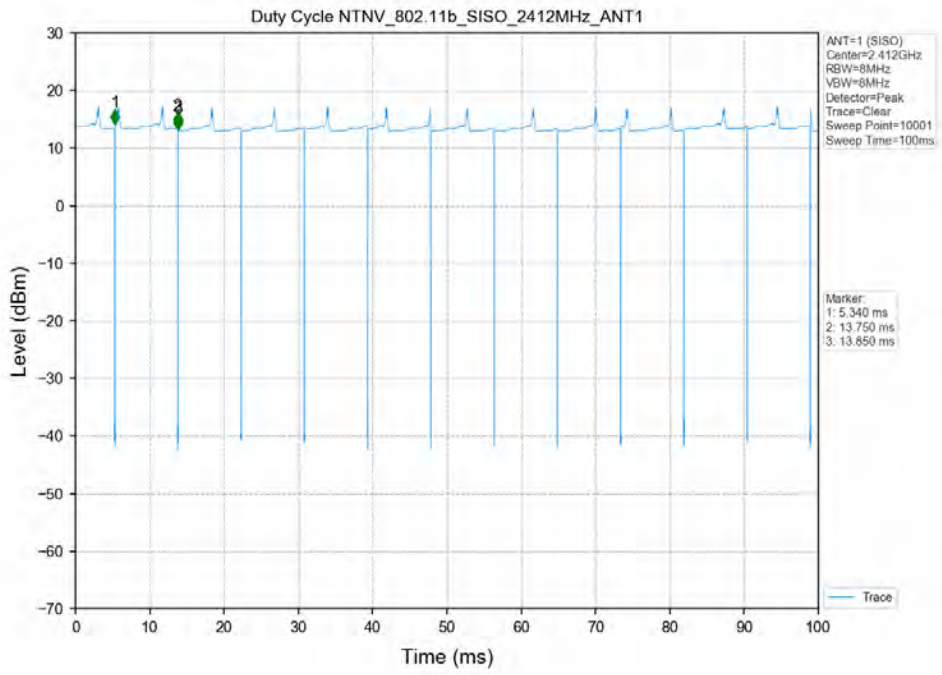
Appendix C for SHEM200300180803

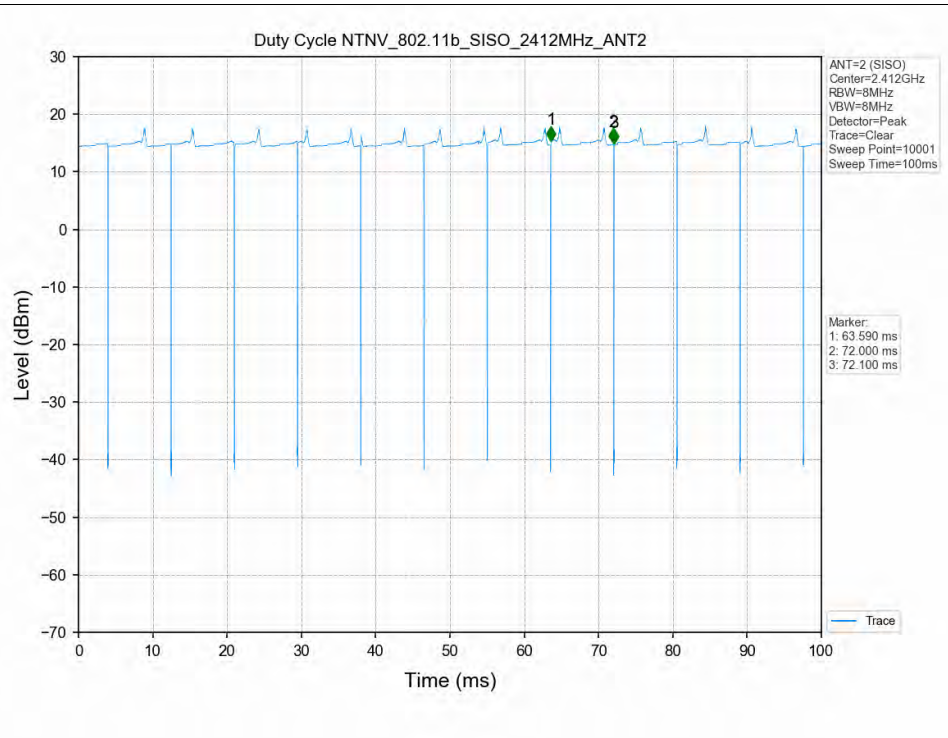
1. Duty Cycle

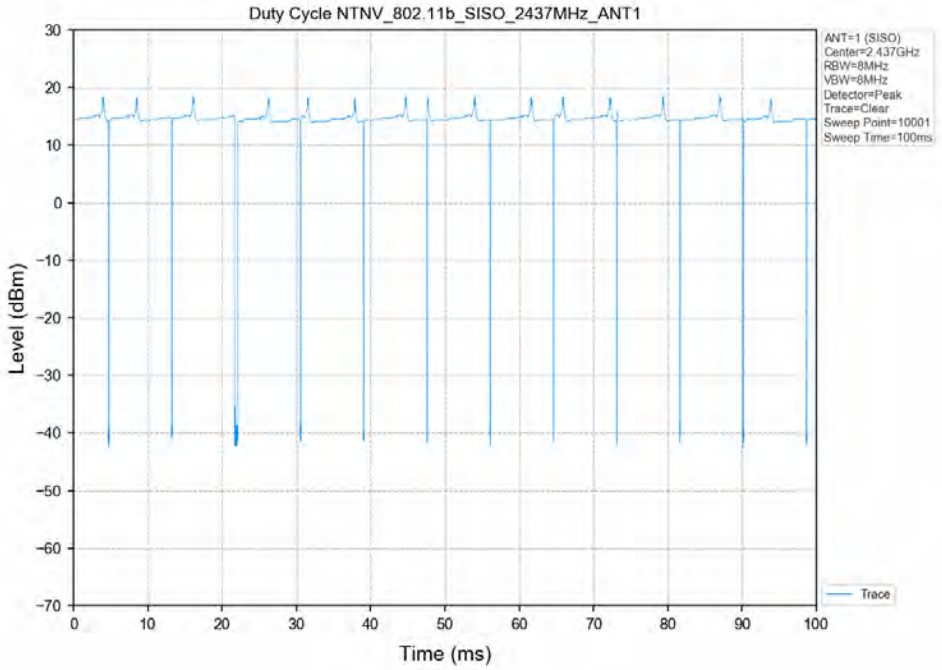
1.1 Test Result

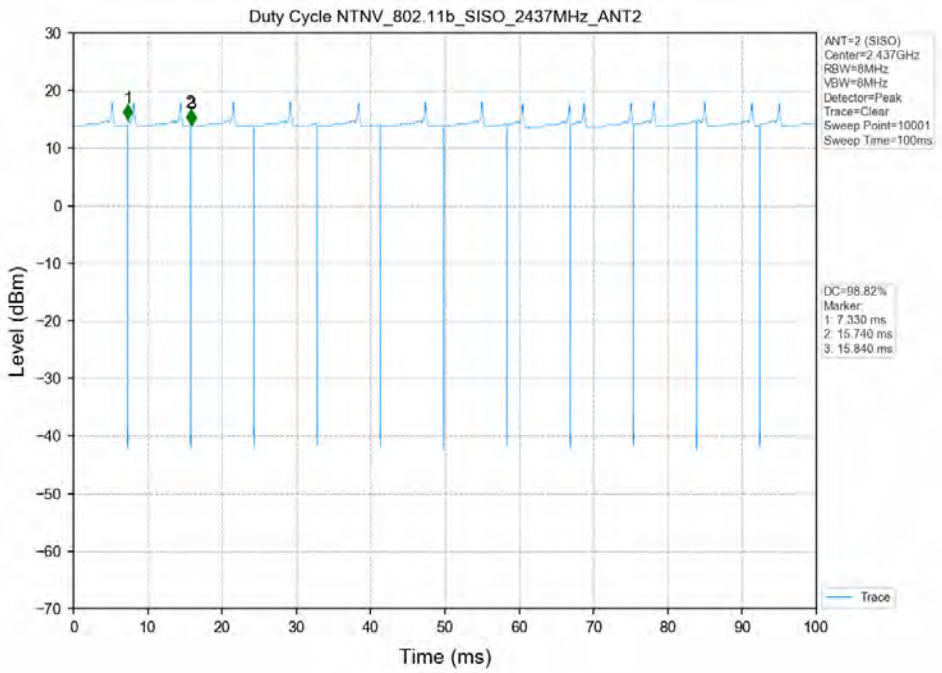
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	8.410	8.510	98.82	0.05
			2	8.410	8.510	98.82	0.05
	2437	SISO	1	8.410	8.510	98.82	0.00
			2	8.410	8.510	98.82	0.05
	2462	SISO	1	8.410	8.510	98.82	0.05
			2	8.410	8.510	98.82	0.05
802.11g	2412	SISO	1	1.365	1.463	93.30	0.30
			2	1.366	1.463	93.37	0.30
	2437	SISO	1	1.366	1.463	93.37	0.30
			2	1.364	1.462	93.30	0.30
	2462	SISO	1	1.366	1.463	93.37	0.30
			2	1.364	1.462	93.30	0.30
802.11n(HT20)	2412	MIMO	1	1.308	1.409	92.83	0.32
			2	1.308	1.408	92.90	0.32
	2437	MIMO	1	1.308	1.408	92.90	0.32
			2	1.307	1.408	92.83	0.32
	2462	MIMO	1	1.308	1.408	92.90	0.32
			2	1.307	1.408	92.83	0.32

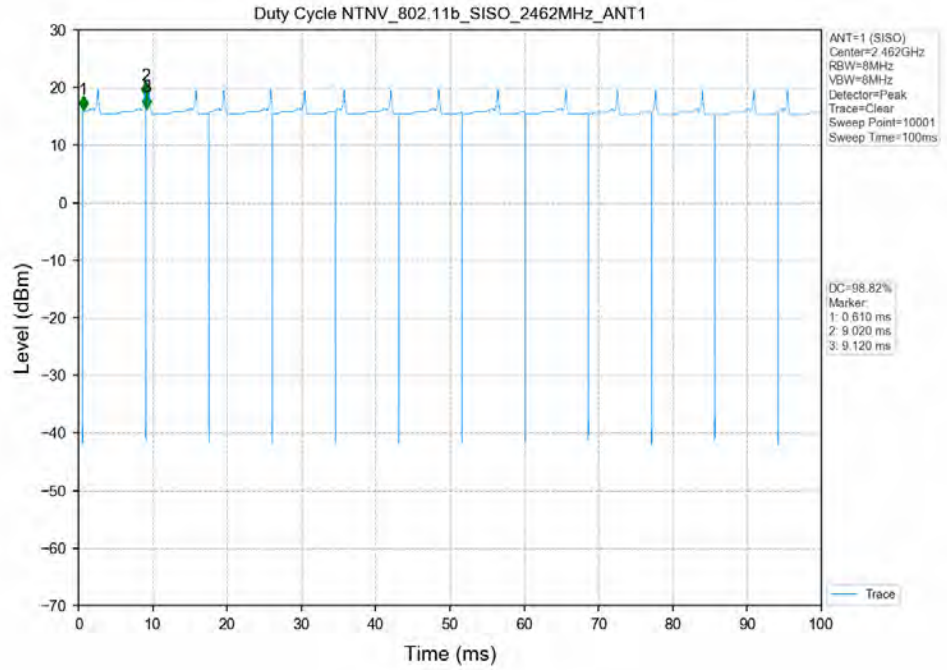
1.2 Test Graph

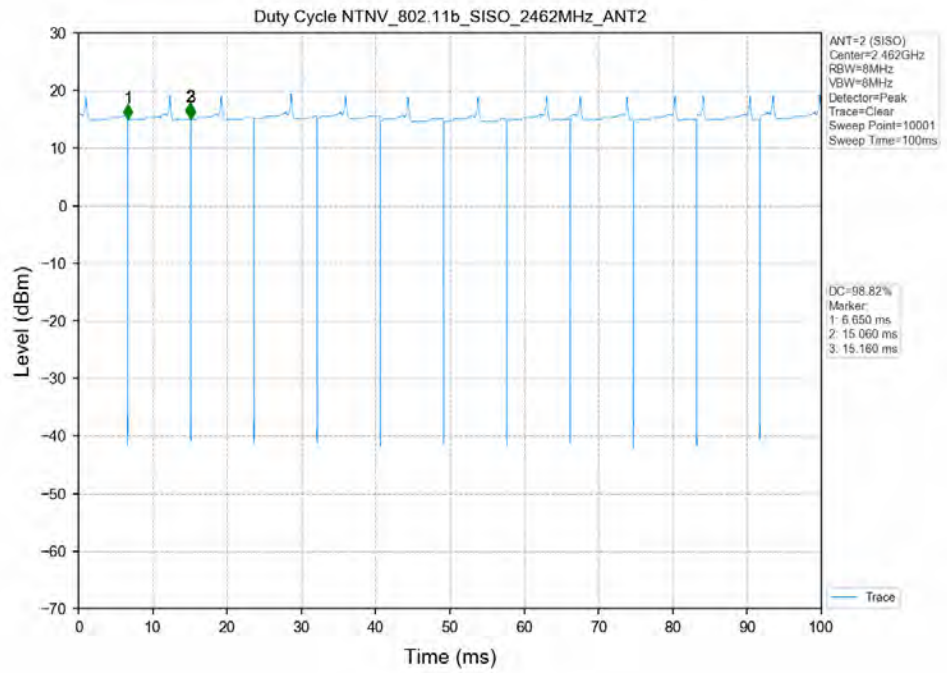


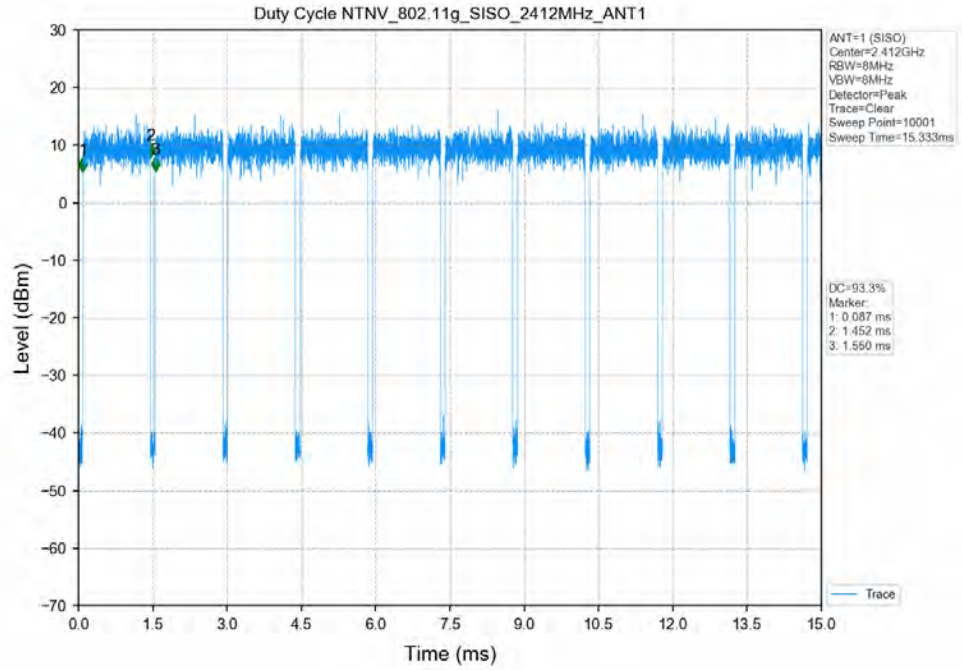


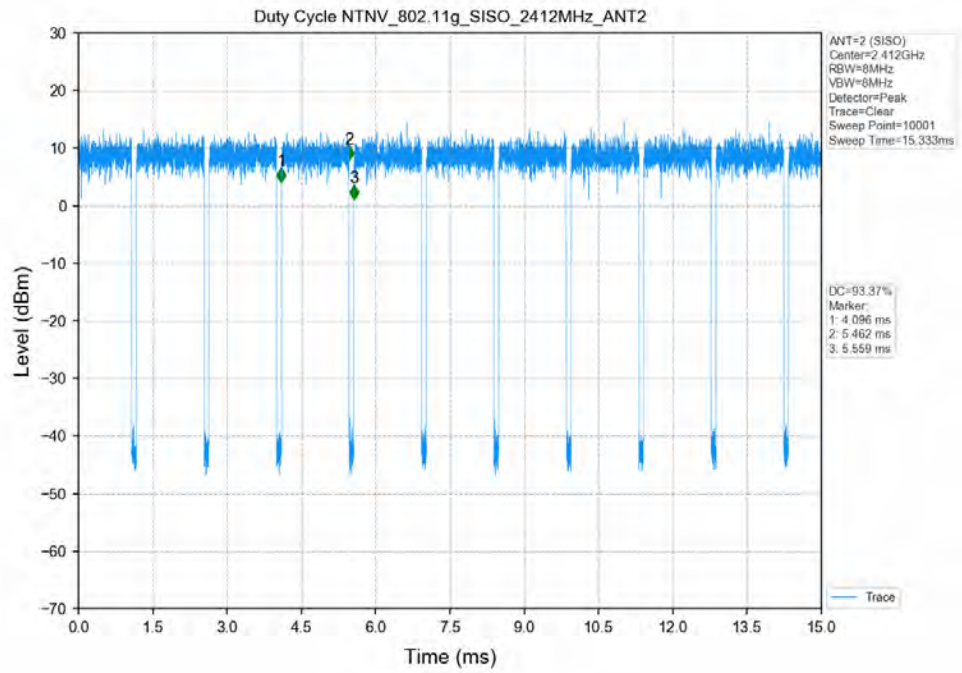

Duty Cycle NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=100ms
Trace
Level (dBm)
Time (ms)

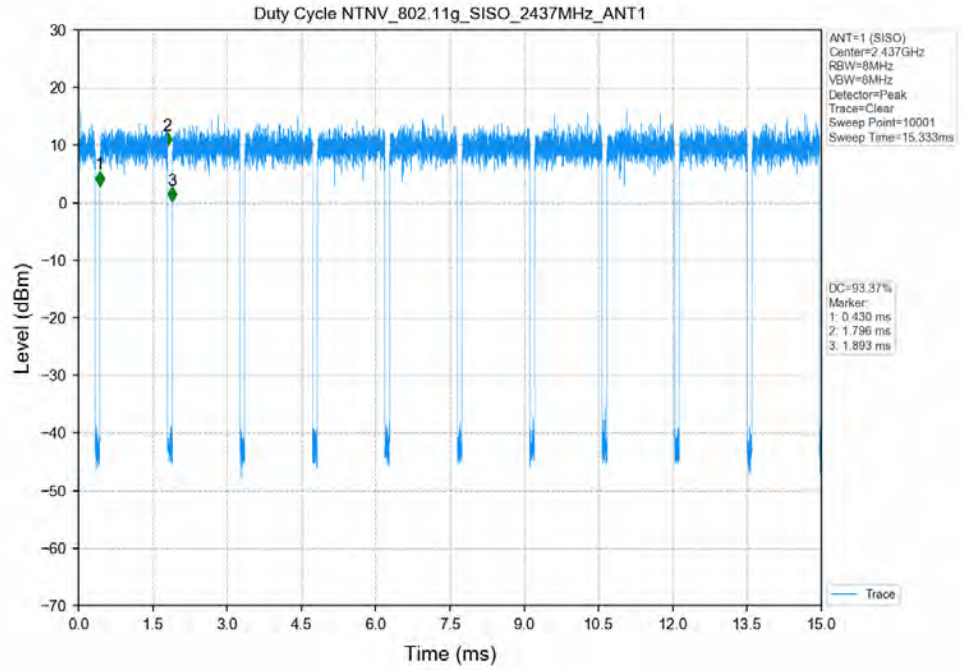

Duty Cycle NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=100ms
DC=98.82%
Marker:
1: 7.330 ms
2: 15.740 ms
3: 15.840 ms
Trace
Level (dBm)
Time (ms)

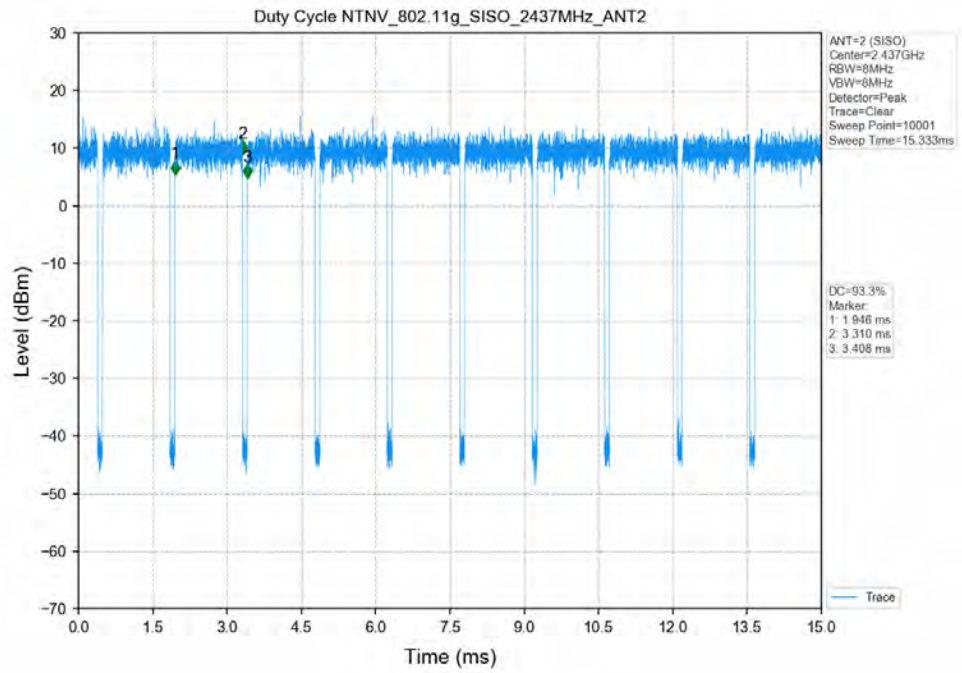

Duty Cycle NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=100ms
DC=98.82%
Marker
1: 0.610 ms
2: 9.020 ms
3: 9.120 ms
Trace
Level (dBm)
Time (ms)

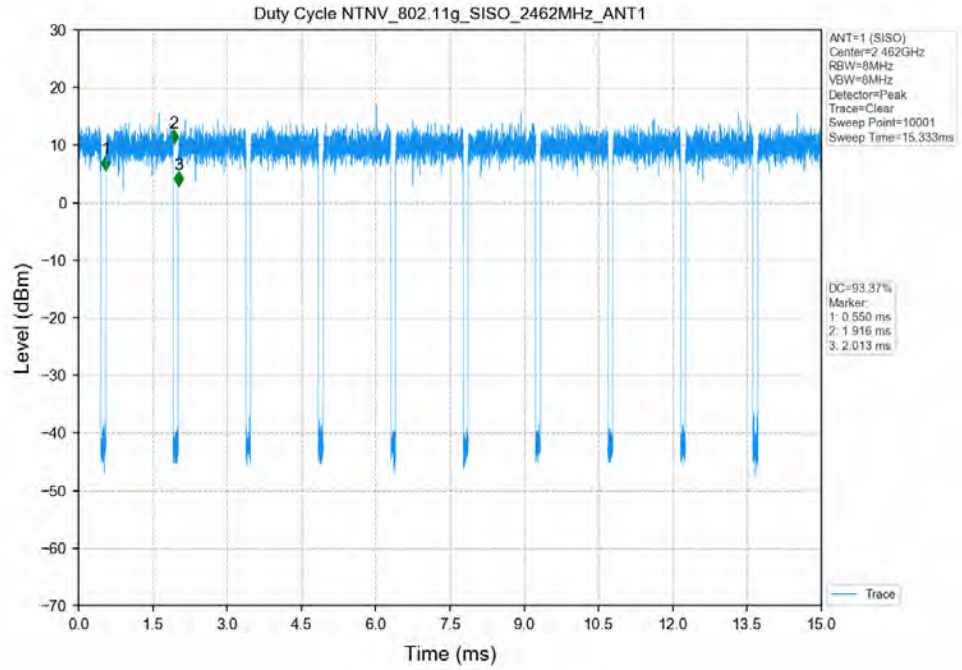

Duty Cycle NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=100ms
DC=98.82%
Marker
1: 6.650 ms
2: 15.060 ms
3: 15.160 ms
Trace
Level (dBm)
Time (ms)

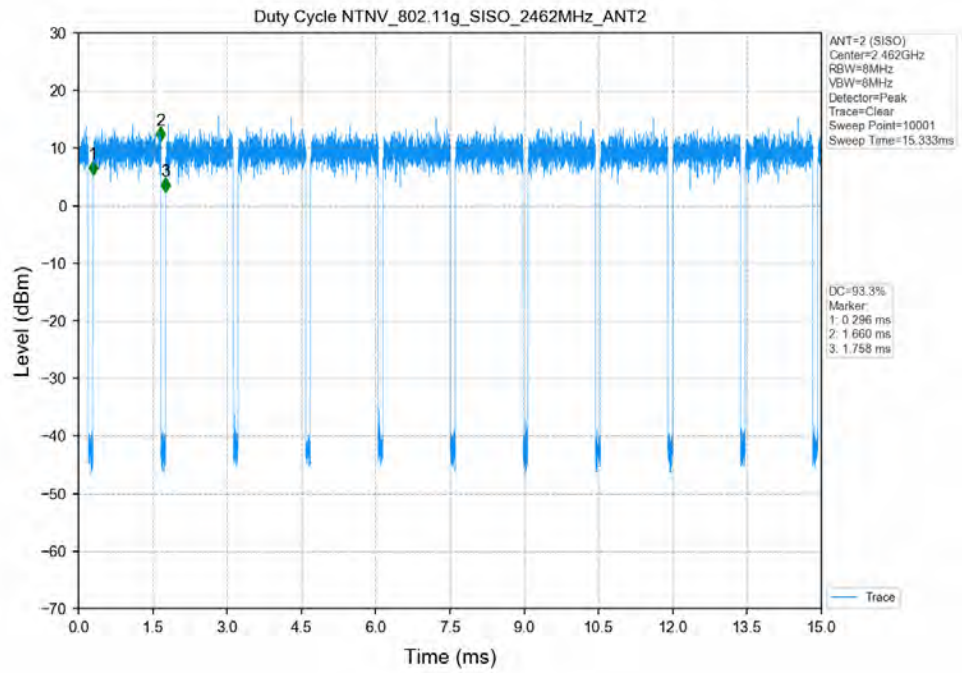

Duty Cycle NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.3%
Marker
1: 0.087 ms
2: 1.452 ms
3: 1.550 ms
Trace
Level (dBm)
Time (ms)

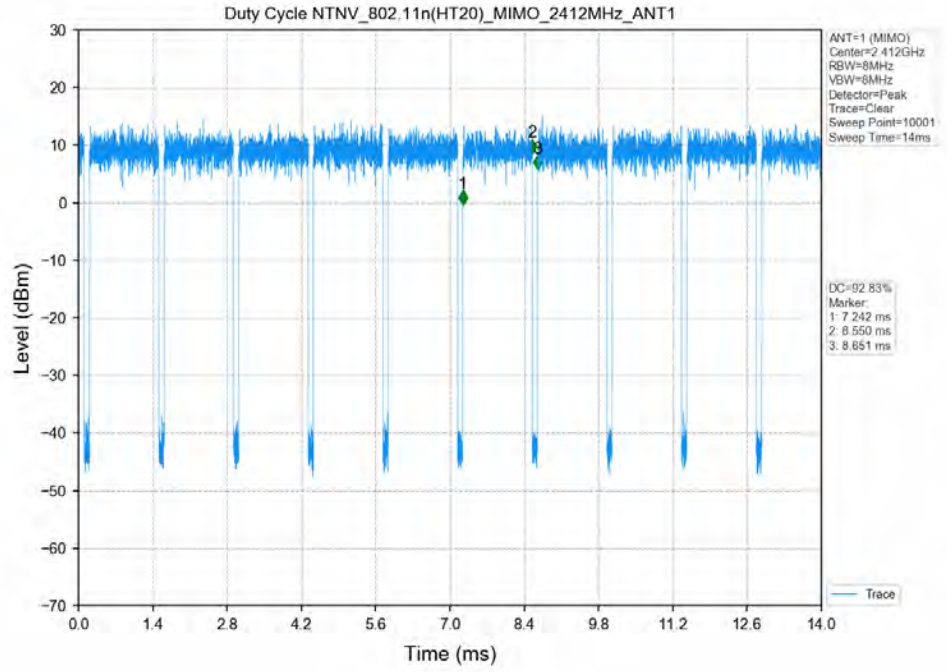

Duty Cycle NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.37%
Marker
1: 4.096 ms
2: 5.462 ms
3: 5.559 ms
Trace
Level (dBm)
Time (ms)

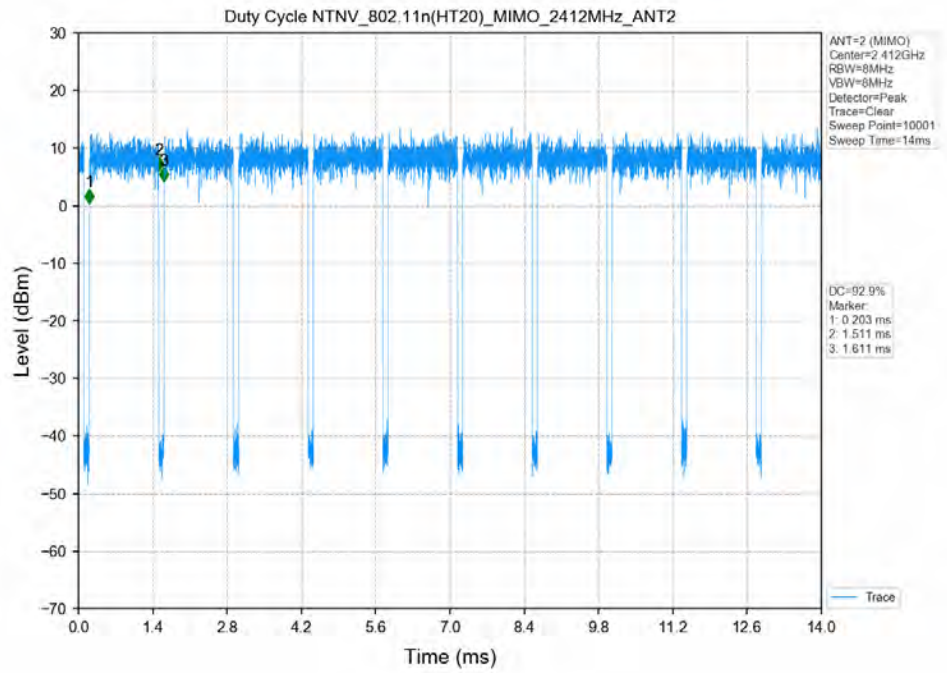

Duty Cycle NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.37%
Marker
1: 0.430 ms
2: 1.796 ms
3: 1.893 ms
Trace
Level (dBm)
Time (ms)

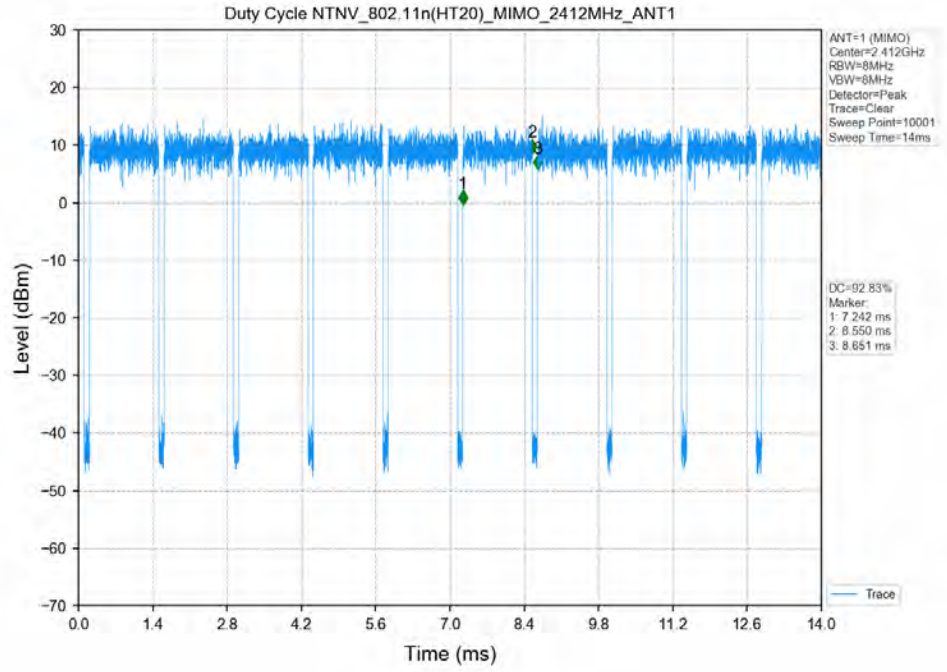

Duty Cycle NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.3%
Marker
1: 1.946 ms
2: 3.310 ms
3: 3.408 ms
Trace
Level (dBm)
Time (ms)

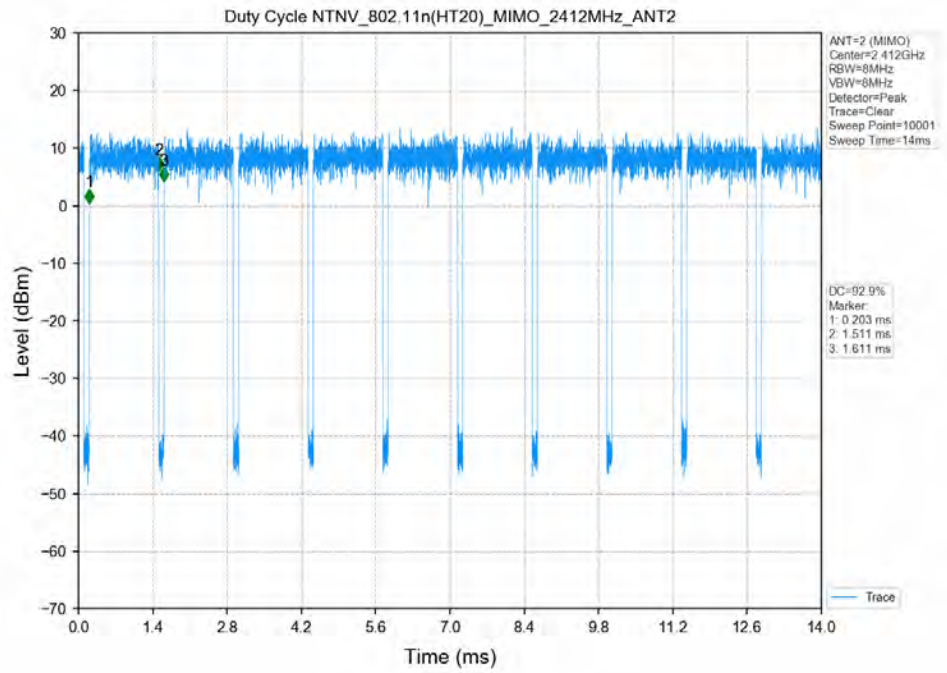

Duty Cycle NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.37%
Marker
1: 0.550 ms
2: 1.916 ms
3: 2.013 ms
Trace
Level (dBm)
Time (ms)

