RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Wireless Network Video Recorder
Test Model:	WNVR-FWR8G1-8
Sample ID:	HC-C-202403-0339-01-01-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	AC 120V
Test Engineer:	ZKN zhou
Note: For a more detailed features description, please refer to the report TBR-C-202403-0339-3 The report only show the worst case data.	

Contents

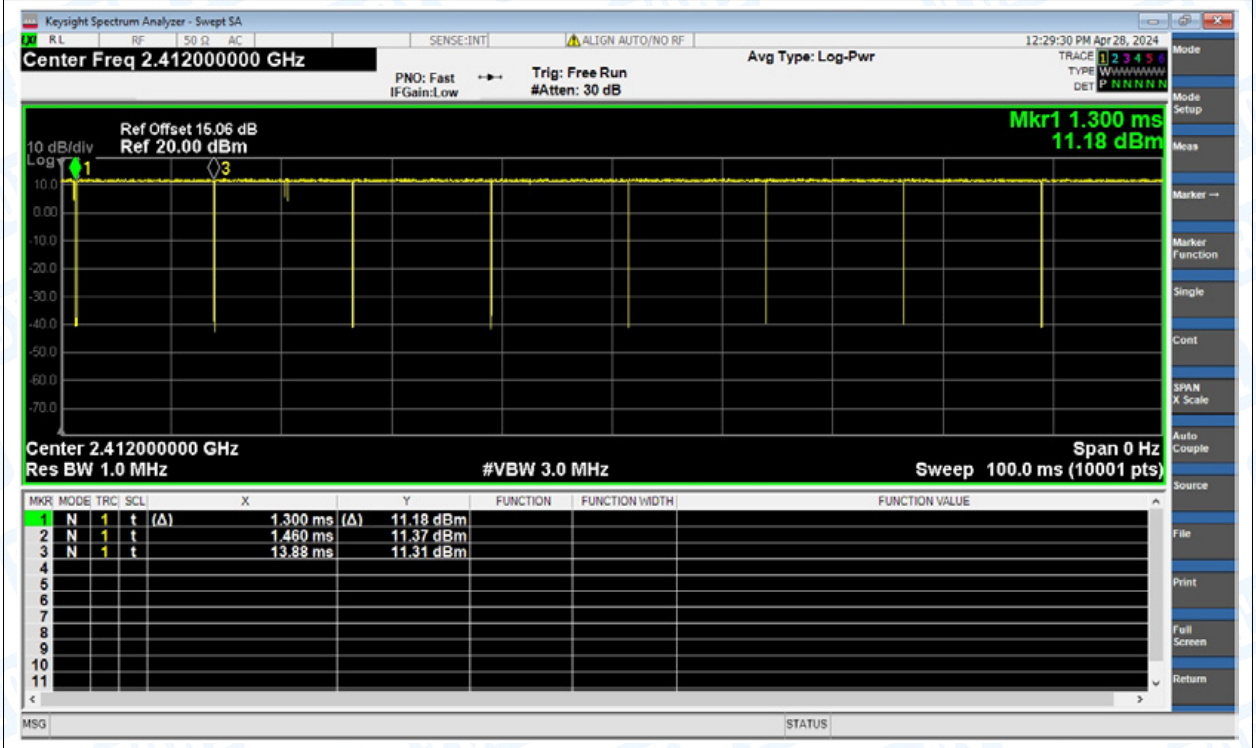
1. Duty Cycle 3
2. Maximum Conducted Output Power 10
3. -6dB Bandwidth 11
4. Occupied Channel Bandwidth 24
5. Maximum Power Spectral Density Level 37
6. Band Edge 50
7. Conducted RF Spurious Emission 67
8. Restrict Band 92

1. Duty Cycle

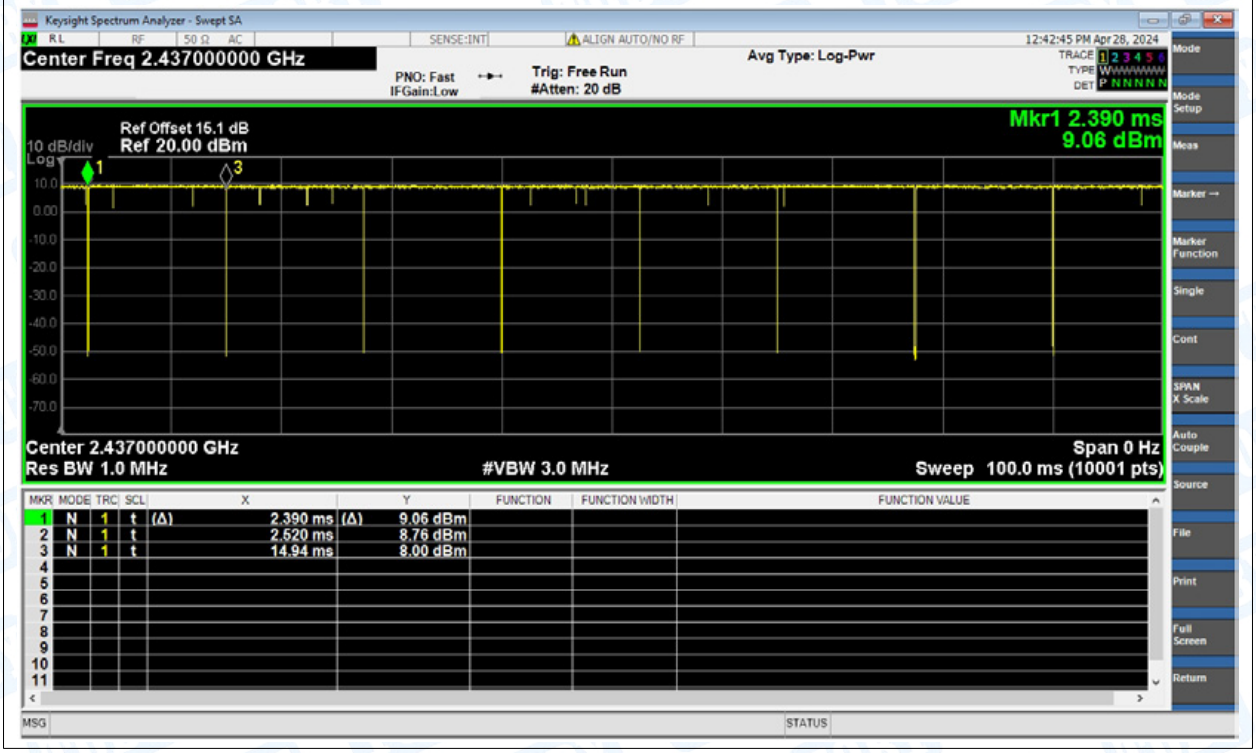
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Sum	98.73	0.06	0.08
NVNT	b	2437	Sum	98.96	0.05	0.08
NVNT	b	2462	Sum	99.04	0.04	0.08
NVNT	g	2412	Sum	98.10	0.08	0.49
NVNT	g	2437	Sum	97.17	0.12	0.49
NVNT	g	2462	Sum	92.41	0.34	0.48
NVNT	n(HT20)	2412	Sum	94.61	0.24	0.52
NVNT	n(HT20)	2437	Sum	97.96	0.09	0.52
NVNT	n(HT20)	2462	Sum	95.05	0.22	0.52
NVNT	n(HT40)	2422	Sum	95.00	0.22	1.05
NVNT	n(HT40)	2437	Sum	90.38	0.44	1.06
NVNT	n(HT40)	2452	Sum	92.23	0.35	1.05

