RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	**Smart Mattress**
Test Model:	**1-5**
Sample ID:	**HC-C-202401-0039-08-02#**
Environmental Conditions	
Temperature:	**25℃**
Relative Humidity:	**55%**
Test Voltage:	**AC 120V**
Test Engineer:	**Mike Yan**
Note: For a more detailed features description, please refer to the report TBR-C-202401-0039-91 The report only show the worst case data.	

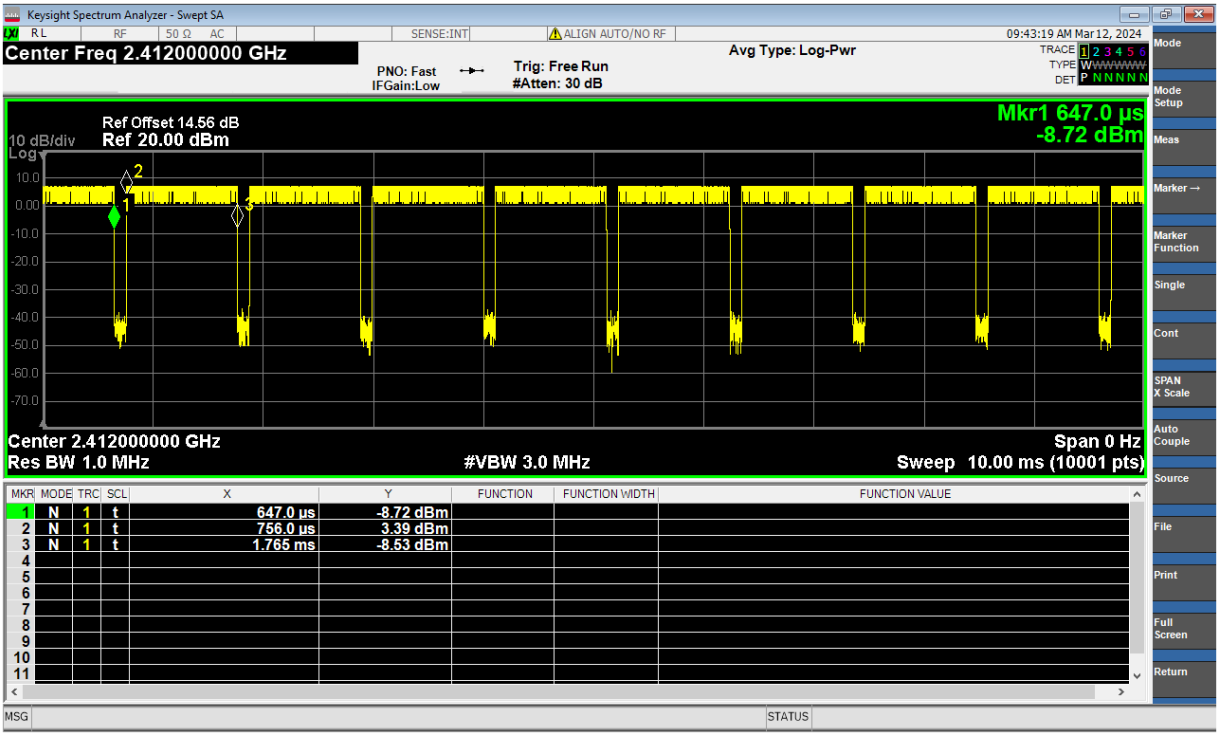
Contents

1.Duty Cycle

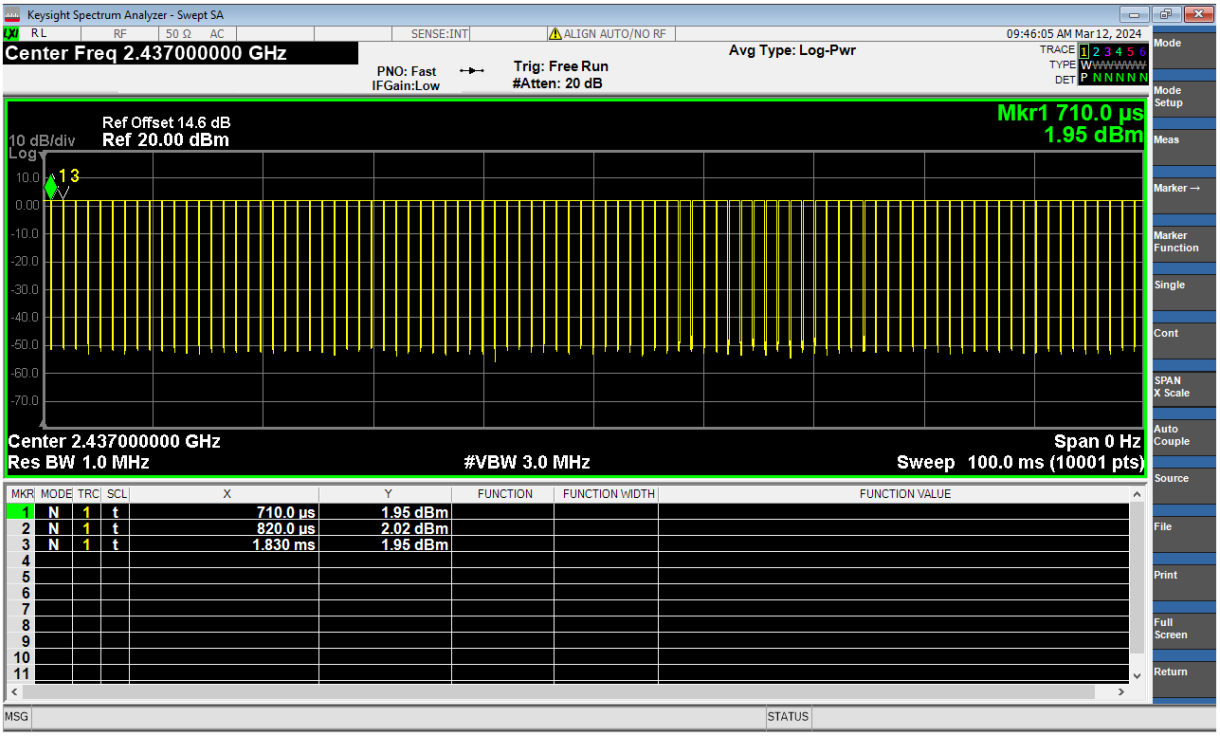
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	90.25	0.45	0.99
NVNT	b	2437	Ant1	90.18	0.45	0.99
NVNT	b	2462	Ant1	89.29	0.49	1
NVNT	g	2412	Ant1	90.79	0.42	1.61
NVNT	g	2437	Ant1	90.62	0.43	1.62
NVNT	g	2462	Ant1	90.62	0.43	1.62
NVNT	n(HT20)	2412	Ant1	90.56	0.43	1.63
NVNT	n(HT20)	2437	Ant1	90.43	0.44	1.63
NVNT	n(HT20)	2462	Ant1	90.56	0.43	1.63
NVNT	n(HT40)	2422	Ant1	90.69	0.42	1.63
NVNT	n(HT40)	2437	Ant1	90.56	0.43	1.63
NVNT	n(HT40)	2452	Ant1	90.84	0.42	1.63

