

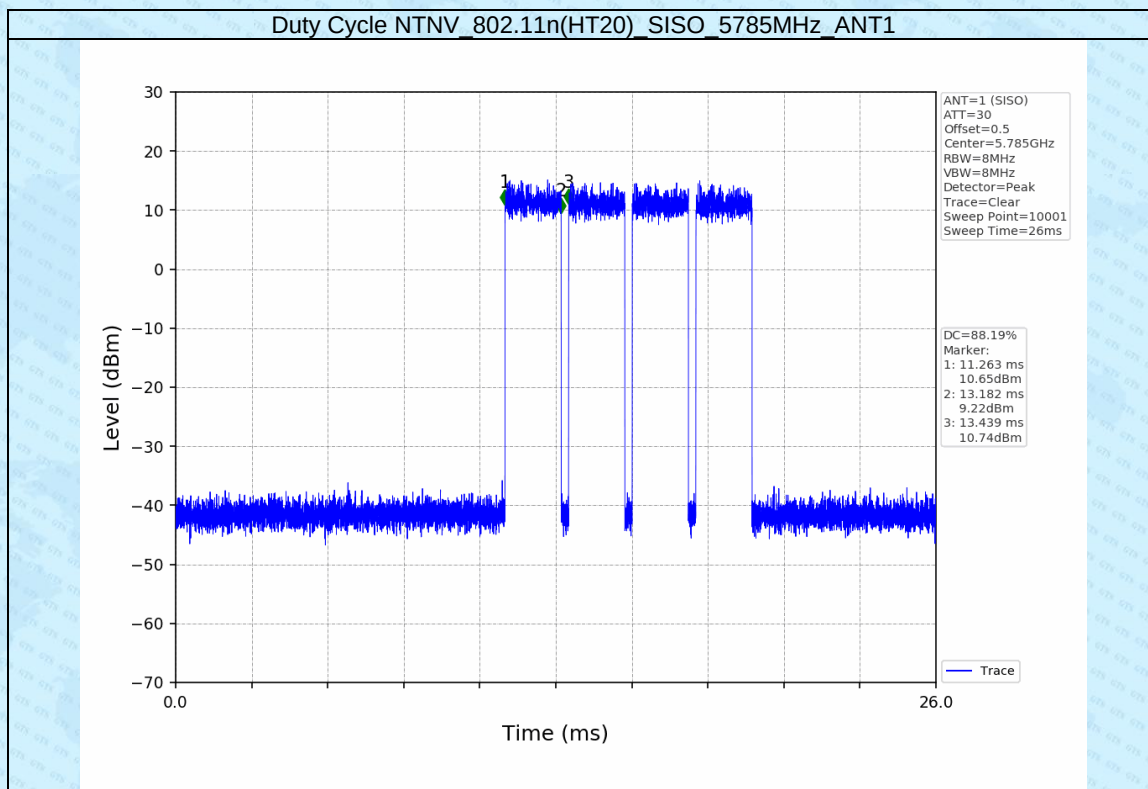
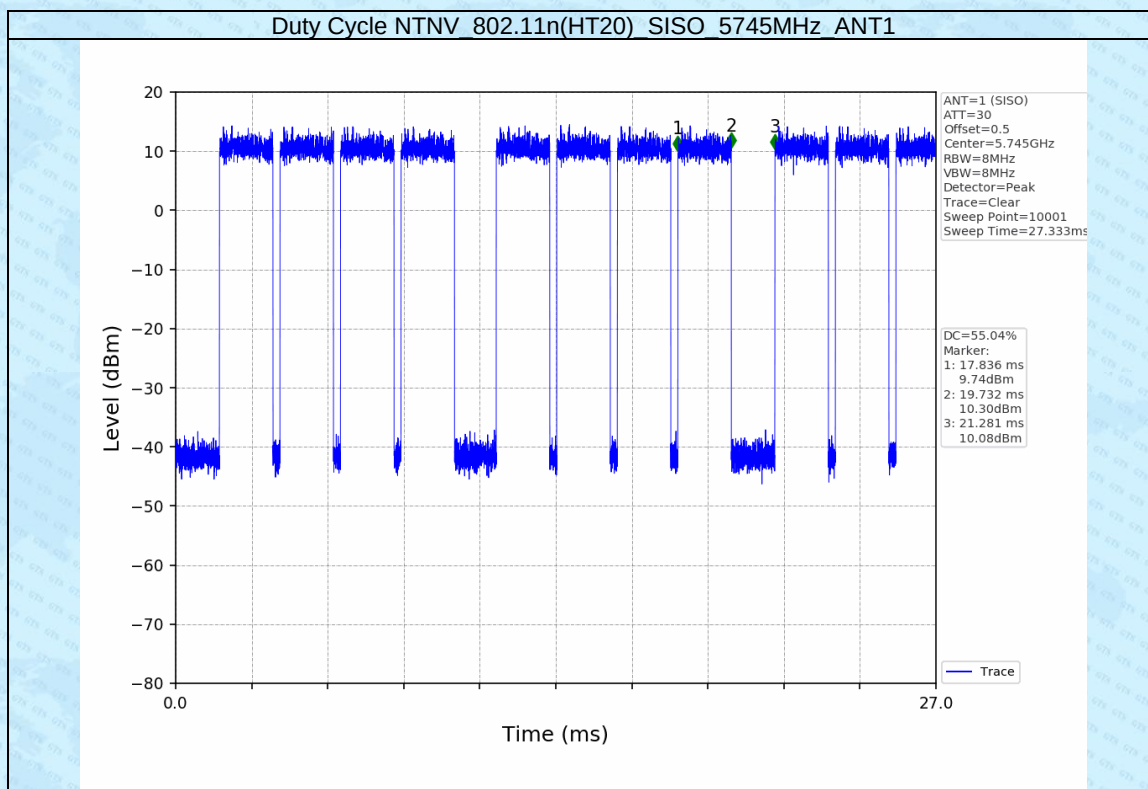
Appendix for 15.407

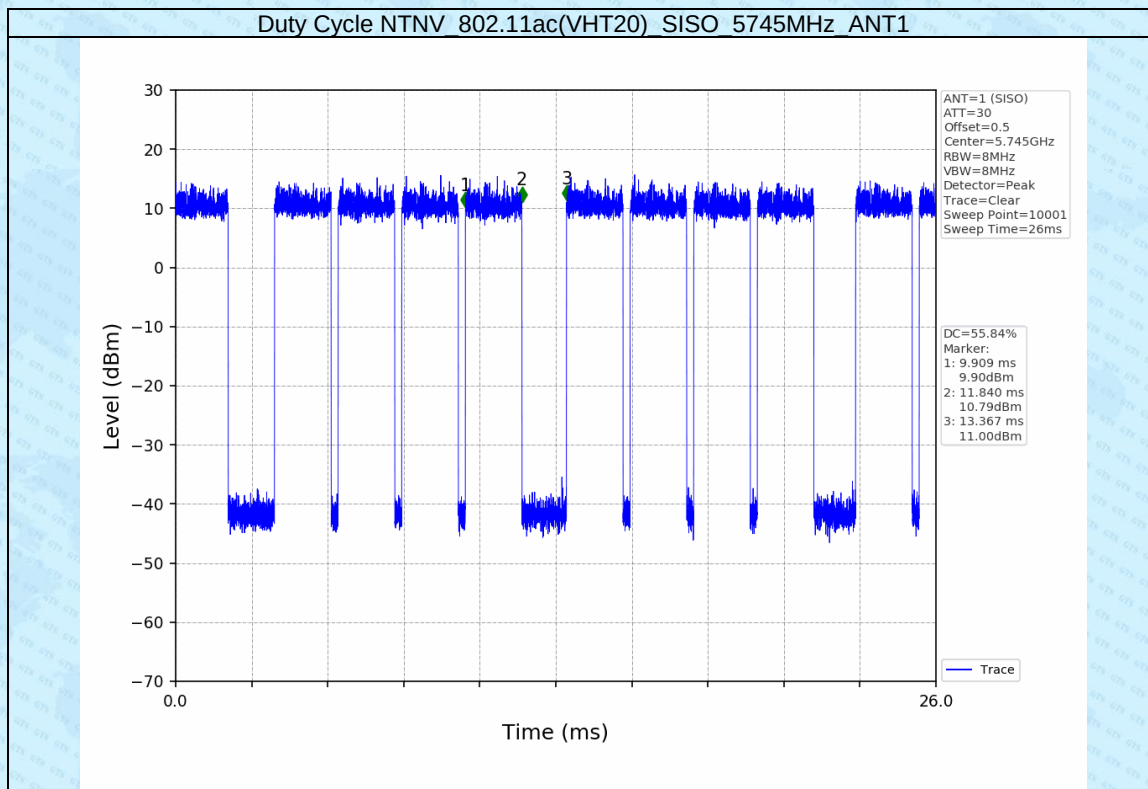
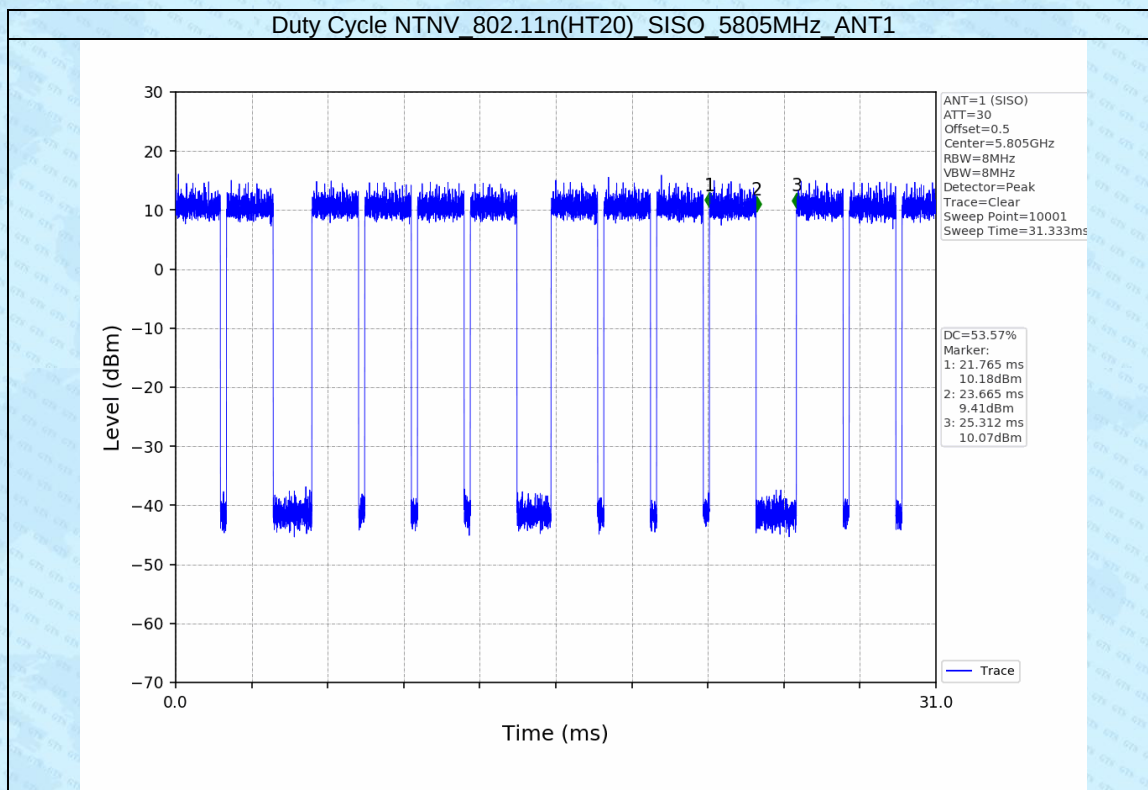
1. Duty Cycle

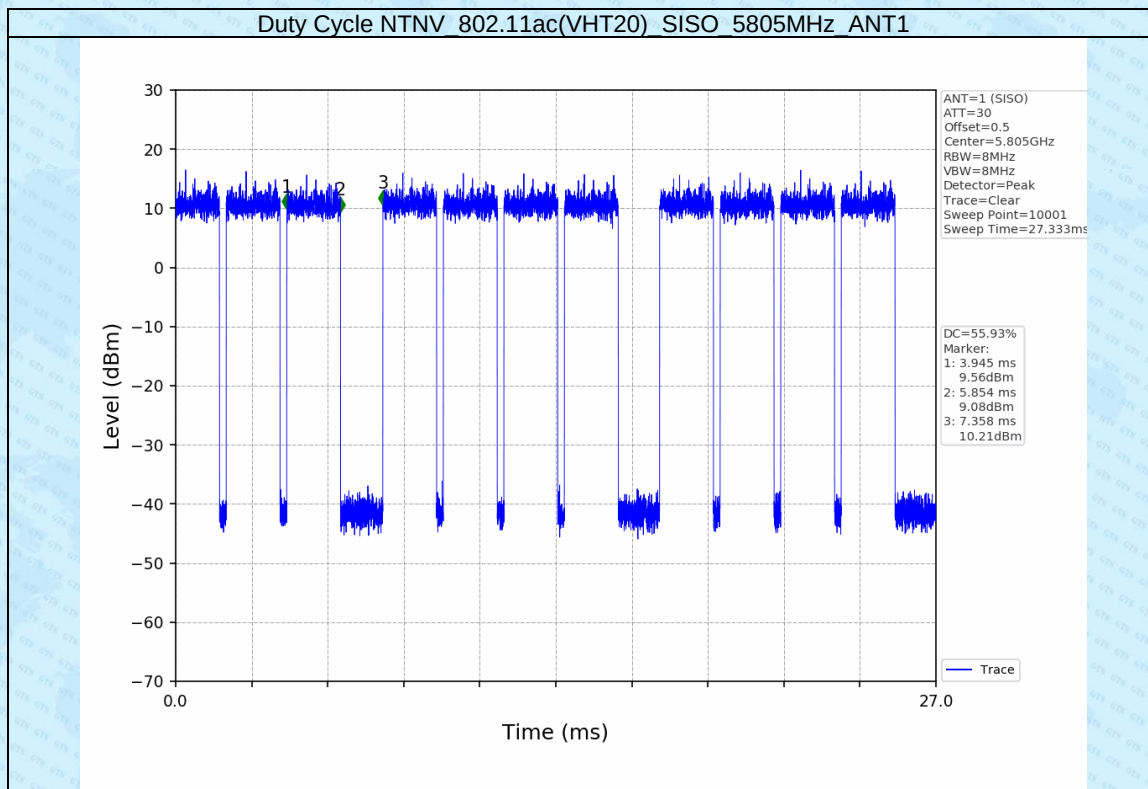
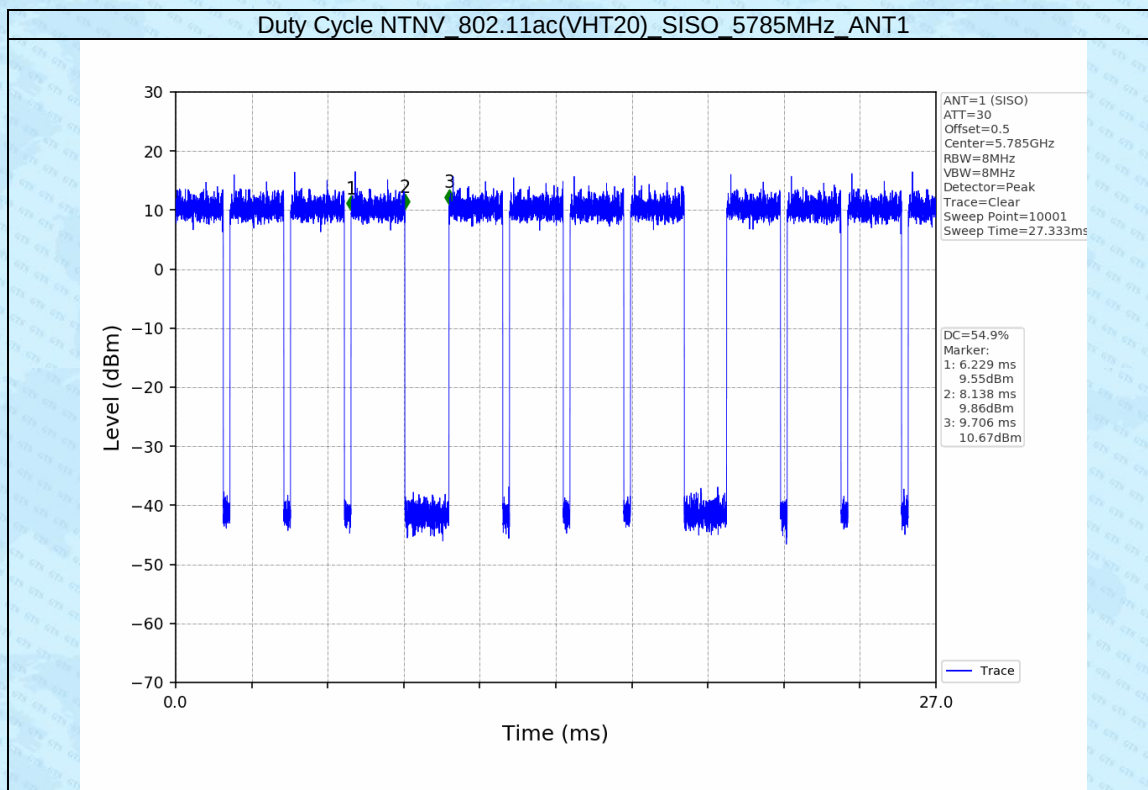
1.1 Test Result

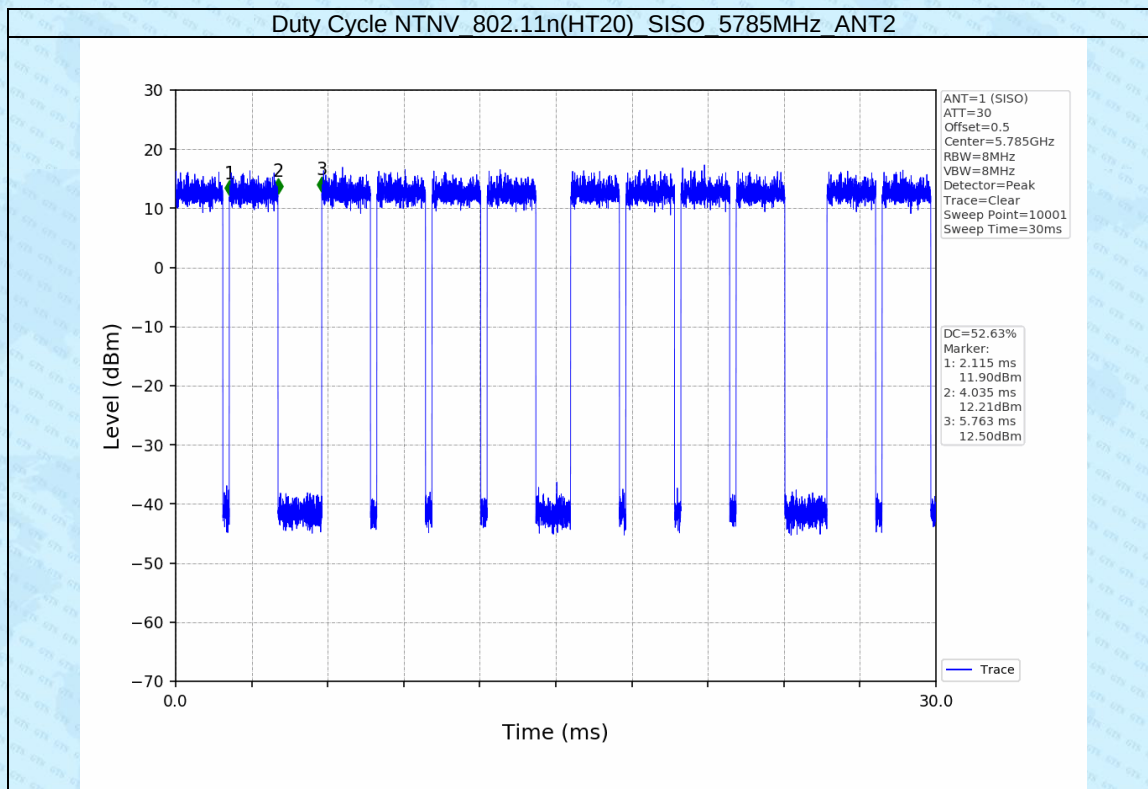
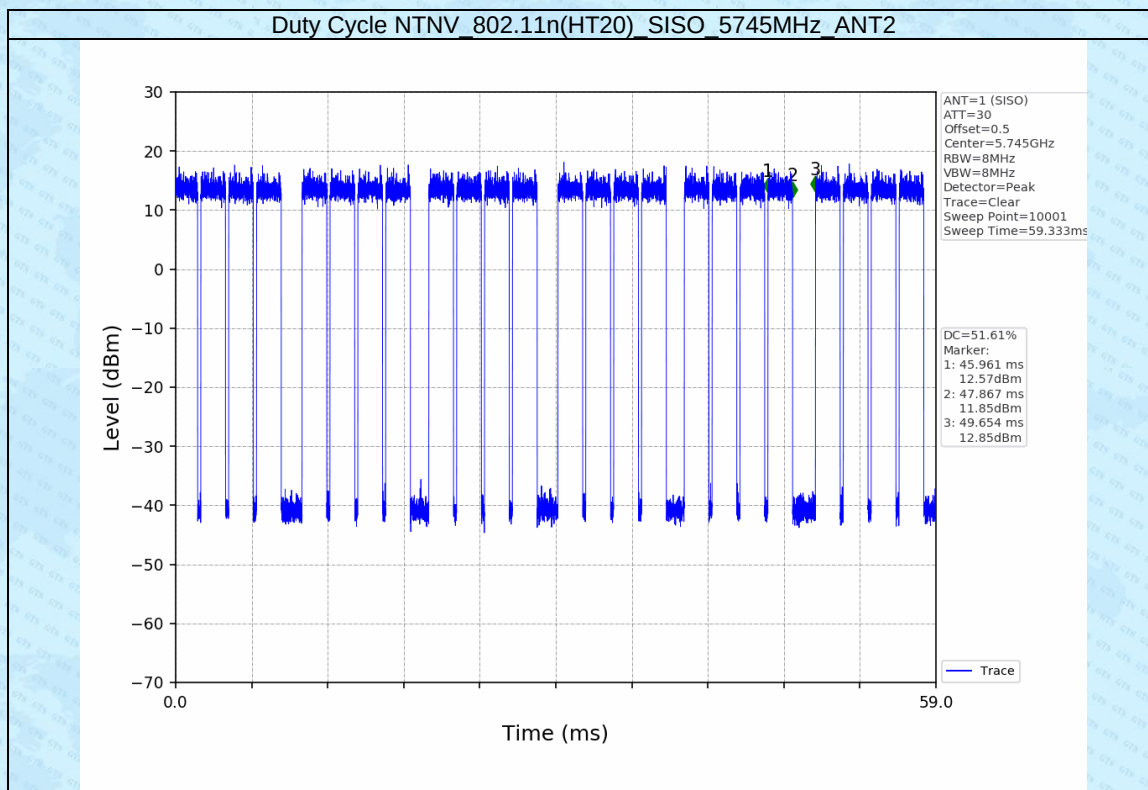
Test Mode	Channel Frequency (MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11n(HT20)	5745.0	SISO	1	1.896	3.445	55.04	2.59
	5785.0	SISO	1	1.919	2.176	88.19	0.55
	5805.0	SISO	1	1.900	3.547	53.57	2.71
802.11ac(VHT20)	5745.0	SISO	1	1.931	3.458	55.84	2.53
	5785.0	SISO	1	1.909	3.477	54.90	2.60
	5805.0	SISO	1	1.909	3.413	55.93	2.52
802.11n(HT20)	5745.0	SISO	2	1.906	3.693	51.61	2.87
	5785.0	SISO	2	1.920	3.648	52.63	2.79
	5805.0	SISO	2	1.896	3.508	54.05	2.67
802.11ac(VHT20)	5745.0	SISO	2	1.932	3.520	54.89	2.61
	5785.0	SISO	2	1.906	3.699	51.53	2.88
	5805.0	SISO	2	1.932	3.455	55.92	2.52

