Appendix H for 5.2G WIFI RF Test Data

Product Name: Media Player

Test Model: Stix3800

Environmental Conditions

Temperature:	23.3° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng

H.1 Centre Frequencies

Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	5180.00	0.00	20	Pass
	n20	5180	5179.98	-3.86	20	Pass
	n40	5190	5189.99	-1.93	20	Pass
	ac20	5180	5180.02	3.86	20	Pass
	ac40	5190	5189.98	-3.85	20	Pass
	ac80	5210	5209.99	-1.92	20	Pass

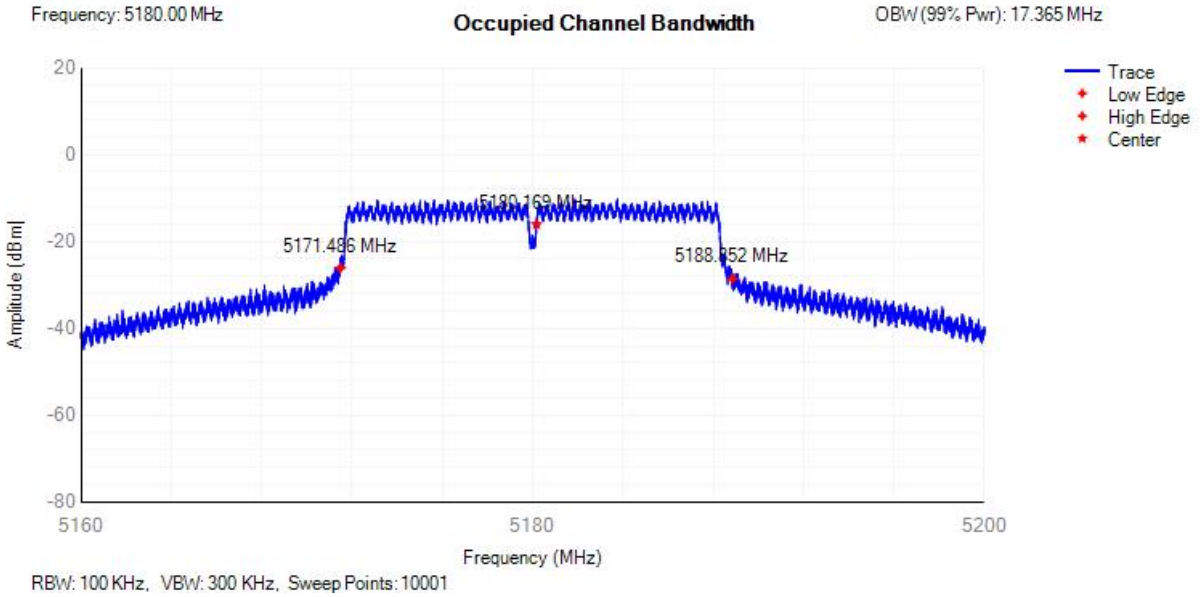
Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVLT	a	5180	5179.96	-7.72	20	Pass
	n20	5180	5180.03	5.79	20	Pass
	n40	5190	5189.97	-5.78	20	Pass
	ac20	5180	5180.00	0.00	20	Pass
	ac40	5190	5190.04	7.71	20	Pass
	ac80	5210	5210.02	3.84	20	Pass

Condition	Mode	Frequency (MHz)	Measured Frequency (MHz)	Deviation (ppm)	Limit (ppm)	Verdict
NVHT	a	5180	5180.03	5.79	20	Pass
	n20	5180	5180.02	3.86	20	Pass
	n40	5190	5190.04	7.71	20	Pass
	ac20	5180	5180.04	7.72	20	Pass
	ac40	5190	5190.00	0.00	20	Pass
	ac80	5210	5209.99	-1.92	20	Pass

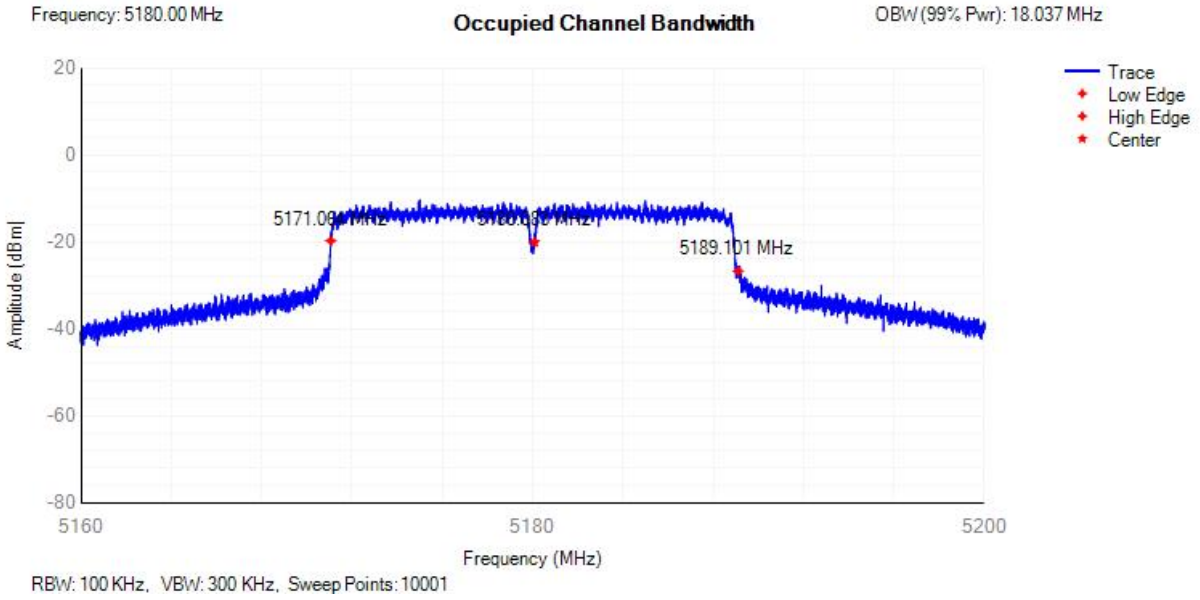
H.2 Nominal Channel Bandwidth and Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Center Frequency (MHz)	OBW (MHz)	Lower Limit (MHz)	Upper Limit(MHz)	Verdict
NVNT	a	5180	5180.169	17.365	16	20	Pass
NVNT	ac20	5180	5180.083	18.037	16	20	Pass
NVNT	ac40	5190	5190.554	37.61	32	40	Pass
NVNT	ac80	5210	5210.665	77.481	64	80	Pass
NVNT	n20	5180	5180.105	18.102	16	20	Pass
NVNT	n40	5190	5190.546	37.618	32	40	Pass

