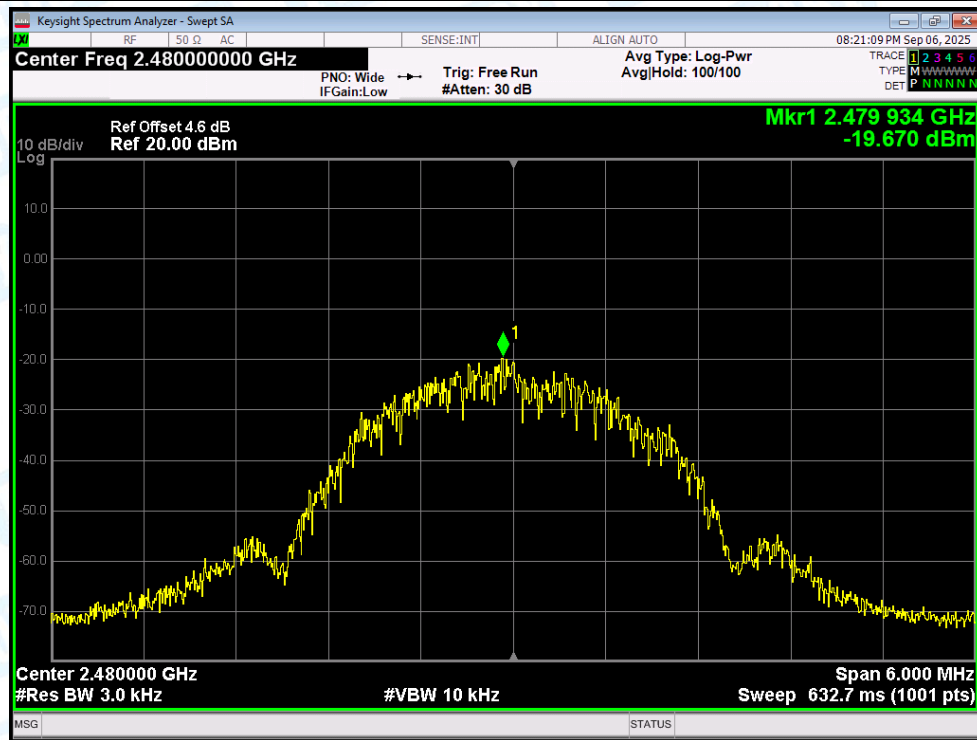
PSD NVNT BLE 2Mbps 2402MHz Ant1



PSD NVNT BLE 2Mbps 2440MHz Ant1



PSD NVNT BLE 2Mbps 2480MHz Ant1

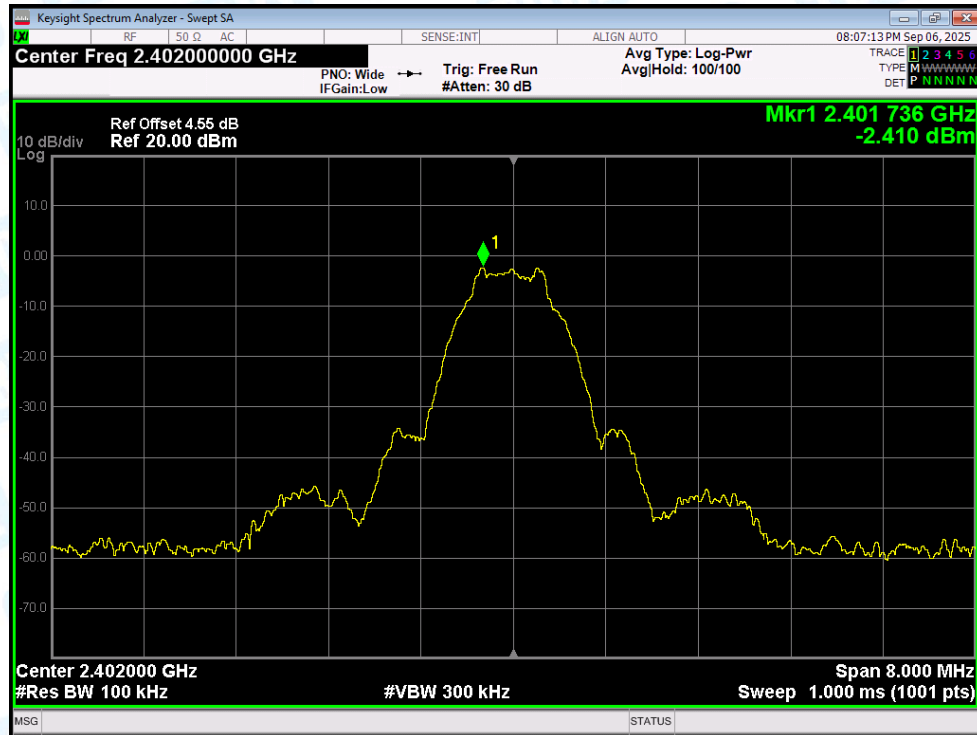


5. Band Edge

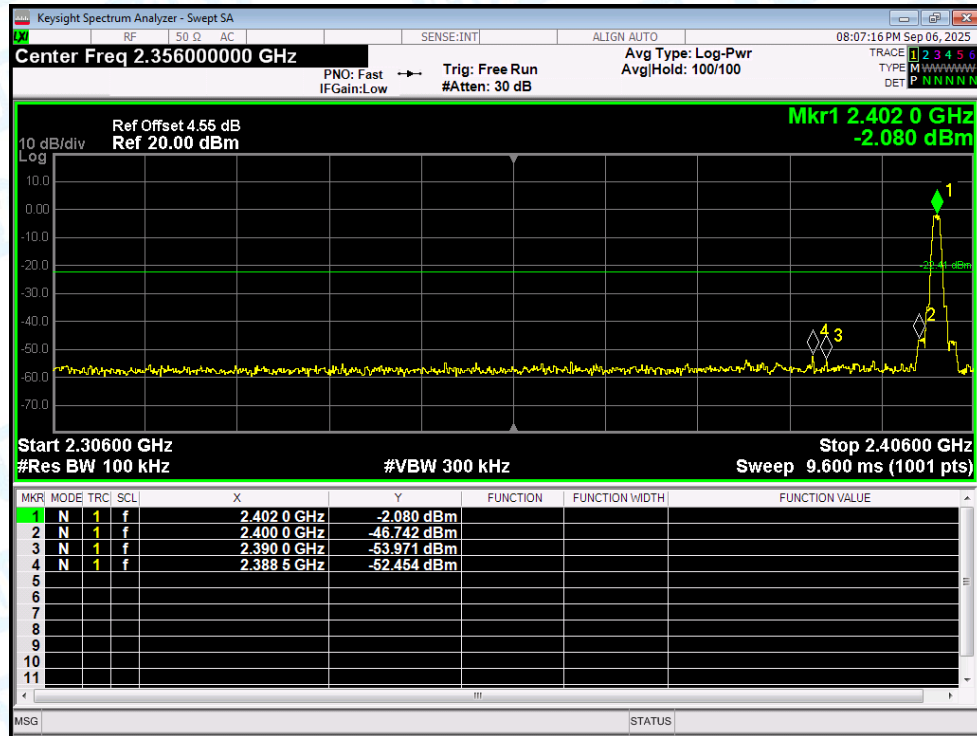
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-50.04	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-52.51	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-49.8	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-52.03	-20	Pass

