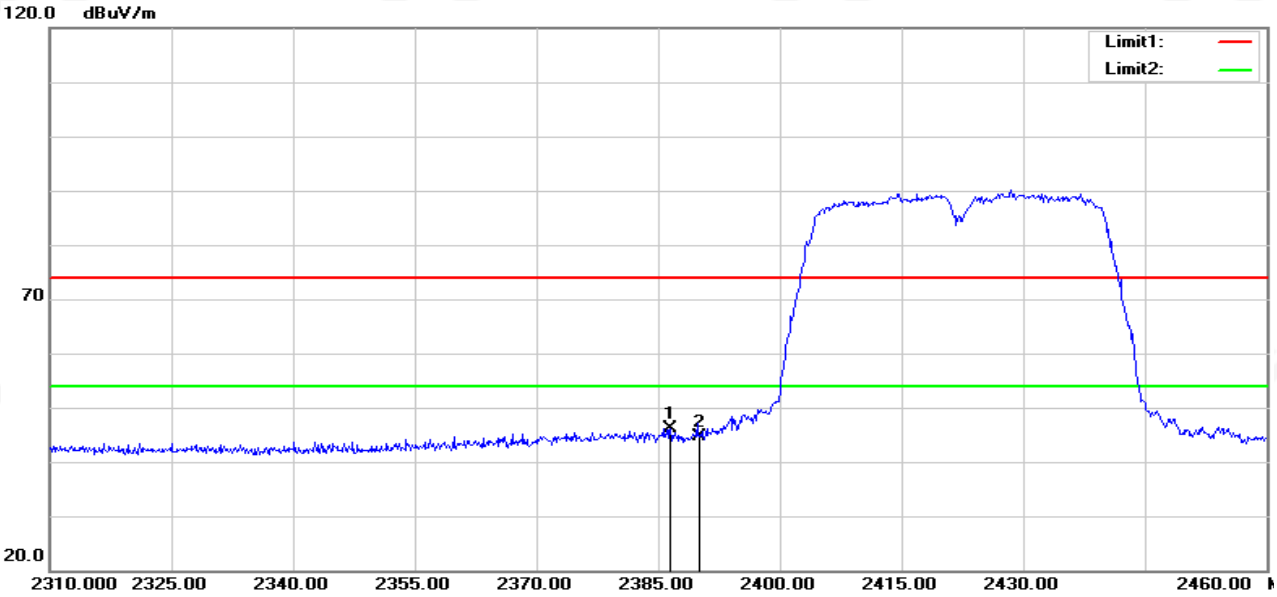
High Channel (802.11n40/2452 MHz)										
3264.62	61.70	44.70	6.70	28.20	-9.80	51.90	74.00	-22.10	PK	Vertical
3264.62	51.02	44.70	6.70	28.20	-9.80	41.22	54.00	-12.78	AV	Vertical
3264.78	61.57	44.70	6.70	28.20	-9.80	51.77	74.00	-22.23	PK	Horizontal
3264.78	50.06	44.70	6.70	28.20	-9.80	40.26	54.00	-13.74	AV	Horizontal
4924.52	58.84	44.20	9.04	31.60	-3.56	55.28	74.00	-18.72	PK	Vertical
4924.52	49.54	44.20	9.04	31.60	-3.56	45.98	54.00	-8.02	AV	Vertical
4924.36	58.41	44.20	9.04	31.60	-3.56	54.85	74.00	-19.15	PK	Horizontal
4924.36	49.11	44.20	9.04	31.60	-3.56	45.55	54.00	-8.45	AV	Horizontal
5359.88	49.16	44.20	9.86	32.00	-2.34	46.82	74.00	-27.18	PK	Vertical
5359.88	39.10	44.20	9.86	32.00	-2.34	36.76	54.00	-17.24	AV	Vertical
5359.58	47.91	44.20	9.86	32.00	-2.34	45.57	74.00	-28.43	PK	Horizontal
5359.58	38.78	44.20	9.86	32.00	-2.34	36.44	54.00	-17.56	AV	Horizontal
7385.70	54.06	43.50	11.40	35.50	3.40	57.46	74.00	-16.54	PK	Vertical
7385.70	44.30	43.50	11.40	35.50	3.40	47.70	54.00	-6.30	AV	Vertical
7385.90	54.70	43.50	11.40	35.50	3.40	58.10	74.00	-15.90	PK	Horizontal
7385.90	43.87	43.50	11.40	35.50	3.40	47.27	54.00	-6.73	AV	Horizontal

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. All modes have been measurement, only worst mode was reported.
   Emission Level = Reading + Factor
   Margin = Emission Level-Limit
3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

3.2.6 TEST RESULTS(Band edge Requirements)

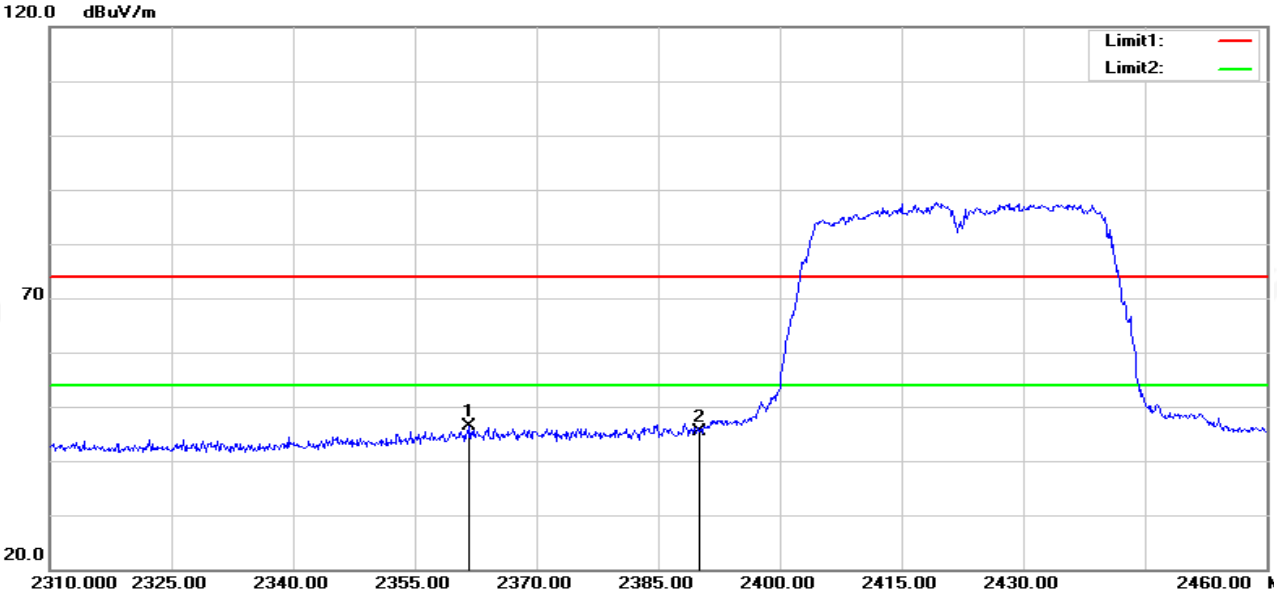
802.11 n40-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.500	41.77	4.28	46.05	74.00	-27.95	peak
2	2390.000	40.28	4.34	44.62	74.00	-29.38	peak

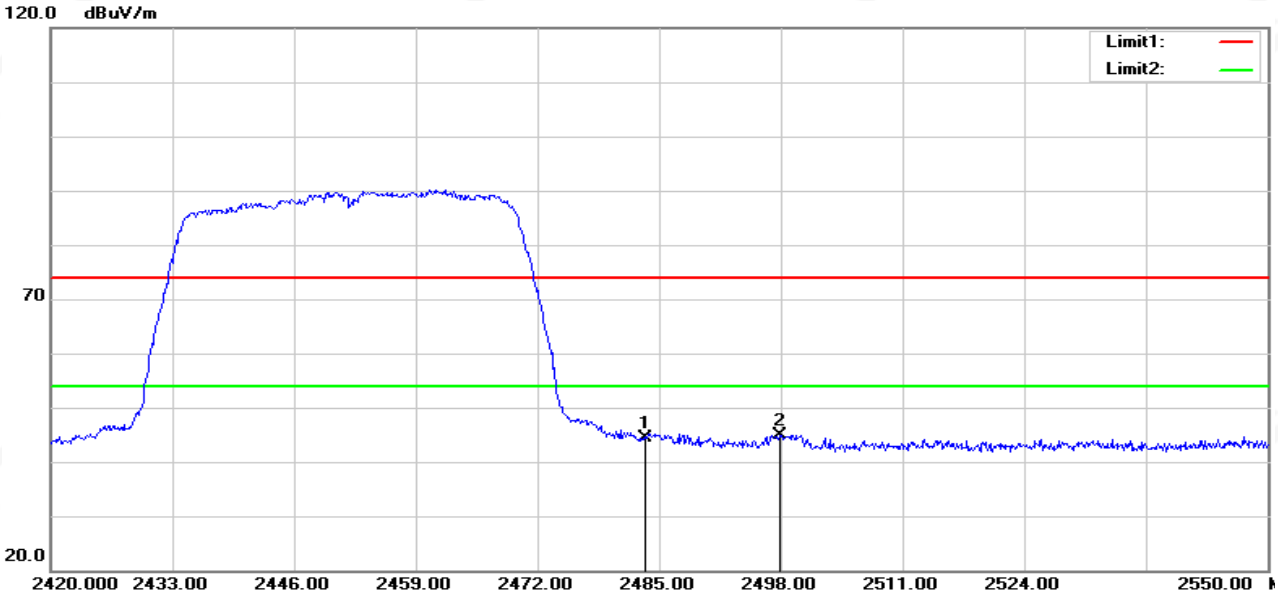
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2361.750	42.53	3.92	46.45	74.00	-27.55	peak
2	2390.000	41.04	4.34	45.38	74.00	-28.62	peak

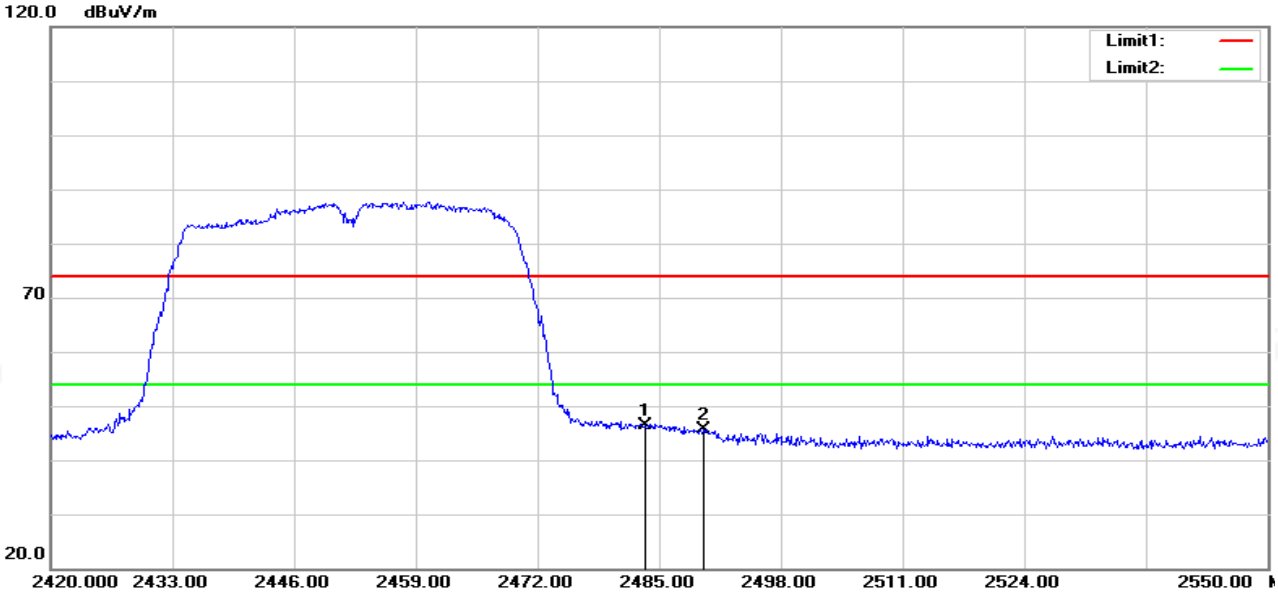
802.11 n40-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	39.77	4.60	44.37	74.00	-29.63	peak
2	2497.870	40.36	4.64	45.00	74.00	-29.00	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	41.81	4.60	46.41	74.00	-27.59	peak
2	2489.680	41.00	4.62	45.62	74.00	-28.38	peak

Note: All modes have been measurement, only worst mode was reported.