Test Graphs

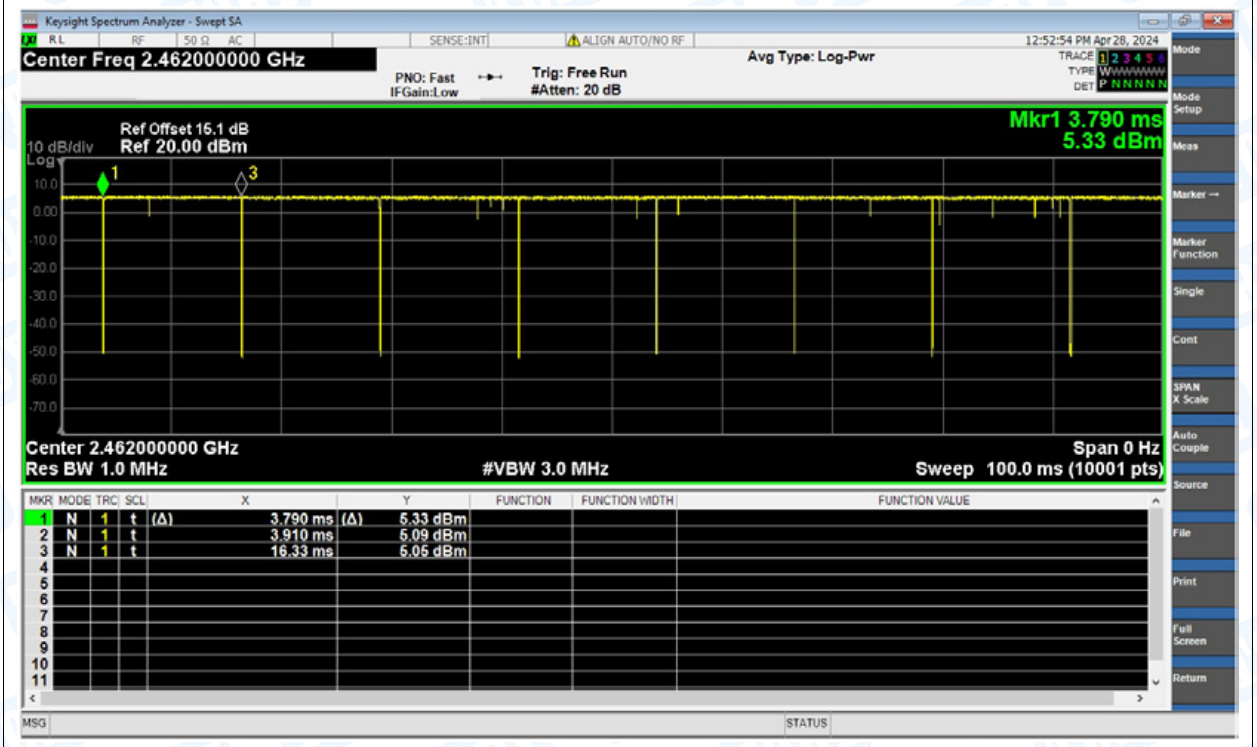
Duty Cycle NVNT b 2412MHz Sum



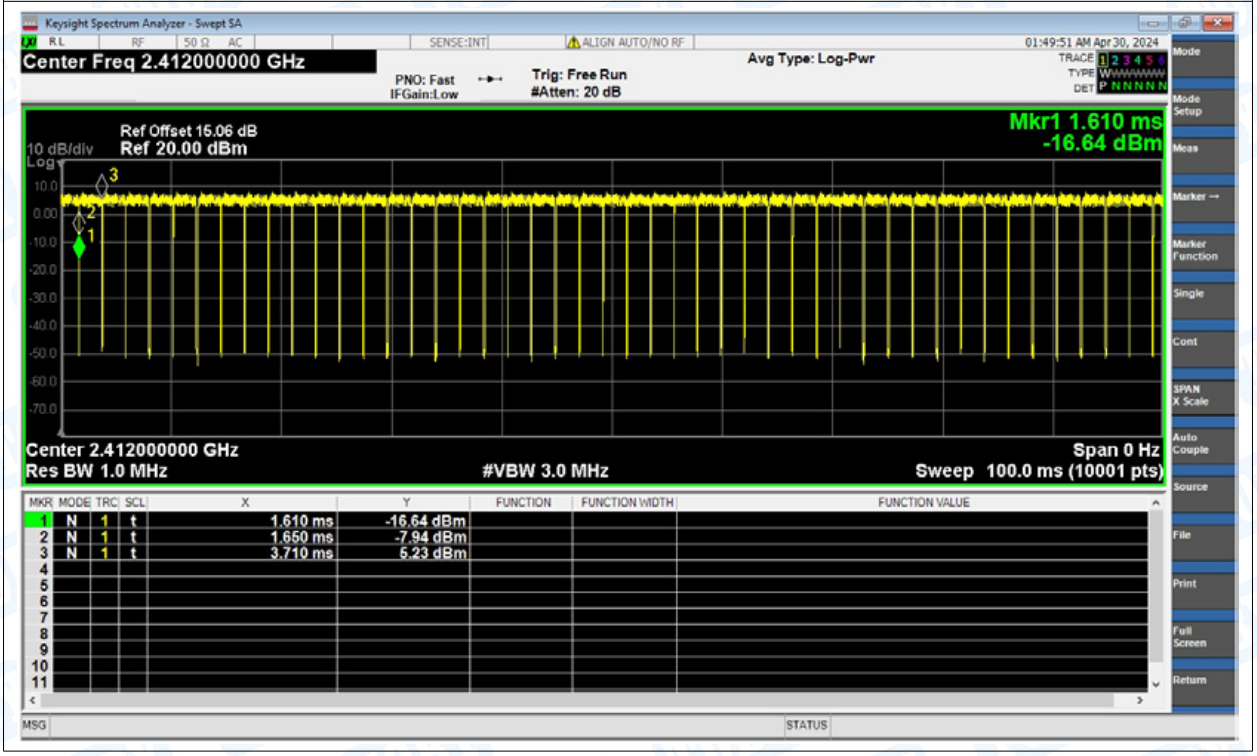
Duty Cycle NVNT b 2437MHz Sum



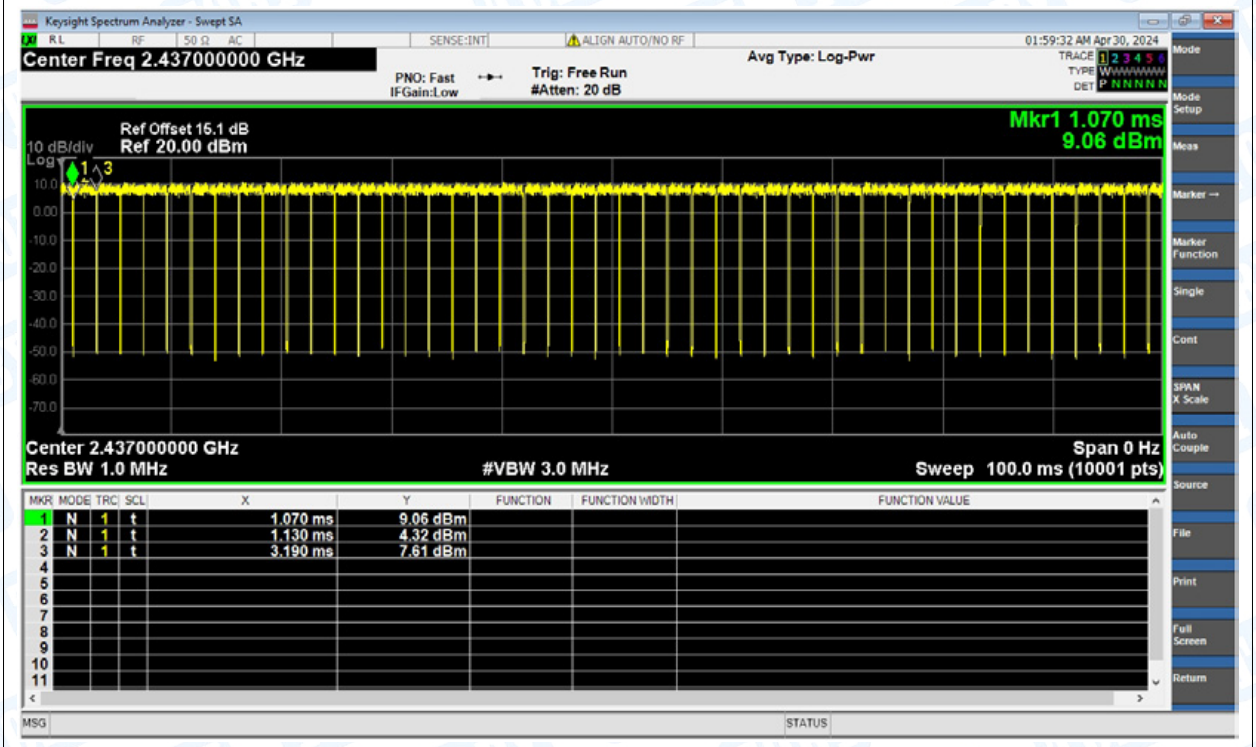
Duty Cycle NVNT b 2462MHz Sum



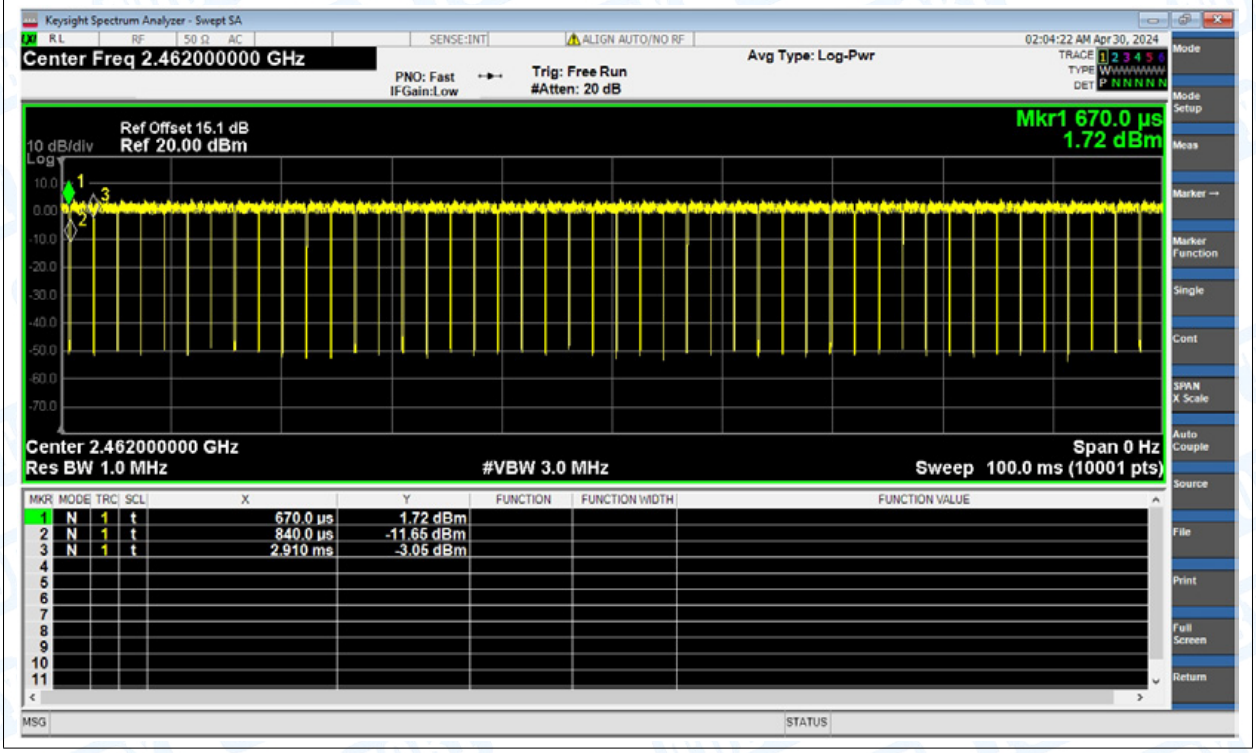
Duty Cycle NVNT g 2412MHz Sum



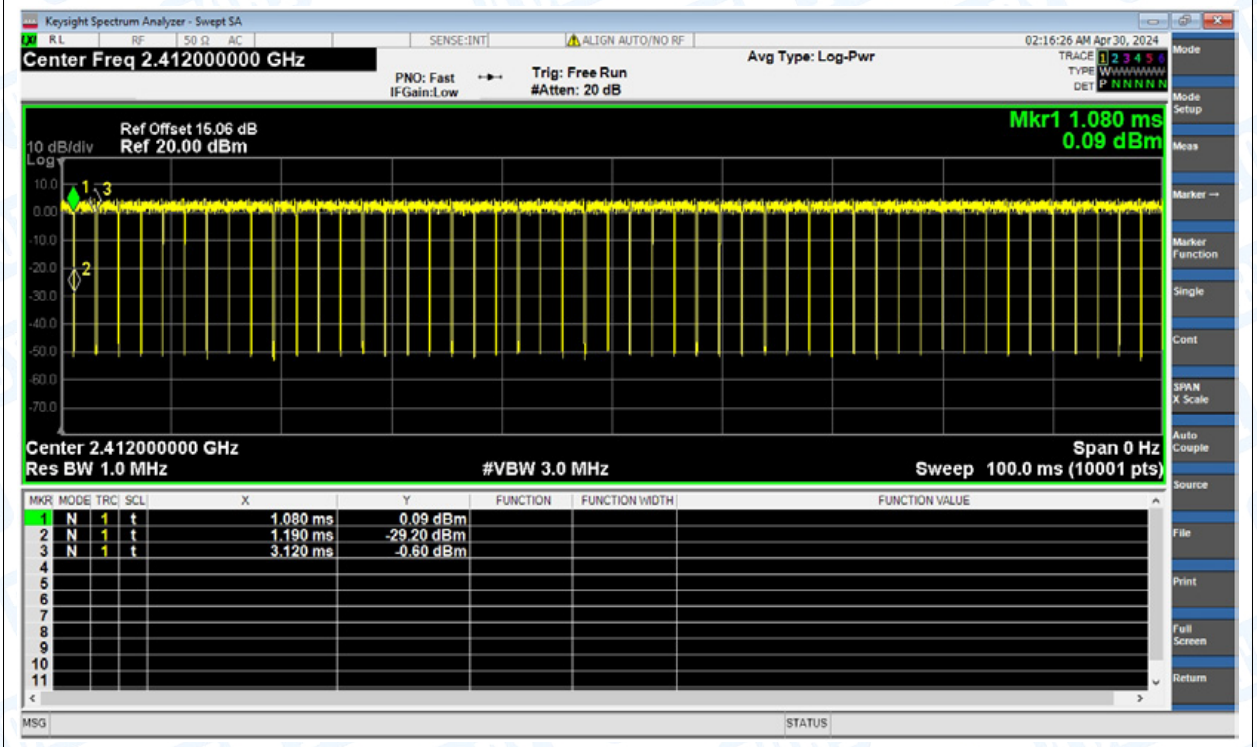
Duty Cycle NVNT g 2437MHz Sum



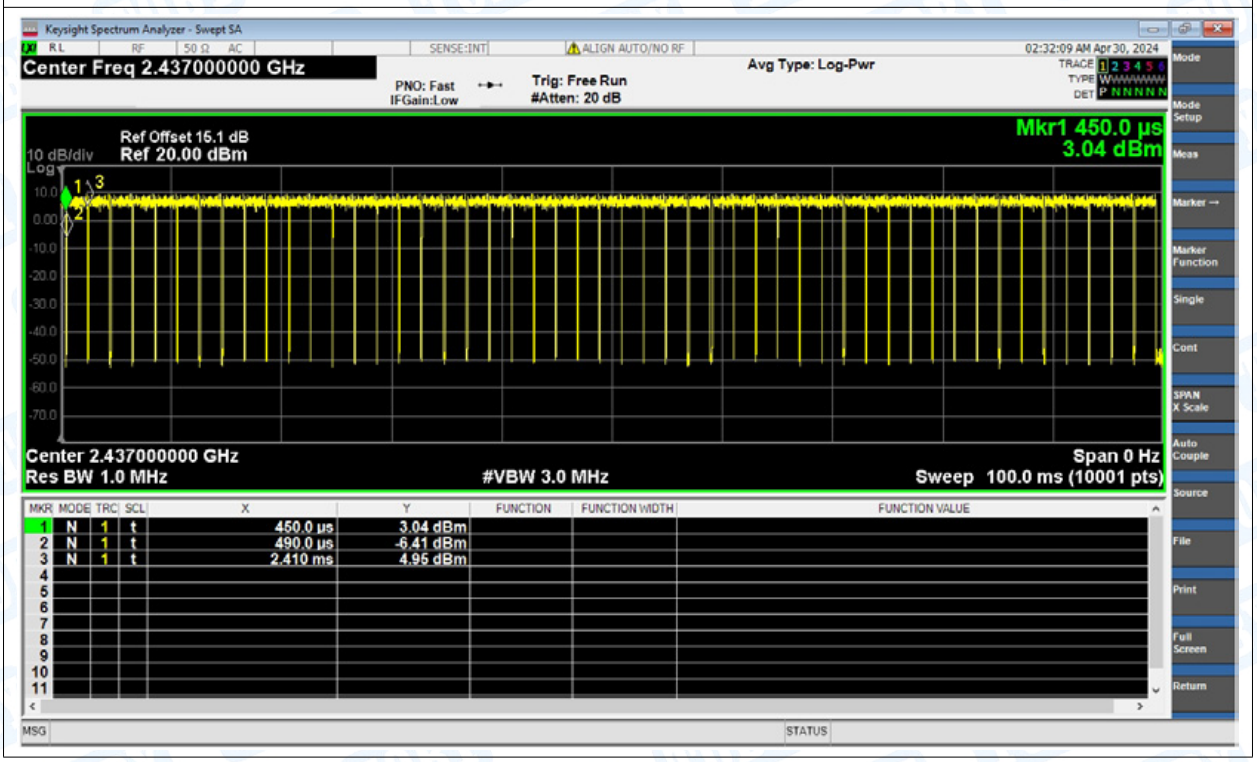
Duty Cycle NVNT g 2462MHz Sum



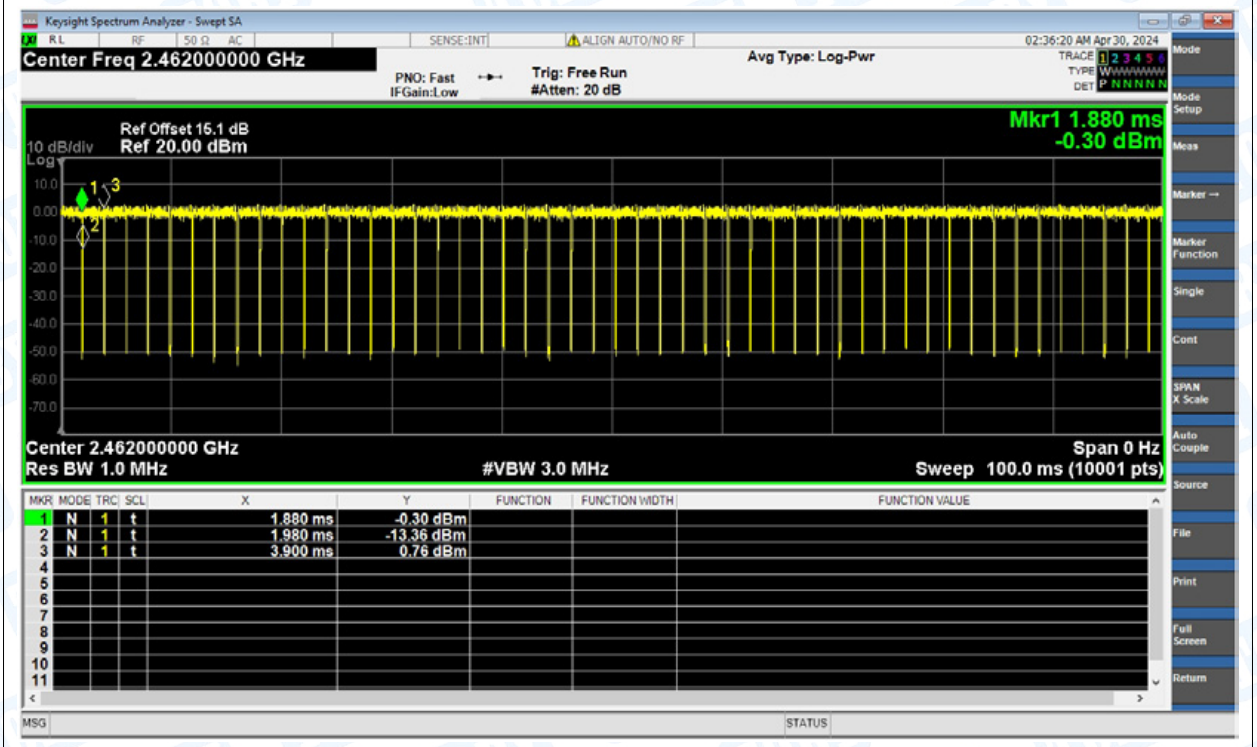
Duty Cycle NVNT n(HT20) 2412MHz Sum



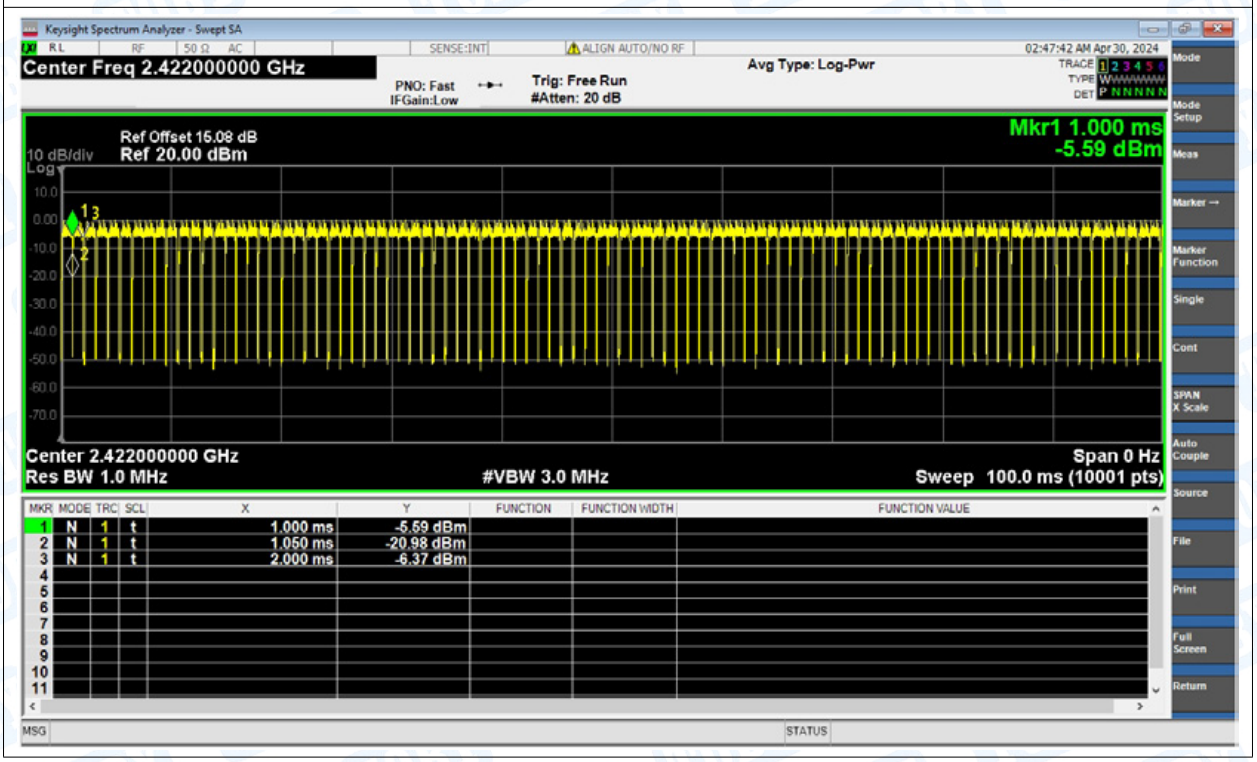
Duty Cycle NVNT n(HT20) 2437MHz Sum



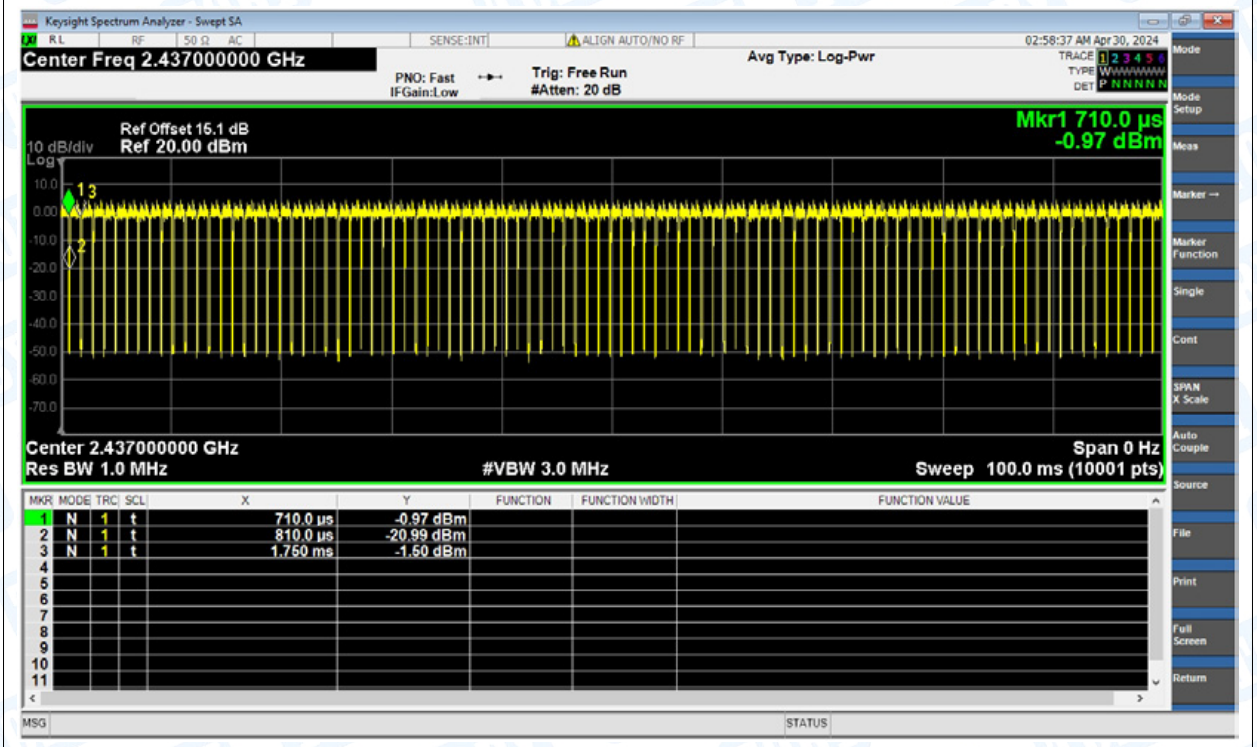
Duty Cycle NVNT n(HT20) 2462MHz Sum



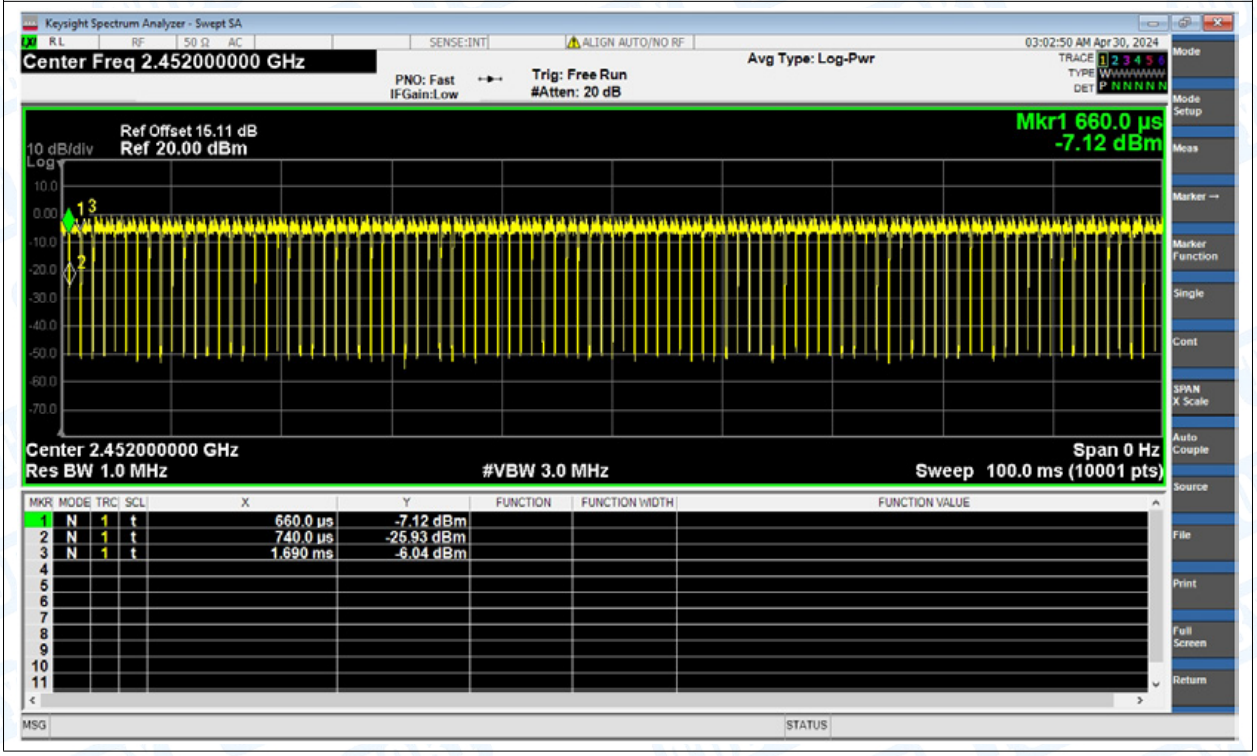
Duty Cycle NVNT n(HT40) 2422MHz Sum



Duty Cycle NVNT n(HT40) 2437MHz Sum



