

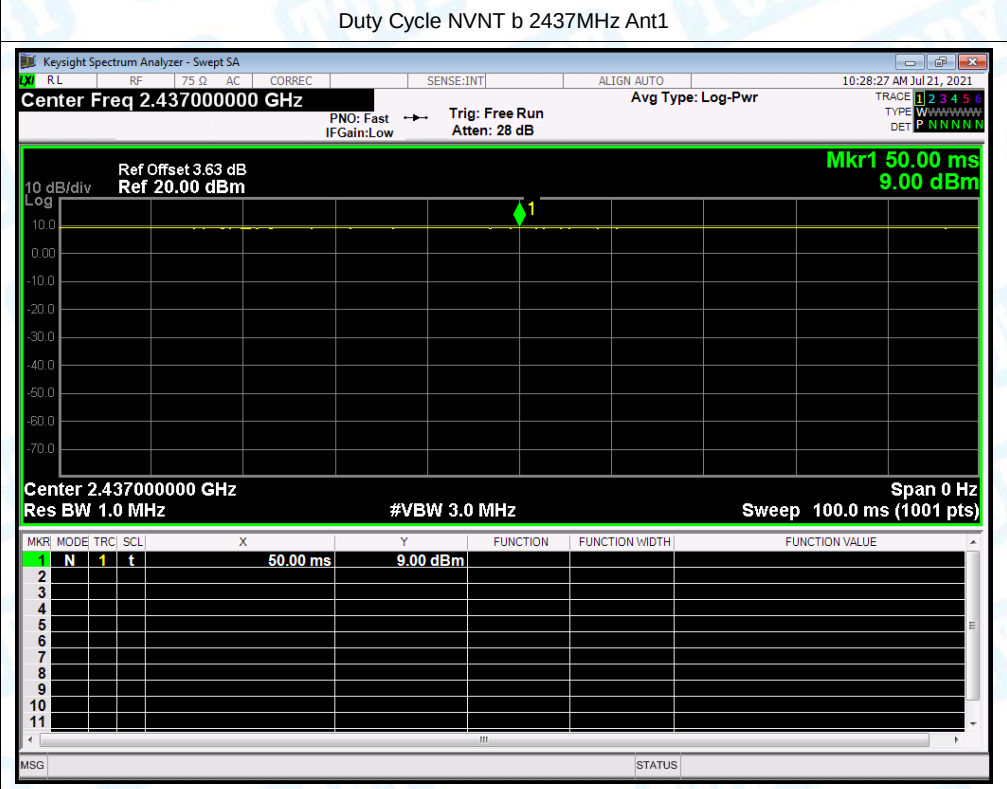
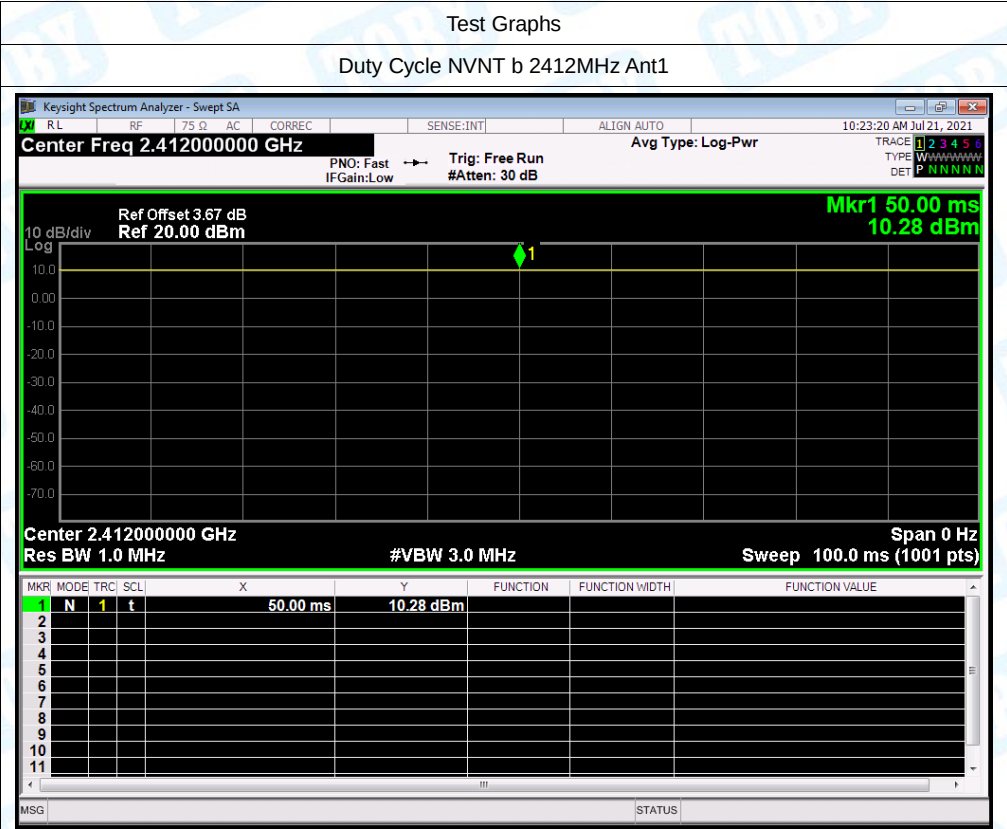
RF Test Data for 2.4GWIFI

(Conducted Measurements)

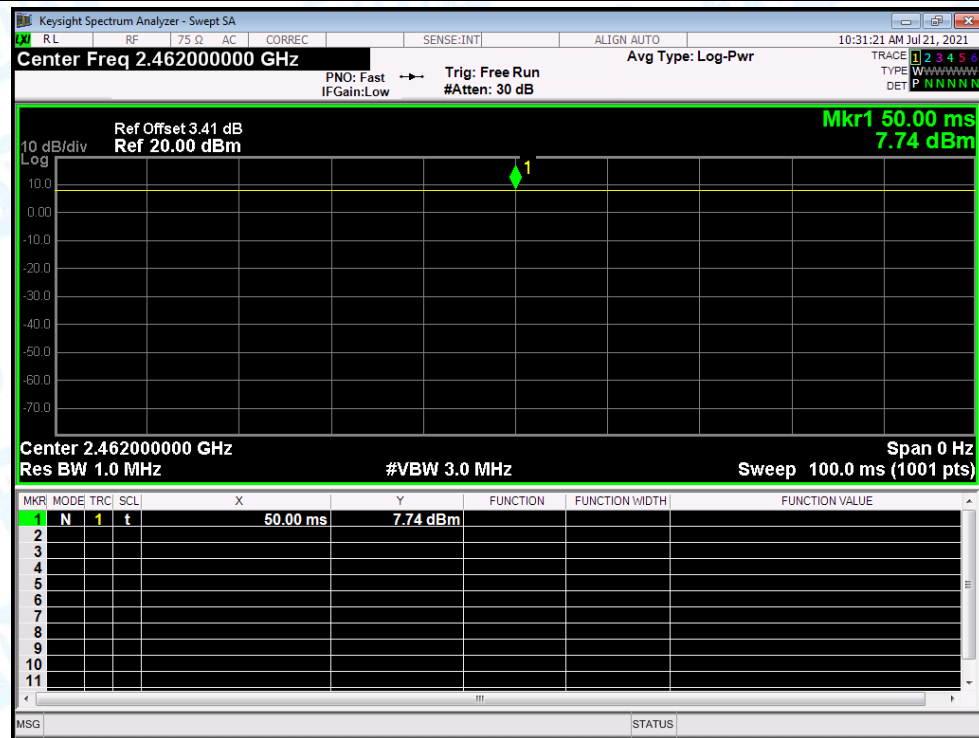
General Description of EUT	
Product Name:	Smart IP Camera with Battery
Test Model:	BWNIP-2TA-BS-V3
Sample ID:	20210628-06_1-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	HeJingchang
Note: For a more detailed features description, please refer to the report TB-RF182706.	

1.Duty Cycle

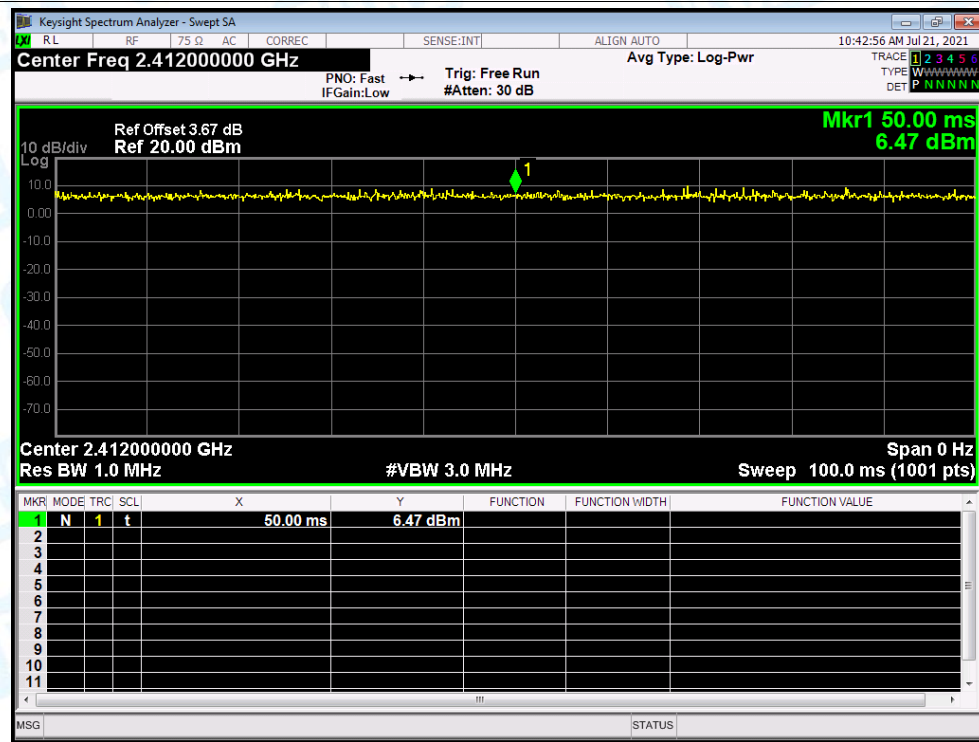
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	100	0	0
NVNT	b	2437	Ant1	100	0	0
NVNT	b	2462	Ant1	100	0	0
NVNT	g	2412	Ant1	100	0	0
NVNT	g	2437	Ant1	100	0	0
NVNT	g	2462	Ant1	100	0	0
NVNT	n(HT20)	2412	Ant1	100	0	0
NVNT	n(HT20)	2437	Ant1	100	0	0
NVNT	n(HT20)	2462	Ant1	100	0	0



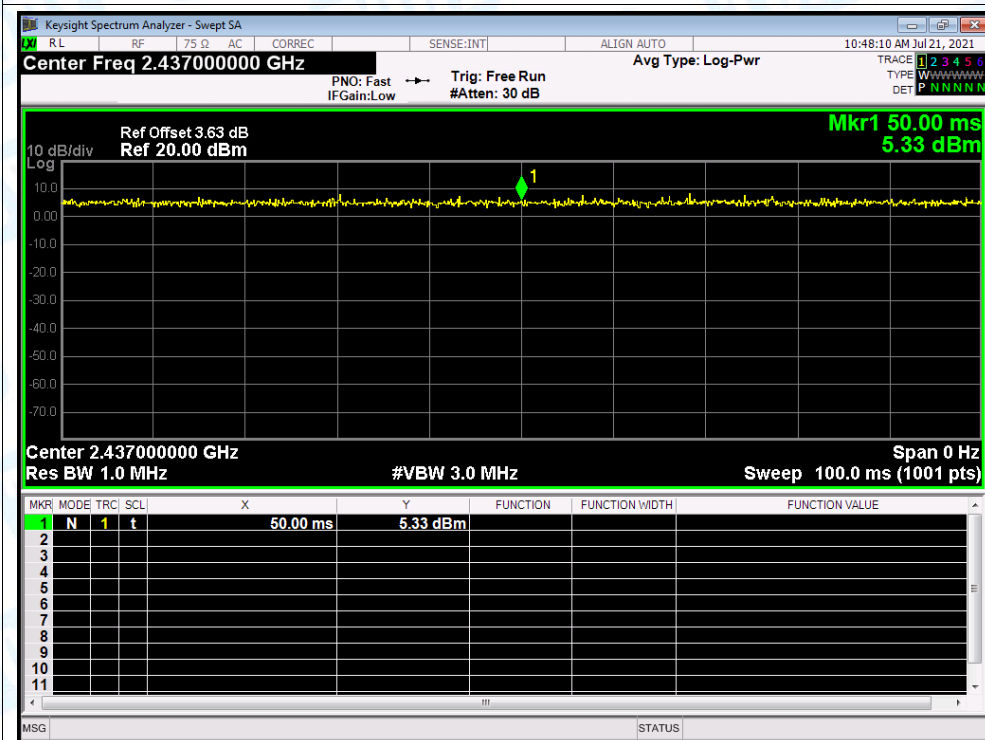
Duty Cycle NVNT b 2462MHz Ant1



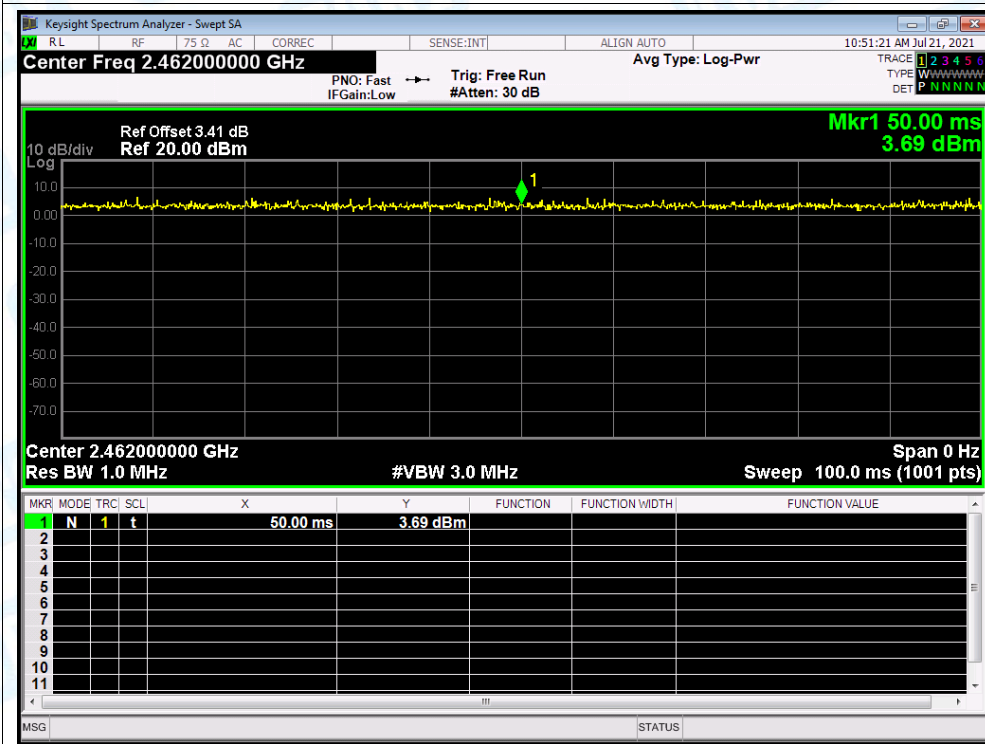
Duty Cycle NVNT g 2412MHz Ant1



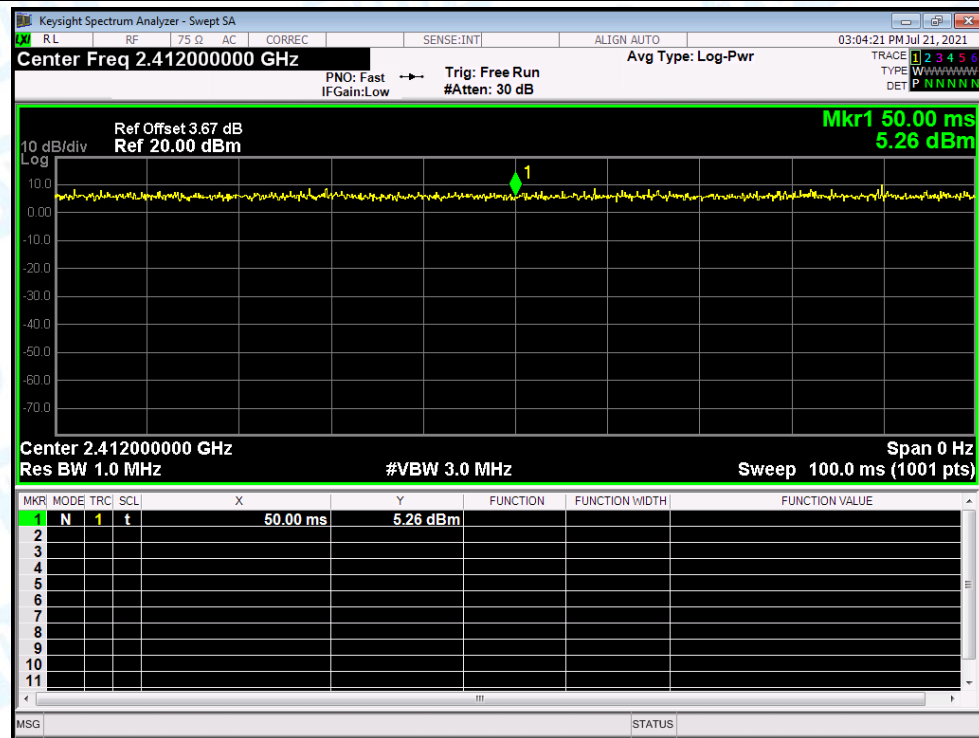
Duty Cycle NVNT g 2437MHz Ant1



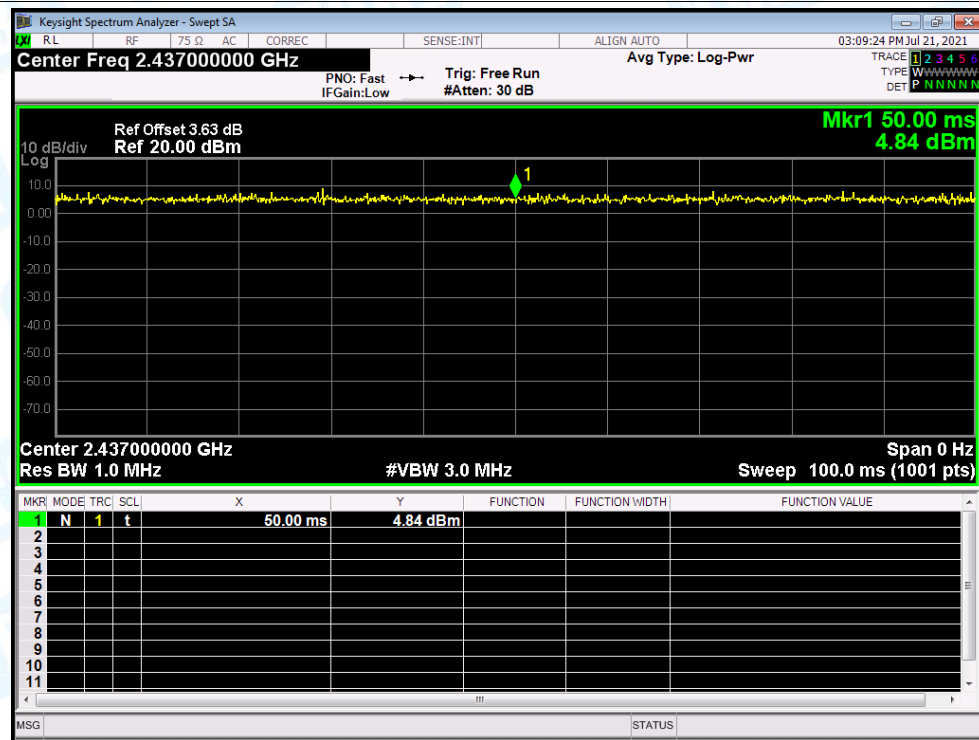
Duty Cycle NVNT g 2462MHz Ant1

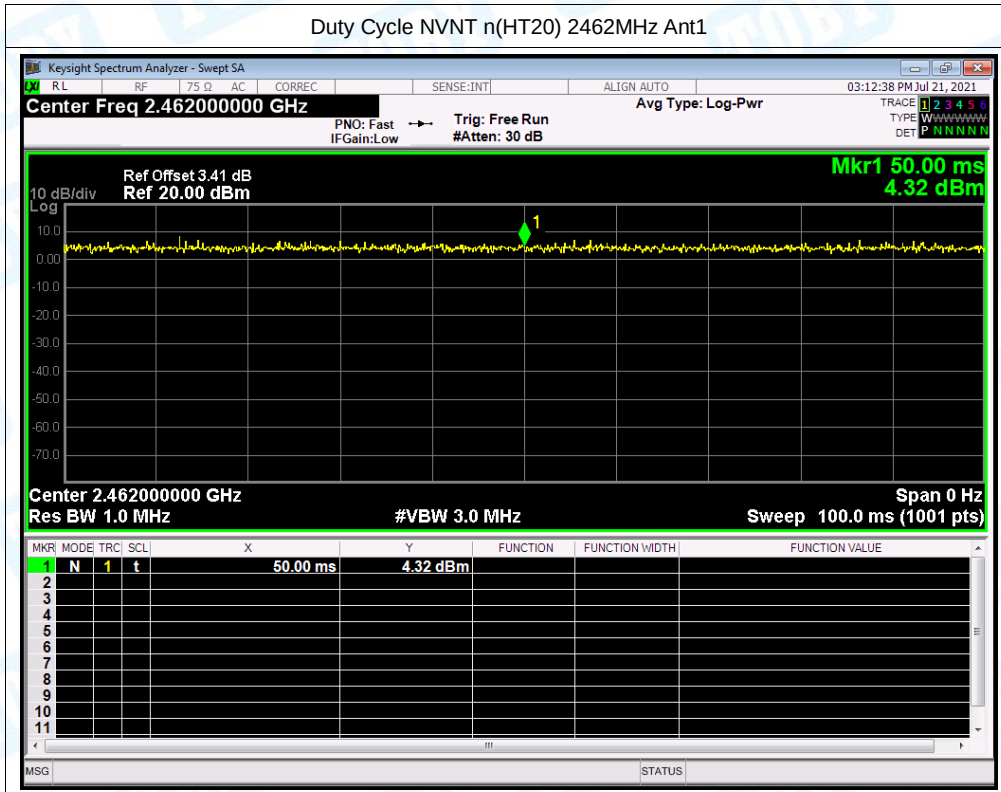


Duty Cycle NVNT n(HT20) 2412MHz Ant1



Duty Cycle NVNT n(HT20) 2437MHz Ant1





2.Maximum Conducted Output Power

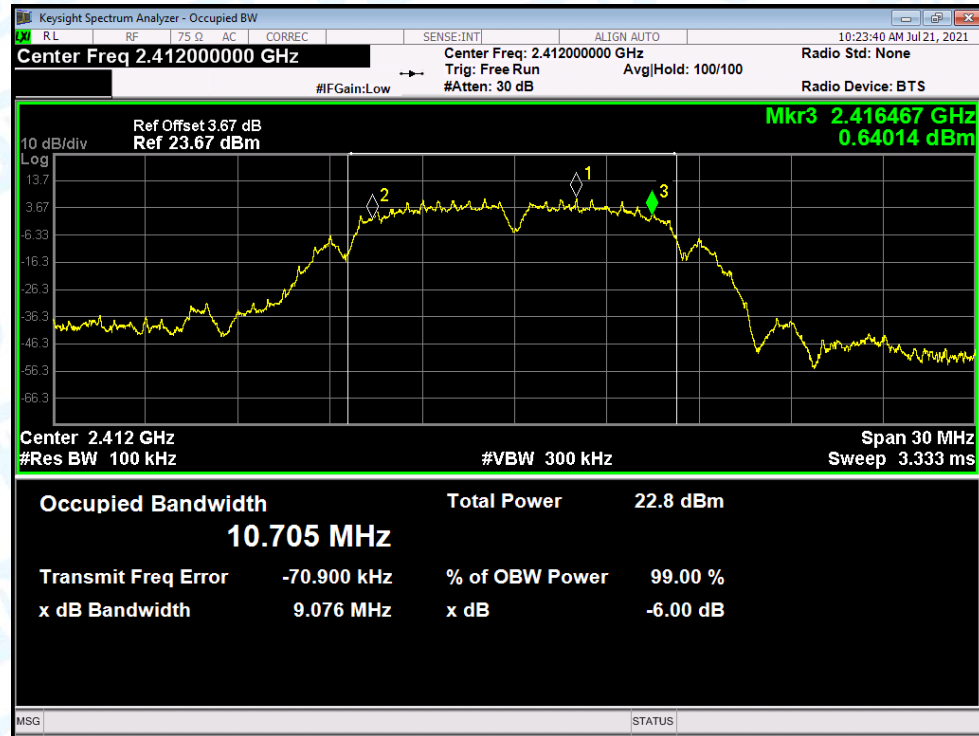
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	17.715	30	Pass
NVNT	b	2437	Ant1	16.675	30	Pass
NVNT	b	2462	Ant1	15.169	30	Pass
NVNT	g	2412	Ant1	16.791	30	Pass
NVNT	g	2437	Ant1	15.533	30	Pass
NVNT	g	2462	Ant1	14.068	30	Pass
NVNT	n(HT20)	2412	Ant1	16.65	30	Pass
NVNT	n(HT20)	2437	Ant1	16.074	30	Pass
NVNT	n(HT20)	2462	Ant1	15.062	30	Pass