Test Graphs

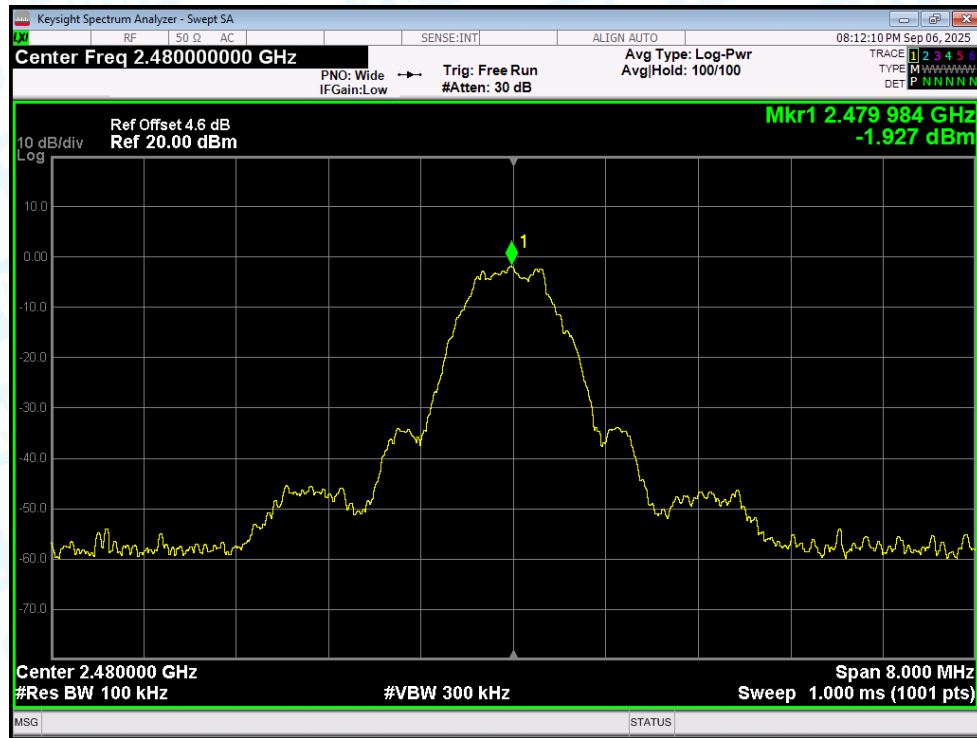
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref



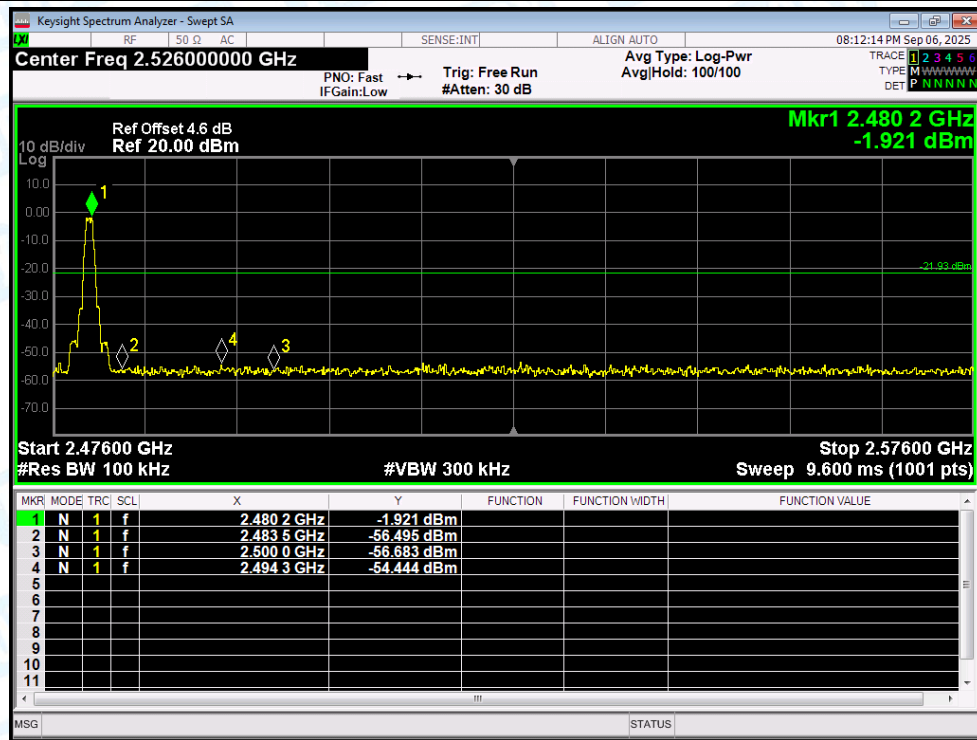
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission



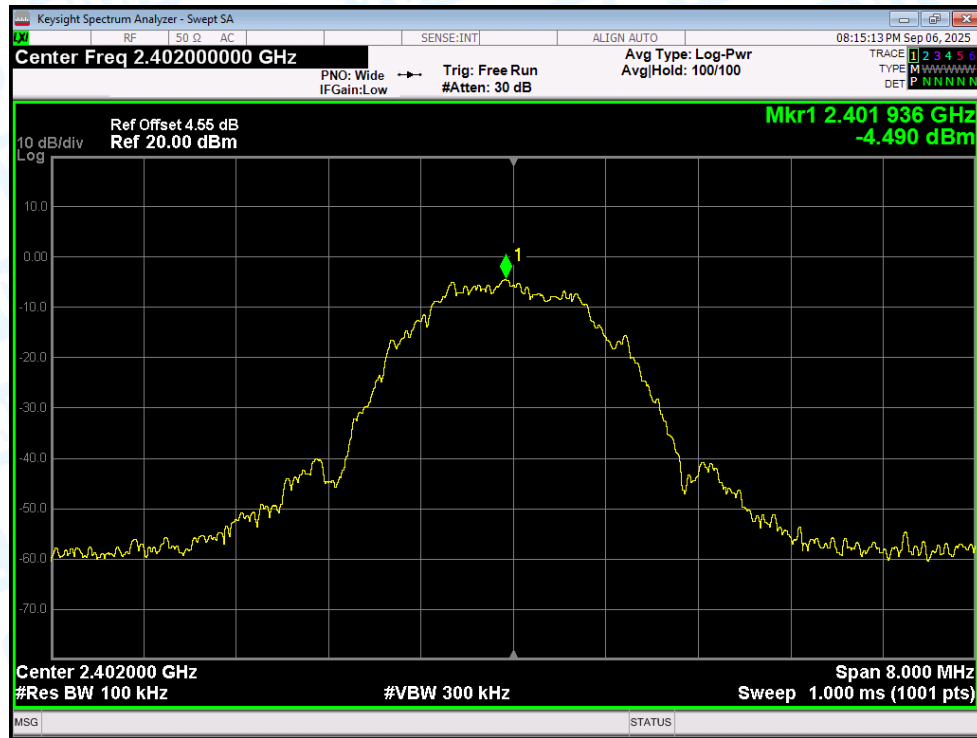
Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Ref



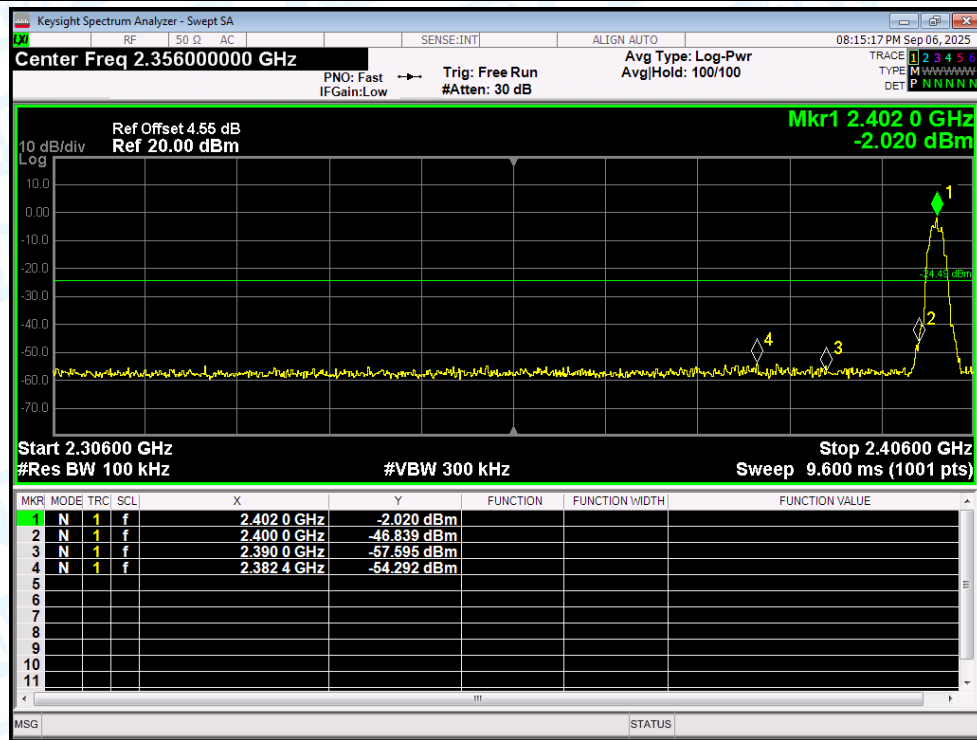
Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Emission



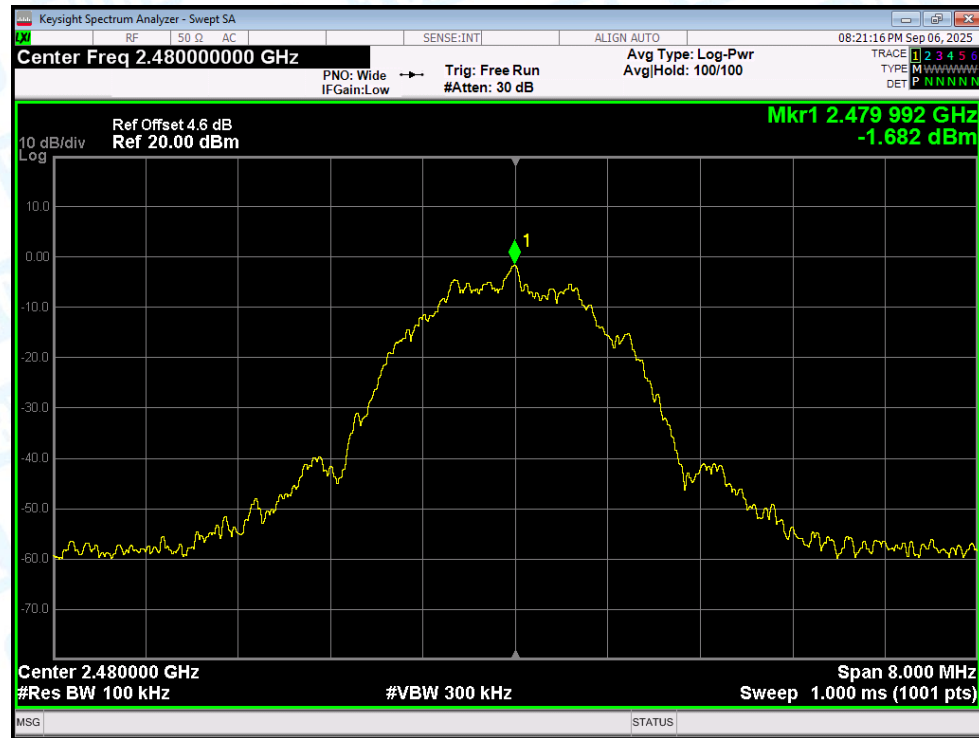
Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Ref



