

Appendix A: Test Results of DTS device

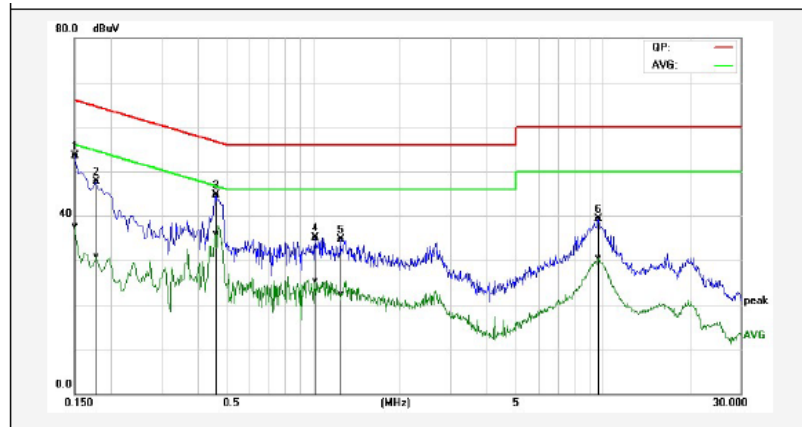
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Conducted Emission on AC Mains

Note: All modes have been tested, and the report only reflects the worst mode.

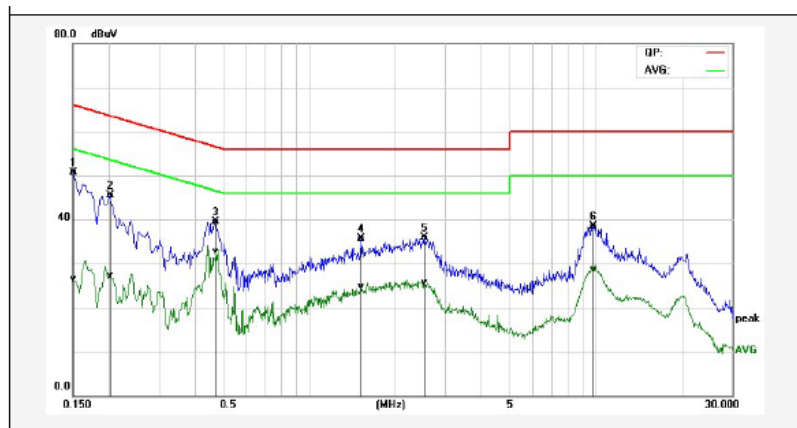
Test Mode :	Working	Test Voltage :	AC 110V/60Hz
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L



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1P	0.1500	44.04	28.14	9.50	53.54	37.64	65.99	56.00	-12.45	-18.36	Pass
2P	0.1780	38.27	21.37	9.50	47.77	30.87	64.57	54.58	-16.80	-23.71	Pass
3*	0.4620	35.26	26.39	9.50	44.76	35.89	56.66	46.66	-11.90	-10.77	Pass
4P	1.0220	25.72	15.96	9.40	35.12	25.36	56.00	46.00	-20.88	-20.64	Pass
5P	1.2500	25.38	12.87	9.38	34.76	22.25	56.00	46.00	-21.24	-23.75	Pass
6P	9.6820	30.12	21.24	9.18	39.30	30.42	60.00	50.00	-20.70	-19.58	Pass

N



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1P	0.1500	41.38	17.07	9.40	50.78	26.47	65.99	56.00	-15.21	-29.53	Pass
2P	0.2020	36.17	17.97	9.40	45.57	27.37	63.52	53.53	-17.95	-26.16	Pass
3*	0.4740	30.13	23.21	9.40	39.53	32.61	56.44	46.44	-16.91	-13.83	Pass
4P	1.5300	26.52	15.45	9.25	35.77	24.70	56.00	46.00	-20.23	-21.30	Pass
5P	2.5460	26.70	16.46	9.15	35.85	25.61	56.00	46.00	-20.15	-20.39	Pass
6P	9.7580	29.38	19.68	9.09	38.47	28.77	60.00	50.00	-21.53	-21.23	Pass

Correction Factor = insertion loss of LISN + cable loss;

Reading = Reading Amplitude in the instrument;

Result = Correction Factor + Reading;

Margin = Result – Limit

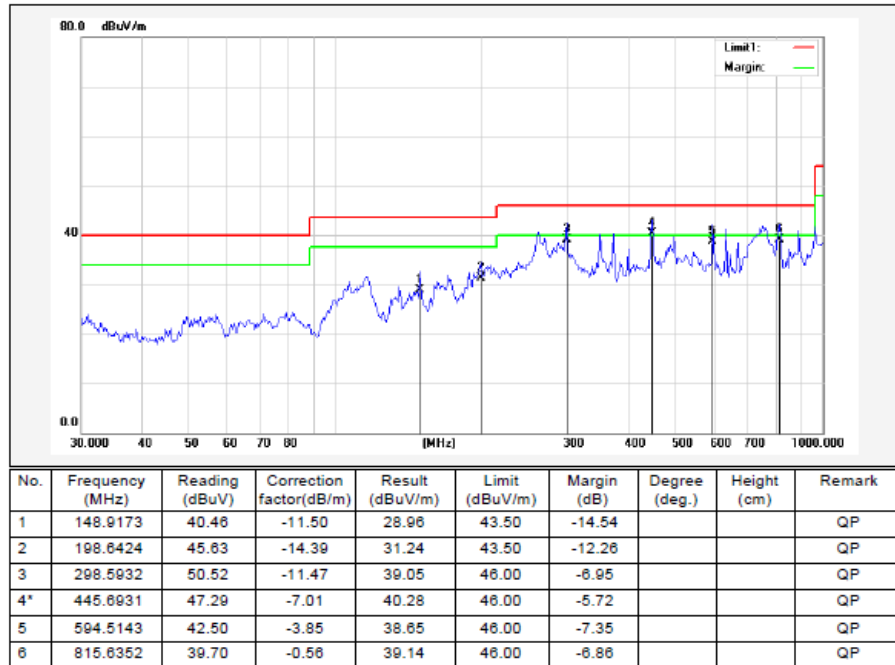
Radiated Spurious Emission

Below 1GHz:

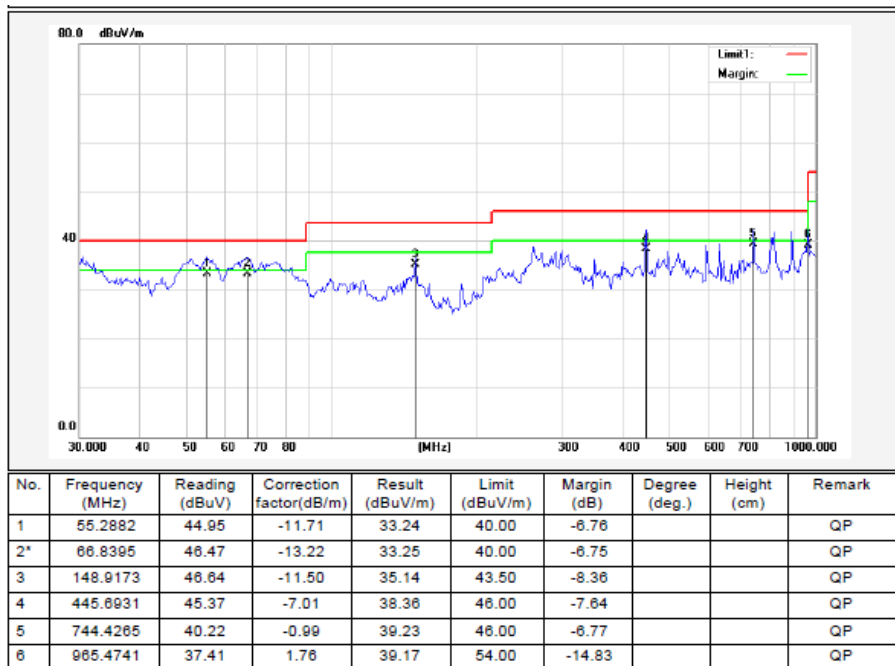
All modes have been tested, and the report only reflects the worst mode.

Test Mode: Working

Horizontal



Vertical



Correction Factor = antenna factor + cable loss – amplifier gain;

Reading = Reading Amplitude in the instrument;

Result = Correction Factor + Reading;

Margin = Result – Limit.

Above 1GHz:

Note: All models were tested, and only the worst model(802.11n (HT20), MIMO) were reported in the report.

802.11n (HT20)-Low (worst mode) Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3822	61.33	-16.04	45.29	74	-28.71	peak
2	7018	56.24	-8.69	47.55	74	-26.45	peak
3	7562	55.95	-7.22	48.73	74	-25.27	peak
4	8344	55.9	-7.2	48.7	74	-25.3	peak
5	10962	54.62	-2.91	51.71	74	-22.29	peak
6	11404	53.88	-1.87	52.01	74	-21.99	peak

802.11n (HT20)-Low (worst mode) Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5488	58.25	-12.17	46.08	74	-27.92	peak
2	7494	56.41	-7.13	49.28	74	-24.72	peak
3	8412	55.55	-7.14	48.41	74	-25.59	peak
4	10452	54.61	-3.8	50.81	74	-23.19	peak
5	11132	54.29	-2.48	51.81	74	-22.19	peak
6	12458	54.6	-1.59	53.01	74	-20.99	peak

802.11n (HT20)-Middle (worst mode) Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5162	57.71	-12.66	45.05	74	-28.95	peak
2	7052	56.37	-8.58	47.79	74	-26.21	peak
3	7494	55.83	-7.13	48.7	74	-25.3	peak
4	10622	54.09	-2.67	51.42	74	-22.58	peak
5	11472	54.6	-2.21	52.39	74	-21.61	peak
6	12492	54.76	-1.38	53.38	74	-20.62	peak

802.11n (HT20)-Middle (worst mode) Vertical

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3856	60.94	-15.7	45.24	74	-28.76	peak
2	7460	56.27	-7.09	49.18	74	-24.82	peak
3	8106	56.08	-7.73	48.35	74	-25.65	peak
4	10418	55.83	-4.09	51.74	74	-22.26	peak
5	11064	54.89	-2.65	52.24	74	-21.76	peak
6	12424	54.76	-1.81	52.95	74	-21.05	peak

802.11n (HT20)-High (worst mode) Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5488	58.26	-12.17	46.09	74	-27.91	peak
2	6814	56.89	-8.86	48.03	74	-25.97	peak
3	8276	56.77	-7.36	49.41	74	-24.59	peak
4	10248	55.24	-3.89	51.35	74	-22.65	peak
5	11098	54.71	-2.54	52.17	74	-21.83	peak
6	12084	54.79	-2.26	52.53	74	-21.47	peak