Test Graphs

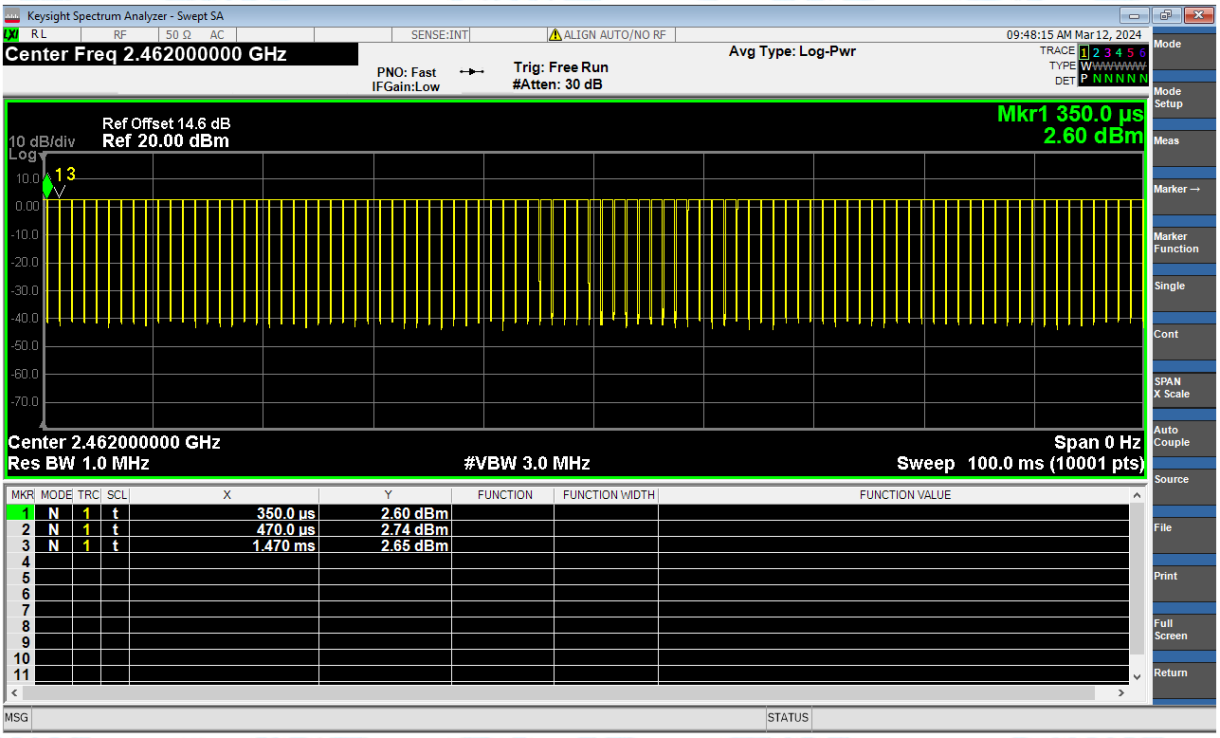
Duty Cycle NVNT b 2412MHz Ant1



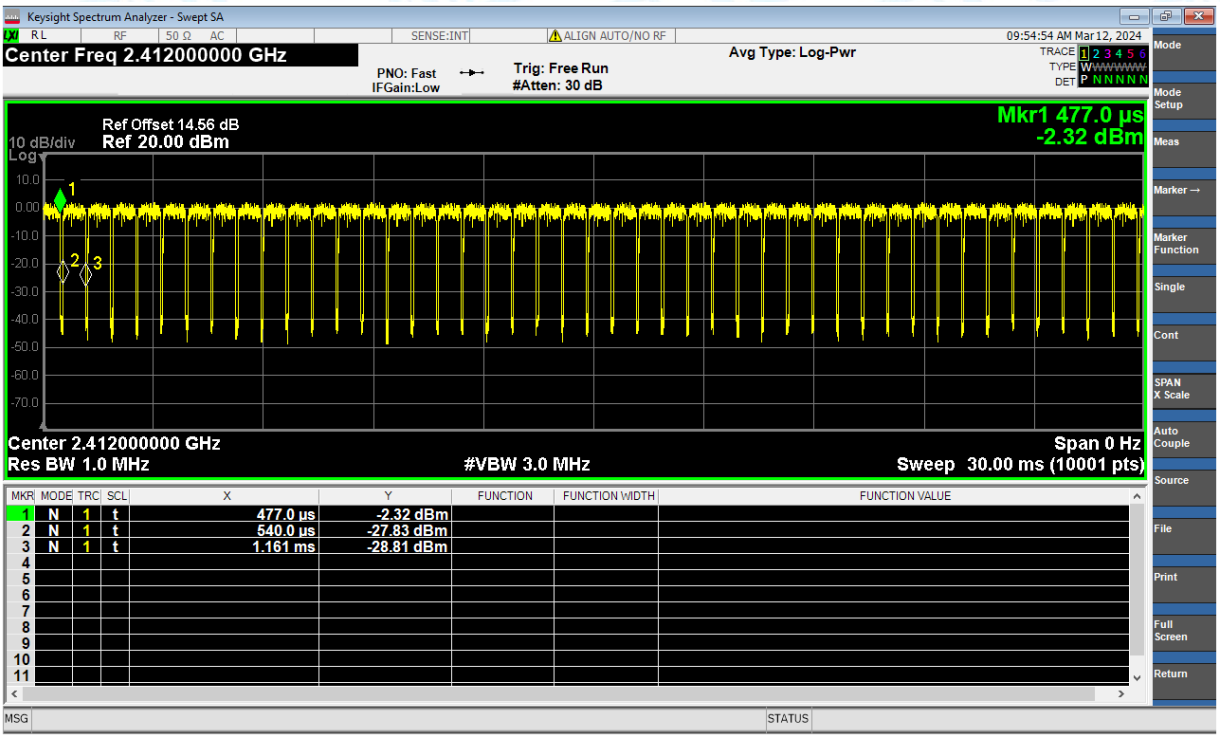
Duty Cycle NVNT b 2437MHz Ant1



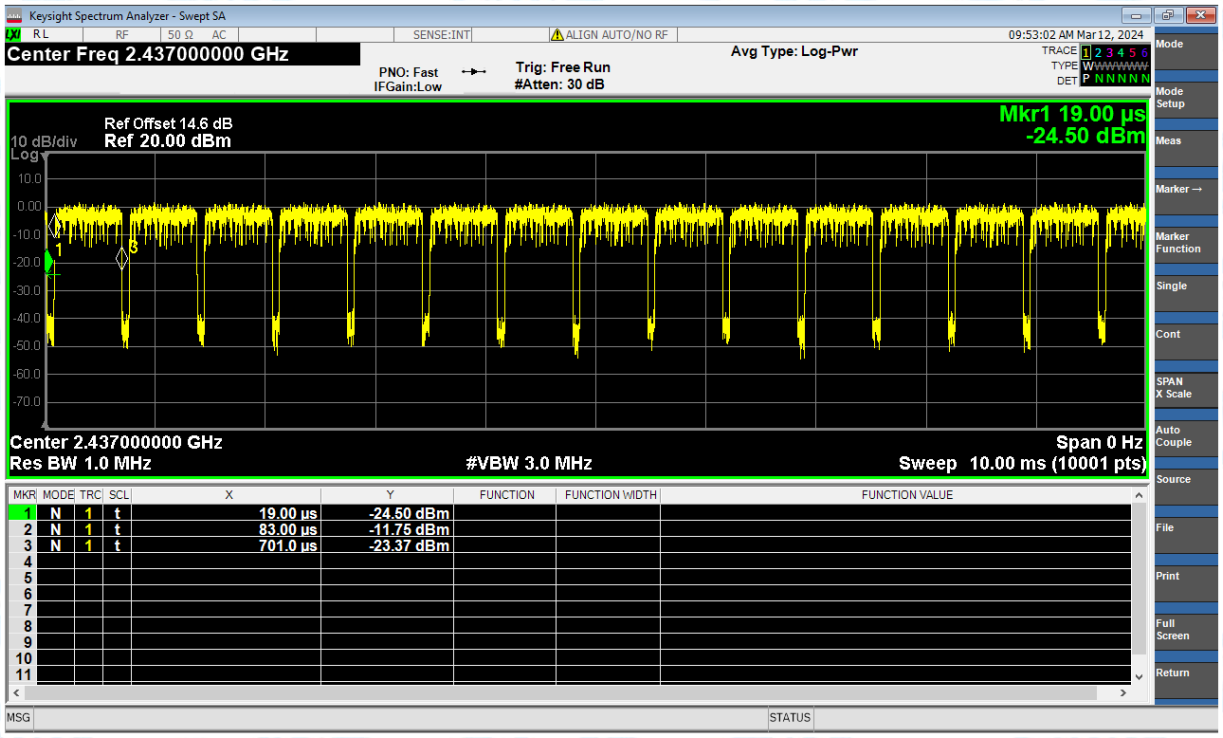
Duty Cycle NVNT b 2462MHz Ant1



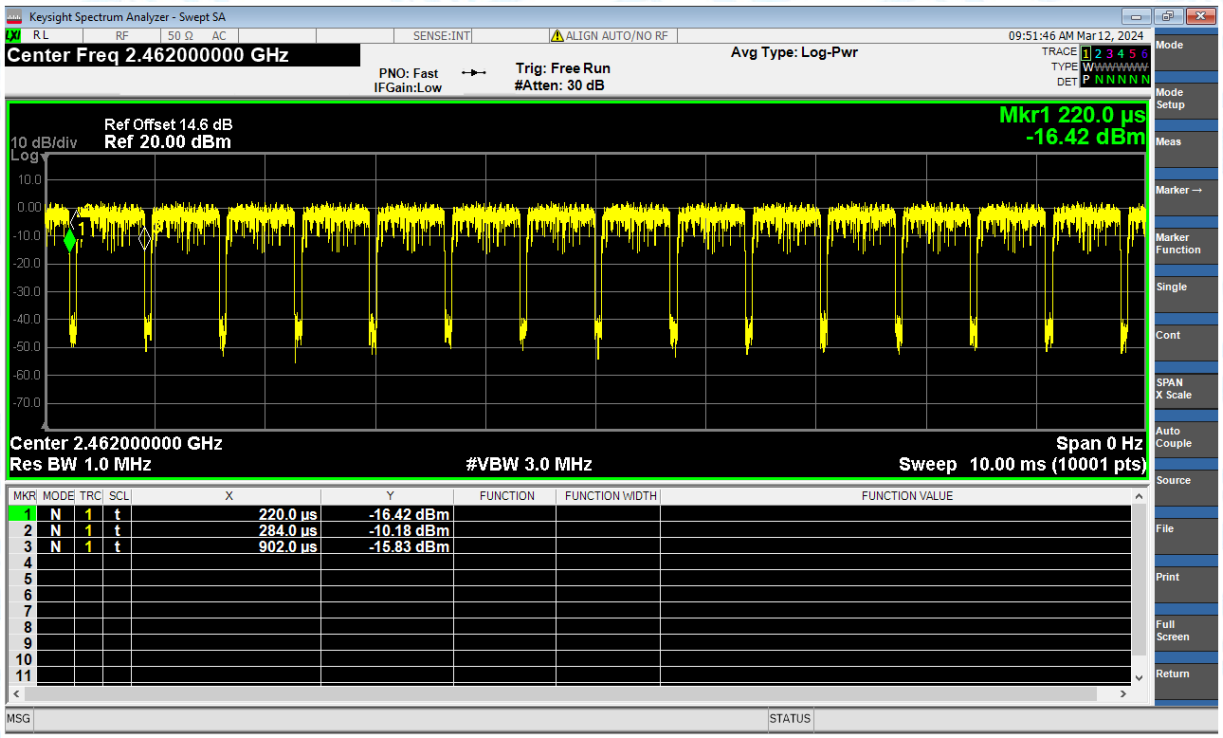
Duty Cycle NVNT g 2412MHz Ant1



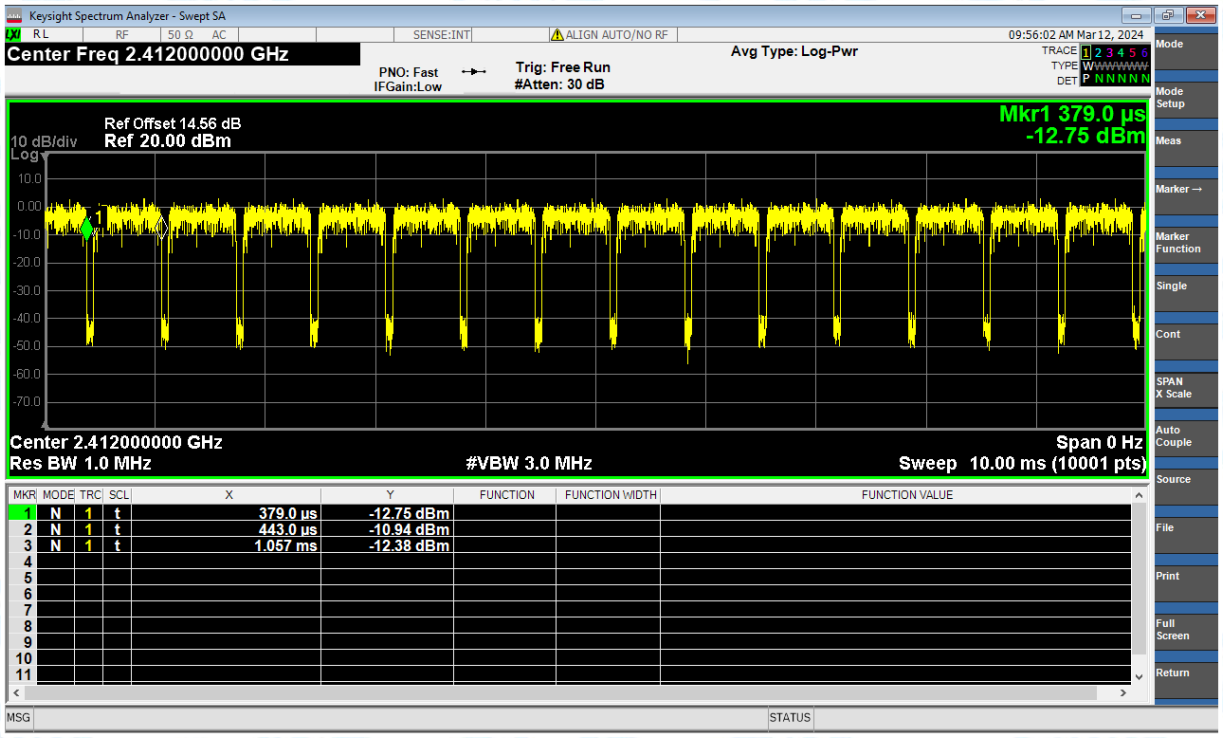
Duty Cycle NVNT g 2437MHz Ant1



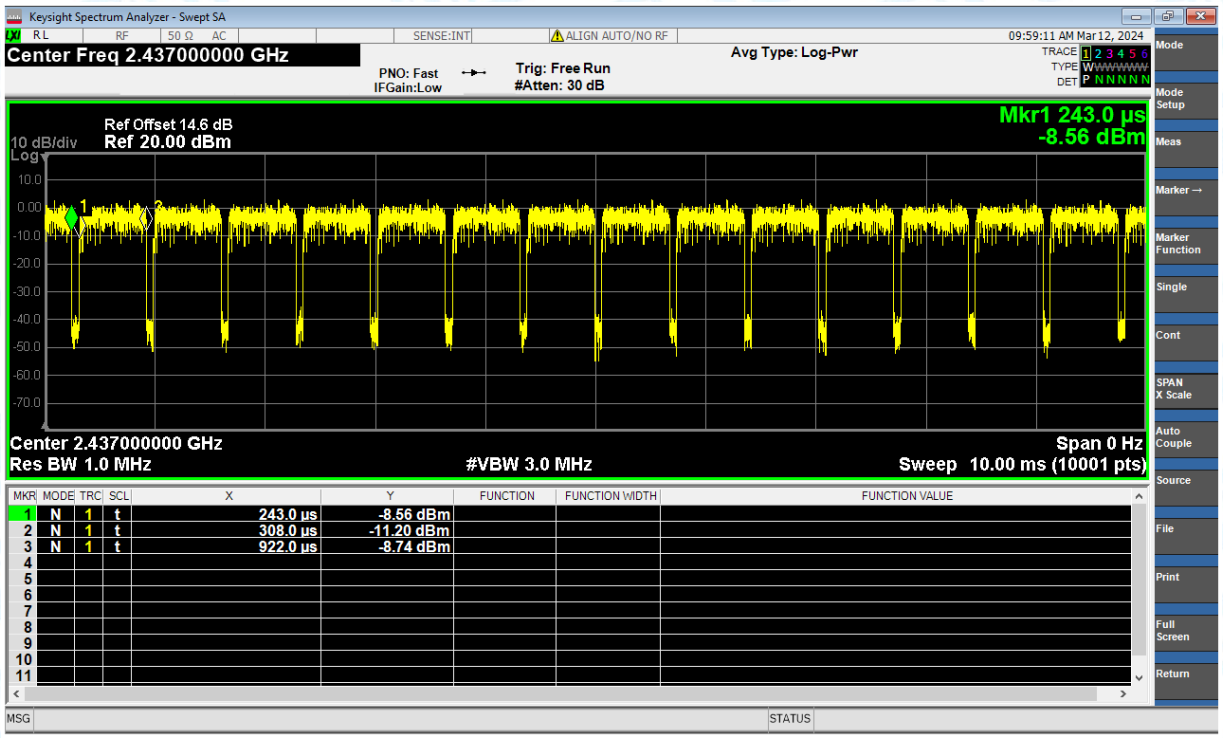
Duty Cycle NVNT g 2462MHz Ant1



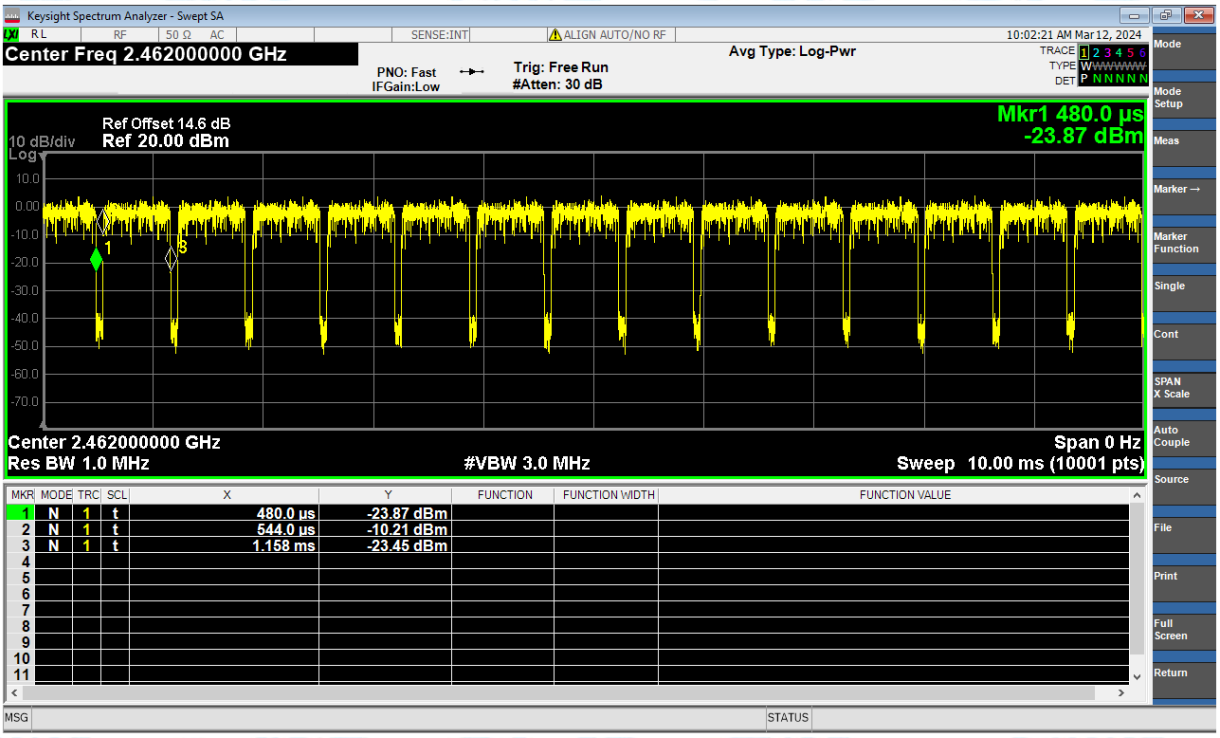
Duty Cycle NVNT n(HT20) 2412MHz Ant1



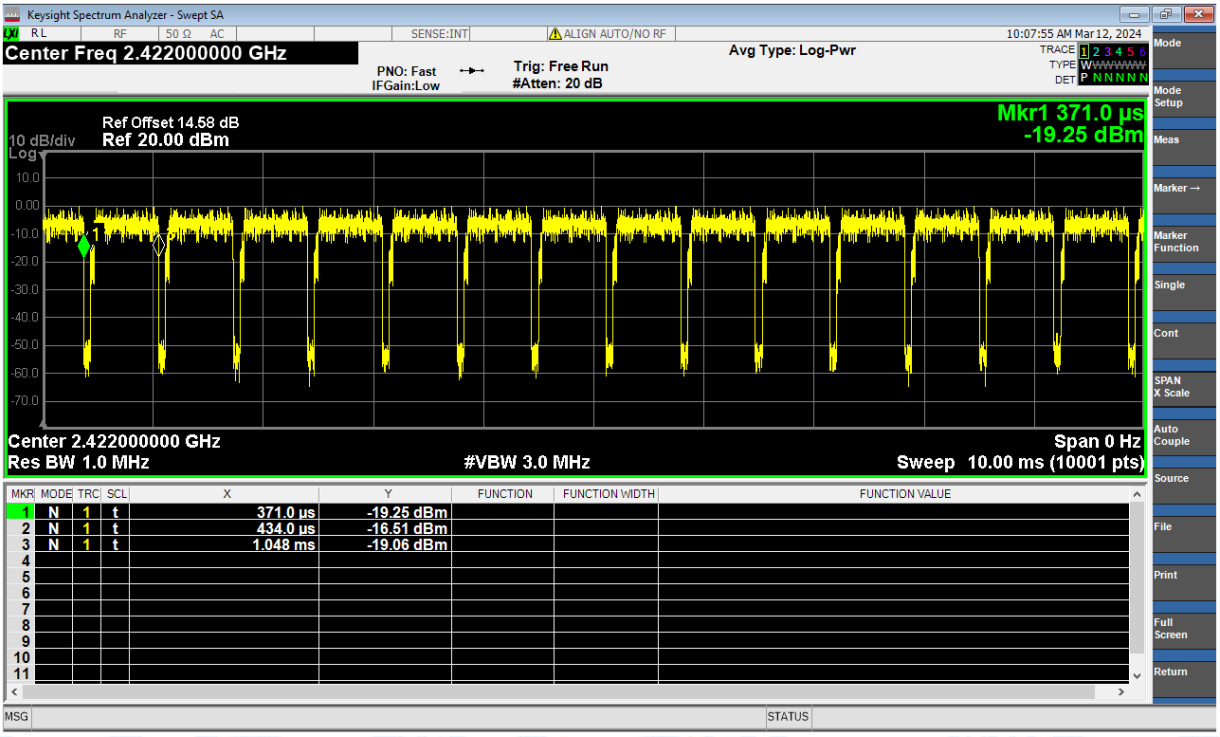
Duty Cycle NVNT n(HT20) 2437MHz Ant1



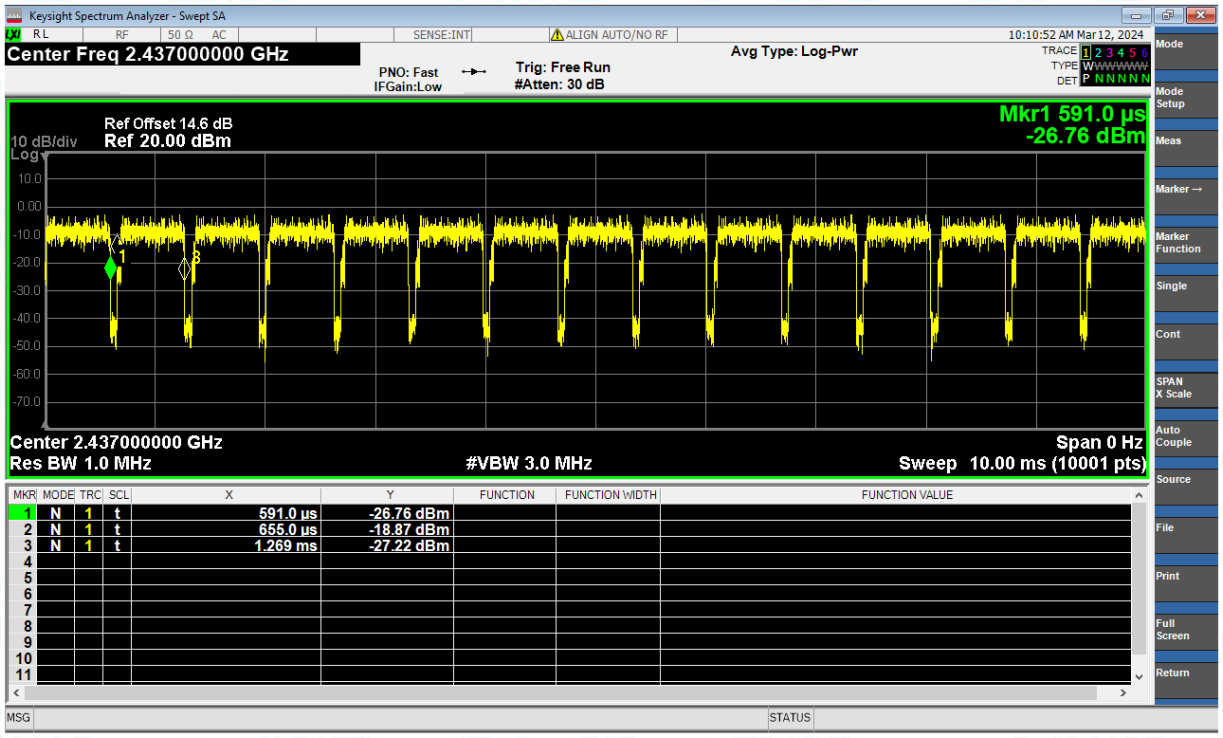
Duty Cycle NVNT n(HT20) 2462MHz Ant1



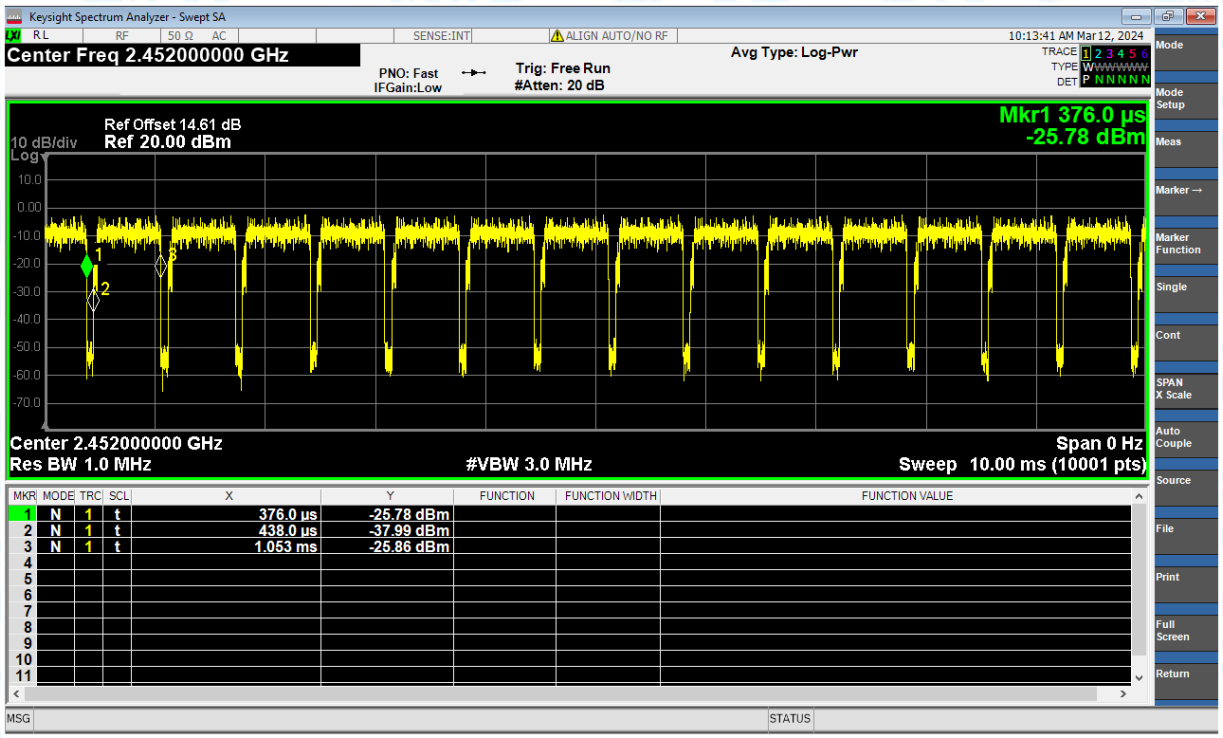
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



2.Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	7.8	30	Pass
NVNT	b	2437	Ant1	8.05	30	Pass
NVNT	b	2462	Ant1	7.72	30	Pass
NVNT	g	2412	Ant1	7.7	30	Pass
NVNT	g	2437	Ant1	7.88	30	Pass
NVNT	g	2462	Ant1	7.91	30	Pass
NVNT	n(HT20)	2412	Ant1	7.7	30	Pass
NVNT	n(HT20)	2437	Ant1	7.57	30	Pass
NVNT	n(HT20)	2462	Ant1	7.98	30	Pass
NVNT	n(HT40)	2422	Ant1	7.92	30	Pass
NVNT	n(HT40)	2437	Ant1	7.88	30	Pass
NVNT	n(HT40)	2452	Ant1	7.88	30	Pass

