

RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Sprinkler Controller
Test Model:	NAS-SS01W9
Sample ID:	HC-C-202412-0063-01-01
Environmental Conditions	
Temperature:	25.6℃
Relative Humidity:	48.6%
Test Voltage:	DC 24V
Test Engineer:	Rick.Chen
Note: For a more detailed features description, please refer to the report TBR-C-202412-0063-2 The report only show the worst case data.	

Contents

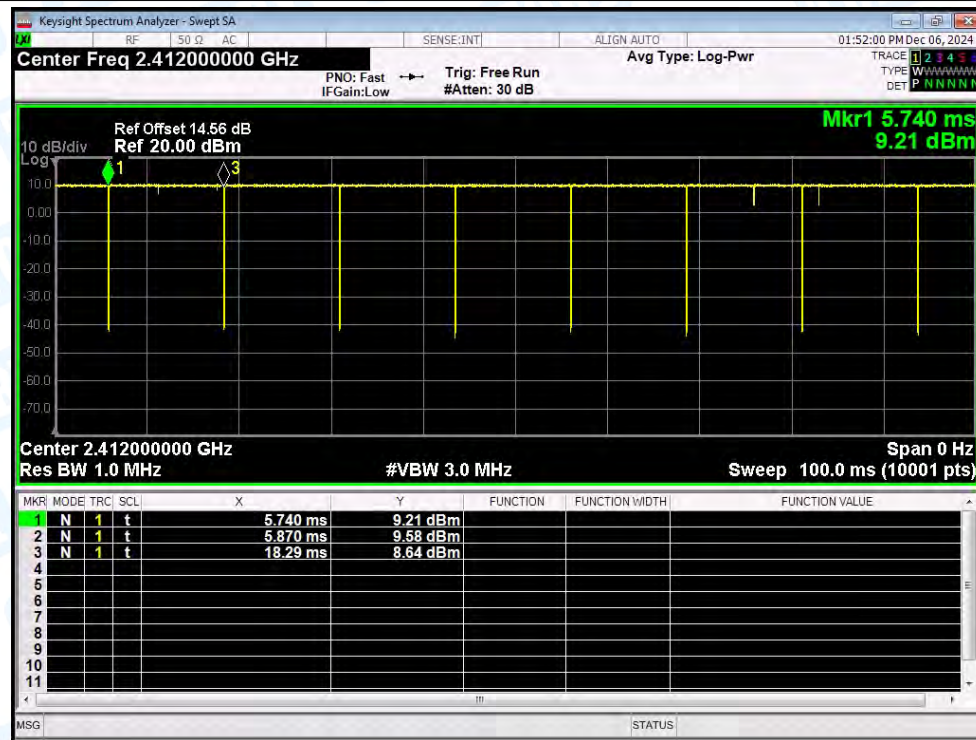
1.	Duty Cycle	3
2.	Restrict Band	16
3.	Maximum Conducted Output Power	25
4.	-6dB Bandwidth	26
5.	Occupied Channel Bandwidth	39
6.	Maximum Power Spectral Density Level	52
7.	Band Edge	65
8.	Conducted RF Spurious Emission	82

1. Duty Cycle

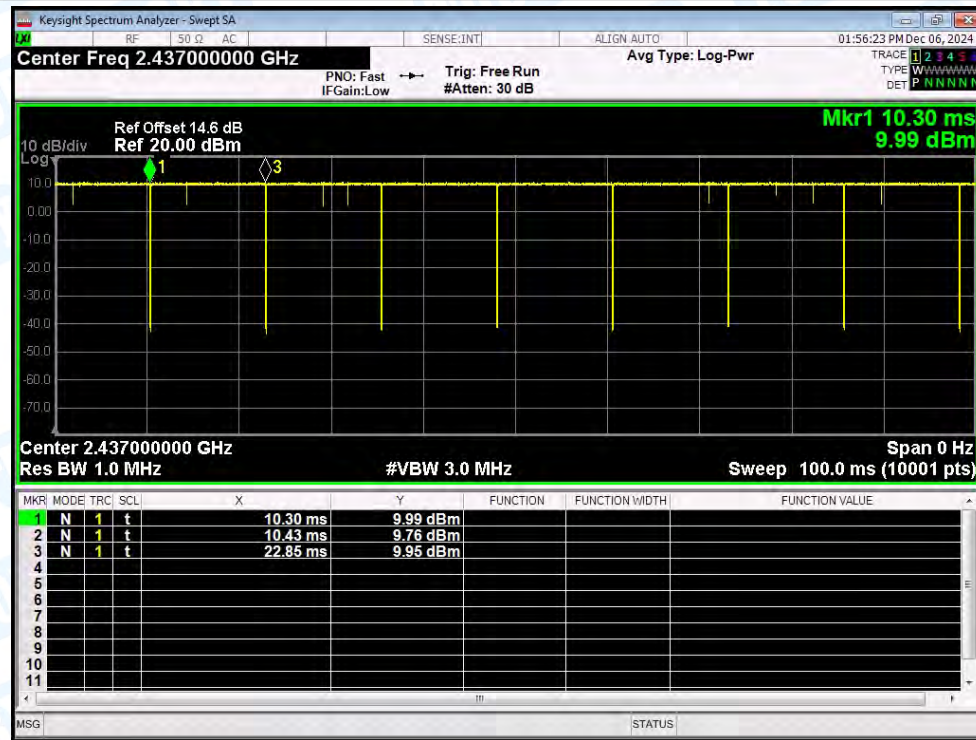
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	98.96	0.05	0.08
NVNT	b	2437	Ant1	98.96	0.05	0.08
NVNT	b	2462	Ant1	98.96	0.05	0.08
NVNT	g	2412	Ant1	94.09	0.26	0.48
NVNT	g	2437	Ant1	94.09	0.26	0.48
NVNT	g	2462	Ant1	94.09	0.26	0.48
NVNT	n(HT20)	2412	Ant1	93.66	0.28	0.52
NVNT	n(HT20)	2437	Ant1	94.15	0.26	0.52
NVNT	n(HT20)	2462	Ant1	93.66	0.28	0.52
NVNT	n(HT40)	2422	Ant1	87.85	0.56	1.06
NVNT	n(HT40)	2442	Ant1	87.85	0.56	1.06
NVNT	n(HT40)	2462	Ant1	87.96	0.56	1.05

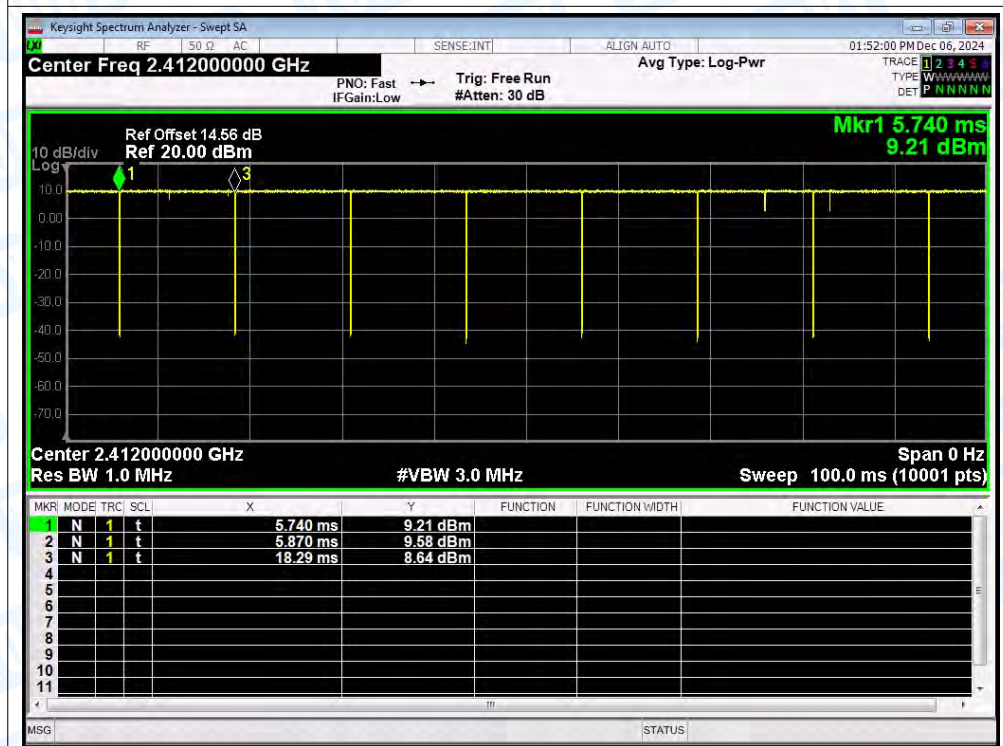
Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

