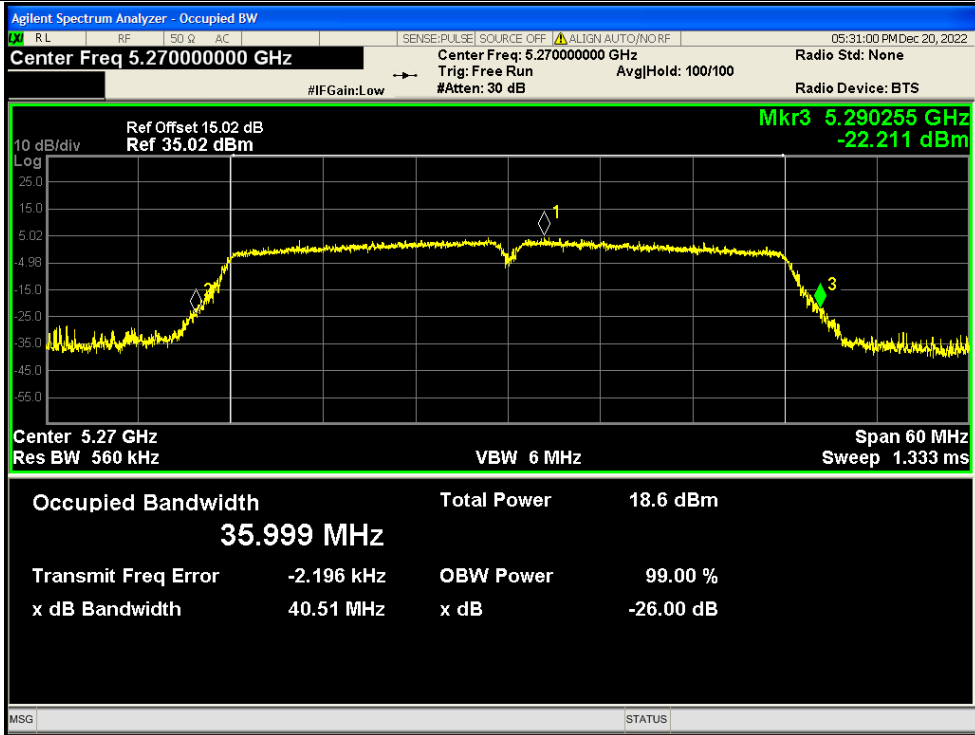
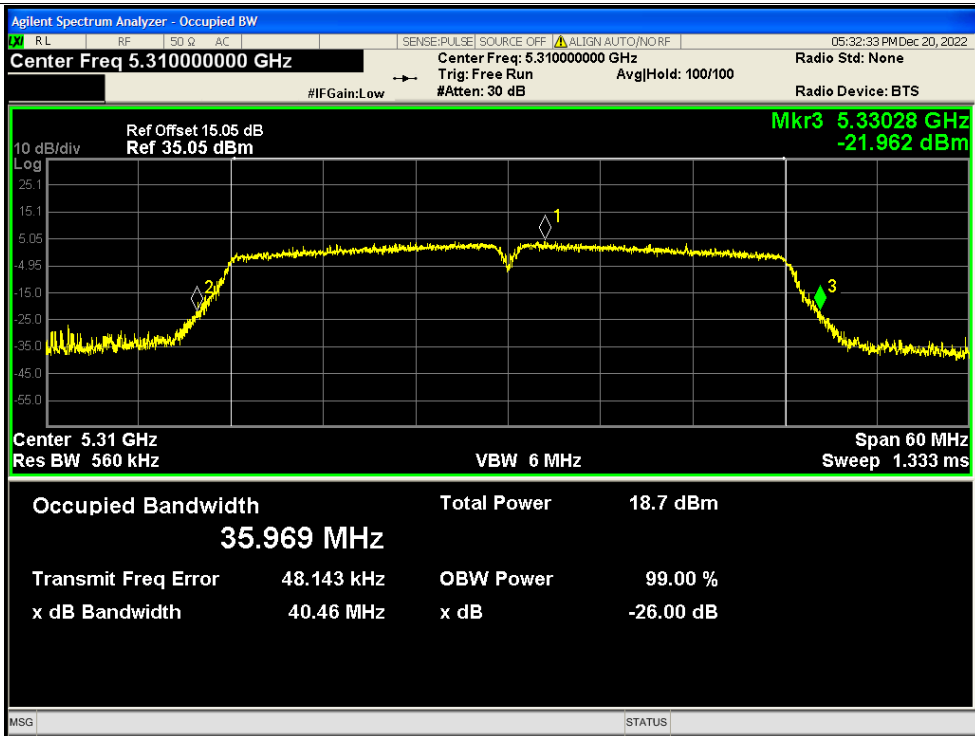