802.11n (HT20)-High (worst mode) Vertical

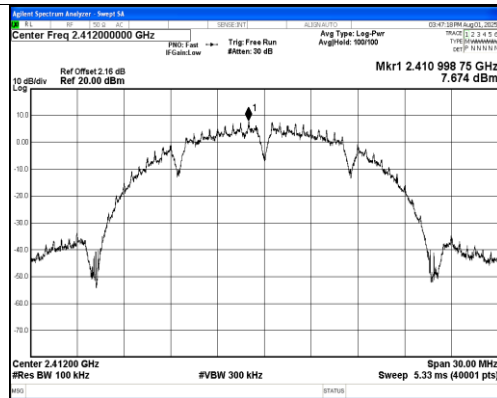
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4910	57.91	-12.91	45	74	-29	peak
2	7018	57.06	-8.69	48.37	74	-25.63	peak
3	8344	56.48	-7.2	49.28	74	-24.72	peak
4	10044	55.34	-4.59	50.75	74	-23.25	peak
5	11098	54.67	-2.54	52.13	74	-21.87	peak
6	12050	54.46	-2.17	52.29	74	-21.71	peak

Node:

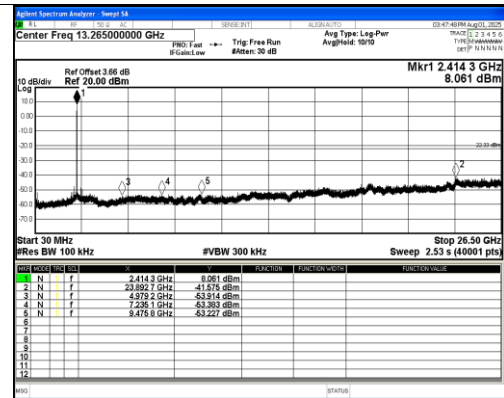
- 1、Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported..
- 2、Radiated emissions measured in frequency above 1GHz were made with an instrument using peak/average detector mode.
- 3、Average test would be performed if the peak result were greater than the average limit or as required by the applicant.
- 4、Margin (dB), result in dBuV/m – limit in dBuV/m.
- 5、All restricted band have a frequency margin greater than 20dB (20dB = 74dBuV/m-54dBuV/m), meet the 54dBuV/m limit, and do not require AVG.

Conducted RF Spurious Emission

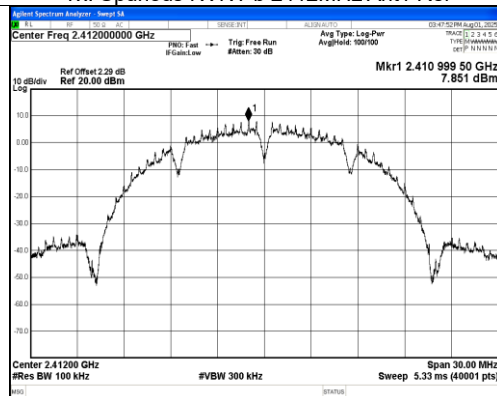
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-49.24	-30	Pass
NVNT	b	2412	Ant4	-49.49	-30	Pass
NVNT	b	2437	Ant1	-49.61	-30	Pass
NVNT	b	2437	Ant4	-48.73	-30	Pass
NVNT	b	2462	Ant1	-44.49	-30	Pass
NVNT	b	2462	Ant4	-48.18	-30	Pass
NVNT	g	2412	Ant1	-46.29	-30	Pass
NVNT	g	2412	Ant4	-47.46	-30	Pass
NVNT	g	2437	Ant1	-46.27	-30	Pass
NVNT	g	2437	Ant4	-45.77	-30	Pass
NVNT	g	2462	Ant1	-46.28	-30	Pass
NVNT	g	2462	Ant4	-45.38	-30	Pass
NVNT	n20	2412	Ant1	-45.17	-30	Pass
NVNT	n20	2412	Ant4	-46.8	-30	Pass
NVNT	n20	2437	Ant1	-45.33	-30	Pass
NVNT	n20	2437	Ant4	-46.38	-30	Pass
NVNT	n20	2462	Ant1	-45.57	-30	Pass
NVNT	n20	2462	Ant4	-45.45	-30	Pass



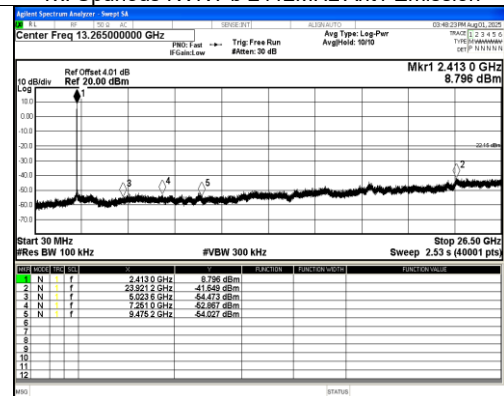
Tx. Spurious NVNT b 2412MHz Ant1 Ref



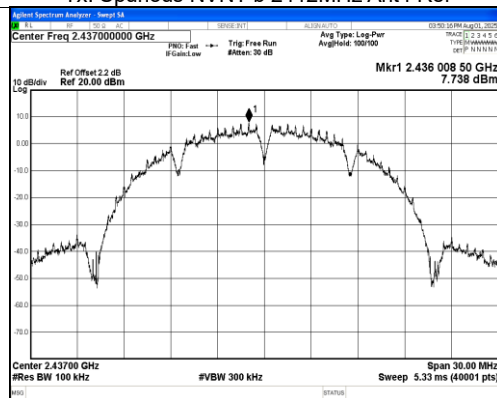
Tx. Spurious NVNT b 2412MHz Ant1 Emission



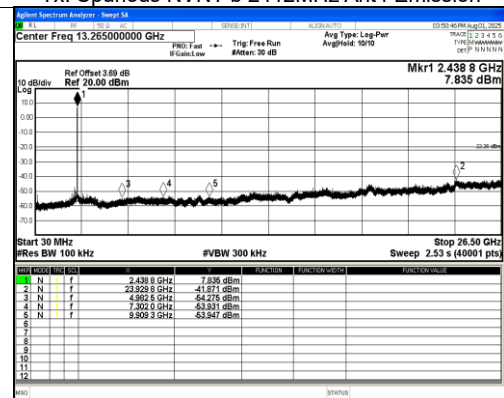
Tx. Spurious NVNT b 2412MHz Ant4 Ref



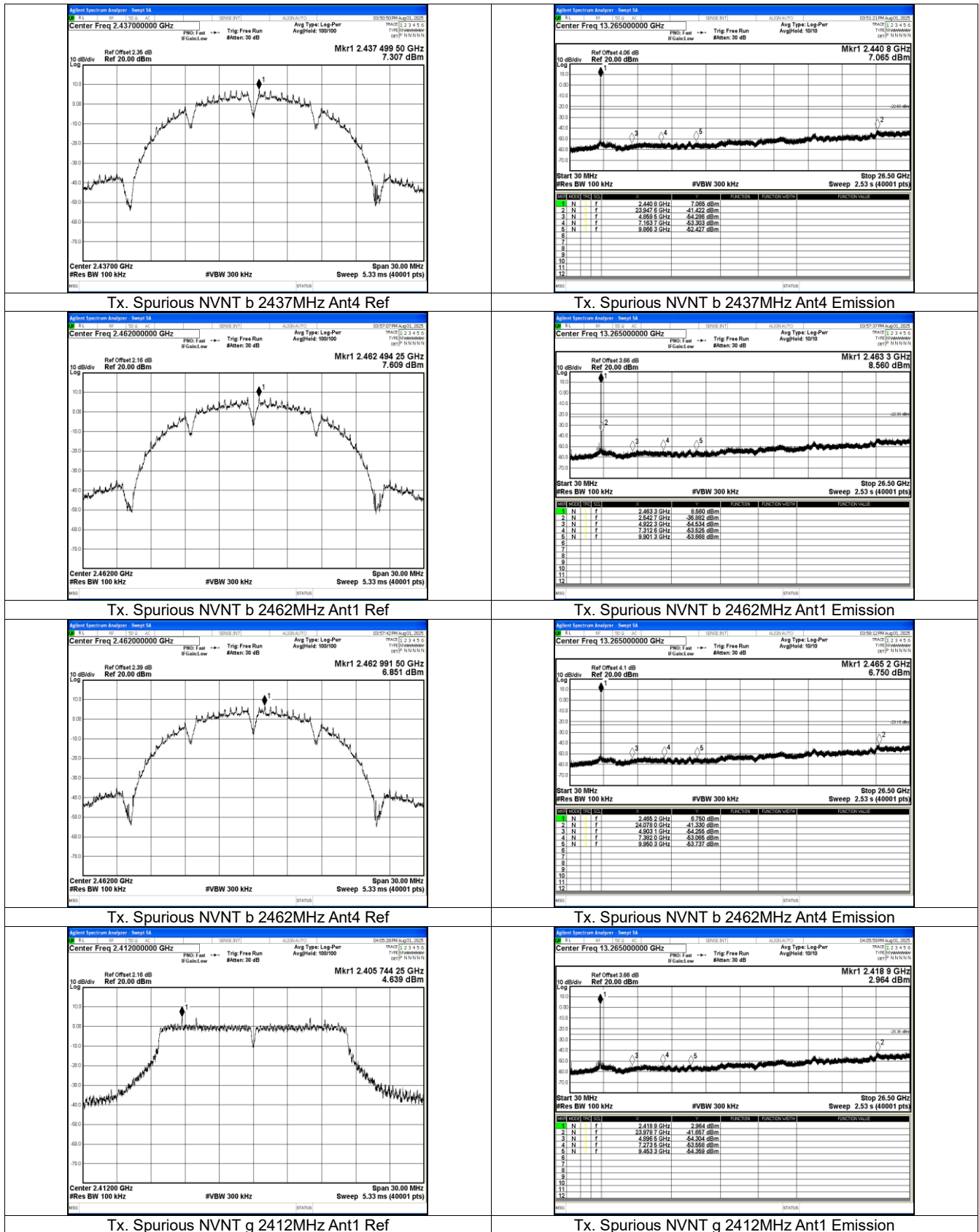
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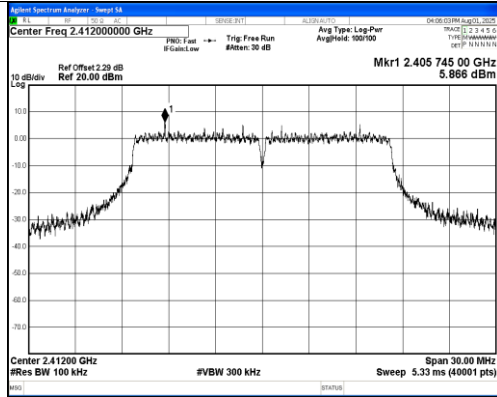


