



## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Wireless USB Adapter

Test Model: OpenScope CP10

#### Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Wunder Wu
Supervised by:	Li Huan





### A.1 6dB Bandwidth

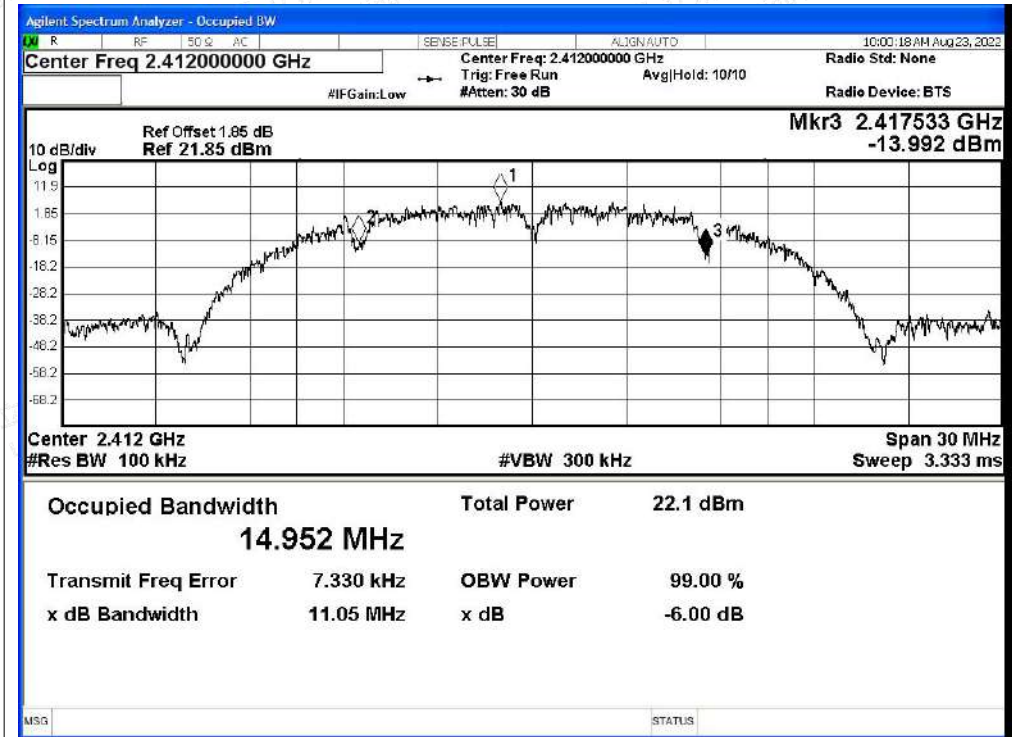
Condition	Mode	Frequency (MHz)	Antenna	6 dB Bandwidth (MHz)	Limit 6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	11.051	>=0.5	Pass
NVNT	b	2437	Ant1	9.724	>=0.5	Pass
NVNT	b	2462	Ant1	8.971	>=0.5	Pass
NVNT	g	2412	Ant1	16.408	>=0.5	Pass
NVNT	g	2437	Ant1	16.424	>=0.5	Pass
NVNT	g	2462	Ant1	16.302	>=0.5	Pass
NVNT	n20	2412	Ant1	17.013	>=0.5	Pass
NVNT	n20	2437	Ant1	16.436	>=0.5	Pass
NVNT	n20	2462	Ant1	17.55	>=0.5	Pass
NVNT	n40	2422	Ant1	35.547	>=0.5	Pass
NVNT	n40	2437	Ant1	35.294	>=0.5	Pass
NVNT	n40	2452	Ant1	36.352	>=0.5	Pass



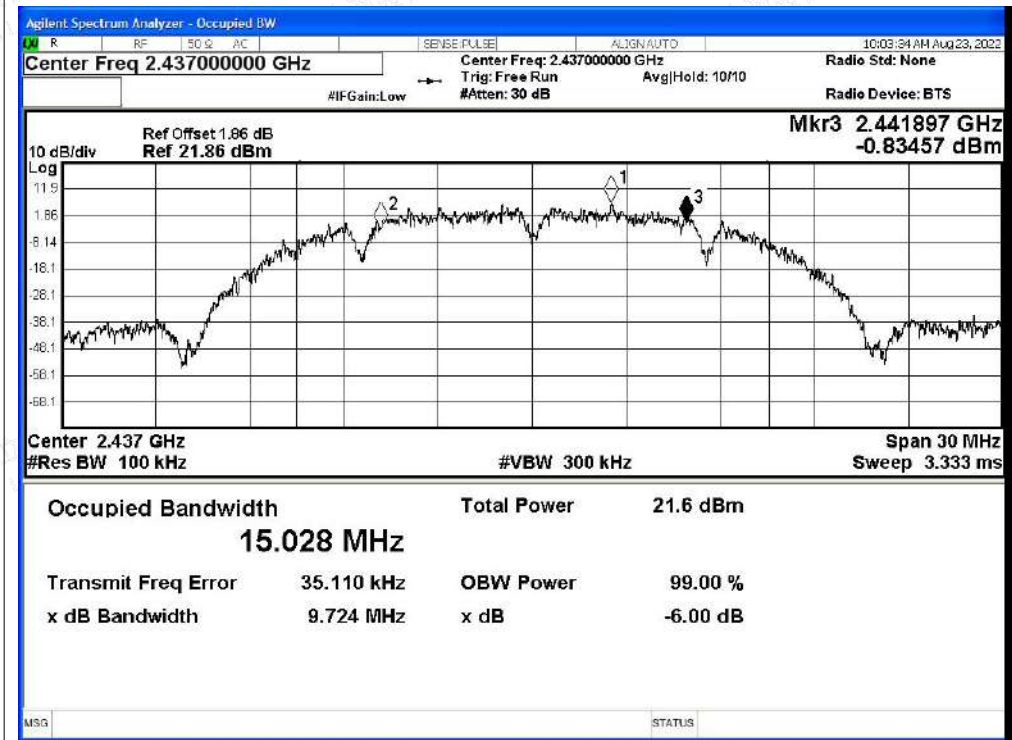


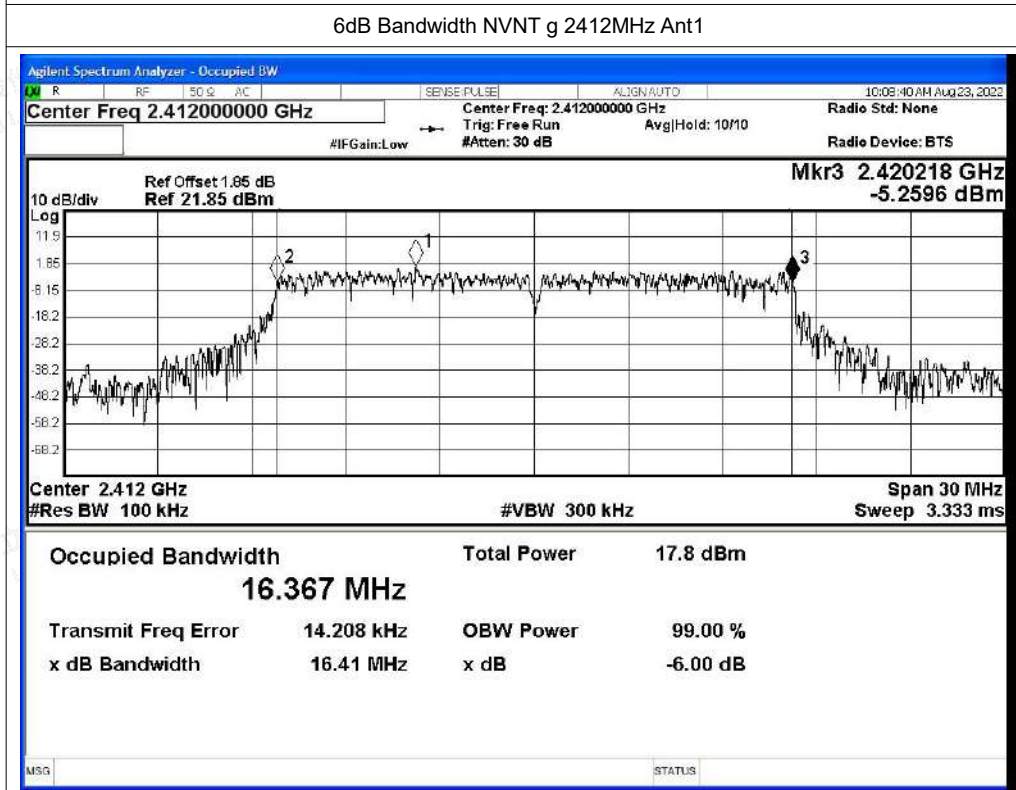
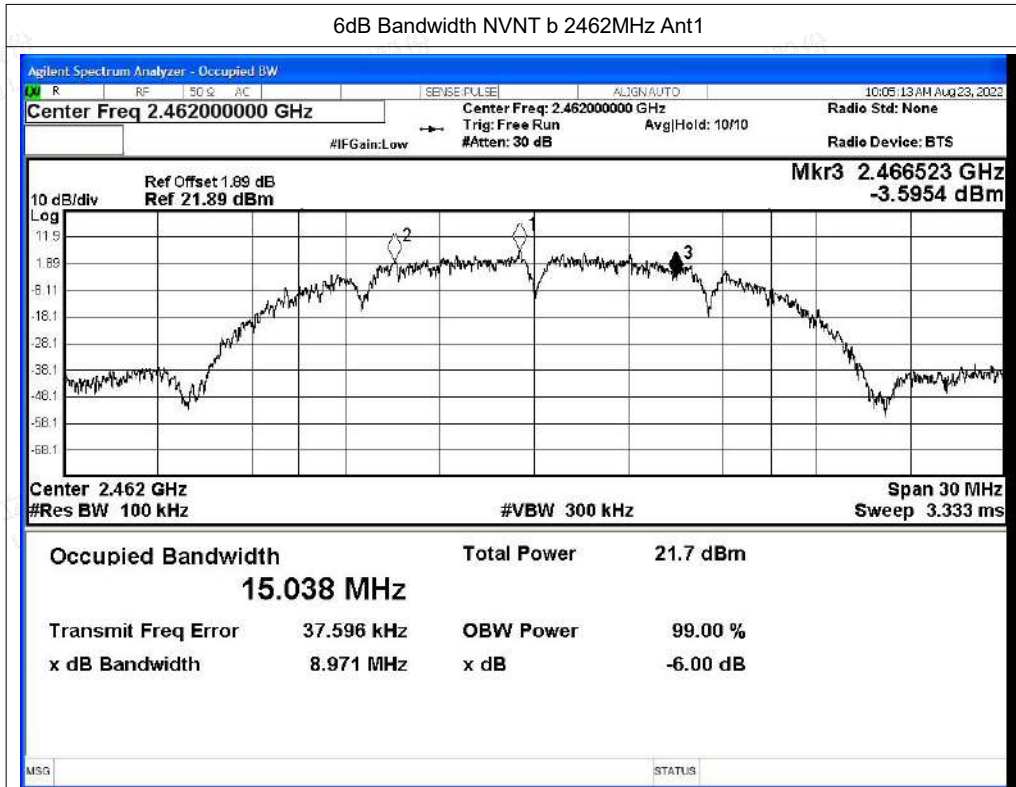
Test Graphs

6dB Bandwidth NVNT b 2412MHz Ant1



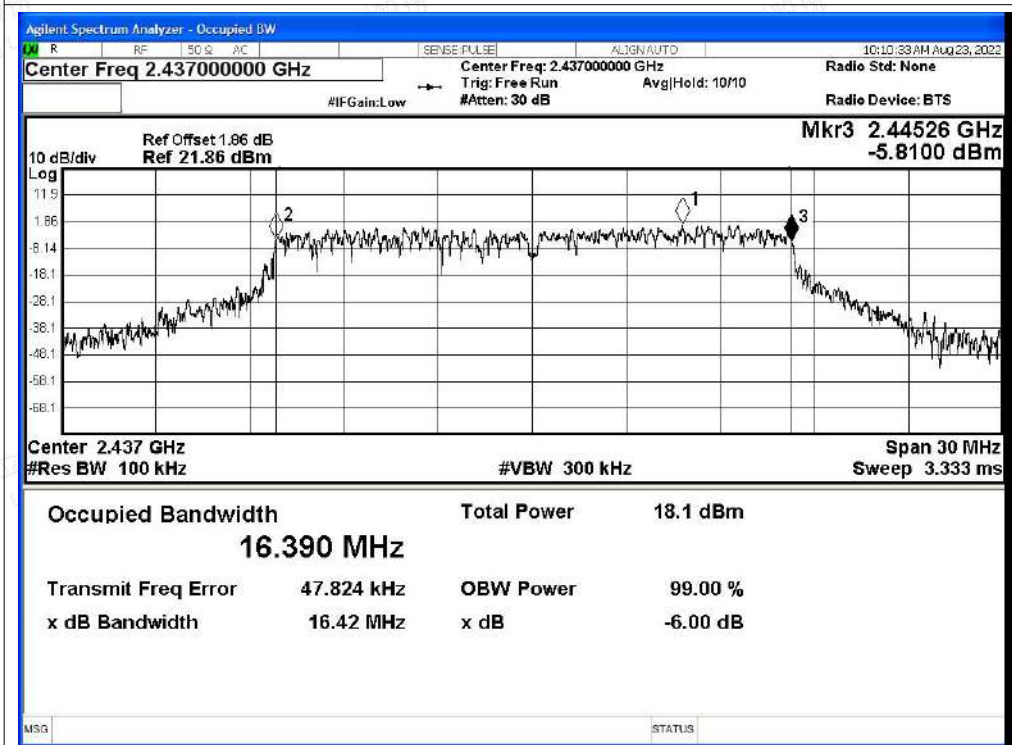
6dB Bandwidth NVNT b 2437MHz Ant1



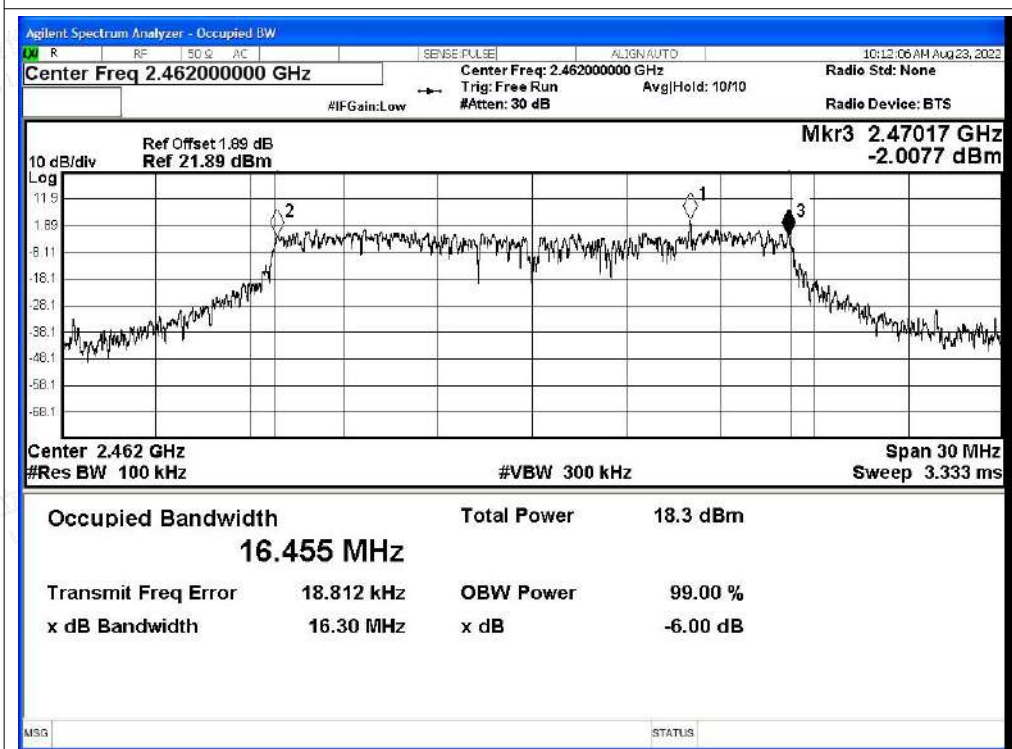




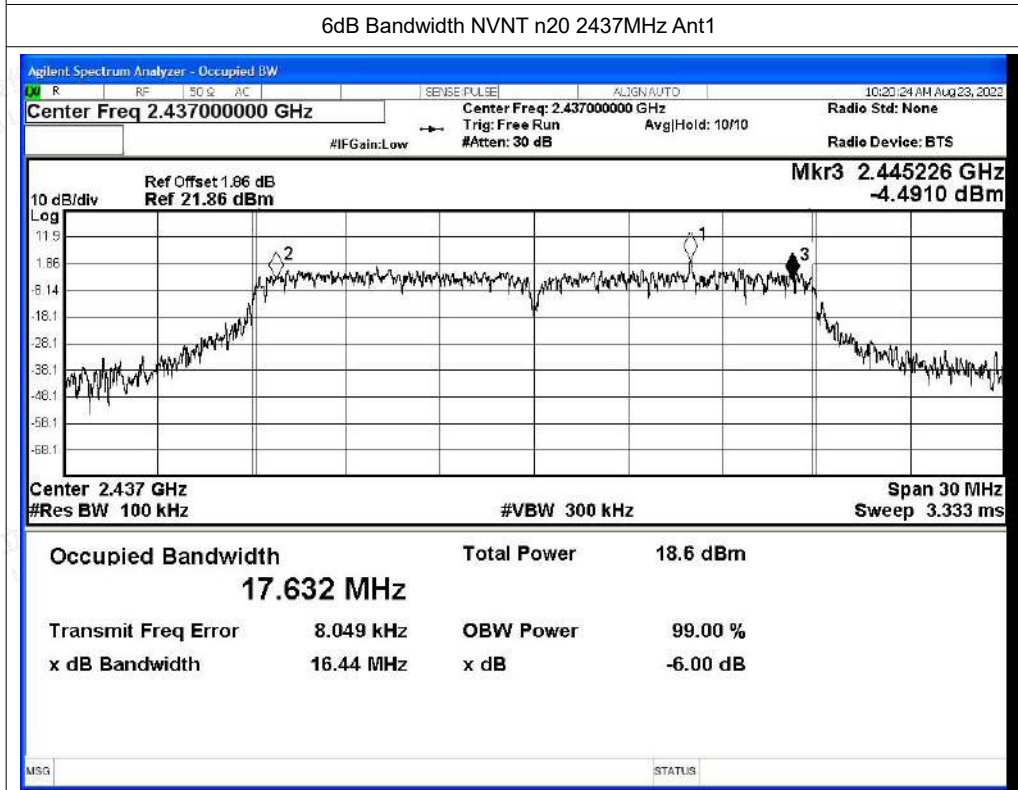
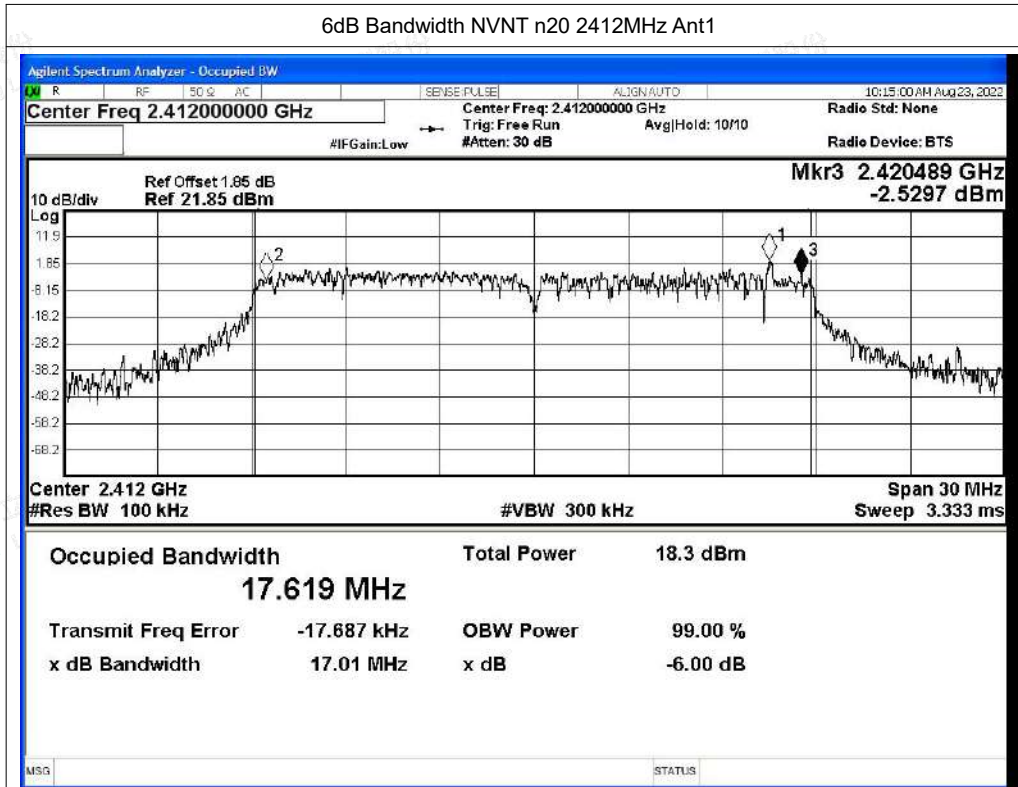
6dB Bandwidth NVNT g 2437MHz Ant1

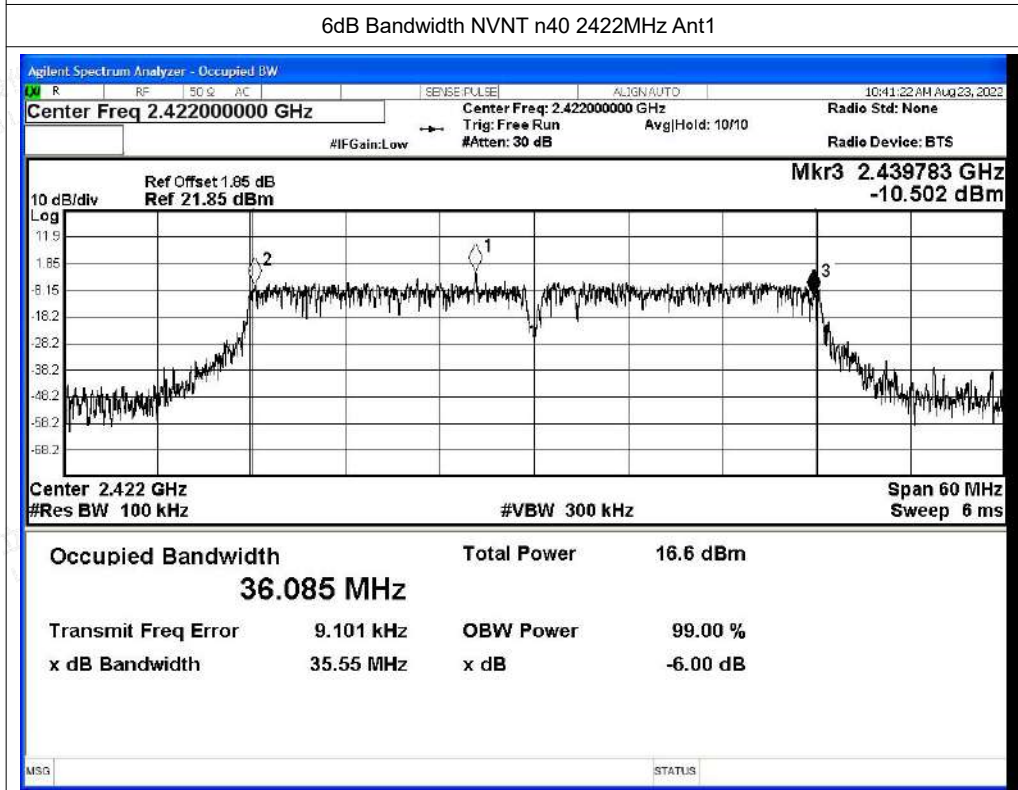
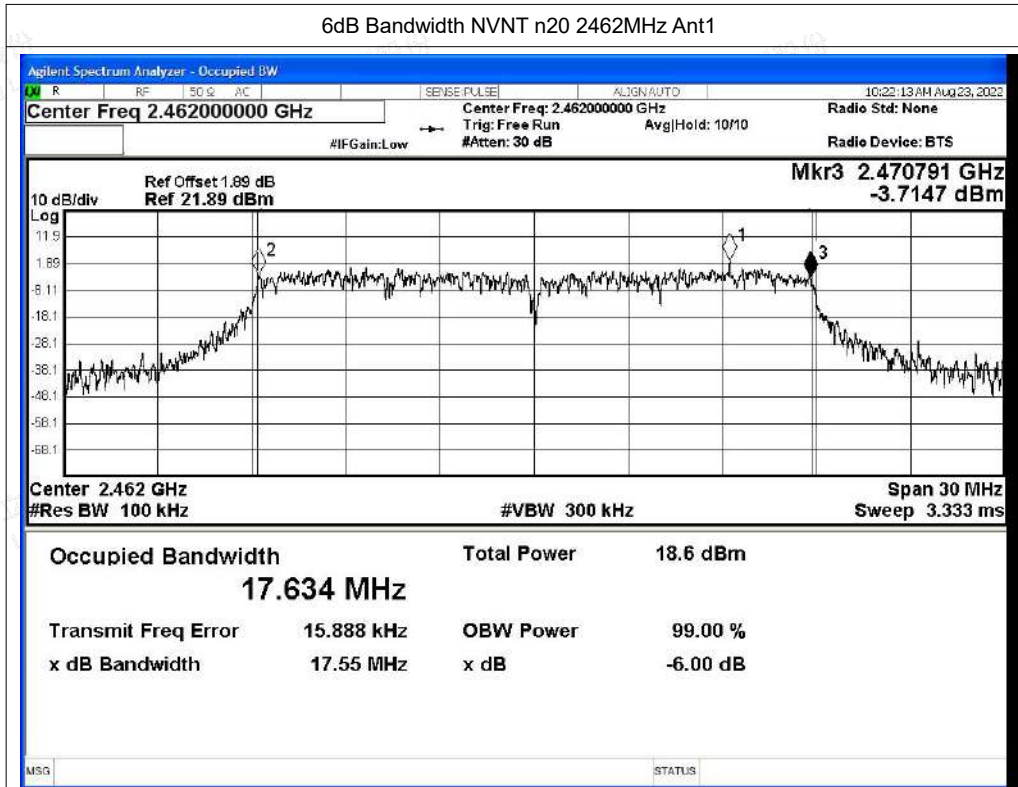


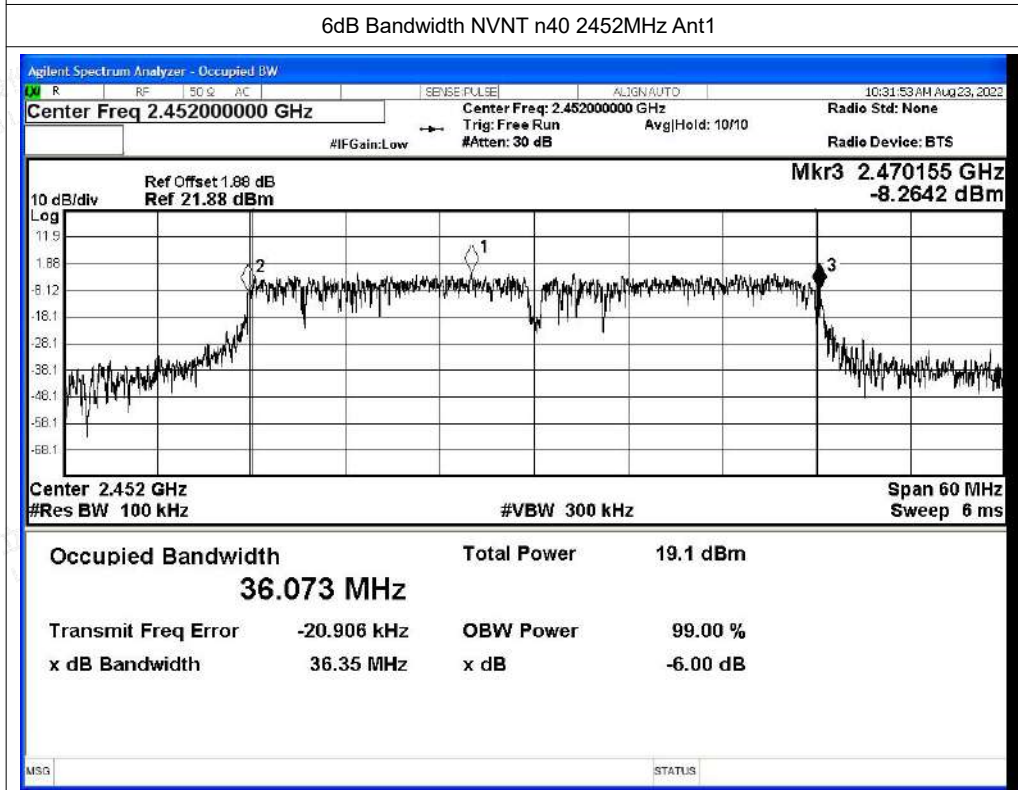
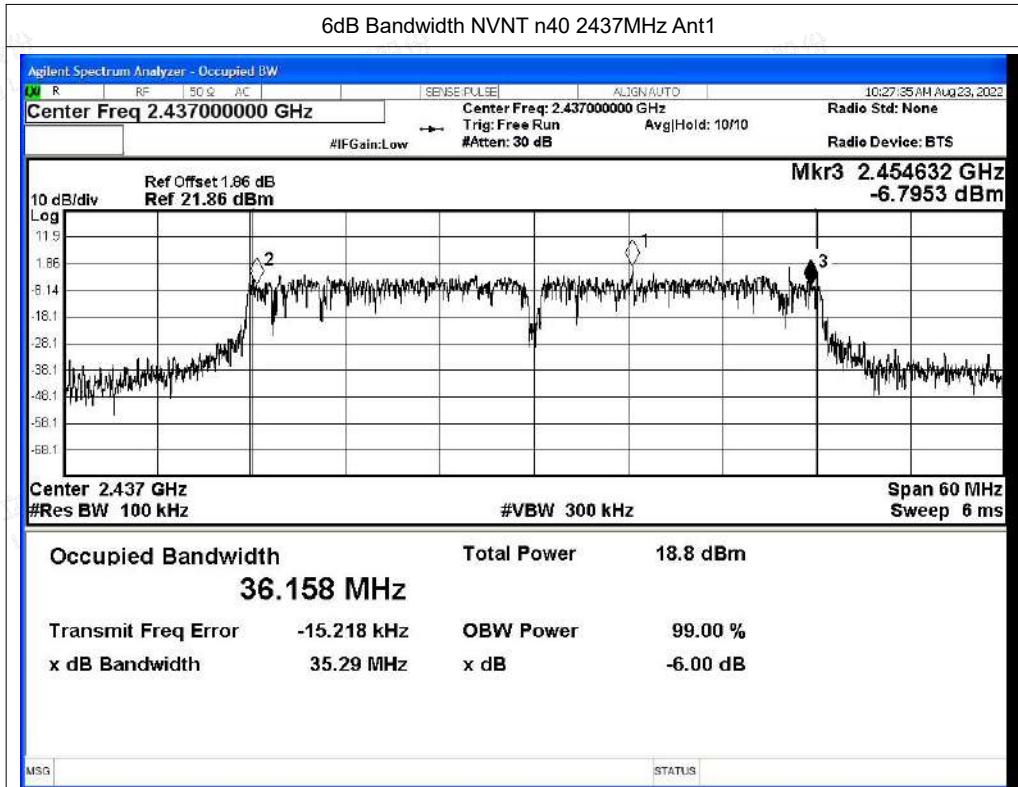
6dB Bandwidth NVNT g 2462MHz Ant1















## A.2 Occupied Channel Bandwidth

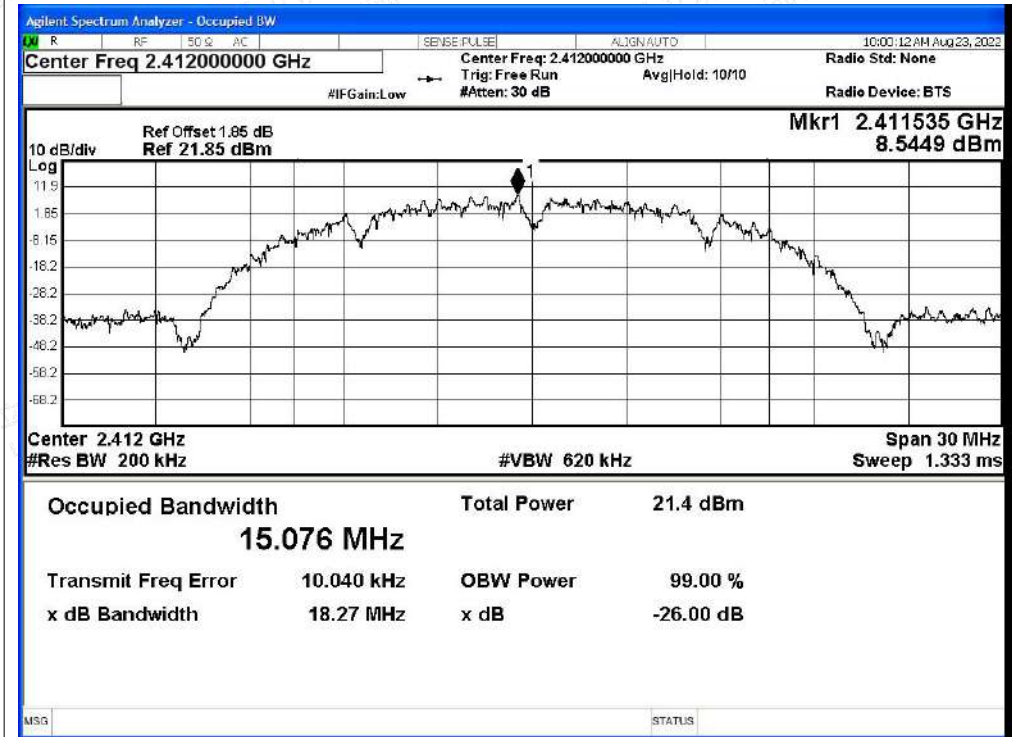
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	15.076
NVNT	b	2437	Ant1	15.012
NVNT	b	2462	Ant1	15.041
NVNT	g	2412	Ant1	16.52
NVNT	g	2437	Ant1	16.441
NVNT	g	2462	Ant1	16.477
NVNT	n20	2412	Ant1	17.632
NVNT	n20	2437	Ant1	17.616
NVNT	n20	2462	Ant1	17.655
NVNT	n40	2422	Ant1	35.96
NVNT	n40	2437	Ant1	36.059
NVNT	n40	2452	Ant1	36.089



