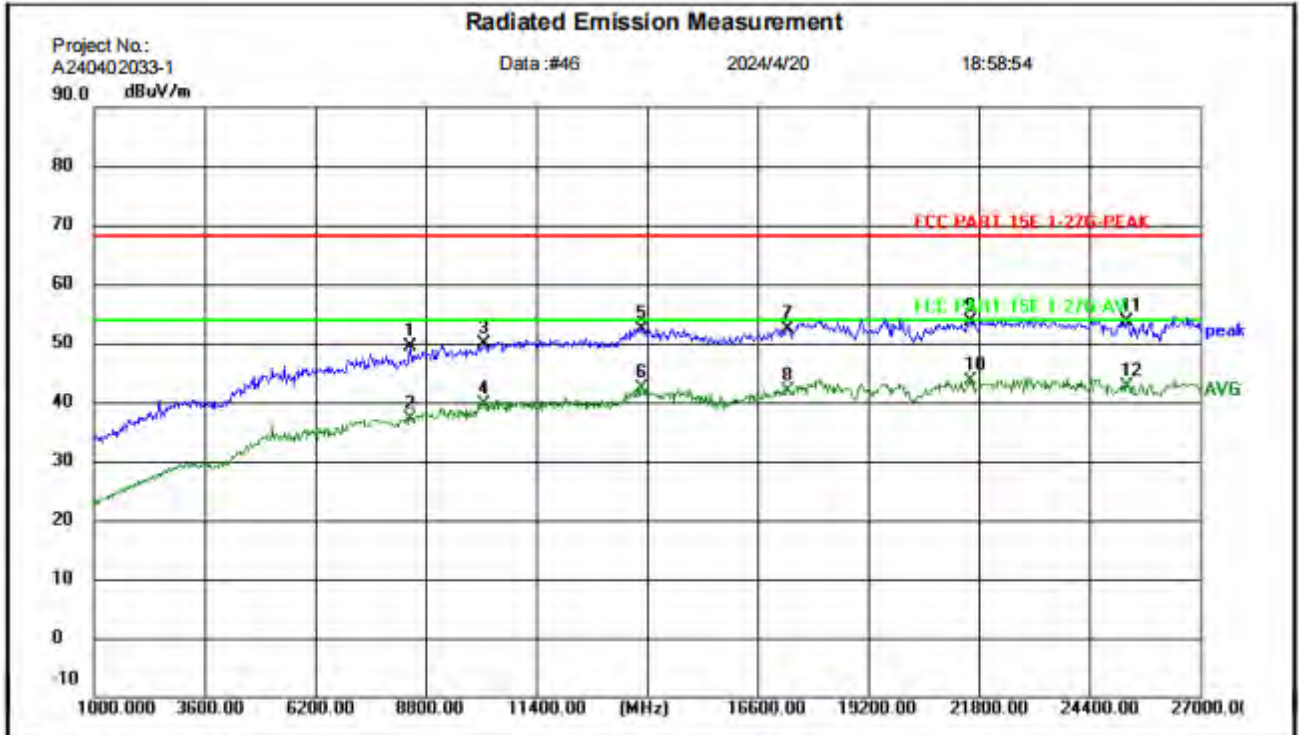


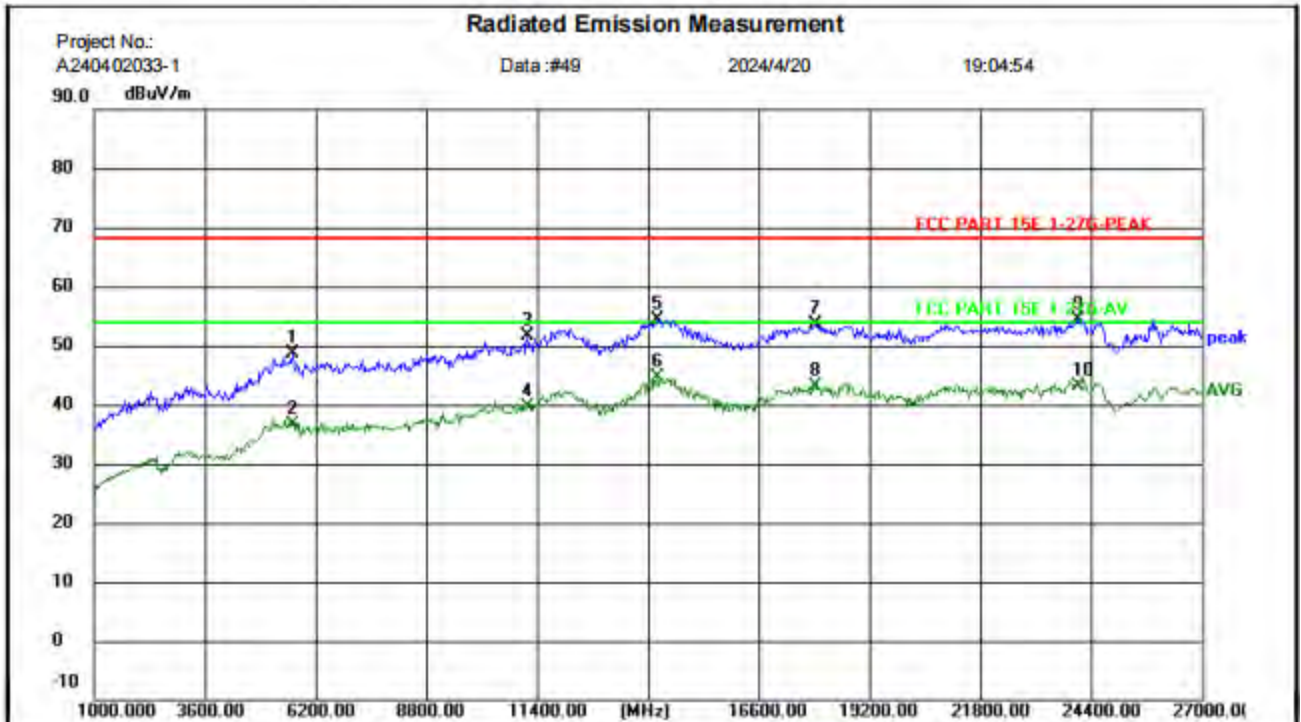
Site 966 chamber #1	Polarization: Horizontal	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11n40: 5190(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	6382.000	46.79	-1.98	44.81	68.20	-23.39	peak	P	
2	6382.000	36.38	-1.98	34.40	54.00	-19.60	AVG	P	
3	10464.000	47.02	4.38	51.40	68.20	-16.80	peak	P	
4	10464.000	36.10	4.38	40.48	54.00	-13.52	AVG	P	
5	14988.000	44.48	9.99	54.47	68.20	-13.73	peak	P	
6	14988.000	34.23	9.99	44.22	54.00	-9.78	AVG	P	
7	17198.000	41.58	12.59	54.17	68.20	-14.03	peak	P	
8	17198.000	30.07	12.59	42.66	54.00	-11.34	AVG	P	
9	20968.000	42.26	12.01	54.27	68.20	-13.93	peak	P	
10	20968.000	31.70	12.01	43.71	54.00	-10.29	AVG	P	
11	24036.000	41.86	13.26	55.12	68.20	-13.08	peak	P	
12	24036.000	31.08	13.26	44.34	54.00	-9.66	AVG	P	



Site: 966 chamber #1	Polarization: Vertical	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11n40: 5190(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	8436.000	48.06	1.21	49.27	68.20	-18.93	peak	P	
2	8436.000	35.96	1.21	37.17	54.00	-16.83	AVG	P	
3	10178.000	46.00	3.87	49.87	68.20	-18.33	peak	P	
4	10178.000	35.72	3.87	39.59	54.00	-14.41	AVG	P	
5	13870.000	43.69	8.80	52.49	68.20	-15.71	peak	P	
6	13870.000	33.60	8.80	42.40	54.00	-11.60	AVG	P	
7	17302.000	39.26	13.24	52.50	68.20	-15.70	peak	P	
8	17302.000	28.64	13.24	41.88	54.00	-12.12	AVG	P	
9	21592.000	41.63	12.10	53.73	68.20	-14.47	peak	P	
10	21592.000	31.45	12.10	43.55	54.00	-10.45	AVG	P	
11	25284.000	39.78	13.91	53.69	68.20	-14.51	peak	P	
12	25284.000	28.68	13.91	42.59	54.00	-11.41	AVG	P	



Site: 966 chamber #1

Polarization: **Horizontal**

Temperature: 23.9 (C)

Limit: FCC PART 15E 1-27G-PEAK

Power: AC 120V/60Hz

Humidity: 52.1 %RH

EUT: Wireless Scanning Module

Distance: 3m

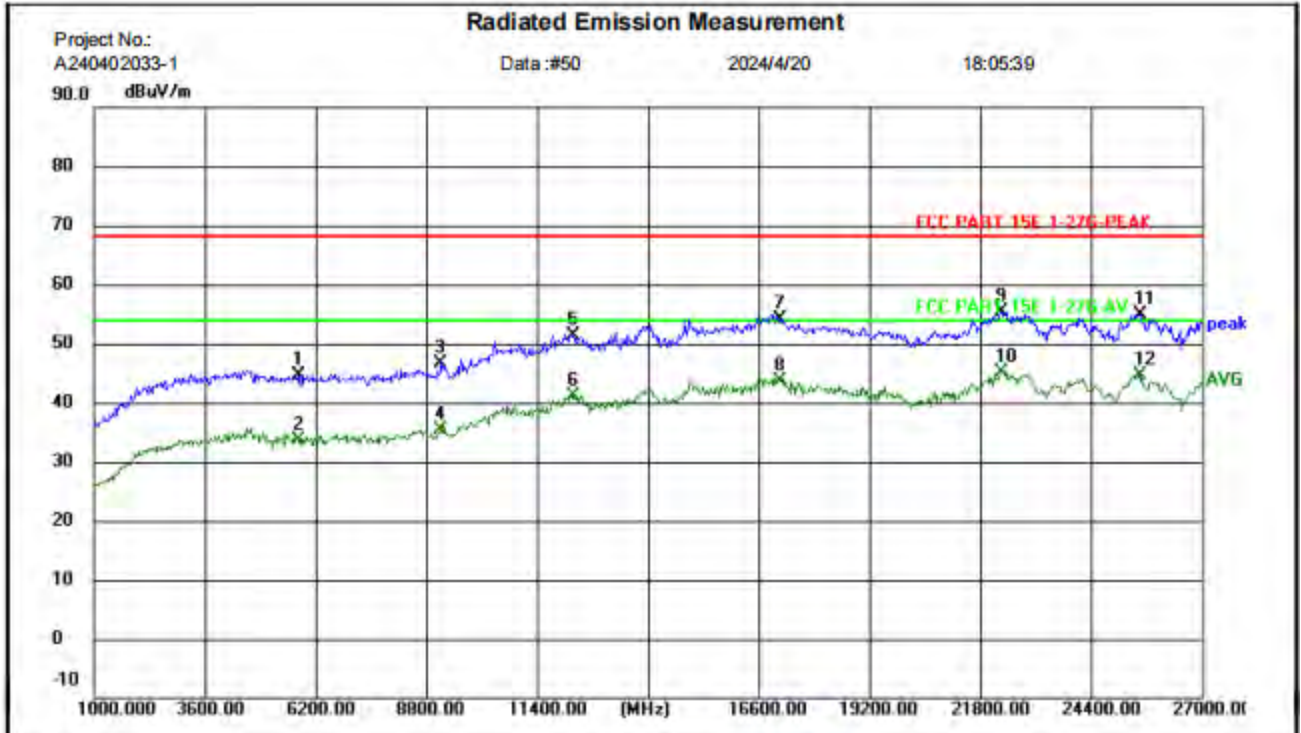
Engineer :

M/N: FREEBOX-II

Mode: 5.2GWIFI

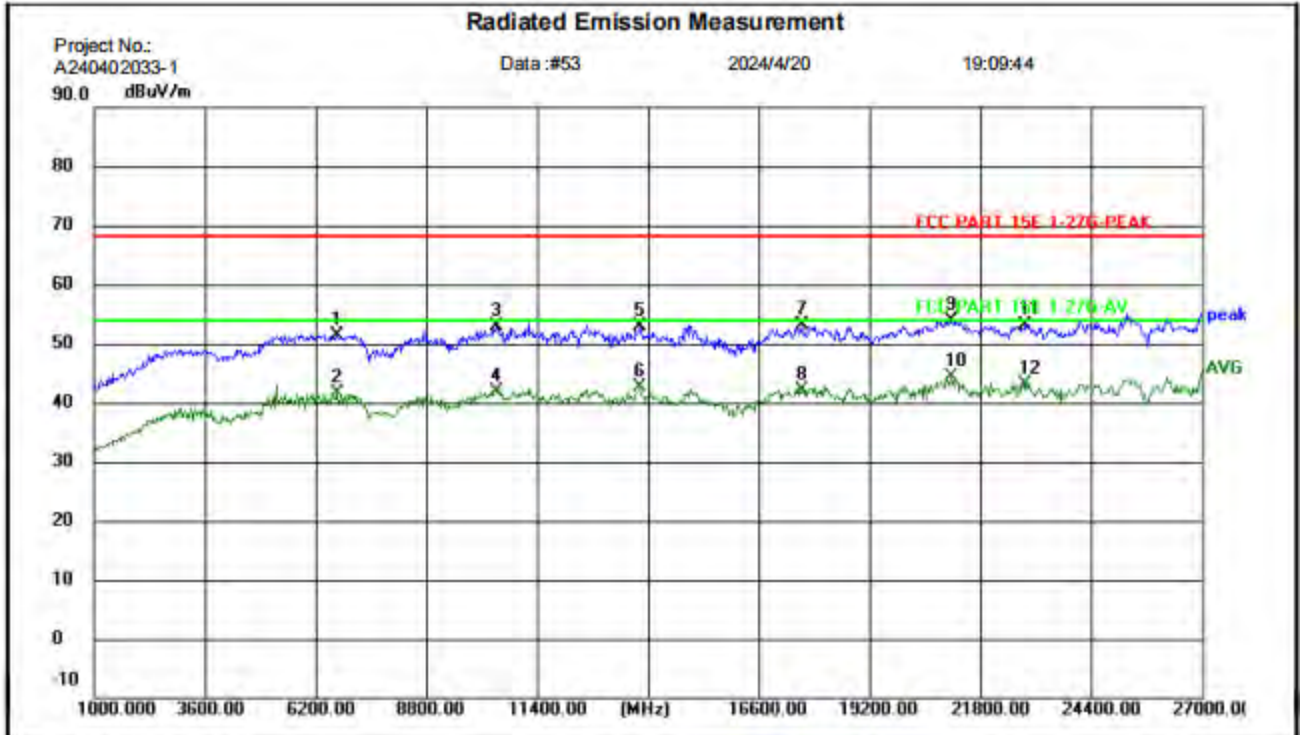
Note: 802.11n40: 5230(MIMO)

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	5654.000	51.94	-3.35	48.59	68.20	-19.61	peak	P	
2	5654.000	39.98	-3.35	36.63	54.00	-17.37	AVG	P	
3	11166.000	46.14	5.57	51.71	68.20	-16.49	peak	P	
4	11166.000	34.12	5.57	39.69	54.00	-14.31	AVG	P	
5	14234.000	44.96	9.37	54.33	68.20	-13.87	peak	P	
6	14234.000	35.33	9.37	44.70	54.00	-9.30	AVG	P	
7	17926.000	36.44	17.19	53.63	68.20	-14.57	peak	P	
8	17926.000	25.98	17.19	43.17	54.00	-10.83	AVG	P	
9	24088.000	41.12	13.28	54.40	68.20	-13.80	peak	P	
10	24088.000	29.89	13.28	43.17	54.00	-10.83	AVG	P	



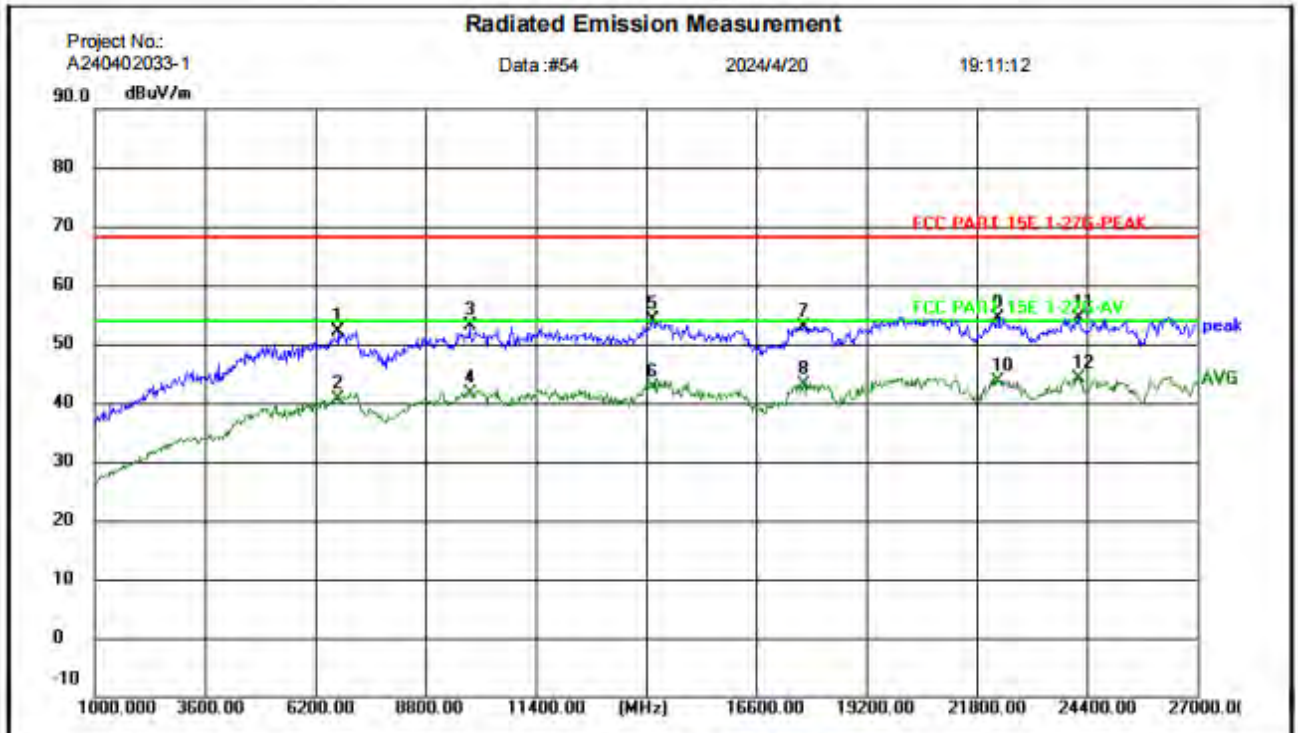
Site 966 chamber #1	Polarization: Vertical	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11n40: 5230(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	5784.000	48.15	-3.48	44.67	68.20	-23.53	peak	P	
2	5784.000	37.11	-3.48	33.63	54.00	-20.37	AVG	P	
3	9138.000	44.52	2.13	46.65	68.20	-21.55	peak	P	
4	9138.000	33.32	2.13	35.45	54.00	-18.55	AVG	P	
5	12258.000	44.93	6.56	51.49	68.20	-16.71	peak	P	
6	12258.000	34.65	6.56	41.21	54.00	-12.79	AVG	P	
7	17094.000	42.25	11.93	54.18	68.20	-14.02	peak	P	
8	17094.000	31.79	11.93	43.72	54.00	-10.28	AVG	P	
9	22294.000	43.05	12.37	55.42	68.20	-12.78	peak	P	
10	22294.000	32.70	12.37	45.07	54.00	-8.93	AVG	P	
11	25544.000	40.85	14.13	54.98	68.20	-13.22	peak	P	
12	25544.000	30.53	14.13	44.66	54.00	-9.34	AVG	P	



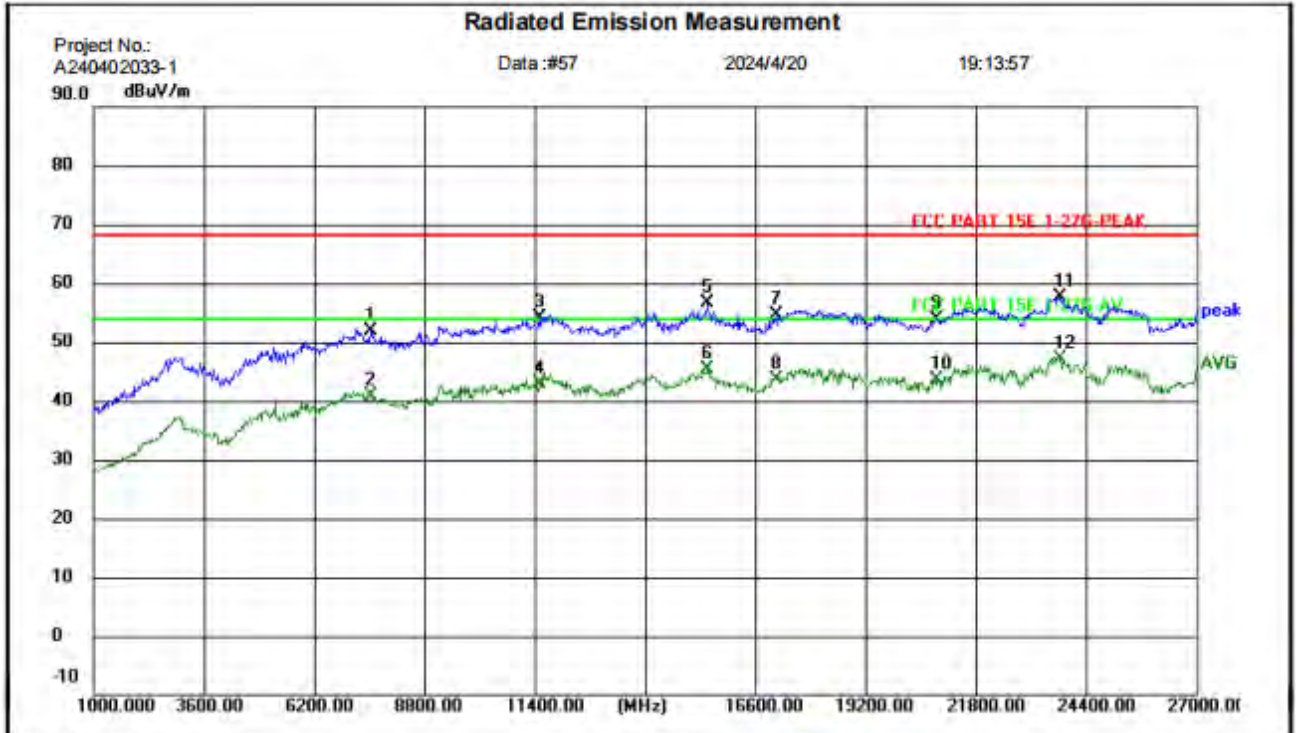
Site: 966 chamber #1	Polarization: <i>Horizontal</i>	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac40: 5190(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	6694.000	52.42	-0.96	51.46	68.20	-16.74	peak	P	
2	6694.000	42.60	-0.96	41.64	54.00	-12.36	AVG	P	
3	10438.000	48.62	4.34	52.96	68.20	-15.24	peak	P	
4	10438.000	37.61	4.34	41.95	54.00	-12.05	AVG	P	
5	13818.000	44.29	8.64	52.93	68.20	-15.27	peak	P	
6	13818.000	34.08	8.64	42.72	54.00	-11.28	AVG	P	
7	17614.000	38.02	15.21	53.23	68.20	-14.97	peak	P	
8	17614.000	26.95	15.21	42.16	54.00	-11.84	AVG	P	
9	21124.000	41.95	12.04	53.99	68.20	-14.21	peak	P	
10	21124.000	32.23	12.04	44.27	54.00	-9.73	AVG	P	
11	22866.000	40.40	12.79	53.19	68.20	-15.01	peak	P	
12	22866.000	30.31	12.79	43.10	54.00	-10.90	AVG	P	



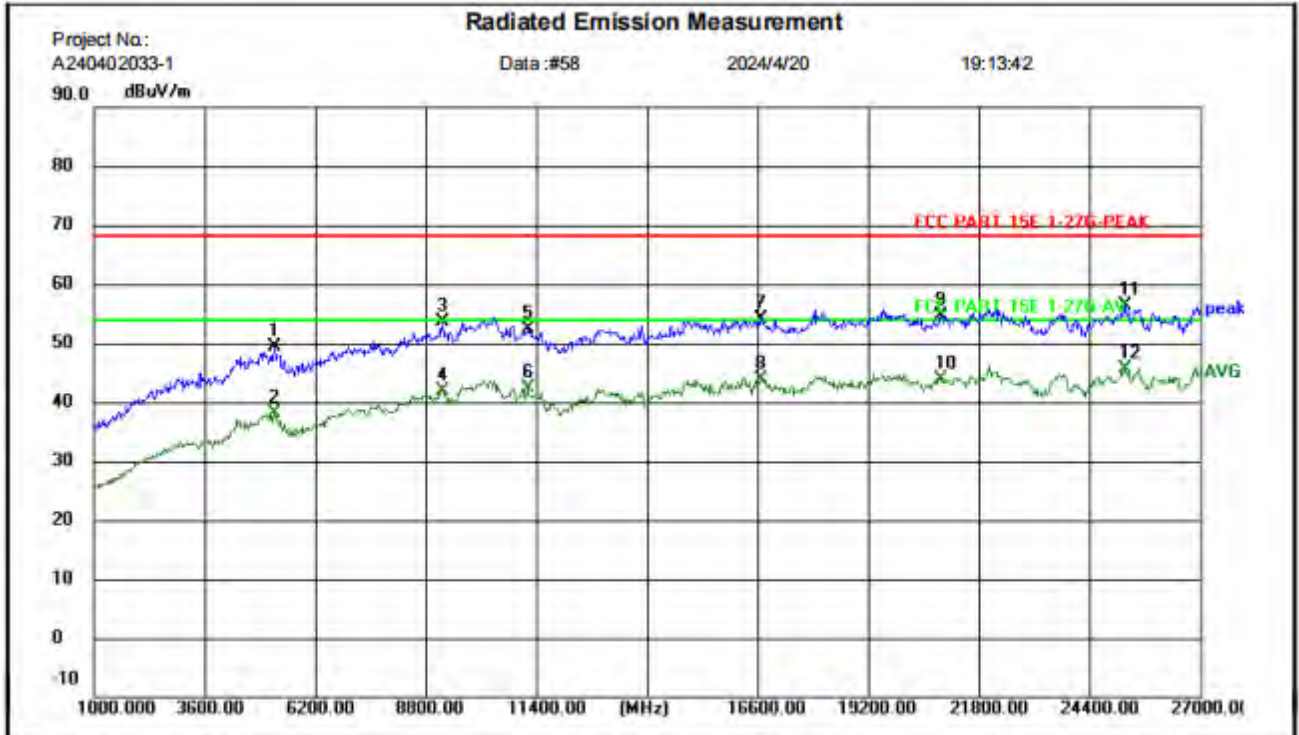
Site: 966 chamber #1	Polarization: Vertical	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
MN: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac40: 5190(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	6746.000	52.92	-0.84	52.08	68.20	-16.12	peak	P	
2	6746.000	41.35	-0.84	40.51	54.00	-13.49	AVG	P	
3	9840.000	49.81	3.29	53.10	68.20	-15.10	peak	P	
4	9840.000	38.26	3.29	41.55	54.00	-12.45	AVG	P	
5	14156.000	44.82	9.31	54.13	68.20	-14.07	peak	P	
6	14156.000	33.40	9.31	42.71	54.00	-11.29	AVG	P	
7	17718.000	37.06	15.88	52.94	68.20	-15.26	peak	P	
8	17718.000	27.30	15.88	43.18	54.00	-10.82	AVG	P	
9	22294.000	42.12	12.37	54.49	68.20	-13.71	peak	P	
10	22294.000	31.14	12.37	43.51	54.00	-10.49	AVG	P	
11	24192.000	40.98	13.32	54.30	68.20	-13.90	peak	P	
12	24192.000	30.84	13.32	44.16	54.00	-9.84	AVG	P	