Tx. Spurious NVNT b 2437MHz Ant1 Ref

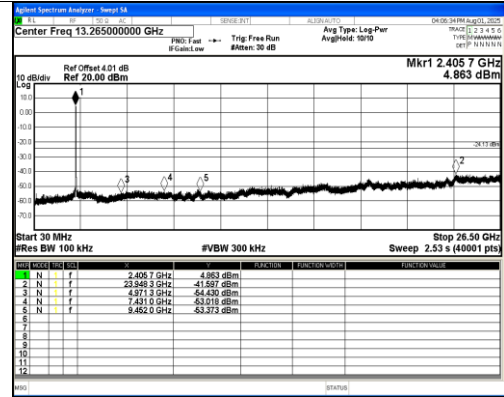


Tx. Spurious NVNT b 2437MHz Ant1 Emission

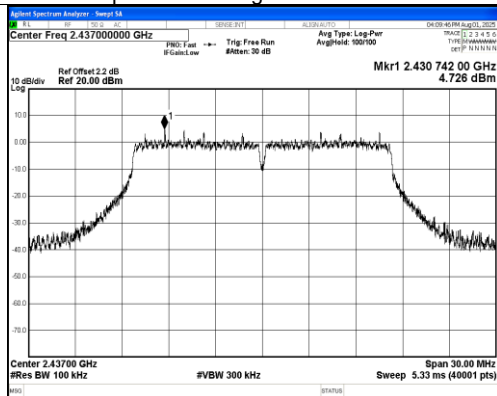




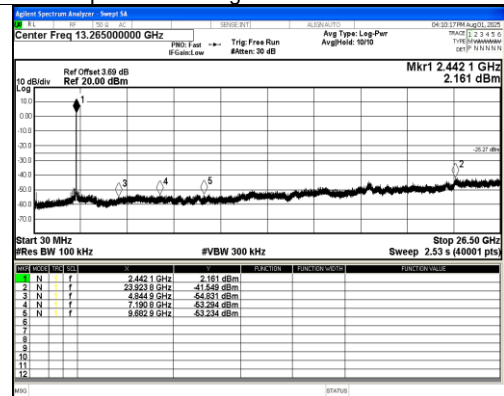
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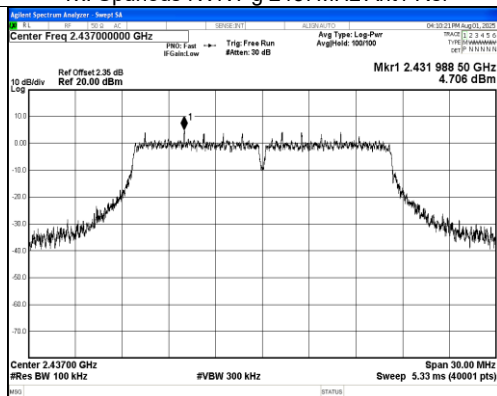
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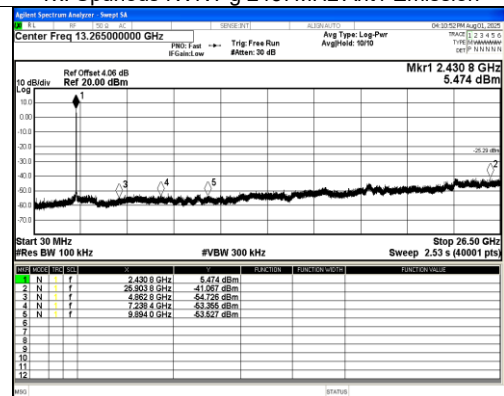
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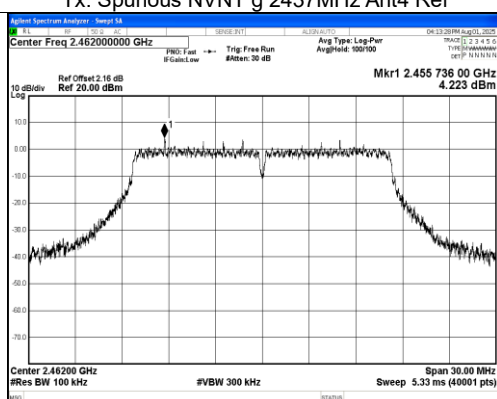
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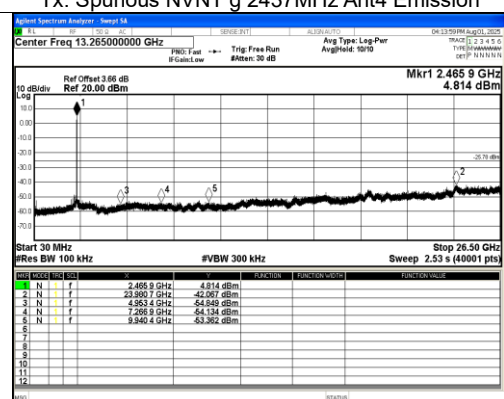
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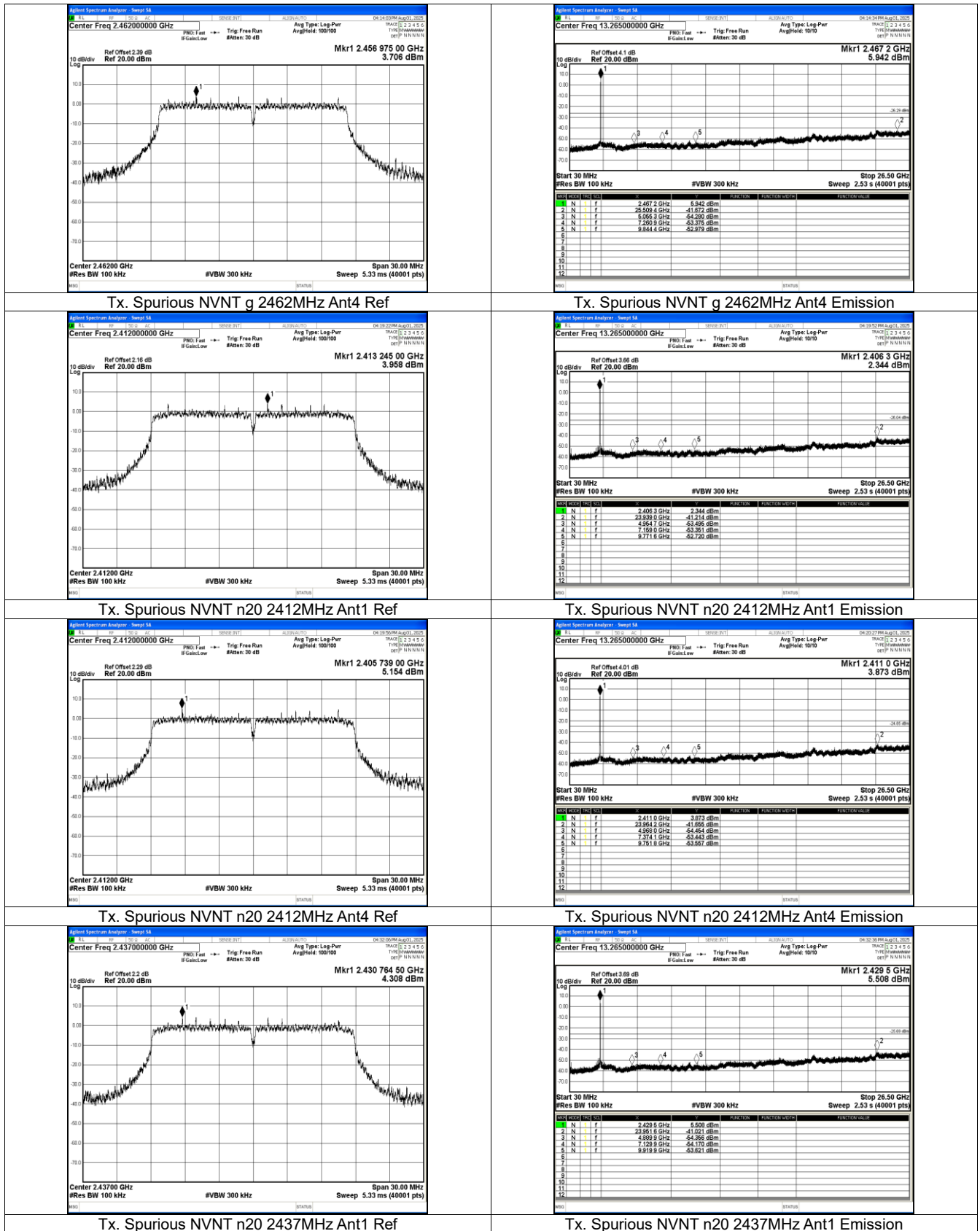
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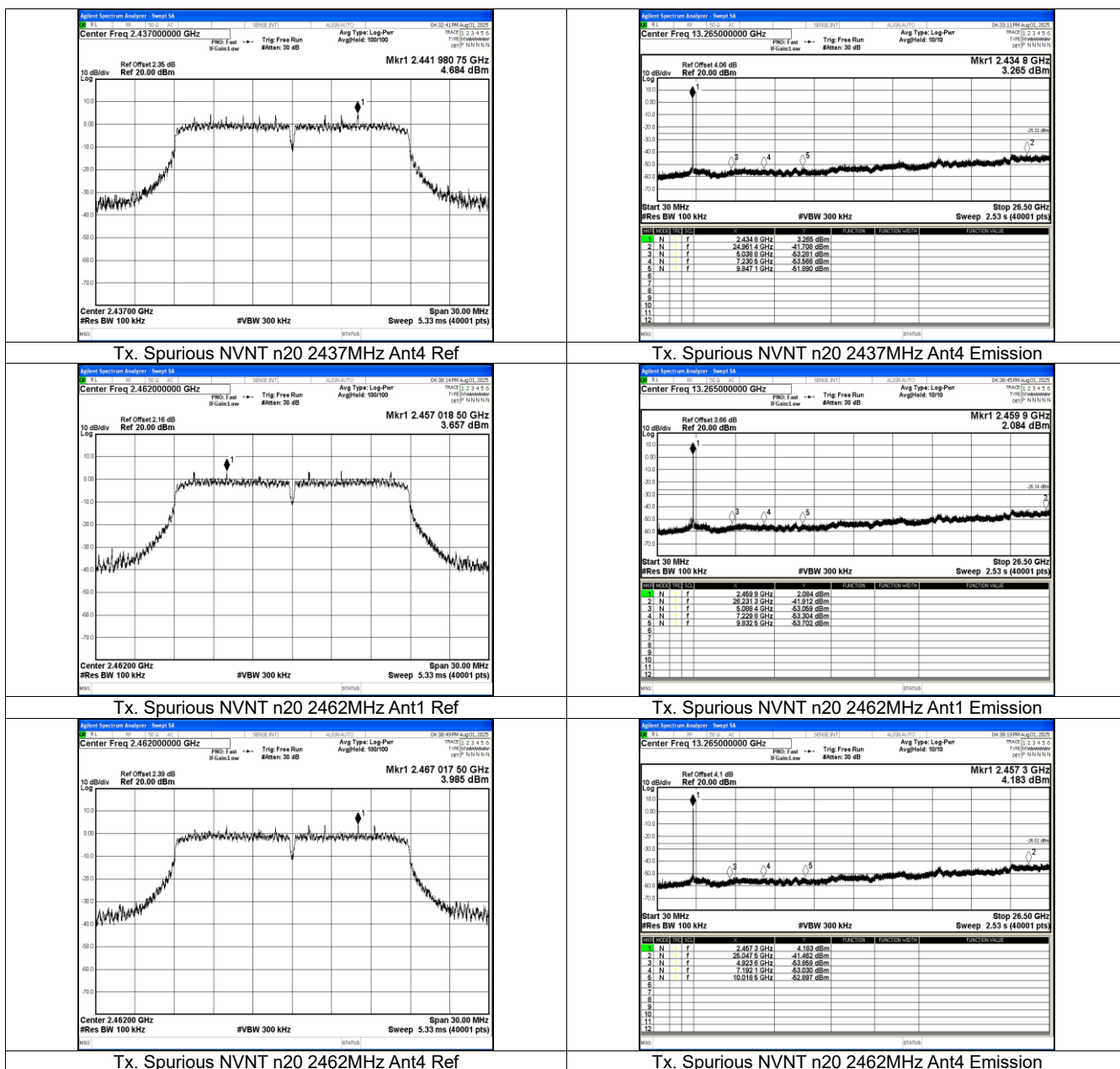