4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP

The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

4.6 TEST RESULTS

Note: 1.The test data please refer to APPENDIX 1.

5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247 , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤8 dBm (RBW ≥3KHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the 100 kHz ≥ RBW ≥3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD
No deviation.

5.4 TEST SETUP

5.5 EUT OPERATION CONDITIONS
Please refer to section 3.1.4 of this report.

5.6 TEST RESULTS
Note: The test data please refer to APPENDIX 1.

6. BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	≥500KHz (6dB bandwidth)	2400-2483.5	PASS

6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 1% to 5% of the OBW but not less than 100 kHz., VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

6.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

7. PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2 TEST PROCEDURE

One of the following procedures may be used to determine the averaging conducted output powe r of a DTS EUT.

Method AVGSA-2 uses trace averaging across ON and OFF times of the EUT transmissions, foll owed by duty cycle correction. The procedure for this method is as follows:

a) Measure the duty cycle D of the transmitter output signal as described in 11.6.

b) Set span to at least 1.5 times the OBW.

c) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.

d) Set VBW ≥ [3 × RBW].

e) Number of points in sweep ≥ [2 × span / RBW]. (This gives bin-to-bin spacing ≤ RBW / 2, so th at narrowband signals are not lost between frequency bins.)

f) Sweep time = auto.

g) Detector = RMS (i.e., power averaging), if available. Otherwise, use the sample detector mode . h) Do not use sweep triggering. Allow the sweep to “free run.”

i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of trac es to be averaged shall be increased above 100 as needed such that the average accurately re presents the true average over the ON and OFF periods of the transmitter.

j) Compute power by integrating the spectrum across the OBW of the signal using the instrument ’s band power measurement function with band limits set equal to the OBW band edges. If the in strument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

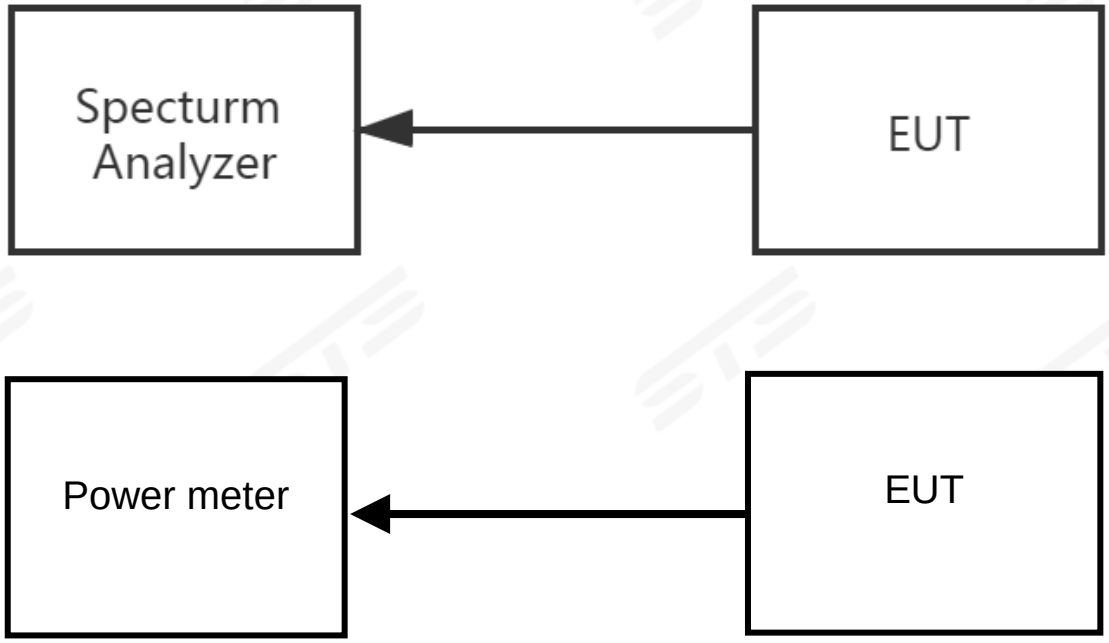
k) Add [10 log (1 / D)], where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average o ver both the ON and OFF times of the transmission). For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is 25%.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

7.3 DEVIATION FROM STANDARD
No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS
Please refer to section 3.1.4 of this report.

7.6 TEST RESULTS
Note: The test data please refer to APPENDIX 1.

8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible partyshall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is PIFA Antenna. It comply with the standard requirement.

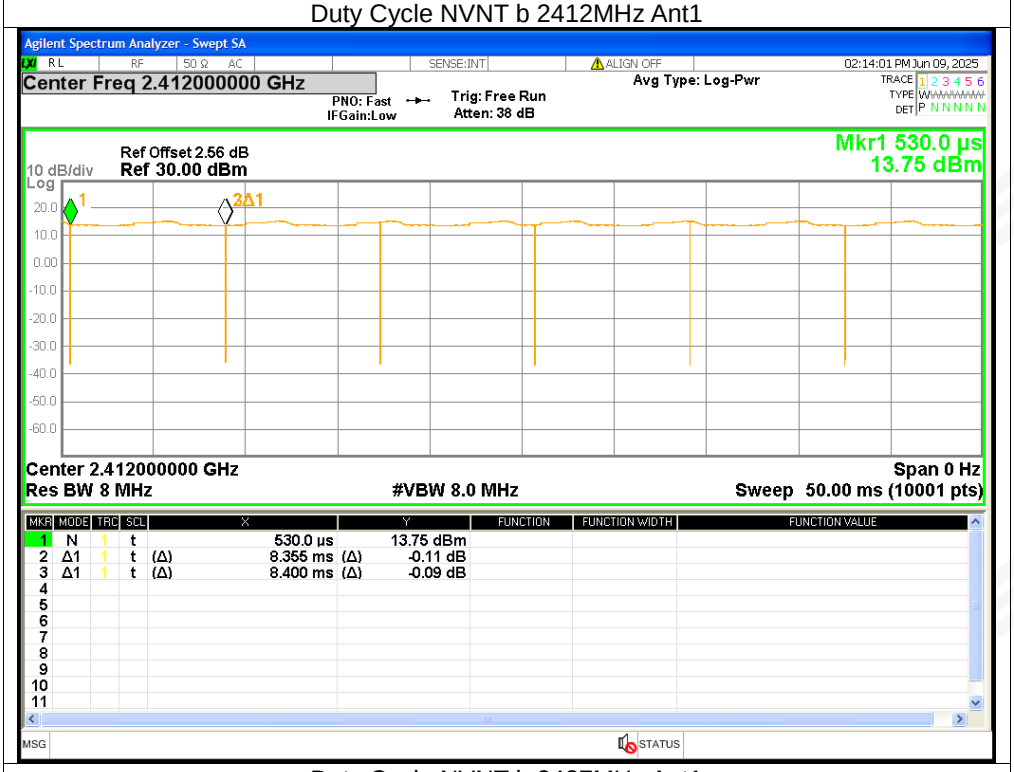
APPENDIX 1-TEST DATA

Duty Cycle

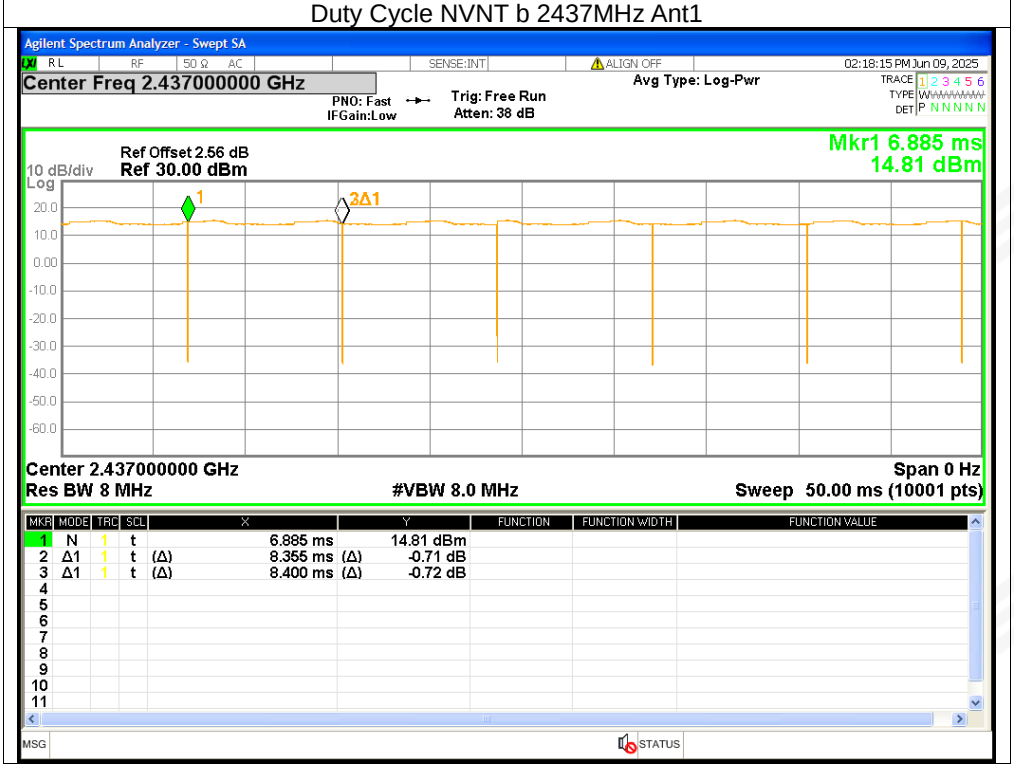
Condition	Mode	Frequency (MHz)	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	8.355	8.4	99.46	0.02	0.12
NVNT	b	2437	Ant1	8.355	8.4	99.46	0.02	0.12
NVNT	b	2462	Ant1	8.355	8.4	99.46	0.02	0.12
NVNT	b	2412	Ant2	8.355	8.4	99.46	0.02	0.12
NVNT	b	2437	Ant2	8.35	8.395	99.46	0.02	0.12
NVNT	b	2462	Ant2	8.35	8.4	99.4	0.03	0.12
NVNT	g	2412	Ant1	0.193	0.242	79.75	0.98	5.18
NVNT	g	2437	Ant1	0.192	0.24	80	0.97	5.21
NVNT	g	2462	Ant1	0.192	0.242	79.34	1.01	5.21
NVNT	g	2412	Ant2	0.192	0.241	79.67	0.99	5.21
NVNT	g	2437	Ant2	0.192	0.24	80	0.97	5.21
NVNT	g	2462	Ant2	0.192	0.242	79.34	1.01	5.21
NVNT	n20	2412	MIMO	0.353	0.403	87.59	0.58	2.83
NVNT	n20	2437	MIMO	0.352	0.4	88	0.56	2.84
NVNT	n20	2462	MIMO	0.353	0.402	87.81	0.56	2.83
NVNT	n40	2422	MIMO	0.341	0.391	87.21	0.59	2.93
NVNT	n40	2437	MIMO	0.34	0.389	87.4	0.58	2.94
NVNT	n40	2452	MIMO	0.341	0.39	87.44	0.58	2.93
NVNT	ax20	2412	MIMO	0.262	0.312	83.97	0.76	3.82
NVNT	ax20	2437	MIMO	0.262	0.309	84.79	0.72	3.82
NVNT	ax20	2462	MIMO	0.262	0.313	83.71	0.77	3.82
NVNT	ax40	2422	MIMO	0.299	0.349	85.67	0.67	3.34
NVNT	ax40	2437	MIMO	0.299	0.348	85.92	0.66	3.34
NVNT	ax40	2452	MIMO	0.299	0.349	85.67	0.67	3.34

