

RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	AIBOT2 AI humanoid robot
Test Model:	R12E
Sample ID:	HC-C-202404-0185-01-01-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 7.2V
Test Engineer:	ZKN ZHOU
Note: For a more detailed features description, please refer to the report TBR-C-202404-0185-33 The report only show the worst case data.	

Contents

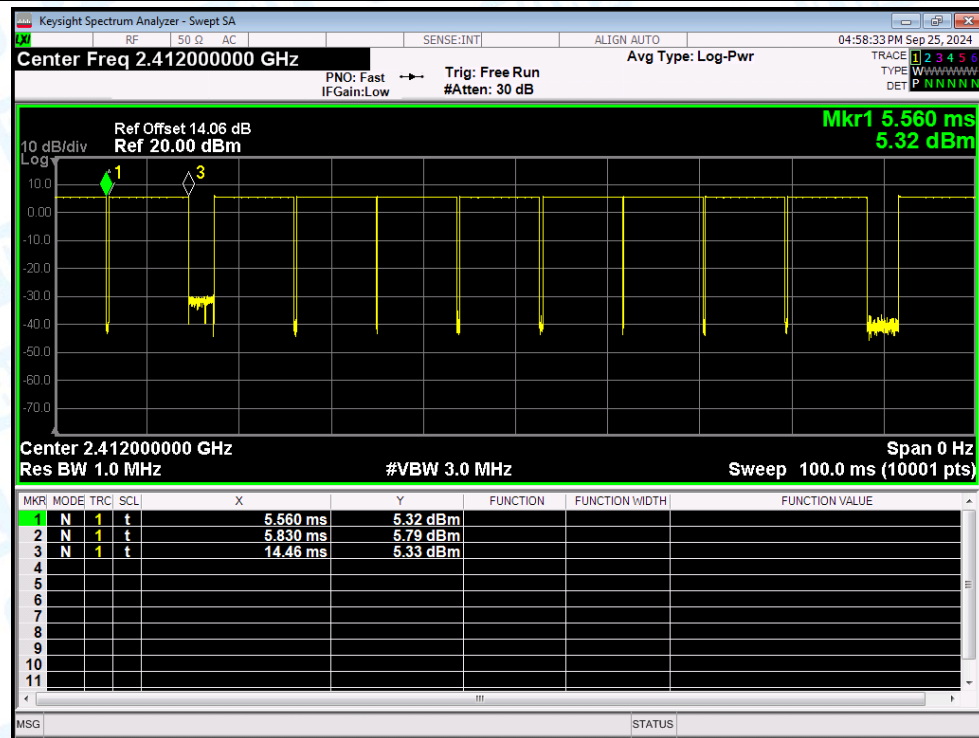
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1. Duty Cycle

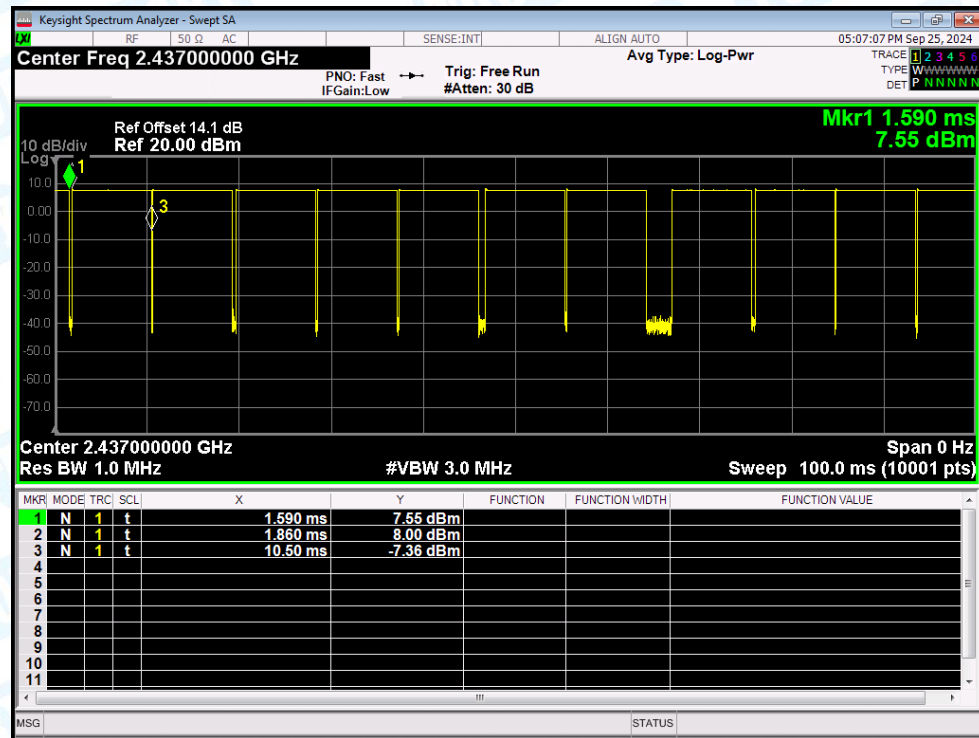
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	96.97	0.13	0.12
NVNT	b	2437	Ant1	96.97	0.13	0.12
NVNT	b	2462	Ant1	95.89	0.18	0.12
NVNT	g	2412	Ant1	82.18	0.85	0.7
NVNT	g	2437	Ant1	90.57	0.43	0.69
NVNT	g	2462	Ant1	85.12	0.7	0.7
NVNT	n(HT20)	2412	Ant1	90.3	0.44	0.83
NVNT	n(HT20)	2437	Ant1	77.56	1.1	0.83
NVNT	n(HT20)	2462	Ant1	94.53	0.24	0.83