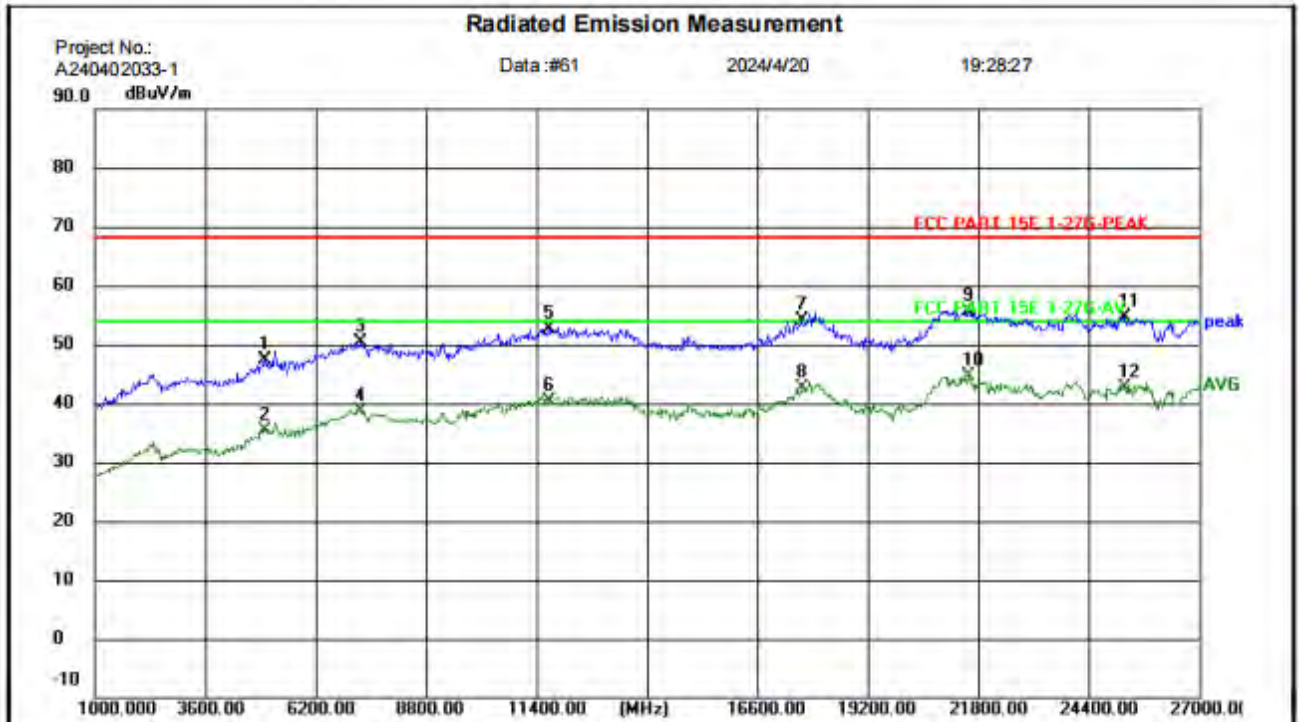
Site: 966 chamber #1	Polarization: Horizontal	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac40: 5230(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	7526.000	51.33	0.66	51.99	68.20	-16.21	peak	P	
2	7526.000	40.11	0.66	40.77	54.00	-13.23	AVG	P	
3	11504.000	47.99	6.02	54.01	68.20	-14.19	peak	P	
4	11504.000	36.97	6.02	42.99	54.00	-11.01	AVG	P	
5	15482.000	47.97	8.71	56.68	68.20	-11.52	peak	P	
6	15482.000	36.62	8.71	45.33	54.00	-8.67	AVG	P	
7	17094.000	42.71	11.93	54.64	68.20	-13.56	peak	P	
8	17094.000	31.79	11.93	43.72	54.00	-10.28	AVG	P	
9	20864.000	41.99	11.95	53.94	68.20	-14.26	peak	P	
10	20864.000	31.61	11.95	43.56	54.00	-10.44	AVG	P	
11	23776.000	44.54	13.16	57.70	68.20	-10.50	peak	P	
12	23776.000	33.93	13.16	47.09	54.00	-6.91	AVG	P	



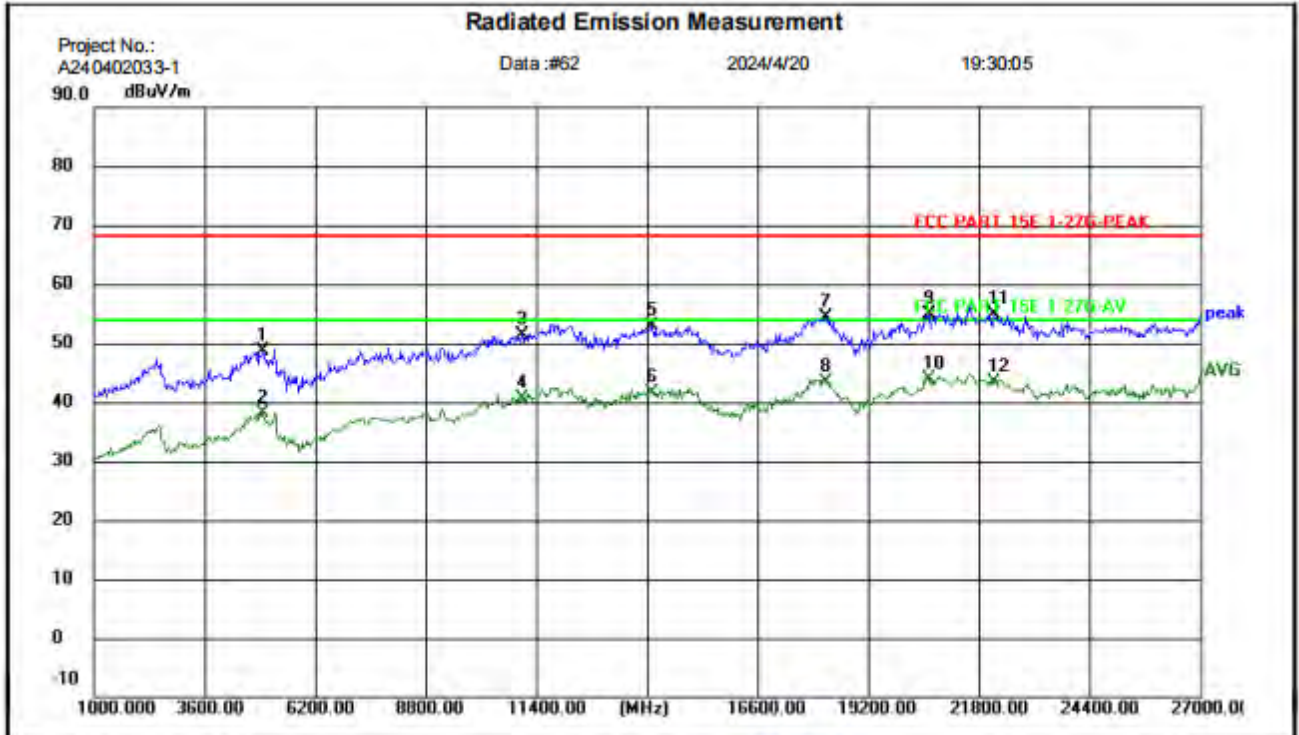
Site 966 chamber #1	Polarization: Vertical	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac40: 5230(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	5238.000	53.11	-3.69	49.42	68.20	-18.78	peak	P	
2	5238.000	41.92	-3.69	38.23	54.00	-15.77	AVG	P	
3	9190.000	51.34	2.21	53.55	68.20	-14.65	peak	P	
4	9190.000	39.74	2.21	41.95	54.00	-12.05	AVG	P	
5	11192.000	46.87	5.61	52.48	68.20	-15.72	peak	P	
6	11192.000	36.82	5.61	42.43	54.00	-11.57	AVG	P	
7	16678.000	44.15	10.05	54.20	68.20	-14.00	peak	P	
8	16678.000	33.73	10.05	43.78	54.00	-10.22	AVG	P	
9	20916.000	42.73	11.98	54.71	68.20	-13.49	peak	P	
10	20916.000	31.95	11.98	43.93	54.00	-10.07	AVG	P	
11	25232.000	42.54	13.87	56.41	68.20	-11.79	peak	P	
12	25232.000	31.65	13.87	45.52	54.00	-8.48	AVG	P	



Site: 966 chamber #1	Polarization: Horizontal	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac80: 5210(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	5004.000	51.52	-4.11	47.41	68.20	-20.79	peak	P	
2	5004.000	39.56	-4.11	35.45	54.00	-18.55	AVG	P	
3	7240.000	50.06	0.21	50.27	68.20	-17.93	peak	P	
4	7240.000	38.51	0.21	38.72	54.00	-15.28	AVG	P	
5	11686.000	46.42	6.26	52.68	68.20	-15.52	peak	P	
6	11686.000	34.03	6.26	40.29	54.00	-13.71	AVG	P	
7	17640.000	38.80	15.38	54.18	68.20	-14.02	peak	P	
8	17640.000	27.15	15.38	42.53	54.00	-11.47	AVG	P	
9	21566.000	43.61	12.10	55.71	68.20	-12.49	peak	P	
10	21566.000	32.46	12.10	44.56	54.00	-9.44	AVG	P	
11	25258.000	40.64	13.89	54.53	68.20	-13.67	peak	P	
12	25258.000	28.81	13.89	42.70	54.00	-11.30	AVG	P	



Site: 966 chamber #1	Polarization: Vertical	Temperature: 23.9 (C)
Limit: FCC PART 15E 1-27G-PEAK	Power: AC 120V/60Hz	Humidity: 52.1 %RH
EUT: Wireless Scanning Module	Distance: 3m	Engineer :
M/N: FREEBOX-II		
Mode: 5.2GWIFI		
Note: 802.11ac80: 5210(MIMO)		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	4978.000	52.94	-4.22	48.72	68.20	-19.48	peak	P	
2	4978.000	42.31	-4.22	38.09	54.00	-15.91	AVG	P	
3	11062.000	45.90	5.43	51.33	68.20	-16.87	peak	P	
4	11062.000	35.31	5.43	40.74	54.00	-13.26	AVG	P	
5	14130.000	43.48	9.29	52.77	68.20	-15.43	peak	P	
6	14130.000	32.40	9.29	41.69	54.00	-12.31	AVG	P	
7	18212.000	43.92	10.54	54.46	68.20	-13.74	peak	P	
8	18212.000	32.93	10.54	43.47	54.00	-10.53	AVG	P	
9	20630.000	42.95	11.83	54.78	68.20	-13.42	peak	P	
10	20630.000	31.98	11.83	43.81	54.00	-10.19	AVG	P	
11	22164.000	42.70	12.27	54.97	68.20	-13.23	peak	P	
12	22164.000	31.11	12.27	43.38	54.00	-10.62	AVG	P	

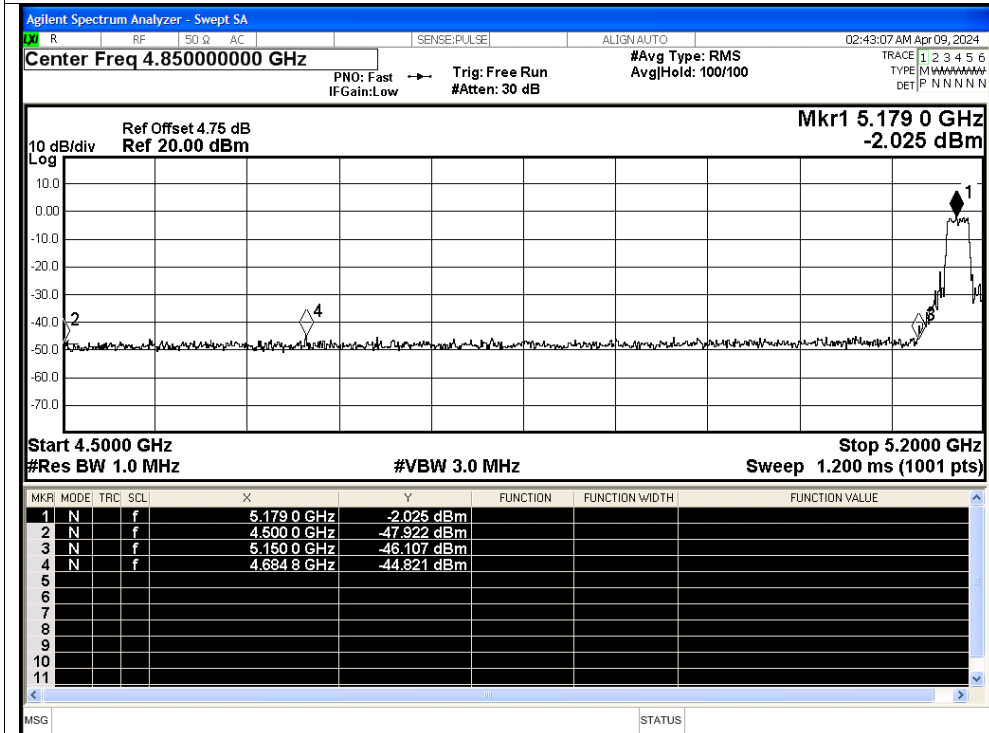
Appendix A.7: Restrict Band

Condition	Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	4500	-47.92	5.0	-	52.34	Peak	68.2	Pass
NVNT	a	5180	4500	-57.26	5.0	0	43.00	Average	54	Pass
NVNT	a	5180	4684.8	-44.82	5.0	-	55.44	Peak	68.2	Pass
NVNT	a	5180	5072.6	-54.99	5.0	0	45.27	Average	54	Pass
NVNT	a	5180	5150	-46.11	5.0	-	54.15	Peak	68.2	Pass
NVNT	a	5180	5150	-55.21	5.0	0	45.05	Average	54	Pass
NVNT	a	5240	5350	-49.27	5.0	-	50.99	Peak	68.2	Pass
NVNT	a	5240	5350	-56.28	5.0	0.24	43.98	Average	54	Pass
NVNT	a	5240	5405.76	-46.78	5.0	-	53.48	Peak	68.2	Pass
NVNT	a	5240	5350.56	-55.81	5.0	0.24	44.45	Average	54	Pass
NVNT	a	5240	5460	-49.05	5.0	-	51.21	Peak	68.2	Pass
NVNT	a	5240	5460	-56.14	5.0	0.24	44.12	Average	54	Pass
NVNT	n20mimo	5180	4500	-48.47	8.01	-	54.80	Peak	68.2	Pass
NVNT	n20mimo	5180	4500	-57.19	8.01	0.28	46.08	Average	54	Pass
NVNT	n20mimo	5180	5149.6	-42.8	8.01	-	60.47	Peak	68.2	Pass
NVNT	n20mimo	5180	5146.8	-53.97	8.01	0.28	49.30	Average	54	Pass
NVNT	n20mimo	5180	5150	-44.69	8.01	-	58.58	Peak	68.2	Pass
NVNT	n20mimo	5180	5150	-53.68	8.01	0.28	49.59	Average	54	Pass
NVNT	n20mimo	5240	5350	-47.64	8.01	-	55.63	Peak	68.2	Pass
NVNT	n20mimo	5240	5350	-56.73	8.01	0.28	46.54	Average	54	Pass
NVNT	n20mimo	5240	5450.88	-46.14	8.01	-	57.13	Peak	68.2	Pass
NVNT	n20mimo	5240	5351.04	-56.16	8.01	0.28	47.11	Average	54	Pass
NVNT	n20mimo	5240	5460	-48.5	8.01	-	54.77	Peak	68.2	Pass
NVNT	n20mimo	5240	5460	-56.75	8.01	0.28	46.52	Average	54	Pass
NVNT	n40mimo	5190	4500	-49.4	8.01	-	53.87	Peak	68.2	Pass
NVNT	n40mimo	5190	4500	-57.46	8.01	0.24	45.81	Average	54	Pass
NVNT	n40mimo	5190	5149.7	-43.19	8.01	-	60.08	Peak	68.2	Pass
NVNT	n40mimo	5190	5149.7	-53.11	8.01	0.24	50.16	Average	54	Pass
NVNT	n40mimo	5190	5150	-43.19	8.01	-	60.08	Peak	68.2	Pass
NVNT	n40mimo	5190	5150	-53.11	8.01	0.24	50.16	Average	54	Pass
NVNT	n40mimo	5230	5350	-48.01	8.01	-	55.26	Peak	68.2	Pass
NVNT	n40mimo	5230	5350	-57.29	8.01	0.24	45.98	Average	54	Pass
NVNT	n40mimo	5230	5381.43	-45.74	8.01	-	57.53	Peak	68.2	Pass
NVNT	n40mimo	5230	5371.71	-56.23	8.01	0.24	47.04	Average	54	Pass
NVNT	n40mimo	5230	5460	-49.3	8.01	-	53.97	Peak	68.2	Pass
NVNT	n40mimo	5230	5460	-57.01	8.01	0.24	46.26	Average	54	Pass
NVNT	ac20mimo	5180	4500	-48.98	8.01	-	54.29	Peak	68.2	Pass
NVNT	ac20mimo	5180	4500	-57.21	8.01	0.28	46.06	Average	54	Pass
NVNT	ac20mimo	5180	5149.6	-37.45	8.01	-	65.82	Peak	68.2	Pass
NVNT	ac20mimo	5180	5149.6	-52.74	8.01	0.28	50.53	Average	54	Pass
NVNT	ac20mimo	5180	5150	-42.63	8.01	-	60.64	Peak	68.2	Pass
NVNT	ac20mimo	5180	5150	-53.1	8.01	0.28	50.17	Average	54	Pass
NVNT	ac20mimo	5240	5350	-49.56	8.01	-	53.71	Peak	68.2	Pass
NVNT	ac20mimo	5240	5350	-57.15	8.01	0.28	46.12	Average	54	Pass
NVNT	ac20mimo	5240	5374.56	-45.73	8.01	-	57.54	Peak	68.2	Pass
NVNT	ac20mimo	5240	5368.8	-56.3	8.01	0.28	46.97	Average	54	Pass
NVNT	ac20mimo	5240	5460	-48.62	8.01	-	54.65	Peak	68.2	Pass
NVNT	ac20mimo	5240	5460	-57.05	8.01	0.28	46.22	Average	54	Pass
NVNT	ac40mimo	5190	4500	-49.82	8.01	-	53.45	Peak	68.2	Pass
NVNT	ac40mimo	5190	4500	-57.41	8.01	0.24	45.86	Average	54	Pass
NVNT	ac40mimo	5190	5148.97	-39.79	8.01	-	63.48	Peak	68.2	Pass
NVNT	ac40mimo	5190	5148.97	-52.97	8.01	0.24	50.30	Average	54	Pass
NVNT	ac40mimo	5190	5150	-40.85	8.01	-	62.42	Peak	68.2	Pass

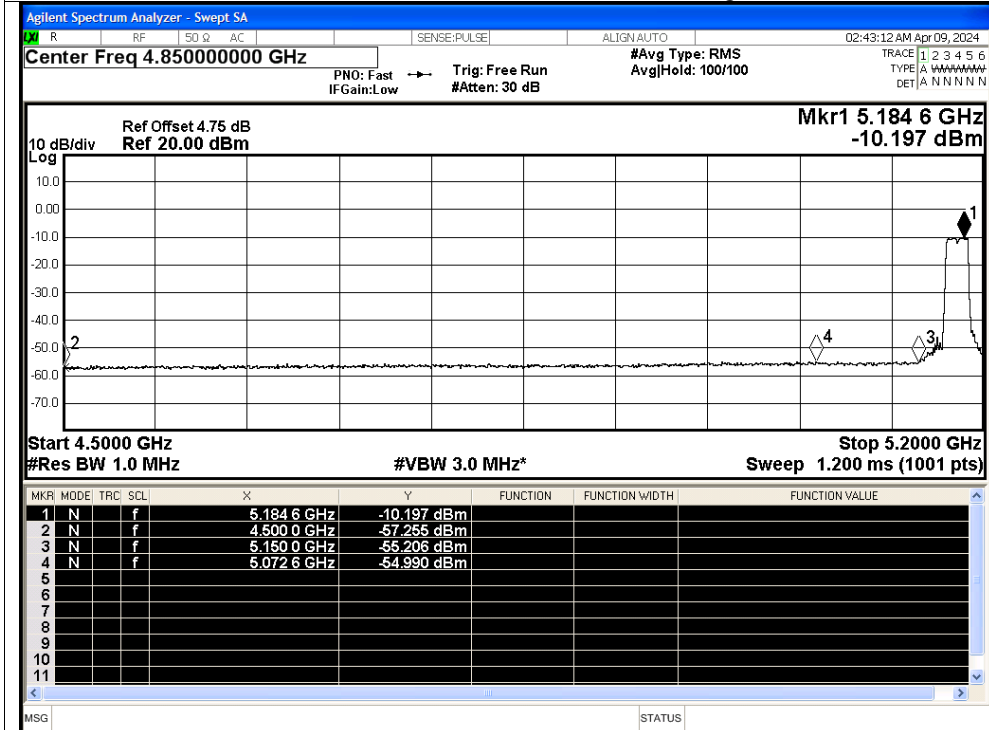
NVNT	ac40mimo	5190	5150	-54.01	8.01	0.24	49.26	Average	54	Pass
NVNT	ac40mimo	5230	5350	-47.91	8.01	-	55.36	Peak	68.2	Pass
NVNT	ac40mimo	5230	5350	-56.98	8.01	0.23	46.29	Average	54	Pass
NVNT	ac40mimo	5230	5424.36	-46.35	8.01	-	56.92	Peak	68.2	Pass
NVNT	ac40mimo	5230	5388.45	-56.3	8.01	0.23	46.97	Average	54	Pass
NVNT	ac40mimo	5230	5460	-48.2	8.01	-	55.07	Peak	68.2	Pass
NVNT	ac40mimo	5230	5460	-57.71	8.01	0.23	45.56	Average	54	Pass
NVNT	ac80mimo	5210	5350	-47.67	8.01	-	55.60	Peak	68.2	Pass
NVNT	ac80mimo	5210	5350	-56.45	8.01	0.25	46.82	Average	54	Pass
NVNT	ac80mimo	5210	5409.51	-45.31	8.01	-	57.96	Peak	68.2	Pass
NVNT	ac80mimo	5210	5362.65	-55.99	8.01	0.25	47.28	Average	54	Pass
NVNT	ac80mimo	5210	5460	-48.59	8.01	-	54.68	Peak	68.2	Pass
NVNT	ac80mimo	5210	5460	-57.25	8.01	0.25	46.02	Average	54	Pass
NVNT	ac80mimo	5210	4500	-47.96	8.01	-	55.31	Peak	68.2	Pass
NVNT	ac80mimo	5210	4500	-57.62	8.01	0.25	45.65	Average	54	Pass
NVNT	ac80mimo	5210	5149.38	-42.27	8.01	-	61.00	Peak	68.2	Pass
NVNT	ac80mimo	5210	5148.59	-52.96	8.01	0.25	50.31	Average	54	Pass
NVNT	ac80mimo	5210	5150	-42.58	8.01	-	60.69	Peak	68.2	Pass
NVNT	ac80mimo	5210	5150	-52.71	8.01	0.25	50.56	Average	54	Pass

Note: 802.11a mode, only show the worst set of antenna 1 data.