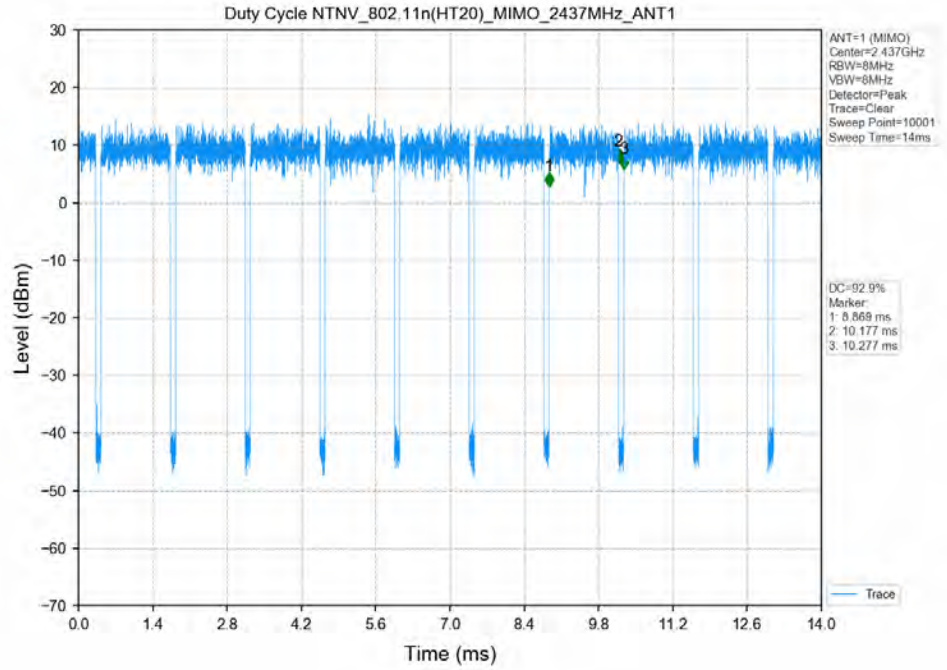

Duty Cycle NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=15.333ms
DC=93.3%
Marker
1: 0.296 ms
2: 1.660 ms
3: 1.758 ms
Trace
Level (dBm)
Time (ms)

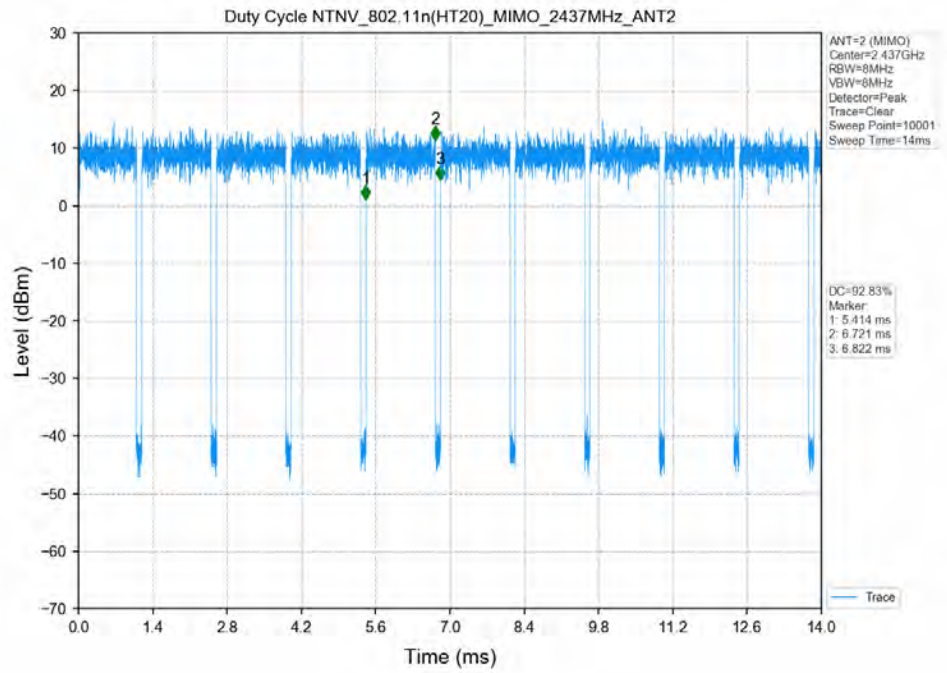

Duty Cycle NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 7.242 ms
2: 8.550 ms
3: 8.651 ms
Trace
Level (dBm)
Time (ms)

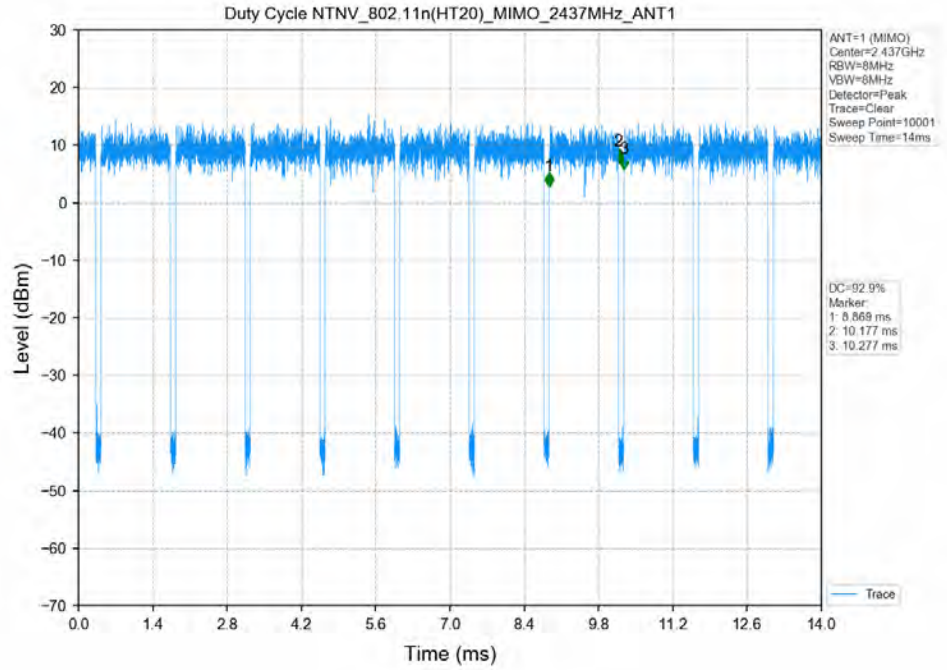

Duty Cycle NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 0.203 ms
2: 1.511 ms
3: 1.611 ms
Trace
Level (dBm)
Time (ms)

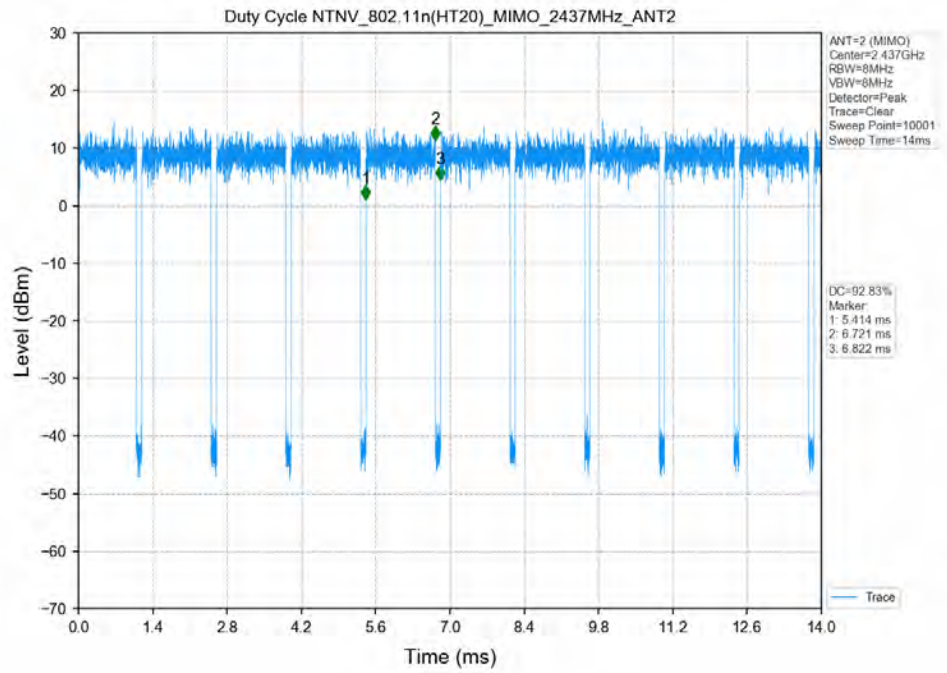

Duty Cycle NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 7.242 ms
2: 8.550 ms
3: 8.651 ms
Trace
Level (dBm)
Time (ms)

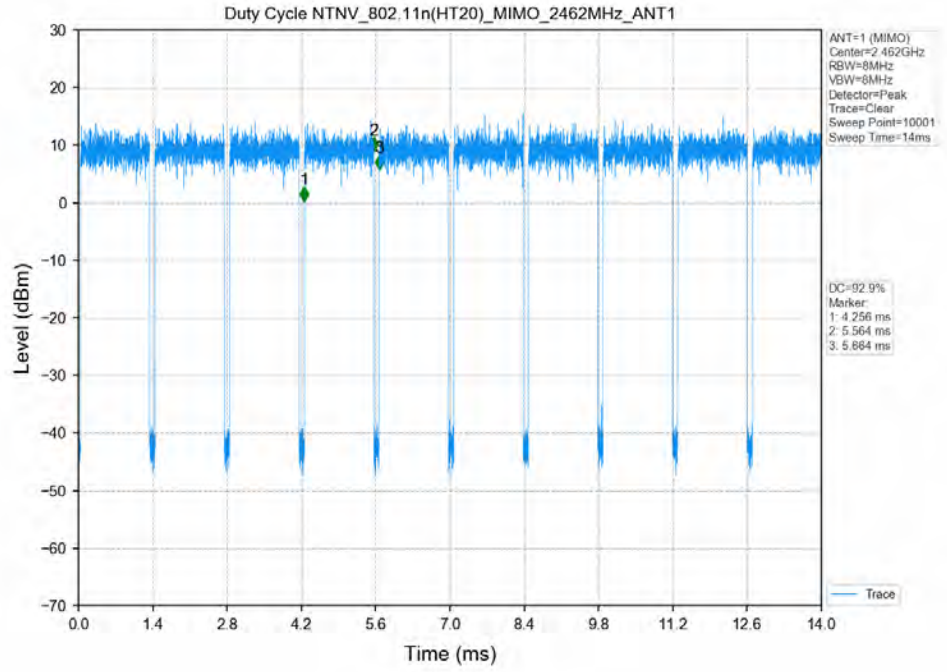

Duty Cycle NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
Center=2.412GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 0.203 ms
2: 1.511 ms
3: 1.611 ms
Trace
Level (dBm)
Time (ms)

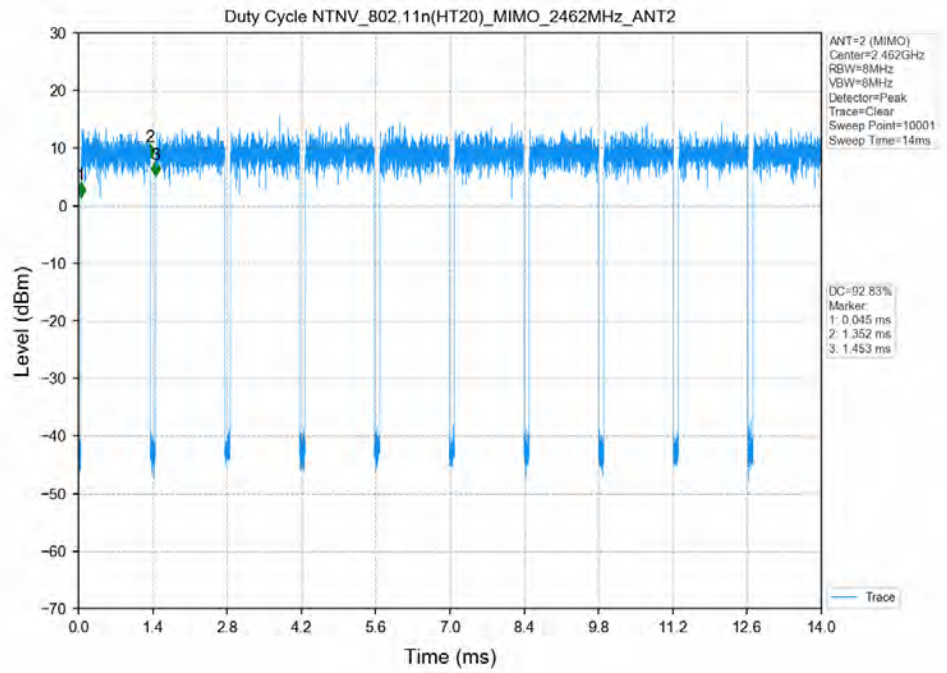

Duty Cycle NTNV_802.11n(HT20)_MIMO_2437MHz_ANT1
ANT=1 (MIMO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 8.869 ms
2: 10.177 ms
3: 10.277 ms
Trace
Level (dBm)
Time (ms)

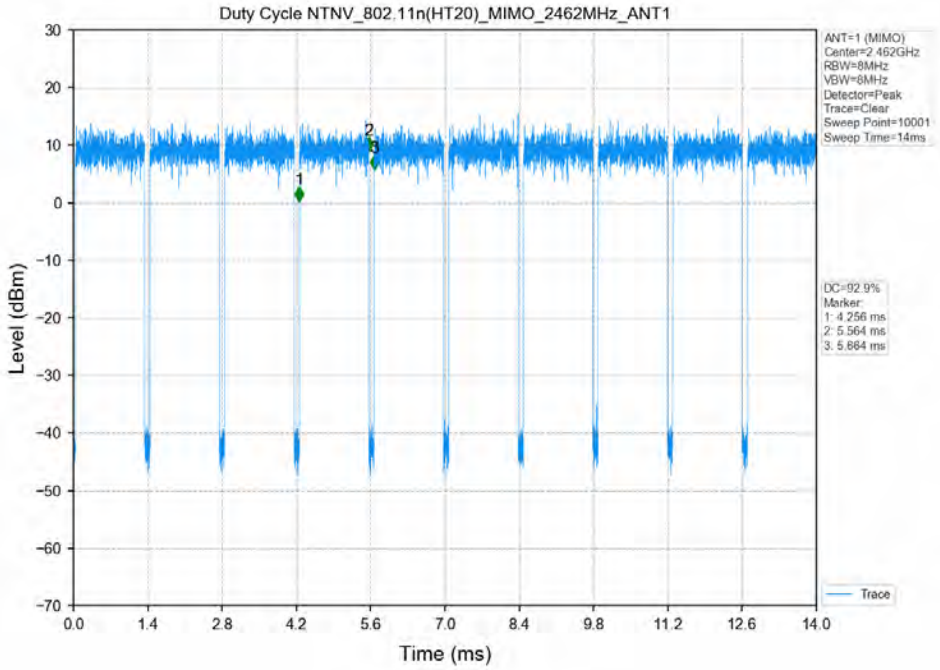

Duty Cycle NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 5.414 ms
2: 6.721 ms
3: 6.822 ms
Trace
Level (dBm)
Time (ms)

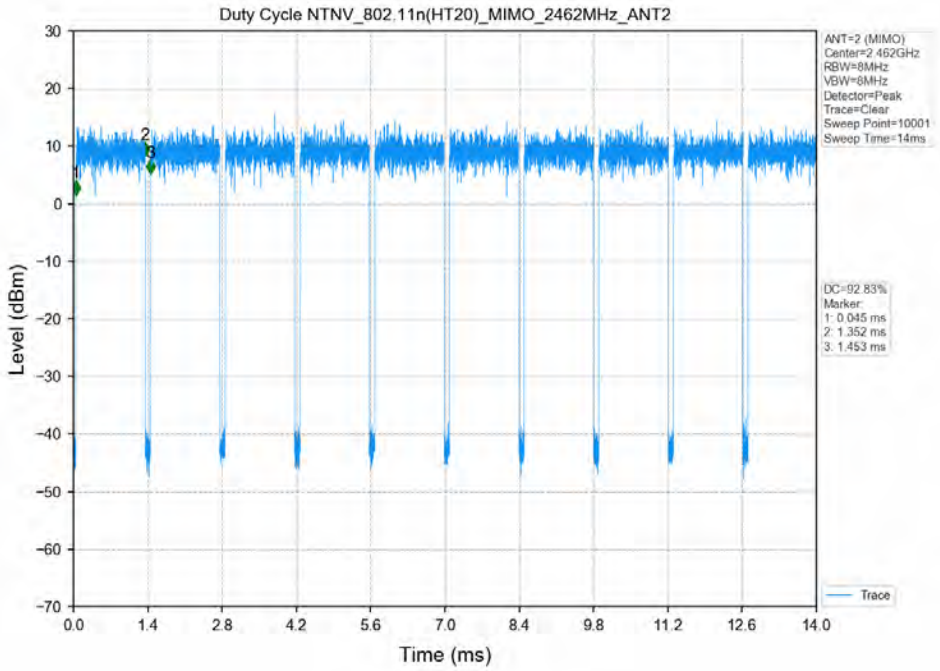

Duty Cycle NTNV_802.11n(HT20)_MIMO_2437MHz_ANT1
ANT=1 (MIMO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 8.869 ms
2: 10.177 ms
3: 10.277 ms
Trace
Level (dBm)
Time (ms)


Duty Cycle NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
Center=2.437GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 5.414 ms
2: 6.721 ms
3: 6.822 ms
Trace
Level (dBm)
Time (ms)


Duty Cycle NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 4.256 ms
2: 5.564 ms
3: 5.664 ms
Trace
Level (dBm)
Time (ms)
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0.0
1.4
2.8
4.2
5.6
7.0
8.4
9.8
11.2
12.6
14.0


Duty Cycle NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 0.045 ms
2: 1.352 ms
3: 1.453 ms
Trace
Level (dBm)
Time (ms)
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0.0
1.4
2.8
4.2
5.6
7.0
8.4
9.8
11.2
12.6
14.0


Duty Cycle NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.9%
Marker
1: 4.256 ms
2: 5.564 ms
3: 5.664 ms
Trace
Level (dBm)
Time (ms)
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0.0
1.4
2.8
4.2
5.6
7.0
8.4
9.8
11.2
12.6
14.0


Duty Cycle NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
Center=2.462GHz
RBW=8MHz
VBW=8MHz
Detector=Peak
Trace=Clear
Sweep Point=10001
Sweep Time=14ms
DC=92.83%
Marker
1: 0.045 ms
2: 1.352 ms
3: 1.453 ms
Trace
Level (dBm)
Time (ms)
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0.0
1.4
2.8
4.2
5.6
7.0
8.4
9.8
11.2
12.6
14.0

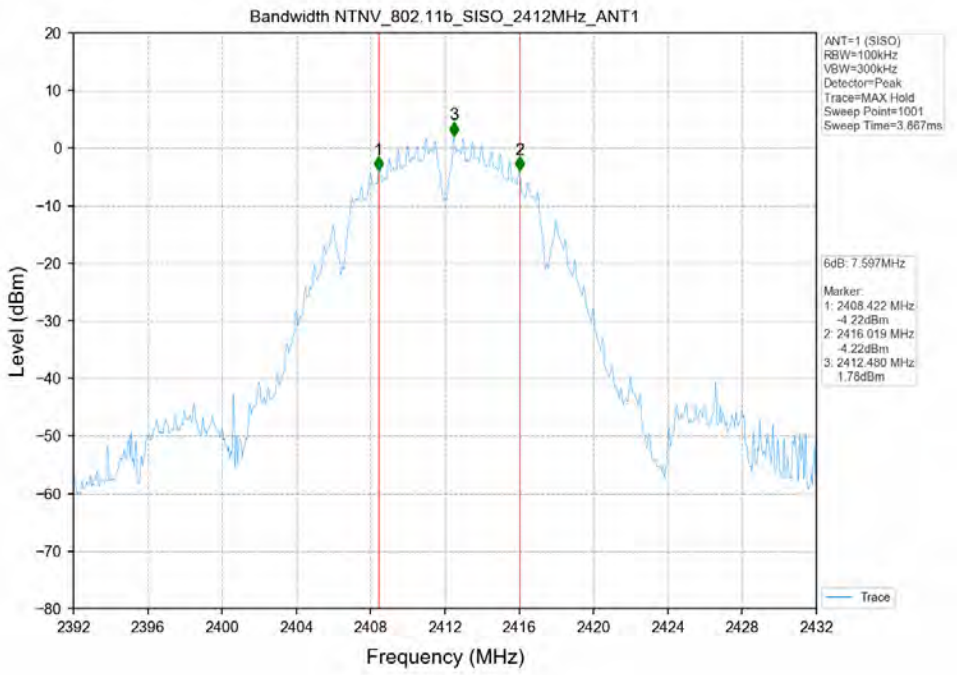
2. Bandwidth

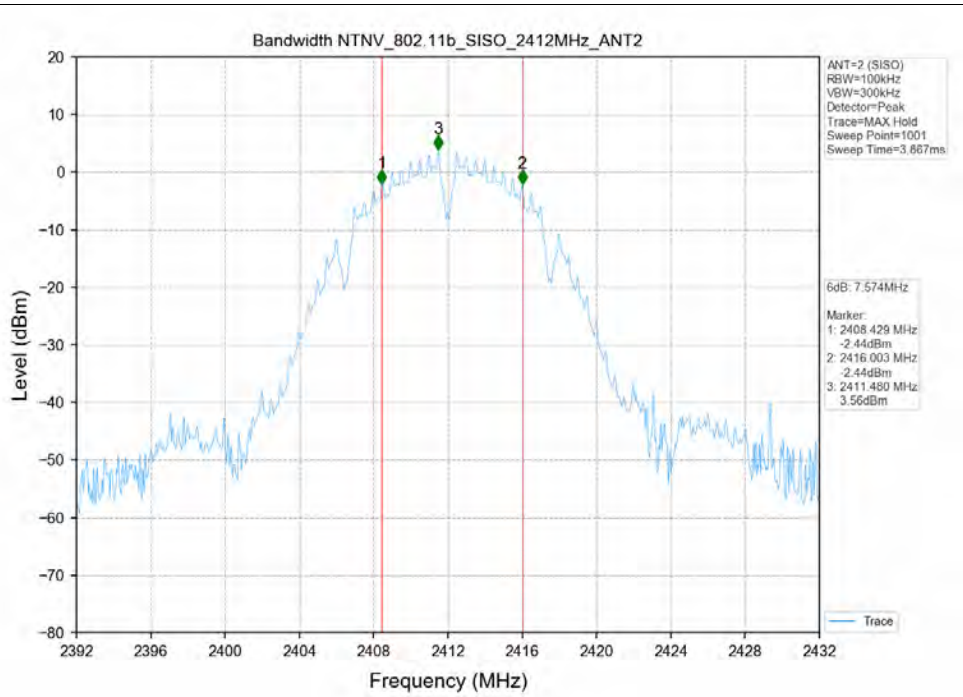
2.1 Test Result

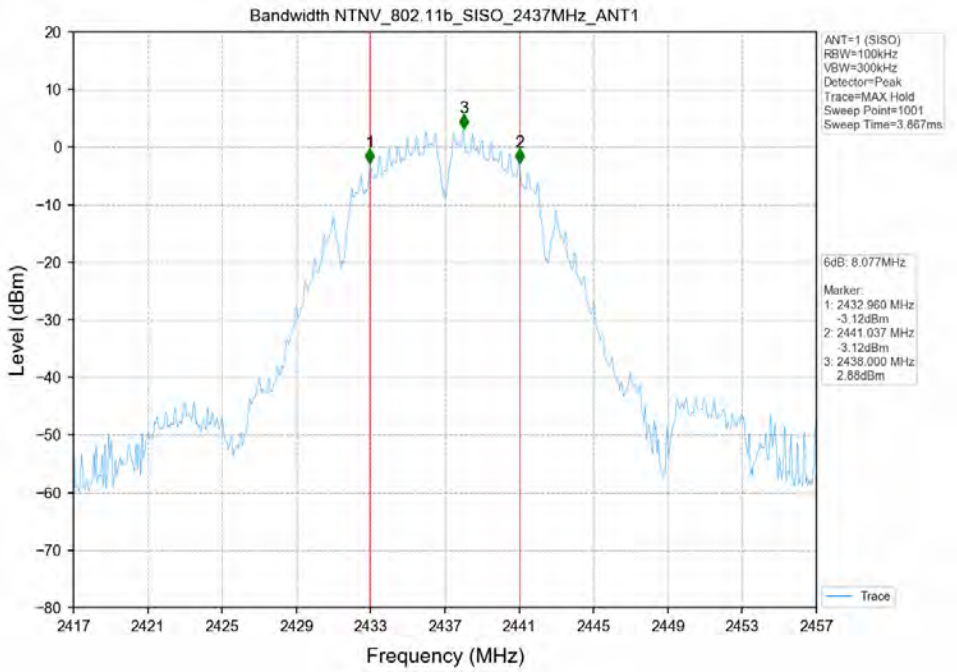
Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth	1.5*BW(MHz)	Limits (MHz)	Span using in Power (MHz)	Span using in PSD (MHz)	Verdict
				Test Result (MHz)					
802.11b	2412	SISO	1	7.597	11.396	≥0.5	16.00	12.00	PASS
			2	7.574	11.361	≥0.5	16.00	12.00	PASS
	2437	SISO	1	8.077	12.116	≥0.5	14.00	13.00	PASS
			2	8.068	12.102	≥0.5	14.00	13.00	PASS
	2462	SISO	1	7.145	10.718	≥0.5	16.00	11.00	PASS
			2	7.122	10.683	≥0.5	16.00	11.00	PASS
802.11g	2412	SISO	1	16.368	24.552	≥0.5	25.00	25.00	PASS
			2	16.380	24.570	≥0.5	25.00	25.00	PASS
	2437	SISO	1	16.384	24.576	≥0.5	25.00	25.00	PASS
			2	16.349	24.524	≥0.5	25.00	25.00	PASS
	2462	SISO	1	16.361	24.542	≥0.5	25.00	25.00	PASS
			2	16.359	24.539	≥0.5	25.00	25.00	PASS
802.11n(HT20)	2412	MIMO	1	17.601	26.402	≥0.5	27.00	27.00	PASS
	2412	MIMO	2	17.601	26.402	≥0.5	27.00	27.00	PASS
	2437	MIMO	1	17.638	26.457	≥0.5	27.00	27.00	PASS
	2437	MIMO	2	17.638	26.457	≥0.5	27.00	27.00	PASS
	2462	MIMO	1	17.623	26.435	≥0.5	27.00	27.00	PASS
	2462	MIMO	2	17.623	26.435	≥0.5	27.00	27.00	PASS

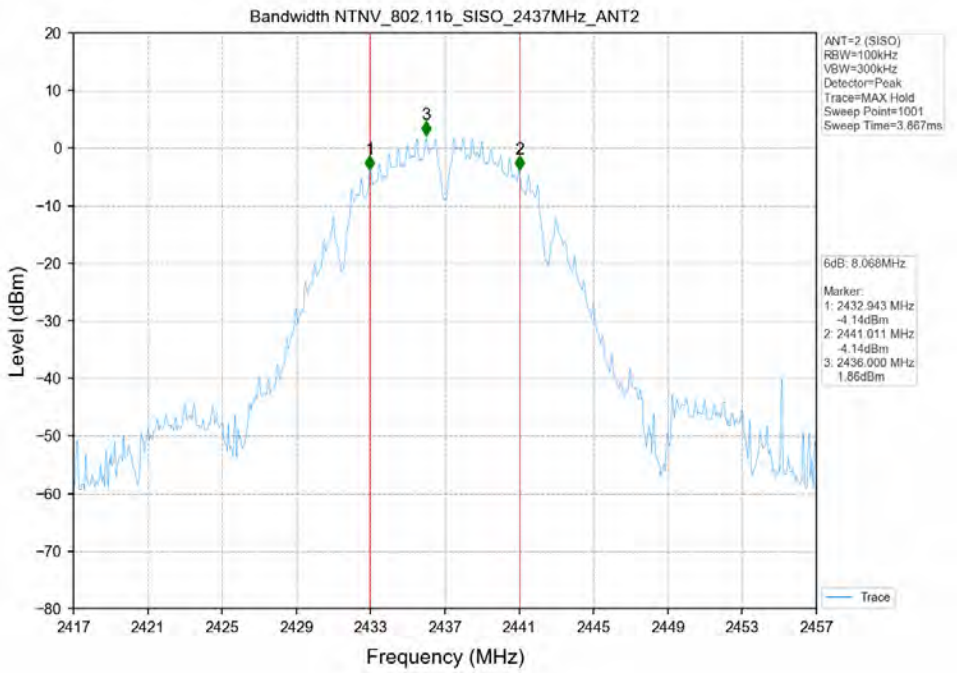
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	11.728	Only for Report Use
			2	11.758	Only for Report Use
	2437	SISO	1	11.751	Only for Report Use
			2	11.760	Only for Report Use
	2462	SISO	1	11.802	Only for Report Use
			2	11.825	Only for Report Use
802.11g	2412	SISO	1	16.893	Only for Report Use
			2	16.929	Only for Report Use
	2437	SISO	1	16.952	Only for Report Use
			2	16.897	Only for Report Use
	2462	SISO	1	16.930	Only for Report Use
			2	16.941	Only for Report Use
802.11n(HT20)	2412	MIMO	1	17.853	Only for Report Use
	2412	MIMO	2	17.853	Only for Report Use
	2437	MIMO	1	17.829	Only for Report Use
	2437	MIMO	2	17.829	Only for Report Use
	2462	MIMO	1	17.828	Only for Report Use
	2462	MIMO	2	17.828	Only for Report Use

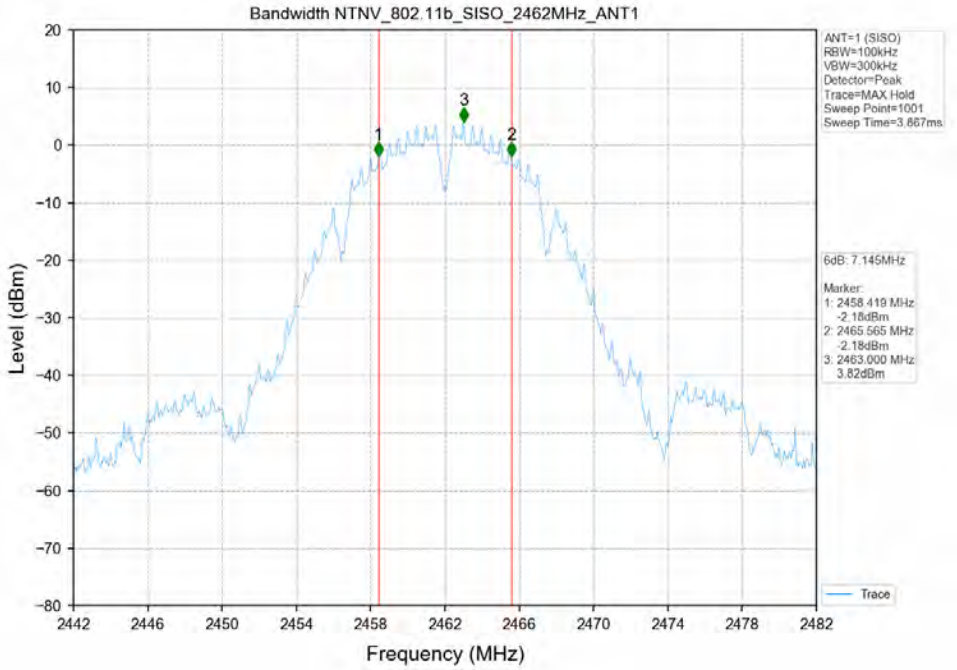
2.2 Test Graph - 6dB Bandwidth

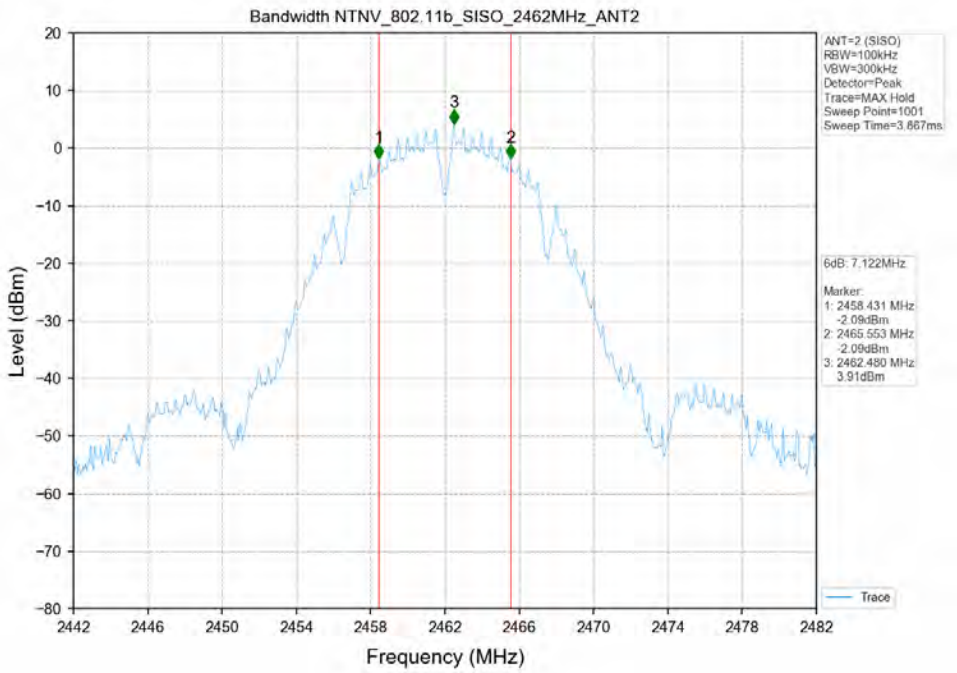


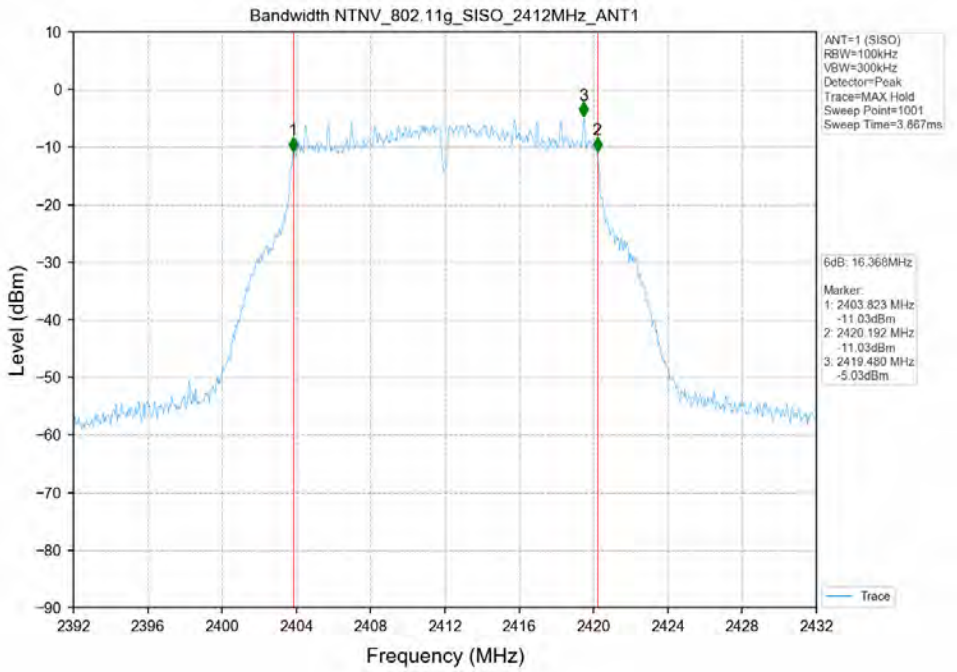


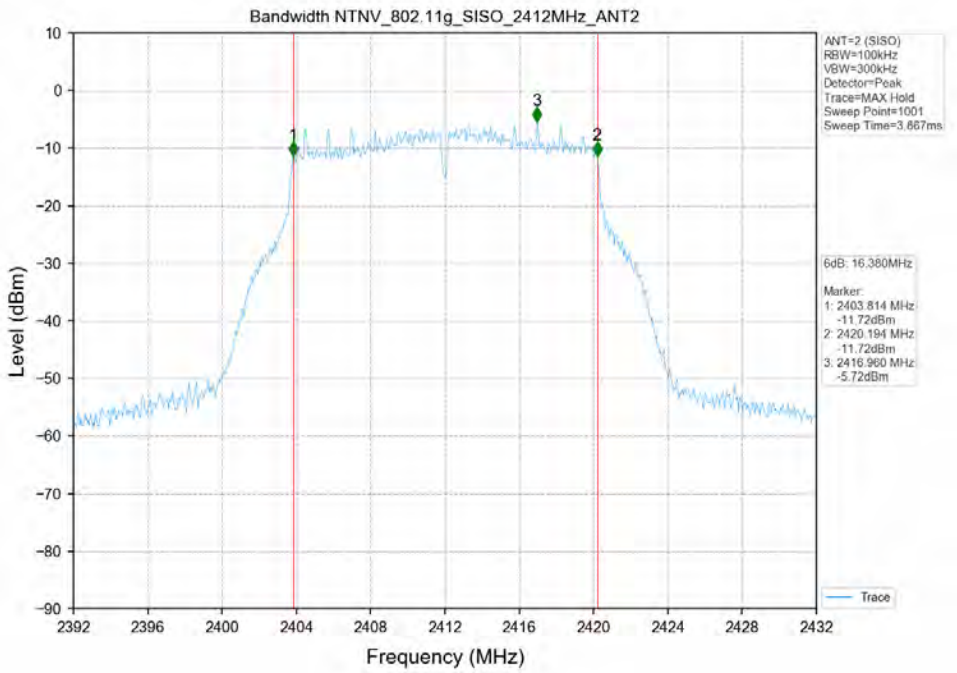

Bandwidth NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.867ms
6dB: 8.077MHz
Marker:
1: 2432.960 MHz
-3.12dBm
2: 2441.037 MHz
-3.12dBm
3: 2438.000 MHz
2.88dBm
Trace
Level (dBm)
Frequency (MHz)