Test Graphs

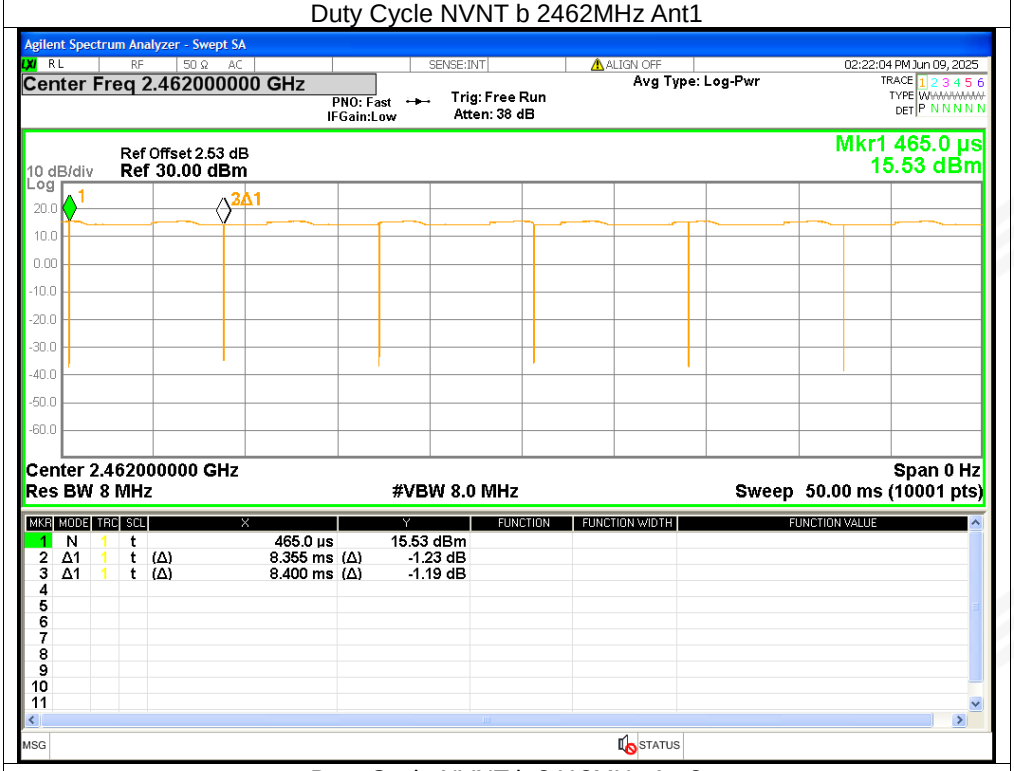
Duty Cycle NVNT b 2412MHz Ant1



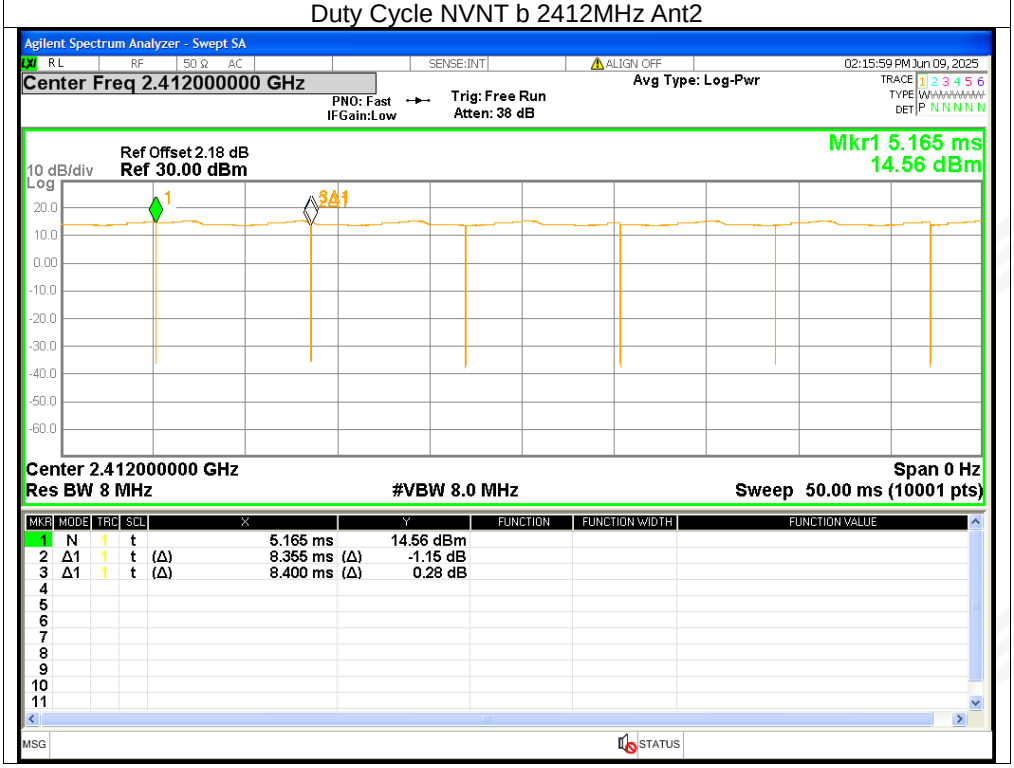
Duty Cycle NVNT b 2437MHz Ant1



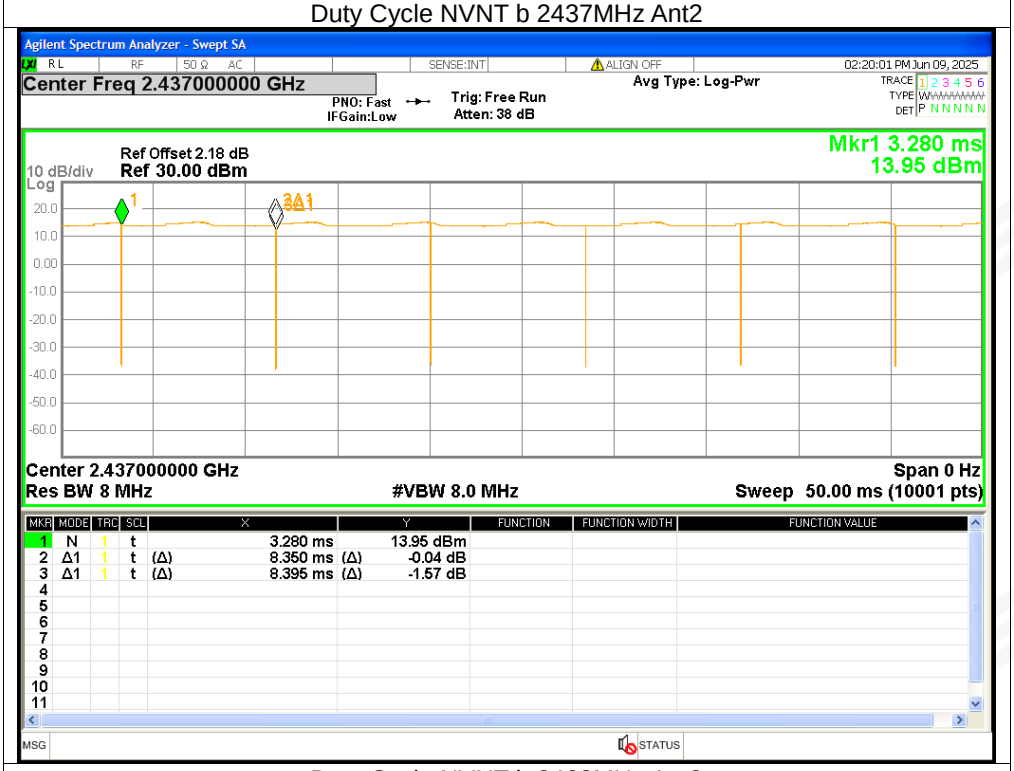
Duty Cycle NVNT b 2462MHz Ant1



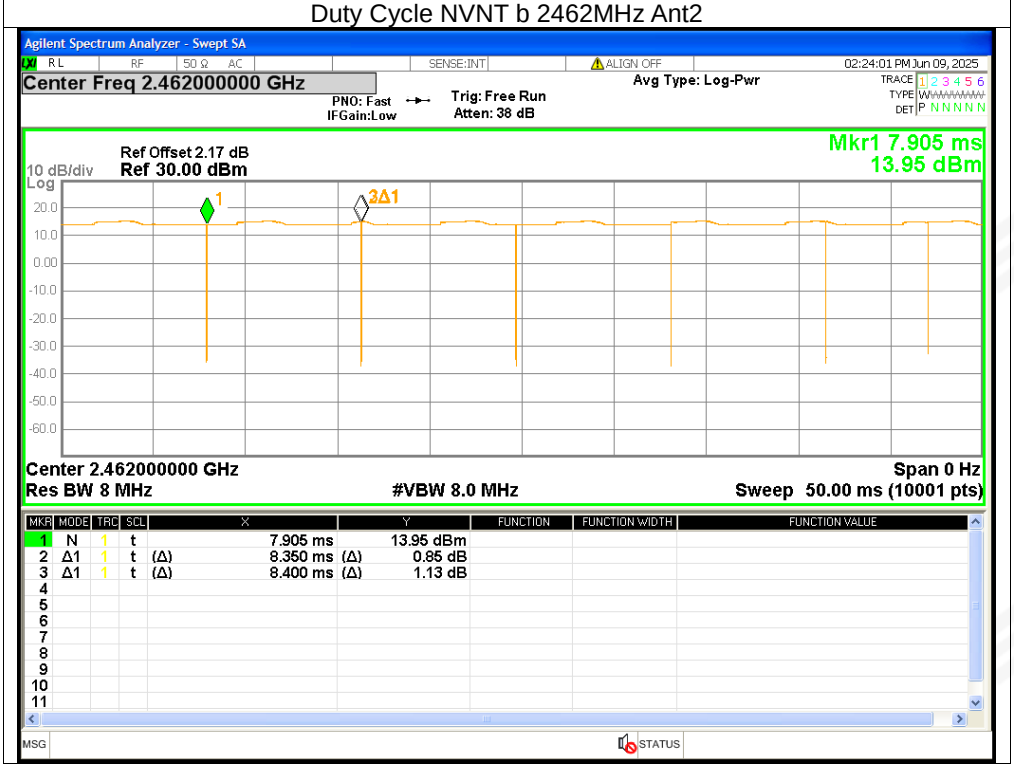
Duty Cycle NVNT b 2412MHz Ant2



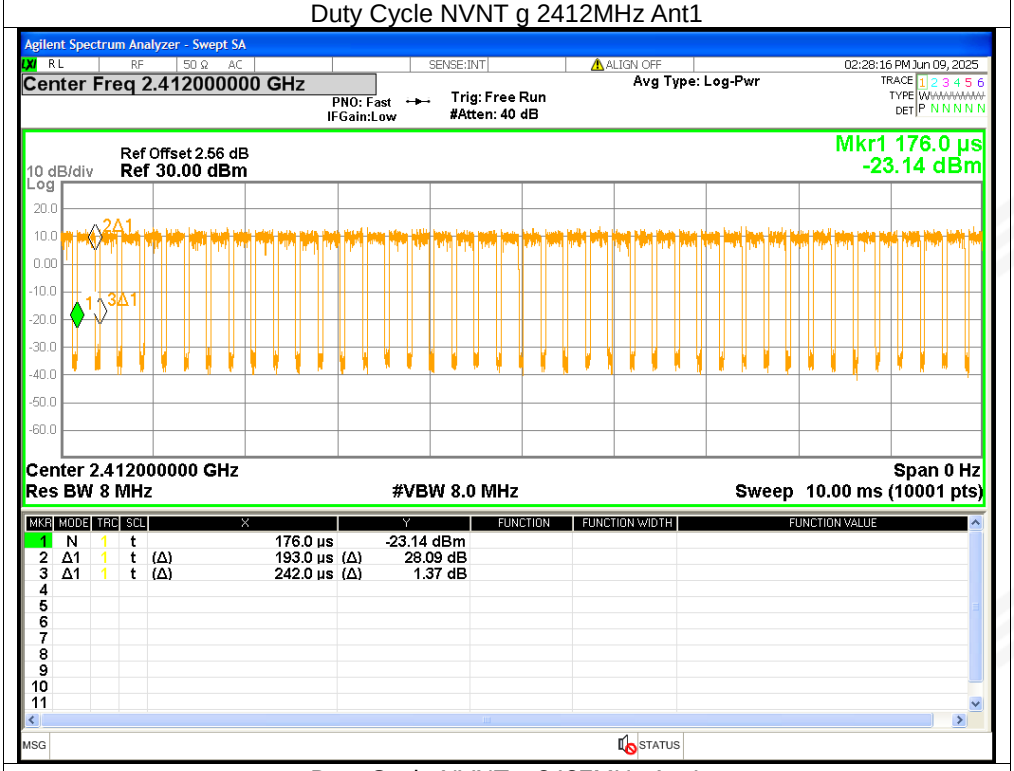
Duty Cycle NVNT b 2437MHz Ant2



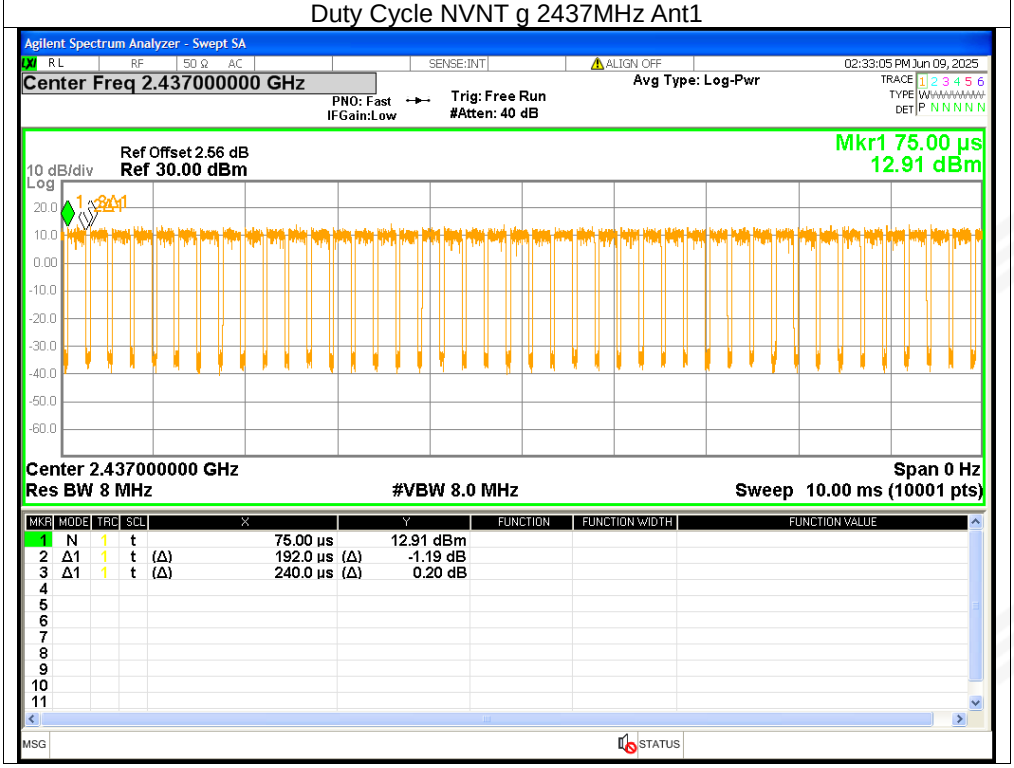
Duty Cycle NVNT b 2462MHz Ant2



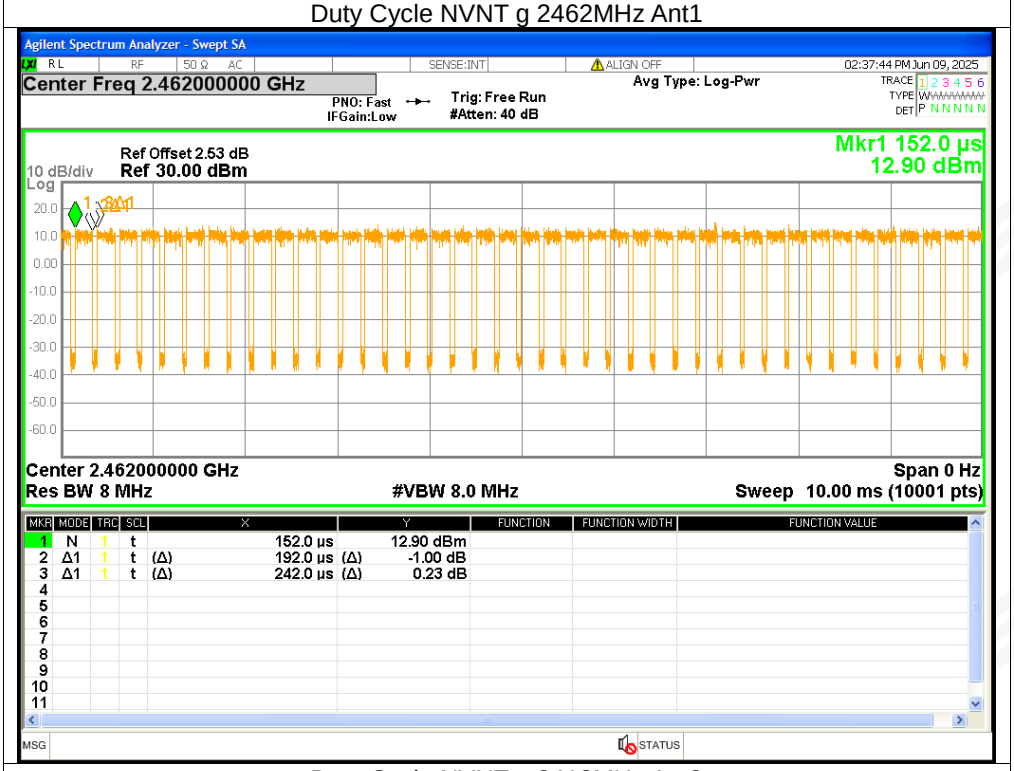
Duty Cycle NVNT g 2412MHz Ant1



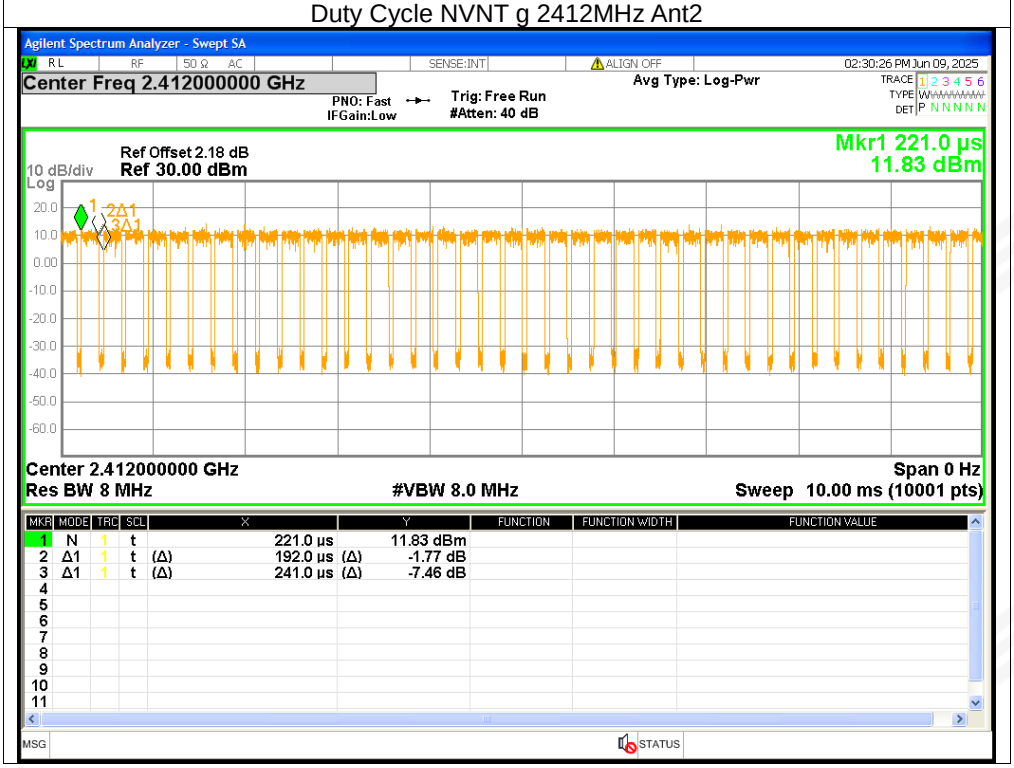
Duty Cycle NVNT g 2437MHz Ant1



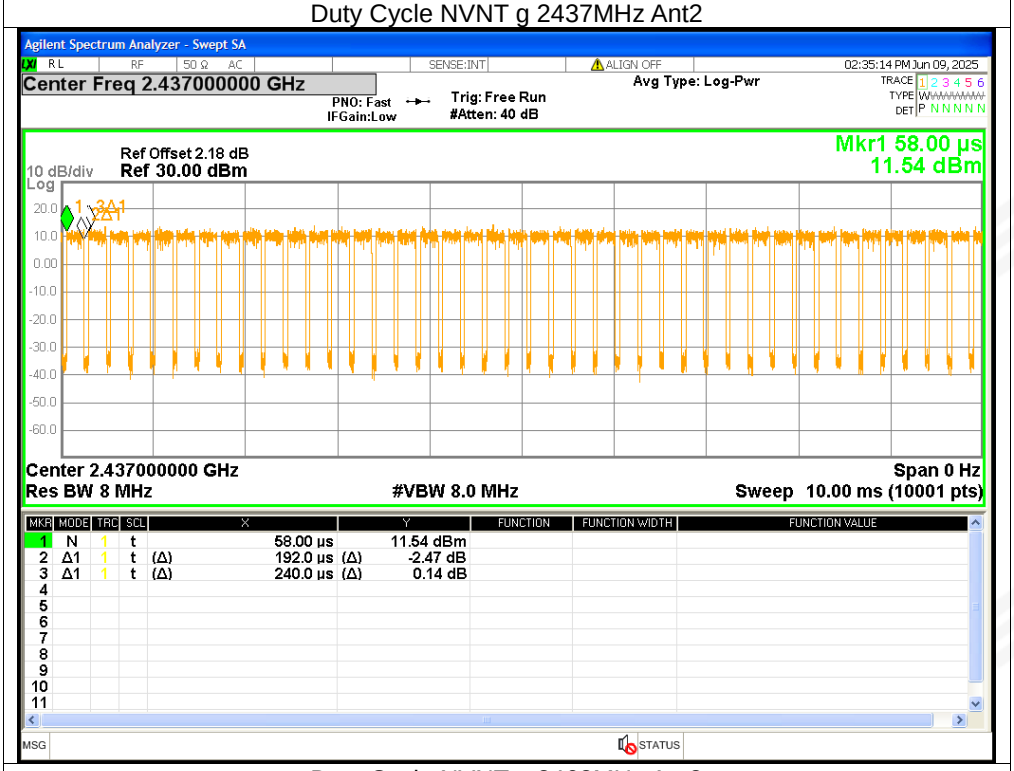
Duty Cycle NVNT g 2462MHz Ant1



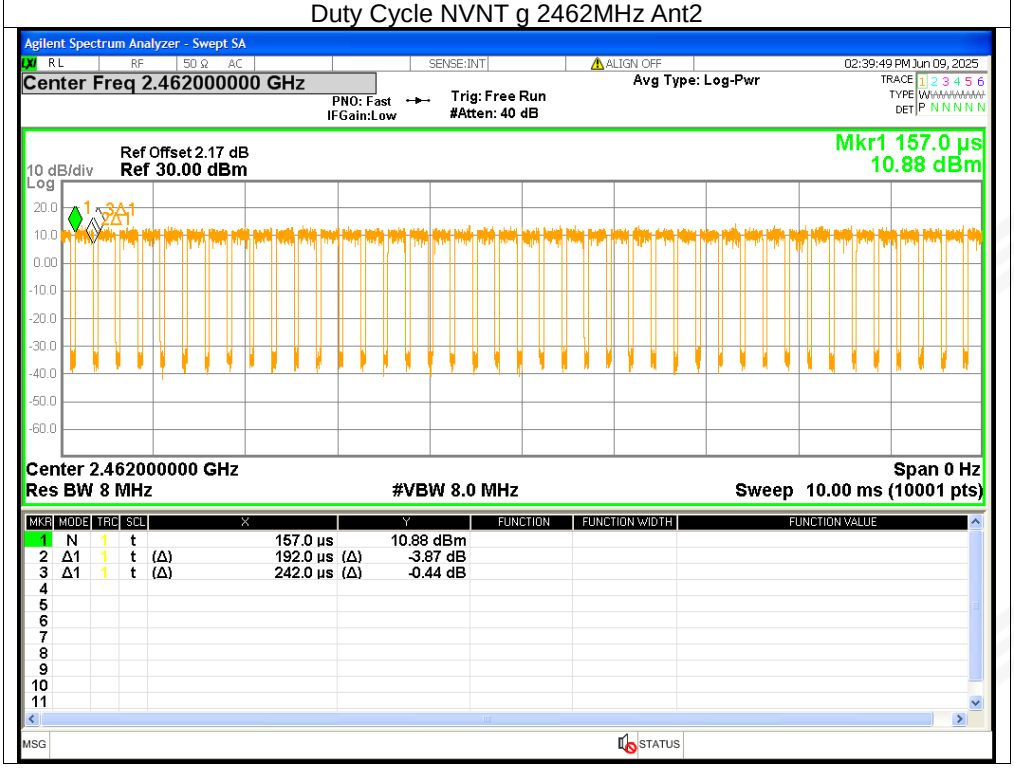