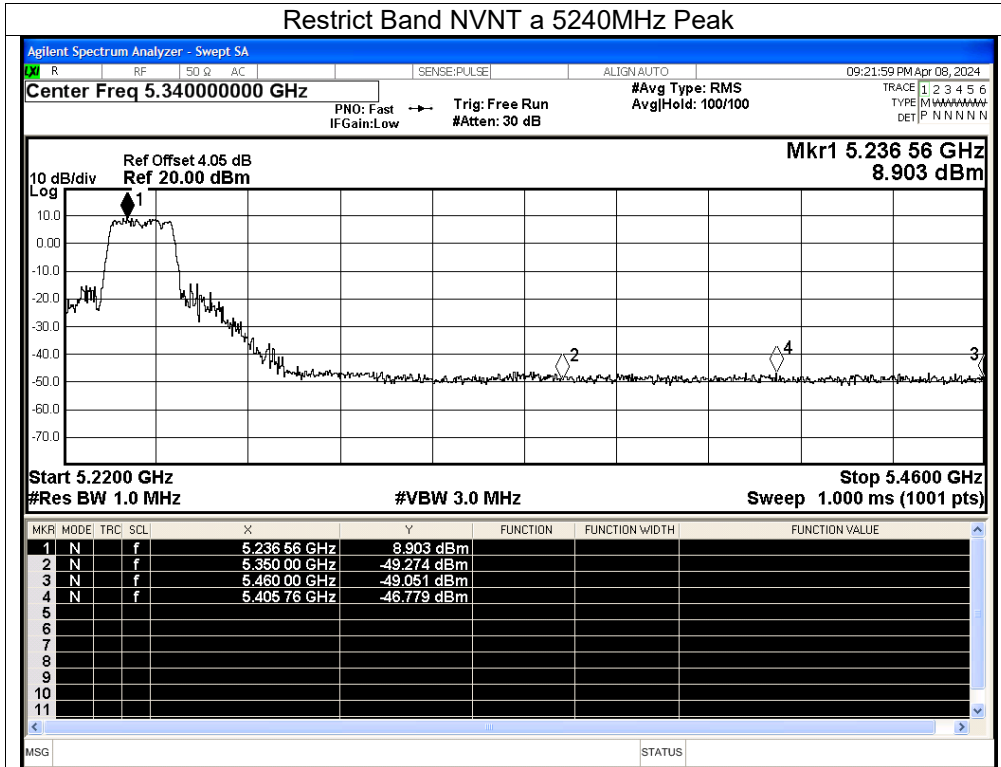
Test Graphs
Restrict Band NVNT a 5180MHz Peak



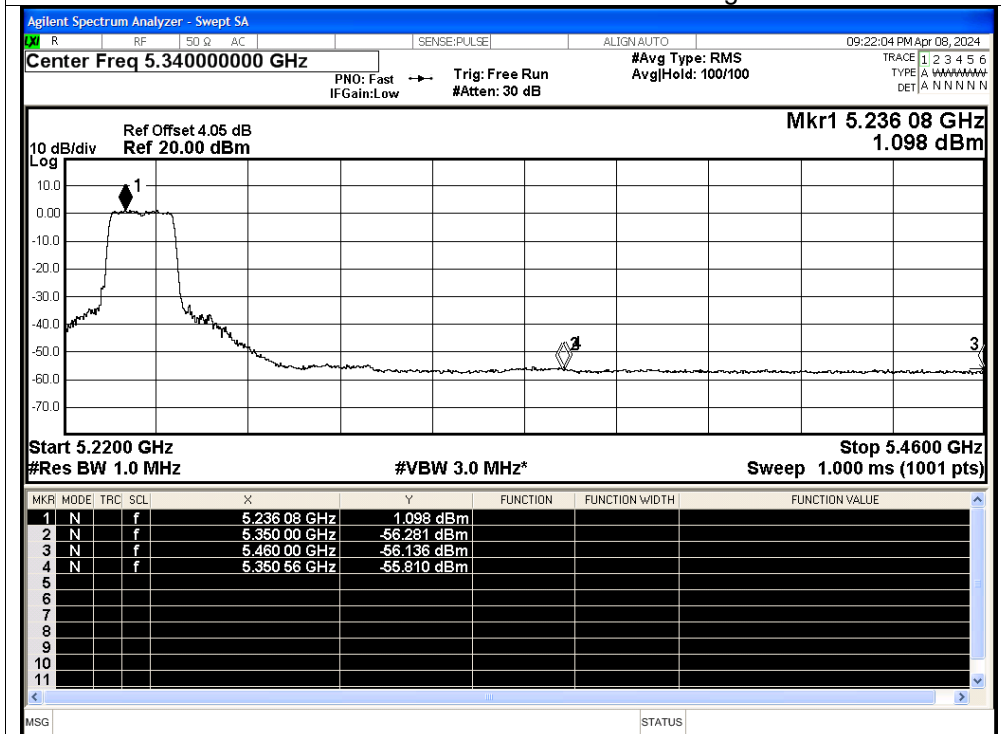
Restrict Band NVNT a 5180MHz Average



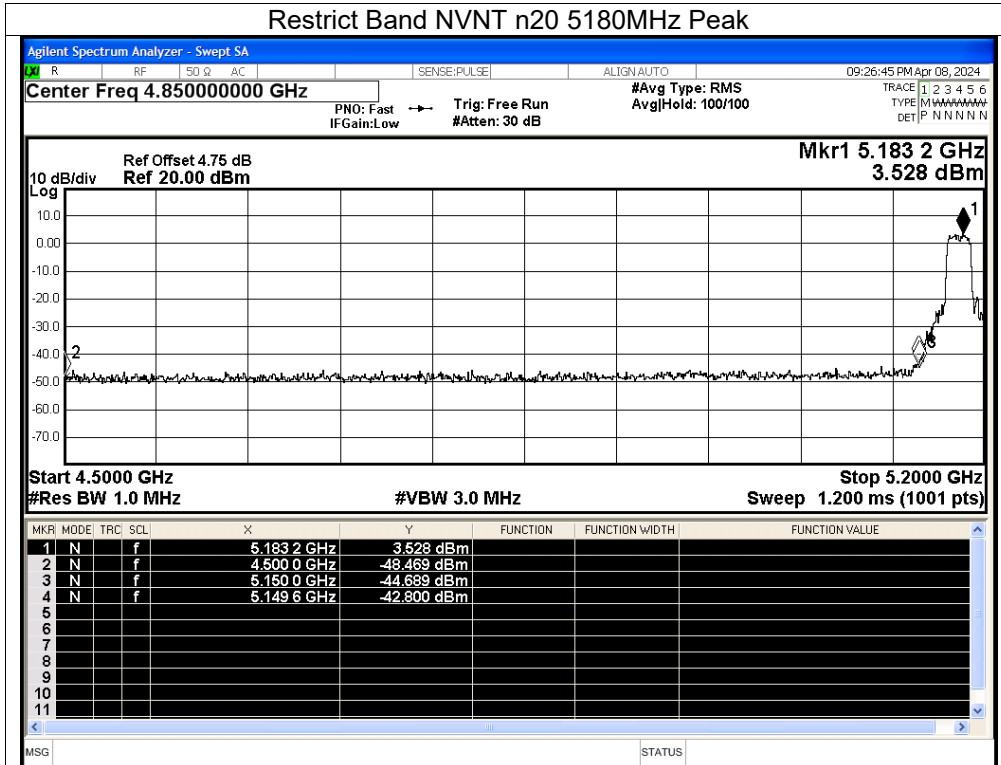
Restrict Band NVNT a 5240MHz Peak



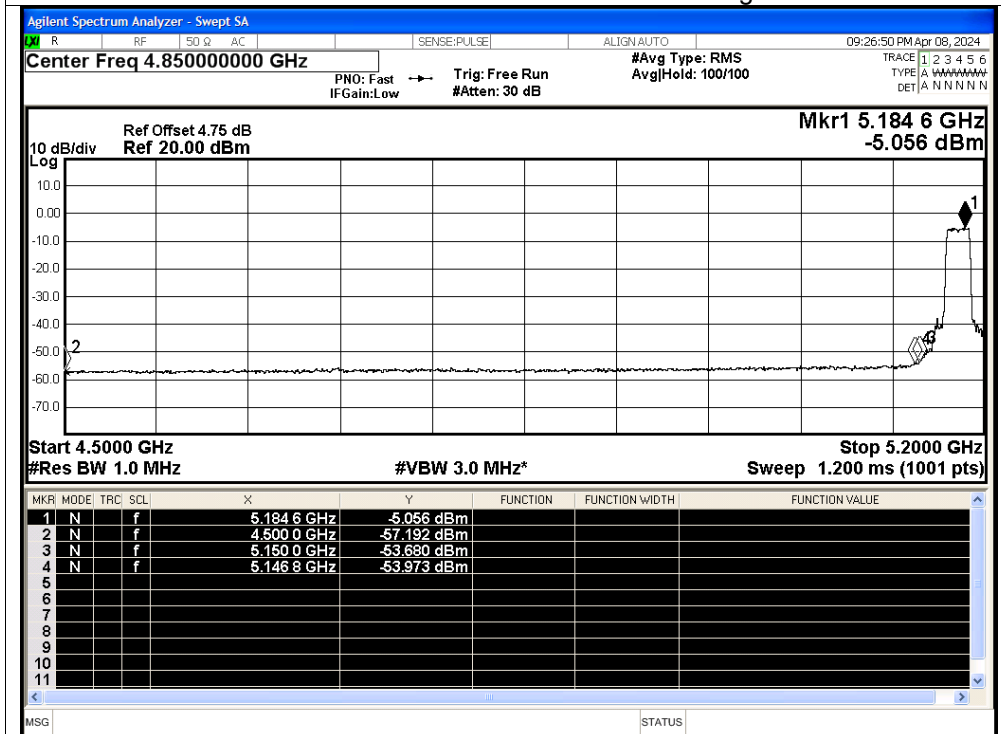
Restrict Band NVNT a 5240MHz Average



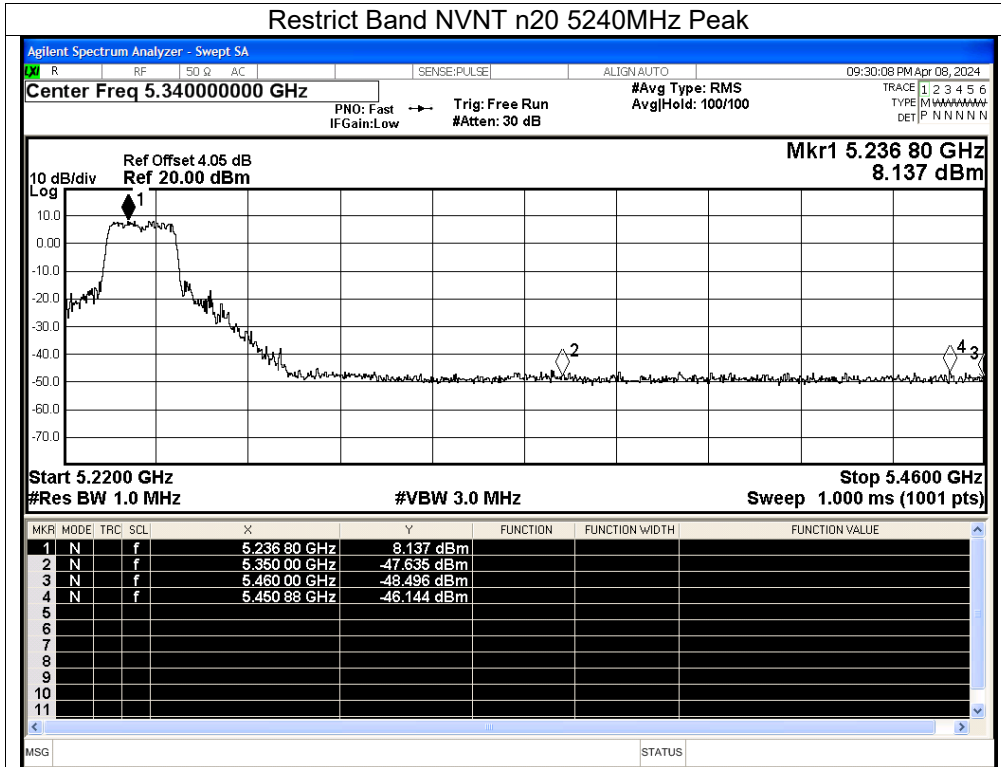
Restrict Band NVNT n20 5180MHz Peak



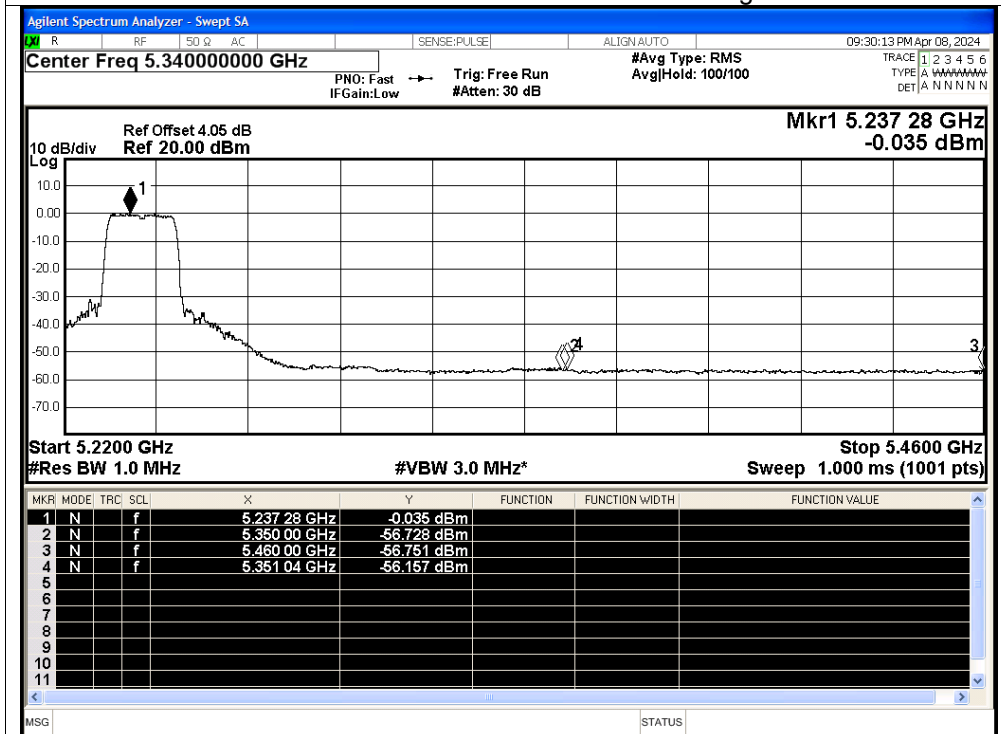
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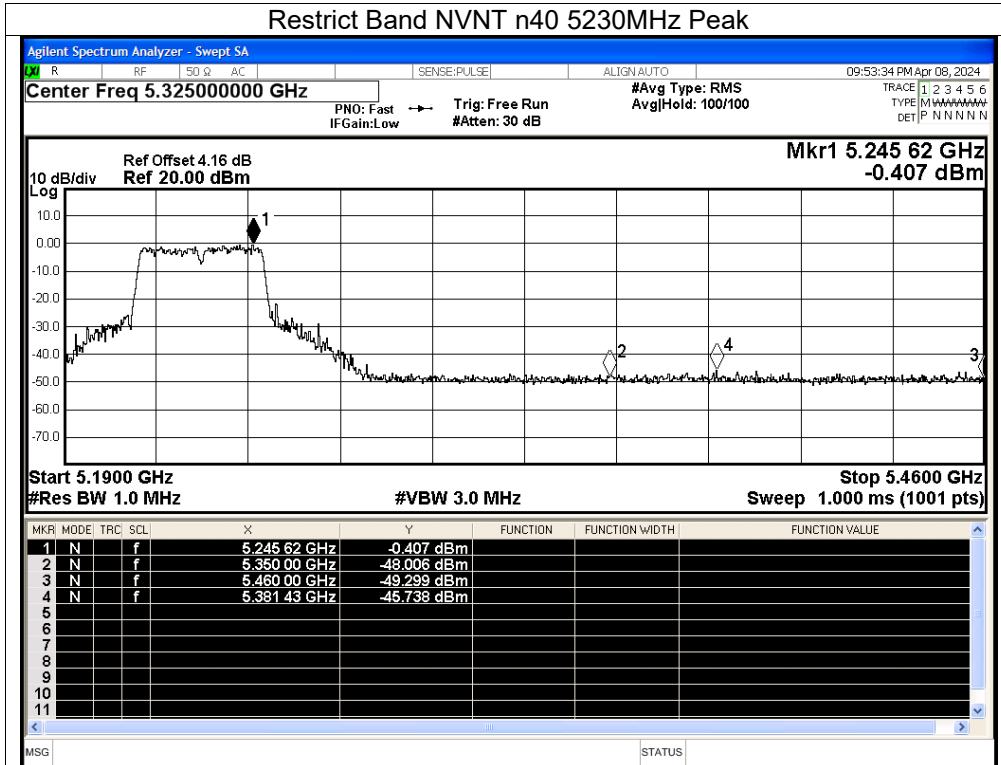
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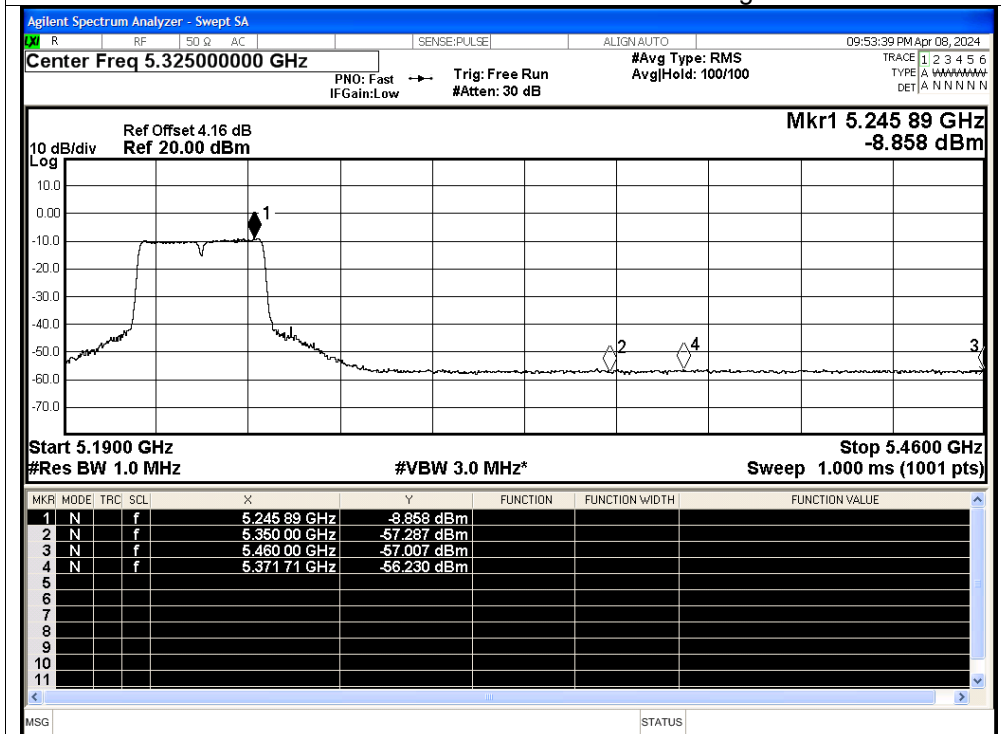
Restrict Band NVNT n20 5240MHz Average



