

RF Test Data for 2.4G WiFi (Conducted Measurements)

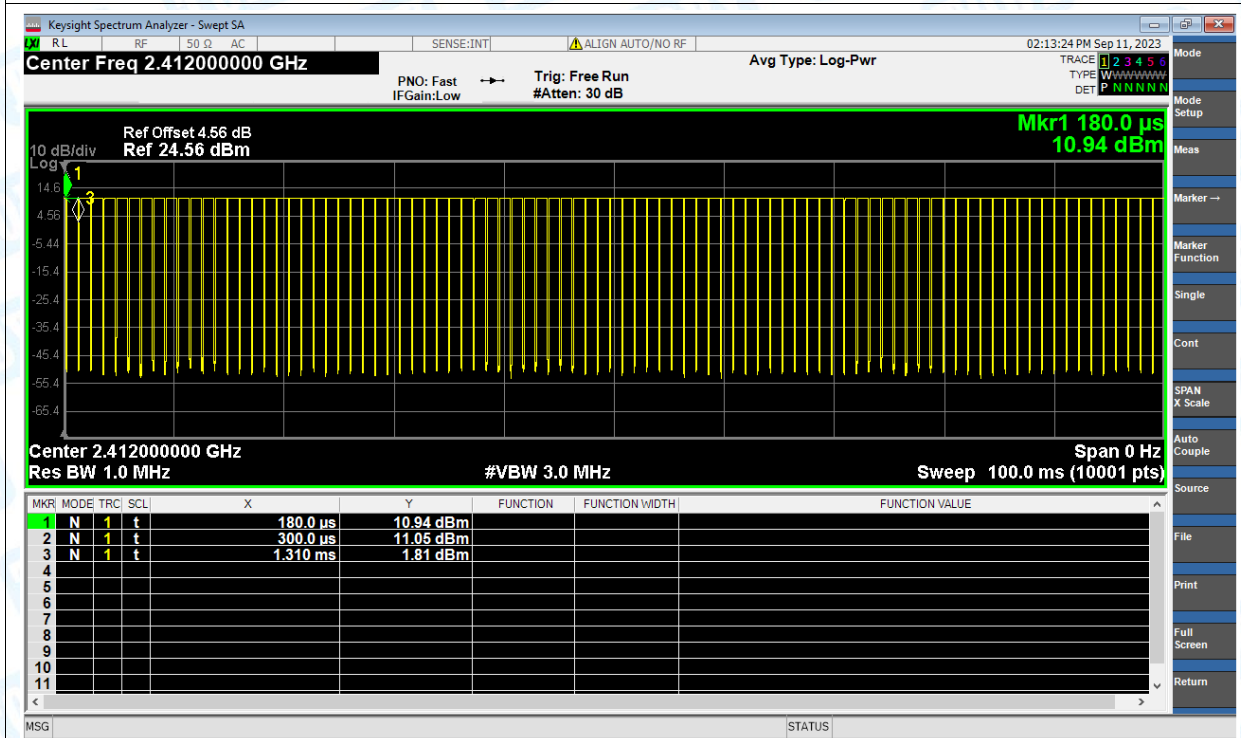
General Description of EUT	
Product Name:	Wi-Fi Combination Smoke and Carbon Monoxide Alarm
Test Model:	SC07-WX
Sample ID:	HC-C-202308-0143-01-1-2#
Environmental Conditions	
Temperature:	24°C
Relative Humidity:	50%
Test Voltage:	DC 3V
Test Engineer:	Zhangchenxi
Note: For a more detailed features description, please refer to the report TBR-C-202308-0143-72 The report only show the worst case data.	

Duty Cycle

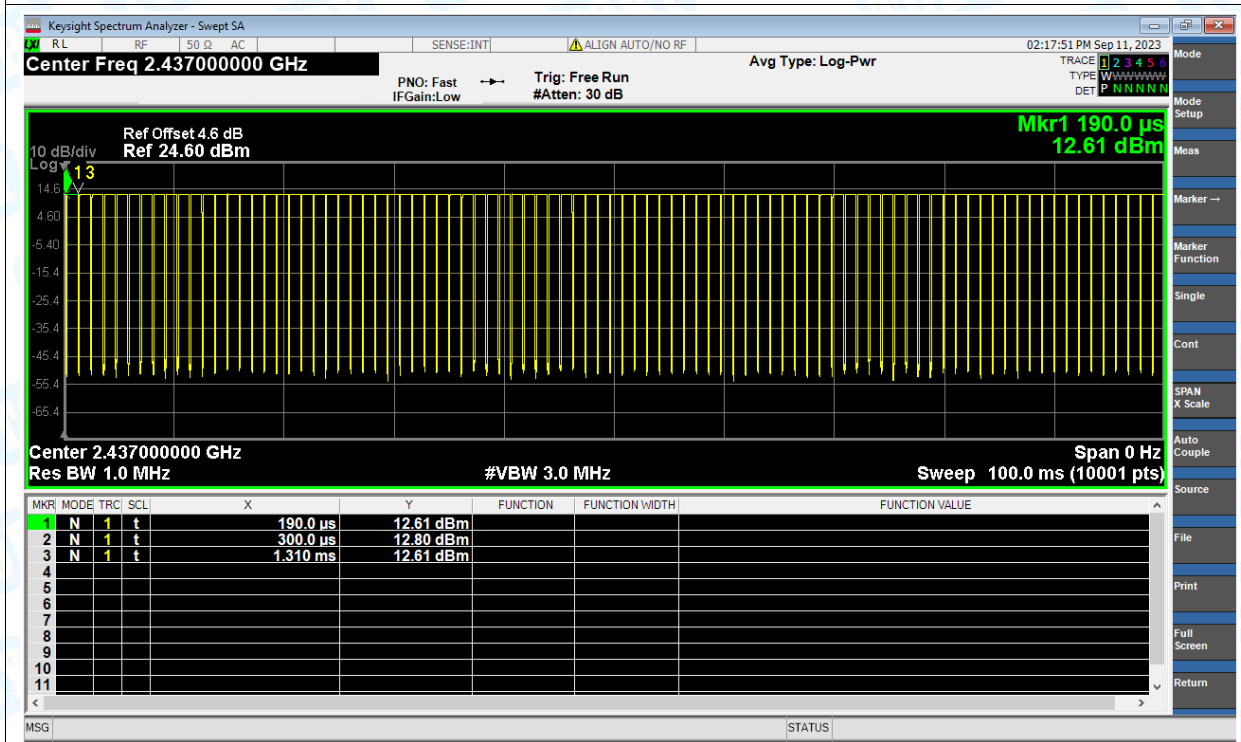
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	89.38	0.49	0.99
NVNT	b	2437	Ant1	90.18	0.45	0.99
NVNT	b	2462	Ant1	89.38	0.49	0.99
NVNT	g	2412	Ant1	89.86	0.46	1.61
NVNT	g	2437	Ant1	89.86	0.46	1.61
NVNT	g	2462	Ant1	89.71	0.47	1.64
NVNT	n(HT20)	2412	Ant1	91.18	0.4	1.61
NVNT	n(HT20)	2437	Ant1	89.86	0.46	1.61
NVNT	n(HT20)	2462	Ant1	89.71	0.47	1.64
NVNT	n(HT40)	2422	Ant1	91.18	0.4	1.61
NVNT	n(HT40)	2437	Ant1	91.04	0.41	1.64
NVNT	n(HT40)	2452	Ant1	91.04	0.41	1.64

Test Graphs

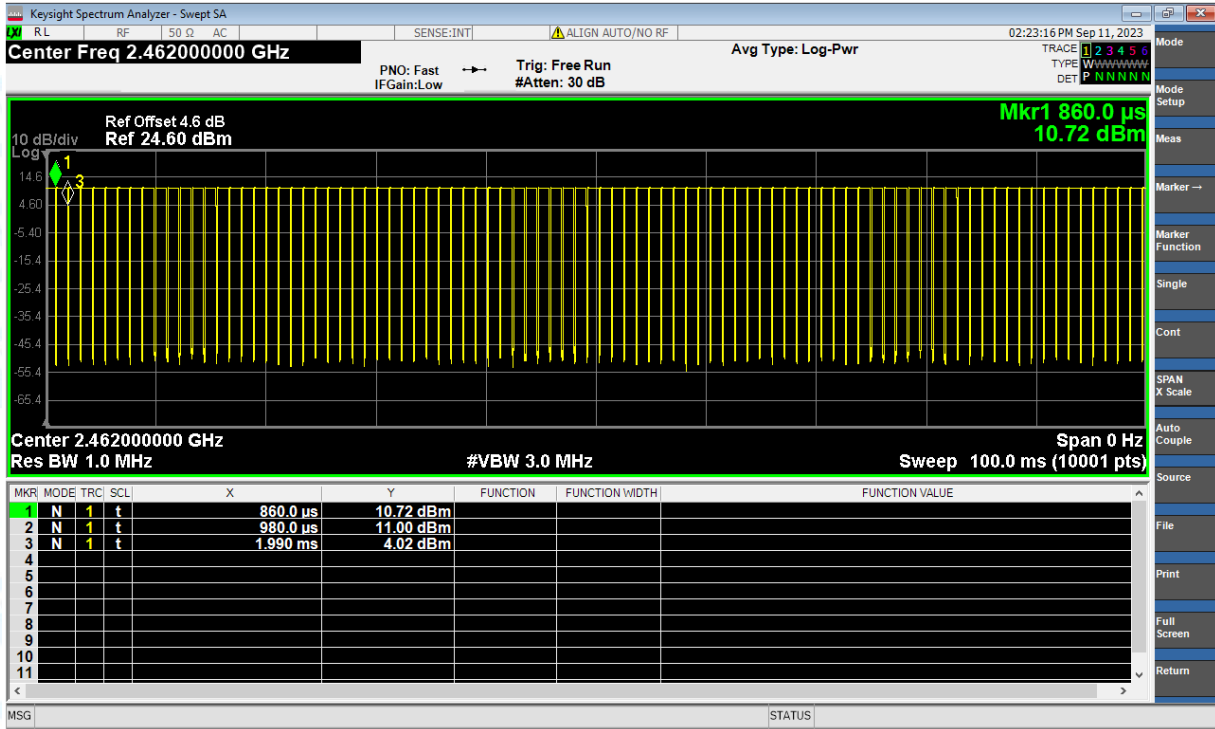
Duty Cycle NVNT b 2412MHz Ant1



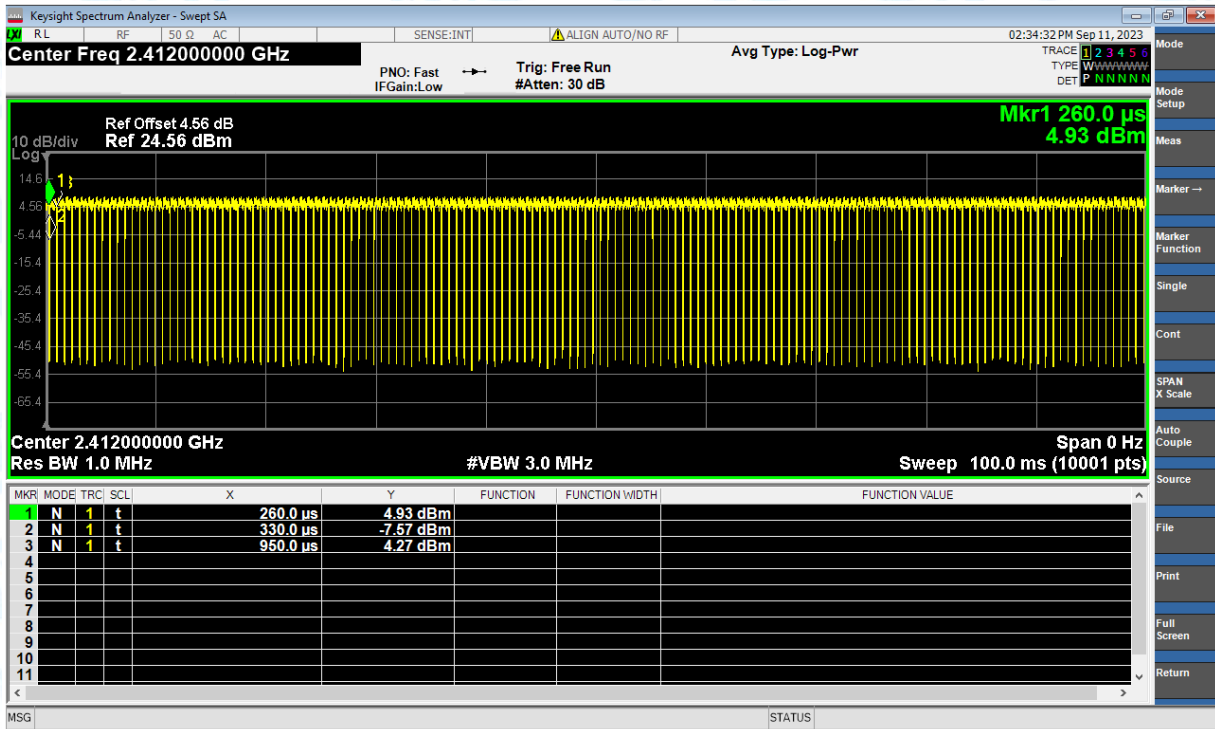
Duty Cycle NVNT b 2437MHz Ant1



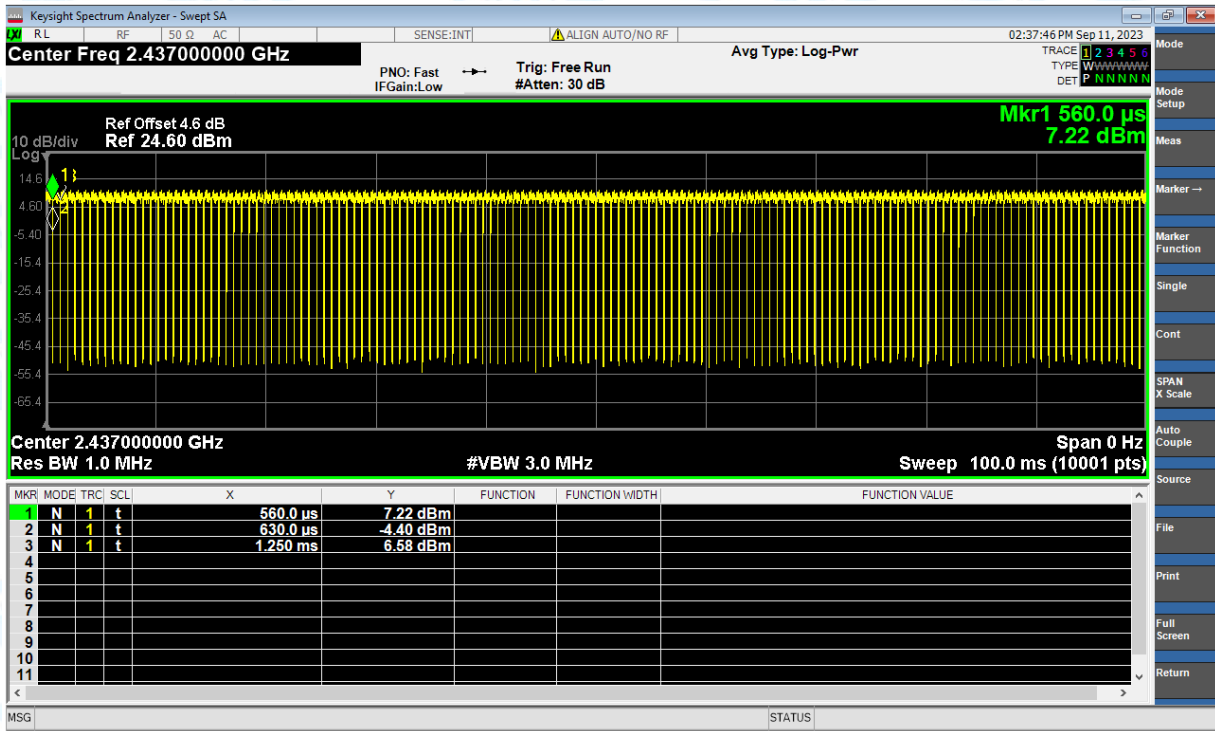
Duty Cycle NVNT b 2462MHz Ant1



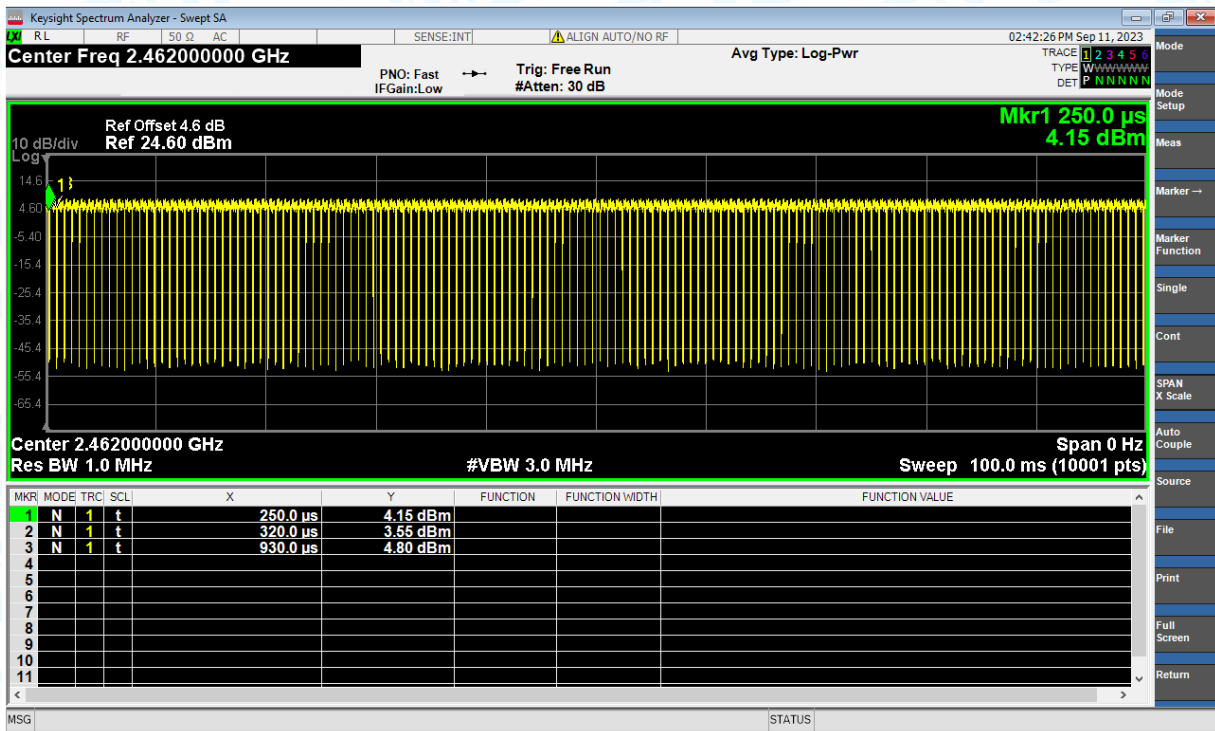
Duty Cycle NVNT g 2412MHz Ant1



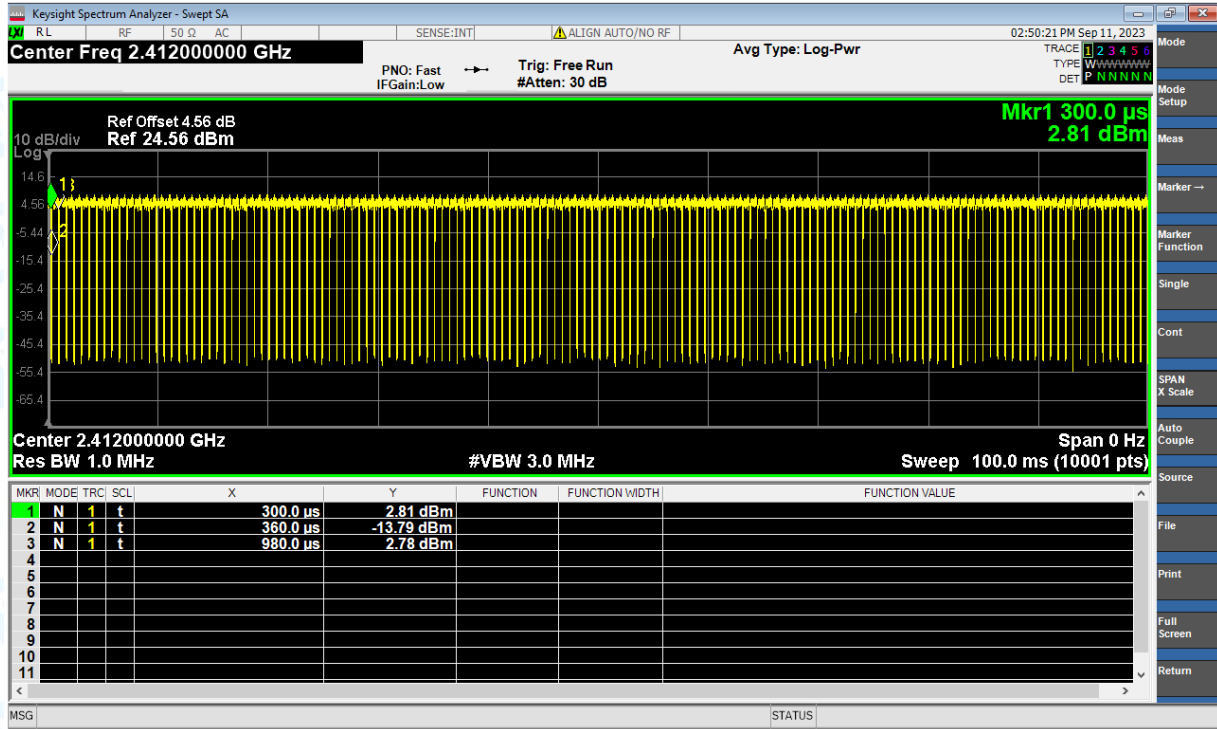
Duty Cycle NVNT g 2437MHz Ant1



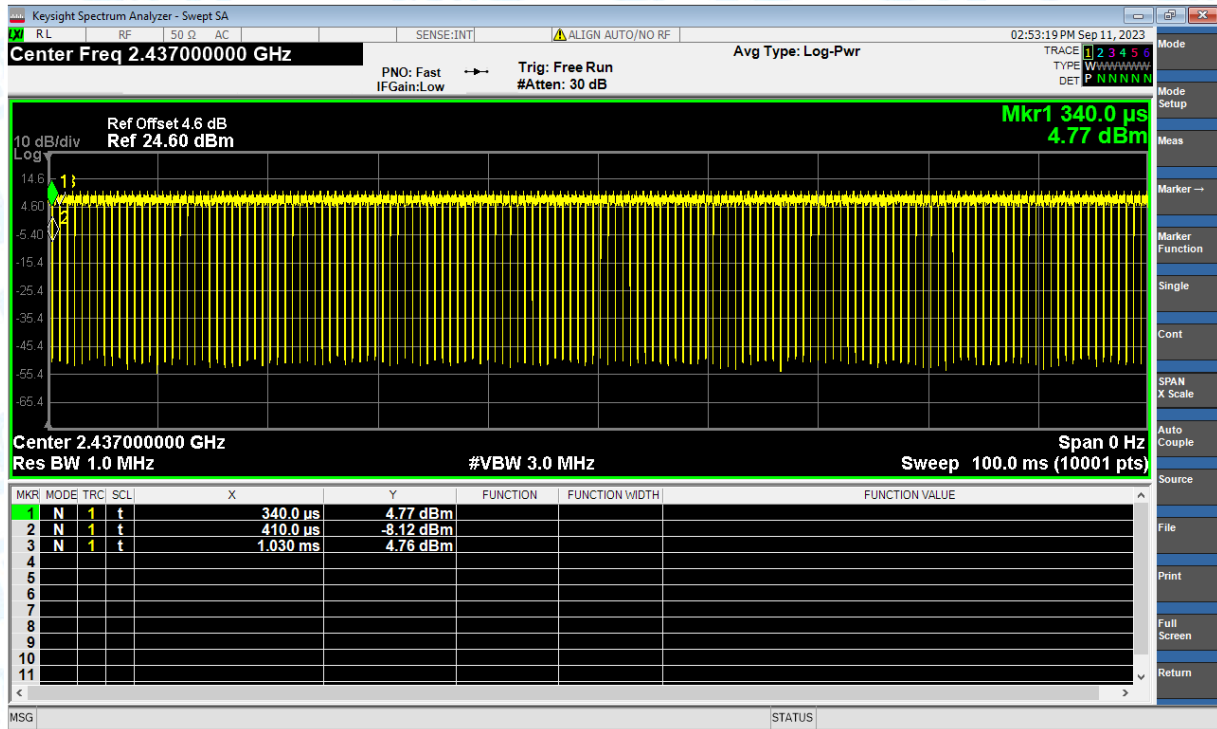
Duty Cycle NVNT g 2462MHz Ant1



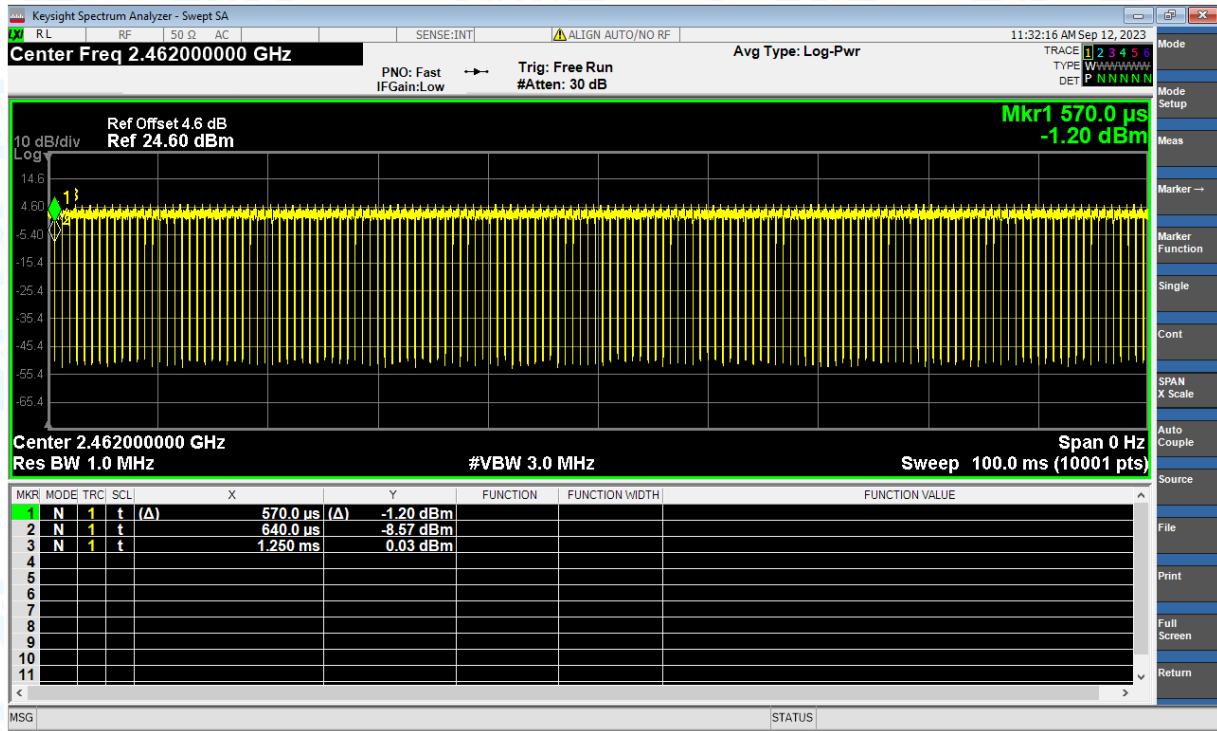
Duty Cycle NVNT n(HT20) 2412MHz Ant1



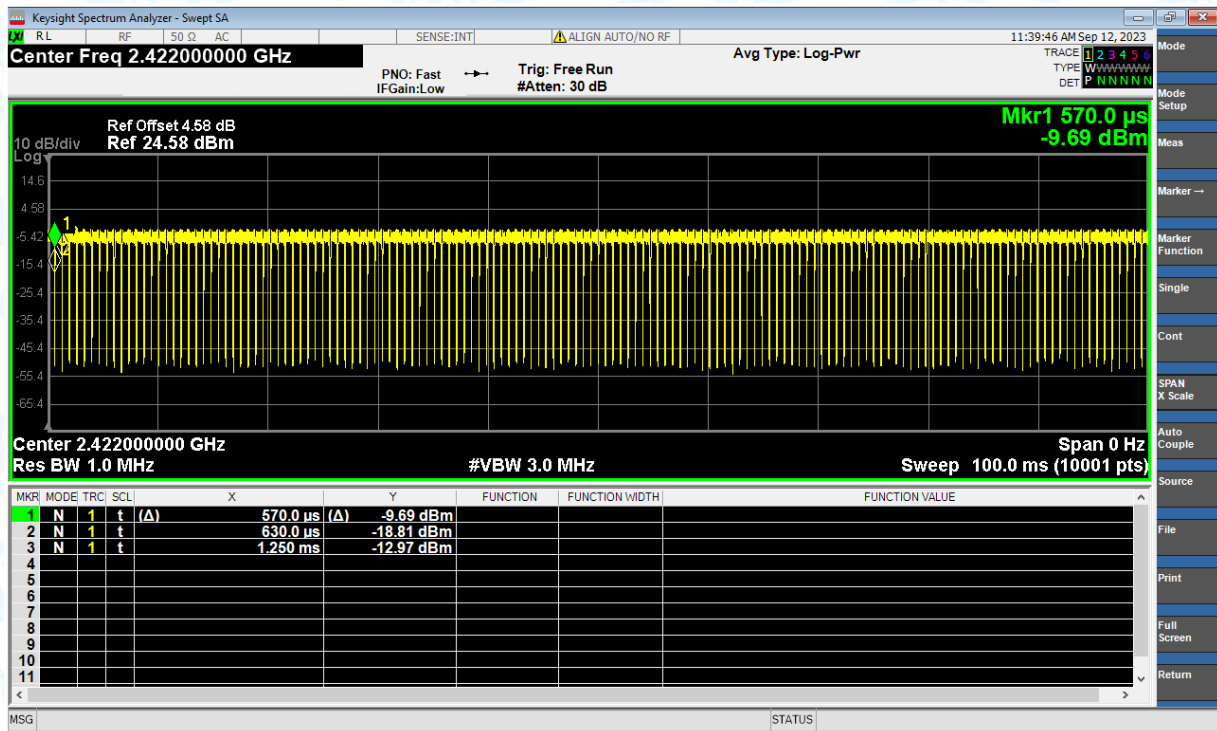
Duty Cycle NVNT n(HT20) 2437MHz Ant1



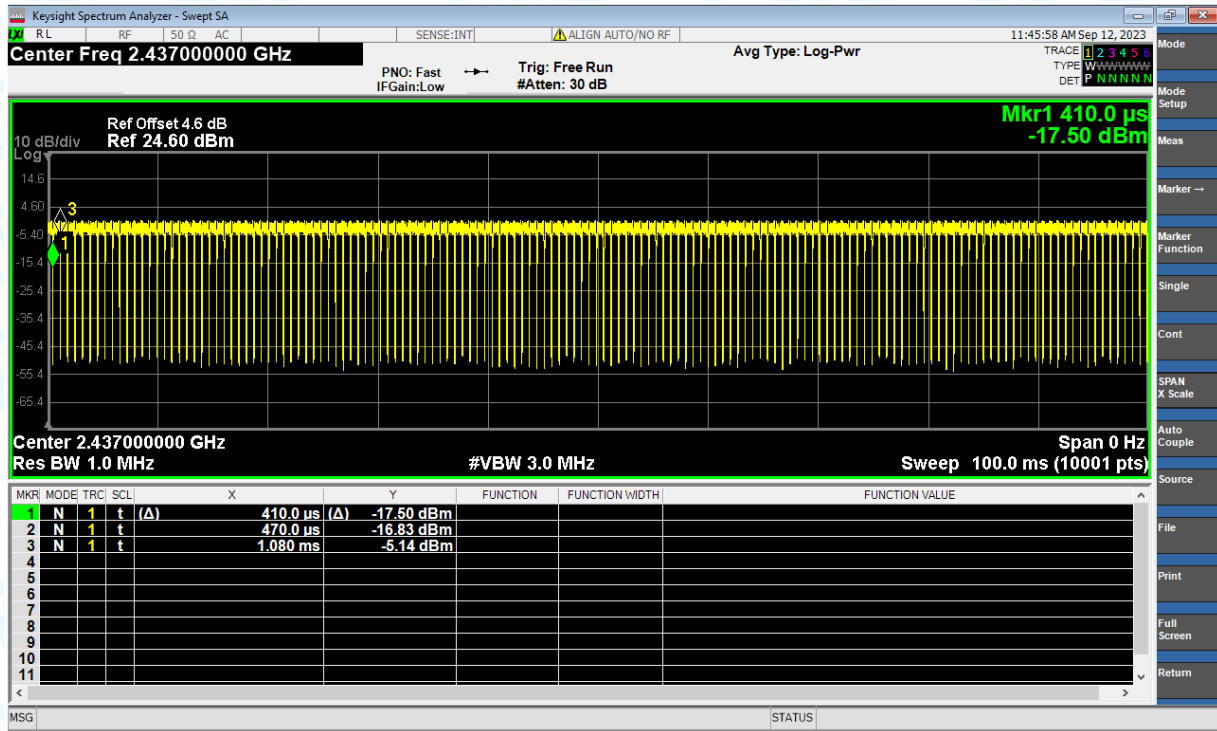
Duty Cycle NVNT n(HT20) 2462MHz Ant1



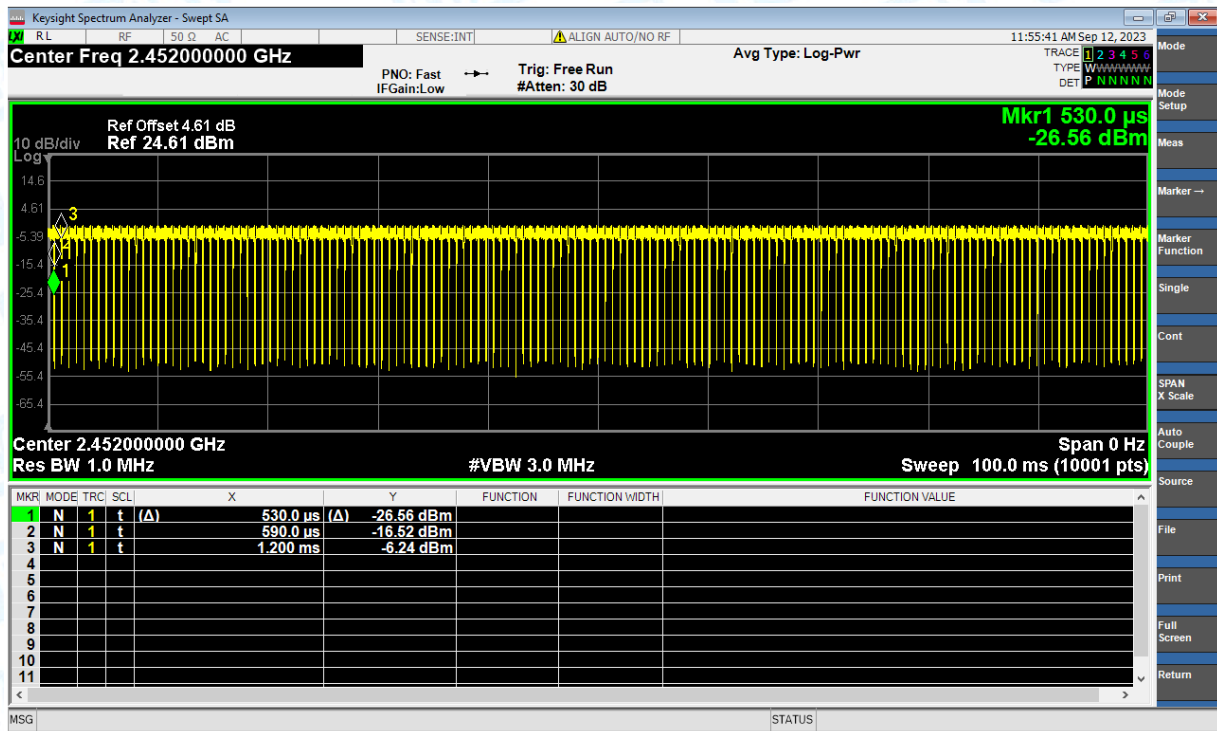
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