Duty Cycle NVNT g 2412MHz Ant2



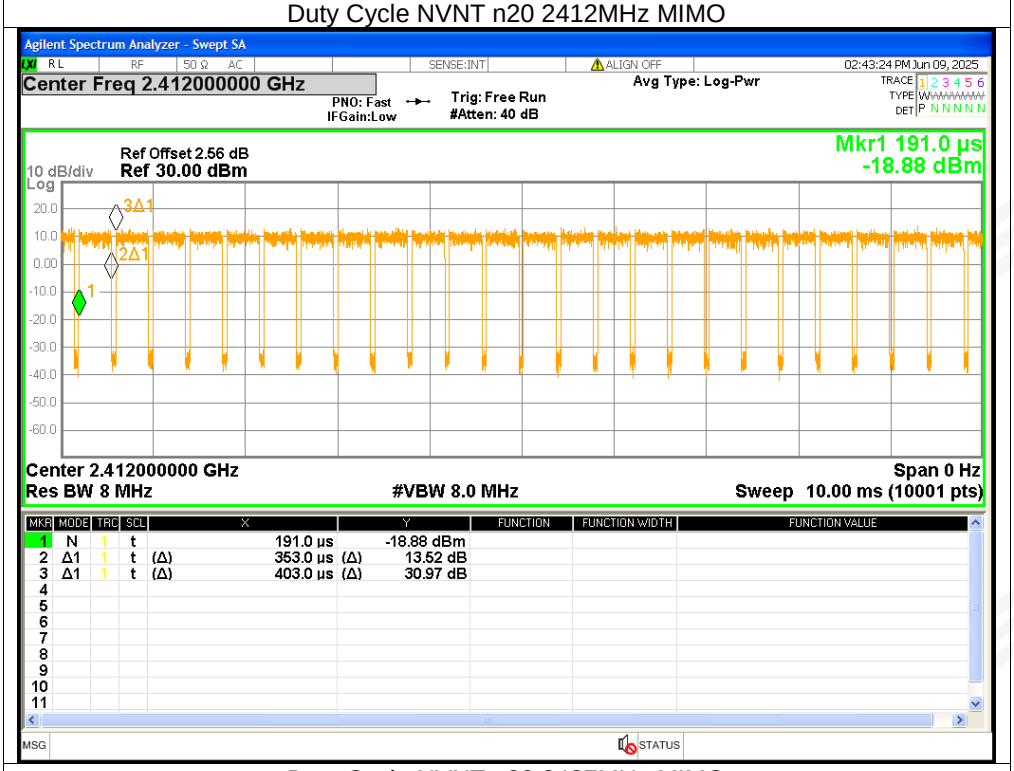
Duty Cycle NVNT g 2437MHz Ant2



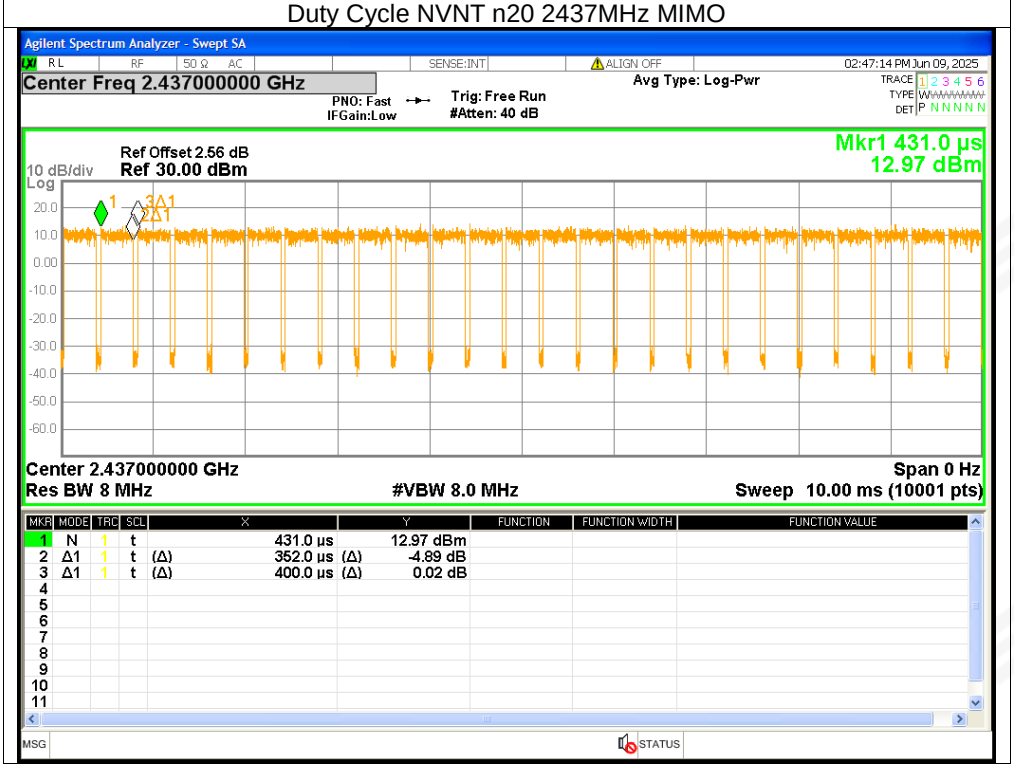
Duty Cycle NVNT g 2462MHz Ant2



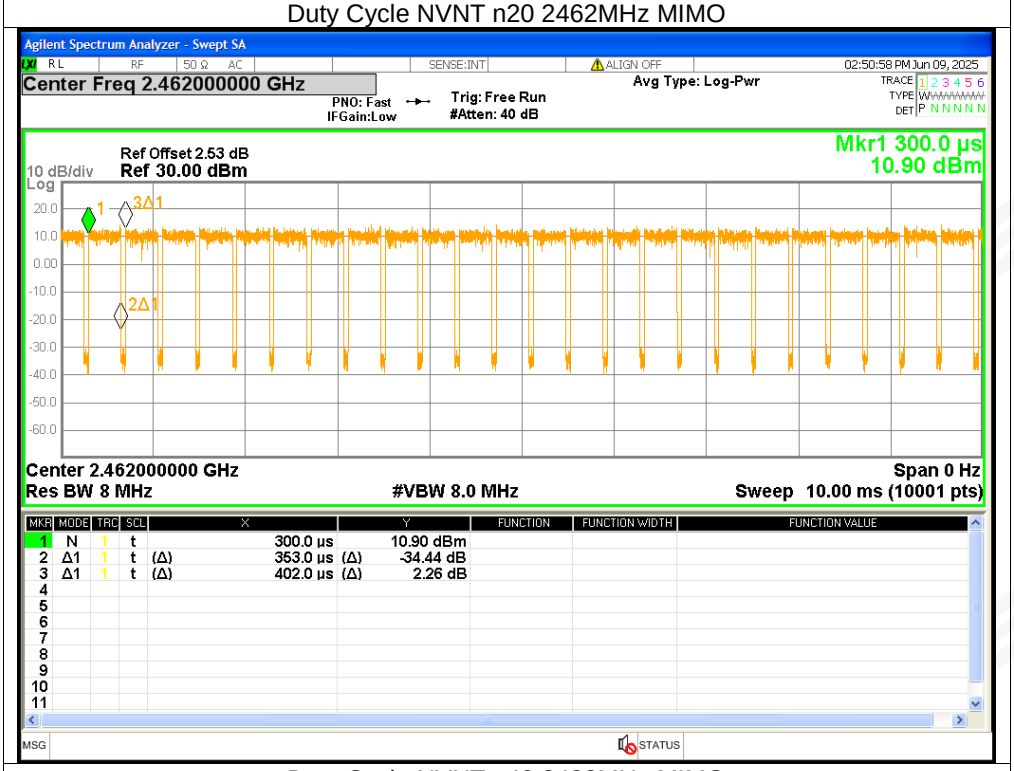
Duty Cycle NVNT n20 2412MHz MIMO



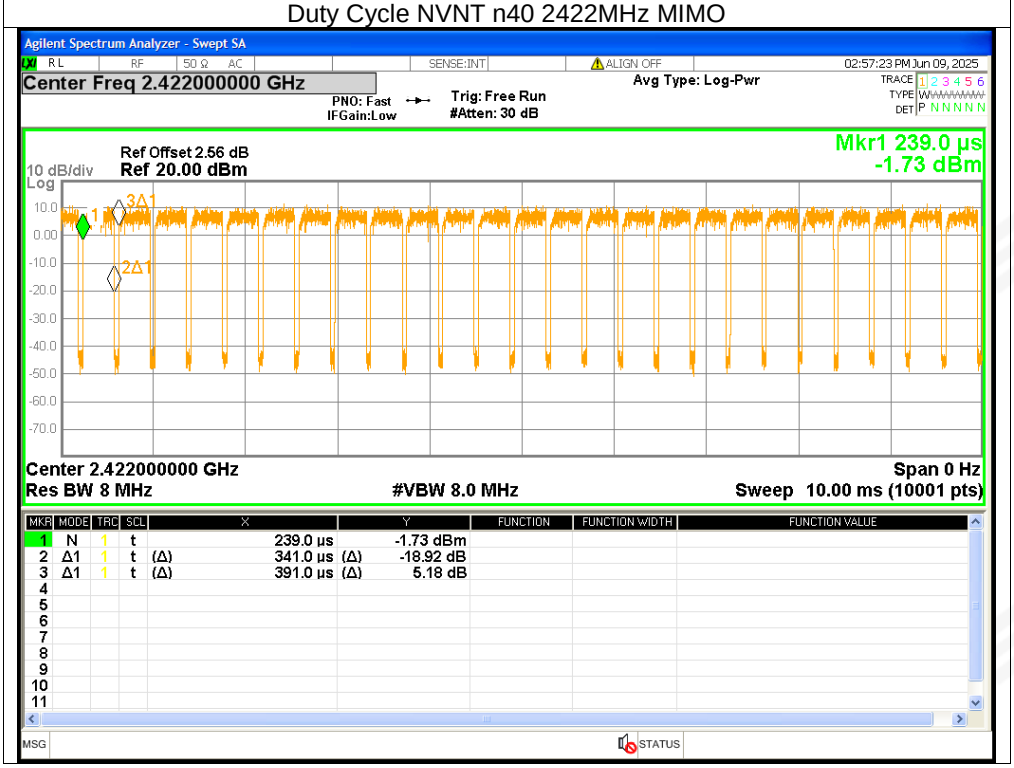
Duty Cycle NVNT n20 2437MHz MIMO



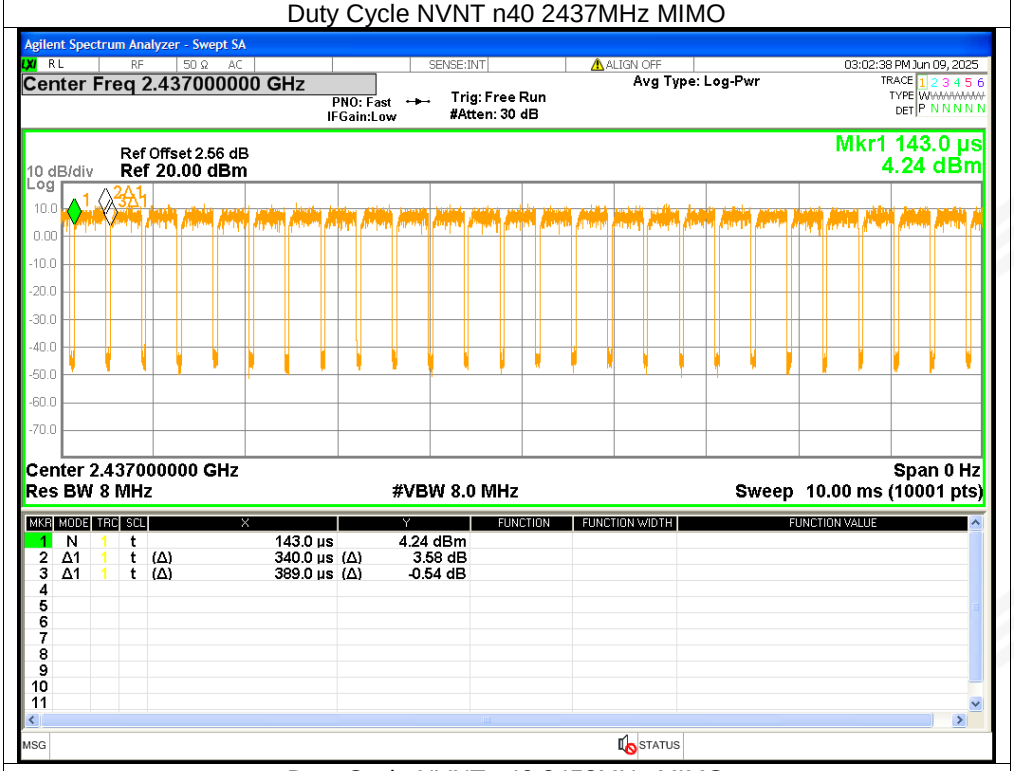
Duty Cycle NVNT n20 2462MHz MIMO



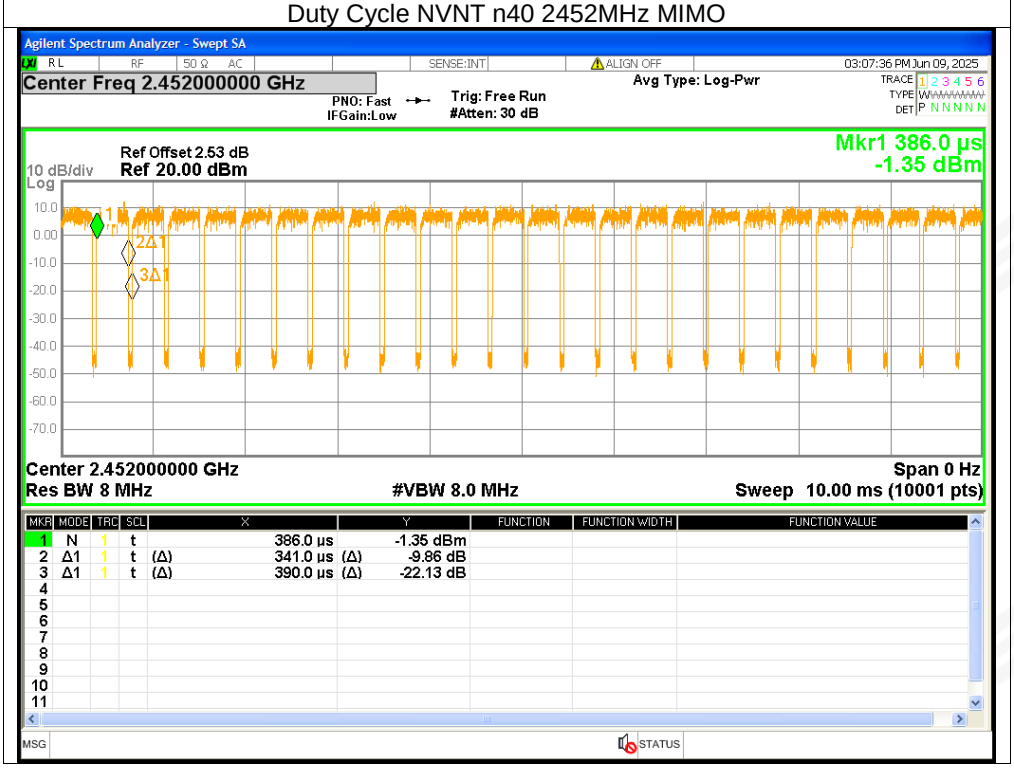
Duty Cycle NVNT n40 2422MHz MIMO



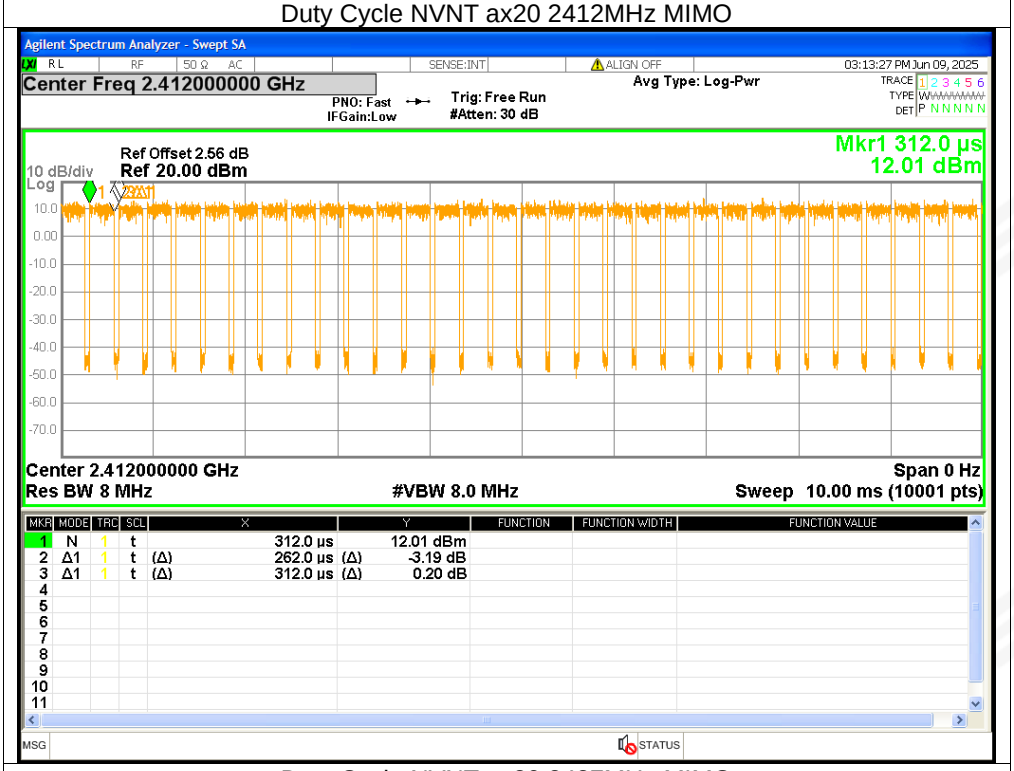
Duty Cycle NVNT n40 2437MHz MIMO



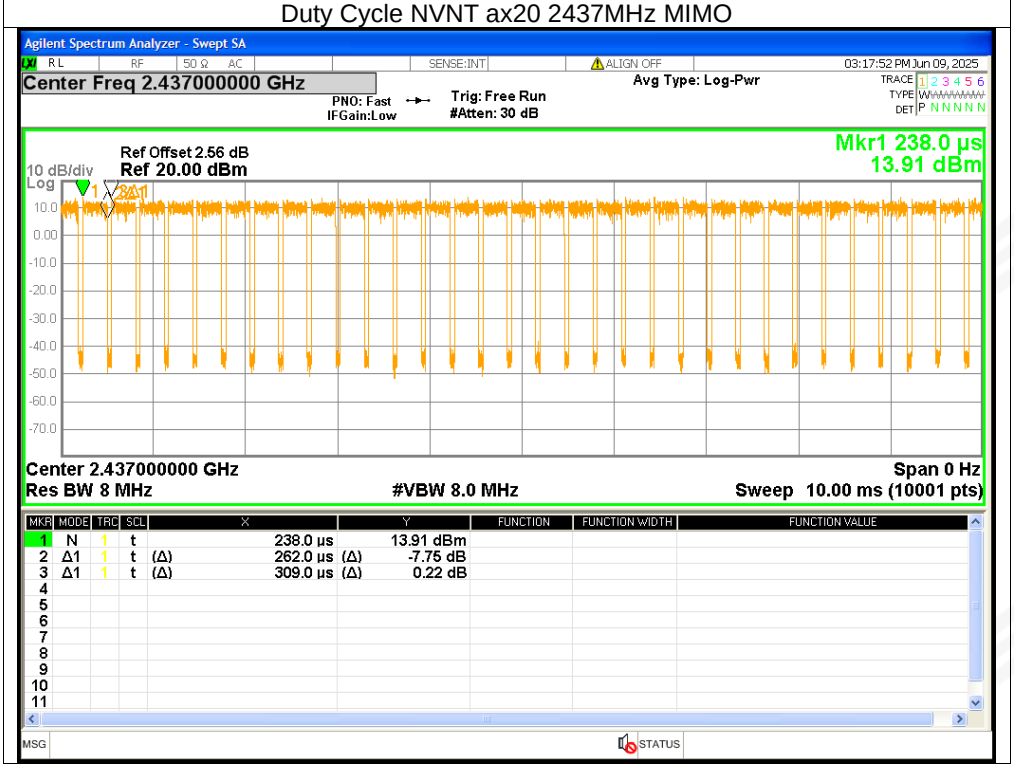
Duty Cycle NVNT n40 2452MHz MIMO



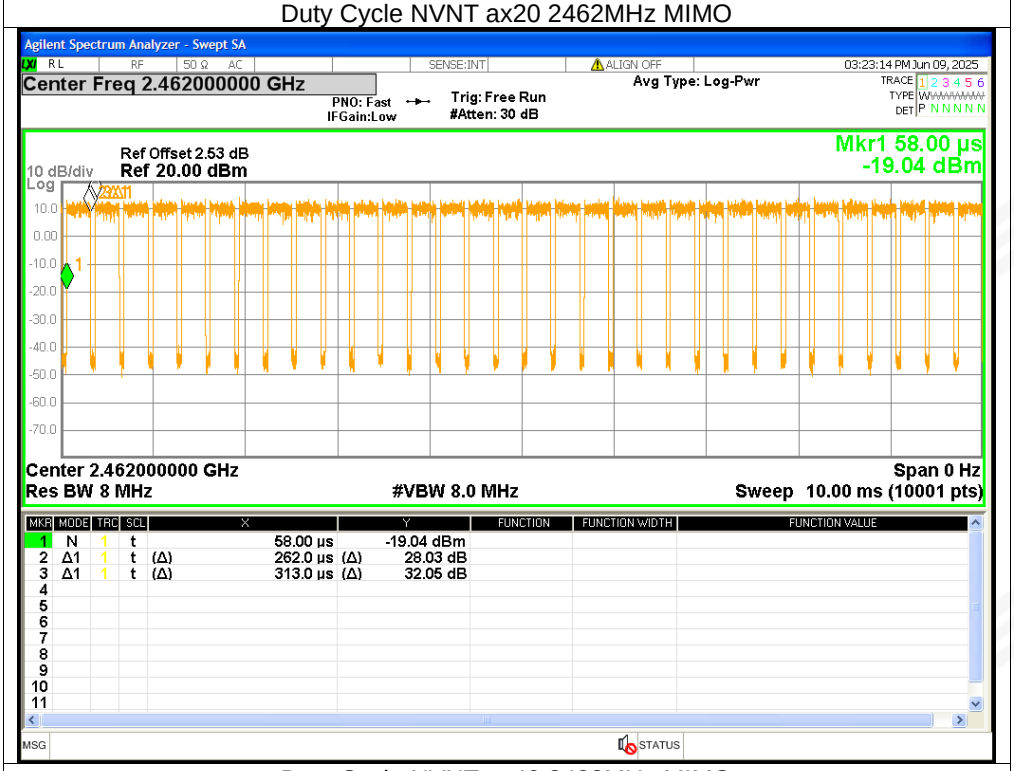
Duty Cycle NVNT ax20 2412MHz MIMO