3.-6dB Bandwidth

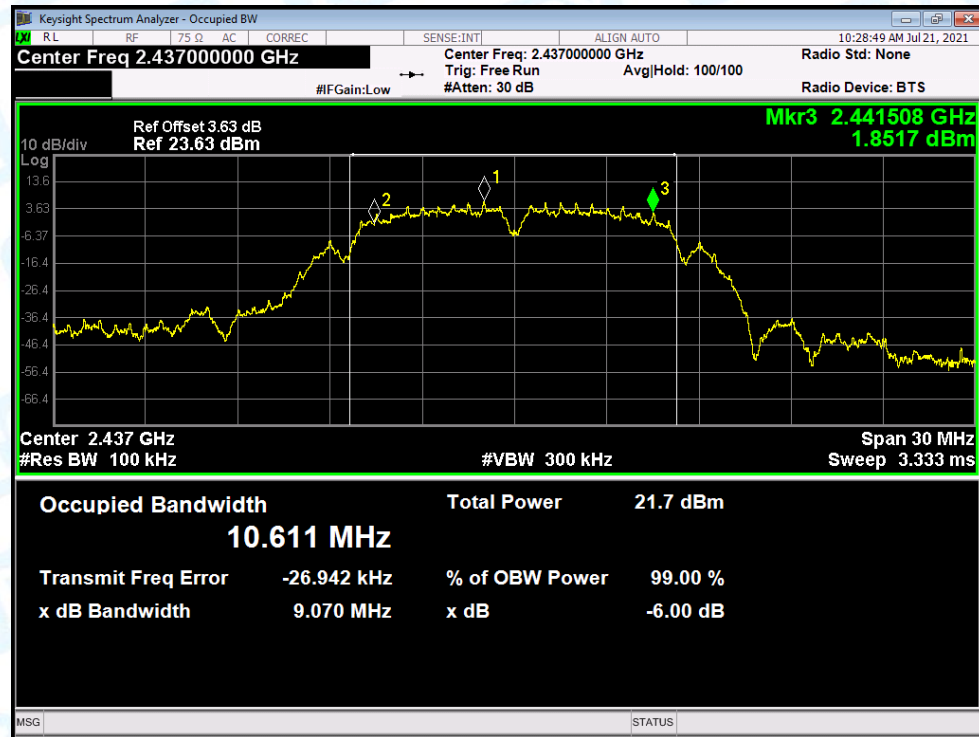
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.076	0.5	Pass
NVNT	b	2437	Ant1	9.07	0.5	Pass
NVNT	b	2462	Ant1	9.096	0.5	Pass
NVNT	g	2412	Ant1	16.36	0.5	Pass
NVNT	g	2437	Ant1	16.473	0.5	Pass
NVNT	g	2462	Ant1	16.441	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.625	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.582	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.621	0.5	Pass