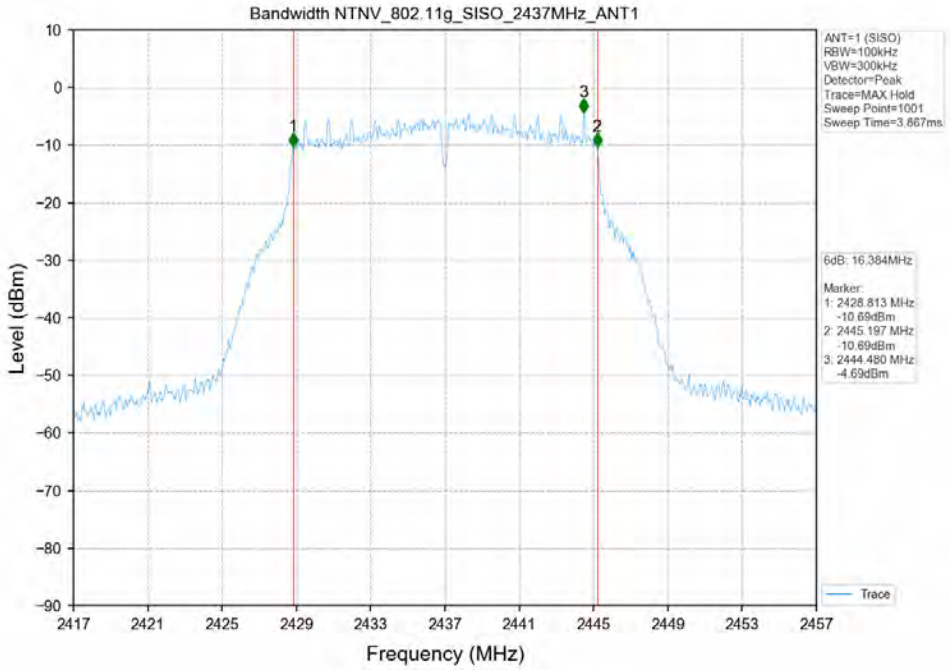

Bandwidth NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.867ms
6dB: 8.068MHz
Marker:
1: 2432.943 MHz
-4.14dBm
2: 2441.011 MHz
-4.14dBm
3: 2436.000 MHz
1.86dBm
Trace
Level (dBm)
Frequency (MHz)

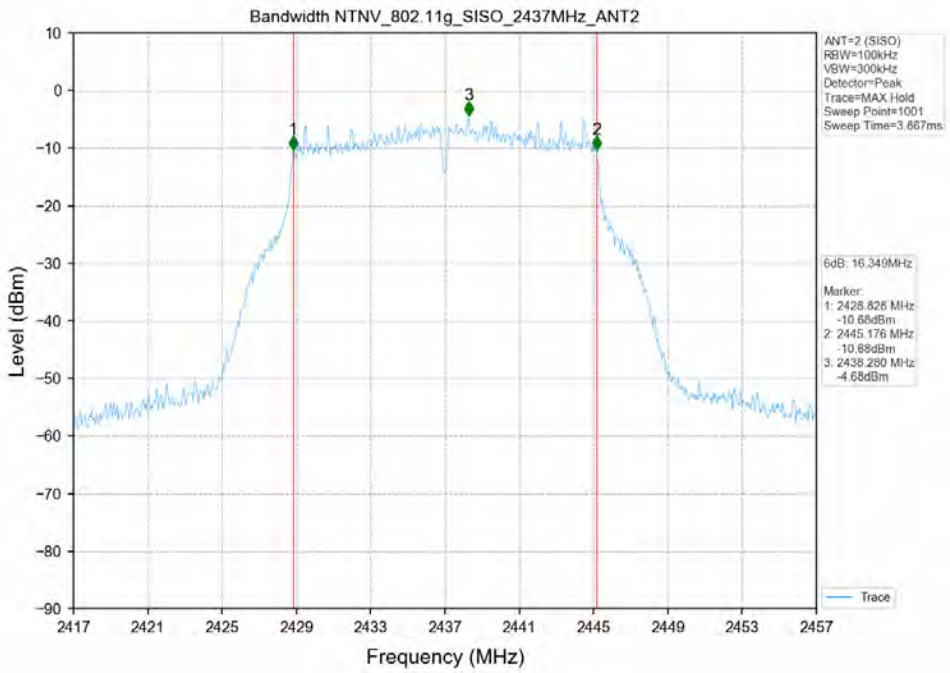

Bandwidth NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.867ms
6dB: 7.145MHz
Marker:
1: 2458.419 MHz
-2.18dBm
2: 2465.565 MHz
-2.18dBm
3: 2463.000 MHz
3.82dBm
Trace
Level (dBm)
Frequency (MHz)

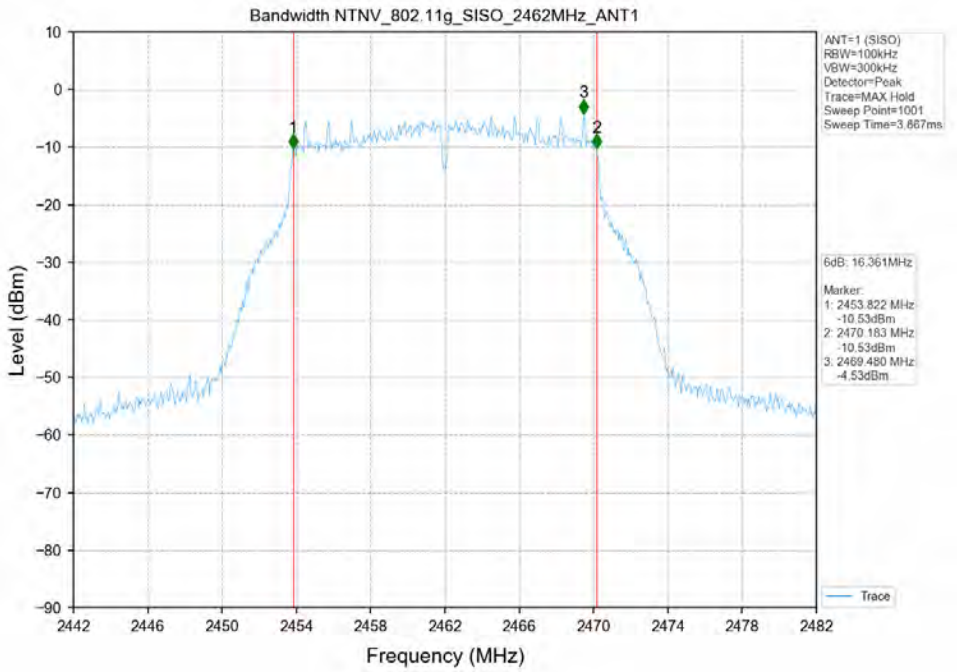

Bandwidth NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.867ms
6dB: 7.122MHz
Marker:
1: 2458.431 MHz
-2.09dBm
2: 2465.553 MHz
-2.09dBm
3: 2462.480 MHz
3.91dBm
Trace
Level (dBm)
Frequency (MHz)

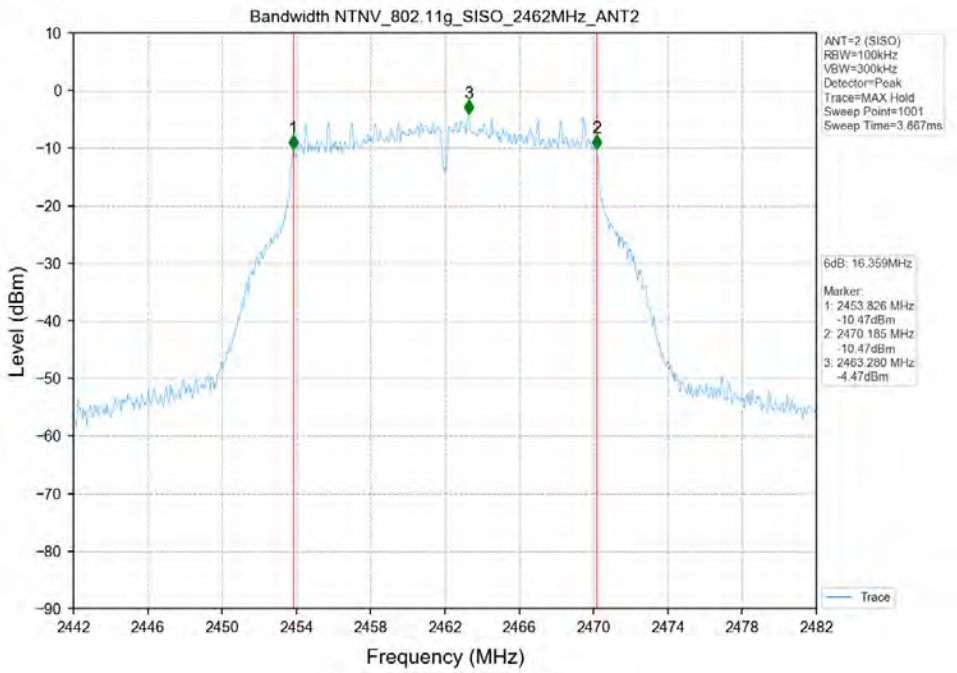

Bandwidth NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.368MHz
Marker:
1: 2403.823 MHz
-11.03dBm
2: 2420.192 MHz
-11.03dBm
3: 2419.480 MHz
-5.03dBm
Trace
Level (dBm)
Frequency (MHz)

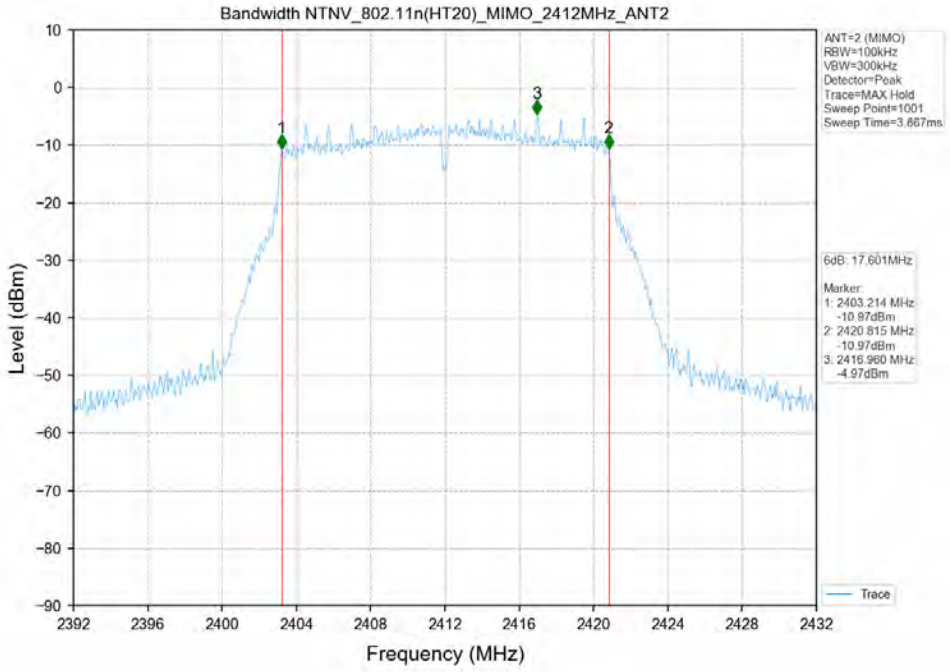

Bandwidth NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.380MHz
Marker:
1: 2403.814 MHz
-11.72dBm
2: 2420.194 MHz
-11.72dBm
3: 2416.960 MHz
-5.72dBm
Trace
Level (dBm)
Frequency (MHz)

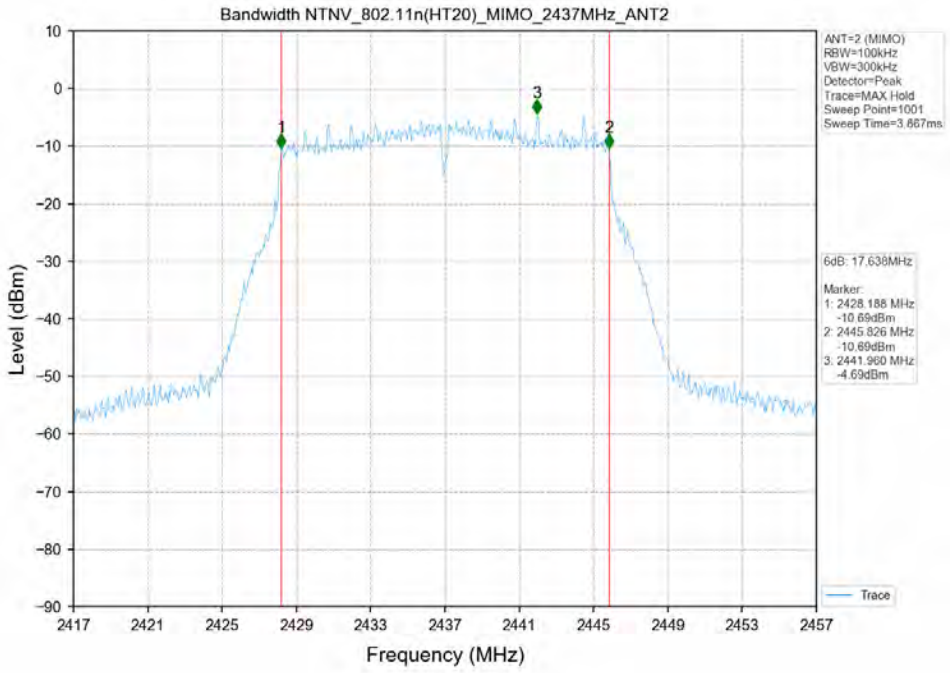

Bandwidth NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.384MHz
Marker:
1: 2428.813 MHz
-10.69dBm
2: 2445.197 MHz
-10.69dBm
3: 2444.480 MHz
-4.69dBm
Trace
Level (dBm)
Frequency (MHz)

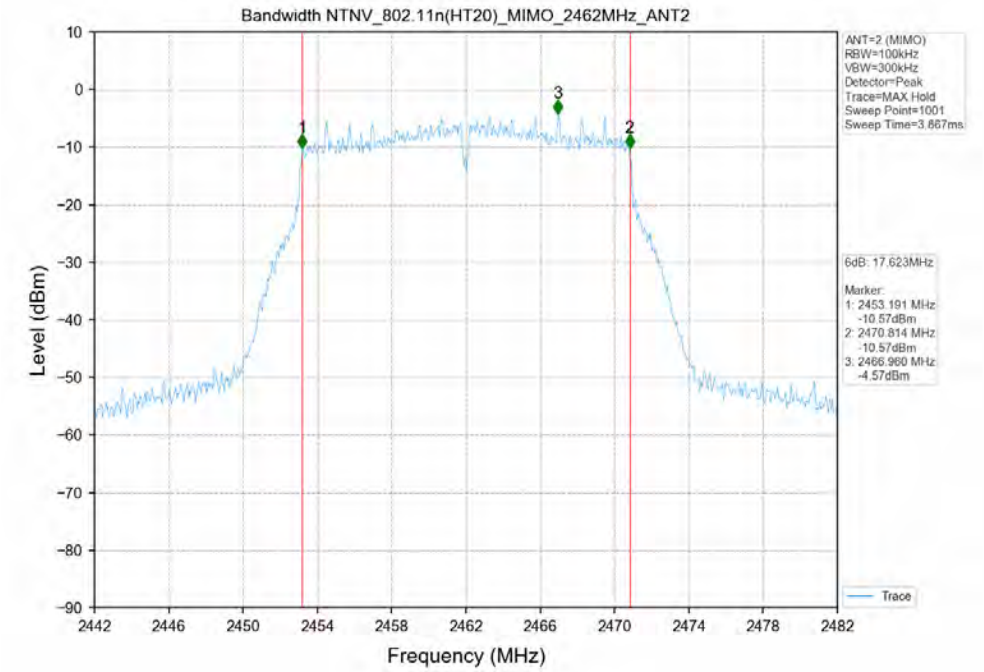

Bandwidth NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.349MHz
Marker:
1: 2428.828 MHz
-10.68dBm
2: 2445.176 MHz
-10.88dBm
3: 2438.280 MHz
-4.68dBm
Trace
Level (dBm)
Frequency (MHz)


Bandwidth NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.361MHz
Marker:
1: 2453.822 MHz
-10.53dBm
2: 2470.183 MHz
-10.53dBm
3: 2469.480 MHz
-4.53dBm
Trace
Level (dBm)
Frequency (MHz)

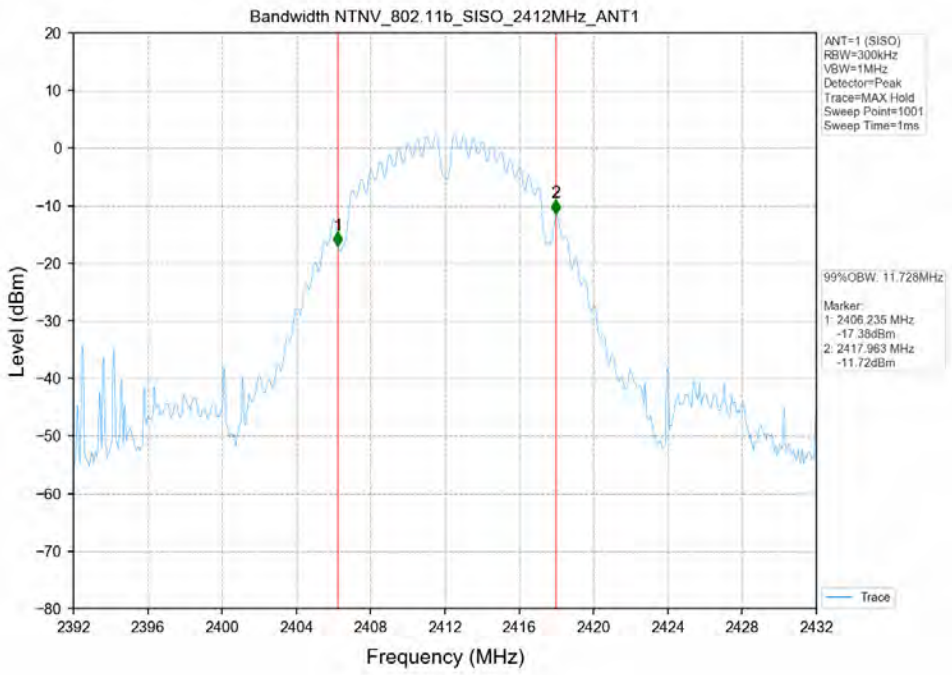

Bandwidth NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 16.359MHz
Marker:
1: 2453.826 MHz
-10.47dBm
2: 2470.185 MHz
-10.47dBm
3: 2463.280 MHz
-4.47dBm
Trace
Level (dBm)
Frequency (MHz)

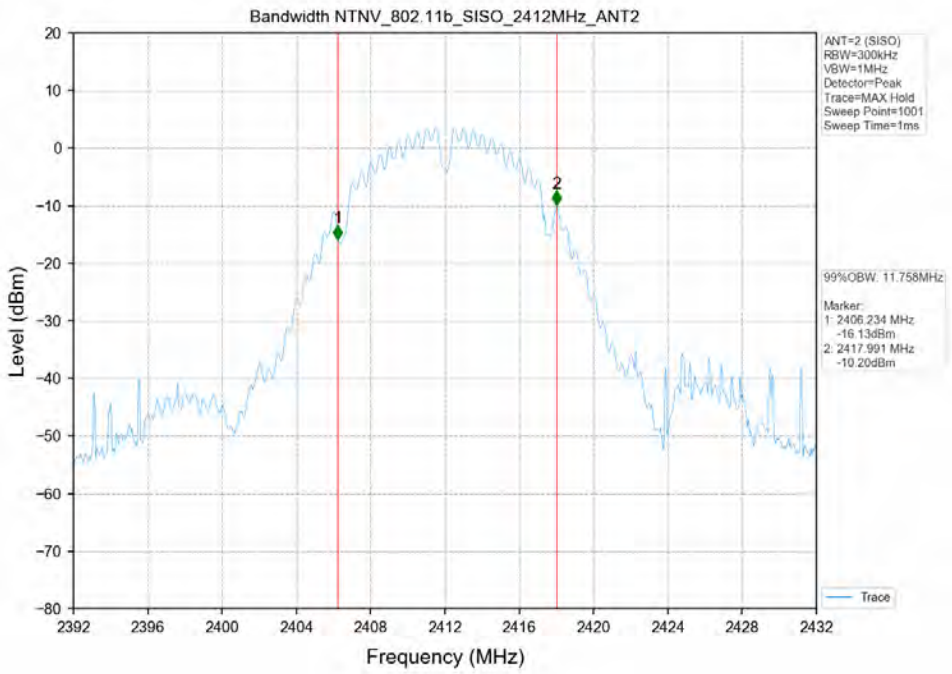

Bandwidth NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 17.601MHz
Marker:
1: 2403.214 MHz
-10.97dBm
2: 2420.815 MHz
-10.97dBm
3: 2416.960 MHz
-4.97dBm
Trace
Level (dBm)
Frequency (MHz)

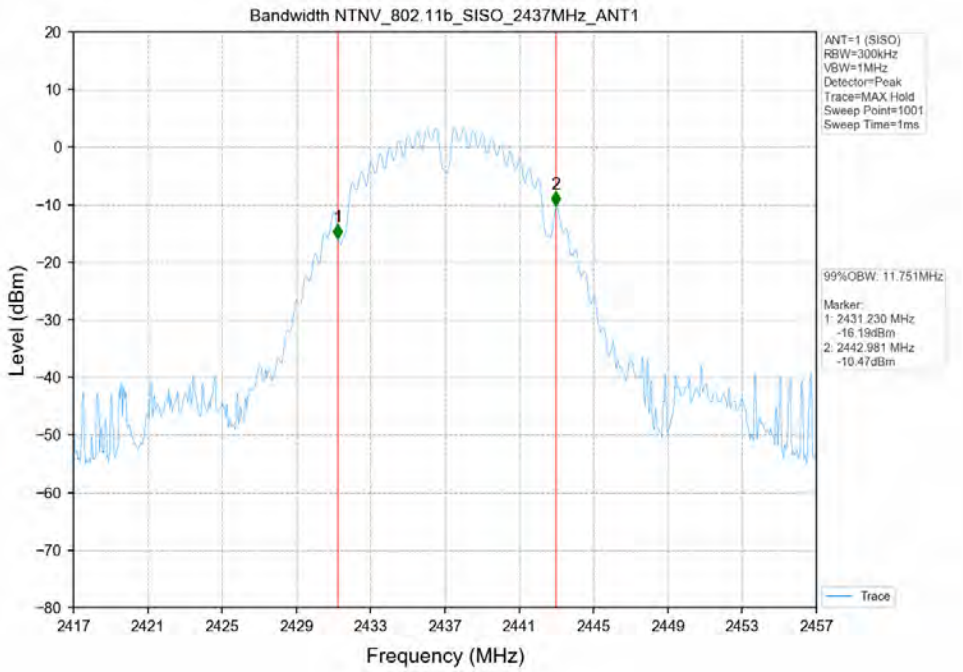

Bandwidth NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 17.638MHz
Marker:
1: 2428.188 MHz
-10.69dBm
2: 2445.826 MHz
-10.69dBm
3: 2441.960 MHz
-4.69dBm
Trace
Level (dBm)
Frequency (MHz)

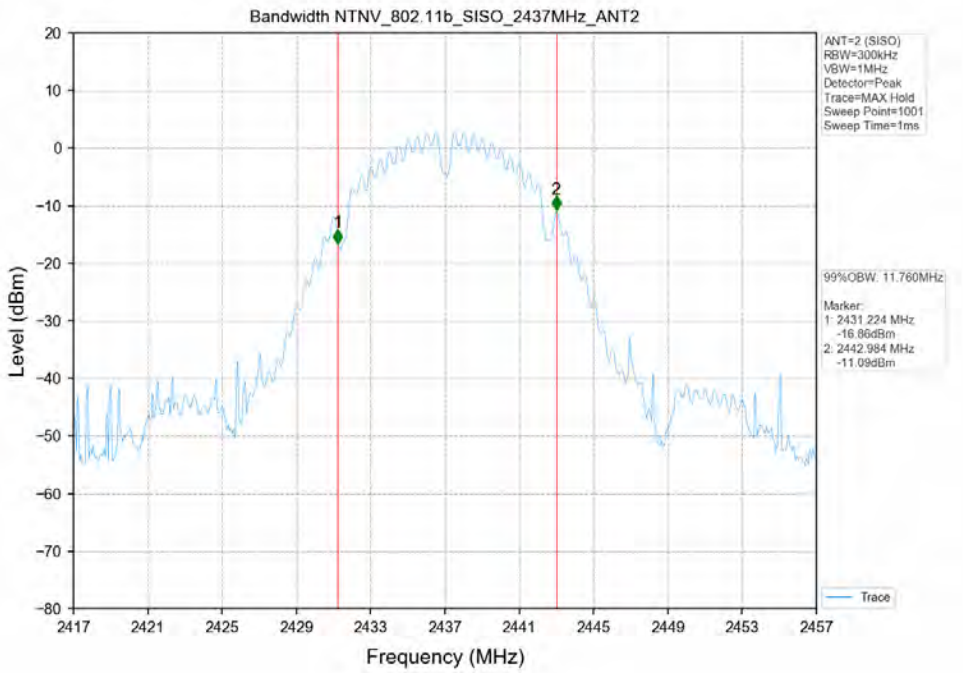

Bandwidth NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=3.667ms
6dB: 17.623MHz
Marker:
1: 2453.191 MHz
-10.57dBm
2: 2470.814 MHz
-10.57dBm
3: 2466.960 MHz
-4.57dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2442
2446
2450
2454
2458
2462
2466
2470
2474
2478
2482

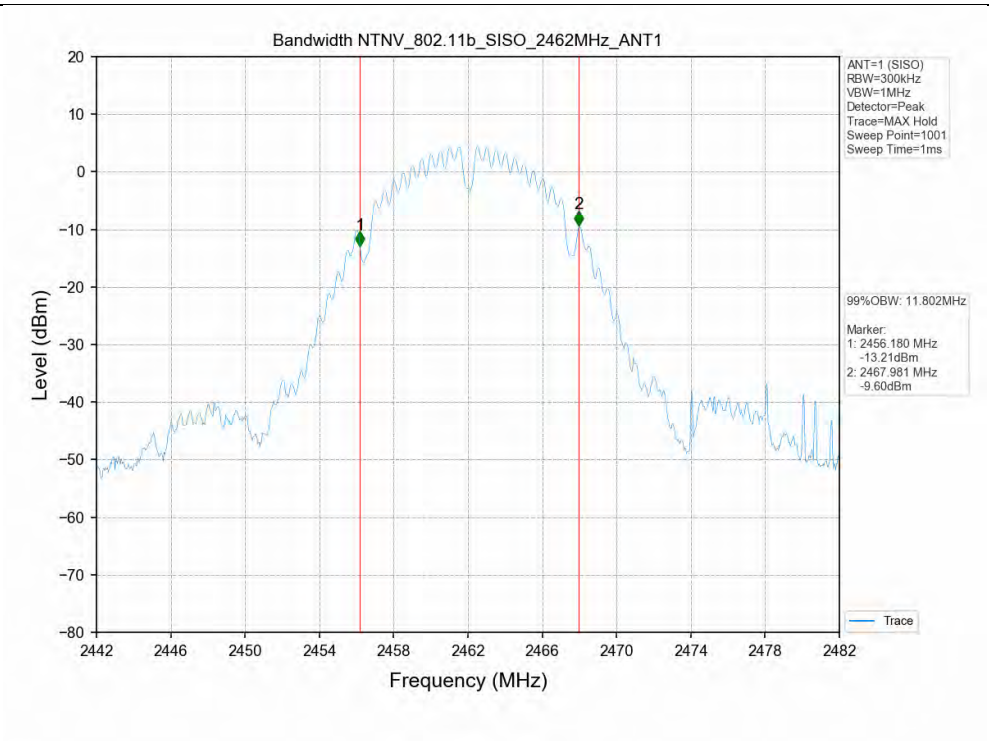
2.3 Test Graph - 99% Occupied Bandwidth

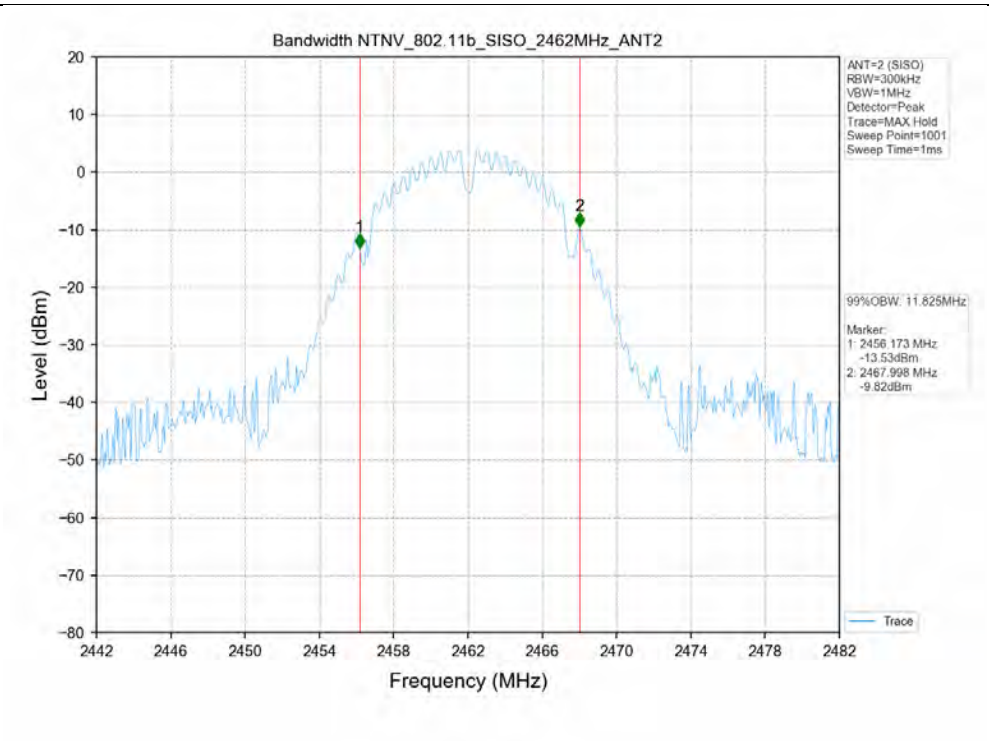


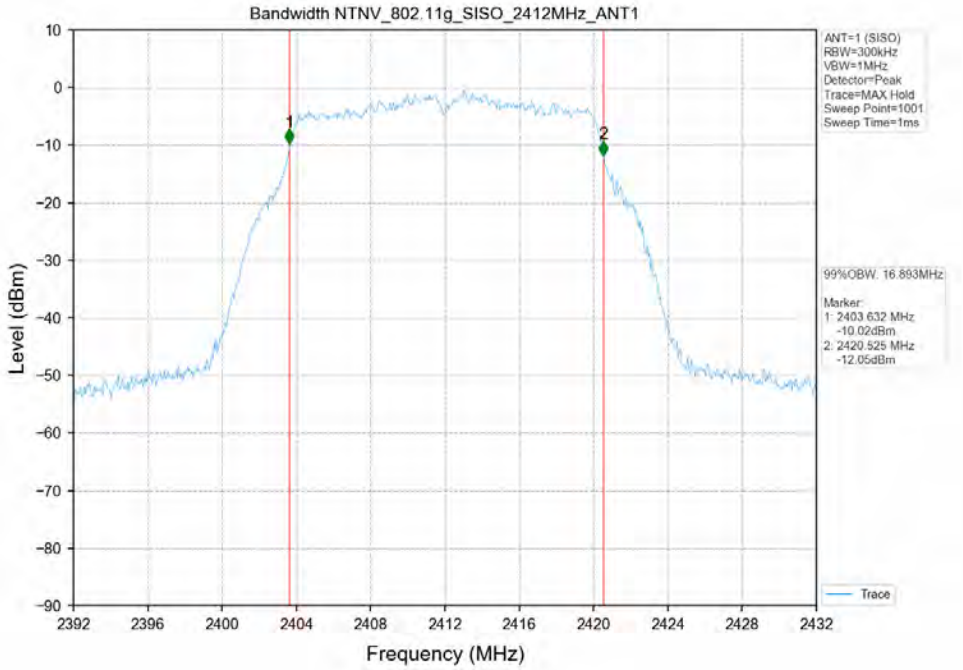


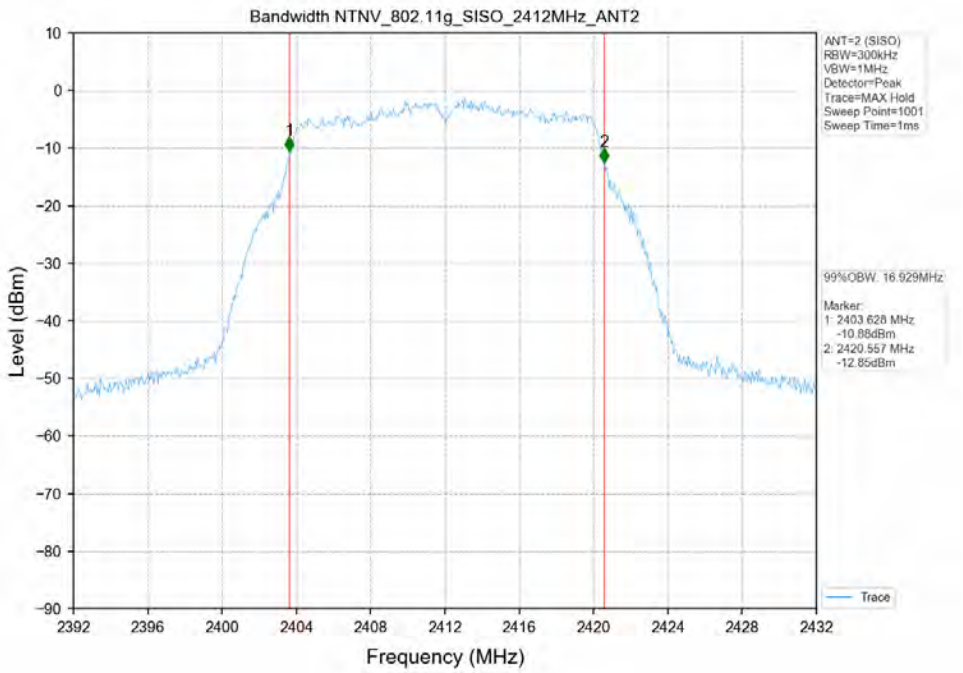

Bandwidth NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 11.751MHz
Marker:
1: 2431.230 MHz
-16.19dBm
2: 2442.981 MHz
-10.47dBm
Trace
Level (dBm)
Frequency (MHz)