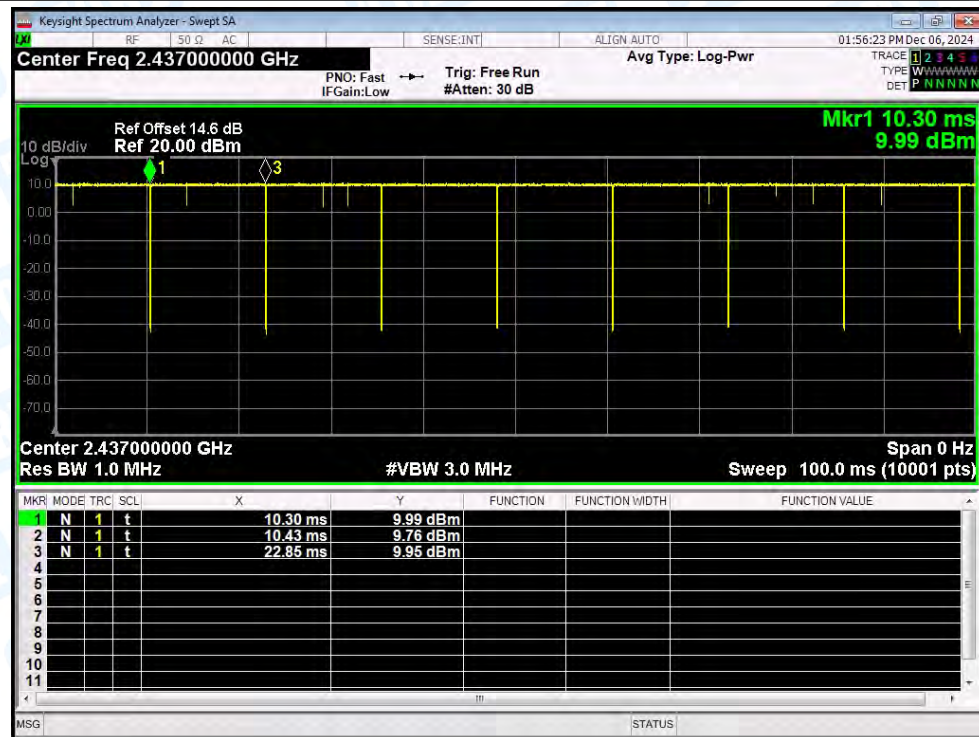


Duty Cycle NVNT b 2437MHz Ant1

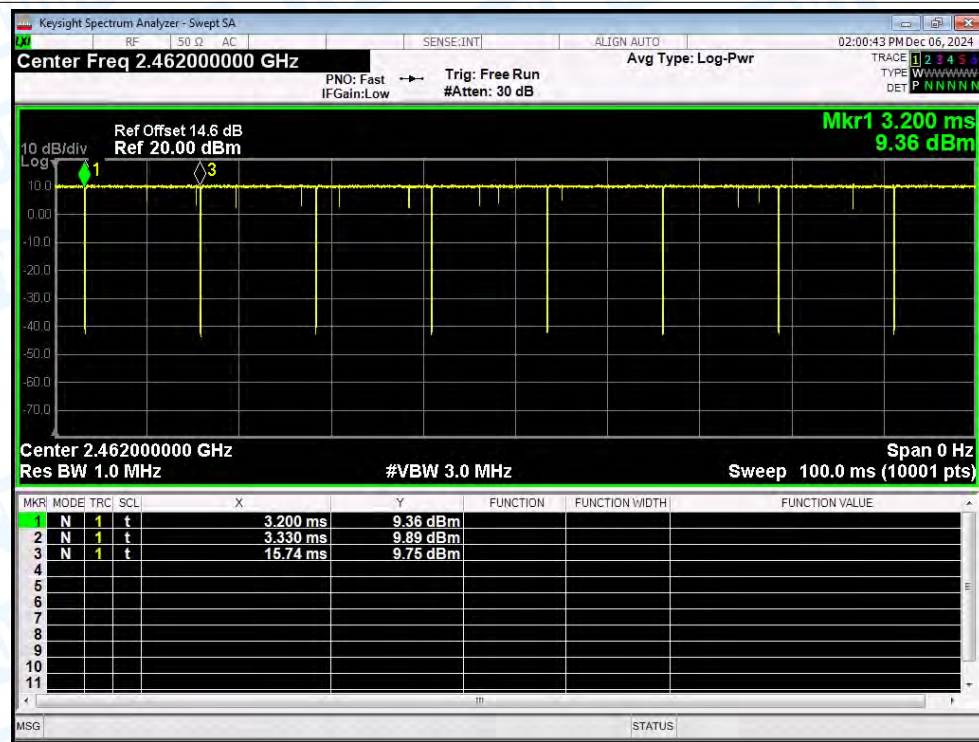




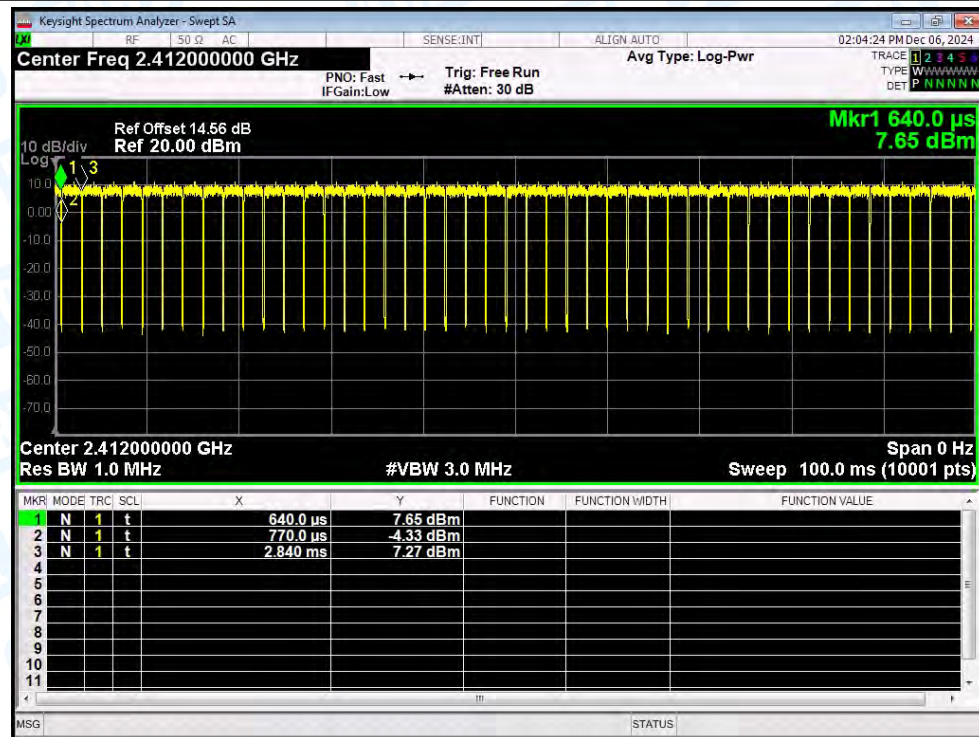
Duty Cycle NVNT b 2437MHz Ant1



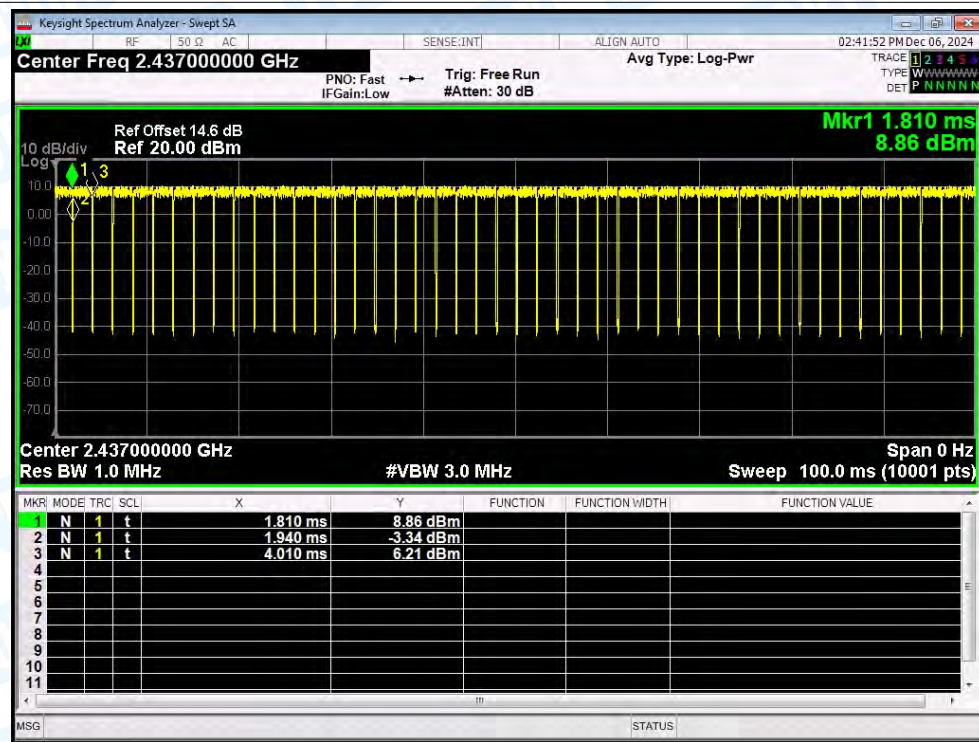
Duty Cycle NVNT b 2462MHz Ant1



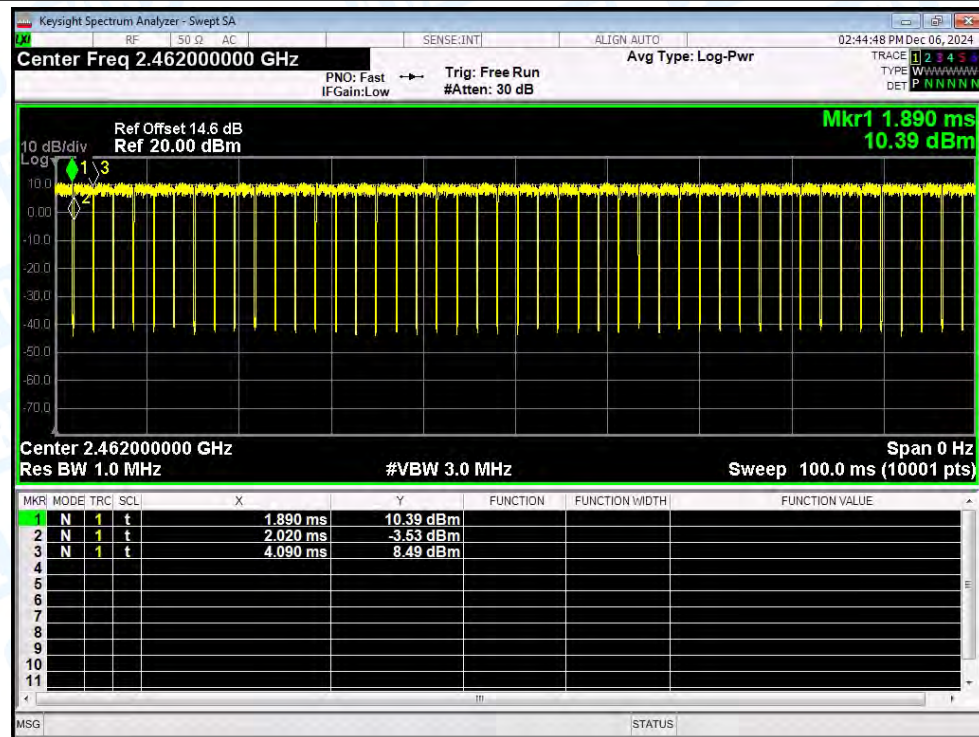
Duty Cycle NVNT g 2412MHz Ant1



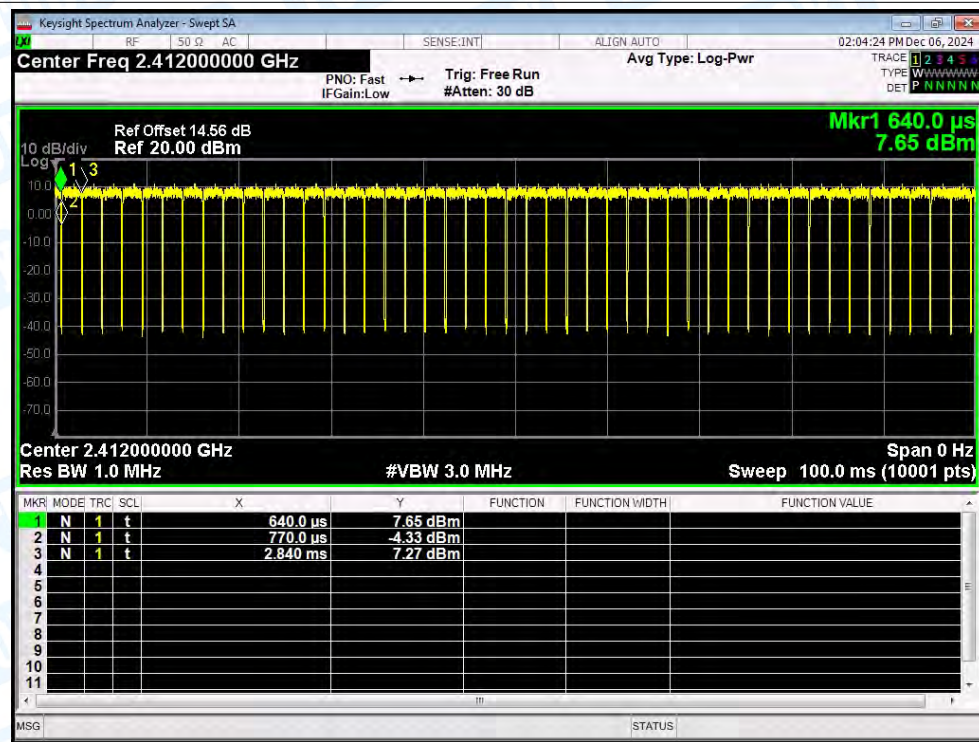
Duty Cycle NVNT g 2437MHz Ant1



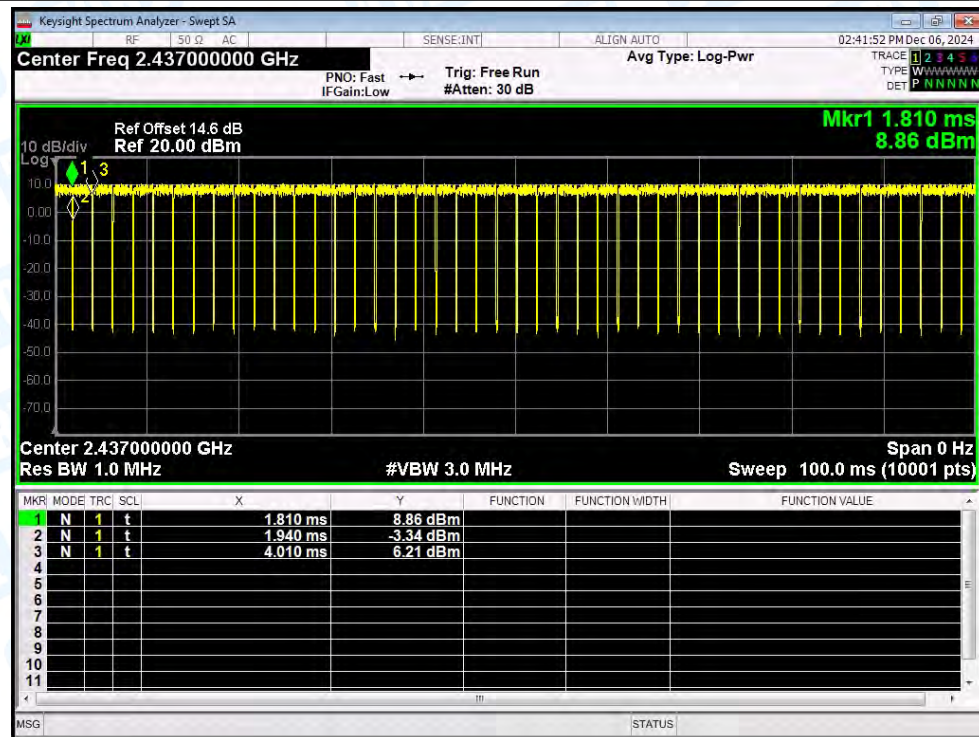
Duty Cycle NVNT g 2462MHz Ant1



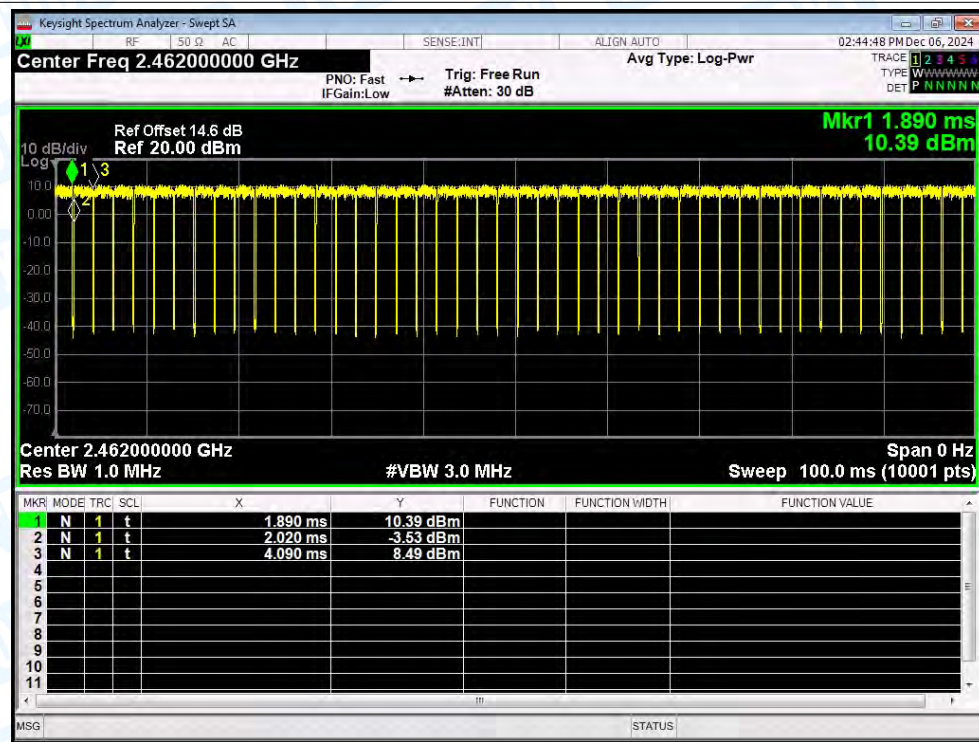
Duty Cycle NVNT g 2412MHz Ant1



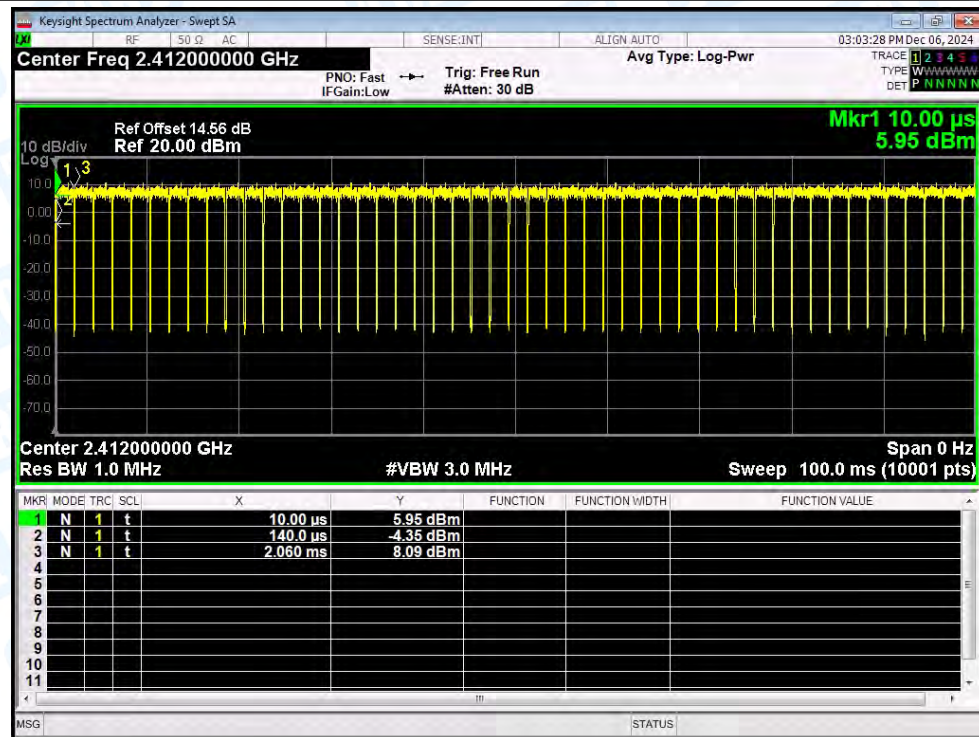
Duty Cycle NVNT g 2437MHz Ant1



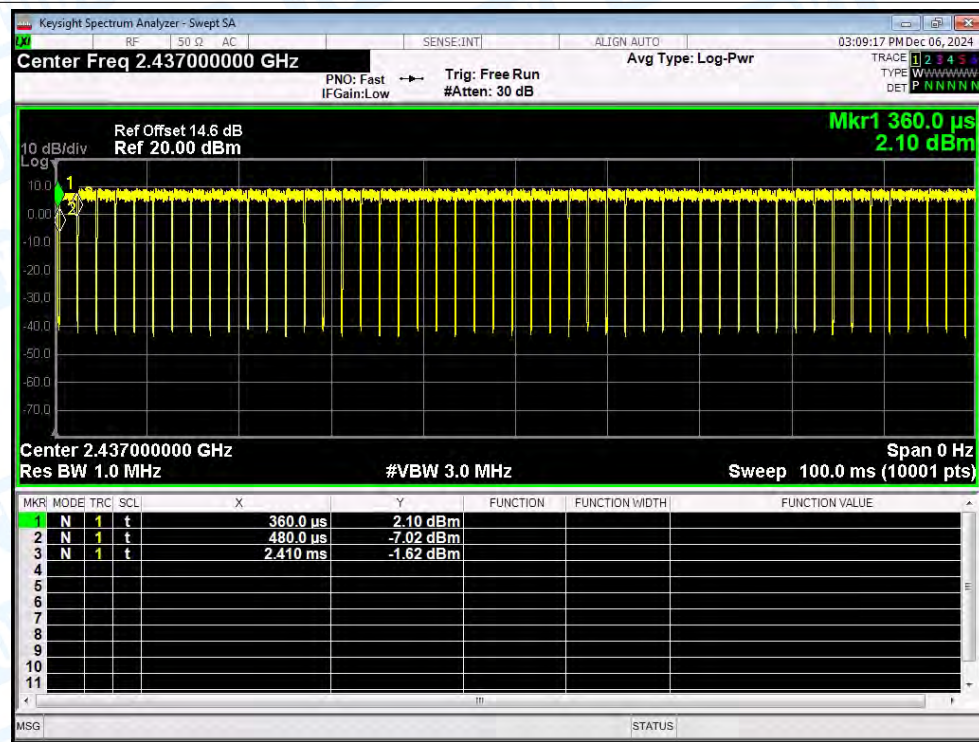
Duty Cycle NVNT g 2462MHz Ant1



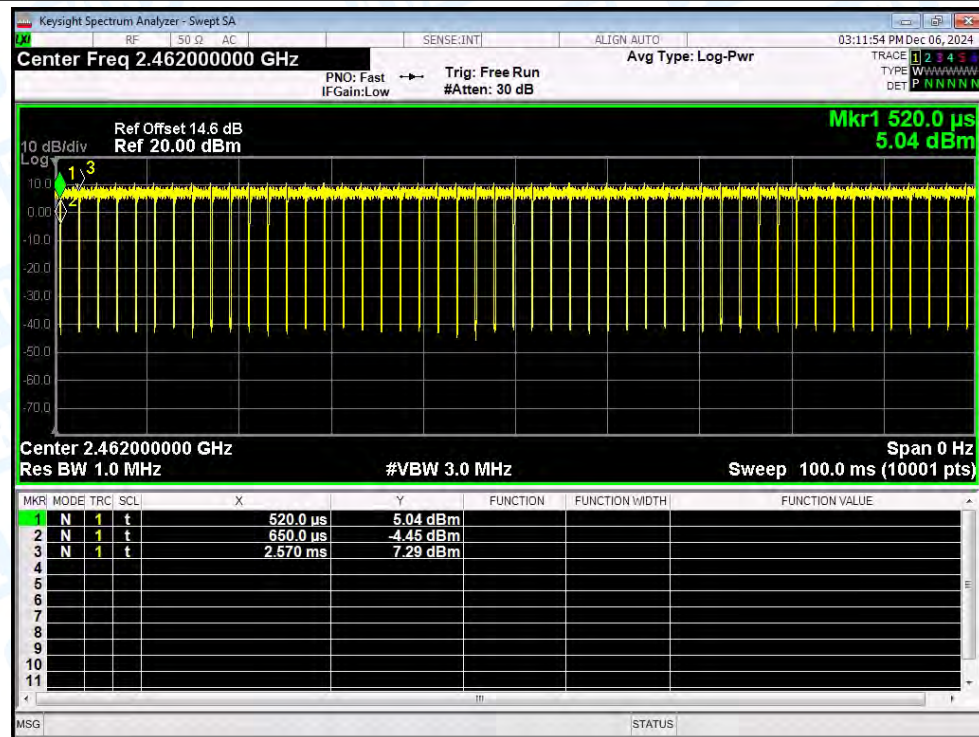
Duty Cycle NVNT n(HT20) 2412MHz Ant1



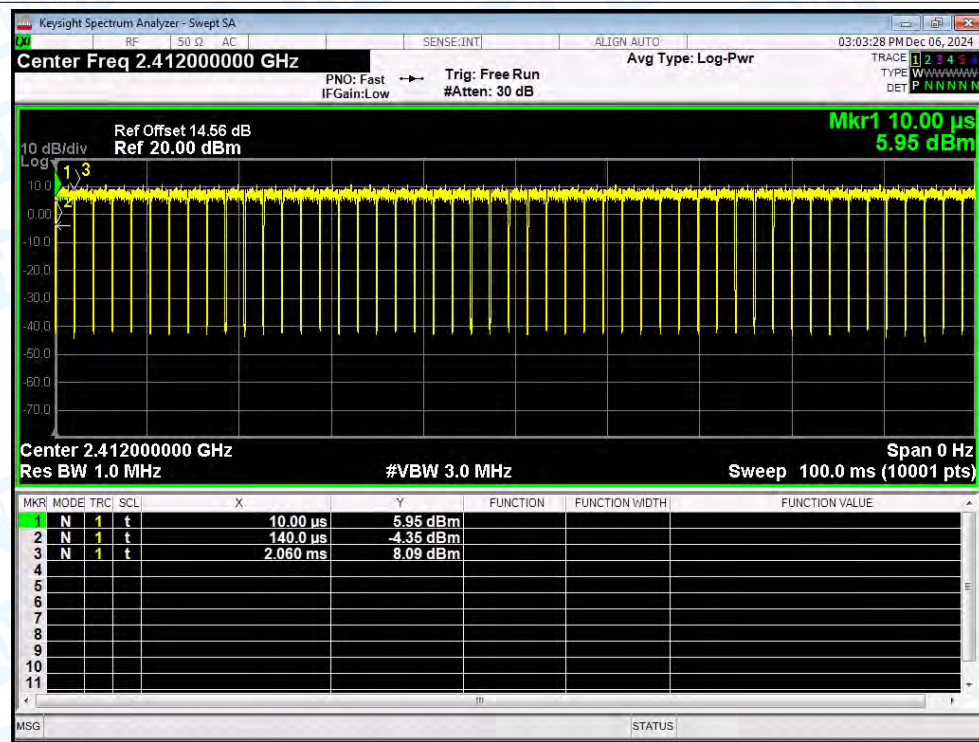
Duty Cycle NVNT n(HT20) 2437MHz Ant1



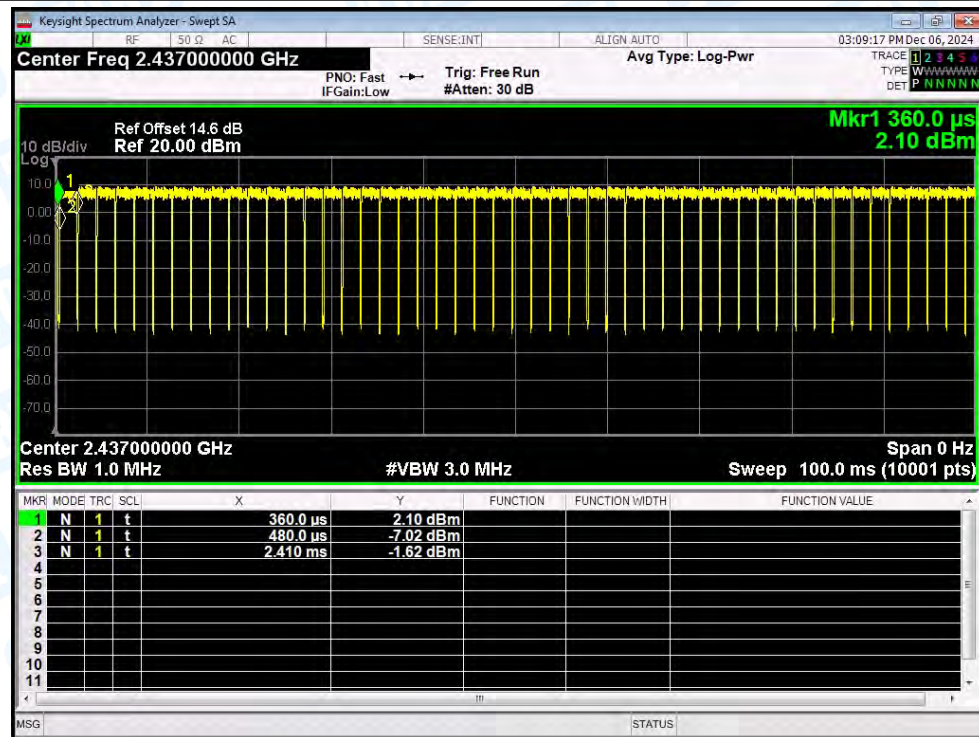
Duty Cycle NVNT n(HT20) 2462MHz Ant1



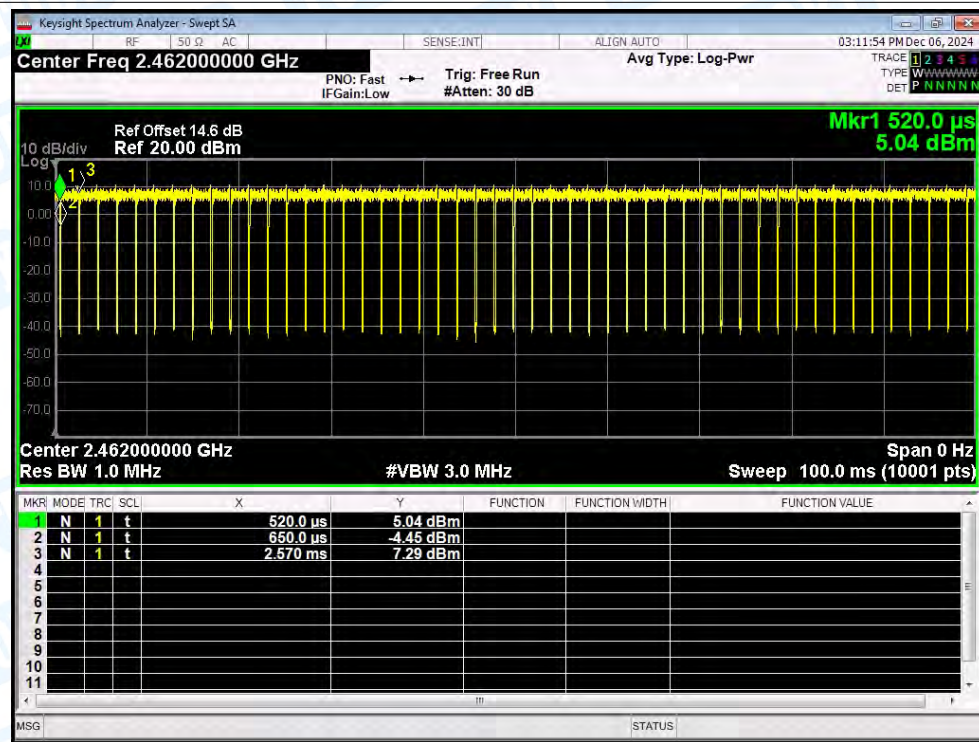
Duty Cycle NVNT n(HT20) 2412MHz Ant1



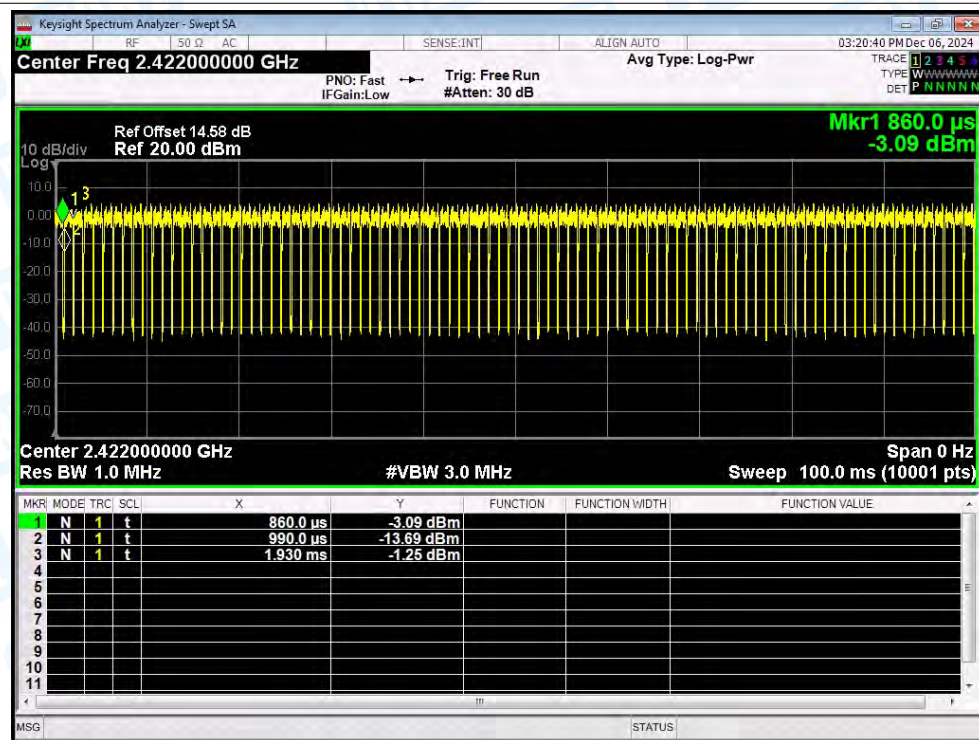
Duty Cycle NVNT n(HT20) 2437MHz Ant1



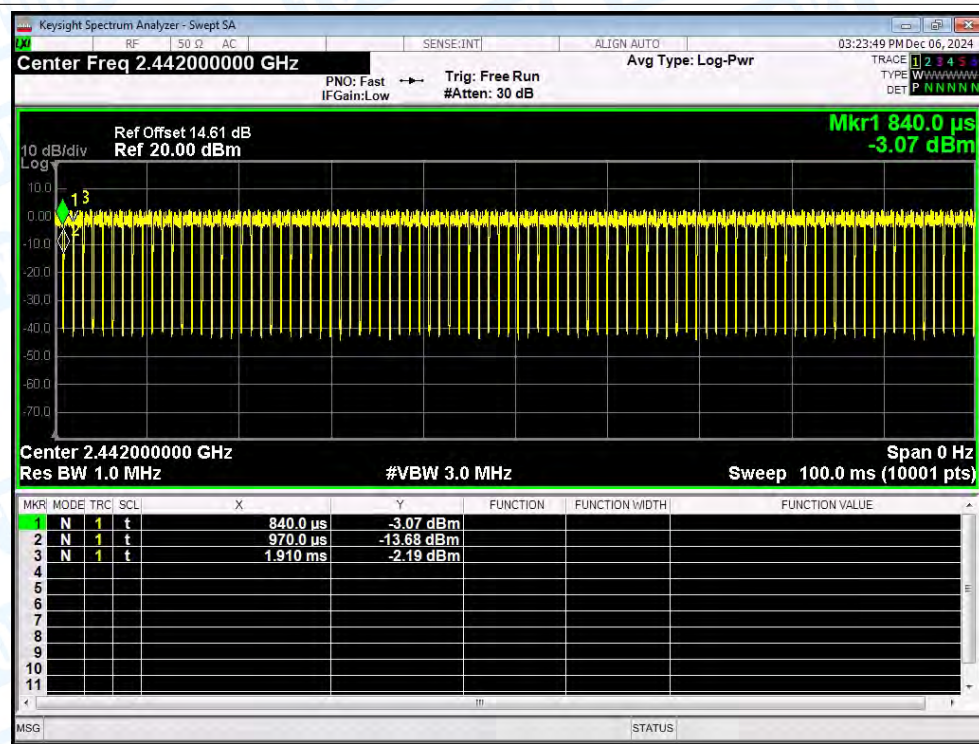
Duty Cycle NVNT n(HT20) 2462MHz Ant1



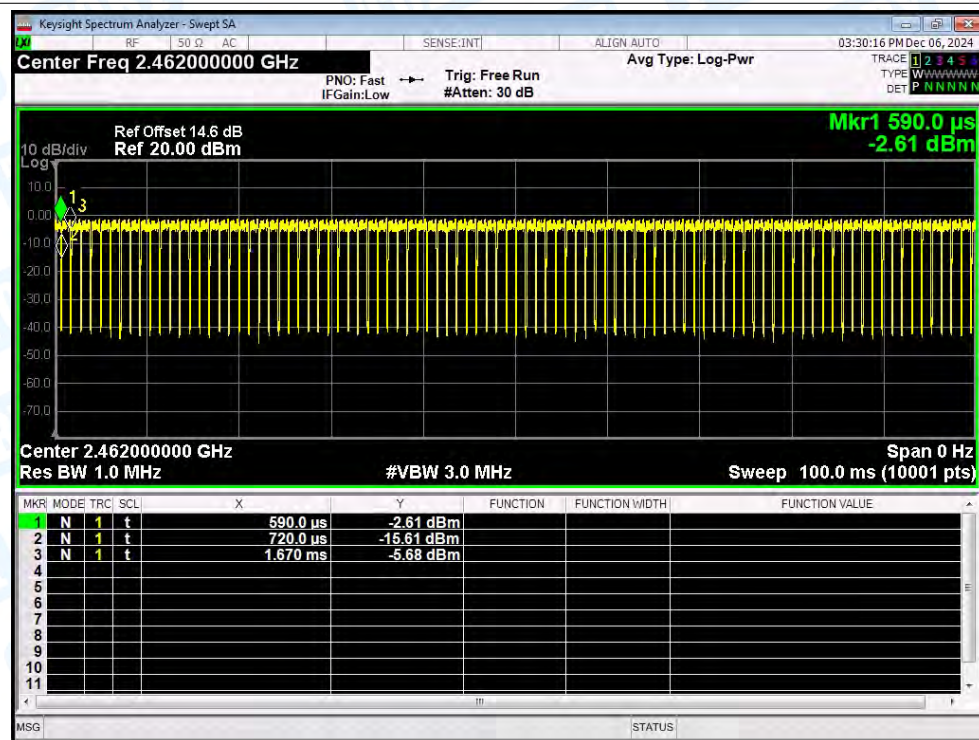
Duty Cycle NVNT n(HT40) 2422MHz Ant1



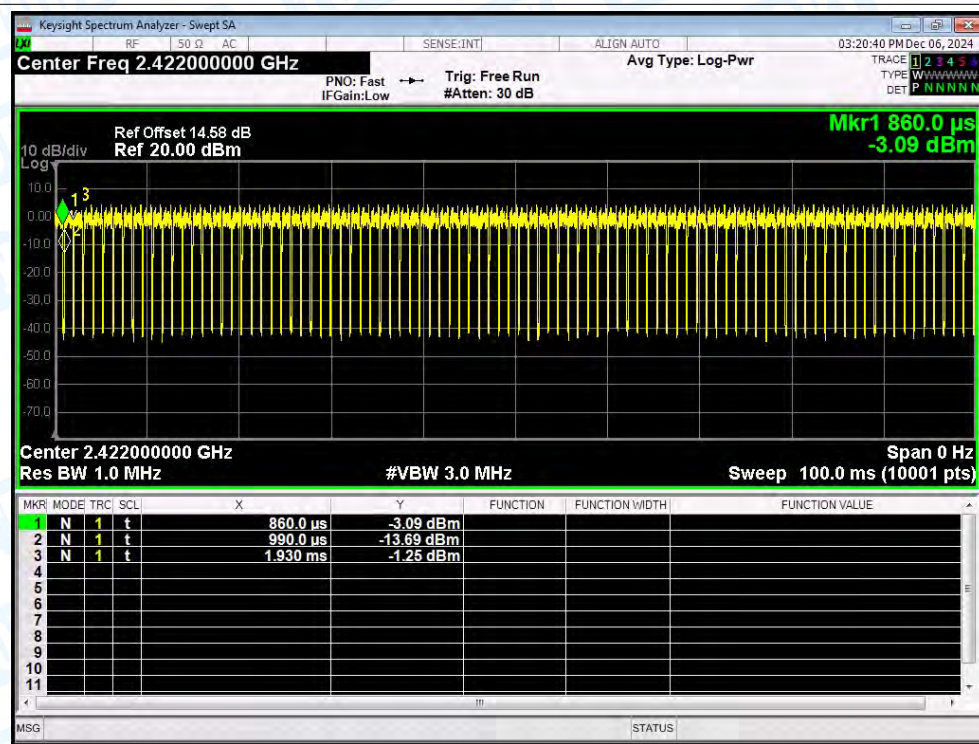
Duty Cycle NVNT n(HT40) 2442MHz Ant1



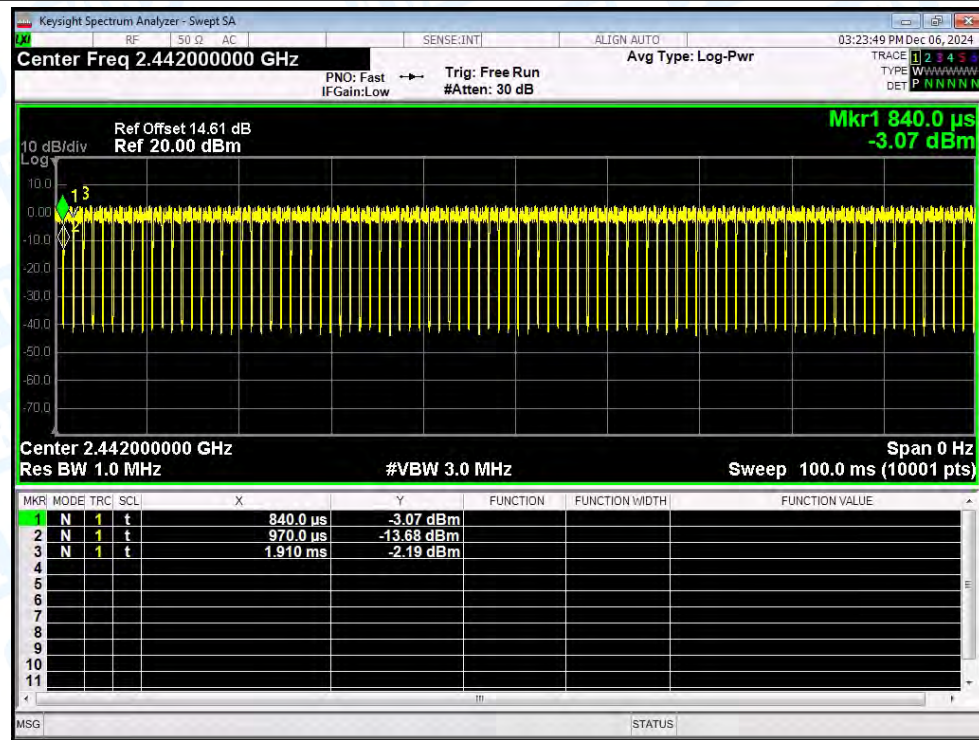
Duty Cycle NVNT n(HT40) 2462MHz Ant1



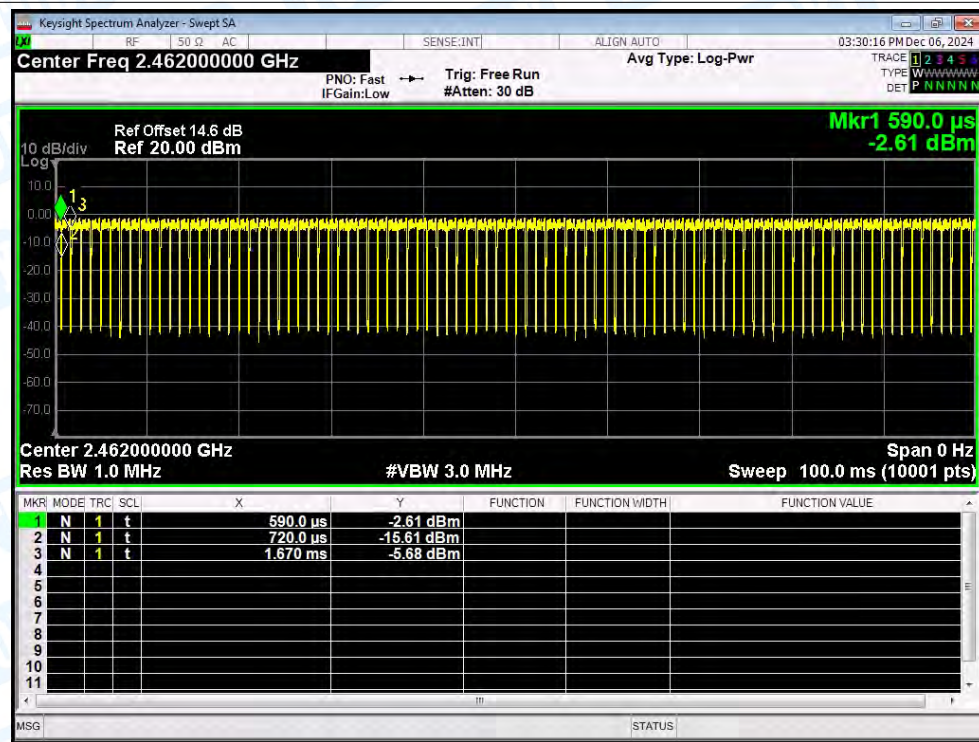
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2442MHz Ant1



Duty Cycle NVNT n(HT40) 2462MHz Ant1

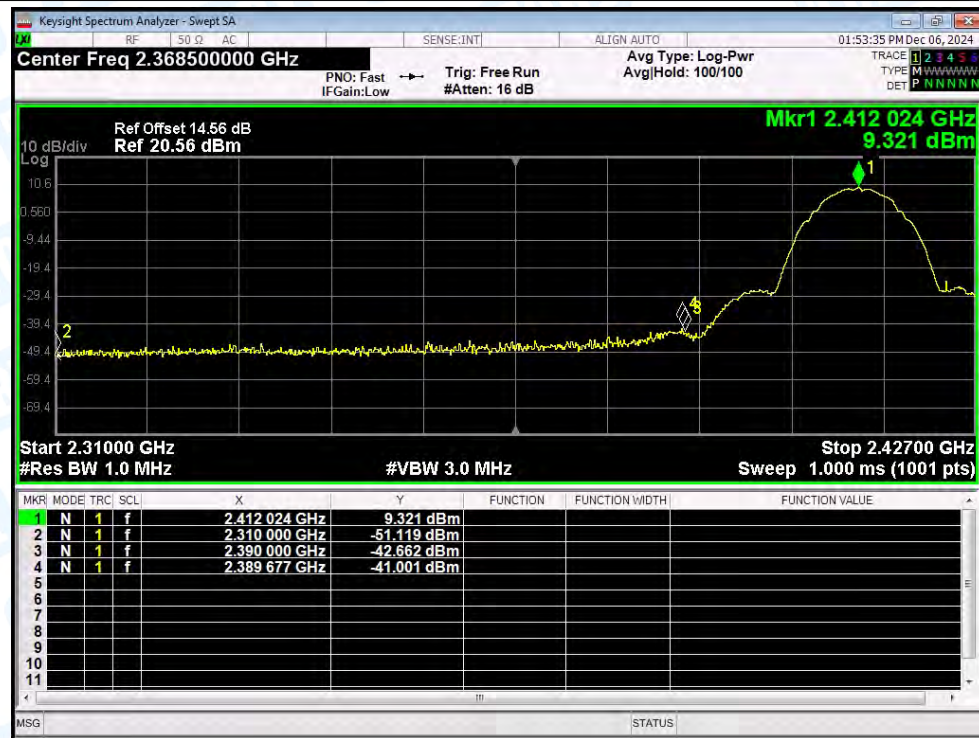


2. Restrict Band

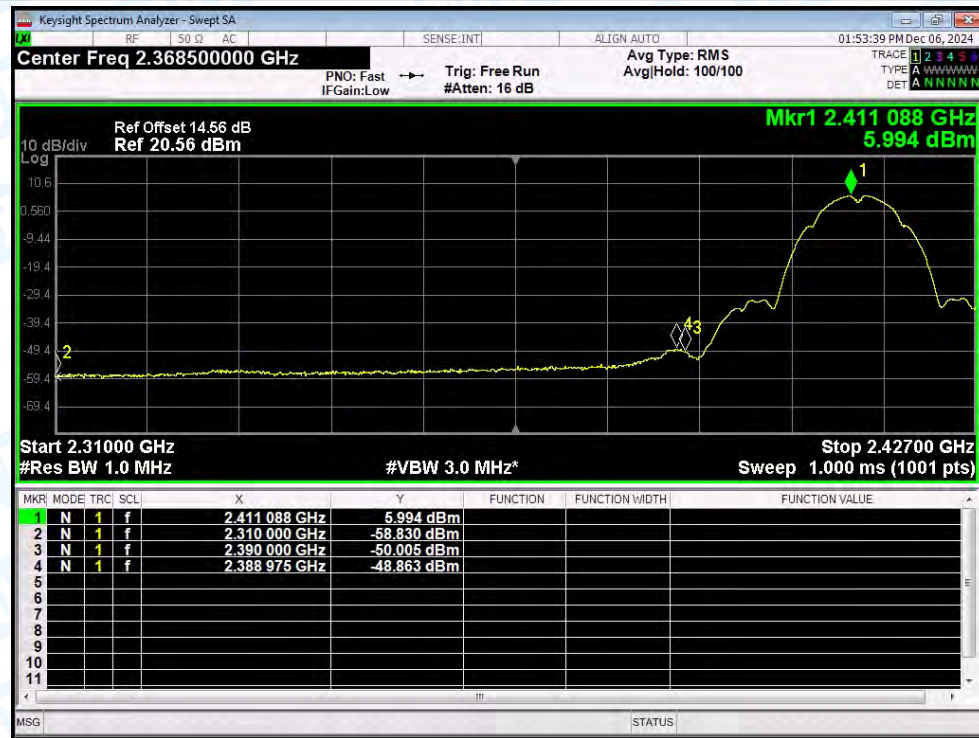
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-51.12	2	-	46.14	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-58.83	2	0.05	38.48	Average	54	Pass
NVNT	b	2412	Ant1	2389.677	-41	2	-	56.26	Peak	74	Pass
NVNT	b	2412	Ant1	2388.975	-48.86	2	0.05	48.45	Average	54	Pass
NVNT	b	2412	Ant1	2390	-42.66	2	-	54.6	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-50.01	2	0.05	47.3	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-45	2	-	52.26	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-52.84	2	0.05	44.47	Average	54	Pass
NVNT	b	2462	Ant1	2487.916	-42.89	2	-	54.37	Peak	74	Pass
NVNT	b	2462	Ant1	2484.365	-52.12	2	0.05	45.19	Average	54	Pass
NVNT	b	2462	Ant1	2500	-48.68	2	-	48.58	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-54.42	2	0.05	42.89	Average	54	Pass
NVNT	g	2412	Ant1	2310	-51.65	2	-	45.61	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-57.92	2	0.26	39.6	Average	54	Pass
NVNT	g	2412	Ant1	2389.56	-34.54	2	-	62.72	Peak	74	Pass
NVNT	g	2412	Ant1	2389.677	-47.06	2	0.26	50.46	Average	54	Pass