-26dB Bandwidth NVNT n40 5270MHz Ant1

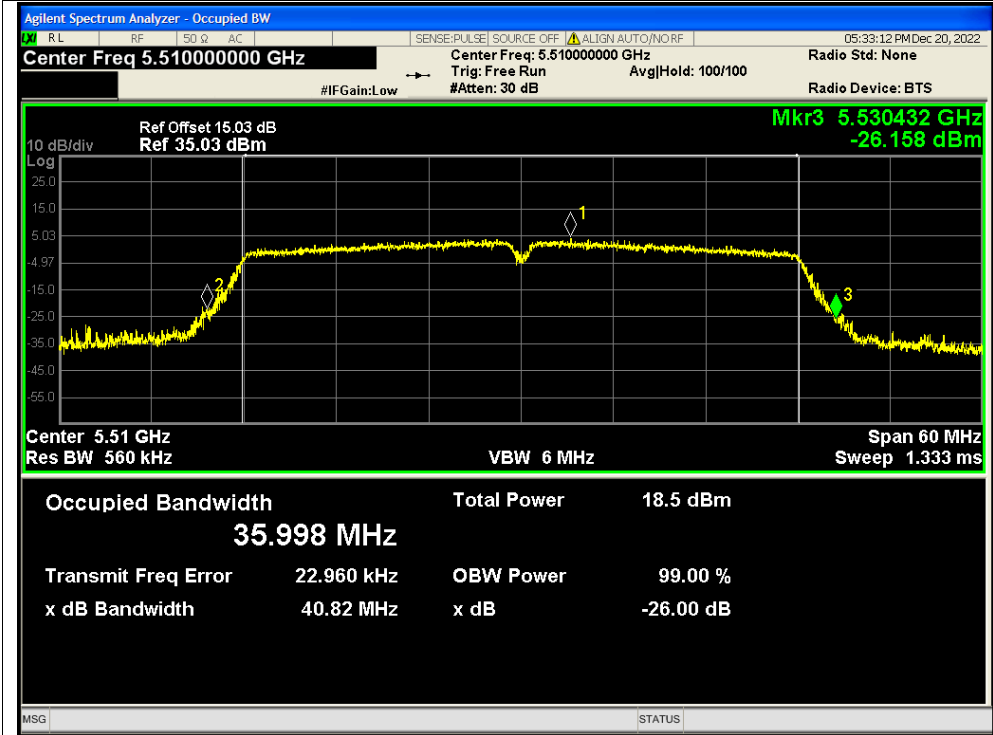


-26dB Bandwidth NVNT n40 5310MHz Ant1

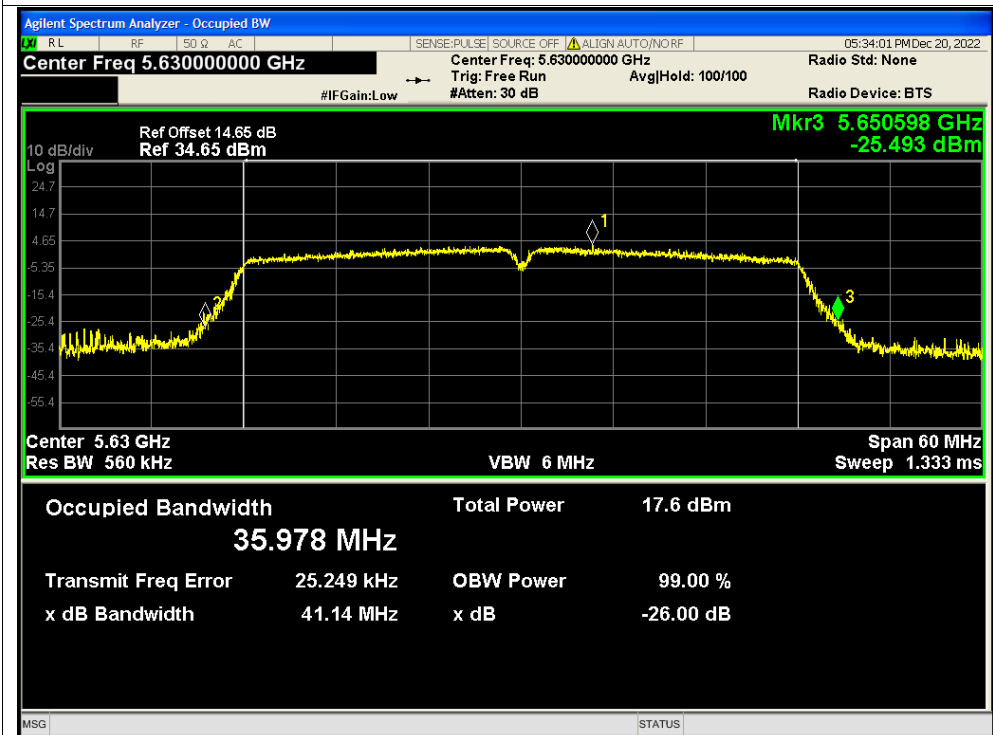




-26dB Bandwidth NVNT n40 5510MHz Ant1

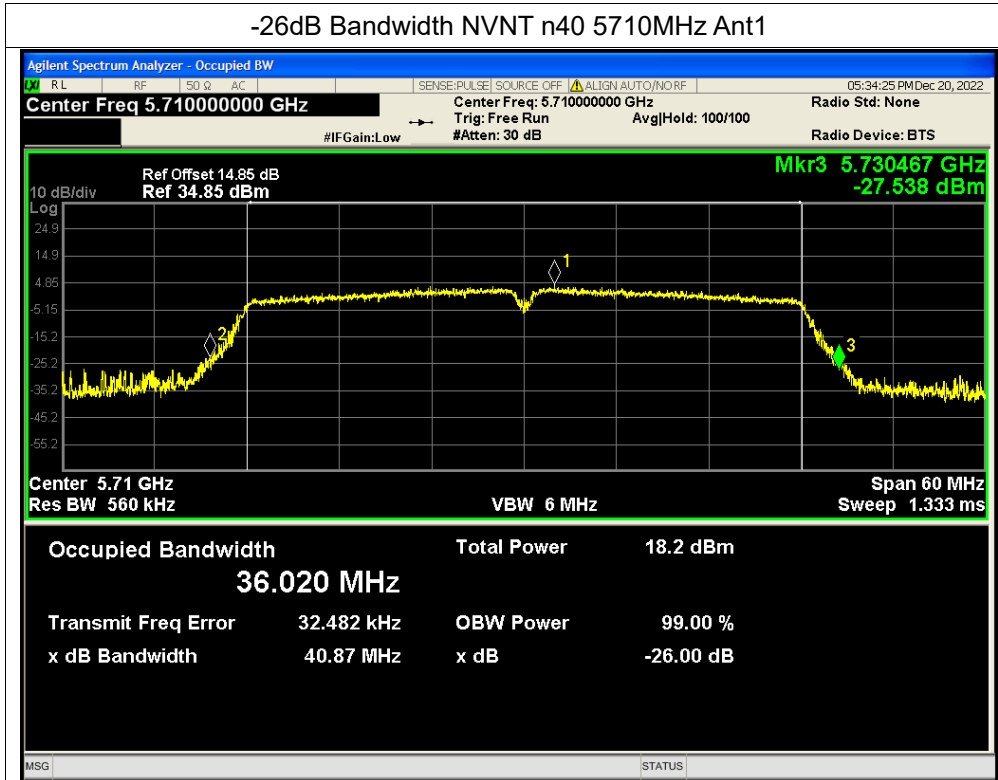


-26dB Bandwidth NVNT n40 5630MHz Ant1

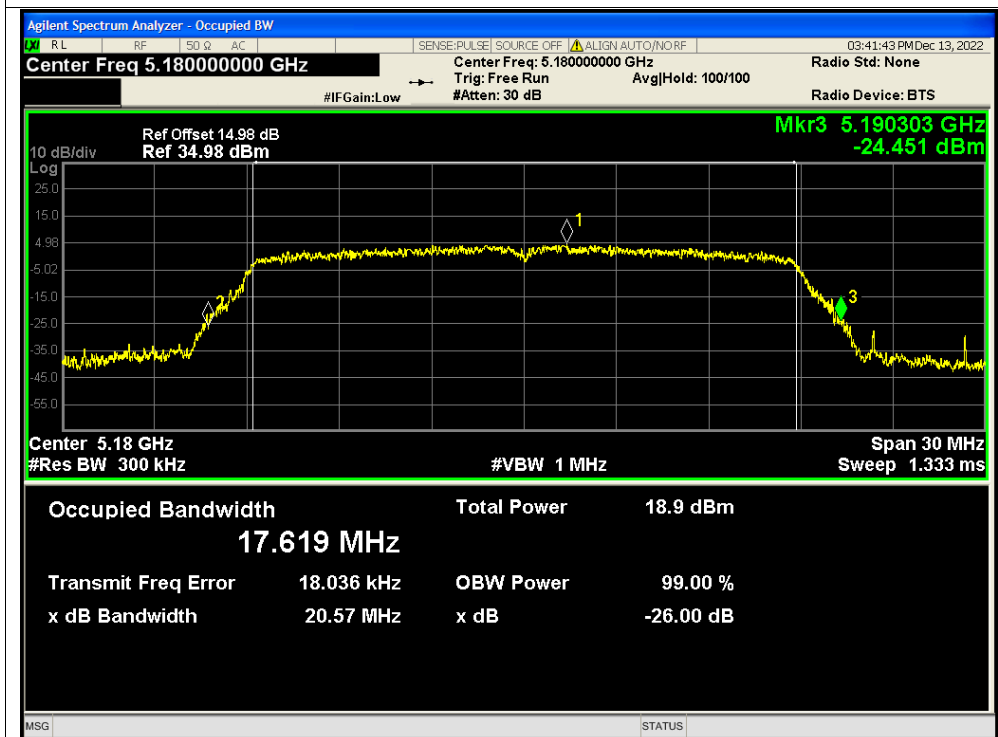




-26dB Bandwidth NVNT n40 5710MHz Ant1

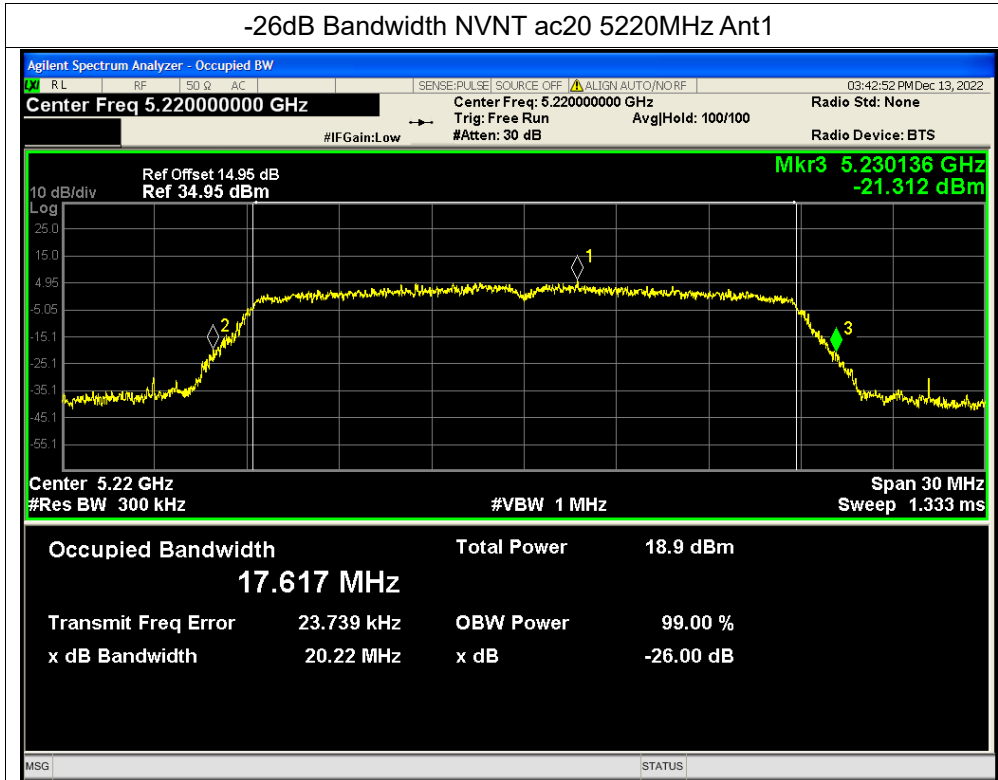


-26dB Bandwidth NVNT ac20 5180MHz Ant1

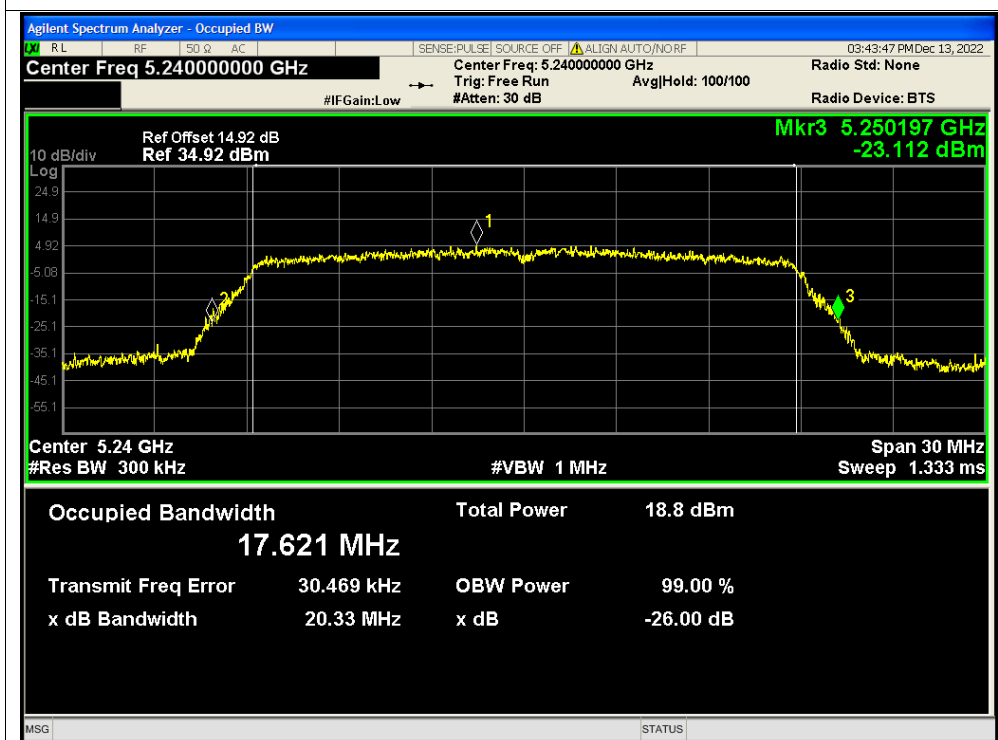




-26dB Bandwidth NVNT ac20 5220MHz Ant1

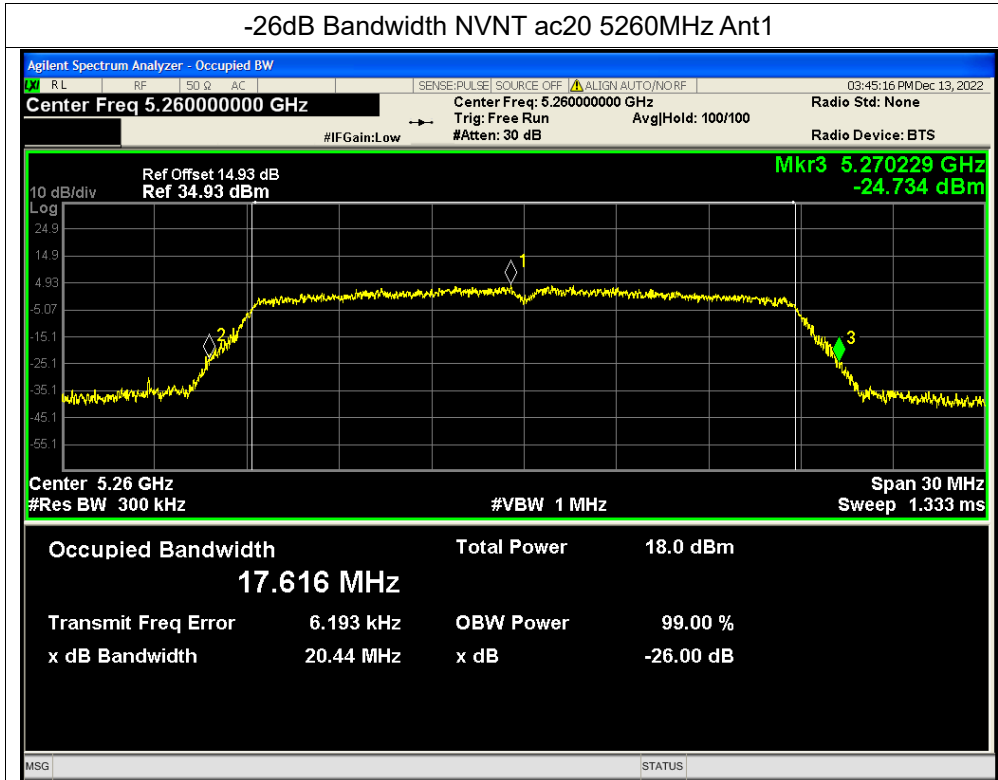


-26dB Bandwidth NVNT ac20 5240MHz Ant1

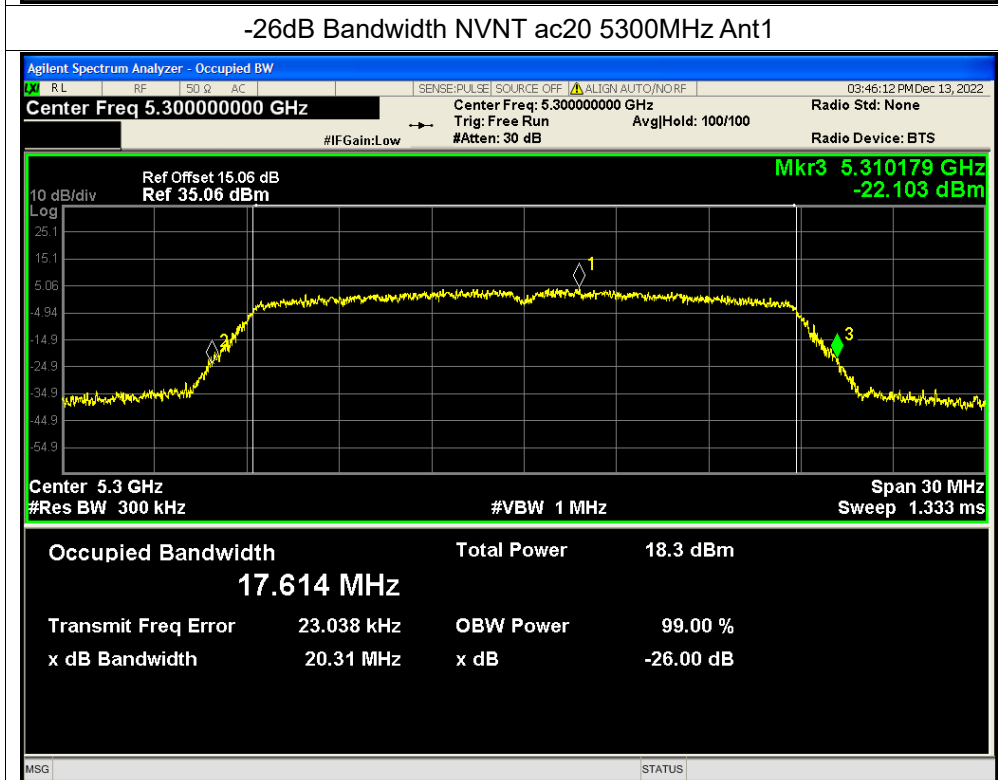




-26dB Bandwidth NVNT ac20 5260MHz Ant1

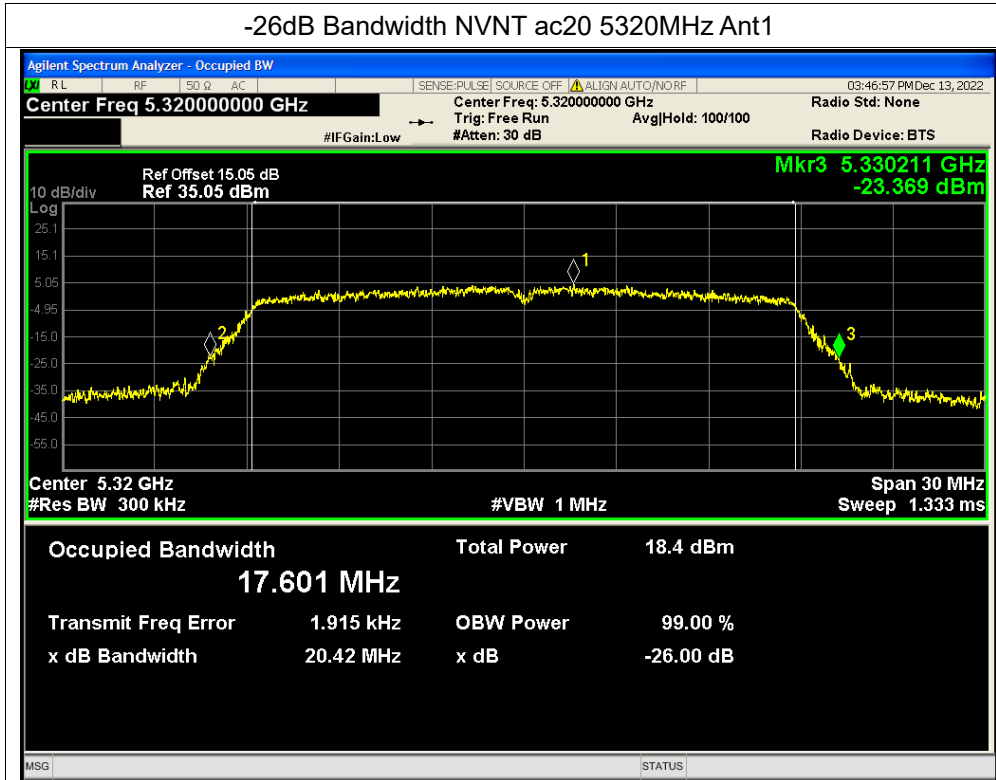


-26dB Bandwidth NVNT ac20 5300MHz Ant1

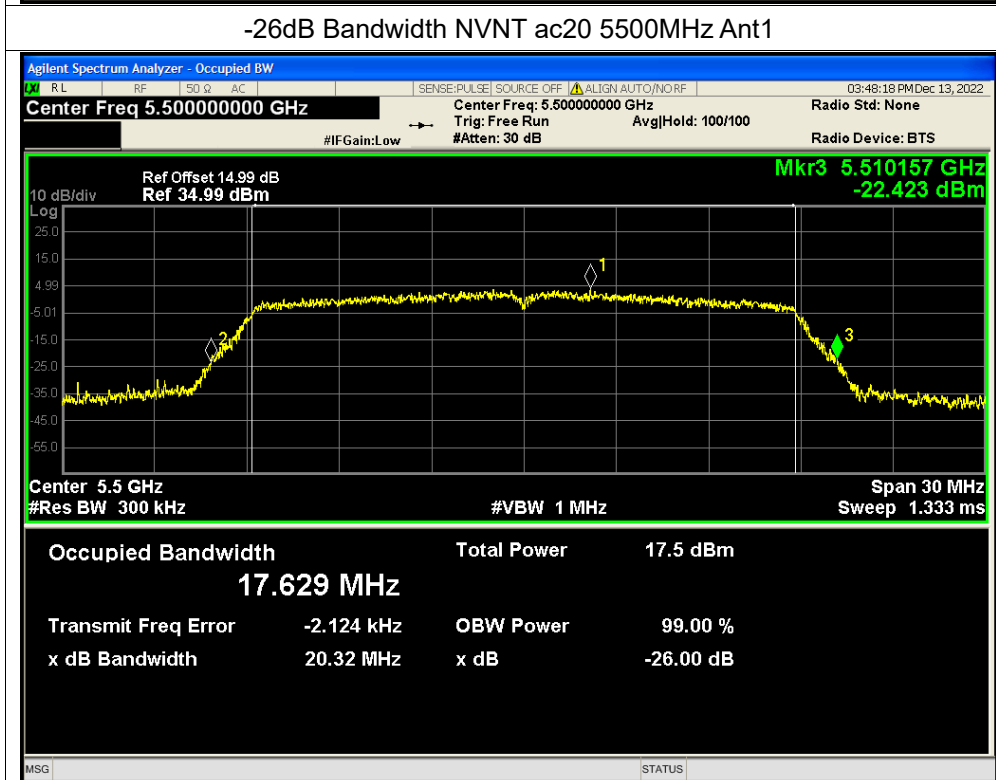




-26dB Bandwidth NVNT ac20 5320MHz Ant1

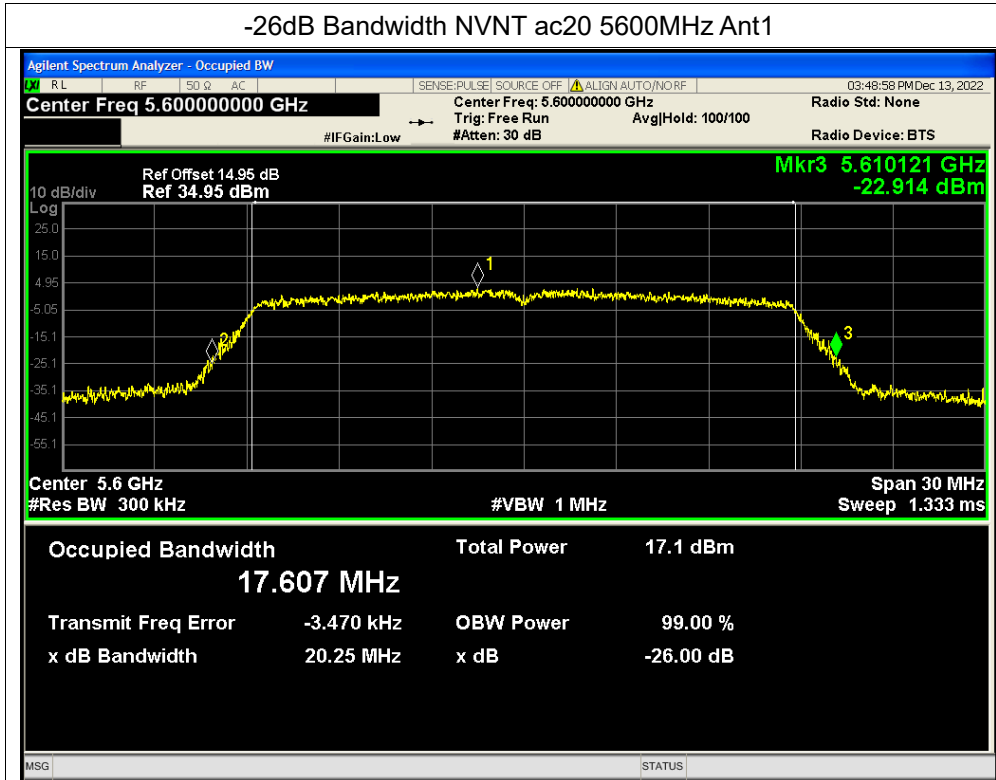


-26dB Bandwidth NVNT ac20 5500MHz Ant1

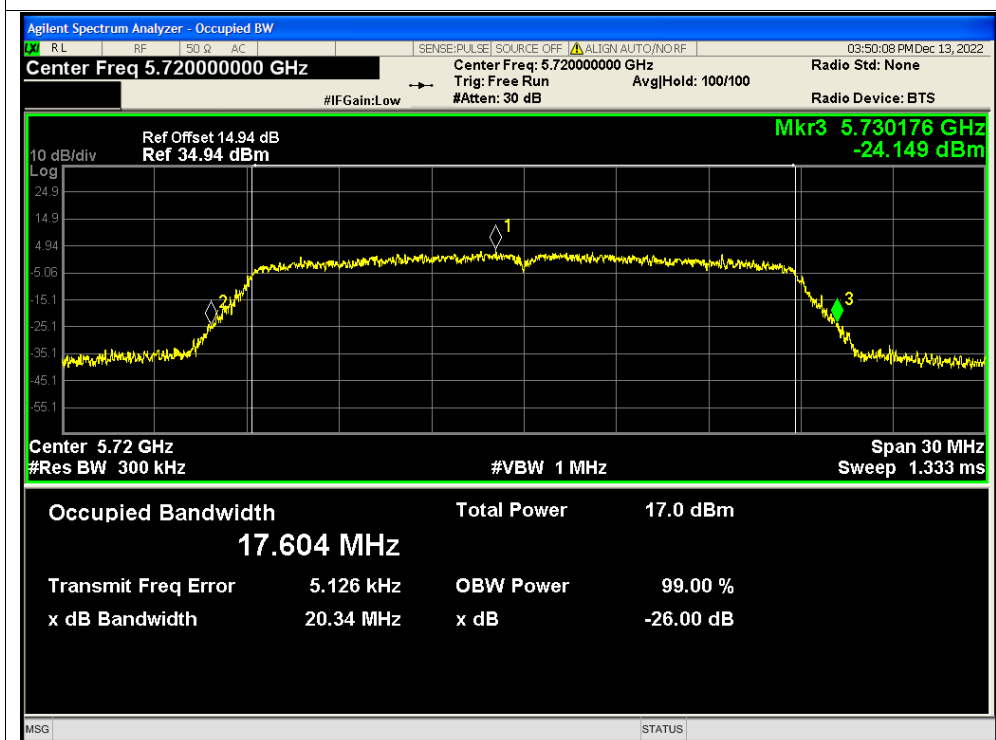




-26dB Bandwidth NVNT ac20 5600MHz Ant1

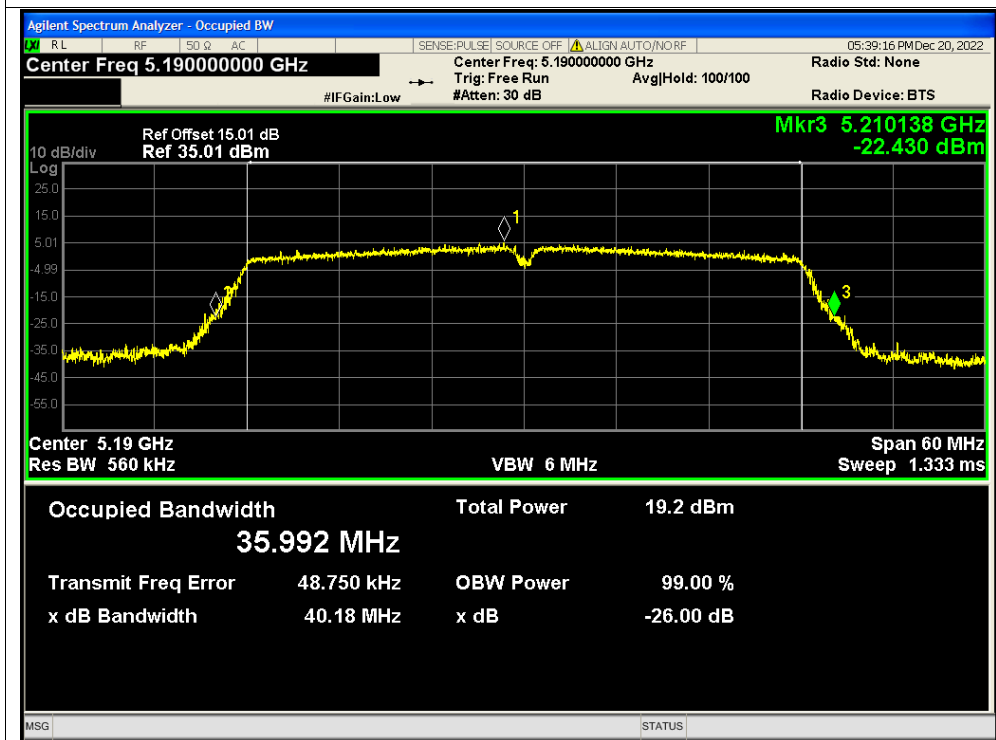


-26dB Bandwidth NVNT ac20 5720MHz Ant1

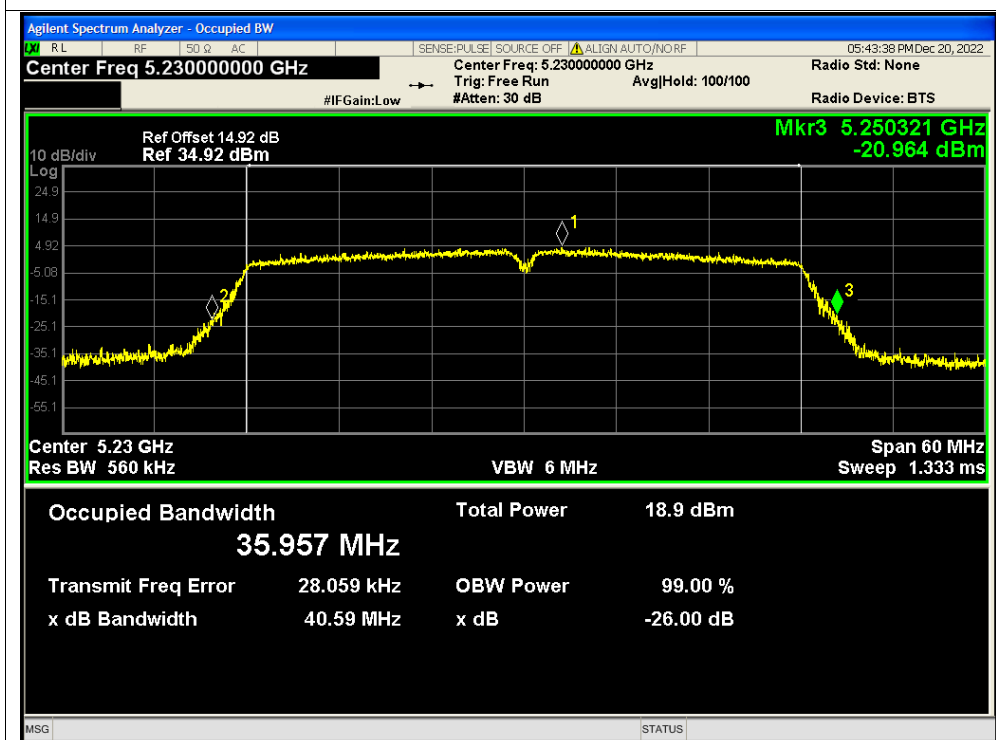




-26dB Bandwidth NVNT ac40 5190MHz Ant1

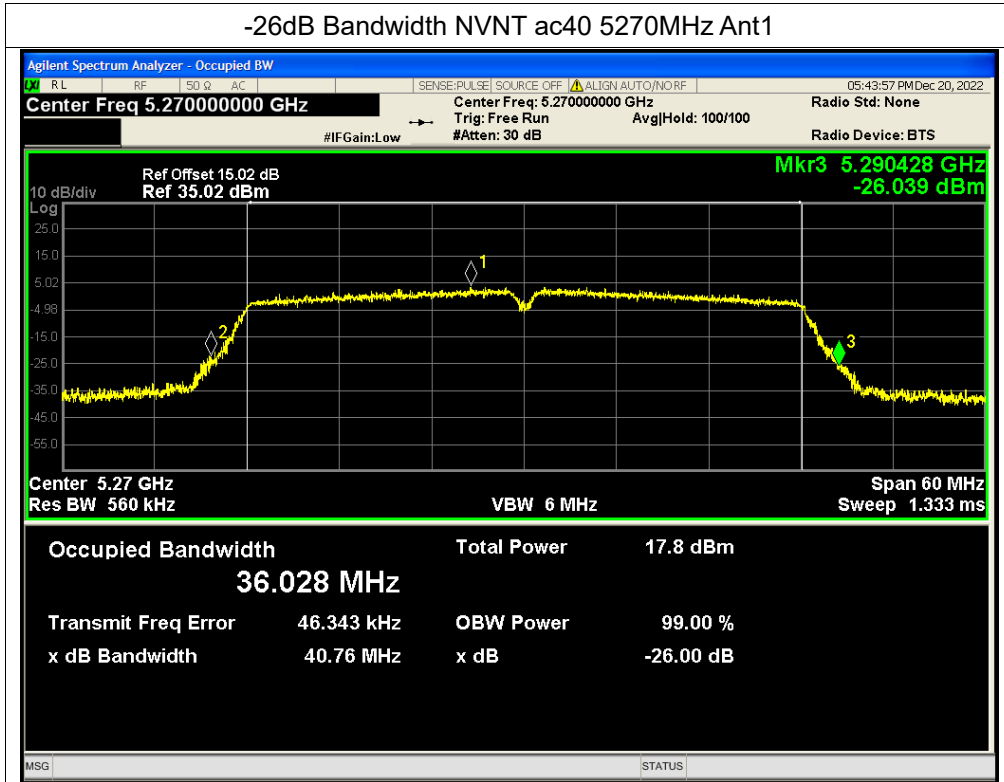


-26dB Bandwidth NVNT ac40 5230MHz Ant1

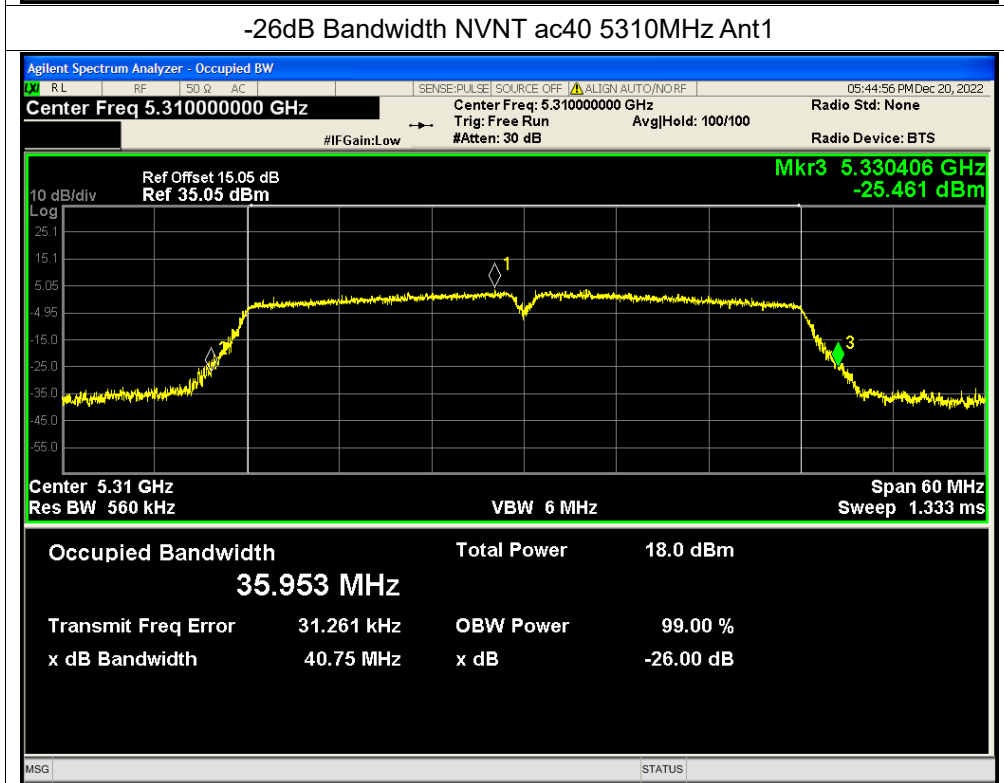




-26dB Bandwidth NVNT ac40 5270MHz Ant1

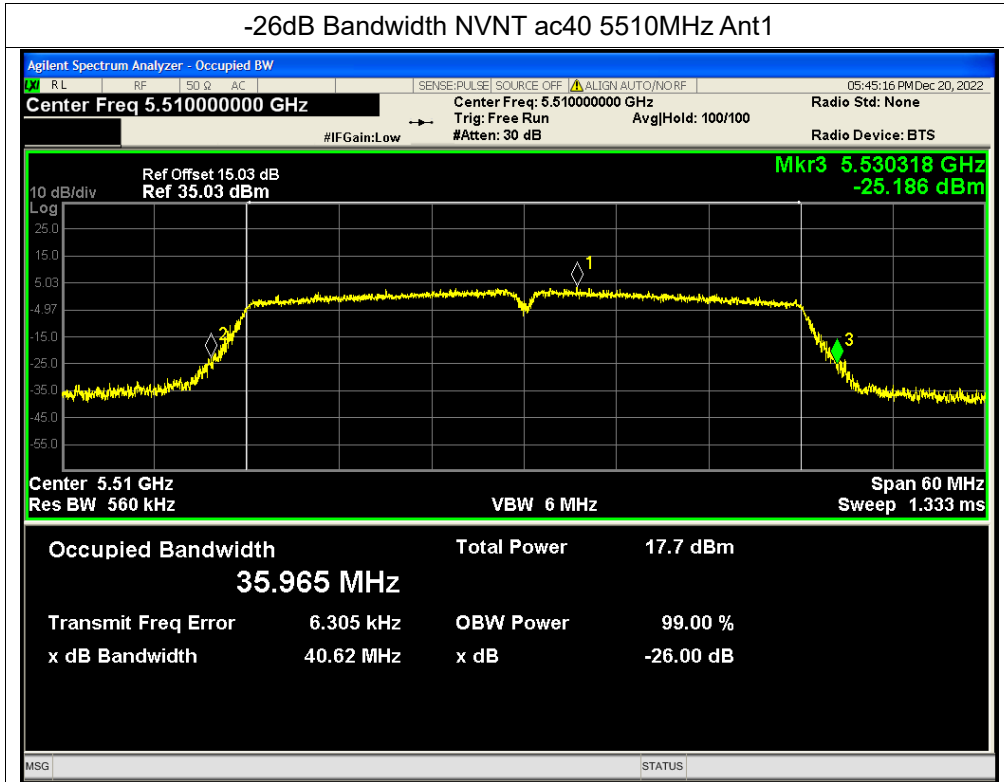


-26dB Bandwidth NVNT ac40 5310MHz Ant1

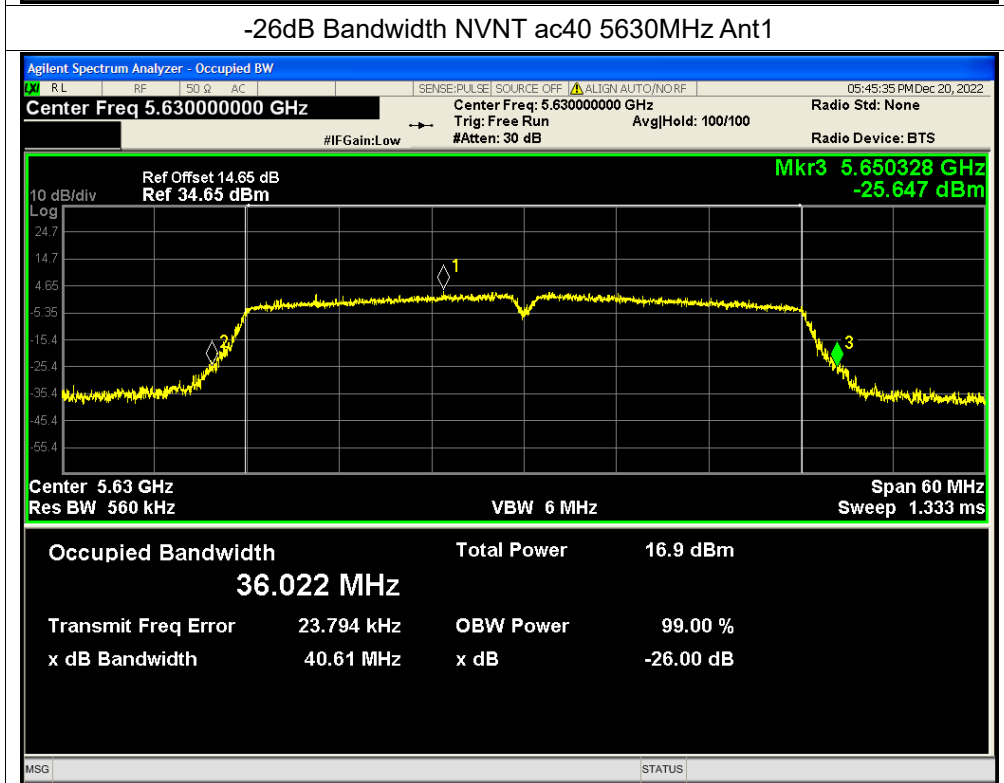




-26dB Bandwidth NVNT ac40 5510MHz Ant1

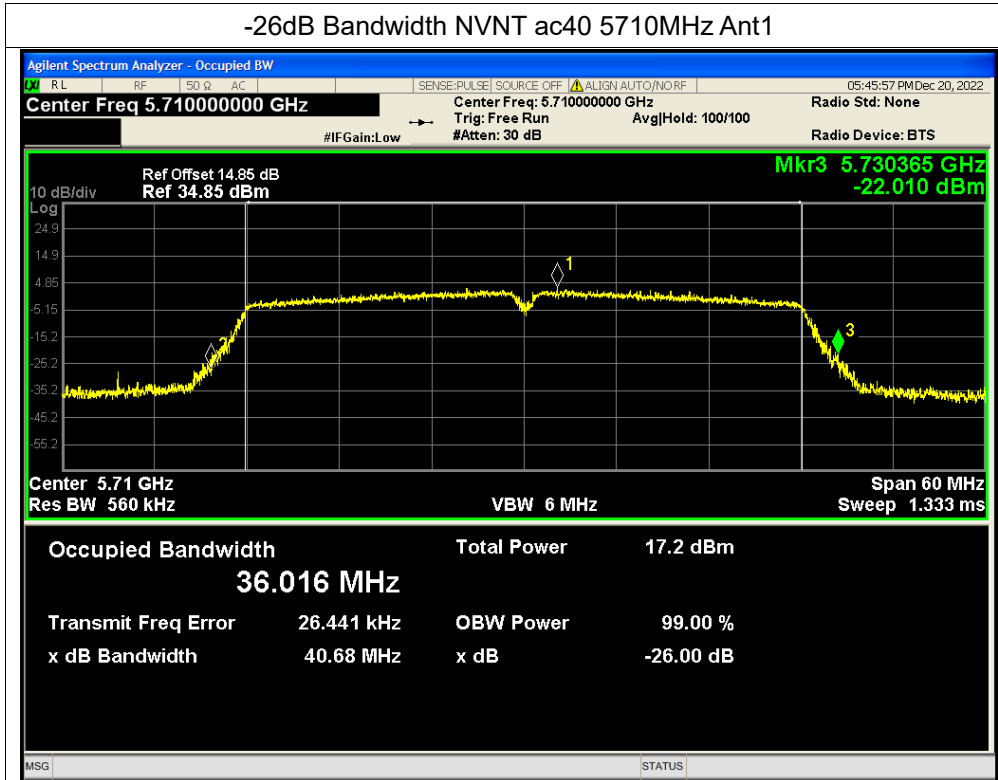


-26dB Bandwidth NVNT ac40 5630MHz Ant1

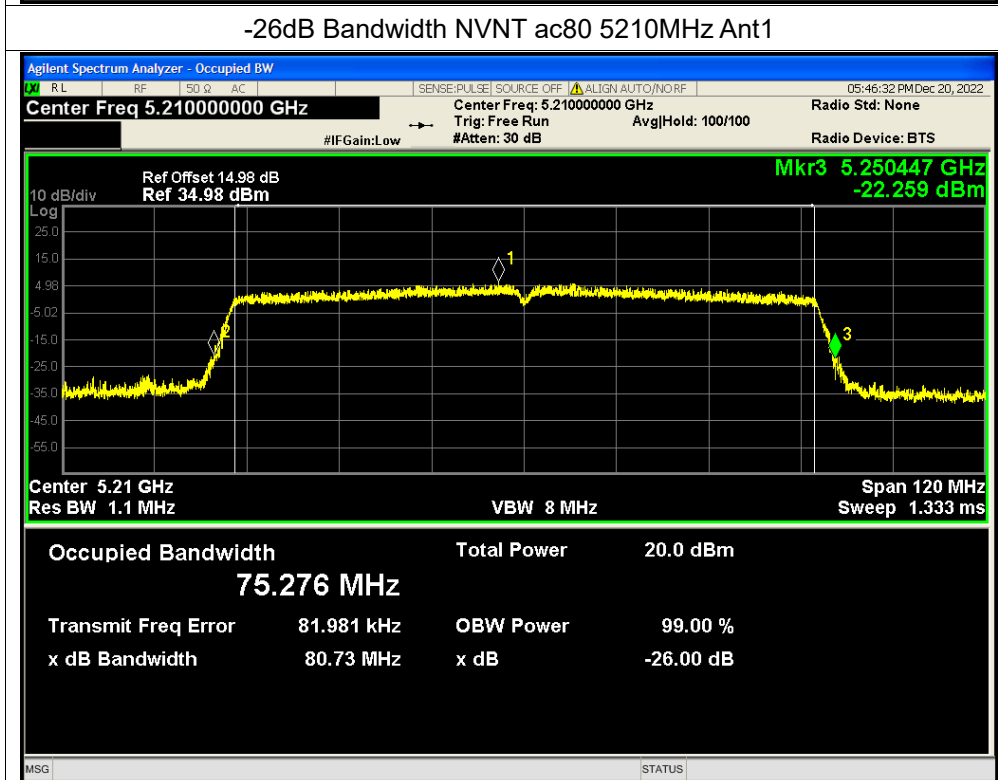




-26dB Bandwidth NVNT ac40 5710MHz Ant1

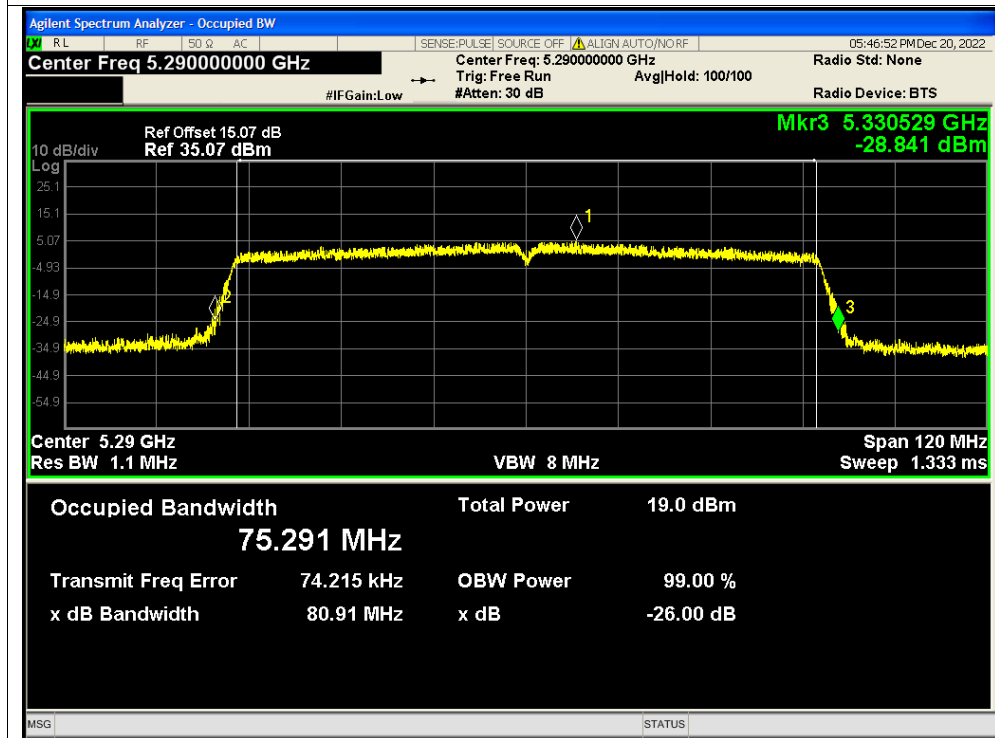


-26dB Bandwidth NVNT ac80 5210MHz Ant1

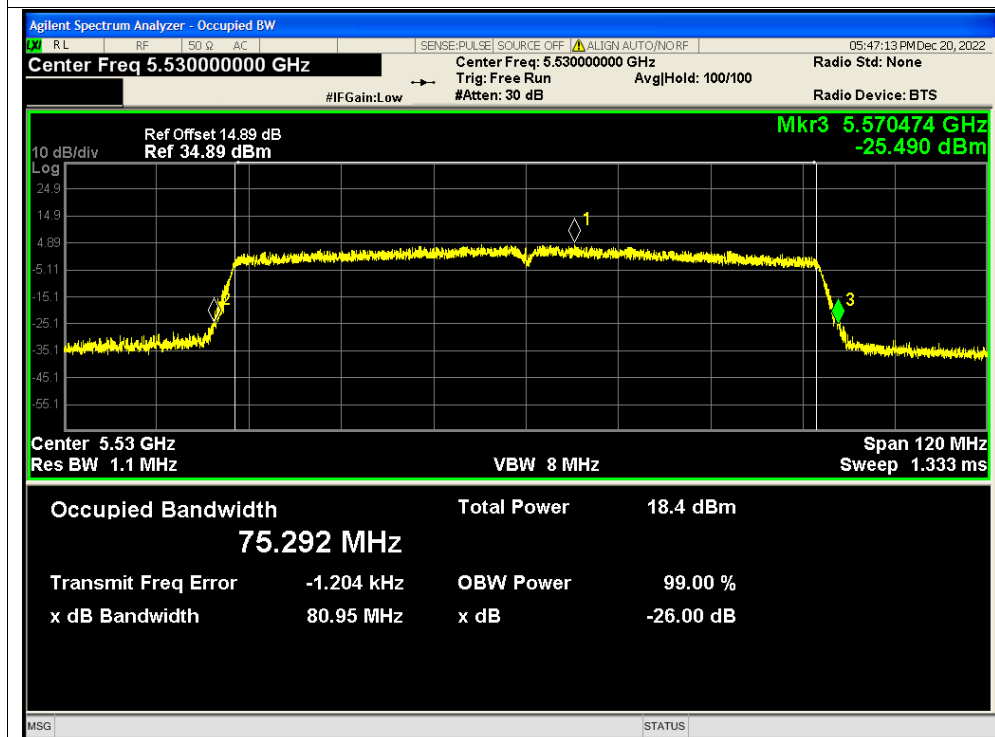




-26dB Bandwidth NVNT ac80 5290MHz Ant1

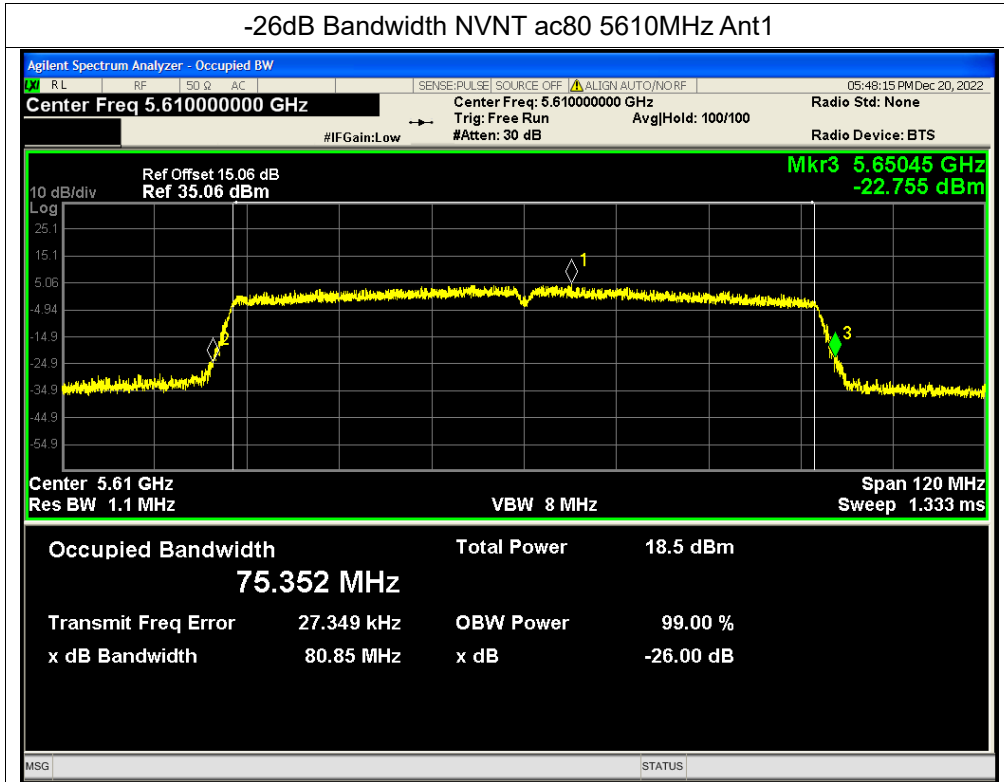


-26dB Bandwidth NVNT ac80 5530MHz Ant1

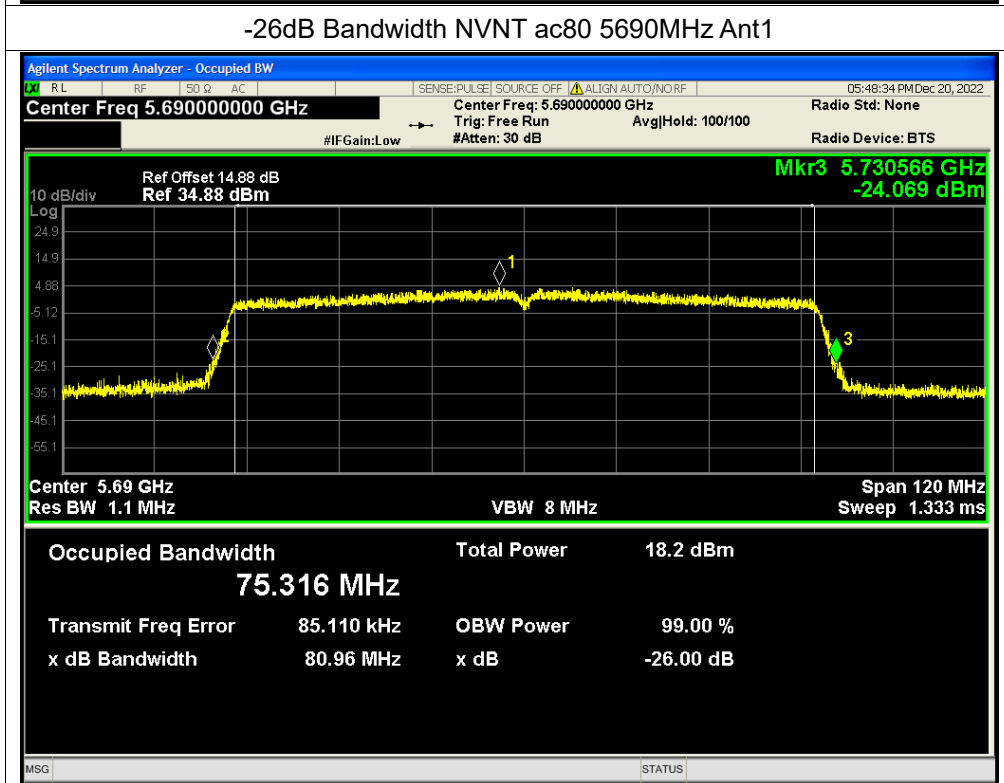




-26dB Bandwidth NVNT ac80 5610MHz Ant1



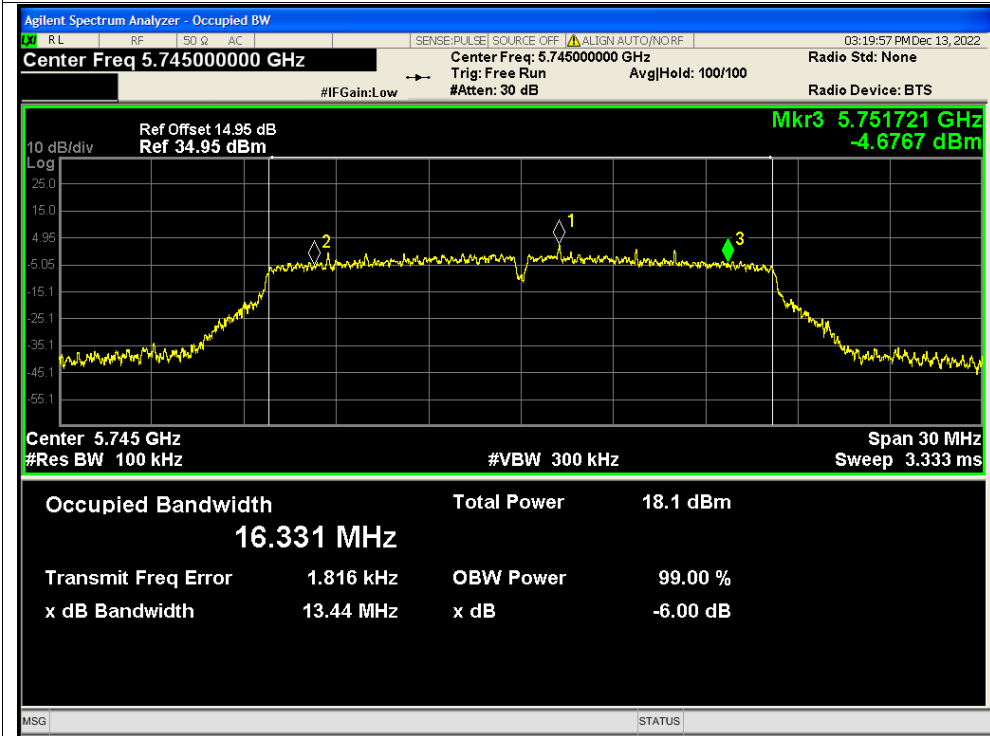
-26dB Bandwidth NVNT ac80 5690MHz Ant1



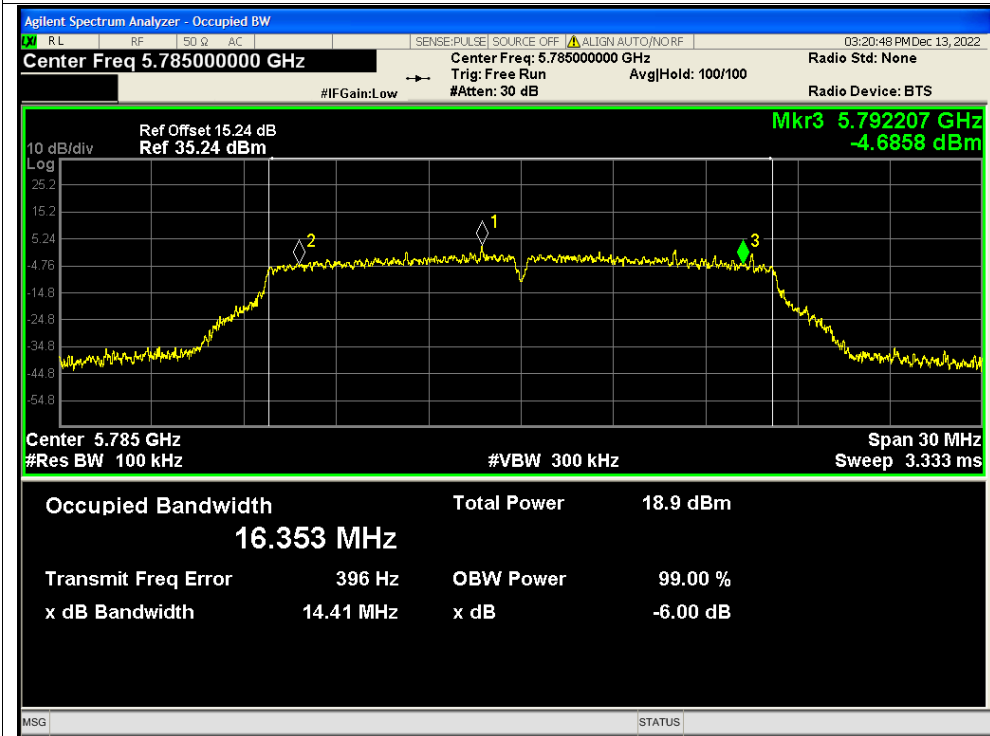


Test Graphs

-6dB Bandwidth NVNT a 5745MHz Ant1

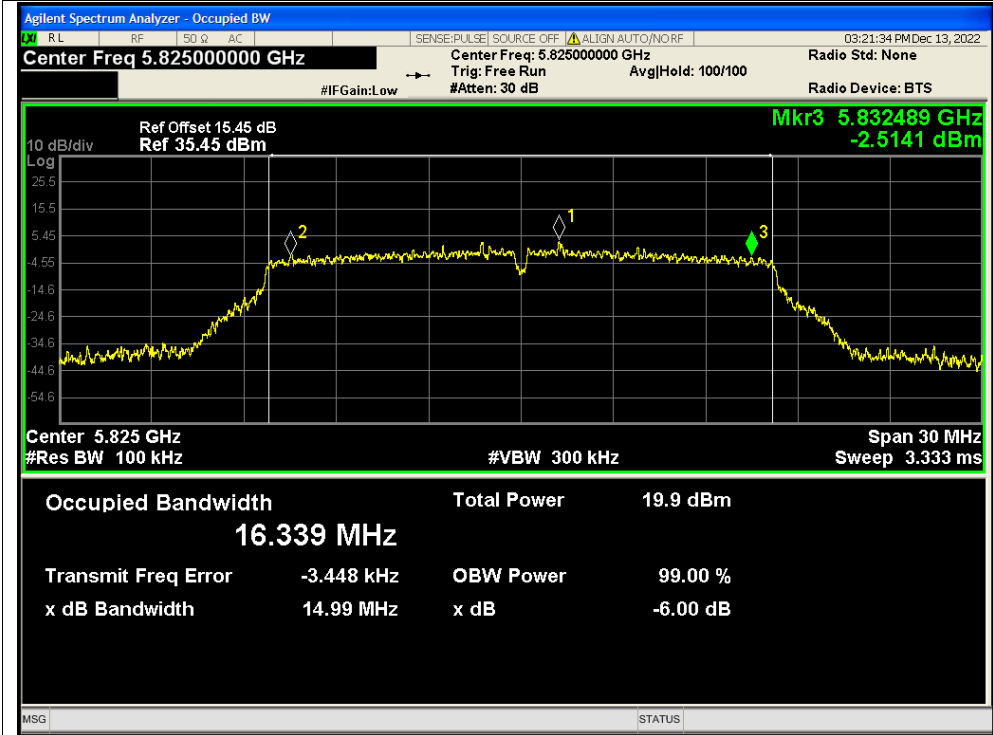


-6dB Bandwidth NVNT a 5785MHz Ant1

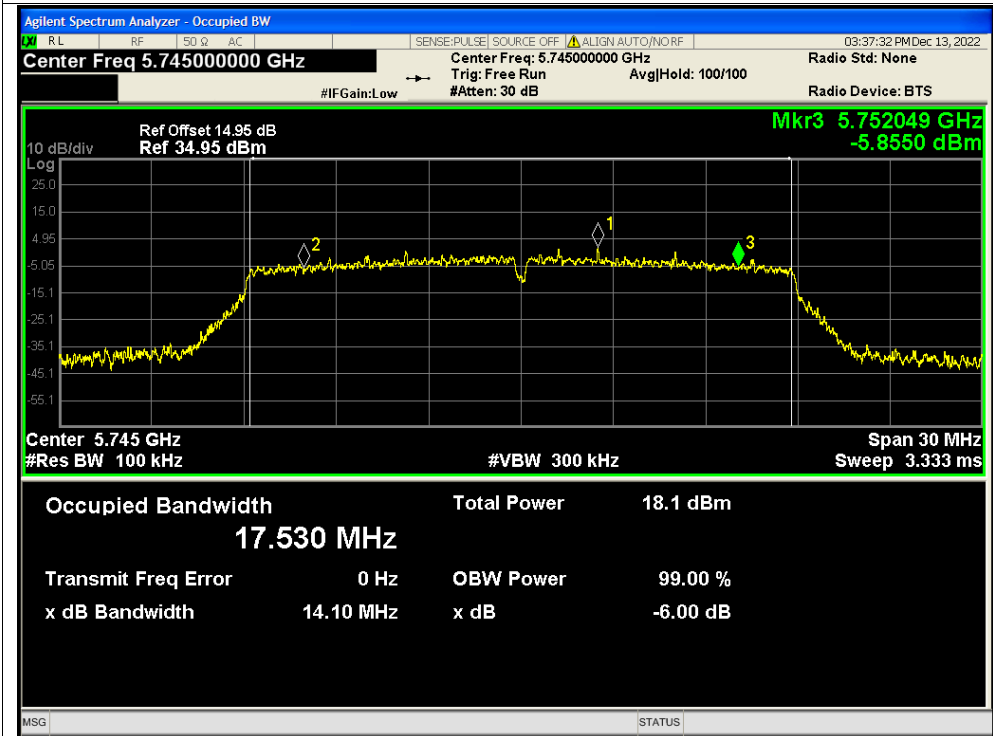




-6dB Bandwidth NVNT a 5825MHz Ant1

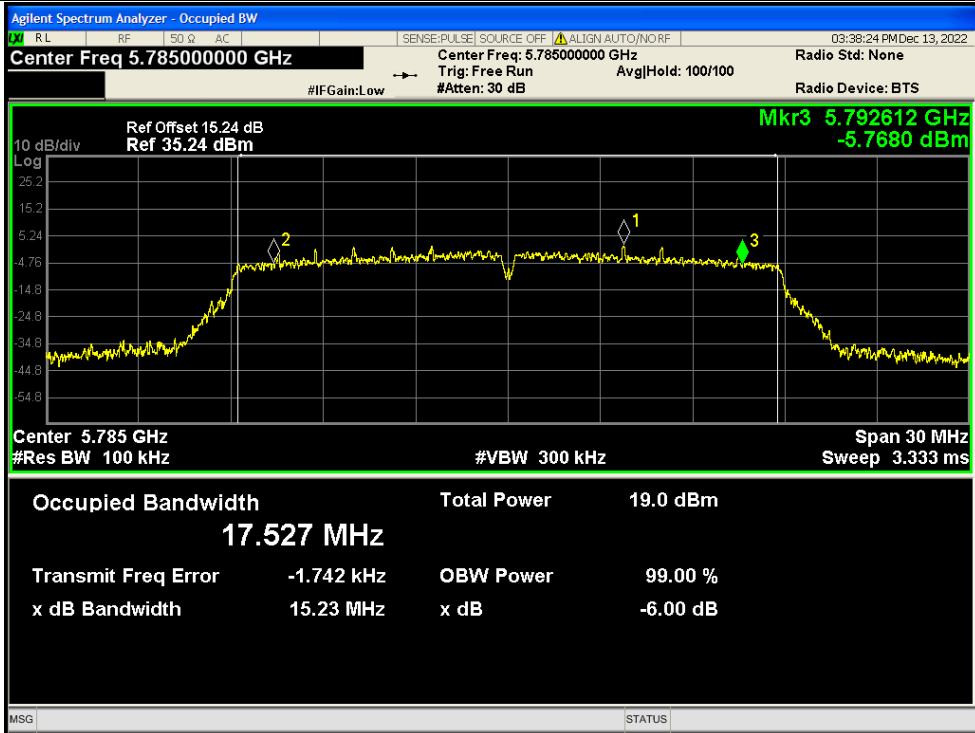


-6dB Bandwidth NVNT n20 5745MHz Ant1

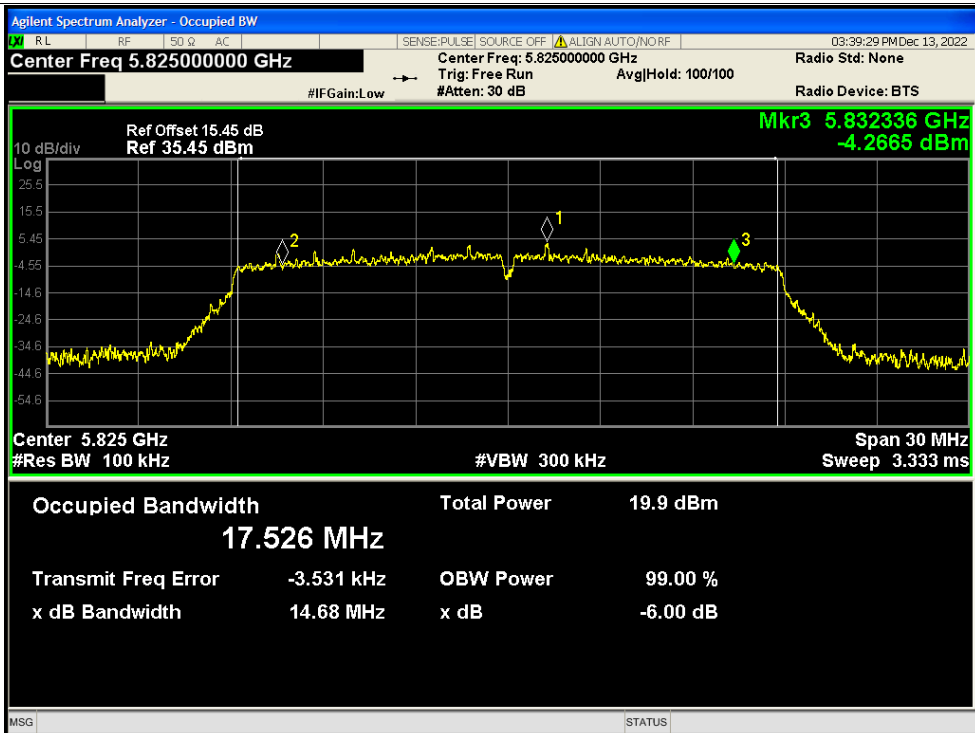




-6dB Bandwidth NVNT n20 5785MHz Ant1

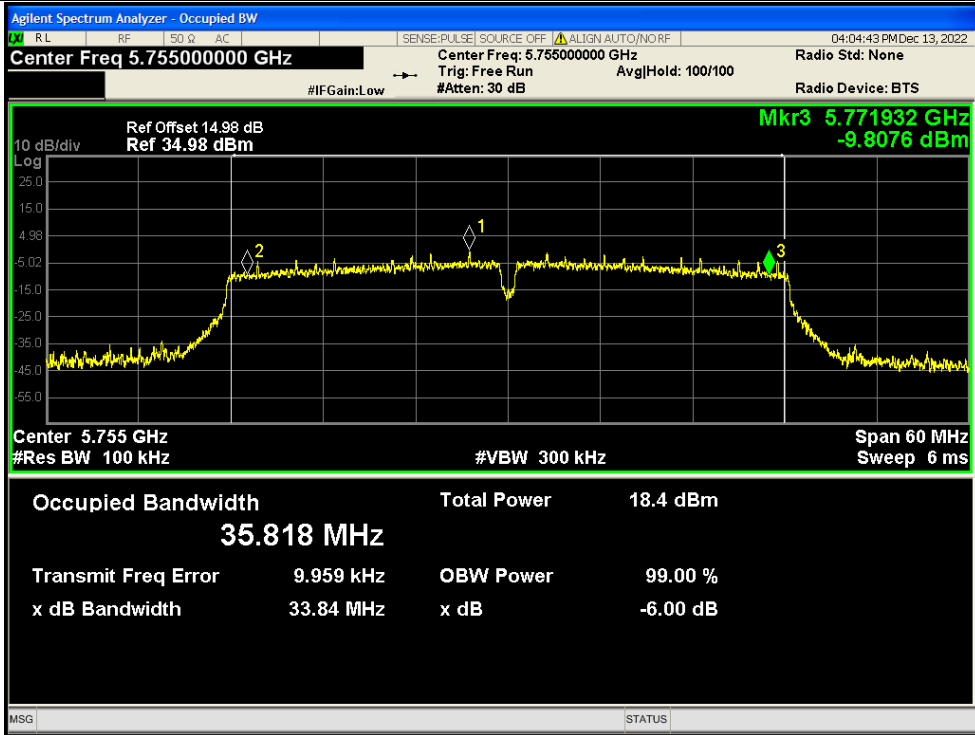


-6dB Bandwidth NVNT n20 5825MHz Ant1

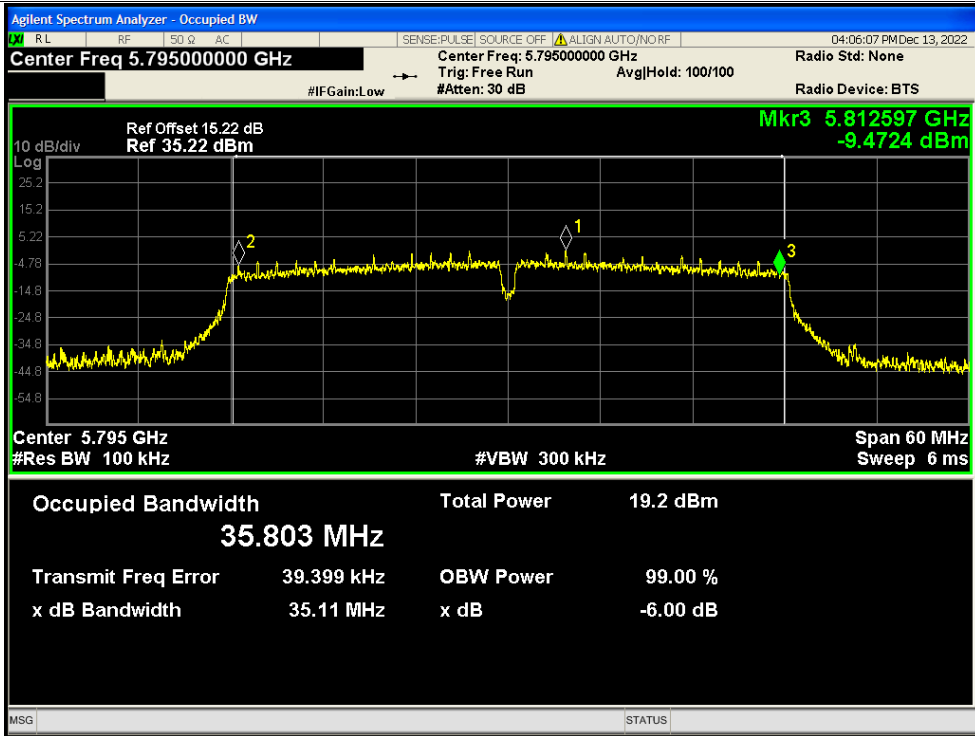




-6dB Bandwidth NVNT n40 5755MHz Ant1

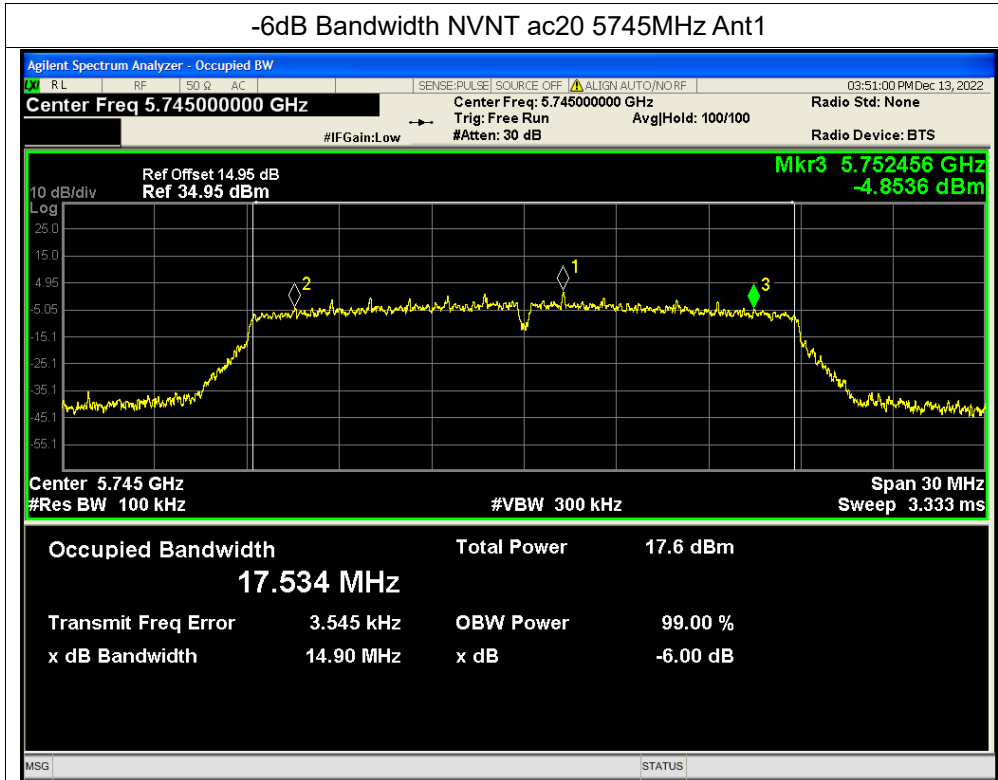


-6dB Bandwidth NVNT n40 5795MHz Ant1

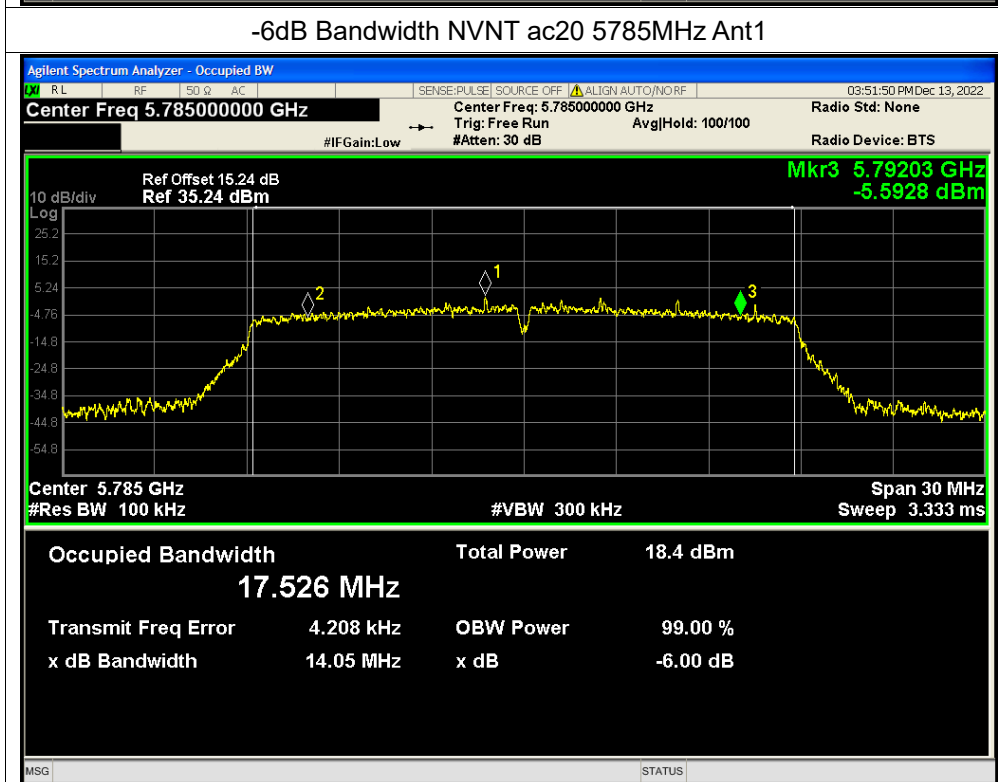




-6dB Bandwidth NVNT ac20 5745MHz Ant1

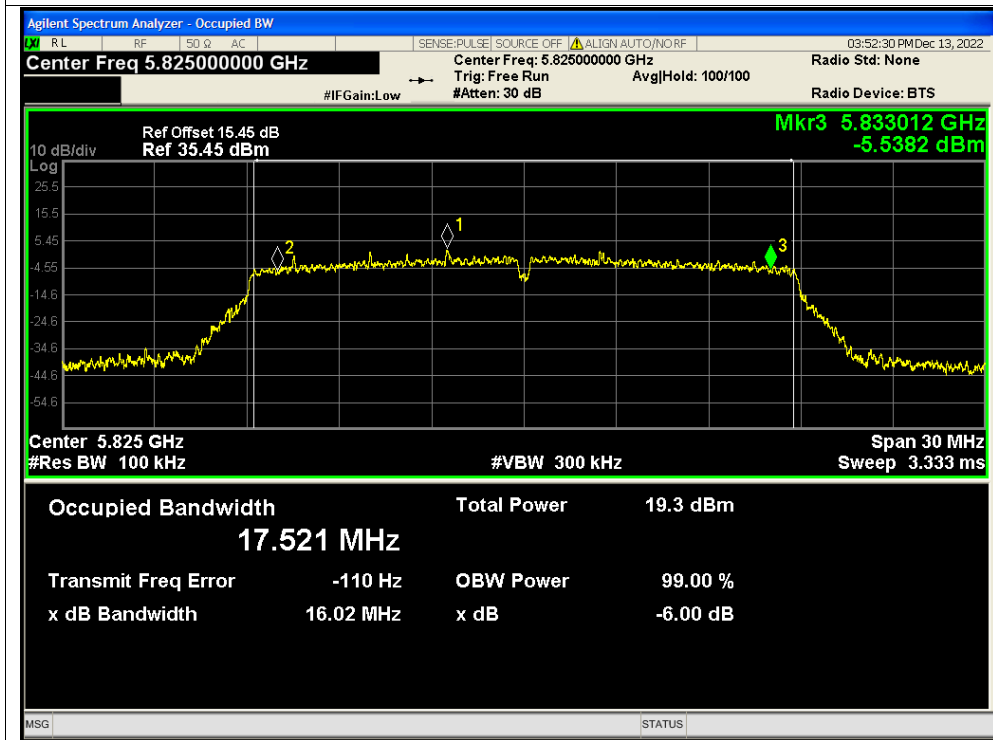


-6dB Bandwidth NVNT ac20 5785MHz Ant1