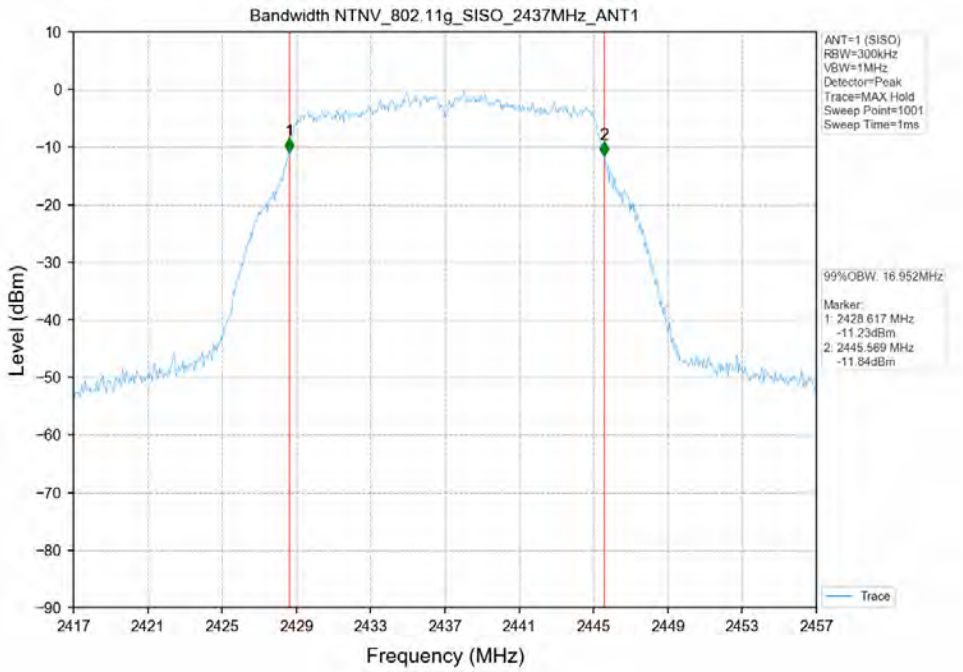

Bandwidth NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 11.760MHz
Marker:
1: 2431.224 MHz
-16.86dBm
2: 2442.984 MHz
-11.09dBm
Trace
Level (dBm)
Frequency (MHz)

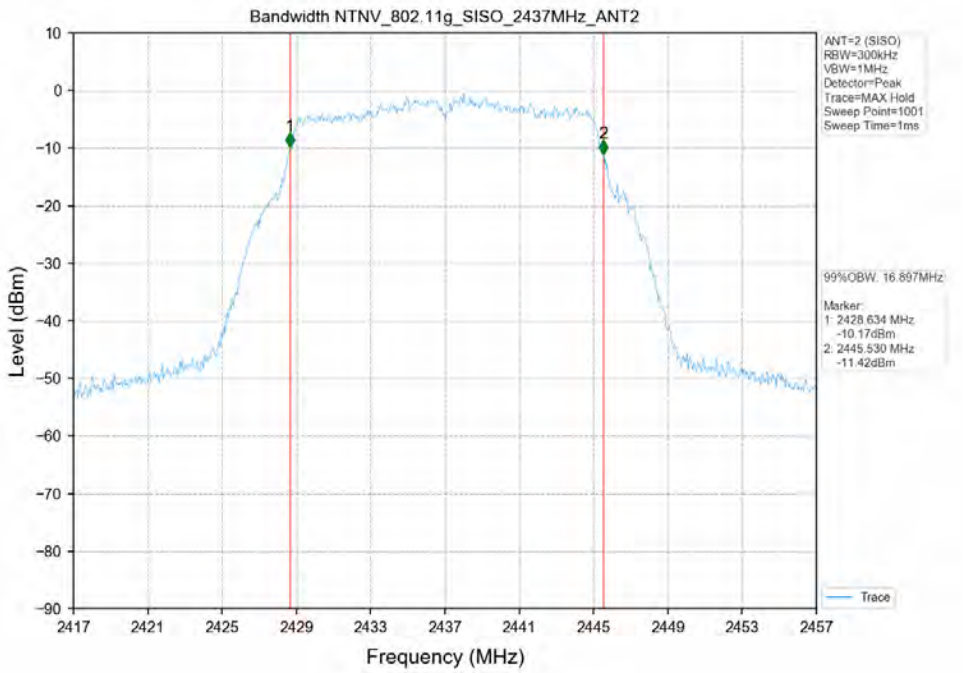

Bandwidth NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 11.802MHz
Marker:
1: 2456.180 MHz
-13.21dBm
2: 2467.981 MHz
-9.60dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2442
2446
2450
2454
2458
2462
2466
2470
2474
2478
2482

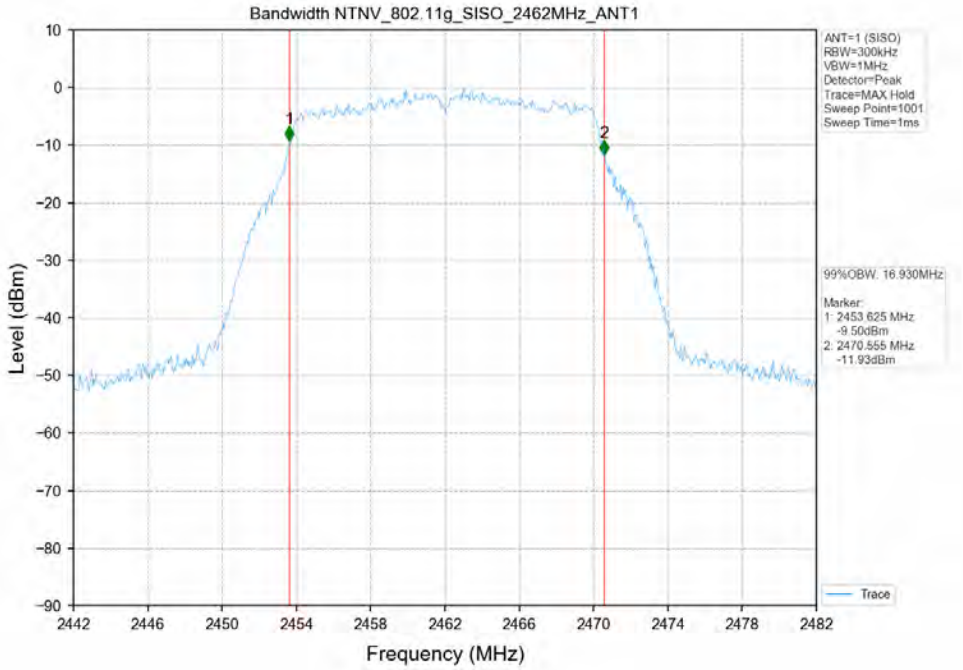

Bandwidth NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 11.825MHz
Marker:
1: 2456.173 MHz
-13.53dBm
2: 2467.998 MHz
-9.82dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2442
2446
2450
2454
2458
2462
2466
2470
2474
2478
2482

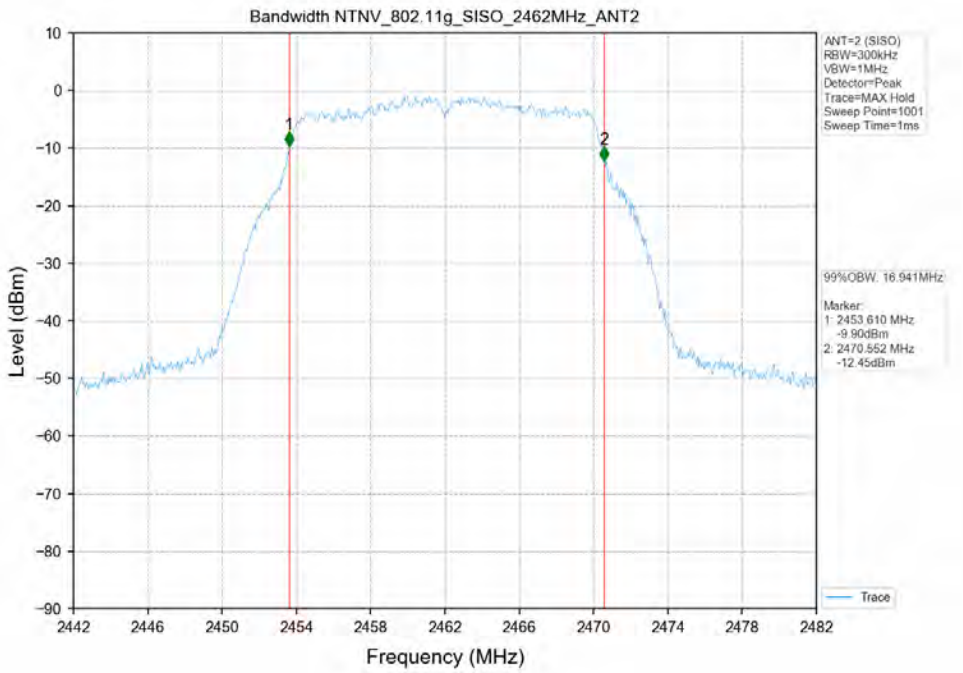

Bandwidth NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.893MHz
Marker:
1: 2403.632 MHz
-10.02dBm
2: 2420.525 MHz
-12.05dBm
Trace
Level (dBm)
Frequency (MHz)

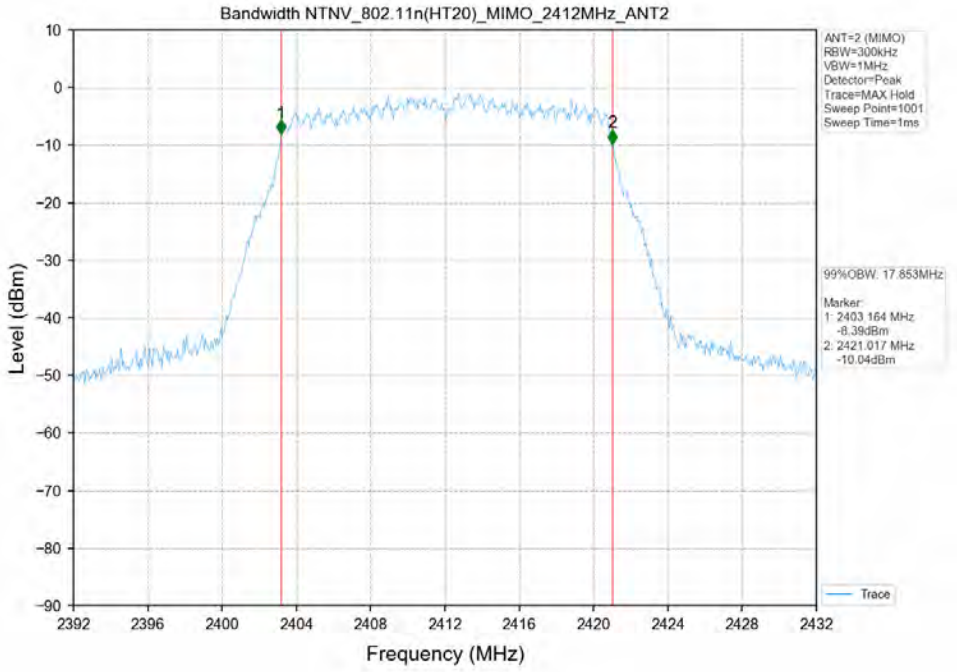

Bandwidth NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.929MHz
Marker:
1: 2403.628 MHz
-10.88dBm
2: 2420.557 MHz
-12.85dBm
Trace
Level (dBm)
Frequency (MHz)

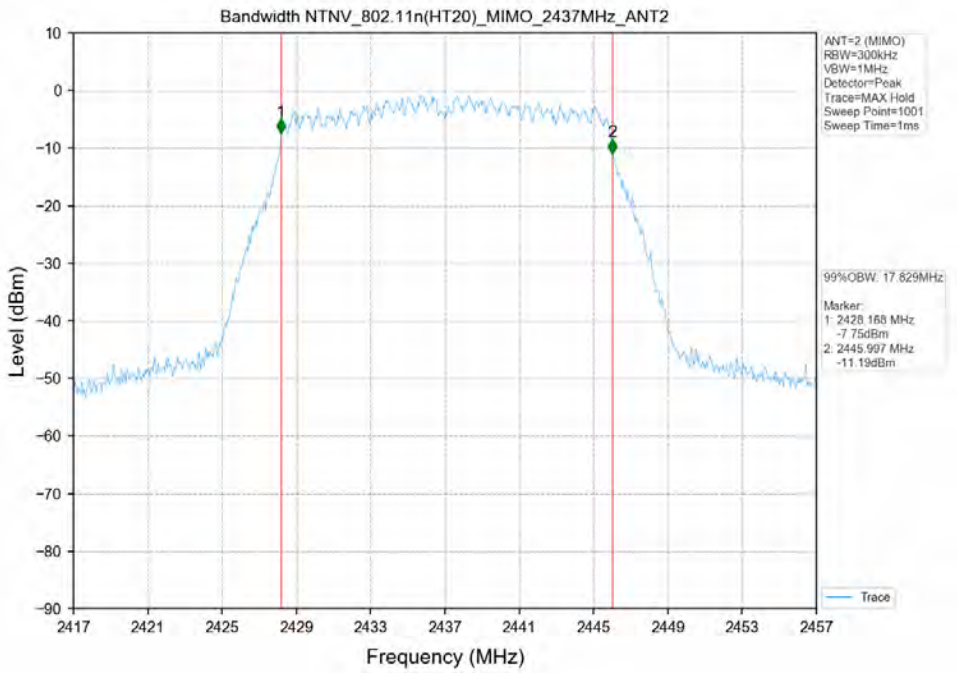

Bandwidth NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.952MHz
Marker:
1: 2428.617 MHz
-11.23dBm
2: 2445.569 MHz
-11.84dBm
Trace
Level (dBm)
Frequency (MHz)

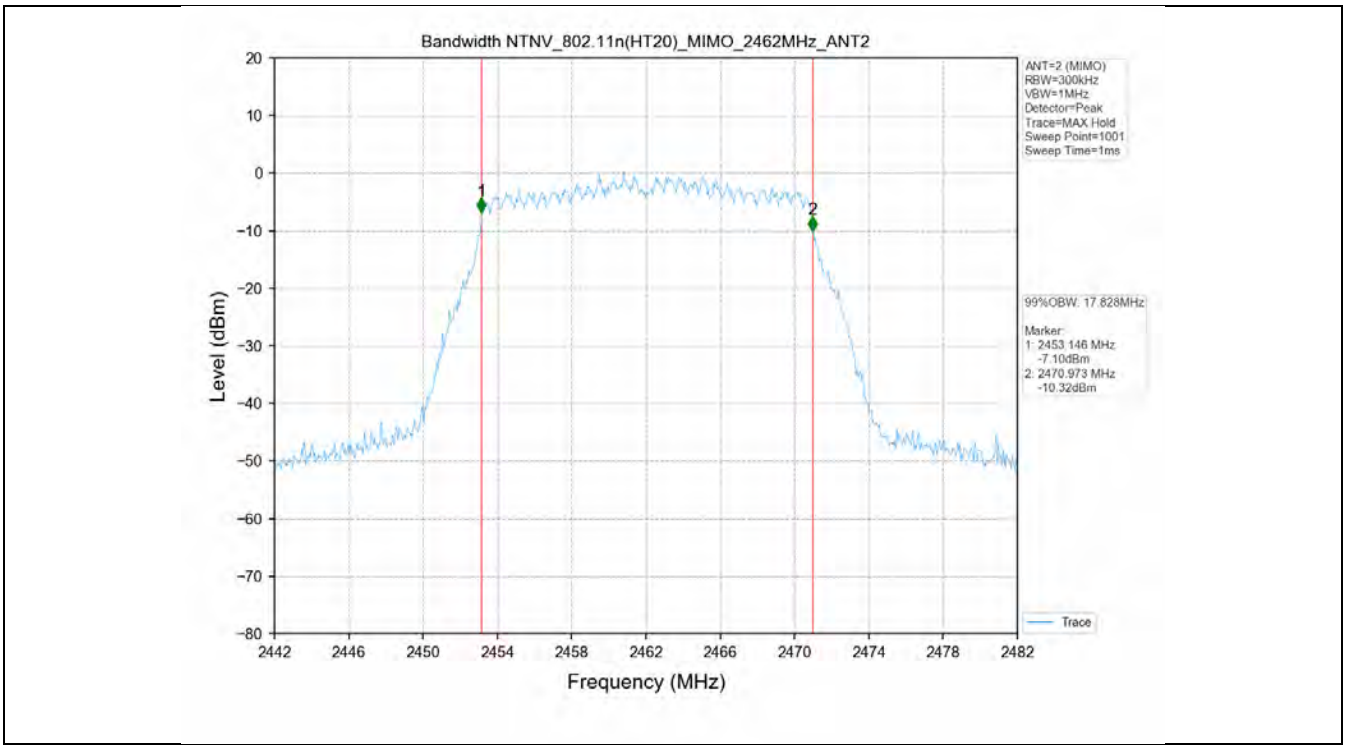

Bandwidth NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.897MHz
Marker:
1: 2428.634 MHz
-10.17dBm
2: 2445.530 MHz
-11.42dBm
Trace
Level (dBm)
Frequency (MHz)


Bandwidth NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.930MHz
Marker:
1: 2453.625 MHz
-9.50dBm
2: 2470.555 MHz
-11.93dBm
Trace
Level (dBm)
Frequency (MHz)


Bandwidth NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 16.941MHz
Marker:
1: 2453.610 MHz
-9.90dBm
2: 2470.552 MHz
-12.45dBm
Trace
Level (dBm)
Frequency (MHz)


Bandwidth NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 17.853MHz
Marker:
1: 2403.164 MHz
-8.39dBm
2: 2421.017 MHz
-10.04dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2392
2396
2400
2404
2408
2412
2416
2420
2424
2428
2432


Bandwidth NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
RBW=300kHz
VBW=1MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
99%OBW: 17.829MHz
Marker:
1: 2428.168 MHz
-7.75dBm
2: 2445.997 MHz
-11.19dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2417
2421
2425
2429
2433
2437
2441
2445
2449
2453
2457

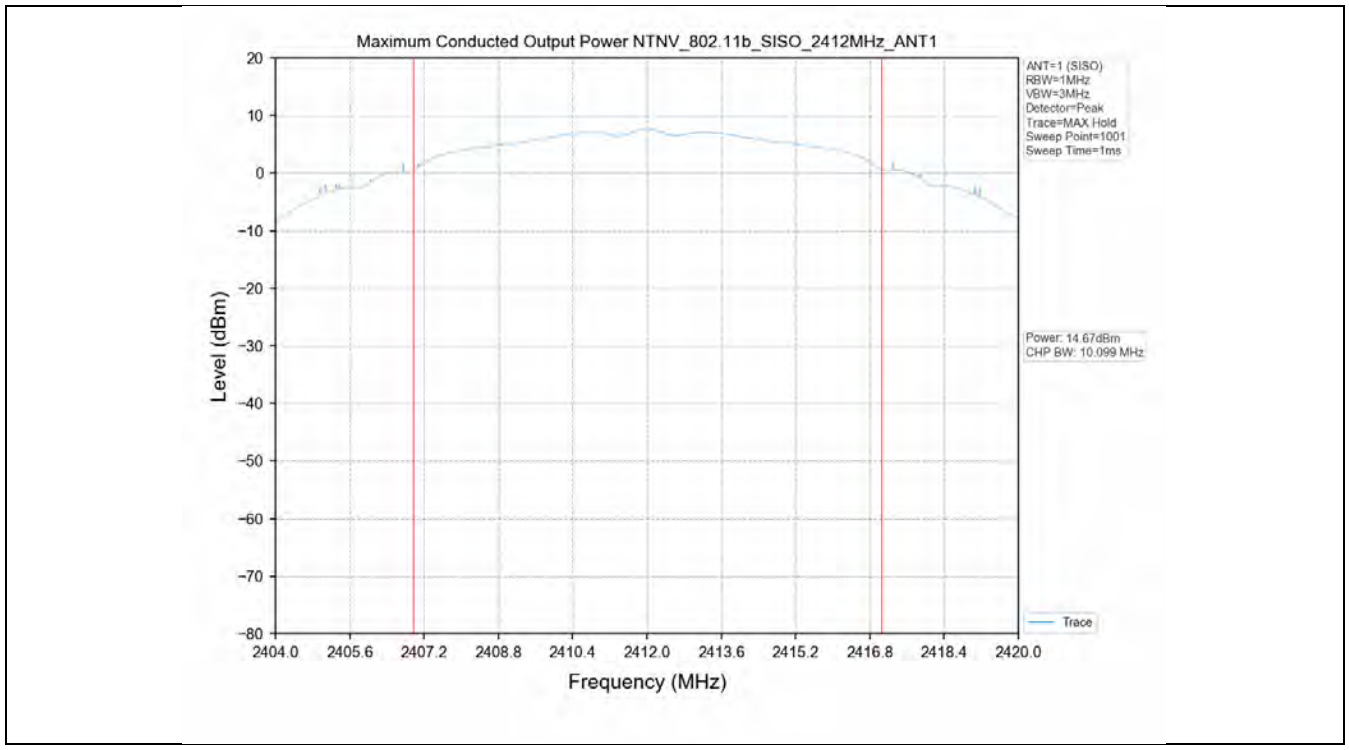


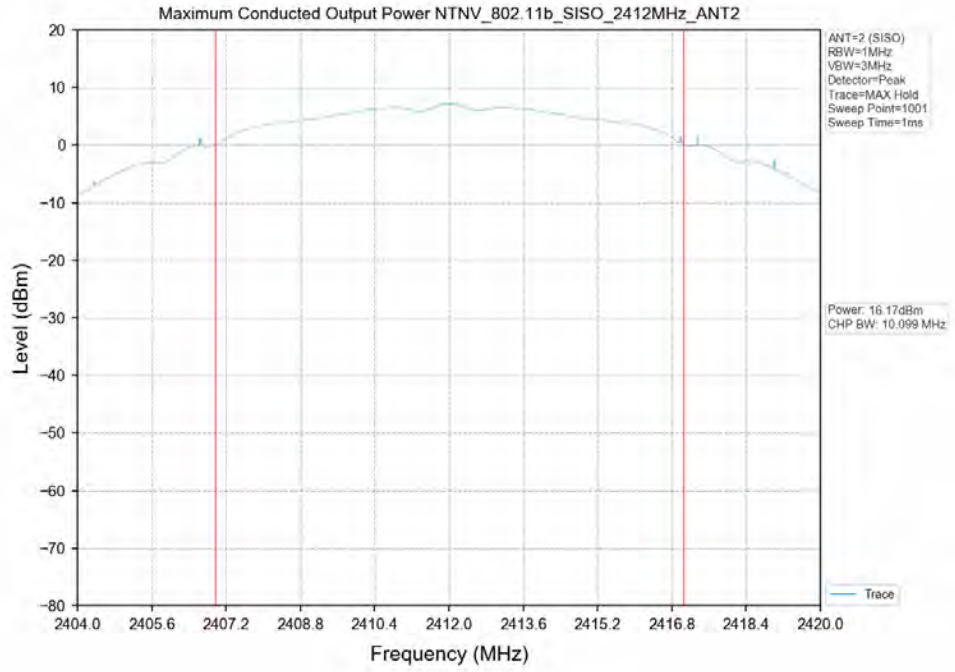
3. Maximum Conducted Output Power

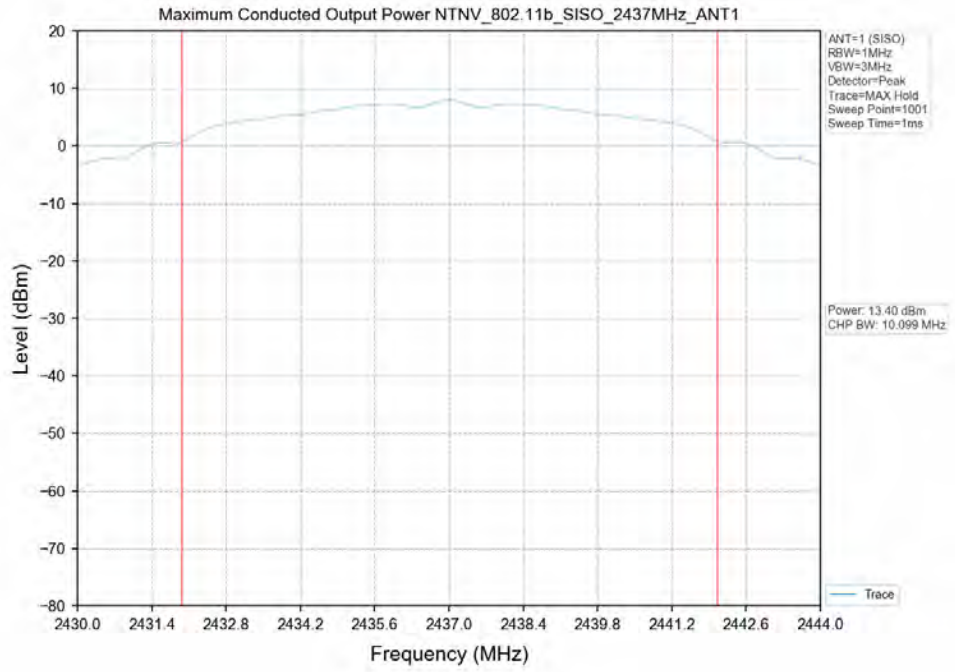
3.1 Test Result

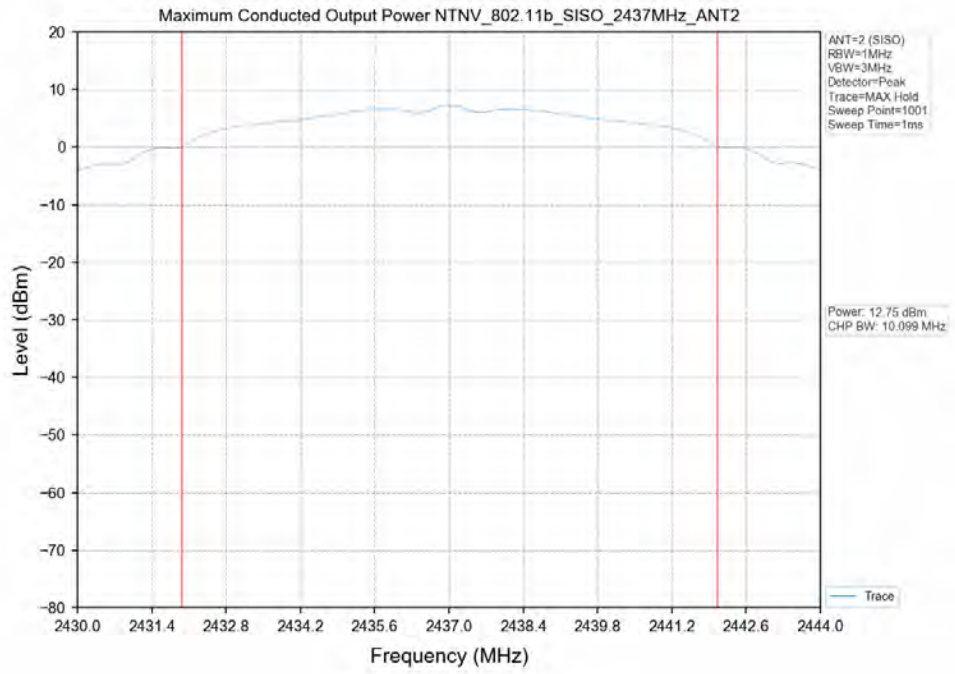
Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)			Limits (dBm)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	14.67	16.17	/	30	PASS
	2437	SISO	13.40	12.75	/	30	PASS
	2462	SISO	16.74	16.38	/	30	PASS
802.11g	2412	SISO	14.67	13.91	/	30	PASS
	2437	SISO	15.01	14.65	/	30	PASS
	2462	SISO	15.08	14.93	/	30	PASS
802.11n(HT20)	2412	MIMO	14.62	14.57	17.61	30	PASS
	2437	MIMO	14.85	14.91	17.89	30	PASS
	2462	MIMO	15.18	15.18	18.19	30	PASS

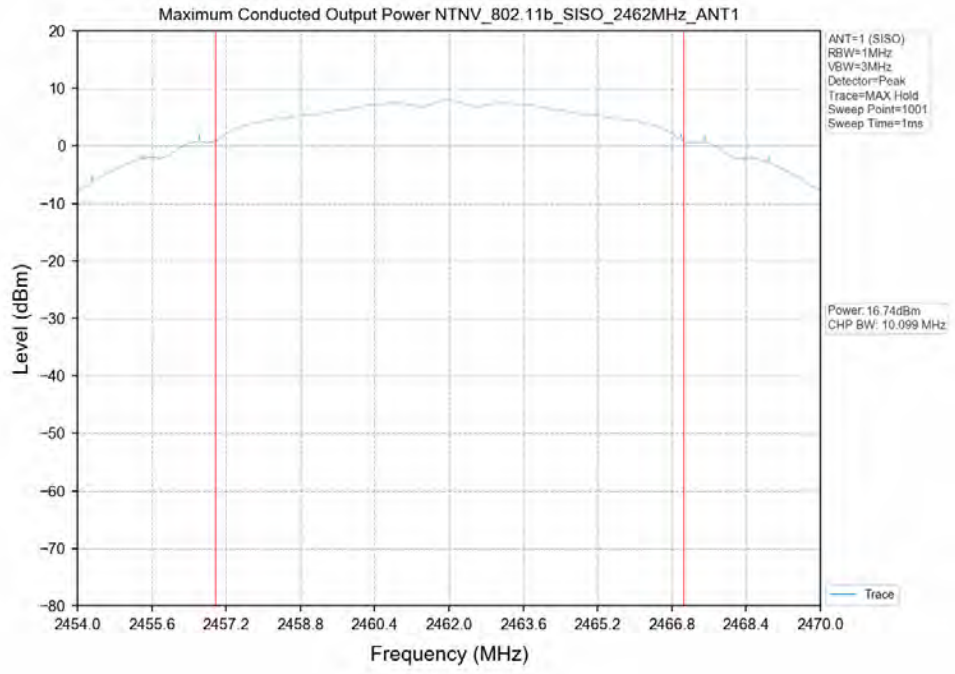
3.2 Test Graph

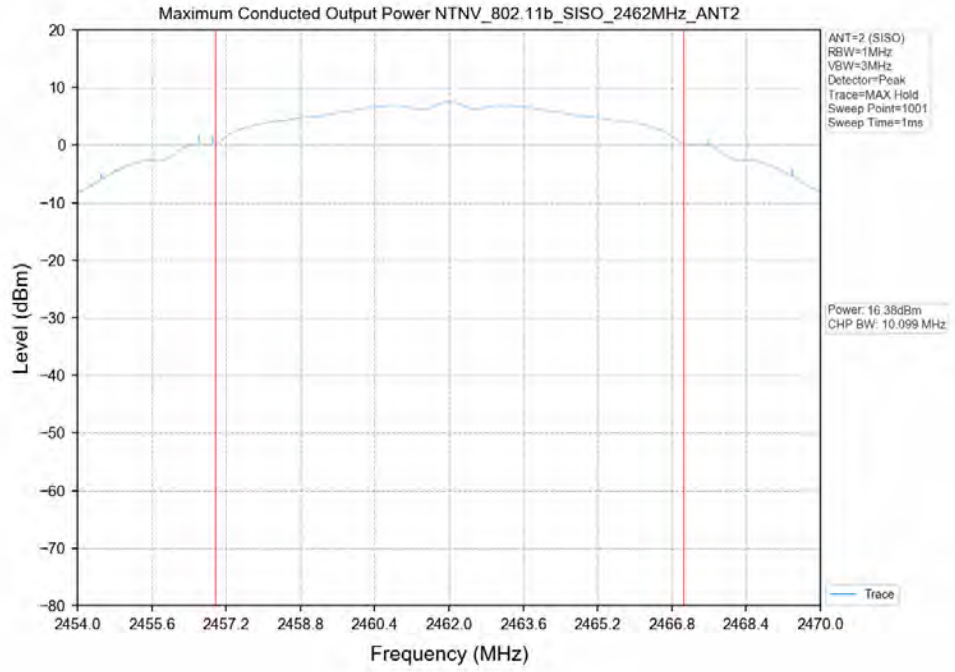


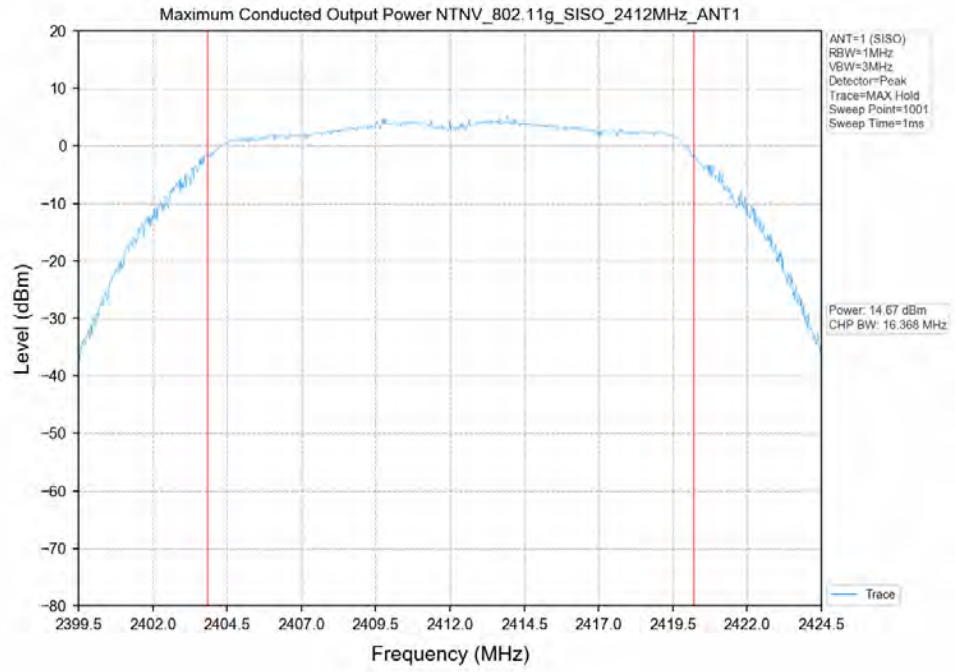

Maximum Conducted Output Power NTNV_802.11b_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 16.17dBm
CHP BW: 10.099 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2404.0
2405.6
2407.2
2408.8
2410.4
2412.0
2413.6
2415.2
2416.8
2418.4
2420.0

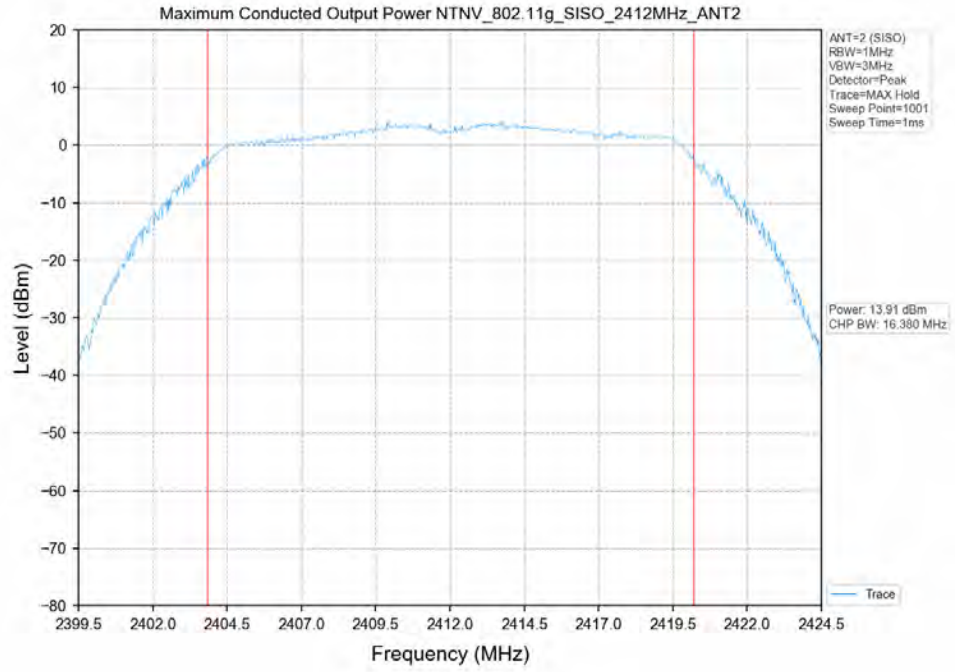

Maximum Conducted Output Power NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 13.40 dBm
CHP BW: 10.099 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2430.0
2431.4
2432.8
2434.2
2435.6
2437.0
2438.4
2439.8
2441.2
2442.6
2444.0