Duty Cycle NVNT n(HT40) 2452MHz Sum



2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	12.04	30	Pass
NVNT	b	2412	Ant2	11.74	30	Pass
NVNT	**b**	**2412**	**Sum**	**14.903**	**28.15**	**Pass**
NVNT	b	2437	Ant1	15.26	30	Pass
NVNT	b	2437	Ant2	15.37	30	Pass
NVNT	**b**	**2437**	**Sum**	**18.326**	**28.15**	**Pass**
NVNT	b	2462	Ant1	10.5	30	Pass
NVNT	b	2462	Ant2	10.4	30	Pass
NVNT	**b**	**2462**	**Sum**	**13.461**	**28.15**	**Pass**
NVNT	g	2412	Ant1	8.33	30	Pass
NVNT	g	2412	Ant2	8.63	30	Pass
NVNT	**g**	**2412**	**Sum**	**11.493**	**28.15**	**Pass**
NVNT	g	2437	Ant1	15.78	30	Pass
NVNT	g	2437	Ant2	15.95	30	Pass
NVNT	**g**	**2437**	**Sum**	**18.876**	**28.15**	**Pass**
NVNT	g	2462	Ant1	7.57	30	Pass
NVNT	g	2462	Ant2	7.07	30	Pass
NVNT	**g**	**2462**	**Sum**	**10.337**	**28.15**	**Pass**