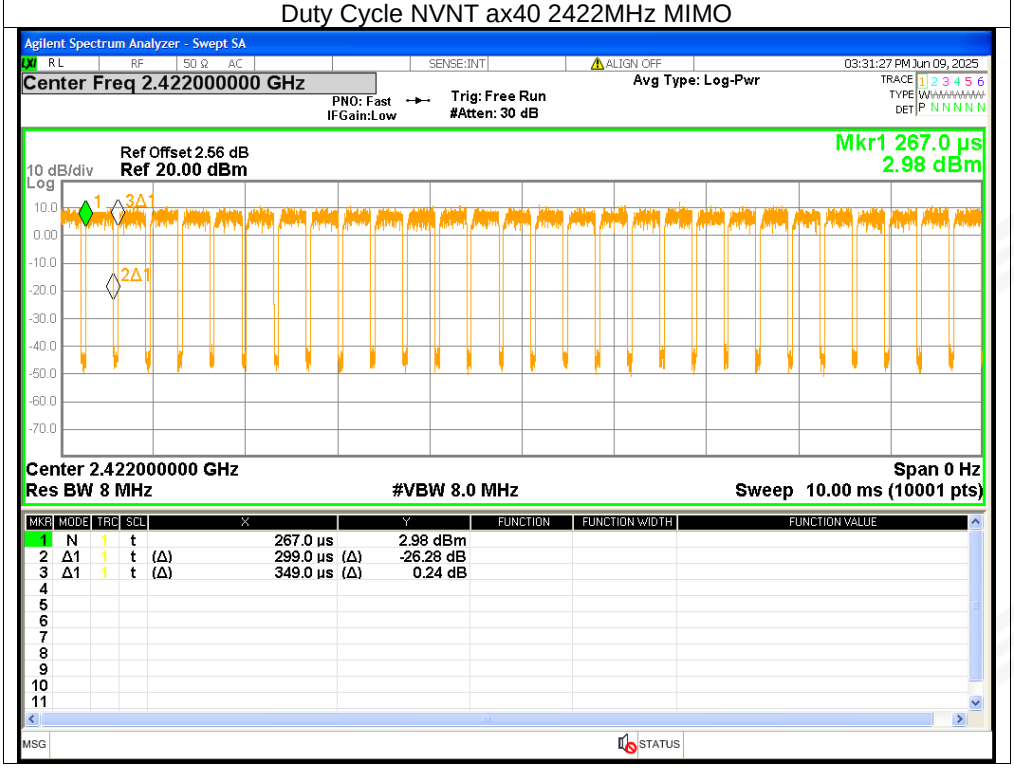
Duty Cycle NVNT ax20 2437MHz MIMO



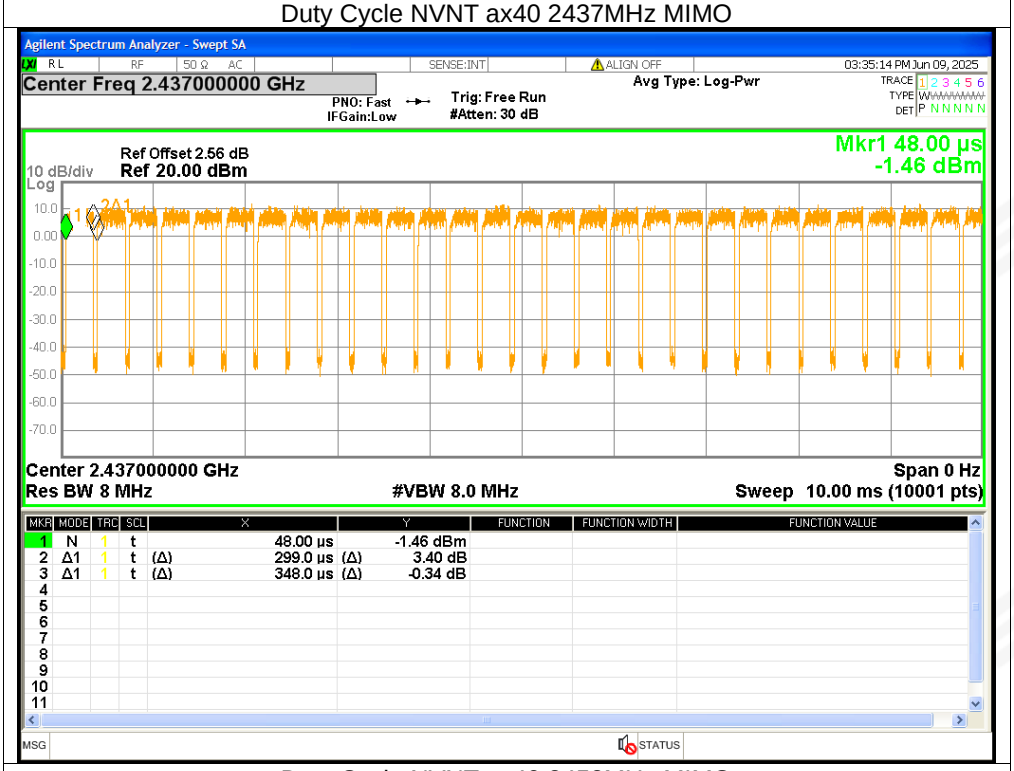
Duty Cycle NVNT ax20 2462MHz MIMO



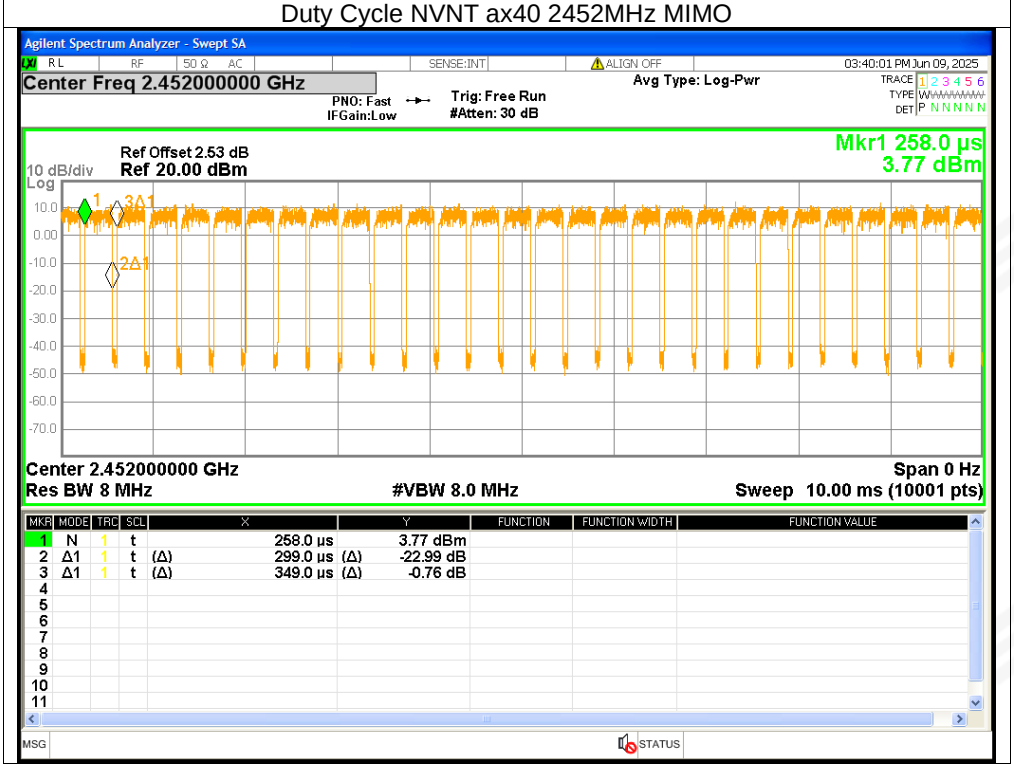
Duty Cycle NVNT ax40 2422MHz MIMO



Duty Cycle NVNT ax40 2437MHz MIMO



Duty Cycle NVNT ax40 2452MHz MIMO

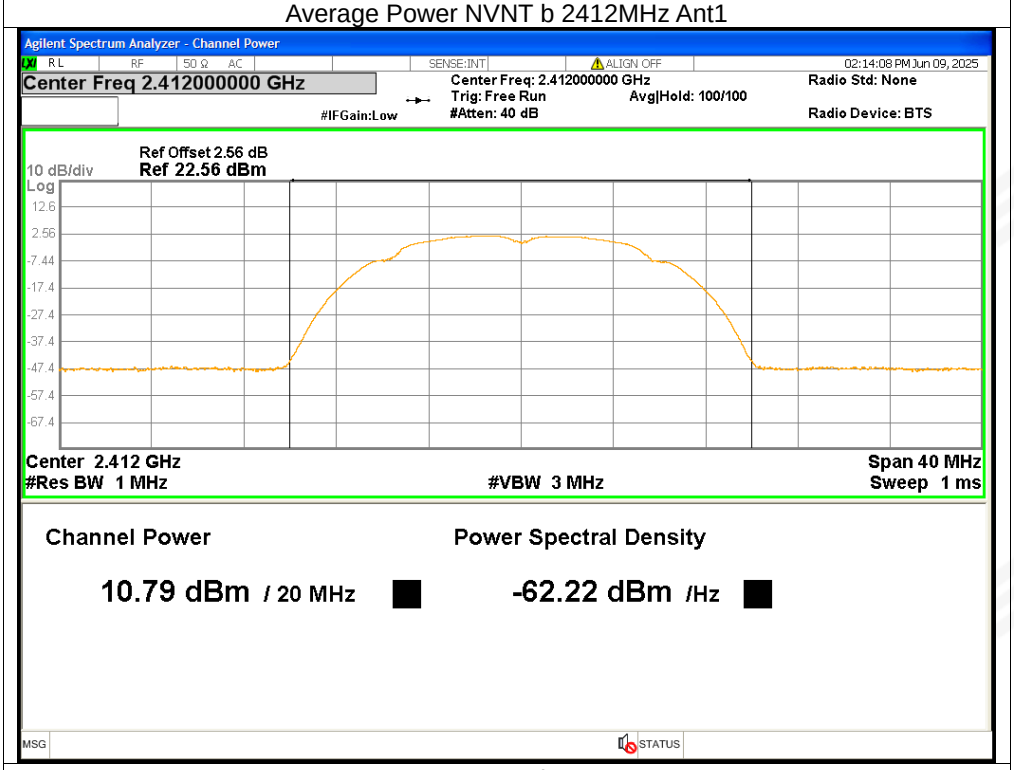


Maximum Average Conducted Output Power

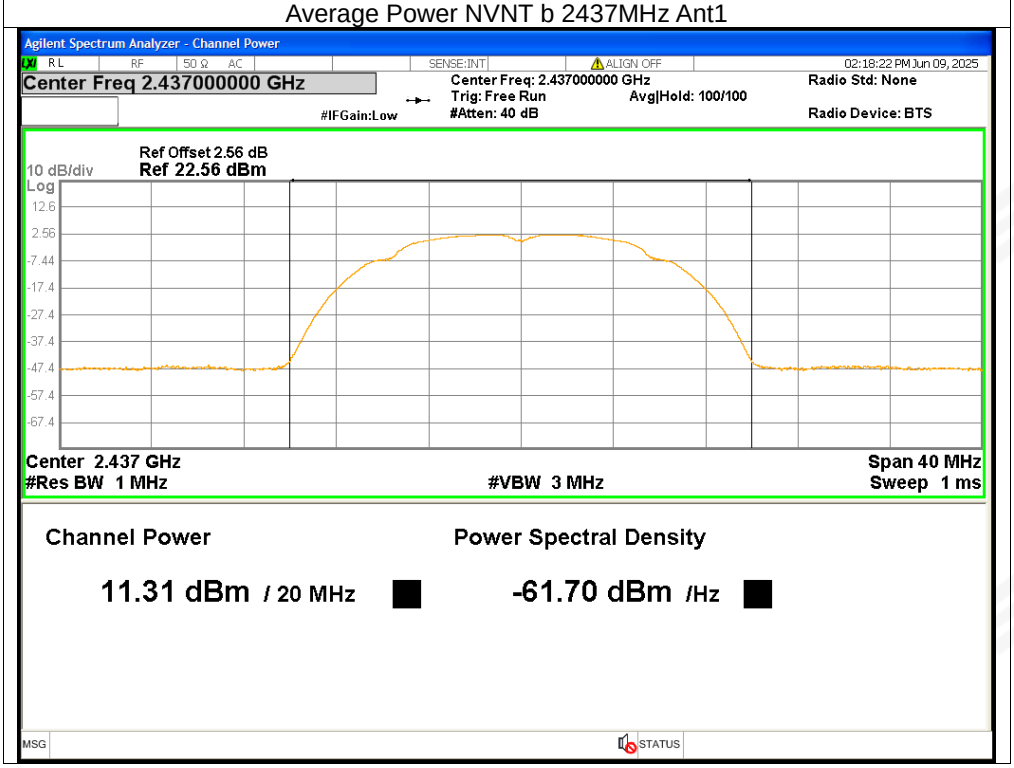
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	10.79	0.02	10.81	<=30	Pass
NVNT	b	2437	Ant1	11.31	0.02	11.33	<=30	Pass
NVNT	b	2462	Ant1	11.43	0.02	11.45	<=30	Pass
NVNT	b	2412	Ant2	10.89	0.02	10.91	<=30	Pass
NVNT	b	2437	Ant2	11.12	0.02	11.14	<=30	Pass
NVNT	b	2462	Ant2	11.14	0.03	11.17	<=30	Pass