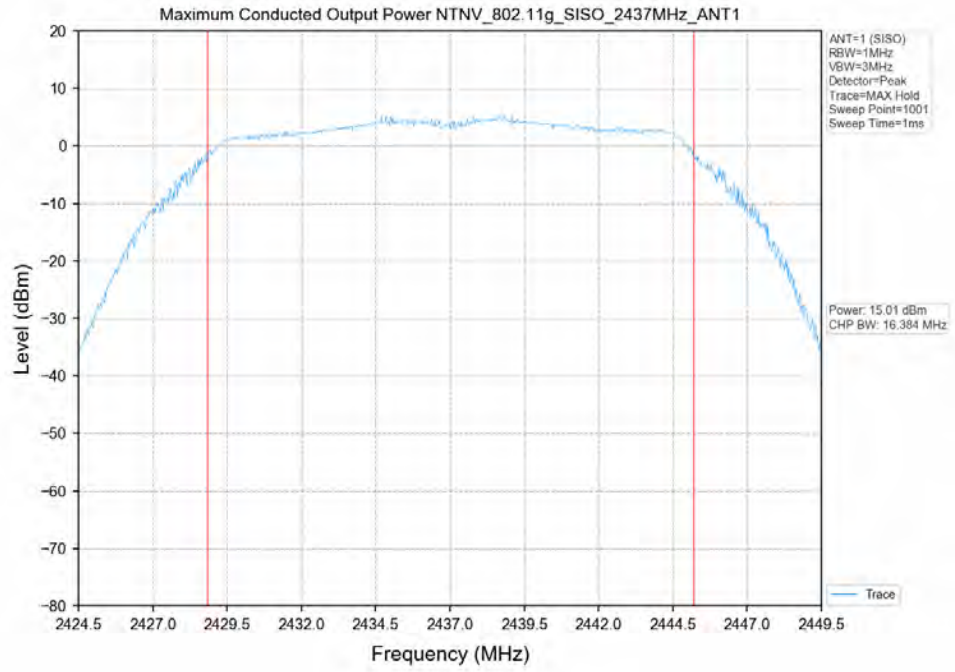

Maximum Conducted Output Power NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 12.75 dBm
CHP BW: 10.099 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2430.0
2431.4
2432.8
2434.2
2435.6
2437.0
2438.4
2439.8
2441.2
2442.6
2444.0

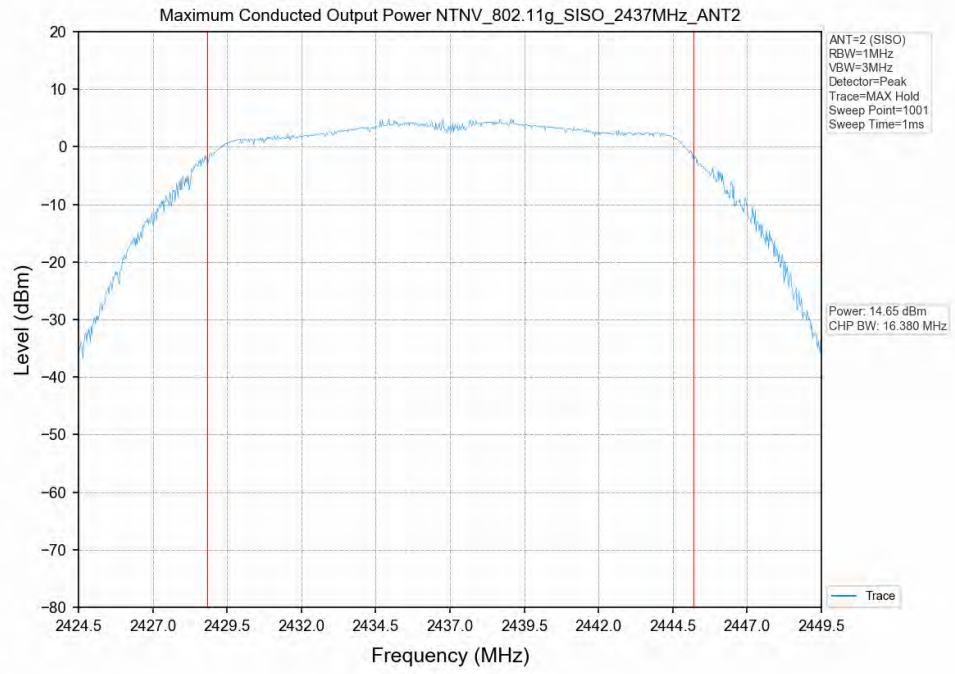

Maximum Conducted Output Power NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 16.74dBm
CHP BW: 10.099 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2454.0
2455.6
2457.2
2458.8
2460.4
2462.0
2463.6
2465.2
2466.8
2468.4
2470.0

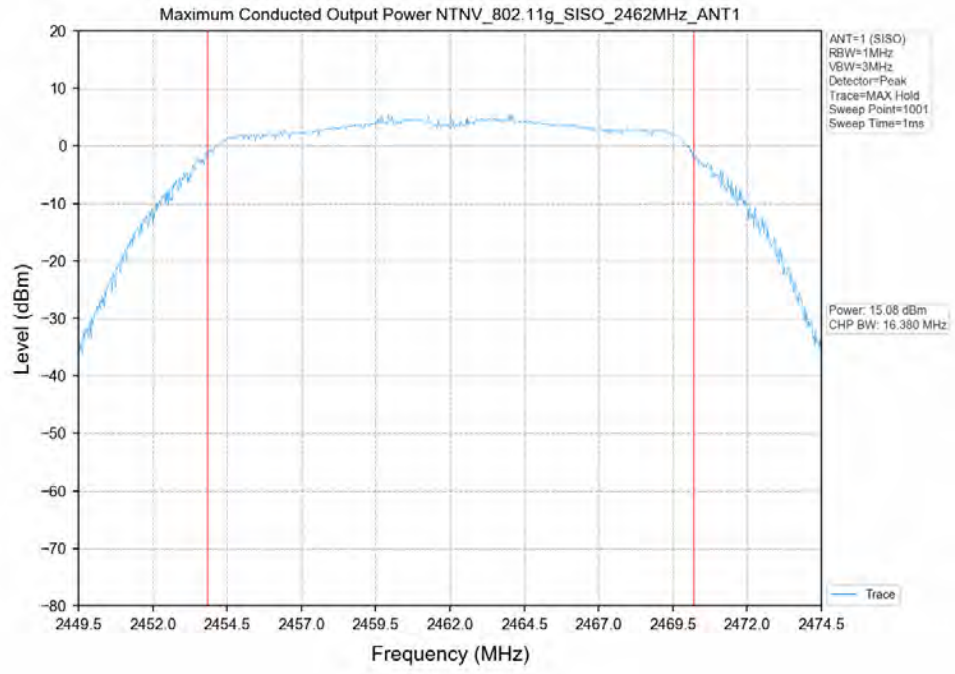

Maximum Conducted Output Power NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 16.38dBm
CHP BW: 10.099 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2454.0
2455.6
2457.2
2458.8
2460.4
2462.0
2463.6
2465.2
2466.8
2468.4
2470.0

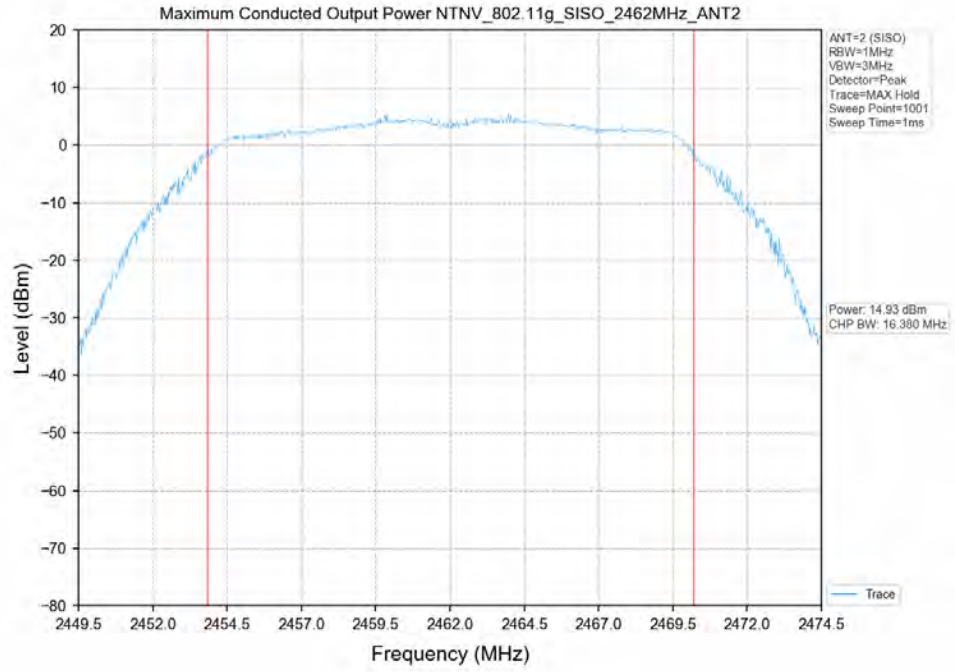

Maximum Conducted Output Power NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.67 dBm
CHP BW: 16.368 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2399.5
2402.0
2404.5
2407.0
2409.5
2412.0
2414.5
2417.0
2419.5
2422.0
2424.5

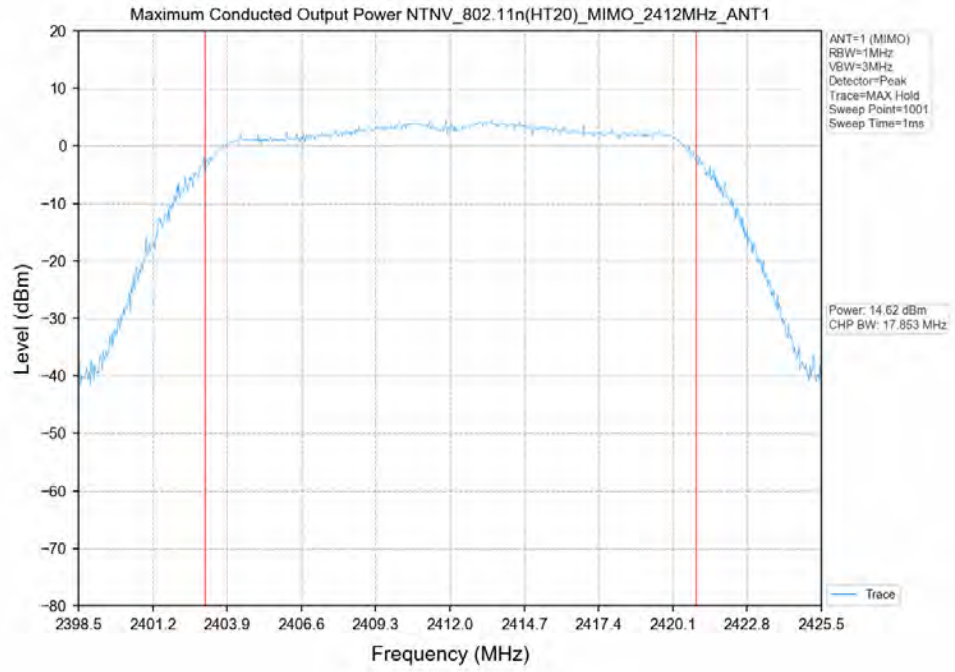

Maximum Conducted Output Power NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 13.91 dBm
CHP BW: 16.380 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2399.5
2402.0
2404.5
2407.0
2409.5
2412.0
2414.5
2417.0
2419.5
2422.0
2424.5

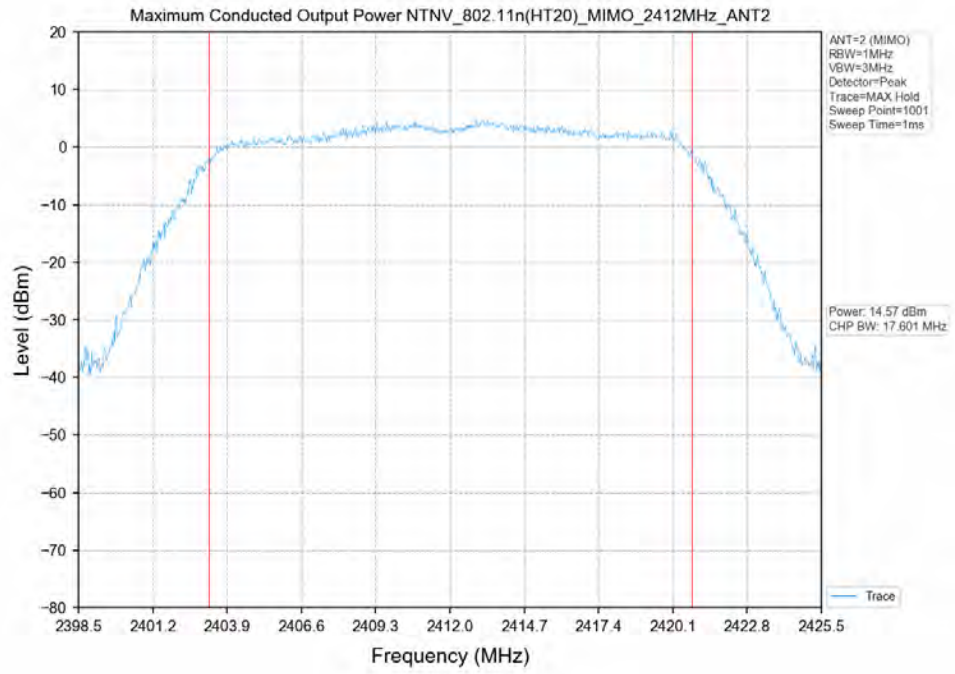

Maximum Conducted Output Power NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 15.01 dBm
CHP BW: 16.384 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2424.5
2427.0
2429.5
2432.0
2434.5
2437.0
2439.5
2442.0
2444.5
2447.0
2449.5

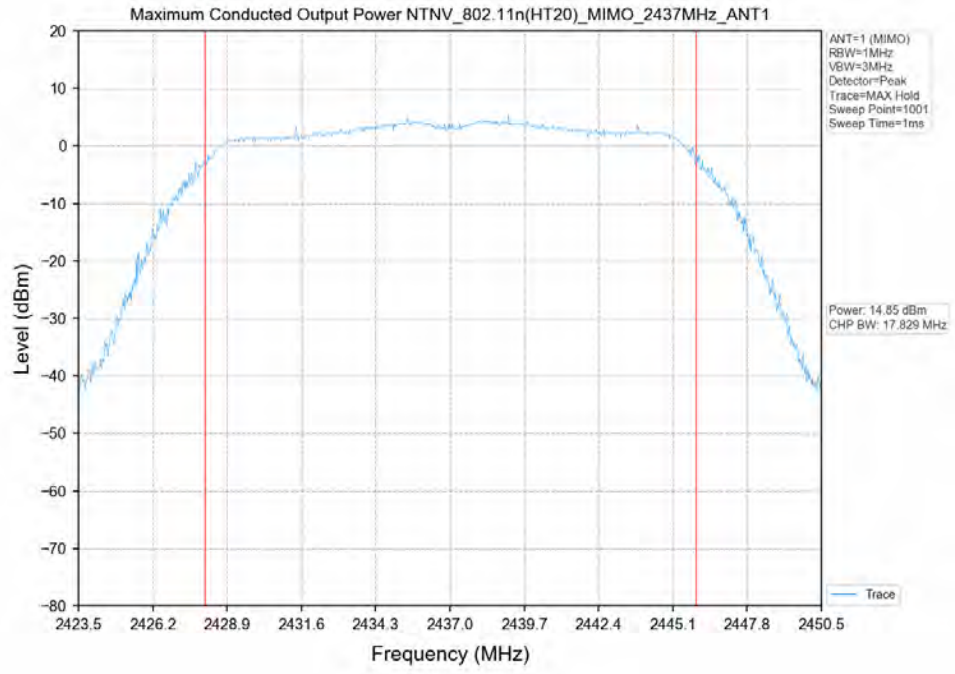

Maximum Conducted Output Power NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.65 dBm
CHP BW: 16.380 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2424.5
2427.0
2429.5
2432.0
2434.5
2437.0
2439.5
2442.0
2444.5
2447.0
2449.5

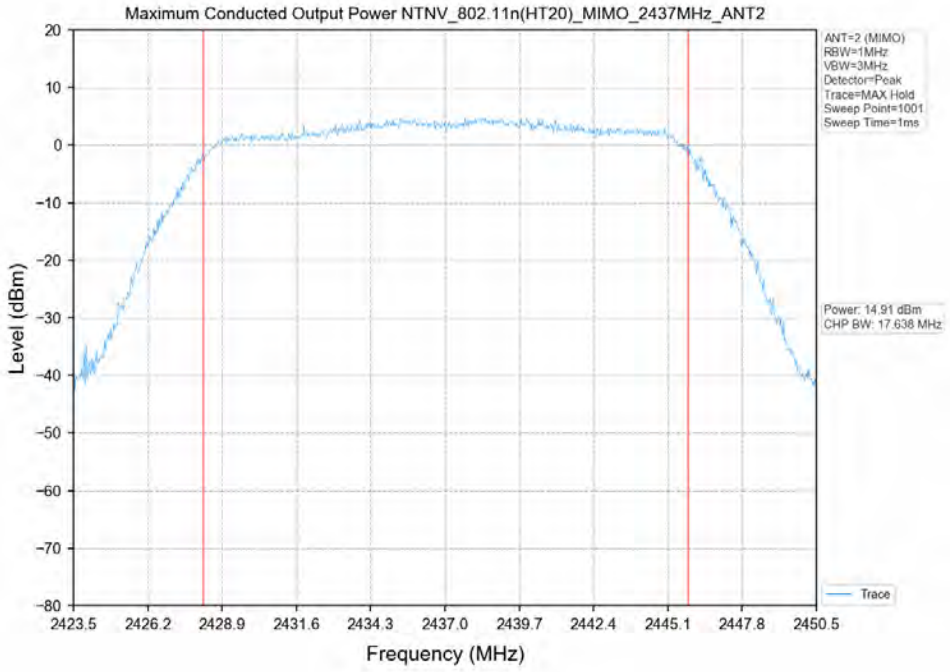

Maximum Conducted Output Power NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 15.08 dBm
CHP BW: 16.380 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2449.5
2452.0
2454.5
2457.0
2459.5
2462.0
2464.5
2467.0
2469.5
2472.0
2474.5

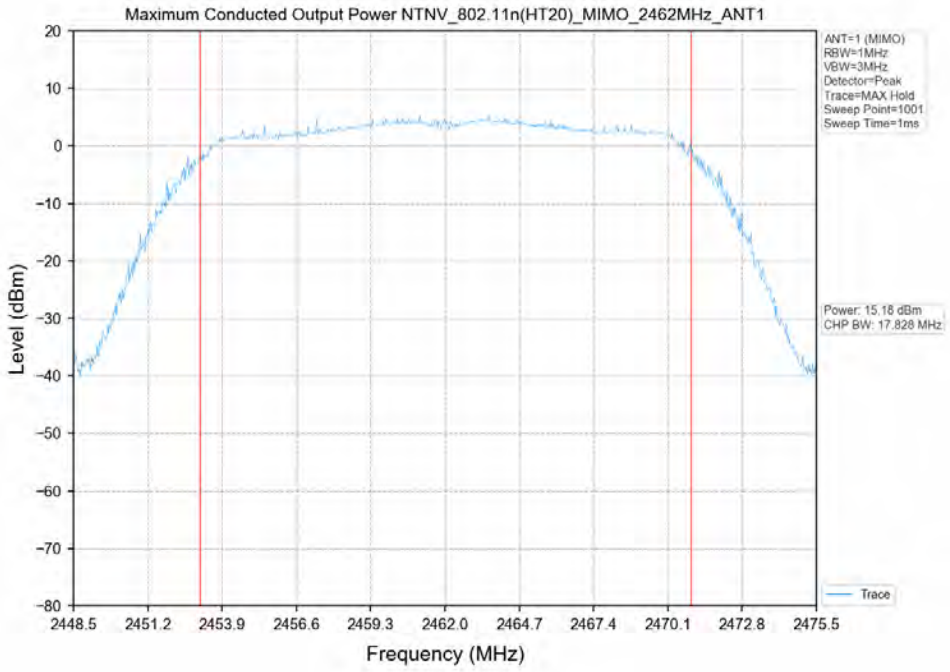

Maximum Conducted Output Power NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.93 dBm
CHP BW: 16.380 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2449.5
2452.0
2454.5
2457.0
2459.5
2462.0
2464.5
2467.0
2469.5
2472.0
2474.5

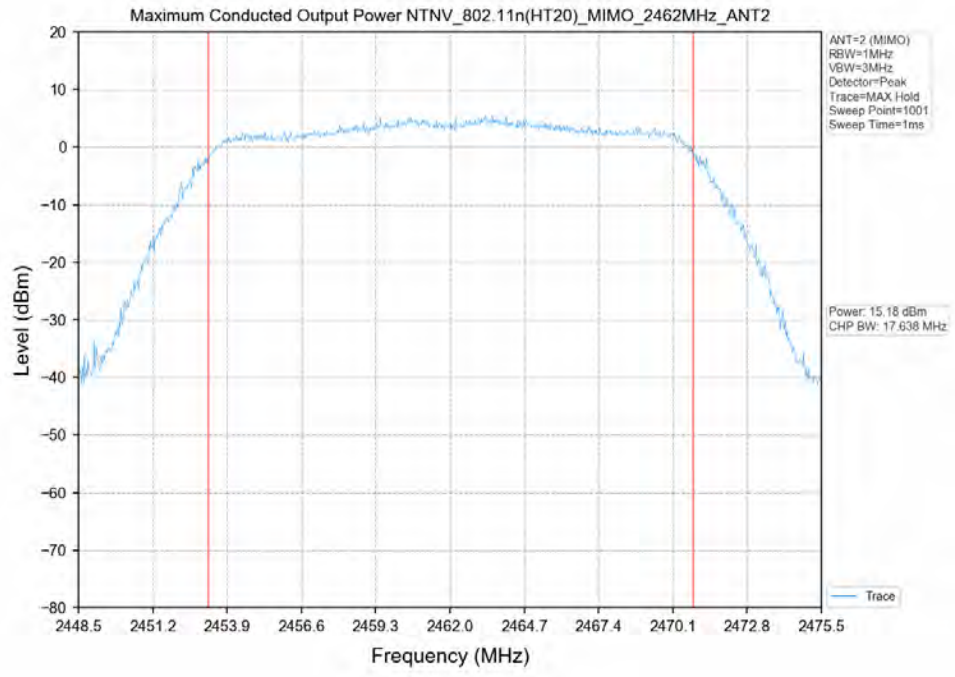

Maximum Conducted Output Power NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.62 dBm
CHP BW: 17.853 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2398.5
2401.2
2403.9
2406.6
2409.3
2412.0
2414.7
2417.4
2420.1
2422.8
2425.5


Maximum Conducted Output Power NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.57 dBm
CHP BW: 17.601 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2398.5
2401.2
2403.9
2406.6
2409.3
2412.0
2414.7
2417.4
2420.1
2422.8
2425.5


Maximum Conducted Output Power NTNV_802.11n(HT20)_MIMO_2437MHz_ANT1
ANT=1 (MIMO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.85 dBm
CHP BW: 17.829 MHz
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2423.5
2426.2
2428.9
2431.6
2434.3
2437.0
2439.7
2442.4
2445.1
2447.8
2450.5


Maximum Conducted Output Power NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 14.91 dBm
CHP BW: 17.638 MHz
Trace
Level (dBm)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2423.5
2426.2
2428.9
2431.6
2434.3
2437.0
2439.7
2442.4
2445.1
2447.8
2450.5
Frequency (MHz)


Maximum Conducted Output Power NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
RBW=1MHz
VBW=3MHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1ms
Power: 15.18 dBm
CHP BW: 17.828 MHz
Trace
Level (dBm)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2448.5
2451.2
2453.9
2456.6
2459.3
2462.0
2464.7
2467.4
2470.1
2472.8
2475.5
Frequency (MHz)

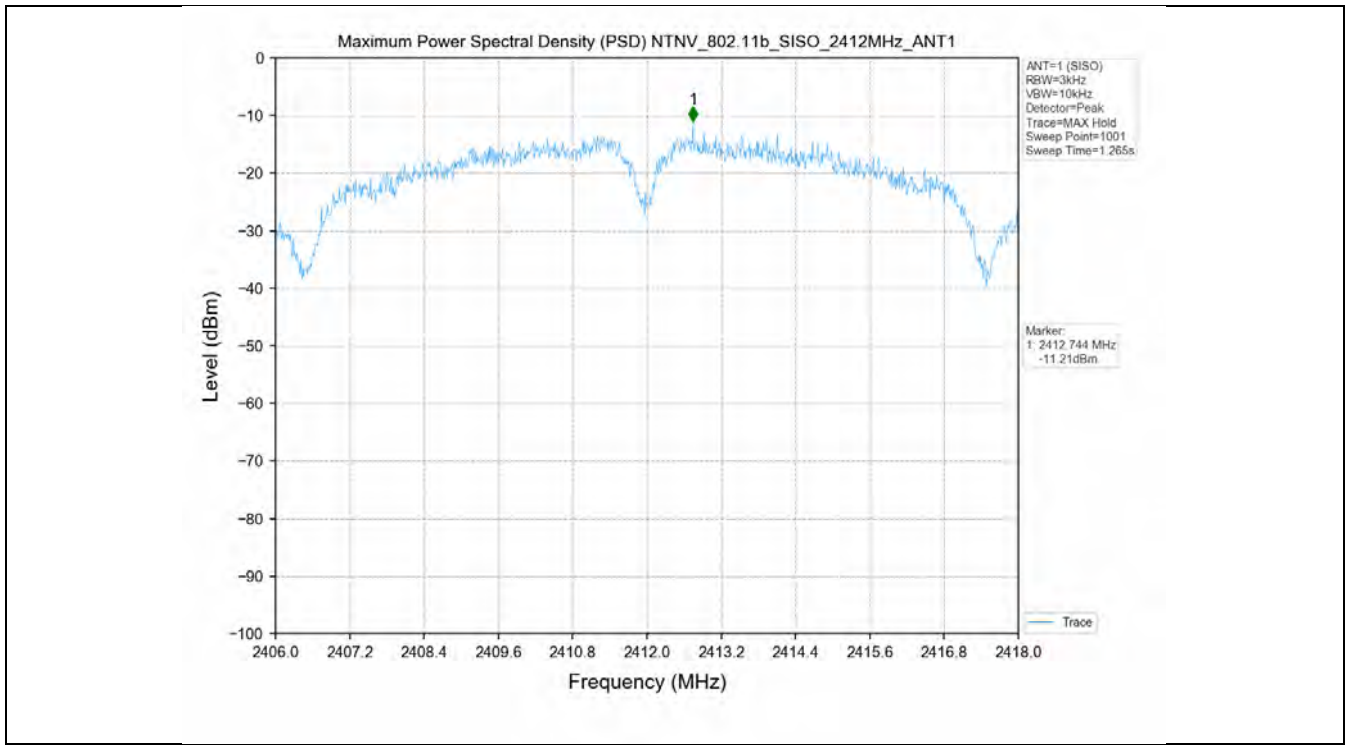


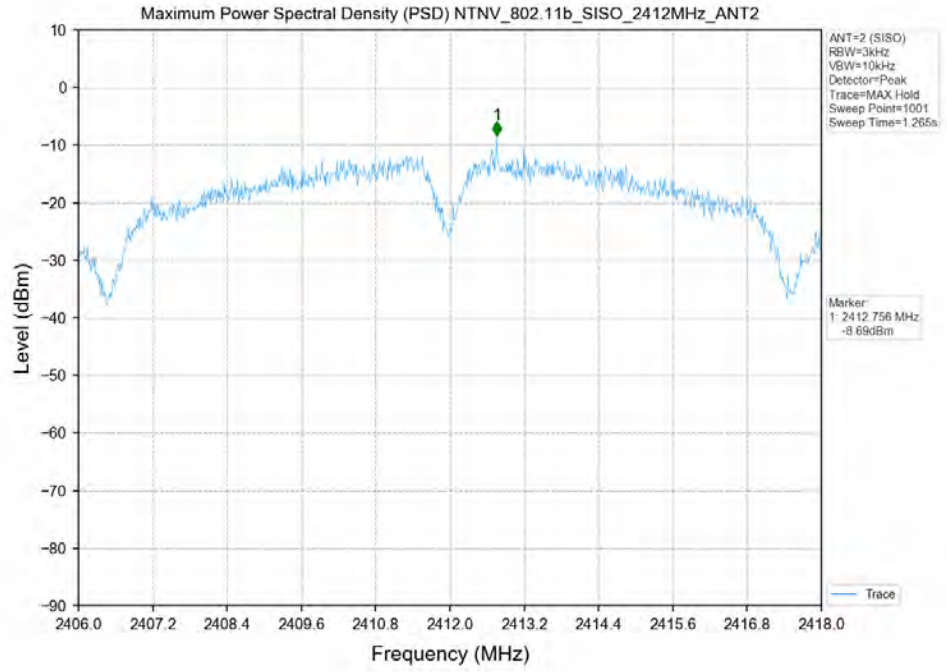
4. Maximum Power Spectral Density (PSD)

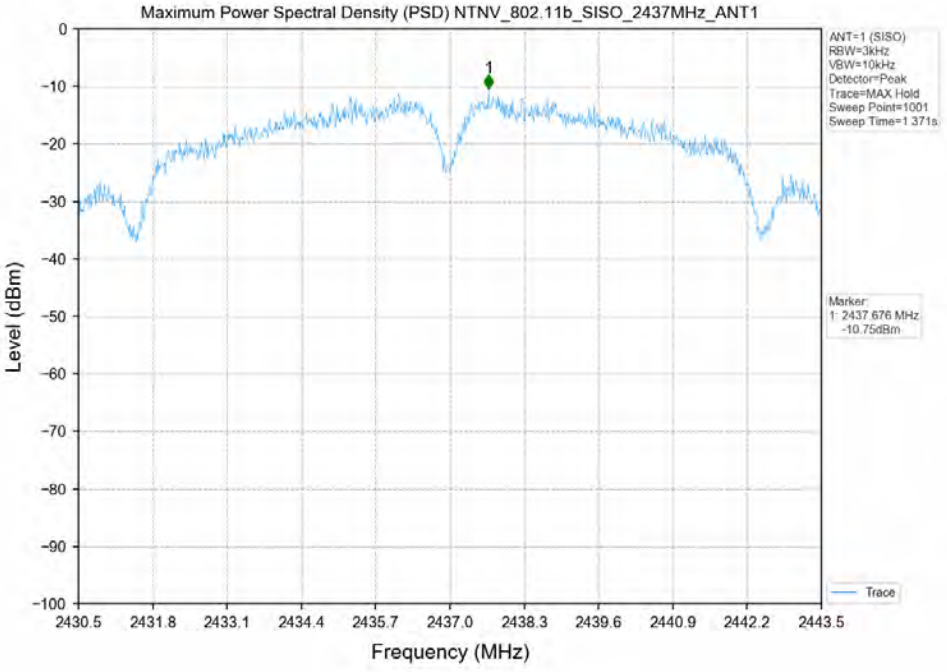
4.1 Test Result

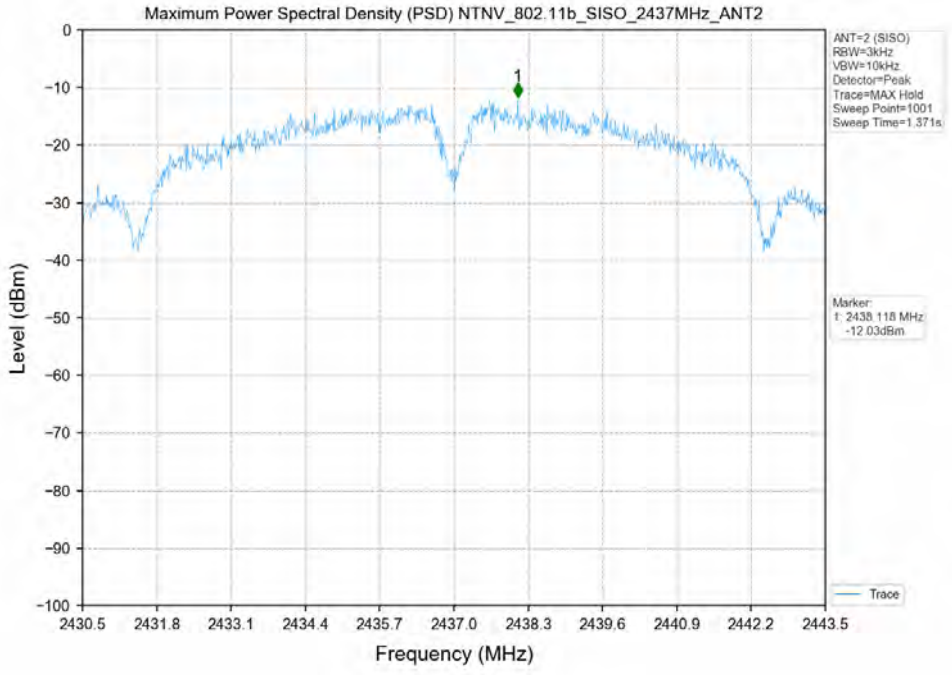
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)			Limits (dBm/3kHz)	Verdict
			Ant 1	Ant 2	Total		
802.11b	2412	SISO	-11.21	-8.69	/	≤8	PASS
	2437	SISO	-10.75	-12.03	/	≤8	PASS
	2462	SISO	-9.23	-10.32	/	≤8	PASS
802.11g	2412	SISO	-17.07	-18.50	/	≤8	PASS
	2437	SISO	-16.80	-16.68	/	≤8	PASS
	2462	SISO	-16.65	-16.70	/	≤8	PASS
802.11n(HT20)	2412	MIMO	-17.35	-17.74	-15.52	≤8	PASS
	2437	MIMO	-17.67	-17.37	-15.29	≤8	PASS
	2462	MIMO	-17.81	-17.08	-15.22	≤8	PASS