Test Graphs

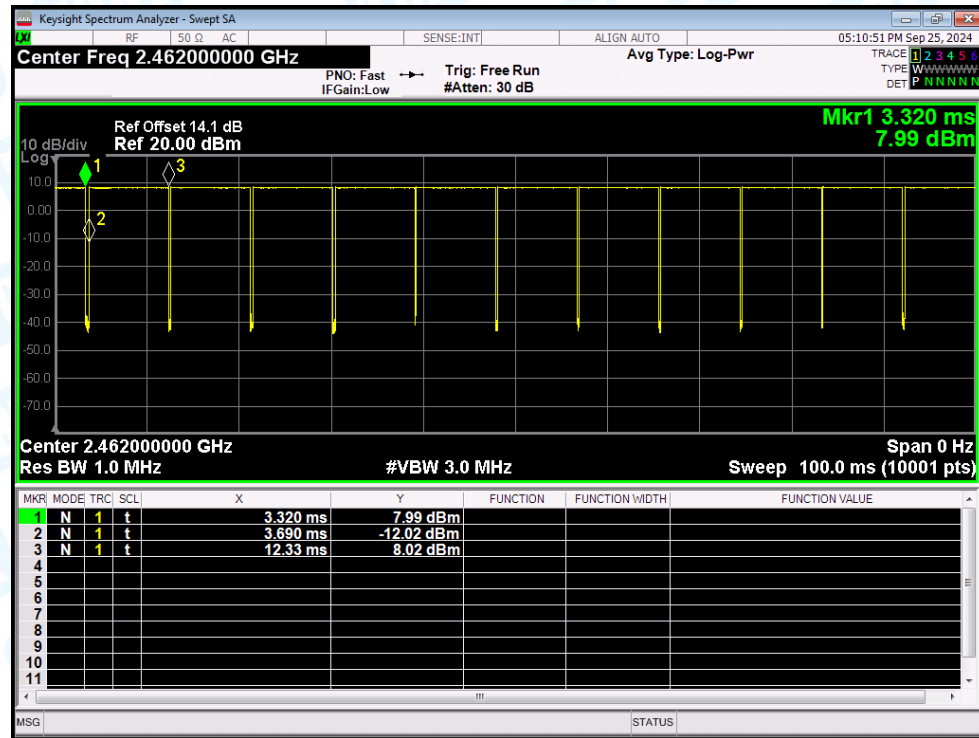
Duty Cycle NVNT b 2412MHz Ant1



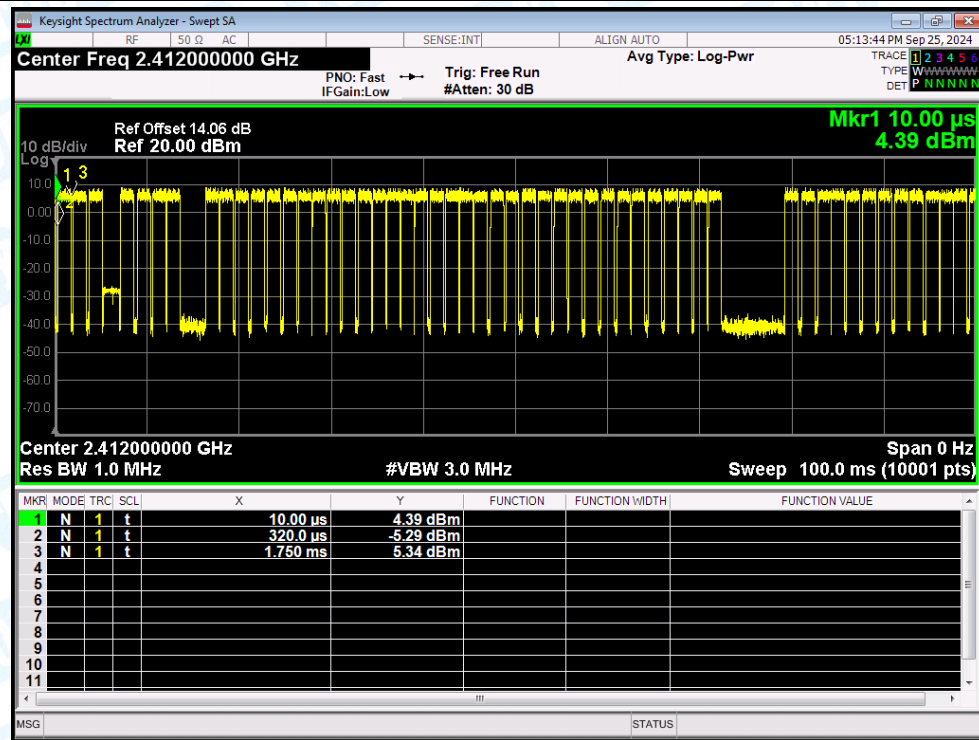
Duty Cycle NVNT b 2437MHz Ant1



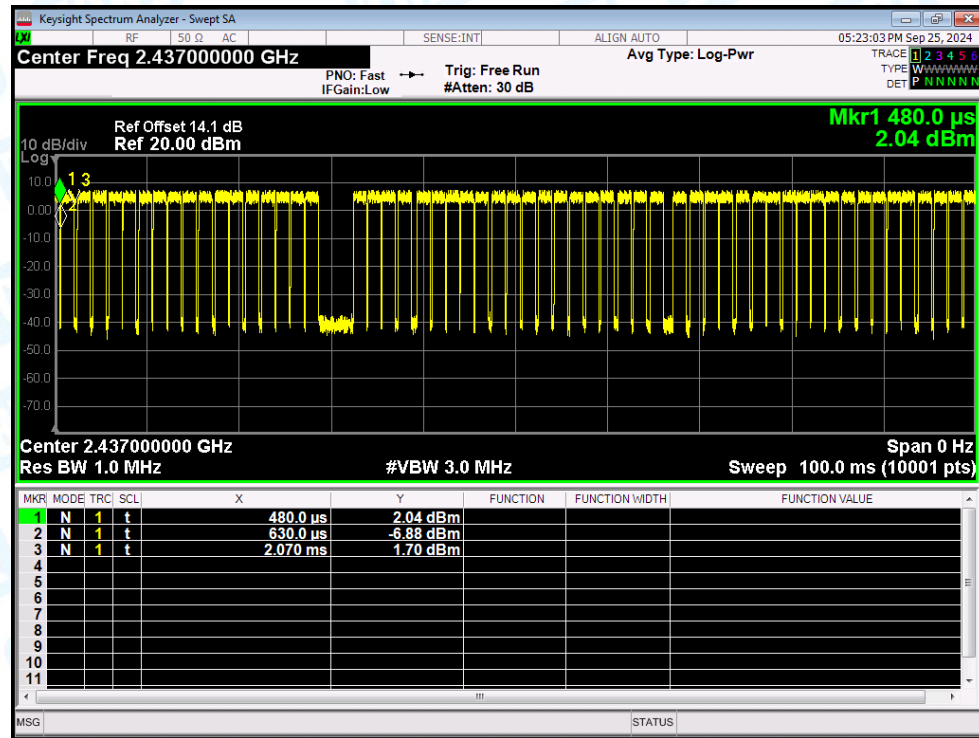
Duty Cycle NVNT b 2462MHz Ant1



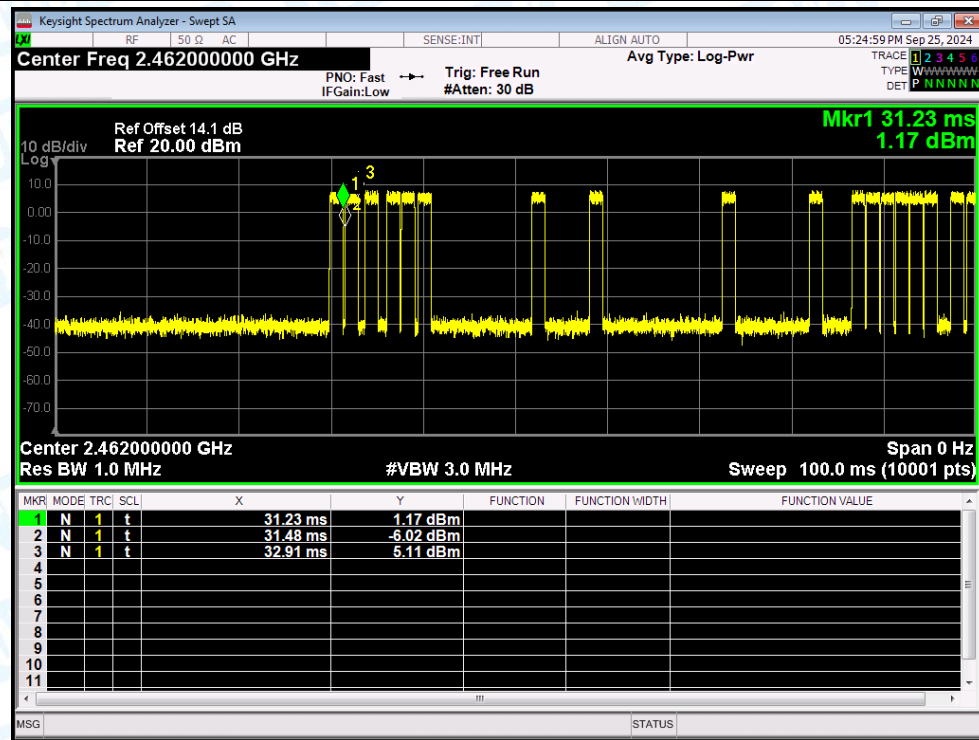
Duty Cycle NVNT g 2412MHz Ant1



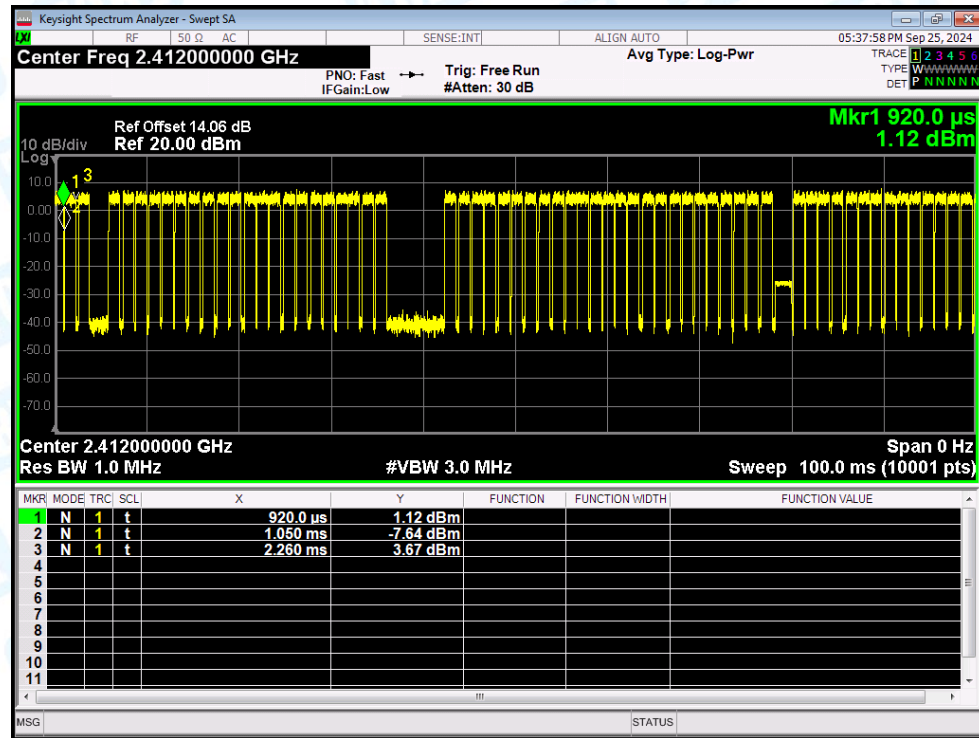
Duty Cycle NVNT g 2437MHz Ant1



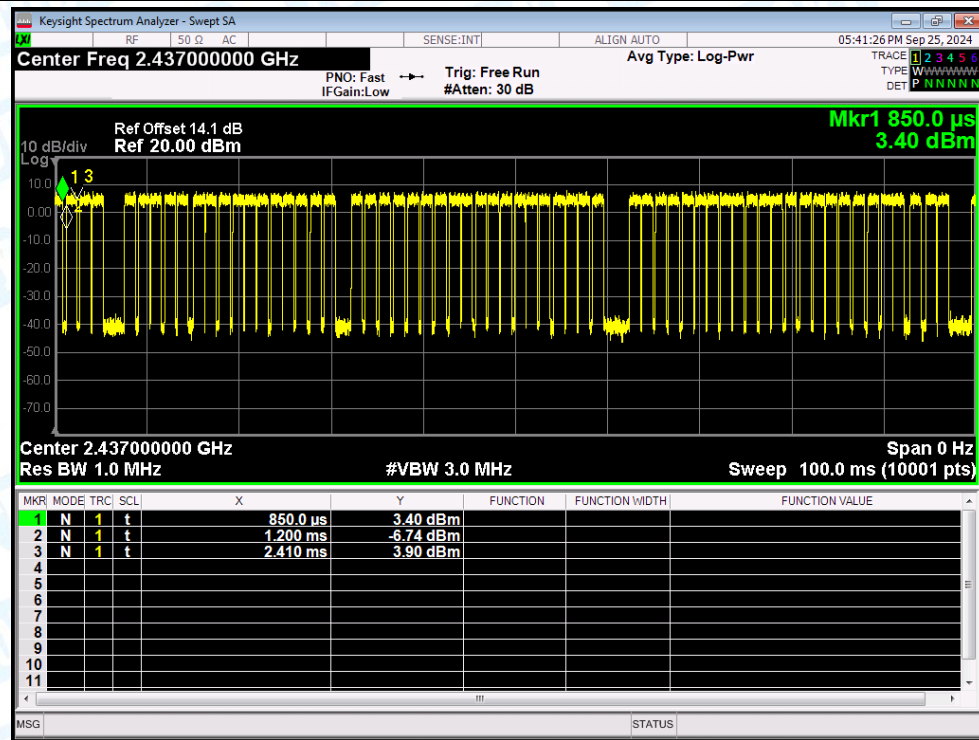
Duty Cycle NVNT g 2462MHz Ant1

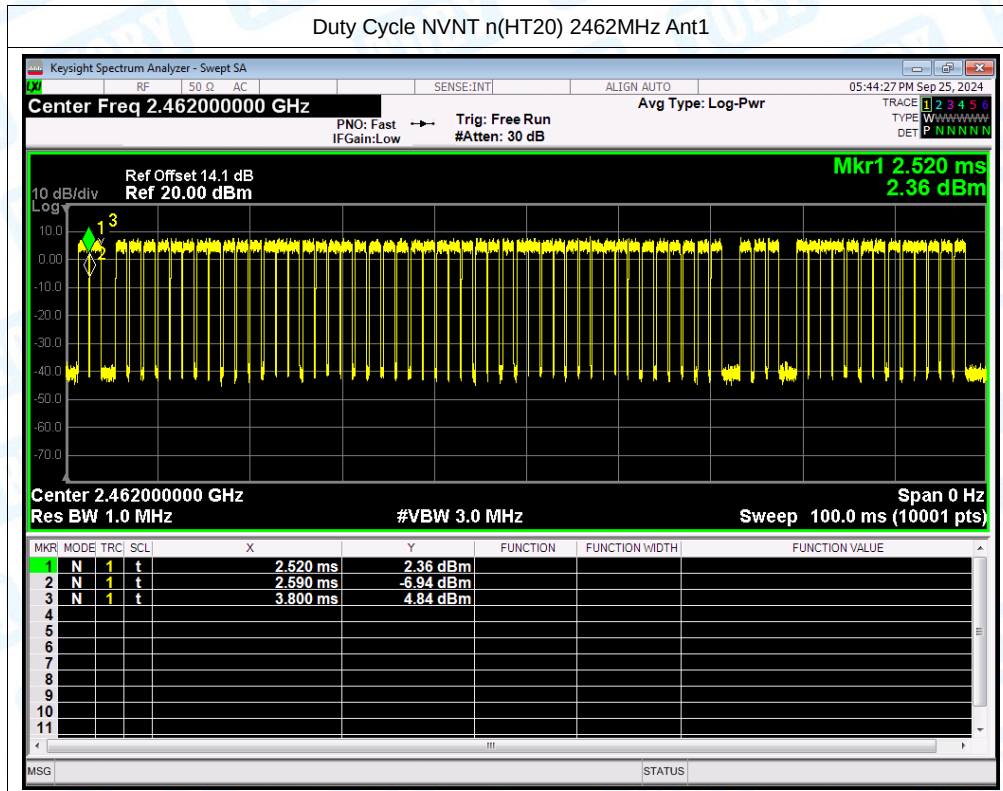


Duty Cycle NVNT n(HT20) 2412MHz Ant1



Duty Cycle NVNT n(HT20) 2437MHz Ant1





2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	14.09	30	Pass
NVNT	b	2437	Ant1	14.18	30	Pass
NVNT	b	2462	Ant1	14.75	30	Pass
NVNT	g	2412	Ant1	11.97	30	Pass
NVNT	g	2437	Ant1	11.73	30	Pass
NVNT	g	2462	Ant1	11.8	30	Pass
NVNT	n(HT20)	2412	Ant1	11.27	30	Pass
NVNT	n(HT20)	2437	Ant1	12.03	30	Pass
NVNT	n(HT20)	2462	Ant1	11.38	30	Pass

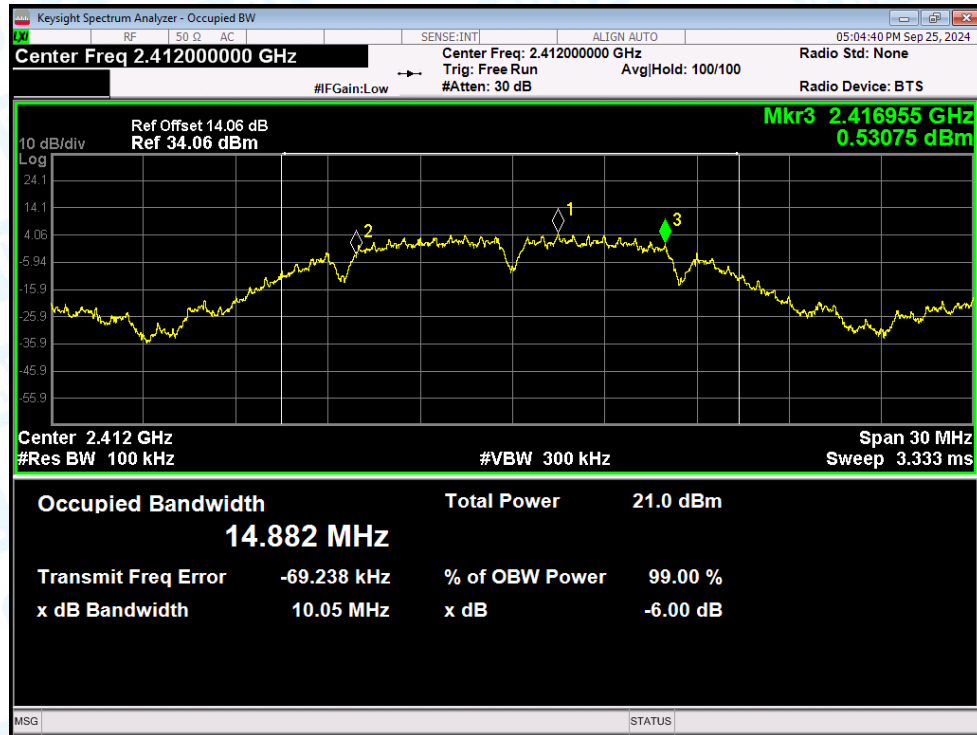
Note: The Duty Cycle Factor is compensated in the graph.

3. -6dB Bandwidth

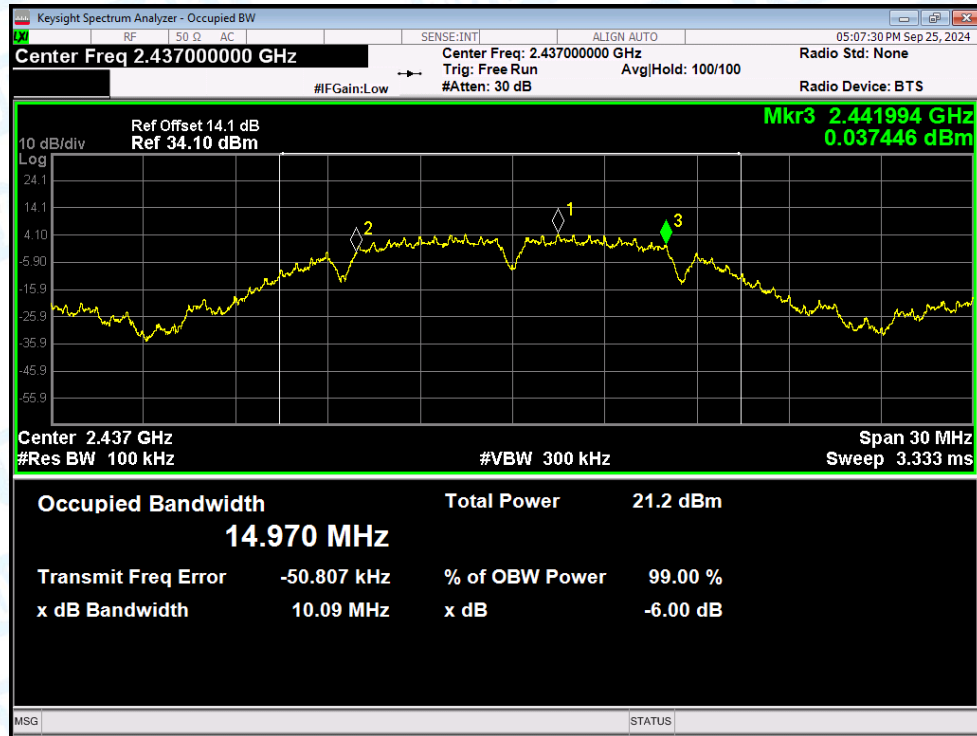
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.05	0.5	Pass
NVNT	b	2437	Ant1	10.09	0.5	Pass
NVNT	b	2462	Ant1	10.09	0.5	Pass
NVNT	g	2412	Ant1	16.16	0.5	Pass
NVNT	g	2437	Ant1	15.33	0.5	Pass
NVNT	g	2462	Ant1	15.75	0.5	Pass
NVNT	n(HT20)	2412	Ant1	16.57	0.5	Pass
NVNT	n(HT20)	2437	Ant1	16.33	0.5	Pass
NVNT	n(HT20)	2462	Ant1	16.12	0.5	Pass