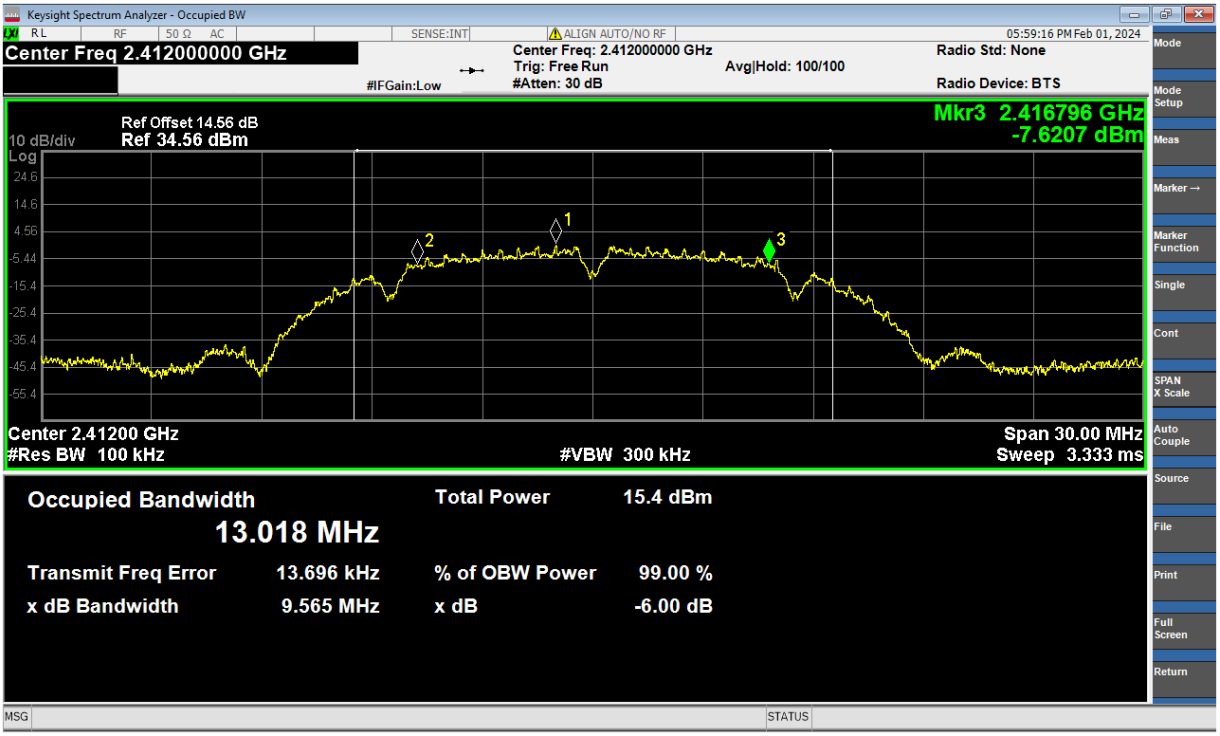
Note: The duty factor has been compensated into the result.

3.-6dB Bandwidth

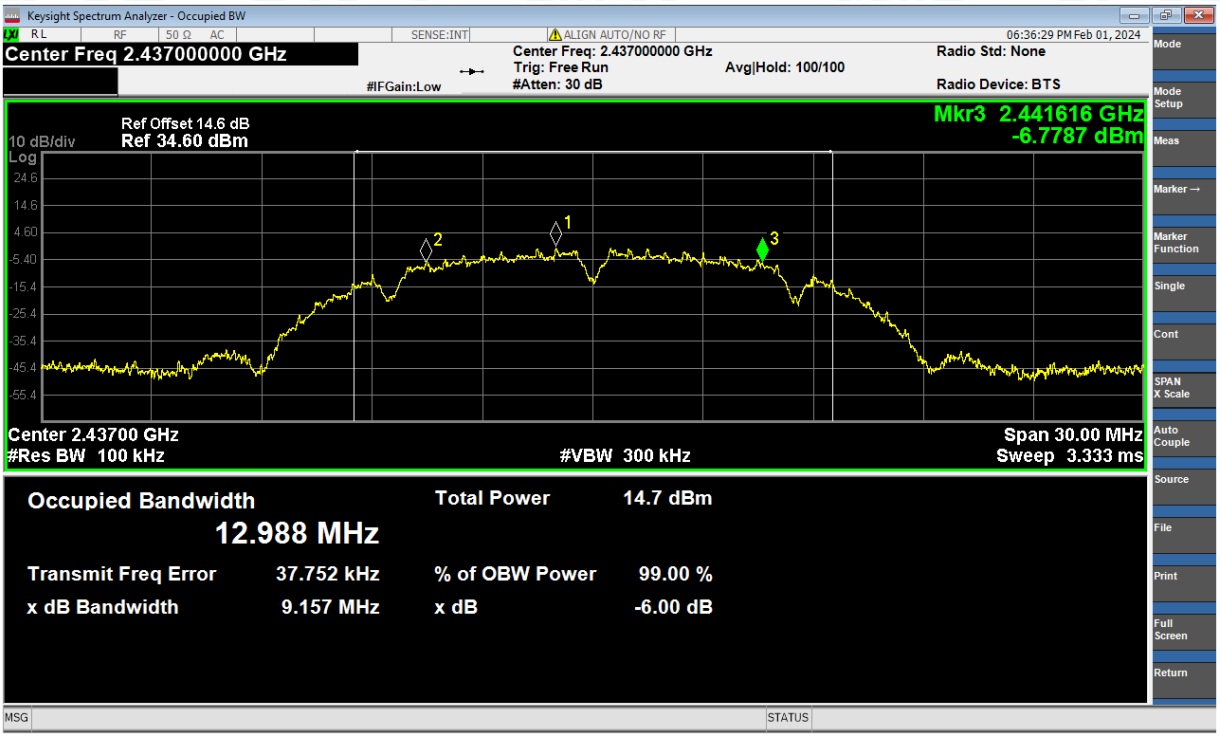
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.57	0.5	Pass
NVNT	b	2437	Ant1	9.16	0.5	Pass
NVNT	b	2462	Ant1	9.11	0.5	Pass
NVNT	g	2412	Ant1	16.35	0.5	Pass
NVNT	g	2437	Ant1	16.39	0.5	Pass
NVNT	g	2462	Ant1	16.35	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.59	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.57	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.59	0.5	Pass
NVNT	n(HT40)	2422	Ant1	36.33	0.5	Pass
NVNT	n(HT40)	2437	Ant1	36.31	0.5	Pass
NVNT	n(HT40)	2452	Ant1	36.34	0.5	Pass