NVNT	g	2412	Ant1	7.31	0.98	8.29	<=30	Pass
NVNT	g	2437	Ant1	7.78	0.97	8.75	<=30	Pass
NVNT	g	2462	Ant1	8.02	1.01	9.03	<=30	Pass
NVNT	g	2412	Ant2	7.52	0.99	8.51	<=30	Pass
NVNT	g	2437	Ant2	7.7	0.97	8.67	<=30	Pass
NVNT	g	2462	Ant2	7.76	1.01	8.77	<=30	Pass
NVNT	n20	2412	Ant1	7.68	0.58	8.26	<=30	Pass
NVNT	n20	2412	Ant2	7.7	0.58	8.28	<=30	Pass
NVNT	n20	2412	MIMO	10.7	0.58	11.28	<=30	Pass
NVNT	n20	2437	Ant1	8.13	0.56	8.69	<=30	Pass
NVNT	n20	2437	Ant2	7.95	0.56	8.51	<=30	Pass
NVNT	n20	2437	MIMO	11.05	0.56	11.61	<=30	Pass
NVNT	n20	2462	Ant1	8.28	0.56	8.84	<=30	Pass
NVNT	n20	2462	Ant2	8.03	0.56	8.59	<=30	Pass
NVNT	n20	2462	MIMO	11.17	0.56	11.73	<=30	Pass
NVNT	n40	2422	Ant1	8.32	0.59	8.91	<=30	Pass
NVNT	n40	2422	Ant2	8.34	0.59	8.93	<=30	Pass