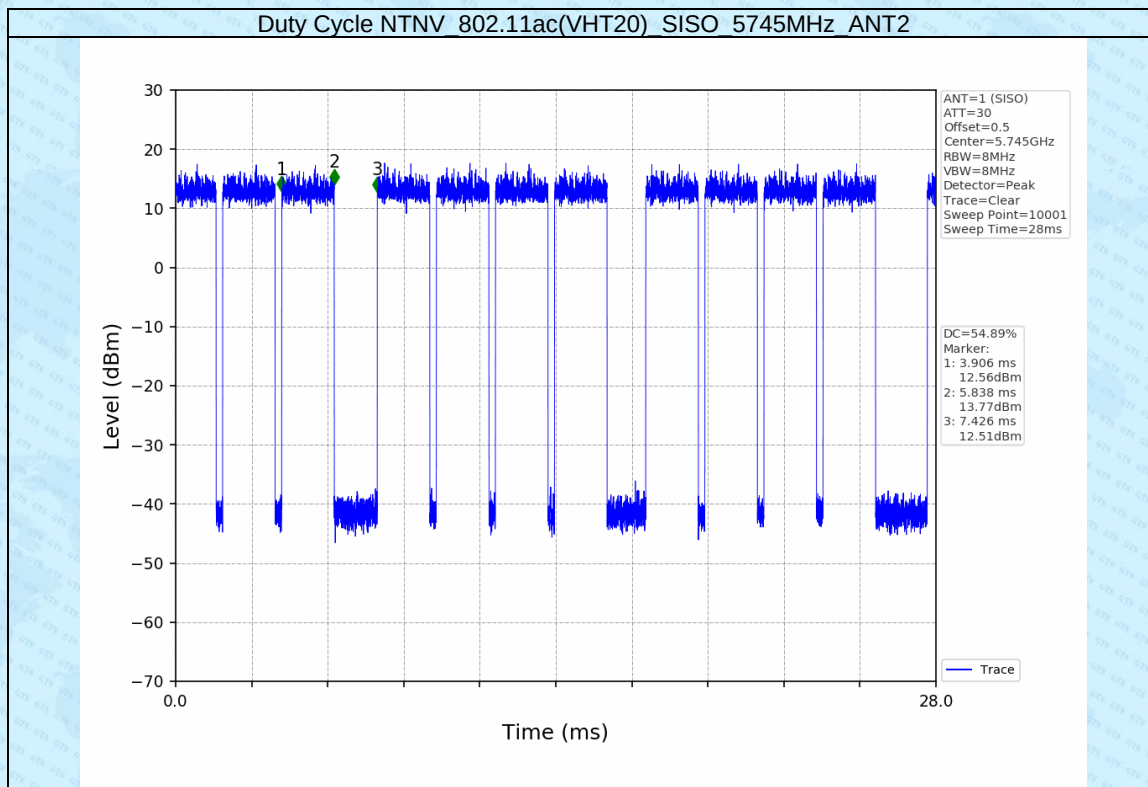
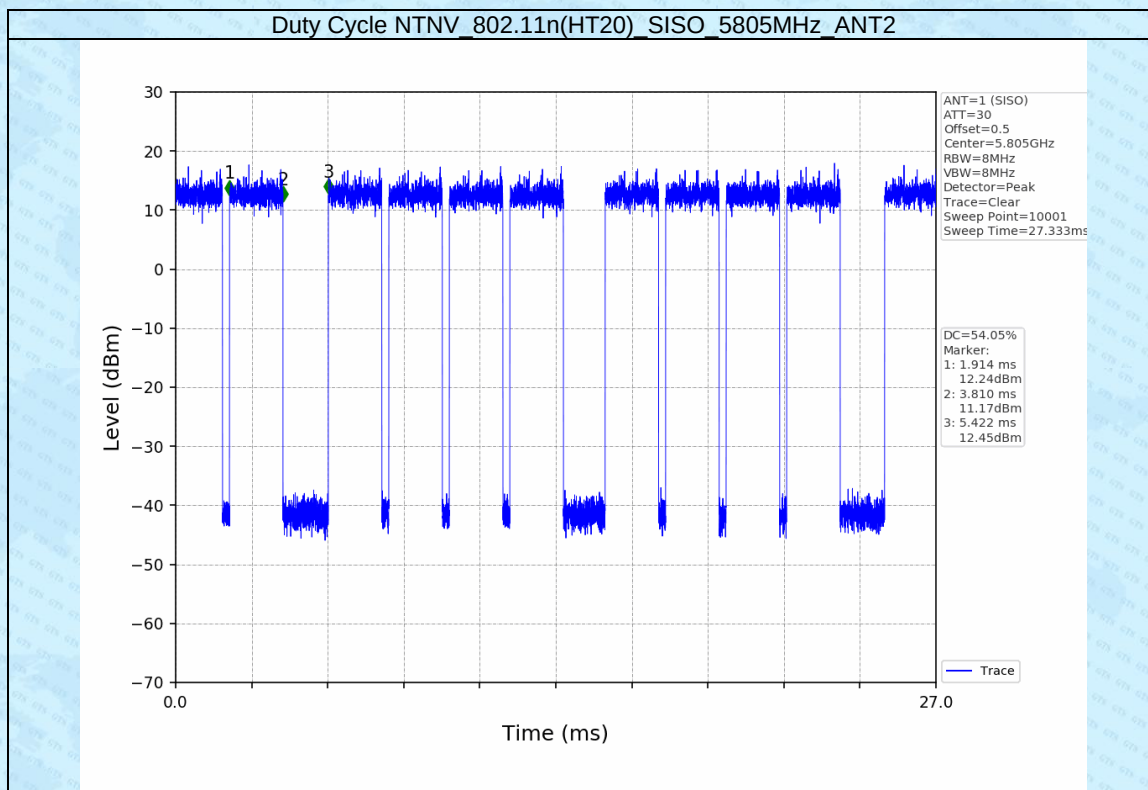
1.2 Test Graph

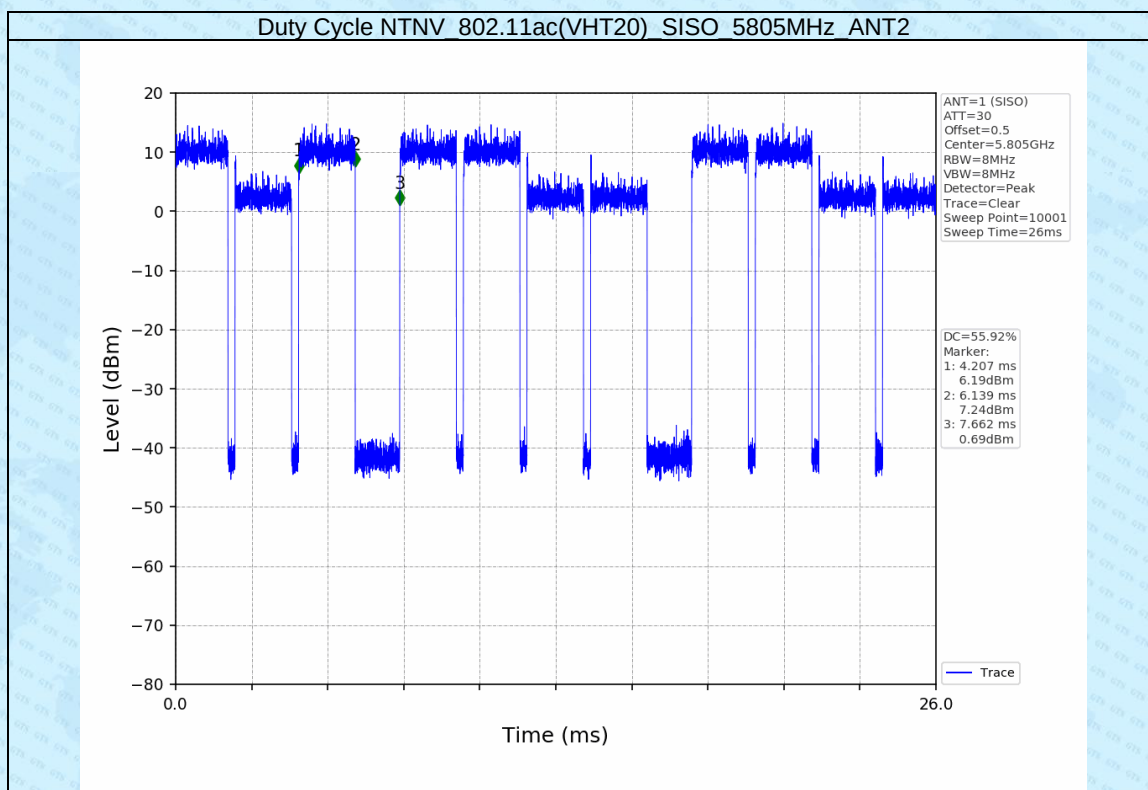
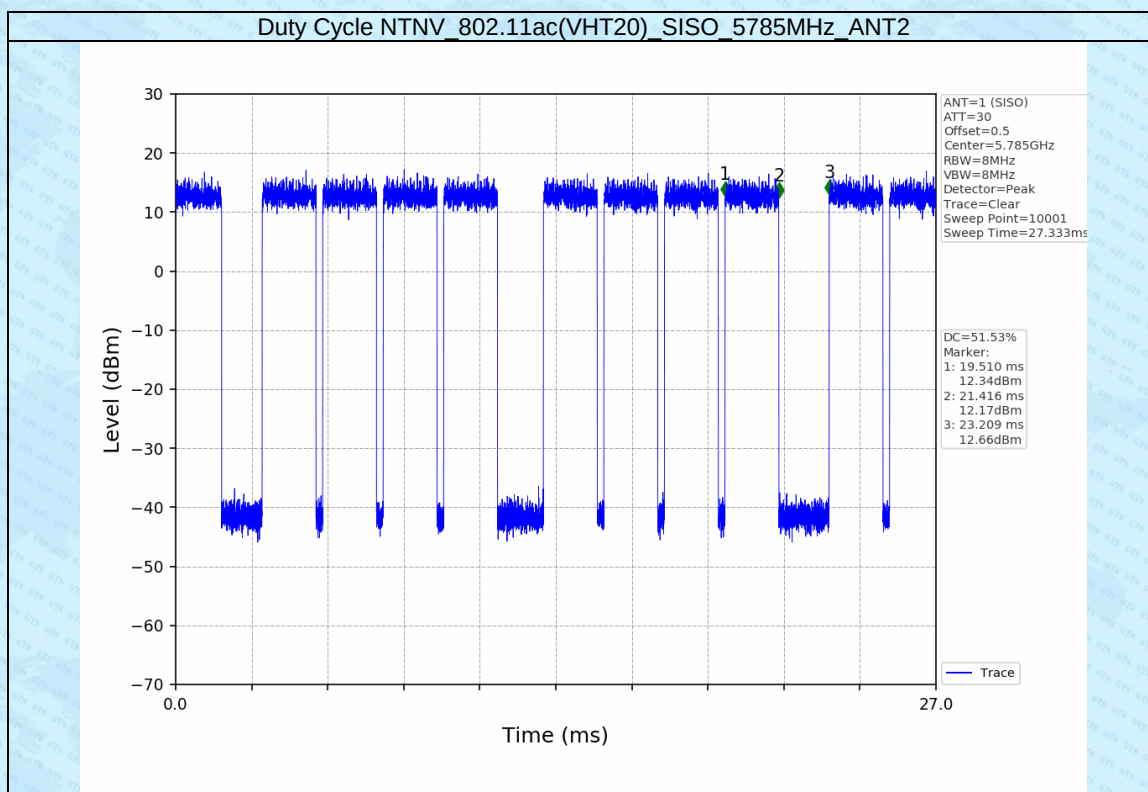












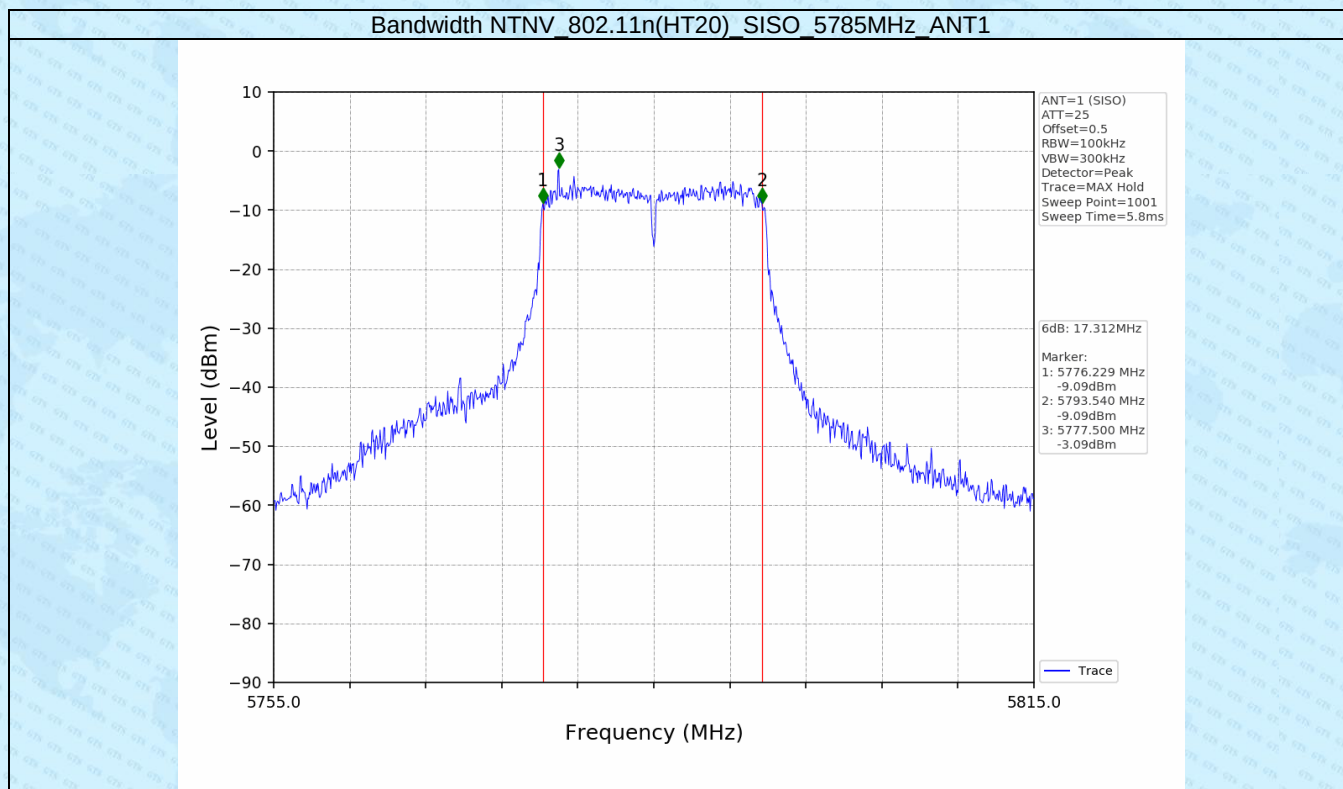
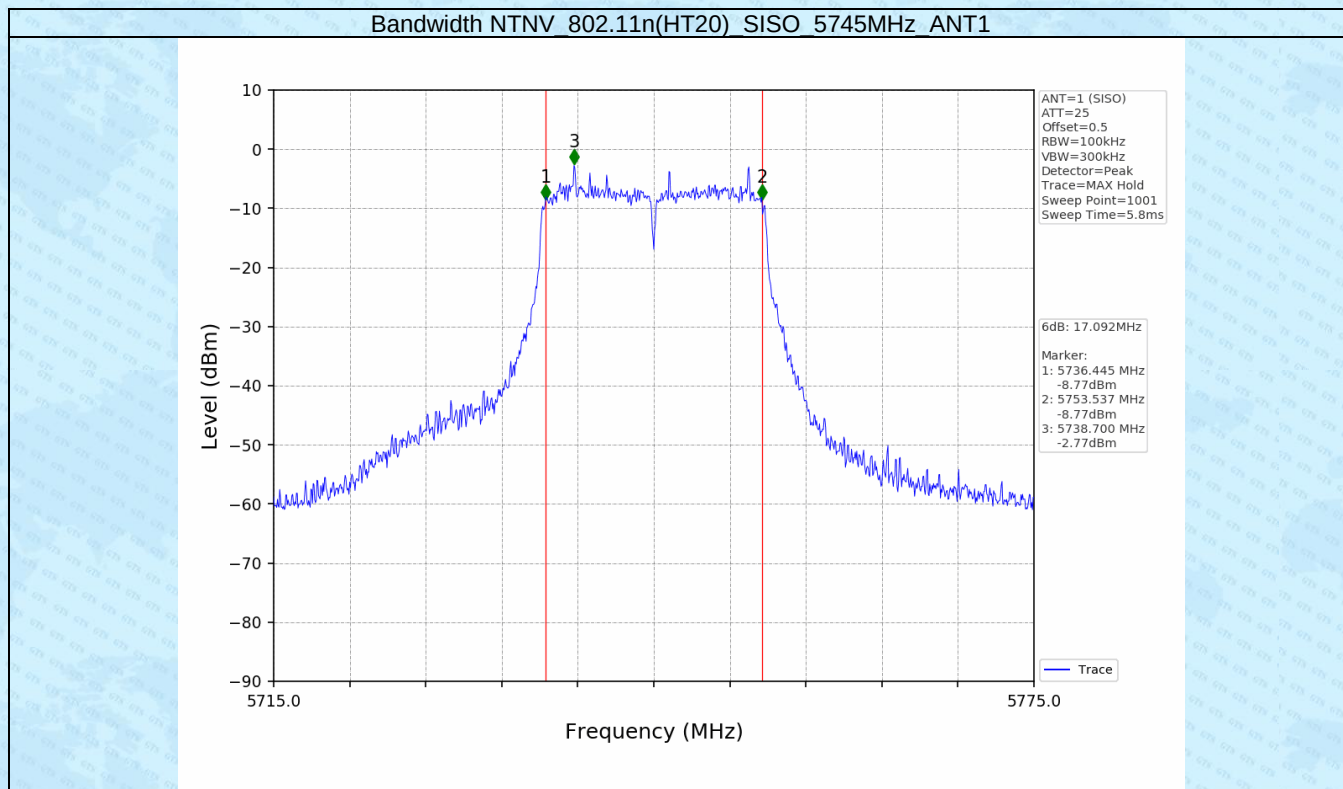
2. Bandwidth

2.1 Test Result

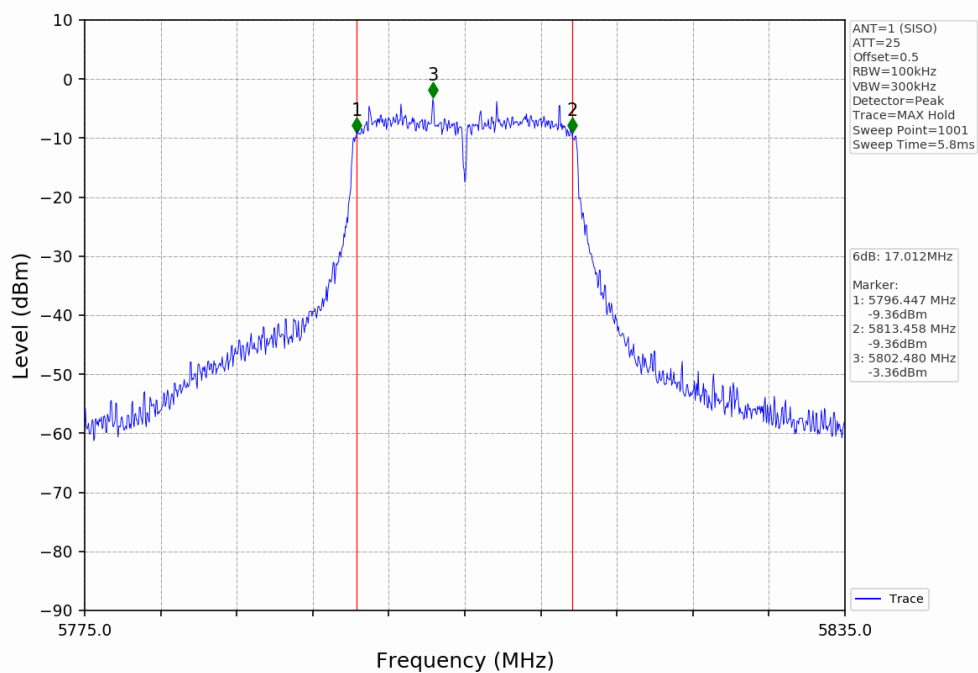
Test Mode	Frequency (MHz)	TX Type	ANT No.	Emission Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11n(HT20)	5745.0	SISO	1	17.092	≥0.5	PASS
	5785.0	SISO	1	17.312	≥0.5	PASS
	5805.0	SISO	1	17.012	≥0.5	PASS
802.11ac(VHT20)	5745.0	SISO	1	16.746	≥0.5	PASS
	5785.0	SISO	1	16.898	≥0.5	PASS
	5805.0	SISO	1	16.944	≥0.5	PASS
802.11n(HT20)	5745.0	SISO	2	16.964	≥0.5	PASS
	5785.0	SISO	2	16.700	≥0.5	PASS
	5805.0	SISO	2	17.179	≥0.5	PASS
802.11ac(VHT20)	5745.0	SISO	2	16.822	≥0.5	PASS
	5785.0	SISO	2	16.380	≥0.5	PASS
	5805.0	SISO	2	16.731	≥0.5	PASS

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11n(HT20)	5745.0	SISO	1	18.066	Only for Report Use
	5785.0	SISO	1	17.987	Only for Report Use
	5805.0	SISO	1	18.150	Only for Report Use
802.11ac(VHT20)	5745.0	SISO	1	18.070	Only for Report Use
	5785.0	SISO	1	18.132	Only for Report Use
	5805.0	SISO	1	18.043	Only for Report Use
802.11n(HT20)	5745.0	SISO	2	18.191	Only for Report Use
	5785.0	SISO	2	18.139	Only for Report Use
	5805.0	SISO	2	18.087	Only for Report Use
802.11ac(VHT20)	5745.0	SISO	2	18.115	Only for Report Use
	5785.0	SISO	2	18.247	Only for Report Use
	5805.0	SISO	2	18.025	Only for Report Use

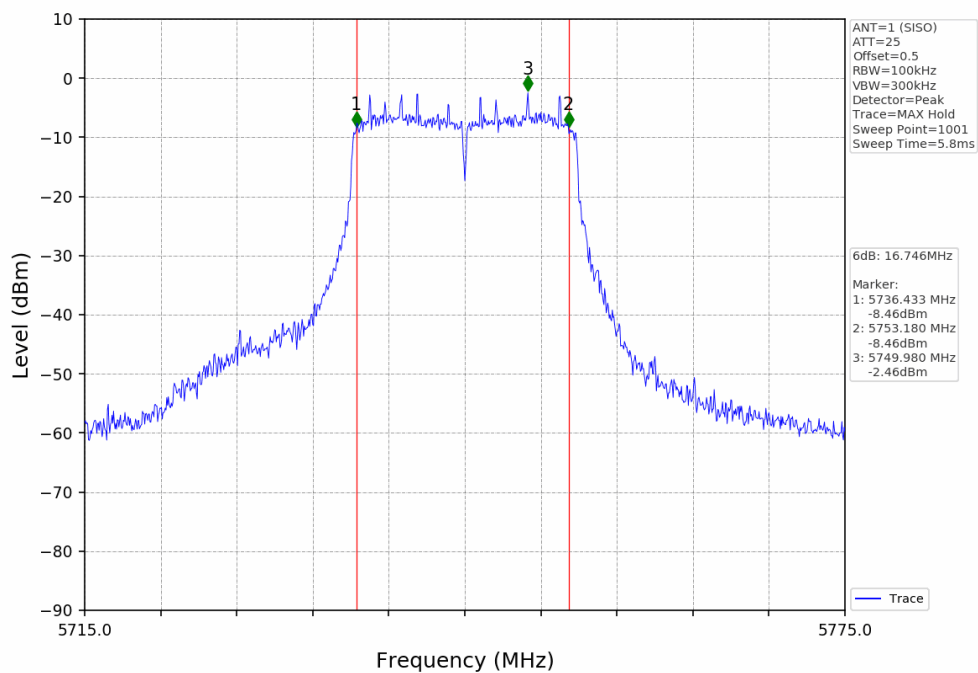
2.2 Test Graph - Emission Bandwidth



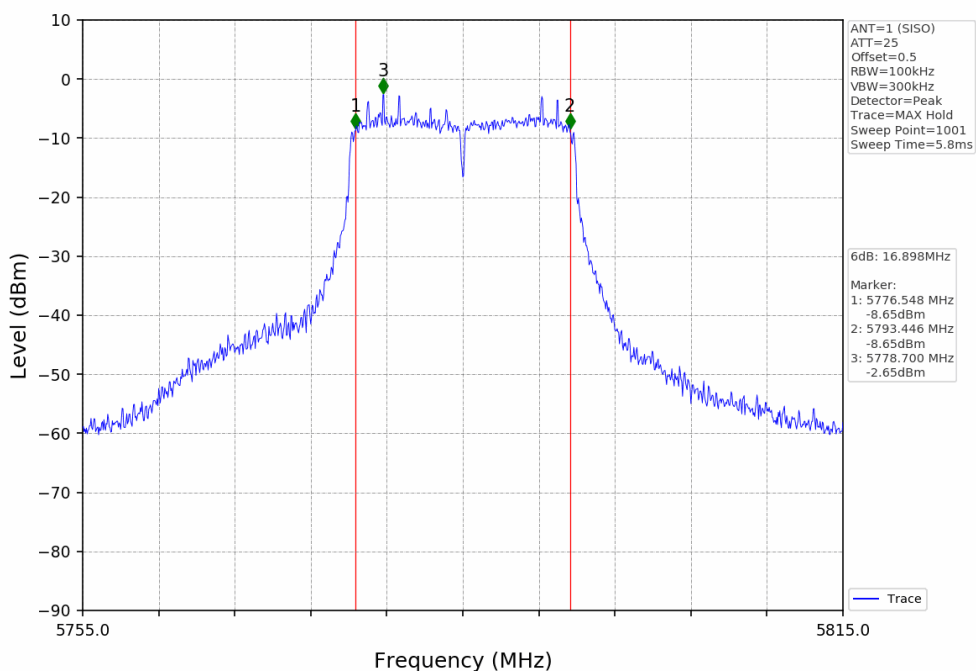
Bandwidth NTNV_802.11n(HT20)_SISO_5805MHz_ANT1



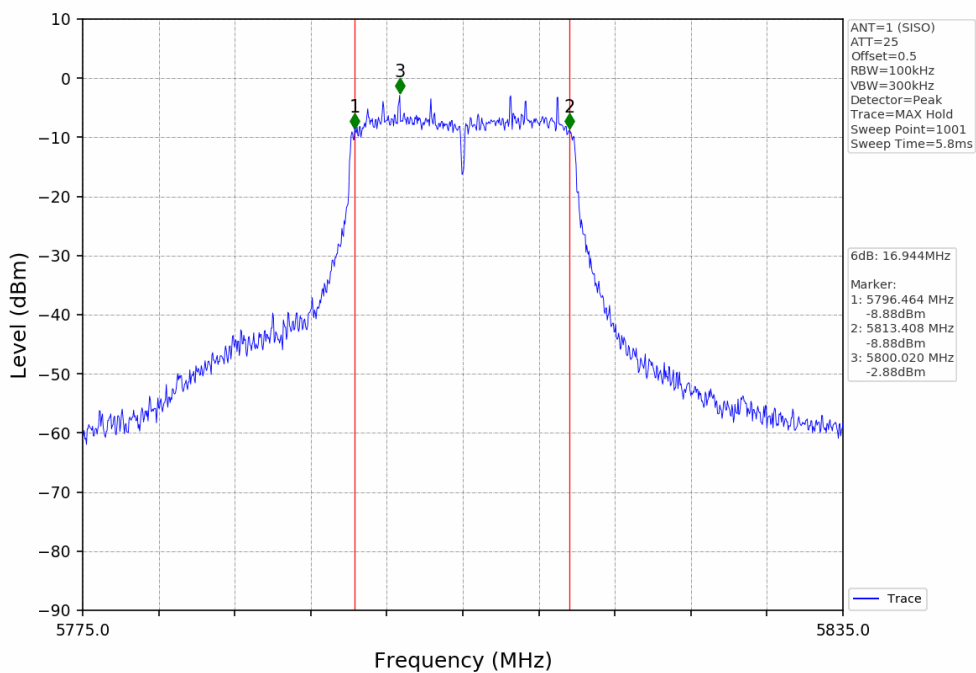
Bandwidth NTNV_802.11ac(VHT20)_SISO_5745MHz_ANT1



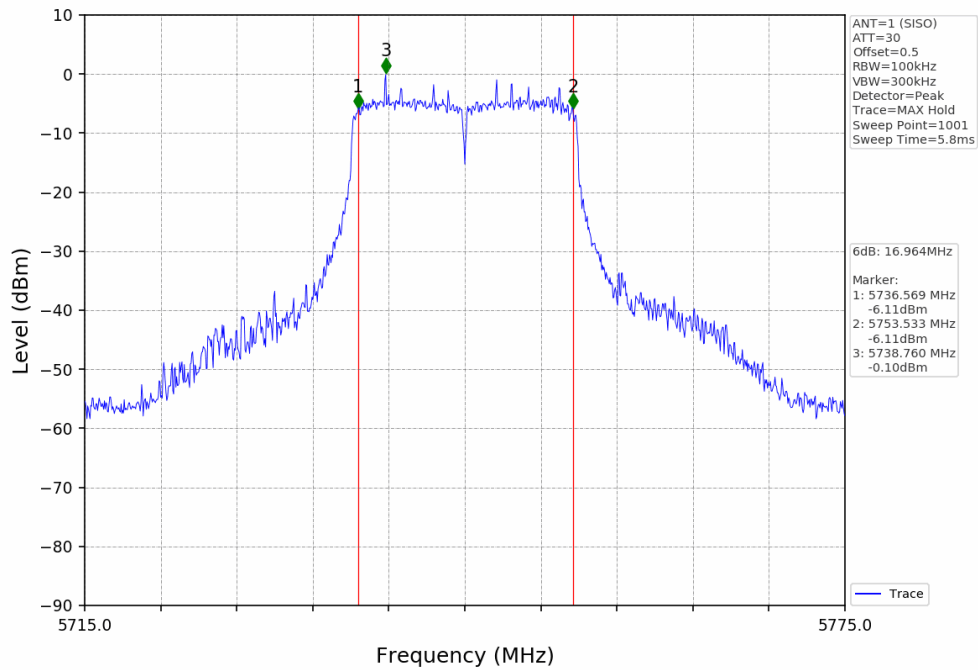
Bandwidth NTN 802.11ac(VHT20) SISO 5785MHz ANT1



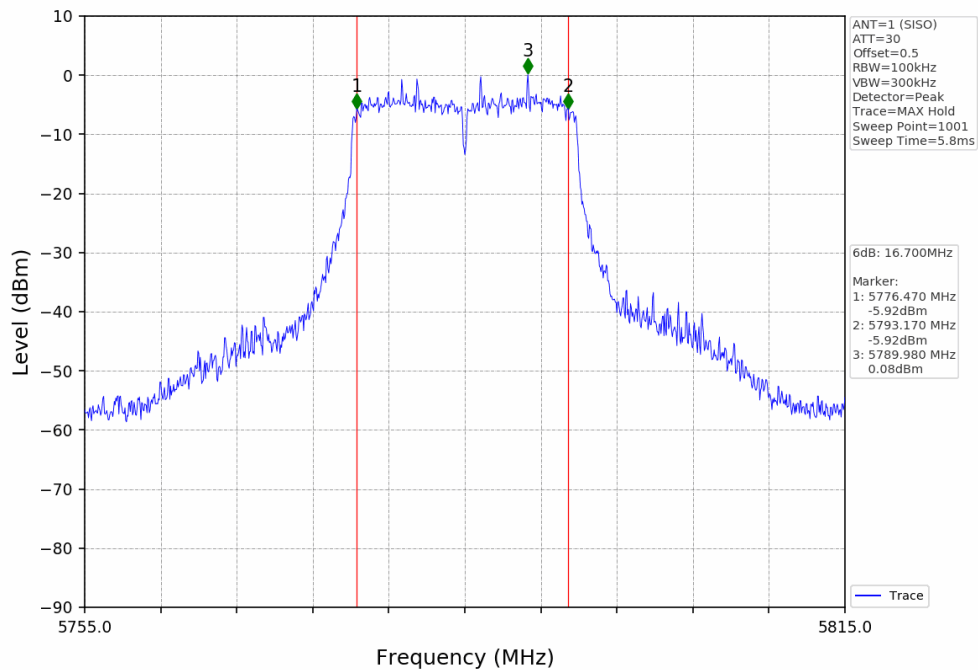
Bandwidth NTN 802.11ac(VHT20) SISO 5805MHz ANT1



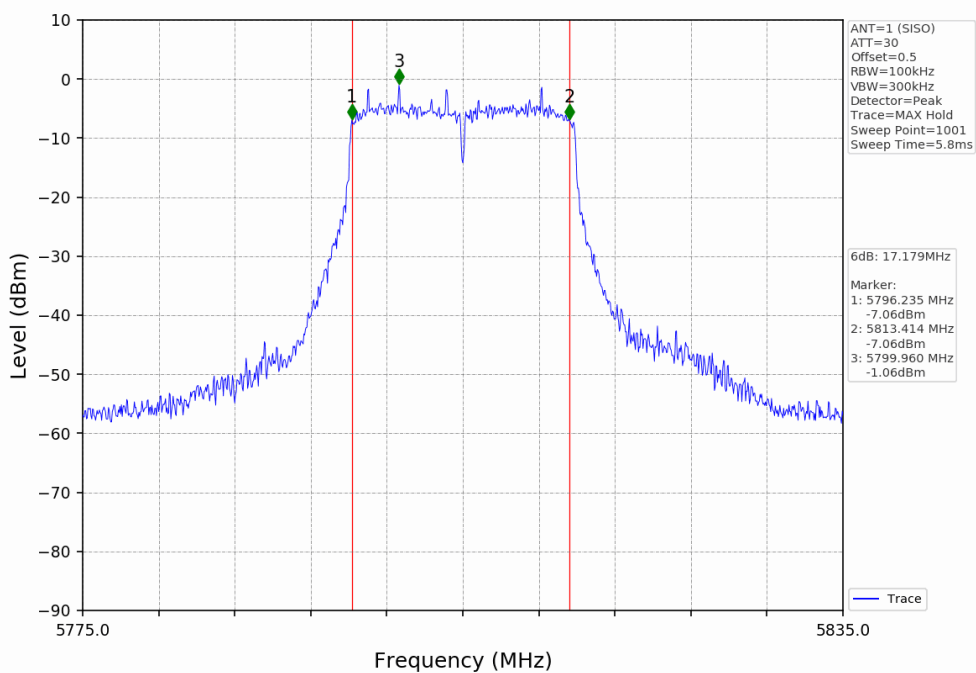
Bandwidth NTNV 802.11n(HT20) SISO 5745MHz ANT2



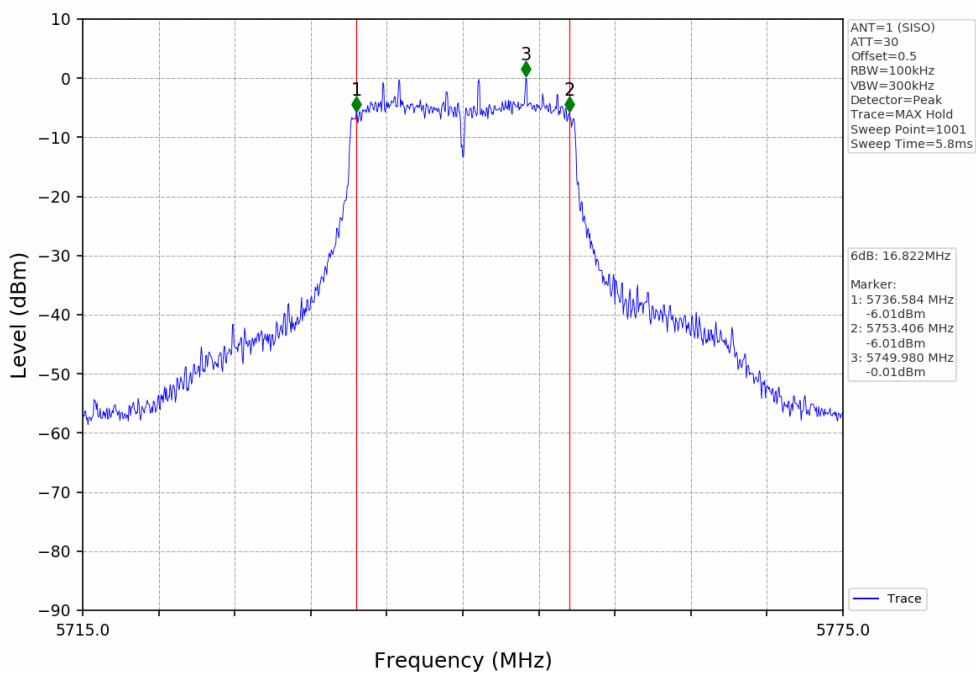
Bandwidth NTNV 802.11n(HT20) SISO 5785MHz ANT2



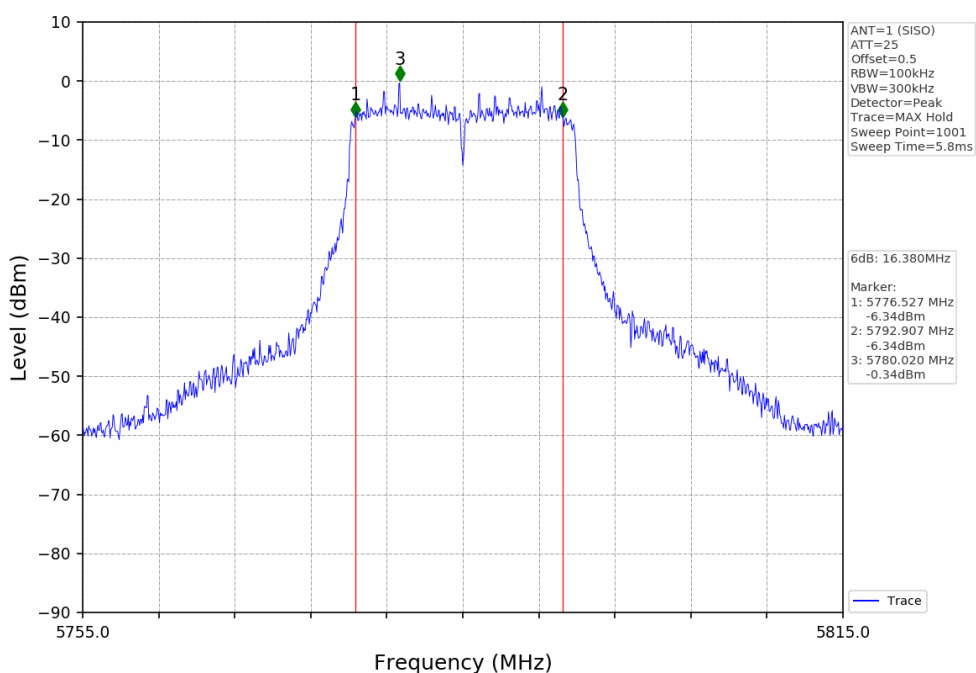
Bandwidth NTNV 802.11n(HT20) SISO 5805MHz ANT2



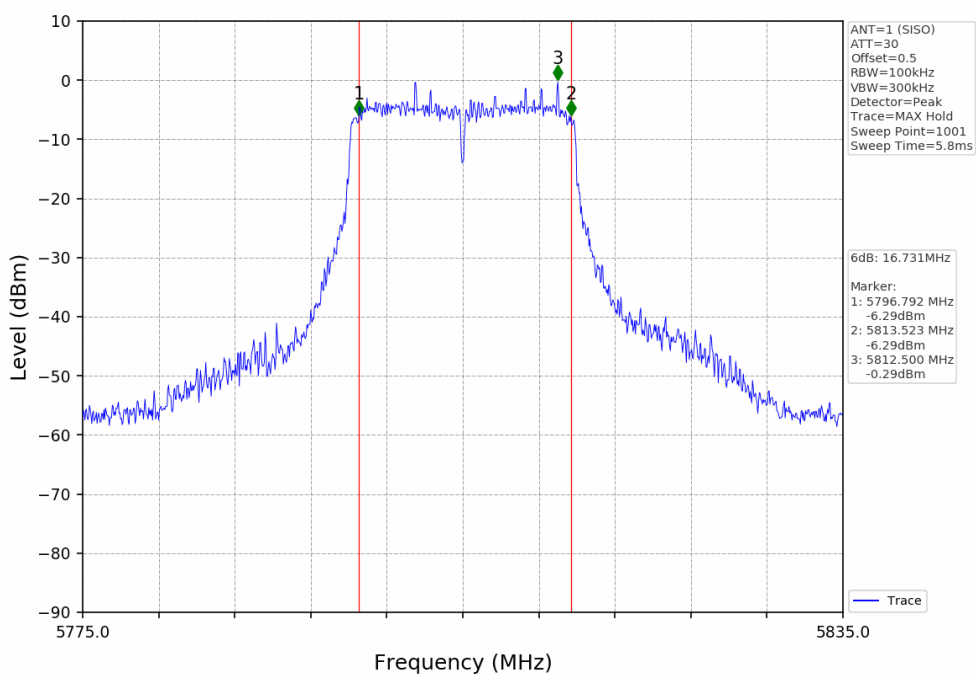
Bandwidth NTNV 802.11ac(VHT20) SISO 5745MHz ANT2