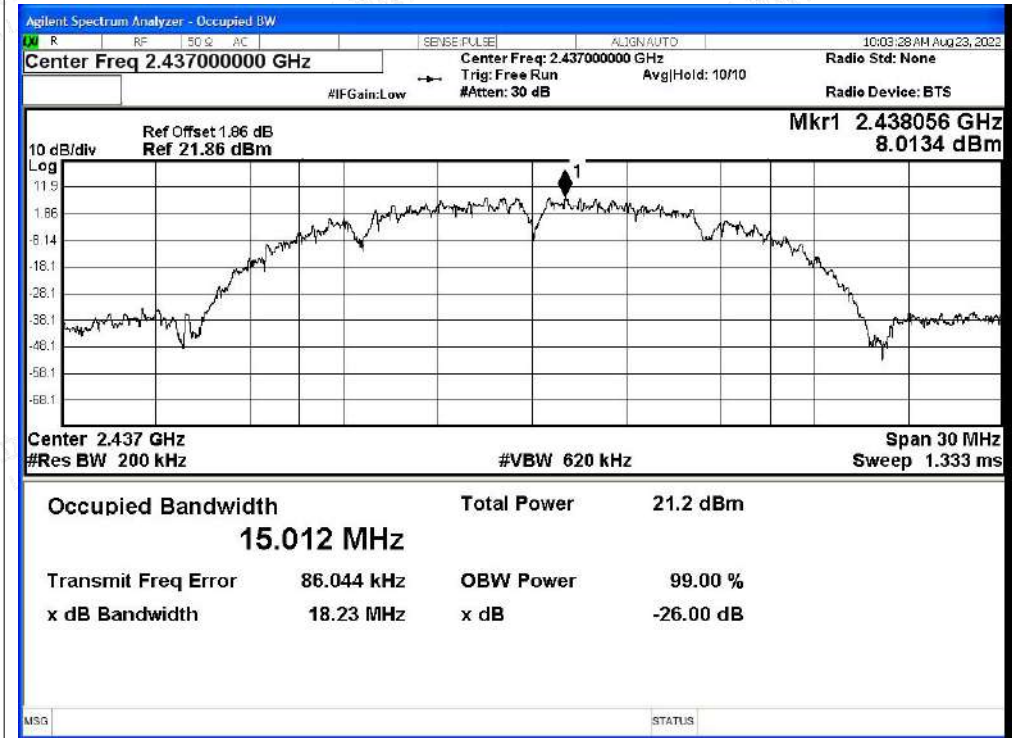


Test Graphs

OBW NVNT b 2412MHz Ant1



OBW NVNT b 2437MHz Ant1

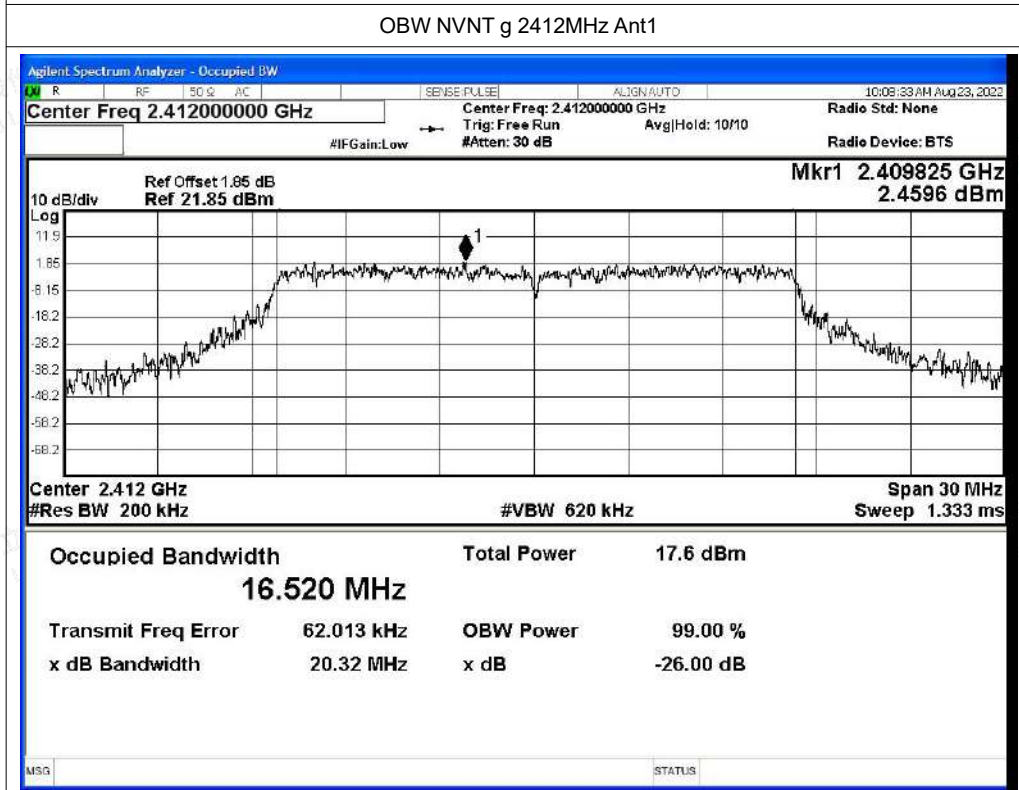
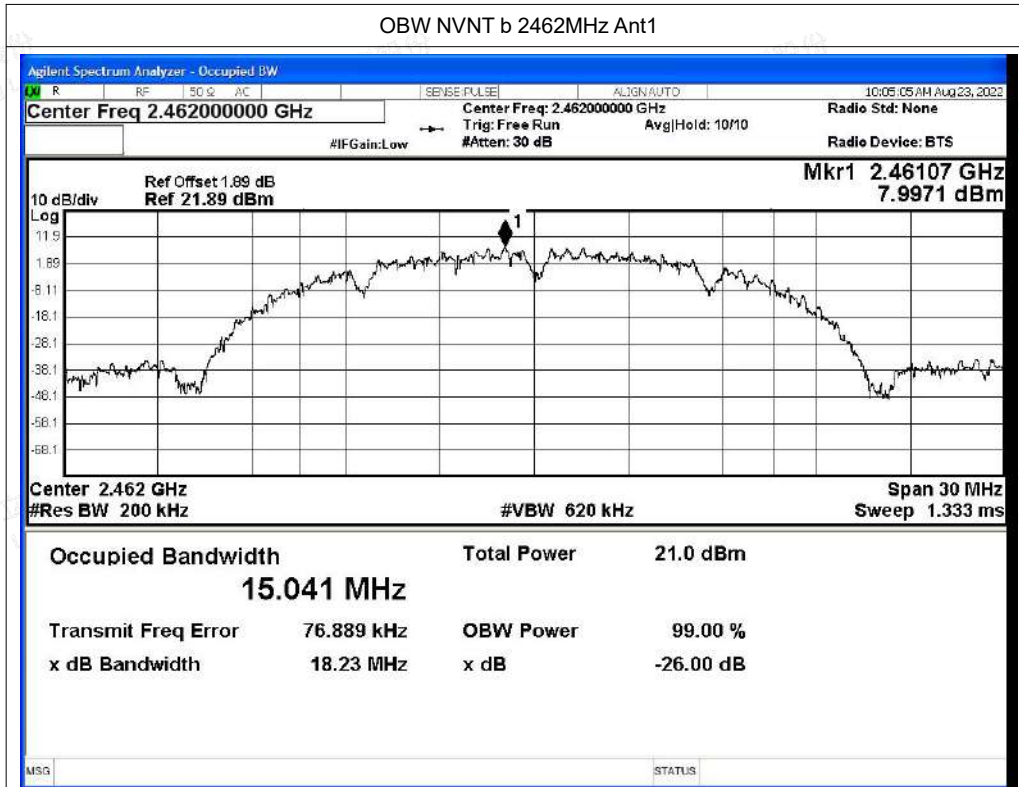


Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

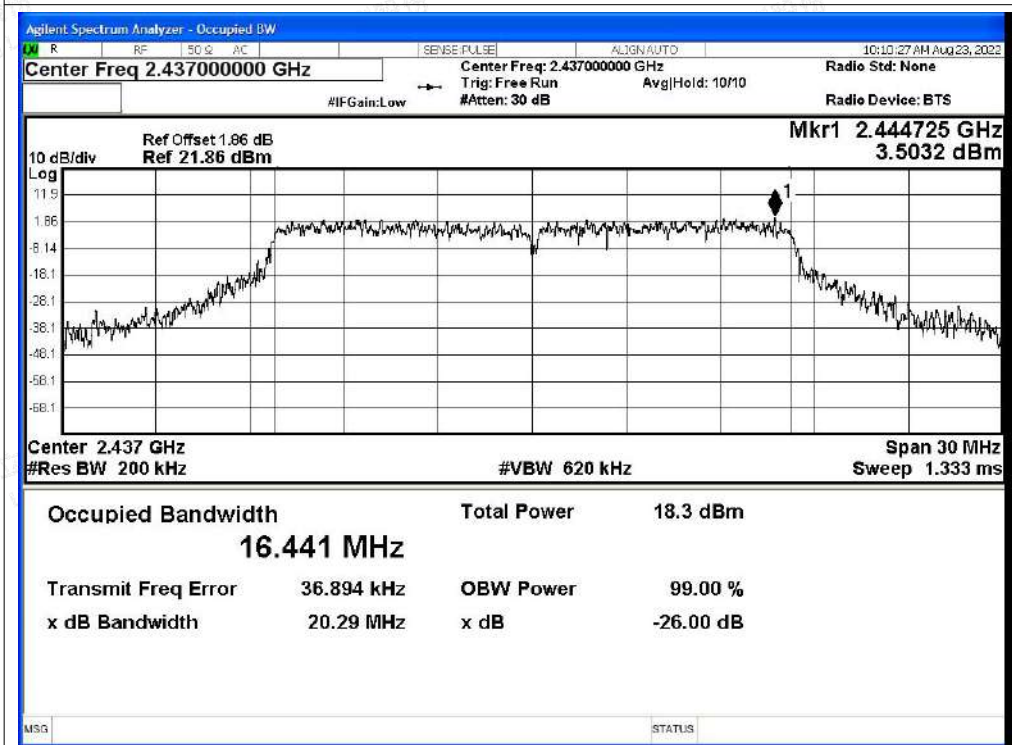
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity

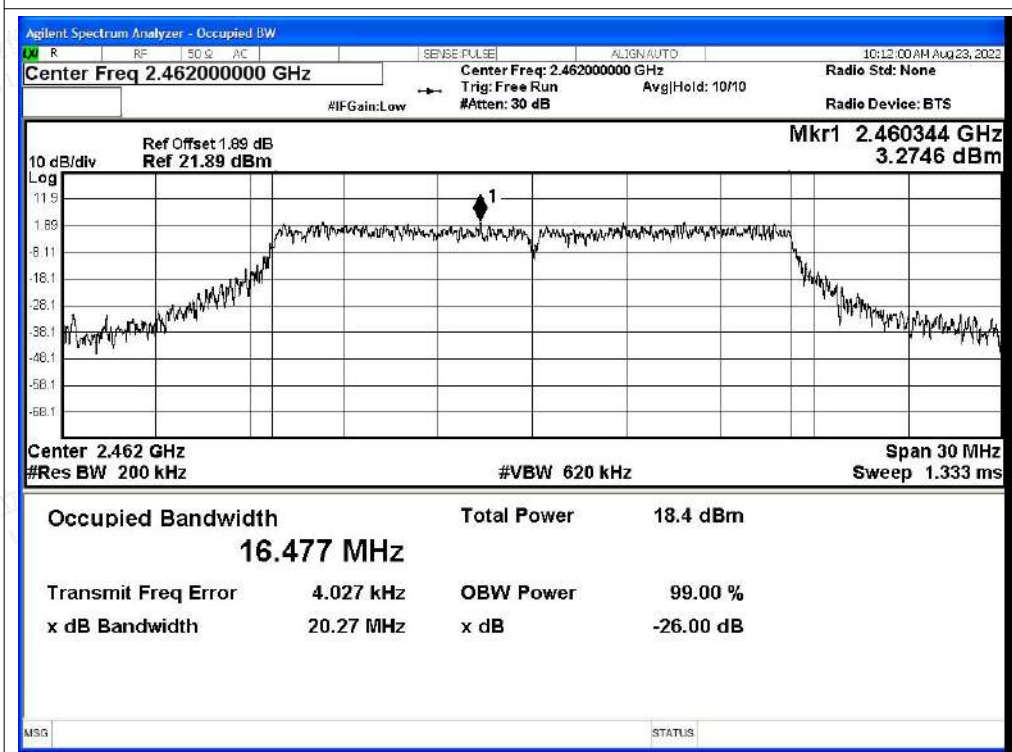




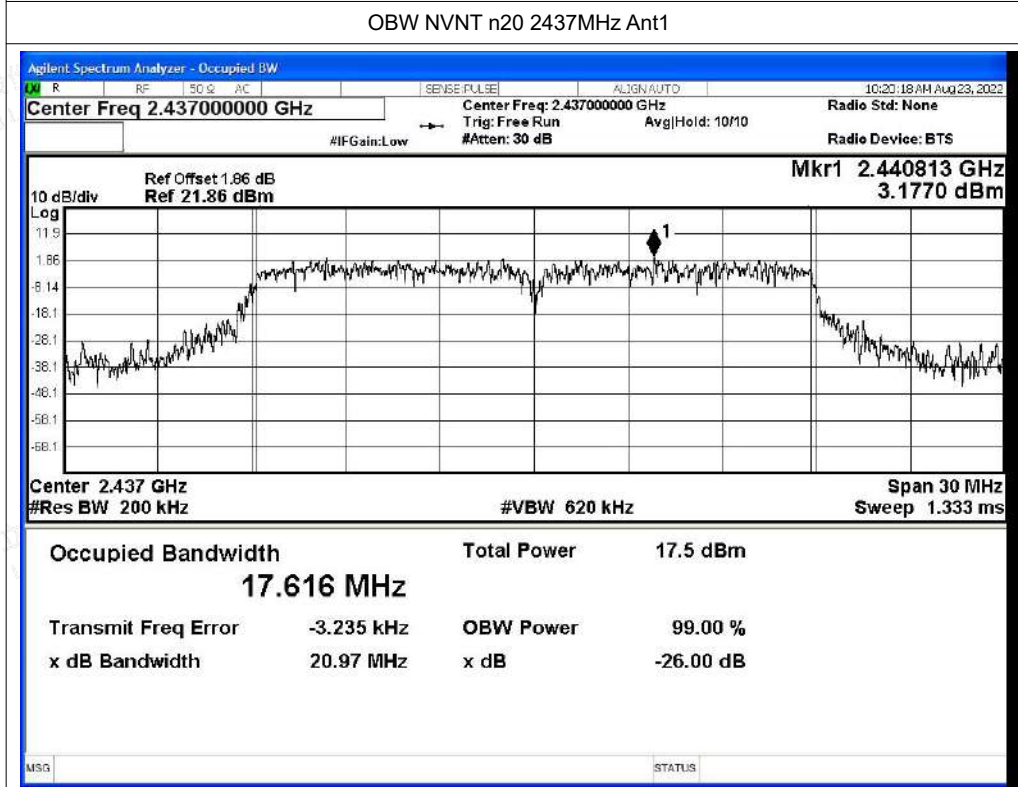
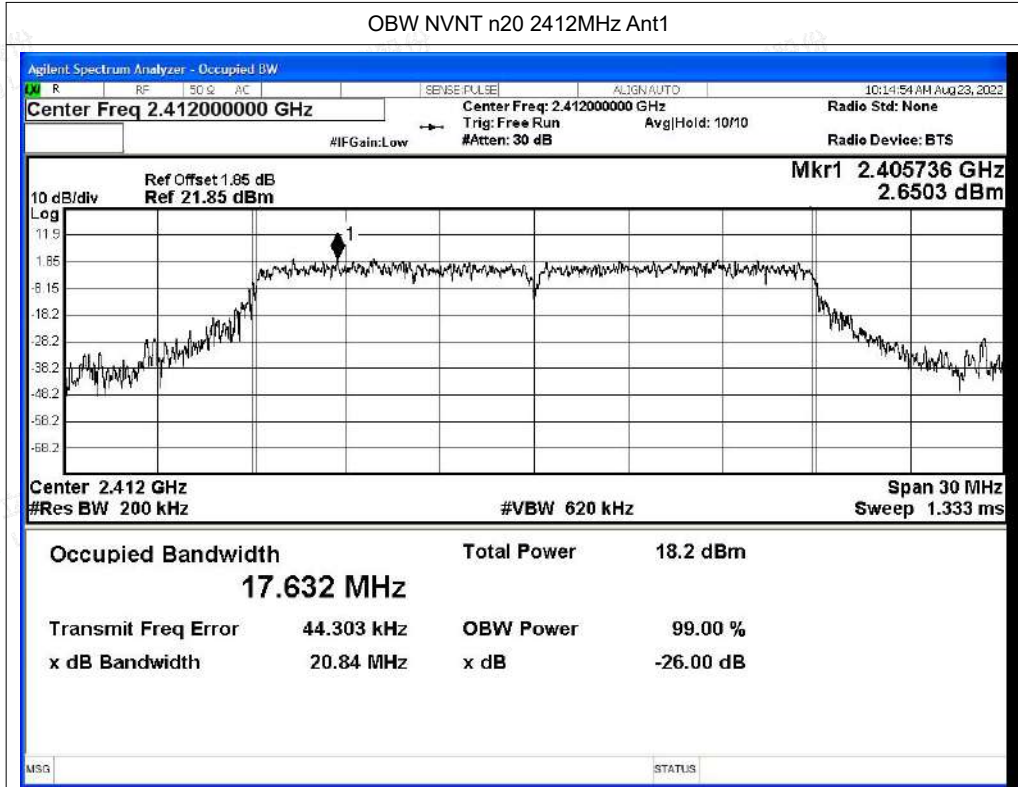
OBW NVNT g 2437MHz Ant1

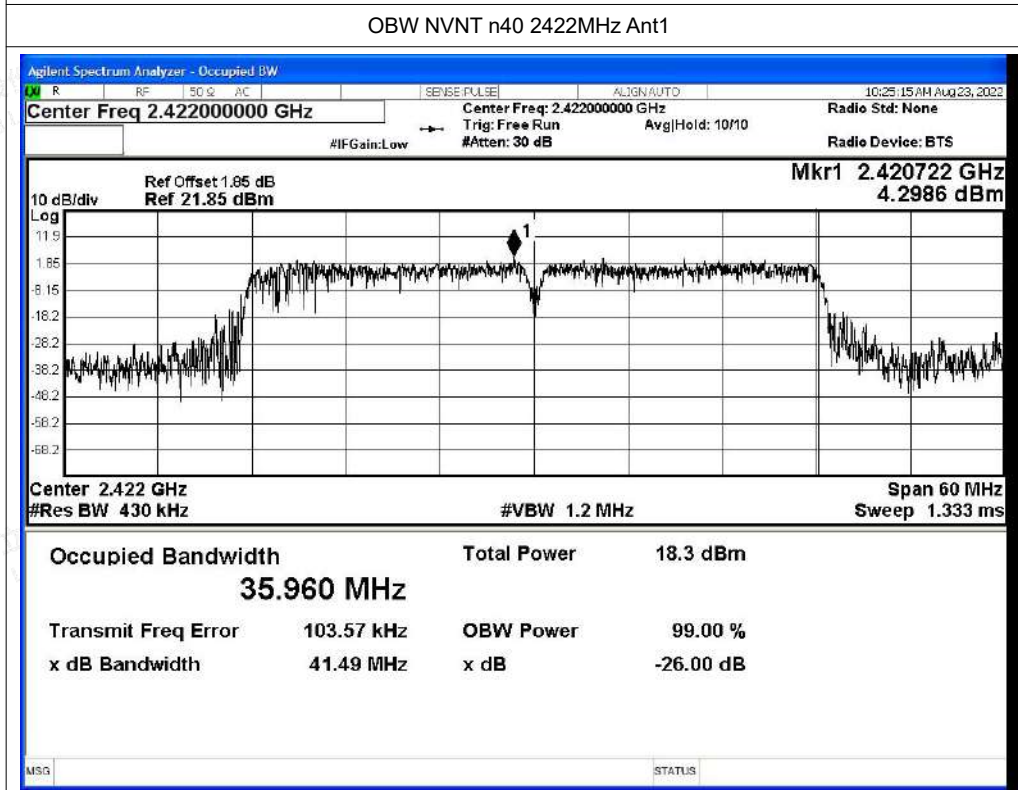
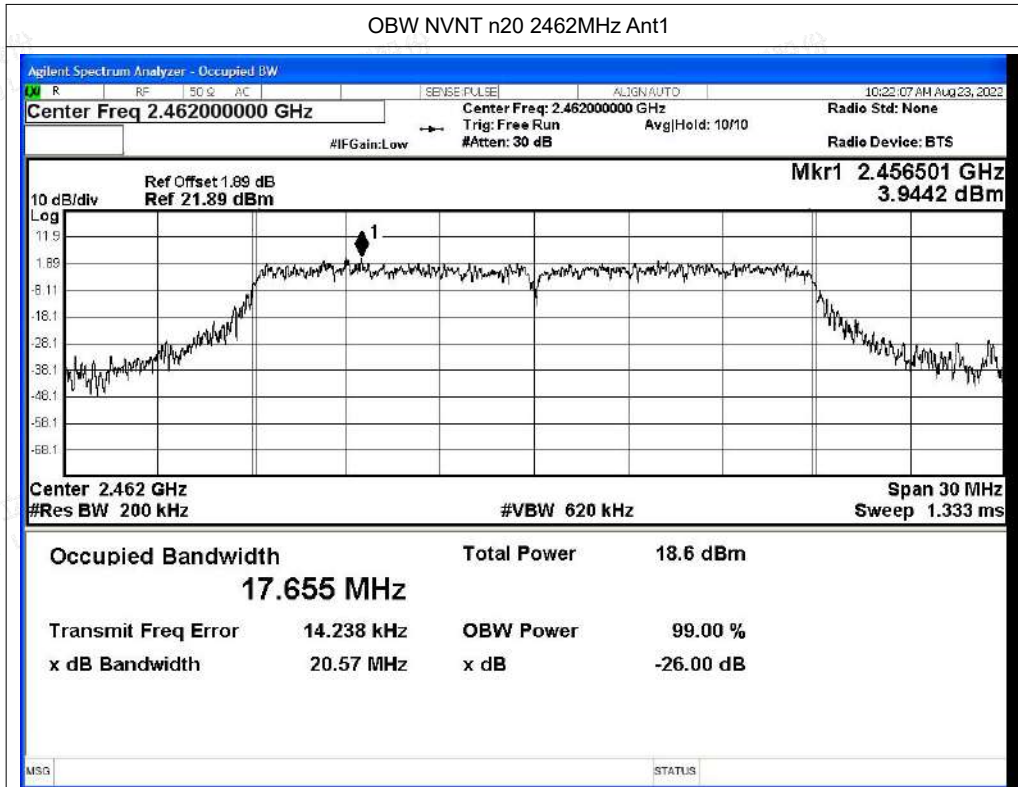


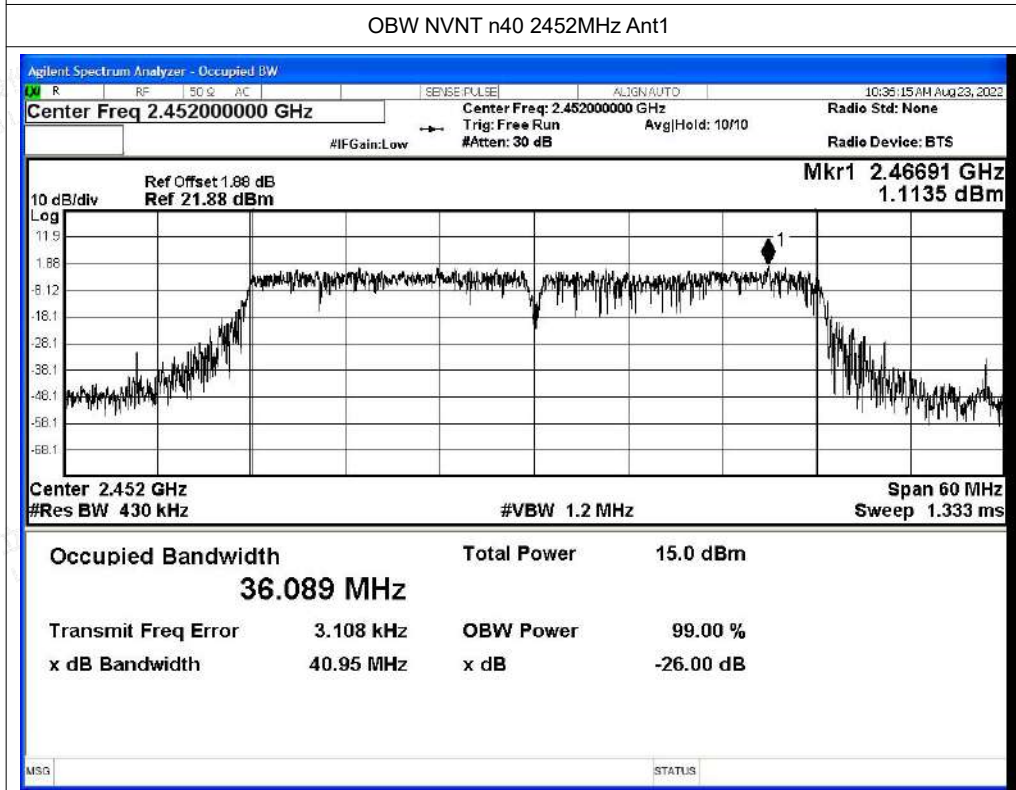
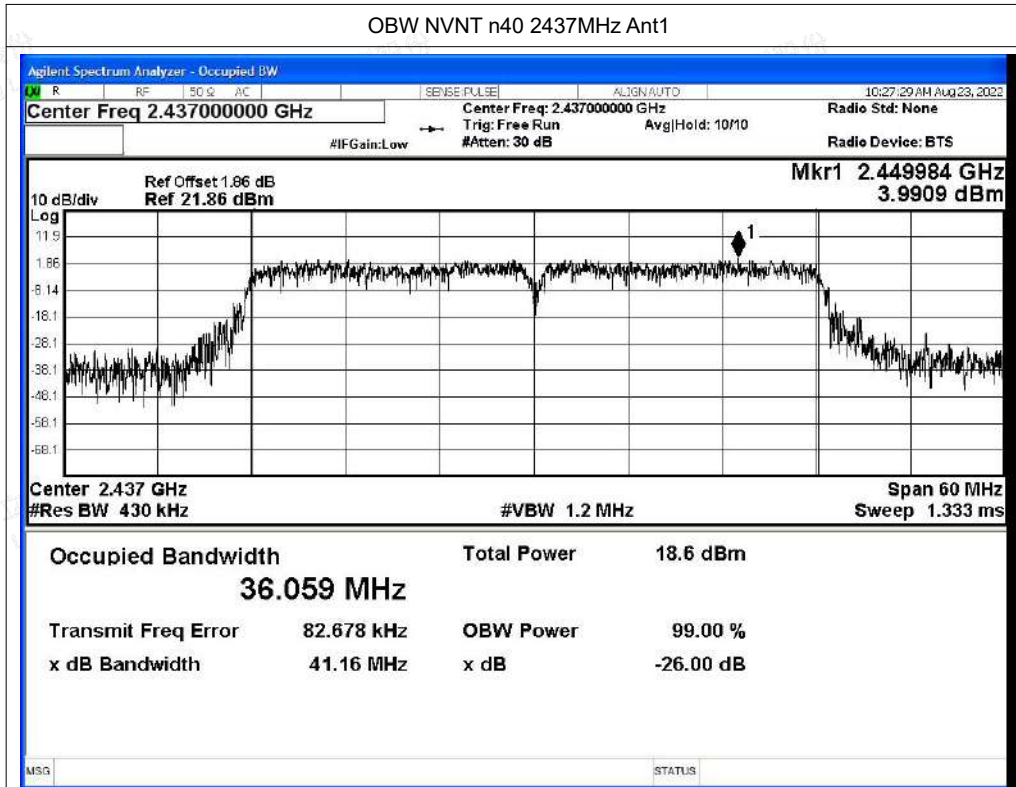
OBW NVNT g 2462MHz Ant1













### A.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Antenna Gain	EIRP [dBm]	EIRP Limit[dBm]	Verdict
NVNT	b	2412	Ant1	18.88	30	2.81	21.69	36	Pass
NVNT	b	2437	Ant1	18.55	30	2.81	21.36	36	Pass
NVNT	b	2462	Ant1	18.23	30	2.81	21.04	36	Pass
NVNT	g	2412	Ant1	16.72	30	2.81	19.53	36	Pass
NVNT	g	2437	Ant1	17.02	30	2.81	19.83	36	Pass
NVNT	g	2462	Ant1	17.45	30	2.81	20.26	36	Pass
NVNT	n20	2412	Ant1	17.46	30	2.81	20.27	36	Pass
NVNT	n20	2437	Ant1	17.45	30	2.81	20.26	36	Pass
NVNT	n20	2462	Ant1	19.31	30	2.81	22.12	36	Pass
NVNT	n40	2422	Ant1	17.14	30	2.81	19.95	36	Pass
NVNT	n40	2437	Ant1	17.42	30	2.81	20.23	36	Pass
NVNT	n40	2452	Ant1	18.21	30	2.81	21.02	36	Pass







### A.4 Maximum Power Spectral Density Level

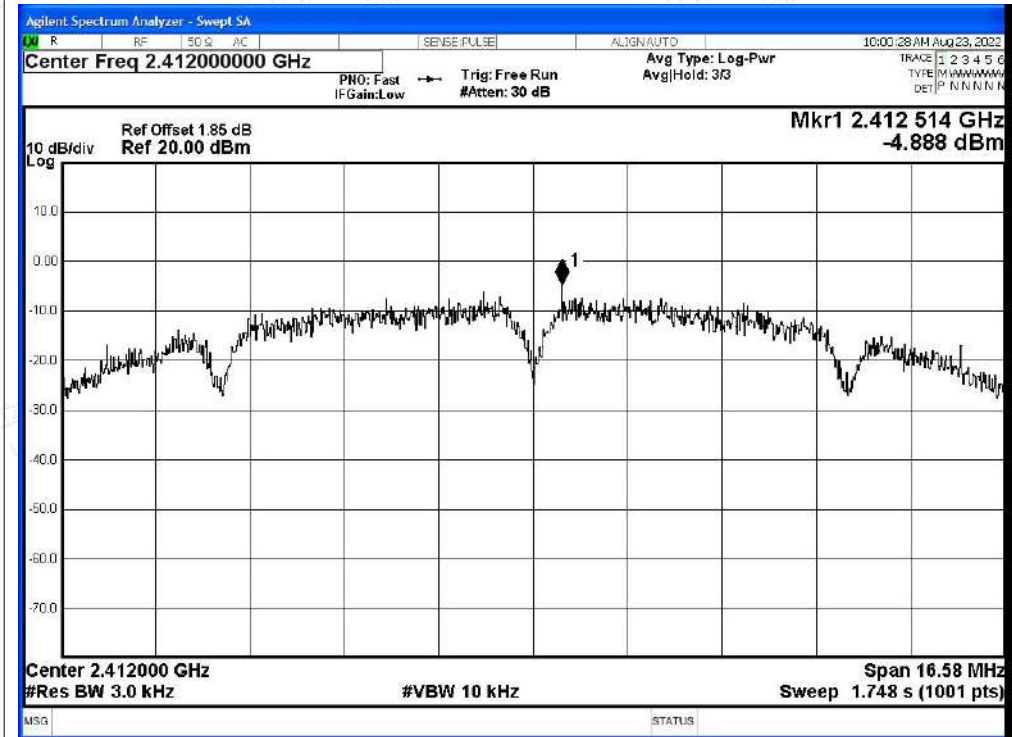
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-4.89	8	Pass
NVNT	b	2437	Ant1	-7.45	8	Pass
NVNT	b	2462	Ant1	-7.14	8	Pass
NVNT	g	2412	Ant1	-10.59	8	Pass
NVNT	g	2437	Ant1	-10.16	8	Pass
NVNT	g	2462	Ant1	-10.27	8	Pass
NVNT	n20	2412	Ant1	-10.51	8	Pass
NVNT	n20	2437	Ant1	-10.43	8	Pass
NVNT	n20	2462	Ant1	-10.45	8	Pass
NVNT	n40	2422	Ant1	-12.97	8	Pass
NVNT	n40	2437	Ant1	-13.44	8	Pass
NVNT	n40	2452	Ant1	-13.15	8	Pass



