

APPENDIX 2.4G WIFI RF Test Data

Product Name: Automotive AI

Test Model: DGSD201

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	52%
ATM Pressure:	101.0 kPa
Test Engineer:	Leon Li
Supervised by:	Baret Wu



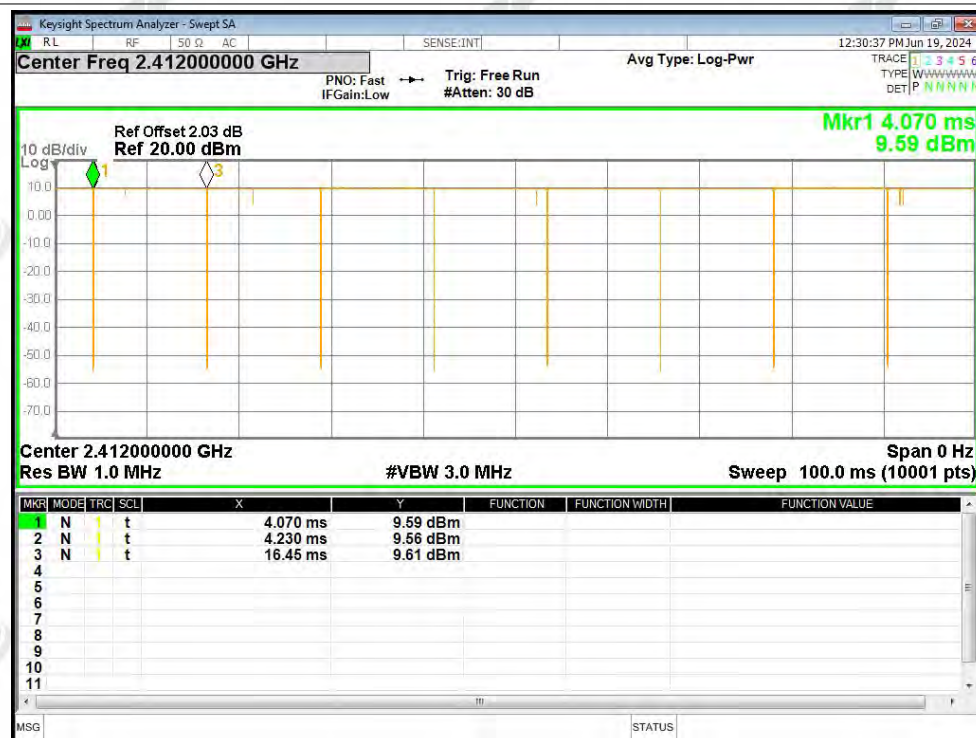
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	98.71	0	0.08
NVNT	b	2437	Ant1	99.43	0	0.08
NVNT	b	2462	Ant1	98.63	0	0.08
NVNT	g	2412	Ant1	95.31	0.21	0.49
NVNT	g	2437	Ant1	93.12	0.31	0.49
NVNT	g	2462	Ant1	95.33	0.21	0.49
NVNT	n20	2412	Ant1	97.42	0.11	0.53
NVNT	n20	2437	Ant1	94.5	0.25	0.53
NVNT	n20	2462	Ant1	90.43	0.44	0.53
NVNT	n40	2422	Ant1	85.32	0.69	1.08
NVNT	n40	2437	Ant1	89.52	0.48	1.06
NVNT	n40	2452	Ant1	86.11	0.65	1.08
NVNT	ax20	2412	Ant1	93.55	0.29	0.69
NVNT	ax20	2437	Ant1	94.77	0.23	0.69
NVNT	ax20	2462	Ant1	96.67	0.15	0.69
NVNT	ax40	2422	Ant1	89.29	0.49	1.33
NVNT	ax40	2437	Ant1	81.52	0.89	1.33
NVNT	ax40	2452	Ant1	88.24	0.54	1.33