NVNT	n40	2422	MIMO	11.34	0.59	11.93	<=30	Pass
NVNT	n40	2437	Ant1	8.51	0.58	9.09	<=30	Pass
NVNT	n40	2437	Ant2	8.54	0.58	9.12	<=30	Pass
NVNT	n40	2437	MIMO	11.54	0.58	12.12	<=30	Pass
NVNT	n40	2452	Ant1	8.6	0.58	9.18	<=30	Pass
NVNT	n40	2452	Ant2	8.42	0.58	9	<=30	Pass
NVNT	n40	2452	MIMO	11.52	0.58	12.1	<=30	Pass
NVNT	ax20	2412	Ant1	7.55	0.76	8.31	<=30	Pass
NVNT	ax20	2412	Ant2	7.78	0.76	8.54	<=30	Pass
NVNT	ax20	2412	MIMO	10.68	0.76	11.44	<=30	Pass
NVNT	ax20	2437	Ant1	8.11	0.72	8.83	<=30	Pass
NVNT	ax20	2437	Ant2	7.91	0.72	8.63	<=30	Pass
NVNT	ax20	2437	MIMO	11.02	0.72	11.74	<=30	Pass
NVNT	ax20	2462	Ant1	8.25	0.77	9.02	<=30	Pass
NVNT	ax20	2462	Ant2	7.98	0.77	8.75	<=30	Pass
NVNT	ax20	2462	MIMO	11.13	0.77	11.9	<=30	Pass
NVNT	ax40	2422	Ant1	8.07	0.67	8.74	<=30	Pass