Test Graphs

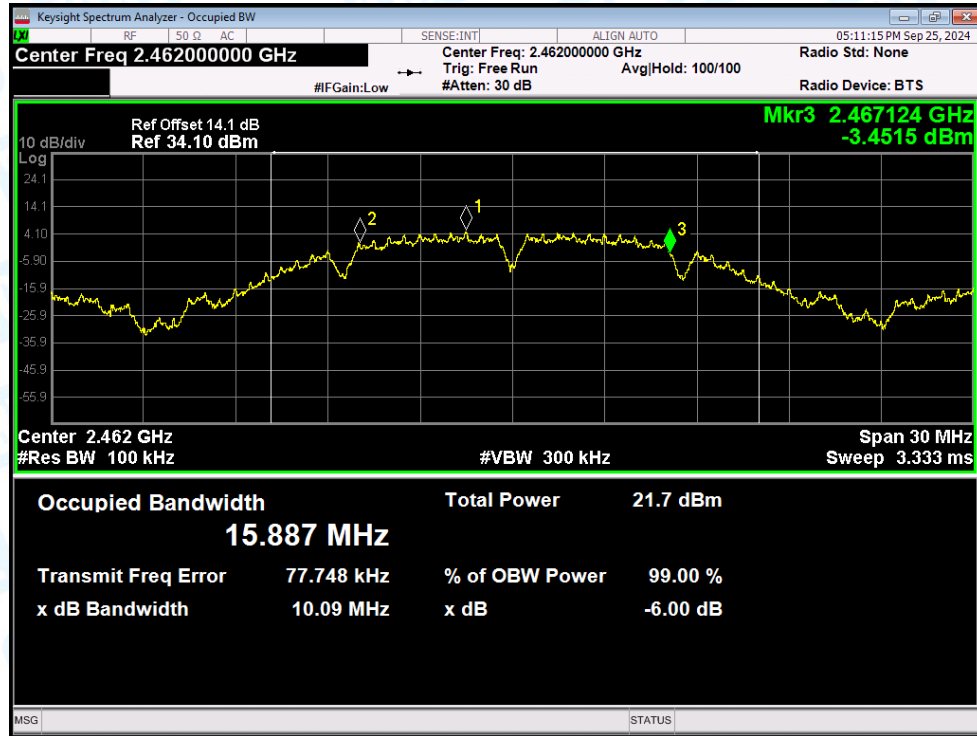
-6dB Bandwidth NVNT b 2412MHz Ant1



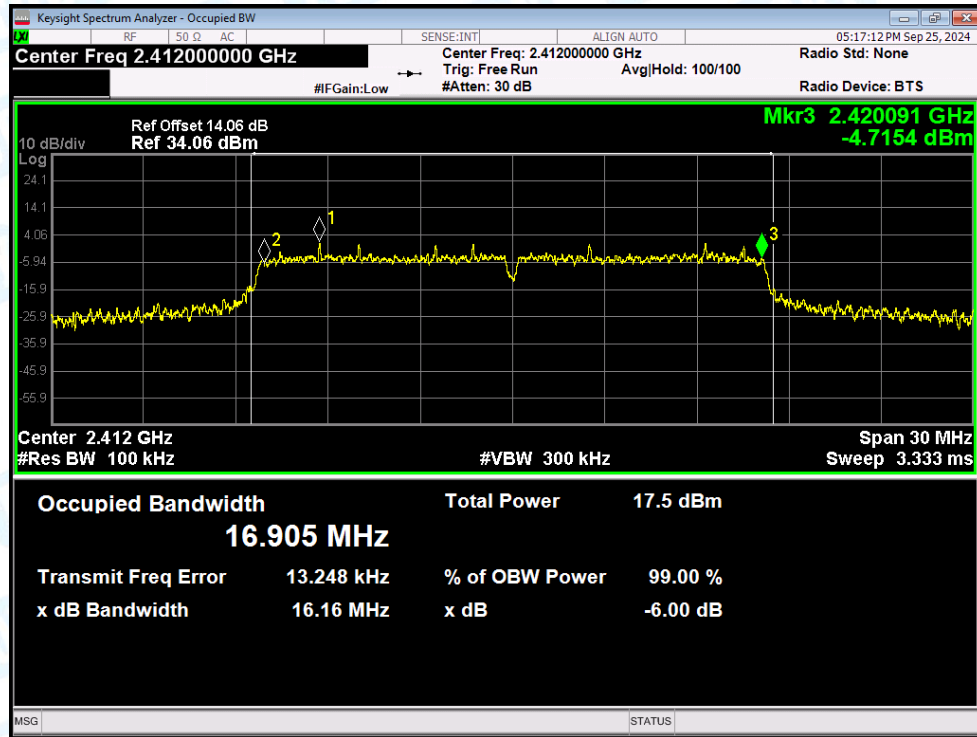
-6dB Bandwidth NVNT b 2437MHz Ant1



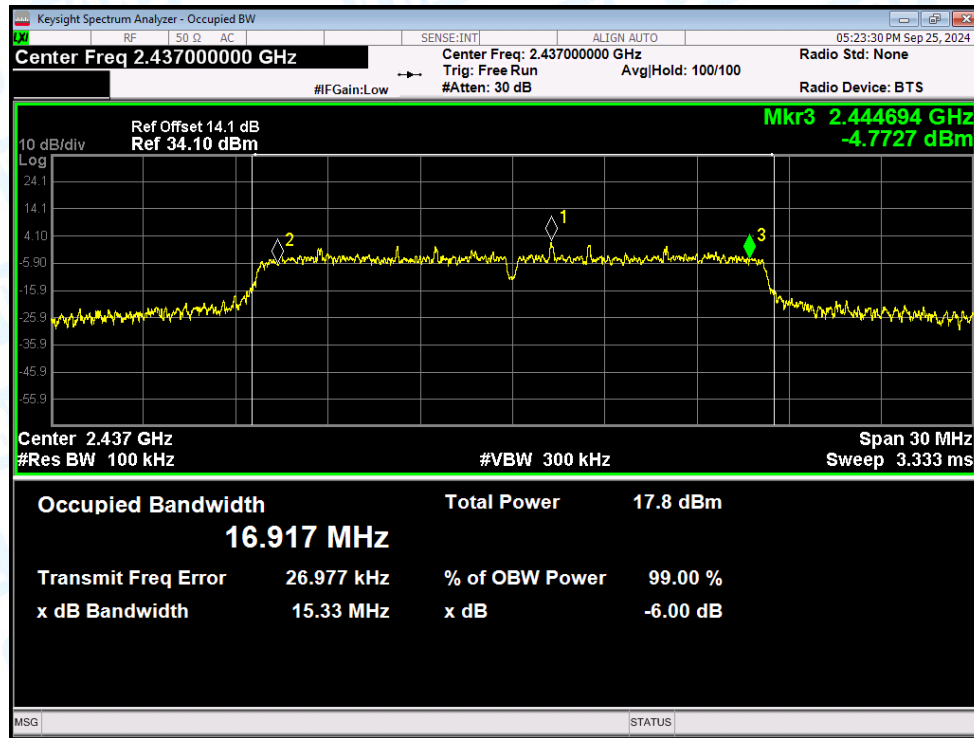
-6dB Bandwidth NVNT b 2462MHz Ant1



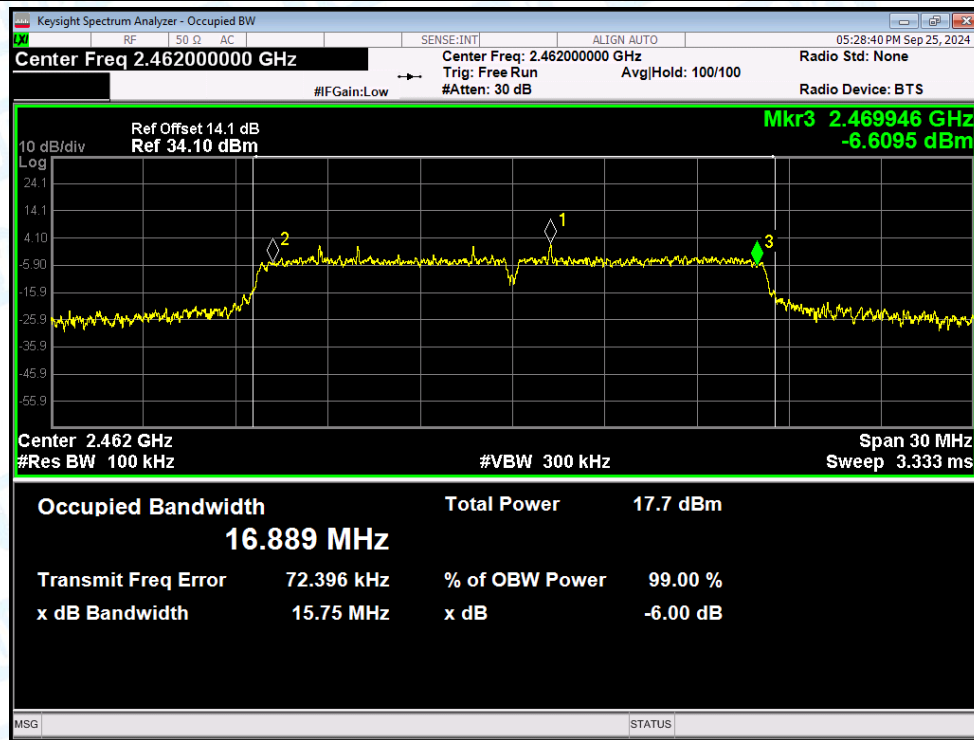
-6dB Bandwidth NVNT g 2412MHz Ant1



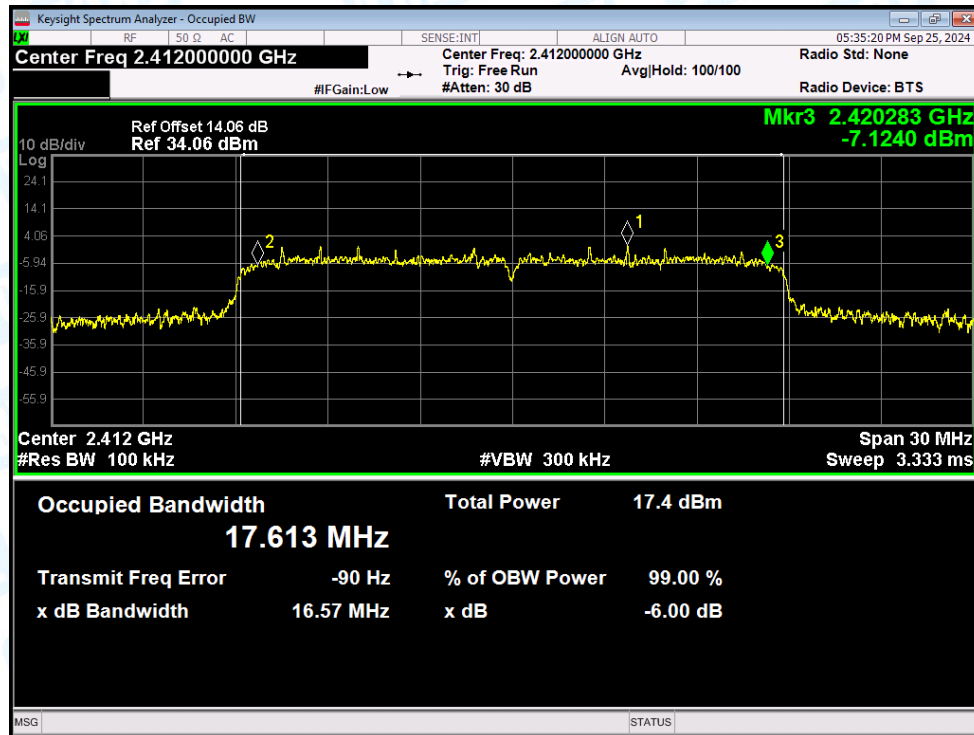
-6dB Bandwidth NVNT g 2437MHz Ant1



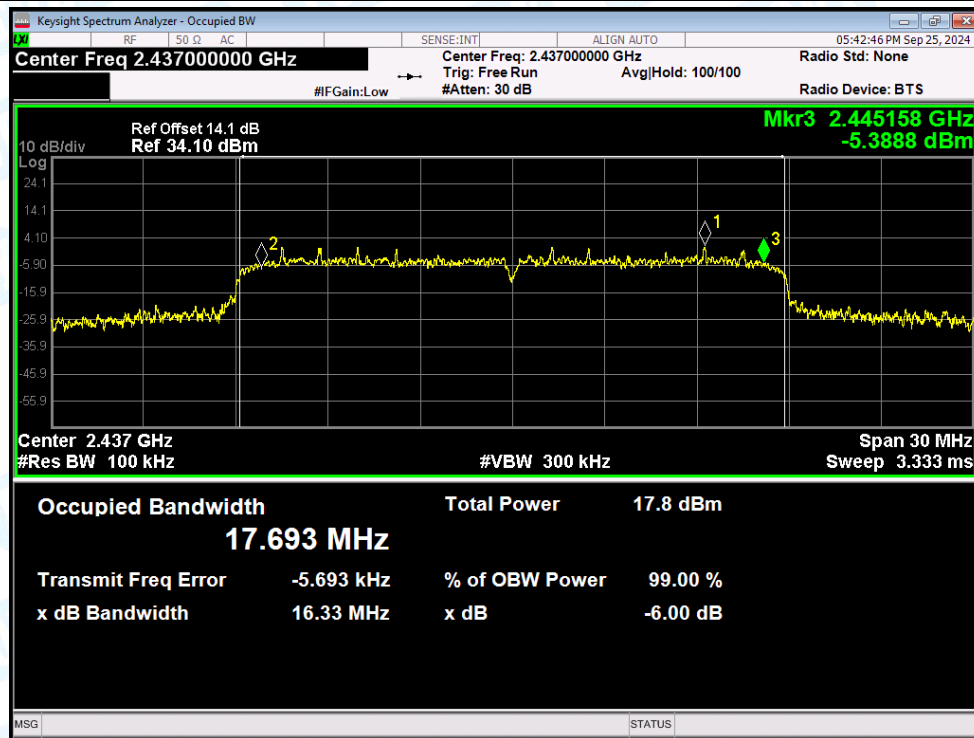
-6dB Bandwidth NVNT g 2462MHz Ant1

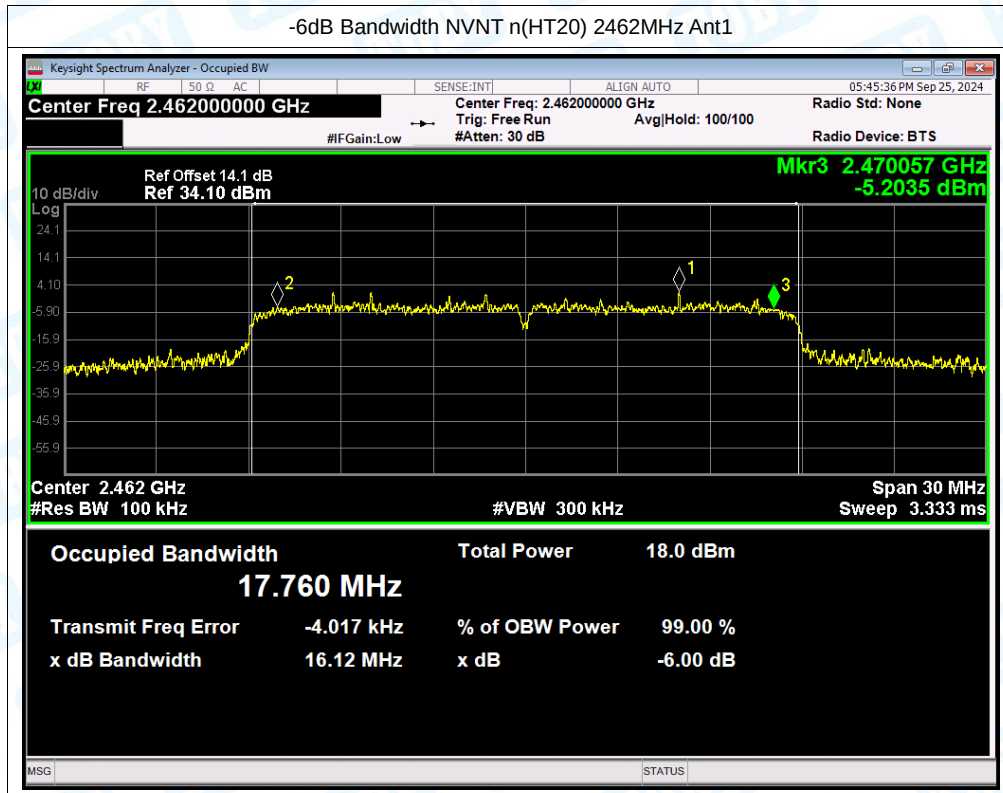


-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



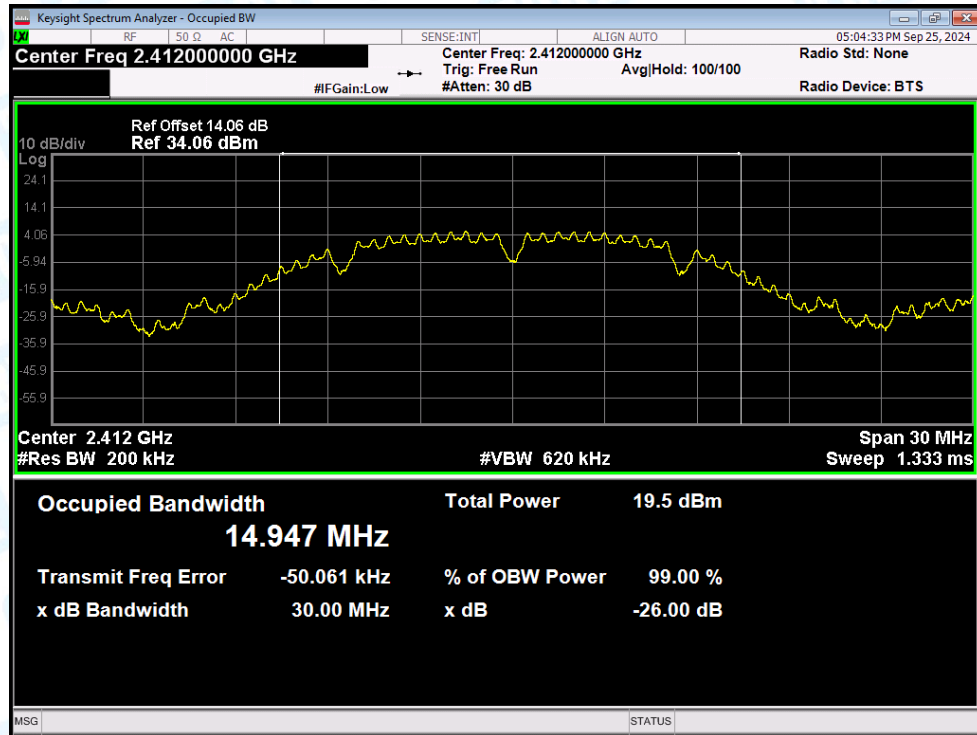


4. Occupied Channel Bandwidth

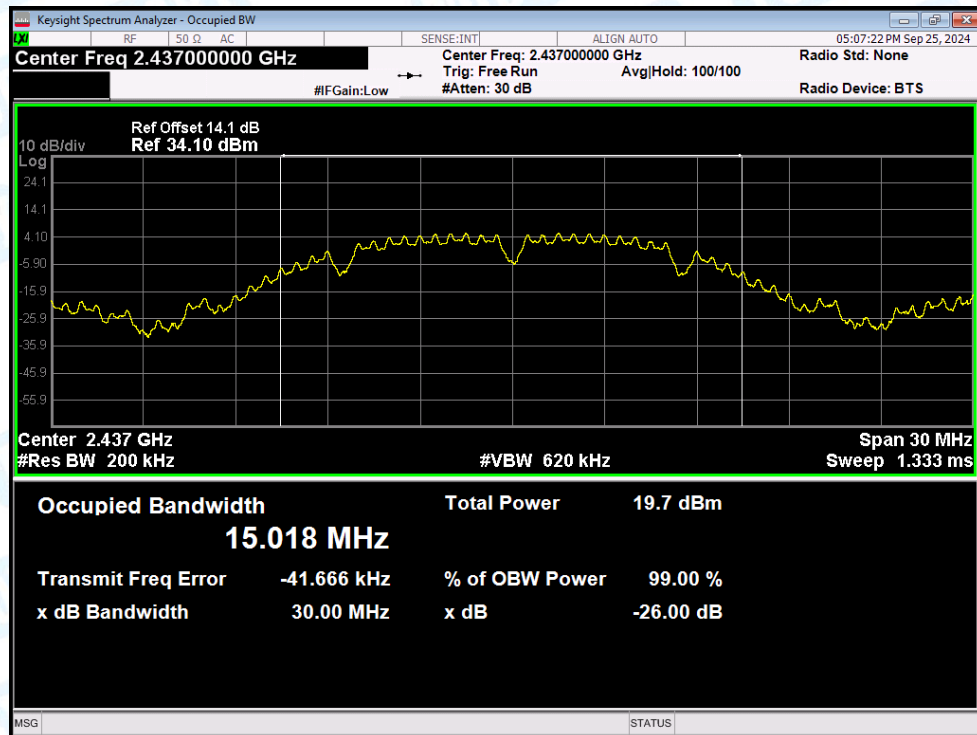
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.947
NVNT	b	2437	Ant1	15.018
NVNT	b	2462	Ant1	15.915
NVNT	g	2412	Ant1	17.117
NVNT	g	2437	Ant1	16.887
NVNT	g	2462	Ant1	17.199
NVNT	n(HT20)	2412	Ant1	17.705
NVNT	n(HT20)	2437	Ant1	17.785
NVNT	n(HT20)	2462	Ant1	17.861