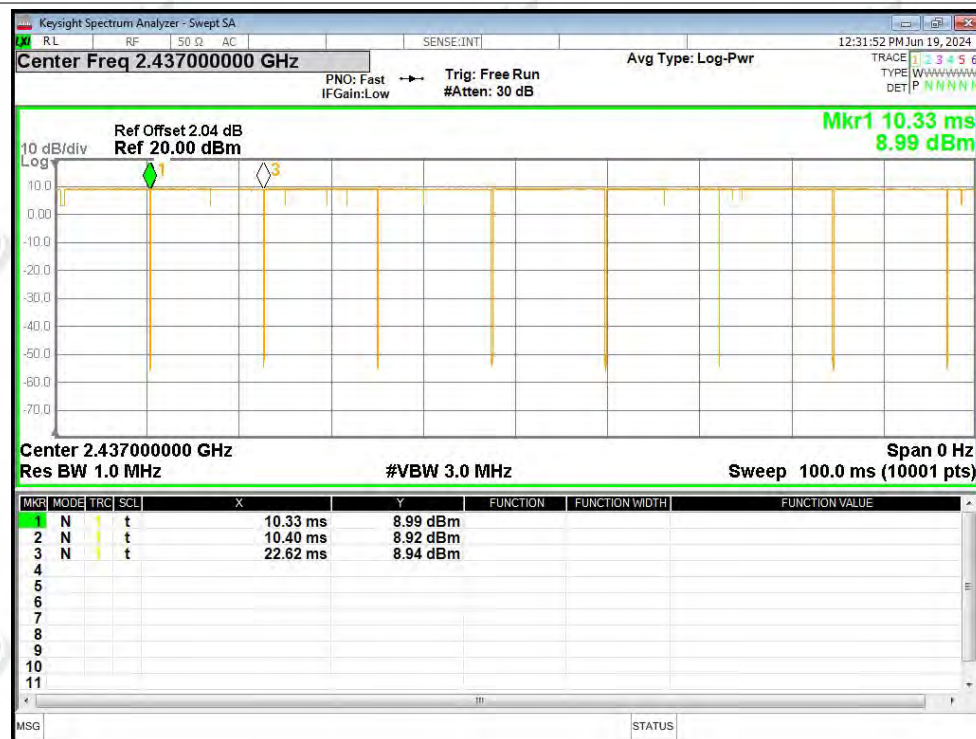


Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

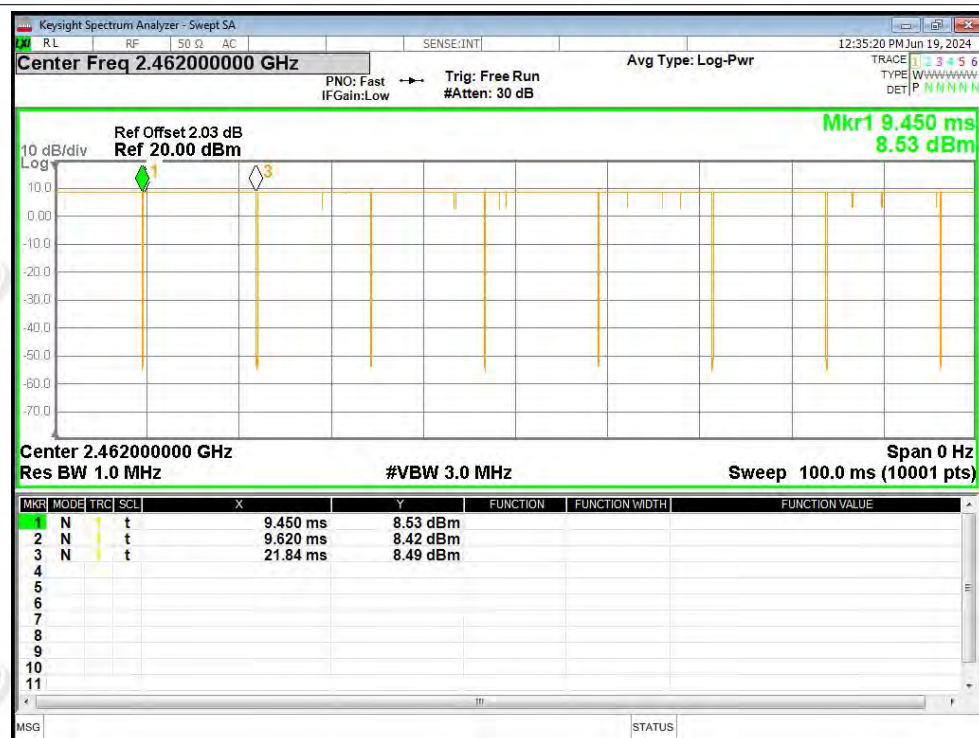


Duty Cycle NVNT b 2437MHz Ant1

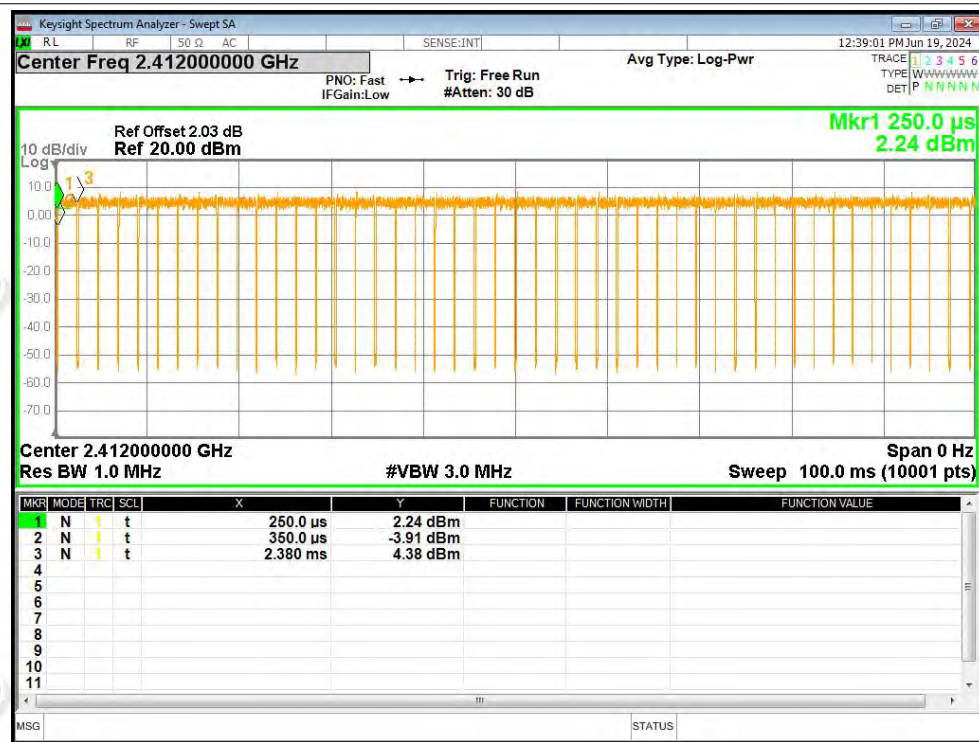




Duty Cycle NVNT b 2462MHz Ant1

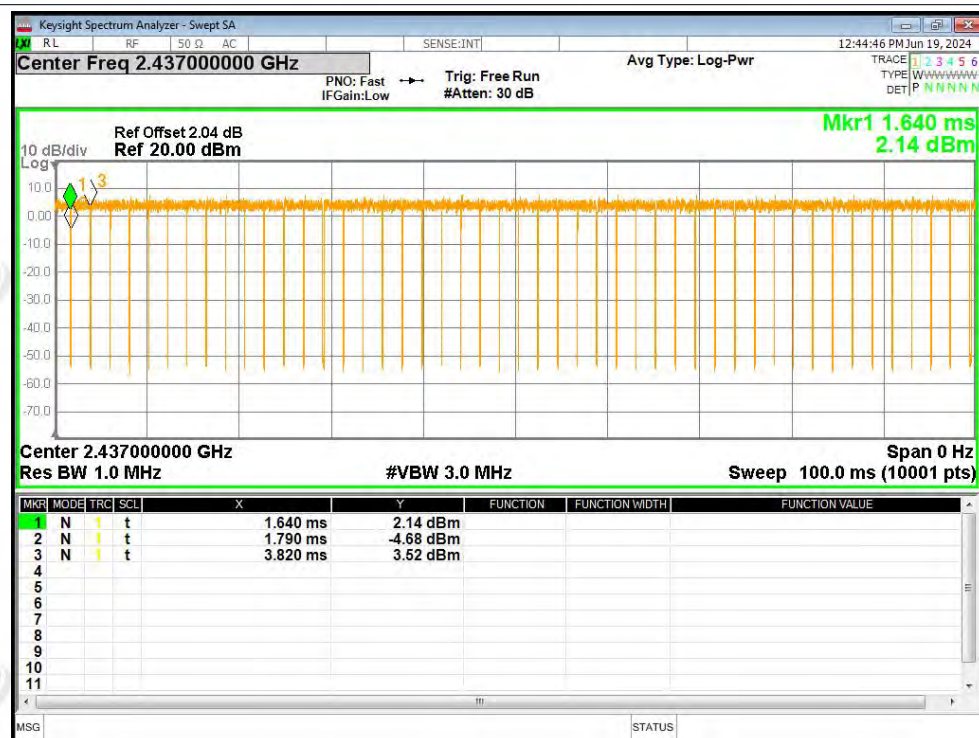


Duty Cycle NVNT g 2412MHz Ant1

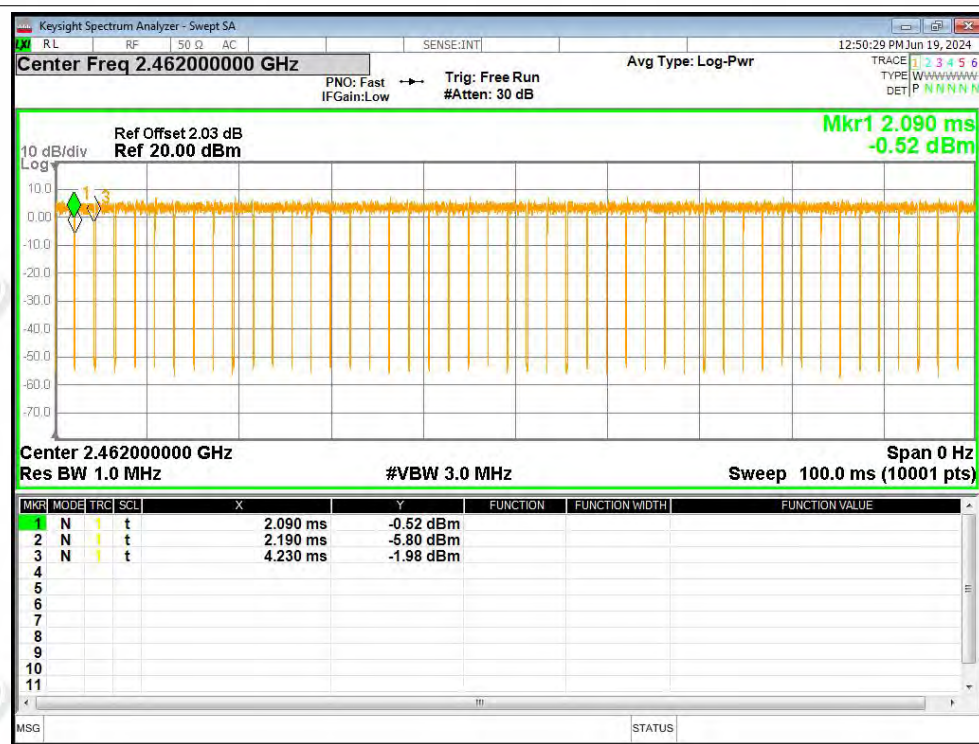




Duty Cycle NVNT g 2437MHz Ant1

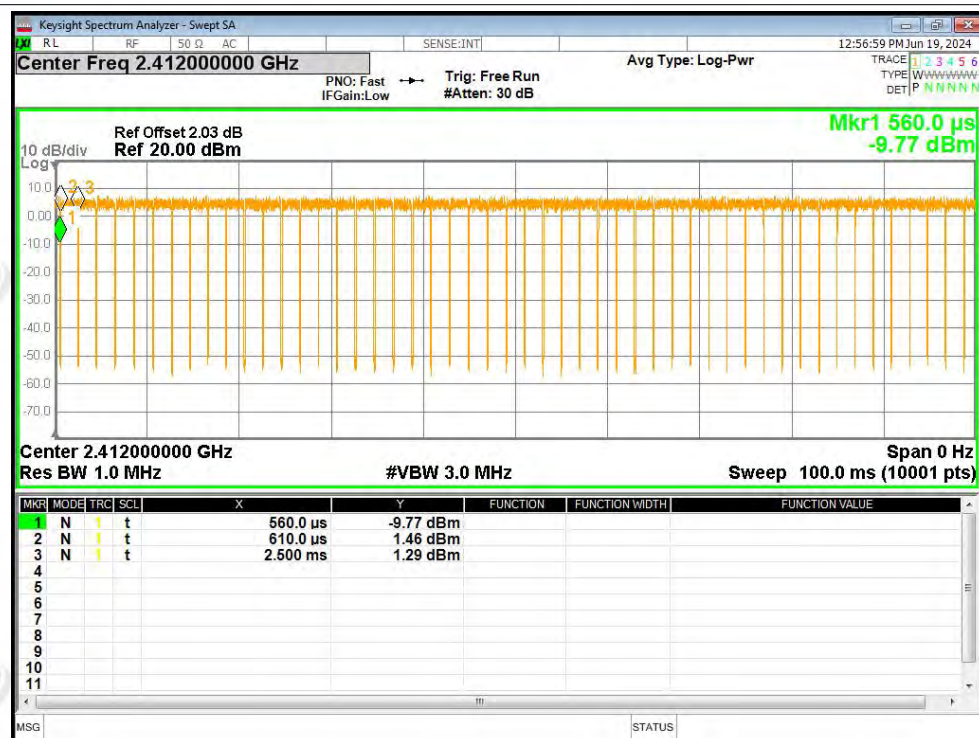


Duty Cycle NVNT g 2462MHz Ant1

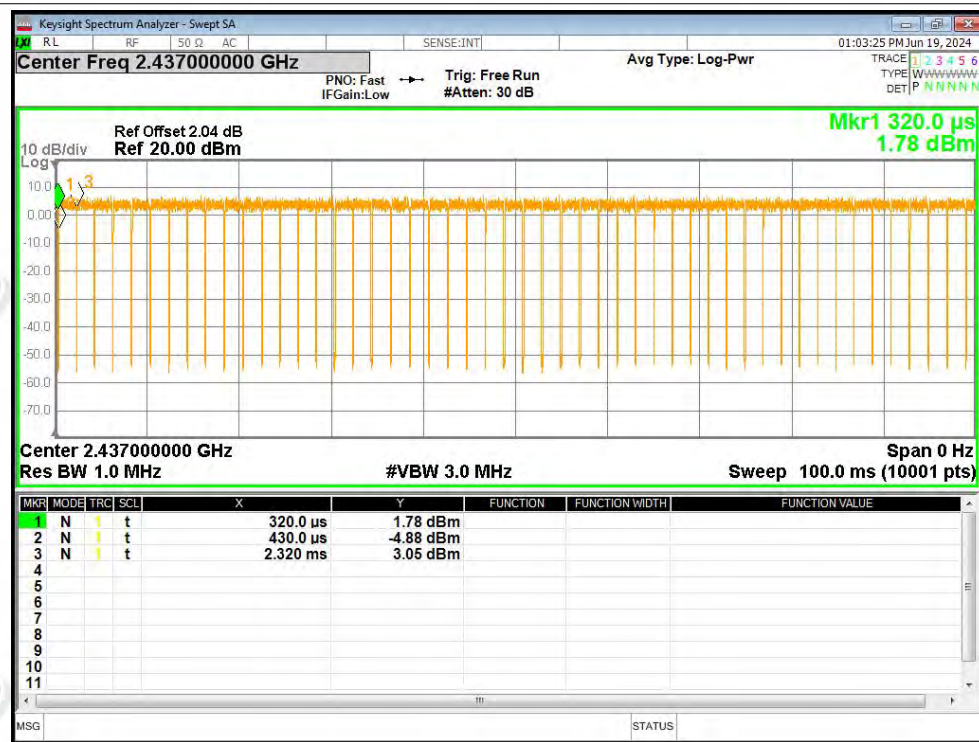




Duty Cycle NVNT n20 2412MHz Ant1

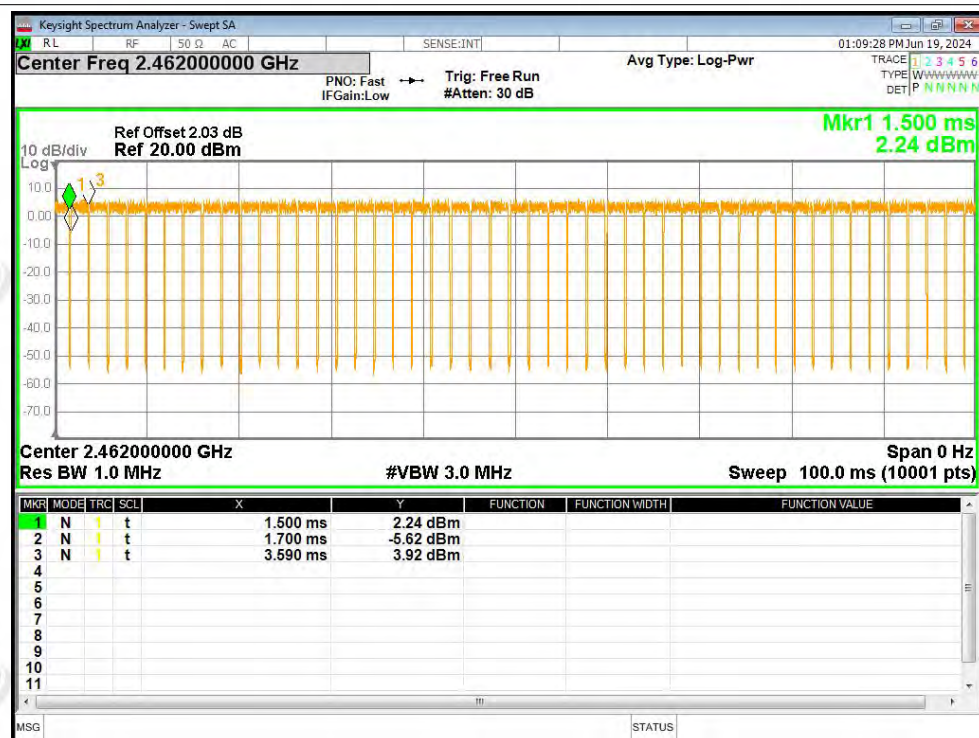


Duty Cycle NVNT n20 2437MHz Ant1

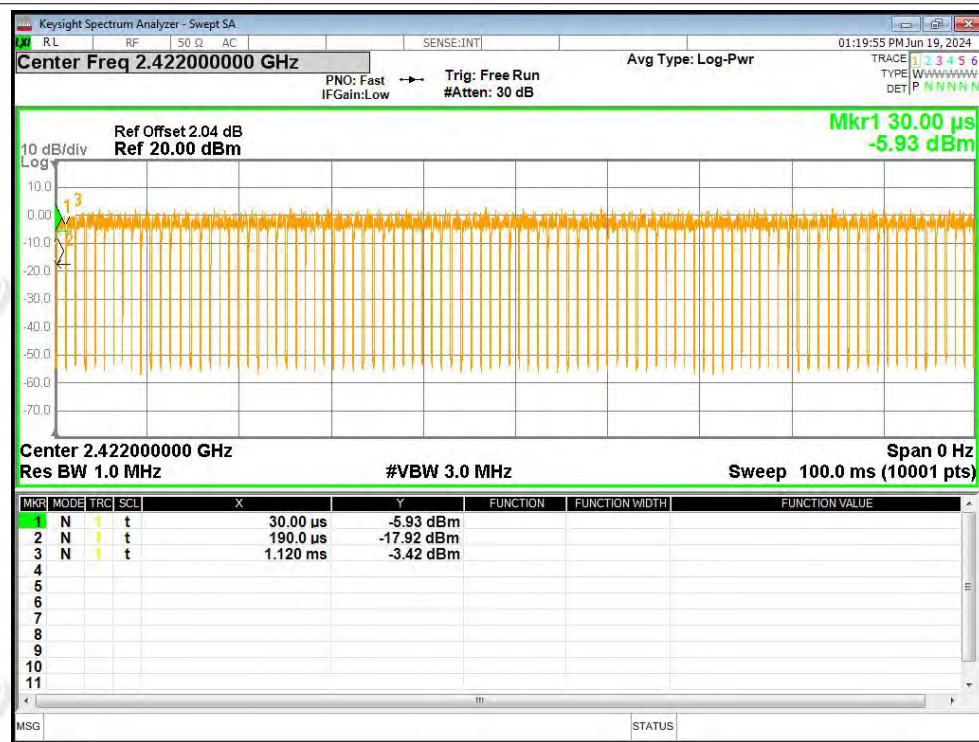




Duty Cycle NVNT n20 2462MHz Ant1

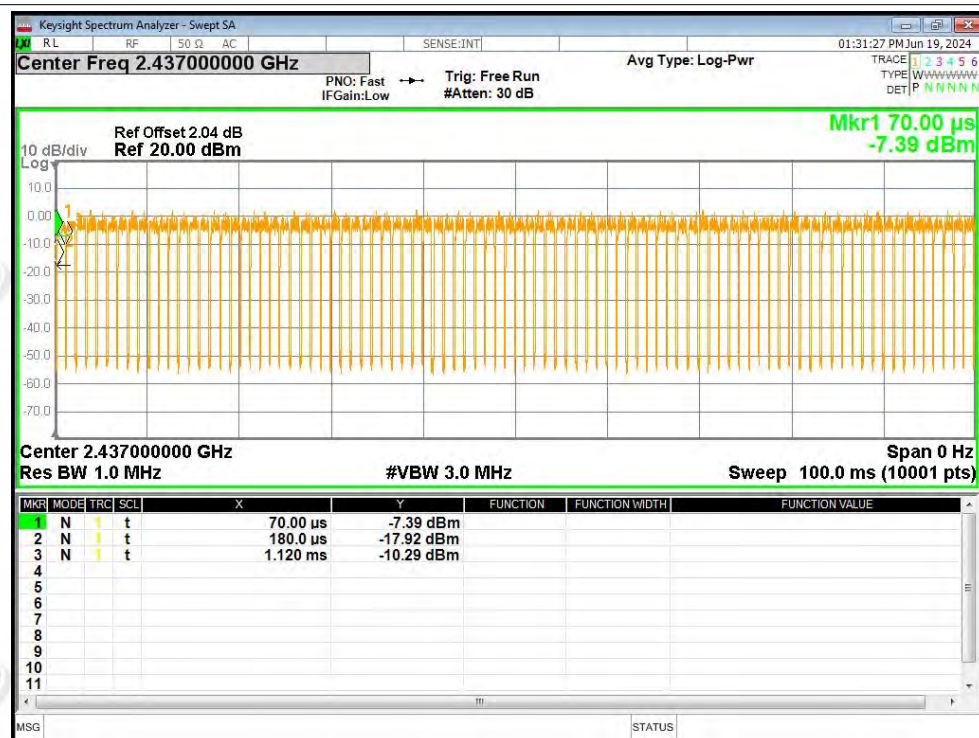


Duty Cycle NVNT n40 2422MHz Ant1

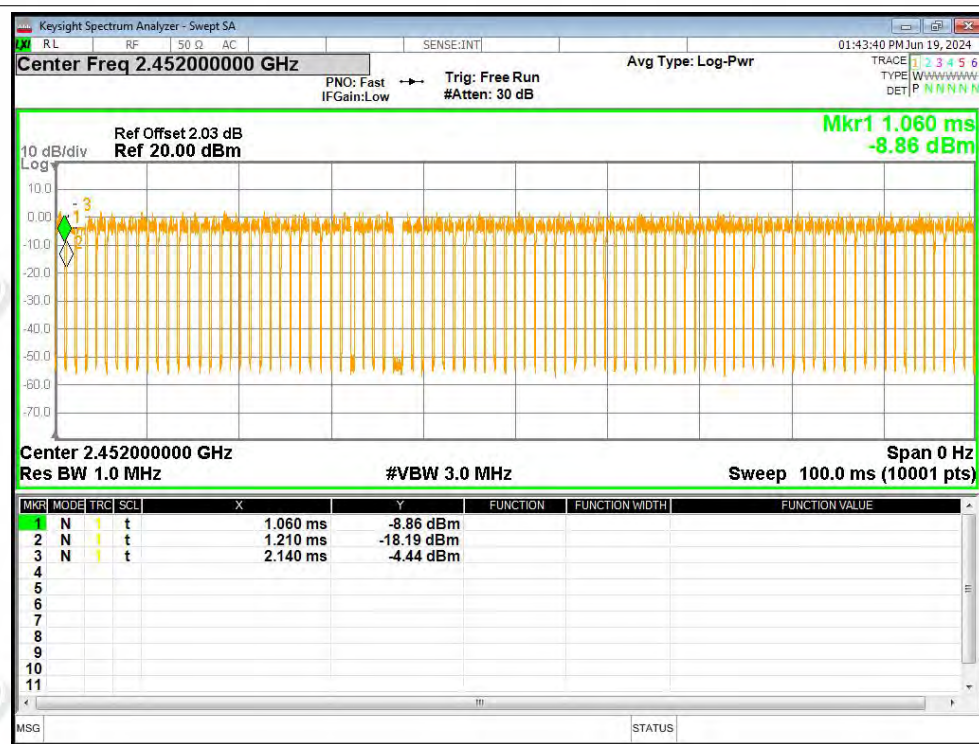




Duty Cycle NVNT n40 2437MHz Ant1

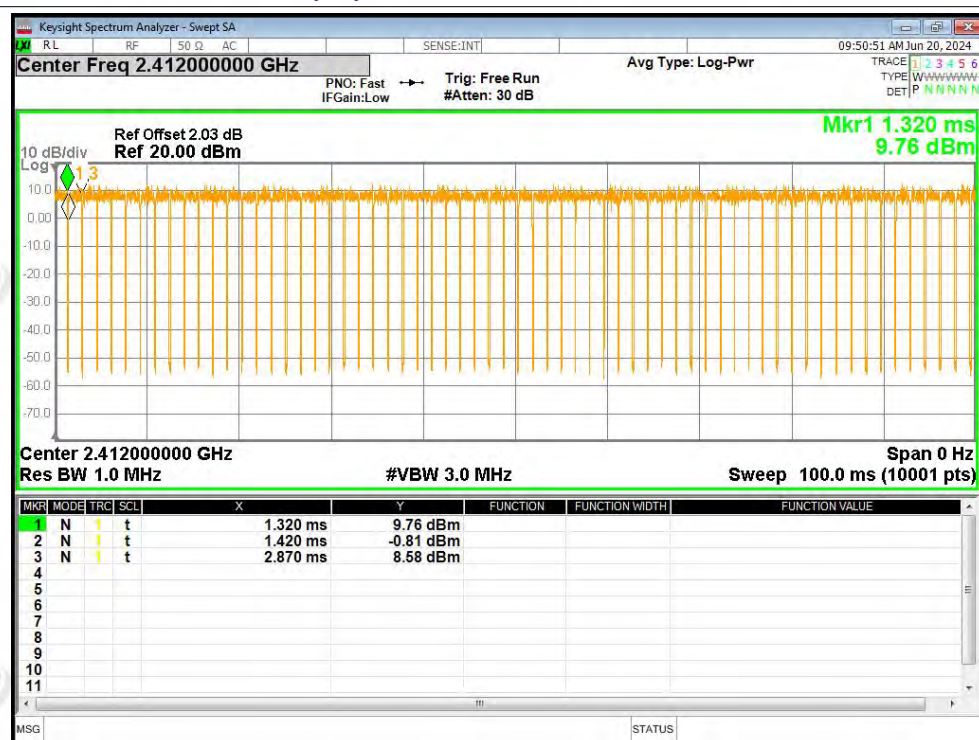


Duty Cycle NVNT n40 2452MHz Ant1

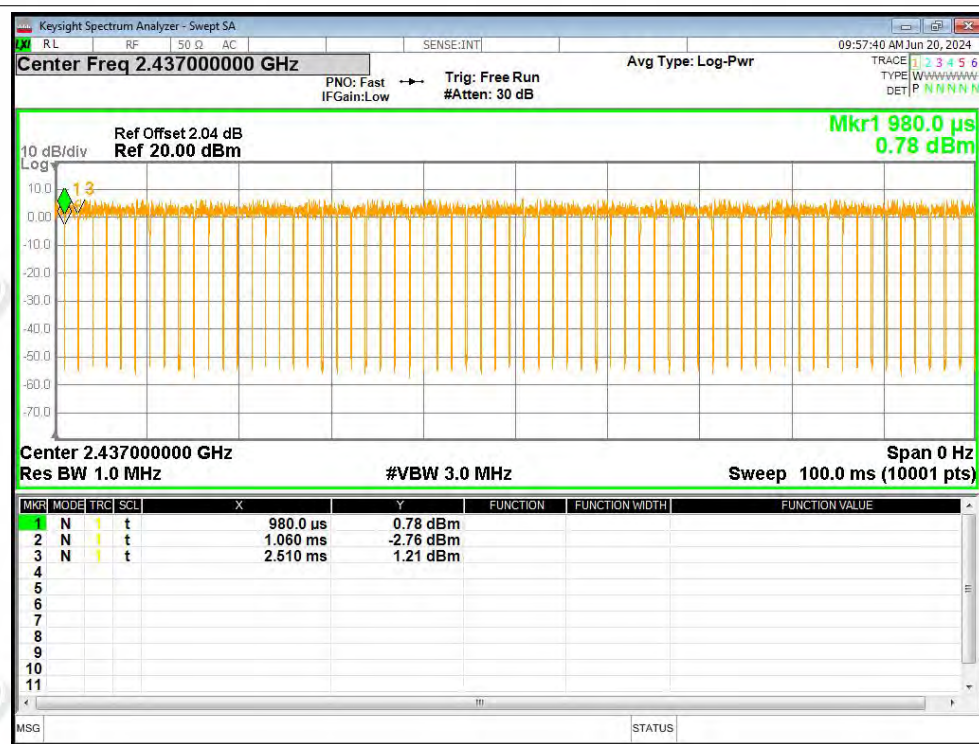




Duty Cycle NVNT ax20 2412MHz Ant1