NVNT	n(HT20)	2412	Ant1	8.24	30	Pass
NVNT	n(HT20)	2412	Ant2	7.94	30	Pass
NVNT	**n(HT20)**	**2412**	**Sum**	**11.103**	**28.15**	**Pass**
NVNT	n(HT20)	2437	Ant1	14.98	30	Pass
NVNT	n(HT20)	2437	Ant2	15.56	30	Pass
NVNT	**n(HT20)**	**2437**	**Sum**	**18.29**	**28.15**	**Pass**
NVNT	n(HT20)	2462	Ant1	7.42	30	Pass
NVNT	n(HT20)	2462	Ant2	7.04	30	Pass
NVNT	**n(HT20)**	**2462**	**Sum**	**10.244**	**28.15**	**Pass**
NVNT	n(HT40)	2422	Ant1	7.49	30	Pass
NVNT	n(HT40)	2422	Ant2	7.36	30	Pass
NVNT	**n(HT40)**	**2422**	**Sum**	**10.436**	**28.15**	**Pass**
NVNT	n(HT40)	2437	Ant1	15.04	30	Pass
NVNT	n(HT40)	2437	Ant2	15.1	30	Pass
NVNT	**n(HT40)**	**2437**	**Sum**	**18.08**	**28.15**	**Pass**
NVNT	n(HT40)	2452	Ant1	7.16	30	Pass
NVNT	n(HT40)	2452	Ant2	6.51	30	Pass
NVNT	**n(HT40)**	**2452**	**Sum**	**9.857**	**28.15**	**Pass**