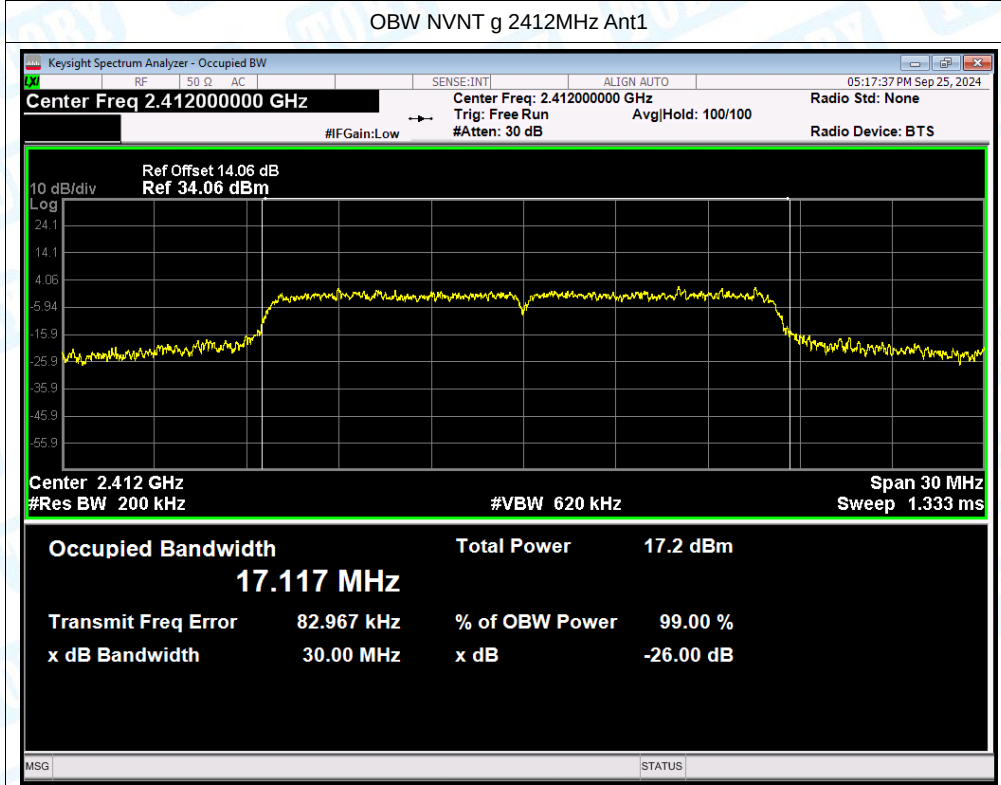
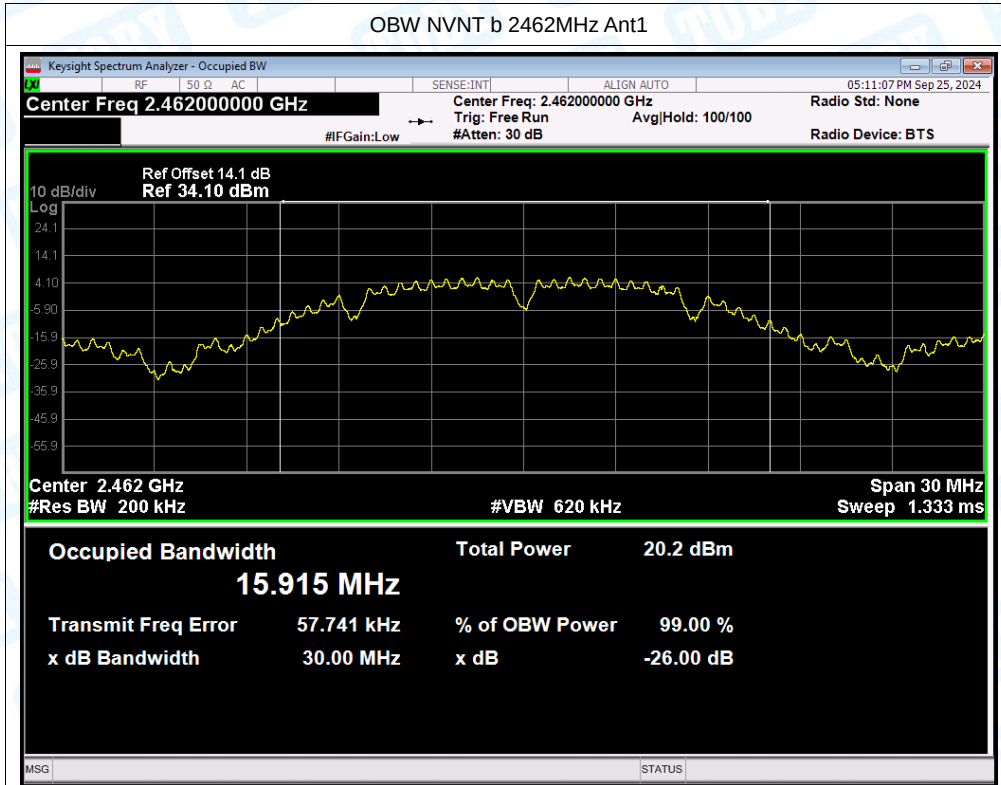
Test Graphs

OBW NVNT b 2412MHz Ant1

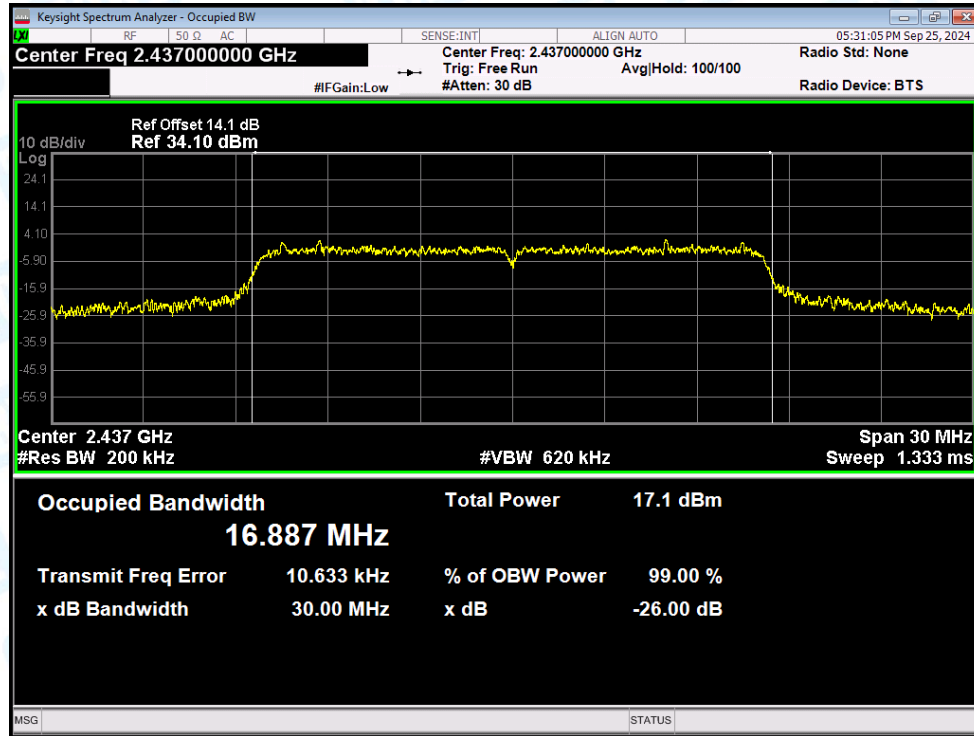


OBW NVNT b 2437MHz Ant1

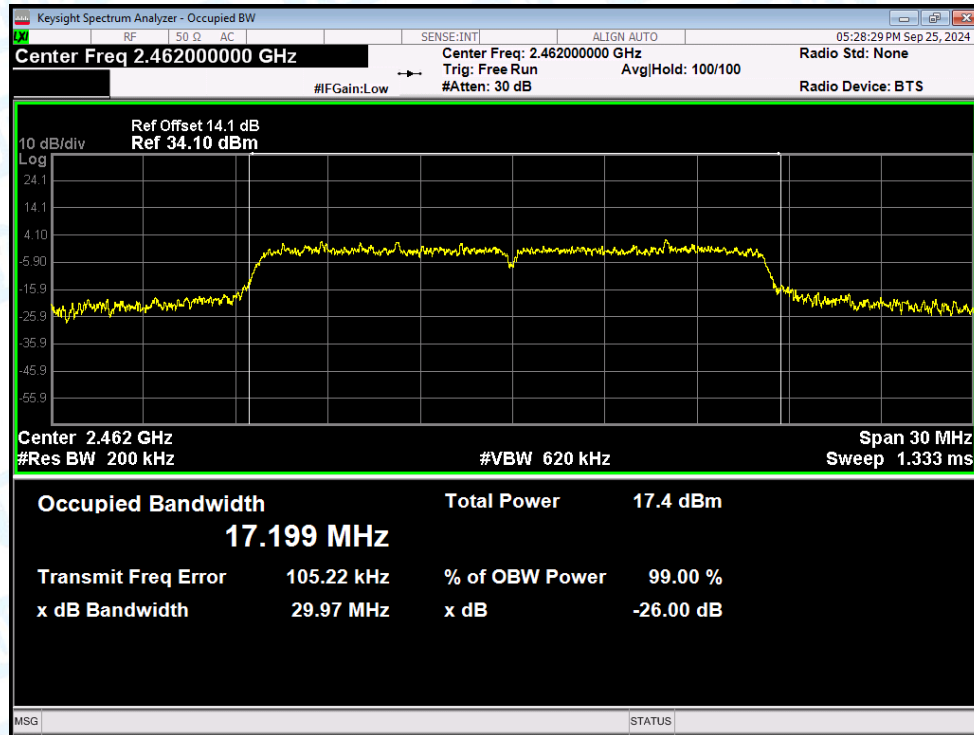




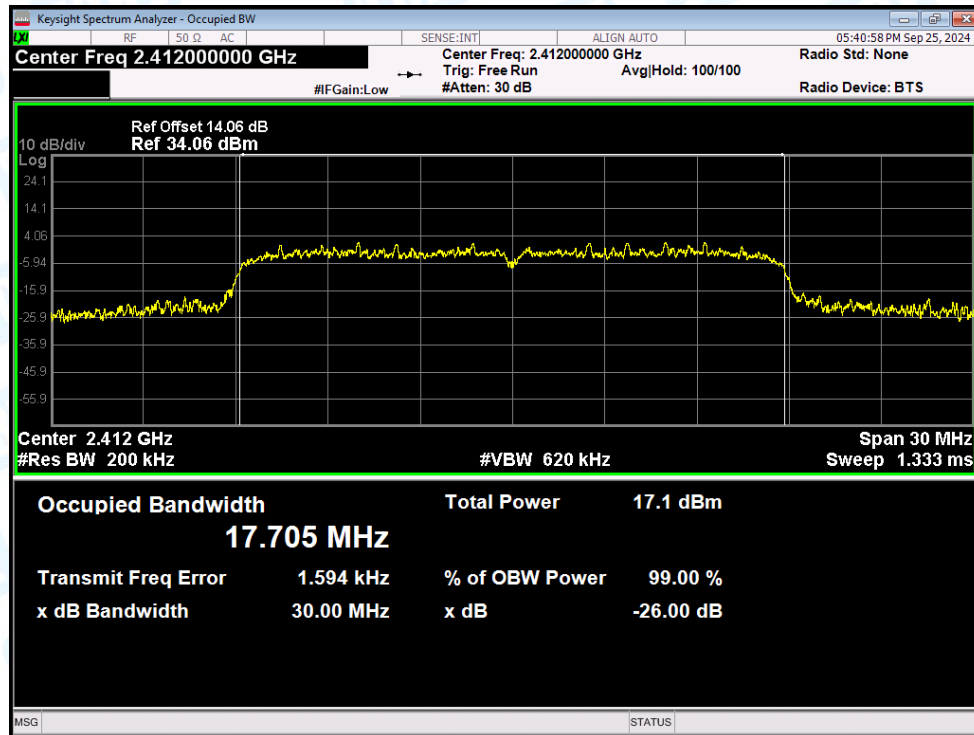
OBW NVNT g 2437MHz Ant1



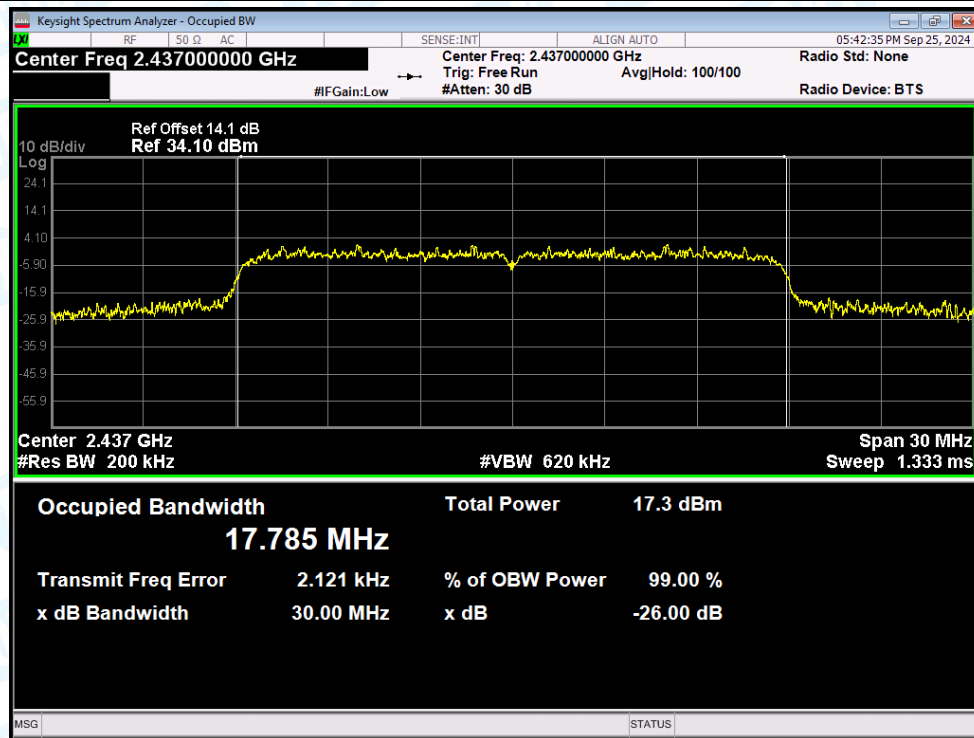
OBW NVNT g 2462MHz Ant1

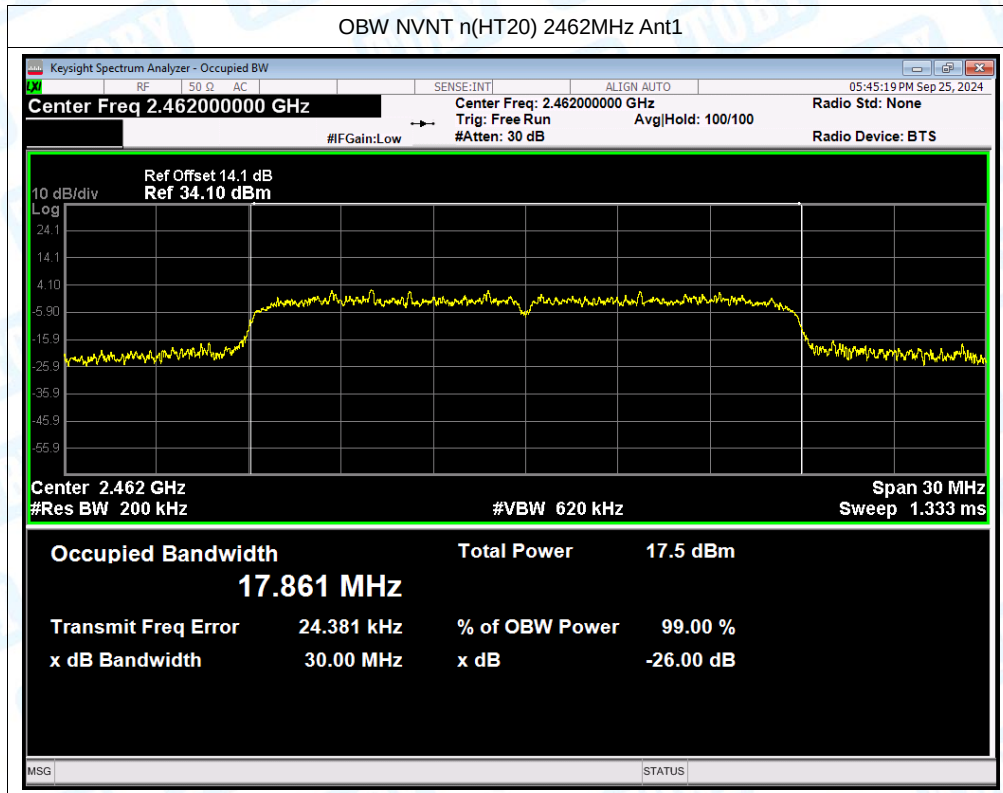


OBW NVNT n(HT20) 2412MHz Ant1



OBW NVNT n(HT20) 2437MHz Ant1





5. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-19.14	8	Pass
NVNT	b	2437	Ant1	-18.825	8	Pass
NVNT	b	2462	Ant1	-18.407	8	Pass
NVNT	g	2412	Ant1	-23.609	8	Pass
NVNT	g	2437	Ant1	-23.195	8	Pass
NVNT	g	2462	Ant1	-23.339	8	Pass
NVNT	n(HT20)	2412	Ant1	-24.186	8	Pass
NVNT	n(HT20)	2437	Ant1	-23.661	8	Pass
NVNT	n(HT20)	2462	Ant1	-23.501	8	Pass

Note: The Duty Cycle Factor is compensated in the graph.