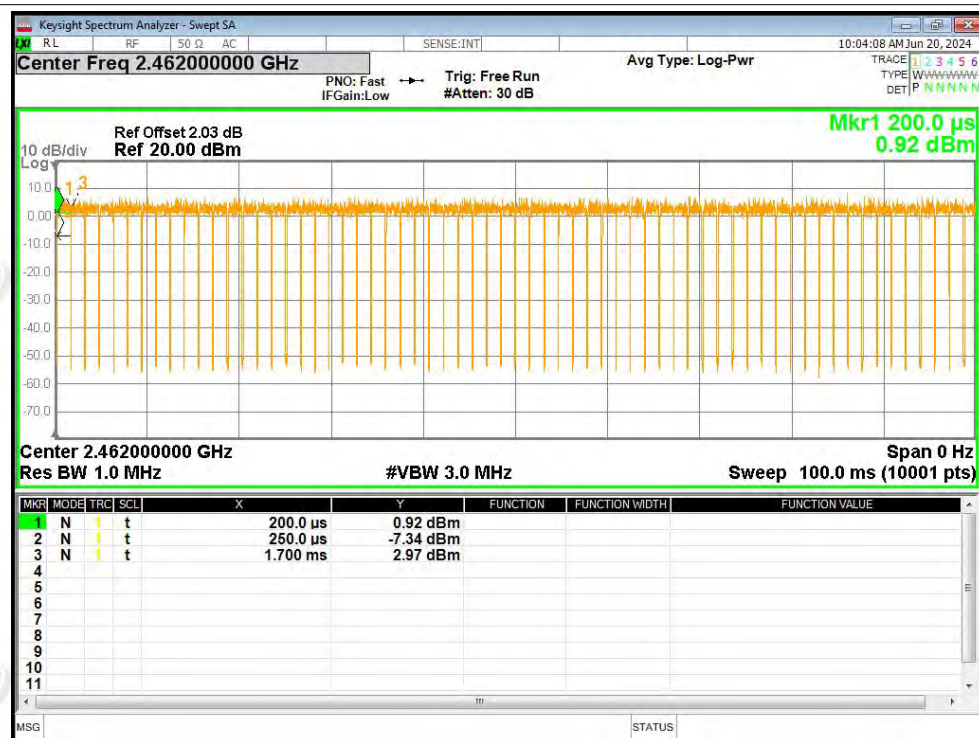


Duty Cycle NVNT ax20 2437MHz Ant1

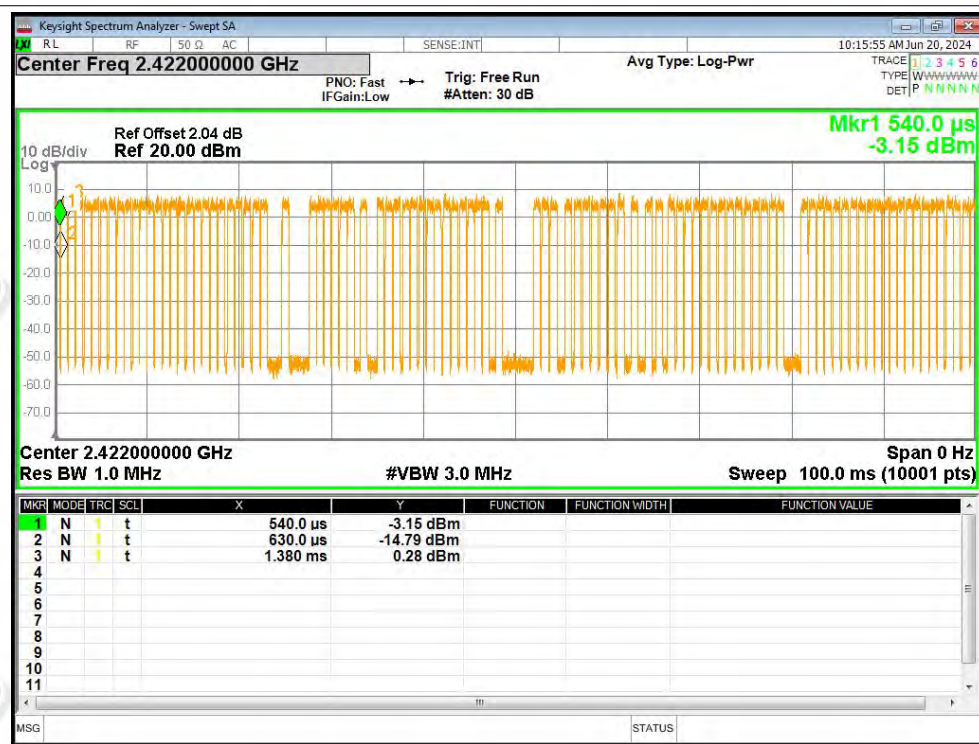




Duty Cycle NVNT ax20 2462MHz Ant1

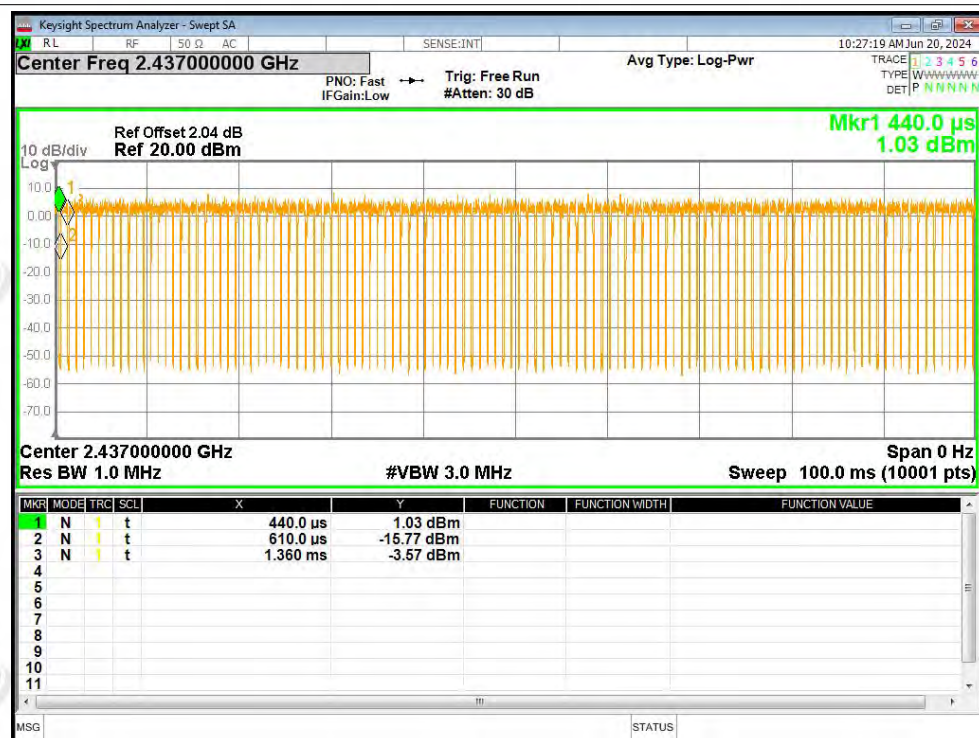


Duty Cycle NVNT ax40 2422MHz Ant1

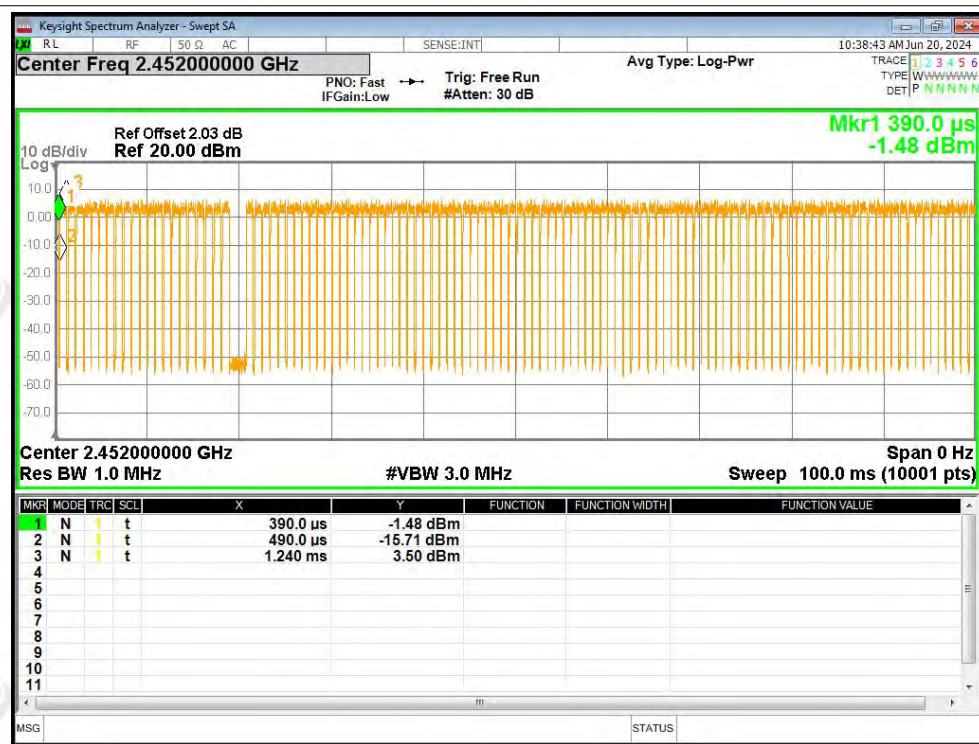




Duty Cycle NVNT ax40 2437MHz Ant1



Duty Cycle NVNT ax40 2452MHz Ant1



**ZHONGHAN****Maximum Peak Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.82	30	Pass
NVNT	b	2437	Ant1	15.16	30	Pass
NVNT	b	2462	Ant1	14.7	30	Pass
NVNT	g	2412	Ant1	16.47	30	Pass
NVNT	g	2437	Ant1	15.85	30	Pass
NVNT	g	2462	Ant1	15.32	30	Pass
NVNT	n20	2412	Ant1	16.53	30	Pass
NVNT	n20	2437	Ant1	15.83	30	Pass
NVNT	n20	2462	Ant1	15.29	30	Pass
NVNT	n40	2422	Ant1	16.12	30	Pass
NVNT	n40	2437	Ant1	15.77	30	Pass
NVNT	n40	2452	Ant1	15.55	30	Pass
NVNT	ax20	2412	Ant1	20.48	30	Pass
NVNT	ax20	2437	Ant1	14.93	30	Pass
NVNT	ax20	2462	Ant1	15.29	30	Pass
NVNT	ax40	2422	Ant1	20.54	30	Pass
NVNT	ax40	2437	Ant1	19.6	30	Pass
NVNT	ax40	2452	Ant1	19.41	30	Pass