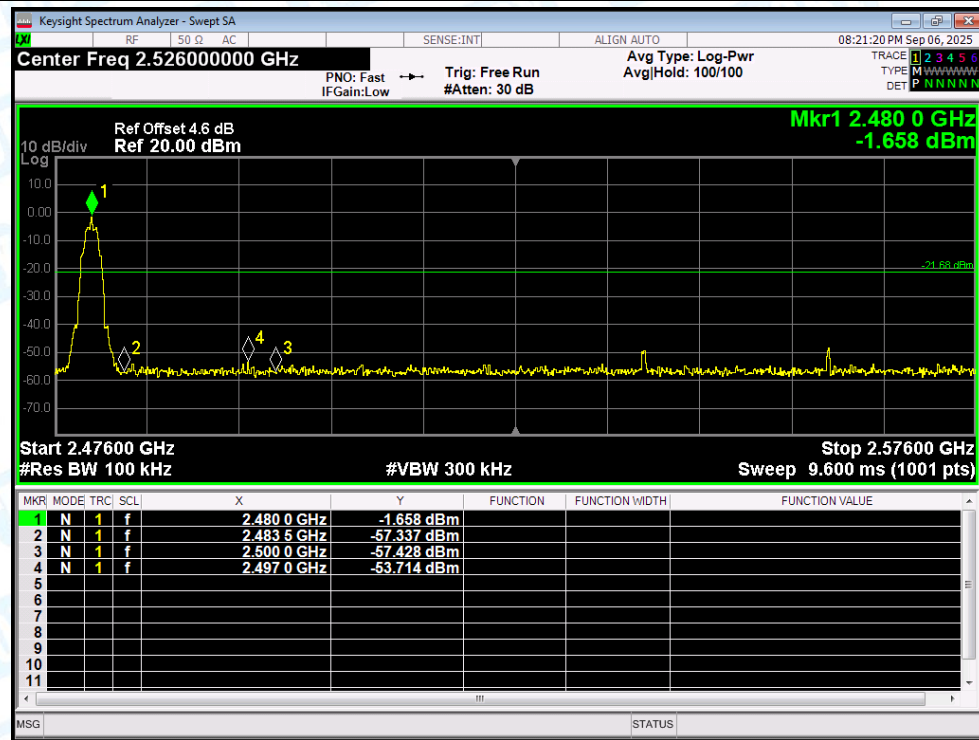
Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Emission