Test Graphs

PSD NVNT b 2412MHz Ant1



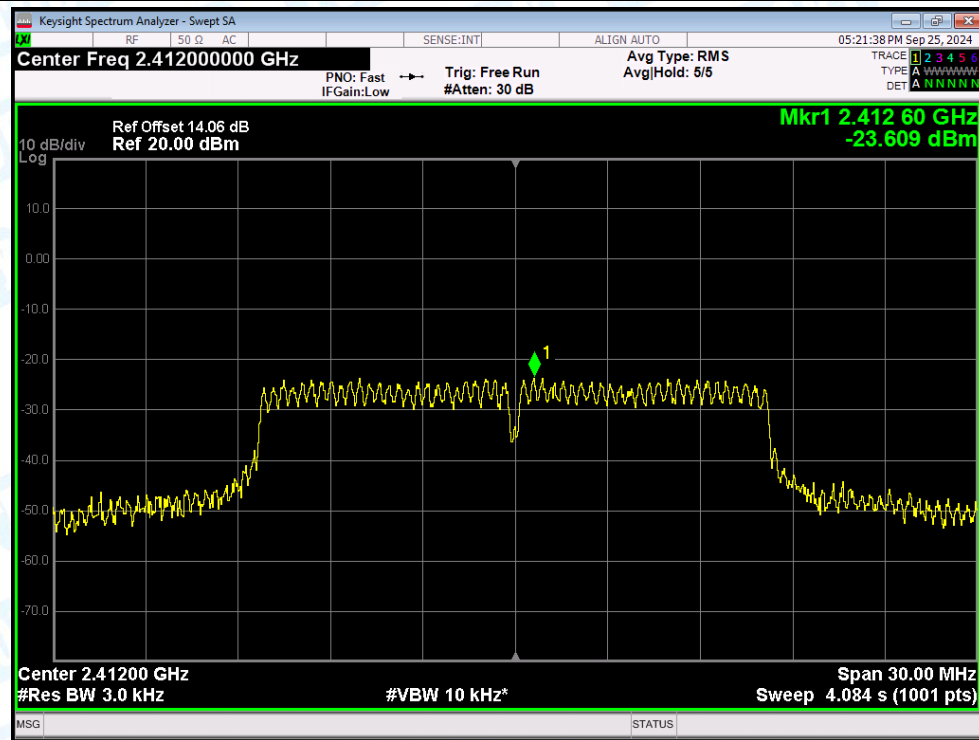
PSD NVNT b 2437MHz Ant1



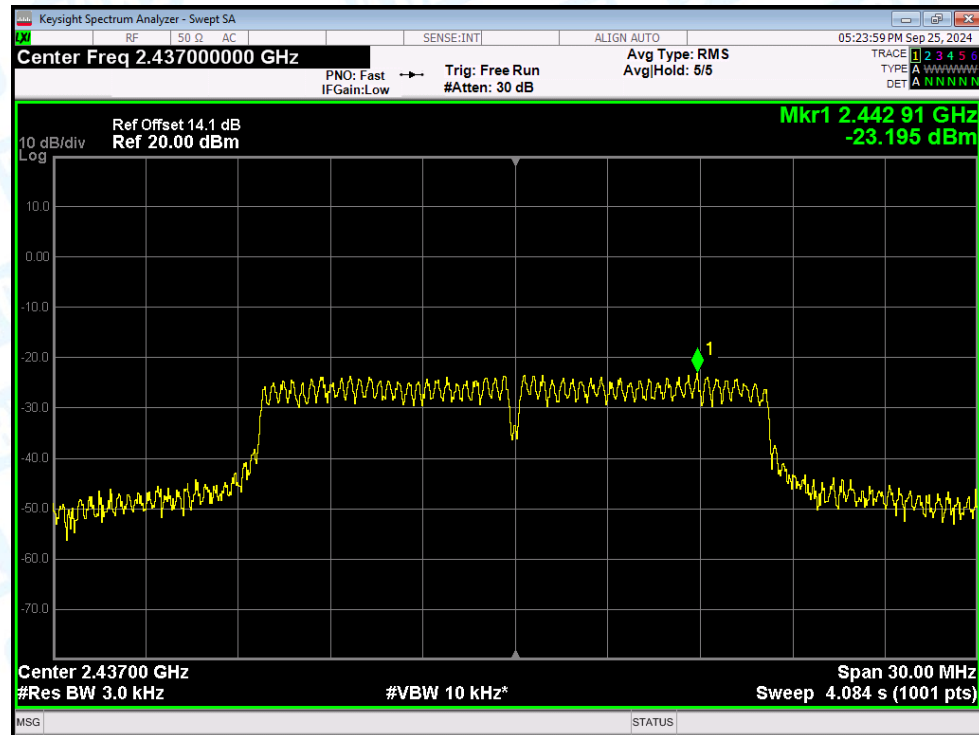
PSD NVNT b 2462MHz Ant1



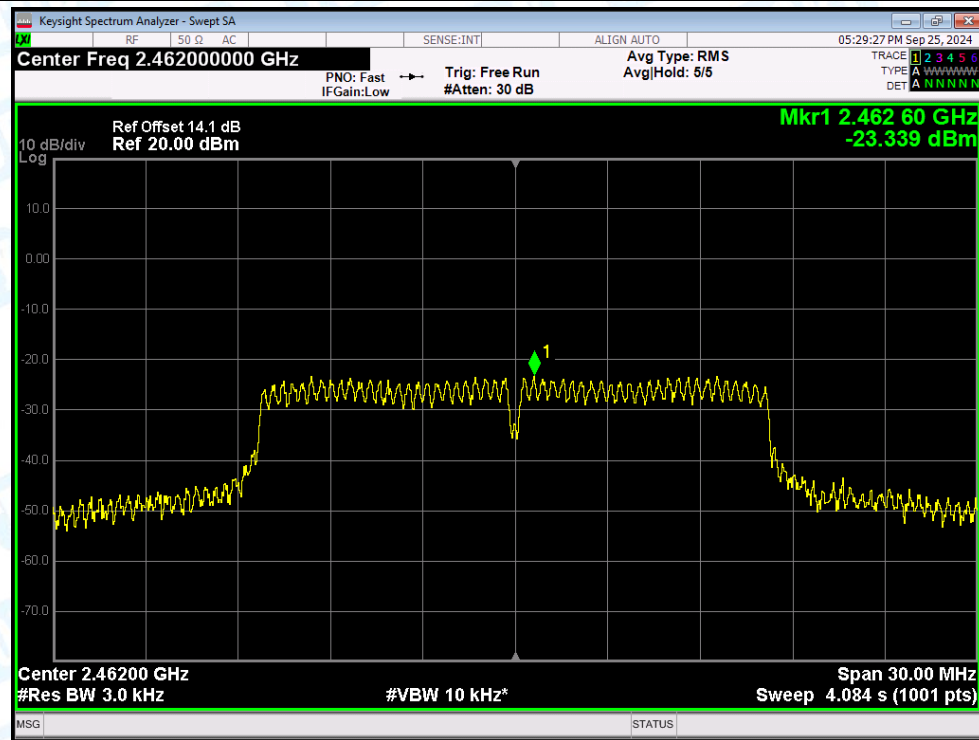
PSD NVNT g 2412MHz Ant1



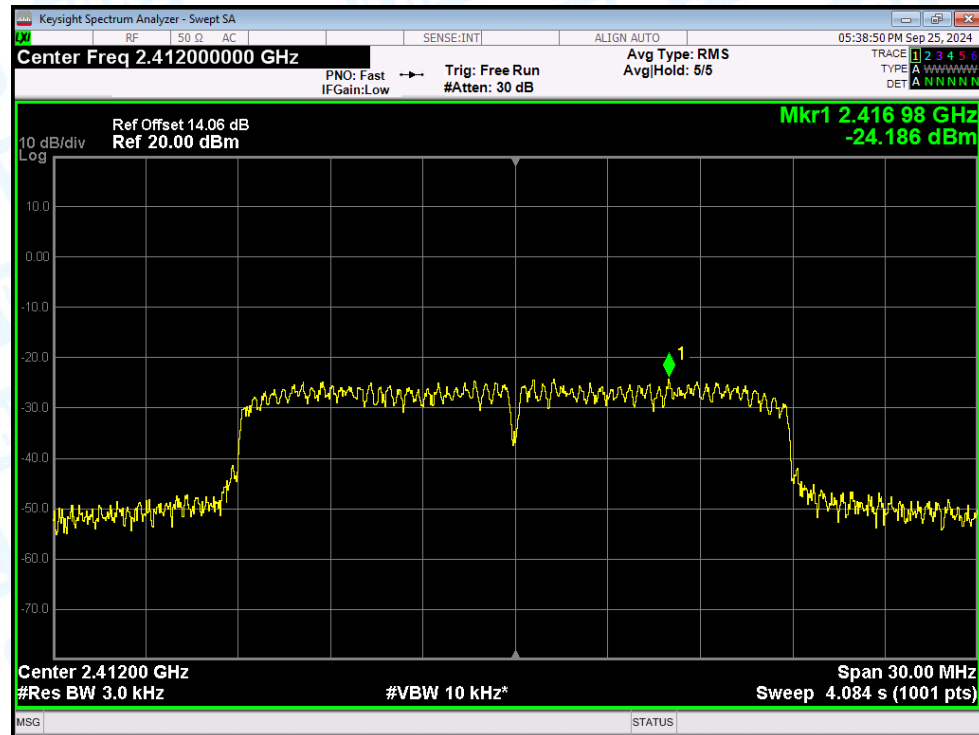
PSD NVNT g 2437MHz Ant1



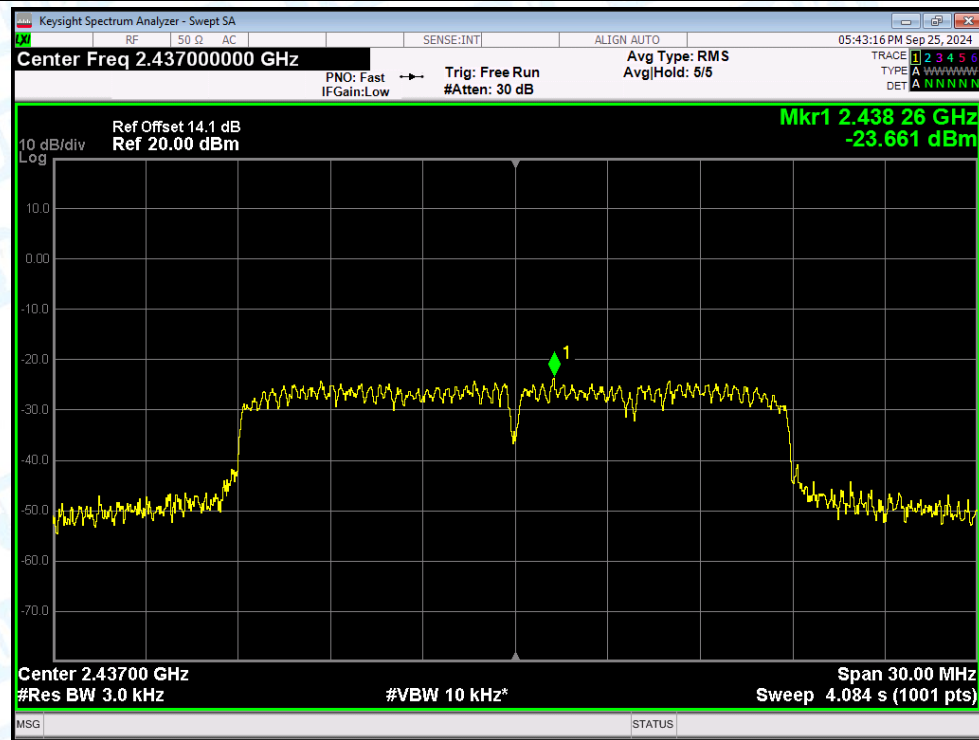
PSD NVNT g 2462MHz Ant1

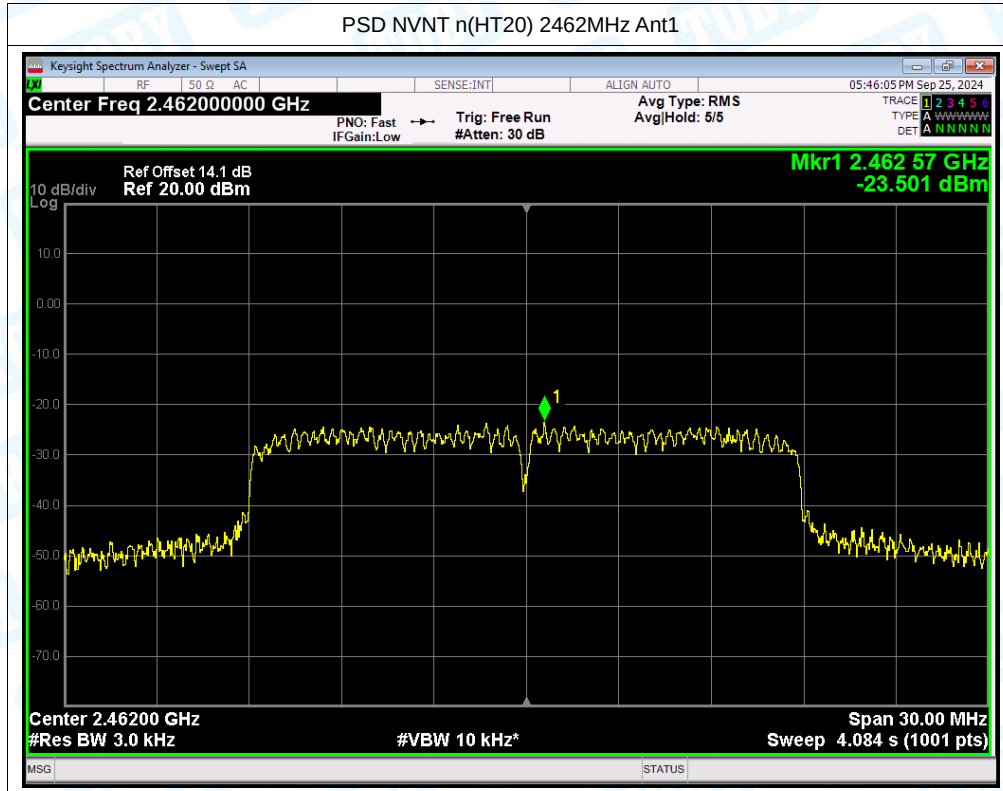


PSD NVNT n(HT20) 2412MHz Ant1



PSD NVNT n(HT20) 2437MHz Ant1



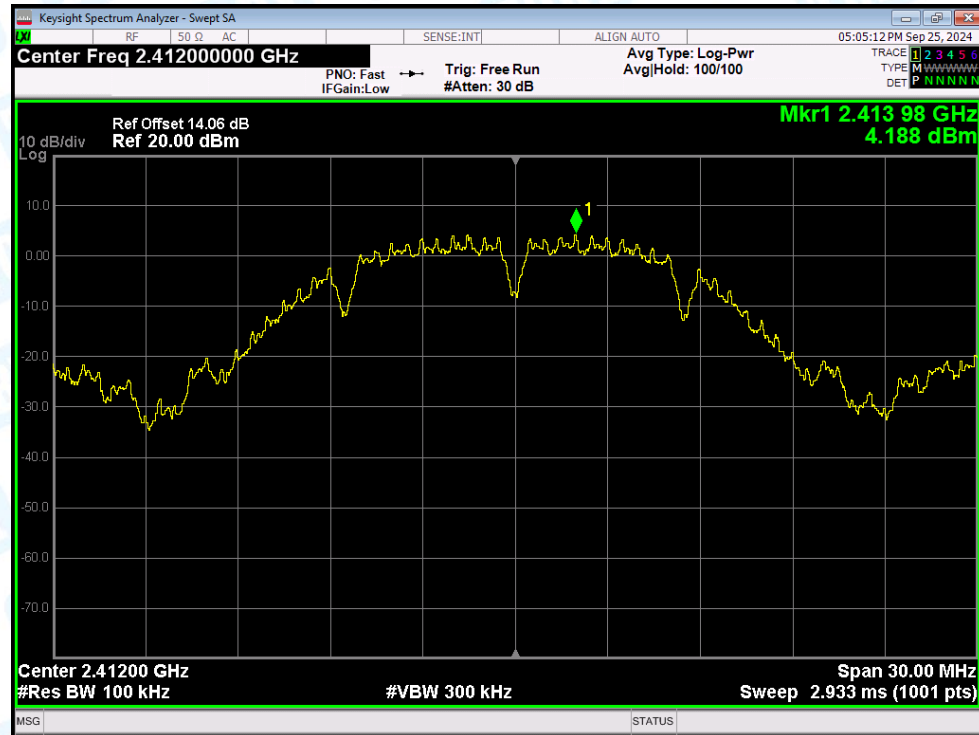


6. Band Edge

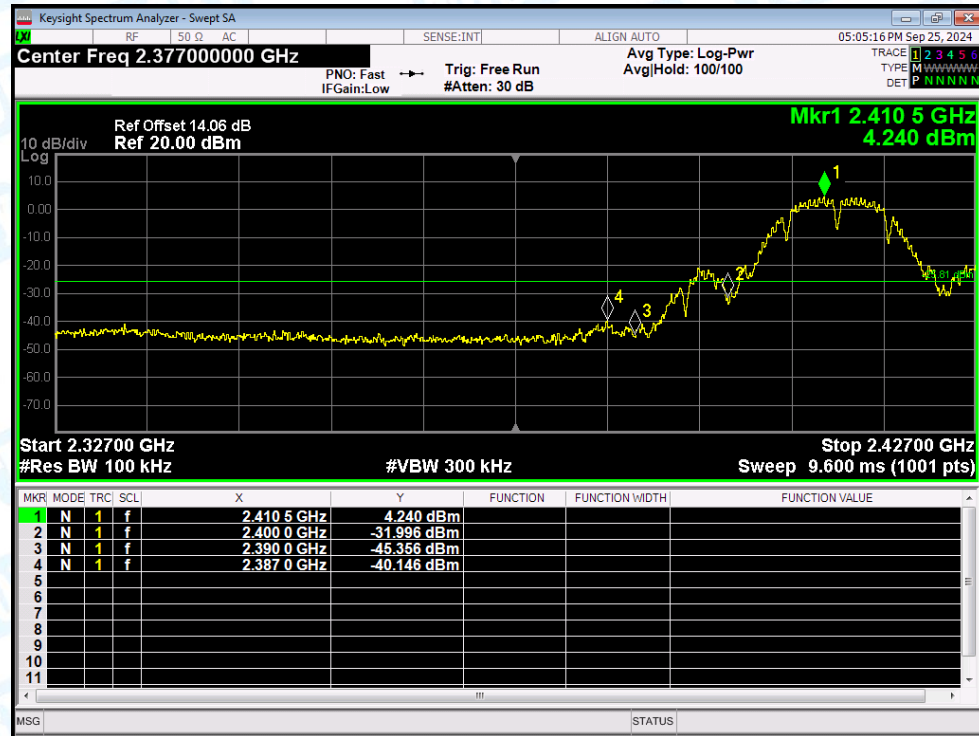
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-44.34	-30	Pass
NVNT	b	2462	Ant1	-37.17	-30	Pass
NVNT	g	2412	Ant1	-37.65	-30	Pass
NVNT	g	2462	Ant1	-31.04	-30	Pass
NVNT	n(HT20)	2412	Ant1	-35.27	-30	Pass
NVNT	n(HT20)	2462	Ant1	-32.03	-30	Pass