Tx. Spurious NVNT g 2462MHz Ant1 Ref



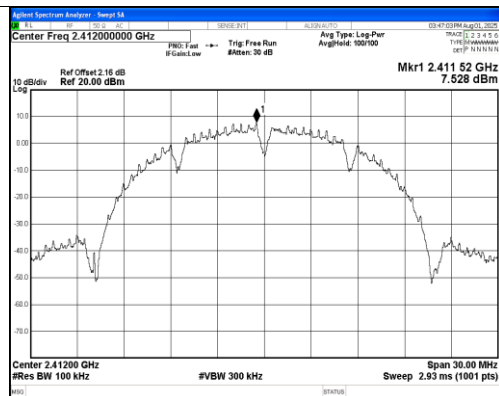
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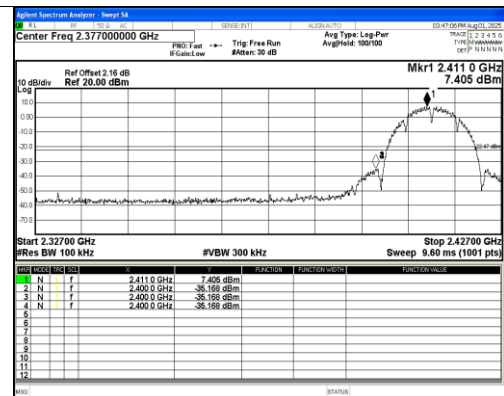


Band Edge

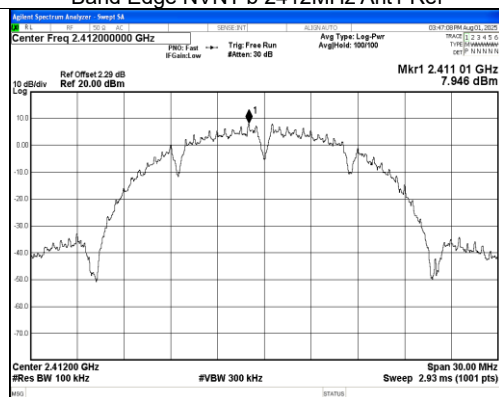
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-42.69	-30	Pass
NVNT	b	2412	Ant4	-41.51	-30	Pass
NVNT	b	2462	Ant1	-60.88	-30	Pass
NVNT	b	2462	Ant4	-61.03	-30	Pass
NVNT	g	2412	Ant1	-38.75	-30	Pass
NVNT	g	2412	Ant4	-36.24	-30	Pass
NVNT	g	2462	Ant1	-53.41	-30	Pass
NVNT	g	2462	Ant4	-50.51	-30	Pass
NVNT	n20	2412	Ant1	-41.04	-30	Pass
NVNT	n20	2412	Ant4	-39.91	-30	Pass
NVNT	n20	2462	Ant1	-49.48	-30	Pass
NVNT	n20	2462	Ant4	-48.27	-30	Pass