Note： The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.
When ANT.1(4.61dBi) and ANT. 2(5.06dBi) transmitting simultaneously, so the Directional Gain= 7.85dBi＞6dBi.
So Pout = Plimit-(GTX-6)]=(30-1.85)dBm =28.15dBm

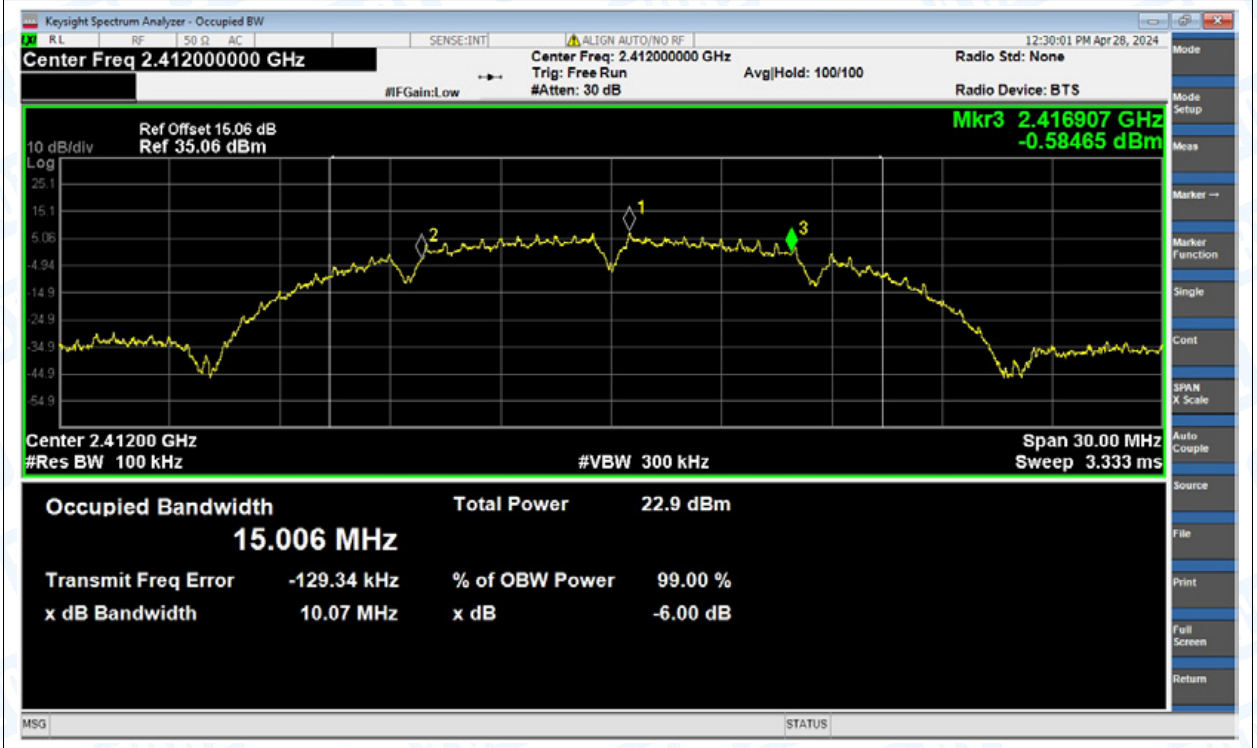
Directional Gain=10 log[(10^G1/20 + 10^G2/20 + … + 10GN/20)^2/NANT]
The Duty Cycle Factor is compensated in the graph.

3. -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.07	0.5	Pass
NVNT	b	2412	Ant2	9.53	0.5	Pass
NVNT	b	2437	Ant1	10.05	0.5	Pass
NVNT	b	2437	Ant2	10.03	0.5	Pass
NVNT	b	2462	Ant1	10.04	0.5	Pass
NVNT	b	2462	Ant2	9.09	0.5	Pass
NVNT	g	2412	Ant1	16.32	0.5	Pass
NVNT	g	2412	Ant2	16.34	0.5	Pass
NVNT	g	2437	Ant1	16.33	0.5	Pass
NVNT	g	2437	Ant2	16.42	0.5	Pass
NVNT	g	2462	Ant1	16.32	0.5	Pass
NVNT	g	2462	Ant2	16.34	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.28	0.5	Pass
NVNT	n(HT20)	2412	Ant2	17.32	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.31	0.5	Pass
NVNT	n(HT20)	2437	Ant2	17.31	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.33	0.5	Pass
NVNT	n(HT20)	2462	Ant2	16.94	0.5	Pass
NVNT	n(HT40)	2422	Ant1	35.43	0.5	Pass
NVNT	n(HT40)	2422	Ant2	35.38	0.5	Pass
NVNT	n(HT40)	2437	Ant1	35.34	0.5	Pass
NVNT	n(HT40)	2437	Ant2	35.41	0.5	Pass
NVNT	n(HT40)	2452	Ant1	35.38	0.5	Pass
NVNT	n(HT40)	2452	Ant2	35.26	0.5	Pass

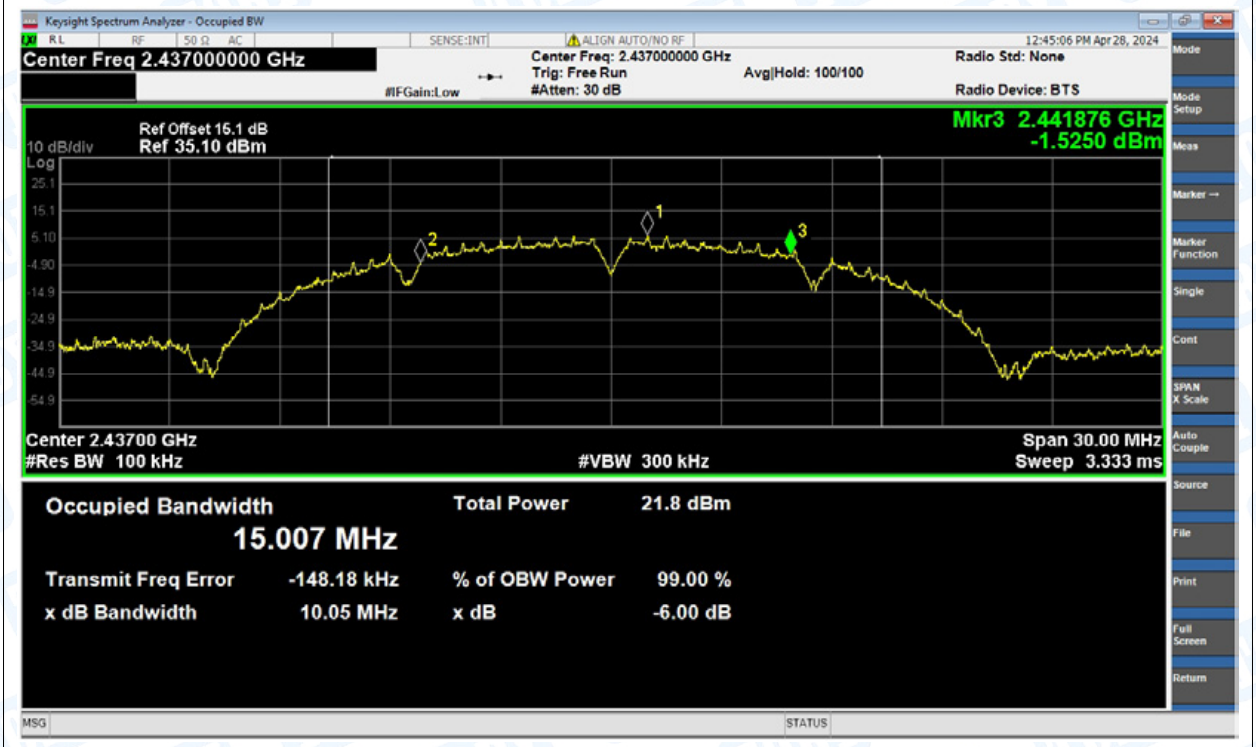
Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