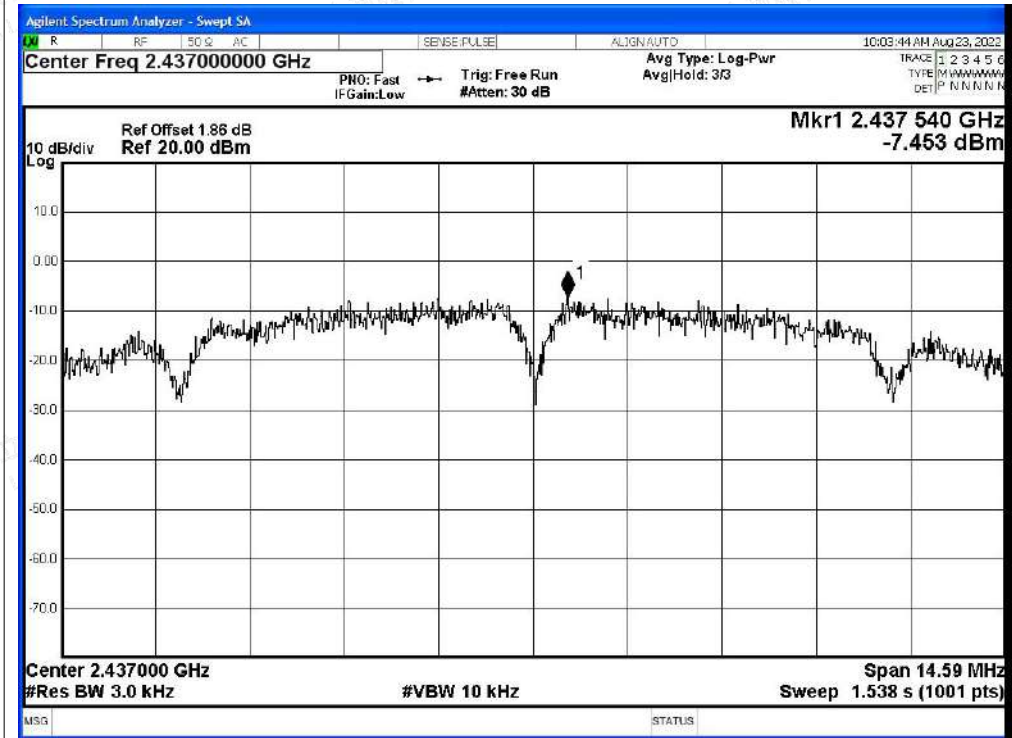


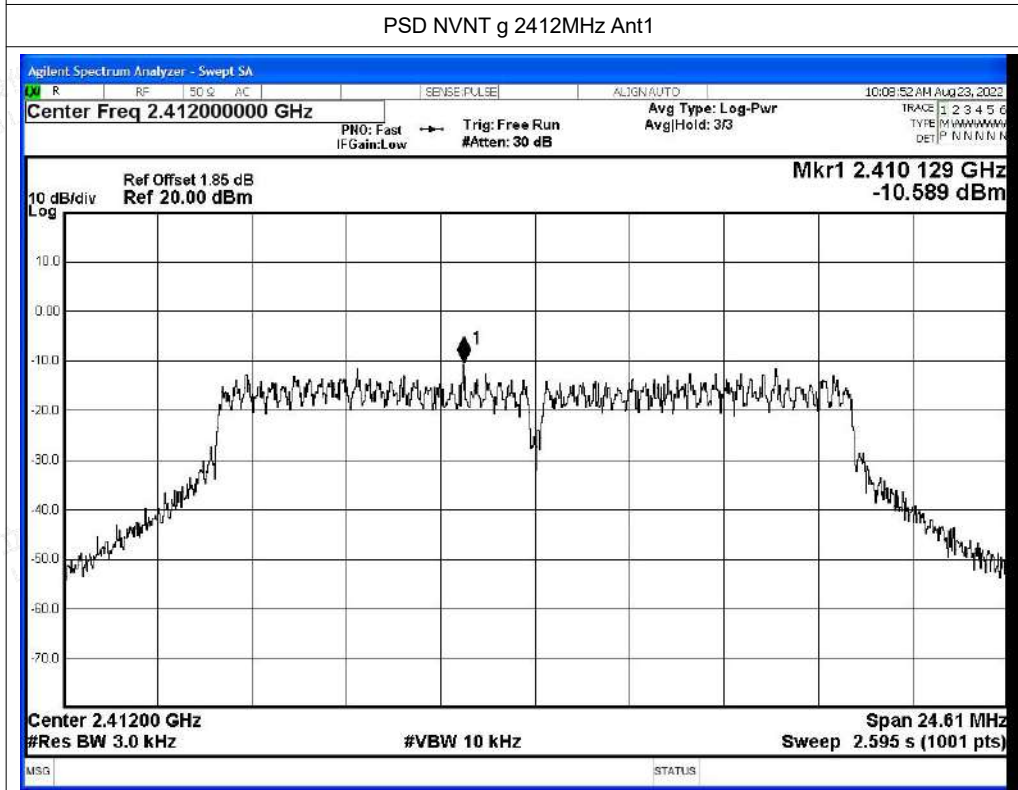
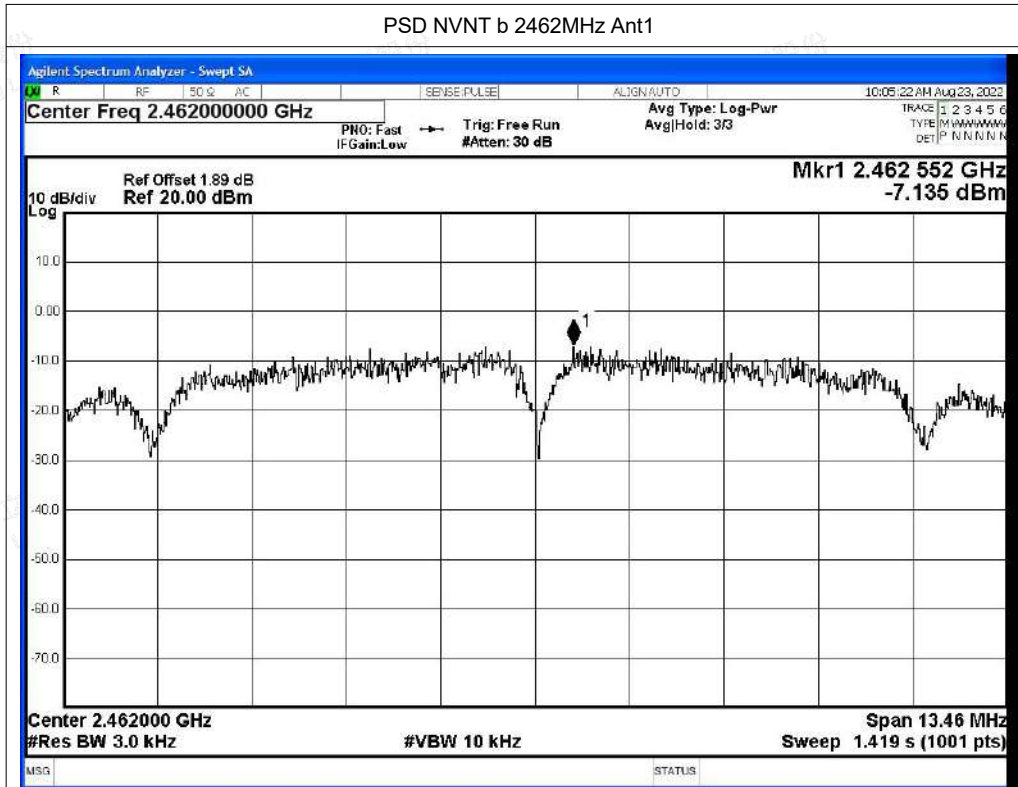
Test Graphs

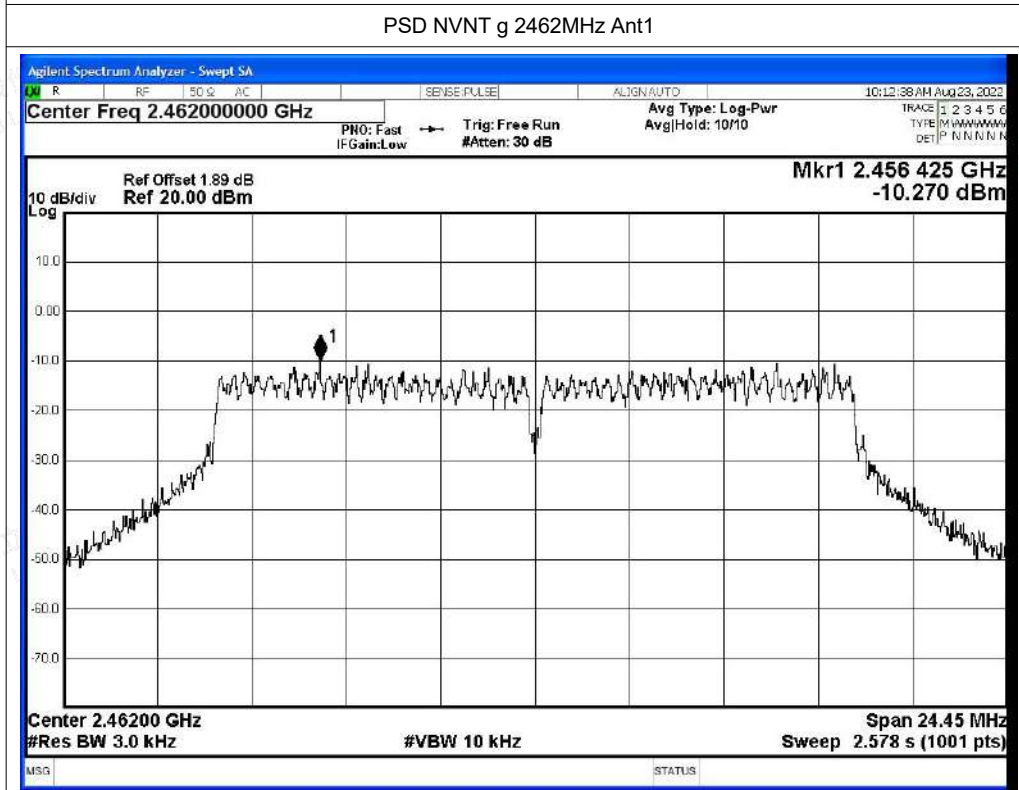
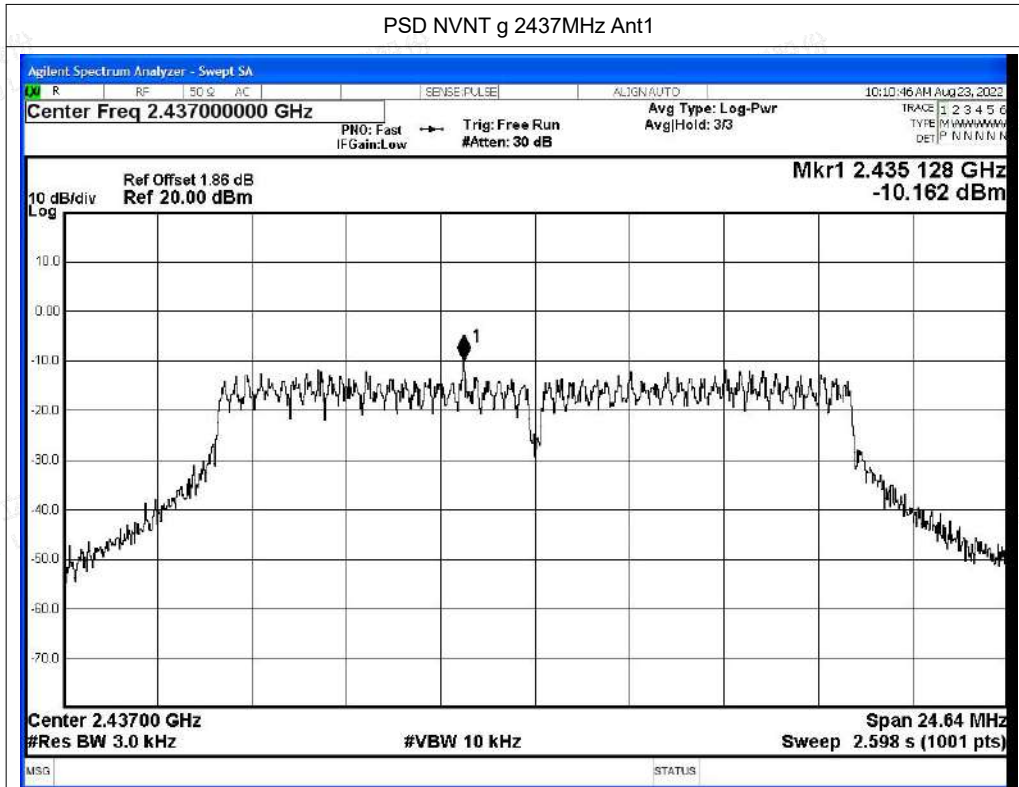
PSD NVNT b 2412MHz Ant1



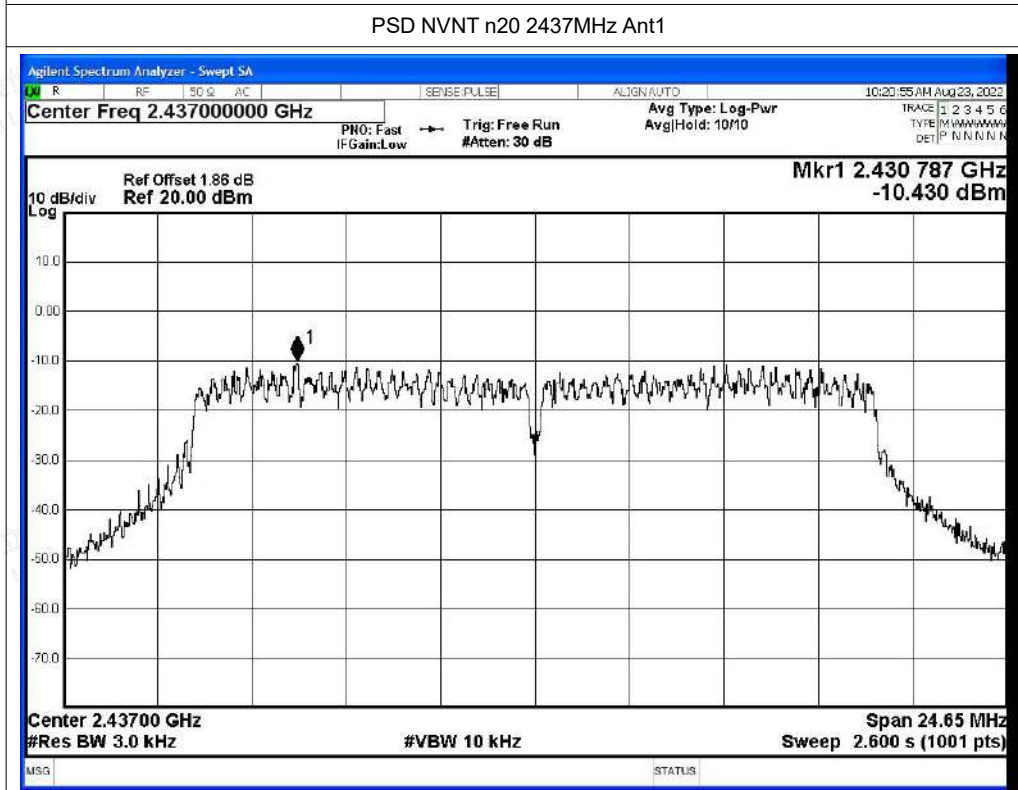
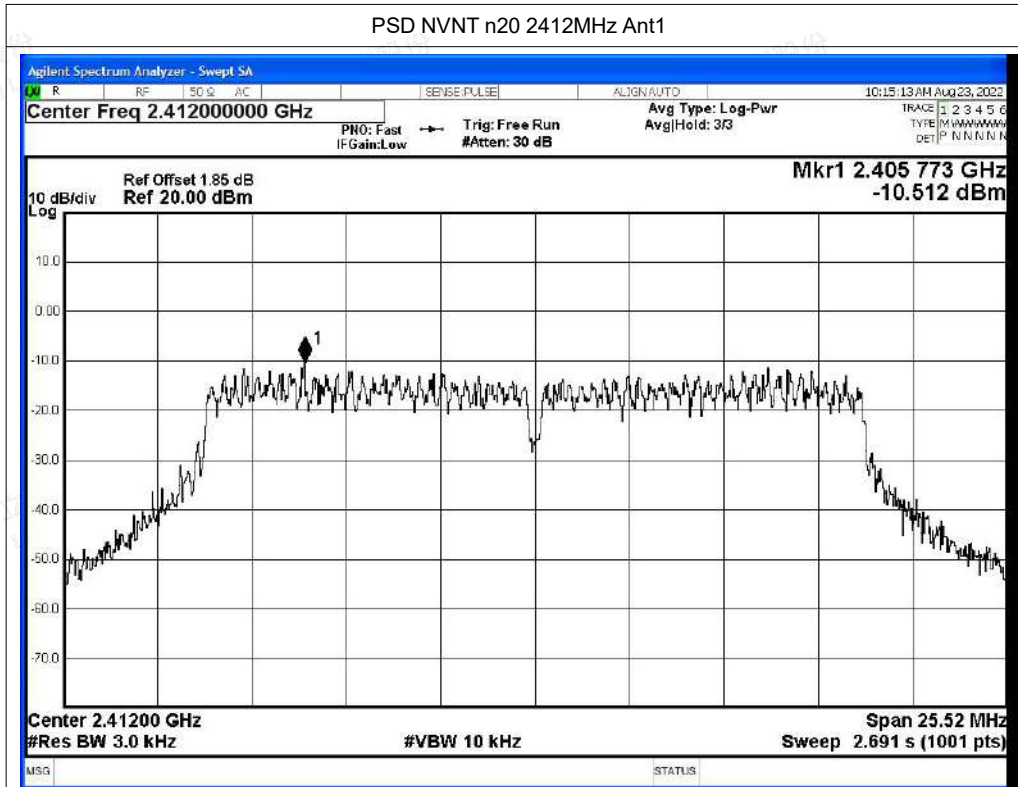
PSD NVNT b 2437MHz Ant1

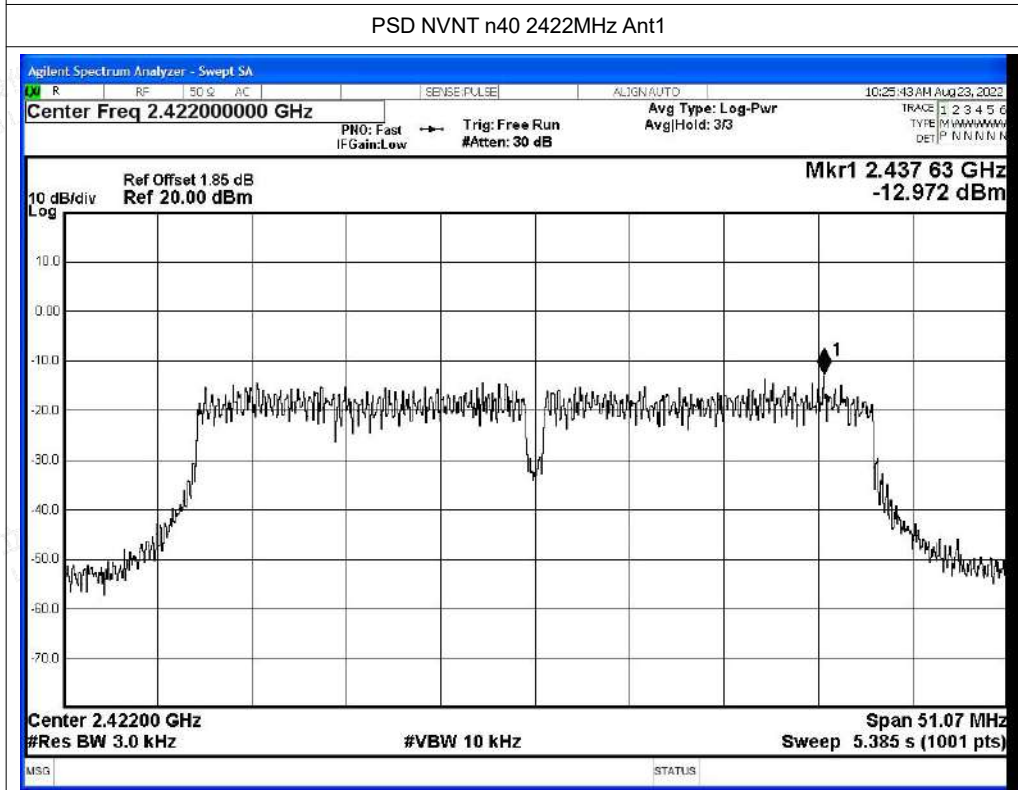
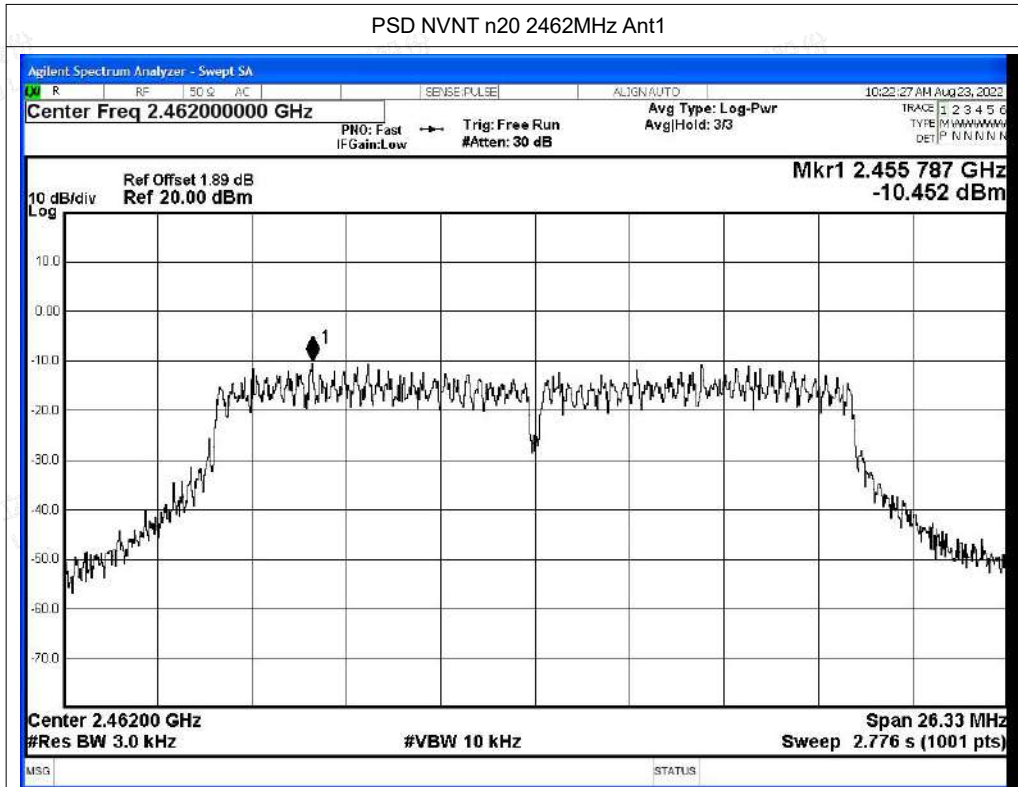


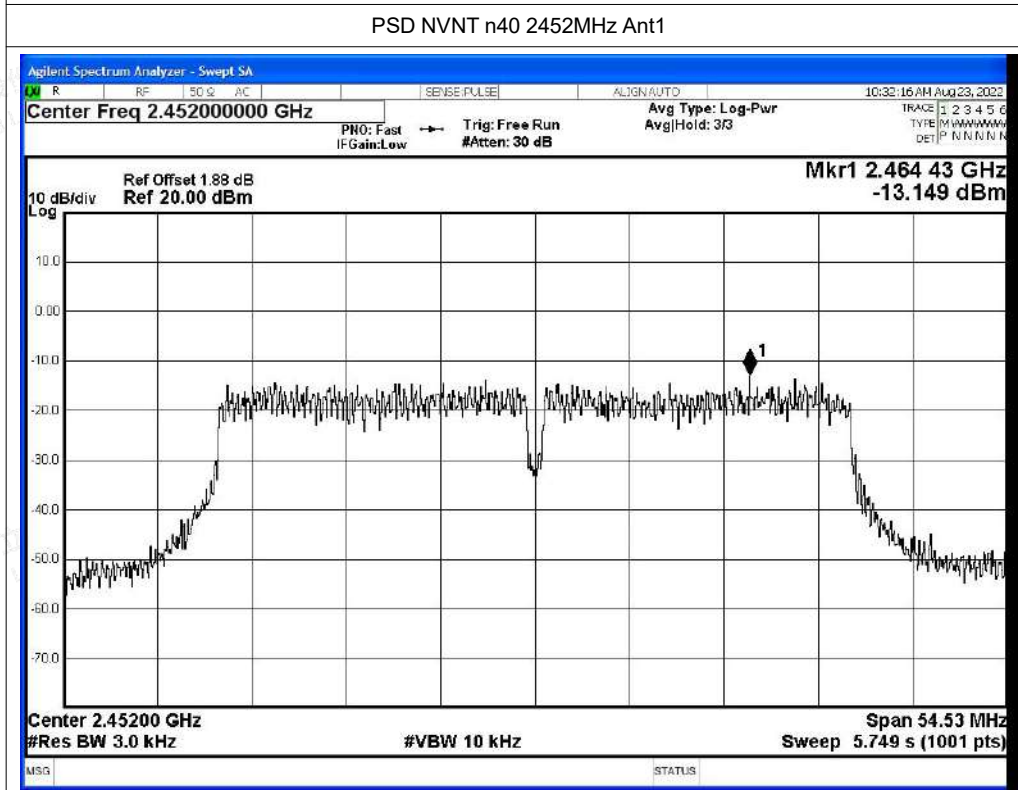
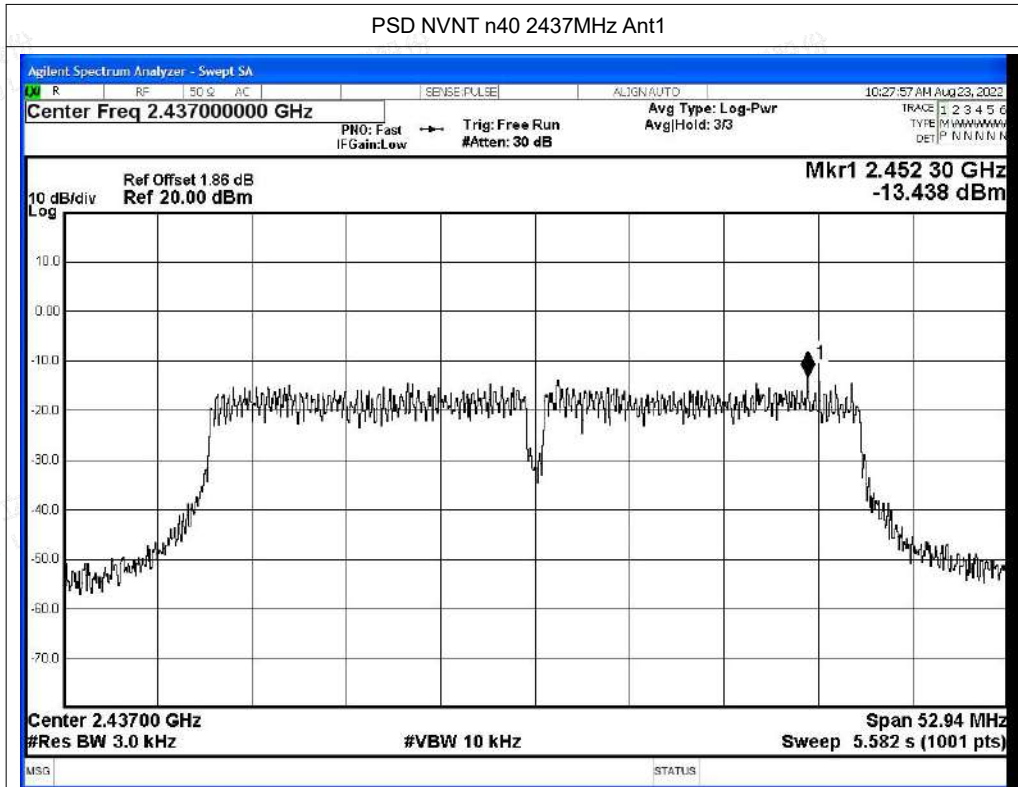














### A.5 Band Edge

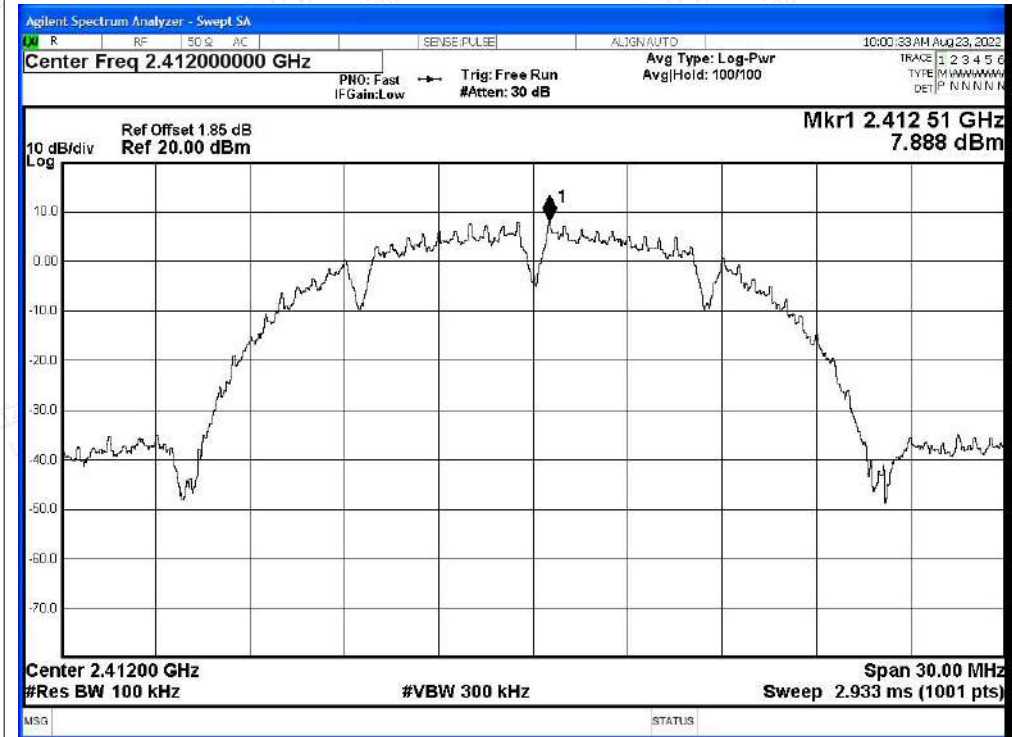
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-43.95	-20	Pass
NVNT	b	2462	Ant1	-60.25	-20	Pass
NVNT	g	2412	Ant1	-36.94	-20	Pass
NVNT	g	2462	Ant1	-46.46	-20	Pass
NVNT	n20	2412	Ant1	-35.96	-20	Pass
NVNT	n20	2462	Ant1	-46.38	-20	Pass
NVNT	n40	2422	Ant1	-37.41	-20	Pass
NVNT	n40	2452	Ant1	-36.57	-20	Pass



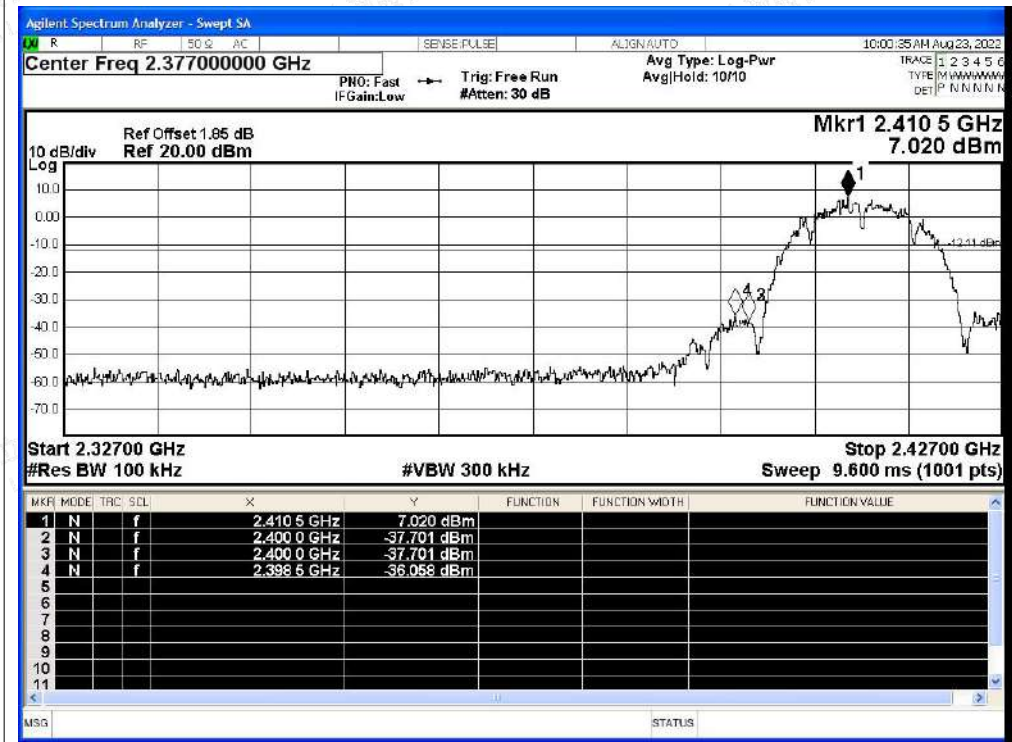


Test Graphs

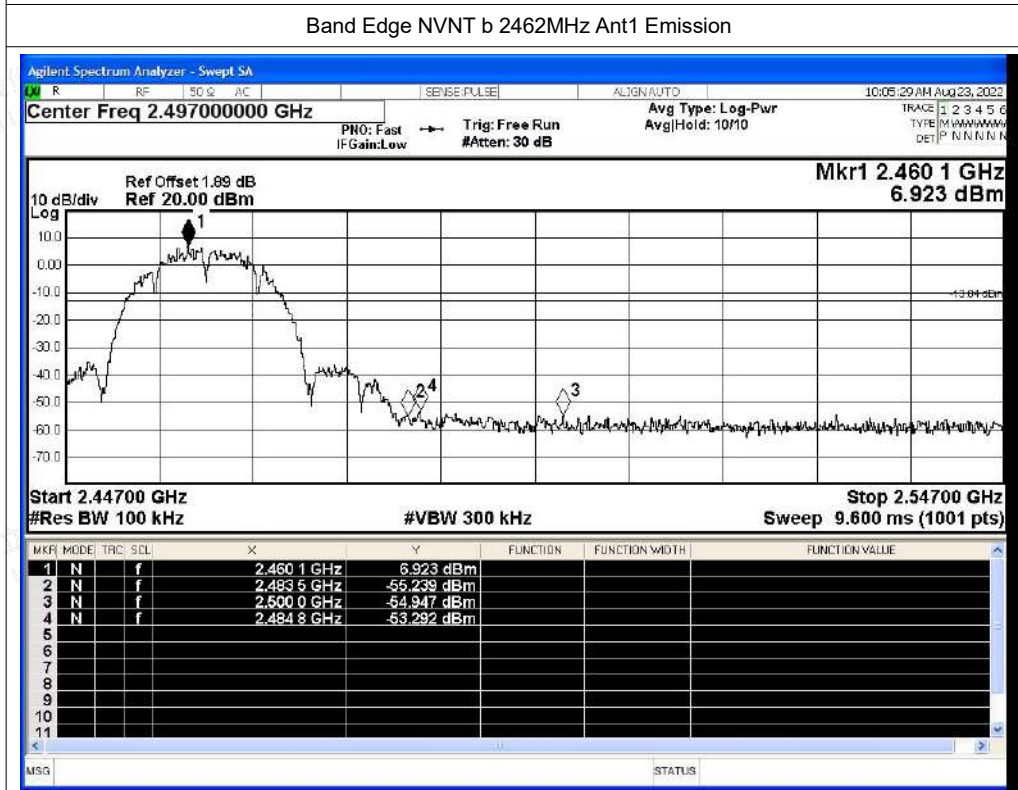
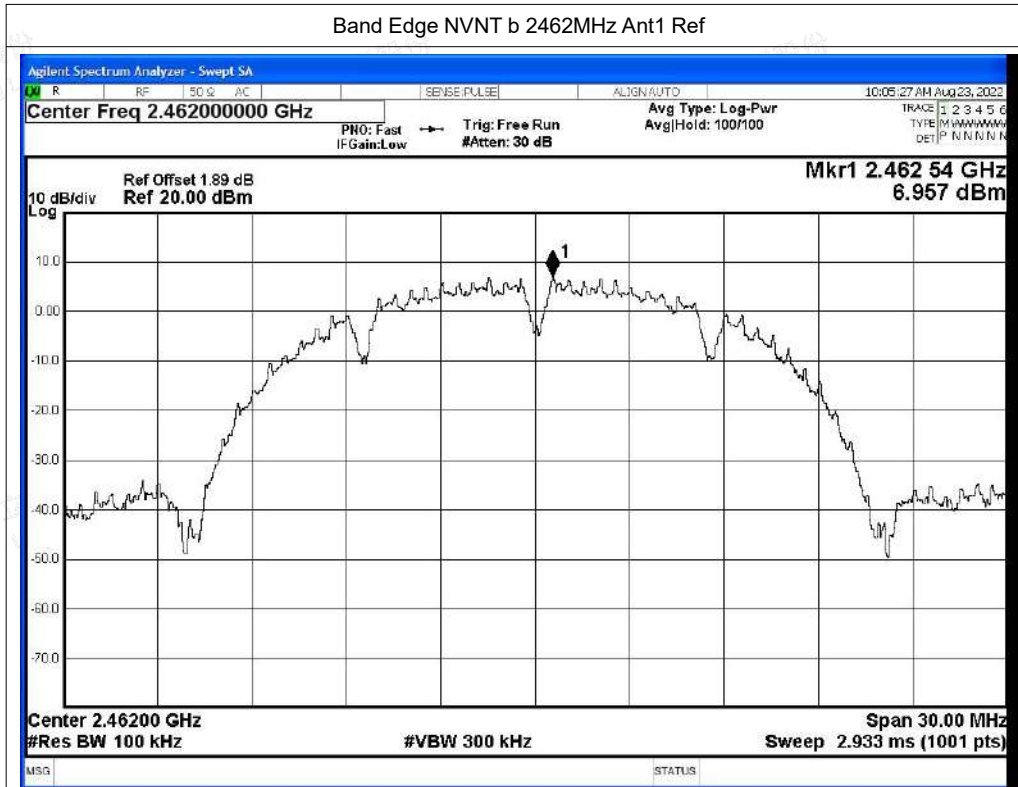
Band Edge NVNT b 2412MHz Ant1 Ref