Maximum Conducted Output Power

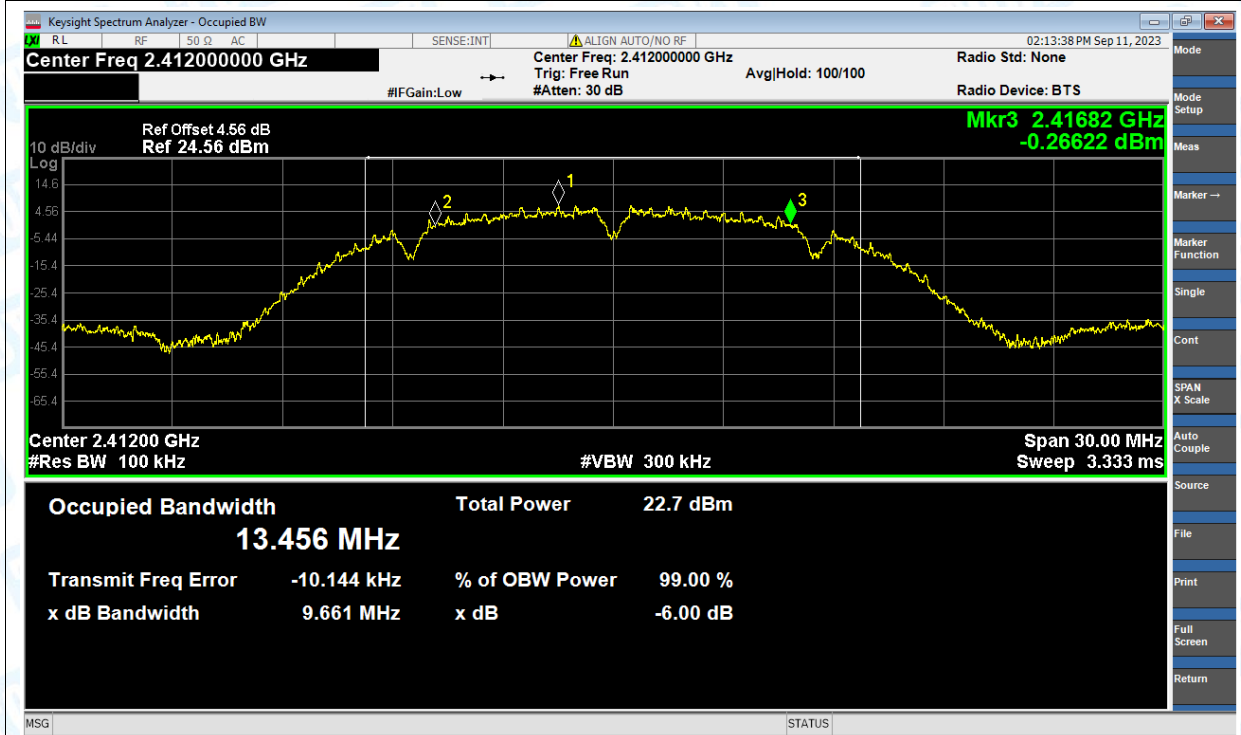
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	16.334	30	Pass
NVNT	b	2437	Ant1	18.187	30	Pass
NVNT	b	2462	Ant1	16.279	30	Pass
NVNT	g	2412	Ant1	13.279	30	Pass
NVNT	g	2437	Ant1	15.726	30	Pass
NVNT	g	2462	Ant1	13.528	30	Pass
NVNT	n(HT20)	2412	Ant1	12.995	30	Pass
NVNT	n(HT20)	2437	Ant1	14.924	30	Pass
NVNT	n(HT20)	2462	Ant1	9.951	30	Pass
NVNT	n(HT40)	2422	Ant1	8.735	30	Pass
NVNT	n(HT40)	2437	Ant1	10.46	30	Pass
NVNT	n(HT40)	2452	Ant1	9.521	30	Pass

-6dB Bandwidth

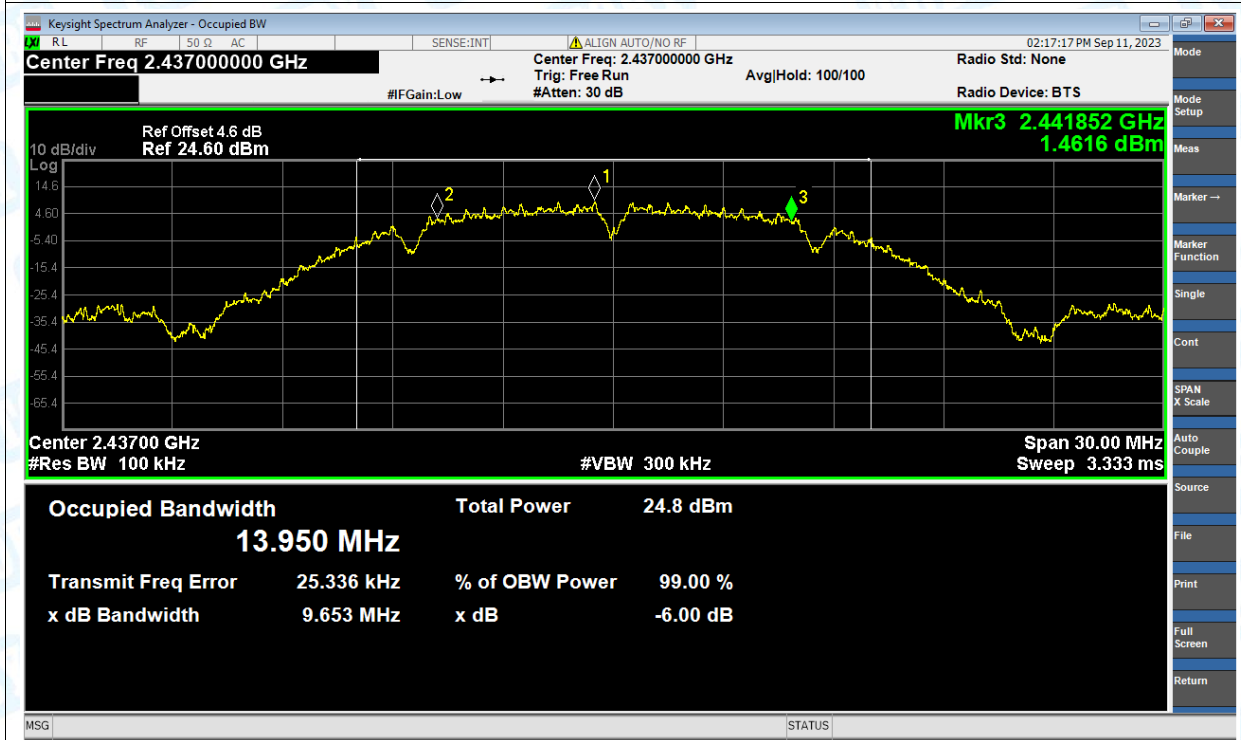
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.66	0.5	Pass
NVNT	b	2437	Ant1	9.65	0.5	Pass
NVNT	b	2462	Ant1	9.53	0.5	Pass
NVNT	g	2412	Ant1	16.35	0.5	Pass
NVNT	g	2437	Ant1	16.34	0.5	Pass
NVNT	g	2462	Ant1	16.37	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.55	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.59	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.58	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	36.36	0.5	Pass

Test Graphs

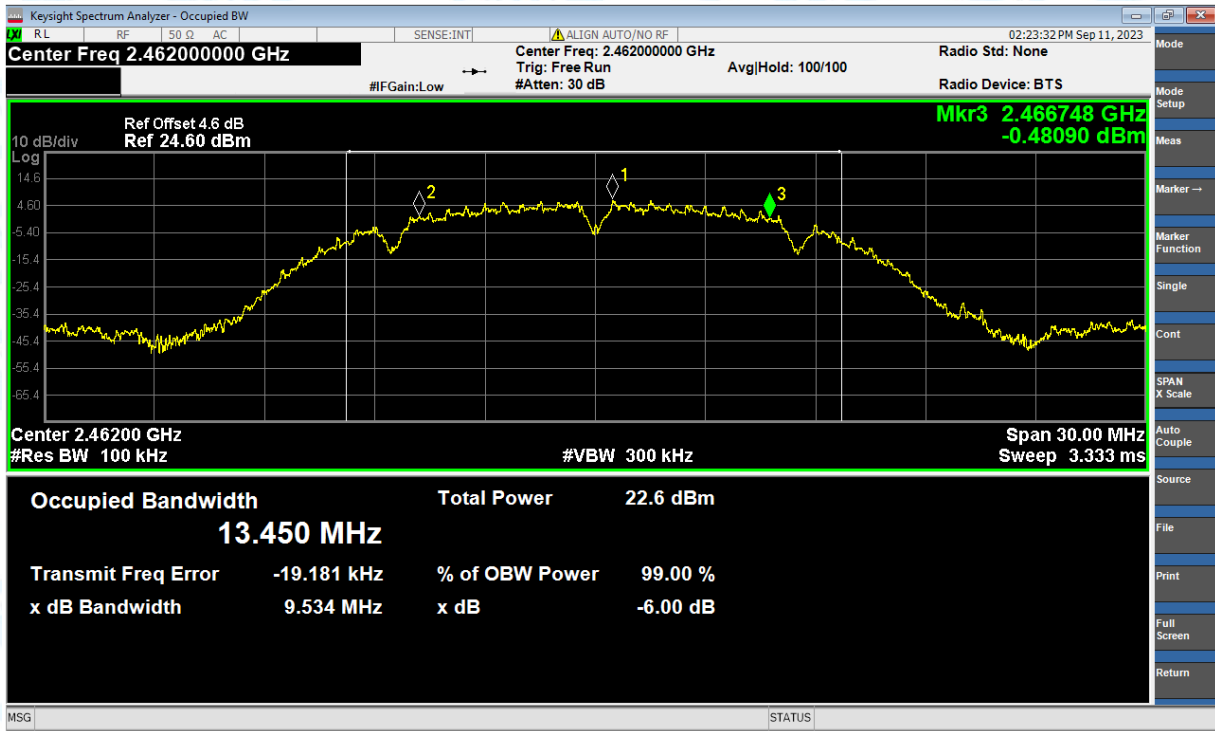
-6dB Bandwidth NVNT b 2412MHz Ant1



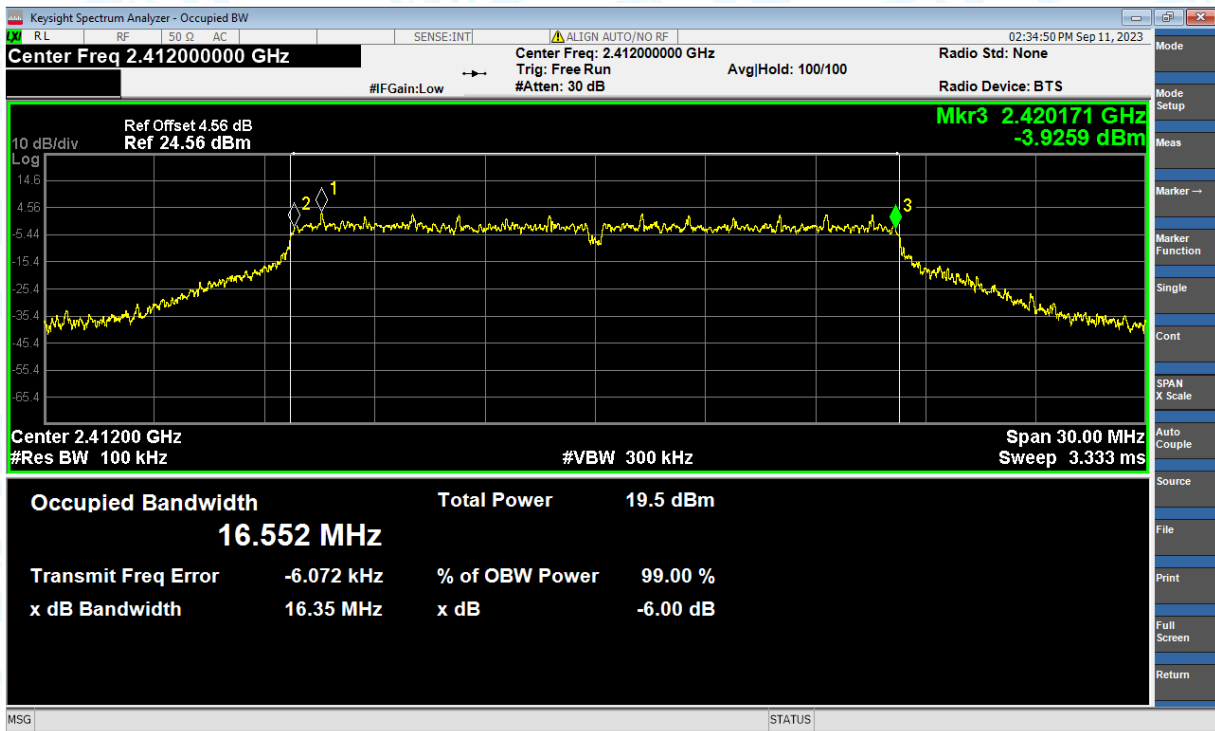
-6dB Bandwidth NVNT b 2437MHz Ant1



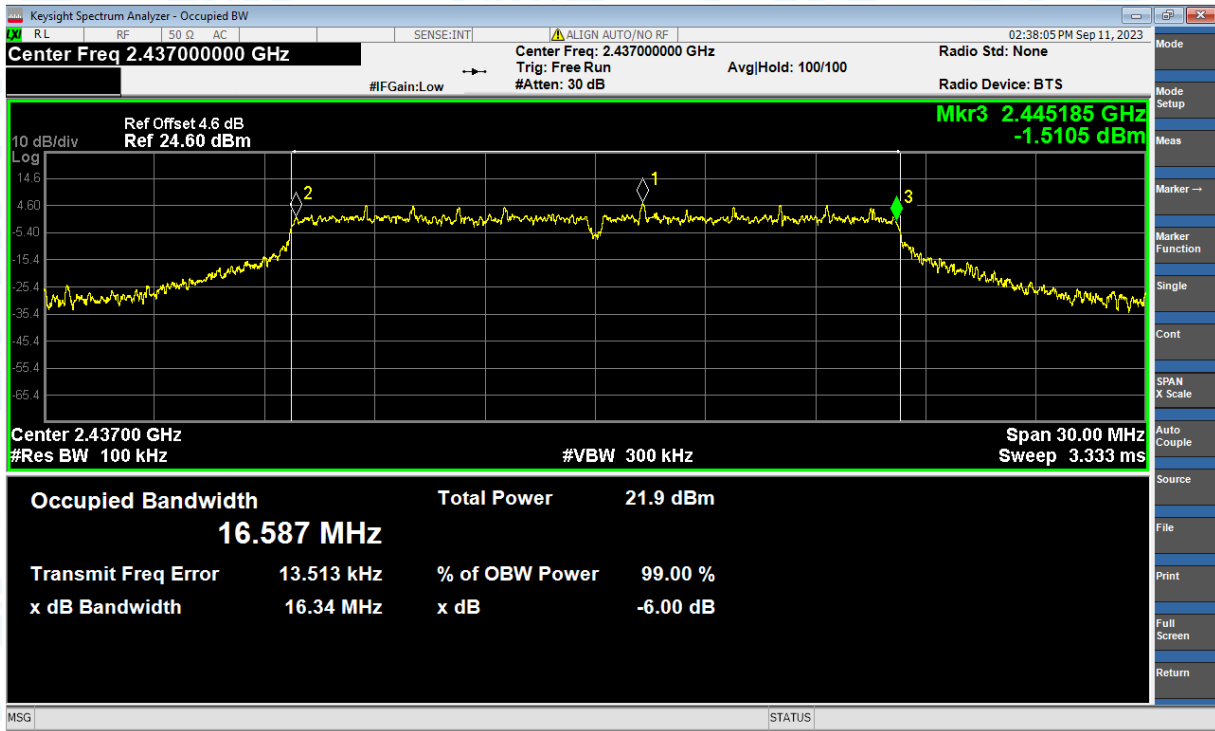
-6dB Bandwidth NVNT b 2462MHz Ant1



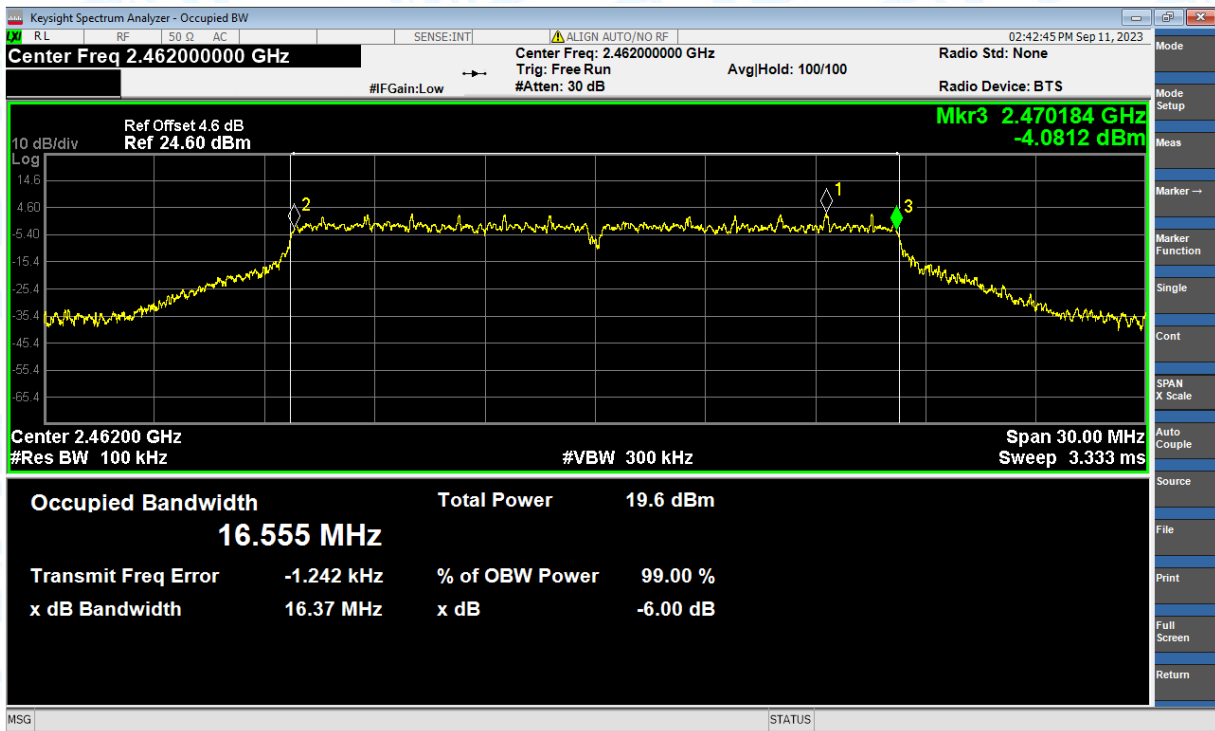
-6dB Bandwidth NVNT g 2412MHz Ant1



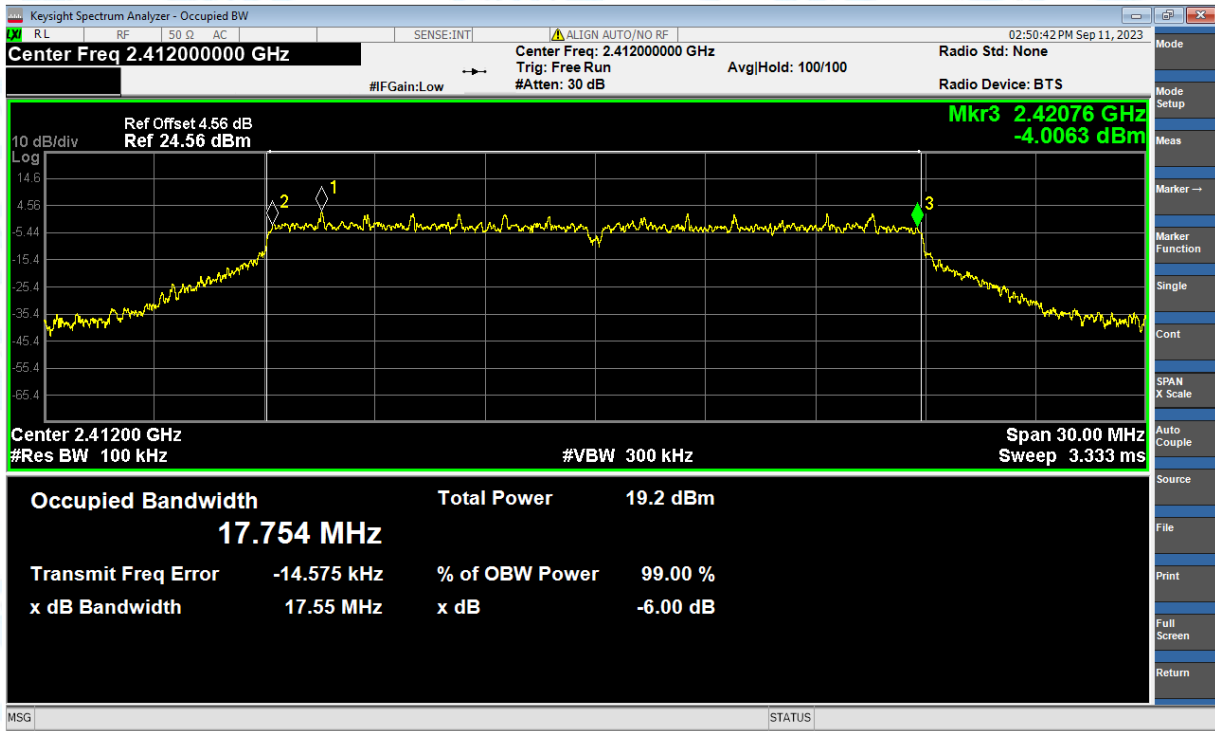
-6dB Bandwidth NVNT g 2437MHz Ant1



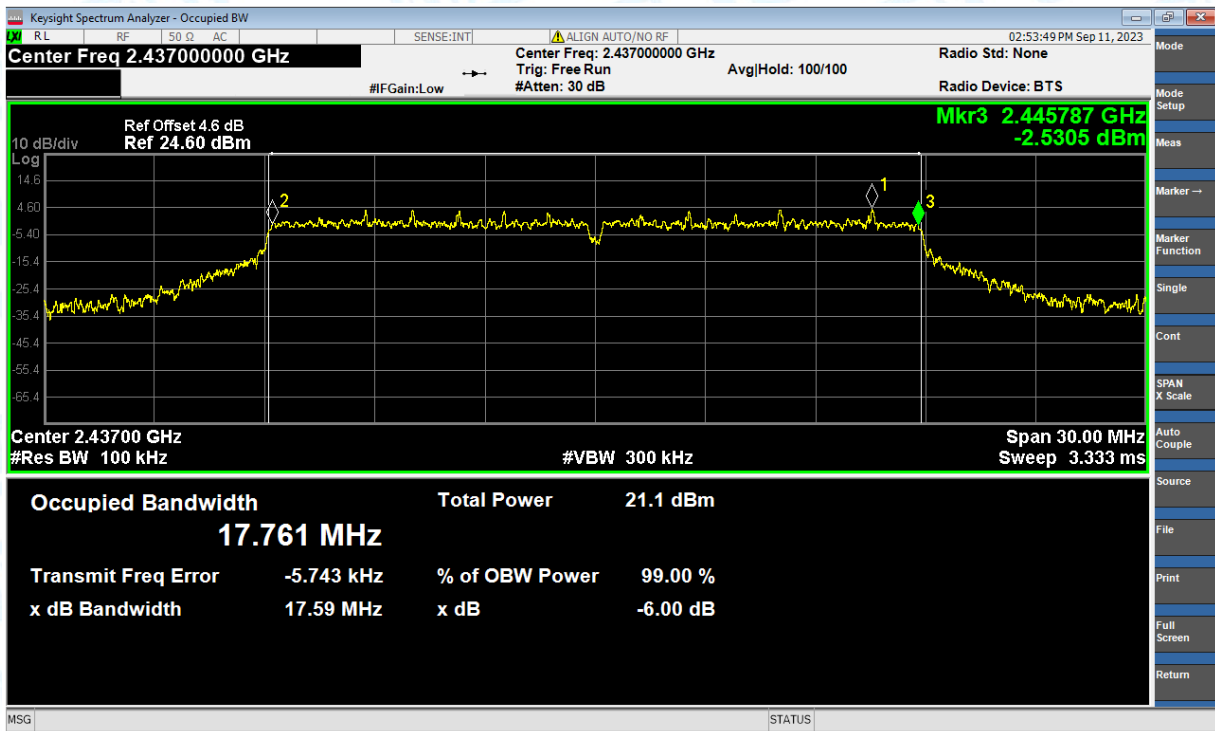
-6dB Bandwidth NVNT g 2462MHz Ant1



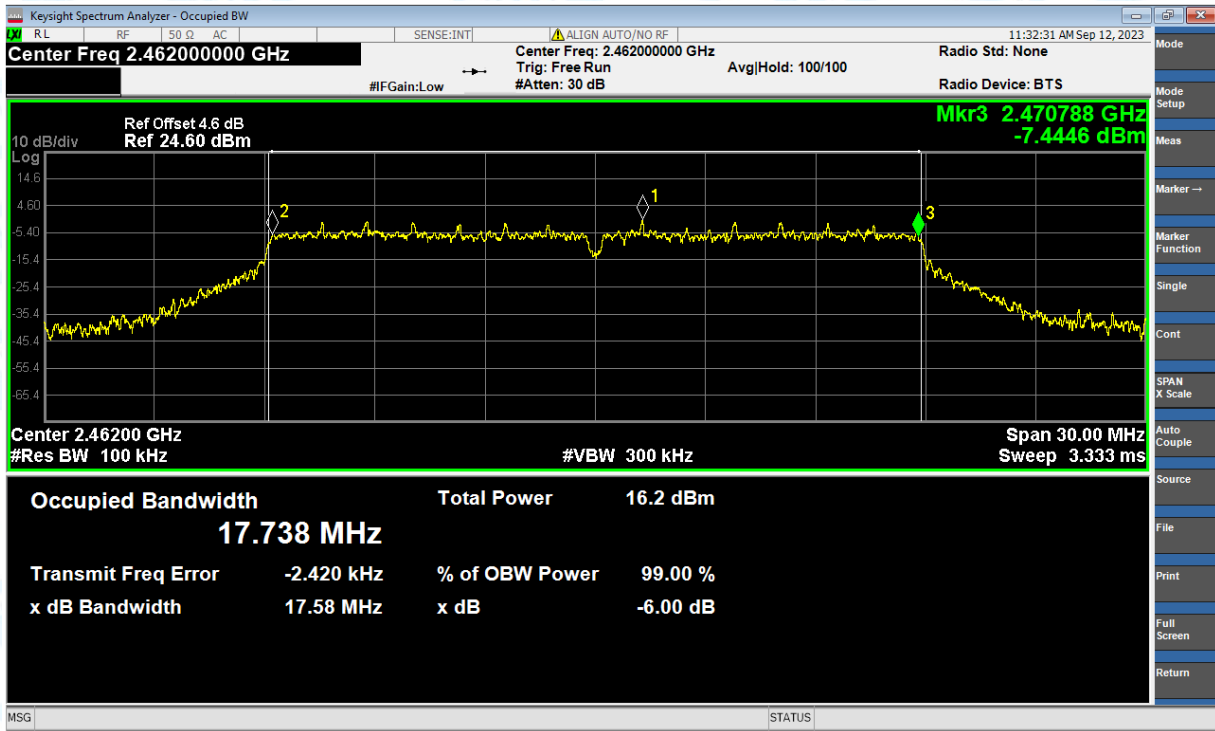
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



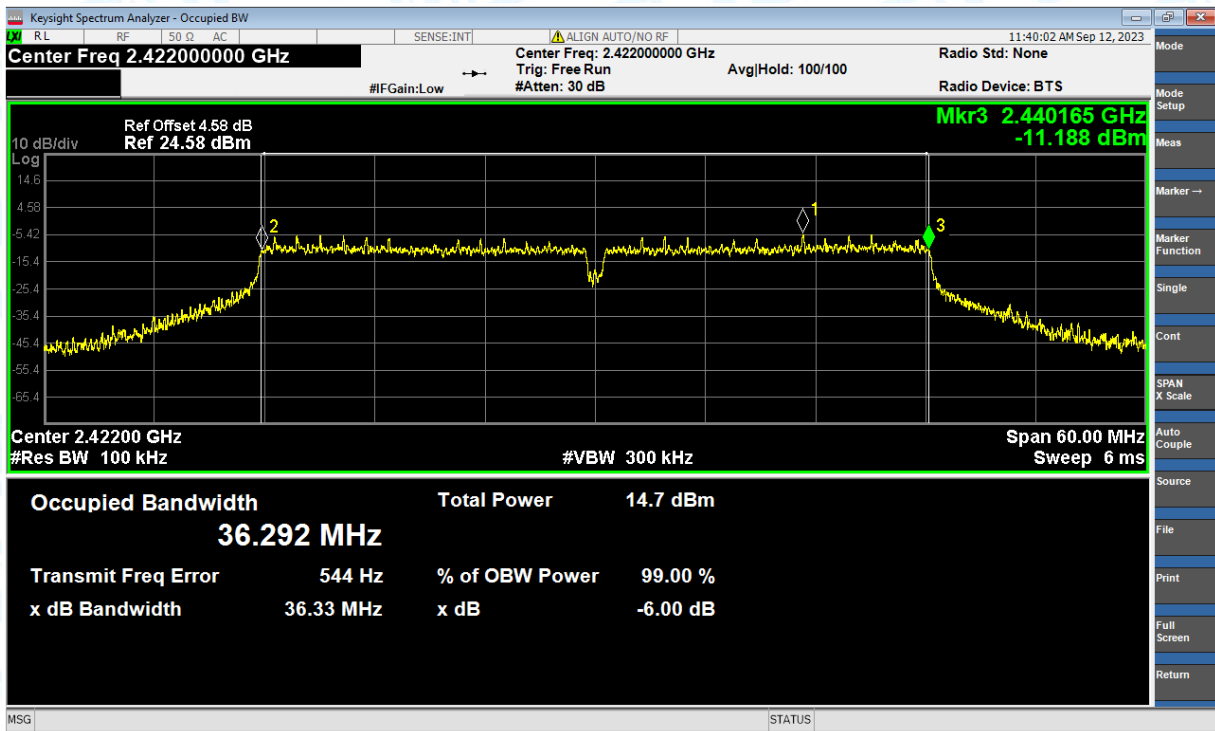
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



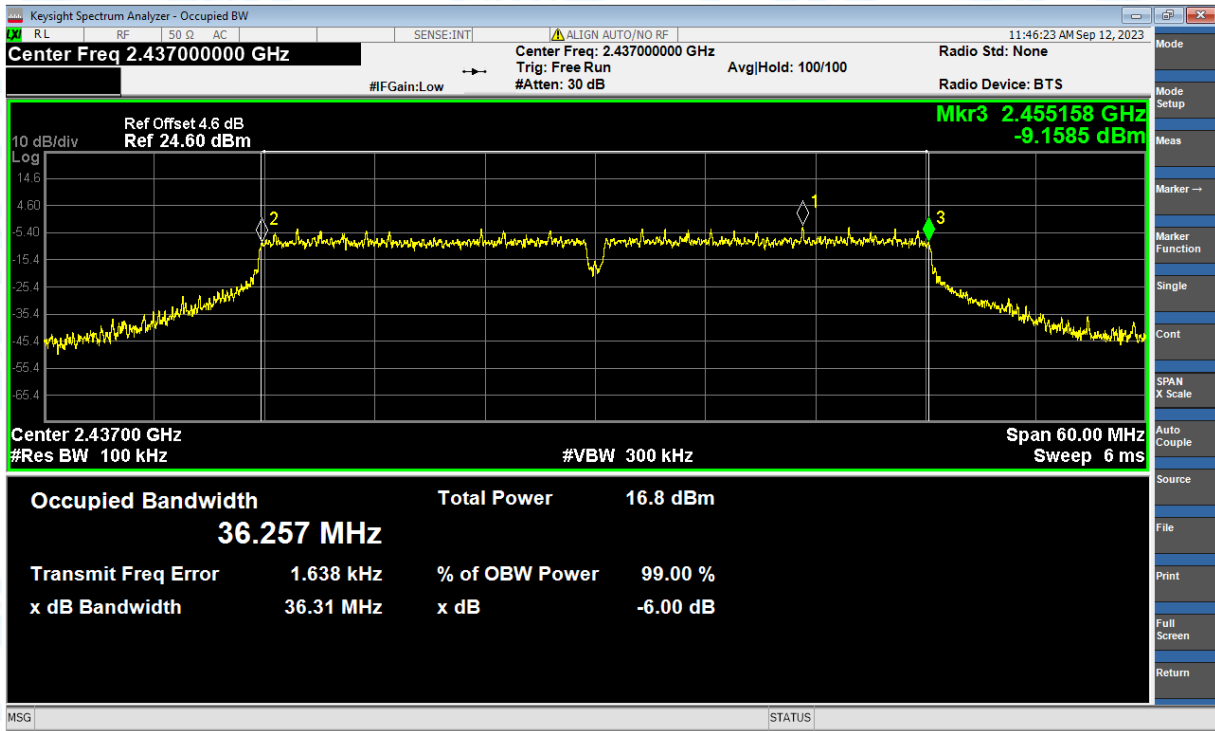
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



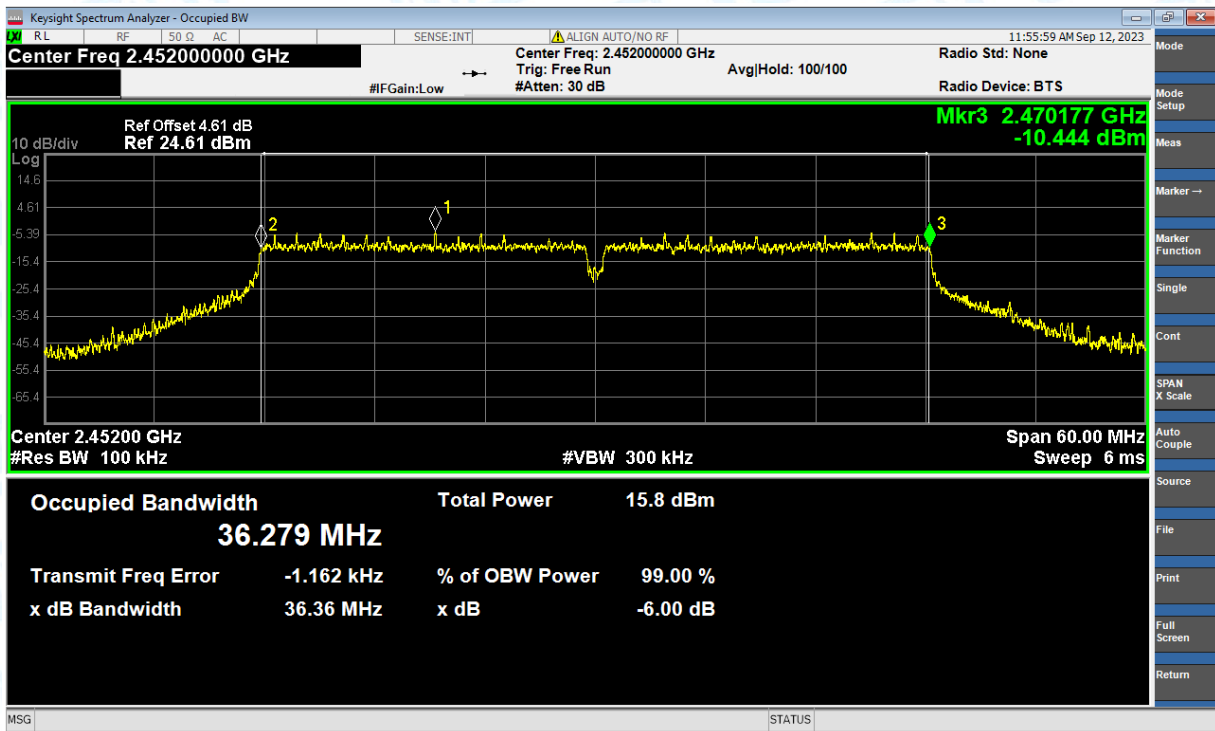
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