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Ref



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Emission

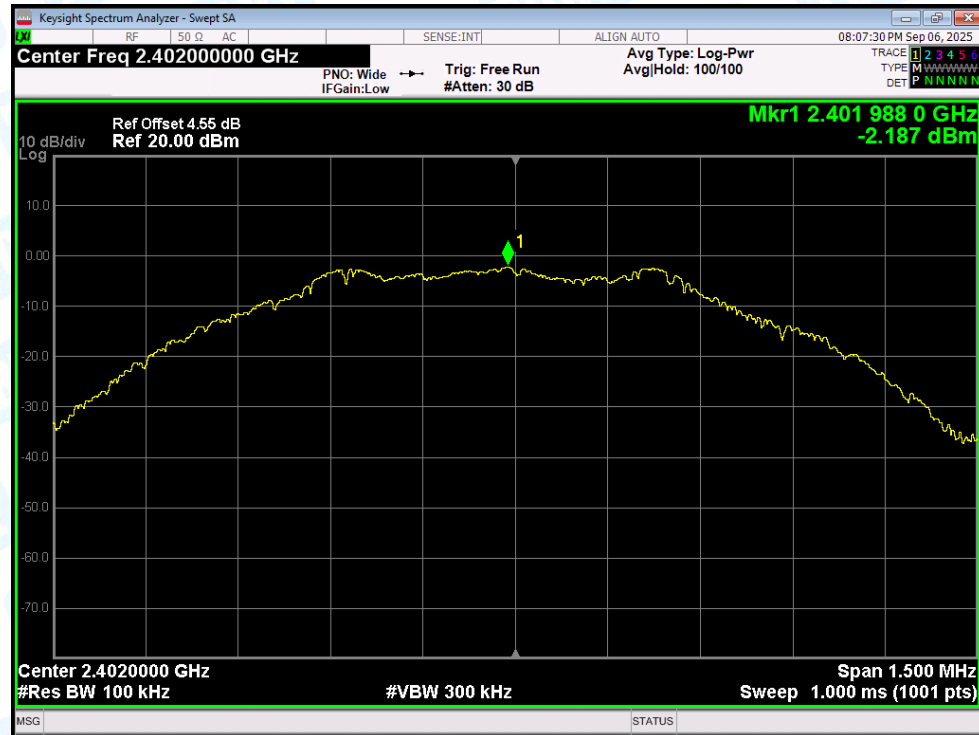


6. Conducted RF Spurious Emission

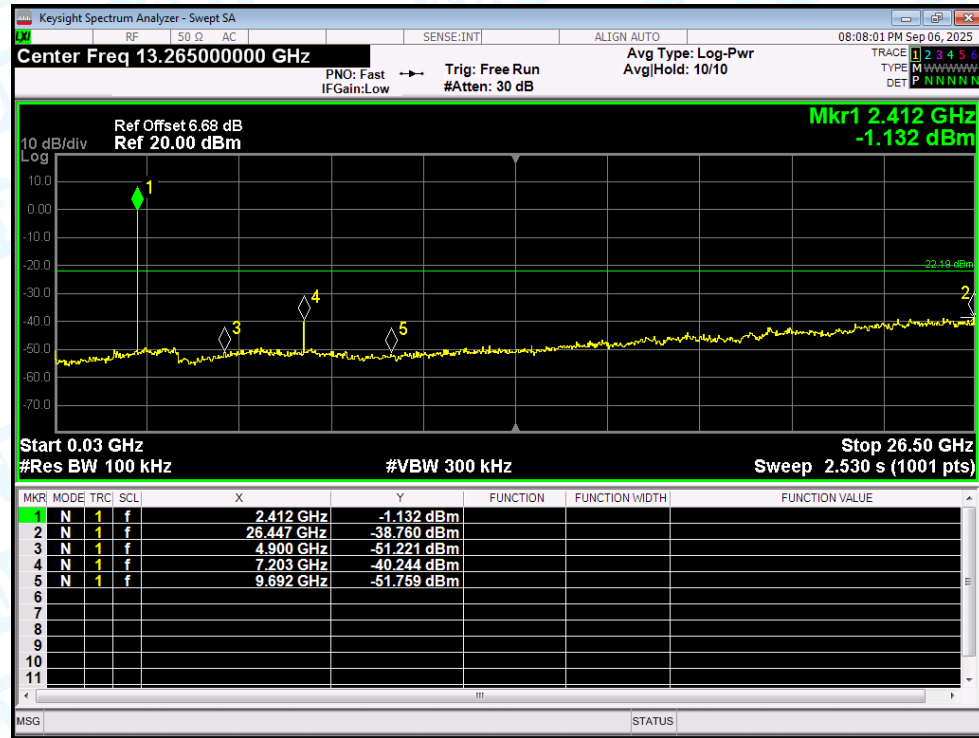
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-36.57	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-34.34	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-36.7	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-36.26	-20	Pass
NVNT	BLE 2Mbps	2440	Ant1	-36.97	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-37.4	-20	Pass

Test Graphs

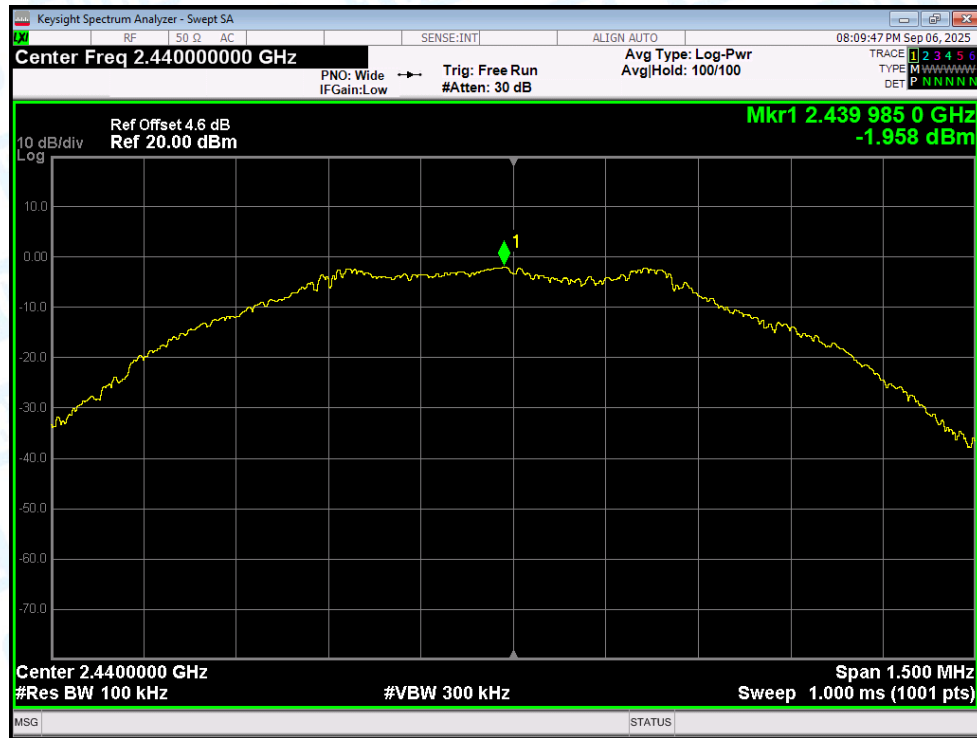
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



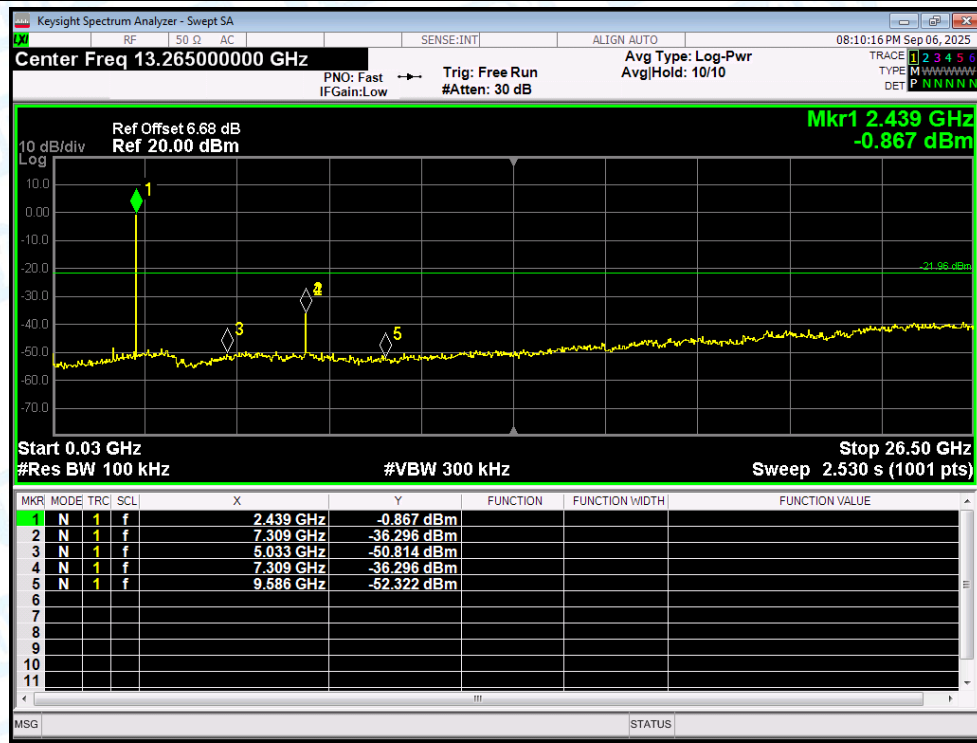
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission



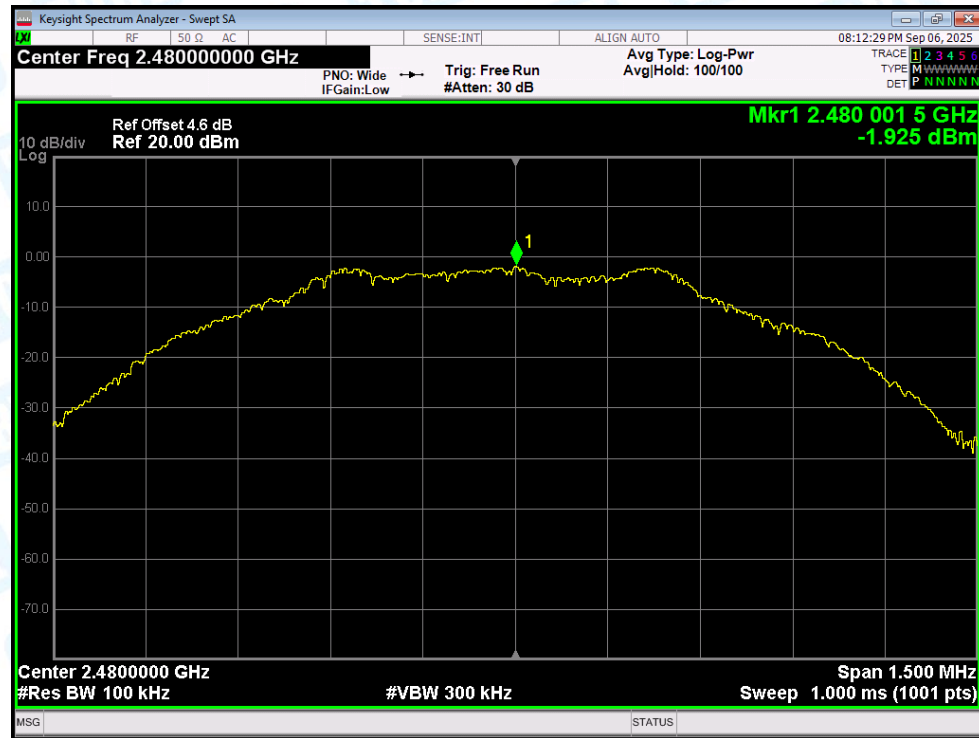
Tx. Spurious NVNT BLE 1Mbps 2440MHz Ant1 Ref