Test Graphs

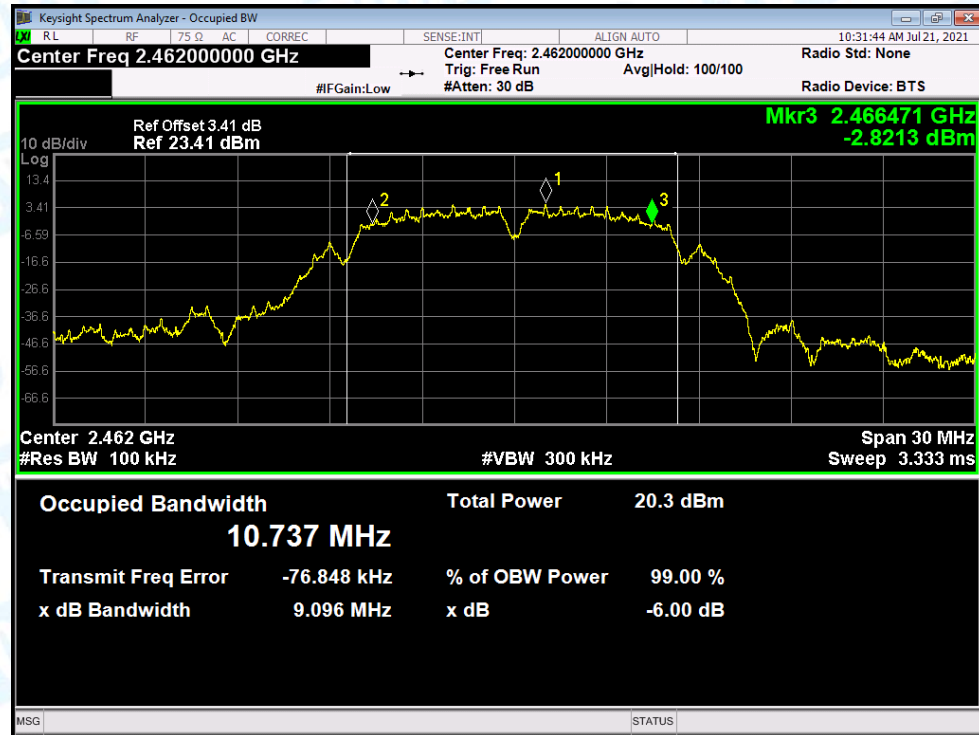
-6dB Bandwidth NVNT b 2412MHz Ant1



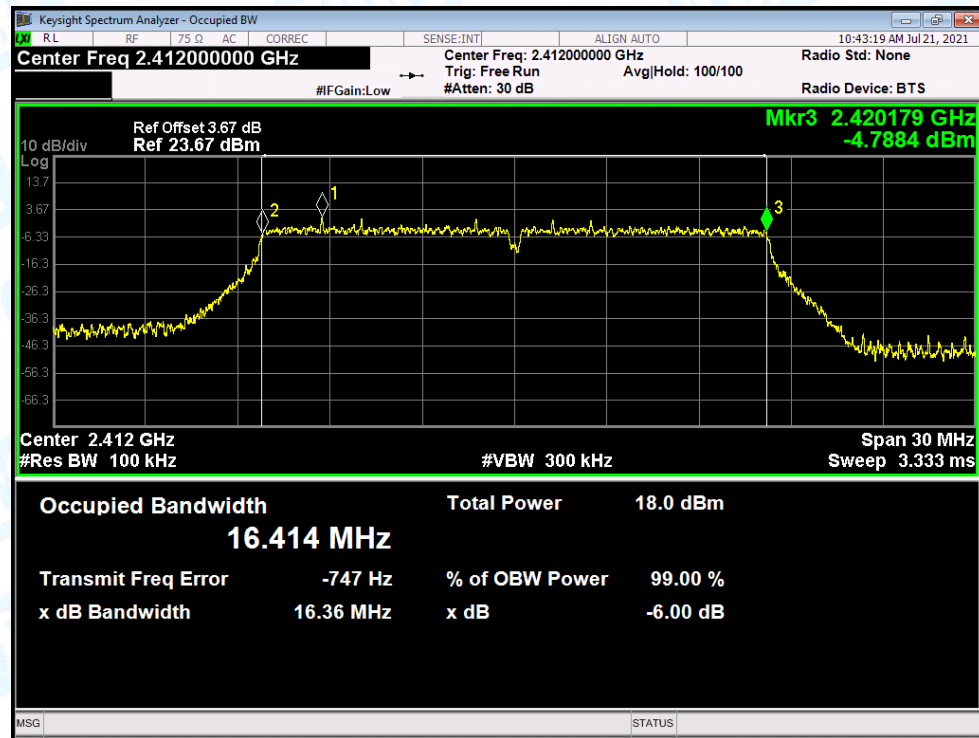
-6dB Bandwidth NVNT b 2437MHz Ant1



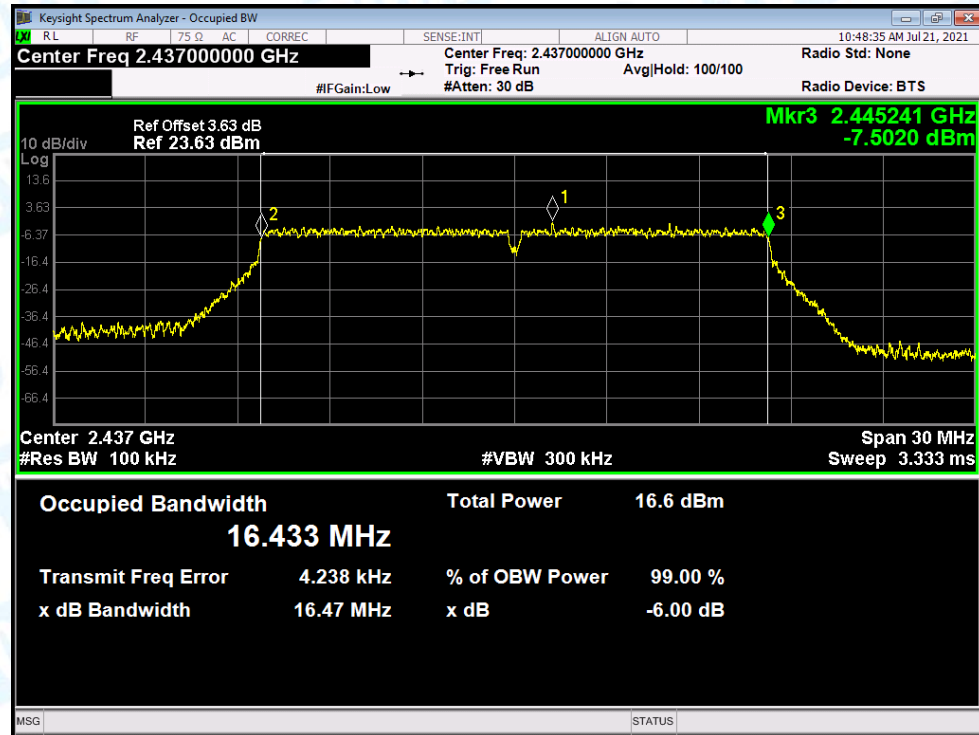
-6dB Bandwidth NVNT b 2462MHz Ant1



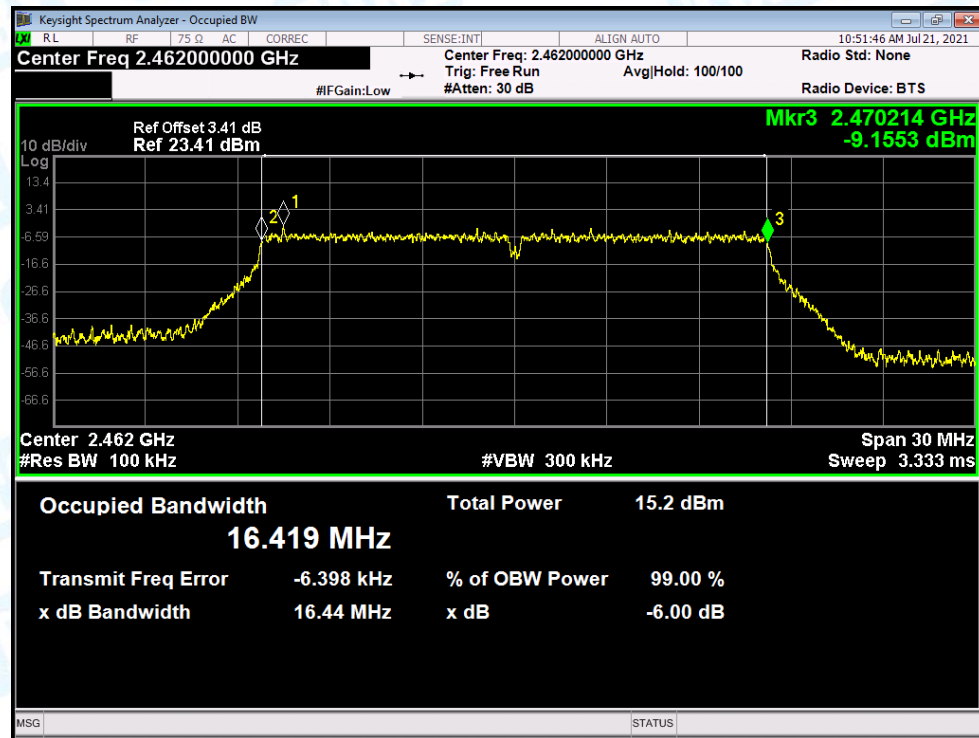
-6dB Bandwidth NVNT g 2412MHz Ant1



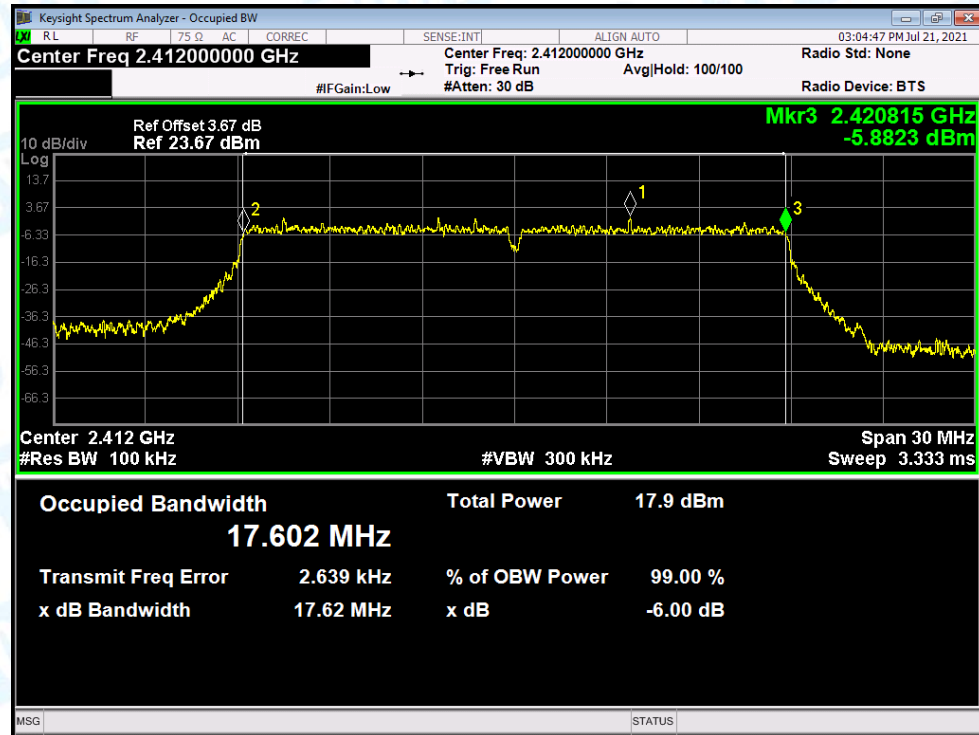
-6dB Bandwidth NVNT g 2437MHz Ant1



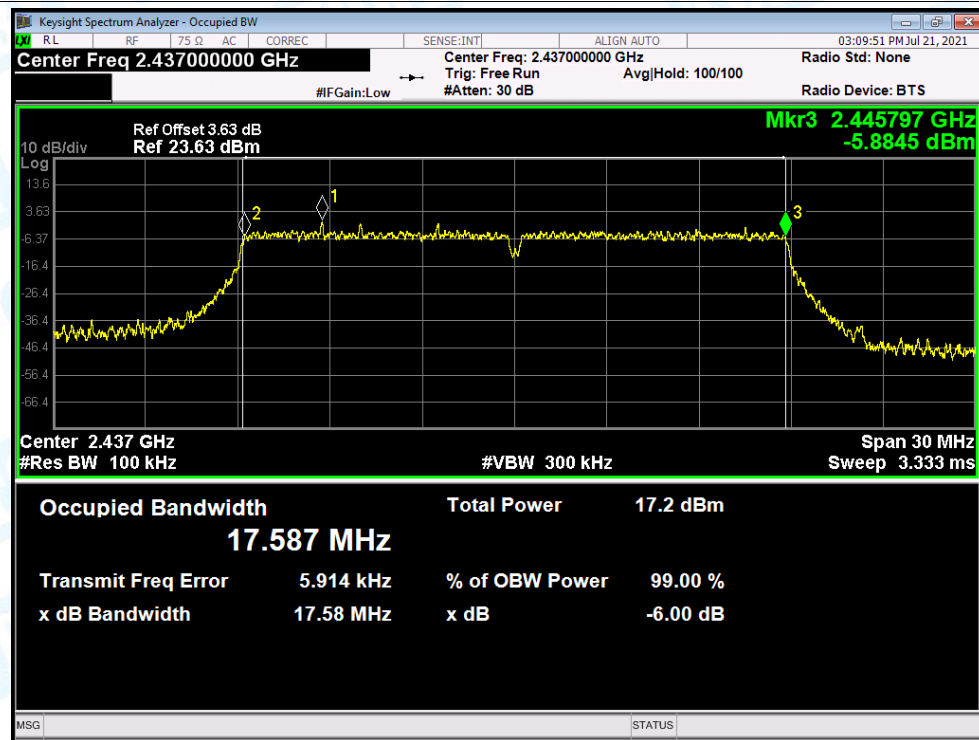
-6dB Bandwidth NVNT g 2462MHz Ant1

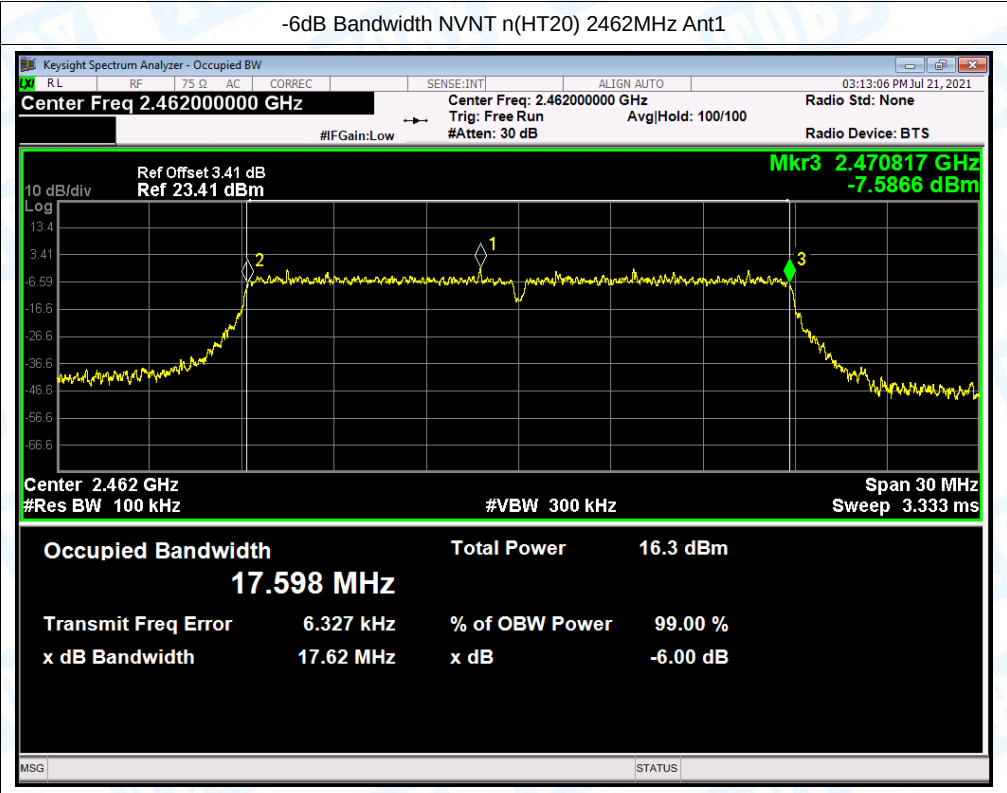


-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



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



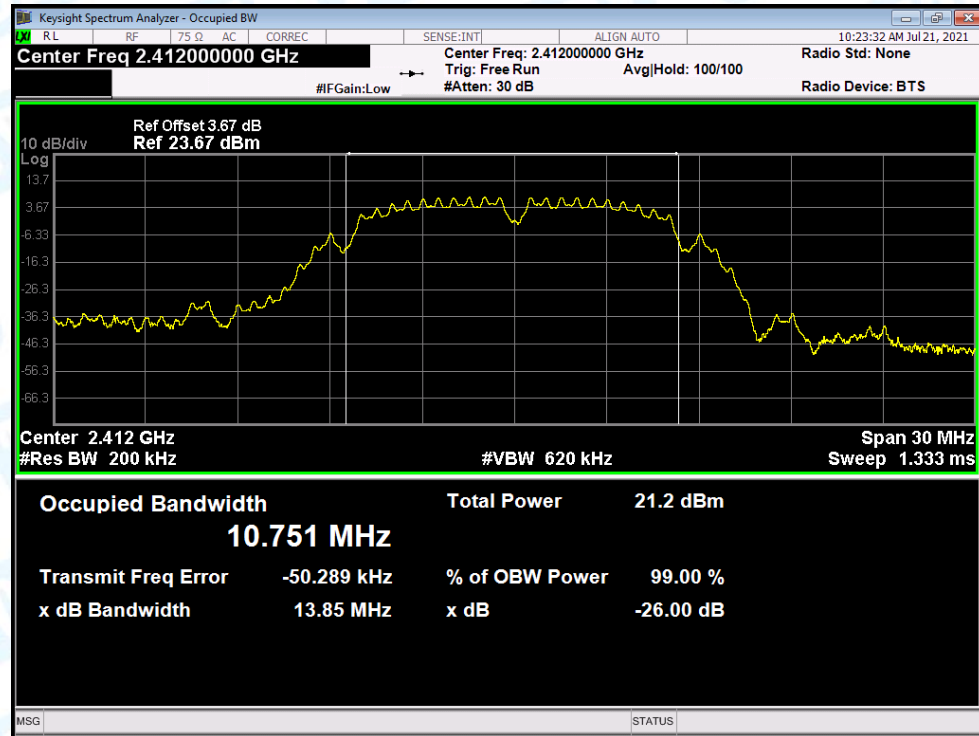


4.Occupied Channel Bandwidth

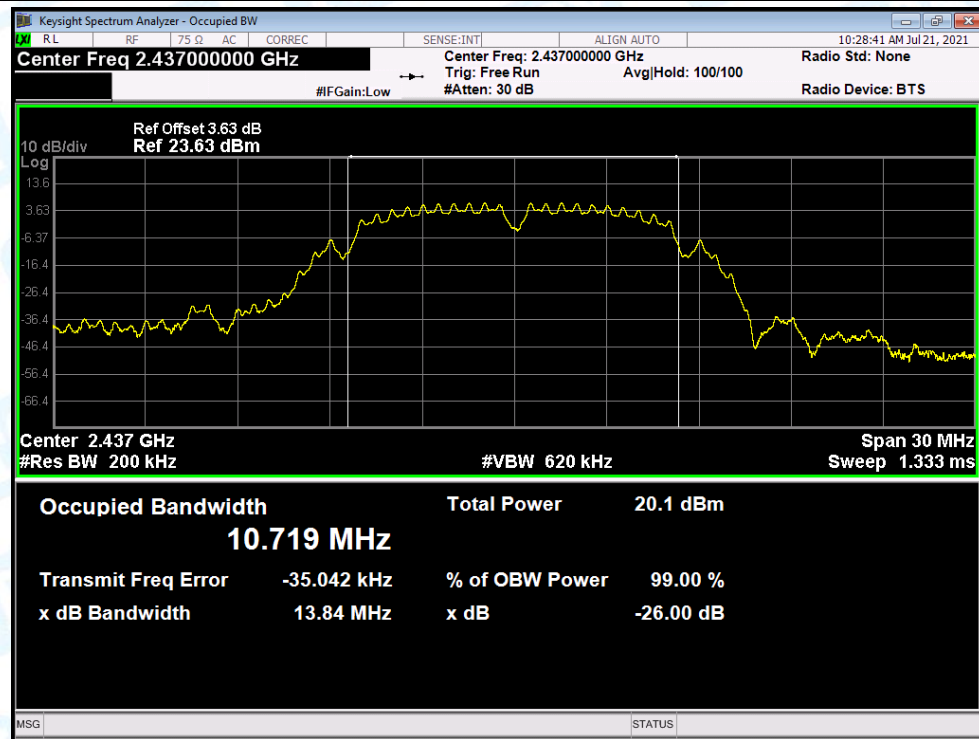
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	10.75052261
NVNT	b	2437	Ant1	10.71880739
NVNT	b	2462	Ant1	10.74213412
NVNT	g	2412	Ant1	16.51326515
NVNT	g	2437	Ant1	16.50271051
NVNT	g	2462	Ant1	16.49702876
NVNT	n(HT20)	2412	Ant1	17.59885144
NVNT	n(HT20)	2437	Ant1	17.62058932