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



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

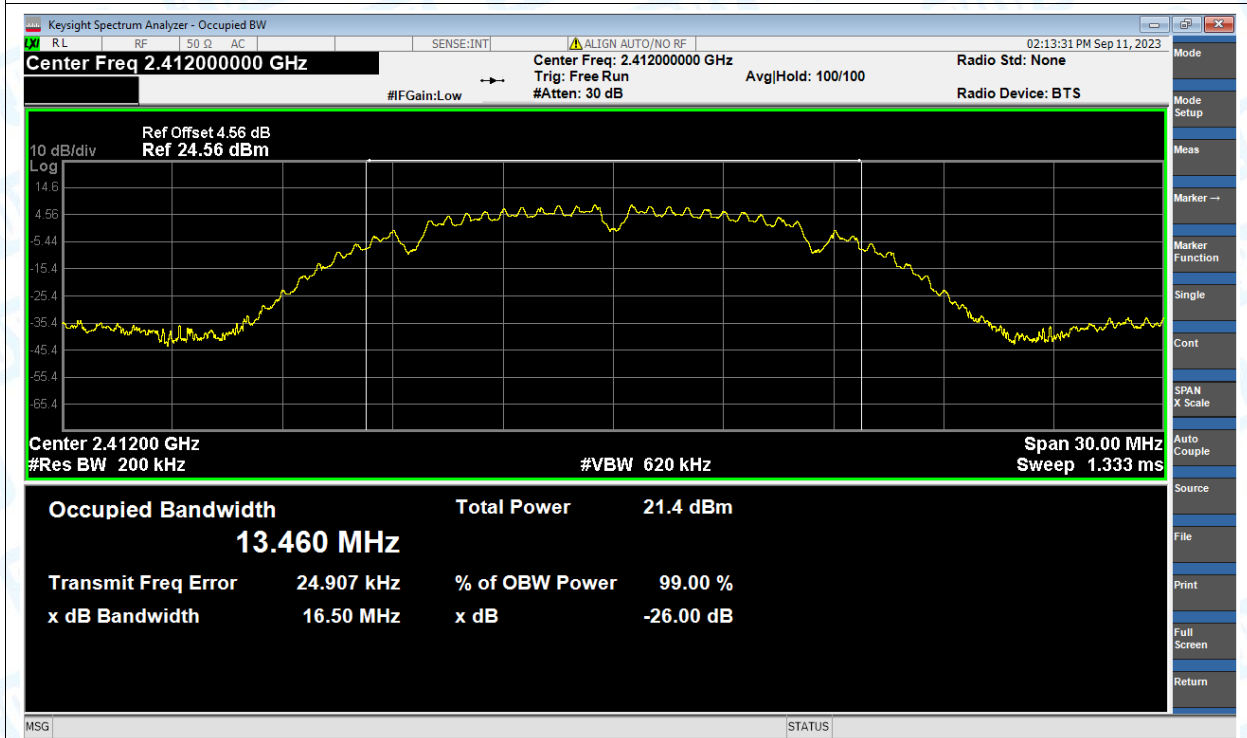


Occupied Channel Bandwidth

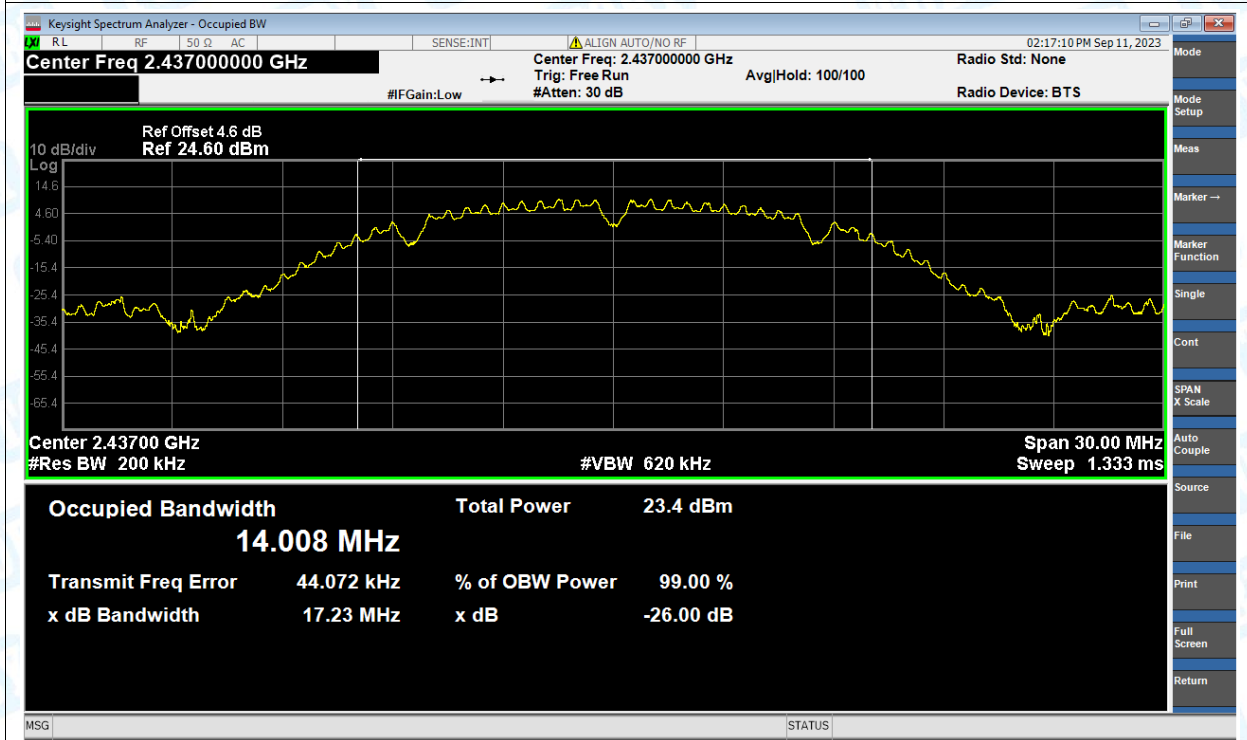
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.46
NVNT	b	2437	Ant1	14.008
NVNT	b	2462	Ant1	13.392
NVNT	g	2412	Ant1	16.794
NVNT	g	2437	Ant1	16.848
NVNT	g	2462	Ant1	16.803
NVNT	n(HT20)	2412	Ant1	17.941
NVNT	n(HT20)	2437	Ant1	17.936
NVNT	n(HT20)	2462	Ant1	17.894
NVNT	n(HT40)	2422	Ant1	36.727
NVNT	n(HT40)	2437	Ant1	36.643
NVNT	n(HT40)	2452	Ant1	36.64

Test Graphs

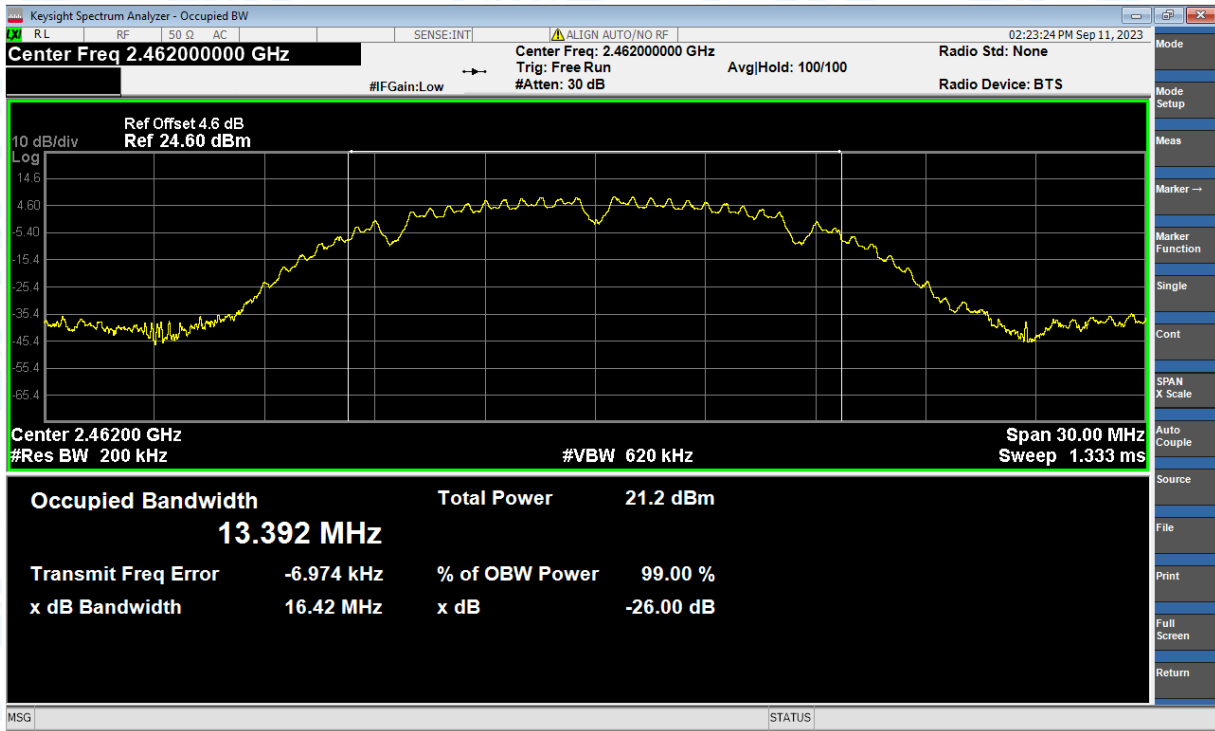
OBV NVNT b 2412MHz Ant1



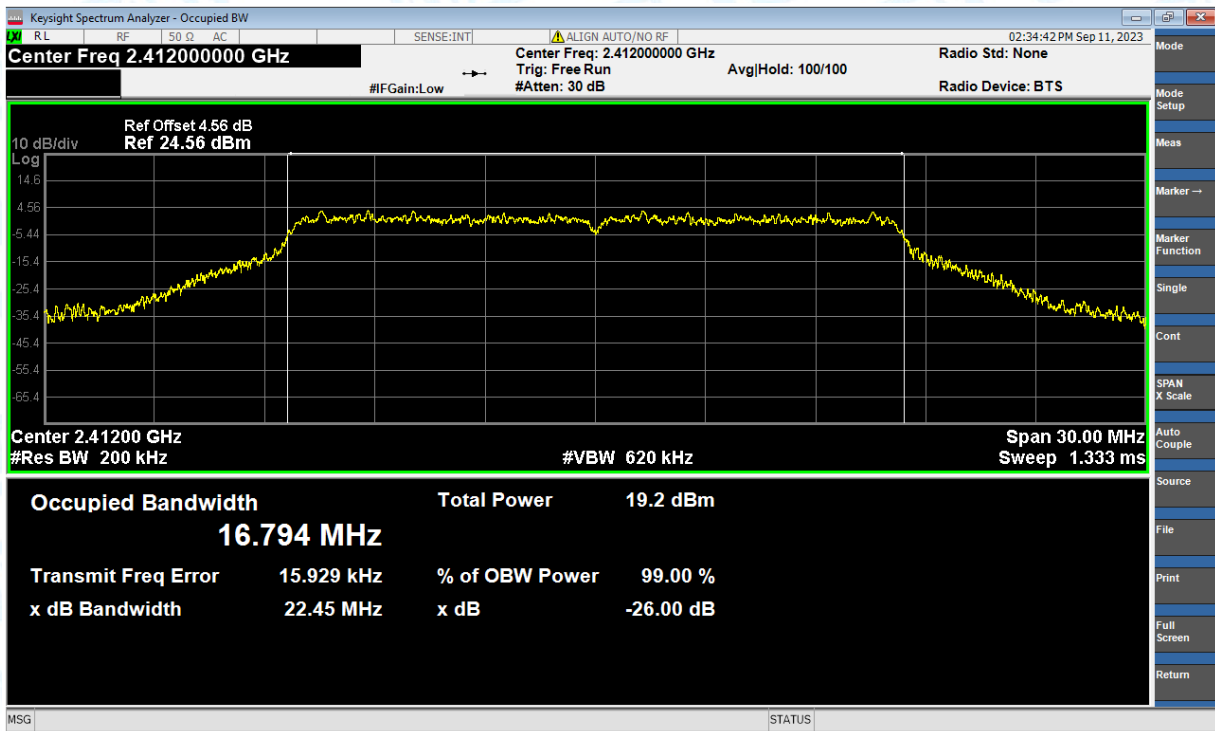
OBV NVNT b 2437MHz Ant1



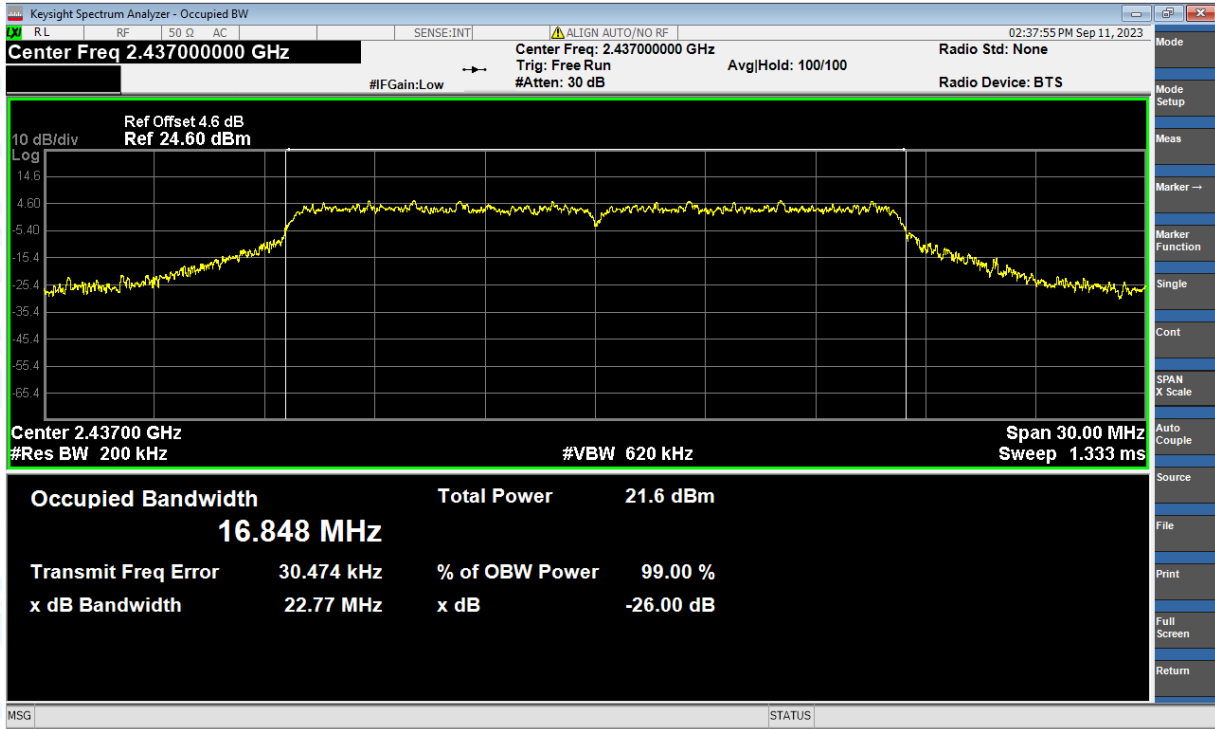
OBW NVNT b 2462MHz Ant1



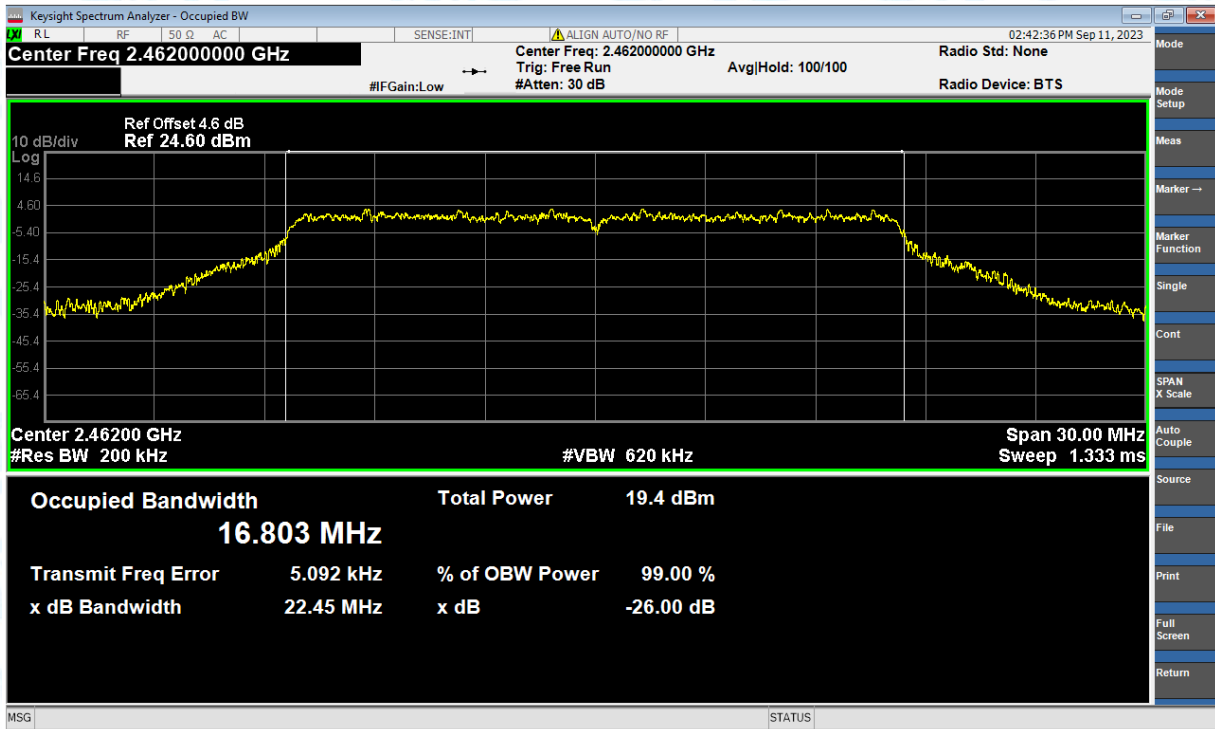
OBW NVNT g 2412MHz Ant1



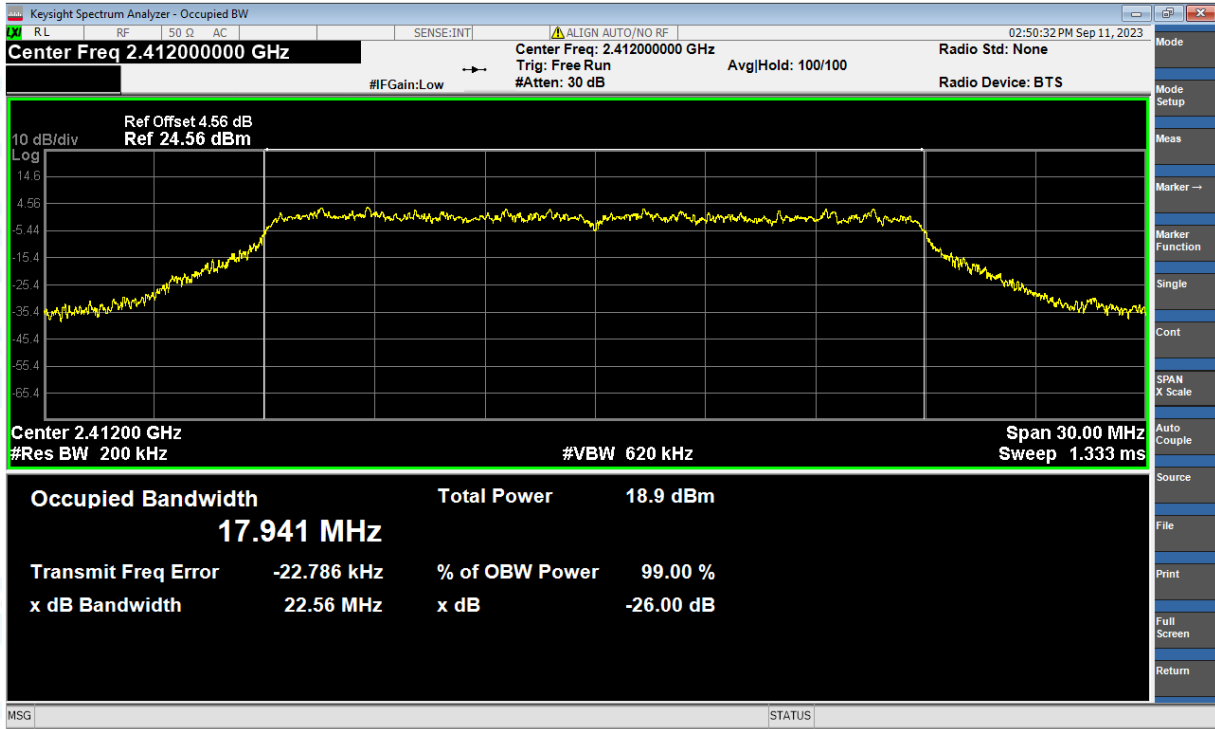
OBW NVNT g 2437MHz Ant1



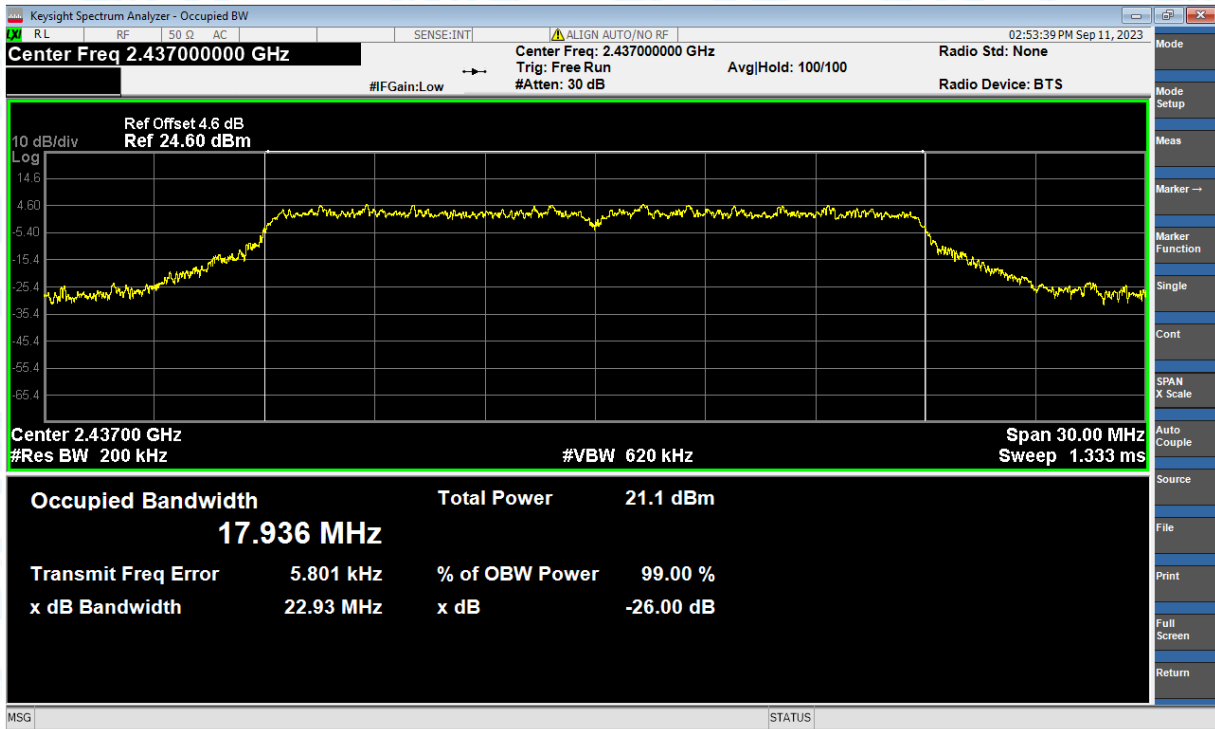
OBW NVNT g 2462MHz Ant1



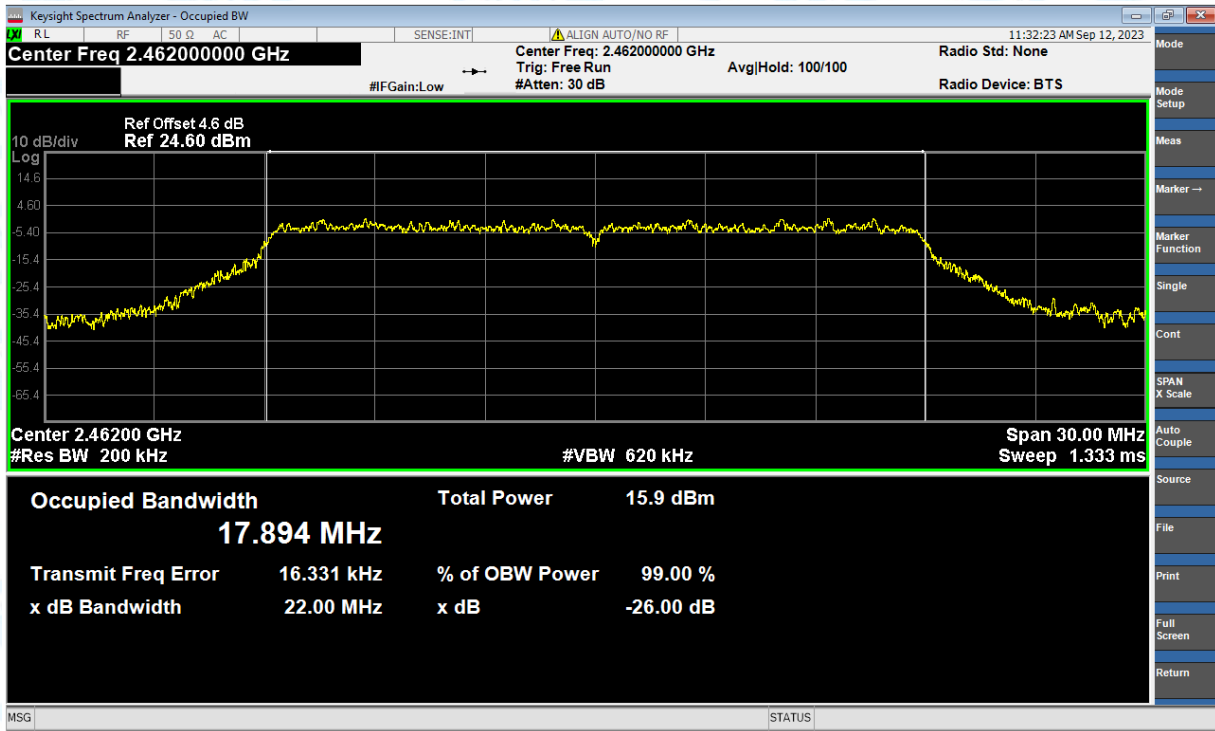
OBW NVNT n(HT20) 2412MHz Ant1



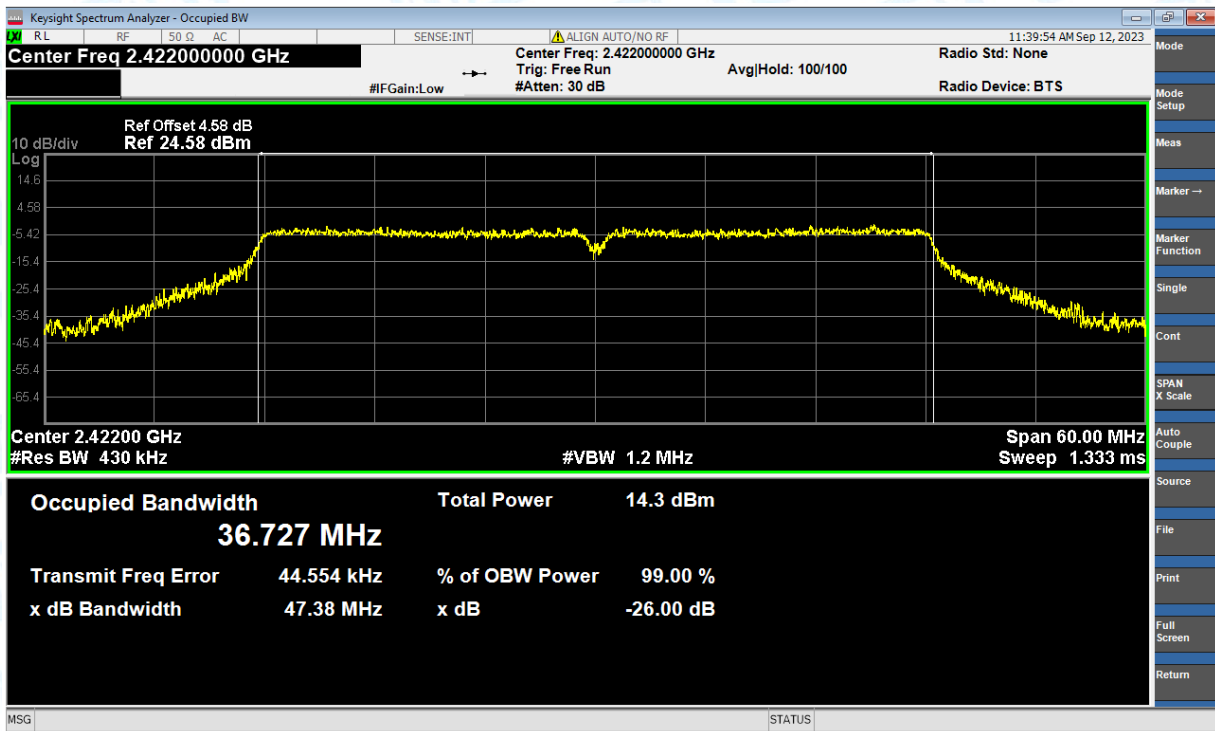
OBW NVNT n(HT20) 2437MHz Ant1



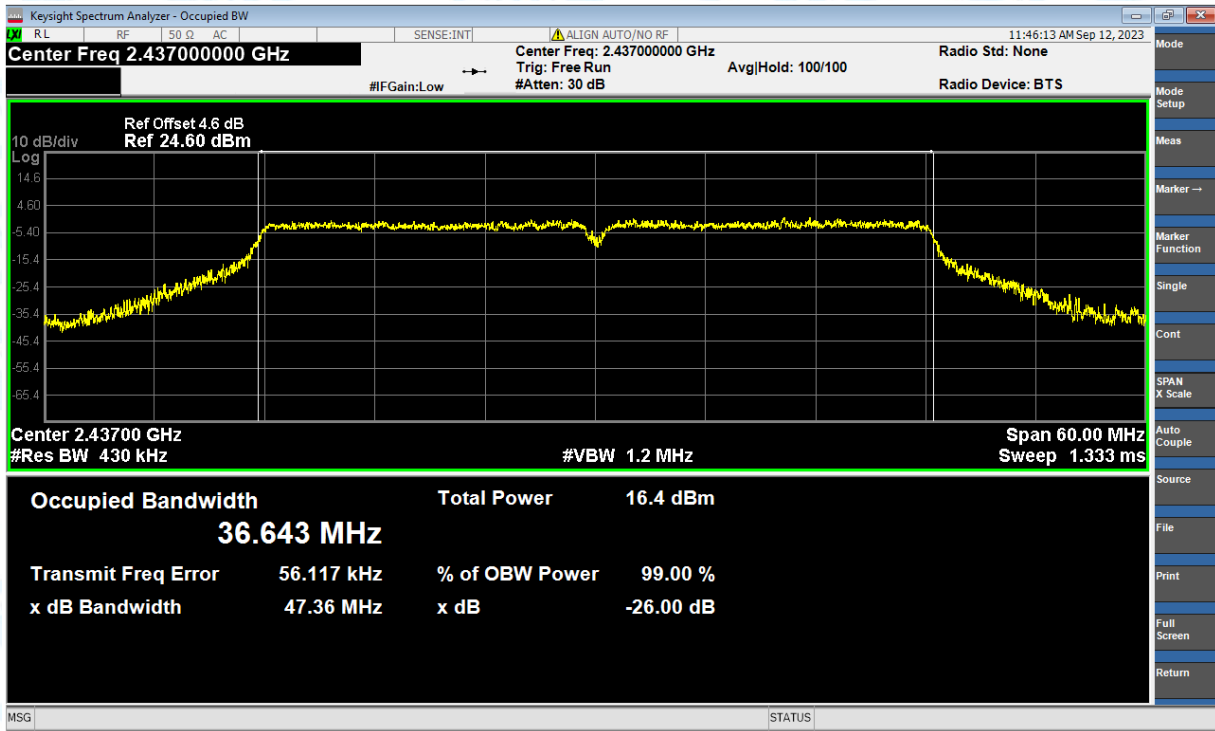
OBW NVNT n(HT20) 2462MHz Ant1



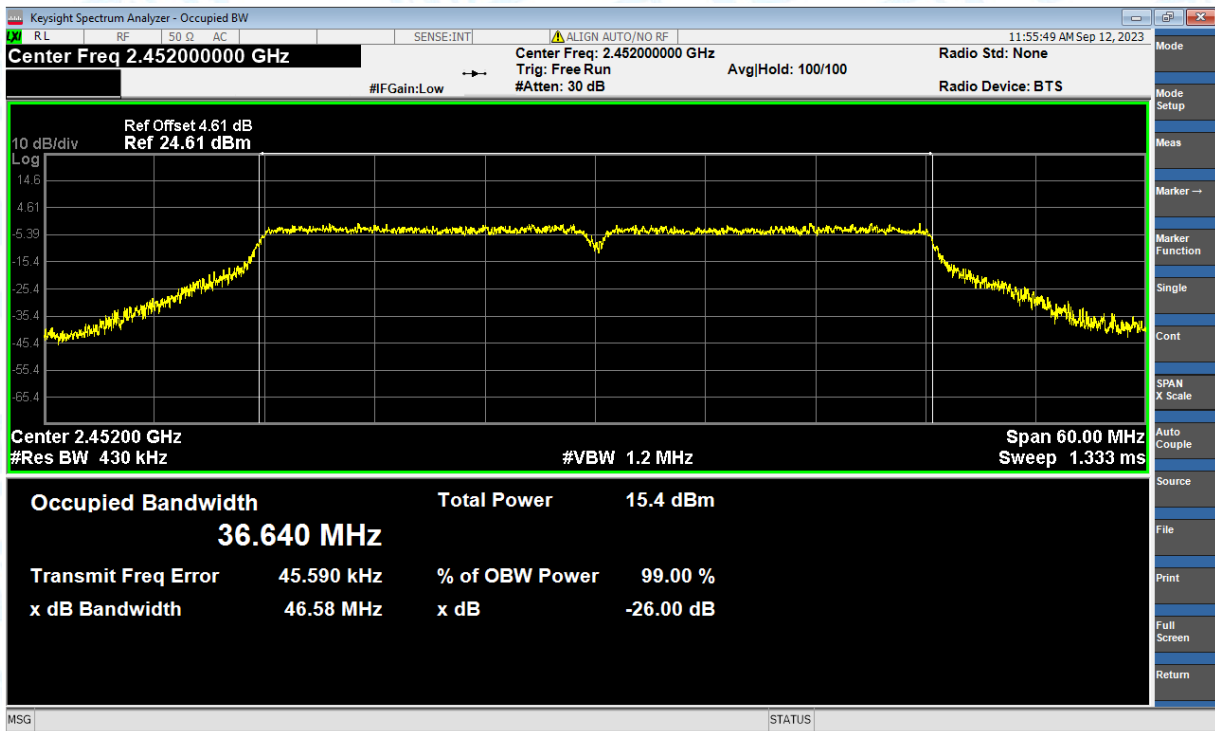
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