NVNT	g	2412	Ant1	2390	-37.87	2	-	59.39	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-47.36	2	0.26	50.16	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-28.81	2	-	68.45	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-44.91	2	0.26	52.61	Average	54	Pass
NVNT	g	2462	Ant1	2483.517	-28.81	2	-	68.45	Peak	74	Pass
NVNT	g	2462	Ant1	2484.471	-44.44	2	0.26	53.08	Average	54	Pass
NVNT	g	2462	Ant1	2500	-46.99	2	-	50.27	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-53.99	2	0.26	43.53	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-50.4	2	-	46.86	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-58.83	2	0.28	38.71	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.209	-33.6	2	-	63.66	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.56	-45.72	2	0.28	51.82	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-37.32	2	-	59.94	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-46.22	2	0.28	51.32	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-36.4	2	-	60.86	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-46.43	2	0.28	51.11	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2484.259	-31.88	2	-	65.38	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.888	-45.28	2	0.28	52.26	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-45.97	2	-	51.29	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-54.15	2	0.28	43.39	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2310	-50.76	2	-	46.5	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2310	-58.37	2	0.56	39.45	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2381.284	-35.85	2	-	61.41	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2389.804	-45.46	2	0.56	52.36	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2390	-37.23	2	-	60.03	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2390	-45.72	2	0.56	52.1	Average	54	Pass
NVNT	n(HT40)	2462	Ant1	2483.5	-37.64	2	-	59.62	Peak	74	Pass
NVNT	n(HT40)	2462	Ant1	2483.5	-45.13	2	0.56	52.69	Average	54	Pass
NVNT	n(HT40)	2462	Ant1	2483.952	-30.5	2	-	66.76	Peak	74	Pass
NVNT	n(HT40)	2462	Ant1	2483.68	-44.26	2	0.56	53.56	Average	54	Pass
NVNT	n(HT40)	2462	Ant1	2500	-43.53	2	-	53.73	Peak	74	Pass
NVNT	n(HT40)	2462	Ant1	2500	-52.18	2	0.56	45.64	Average	54	Pass

Test Graphs

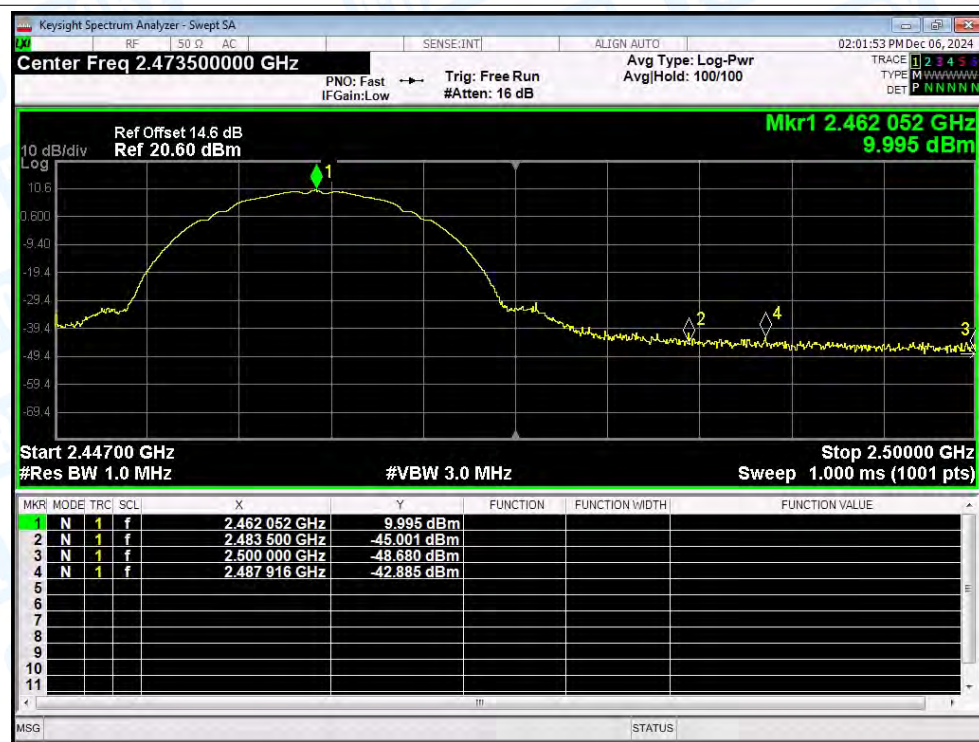
Restrict Band NVNT b 2412MHz Ant1 Peak



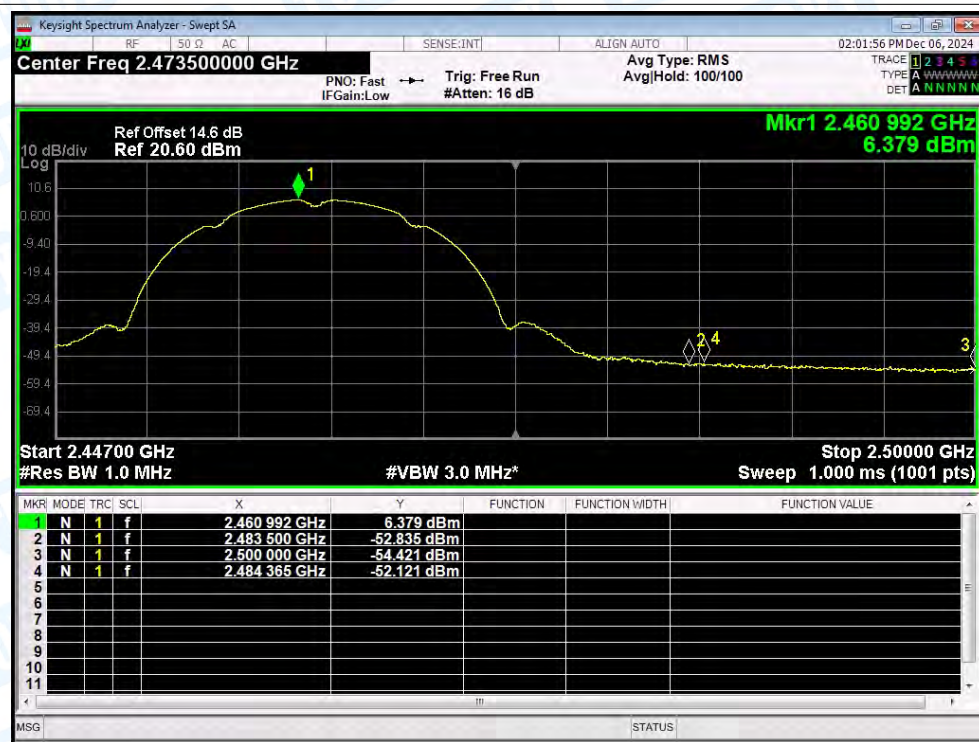
Restrict Band NVNT b 2412MHz Ant1 Average



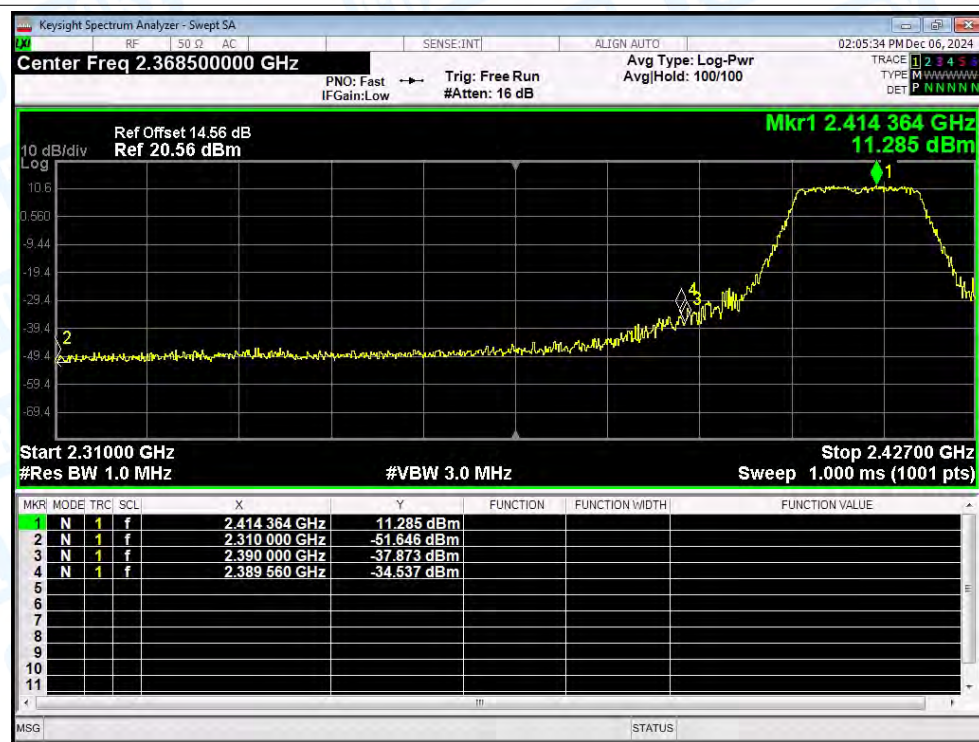
Restrict Band NVNT b 2462MHz Ant1 Peak



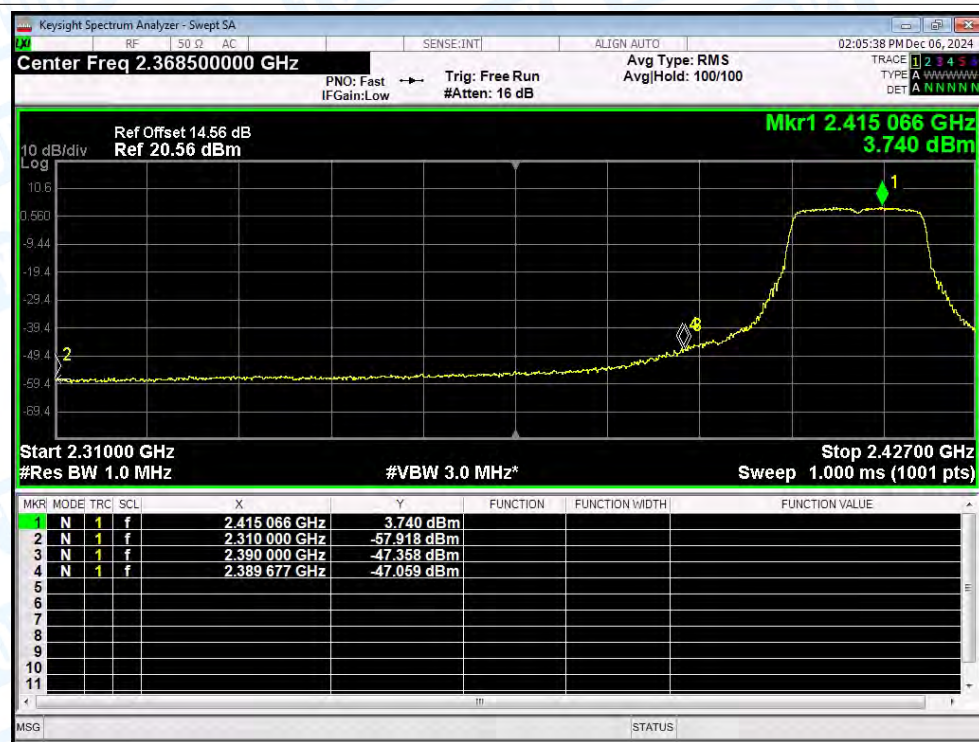
Restrict Band NVNT b 2462MHz Ant1 Average



Restrict Band NVNT g 2412MHz Ant1 Peak



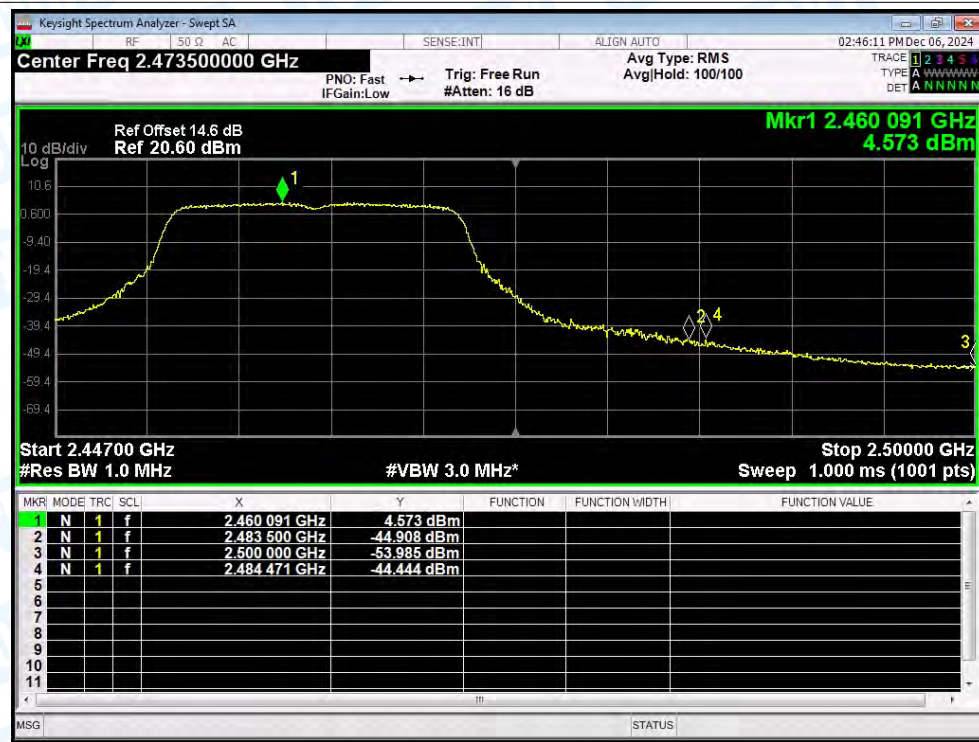
Restrict Band NVNT g 2412MHz Ant1 Average