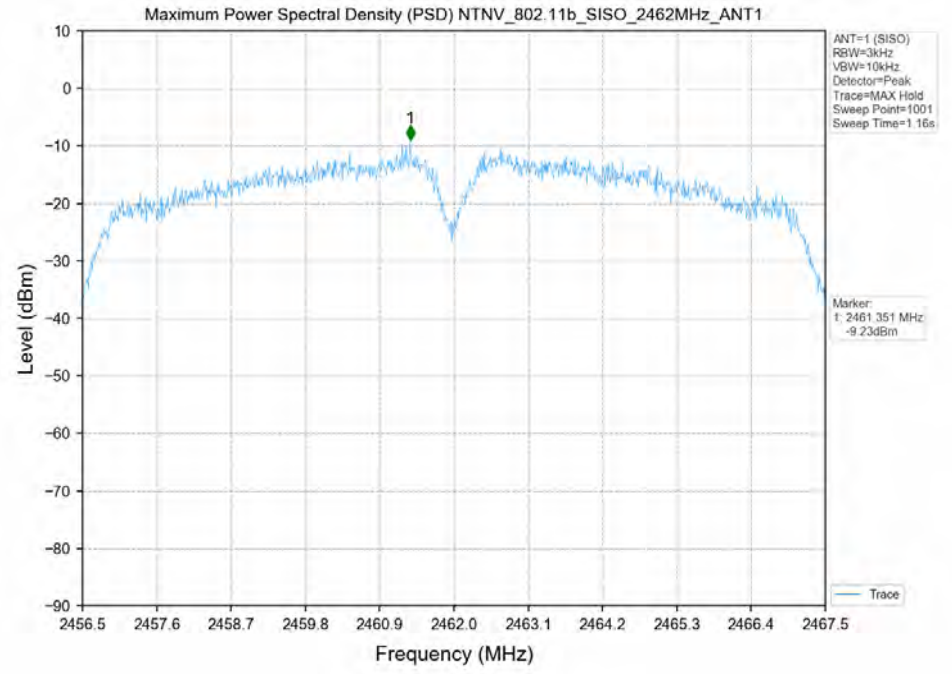
4.2 Test Graph

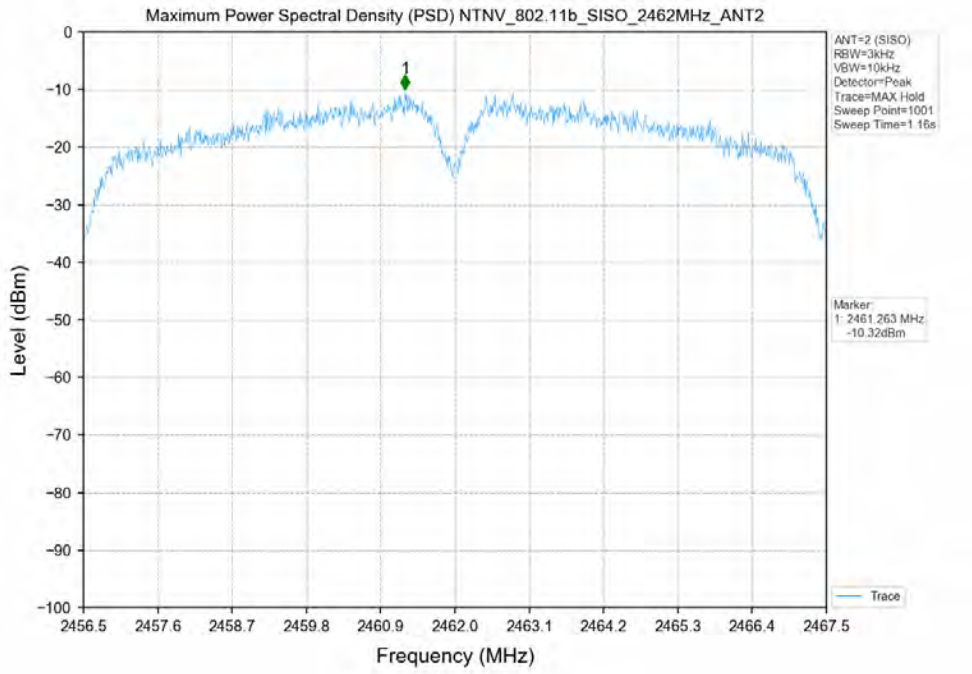


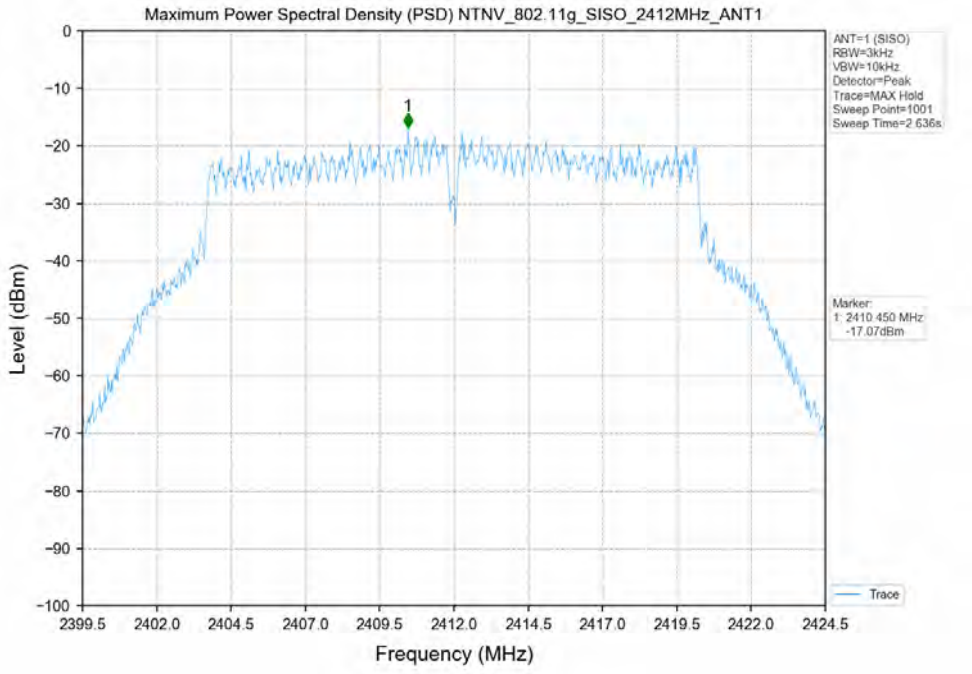

Maximum Power Spectral Density (PSD) NTNV_802.11b_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.265s
Marker
1: 2412.756 MHz
-8.69dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2406.0
2407.2
2408.4
2409.6
2410.8
2412.0
2413.2
2414.4
2415.6
2416.8
2418.0

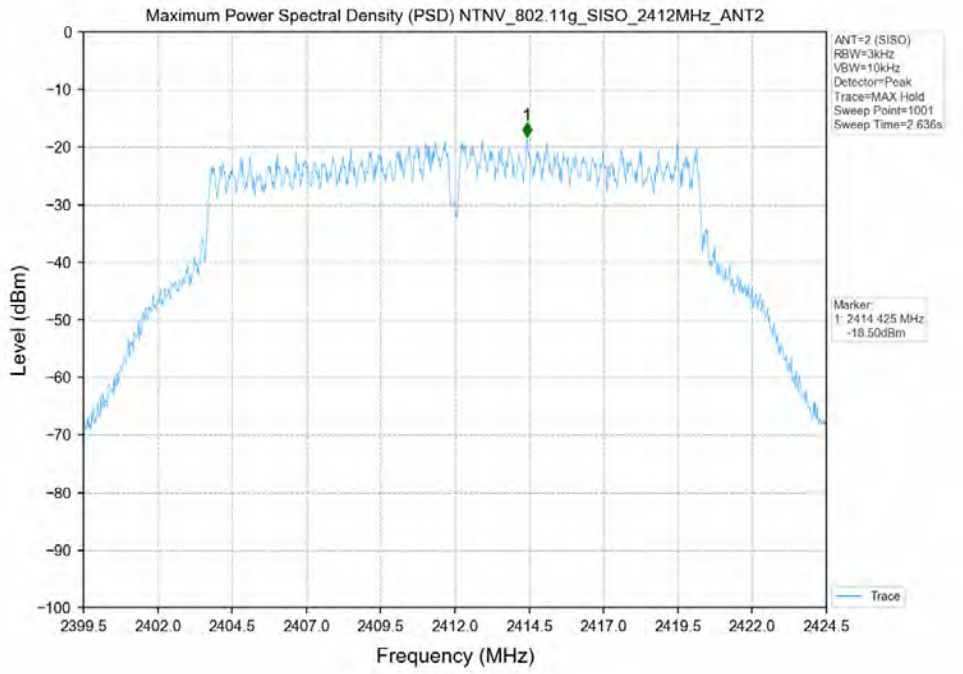

Maximum Power Spectral Density (PSD) NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.371s
Marker
1: 2437.676 MHz
-10.75dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2430.5
2431.8
2433.1
2434.4
2435.7
2437.0
2438.3
2439.6
2440.9
2442.2
2443.5

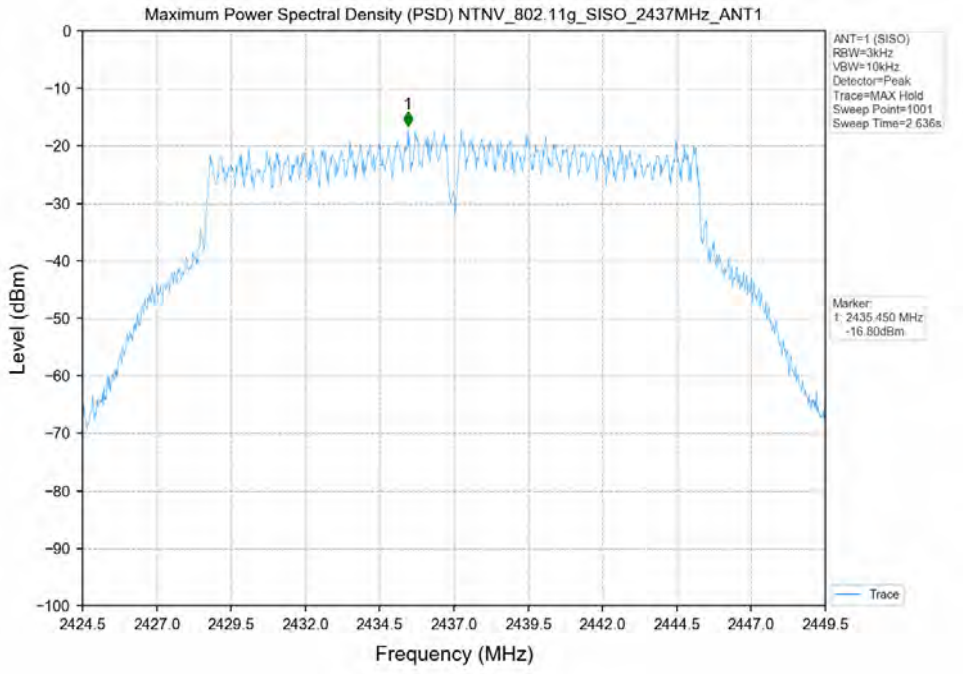

Maximum Power Spectral Density (PSD) NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.371s
Marker:
f: 2438.118 MHz
-12.03dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2430.5
2431.8
2433.1
2434.4
2435.7
2437.0
2438.3
2439.6
2440.9
2442.2
2443.5

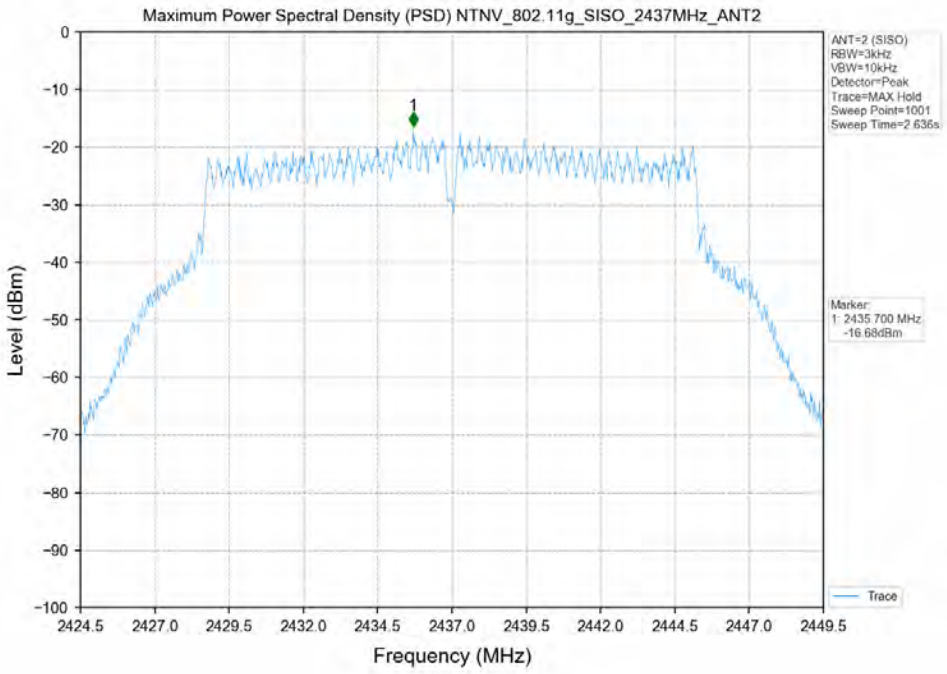

Maximum Power Spectral Density (PSD) NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.16s
Marker:
f: 2461.351 MHz
-9.23dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2456.5
2457.6
2458.7
2459.8
2460.9
2462.0
2463.1
2464.2
2465.3
2466.4
2467.5

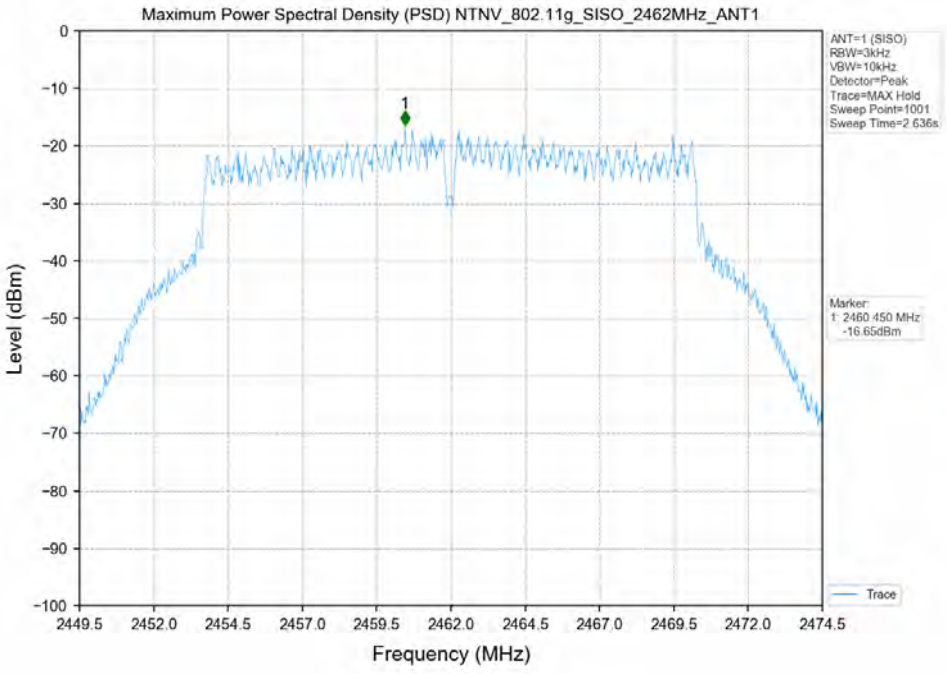

Maximum Power Spectral Density (PSD) NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=1.16s
Marker
1: 2461.263 MHz
-10.32dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2456.5
2457.6
2458.7
2459.8
2460.9
2462.0
2463.1
2464.2
2465.3
2466.4
2467.5

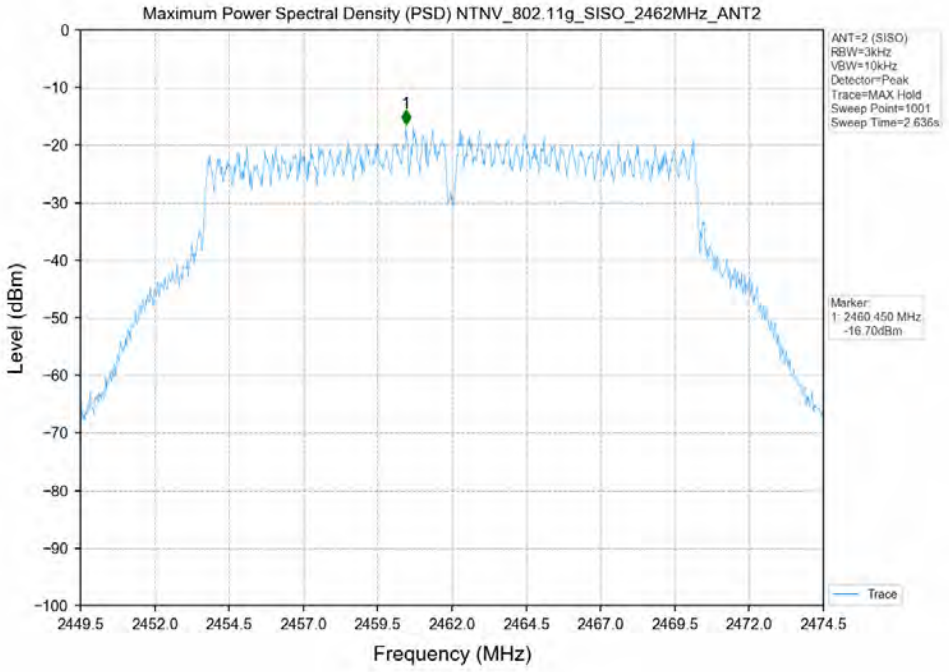

Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2410.450 MHz
-17.07dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2399.5
2402.0
2404.5
2407.0
2409.5
2412.0
2414.5
2417.0
2419.5
2422.0
2424.5

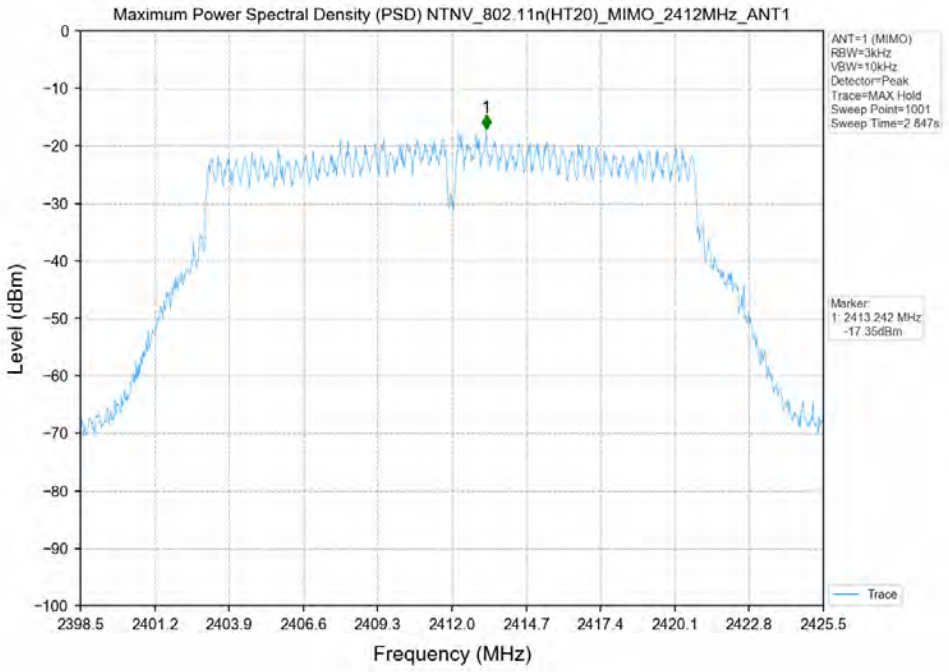

Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2414.425 MHz
-18.50dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2399.5
2402.0
2404.5
2407.0
2409.5
2412.0
2414.5
2417.0
2419.5
2422.0
2424.5

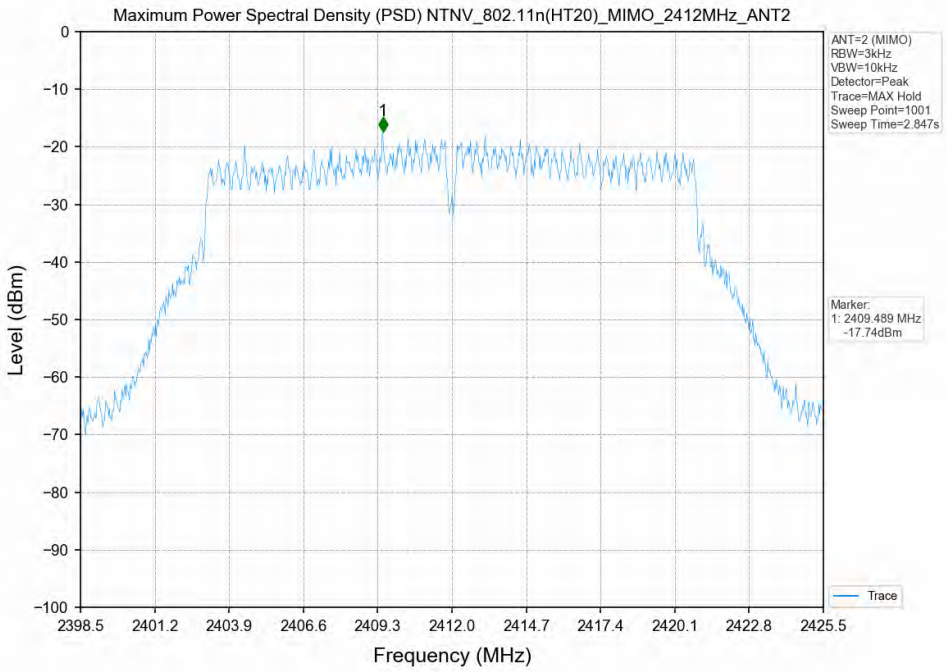

Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2435.450 MHz
-16.80dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2424.5
2427.0
2429.5
2432.0
2434.5
2437.0
2439.5
2442.0
2444.5
2447.0
2449.5


Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2435.700 MHz
-16.68dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2424.5
2427.0
2429.5
2432.0
2434.5
2437.0
2439.5
2442.0
2444.5
2447.0
2449.5

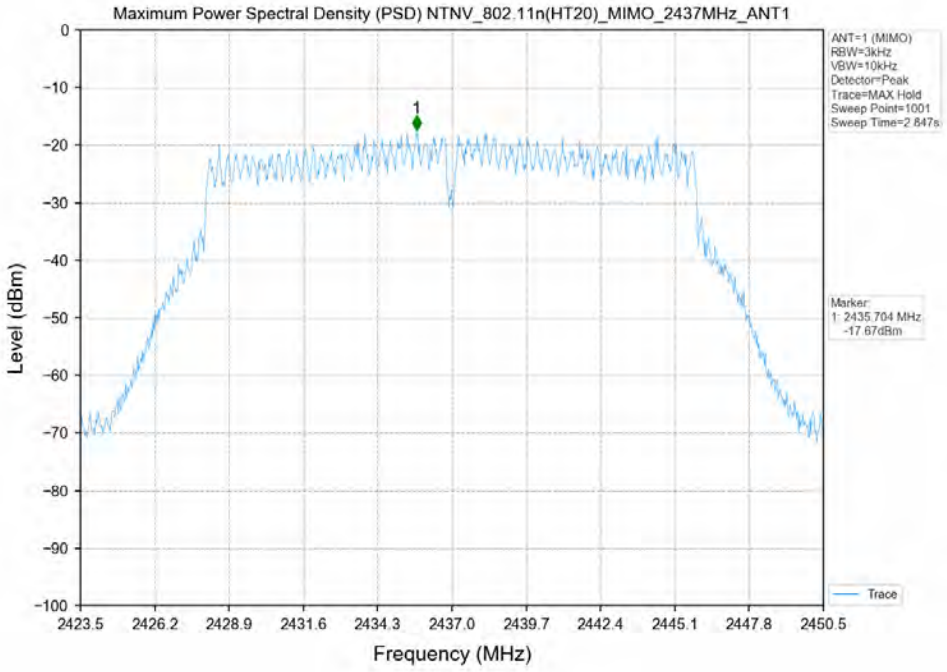

Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2460.450 MHz
-16.65dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2449.5
2452.0
2454.5
2457.0
2459.5
2462.0
2464.5
2467.0
2469.5
2472.0
2474.5

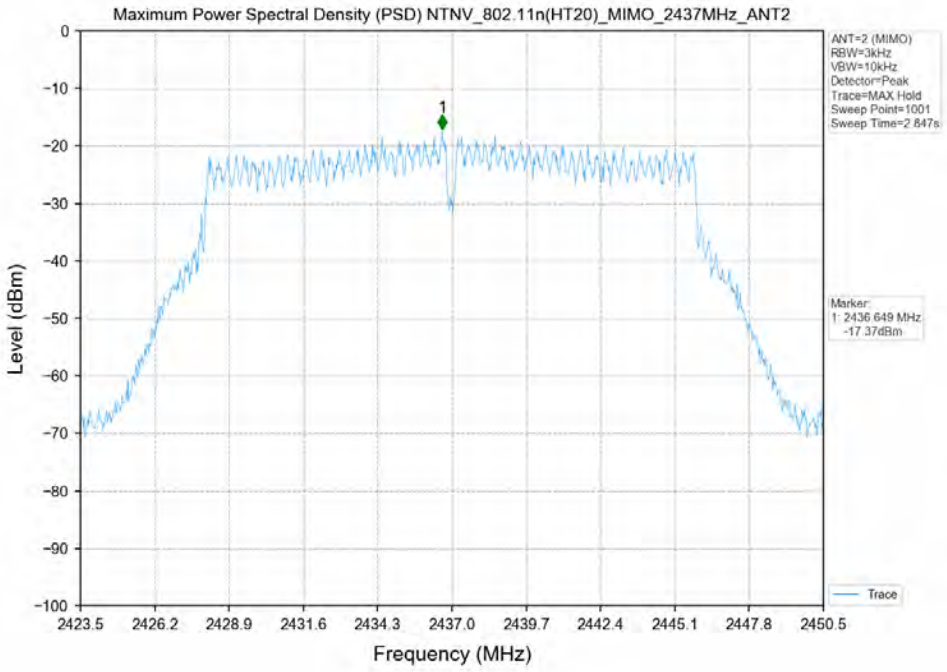

Maximum Power Spectral Density (PSD) NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.636s
Marker
1: 2460.450 MHz
-16.70dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2449.5
2452.0
2454.5
2457.0
2459.5
2462.0
2464.5
2467.0
2469.5
2472.0
2474.5

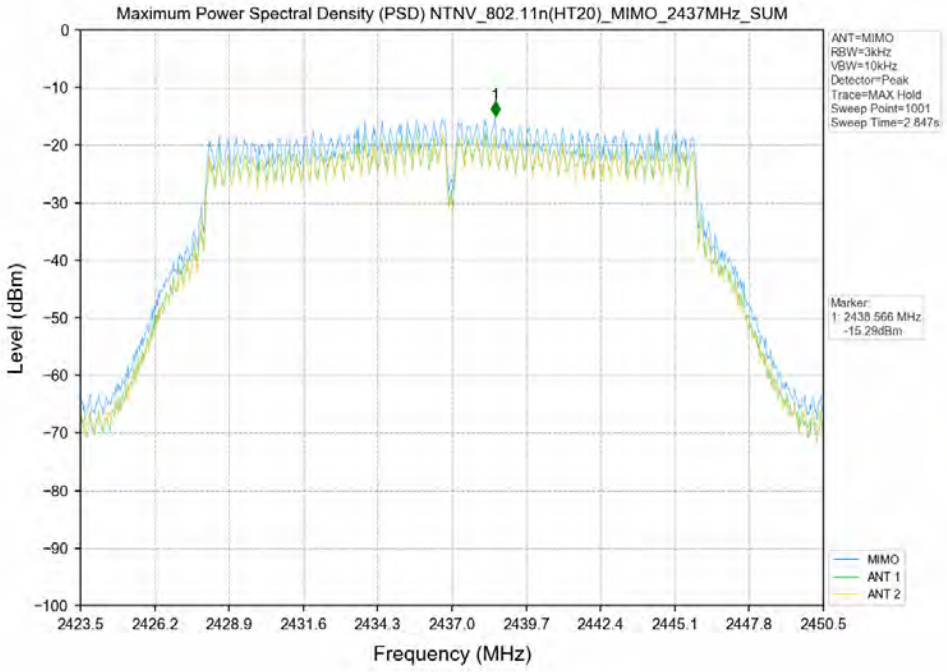

Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2413.242 MHz
-17.35dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2398.5
2401.2
2403.9
2406.6
2409.3
2412.0
2414.7
2417.4
2420.1
2422.8
2425.5

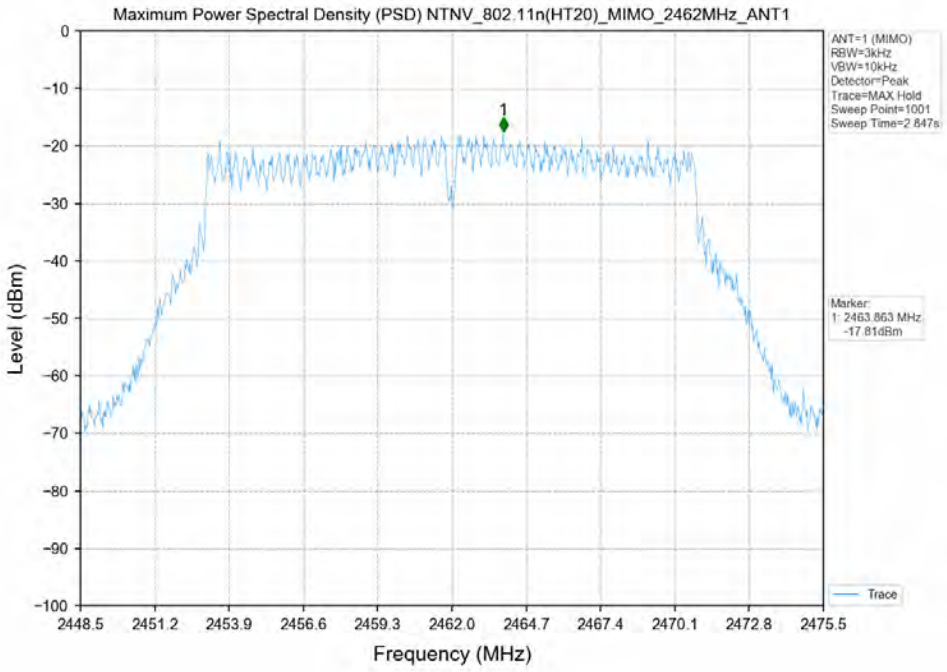

Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker:
1: 2409.489 MHz
-17.74dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2398.5
2401.2
2403.9
2406.6
2409.3
2412.0
2414.7
2417.4
2420.1
2422.8
2425.5

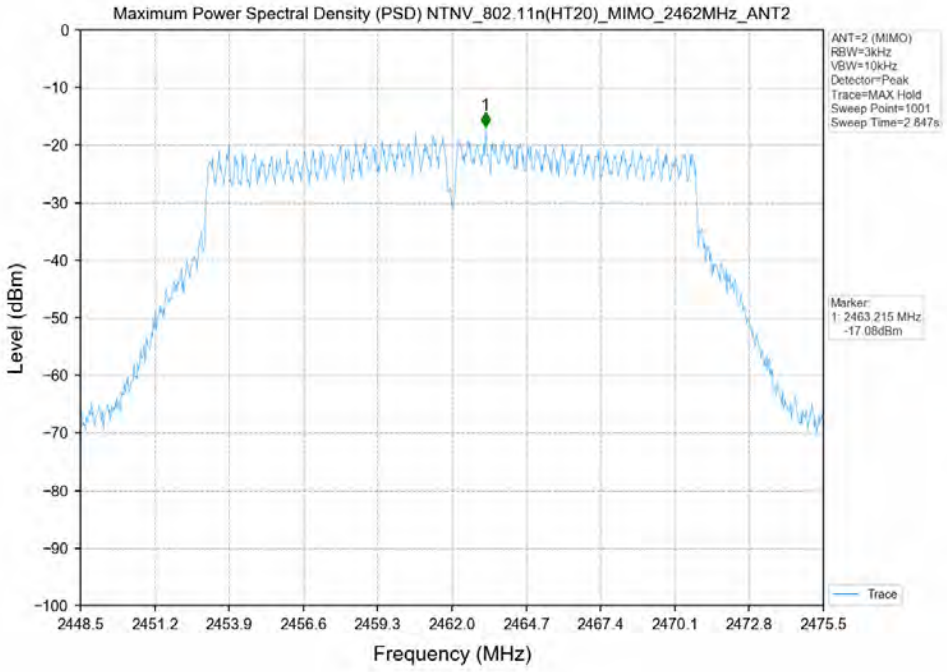
Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2412MHz_SUM
ANT=MIMO
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker:
1: 2412.891 MHz
-15.52dBm
MIMO
ANT 1
ANT 2
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2398.5
2401.2
2403.9
2406.6
2409.3
2412.0
2414.7
2417.4
2420.1
2422.8
2425.5

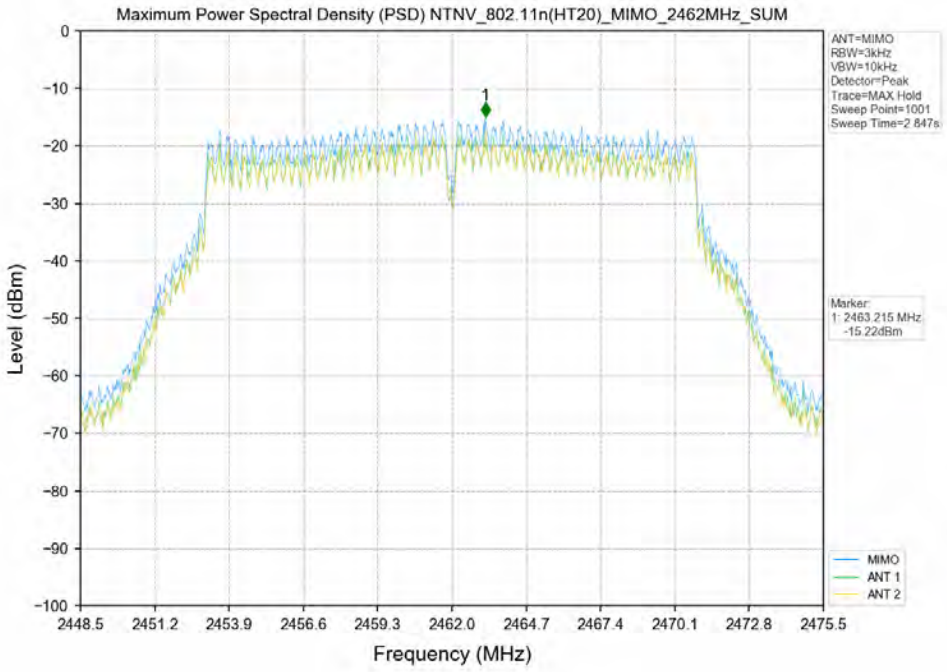

Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2437MHz_ANT1
ANT=1 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2435.704 MHz
-17.67dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2423.5
2426.2
2428.9
2431.6
2434.3
2437.0
2439.7
2442.4
2445.1
2447.8
2450.5


Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2436.649 MHz
-17.37dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2423.5
2426.2
2428.9
2431.6
2434.3
2437.0
2439.7
2442.4
2445.1
2447.8
2450.5


Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2437MHz_SUM
ANT=MIMO
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2438.566 MHz
-15.29dBm
MIMO
ANT 1
ANT 2
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2423.5
2426.2
2428.9
2431.6
2434.3
2437.0
2439.7
2442.4
2445.1
2447.8
2450.5


Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2463.863 MHz
-17.81dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2448.5
2451.2
2453.9
2456.6
2459.3
2462.0
2464.7
2467.4
2470.1
2472.8
2475.5


Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2463.215 MHz
-17.08dBm
Trace
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2448.5
2451.2
2453.9
2456.6
2459.3
2462.0
2464.7
2467.4
2470.1
2472.8
2475.5

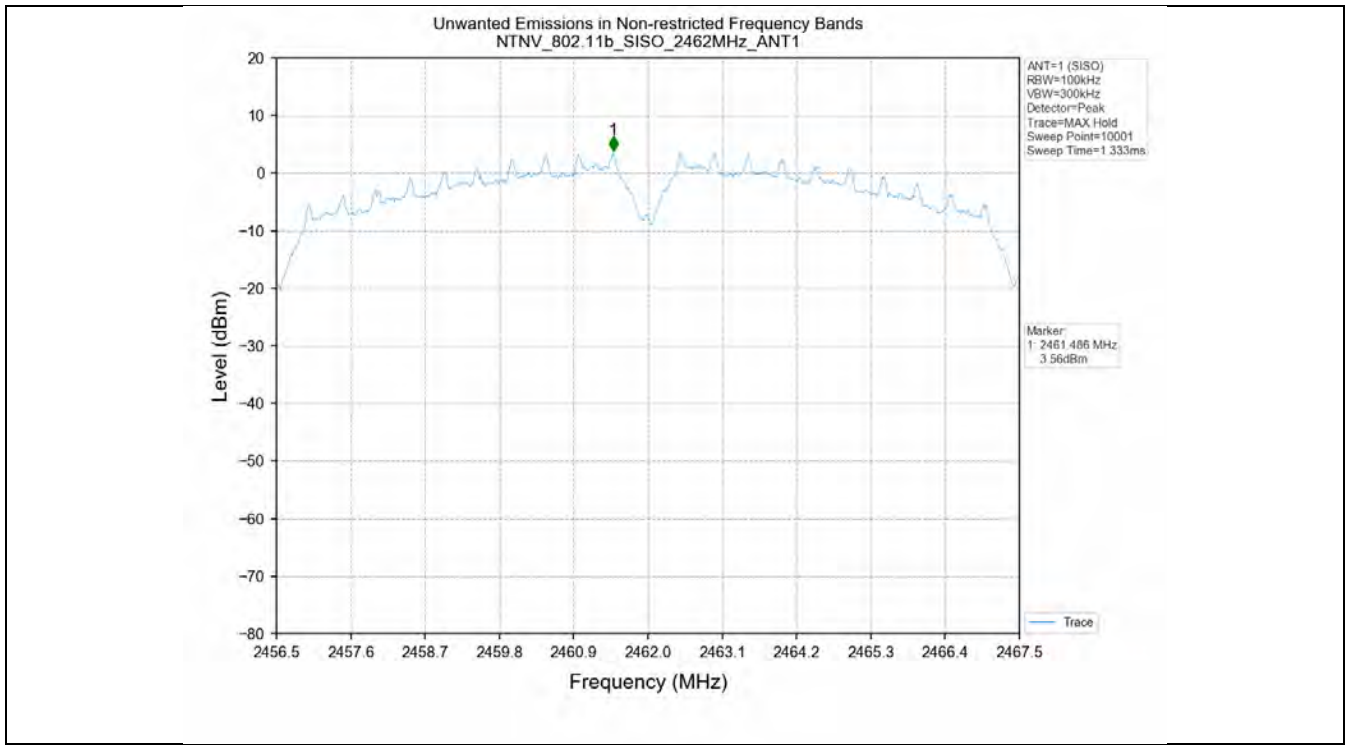

Maximum Power Spectral Density (PSD) NTNV_802.11n(HT20)_MIMO_2462MHz_SUM
ANT=MIMO
RBW=3kHz
VBW=10kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.847s
Marker
1: 2463.215 MHz
-15.22dBm
MIMO
ANT 1
ANT 2
Level (dBm)
Frequency (MHz)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
2448.5
2451.2
2453.9
2456.6
2459.3
2462.0
2464.7
2467.4
2470.1
2472.8
2475.5