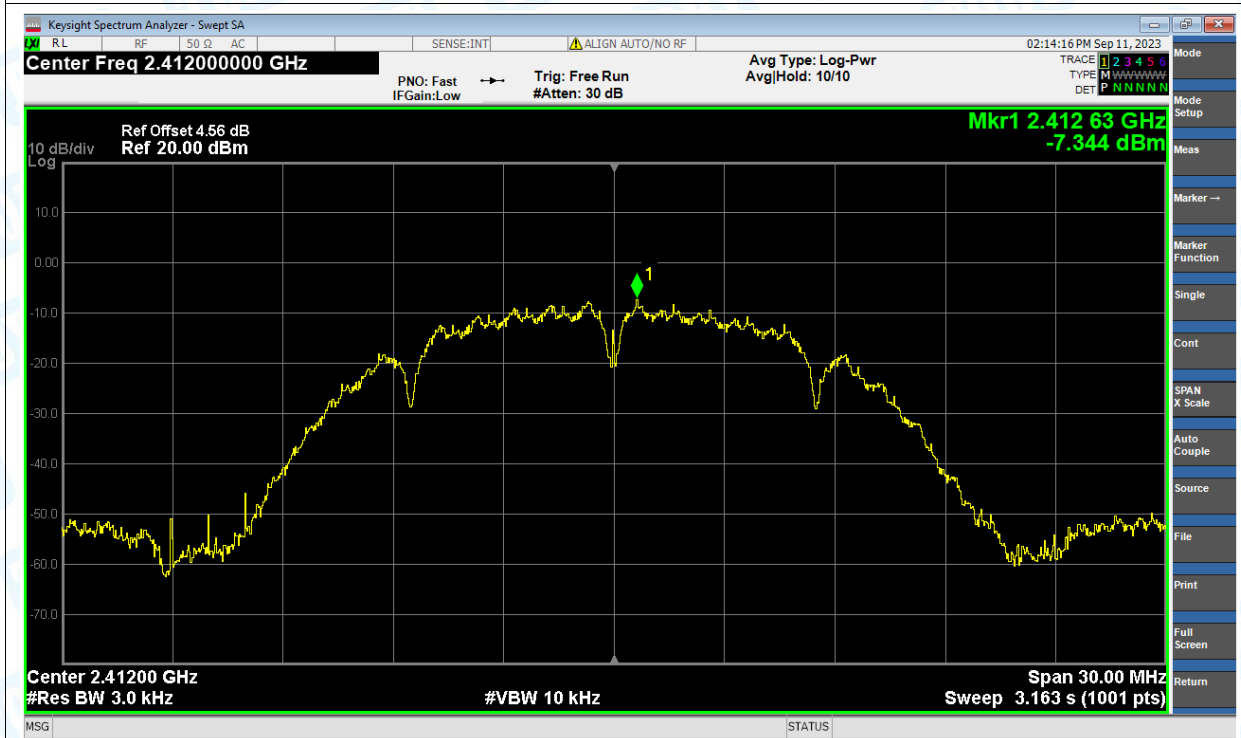


Maximum Power Spectral Density Level

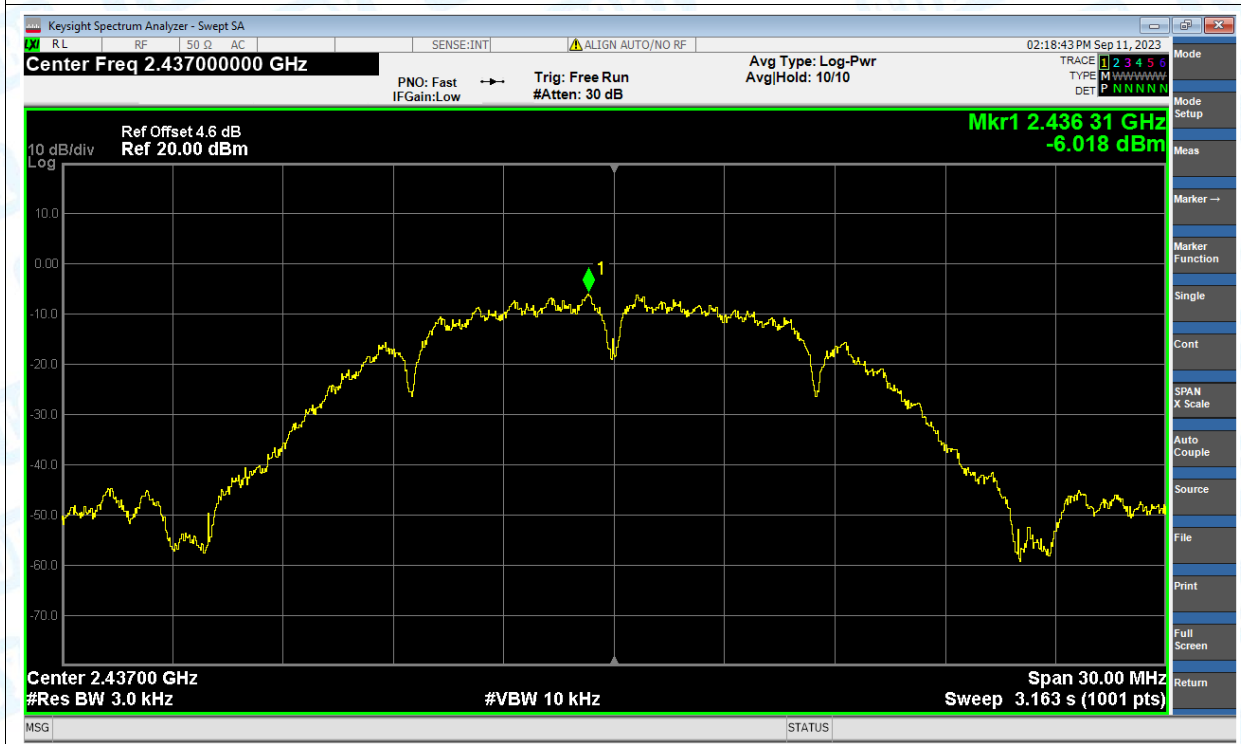
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-7.344	8	Pass
NVNT	b	2437	Ant1	-6.018	8	Pass
NVNT	b	2462	Ant1	-7.462	8	Pass
NVNT	g	2412	Ant1	-11.925	8	Pass
NVNT	g	2437	Ant1	-9.477	8	Pass
NVNT	g	2462	Ant1	-11.514	8	Pass
NVNT	n(HT20)	2412	Ant1	-11.912	8	Pass
NVNT	n(HT20)	2437	Ant1	-10.258	8	Pass
NVNT	n(HT20)	2462	Ant1	-15.639	8	Pass
NVNT	n(HT40)	2422	Ant1	-18.999	8	Pass
NVNT	n(HT40)	2437	Ant1	-16.546	8	Pass
NVNT	n(HT40)	2452	Ant1	-17.72	8	Pass

Test Graphs

PSD NVNT b 2412MHz Ant1



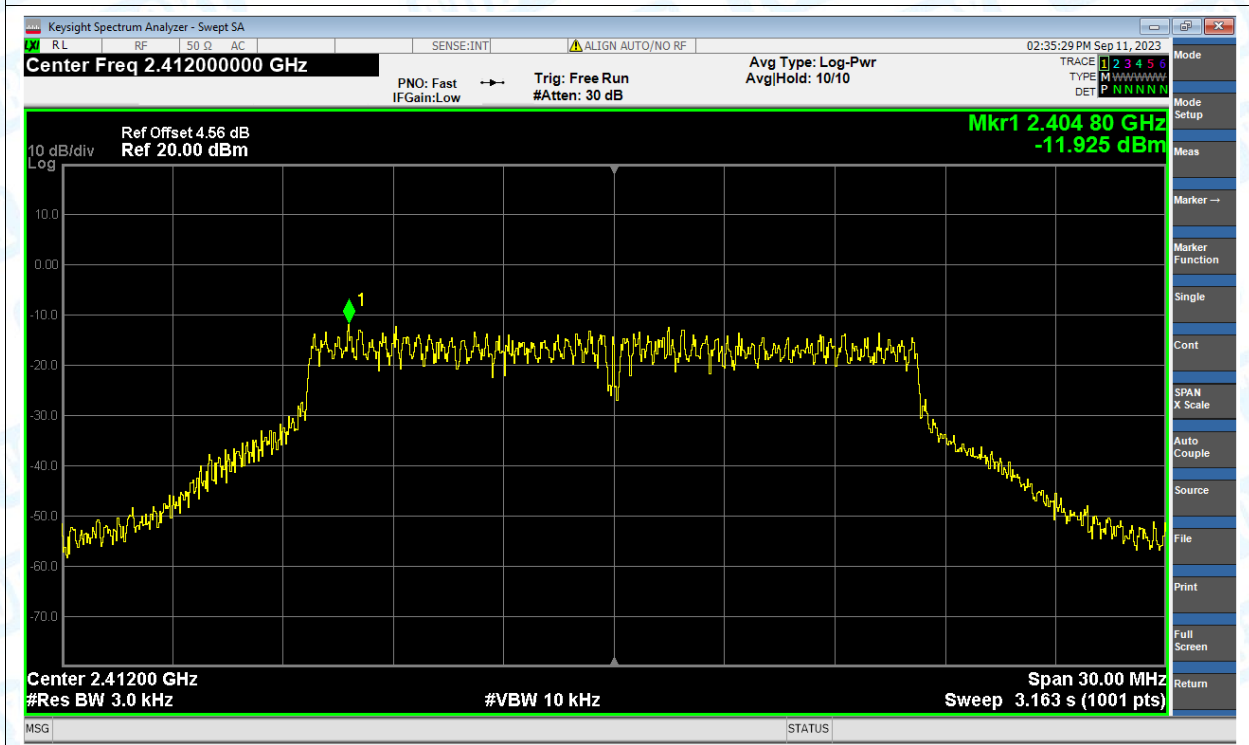
PSD NVNT b 2437MHz Ant1



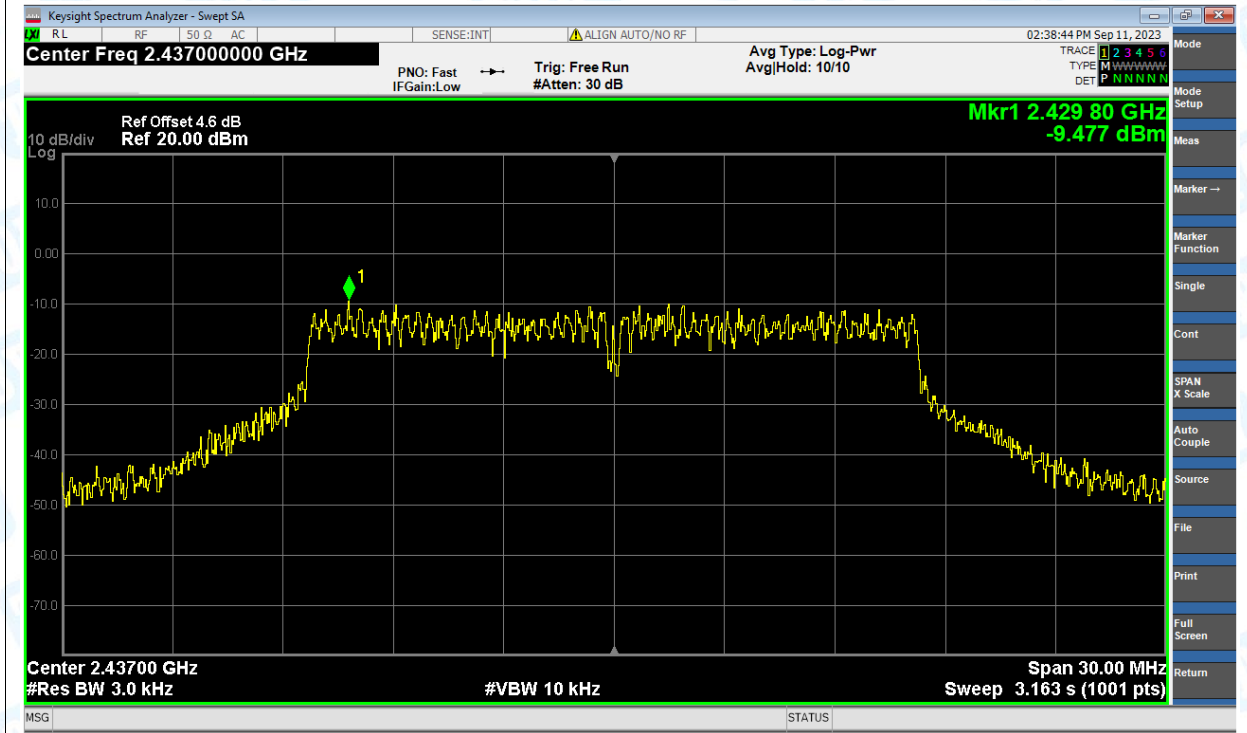
PSD NVNT b 2462MHz Ant1



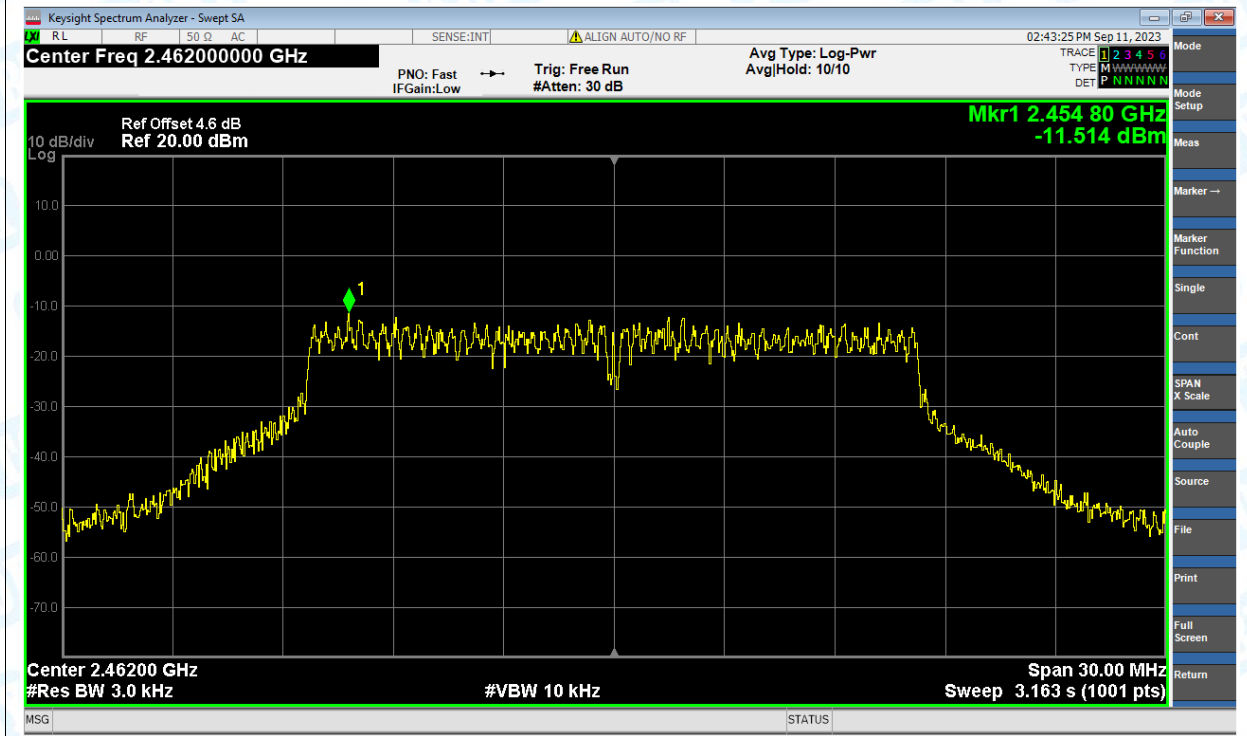
PSD NVNT g 2412MHz Ant1



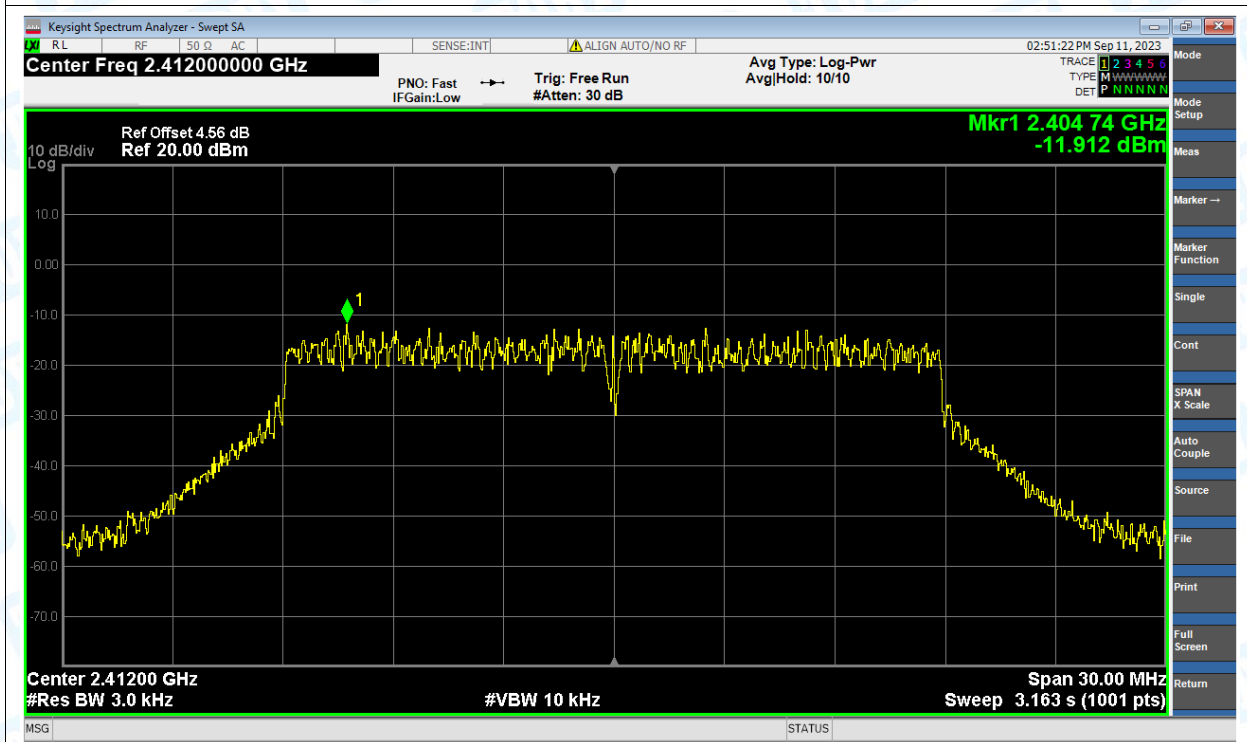
PSD NVNT g 2437MHz Ant1



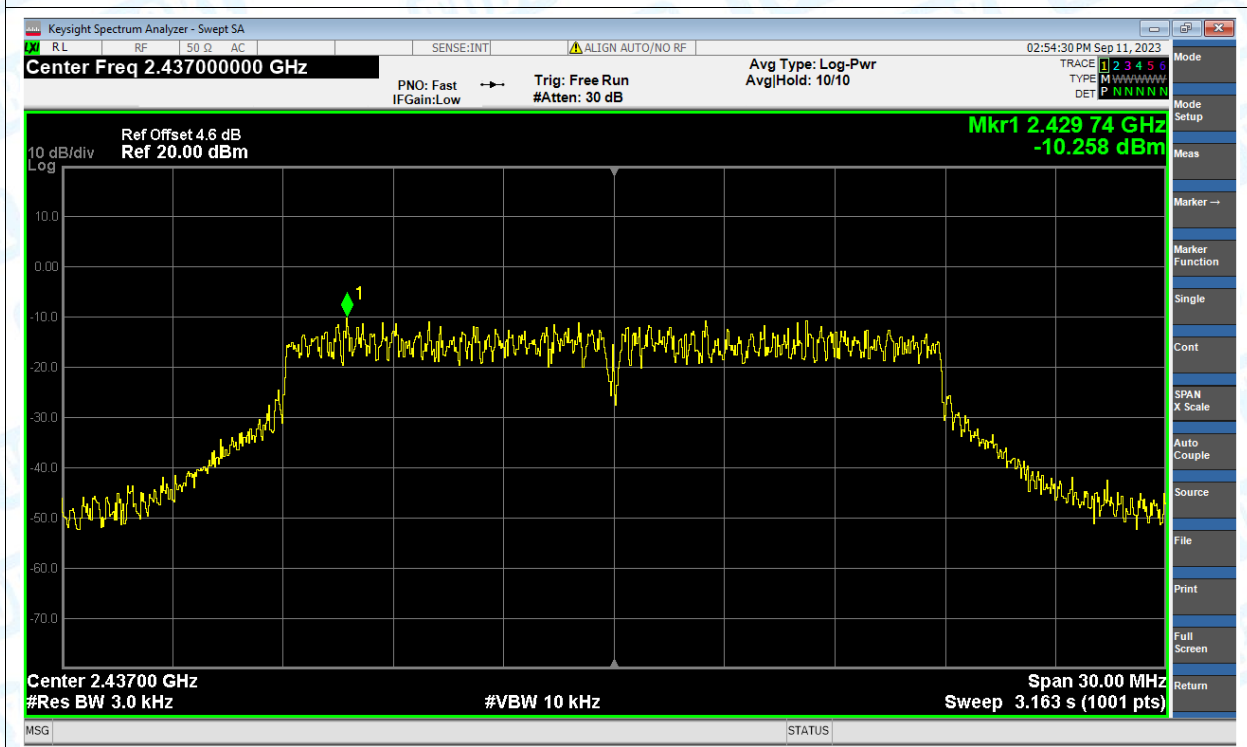
PSD NVNT g 2462MHz Ant1



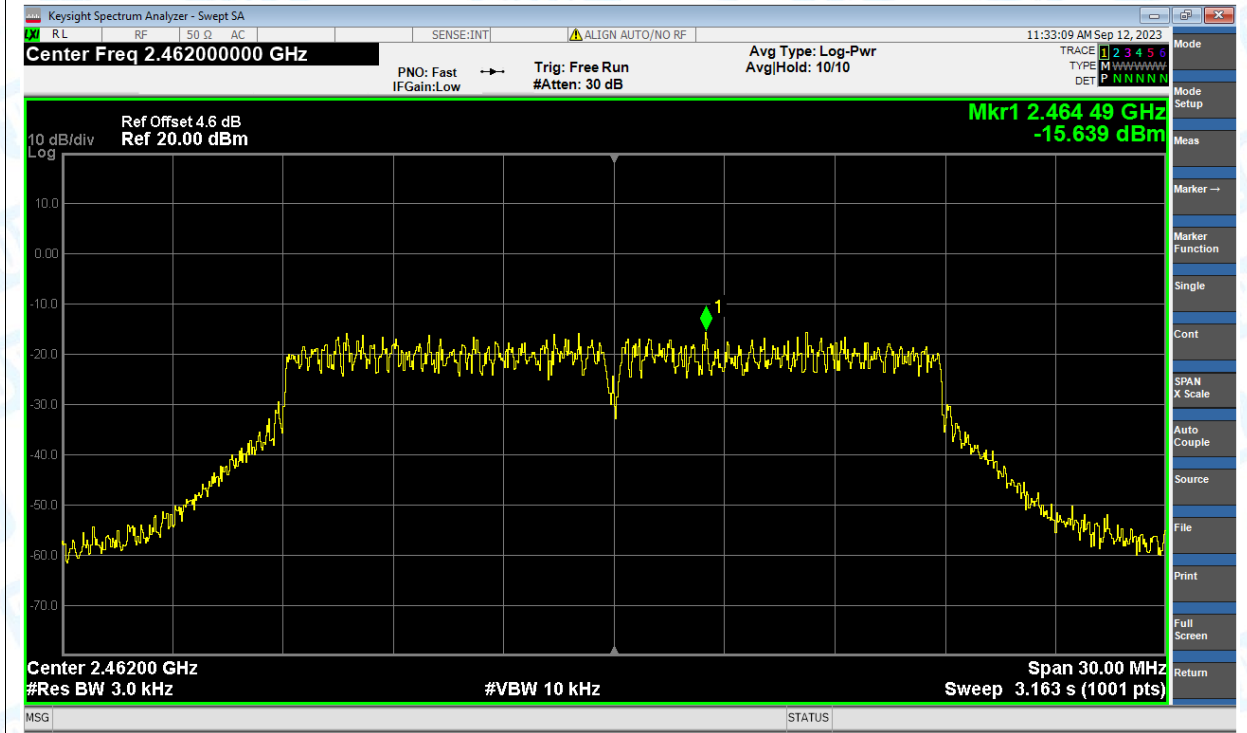
PSD NVNT n(HT20) 2412MHz Ant1



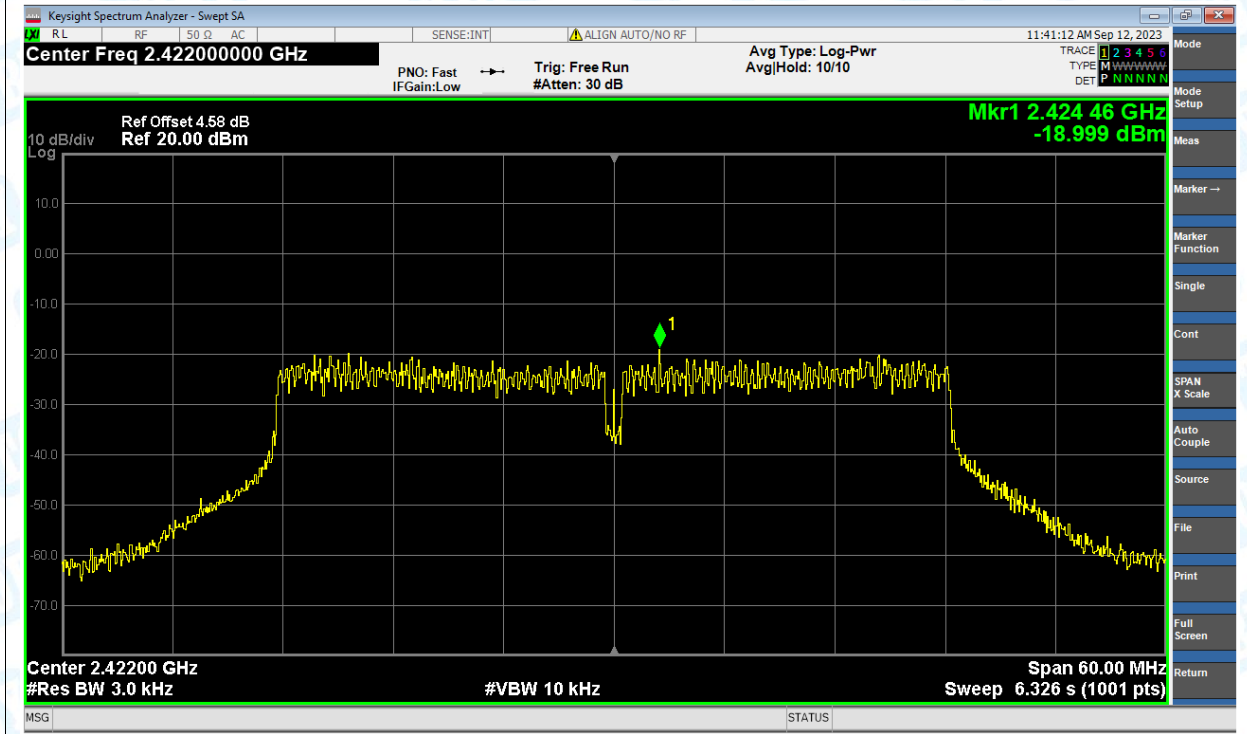
PSD NVNT n(HT20) 2437MHz Ant1



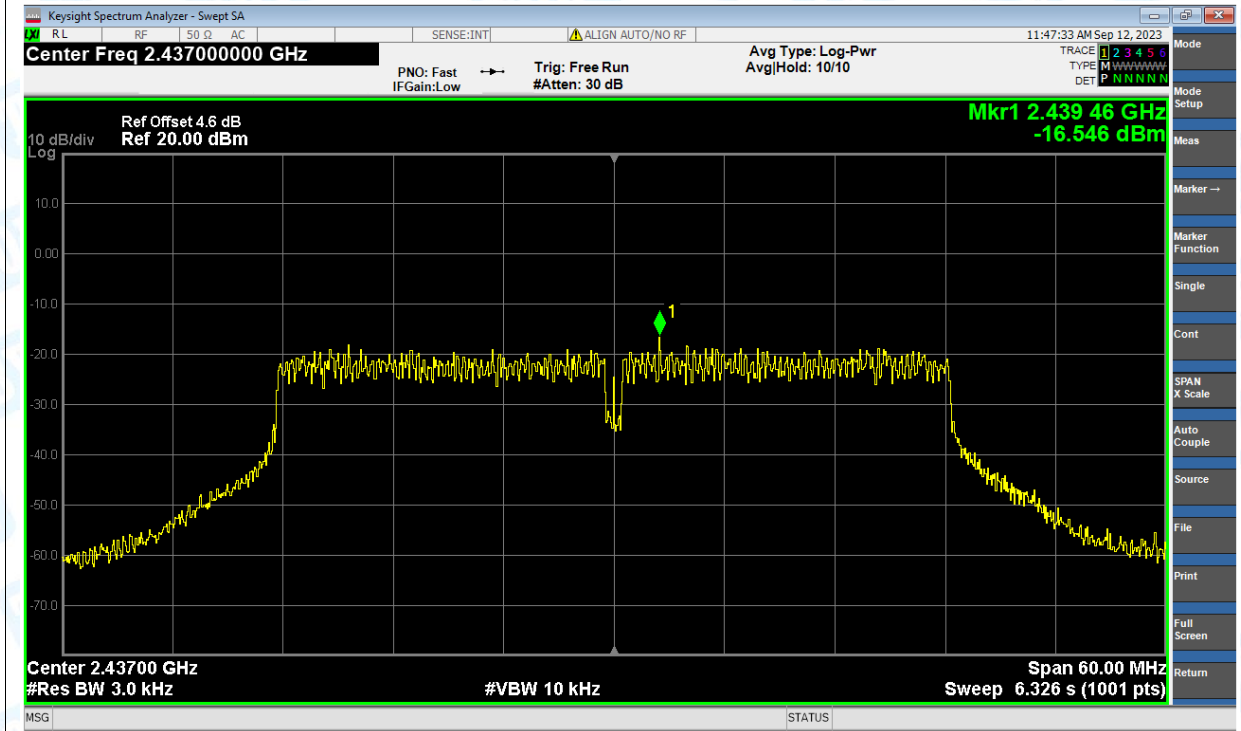
PSD NVNT n(HT20) 2462MHz Ant1



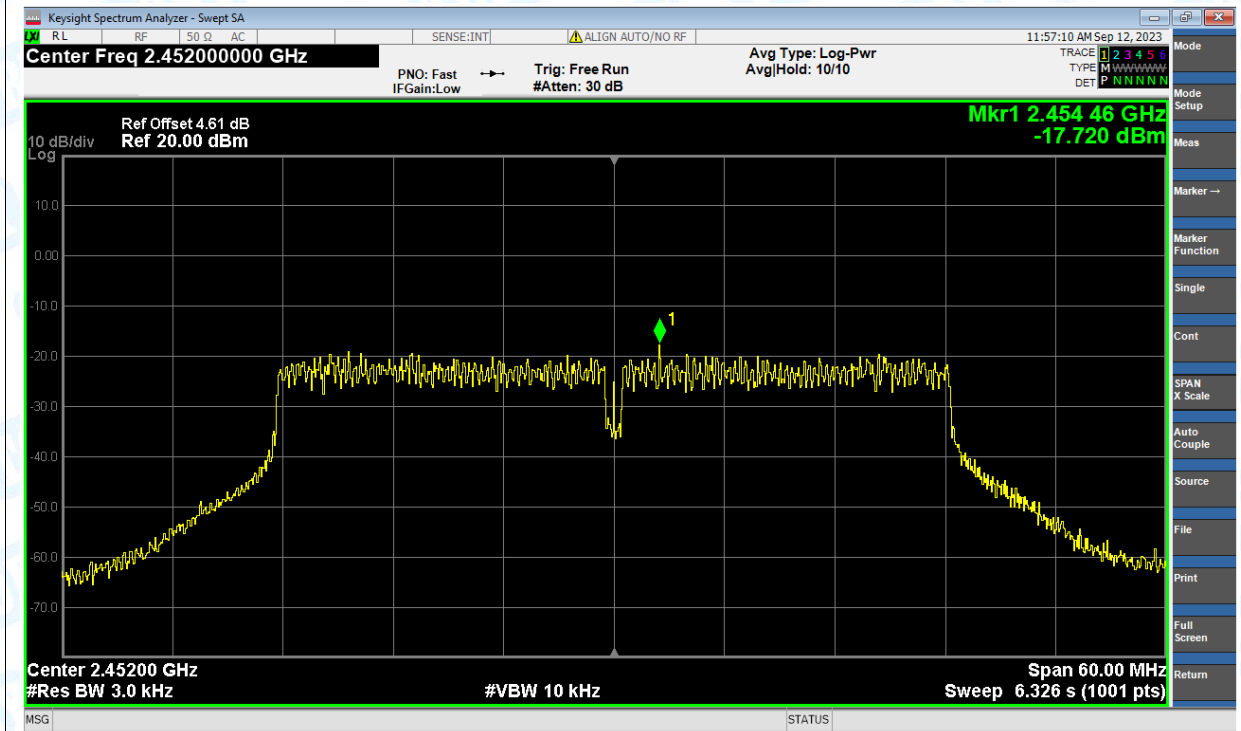
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

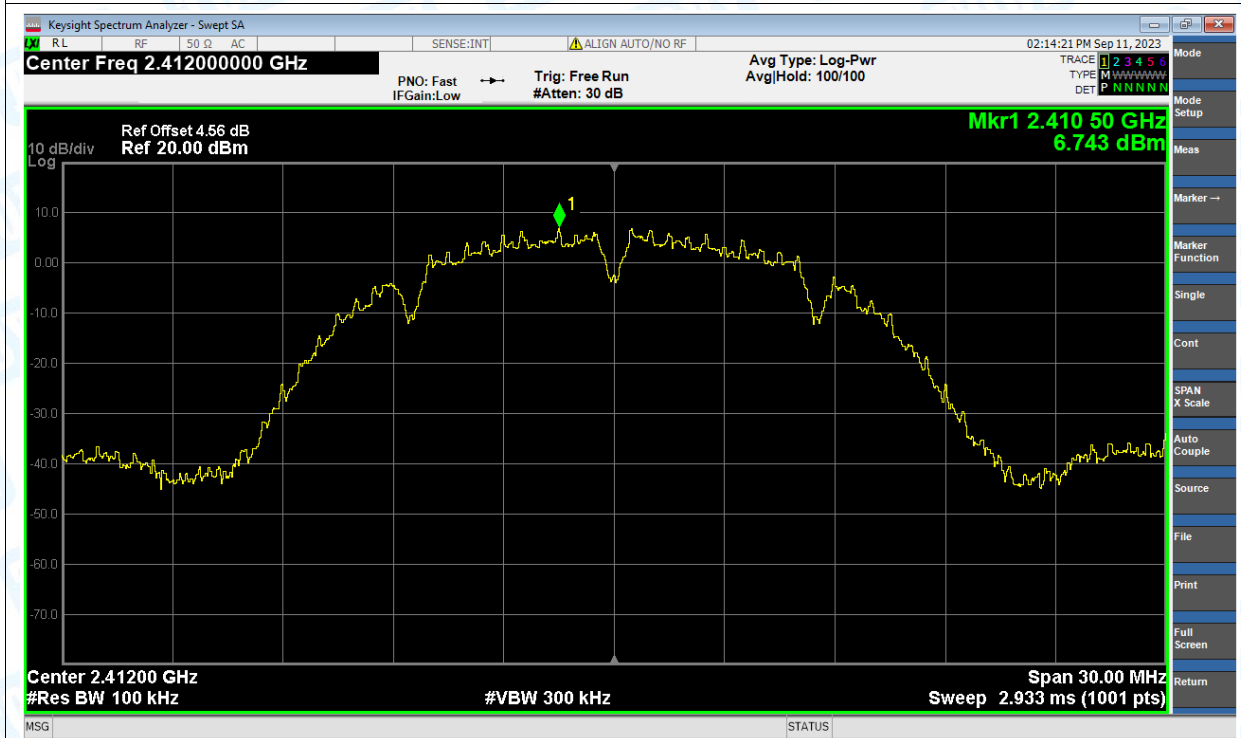


Band Edge

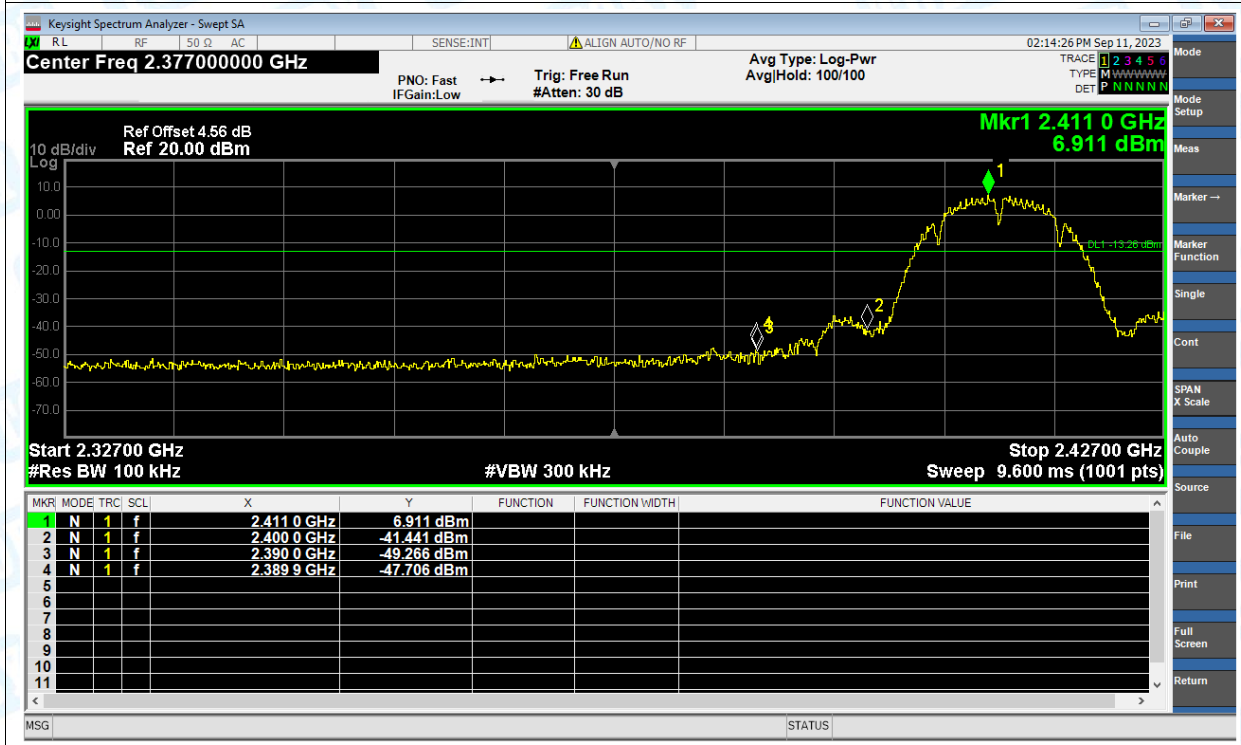
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-54.45	-20	Pass
NVNT	b	2462	Ant1	-56.91	-20	Pass
NVNT	g	2412	Ant1	-49.21	-20	Pass
NVNT	g	2462	Ant1	-46.19	-20	Pass
NVNT	n(HT20)	2412	Ant1	-44.11	-20	Pass
NVNT	n(HT20)	2462	Ant1	-43.01	-20	Pass
NVNT	n(HT40)	2422	Ant1	-37.5	-20	Pass
NVNT	n(HT40)	2452	Ant1	-38.99	-20	Pass