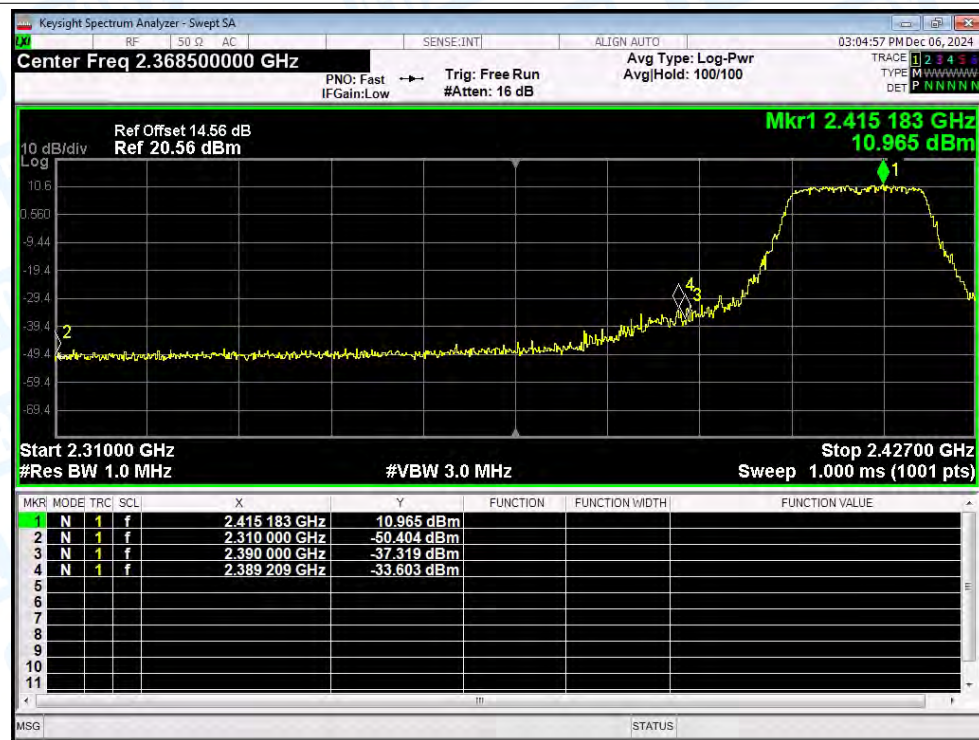
Restrict Band NVNT g 2462MHz Ant1 Peak



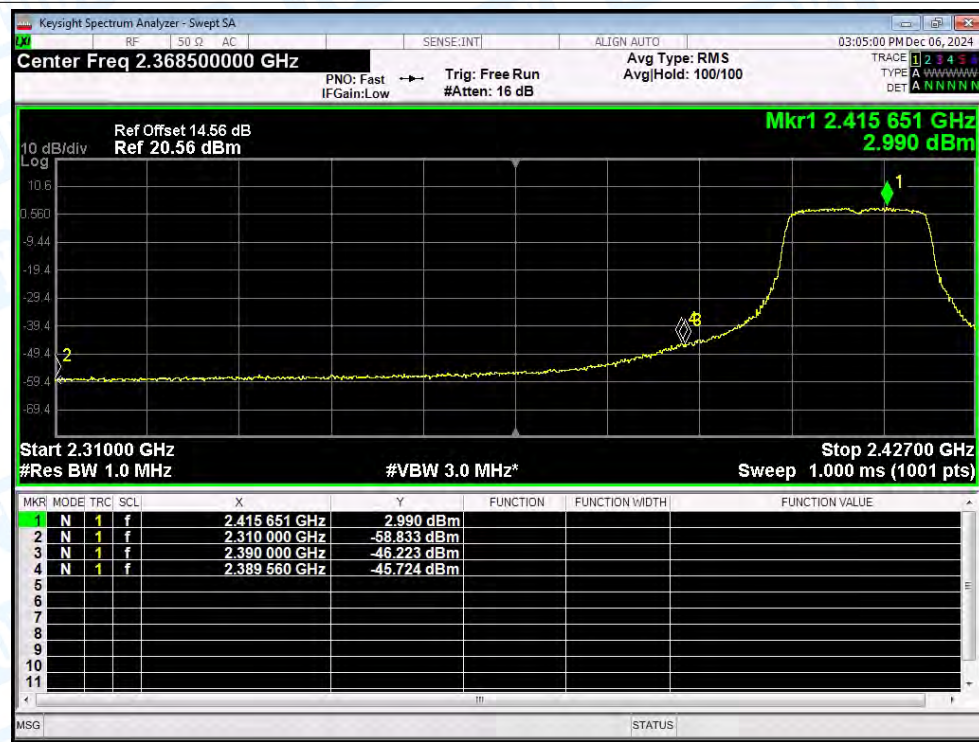
Restrict Band NVNT g 2462MHz Ant1 Average



Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



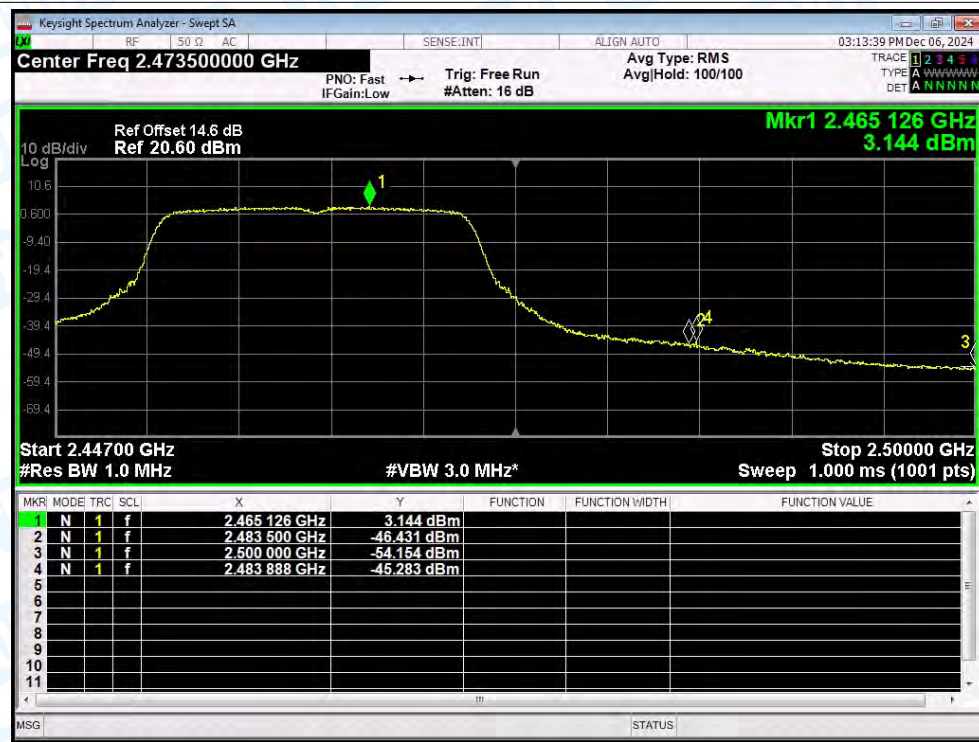
Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



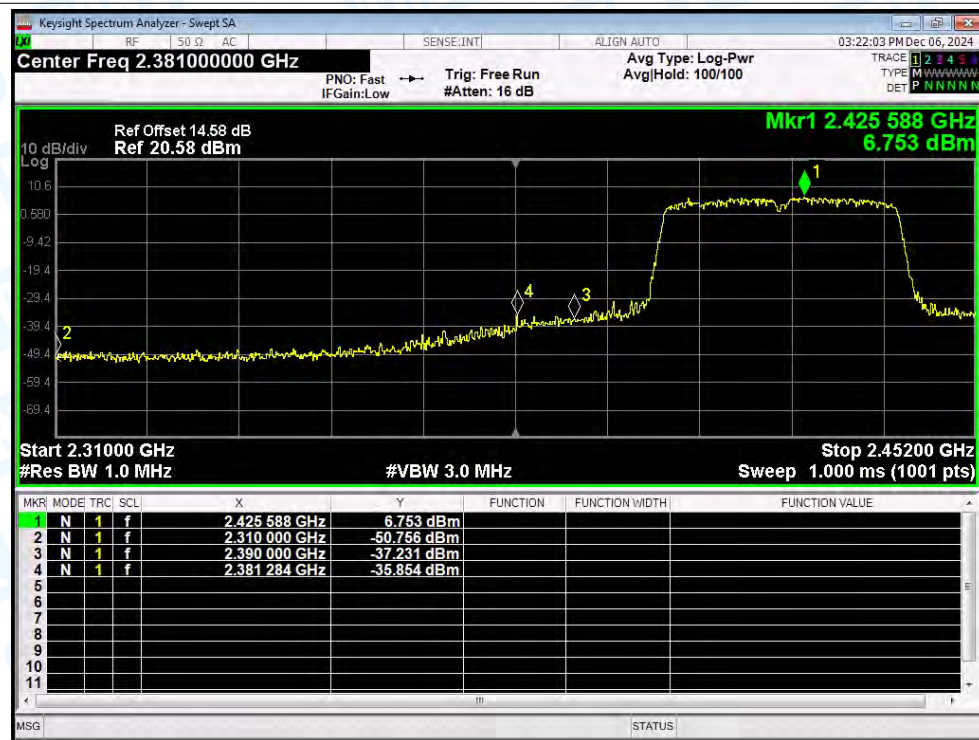
Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



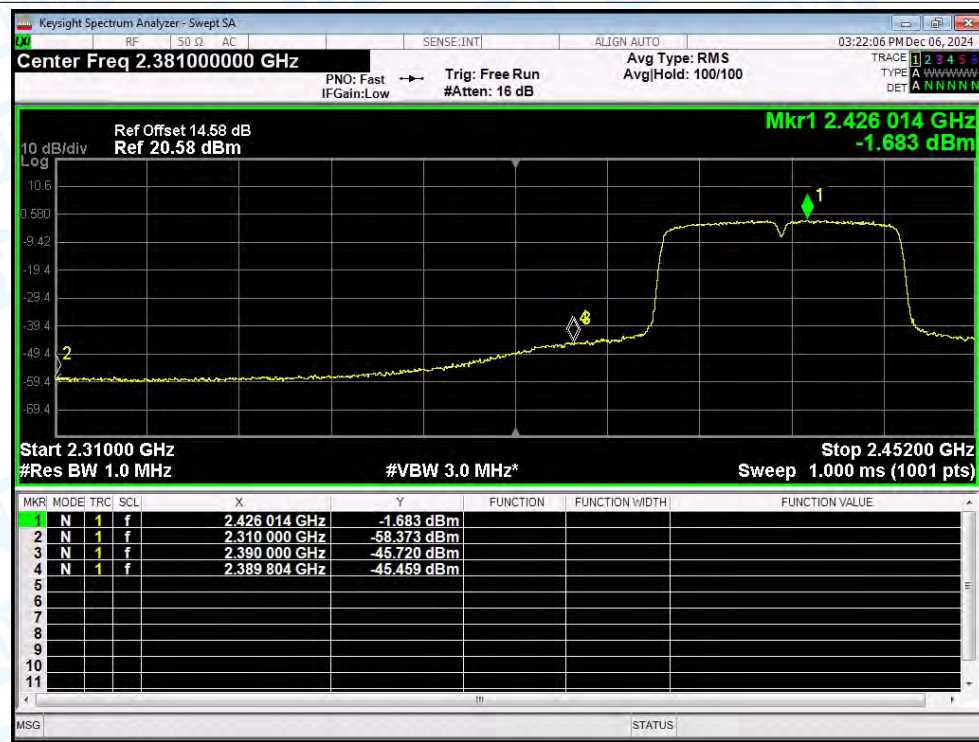
Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



Restrict Band NVNT n(HT40) 2422MHz Ant1 Peak



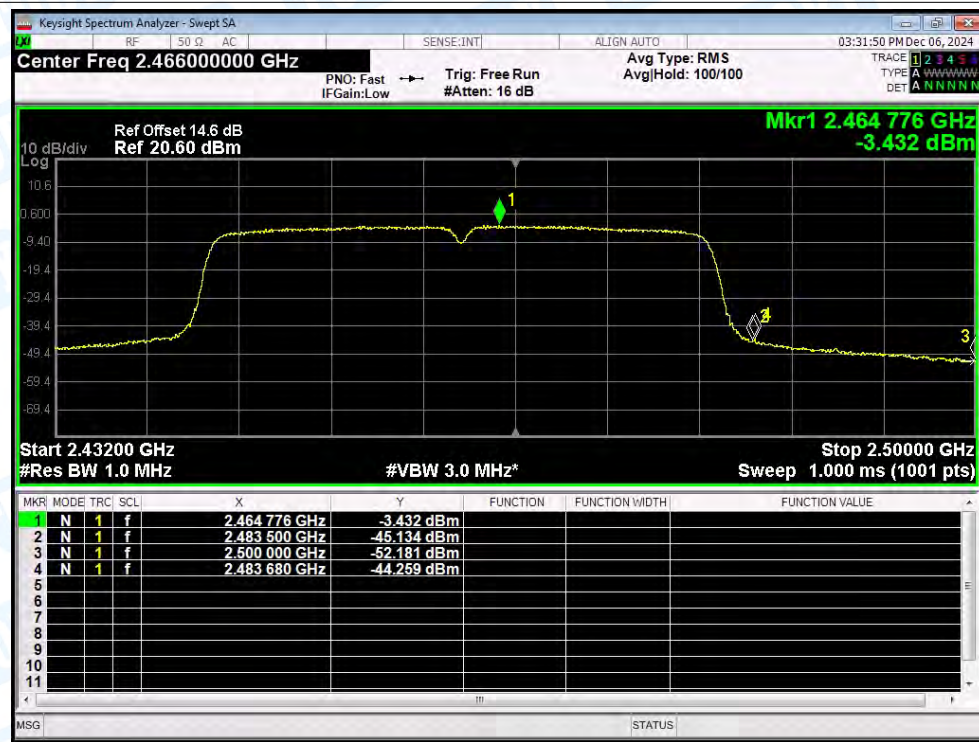
Restrict Band NVNT n(HT40) 2422MHz Ant1 Average



Restrict Band NVNT n(HT40) 2462MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2462MHz Ant1 Average



3. Maximum Conducted Output Power

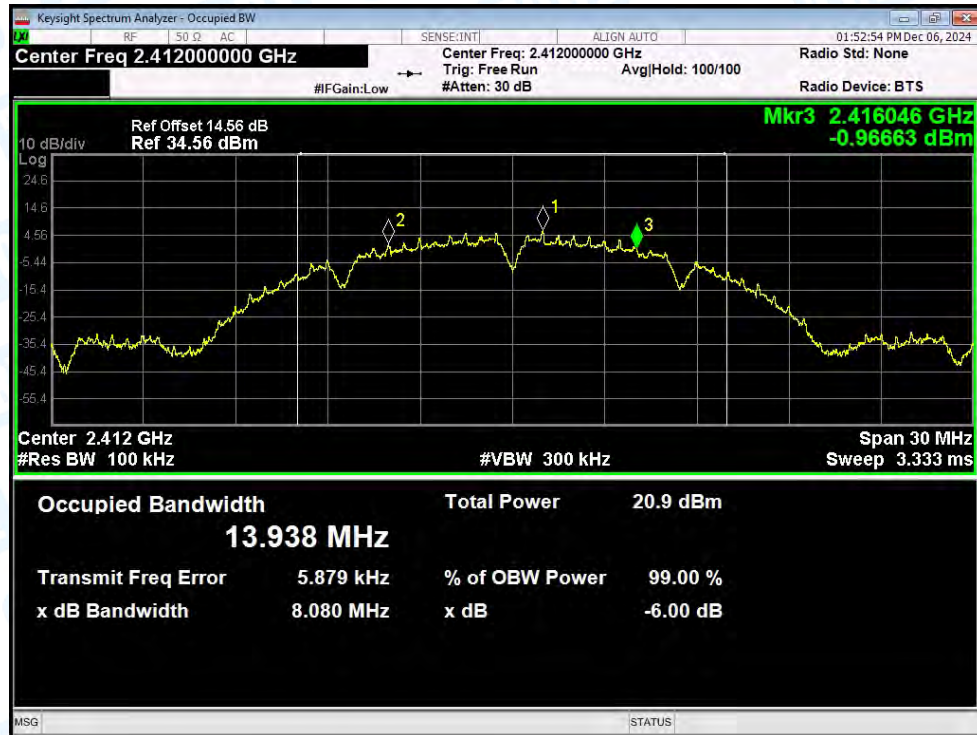
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	14.12	30	Pass
NVNT	b	2437	Ant1	14.64	30	Pass
NVNT	b	2462	Ant1	15.19	30	Pass
NVNT	g	2412	Ant1	15.05	30	Pass
NVNT	g	2437	Ant1	15.45	30	Pass
NVNT	g	2462	Ant1	15.45	30	Pass
NVNT	n(HT20)	2412	Ant1	14.21	30	Pass
NVNT	n(HT20)	2437	Ant1	14.12	30	Pass
NVNT	n(HT20)	2462	Ant1	14.15	30	Pass
NVNT	n(HT40)	2422	Ant1	12.91	30	Pass
NVNT	n(HT40)	2442	Ant1	12.94	30	Pass
NVNT	n(HT40)	2462	Ant1	10.66	30	Pass

4. -6dB Bandwidth

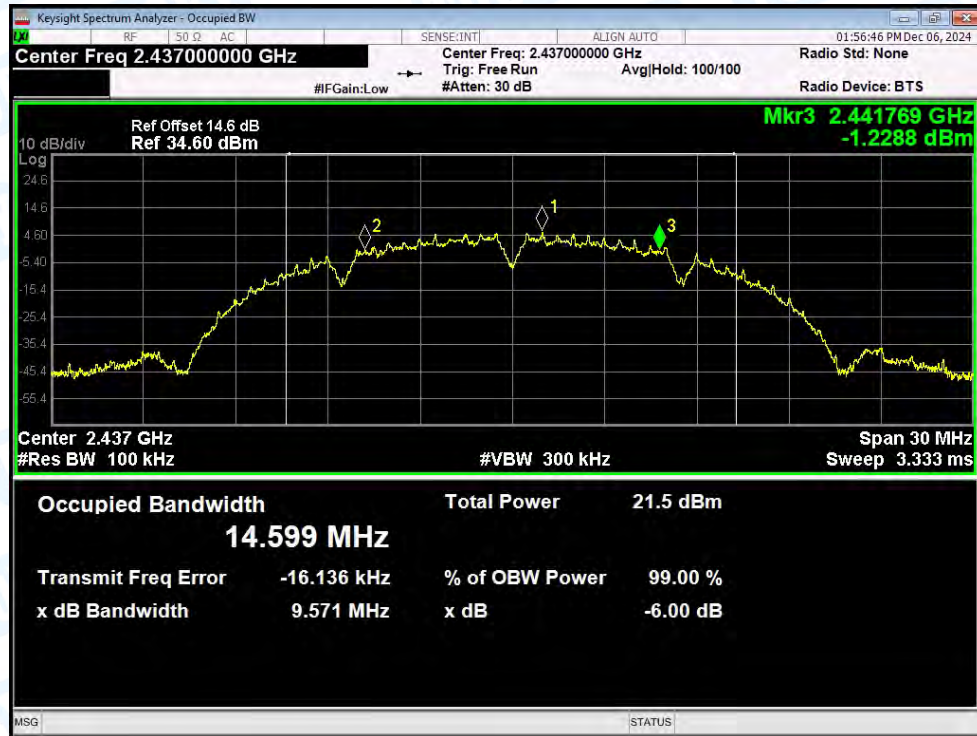
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.08	0.5	Pass
NVNT	b	2437	Ant1	9.57	0.5	Pass
NVNT	b	2462	Ant1	9.53	0.5	Pass
NVNT	g	2412	Ant1	16.3	0.5	Pass
NVNT	g	2437	Ant1	16.3	0.5	Pass
NVNT	g	2462	Ant1	16.28	0.5	Pass
NVNT	n(HT20)	2412	Ant1	16.85	0.5	Pass
NVNT	n(HT20)	2437	Ant1	16.92	0.5	Pass
NVNT	n(HT20)	2462	Ant1	16.89	0.5	Pass
NVNT	n(HT40)	2422	Ant1	34.37	0.5	Pass
NVNT	n(HT40)	2442	Ant1	35.07	0.5	Pass
NVNT	n(HT40)	2462	Ant1	35.1	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



