

4. Maximum Power Spectral Density (PSD)

4.1 Test Result for Sinclair antenna

Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)			Limits (dBm/MHz)	Verdict
			Ant 1	Ant 2	Total		
802.11a	5180	SISO	3.35	3.84	/	≤11	PASS
	5200	SISO	3.71	3.28	/	≤11	PASS
	5240	SISO	4.22	2.44	/	≤11	PASS
	5260	SISO	3.74	1.24	/	≤11	PASS
	5300	SISO	2.94	0.36	/	≤11	PASS
	5320	SISO	3.34	0.24	/	≤11	PASS
	5500	SISO	3.52	1.46	/	≤11	PASS
	5580	SISO	2.60	1.08	/	≤11	PASS
	5700	SISO	3.50	1.16	/	≤11	PASS
802.11n(HT20)	5180	MIMO	-1.55	0.54	2.46	≤11	PASS
	5200	MIMO	-1.17	0.37	2.68	≤11	PASS
	5240	MIMO	-0.99	-0.86	1.95	≤11	PASS
	5260	MIMO	3.49	3.03	6.03	≤11	PASS
	5300	MIMO	2.47	1.98	5.19	≤11	PASS
	5320	MIMO	2.75	2.29	5.24	≤11	PASS
	5500	MIMO	3.79	3.72	6.51	≤11	PASS
	5580	MIMO	3.19	2.94	5.78	≤11	PASS
	5700	MIMO	3.86	0.58	5.41	≤11	PASS
802.11n(HT40)	5190	MIMO	-1.32	0.57	2.62	≤11	PASS
	5230	MIMO	-0.77	-0.67	2.10	≤11	PASS
	5270	MIMO	0.88	0.35	3.33	≤11	PASS
	5310	MIMO	0.50	-0.28	3.02	≤11	PASS
	5510	MIMO	1.29	0.61	3.79	≤11	PASS
	5550	MIMO	0.46	-0.26	2.92	≤11	PASS
	5670	MIMO	-0.54	-2.73	1.35	≤11	PASS
802.11ac(VHT20)	5180	MIMO	-1.43	0.95	2.70	≤11	PASS
	5200	MIMO	-1.24	0.27	2.37	≤11	PASS
	5240	MIMO	-0.83	-0.92	1.99	≤11	PASS
	5260	MIMO	4.30	3.88	6.95	≤11	PASS
	5300	MIMO	3.49	3.04	6.14	≤11	PASS
	5320	MIMO	3.59	3.21	6.41	≤11	PASS
	5500	MIMO	4.38	3.68	6.78	≤11	PASS
	5580	MIMO	3.21	2.49	5.65	≤11	PASS
	5700	MIMO	3.28	0.21	4.84	≤11	PASS
802.11ac(VHT40)	5190	MIMO	-1.55	0.83	2.61	≤11	PASS

	5230	MIMO	-1.27	-0.73	1.91	≤11	PASS
	5270	MIMO	0.79	0.68	3.37	≤11	PASS
	5310	MIMO	0.39	0.41	3.22	≤11	PASS
	5510	MIMO	0.96	-0.65	3.01	≤11	PASS
	5550	MIMO	0.30	-0.46	2.79	≤11	PASS
	5670	MIMO	-0.40	-2.88	1.40	≤11	PASS
802.11ac(VHT80)	5210	MIMO	-3.22	-2.11	0.22	≤11	PASS
	5290	MIMO	-3.89	-4.14	-1.29	≤11	PASS
	5530	MIMO	-2.36	-3.21	-0.08	≤11	PASS
	5610	MIMO	-3.06	-3.92	-0.65	≤11	PASS

Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/500kHz)			Limits (dBm/500kHz)	Verdict
			Ant 1	Ant 2	Total		
802.11a	5745	SISO	1.32	0.41	/	≤30	PASS
	5785	SISO	1.03	-0.33	/	≤30	PASS
	5825	SISO	0.63	-0.56	/	≤30	PASS
802.11n(HT20)	5745	MIMO	1.31	-3.30	2.50	≤30	PASS
	5785	MIMO	1.26	-4.24	2.28	≤30	PASS
	5825	MIMO	0.57	-4.52	1.68	≤30	PASS
802.11n(HT40)	5755	MIMO	-2.69	-6.01	-1.18	≤30	PASS
	5795	MIMO	-2.91	-6.02	-1.29	≤30	PASS
802.11ac(VHT20)	5745	MIMO	0.33	-2.94	1.85	≤30	PASS
	5785	MIMO	0.16	-3.36	1.55	≤30	PASS
	5825	MIMO	-0.18	-3.08	1.42	≤30	PASS
802.11ac(VHT40)	5755	MIMO	-2.89	-5.98	-1.31	≤30	PASS
	5795	MIMO	-3.22	-6.55	-1.57	≤30	PASS
802.11ac(VHT80)	5775	MIMO	-6.14	-9.15	-4.60	≤30	PASS

Remark:

Since the number of transmit antennas is less than 4, Array gain=0dB.



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4.1 Test Result for SANAV antenna

Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)			Limits (dBm/MHz)	Verdict
			Ant 1	Ant 2	Total		
802.11a	5180	SISO	3.35	3.84	/	≤11	PASS
	5200	SISO	3.71	3.28	/	≤11	PASS
	5240	SISO	4.22	2.44	/	≤11	PASS
	5260	SISO	3.74	1.24	/	≤11	PASS
	5300	SISO	2.94	0.36	/	≤11	PASS
	5320	SISO	3.34	0.24	/	≤11	PASS
	5500	SISO	3.52	1.46	/	≤11	PASS
	5580	SISO	2.60	1.08	/	≤11	PASS
	5700	SISO	3.50	1.16	/	≤11	PASS
802.11n(HT20)	5180	MIMO	-1.55	0.54	2.46	≤8.15	PASS
	5200	MIMO	-1.17	0.37	2.68	≤8.15	PASS
	5240	MIMO	-0.99	-0.86	1.95	≤8.15	PASS
	5260	MIMO	3.49	3.03	6.03	≤8.15	PASS
	5300	MIMO	2.47	1.98	5.19	≤8.15	PASS
	5320	MIMO	2.75	2.29	5.24	≤8.15	PASS
	5500	MIMO	3.79	3.72	6.51	≤8.15	PASS
	5580	MIMO	3.19	2.94	5.78	≤8.15	PASS
	5700	MIMO	3.86	0.58	5.41	≤8.15	PASS
802.11n(HT40)	5190	MIMO	-1.32	0.57	2.62	≤8.15	PASS
	5230	MIMO	-0.77	-0.67	2.10	≤8.15	PASS
	5270	MIMO	0.88	0.35	3.33	≤8.15	PASS
	5310	MIMO	0.50	-0.28	3.02	≤8.15	PASS
	5510	MIMO	1.29	0.61	3.79	≤8.15	PASS
	5550	MIMO	0.46	-0.26	2.92	≤8.15	PASS
	5670	MIMO	-0.54	-2.73	1.35	≤8.15	PASS
802.11ac(VHT20)	5180	MIMO	-1.43	0.95	2.70	≤8.15	PASS
	5200	MIMO	-1.24	0.27	2.37	≤8.15	PASS
	5240	MIMO	-0.83	-0.92	1.99	≤8.15	PASS
	5260	MIMO	4.30	3.88	6.95	≤8.15	PASS
	5300	MIMO	3.49	3.04	6.14	≤8.15	PASS
	5320	MIMO	3.59	3.21	6.41	≤8.15	PASS
	5500	MIMO	4.38	3.68	6.78	≤8.15	PASS
	5580	MIMO	3.21	2.49	5.65	≤8.15	PASS
	5700	MIMO	3.28	0.21	4.84	≤8.15	PASS
802.11ac(VHT40)	5190	MIMO	-1.55	0.83	2.61	≤8.15	PASS
	5230	MIMO	-1.27	-0.73	1.91	≤8.15	PASS



	5270	MIMO	0.79	0.68	3.37	≤8.15	PASS
	5310	MIMO	0.39	0.41	3.22	≤8.15	PASS
	5510	MIMO	0.96	-0.65	3.01	≤8.15	PASS
	5550	MIMO	0.30	-0.46	2.79	≤8.15	PASS
	5670	MIMO	-0.40	-2.88	1.40	≤8.15	PASS
802.11ac(VHT80)	5210	MIMO	-3.22	-2.11	0.22	≤8.15	PASS
	5290	MIMO	-3.89	-4.14	-1.29	≤8.15	PASS
	5530	MIMO	-2.36	-3.21	-0.08	≤8.15	PASS
	5610	MIMO	-3.06	-3.92	-0.65	≤8.15	PASS

Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/500kHz)			Limits (dBm/500kHz)	Verdict
			Ant 1	Ant 2	Total		
802.11a	5745	SISO	1.32	0.41	/	≤30	PASS
	5785	SISO	1.03	-0.33	/	≤30	PASS
	5825	SISO	0.63	-0.56	/	≤30	PASS
802.11n(HT20)	5745	MIMO	1.31	-3.30	2.50	≤27.15	PASS
	5785	MIMO	1.26	-4.24	2.28	≤27.15	PASS
	5825	MIMO	0.57	-4.52	1.68	≤27.15	PASS
802.11n(HT40)	5755	MIMO	-2.69	-6.01	-1.18	≤27.15	PASS
	5795	MIMO	-2.91	-6.02	-1.29	≤27.15	PASS
802.11ac(VHT20)	5745	MIMO	0.33	-2.94	1.85	≤27.15	PASS
	5785	MIMO	0.16	-3.36	1.55	≤27.15	PASS
	5825	MIMO	-0.18	-3.08	1.42	≤27.15	PASS
802.11ac(VHT40)	5755	MIMO	-2.89	-5.98	-1.31	≤27.15	PASS
	5795	MIMO	-3.22	-6.55	-1.57	≤27.15	PASS
802.11ac(VHT80)	5775	MIMO	-6.14	-9.15	-4.60	≤27.15	PASS

Remark:

Directional gain = $G_{ANT} + 10 \cdot \log(N_{ANT}/N_{SS}) = 5.84 + 10 \cdot \log(2/1) = 8.85\text{dBi}$.

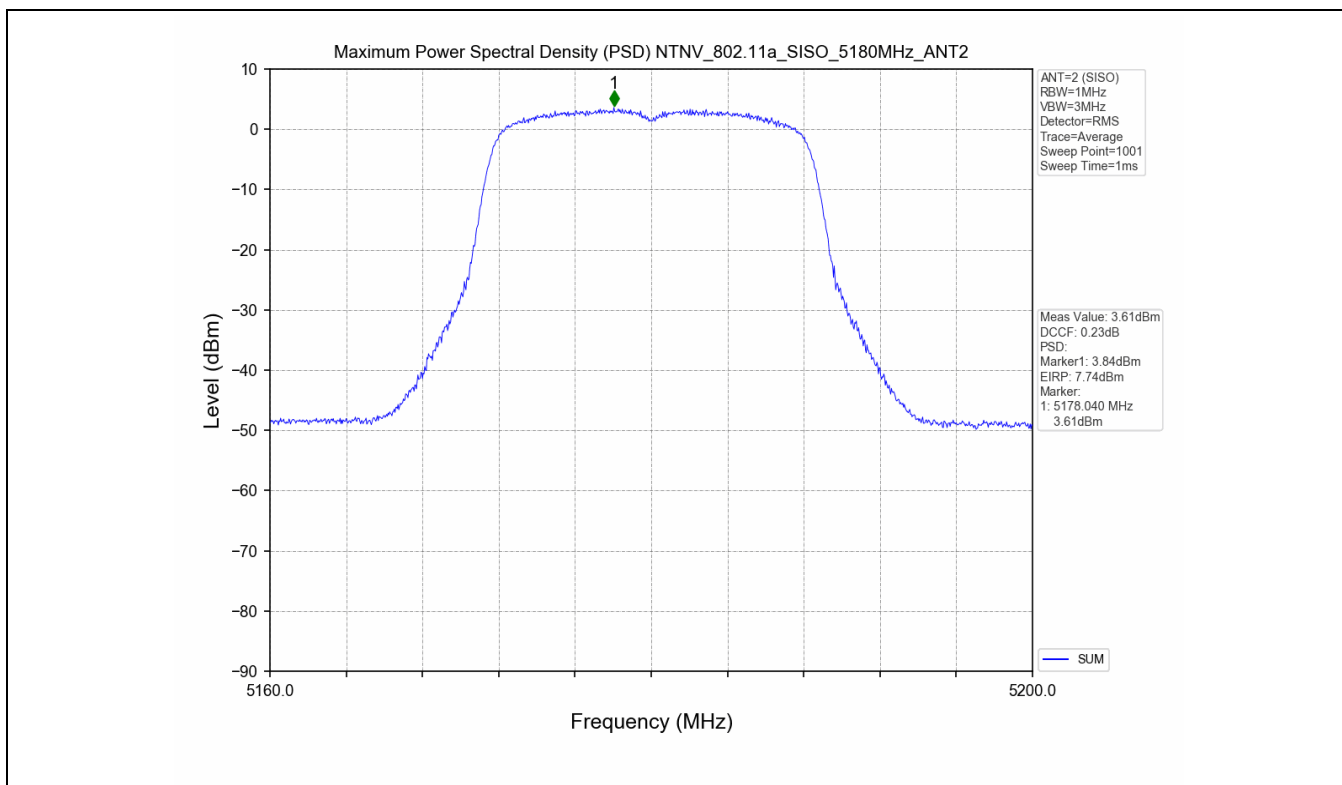
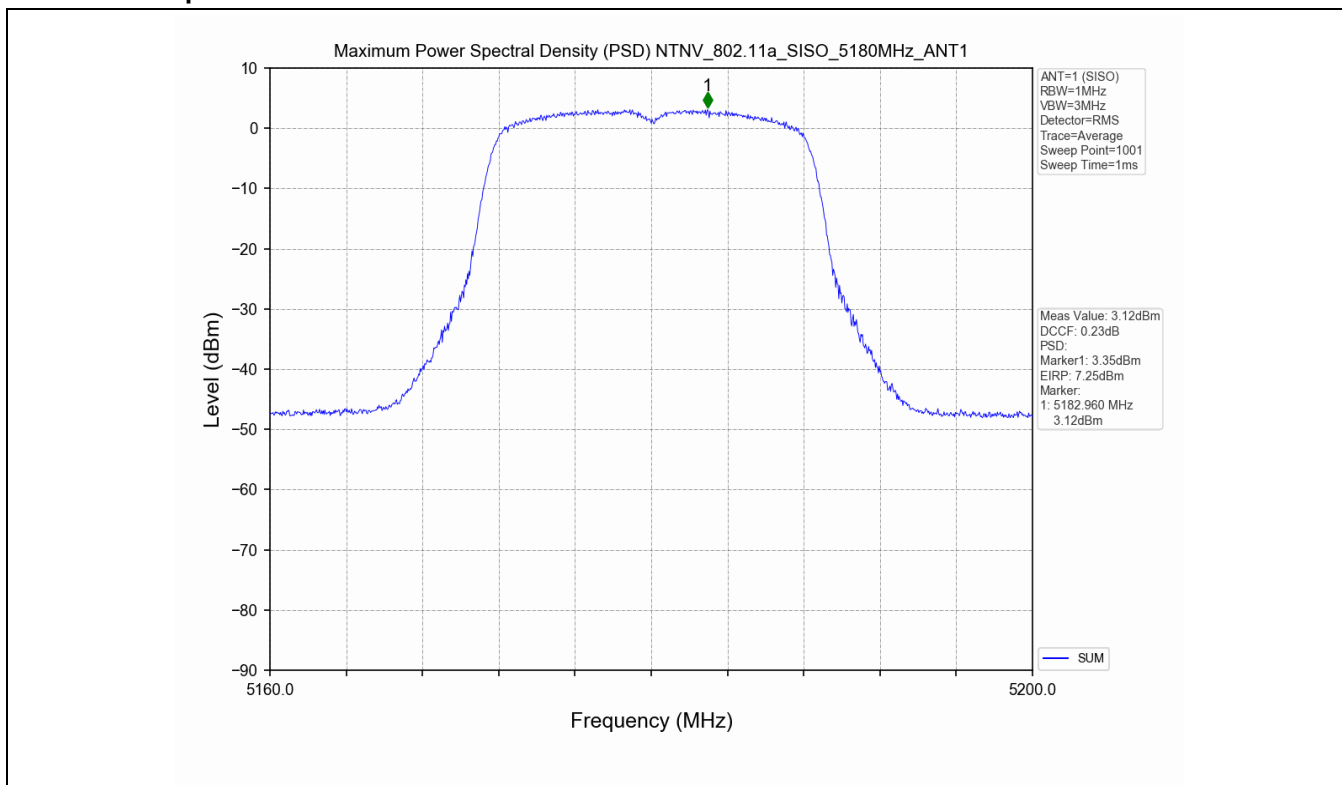