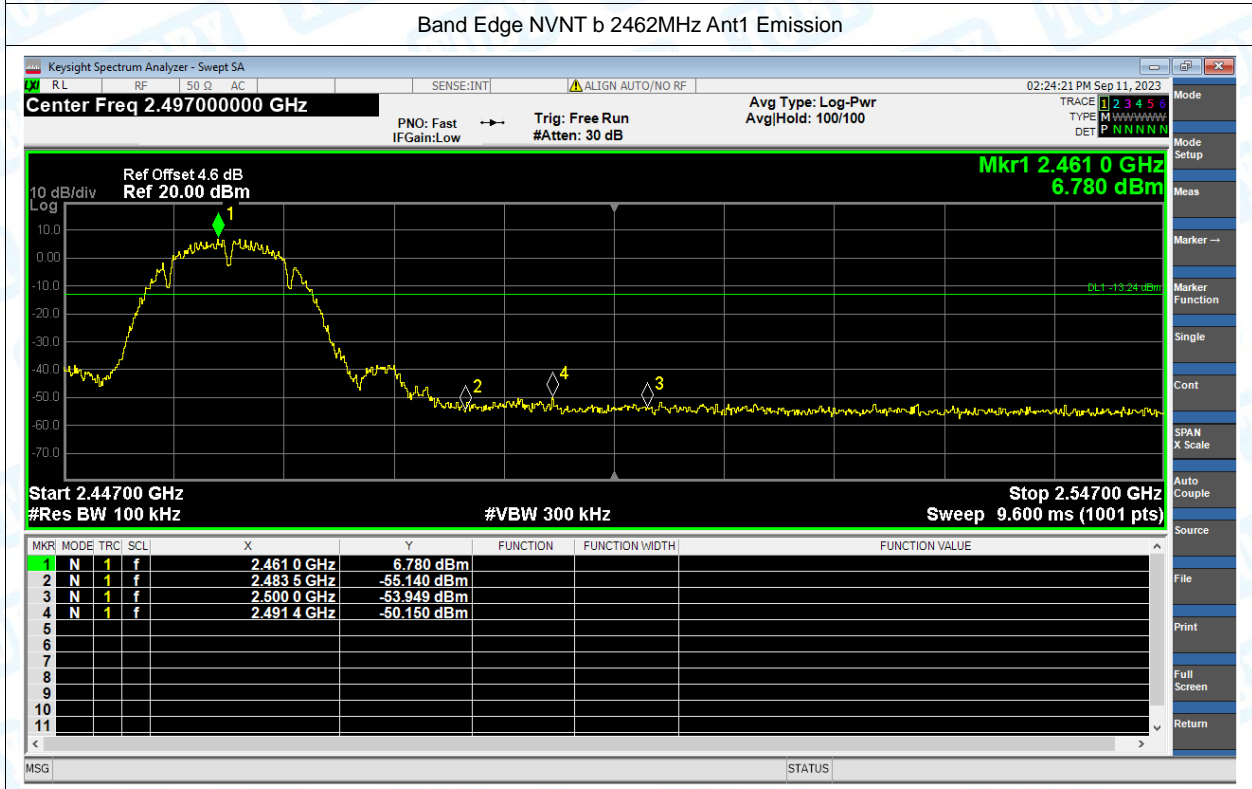
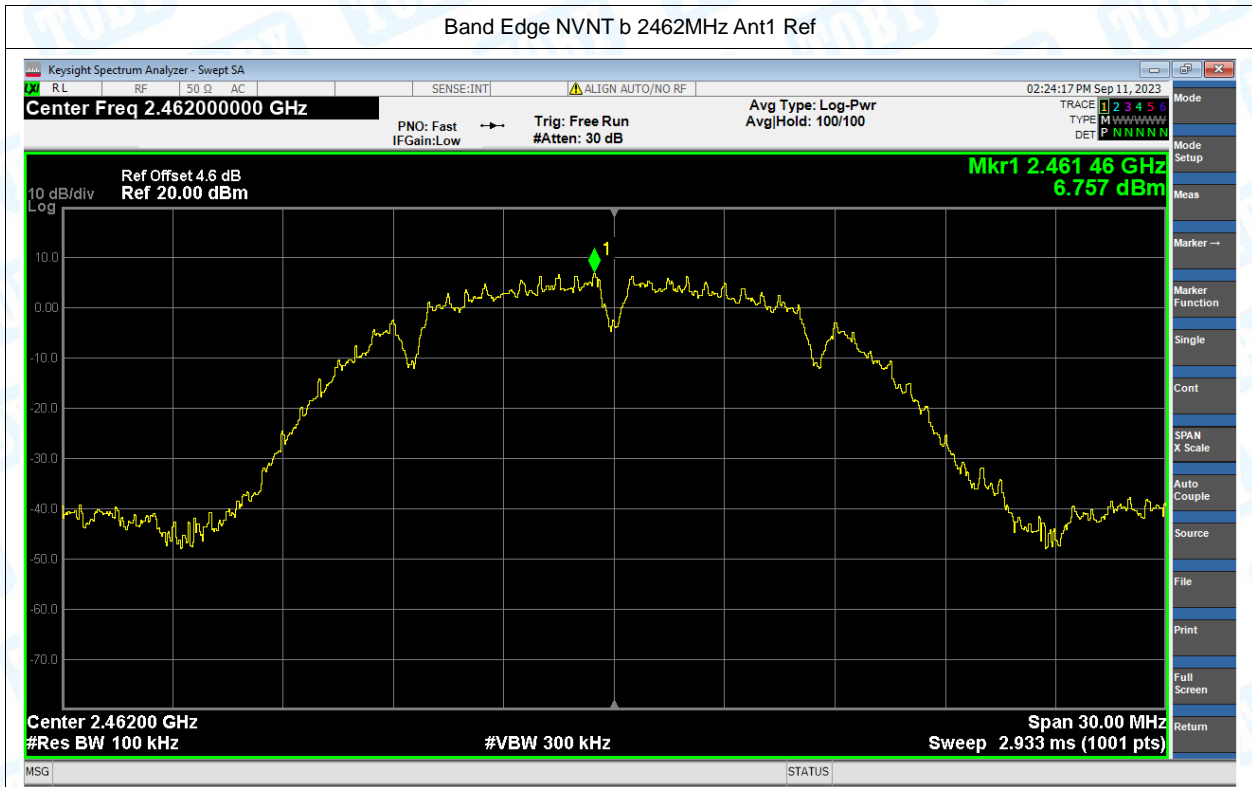
Test Graphs

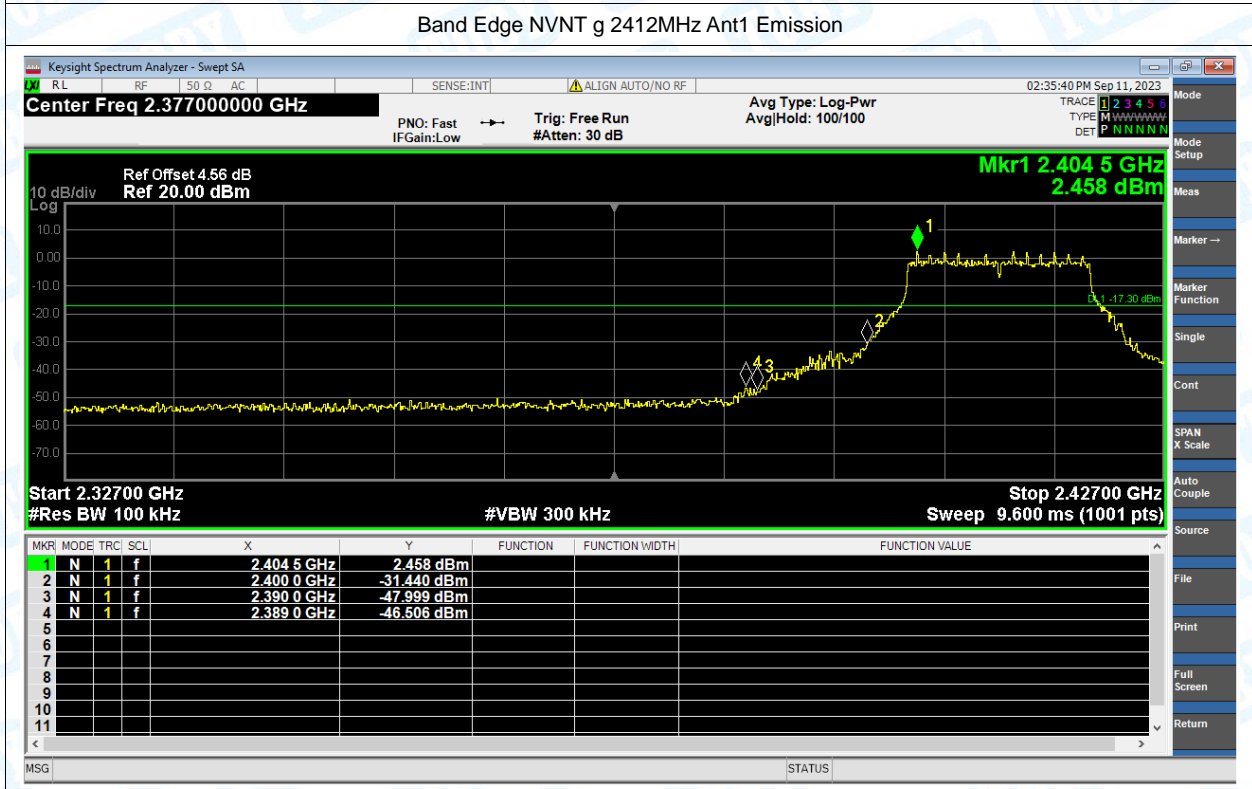
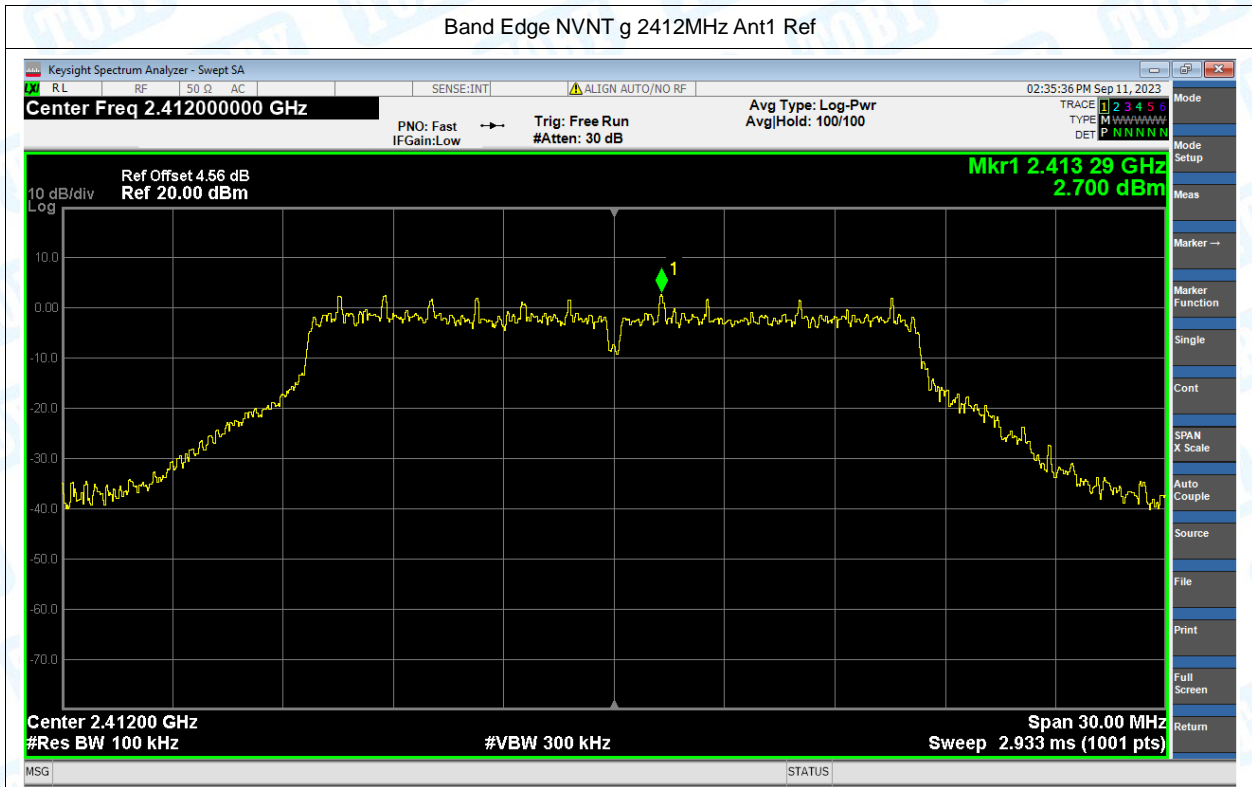
Band Edge NVNT b 2412MHz Ant1 Ref

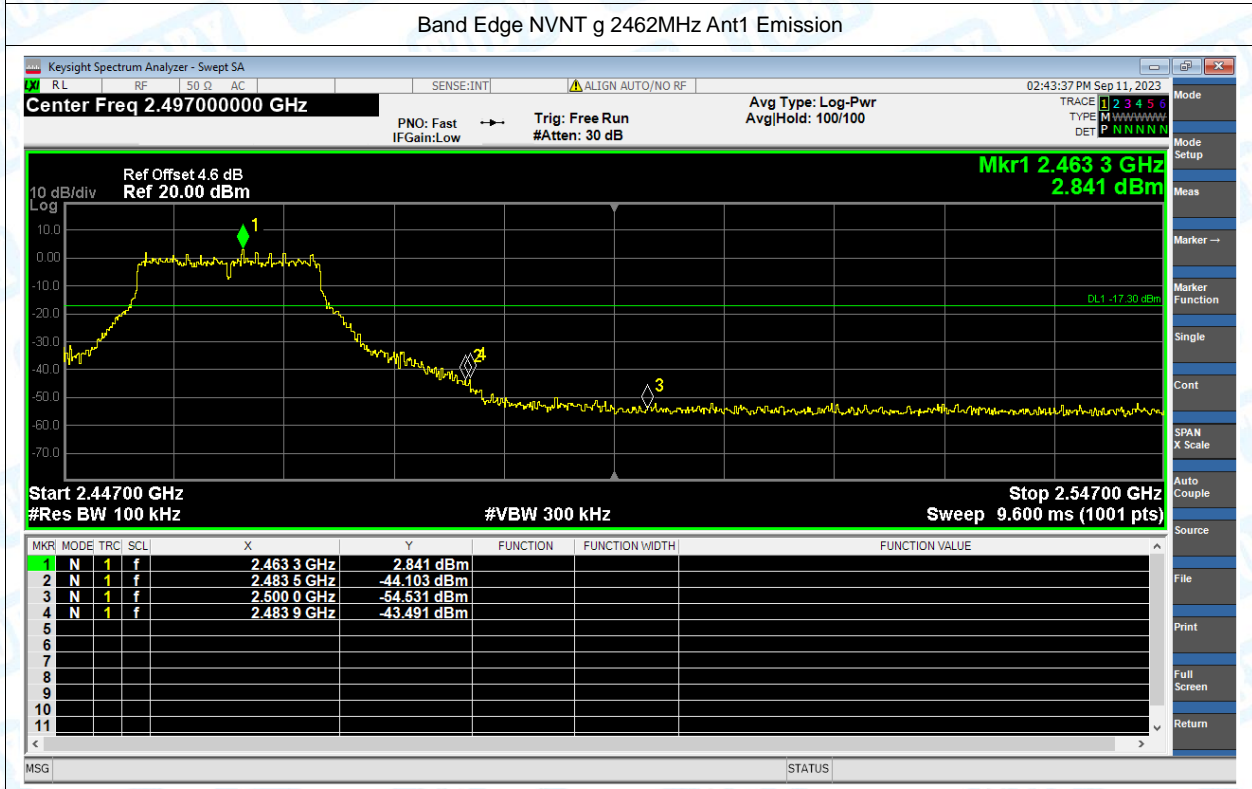
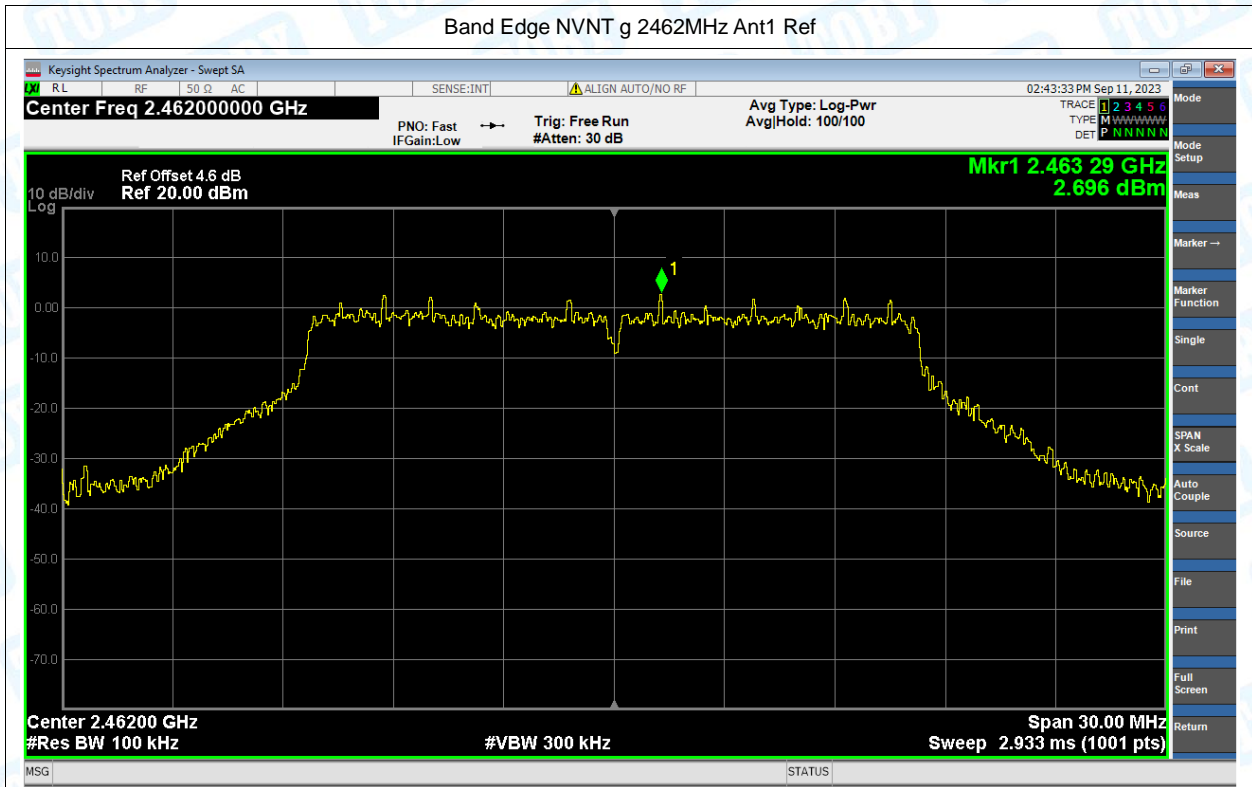


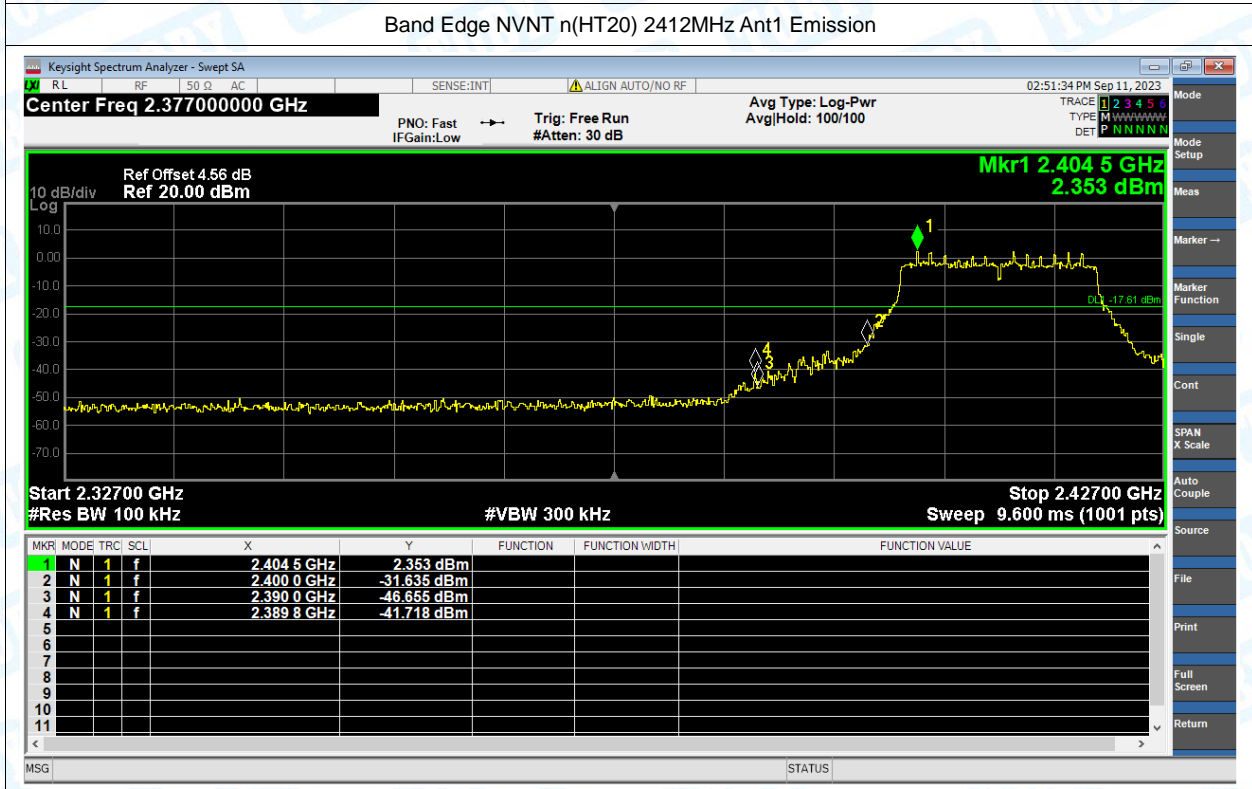
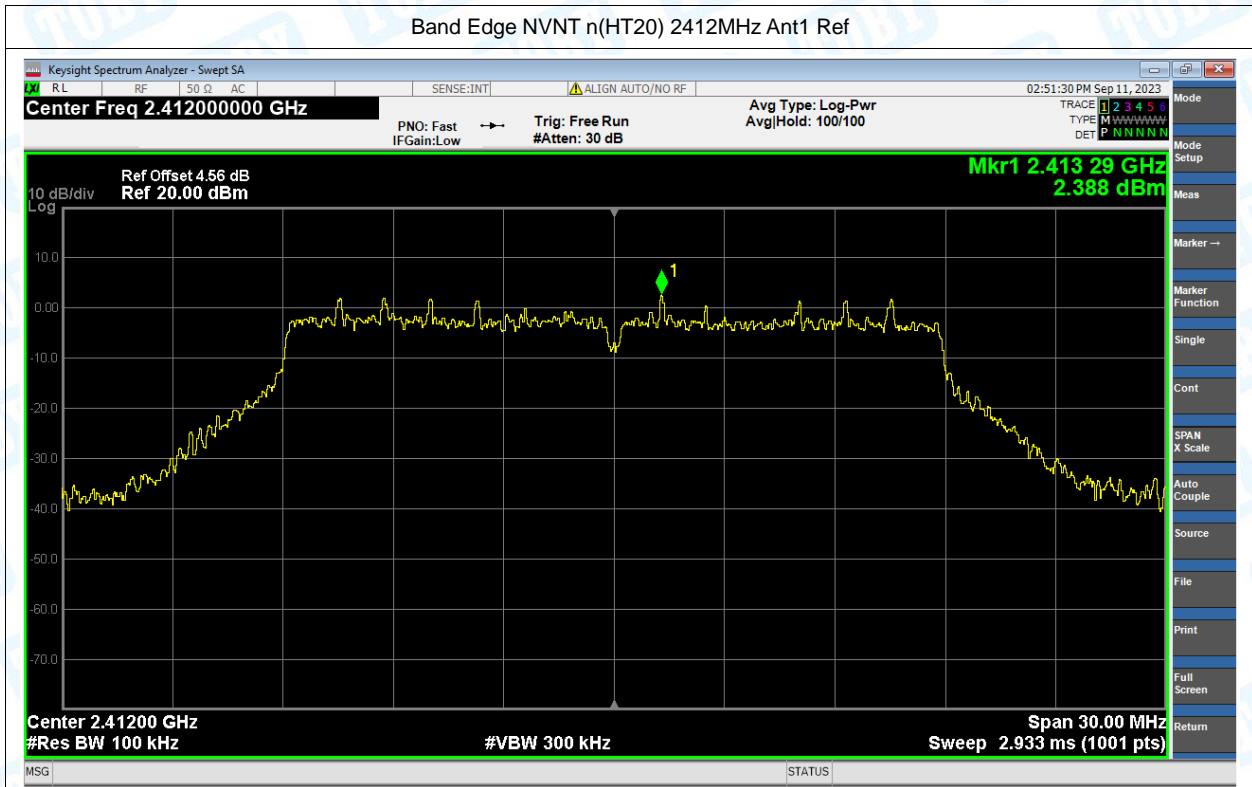
Band Edge NVNT b 2412MHz Ant1 Emission

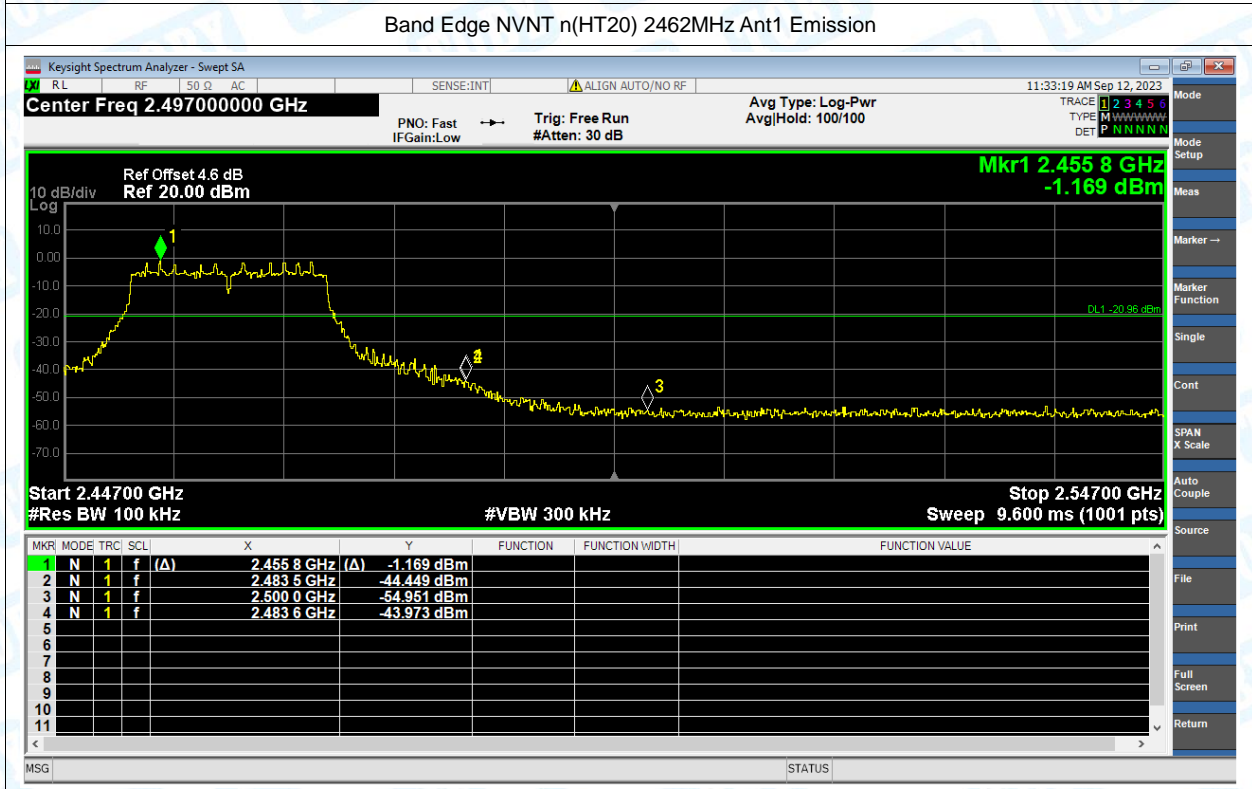
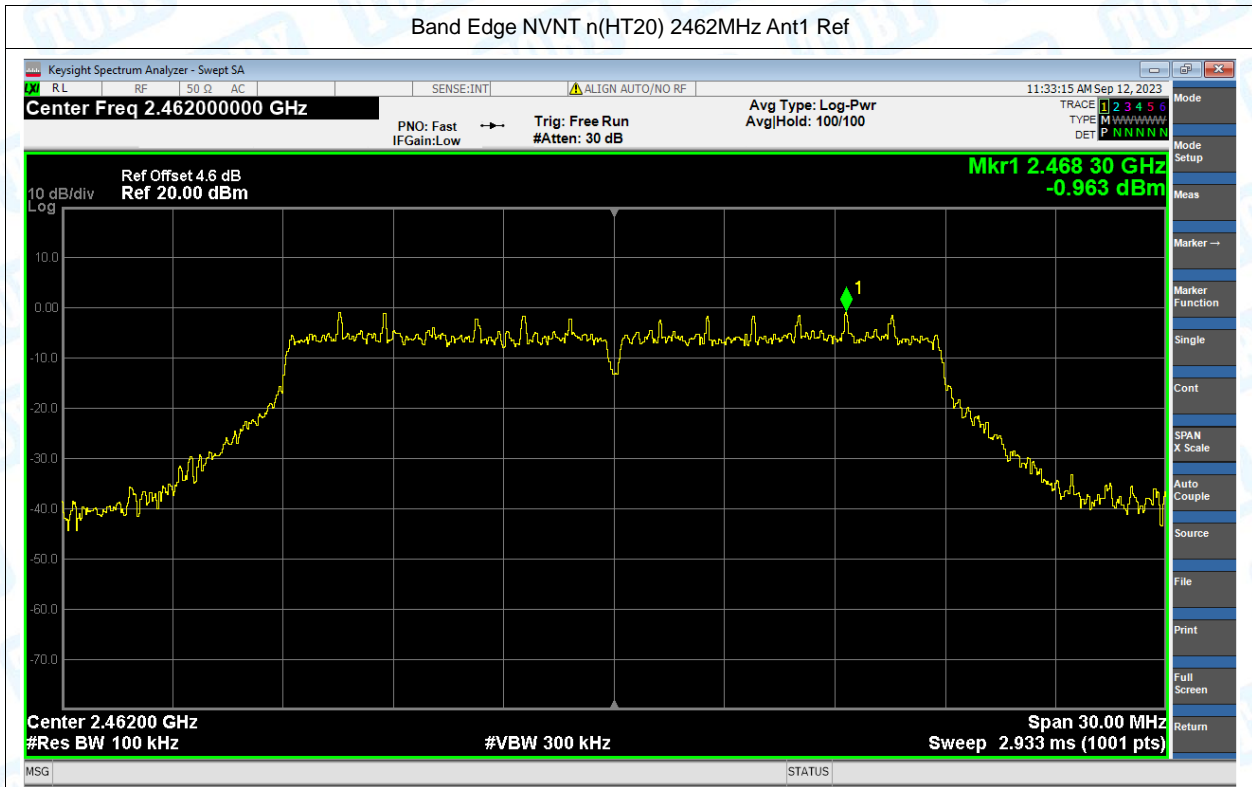