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



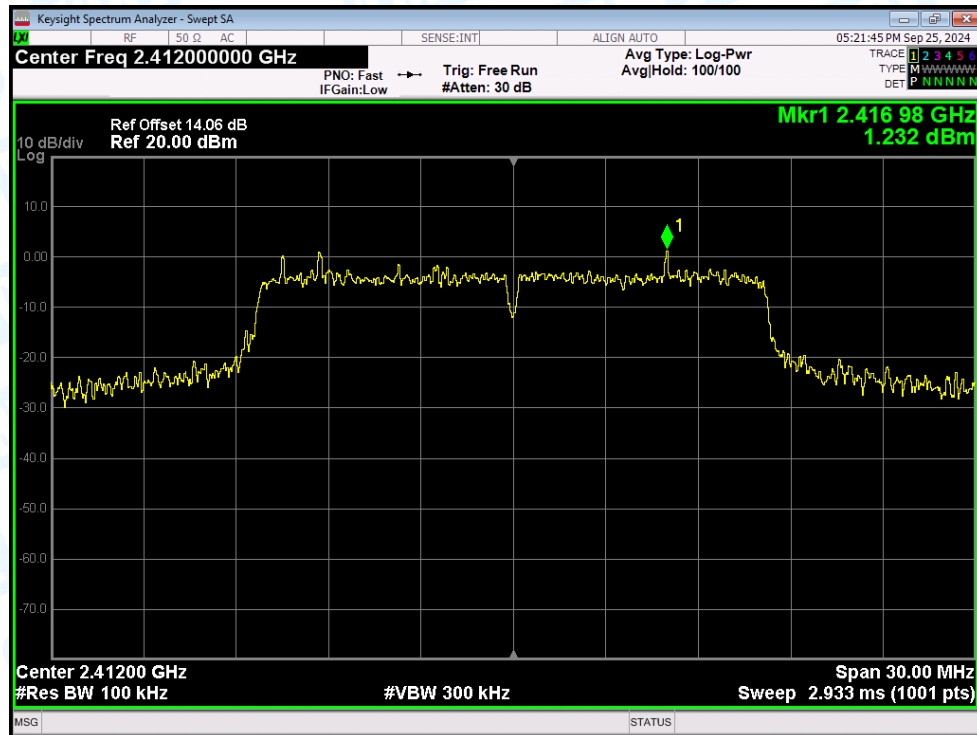
Band Edge NVNT b 2462MHz Ant1 Ref



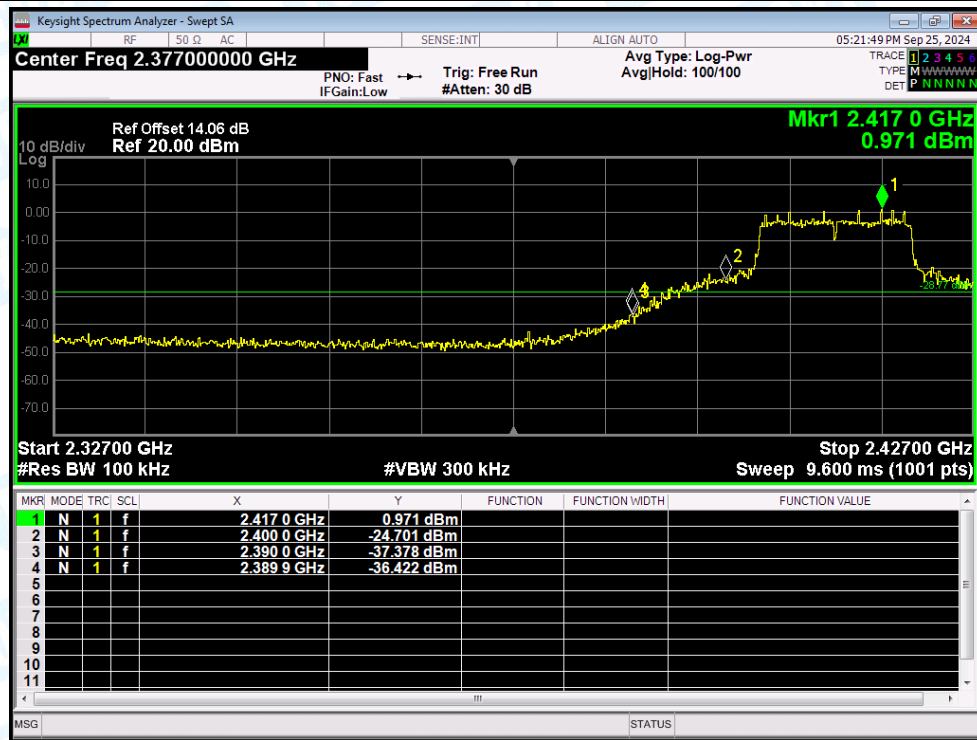
Band Edge NVNT b 2462MHz Ant1 Emission



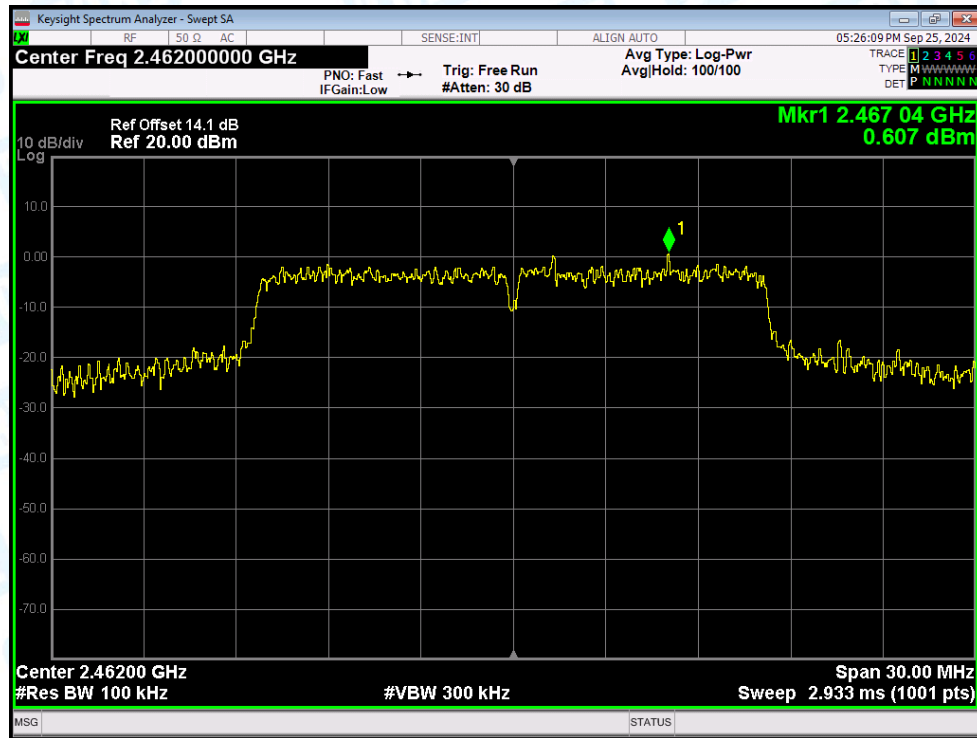
Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission



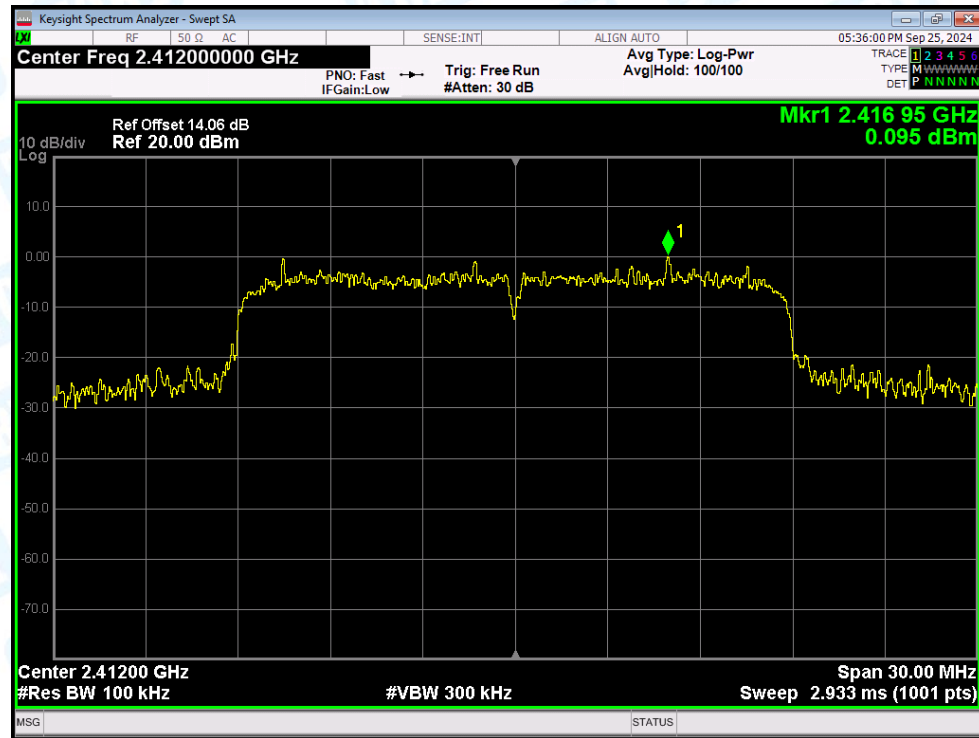
Band Edge NVNT g 2462MHz Ant1 Ref



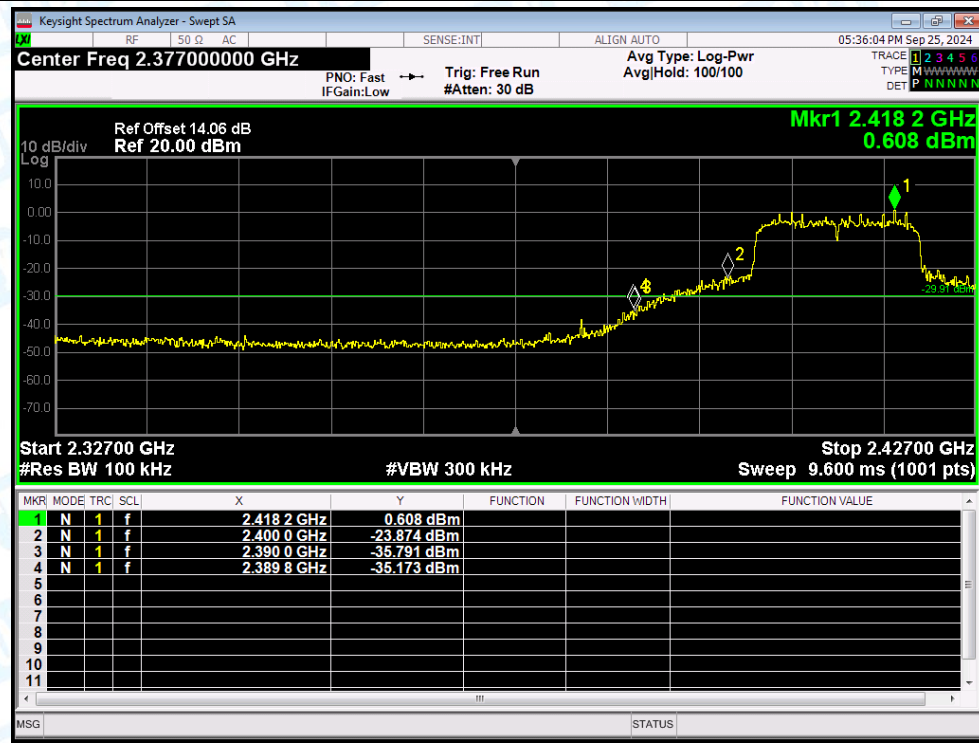
Band Edge NVNT g 2462MHz Ant1 Emission



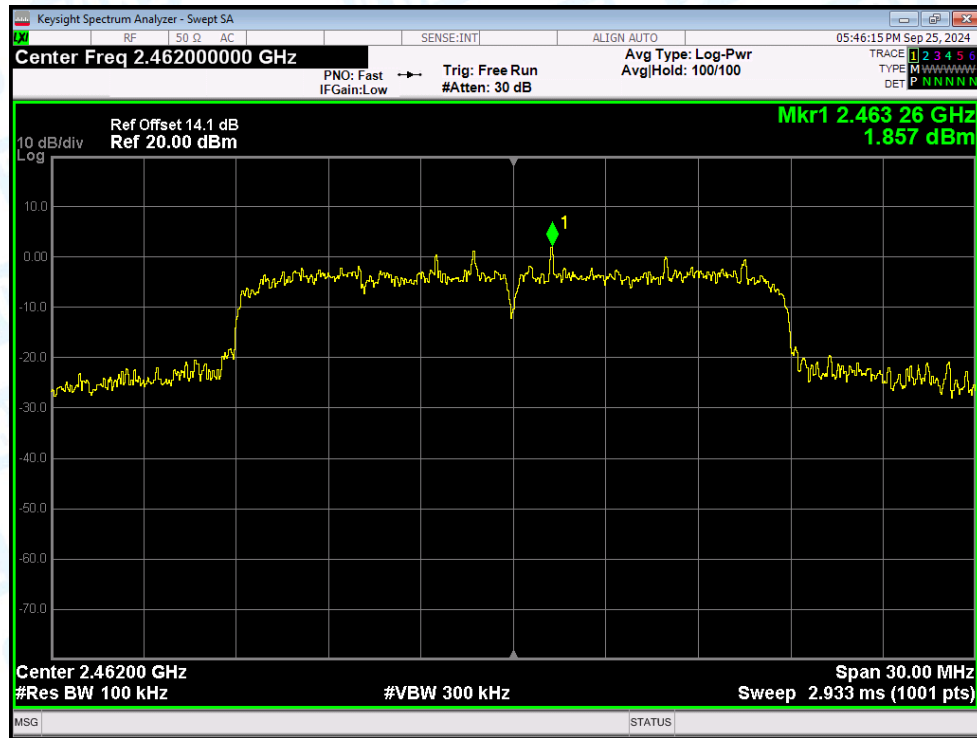
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



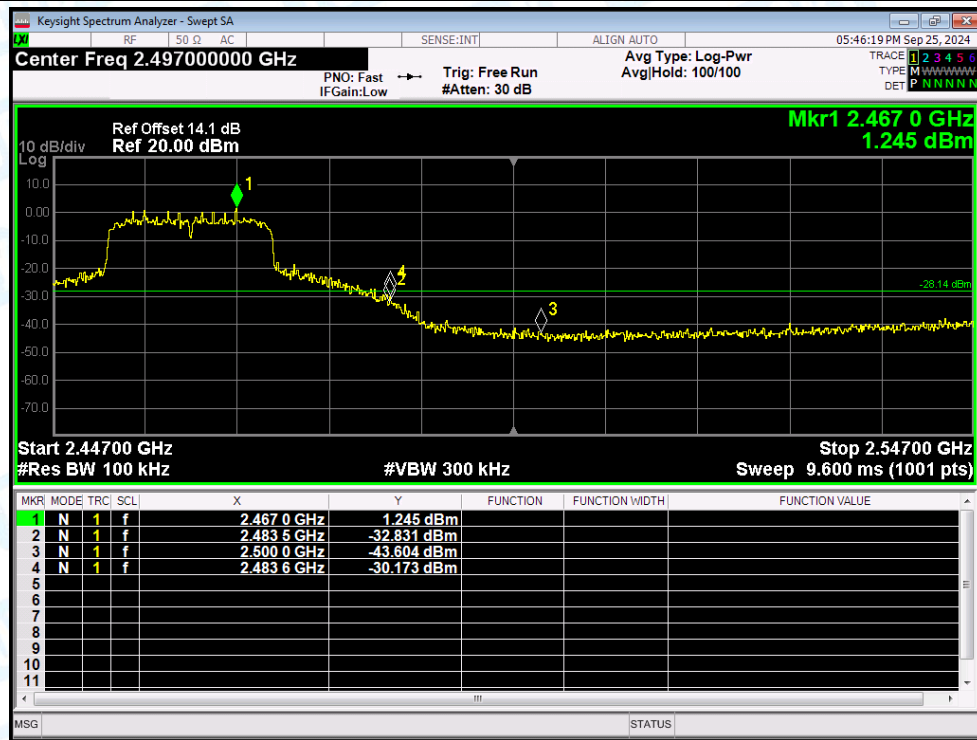
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