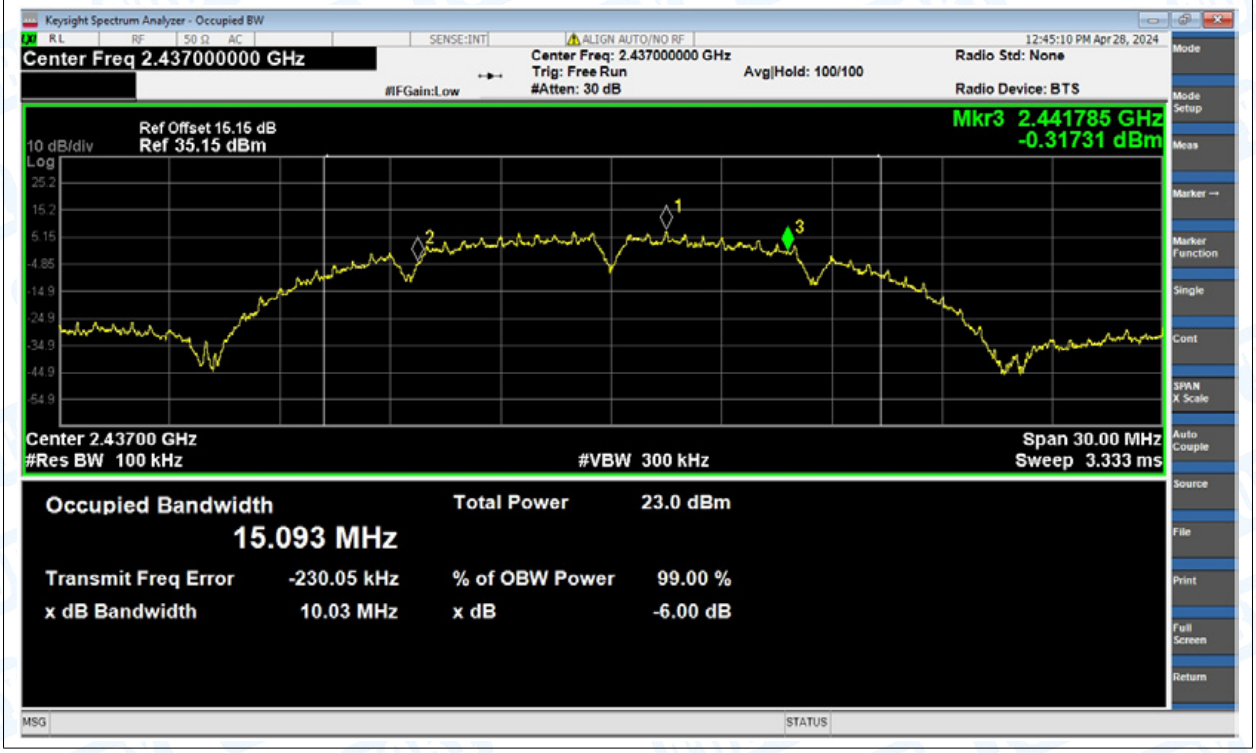


-6dB Bandwidth NVNT b 2412MHz Ant2

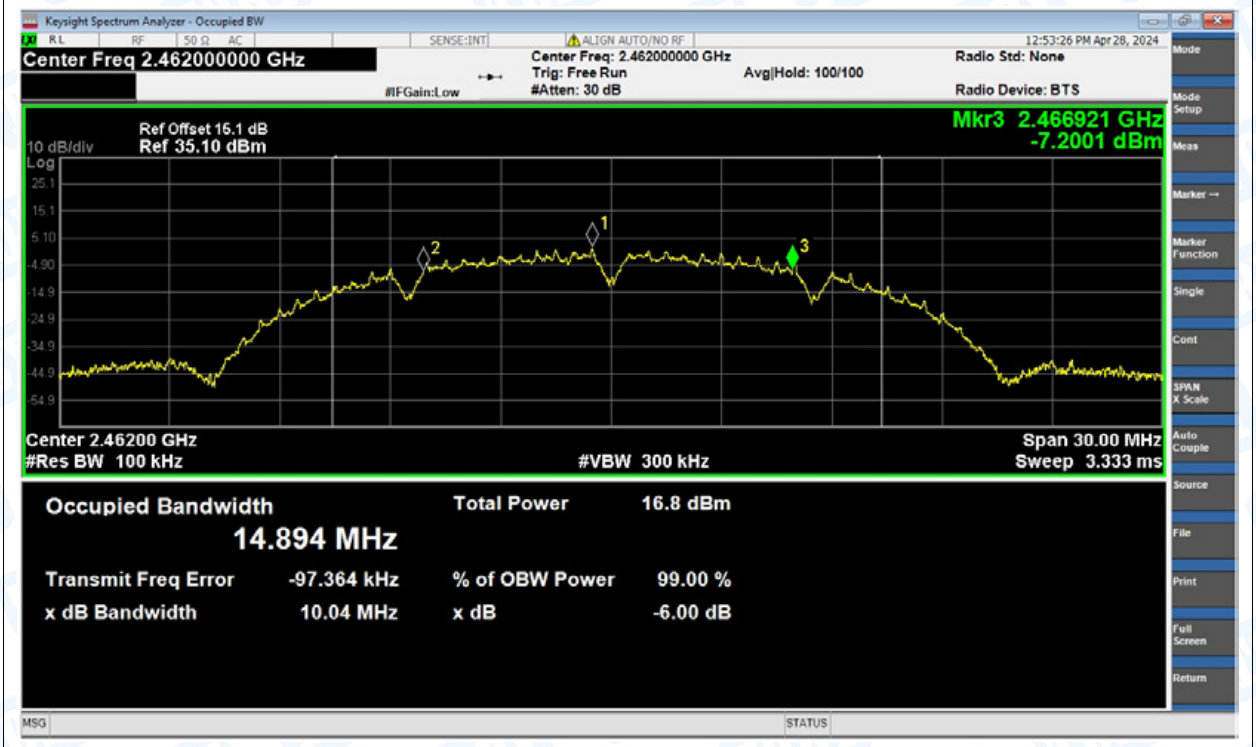
-6dB Bandwidth NVNT b 2437MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant2