NVNT	n(HT20)	2462	Ant1	17.61634258

Test Graphs

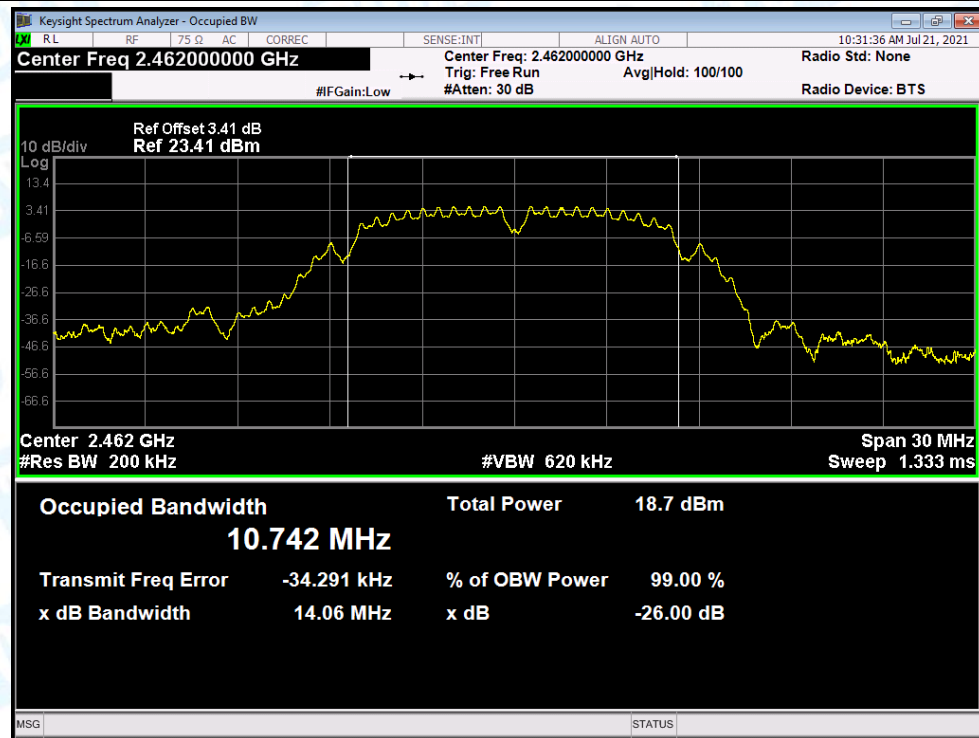
OBW NVNT b 2412MHz Ant1



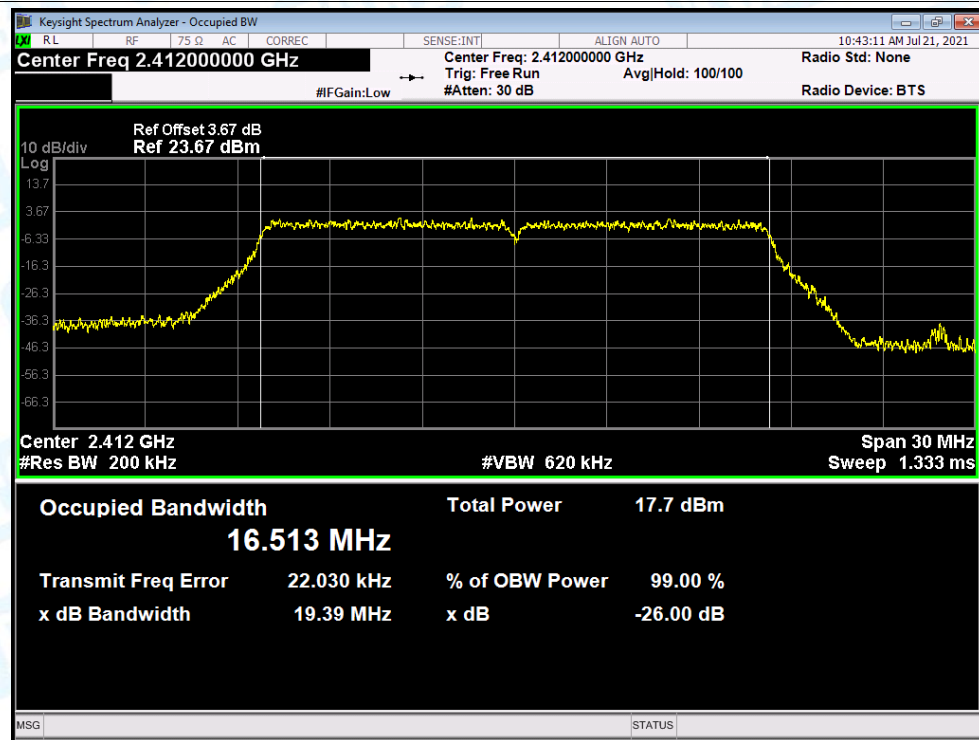
OBW NVNT b 2437MHz Ant1



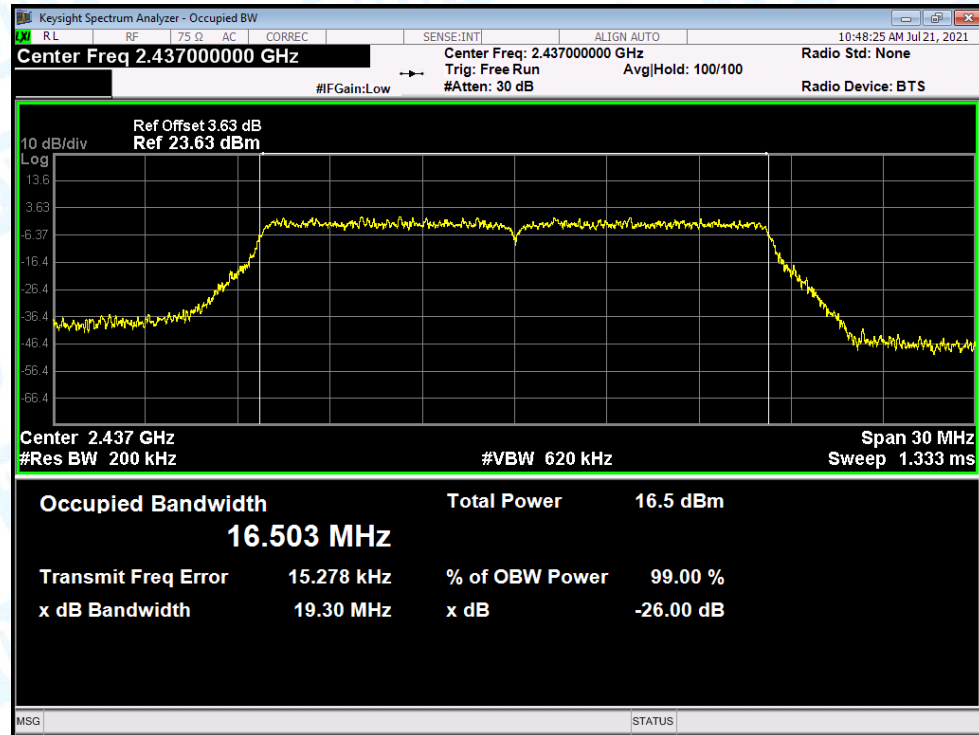
OBW NVNT b 2462MHz Ant1



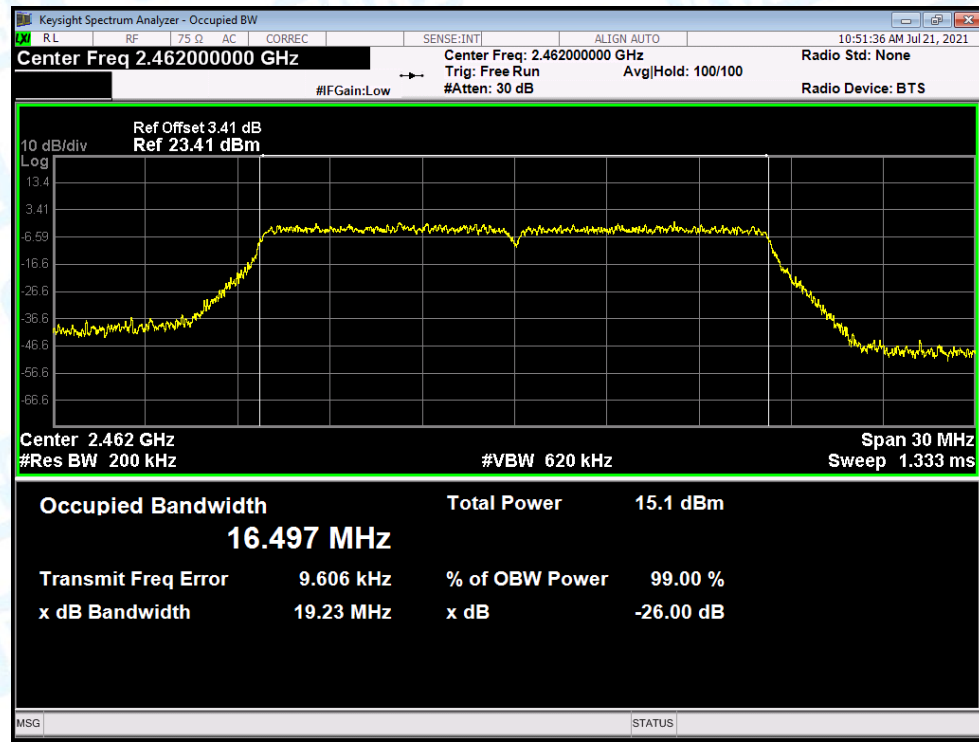
OBW NVNT g 2412MHz Ant1



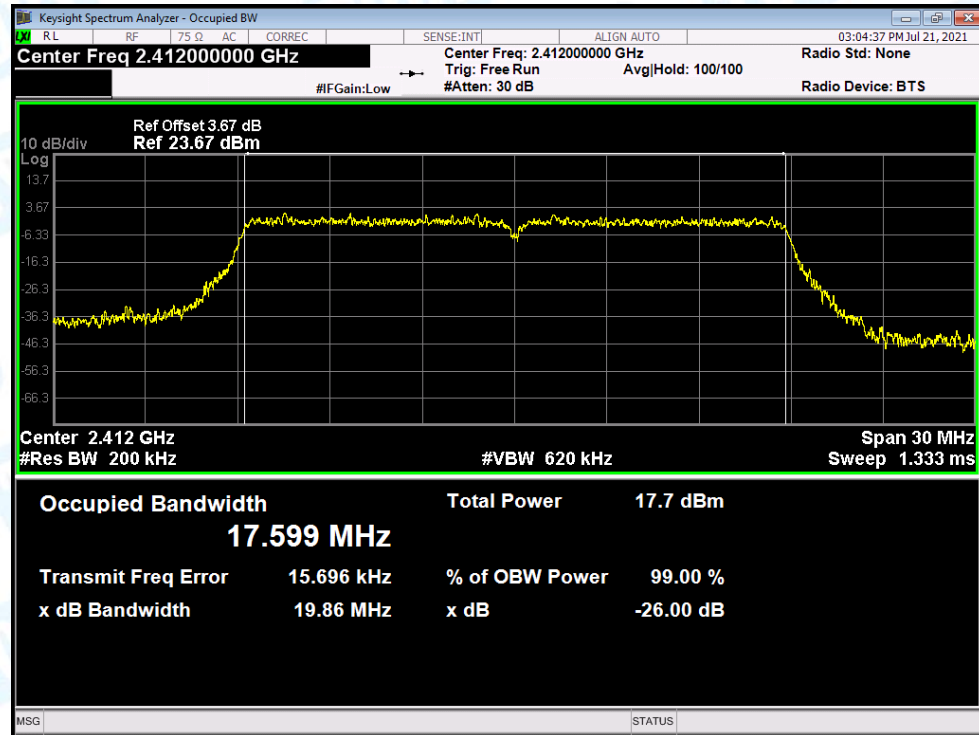
OBW NVNT g 2437MHz Ant1



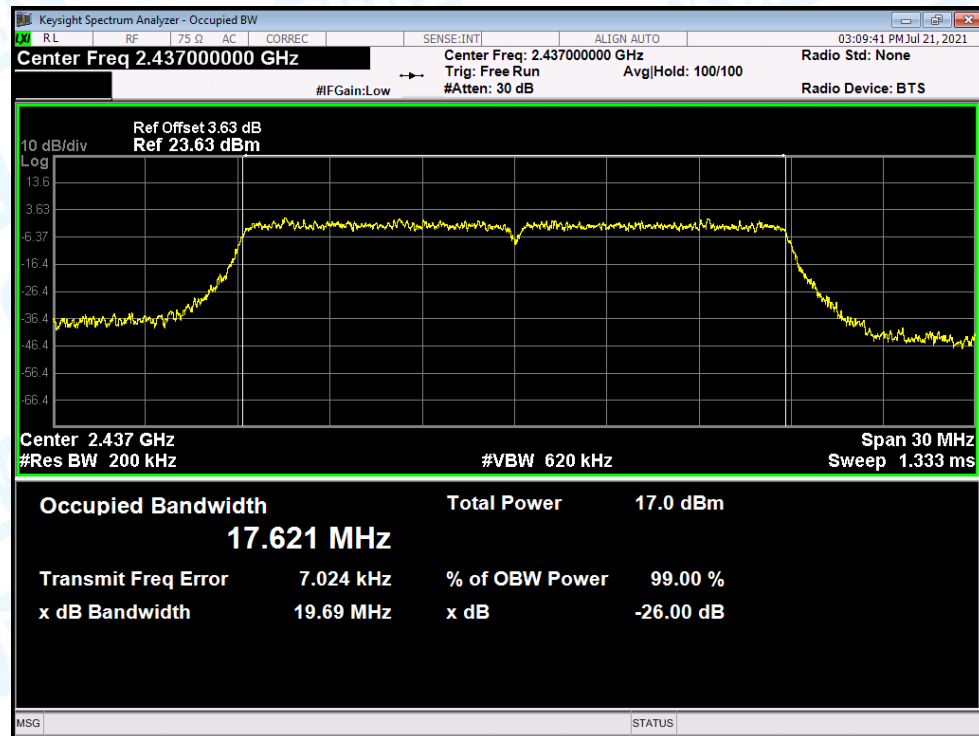
OBW NVNT g 2462MHz Ant1

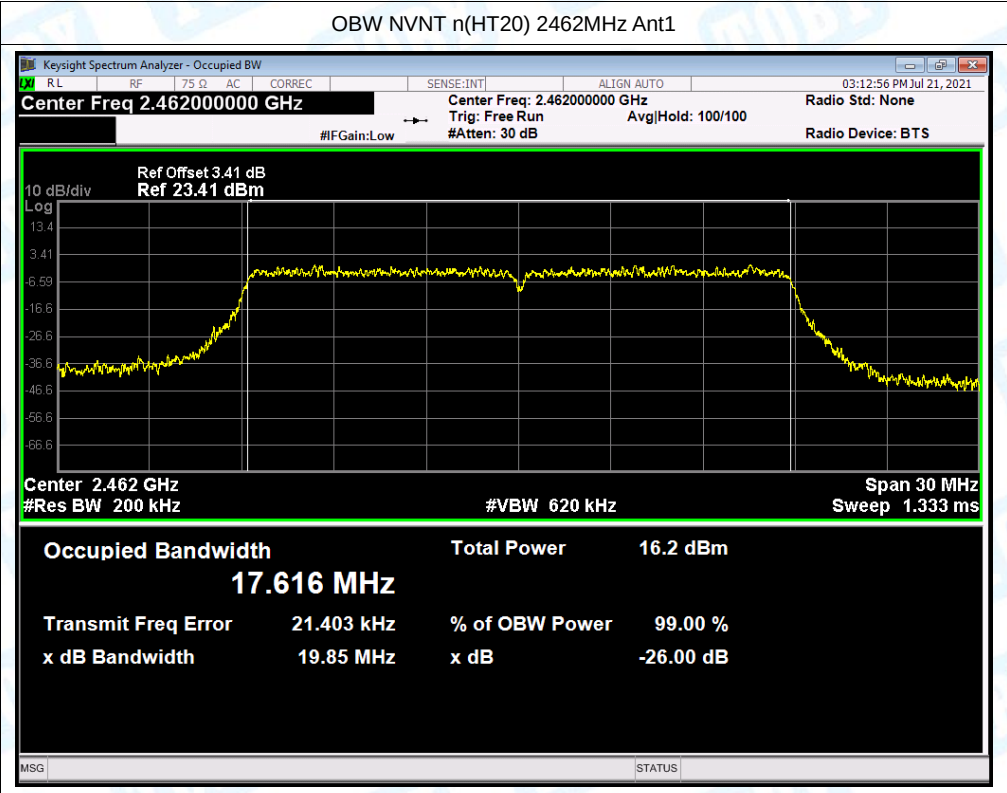


OBW NVNT n(HT20) 2412MHz Ant1



OBW NVNT n(HT20) 2437MHz Ant1



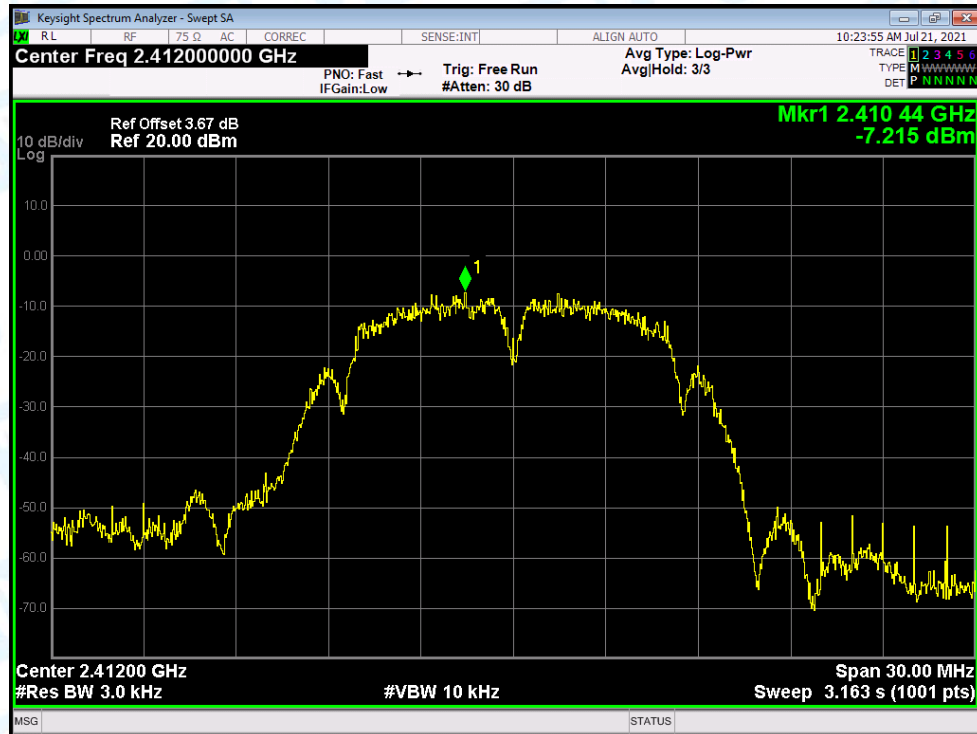


5.Maximum Power Spectral Density Level

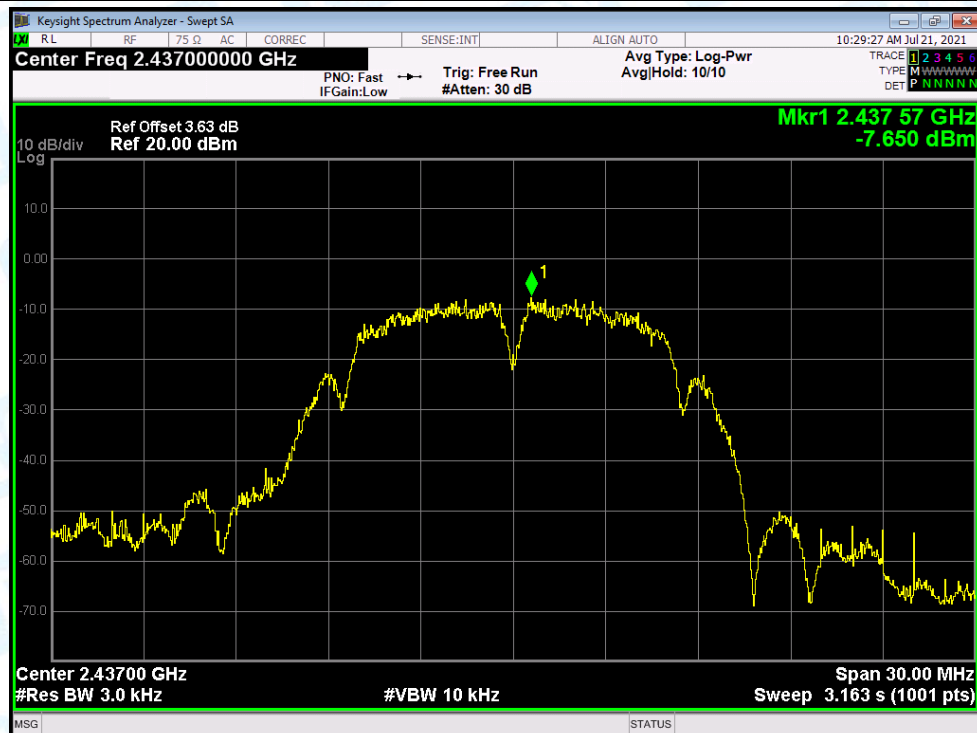
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-7.215	8	Pass
NVNT	b	2437	Ant1	-7.65	8	Pass
NVNT	b	2462	Ant1	-9.24	8	Pass
NVNT	g	2412	Ant1	-12.765	8	Pass
NVNT	g	2437	Ant1	-13.482	8	Pass
NVNT	g	2462	Ant1	-15.279	8	Pass
NVNT	n(HT20)	2412	Ant1	-12.492	8	Pass
NVNT	n(HT20)	2437	Ant1	-13.486	8	Pass
NVNT	n(HT20)	2462	Ant1	-13.896	8	Pass