7. Conducted RF Spurious Emission

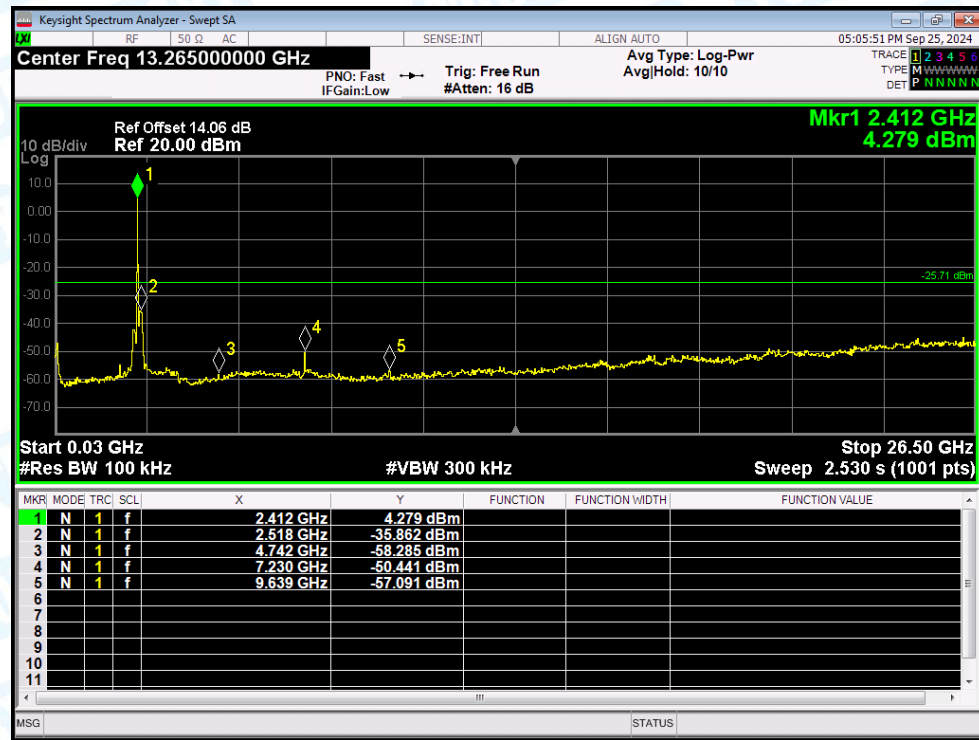
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-40.15	-30	Pass
NVNT	b	2437	Ant1	-40.45	-30	Pass
NVNT	b	2462	Ant1	-41.68	-30	Pass
NVNT	g	2412	Ant1	-37.41	-30	Pass
NVNT	g	2437	Ant1	-38.5	-30	Pass
NVNT	g	2462	Ant1	-39.83	-30	Pass
NVNT	n(HT20)	2412	Ant1	-37.75	-30	Pass
NVNT	n(HT20)	2437	Ant1	-37.35	-30	Pass
NVNT	n(HT20)	2462	Ant1	-38.71	-30	Pass

Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



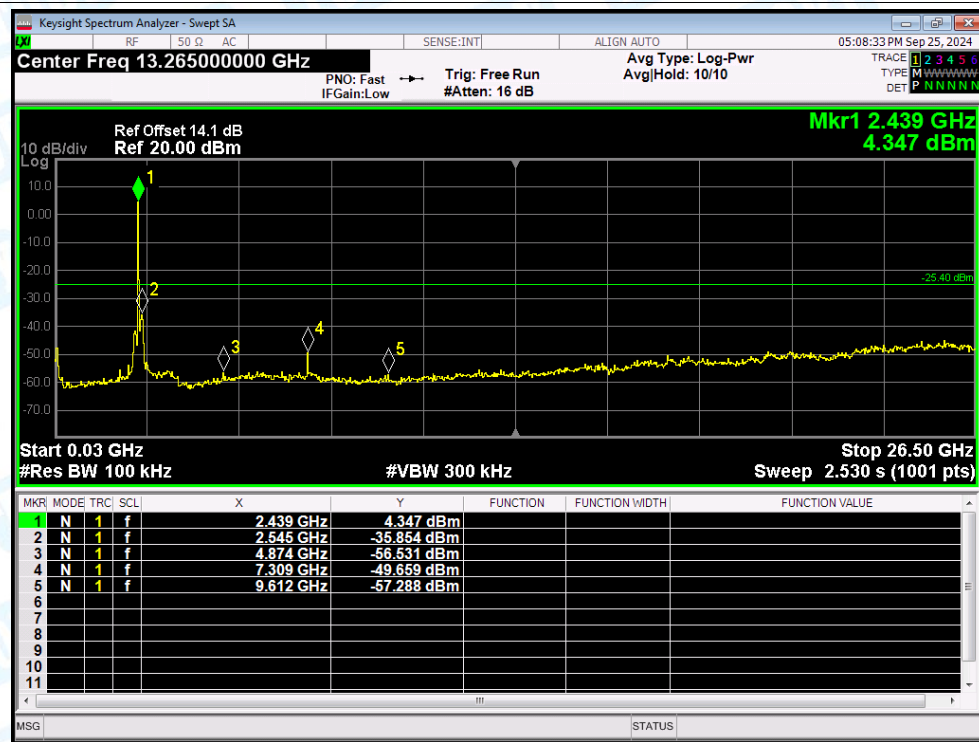
Tx. Spurious NVNT b 2412MHz Ant1 Emission



Tx. Spurious NVNT b 2437MHz Ant1 Ref



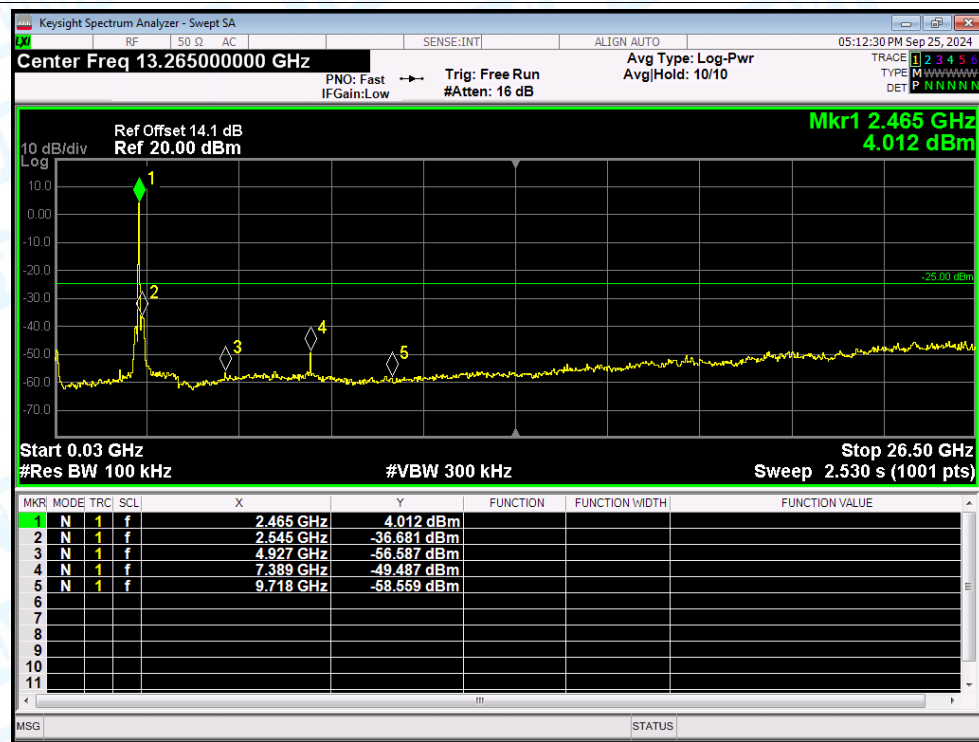
Tx. Spurious NVNT b 2437MHz Ant1 Emission



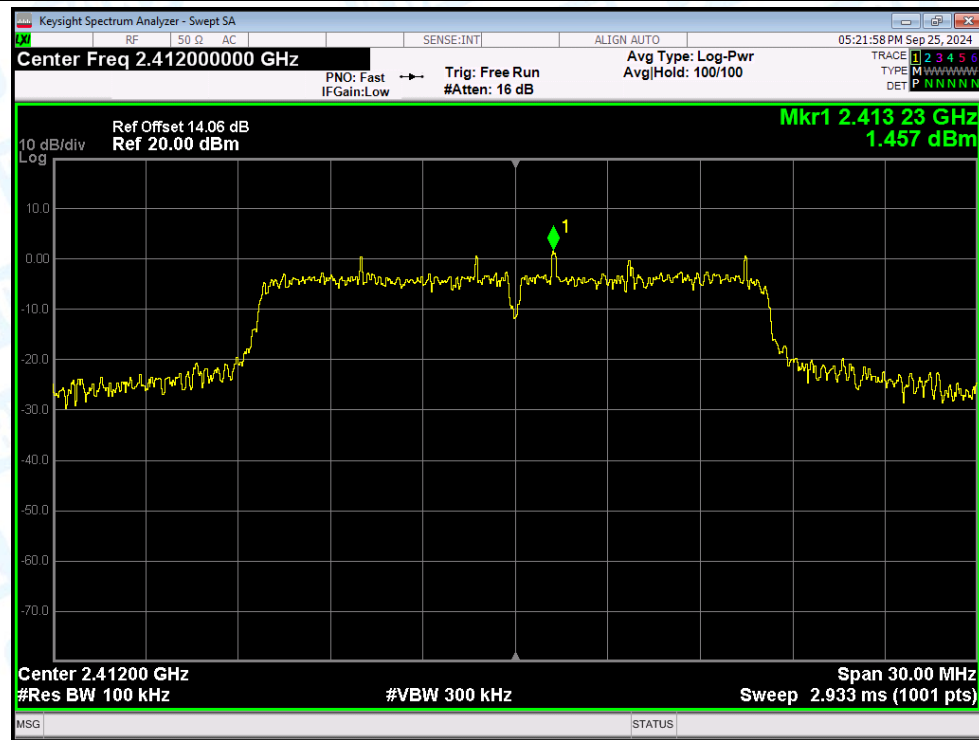
Tx. Spurious NVNT b 2462MHz Ant1 Ref



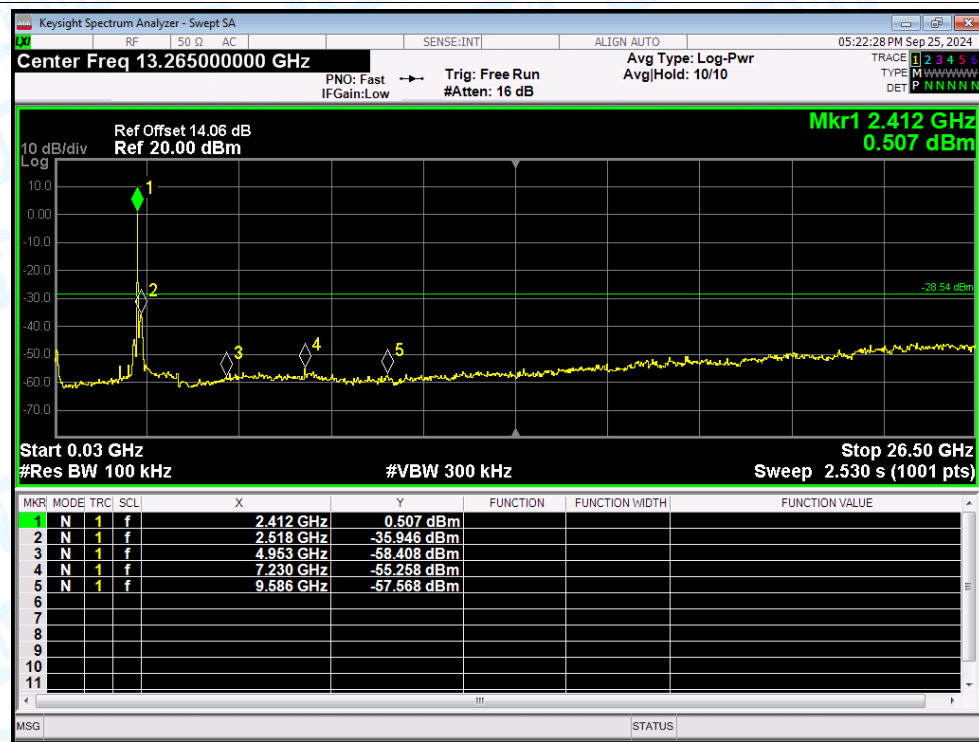
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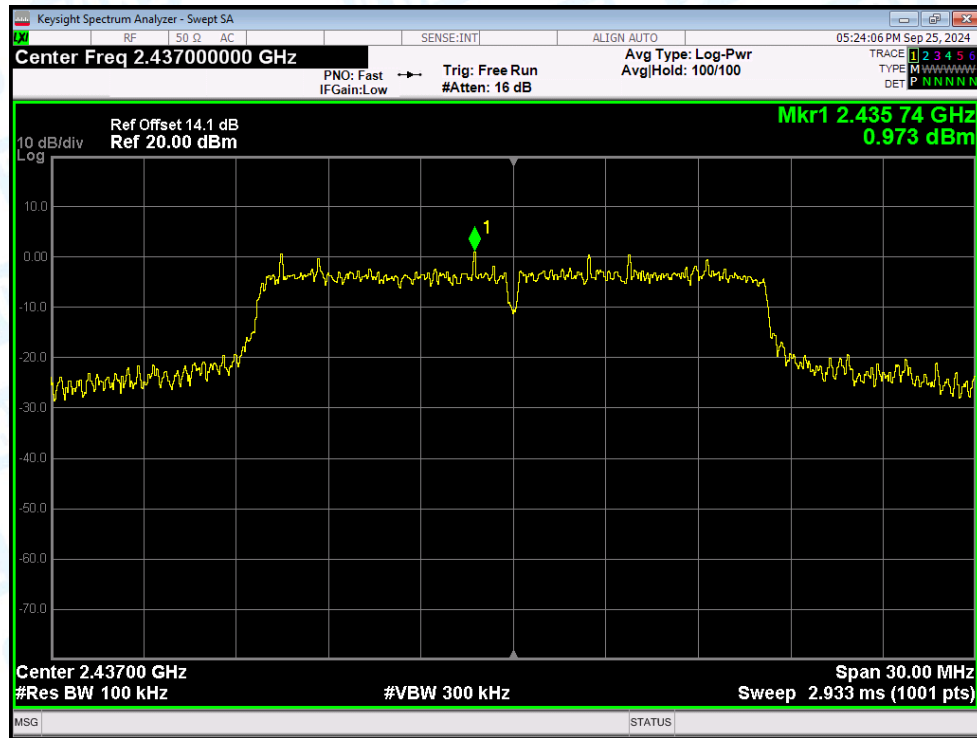
Tx. Spurious NVNT g 2412MHz Ant1 Ref



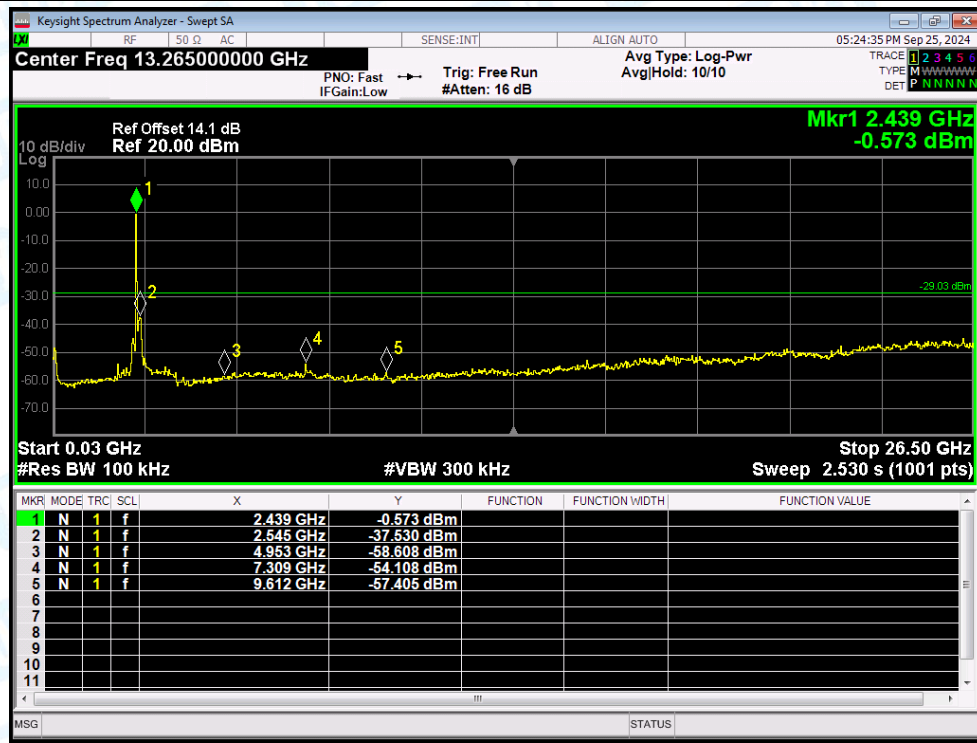
Tx. Spurious NVNT g 2412MHz Ant1 Emission