**ZHONGHAN**
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	7.583	0.5	Pass
NVNT	b	2437	Ant1	8.008	0.5	Pass
NVNT	b	2462	Ant1	7.553	0.5	Pass
NVNT	g	2412	Ant1	16.317	0.5	Pass
NVNT	g	2437	Ant1	16.332	0.5	Pass
NVNT	g	2462	Ant1	16.3	0.5	Pass
NVNT	n20	2412	Ant1	17.589	0.5	Pass
NVNT	n20	2437	Ant1	17.577	0.5	Pass
NVNT	n20	2462	Ant1	17.327	0.5	Pass
NVNT	n40	2422	Ant1	36.305	0.5	Pass
NVNT	n40	2437	Ant1	36.307	0.5	Pass
NVNT	n40	2452	Ant1	36.292	0.5	Pass
NVNT	ax20	2412	Ant1	18.906	0.5	Pass
NVNT	ax20	2437	Ant1	18.888	0.5	Pass
NVNT	ax20	2462	Ant1	18.902	0.5	Pass
NVNT	ax40	2422	Ant1	37.892	0.5	Pass
NVNT	ax40	2437	Ant1	37.832	0.5	Pass
NVNT	ax40	2452	Ant1	37.746	0.5	Pass

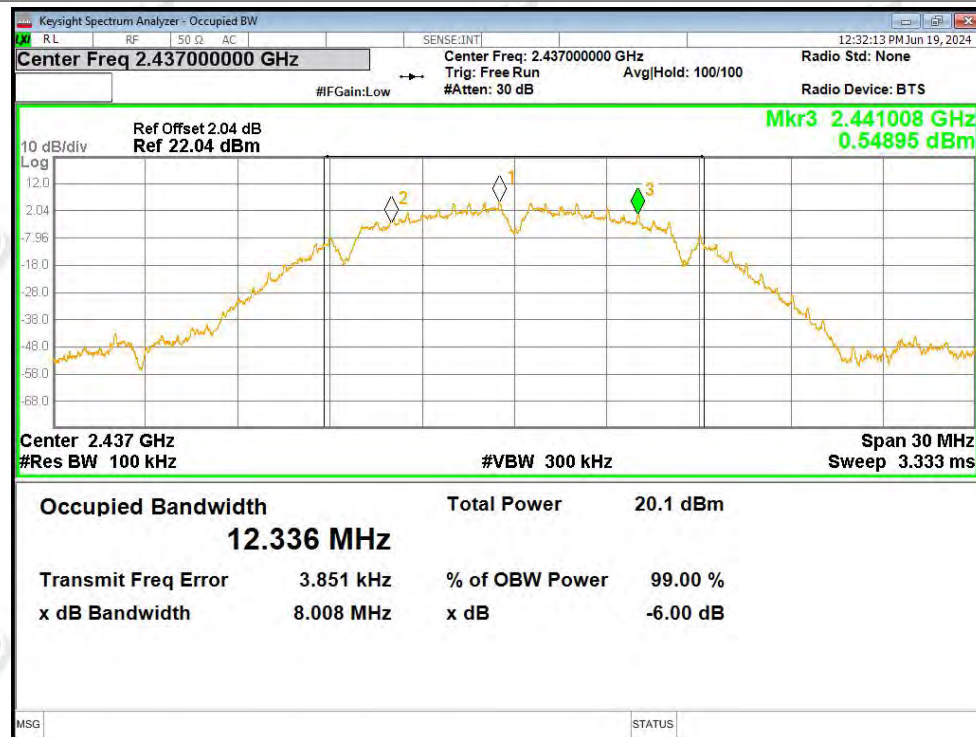


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

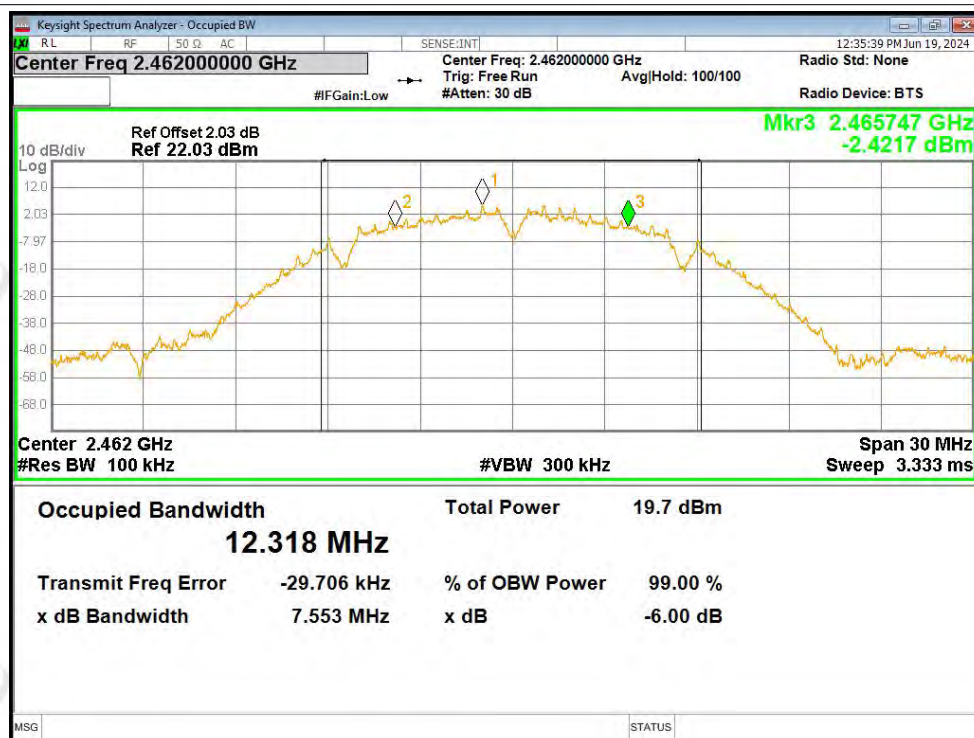


-6dB Bandwidth NVNT b 2437MHz Ant1

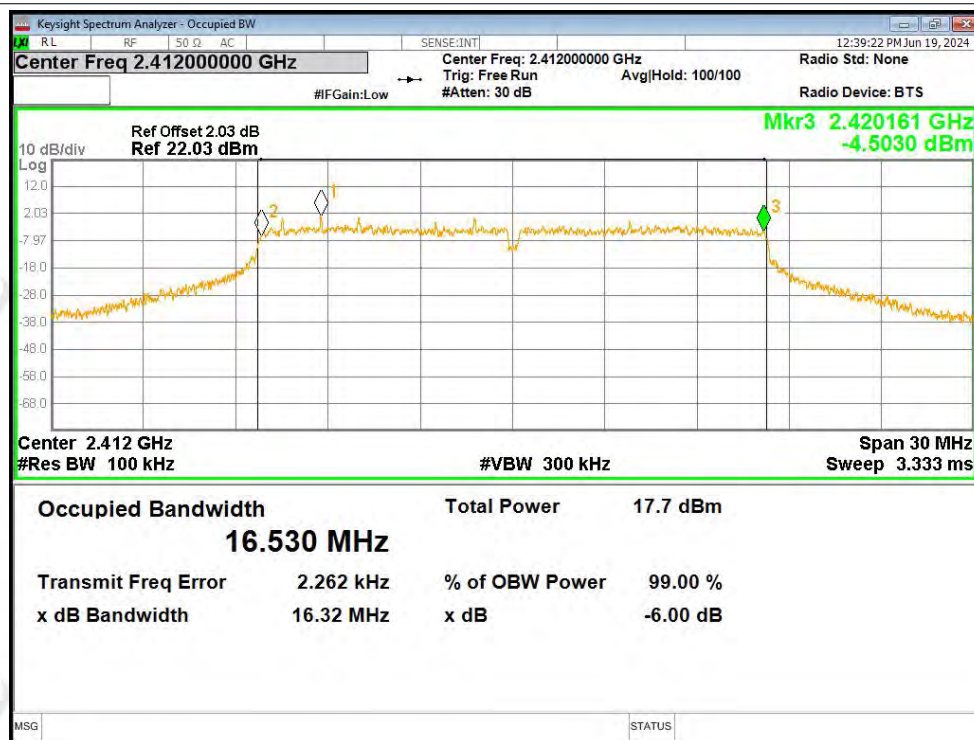




-6dB Bandwidth NVNT b 2462MHz Ant1

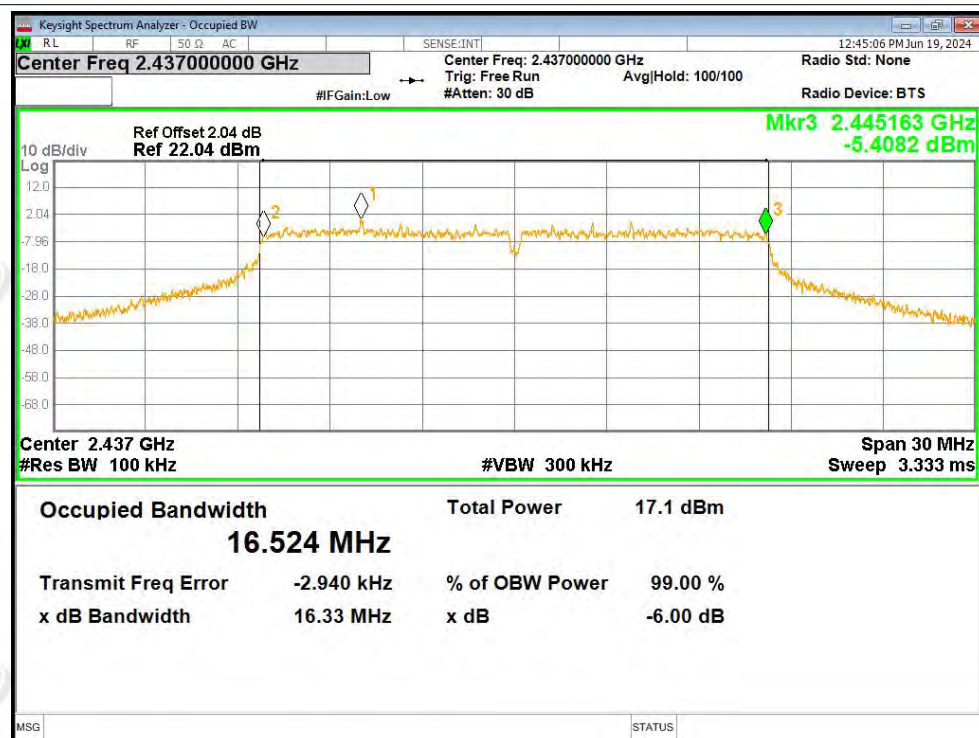


-6dB Bandwidth NVNT g 2412MHz Ant1

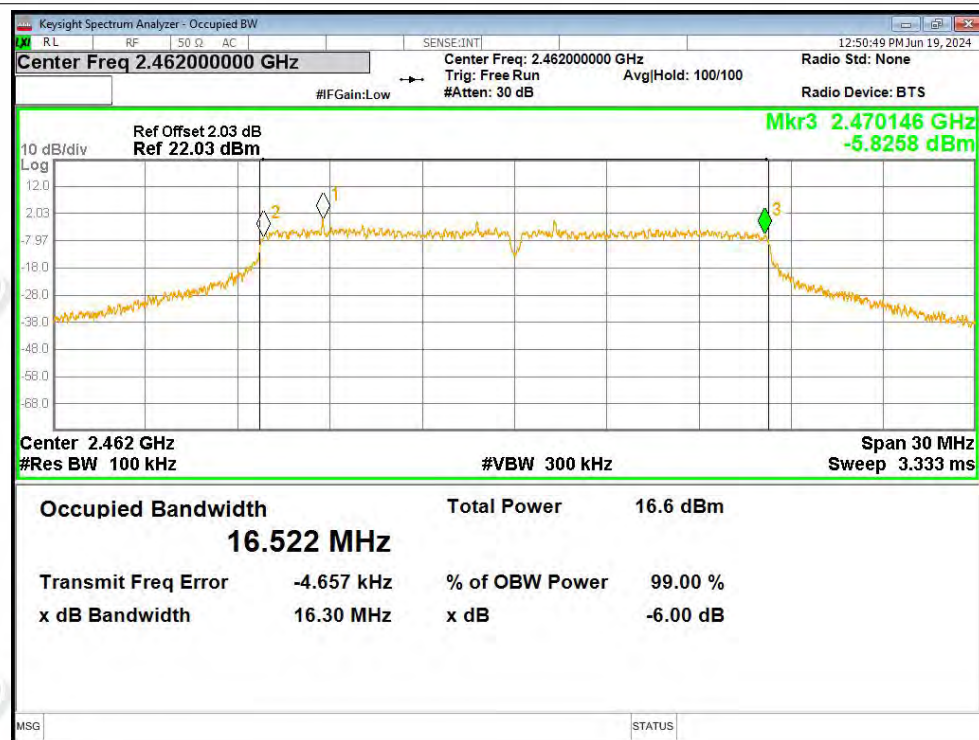




-6dB Bandwidth NVNT g 2437MHz Ant1

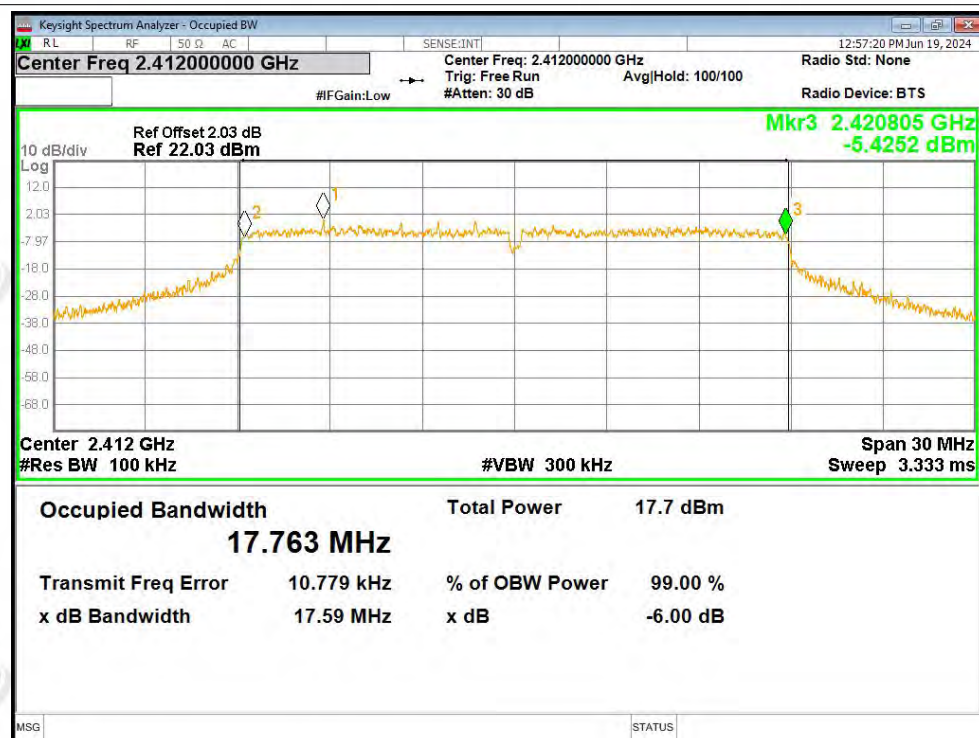


-6dB Bandwidth NVNT g 2462MHz Ant1

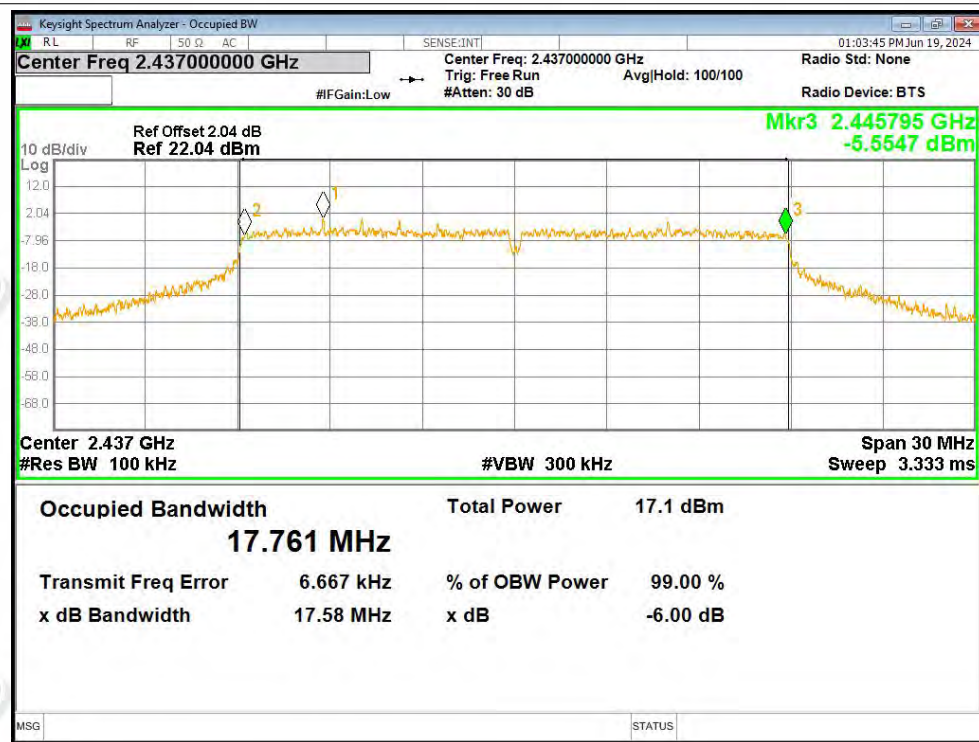




-6dB Bandwidth NVNT n20 2412MHz Ant1

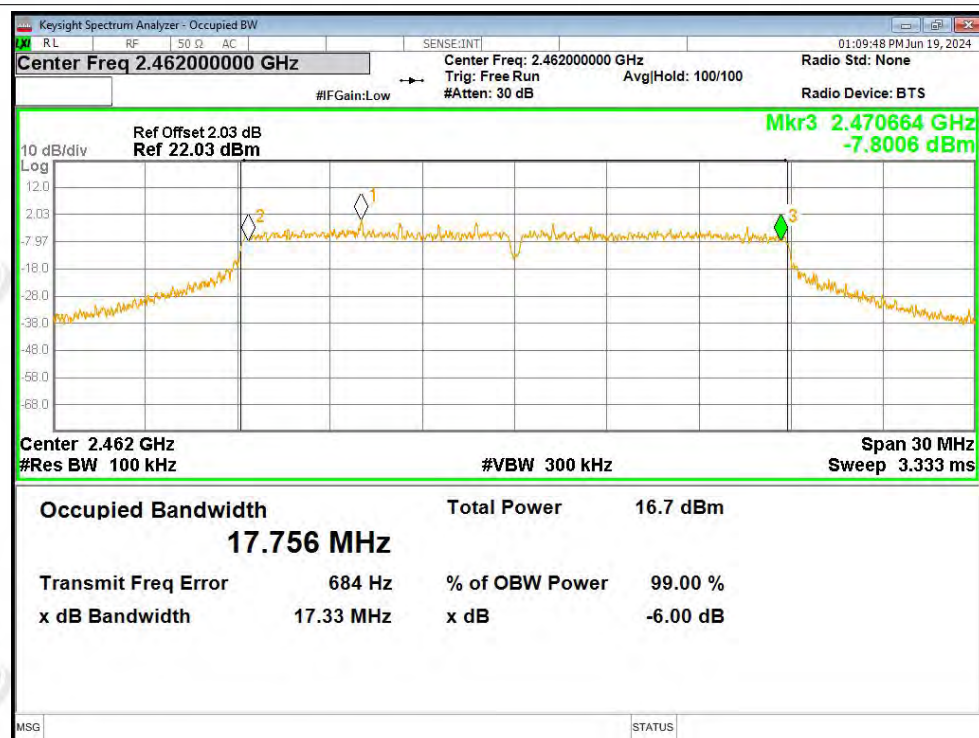


-6dB Bandwidth NVNT n20 2437MHz Ant1