Test Graphs

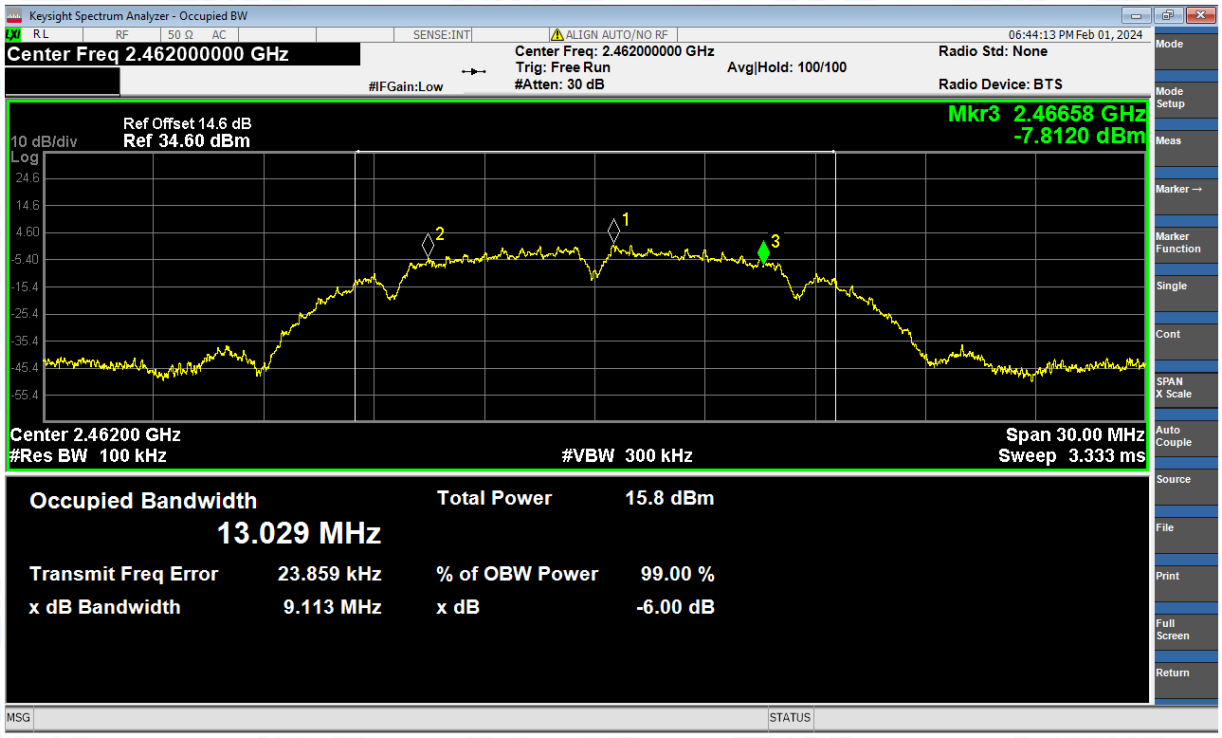
-6dB Bandwidth NVNT b 2412MHz Ant1



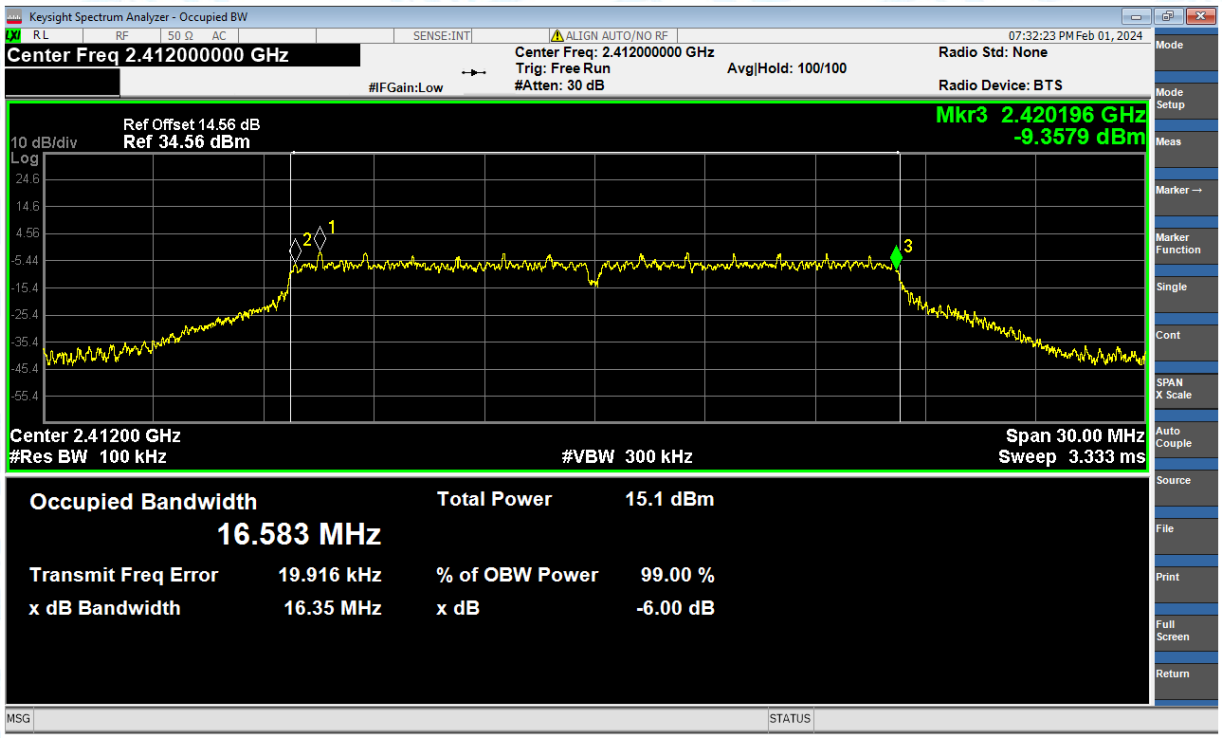
-6dB Bandwidth NVNT b 2437MHz Ant1



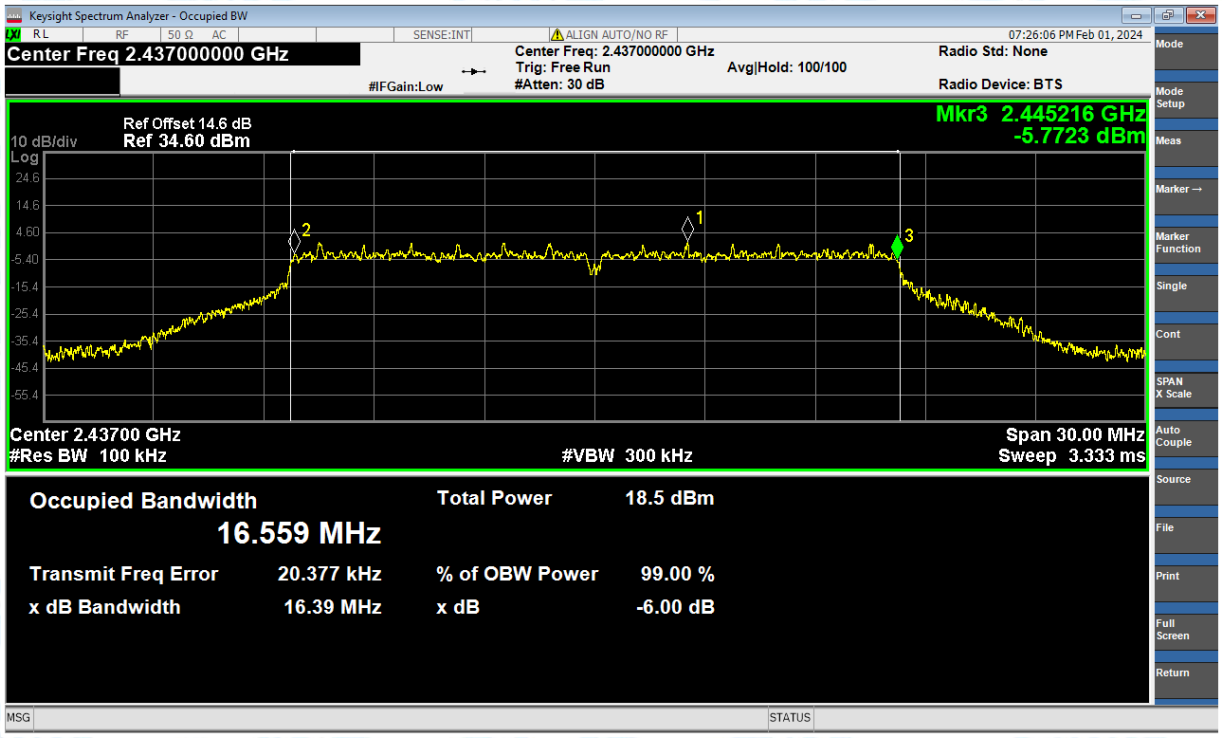
-6dB Bandwidth NVNT b 2462MHz Ant1



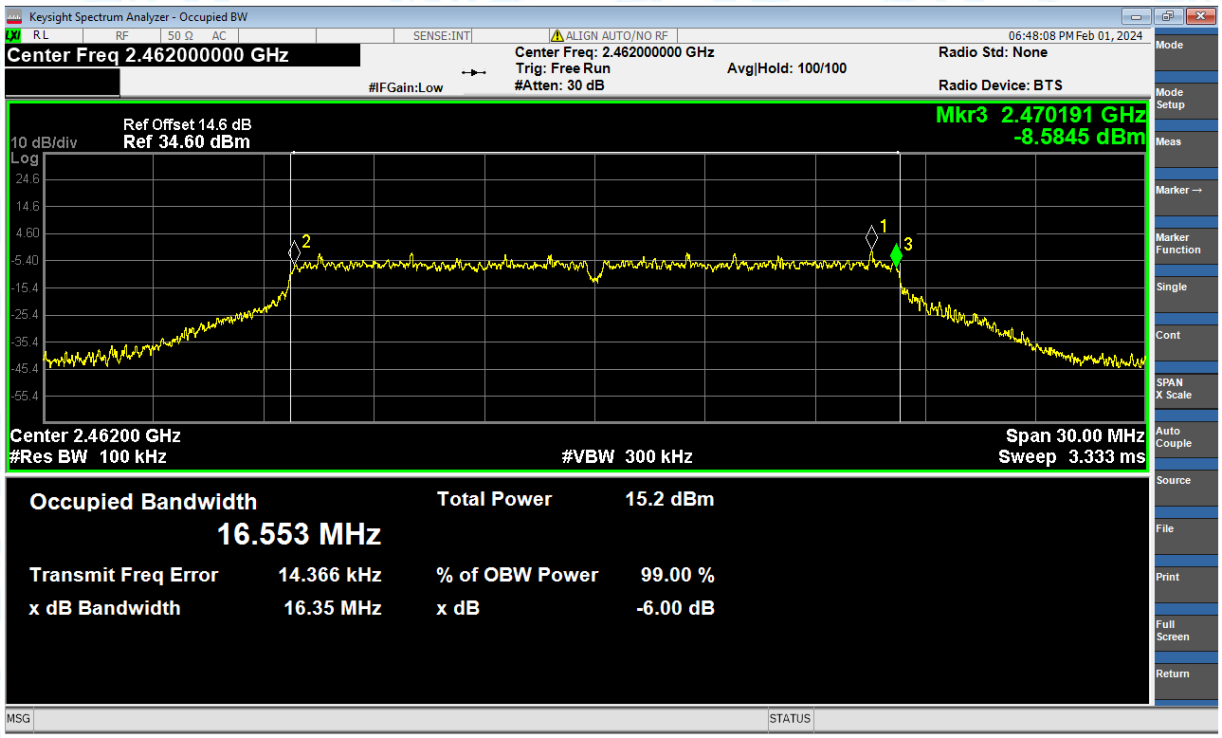
-6dB Bandwidth NVNT g 2412MHz Ant1



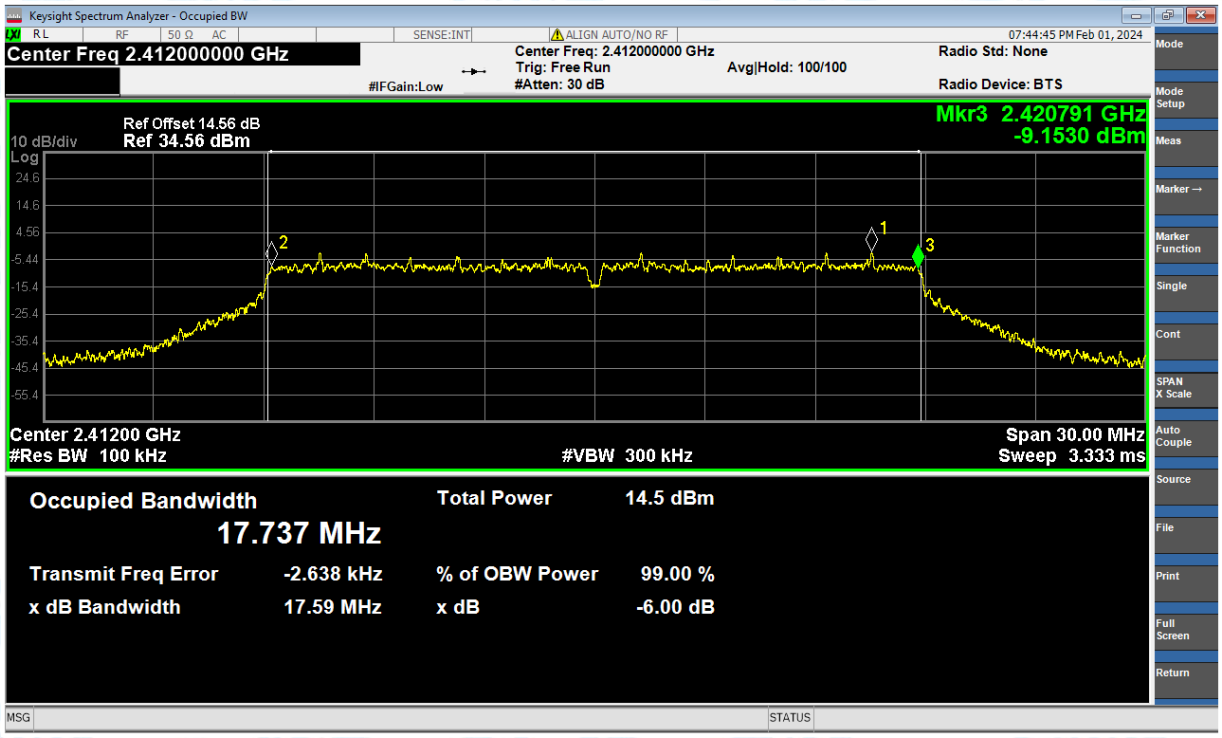
-6dB Bandwidth NVNT g 2437MHz Ant1



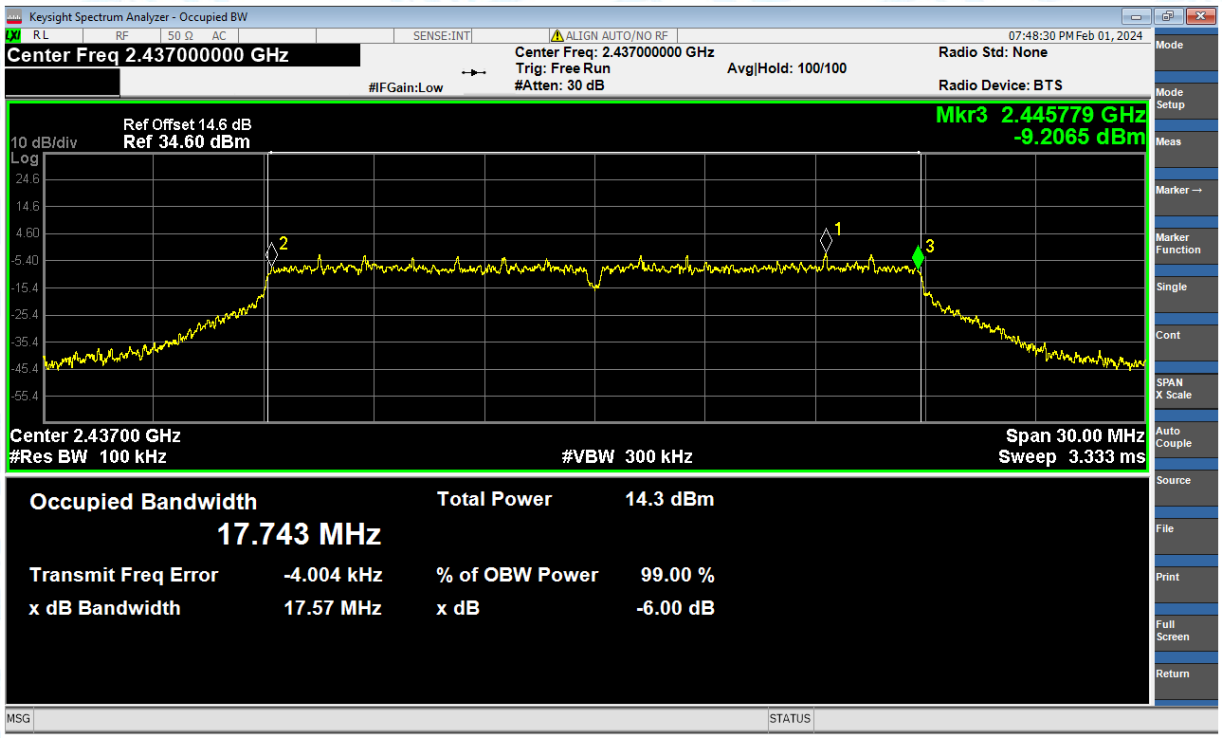
-6dB Bandwidth NVNT g 2462MHz Ant1



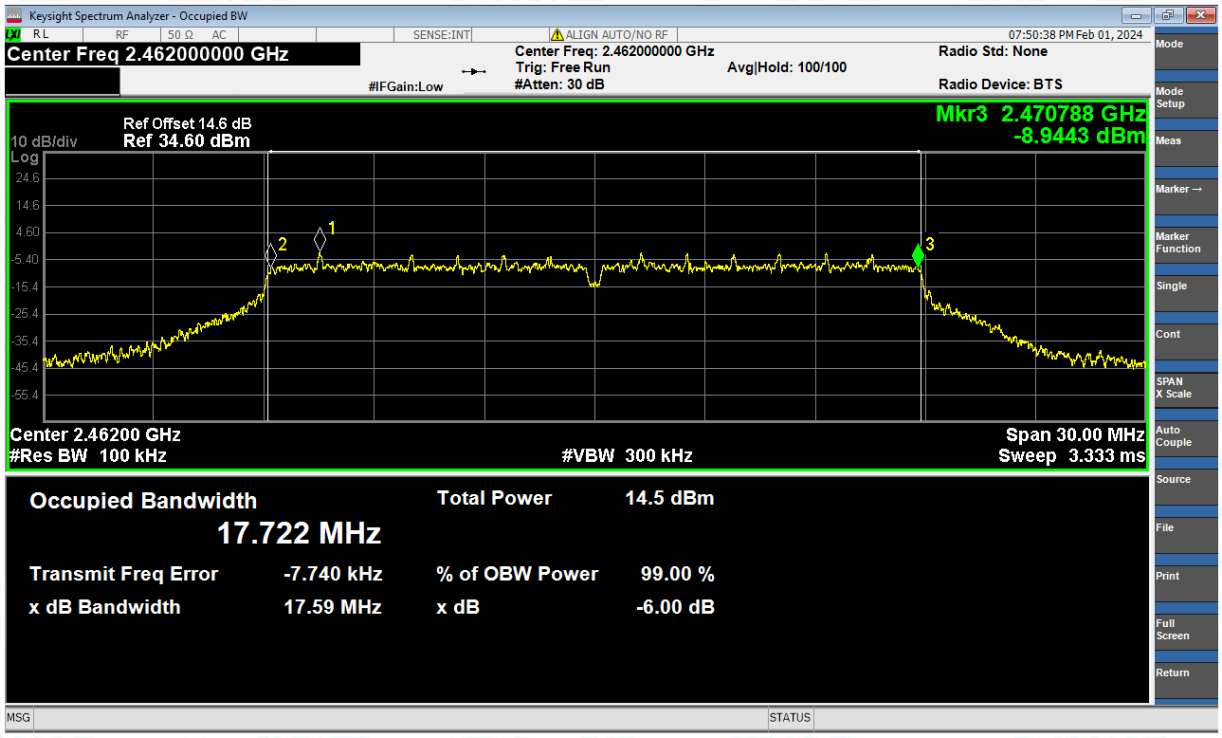
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



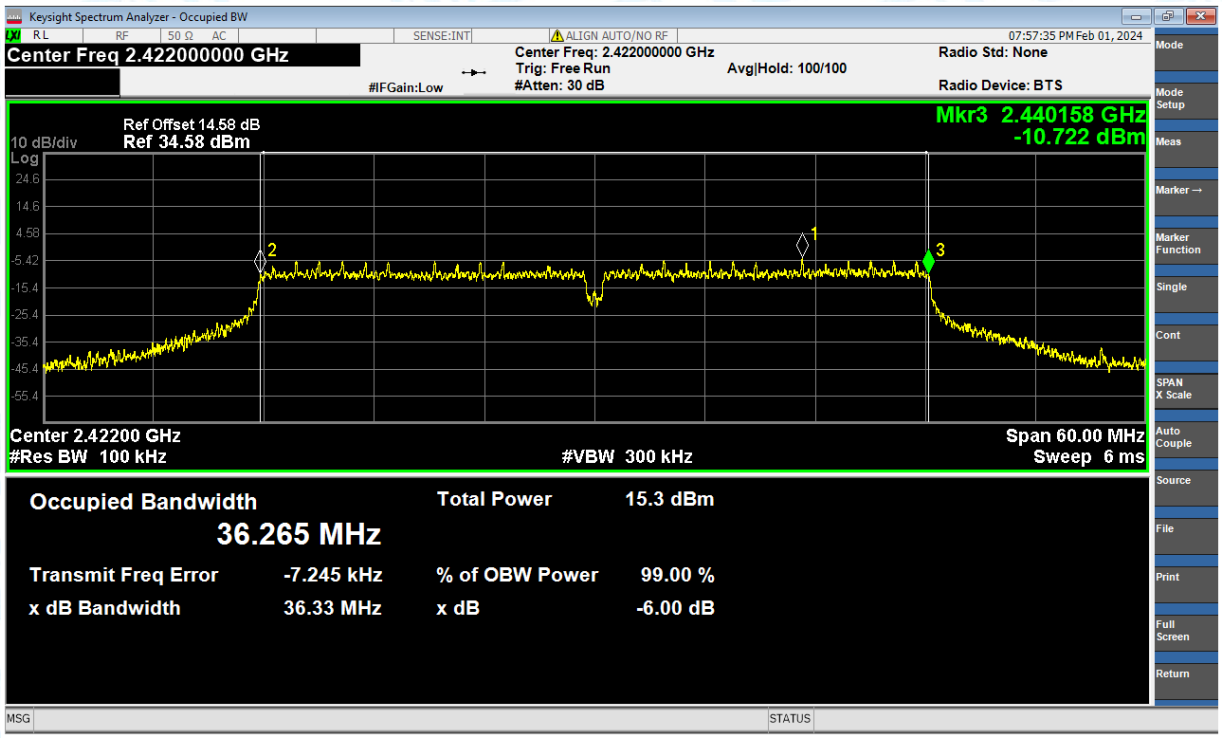
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



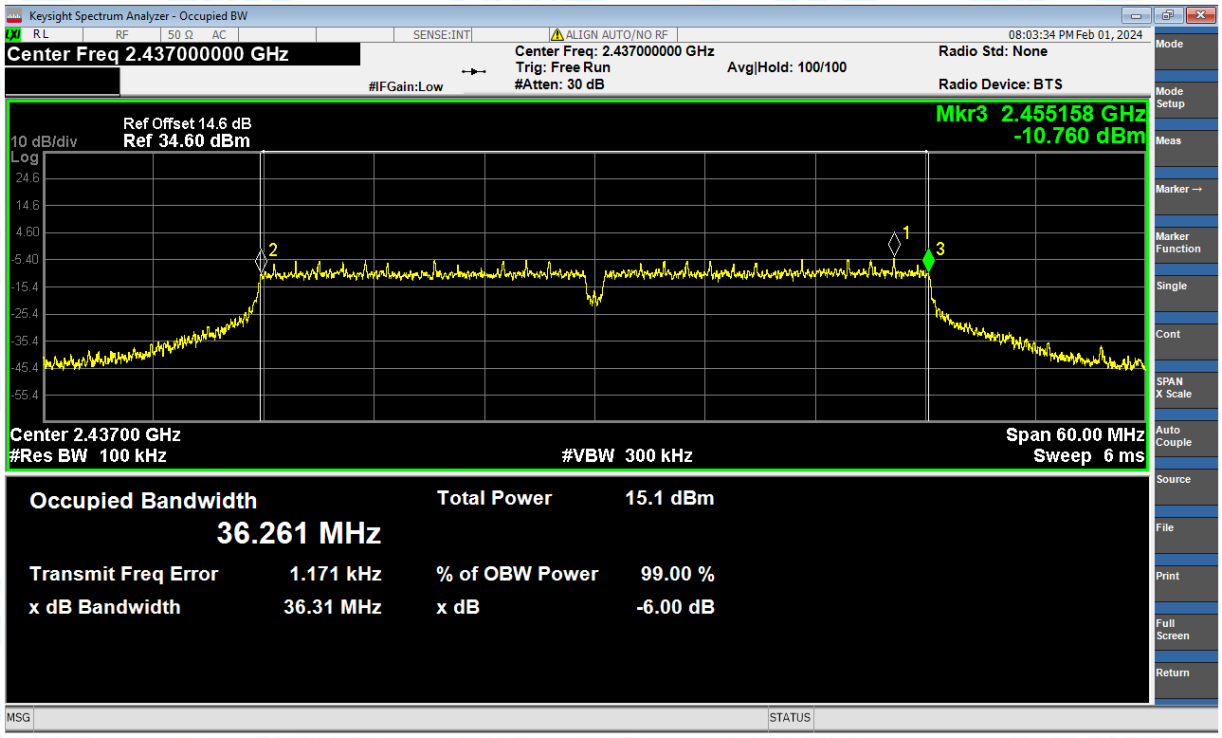
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



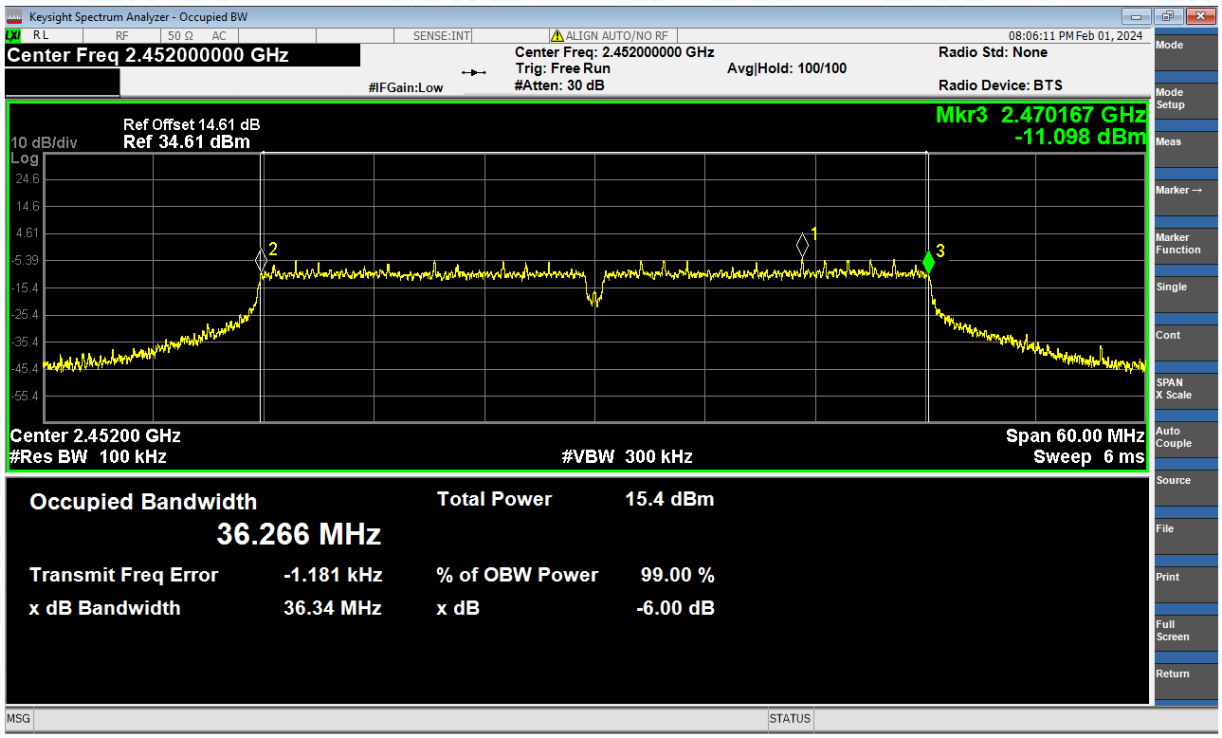
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