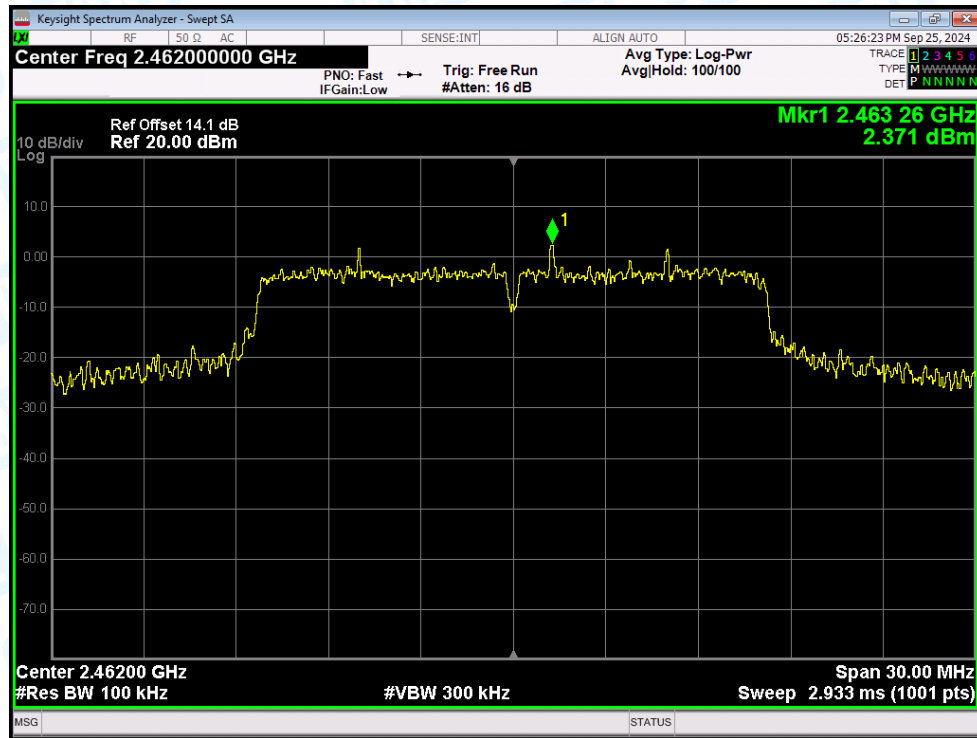
Tx. Spurious NVNT g 2437MHz Ant1 Ref



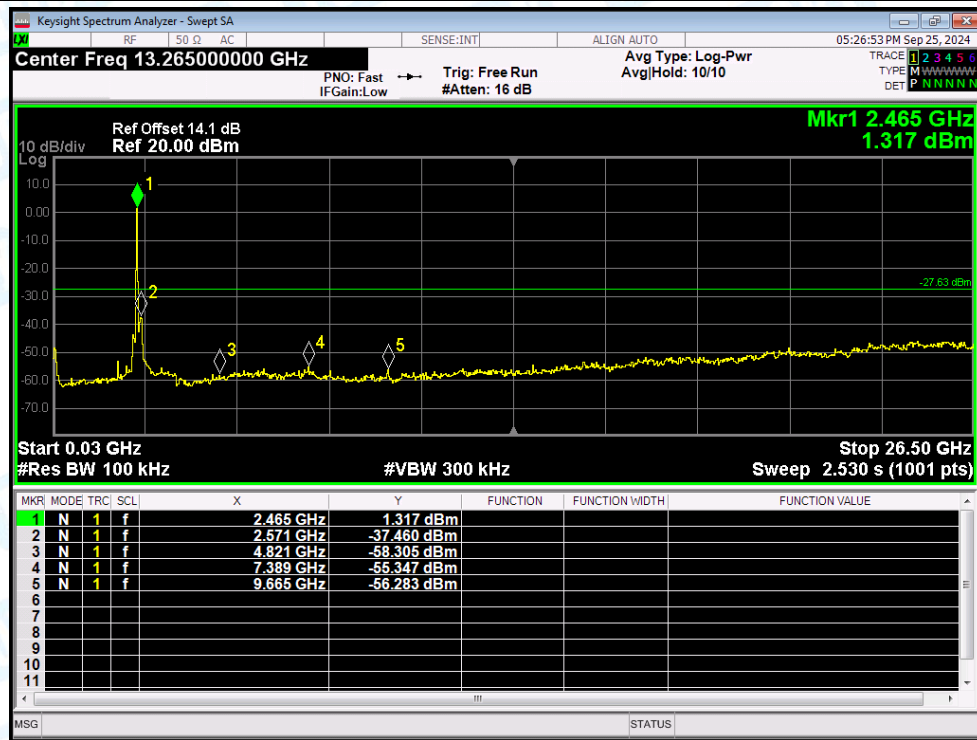
Tx. Spurious NVNT g 2437MHz Ant1 Emission



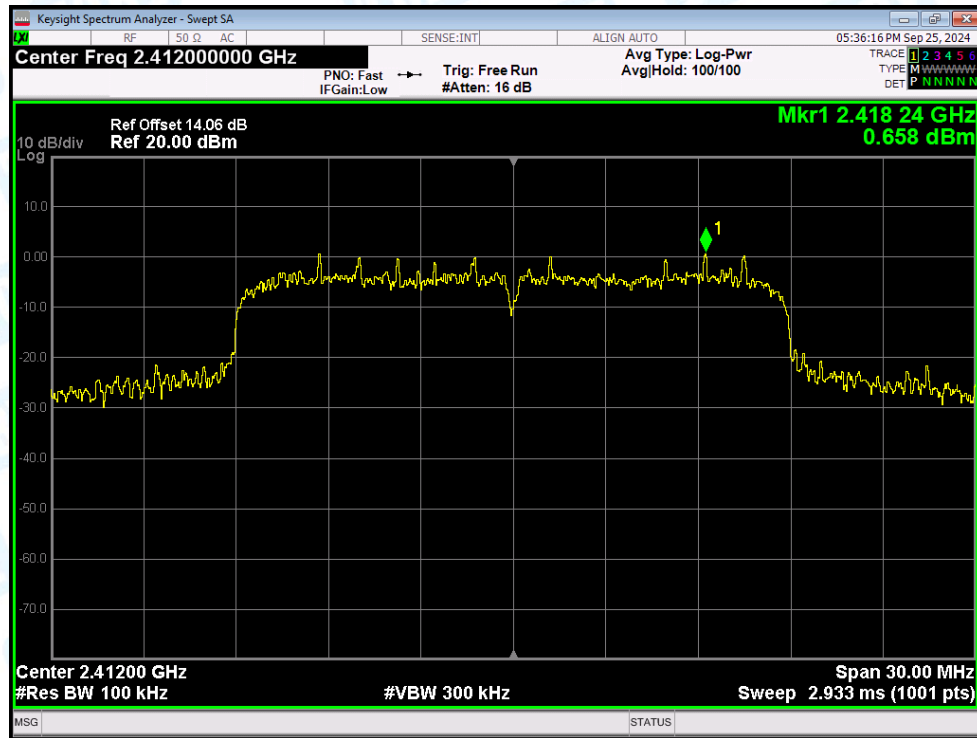
Tx. Spurious NVNT g 2462MHz Ant1 Ref



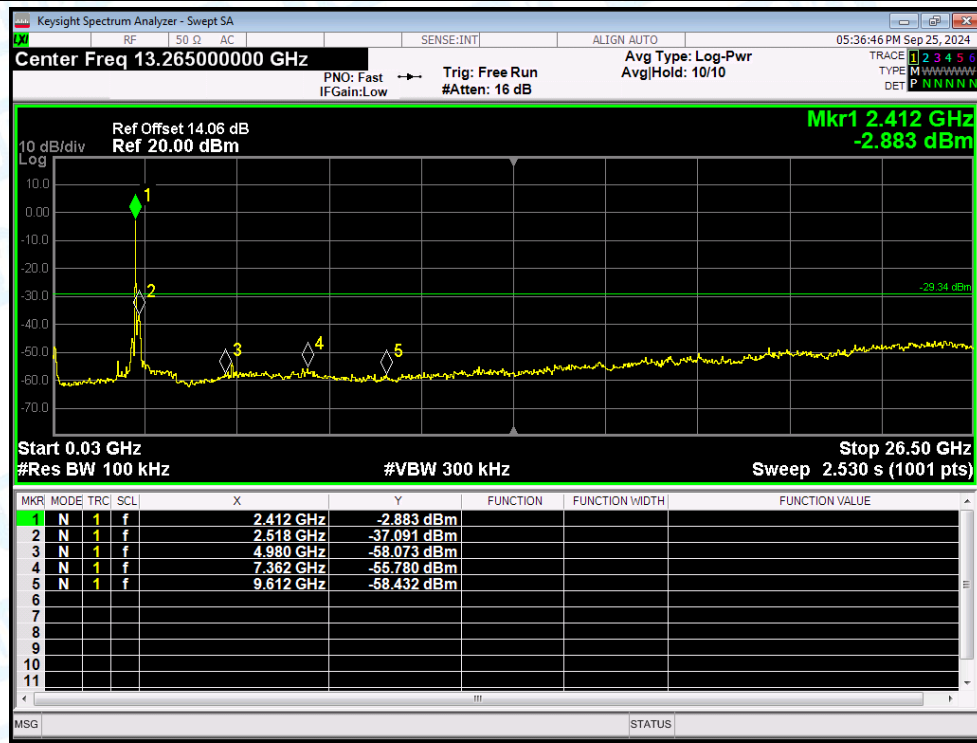
Tx. Spurious NVNT g 2462MHz Ant1 Emission



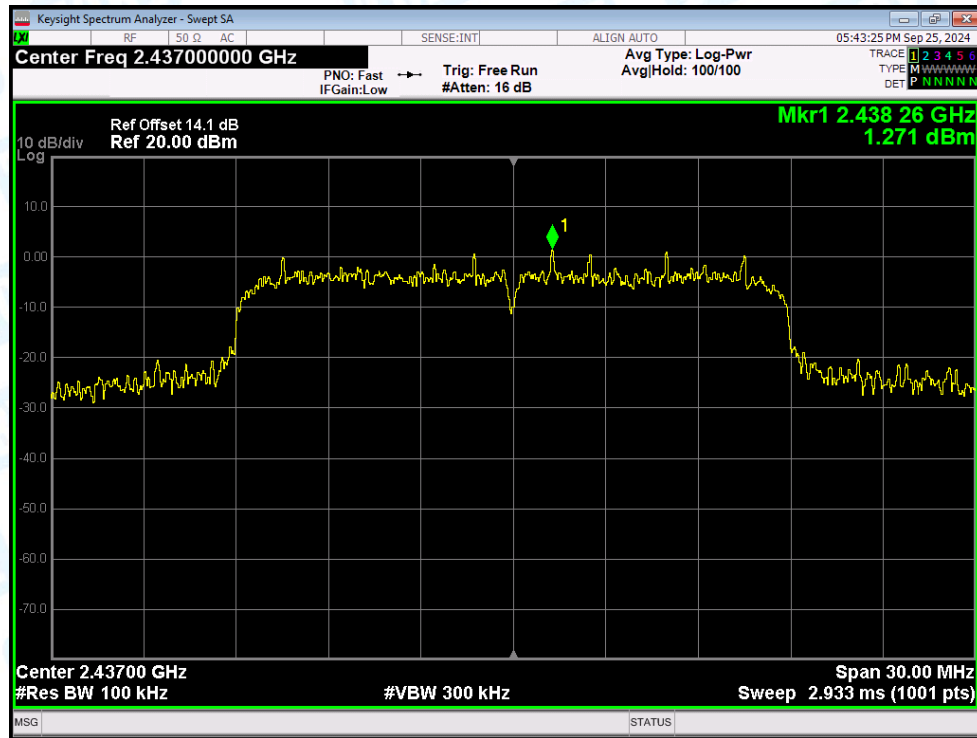
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref



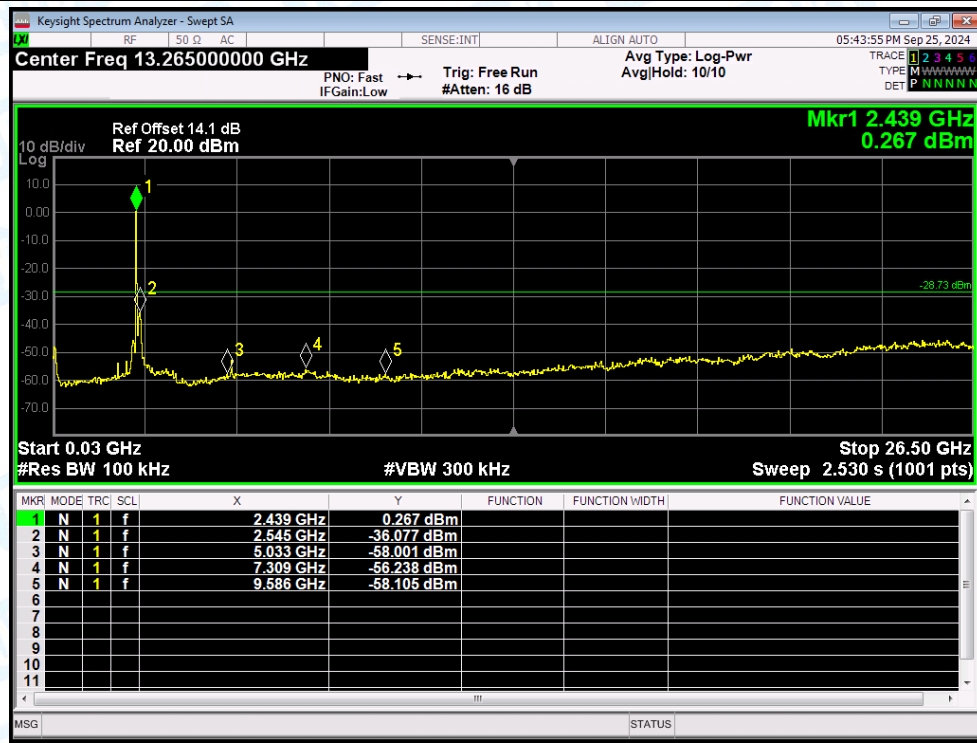
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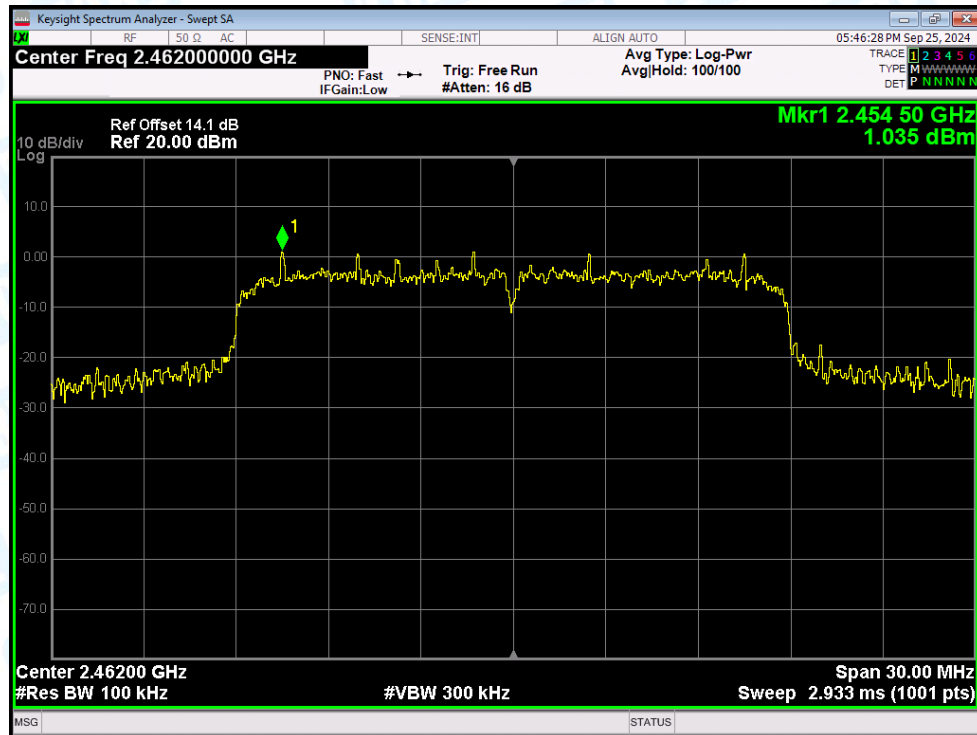
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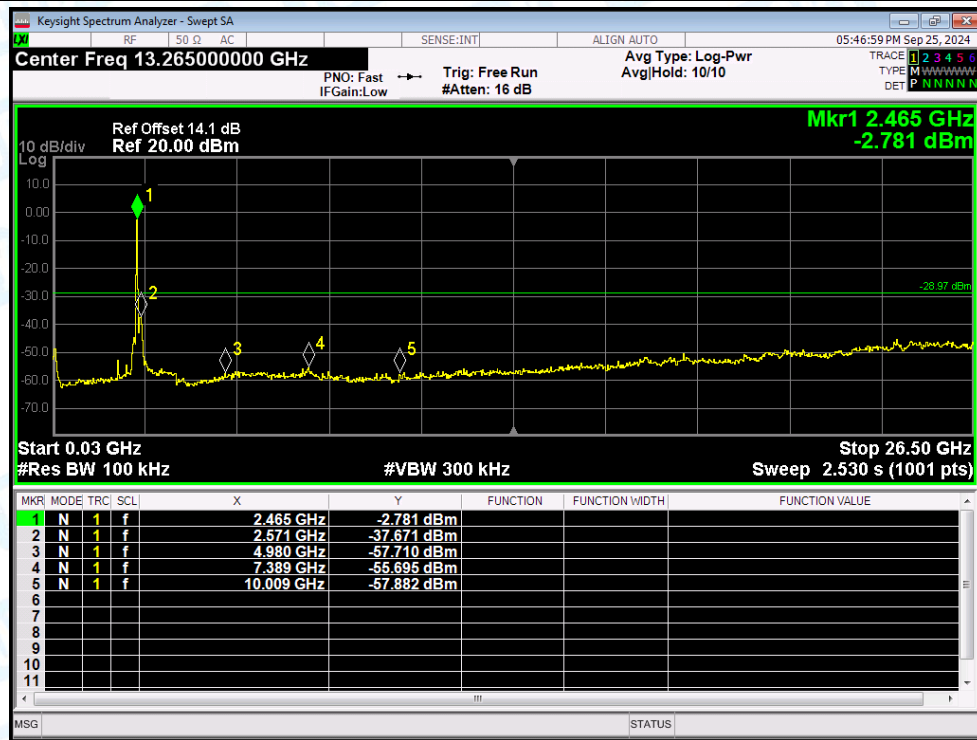
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Ref



Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Emission



-----END OF THE REPORT-----