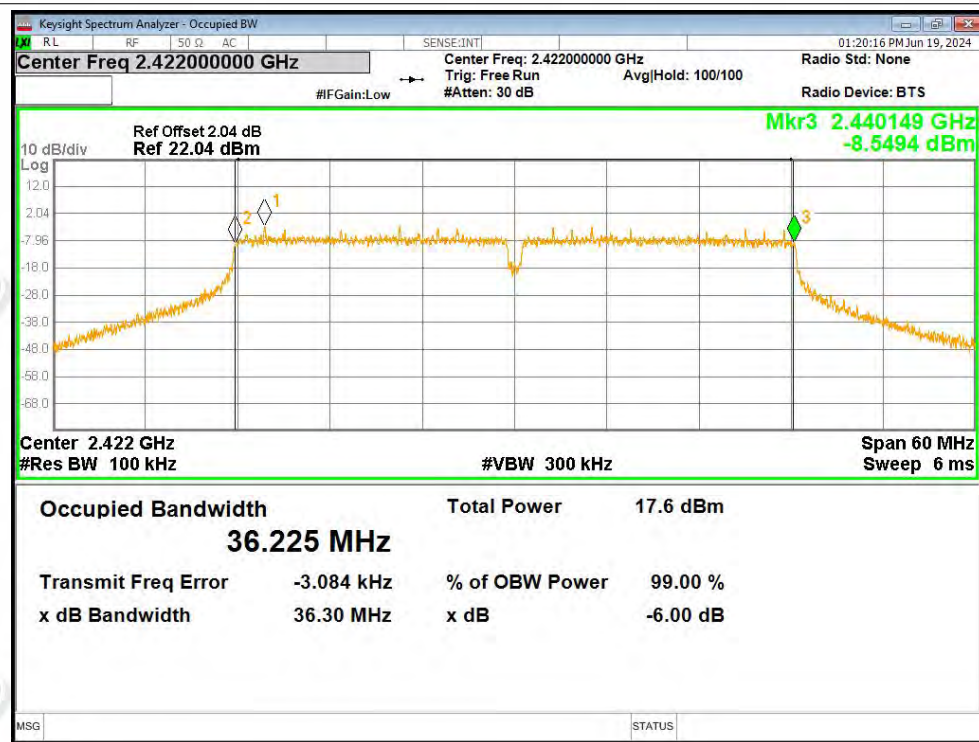




-6dB Bandwidth NVNT n20 2462MHz Ant1

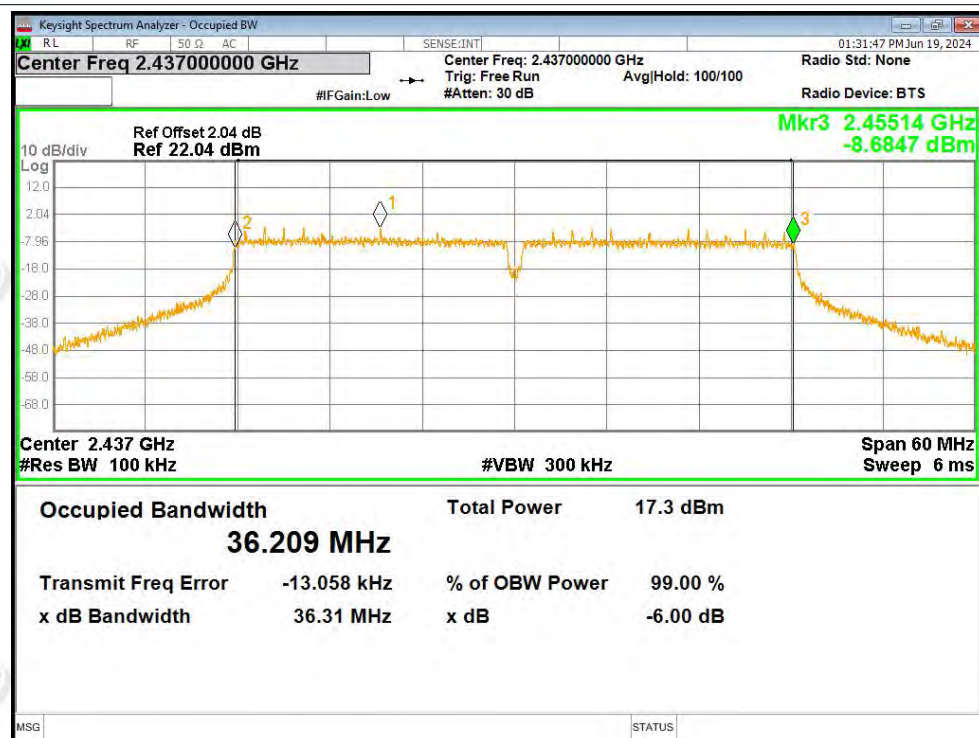


-6dB Bandwidth NVNT n40 2422MHz Ant1

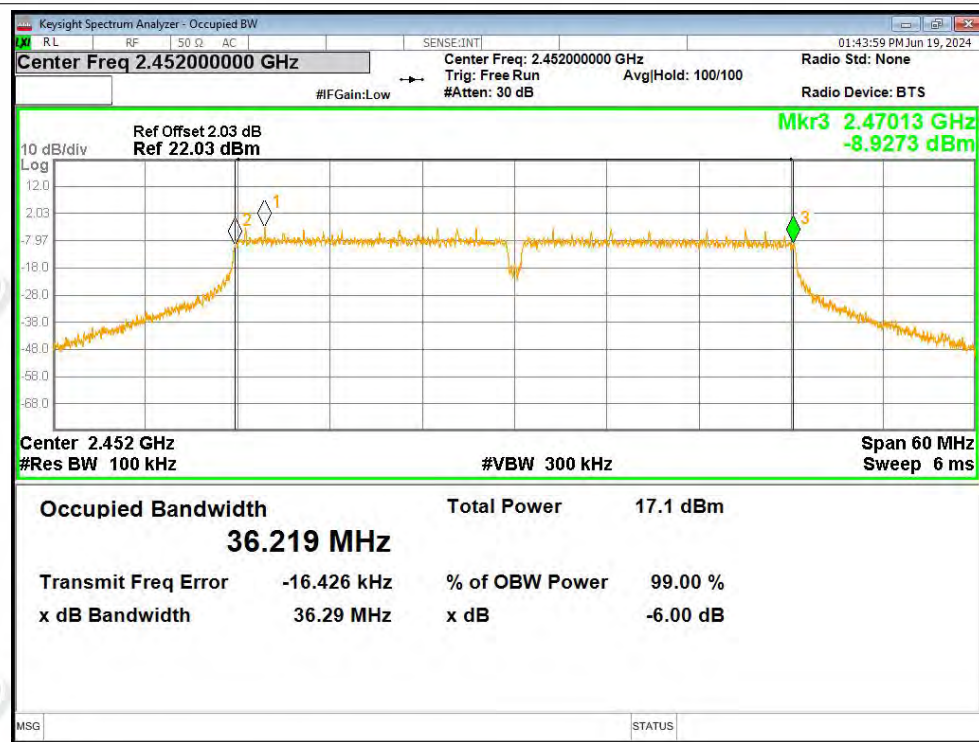




-6dB Bandwidth NVNT n40 2437MHz Ant1

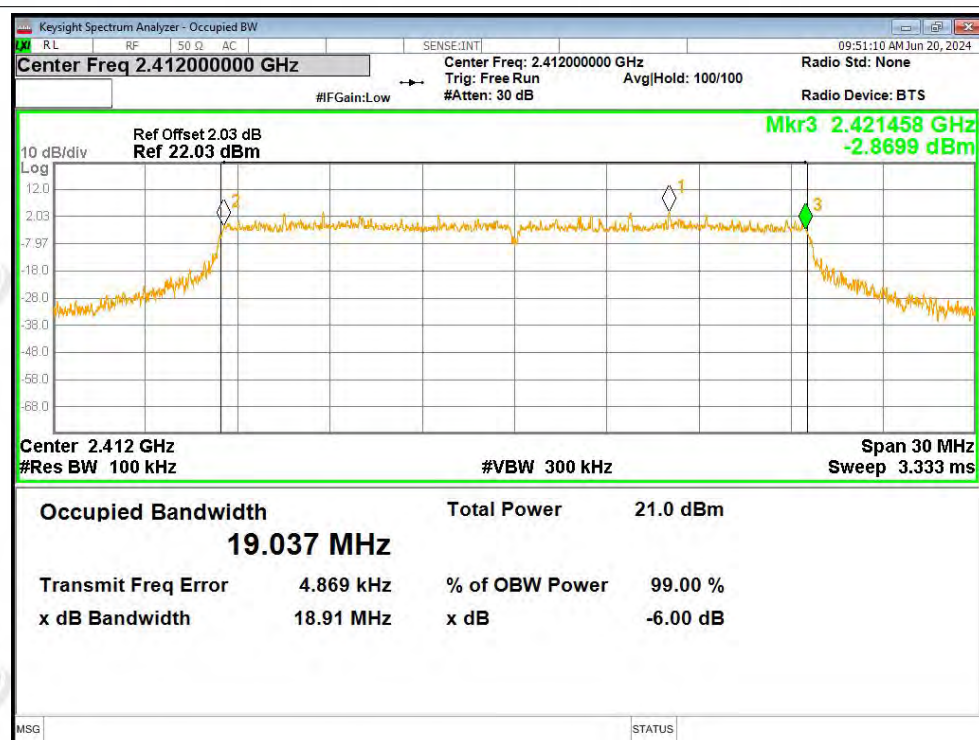


-6dB Bandwidth NVNT n40 2452MHz Ant1

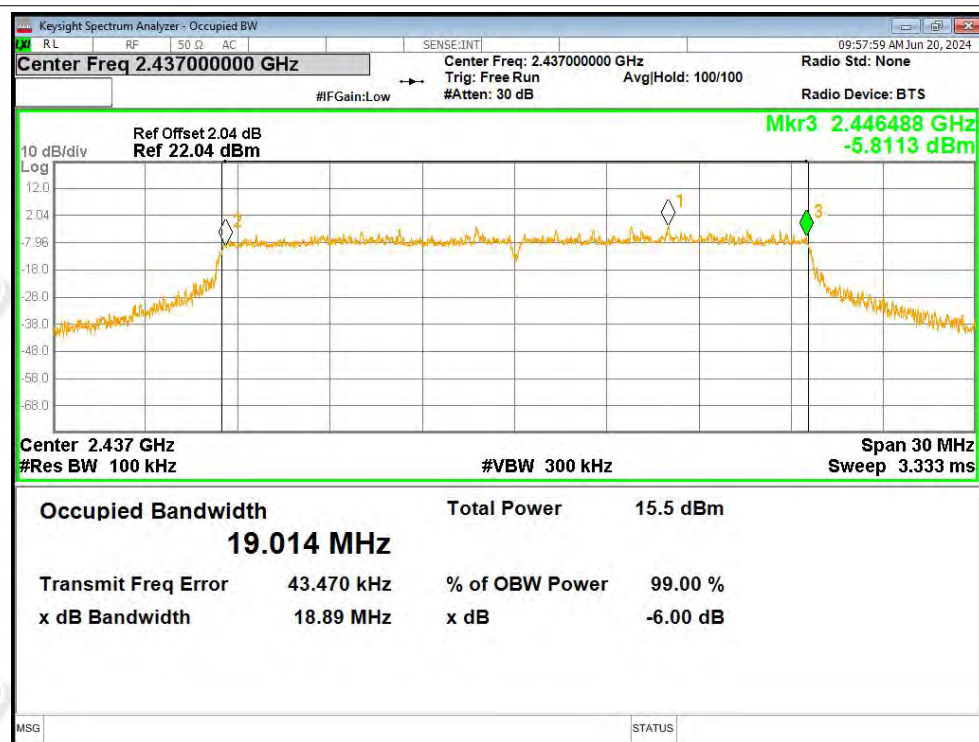




-6dB Bandwidth NVNT ax20 2412MHz Ant1

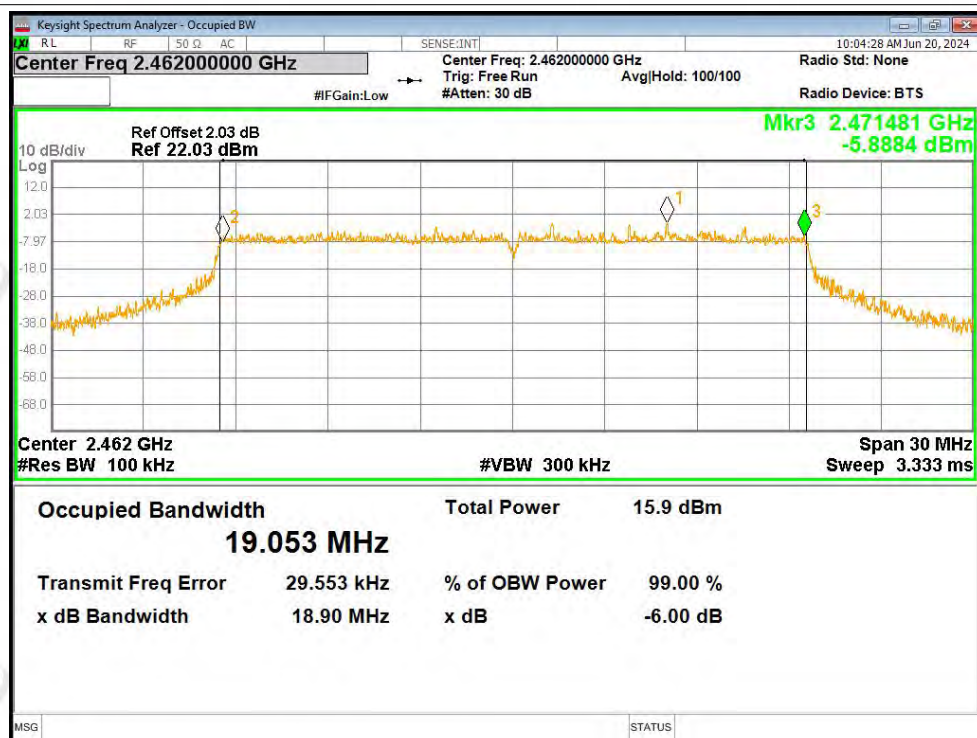


-6dB Bandwidth NVNT ax20 2437MHz Ant1

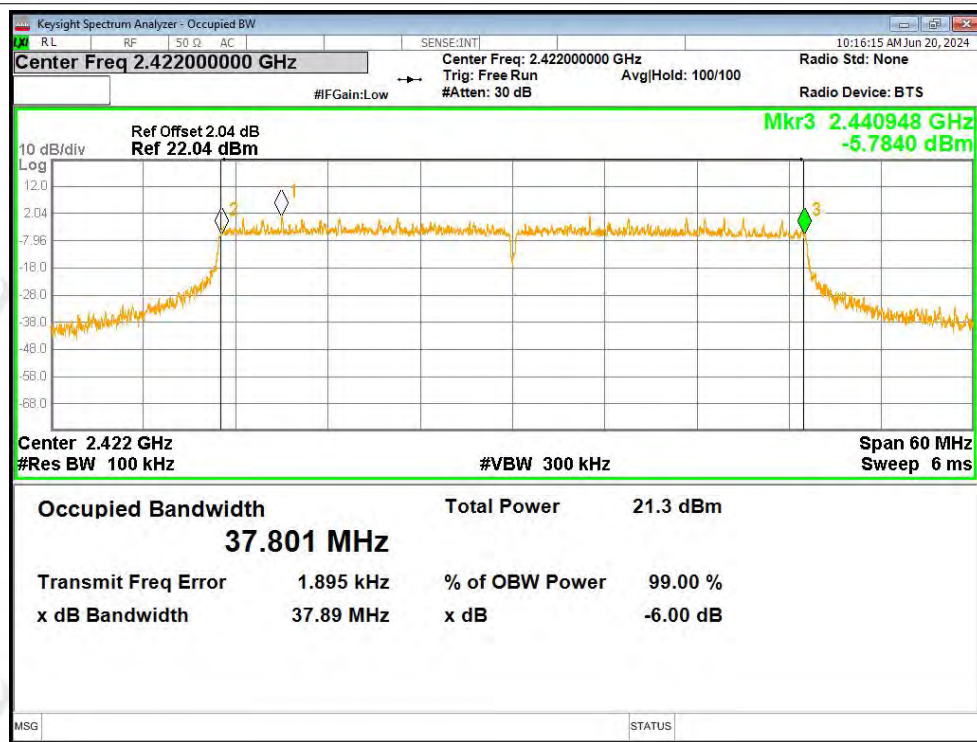




-6dB Bandwidth NVNT ax20 2462MHz Ant1

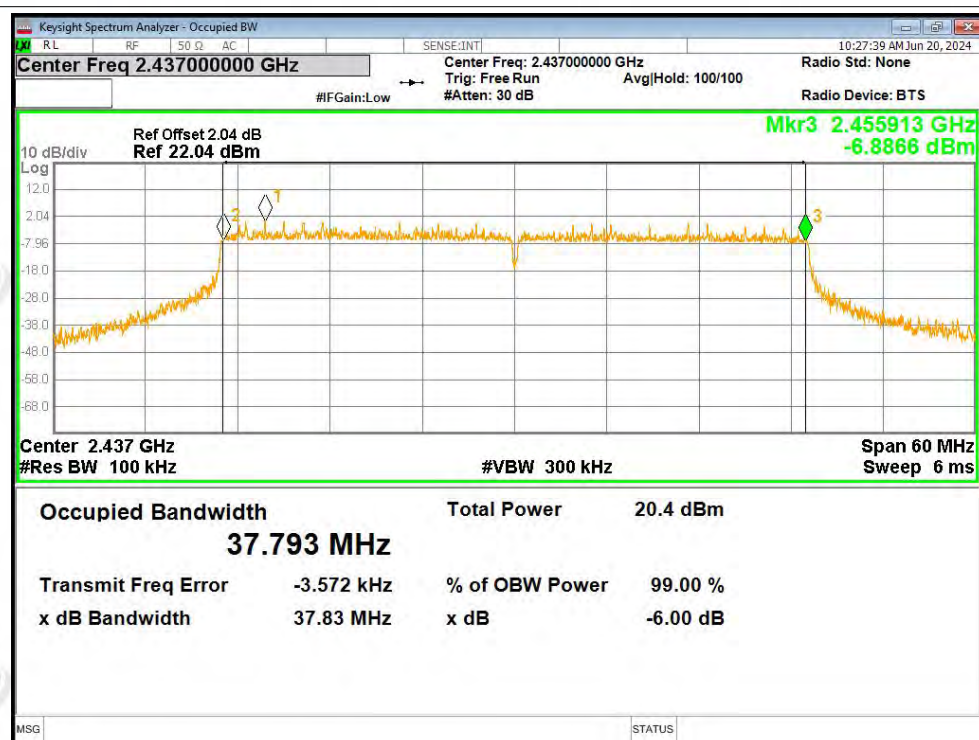


-6dB Bandwidth NVNT ax40 2422MHz Ant1

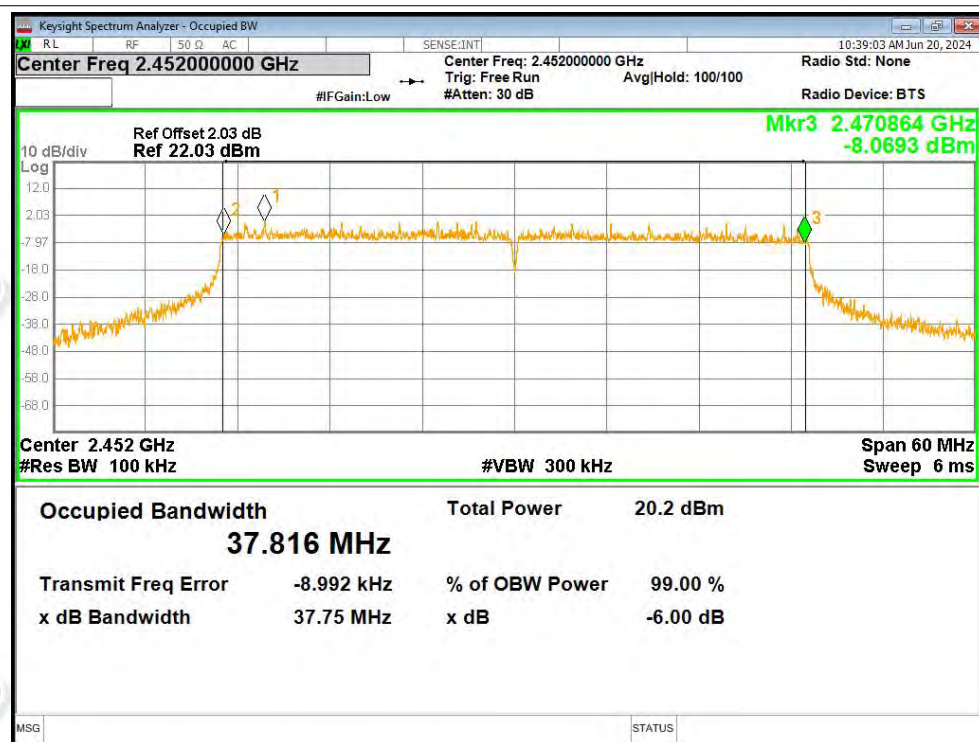




-6dB Bandwidth NVNT ax40 2437MHz Ant1



-6dB Bandwidth NVNT ax40 2452MHz Ant1



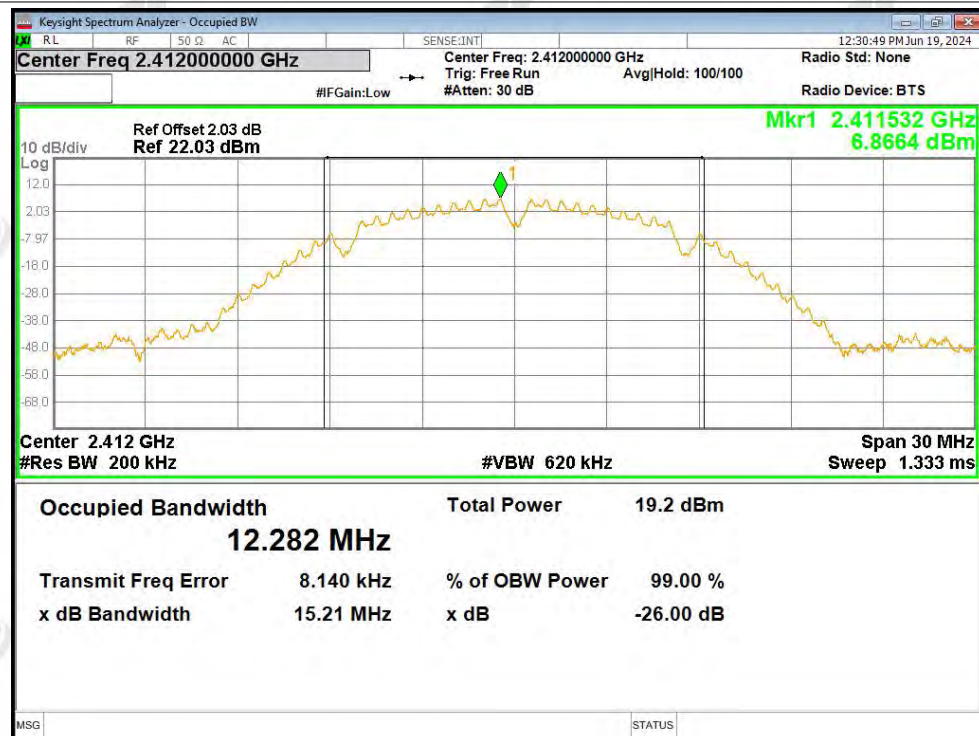
**ZHONGHAN****Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	12.282
NVNT	b	2437	Ant1	12.306
NVNT	b	2462	Ant1	12.308
NVNT	g	2412	Ant1	16.731
NVNT	g	2437	Ant1	16.776
NVNT	g	2462	Ant1	16.769
NVNT	n20	2412	Ant1	17.927
NVNT	n20	2437	Ant1	17.969
NVNT	n20	2462	Ant1	17.98
NVNT	n40	2422	Ant1	36.537
NVNT	n40	2437	Ant1	36.551
NVNT	n40	2452	Ant1	36.541
NVNT	ax20	2412	Ant1	19.116
NVNT	ax20	2437	Ant1	19.107
NVNT	ax20	2462	Ant1	19.115
NVNT	ax40	2422	Ant1	37.923
NVNT	ax40	2437	Ant1	37.964
NVNT	ax40	2452	Ant1	37.889