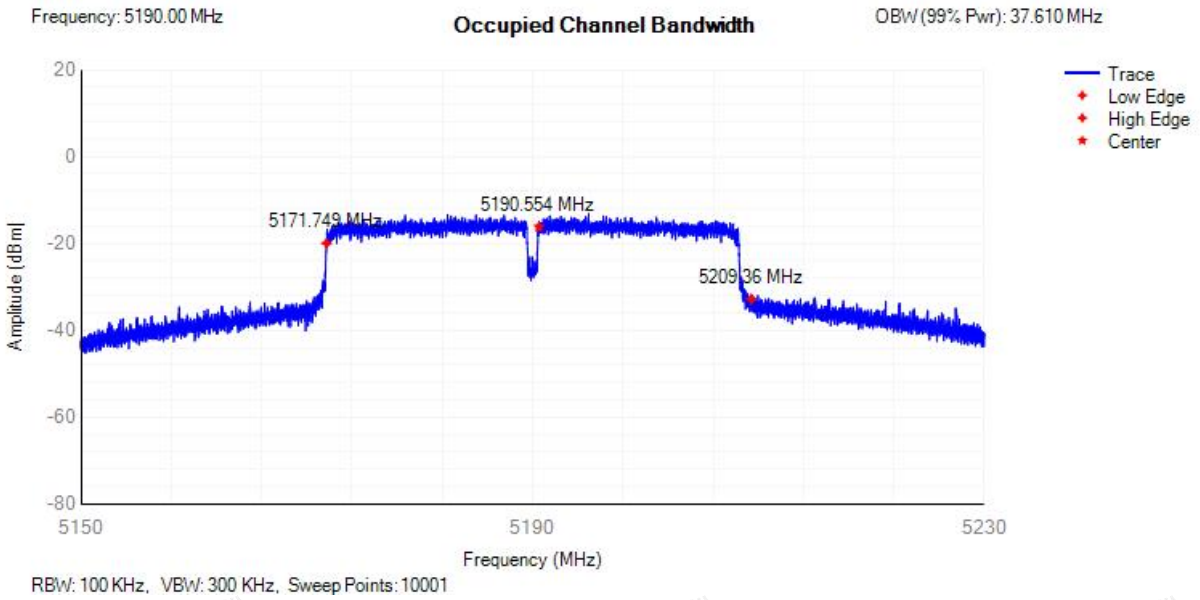
OBW NVNT a 5180MHz



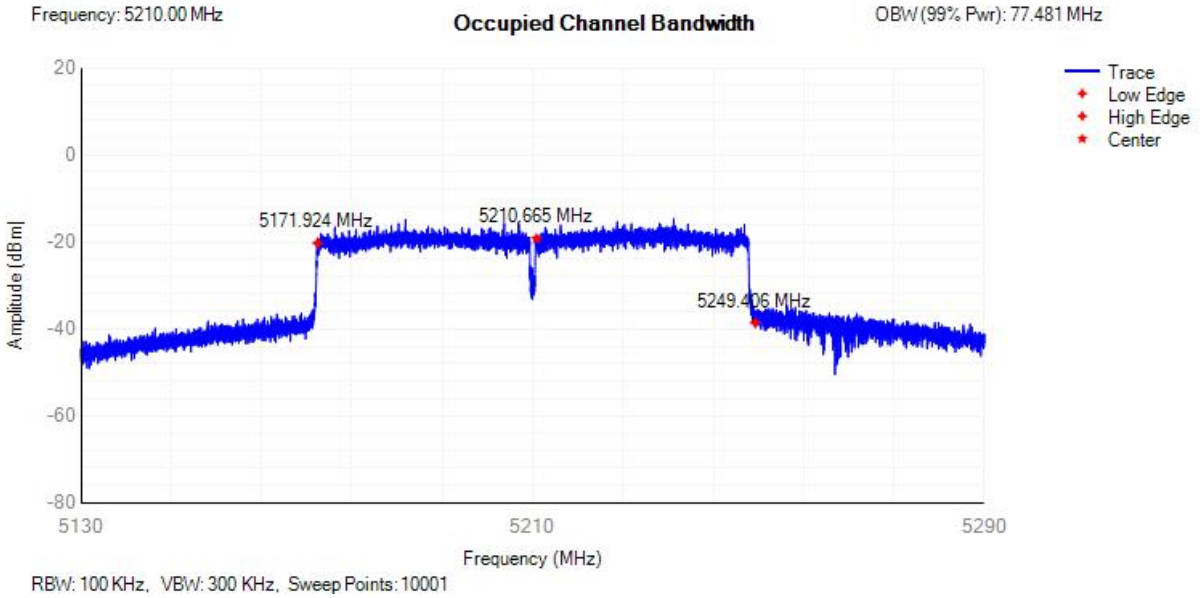
OBW NVNT ac20 5180MHz



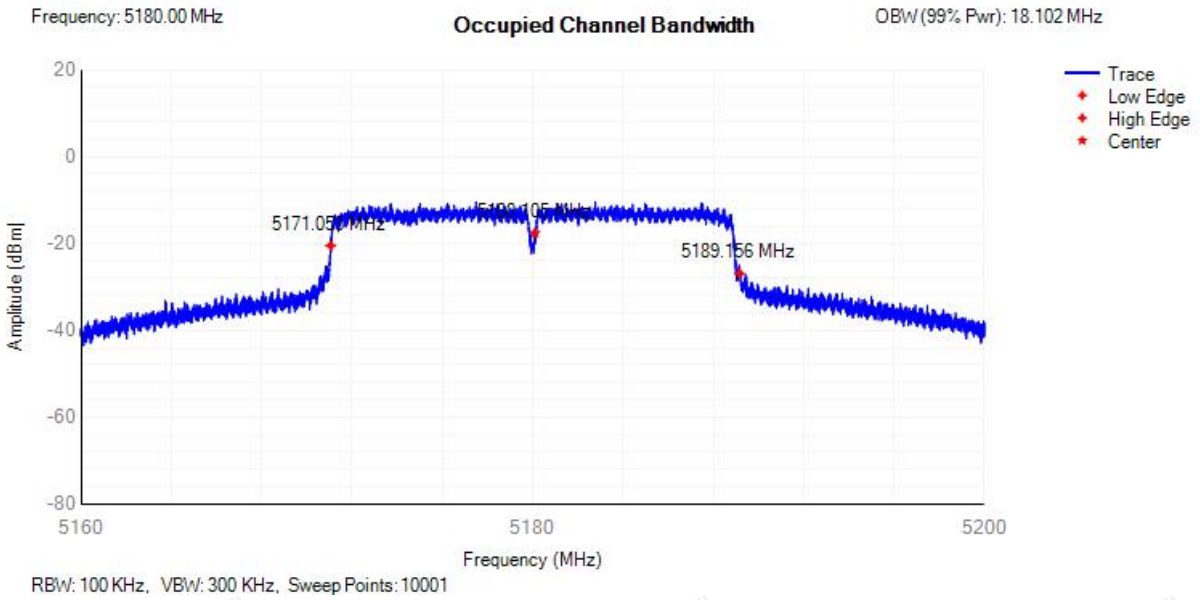
OBW NVNT ac40 5190MHz



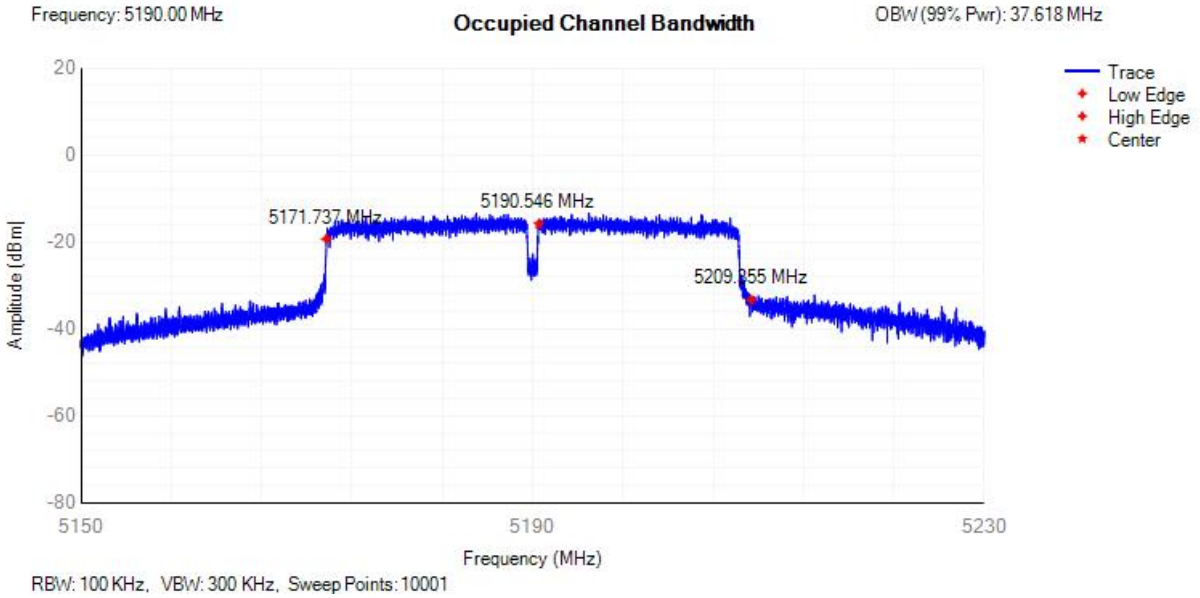
OBW NVNT ac80 5210MHz



OBW NVNT n20 5180MHz



OBW NVNT n40 5190MHz



H.3 RF Output Power

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	10.78	23	Pass
NVNT	ac20	5180	10.5	23	Pass
NVNT	ac40	5190	10.88	23	Pass
NVNT	ac80	5210	11.4	23	Pass
NVNT	n20	5180	10.64	23	Pass
NVNT	n40	5190	10.92	23	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVLT	a	5180	10.73	23	Pass
NVLT	ac20	5180	10.48	23	Pass
NVLT	ac40	5190	10.78	23	Pass
NVLT	ac80	5210	11.39	23	Pass
NVLT	n20	5180	10.62	23	Pass
NVLT	n40	5190	10.90	23	Pass

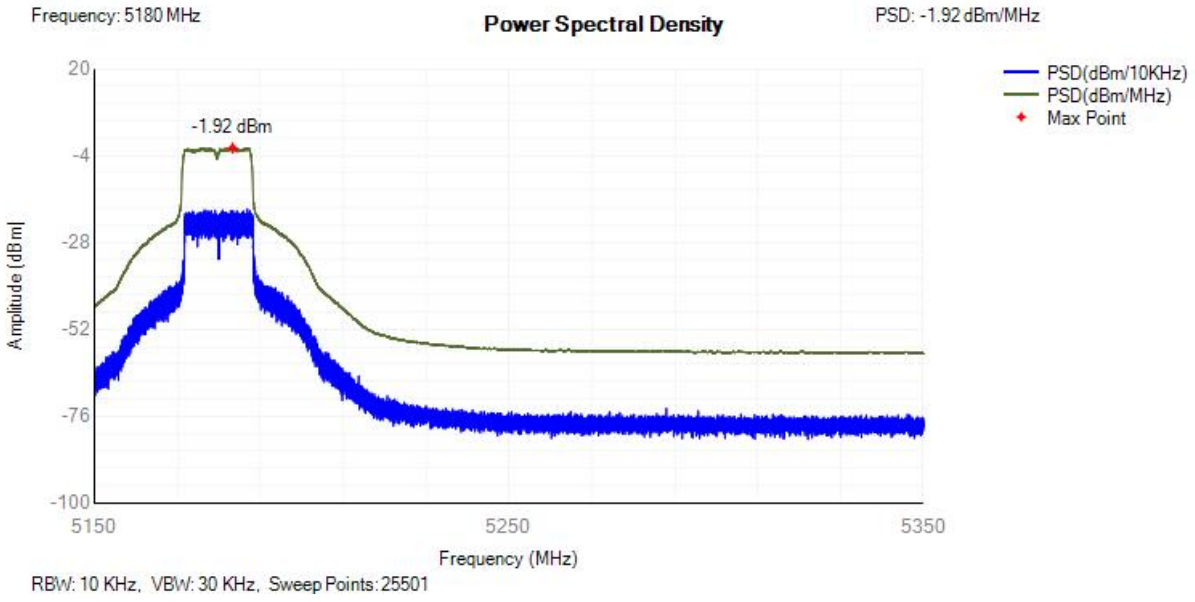
Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVHT	a	5180	10.70	23	Pass
NVHT	ac20	5180	10.39	23	Pass
NVHT	ac40	5190	10.71	23	Pass
NVHT	ac80	5210	11.30	23	Pass
NVHT	n20	5180	10.60	23	Pass
NVHT	n40	5190	10.84	23	Pass

***Note: 20 bursts had been captured for power measurement.

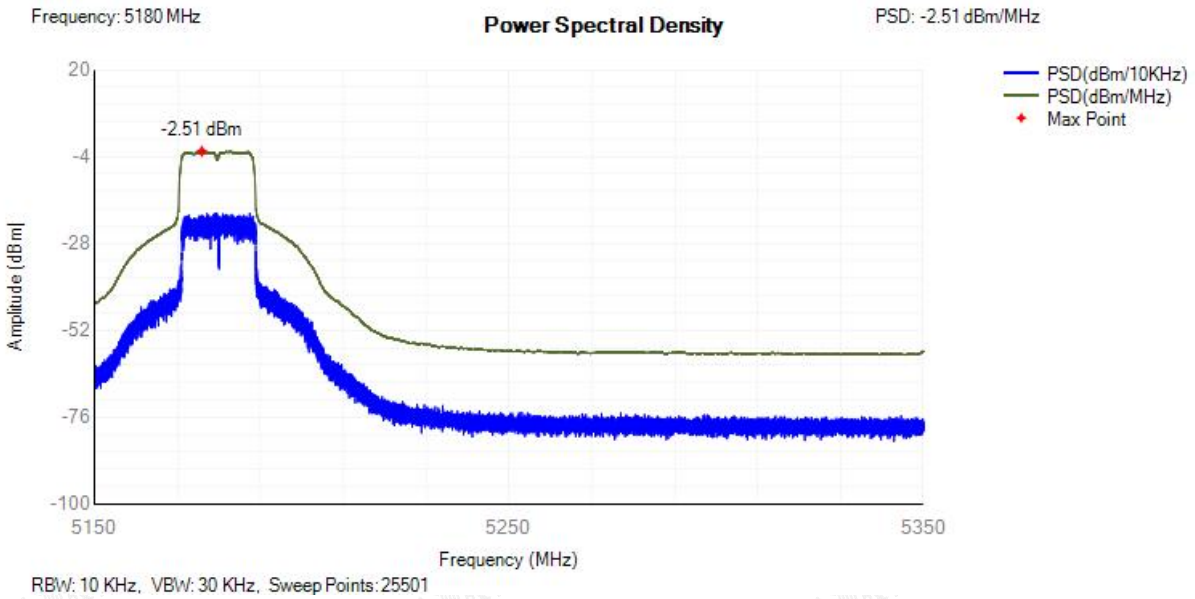
H.4 Power Spectral Density

Condition	Mode	Frequency (MHz)	Max PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	-1.92	10	Pass
NVNT	ac20	5180	-2.51	10	Pass
NVNT	ac40	5190	-4.95	10	Pass
NVNT	ac80	5210	-7.21	10	Pass
NVNT	n20	5180	-2.32	10	Pass
NVNT	n40	5190	-4.92	10	Pass