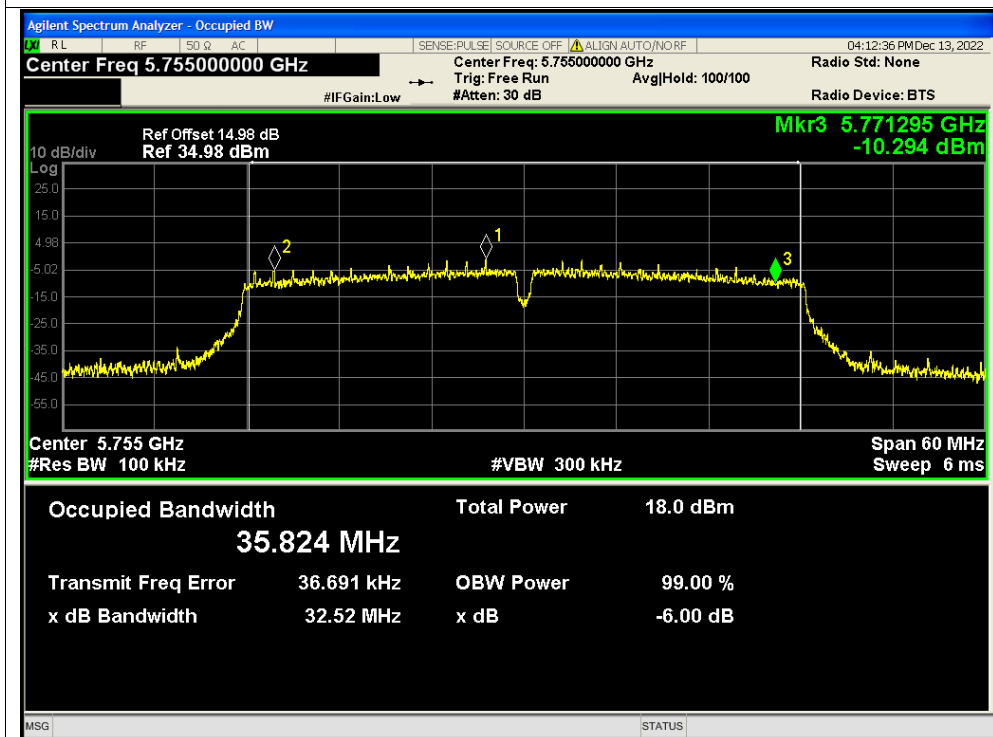




-6dB Bandwidth NVNT ac20 5825MHz Ant1

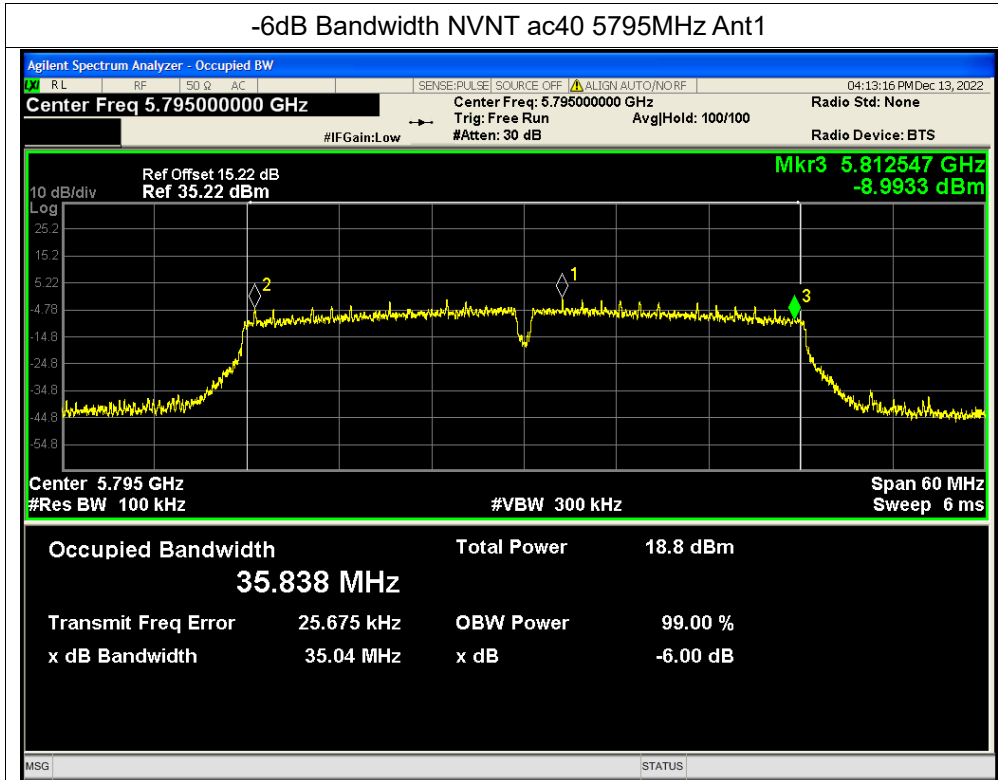


-6dB Bandwidth NVNT ac40 5755MHz Ant1

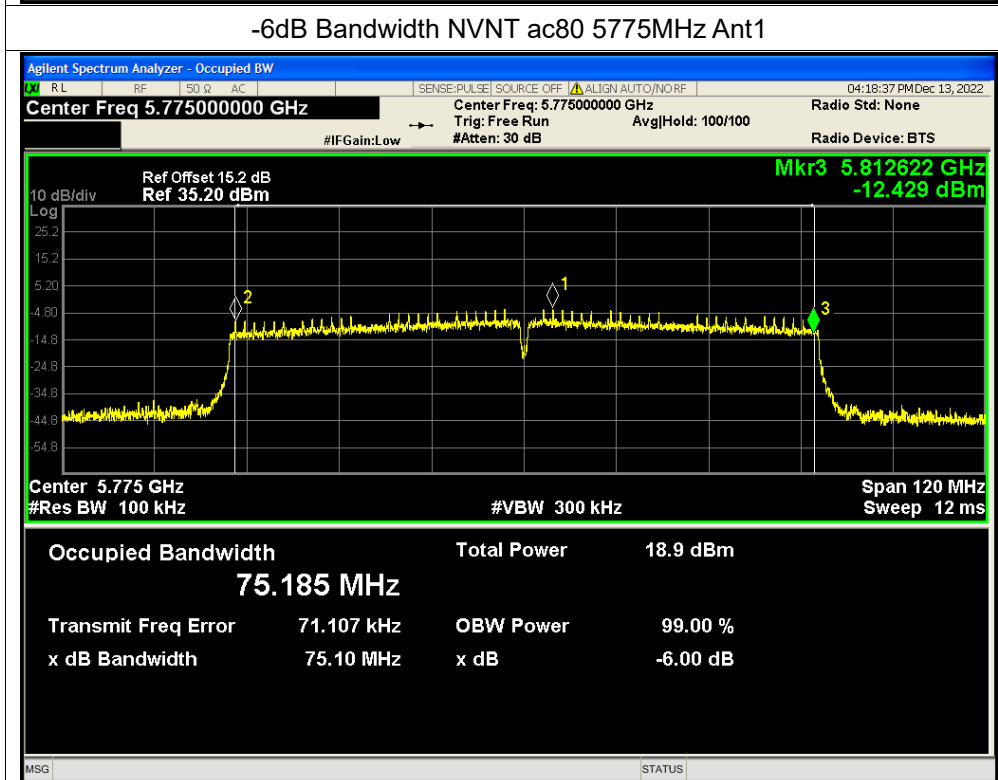




-6dB Bandwidth NVNT ac40 5795MHz Ant1



-6dB Bandwidth NVNT ac80 5775MHz Ant1



**A.4. Peak Power Spectral Density**

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	4.12	0.18	4.3	11	Pass
NVNT	a	5220	Ant1	4.27	0.12	4.39	11	Pass
NVNT	a	5240	Ant1	4.07	0.12	4.19	11	Pass
NVNT	a	5260	Ant1	2.96	0.12	3.08	11	Pass
NVNT	a	5300	Ant1	3.2	0.12	3.32	11	Pass
NVNT	a	5320	Ant1	3.12	0.12	3.24	11	Pass
NVNT	a	5500	Ant1	2.35	0.12	2.47	11	Pass
NVNT	a	5600	Ant1	1.99	0.12	2.11	11	Pass
NVNT	a	5720	Ant1	2.12	0.18	2.3	11	Pass
NVNT	a	5745	Ant1	-0.4	0.18	-0.22	30	Pass
NVNT	a	5785	Ant1	0.19	0.12	0.31	30	Pass
NVNT	a	5825	Ant1	1.21	0.12	1.33	30	Pass
NVNT	n20	5180	Ant1	3.57	0.13	3.7	11	Pass
NVNT	n20	5220	Ant1	3.43	0.2	3.63	11	Pass
NVNT	n20	5240	Ant1	3.29	0.13	3.42	11	Pass
NVNT	n20	5260	Ant1	2.11	0.13	2.24	11	Pass
NVNT	n20	5300	Ant1	2.44	0.13	2.57	11	Pass
NVNT	n20	5320	Ant1	2.71	0.13	2.84	11	Pass
NVNT	n20	5500	Ant1	2.13	0.13	2.26	11	Pass
NVNT	n20	5600	Ant1	1.85	0.13	1.98	11	Pass
NVNT	n20	5720	Ant1	1.86	0.13	1.99	11	Pass
NVNT	n20	5745	Ant1	-0.74	0.13	-0.61	30	Pass
NVNT	n20	5785	Ant1	-0.04	0.13	0.09	30	Pass
NVNT	n20	5825	Ant1	0.69	0.13	0.82	30	Pass
NVNT	n40	5190	Ant1	0.42	0.39	0.81	11	Pass
NVNT	n40	5230	Ant1	0.33	0.26	0.59	11	Pass
NVNT	n40	5270	Ant1	-0.68	0.26	-0.42	11	Pass
NVNT	n40	5310	Ant1	-0.56	0.26	-0.3	11	Pass
NVNT	n40	5510	Ant1	-1.05	0.26	-0.79	11	Pass
NVNT	n40	5630	Ant1	-2.06	0.26	-1.8	11	Pass
NVNT	n40	5710	Ant1	-1.47	0.39	-1.08	11	Pass
NVNT	n40	5755	Ant1	-3.92	0.26	-3.66	30	Pass
NVNT	n40	5795	Ant1	-3.11	0.26	-2.85	30	Pass
NVNT	ac20	5180	Ant1	2.97	0.13	3.1	11	Pass

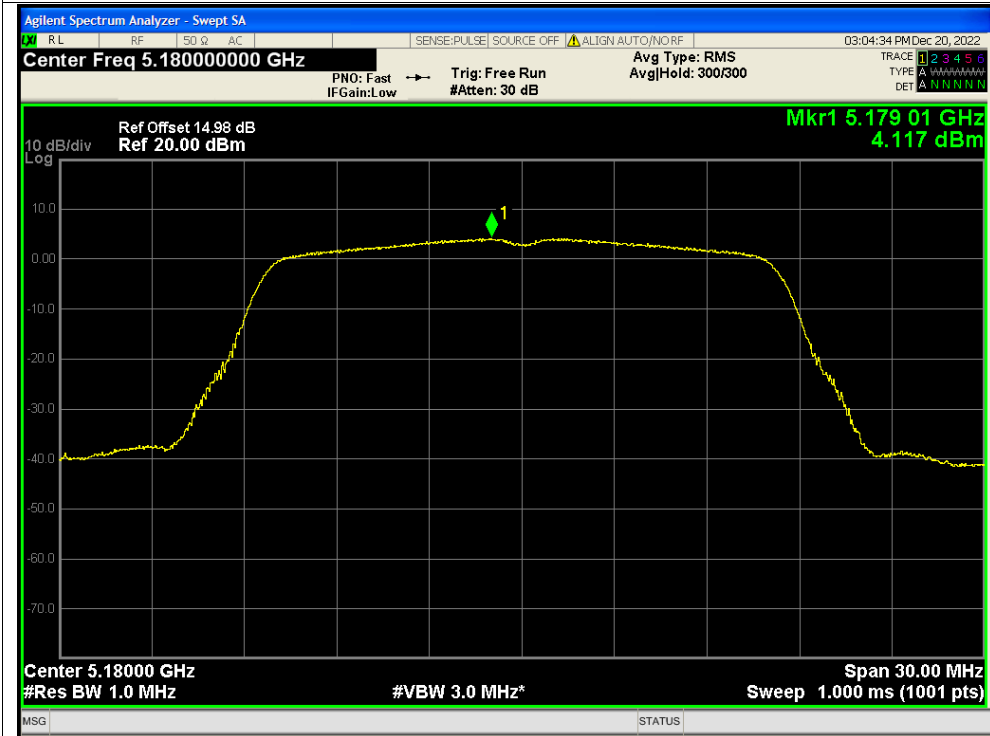


NVNT	ac20	5220	Ant1	2.69	0.2	2.89	11	Pass
NVNT	ac20	5240	Ant1	2.74	0.13	2.87	11	Pass
NVNT	ac20	5260	Ant1	1.89	0.13	2.02	11	Pass
NVNT	ac20	5300	Ant1	2.03	0.2	2.23	11	Pass
NVNT	ac20	5320	Ant1	2.04	0.13	2.17	11	Pass
NVNT	ac20	5500	Ant1	1.62	0.13	1.75	11	Pass
NVNT	ac20	5600	Ant1	1.49	0.13	1.62	11	Pass
NVNT	ac20	5720	Ant1	1.46	0.13	1.59	11	Pass
NVNT	ac20	5745	Ant1	-1.2	0.13	-1.07	30	Pass
NVNT	ac20	5785	Ant1	-0.44	0.13	-0.31	30	Pass
NVNT	ac20	5825	Ant1	0.52	0.13	0.65	30	Pass
NVNT	ac40	5190	Ant1	-0.18	0.26	0.08	11	Pass
NVNT	ac40	5230	Ant1	-0.41	0.26	-0.15	11	Pass
NVNT	ac40	5270	Ant1	-1.29	0.26	-1.03	11	Pass
NVNT	ac40	5310	Ant1	-1.07	0.26	-0.81	11	Pass
NVNT	ac40	5510	Ant1	-1.44	0.26	-1.18	11	Pass
NVNT	ac40	5630	Ant1	-2.31	0.26	-2.05	11	Pass
NVNT	ac40	5710	Ant1	-1.97	0.26	-1.71	11	Pass
NVNT	ac40	5755	Ant1	-4.25	0.26	-3.99	30	Pass
NVNT	ac40	5795	Ant1	-3.86	0.26	-3.6	30	Pass
NVNT	ac80	5210	Ant1	-2.14	0.48	-1.66	11	Pass
NVNT	ac80	5290	Ant1	-3.12	0.51	-2.61	11	Pass
NVNT	ac80	5530	Ant1	-3.51	0.51	-3	11	Pass
NVNT	ac80	5610	Ant1	-3.54	0.51	-3.03	11	Pass
NVNT	ac80	5690	Ant1	-3.3	0.51	-2.79	11	Pass
NVNT	ac80	5775	Ant1	-4.97	0.48	-4.49	30	Pass