Test Graphs

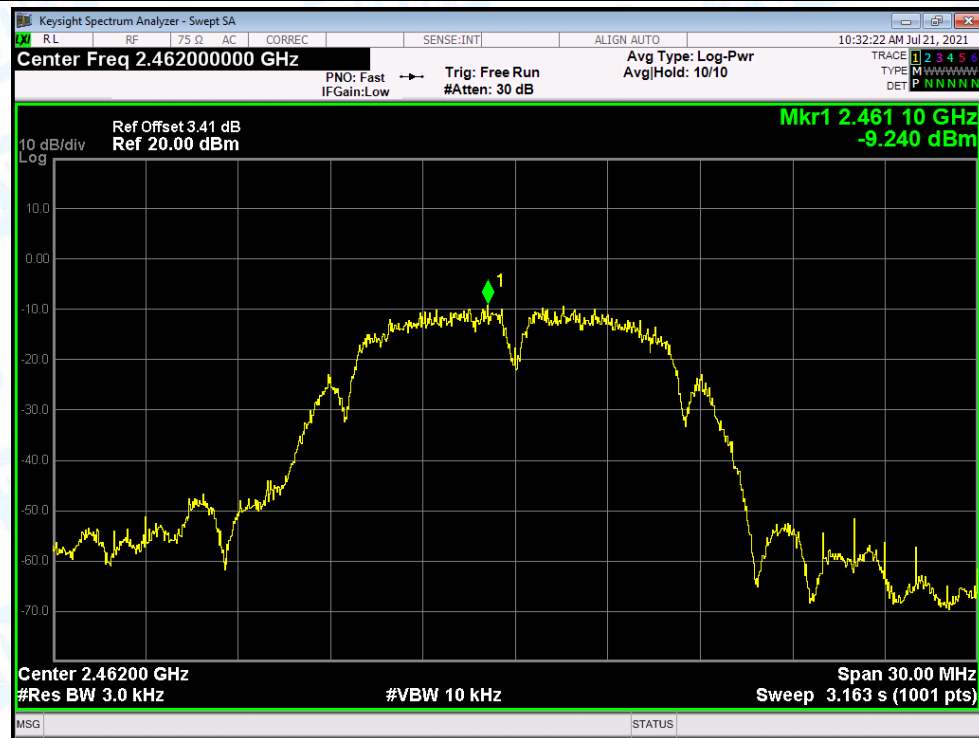
PSD NVNT b 2412MHz Ant1



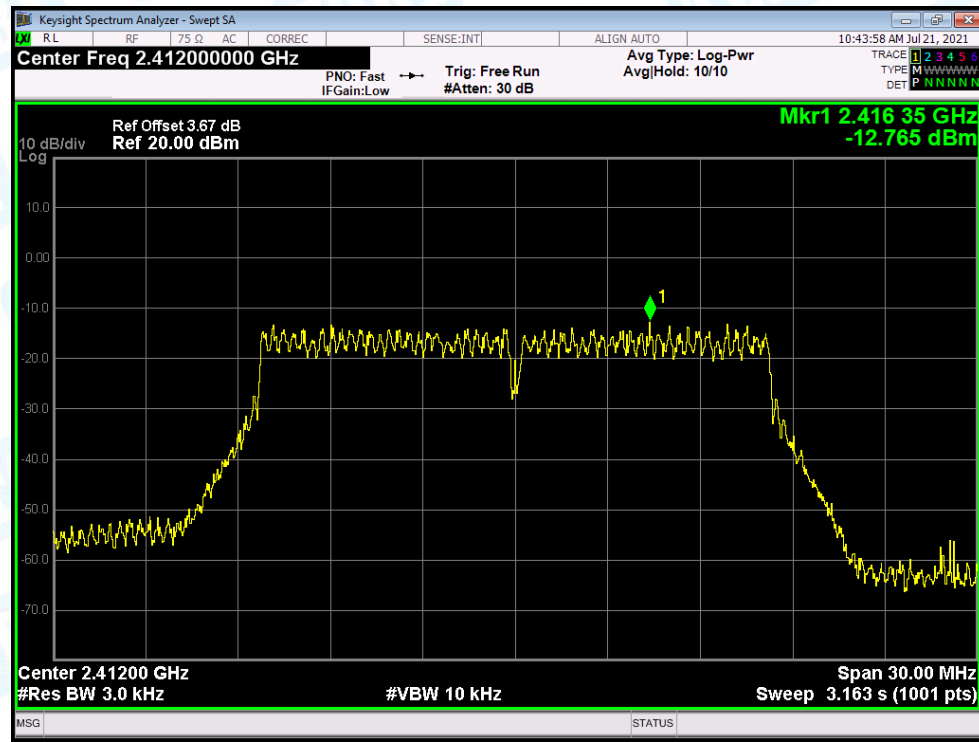
PSD NVNT b 2437MHz Ant1



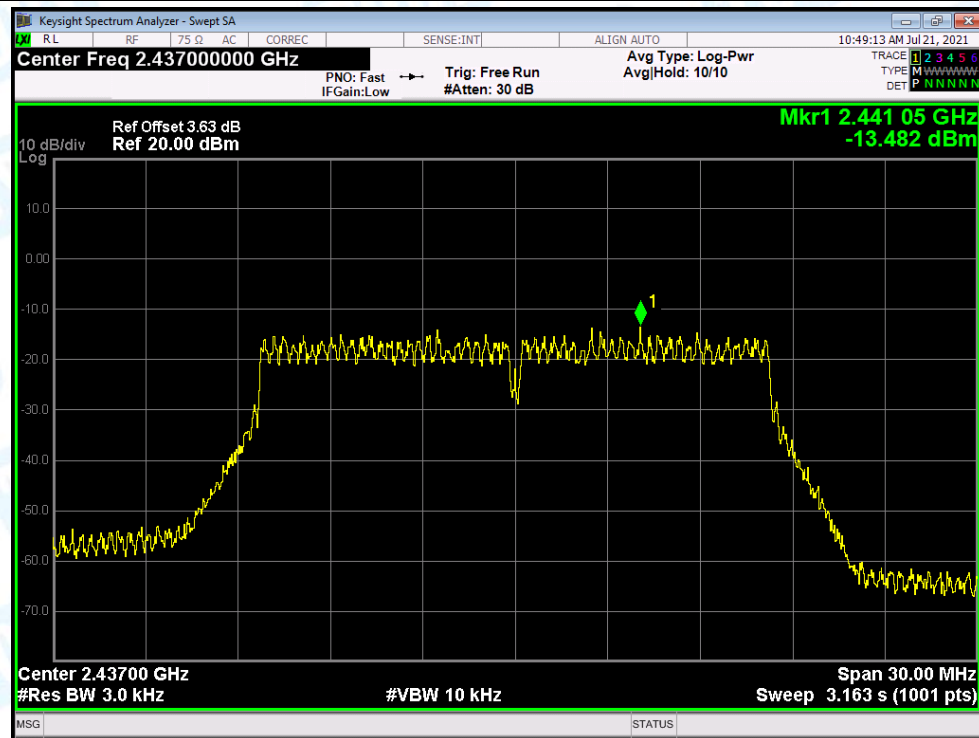
PSD NVNT b 2462MHz Ant1



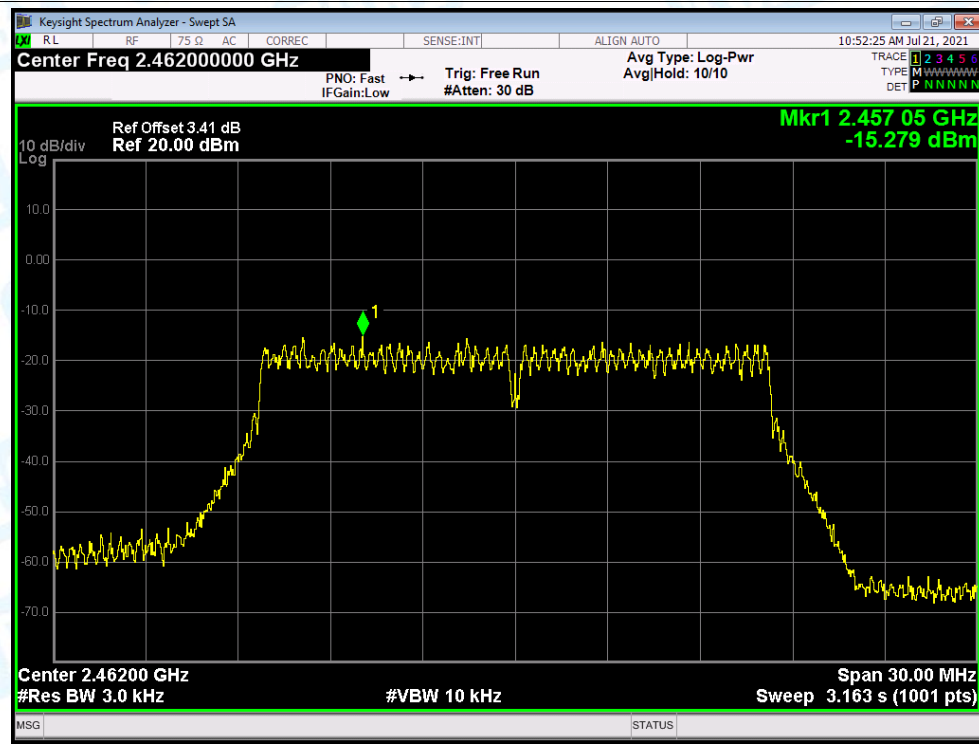
PSD NVNT g 2412MHz Ant1



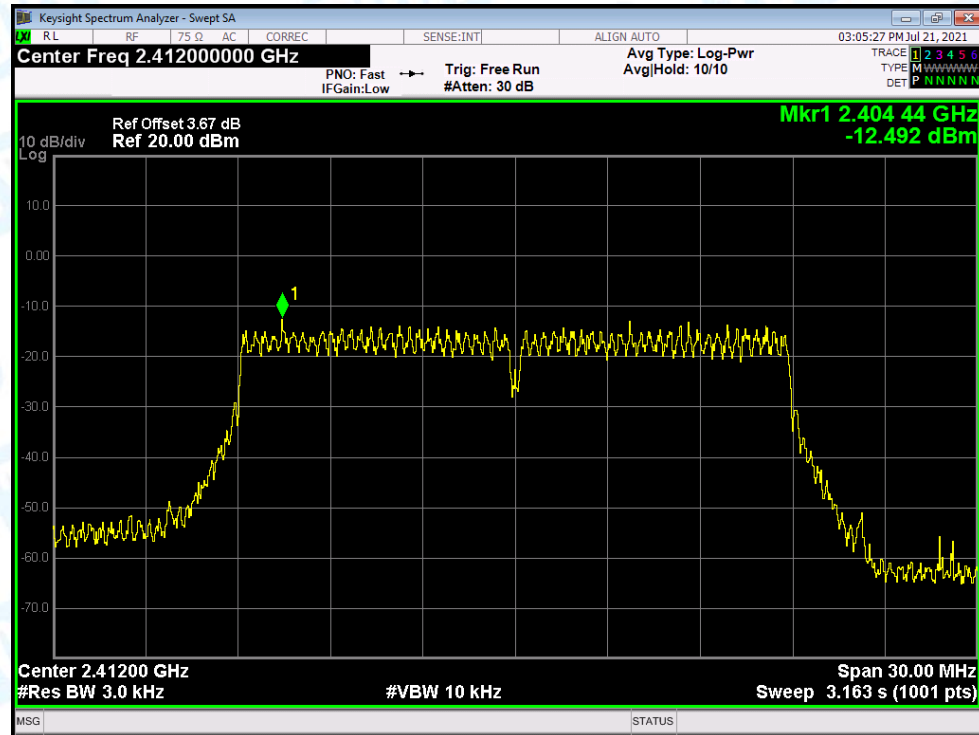
PSD NVNT g 2437MHz Ant1



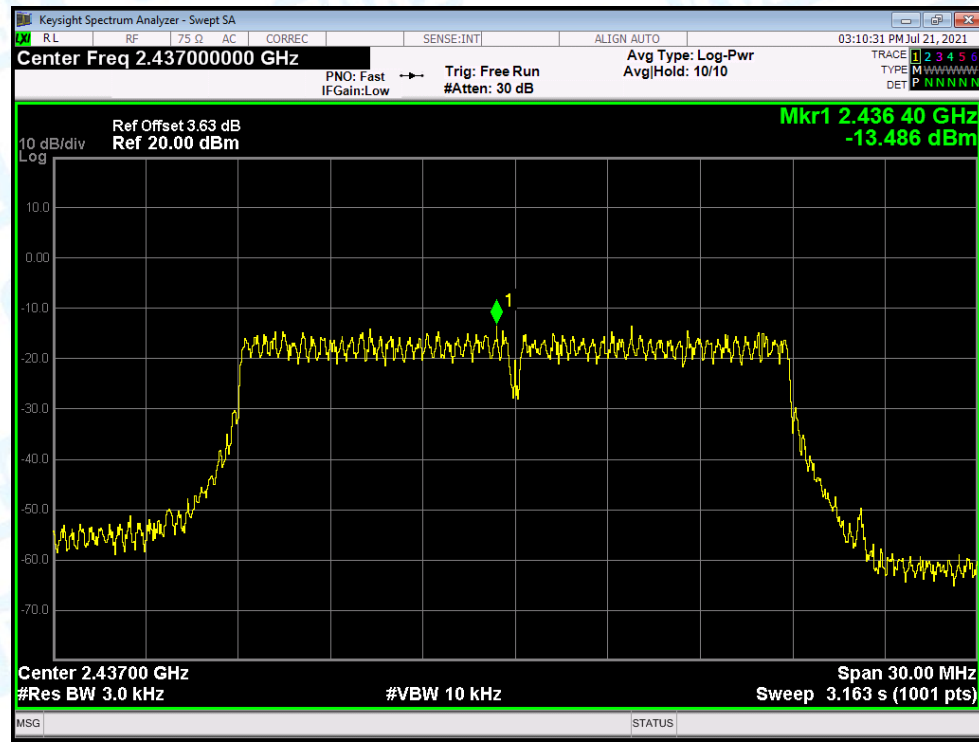
PSD NVNT g 2462MHz Ant1

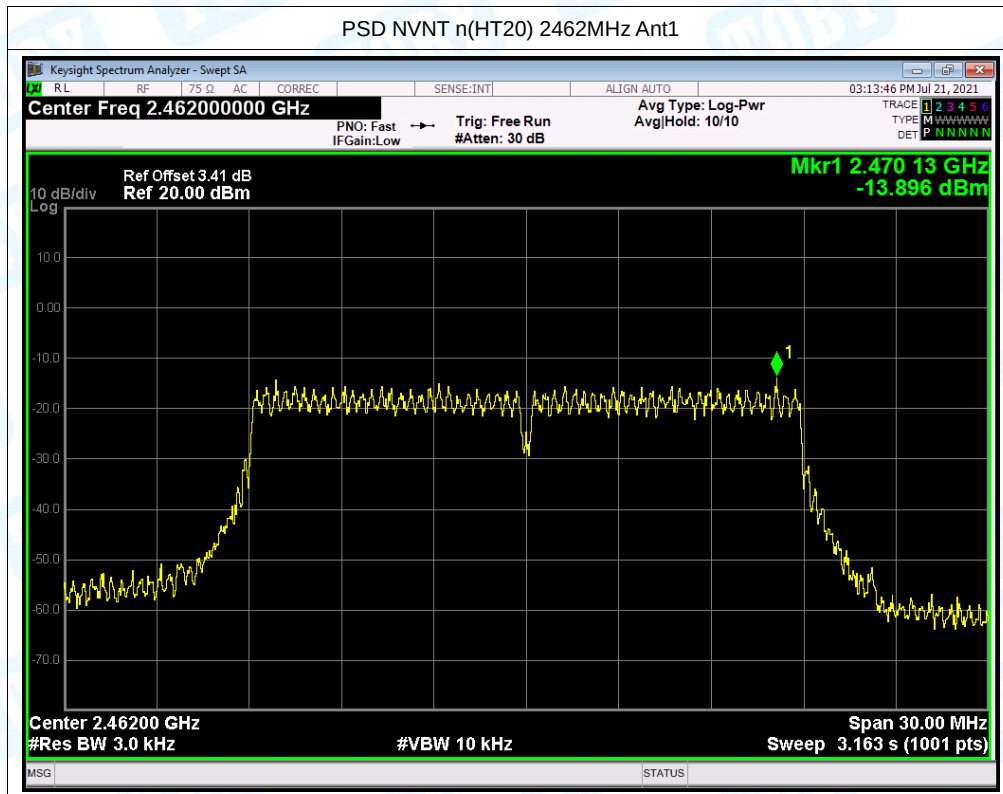


PSD NVNT n(HT20) 2412MHz Ant1



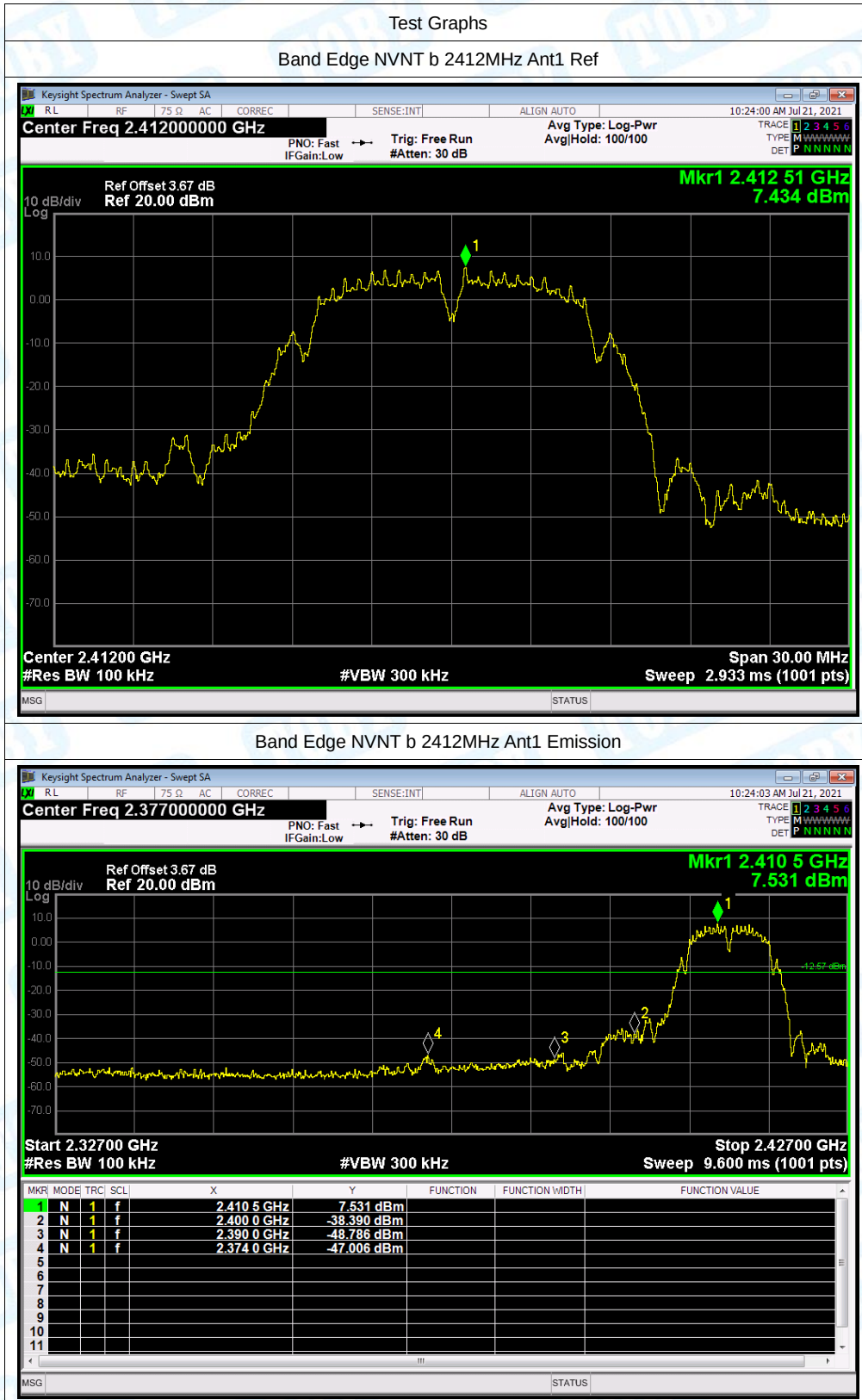
PSD NVNT n(HT20) 2437MHz Ant1





6.Band Edge

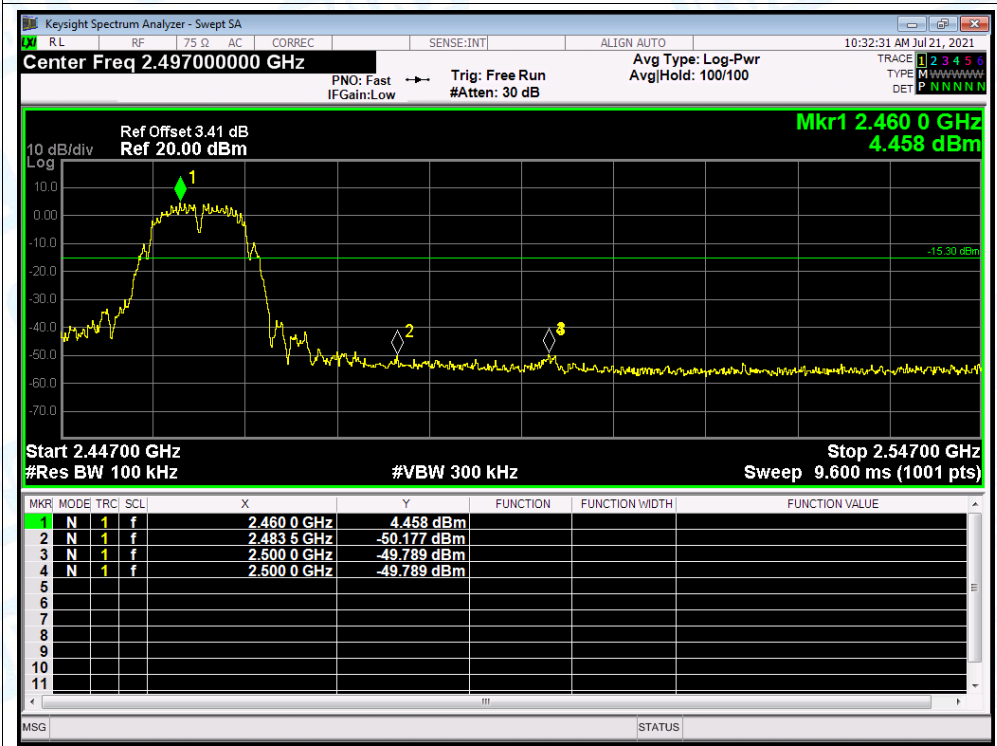
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-54.43	-20	Pass
NVNT	b	2462	Ant1	-54.48	-20	Pass
NVNT	g	2412	Ant1	-47.22	-20	Pass
NVNT	g	2462	Ant1	-50.04	-20	Pass
NVNT	n(HT20)	2412	Ant1	-45.18	-20	Pass
NVNT	n(HT20)	2462	Ant1	-47.09	-20	Pass



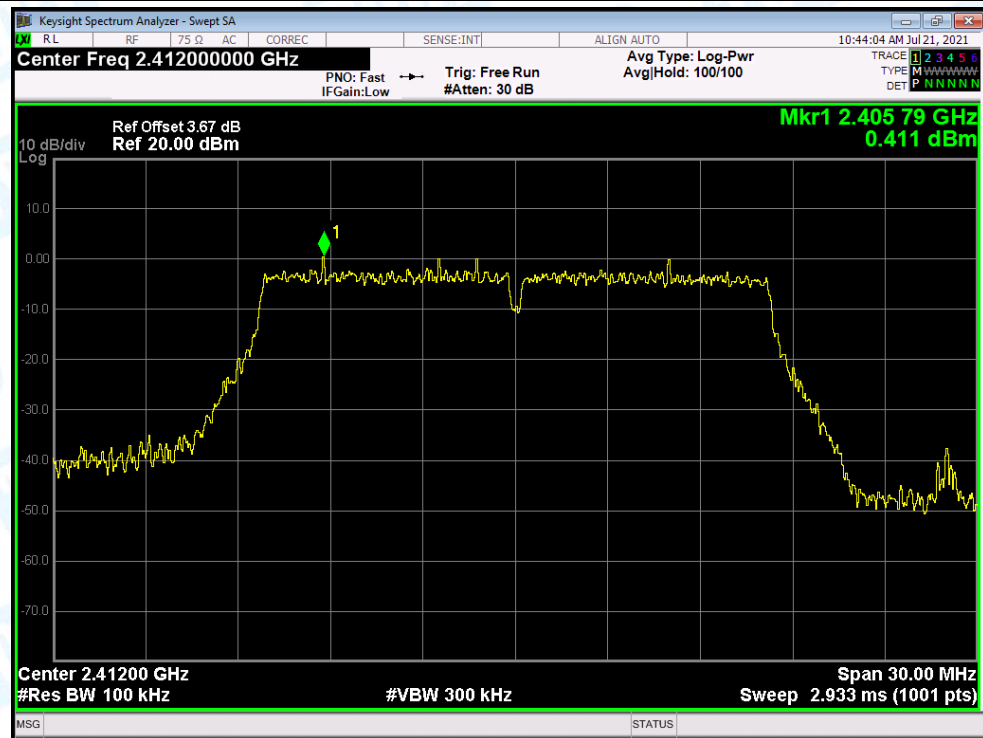
Band Edge NVNT b 2462MHz Ant1 Ref



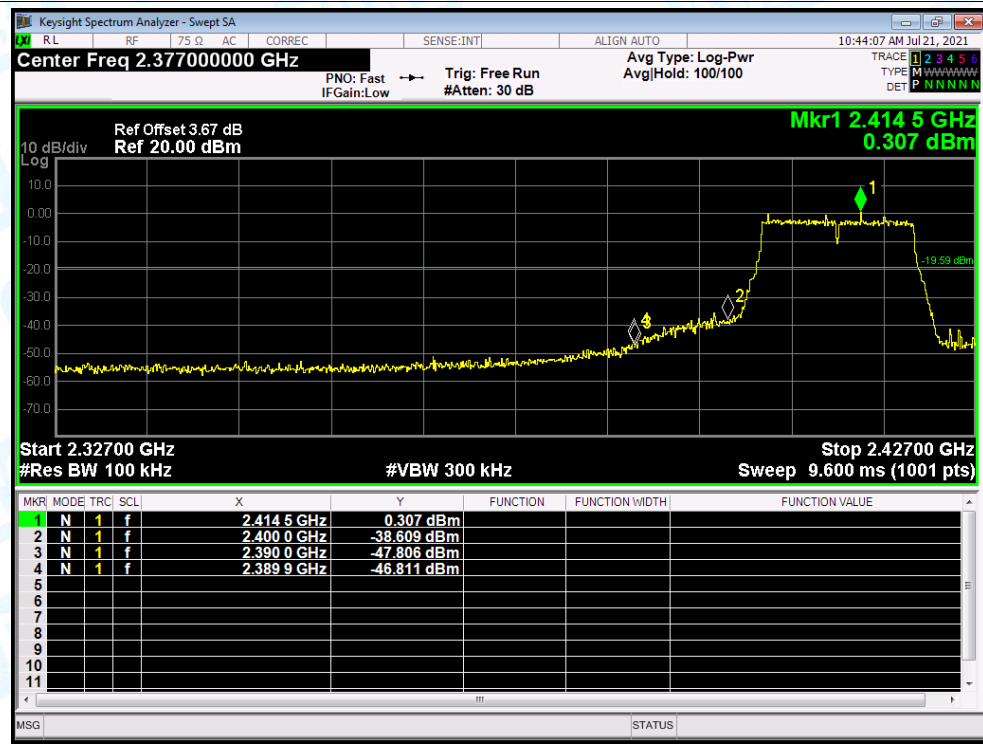
Band Edge NVNT b 2462MHz Ant1 Emission

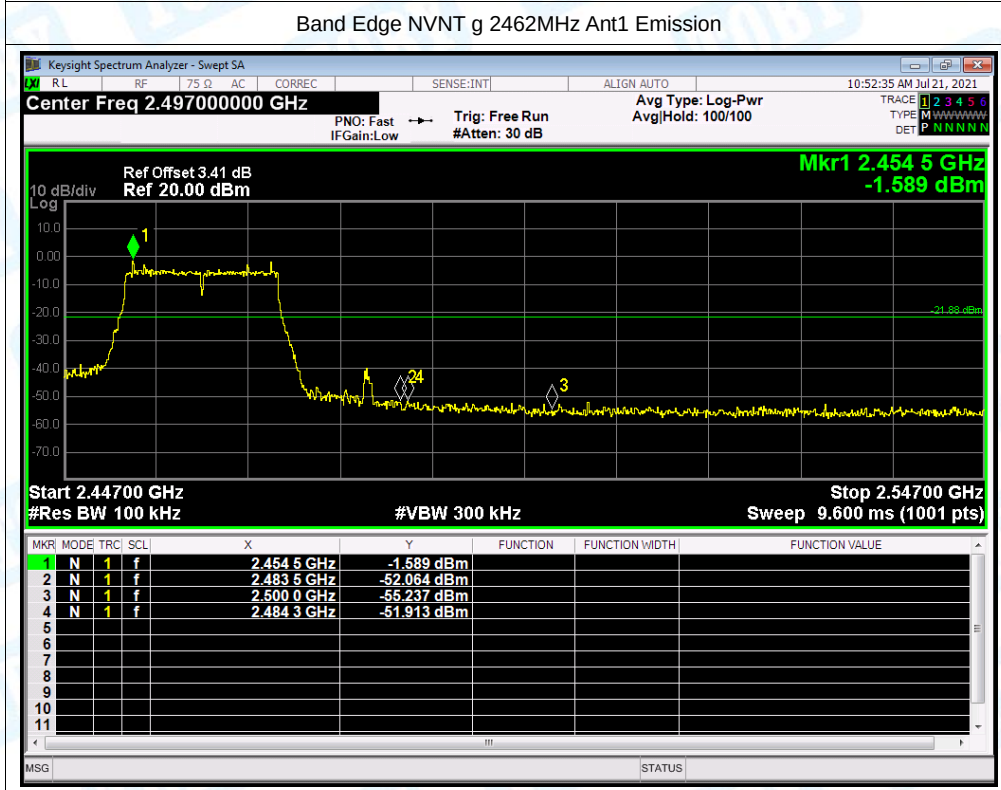
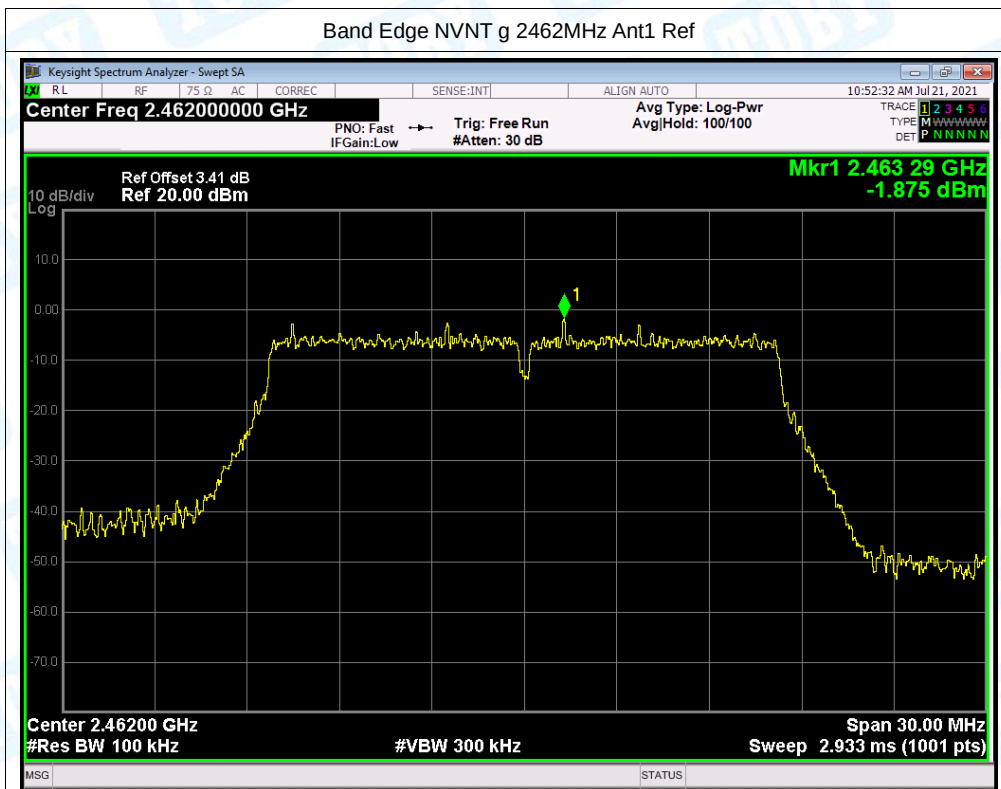


Band Edge NVNT g 2412MHz Ant1 Ref

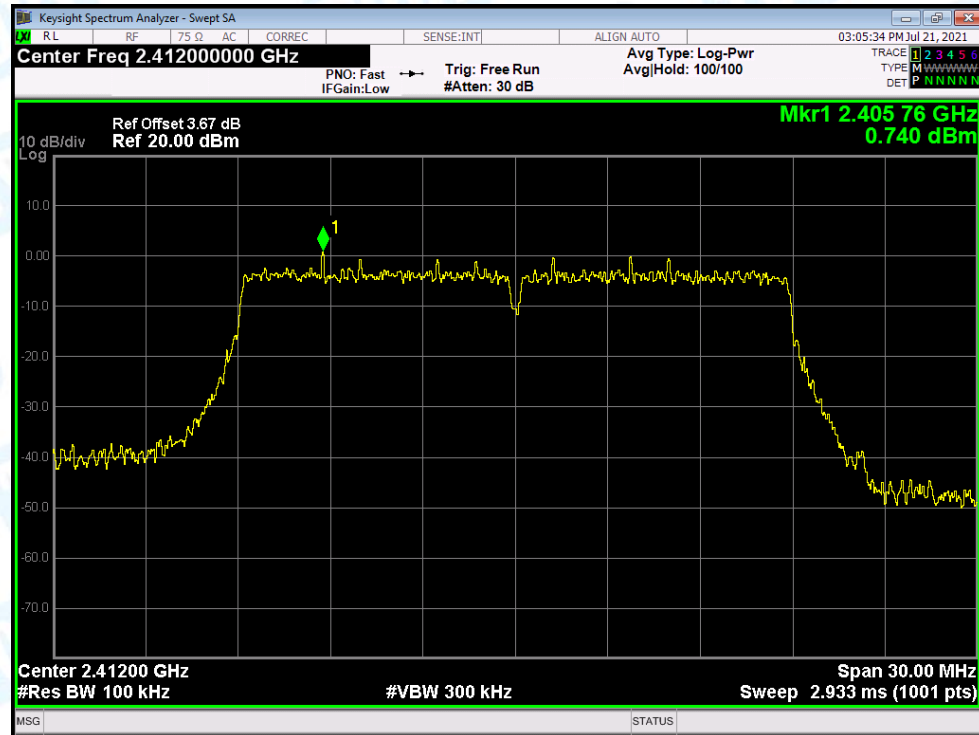


Band Edge NVNT g 2412MHz Ant1 Emission

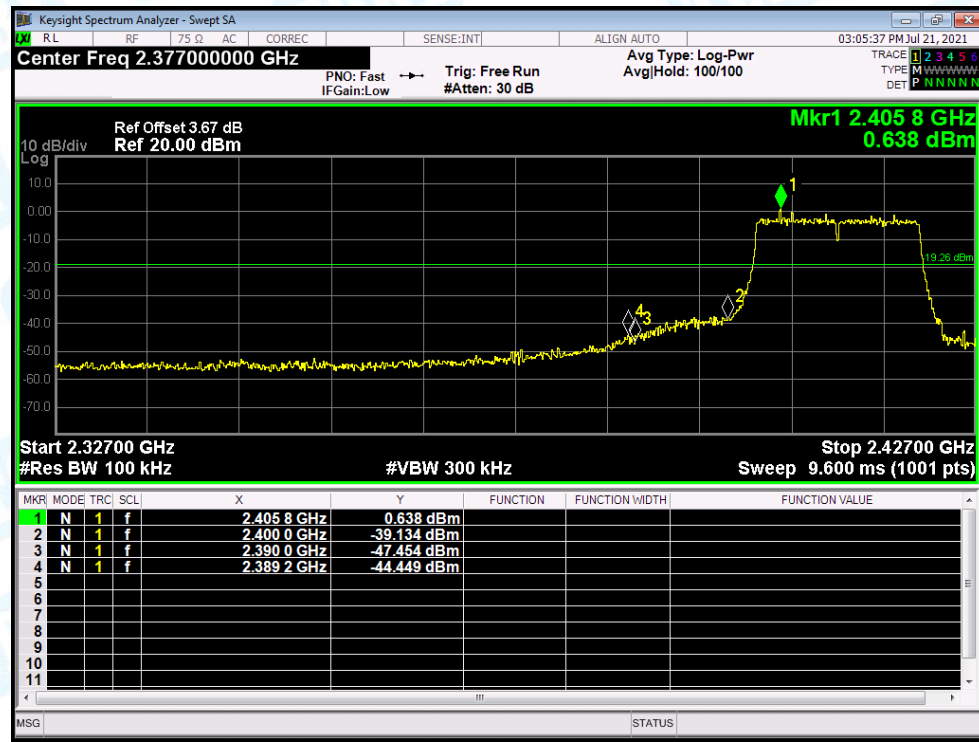




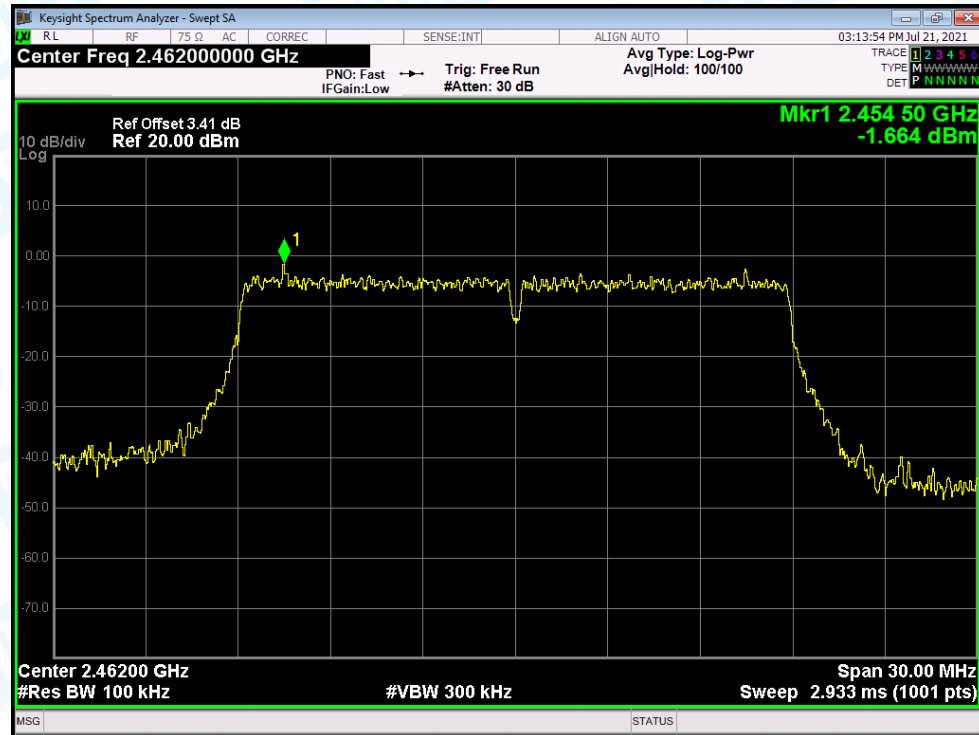
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



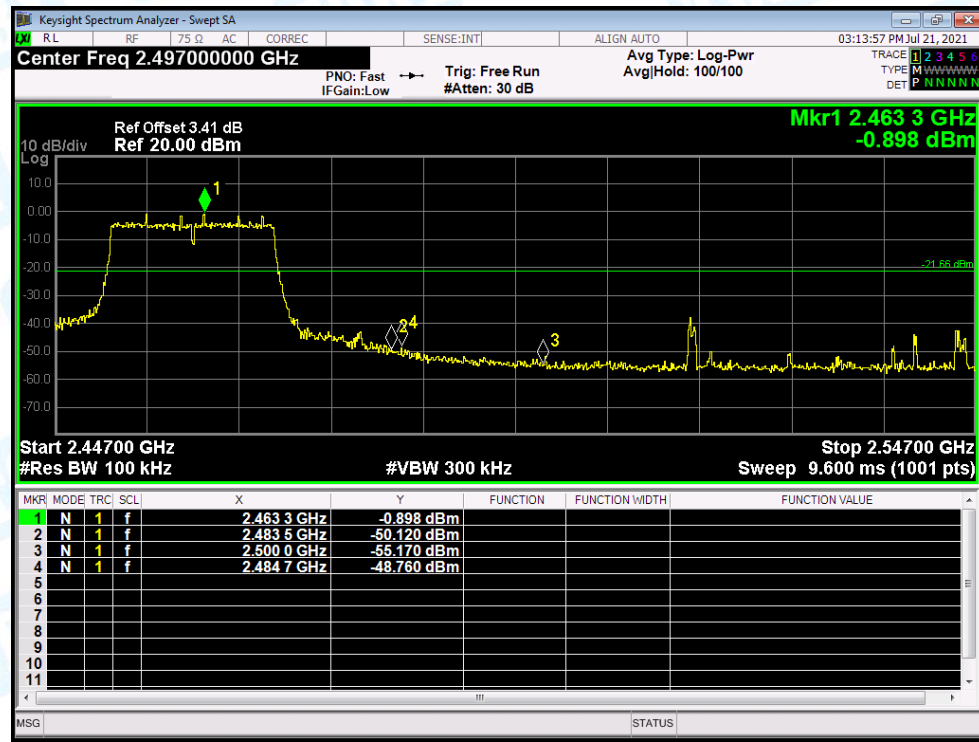
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