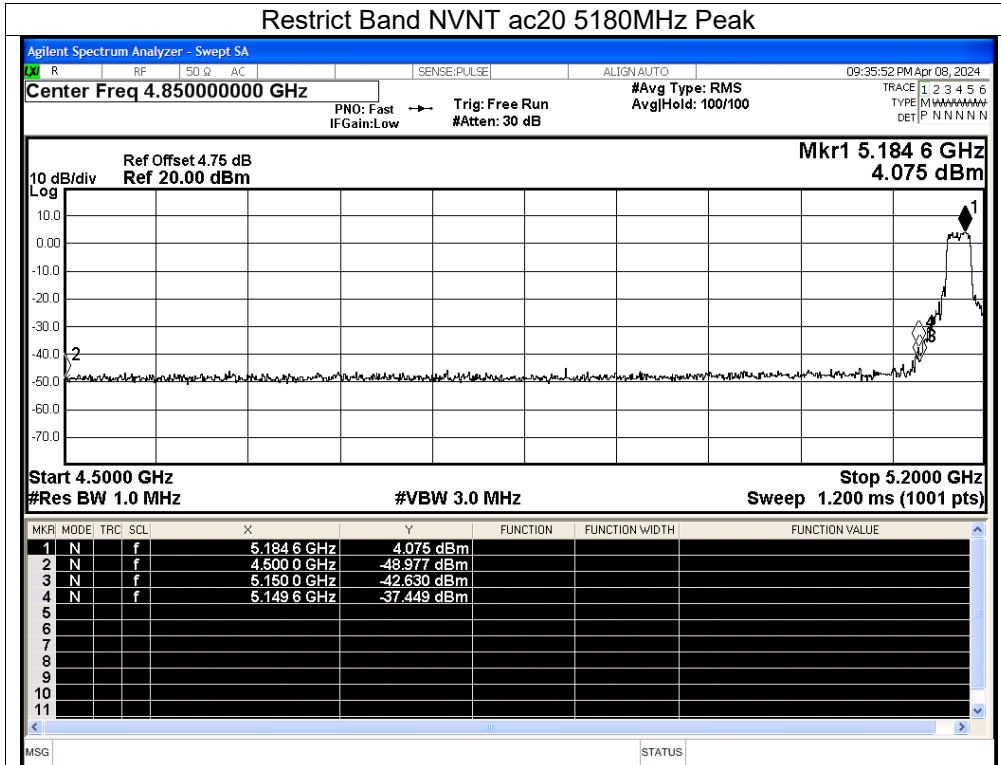
Restrict Band NVNT n40 5230MHz Peak



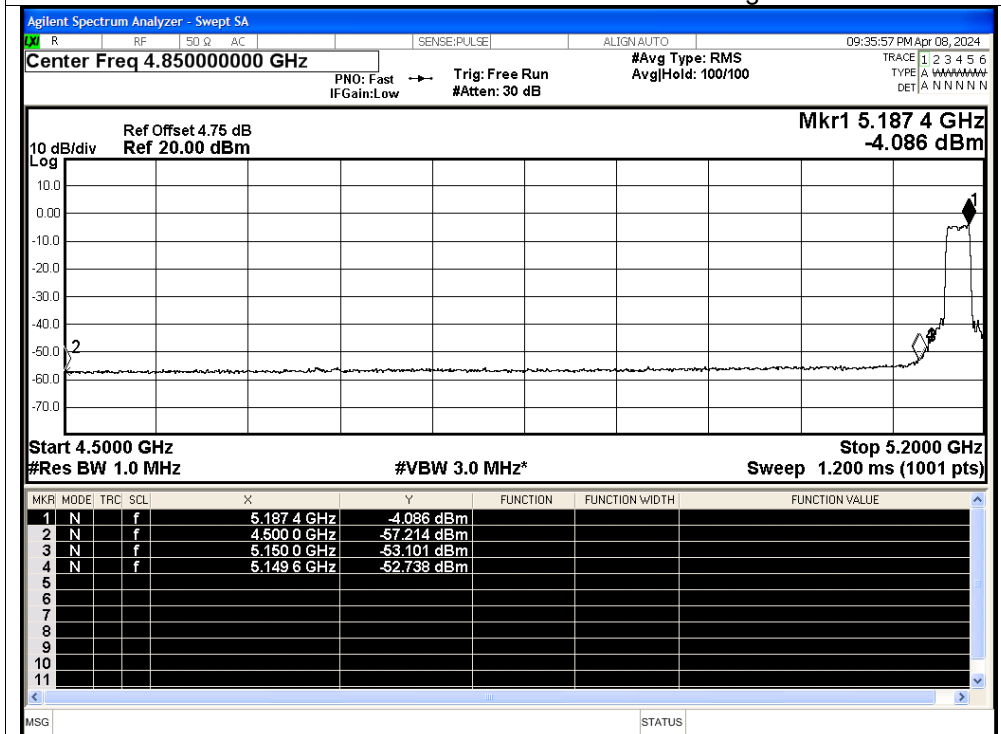
Restrict Band NVNT n40 5230MHz Average



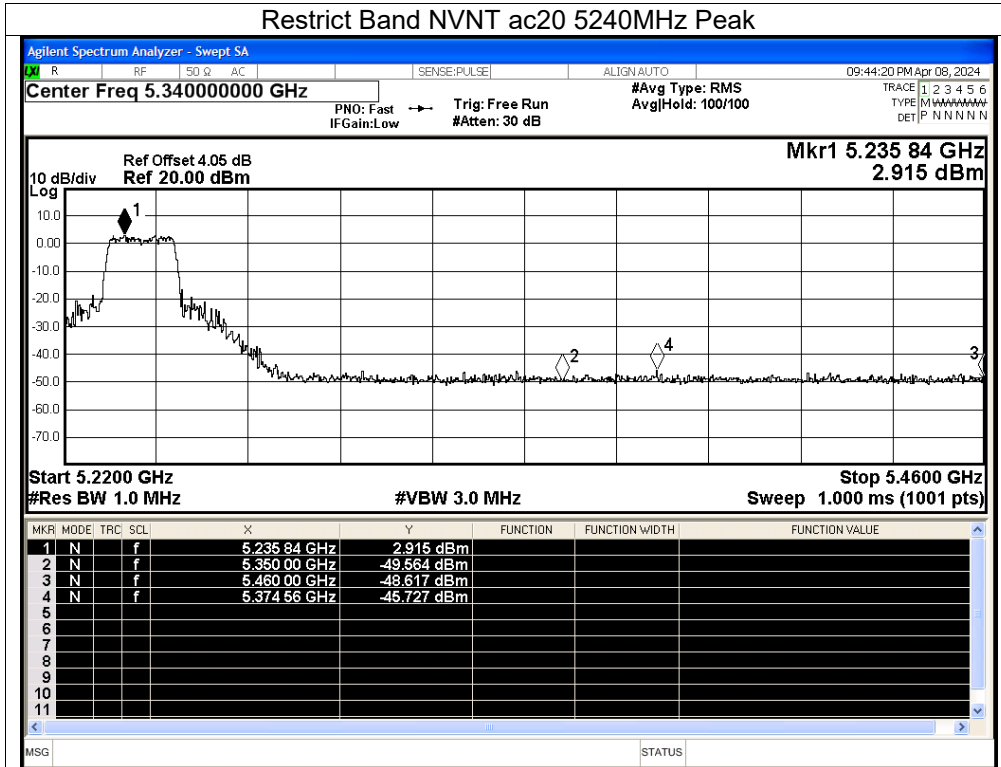
Restrict Band NVNT ac20 5180MHz Peak



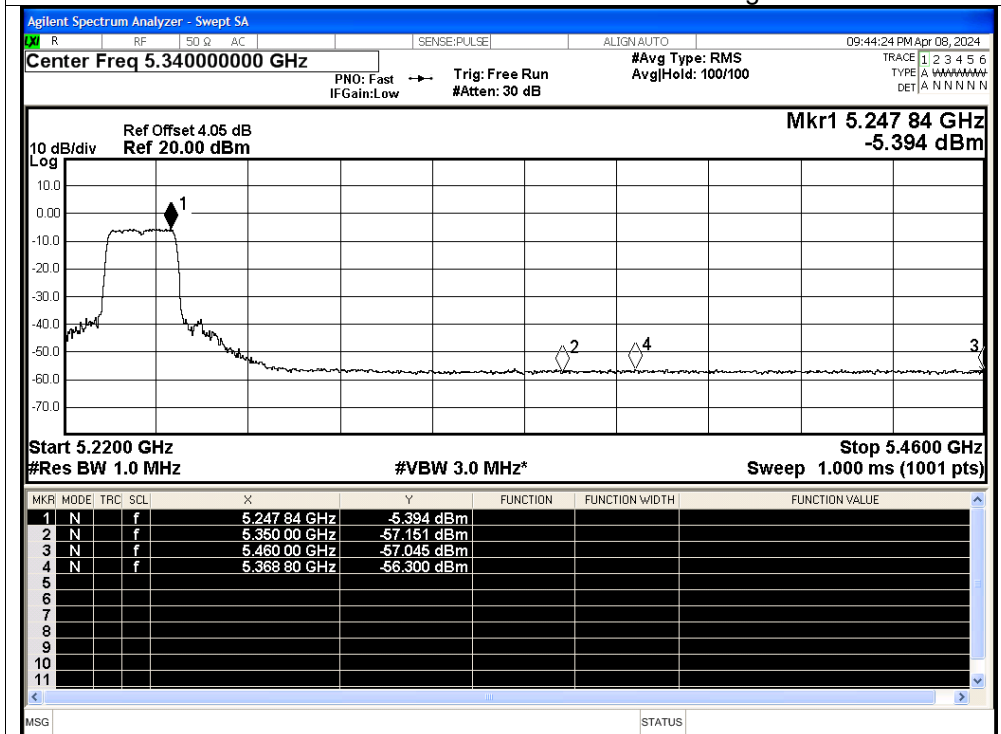
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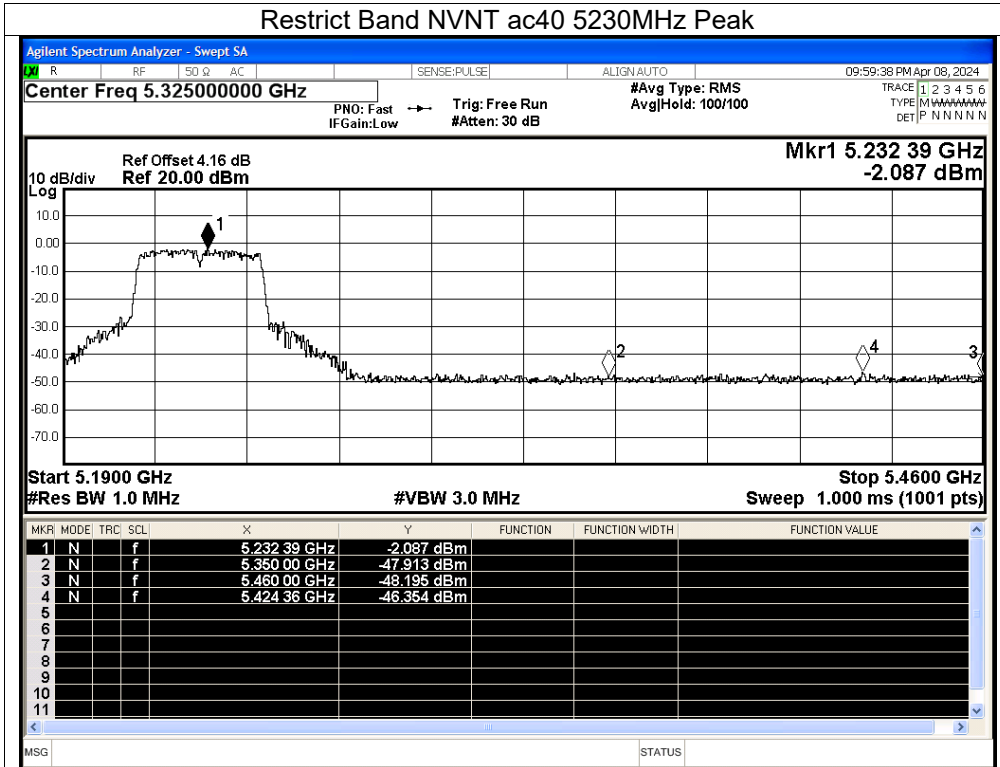
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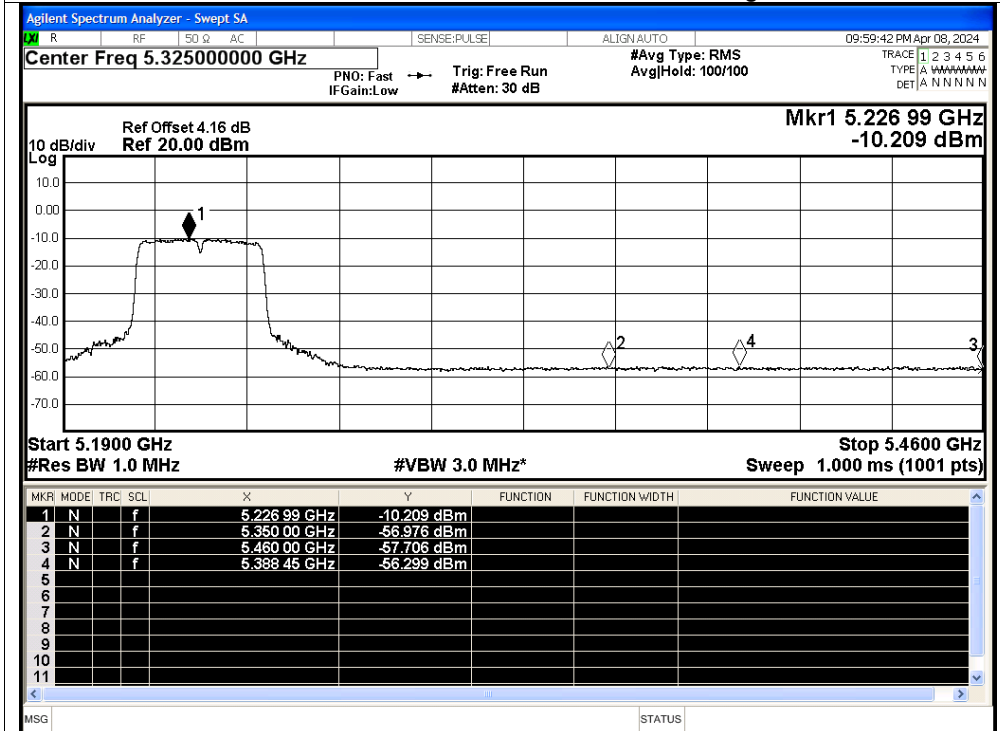
Restrict Band NVNT ac20 5240MHz Average



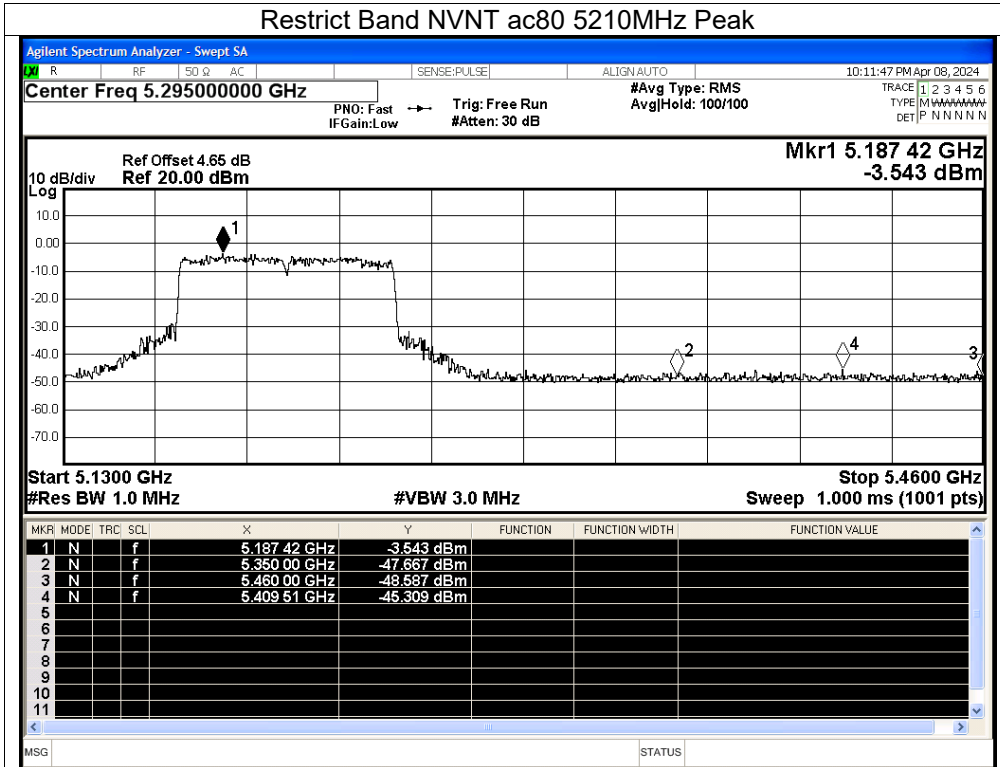
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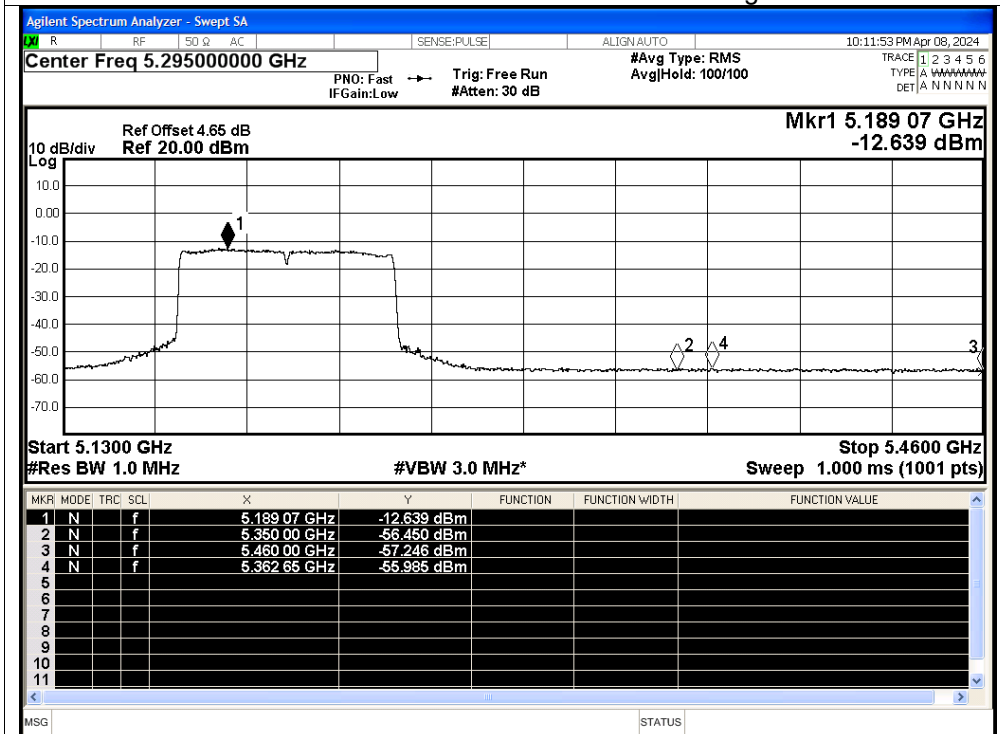
Restrict Band NVNT ac40 5230MHz Average



Restrict Band NVNT ac80 5210MHz Peak



Restrict Band NVNT ac80 5210MHz Average

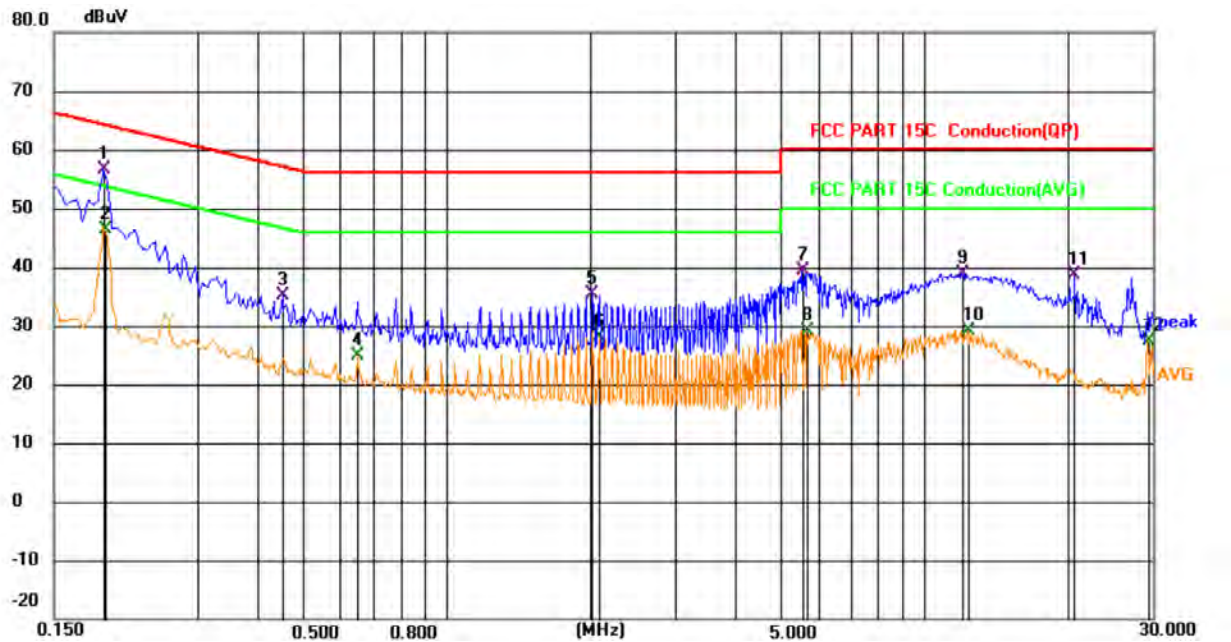


Appendix A.8: Test Results of Conducted Emission

EUT Information

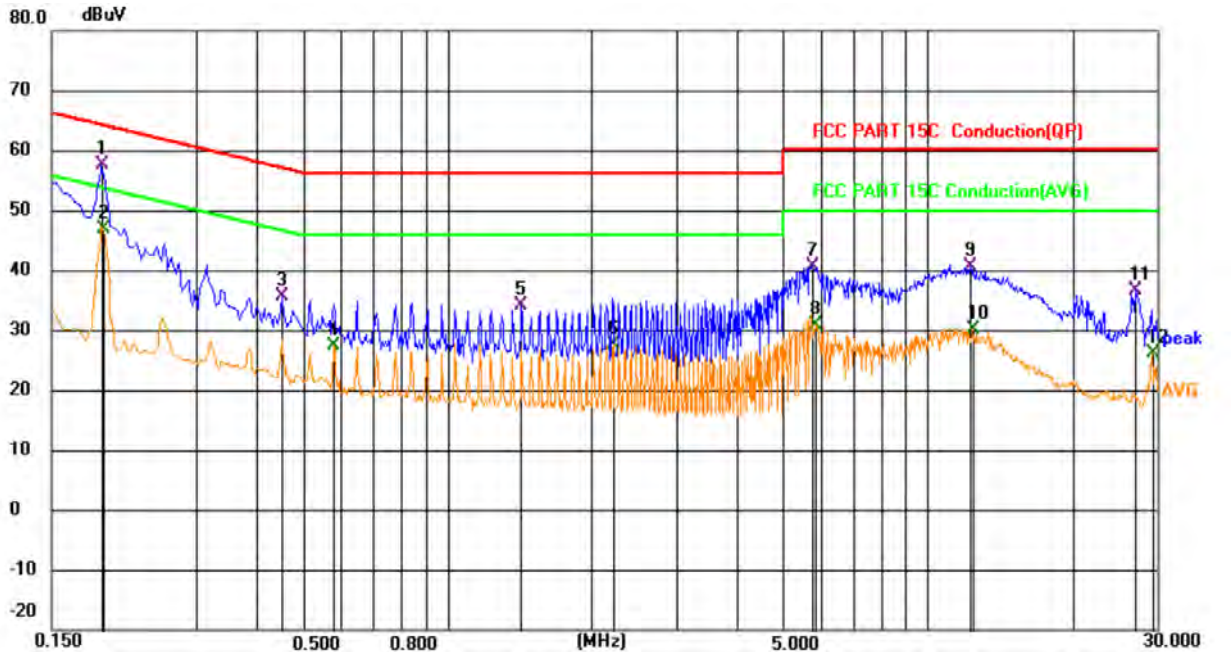
EUT Name:	Wireless Scanning Module
Model:	FREEBOX-II
Test Mode:	B
Test Voltage::	DC 25.5V from the AC/DC adapter
Remark:	Temp 22; Humi:55%; 101 kPa.
Test Standard:	FCC 15.207

Line



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1906	36.56	20.18	56.74	64.01	-7.27	QP	
2		0.1913	26.19	20.17	46.36	53.98	-7.62	AVG	
3		0.4516	14.86	20.23	35.09	56.85	-21.76	QP	
4		0.6495	4.75	20.09	24.84	46.00	-21.16	AVG	
5		2.0175	15.16	20.19	35.35	56.00	-20.65	QP	
6		2.0850	7.98	20.20	28.18	46.00	-17.82	AVG	
7		5.5366	19.39	19.94	39.33	60.00	-20.67	QP	
8		5.6671	9.24	19.94	29.18	50.00	-20.82	AVG	
9		11.9941	18.56	20.40	38.96	60.00	-21.04	QP	
10		12.3181	8.68	20.41	29.09	50.00	-20.91	AVG	
11		20.6566	17.94	20.79	38.73	60.00	-21.27	QP	
12		29.2336	7.27	20.08	27.35	50.00	-22.65	AVG	

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1904	37.49	20.04	57.53	64.02	-6.49	QP	
2		0.1914	26.95	20.04	46.99	53.98	-6.99	AVG	
3		0.4515	15.72	19.87	35.59	56.85	-21.26	QP	
4		0.5792	7.32	20.01	27.33	46.00	-18.67	AVG	
5		1.4256	13.95	20.15	34.10	56.00	-21.90	QP	
6		2.2132	7.30	20.24	27.54	46.00	-18.46	AVG	
7		5.7135	20.44	20.11	40.55	60.00	-19.45	QP	
8		5.8358	10.74	20.14	30.88	50.00	-19.12	AVG	
9		12.2531	20.41	20.14	40.55	60.00	-19.45	QP	
10		12.3837	10.10	20.13	30.23	50.00	-19.77	AVG	
11		26.9836	16.18	20.34	36.52	60.00	-23.48	QP	
12		29.2157	6.25	19.94	26.19	50.00	-23.81	AVG	

***Note: Pre-scan all modes and recorded the worst case results in this report IEEE 802.11n HT20 MIMO mode (Middle Channell).
Measurement = Reading + Correct Factor, Margin = Measurement – Limit,
Correct Factor=Lisn Factor+Cable Factor.

Appendix B: Test Results of 5.8GHz Wi-Fi

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Appendix B.1: Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	12.14	0.24	12.38	30	Pass
NVNT	a	5785	Ant1	12.25	0.24	12.49	30	Pass
NVNT	a	5825	Ant1	12.29	0.24	12.53	30	Pass
NVNT	n20	5745	Ant1	11.52	0.28	11.8	30	Pass
NVNT	n20	5785	Ant1	11.57	0.28	11.85	30	Pass
NVNT	n20	5825	Ant1	11.77	0.28	12.05	30	Pass
NVNT	n40	5755	Ant1	10.48	0.24	10.72	30	Pass
NVNT	n40	5795	Ant1	10.04	0.24	10.28	30	Pass
NVNT	ac20	5745	Ant1	11.45	0.28	11.73	30	Pass
NVNT	ac20	5785	Ant1	11.6	0.28	11.88	30	Pass
NVNT	ac20	5825	Ant1	11.98	0.28	12.26	30	Pass
NVNT	ac40	5755	Ant1	10.26	0.24	10.5	30	Pass
NVNT	ac40	5795	Ant1	10.18	0.24	10.42	30	Pass
NVNT	ac80	5775	Ant1	9.44	0.25	9.69	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant2	12.2	0.24	12.44	30	Pass
NVNT	a	5785	Ant2	12.28	0.24	12.52	30	Pass
NVNT	a	5825	Ant2	12.52	0.24	12.76	30	Pass
NVNT	n20	5745	Ant2	11.11	0.28	11.39	30	Pass
NVNT	n20	5785	Ant2	11.72	0.28	12	30	Pass
NVNT	n20	5825	Ant2	11.82	0.28	12.1	30	Pass
NVNT	n40	5755	Ant2	10.38	0.24	10.62	30	Pass
NVNT	n40	5795	Ant2	10.06	0.24	10.3	30	Pass
NVNT	ac20	5745	Ant2	11.62	0.28	11.9	30	Pass
NVNT	ac20	5785	Ant2	11.69	0.28	11.97	30	Pass
NVNT	ac20	5825	Ant2	11.88	0.28	12.16	30	Pass
NVNT	ac40	5755	Ant2	10.28	0.24	10.52	30	Pass
NVNT	ac40	5795	Ant2	10.1	0.24	10.34	30	Pass
NVNT	ac80	5775	Ant2	9.42	0.25	9.67	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	5745	11.8	11.39	14.61	27.99	Pass
NVNT	n20	5785	11.85	12	14.94	27.99	Pass
NVNT	n20	5825	12.05	12.1	15.09	27.99	Pass
NVNT	n40	5755	10.72	10.62	13.68	27.99	Pass
NVNT	n40	5795	10.28	10.3	13.30	27.99	Pass
NVNT	ac20	5745	11.73	11.9	14.83	27.99	Pass
NVNT	ac20	5785	11.88	11.97	14.94	27.99	Pass
NVNT	ac20	5825	12.26	12.16	15.22	27.99	Pass
NVNT	ac40	5755	10.5	10.52	13.52	27.99	Pass
NVNT	ac40	5795	10.42	10.34	13.39	27.99	Pass
NVNT	ac80	5775	9.69	9.67	12.69	27.99	Pass

Appendix B.2: Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	Ant1	-1.4	0.24	-1.16	30	Pass
NVNT	a	5785	Ant1	-1.48	0.24	-1.24	30	Pass
NVNT	a	5825	Ant1	-1.08	0.24	-0.84	30	Pass
NVNT	n20	5745	Ant1	-2.13	0.28	-1.85	30	Pass
NVNT	n20	5785	Ant1	-2.31	0.28	-2.03	30	Pass
NVNT	n20	5825	Ant1	-2.08	0.28	-1.8	30	Pass
NVNT	n40	5755	Ant1	-5.37	0.24	-5.13	30	Pass
NVNT	n40	5795	Ant1	-6.54	0.24	-6.3	30	Pass
NVNT	ac20	5745	Ant1	-2.38	0.28	-2.1	30	Pass
NVNT	ac20	5785	Ant1	-1.94	0.28	-1.66	30	Pass
NVNT	ac20	5825	Ant1	-1.86	0.28	-1.58	30	Pass
NVNT	ac40	5755	Ant1	-6.26	0.24	-6.02	30	Pass
NVNT	ac40	5795	Ant1	-6.43	0.24	-6.19	30	Pass
NVNT	ac80	5775	Ant1	-9.9	0.25	-9.65	30	Pass

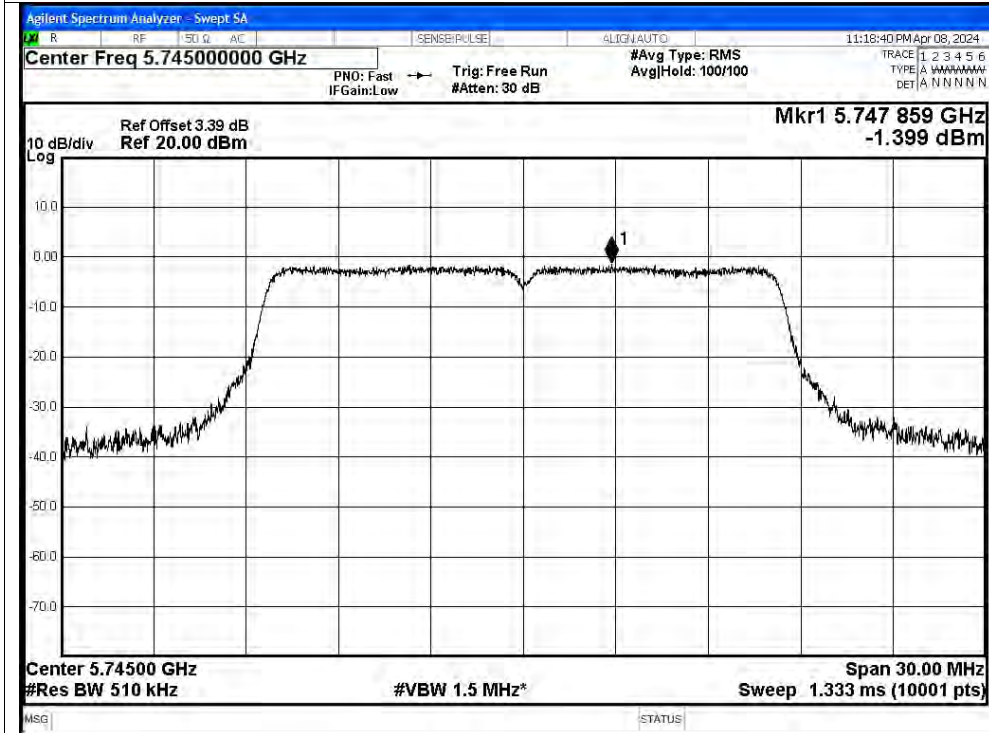
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5745	Ant2	-1.28	0.24	-1.04	30	Pass
NVNT	a	5785	Ant2	-1.18	0.24	-0.94	30	Pass
NVNT	a	5825	Ant2	-1.29	0.24	-1.05	30	Pass
NVNT	n20	5745	Ant2	-2.19	0.28	-1.91	30	Pass
NVNT	n20	5785	Ant2	-2.36	0.28	-2.08	30	Pass
NVNT	n20	5825	Ant2	-1.97	0.28	-1.69	30	Pass
NVNT	n40	5755	Ant2	-5.23	0.24	-4.99	30	Pass
NVNT	n40	5795	Ant2	-6.59	0.24	-6.35	30	Pass
NVNT	ac20	5745	Ant2	-2.3	0.28	-2.02	30	Pass
NVNT	ac20	5785	Ant2	-2.13	0.28	-1.85	30	Pass
NVNT	ac20	5825	Ant2	-2.04	0.28	-1.76	30	Pass
NVNT	ac40	5755	Ant2	-6.43	0.24	-6.19	30	Pass
NVNT	ac40	5795	Ant2	-6.52	0.24	-6.28	30	Pass
NVNT	ac80	5775	Ant2	-9.99	0.25	-9.74	30	Pass