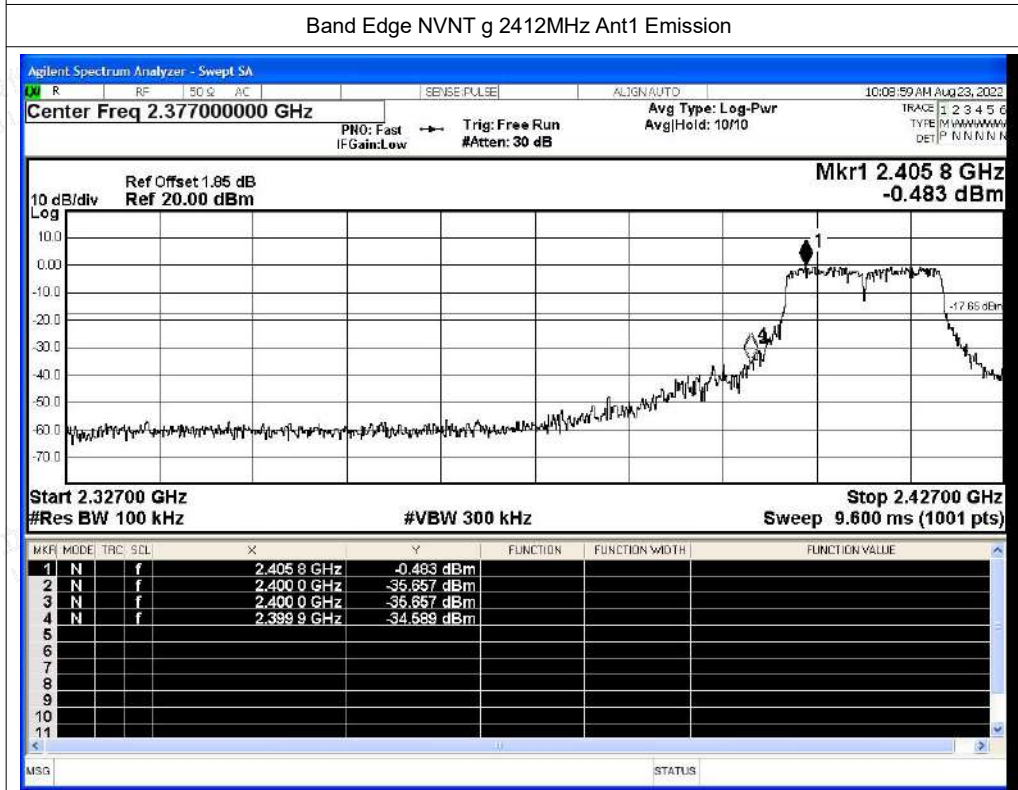
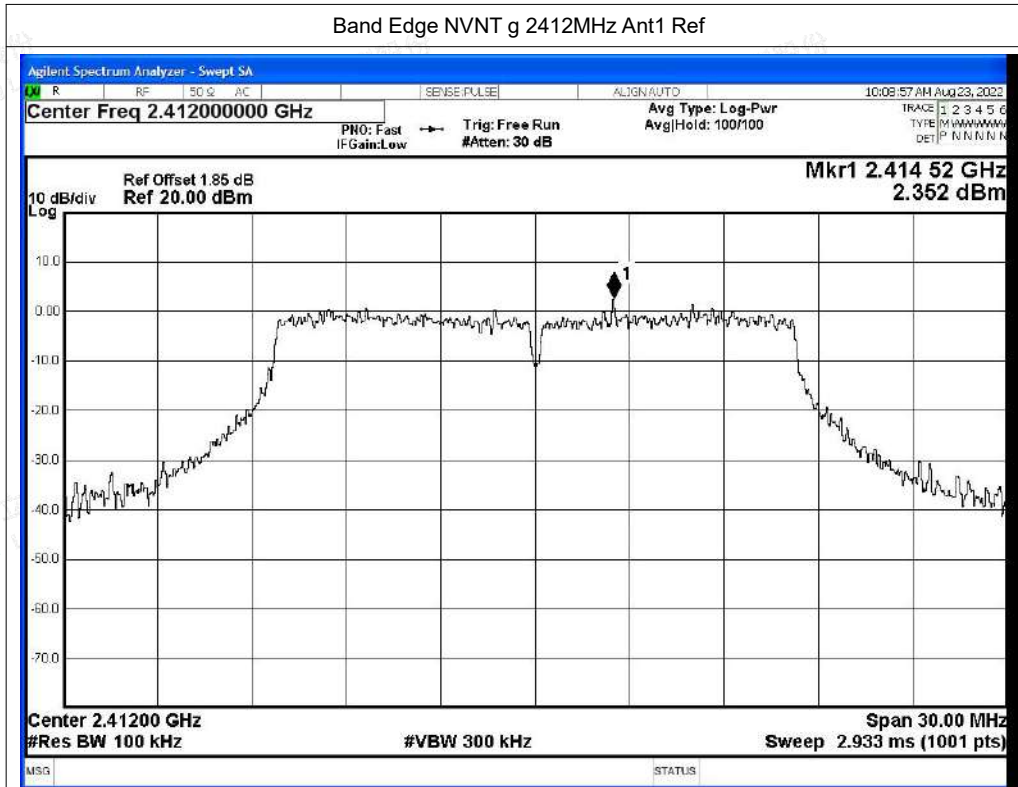


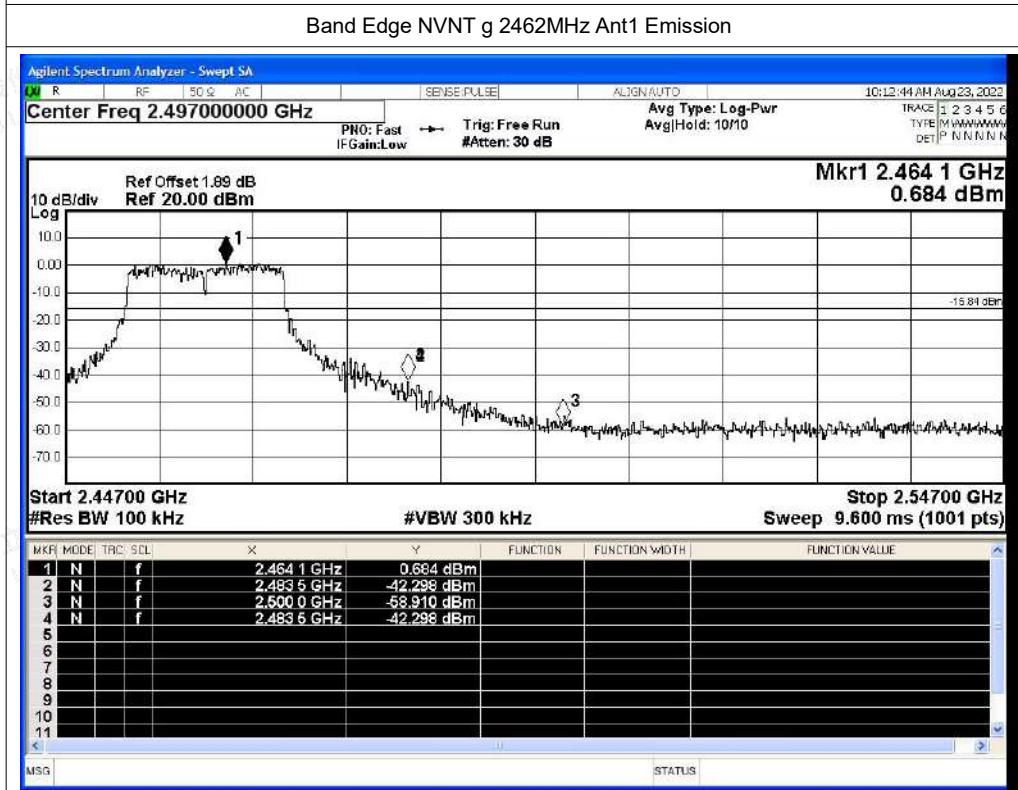
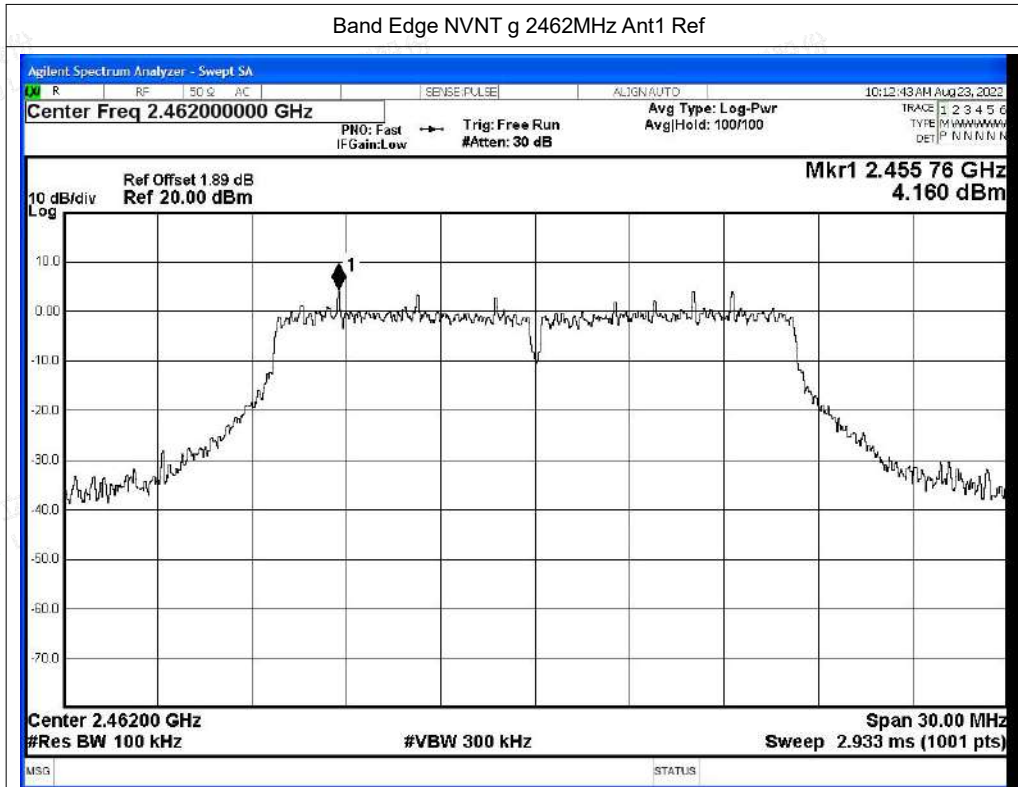
Band Edge NVNT b 2412MHz Ant1 Emission

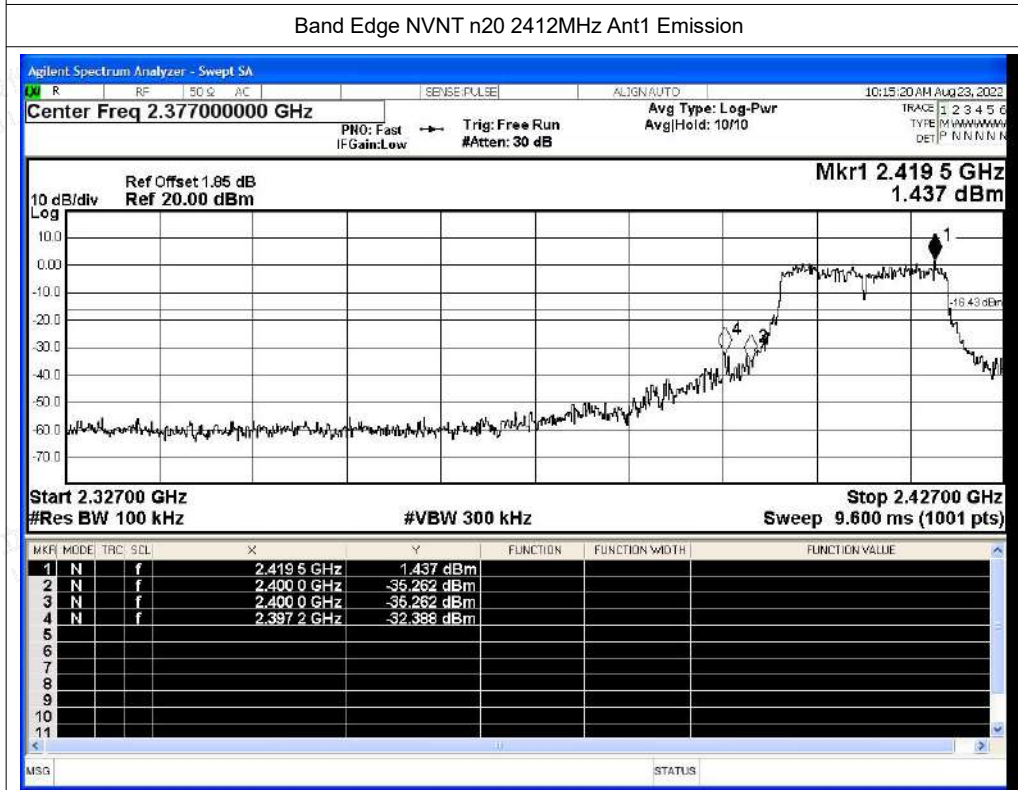
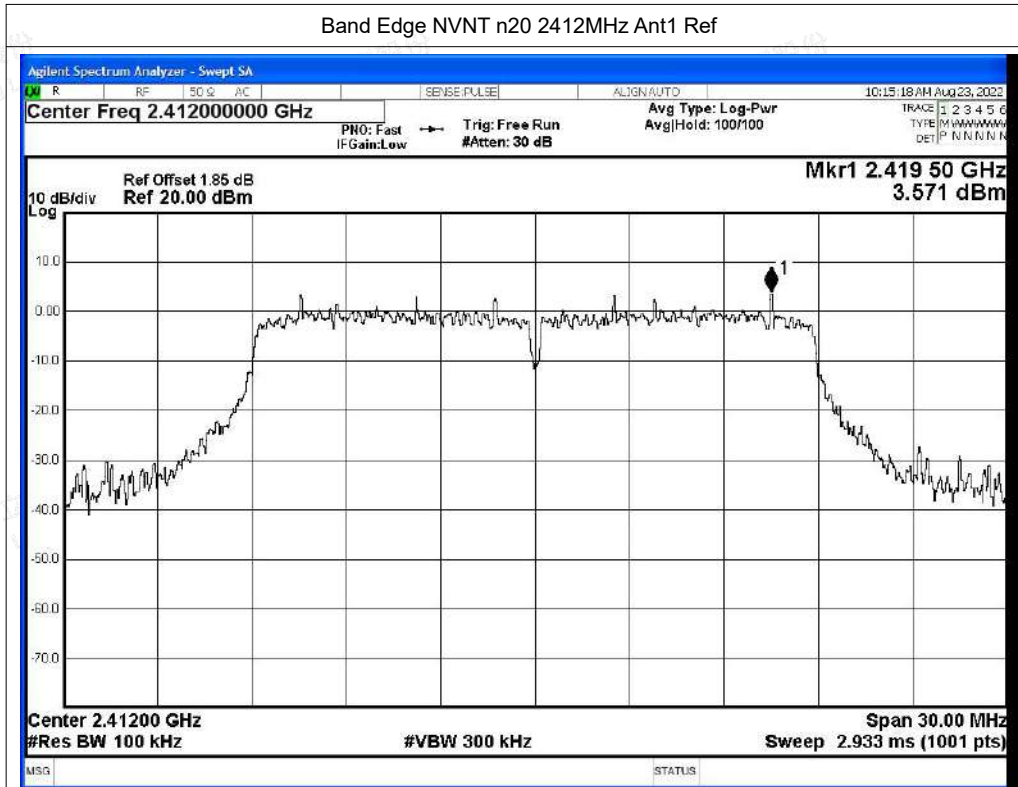




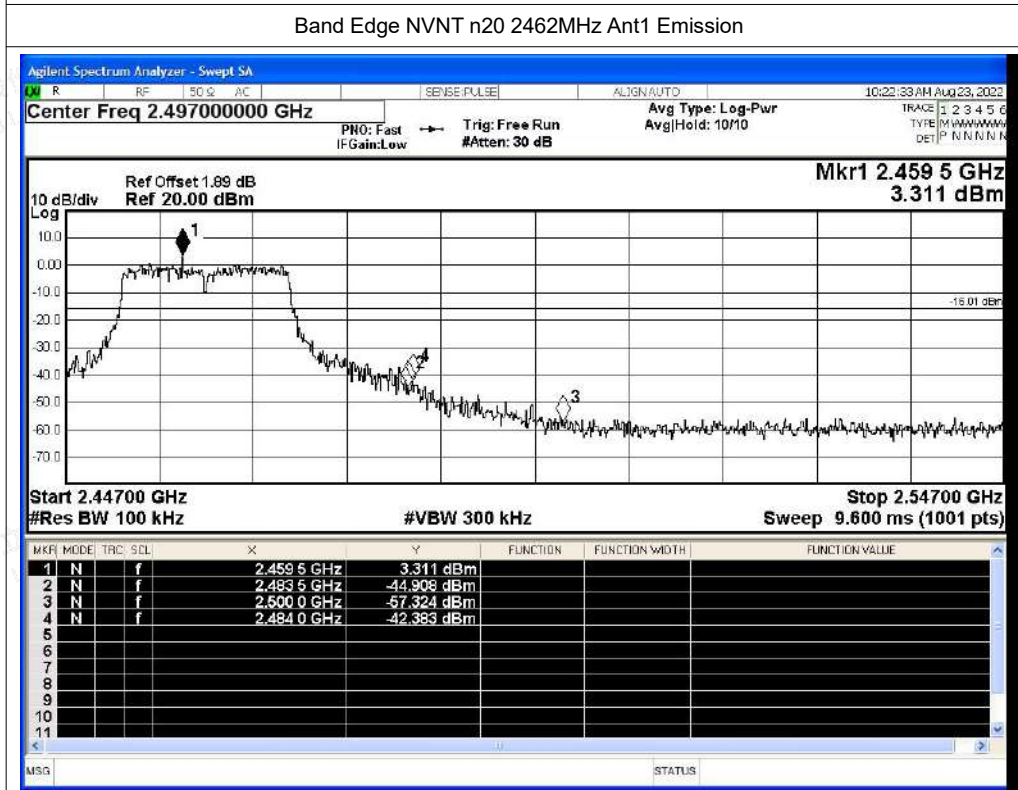
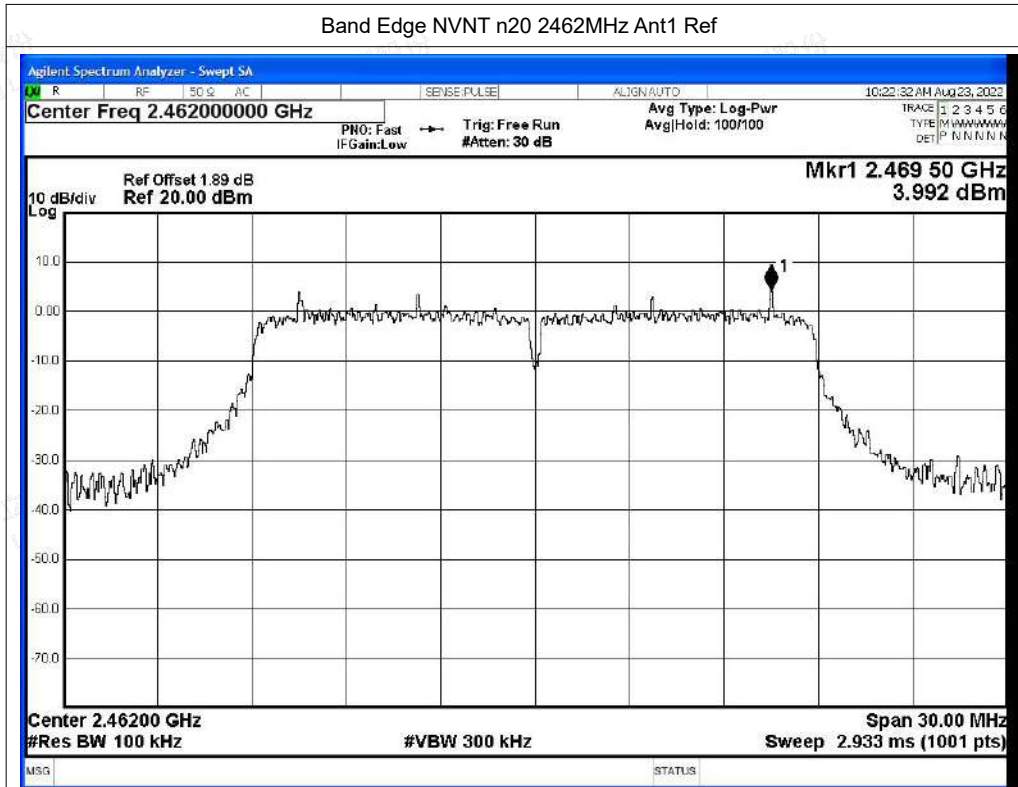




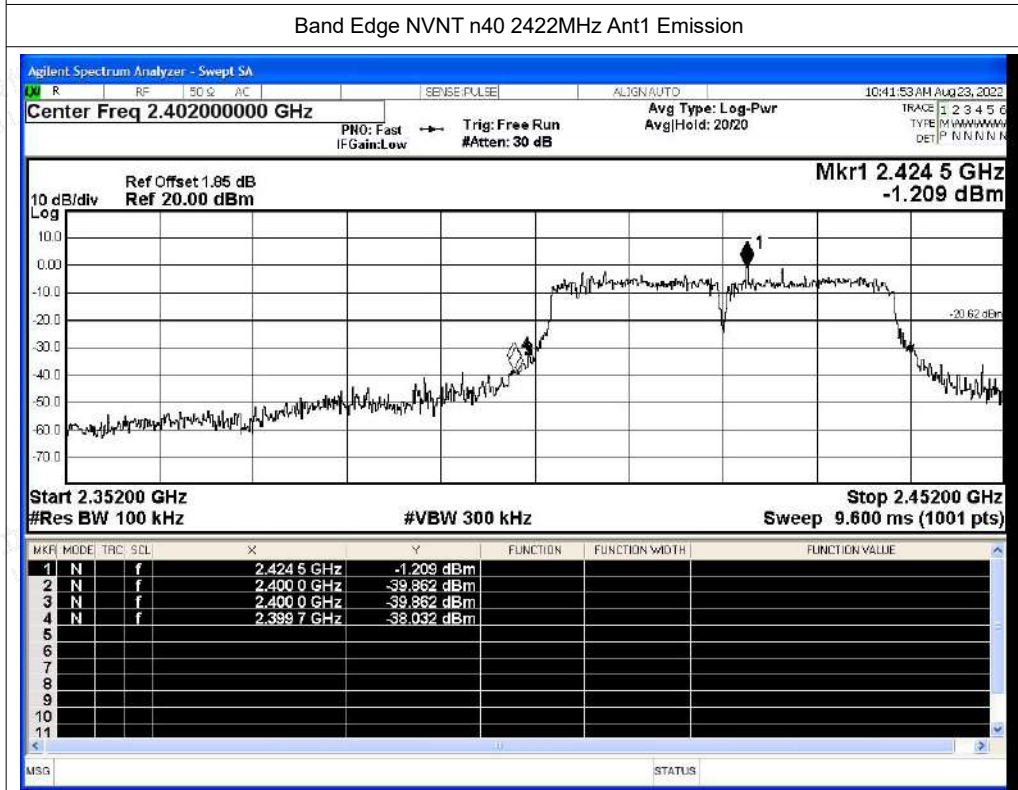
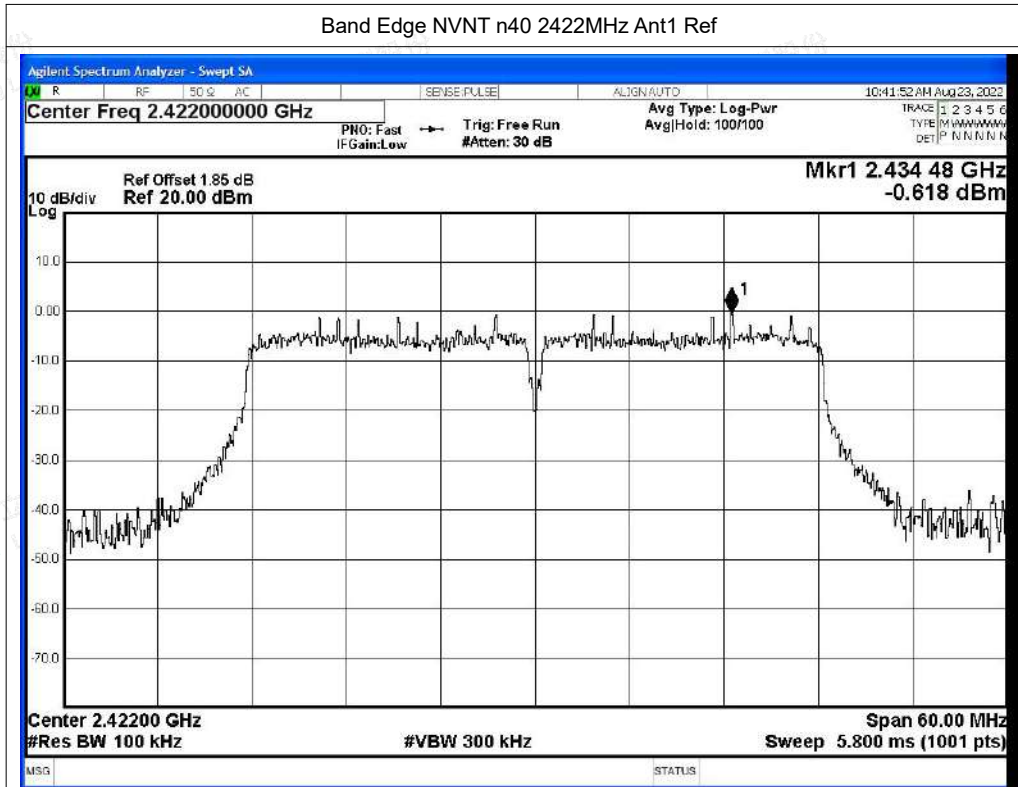


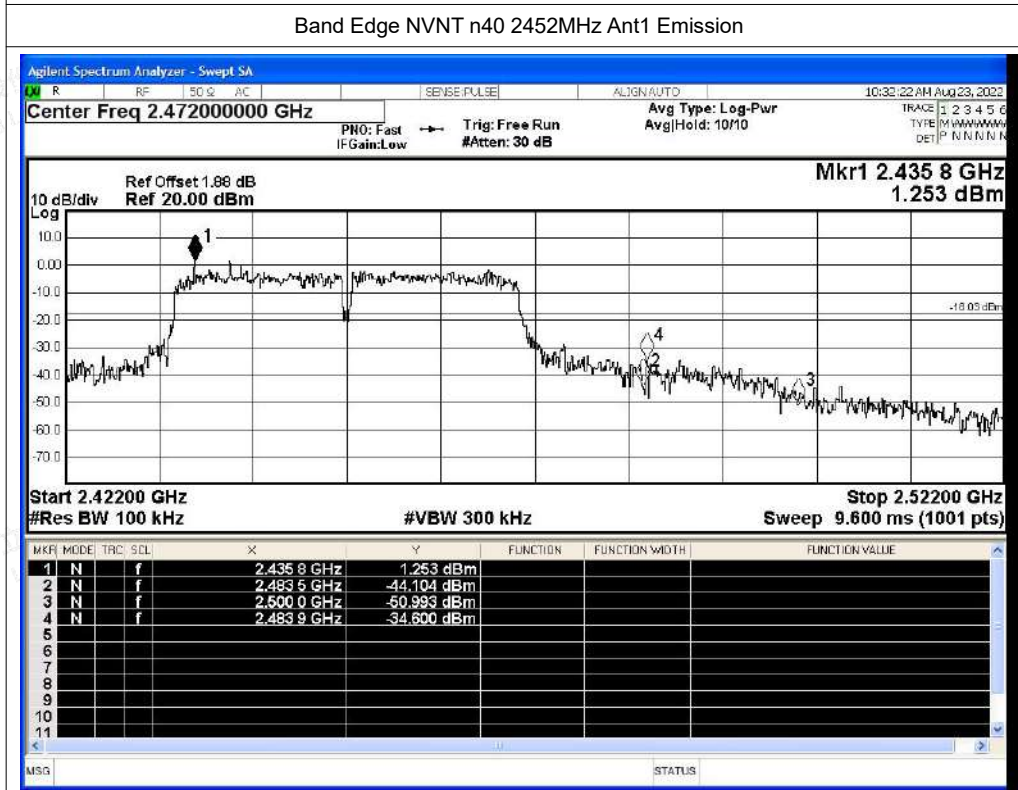
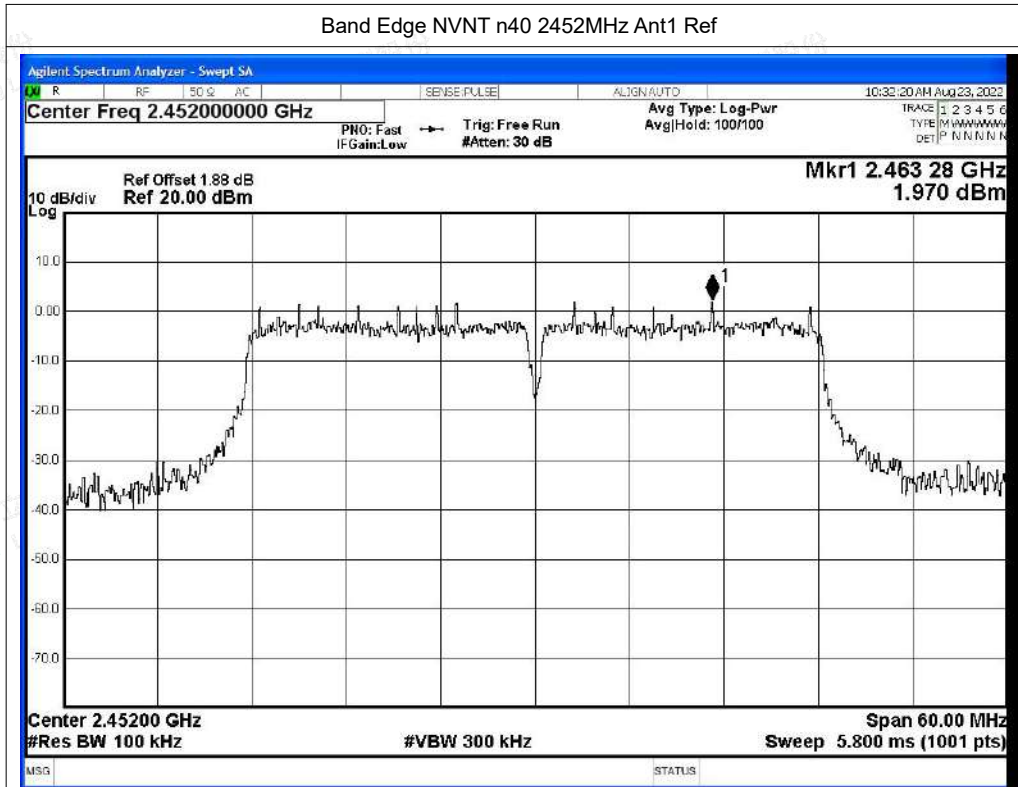