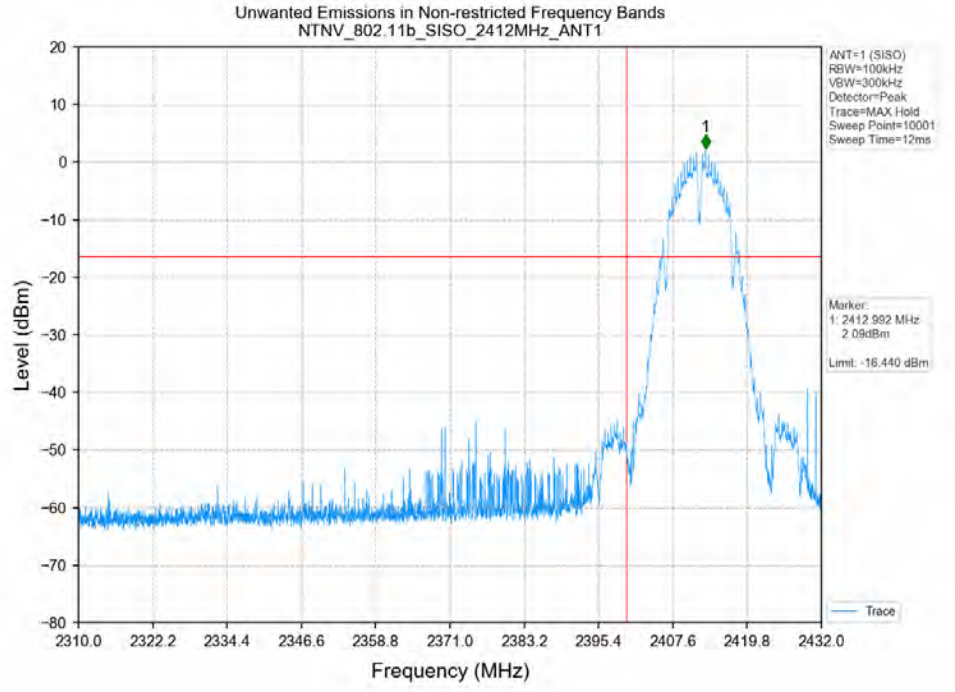
5. Unwanted Emissions in Non-restricted Frequency Bands

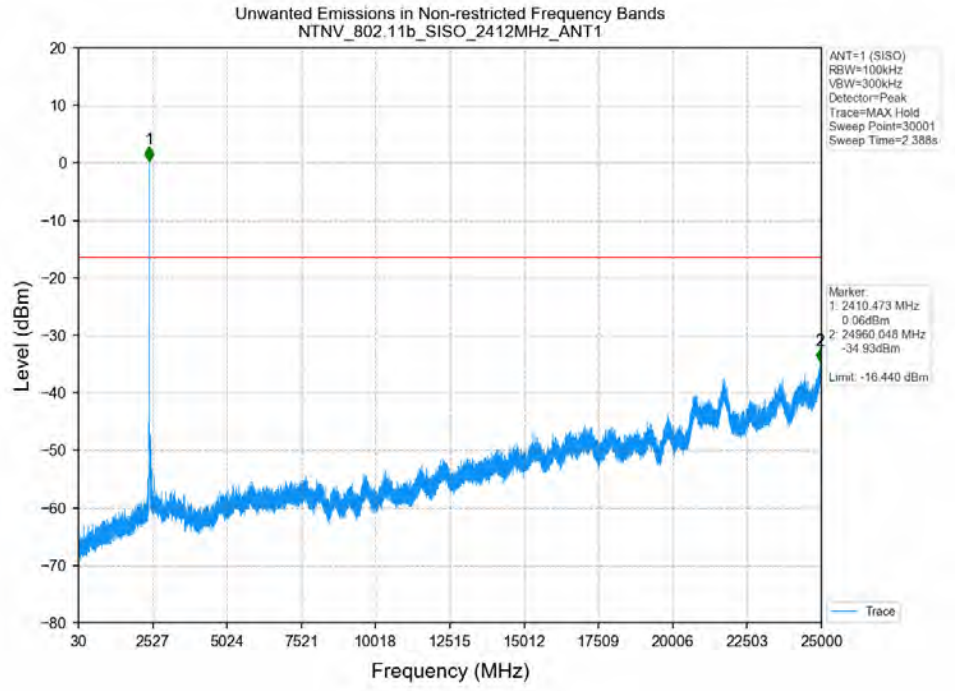
5.1 Test Result

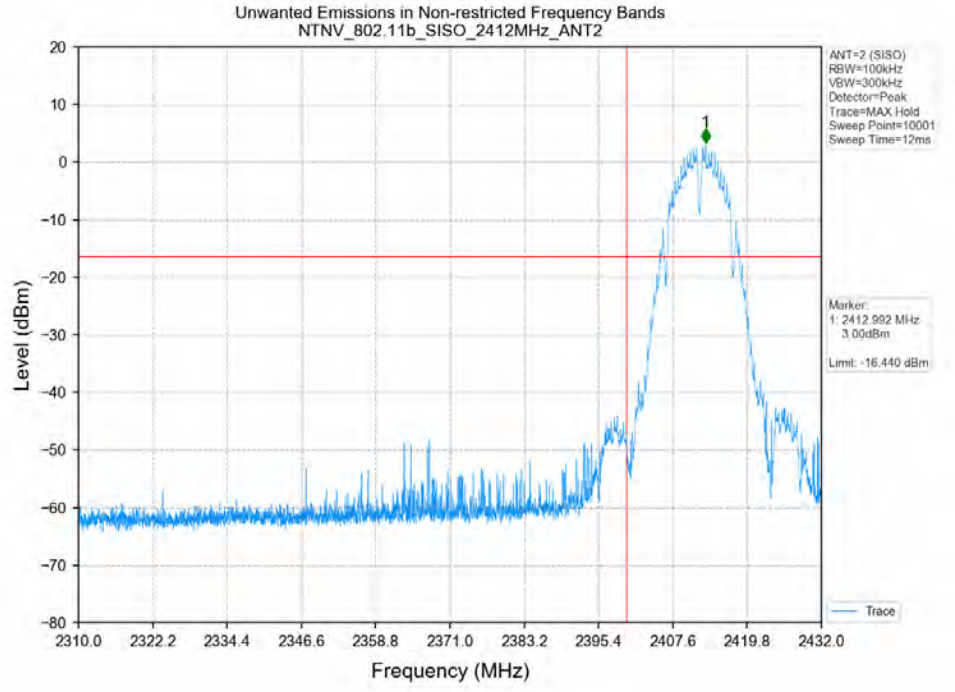
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBc)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
	2437	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
	2462	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
802.11g	2412	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
	2437	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
	2462	SISO	1	Refer to test graph	-20	PASS
			2	Refer to test graph	-20	PASS
802.11n(HT20)	2412	MIMO	0	Refer to test graph	-20	PASS
	2437	MIMO	0	Refer to test graph	-20	PASS
	2462	MIMO	0	Refer to test graph	-20	PASS

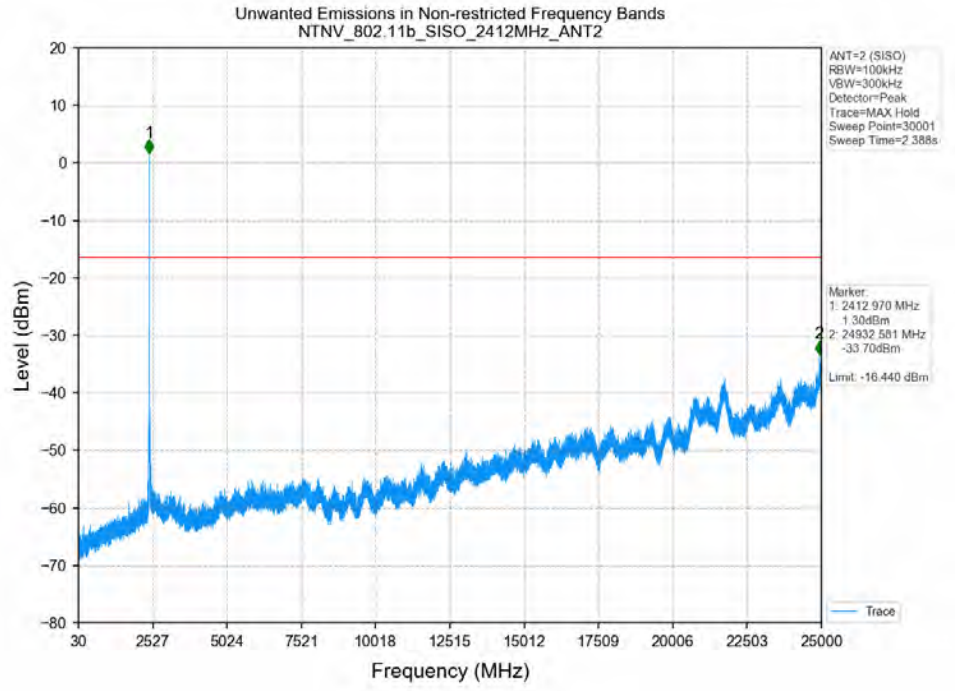
5.2 Test Graph

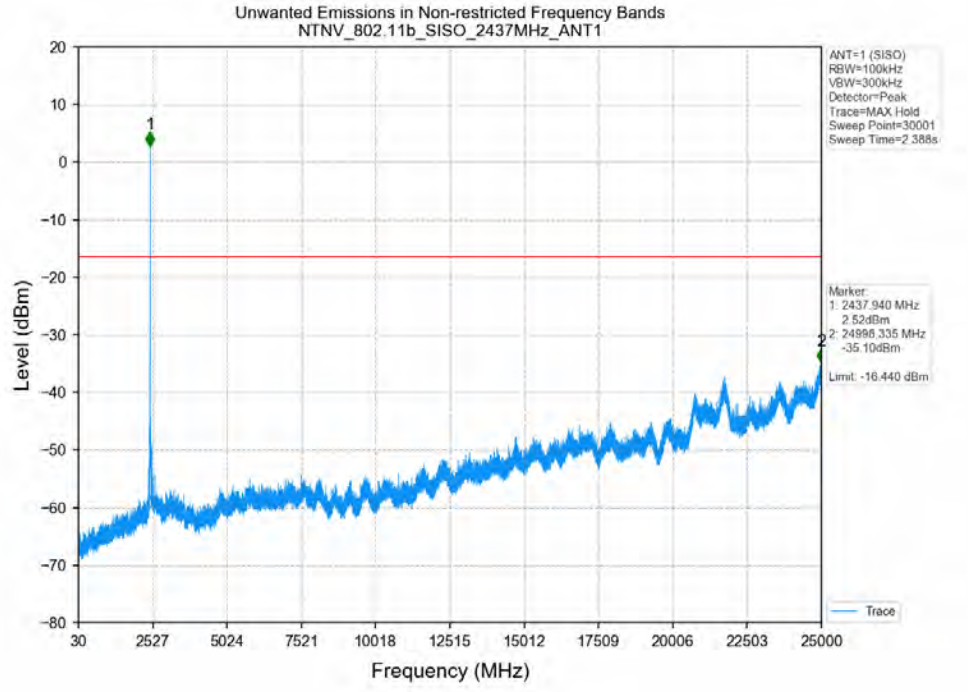


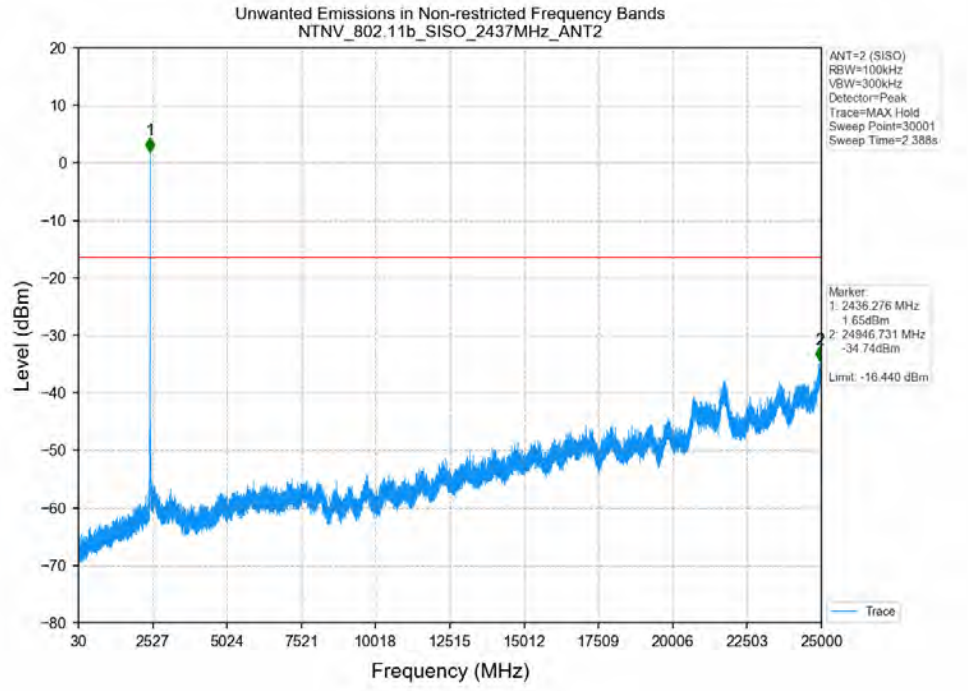

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker
1: 2412.992 MHz
2.09dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

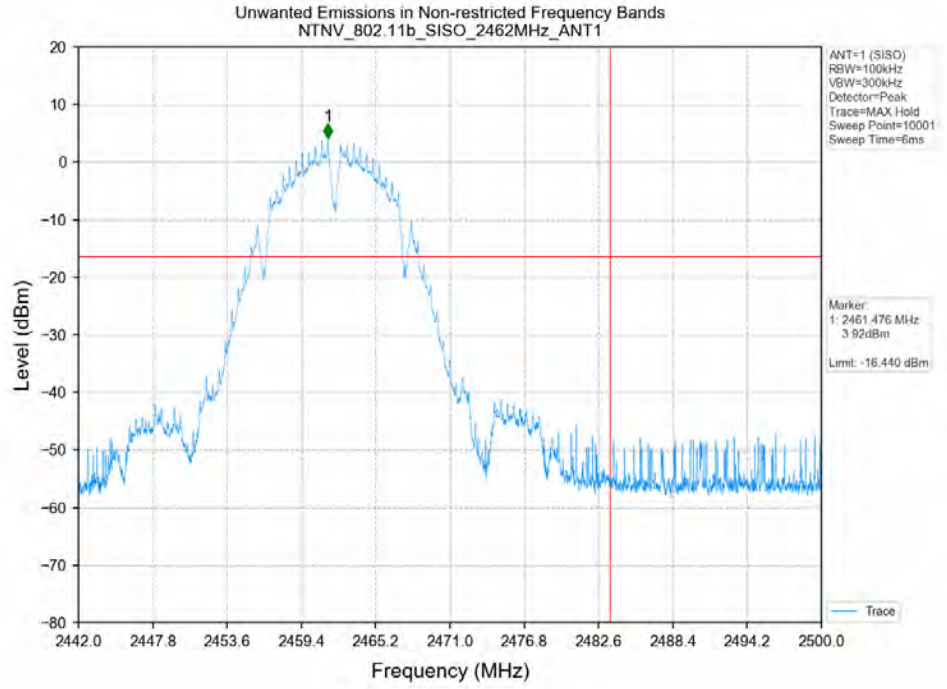

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2410.473 MHz
0.06dBm
2: 24960.048 MHz
-34.93dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

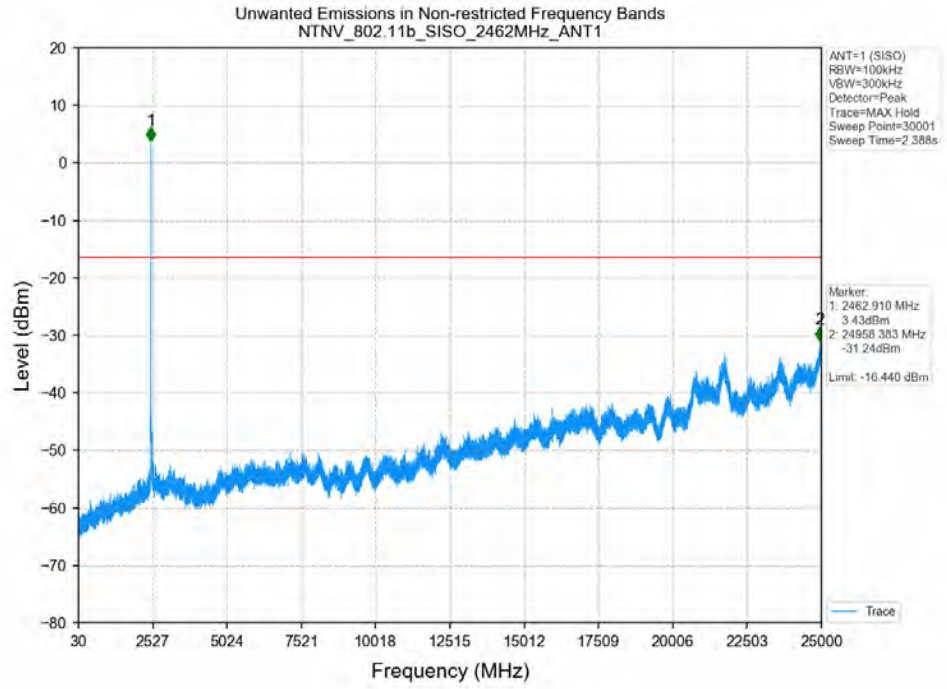

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker
1: 2412.992 MHz
3.00dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

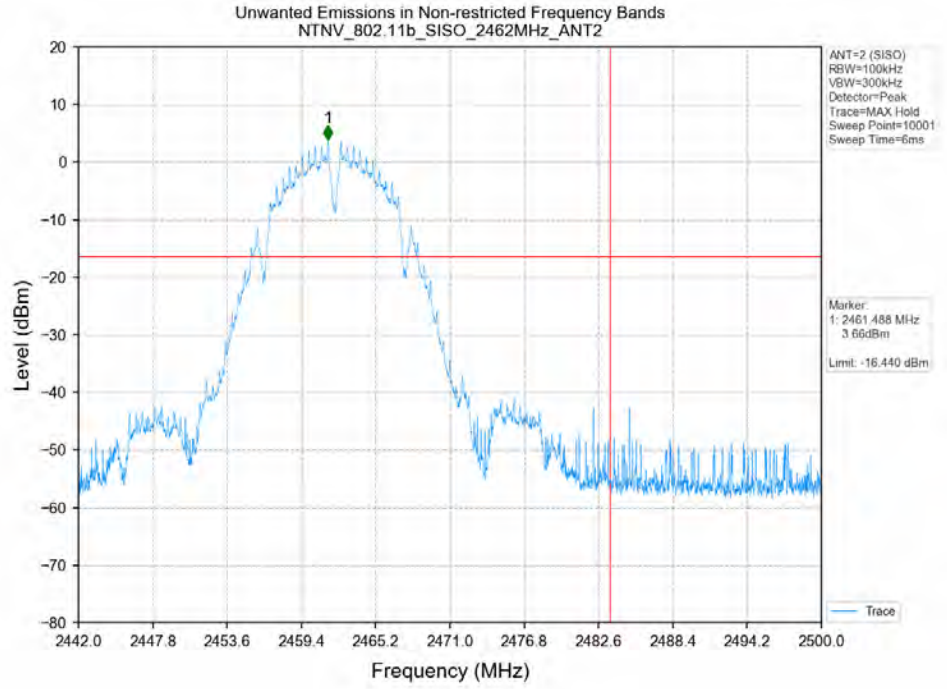

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2412.970 MHz
1.30dBm
2: 24932.581 MHz
-33.70dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

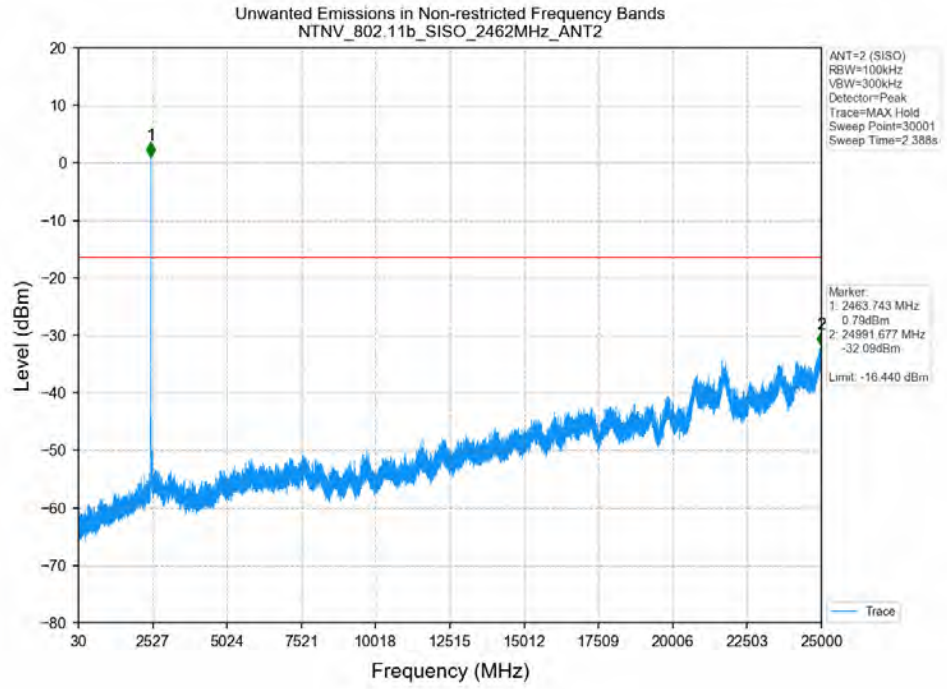

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2437.940 MHz
2.52dBm
2: 24986.335 MHz
-35.10dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

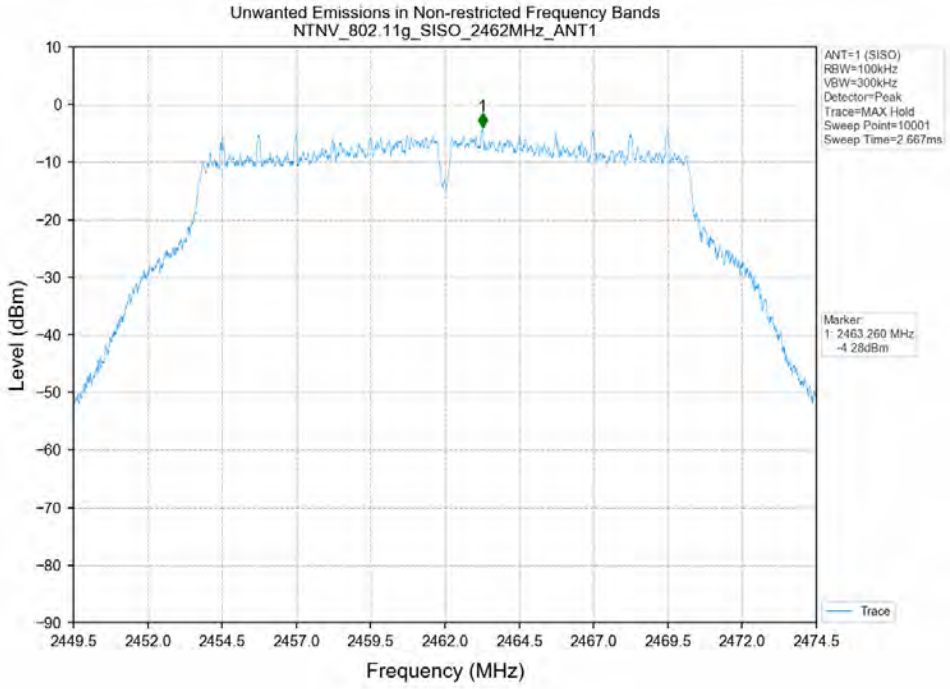

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2436.276 MHz
1.65dBm
2: 24946.731 MHz
-34.74dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

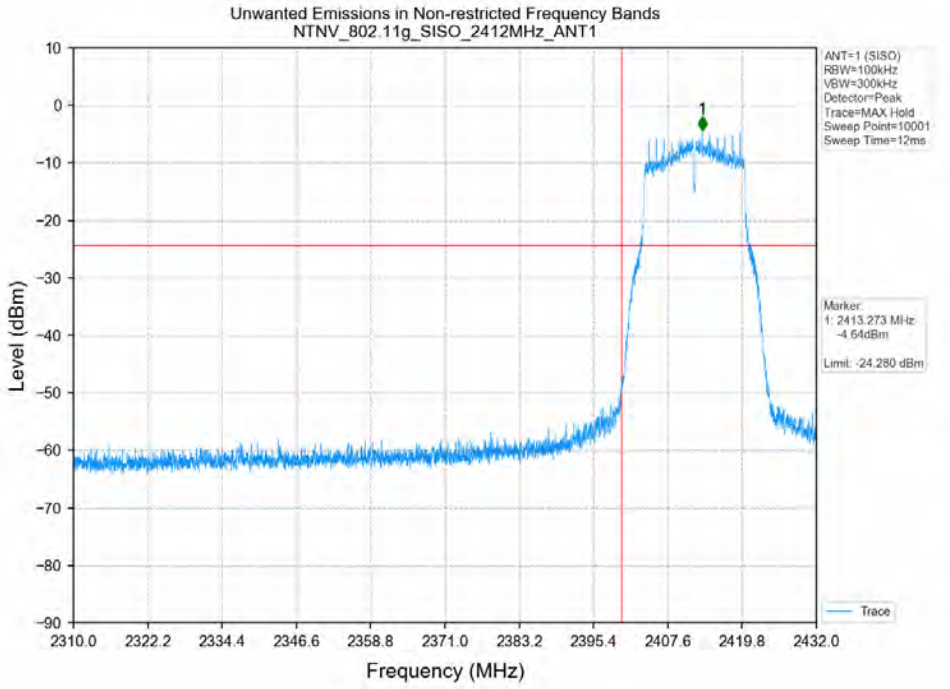

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker
1: 2461.476 MHz
3.92dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0

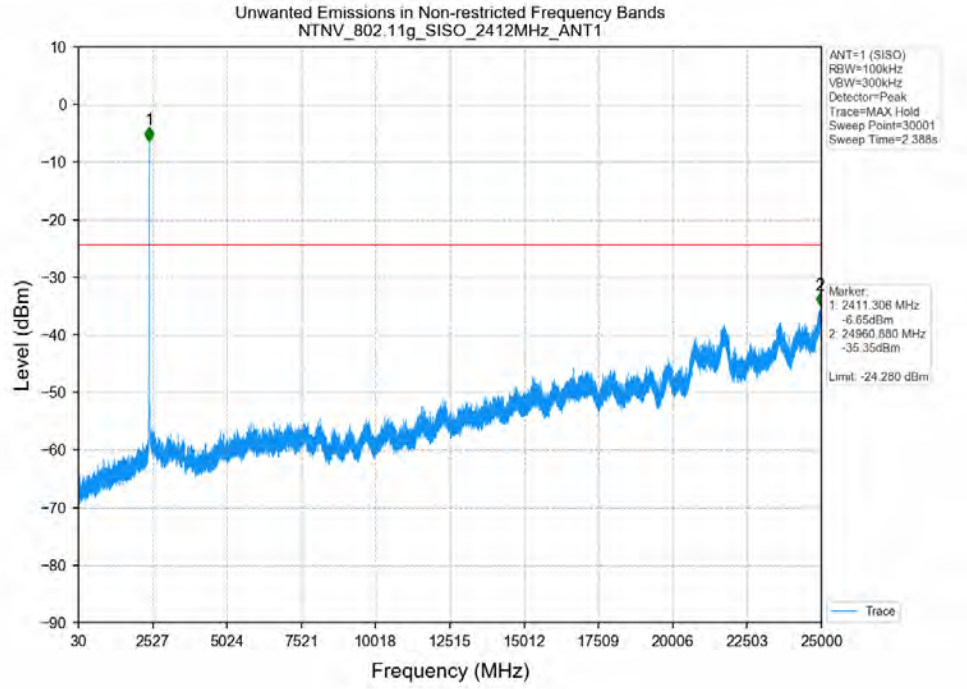

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2462.910 MHz
3.43dBm
2: 24958.383 MHz
-31.24dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

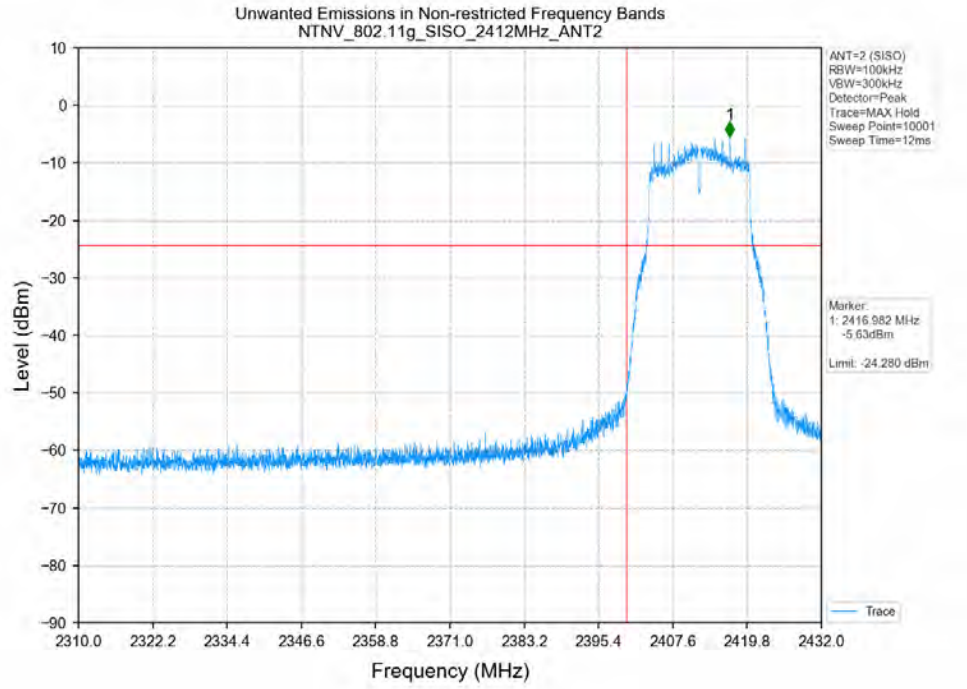

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker
1: 2461.488 MHz
3.66dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0

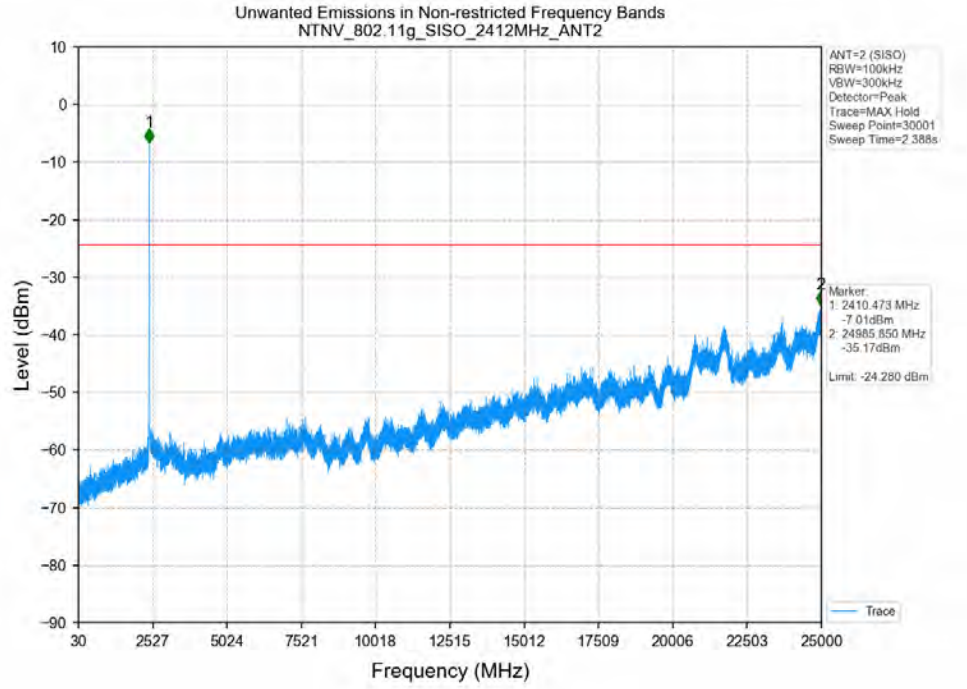

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11b_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2463.743 MHz
0.79dBm
2: 24991.677 MHz
-32.09dBm
Limit: -16.440 dBm
Trace
Level (dBm)
Frequency (MHz)
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

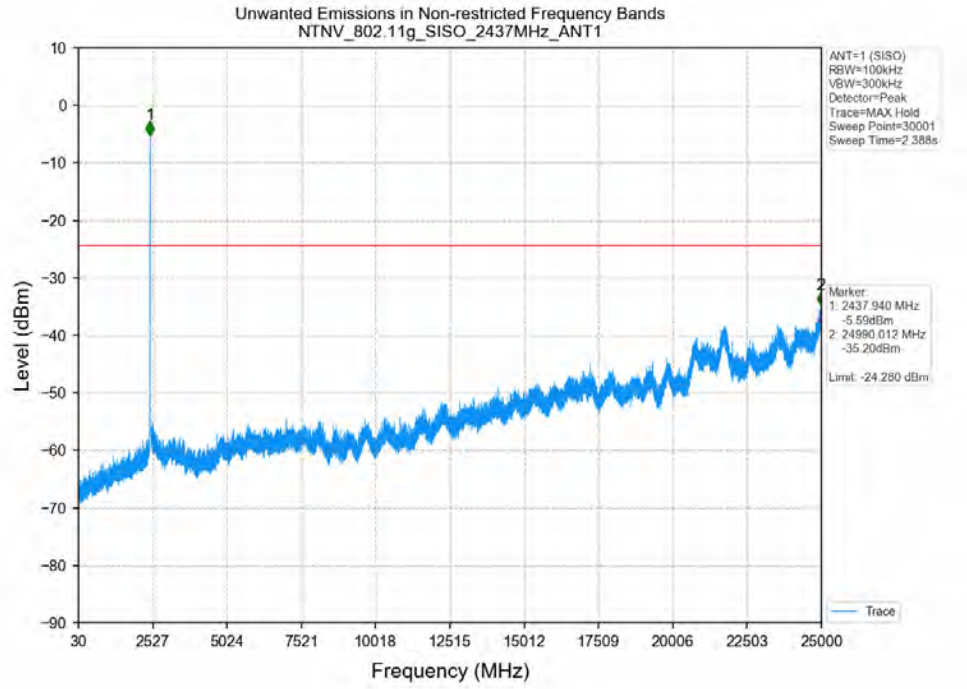

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=2.667ms
Marker
1: 2463.260 MHz
-4.28dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2449.5
2452.0
2454.5
2457.0
2459.5
2462.0
2464.5
2467.0
2469.5
2472.0
2474.5