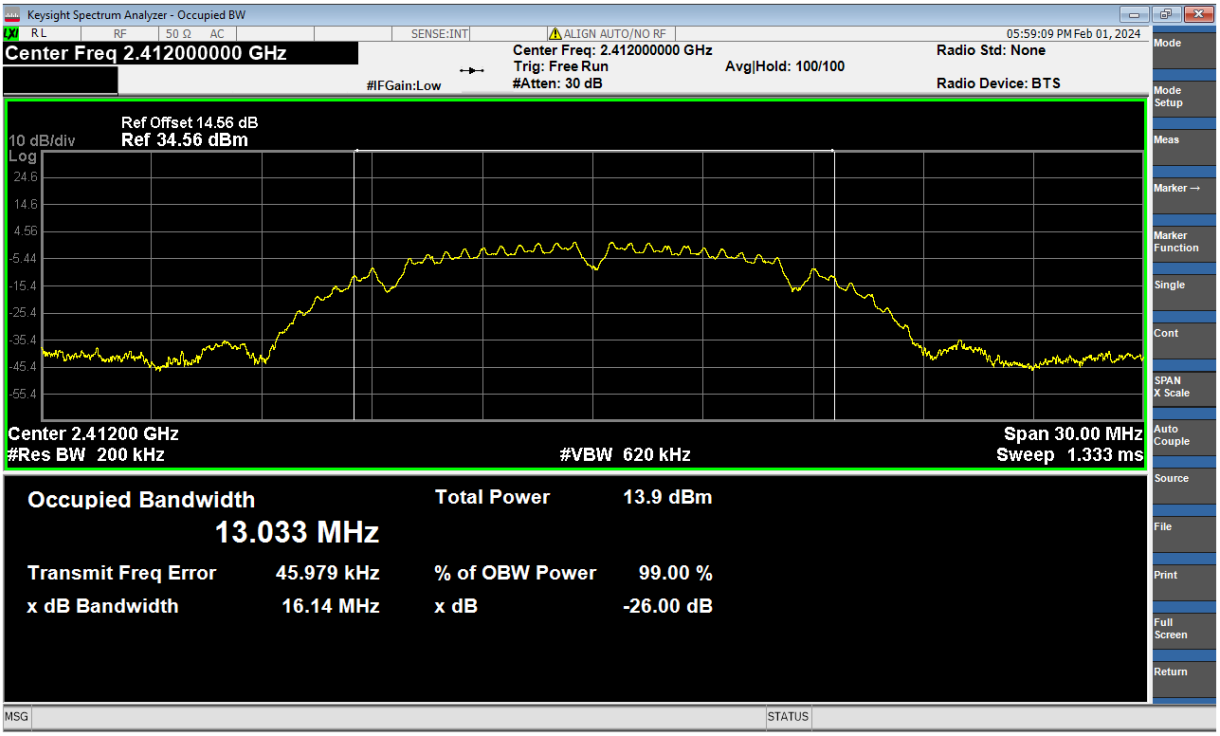


4.Occupied Channel Bandwidth

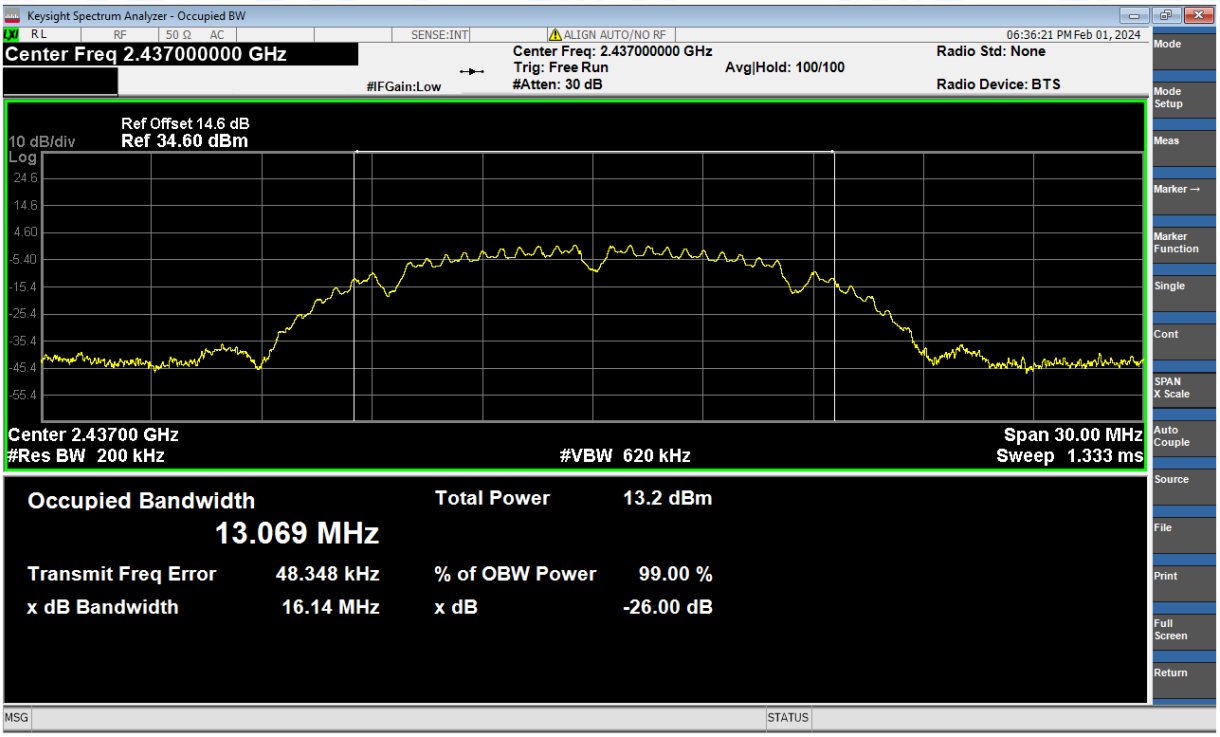
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.033
NVNT	b	2437	Ant1	13.069
NVNT	b	2462	Ant1	13.06
NVNT	g	2412	Ant1	16.749
NVNT	g	2437	Ant1	16.778
NVNT	g	2462	Ant1	16.767
NVNT	n(HT20)	2412	Ant1	17.912
NVNT	n(HT20)	2437	Ant1	17.893
NVNT	n(HT20)	2462	Ant1	17.884
NVNT	n(HT40)	2422	Ant1	36.639
NVNT	n(HT40)	2437	Ant1	36.631
NVNT	n(HT40)	2452	Ant1	36.612