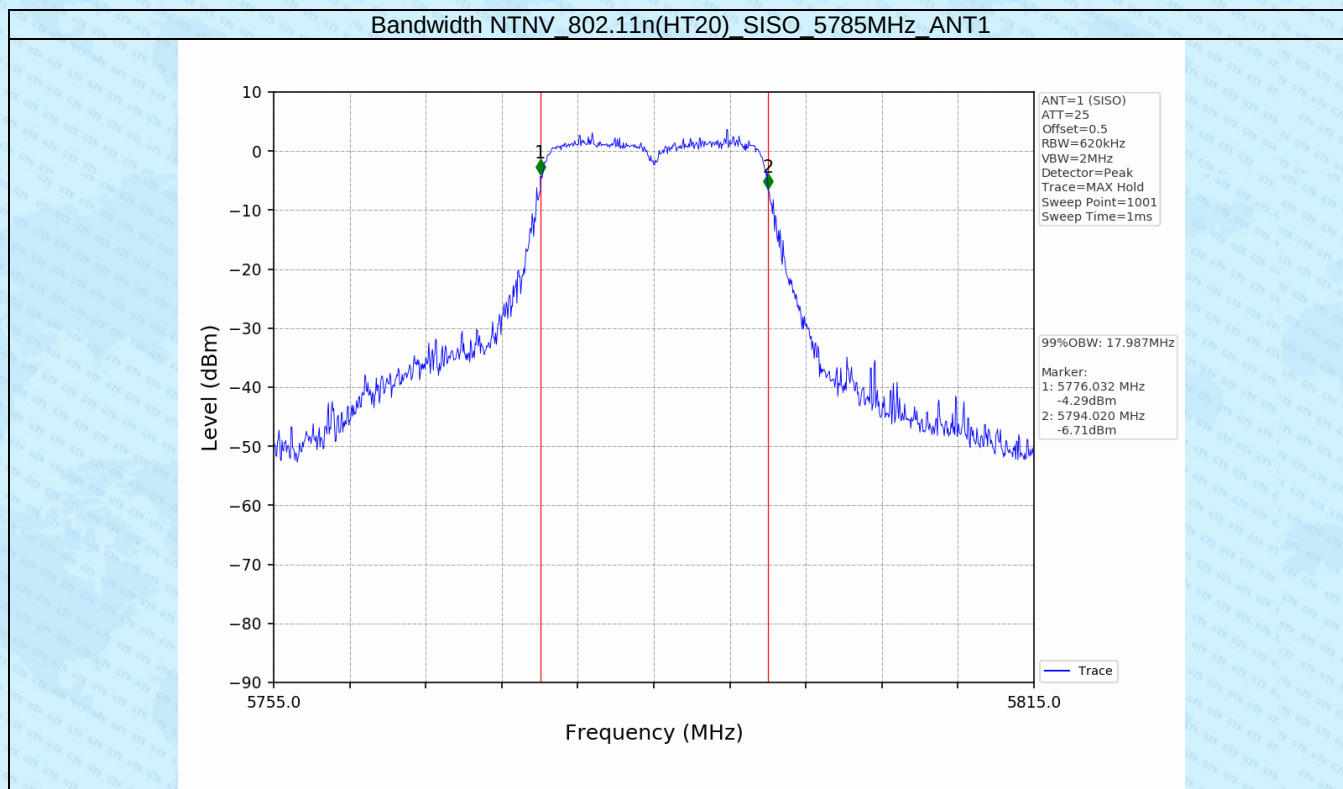
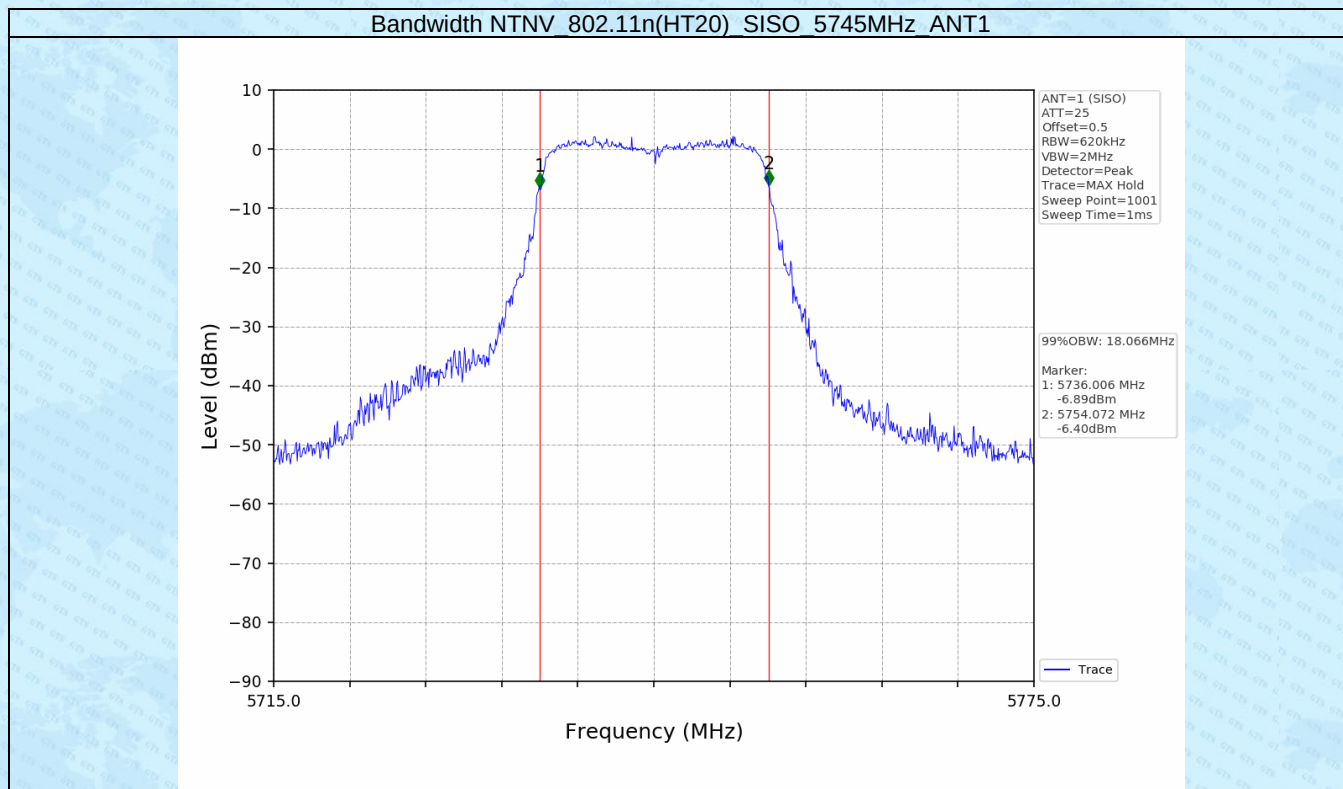
Bandwidth NTN 802.11ac(VHT20) SISO 5785MHz ANT2



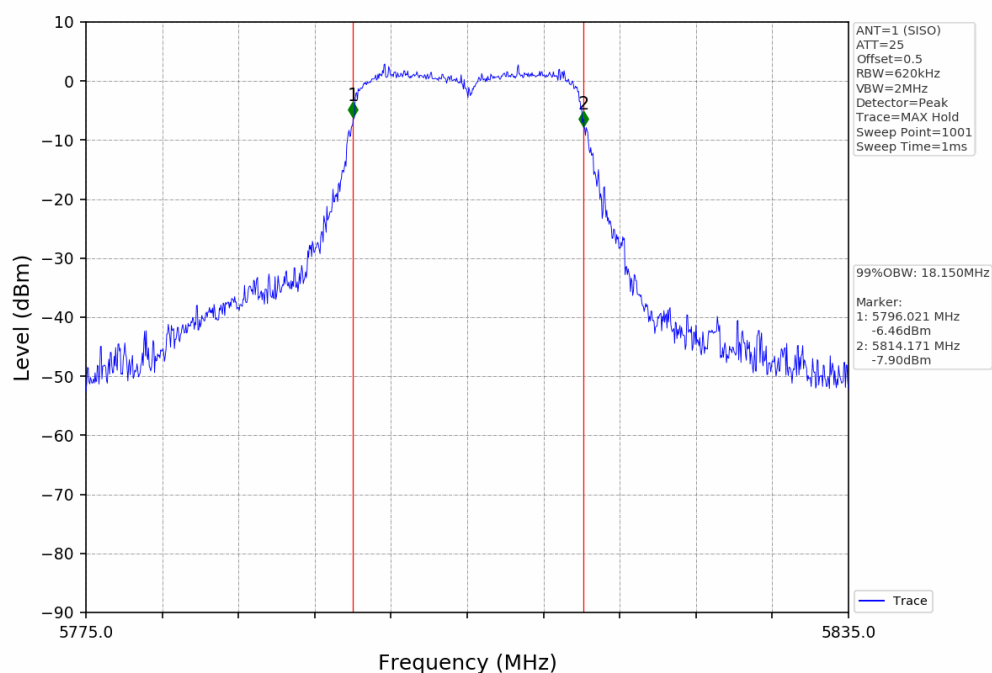
Bandwidth NTN 802.11ac(VHT20) SISO 5805MHz ANT2



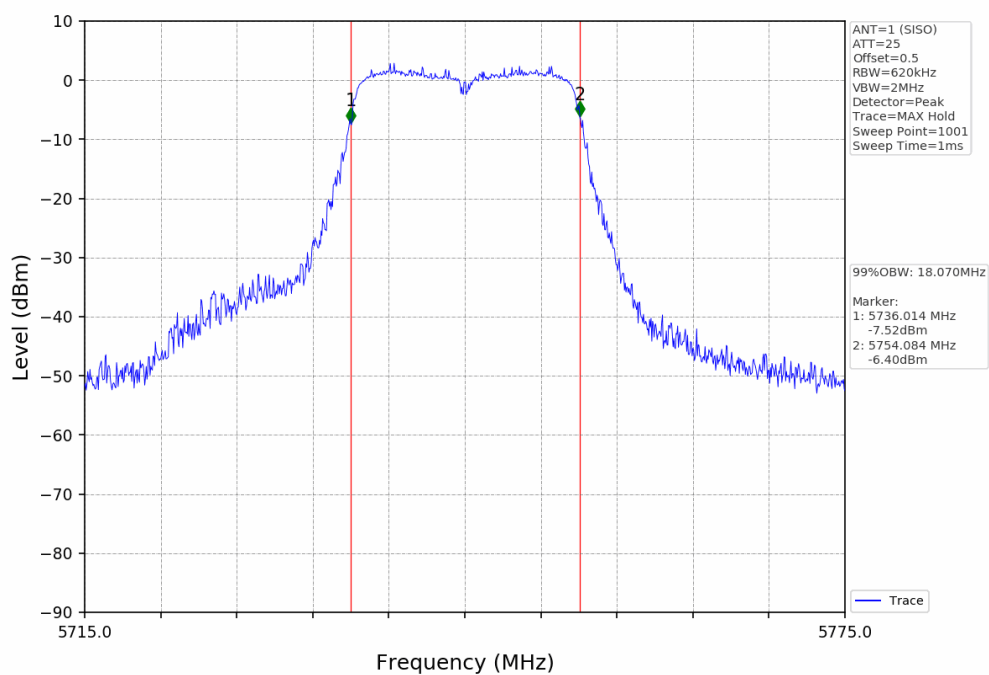
2.3 Test Graph - 99% Occupied Bandwidth



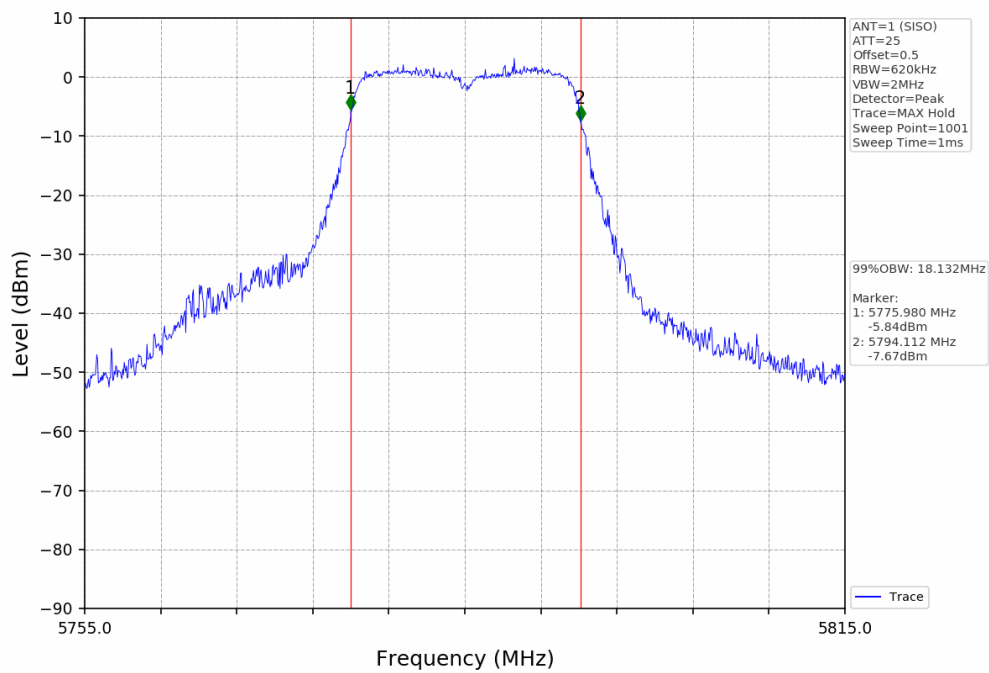
Bandwidth NTN 802.11n(HT20) SISO 5805MHz ANT1



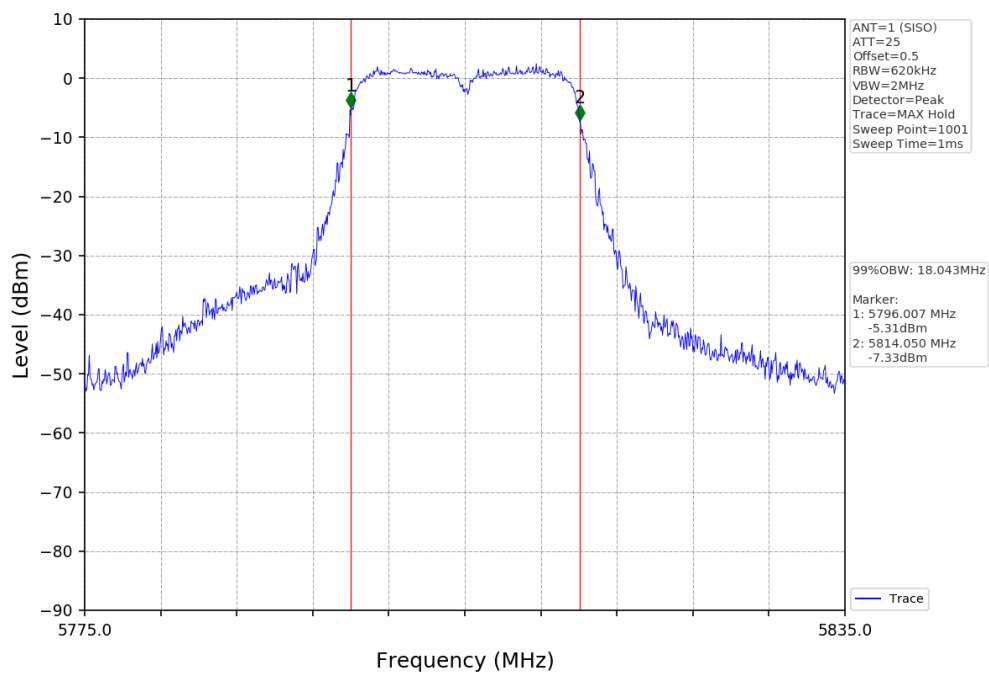
Bandwidth NTN 802.11ac(VHT20) SISO 5745MHz ANT1



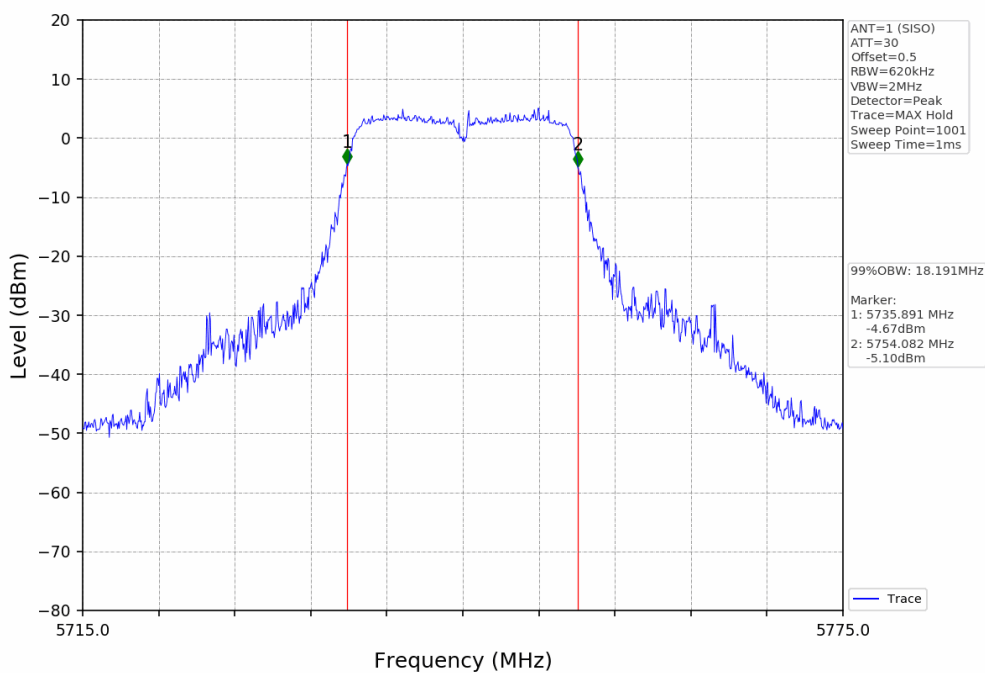
Bandwidth NTN 802.11ac(VHT20) SISO 5785MHz ANT1



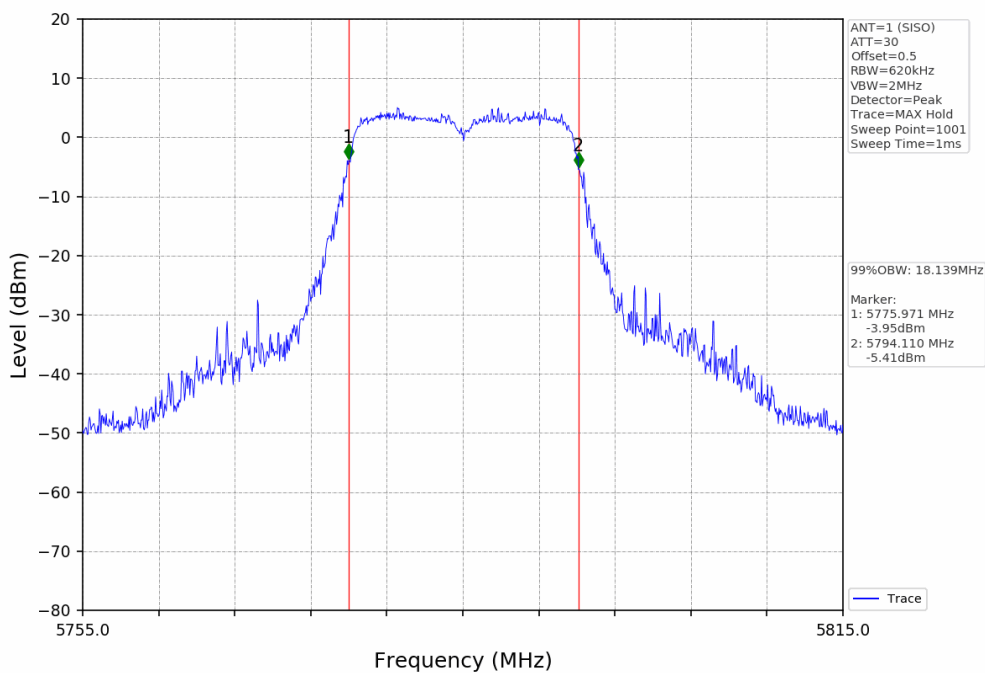
Bandwidth NTN 802.11ac(VHT20) SISO 5805MHz ANT1



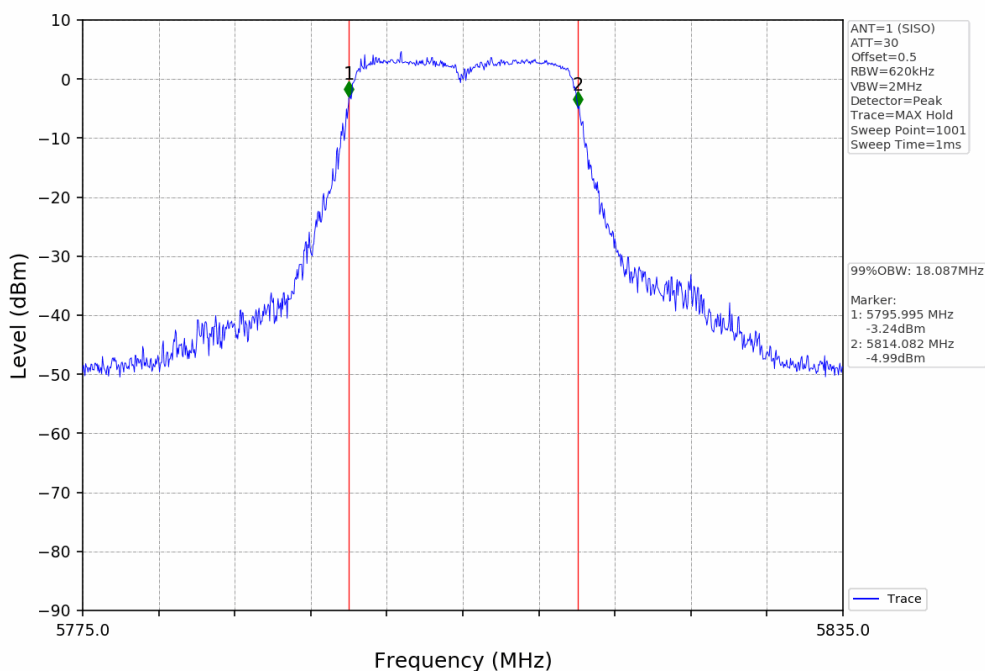
Bandwidth NTNV 802.11n(HT20) SISO 5745MHz ANT2



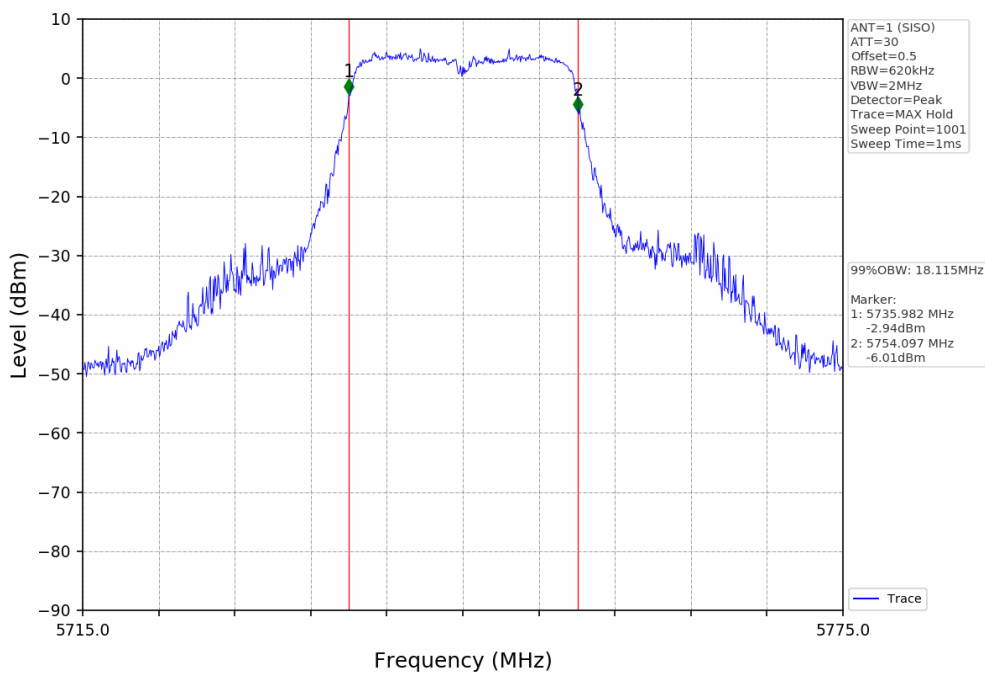
Bandwidth NTNV 802.11n(HT20) SISO 5785MHz ANT2



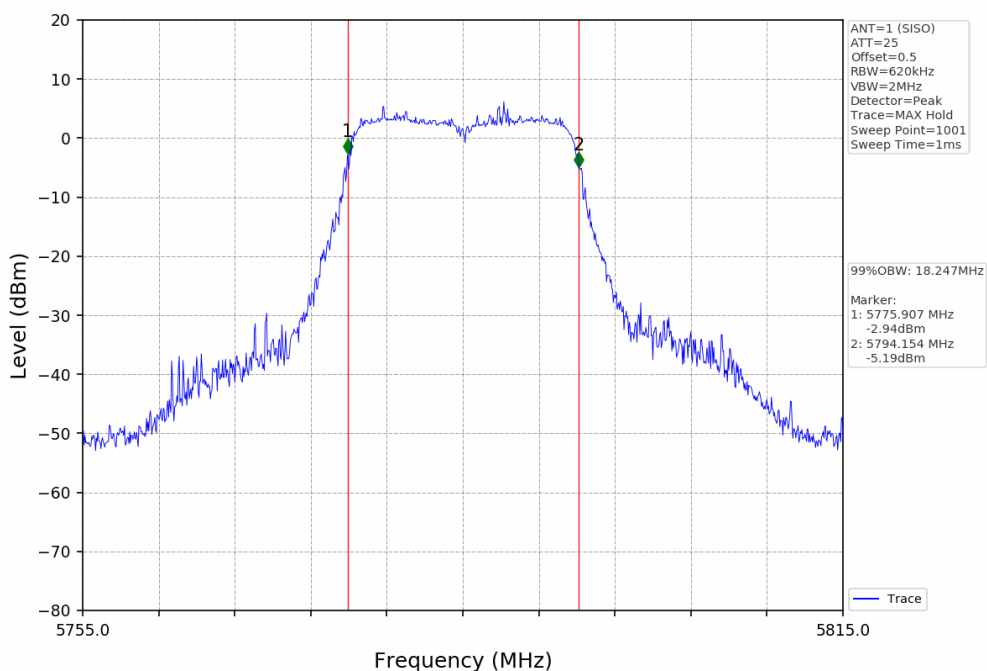
Bandwidth NTNV 802.11n(HT20) SISO 5805MHz ANT2



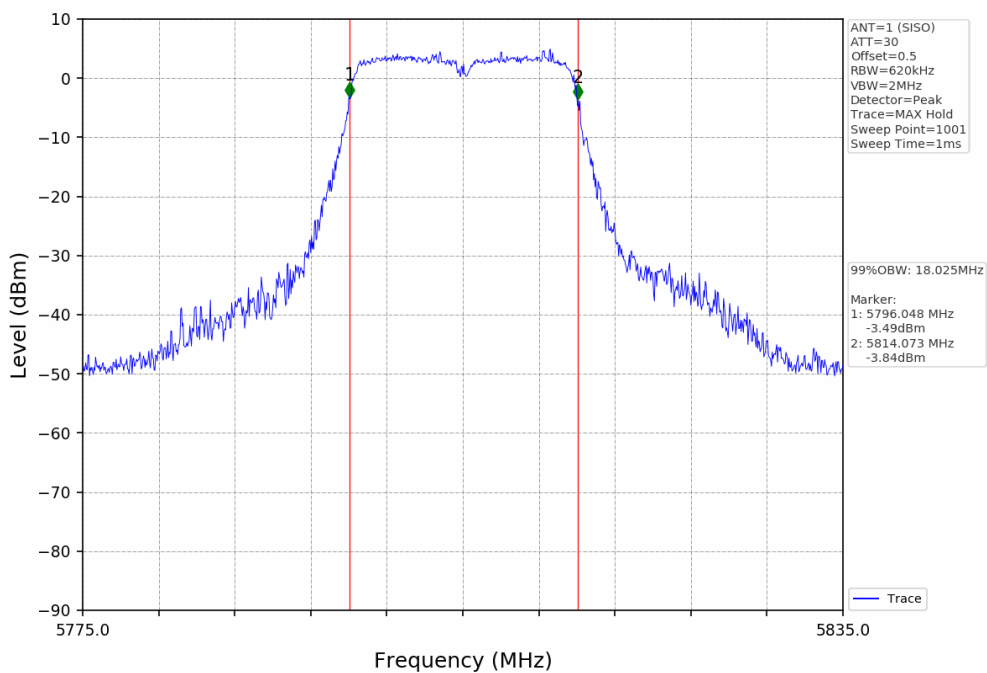
Bandwidth NTNV 802.11ac(VHT20) SISO 5745MHz ANT2



Bandwidth NTN 802.11ac(VHT20) SISO 5785MHz ANT2



Bandwidth NTN 802.11ac(VHT20) SISO 5805MHz ANT2



3. Maximum Conducted Output Power

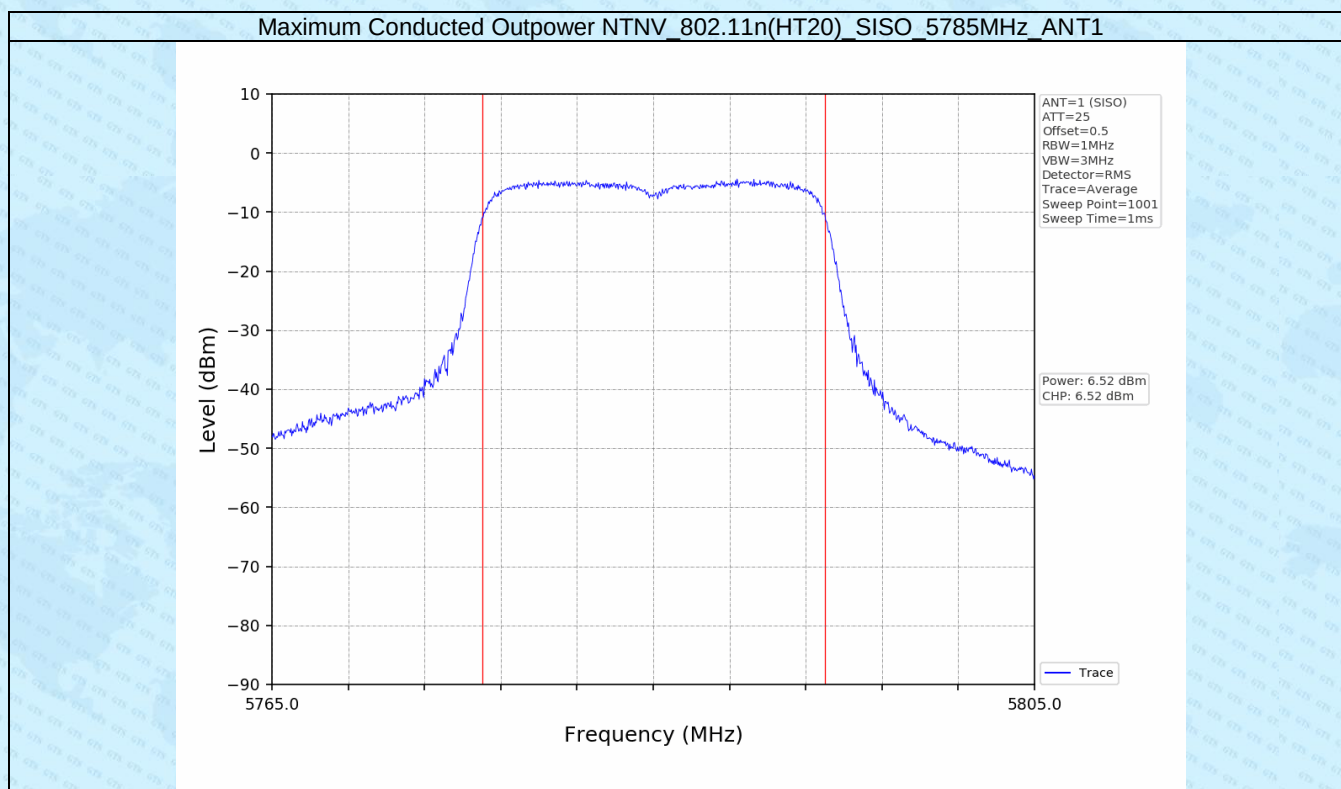
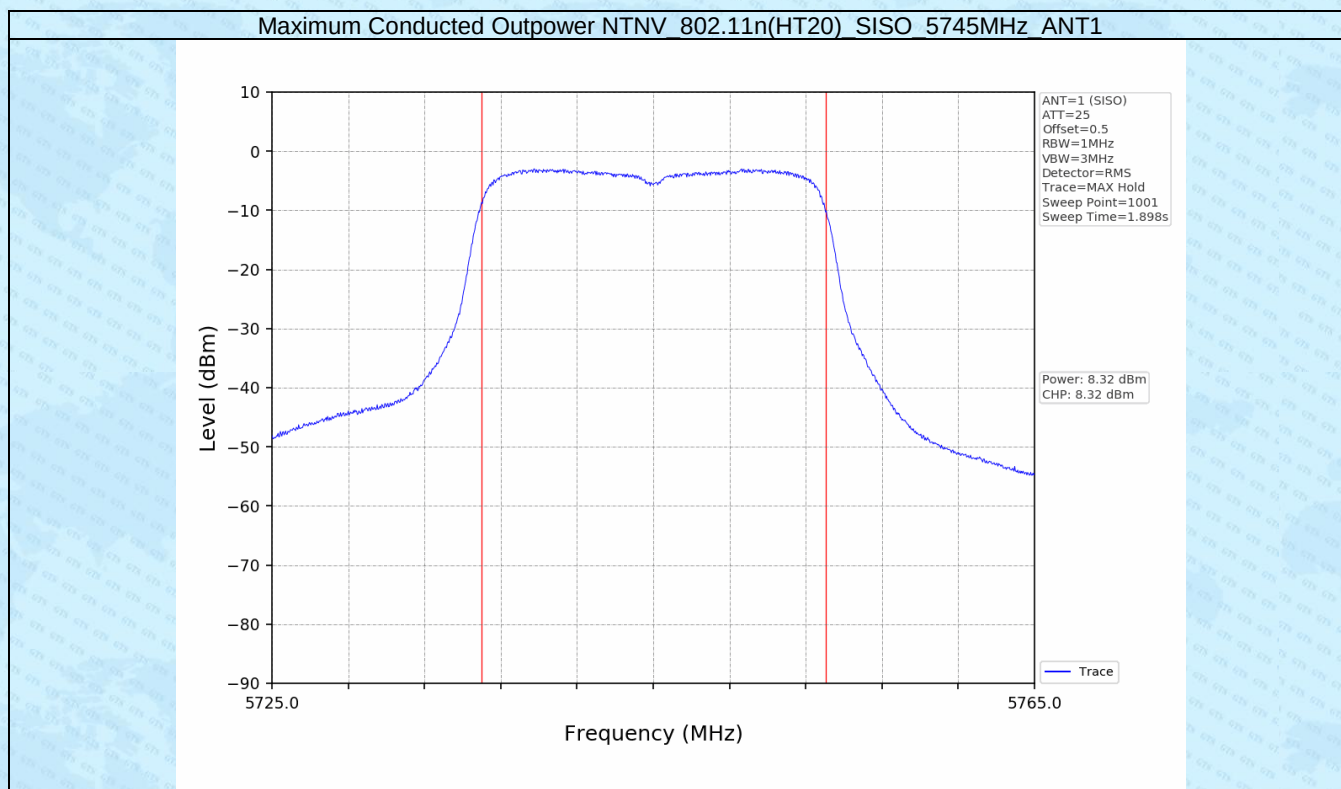
3.1 Test Result

Test Mode	Frequency (MHz)	Tx Type	Measured Output Power (dBm)	Limit (dBm)	Verdict
			Ant 1		
802.11n(HT20)	5745.0	SISO	8.32	≤30.00	PASS
	5785.0	SISO	6.52	≤30.00	PASS
	5805.0	SISO	8.29	≤30.00	PASS
802.11ac(VHT20)	5745.0	SISO	8.52	≤30.00	PASS
	5785.0	SISO	8.82	≤30.00	PASS
	5805.0	SISO	8.48	≤30.00	PASS

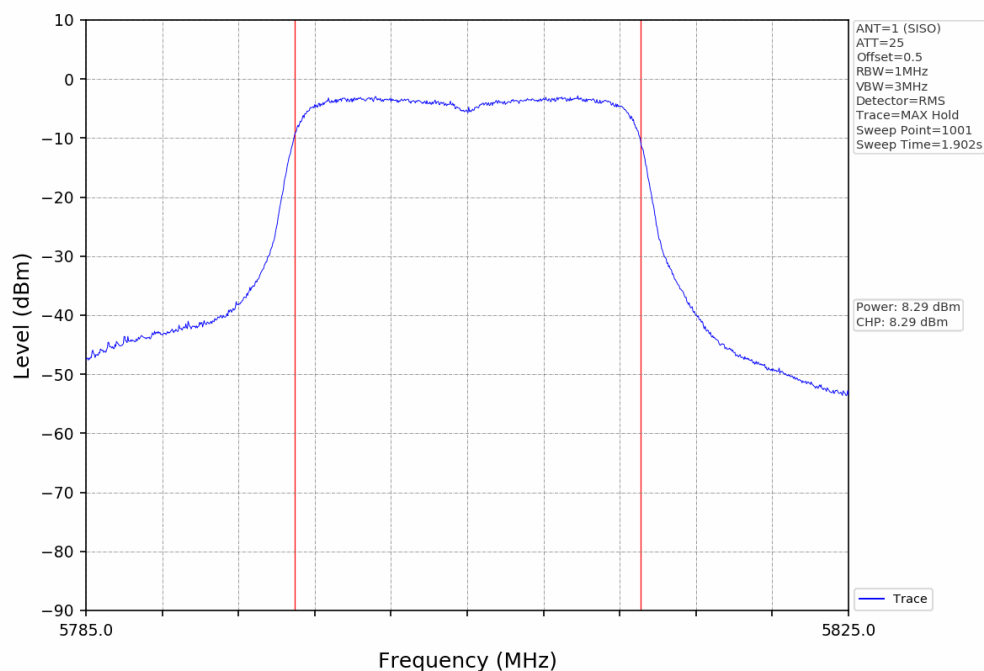
Test Mode	Frequency (MHz)	Tx Type	Measured Output Power (dBm)	Limit (dBm)	Verdict
			Ant 2		
802.11n(HT20)	5745.0	SISO	10.55	≤30.00	PASS
	5785.0	SISO	11.00	≤30.00	PASS
	5805.0	SISO	10.38	≤30.00	PASS
802.11ac(VHT20)	5745.0	SISO	10.79	≤30.00	PASS
	5785.0	SISO	10.51	≤30.00	PASS
	5805.0	SISO	11.00	≤30.00	PASS

Test Mode	Frequency (MHz)	Tx Type	Measured Output Power (dBm)	Limit (dBm)	Verdict
802.11n(HT20)	5745.0	MIMO	12.59	≤30.00	PASS
	5785.0	MIMO	12.32	≤30.00	PASS
	5805.0	MIMO	12.47	≤30.00	PASS
802.11ac(VHT20)	5745.0	MIMO	12.81	≤30.00	PASS
	5785.0	MIMO	12.76	≤30.00	PASS
	5805.0	MIMO	12.93	≤30.00	PASS

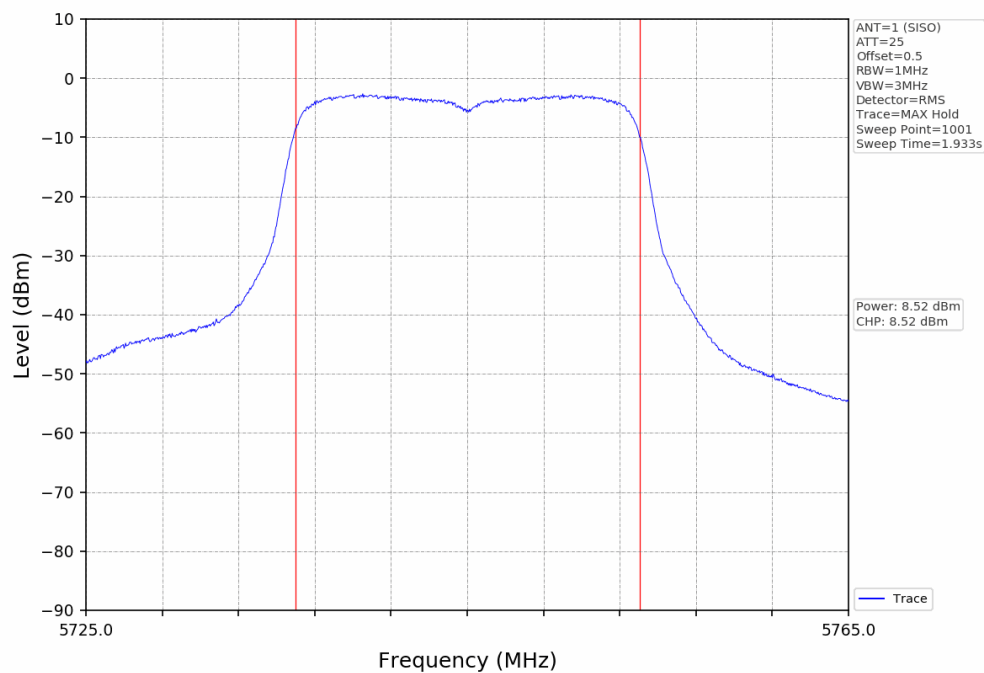
3.2 Test Graph



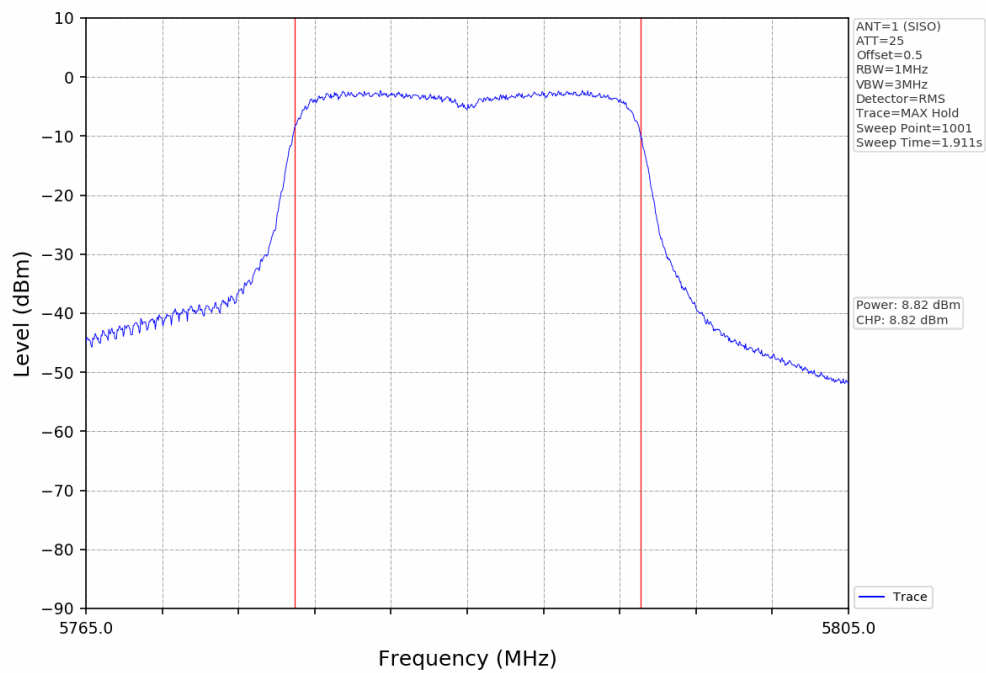
Maximum Conducted Outpower NTNV_802.11n(HT20)_SISO_5805MHz_ANT1



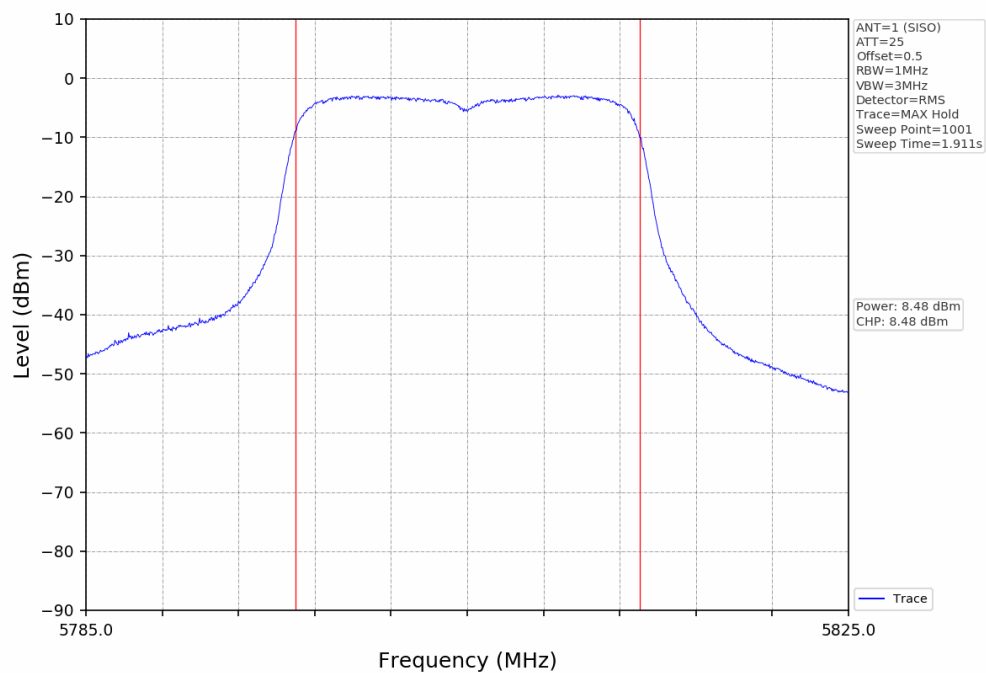
Maximum Conducted Outpower NTNV_802.11ac(VHT20)_SISO_5745MHz_ANT1



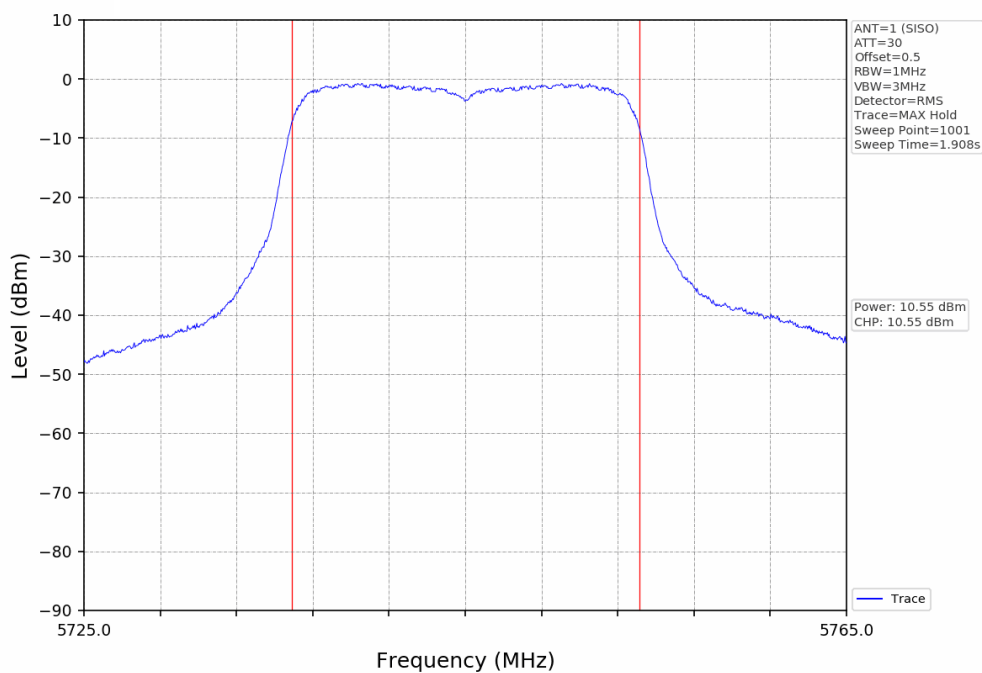
Maximum Conducted Outpower NTV 802.11ac(VHT20) SISO 5785MHz ANT1



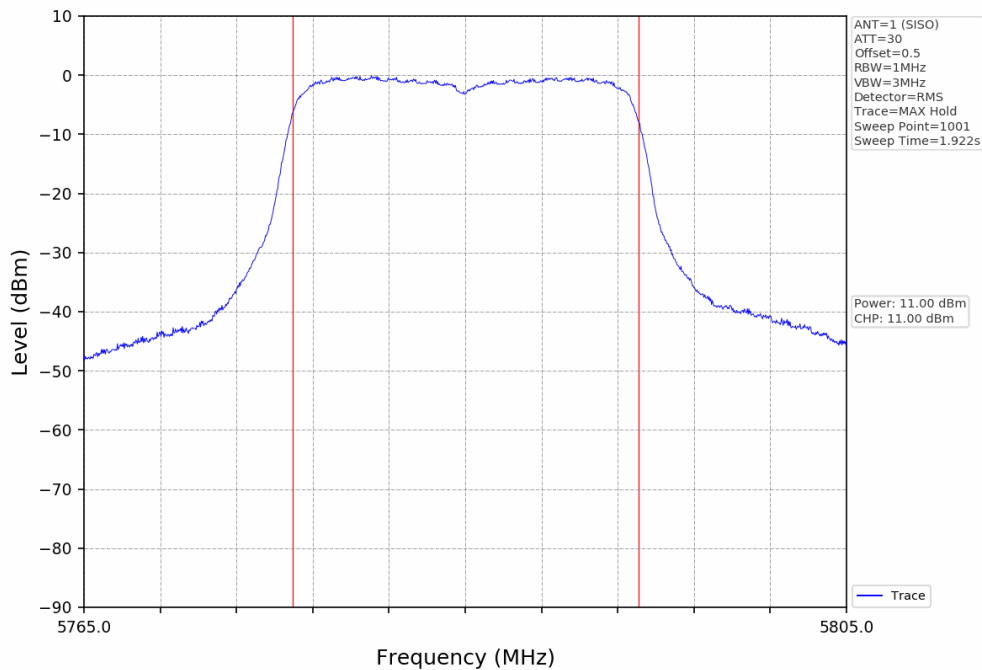
Maximum Conducted Outpower NTV 802.11ac(VHT20) SISO 5805MHz ANT1



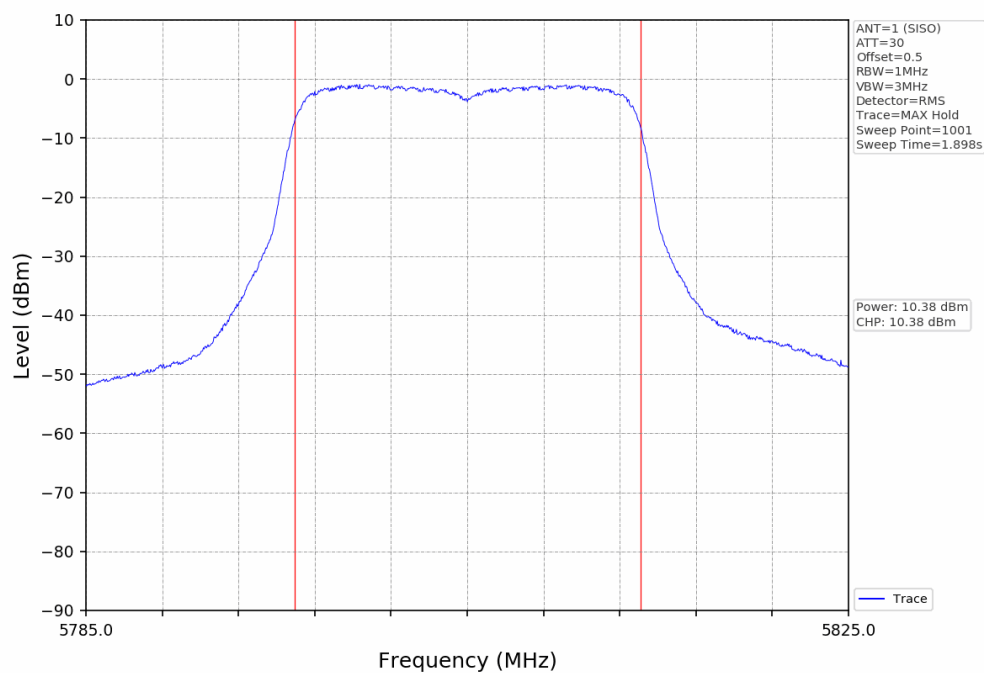
Maximum Conducted Outpower NTN 802.11n(HT20) SISO 5745MHz ANT2



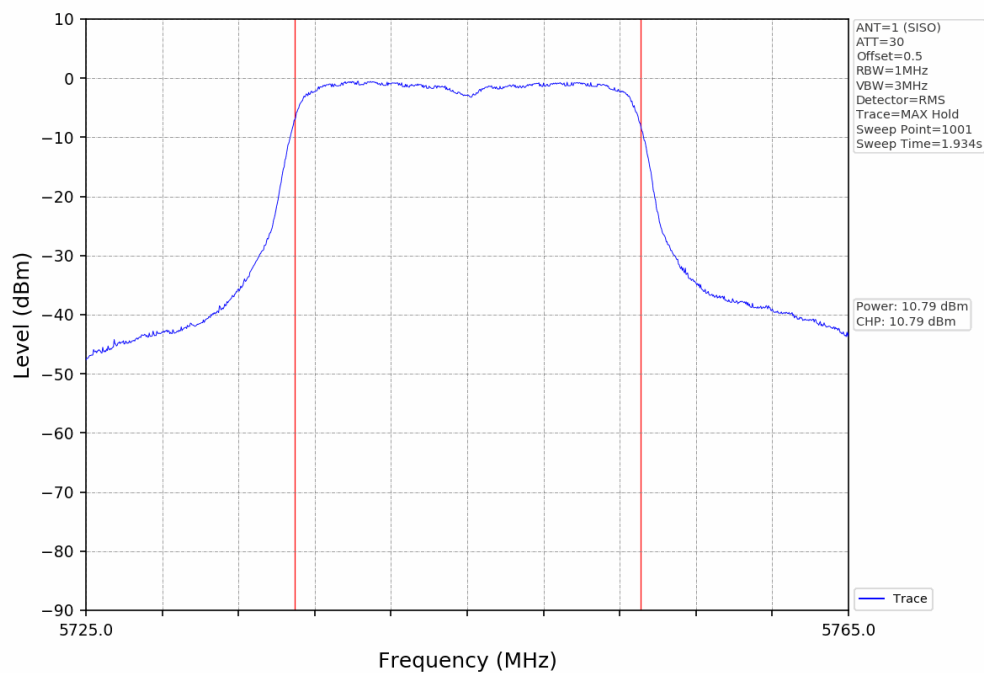
Maximum Conducted Outpower NTN 802.11n(HT20) SISO 5785MHz ANT2



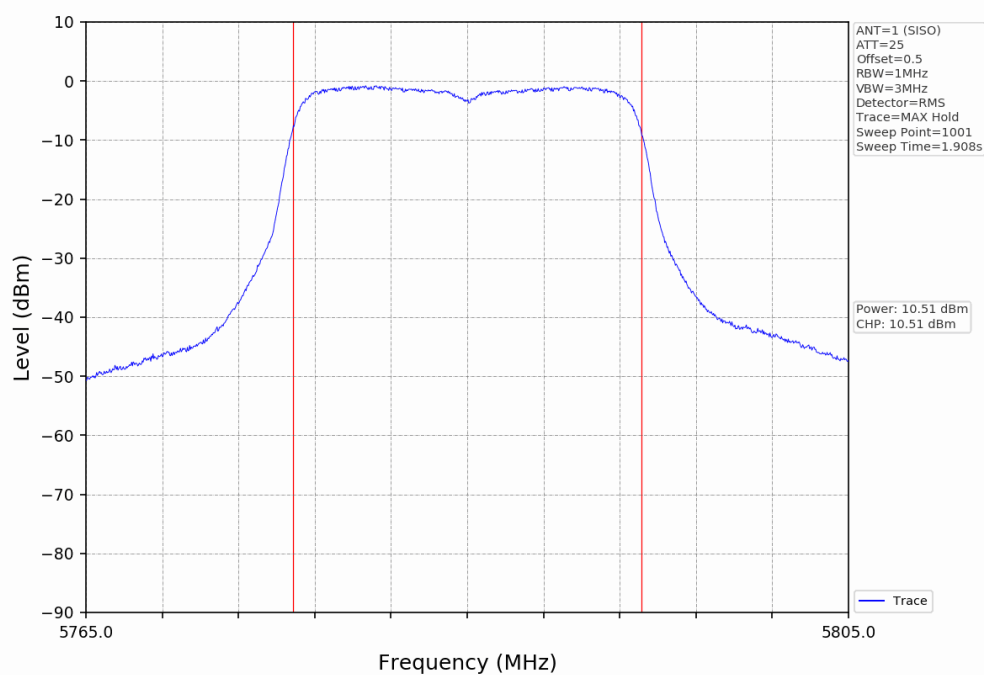
Maximum Conducted Outpower NTNV_802.11n(HT20)_SISO_5805MHz_ANT2



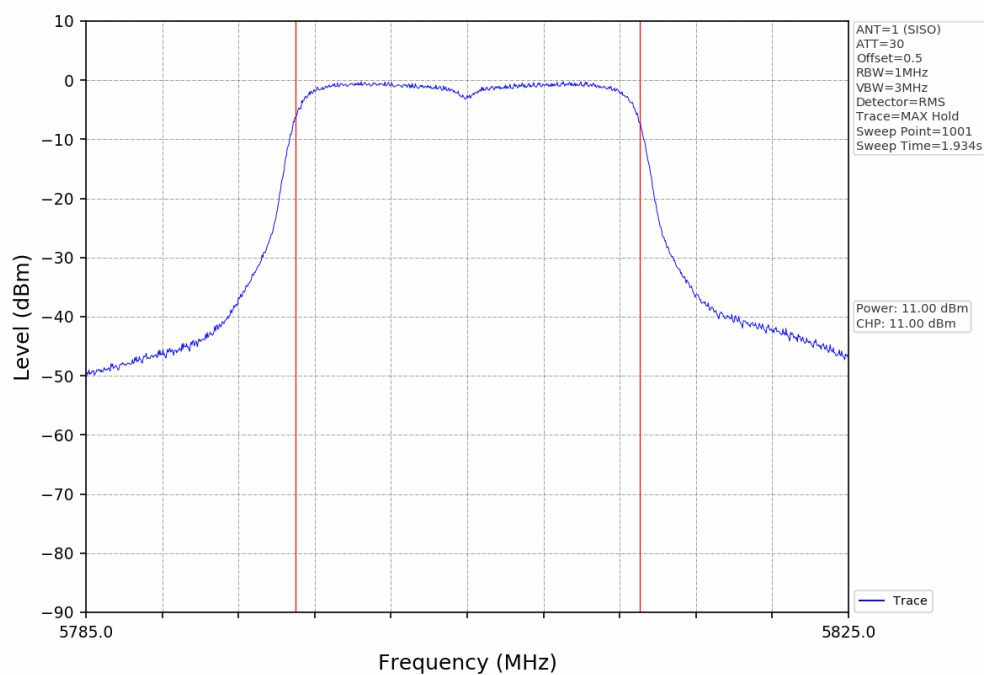
Maximum Conducted Outpower NTNV_802.11ac(VHT20)_SISO_5745MHz_ANT2



Maximum Conducted Outpower NTV 802.11ac(VHT20) SISO 5785MHz ANT2



Maximum Conducted Outpower NTV 802.11ac(VHT20) SISO 5805MHz ANT2



4. Maximum Power Spectral Density (PSD)

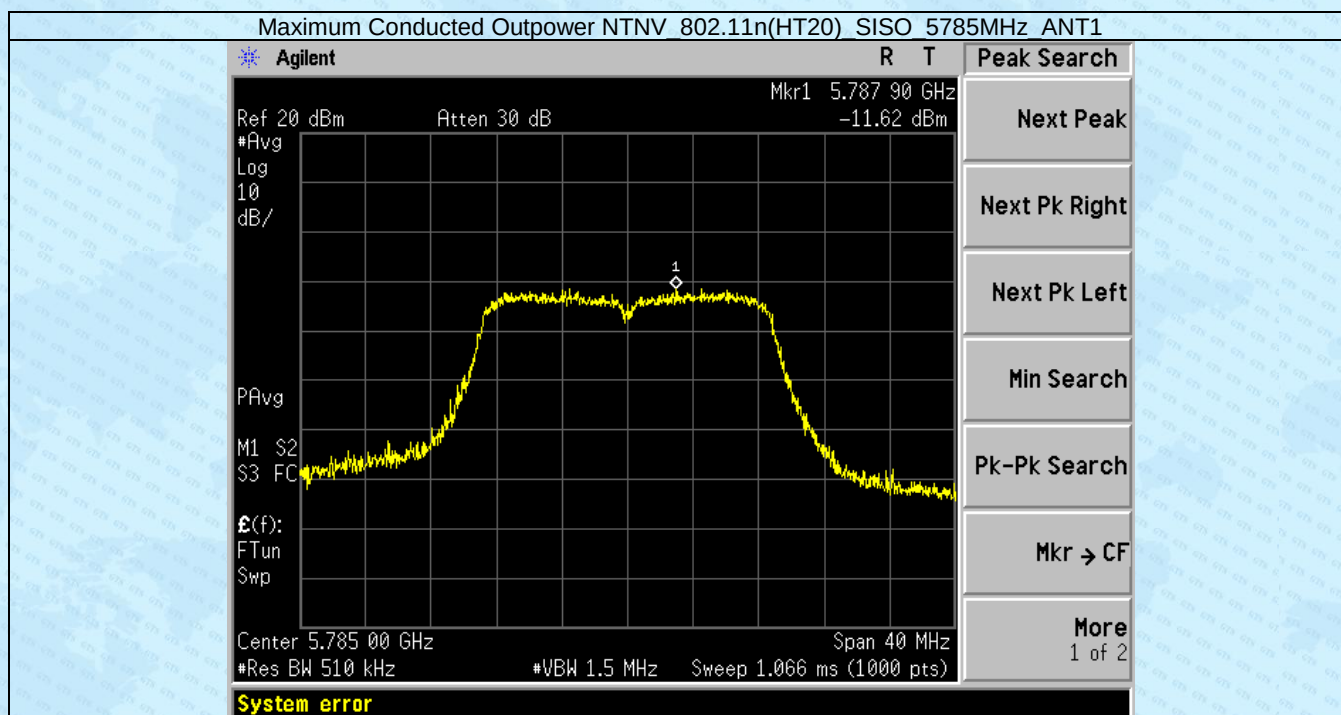
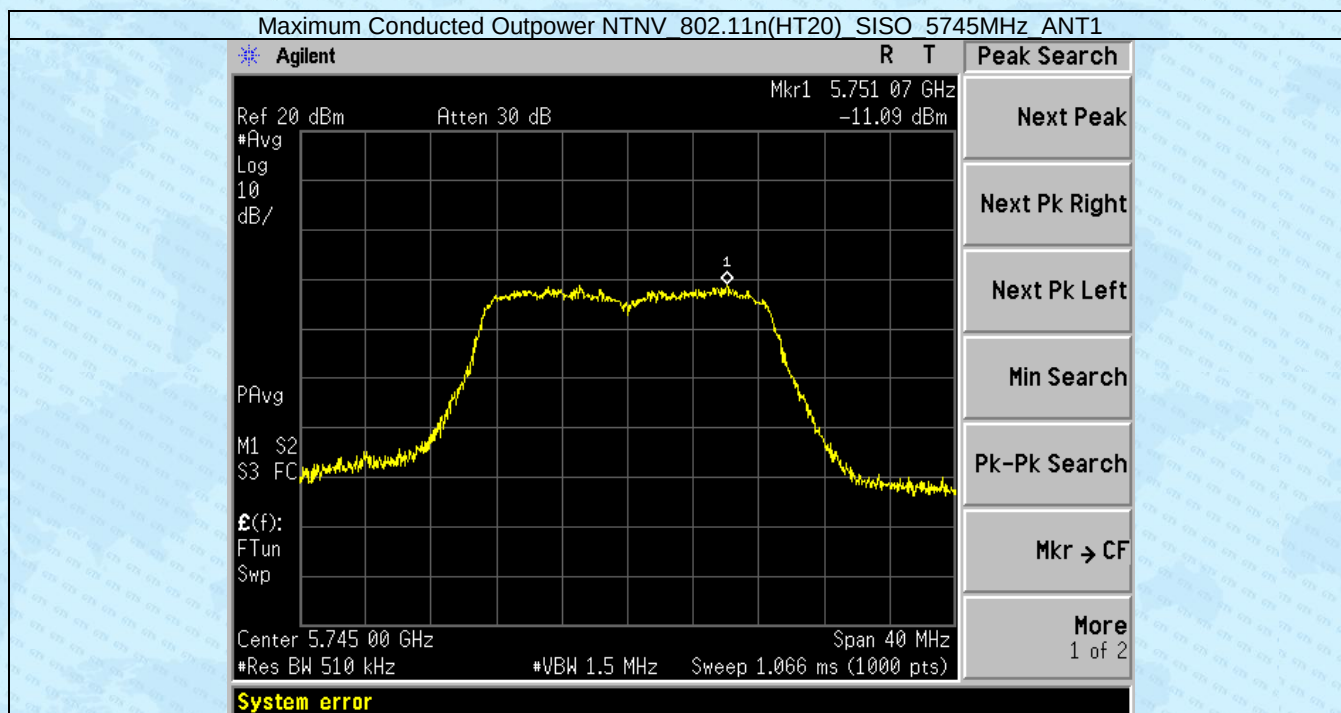
4.1 Test Result

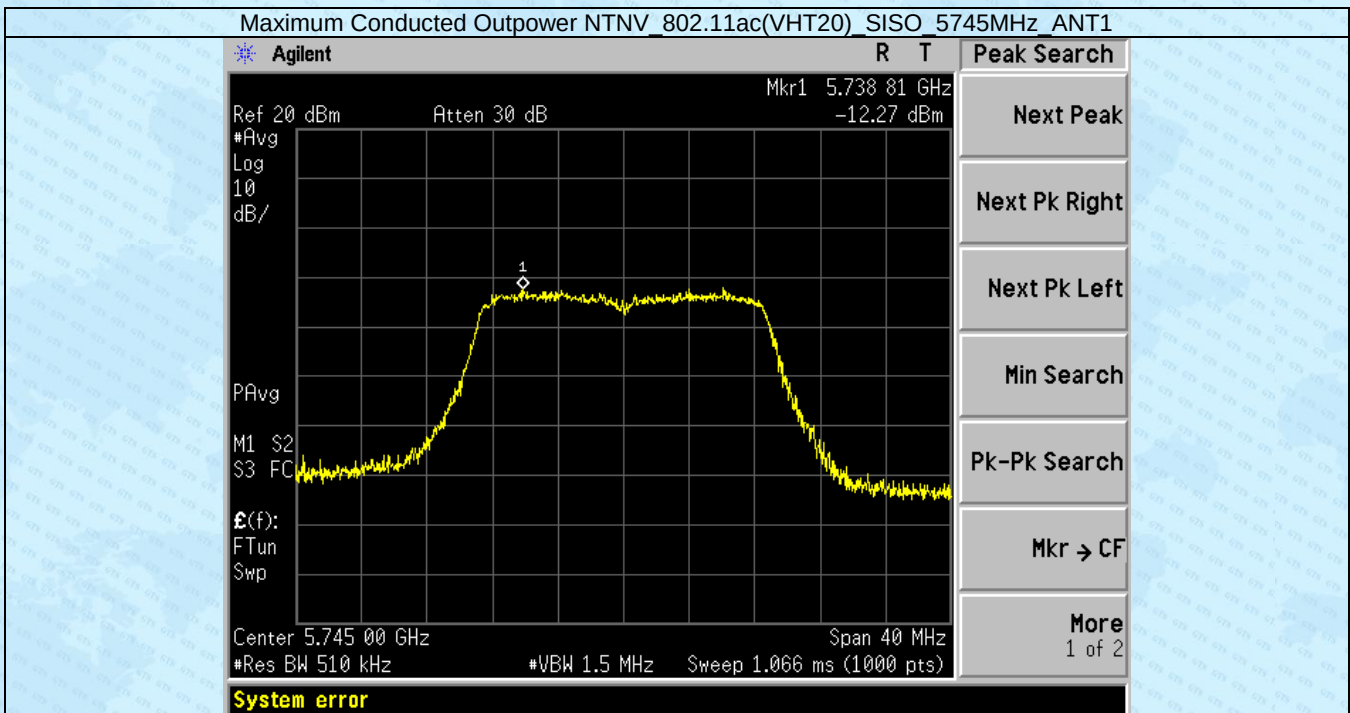
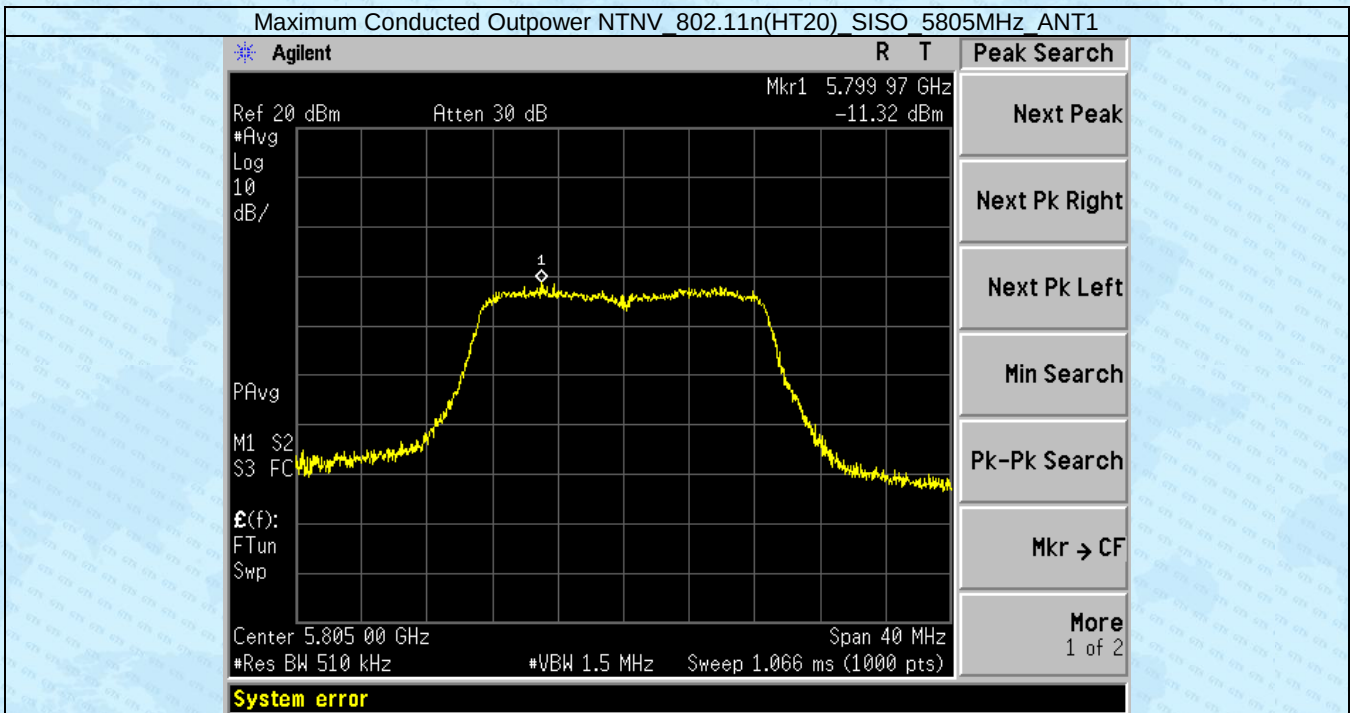
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)	Limits (dBm/MHz)	Verdict
			Ant 1		
802.11n(HT20)	5745.0	SISO	-11.09	≤30	PASS
	5785.0	SISO	-11.62	≤30	PASS
	5805.0	SISO	-11.32	≤30	PASS
802.11ac(VHT20)	5745.0	SISO	-12.27	≤30	PASS
	5785.0	SISO	-11.77	≤30	PASS
	5805.0	SISO	-11.49	≤30	PASS

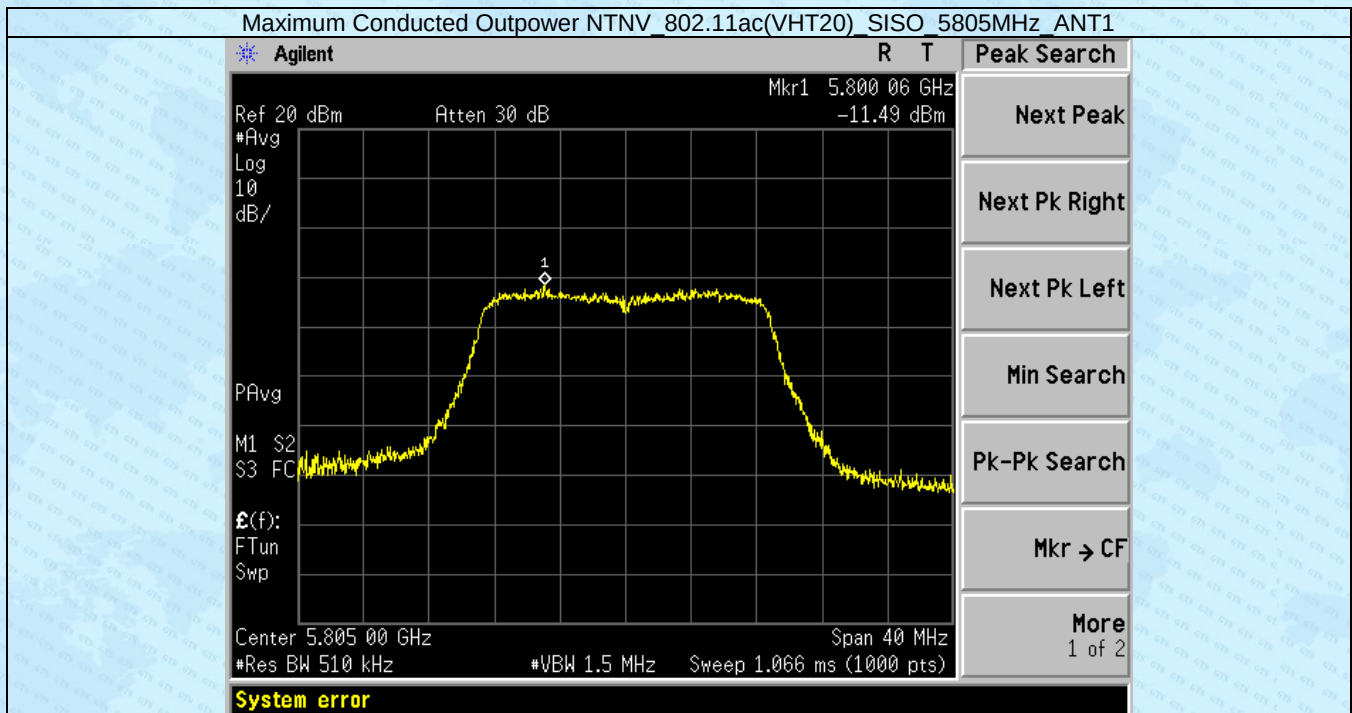
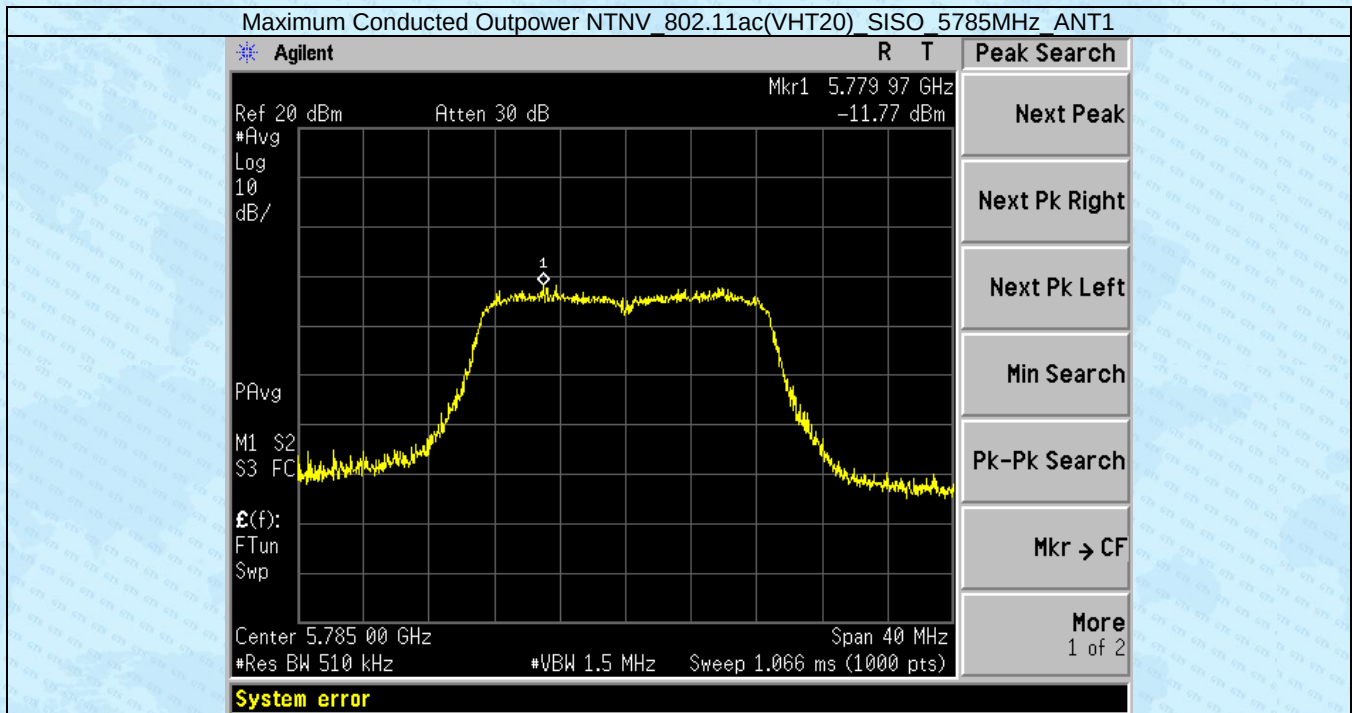
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)	Limits (dBm/MHz)	Verdict
			Ant 2		
802.11n(HT20)	5745.0	SISO	-8.34	≤30	PASS
	5785.0	SISO	-9.88	≤30	PASS
	5805.0	SISO	-9.72	≤30	PASS
802.11ac(VHT20)	5745.0	SISO	-9.18	≤30	PASS
	5785.0	SISO	-10.06	≤30	PASS
	5805.0	SISO	-9.85	≤30	PASS

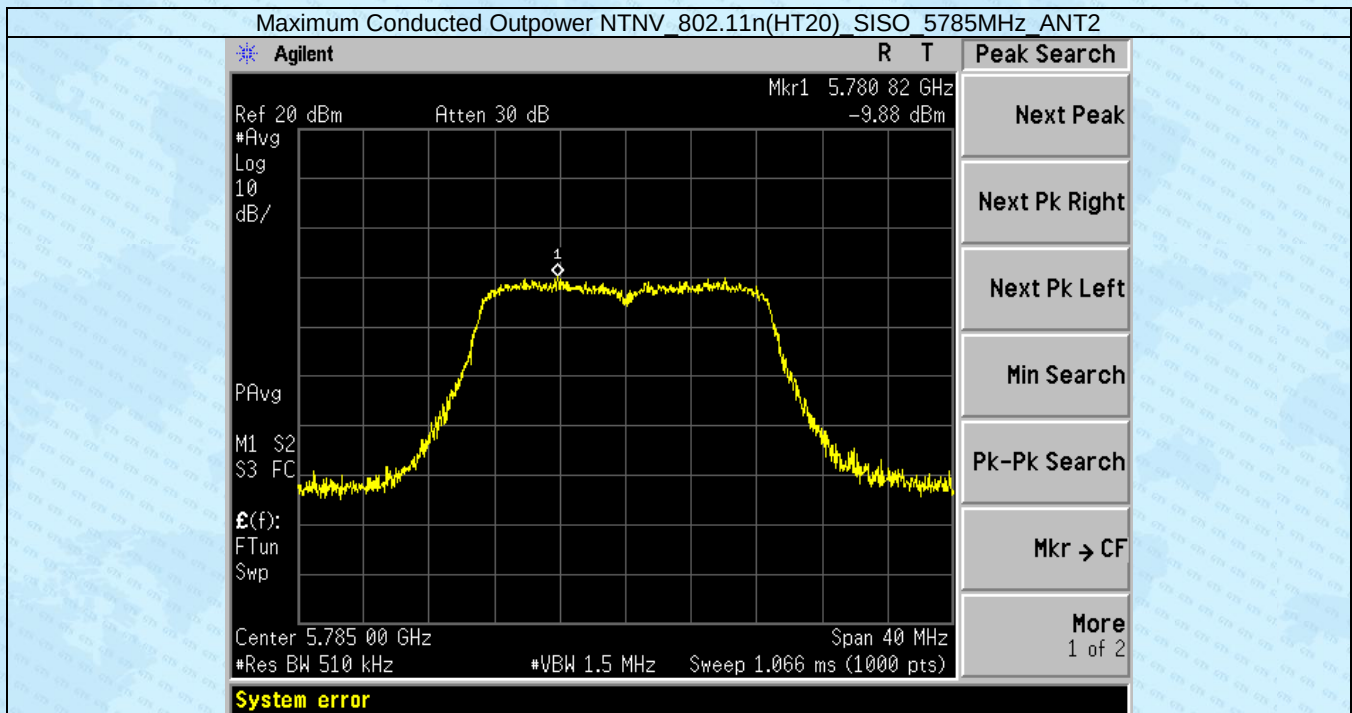
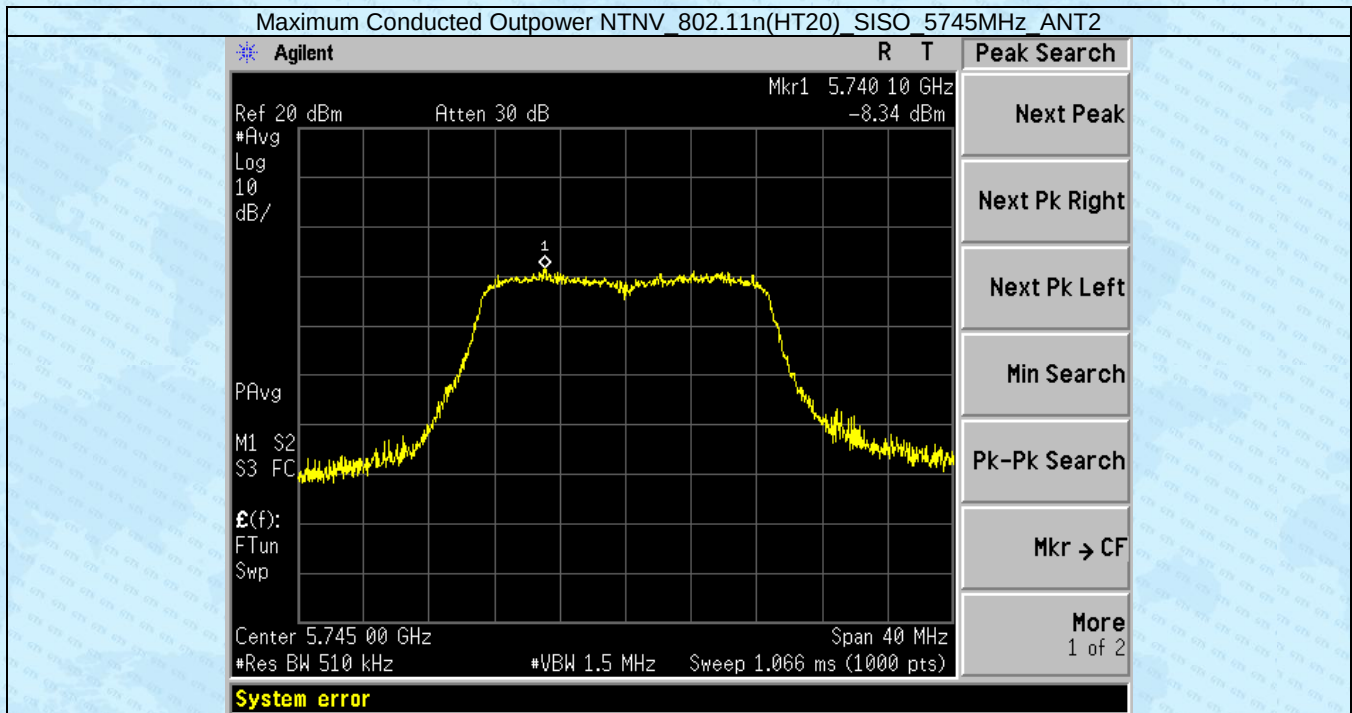
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/MHz)	Limits (dBm/MHz)	Verdict
802.11n(HT20)	5745.0	MIMO	-6.49	≤30	PASS
	5785.0	MIMO	-7.65	≤30	PASS
	5805.0	MIMO	-7.44	≤30	PASS
802.11ac(VHT20)	5745.0	MIMO	-7.45	≤30	PASS
	5785.0	MIMO	-7.82	≤30	PASS
	5805.0	MIMO	-7.58	≤30	PASS

4.2 Test Graph

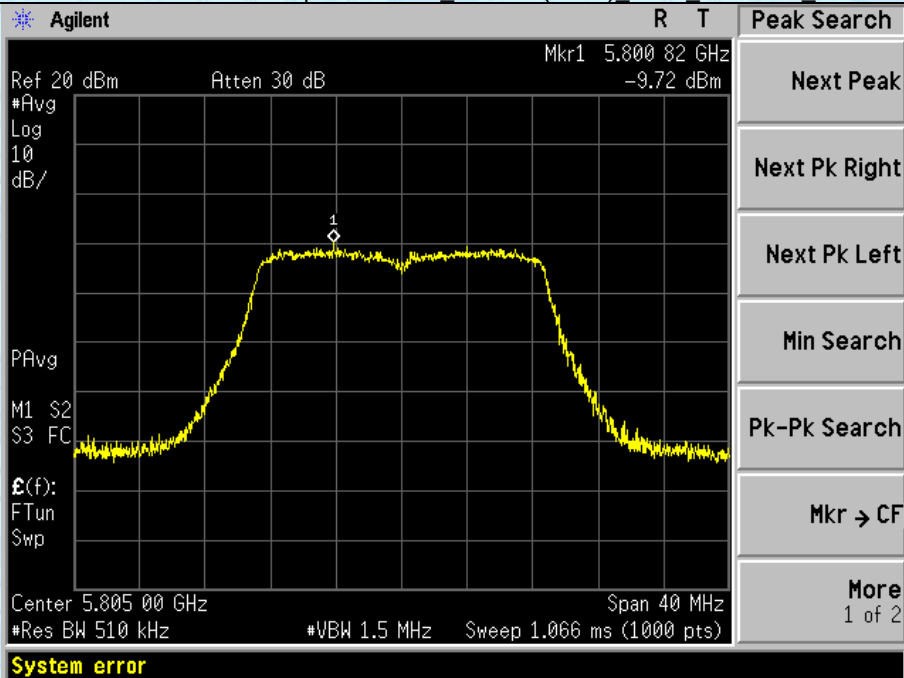




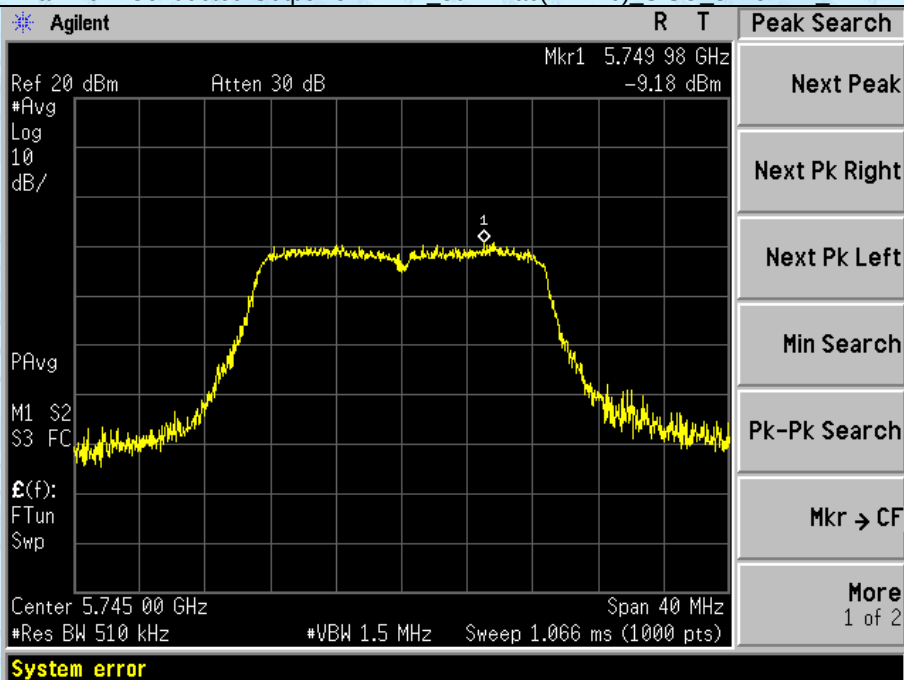




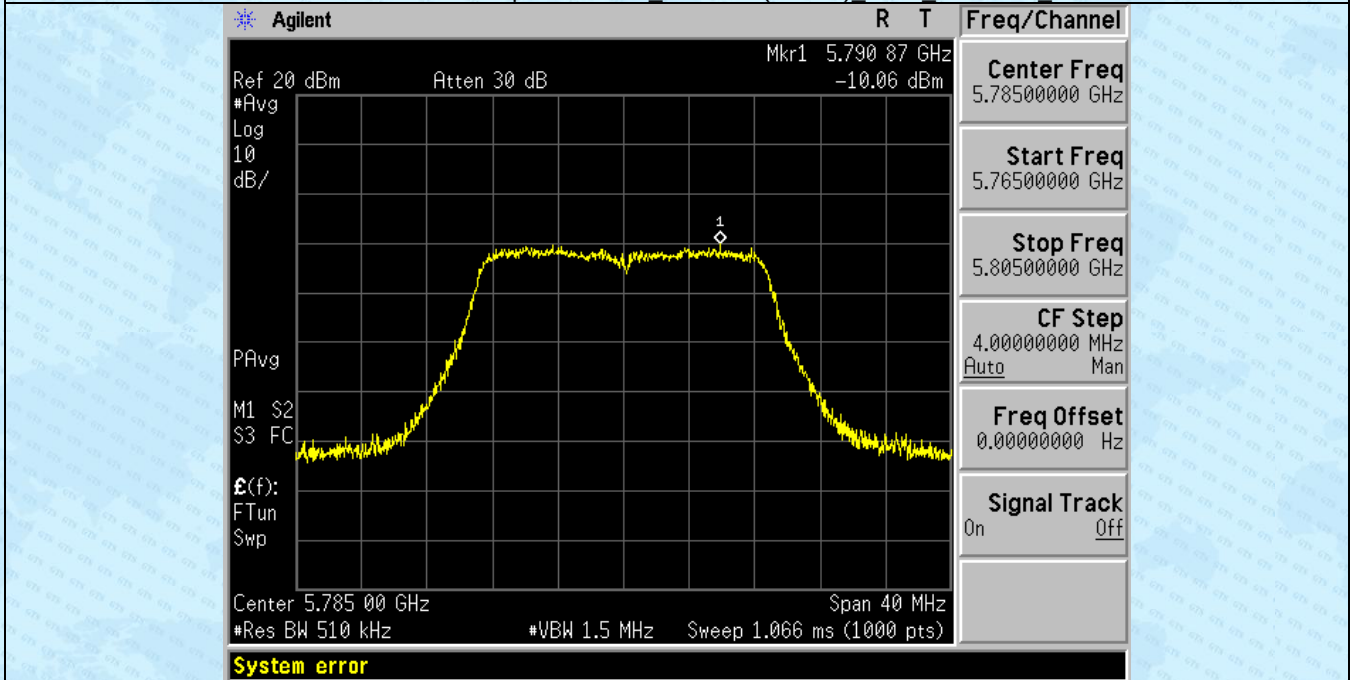
Maximum Conducted Outpower NTN_V_802.11n(HT20) SISO_5805MHz ANT2



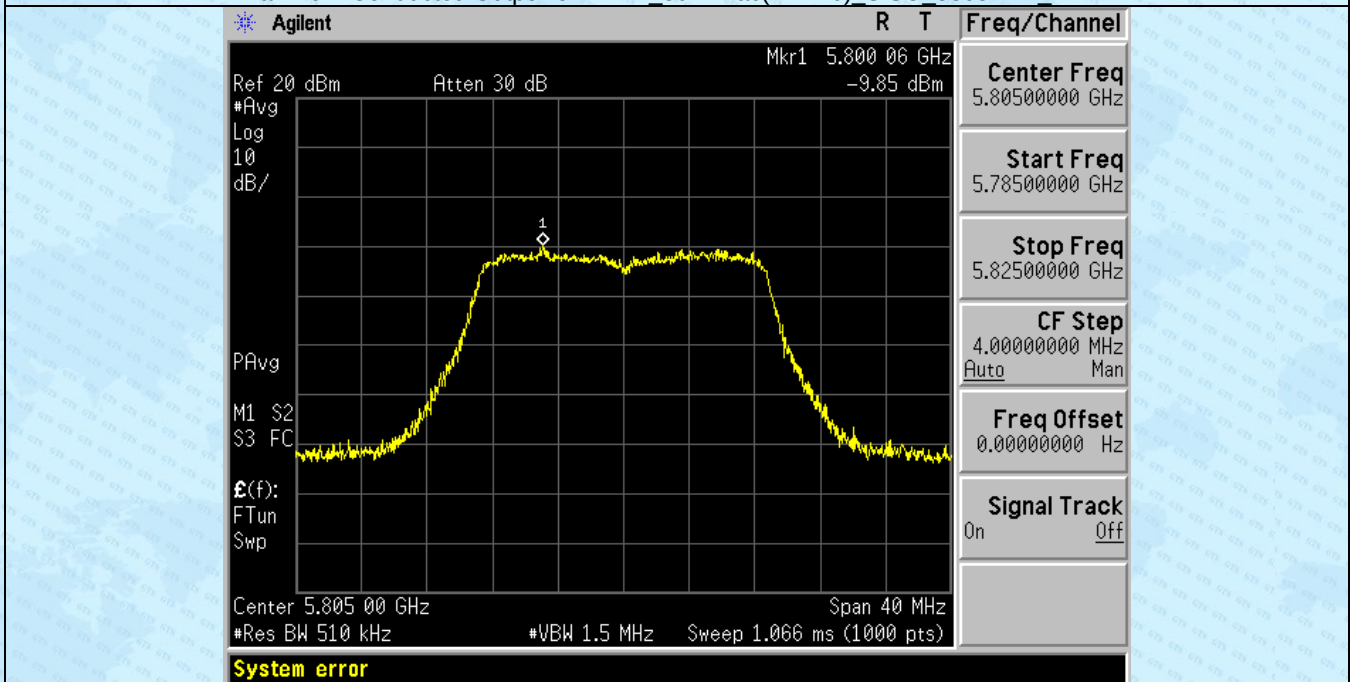
Maximum Conducted Outpower NTN_V_802.11ac(VHT20) SISO_5745MHz ANT2



Maximum Conducted Outpower NTV_802.11ac(VHT20) SISO_5785MHz ANT2



Maximum Conducted Outpower NTV_802.11ac(VHT20) SISO_5805MHz ANT2



5. Unwanted Emissions in Restricted Frequency Bands

5.1 Test Result

Test Mode	Test Frequency (MHz)	TX Type	ANT No.	Frequency (MHz)	Reading Level (dBm)	Antenna Gain (dBi)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
802.11n(HT20)	5745.0	SISO	1	5650.000	-53.31	2.00	43.89	74	-30.11	Peak
				5724.253	-35.18	2.00	62.02	74	-11.98	Peak
				5725.000	-40.67	2.00	56.53	74	-17.47	Peak
				11966.080	-55.55	2.00	41.65	54	-12.35	AVG
					-44.55	2.00	52.66	74	-21.34	Peak
				15293.440	-51.56	2.00	45.64	54	-8.36	AVG
					-41.76	2.00	55.44	74	-18.56	Peak
				17446.720	-49.34	2.00	47.86	54	-6.14	AVG
					-39.31	2.00	57.89	74	-16.11	Peak
				19874.560	-47.82	2.00	49.38	54	-4.62	AVG
	5785.0	SISO	1		-37.38	2.00	59.82	74	-14.18	Peak
				22125.760	-44.66	2.00	52.54	54	-1.46	AVG
					-34.59	2.00	62.61	74	-11.39	Peak
				24281.920	-39.92	2.00	57.28	54	3.28	AVG
					-29.51	2.00	67.69	74	-6.31	Peak
				10223.680	-56.47	2.00	40.73	54	-13.27	AVG
					-45.43	2.00	51.77	74	-22.23	Peak
				13429.120	-54.76	2.00	42.44	54	-11.56	AVG
					-43.92	2.00	53.27	74	-20.73	Peak
				15629.440	-51.06	2.00	46.14	54	-7.86	AVG
802.11ac(VHT20)	5805.0	SISO	1		-41.60	2.00	55.60	74	-18.40	Peak
				17558.080	-48.18	2.00	49.02	54	-4.98	AVG
					-38.29	2.00	58.91	74	-15.09	Peak
				20853.760	-44.43	2.00	52.77	54	-1.23	AVG
					-35.06	2.00	62.14	74	-11.86	Peak
				24139.840	-39.88	2.00	57.32	54	3.32	AVG
					-30.70	2.00	66.50	74	-7.50	Peak
				12388.480	-55.58	2.00	41.62	54	-12.38	AVG
					-44.81	2.00	52.39	74	-21.61	Peak
				14494.720	-53.15	2.00	44.05	54	-9.95	AVG
	5745.0	SISO	1		-42.33	2.00	54.87	74	-19.13	Peak
				16537.600	-52.17	2.00	45.03	54	-8.97	AVG
					-41.81	2.00	55.39	74	-18.61	Peak
				18617.920	-49.49	2.00	47.71	54	-6.29	AVG
					-39.01	2.00	58.19	74	-15.81	Peak
				20889.280	-45.55	2.00	51.65	54	-2.35	AVG
					-34.57	2.00	62.63	74	-11.37	Peak
				23752.000	-41.42	2.00	55.78	54	1.78	AVG
					-30.74	2.00	66.46	74	-7.54	Peak
				5650.000	-52.77	2.00	44.42	74	-29.57	Peak
	5785.0	SISO	1	5724.929	-33.23	2.00	63.97	74	-10.03	Peak
				5725.000	-38.23	2.00	58.97	74	-15.03	Peak
				7743.040	-57.71	2.00	39.49	54	-14.51	AVG
					-45.42	2.00	51.78	74	-22.22	Peak
				12061.120	-55.79	2.00	41.41	54	-12.59	AVG
					-44.59	2.00	52.61	74	-21.39	Peak
				15167.680	-51.50	2.00	45.70	54	-8.30	AVG
					-41.39	2.00	55.81	74	-18.19	Peak
				18476.800	-48.91	2.00	48.29	54	-5.71	AVG
					-39.37	2.00	57.83	74	-16.17	Peak
				20512.960	-44.66	2.00	52.54	54	-1.46	AVG
	5745.0	SISO	1		-34.89	2.00	62.31	74	-11.69	Peak
				24146.560	-40.59	2.00	56.61	54	2.61	AVG
	5785.0	SISO	1		-30.46	2.00	66.74	74	-7.26	Peak
				11296.960	-56.52	2.00	40.68	54	-13.32	AVG

					-45.38	2.00	51.82	74	-22.18	Peak
				13340.800	-55.34	2.00	41.86	54	-12.14	AVG
					-44.02	2.00	53.18	74	-20.82	Peak
				15680.320	-51.46	2.00	45.74	54	-8.26	AVG
					-41.22	2.00	55.98	74	-18.02	Peak
				18215.680	-48.71	2.00	48.49	54	-5.51	AVG
					-38.41	2.00	58.80	74	-15.21	Peak
				20845.120	-45.02	2.00	52.18	54	-1.82	AVG
					-34.49	2.00	62.71	74	-11.29	Peak
				24209.920	-40.32	2.00	56.88	54	2.88	AVG
					-31.35	2.00	65.85	74	-8.15	Peak
	5805.0	SISO	1	12969.280	-55.66	2.00	41.54	54	-12.46	AVG
					-44.12	2.00	53.08	74	-20.92	Peak
				15215.680	-51.31	2.00	45.89	54	-8.11	AVG
					-41.87	2.00	55.34	74	-18.66	Peak
				17509.120	-48.92	2.00	48.28	54	-5.72	AVG
					-38.94	2.00	58.26	74	-15.74	Peak
				20004.160	-47.30	2.00	49.90	54	-4.10	AVG
					-38.37	2.00	58.83	74	-15.17	Peak
				22024.000	-45.02	2.00	52.18	54	-1.82	AVG
					-34.86	2.00	62.34	74	-11.66	Peak
				24314.560	-39.96	2.00	57.24	54	3.24	AVG
					-30.38	2.00	66.82	74	-7.18	Peak
	802.11n(HT20)	SISO	2	5650.000	-48.54	2.00	48.66	74	-25.34	Peak
				5724.515	-27.56	2.00	69.64	74	-4.36	Peak
				5725.000	-35.47	2.00	61.73	74	-12.27	Peak
					-51.53	2.00	45.67	54	-8.33	AVG
				12701.440	-39.80	2.00	57.40	74	-16.60	Peak
					-47.78	2.00	49.42	54	-4.58	AVG
				15313.600	-38.04	2.00	59.16	74	-14.84	Peak
					-44.70	2.00	52.50	54	-1.50	AVG
				17651.200	-34.94	2.00	62.26	74	-11.74	Peak
					-43.61	2.00	53.59	54	-0.41	AVG
				19893.760	-32.95	2.00	64.25	74	-9.75	Peak
					-40.51	2.00	56.69	54	2.69	AVG
				22093.120	-31.26	2.00	65.94	74	-8.06	Peak
					-35.59	2.00	61.61	54	7.61	AVG
				24304.000	-26.55	2.00	70.65	74	-3.35	Peak
					-51.45	2.00	45.75	54	-8.25	AVG
				12794.560	-40.58	2.00	56.62	74	-17.38	Peak
					-47.44	2.00	49.76	54	-4.24	AVG
				15168.640	-38.20	2.00	59.00	74	-15.00	Peak
					-44.82	2.00	52.38	54	-1.62	AVG
				17130.880	-35.38	2.00	61.82	74	-12.18	Peak
					-43.32	2.00	53.88	54	-0.12	AVG
				20053.120	-33.48	2.00	63.72	74	-10.29	Peak
					-40.86	2.00	56.34	54	2.34	AVG
				22025.920	-30.77	2.00	66.44	74	-7.57	Peak
					-35.76	2.00	61.44	54	7.44	AVG
				24299.200	-26.57	2.00	70.63	74	-3.37	Peak
	5805.0	SISO	2		-53.74	2.00	43.46	54	-10.54	AVG
				9722.560	-42.73	2.00	54.47	74	-19.53	Peak
					-51.29	2.00	45.91	54	-8.09	AVG
				11890.240	-40.58	2.00	56.62	74	-17.38	Peak
					-47.83	2.00	49.37	54	-4.63	AVG
				15081.280	-36.43	2.00	60.77	74	-13.23	Peak
					-44.85	2.00	52.35	54	-1.65	AVG
				18157.120	-34.71	2.00	62.49	74	-11.51	Peak
					-40.90	2.00	56.30	54	2.30	AVG
				20778.880	-30.26	2.00	66.94	74	-7.06	Peak
					-36.43	2.00	60.77	54	6.77	AVG
				24175.360	-26.72	2.00	70.48	74	-3.52	Peak

802.11ac(VHT20)	5745.0	SISO	2	5650.000	-49.12	2.00	48.08	74	-25.92	Peak
				5724.571	-31.41	2.00	65.79	74	-8.21	Peak
				5725.000	-37.87	2.00	59.33	74	-14.67	Peak
				11479.360	-50.67	2.00	46.53	54	-7.47	AVG
					-40.23	2.00	56.98	74	-17.02	Peak
				15120.640	-47.71	2.00	49.49	54	-4.51	AVG
					-38.20	2.00	59.00	74	-15.00	Peak
				17130.880	-44.80	2.00	52.40	54	-1.60	AVG
					-35.65	2.00	61.55	74	-12.45	Peak
				19947.520	-43.53	2.00	53.67	54	-0.33	AVG
	5785.0	SISO	2		-34.01	2.00	63.19	74	-10.81	Peak
				22005.760	-41.06	2.00	56.14	54	2.14	AVG
					-31.27	2.00	65.93	74	-8.07	Peak
				24314.560	-35.94	2.00	61.26	54	7.26	AVG
					-26.57	2.00	70.63	74	-3.37	Peak
				10308.160	-56.98	2.00	40.22	54	-13.78	AVG
					-45.22	2.00	51.98	74	-22.02	Peak
				13390.720	-55.46	2.00	41.74	54	-12.26	AVG
					-43.60	2.00	53.60	74	-20.40	Peak
				15702.400	-51.54	2.00	45.66	54	-8.34	AVG
	5805.0	SISO	2		-41.98	2.00	55.22	74	-18.78	Peak
				18601.600	-49.17	2.00	48.03	54	-5.97	AVG
					-39.04	2.00	58.16	74	-15.84	Peak
				20802.880	-44.87	2.00	52.33	54	-1.67	AVG
					-35.09	2.00	62.11	74	-11.89	Peak
				24291.520	-40.03	2.00	57.17	54	3.17	AVG
					-30.96	2.00	66.24	74	-7.76	Peak
				10499.200	-52.82	2.00	44.38	54	-9.62	AVG
					-42.40	2.00	54.80	74	-19.20	Peak
				12569.920	-51.51	2.00	45.69	54	-8.31	AVG
	5805.0	SISO	2		-40.04	2.00	57.16	74	-16.84	Peak
				14699.200	-48.44	2.00	48.76	54	-5.24	AVG
					-37.86	2.00	59.34	74	-14.66	Peak
				17106.880	-44.77	2.00	52.43	54	-1.57	AVG
					-34.69	2.00	62.51	74	-11.49	Peak
				20615.680	-40.81	2.00	56.39	54	2.39	AVG
					-29.59	2.00	67.61	74	-6.39	Peak
				24256.960	-35.97	2.00	61.23	54	7.23	AVG
					-26.81	2.00	70.39	74	-3.61	Peak

6. Frequency Stability

6.1 Test Result

Only shown the worst case

Test Condition	Test Mode	Test Frequency [MHz]	Ant	Result [ppm]	Limit [ppm]	Verdict
NTNV	Carrier	5745.0	1	-3.31	<=20	PASS
		5785.0	1	-3.63	<=20	PASS
		5805.0	1	-3.79	<=20	PASS

---END---