### A.6 Conducted RF Spurious Emission

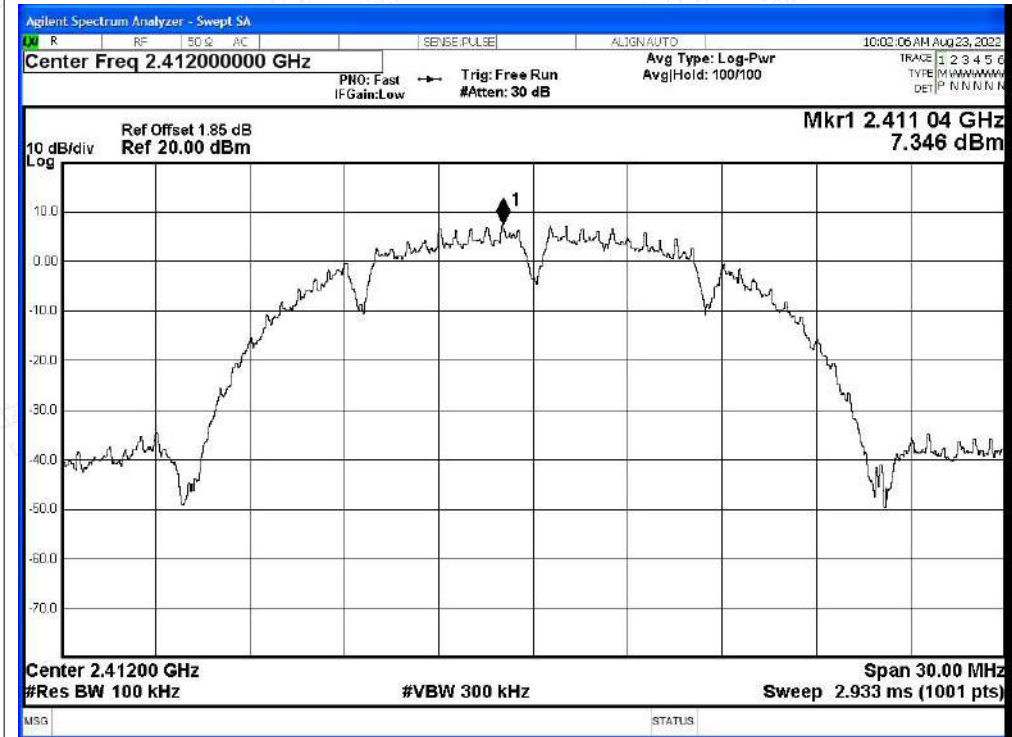
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-53.19	-20	Pass
NVNT	b	2437	Ant1	-52.71	-20	Pass
NVNT	b	2462	Ant1	-52.25	-20	Pass
NVNT	g	2412	Ant1	-49.52	-20	Pass
NVNT	g	2437	Ant1	-49.48	-20	Pass
NVNT	g	2462	Ant1	-49.34	-20	Pass
NVNT	n20	2412	Ant1	-49.09	-20	Pass
NVNT	n20	2437	Ant1	-51.03	-20	Pass
NVNT	n20	2462	Ant1	-48.52	-20	Pass
NVNT	n40	2422	Ant1	-48.21	-20	Pass
NVNT	n40	2437	Ant1	-48.64	-20	Pass
NVNT	n40	2452	Ant1	-47.82	-20	Pass



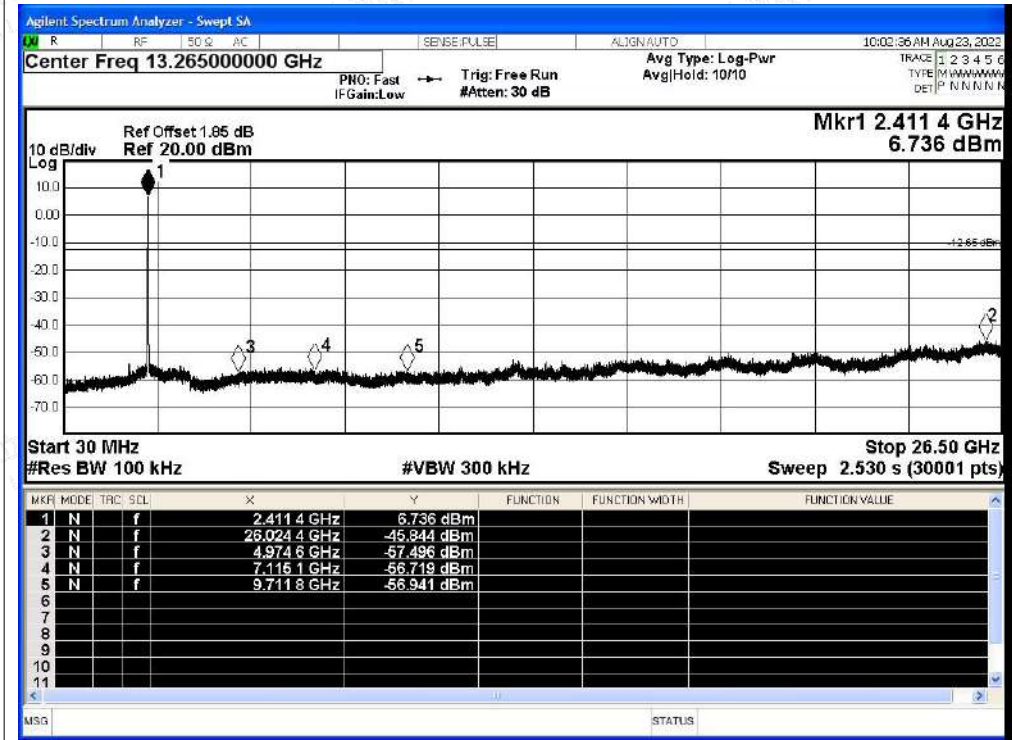


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Tx. Spurious NVNT b 2412MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

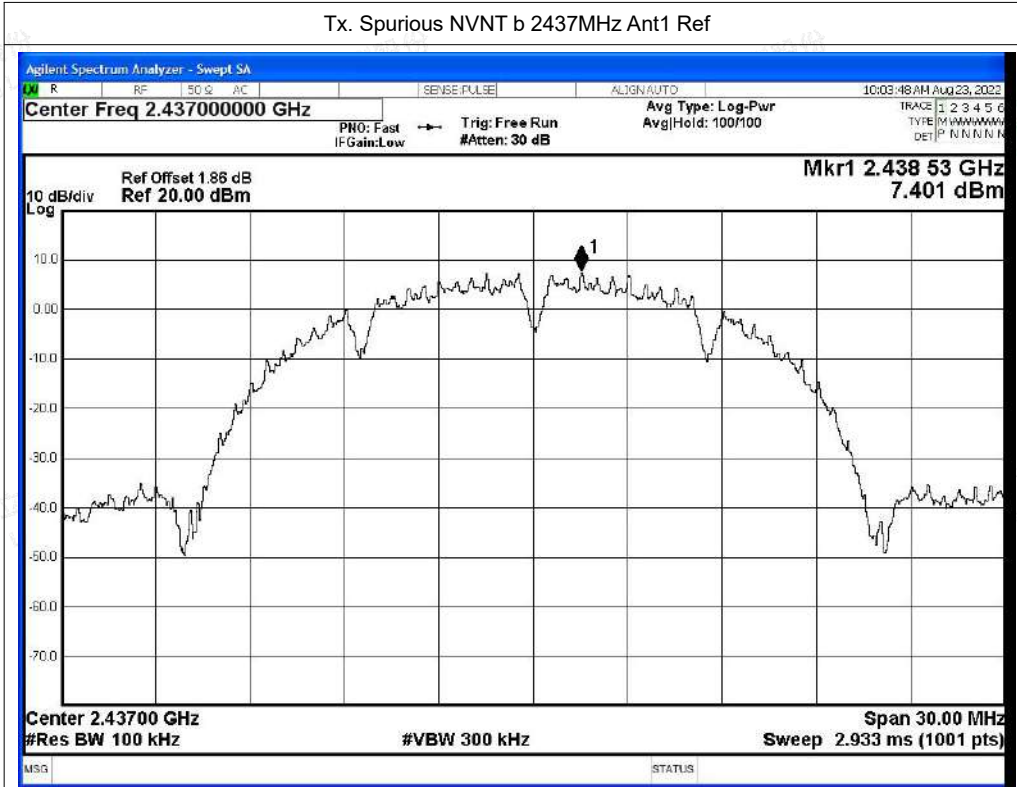
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

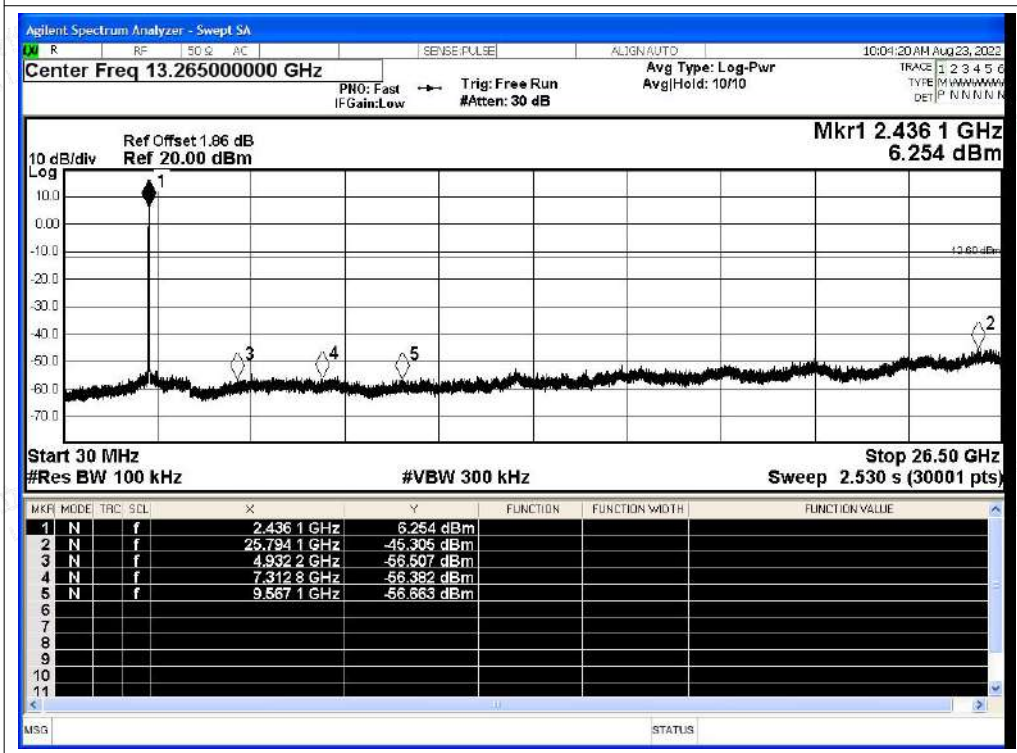
Scan code to check authenticity



Tx. Spurious NVNT b 2437MHz Ant1 Ref



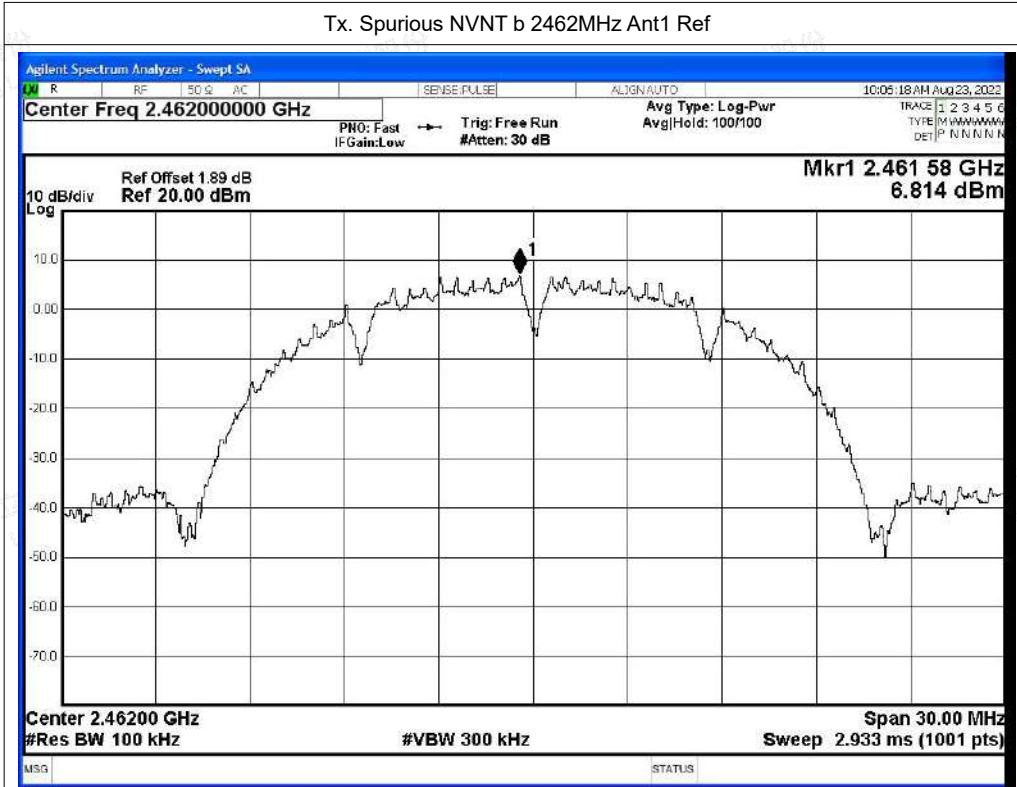
Tx. Spurious NVNT b 2437MHz Ant1 Emission



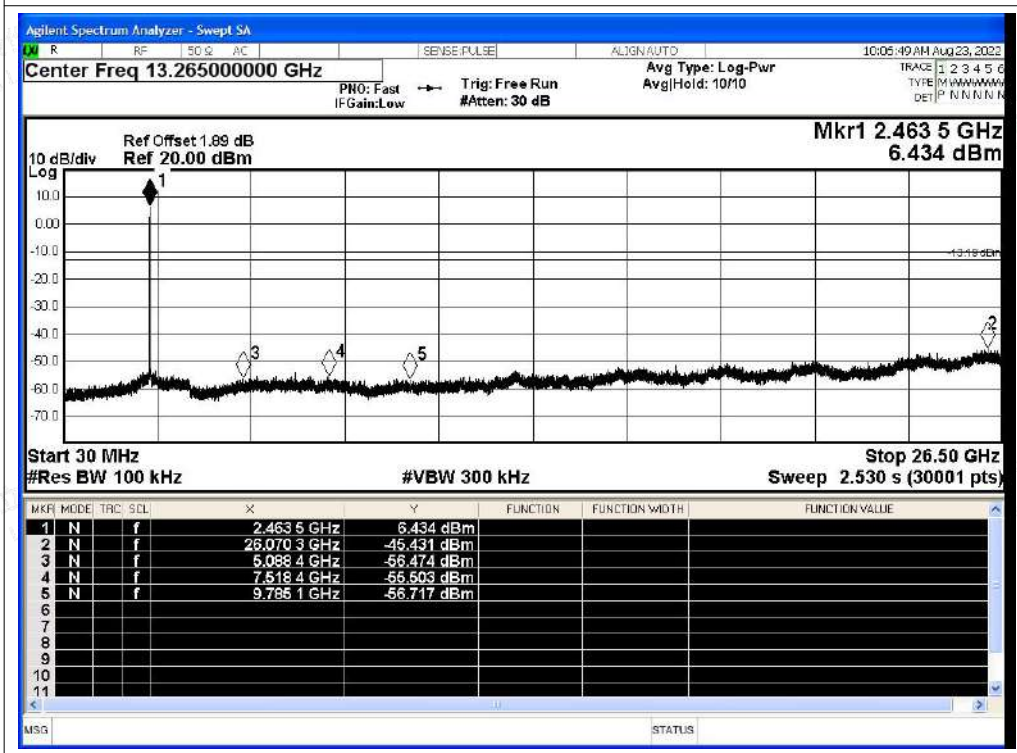




Tx. Spurious NVNT b 2462MHz Ant1 Ref

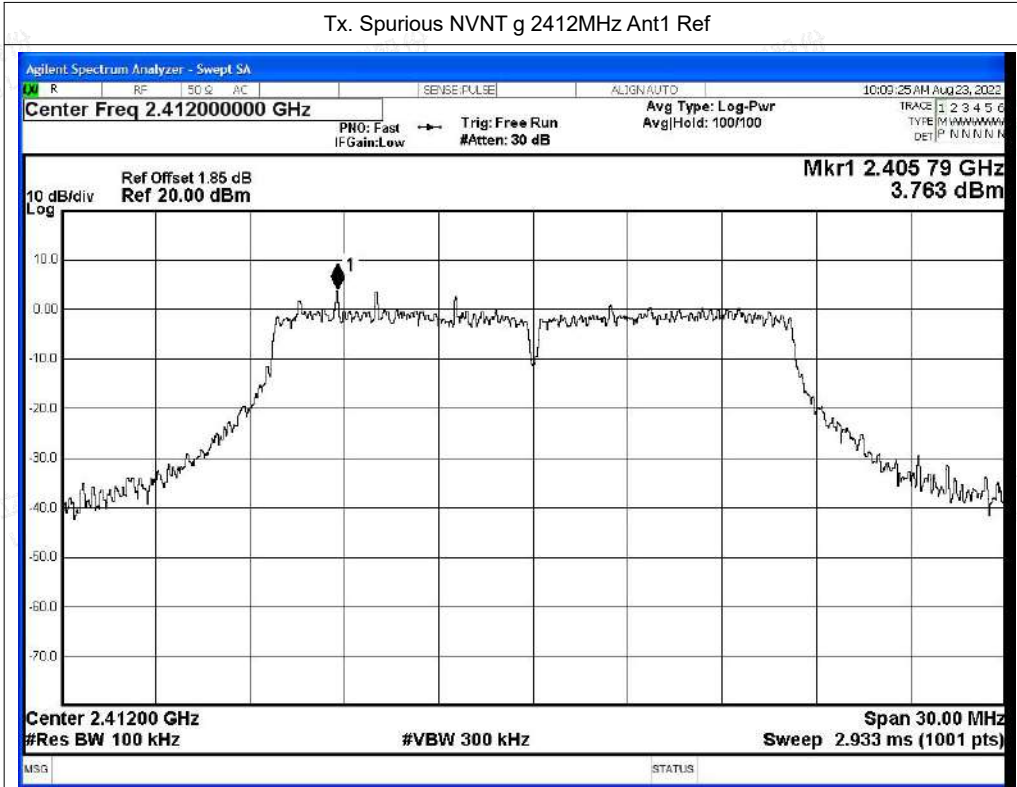


Tx. Spurious NVNT b 2462MHz Ant1 Emission

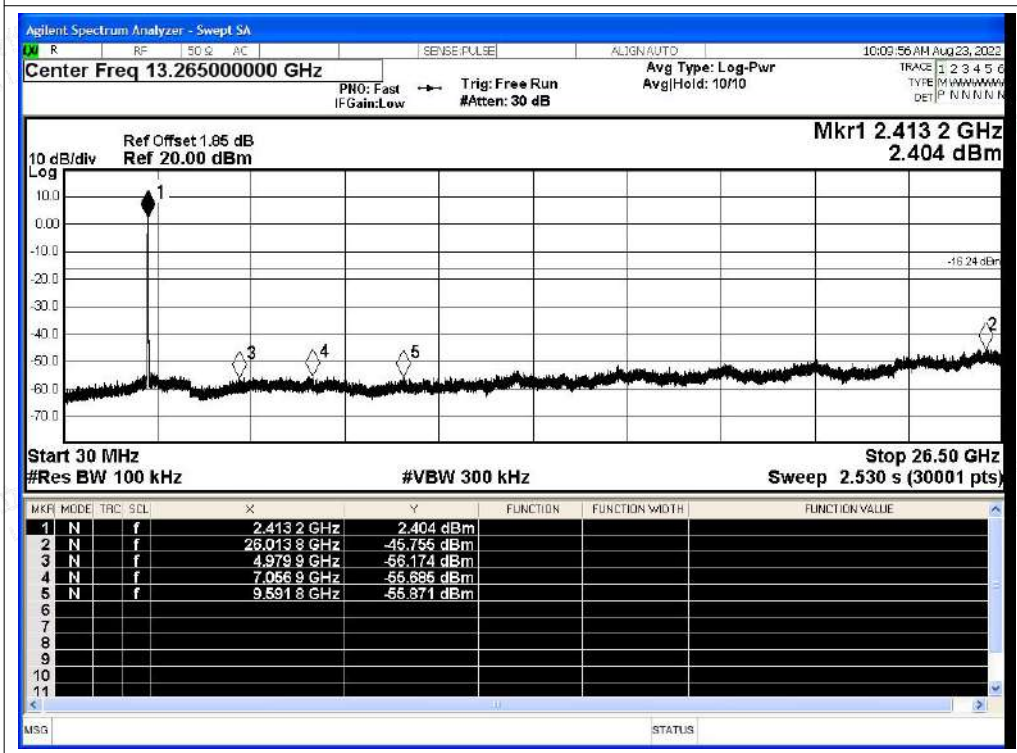




Tx. Spurious NVNT g 2412MHz Ant1 Ref

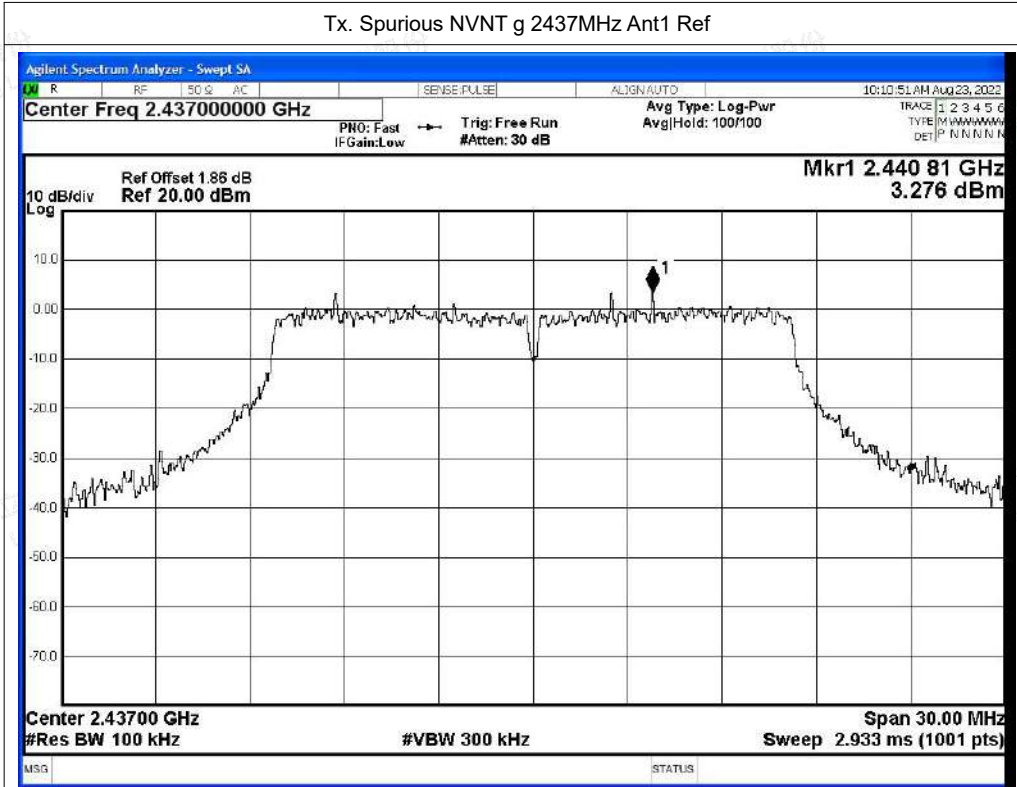


Tx. Spurious NVNT g 2412MHz Ant1 Emission

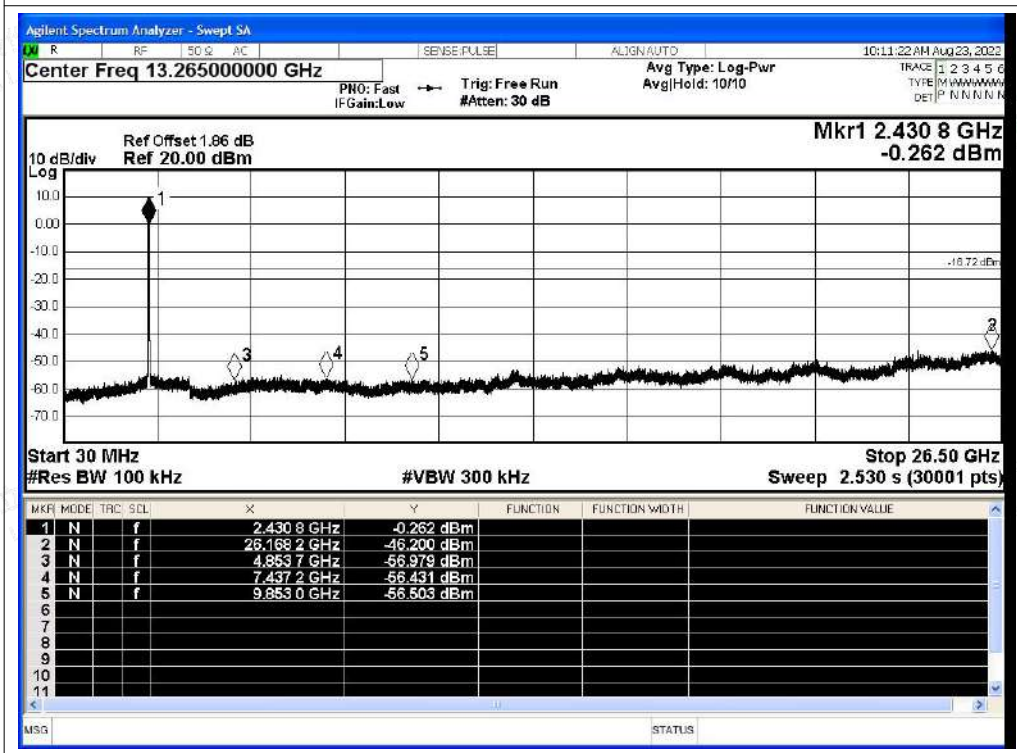




Tx. Spurious NVNT g 2437MHz Ant1 Ref

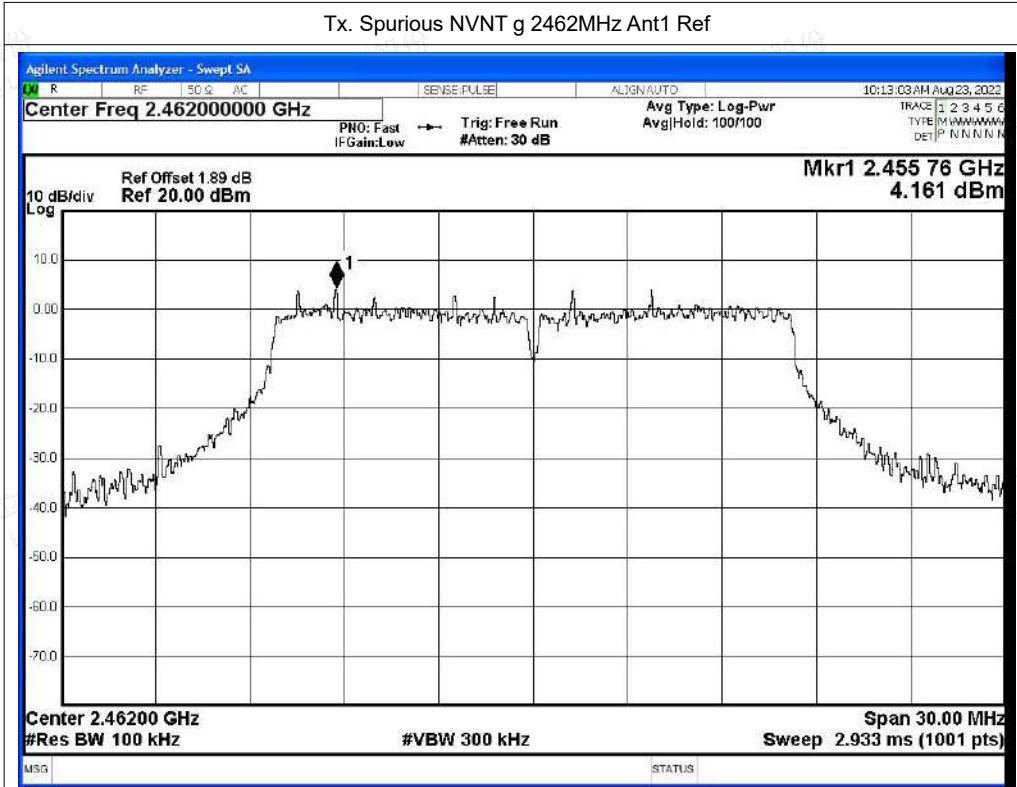


Tx. Spurious NVNT g 2437MHz Ant1 Emission

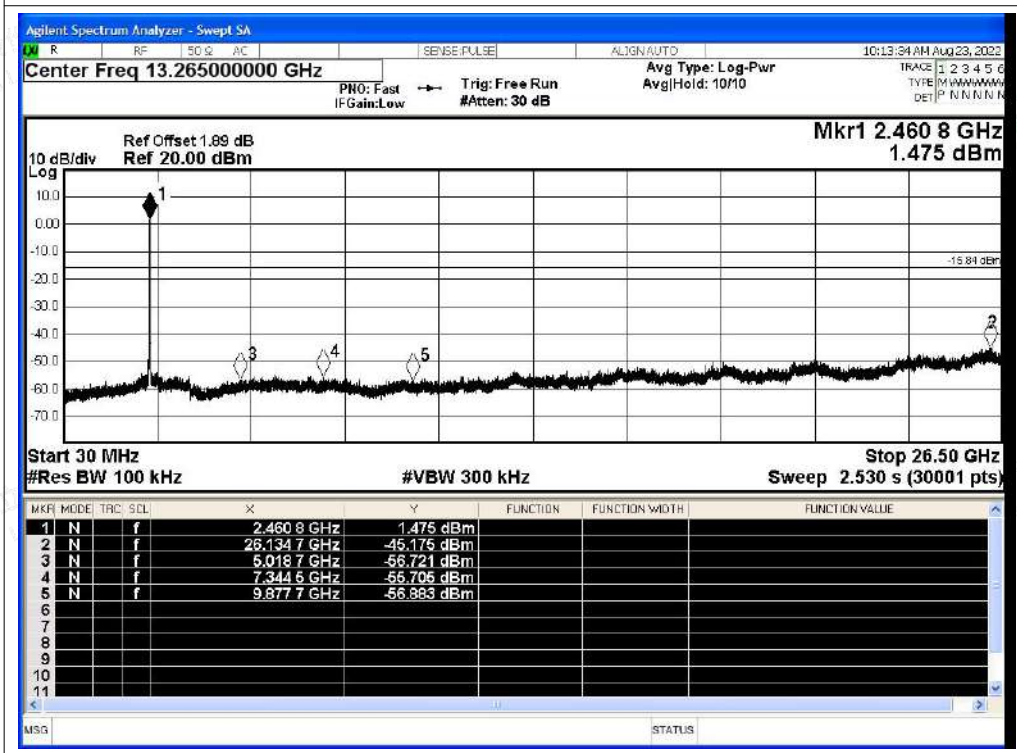




Tx. Spurious NVNT g 2462MHz Ant1 Ref



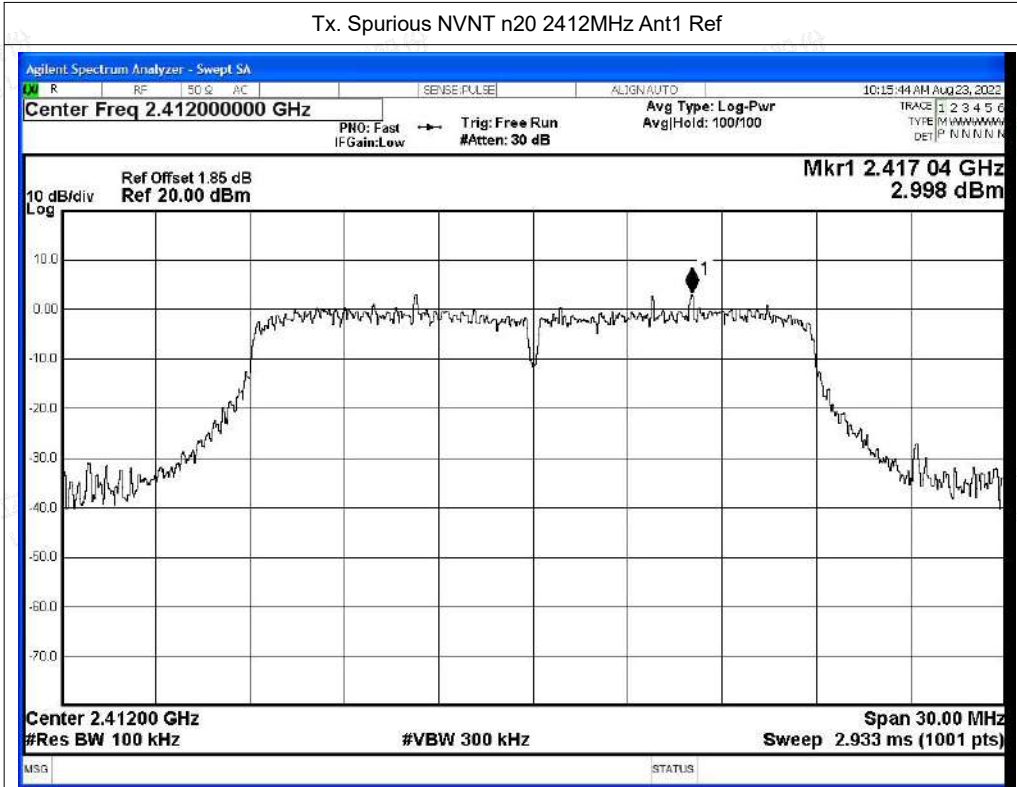
Tx. Spurious NVNT g 2462MHz Ant1 Emission