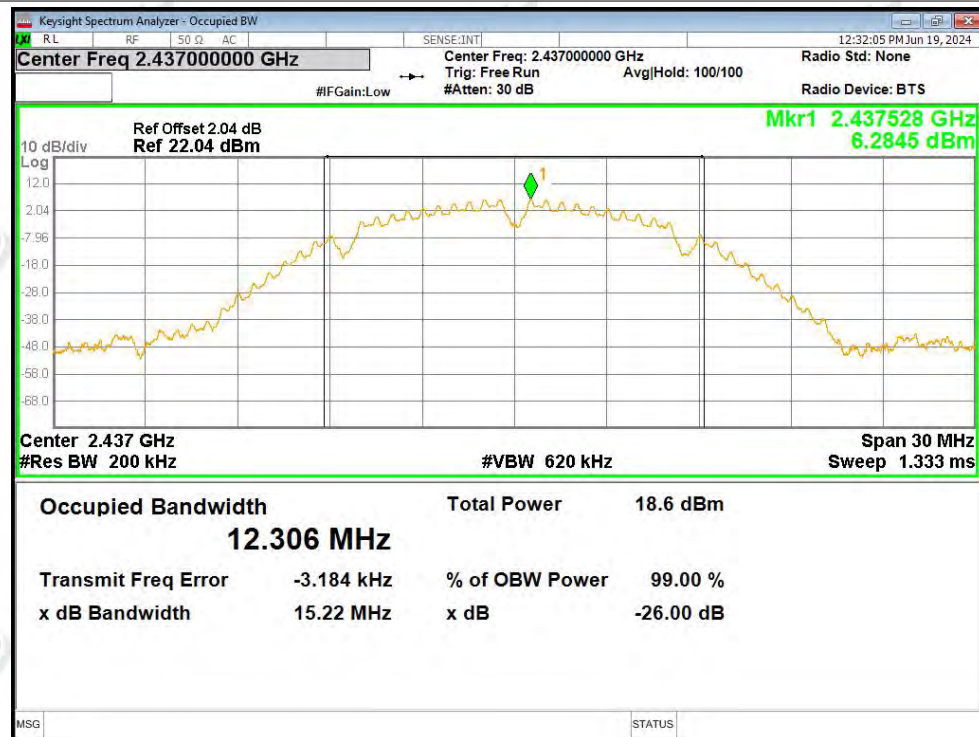


Test Graphs

OBW NVNT b 2412MHz Ant1

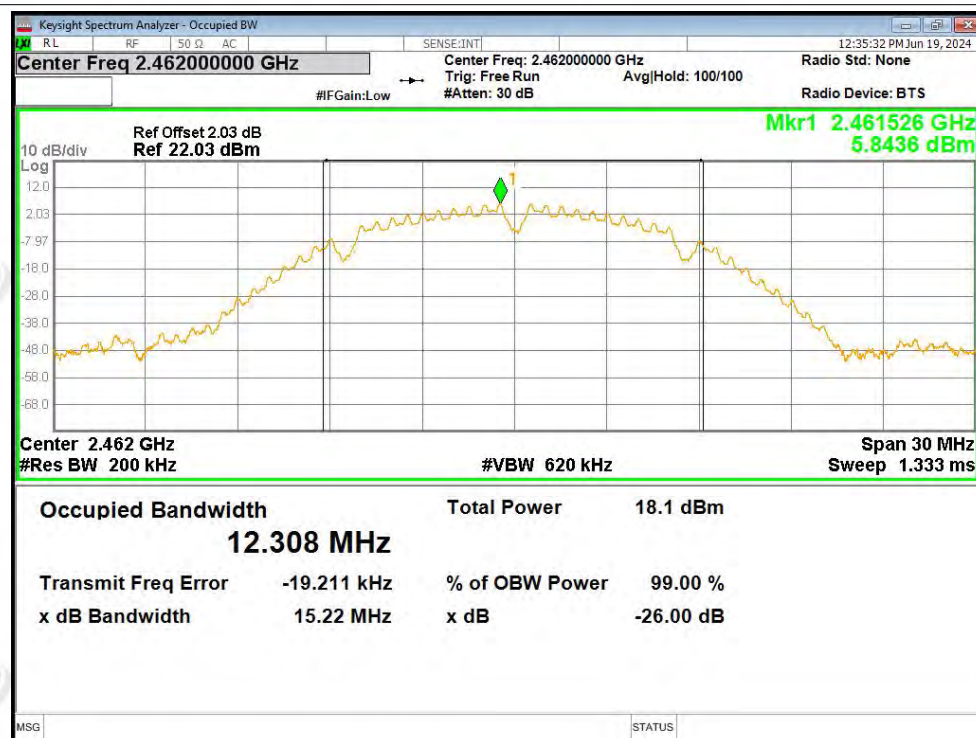


OBW NVNT b 2437MHz Ant1

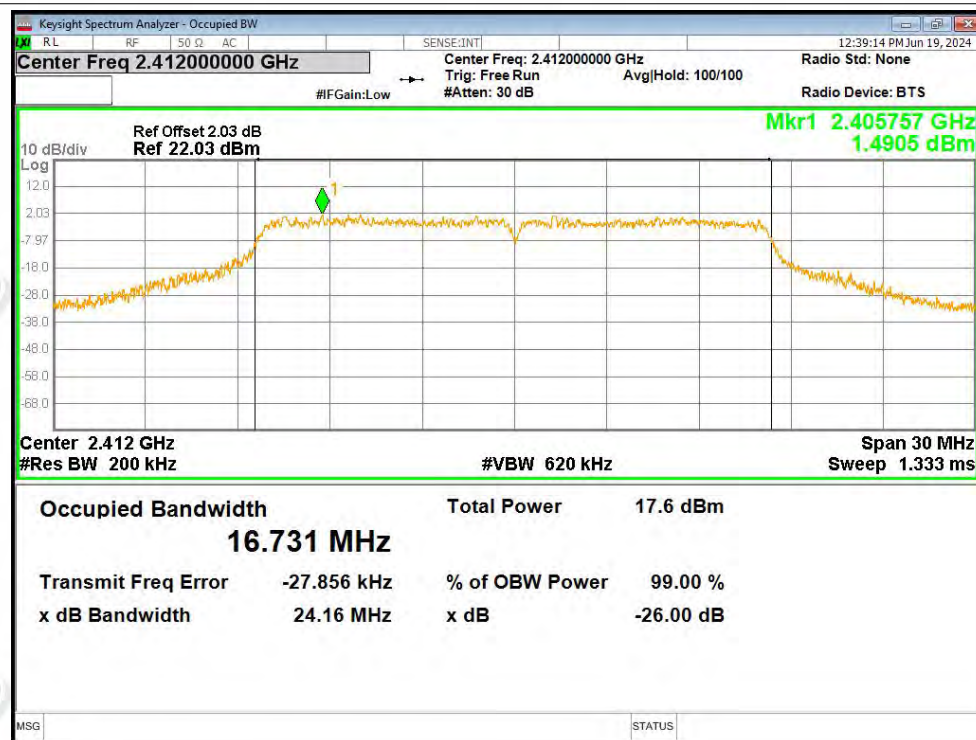




OBW NVNT b 2462MHz Ant1

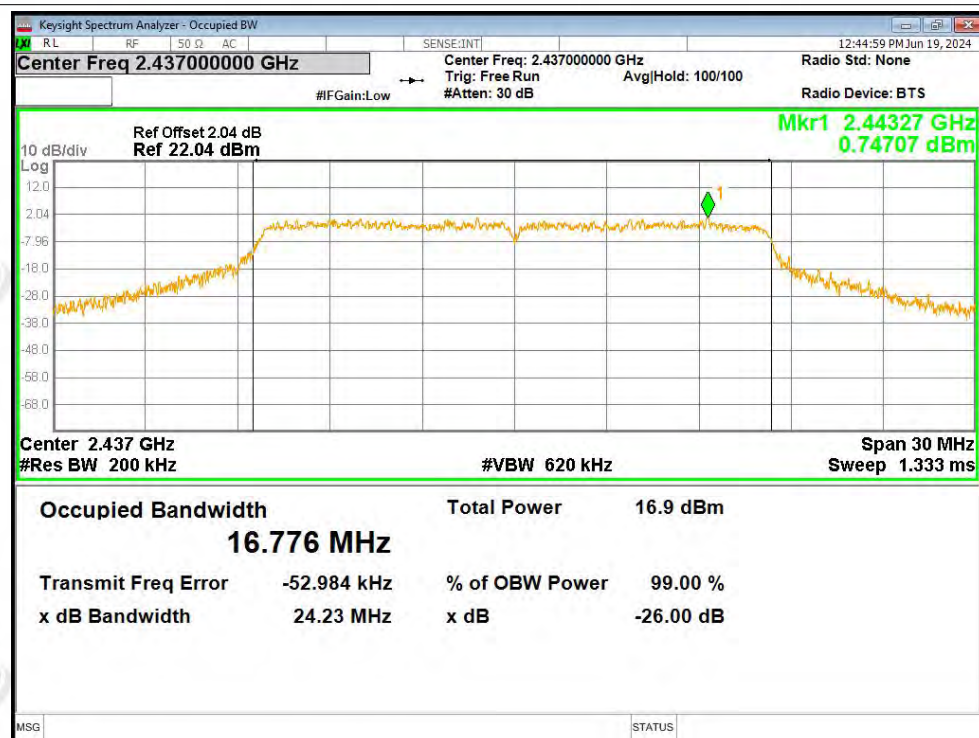


OBW NVNT g 2412MHz Ant1

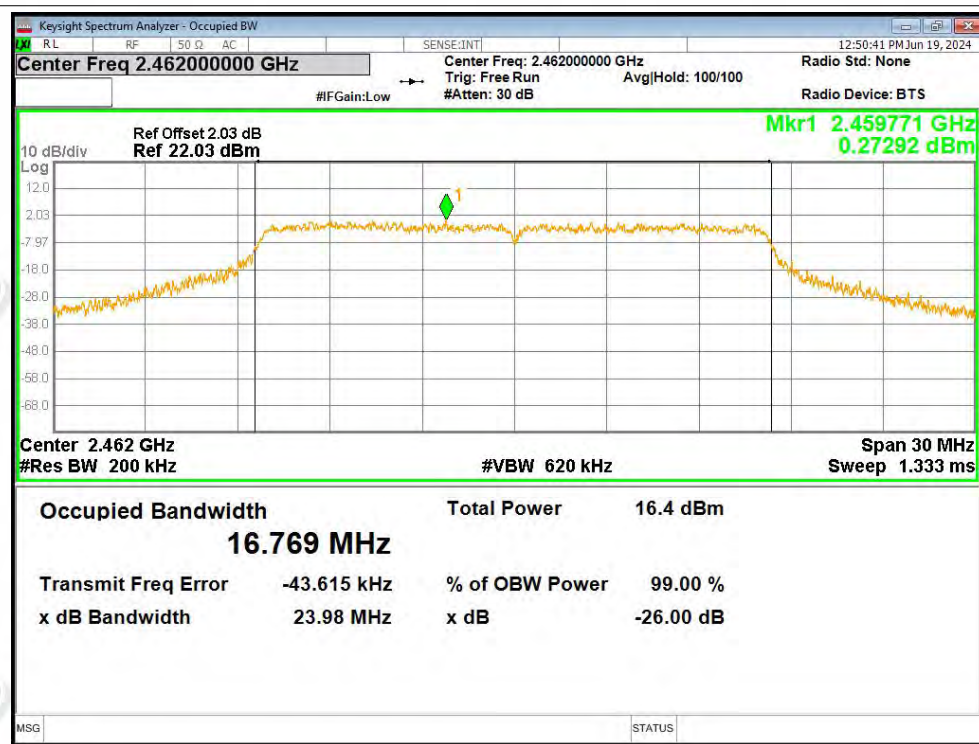




OBW NVNT g 2437MHz Ant1

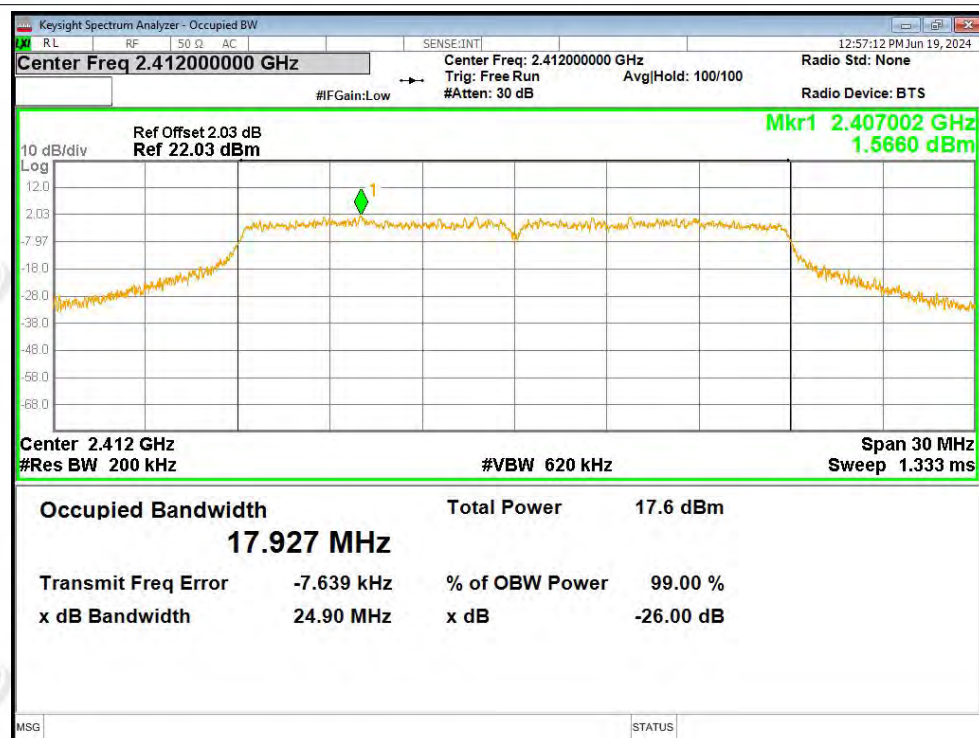


OBW NVNT g 2462MHz Ant1

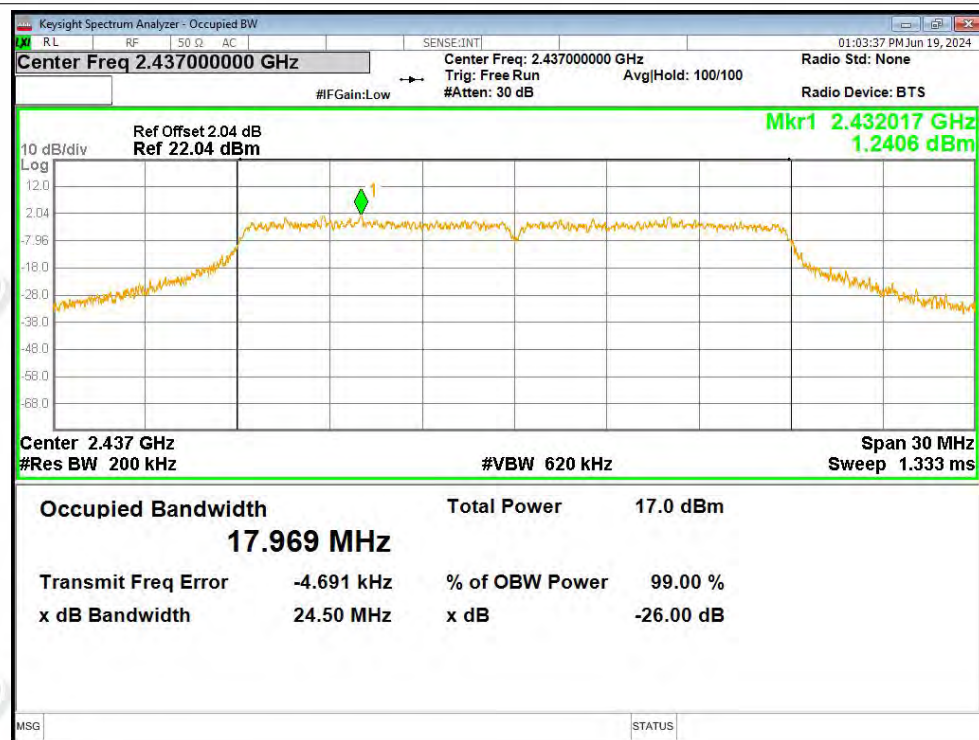




OBW NVNT n20 2412MHz Ant1

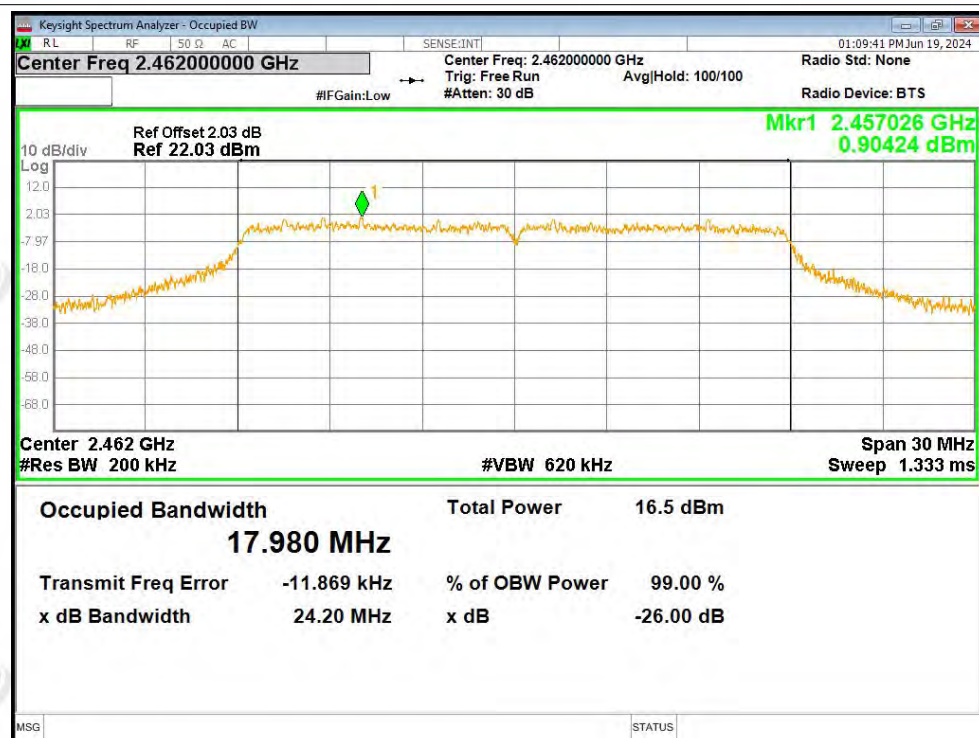


OBW NVNT n20 2437MHz Ant1

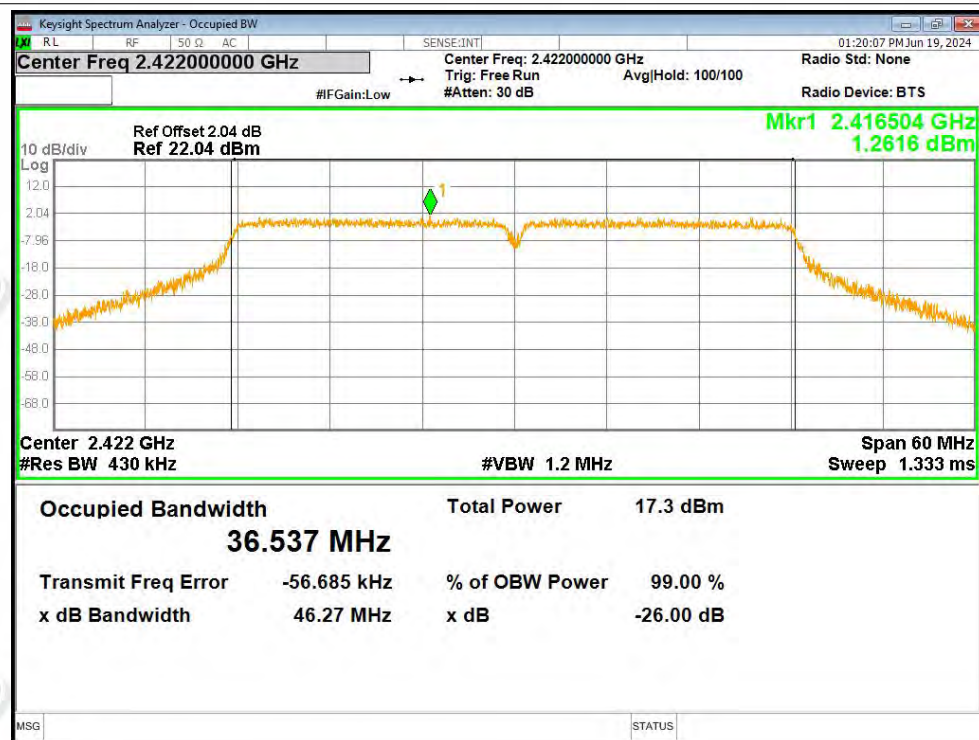




OBW NVNT n20 2462MHz Ant1

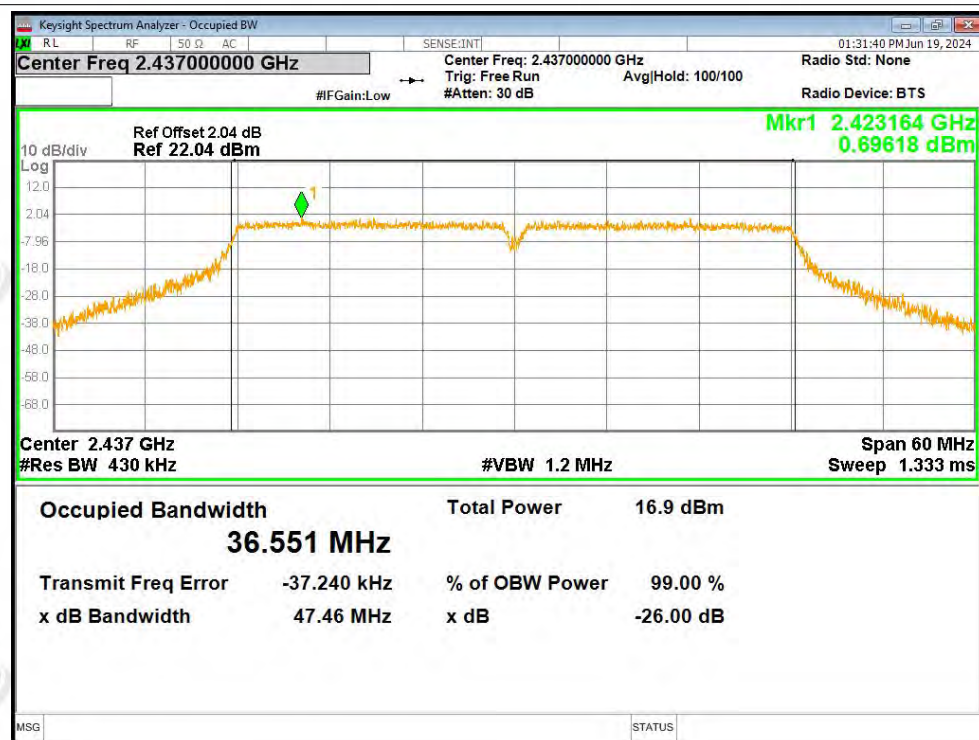


OBW NVNT n40 2422MHz Ant1

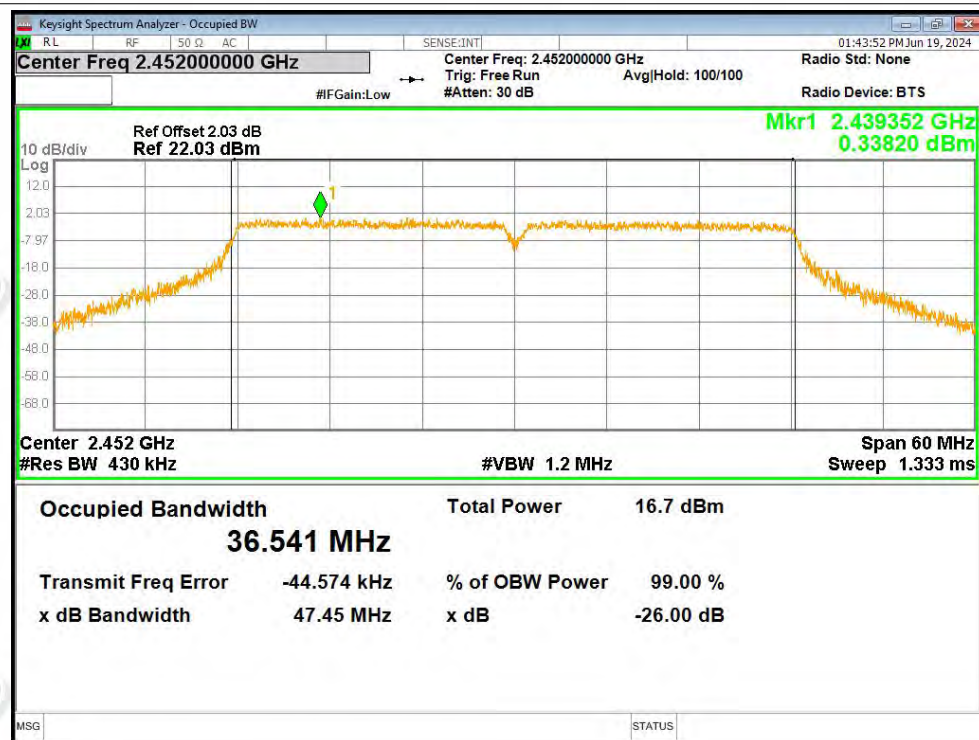




OBW NVNT n40 2437MHz Ant1

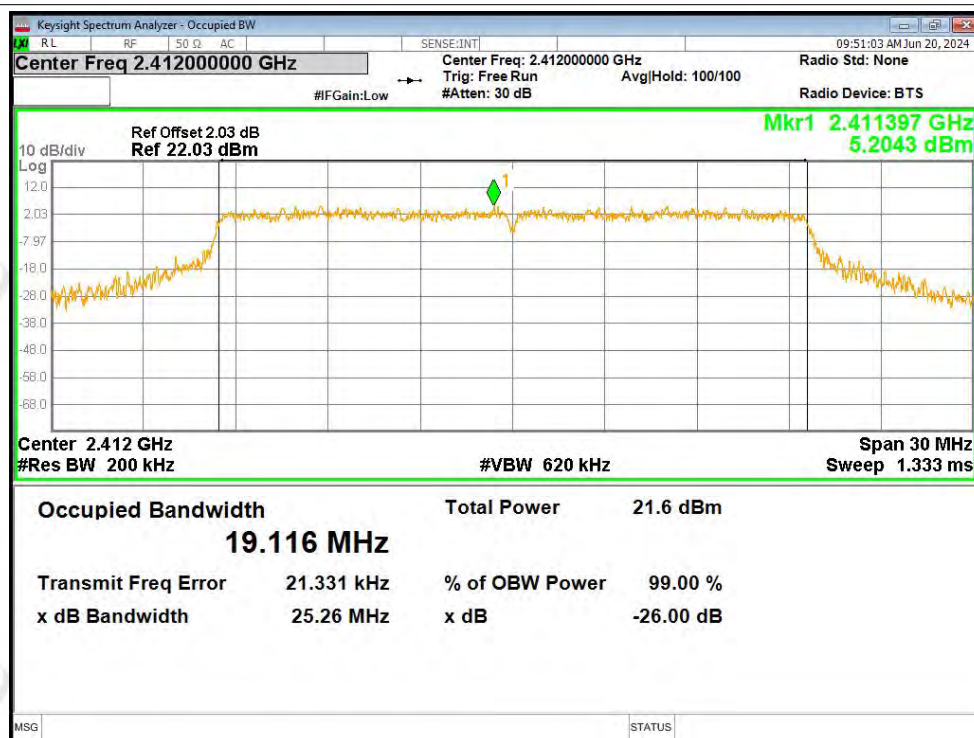


OBW NVNT n40 2452MHz Ant1

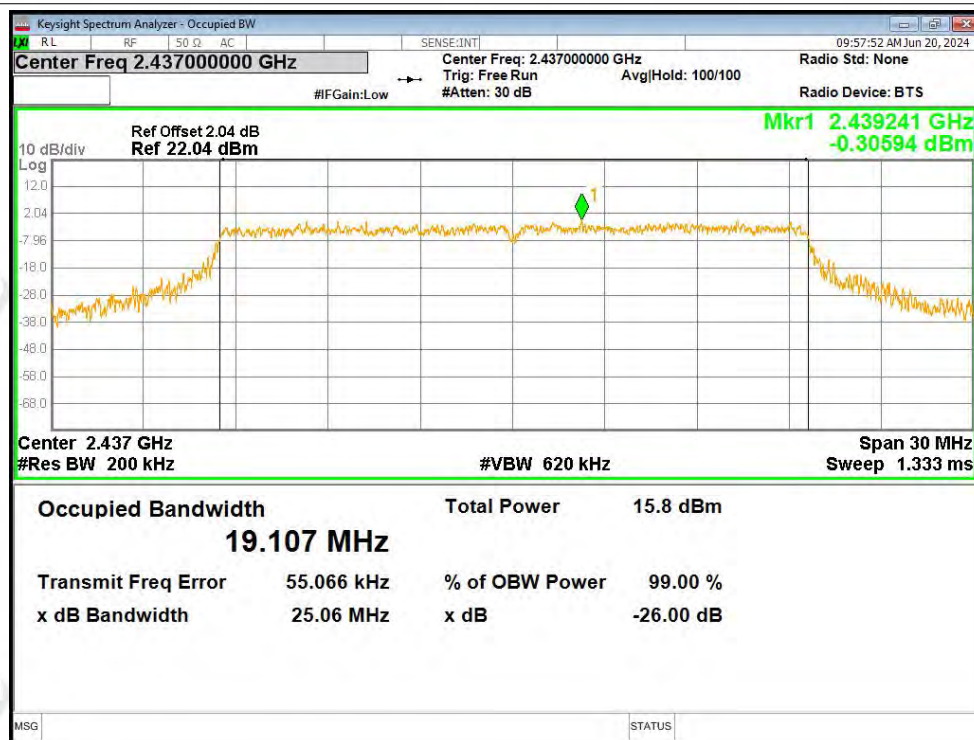




OBW NVNT ax20 2412MHz Ant1

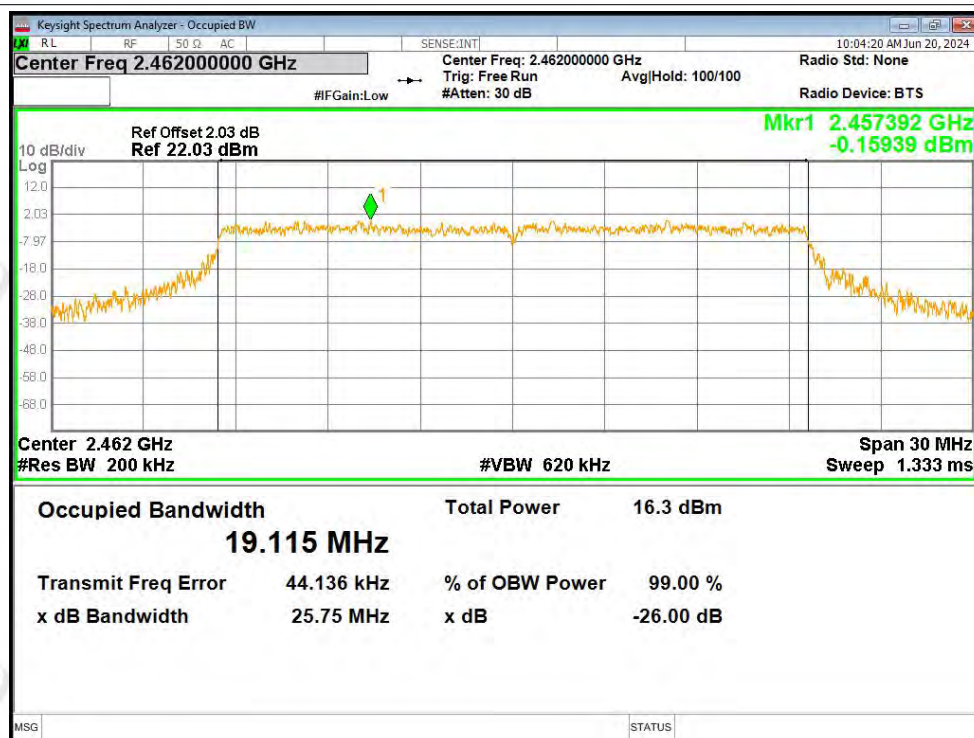


OBW NVNT ax20 2437MHz Ant1

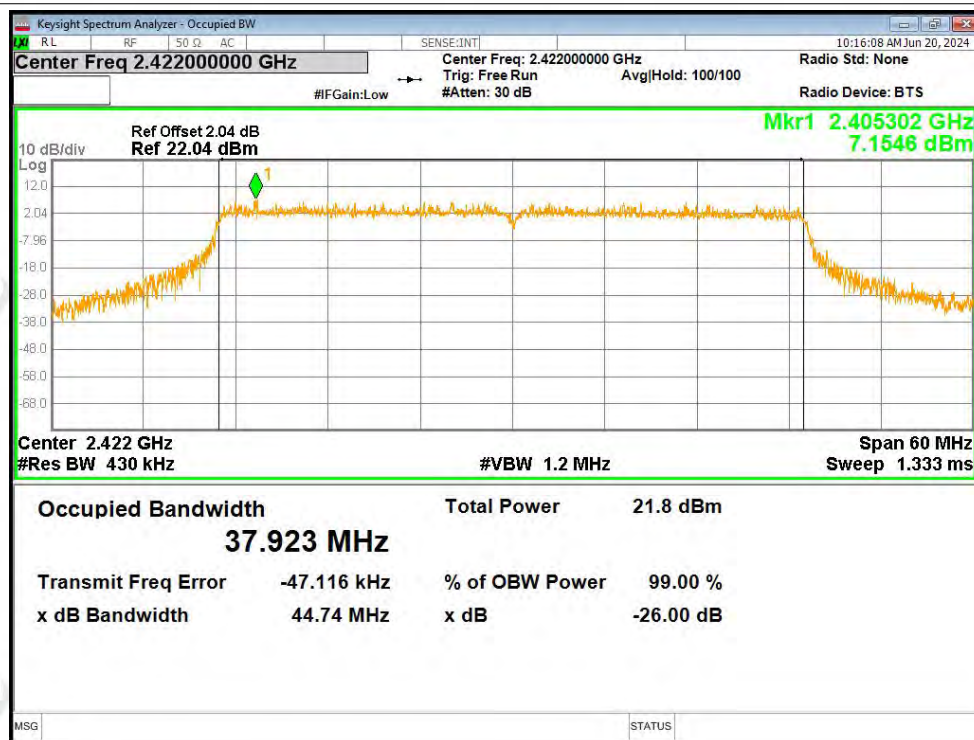




OBW NVNT ax20 2462MHz Ant1

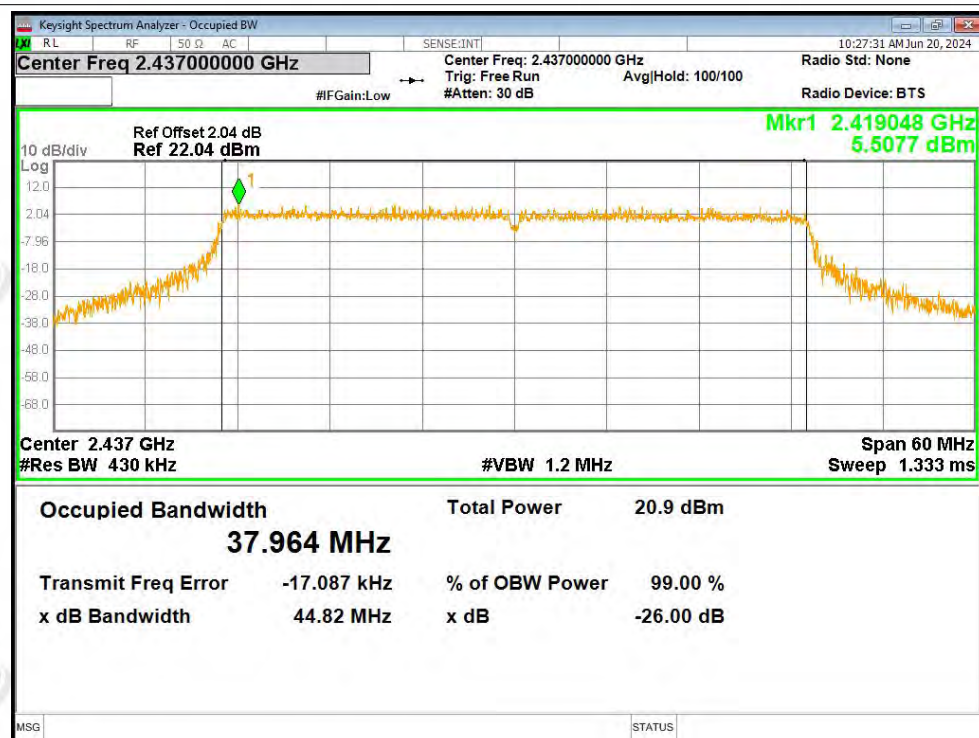


OBW NVNT ax40 2422MHz Ant1

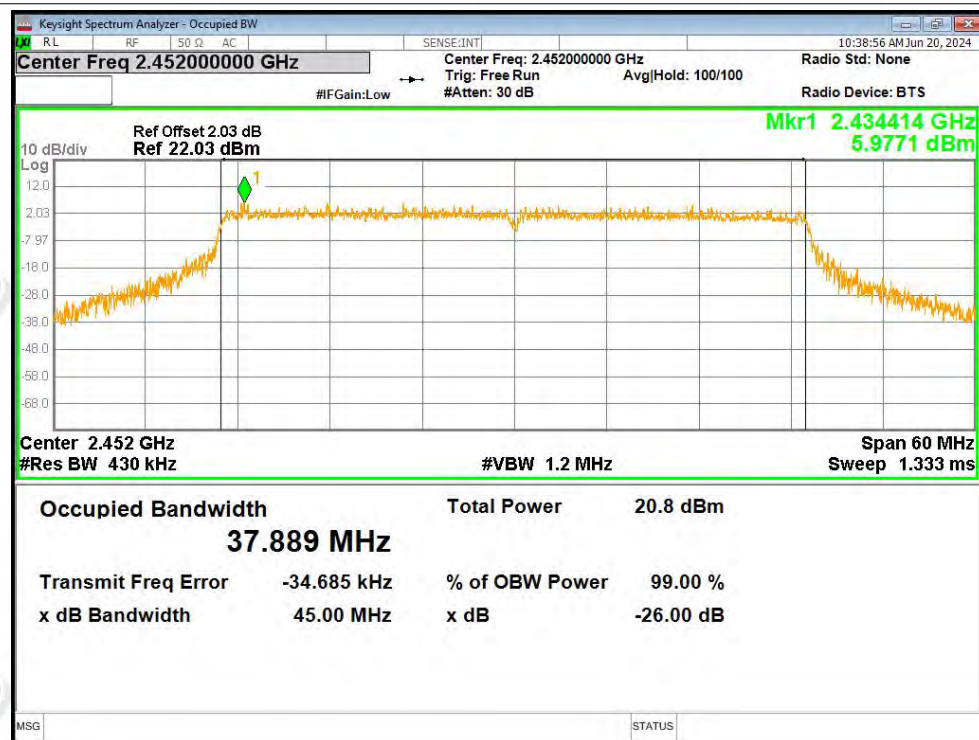




OBW NVNT ax40 2437MHz Ant1



OBW NVNT ax40 2452MHz Ant1



**ZHONGHAN****Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	6.48	8	Pass
NVNT	b	2437	Ant1	4.7	8	Pass
NVNT	b	2462	Ant1	4.35	8	Pass
NVNT	g	2412	Ant1	-12.05	8	Pass
NVNT	g	2437	Ant1	-12.5	8	Pass
NVNT	g	2462	Ant1	-13.22	8	Pass
NVNT	n20	2412	Ant1	-10.83	8	Pass
NVNT	n20	2437	Ant1	-11.79	8	Pass
NVNT	n20	2462	Ant1	-12.71	8	Pass
NVNT	n40	2422	Ant1	-14.7	8	Pass
NVNT	n40	2437	Ant1	-14.67	8	Pass
NVNT	n40	2452	Ant1	-14.78	8	Pass
NVNT	ax20	2412	Ant1	-10.63	8	Pass
NVNT	ax20	2437	Ant1	-15.92	8	Pass
NVNT	ax20	2462	Ant1	-15.39	8	Pass
NVNT	ax40	2422	Ant1	-13.47	8	Pass
NVNT	ax40	2437	Ant1	-14.13	8	Pass
NVNT	ax40	2452	Ant1	-14.26	8	Pass