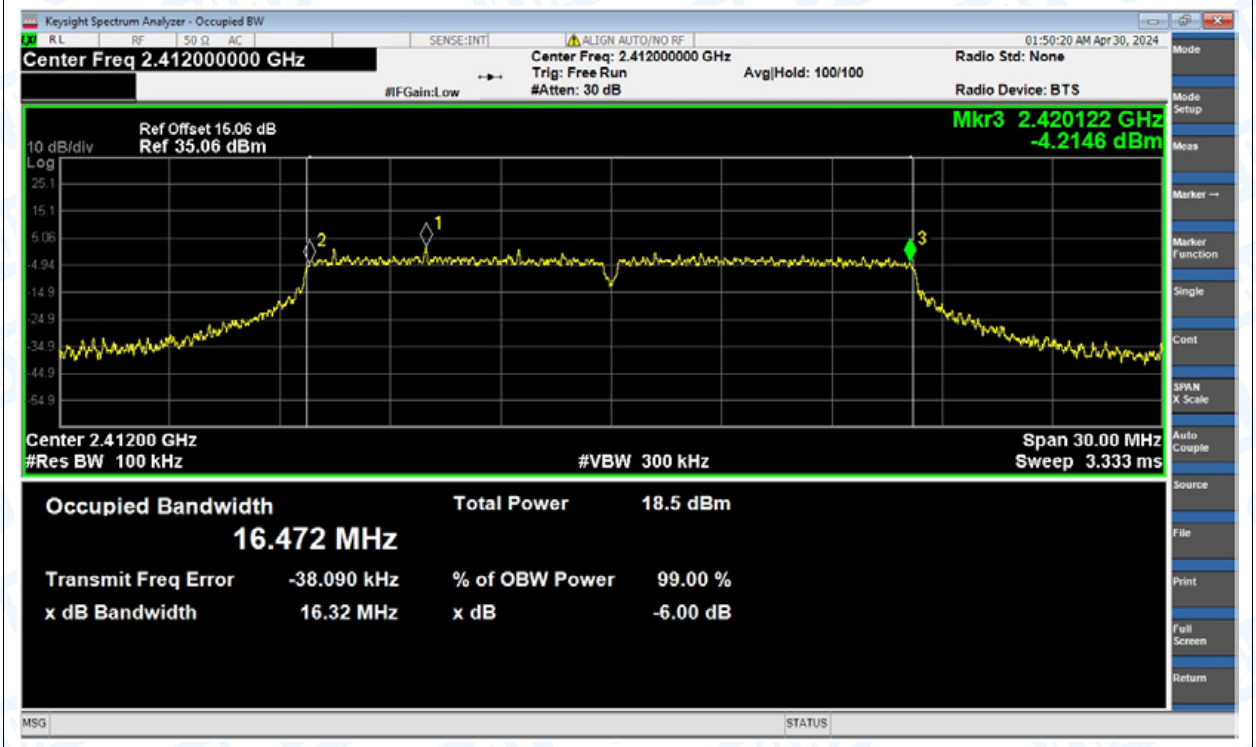


-6dB Bandwidth NVNT b 2462MHz Ant1

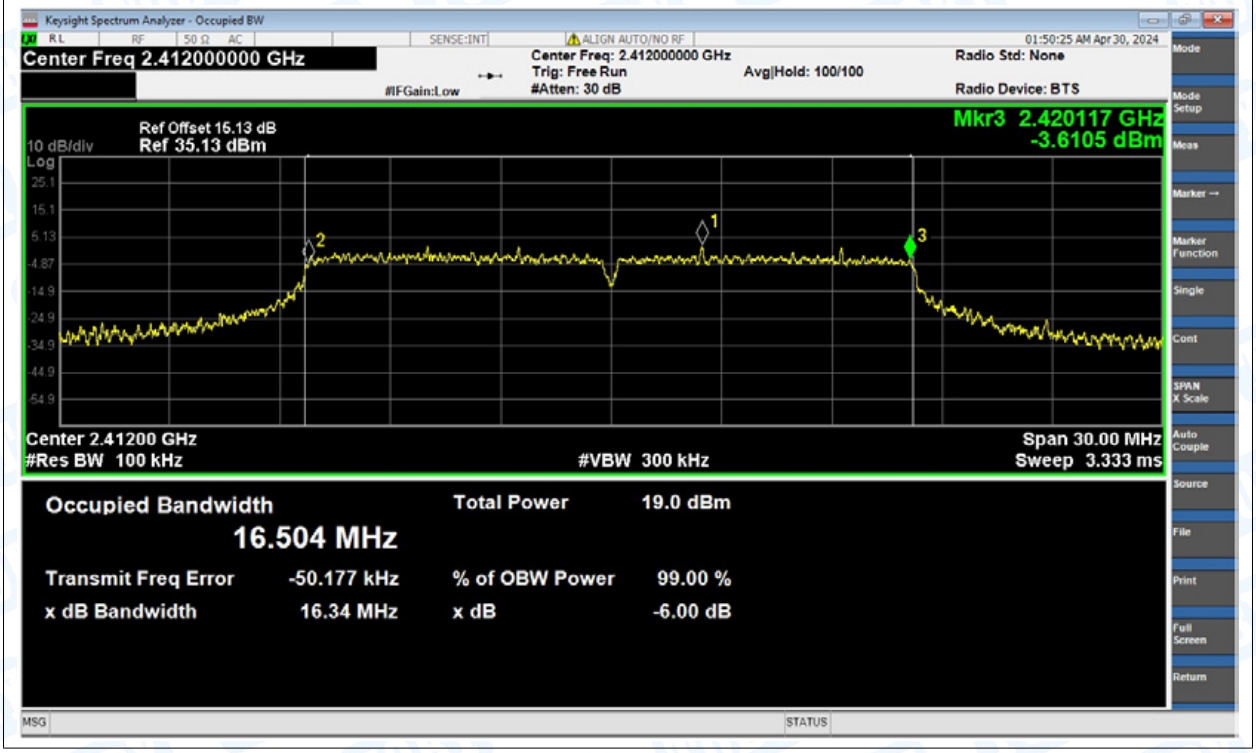


-6dB Bandwidth NVNT b 2462MHz Ant2

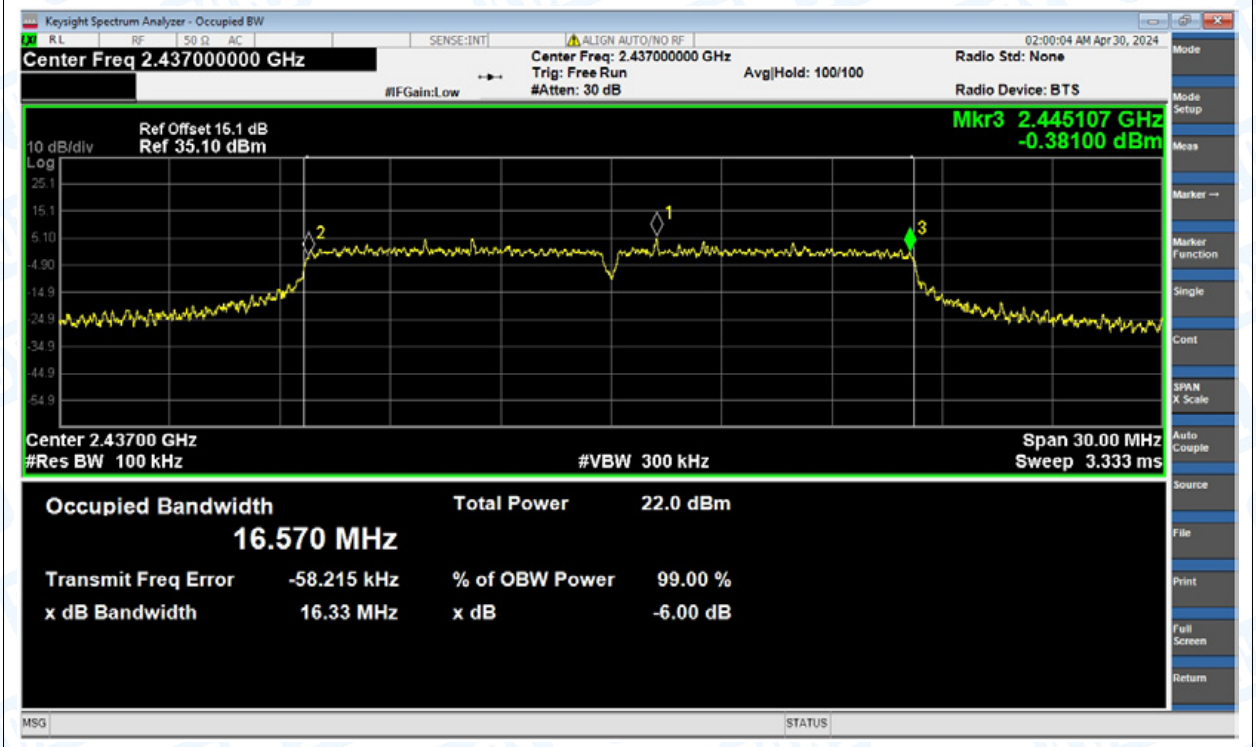
-6dB Bandwidth NVNT g 2412MHz Ant1



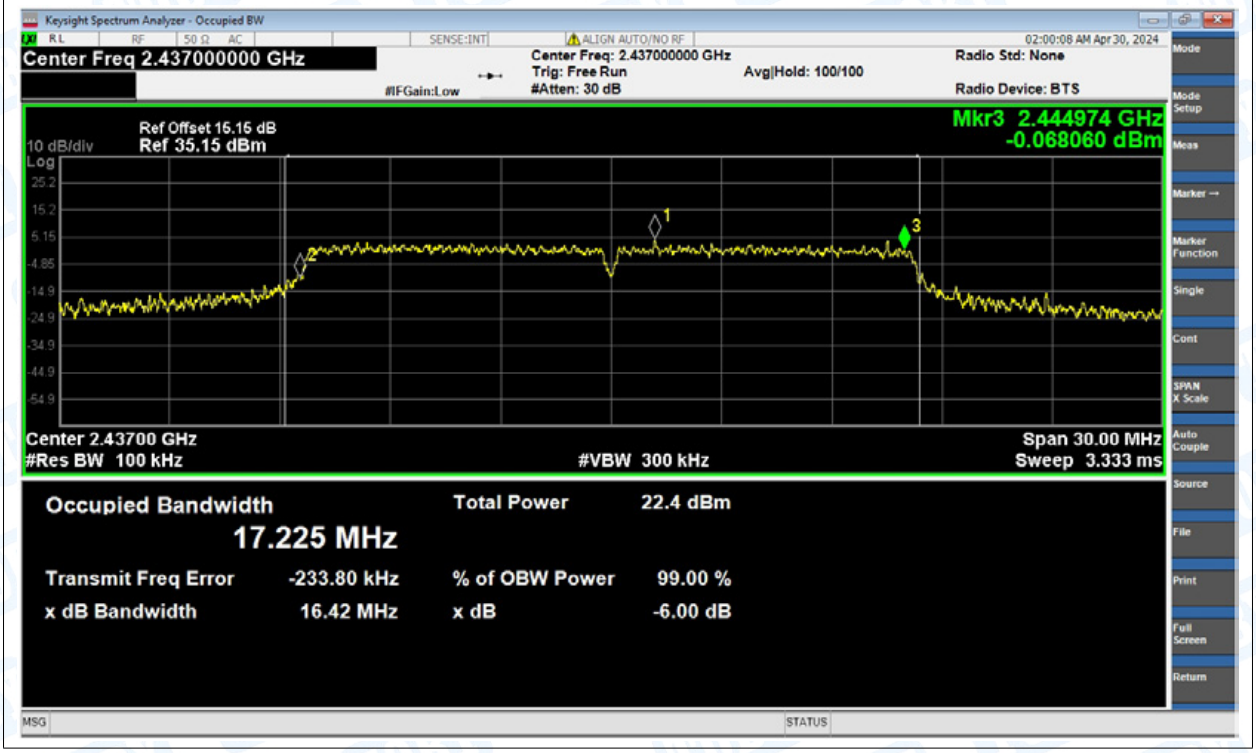
-6dB Bandwidth NVNT g 2412MHz Ant2



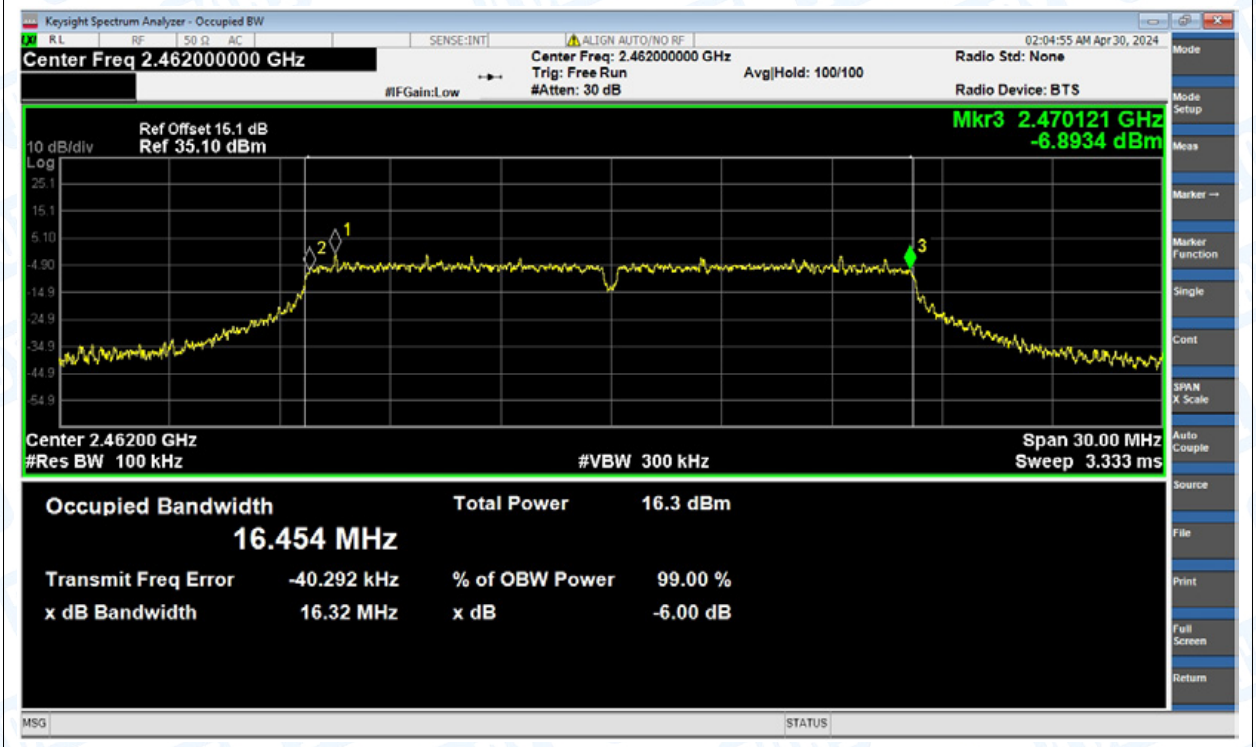