Band Edge NVNT n(HT20) 2462MHz Ant1 Emission

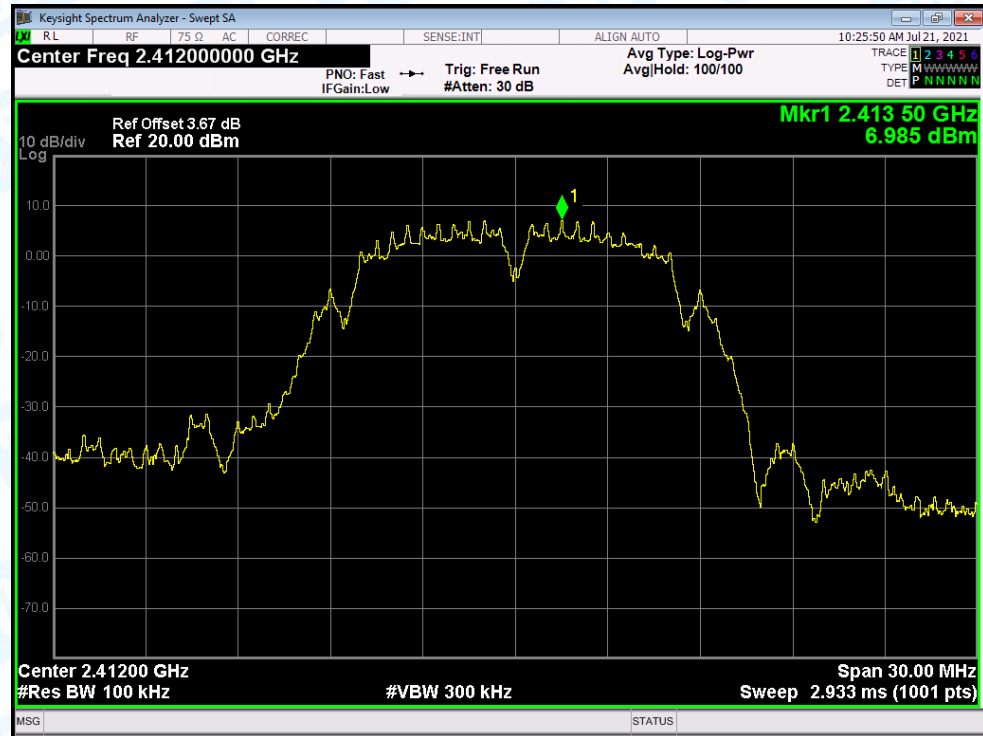


7. Conducted RF Spurious Emission

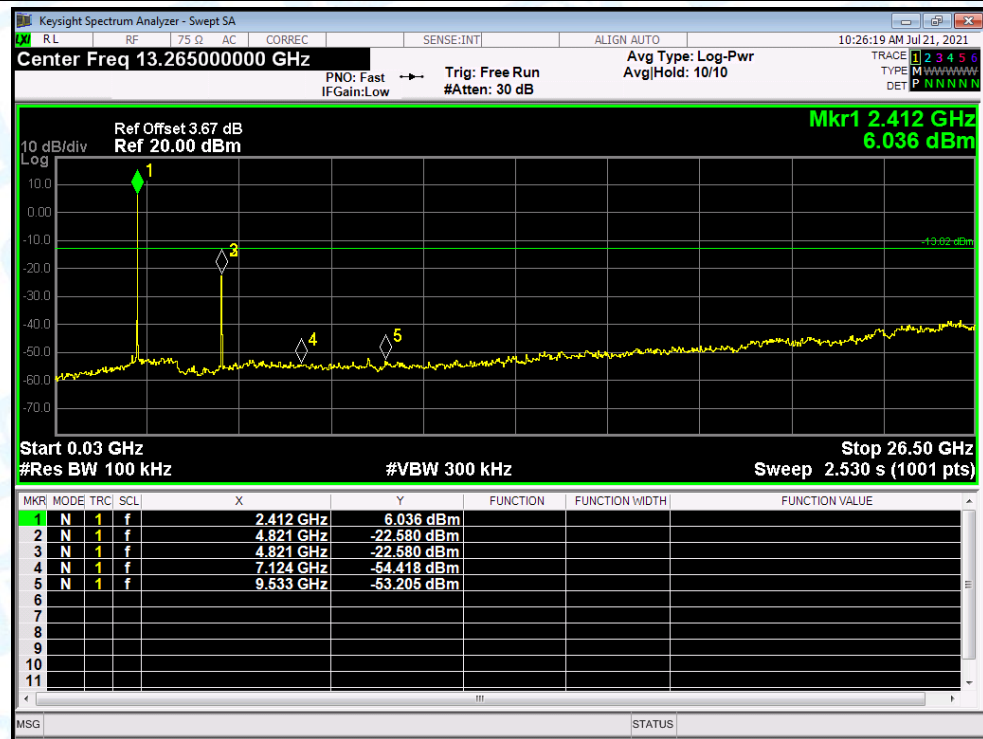
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-29.57	-20	Pass
NVNT	b	2437	Ant1	-29.27	-20	Pass
NVNT	b	2462	Ant1	-29.07	-20	Pass
NVNT	g	2412	Ant1	-39.66	-20	Pass
NVNT	g	2437	Ant1	-38.19	-20	Pass
NVNT	g	2462	Ant1	-37.07	-20	Pass
NVNT	n(HT20)	2412	Ant1	-39.61	-20	Pass
NVNT	n(HT20)	2437	Ant1	-39.23	-20	Pass
NVNT	n(HT20)	2462	Ant1	-37.45	-20	Pass

Test Graphs

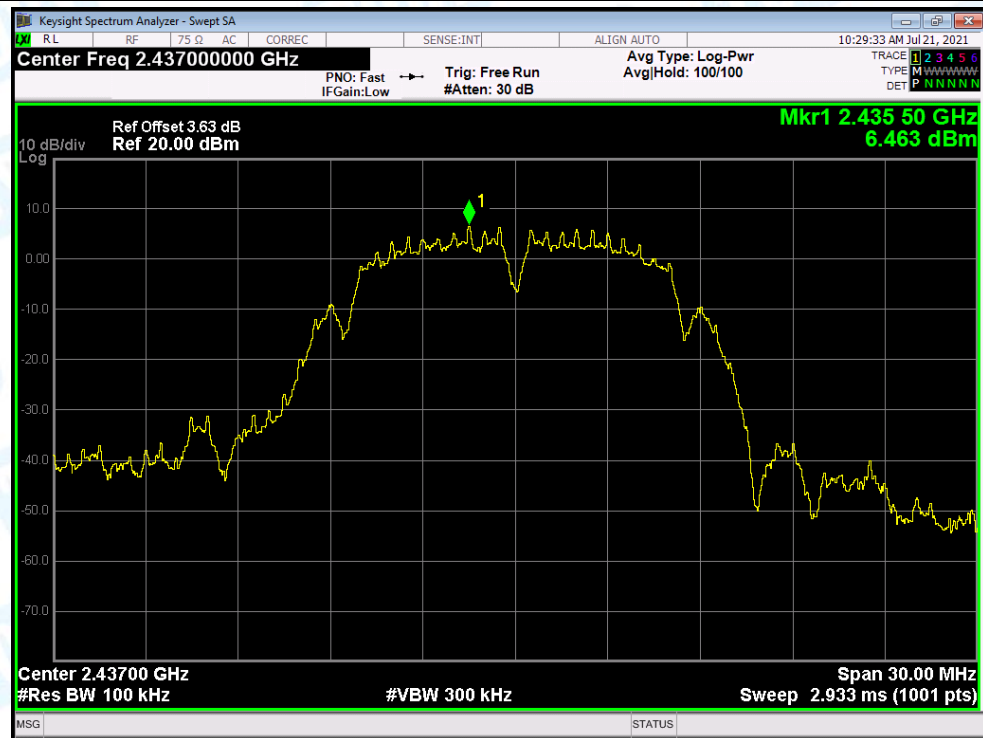
Tx. Spurious NVNT b 2412MHz Ant1 Ref



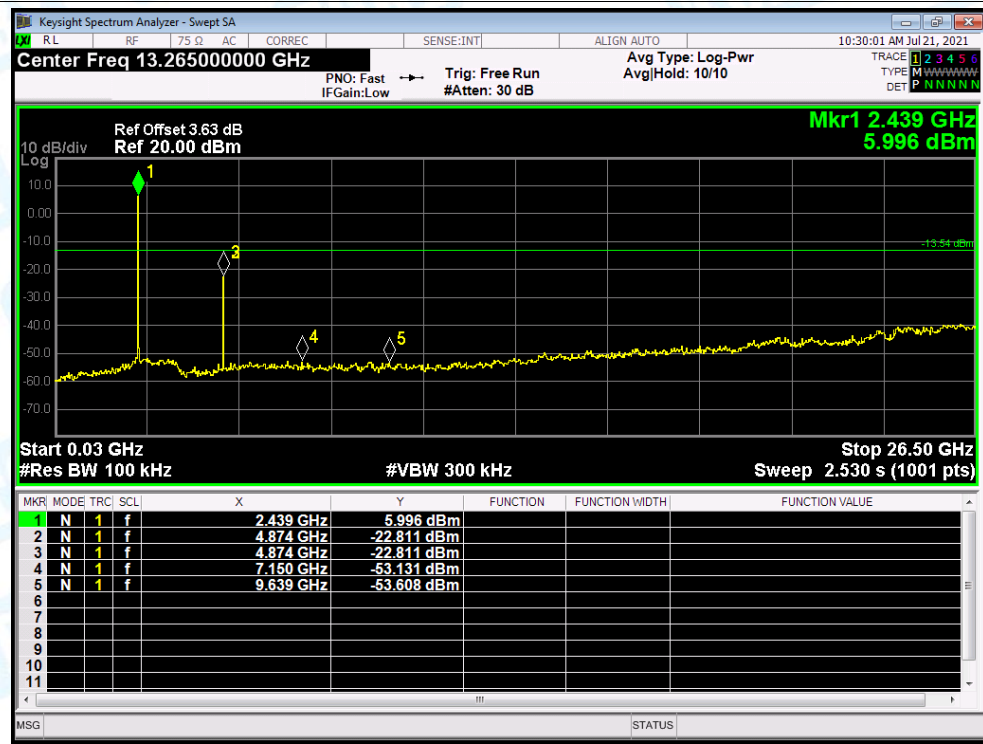
Tx. Spurious NVNT b 2412MHz Ant1 Emission



Tx. Spurious NVNT b 2437MHz Ant1 Ref



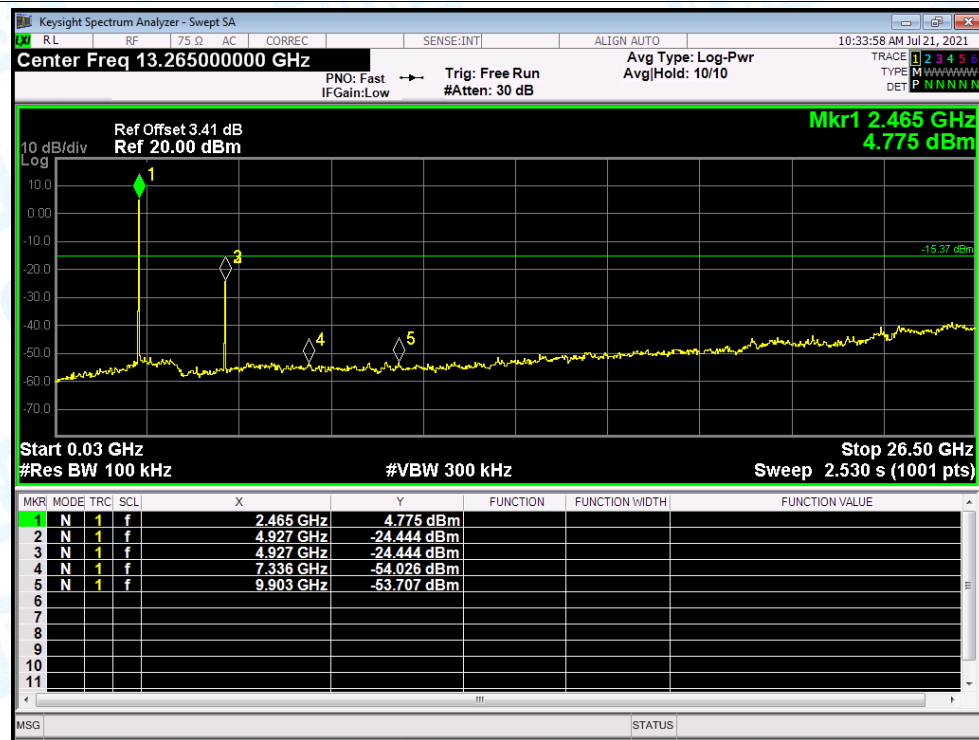
Tx. Spurious NVNT b 2437MHz Ant1 Emission



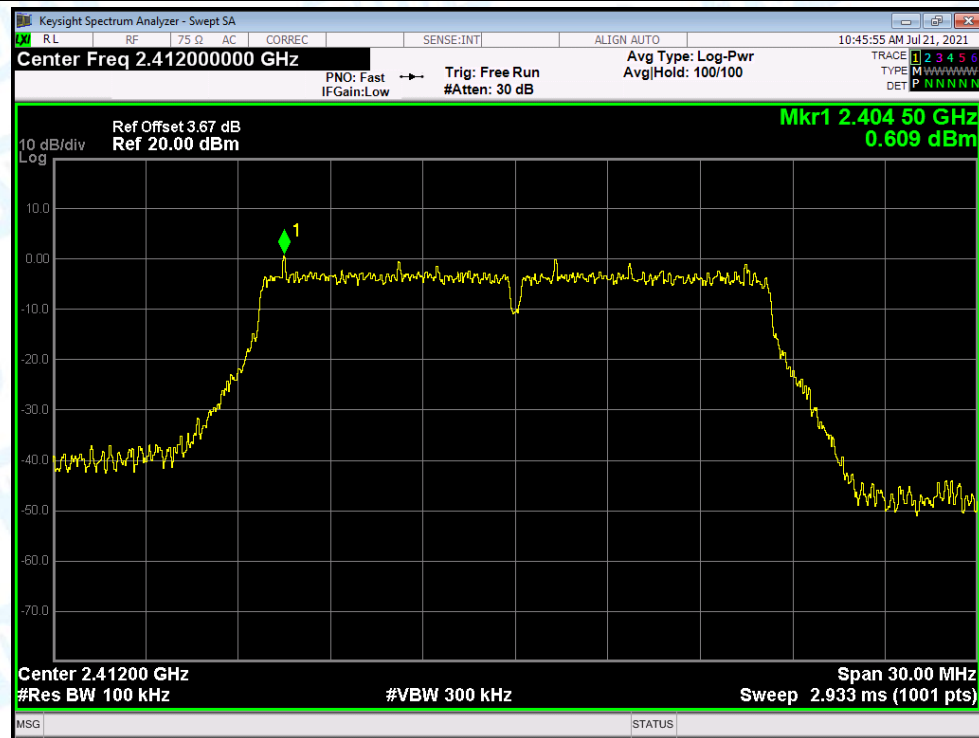
Tx. Spurious NVNT b 2462MHz Ant1 Ref



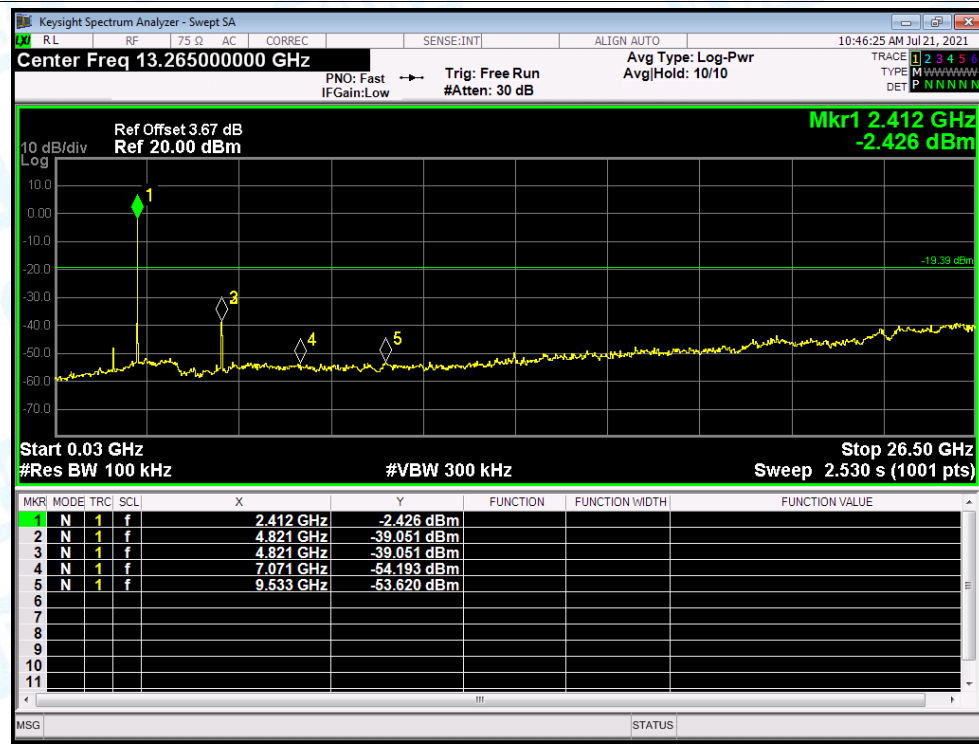
Tx. Spurious NVNT b 2462MHz Ant1 Emission



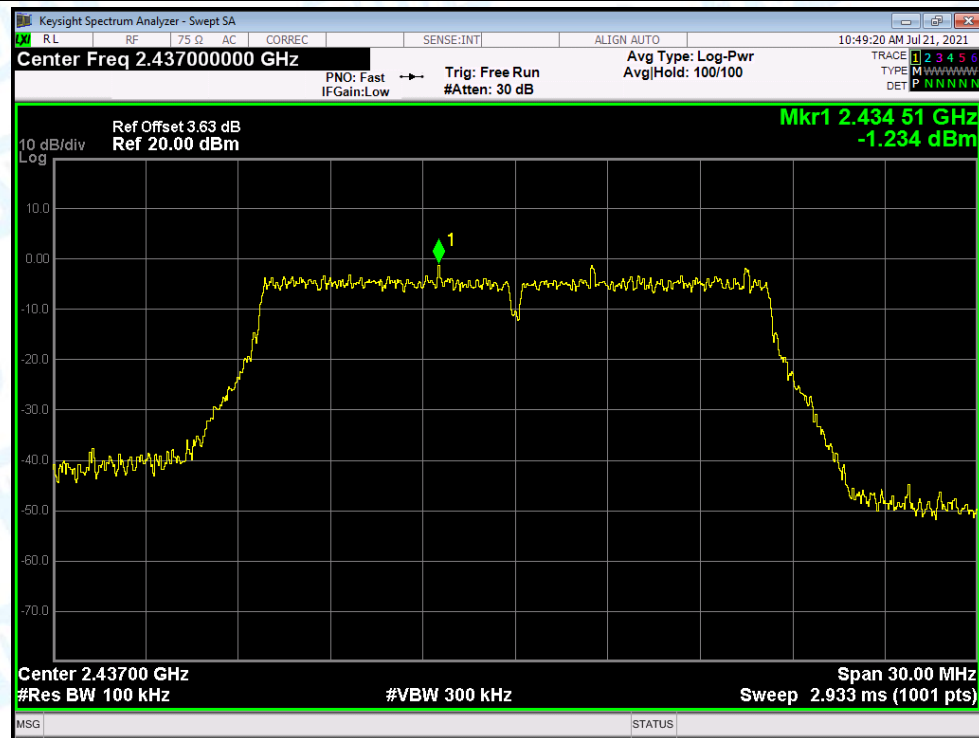
Tx. Spurious NVNT g 2412MHz Ant1 Ref



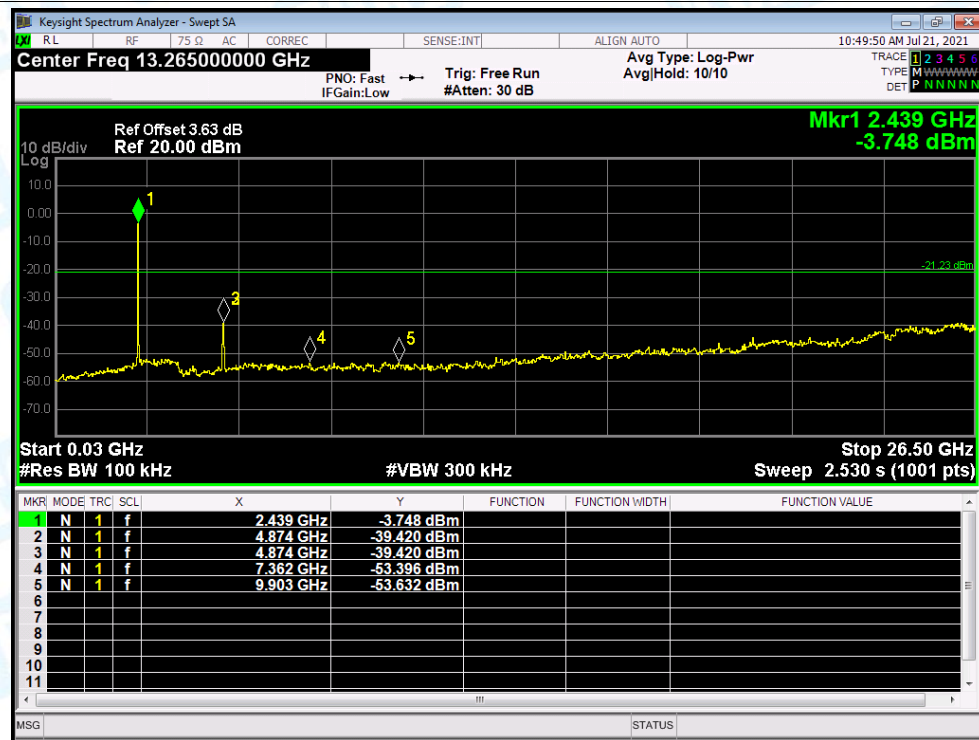
Tx. Spurious NVNT g 2412MHz Ant1 Emission