Test Graphs

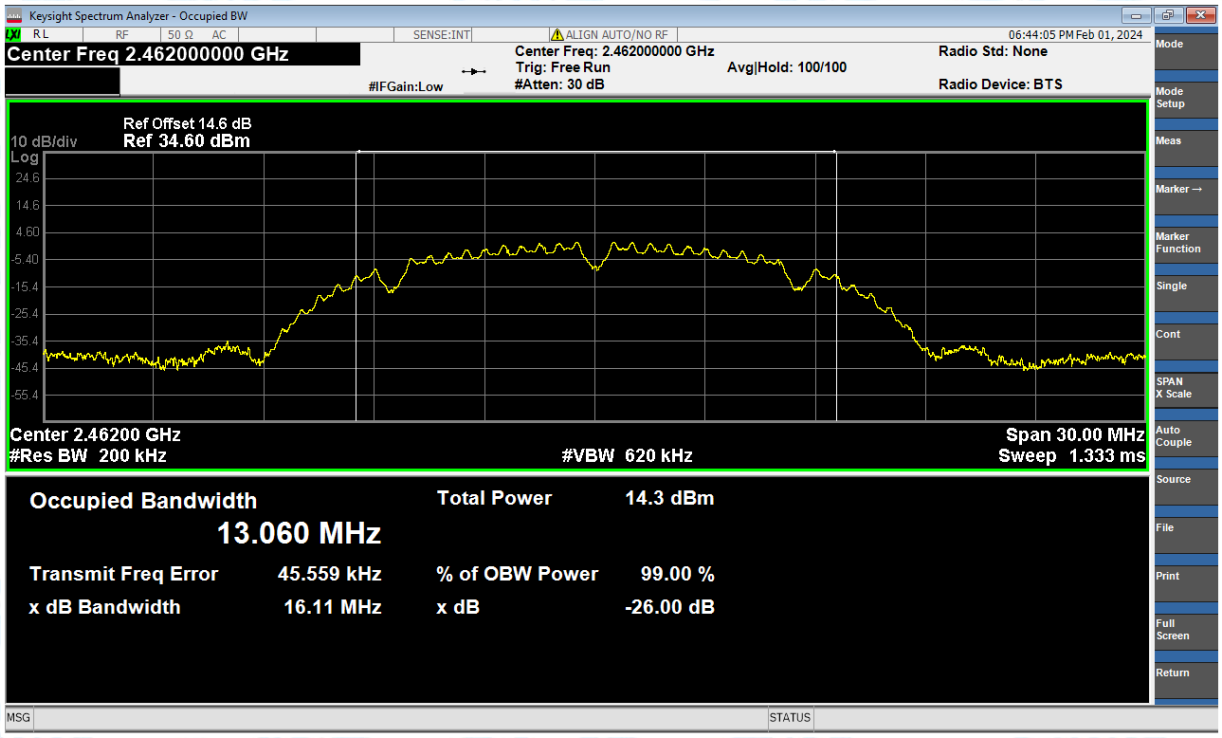
OBW NVNT b 2412MHz Ant1



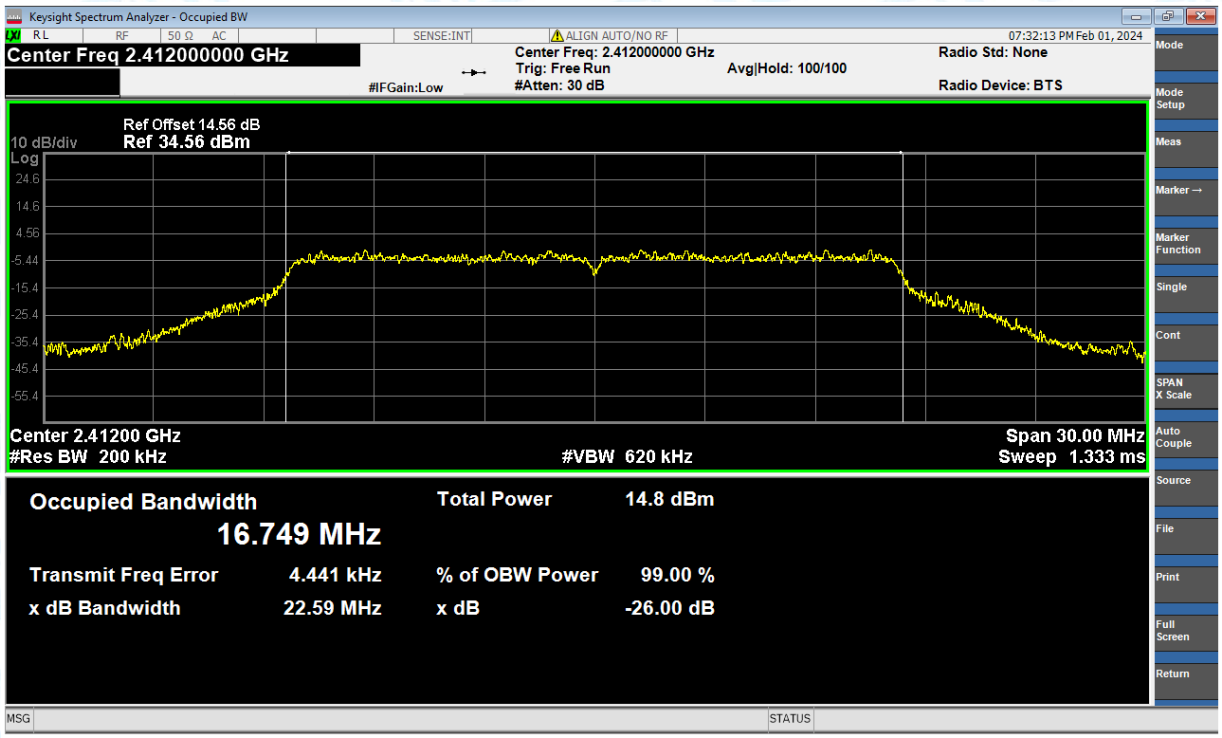
OBW NVNT b 2437MHz Ant1



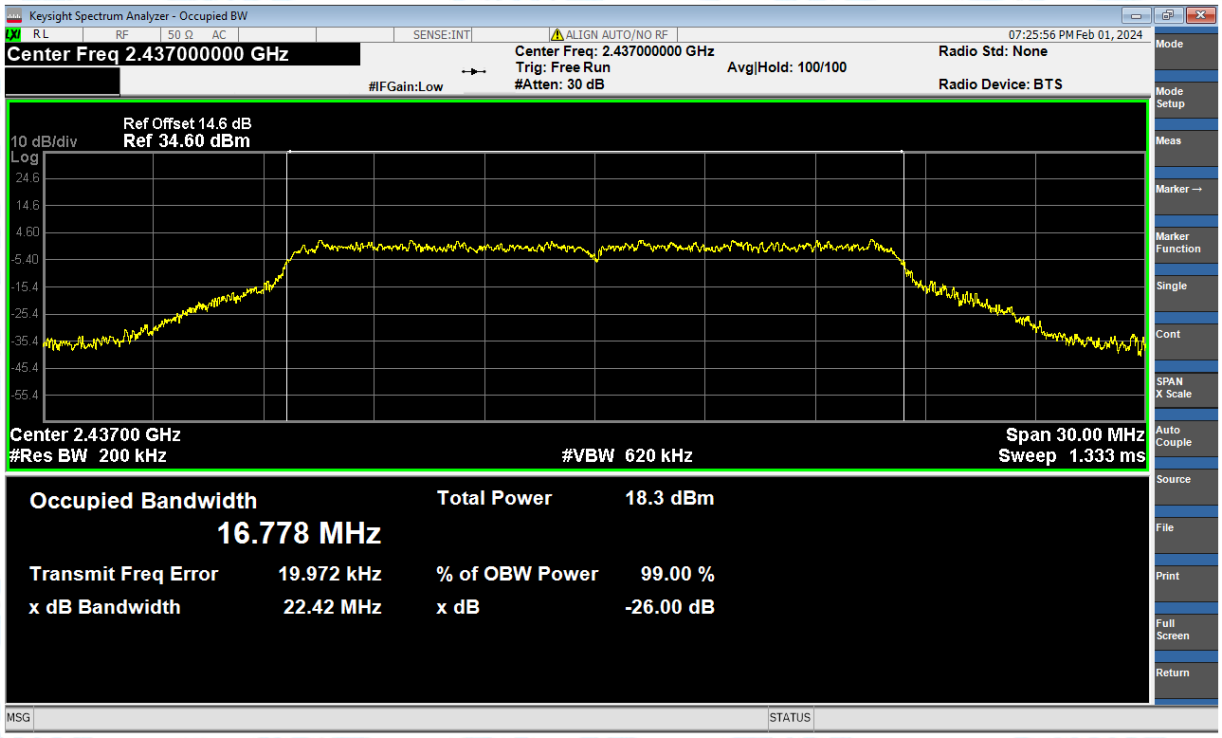
OBW NVNT b 2462MHz Ant1



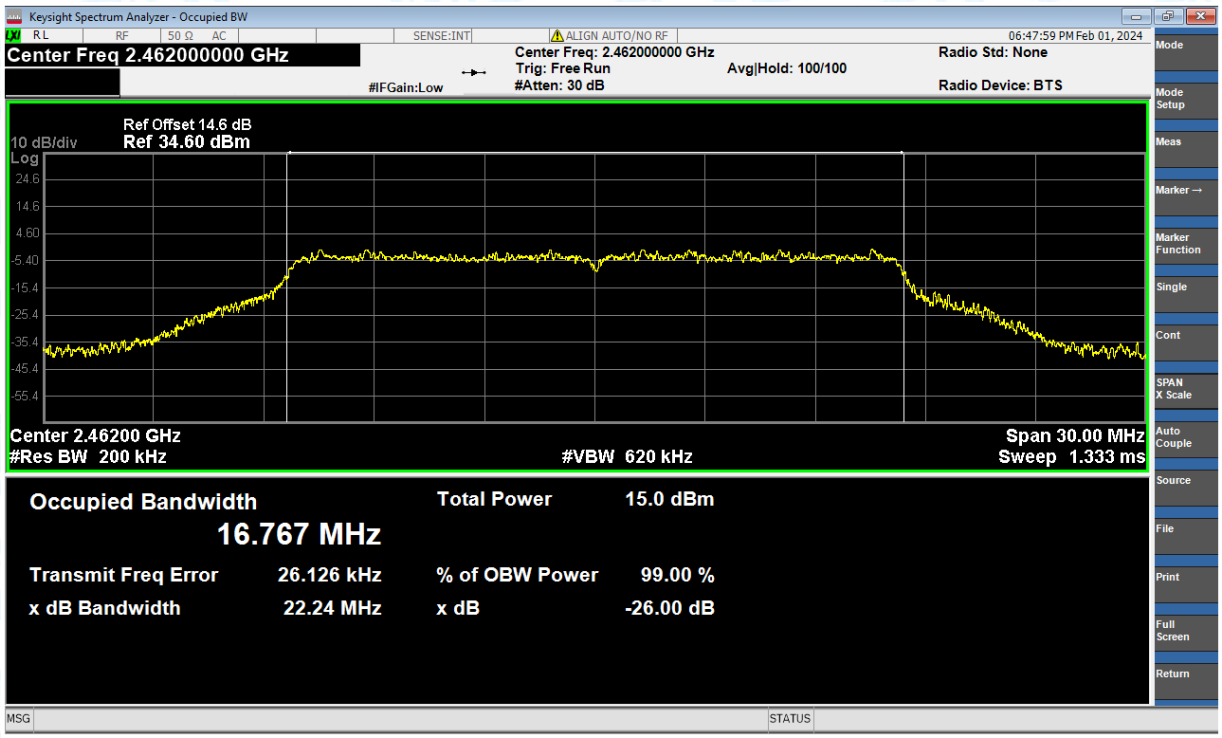
OBW NVNT g 2412MHz Ant1



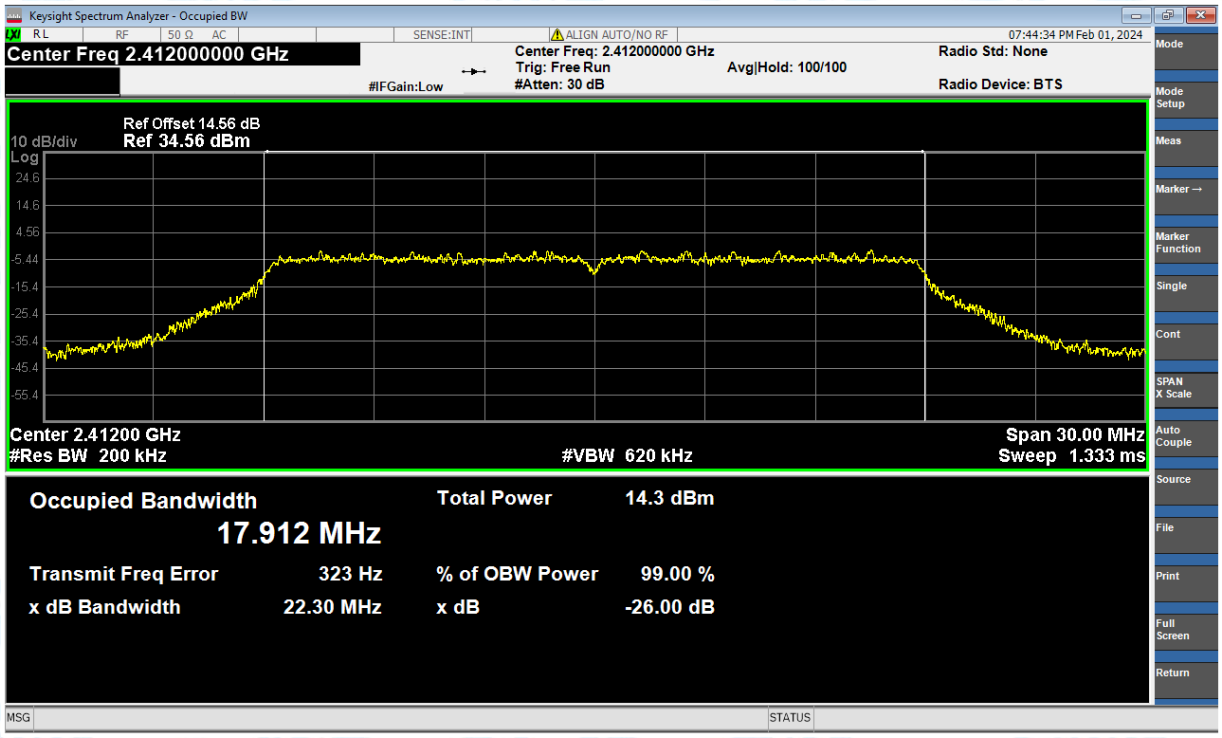
OBW NVNT g 2437MHz Ant1



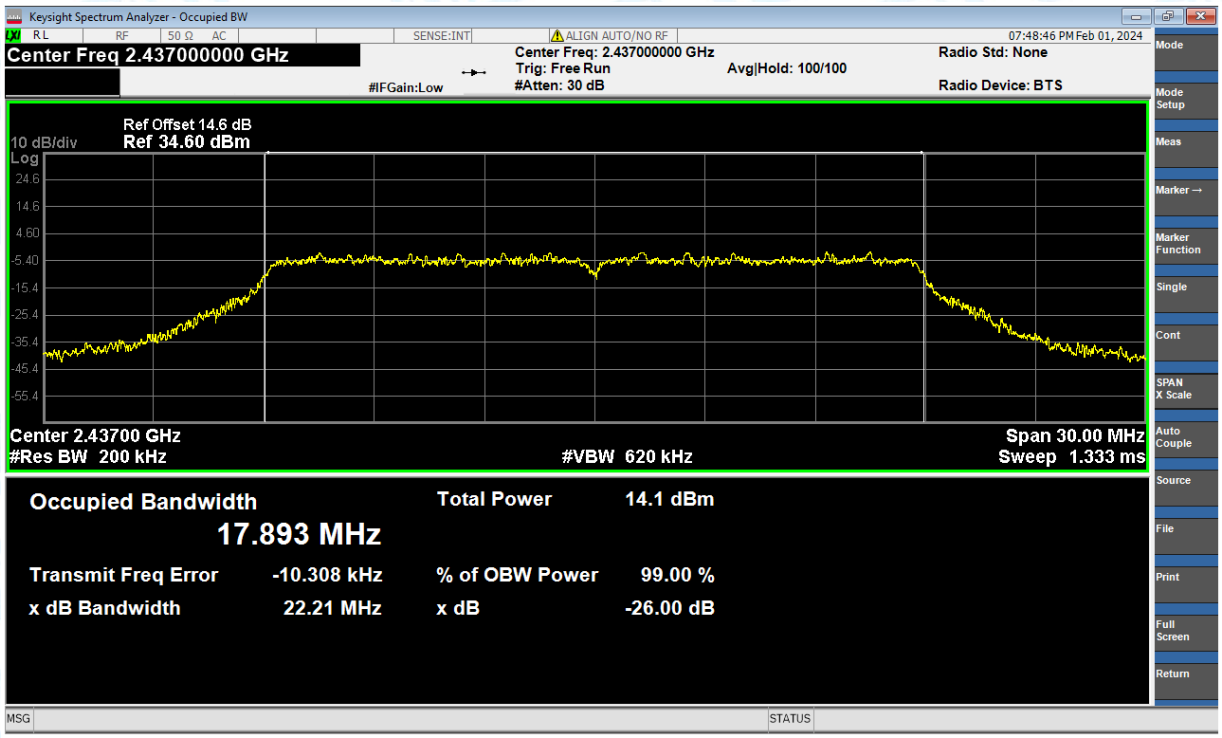
OBW NVNT g 2462MHz Ant1



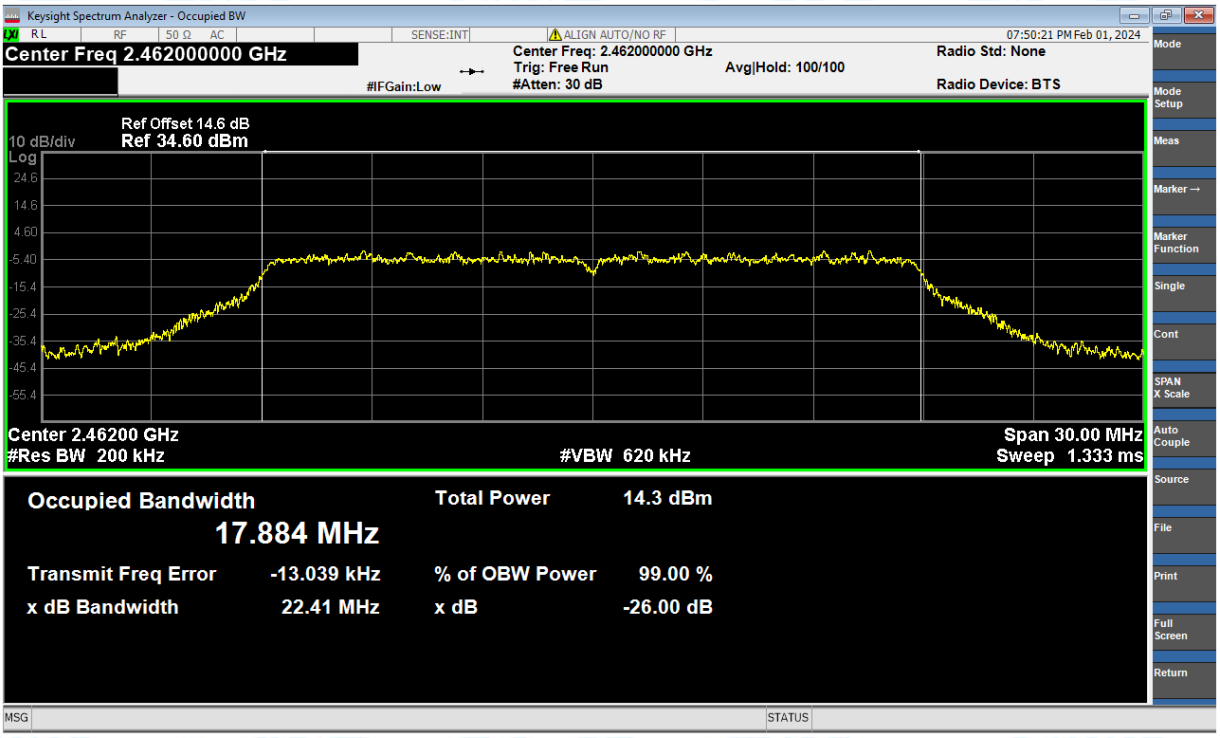
OBW NVNT n(HT20) 2412MHz Ant1



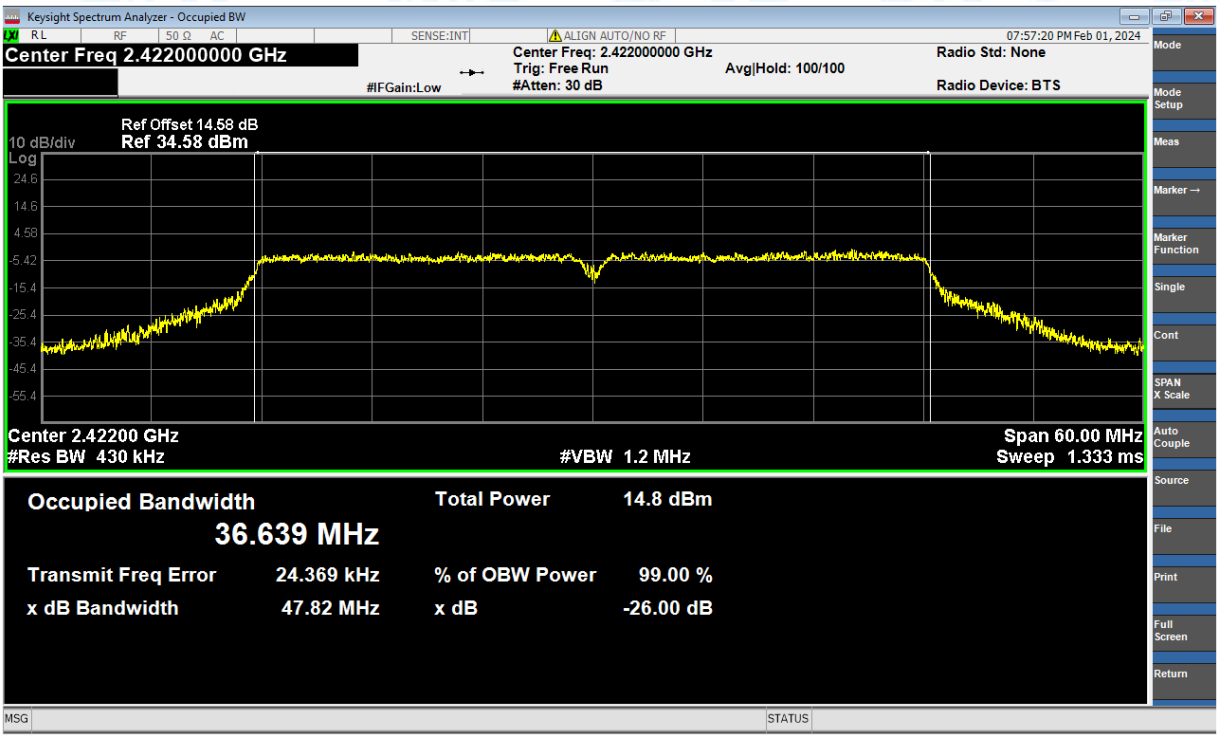
OBW NVNT n(HT20) 2437MHz Ant1



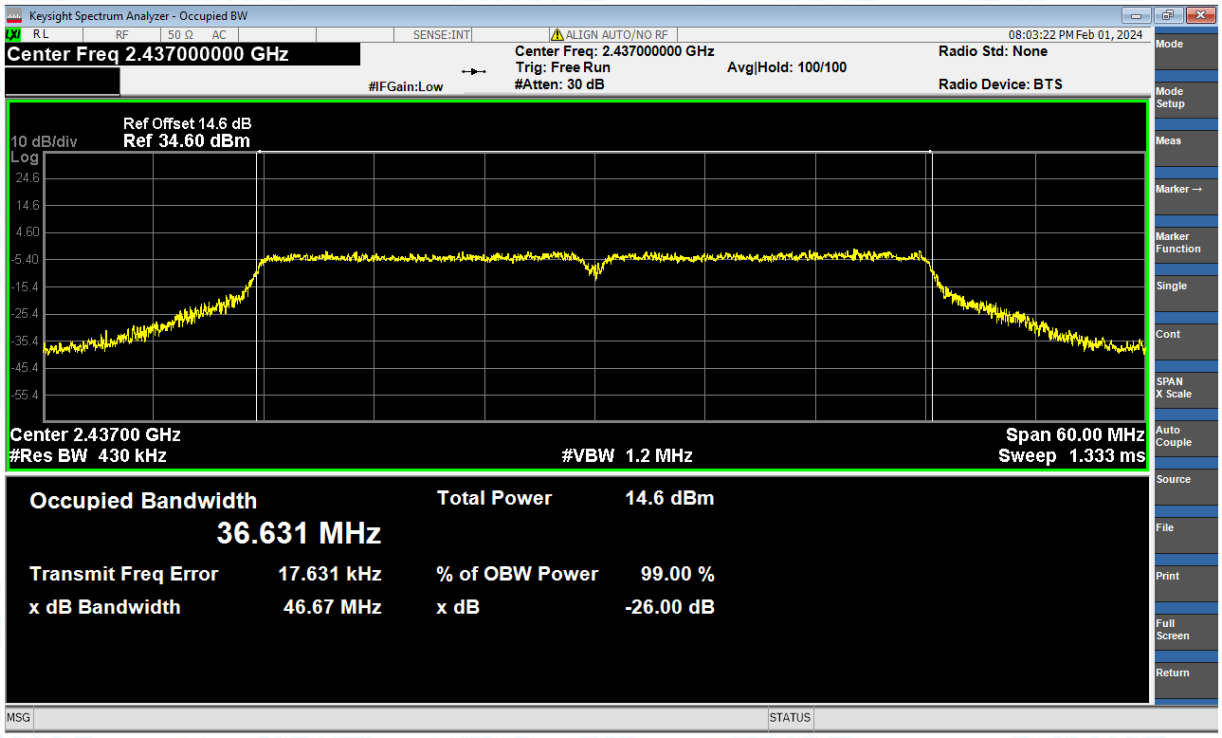
OBW NVNT n(HT20) 2462MHz Ant1



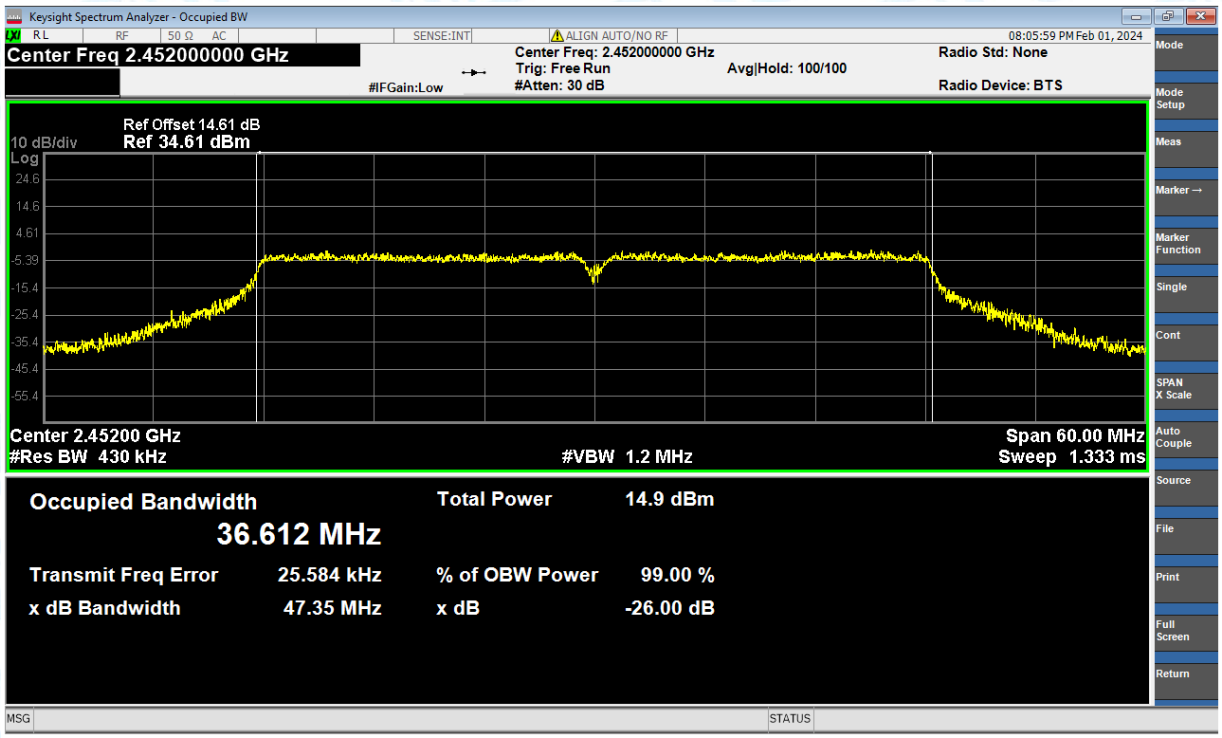
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