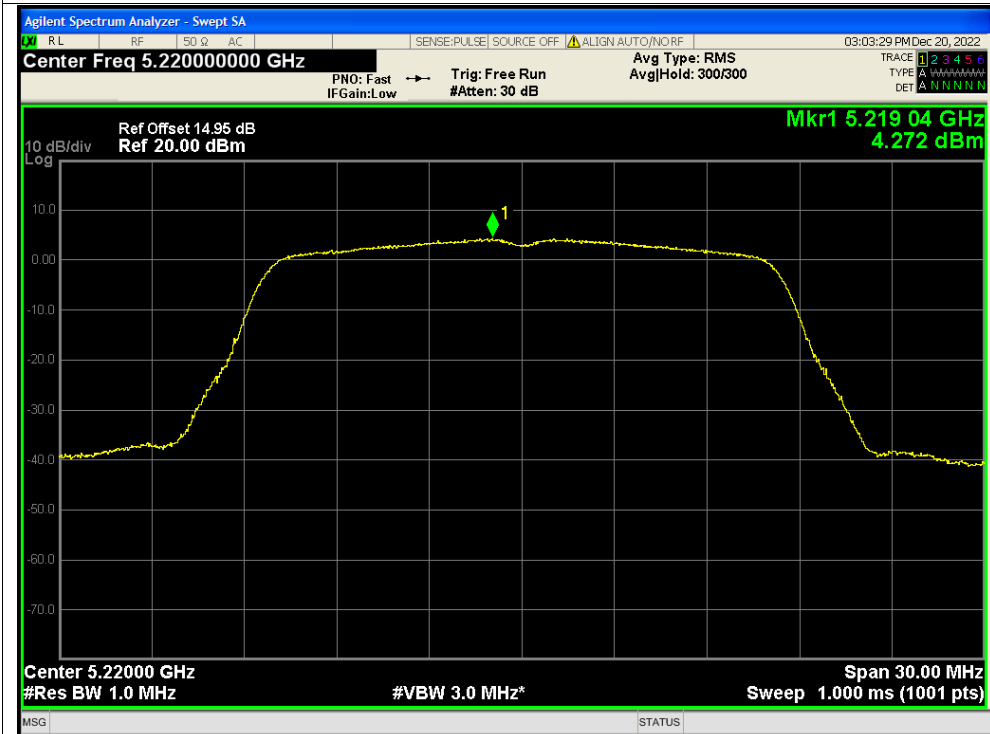


Test Graphs

PSD NVNT a 5180MHz Ant1

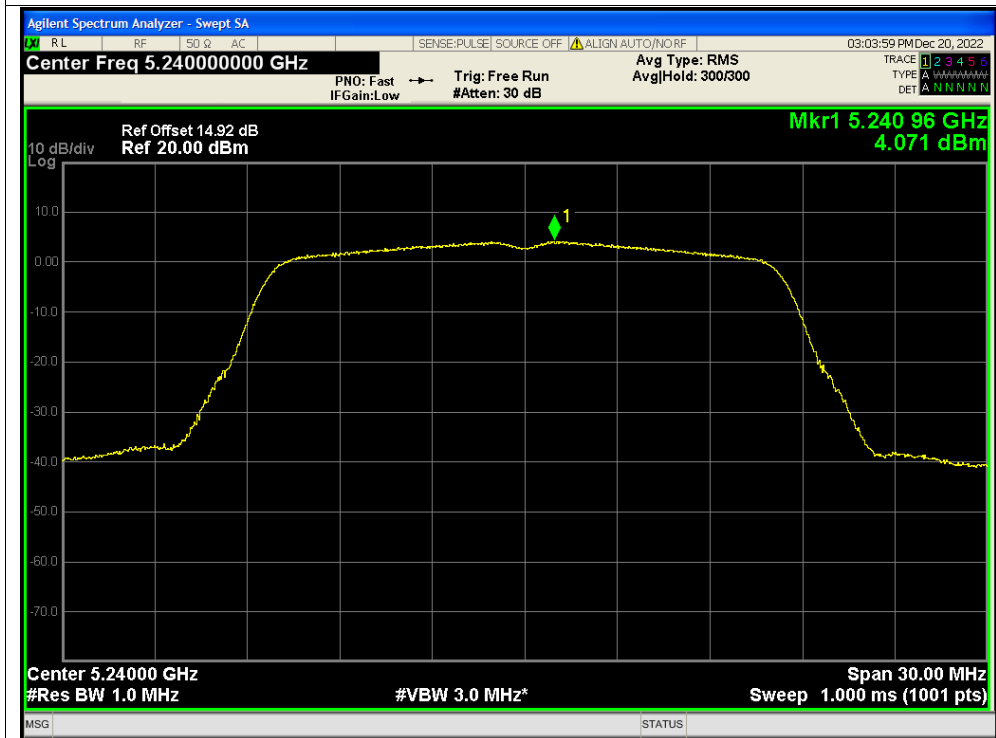


PSD NVNT a 5220MHz Ant1

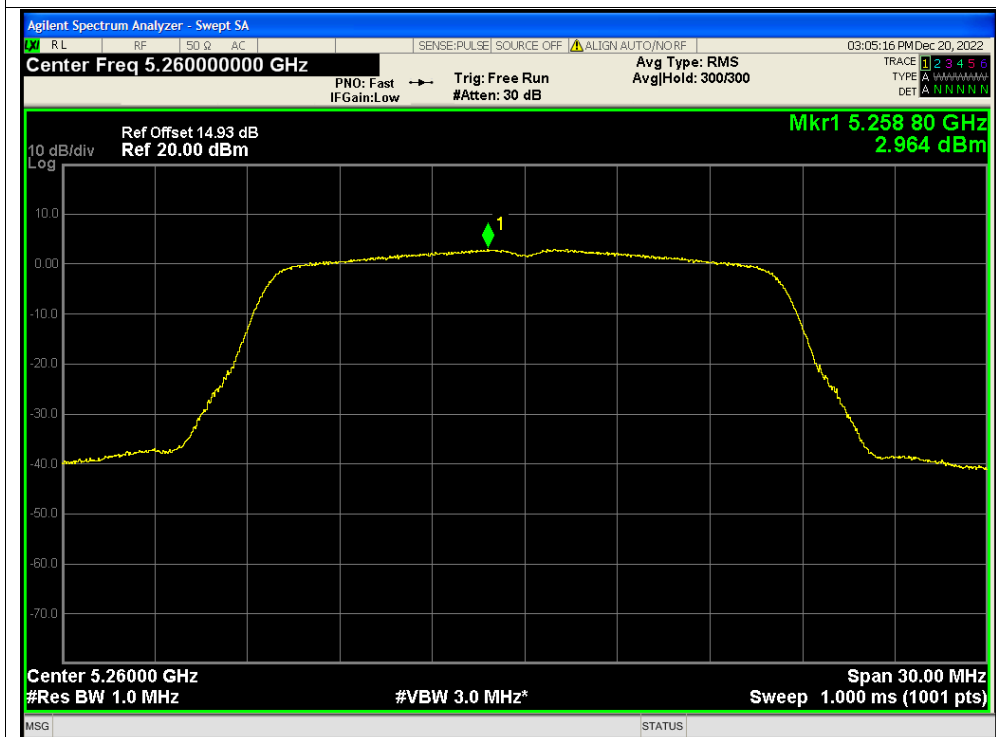




PSD NVNT a 5240MHz Ant1

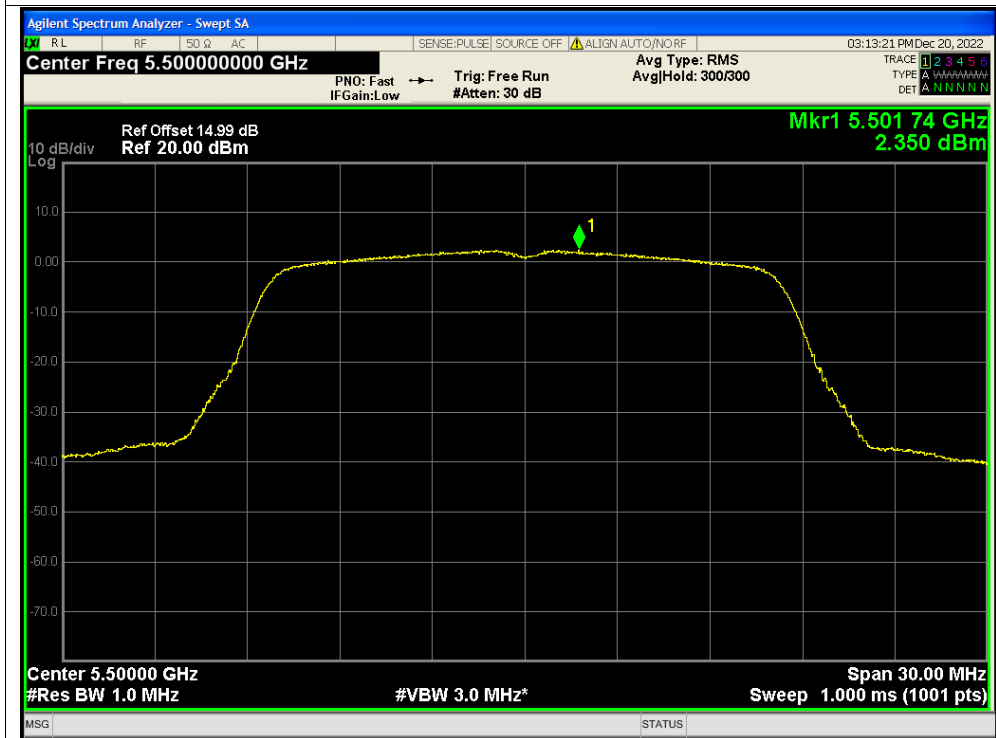


PSD NVNT a 5260MHz Ant1

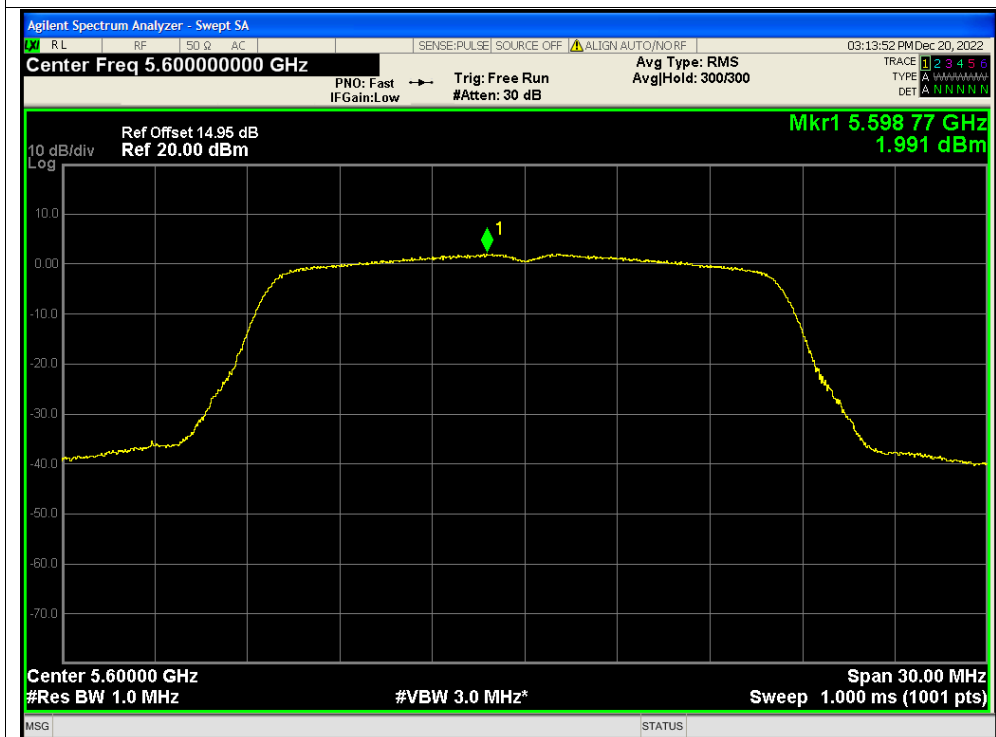




PSD NVNT a 5500MHz Ant1

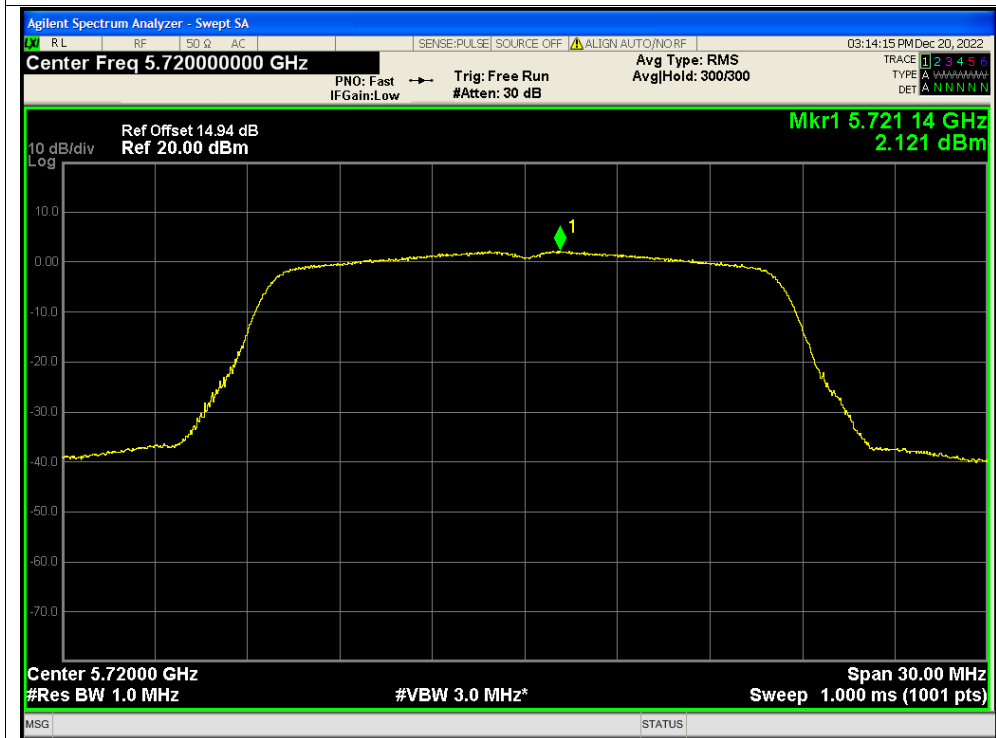


PSD NVNT a 5600MHz Ant1

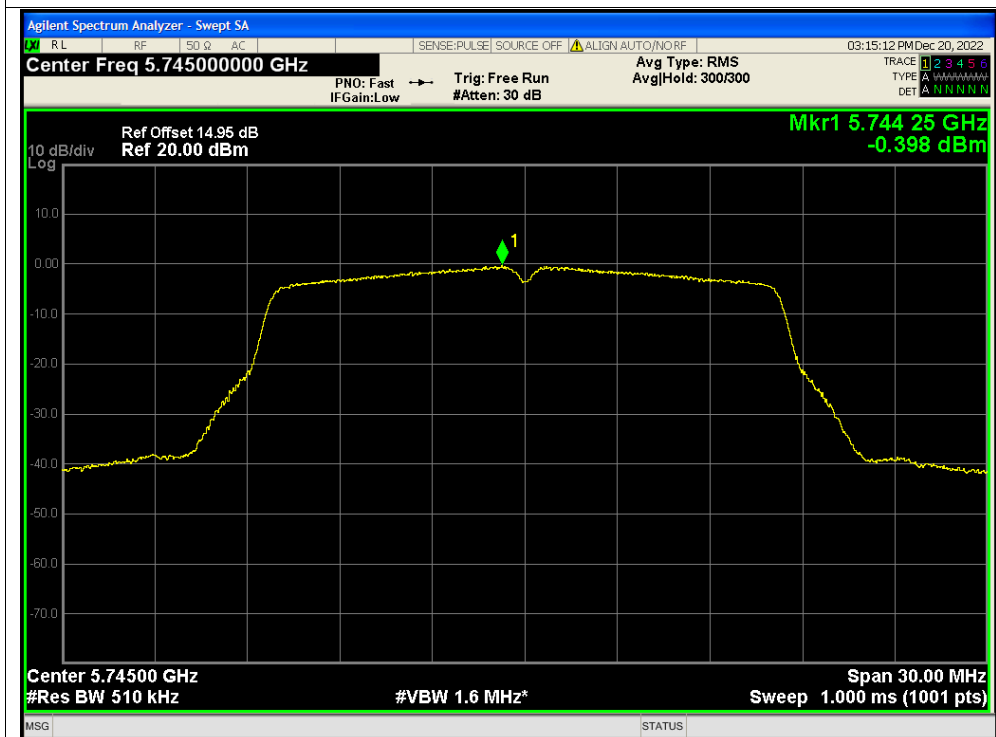




PSD NVNT a 5720MHz Ant1

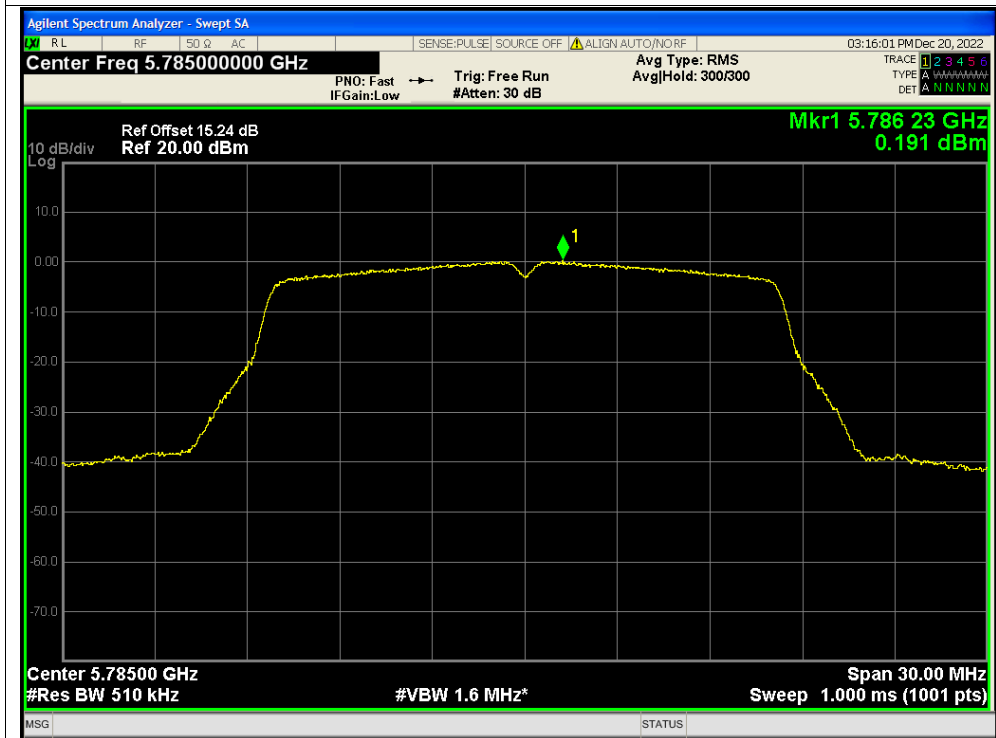


PSD NVNT a 5745MHz Ant1

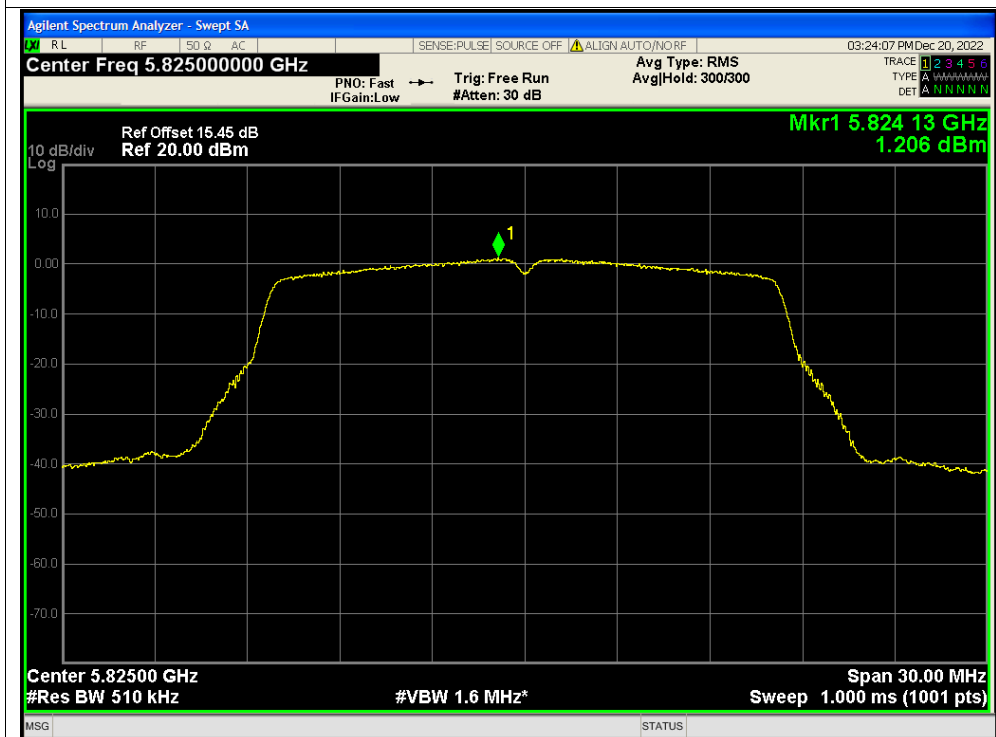




PSD NVNT a 5785MHz Ant1

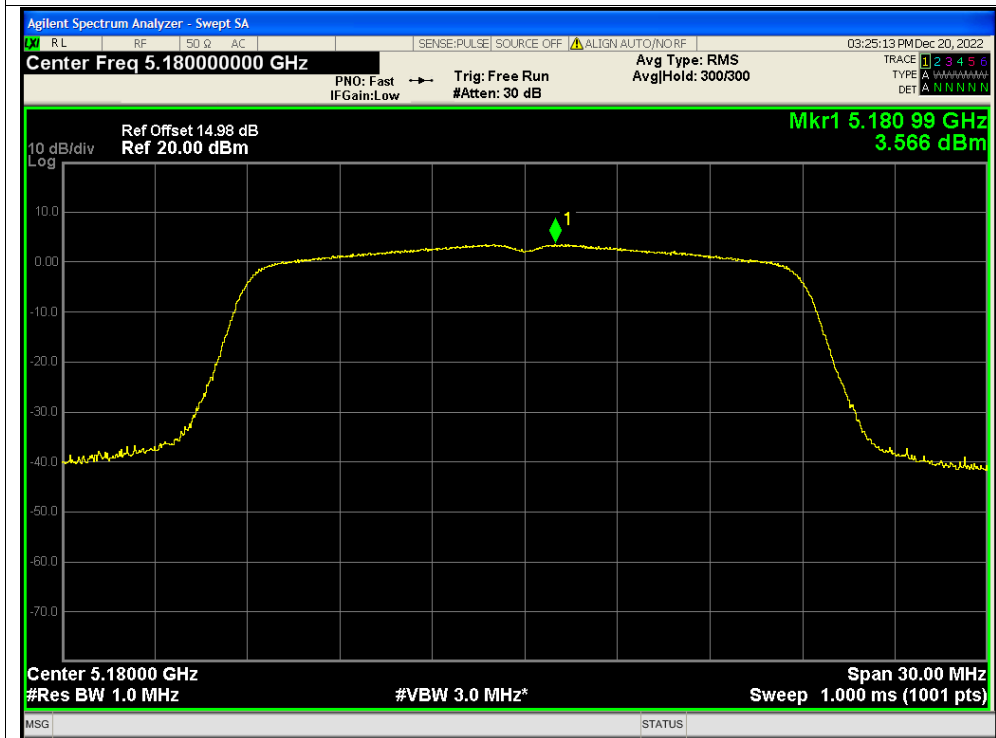


PSD NVNT a 5825MHz Ant1

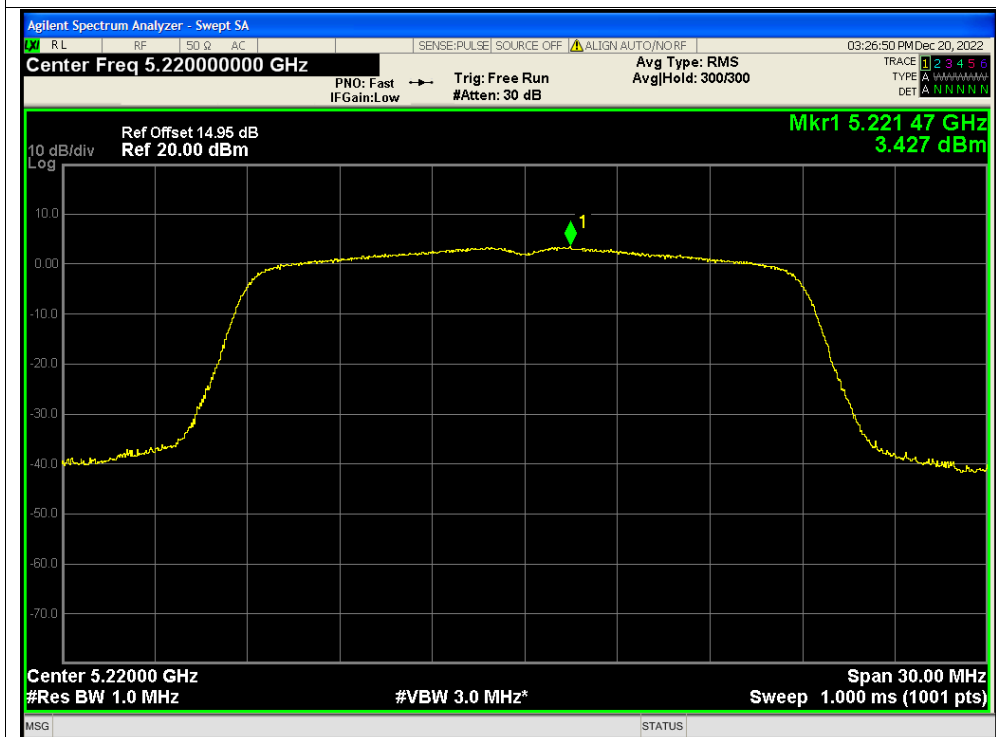




PSD NVNT n20 5180MHz Ant1

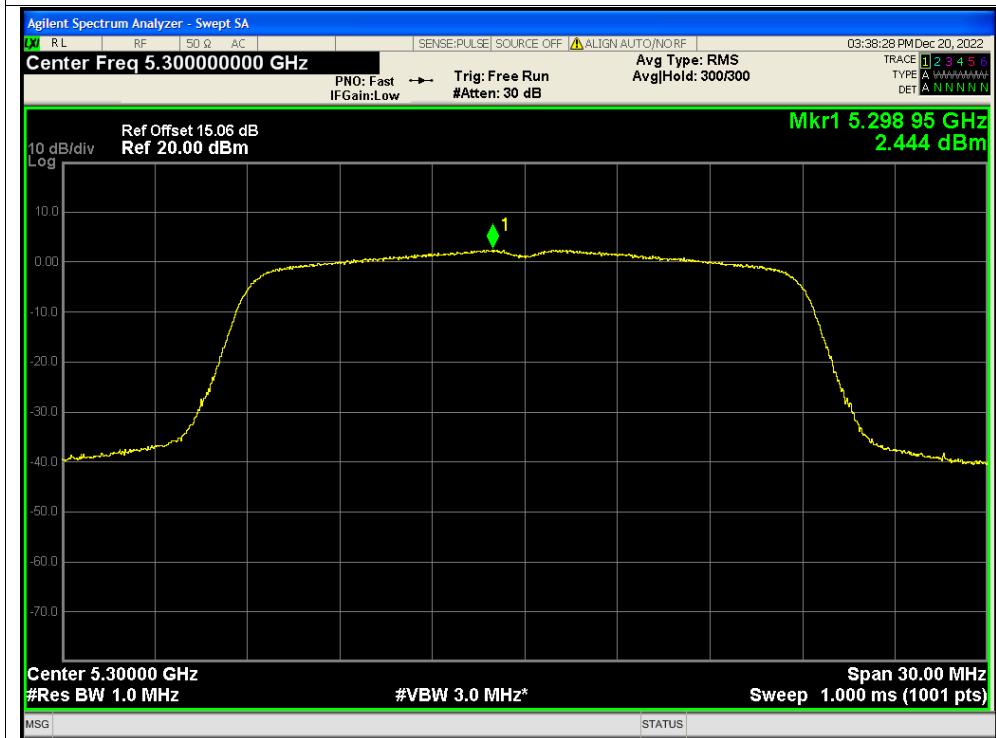


PSD NVNT n20 5220MHz Ant1

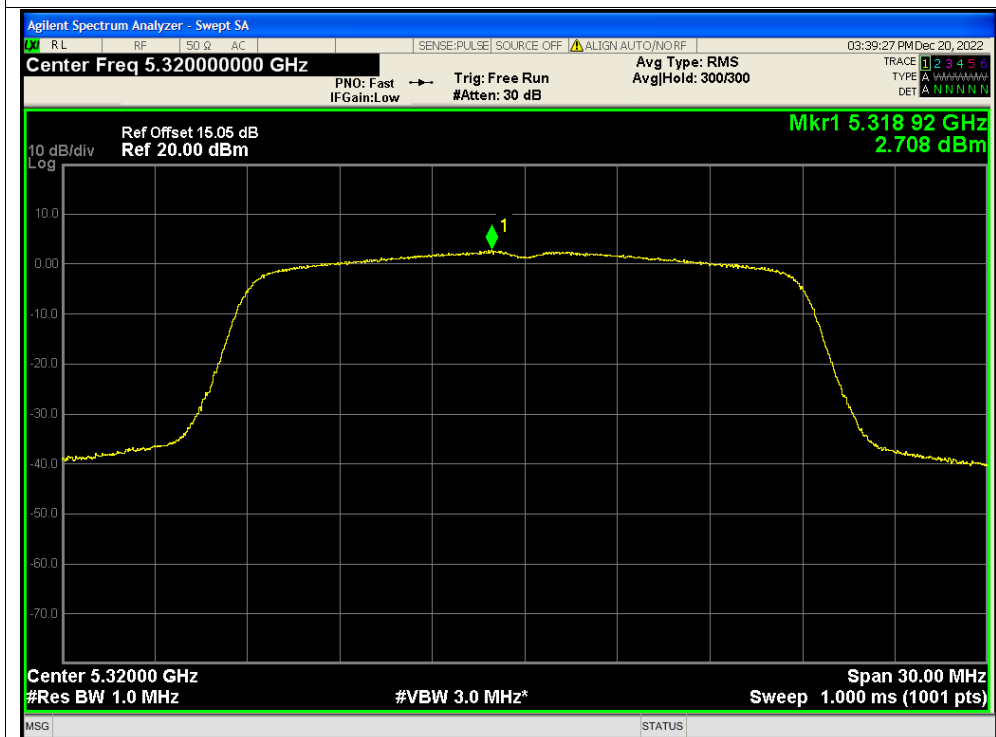




PSD NVNT n20 5300MHz Ant1

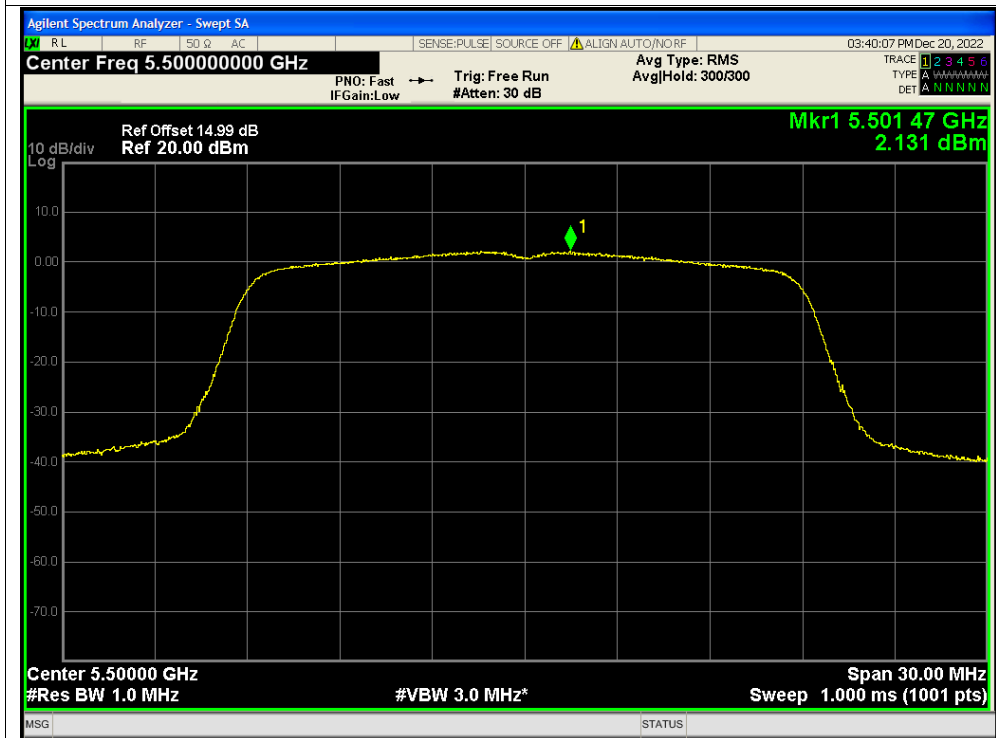


PSD NVNT n20 5320MHz Ant1

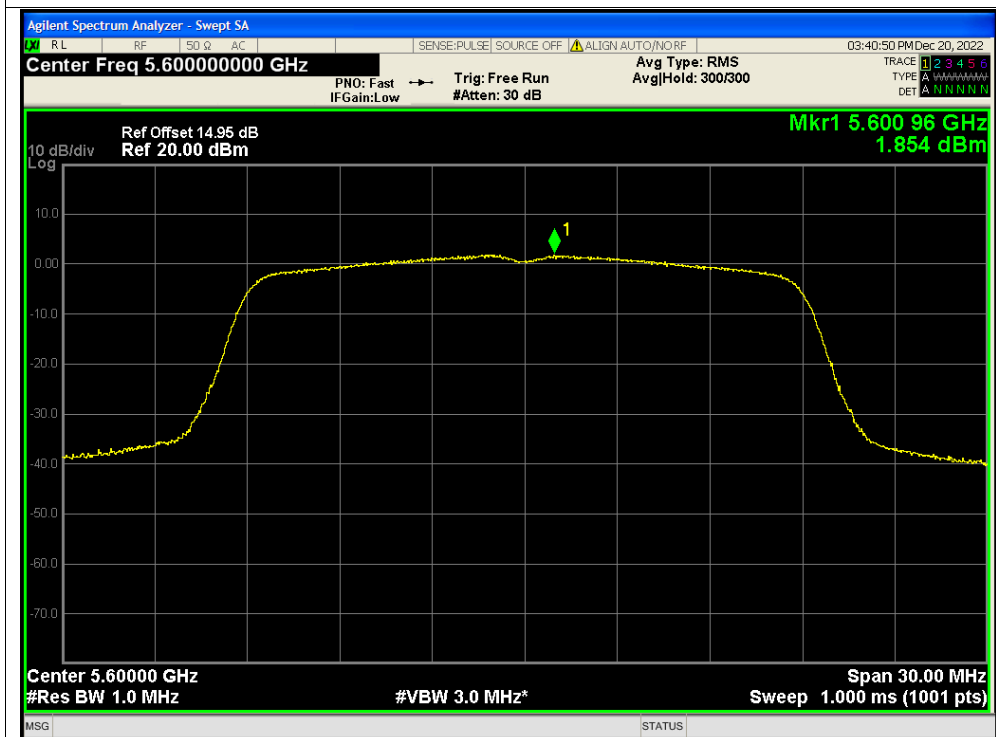




PSD NVNT n20 5500MHz Ant1

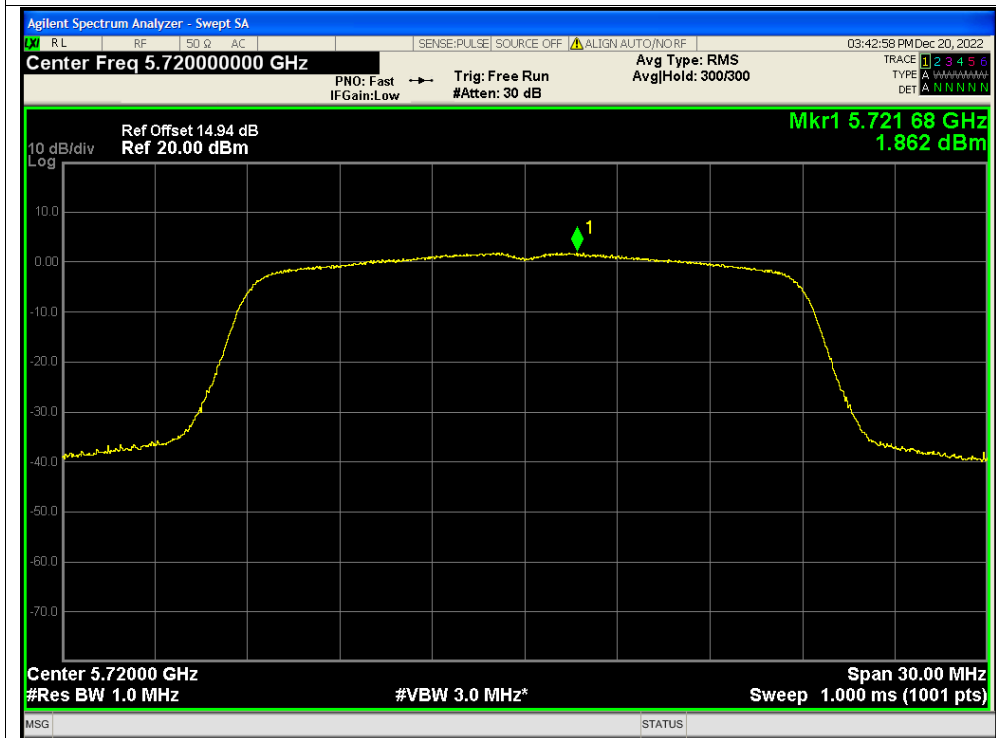


PSD NVNT n20 5600MHz Ant1

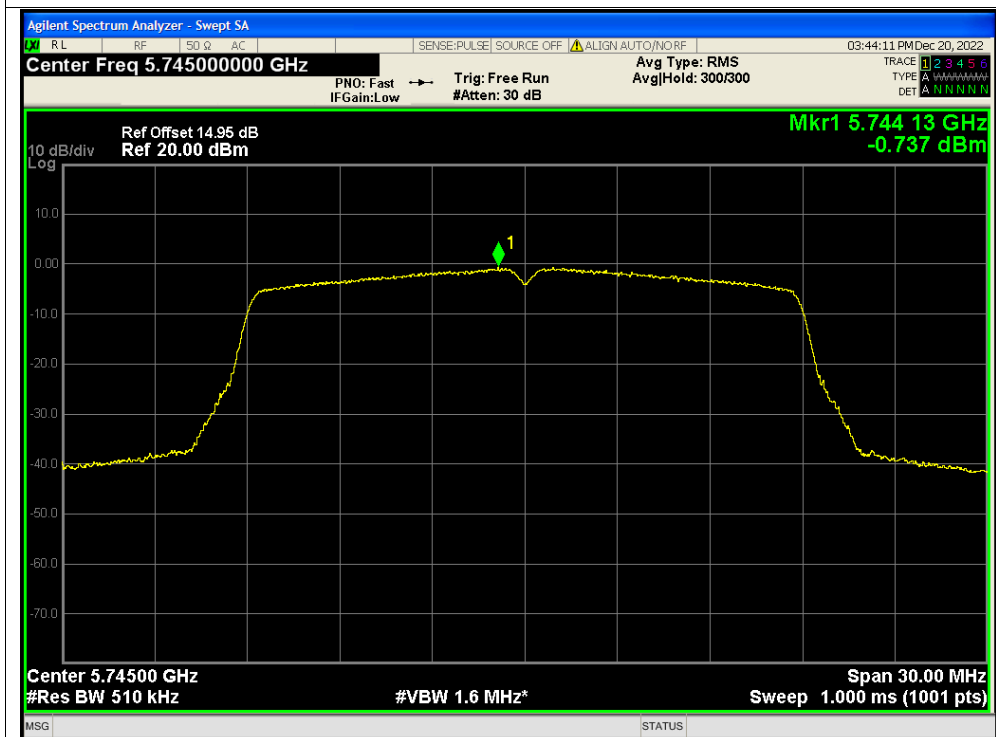




PSD NVNT n20 5720MHz Ant1

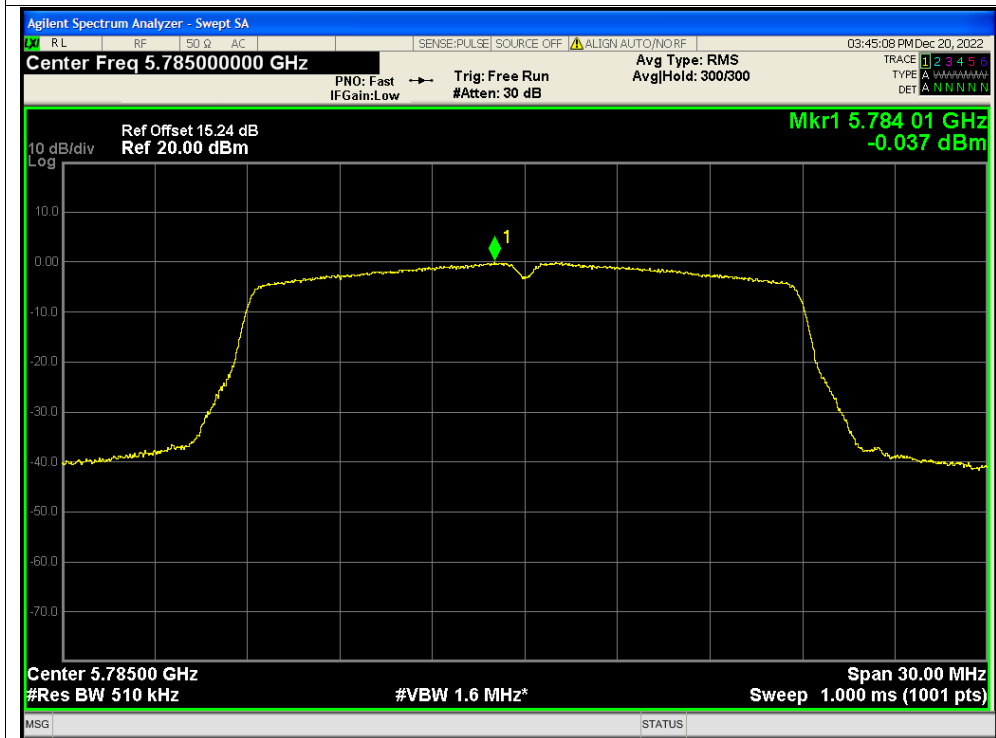


PSD NVNT n20 5745MHz Ant1

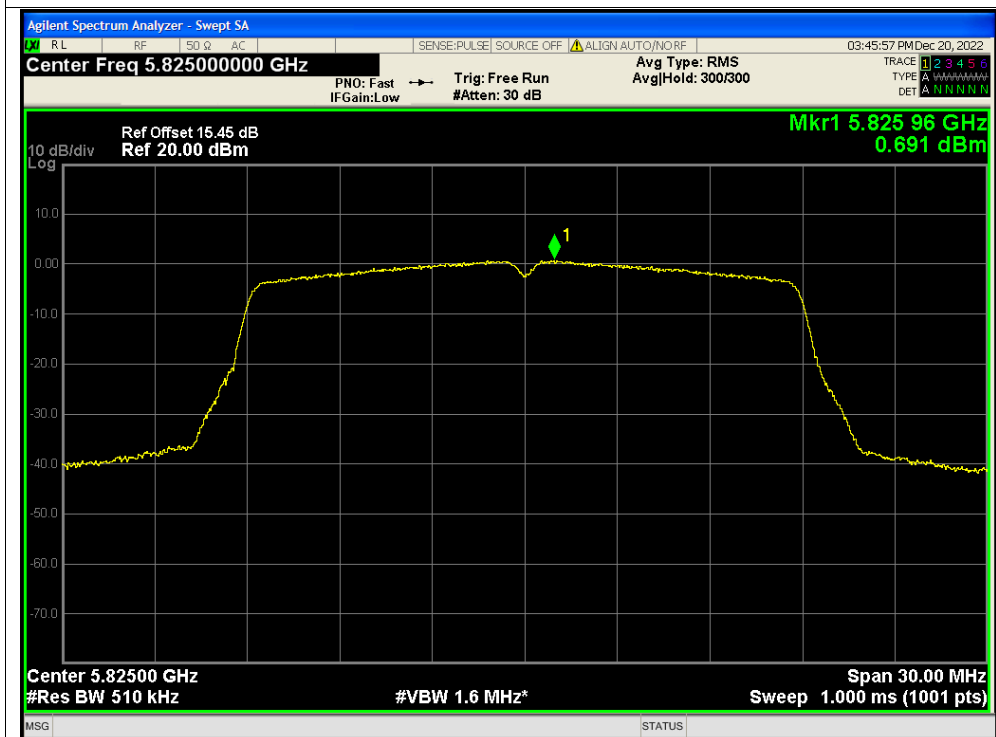




PSD NVNT n20 5785MHz Ant1

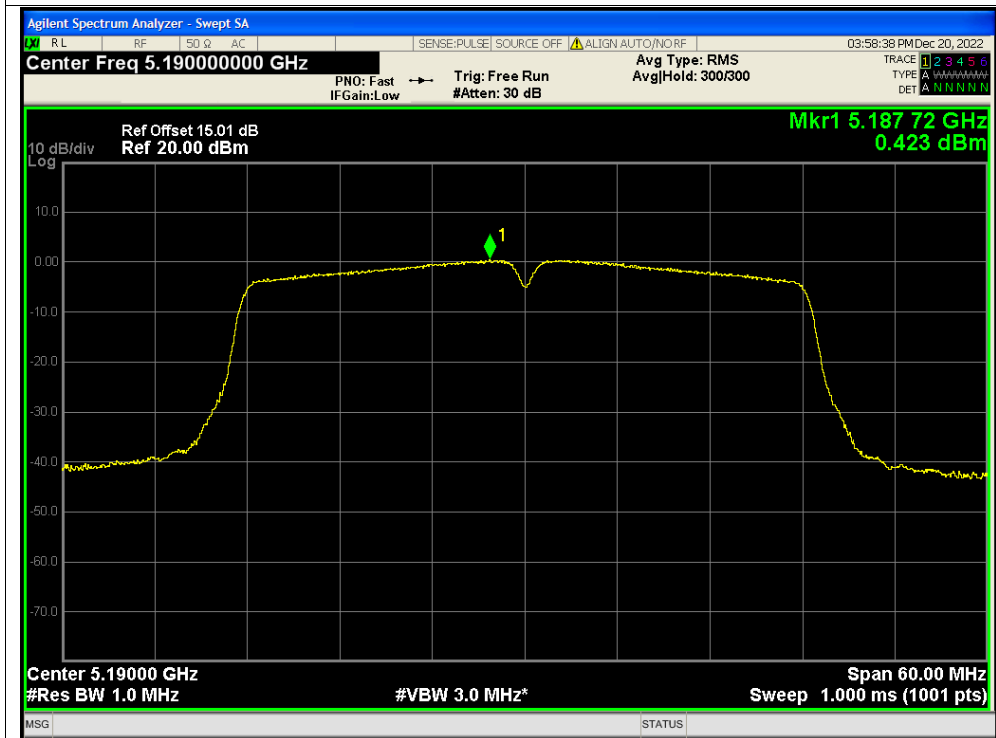


PSD NVNT n20 5825MHz Ant1

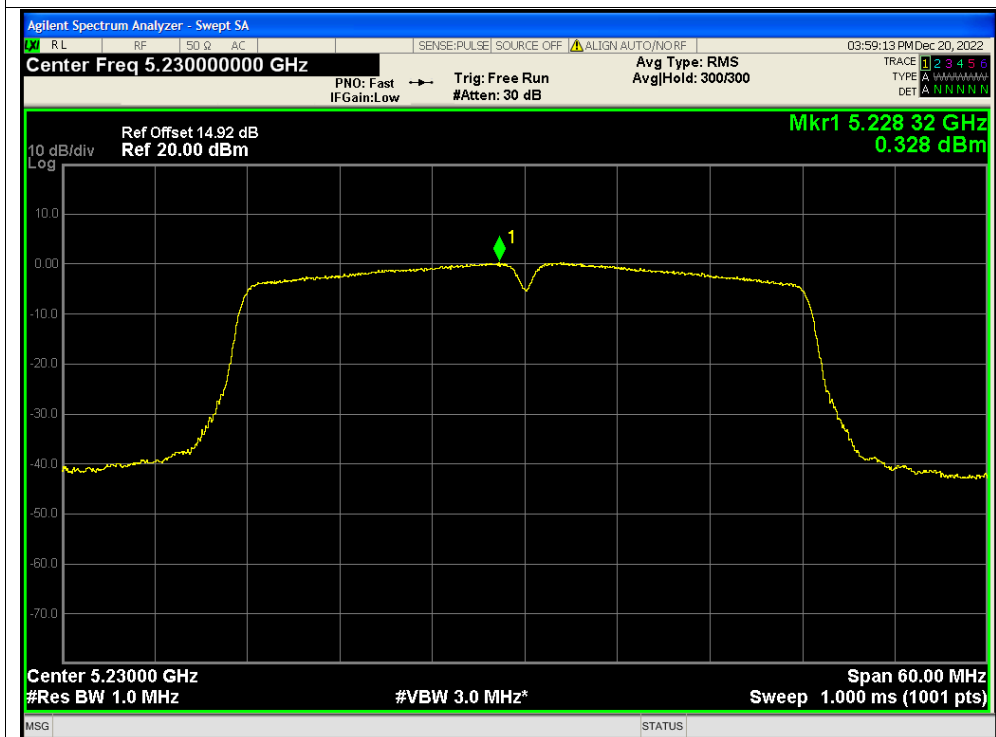




PSD NVNT n40 5190MHz Ant1

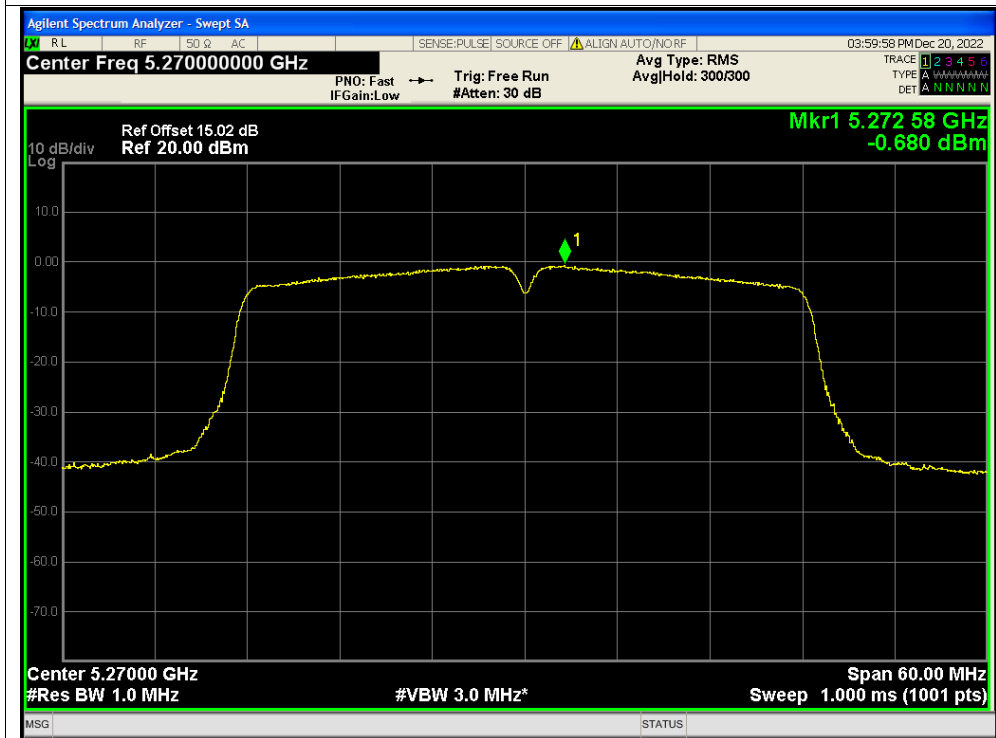


PSD NVNT n40 5230MHz Ant1

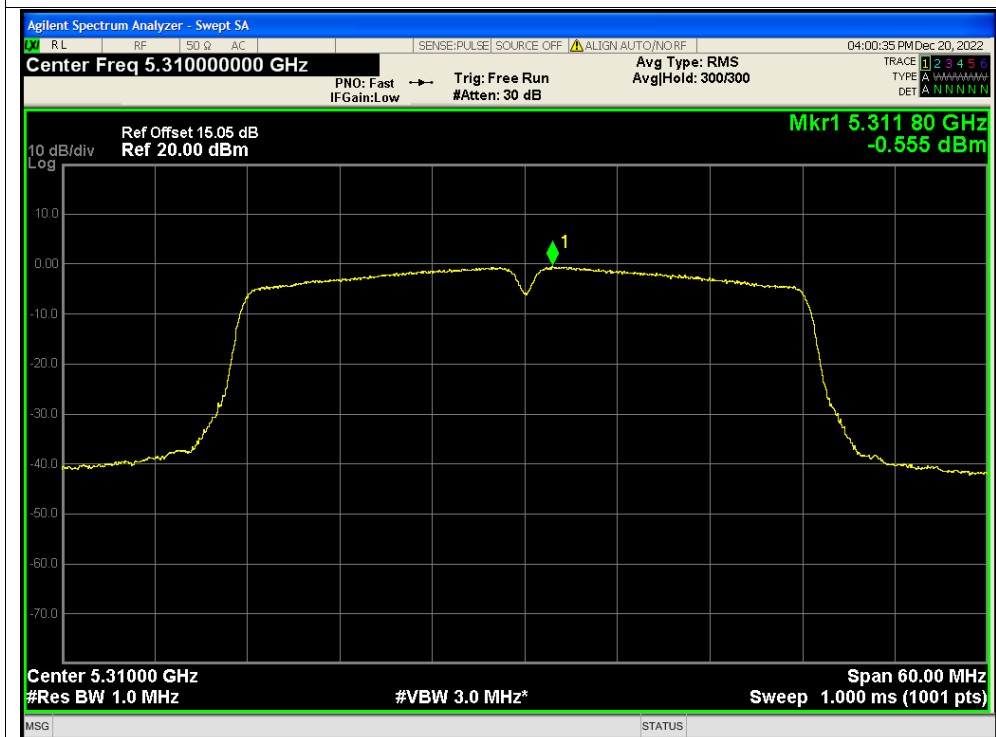




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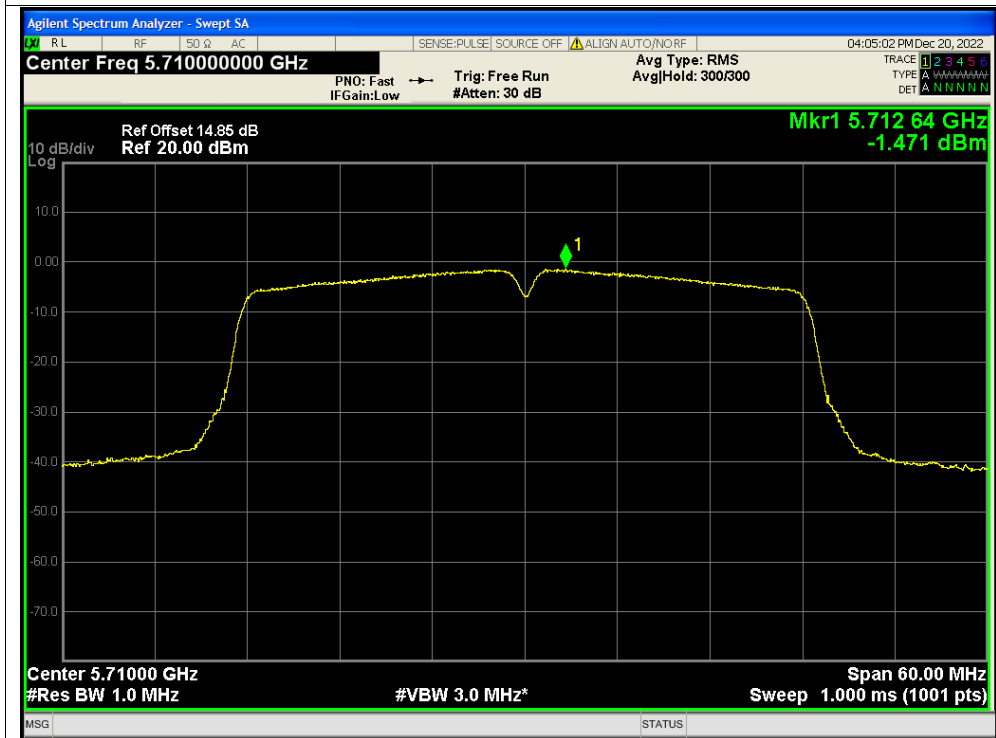


