



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: WIFI LED Strip Light

Test Model: DTWF20RGB

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



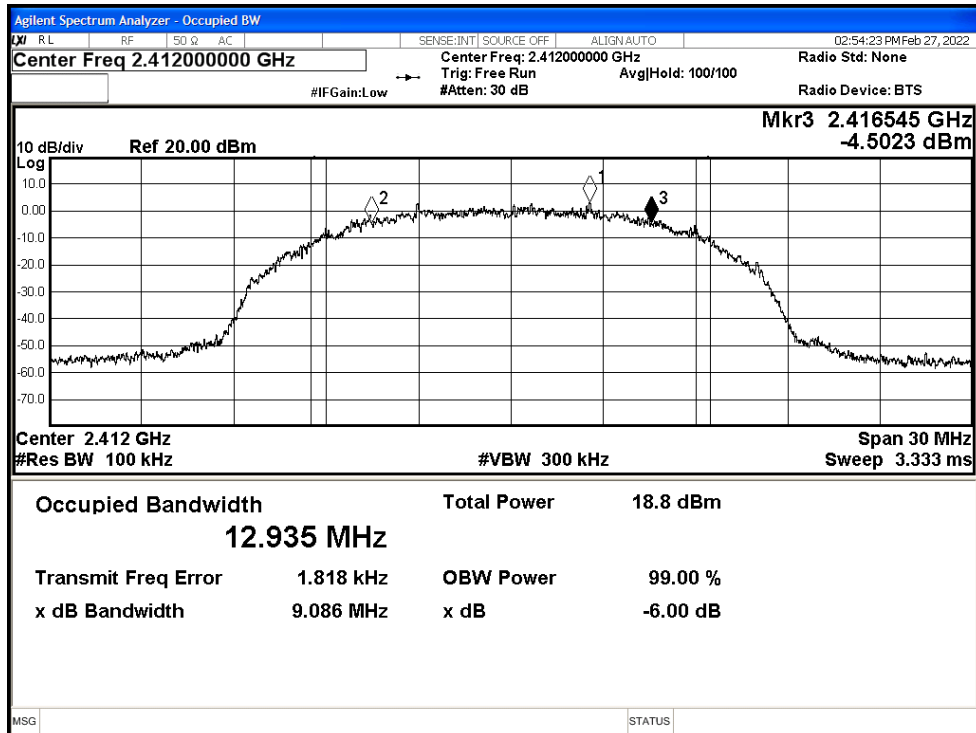
A.1 6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.086	0.5	Pass
NVNT	b	2437	Ant1	9.97	0.5	Pass
NVNT	b	2462	Ant1	8.996	0.5	Pass
NVNT	g	2412	Ant1	16.444	0.5	Pass
NVNT	g	2437	Ant1	16.437	0.5	Pass
NVNT	g	2462	Ant1	16.423	0.5	Pass
NVNT	n20	2412	Ant1	17.481	0.5	Pass
NVNT	n20	2437	Ant1	17.525	0.5	Pass
NVNT	n20	2462	Ant1	17.462	0.5	Pass

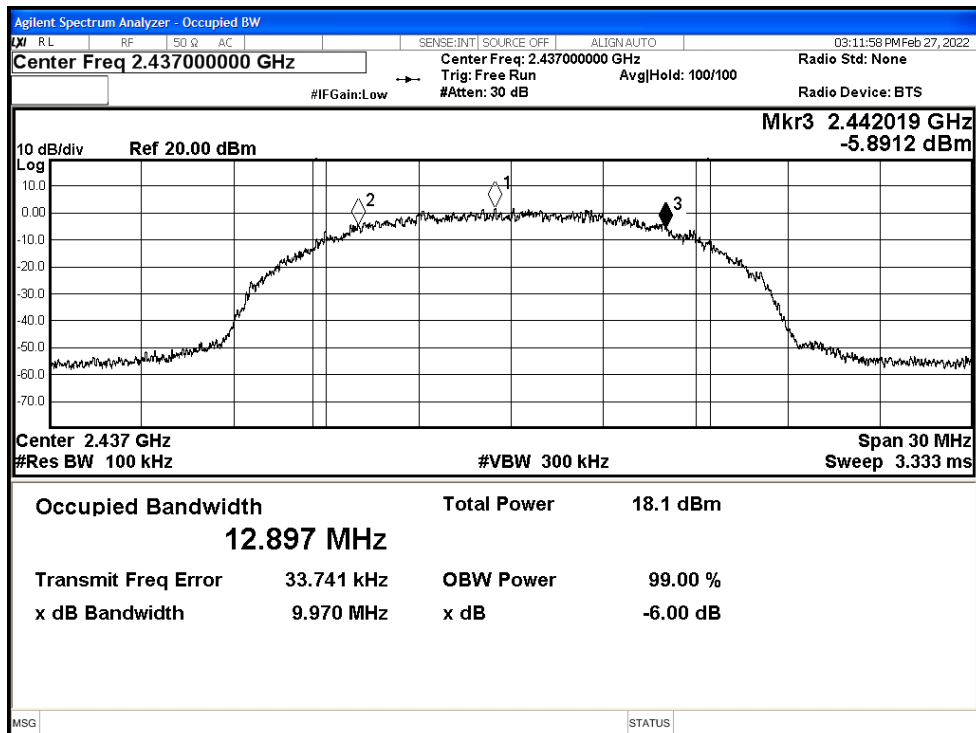


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

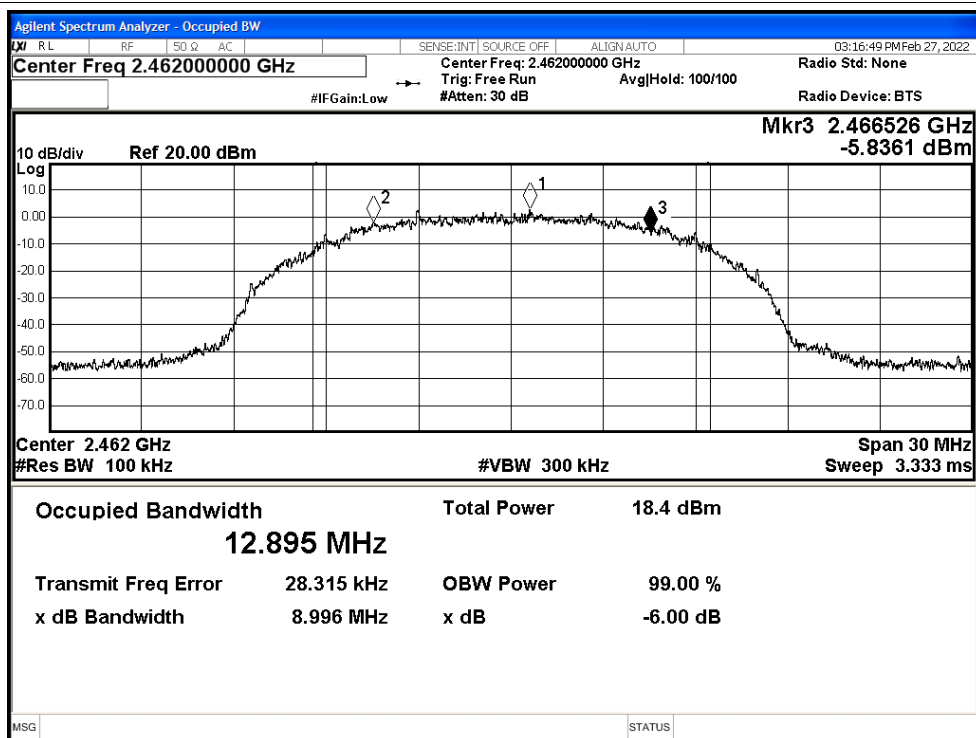


-6dB Bandwidth NVNT b 2437MHz Ant1

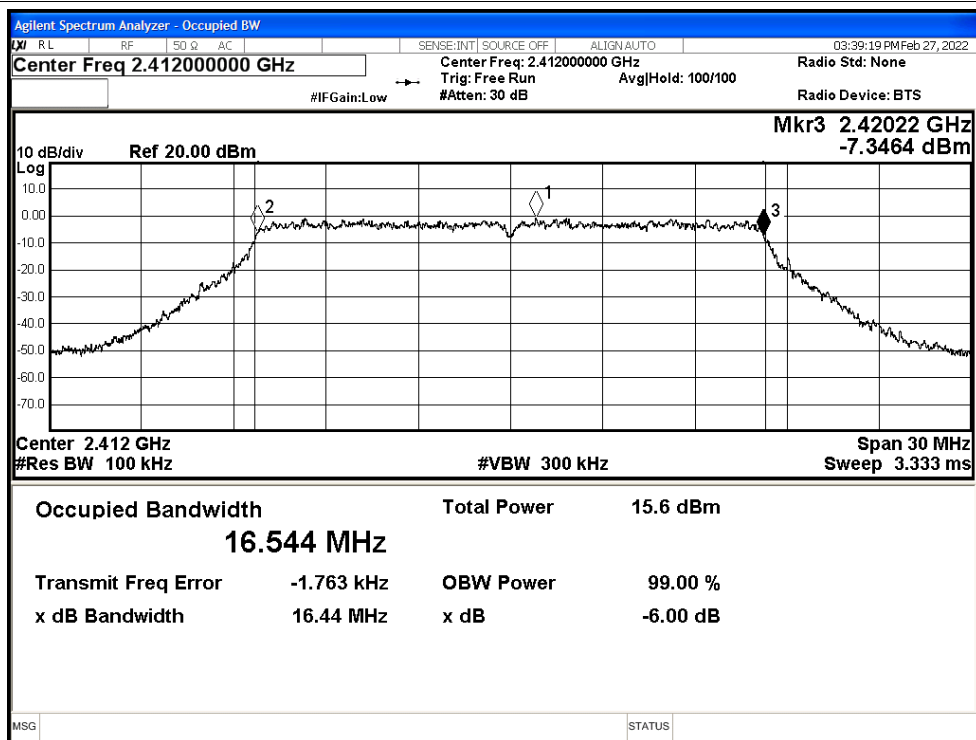




-6dB Bandwidth NVNT b 2462MHz Ant1

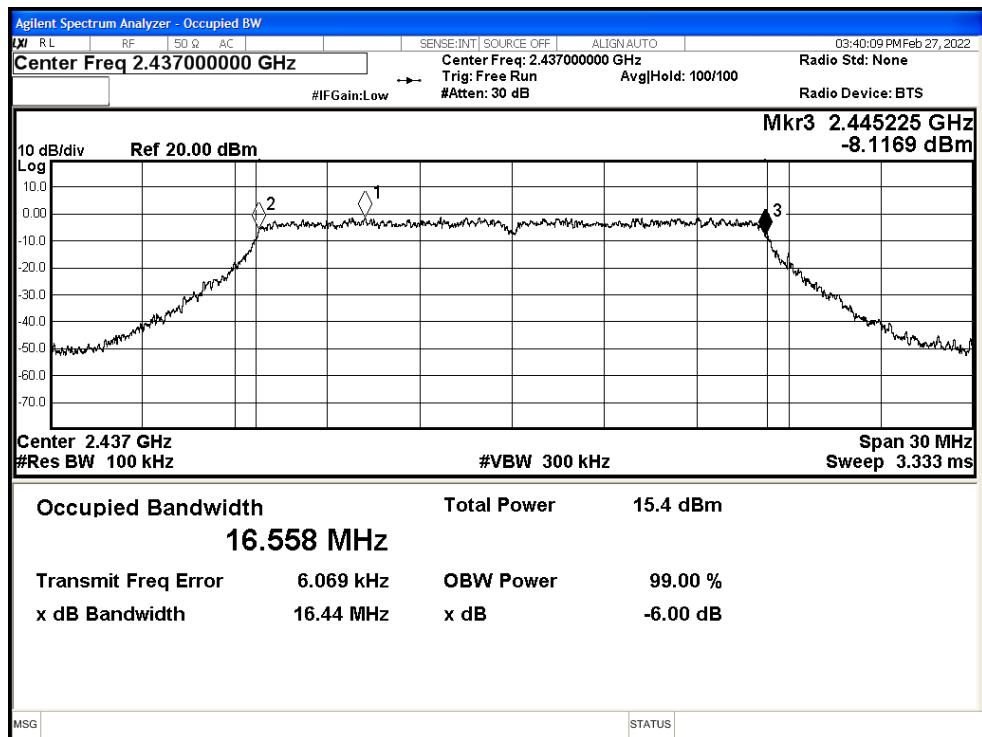


-6dB Bandwidth NVNT g 2412MHz Ant1

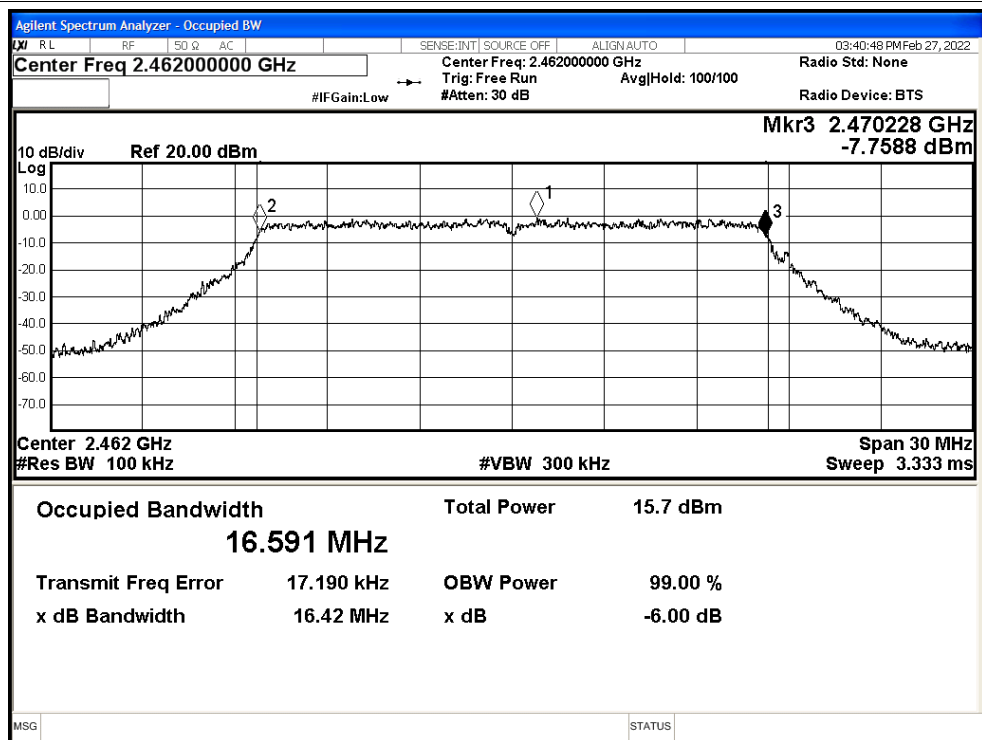




-6dB Bandwidth NVNT g 2437MHz Ant1

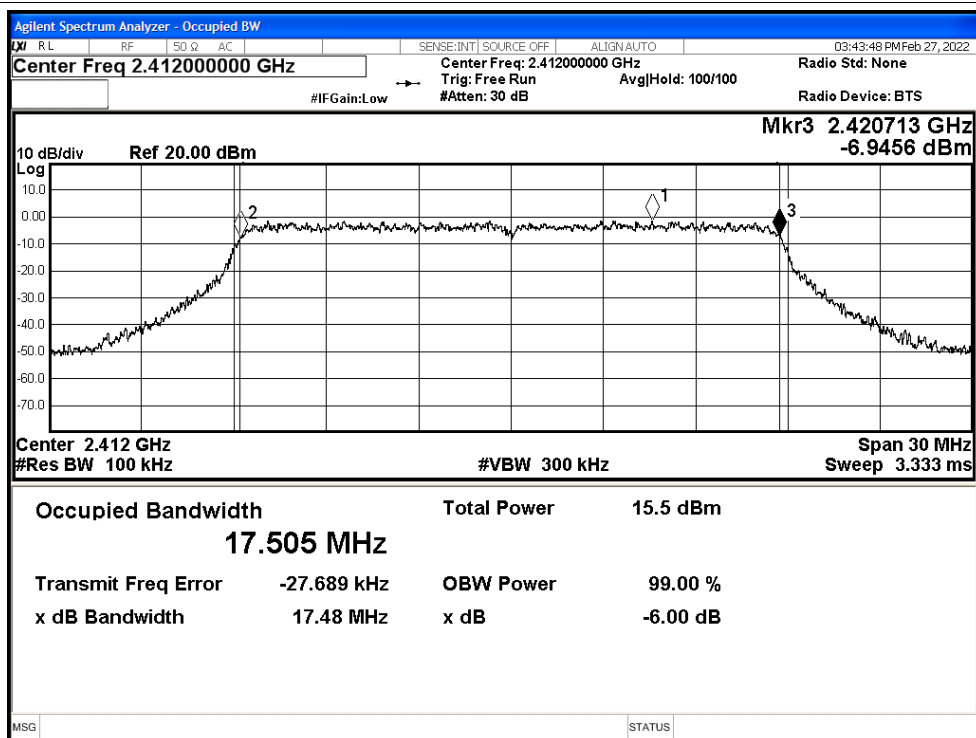


-6dB Bandwidth NVNT g 2462MHz Ant1

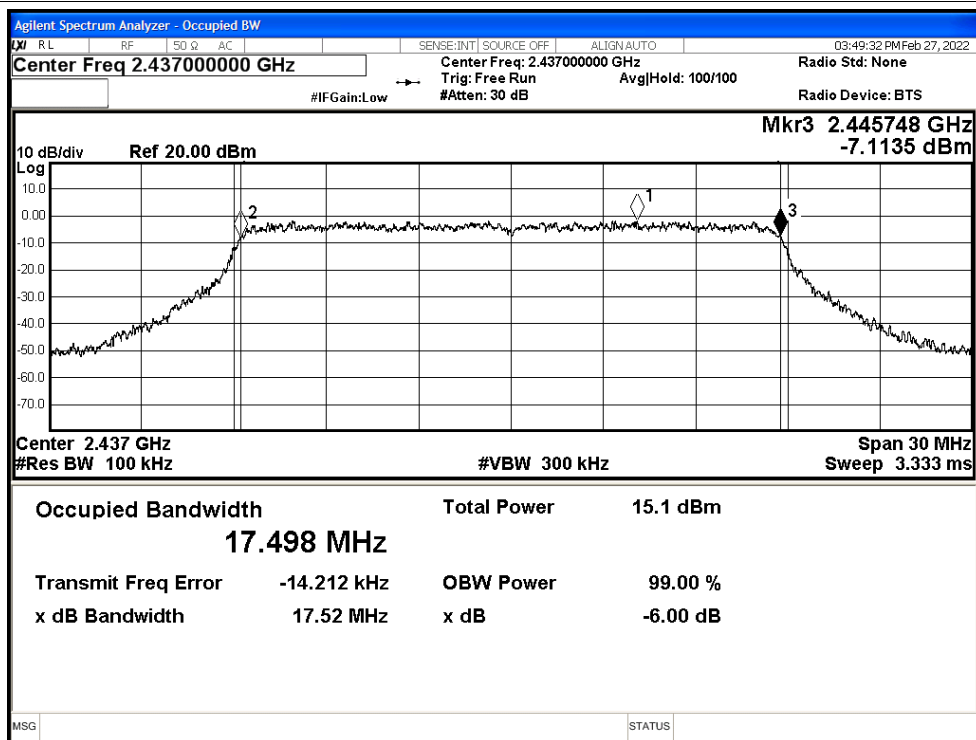




-6dB Bandwidth NVNT n20 2412MHz Ant1

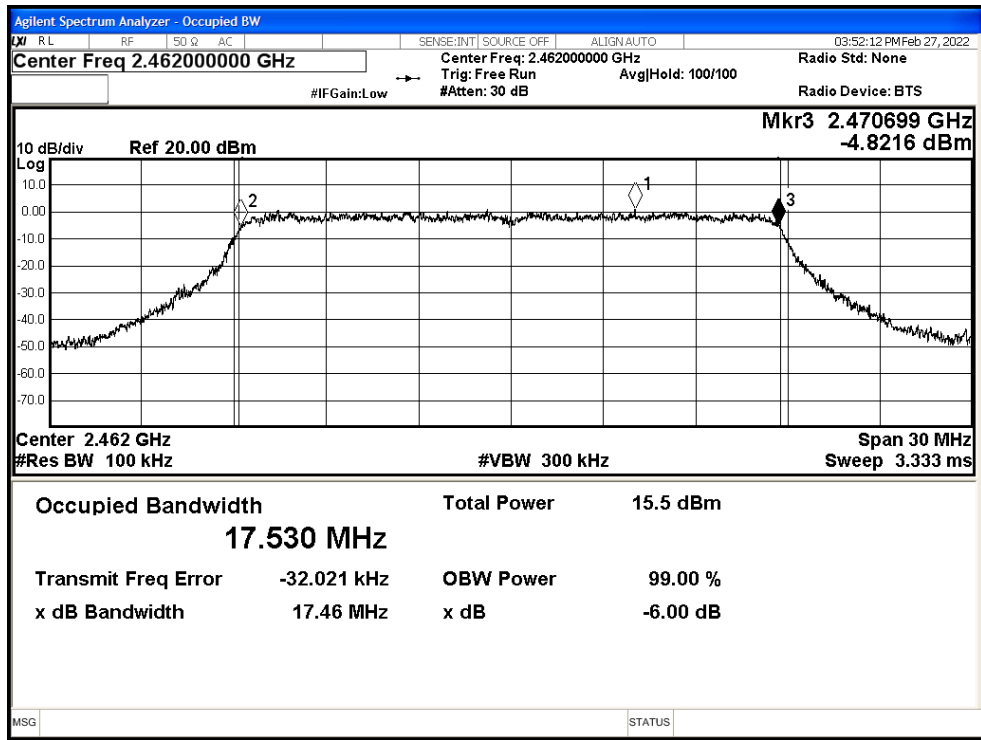


-6dB Bandwidth NVNT n20 2437MHz Ant1





-6dB Bandwidth NVNT n20 2462MHz Ant1





A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	16.57	0	16.57	30	Pass
NVNT	b	2437	Ant1	15.74	0	15.74	30	Pass
NVNT	b	2462	Ant1	16.06	0	16.06	30	Pass
NVNT	g	2412	Ant1	14.56	0	14.56	30	Pass
NVNT	g	2437	Ant1	14.11	0	14.11	30	Pass
NVNT	g	2462	Ant1	14.64	0	14.64	30	Pass
NVNT	n20	2412	Ant1	14.46	0	14.46	30	Pass
NVNT	n20	2437	Ant1	14.09	0	14.09	30	Pass
NVNT	n20	2462	Ant1	14.4	0	14.4	30	Pass



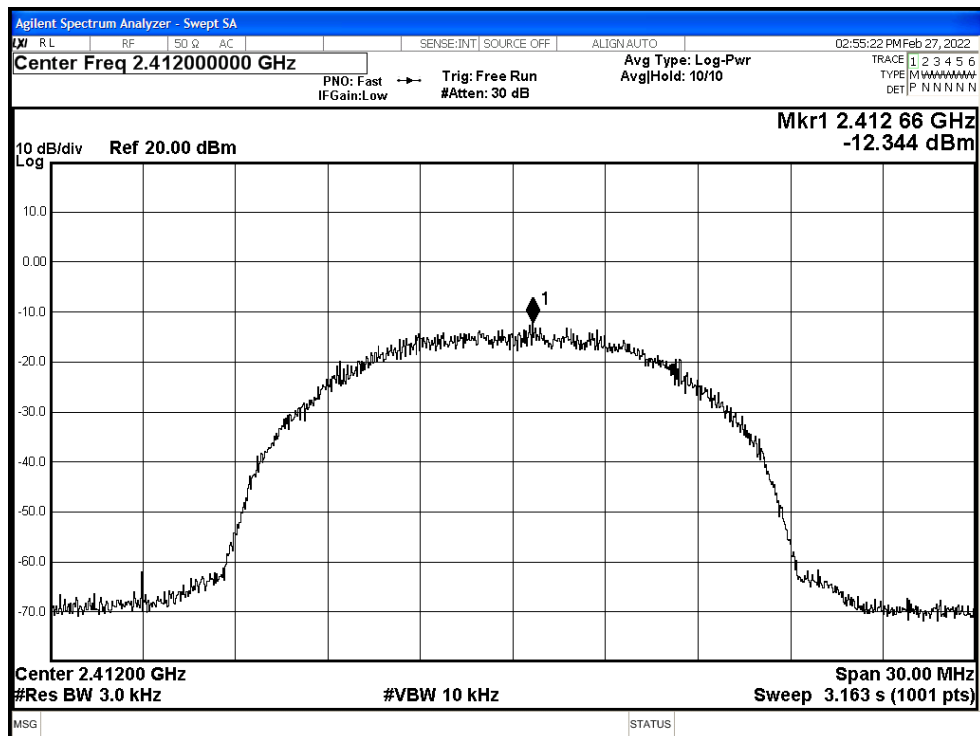
A.3 Power Spectral Density

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-12.34	0	-12.34	8	Pass
NVNT	b	2437	Ant1	-12.84	0	-12.84	8	Pass
NVNT	b	2462	Ant1	-12.6	0	-12.6	8	Pass
NVNT	g	2412	Ant1	-17.04	0	-17.04	8	Pass
NVNT	g	2437	Ant1	-17.25	0	-17.25	8	Pass
NVNT	g	2462	Ant1	-16.31	0	-16.31	8	Pass
NVNT	n20	2412	Ant1	-17.68	0	-17.68	8	Pass
NVNT	n20	2437	Ant1	-16.68	0	-16.68	8	Pass
NVNT	n20	2462	Ant1	-15.85	0	-15.85	8	Pass

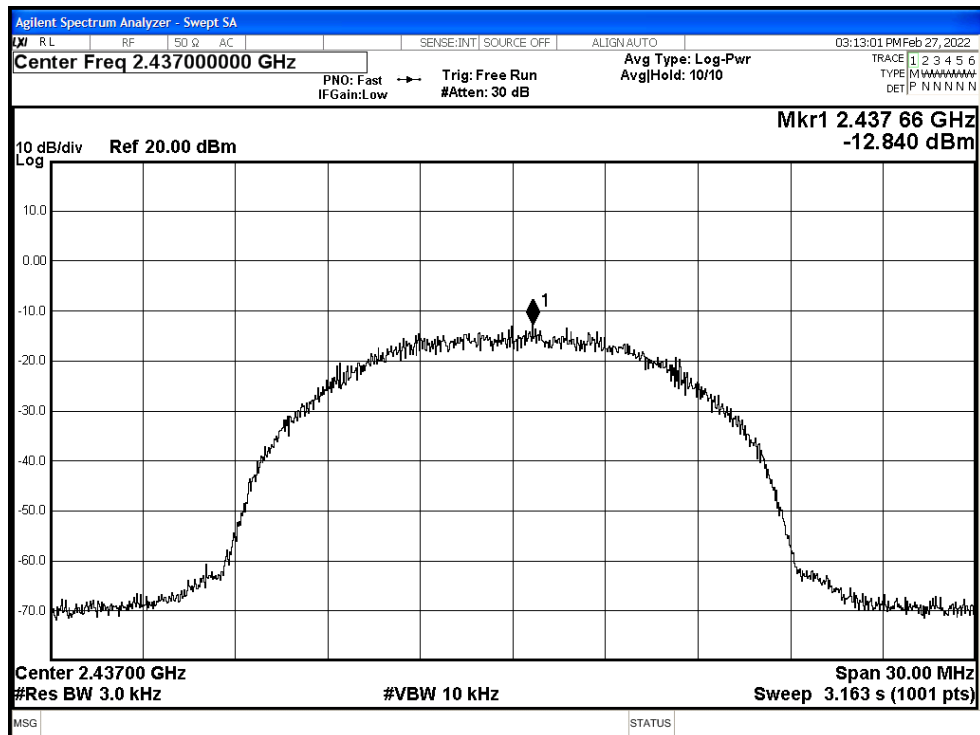


Test Graphs

PSD NVNT b 2412MHz Ant1

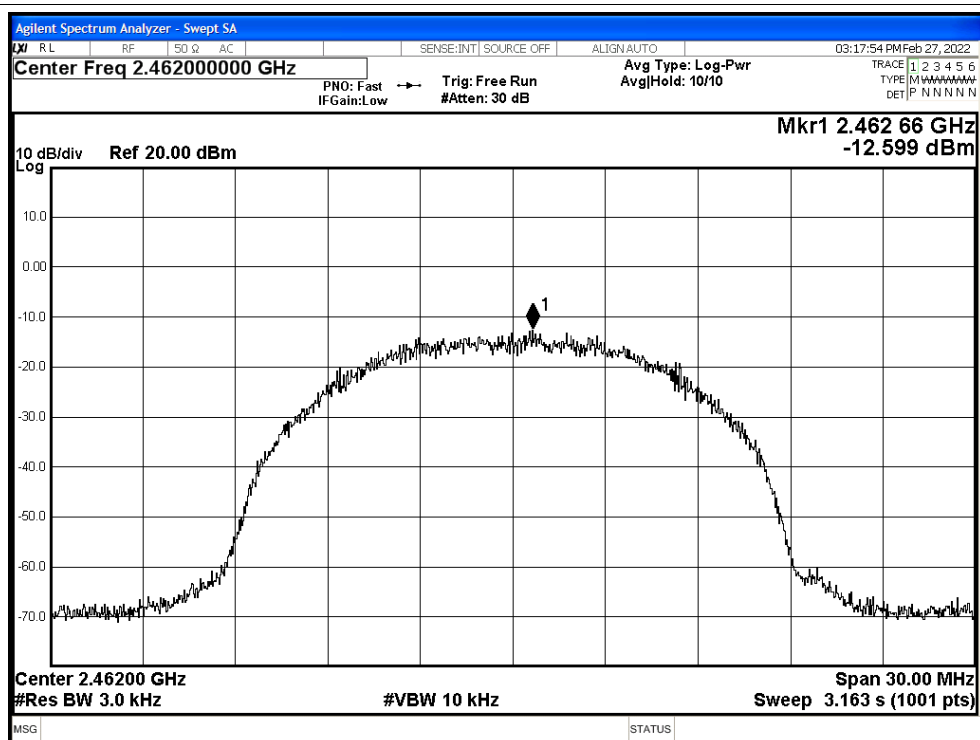


PSD NVNT b 2437MHz Ant1

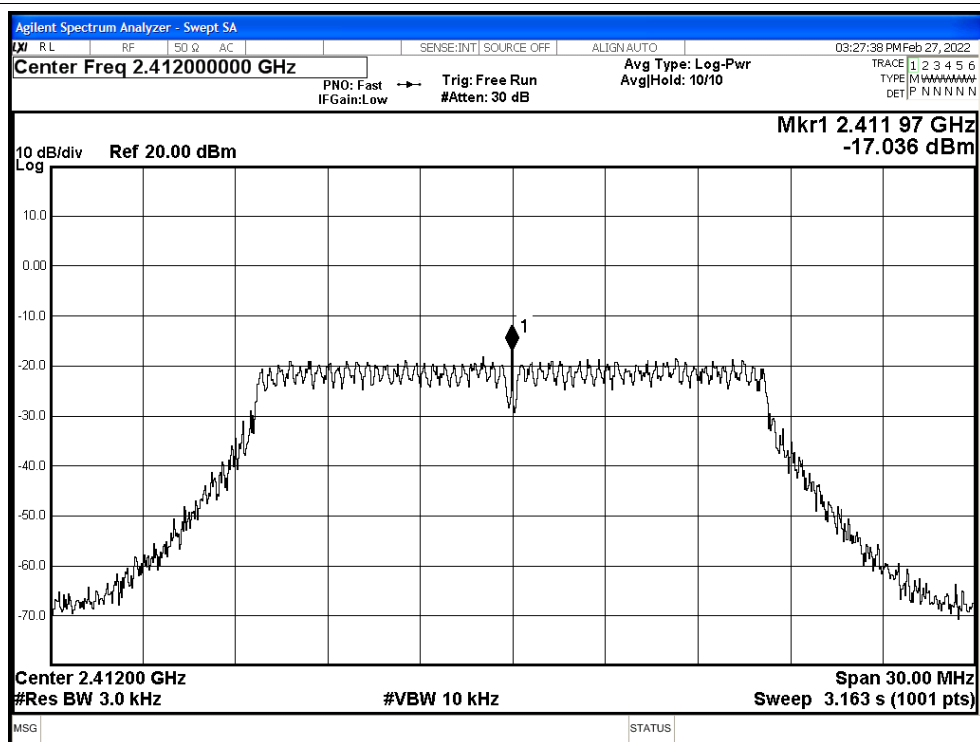




PSD NVNT b 2462MHz Ant1

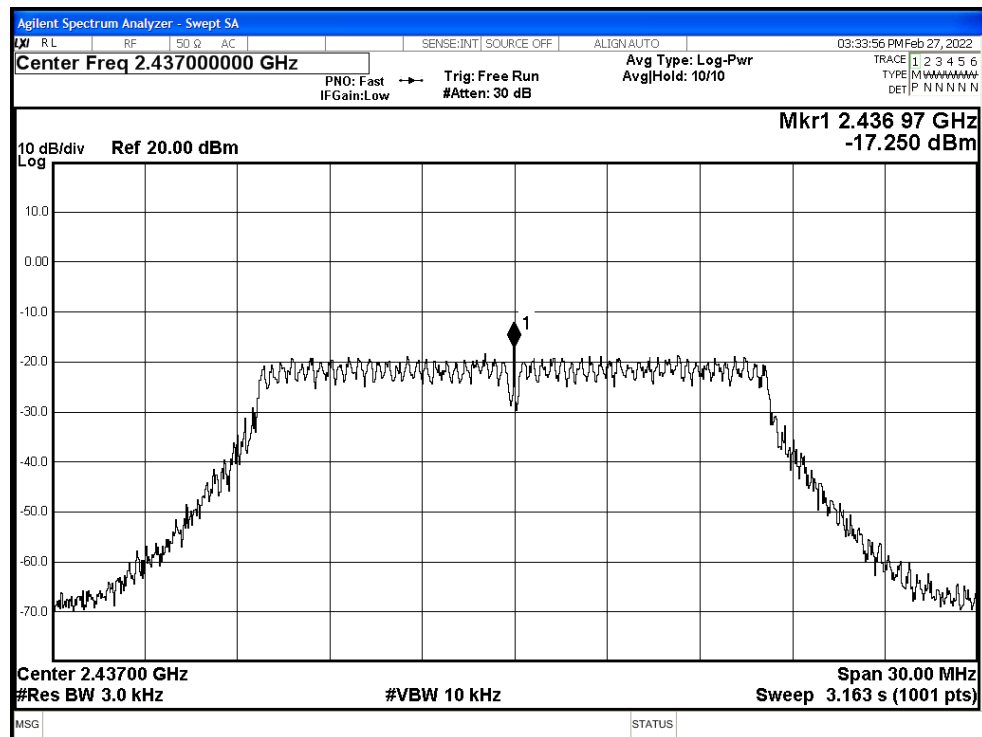


PSD NVNT g 2412MHz Ant1

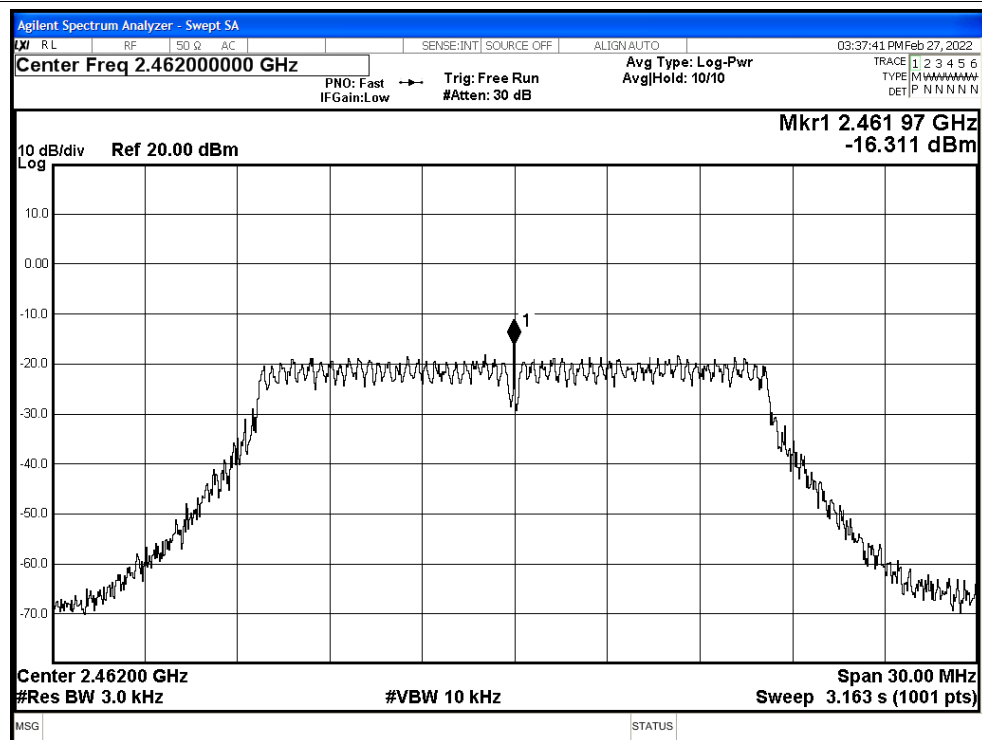




PSD NVNT g 2437MHz Ant1

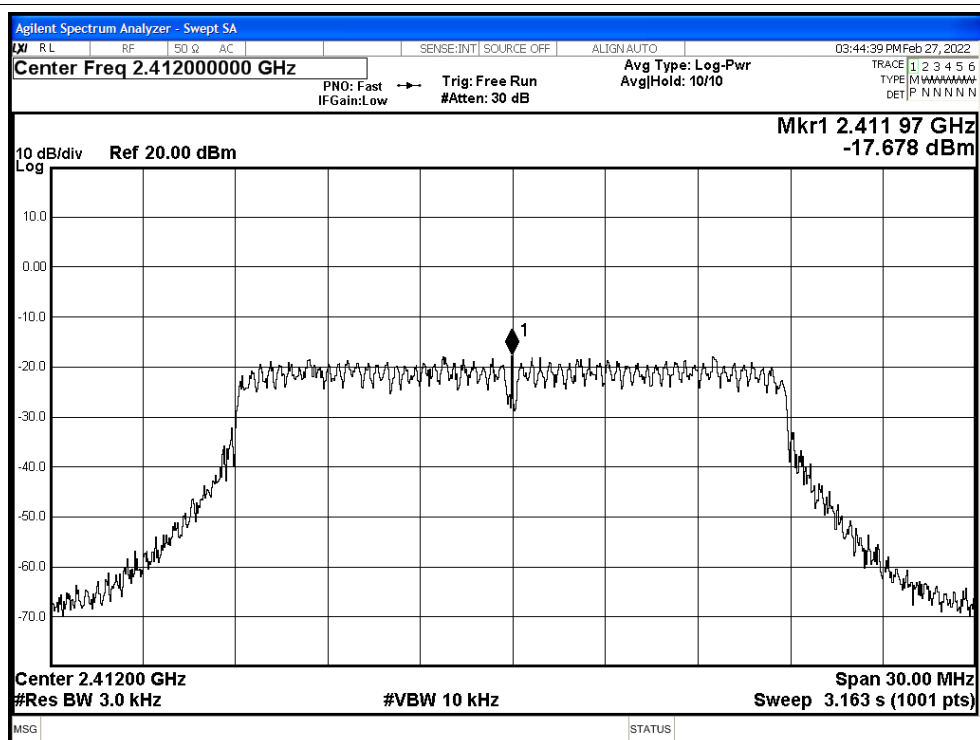


PSD NVNT g 2462MHz Ant1

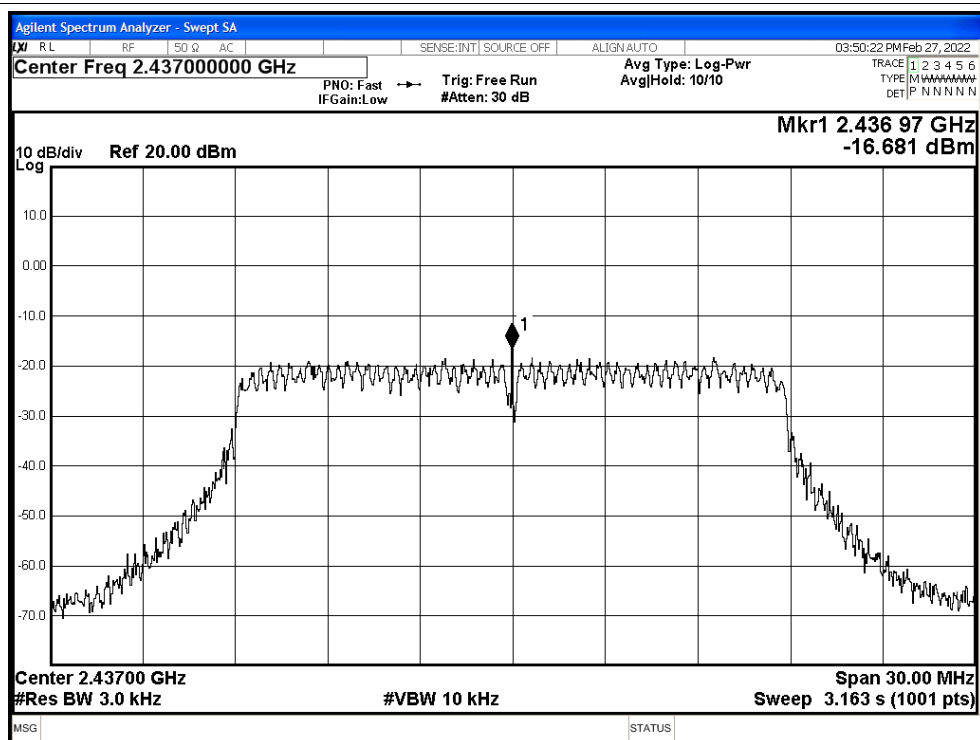


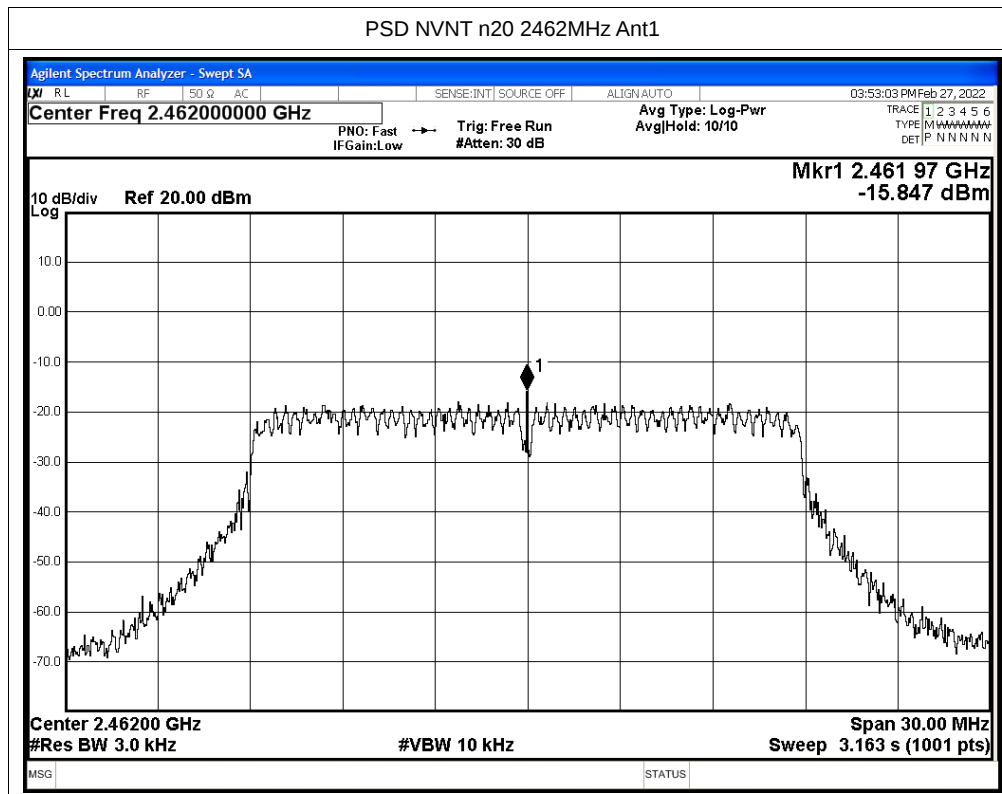


PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2437MHz Ant1







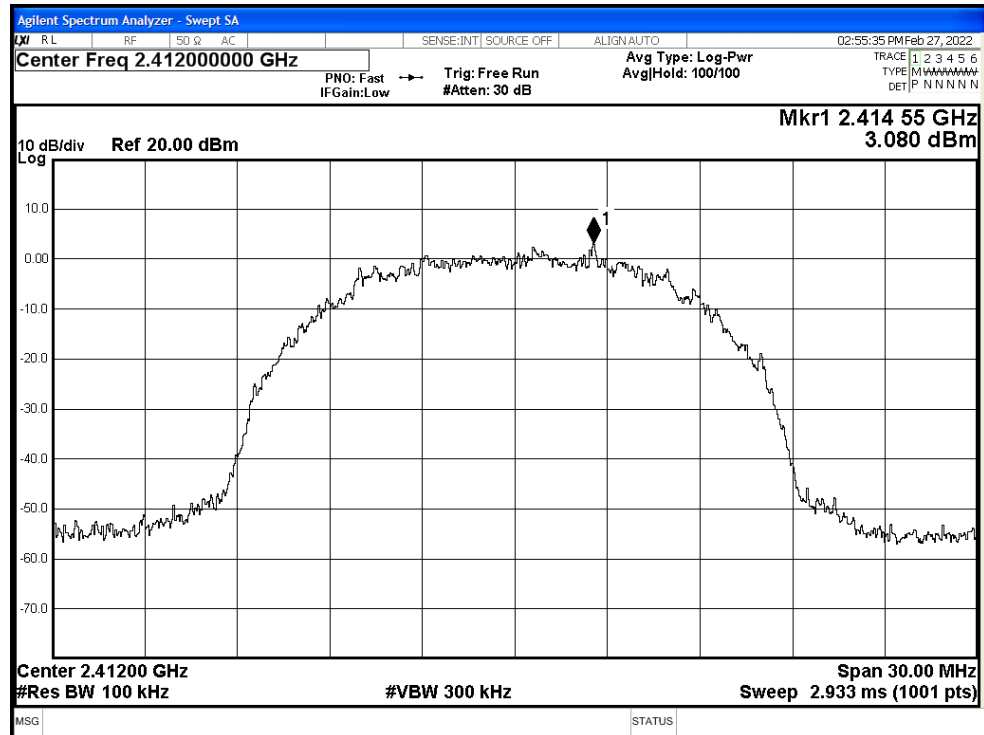
A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-55.14	-20	Pass
NVNT	b	2462	Ant1	-57.23	-20	Pass
NVNT	g	2412	Ant1	-40.26	-20	Pass
NVNT	g	2462	Ant1	-50.13	-20	Pass
NVNT	n20	2412	Ant1	-40.29	-20	Pass
NVNT	n20	2462	Ant1	-48.74	-20	Pass

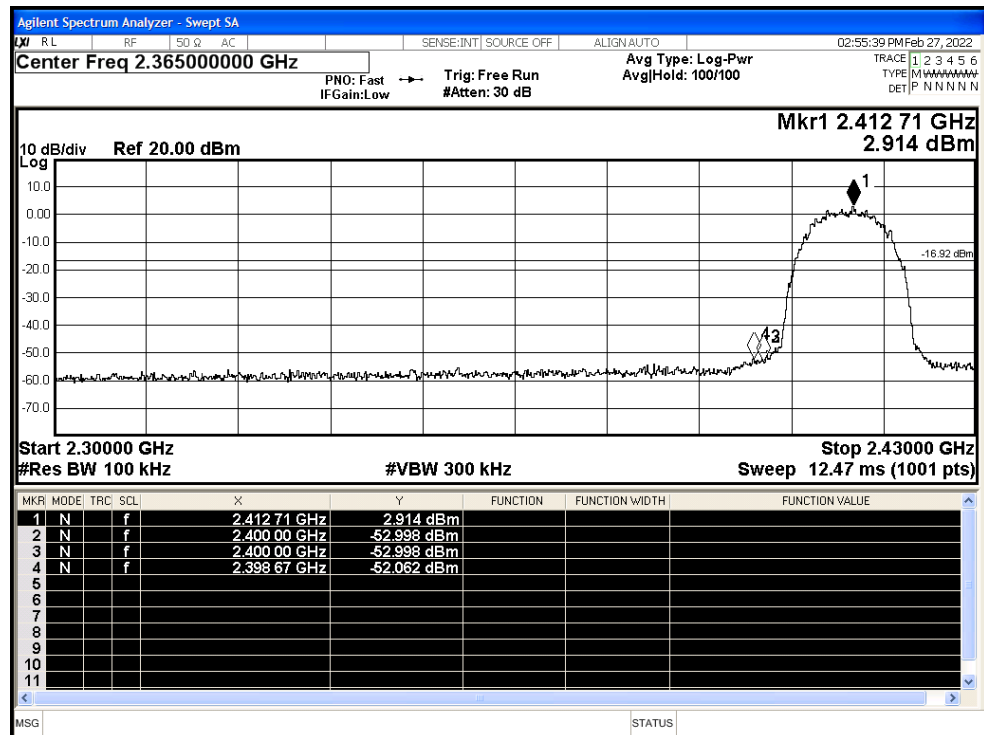


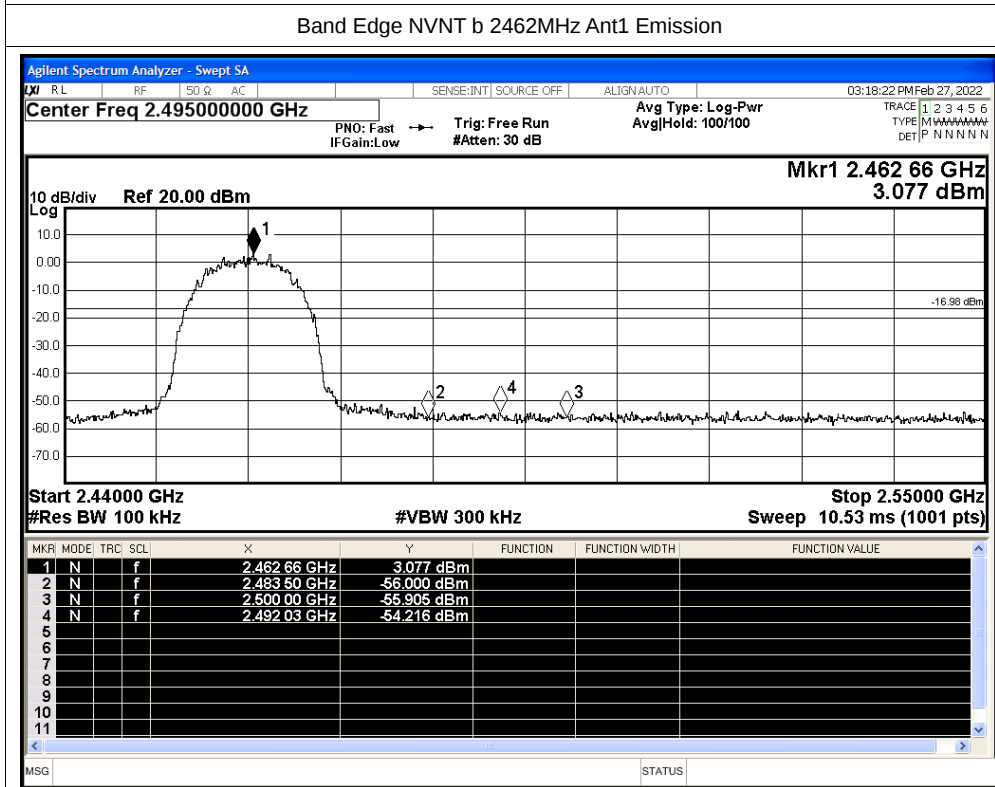
Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



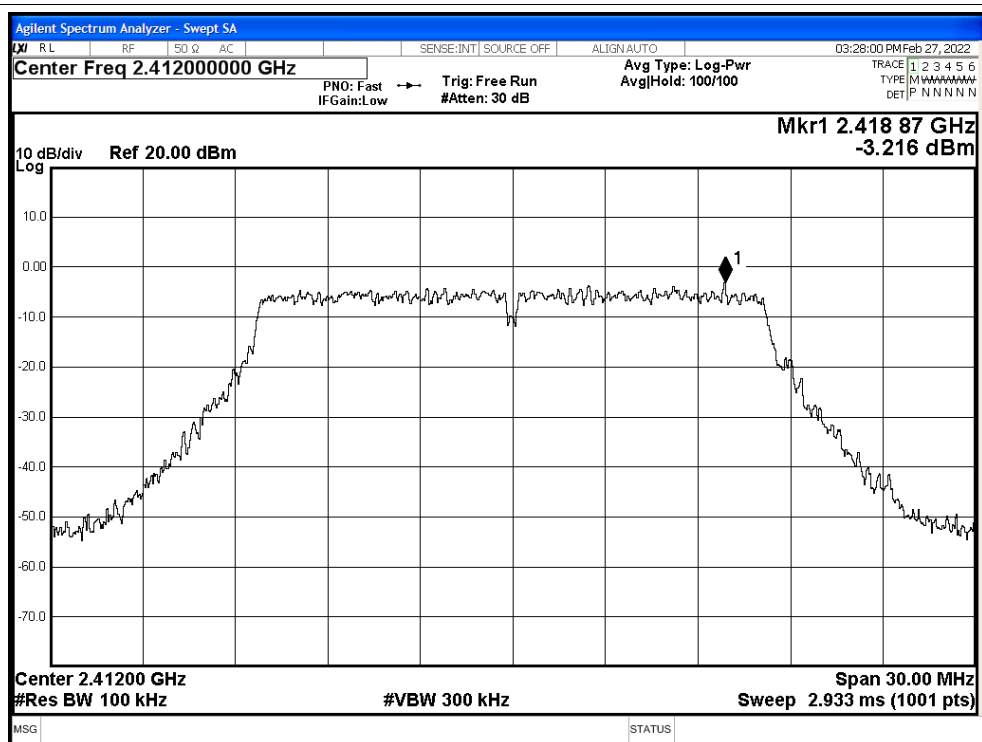
Band Edge NVNT b 2412MHz Ant1 Emission



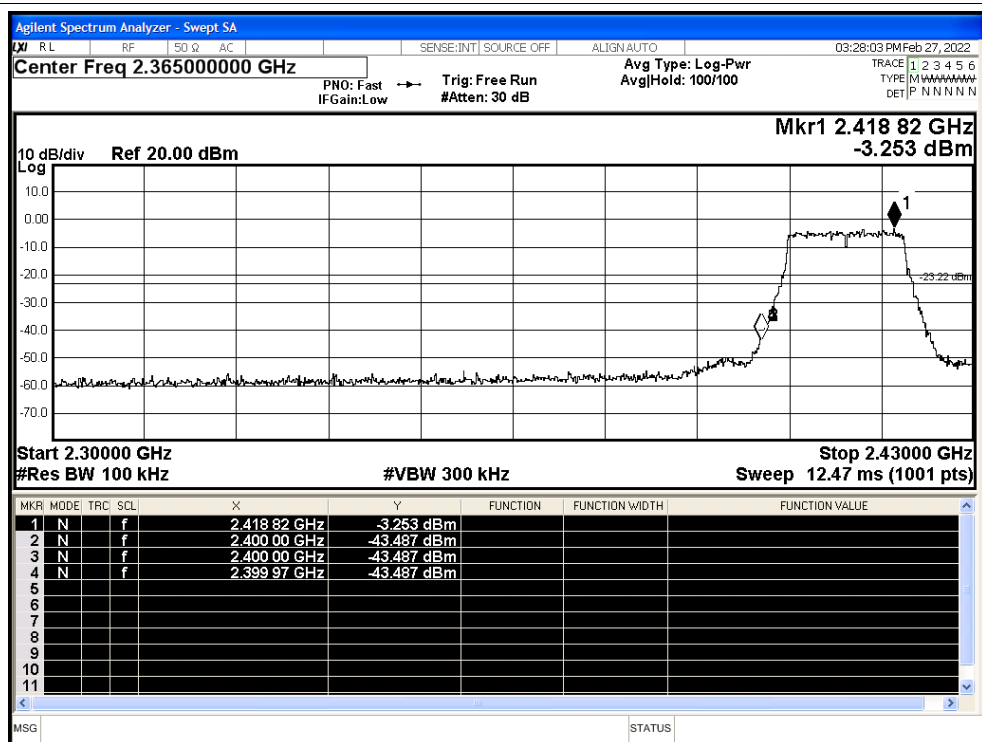




Band Edge NVNT g 2412MHz Ant1 Ref

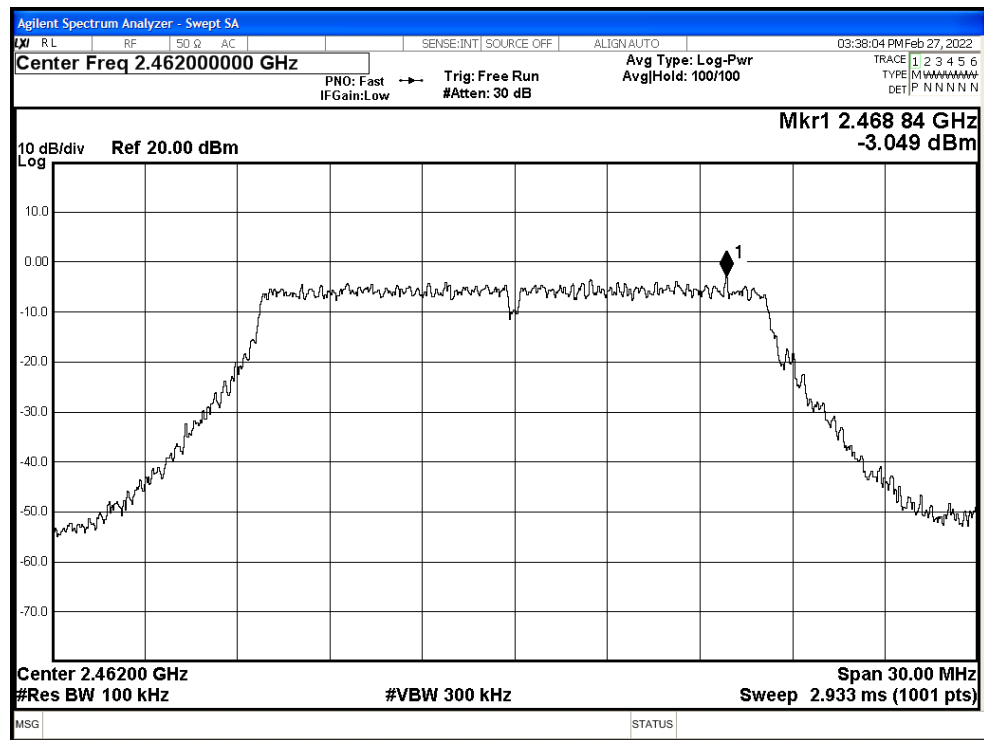


Band Edge NVNT g 2412MHz Ant1 Emission

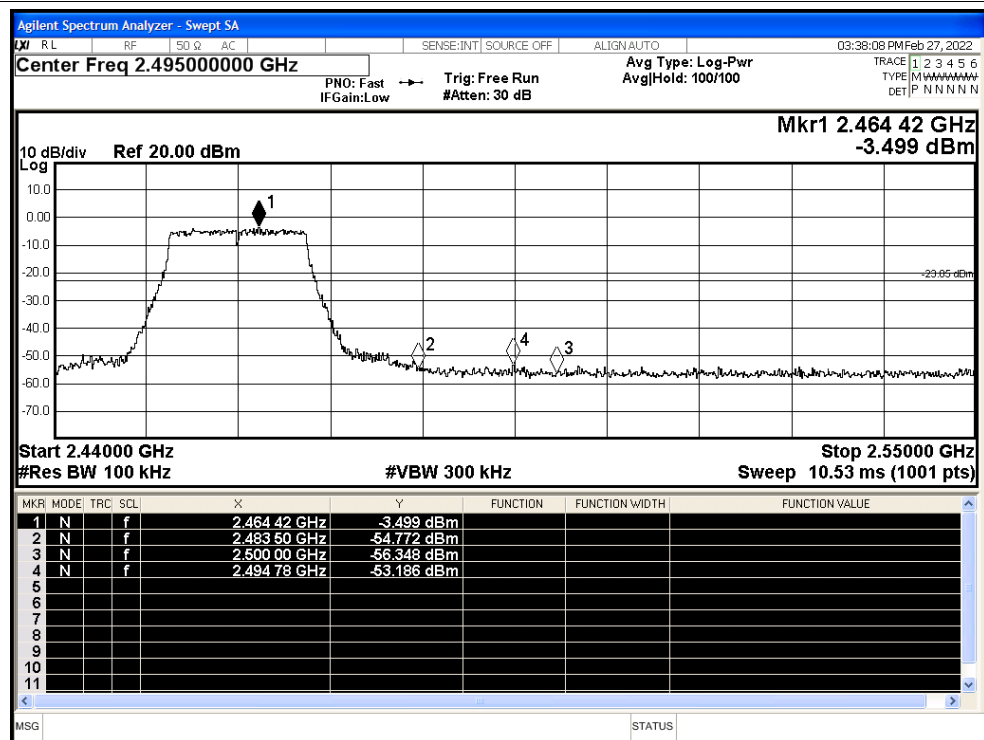




Band Edge NVNT g 2462MHz Ant1 Ref

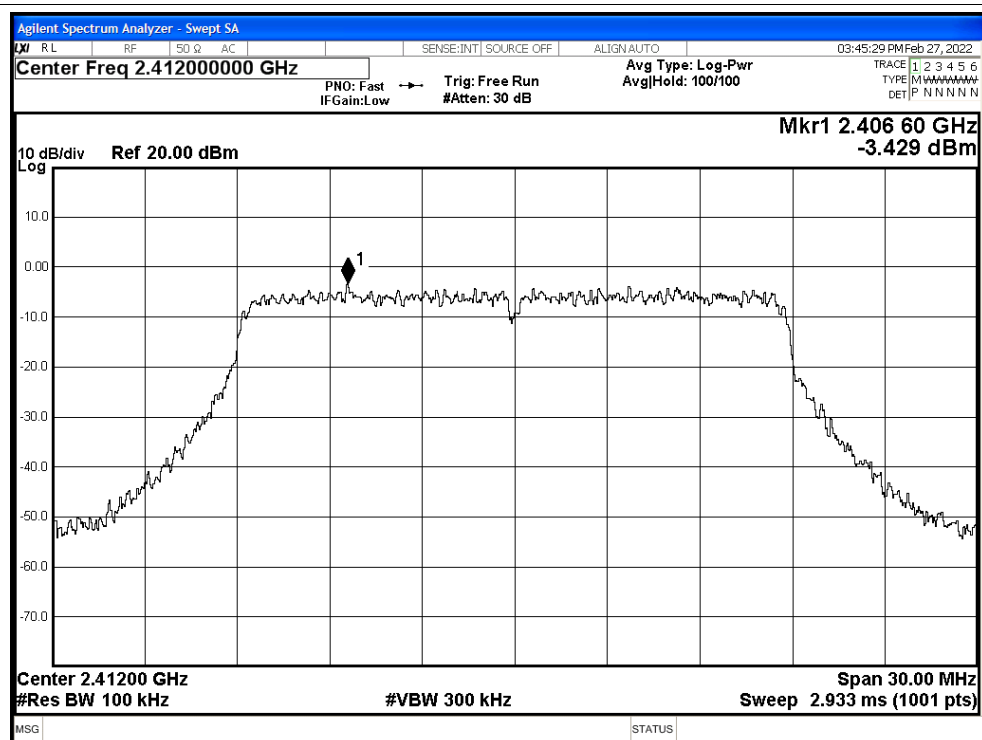


Band Edge NVNT g 2462MHz Ant1 Emission

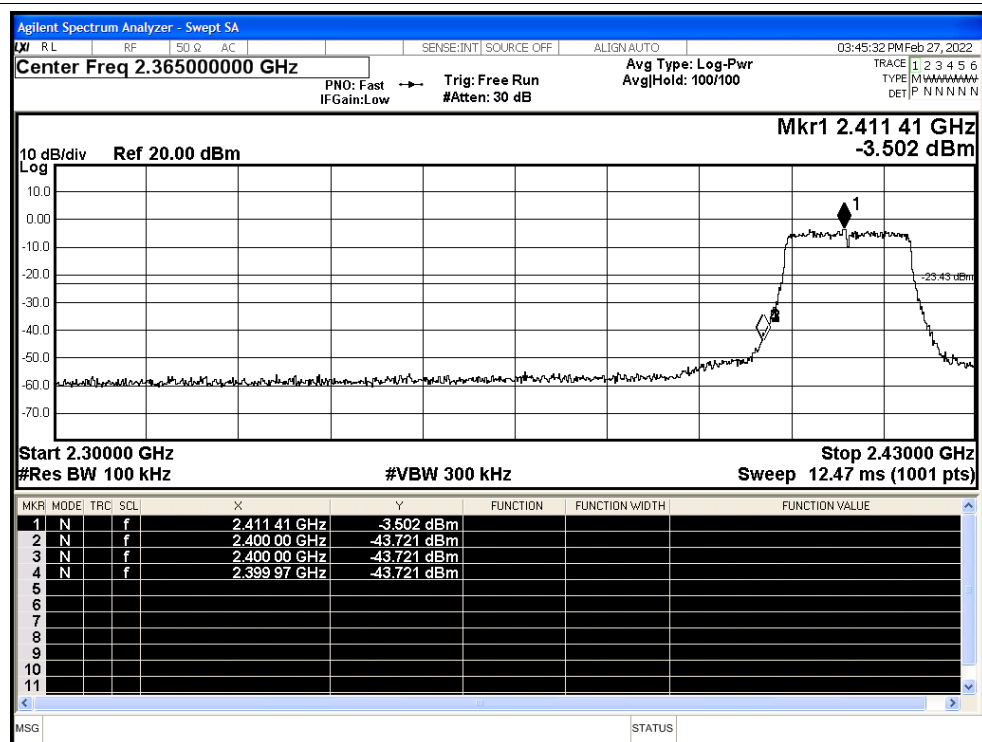




Band Edge NVNT n20 2412MHz Ant1 Ref

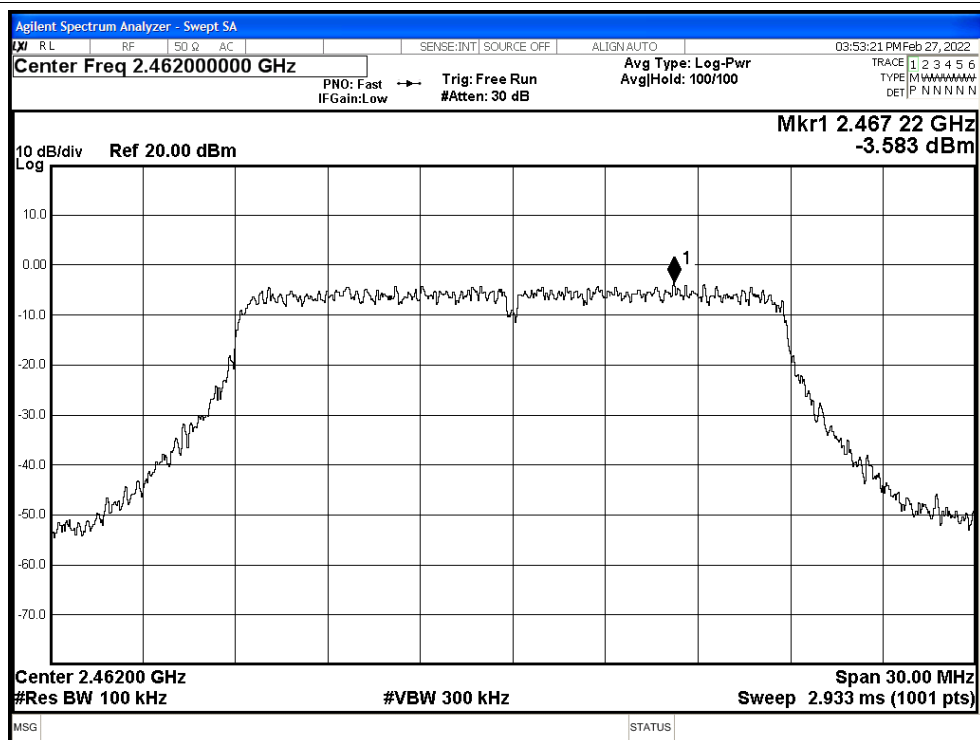


Band Edge NVNT n20 2412MHz Ant1 Emission

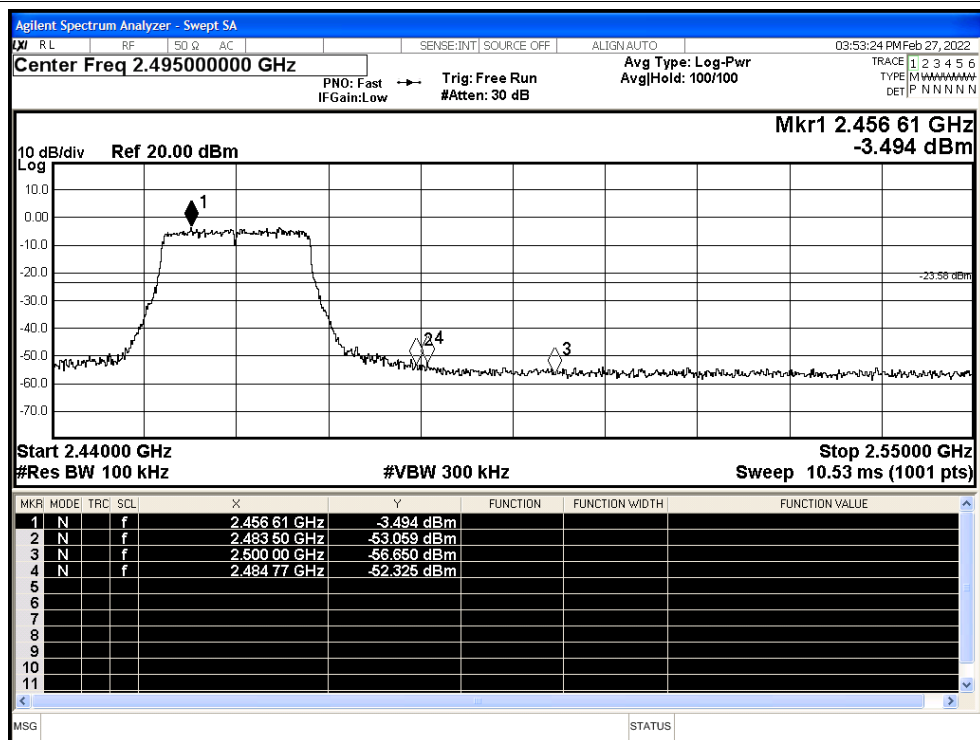




Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission





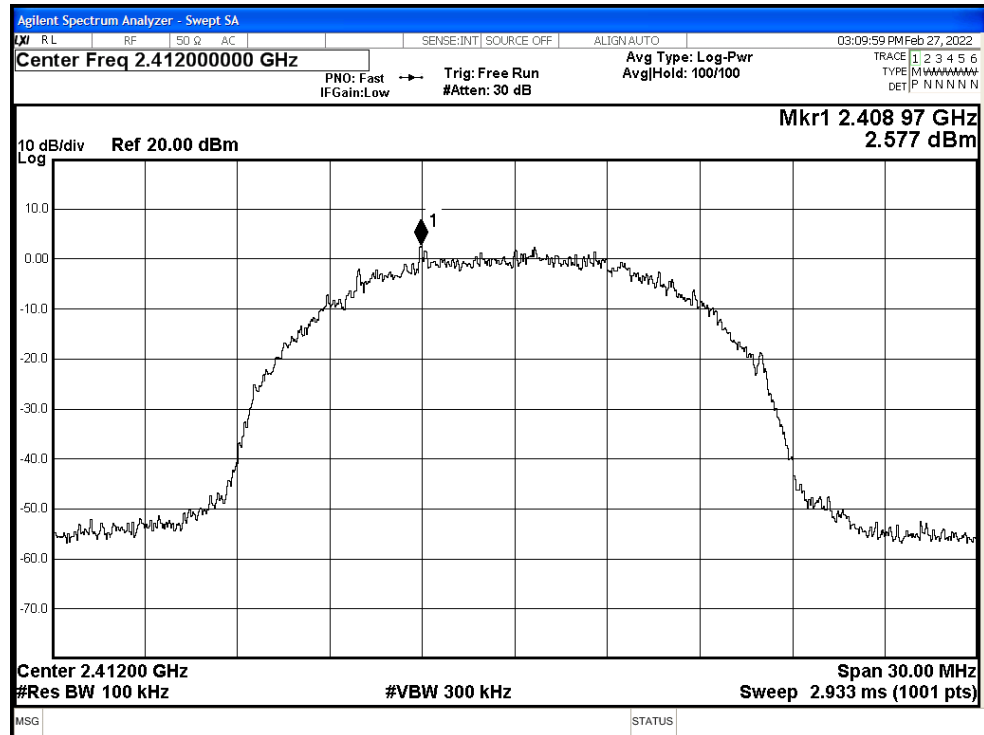
A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.06	-20	Pass
NVNT	b	2437	Ant1	-45.79	-20	Pass
NVNT	b	2462	Ant1	-46.43	-20	Pass
NVNT	g	2412	Ant1	-39.5	-20	Pass
NVNT	g	2437	Ant1	-40.24	-20	Pass
NVNT	g	2462	Ant1	-40.08	-20	Pass
NVNT	n20	2412	Ant1	-40.42	-20	Pass
NVNT	n20	2437	Ant1	-39.81	-20	Pass
NVNT	n20	2462	Ant1	-40.14	-20	Pass

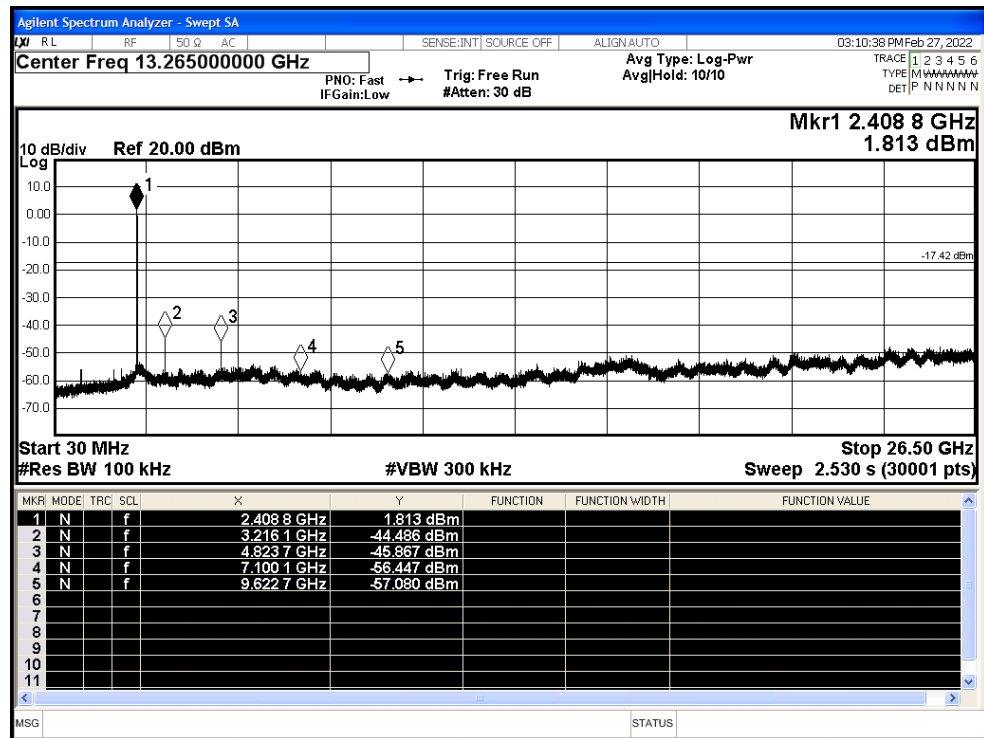


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref

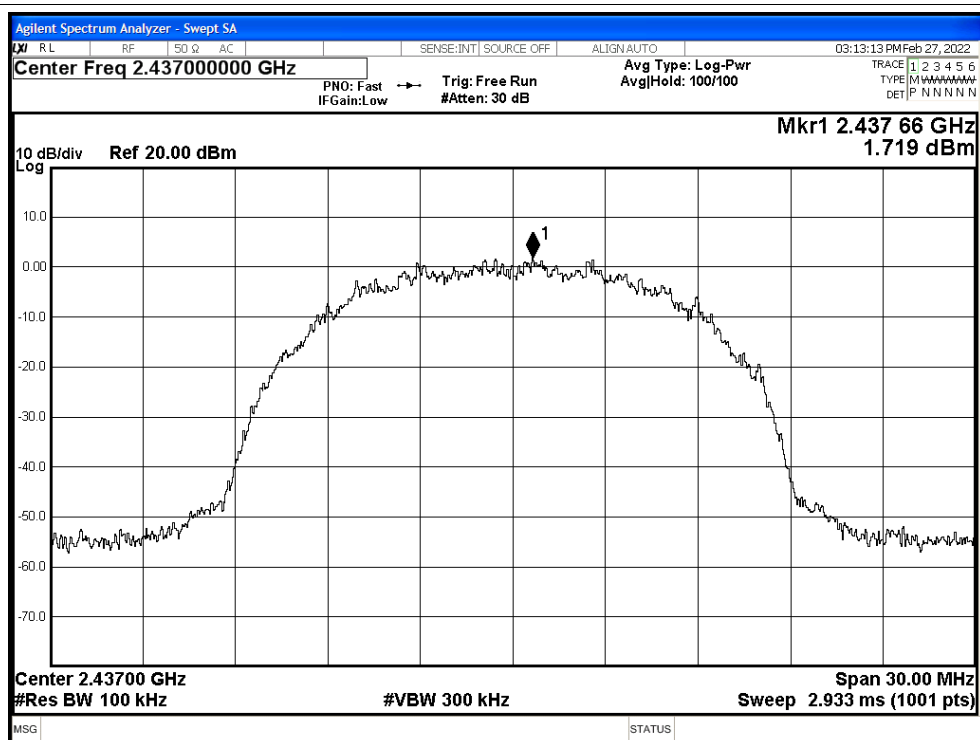


Tx. Spurious NVNT b 2412MHz Ant1 Emission

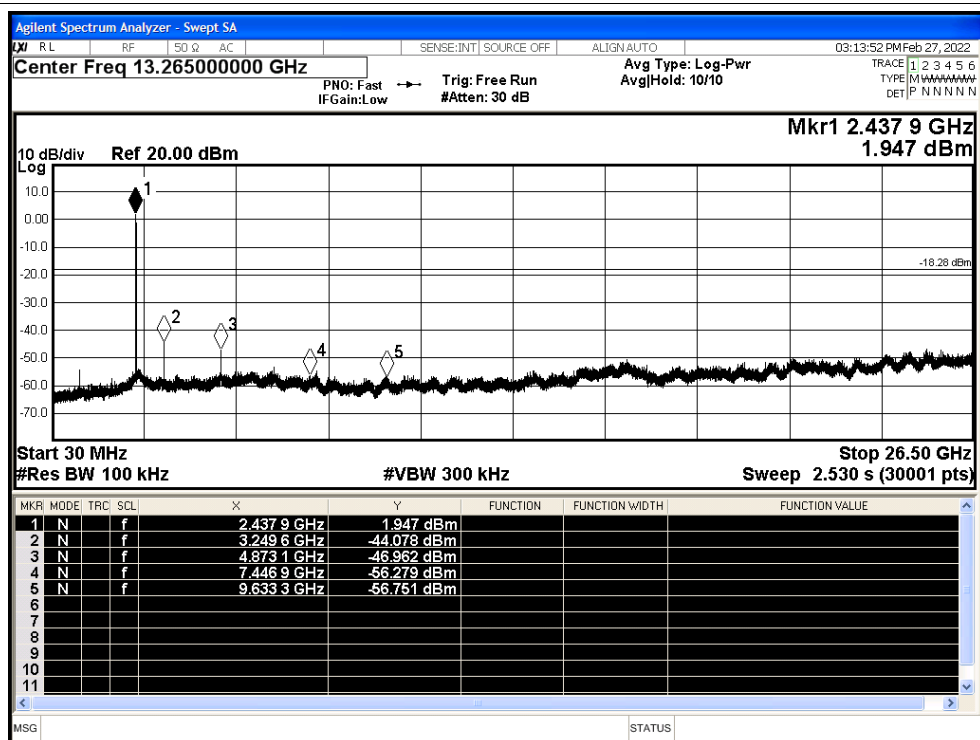


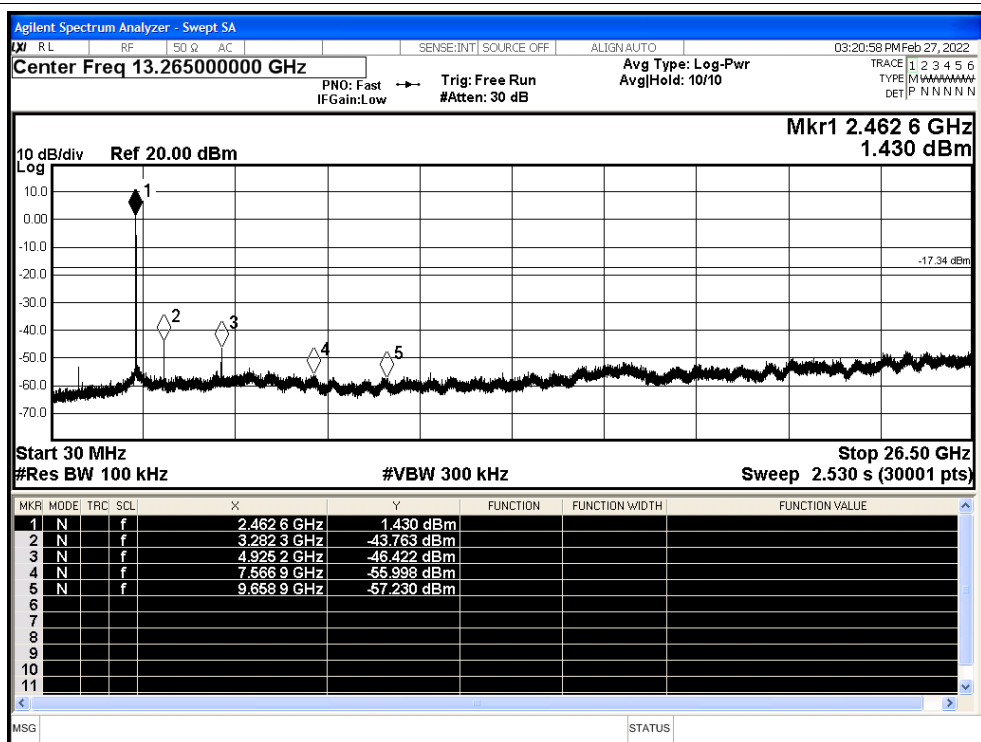
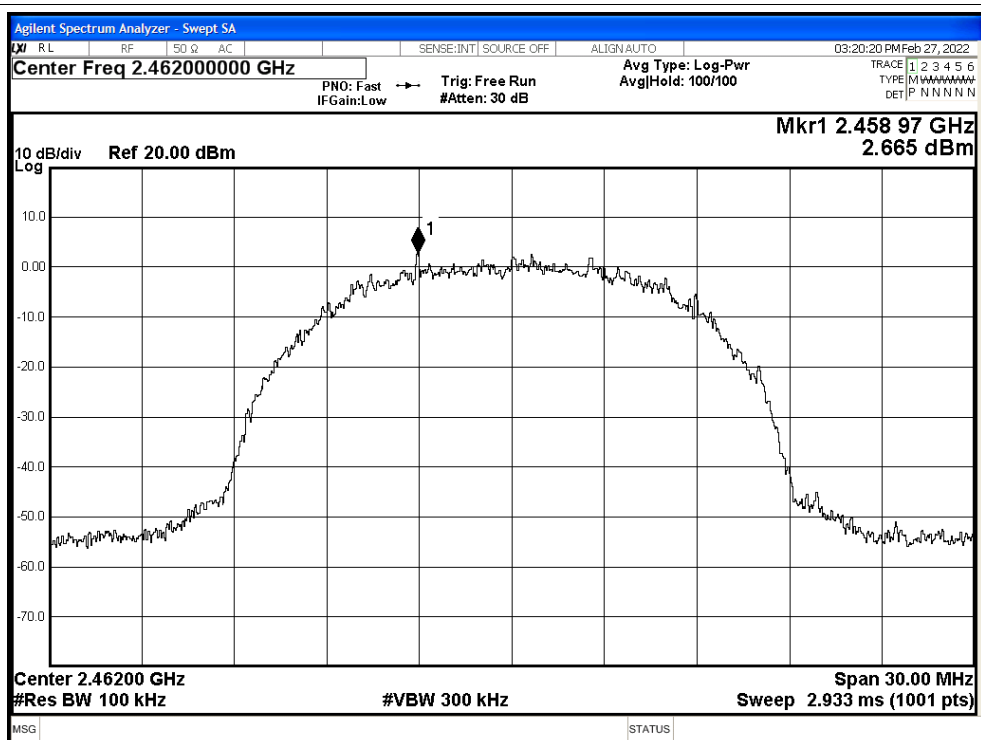


Tx. Spurious NVNT b 2437MHz Ant1 Ref

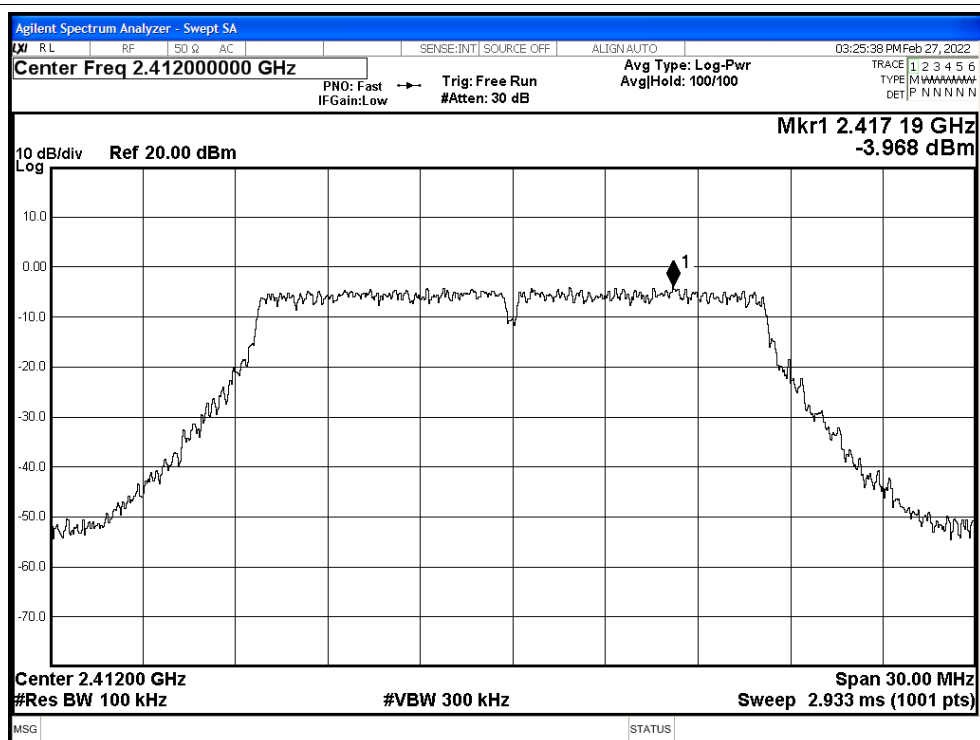


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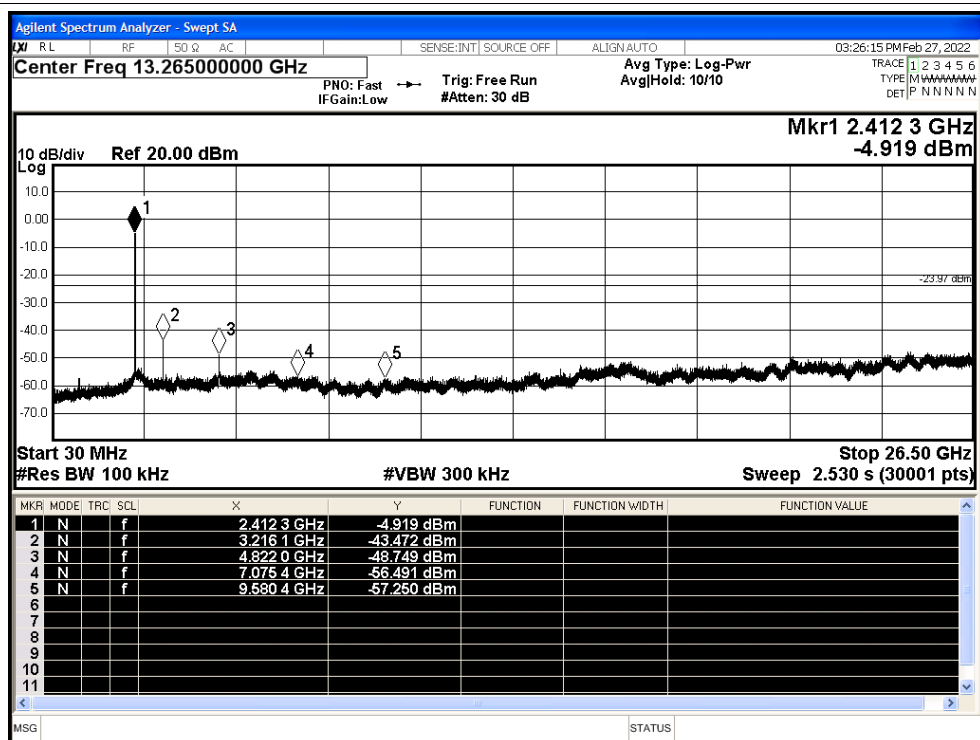




Tx. Spurious NVNT g 2412MHz Ant1 Ref

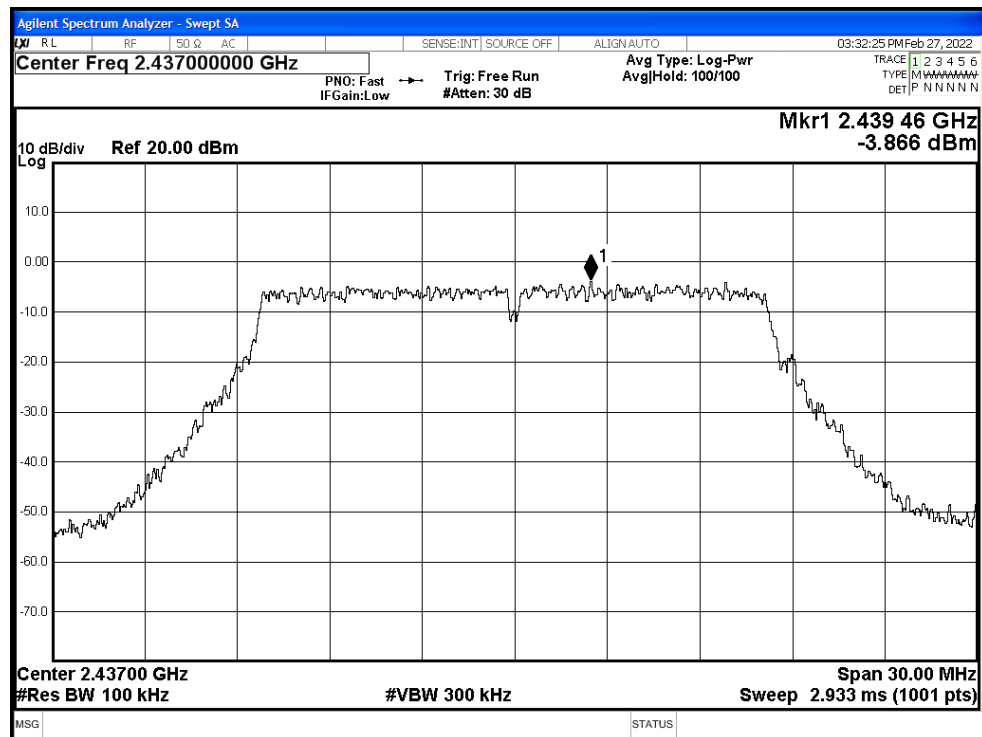


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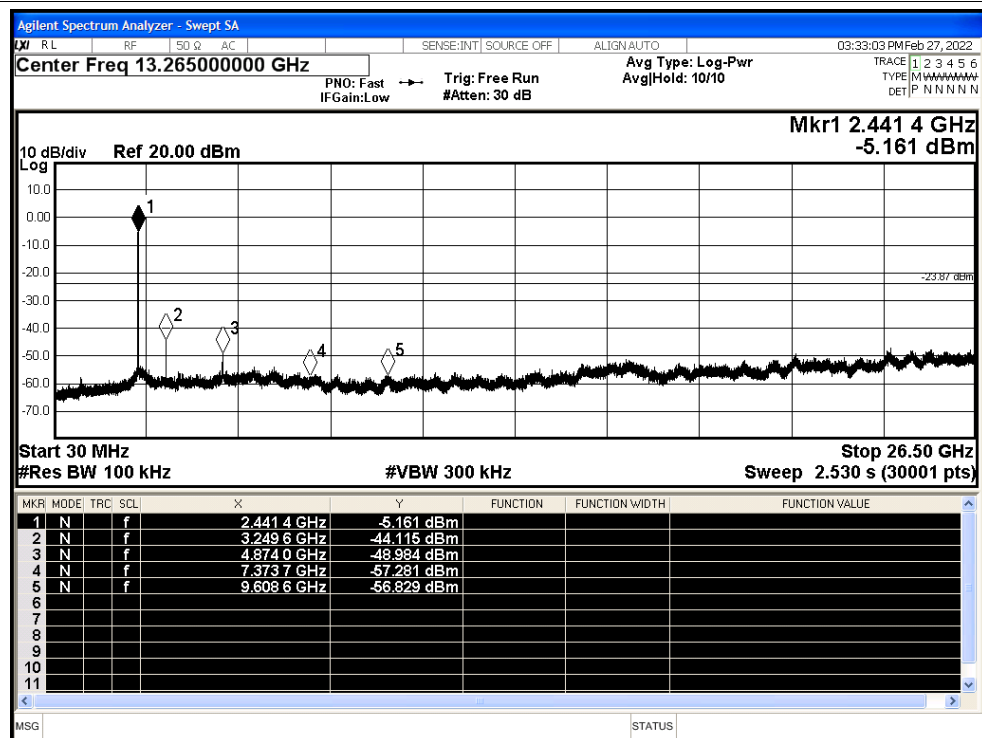




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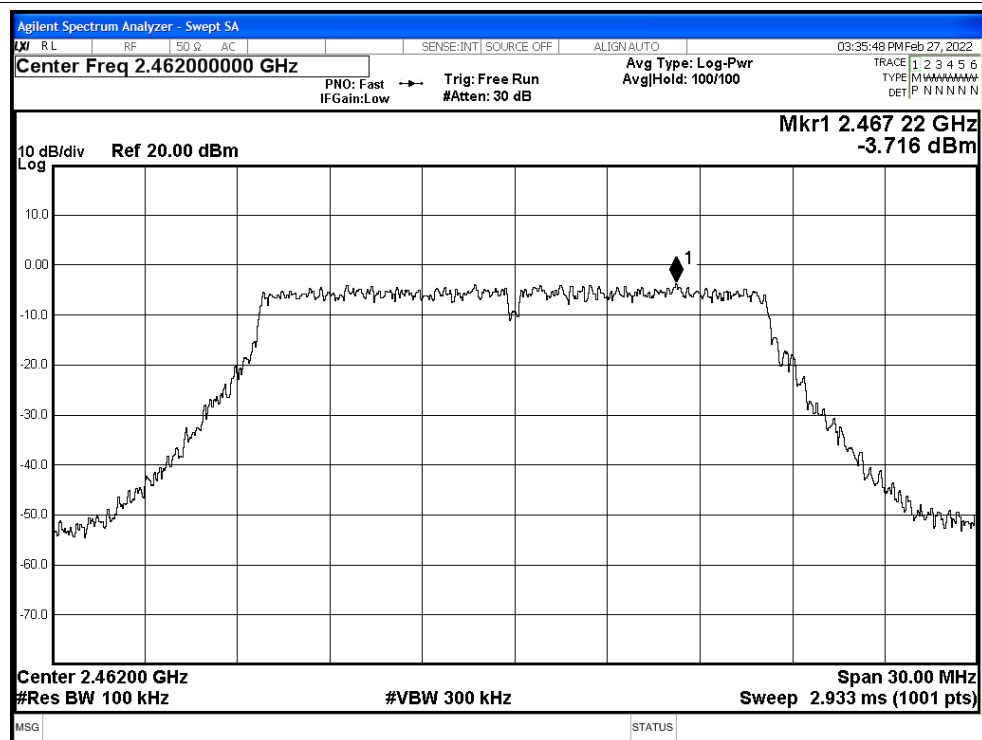


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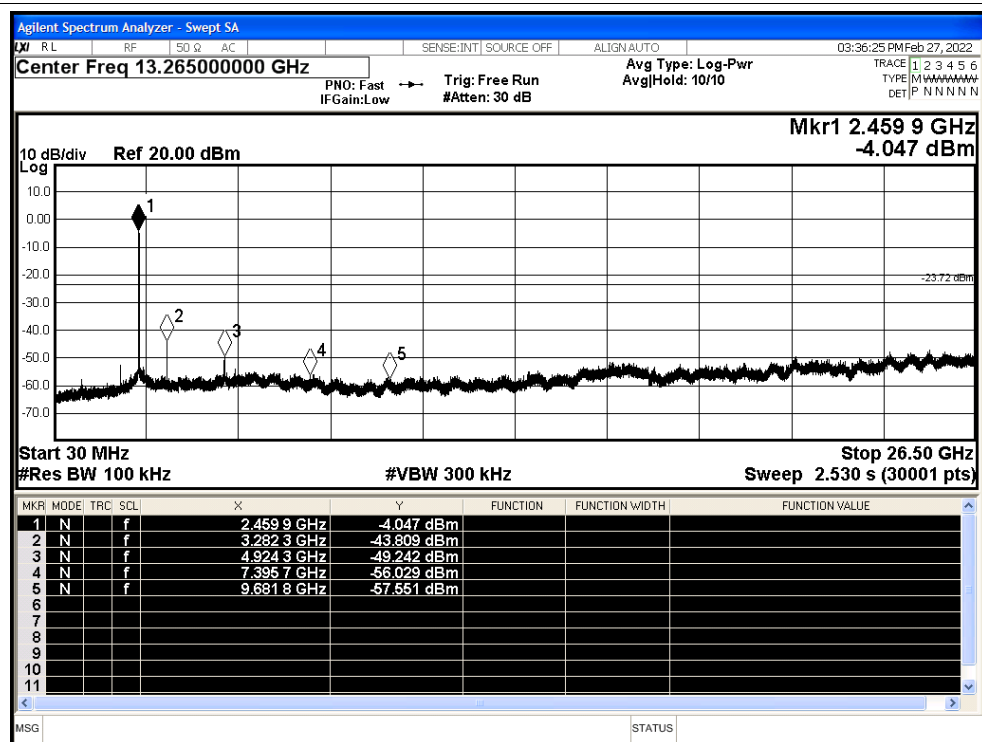




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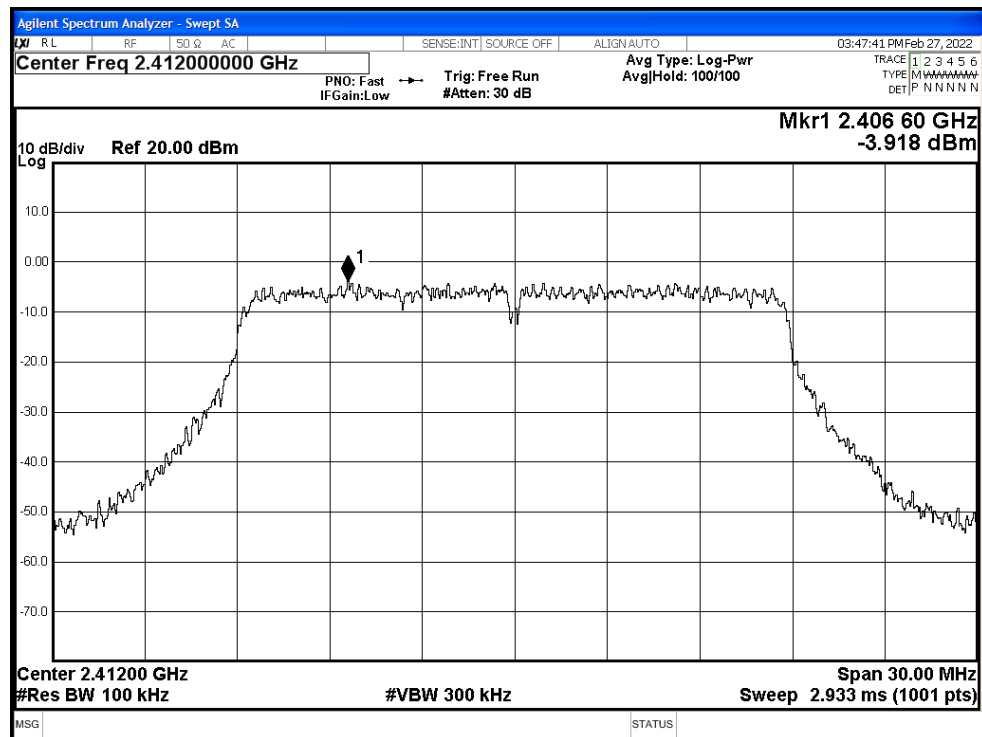


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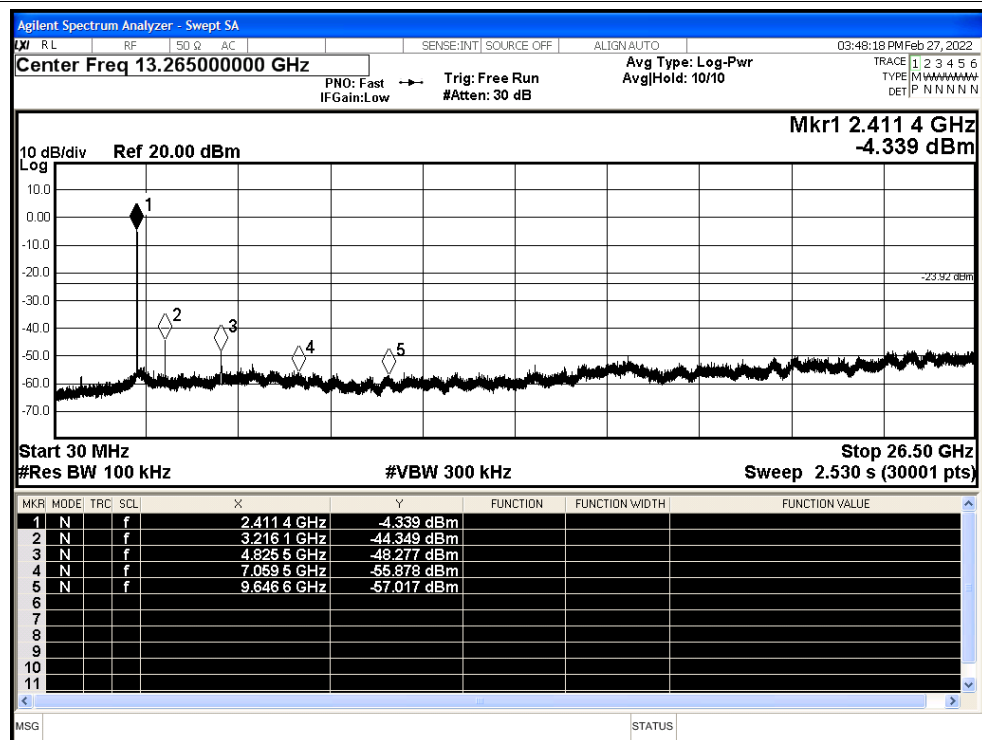




Tx. Spurious NVNT n20 2412MHz Ant1 Ref

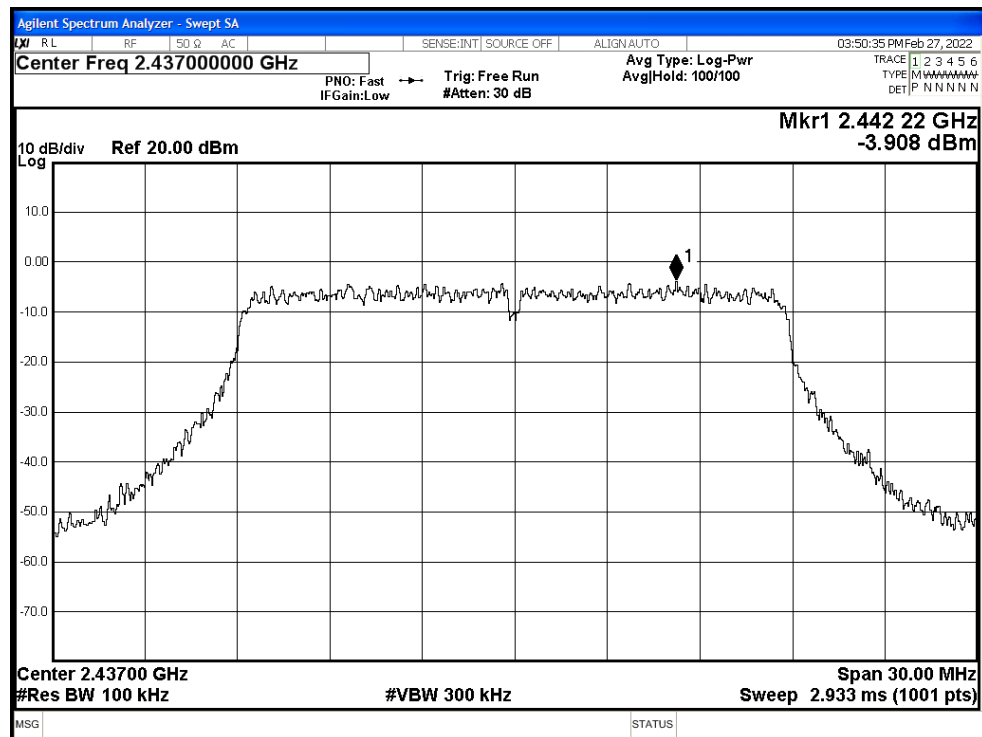


Tx. Spurious NVNT n20 2412MHz Ant1 Emission

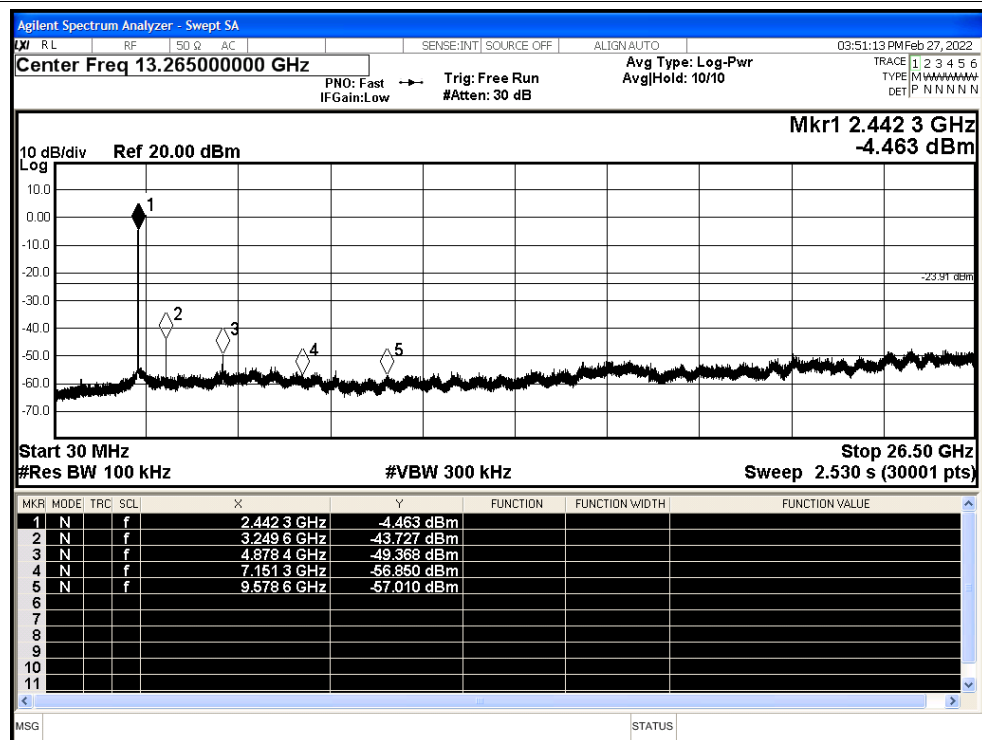




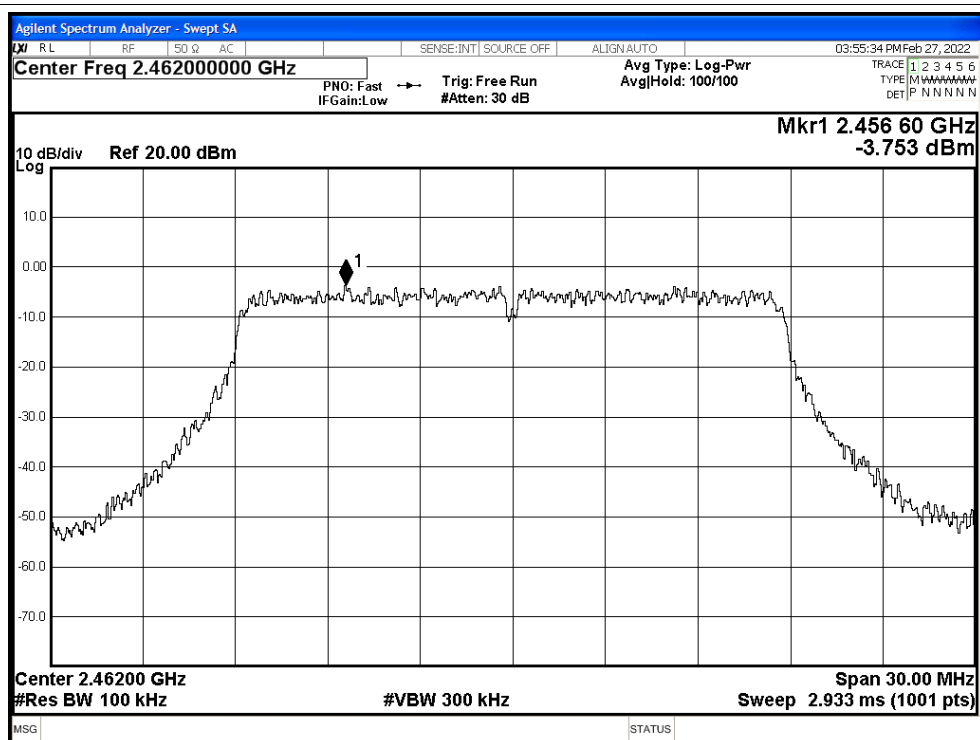
Tx. Spurious NVNT n20 2437MHz Ant1 Ref



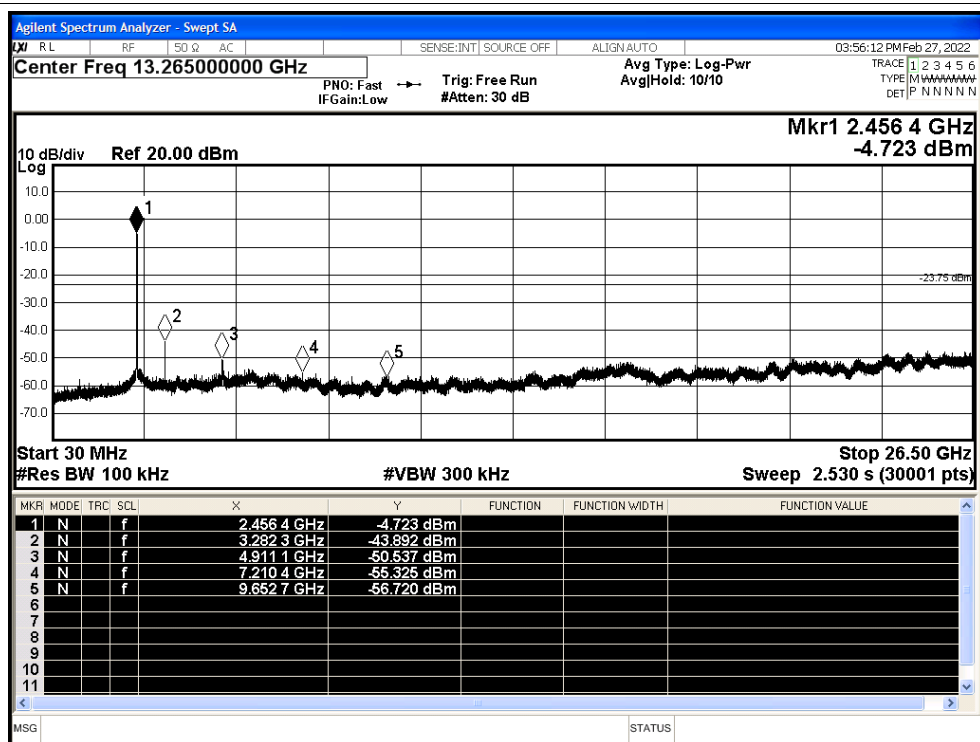
Tx. Spurious NVNT n20 2437MHz Ant1 Emission



Tx. Spurious NVNT n20 2462MHz Ant1 Ref



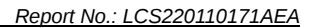
Tx. Spurious NVNT n20 2462MHz Ant1 Emission



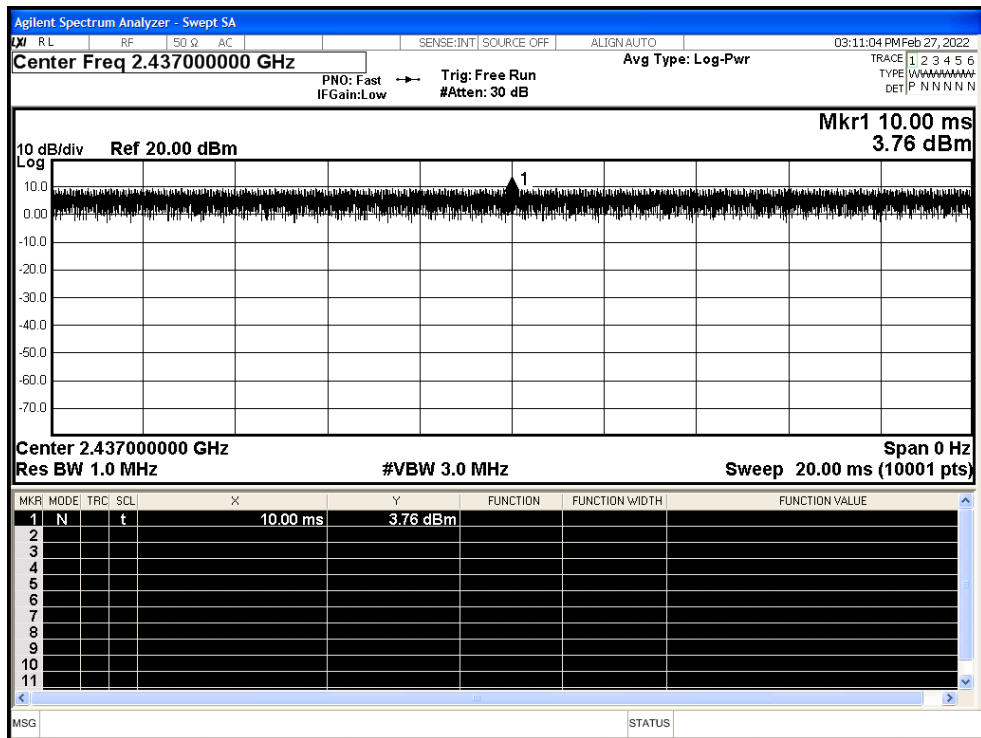


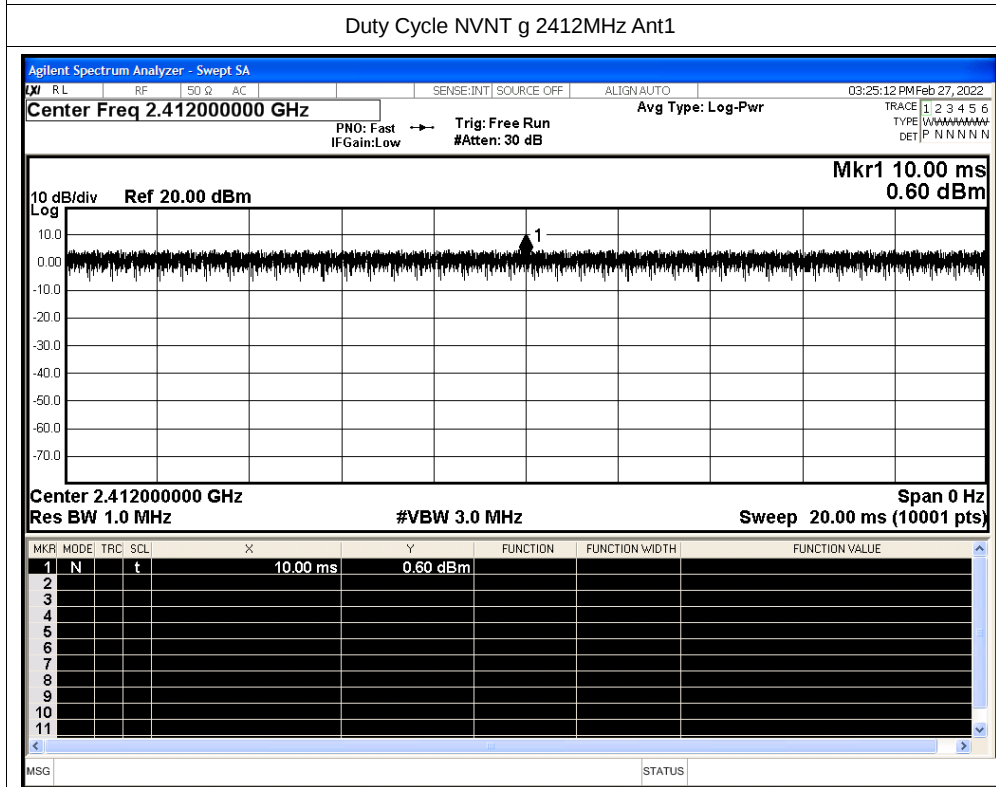
A.6 Duty Cycle

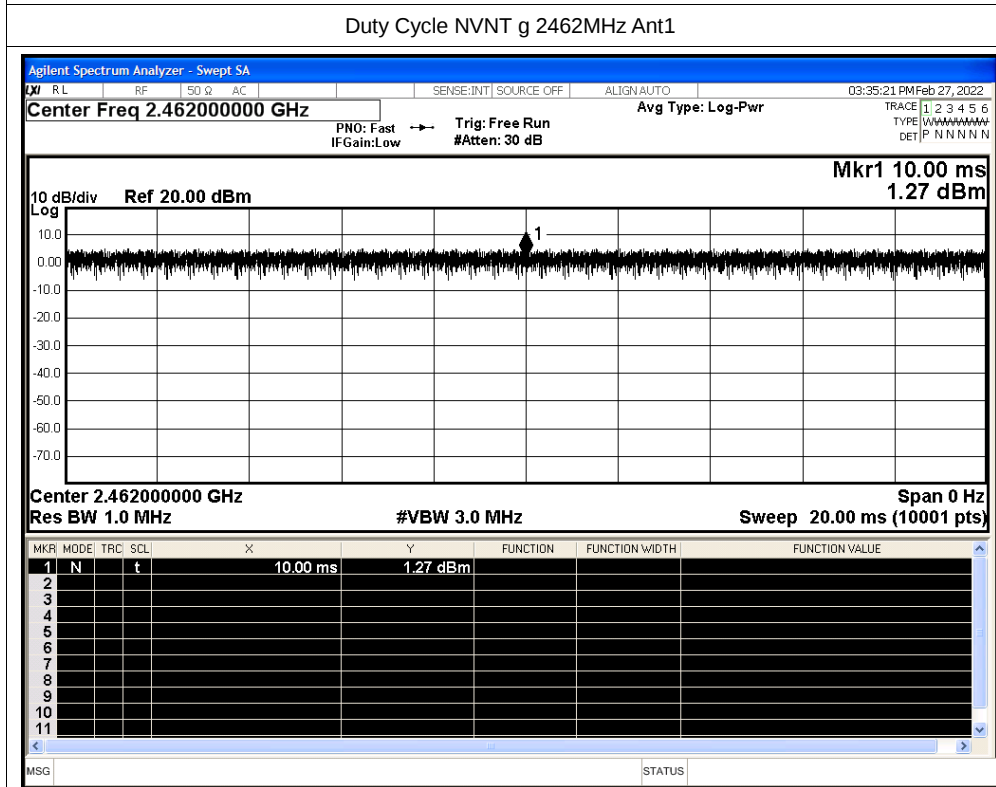
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	100	0	0
NVNT	b	2437	Ant1	100	0	0
NVNT	b	2462	Ant1	100	0	0
NVNT	g	2412	Ant1	100	0	0
NVNT	g	2437	Ant1	100	0	0
NVNT	g	2462	Ant1	100	0	0
NVNT	n20	2412	Ant1	100	0	0
NVNT	n20	2437	Ant1	100	0	0
NVNT	n20	2462	Ant1	100	0	0

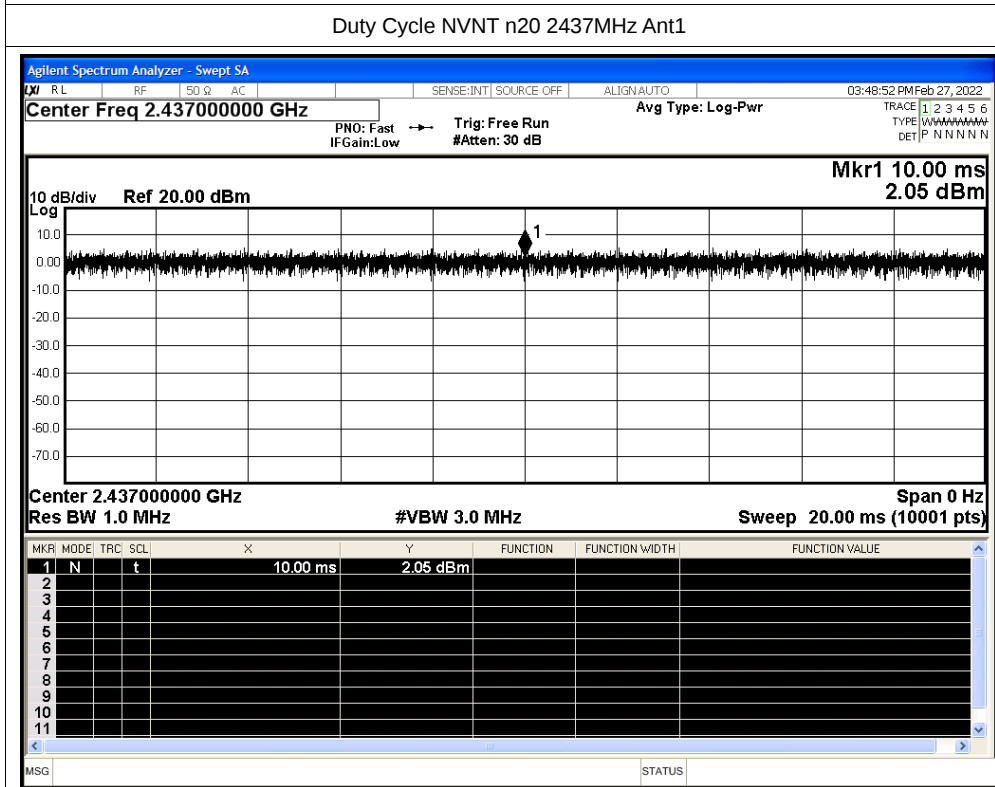


Duty Cycle NVNT b 2412MHz Ant1





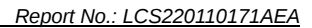






A.7 Emissions at Restricted Band

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	-50.11	2	47.15	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-59.66	2	37.6	Average	54	Pass
NVNT	b	2412	Ant1	2388.92	-45.59	2	51.67	Peak	74	Pass
NVNT	b	2412	Ant1	2386.19	-57.14	2	40.12	Average	54	Pass
NVNT	b	2412	Ant1	2390	-48.06	2	49.2	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-57.39	2	39.87	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-48.23	2	49.03	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-56.36	2	40.9	Average	54	Pass
NVNT	b	2462	Ant1	2487.41	-44.28	2	52.98	Peak	74	Pass
NVNT	b	2462	Ant1	2487.63	-56.15	2	41.11	Average	54	Pass
NVNT	b	2462	Ant1	2500	-47.33	2	49.93	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-56.52	2	40.74	Average	54	Pass
NVNT	g	2412	Ant1	2310	-50.21	2	47.05	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-59.75	2	37.51	Average	54	Pass
NVNT	g	2412	Ant1	2382.16	-45.2	2	52.06	Peak	74	Pass
NVNT	g	2412	Ant1	2389.96	-56.28	2	40.98	Average	54	Pass
NVNT	g	2412	Ant1	2390	-42.77	2	54.49	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-56.22	2	41.04	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-45.62	2	51.64	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-54.88	2	42.38	Average	54	Pass
NVNT	g	2462	Ant1	2485.32	-41.47	2	55.79	Peak	74	Pass
NVNT	g	2462	Ant1	2483.56	-54.88	2	42.38	Average	54	Pass
NVNT	g	2462	Ant1	2500	-44.6	2	52.66	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-56.55	2	40.71	Average	54	Pass
NVNT	n20	2412	Ant1	2310	-49.62	2	47.64	Peak	74	Pass
NVNT	n20	2412	Ant1	2310	-59.77	2	37.49	Average	54	Pass
NVNT	n20	2412	Ant1	2389.7	-42.11	2	55.15	Peak	74	Pass
NVNT	n20	2412	Ant1	2389.96	-55.81	2	41.45	Average	54	Pass
NVNT	n20	2412	Ant1	2390	-44.6	2	52.66	Peak	74	Pass
NVNT	n20	2412	Ant1	2390	-55.69	2	41.57	Average	54	Pass
NVNT	n20	2462	Ant1	2483.5	-45.12	2	52.14	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.5	-54.47	2	42.79	Average	54	Pass
NVNT	n20	2462	Ant1	2483.78	-42.37	2	54.89	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.56	-54.47	2	42.79	Average	54	Pass
NVNT	n20	2462	Ant1	2500	-46.9	2	50.36	Peak	74	Pass
NVNT	n20	2462	Ant1	2500	-56.56	2	40.7	Average	54	Pass



Restrict Band NVNT b 2412MHz Ant1 Peak