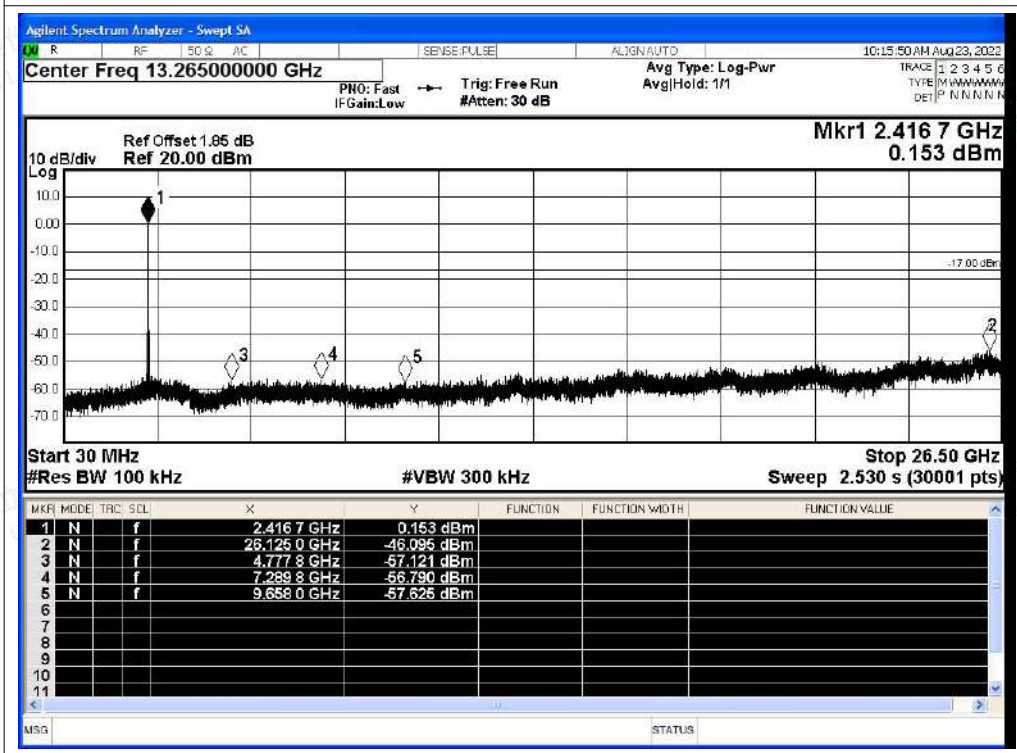




Tx. Spurious NVNT n20 2412MHz Ant1 Ref



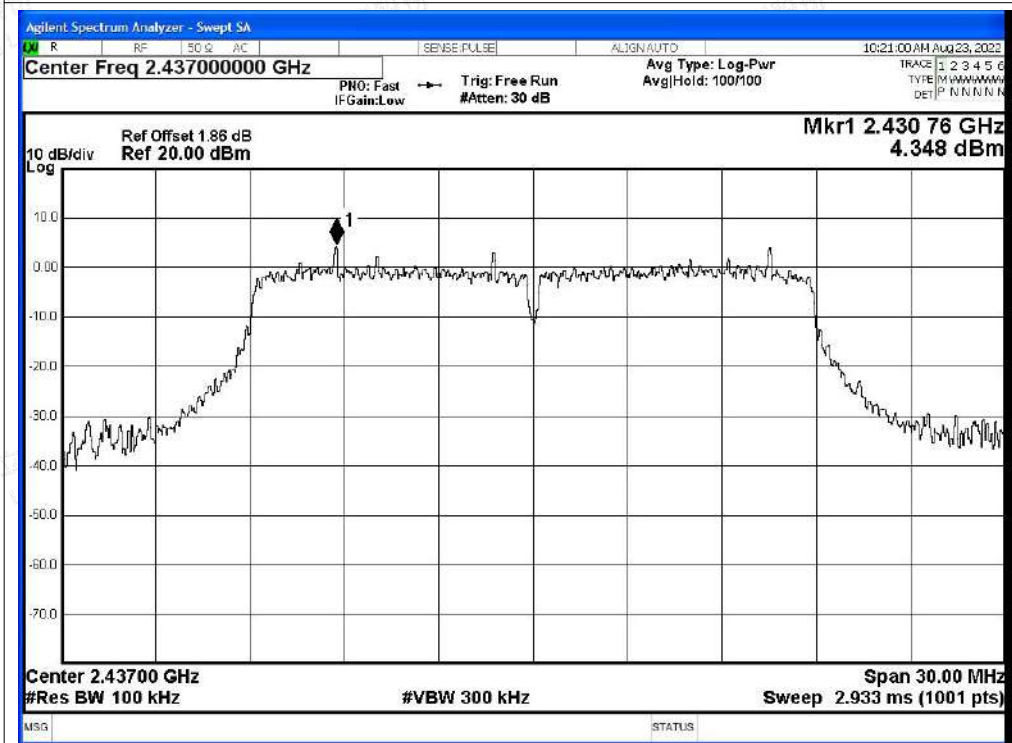
Tx. Spurious NVNT n20 2412MHz Ant1 Emission



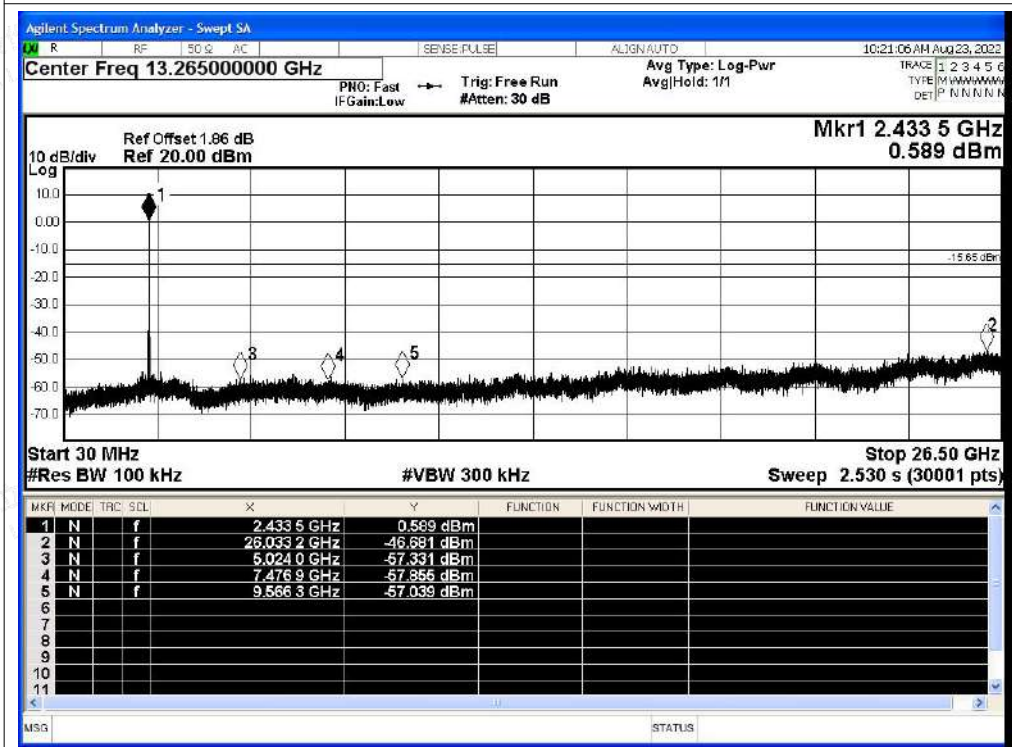


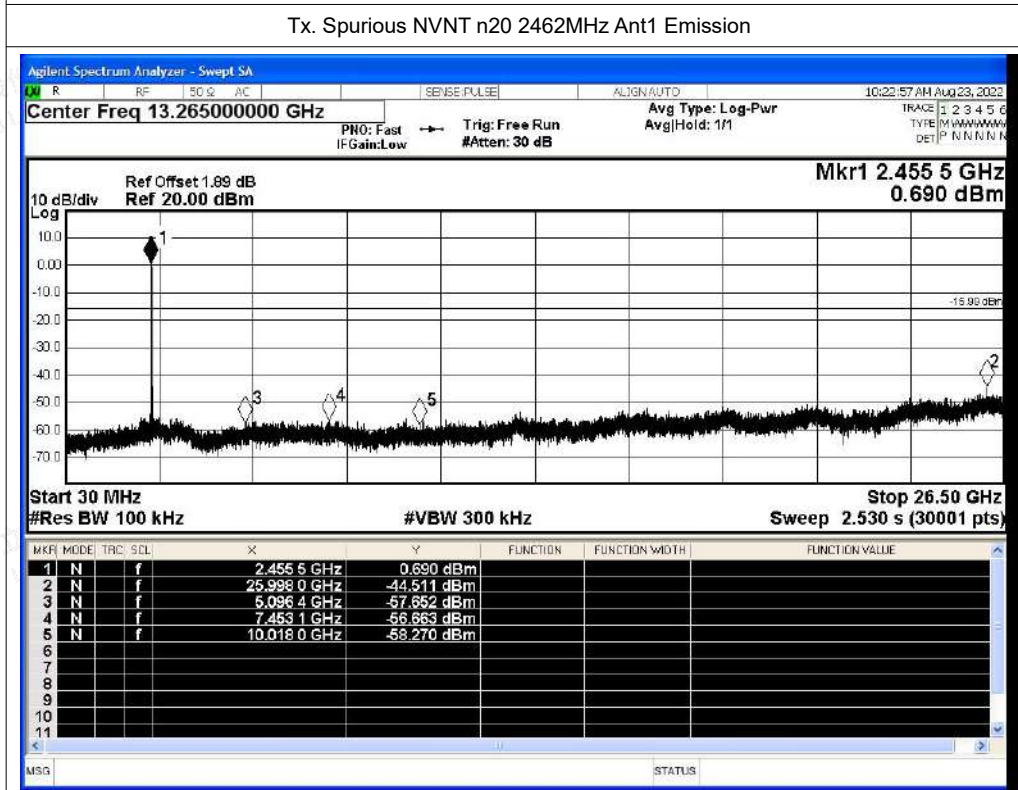
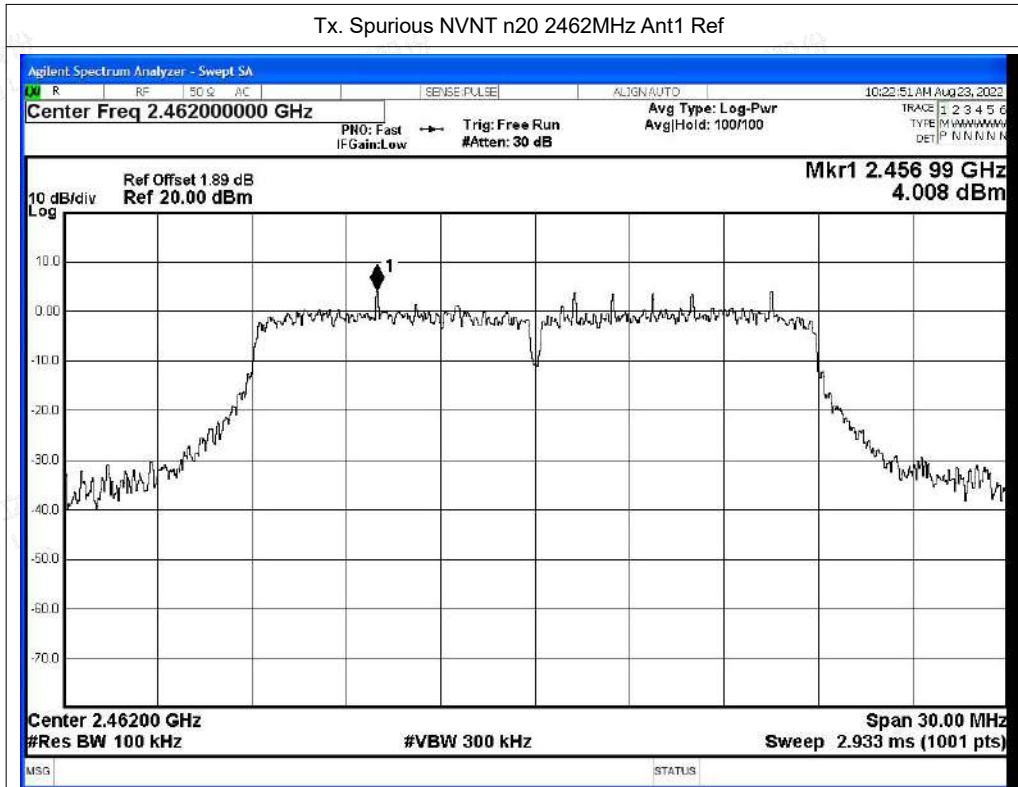


Tx. Spurious NVNT n20 2437MHz Ant1 Ref



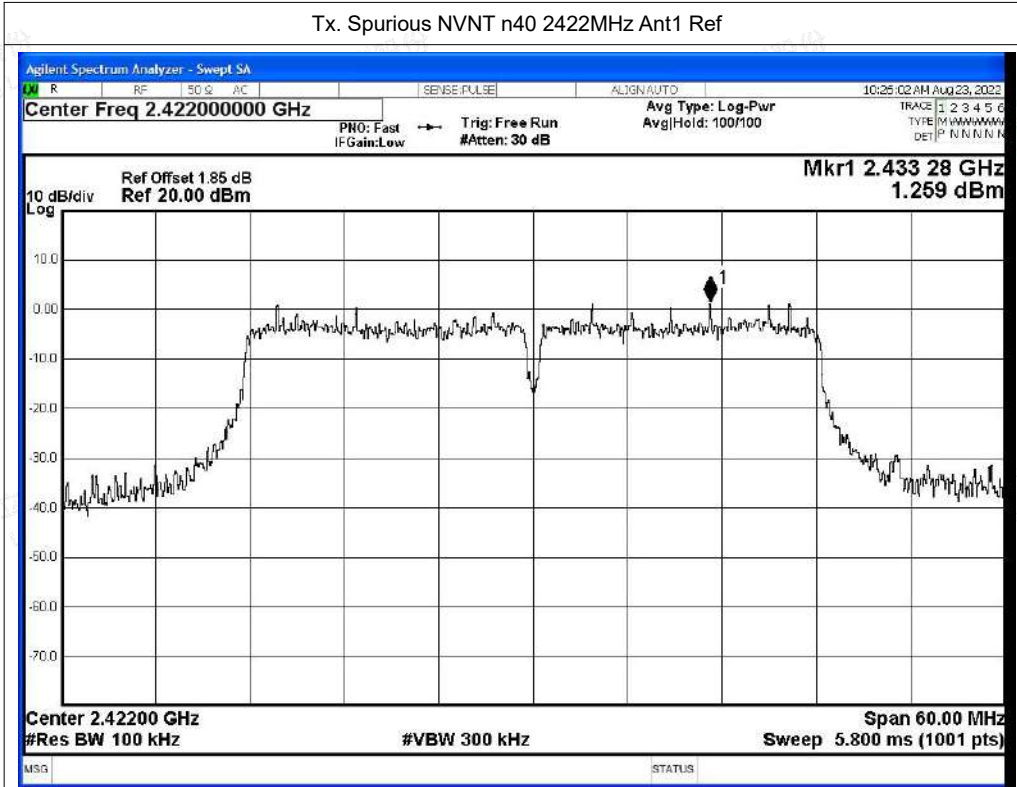
Tx. Spurious NVNT n20 2437MHz Ant1 Emission



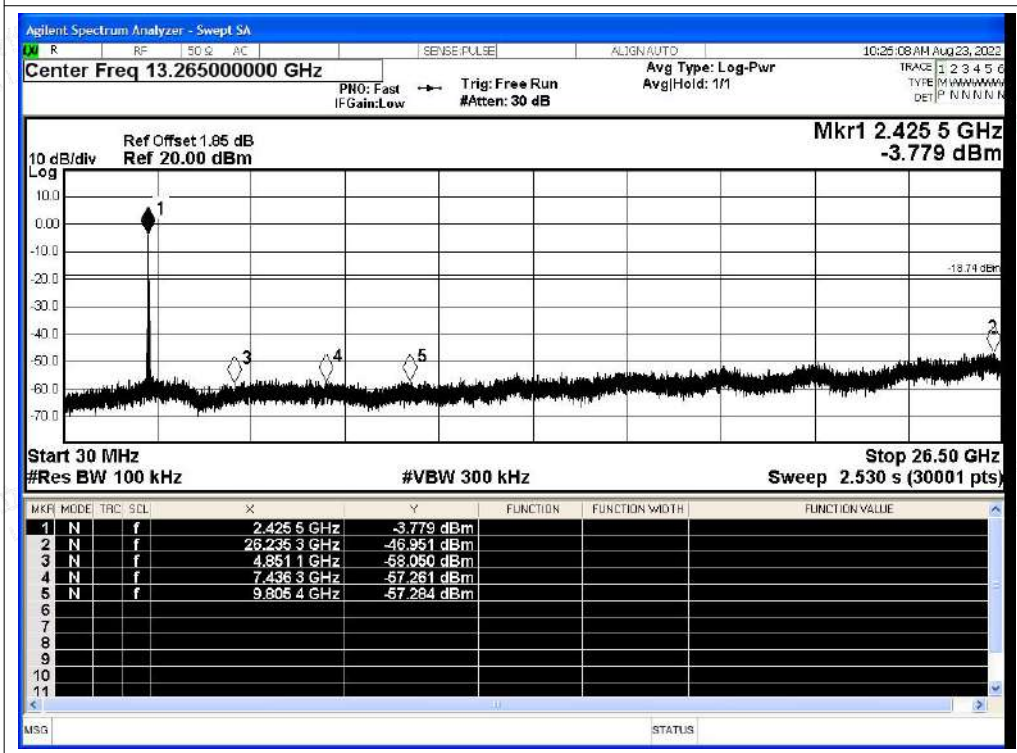




Tx. Spurious NVNT n40 2422MHz Ant1 Ref

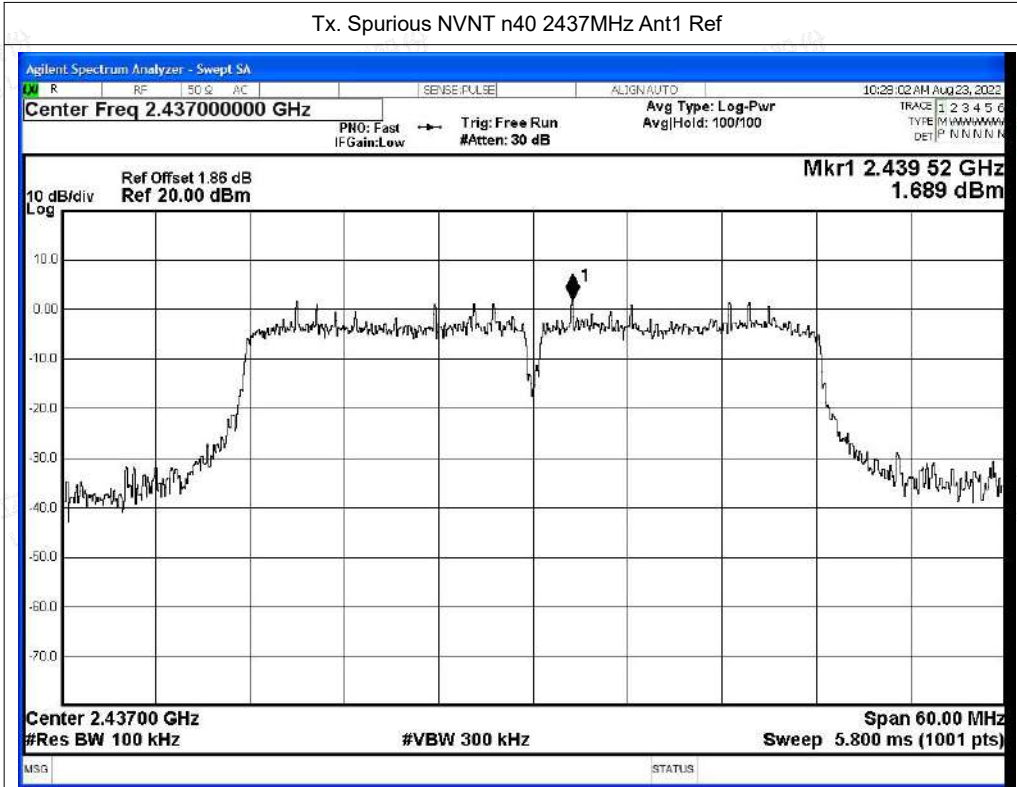


Tx. Spurious NVNT n40 2422MHz Ant1 Emission

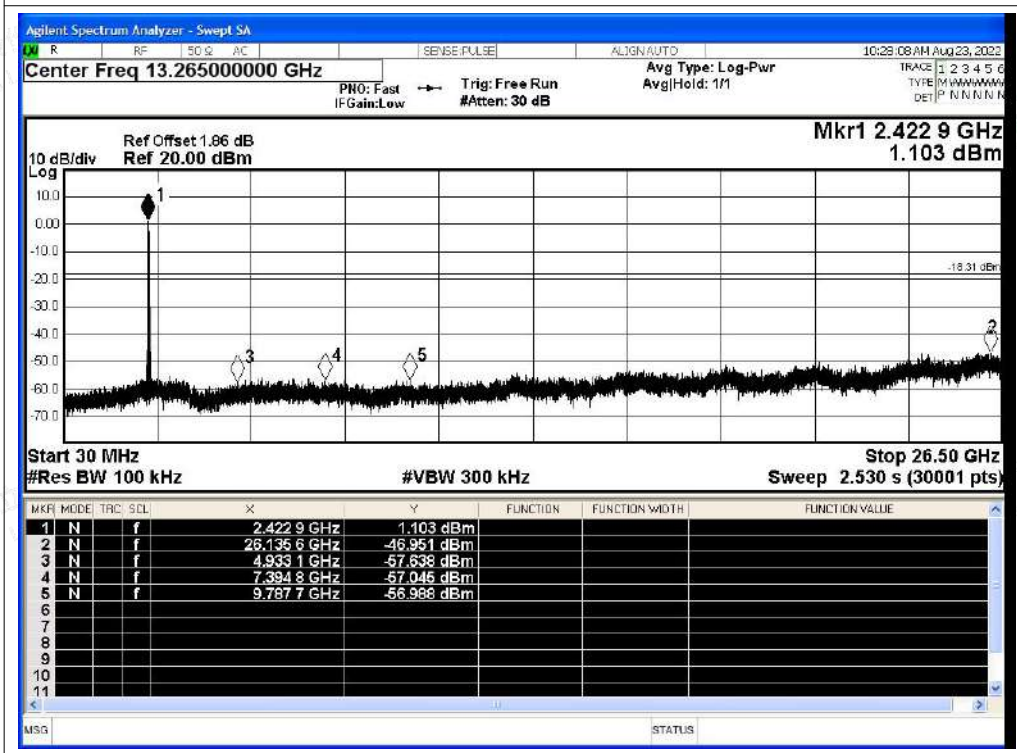




Tx. Spurious NVNT n40 2437MHz Ant1 Ref



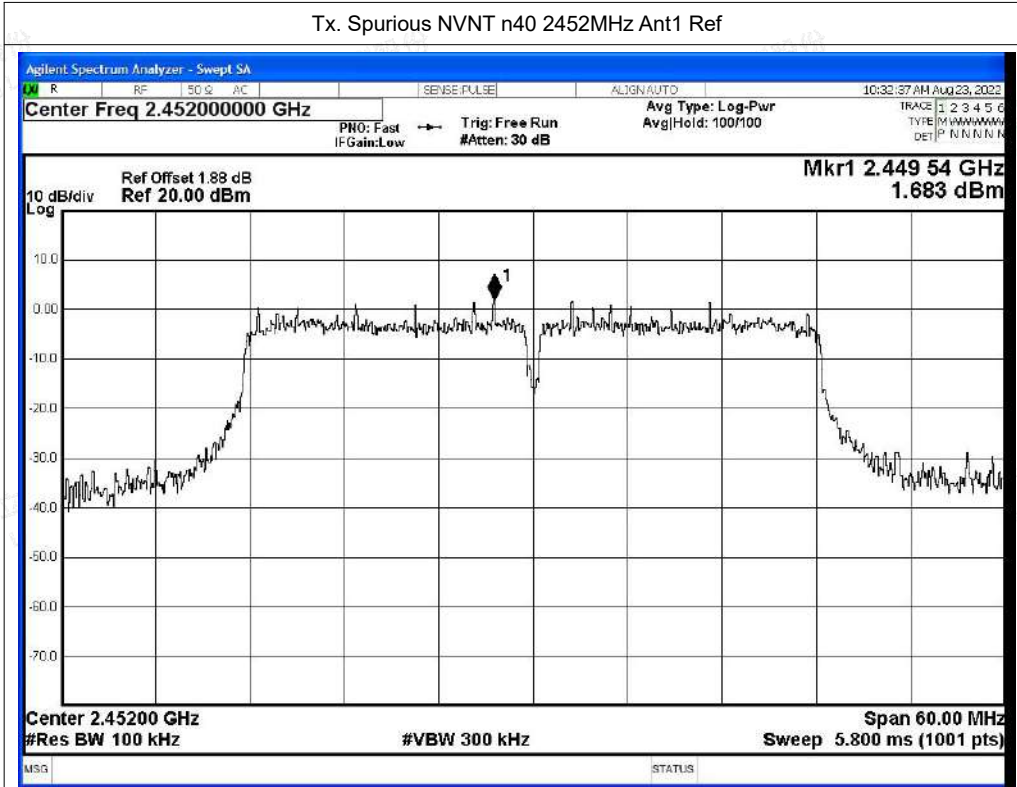
Tx. Spurious NVNT n40 2437MHz Ant1 Emission



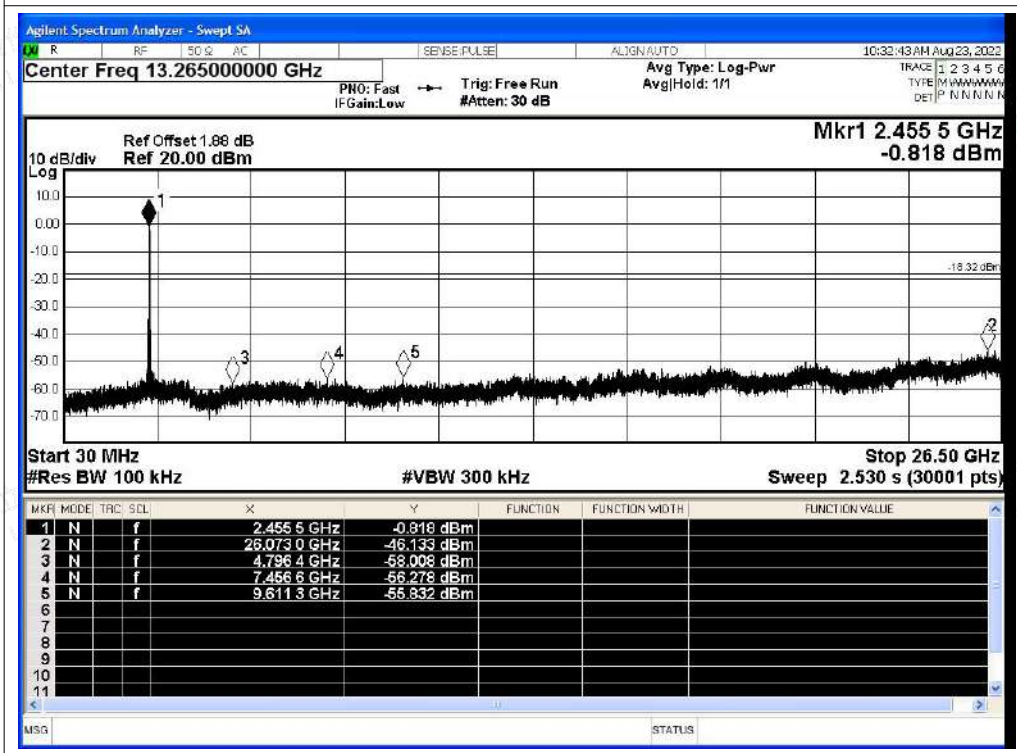




Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission





### A.7 Duty Cycle

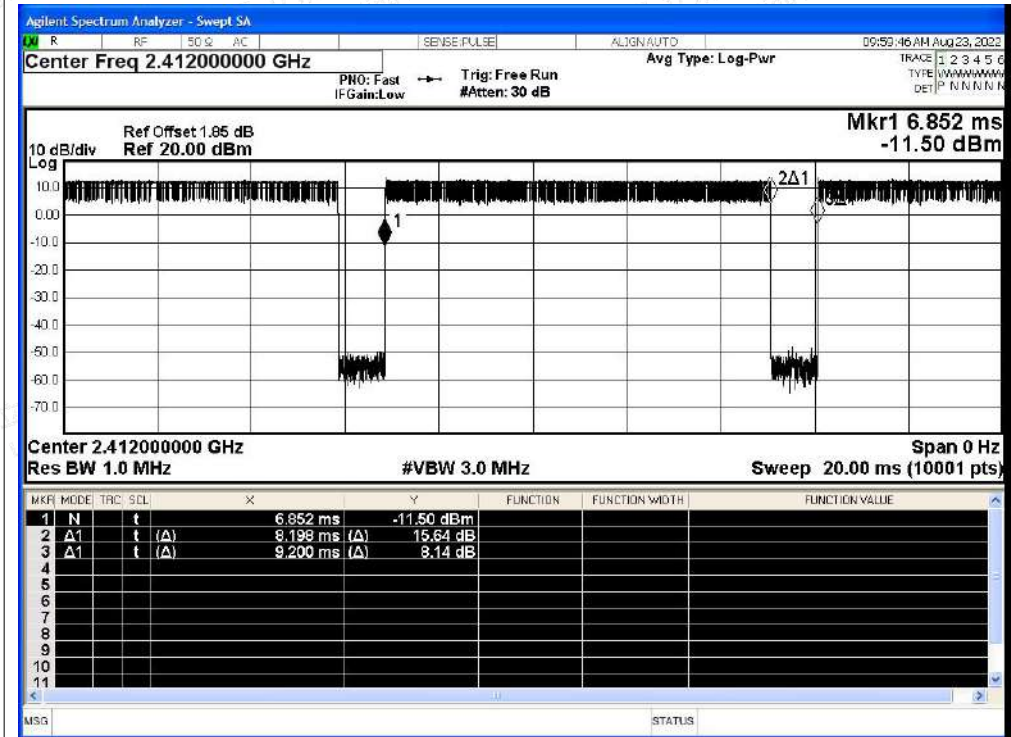
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	89.11	0.5	0.12
NVNT	b	2437	Ant1	89.11	0.5	0.12
NVNT	b	2462	Ant1	89.11	0.5	0.12
NVNT	g	2412	Ant1	57.66	2.39	0.73
NVNT	g	2437	Ant1	57.66	2.39	0.73
NVNT	g	2462	Ant1	57.61	2.4	0.73
NVNT	n20	2412	Ant1	55.98	2.52	0.78
NVNT	n20	2437	Ant1	55.98	2.52	0.78
NVNT	n20	2462	Ant1	55.94	2.52	0.79
NVNT	n40	2422	Ant1	38.75	4.12	1.58
NVNT	n40	2437	Ant1	38.75	4.12	1.58
NVNT	n40	2452	Ant1	38.75	4.12	1.58