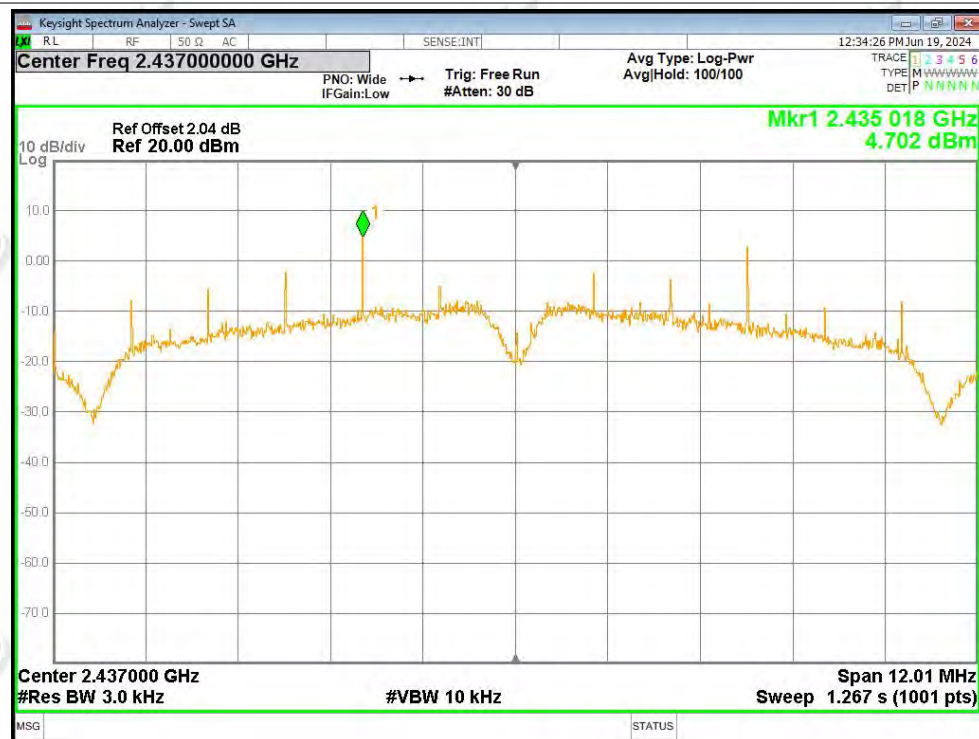


Test Graphs

PSD NVNT b 2412MHz Ant1



PSD NVNT b 2437MHz Ant1





PSD NVNT b 2462MHz Ant1

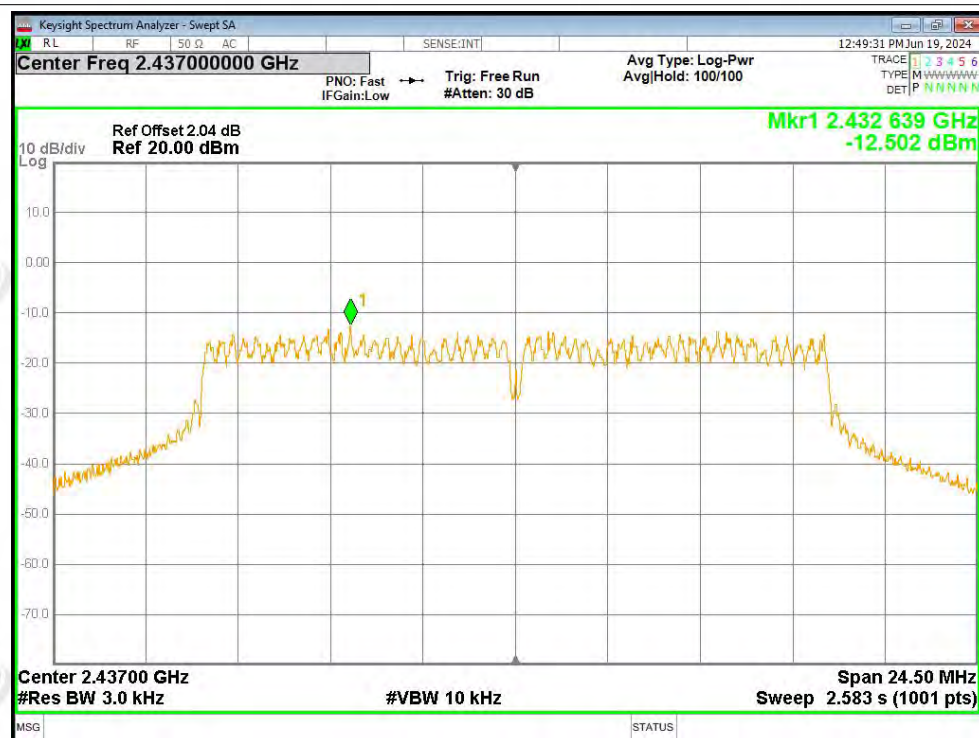


PSD NVNT g 2412MHz Ant1

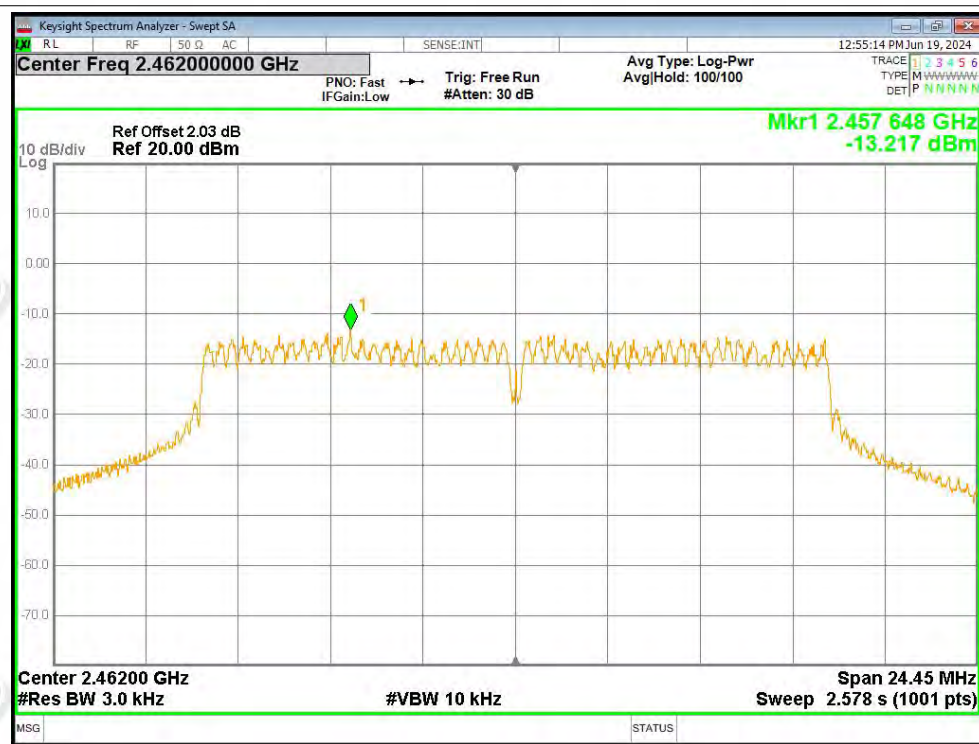




PSD NVNT g 2437MHz Ant1

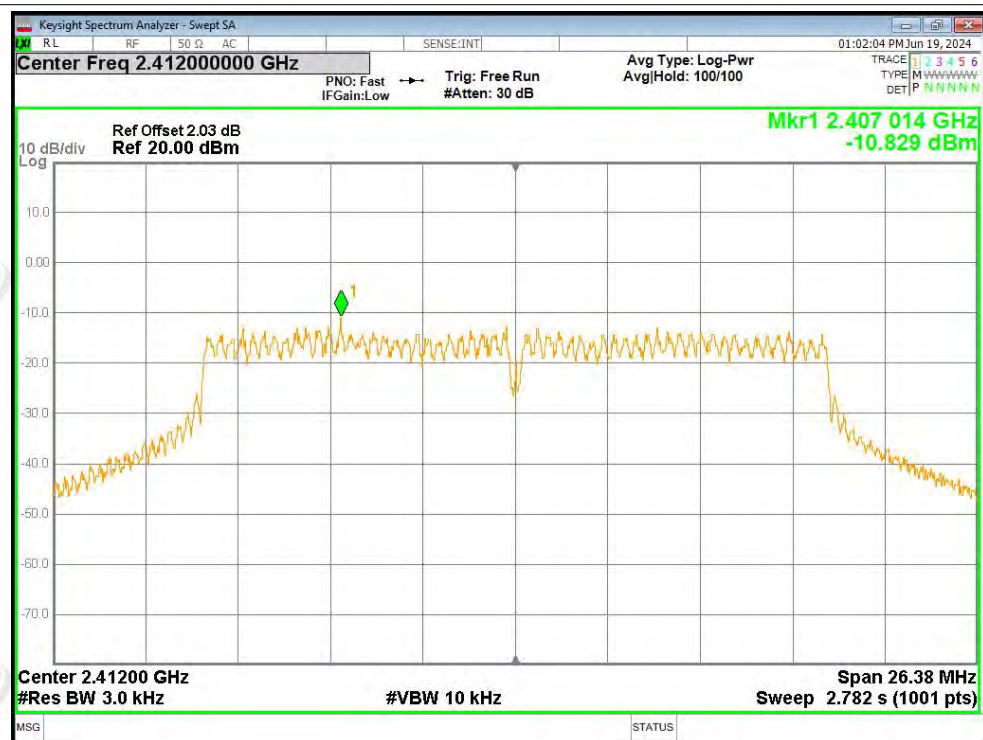


PSD NVNT g 2462MHz Ant1

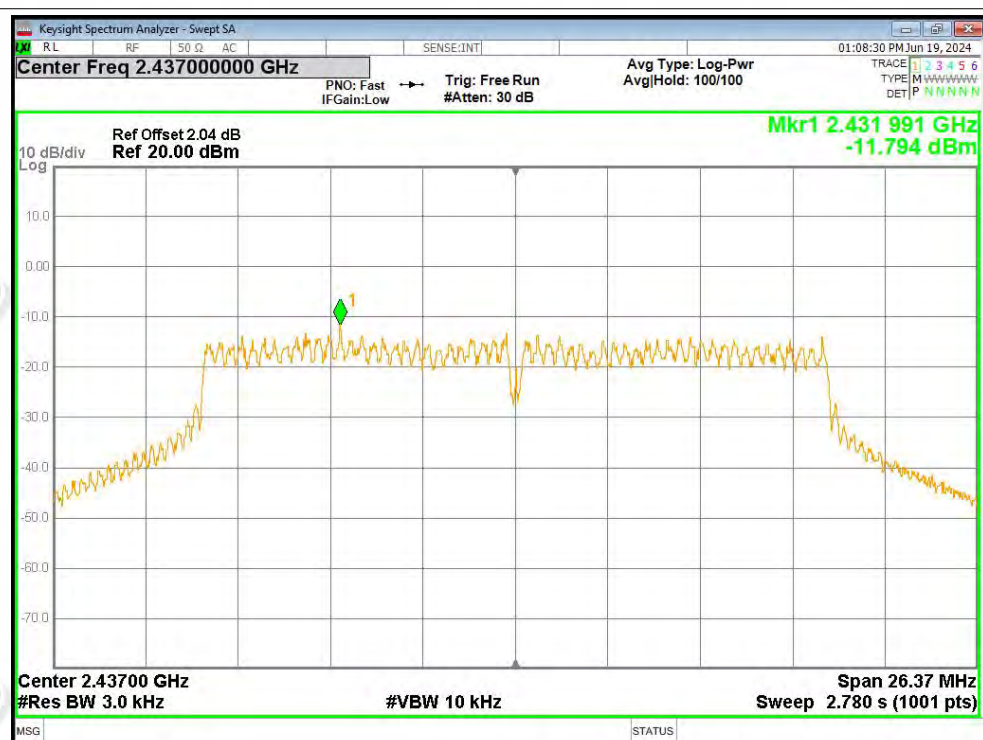




PSD NVNT n20 2412MHz Ant1

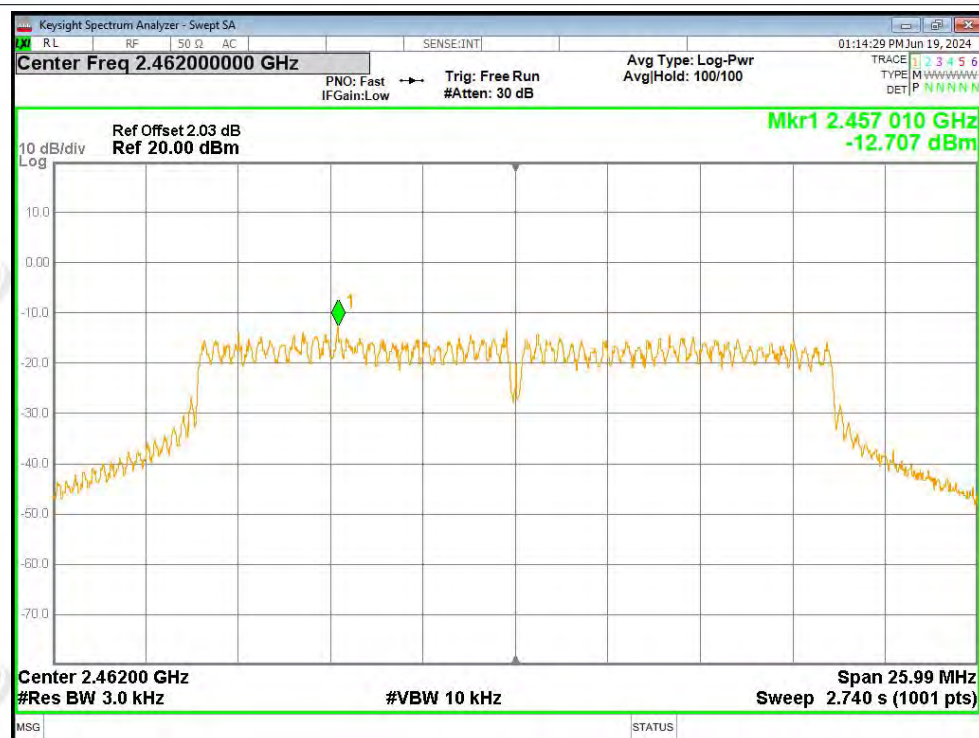


PSD NVNT n20 2437MHz Ant1

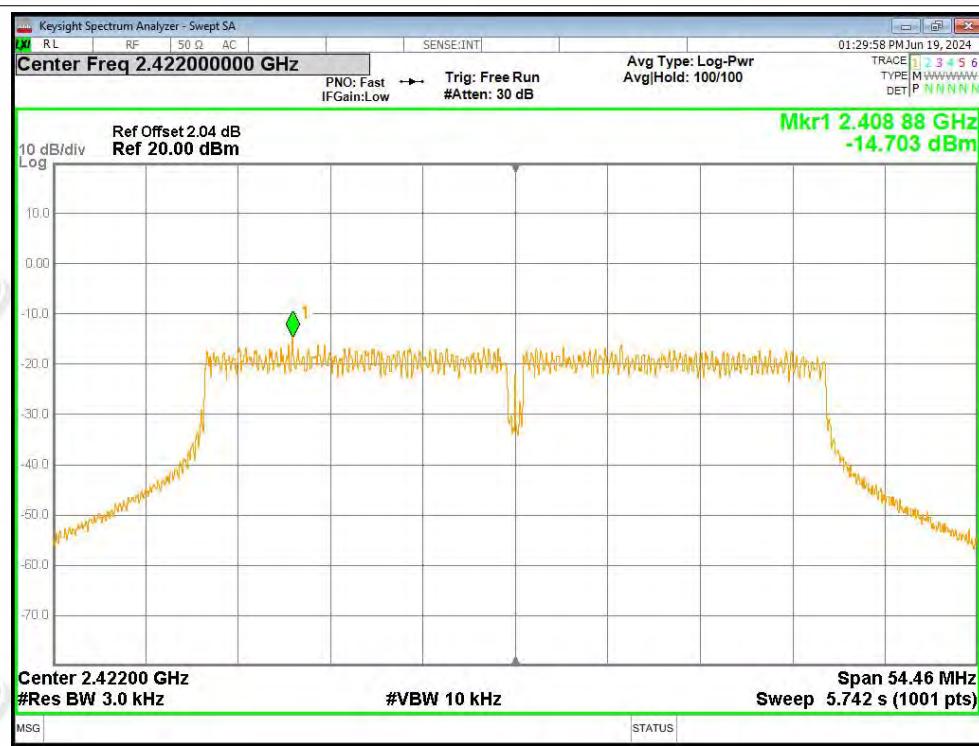




PSD NVNT n20 2462MHz Ant1

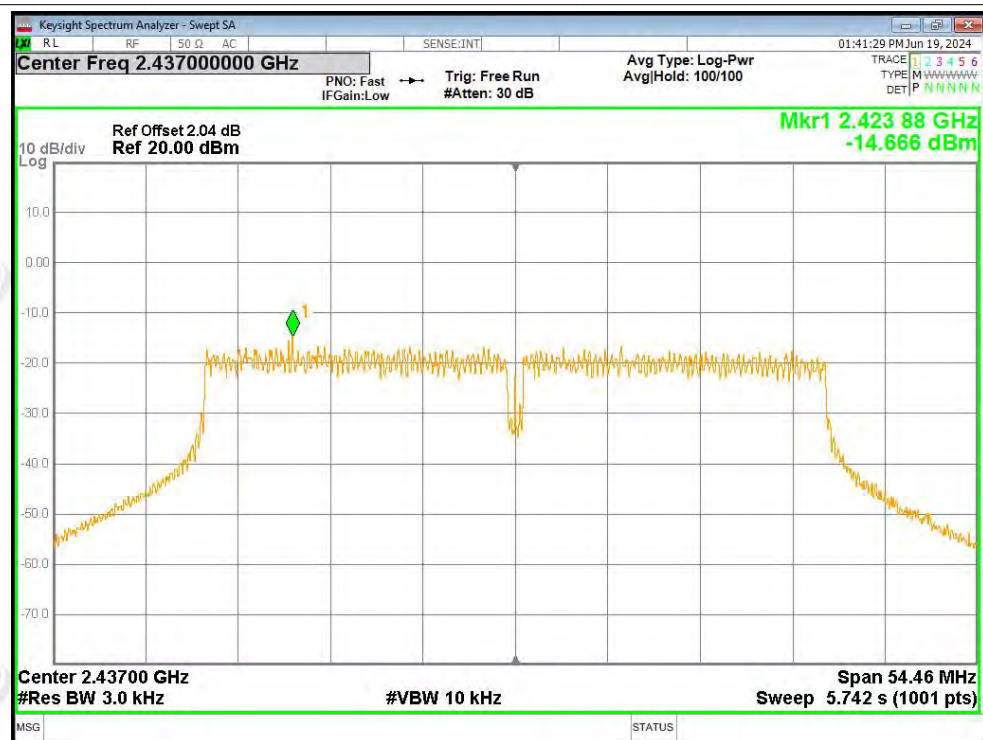


PSD NVNT n40 2422MHz Ant1

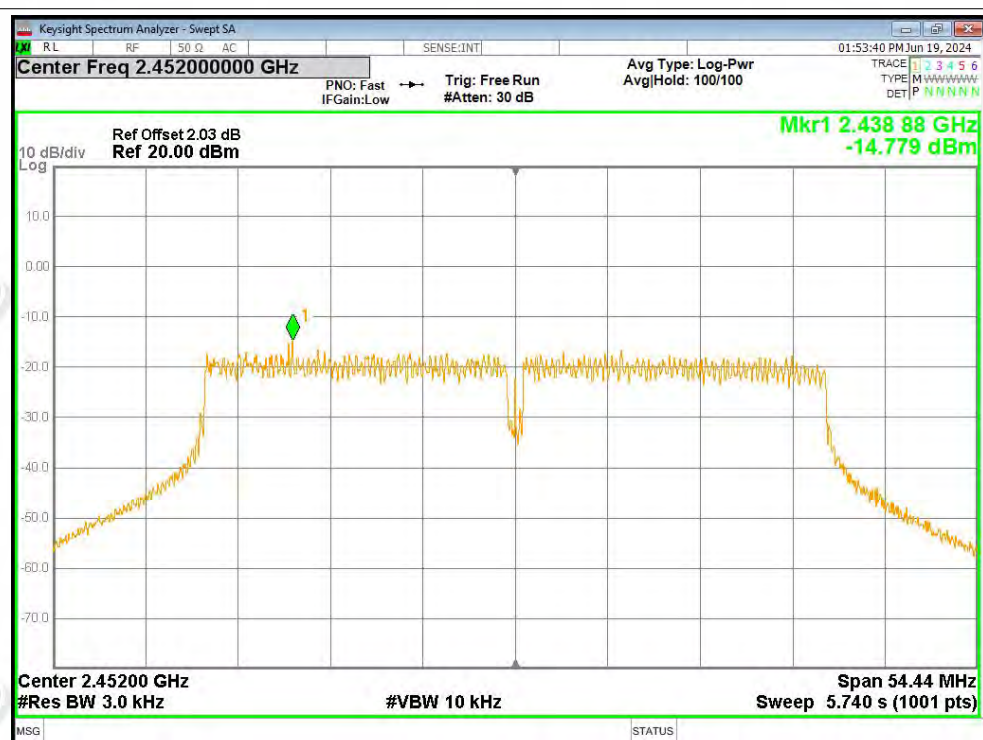




PSD NVNT n40 2437MHz Ant1

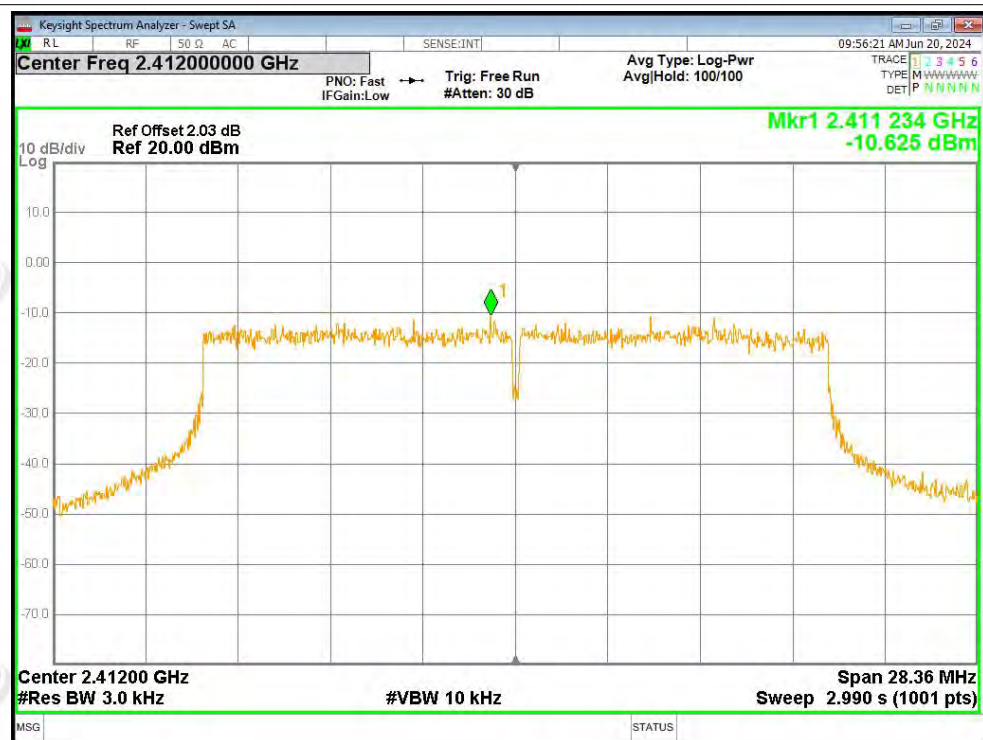


PSD NVNT n40 2452MHz Ant1

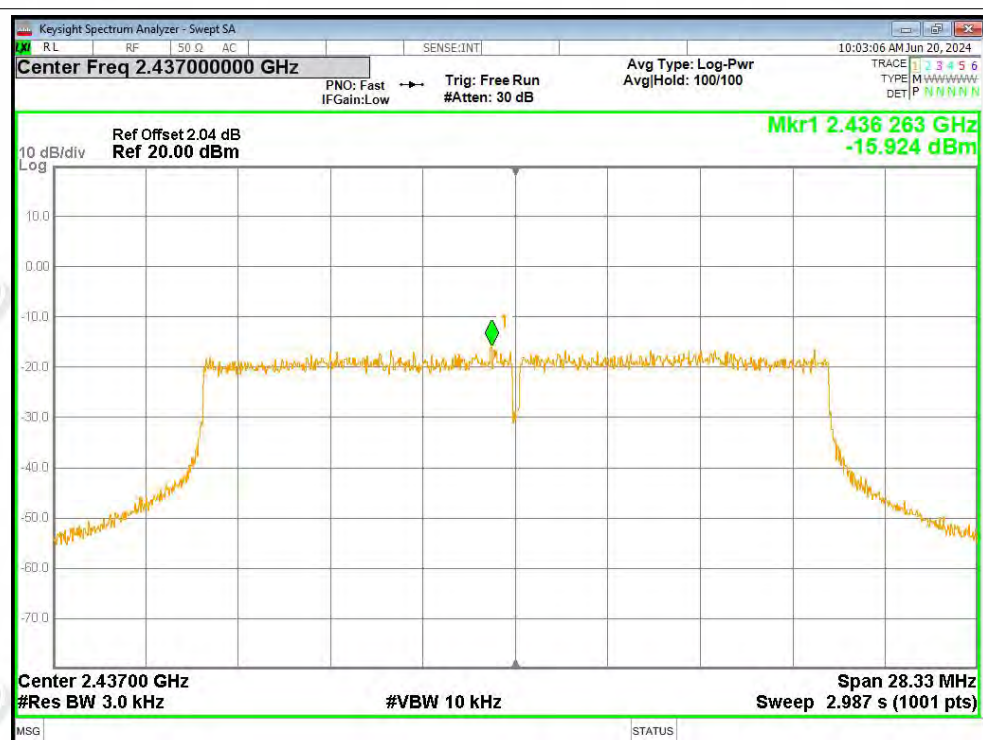




PSD NVNT ax20 2412MHz Ant1

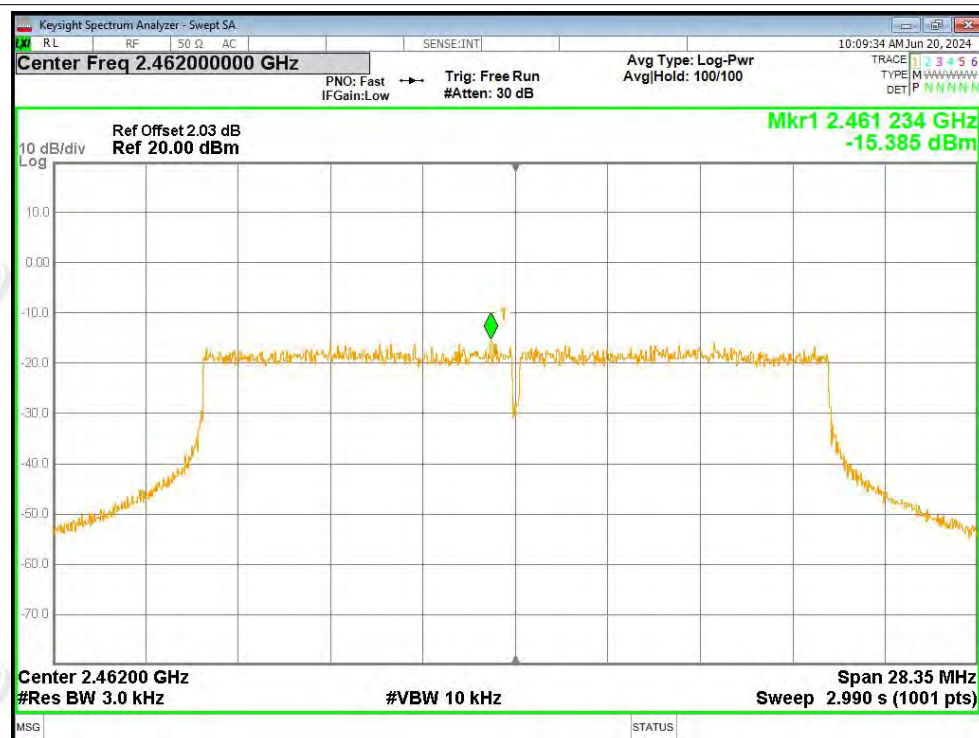


PSD NVNT ax20 2437MHz Ant1





PSD NVNT ax20 2462MHz Ant1

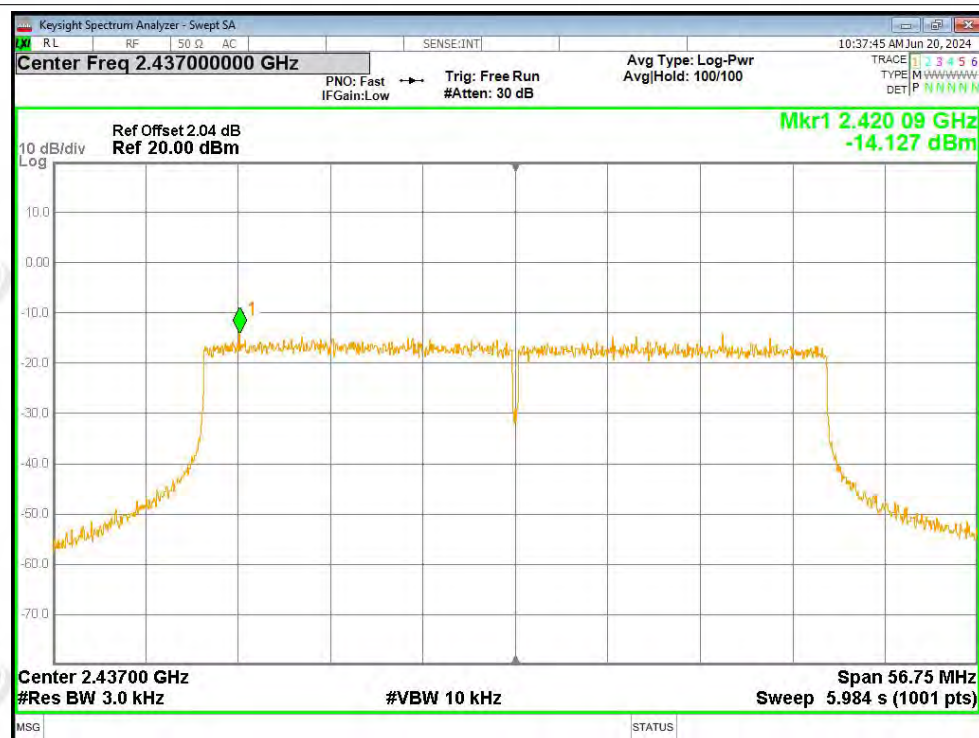


PSD NVNT ax40 2422MHz Ant1





PSD NVNT ax40 2437MHz Ant1



PSD NVNT ax40 2452MHz Ant1



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Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-50.75	-20	Pass
NVNT	b	2462	Ant1	-61.13	-20	Pass
NVNT	g	2412	Ant1	-28.83	-20	Pass
NVNT	g	2462	Ant1	-45.27	-20	Pass
NVNT	n20	2412	Ant1	-28.57	-20	Pass
NVNT	n20	2462	Ant1	-45.52	-20	Pass
NVNT	n40	2422	Ant1	-28.6	-20	Pass
NVNT	n40	2452	Ant1	-42.68	-20	Pass
NVNT	ax20	2412	Ant1	-28.72	-20	Pass
NVNT	ax20	2462	Ant1	-45.59	-20	Pass
NVNT	ax40	2422	Ant1	-29.42	-20	Pass
NVNT	ax40	2452	Ant1	-35.05	-20	Pass

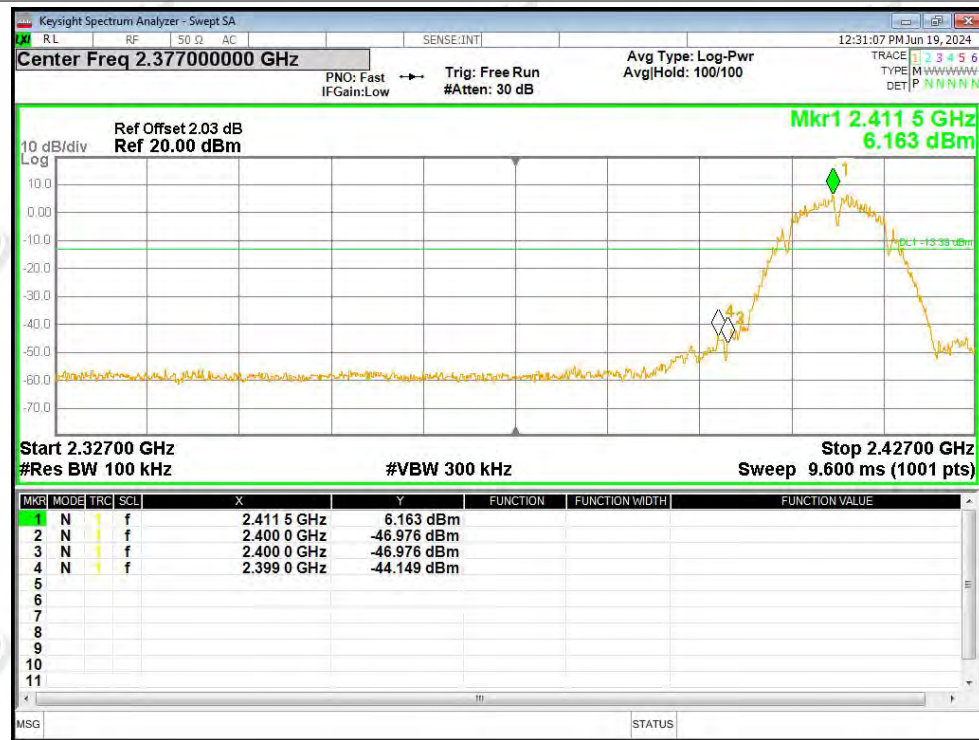


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission

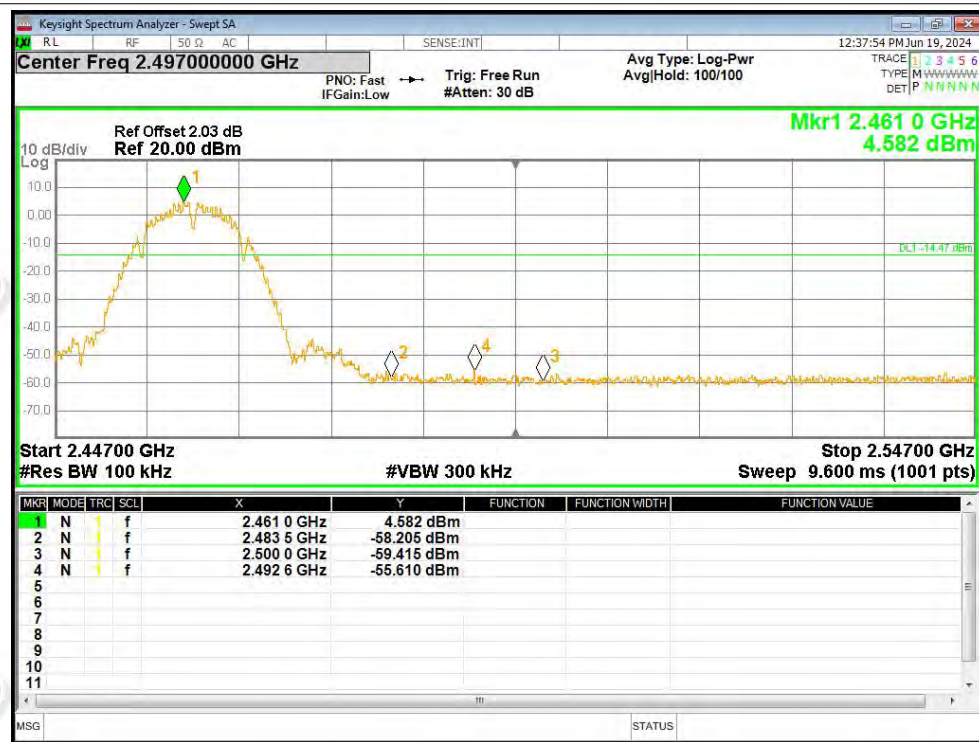




Band Edge NVNT b 2462MHz Ant1 Ref



Band Edge NVNT b 2462MHz Ant1 Emission

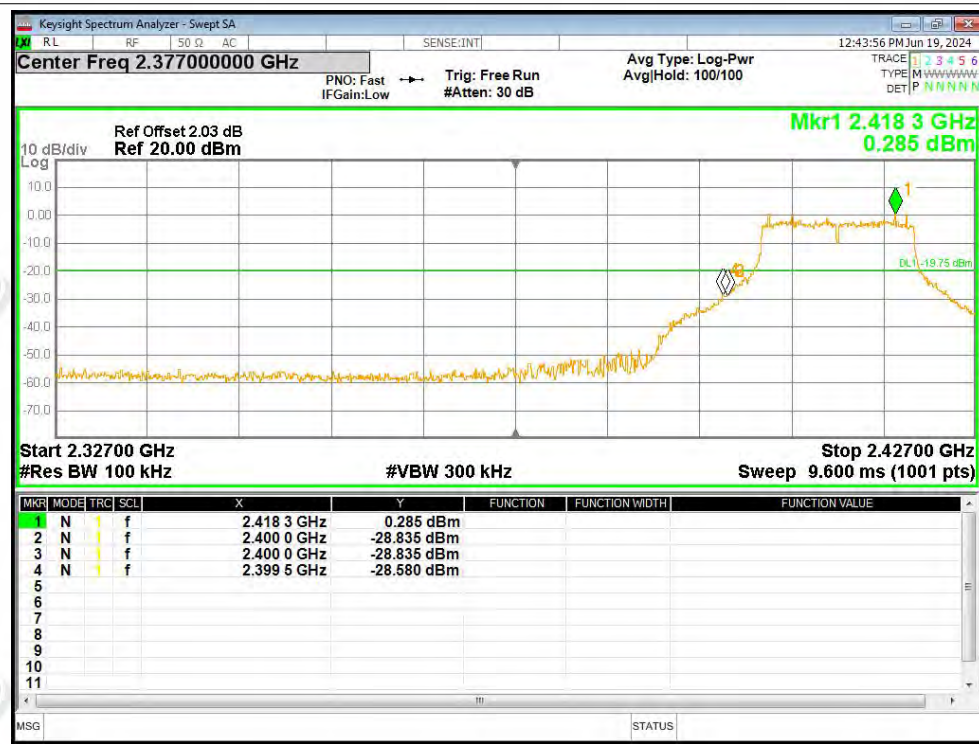




Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission

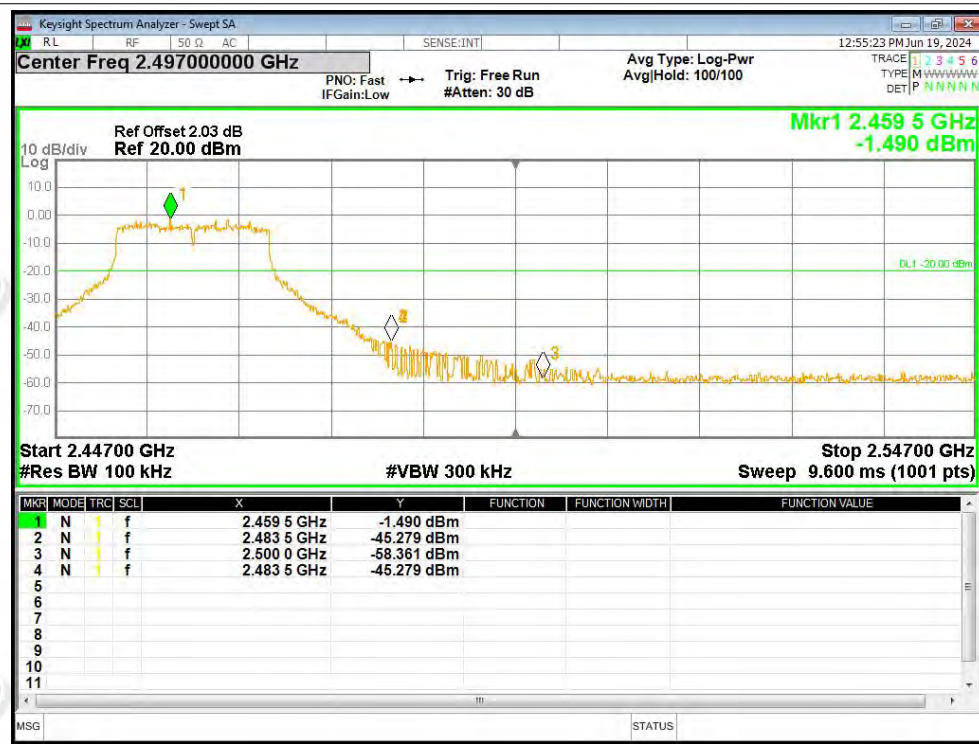




Band Edge NVNT g 2462MHz Ant1 Ref



Band Edge NVNT g 2462MHz Ant1 Emission

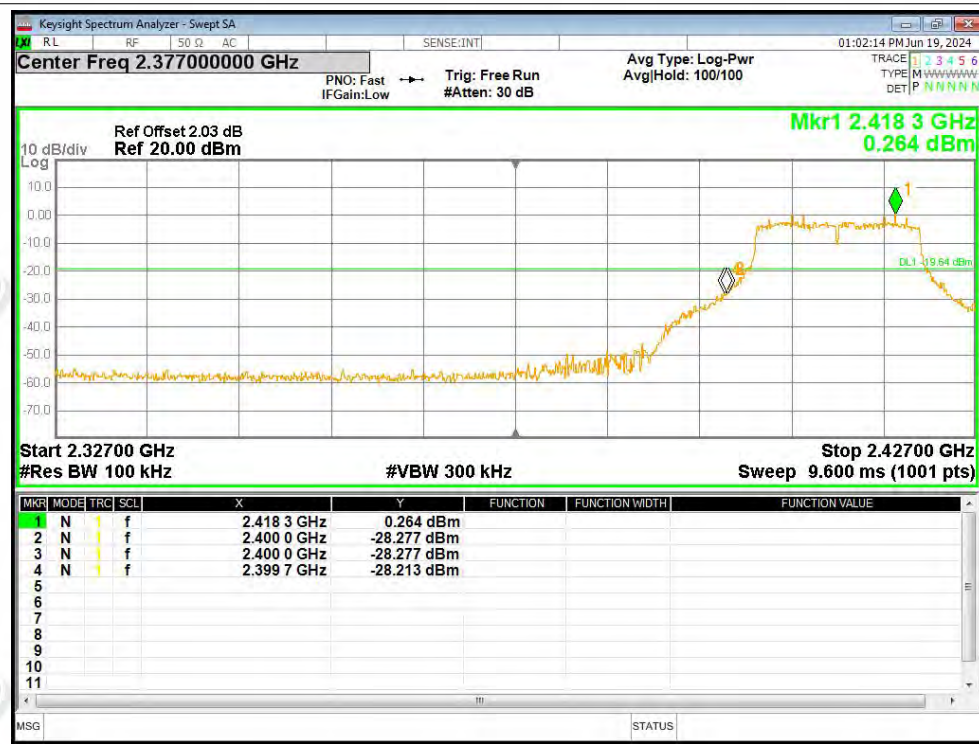




Band Edge NVNT n20 2412MHz Ant1 Ref

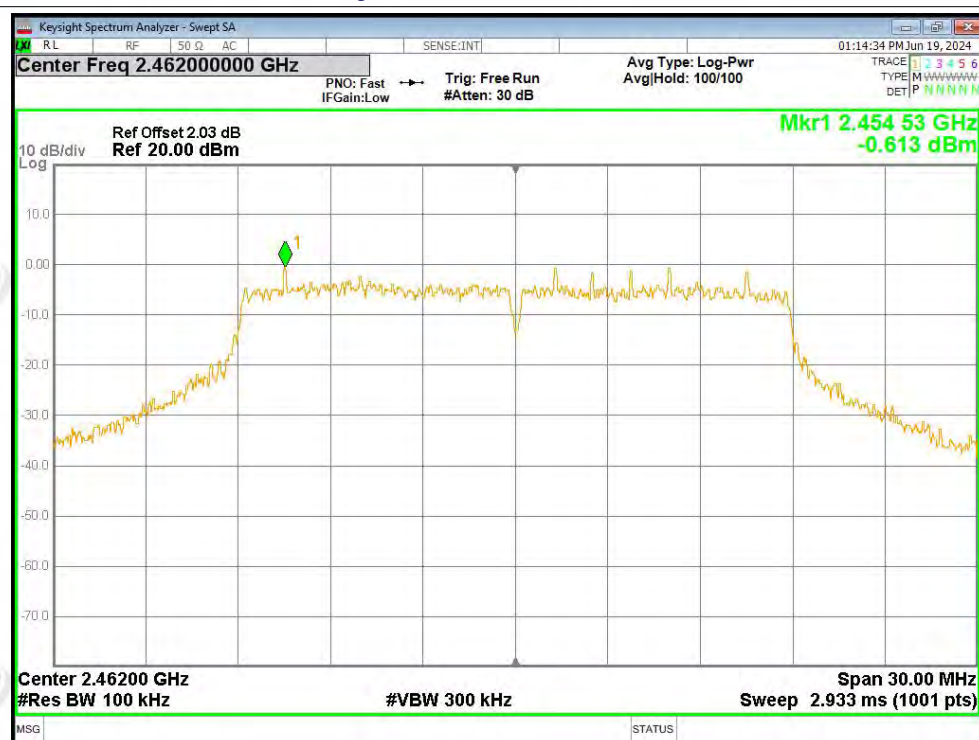


Band Edge NVNT n20 2412MHz Ant1 Emission

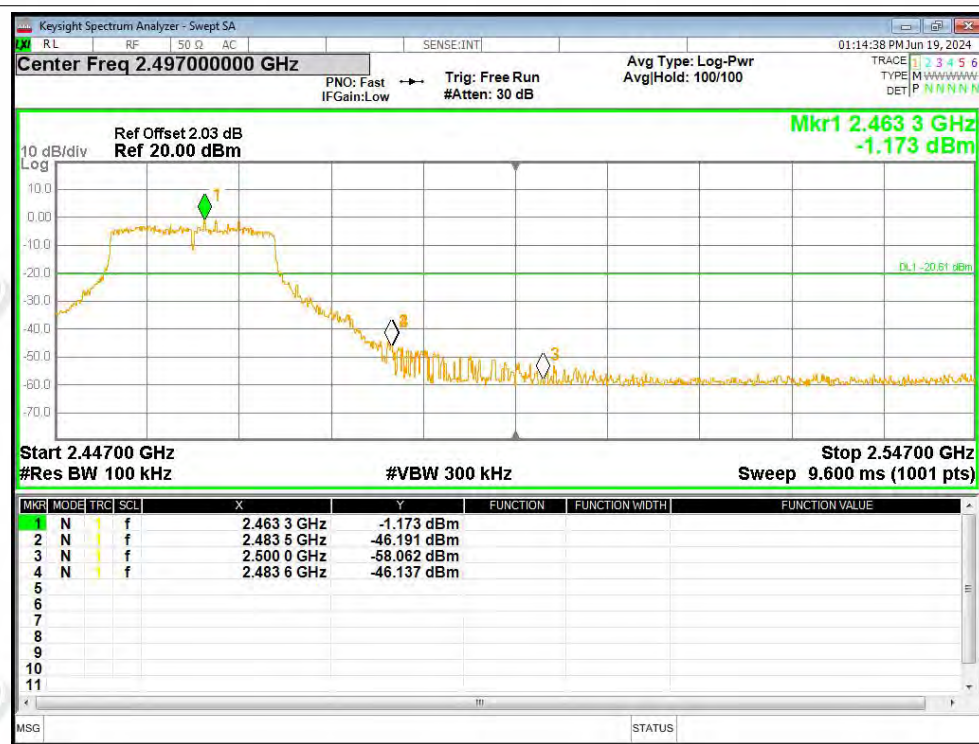




Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission

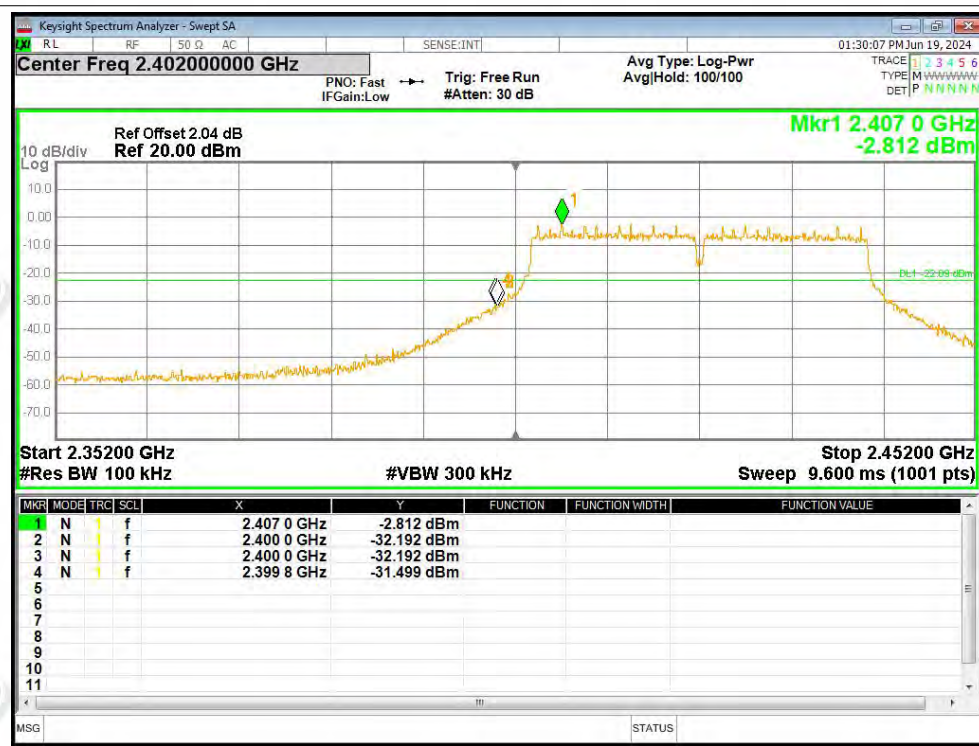




Band Edge NVNT n40 2422MHz Ant1 Ref



Band Edge NVNT n40 2422MHz Ant1 Emission





Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission