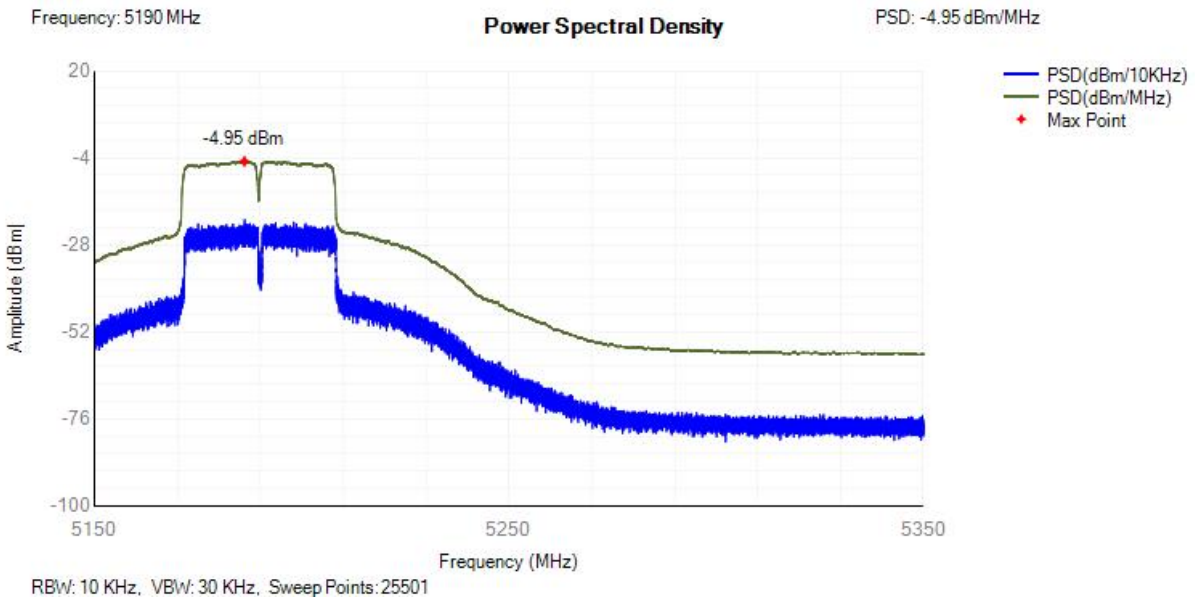
PSD NVNT a 5180MHz



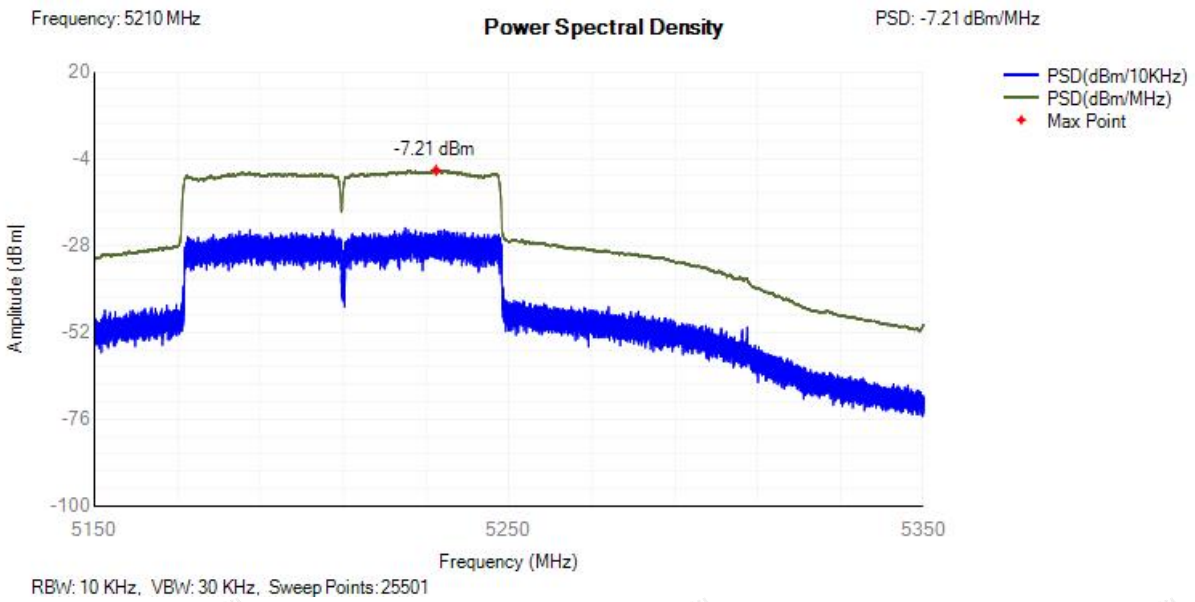
PSD NVNT ac20 5180MHz



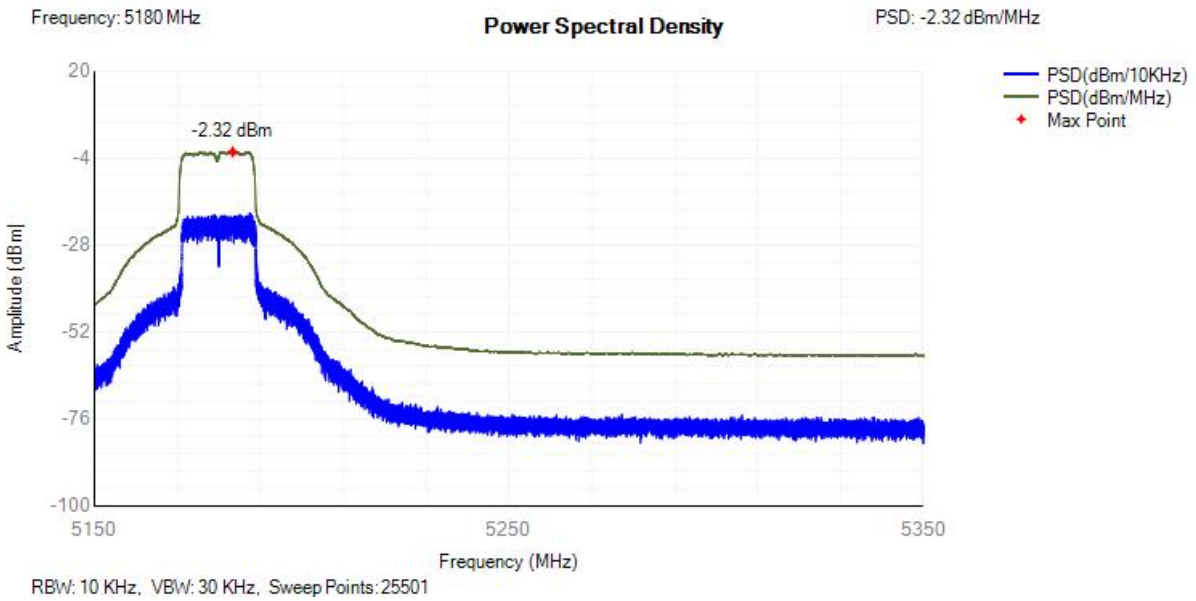
PSD NVNT ac40 5190MHz



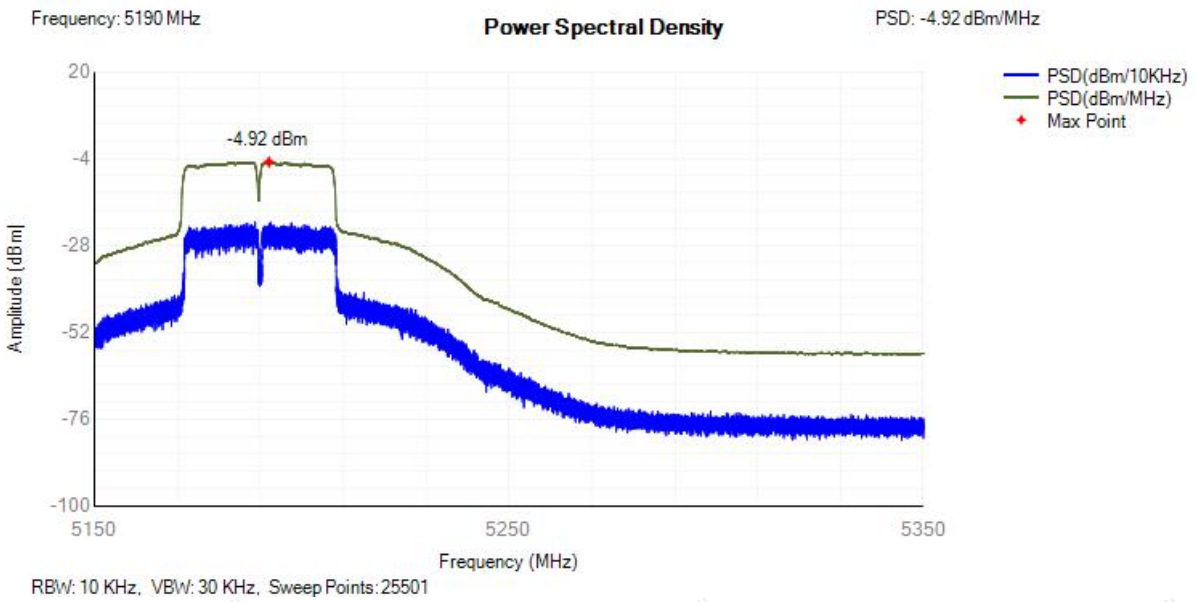
PSD NVNT ac80 5210MHz



PSD NVNT n20 5180MHz



PSD NVNT n40 5190MHz



H.5 Transmitter unwanted emissions in the spurious domain

The Worst Test Result For 802.11a					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
57.56	H	-85.30	-54.00	-31.30	PK
64.48	V	-74.63	-54.00	-20.63	PK
809.78	H	-77.74	-54.00	-23.74	PK
922.92	V	-76.03	-36.00	-40.03	PK
3476.70	H	-50.46	-30.00	-20.46	PK
3462.04	V	-62.16	-30.00	-32.16	PK
10360.07	H	-55.59	-30.00	-25.59	PK
10360.03	V	-52.22	-30.00	-22.22	PK

The Worst Test Result For 802.11n(20MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
59.96	H	-81.09	-54.00	-27.09	PK
65.83	V	-73.31	-54.00	-19.31	PK
807.69	H	-75.59	-54.00	-21.59	PK
925.33	V	-74.26	-36.00	-38.26	PK
3498.90	H	-49.10	-30.00	-19.10	PK
3491.04	V	-61.05	-30.00	-31.05	PK
10360.04	H	-53.24	-30.00	-23.24	PK
10360.02	V	-50.78	-30.00	-20.78	PK

The Worst Test Result For 802.11ac(20MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
56.93	H	-81.61	-54.00	-27.61	PK
65.11	V	-73.33	-54.00	-19.33	PK
811.17	H	-75.18	-54.00	-21.18	PK
926.86	V	-74.89	-36.00	-38.89	PK
3478.69	H	-49.46	-30.00	-19.46	PK
3456.21	V	-61.04	-30.00	-31.04	PK
10360.02	H	-52.71	-30.00	-22.71	PK
10360.09	V	-51.17	-30.00	-21.17	PK