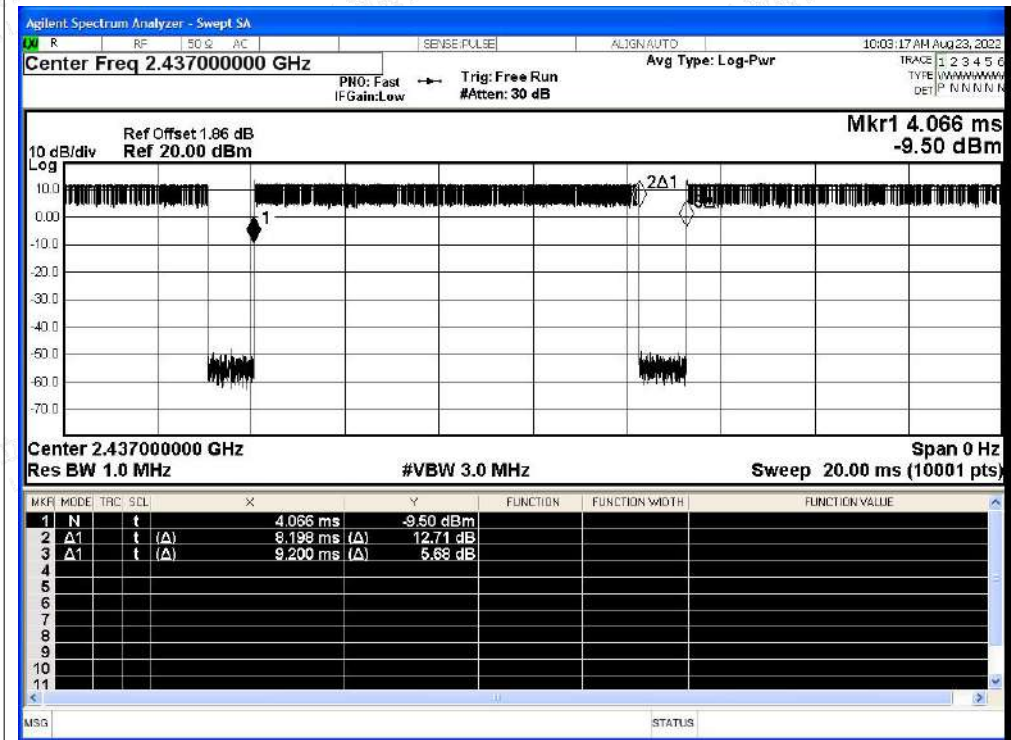


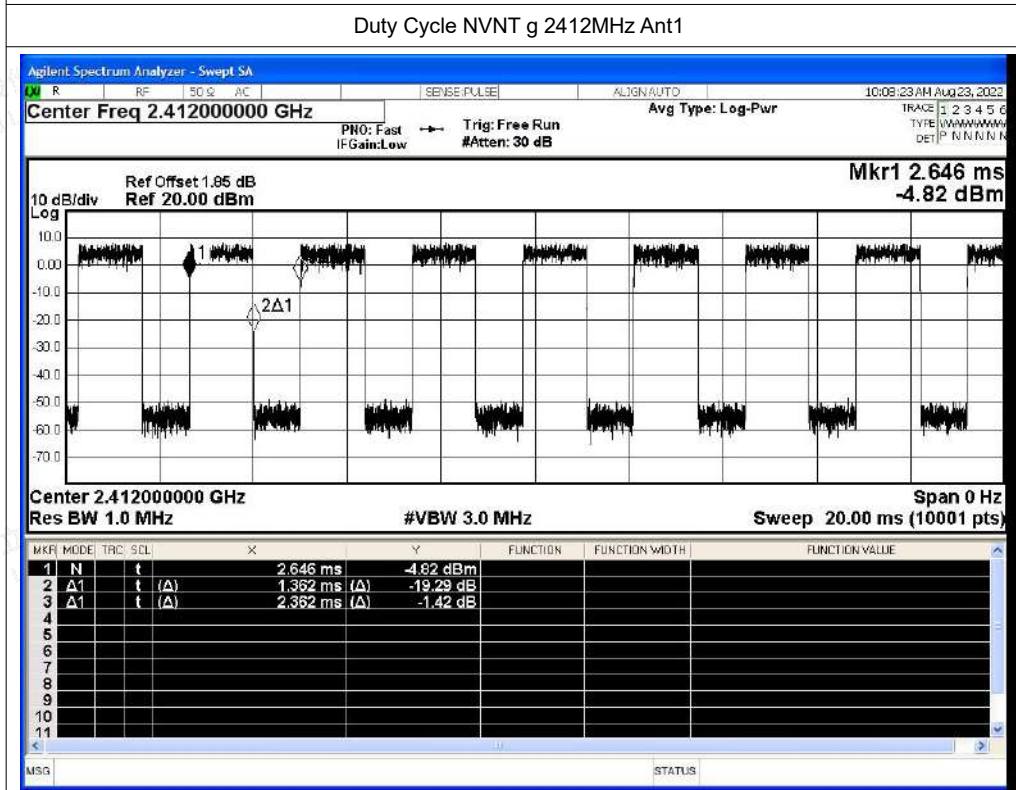
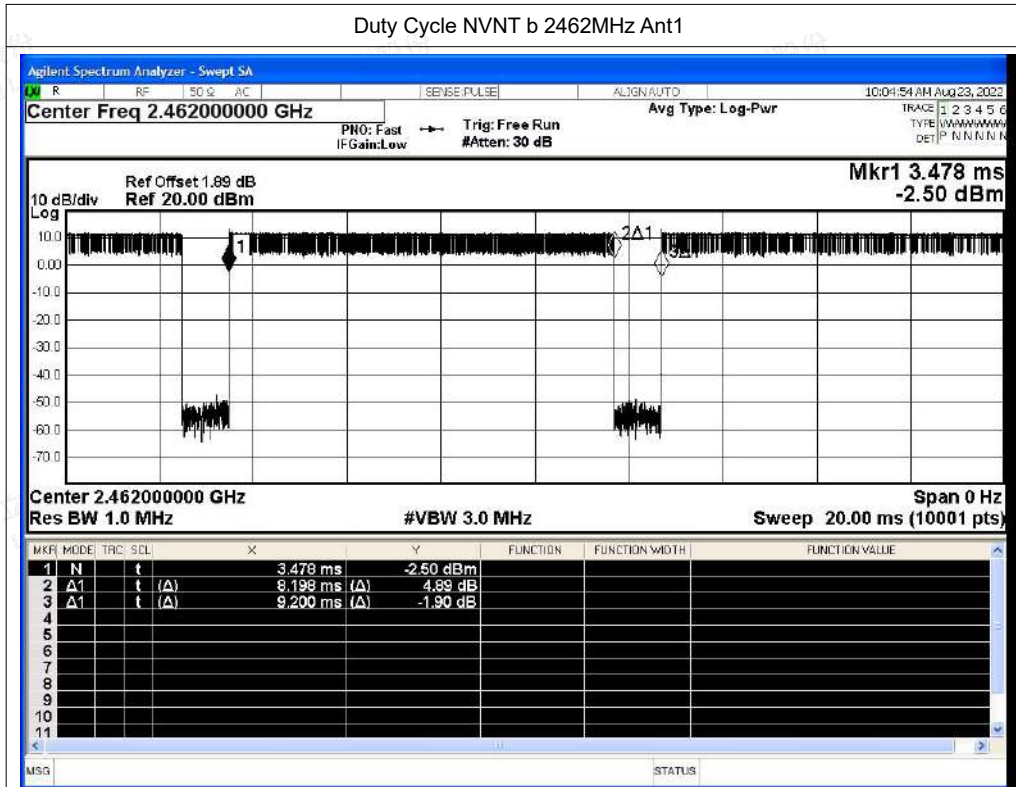
Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

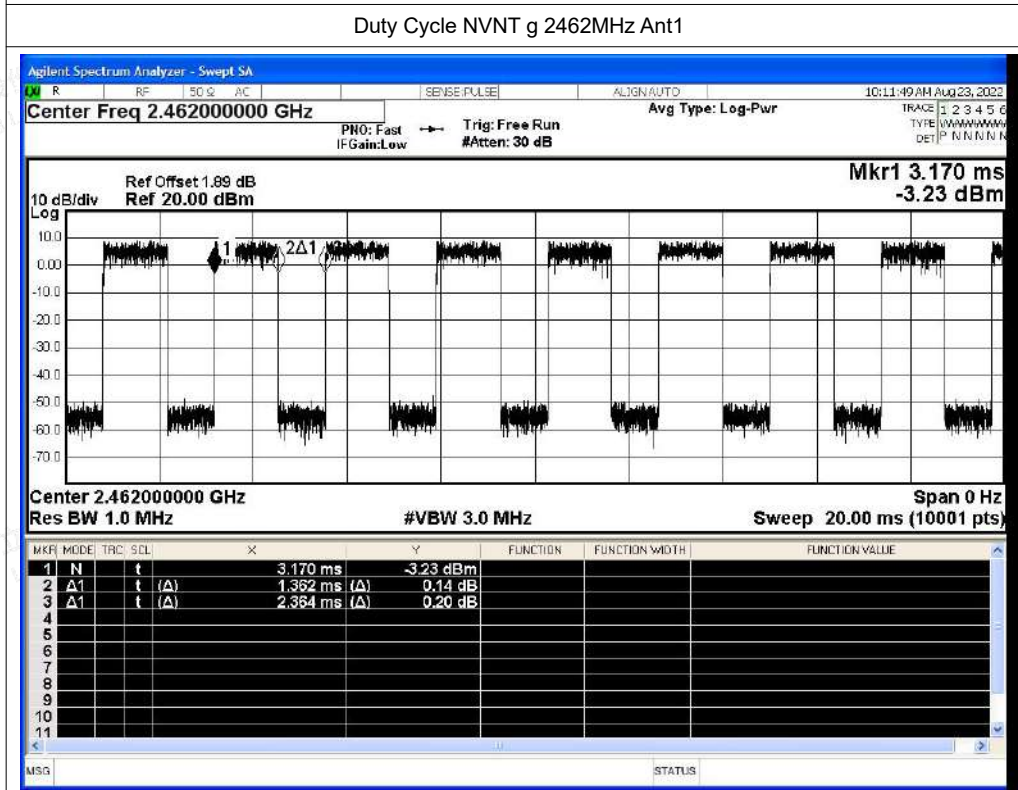
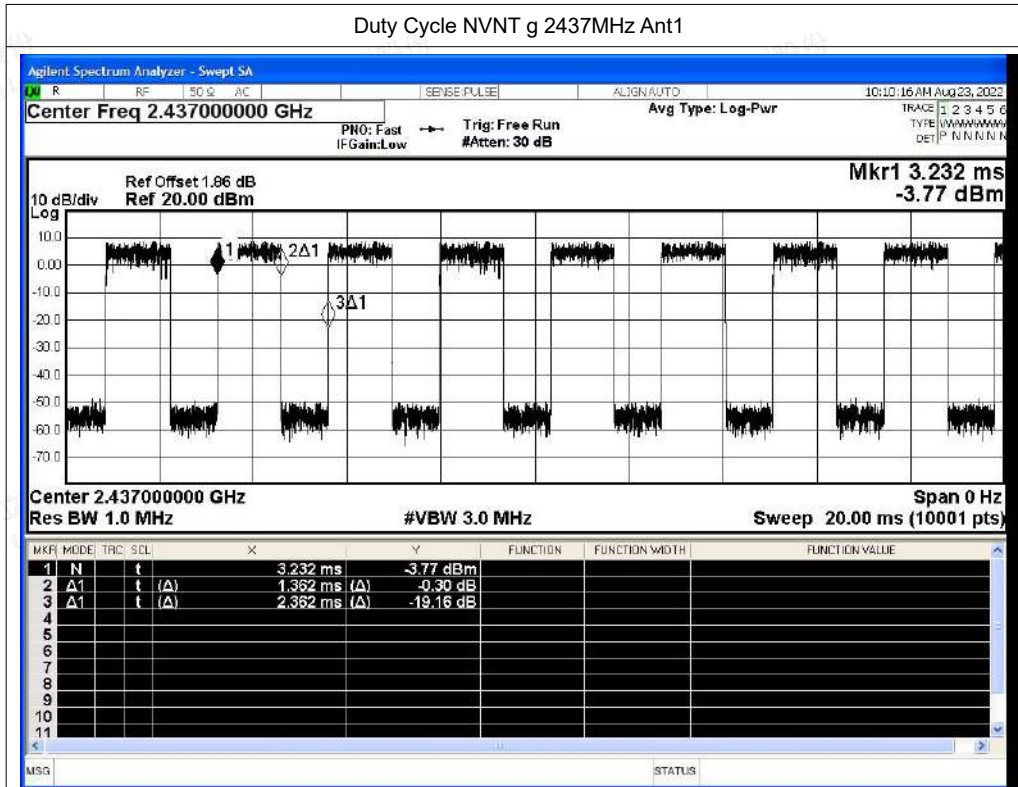


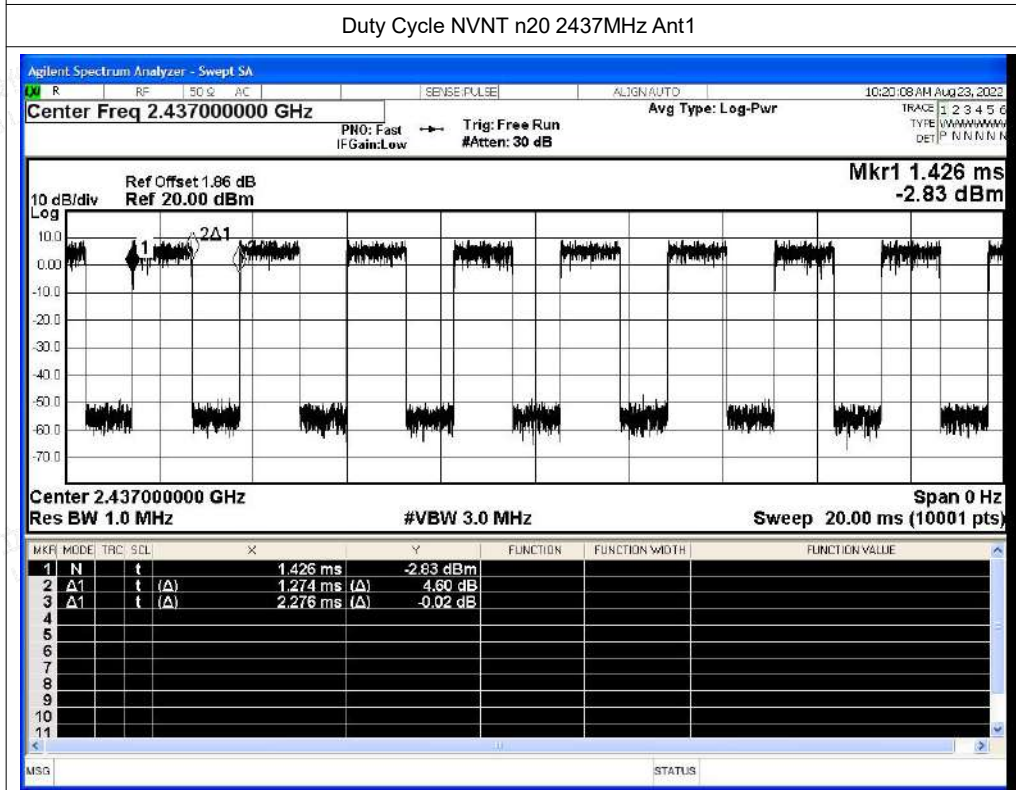
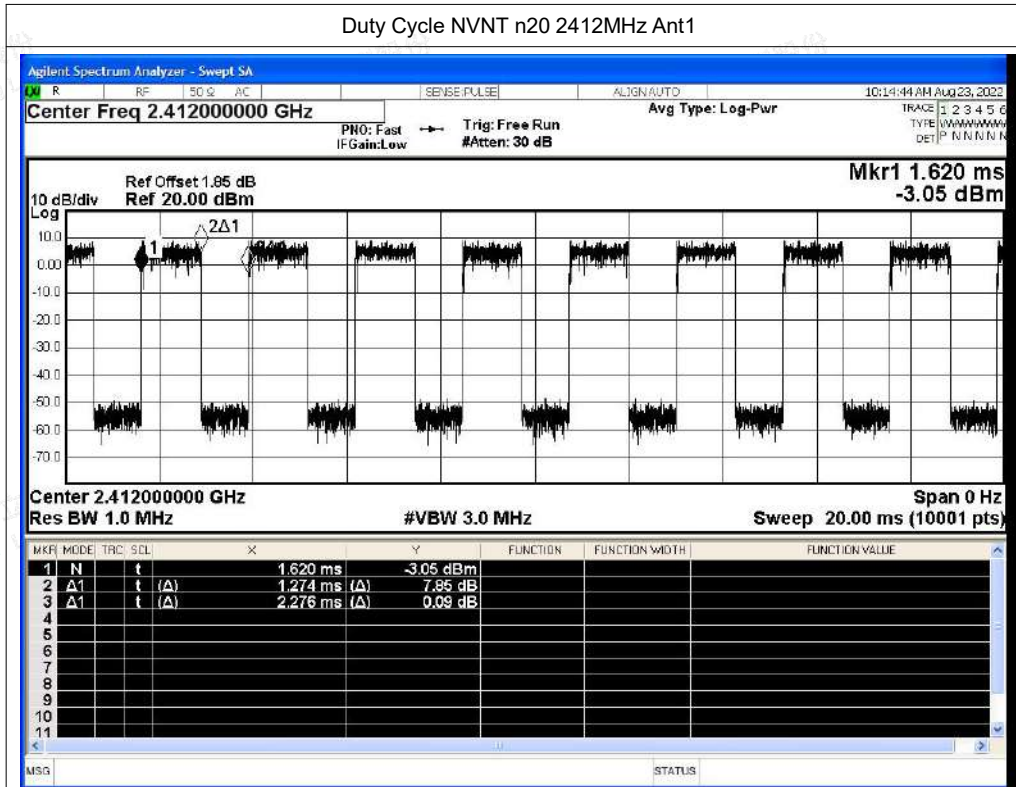
Duty Cycle NVNT b 2437MHz Ant1

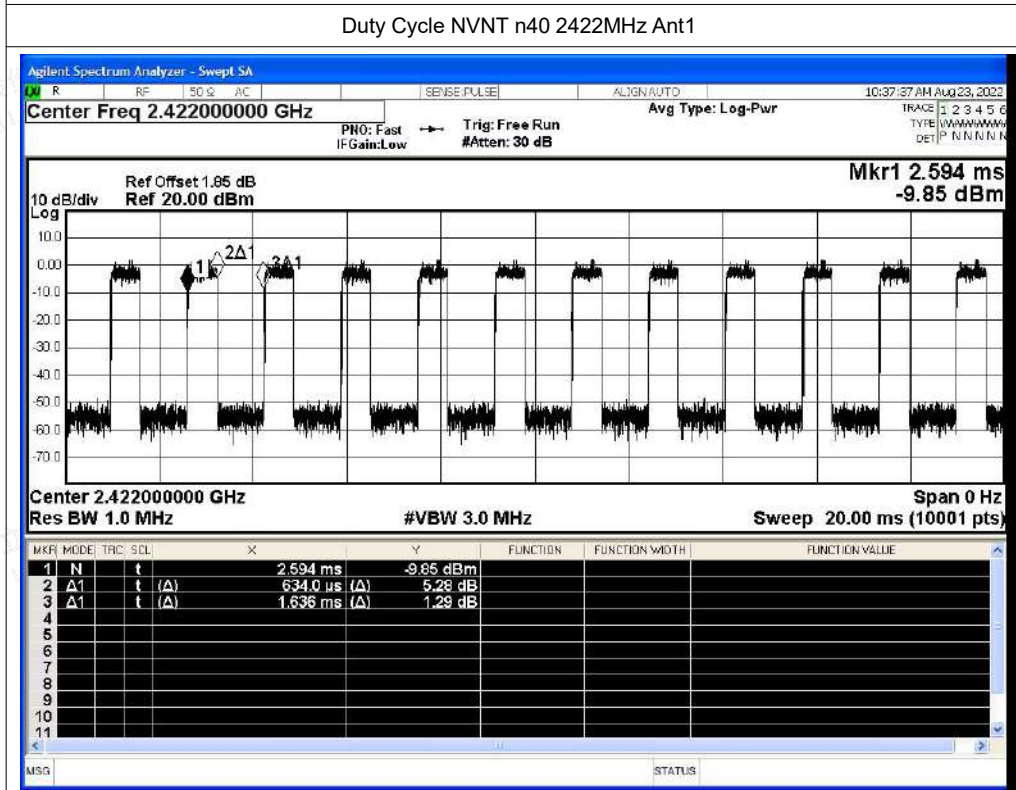
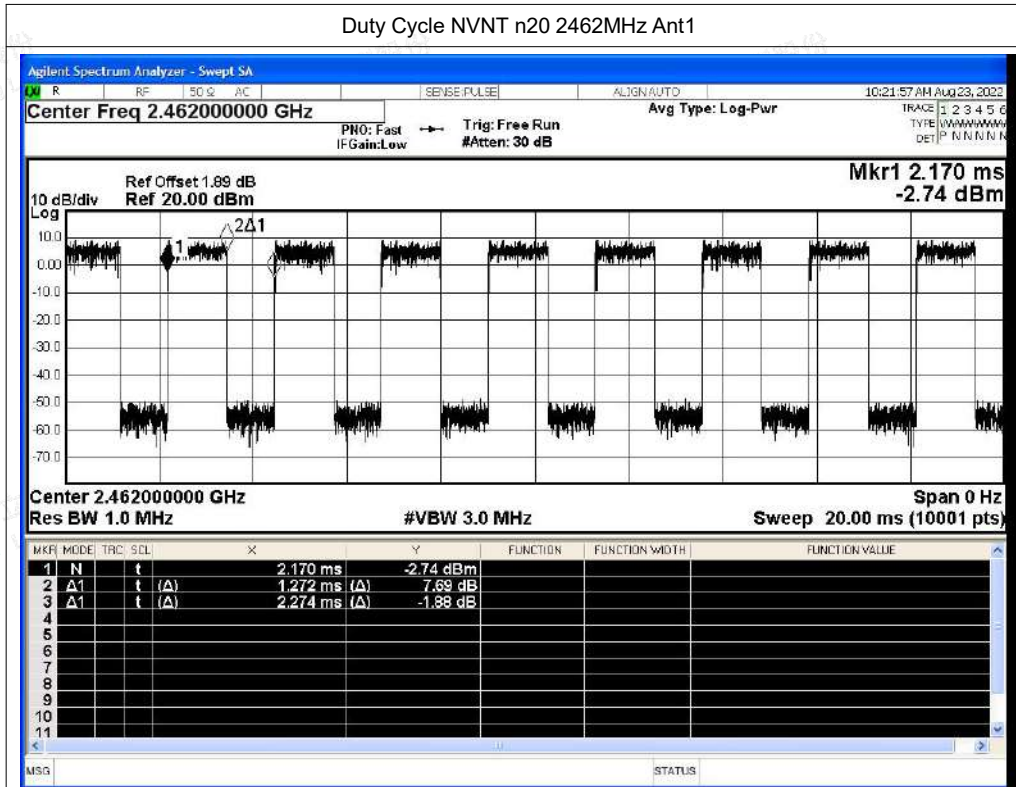




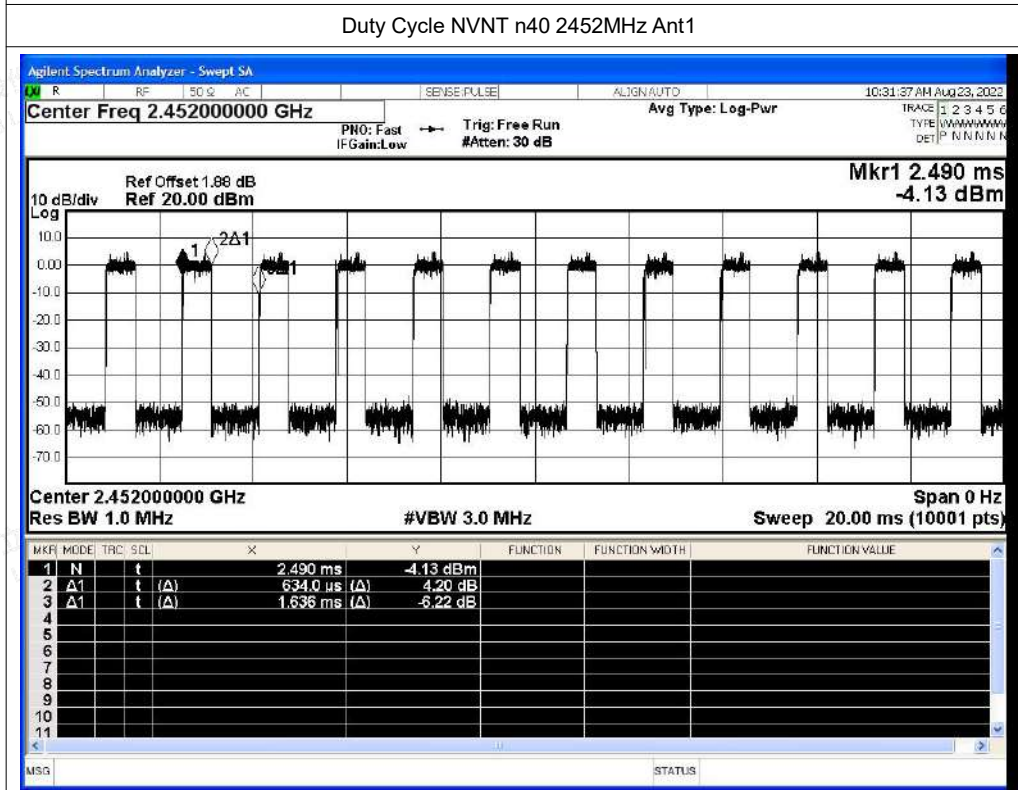
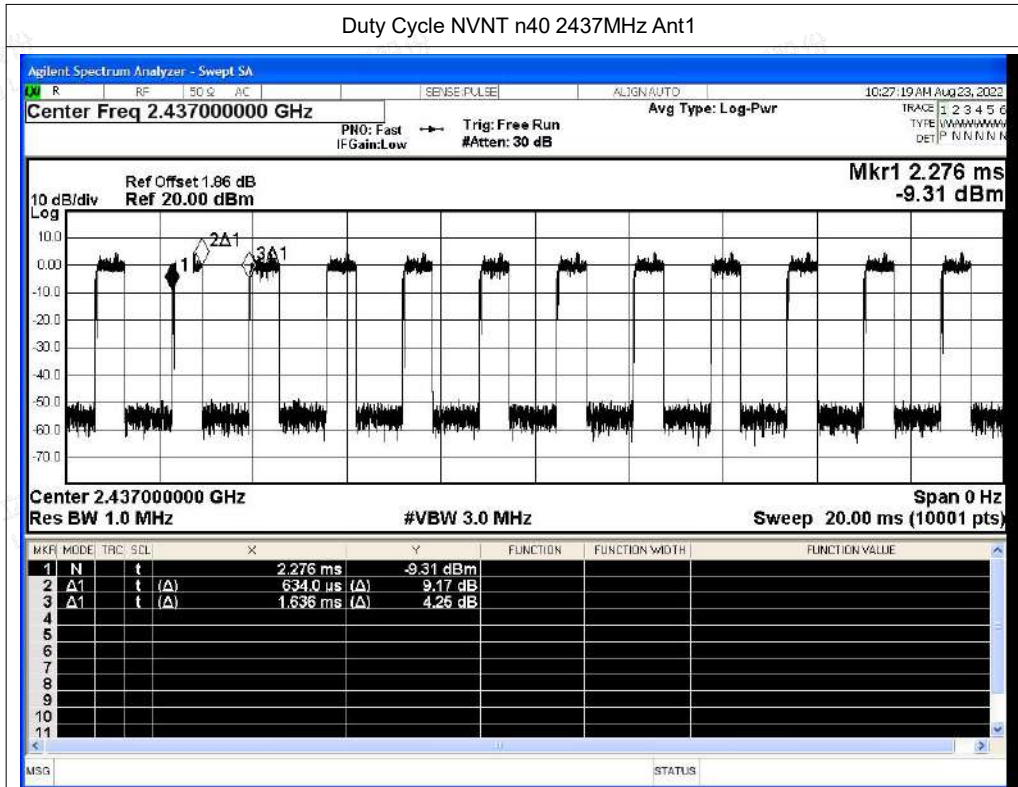
















## A.8 Restrict Band

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	-47.77	2.81	50.27	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-57.89	2.81	40.15	Average	54	Pass
NVNT	b	2412	Ant1	2383.476	-41.19	2.81	56.85	Peak	74	Pass
NVNT	b	2412	Ant1	2389.326	-54.45	2.81	43.59	Average	54	Pass
NVNT	b	2412	Ant1	2390	-45.26	2.81	52.78	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-54.64	2.81	43.4	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-43.71	2.81	54.33	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-53.72	2.81	44.32	Average	54	Pass
NVNT	b	2462	Ant1	2488.87	-38.06	2.81	59.98	Peak	74	Pass
NVNT	b	2462	Ant1	2483.517	-53.72	2.81	44.32	Average	54	Pass
NVNT	b	2462	Ant1	2500	-46.97	2.81	51.07	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-56.45	2.81	41.59	Average	54	Pass
NVNT	g	2412	Ant1	2310	-49.99	2.81	48.05	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-58.43	2.81	39.61	Average	54	Pass
NVNT	g	2412	Ant1	2389.677	-31.98	2.81	66.06	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-48.57	2.81	49.47	Average	54	Pass
NVNT	g	2412	Ant1	2390	-36.03	2.81	62.01	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-48.5	2.81	49.54	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-26.8	2.81	71.24	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-45.63	2.81	52.41	Average	54	Pass
NVNT	g	2462	Ant1	2483.729	-25.79	2.81	72.25	Peak	74	Pass
NVNT	g	2462	Ant1	2483.57	-45.61	2.81	52.43	Average	54	Pass
NVNT	g	2462	Ant1	2500	-45.77	2.81	52.27	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-56.47	2.81	41.57	Average	54	Pass
NVNT	n20	2412	Ant1	2310	-48.35	2.81	49.69	Peak	74	Pass
NVNT	n20	2412	Ant1	2310	-58.32	2.81	39.72	Average	54	Pass
NVNT	n20	2412	Ant1	2389.794	-31.32	2.81	66.72	Peak	74	Pass
NVNT	n20	2412	Ant1	2389.911	-46.46	2.81	51.58	Average	54	Pass
NVNT	n20	2412	Ant1	2390	-34.43	2.81	63.61	Peak	74	Pass
NVNT	n20	2412	Ant1	2390	-46.27	2.81	51.77	Average	54	Pass
NVNT	n20	2462	Ant1	2483.5	-26.39	2.81	71.65	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.5	-43.84	2.81	54.2	Average	54	Pass
NVNT	n20	2462	Ant1	2483.888	-25.5	2.81	72.54	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.517	-43.84	2.81	54.2	Average	54	Pass
NVNT	n20	2462	Ant1	2500	-45.36	2.81	52.68	Peak	74	Pass
NVNT	n20	2462	Ant1	2500	-55.95	2.81	42.09	Average	54	Pass
NVNT	n40	2422	Ant1	2310	-50.04	2.81	48	Peak	74	Pass
NVNT	n40	2422	Ant1	2310	-58.12	2.81	39.92	Average	54	Pass
NVNT	n40	2422	Ant1	2387.958	-28.35	2.81	69.69	Peak	74	Pass



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Scan code to check authenticity



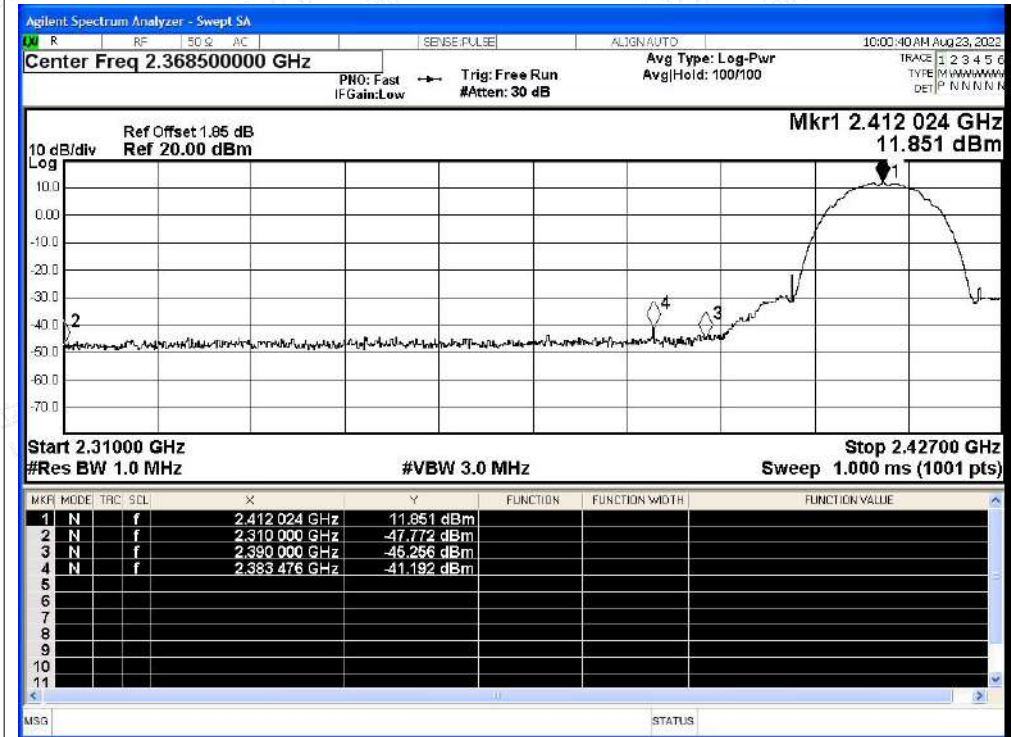
NVNT	n40	2422	Ant1	2389.946	-46.85	2.81	51.19	Average	54	Pass
NVNT	n40	2422	Ant1	2390	-30.91	2.81	67.13	Peak	74	Pass
NVNT	n40	2422	Ant1	2390	-47.07	2.81	50.97	Average	54	Pass
NVNT	n40	2452	Ant1	2483.5	-30.53	2.81	67.51	Peak	74	Pass
NVNT	n40	2452	Ant1	2483.5	-50.38	2.81	47.66	Average	54	Pass
NVNT	n40	2452	Ant1	2483.62	-27.07	2.81	70.97	Peak	74	Pass
NVNT	n40	2452	Ant1	2484.946	-50.07	2.81	47.97	Average	54	Pass
NVNT	n40	2452	Ant1	2500	-45.73	2.81	52.31	Peak	74	Pass
NVNT	n40	2452	Ant1	2500	-54.32	2.81	43.72	Average	54	Pass