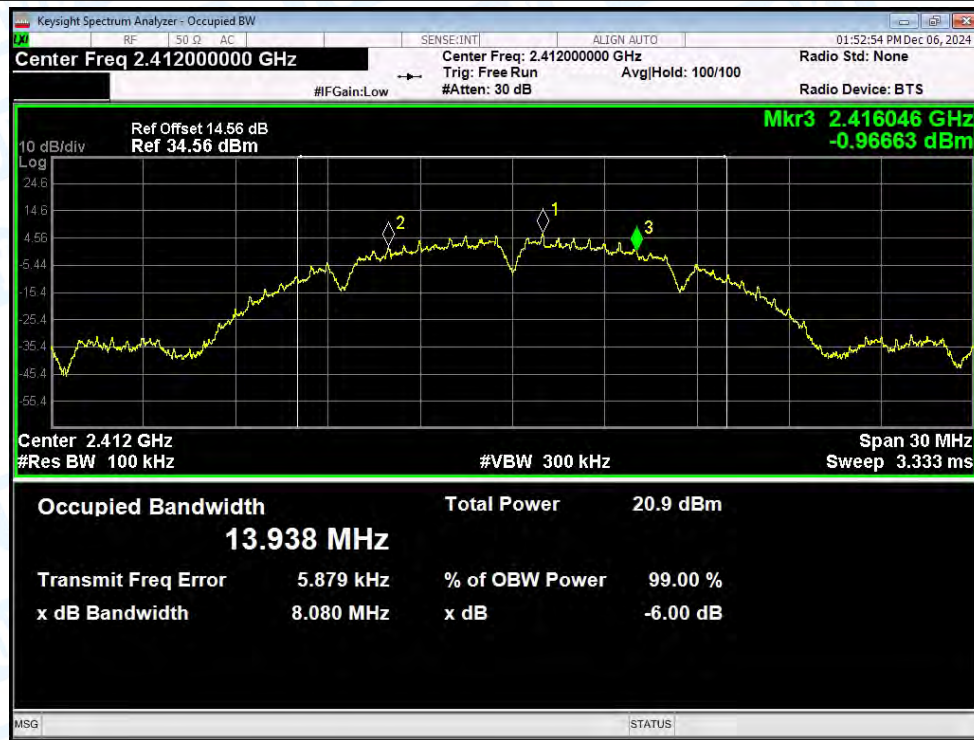
-6dB Bandwidth NVNT b 2437MHz Ant1



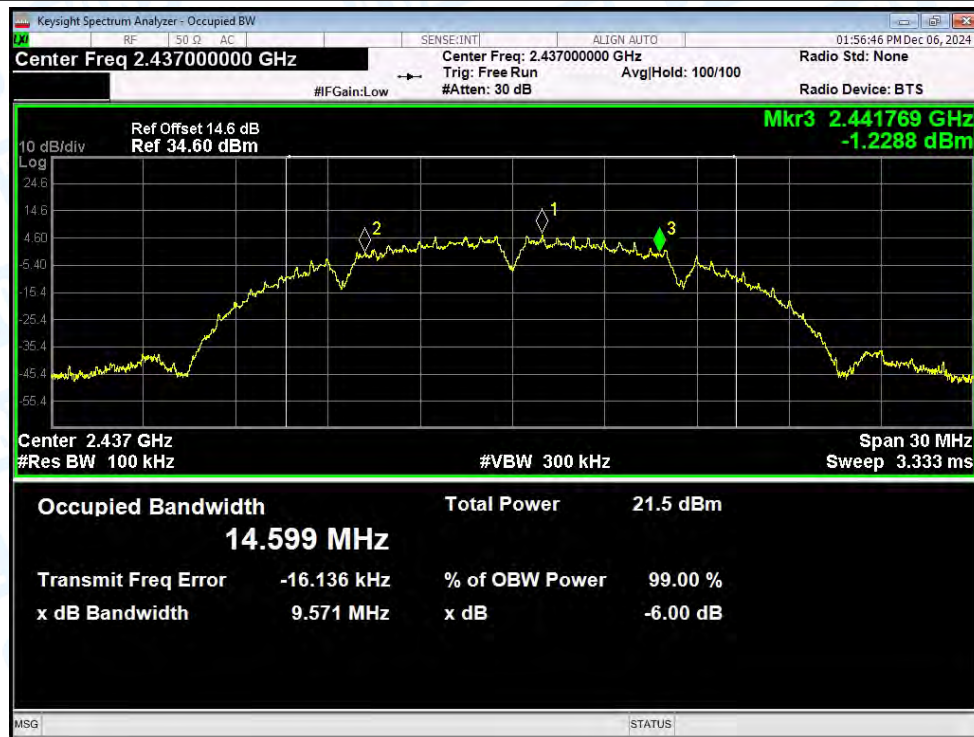
-6dB Bandwidth NVNT b 2462MHz Ant1



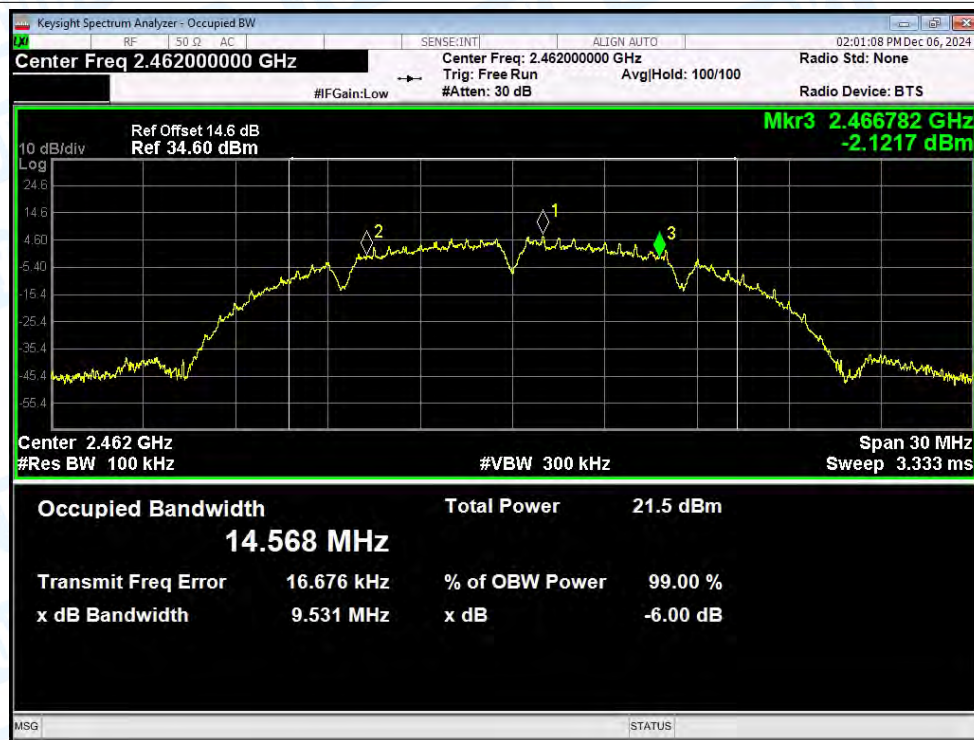
-6dB Bandwidth NVNT b 2412MHz Ant1



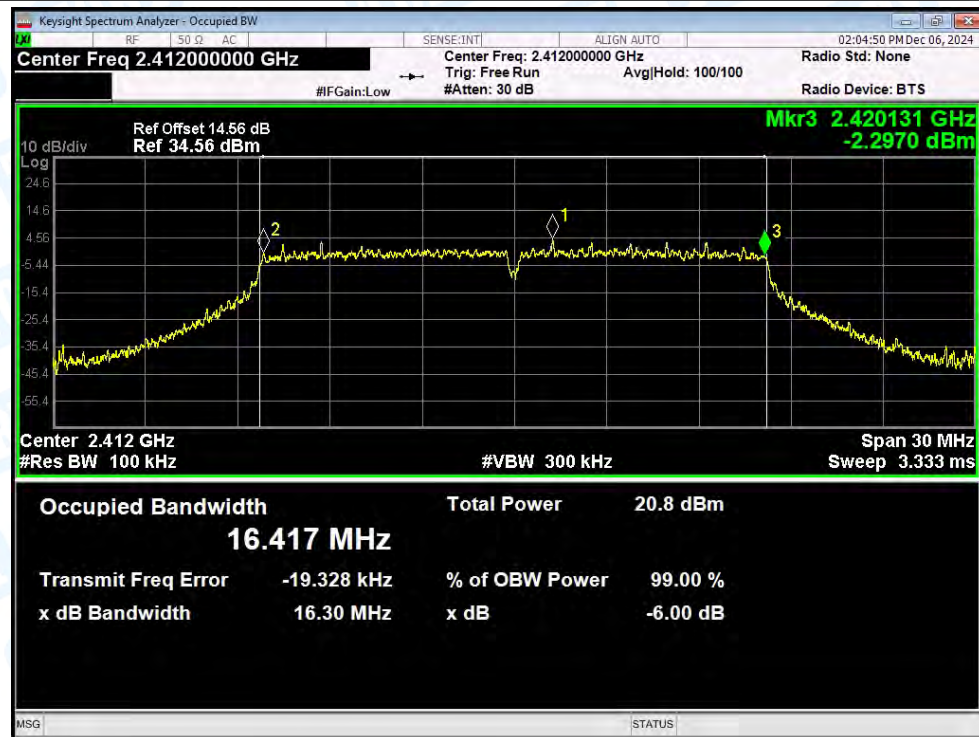
-6dB Bandwidth NVNT b 2437MHz Ant1



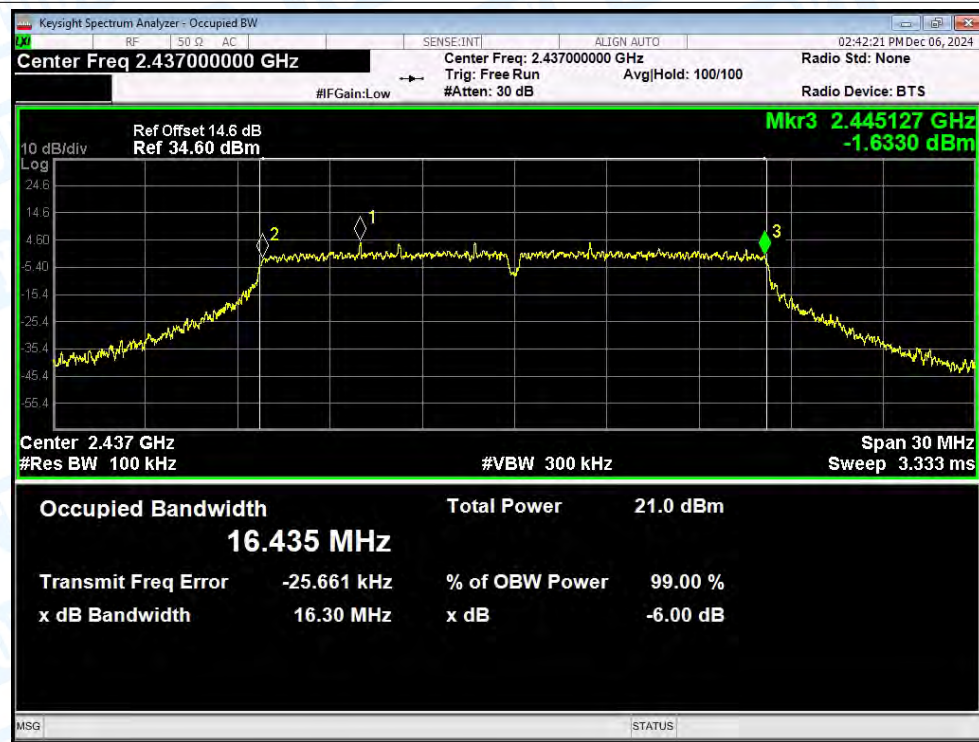
-6dB Bandwidth NVNT b 2462MHz Ant1



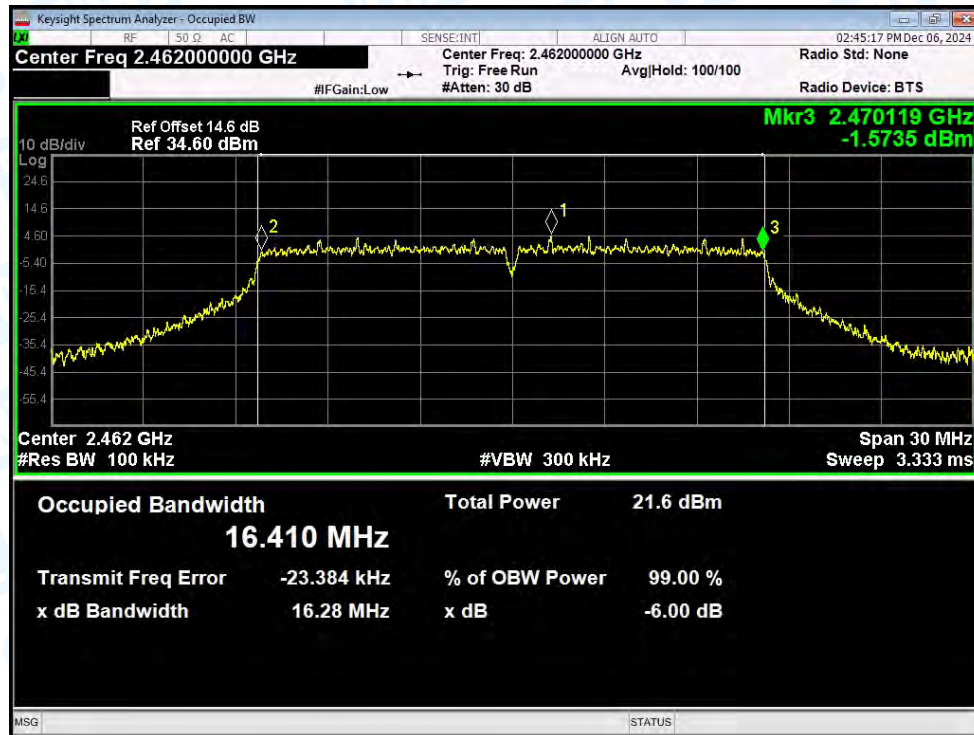
-6dB Bandwidth NVNT g 2412MHz Ant1



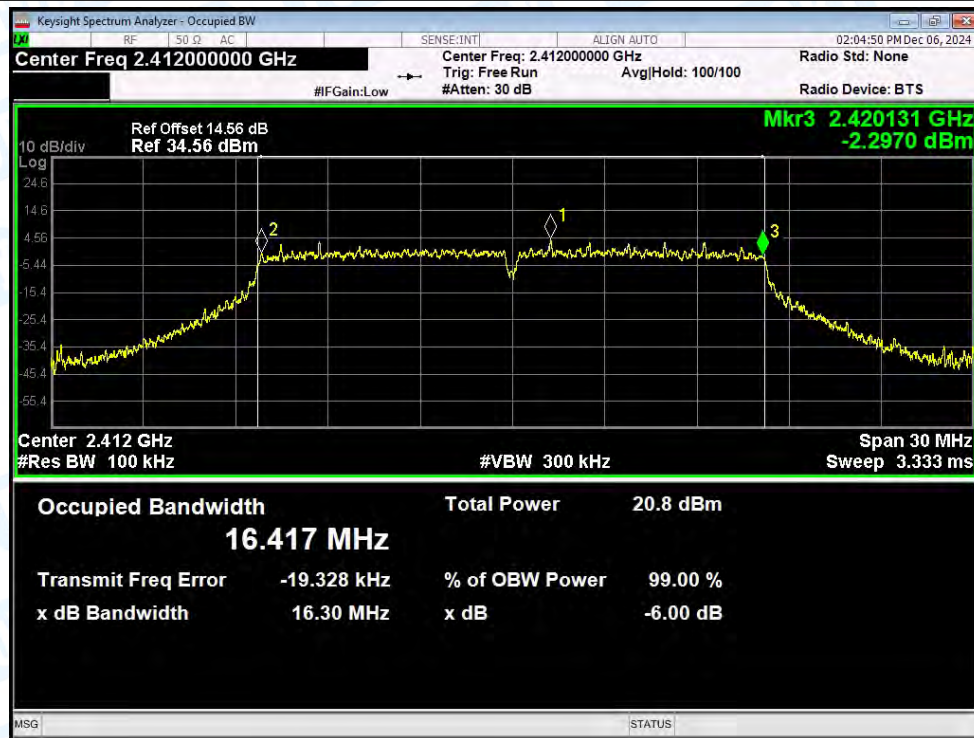
-6dB Bandwidth NVNT g 2437MHz Ant1



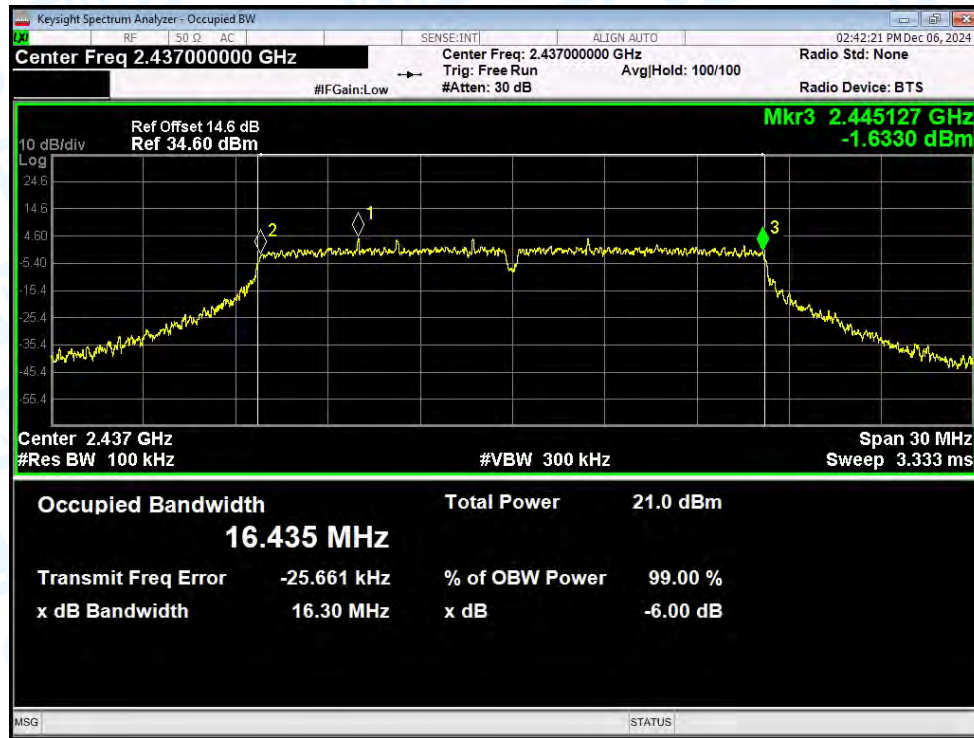
-6dB Bandwidth NVNT g 2462MHz Ant1



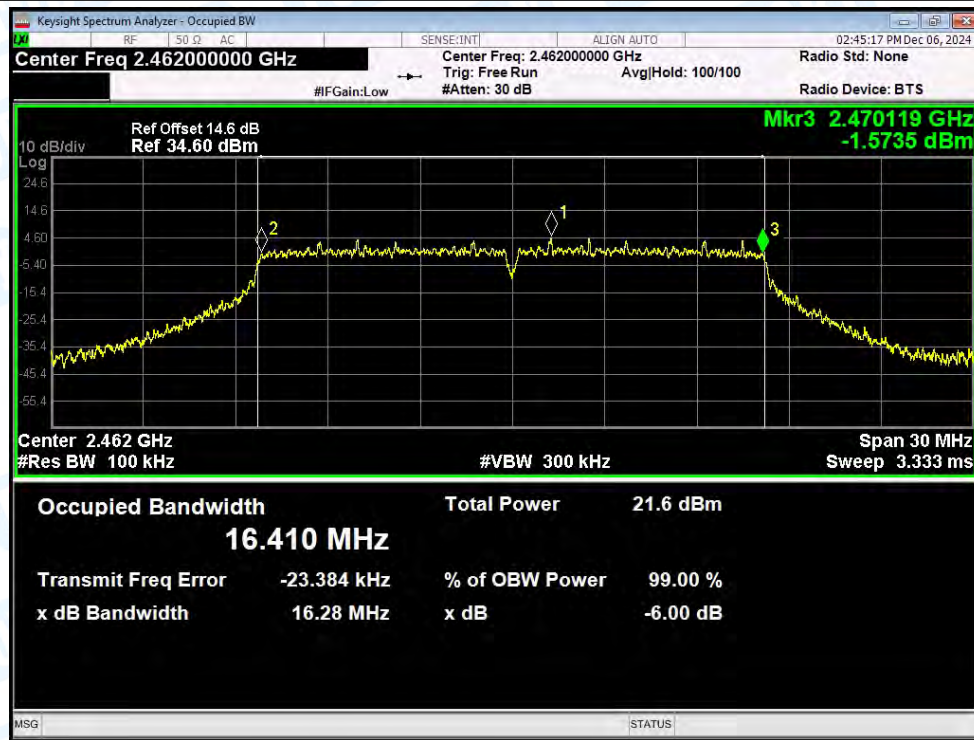
-6dB Bandwidth NVNT g 2412MHz Ant1



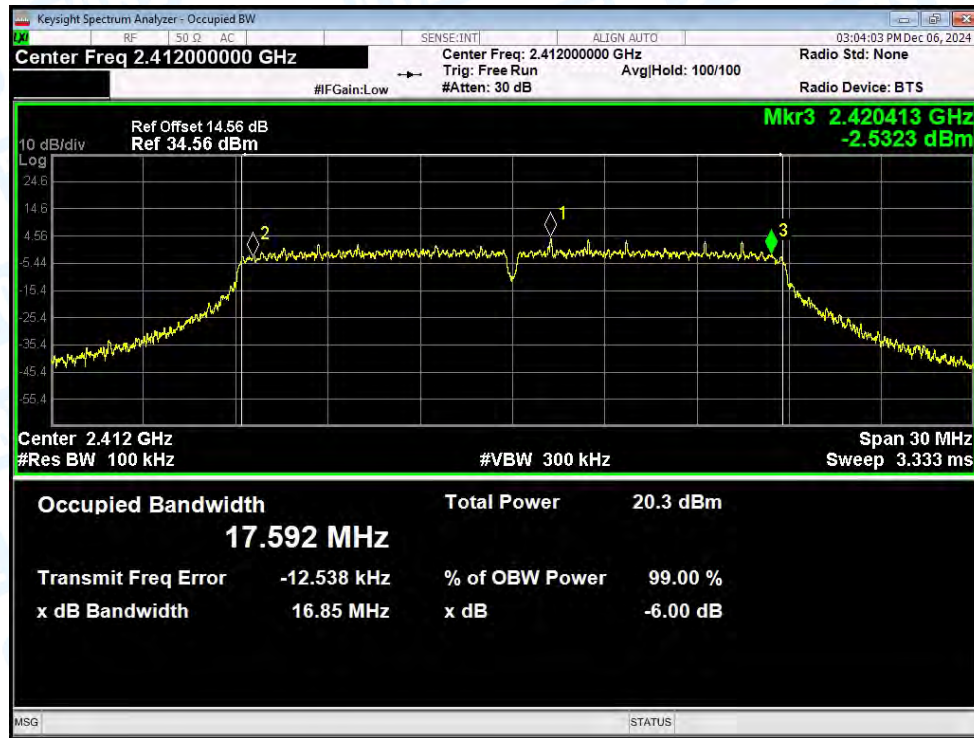
-6dB Bandwidth NVNT g 2437MHz Ant1



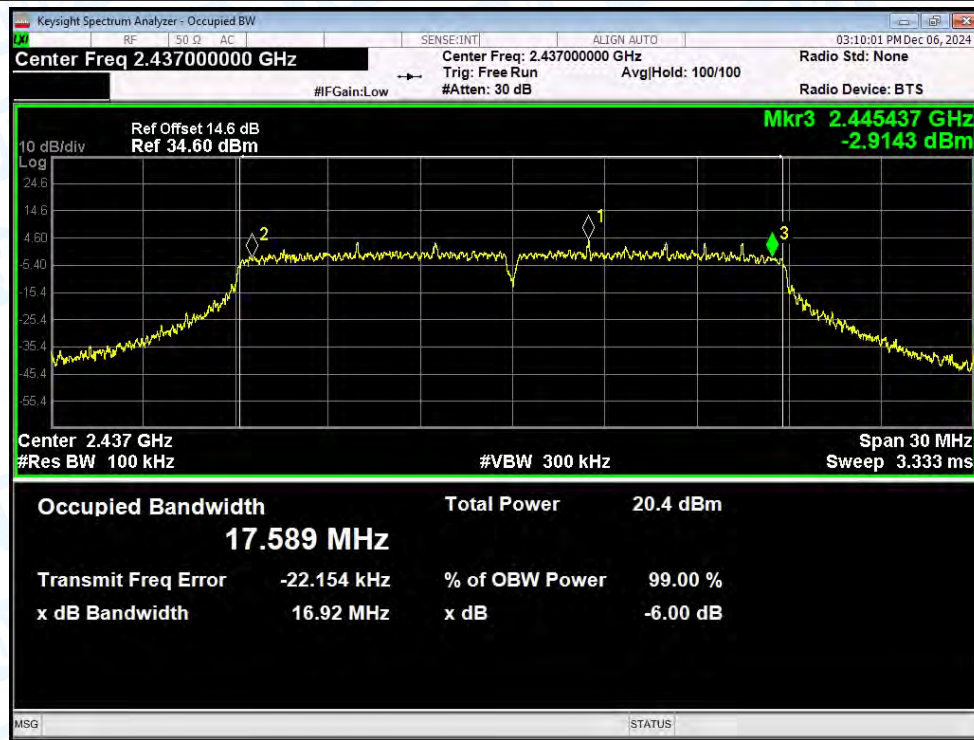
-6dB Bandwidth NVNT g 2462MHz Ant1



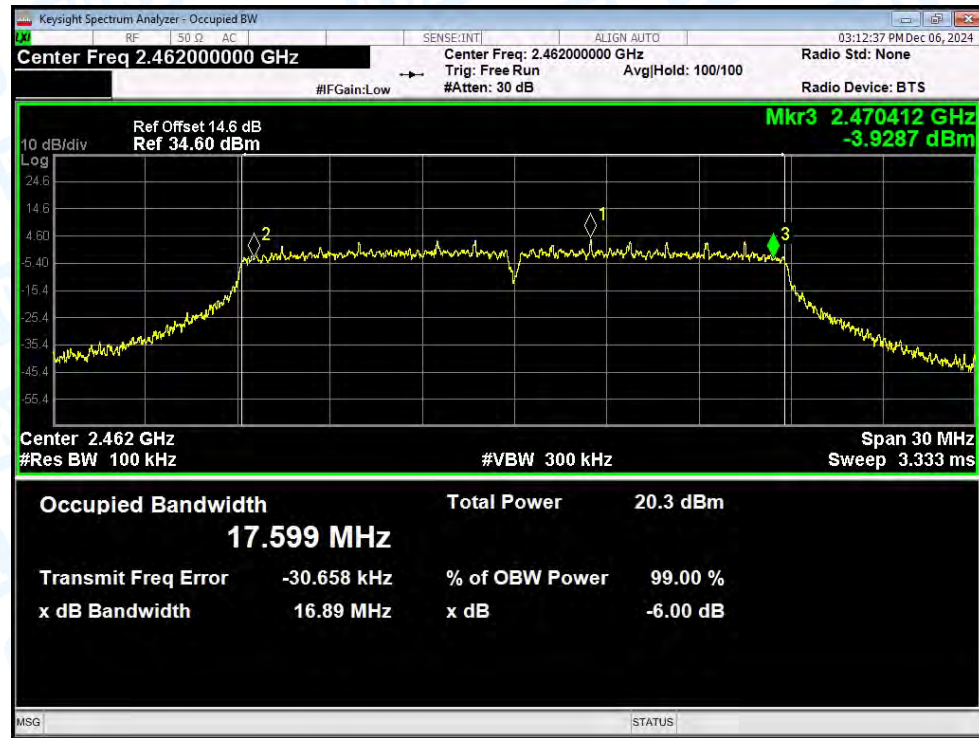
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



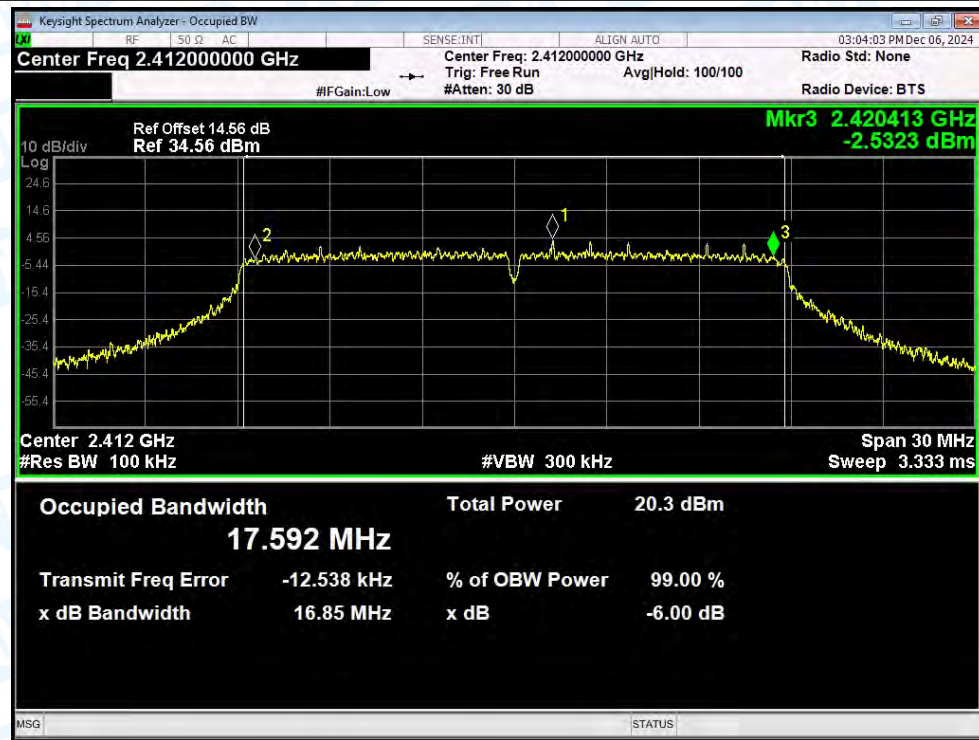
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