The Worst Test Result For 802.11n(40MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 38 (5190MHz)					
58.03	H	-82.85	-54.00	-28.85	PK
67.95	V	-73.72	-54.00	-19.72	PK
811.26	H	-76.16	-54.00	-22.16	PK
923.94	V	-74.04	-36.00	-38.04	PK
3499.51	H	-49.11	-30.00	-19.11	PK
3460.79	V	-59.88	-30.00	-29.88	PK
10380.03	H	-53.29	-30.00	-23.29	PK
10380.05	V	-50.70	-30.00	-20.70	PK

The Worst Test Result For 802.11ac(40MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 38 (5190MHz)					
57.04	H	-82.71	-54.00	-28.71	PK
69.18	V	-73.68	-54.00	-19.68	PK
807.42	H	-75.67	-54.00	-21.67	PK
925.33	V	-74.07	-36.00	-38.07	PK
3487.54	H	-48.62	-30.00	-18.62	PK
3480.21	V	-60.00	-30.00	-30.00	PK
10380.01	H	-53.95	-30.00	-23.95	PK
10380.04	V	-50.89	-30.00	-20.89	PK

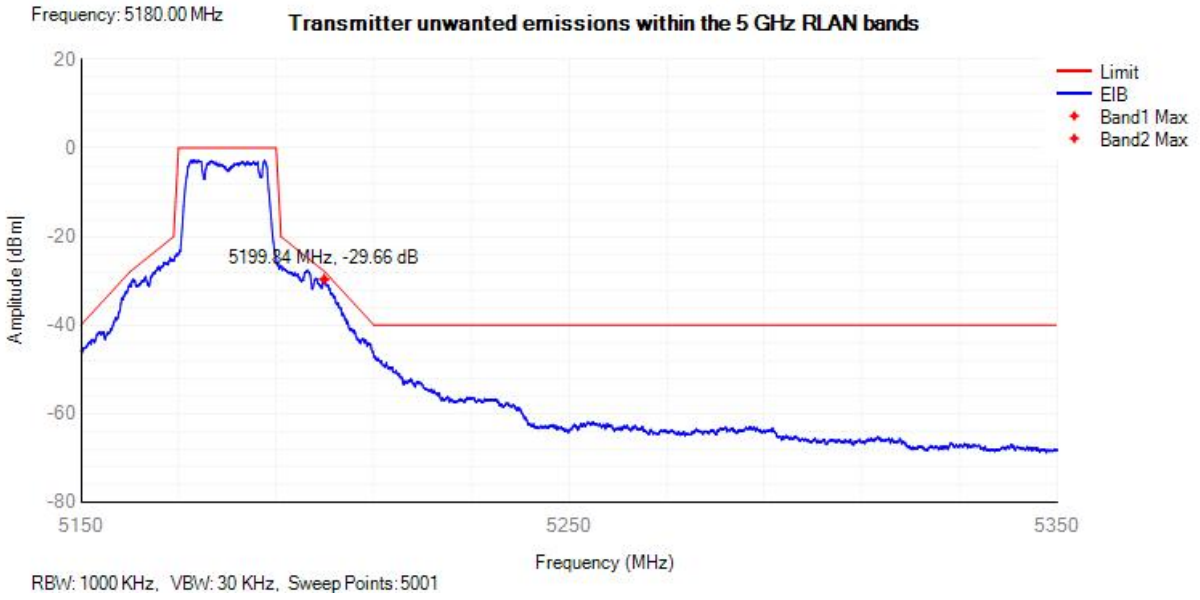
The Worst Test Result For 802.11ac(80MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 42(5210MHz)					
60.02	H	-83.27	-54.00	-29.27	PK
65.49	V	-73.32	-54.00	-19.32	PK
809.09	H	-76.14	-54.00	-22.14	PK
921.16	V	-74.58	-36.00	-38.58	PK
3492.37	H	-49.01	-30.00	-19.01	PK
3521.75	V	-60.12	-30.00	-30.12	PK
10420.03	H	-53.79	-30.00	-23.79	PK
10420.05	V	-51.01	-30.00	-21.01	PK

Note: All test modes were tested, but we only recorded the worst (Low Channel) case in this report.

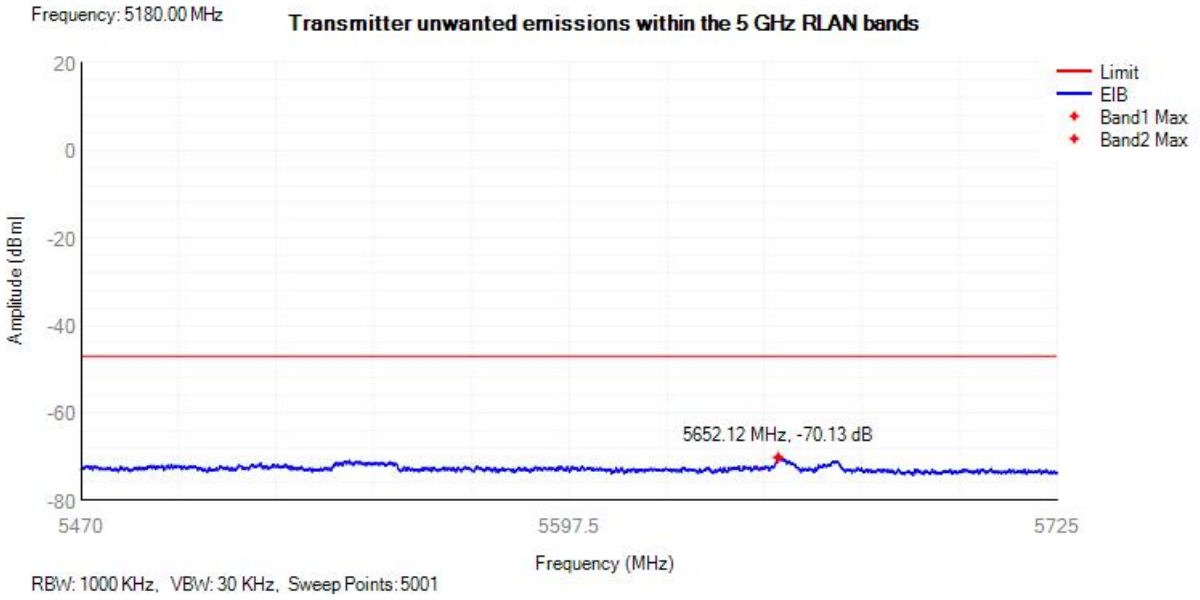
H.6 Transmitter unwanted emissions within the 5 GHz RLAN bands

Condition	Mode	Frequency (MHz)	Sub Band	Worst EIB Frequency (MHz)	Level (dB)	Limit (dB)	Verdict
NVNT	a	5180	Band1	5199.84	-29.66	-27.85	Pass
NVNT	a	5180	Band2	5652.12	-70.13	-47	Pass
NVNT	ac20	5180	Band1	5165.92	-23.71	-22.73	Pass
NVNT	ac20	5180	Band2	5652.22	-70.41	-47	Pass
NVNT	ac40	5190	Band1	5217.51	-22.52	-22.45	Pass
NVNT	ac40	5190	Band2	5653.9	-67.16	-47	Pass
NVNT	ac80	5210	Band1	5308.48	-36.34	-33.54	Pass
NVNT	ac80	5210	Band2	5470.2	-65.98	-40	Pass
NVNT	n20	5180	Band1	5150.96	-42.07	-38.84	Pass
NVNT	n20	5180	Band2	5652.32	-70.75	-47	Pass
NVNT	n40	5190	Band1	5219.28	-25.25	-23.23	Pass
NVNT	n40	5190	Band2	5653.24	-65.64	-47	Pass

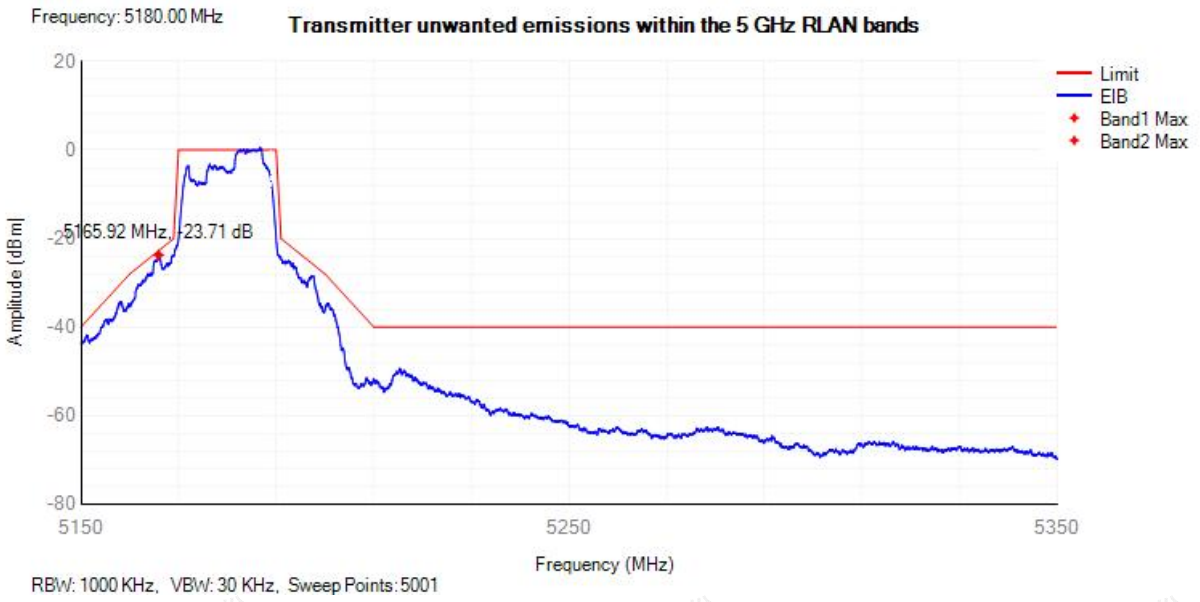
Tx. Emissions EIB NVNT a 5180MHz Sub Band1



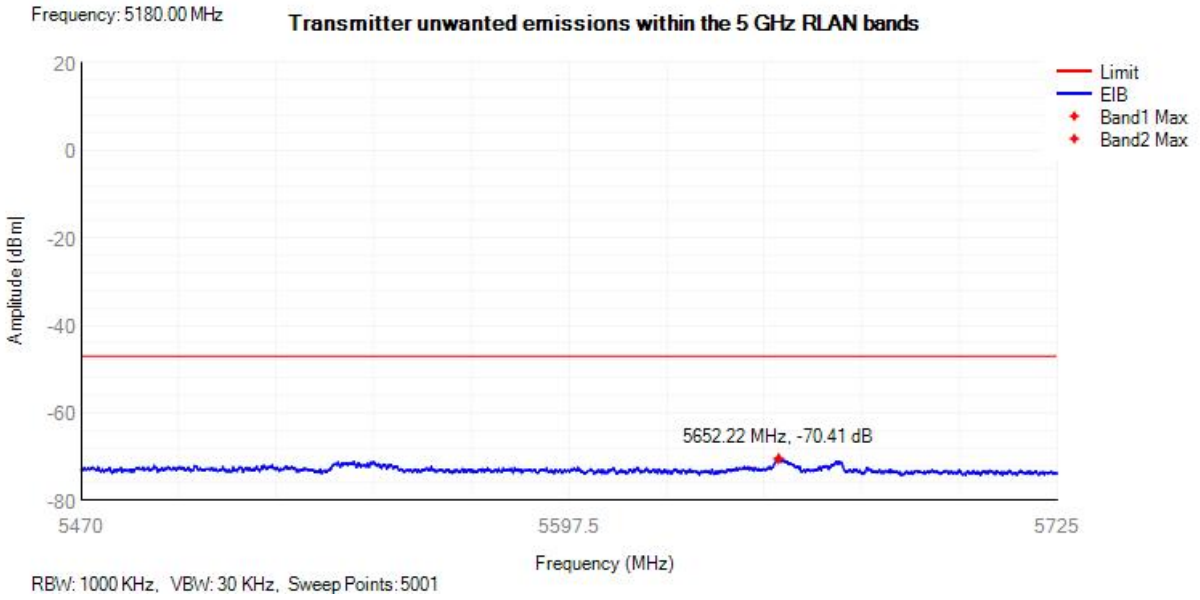
Tx. Emissions EIB NVNT a 5180MHz Sub Band2