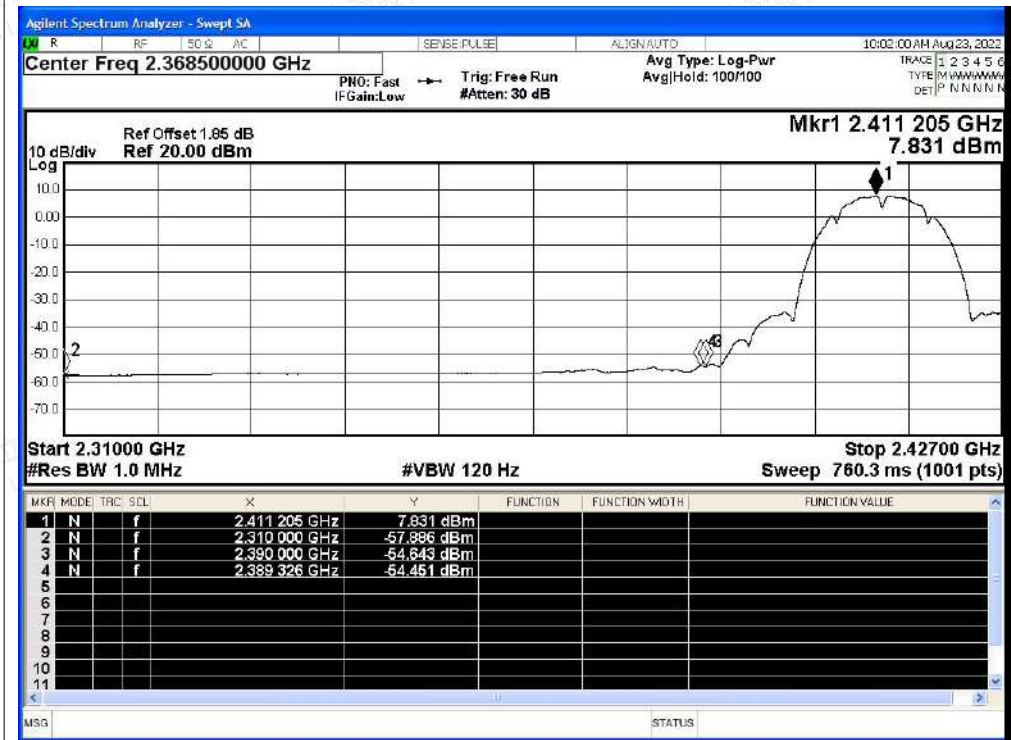


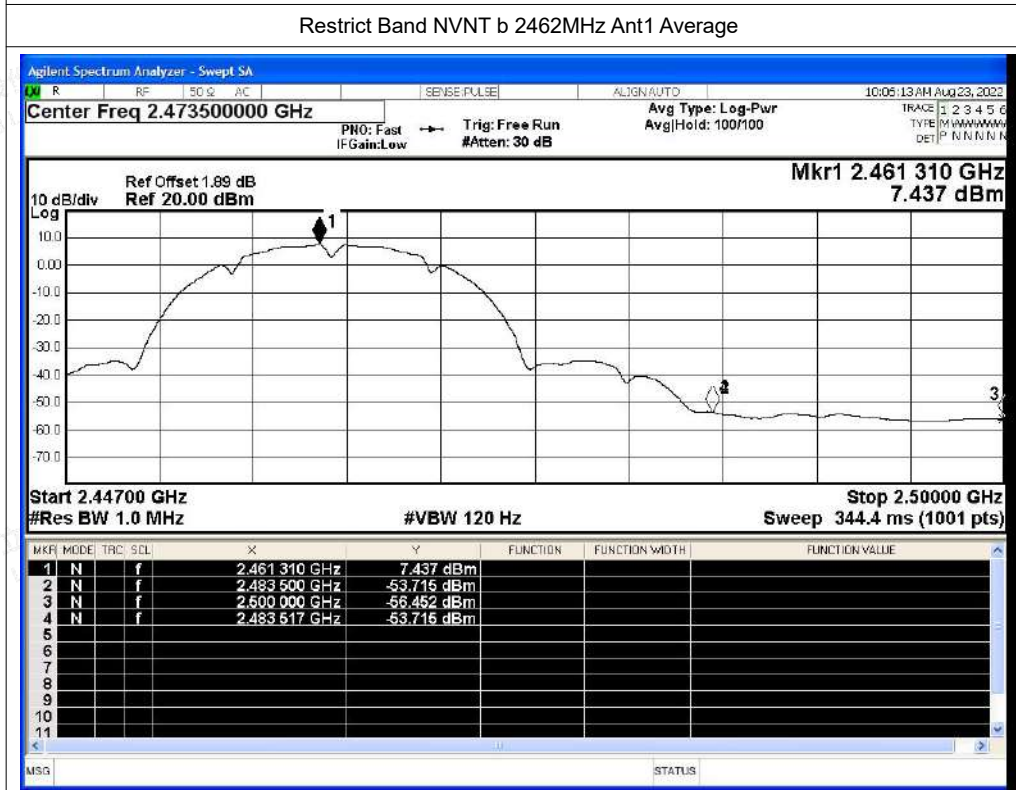
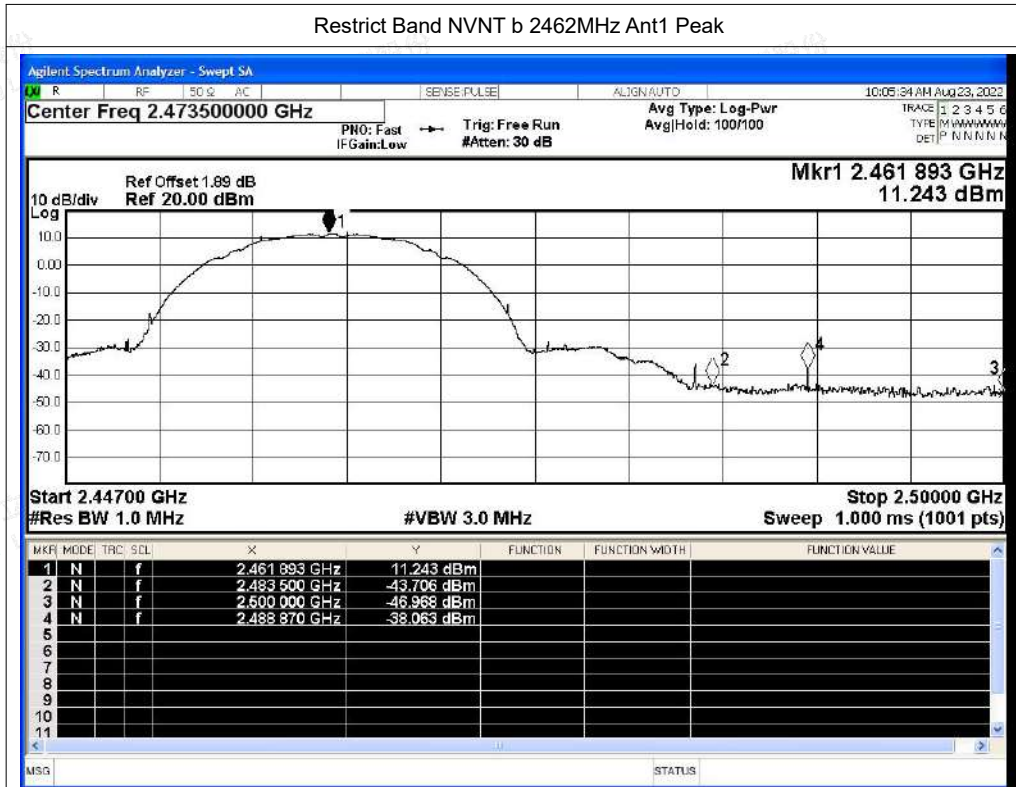
Test Graphs

Restrict Band NVNT b 2412MHz Ant1 Peak

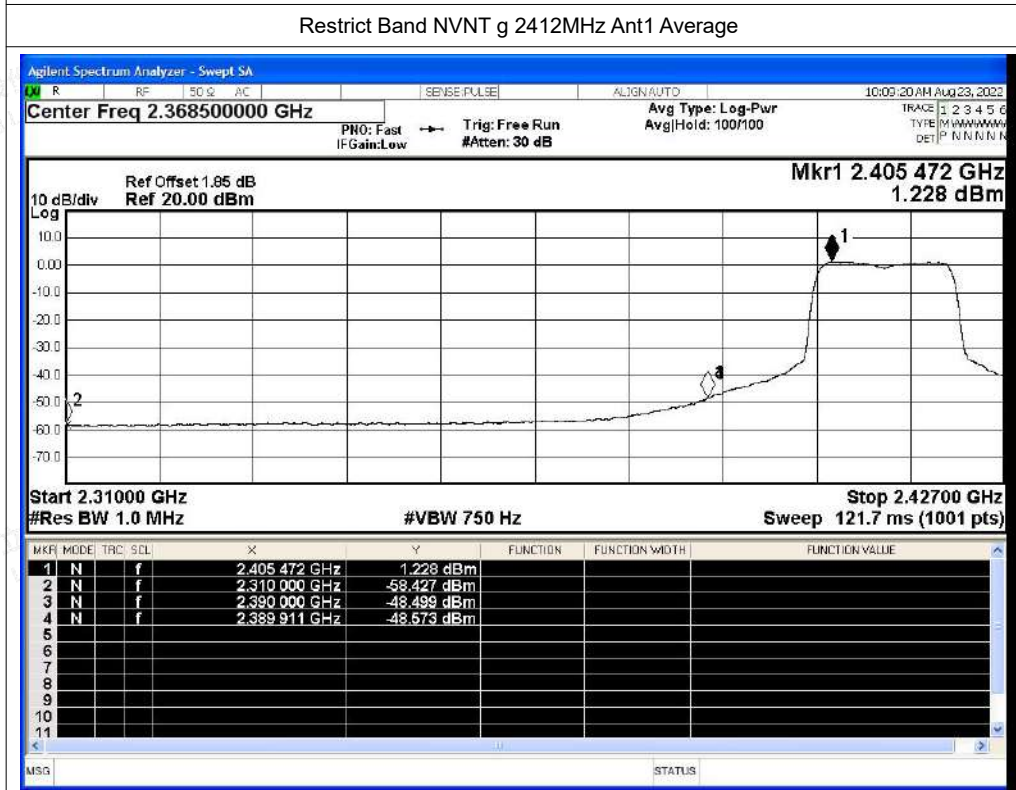
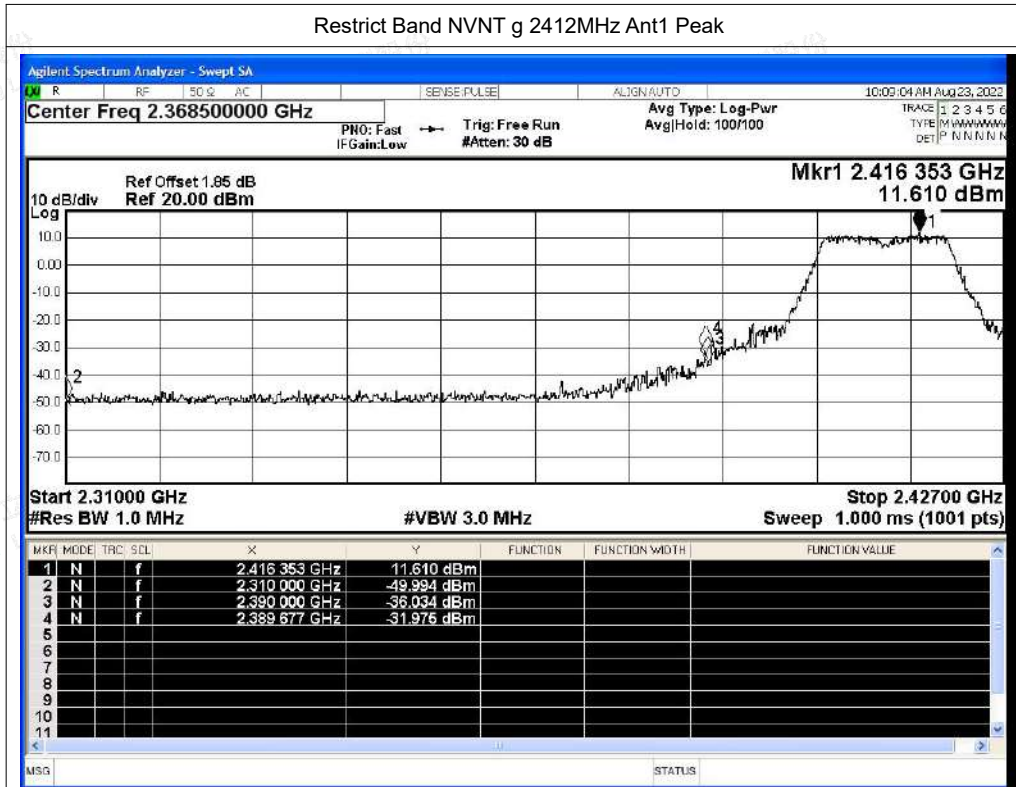


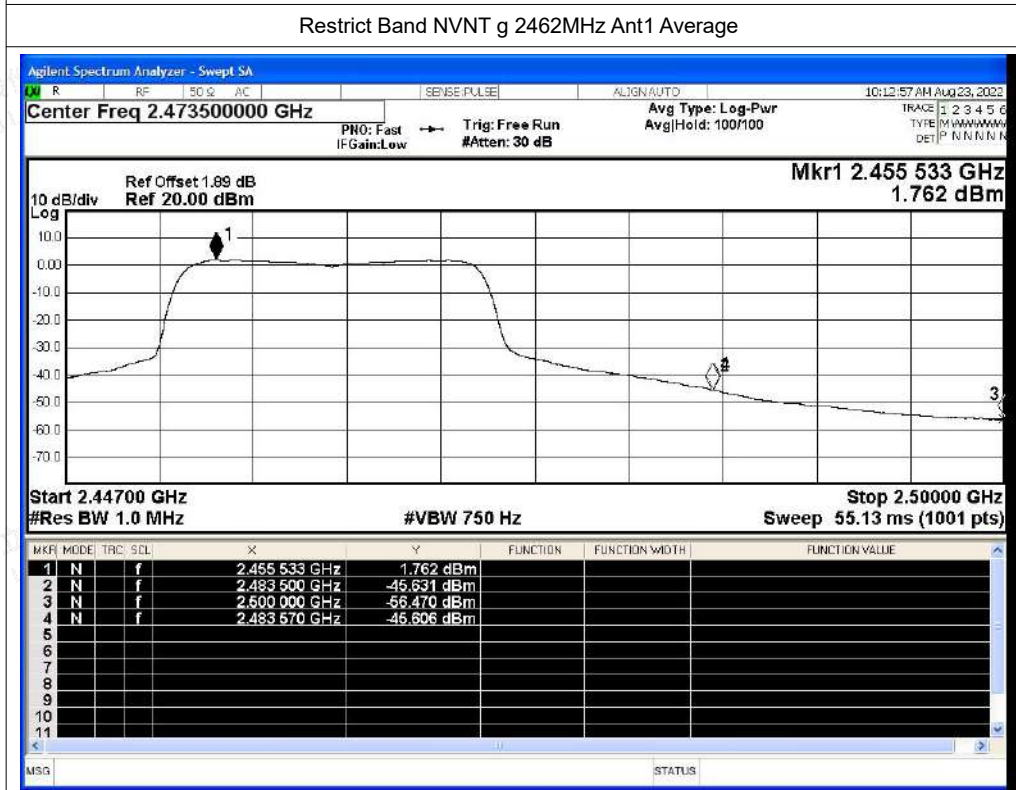
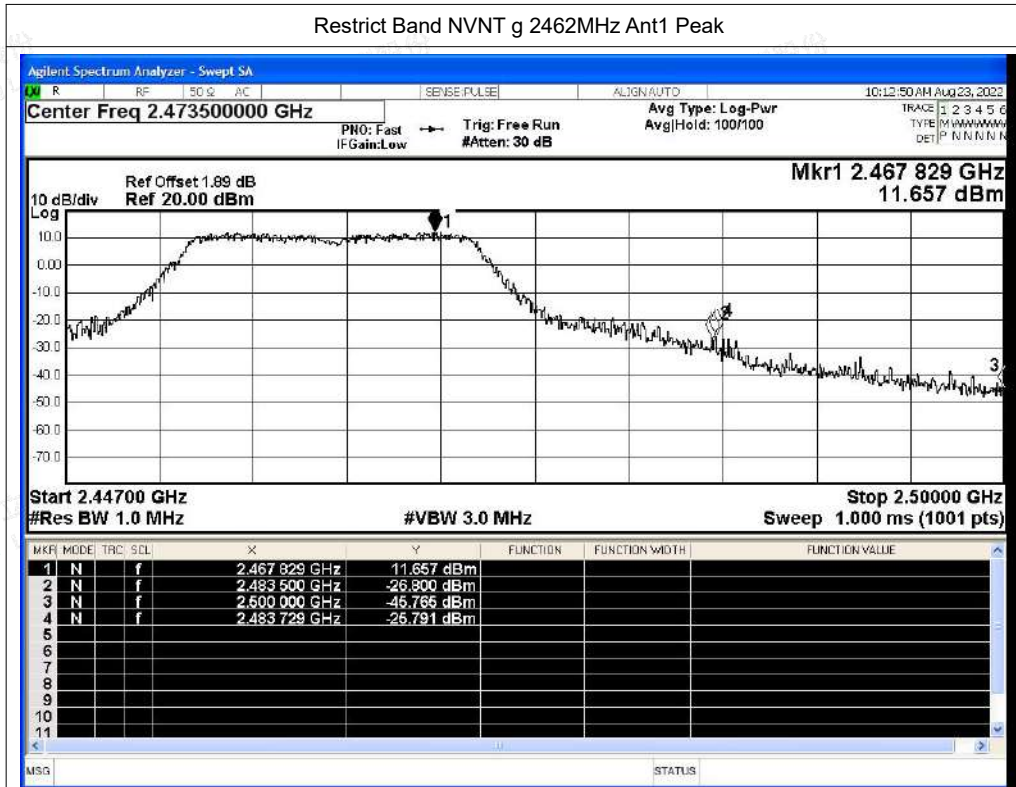
Restrict Band NVNT b 2412MHz Ant1 Average





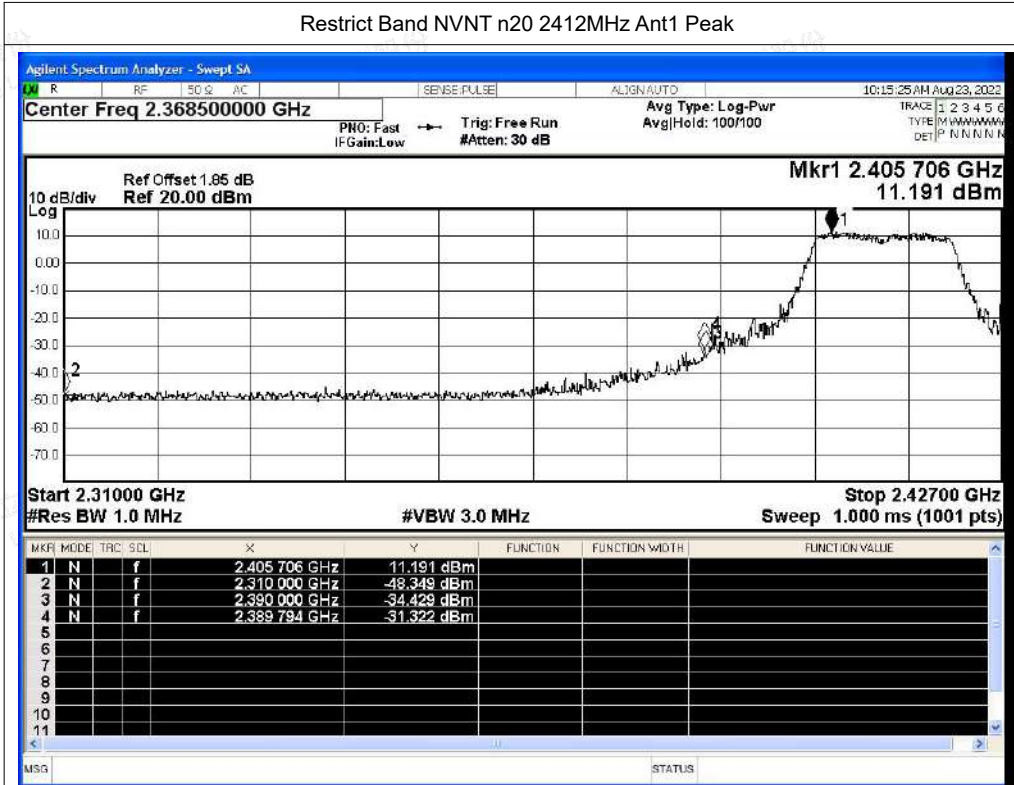




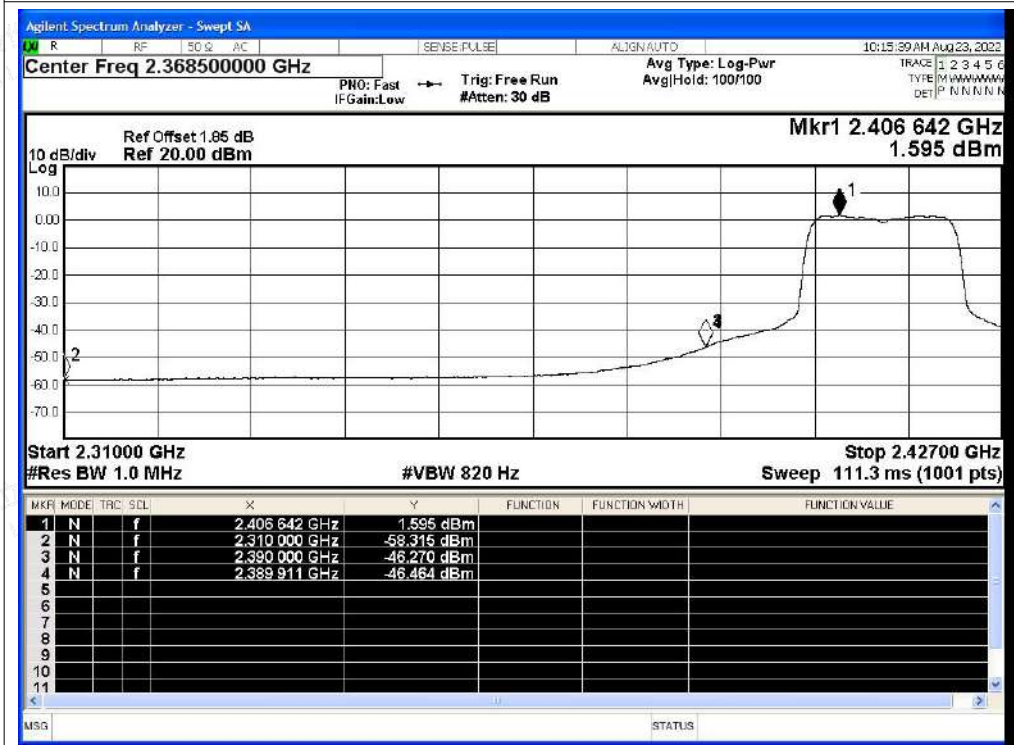




Restrict Band NVNT n20 2412MHz Ant1 Peak

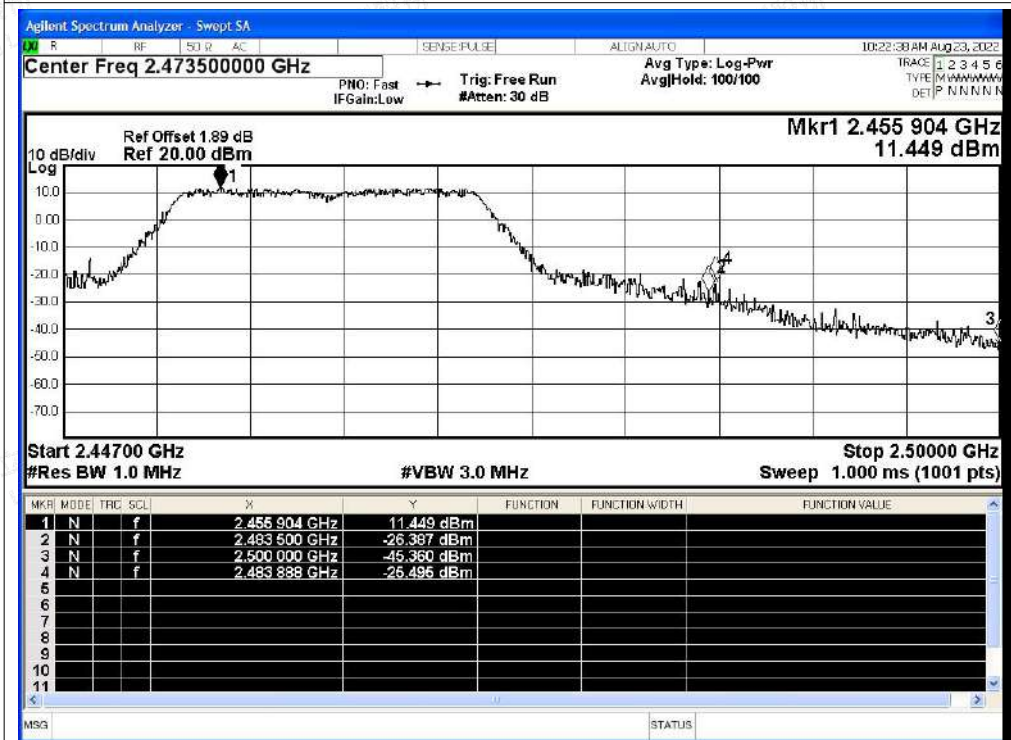


Restrict Band NVNT n20 2412MHz Ant1 Average

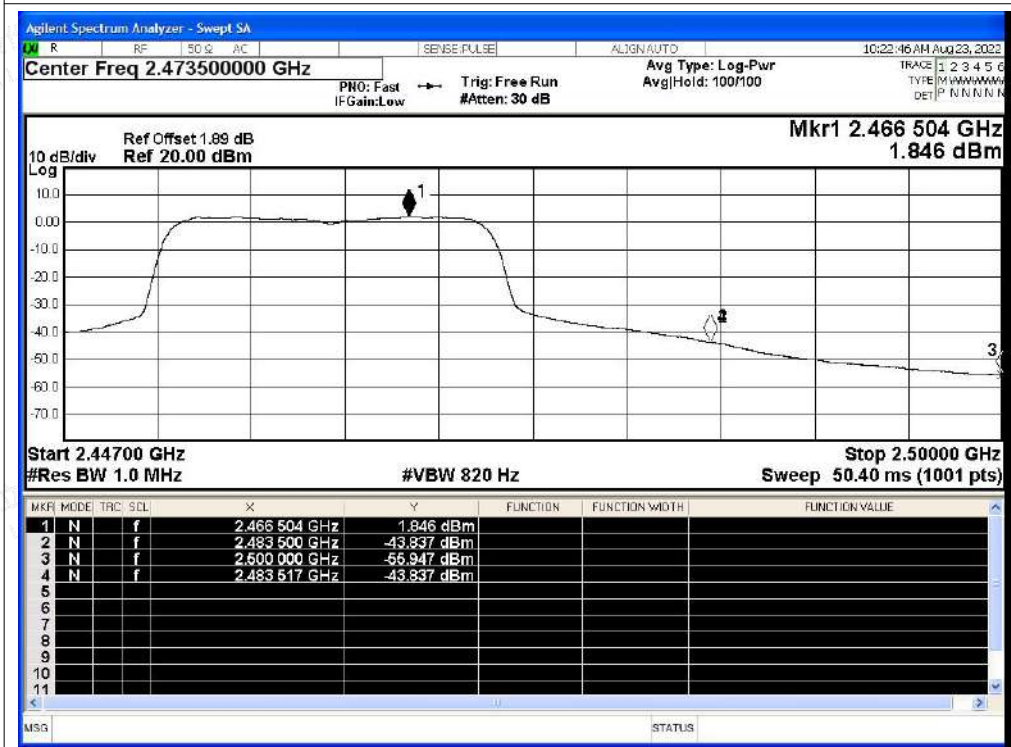




Restrict Band NVNT n20 2462MHz Ant1 Peak



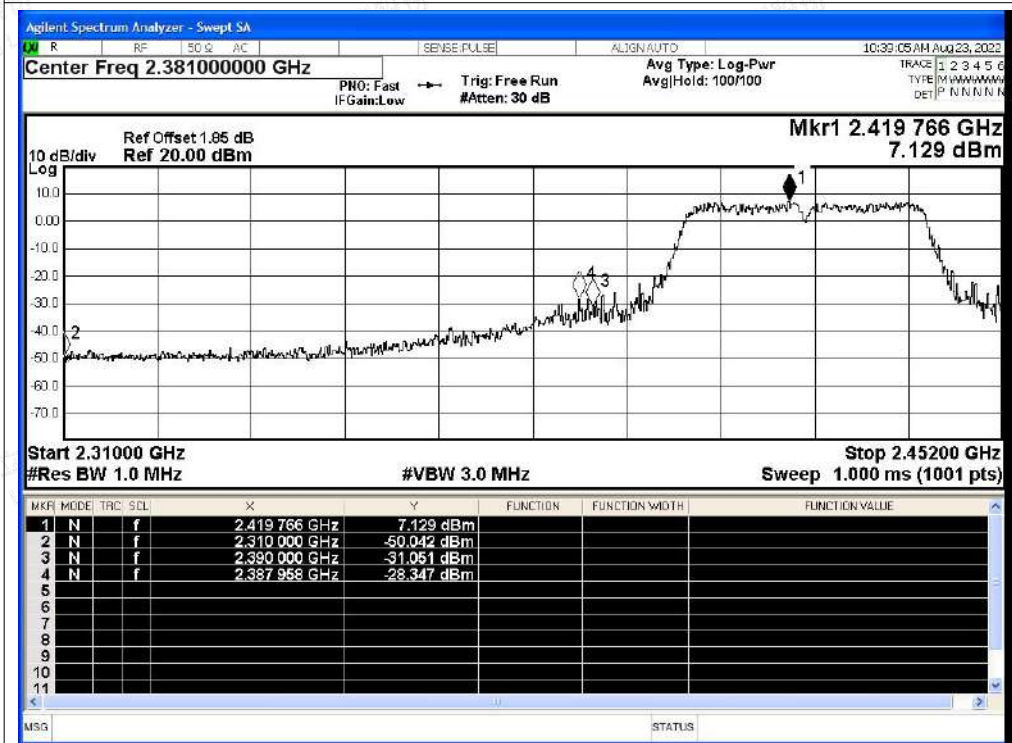
Restrict Band NVNT n20 2462MHz Ant1 Average



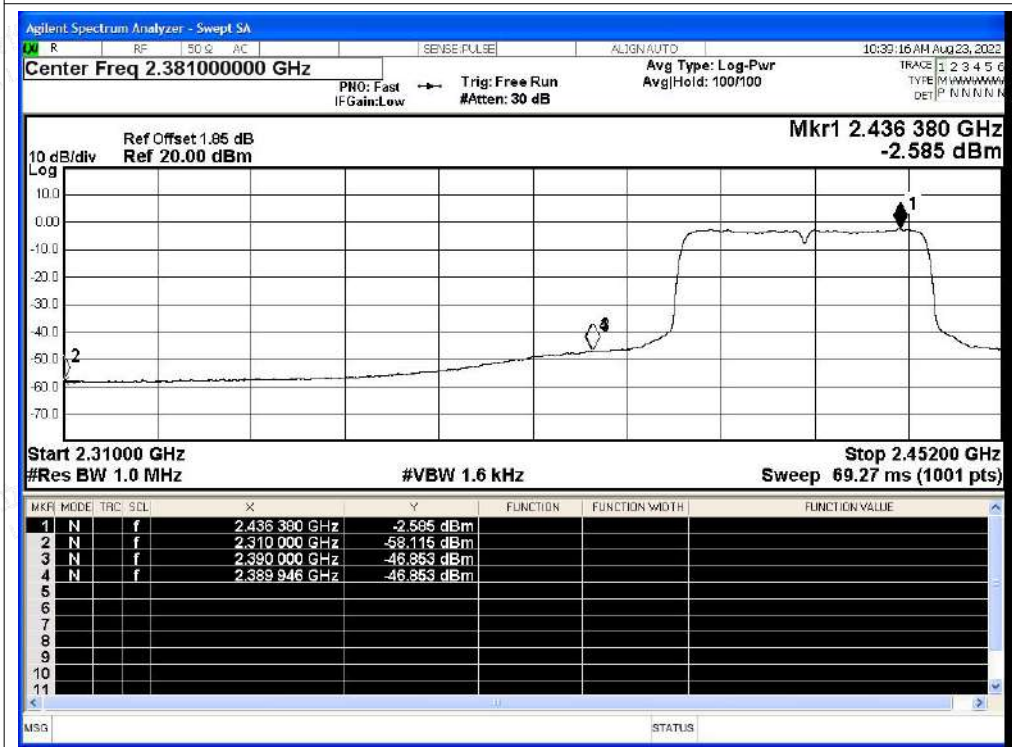




Restrict Band NVNT n40 2422MHz Ant1 Peak

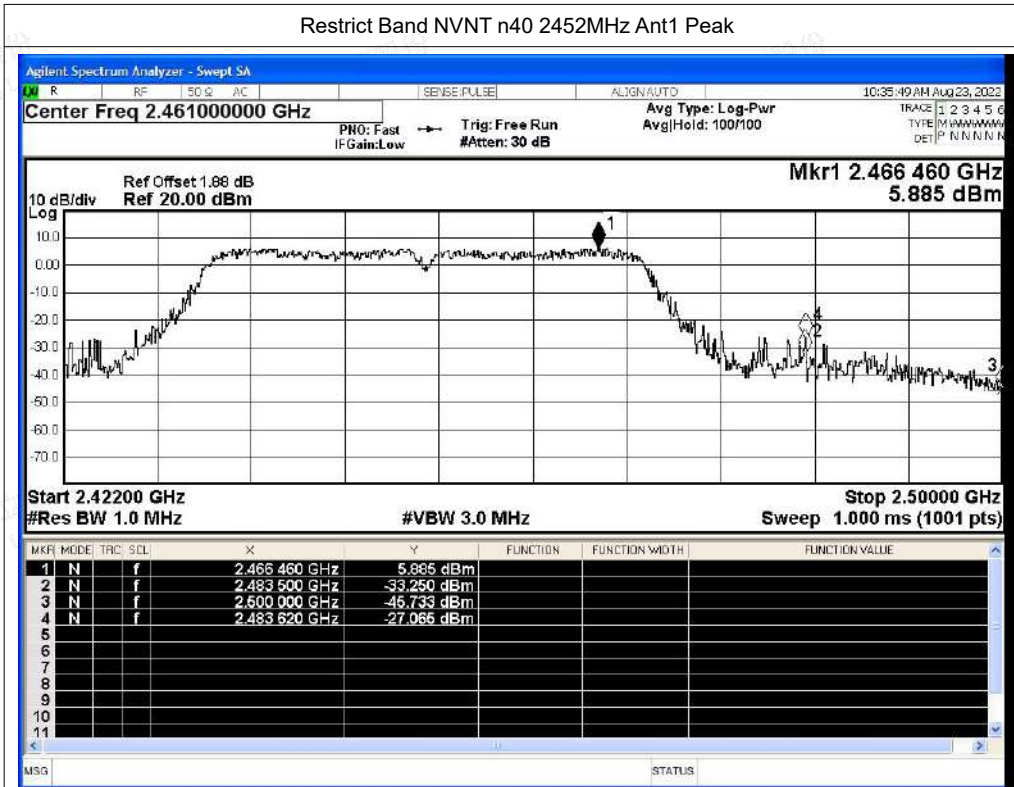


Restrict Band NVNT n40 2422MHz Ant1 Average





Restrict Band NVNT n40 2452MHz Ant1 Peak



Restrict Band NVNT n40 2452MHz Ant1 Average