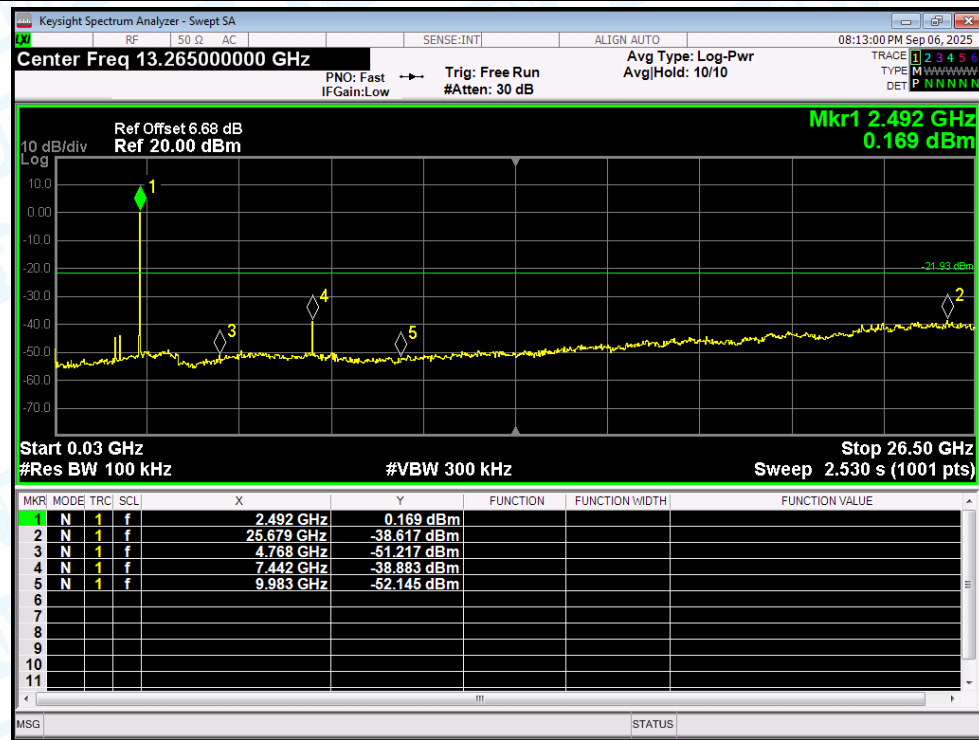
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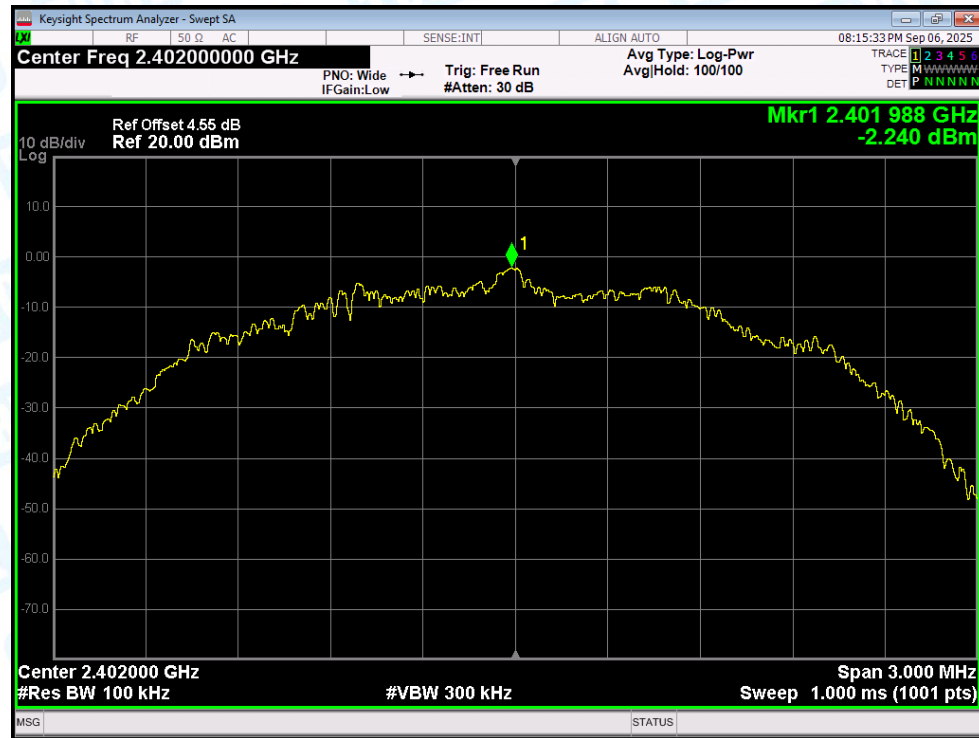
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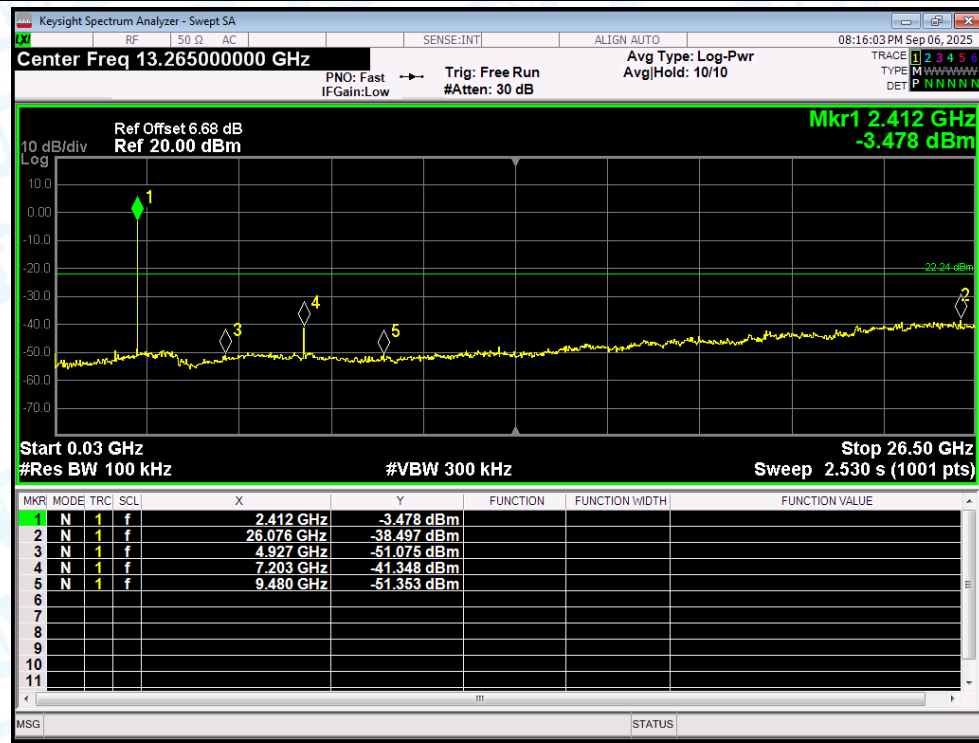
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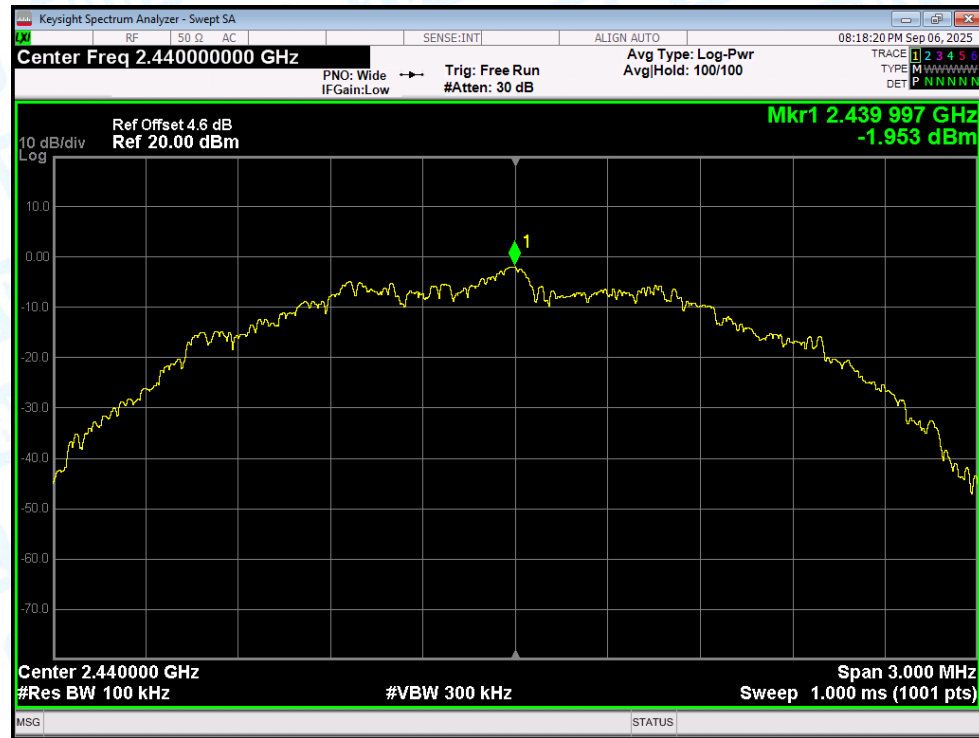
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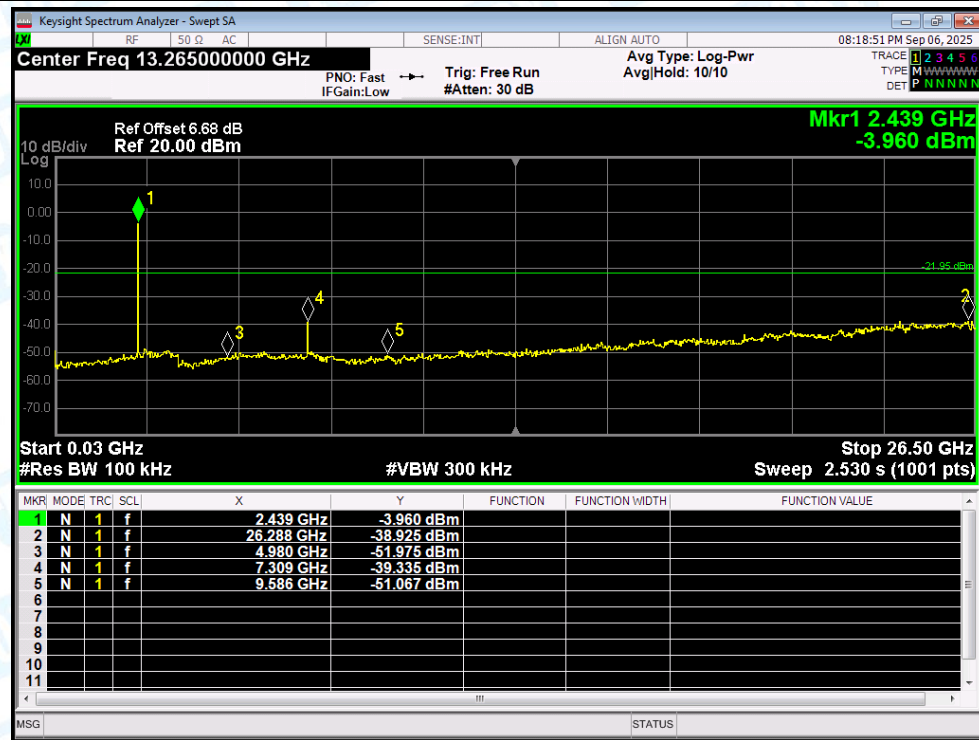
Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Emission