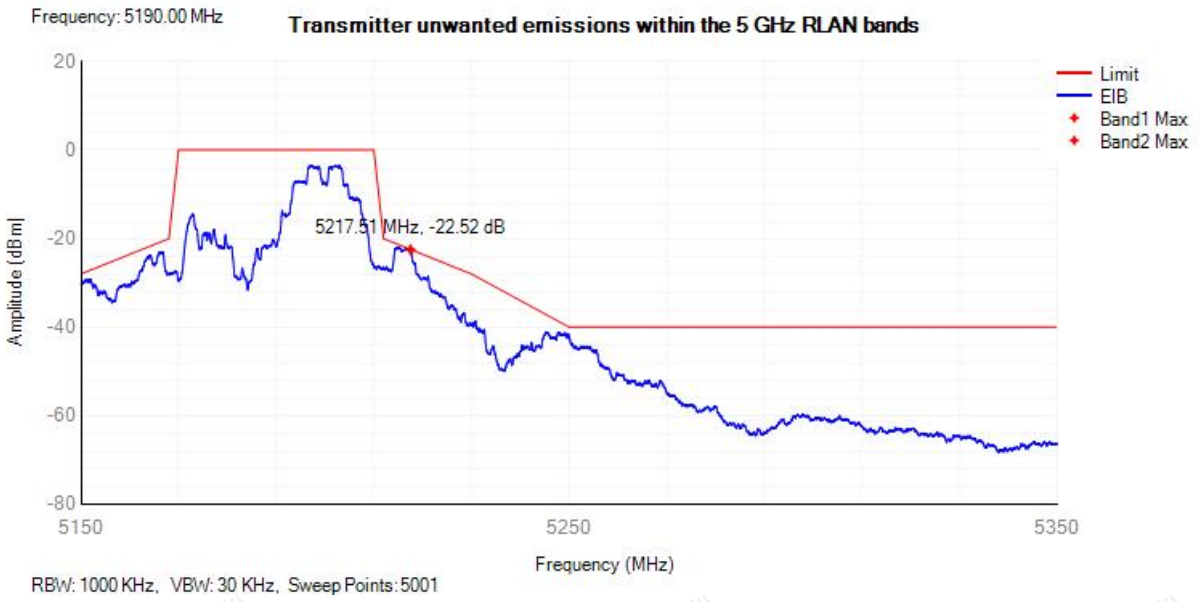
Tx. Emissions EIB NVNT ac20 5180MHz Sub Band1



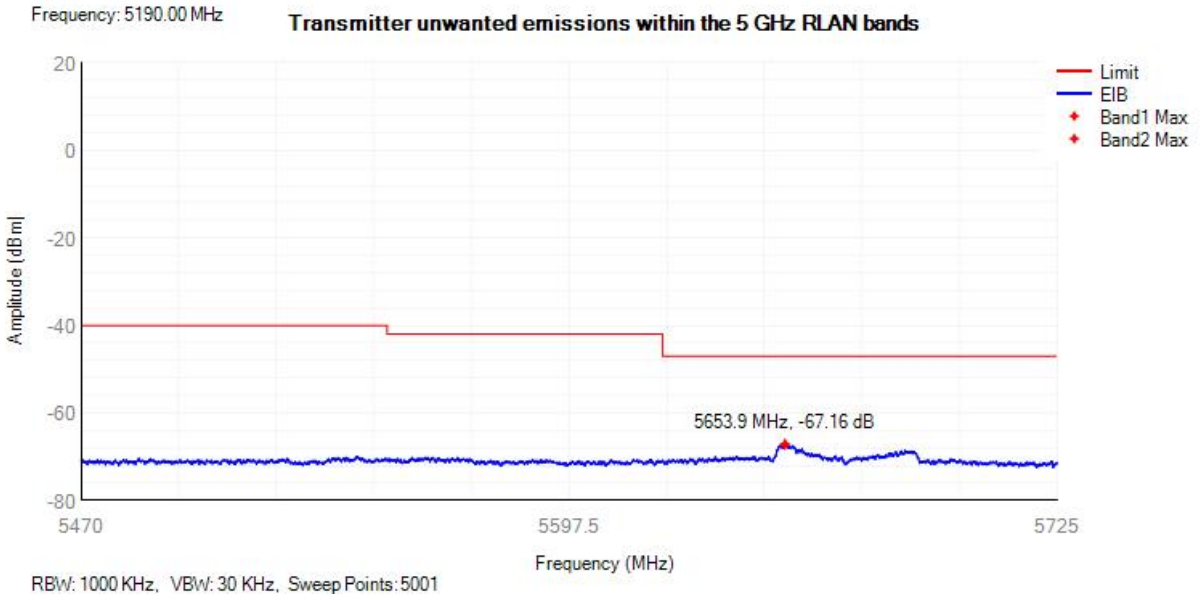
Tx. Emissions EIB NVNT ac20 5180MHz Sub Band2



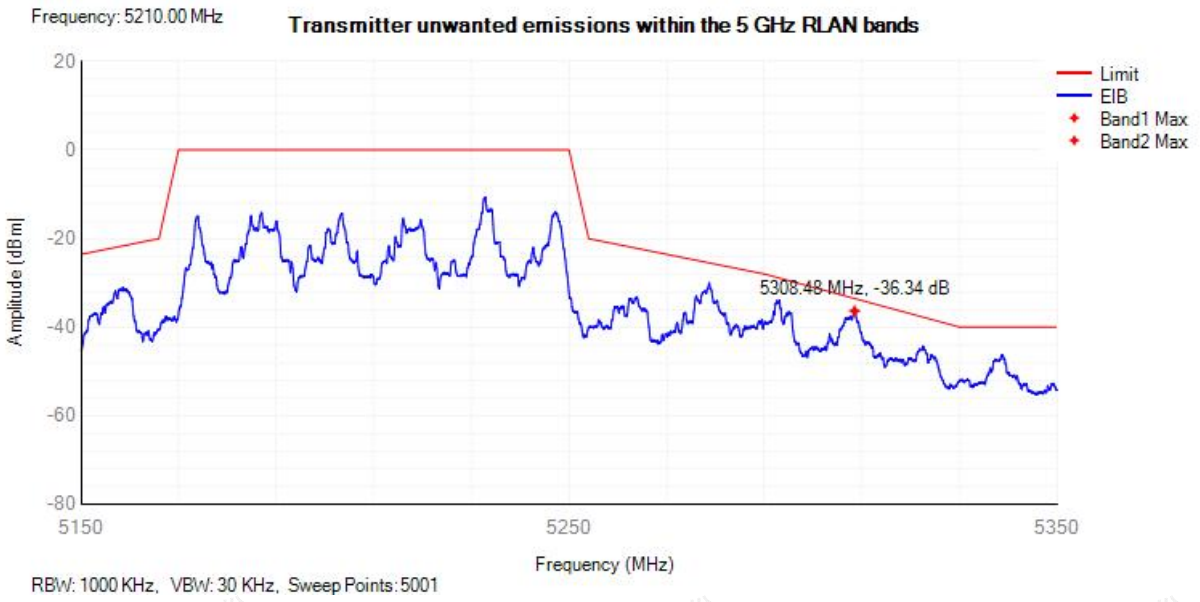
Tx. Emissions EIB NVNT ac40 5190MHz Sub Band1



Tx. Emissions EIB NVNT ac40 5190MHz Sub Band2



Tx. Emissions EIB NVNT ac80 5210MHz Sub Band1



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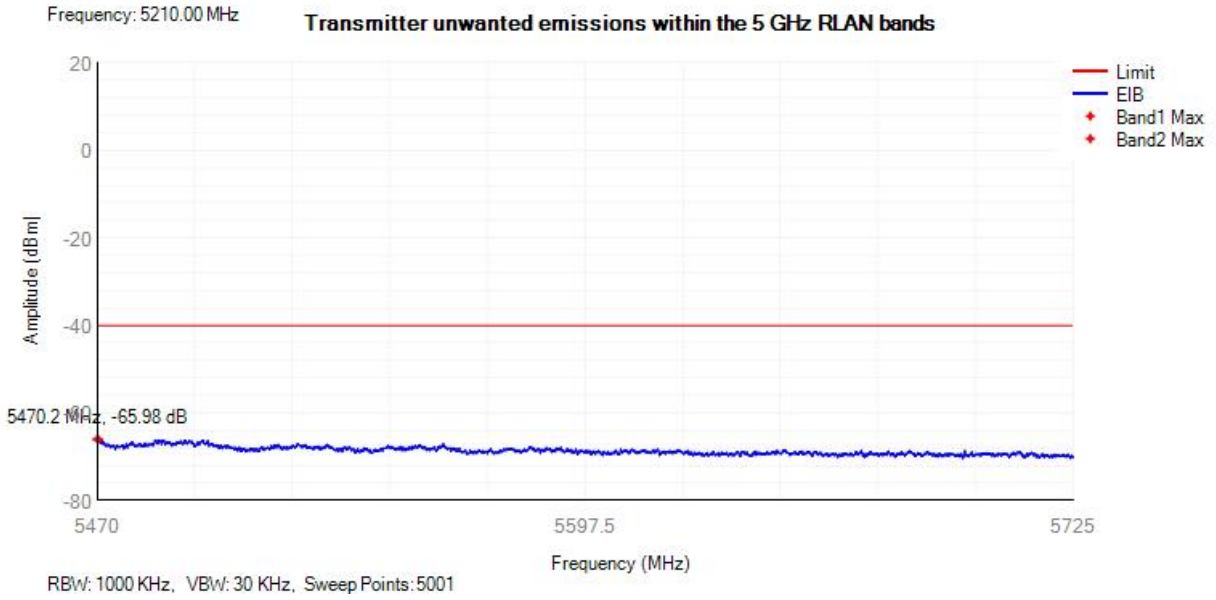
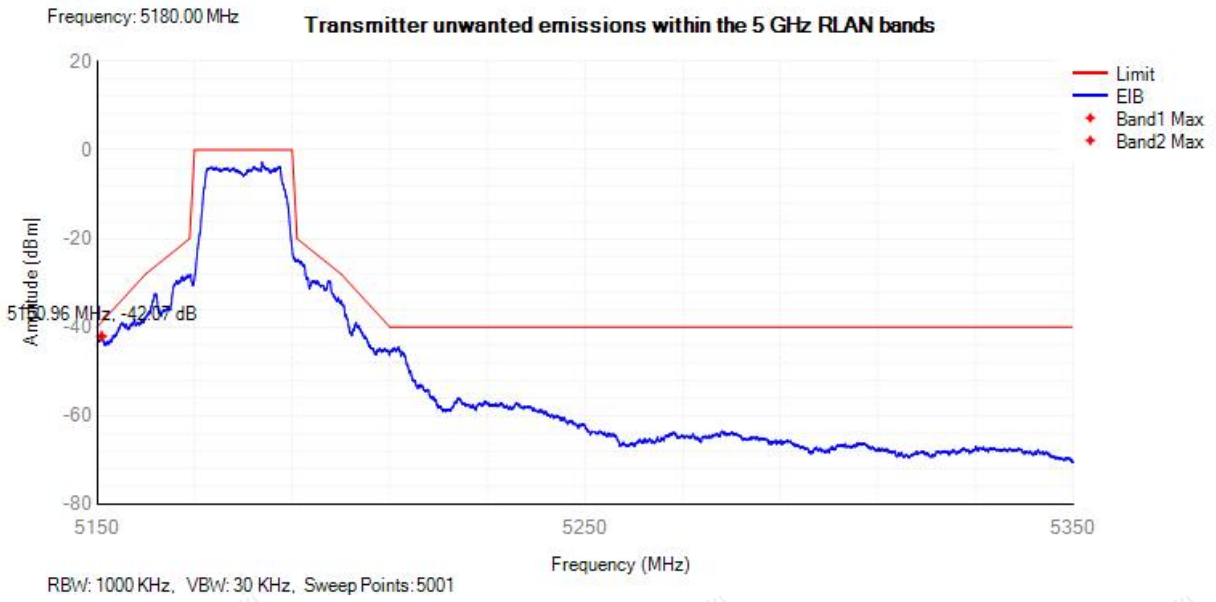
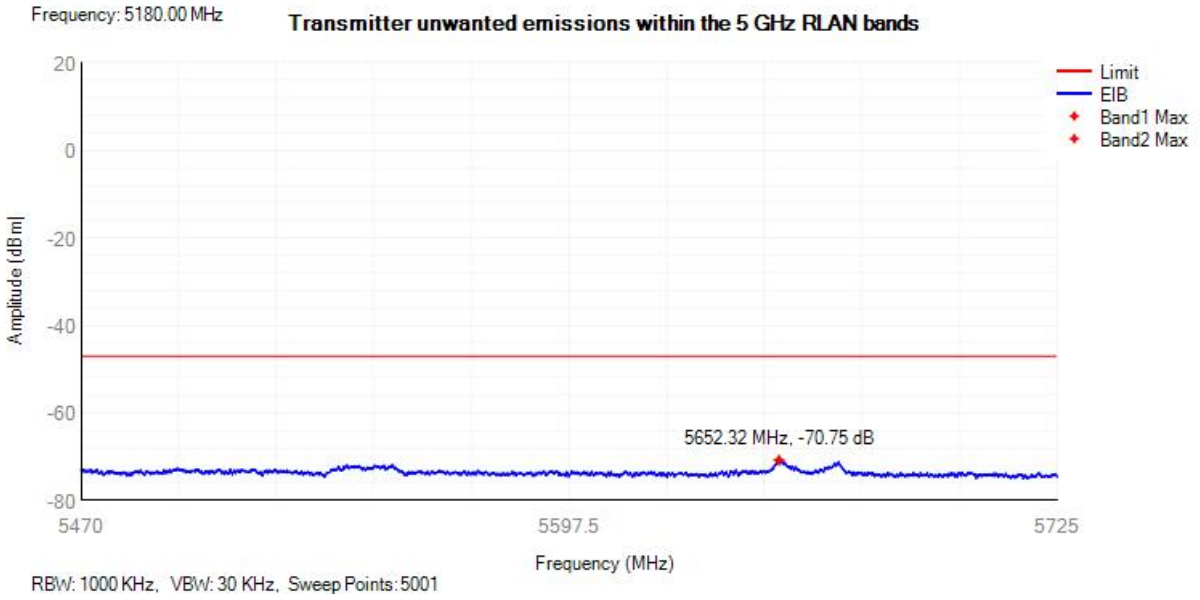


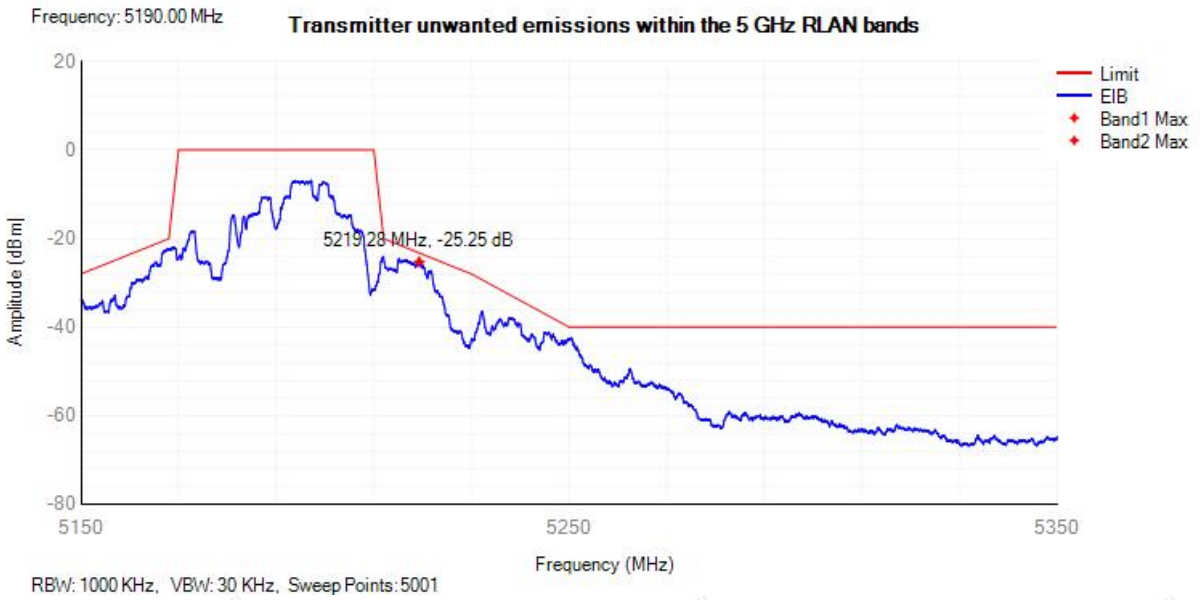
Tx. Emissions EIB NVNT n20 5180MHz Sub Band1



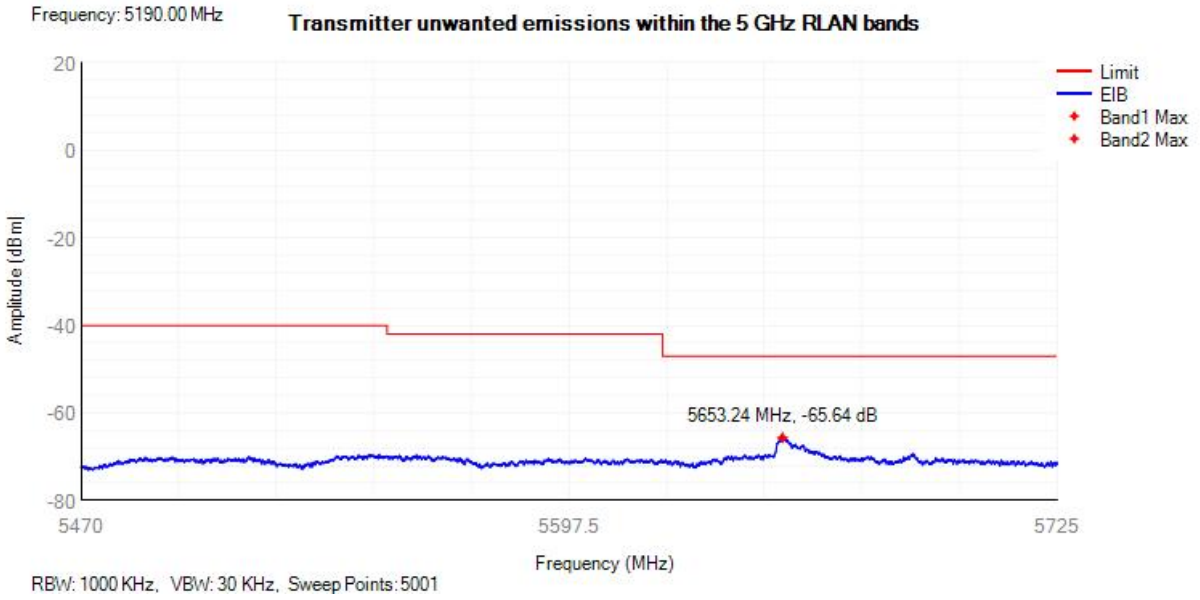
Tx. Emissions EIB NVNT n20 5180MHz Sub Band2



Tx. Emissions EIB NVNT n40 5190MHz Sub Band1



Tx. Emissions EIB NVNT n40 5190MHz Sub Band2



H.7 Receiver Spurious Emissions

The Worst Test Result For 802.11a					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
59.99	H	-81.44	-57.00	-24.44	PK
68.10	V	-73.11	-57.00	-16.11	PK
809.28	H	-72.79	-57.00	-15.79	PK
928.73	V	-73.34	-57.00	-16.34	PK
3479.22	H	-61.08	-47.00	-14.08	PK
3464.83	V	-62.96	-47.00	-15.96	PK
10360.01	H	-57.64	-47.00	-10.64	PK
10360.01	V	-57.57	-47.00	-10.57	PK

The Worst Test Result For 802.11n(20MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
60.53	H	-82.85	-57.00	-25.85	PK
65.49	V	-74.22	-57.00	-17.22	PK
810.29	H	-74.02	-57.00	-17.02	PK
921.23	V	-73.81	-57.00	-16.81	PK
3480.70	H	-63.21	-47.00	-16.21	PK
3478.61	V	-64.08	-47.00	-17.08	PK
10360.02	H	-57.78	-47.00	-10.78	PK
10360.08	V	-59.74	-47.00	-12.74	PK

The Worst Test Result For 802.11ac(20MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 36 (5180MHz)					
59.14	H	-82.26	-57.00	-25.26	PK
68.44	V	-73.76	-57.00	-16.76	PK
808.39	H	-74.40	-57.00	-17.40	PK
922.12	V	-74.17	-57.00	-17.17	PK
3503.23	H	-63.00	-47.00	-16.00	PK
3482.91	V	-63.69	-47.00	-16.69	PK
10360.07	H	-57.97	-47.00	-10.97	PK
10360.03	V	-59.19	-47.00	-12.19	PK

The Worst Test Result For 802.11n(40MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 38 (5190MHz)					
56.24	H	-82.27	-57.00	-25.27	PK
64.30	V	-74.90	-57.00	-17.90	PK
808.99	H	-74.97	-57.00	-17.97	PK
925.63	V	-73.86	-57.00	-16.86	PK
3474.18	H	-63.62	-47.00	-16.62	PK
3468.12	V	-63.45	-47.00	-16.45	PK
10380.07	H	-58.63	-47.00	-11.63	PK
10380.08	V	-59.88	-47.00	-12.88	PK

The Worst Test Result For 802.11ac(40MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 38 (5190MHz)					
58.10	H	-82.42	-57.00	-25.42	PK
67.83	V	-74.29	-57.00	-17.29	PK
812.36	H	-74.66	-57.00	-17.66	PK
924.56	V	-73.29	-57.00	-16.29	PK
3482.16	H	-63.34	-47.00	-16.34	PK
3466.67	V	-63.84	-47.00	-16.84	PK
10380.04	H	-58.64	-47.00	-11.64	PK
10380.04	V	-59.64	-47.00	-12.64	PK

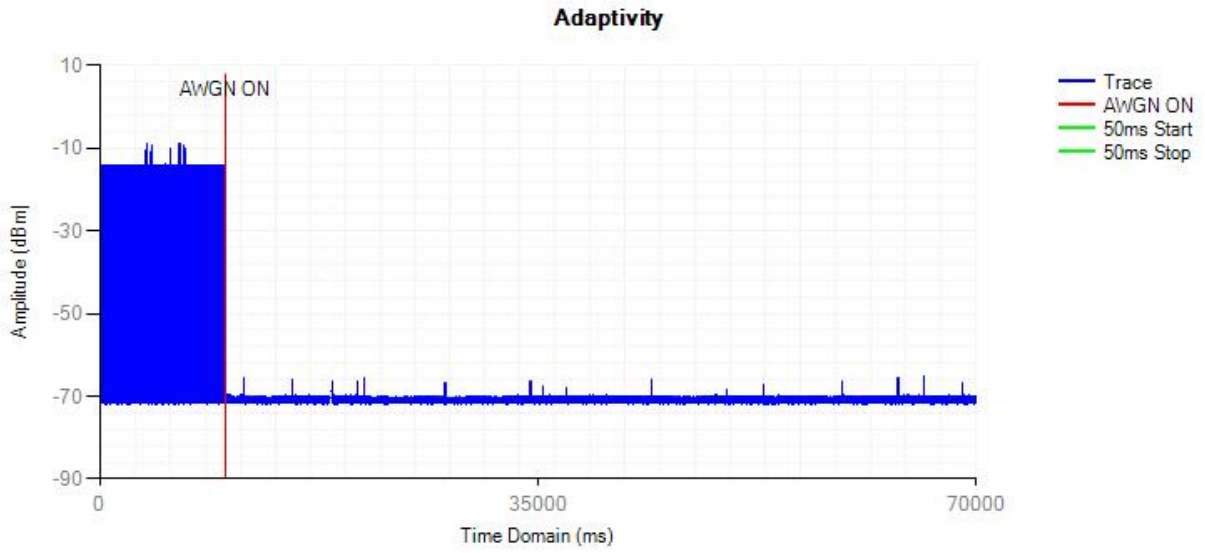
The Worst Test Result For 802.11ac(80MHz)					
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 42 (5210MHz)					
58.84	H	-82.57	-57.00	-25.57	PK
68.02	V	-74.74	-57.00	-17.74	PK
808.51	H	-73.84	-57.00	-16.84	PK
924.63	V	-74.79	-57.00	-17.79	PK
3485.43	H	-63.31	-47.00	-16.31	PK
3507.66	V	-63.84	-47.00	-16.84	PK
10420.01	H	-58.81	-47.00	-11.81	PK
10420.01	V	-60.18	-47.00	-13.18	PK

Note: All test modes were tested, but we only recorded the worst case (Low Channel) in this report.

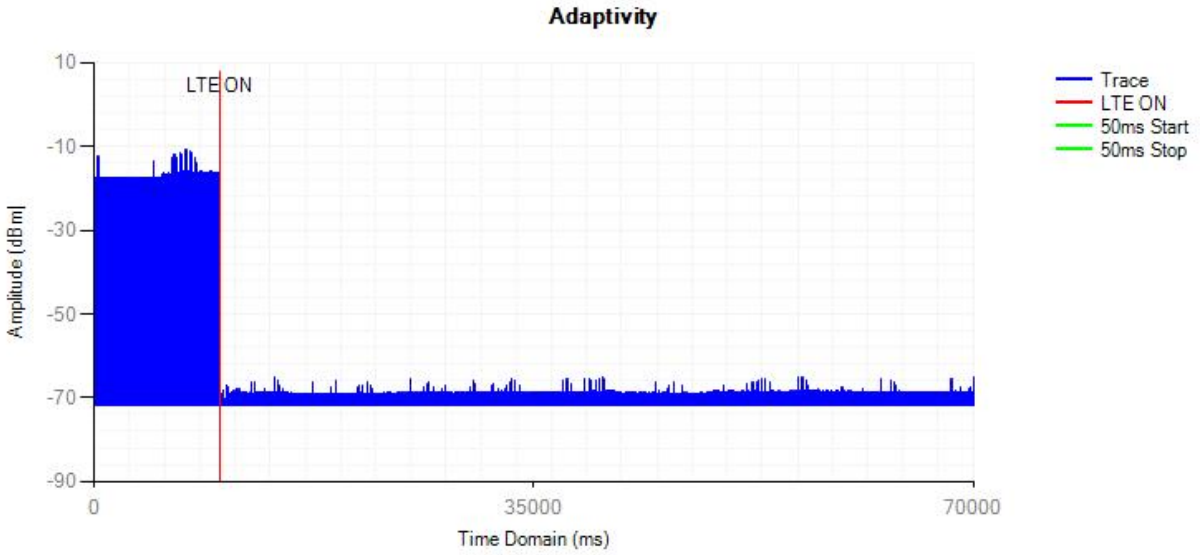
H.8 Adaptivity (Channel Access Mechanism)

Condition	Mode	Frequency (MHz)	Interfer Type	Short Control (ms)	Limit (ms)	Short Control (n)	Limit (n)	Verdict
NVNT	ac20	5180	AWGN	0.40	<=2.5	9	<=50	Pass
NVNT	ac20	5180	LTE	0.35	<=2.5	6	<=50	Pass
NVNT	ac20	5180	OFDM	0.67	<=2.5	3	<=50	Pass
NVNT	ac40	5190	AWGN	0.31	<=2.5	8	<=50	Pass
NVNT	ac40	5190	LTE	0.64	<=2.5	5	<=50	Pass
NVNT	ac40	5190	OFDM	0.50	<=2.5	14	<=50	Pass
NVNT	ac80	5210	AWGN	0.17	<=2.5	7	<=50	Pass
NVNT	ac80	5210	LTE	0.17	<=2.5	13	<=50	Pass
NVNT	ac80	5210	OFDM	0.39	<=2.5	12	<=50	Pass

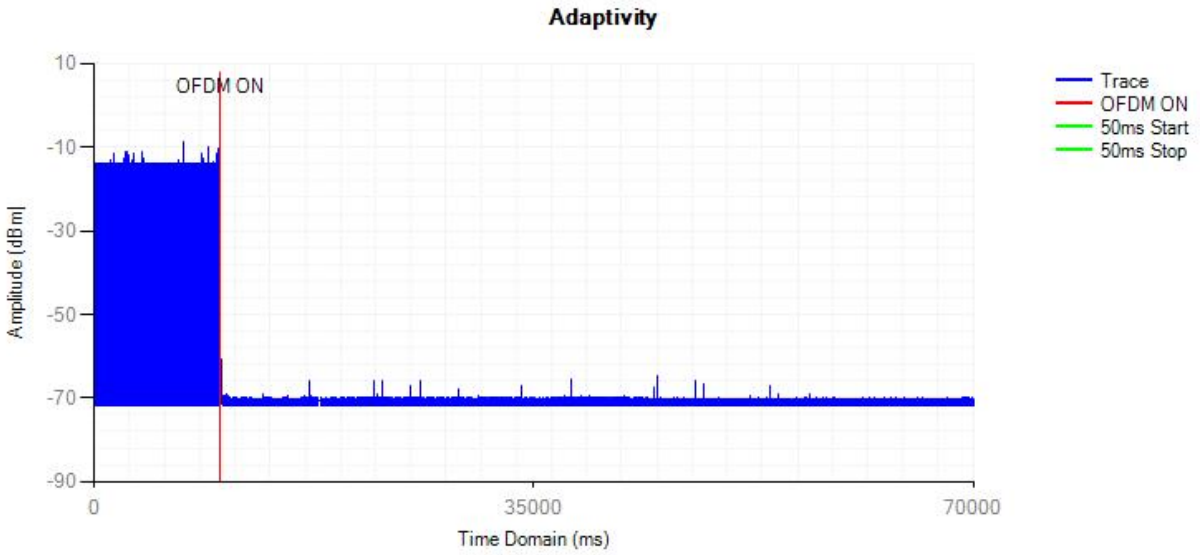
Adaptivity NVNT ac20 5180MHz AWGN



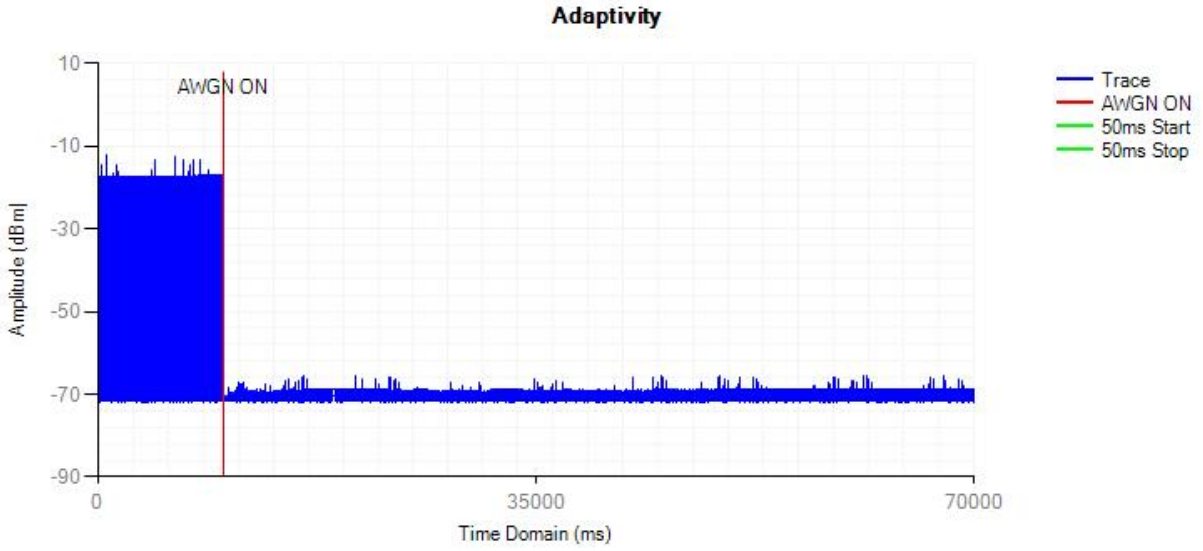
Adaptivity NVNT ac20 5180MHz LTE



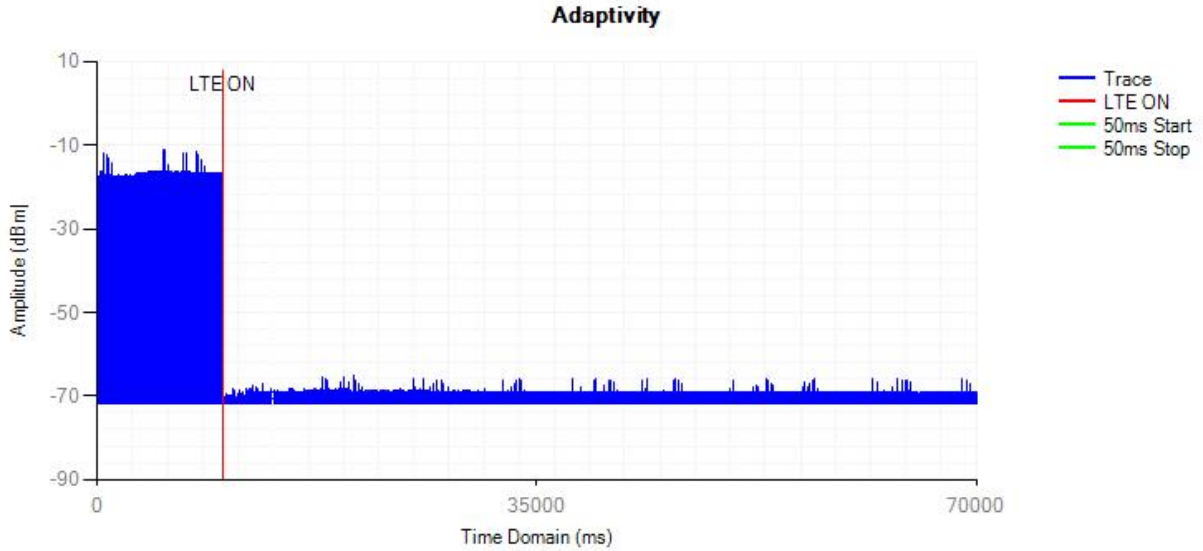
Adaptivity NVNT ac20 5180MHz OFDM



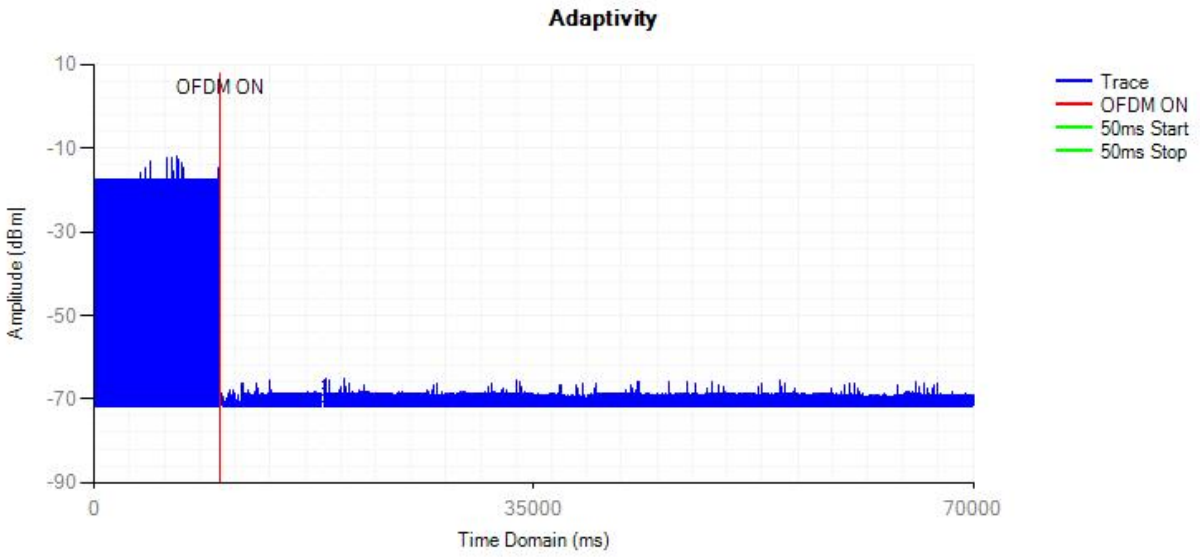
Adaptivity NVNT ac40 5190MHz AWGN



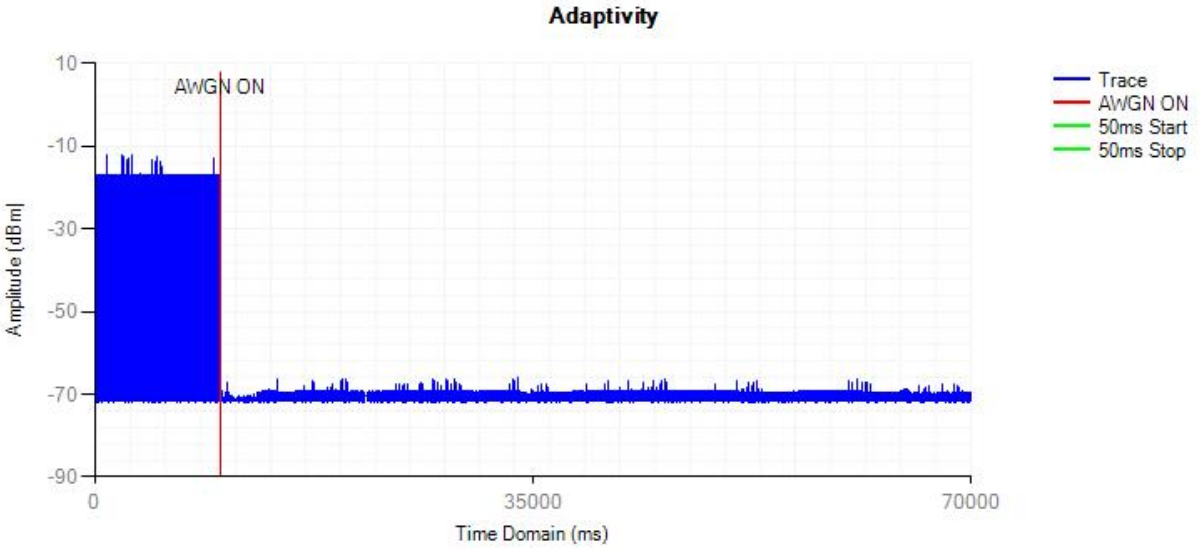
Adaptivity NVNT ac40 5190MHz LTE



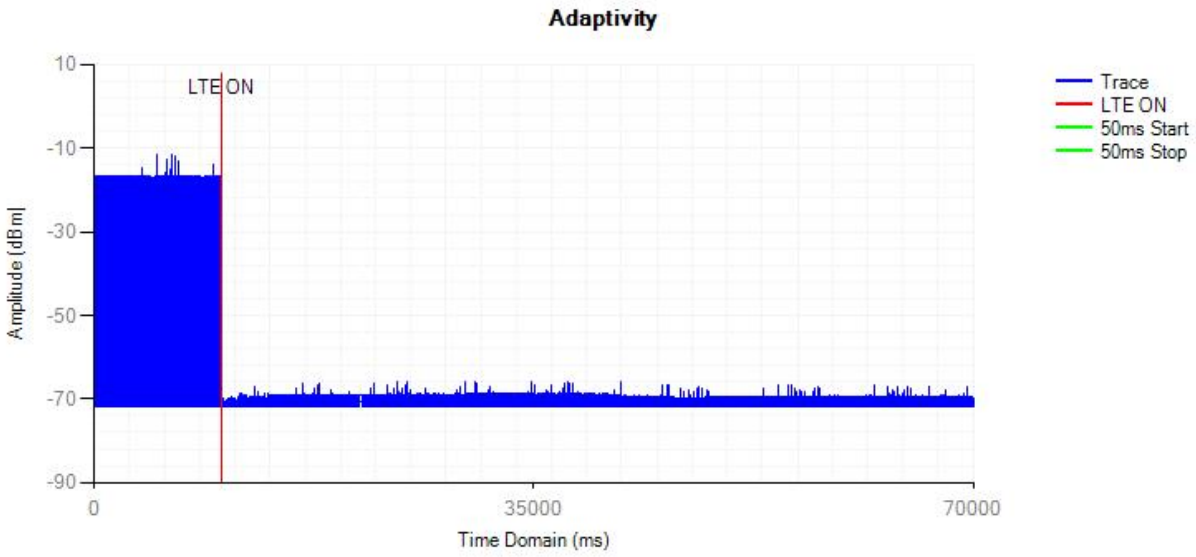
Adaptivity NVNT ac40 5190MHz OFDM



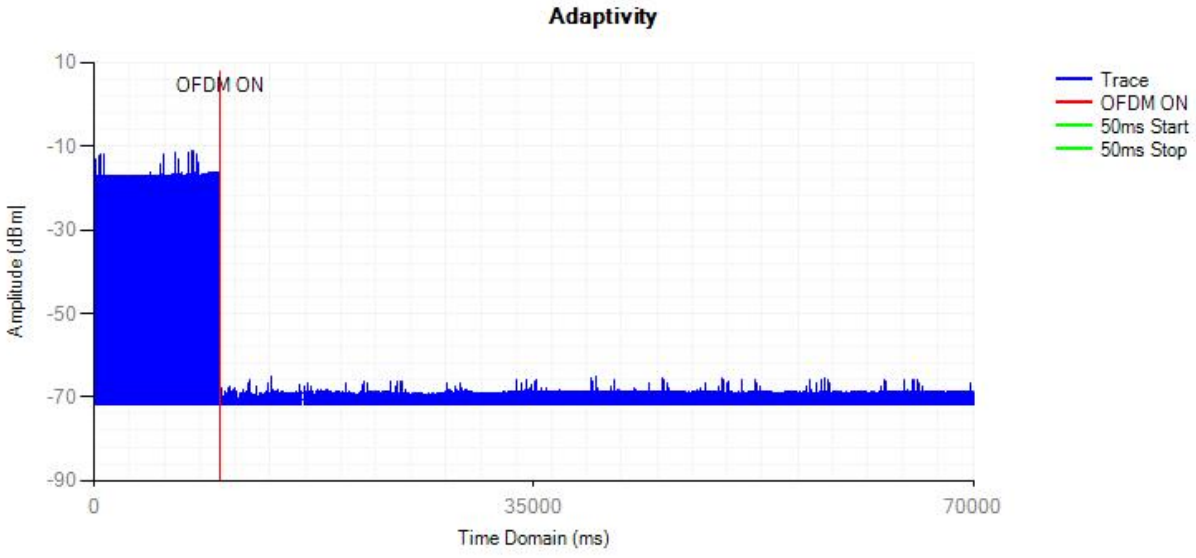
Adaptivity NVNT ac80 5210MHz AWGN



Adaptivity NVNT ac80 5210MHz LTE



Adaptivity NVNT ac80 5210MHz OFDM



H.9 Receiver Blocking

Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm)		Type of blocking signal	PER(%)		Test Result
		Test Value	Limit		Test Value	Limit	
Pmin + 6 dB	5100	-55	≥-59	CW	3.45	10	Pass
	4900	-45	≥-53	CW	2.05	10	Pass
	5000	-49	≥-53	CW	3.04	10	Pass
	5975	-43	≥-53	CW	1.04	10	Pass