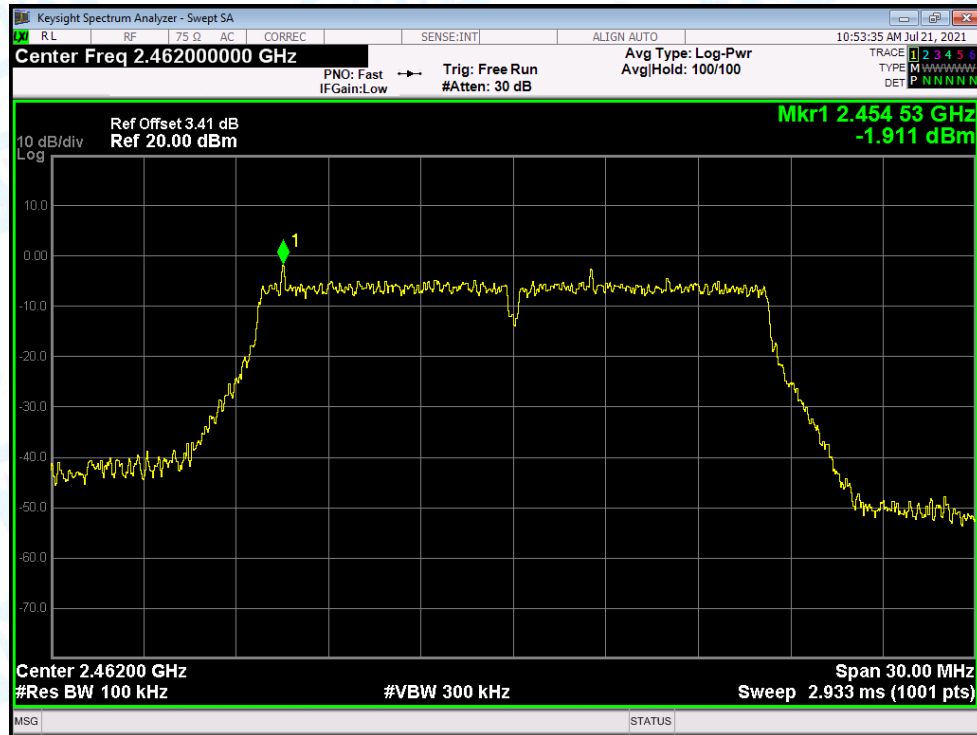
Tx. Spurious NVNT g 2437MHz Ant1 Ref



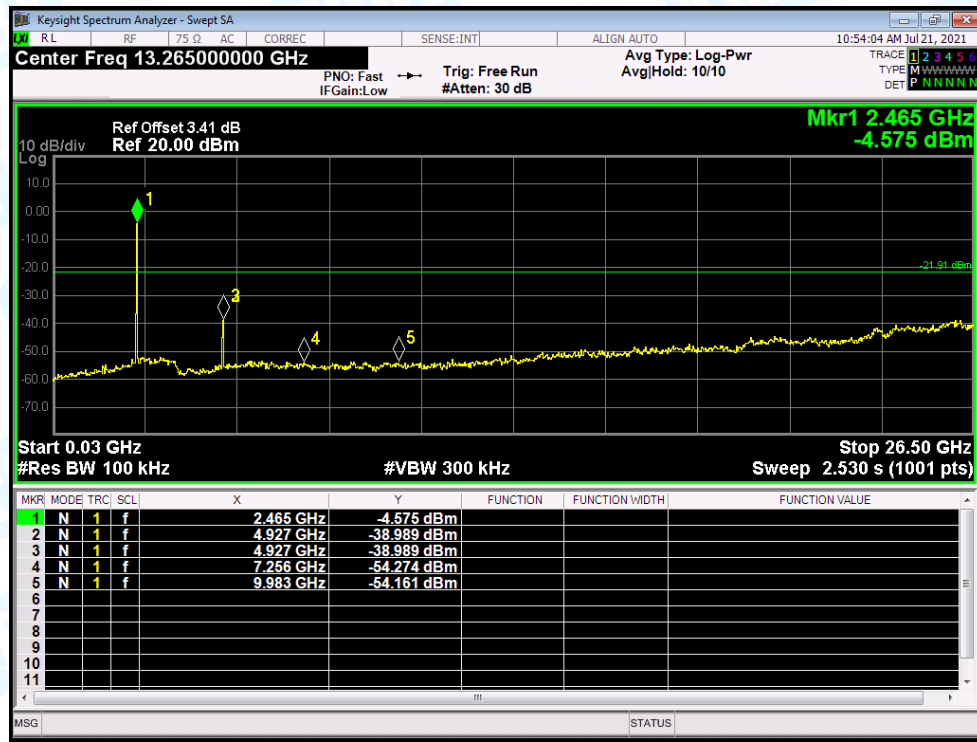
Tx. Spurious NVNT g 2437MHz Ant1 Emission



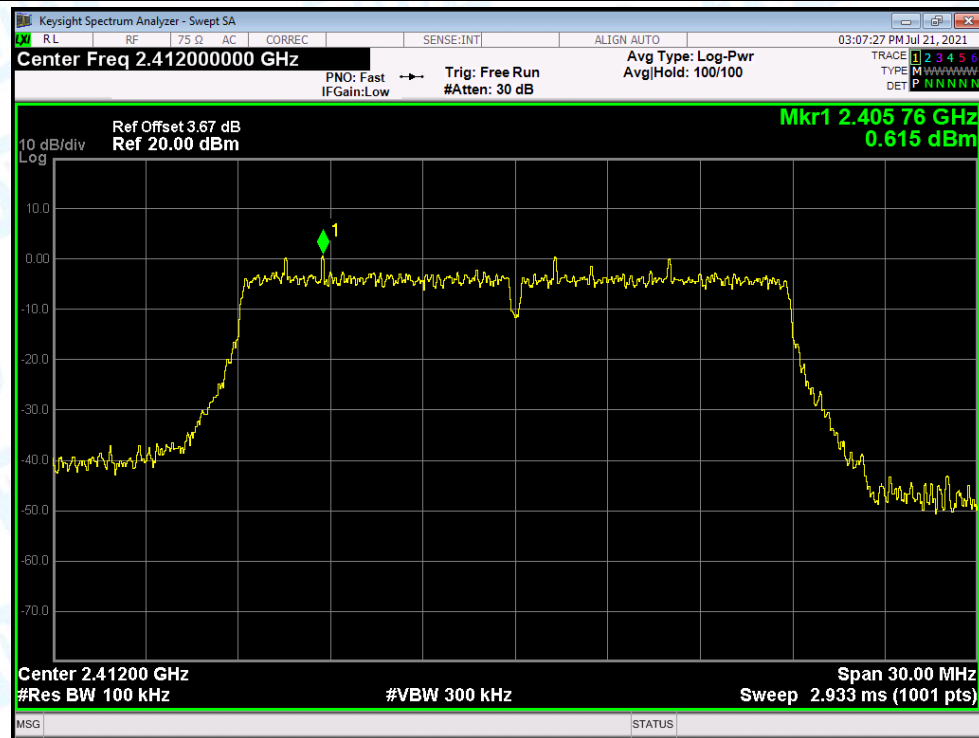
Tx. Spurious NVNT g 2462MHz Ant1 Ref



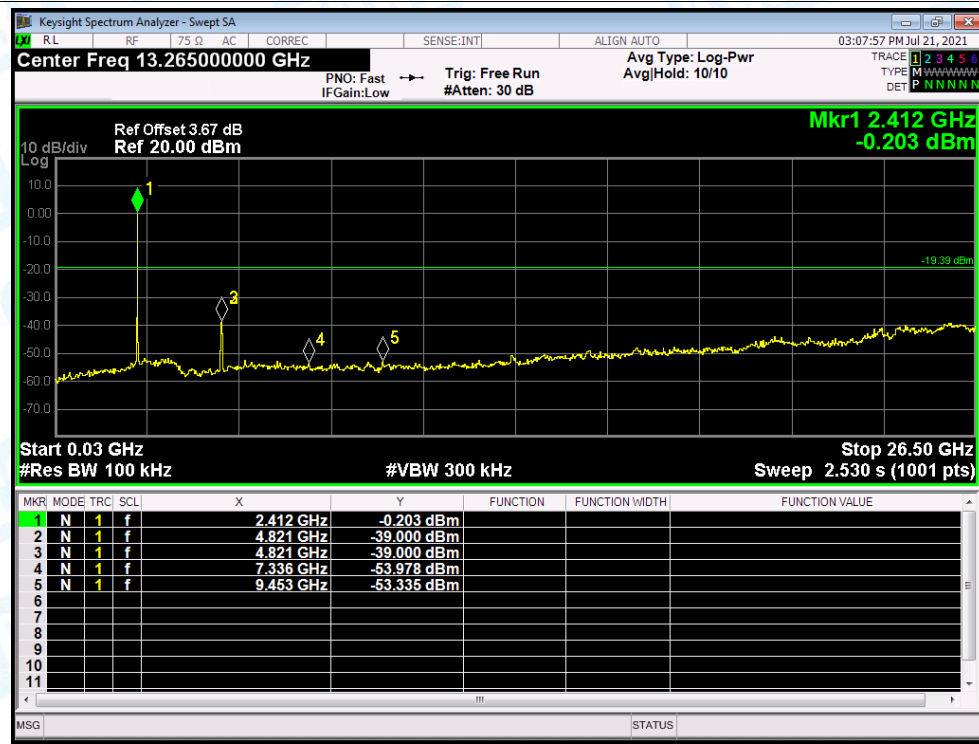
Tx. Spurious NVNT g 2462MHz Ant1 Emission



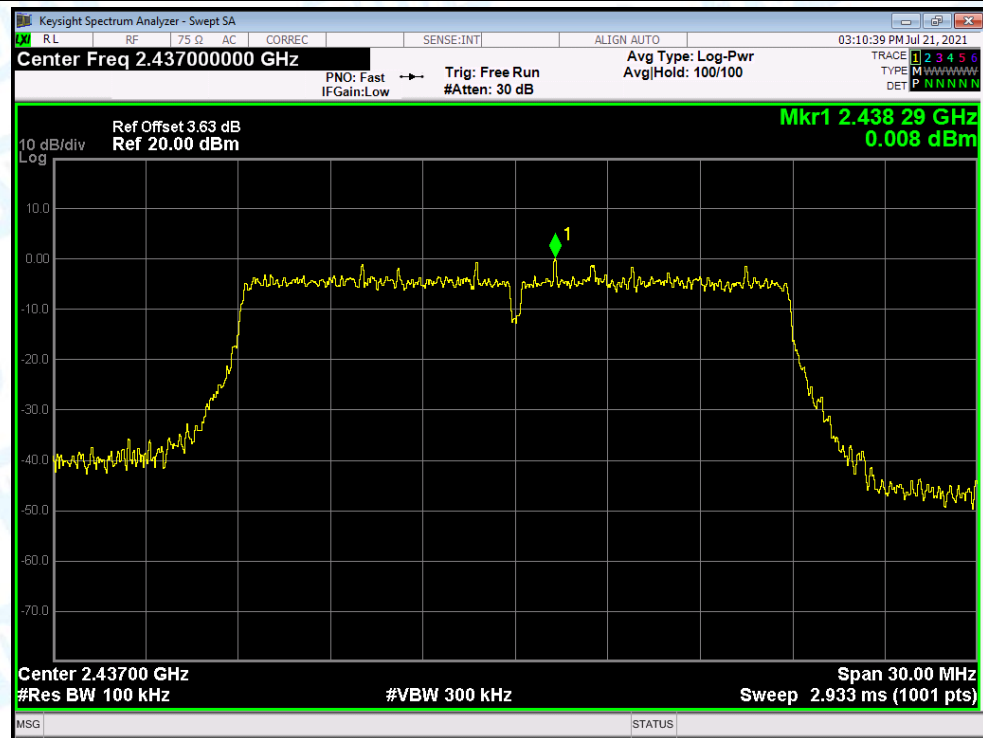
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref



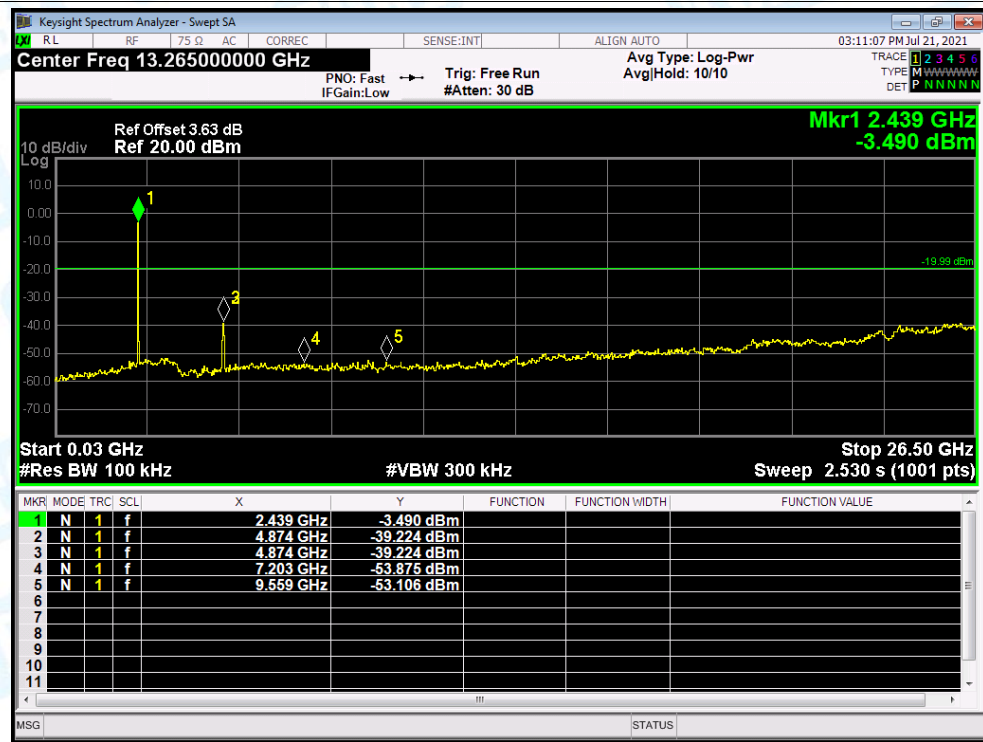
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Emission



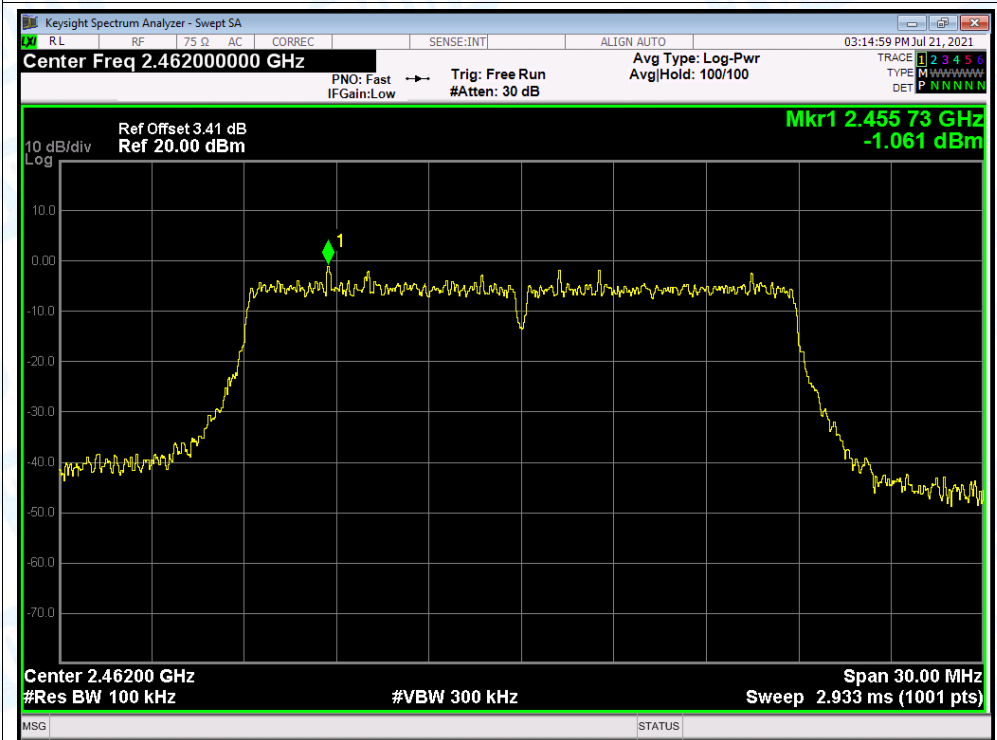
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Ref



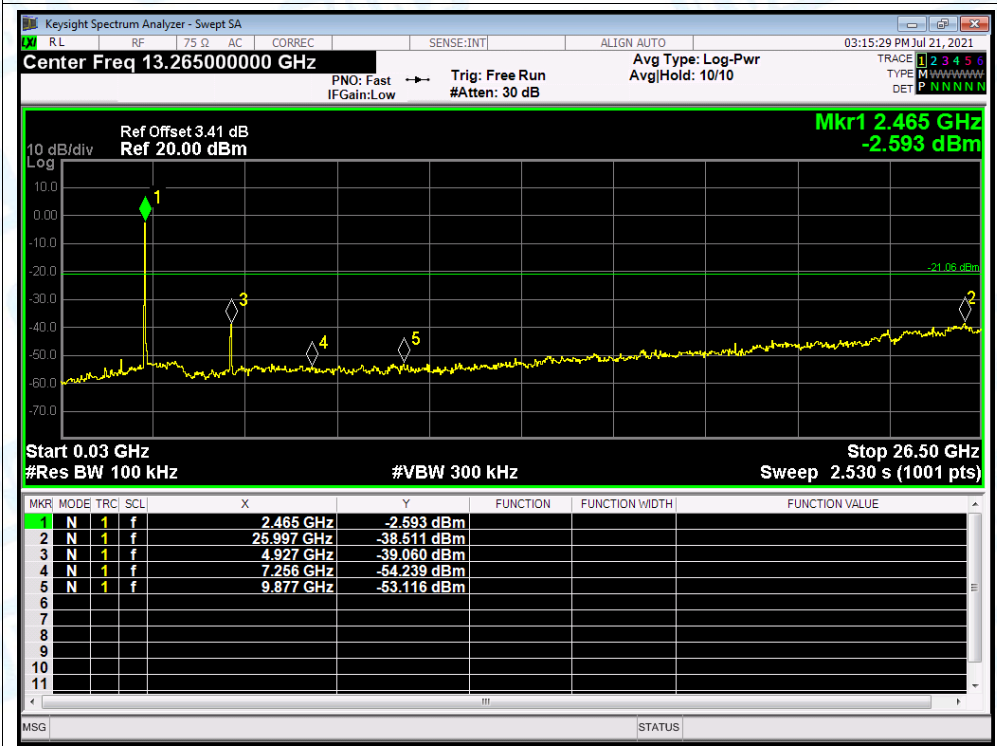
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



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



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

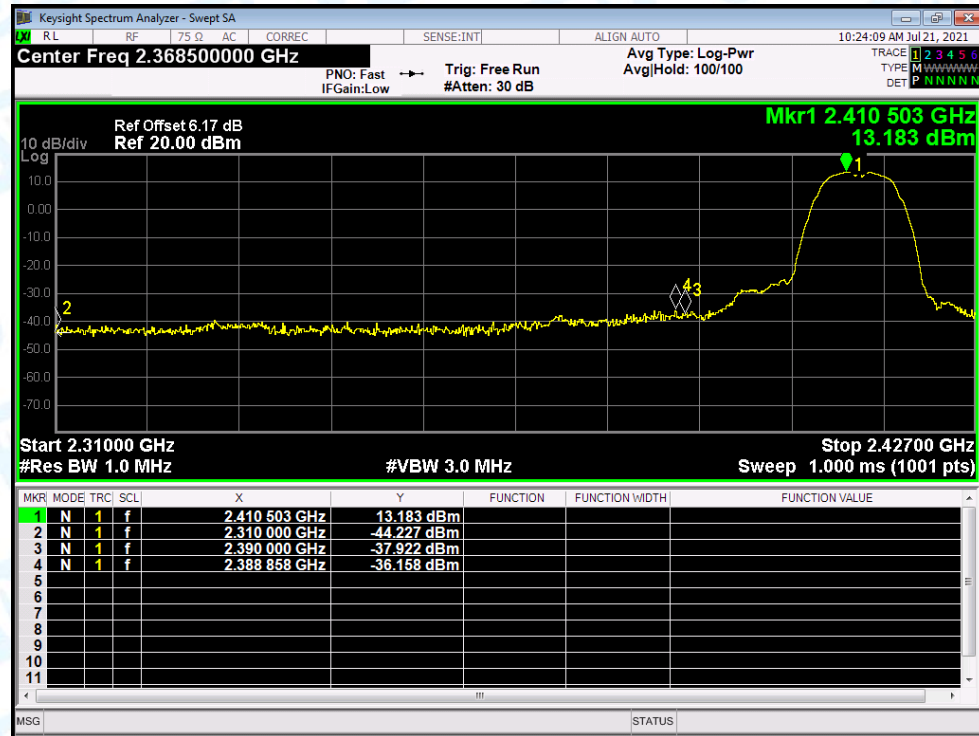


8.Restrict Band

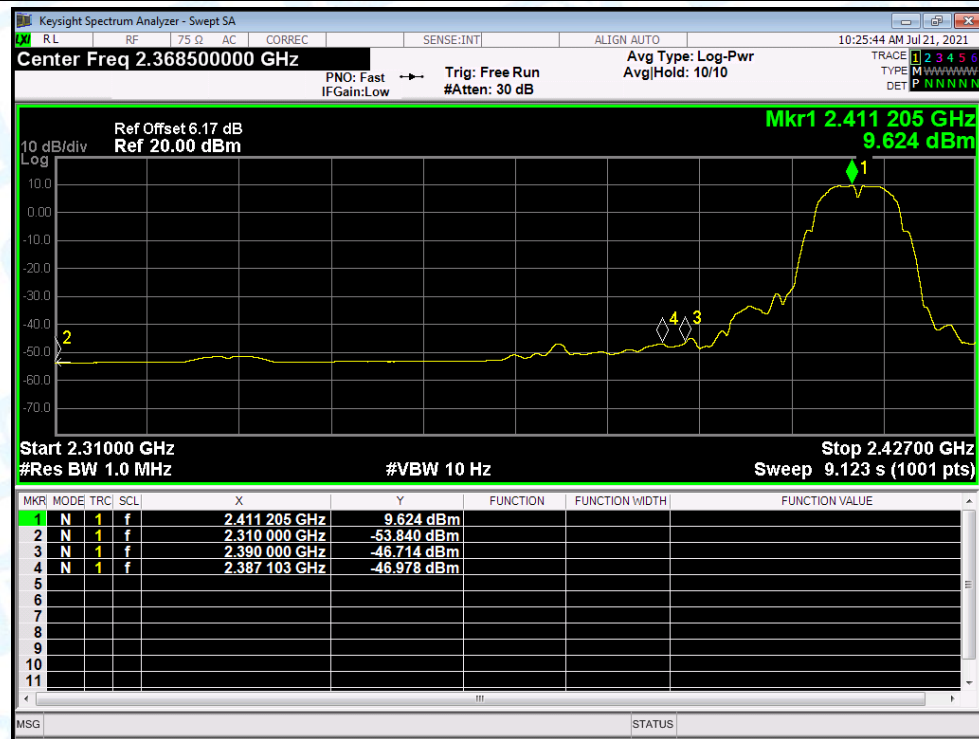
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-43.86	2.5	53.9	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-53.82	2.5	43.94	Average	54	Pass
NVNT	b	2412	Ant1	2388.858	-36.15	2.5	61.61	Peak	74	Pass
NVNT	b	2412	Ant1	2387.103	-46.97	2.5	50.79	Average	54	Pass
NVNT	b	2412	Ant1	2390	-37.92	2.5	59.84	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-46.71	2.5	51.05	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-38.72	2.5	59.04	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-50.6	2.5	47.16	Average	54	Pass
NVNT	b	2462	Ant1	2483.57	-38.31	2.5	59.45	Peak	74	Pass
NVNT	b	2462	Ant1	2499.841	-49.93	2.5	47.83	Average	54	Pass
NVNT	b	2462	Ant1	2500	-41.18	2.5	56.58	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-49.95	2.5	47.81	Average	54	Pass
NVNT	g	2412	Ant1	2310	-44.9	2.5	52.86	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-54.22	2.5	43.54	Average	54	Pass
NVNT	g	2412	Ant1	2388.975	-31.27	2.5	66.49	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-46.12	2.5	51.64	Average	54	Pass
NVNT	g	2412	Ant1	2390	-32.88	2.5	64.88	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-46	2.5	51.76	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-41.65	2.5	56.11	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-51.5	2.5	46.26	Average	54	Pass
NVNT	g	2462	Ant1	2485.743	-39.14	2.5	58.62	Peak	74	Pass
NVNT	g	2462	Ant1	2483.517	-51.5	2.5	46.26	Average	54	Pass
NVNT	g	2462	Ant1	2500	-44.01	2.5	53.75	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-53.31	2.5	44.45	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-44.41	2.5	53.35	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-54.17	2.5	43.59	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.443	-25.55	2.5	72.21	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.911	-44.32	2.5	53.44	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-31.85	2.5	65.91	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-44.22	2.5	53.54	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-36.85	2.5	60.91	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-48.67	2.5	49.09	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2485.796	-32.91	2.5	64.85	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-48.67	2.5	49.09	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-42.98	2.5	54.78	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-52.83	2.5	44.93	Average	54	Pass