PSD NVNT n40 5310MHz Ant1

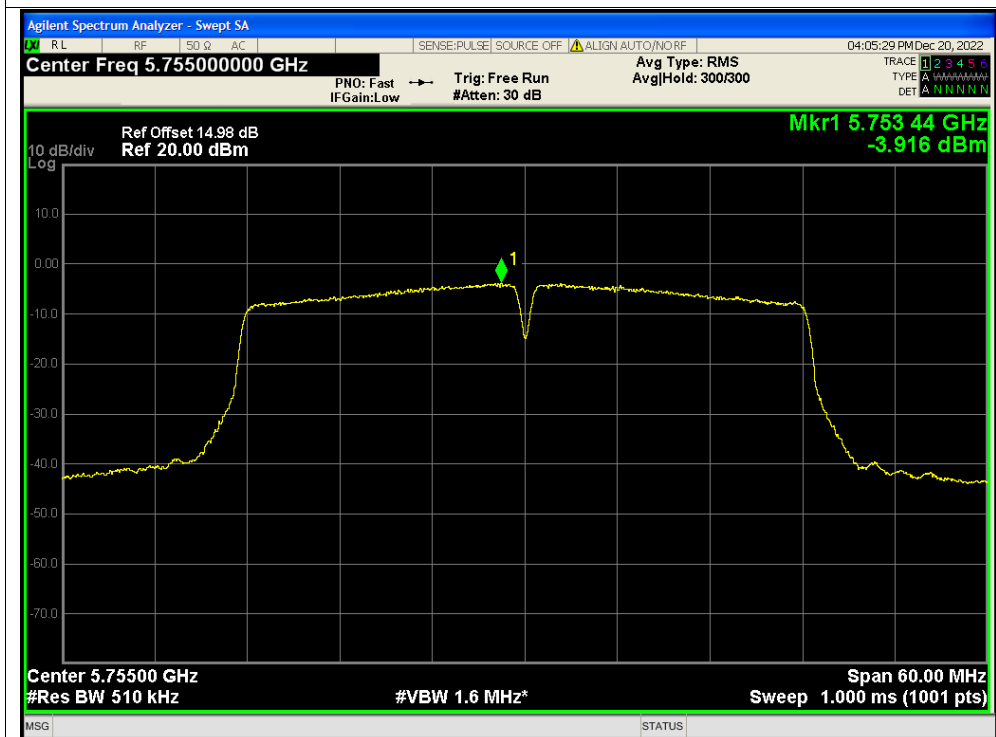




PSD NVNT n40 5710MHz Ant1

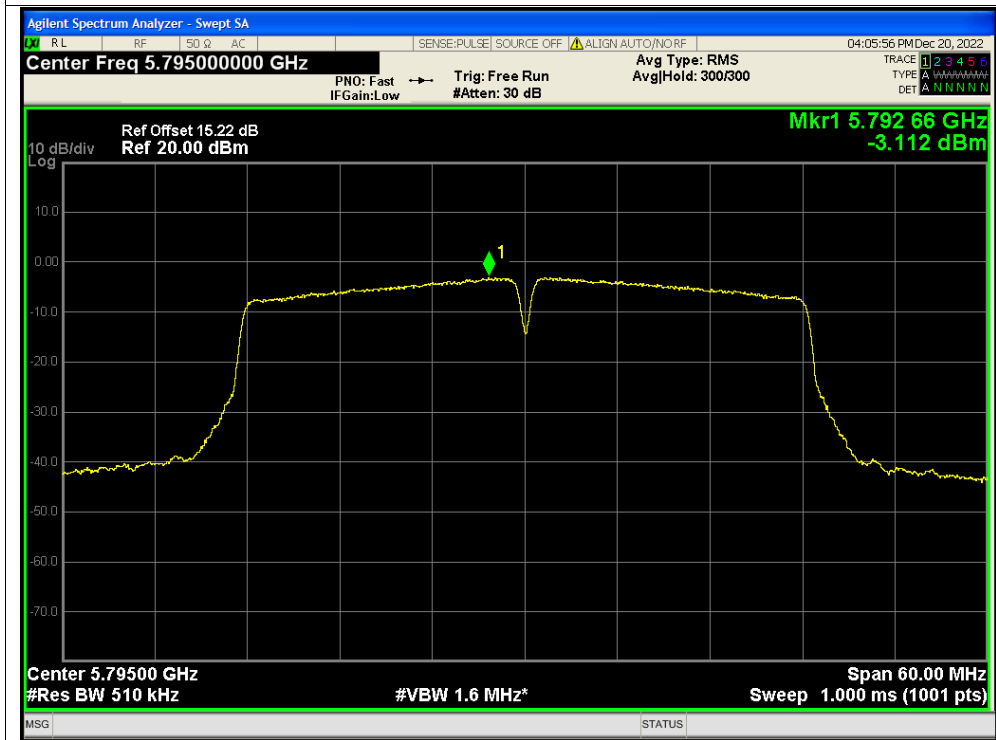


PSD NVNT n40 5755MHz Ant1

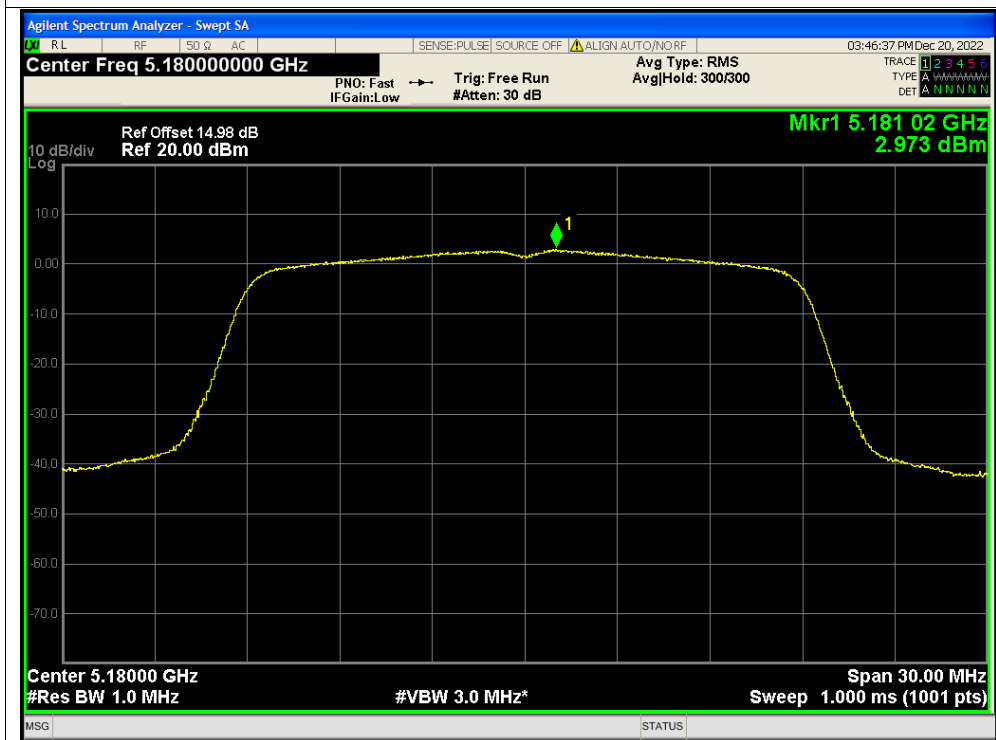




PSD NVNT n40 5795MHz Ant1

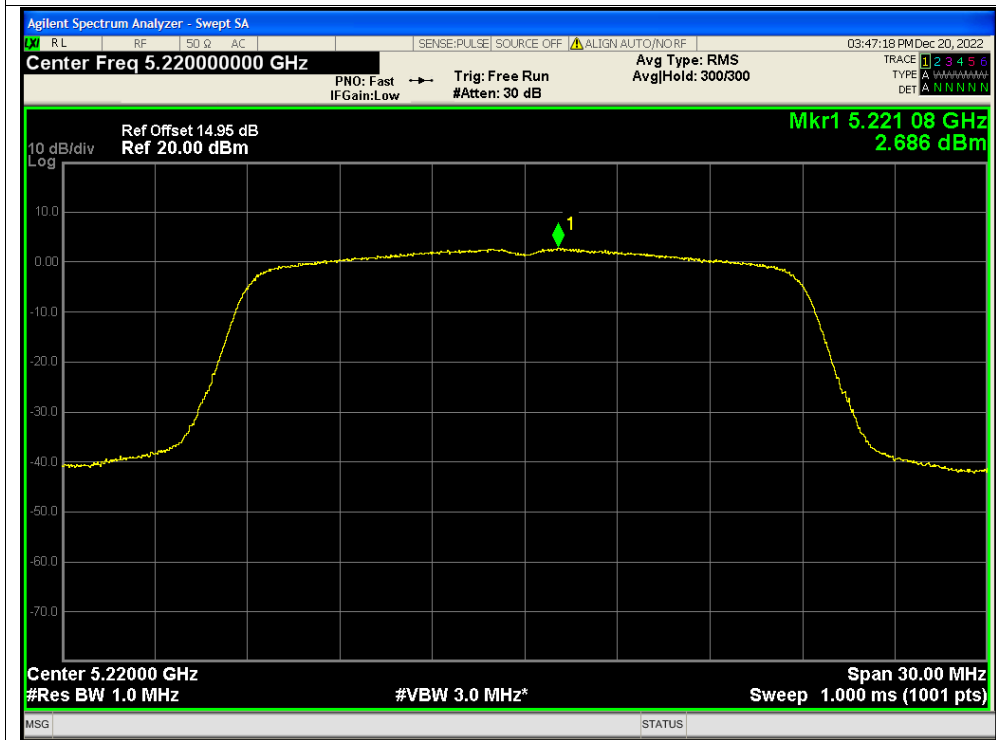


PSD NVNT ac20 5180MHz Ant1

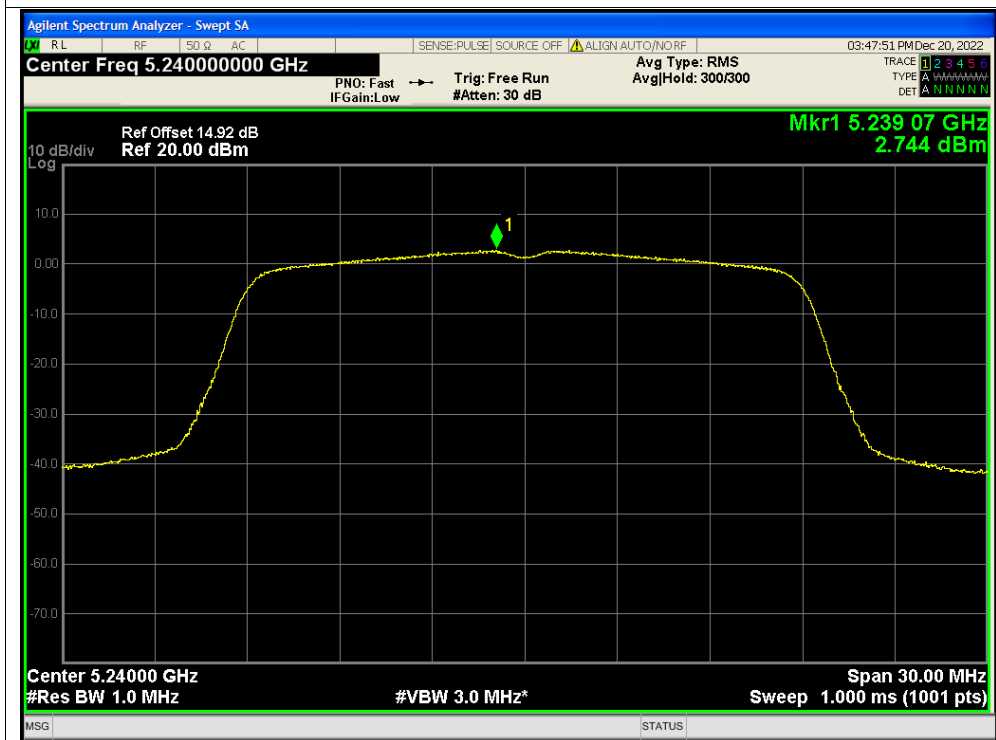




PSD NVNT ac20 5220MHz Ant1

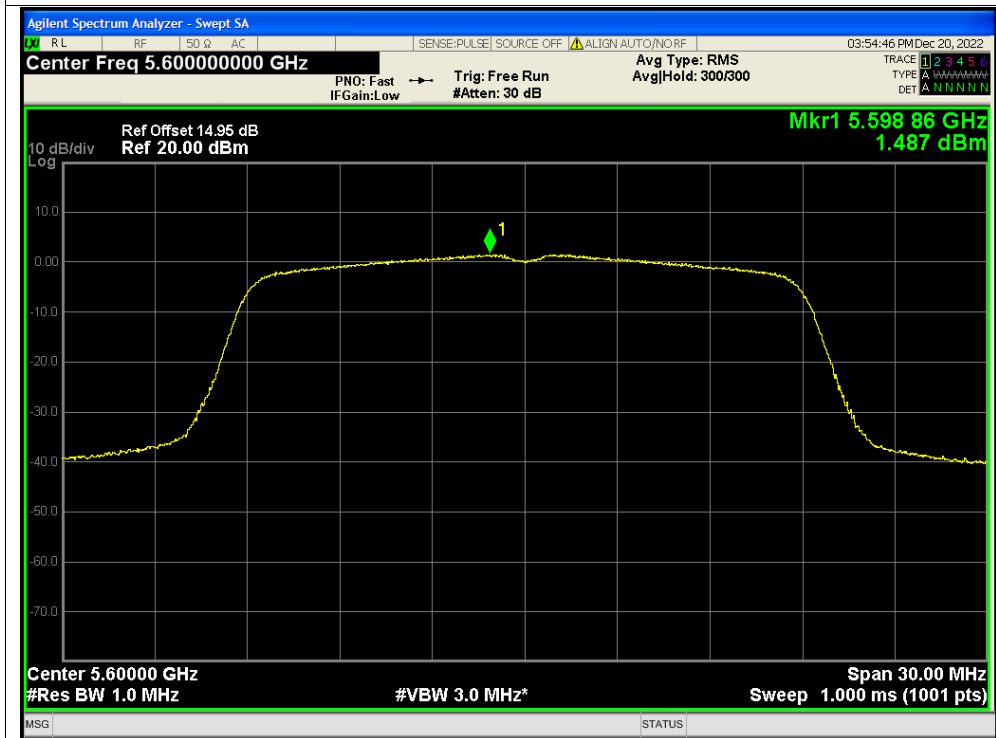


PSD NVNT ac20 5240MHz Ant1

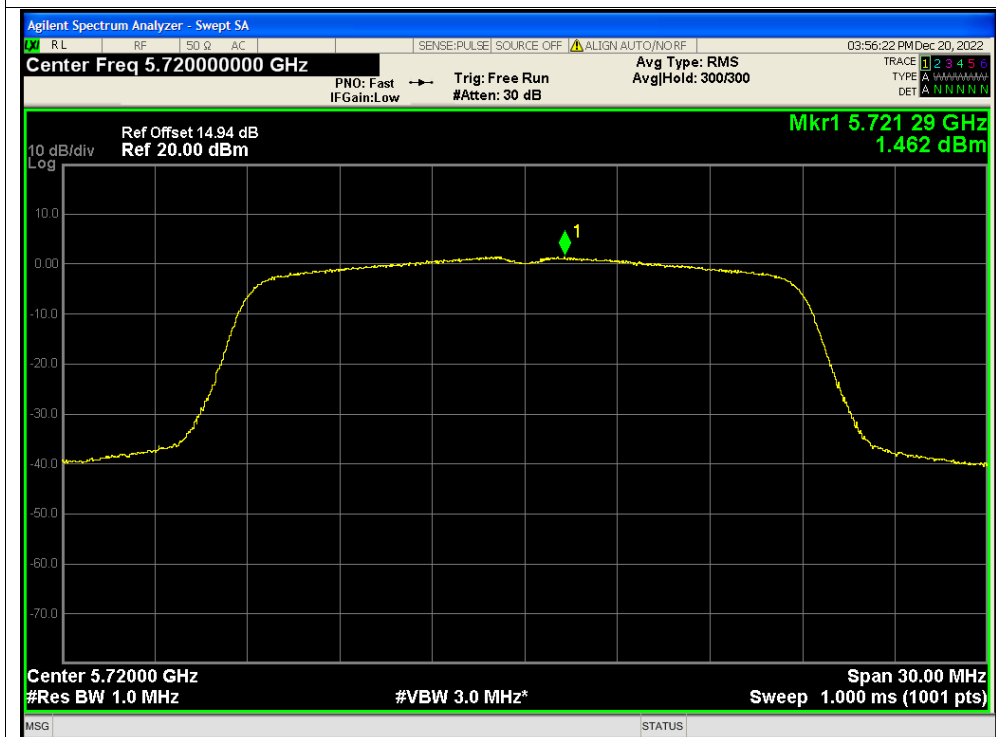




PSD NVNT ac20 5600MHz Ant1

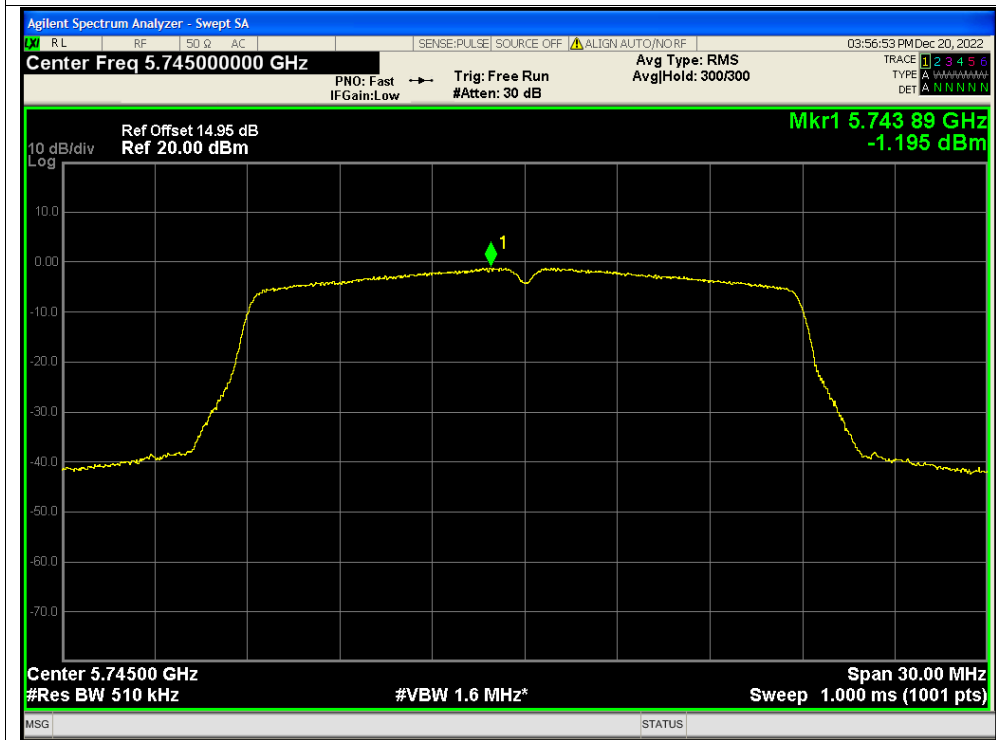


PSD NVNT ac20 5720MHz Ant1

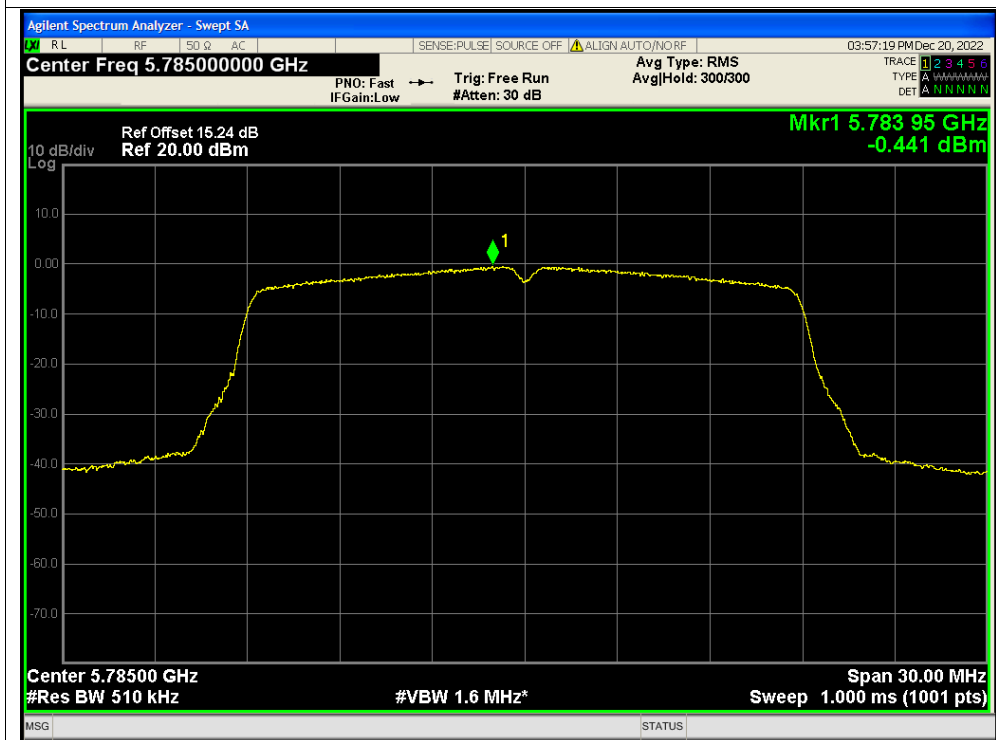




PSD NVNT ac20 5745MHz Ant1

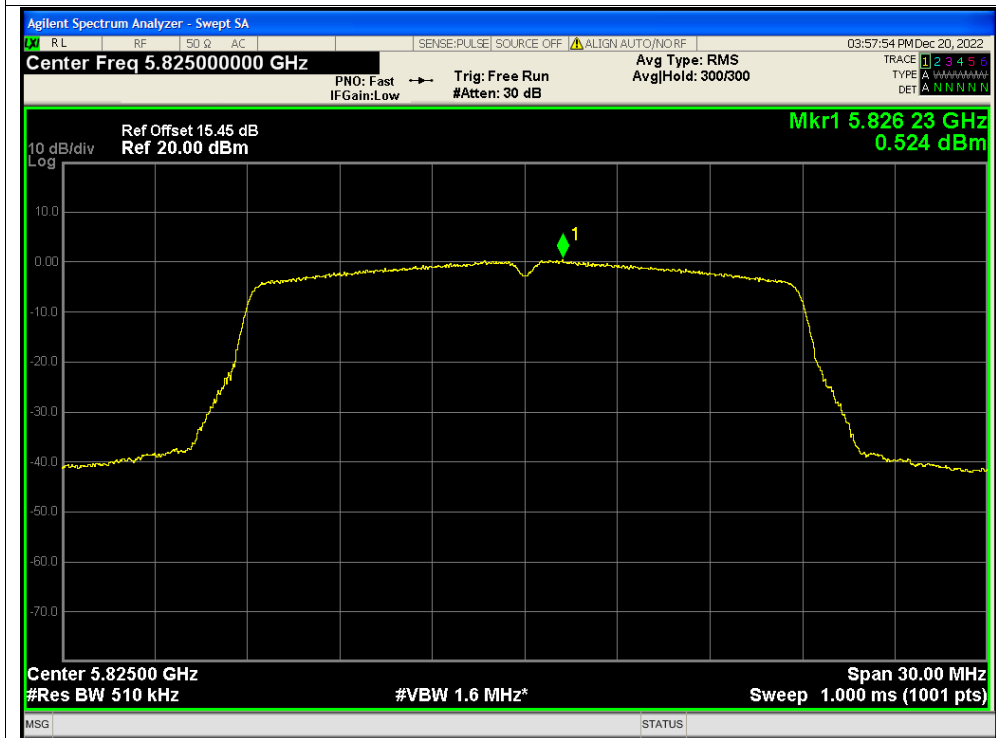


PSD NVNT ac20 5785MHz Ant1





PSD NVNT ac20 5825MHz Ant1

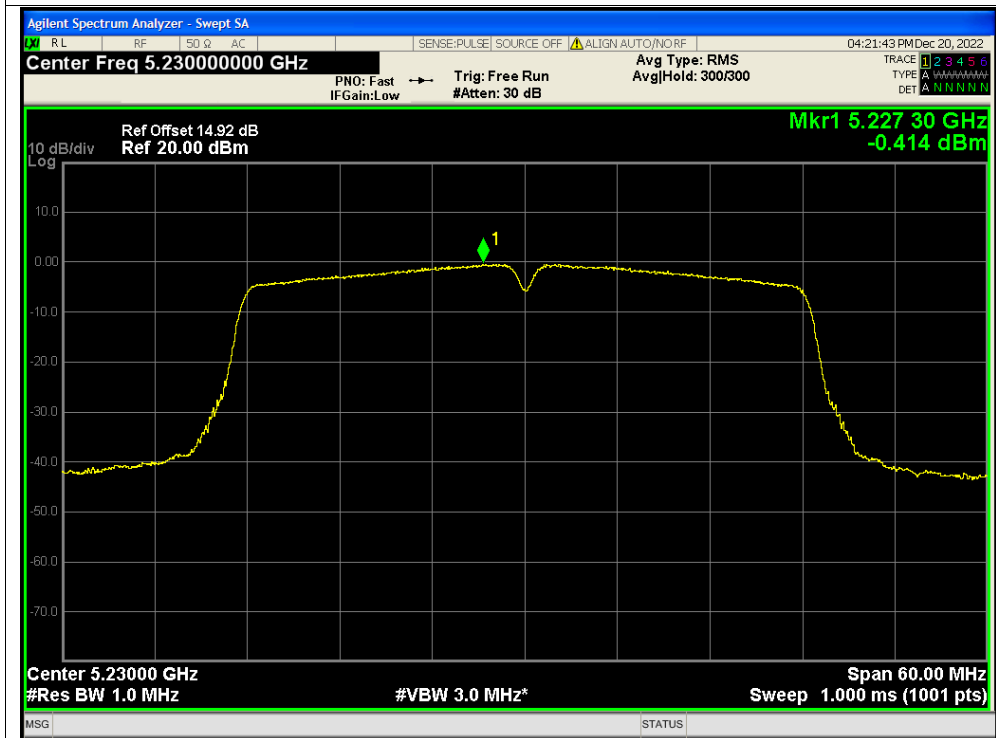


PSD NVNT ac40 5190MHz Ant1

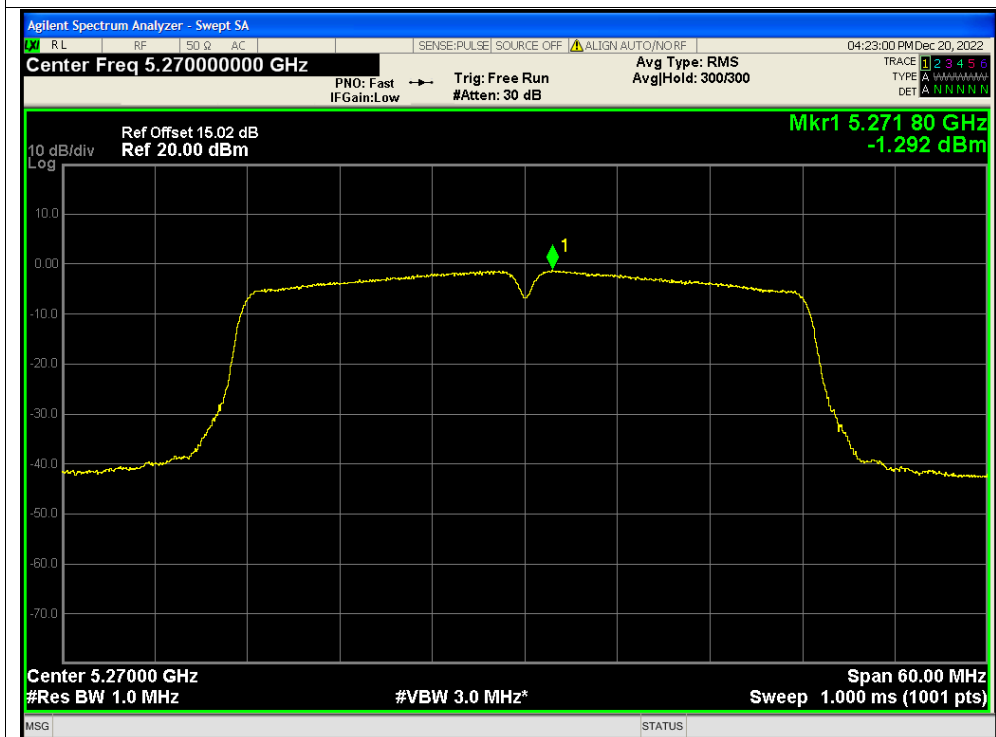




PSD NVNT ac40 5230MHz Ant1

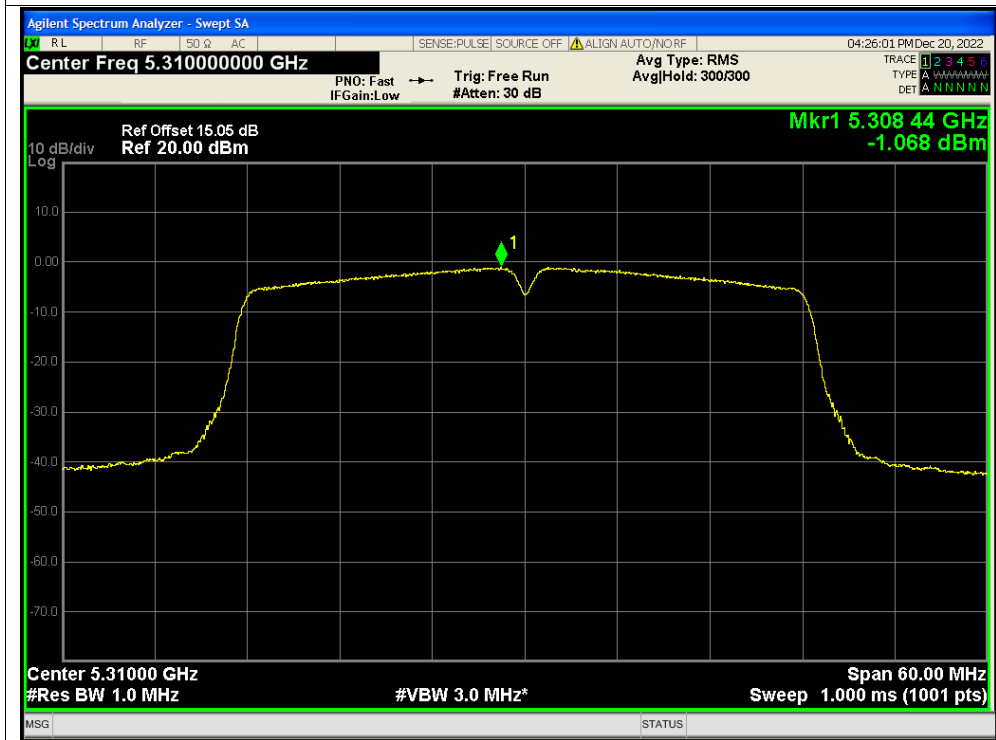


PSD NVNT ac40 5270MHz Ant1

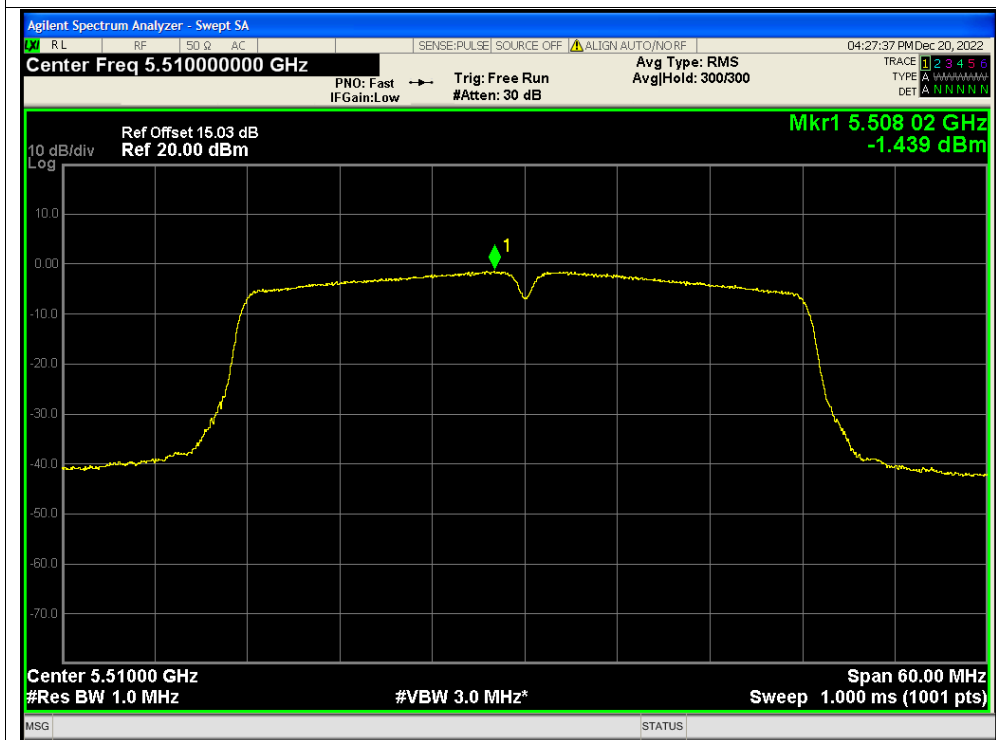




PSD NVNT ac40 5310MHz Ant1

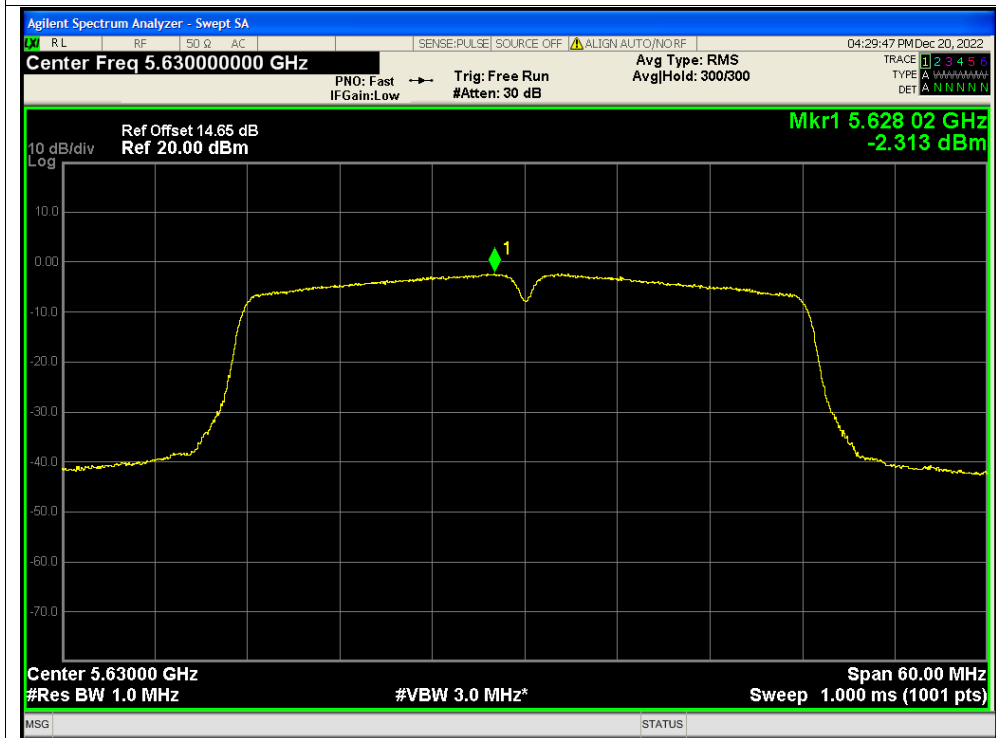


PSD NVNT ac40 5510MHz Ant1

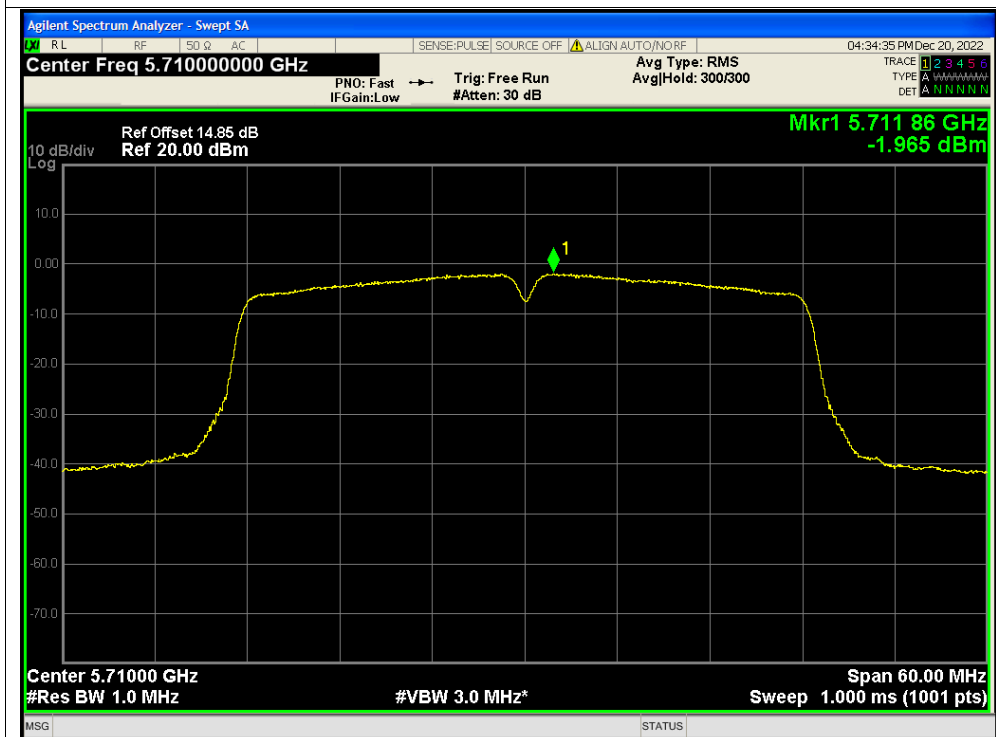




PSD NVNT ac40 5630MHz Ant1

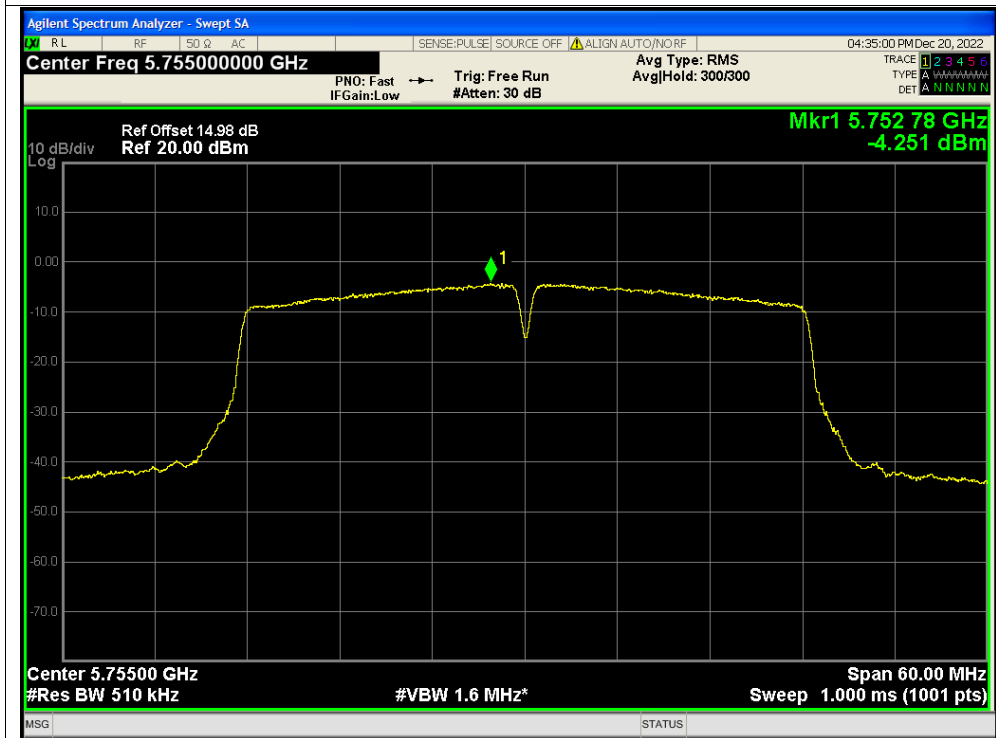


PSD NVNT ac40 5710MHz Ant1

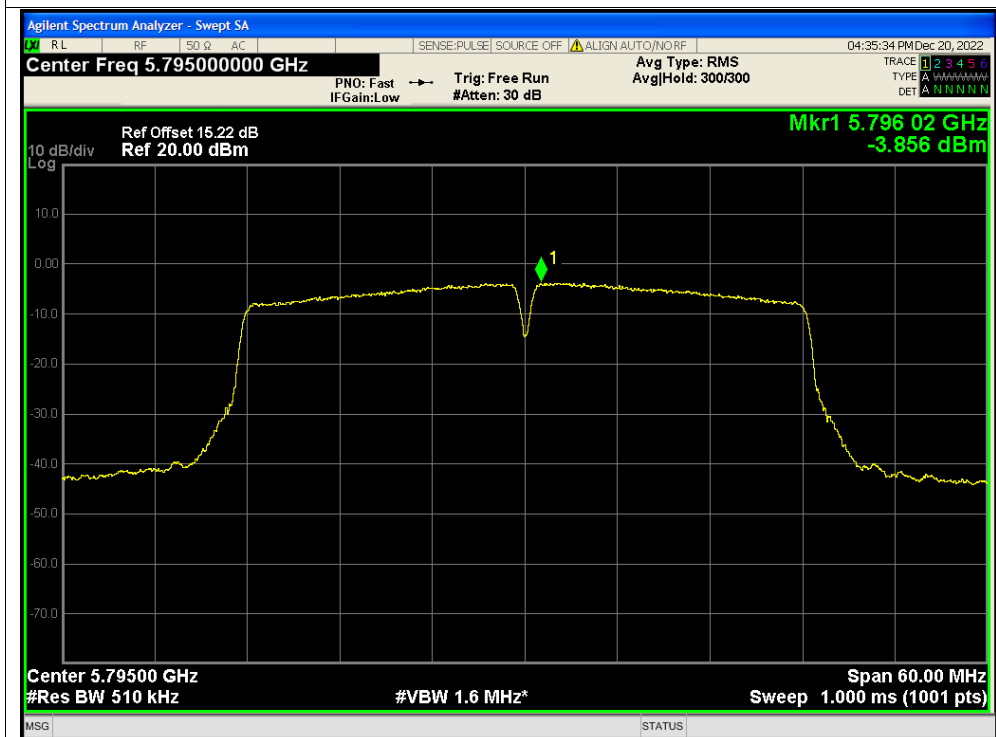




PSD NVNT ac40 5755MHz Ant1

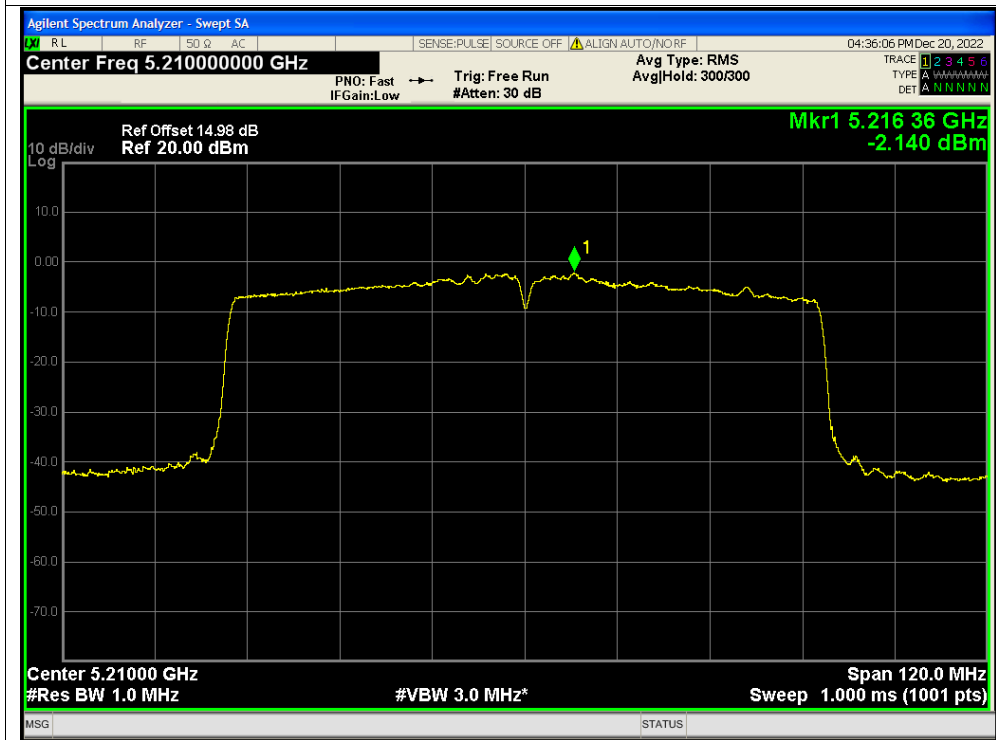


PSD NVNT ac40 5795MHz Ant1

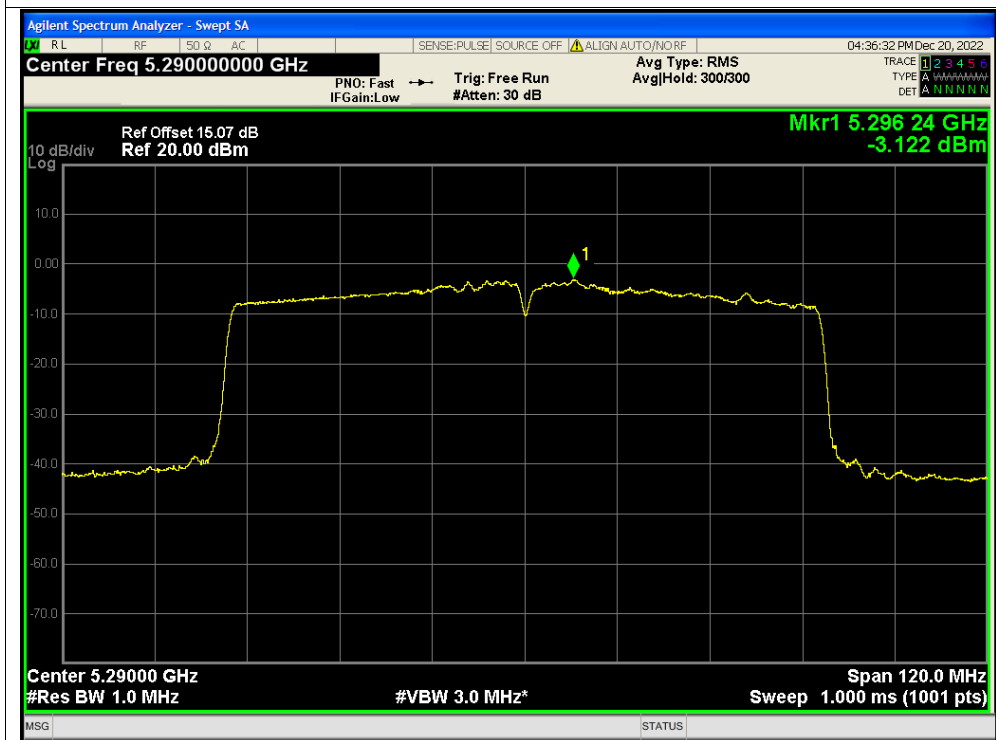




PSD NVNT ac80 5210MHz Ant1

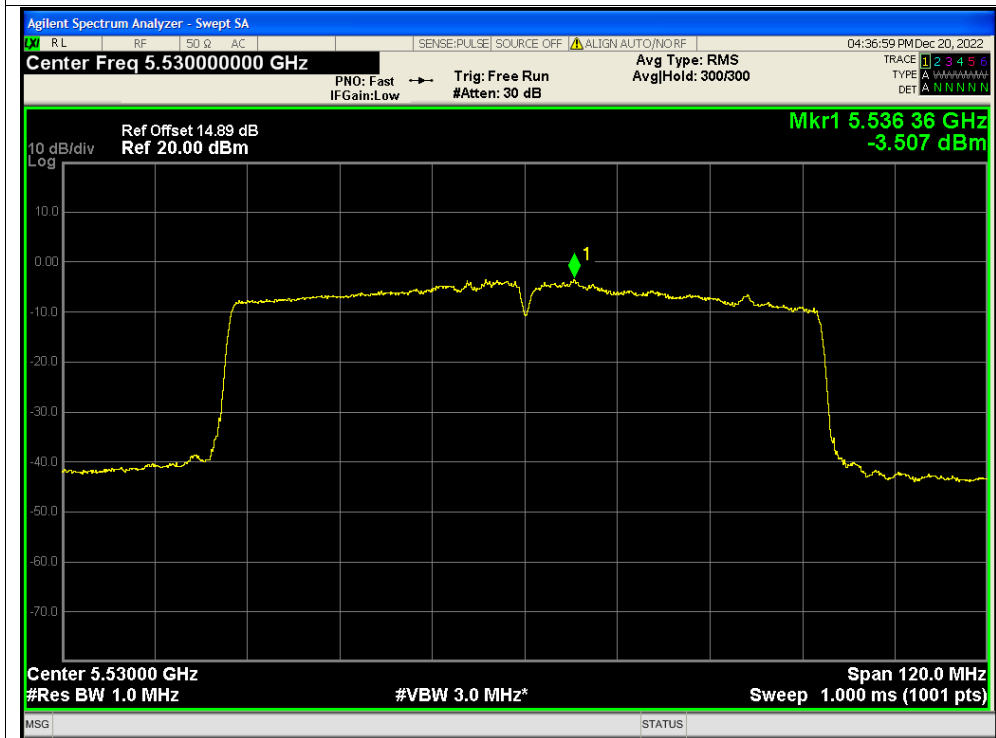


PSD NVNT ac80 5290MHz Ant1

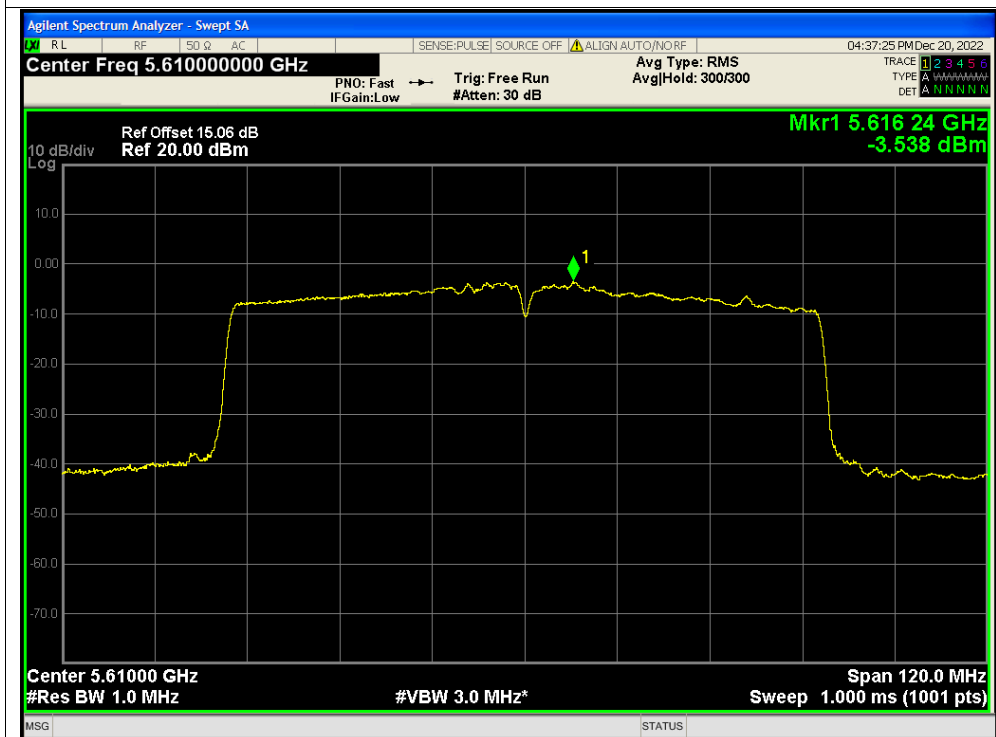




PSD NVNT ac80 5530MHz Ant1

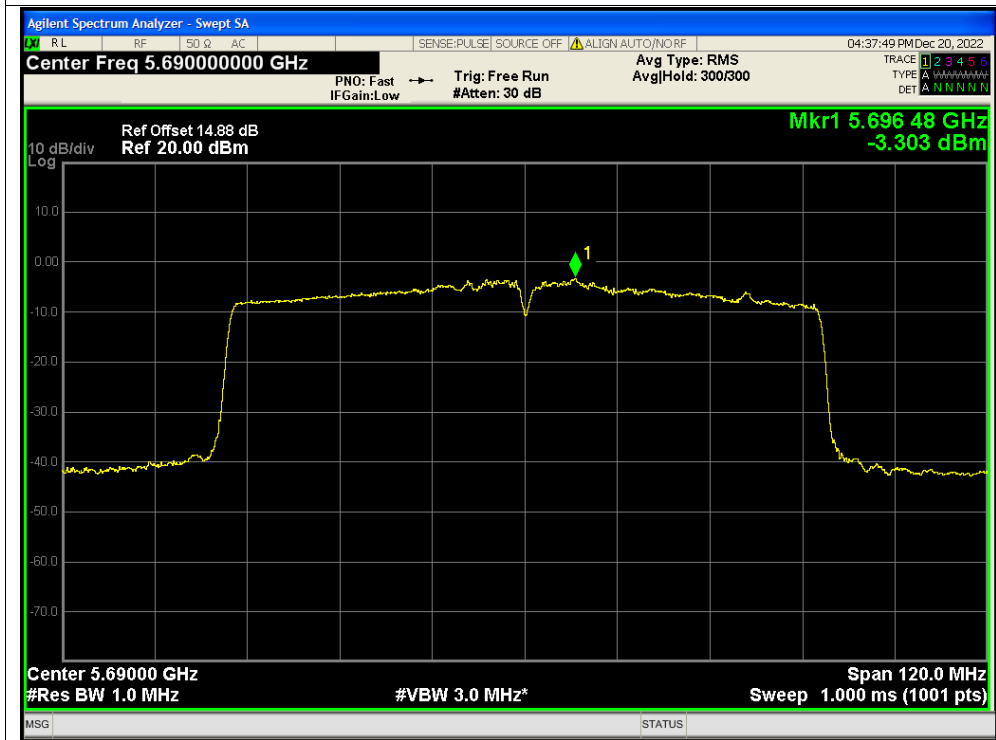


PSD NVNT ac80 5610MHz Ant1





PSD NVNT ac80 5690MHz Ant1



PSD NVNT ac80 5775MHz Ant1



**A.5. Frequency Stability**

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
20C 3.0V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
20C 4.4V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
-30C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
-20C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
-10C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
0C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
10C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
20C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
30C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
40C 3.85V	a	5180	Ant1	5179.986	-14000	-2.7	25	Pass
50C 3.85V	a	5180	Ant1	5179.985	-15000	-2.9	25	Pass
20C 3.0V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
20C 4.4V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
-30C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
-20C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
-10C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
0C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
10C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
20C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
30C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
40C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
50C 3.85V	a	5260	Ant1	5259.984	-16000	-3.04	25	Pass
20C 3.0V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
20C 4.4V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
-30C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
-20C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
-10C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
0C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
10C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
20C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
30C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
40C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
50C 3.85V	a	5500	Ant1	5499.981	-19000	-3.45	25	Pass
20C 3.0V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass



REPORT No.: SZ22110262W04

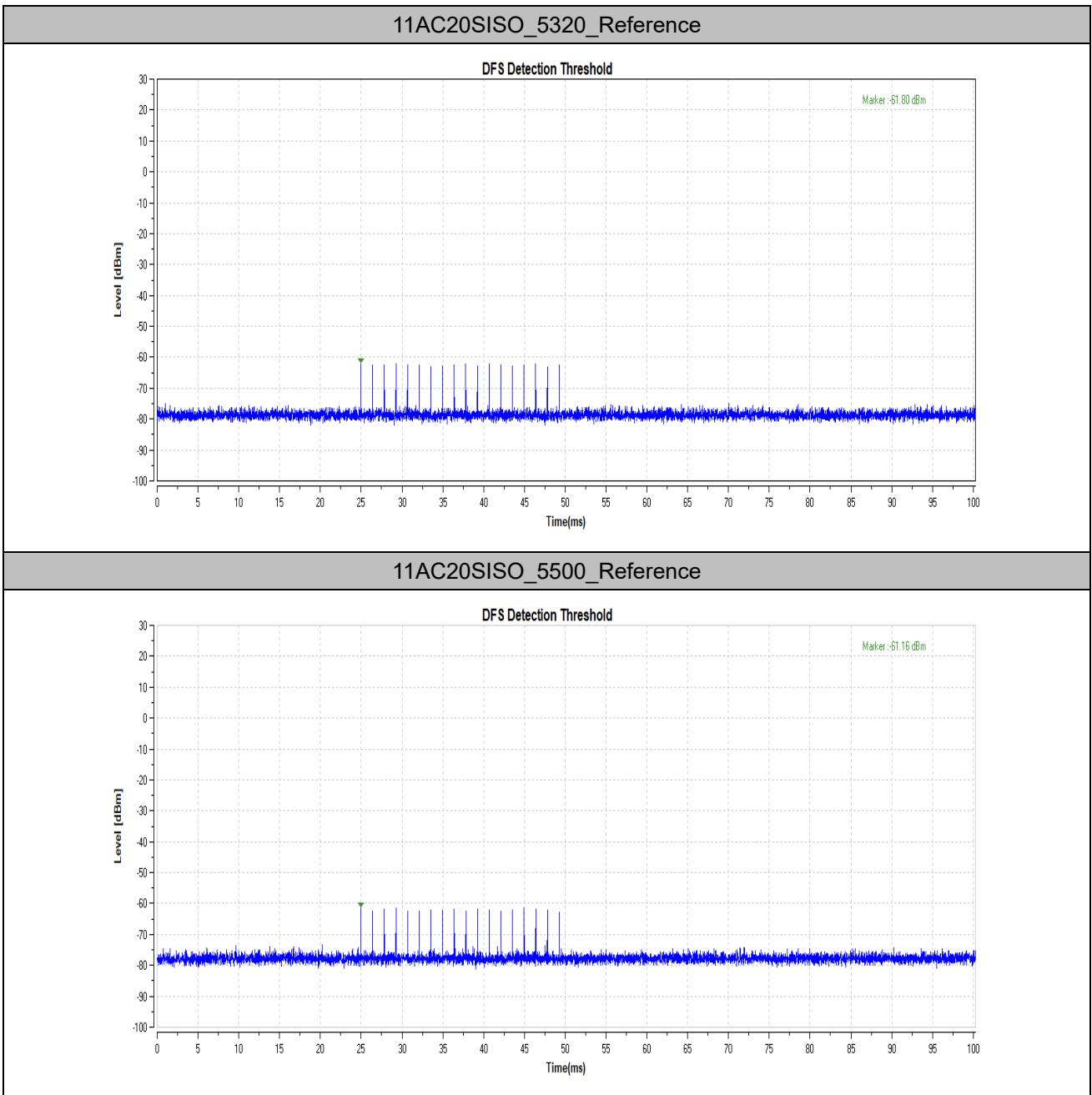
20C 4.4V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
-30C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
-20C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
-10C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
0C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
10C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
20C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
30C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
40C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass
50C 3.85V	a	5745	Ant1	5744.979	-21000	-3.66	25	Pass



A.6. Dynamic Frequency Selection

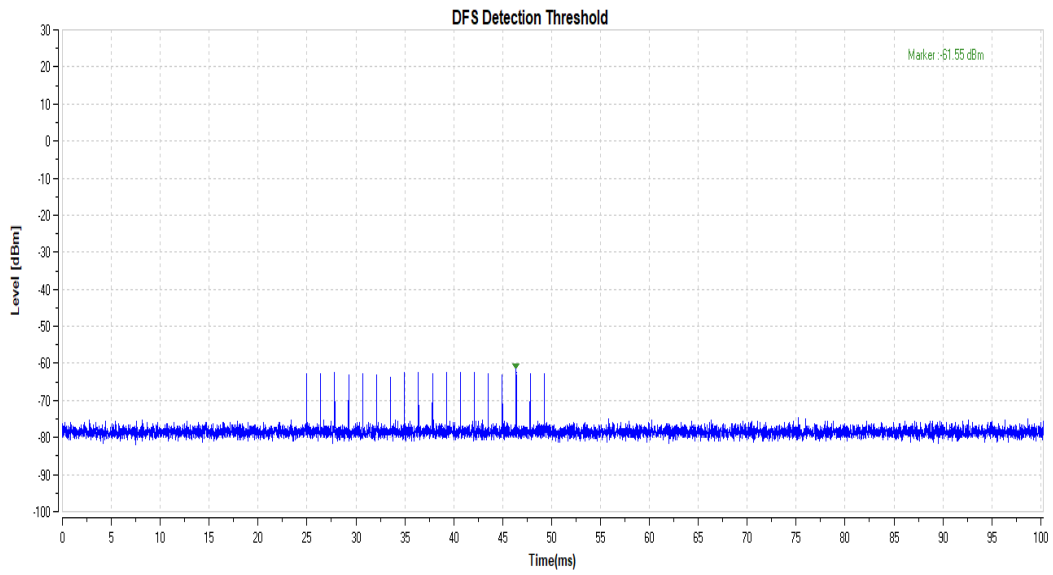
Detection Thresholds

TestMode	Channel	Radar Type	Result	Limit[dbm]	Verdict
11AC20SISO	5320	Reference	-61.80	-57.50	PASS
	5500	Reference	-61.16	-57.50	PASS
11AC80SISO	5290	Reference	-61.55	-57.50	PASS
	5530	Reference	-61.40	-57.50	PASS

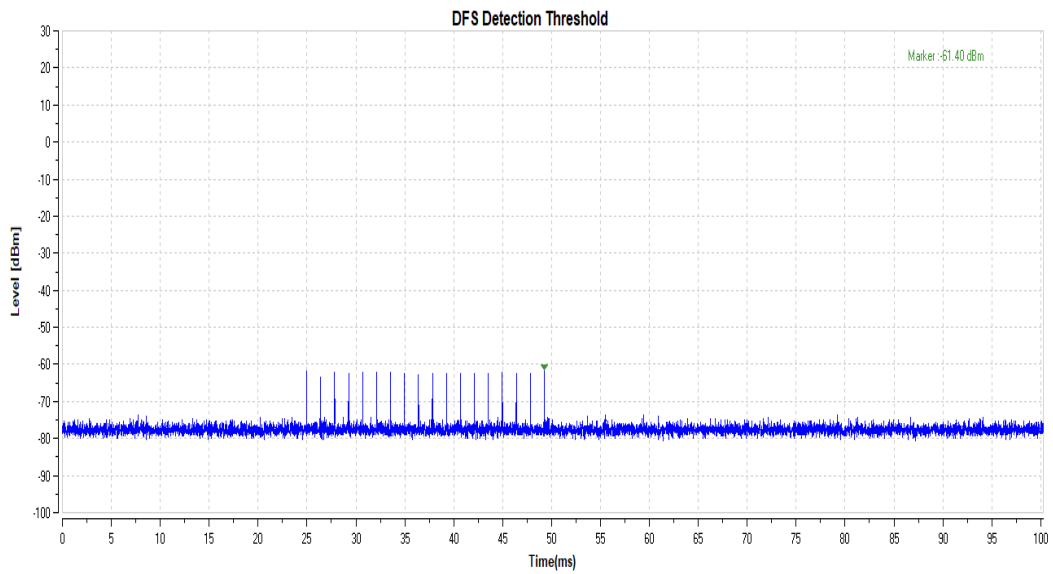




11AC80SISO_5290_Reference



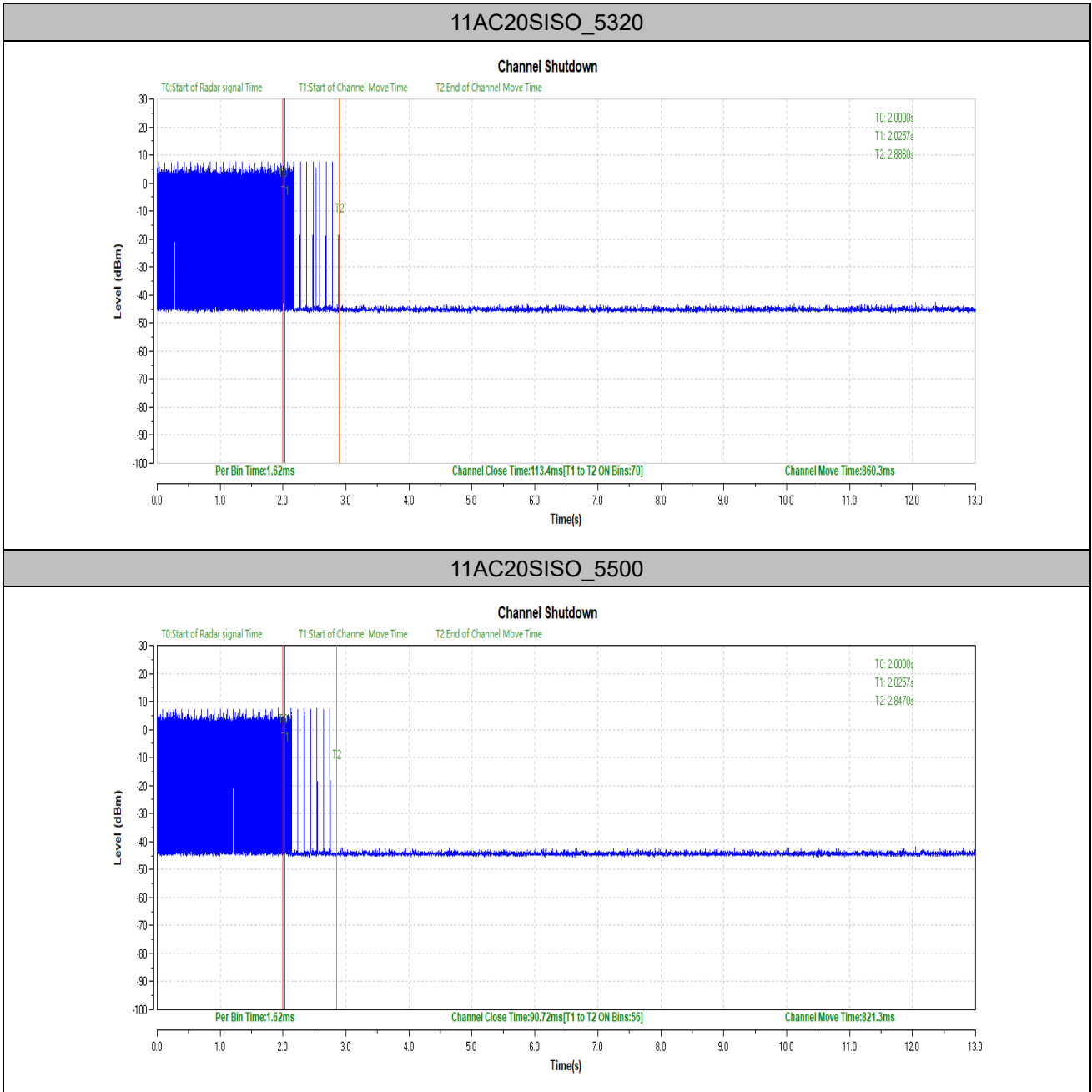
11AC80SISO_5530_Reference





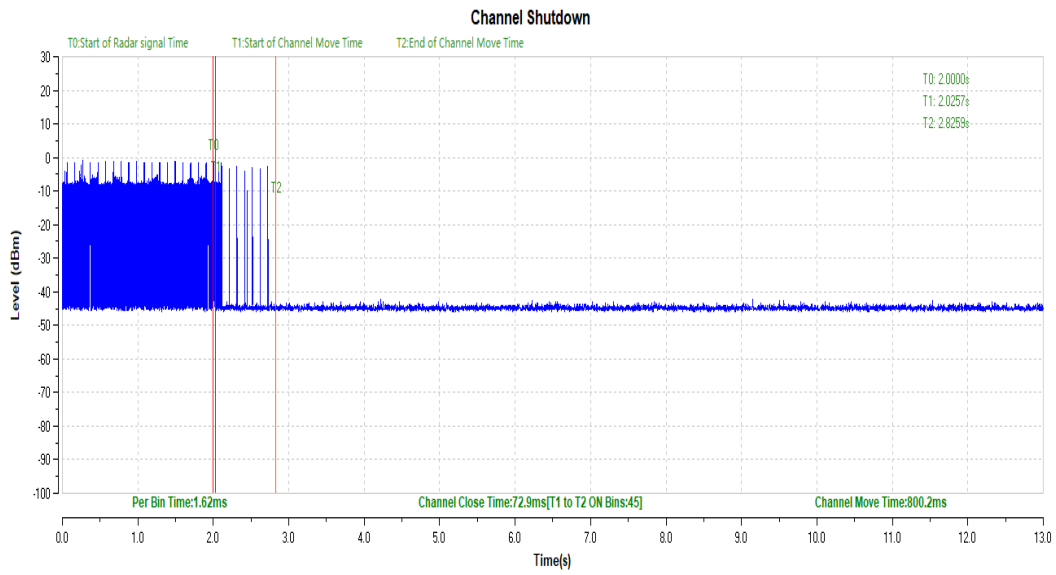
Channel Move Time and Channel Closing Transmission Time

TestMode	Channel	CCT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11AC20SISO	5320	113.4	1000	860.3	10000	PASS
	5500	90.72	1000	821.3	10000	PASS
11AC80SISO	5290	72.9	1000	800.2	10000	PASS
	5530	92.34	1000	819.7	10000	PASS

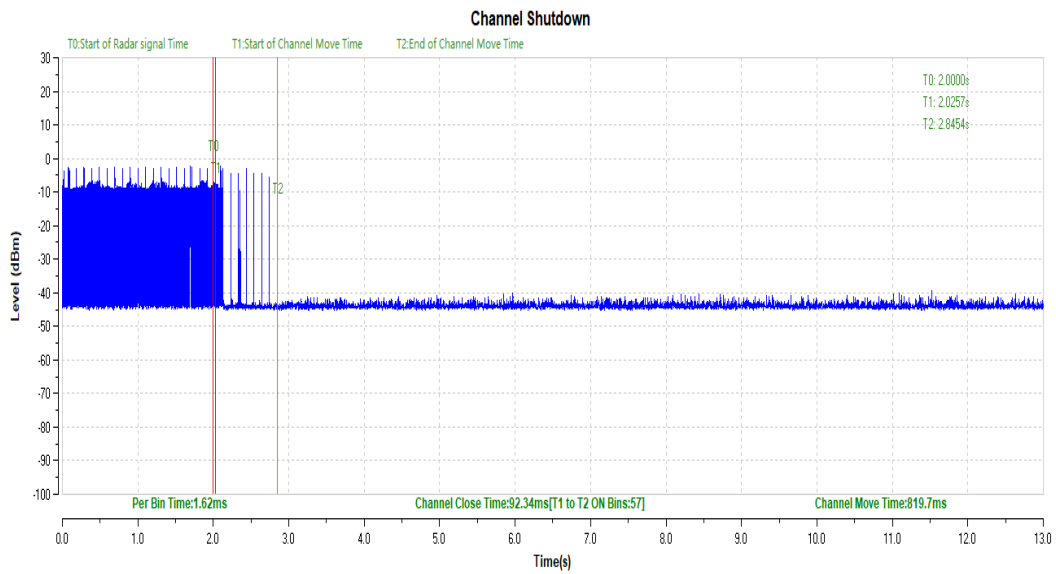




11AC80SISO_5290



11AC80SISO_5530

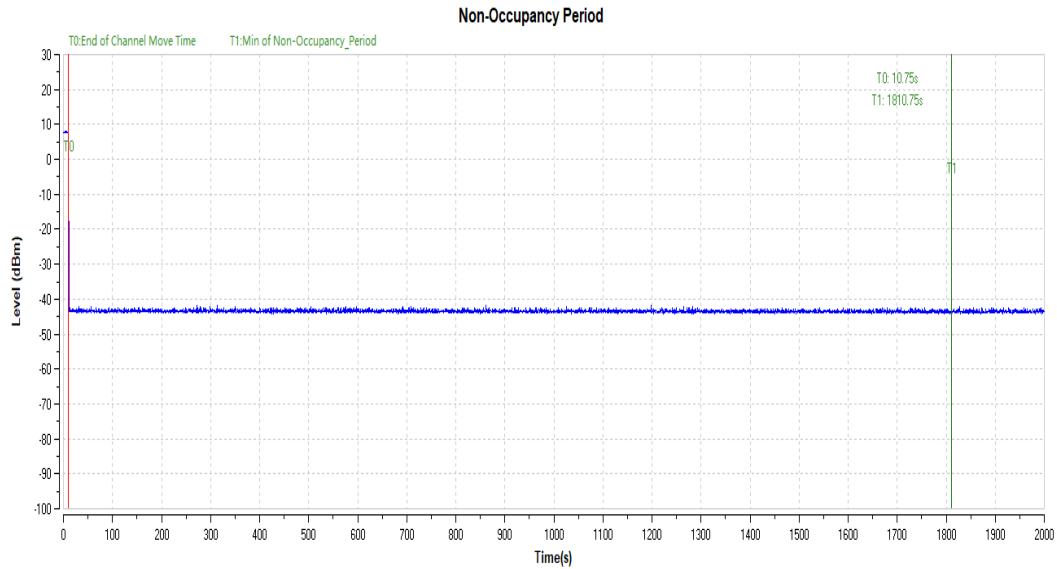




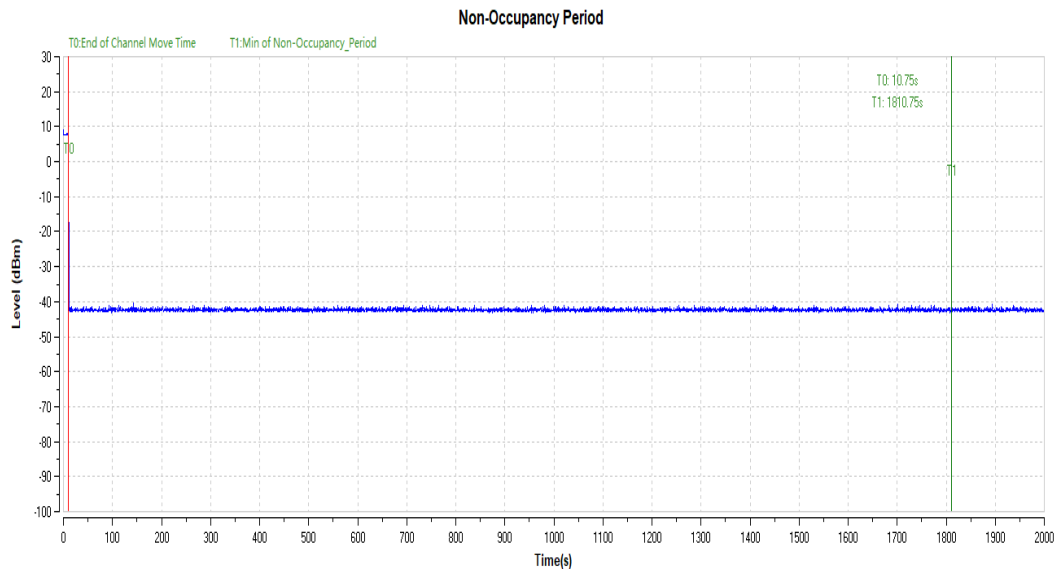
Non-Occupancy Period

TestMode	Channel	Result	Limit[s]	Verdict
11AC20SISO	5320	see test graph	≥1800	PASS
	5500	see test graph	≥1800	PASS

11AC20SISO_5320



11AC20SISO_5500





A.7. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT + ADAPTER + USB CABLE +WIFI TX

Test voltage: AC 120V/60Hz

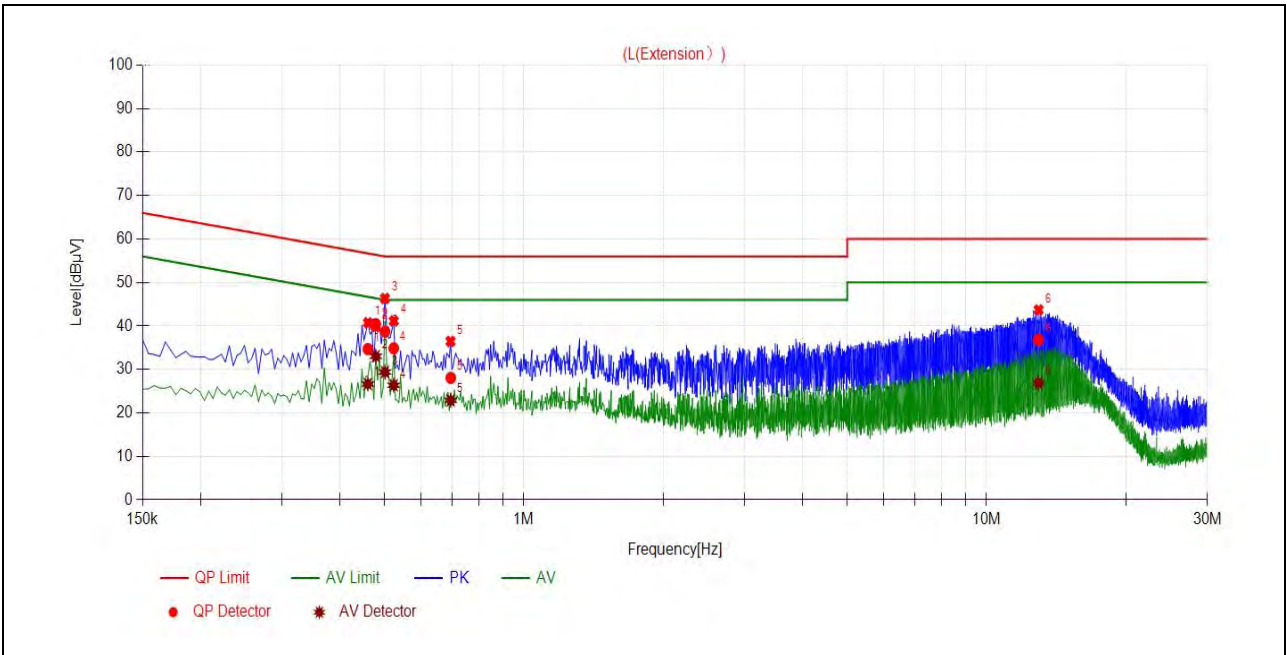
The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V]} = U_R + L_{\text{Cable loss}} \text{ [dB]} + A_{\text{Factor}}$$

U_R : Receiver Reading

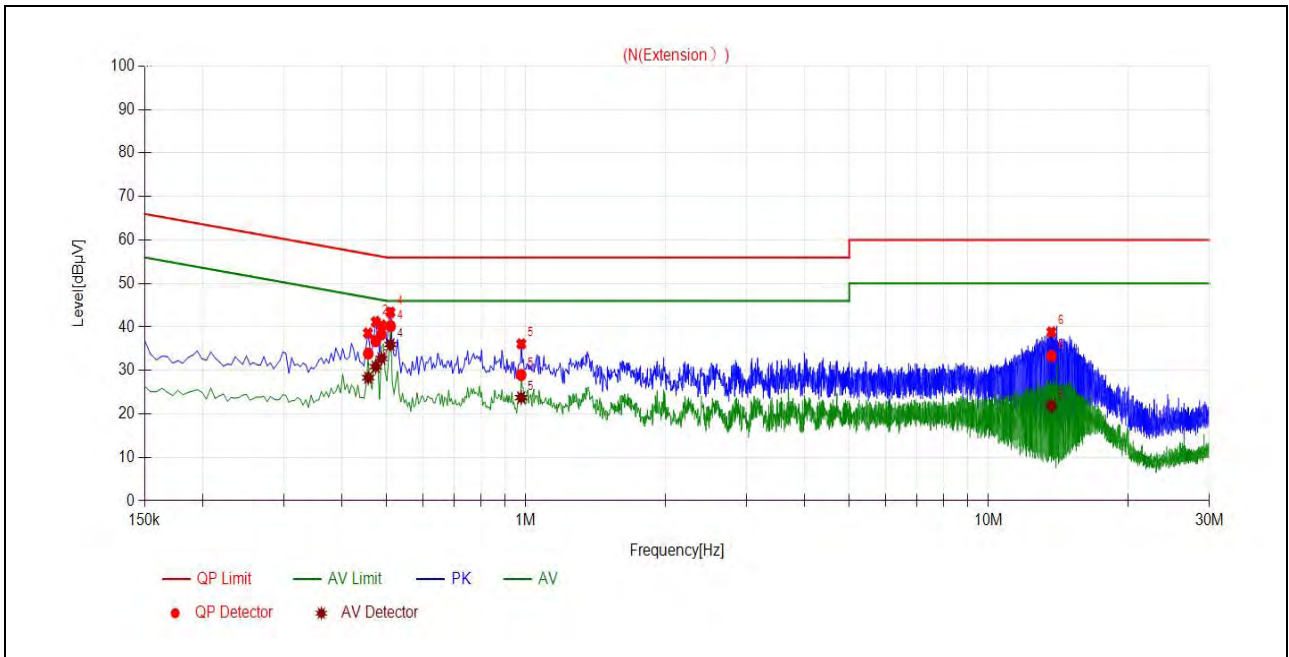
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.4601	34.67	26.64	56.69	46.69	Line	PASS
2	0.4785	40.41	33.03	56.36	46.36		PASS
3	0.5012	38.70	29.40	56.00	46.00		PASS
4	0.5234	34.84	26.37	56.00	46.00		PASS
5	0.6949	28.06	22.89	56.00	46.00		PASS
6	12.9459	36.74	26.88	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.4564	33.88	28.34	56.76	46.76	Neutral	PASS
2	0.4737	36.72	30.85	56.45	46.45		PASS
3	0.4873	38.30	32.76	56.21	46.21		PASS
4	0.5100	40.17	35.95	56.00	46.00		PASS
5	0.9772	28.97	23.74	56.00	46.00		PASS
6	13.6704	33.31	21.89	60.00	50.00		PASS



A.8. Restricted Frequency Bands

The lowest and highest channels are tested to verify the Restricted Frequency Bands.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

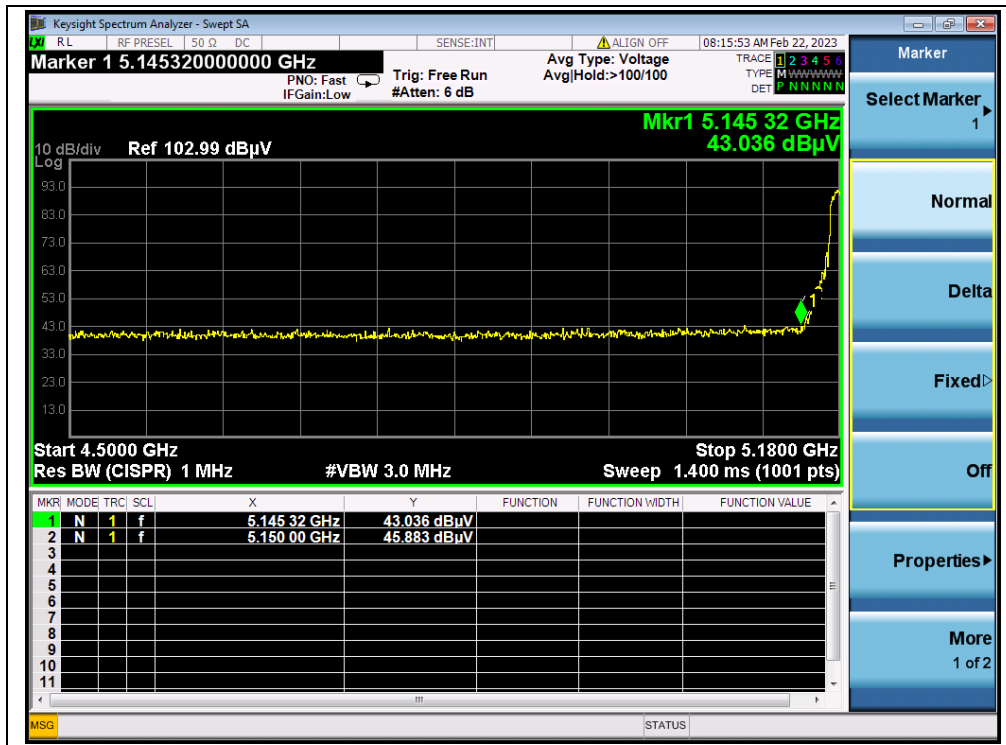
A_{Factor} : Antenna Factor at 3m

Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

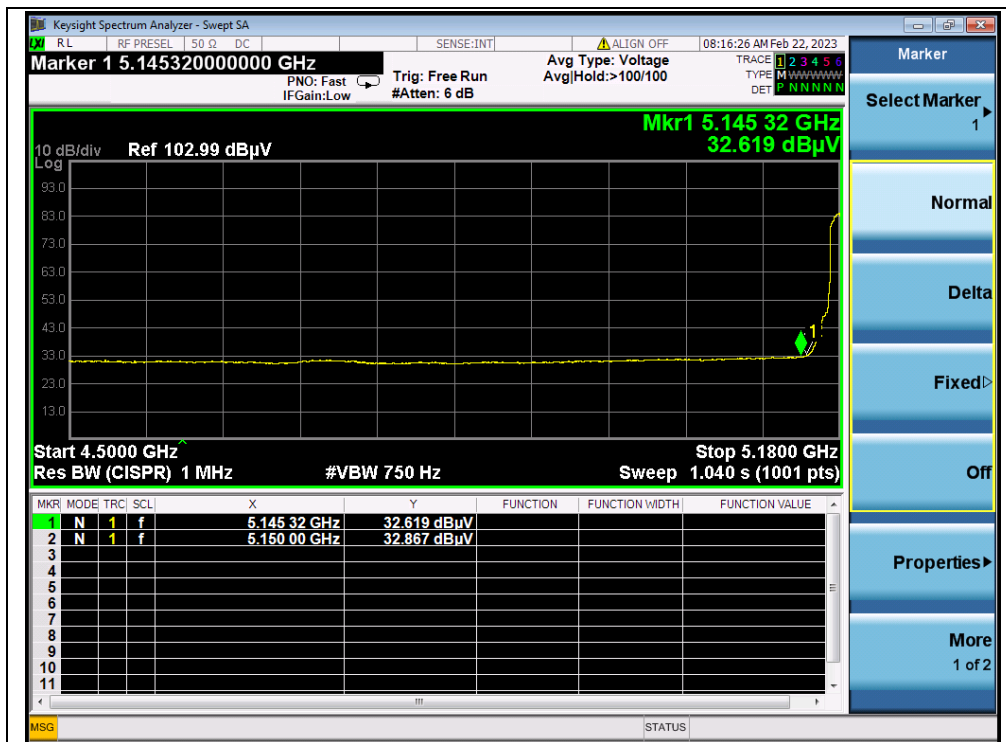
Note 2: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11a Mode

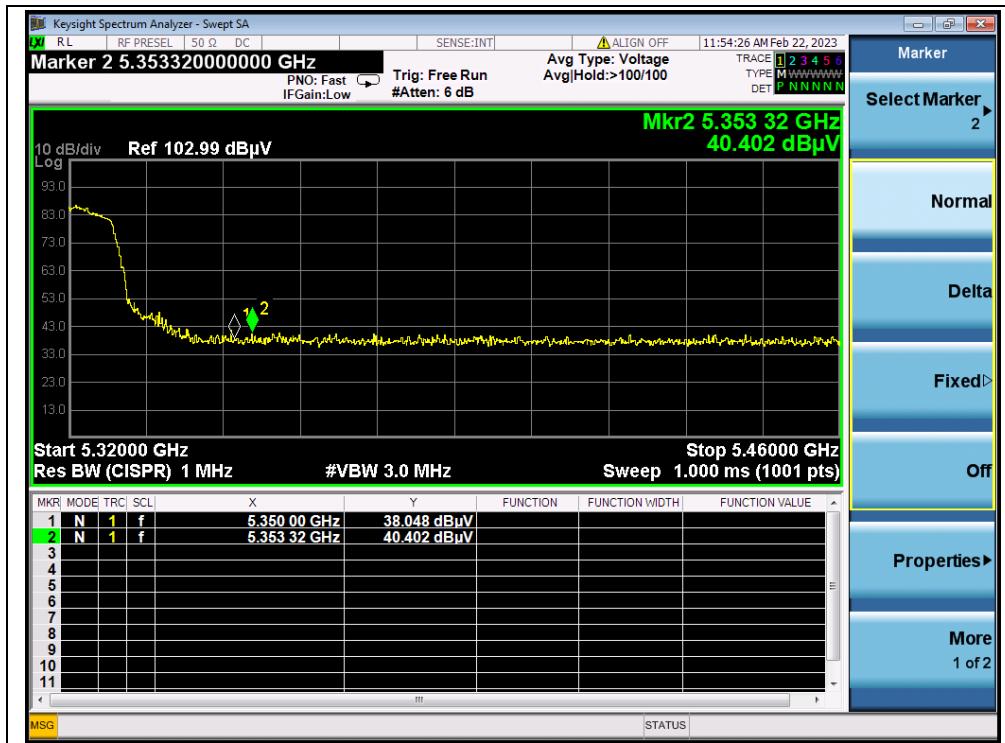
Channel	Frequency (MHz)	Detector	Receiver Reading	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)					
36	5150.00	PK	45.88	-19.54	32.20	58.54	74	PASS
36	5150.00	AV	32.87	-19.54	32.20	45.53	54	PASS
64	5353.32	PK	40.40	-18.80	32.20	53.80	74	PASS
64	5350.00	AV	30.11	-18.80	32.20	43.51	54	PASS
100	5452.88	PK	41.51	-19.20	32.20	54.51	74	PASS
100	5468.69	AV	30.88	-19.20	32.20	43.88	54	PASS
144	5725.00	PK	41.16	-19.20	32.20	54.16	68.23	PASS
149	5725.00	PK	48.11	-19.01	32.20	61.30	122.23	PASS
165	5853.60	PK	43.78	-19.01	32.20	56.97	114.02	PASS



(PEAK, Channel 36, 802.11a)



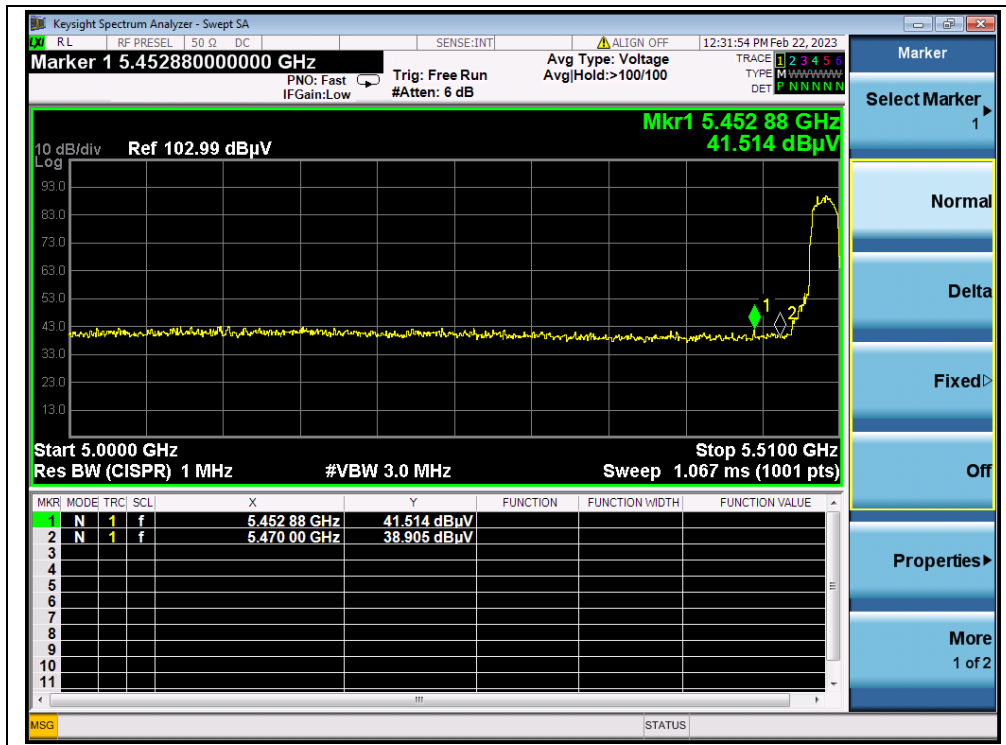
(AVERAGE, Channel 36, 802.11a)



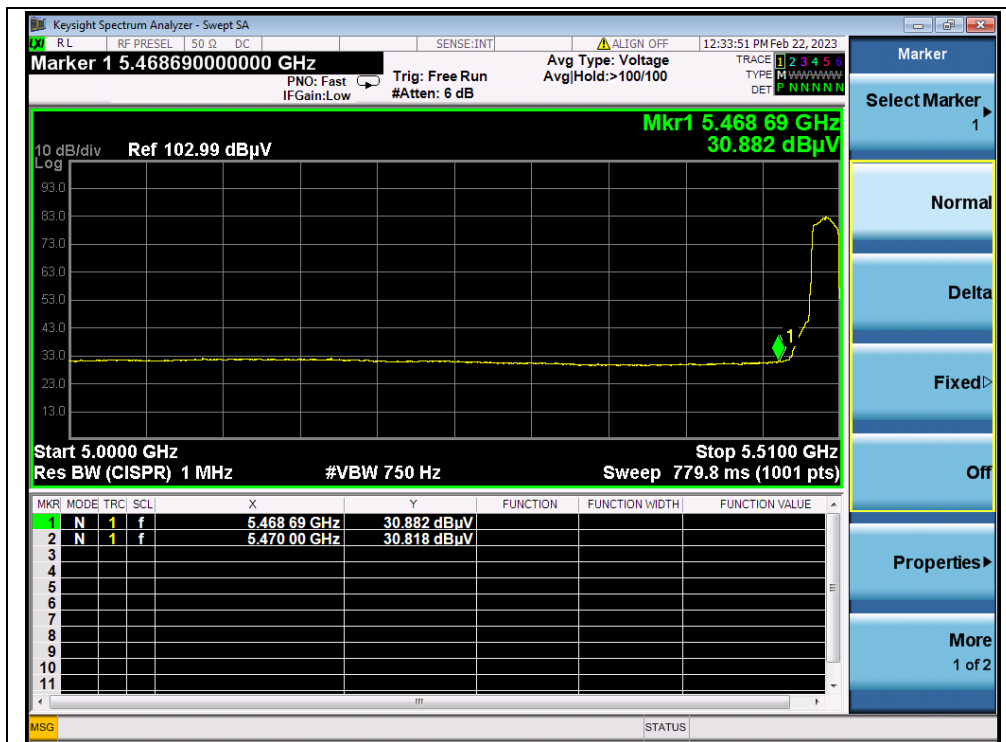
(PEAK, Channel 64, 802.11a)



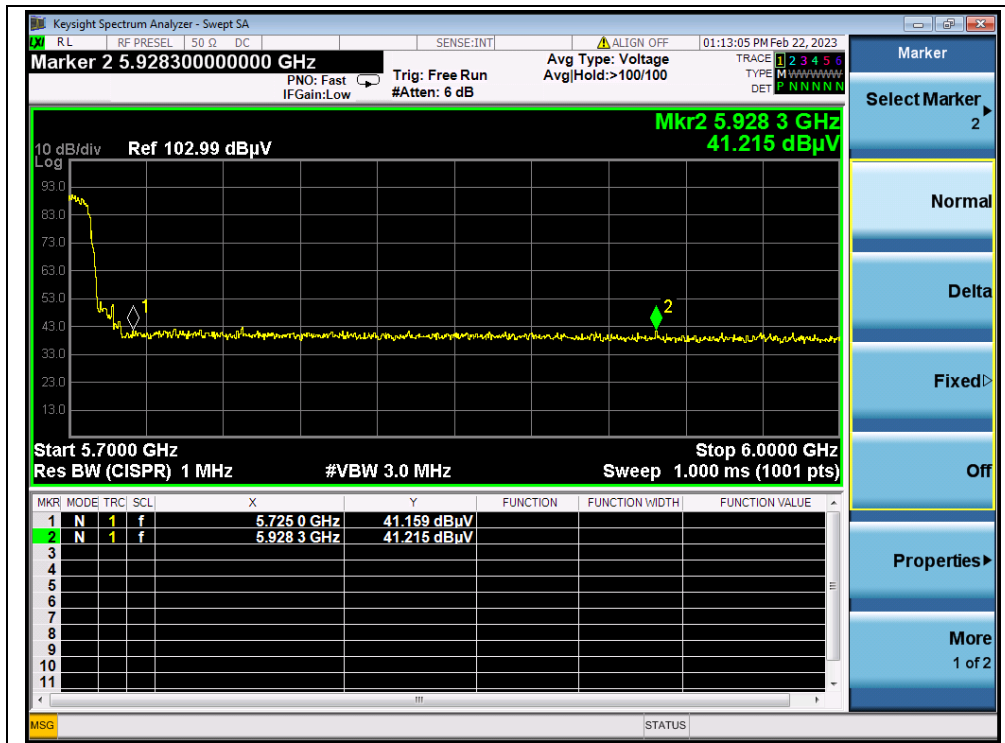
(AVERAGE, Channel 64, 802.11a)



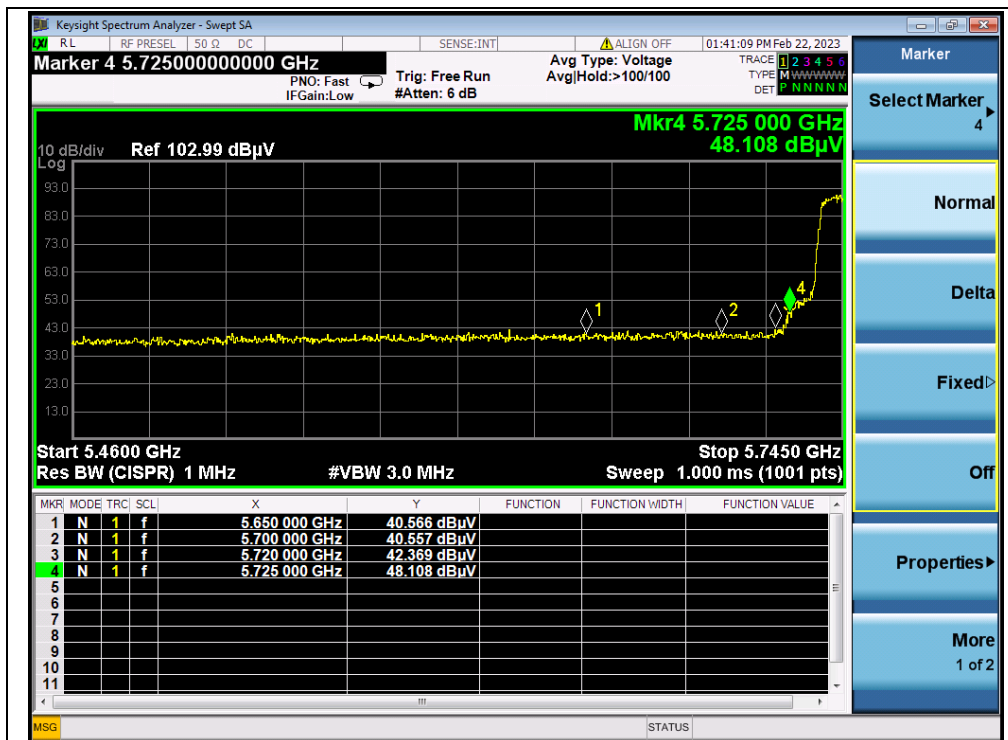
(PEAK, Channel 100, 802.11a)



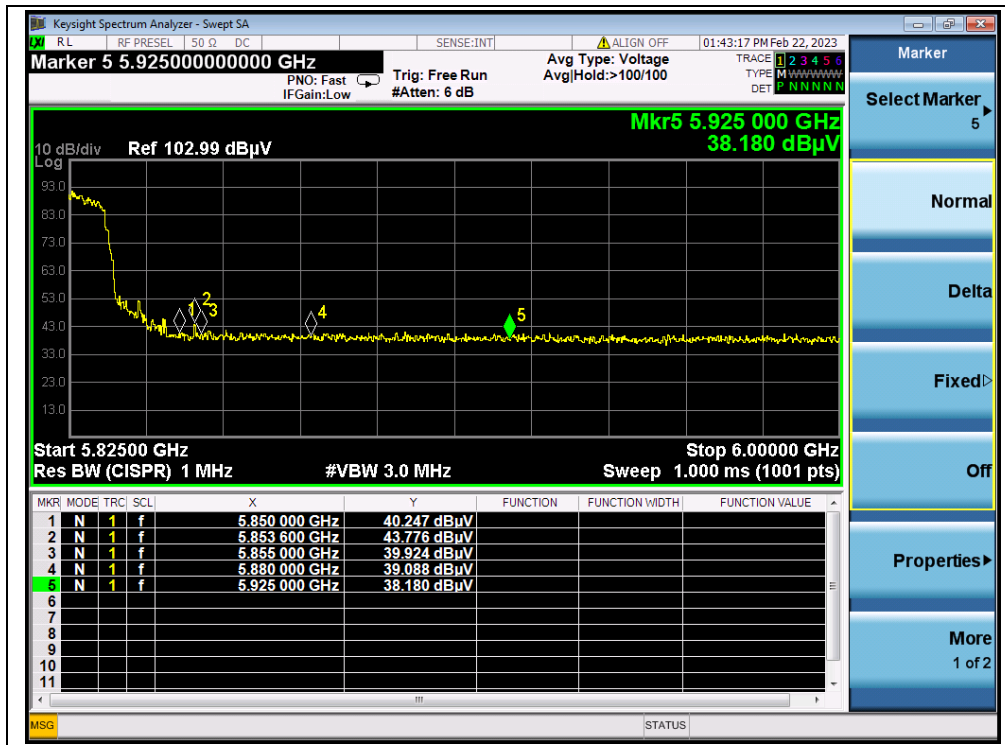
(AVERAGE, Channel 100, 802.11a)



(PEAK, Channel 144, 802.11a)



(PEAK, Channel 149, 802.11a)

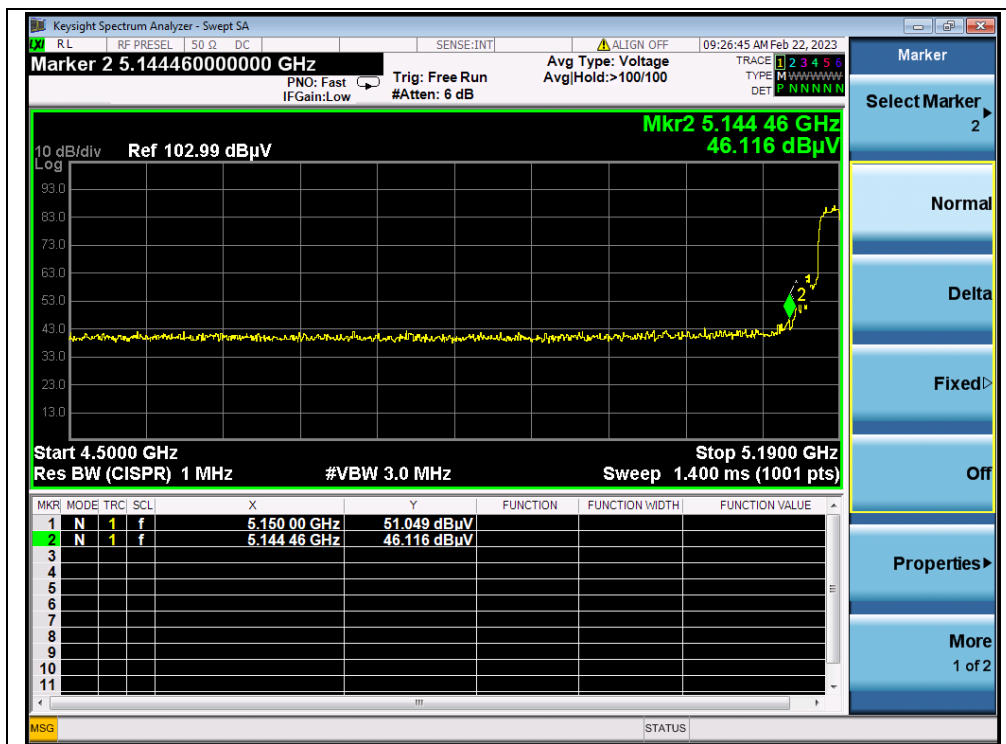


(PEAK, Channel 165, 802.11a)

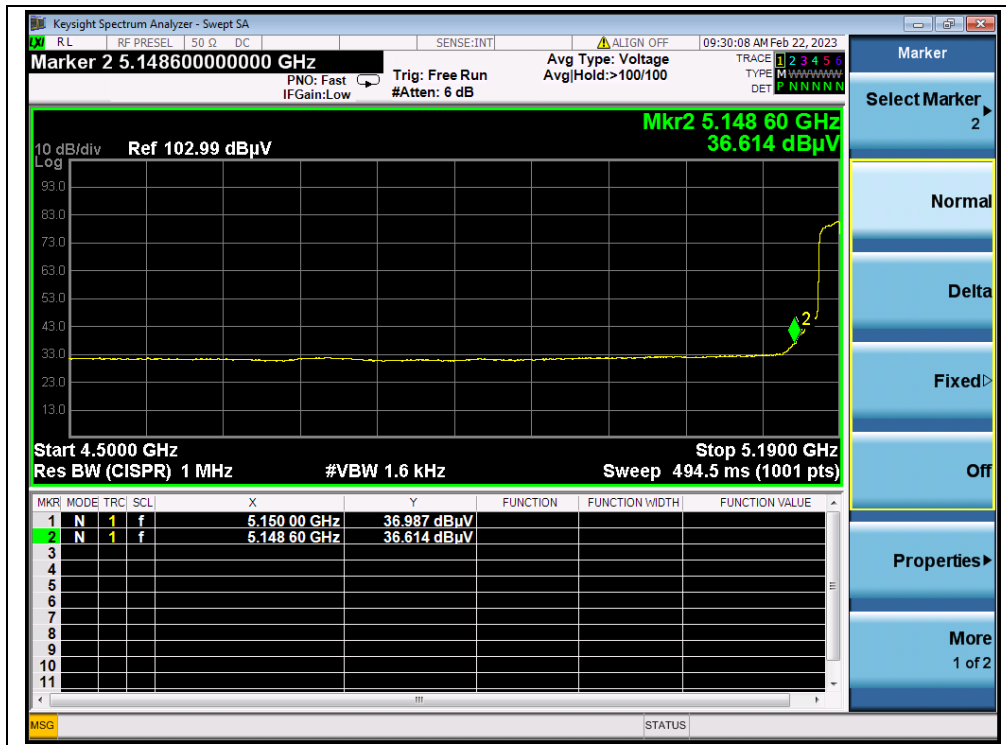


802.11n (HT40) Mode

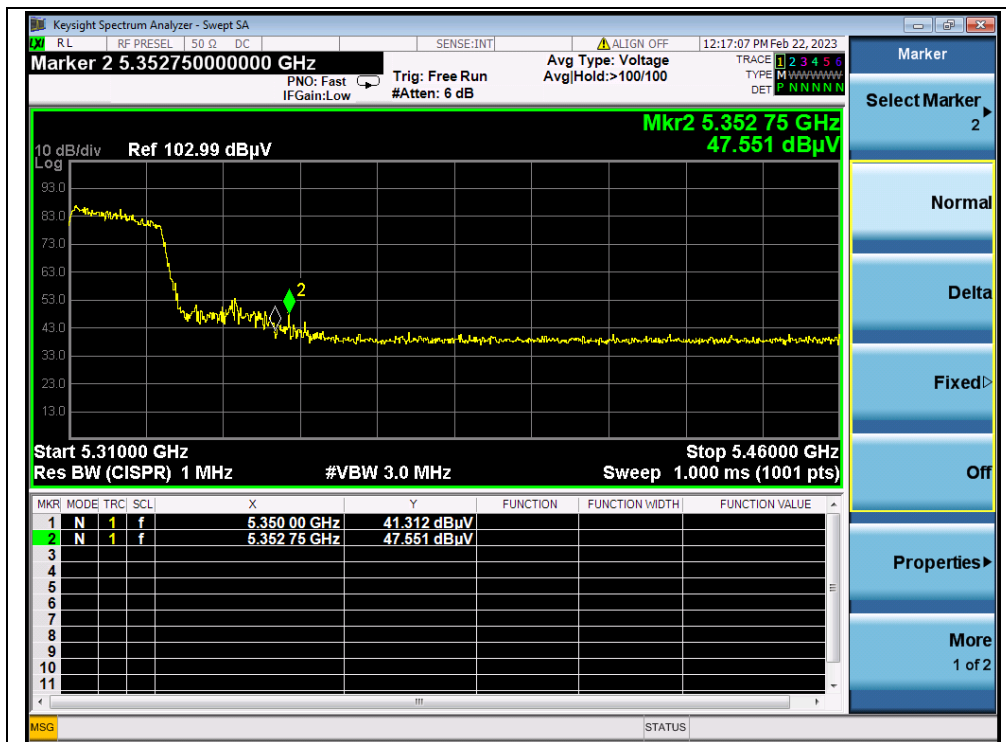
Channel	Frequency (MHz)	Detector	Receiver Reading	A_T	A_{Factor}	Max. Emission E	Limit (dB μ V/m)	Verdict
		PK/ AV	U_R (dB μ V)	(dB)	(dB@3m)	(dB μ V/m)		
38	5150.00	PK	51.05	-19.54	32.20	63.71	74	PASS
38	5150.00	AV	36.99	-19.54	32.20	49.65	54	PASS
62	5352.75	PK	47.55	-18.80	32.20	60.95	74	PASS
62	5350.00	AV	32.93	-18.80	32.20	46.33	54	PASS
102	5464.36	PK	47.56	-19.20	32.20	60.56	68.23	PASS
102	5470.00	AV	36.49	-19.20	32.20	49.49	54	PASS
142	5734.02	PK	41.85	-19.20	32.20	54.85	68.23	PASS
151	5725.00	PK	49.95	-19.01	32.20	63.14	122.23	PASS
159	5859.50	PK	44.38	-19.01	32.20	57.57	98.23	PASS



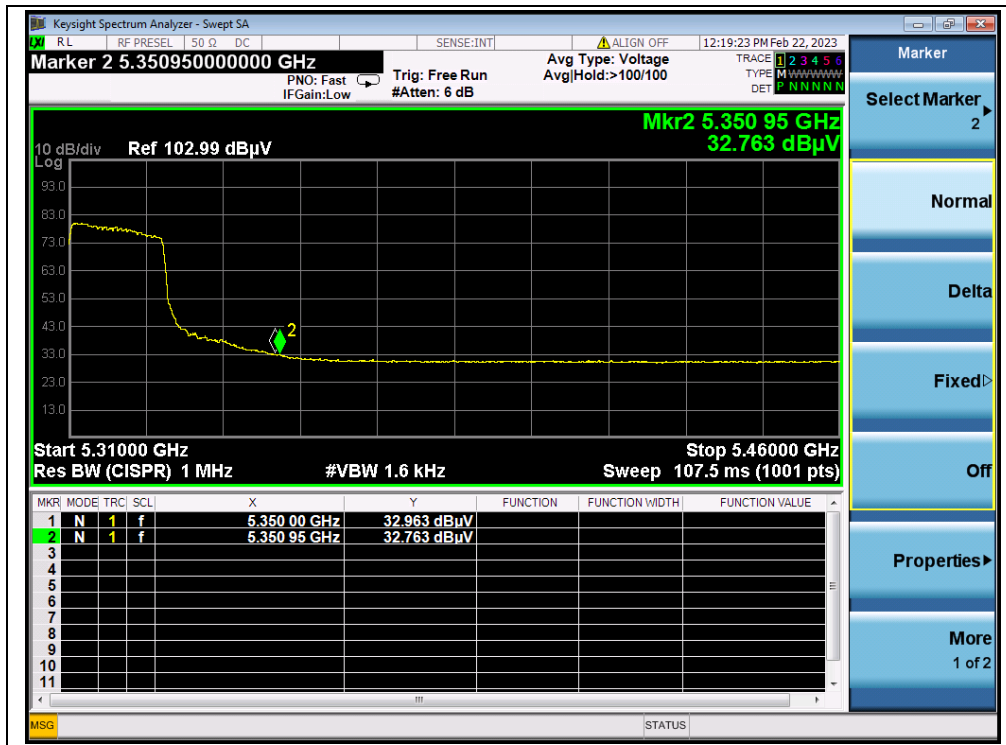
(PEAK, Channel 38, 802.11n (HT40))



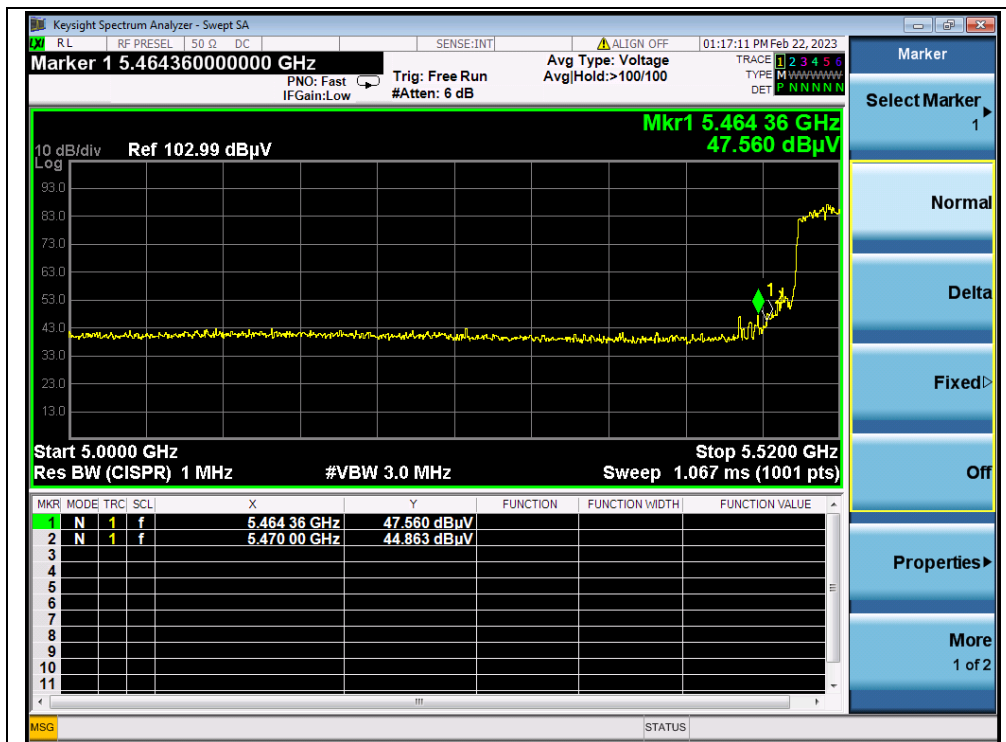
(AVERAGE, Channel 38, 802.11n (HT40))



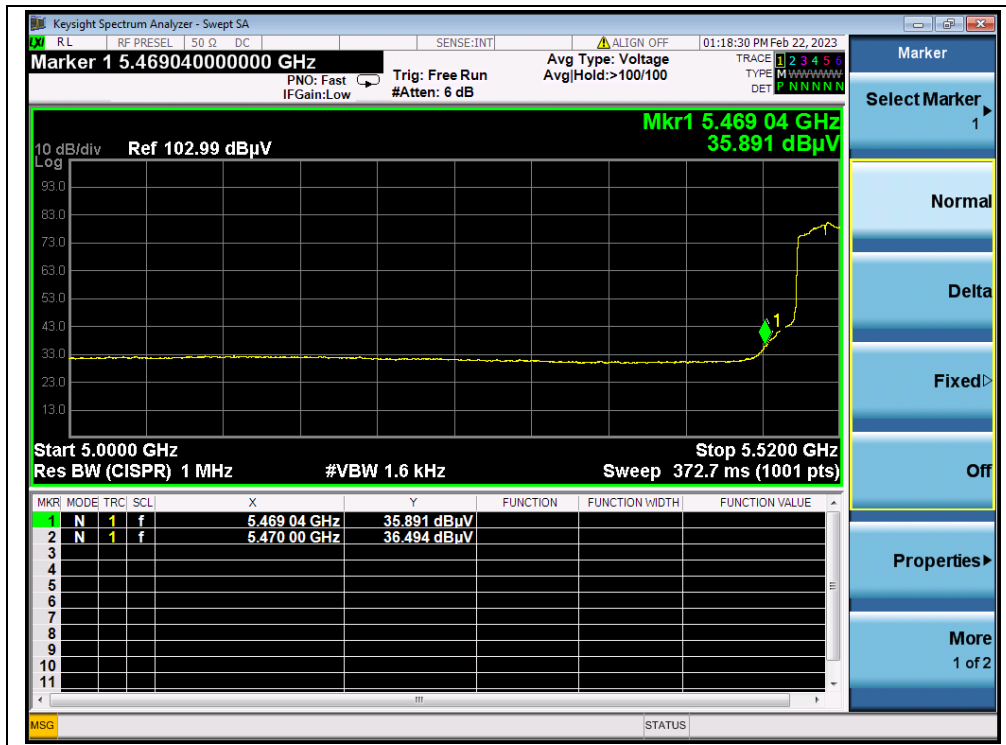
(PEAK, Channel 62, 802.11n (HT40))



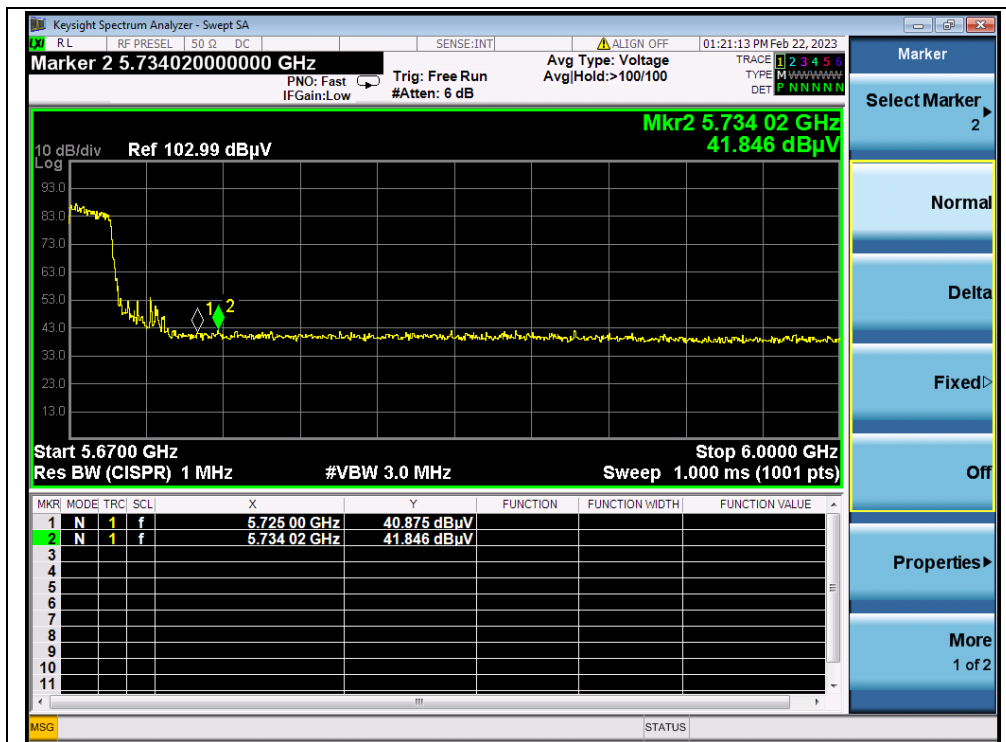
(AVERAGE, Channel 62, 802.11n (HT40))



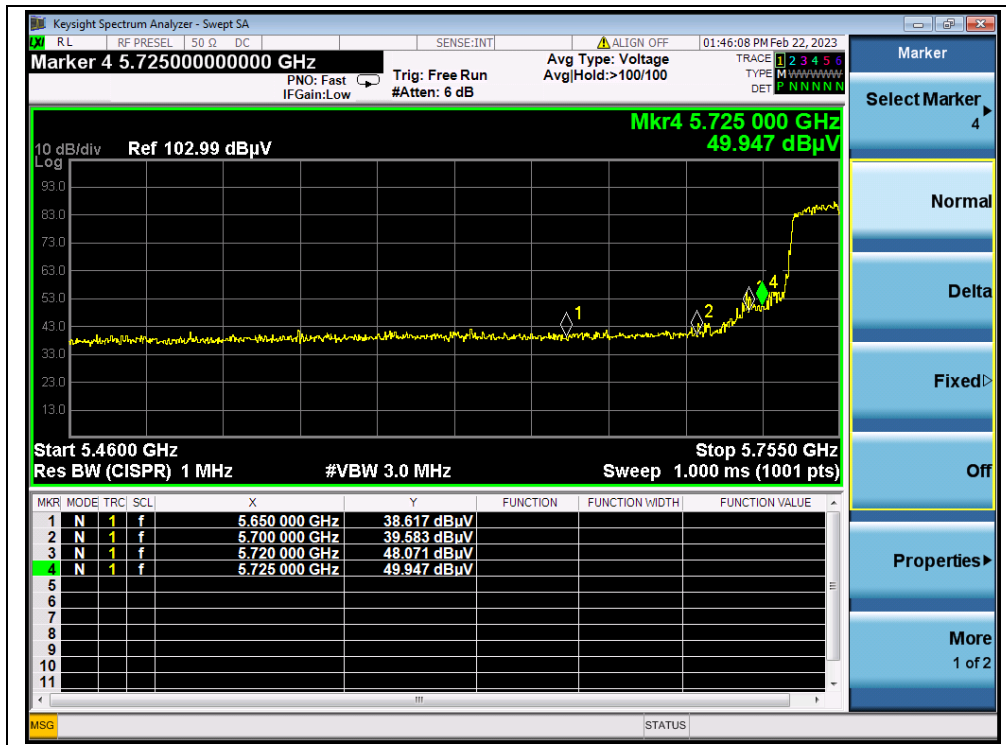
(PEAK, Channel 102, 802.11n (HT40))



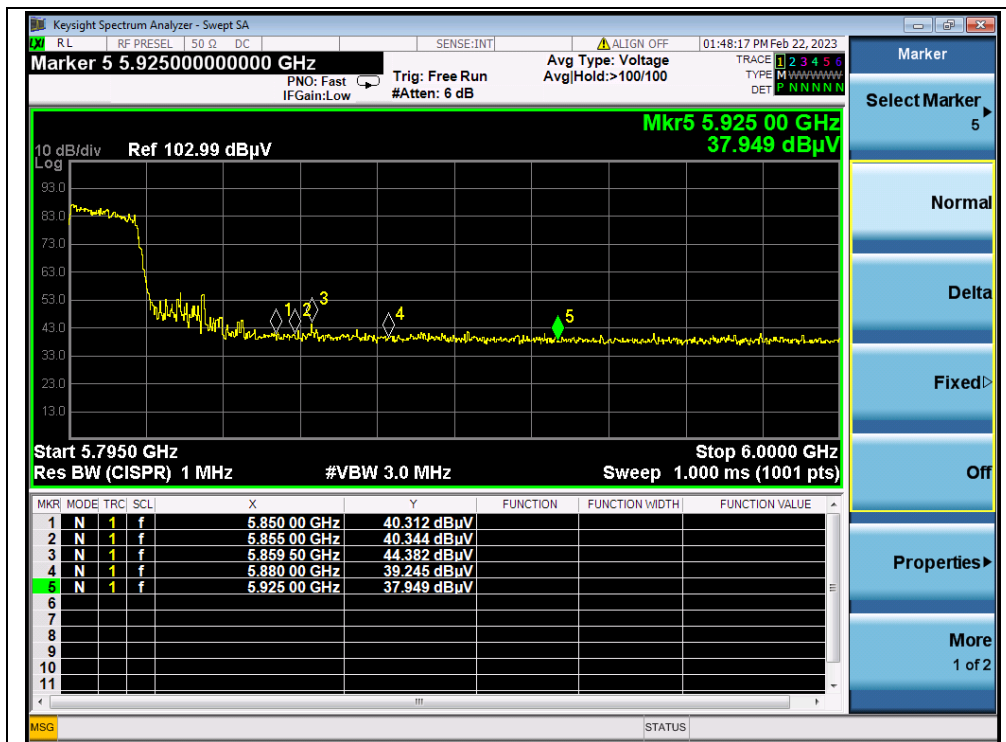
(AVERAGE, Channel 102, 802.11n (HT40))