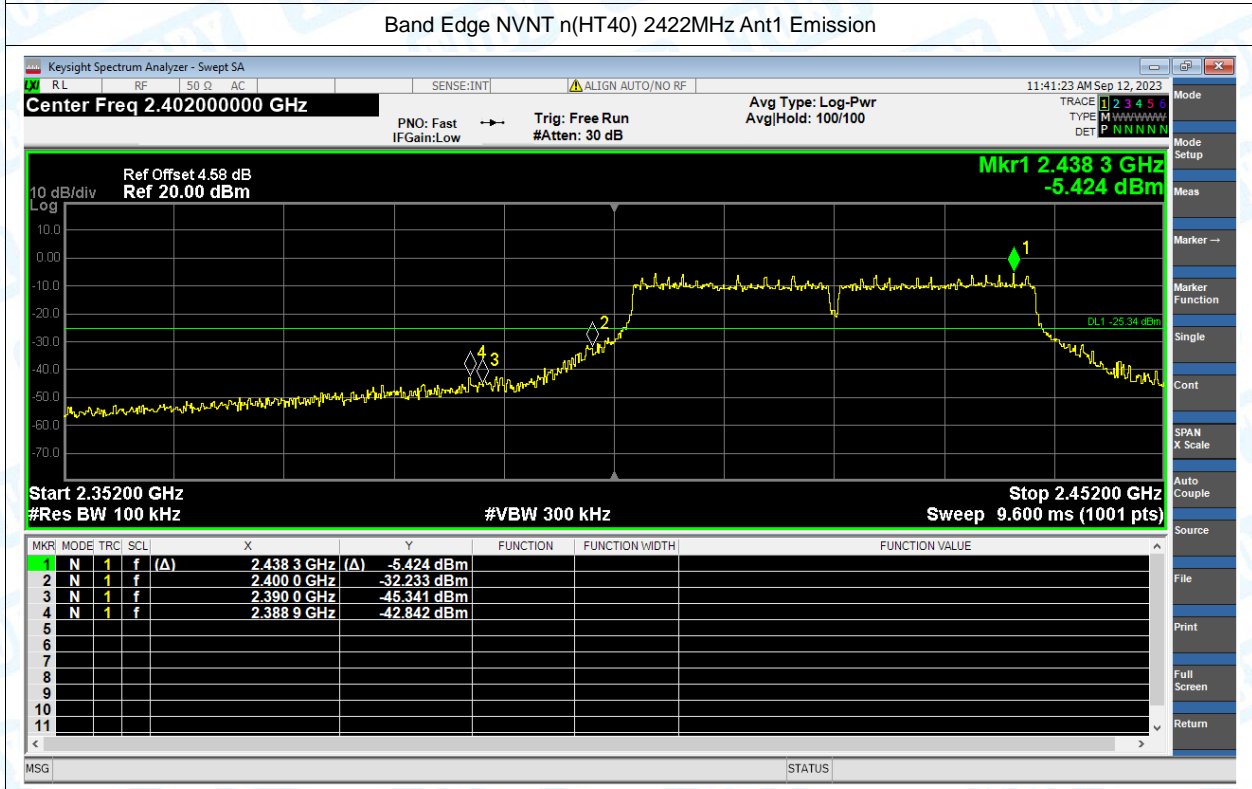
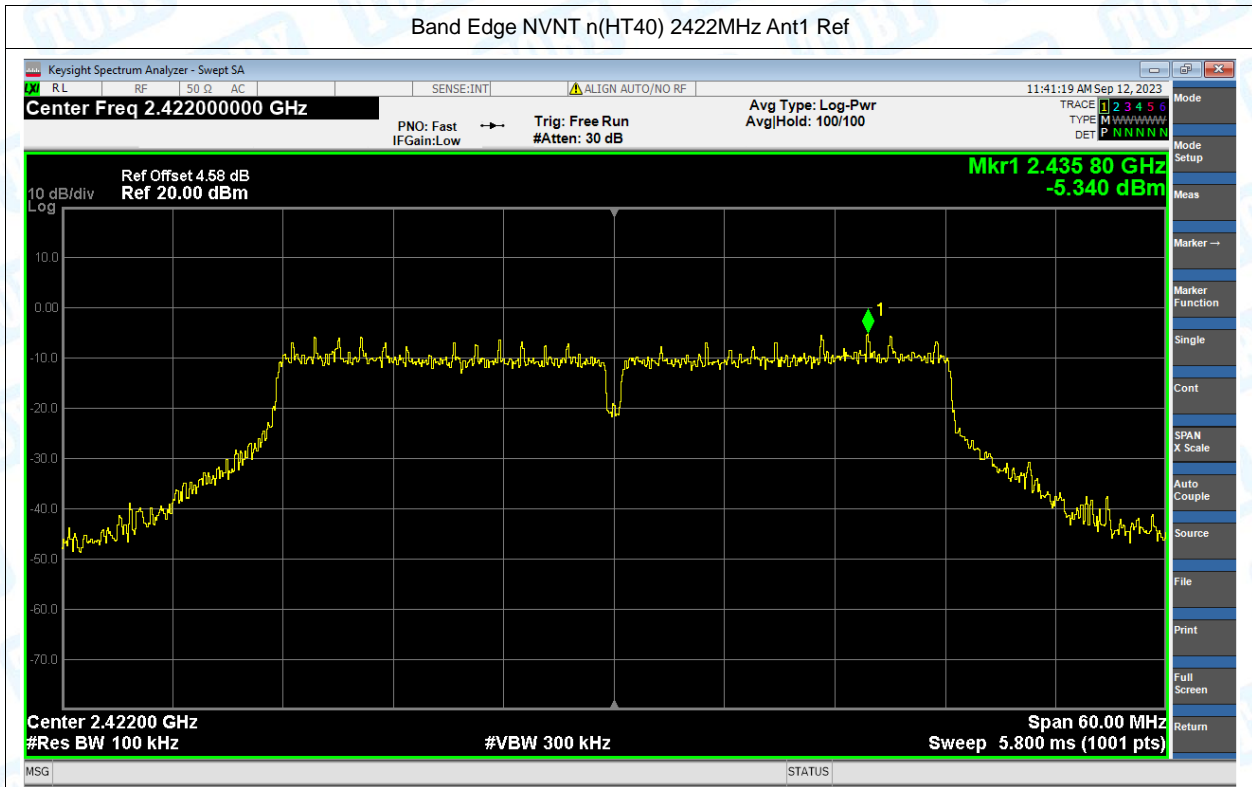




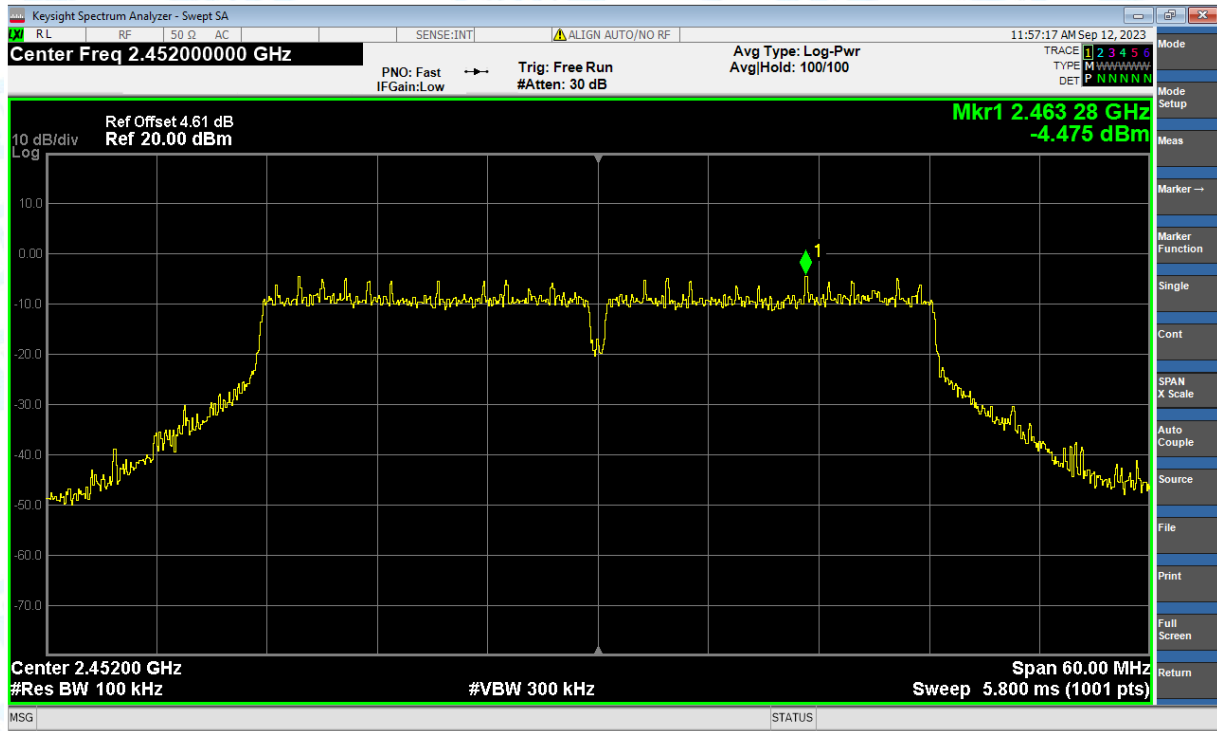








Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission

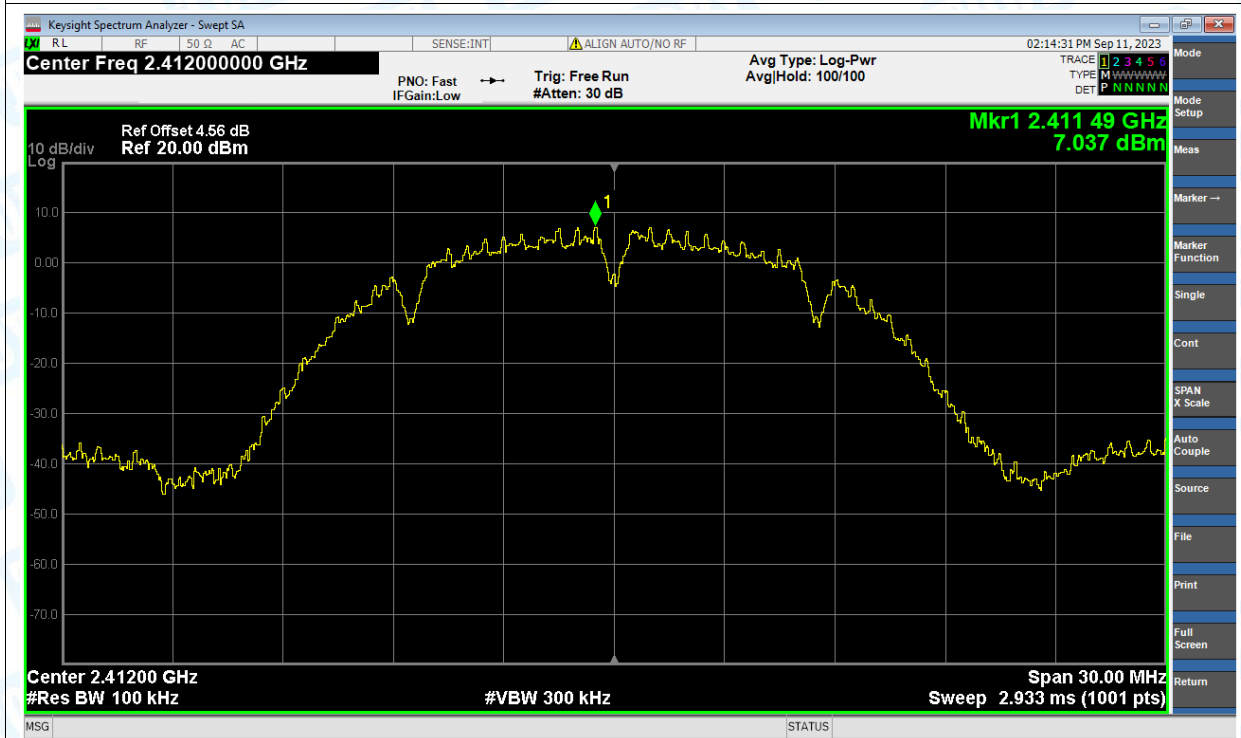


Conducted RF Spurious Emission

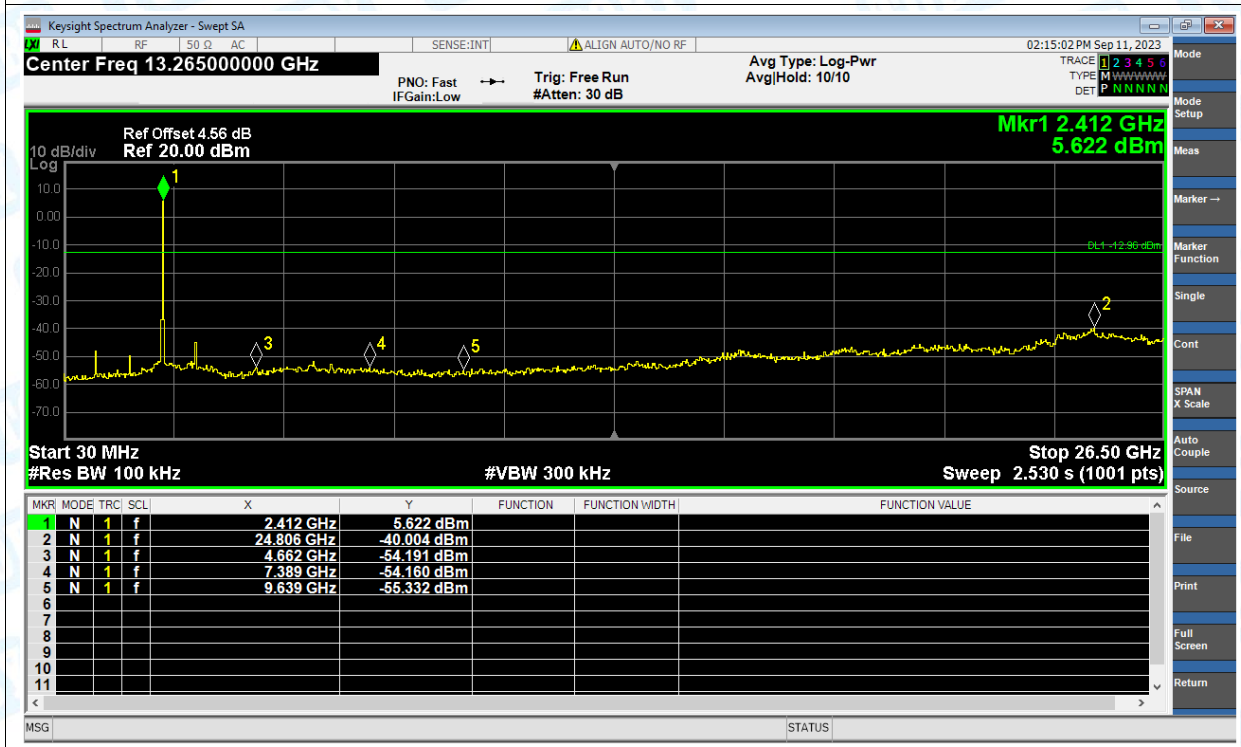
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.04	-20	Pass
NVNT	b	2437	Ant1	-49.36	-20	Pass
NVNT	b	2462	Ant1	-46.97	-20	Pass
NVNT	g	2412	Ant1	-43	-20	Pass
NVNT	g	2437	Ant1	-45.53	-20	Pass
NVNT	g	2462	Ant1	-43.13	-20	Pass
NVNT	n(HT20)	2412	Ant1	-41.88	-20	Pass
NVNT	n(HT20)	2437	Ant1	-44.19	-20	Pass
NVNT	n(HT20)	2462	Ant1	-34.58	-20	Pass
NVNT	n(HT40)	2422	Ant1	-33.68	-20	Pass
NVNT	n(HT40)	2437	Ant1	-35.51	-20	Pass
NVNT	n(HT40)	2452	Ant1	-33.25	-20	Pass

Test Graphs

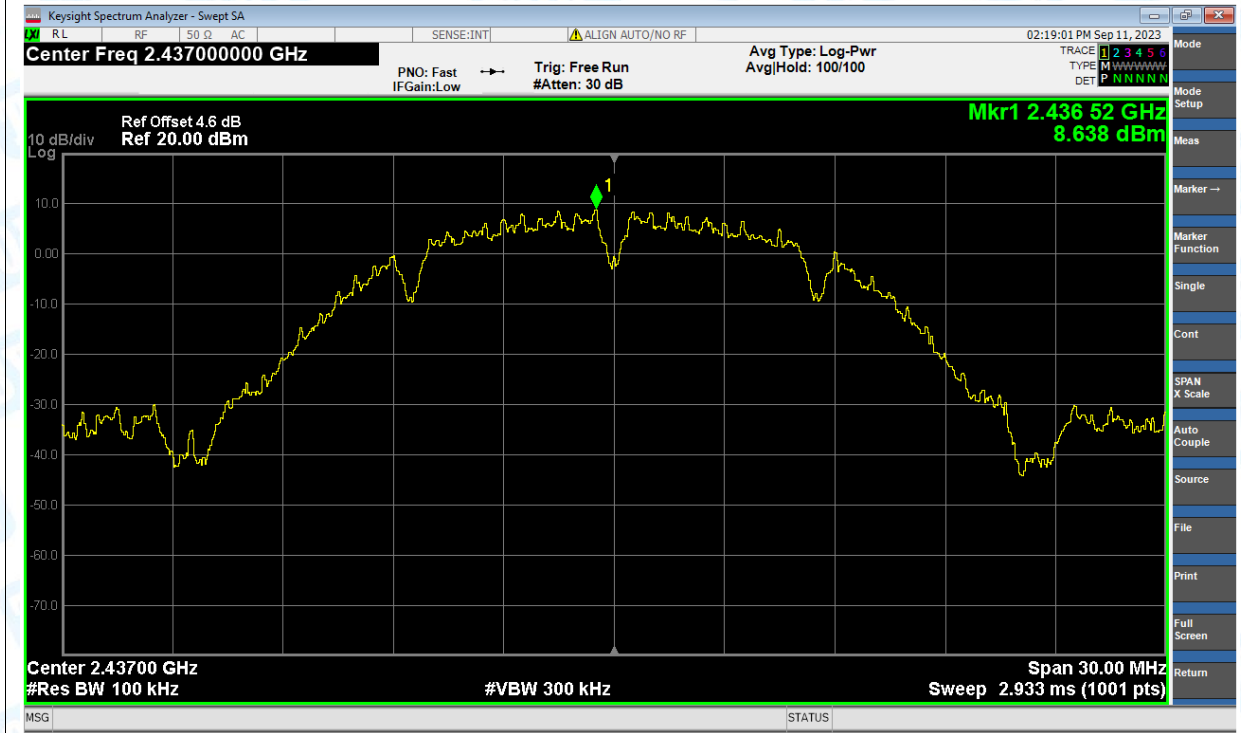
Tx. Spurious NVNT b 2412MHz Ant1 Ref



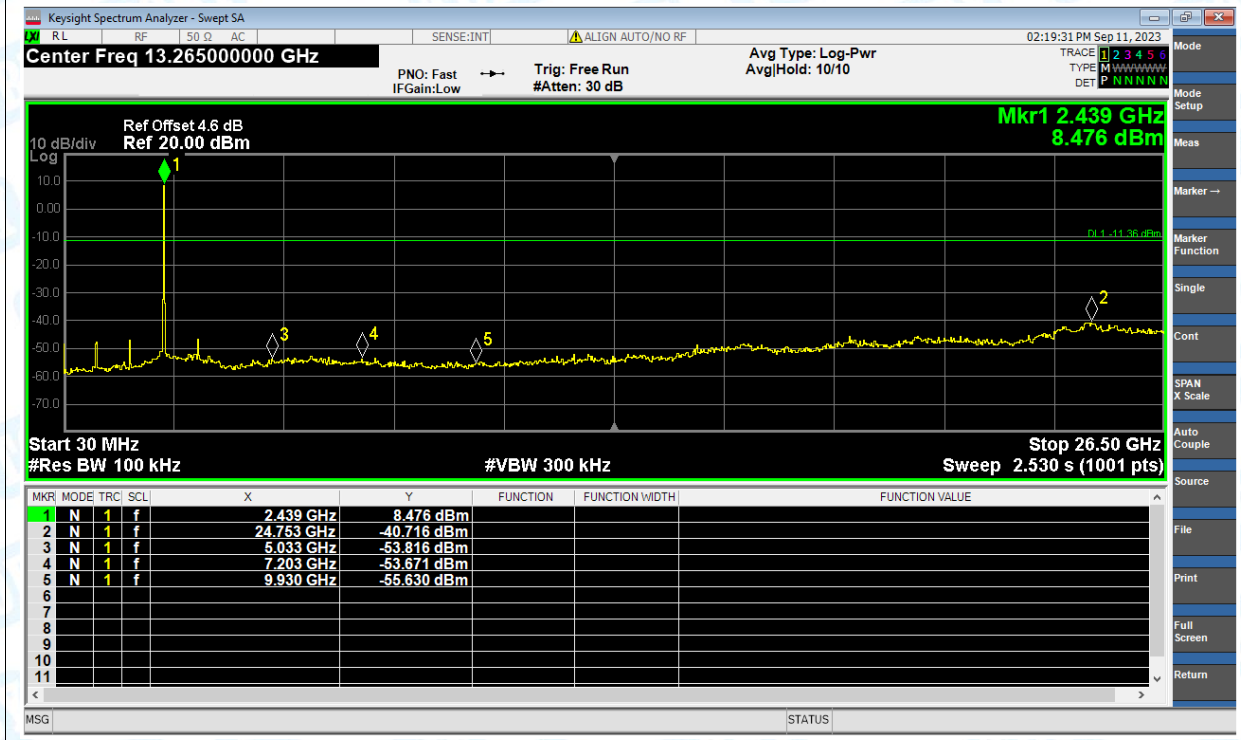
Tx. Spurious NVNT b 2412MHz Ant1 Emission



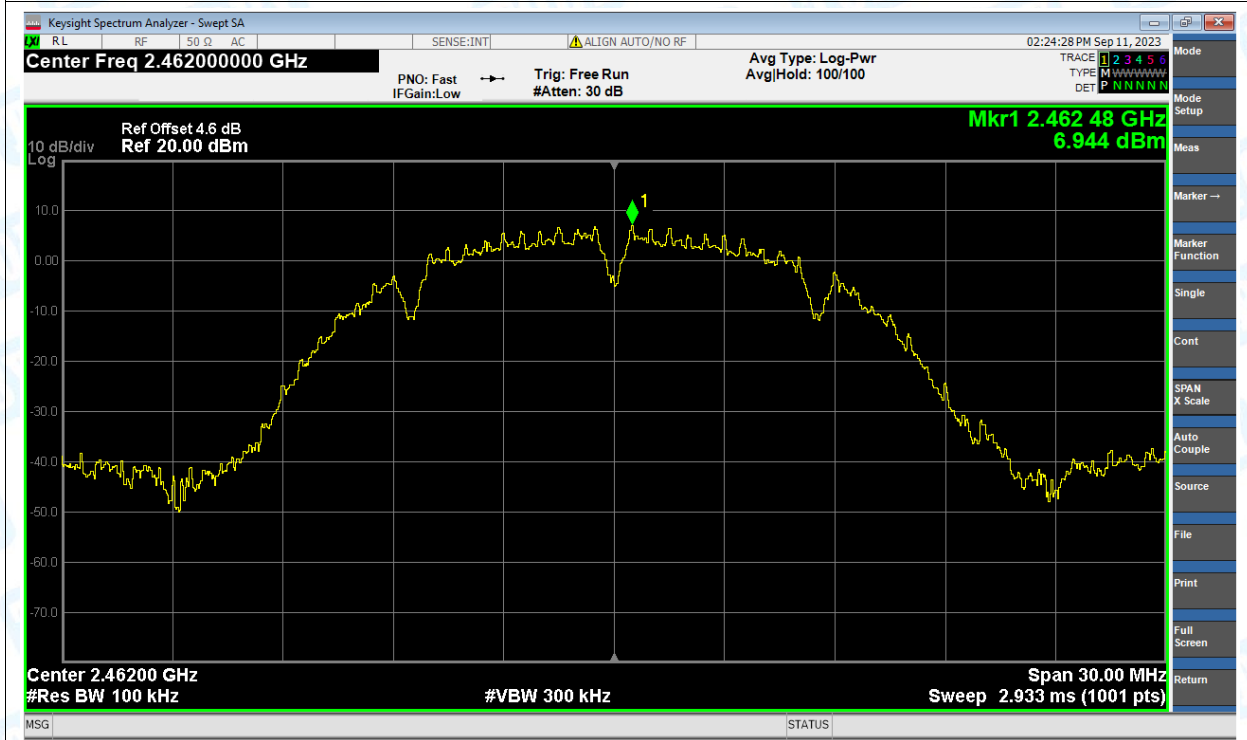
Tx. Spurious NVNT b 2437MHz Ant1 Ref



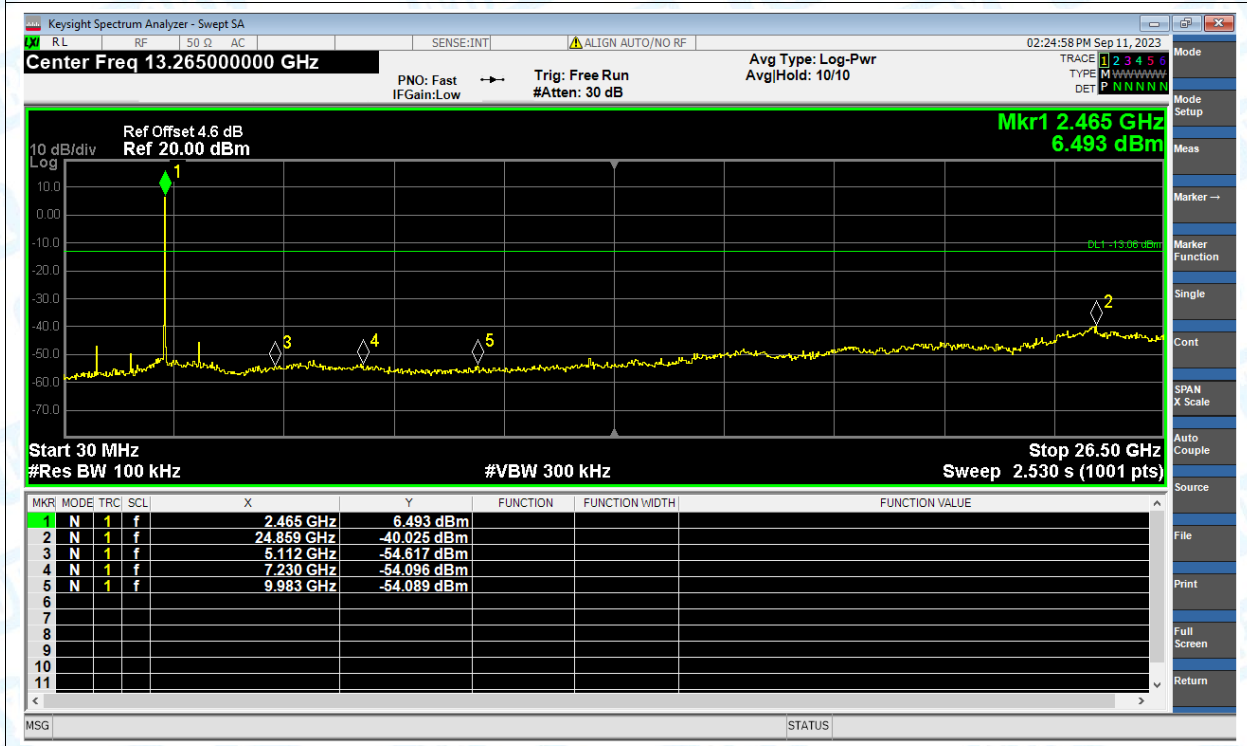
Tx. Spurious NVNT b 2437MHz Ant1 Emission



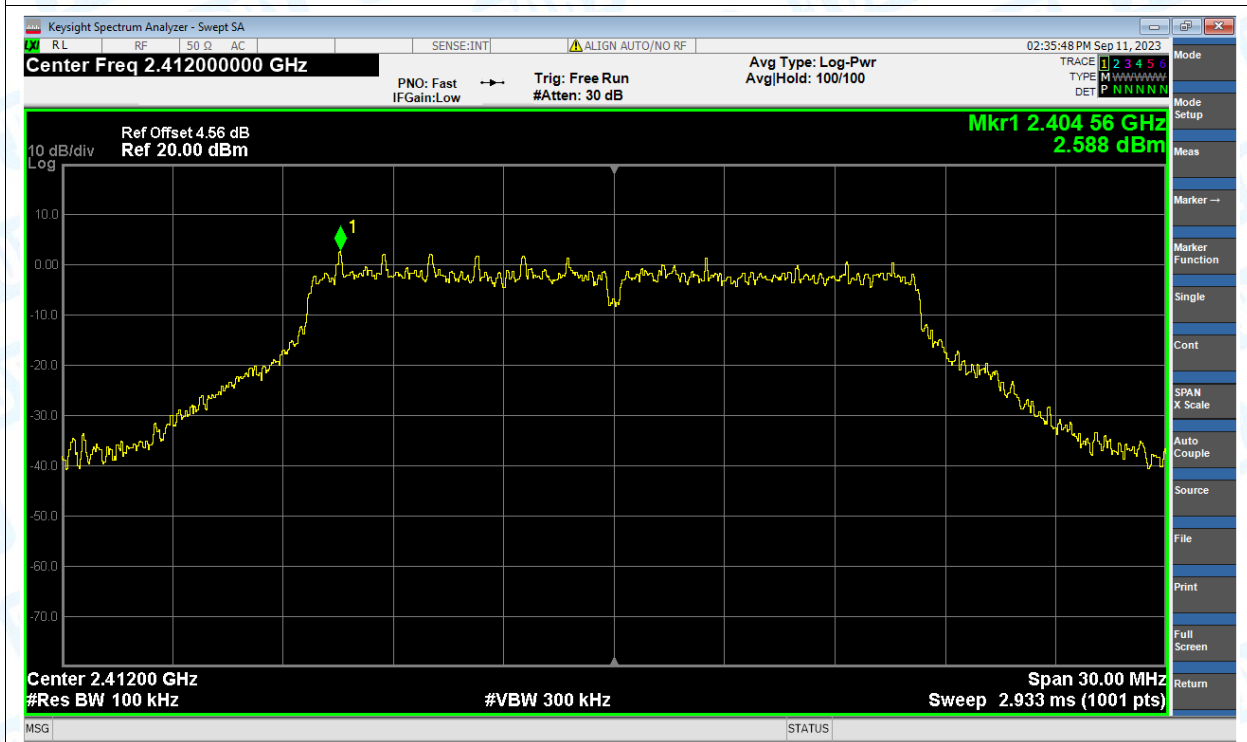
Tx. Spurious NVNT b 2462MHz Ant1 Ref



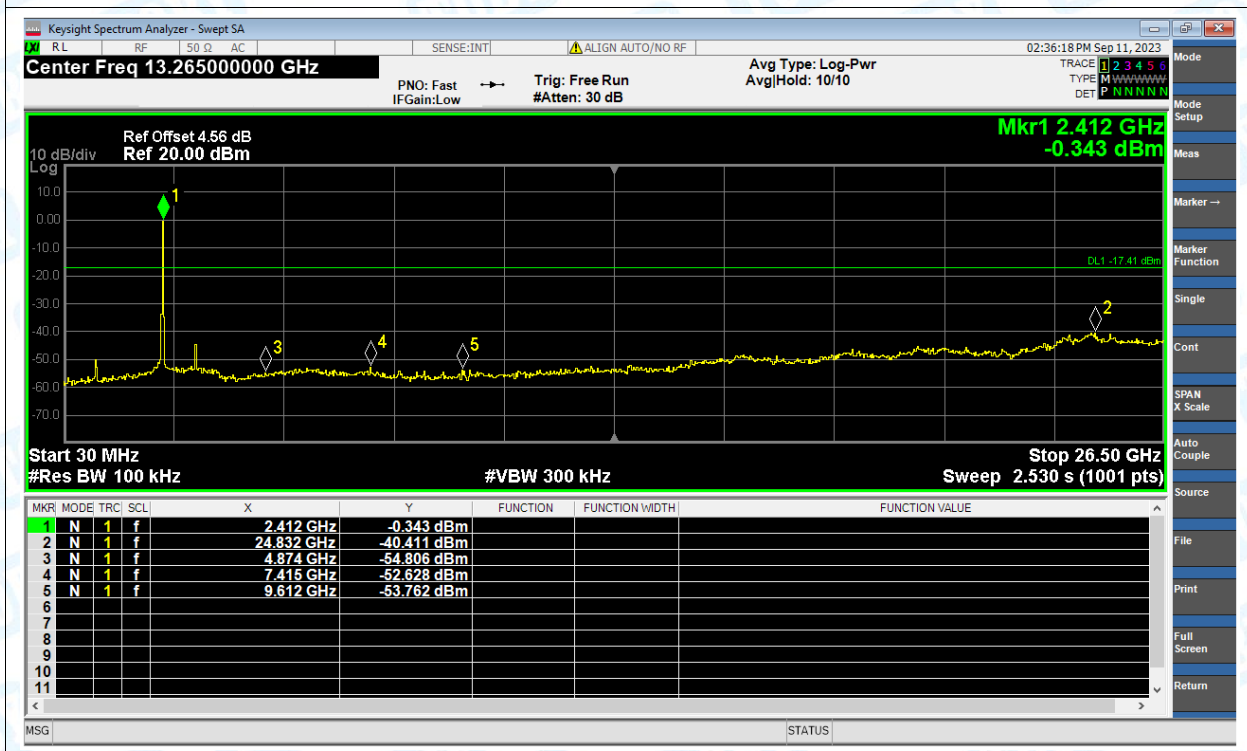
Tx. Spurious NVNT b 2462MHz Ant1 Emission



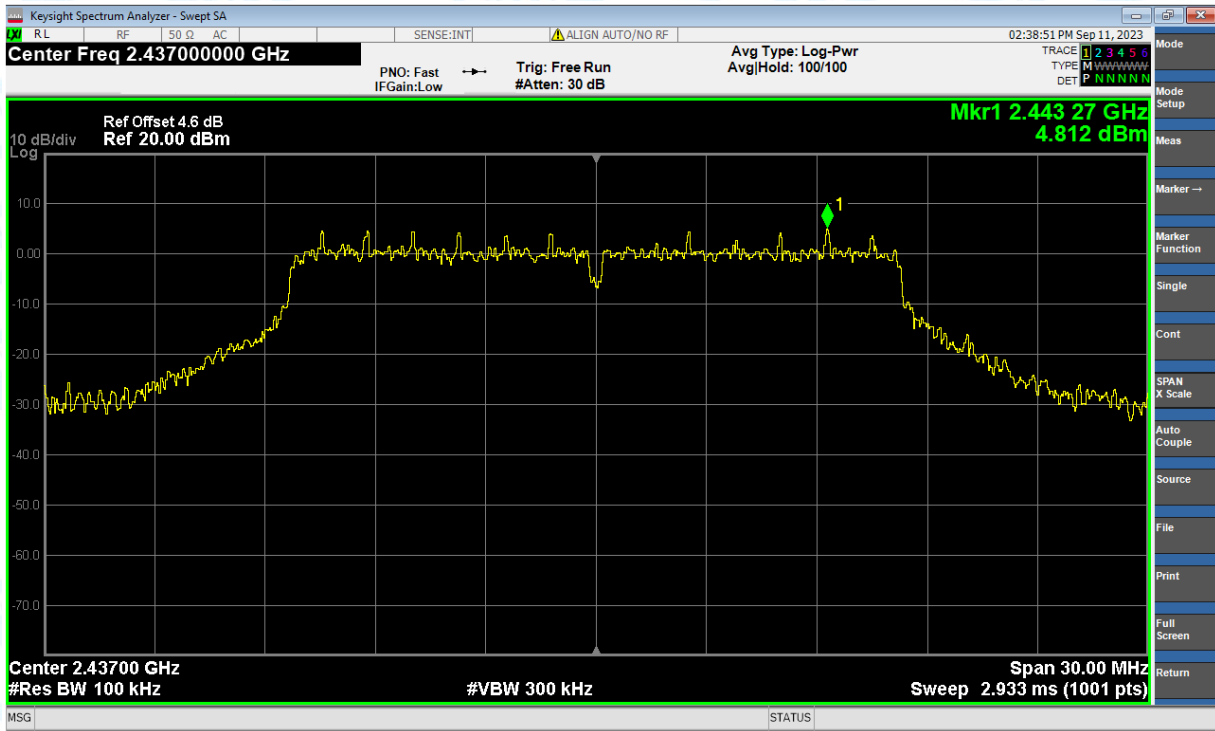
Tx. Spurious NVNT g 2412MHz Ant1 Ref



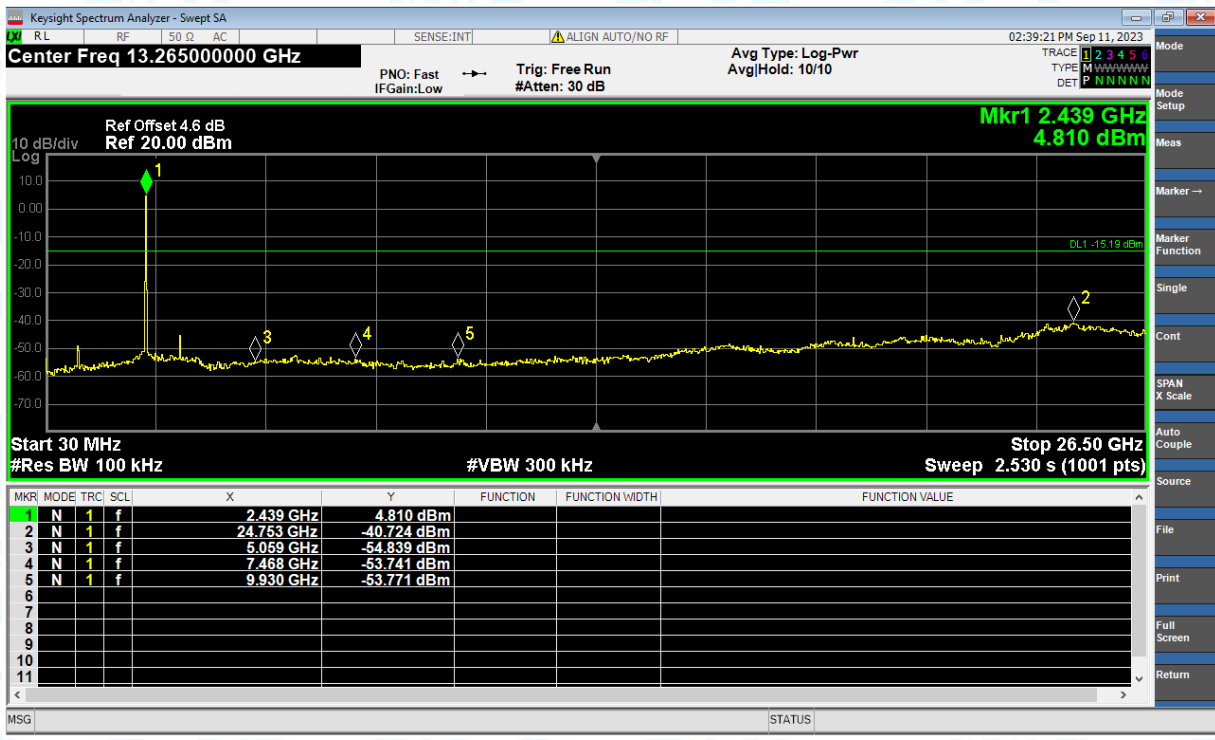
Tx. Spurious NVNT g 2412MHz Ant1 Emission