Test Graphs

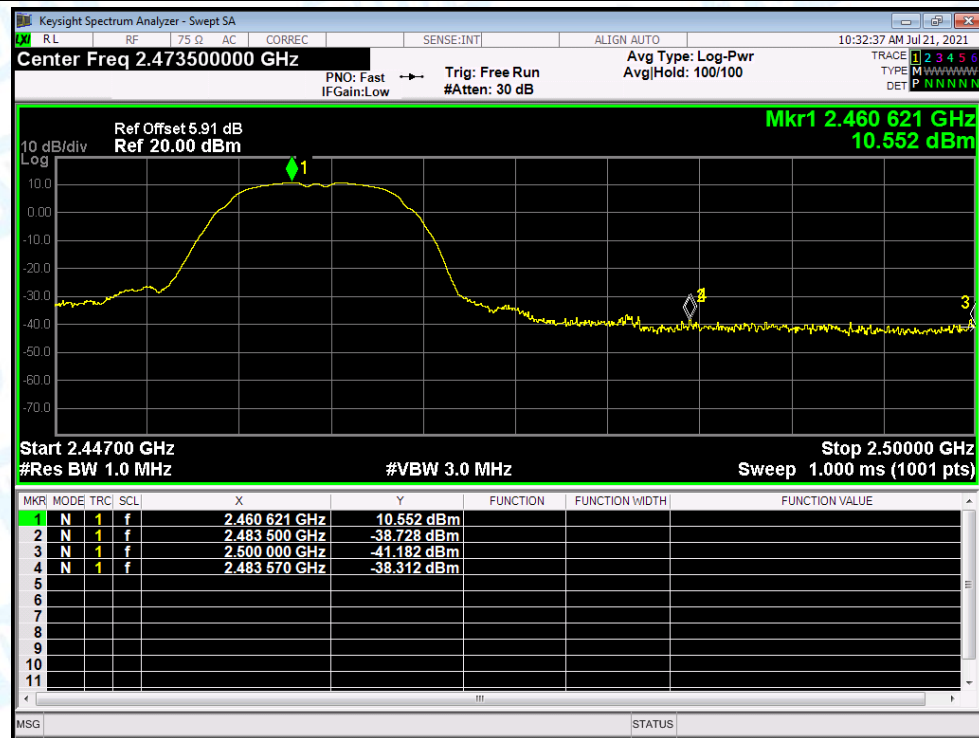
Restrict Band NVNT b 2412MHz Ant1 Peak



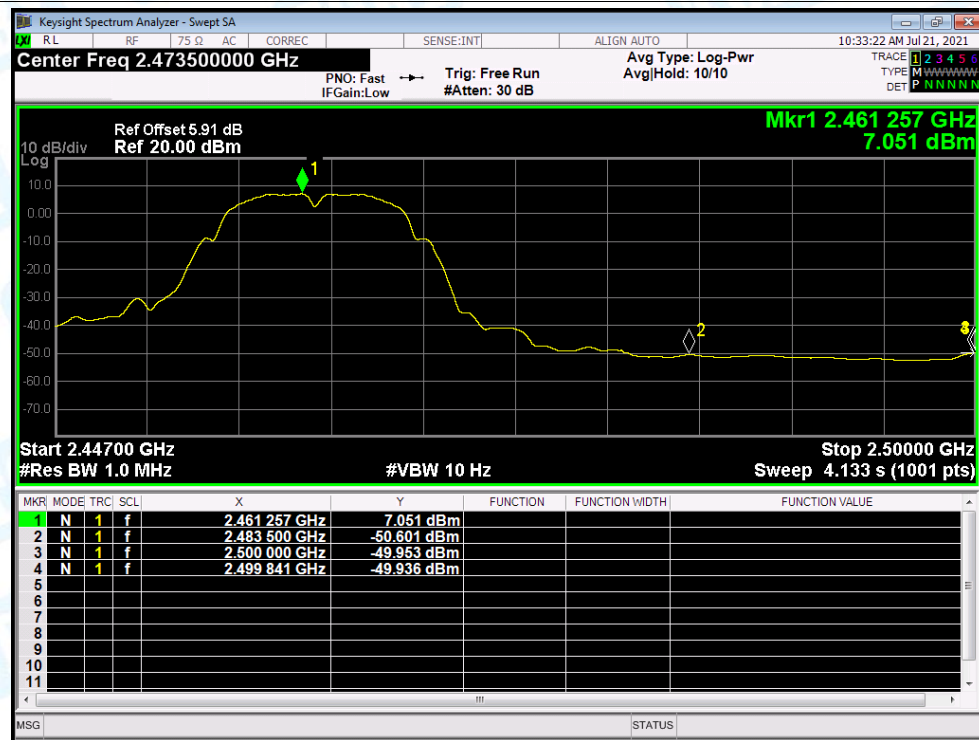
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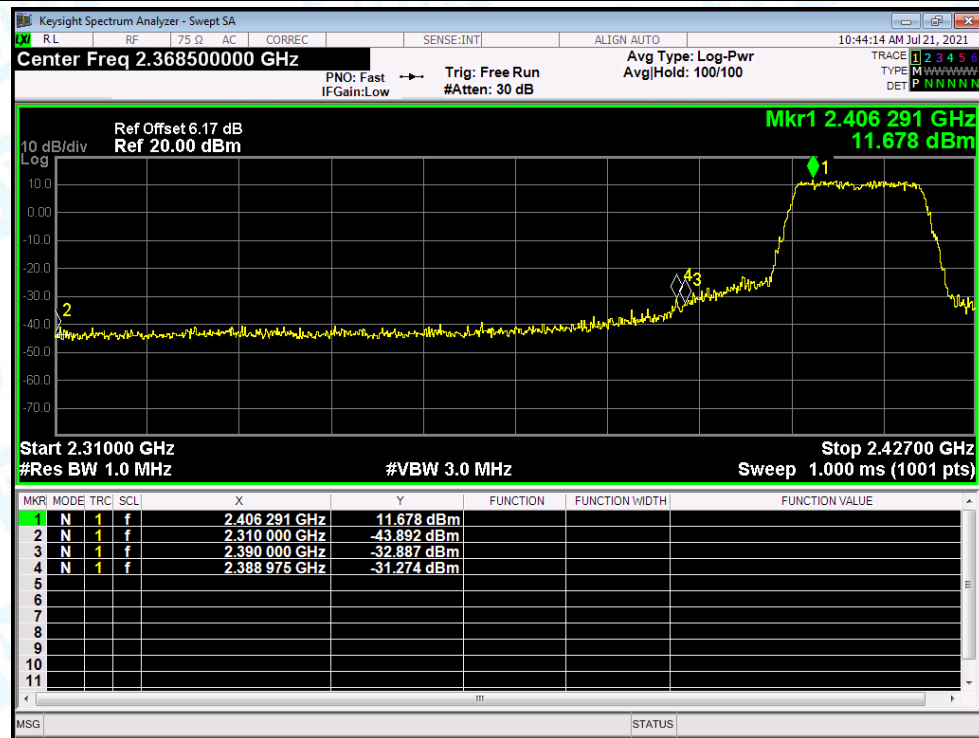
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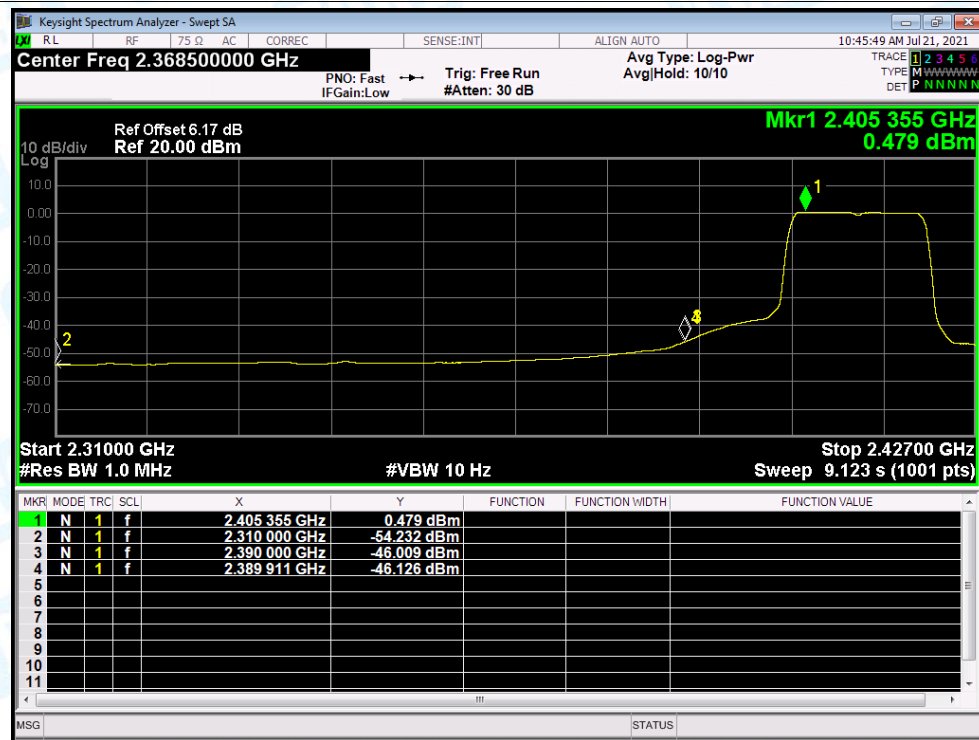
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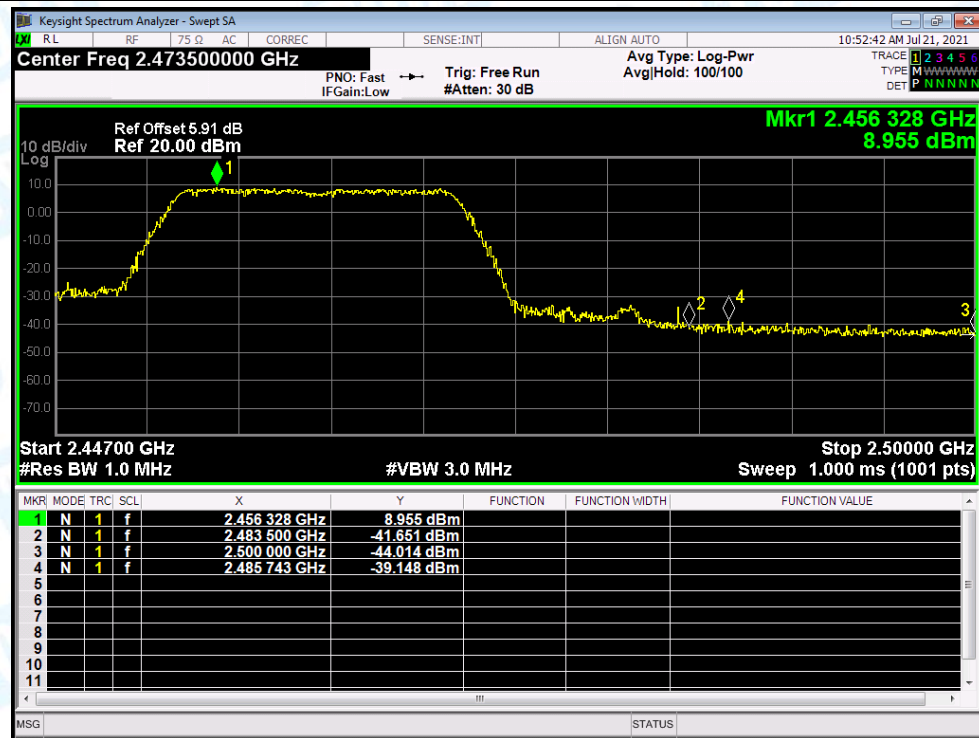
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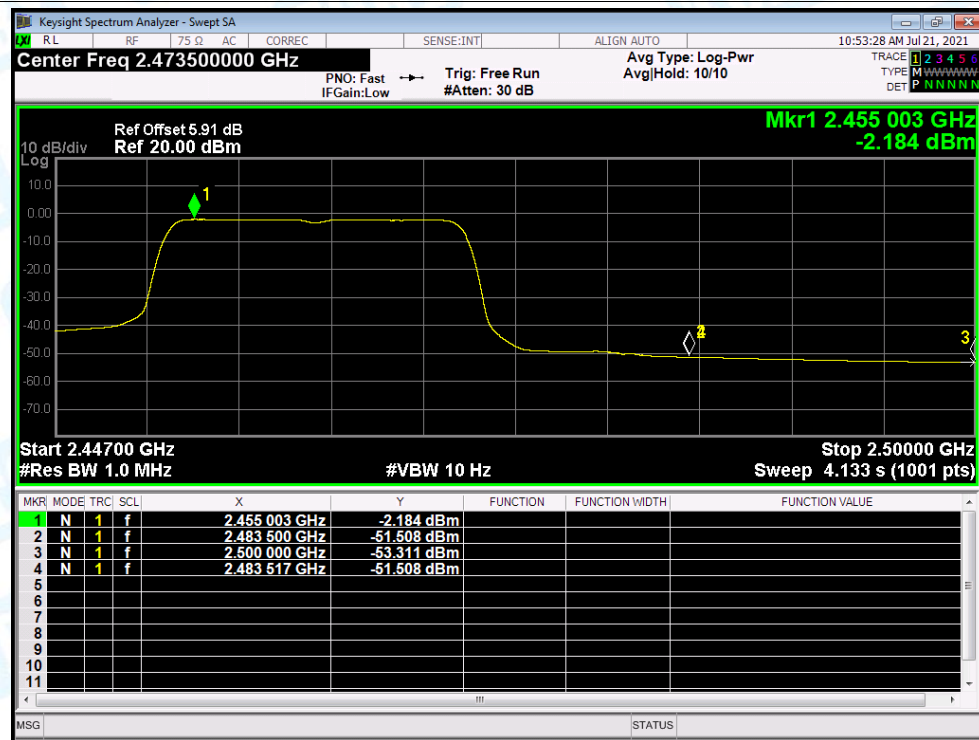
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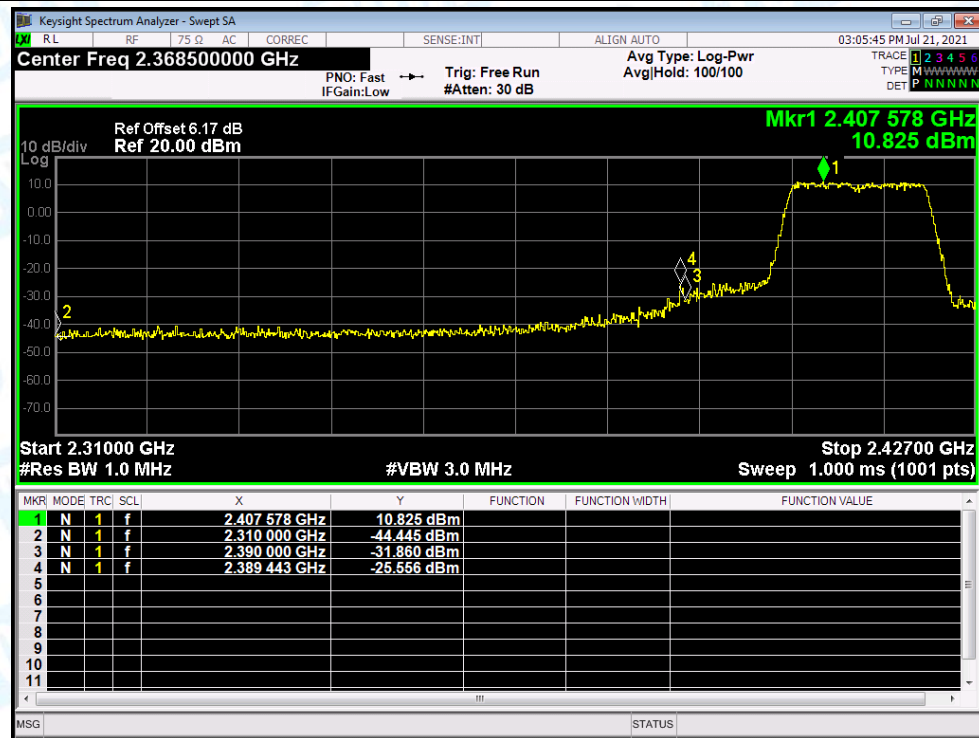
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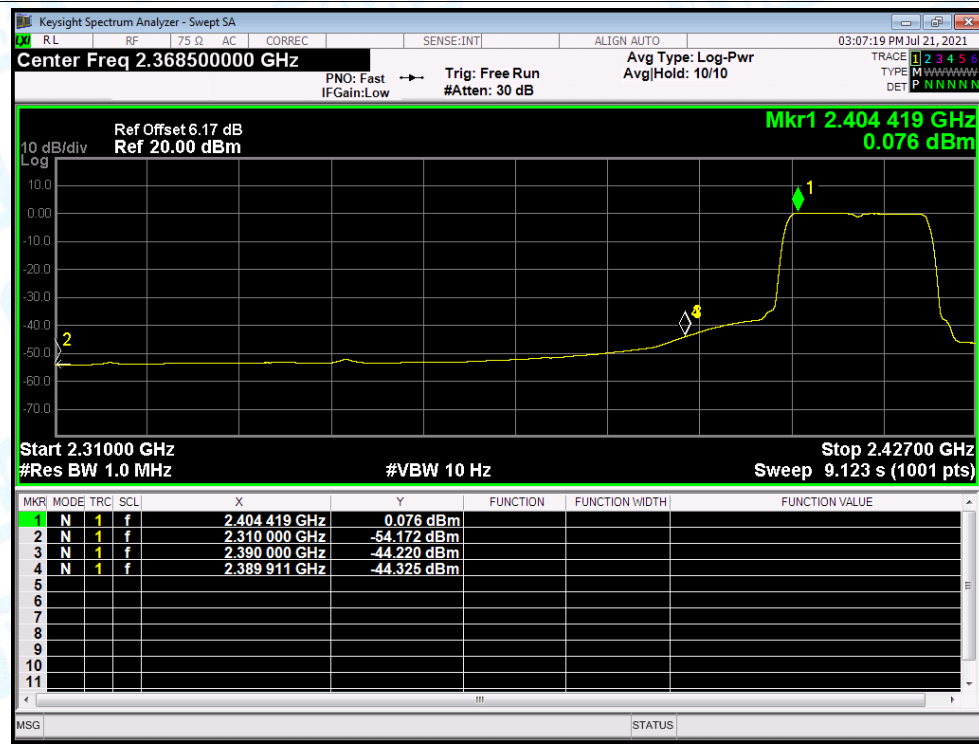
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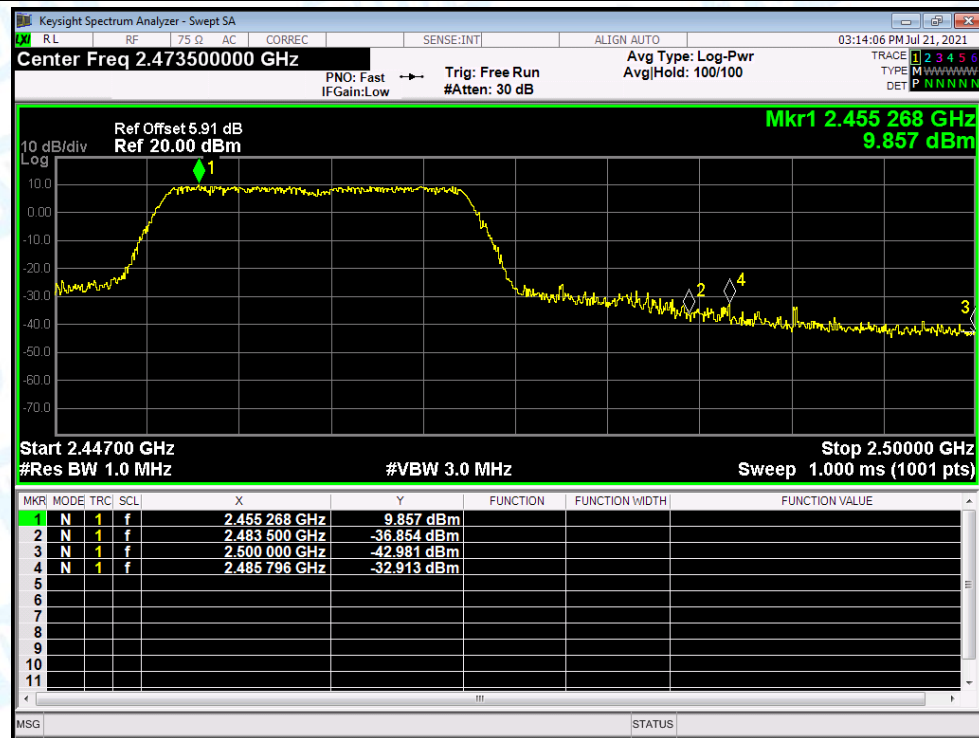
Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



Restrict Band NVNT n(HT20) 2462MHz Ant1 Average