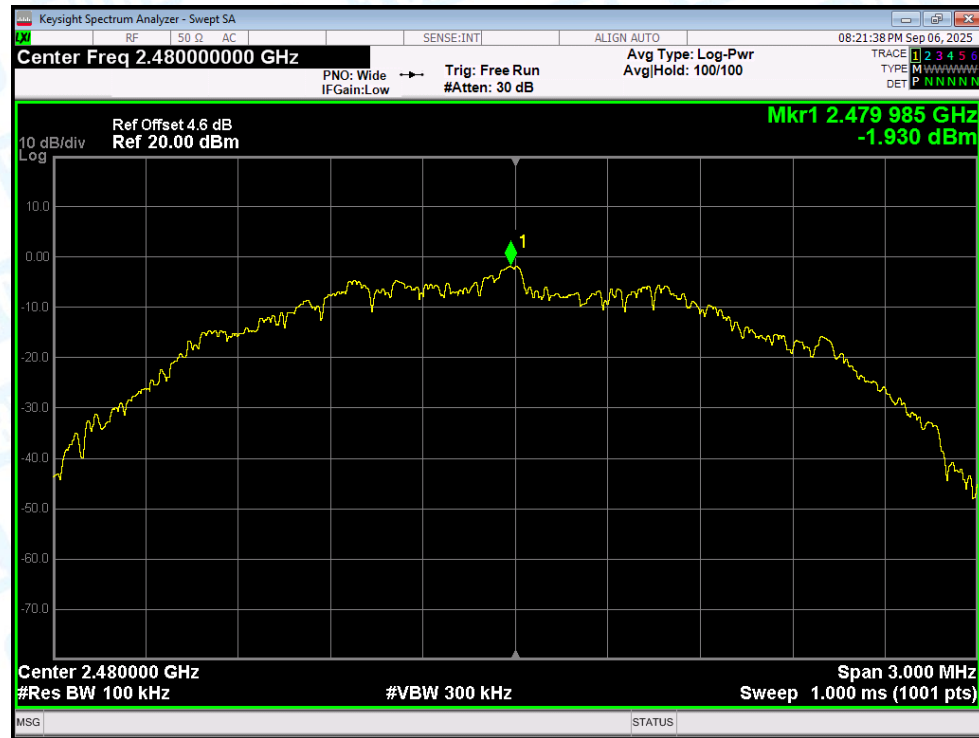
Tx. Spurious NVNT BLE 2Mbps 2440MHz Ant1 Ref



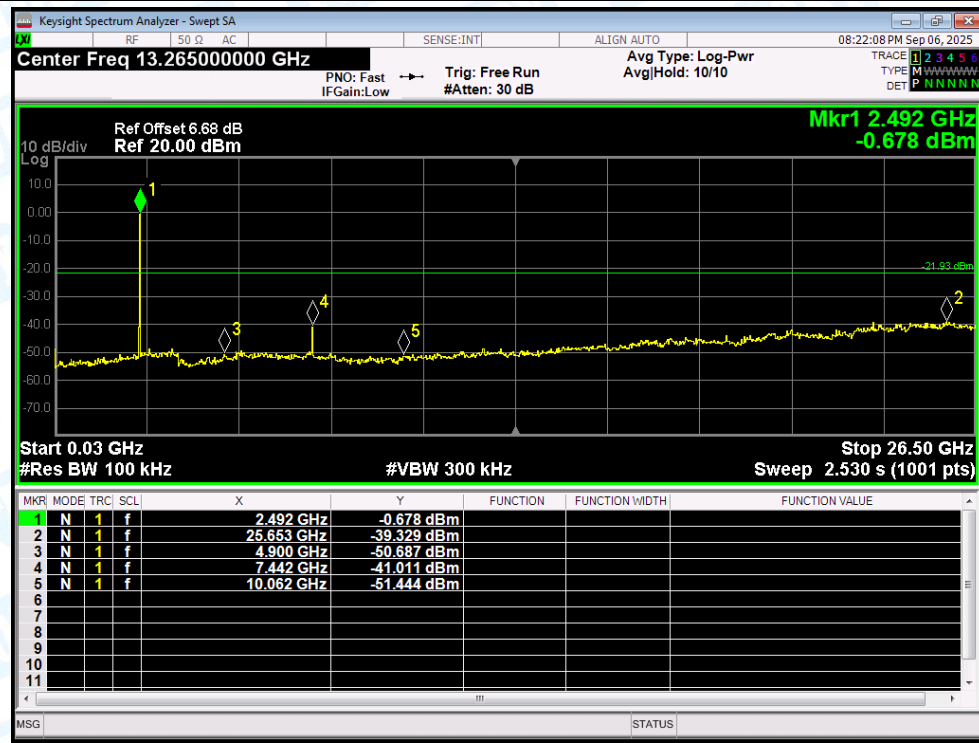
Tx. Spurious NVNT BLE 2Mbps 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Emission



--- END OF REPORT ---