MIMO

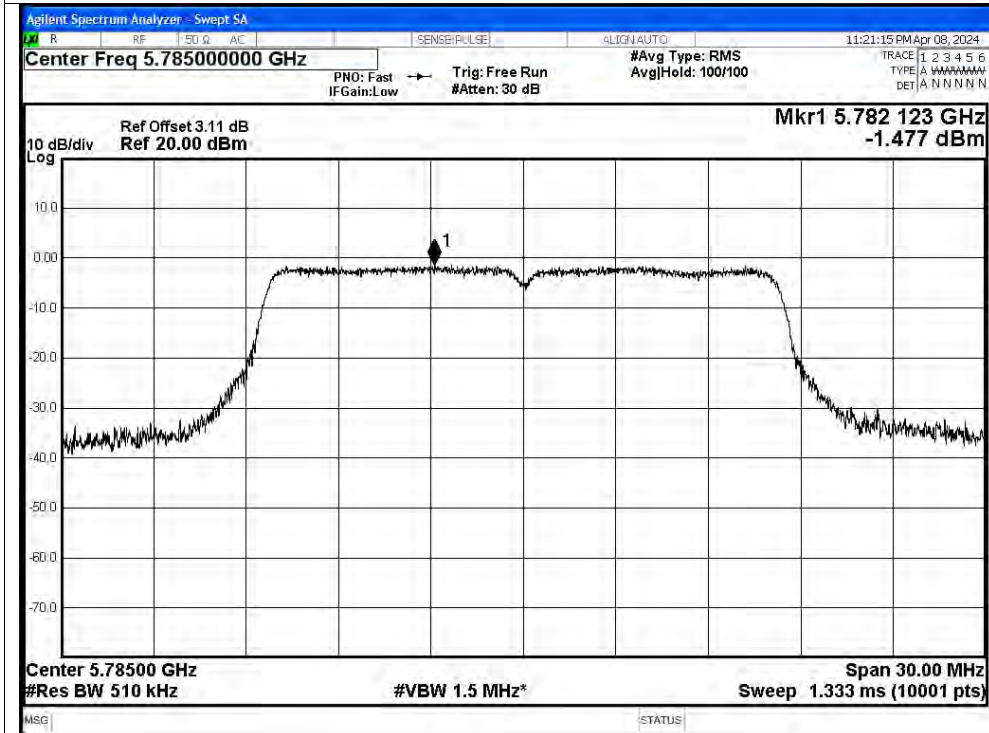
Condition	Mode	Frequency (MHz)	Total PSD (dBm/500KHz)			Limit (dBm/500KHz)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	5745	-1.85	-1.91	1.13	27.99	Pass
NVNT	n20	5785	-2.03	-2.08	0.96	27.99	Pass
NVNT	n20	5825	-1.8	-1.69	1.27	27.99	Pass
NVNT	n40	5755	-5.13	-4.99	-2.05	27.99	Pass
NVNT	n40	5795	-6.3	-6.35	-3.31	27.99	Pass
NVNT	ac20	5745	-2.1	-2.02	0.95	27.99	Pass
NVNT	ac20	5785	-1.66	-1.85	1.26	27.99	Pass
NVNT	ac20	5825	-1.58	-1.76	1.34	27.99	Pass
NVNT	ac40	5755	-6.02	-6.19	-3.09	27.99	Pass
NVNT	ac40	5795	-6.19	-6.28	-3.22	27.99	Pass
NVNT	ac80	5775	-9.65	-9.74	-6.68	27.99	Pass

*For the WLAN 5GHz 802.11n/802.11ac, the directional gain is 8.01dBi for MIMO mode, thus the power limit should be reduced by 2.3dB.
The Duty Cycle Factor is compensated in the tables.

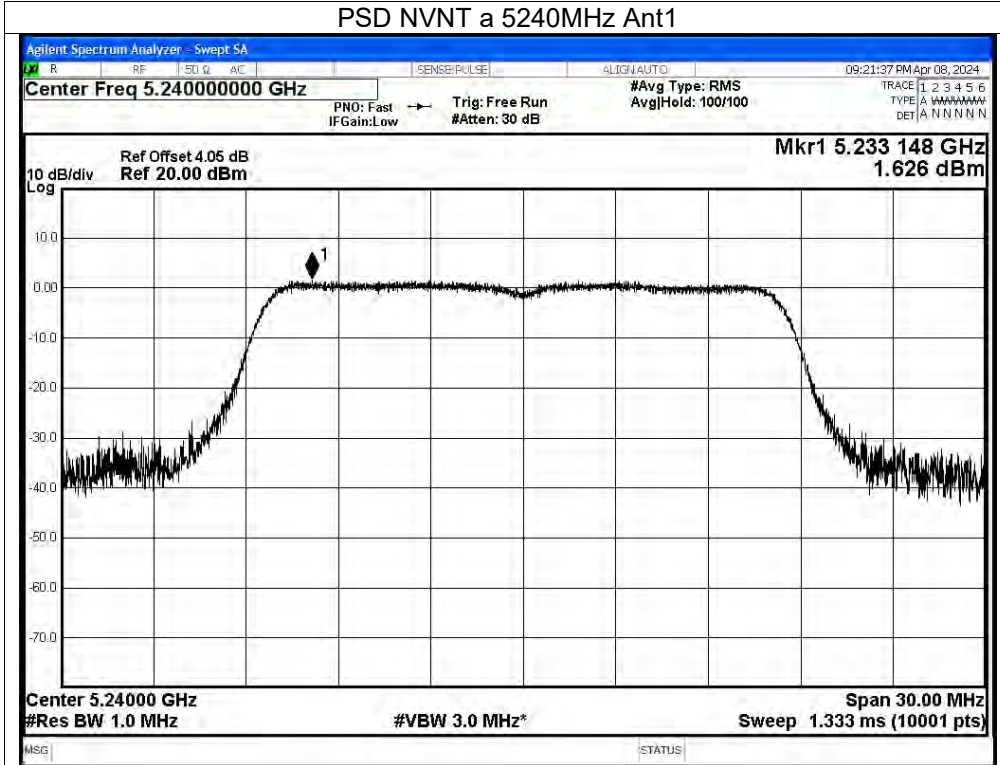
Test Graphs
PSD NVNT a 5745MHz Ant1



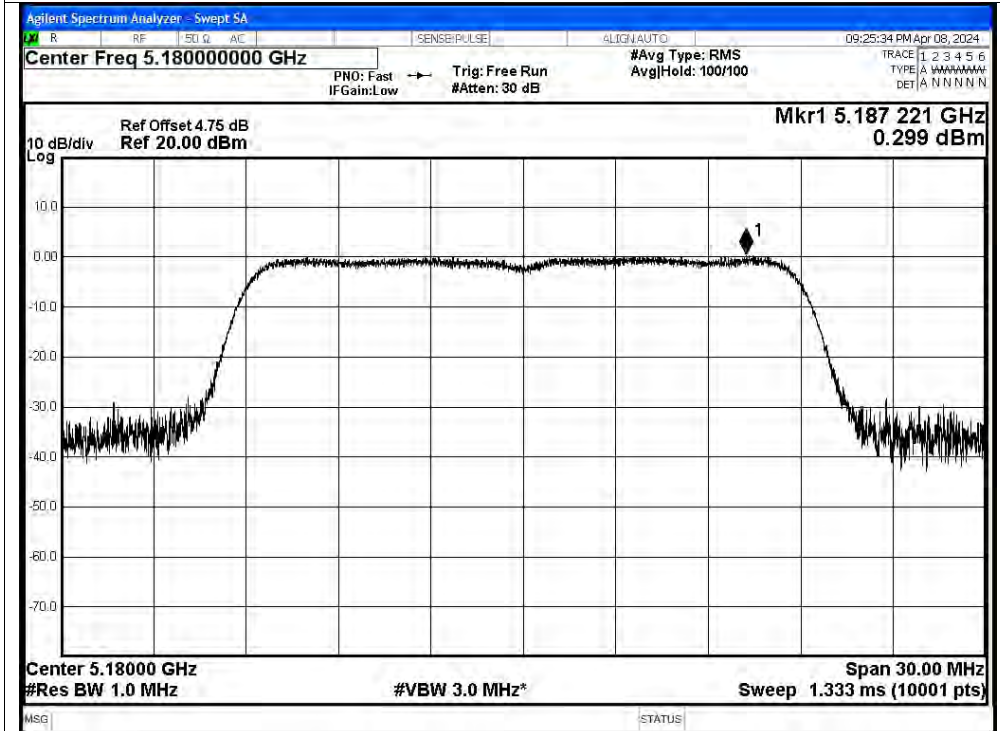
PSD NVNT a 5785MHz Ant1



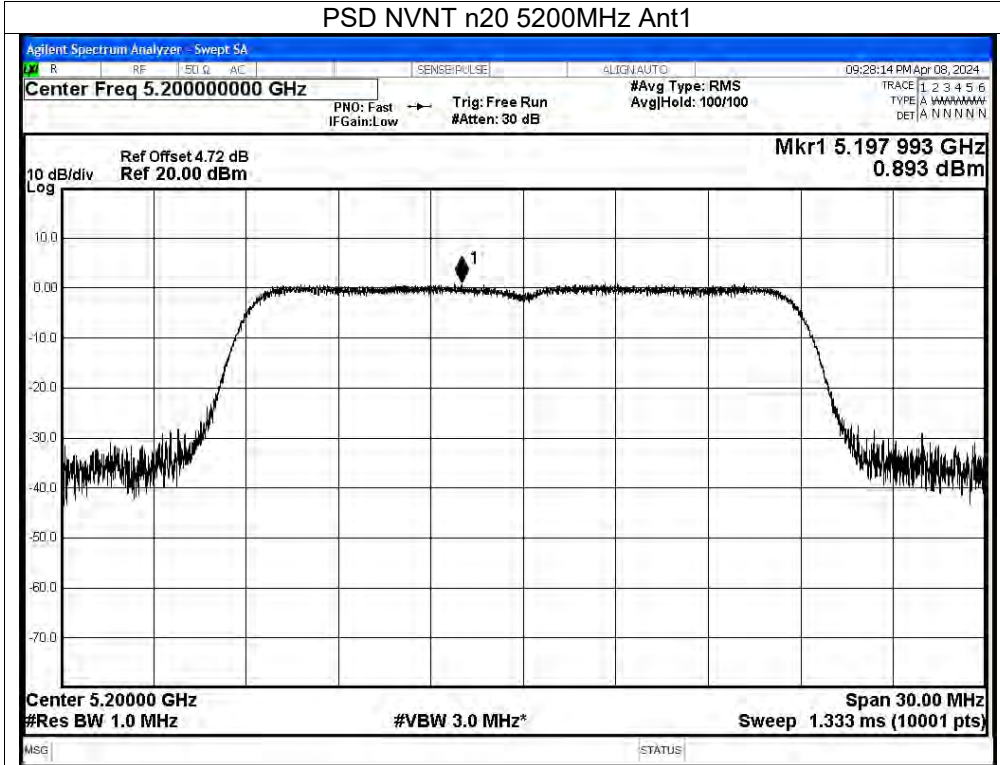
PSD NVNT a 5240MHz Ant1



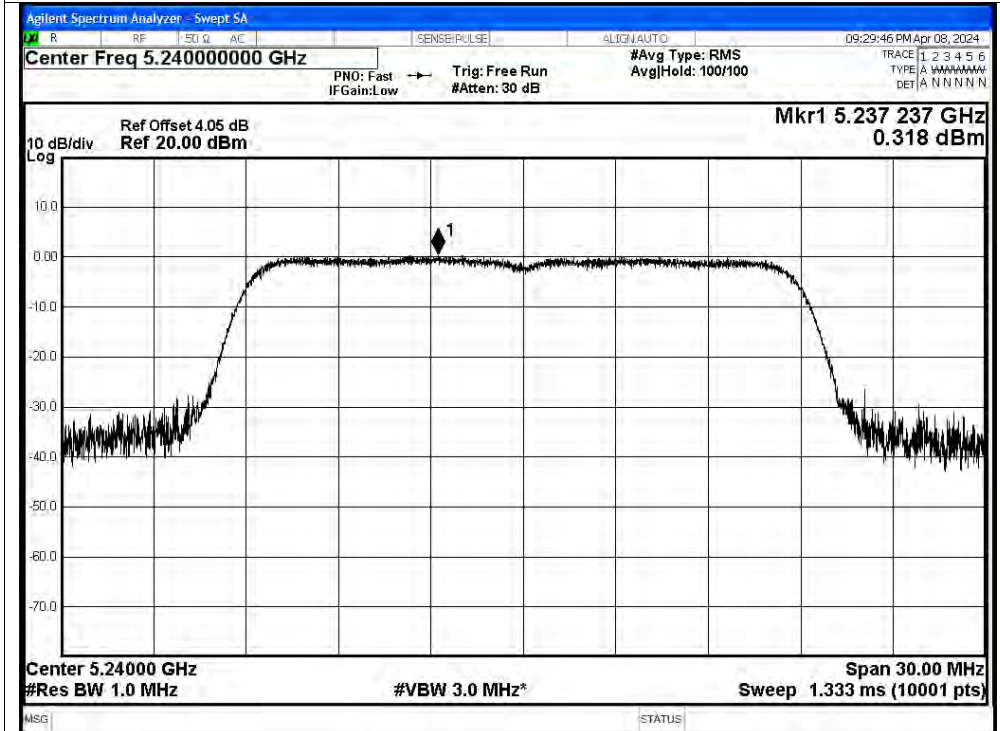
PSD NVNT n20 5180MHz Ant1



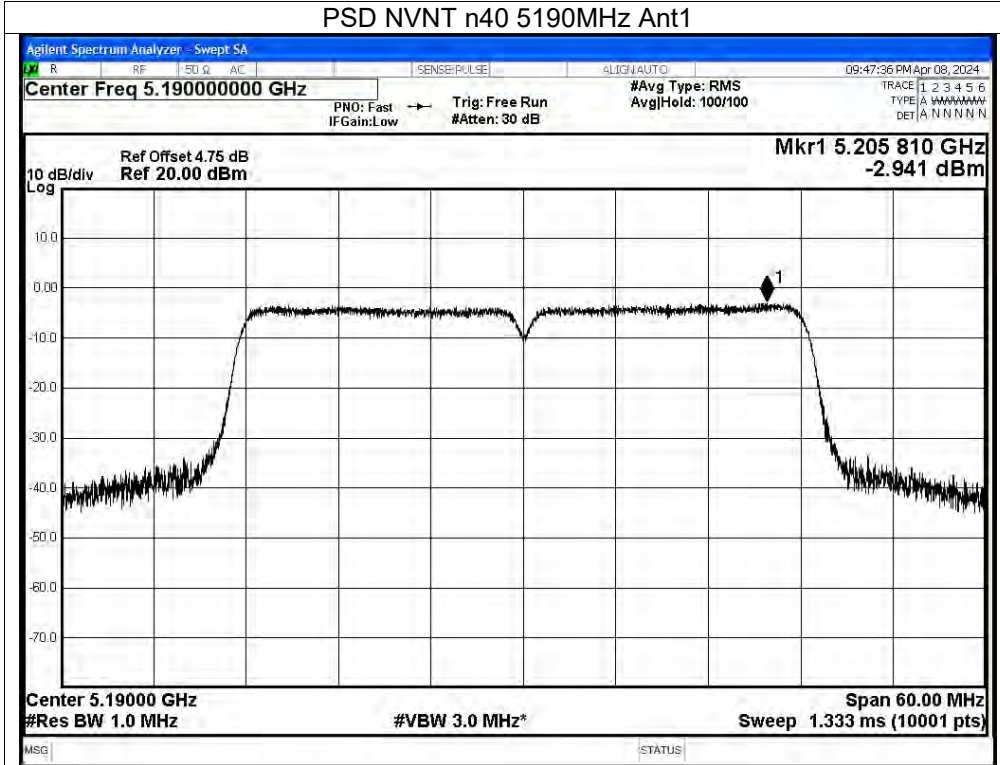
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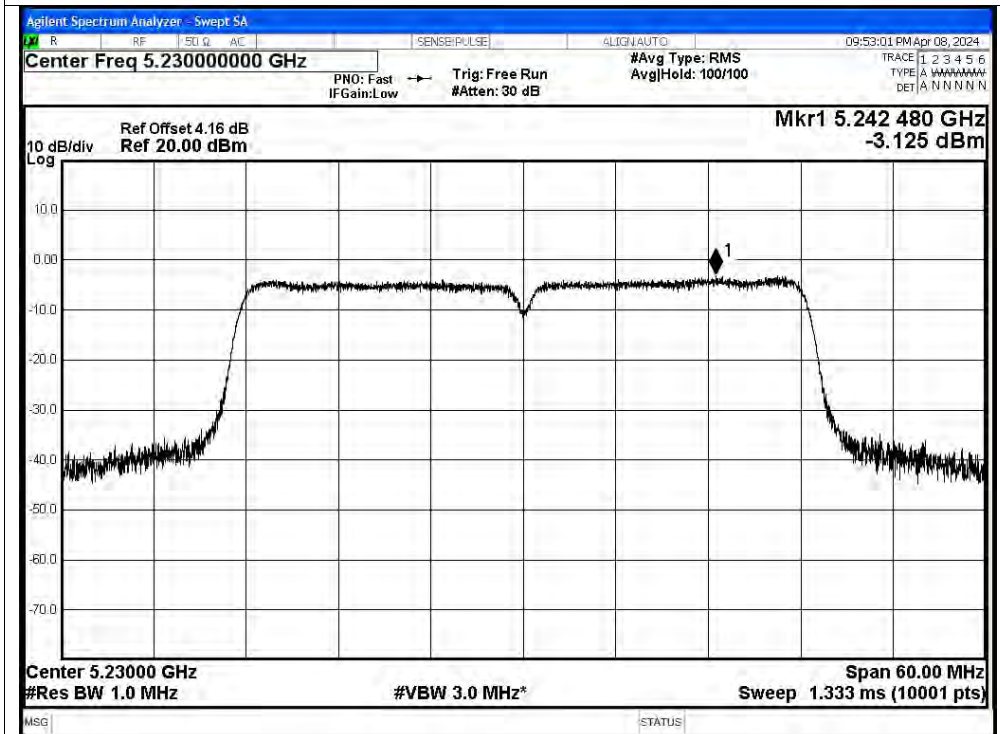
PSD NVNT n20 5240MHz Ant1