-6dB Bandwidth NVNT g 2437MHz Ant1



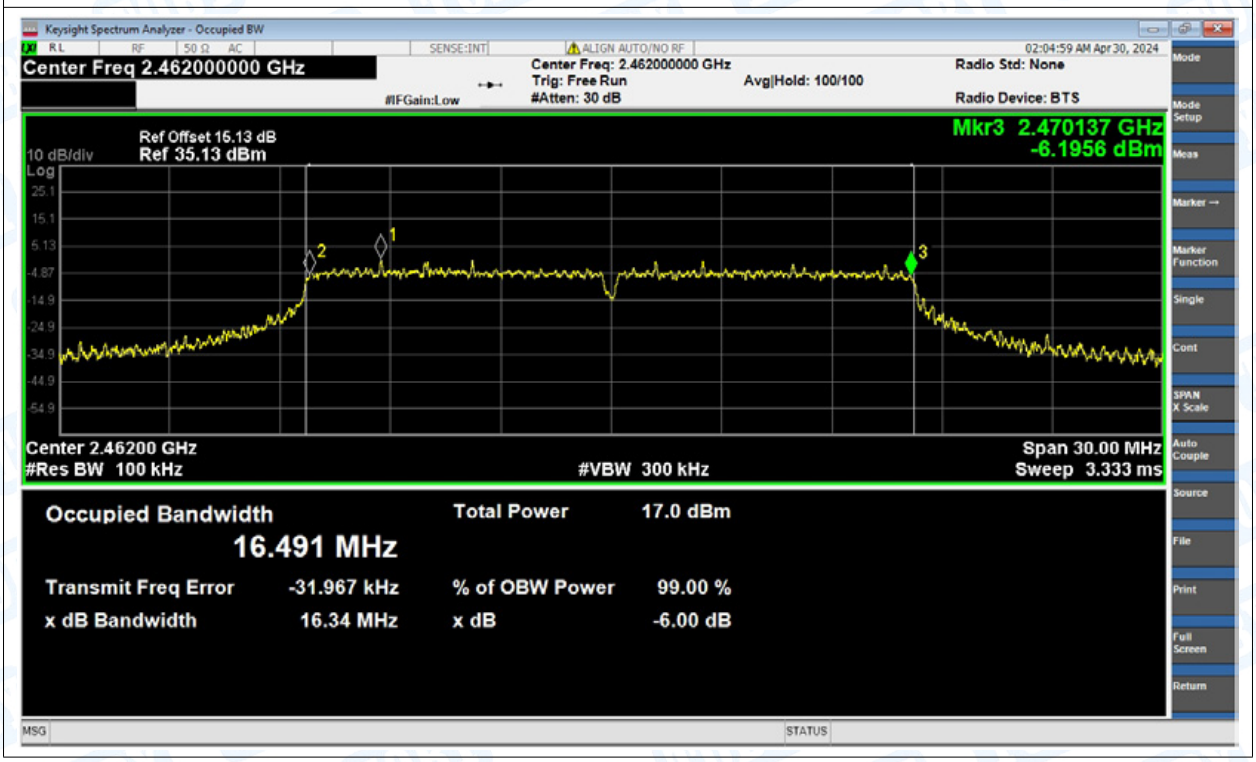
-6dB Bandwidth NVNT g 2437MHz Ant2



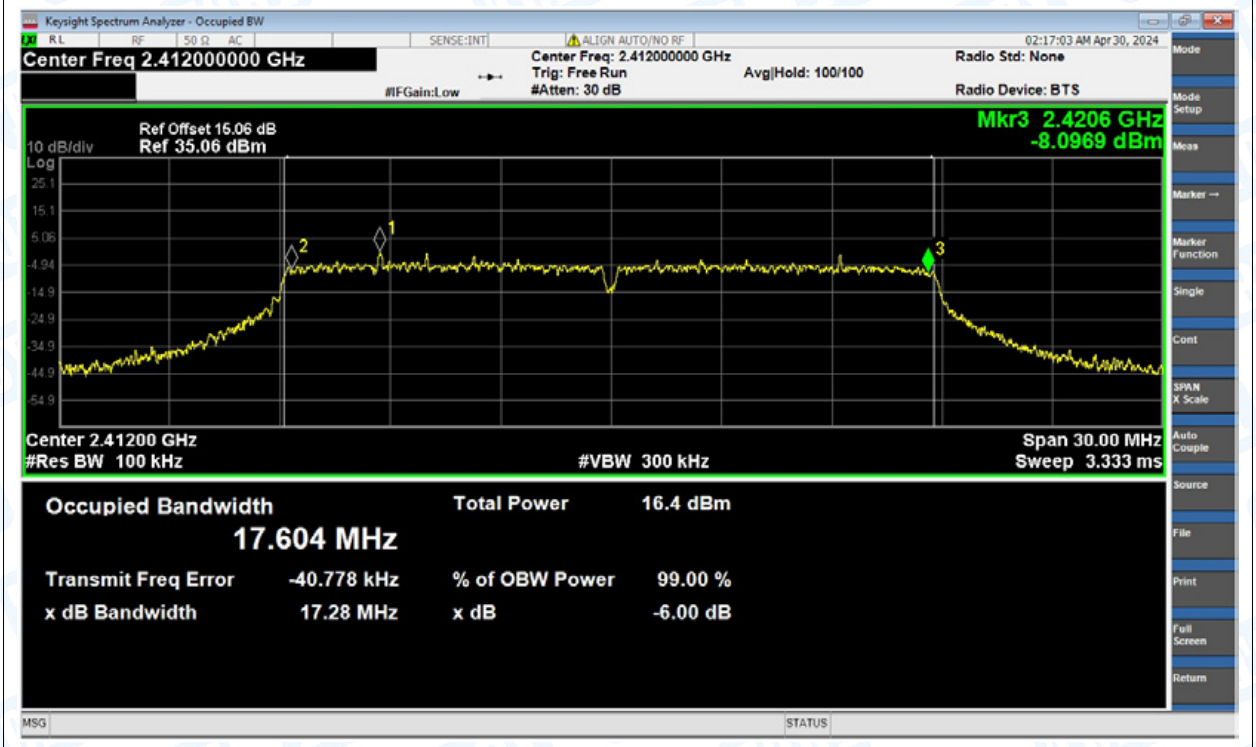
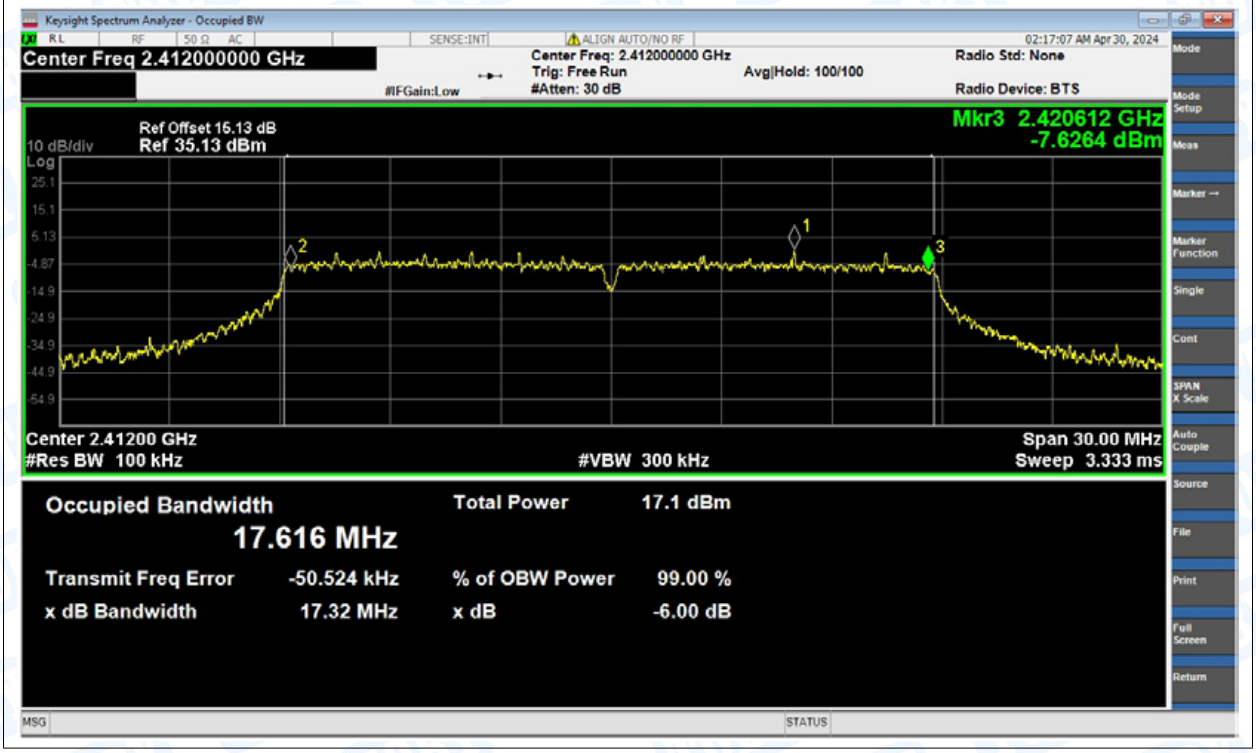
-6dB Bandwidth NVNT g 2462MHz Ant1



-6dB Bandwidth NVNT g 2462MHz Ant2



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



-6dB Bandwidth NVNT n(HT20) 2412MHz Ant2