NVNT	ax40	2422	Ant2	8.06	0.67	8.73	<=30	Pass
NVNT	ax40	2422	MIMO	11.08	0.67	11.75	<=30	Pass
NVNT	ax40	2437	Ant1	8.25	0.66	8.91	<=30	Pass
NVNT	ax40	2437	Ant2	8.17	0.66	8.83	<=30	Pass
NVNT	ax40	2437	MIMO	11.22	0.66	11.88	<=30	Pass
NVNT	ax40	2452	Ant1	8.31	0.67	8.98	<=30	Pass
NVNT	ax40	2452	Ant2	8.21	0.67	8.88	<=30	Pass
NVNT	ax40	2452	MIMO	11.27	0.67	11.94	<=30	Pass

Test Graphs

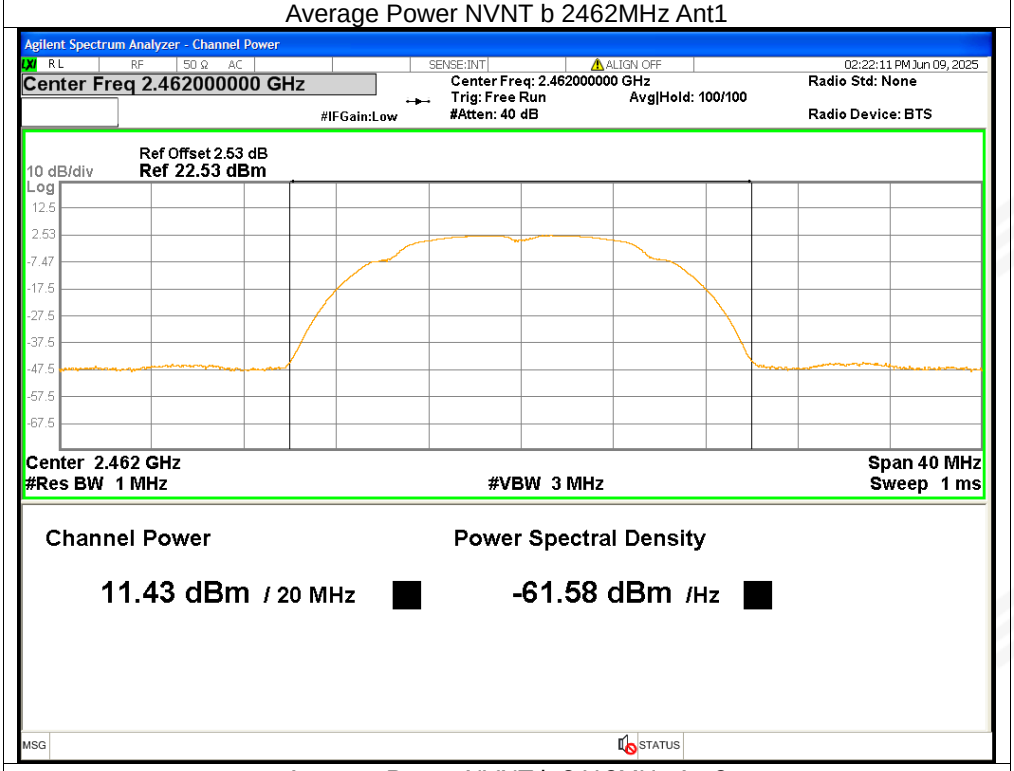
Average Power NVNT b 2412MHz Ant1



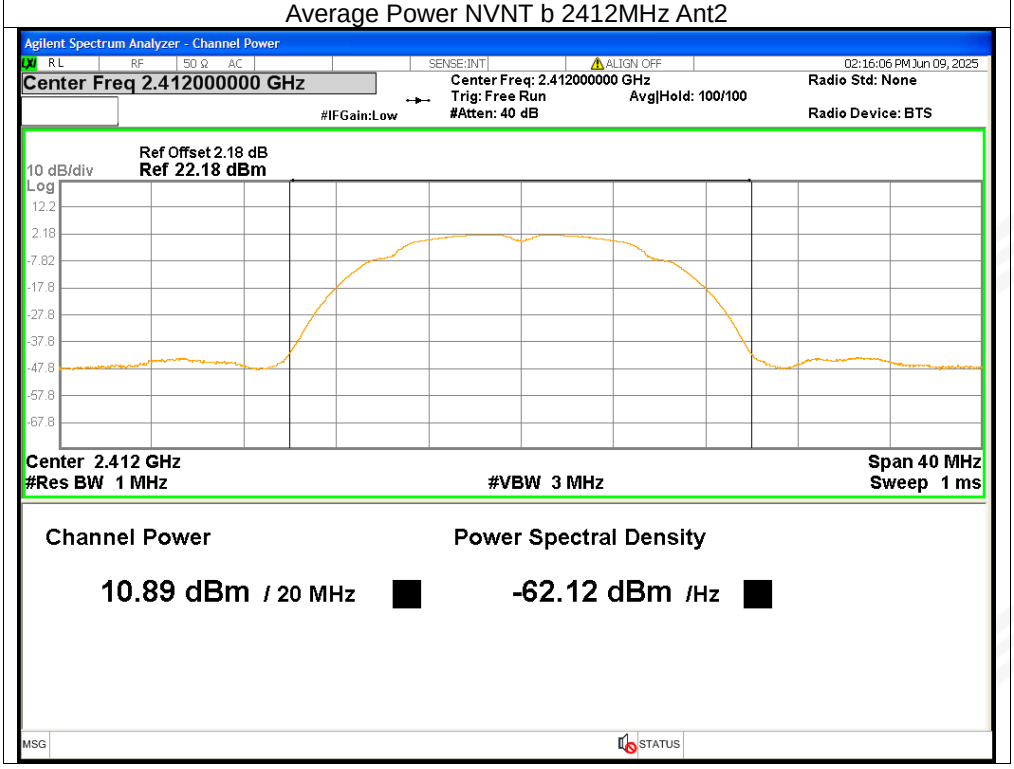
Average Power NVNT b 2437MHz Ant1



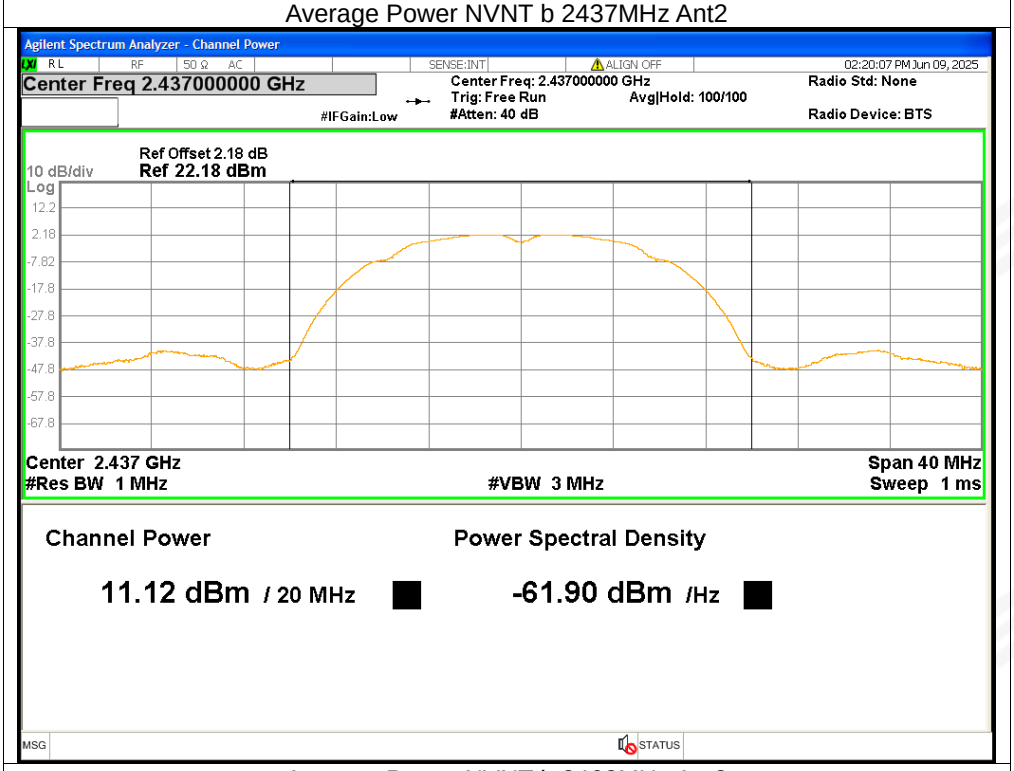
Average Power NVNT b 2462MHz Ant1



Average Power NVNT b 2412MHz Ant2



Average Power NVNT b 2437MHz Ant2



Average Power NVNT b 2462MHz Ant2