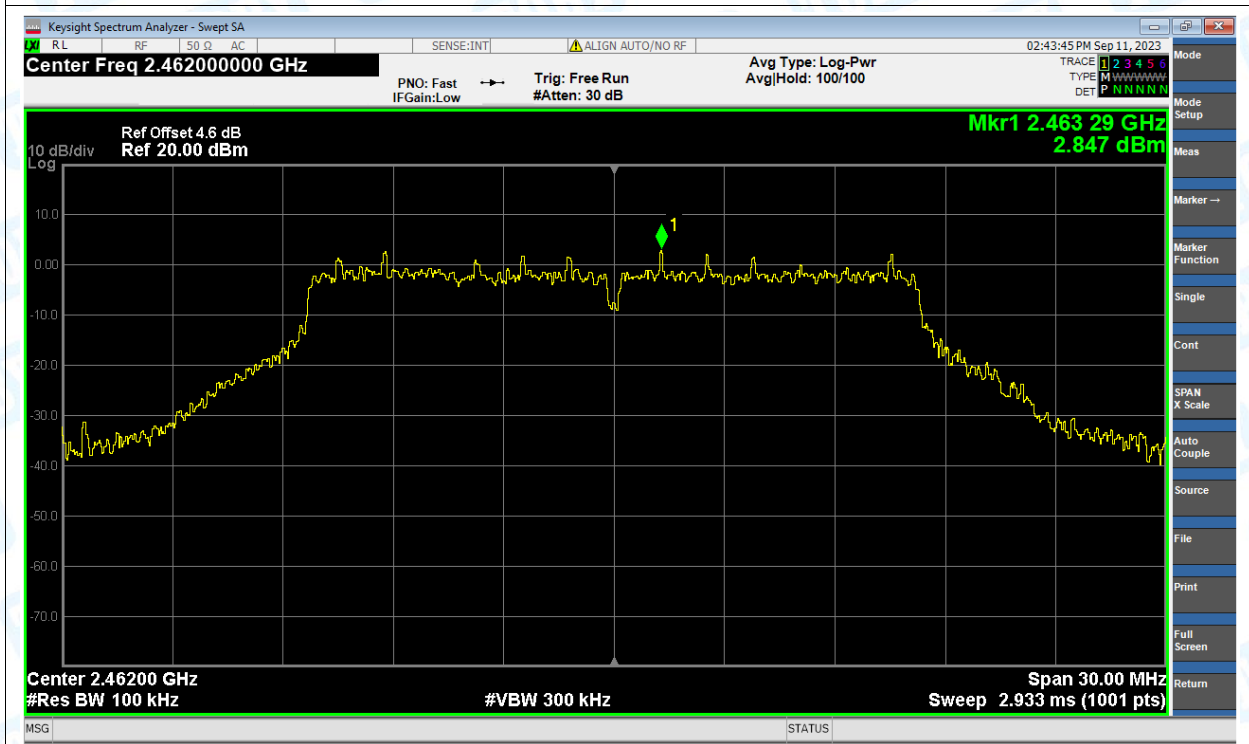
Tx. Spurious NVNT g 2437MHz Ant1 Ref



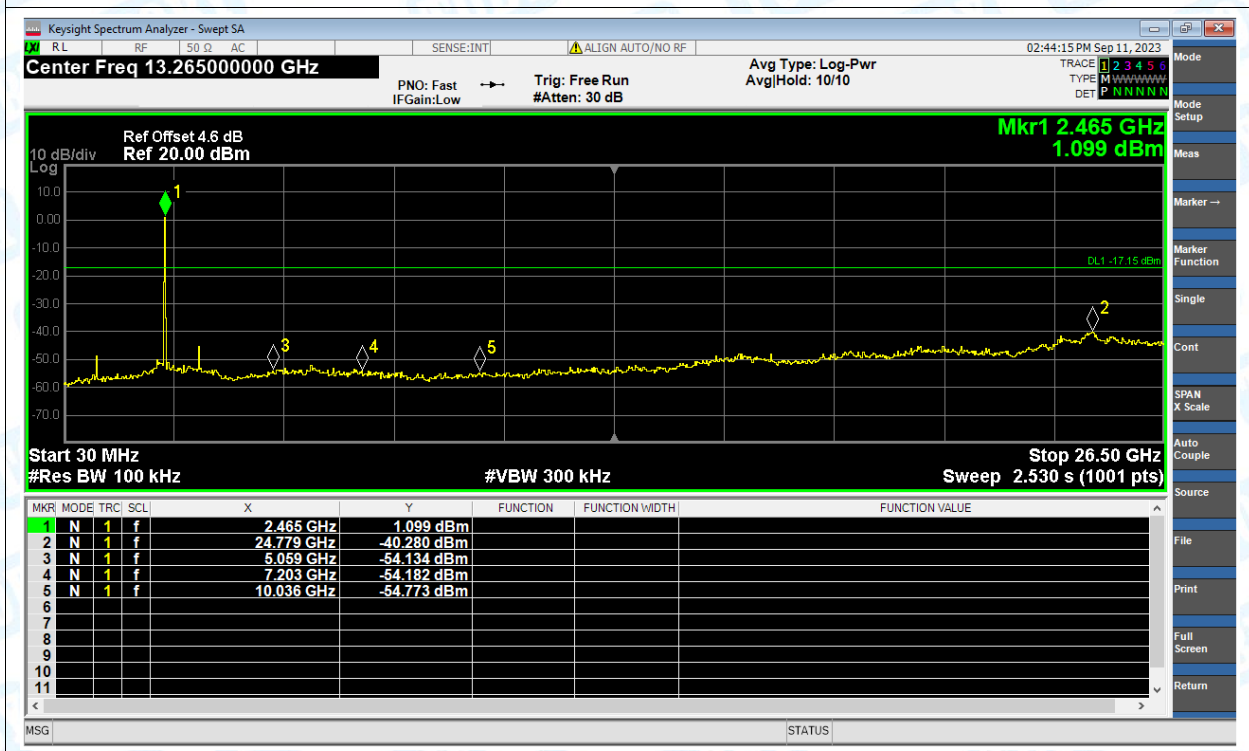
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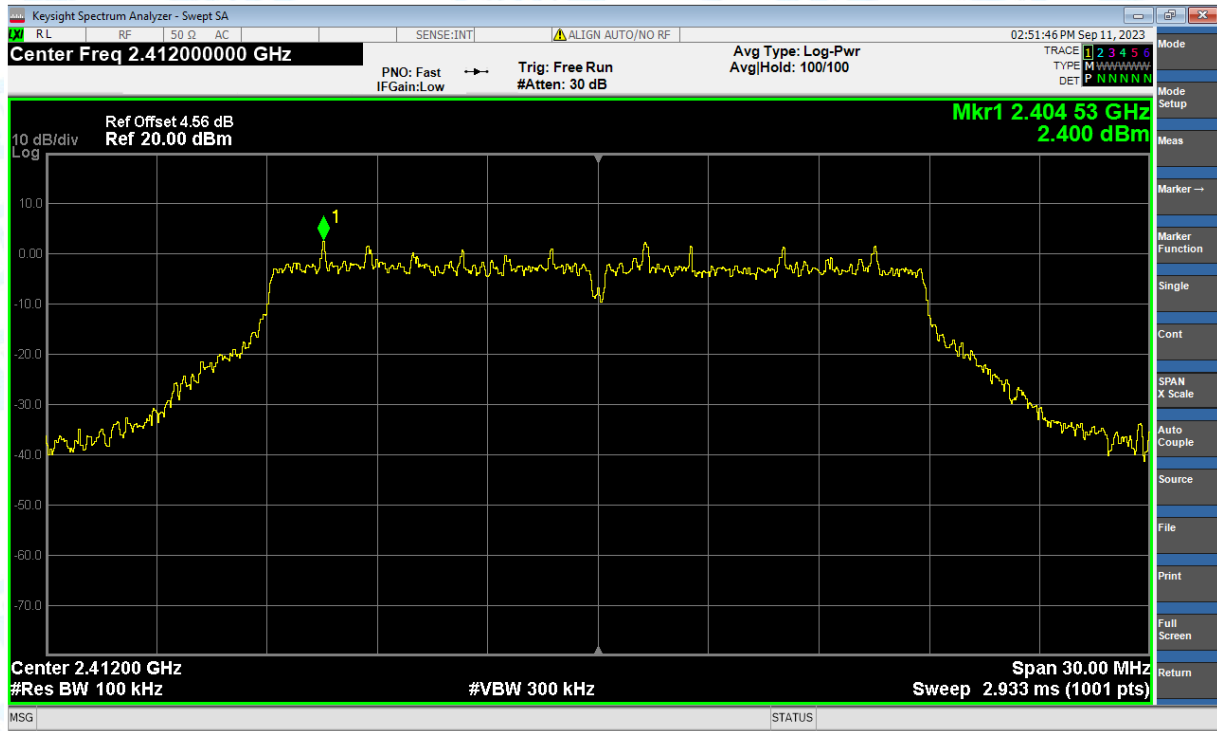
Tx. Spurious NVNT g 2462MHz Ant1 Ref



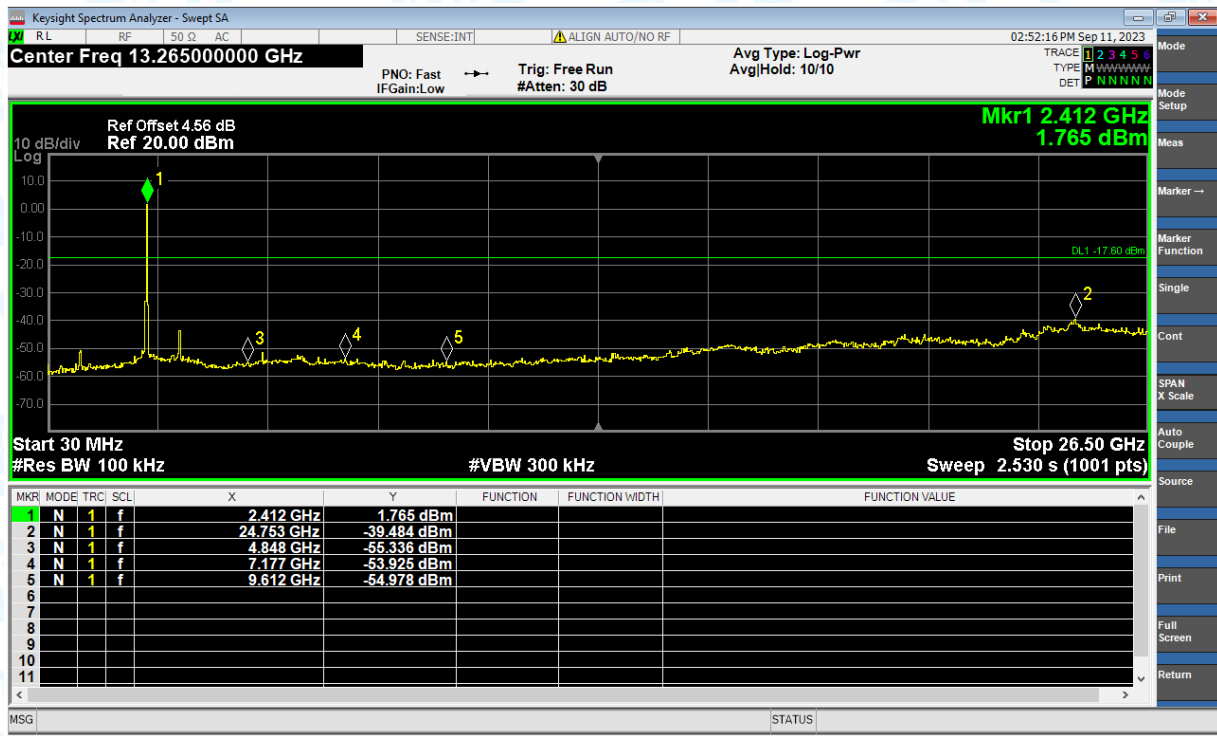
Tx. Spurious NVNT g 2462MHz Ant1 Emission



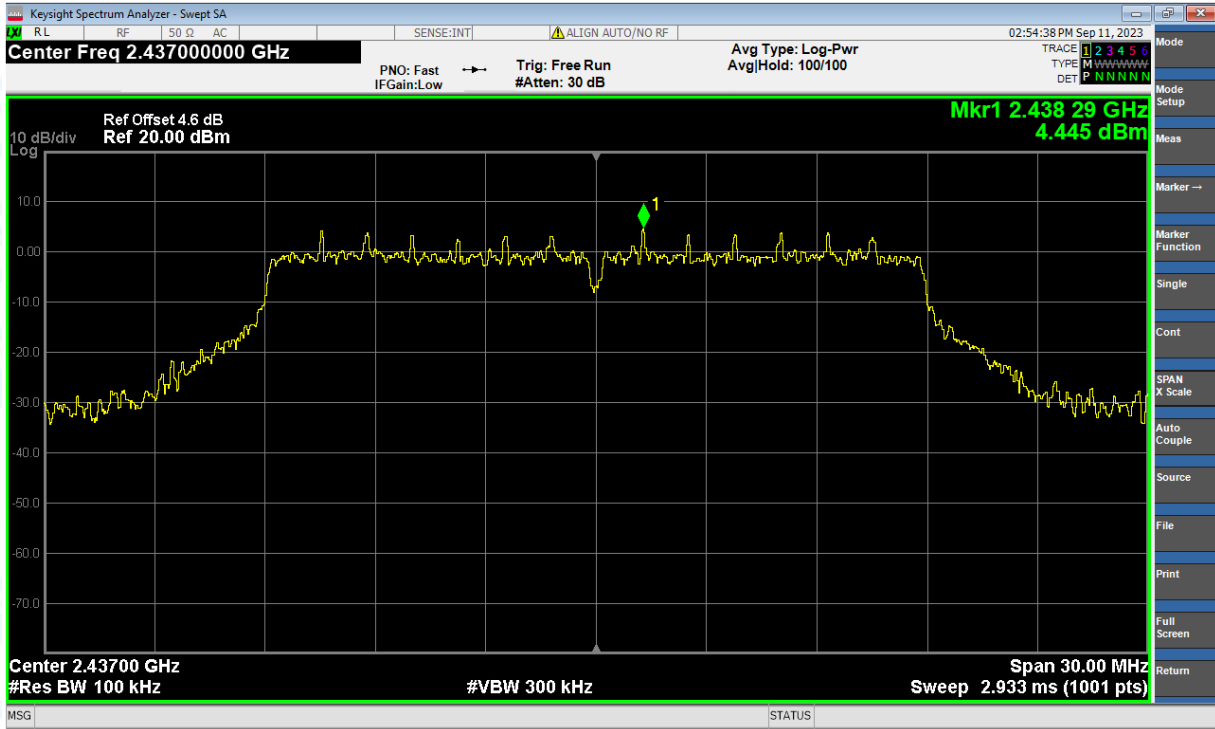
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref



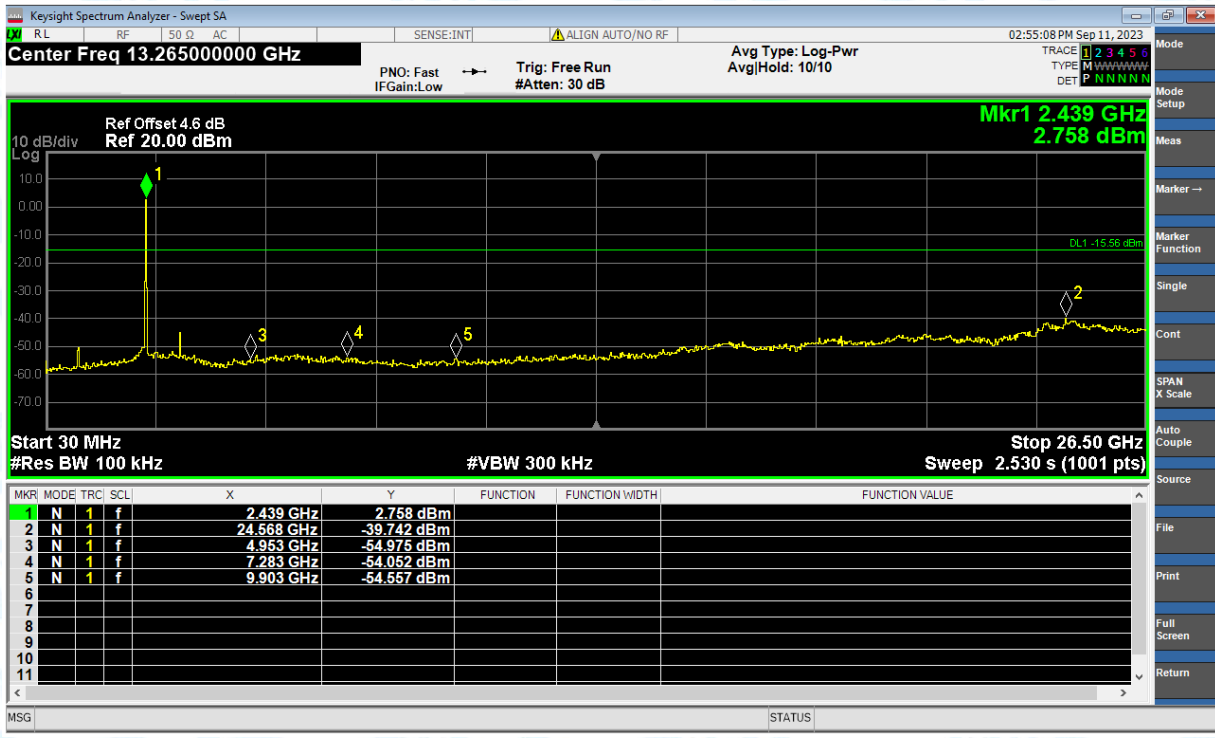
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Emission



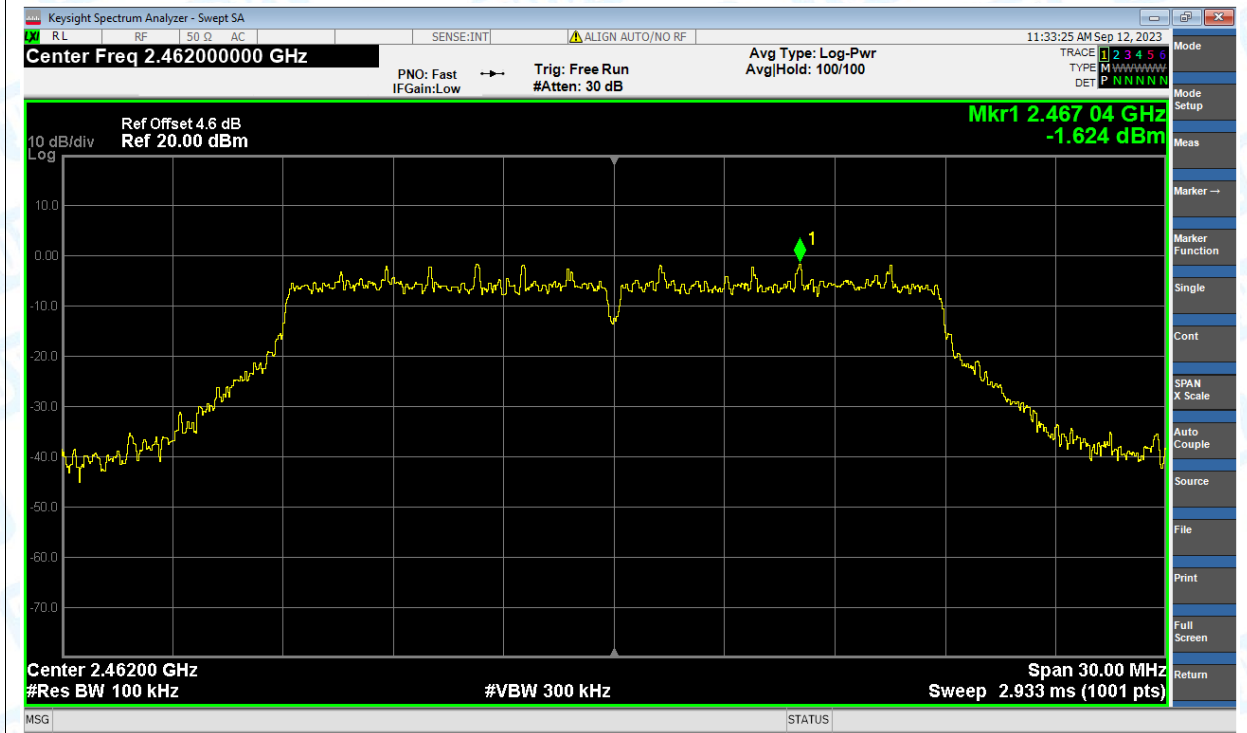
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Ref



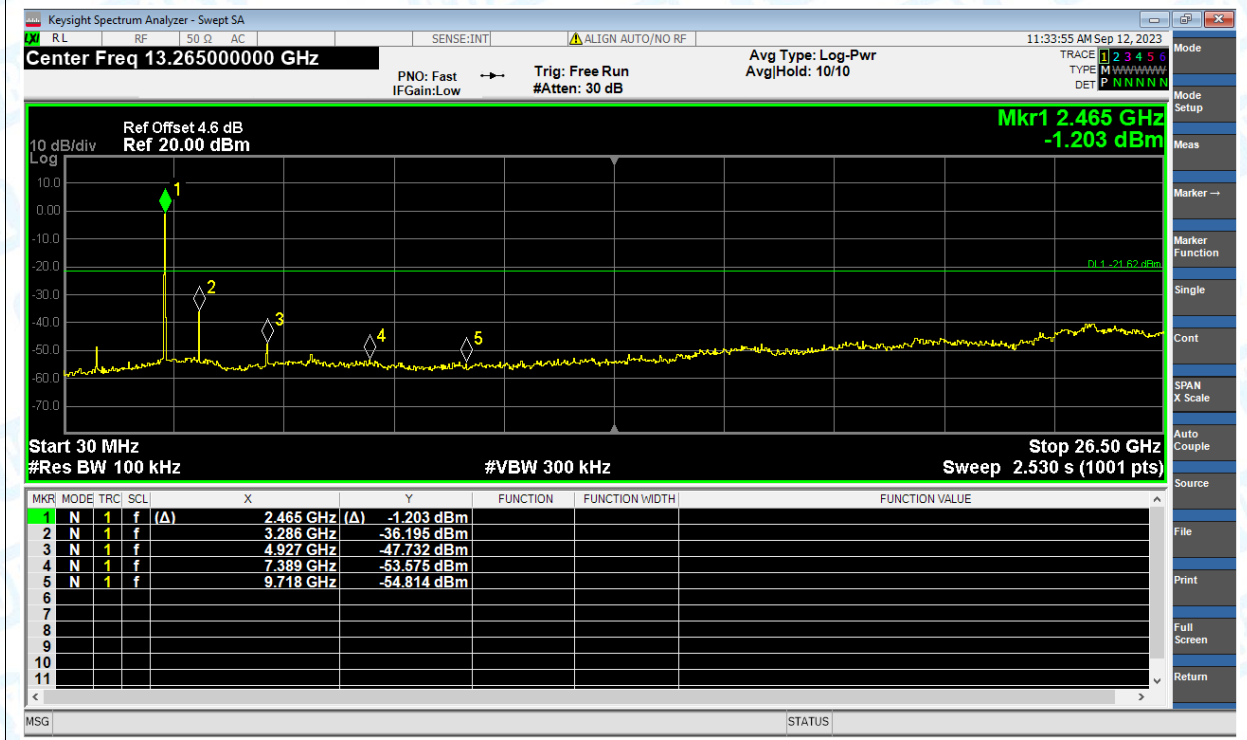
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



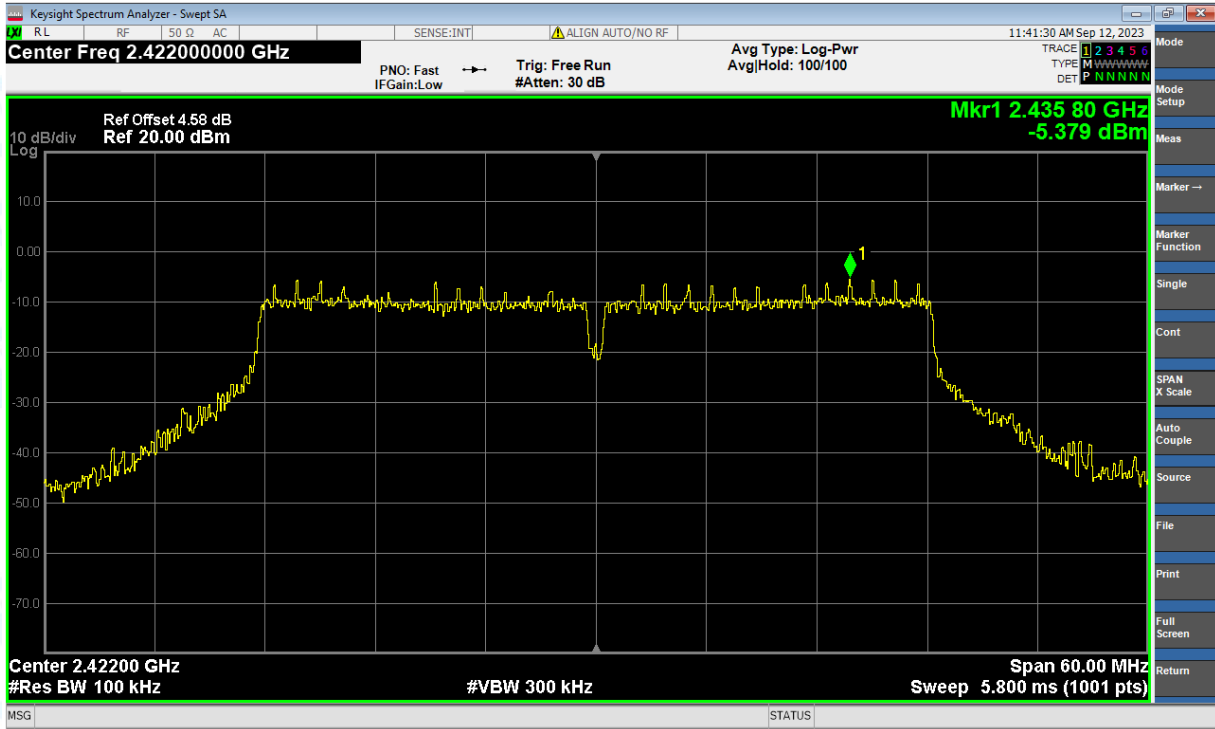
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Ref



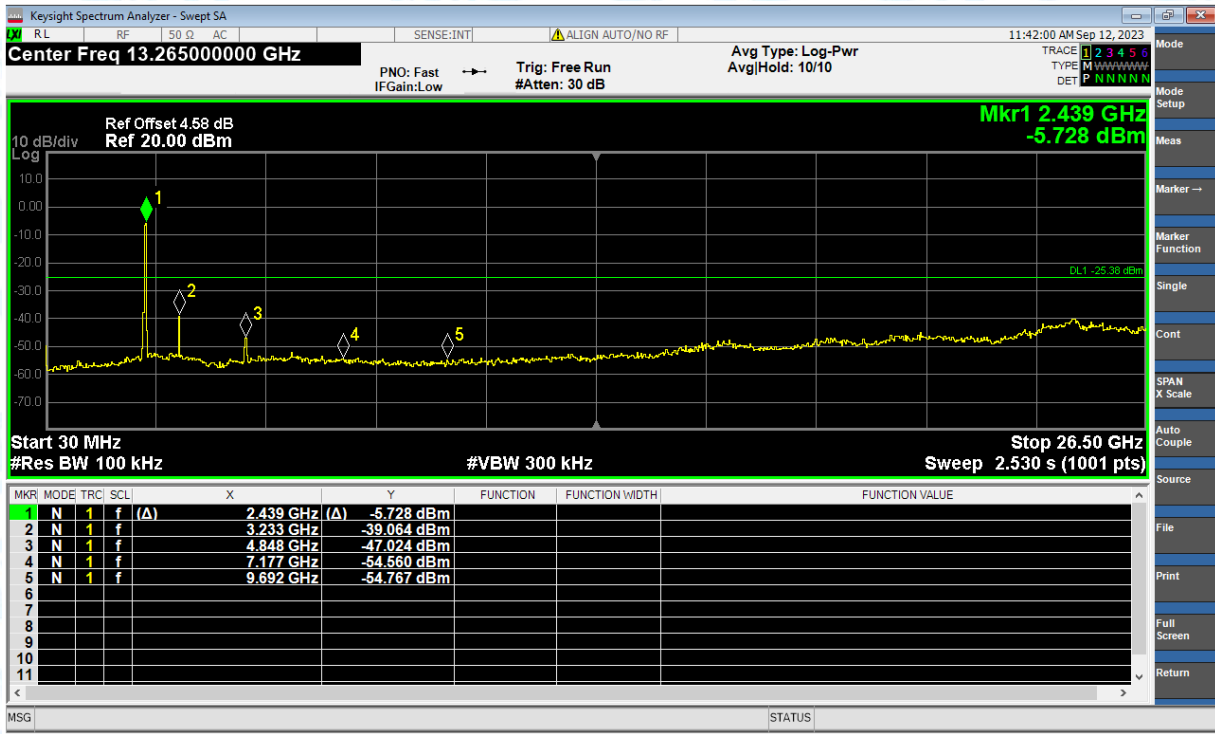
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Emission



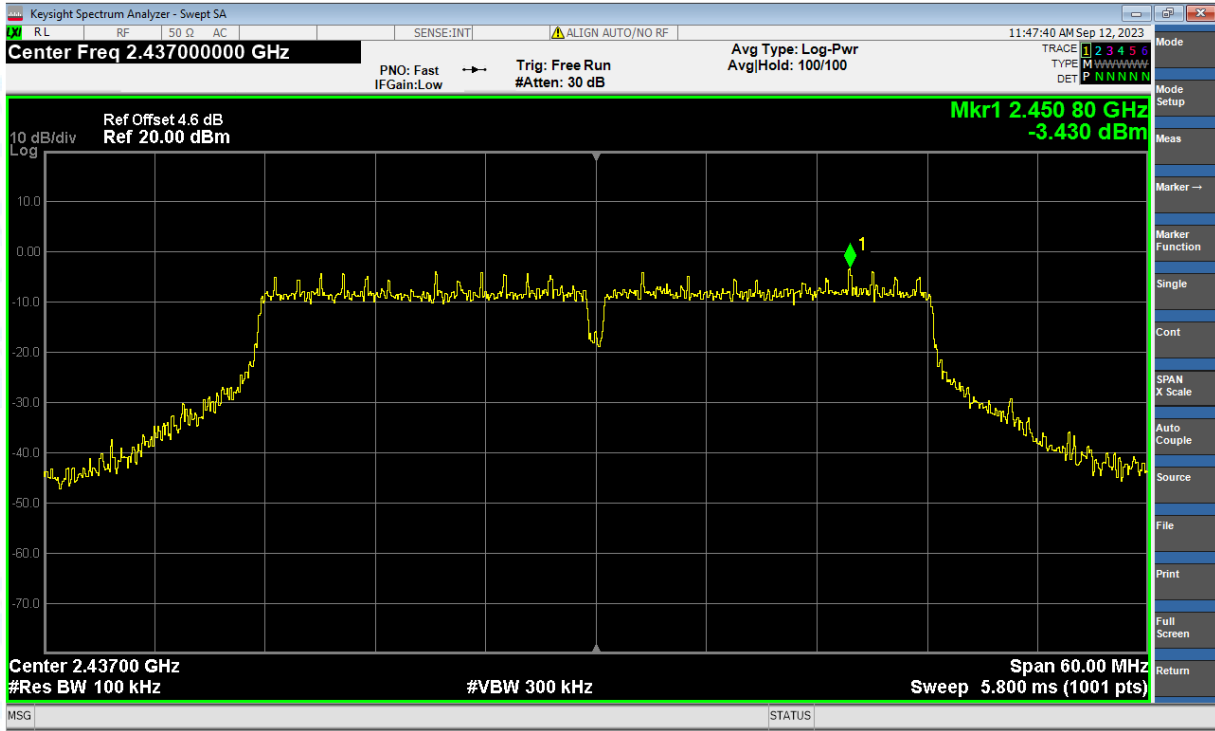
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Ref



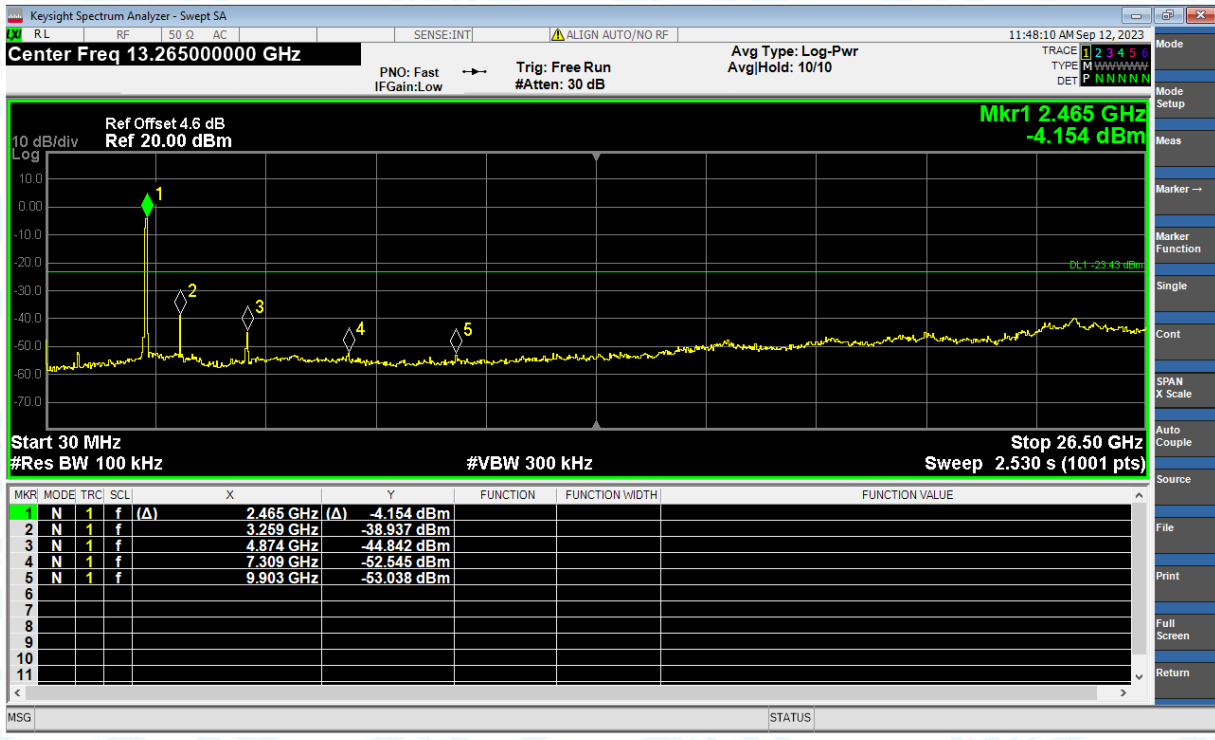
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Emission