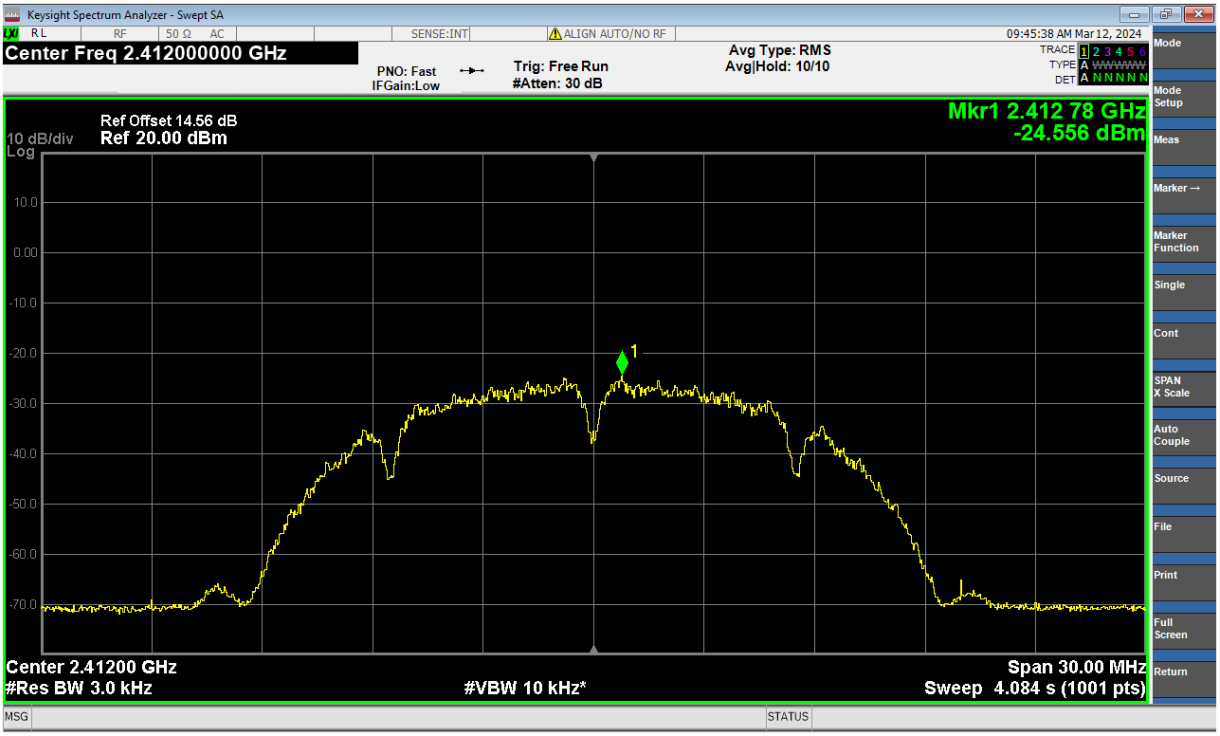


5.Maximum Power Spectral Density Level

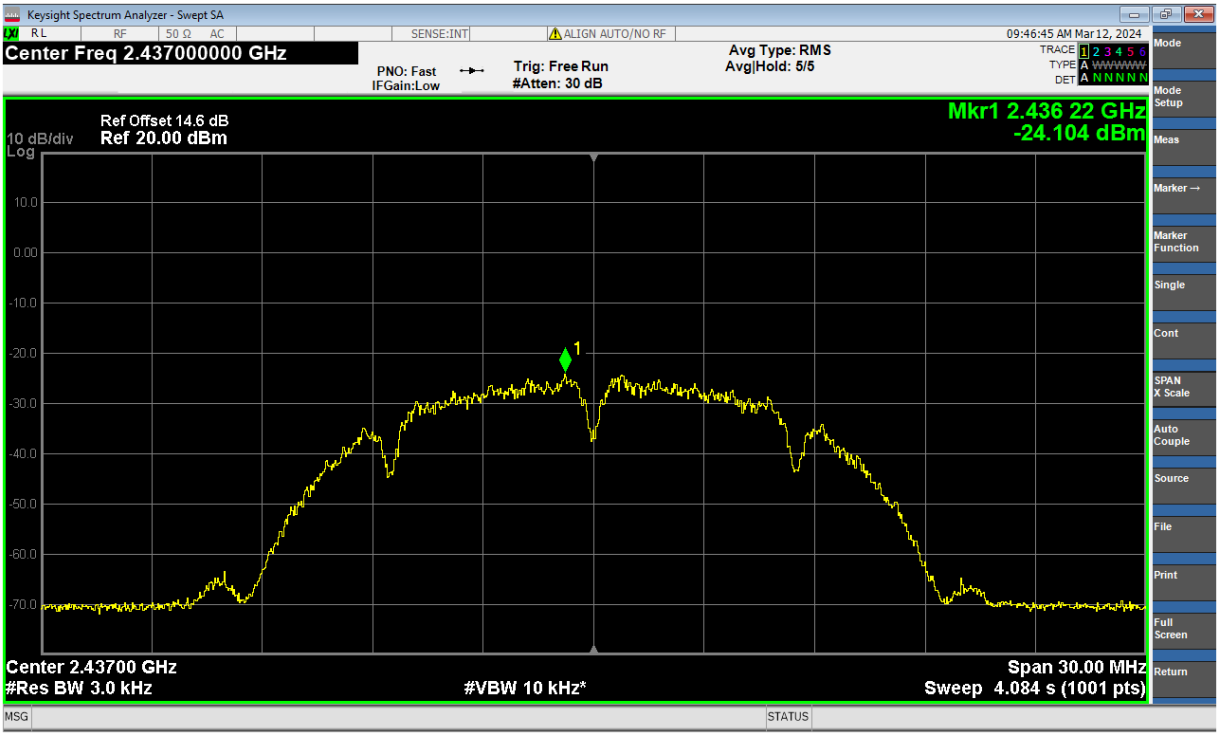
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-24.556	8	Pass
NVNT	b	2437	Ant1	-24.104	8	Pass
NVNT	b	2462	Ant1	-24.465	8	Pass
NVNT	g	2412	Ant1	-26.228	8	Pass
NVNT	g	2437	Ant1	-25.878	8	Pass
NVNT	g	2462	Ant1	-25.816	8	Pass
NVNT	n(HT20)	2412	Ant1	-25.955	8	Pass
NVNT	n(HT20)	2437	Ant1	-26.245	8	Pass
NVNT	n(HT20)	2462	Ant1	-25.734	8	Pass
NVNT	n(HT40)	2422	Ant1	-29.079	8	Pass
NVNT	n(HT40)	2437	Ant1	-29.221	8	Pass
NVNT	n(HT40)	2452	Ant1	-29.027	8	Pass