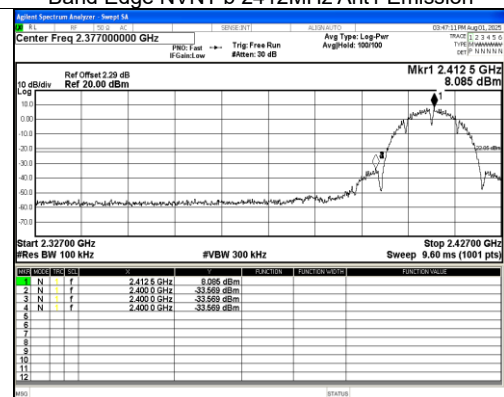
Band Edge NVNT b 2412MHz Ant1 Ref



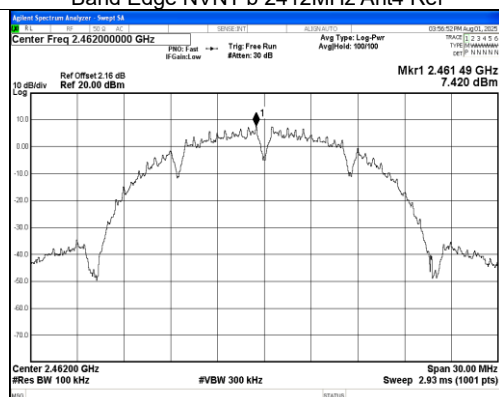
Band Edge NVNT b 2412MHz Ant1 Emission



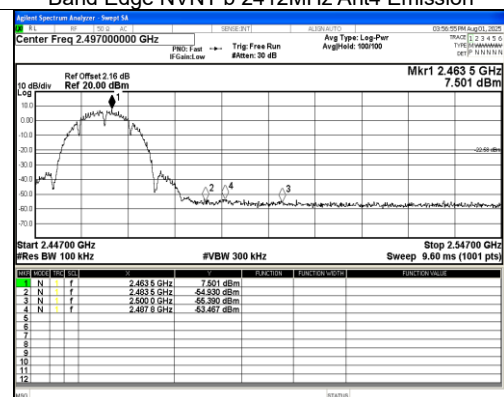
Band Edge NVNT b 2412MHz Ant4 Ref



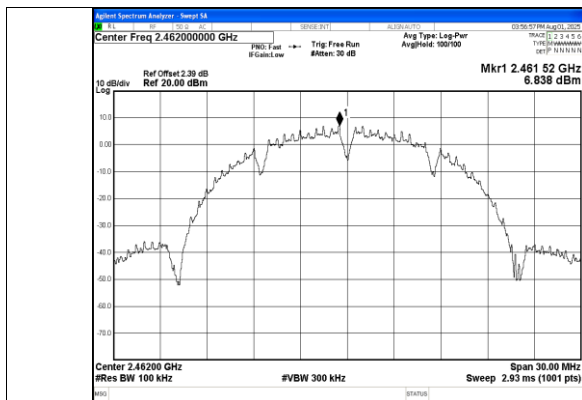
Band Edge NVNT b 2412MHz Ant4 Emission



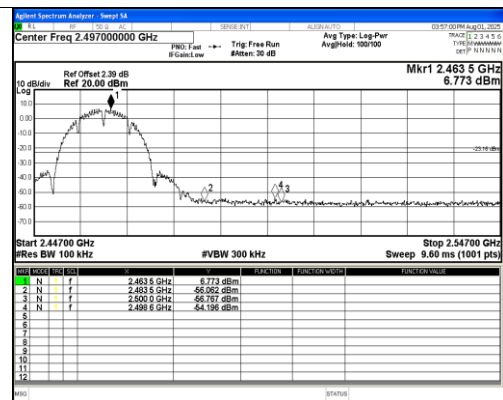
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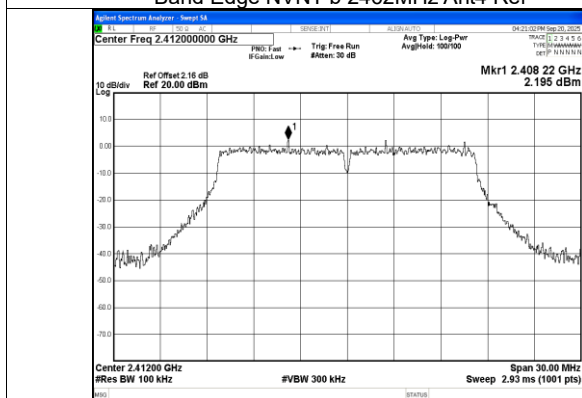
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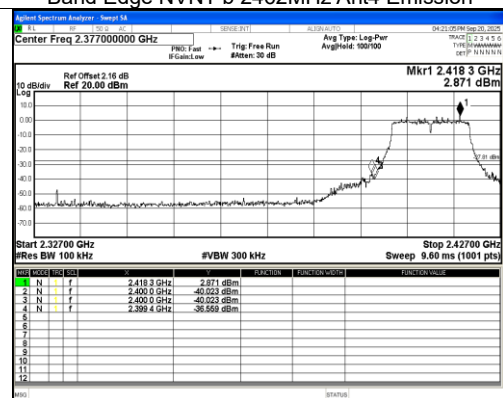
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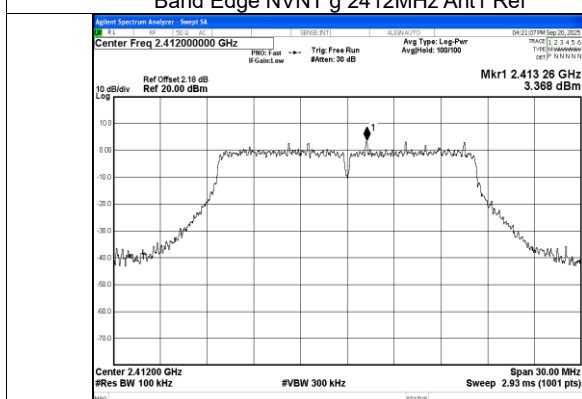
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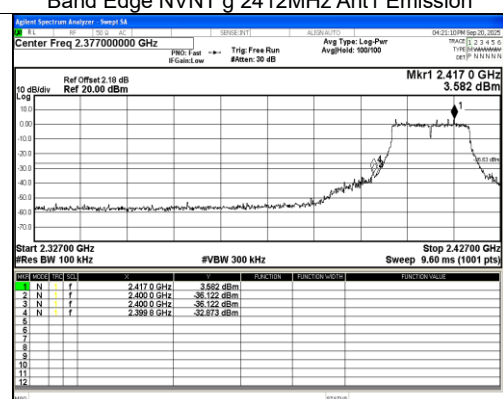
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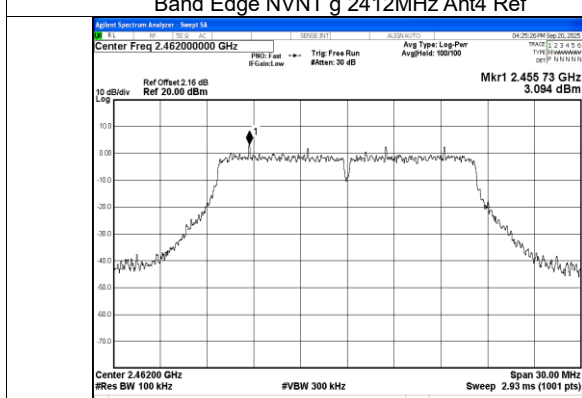
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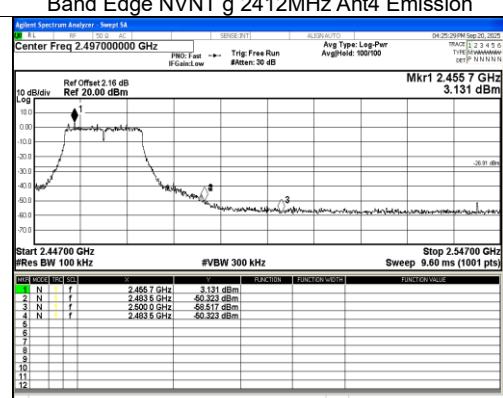
Band Edge NVNT g 2412MHz Ant4 Ref



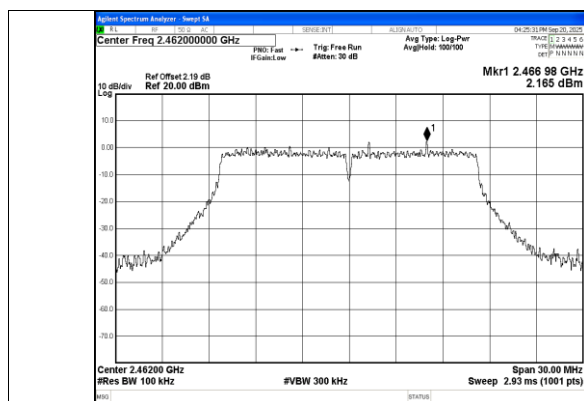
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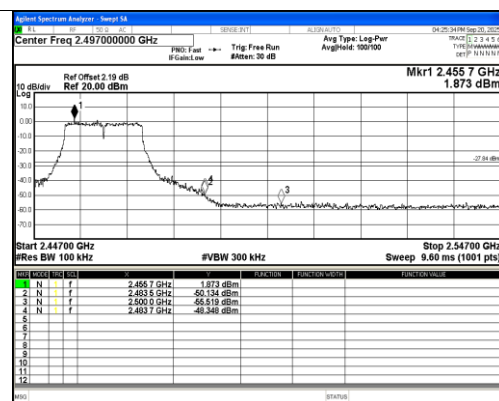
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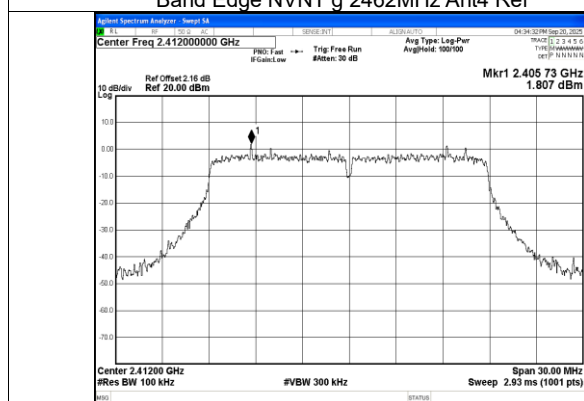
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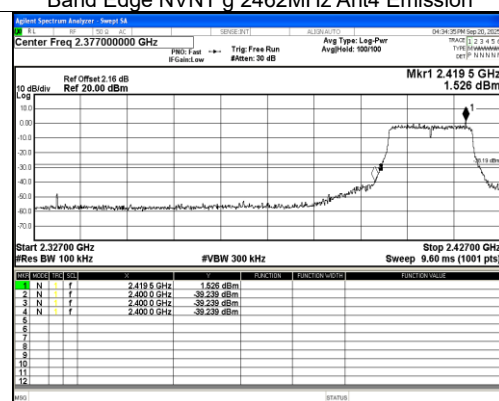
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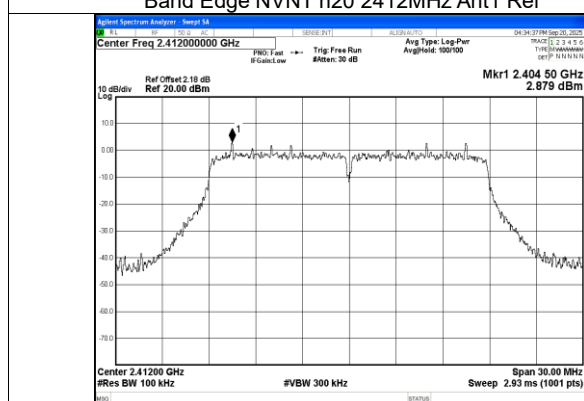
Band Edge NVNT g 2462MHz Ant4 Emission



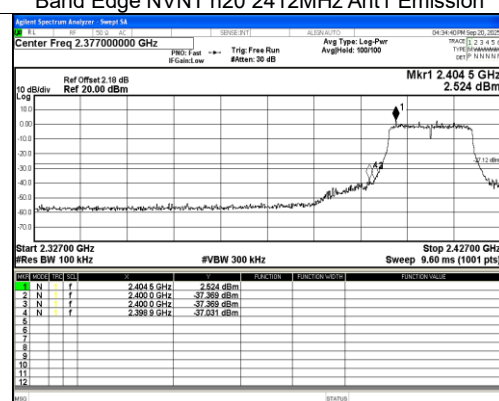
Band Edge NVNT n20 2412MHz Ant1 Ref



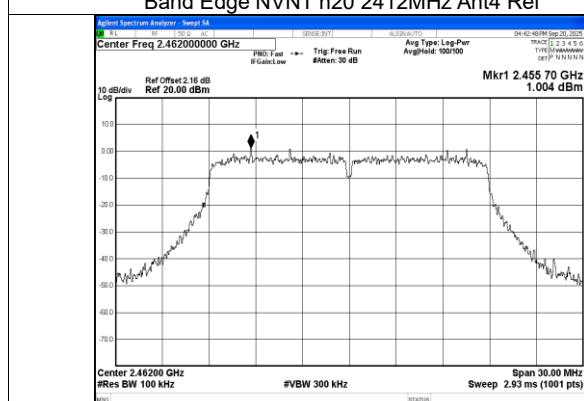
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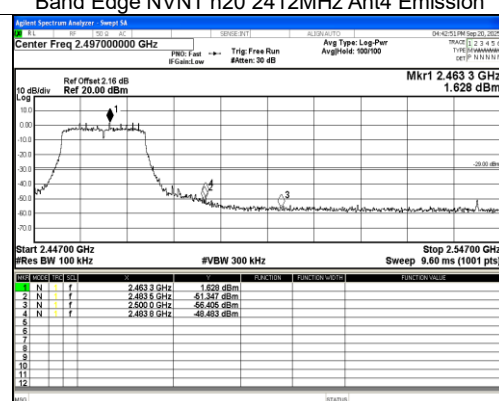
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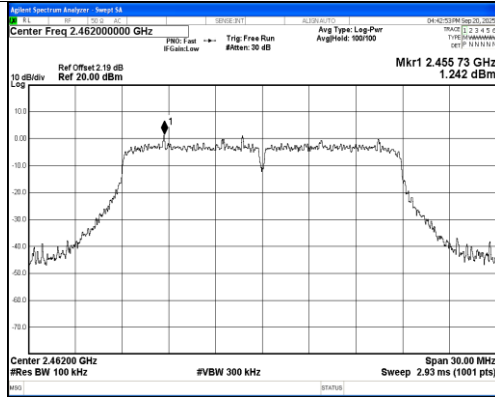
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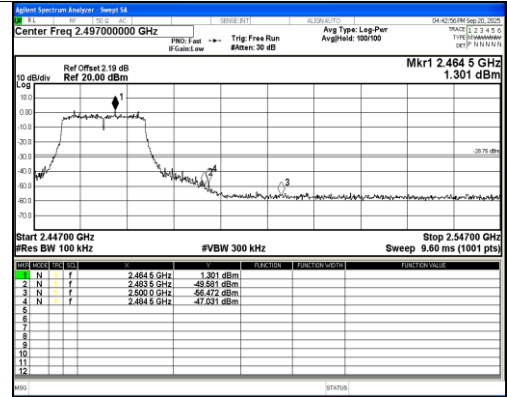
Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission



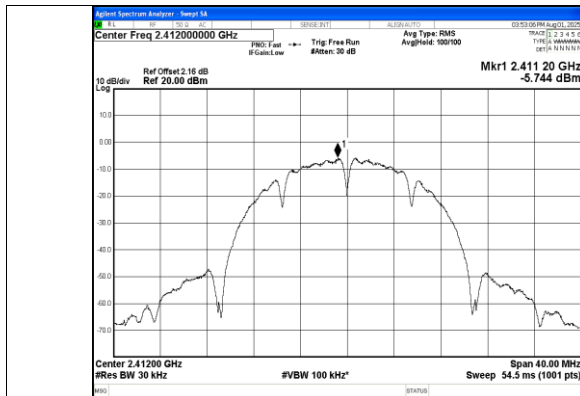
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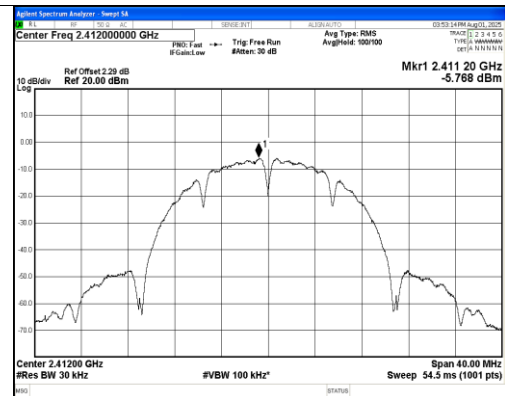
Band Edge NVNT n20 2462MHz Ant4 Emission

Maximum Power Spectral Density Level

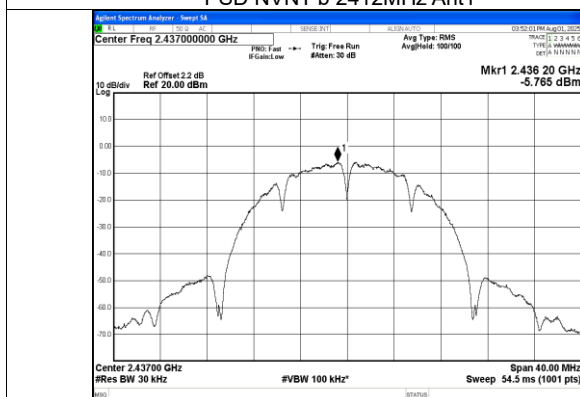
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-15.74	0.04	-15.7	8	Pass
NVNT	b	2412	Ant4	-15.77	0.04	-15.73	8	Pass
NVNT	b	2412	Sum	-12.74	0.04	-12.7	8	Pass
NVNT	b	2437	Ant1	-15.77	0.92	-14.85	8	Pass
NVNT	b	2437	Ant4	-16.57	0.92	-15.65	8	Pass
NVNT	b	2437	Sum	-13.14	0.92	-12.22	8	Pass
NVNT	b	2462	Ant1	-16.09	0.03	-16.06	8	Pass
NVNT	b	2462	Ant4	-16.5	0.03	-16.47	8	Pass
NVNT	b	2462	Sum	-13.28	0.03	-13.25	8	Pass
NVNT	g	2412	Ant1	-19.98	0.31	-19.67	8	Pass
NVNT	g	2412	Ant4	-19.77	0.31	-19.46	8	Pass
NVNT	g	2412	Sum	-16.86	0.31	-16.55	8	Pass
NVNT	g	2437	Ant1	-18.87	0.32	-18.55	8	Pass
NVNT	g	2437	Ant4	-18.61	0.32	-18.29	8	Pass
NVNT	g	2437	Sum	-15.73	0.32	-15.41	8	Pass
NVNT	g	2462	Ant1	-20.47	0.29	-20.18	8	Pass
NVNT	g	2462	Ant4	-21.27	0.29	-20.98	8	Pass
NVNT	g	2462	Sum	-17.84	0.29	-17.55	8	Pass
NVNT	n20	2412	Ant1	-22	0.18	-21.82	8	Pass
NVNT	n20	2412	Ant4	-20.58	0.18	-20.4	8	Pass
NVNT	n20	2412	Sum	-18.22	0.18	-18.04	8	Pass
NVNT	n20	2437	Ant1	-19.36	0.1	-19.26	8	Pass
NVNT	n20	2437	Ant4	-19.22	0.1	-19.12	8	Pass
NVNT	n20	2437	Sum	-16.28	0.1	-16.18	8	Pass
NVNT	n20	2462	Ant1	-22.28	0.1	-22.18	8	Pass
NVNT	n20	2462	Ant4	-21.95	0.1	-21.85	8	Pass
NVNT	n20	2462	Sum	-19.1	0.1	-19	8	Pass



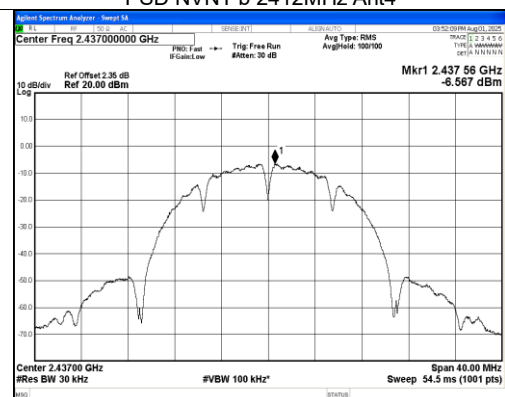
PSD NVNT b 2412MHz Ant1



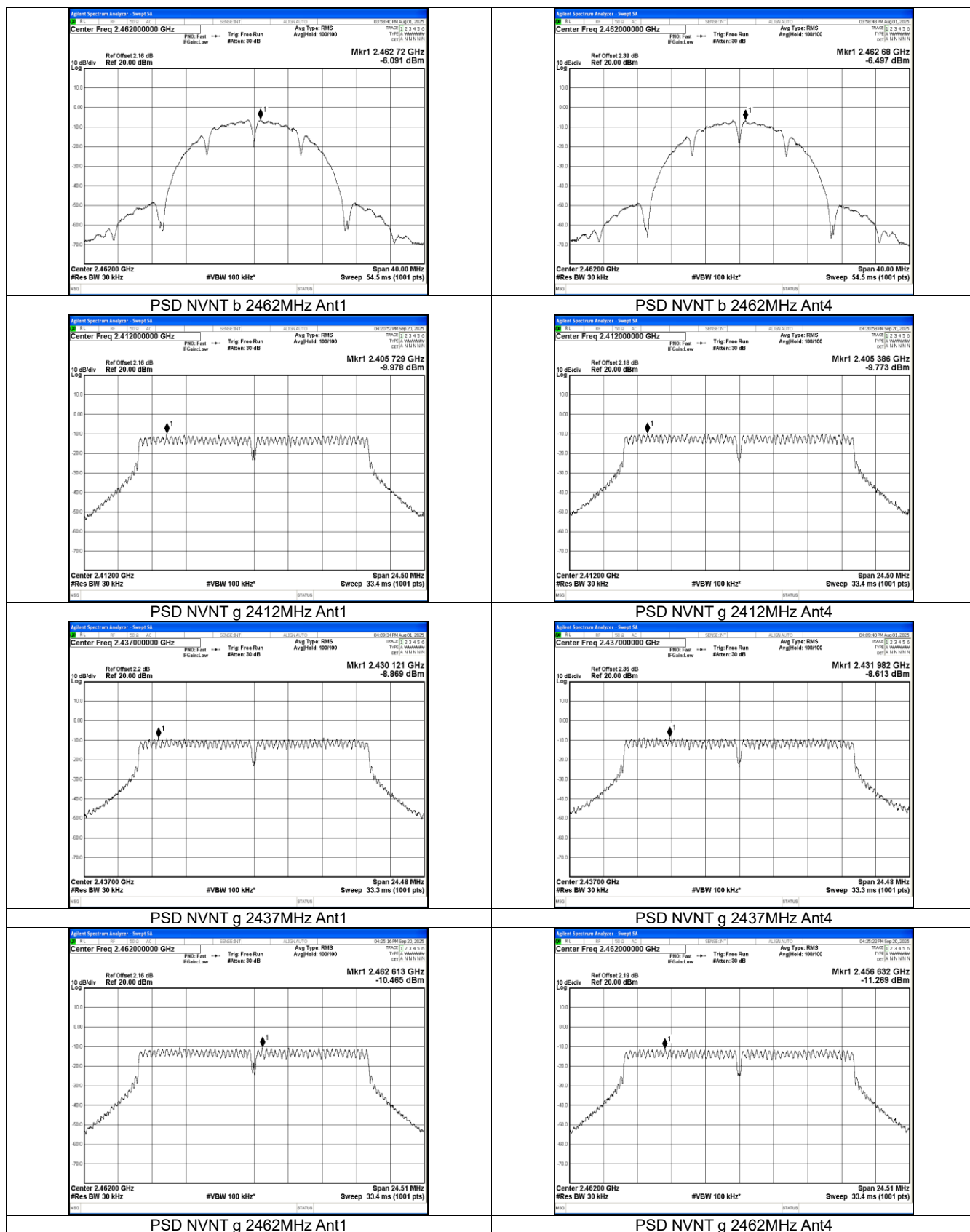
PSD NVNT b 2412MHz Ant4

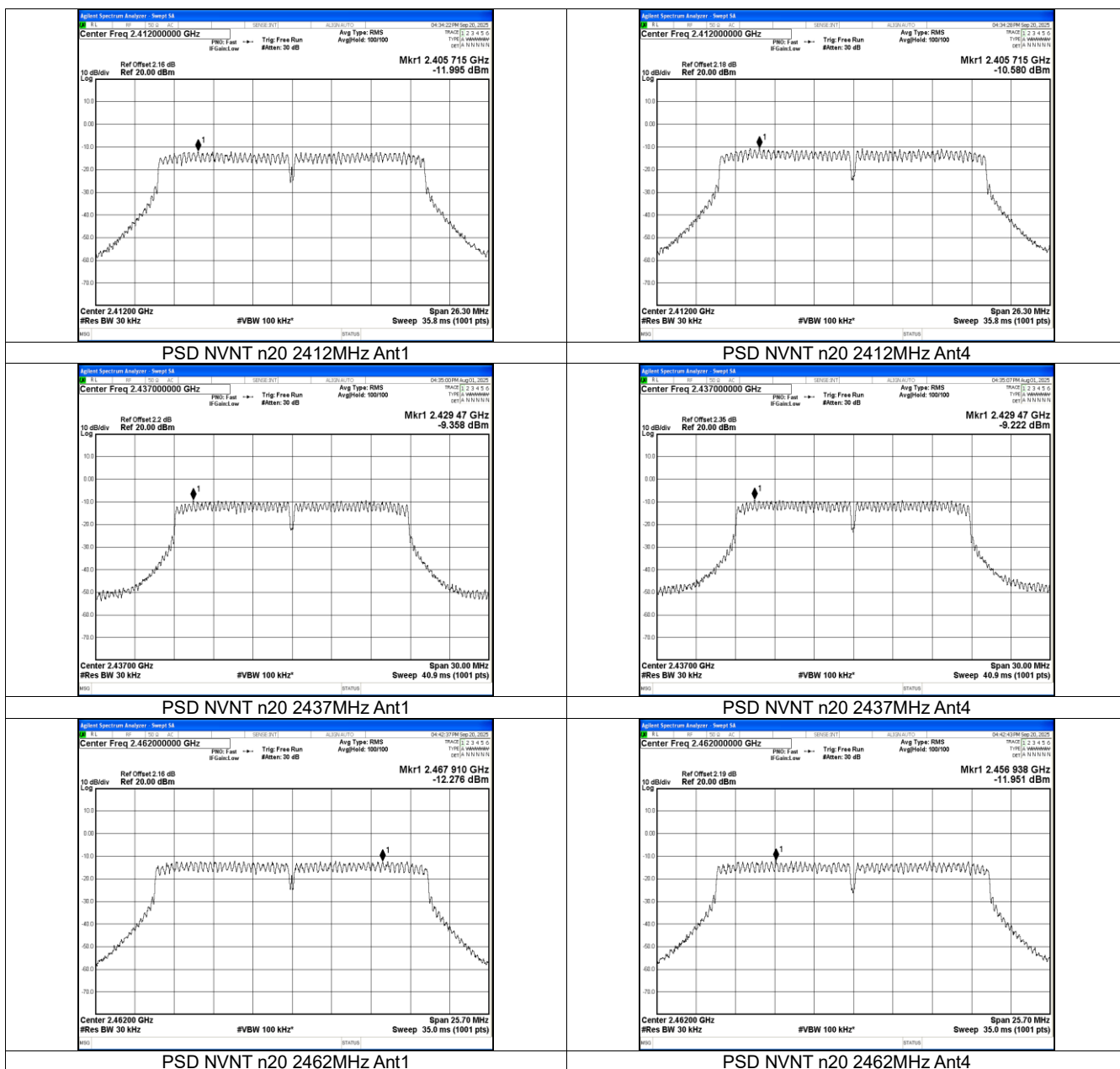


PSD NVNT b 2437MHz Ant1



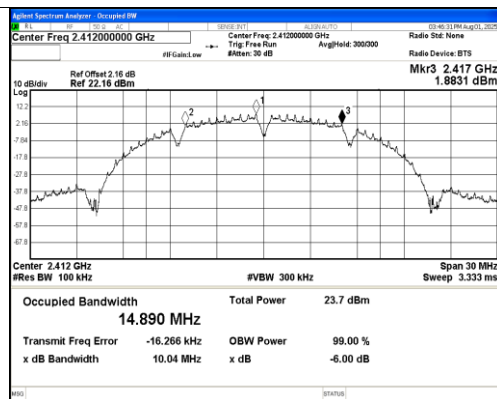
PSD NVNT b 2437MHz Ant4



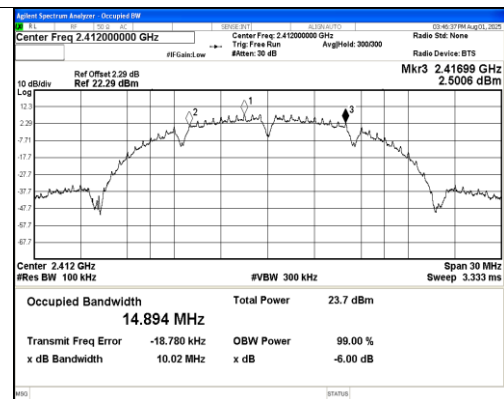


-6dB Bandwidth

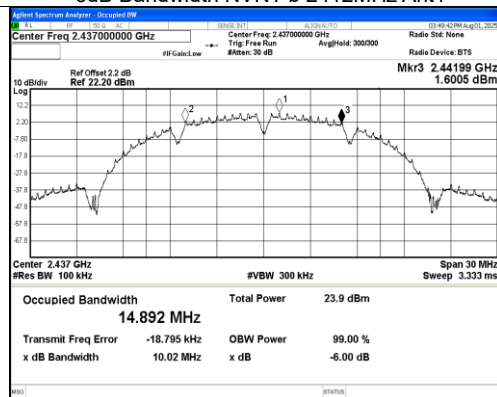
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.04	0.5	Pass
NVNT	b	2412	Ant4	10.02	0.5	Pass
NVNT	b	2437	Ant1	10.02	0.5	Pass
NVNT	b	2437	Ant4	10.05	0.5	Pass
NVNT	b	2462	Ant1	10.05	0.5	Pass
NVNT	b	2462	Ant4	10.06	0.5	Pass
NVNT	g	2412	Ant1	16.33	0.5	Pass
NVNT	g	2412	Ant4	16.32	0.5	Pass
NVNT	g	2437	Ant1	16.32	0.5	Pass
NVNT	g	2437	Ant4	16.32	0.5	Pass
NVNT	g	2462	Ant1	16.33	0.5	Pass
NVNT	g	2462	Ant4	16.34	0.5	Pass
NVNT	n20	2412	Ant1	17.05	0.5	Pass
NVNT	n20	2412	Ant4	17.53	0.5	Pass
NVNT	n20	2437	Ant1	16.81	0.5	Pass
NVNT	n20	2437	Ant4	16.93	0.5	Pass
NVNT	n20	2462	Ant1	17.13	0.5	Pass
NVNT	n20	2462	Ant4	17.1	0.5	Pass



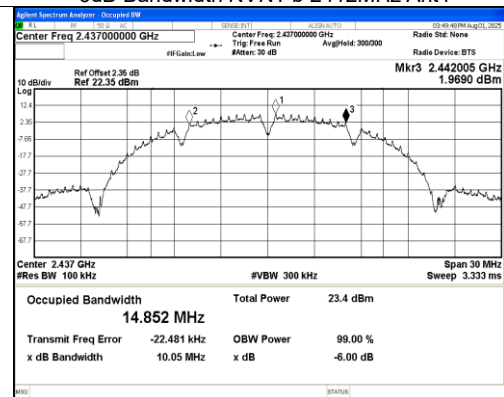
-6dB Bandwidth NVNT b 2412MHz Ant1



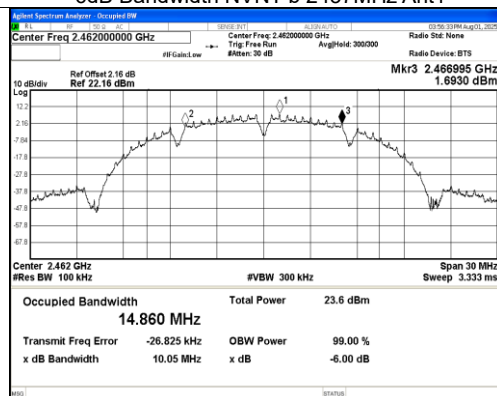
-6dB Bandwidth NVNT b 2412MHz Ant4



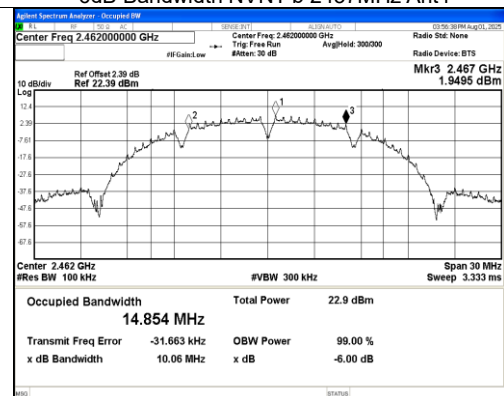
-6dB Bandwidth NVNT b 2437MHz Ant1



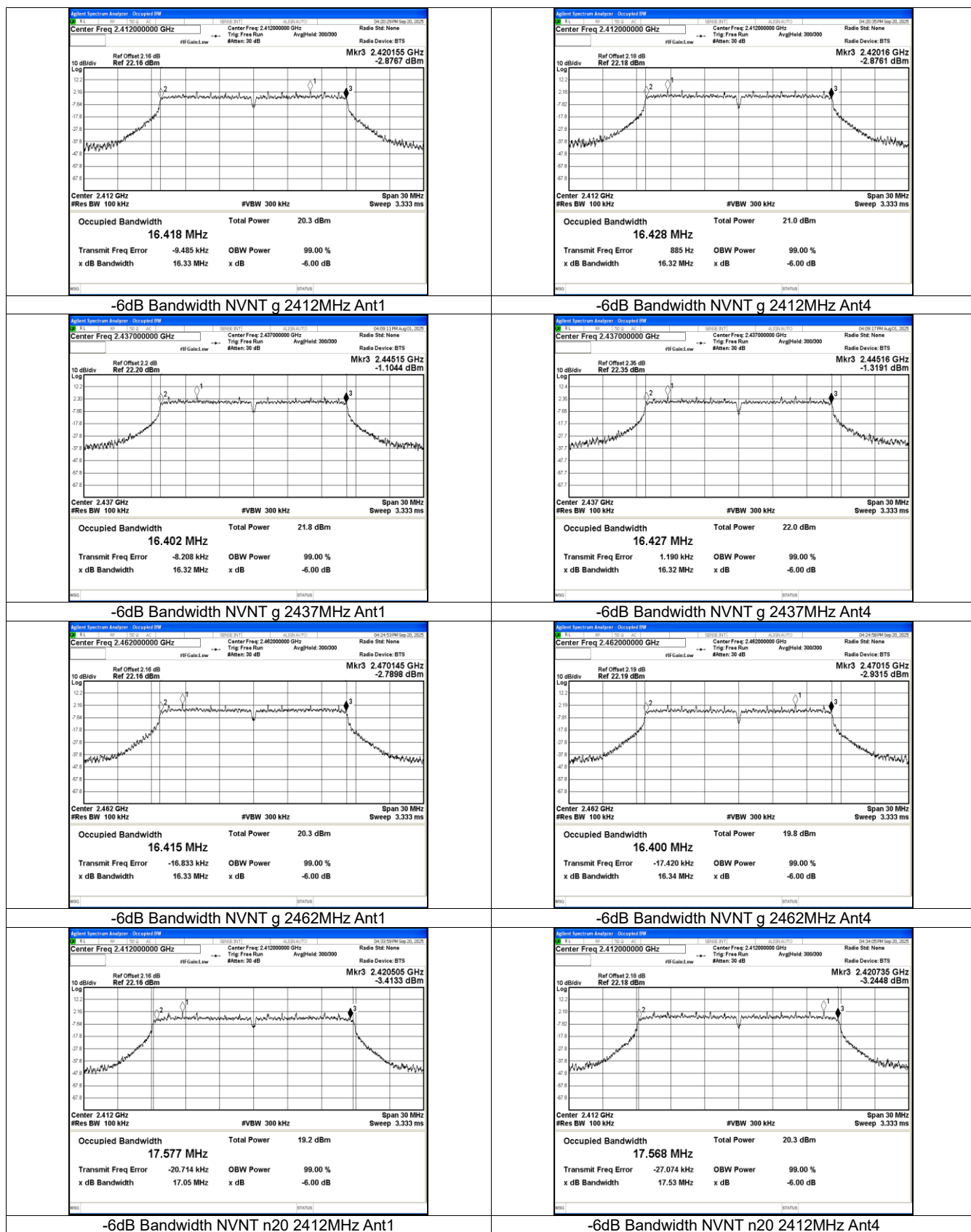
-6dB Bandwidth NVNT b 2437MHz Ant4

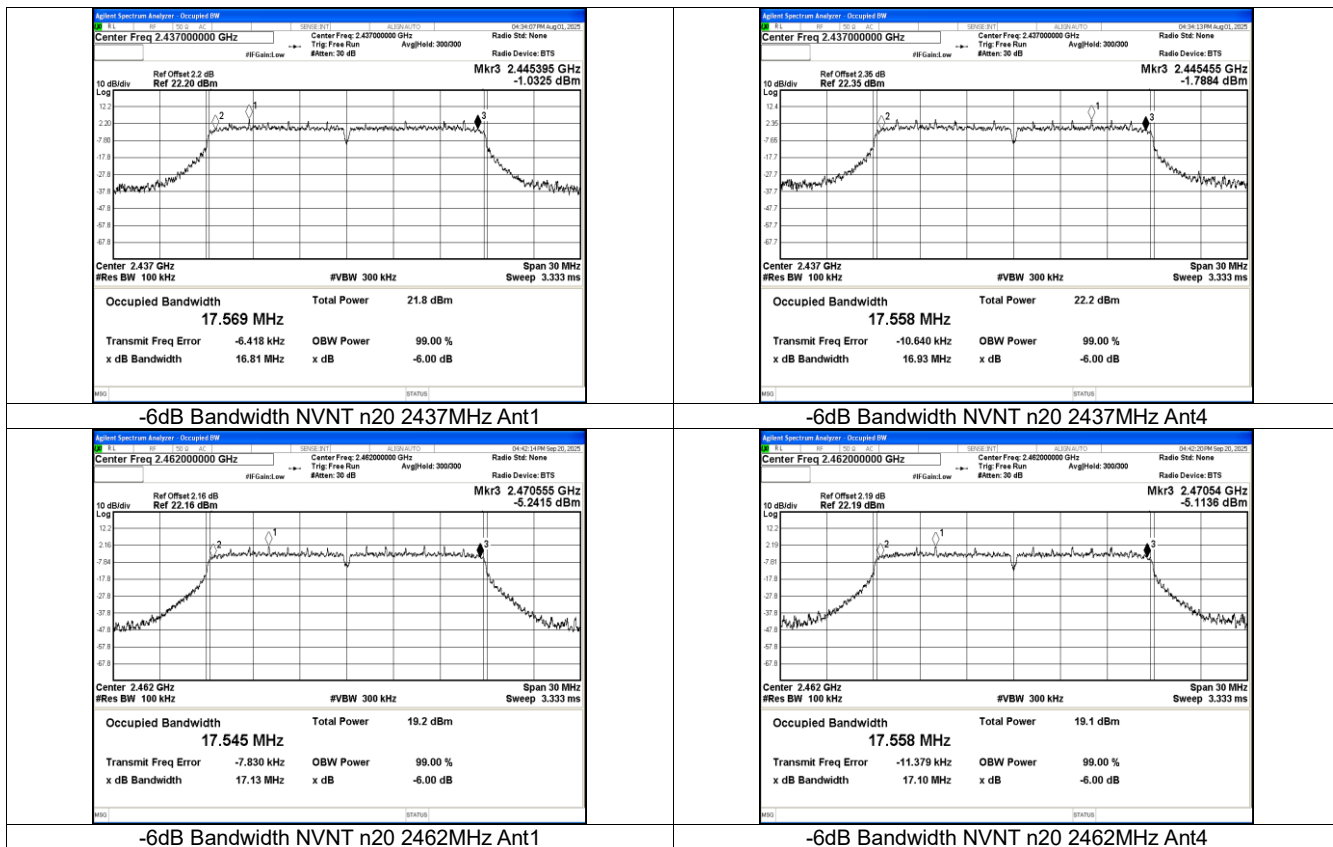


-6dB Bandwidth NVNT b 2462MHz Ant1



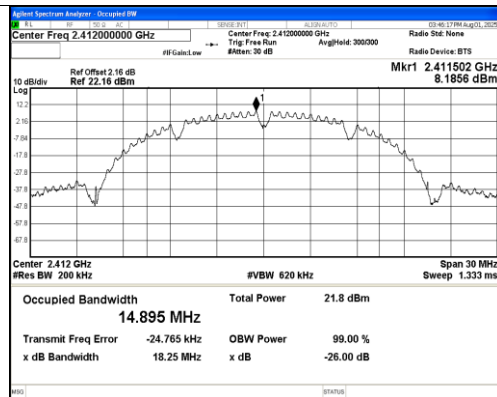
-6dB Bandwidth NVNT b 2462MHz Ant4



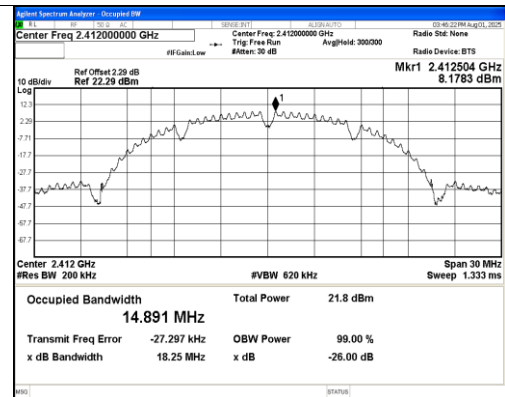


Occupied Channel Bandwidth

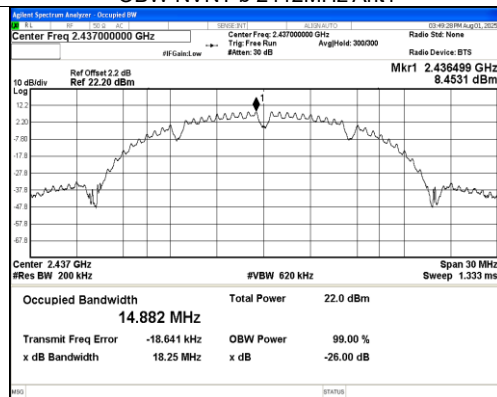
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.895
NVNT	b	2412	Ant4	14.891
NVNT	b	2437	Ant1	14.882
NVNT	b	2437	Ant4	14.872
NVNT	b	2462	Ant1	14.881
NVNT	b	2462	Ant4	14.861
NVNT	g	2412	Ant1	16.503
NVNT	g	2412	Ant4	16.481
NVNT	g	2437	Ant1	16.517
NVNT	g	2437	Ant4	16.523
NVNT	g	2462	Ant1	16.496
NVNT	g	2462	Ant4	16.481
NVNT	n20	2412	Ant1	17.611
NVNT	n20	2412	Ant4	17.586
NVNT	n20	2437	Ant1	17.609
NVNT	n20	2437	Ant4	17.606
NVNT	n20	2462	Ant1	17.578
NVNT	n20	2462	Ant4	17.577



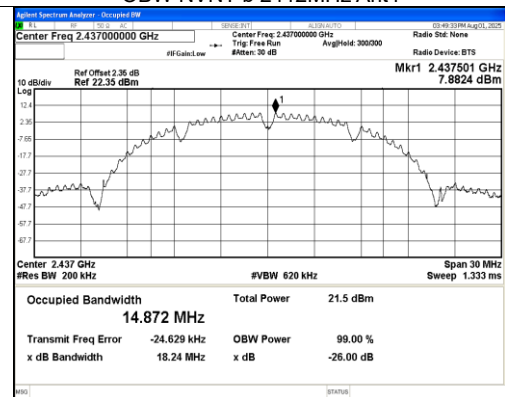
OBW NVNT b 2412MHz Ant1



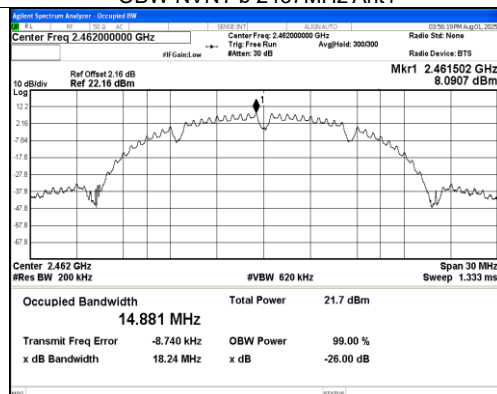
OBW NVNT b 2412MHz Ant4



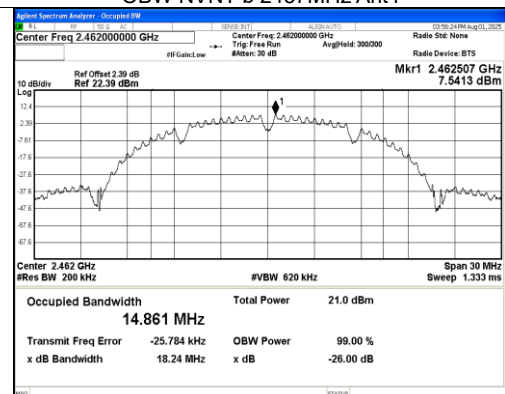
OBW NVNT b 2437MHz Ant1



OBW NVNT b 2437MHz Ant4



OBW NVNT b 2462MHz Ant1



OBW NVNT b 2462MHz Ant4