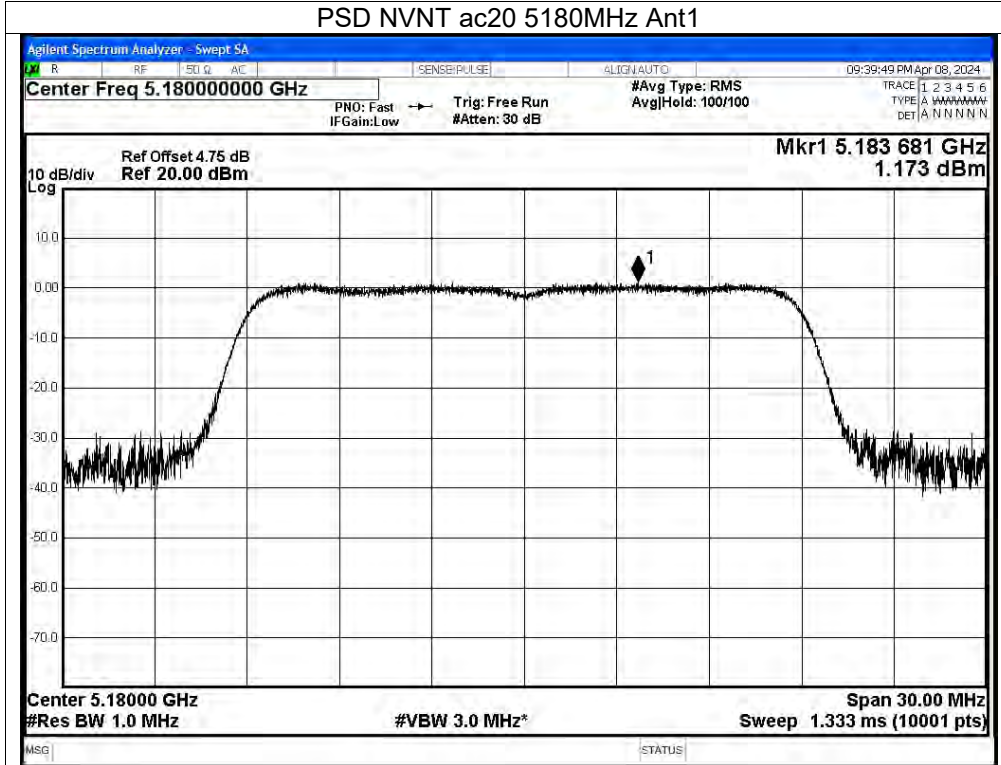
PSD NVNT n40 5190MHz Ant1



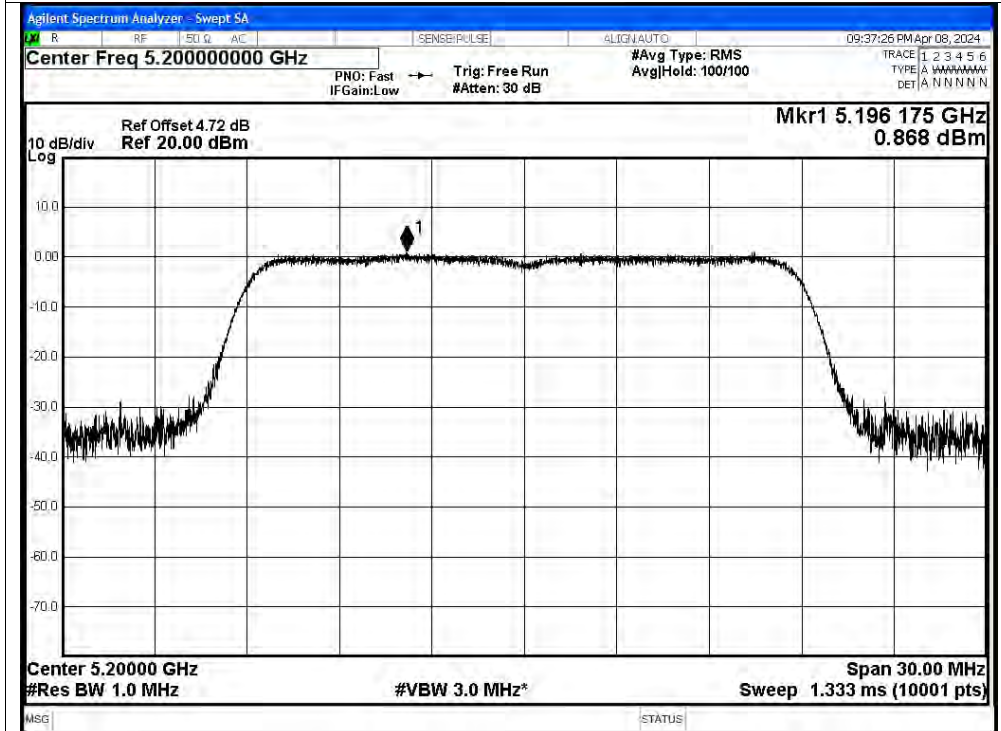
PSD NVNT n40 5230MHz Ant1



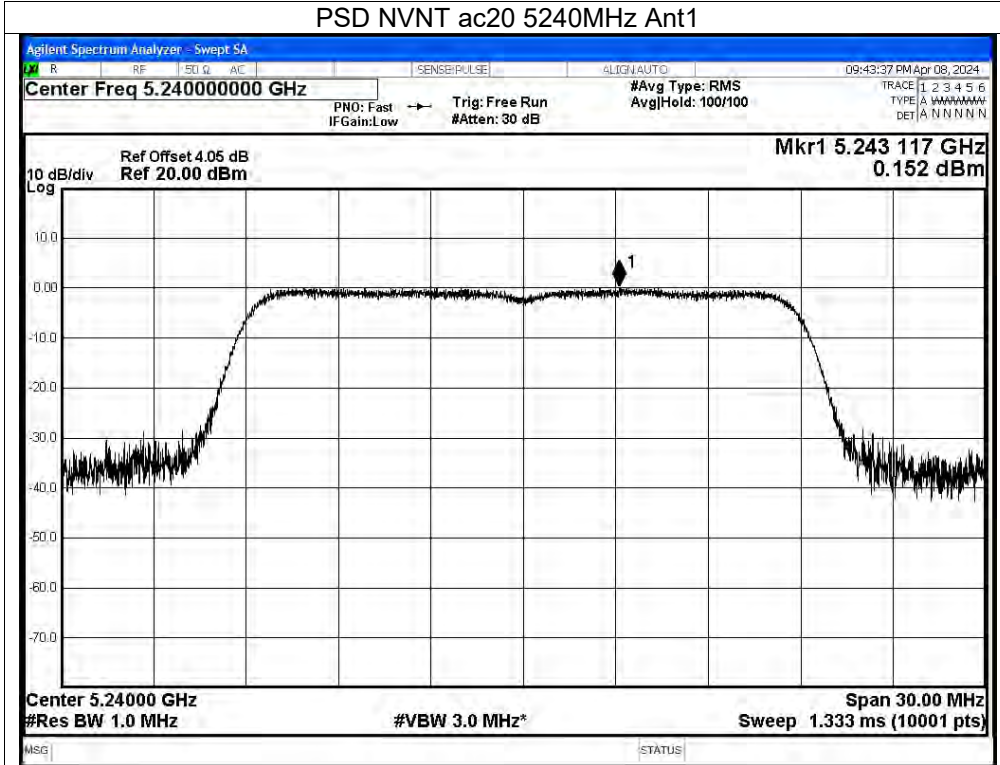
PSD NVNT ac20 5180MHz Ant1



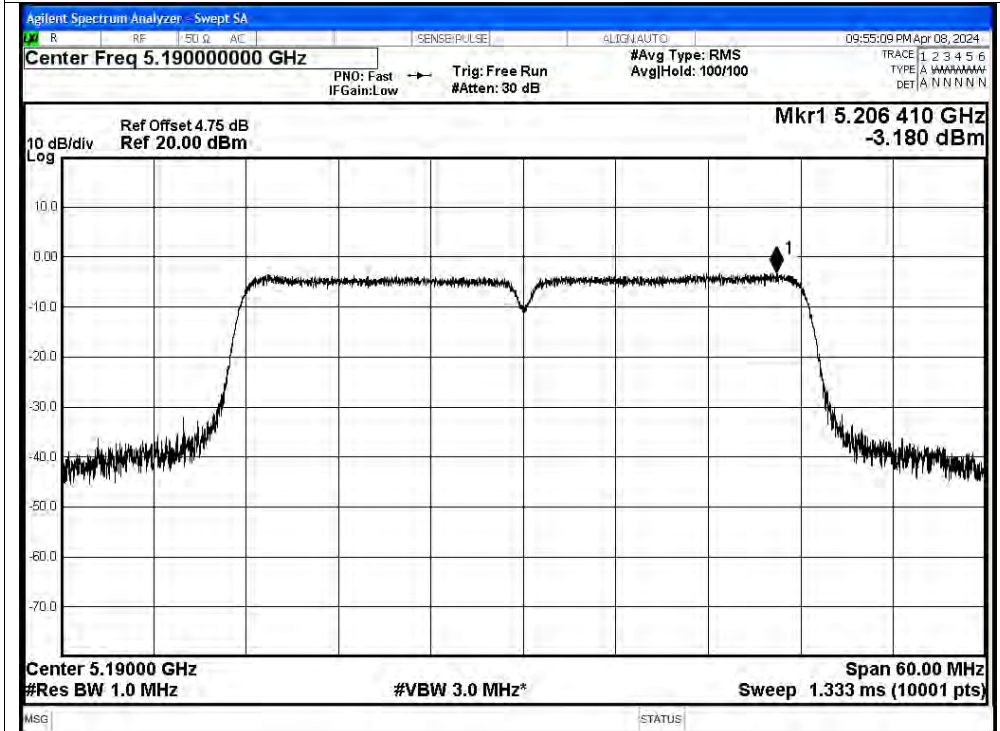
PSD NVNT ac20 5200MHz Ant1

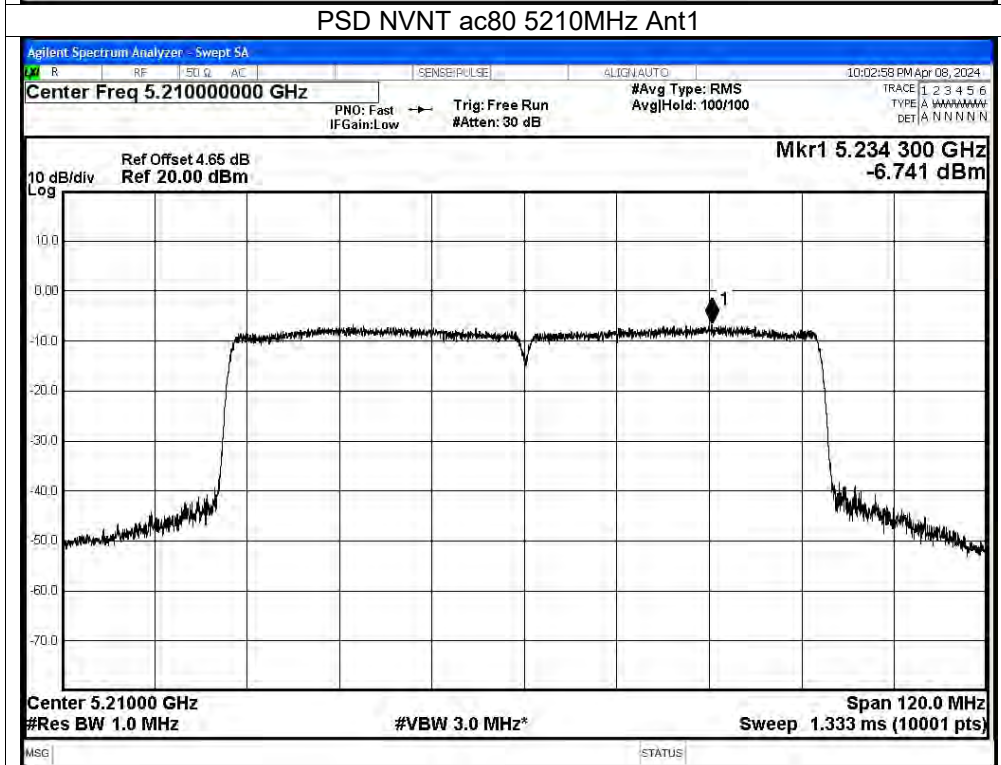
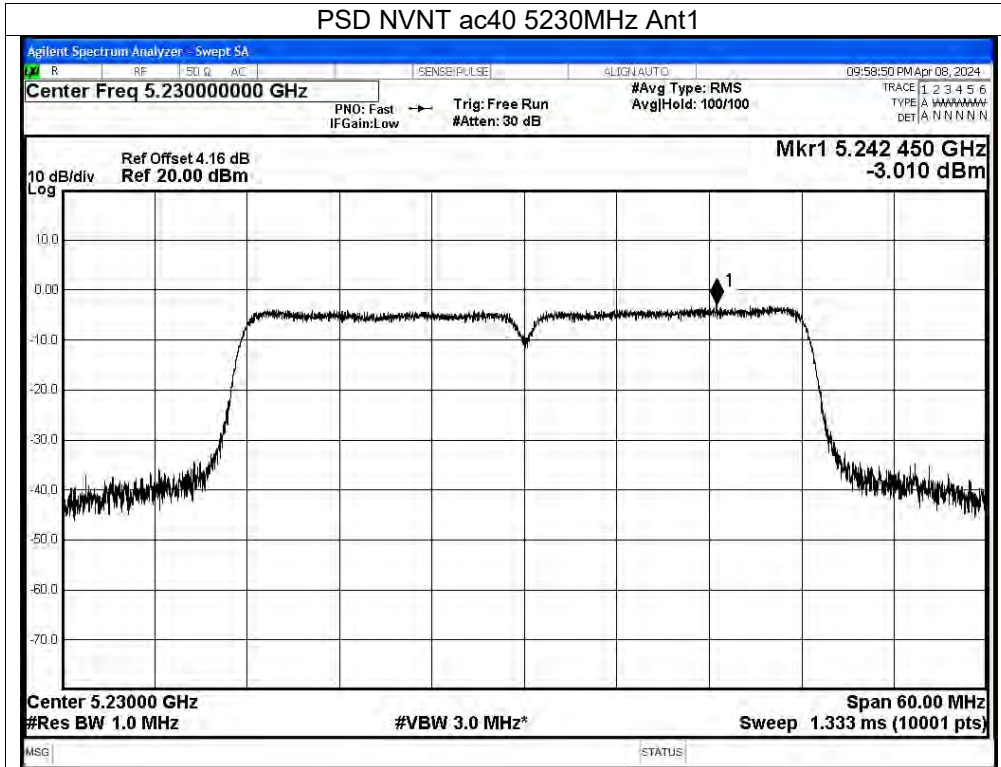


PSD NVNT ac20 5240MHz Ant1

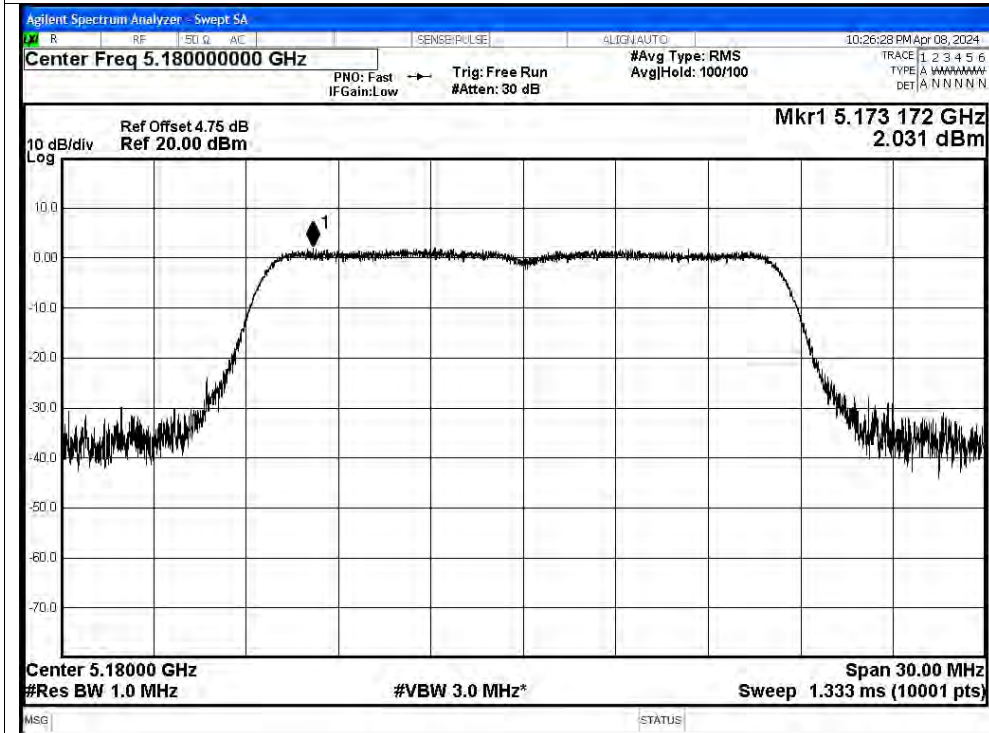


PSD NVNT ac40 5190MHz Ant1

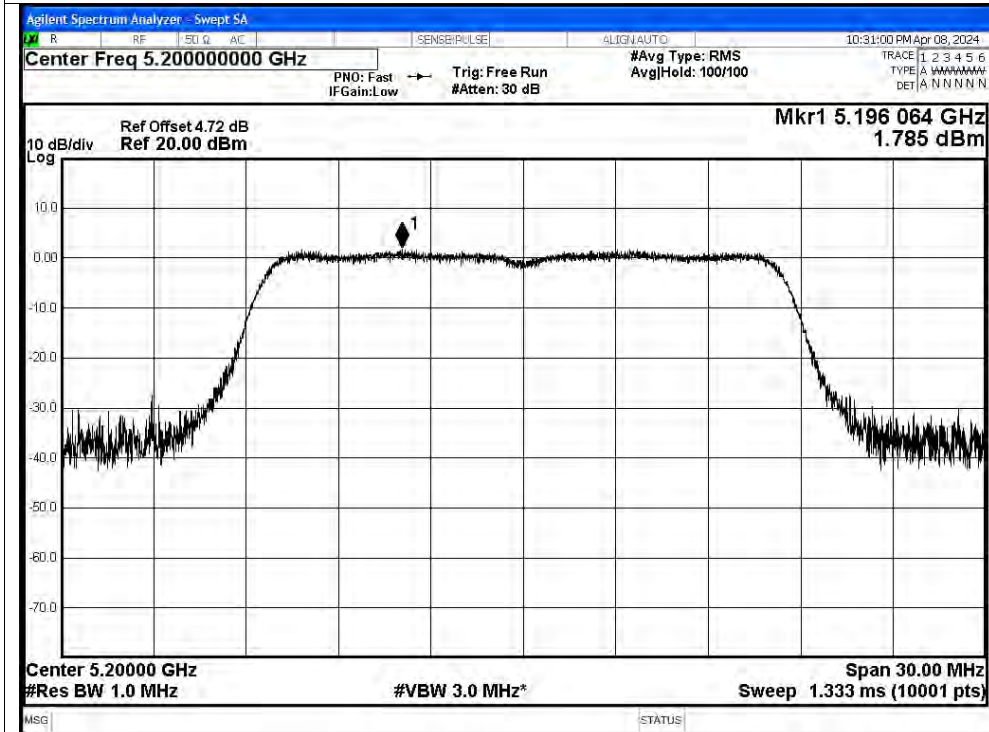




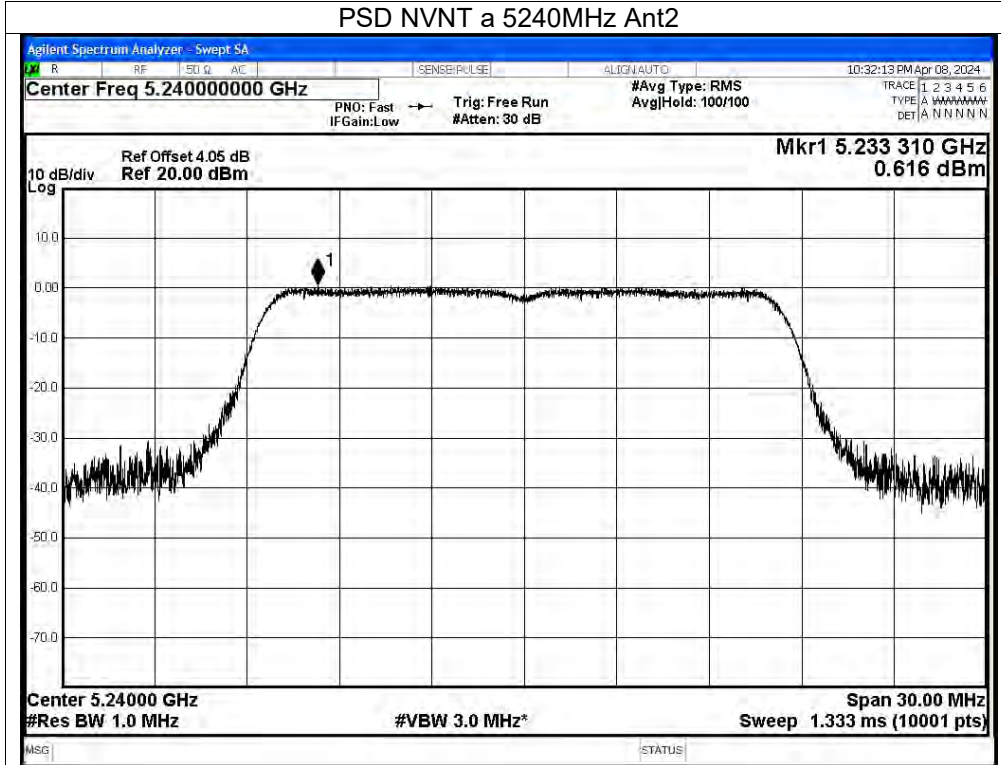
Test Graphs
PSD NVNT a 5180MHz Ant2



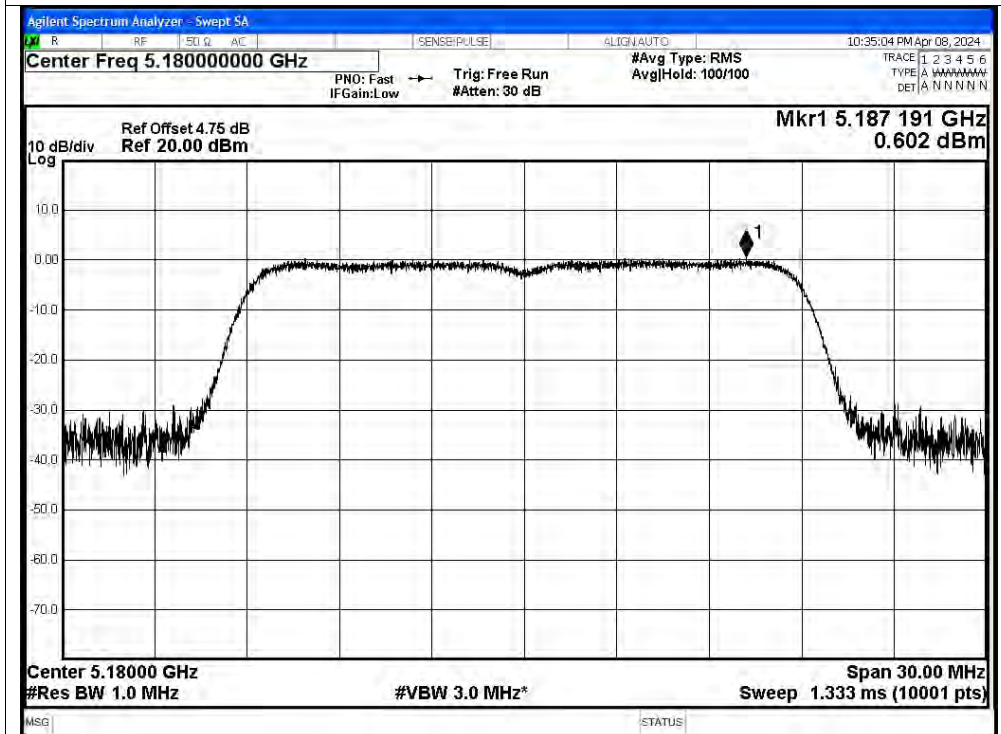
PSD NVNT a 5200MHz Ant2



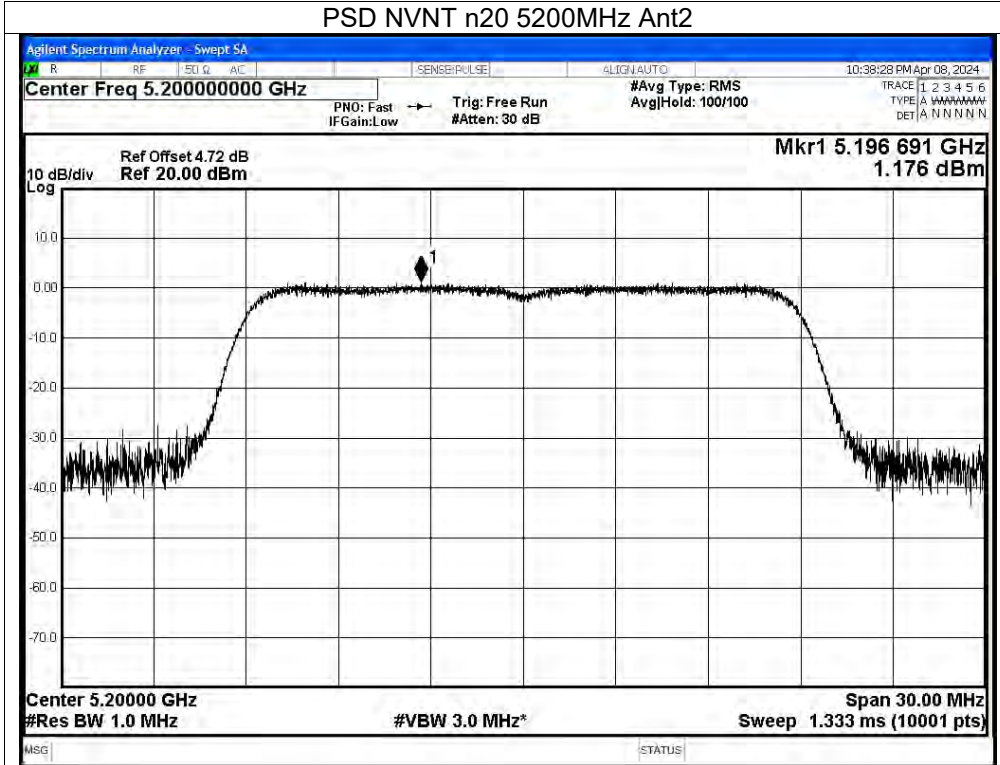
PSD NVNT a 5240MHz Ant2



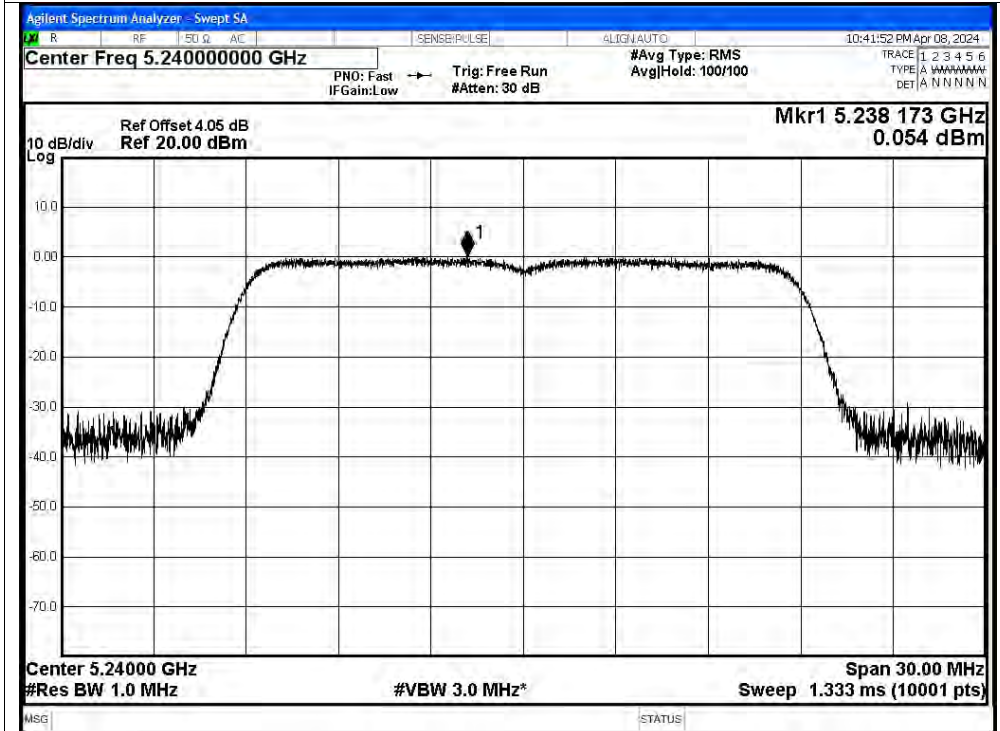
PSD NVNT n20 5180MHz Ant2



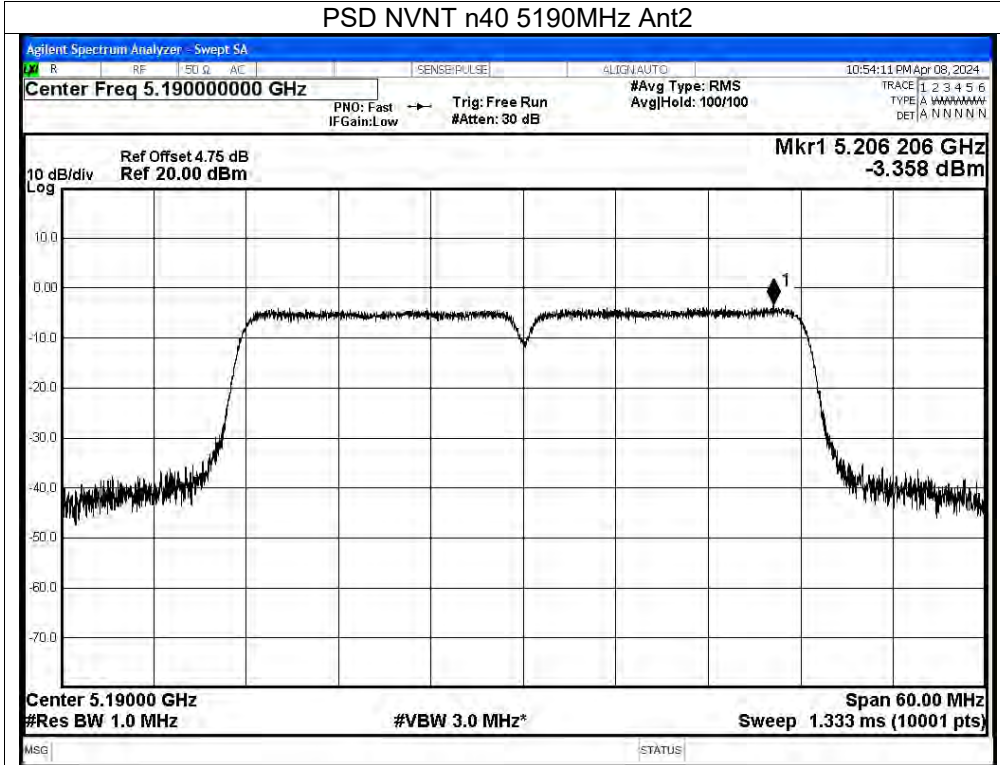
PSD NVNT n20 5200MHz Ant2



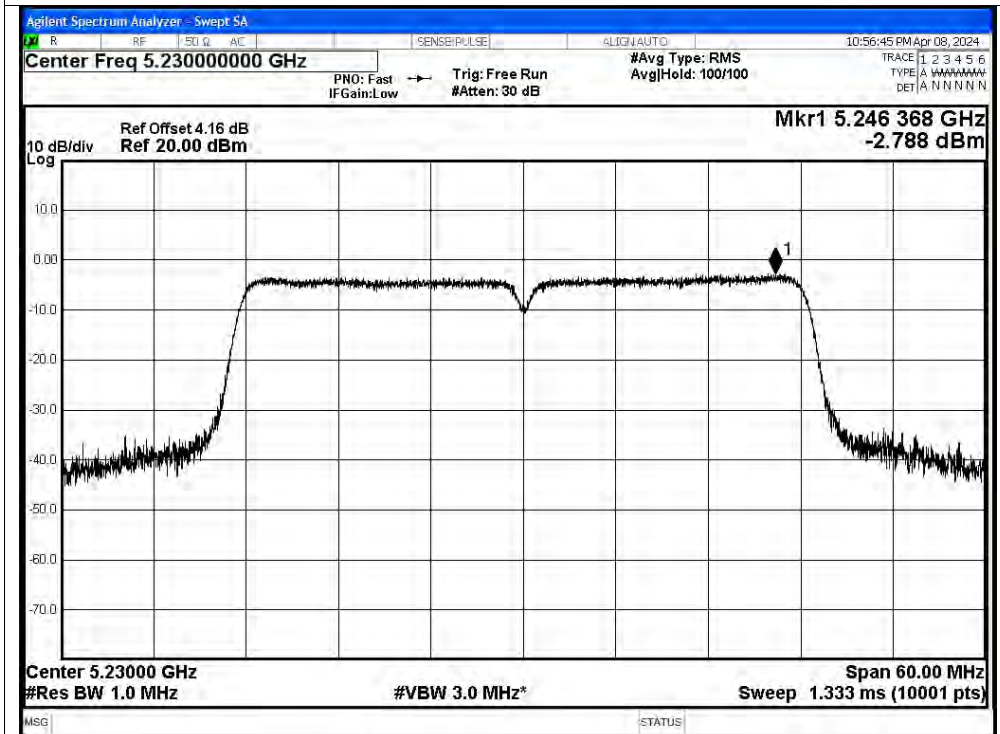
PSD NVNT n20 5240MHz Ant2



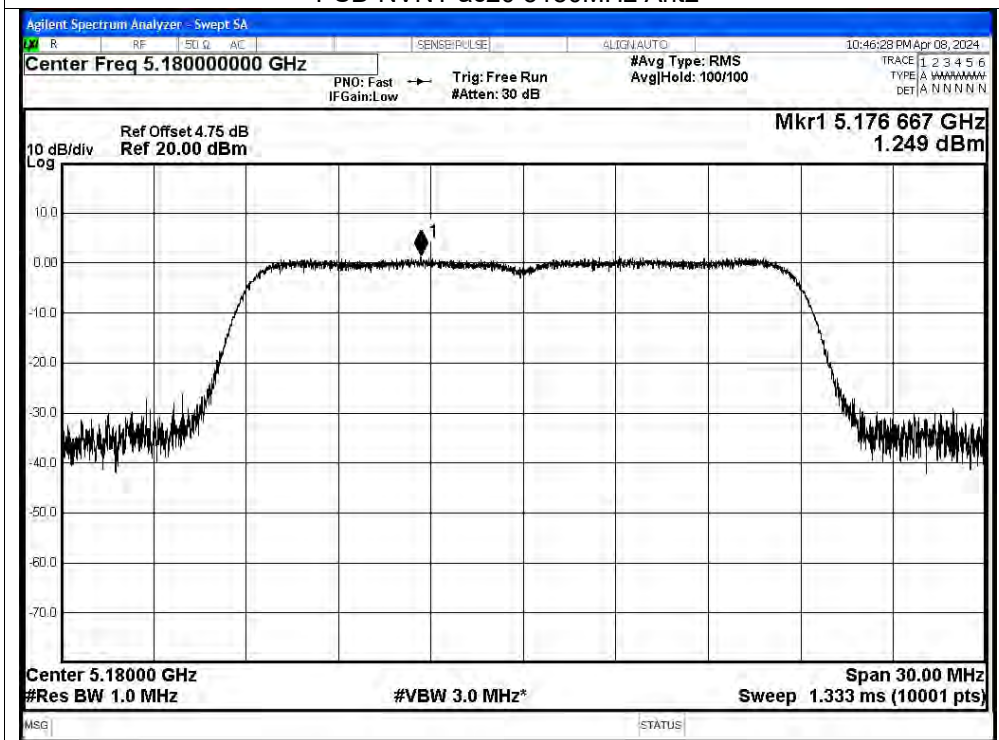
PSD NVNT n40 5190MHz Ant2



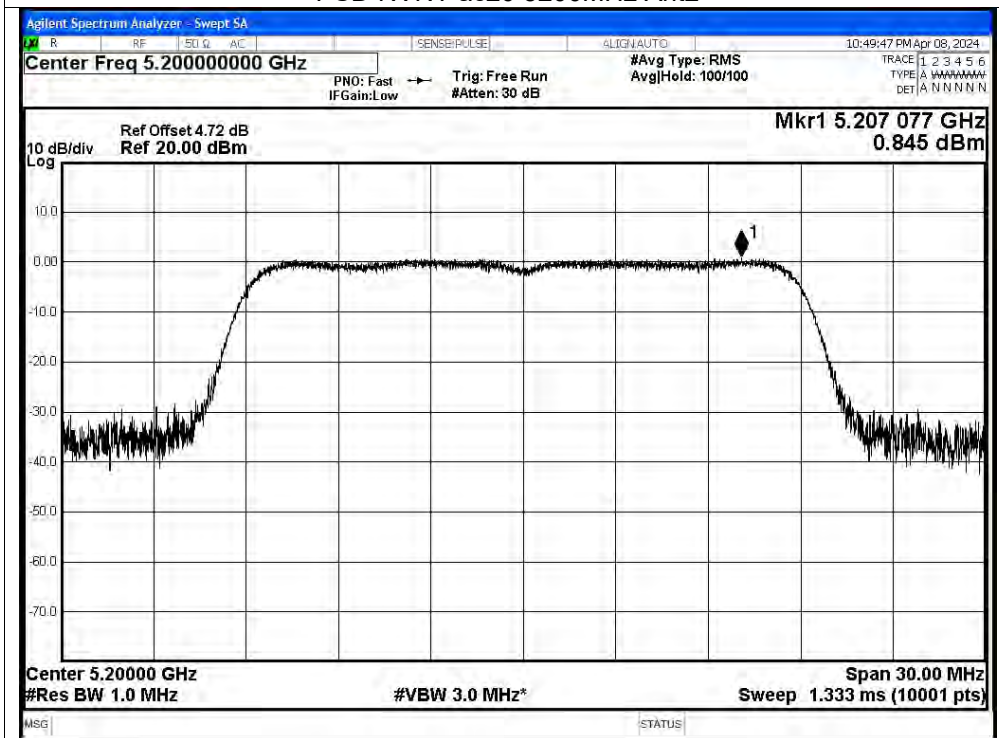
PSD NVNT n40 5230MHz Ant2



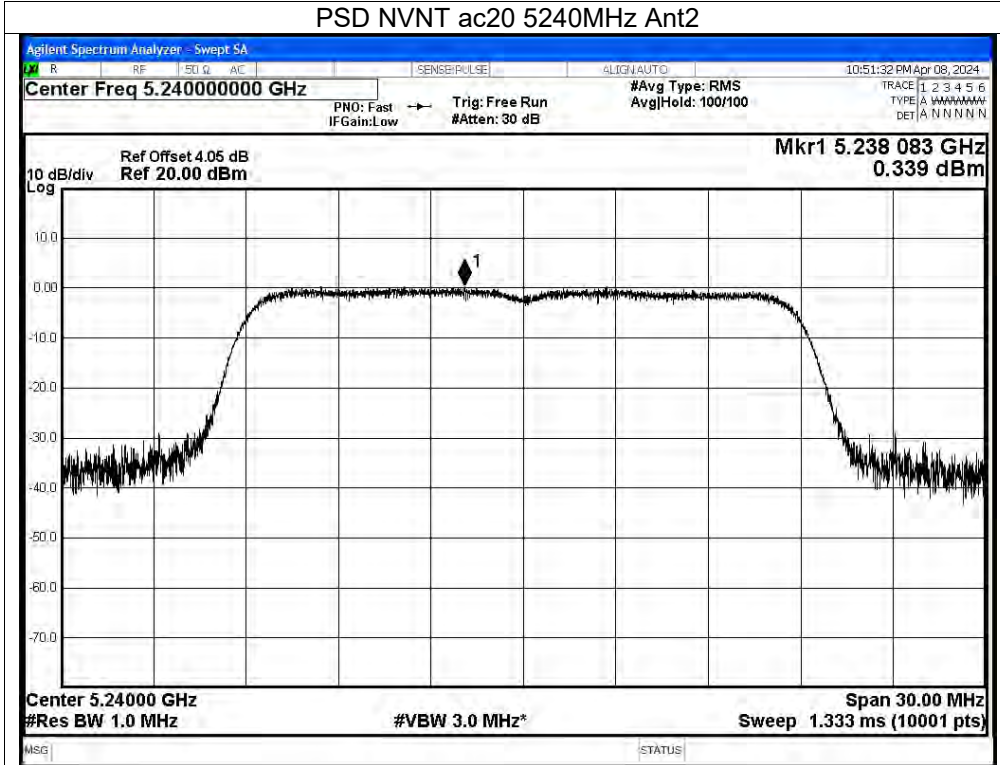
PSD NVNT ac20 5180MHz Ant2



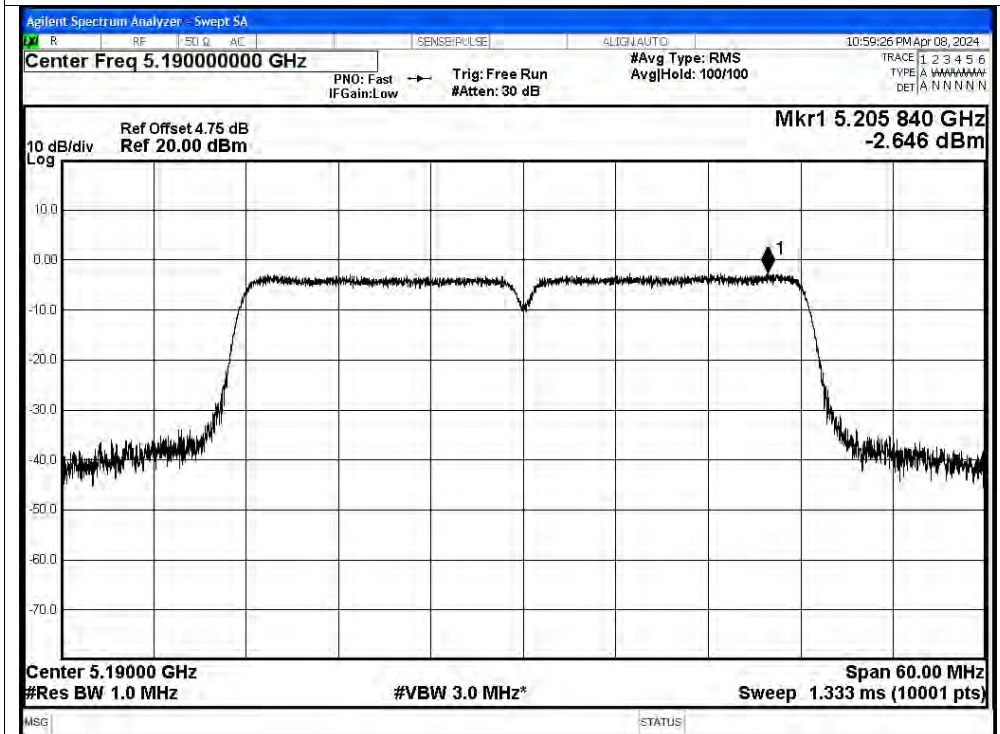
PSD NVNT ac20 5200MHz Ant2



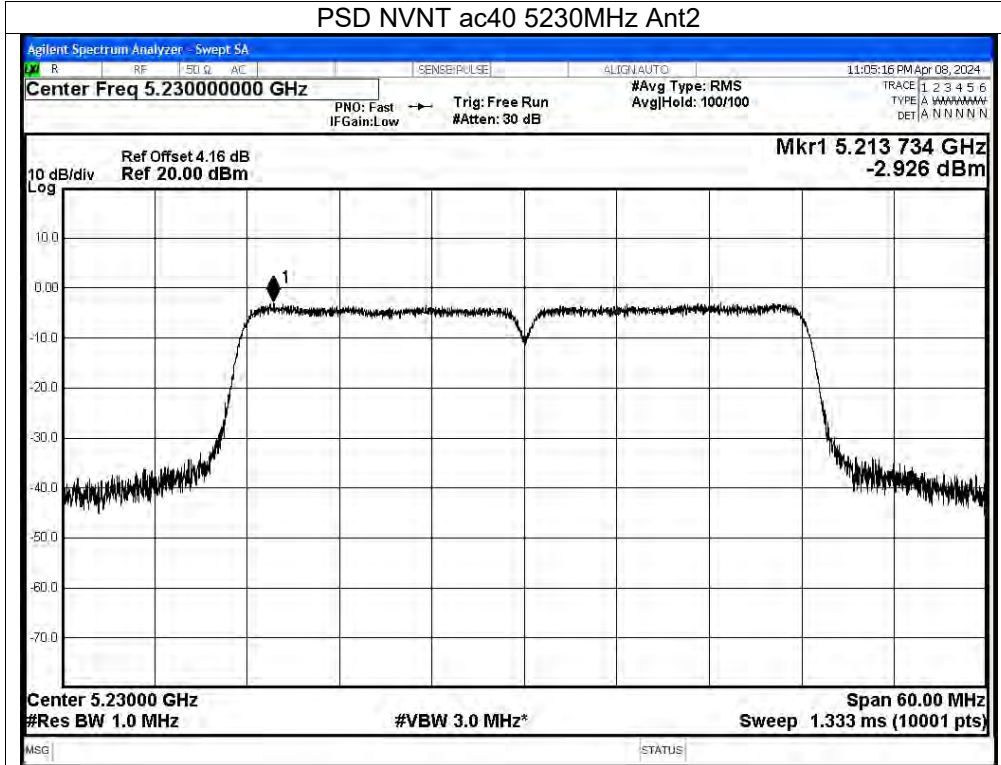
PSD NVNT ac20 5240MHz Ant2



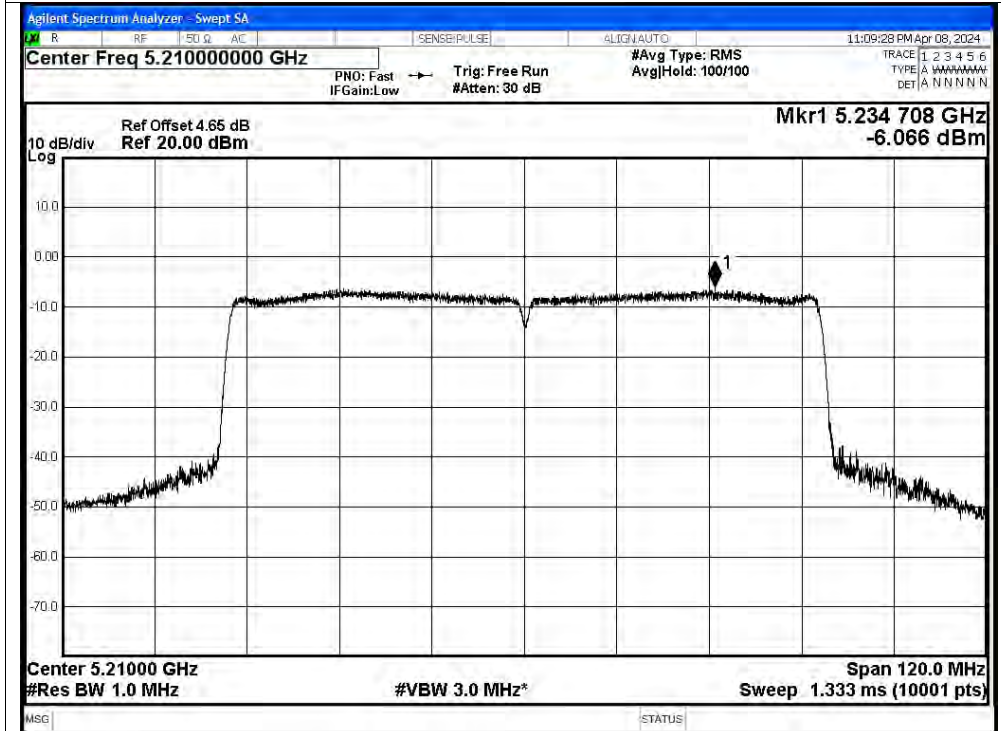
PSD NVNT ac40 5190MHz Ant2



PSD NVNT ac40 5230MHz Ant2



PSD NVNT ac80 5210MHz Ant2



Appendix B.3: Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant1	94.56	0.24	0.91
NVNT	a	5785	Ant1	94.56	0.24	0.91
NVNT	a	5825	Ant1	94.65	0.24	0.91
NVNT	n20	5745	Ant1	93.67	0.28	1.07
NVNT	n20	5785	Ant1	93.67	0.28	1.07
NVNT	n20	5825	Ant1	93.67	0.28	1.07
NVNT	n40	5755	Ant1	94.71	0.24	0.9
NVNT	n40	5795	Ant1	94.71	0.24	0.9
NVNT	ac20	5745	Ant1	93.82	0.28	1.06
NVNT	ac20	5785	Ant1	93.72	0.28	1.06
NVNT	ac20	5825	Ant1	93.82	0.28	1.06
NVNT	ac40	5755	Ant1	94.73	0.24	0.9
NVNT	ac40	5795	Ant1	94.72	0.24	0.9
NVNT	ac80	5775	Ant1	94.32	0.25	0.97

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant2	94.56	0.24	0.91
NVNT	a	5785	Ant2	94.56	0.24	0.91
NVNT	a	5825	Ant2	94.57	0.24	0.91
NVNT	n20	5745	Ant2	93.77	0.28	1.07
NVNT	n20	5785	Ant2	93.67	0.28	1.07
NVNT	n20	5825	Ant2	93.67	0.28	1.07
NVNT	n40	5755	Ant2	94.71	0.24	0.9
NVNT	n40	5795	Ant2	94.71	0.24	0.9
NVNT	ac20	5745	Ant2	93.82	0.28	1.06
NVNT	ac20	5785	Ant2	93.82	0.28	1.06
NVNT	ac20	5825	Ant2	93.72	0.28	1.06
NVNT	ac40	5755	Ant2	94.72	0.24	0.9
NVNT	ac40	5795	Ant2	94.72	0.24	0.9
NVNT	ac80	5775	Ant2	94.32	0.25	0.97

Appendix B.4: Test Results of Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
NVNT	ac20	5785	Ant1	5784.98	-20000	-3.46	25	Pass
NVNT	ac20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
NVNT	ac40	5755	Ant1	5755	0	0	25	Pass
NVNT	ac40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ac80	5775	Ant1	5775	0	0	25	Pass

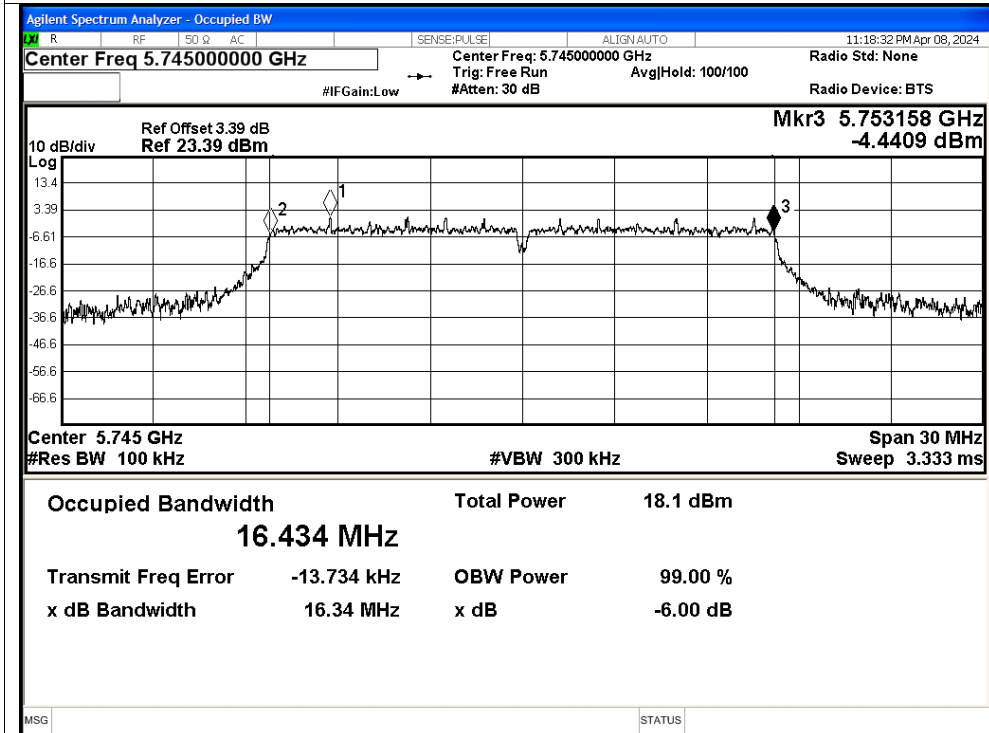
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac20	5745	Ant2	5745	0	0	25	Pass
NVNT	ac20	5785	Ant2	5784.98	-20000	-3.46	25	Pass
NVNT	ac20	5825	Ant2	5824.98	-20000	-3.43	25	Pass
NVNT	ac40	5755	Ant2	5755	0	0	25	Pass
NVNT	ac40	5795	Ant2	5794.96	-40000	-6.9	25	Pass
NVNT	ac80	5775	Ant2	5775	0	0	25	Pass

Appendix B.5: Test Results of -6dB Bandwidth

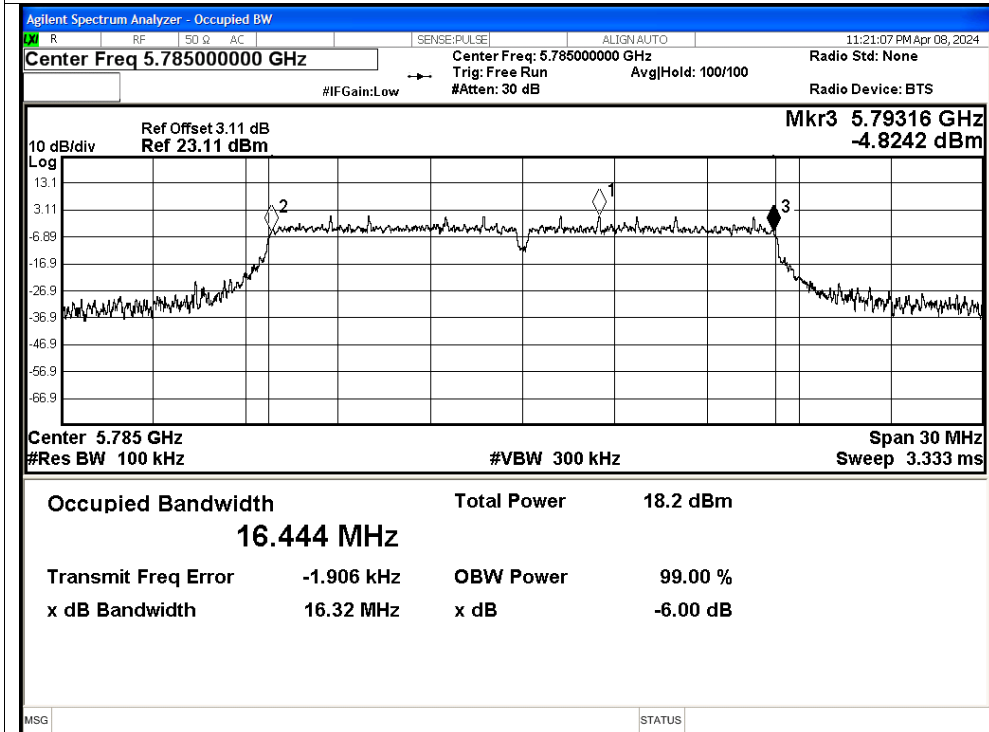
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.344	≥ 0.5	Pass
NVNT	a	5785	Ant1	16.324	≥ 0.5	Pass
NVNT	a	5825	Ant1	16.306	≥ 0.5	Pass
NVNT	n20	5745	Ant1	17.406	≥ 0.5	Pass
NVNT	n20	5785	Ant1	17.288	≥ 0.5	Pass
NVNT	n20	5825	Ant1	17.242	≥ 0.5	Pass
NVNT	n40	5755	Ant1	35.474	≥ 0.5	Pass
NVNT	n40	5795	Ant1	35.996	≥ 0.5	Pass
NVNT	ac20	5745	Ant1	17.53	≥ 0.5	Pass
NVNT	ac20	5785	Ant1	17.278	≥ 0.5	Pass
NVNT	ac20	5825	Ant1	17.124	≥ 0.5	Pass
NVNT	ac40	5755	Ant1	36.436	≥ 0.5	Pass
NVNT	ac40	5795	Ant1	35.193	≥ 0.5	Pass
NVNT	ac80	5775	Ant1	75.254	≥ 0.5	Pass