Test Graphs

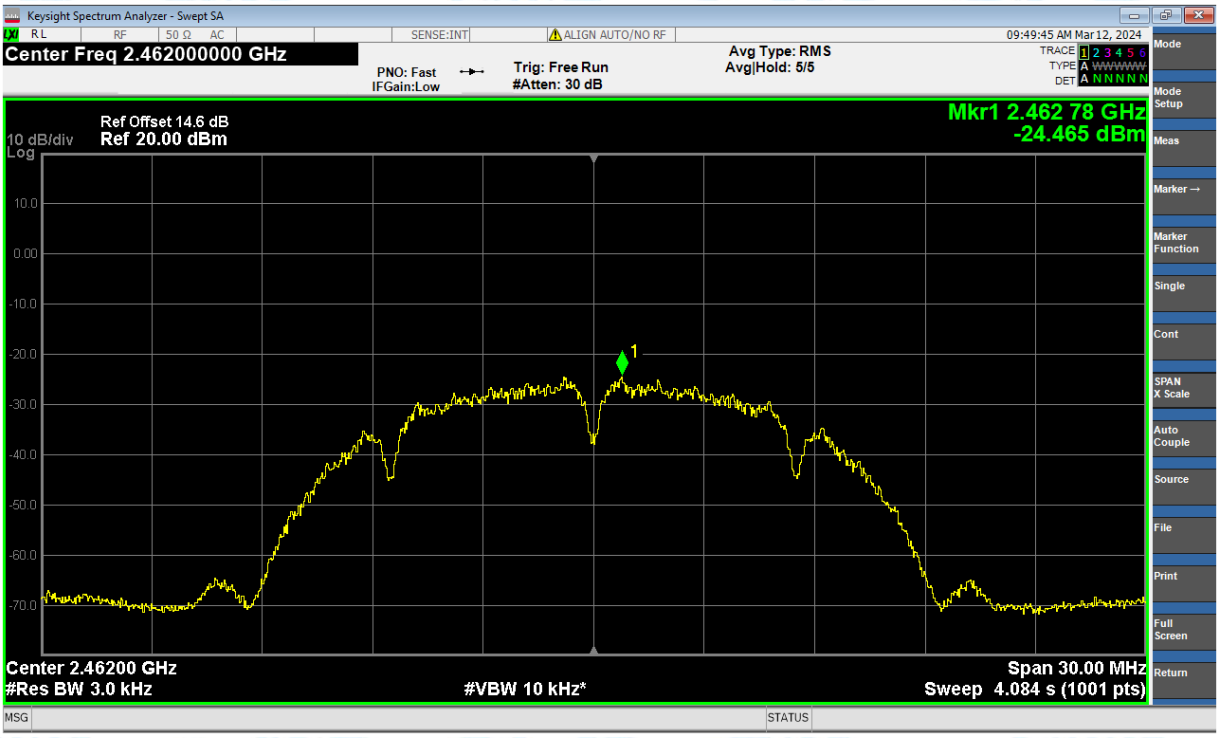
PSD NVNT b 2412MHz Ant1



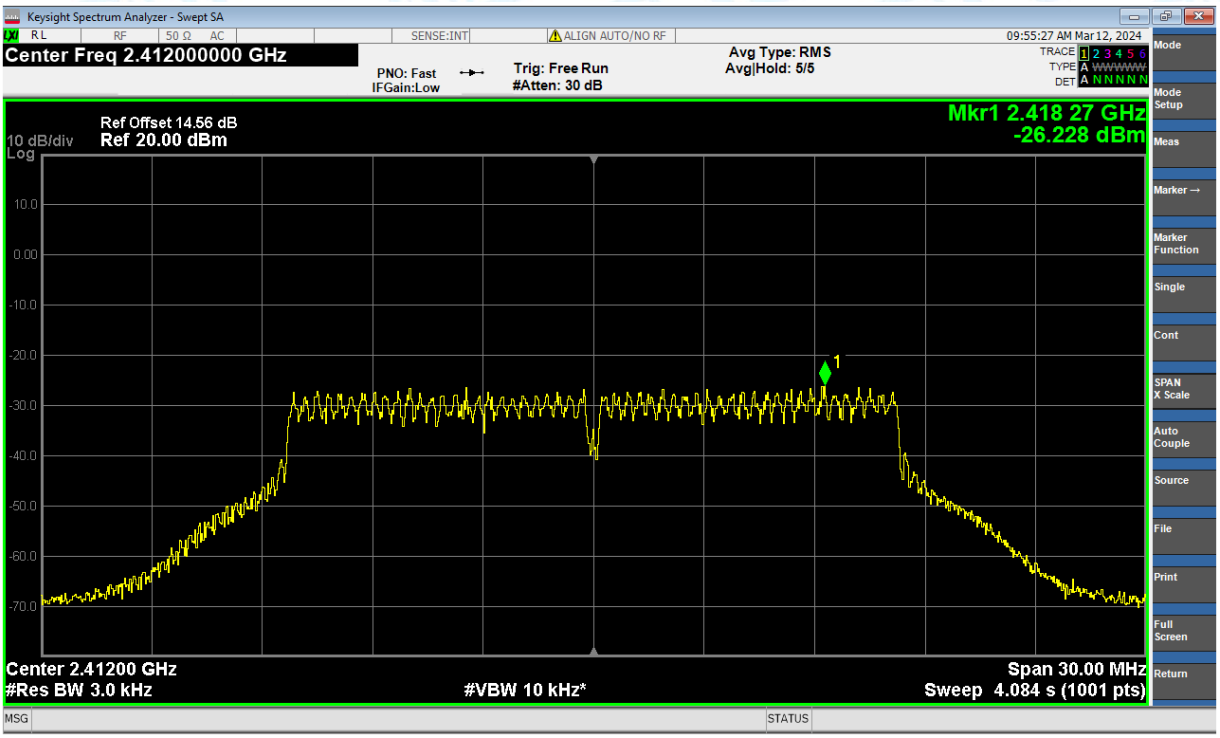
PSD NVNT b 2437MHz Ant1



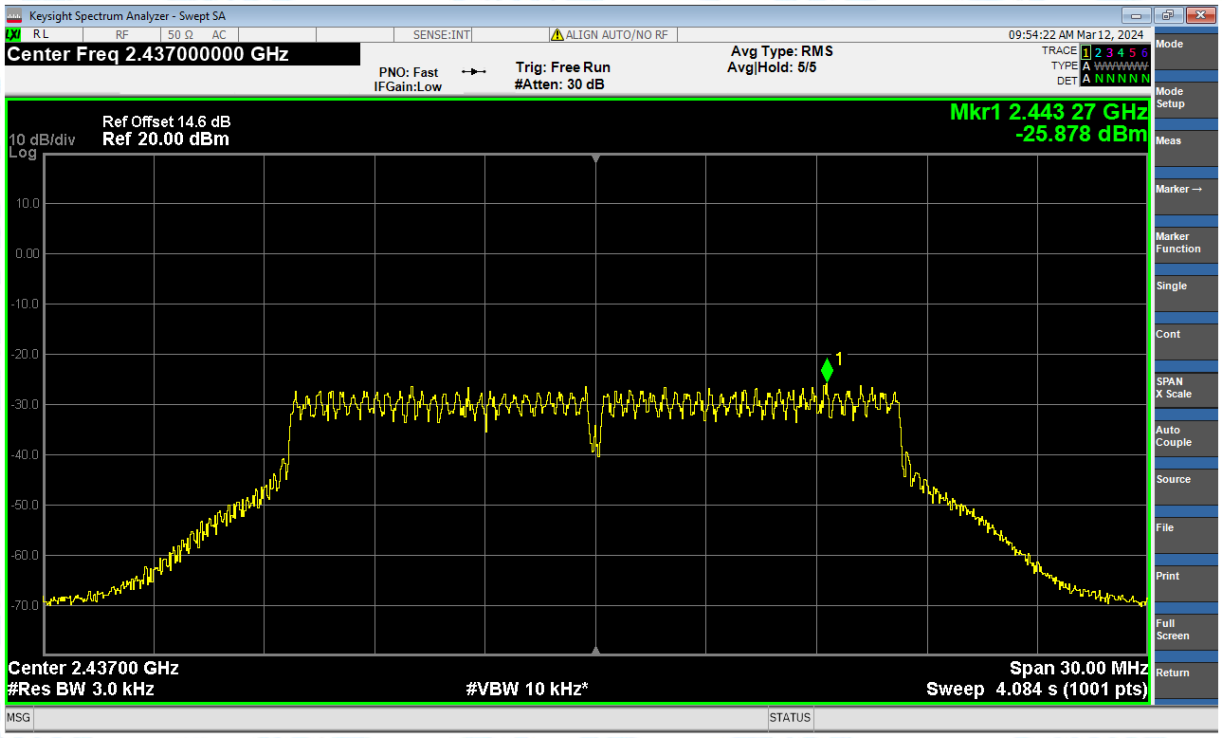
PSD NVNT b 2462MHz Ant1



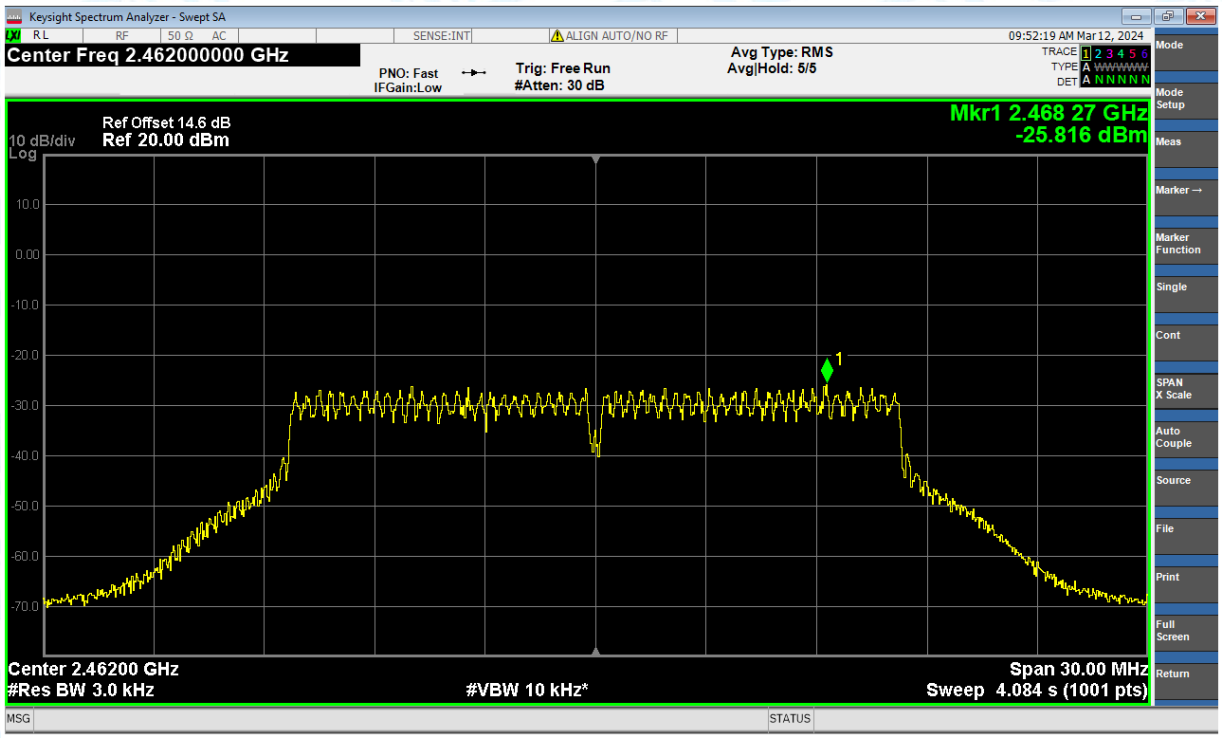
PSD NVNT g 2412MHz Ant1



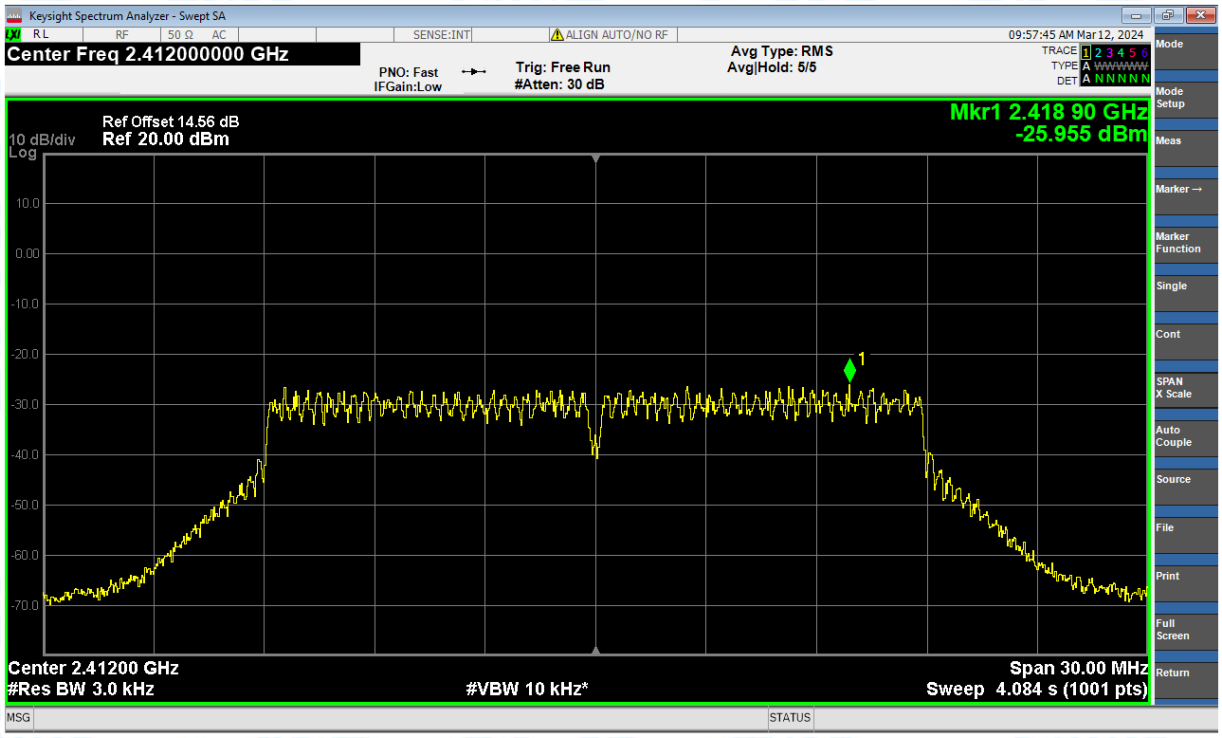
PSD NVNT g 2437MHz Ant1



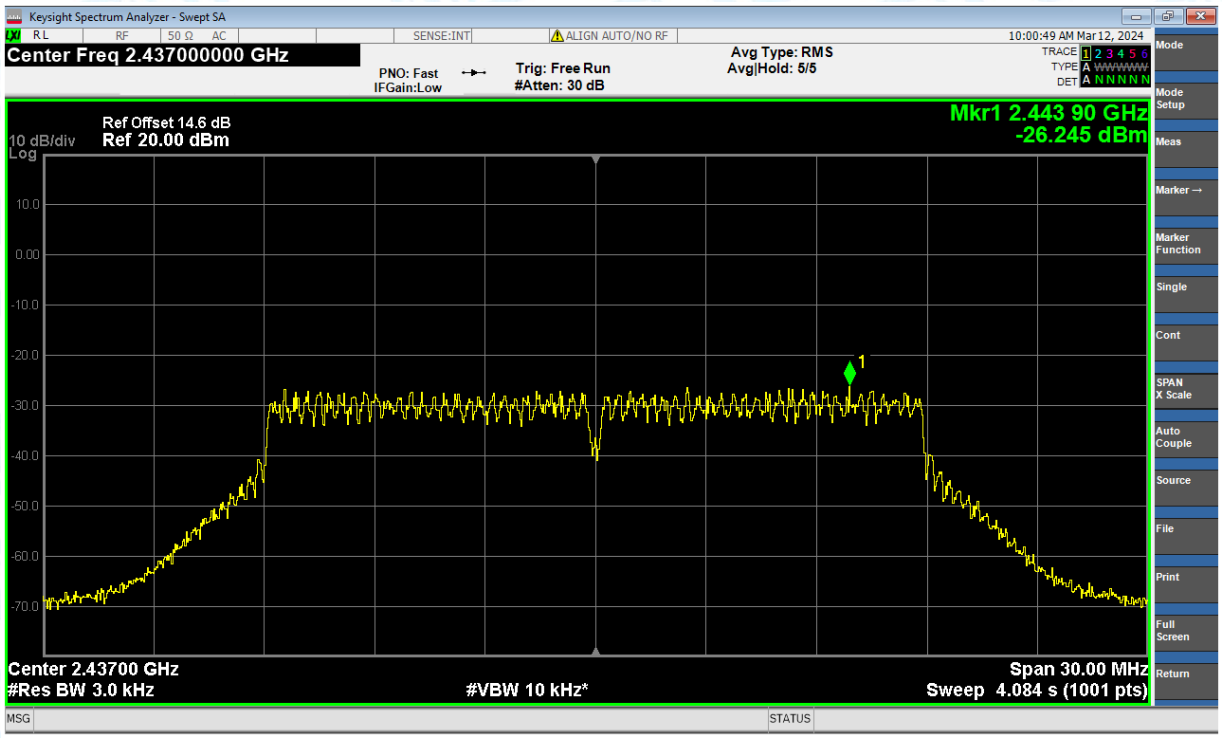
PSD NVNT g 2462MHz Ant1



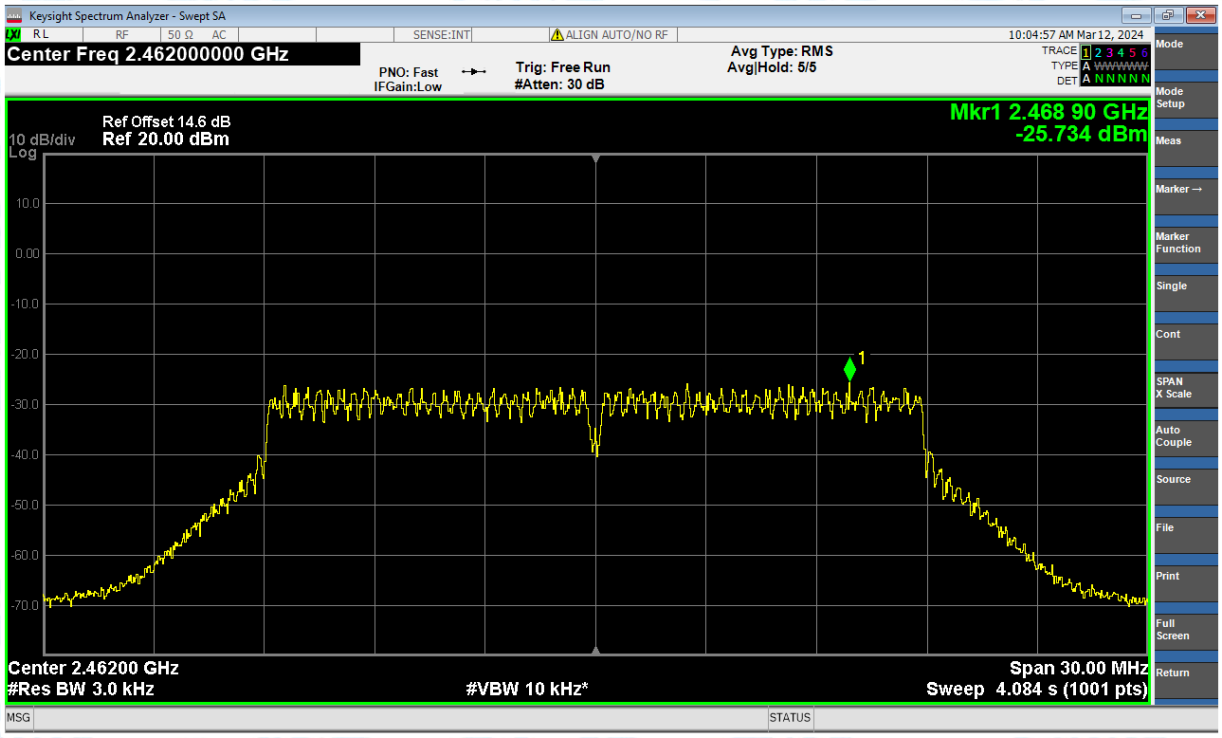
PSD NVNT n(HT20) 2412MHz Ant1



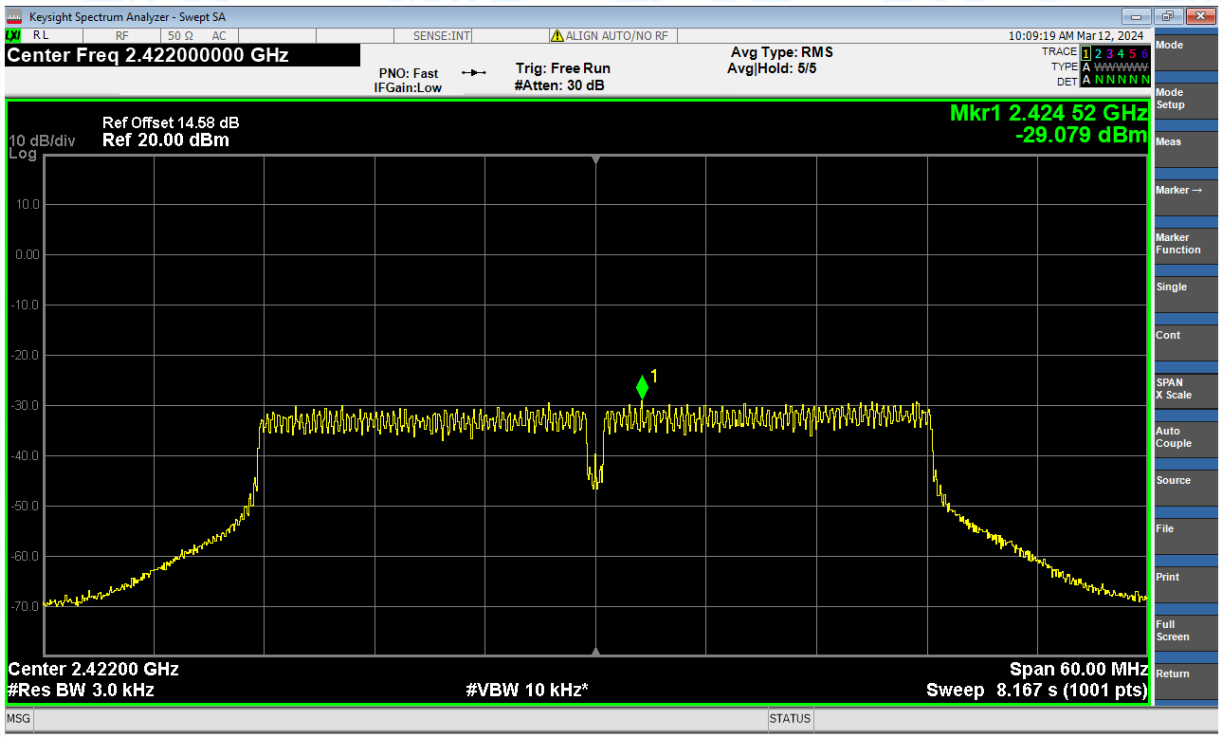
PSD NVNT n(HT20) 2437MHz Ant1



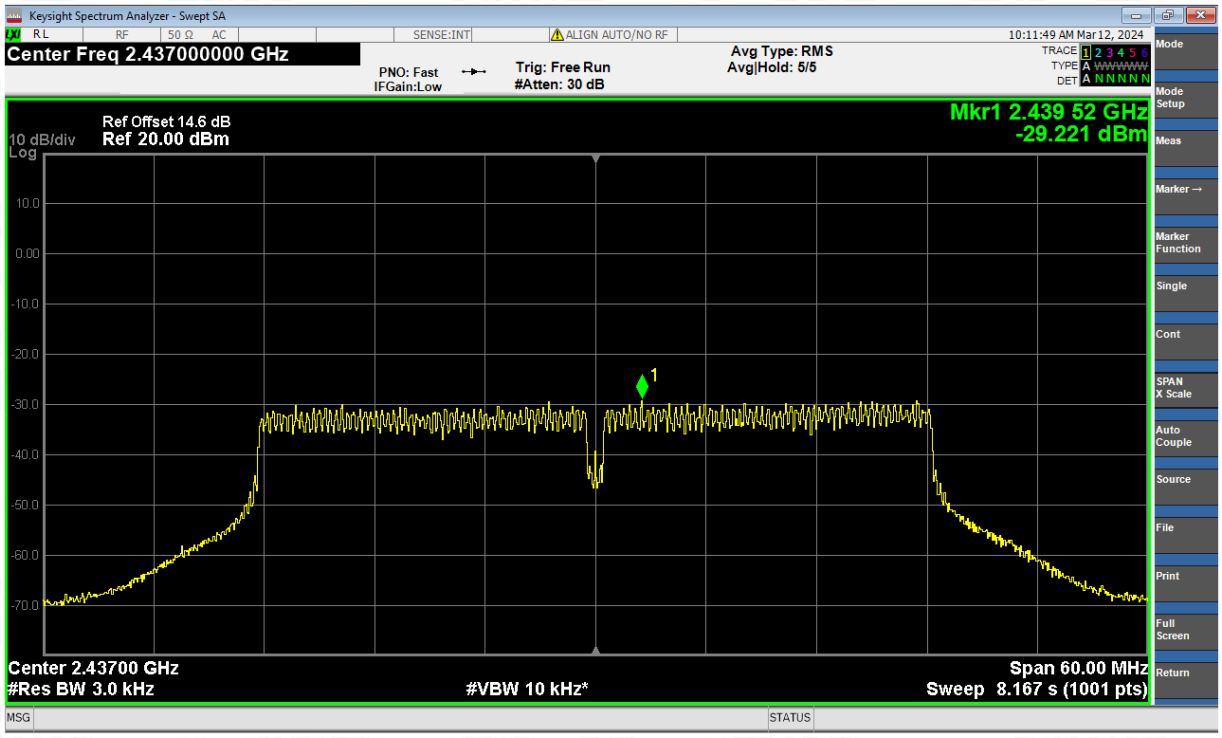
PSD NVNT n(HT20) 2462MHz Ant1



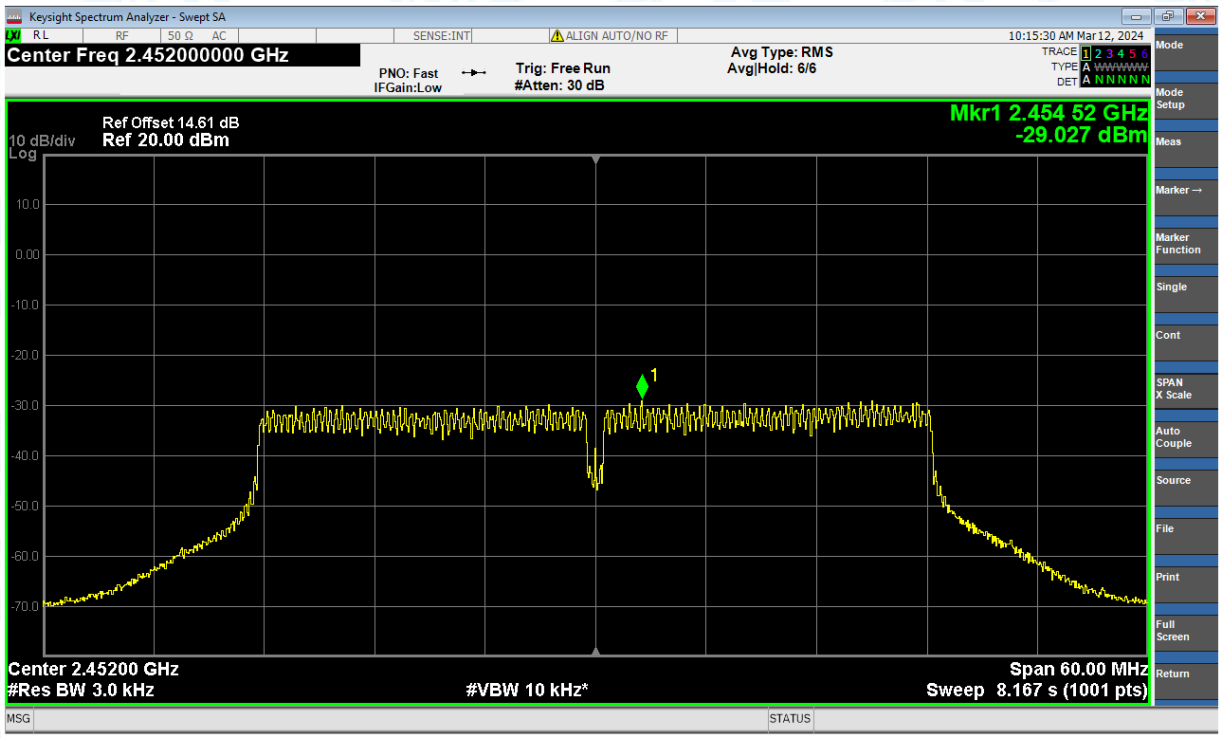
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

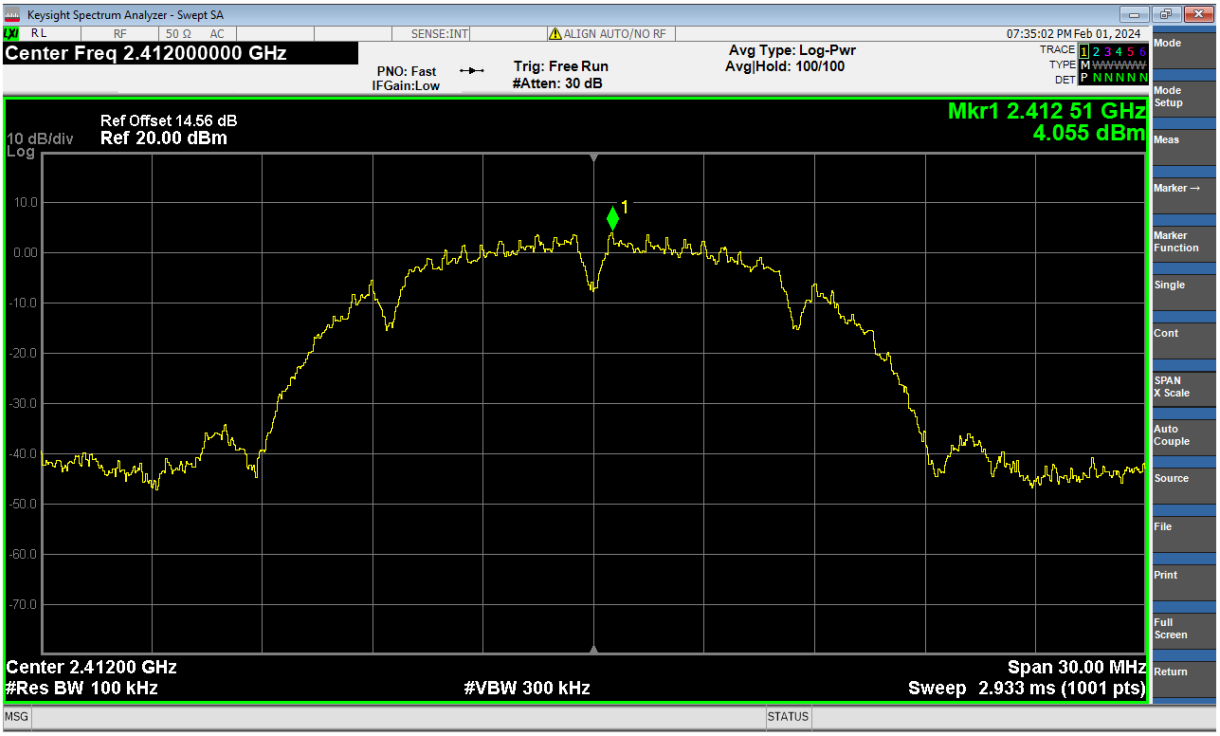


6.Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-48.15	-30	Pass
NVNT	b	2462	Ant1	-45.01	-30	Pass
NVNT	g	2412	Ant1	-40.46	-30	Pass
NVNT	g	2462	Ant1	-40.83	-30	Pass
NVNT	n(HT20)	2412	Ant1	-39.15	-30	Pass
NVNT	n(HT20)	2462	Ant1	-40.34	-30	Pass
NVNT	n(HT40)	2422	Ant1	-33.52	-30	Pass
NVNT	n(HT40)	2452	Ant1	-33.92	-30	Pass

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission