



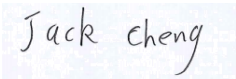
Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 3D Laser Scanner

Test Model: TLS360

Environmental Conditions

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





A.1 -6dB Bandwidth

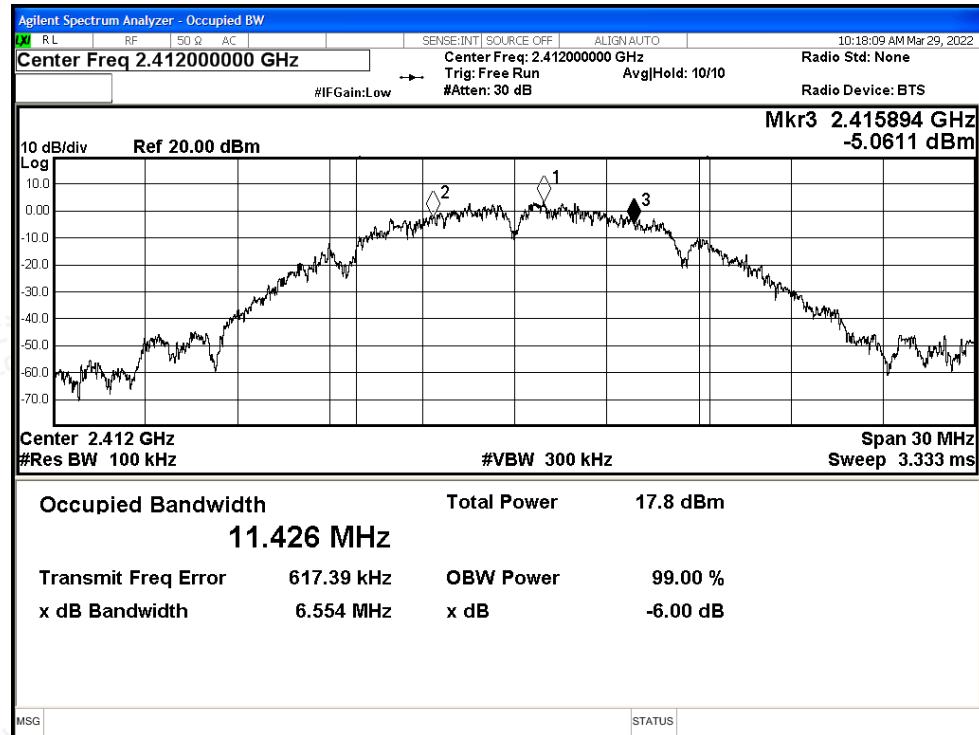
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant	6.554	0.5	Pass
NVNT	b	2437	Ant	8.553	0.5	Pass
NVNT	b	2462	Ant	6.534	0.5	Pass
NVNT	g	2412	Ant	10.695	0.5	Pass
NVNT	g	2437	Ant	16.016	0.5	Pass
NVNT	g	2462	Ant	12.495	0.5	Pass
NVNT	n20	2412	Ant	5.006	0.5	Pass
NVNT	n20	2437	Ant	17.559	0.5	Pass
NVNT	n20	2462	Ant	9.998	0.5	Pass
NVNT	n40	2422	Ant	10.38	0.5	Pass
NVNT	n40	2437	Ant	36.311	0.5	Pass
NVNT	n40	2452	Ant	10.037	0.5	Pass



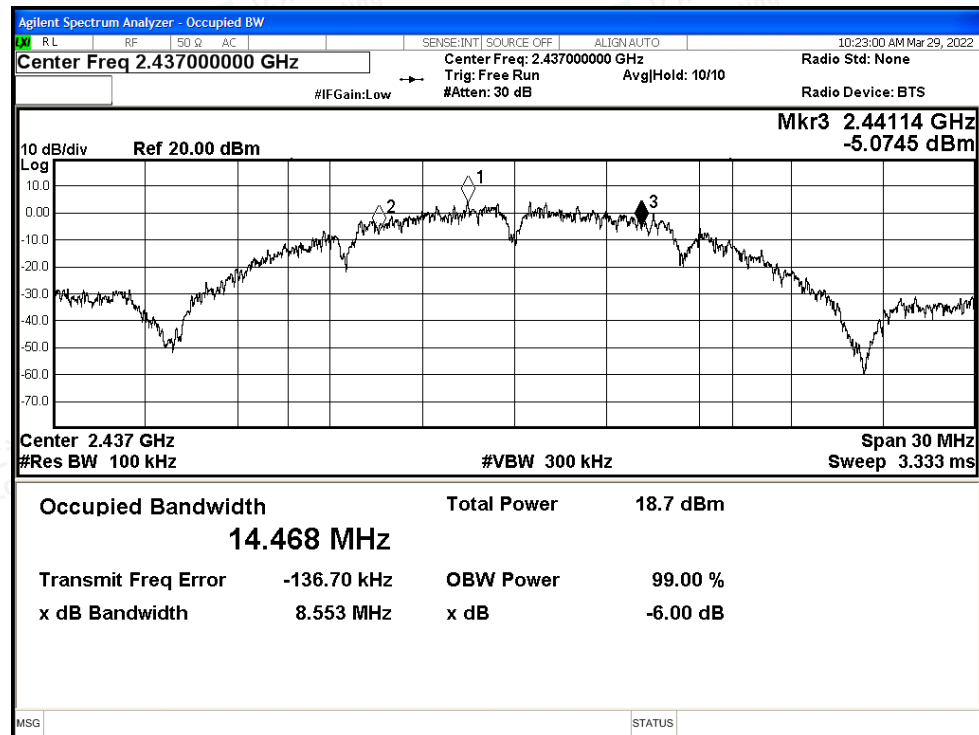


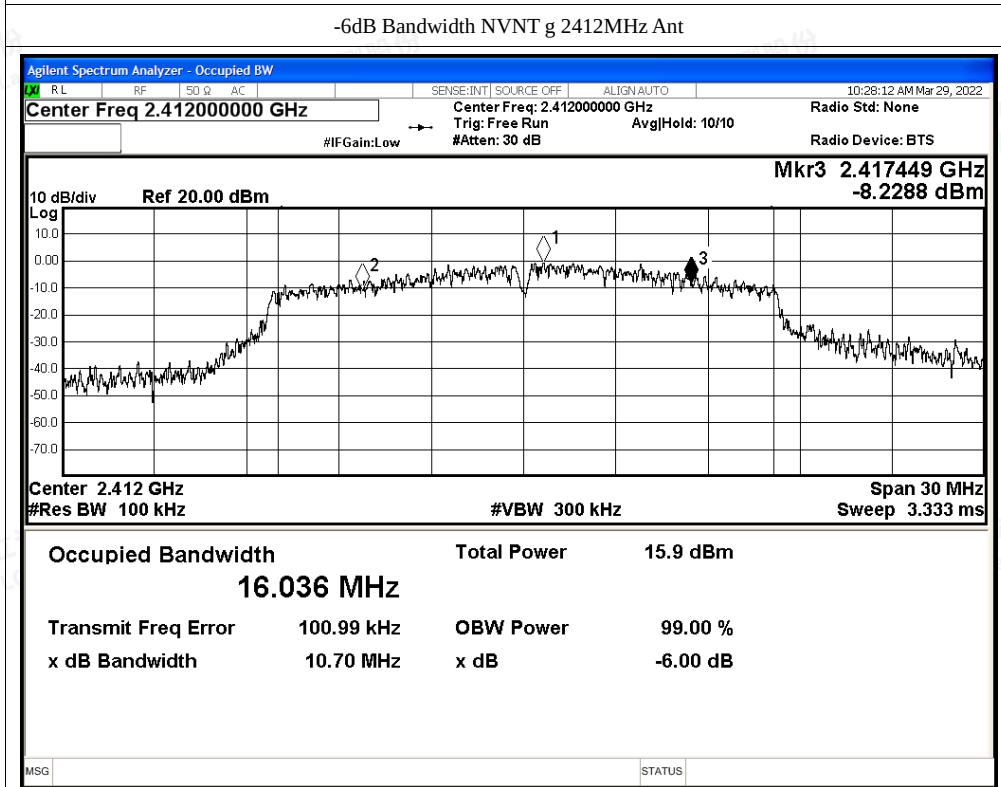
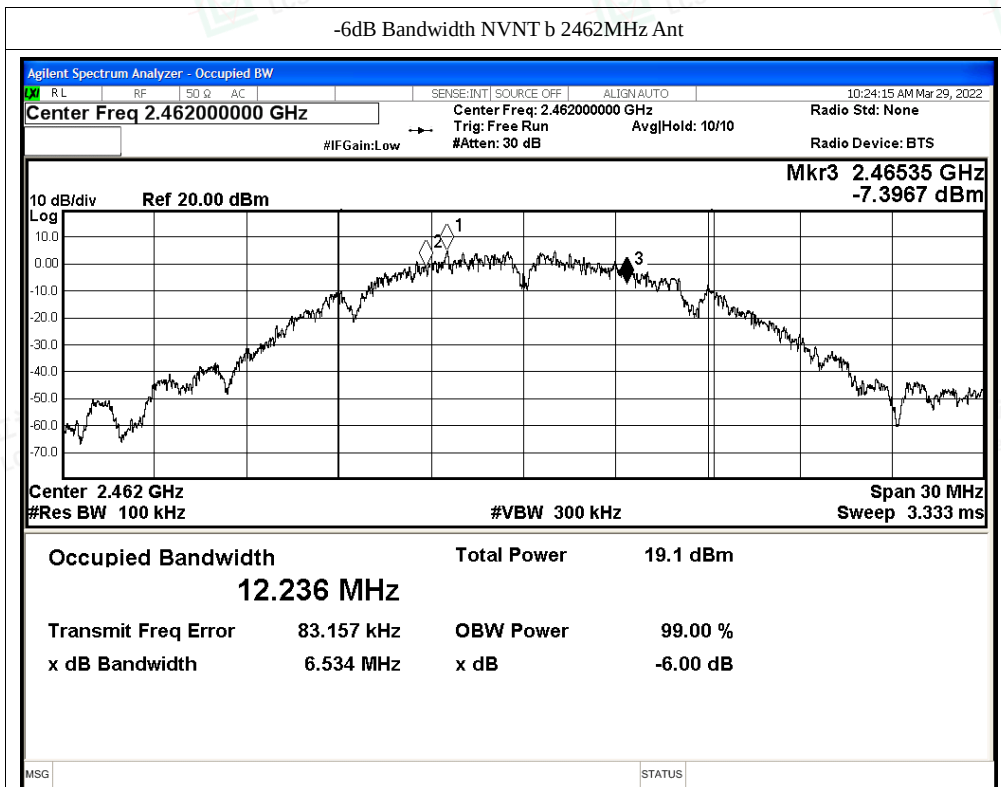
Test Graphs

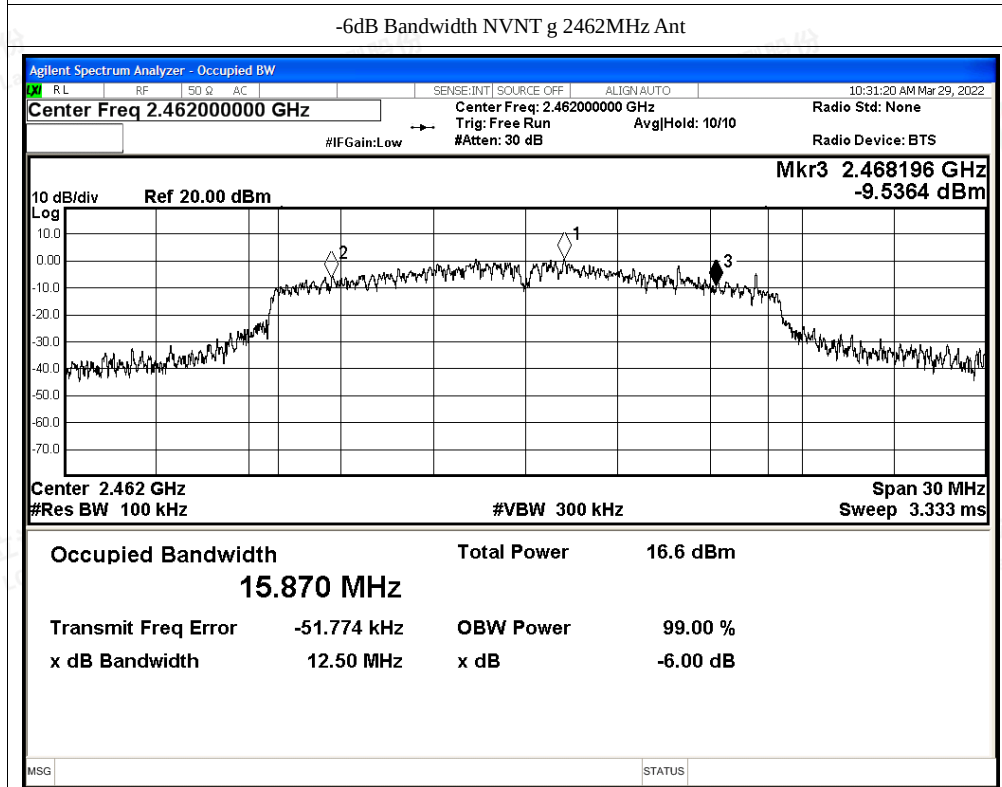
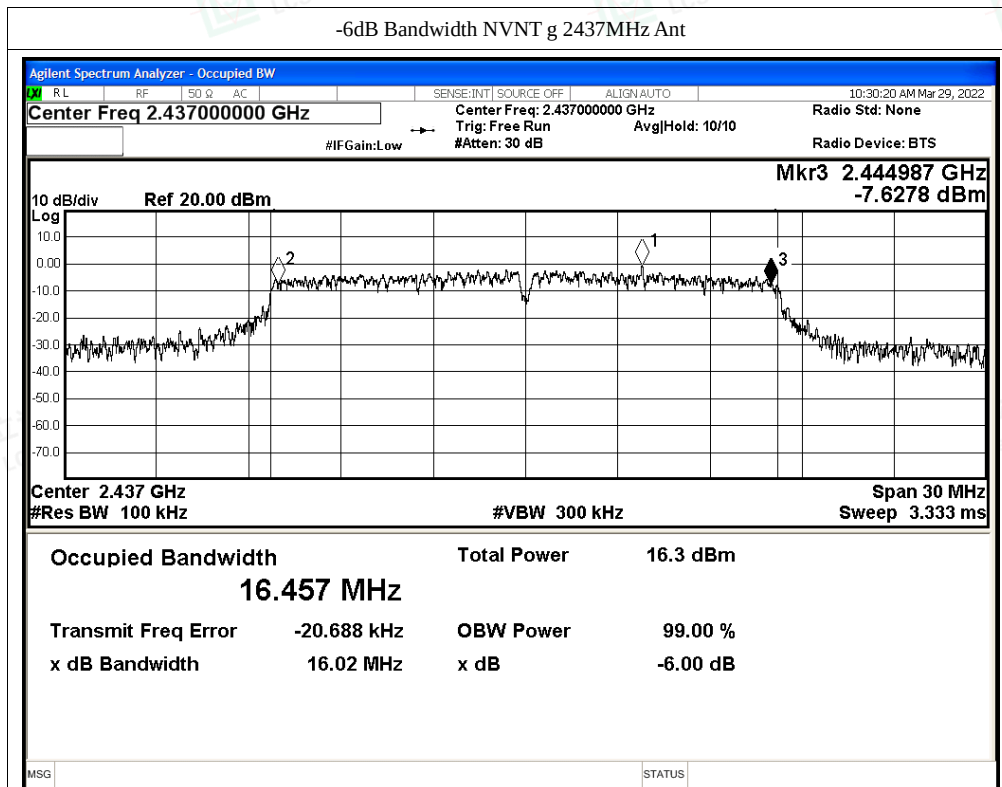
-6dB Bandwidth NVNT b 2412MHz Ant



-6dB Bandwidth NVNT b 2437MHz Ant

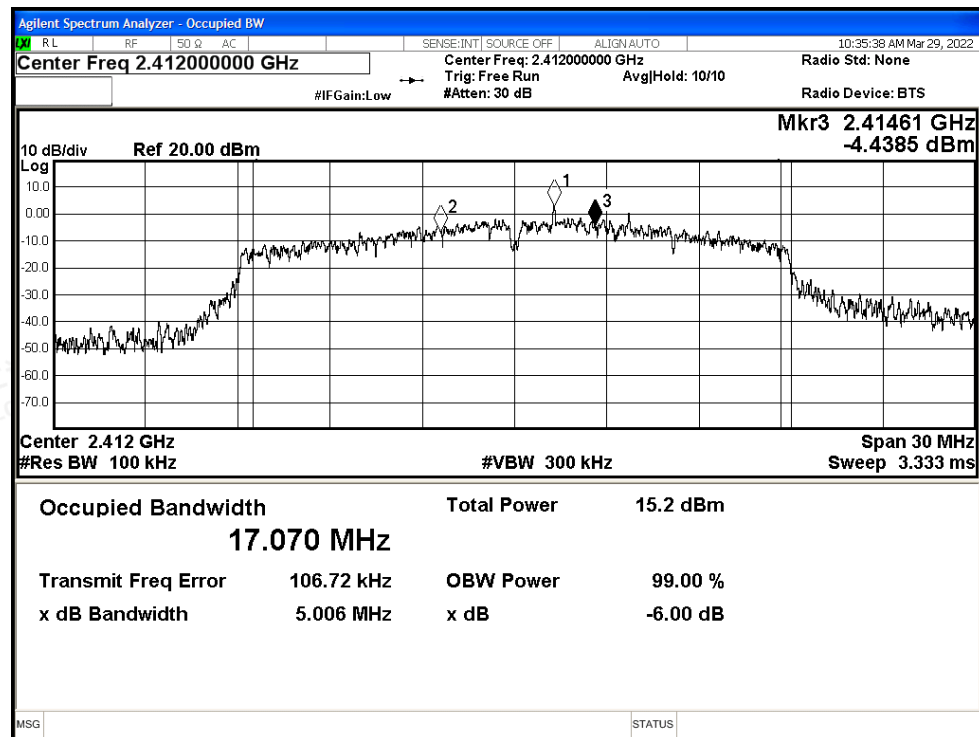




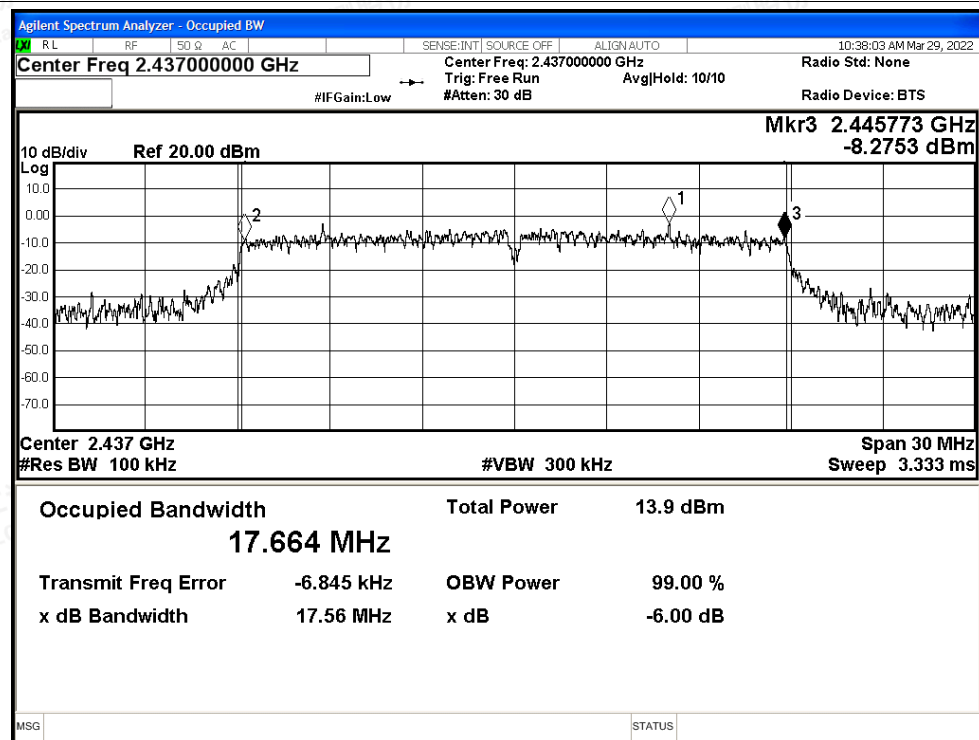




-6dB Bandwidth NVNT n20 2412MHz Ant

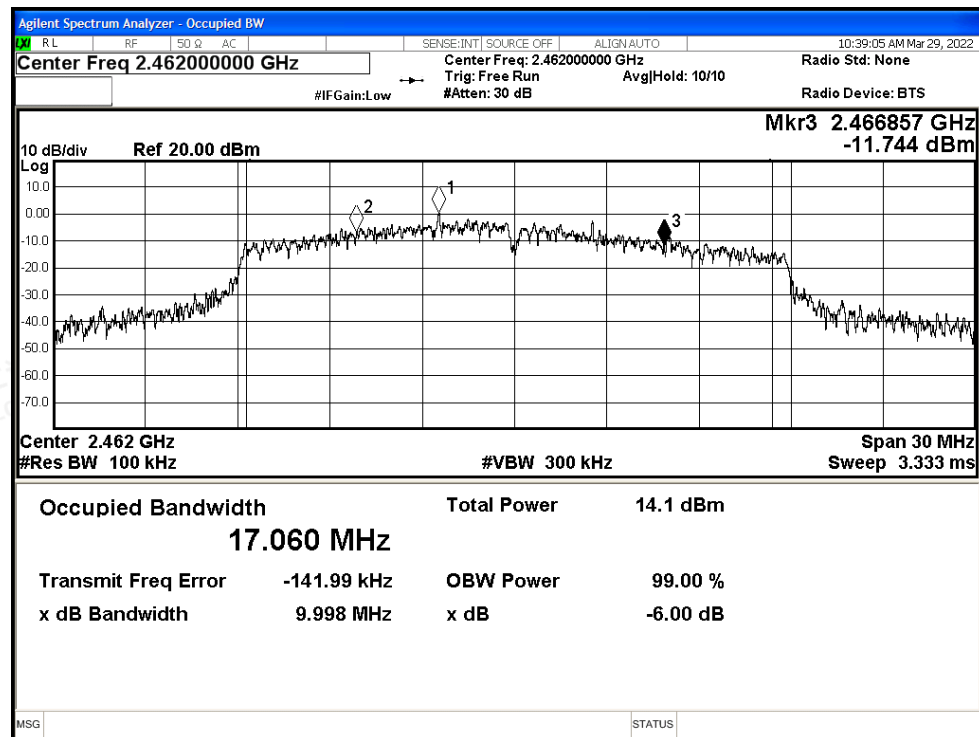


-6dB Bandwidth NVNT n20 2437MHz Ant

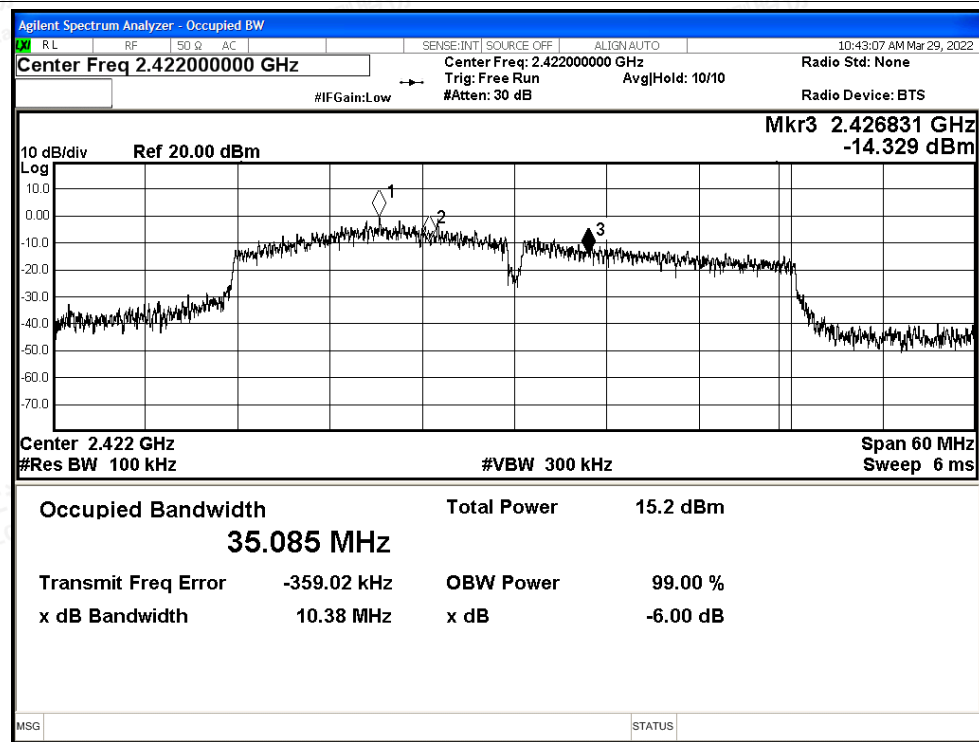




-6dB Bandwidth NVNT n20 2462MHz Ant

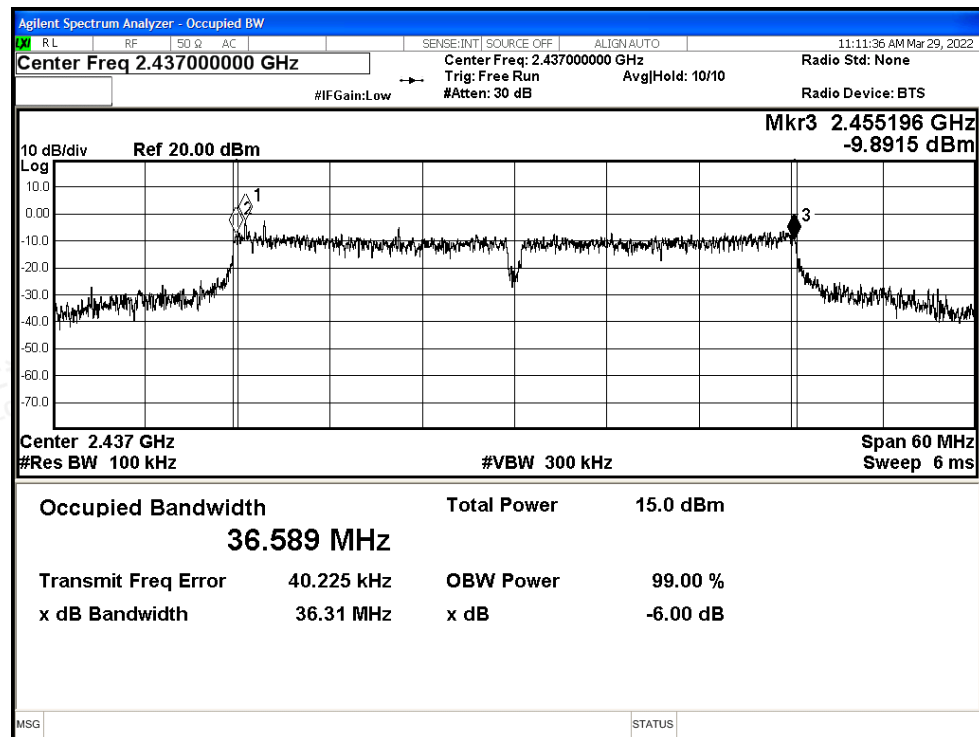


-6dB Bandwidth NVNT n40 2422MHz Ant

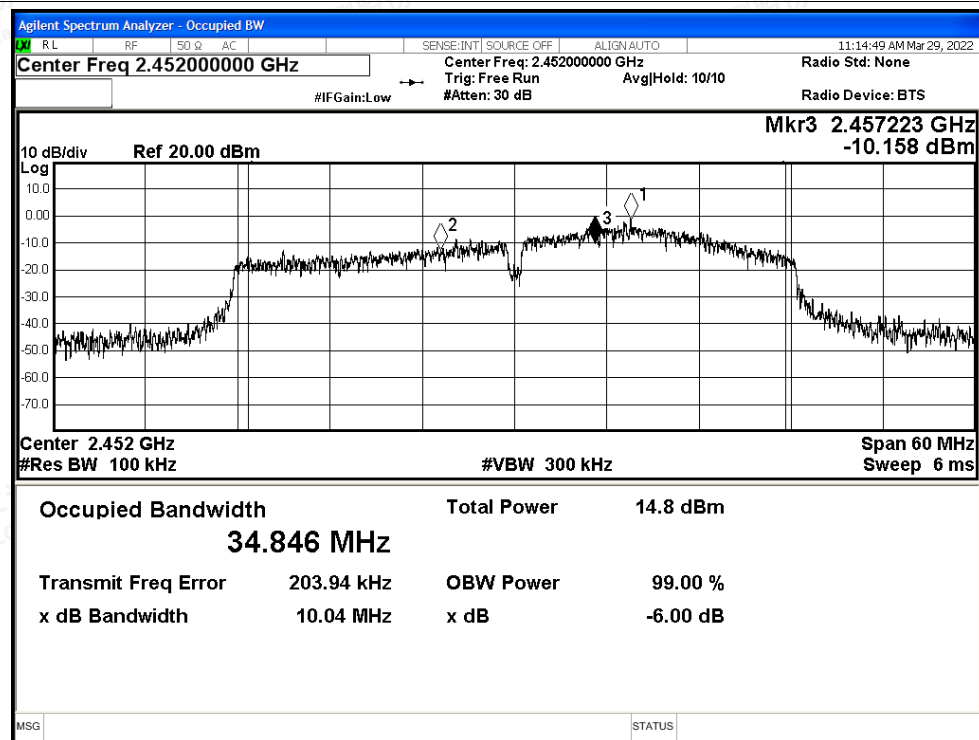




-6dB Bandwidth NVNT n40 2437MHz Ant



-6dB Bandwidth NVNT n40 2452MHz Ant





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	Ant	14.51	0	14.51	30	Pass
NVNT	b	2437	Ant	15.14	0	15.14	30	Pass
NVNT	b	2462	Ant	15.58	0	15.58	30	Pass
NVNT	g	2412	Ant	14.51	0	14.51	30	Pass
NVNT	g	2437	Ant	13.98	0	13.98	30	Pass
NVNT	g	2462	Ant	15.15	0	15.15	30	Pass
NVNT	n20	2412	Ant	13.71	0	13.71	30	Pass
NVNT	n20	2437	Ant	12.58	0	12.58	30	Pass
NVNT	n20	2462	Ant	12.72	0	12.72	30	Pass
NVNT	n40	2422	Ant	13.74	0	13.74	30	Pass
NVNT	n40	2437	Ant	13.38	0	13.38	30	Pass
NVNT	n40	2452	Ant	13.42	0	13.42	30	Pass



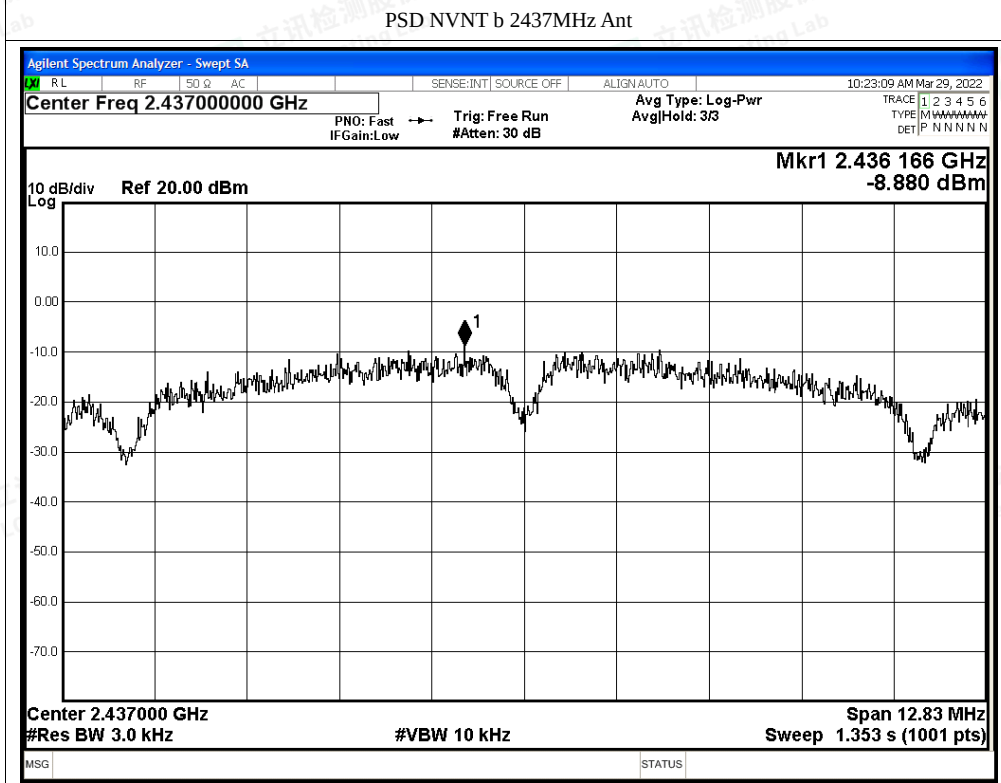
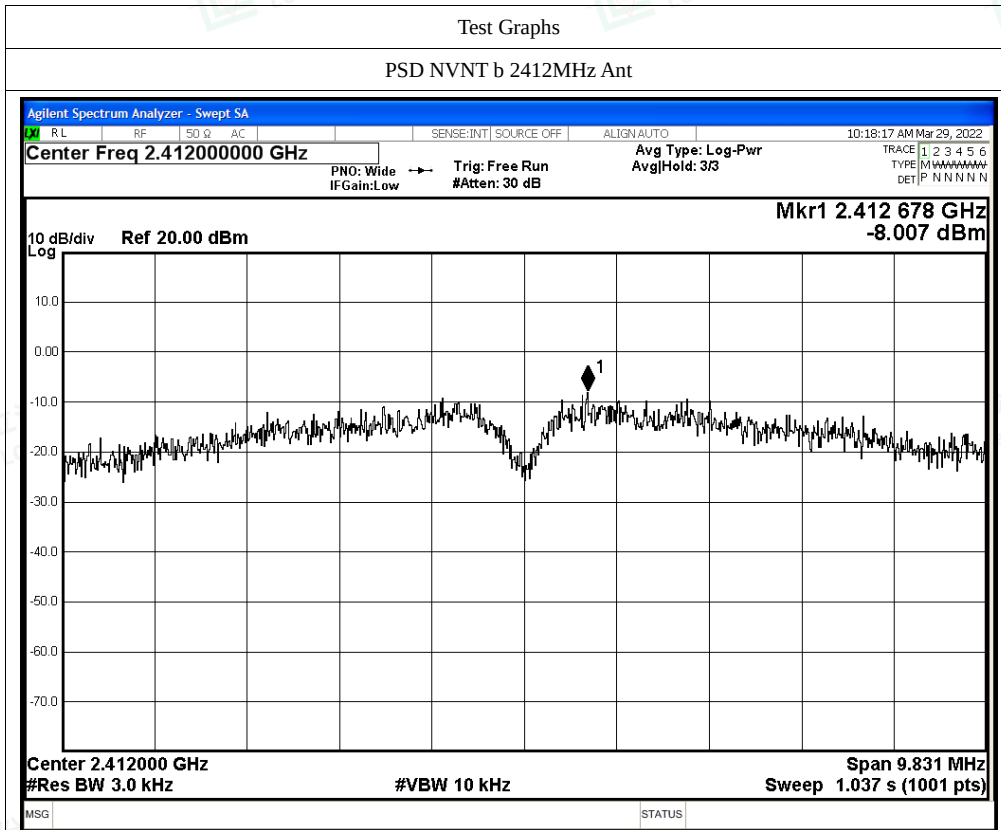
A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant	-8.01	0	-8.01	8	Pass
NVNT	b	2437	Ant	-8.88	0	-8.88	8	Pass
NVNT	b	2462	Ant	-7.59	0	-7.59	8	Pass
NVNT	g	2412	Ant	-11.46	0	-11.46	8	Pass
NVNT	g	2437	Ant	-13.06	0	-13.06	8	Pass
NVNT	g	2462	Ant	-10.69	0	-10.69	8	Pass
NVNT	n20	2412	Ant	-11.84	0	-11.84	8	Pass
NVNT	n20	2437	Ant	-15.36	0	-15.36	8	Pass
NVNT	n20	2462	Ant	-11.64	0	-11.64	8	Pass
NVNT	n40	2422	Ant	-15.11	0	-15.11	8	Pass
NVNT	n40	2437	Ant	-15.47	0	-15.47	8	Pass
NVNT	n40	2452	Ant	-19.9	0	-19.9	8	Pass





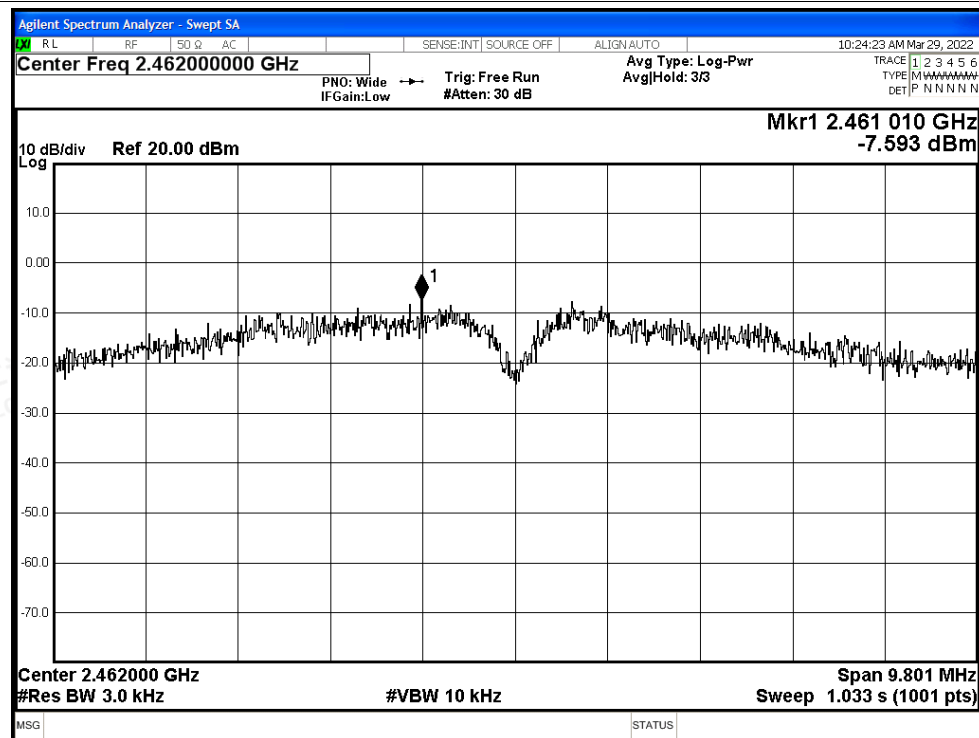
2.412000000 GHz



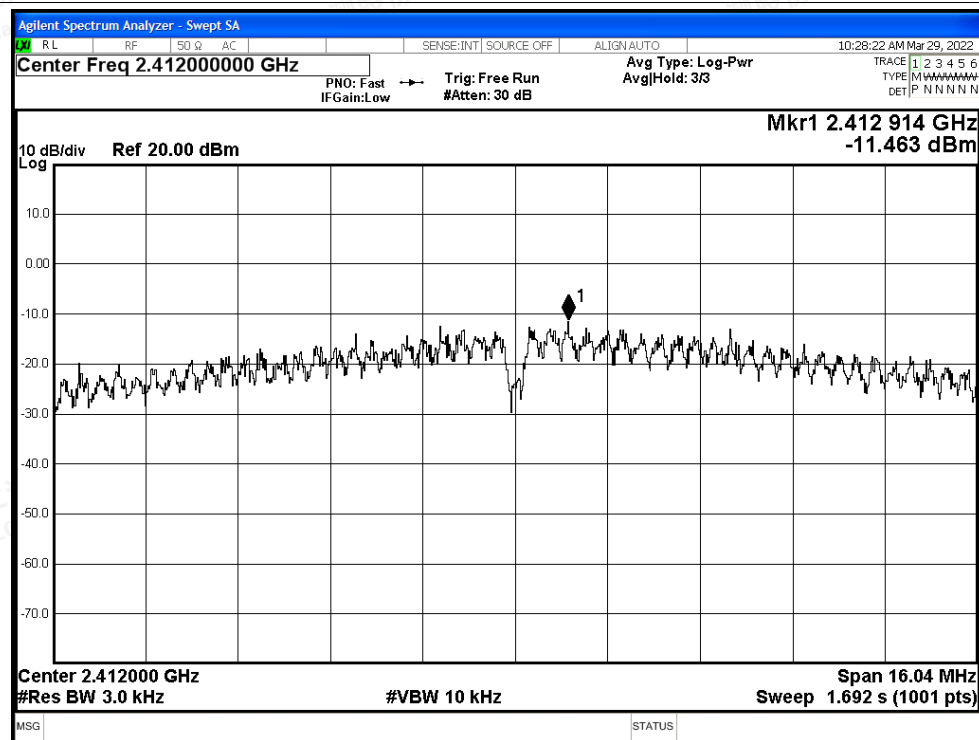


2/6/2022 11:53:30

PSD NVNT b 2462MHz Ant



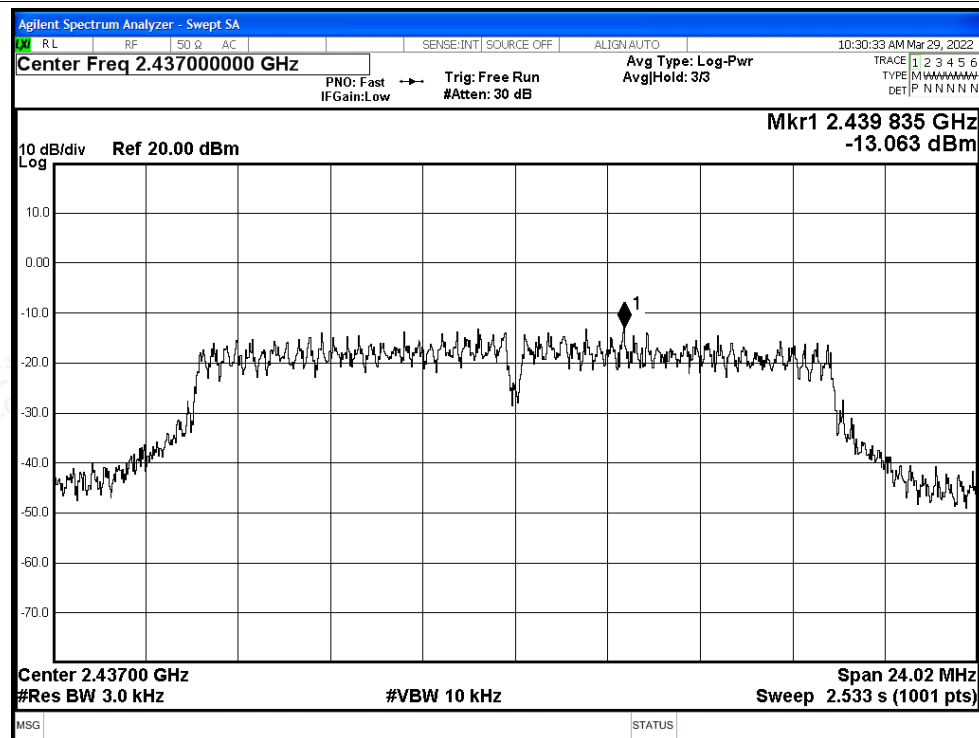
PSD NVNT g 2412MHz Ant



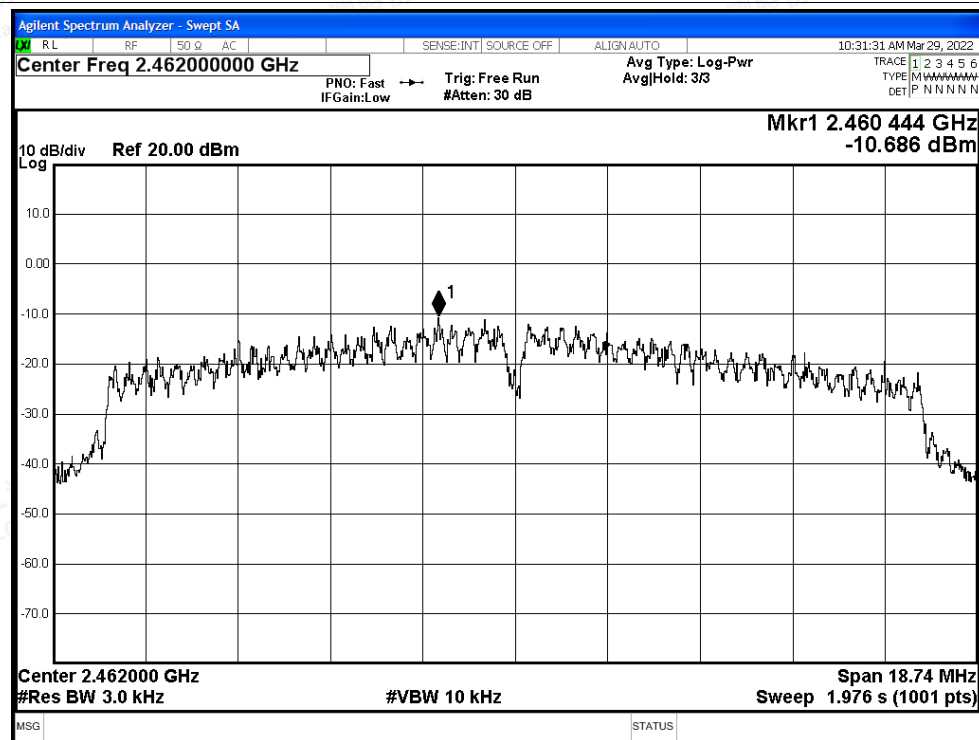


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PSD NVNT g 2437MHz Ant



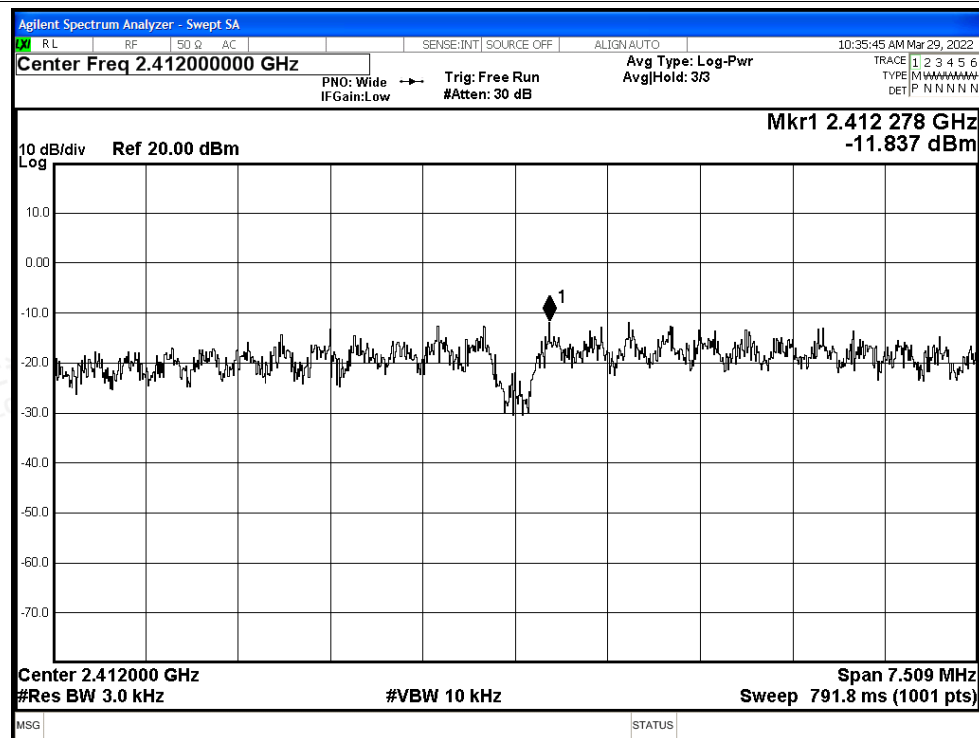
PSD NVNT g 2462MHz Ant



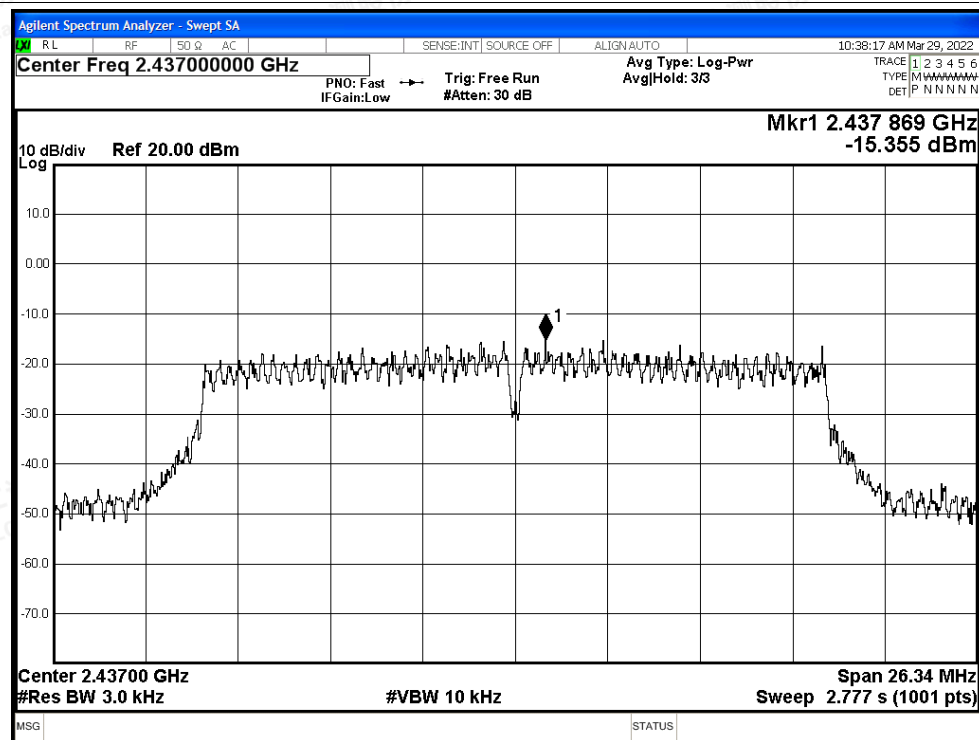


2/6/2022 11:53:60

PSD NVNT n20 2412MHz Ant

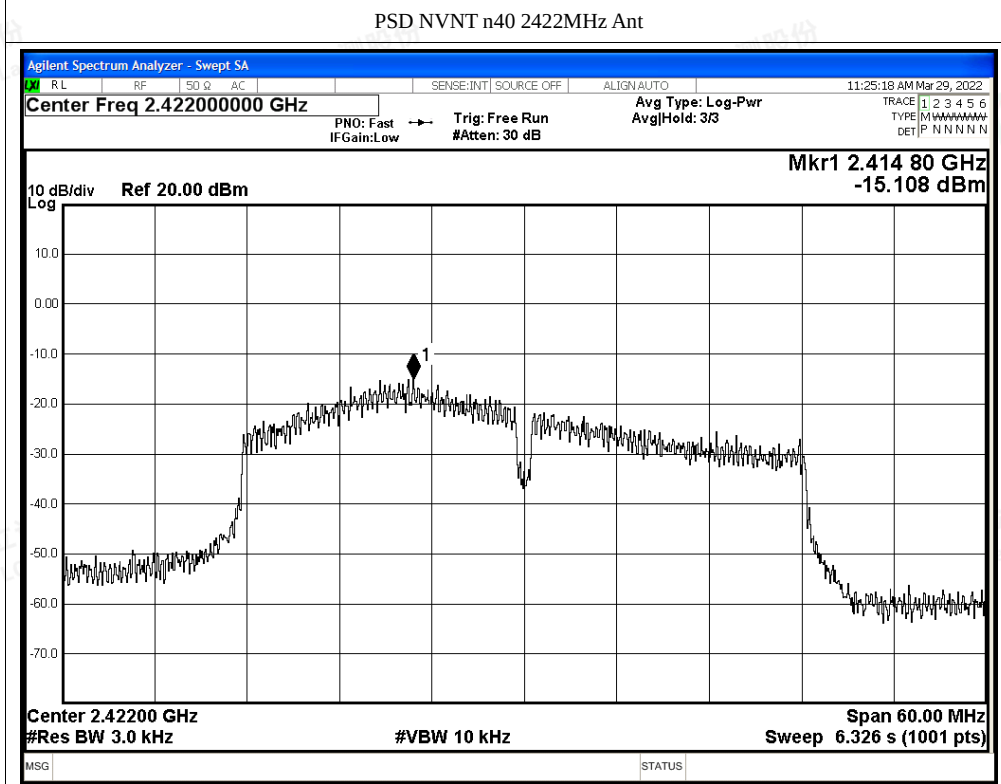
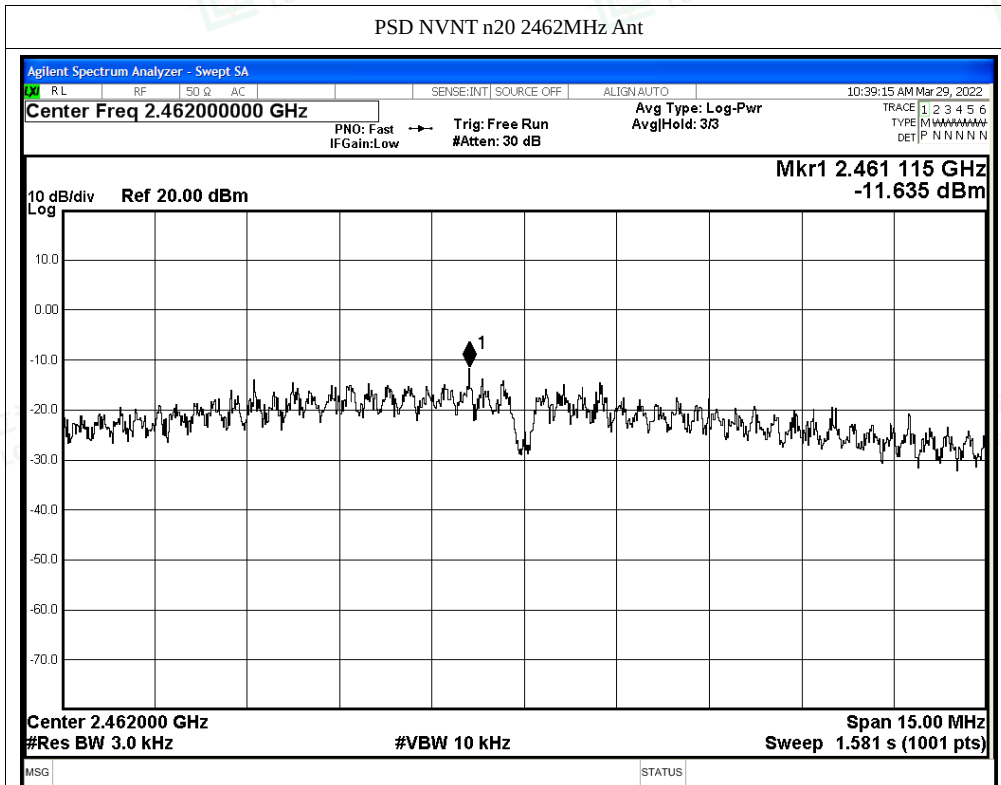


PSD NVNT n20 2437MHz Ant



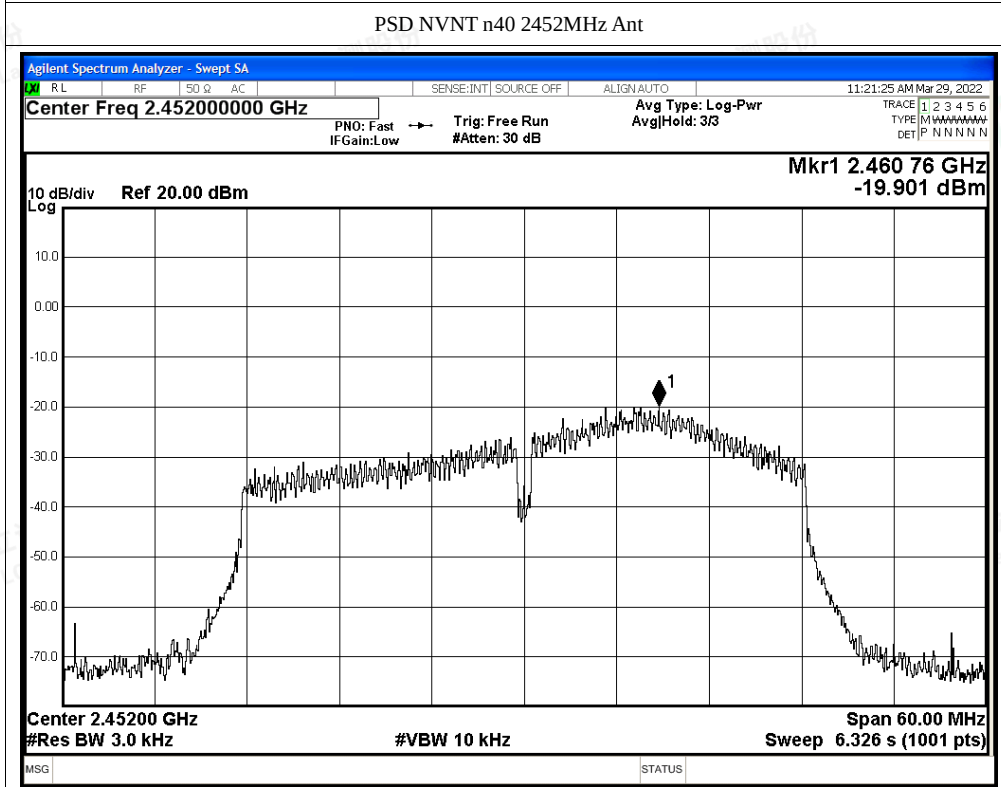
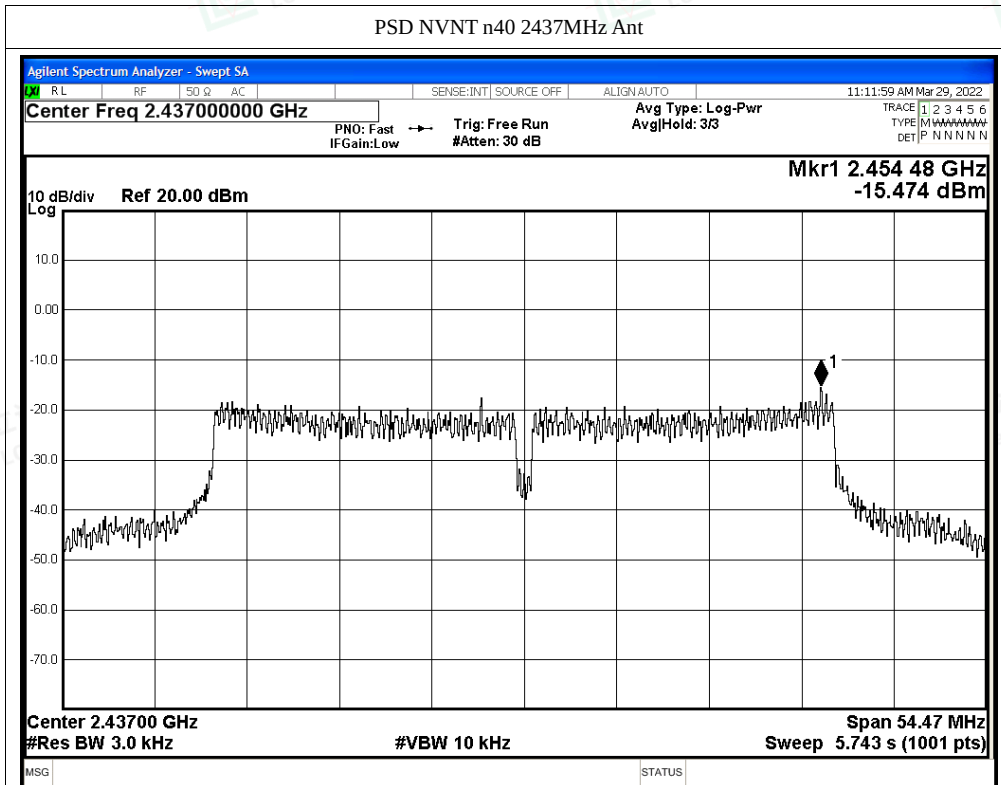


2/6/2022 11:53:36





2/6/2022 11:59 AM S360





A.4Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant	-51.47	-20	Pass
NVNT	b	2462	Ant	-62.08	-20	Pass
NVNT	g	2412	Ant	-42.09	-20	Pass
NVNT	g	2462	Ant	-45.92	-20	Pass
NVNT	n20	2412	Ant	-42.24	-20	Pass
NVNT	n20	2462	Ant	-45.24	-20	Pass
NVNT	n40	2422	Ant	-33.31	-20	Pass
NVNT	n40	2452	Ant	-36.85	-20	Pass

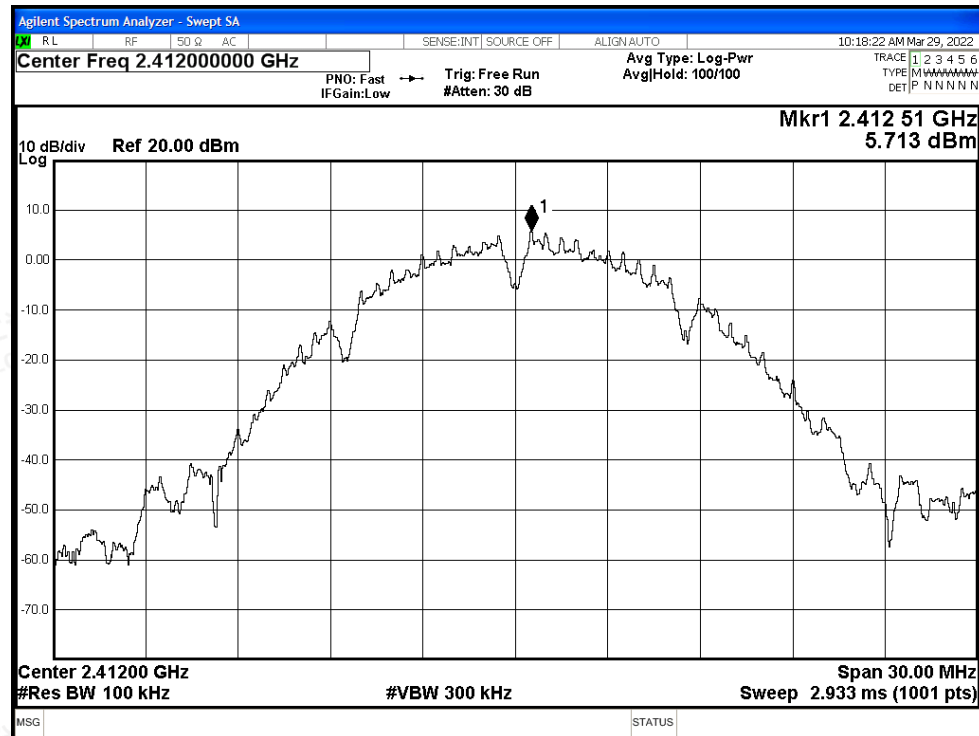




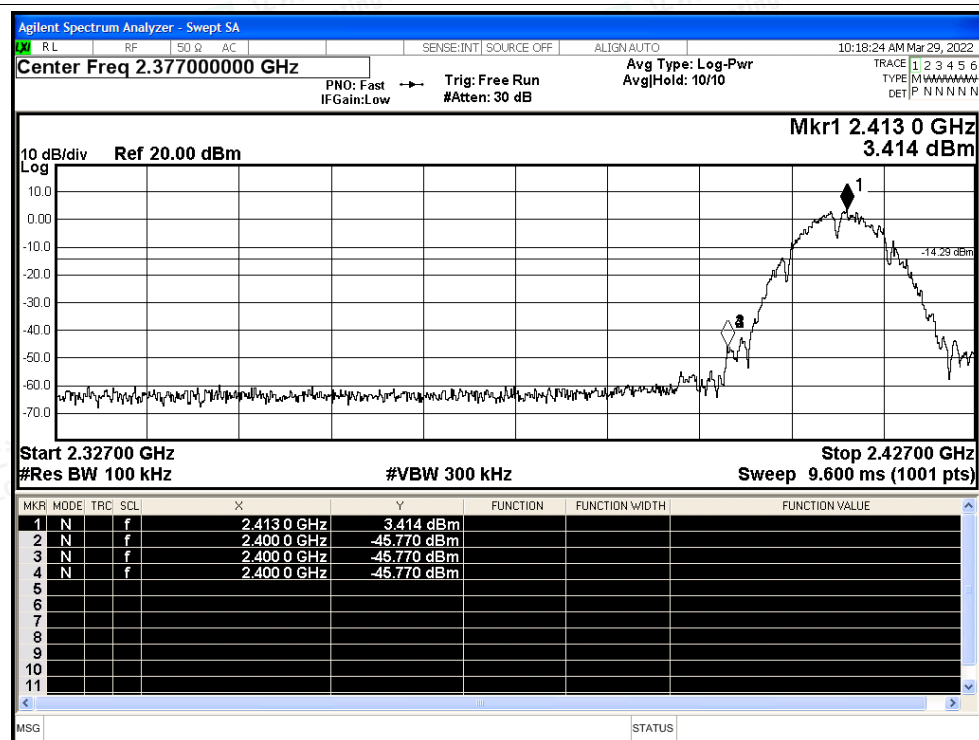
2/6/2022 11:53:60

Test Graphs

Band Edge NVNT b 2412MHz Ant Ref



Band Edge NVNT b 2412MHz Ant Emission

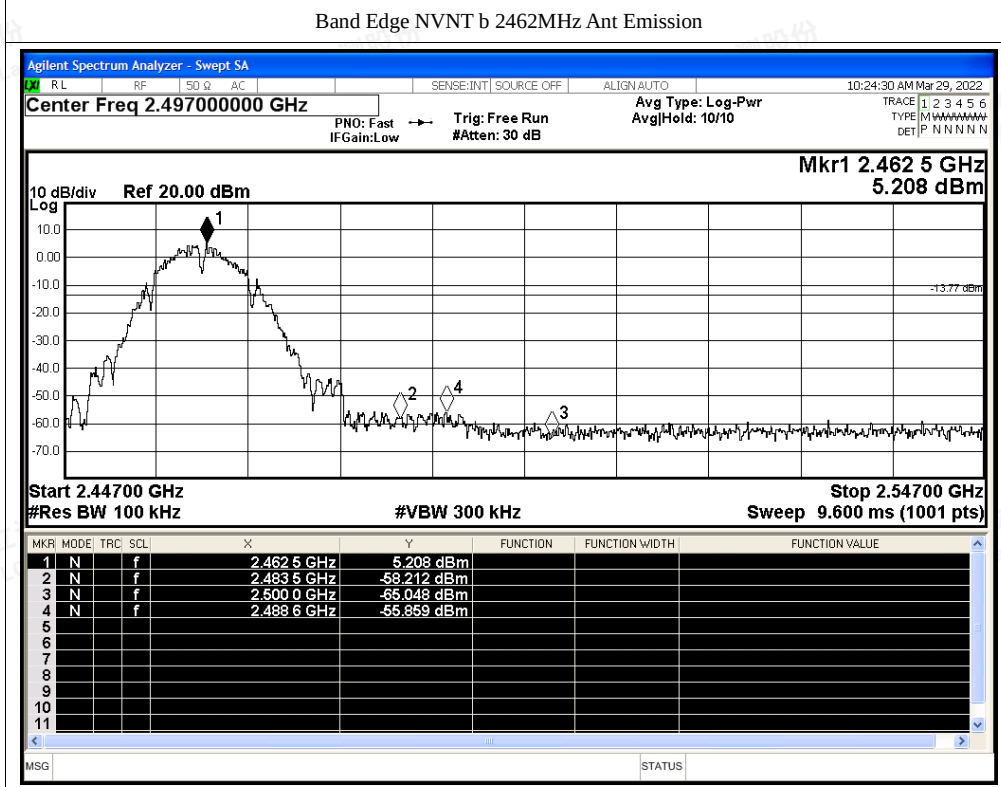
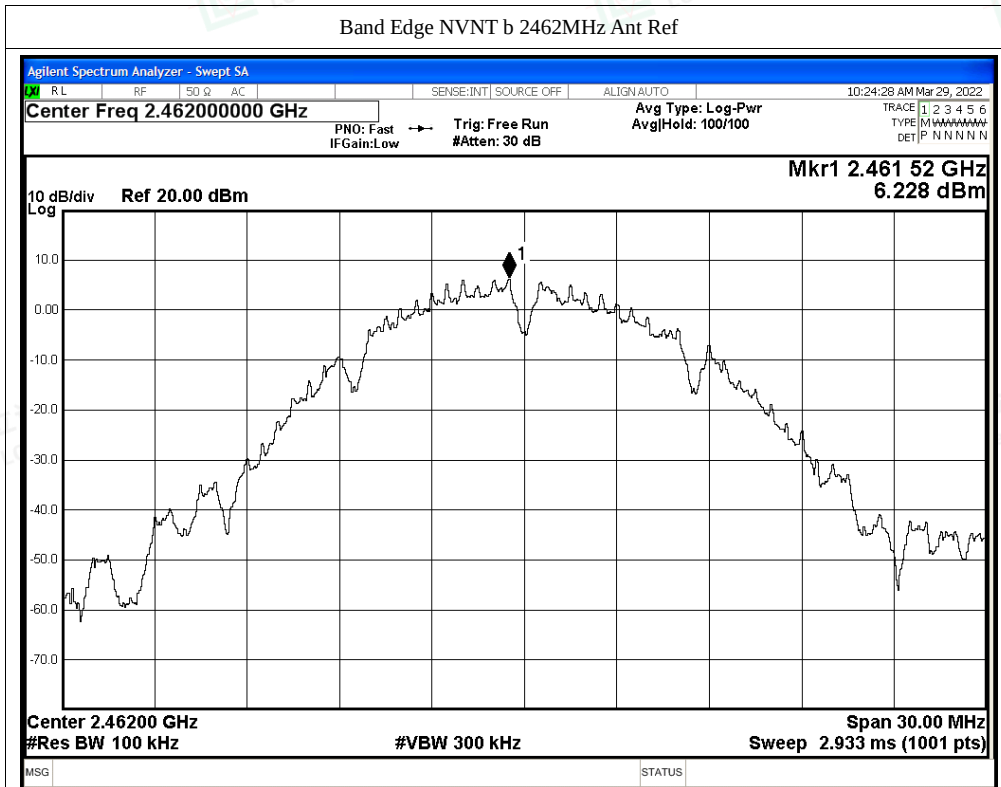


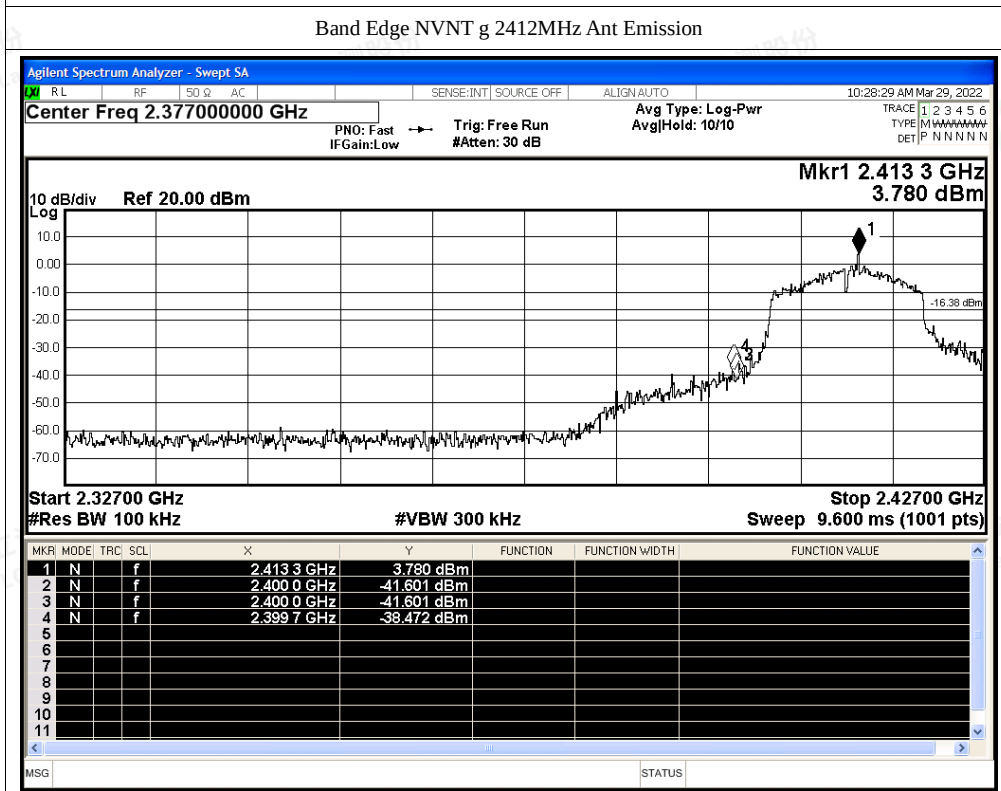
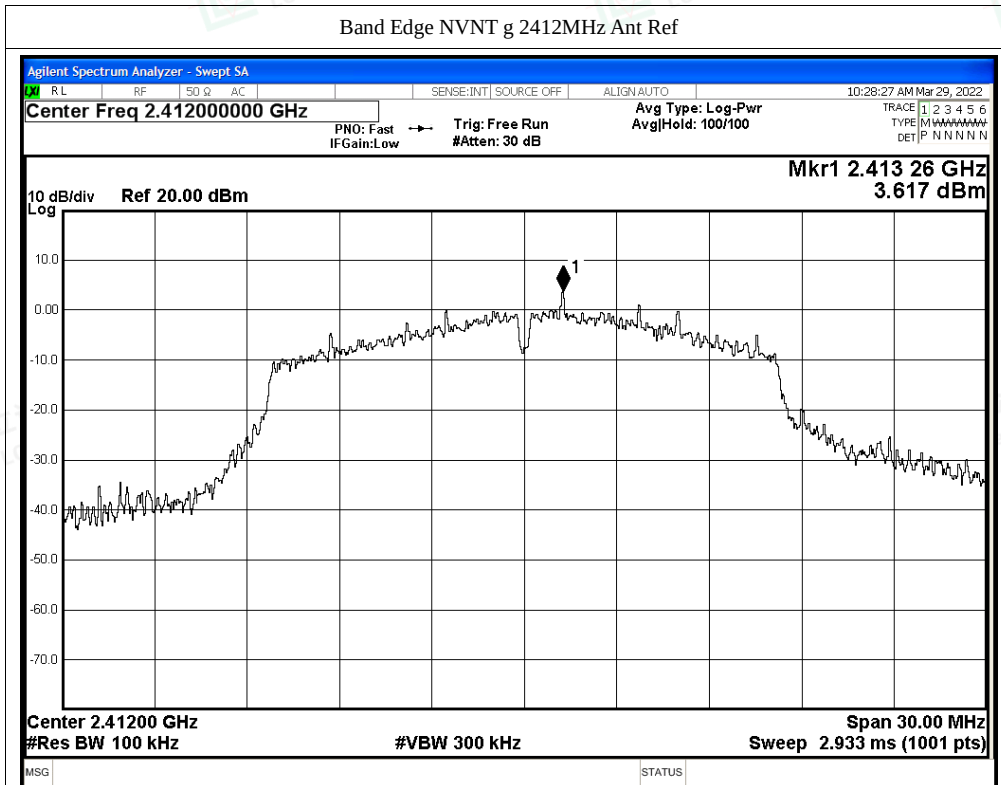
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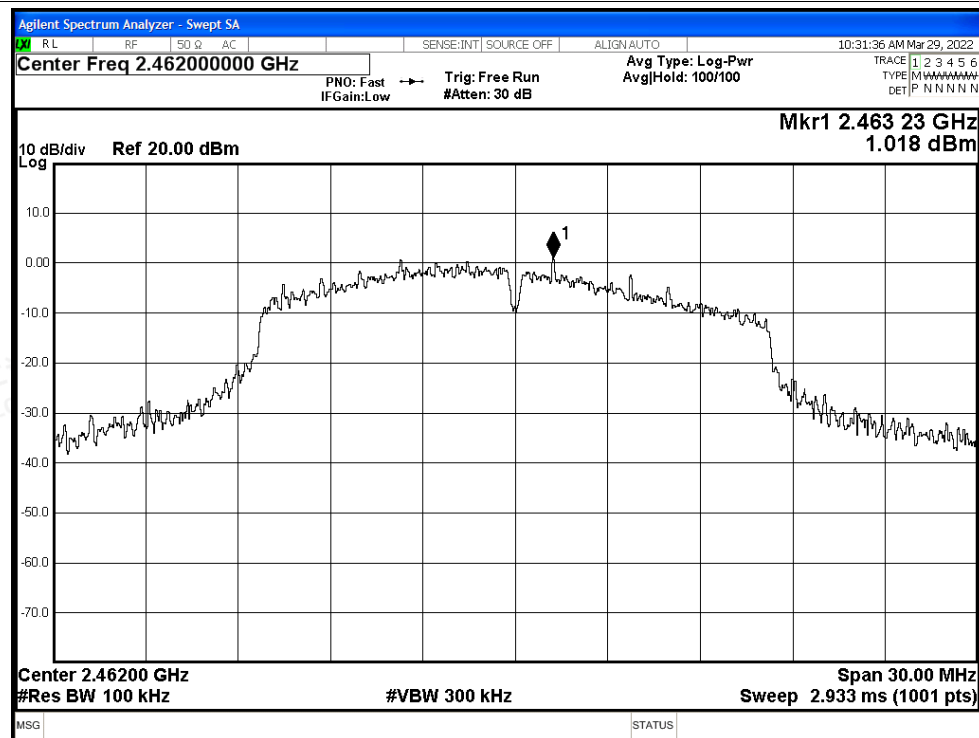




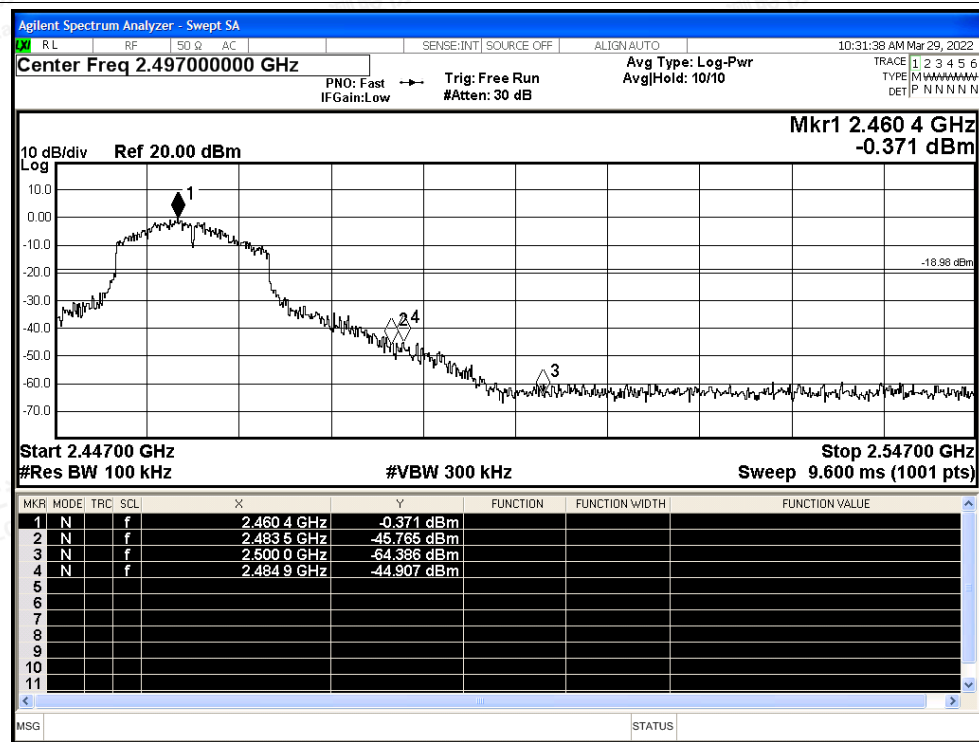


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Band Edge NVNT g 2462MHz Ant Ref



Band Edge NVNT g 2462MHz Ant Emission

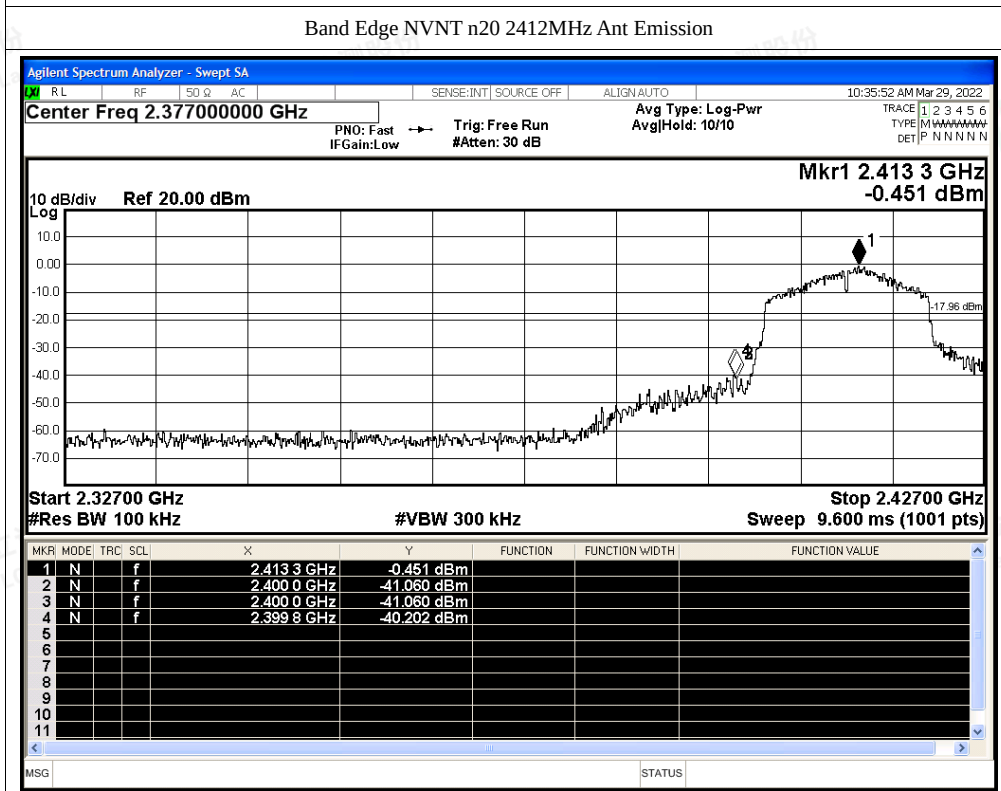
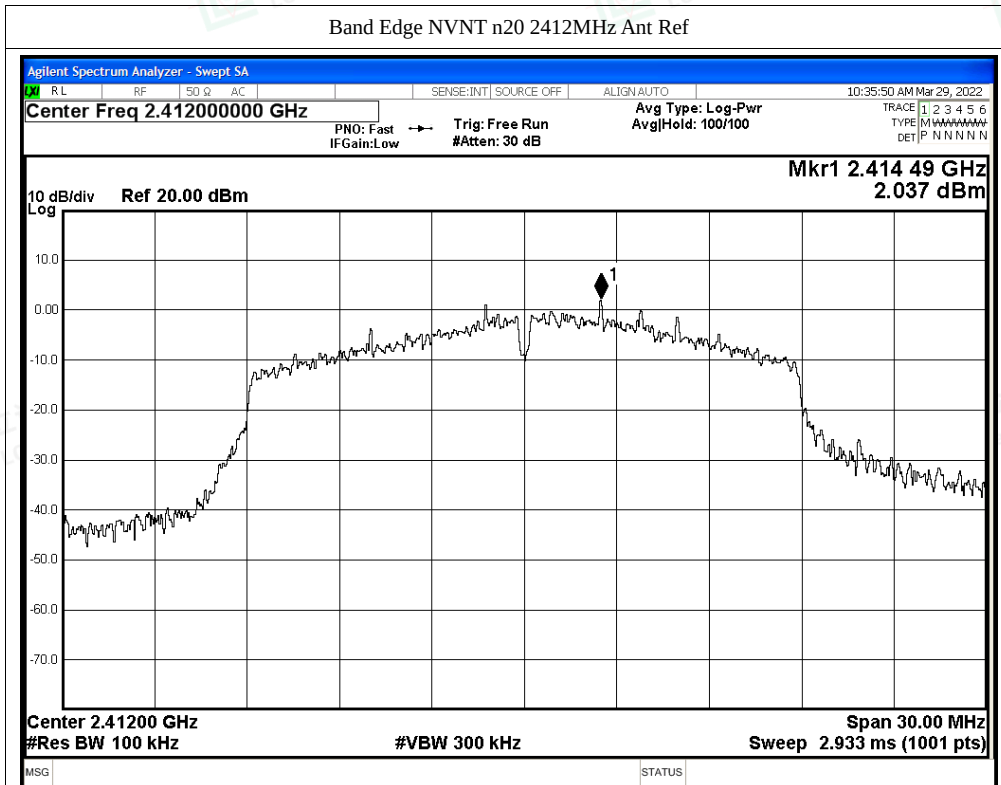


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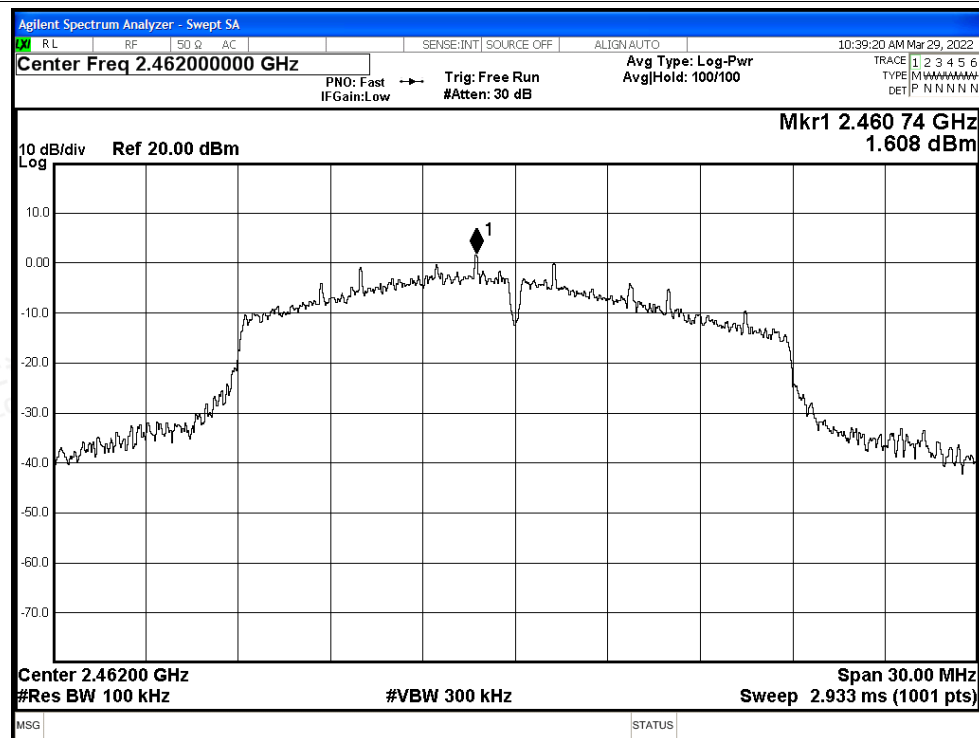
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Scan code to check authenticity

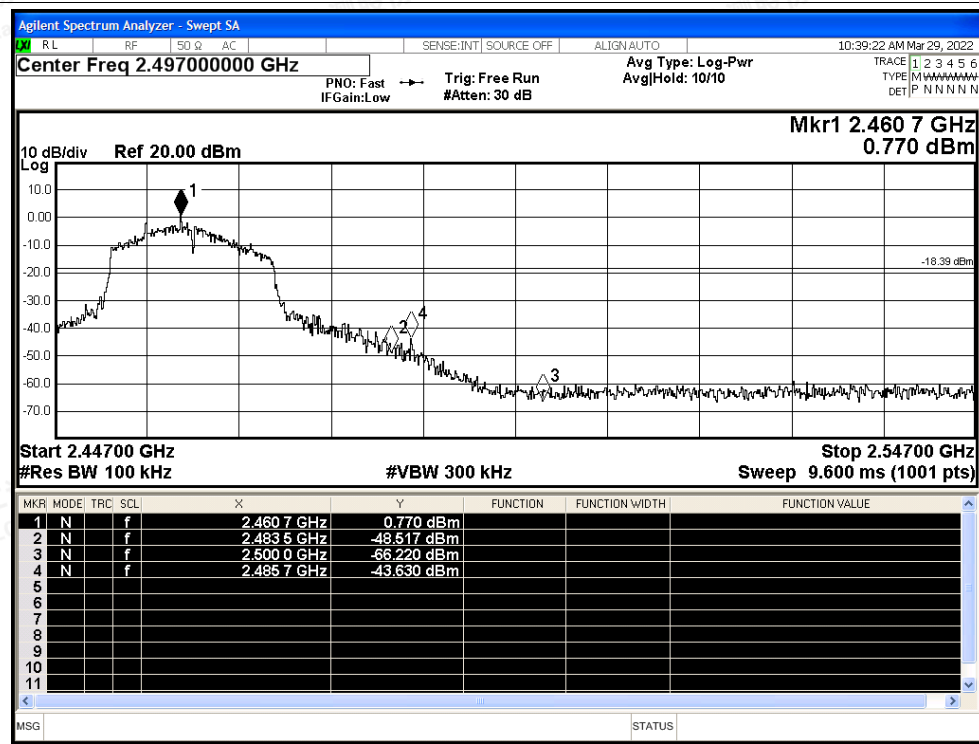


2/6/2022 11:53:36

Band Edge NVNT n20 2462MHz Ant Ref



Band Edge NVNT n20 2462MHz Ant Emission

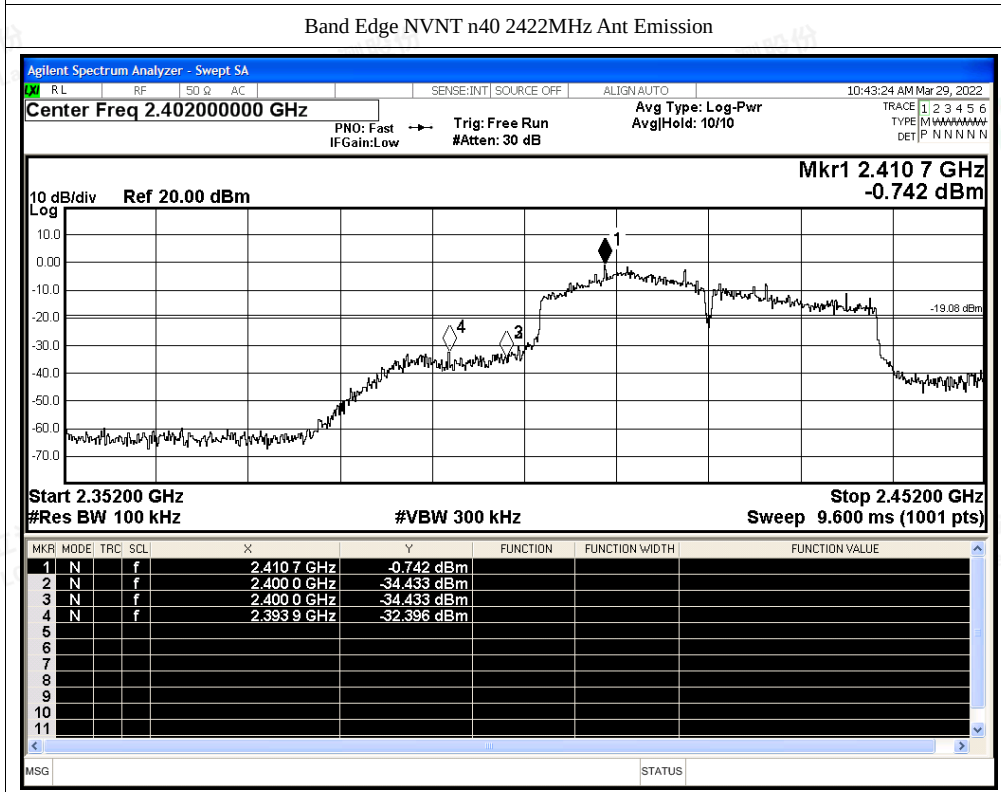
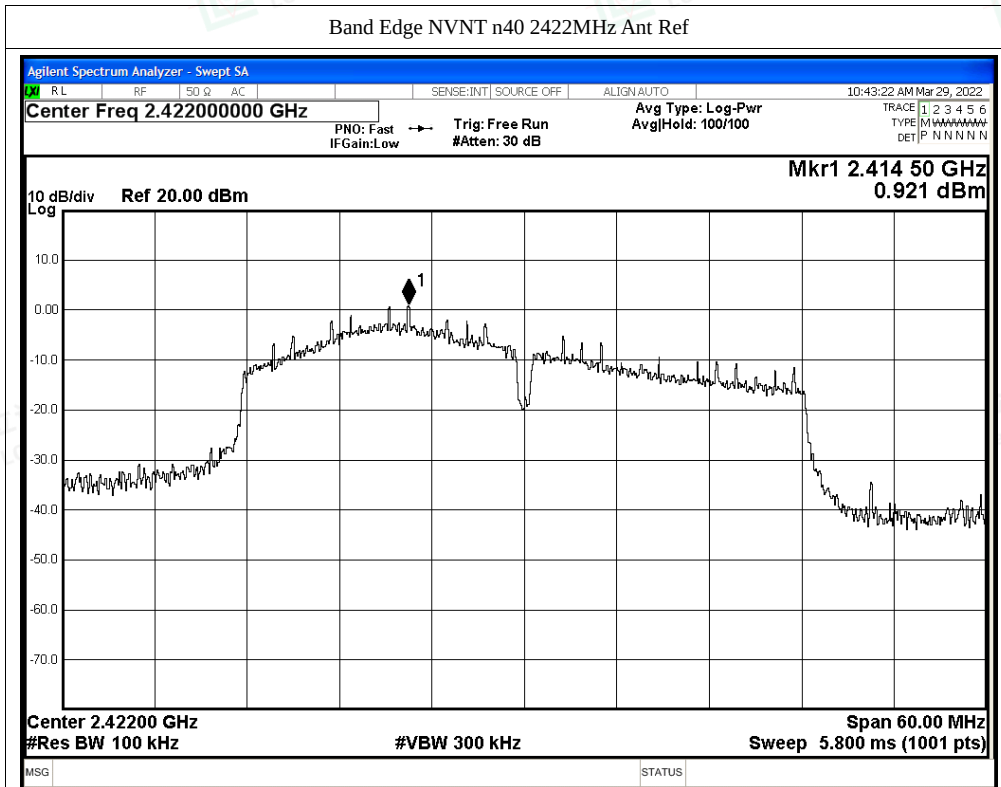


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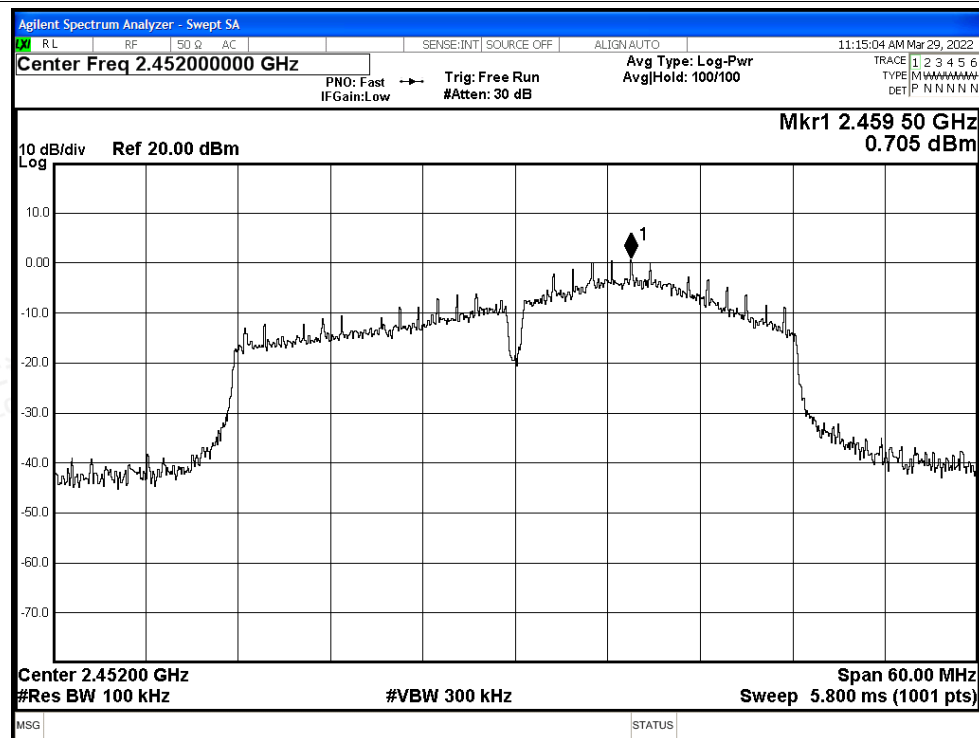
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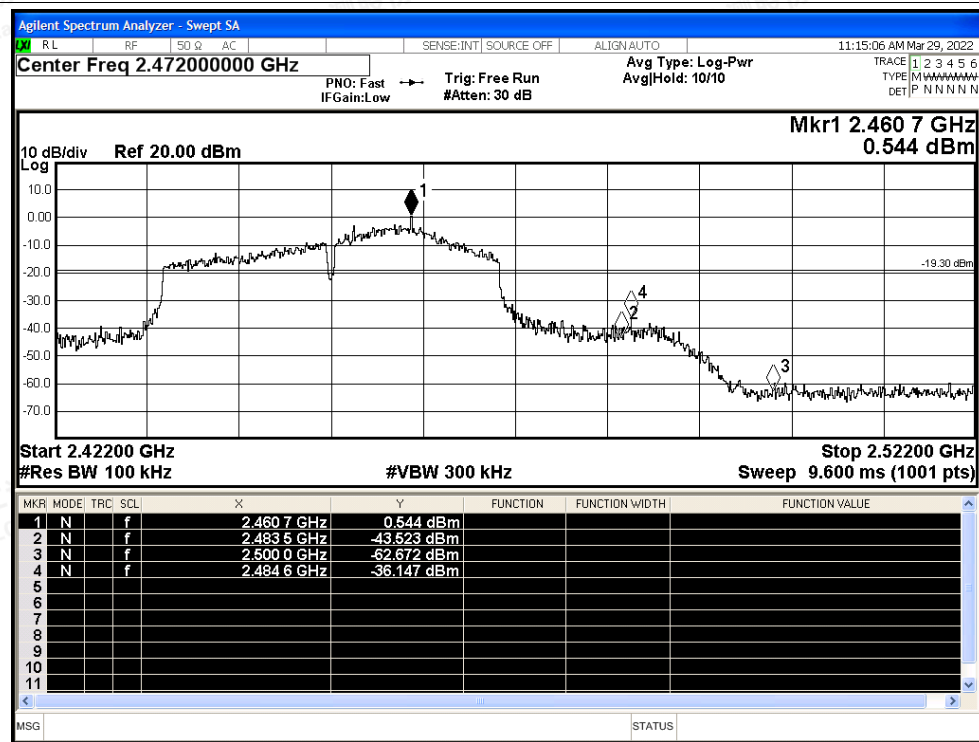


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Band Edge NVNT n40 2452MHz Ant Ref



Band Edge NVNT n40 2452MHz Ant Emission



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A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant	-35.43	-20	Pass
NVNT	b	2462	Ant	-54.19	-20	Pass
NVNT	g	2412	Ant	-48.77	-20	Pass
NVNT	g	2462	Ant	-25.65	-20	Pass
NVNT	n20	2412	Ant	-24.25	-20	Pass
NVNT	n20	2462	Ant	-27.84	-20	Pass
NVNT	n40	2422	Ant	-47.74	-20	Pass
NVNT	n40	2452	Ant	-47.52	-20	Pass

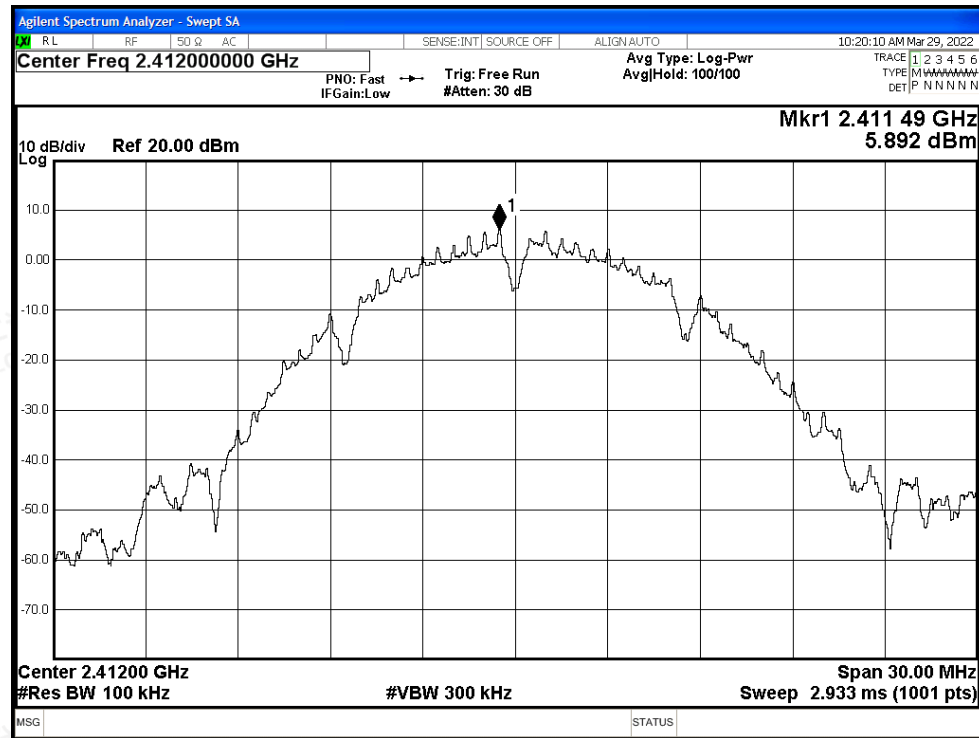




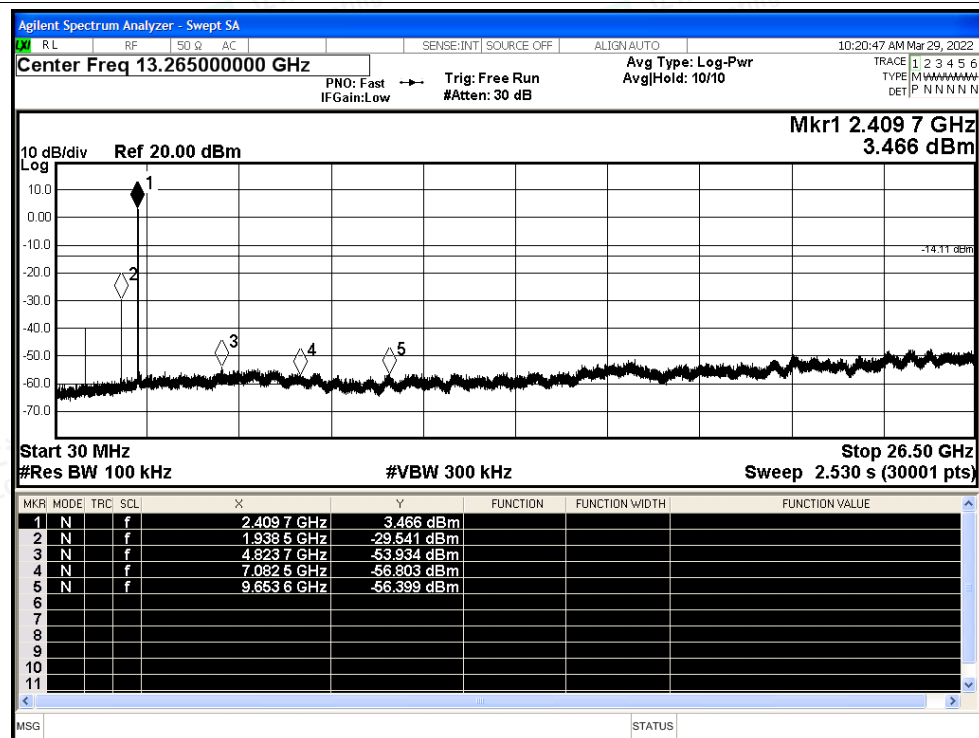
2/6/2022 11:53:60

Test Graphs

Tx. Spurious NVNT b 2412MHz Ant Ref



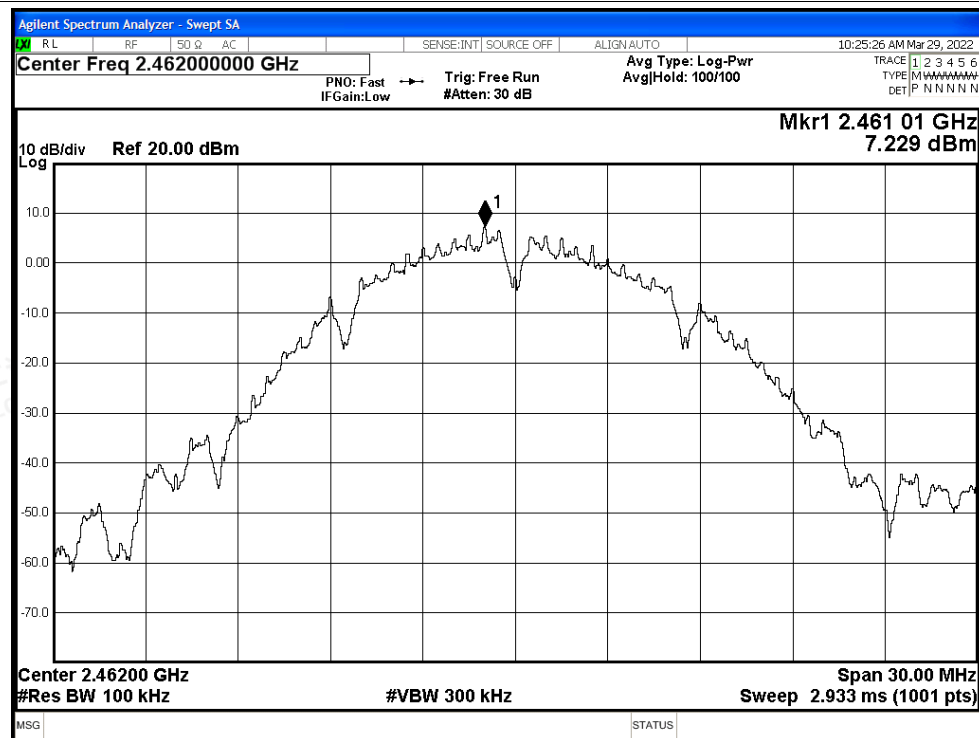
Tx. Spurious NVNT b 2412MHz Ant Emission



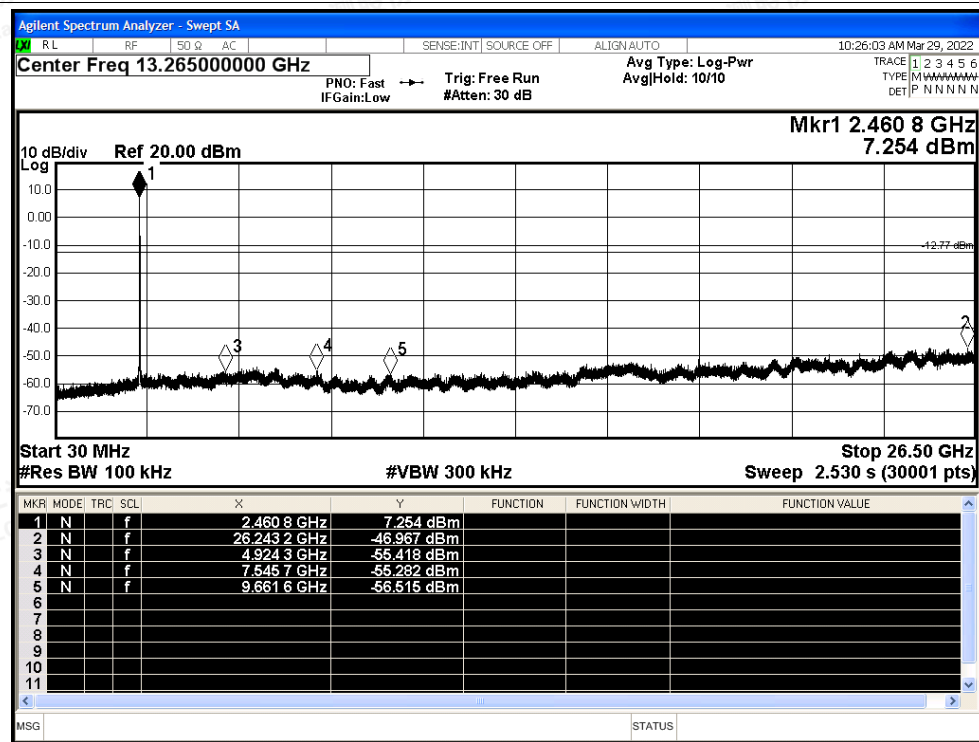


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Tx. Spurious NVNT b 2462MHz Ant Ref



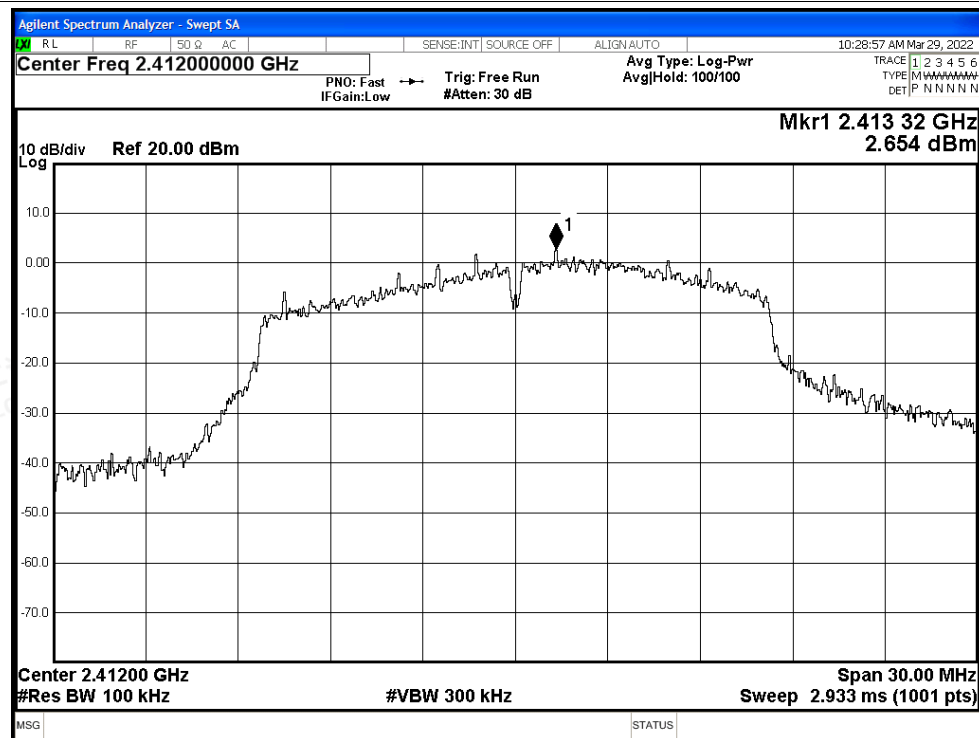
Tx. Spurious NVNT b 2462MHz Ant Emission



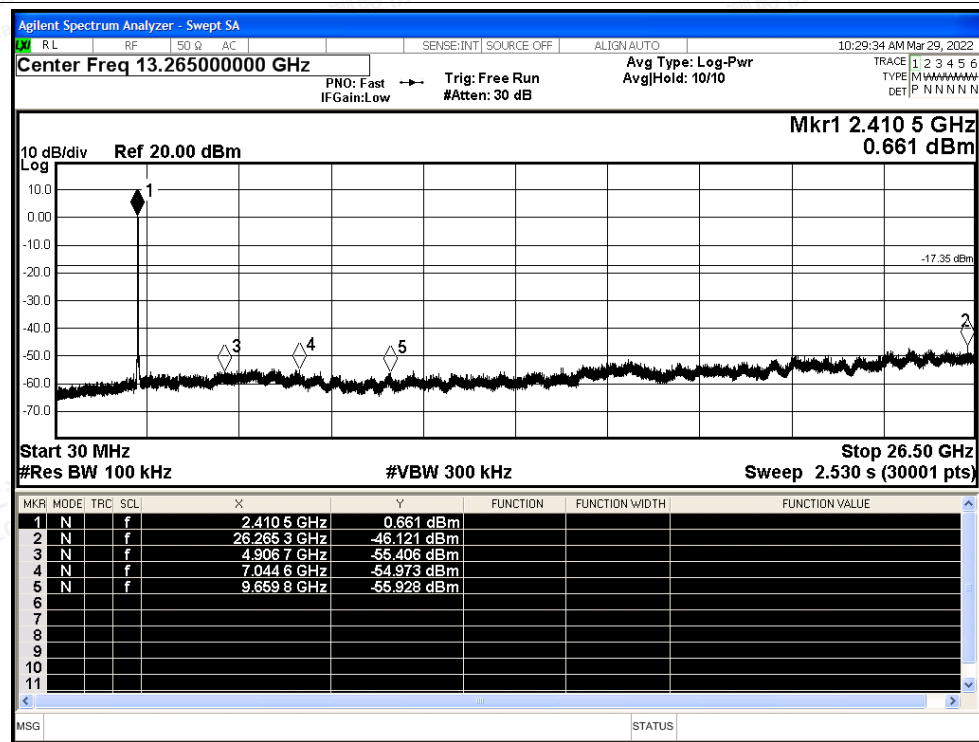


2/6/2022 11:53:60

Tx. Spurious NVNT g 2412MHz Ant Ref



Tx. Spurious NVNT g 2412MHz Ant Emission

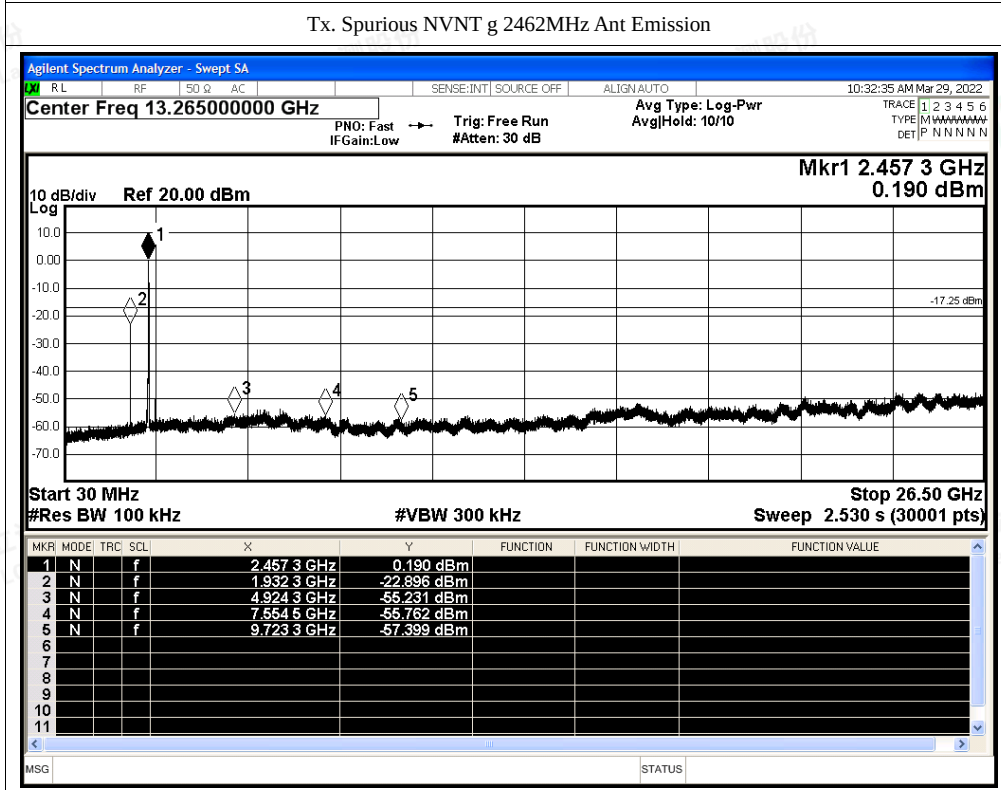
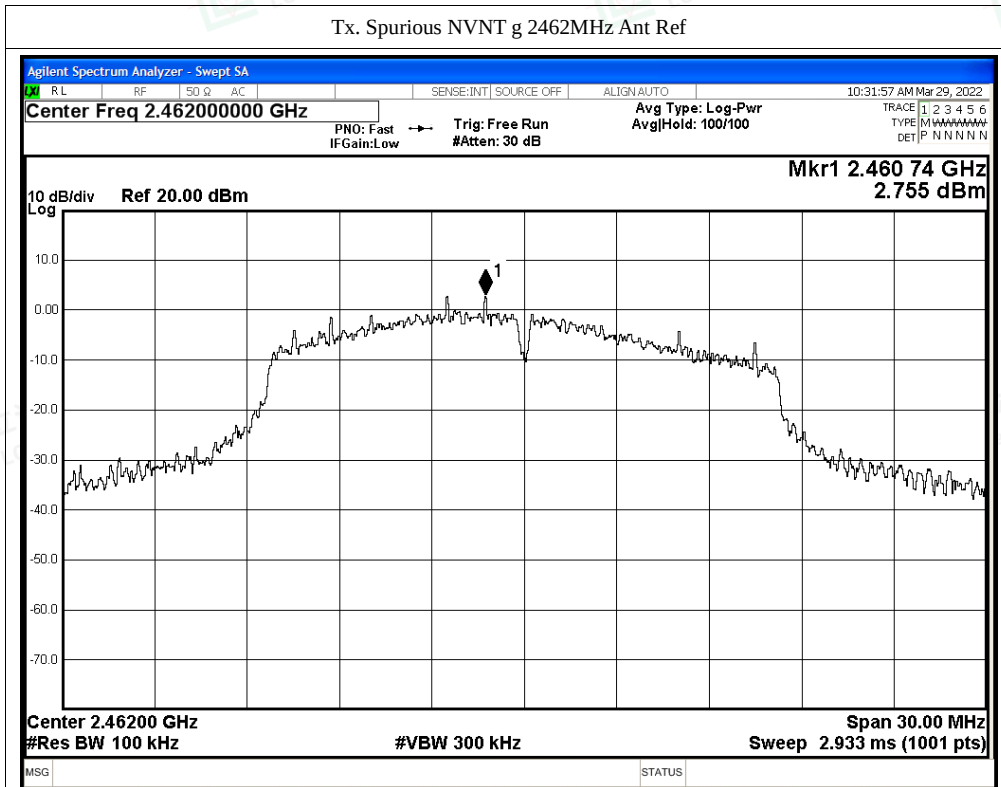


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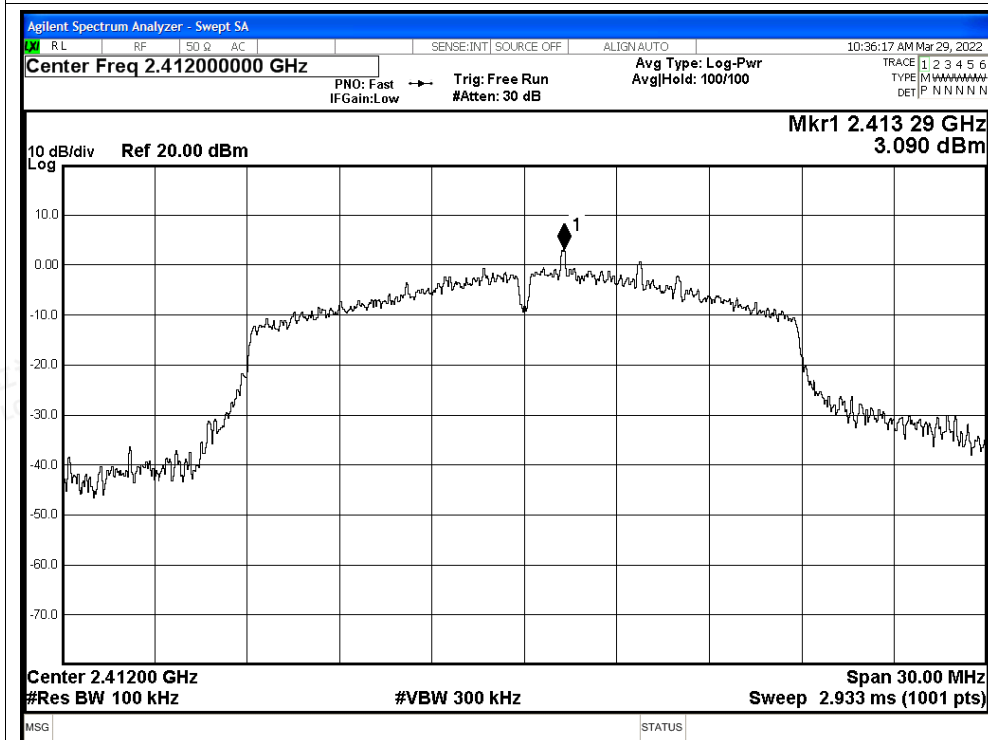
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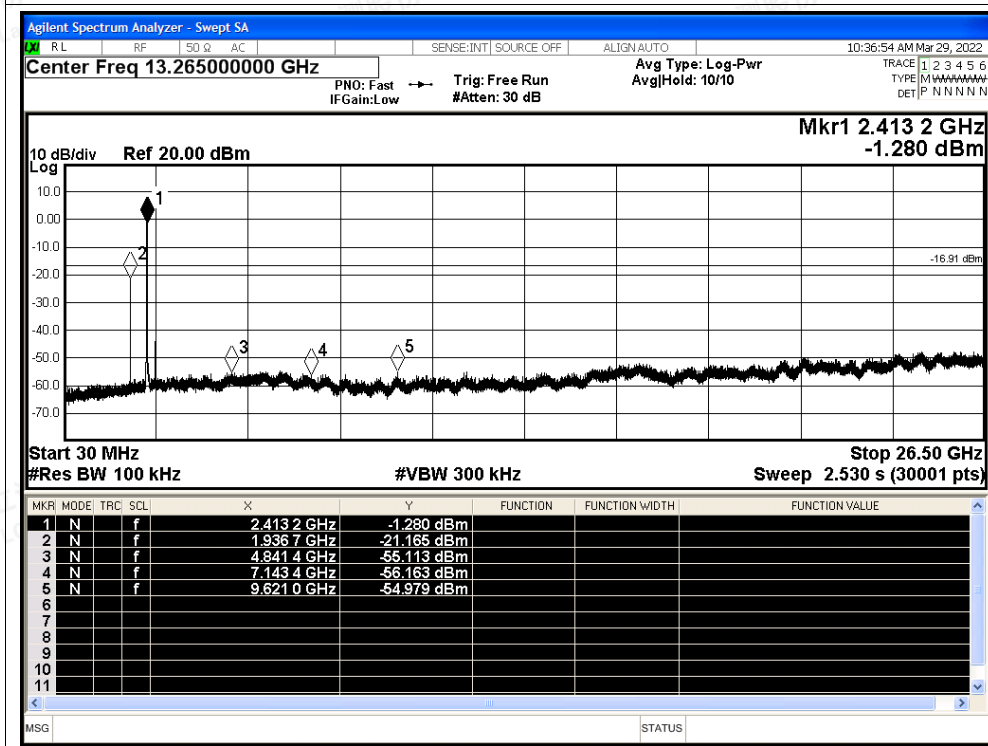
Scan code to check authenticity



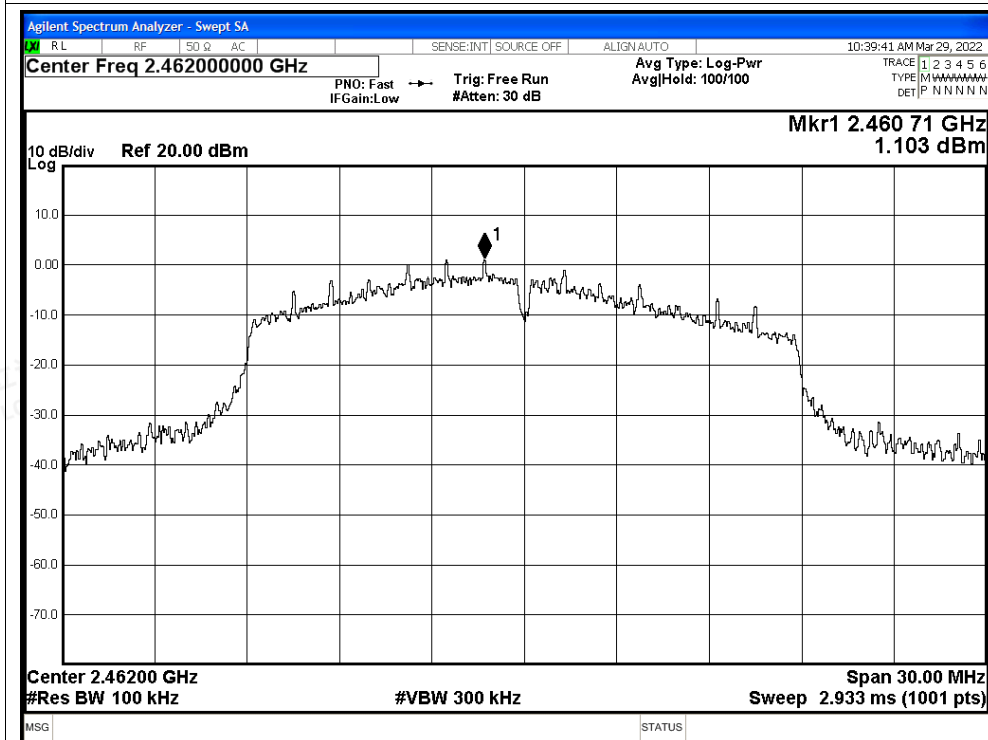
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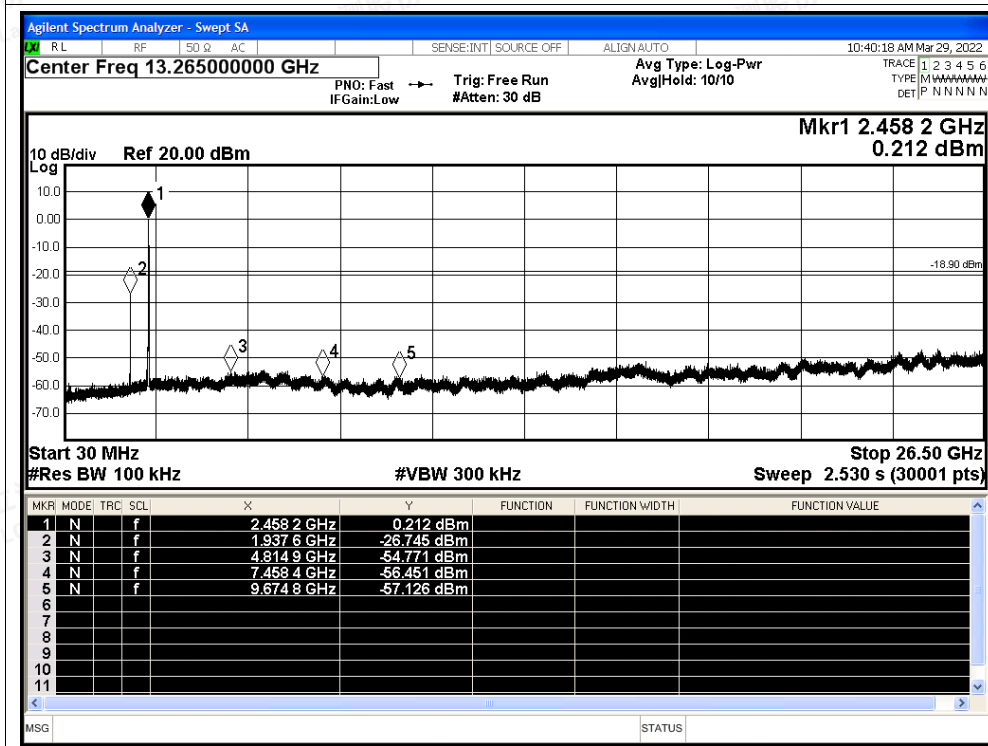
Tx. Spurious NVNT n20 2412MHz Ant Emission

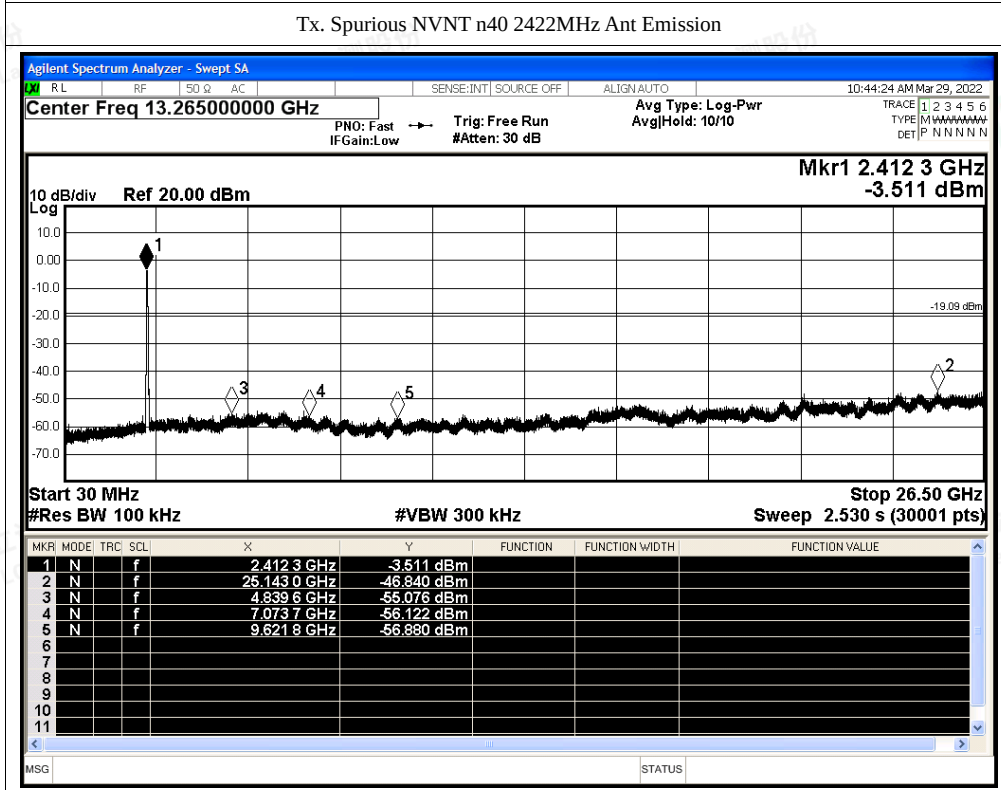
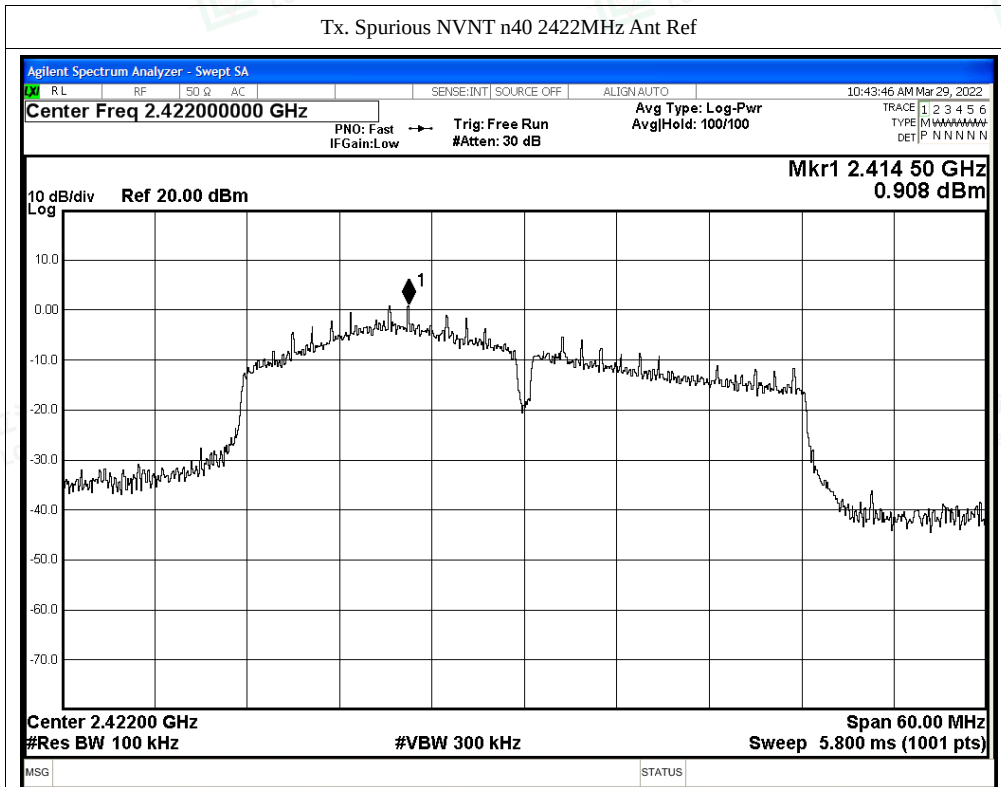


Tx. Spurious NVNT n20 2462MHz Ant Ref



Tx. Spurious NVNT n20 2462MHz Ant Emission

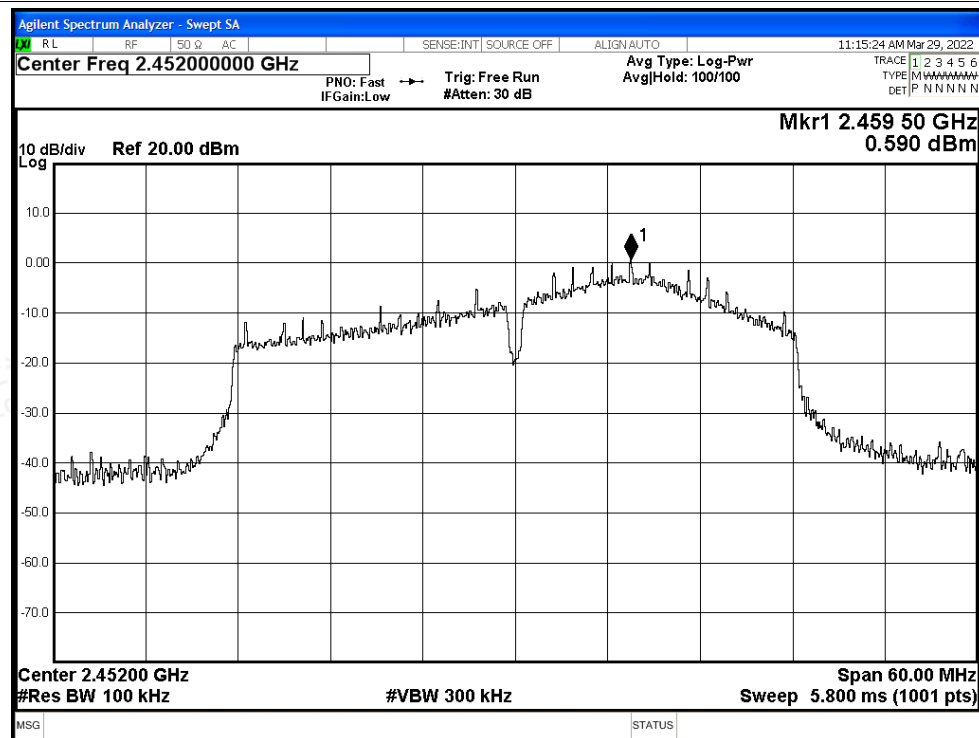




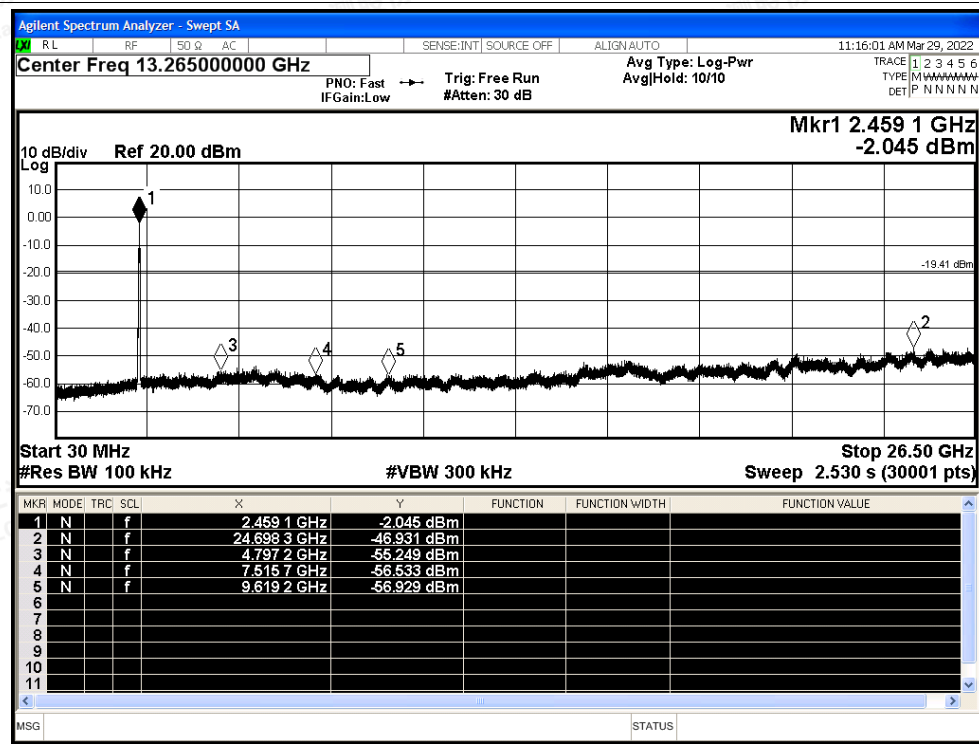


2/6/2022 11:53:36

Tx. Spurious NVNT n40 2452MHz Ant Ref



Tx. Spurious NVNT n40 2452MHz Ant Emission



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A.6Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant	99.57	0	0.12
NVNT	b	2437	Ant	99.57	0	0.12
NVNT	b	2462	Ant	99.57	0	0.12
NVNT	g	2412	Ant	96.94	0.13	0.72
NVNT	g	2437	Ant	96.94	0.13	0.72
NVNT	g	2462	Ant	96.94	0.13	0.72
NVNT	n20	2412	Ant	96.73	0.14	0.77
NVNT	n20	2437	Ant	96.73	0.14	0.77
NVNT	n20	2462	Ant	96.73	0.14	0.77
NVNT	n40	2422	Ant	93.93	0.27	1.54
NVNT	n40	2437	Ant	93.93	0.27	1.54
NVNT	n40	2452	Ant	93.93	0.27	1.54

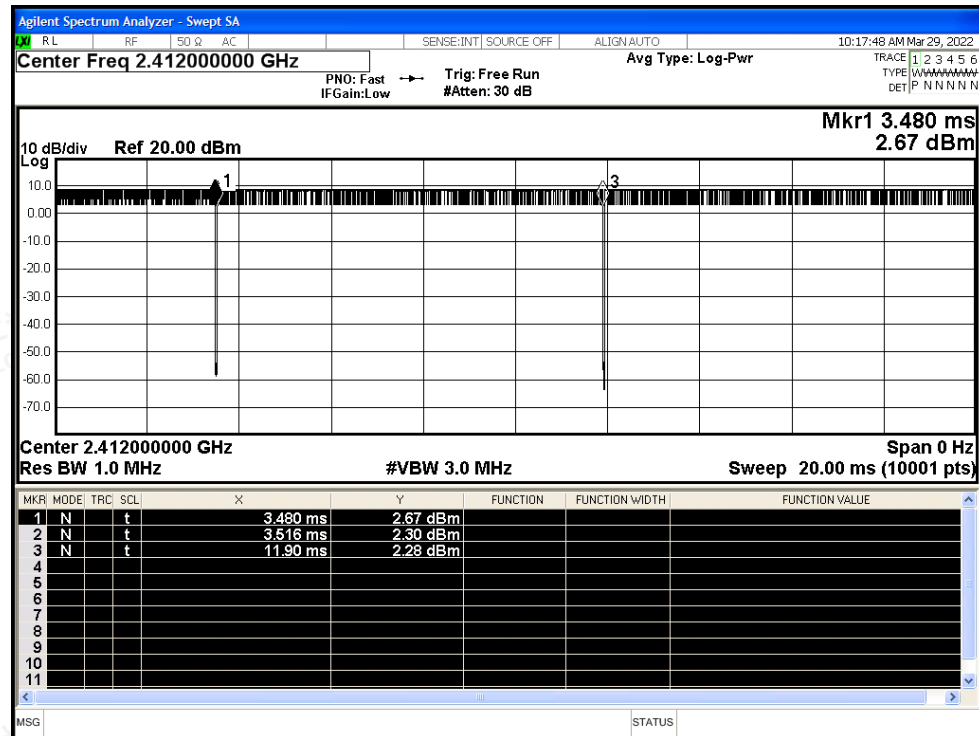




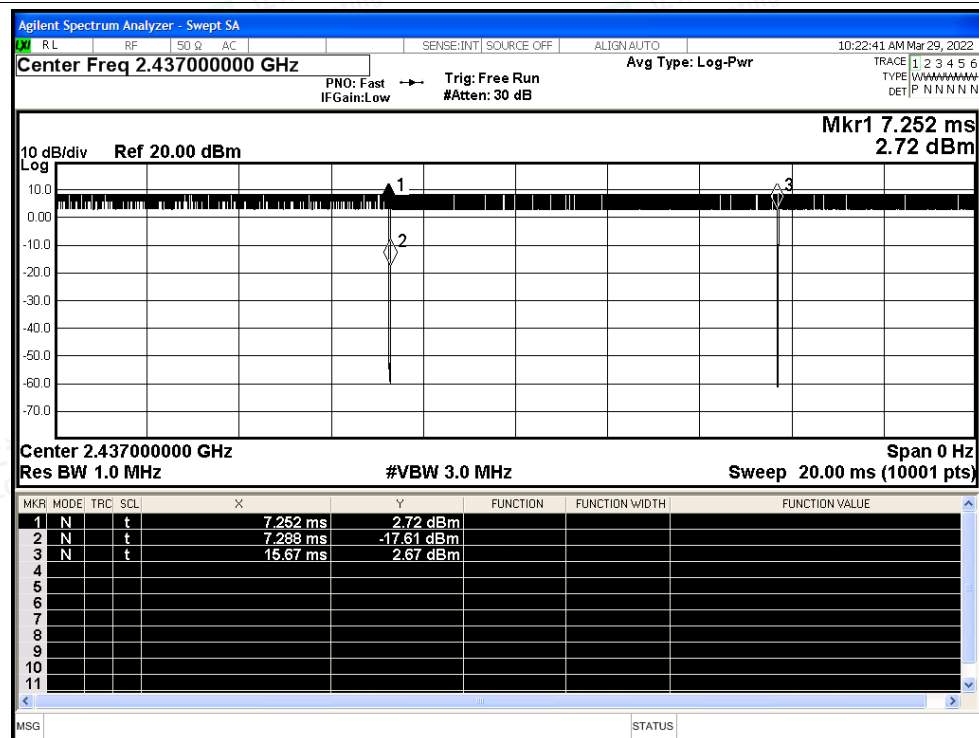
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Test Graphs

Duty Cycle NVNT b 2412MHz Ant

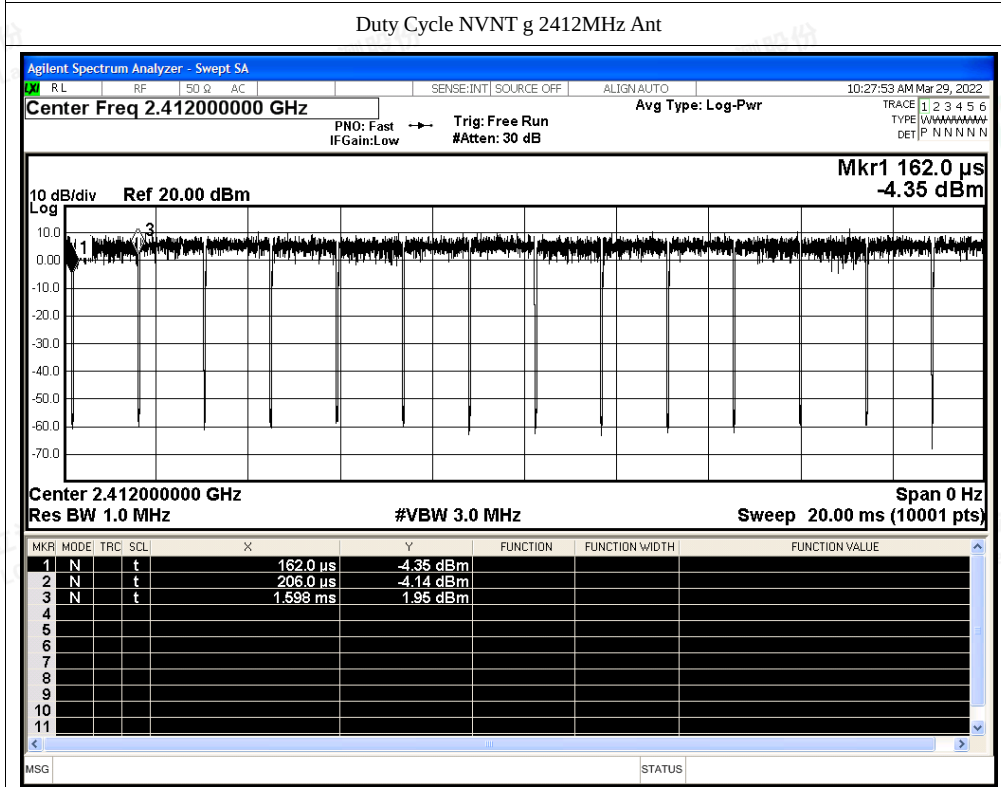
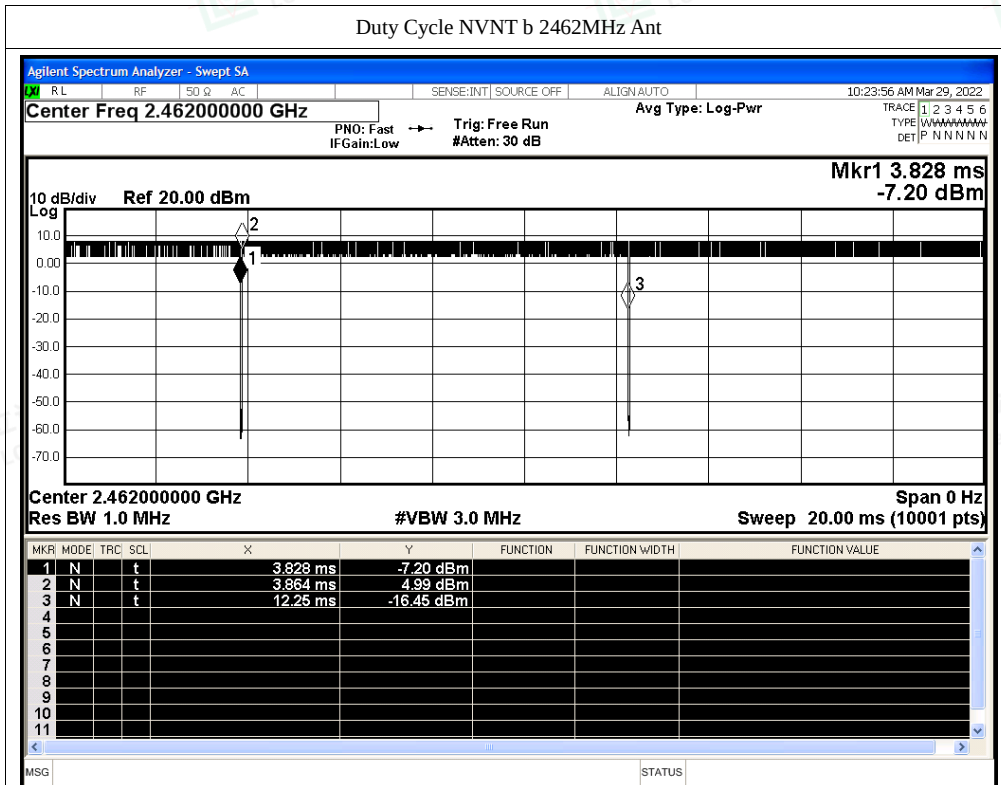


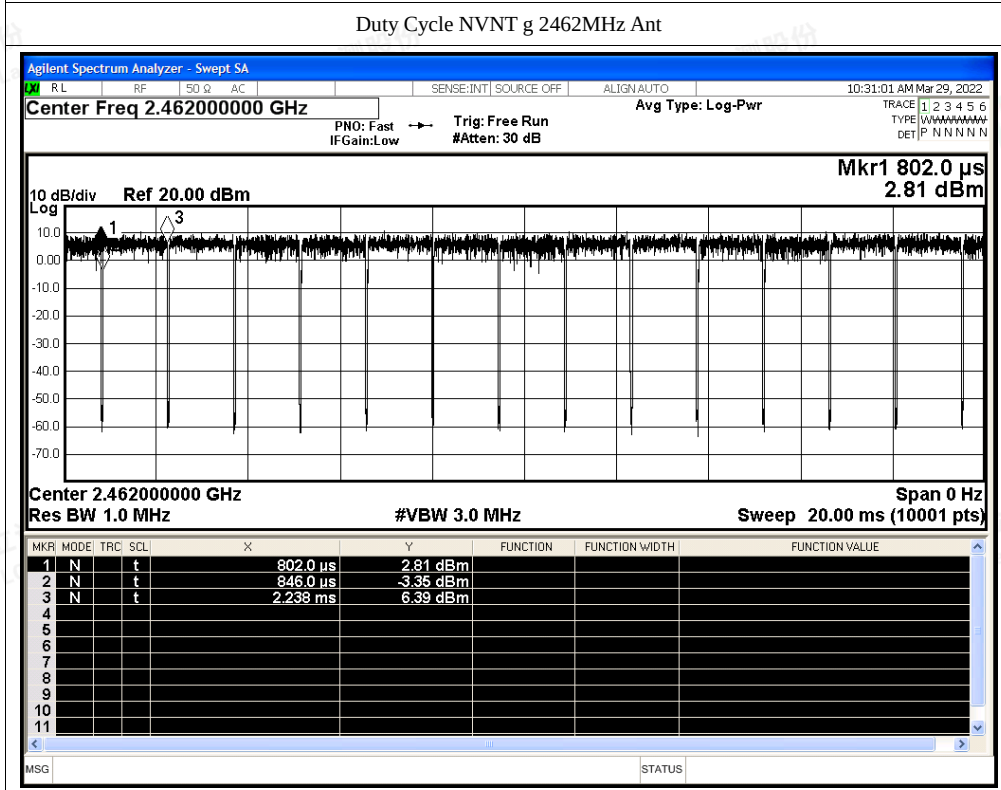
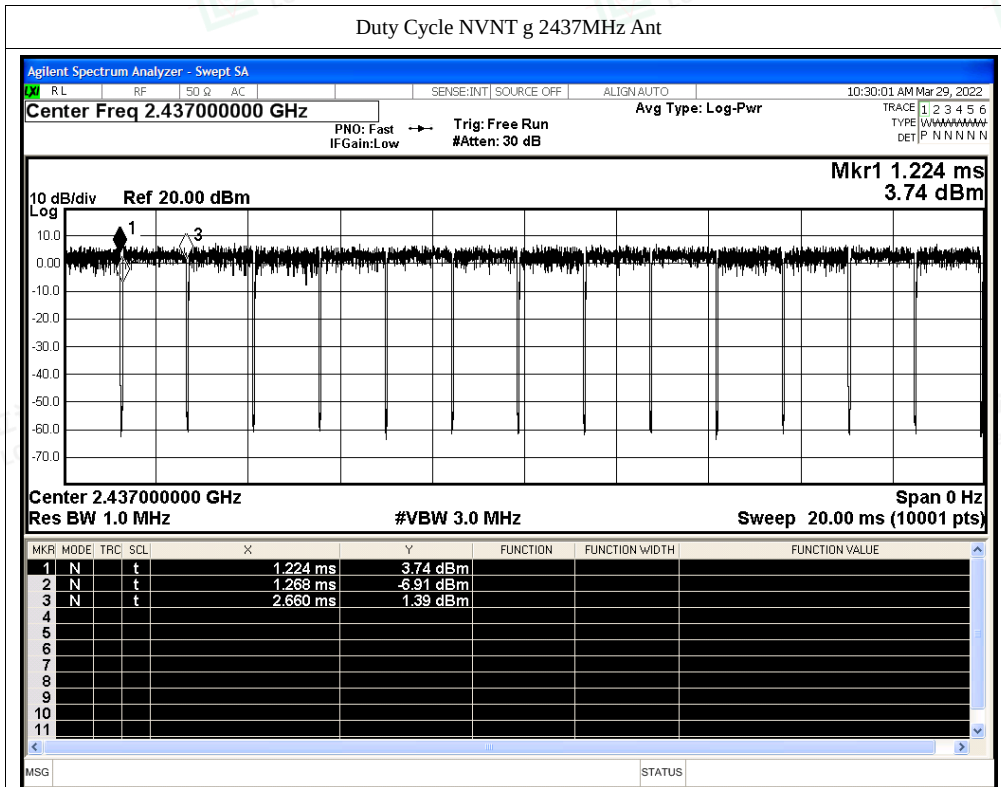
Duty Cycle NVNT b 2437MHz Ant

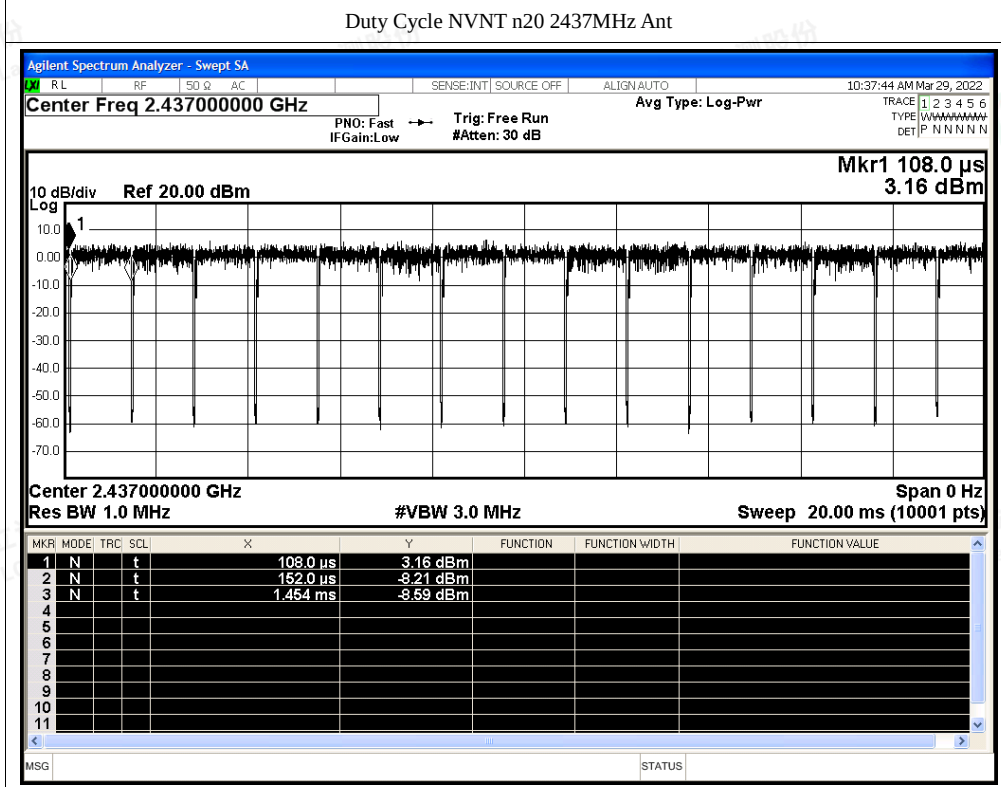
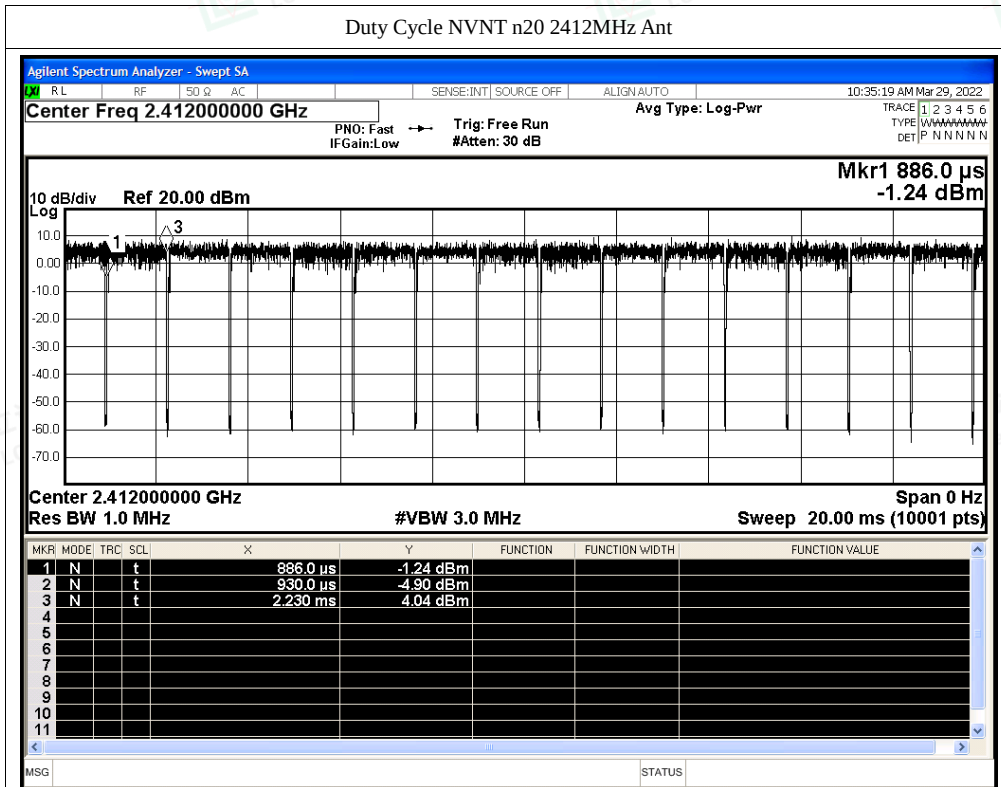




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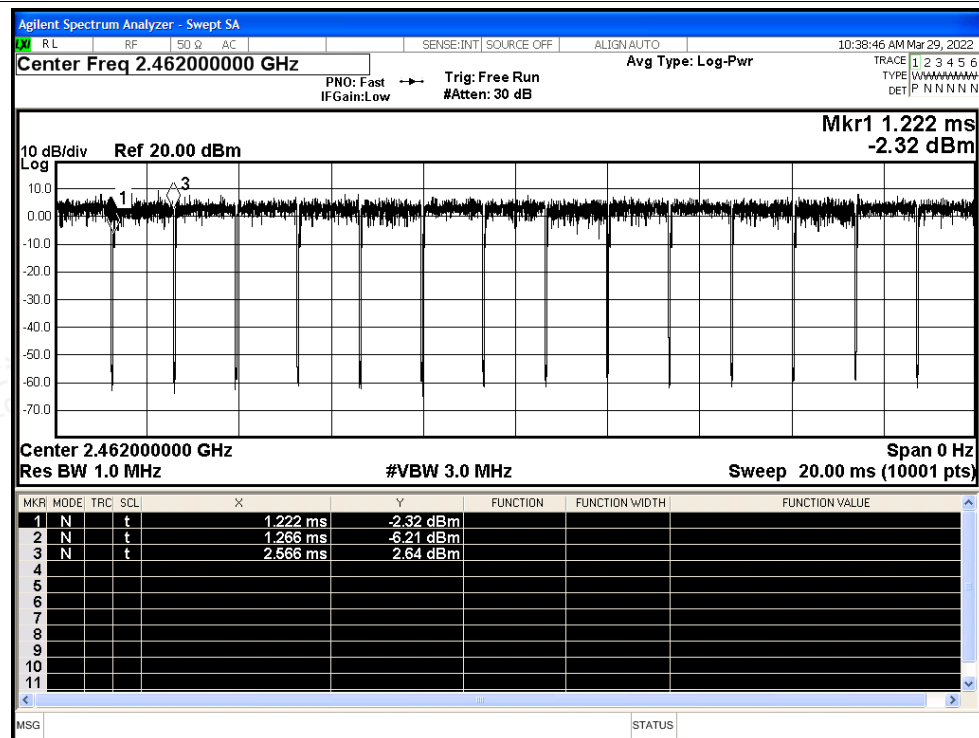




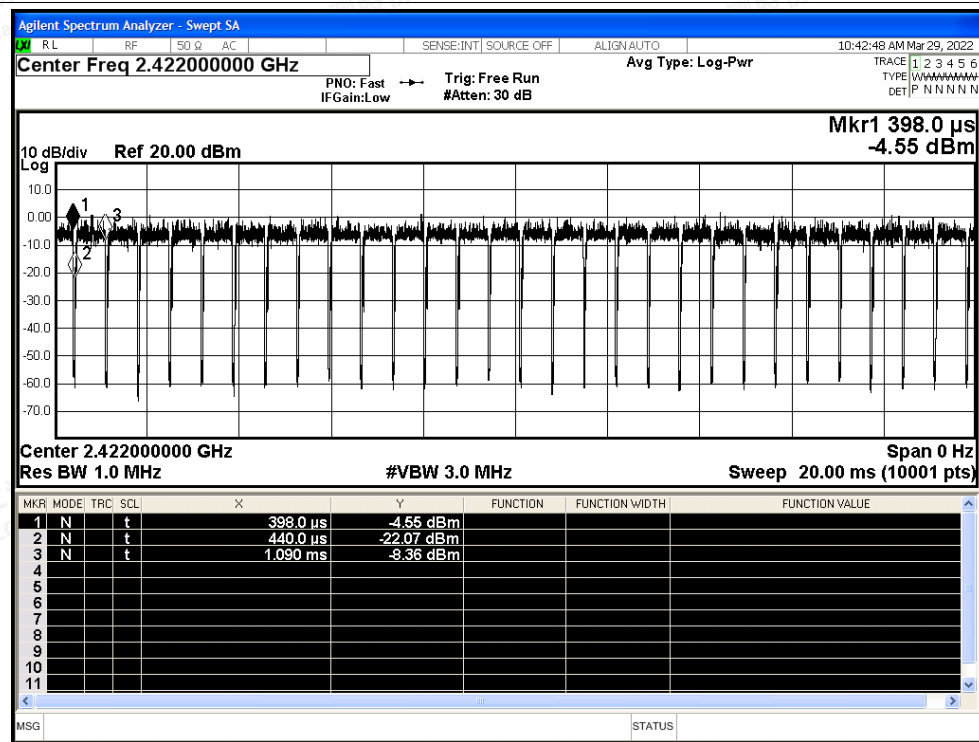


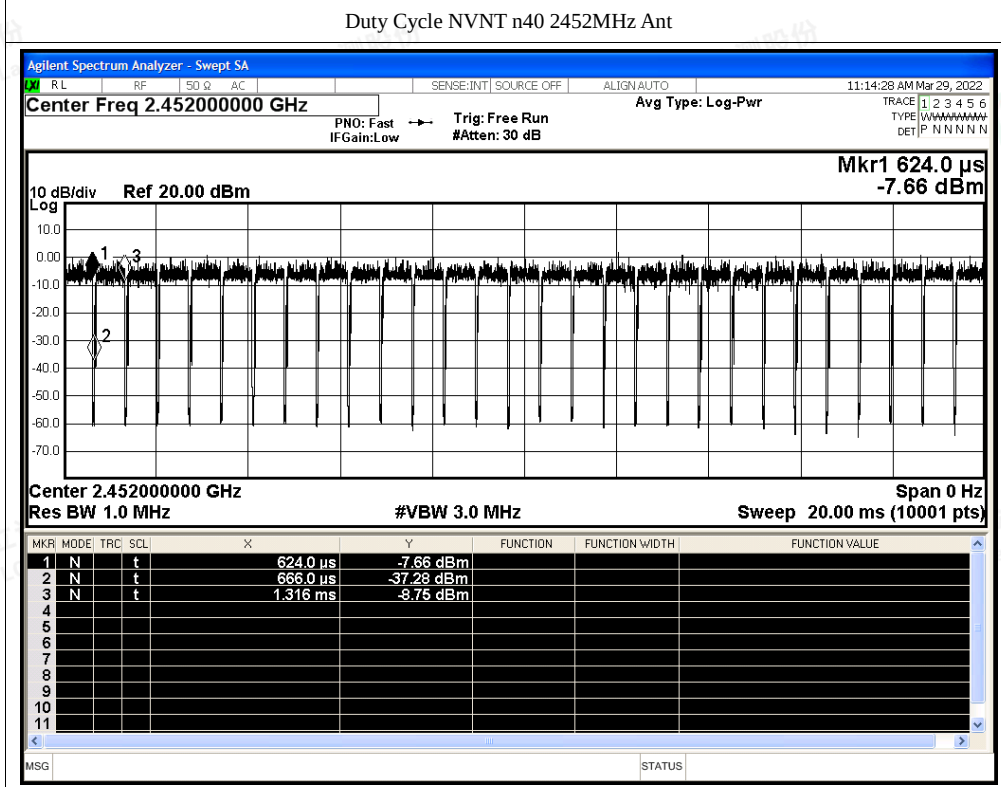
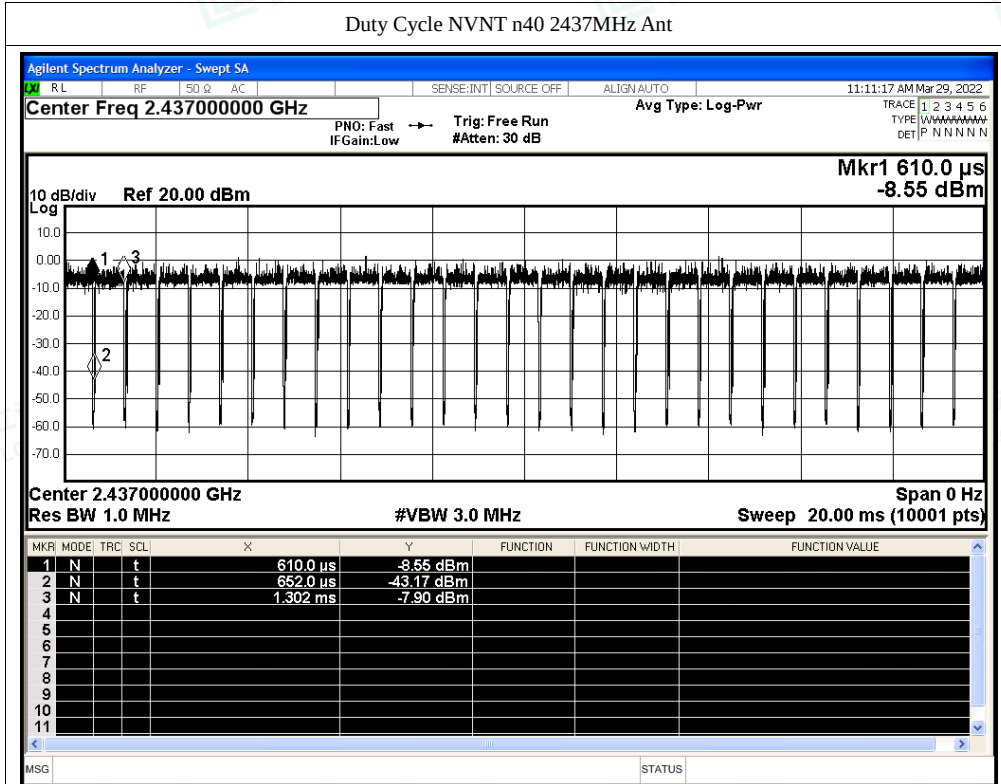
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Duty Cycle NVNT n20 2462MHz Ant



Duty Cycle NVNT n40 2422MHz Ant





A.7 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	Ant	2310	-52.86	2	44.4	Peak	74	Pass
NVNT	b	2412	Ant	2310	-62.2	2	35.06	Average	54	Pass
NVNT	b	2412	Ant	2369.553	-48.12	2	49.14	Peak	74	Pass
NVNT	b	2412	Ant	2389.209	-59.59	2	37.67	Average	54	Pass
NVNT	b	2412	Ant	2390	-48.87	2	48.39	Peak	74	Pass
NVNT	b	2412	Ant	2390	-59.99	2	37.27	Average	54	Pass
NVNT	b	2462	Ant	2483.5	-49.21	2	48.05	Peak	74	Pass
NVNT	b	2462	Ant	2483.5	-56.01	2	41.25	Average	54	Pass
NVNT	b	2462	Ant	2488.022	-45.7	2	51.56	Peak	74	Pass
NVNT	b	2462	Ant	2488.764	-55.7	2	41.56	Average	54	Pass
NVNT	b	2462	Ant	2500	-51.96	2	45.3	Peak	74	Pass
NVNT	b	2462	Ant	2500	-61.66	2	35.6	Average	54	Pass
NVNT	g	2412	Ant	2310	-53.45	2	43.81	Peak	74	Pass
NVNT	g	2412	Ant	2310	-61.56	2	35.7	Average	54	Pass
NVNT	g	2412	Ant	2388.975	-30.67	2	66.59	Peak	74	Pass
NVNT	g	2412	Ant	2389.911	-47.74	2	49.52	Average	54	Pass
NVNT	g	2412	Ant	2390	-33.89	2	63.37	Peak	74	Pass
NVNT	g	2412	Ant	2390	-47.67	2	49.59	Average	54	Pass
NVNT	g	2462	Ant	2483.5	-31.89	2	65.37	Peak	74	Pass
NVNT	g	2462	Ant	2483.5	-45.61	2	51.65	Average	54	Pass
NVNT	g	2462	Ant	2484.895	-26.78	2	70.48	Peak	74	Pass
NVNT	g	2462	Ant	2483.676	-45.38	2	51.88	Average	54	Pass
NVNT	g	2462	Ant	2500	-52.02	2	45.24	Peak	74	Pass
NVNT	g	2462	Ant	2500	-61.1	2	36.16	Average	54	Pass
NVNT	n20	2412	Ant	2310	-52.1	2	45.16	Peak	74	Pass
NVNT	n20	2412	Ant	2310	-61.57	2	35.69	Average	54	Pass
NVNT	n20	2412	Ant	2389.443	-31.13	2	66.13	Peak	74	Pass
NVNT	n20	2412	Ant	2389.794	-49.85	2	47.41	Average	54	Pass
NVNT	n20	2412	Ant	2390	-34.4	2	62.86	Peak	74	Pass
NVNT	n20	2412	Ant	2390	-49.79	2	47.47	Average	54	Pass
NVNT	n20	2462	Ant	2483.5	-31.43	2	65.83	Peak	74	Pass
NVNT	n20	2462	Ant	2483.5	-47.13	2	50.13	Average	54	Pass
NVNT	n20	2462	Ant	2483.623	-27.68	2	69.58	Peak	74	Pass
NVNT	n20	2462	Ant	2483.676	-47.03	2	50.23	Average	54	Pass
NVNT	n20	2462	Ant	2500	-51.5	2	45.76	Peak	74	Pass
NVNT	n20	2462	Ant	2500	-61.06	2	36.2	Average	54	Pass
NVNT	n40	2422	Ant	2310	-52.99	2	44.27	Peak	74	Pass

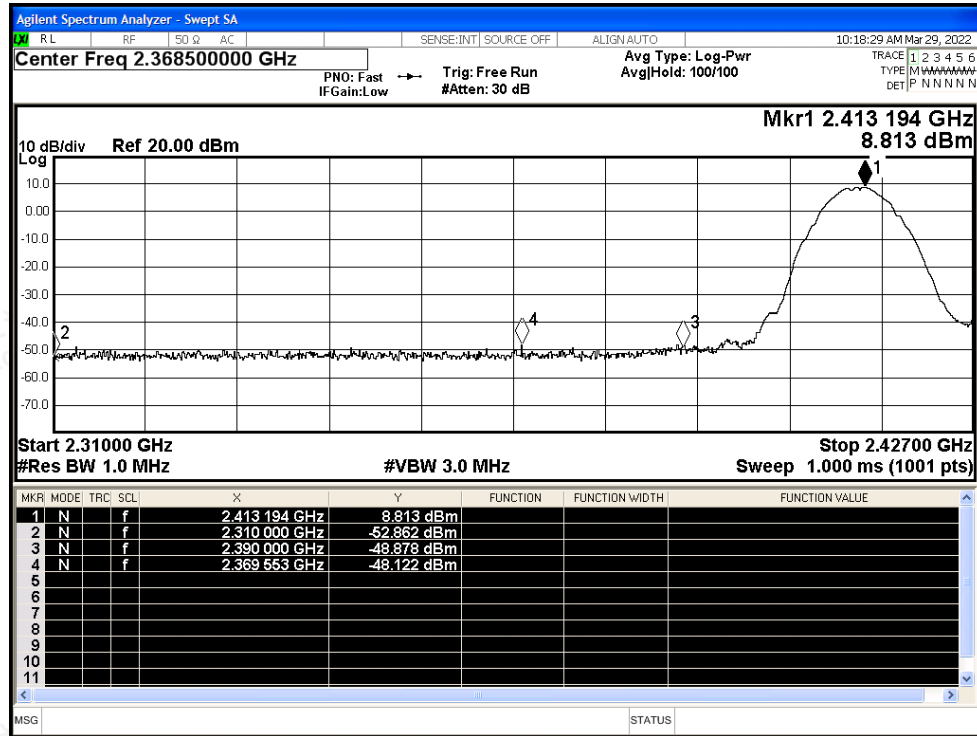


NVNT	n40	2422	Ant	2310	-61.45	2	35.81	Average	54	Pass
NVNT	n40	2422	Ant	2389.662	-30.06	2	67.2	Peak	74	Pass
NVNT	n40	2422	Ant	2389.946	-53.48	2	43.78	Average	54	Pass
NVNT	n40	2422	Ant	2390	-43.14	2	54.12	Peak	74	Pass
NVNT	n40	2422	Ant	2390	-53.48	2	43.78	Average	54	Pass
NVNT	n40	2452	Ant	2483.5	-45.37	2	51.89	Peak	74	Pass
NVNT	n40	2452	Ant	2483.5	-57.31	2	39.95	Average	54	Pass
NVNT	n40	2452	Ant	2485.648	-36.37	2	60.89	Peak	74	Pass
NVNT	n40	2452	Ant	2487.286	-56.06	2	41.2	Average	54	Pass
NVNT	n40	2452	Ant	2500	-51.91	2	45.35	Peak	74	Pass
NVNT	n40	2452	Ant	2500	-60.97	2	36.29	Average	54	Pass

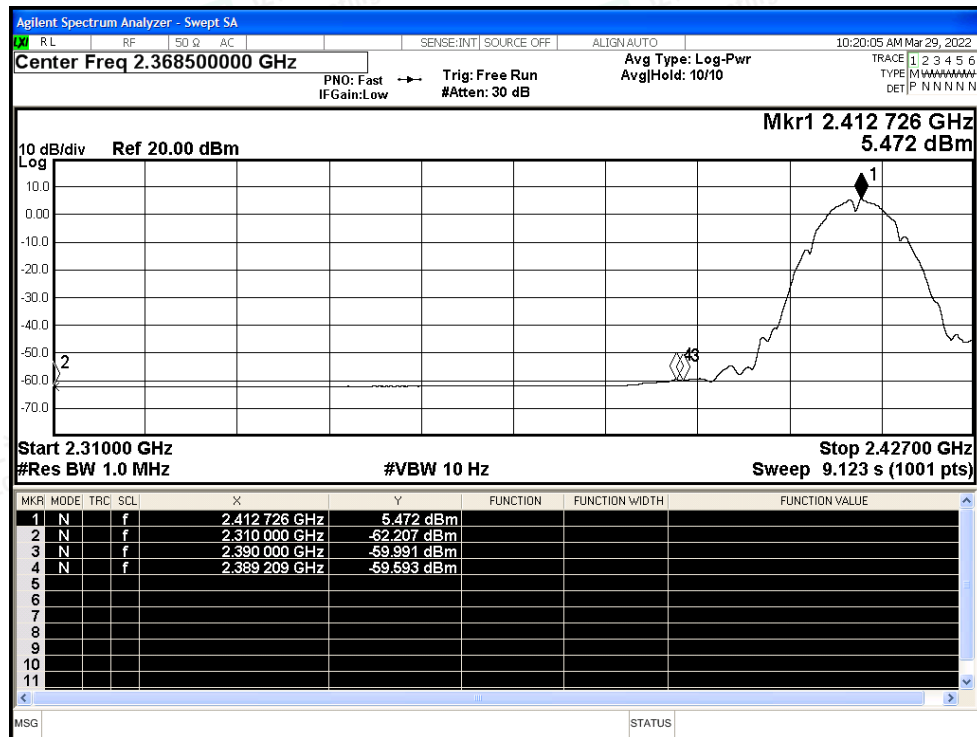


Test Graphs

Restrict Band NVNT b 2412MHz Ant Peak



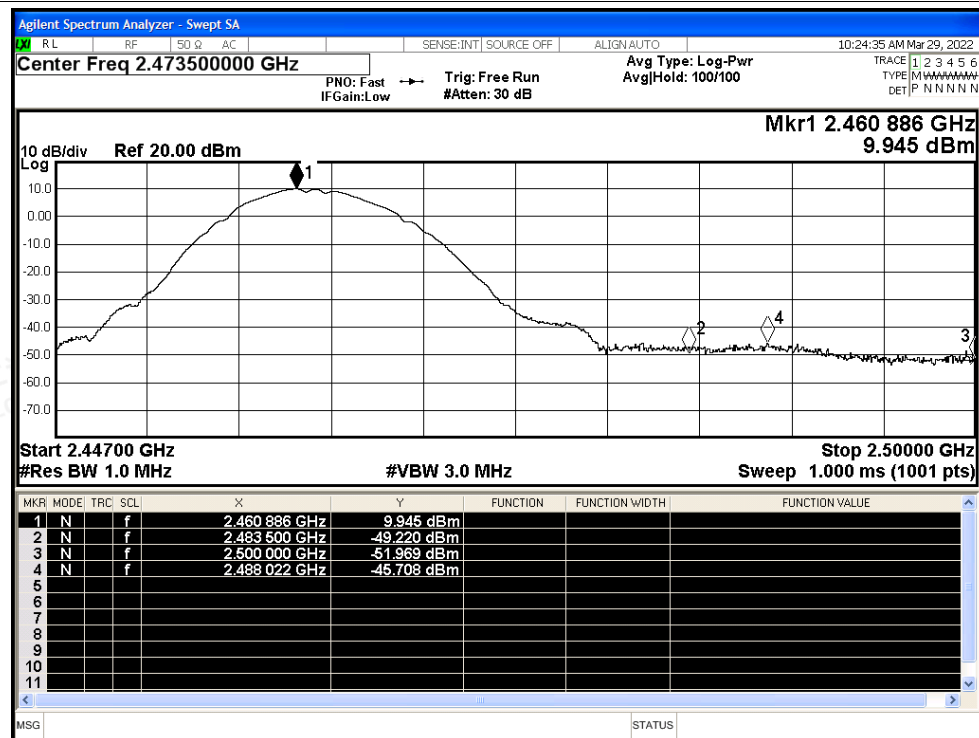
Restrict Band NVNT b 2412MHz Ant Average



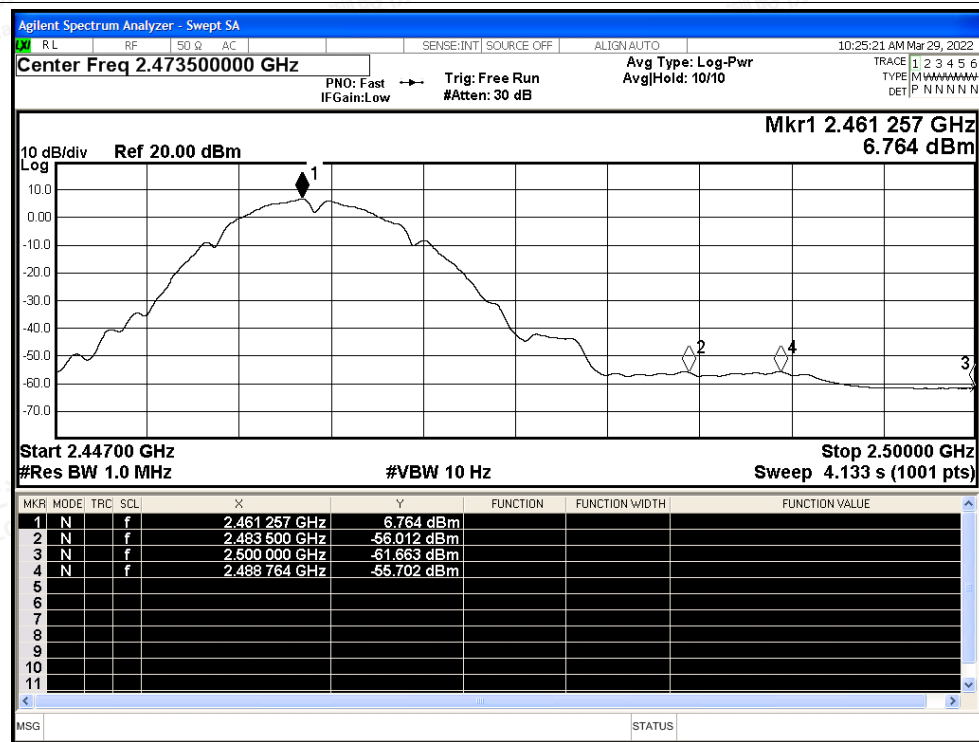


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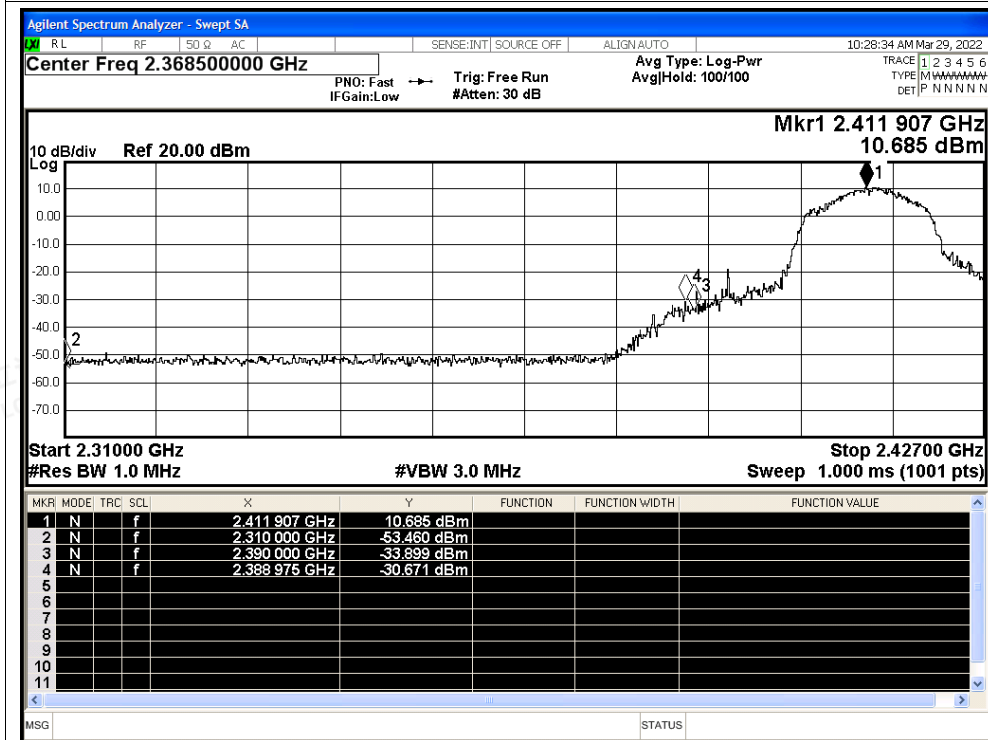
Restrict Band NVNT b 2462MHz Ant Peak



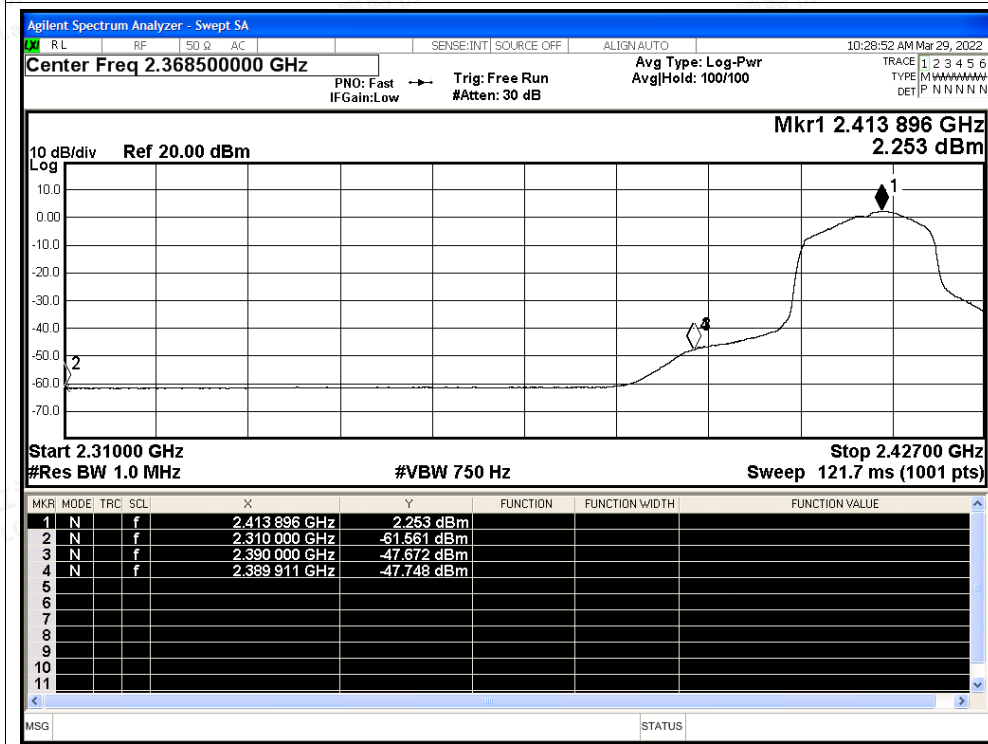
Restrict Band NVNT b 2462MHz Ant Average



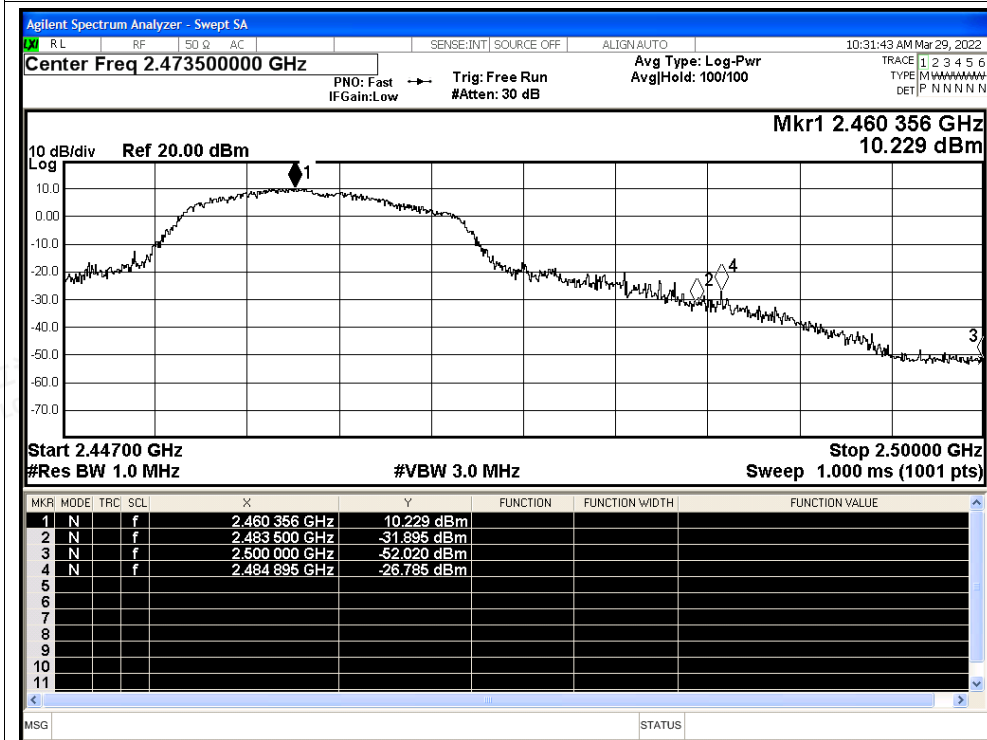
Restrict Band NVNT g 2412MHz Ant Peak



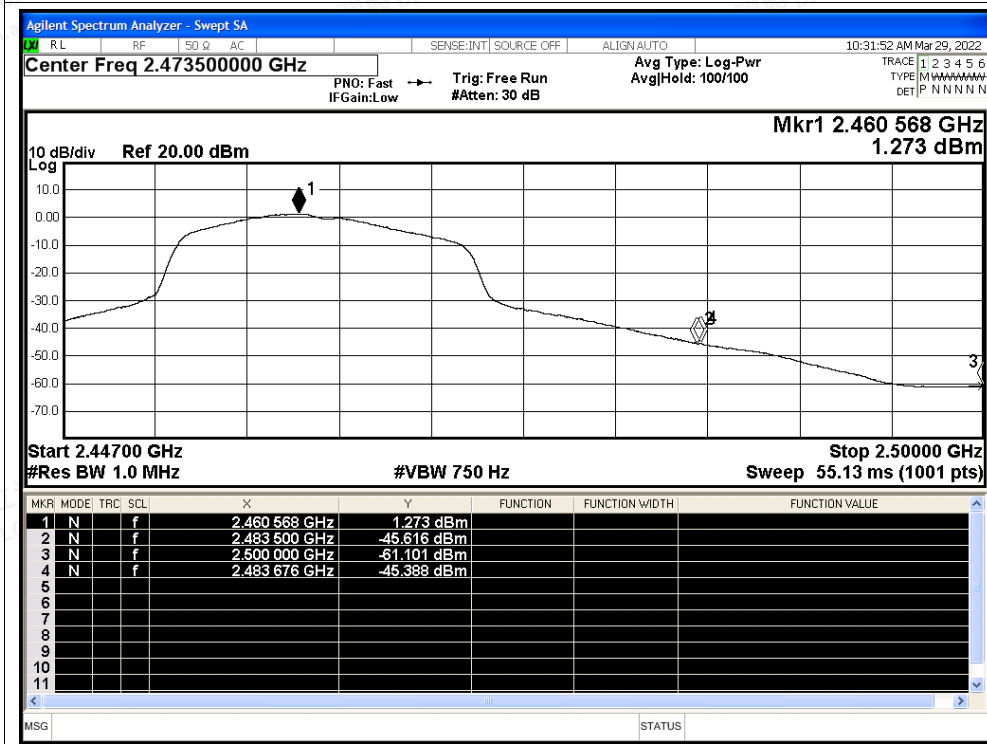
Restrict Band NVNT g 2412MHz Ant Average

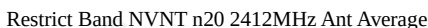


Restrict Band NVNT g 2462MHz Ant Peak



Restrict Band NVNT g 2462MHz Ant Average





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