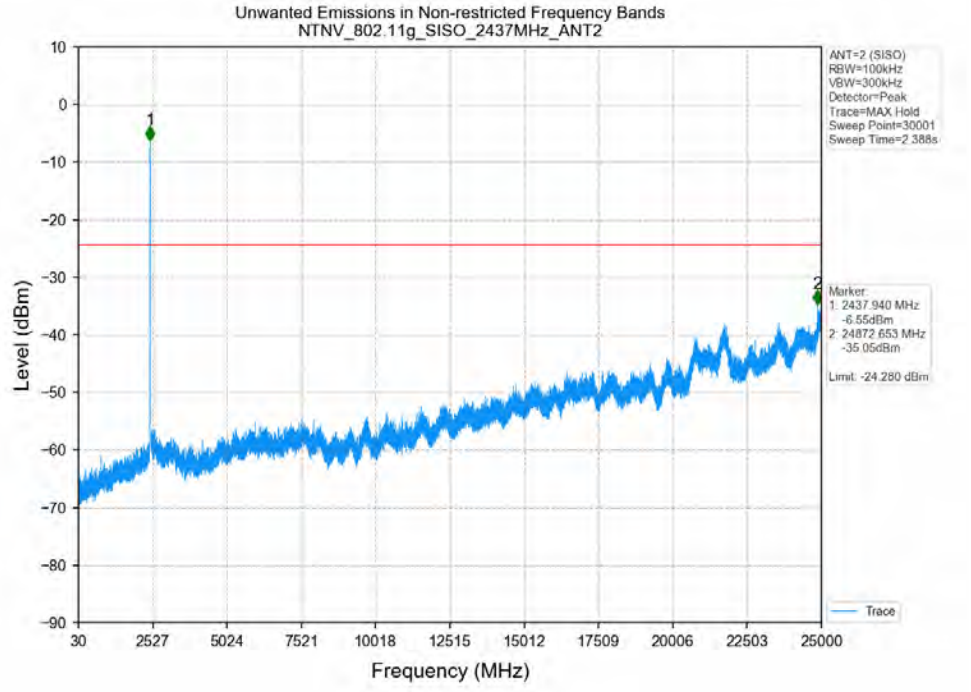

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker
1: 2413.273 MHz
-4.64dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

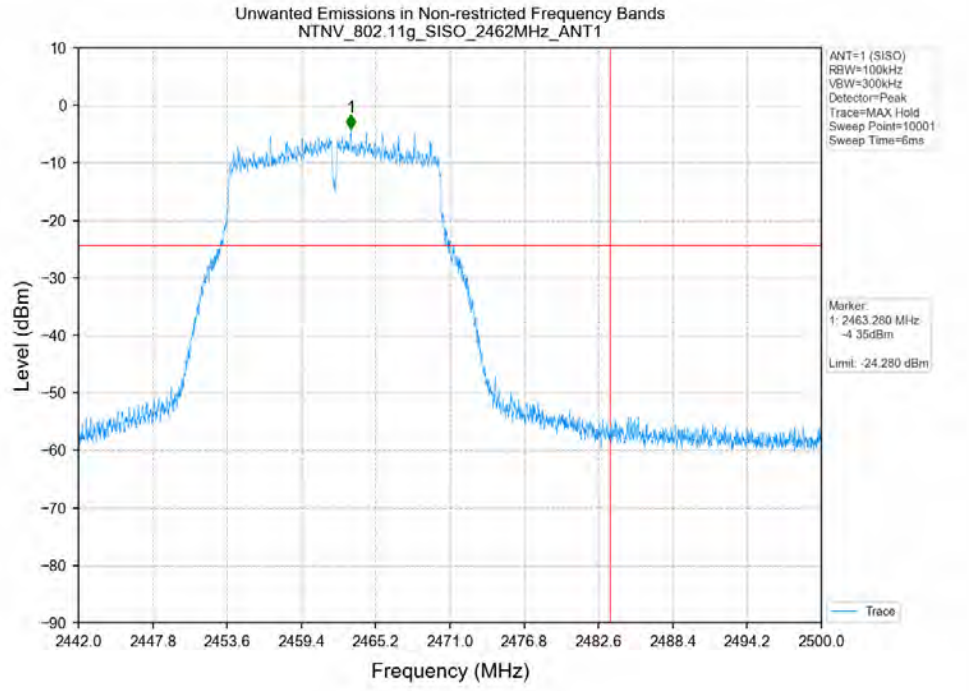

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2412MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker:
1: 2411.308 MHz
-6.65dBm
2: 24960.880 MHz
-35.35dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

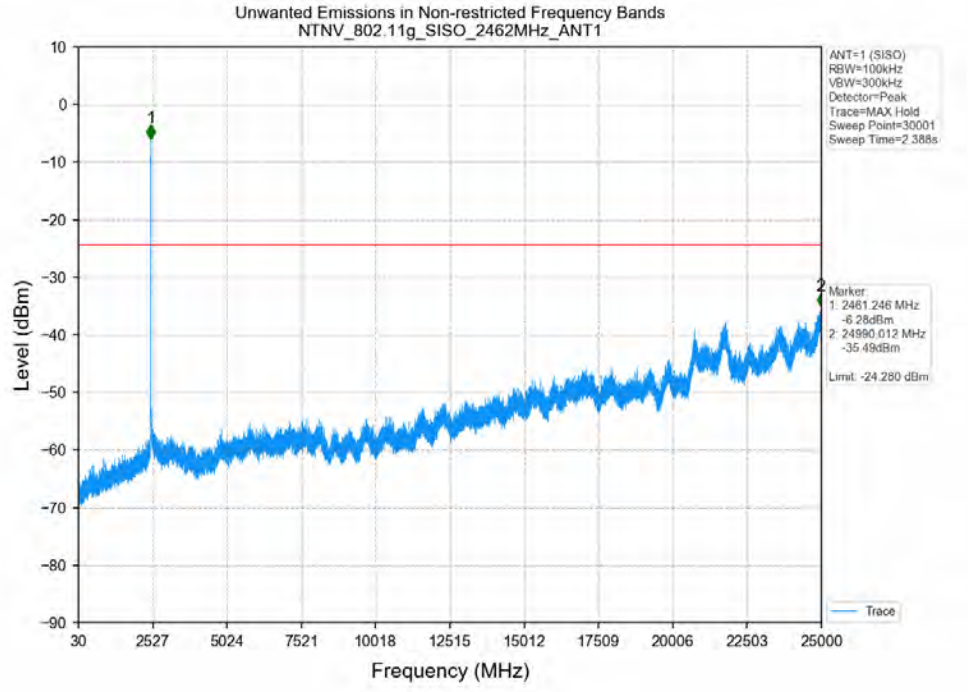

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker:
1: 2416.982 MHz
-5.63dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

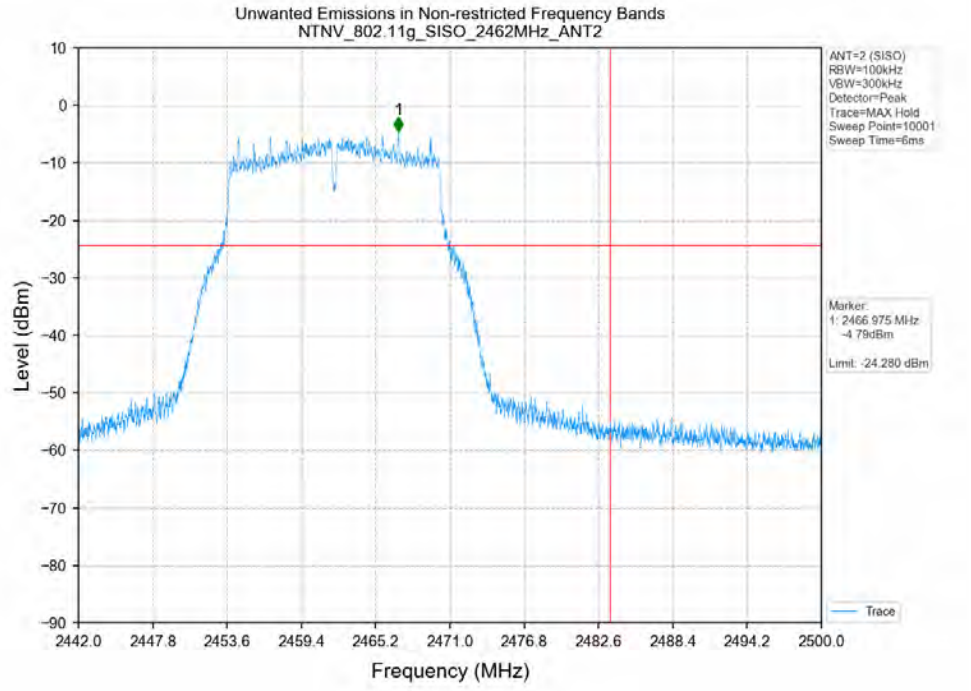

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2412MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2410.473 MHz
-7.01dBm
2: 24985.850 MHz
-35.17dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

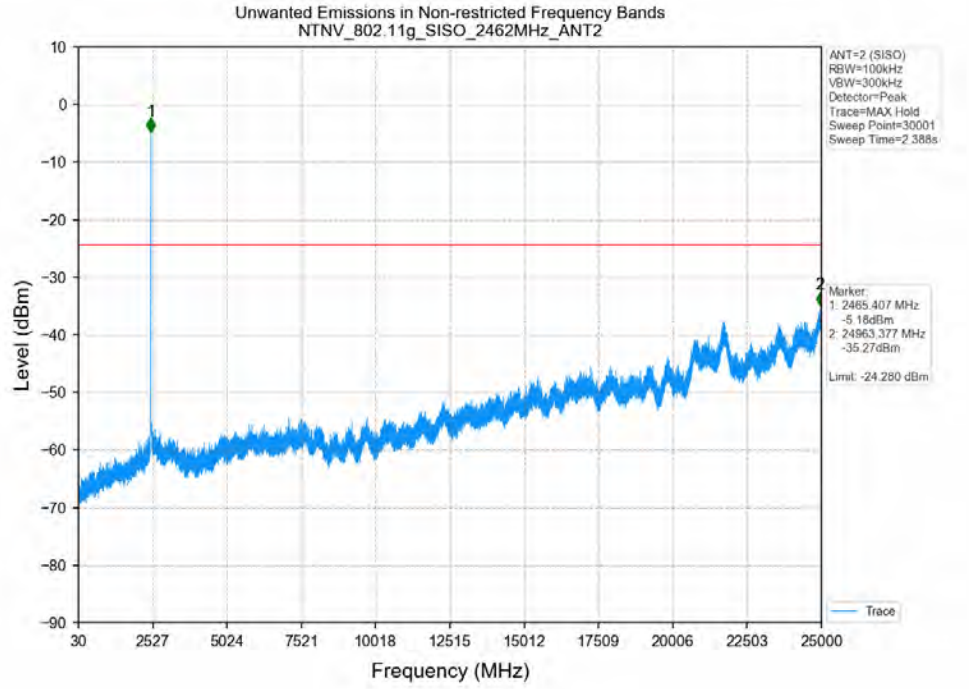

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2437MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2437.940 MHz
-5.59dBm
2: 24990.012 MHz
-35.20dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

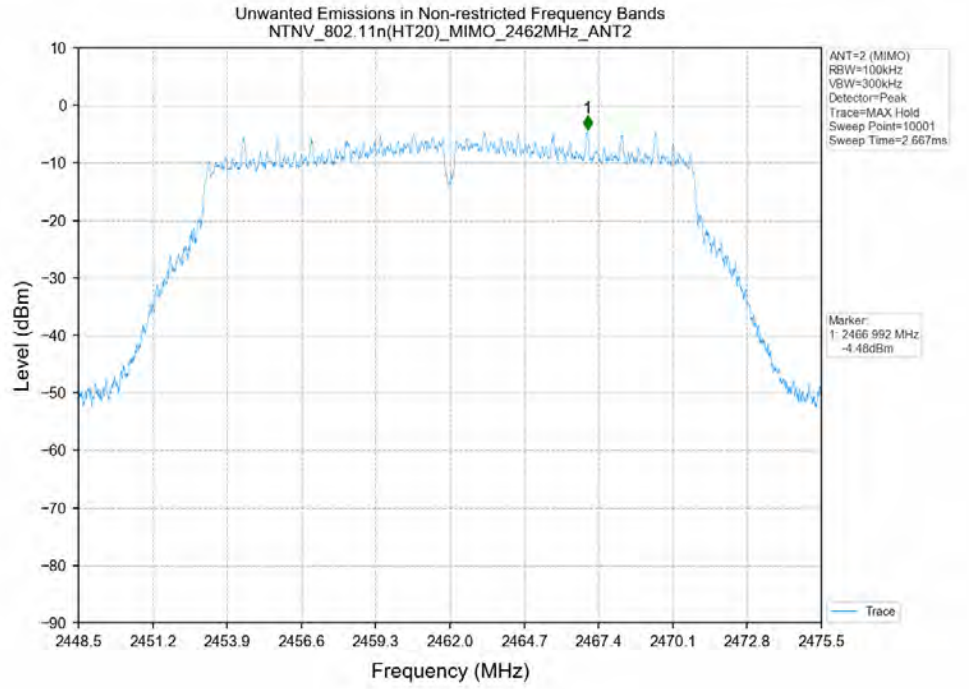

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2437MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2437.940 MHz
-6.55dBm
2: 24872.653 MHz
-35.05dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

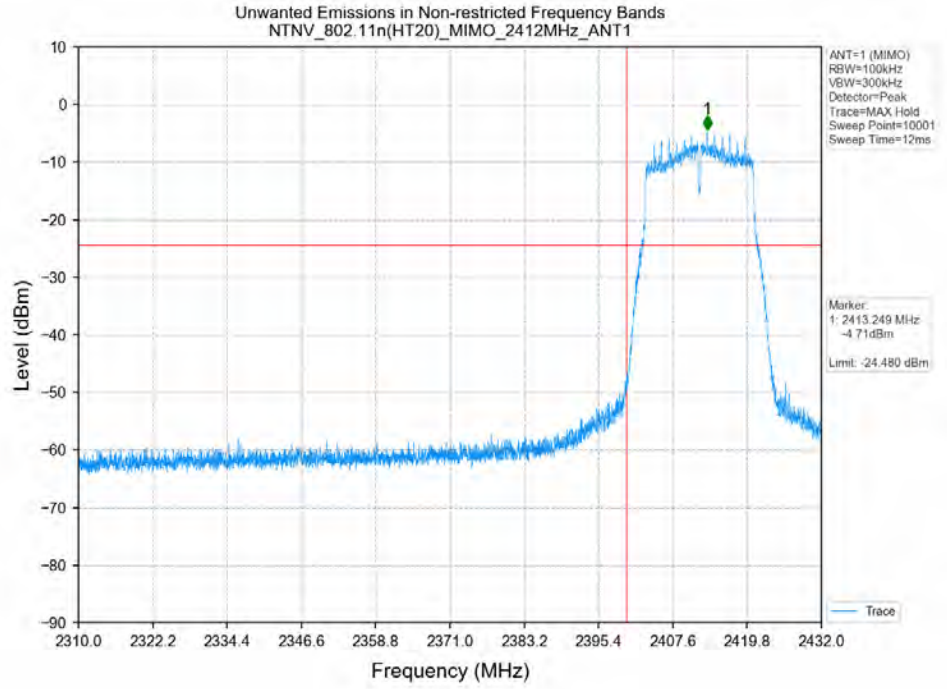

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker
1: 2463.280 MHz
-4.35dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0

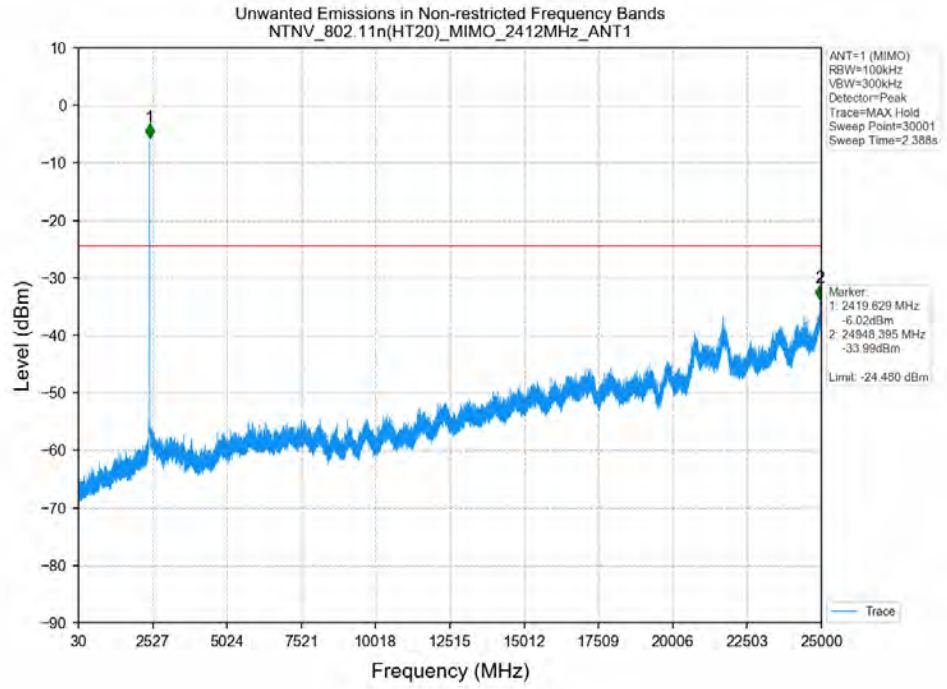

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2462MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2461.246 MHz
-6.28dBm
2: 24990.012 MHz
-35.49dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

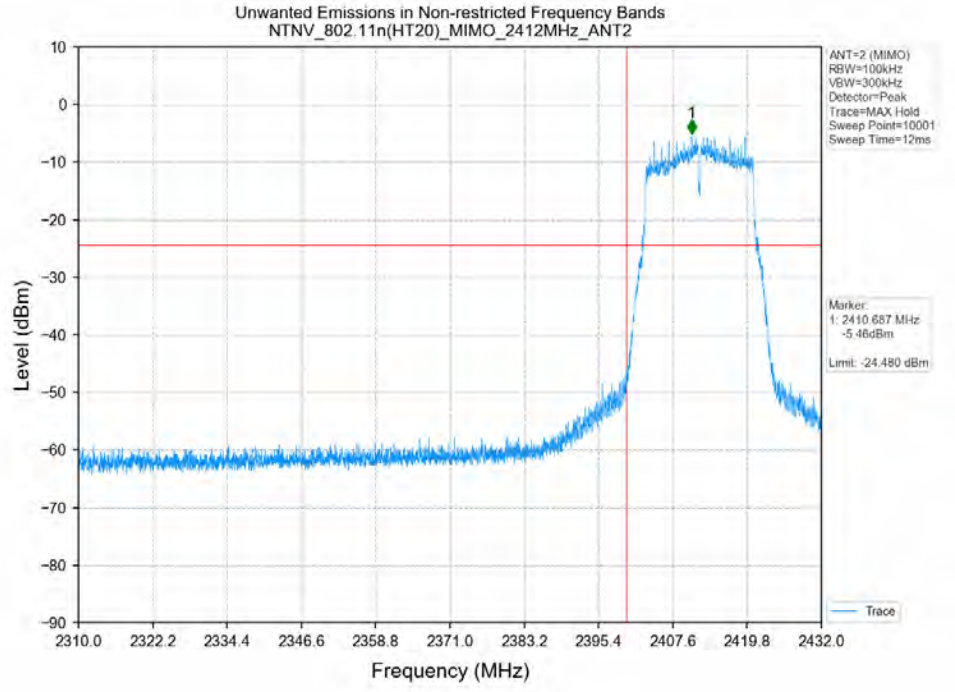

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker
1: 2466.975 MHz
-4.79dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0

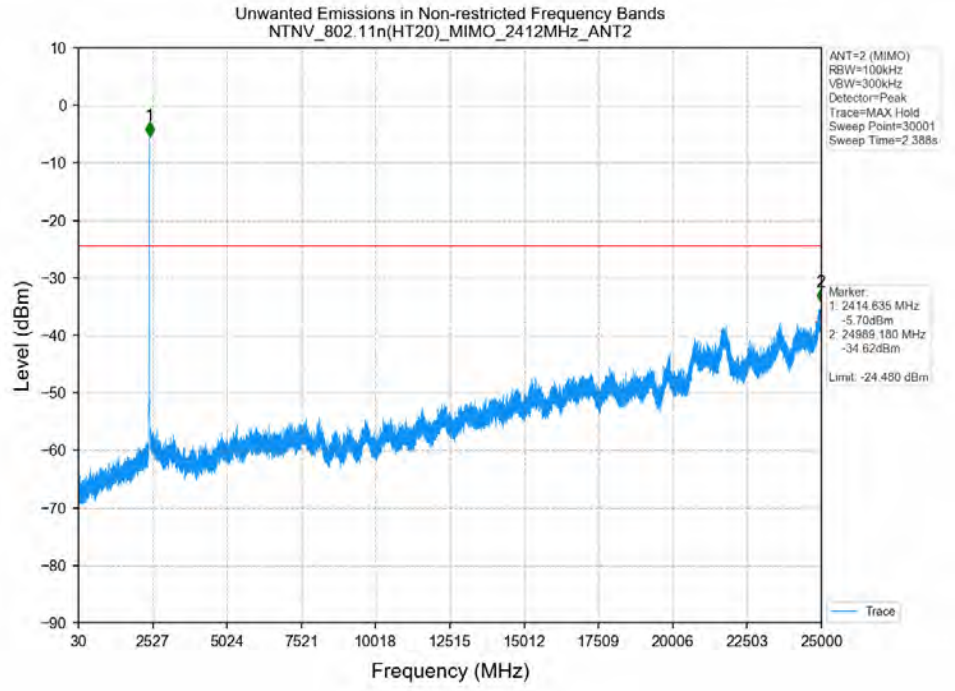

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11g_SISO_2462MHz_ANT2
ANT=2 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker:
1: 2465.407 MHz
-5.18dBm
2: 24963.377 MHz
-35.27dBm
Limit: -24.280 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

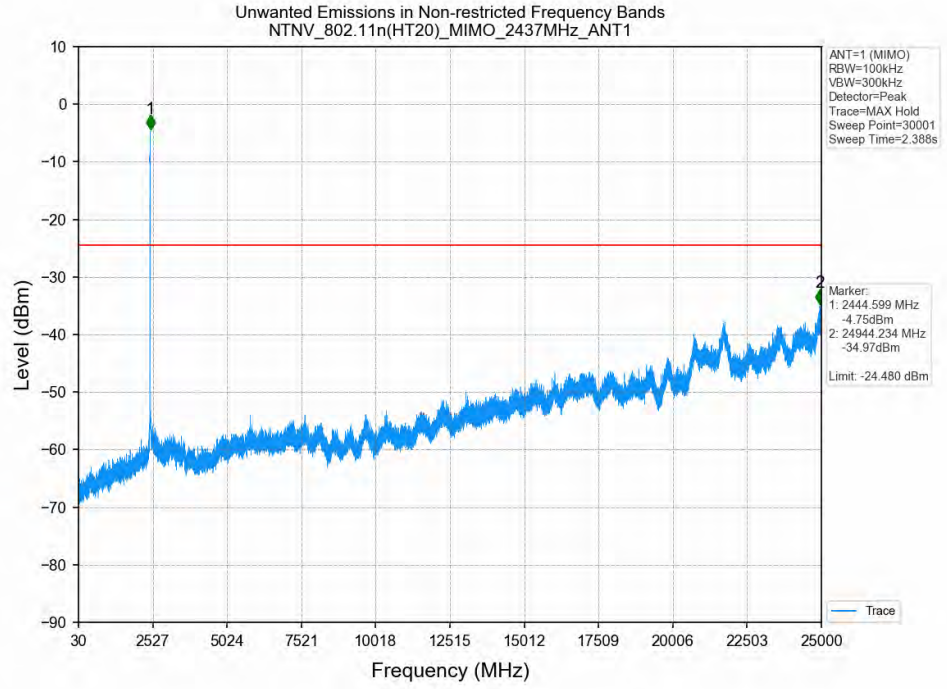

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=2.667ms
Marker:
1: 2466.992 MHz
-4.46dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2448.5
2451.2
2453.9
2456.6
2459.3
2462.0
2464.7
2467.4
2470.1
2472.8
2475.5

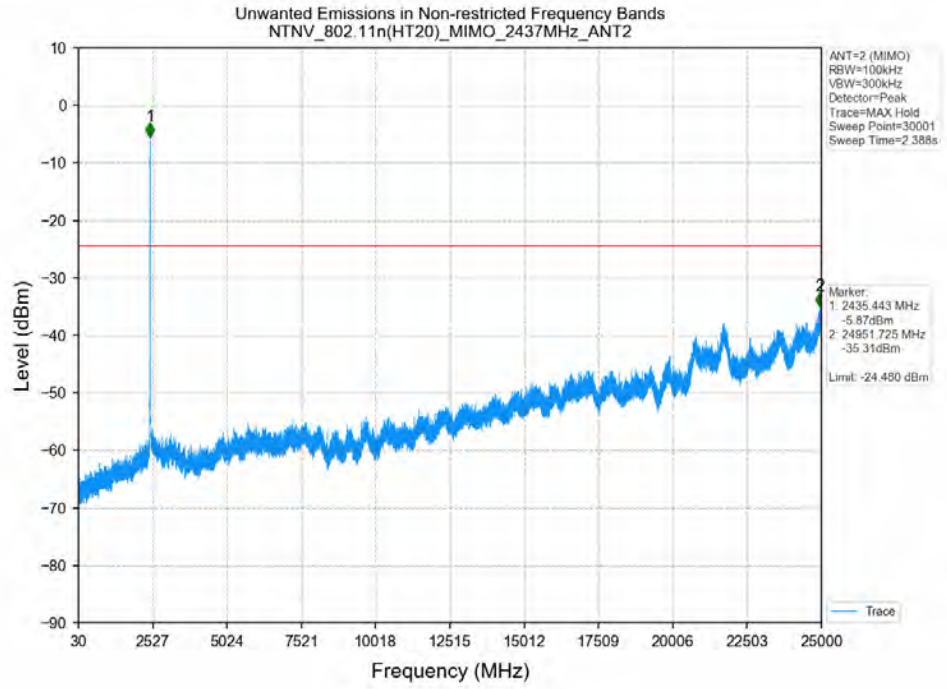

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker
1: 2413.249 MHz
-4.71dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

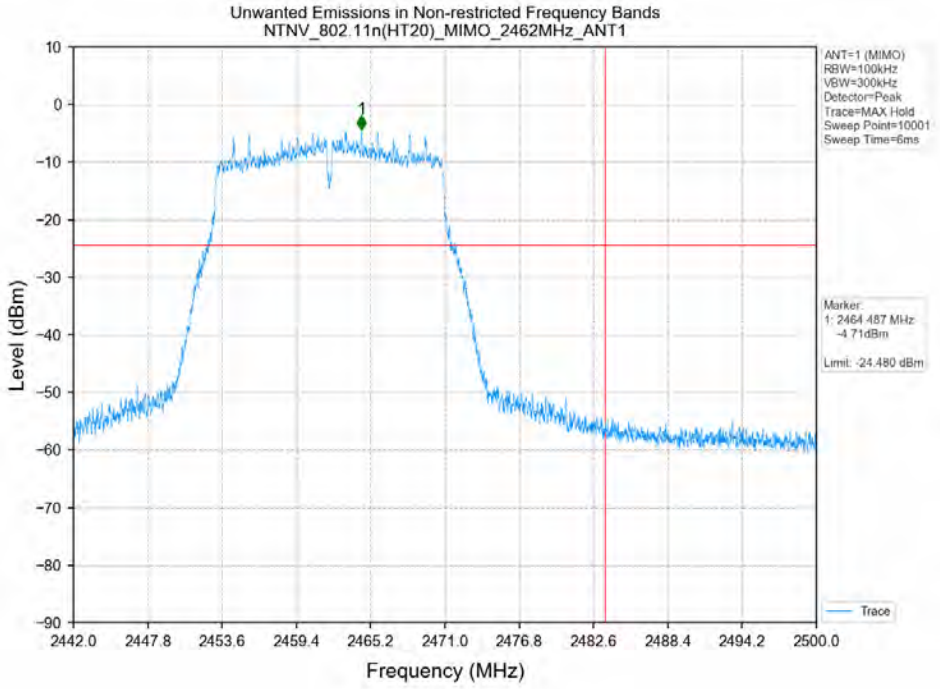

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2412MHz_ANT1
ANT=1 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2419.629 MHz
-6.02dBm
2: 24948.395 MHz
-33.99dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

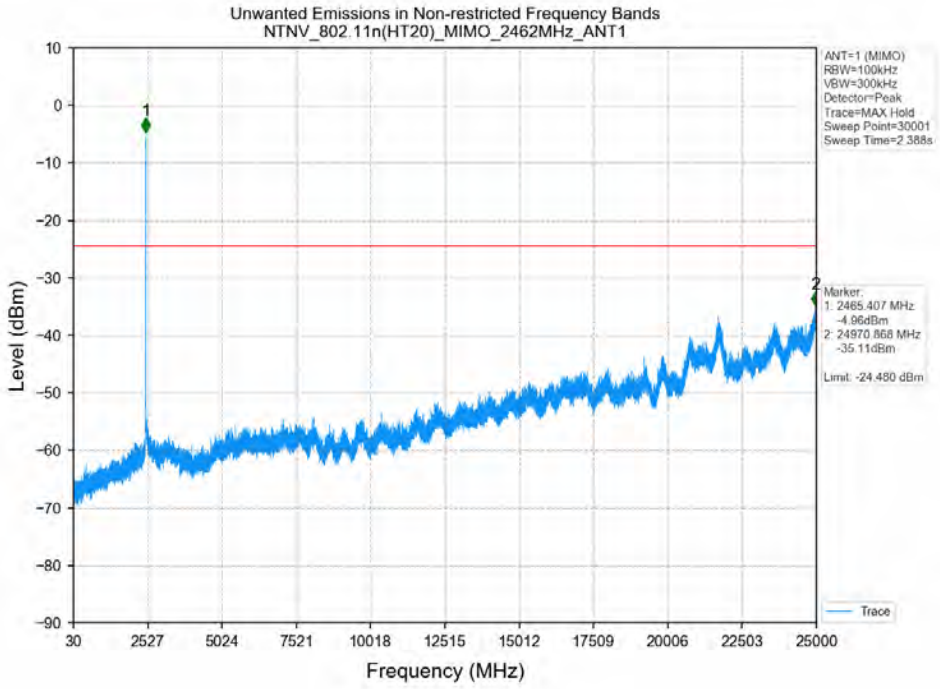

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=12ms
Marker
1: 2410.687 MHz
-5.46dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2310.0
2322.2
2334.4
2346.6
2358.8
2371.0
2383.2
2395.4
2407.6
2419.8
2432.0

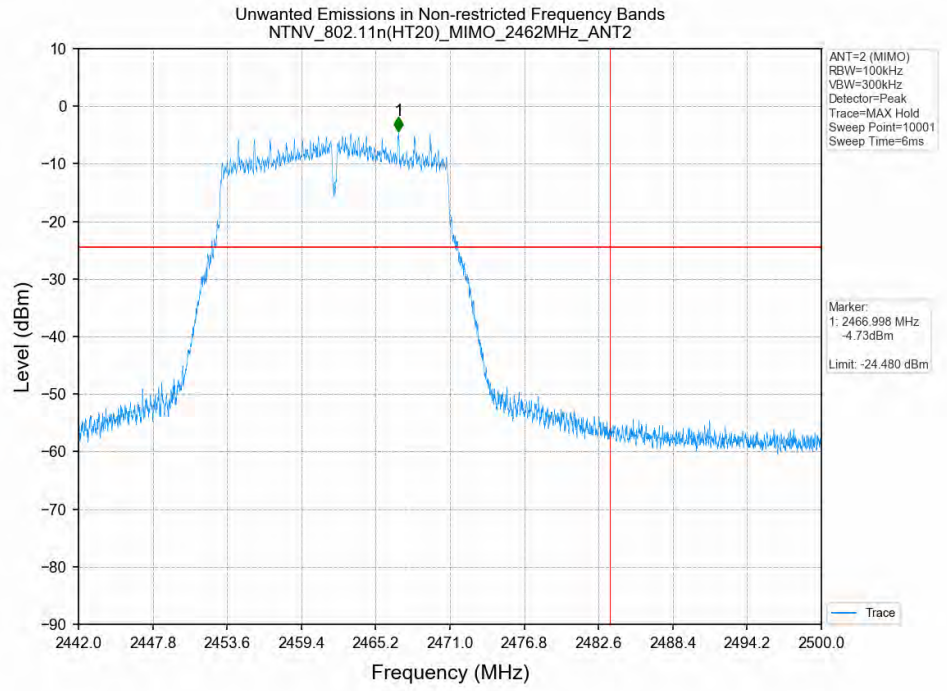

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2412MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2414.635 MHz
-5.70dBm
2: 24989.180 MHz
-34.62dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000

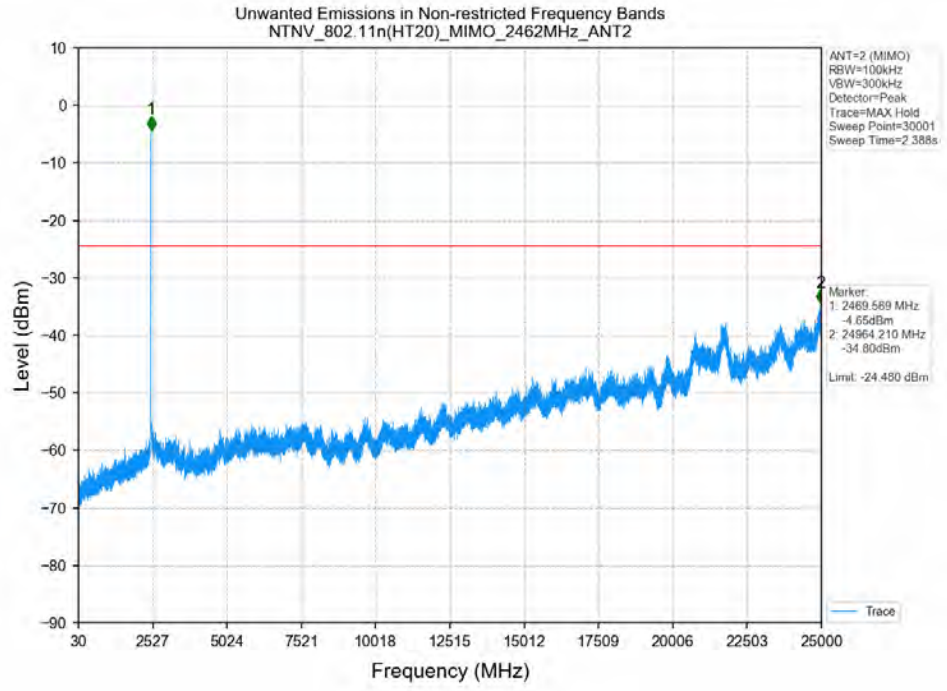

Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2437MHz_ANT1
ANT=1 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker:
1: 2444.599 MHz
-4.75dBm
2: 24944.234 MHz
-34.97dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2437MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker:
1: 2435.443 MHz
-5.87dBm
2: 24951.725 MHz
-35.31dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker
1: 2464.487 MHz
-4.71dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2462MHz_ANT1
ANT=1 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker
1: 2465.407 MHz
-4.96dBm
2: 24970.868 MHz
-35.11dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=10001
Sweep Time=6ms
Marker:
1: 2466.998 MHz
-4.73dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
2442.0
2447.8
2453.6
2459.4
2465.2
2471.0
2476.8
2482.6
2488.4
2494.2
2500.0


Unwanted Emissions in Non-restricted Frequency Bands
NTNV_802.11n(HT20)_MIMO_2462MHz_ANT2
ANT=2 (MIMO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=30001
Sweep Time=2.388s
Marker:
1: 2469.589 MHz
-4.65dBm
2: 24964.210 MHz
-34.80dBm
Limit: -24.480 dBm
Trace
Level (dBm)
Frequency (MHz)
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
30
2527
5024
7521
10018
12515
15012
17509
20006
22503
25000