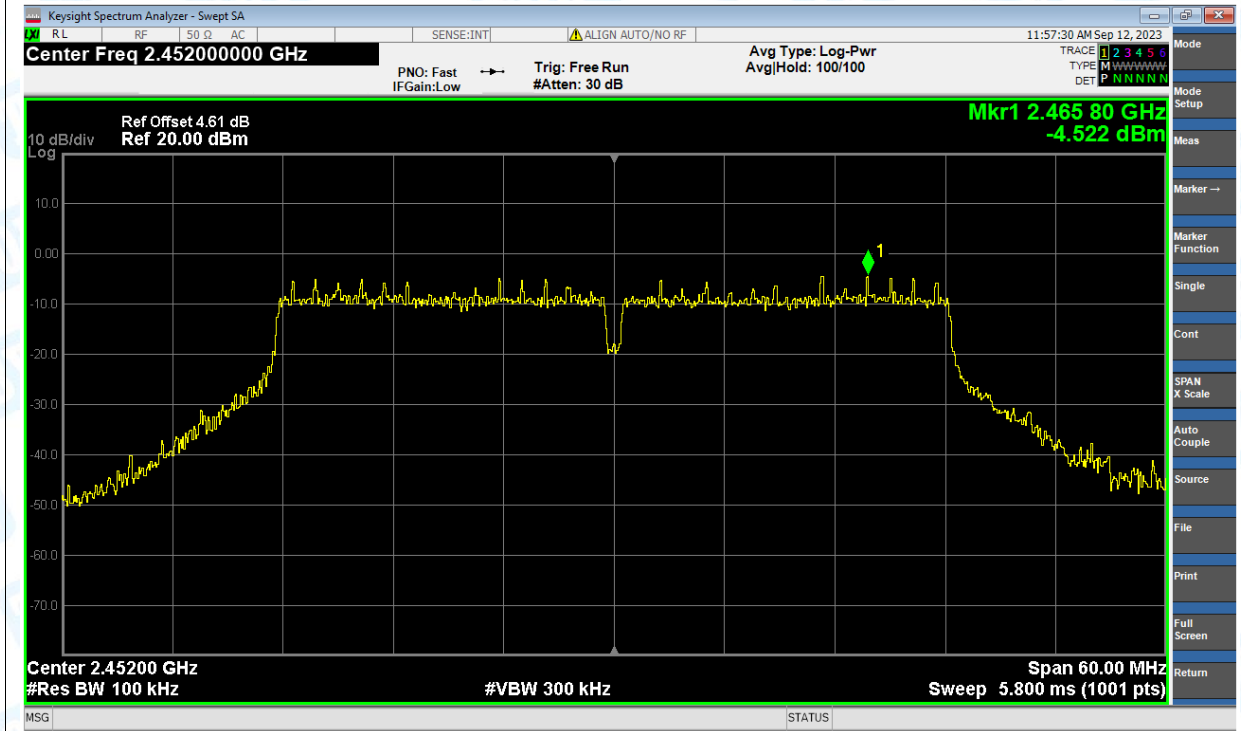
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Ref



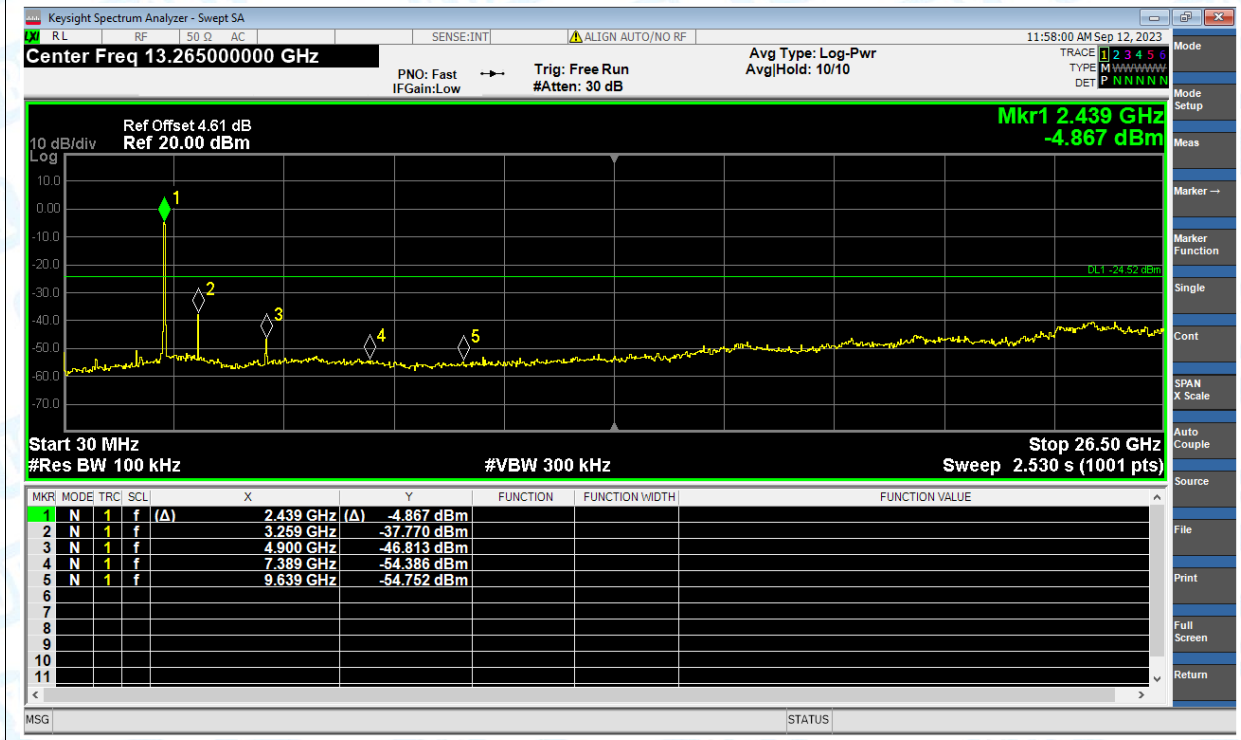
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Emission



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Ref



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Emission



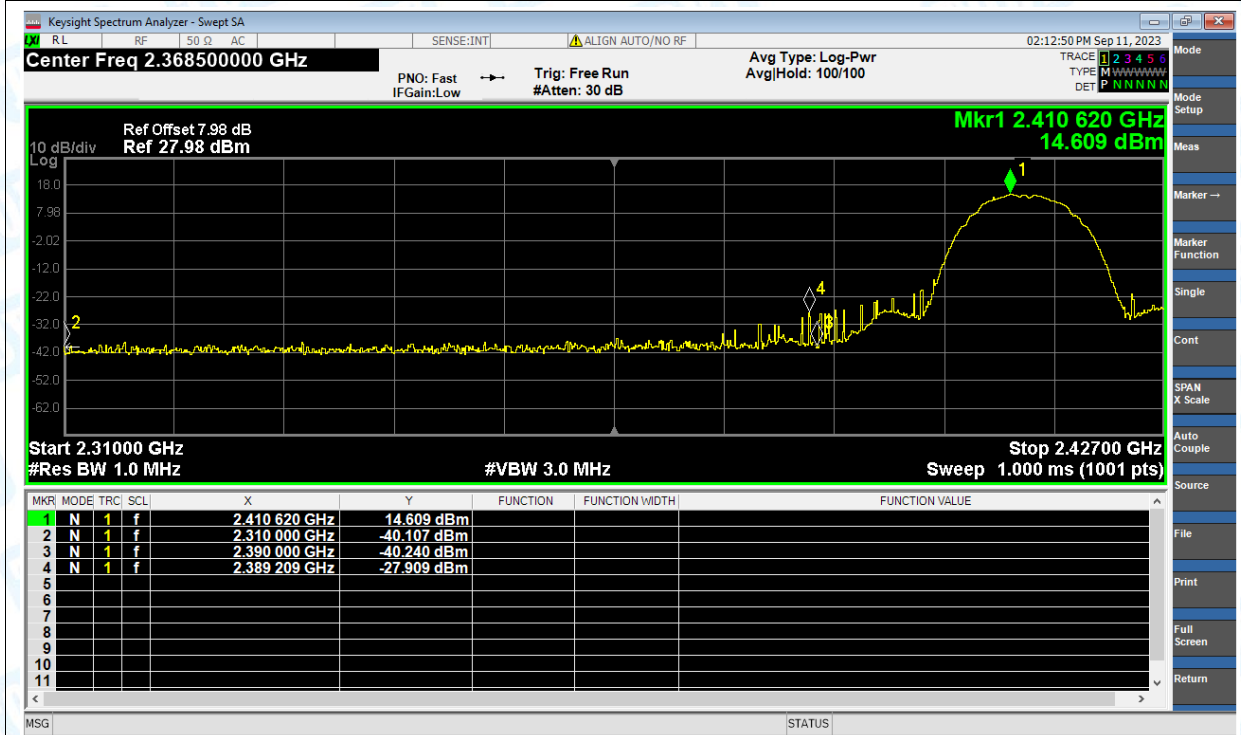
Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-40.11	3.42	58.57	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-50.52	3.42	48.16	Average	54	Pass
NVNT	b	2412	Ant1	2389.209	-27.91	3.42	70.77	Peak	74	Pass
NVNT	b	2412	Ant1	2387.22	-44.98	3.42	53.7	Average	54	Pass
NVNT	b	2412	Ant1	2390	-40.24	3.42	58.44	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-48.52	3.42	50.16	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-42.22	3.42	56.46	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-51.49	3.42	47.19	Average	54	Pass
NVNT	b	2462	Ant1	2486.061	-33.47	3.42	65.21	Peak	74	Pass
NVNT	b	2462	Ant1	2488.446	-49.78	3.42	48.9	Average	54	Pass
NVNT	b	2462	Ant1	2500	-39.94	3.42	58.74	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-51.05	3.42	47.63	Average	54	Pass
NVNT	g	2412	Ant1	2310	-41.32	3.42	57.36	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-51.41	3.42	47.27	Average	54	Pass
NVNT	g	2412	Ant1	2389.794	-27.02	3.42	71.66	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-46.61	3.42	52.07	Average	54	Pass
NVNT	g	2412	Ant1	2390	-33.05	3.42	65.63	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-46.49	3.42	52.19	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-28.47	3.42	70.21	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-44.8	3.42	53.88	Average	54	Pass
NVNT	g	2462	Ant1	2483.888	-26.77	3.42	71.91	Peak	74	Pass
NVNT	g	2462	Ant1	2483.517	-44.8	3.42	53.88	Average	54	Pass
NVNT	g	2462	Ant1	2500	-42.2	3.42	56.48	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-51.47	3.42	47.21	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-40.36	3.42	58.32	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-51.38	3.42	47.3	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.911	-26.26	3.42	72.42	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.911	-45.03	3.42	53.65	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-29.36	3.42	69.32	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-44.89	3.42	53.79	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-25.46	3.42	73.22	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-46.8	3.42	51.88	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-25.46	3.42	73.22	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-46.8	3.42	51.88	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-43.22	3.42	55.46	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-52.68	3.42	46	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2310	-44.29	3.42	54.39	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2310	-53.75	3.42	44.93	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2389.946	-25.46	3.42	73.22	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2389.662	-45.67	3.42	53.01	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2390	-29.42	3.42	69.26	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2390	-45.72	3.42	52.96	Average	54	Pass

NVNT	n(HT40)	2452	Ant1	2483.5	-30.72	3.42	67.96	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.5	-45.58	3.42	53.1	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2485.102	-27.76	3.42	70.92	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.542	-45.58	3.42	53.1	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2500	-37.63	3.42	61.05	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2500	-50.24	3.42	48.44	Average	54	Pass

Test Graphs

Restrict Band NVNT b 2412MHz Ant1 Peak



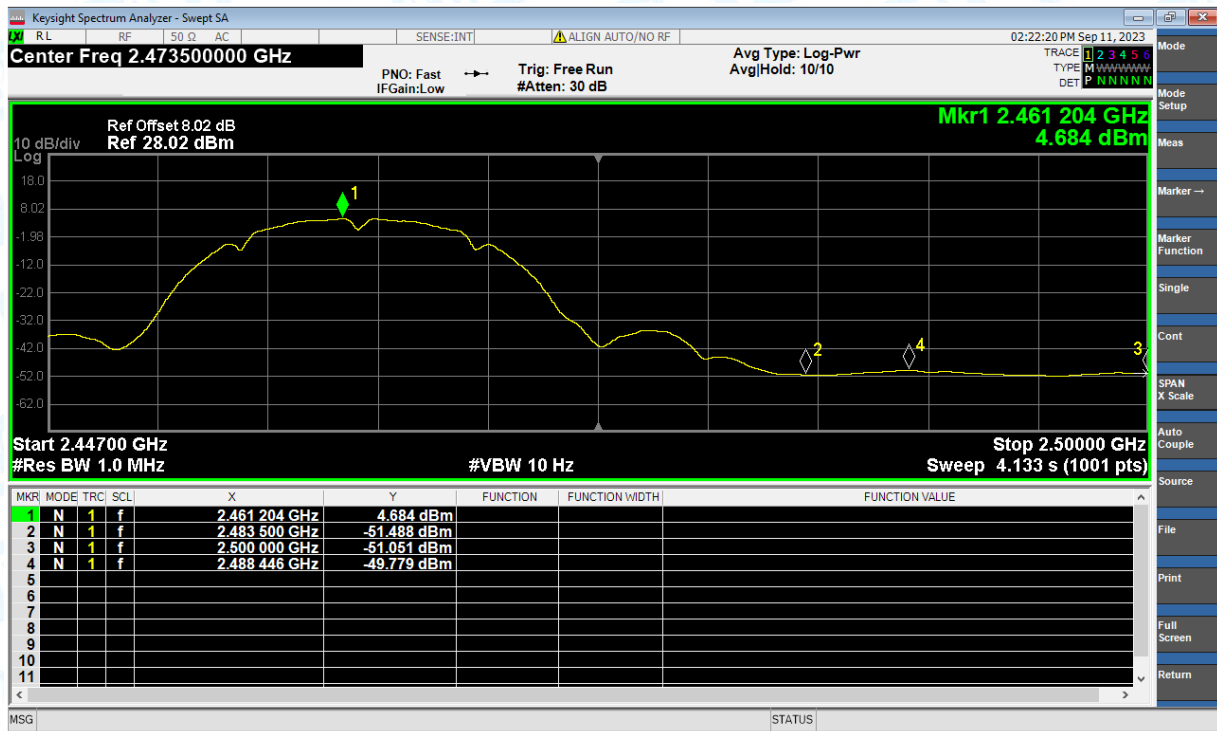
Restrict Band NVNT b 2412MHz Ant1 Average



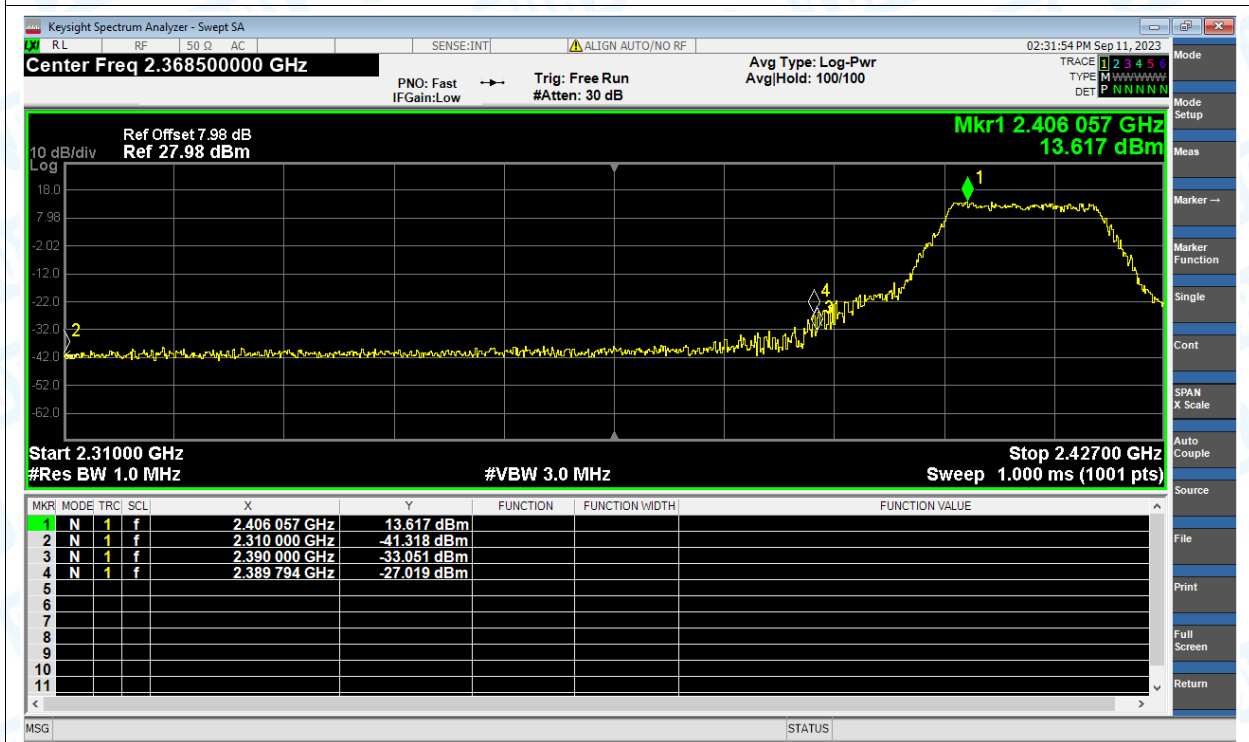
Restrict Band NVNT b 2462MHz Ant1 Peak



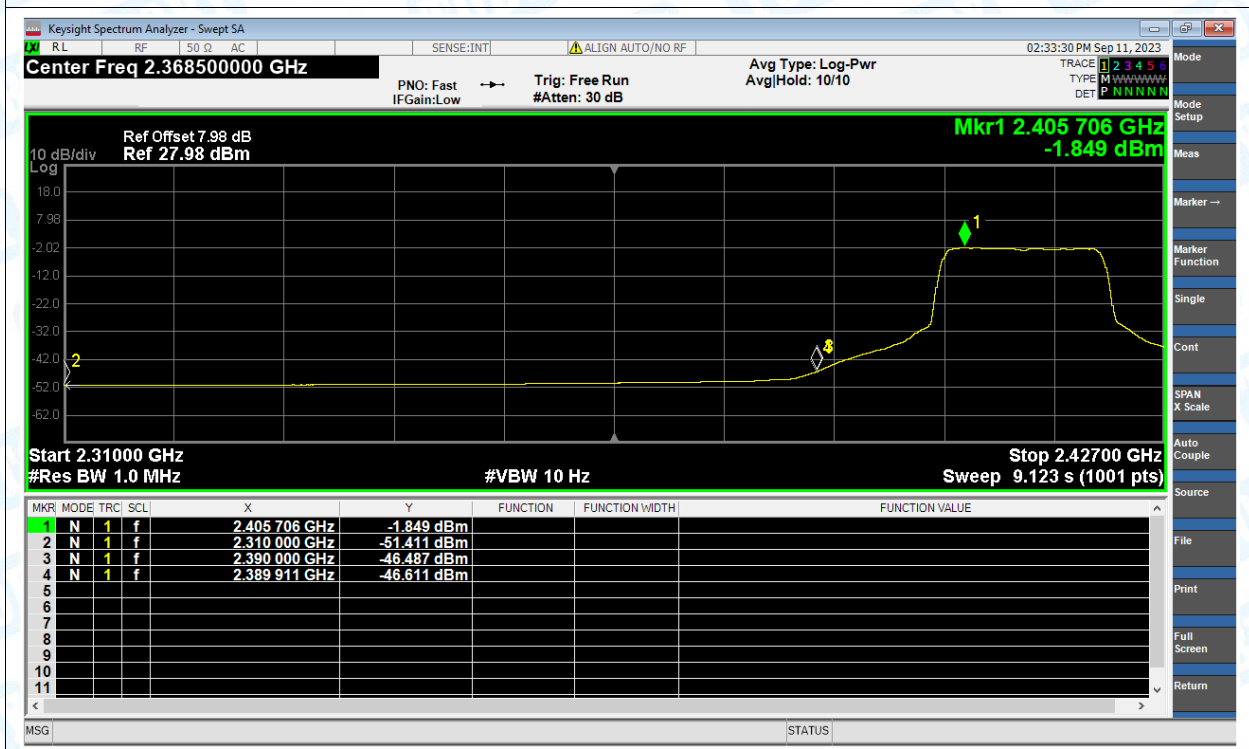
Restrict Band NVNT b 2462MHz Ant1 Average



Restrict Band NVNT g 2412MHz Ant1 Peak



Restrict Band NVNT g 2412MHz Ant1 Average

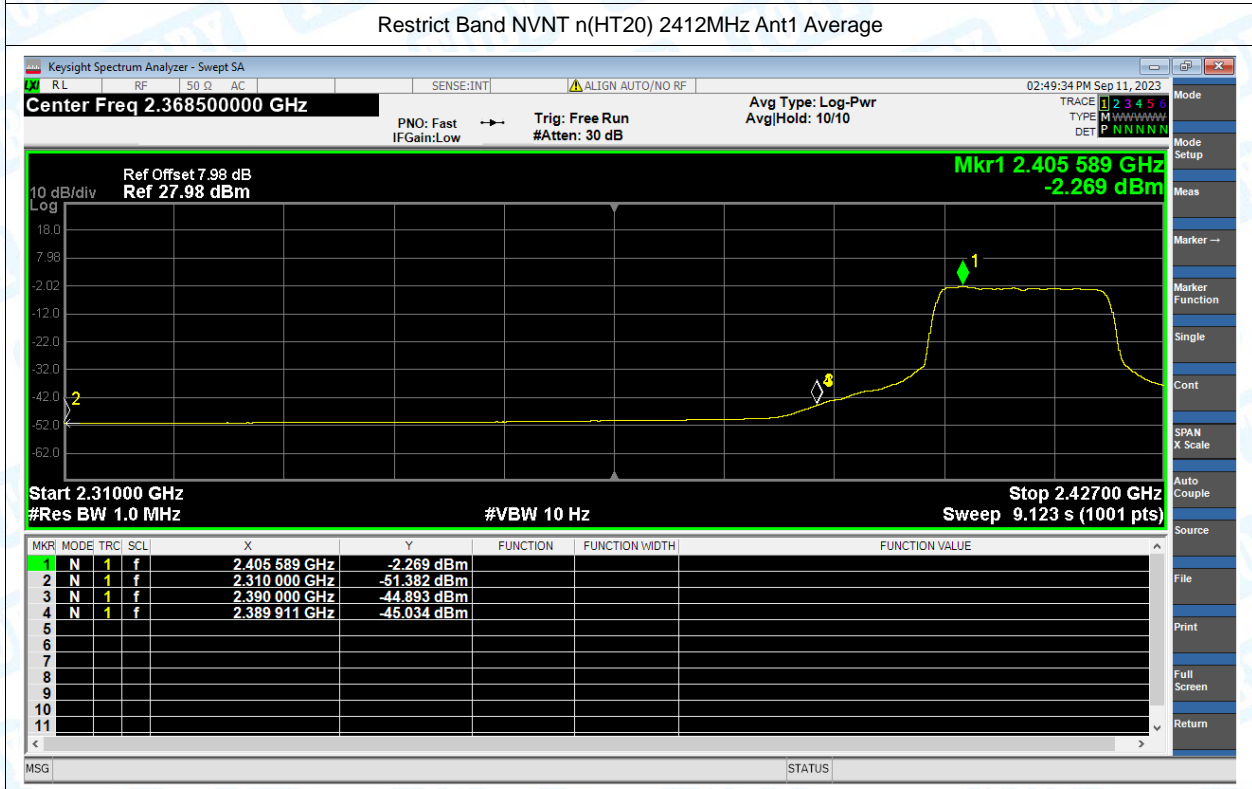
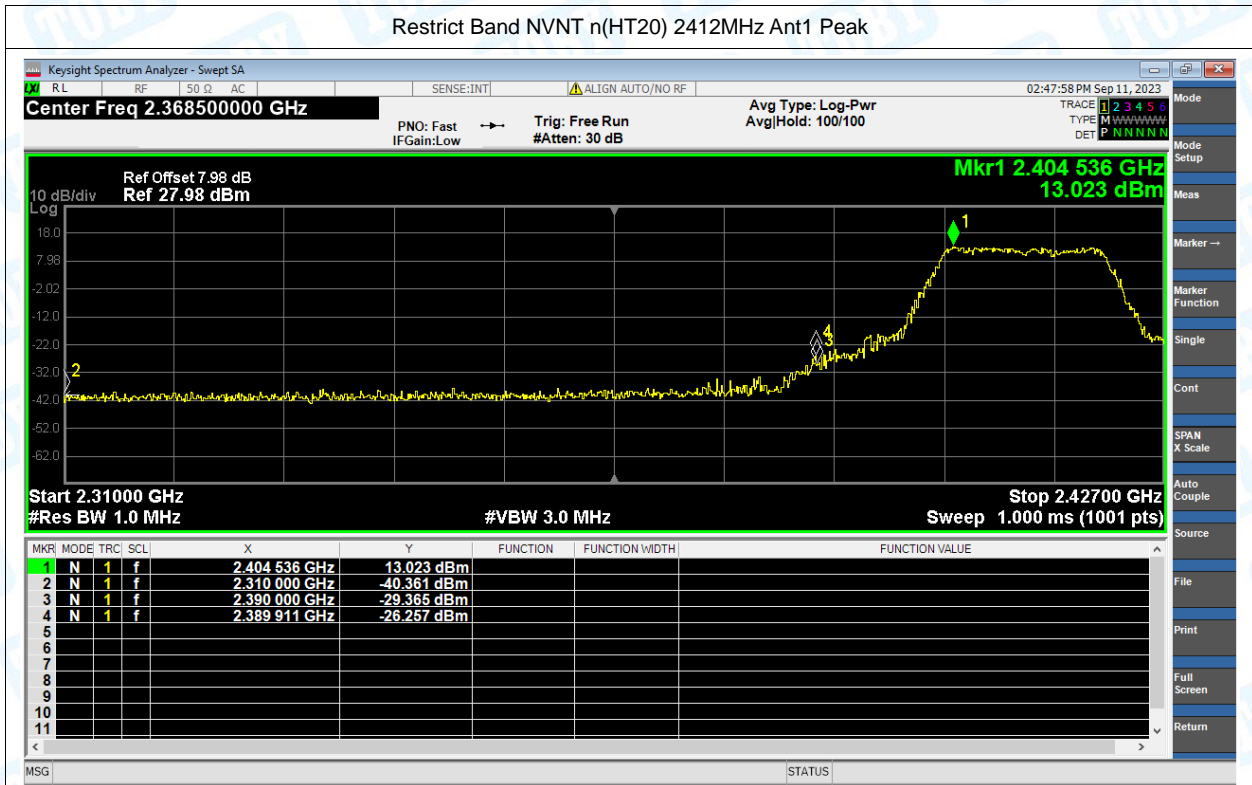


Restrict Band NVNT g 2462MHz Ant1 Peak



Restrict Band NVNT g 2462MHz Ant1 Average





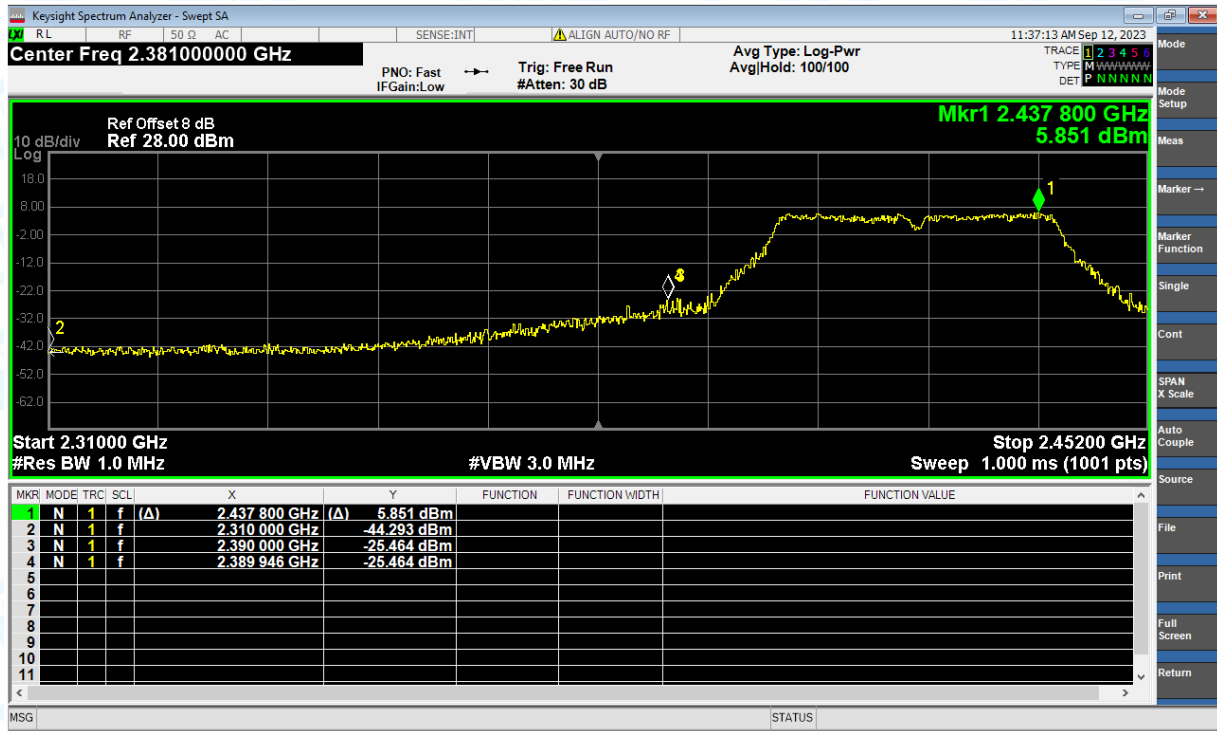
Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



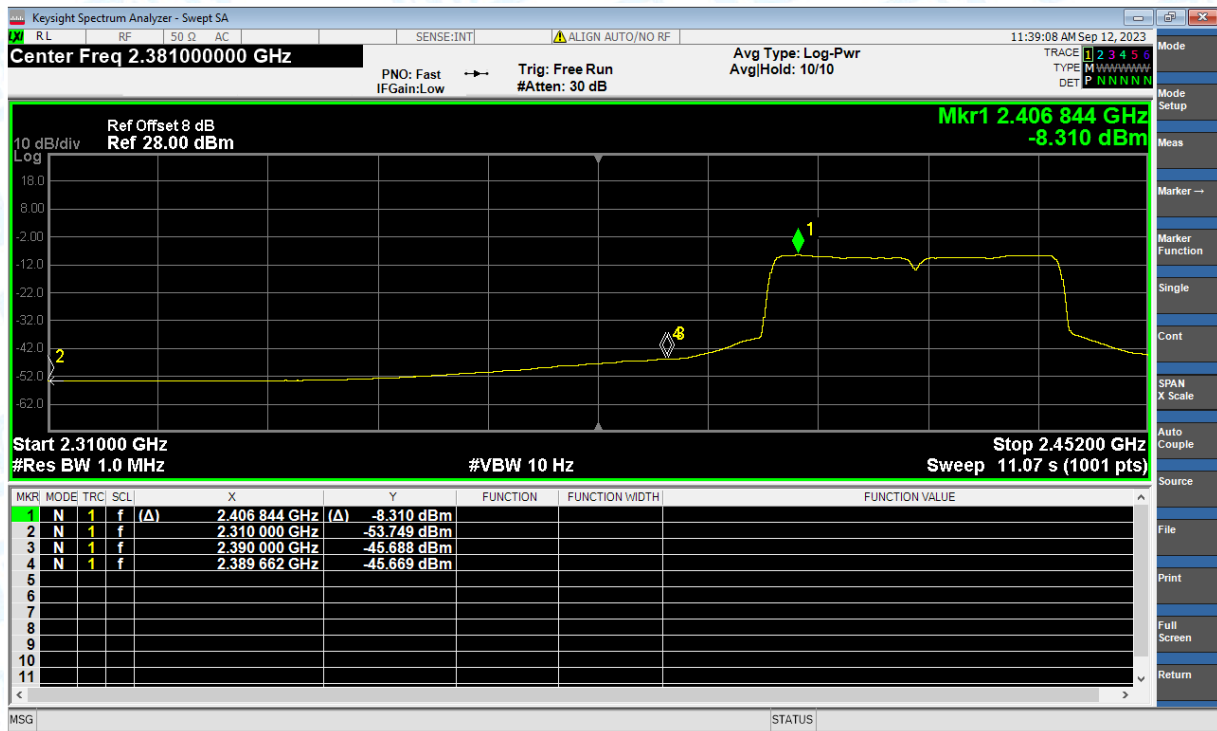
Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



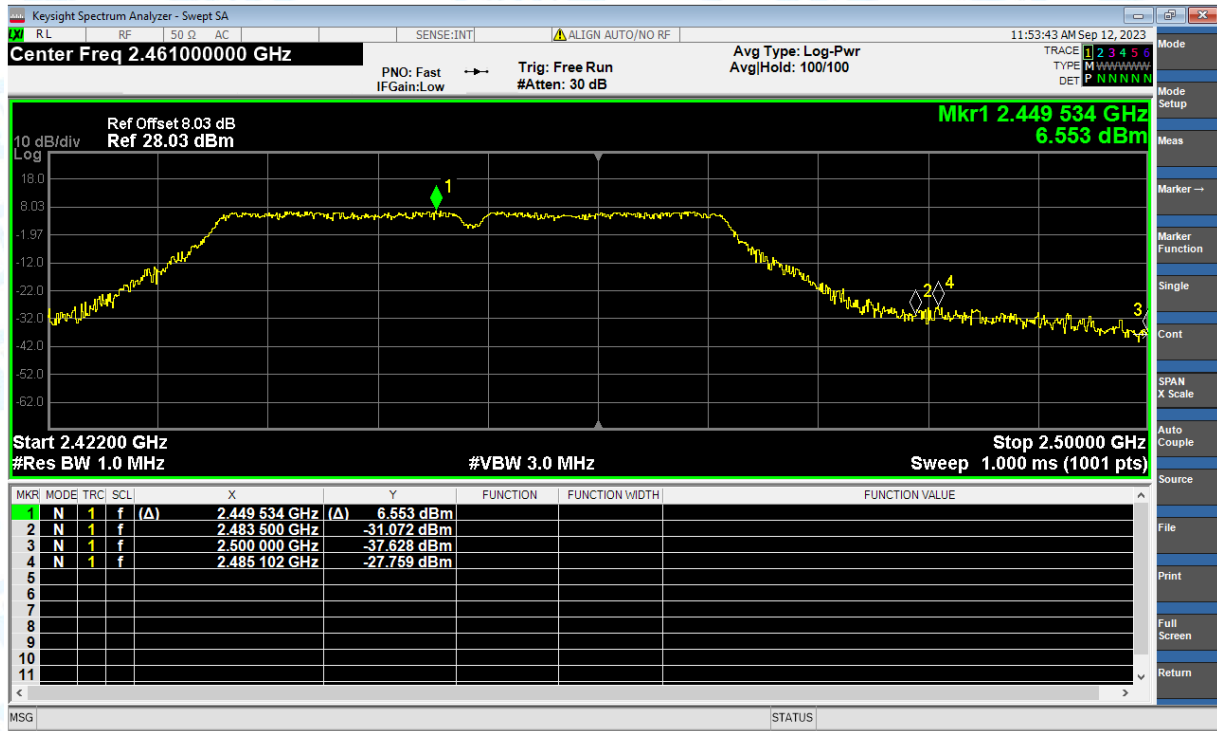
Restrict Band NVNT n(HT40) 2422MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2422MHz Ant1 Average



Restrict Band NVNT n(HT40) 2452MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2452MHz Ant1 Average