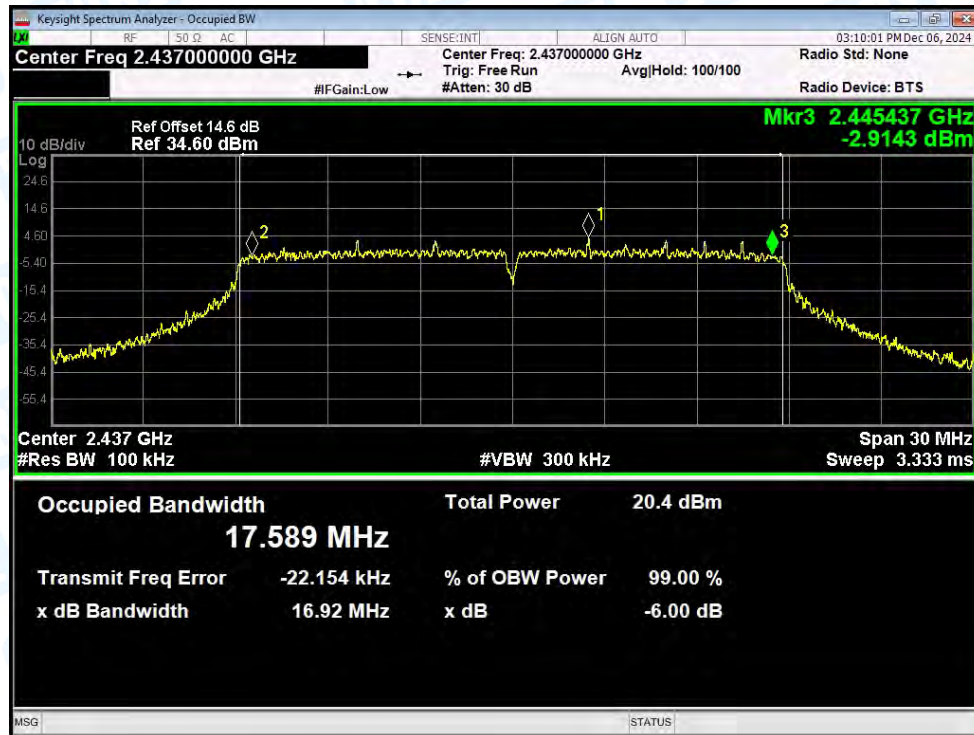
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



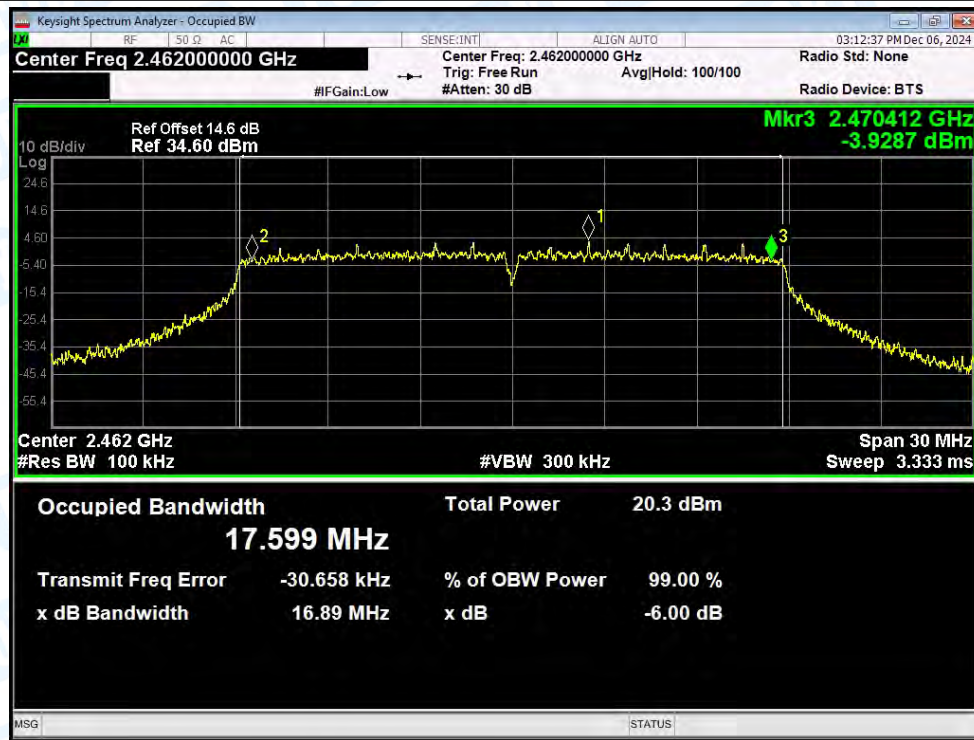
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



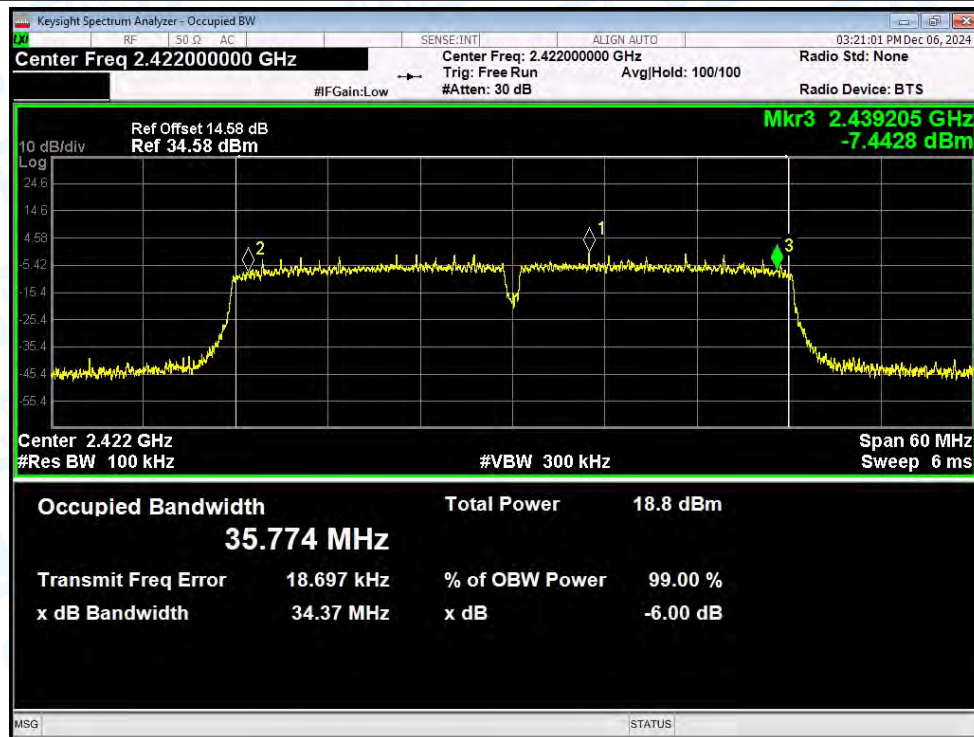
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



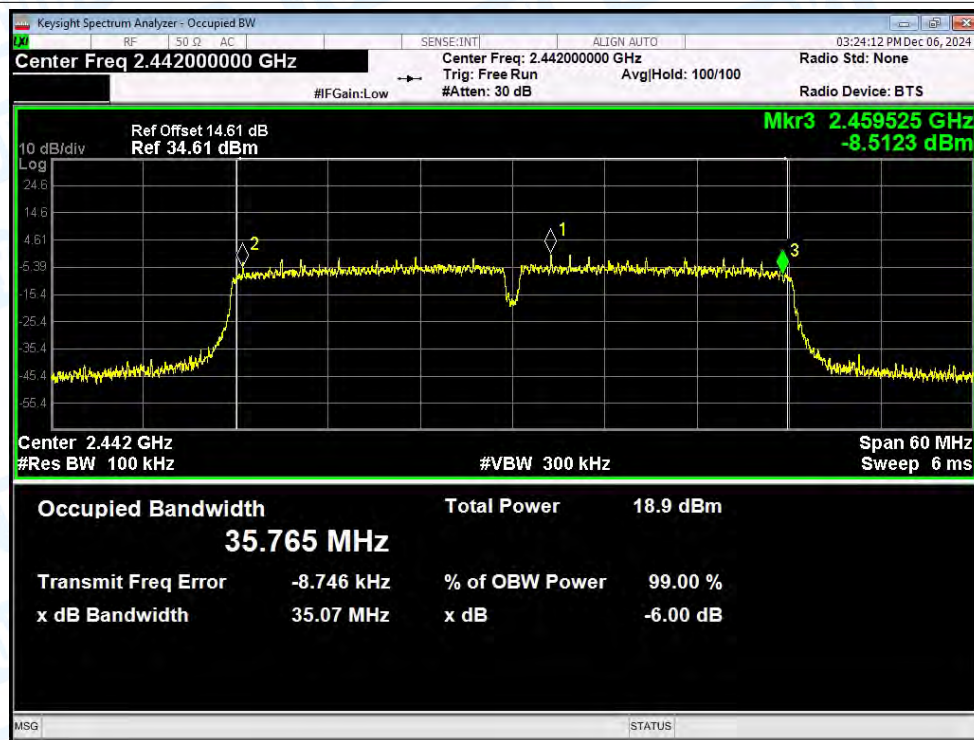
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



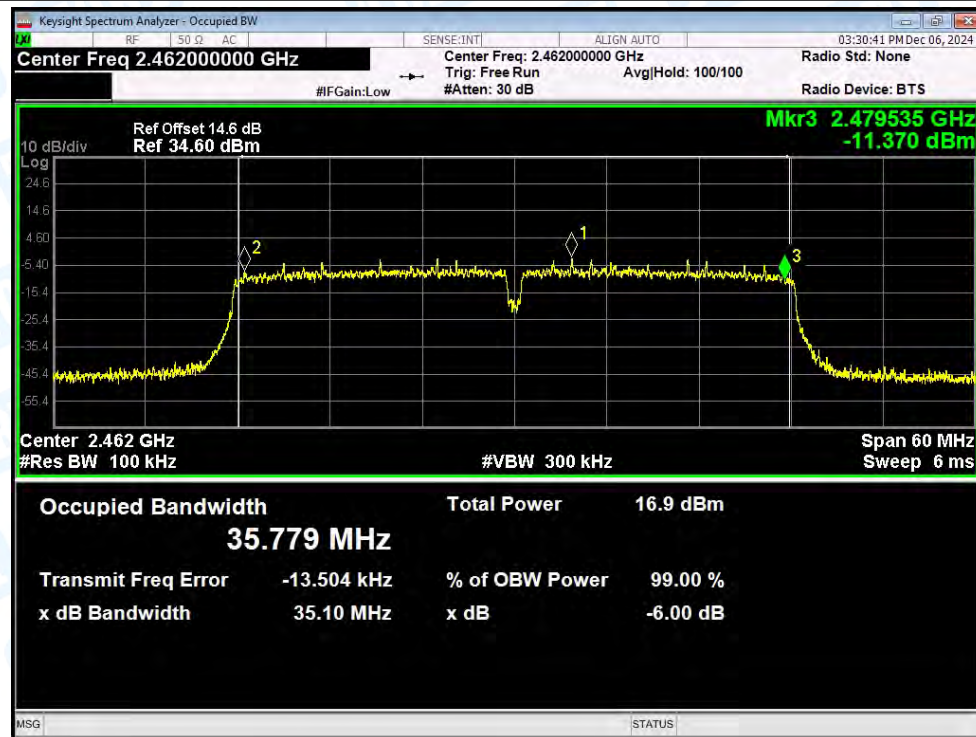
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



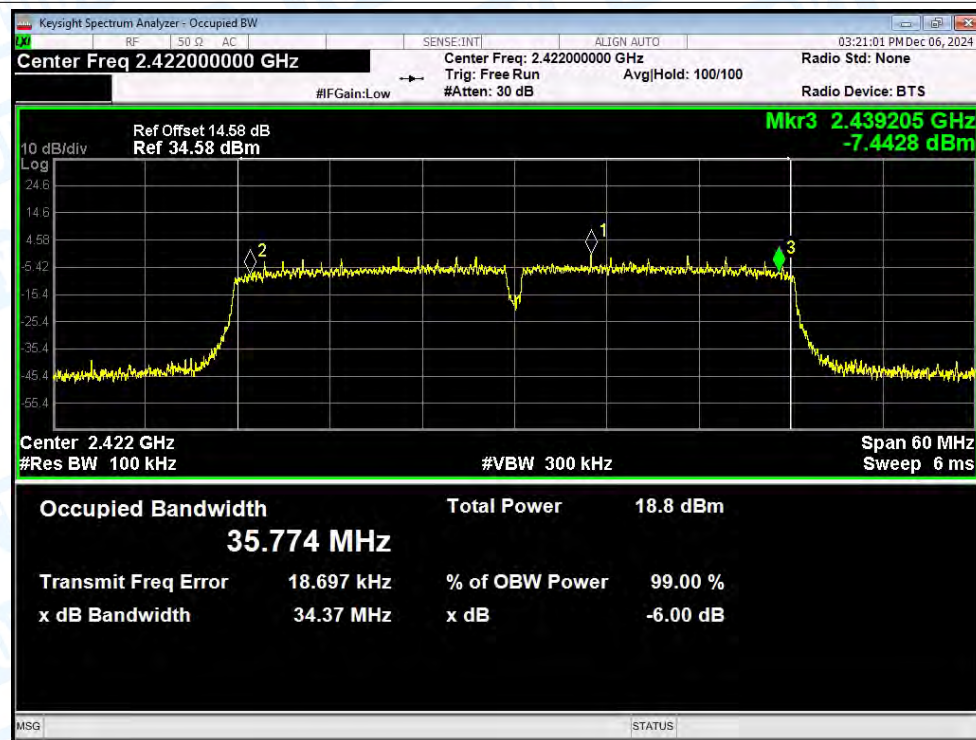
-6dB Bandwidth NVNT n(HT40) 2442MHz Ant1



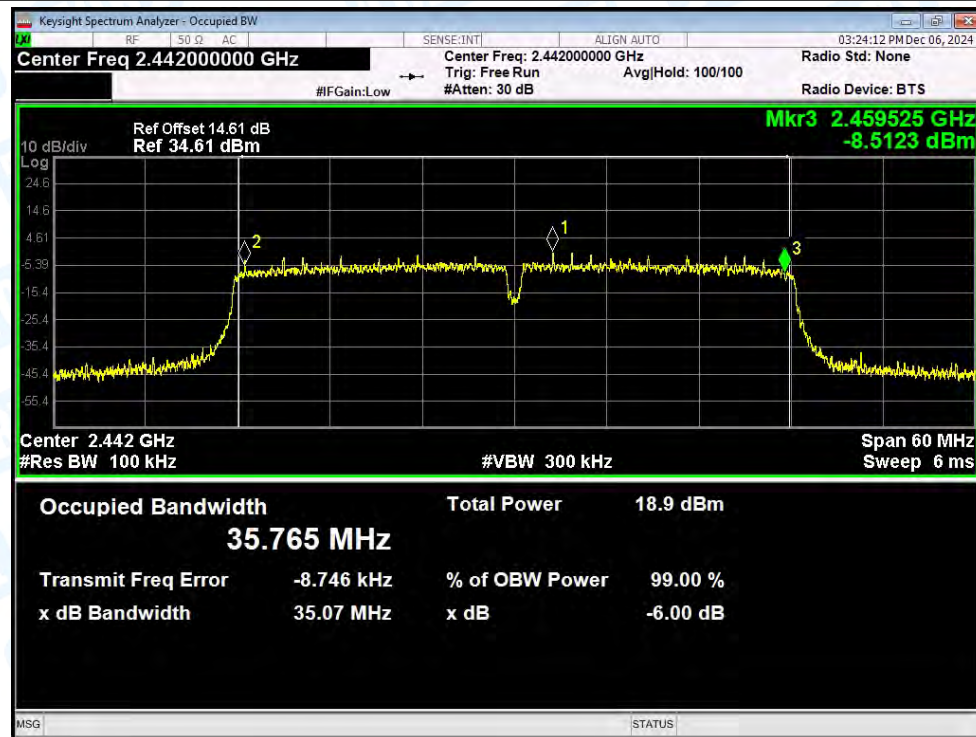
-6dB Bandwidth NVNT n(HT40) 2462MHz Ant1



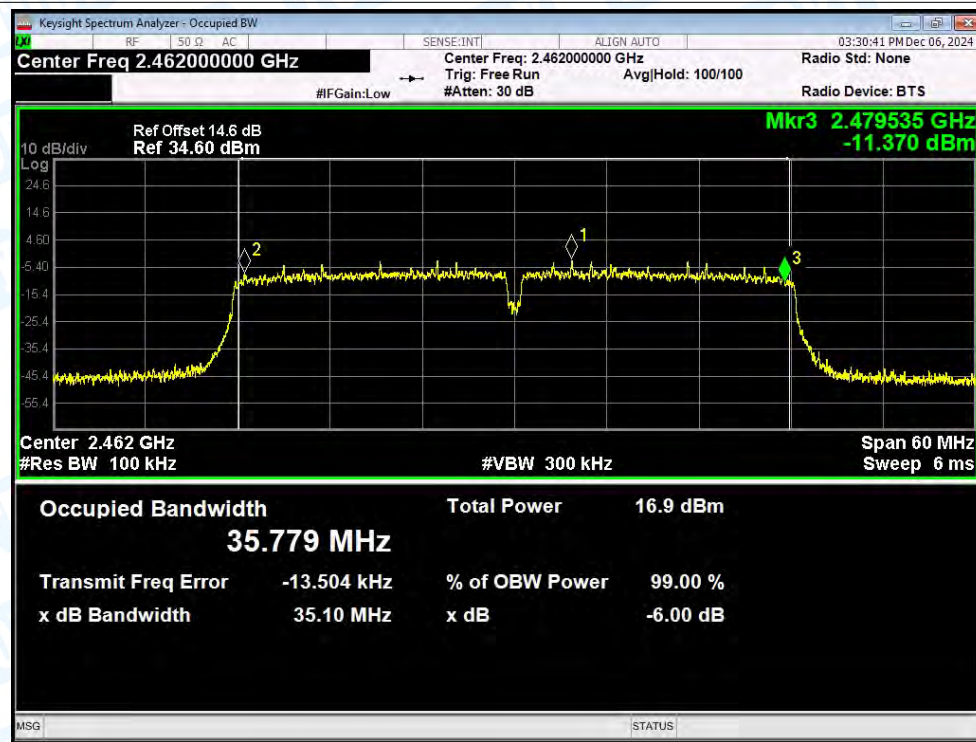
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2442MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2462MHz Ant1

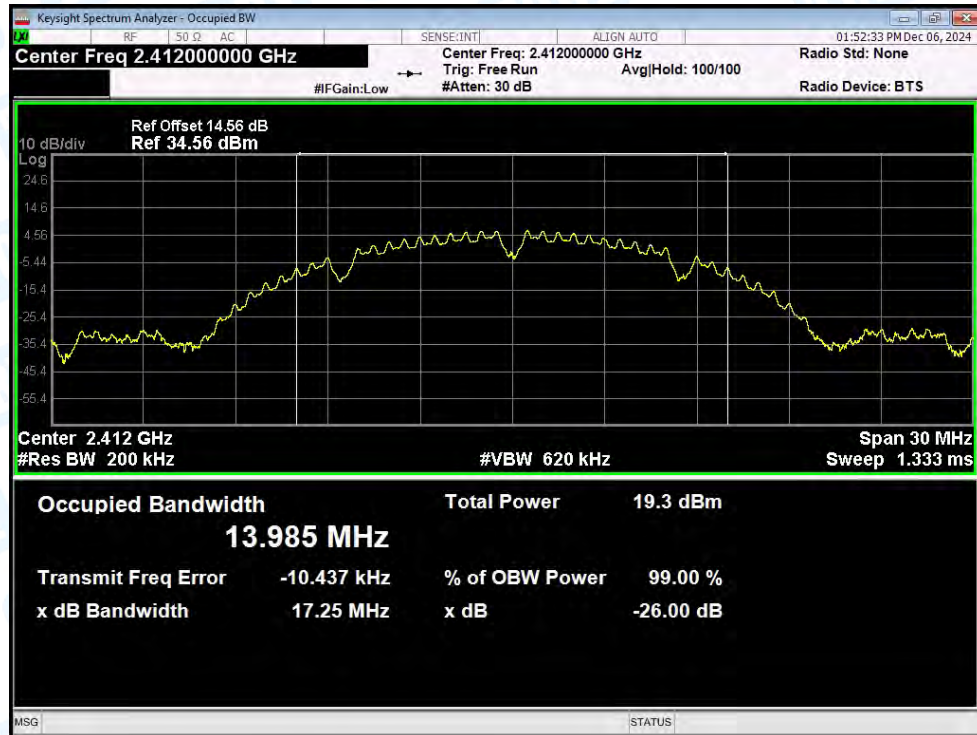


5. Occupied Channel Bandwidth

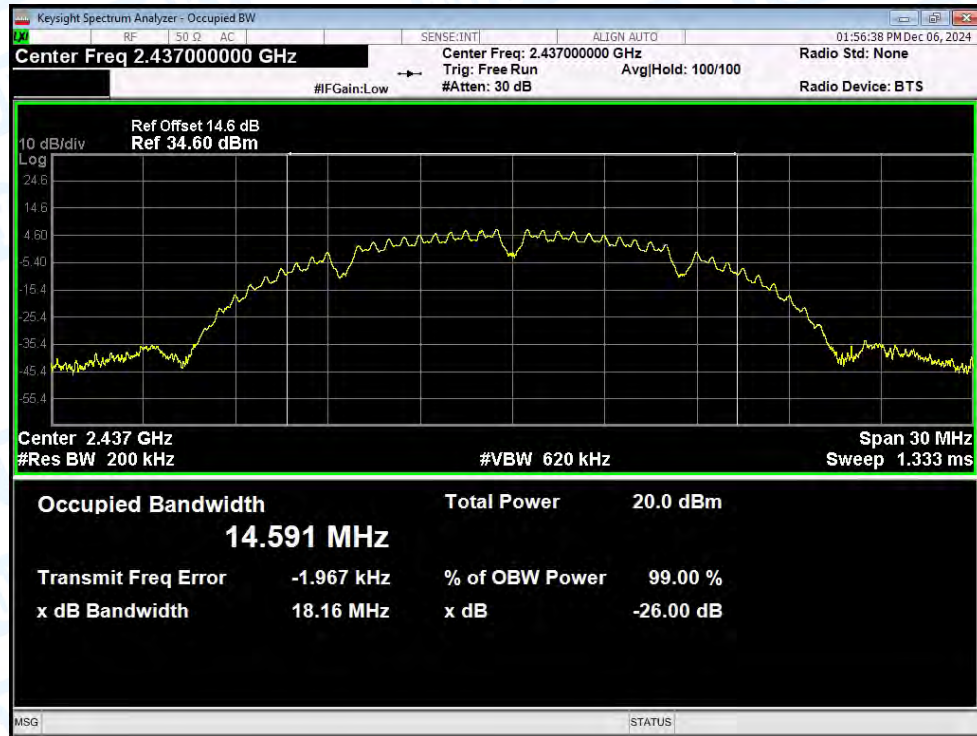
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.985
NVNT	b	2437	Ant1	14.591
NVNT	b	2462	Ant1	14.567
NVNT	g	2412	Ant1	16.56
NVNT	g	2437	Ant1	16.524
NVNT	g	2462	Ant1	16.495
NVNT	n(HT20)	2412	Ant1	17.631
NVNT	n(HT20)	2437	Ant1	17.667
NVNT	n(HT20)	2462	Ant1	17.633
NVNT	n(HT40)	2422	Ant1	35.814
NVNT	n(HT40)	2442	Ant1	35.822
NVNT	n(HT40)	2462	Ant1	35.82

Test Graphs

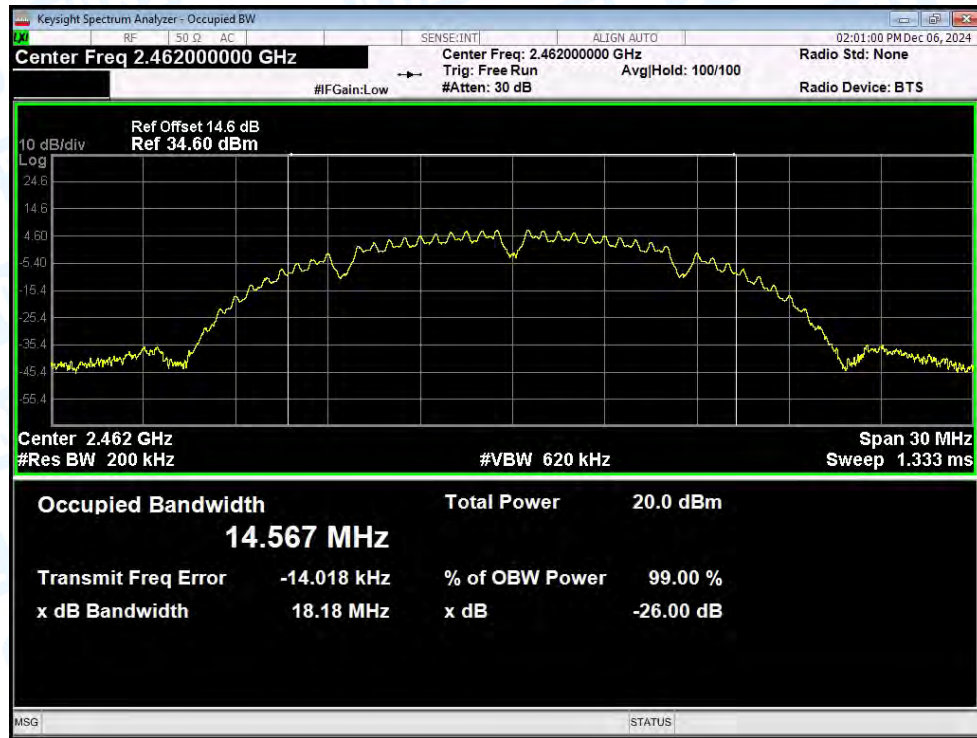
OBW NVNT b 2412MHz Ant1



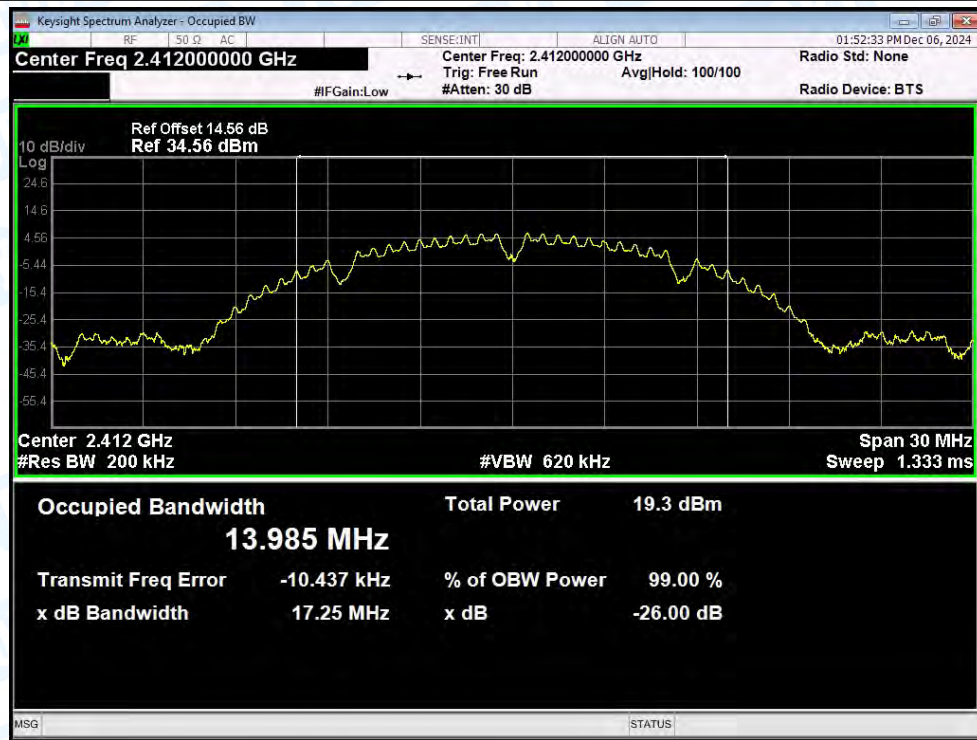
OBW NVNT b 2437MHz Ant1

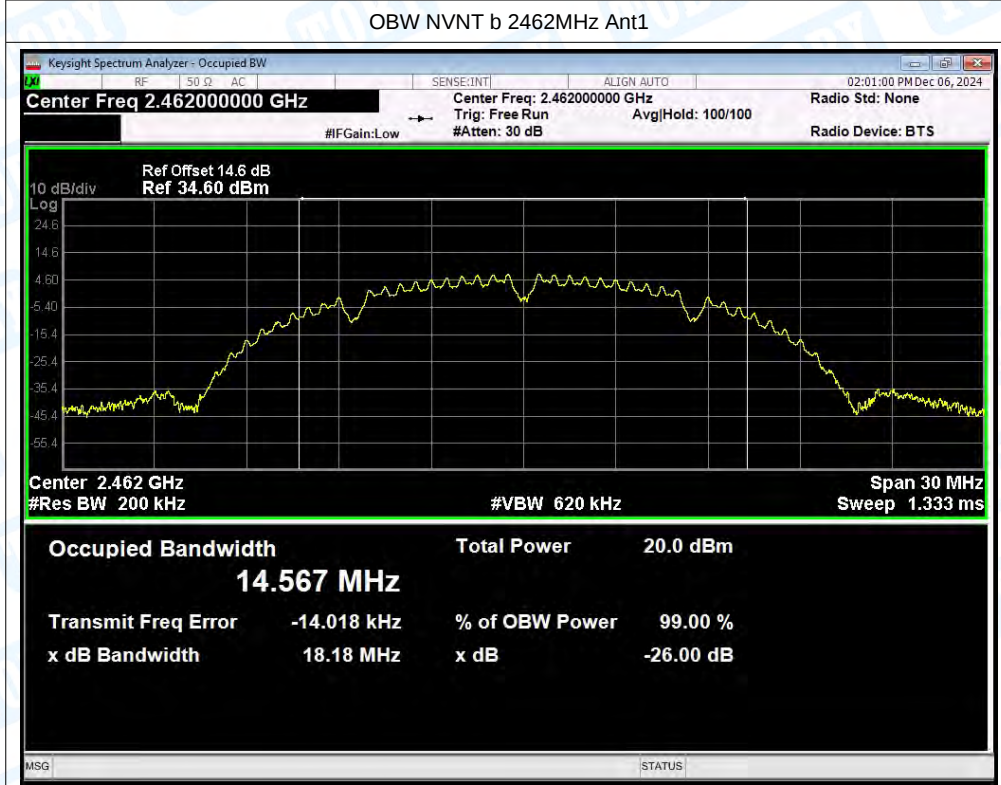
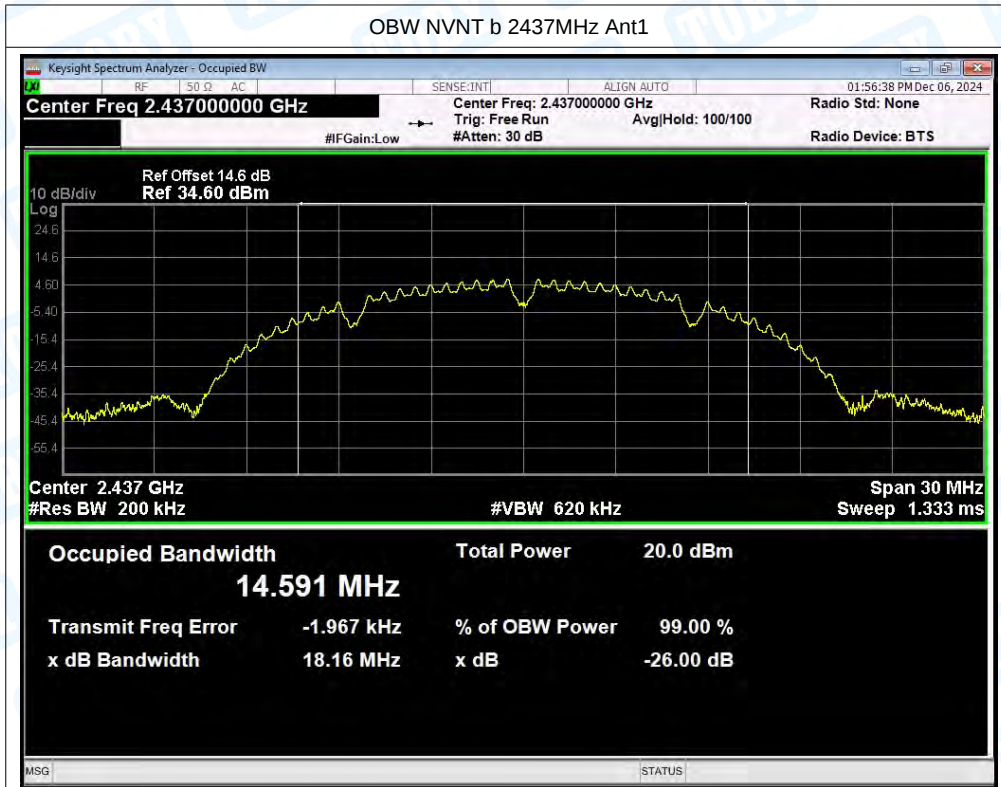


OBW NVNT b 2462MHz Ant1

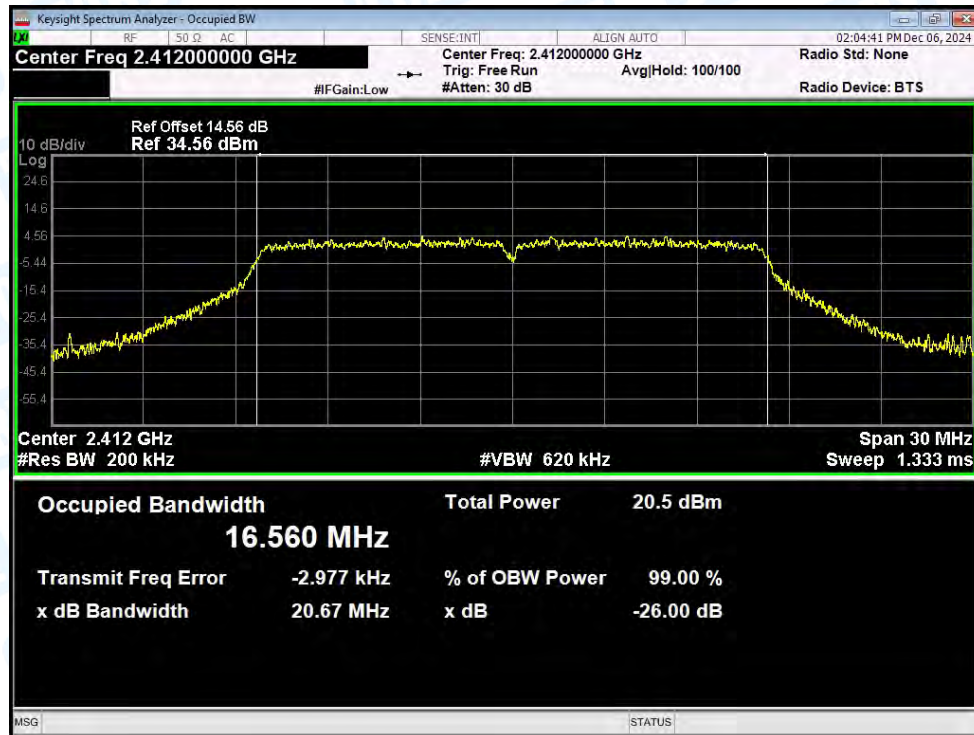


OBW NVNT b 2412MHz Ant1

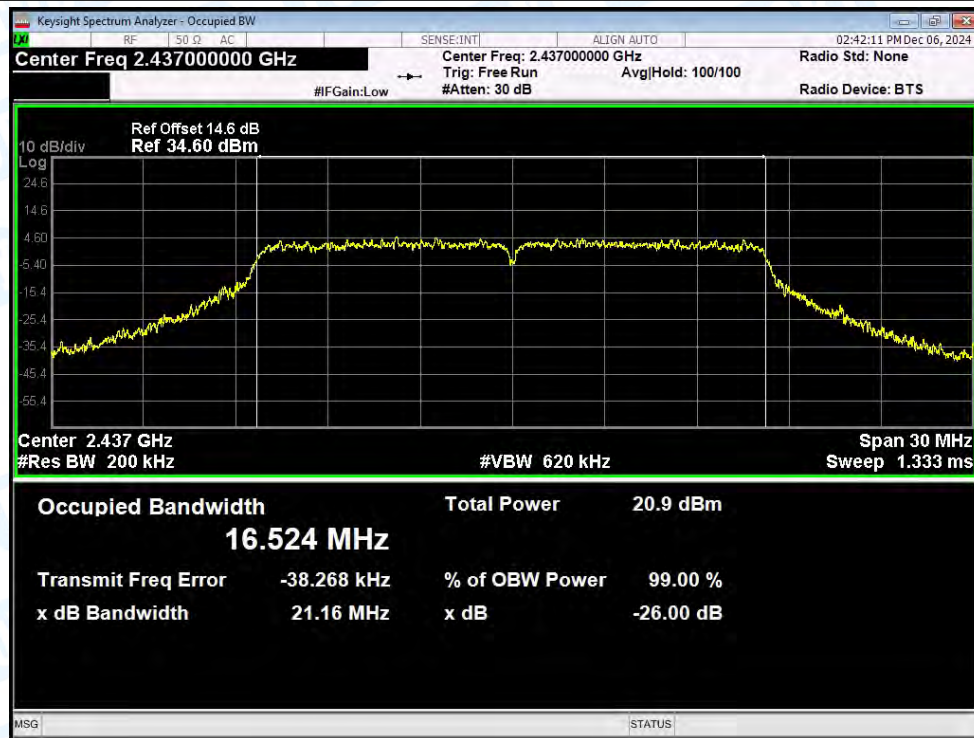




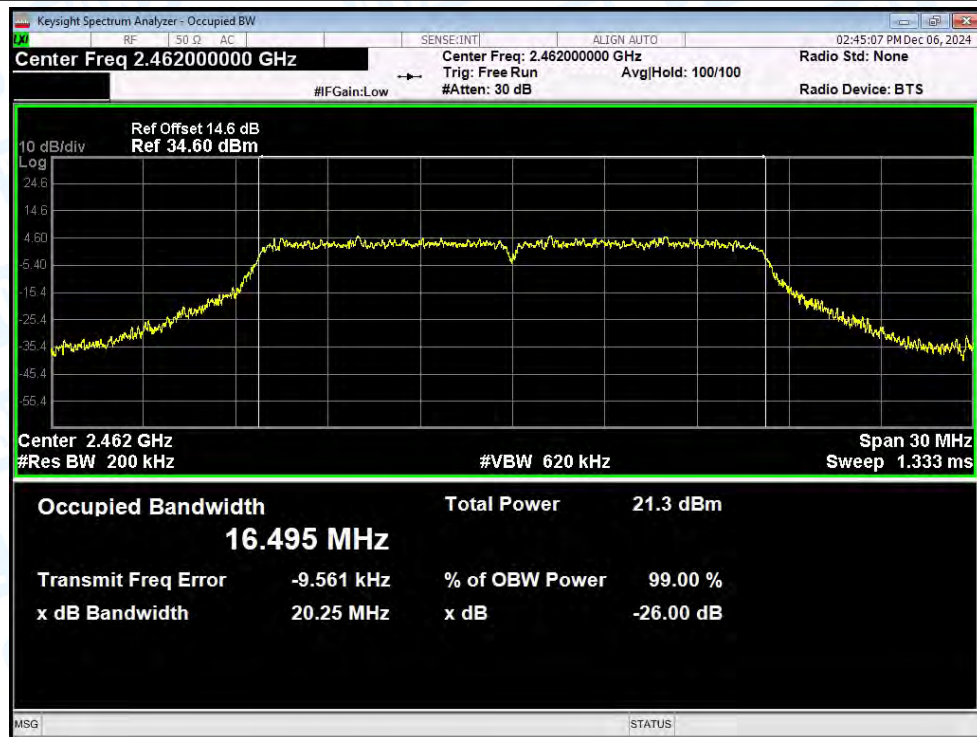
OBW NVNT g 2412MHz Ant1



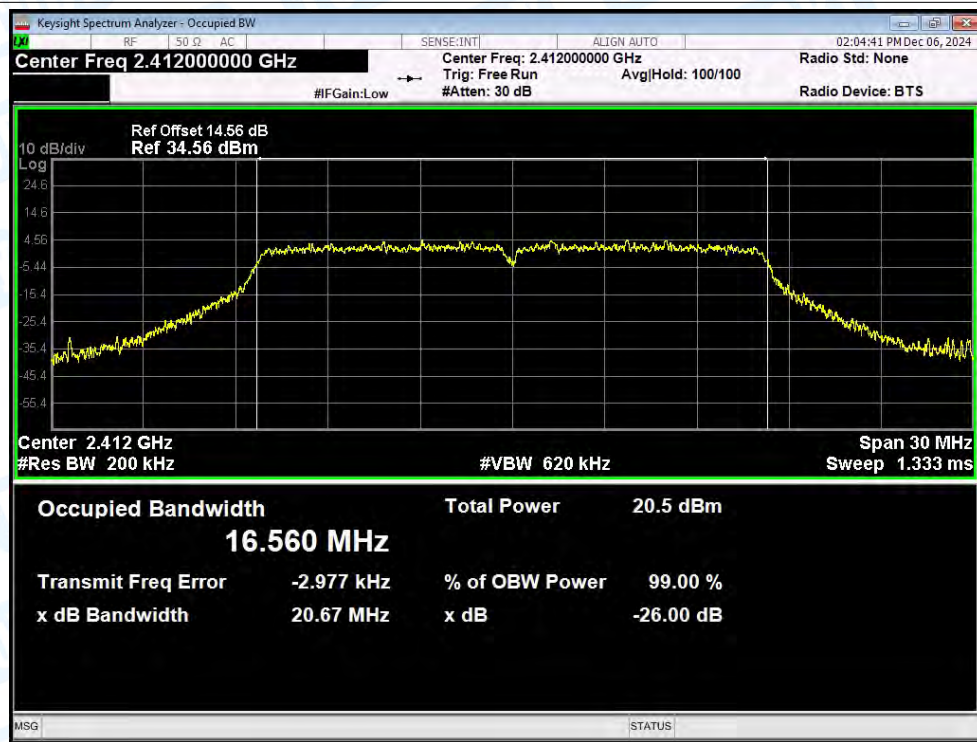
OBW NVNT g 2437MHz Ant1



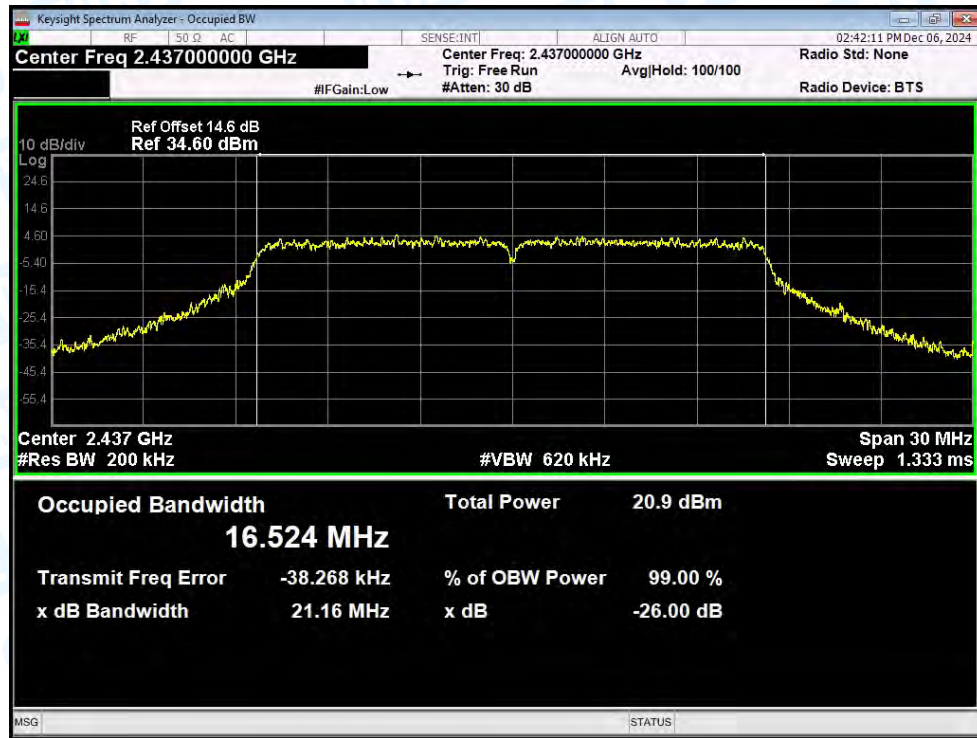
OBW NVNT g 2462MHz Ant1



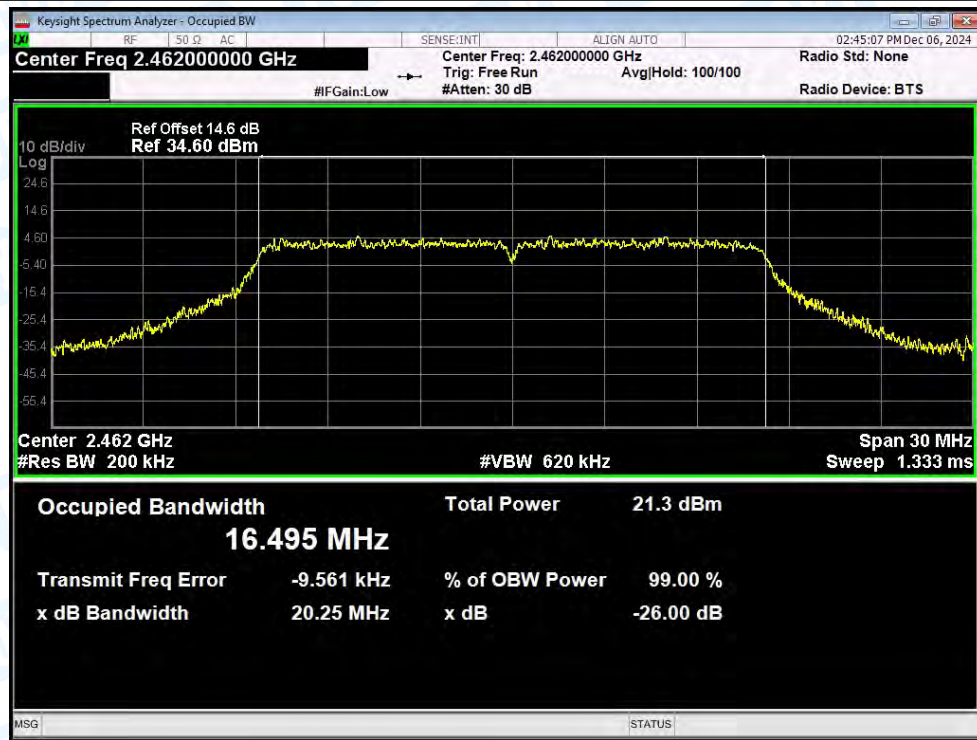
OBW NVNT g 2412MHz Ant1



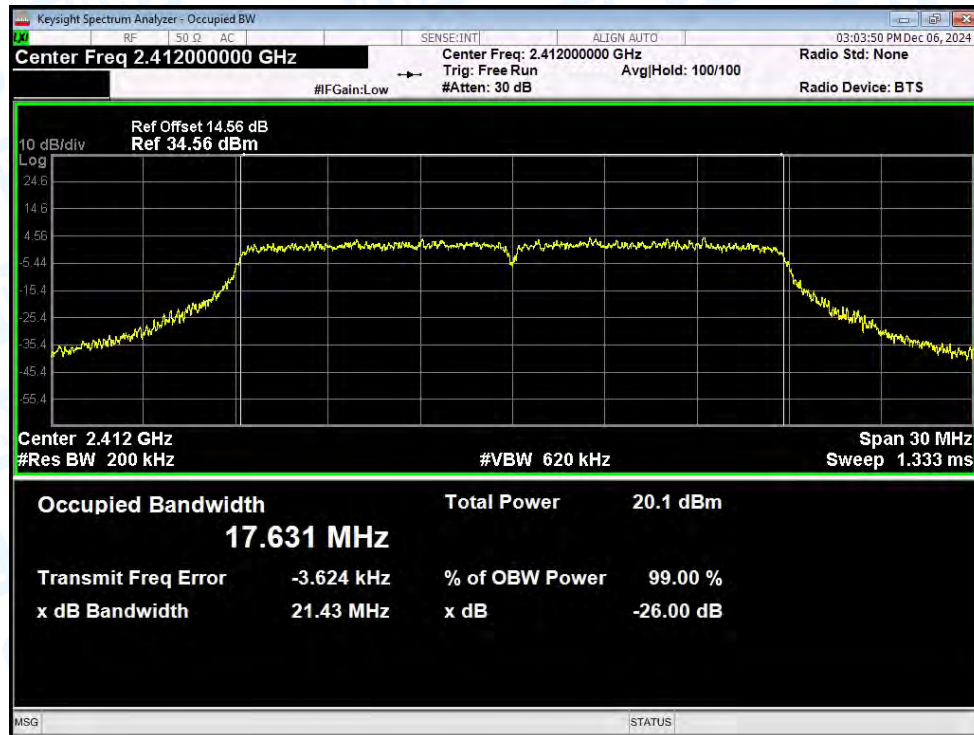
OBW NVNT g 2437MHz Ant1



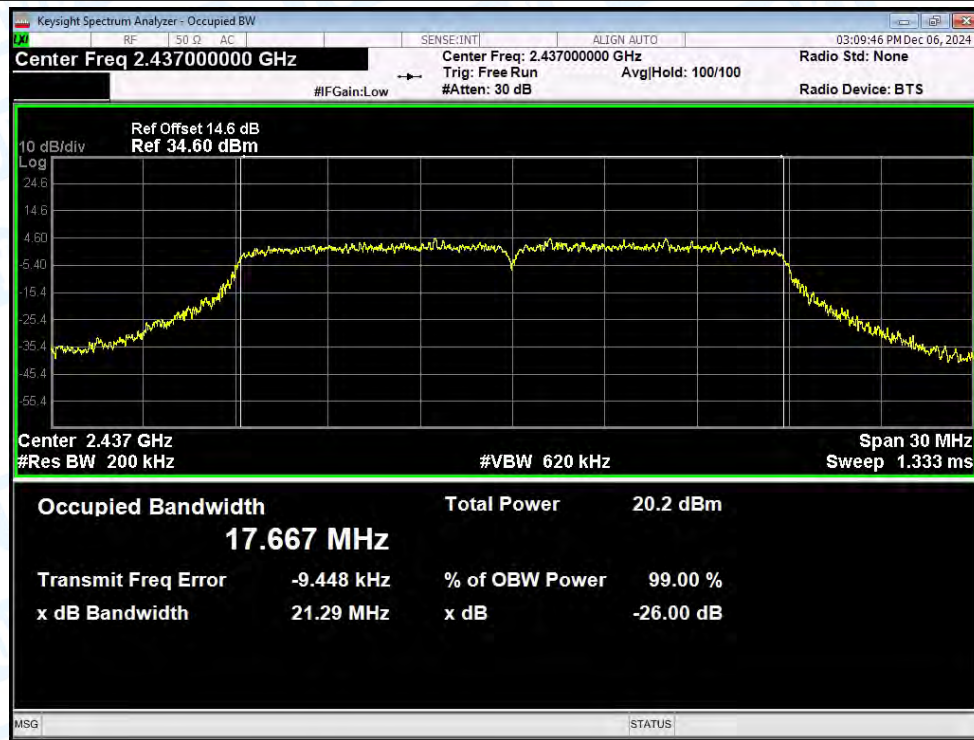
OBW NVNT g 2462MHz Ant1

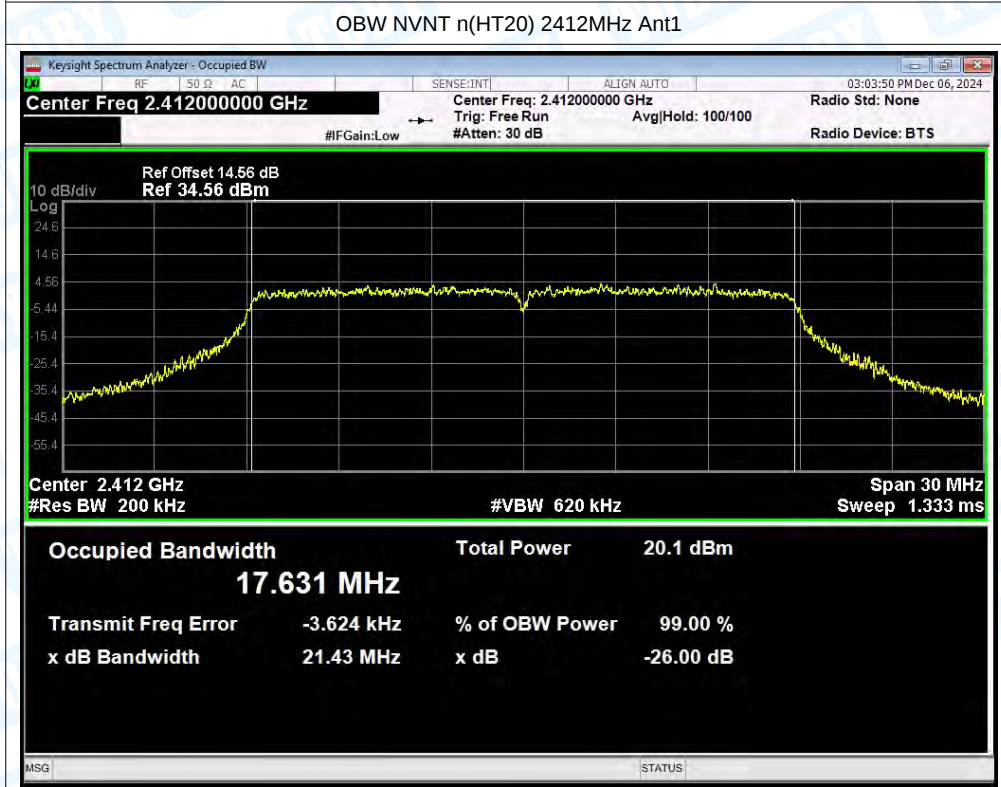
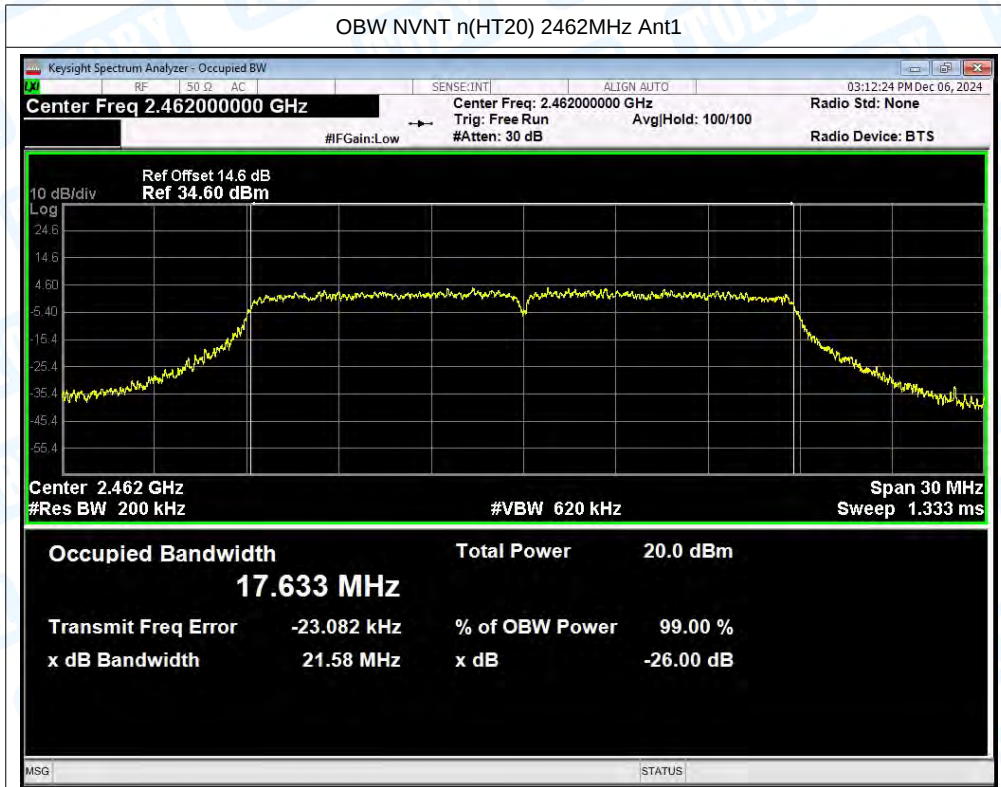


OBW NVNT n(HT20) 2412MHz Ant1

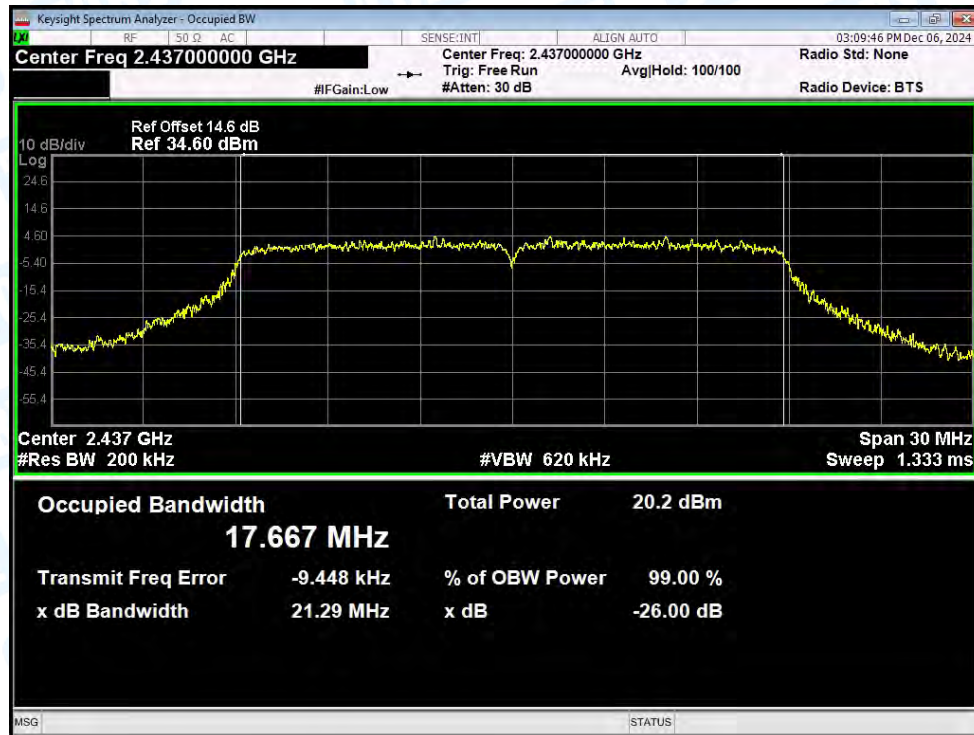


OBW NVNT n(HT20) 2437MHz Ant1

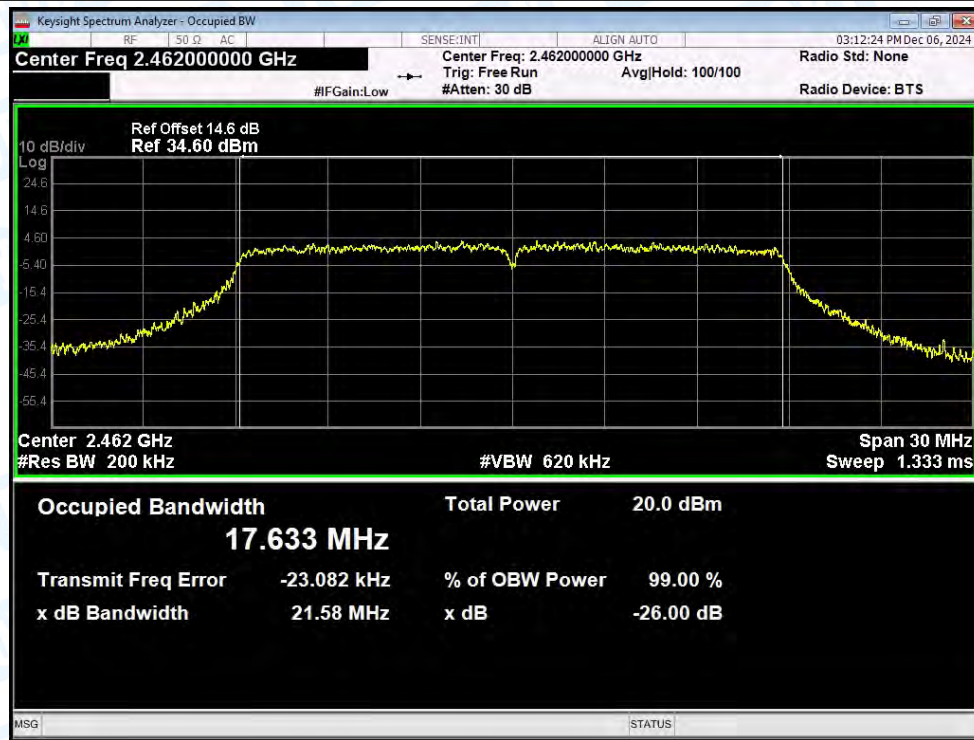




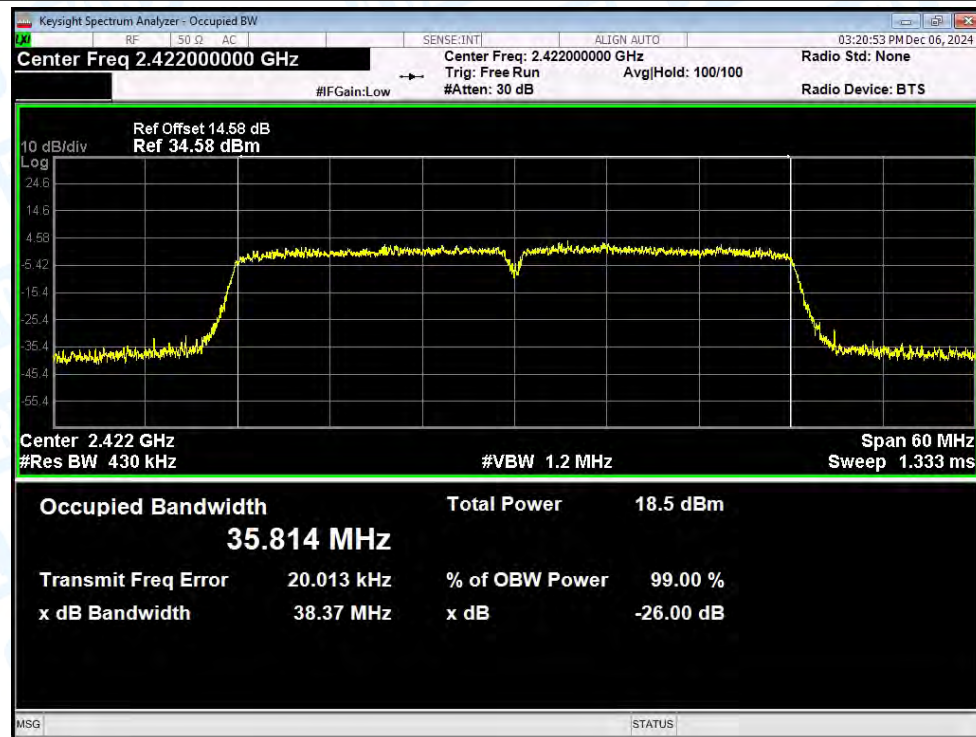
OBW NVNT n(HT20) 2437MHz Ant1



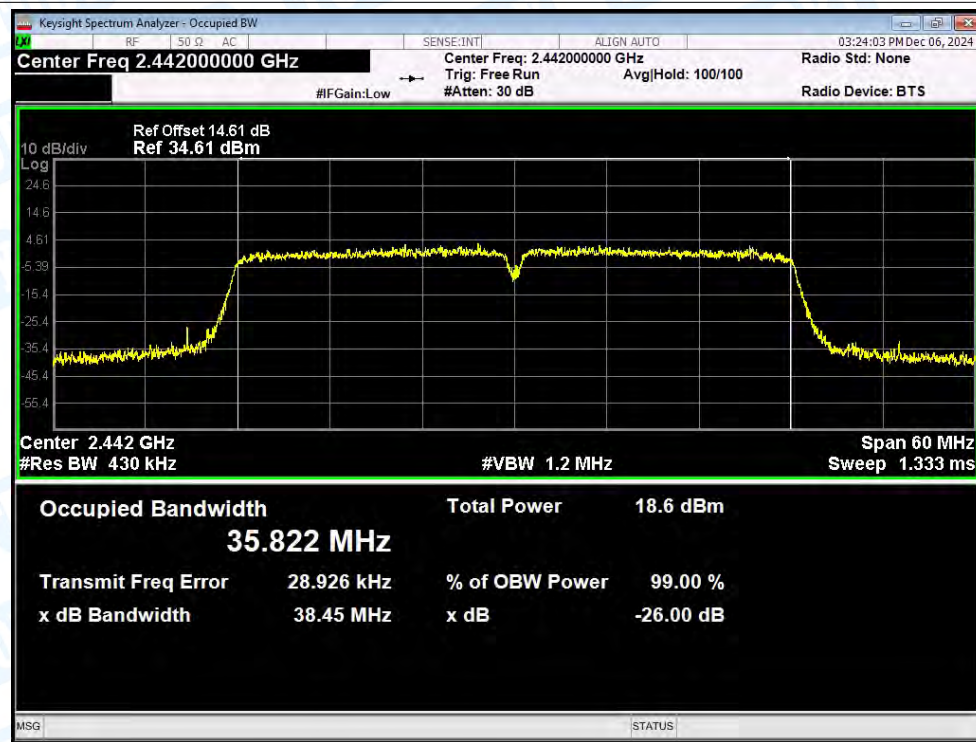
OBW NVNT n(HT20) 2462MHz Ant1



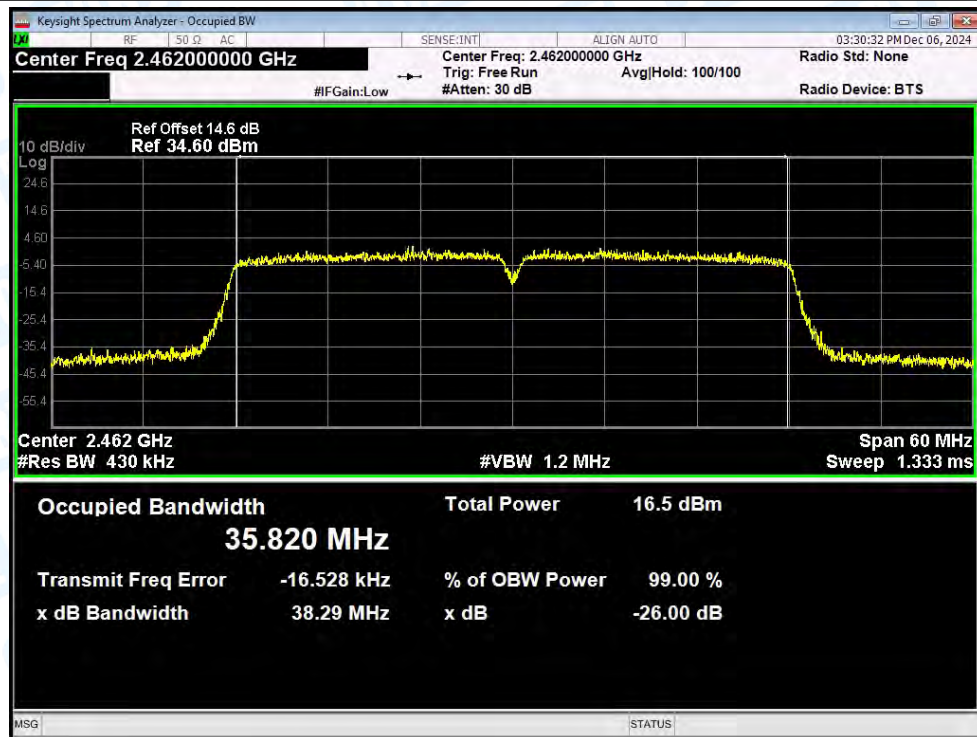
OBW NVNT n(HT40) 2422MHz Ant1



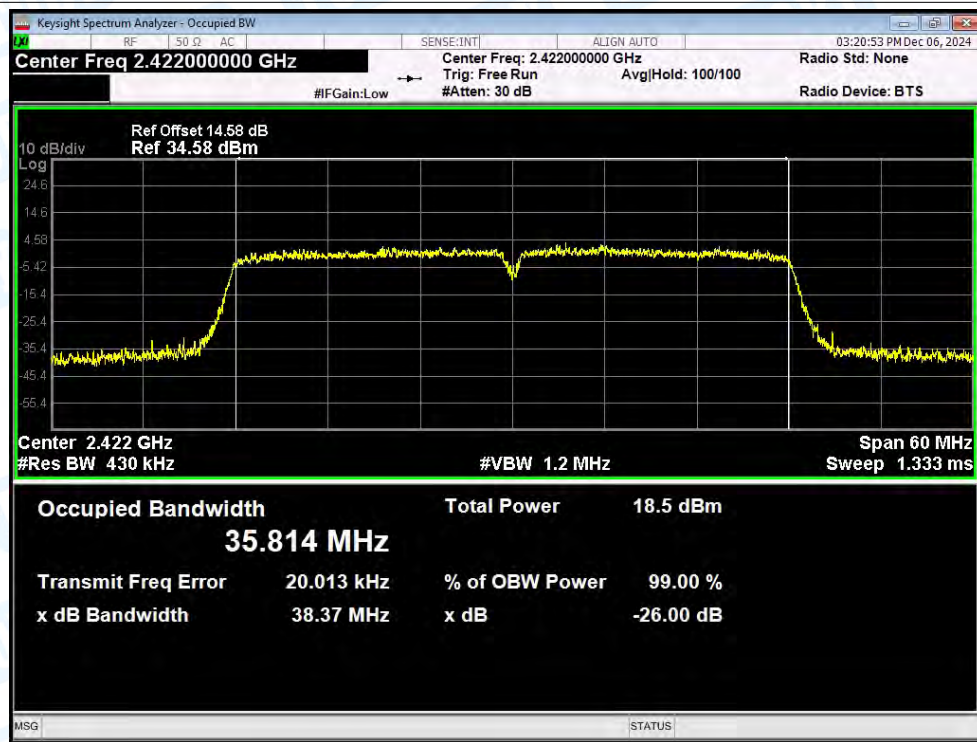
OBW NVNT n(HT40) 2442MHz Ant1



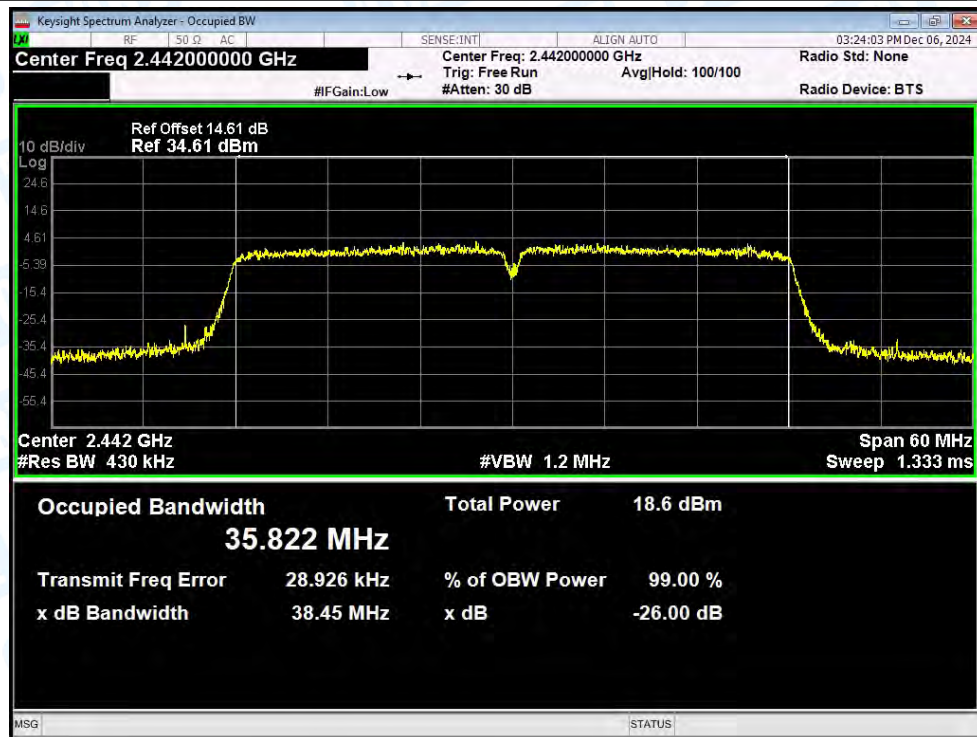
OBW NVNT n(HT40) 2462MHz Ant1



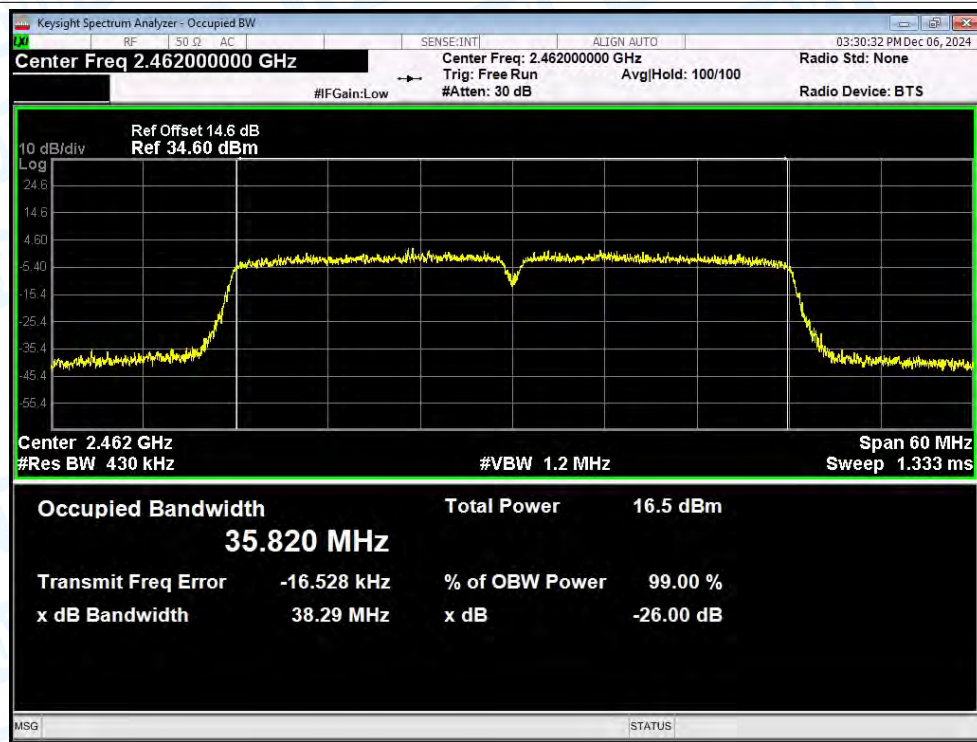
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2442MHz Ant1



OBW NVNT n(HT40) 2462MHz Ant1



6. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-17.792	8	Pass
NVNT	b	2437	Ant1	-17.17	8	Pass
NVNT	b	2462	Ant1	-16.739	8	Pass
NVNT	g	2412	Ant1	-19.16	8	Pass
NVNT	g	2437	Ant1	-18.118	8	Pass
NVNT	g	2462	Ant1	-18.038	8	Pass
NVNT	n(HT20)	2412	Ant1	-19.973	8	Pass
NVNT	n(HT20)	2437	Ant1	-20.301	8	Pass
NVNT	n(HT20)	2462	Ant1	-20.058	8	Pass
NVNT	n(HT40)	2422	Ant1	-24.775	8	Pass
NVNT	n(HT40)	2442	Ant1	-24.817	8	Pass
NVNT	n(HT40)	2462	Ant1	-26.716	8	Pass