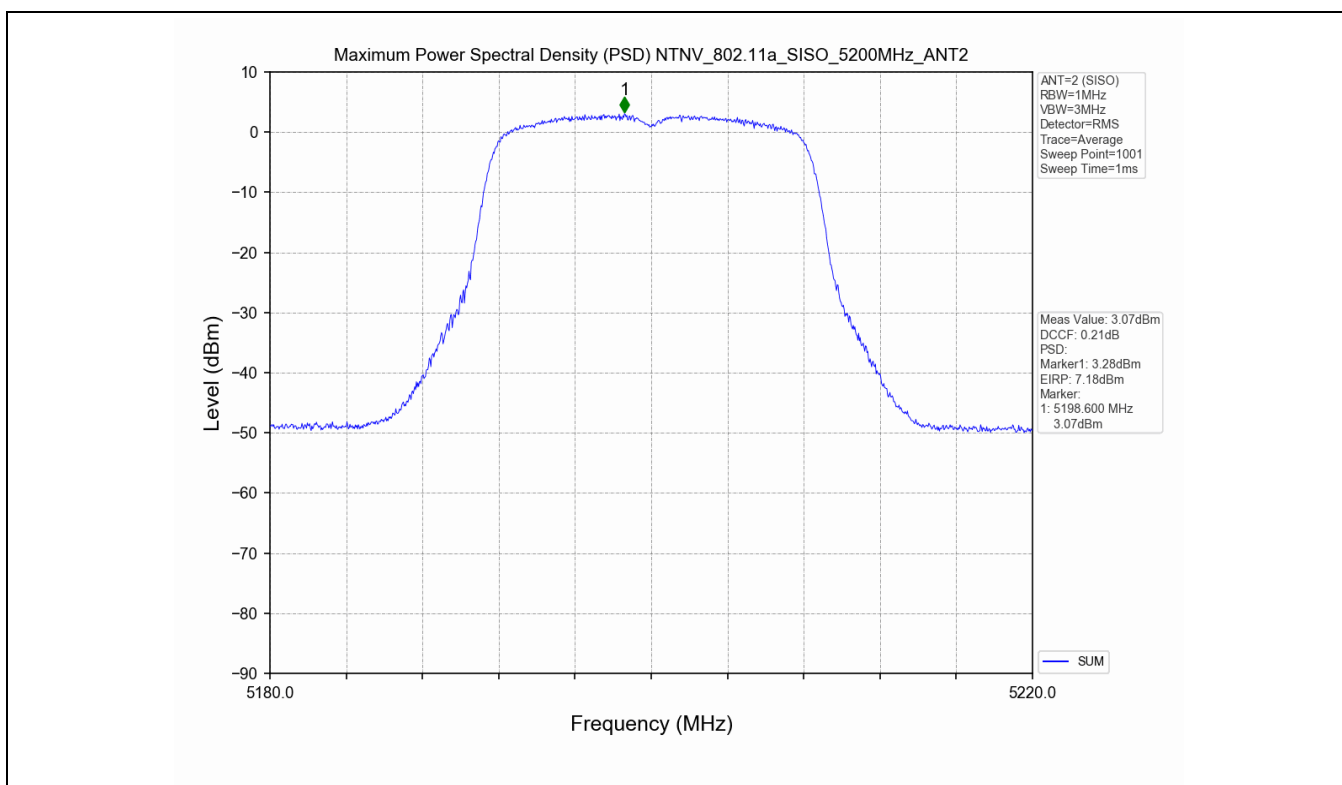
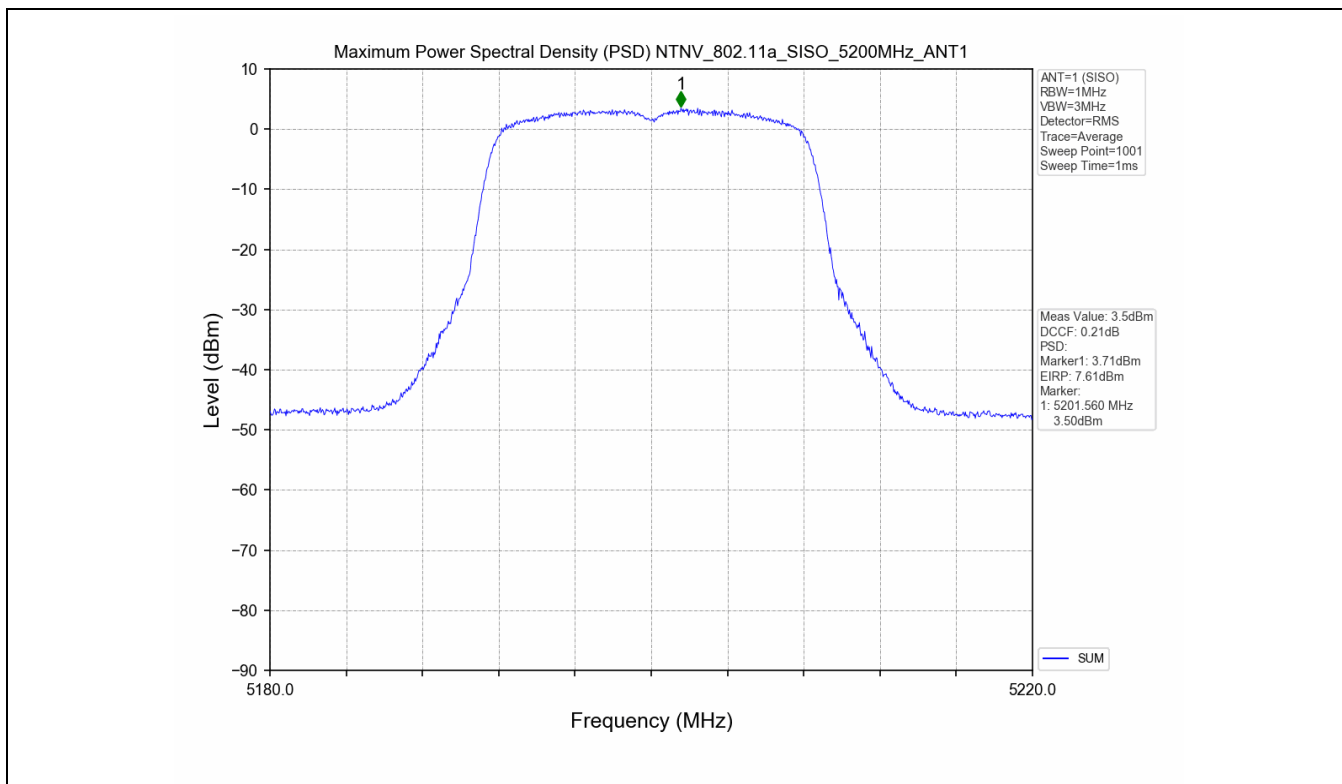
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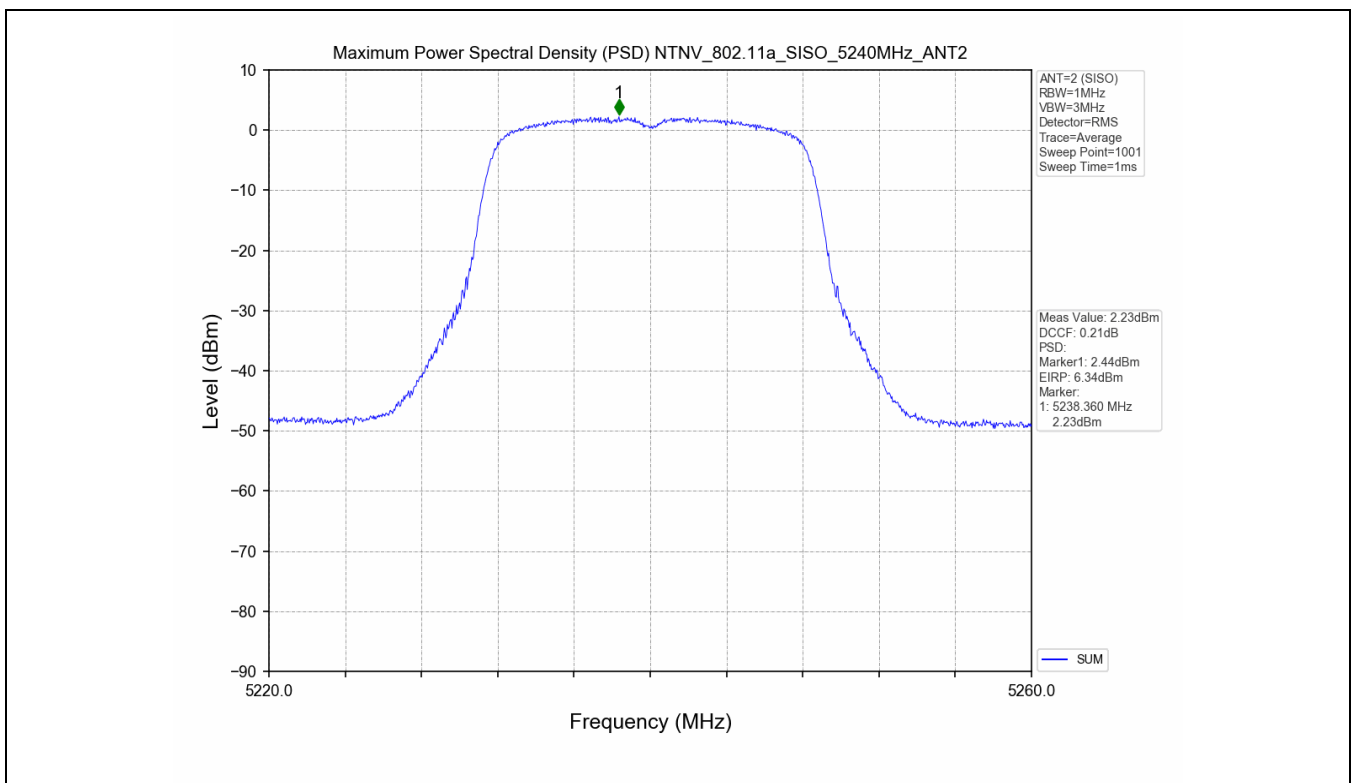
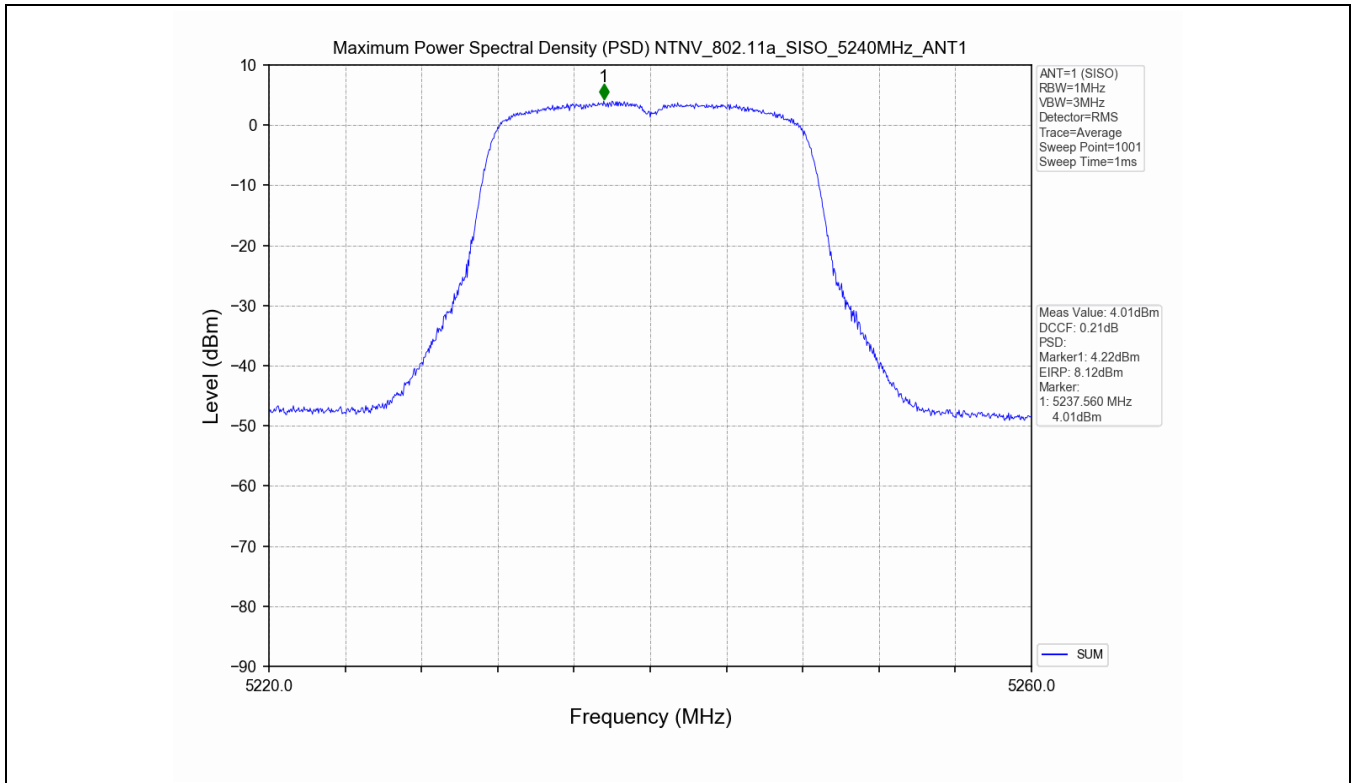
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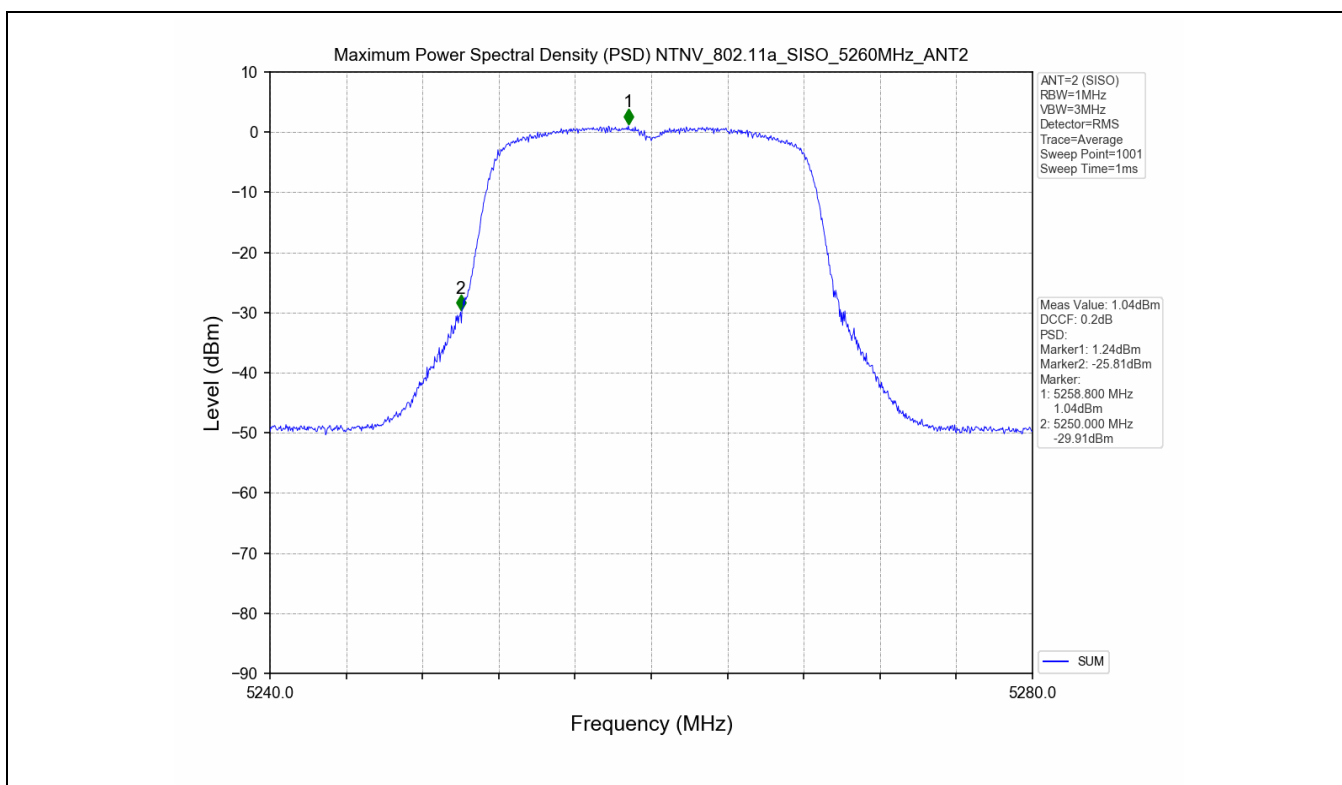
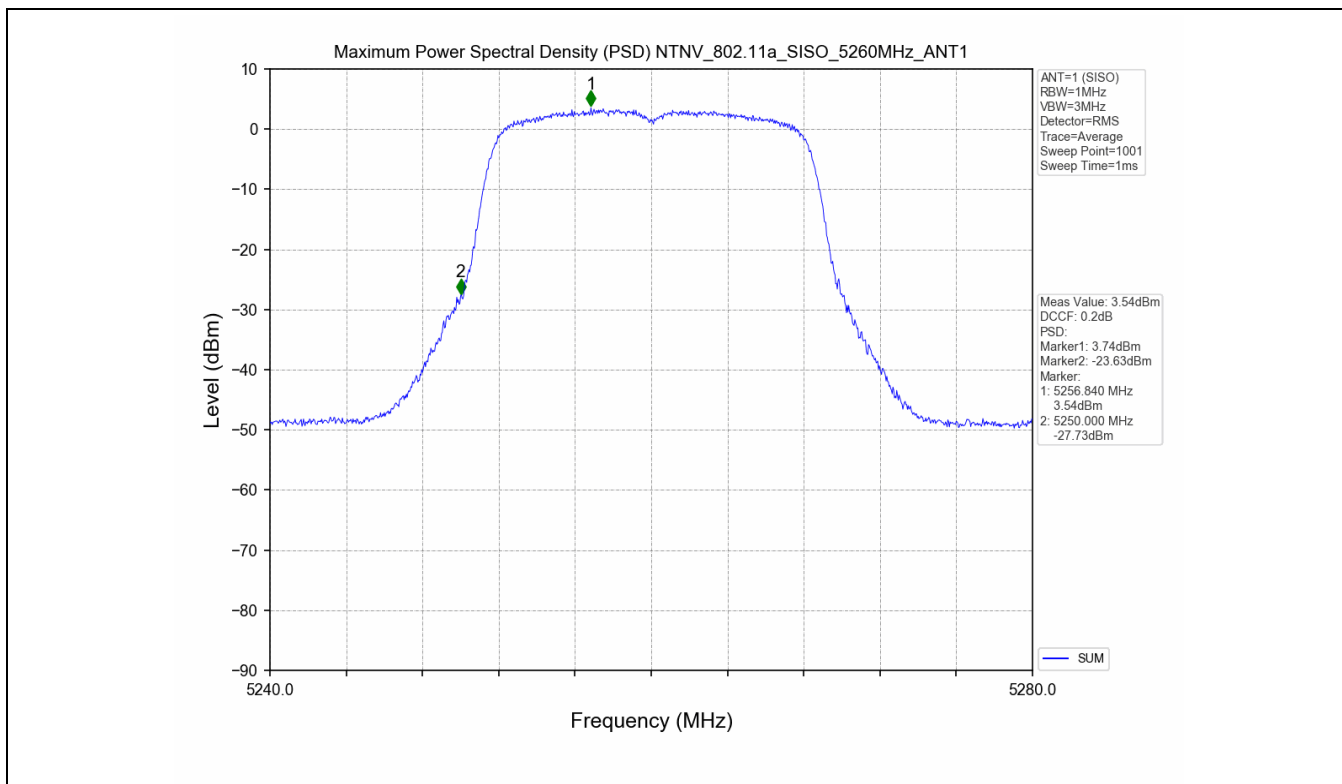
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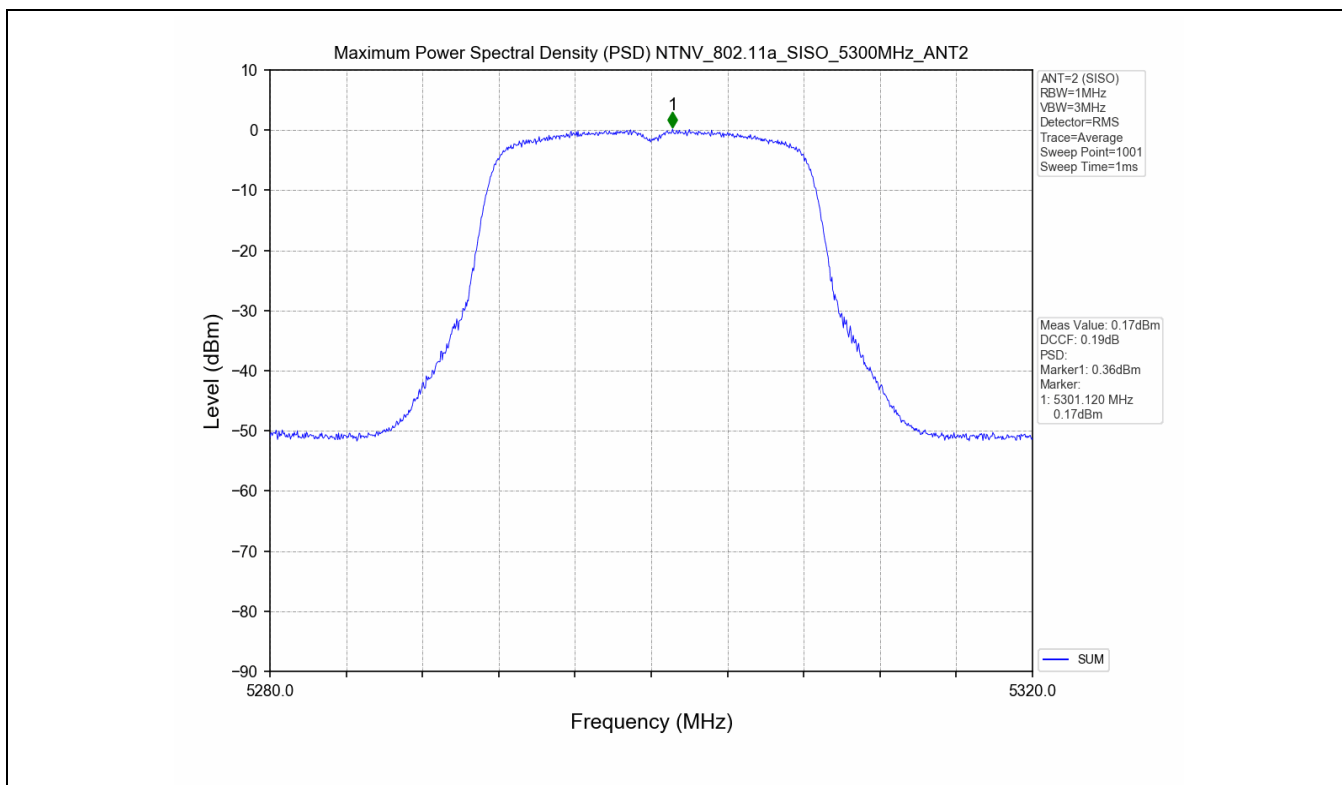
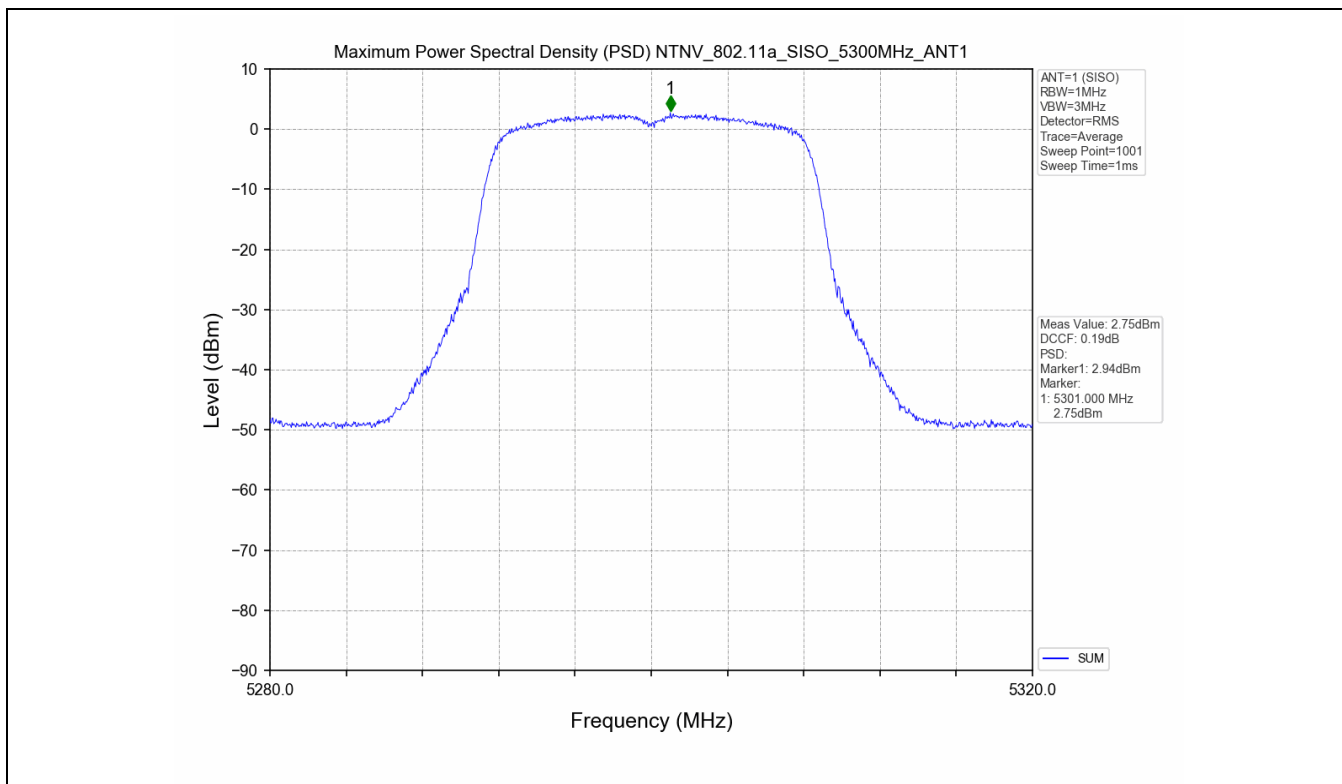
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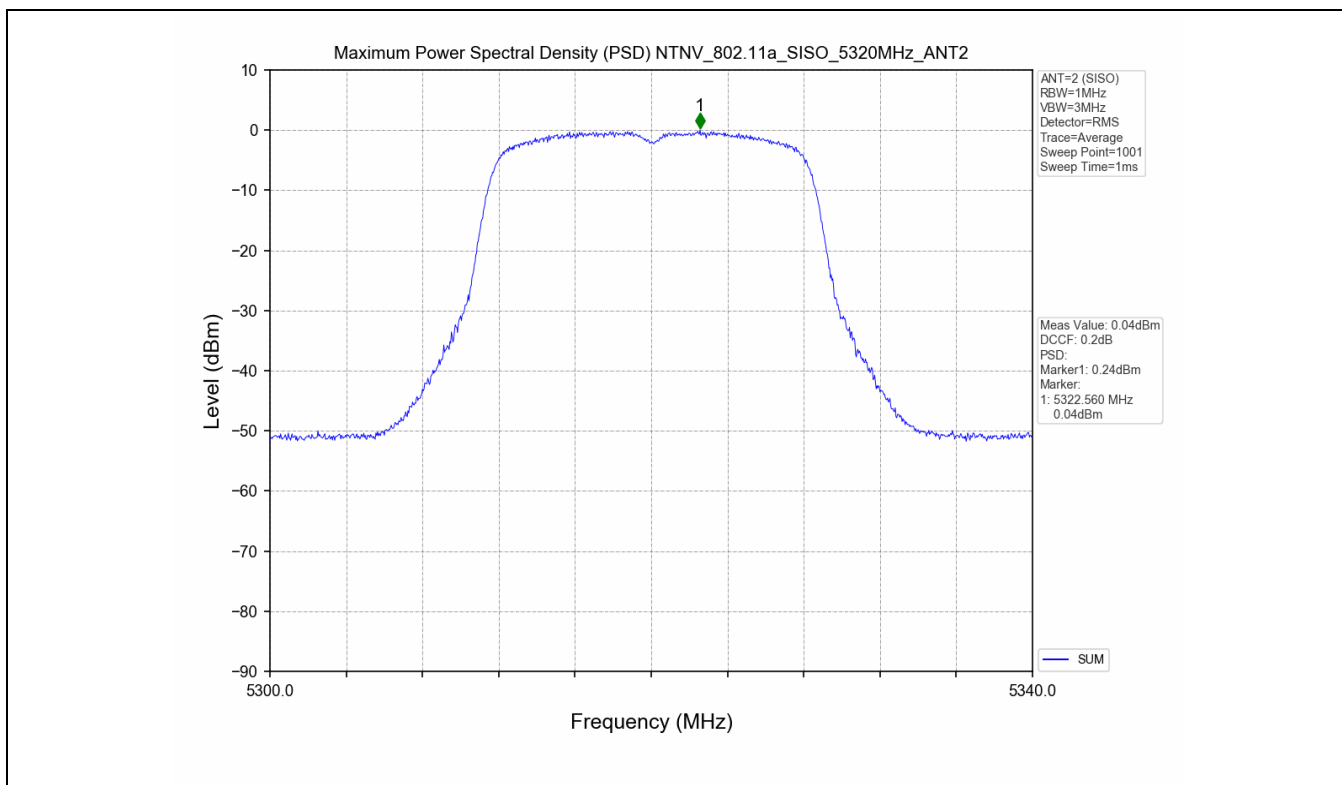
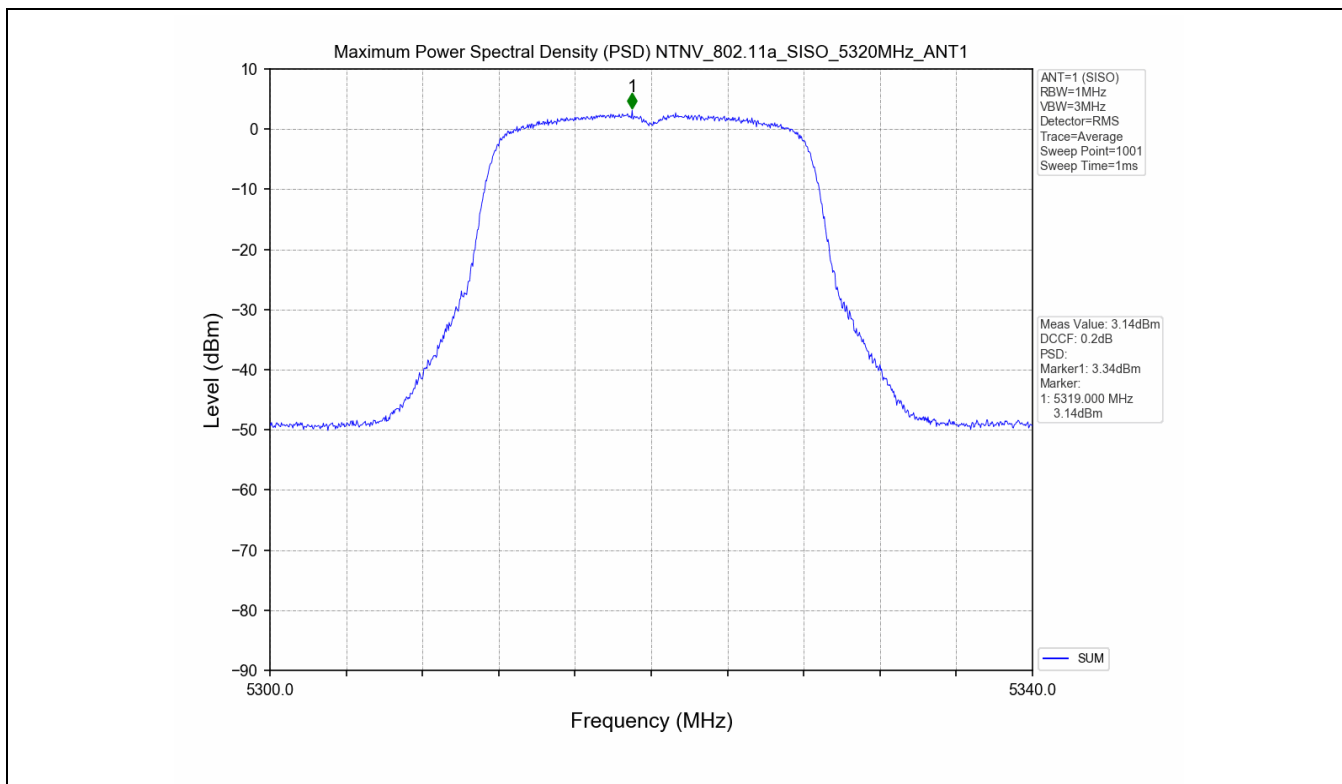








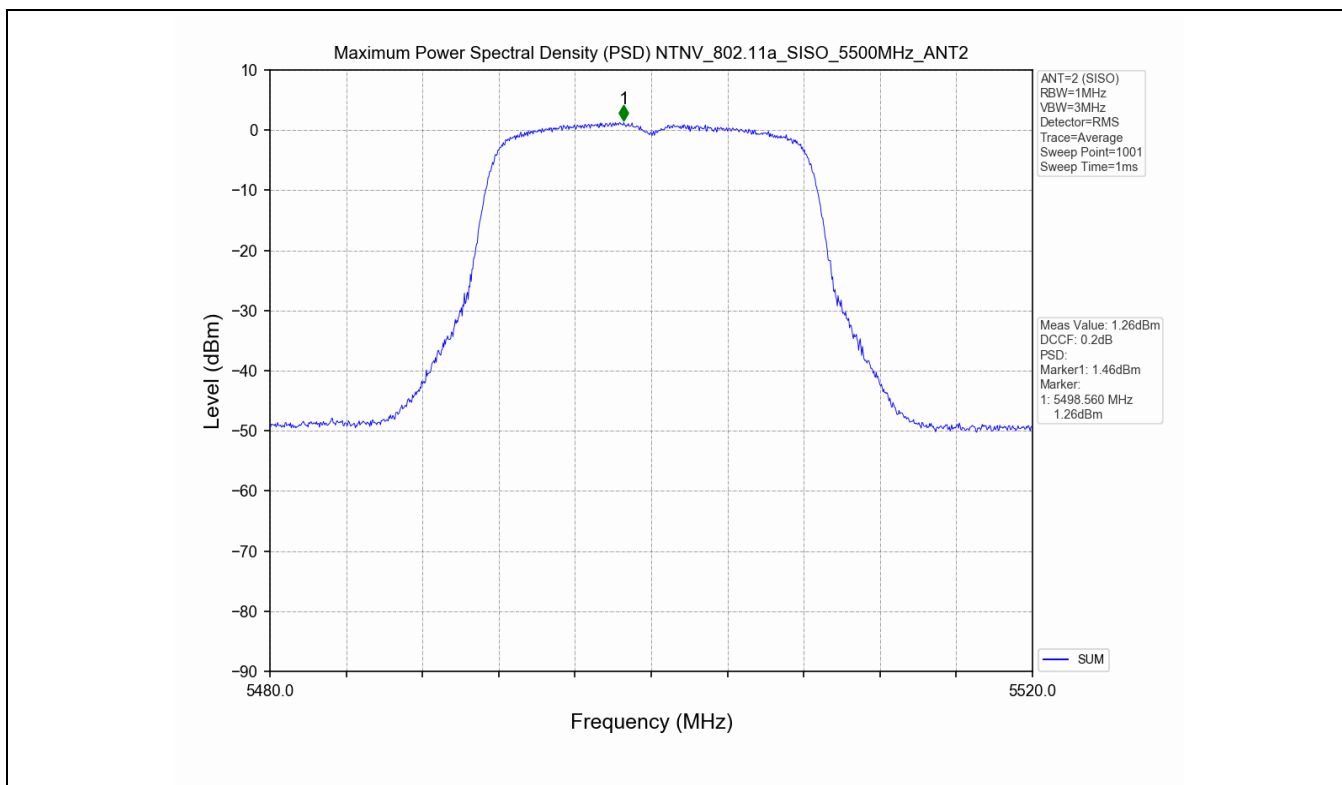
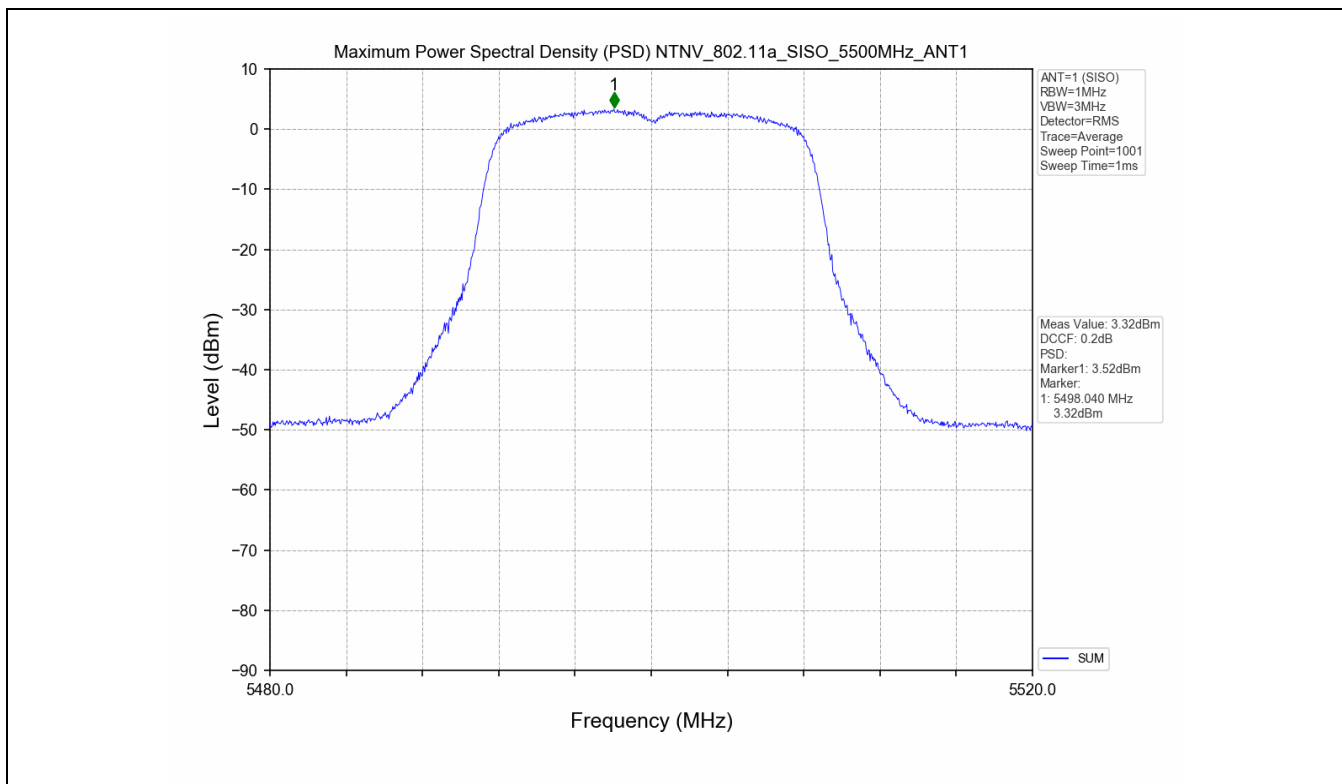


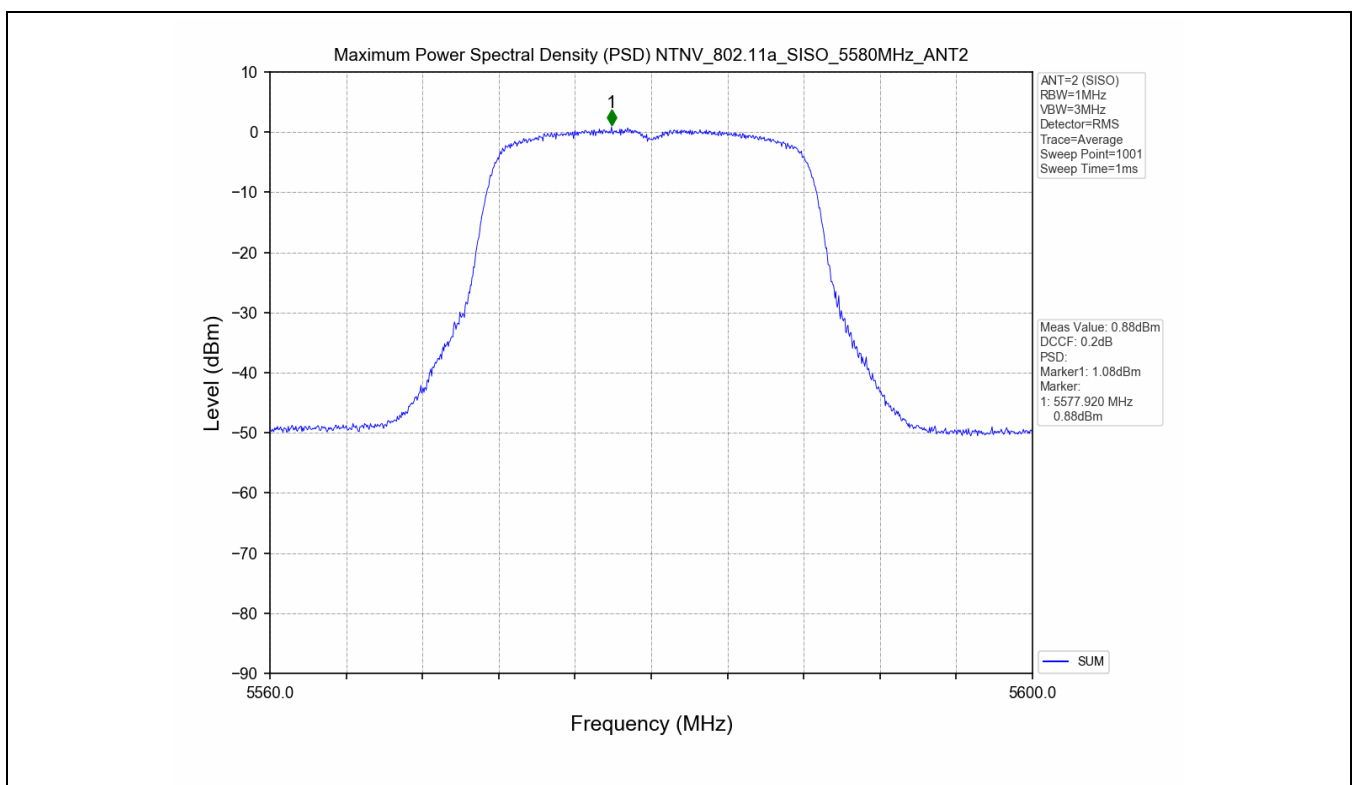
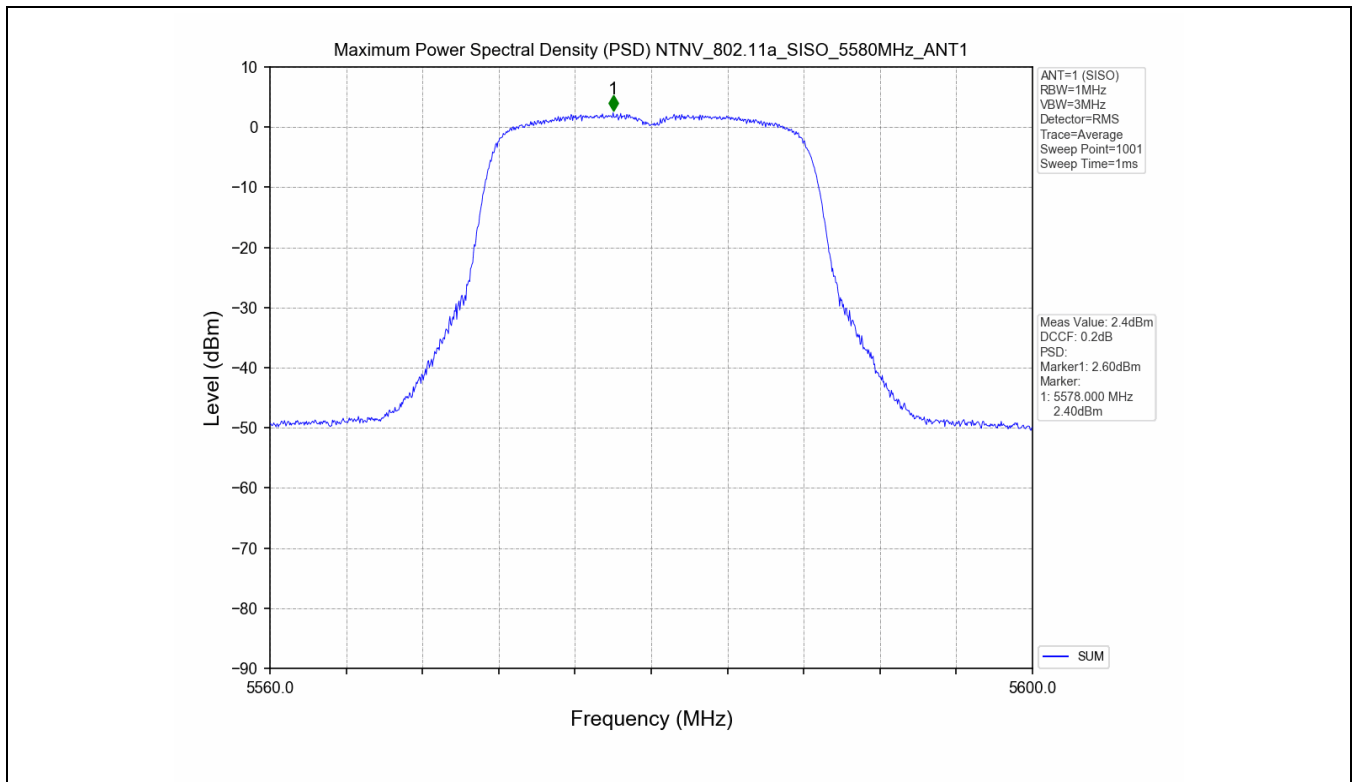


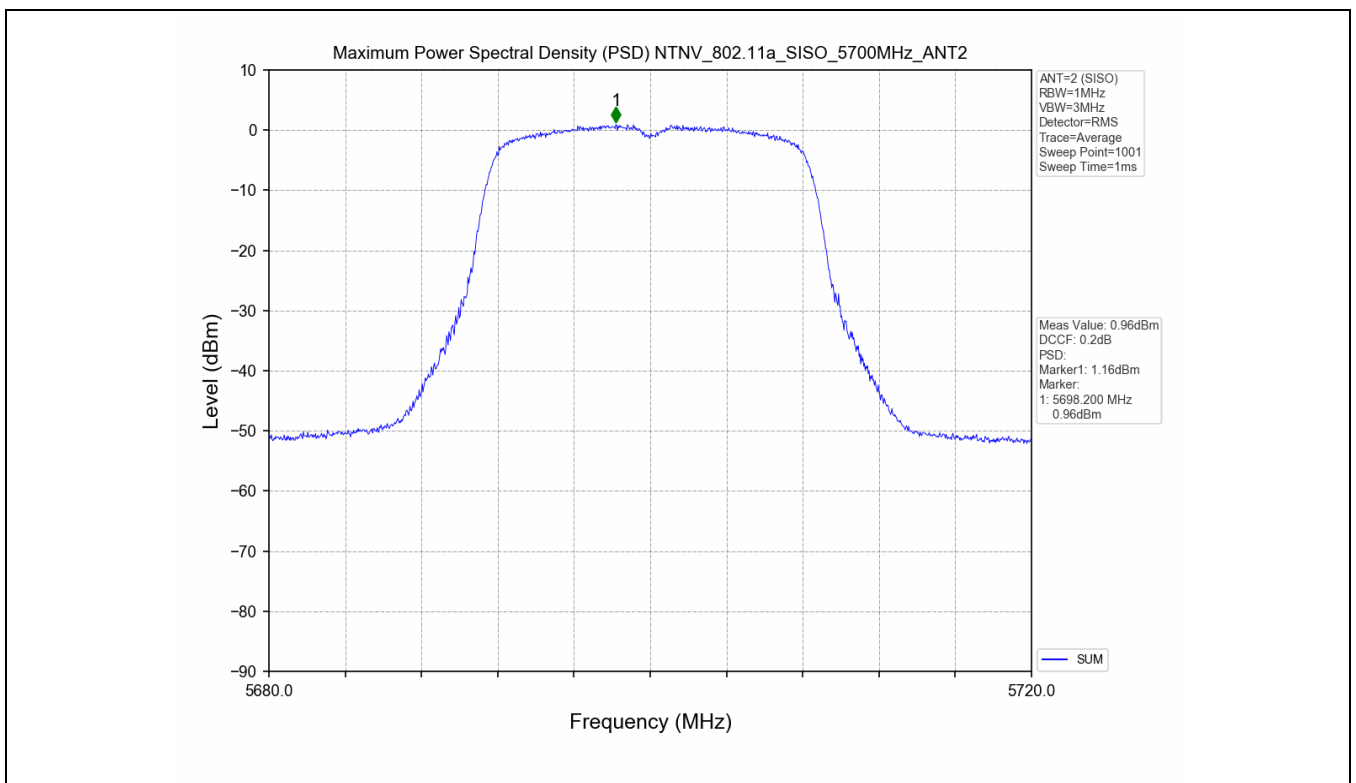
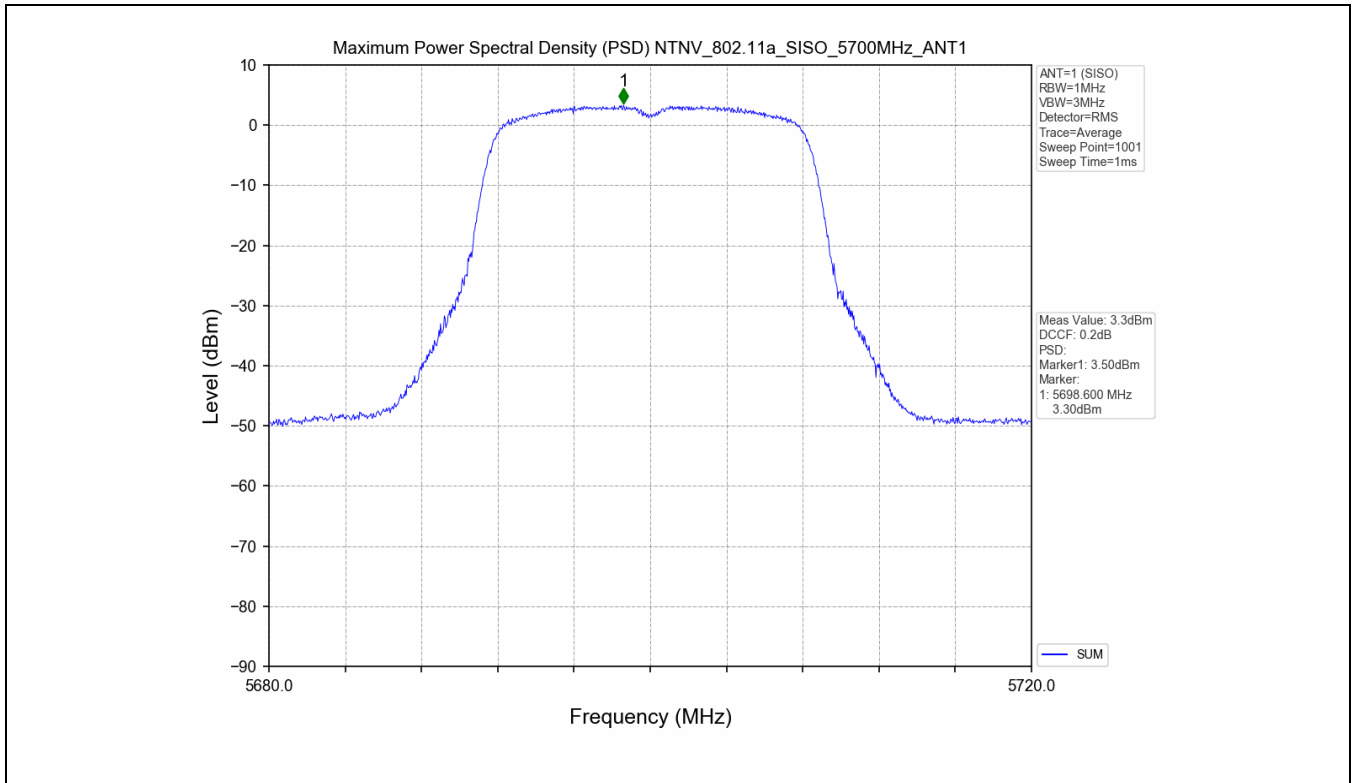
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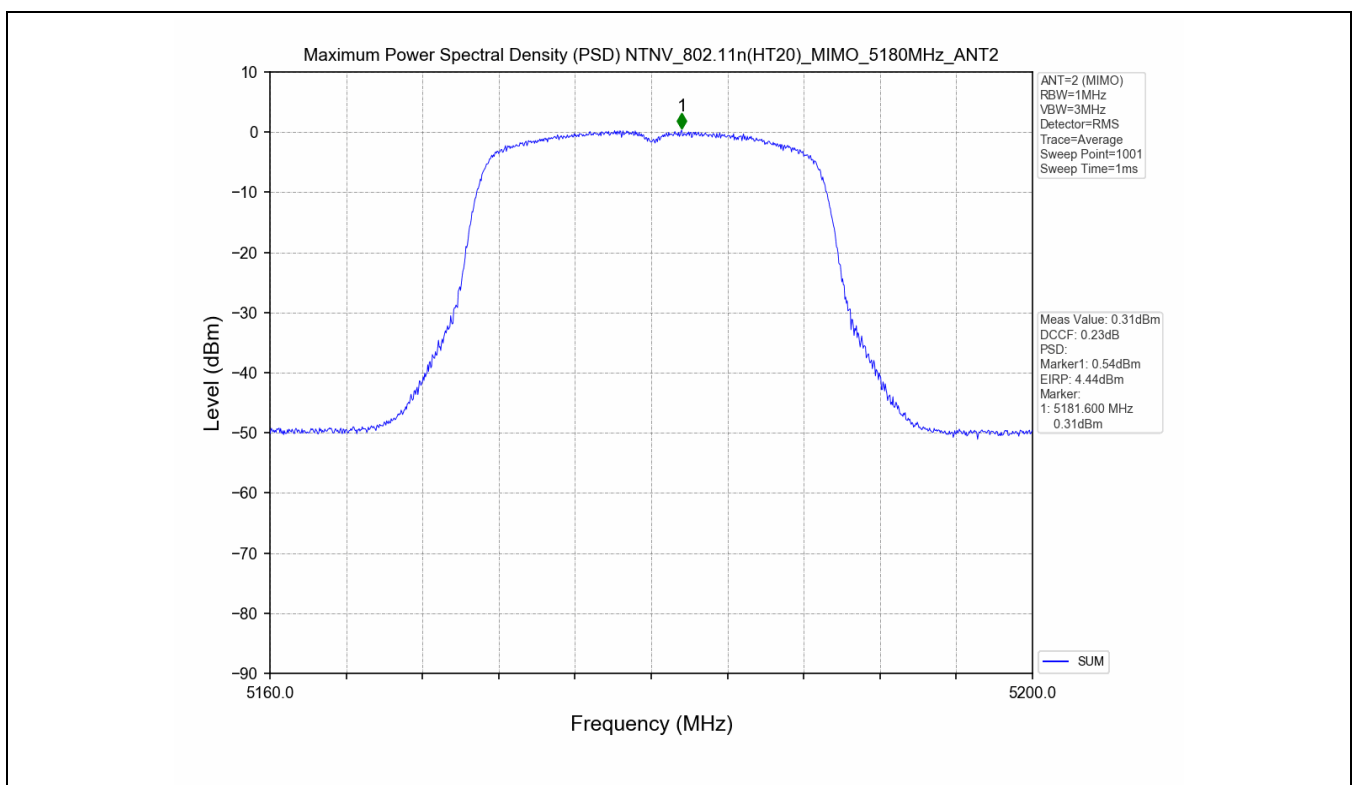
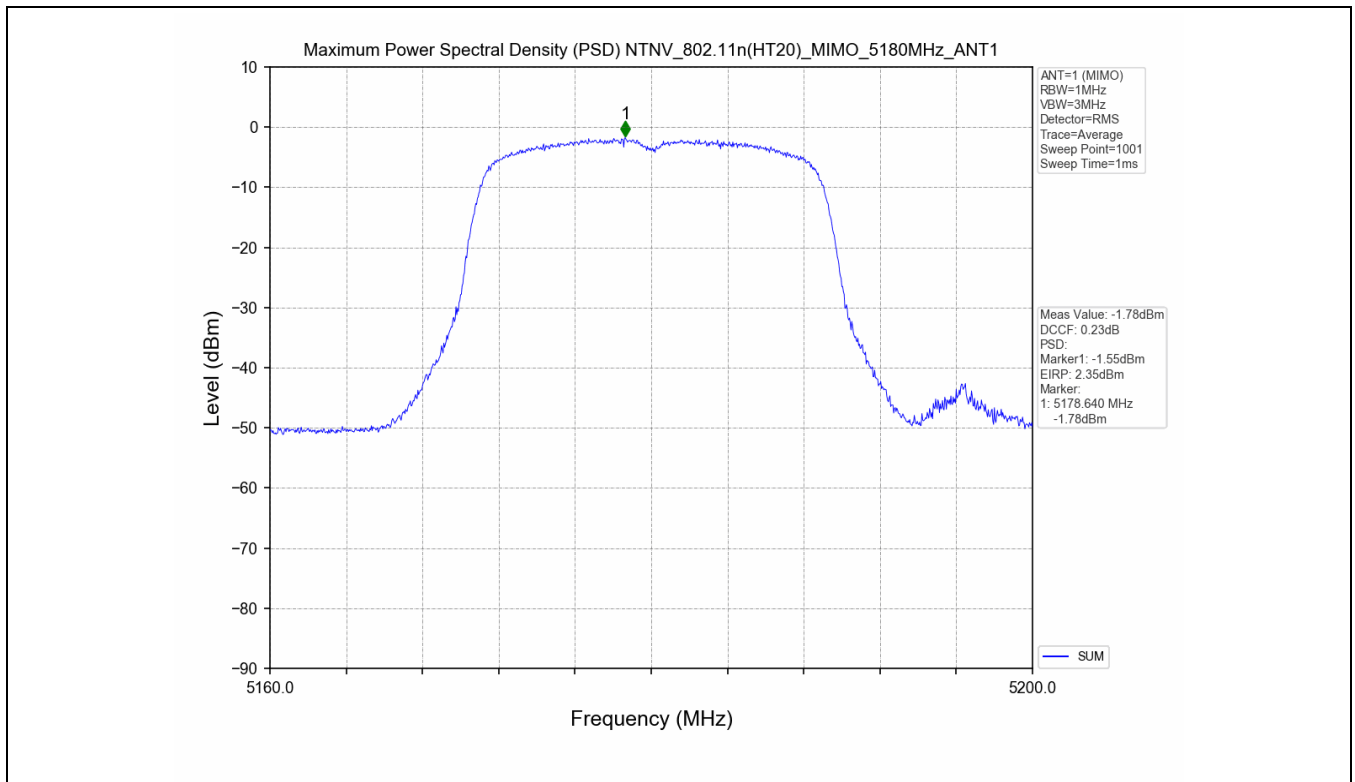
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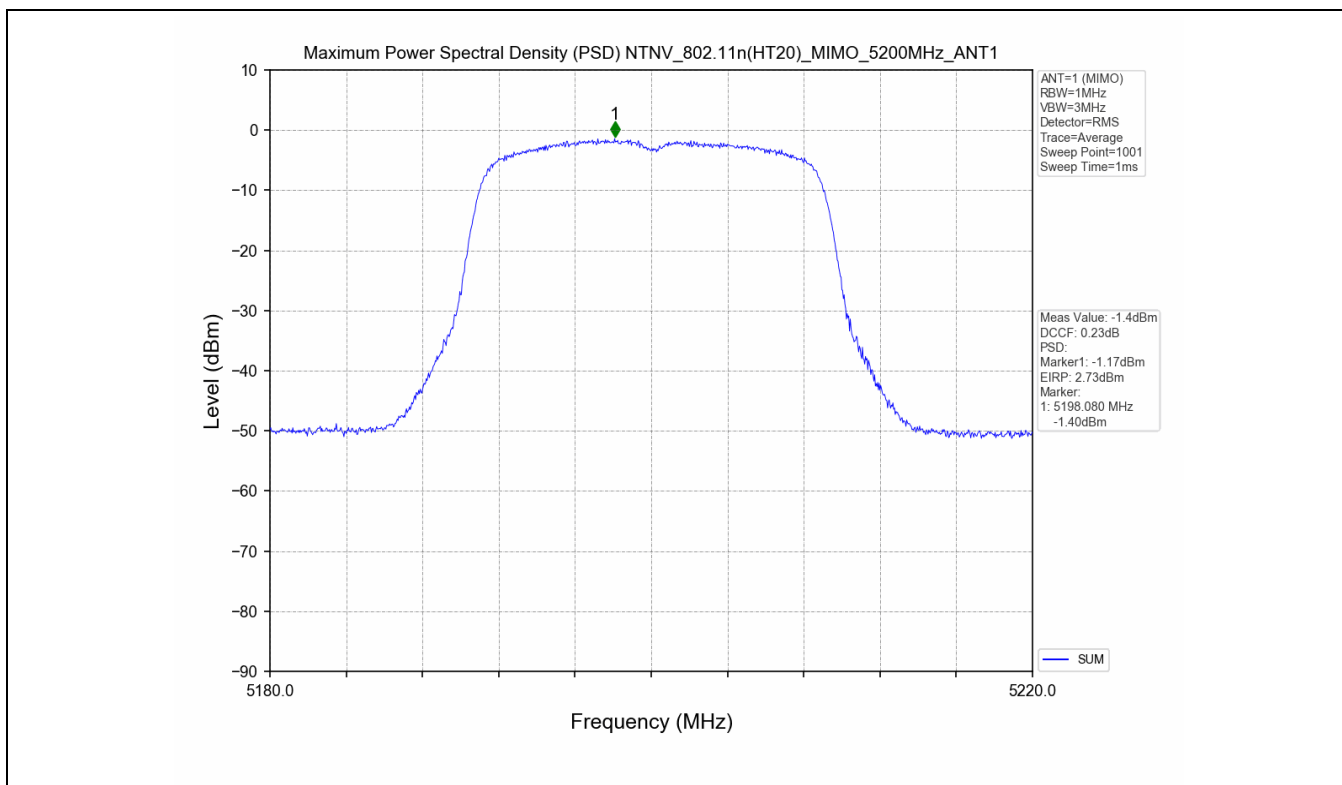
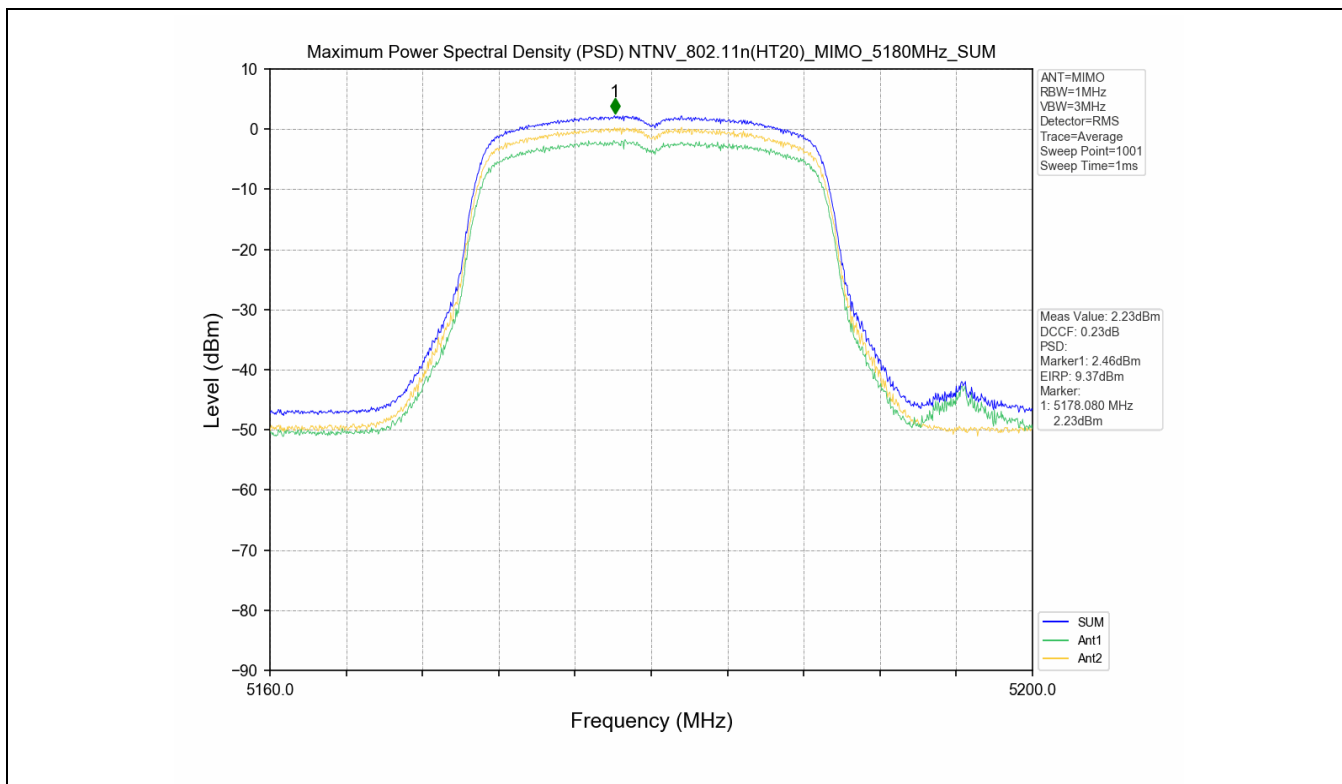
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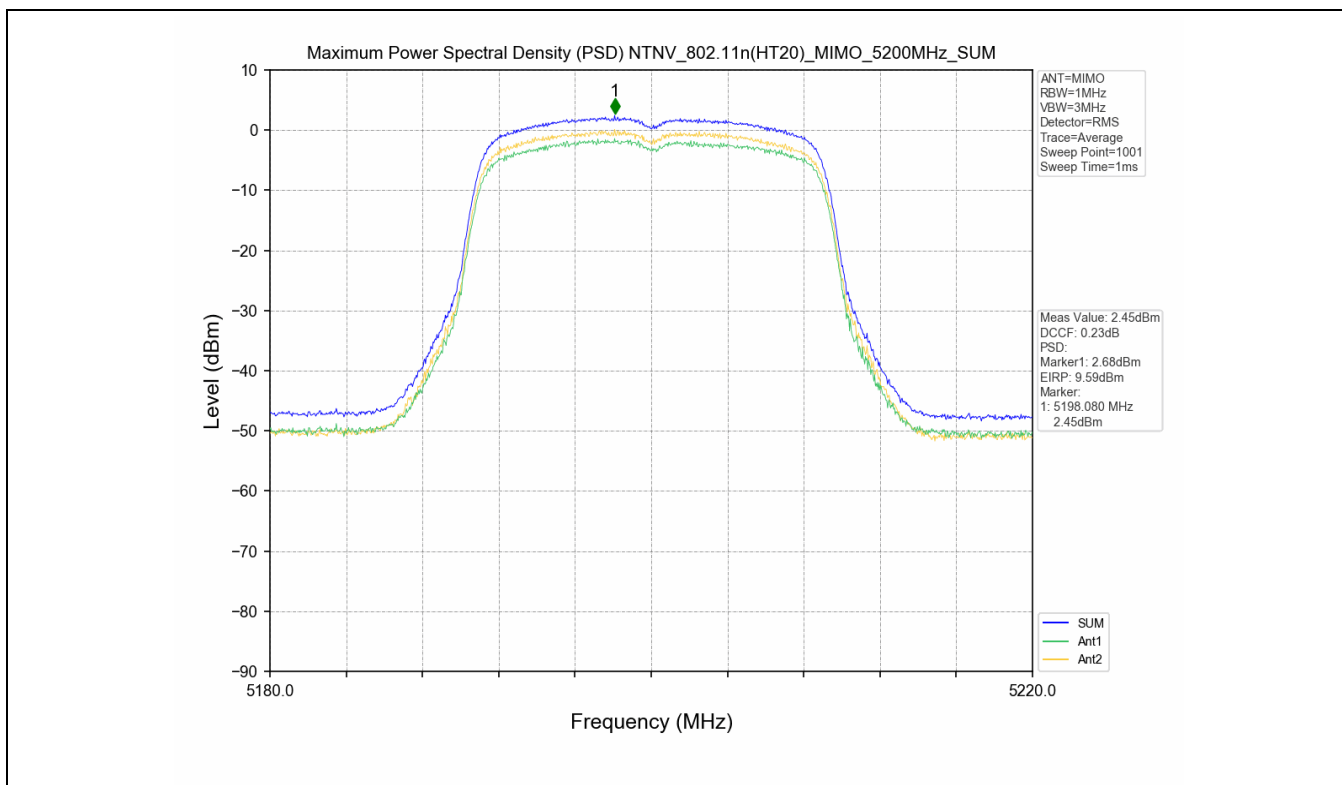
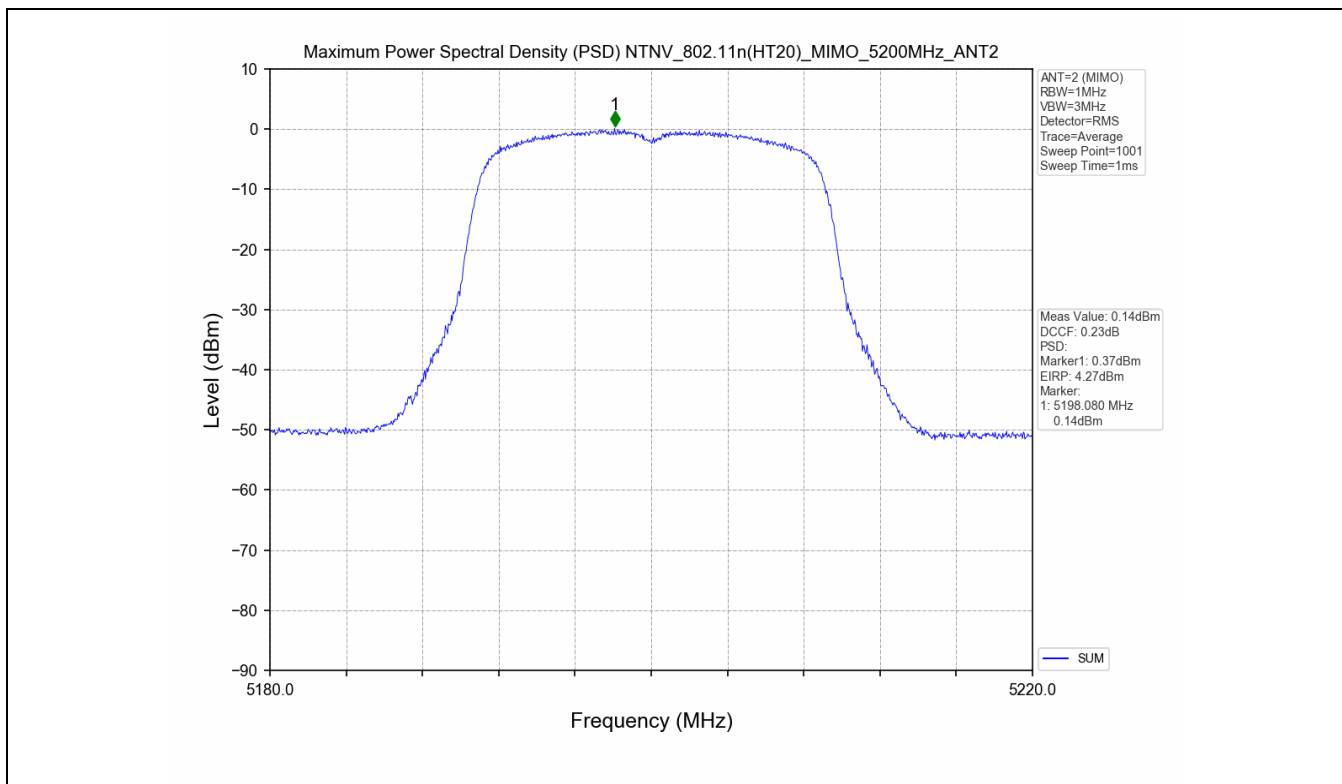


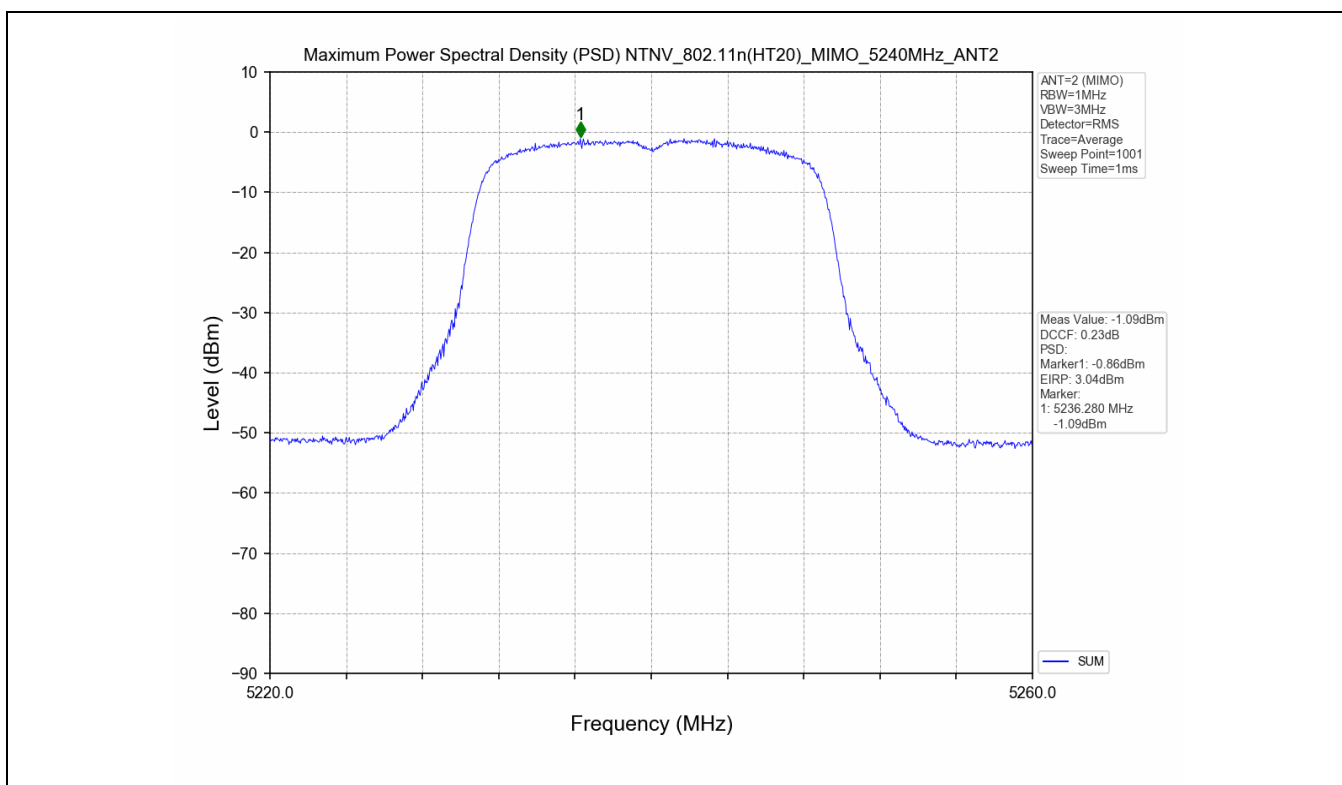
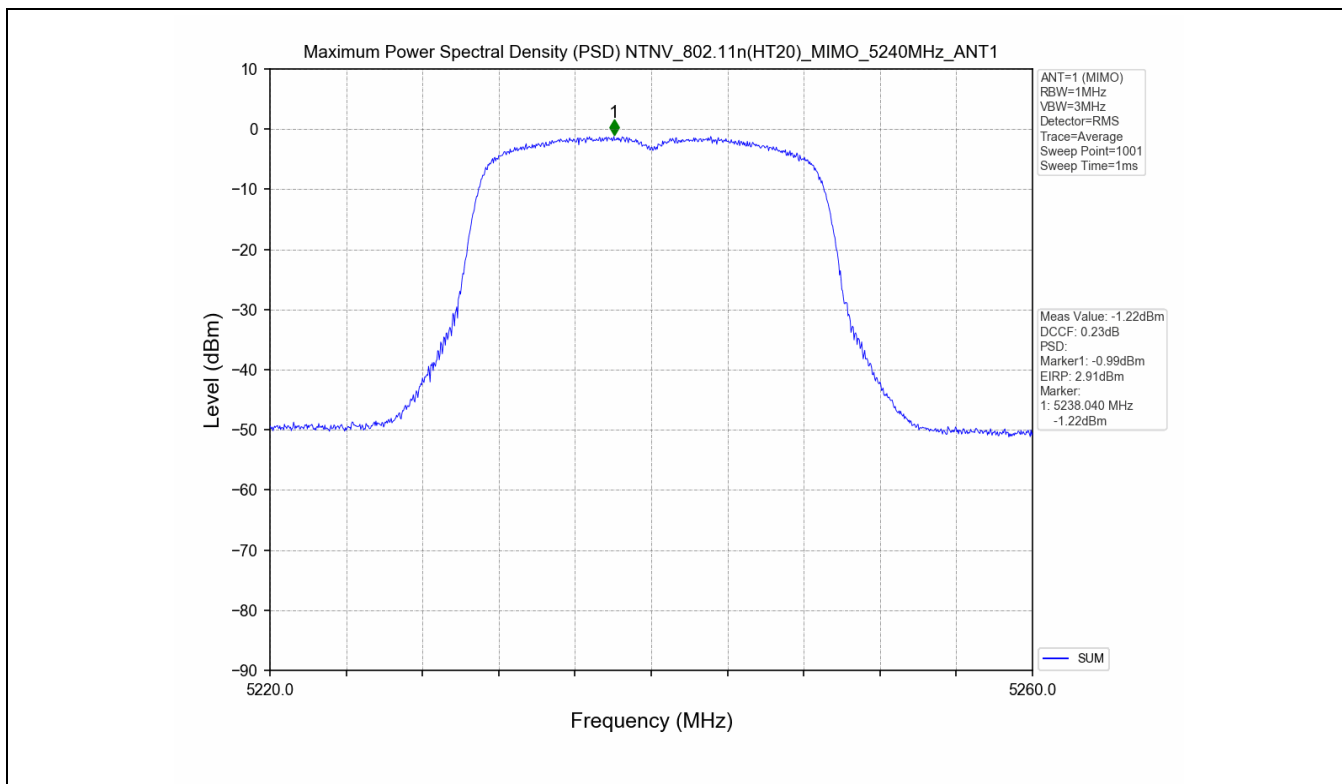


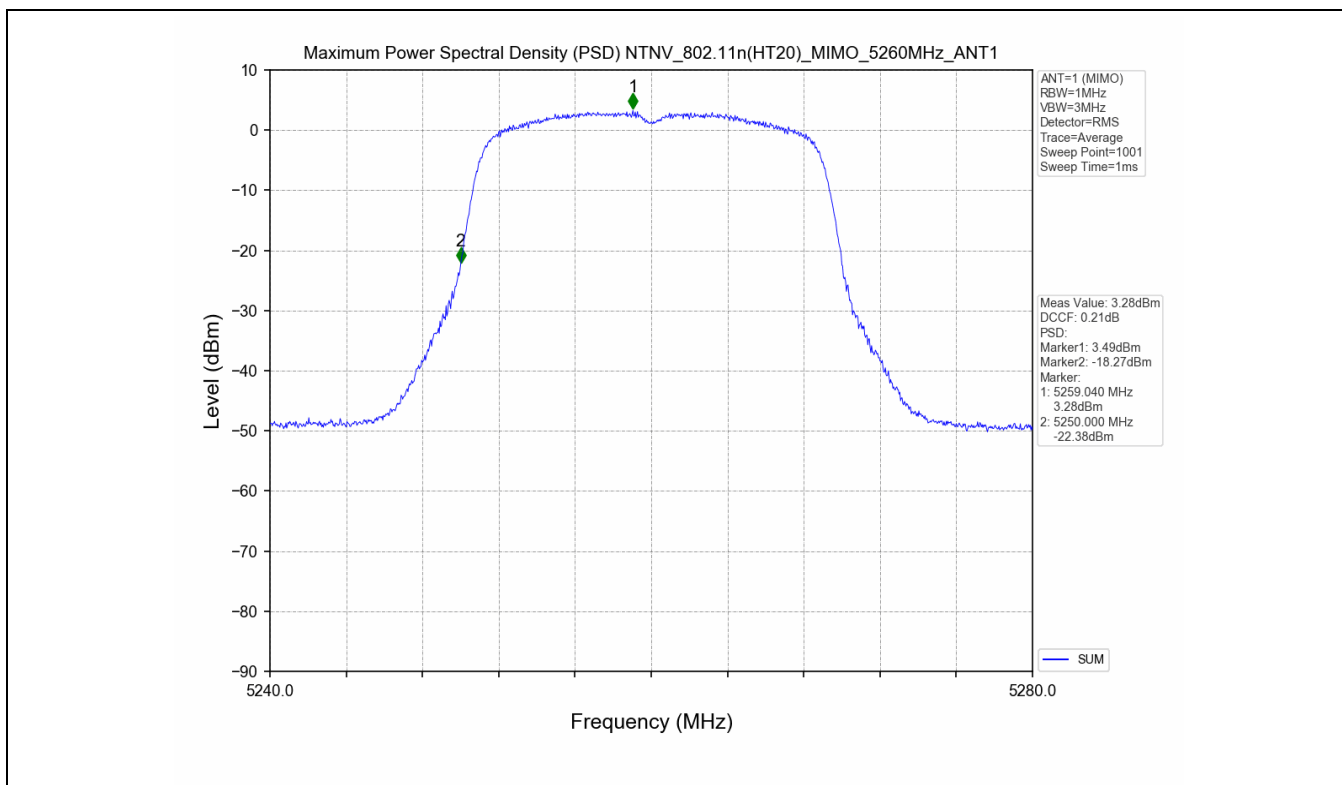
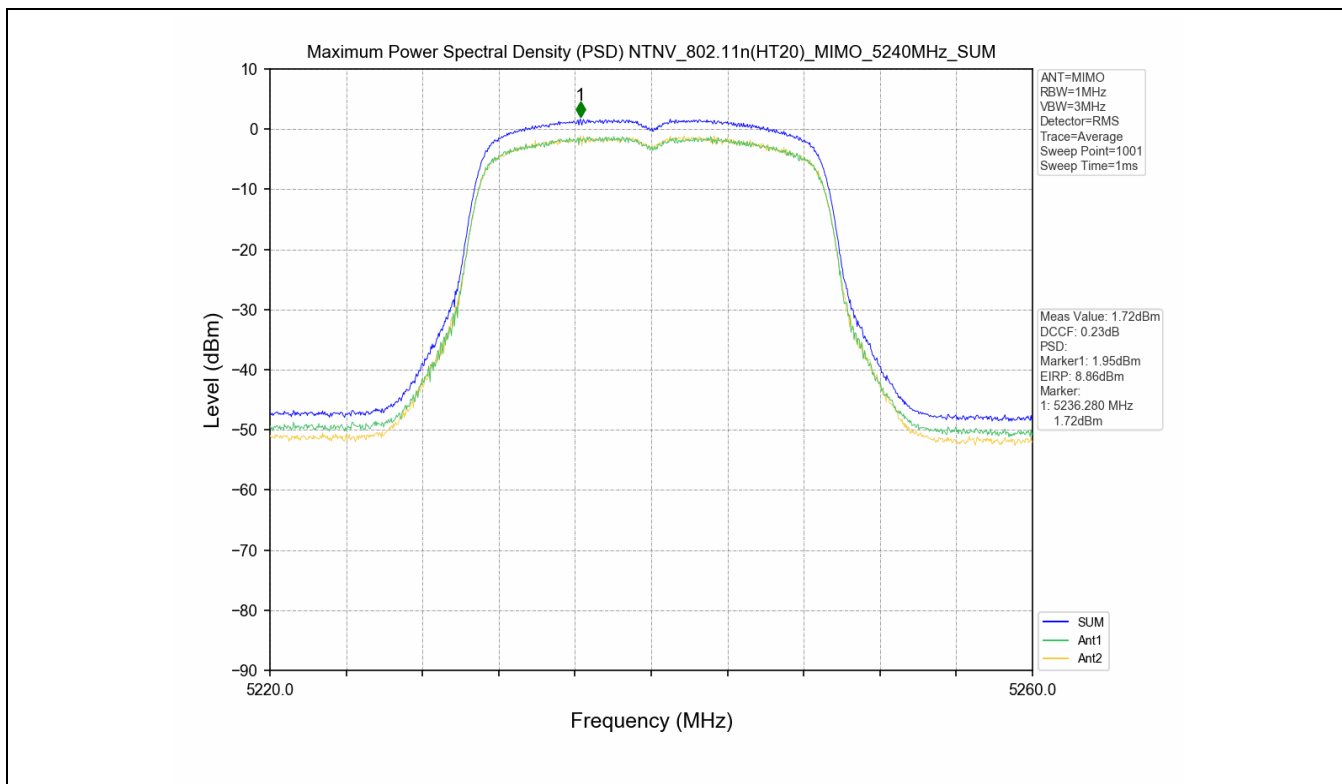


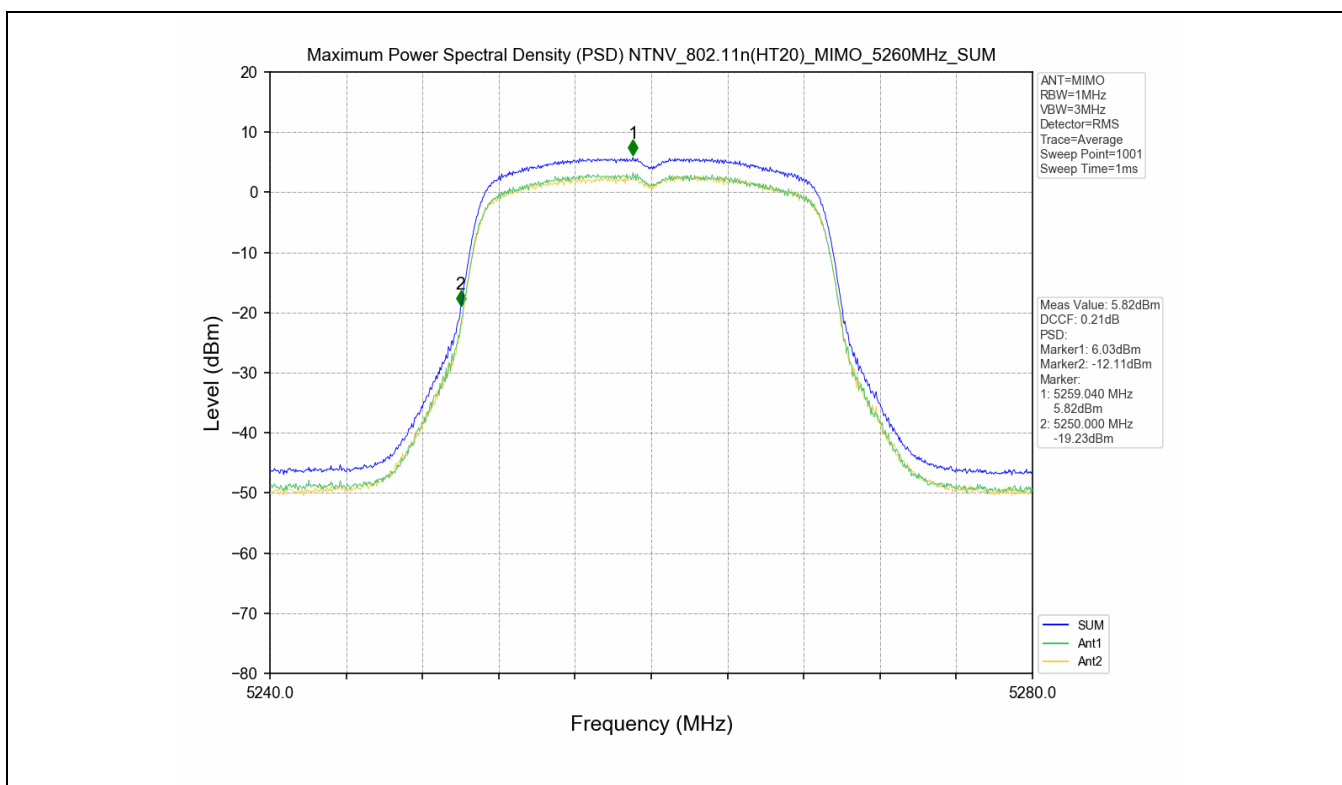
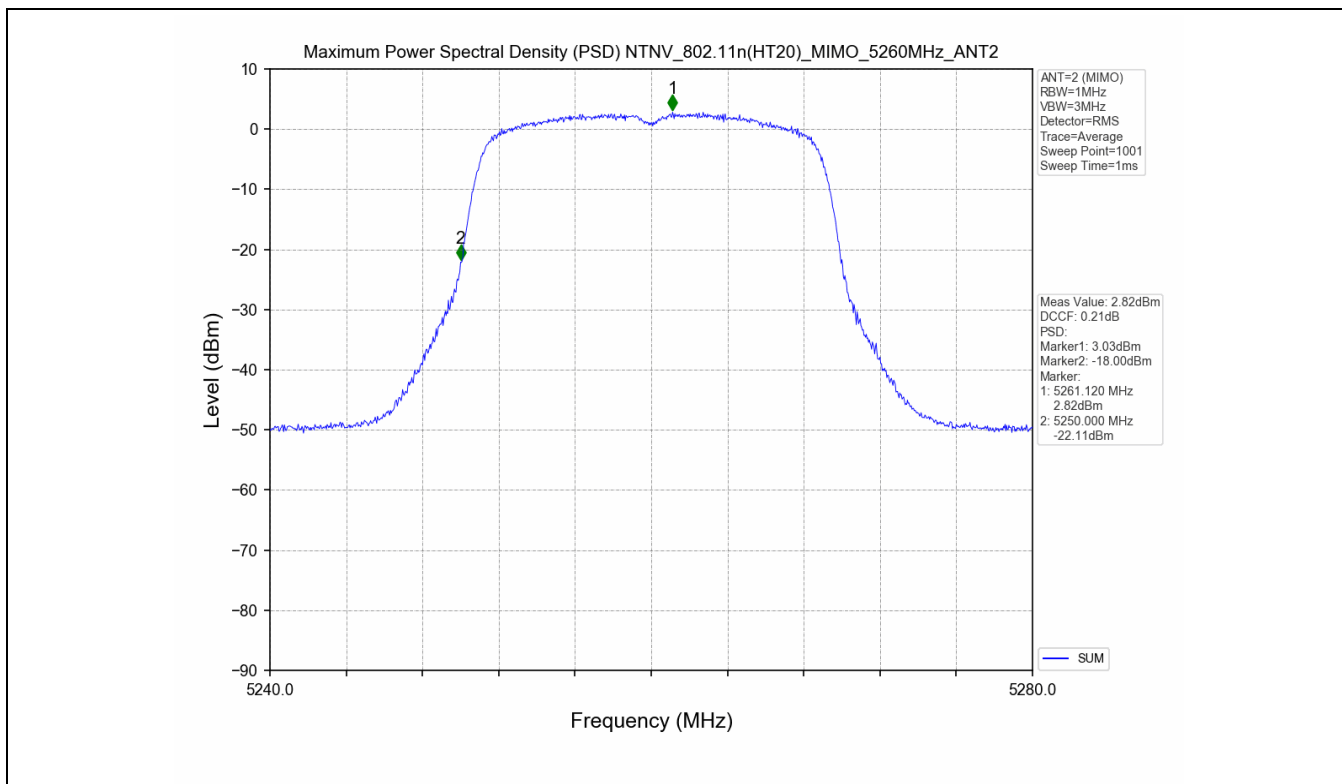


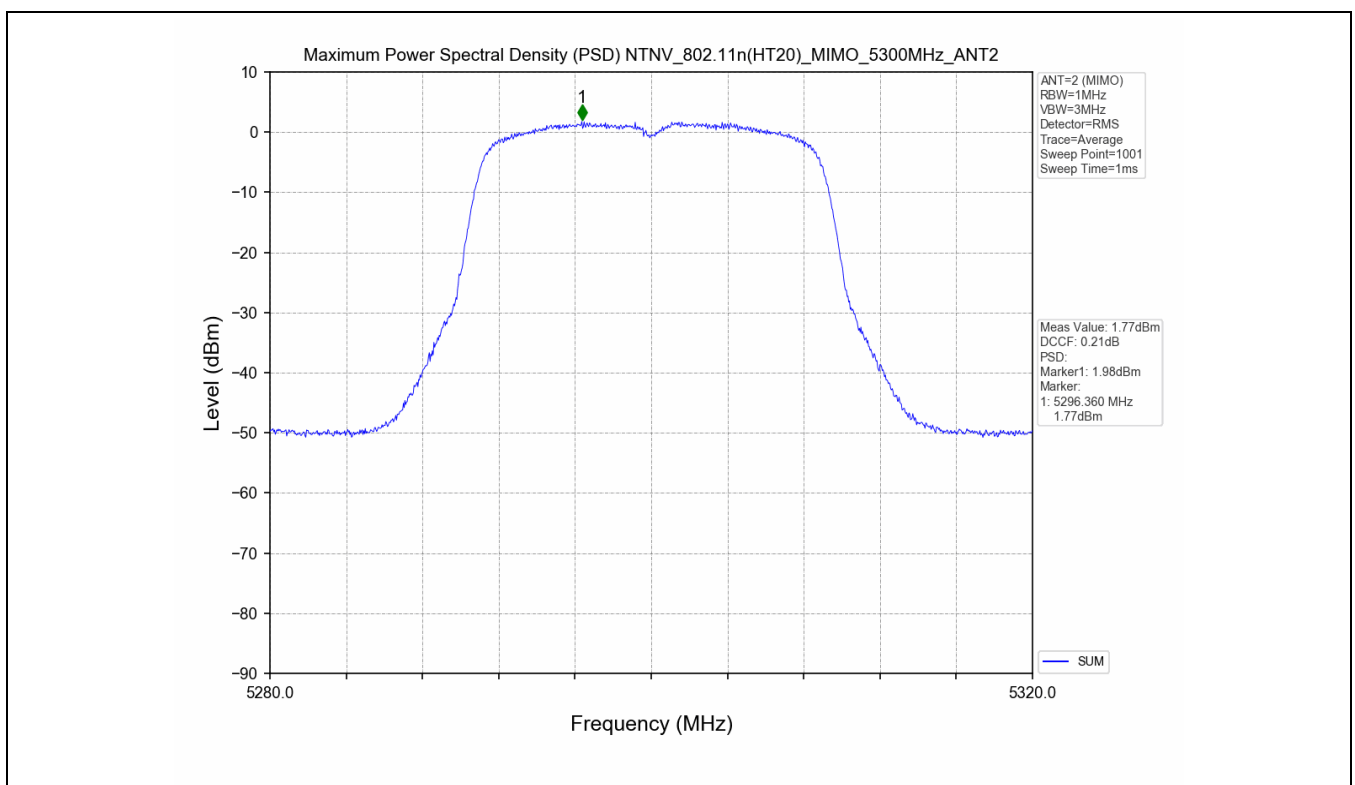
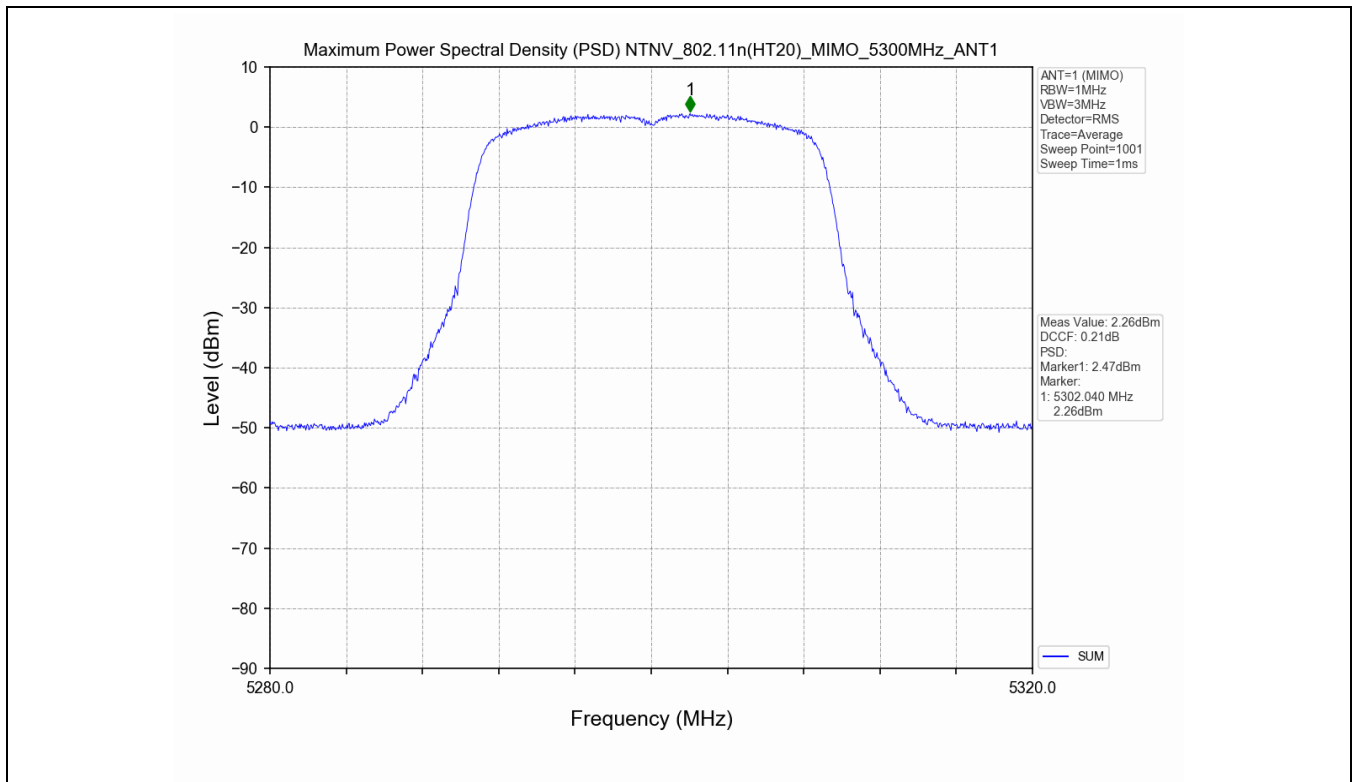


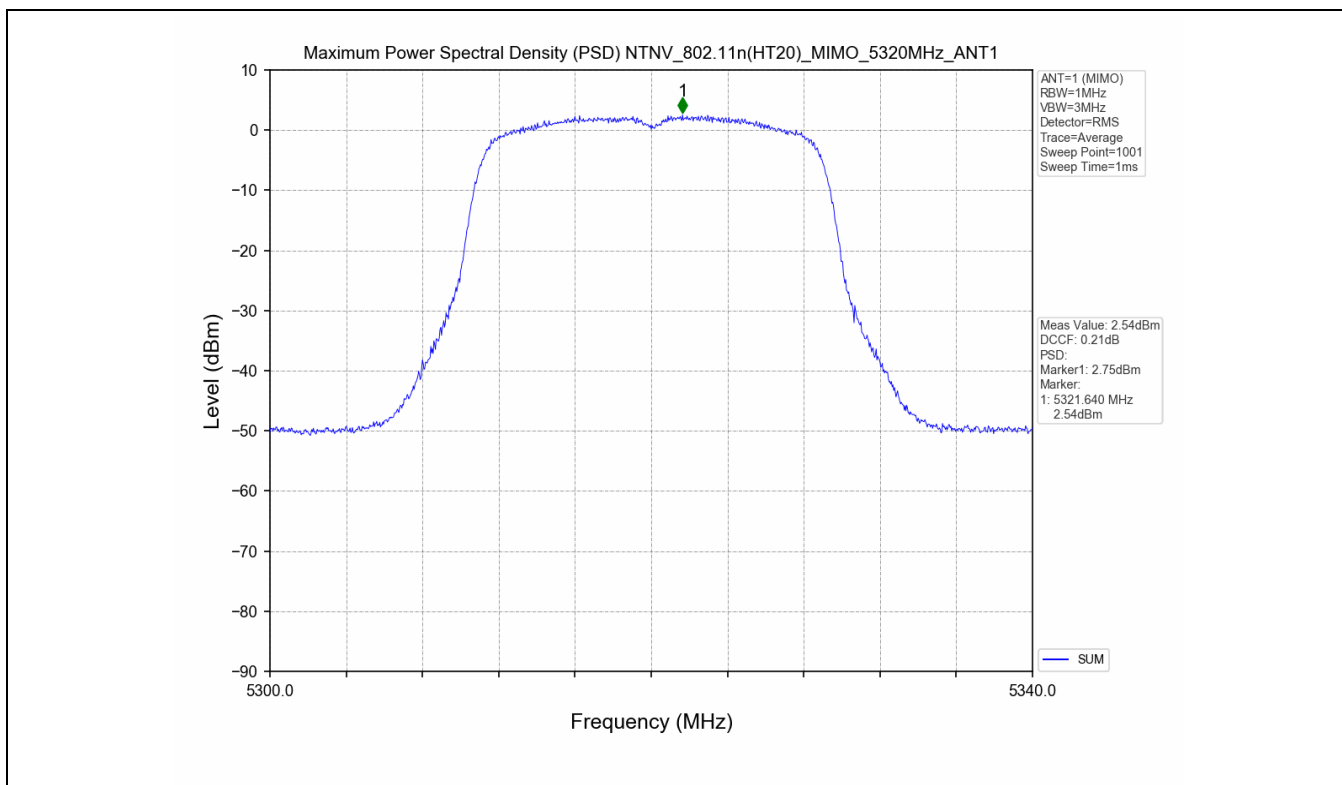
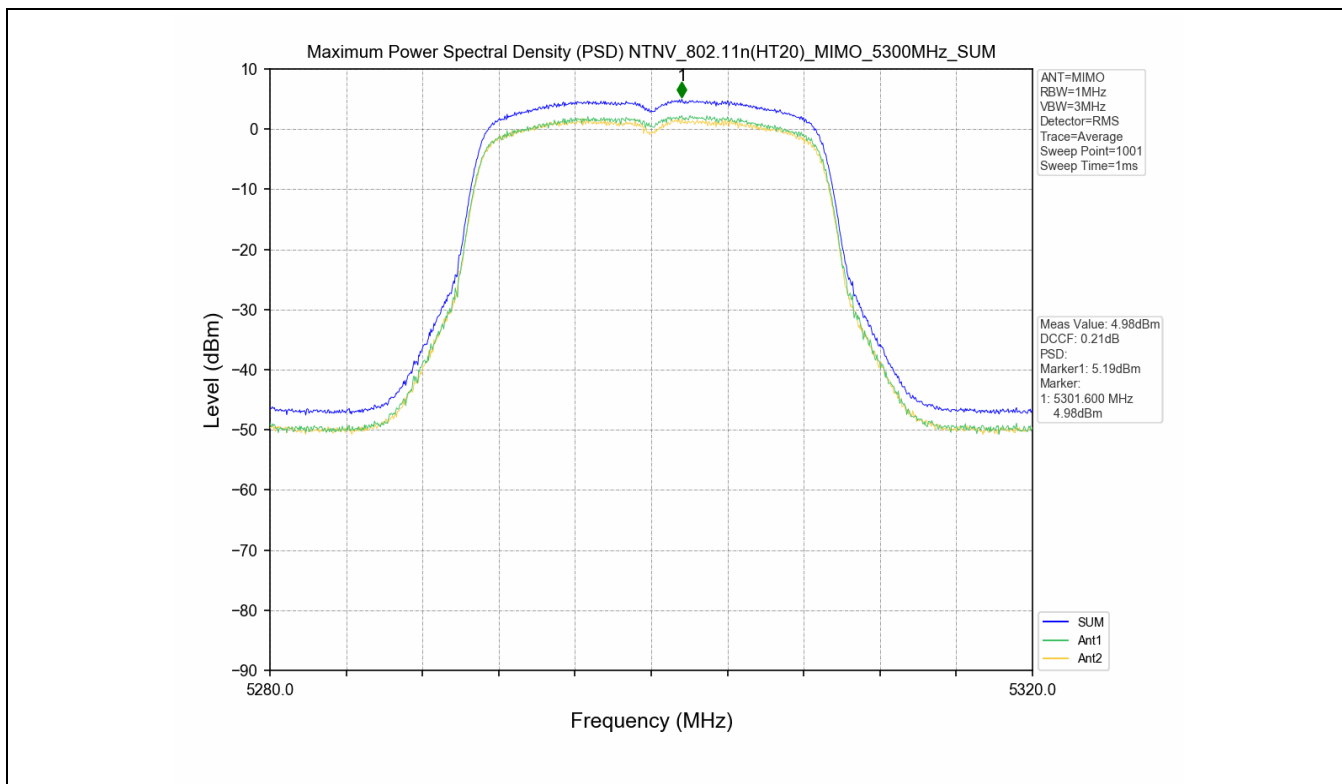


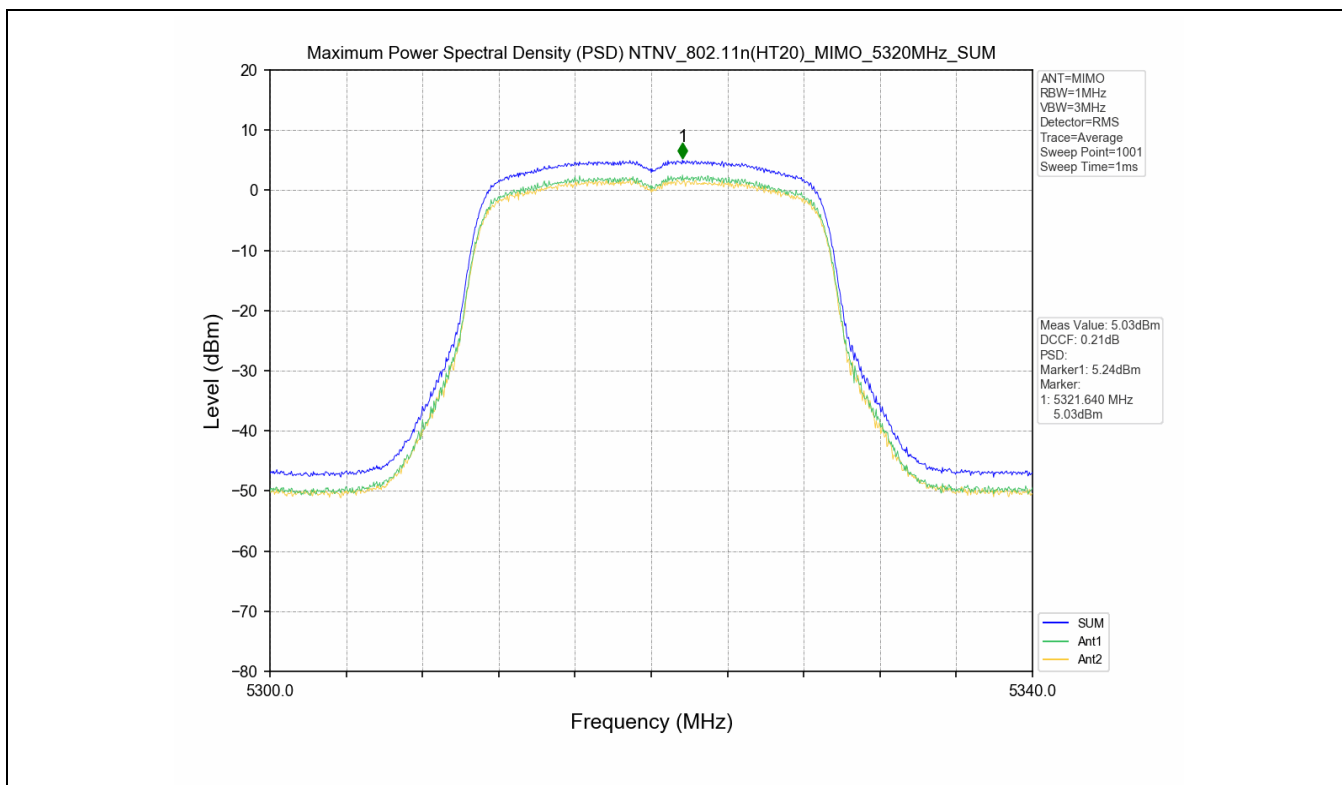
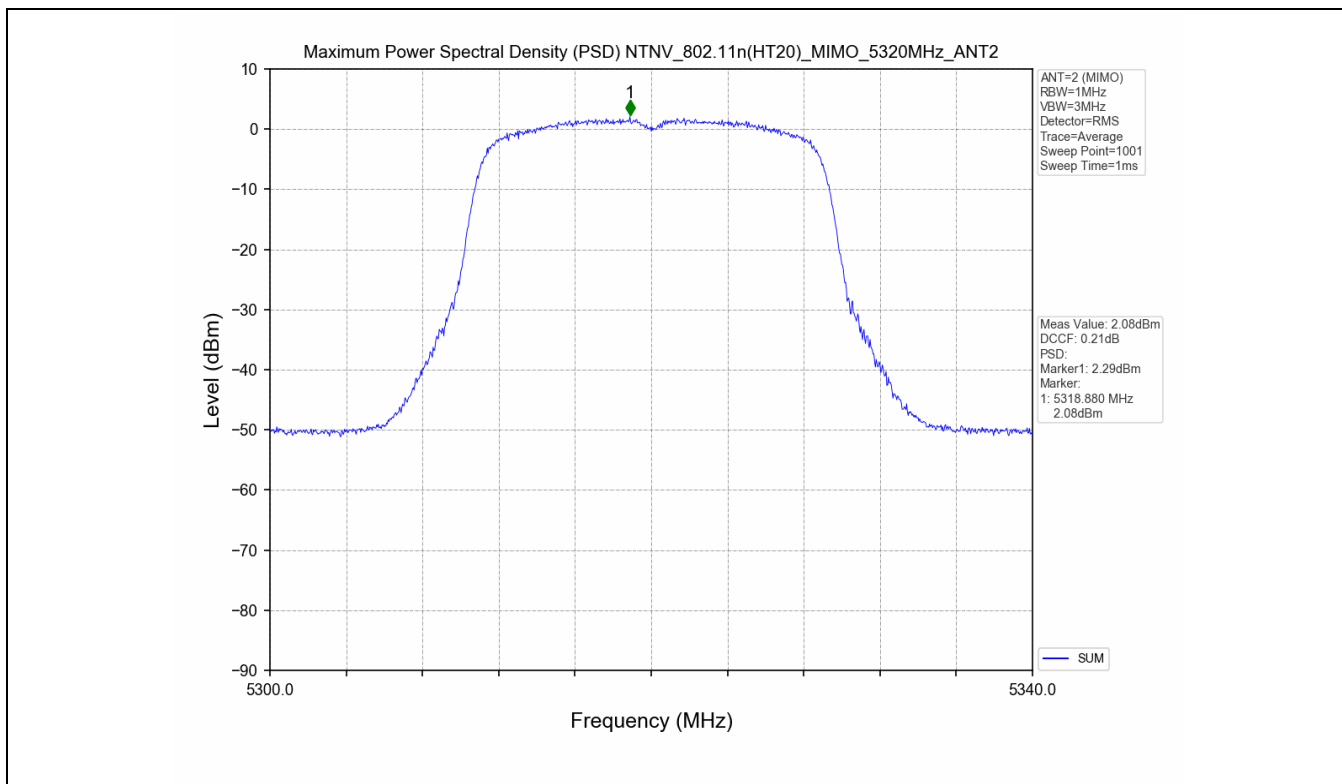


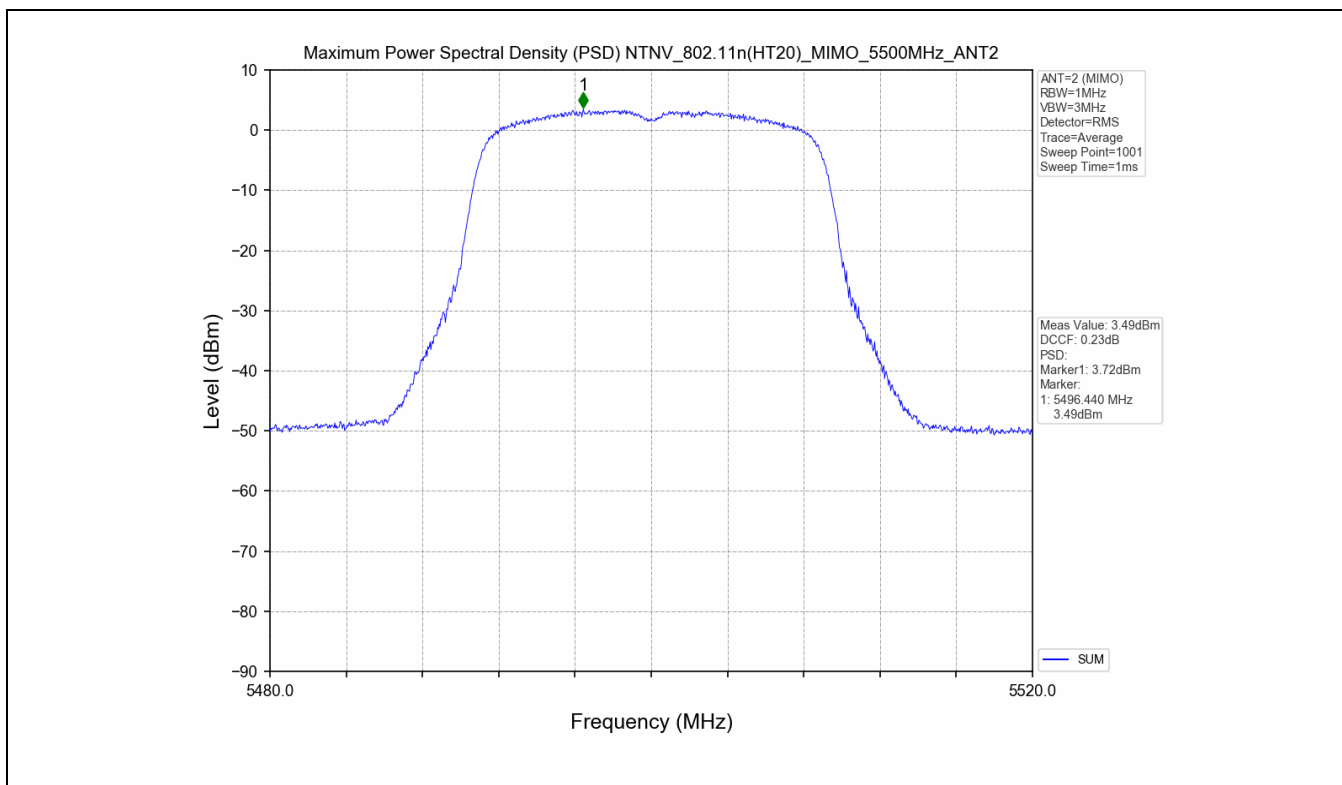
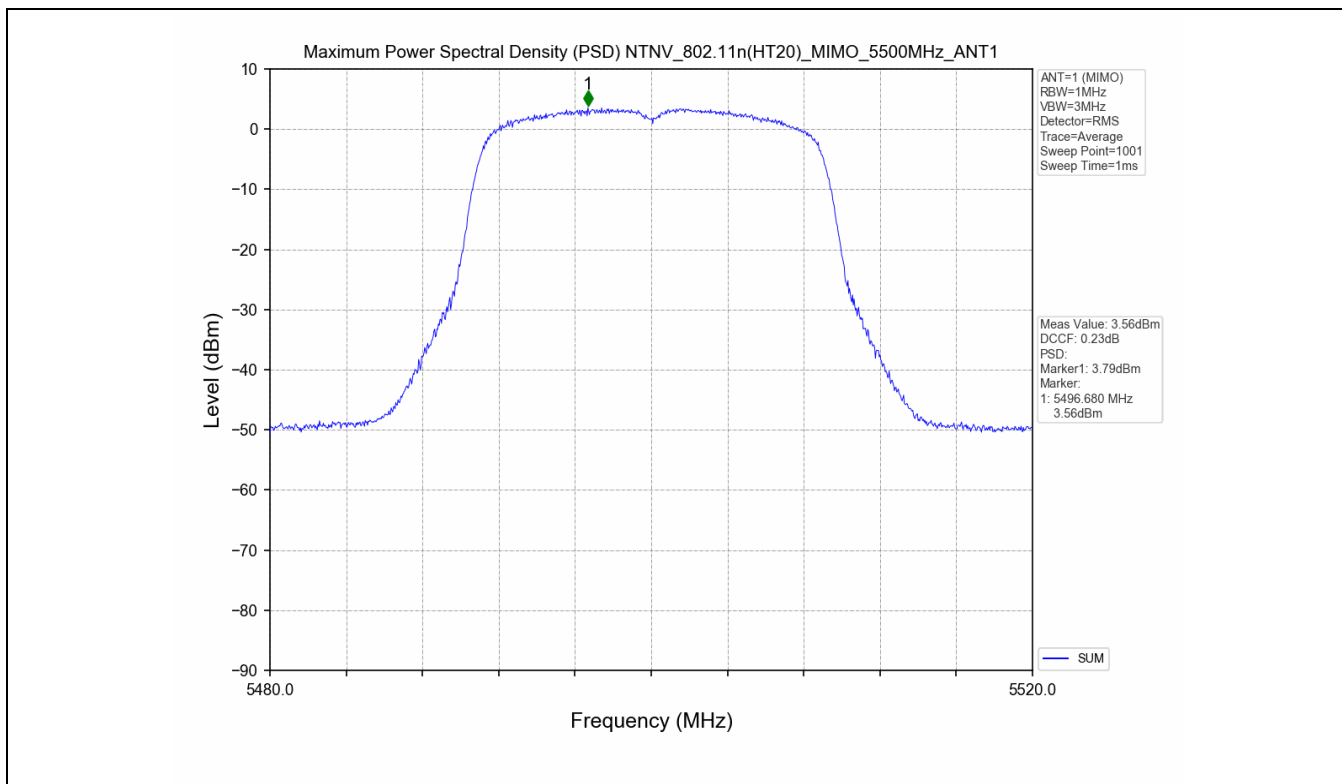


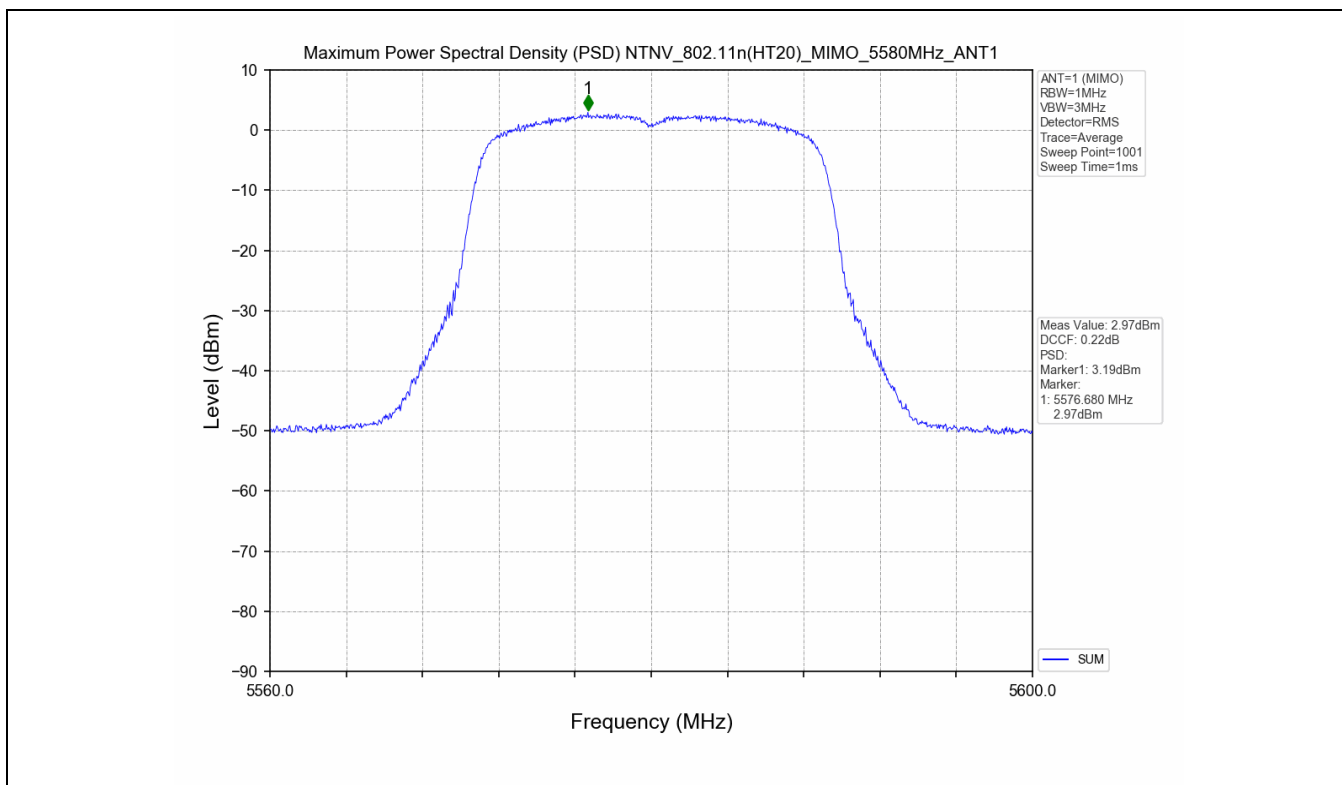
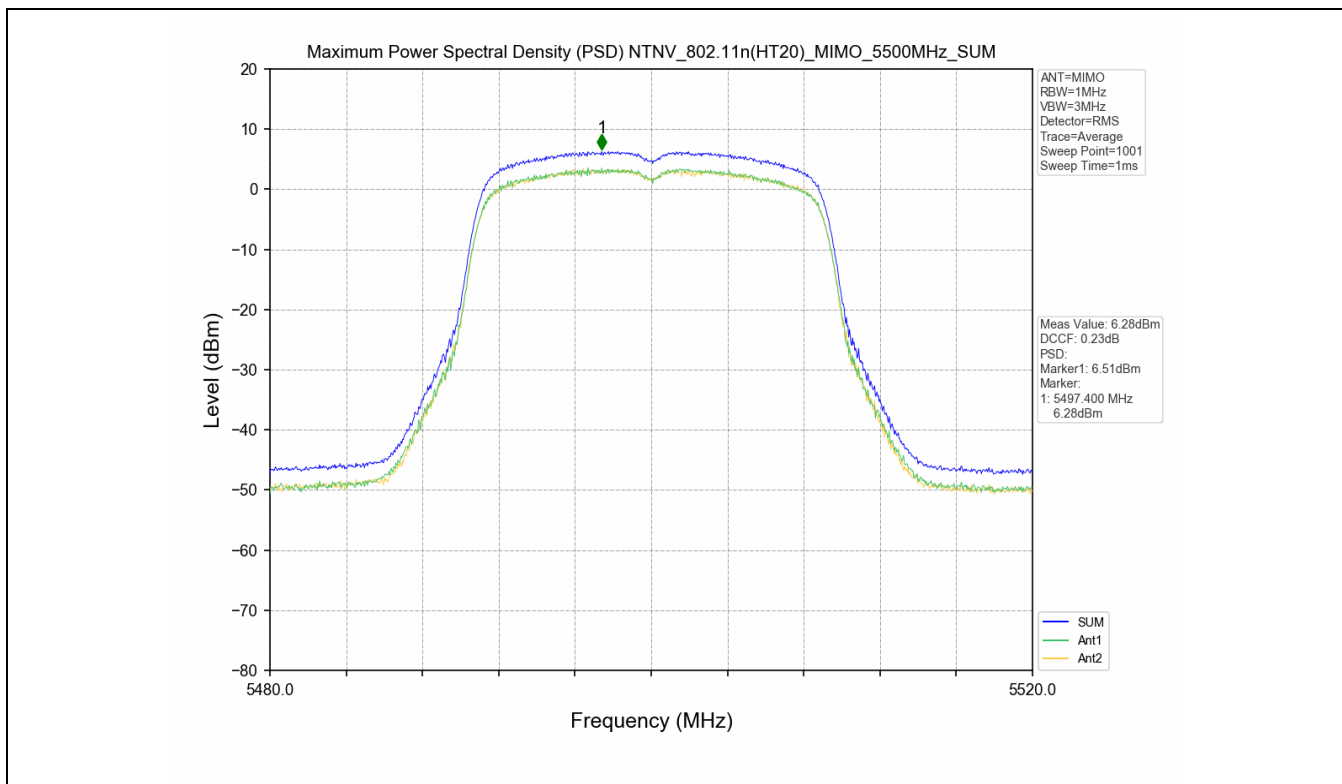


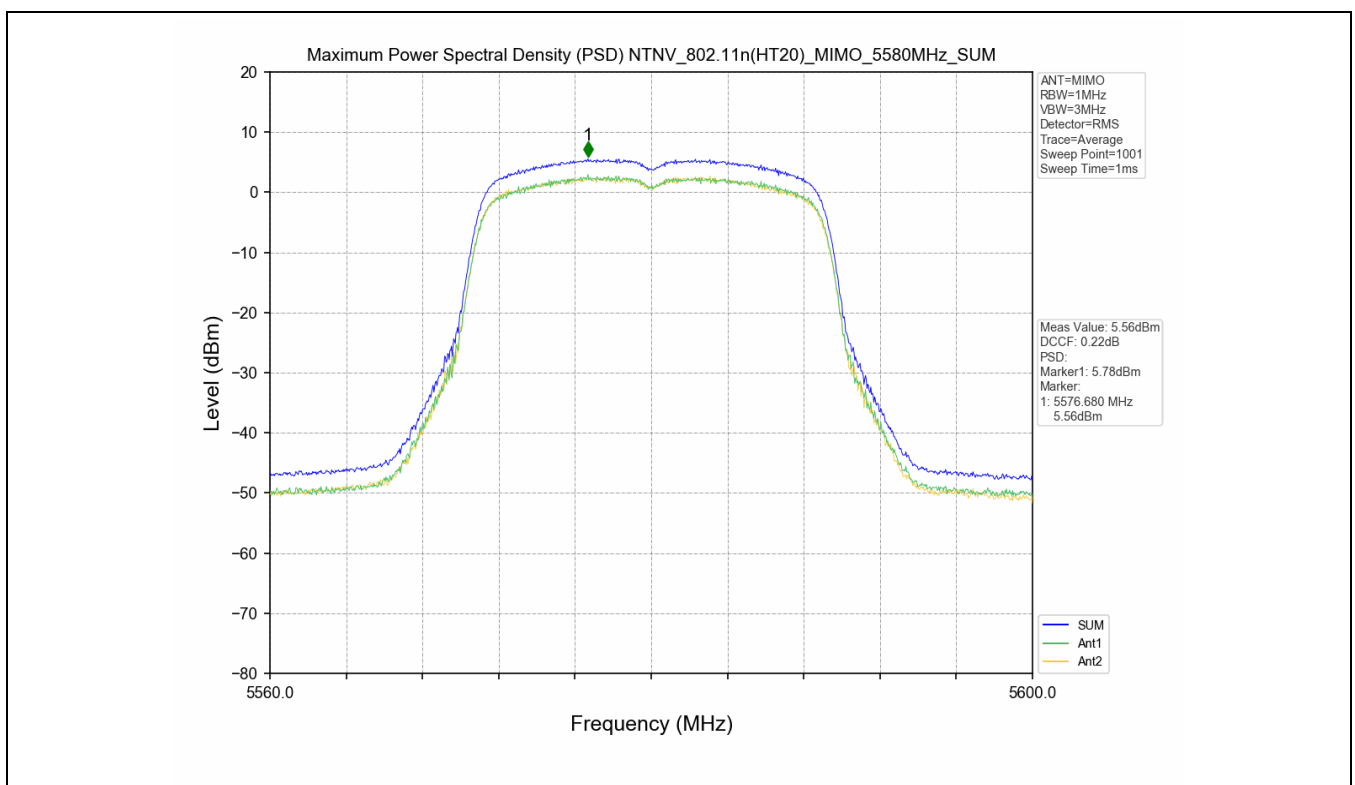
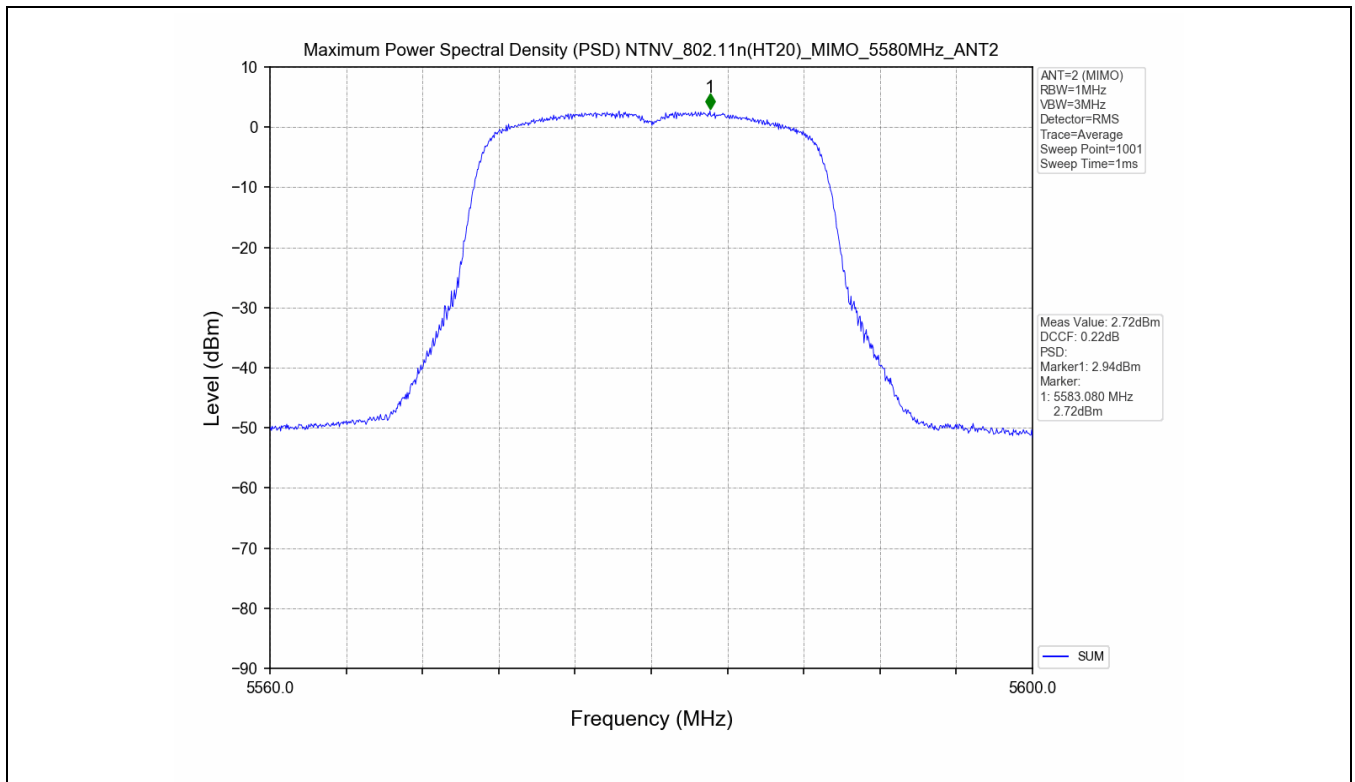


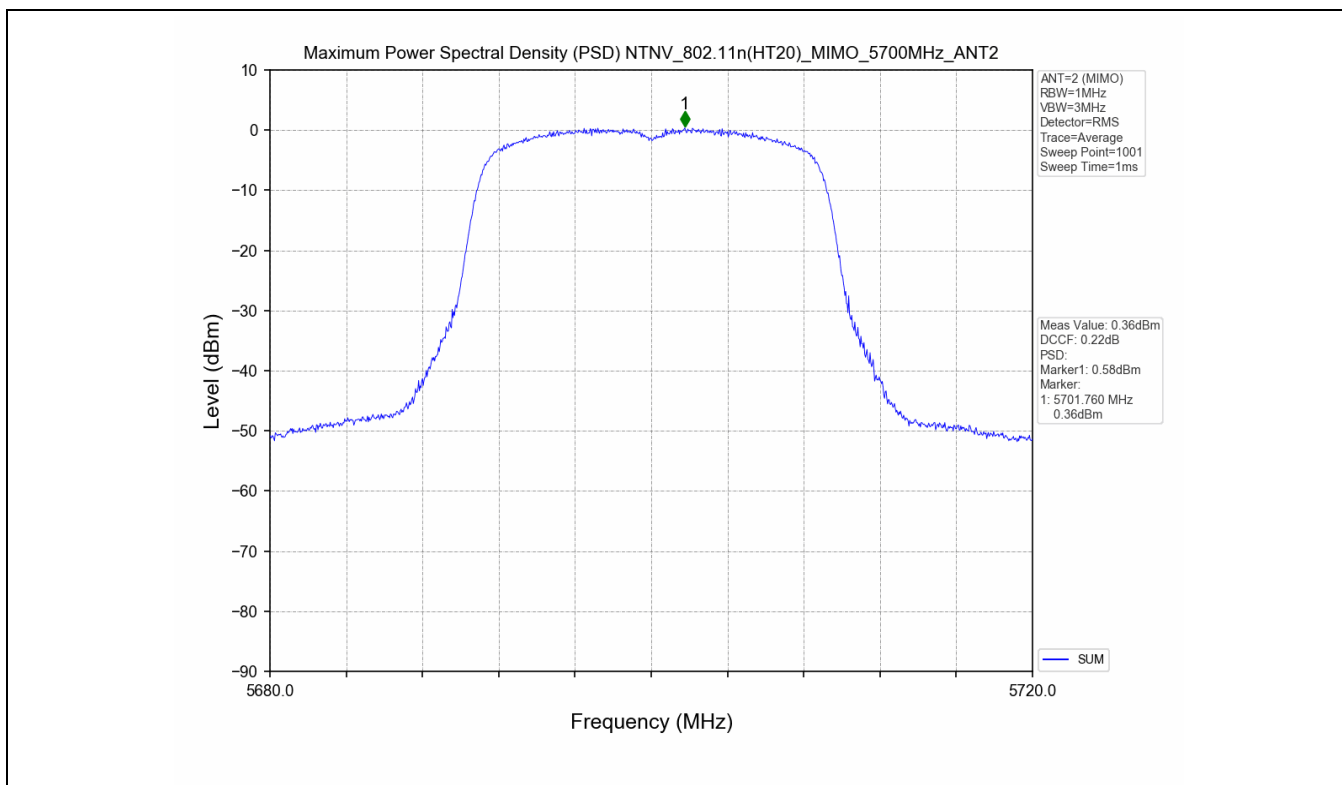
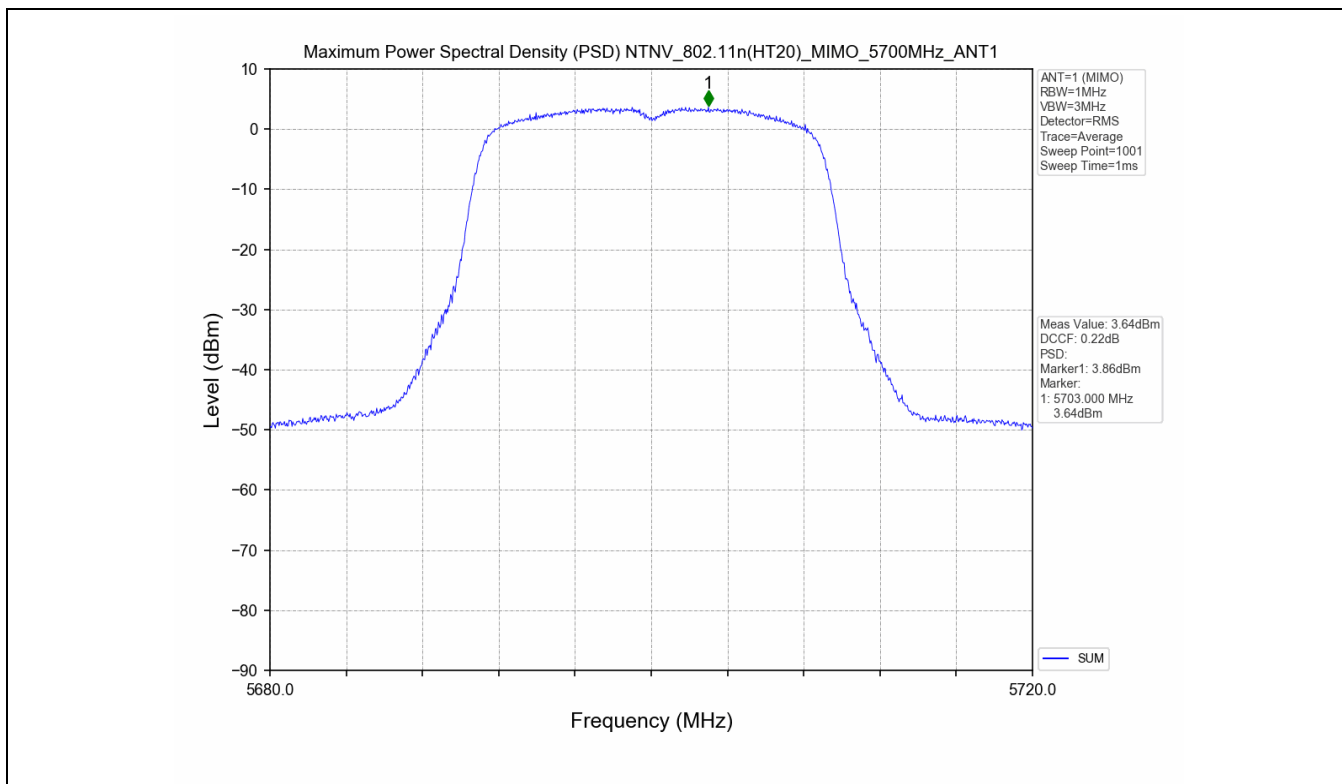


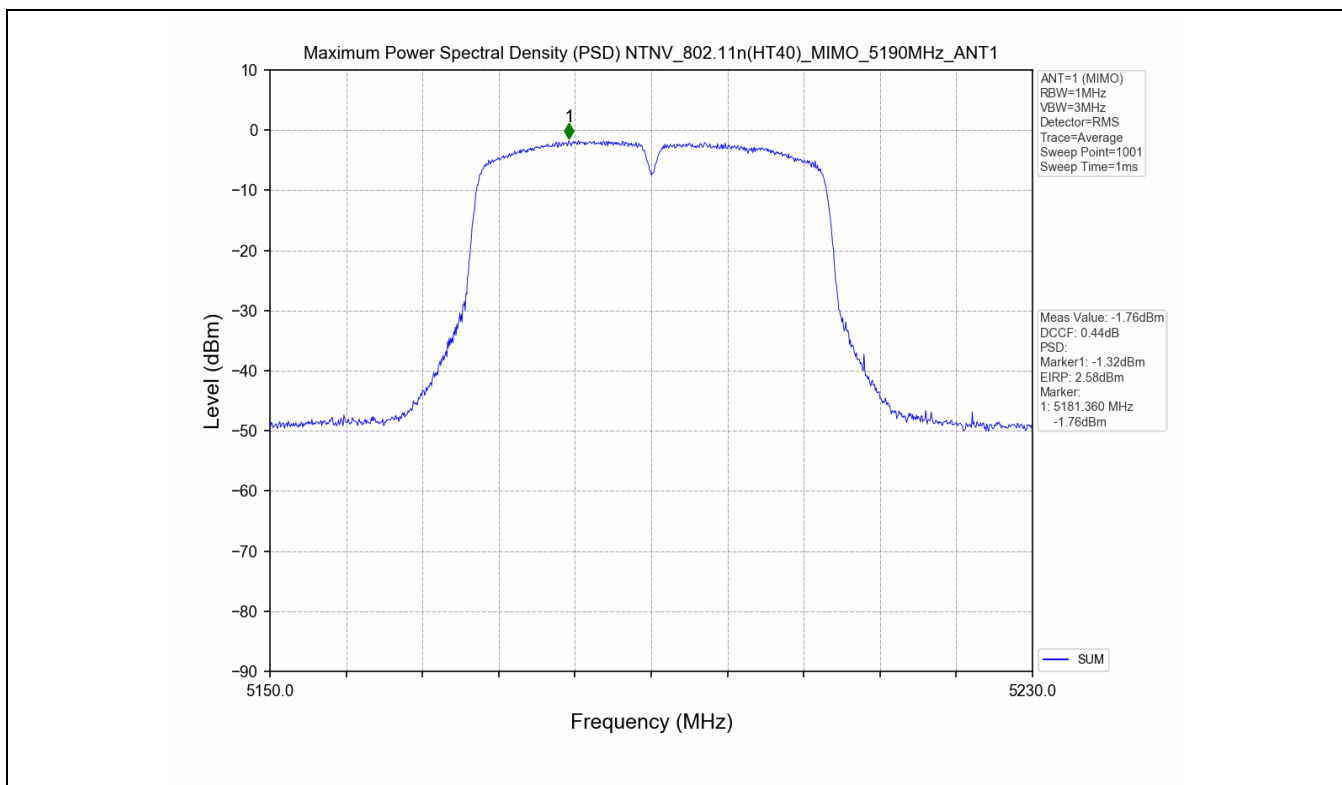
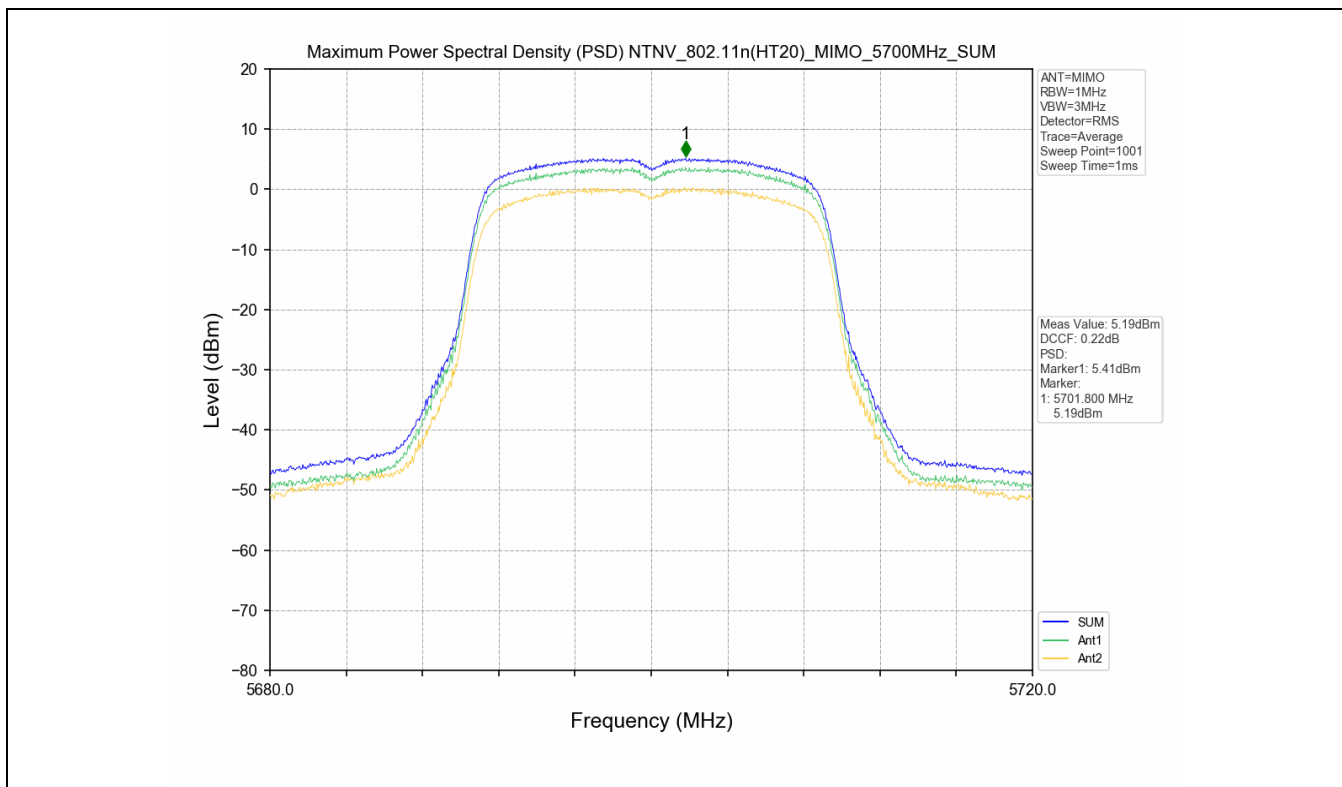


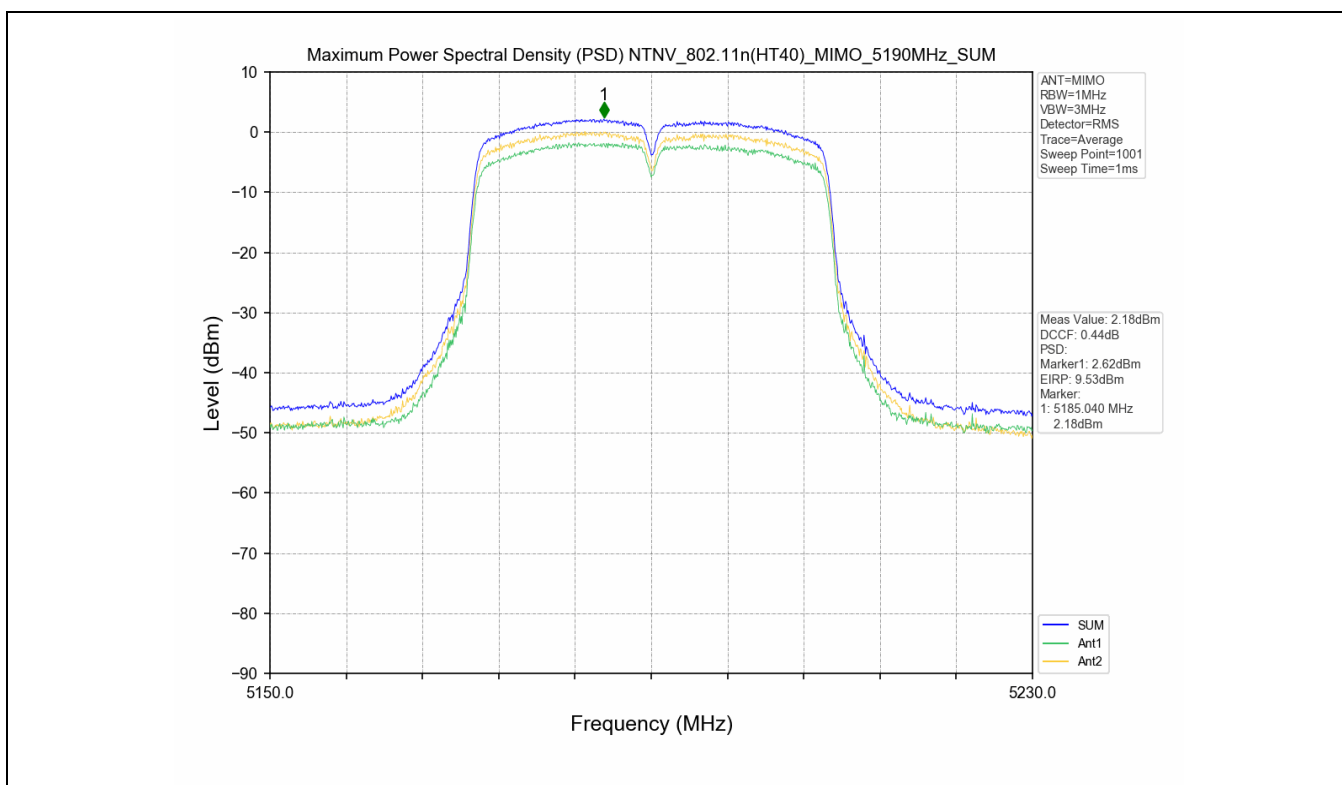
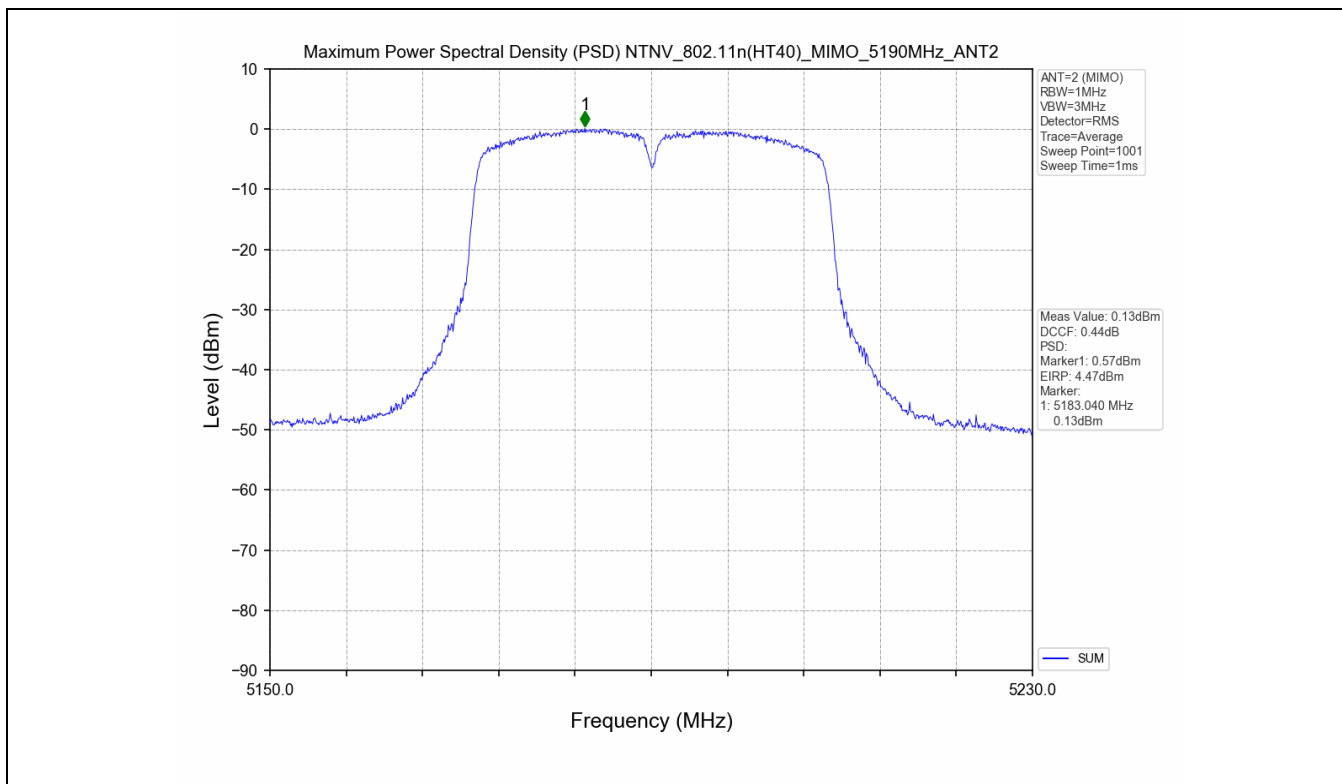


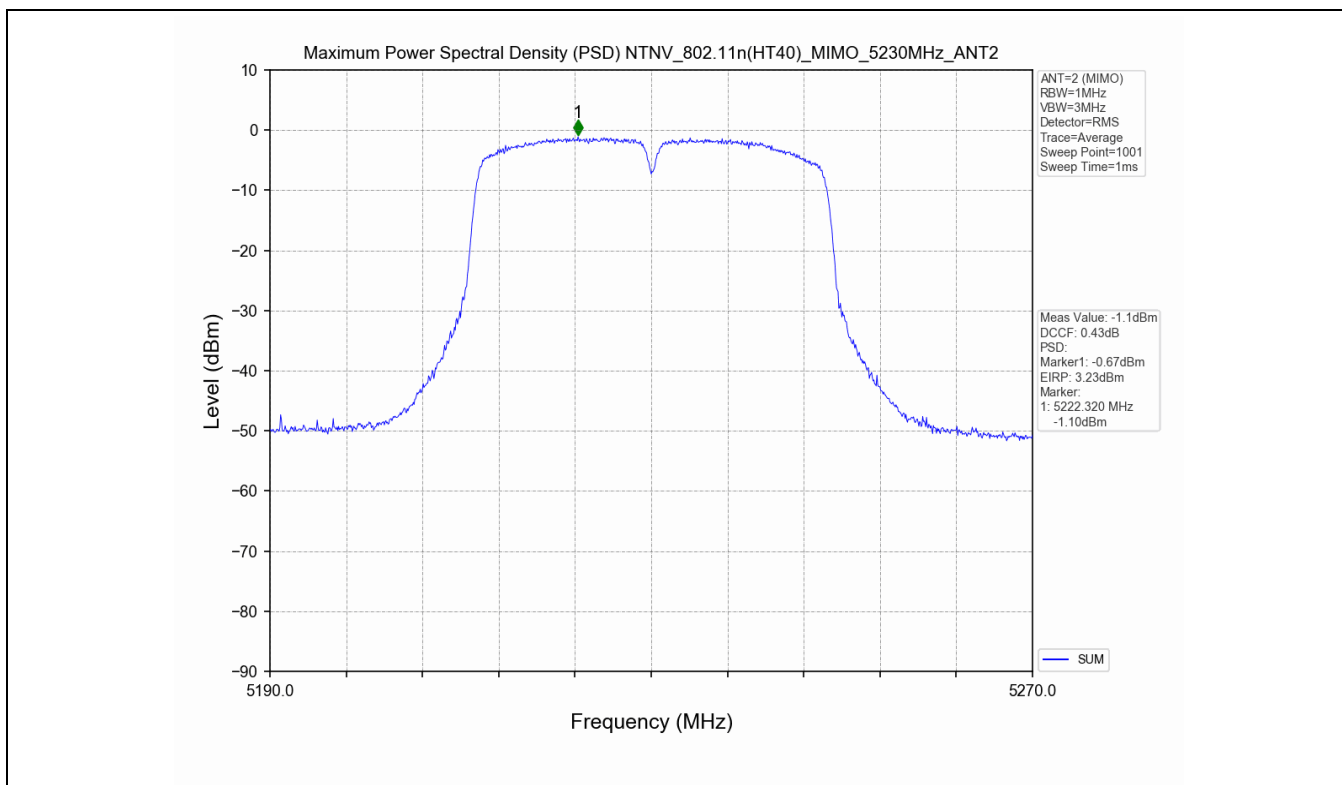
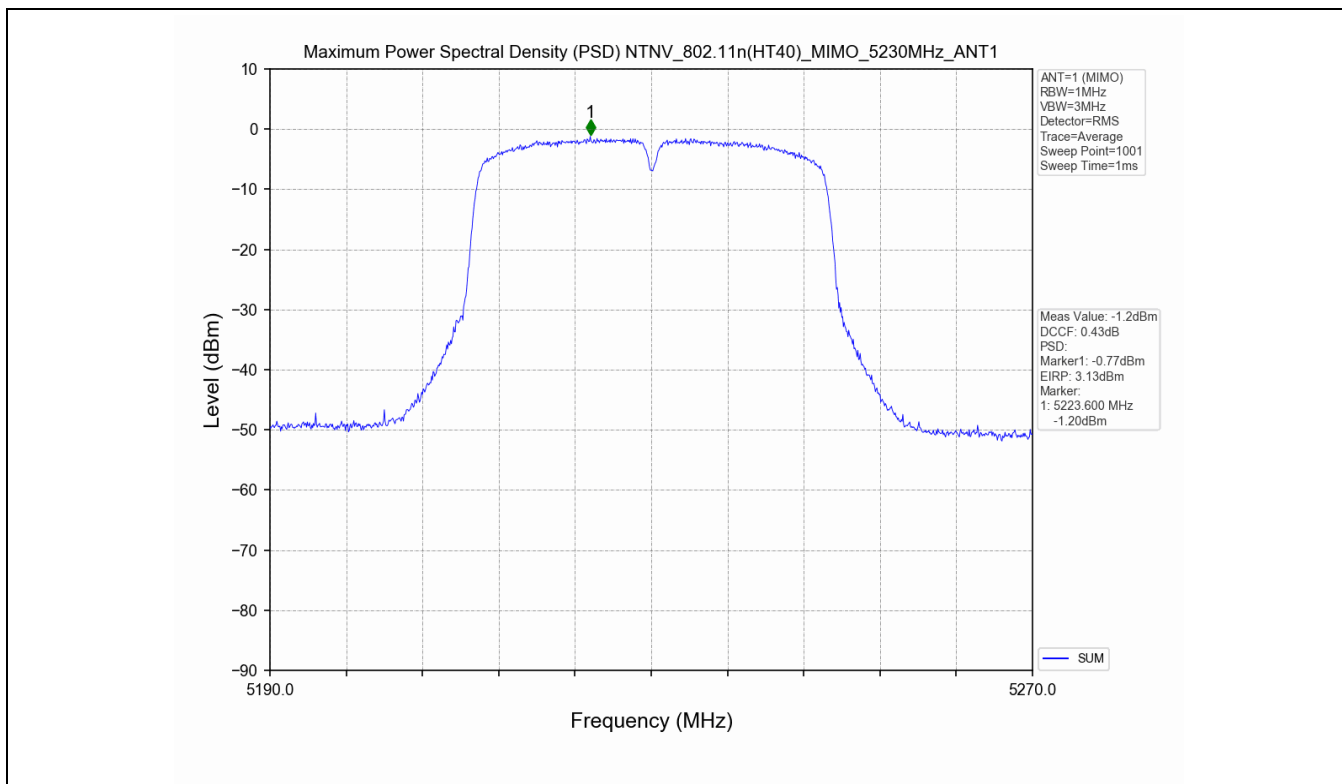


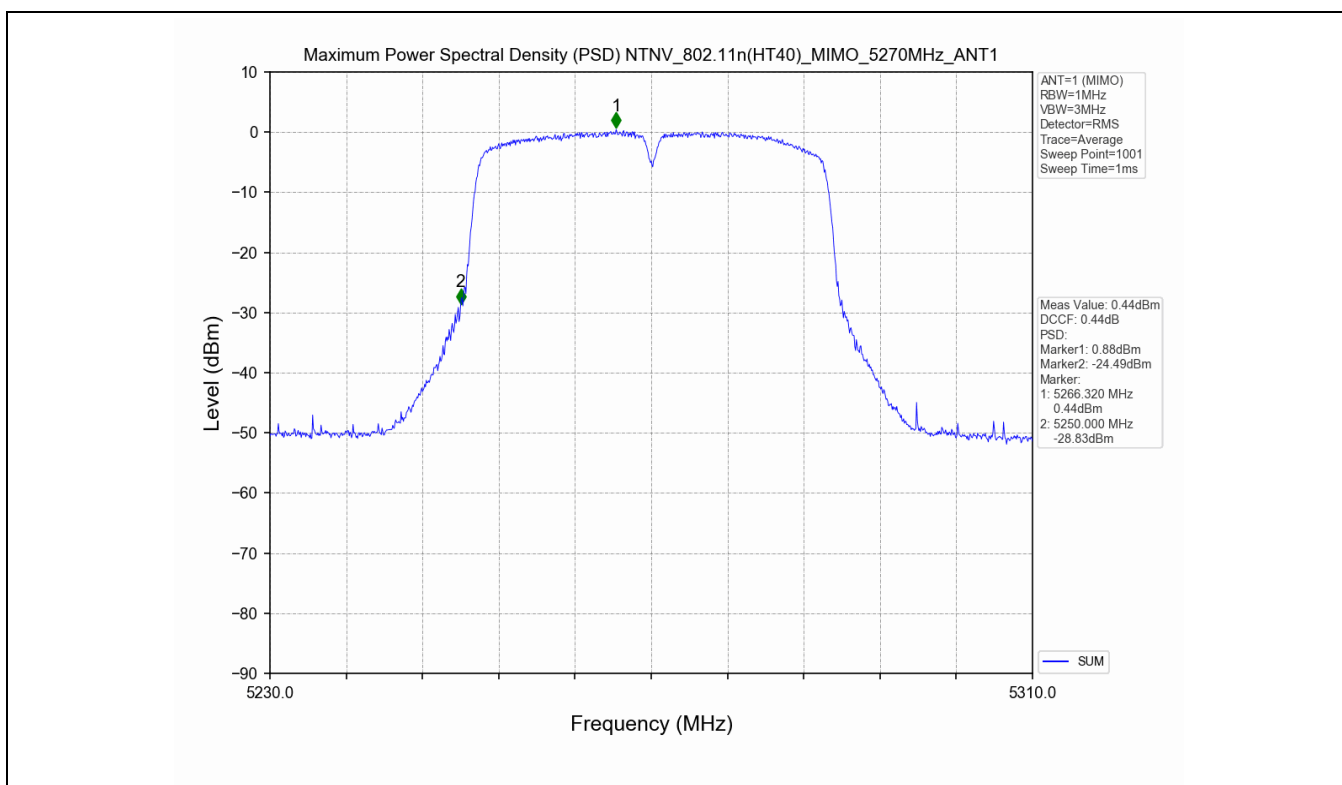
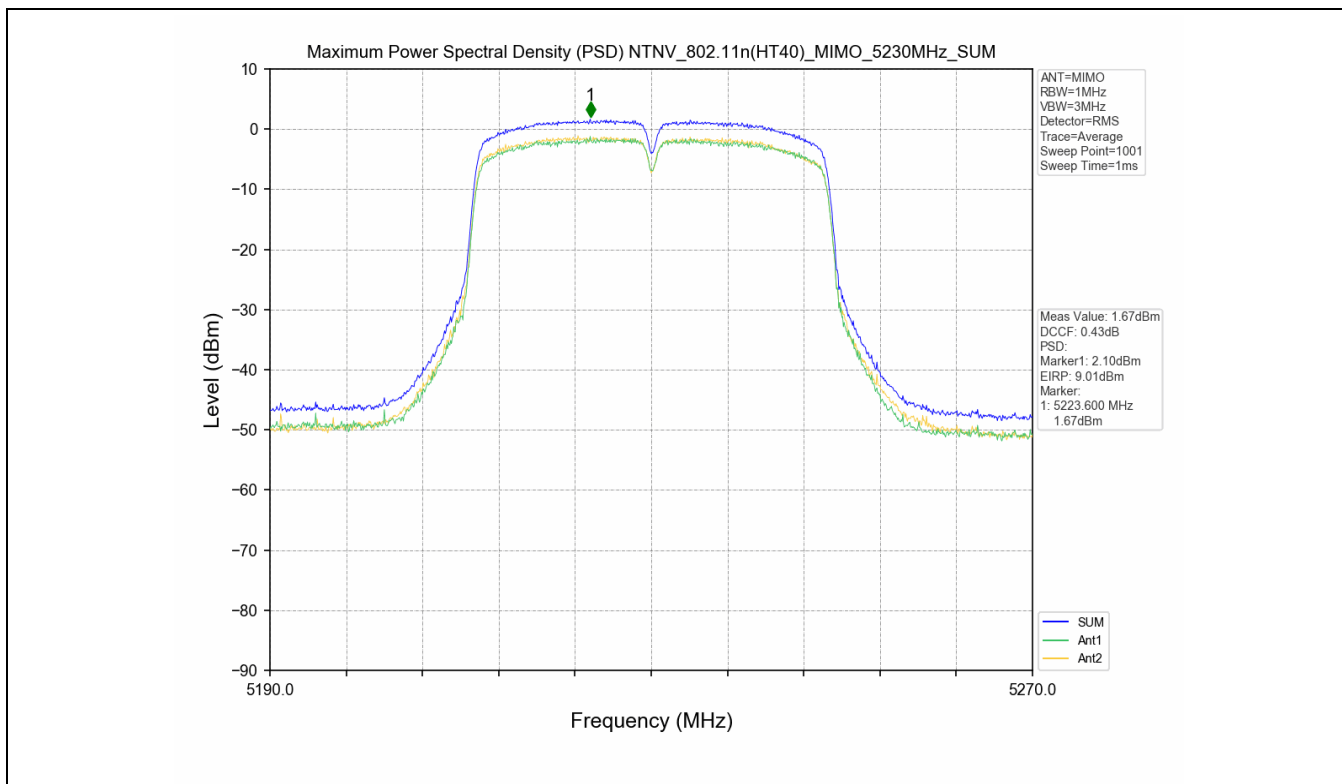


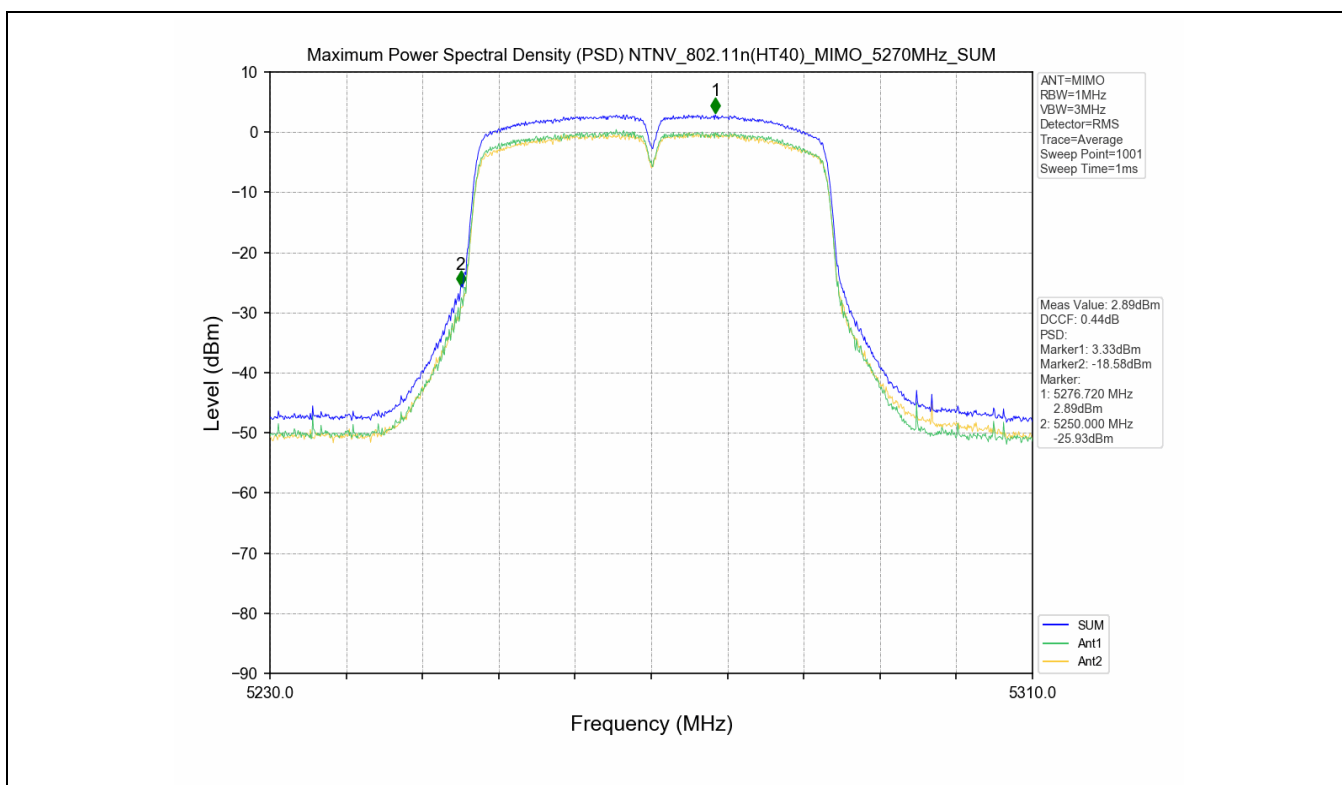
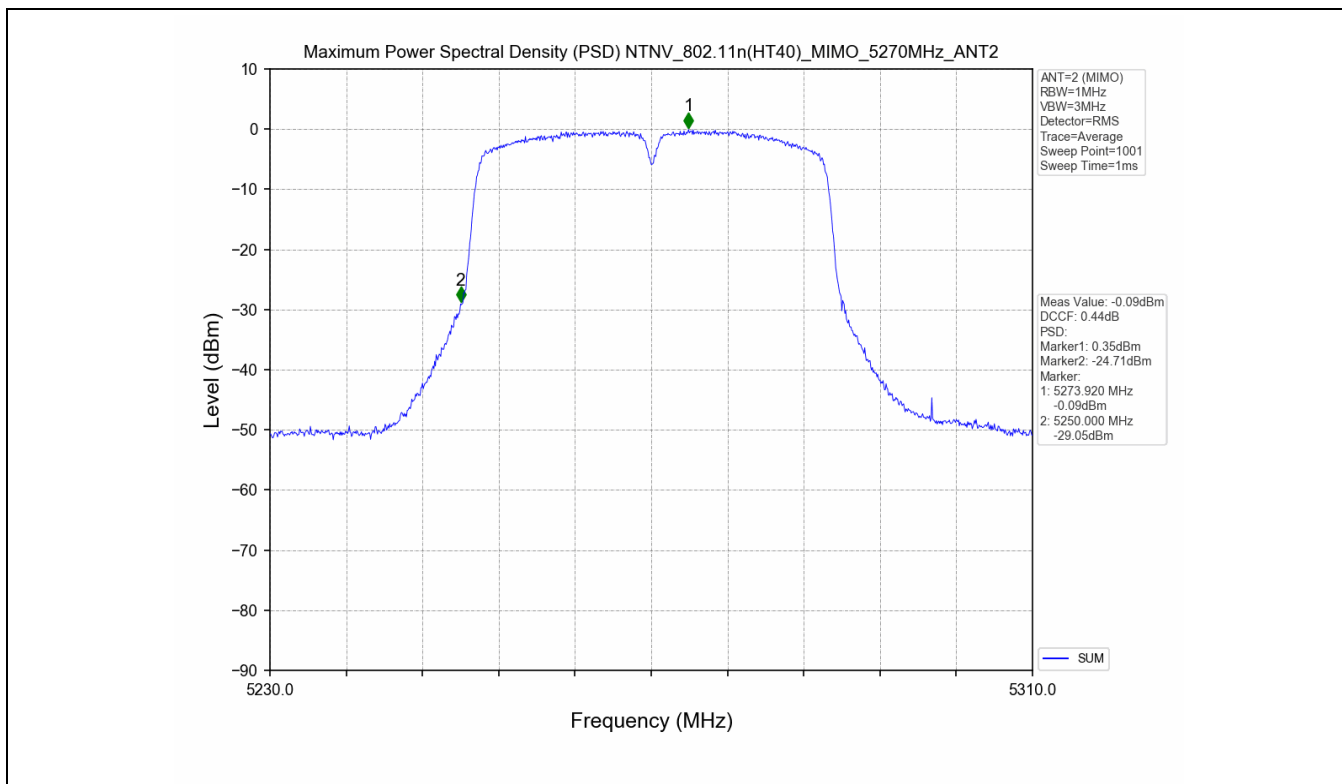


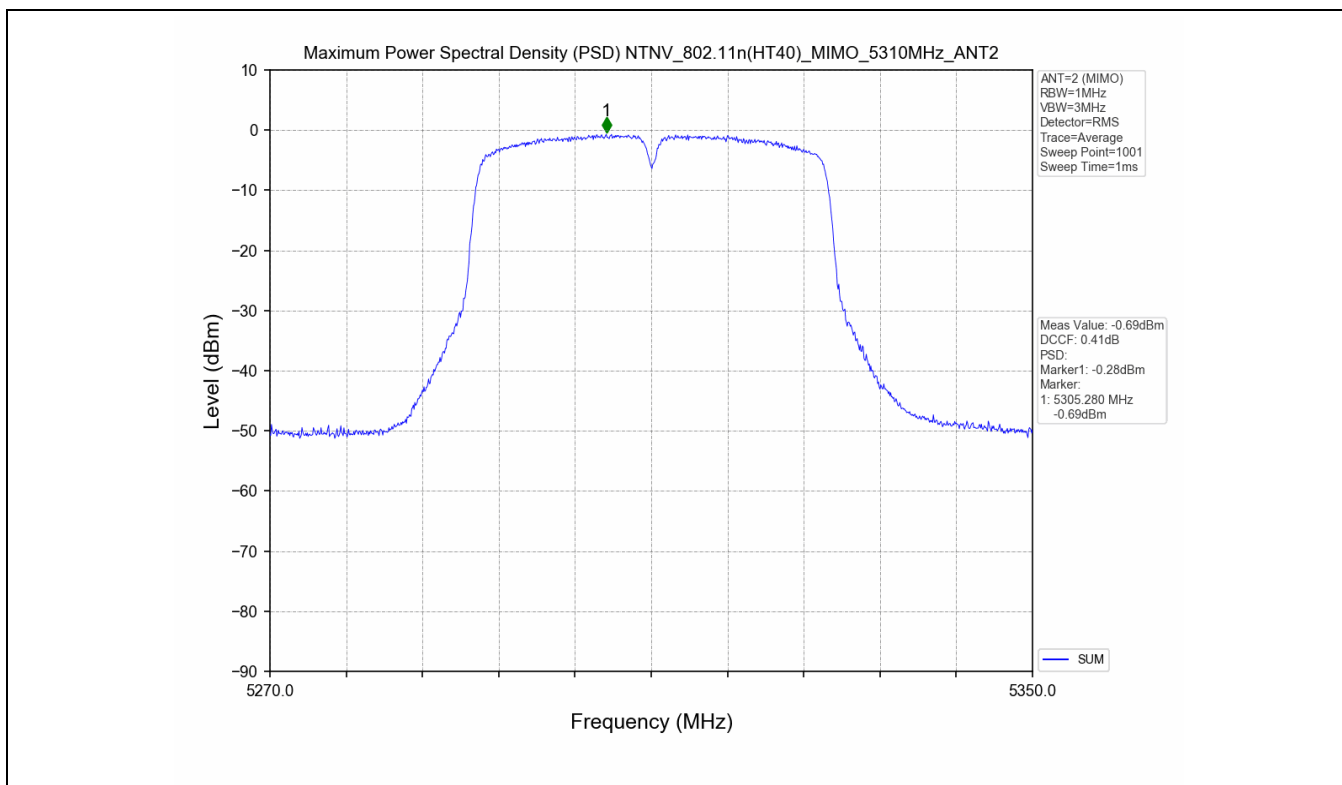
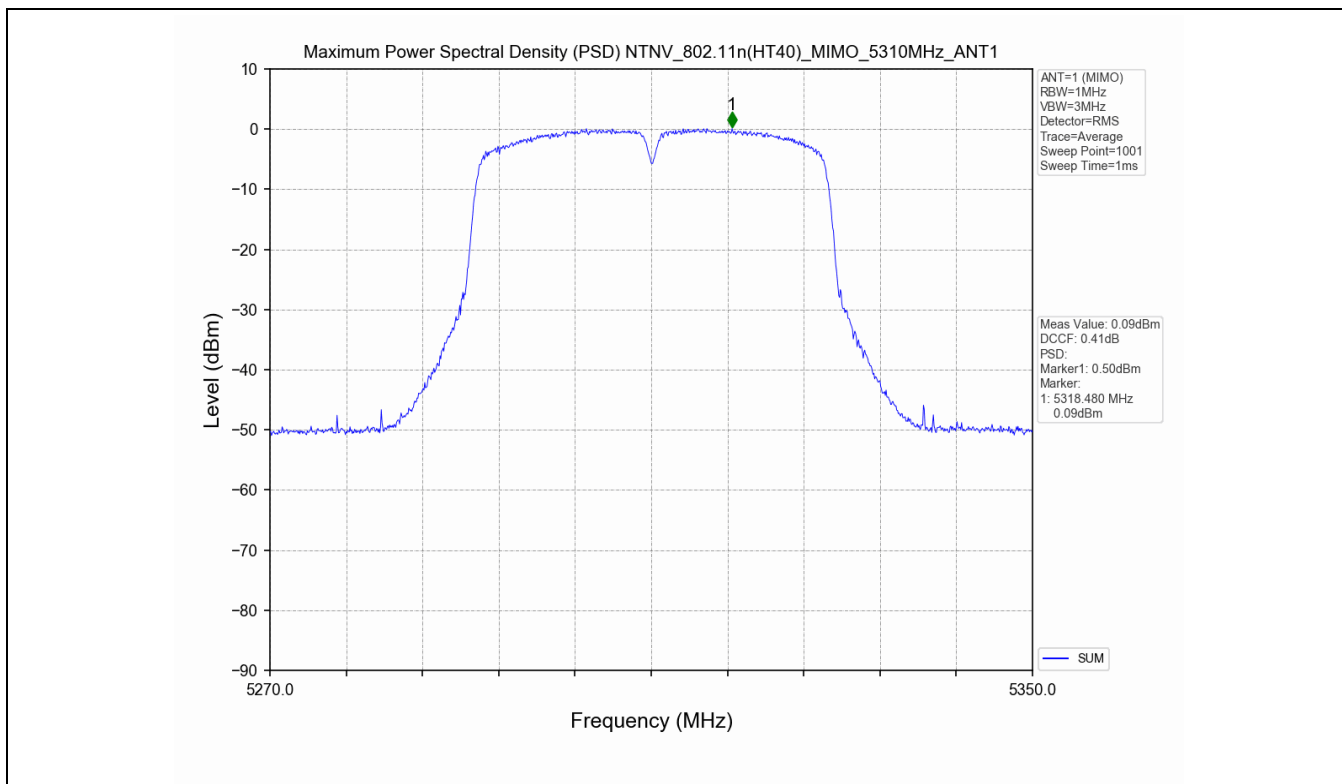


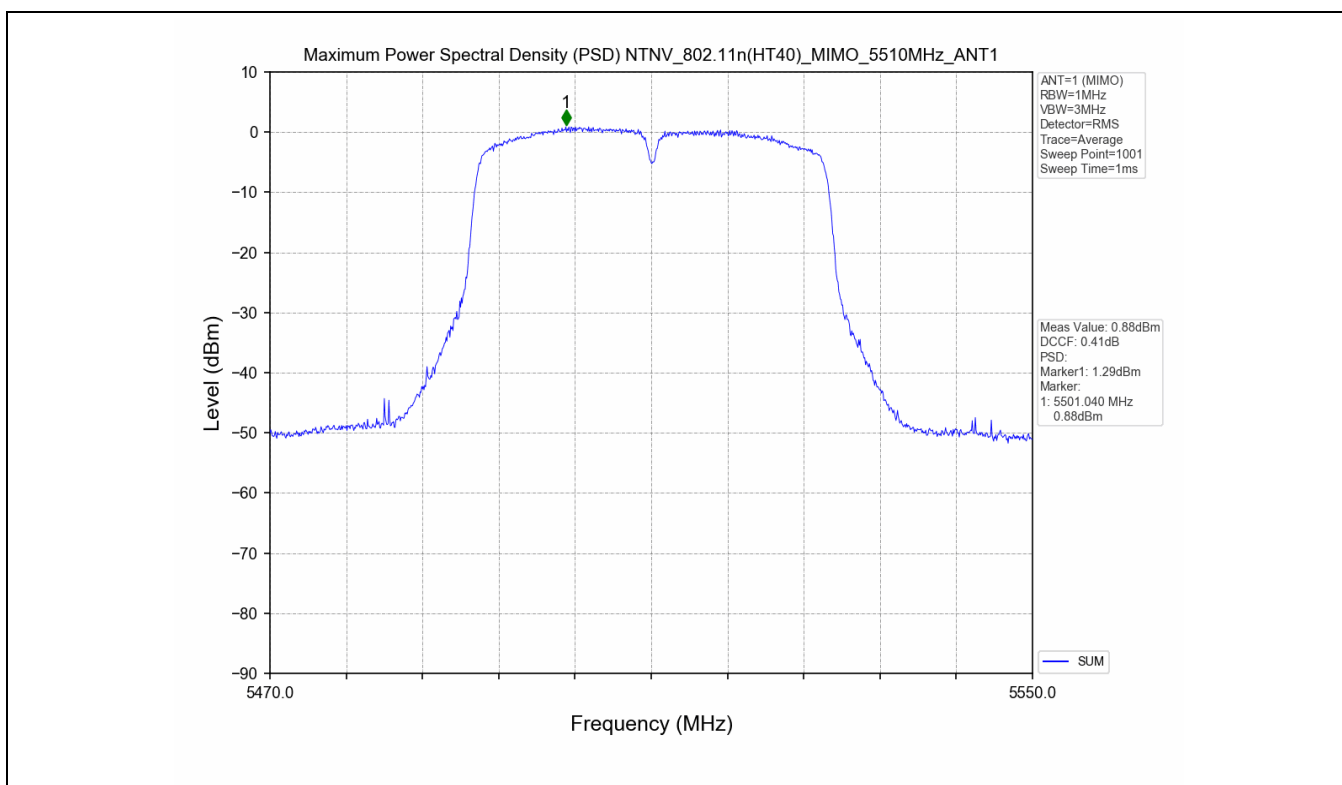
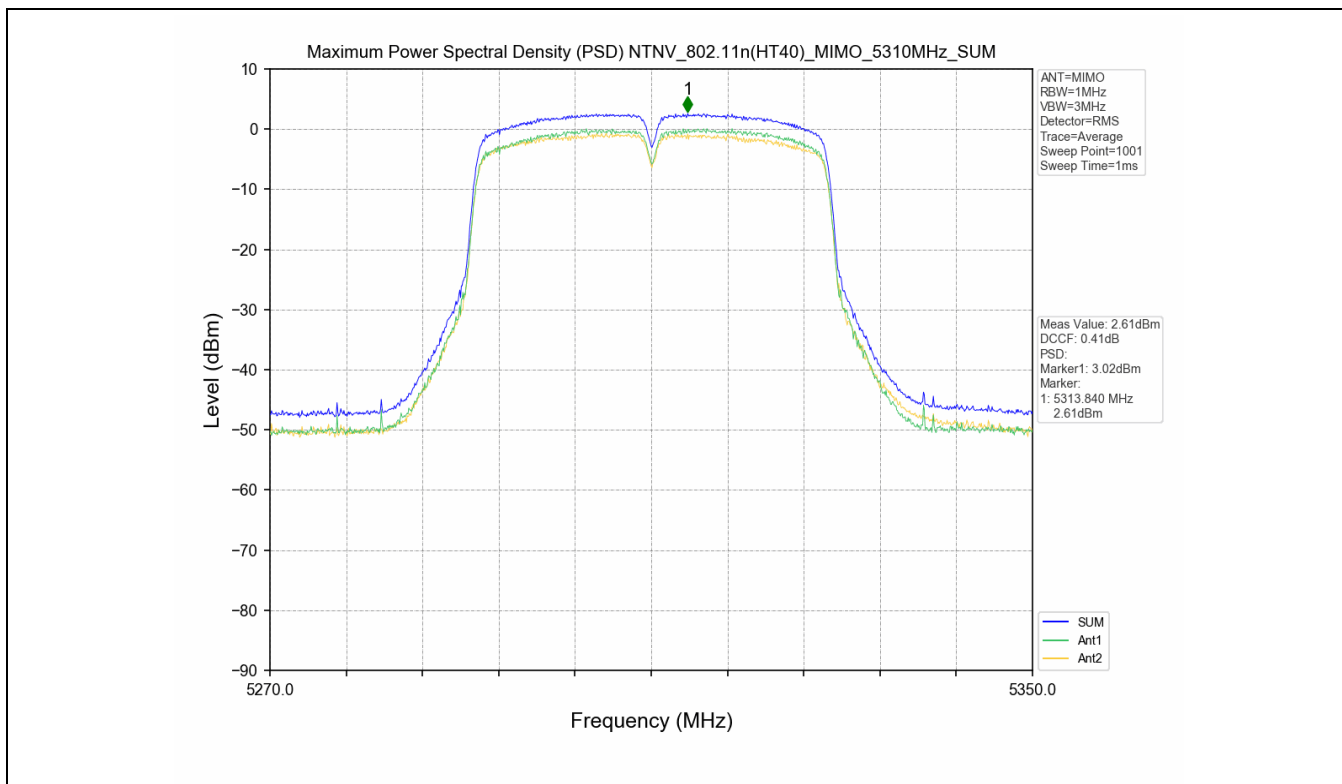


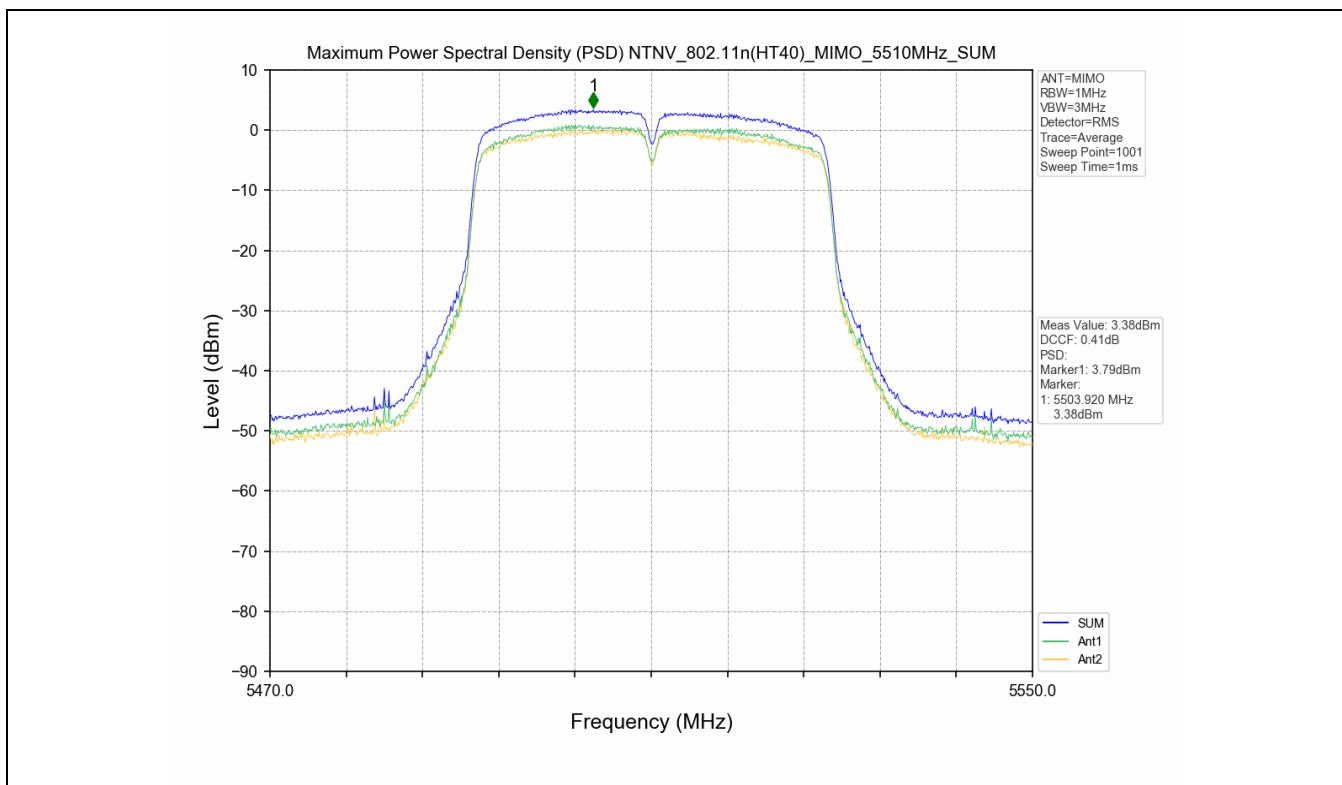
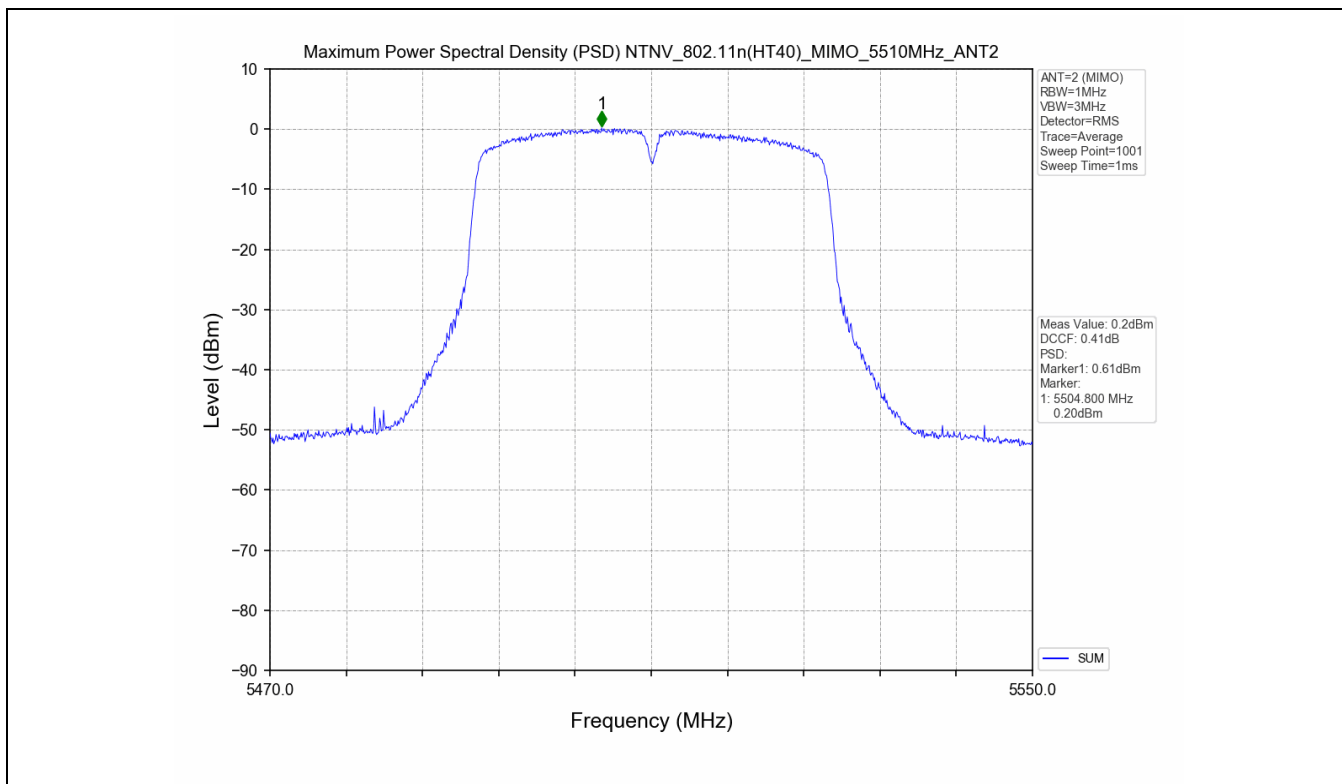


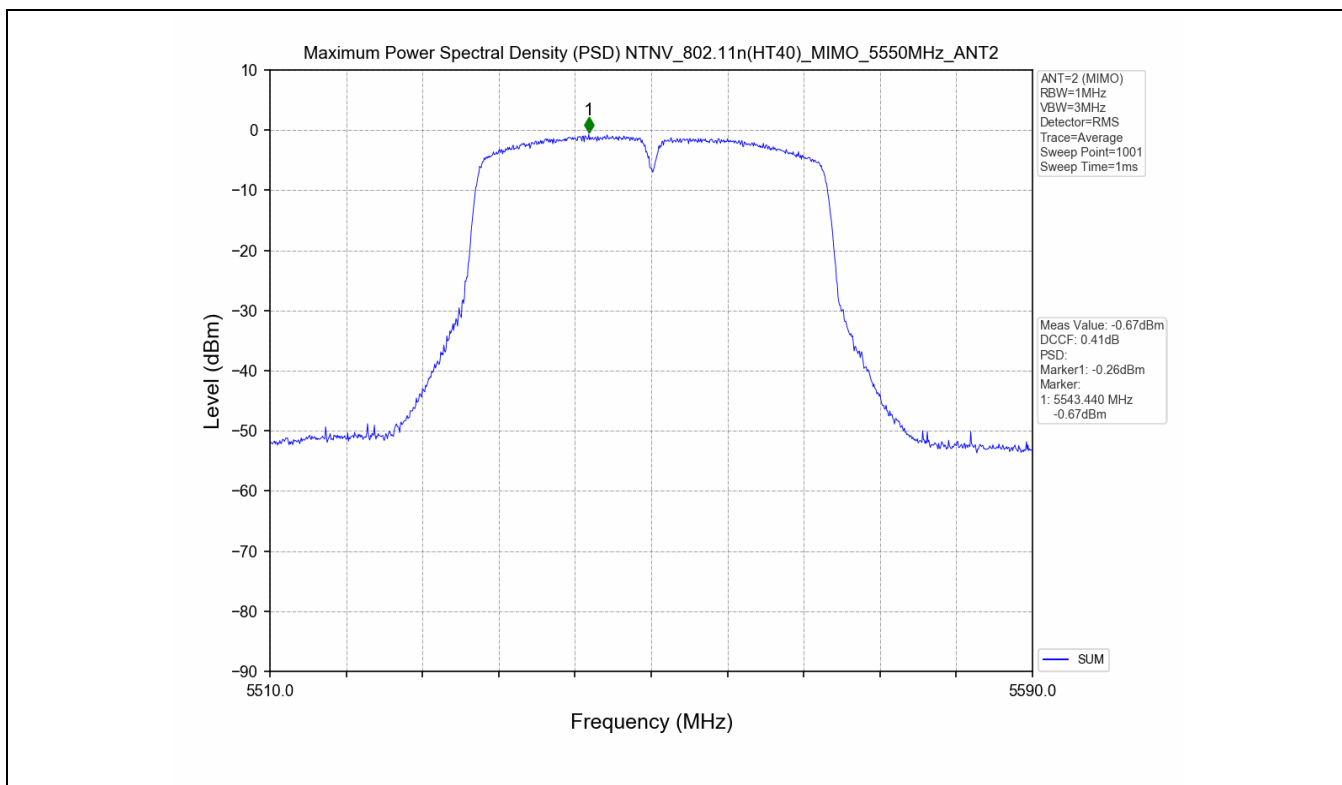
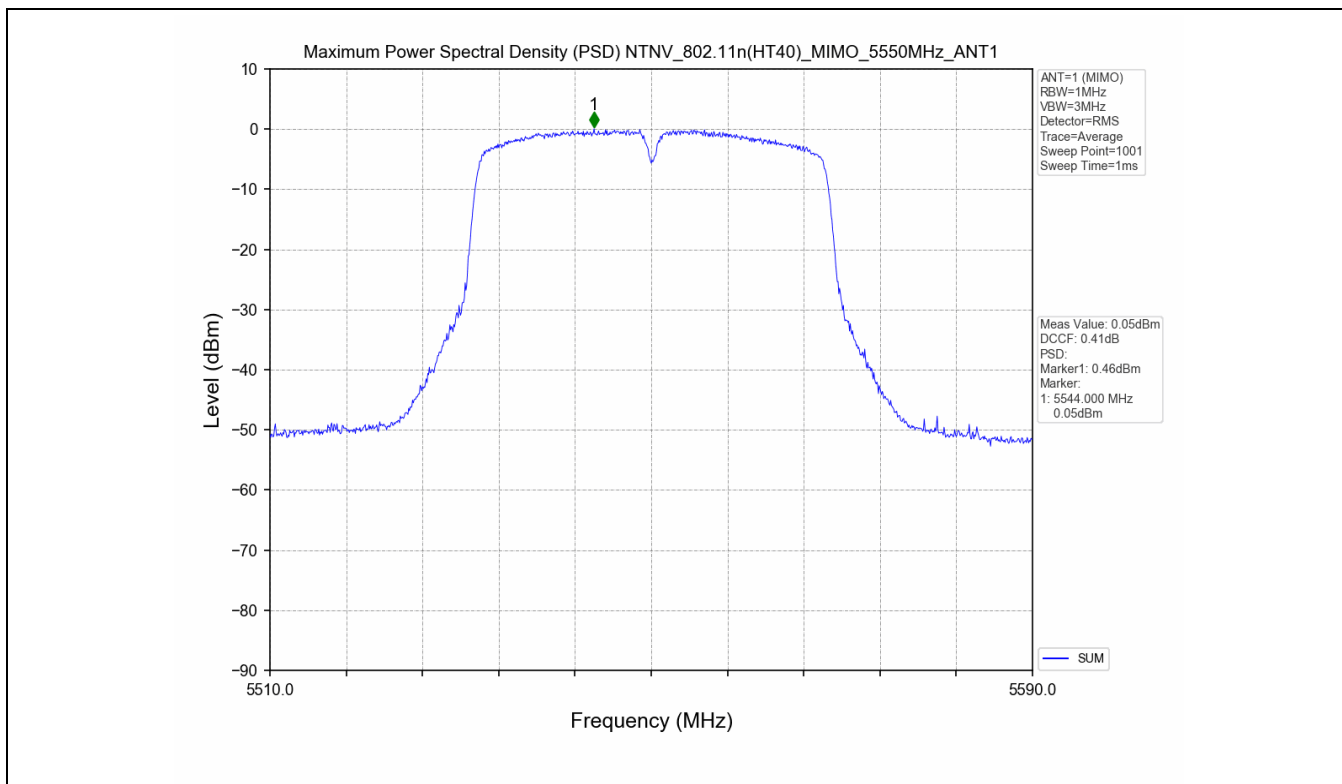












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