Test Graphs

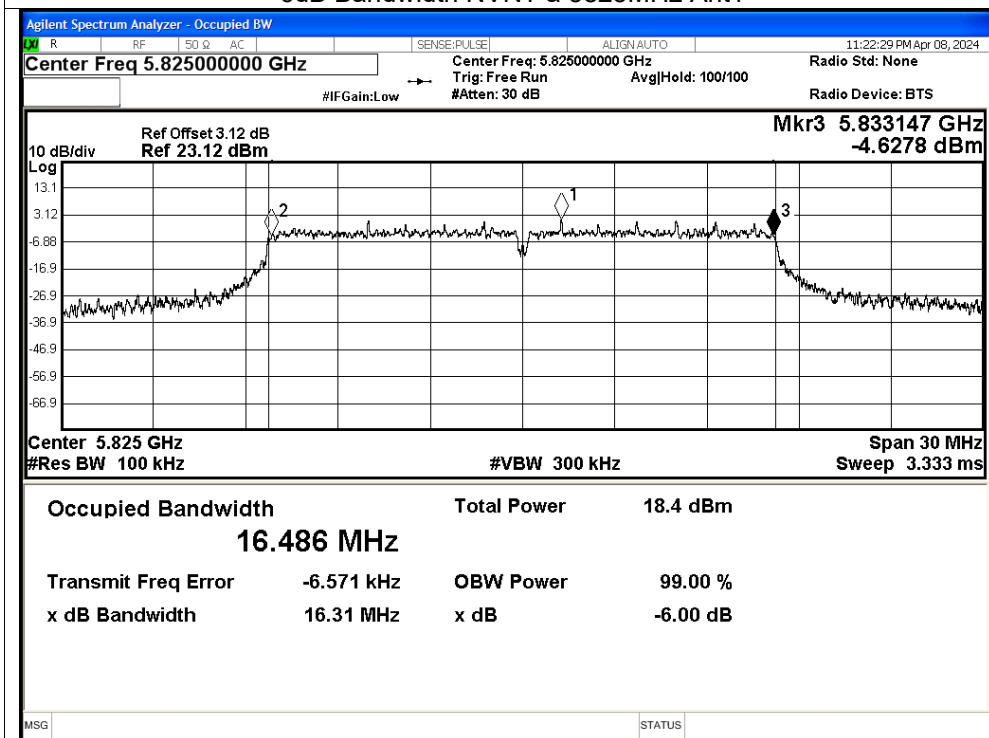
-6dB Bandwidth NVNT a 5745MHz Ant1



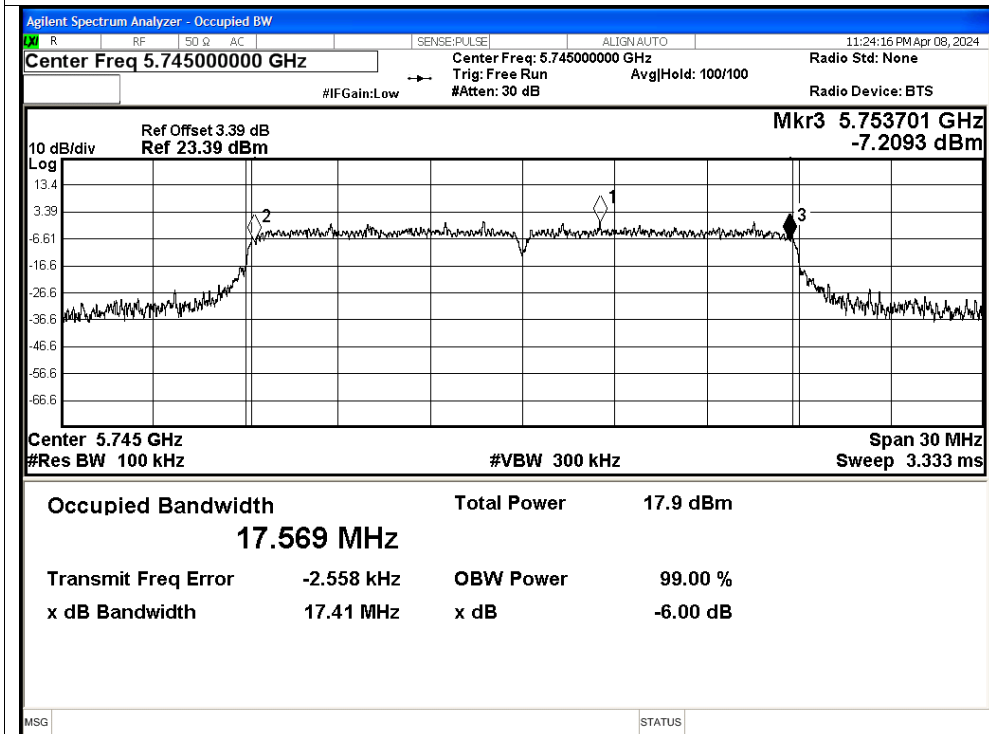
-6dB Bandwidth NVNT a 5785MHz Ant1



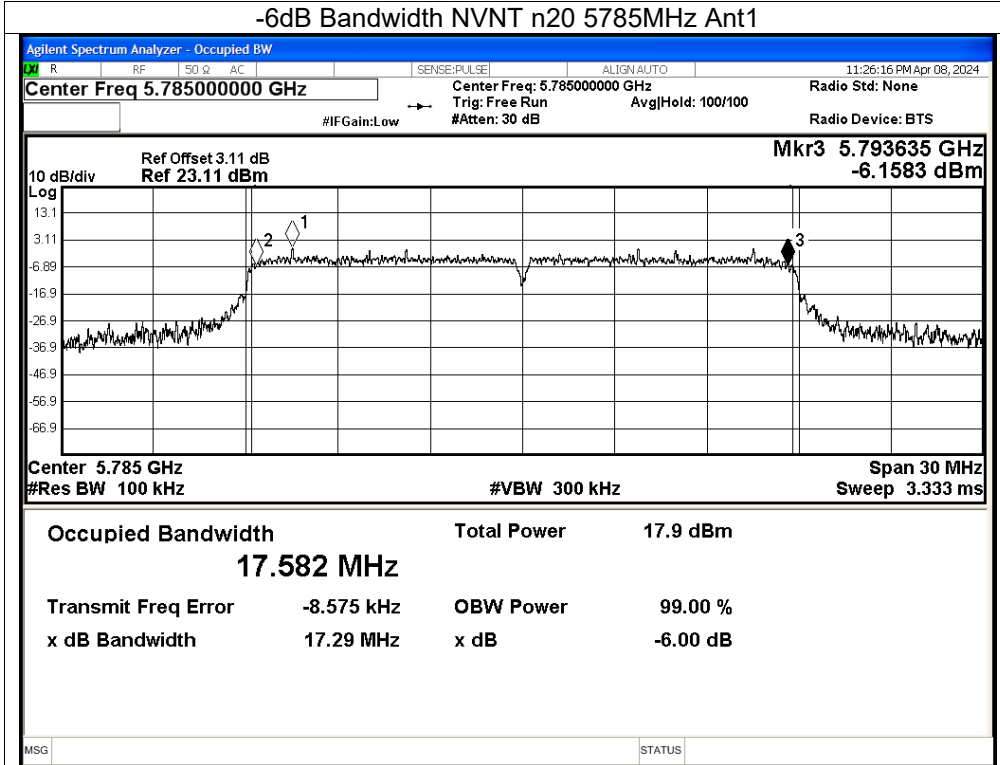
-6dB Bandwidth NVNT a 5825MHz Ant1



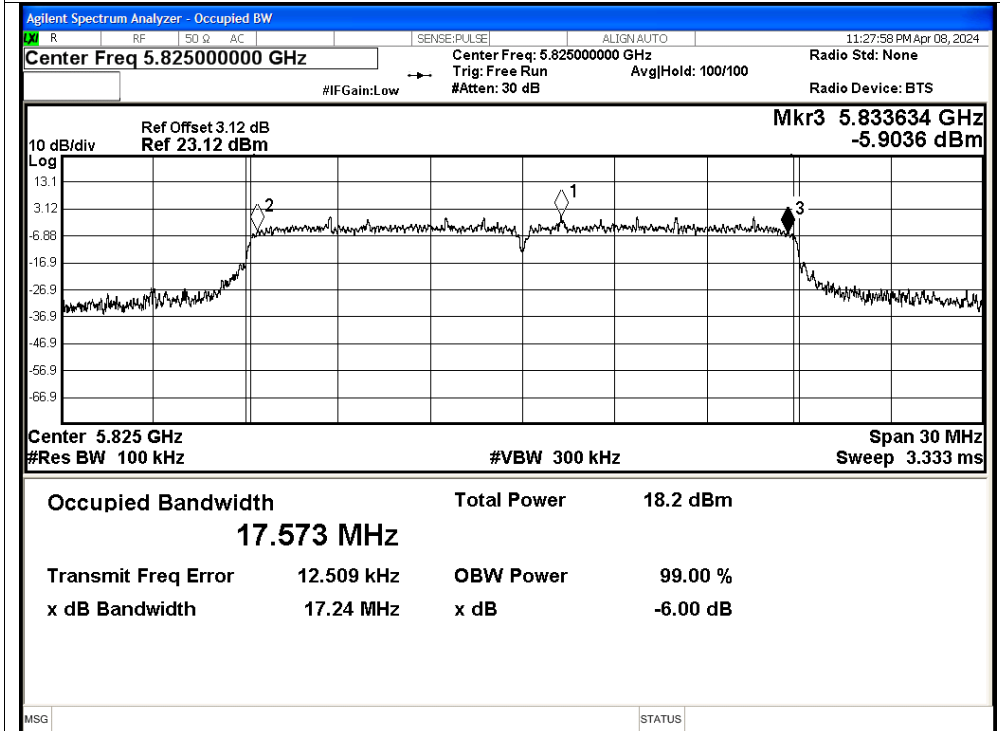
-6dB Bandwidth NVNT n20 5745MHz Ant1

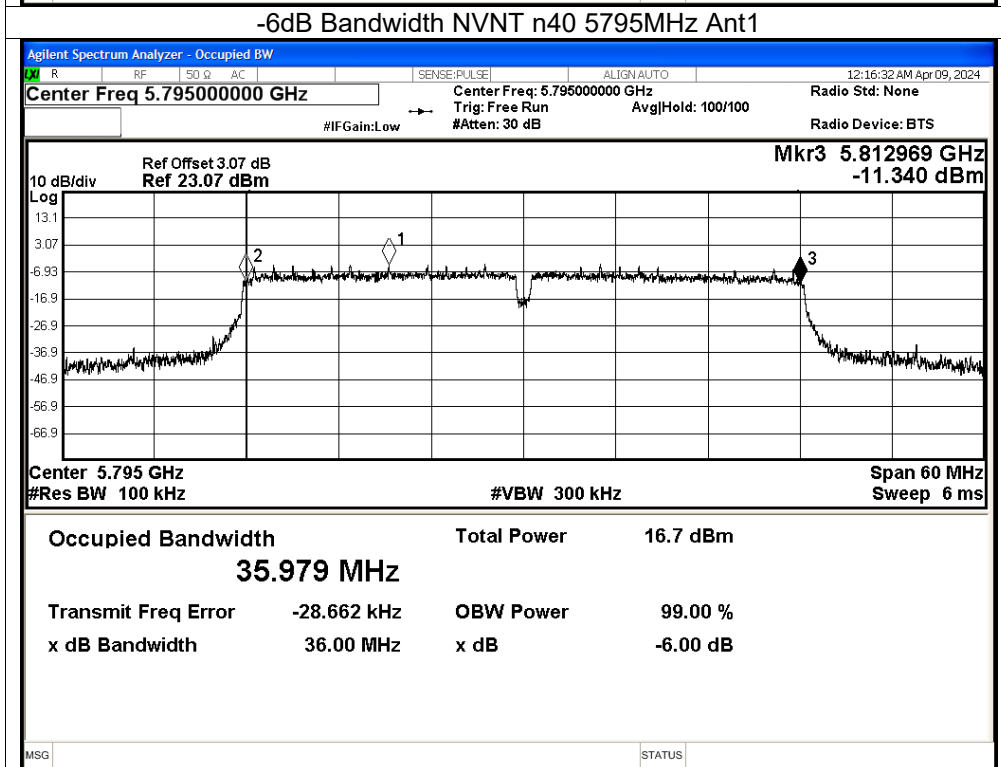
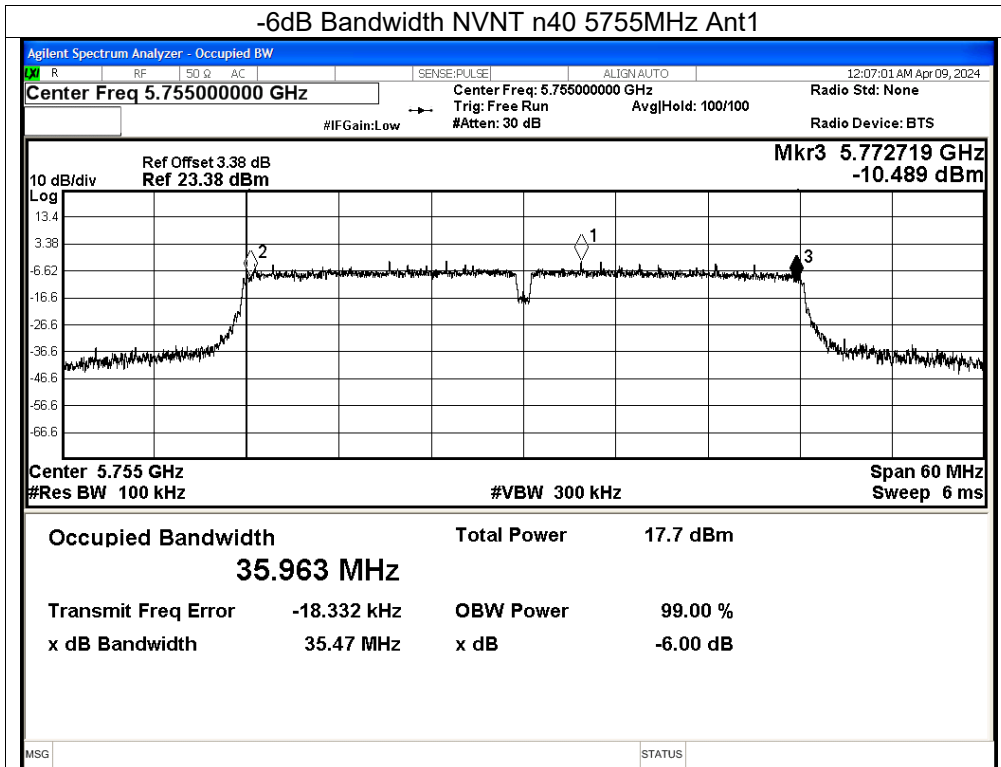


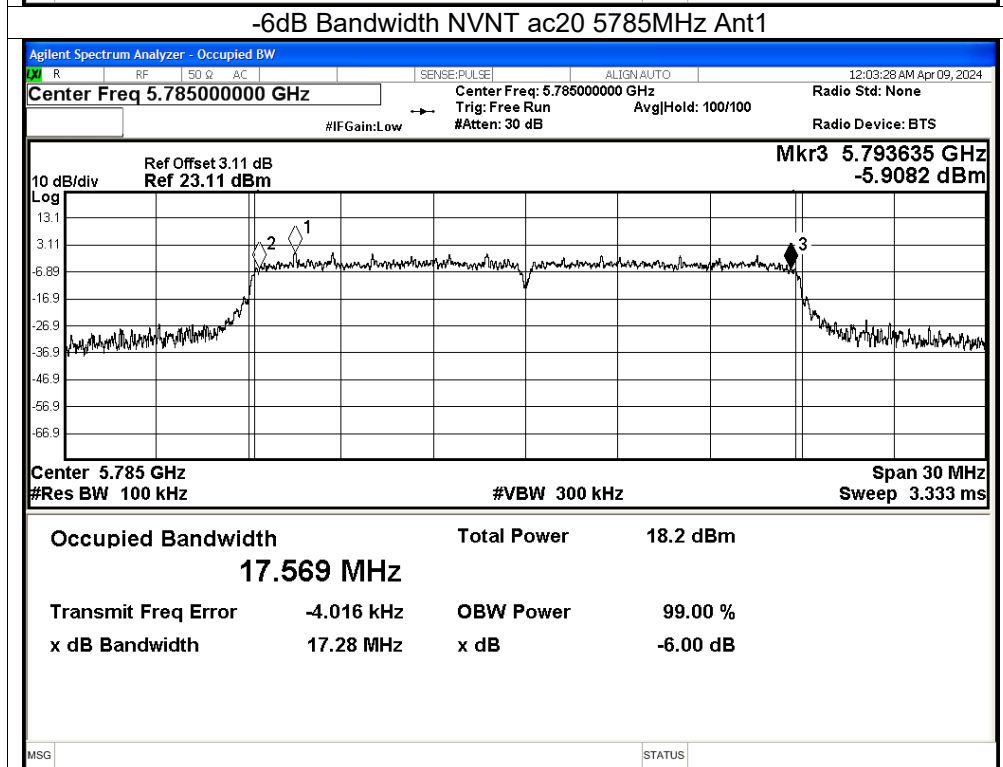
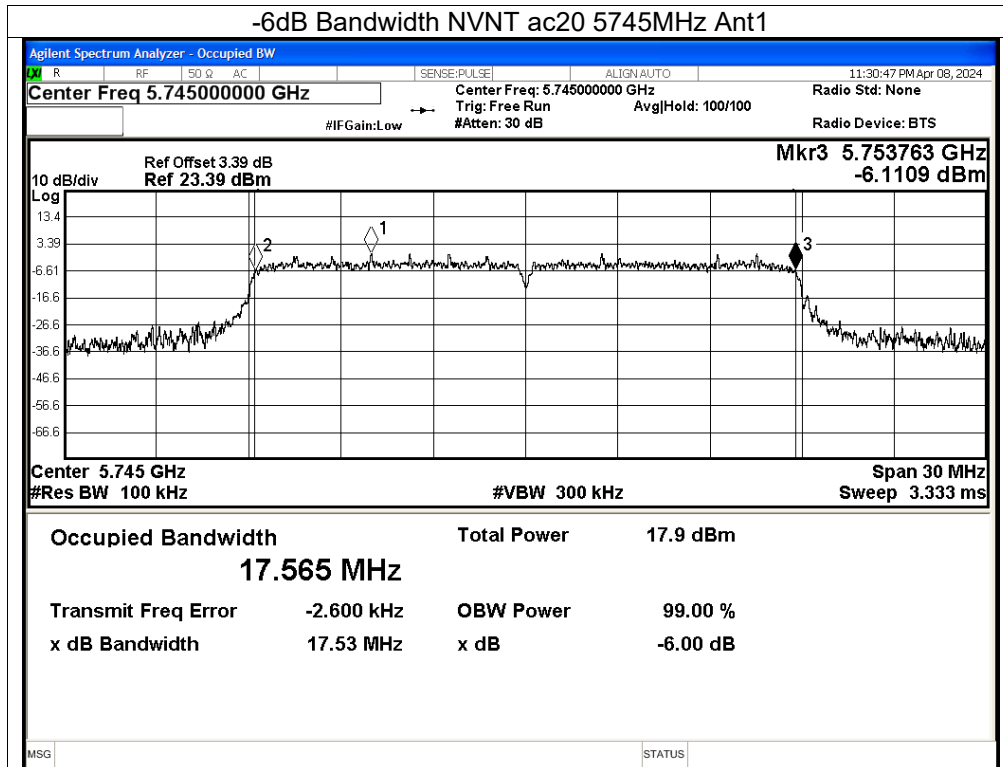
-6dB Bandwidth NVNT n20 5785MHz Ant1



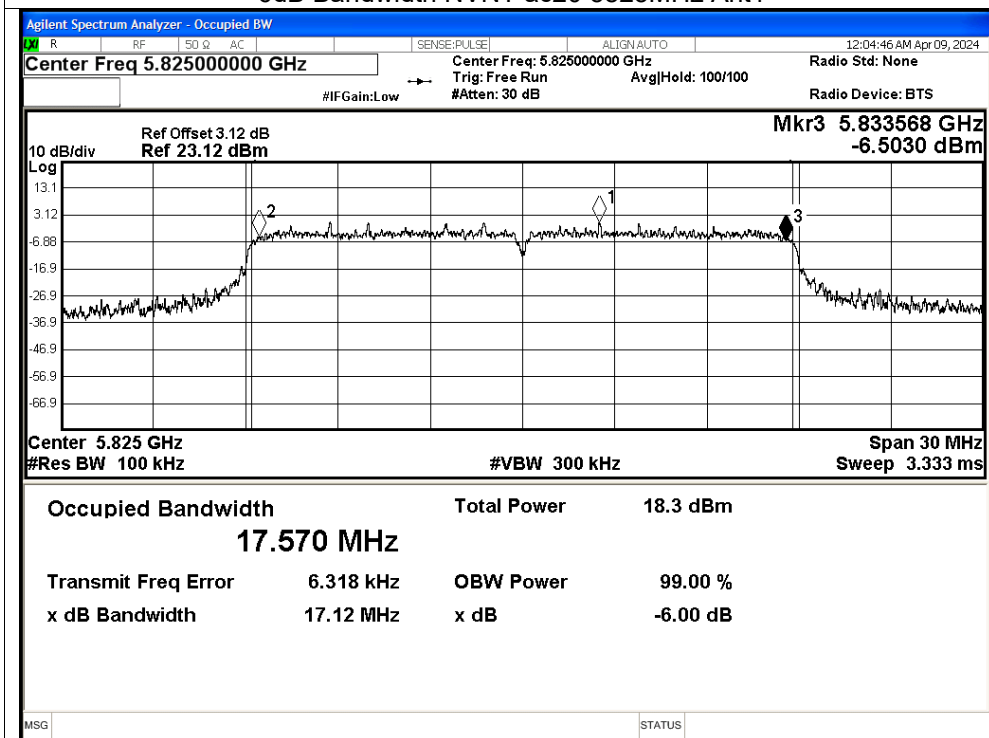
-6dB Bandwidth NVNT n20 5825MHz Ant1



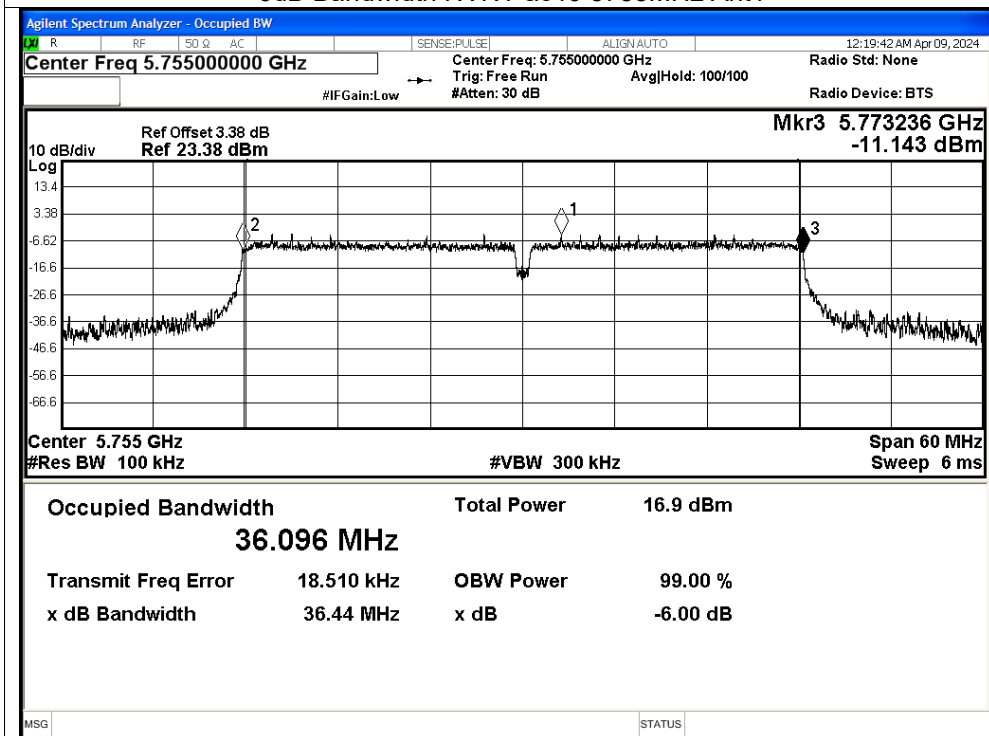




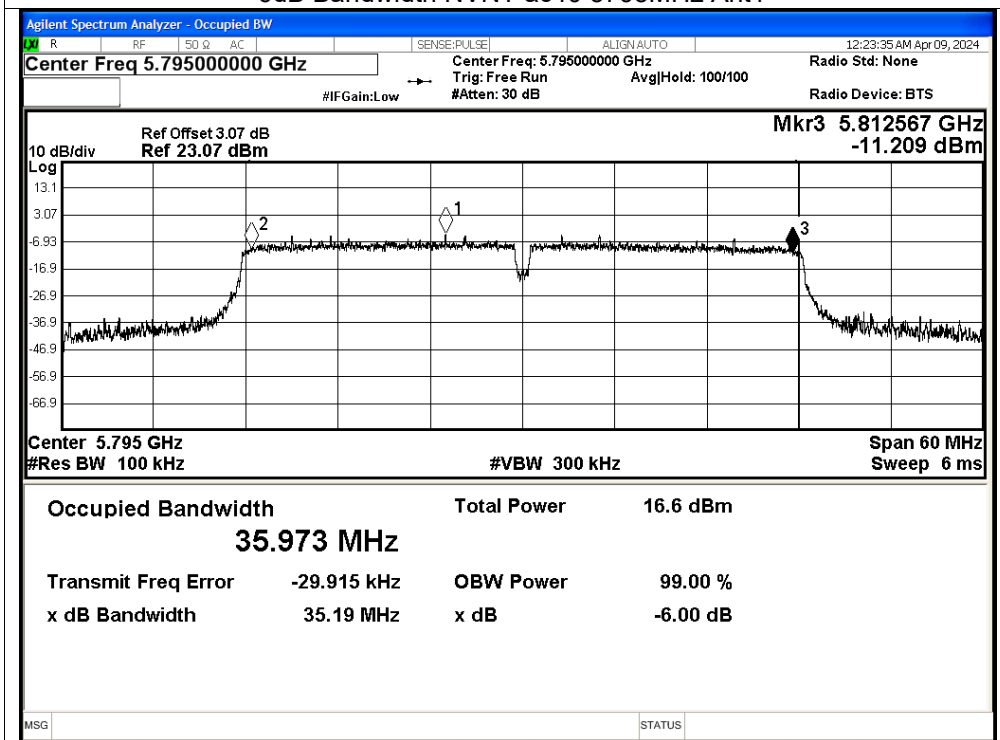
-6dB Bandwidth NVNT ac20 5825MHz Ant1



-6dB Bandwidth NVNT ac40 5755MHz Ant1



-6dB Bandwidth NVNT ac40 5795MHz Ant1



-6dB Bandwidth NVNT ac80 5775MHz Ant1