(PEAK, Channel 142, 802.11n (HT40))



(PEAK, Channel 151, 802.11n (HT40))

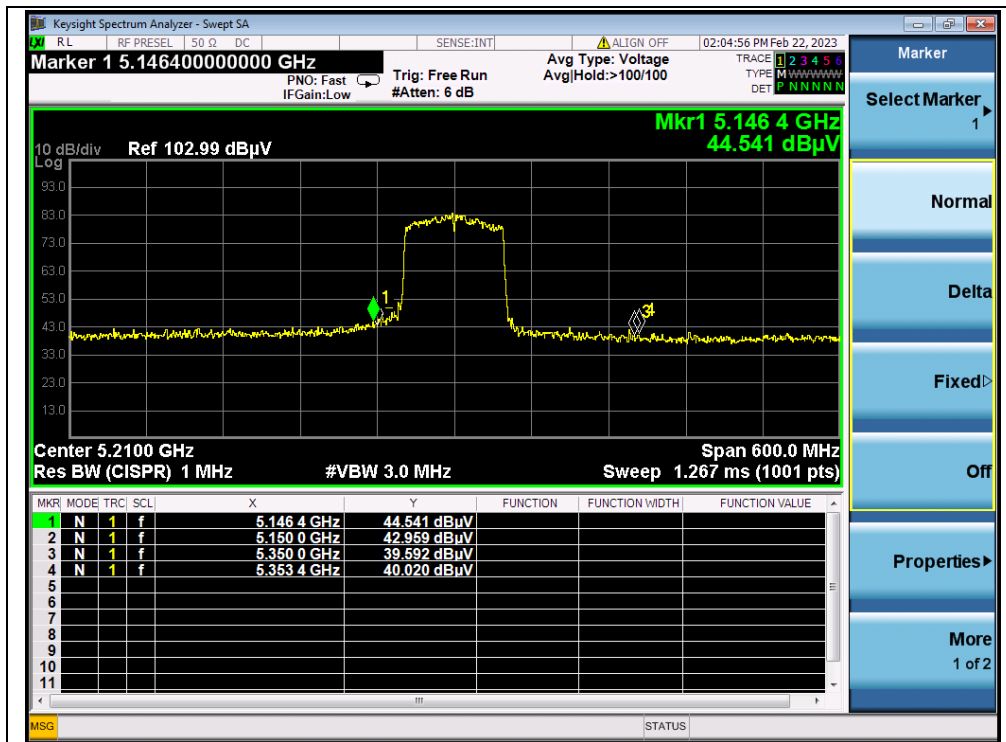


(PEAK, Channel 159, 802.11n (HT40))

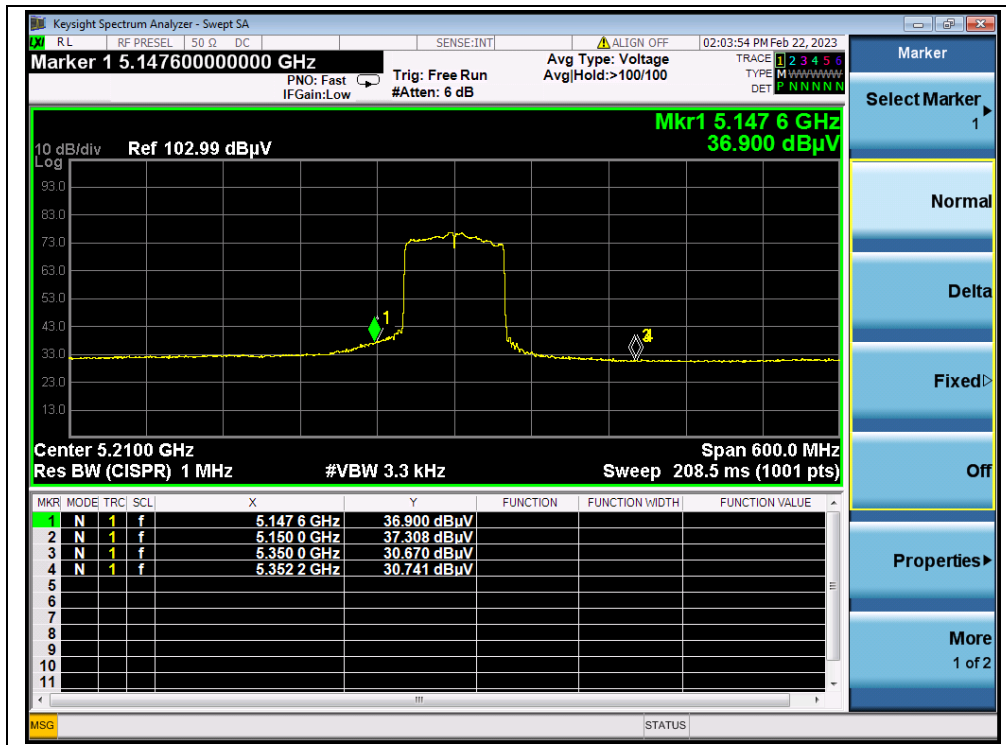


802.11ac (VHT80) Mode

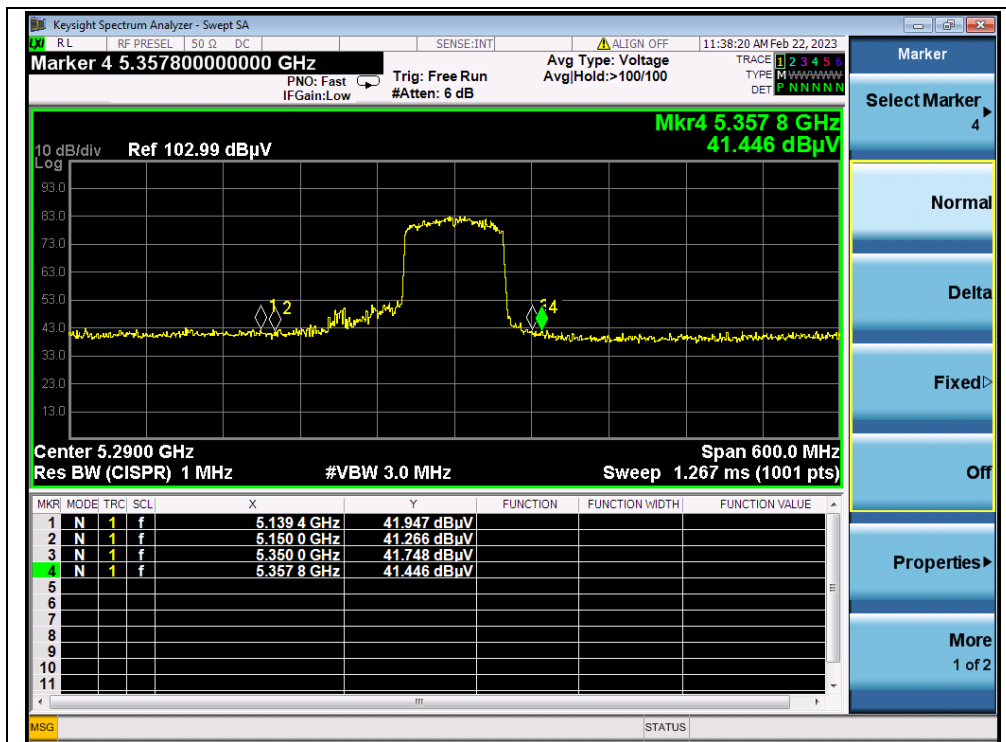
Channel	Frequency (MHz)	Detector	Receiver Reading	A _T (dB)	A _{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV	U _R (dBμV)					
42	5146.40	PK	44.54	-19.54	32.20	57.20	74	PASS
42	5150.00	AV	37.31	-19.54	32.20	49.97	54	PASS
58	5139.40	PK	41.95	-18.80	32.20	55.35	74	PASS
58	5350.00	AV	34.54	-18.80	32.20	47.94	54	PASS
106	5470.00	PK	46.38	-19.20	32.20	59.38	68.23	PASS
106	5468.94	AV	37.10	-19.20	32.20	50.10	54	PASS
138	5730.12	PK	42.10	-19.20	32.20	55.10	68.23	PASS
155	5725.00	PK	51.44	-19.01	32.20	64.63	110.83	PASS
155	5864.40	PK	45.32	-19.01	32.20	58.51	122.23	PASS



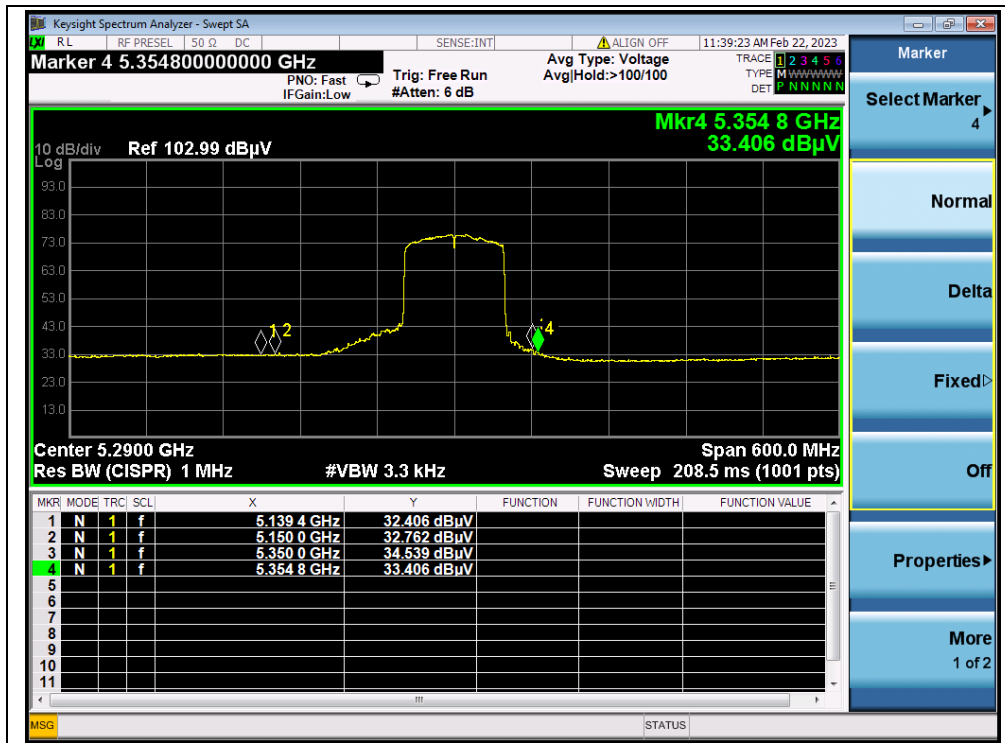
(PEAK, Channel 42, 802.11ac (VHT80))



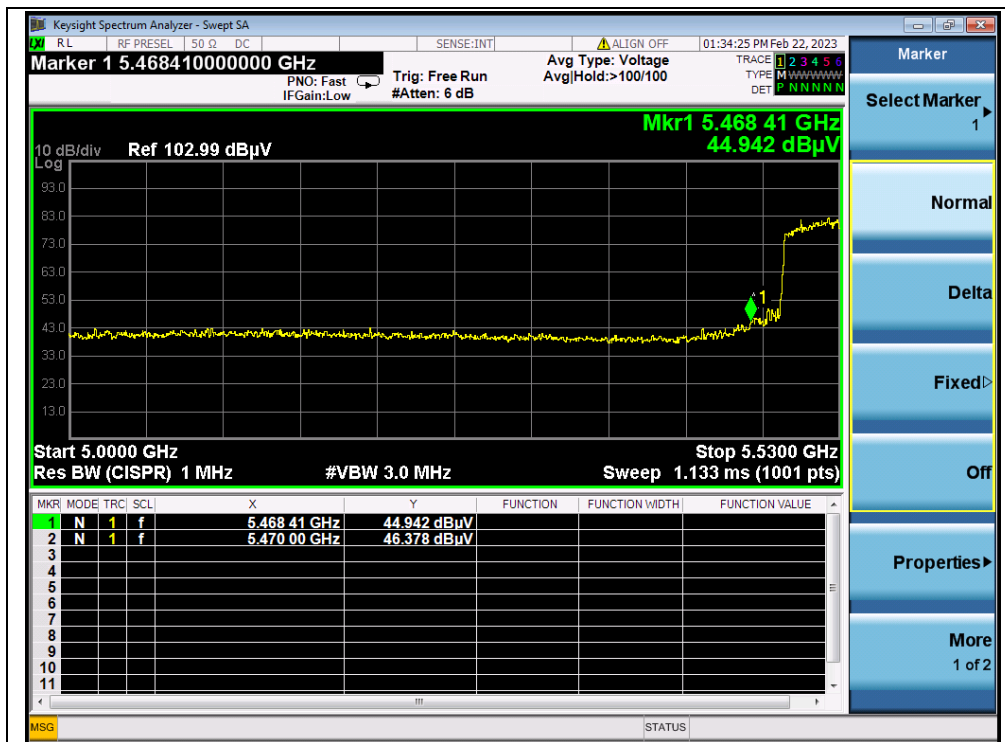
(AVERAGE, Channel 42, 802.11ac (VHT80))



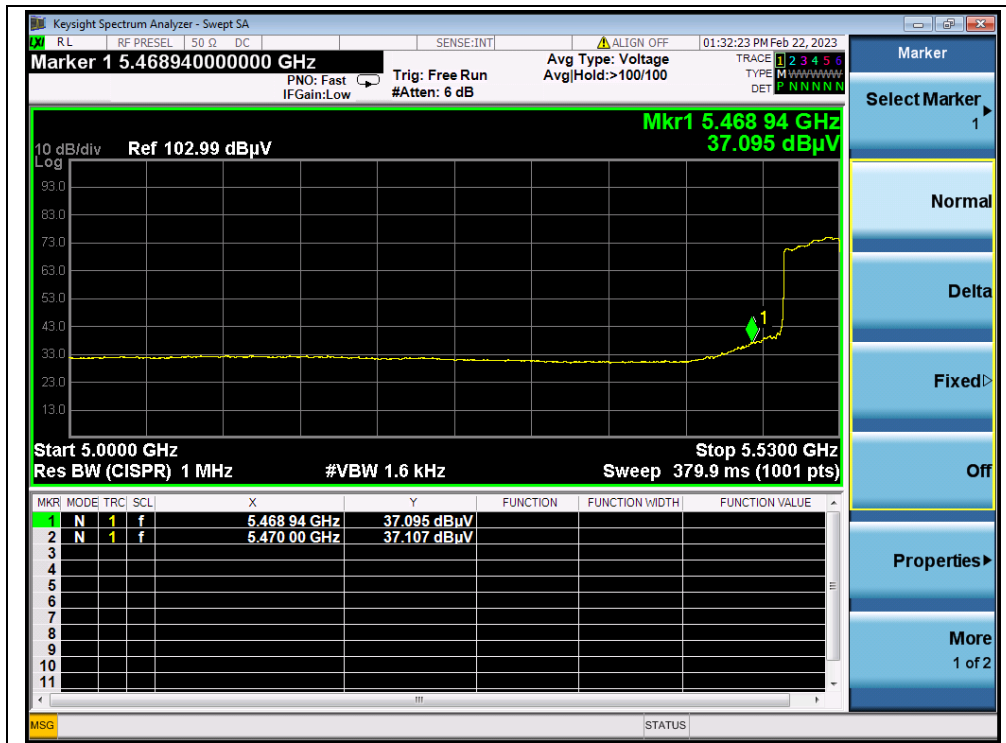
(PEAK, Channel 58, 802.11ac (VHT80))



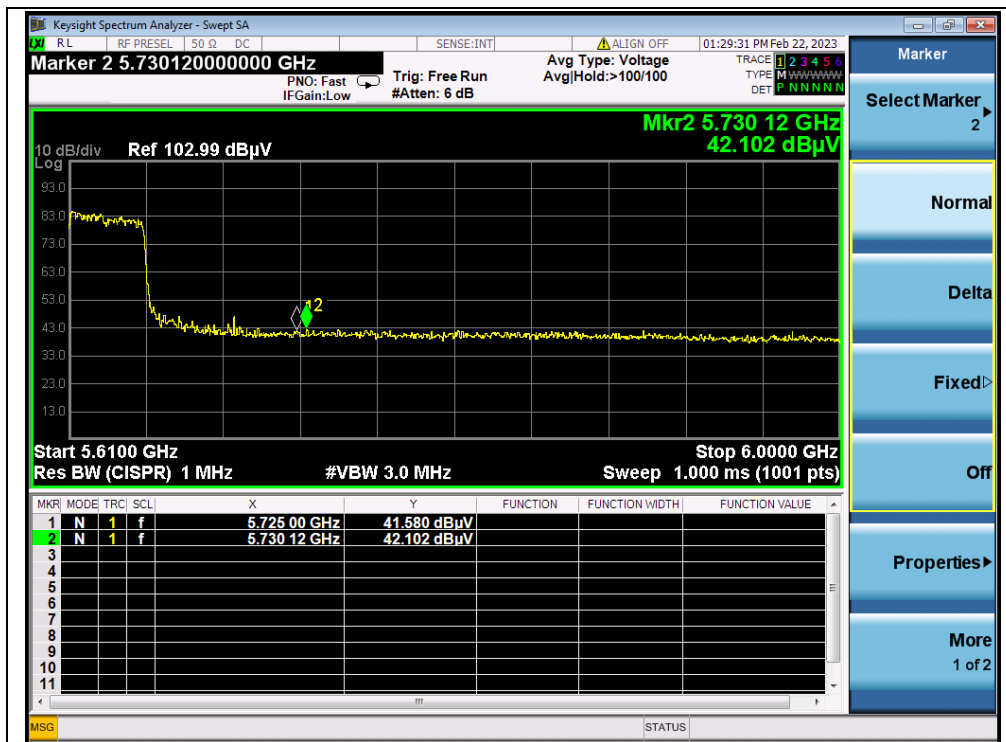
(AVERAGE, Channel 58, 802.11ac (VHT80))



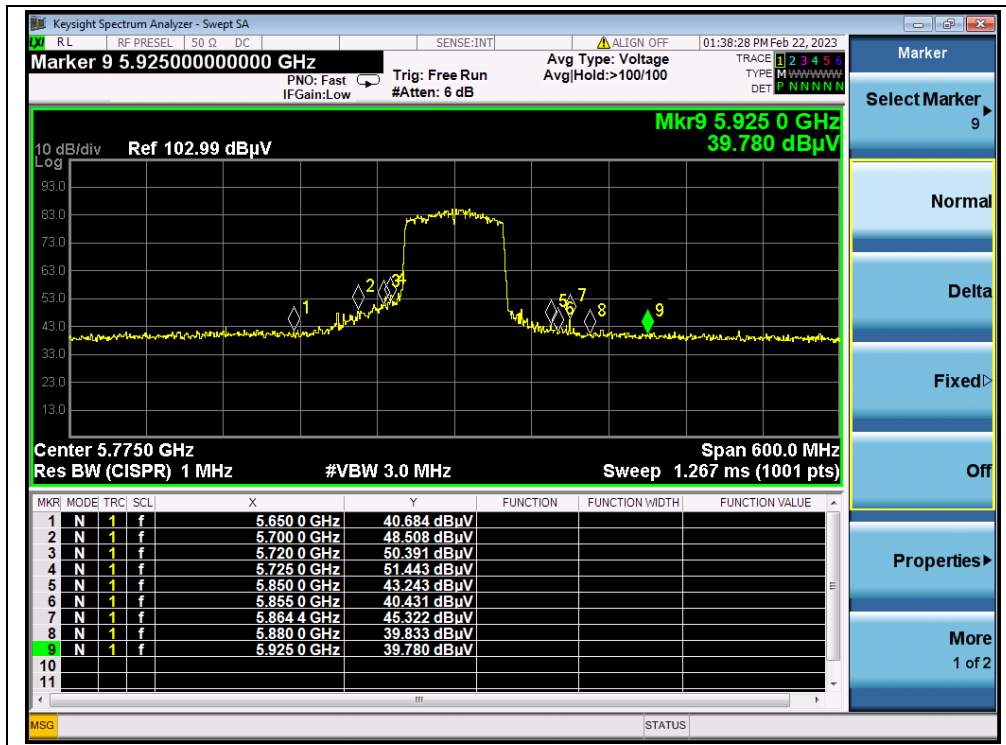
(PEAK, Channel 106, 802.11ac (VHT80))



(AVERAGE, Channel 106, 802.11ac (VHT80))



(PEAK, Channel 138, 802.11ac (VHT80))



(PEAK, Channel 155, 802.11ac (VHT80))



A.9. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

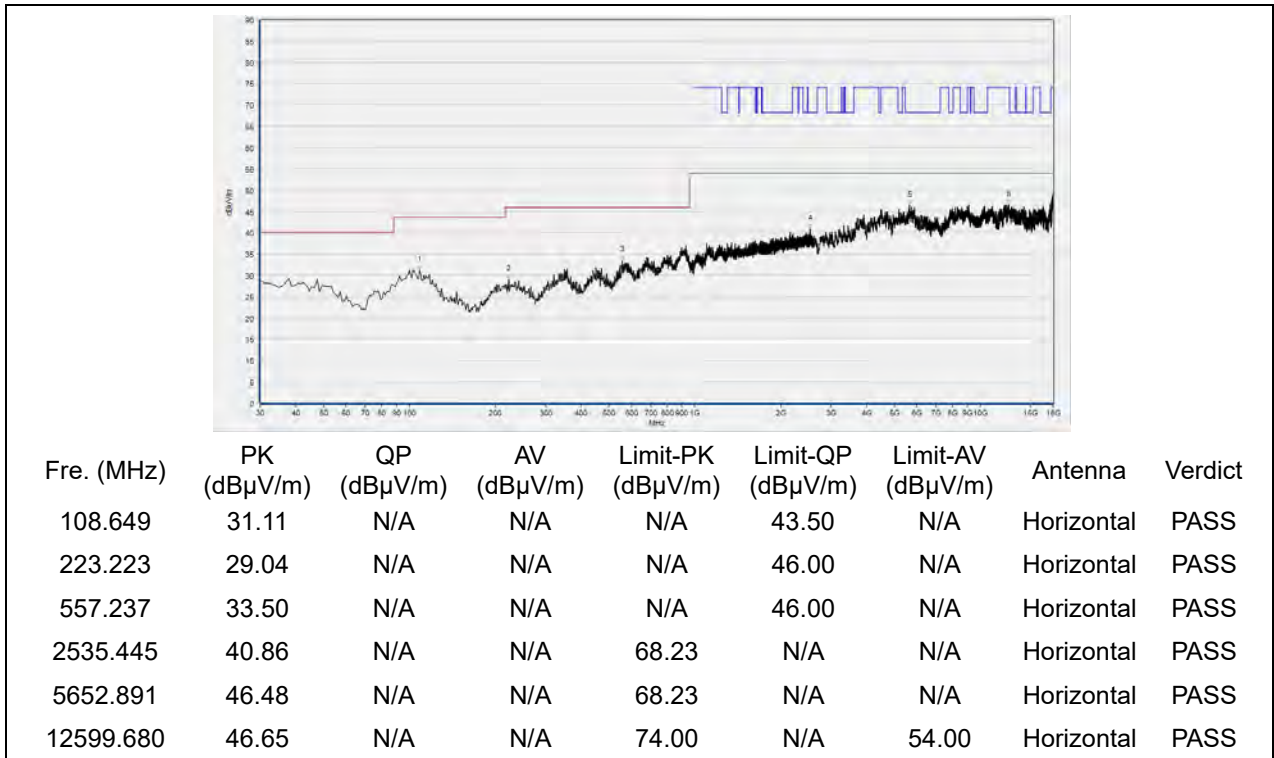
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

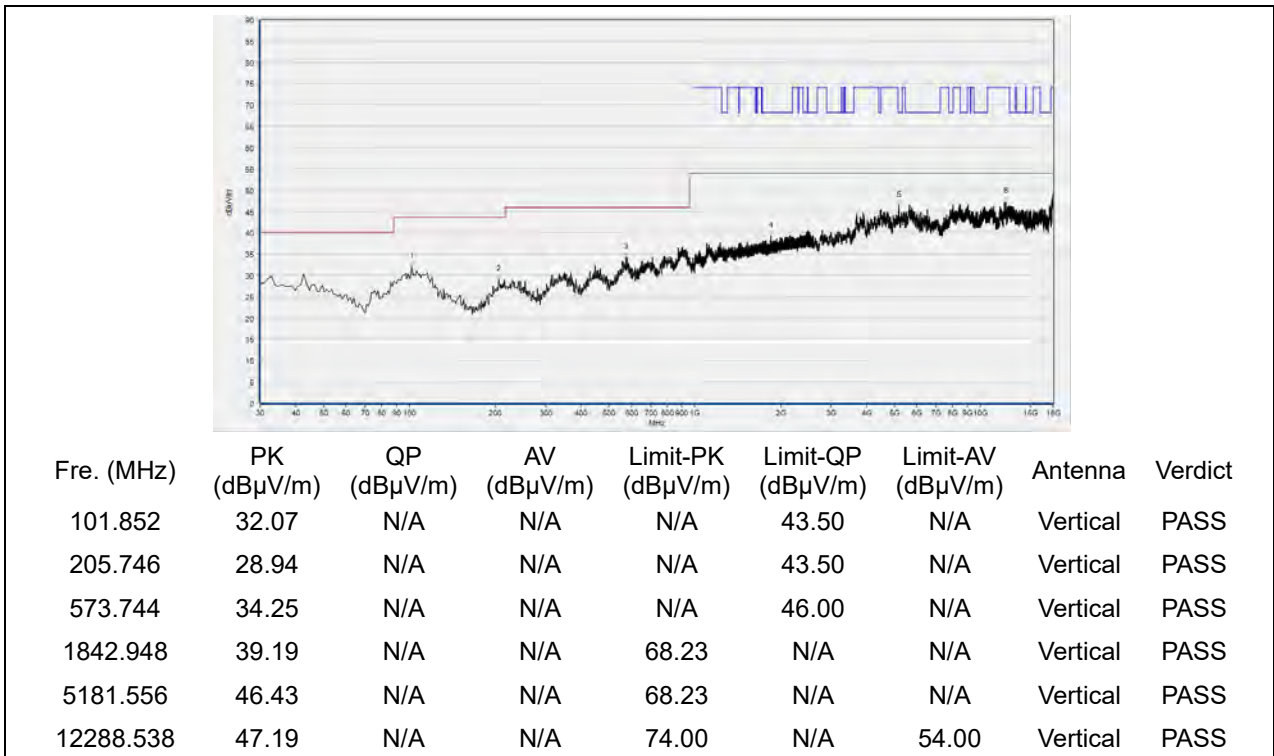
Note 4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11a Mode

Plot for Channel 36

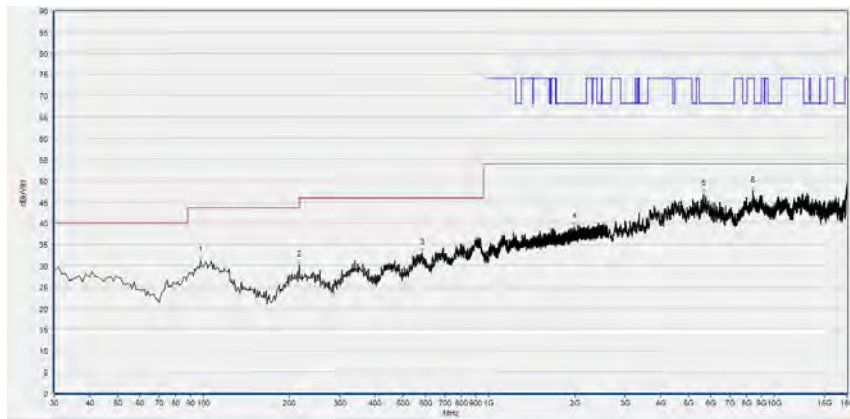


(Antenna Horizontal, 30MHz to 18GHz)



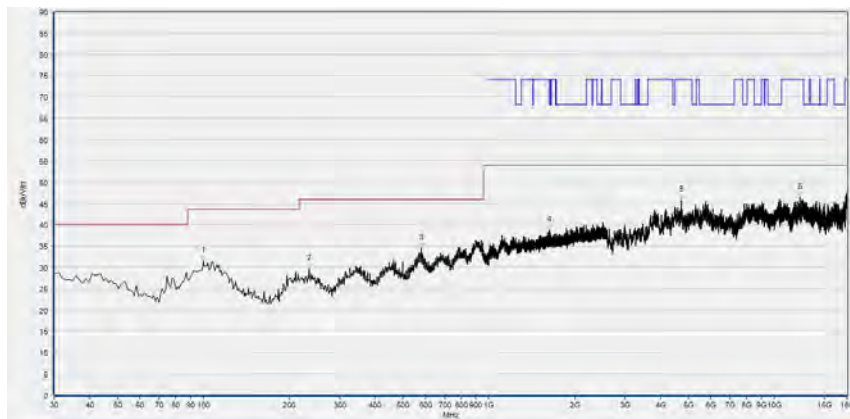
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 44



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
97.968	31.16	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
216.426	30.16	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
583.453	33.09	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
1990.730	39.23	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5655.971	46.91	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
8434.687	47.58	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

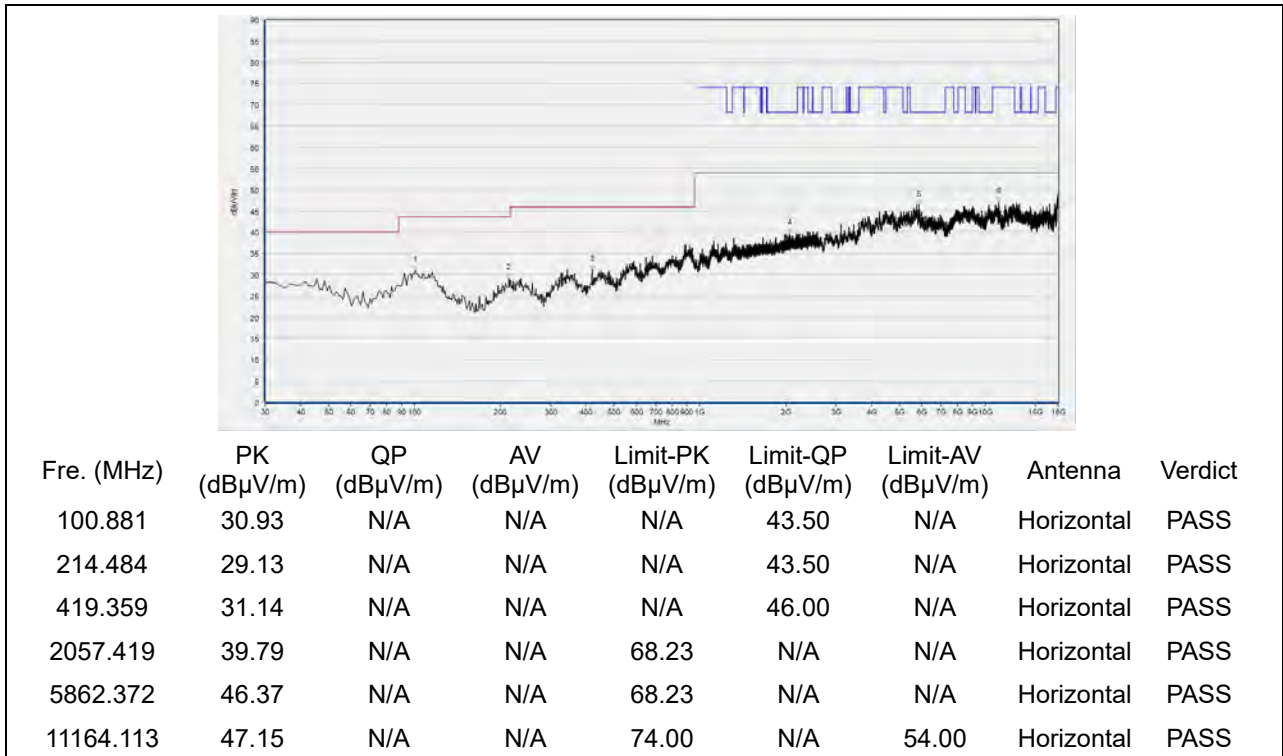
(Antenna Horizontal, 30MHz to 18GHz)



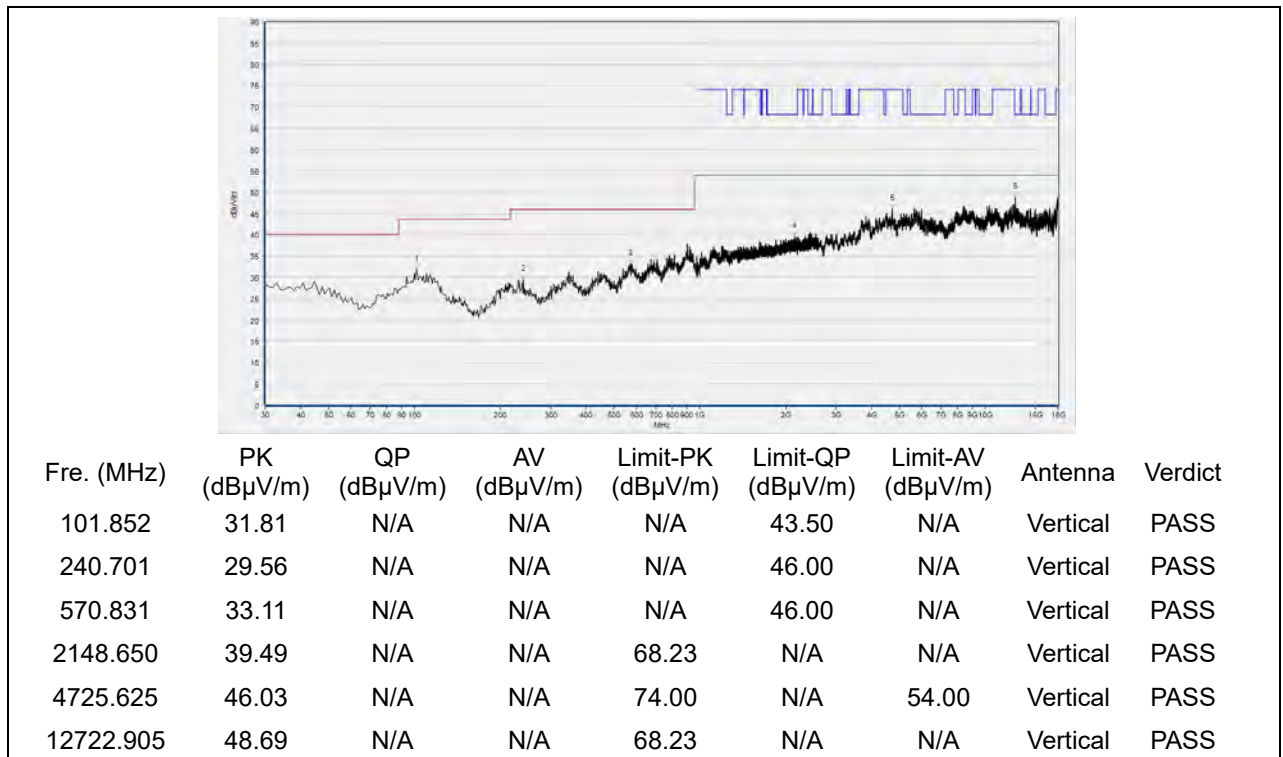
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
99.910	31.52	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
234.875	29.65	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
579.570	34.58	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
1624.208	38.70	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4722.545	45.76	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12303.941	46.41	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 48

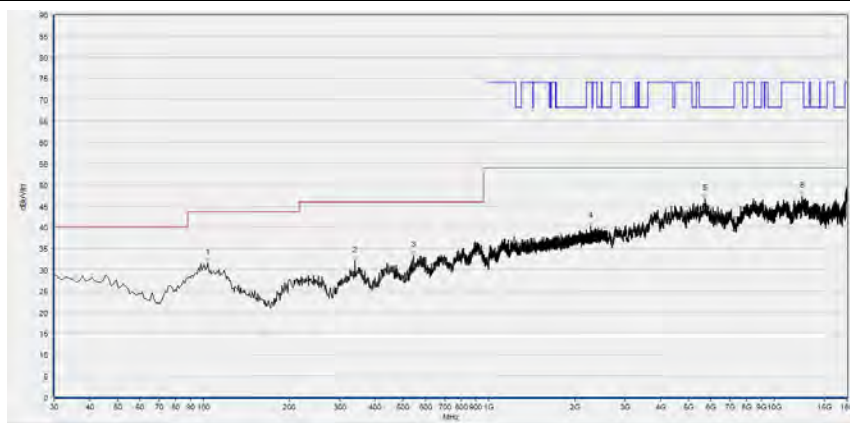


(Antenna Horizontal, 30MHz to 18GHz)



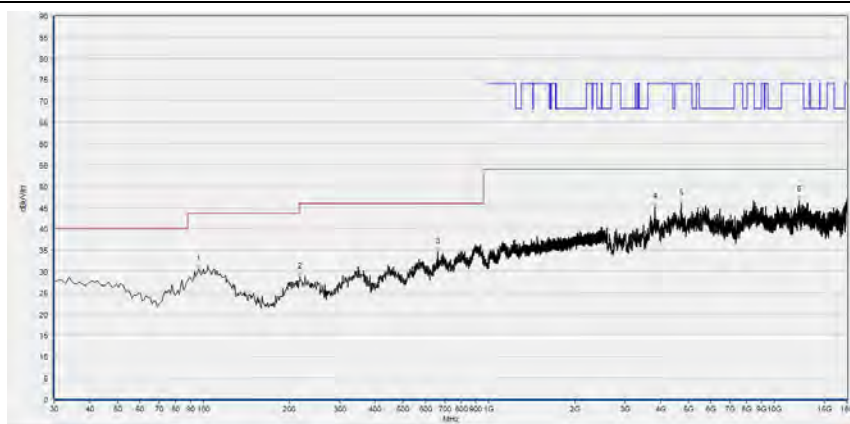
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 52



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
103.794	31.52	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
339.740	32.02	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
545.586	33.37	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2278.293	40.17	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5732.987	46.78	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
12525.745	47.28	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

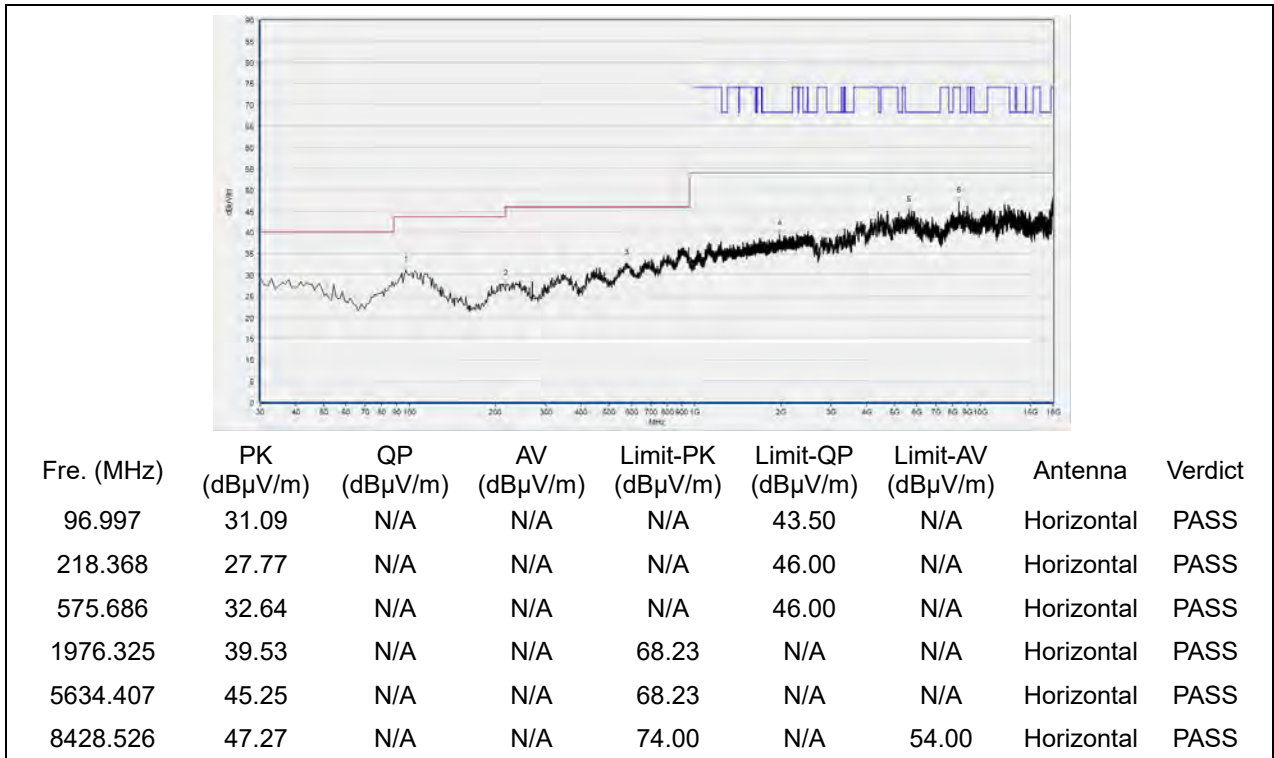
(Antenna Horizontal, 30MHz to 18GHz)



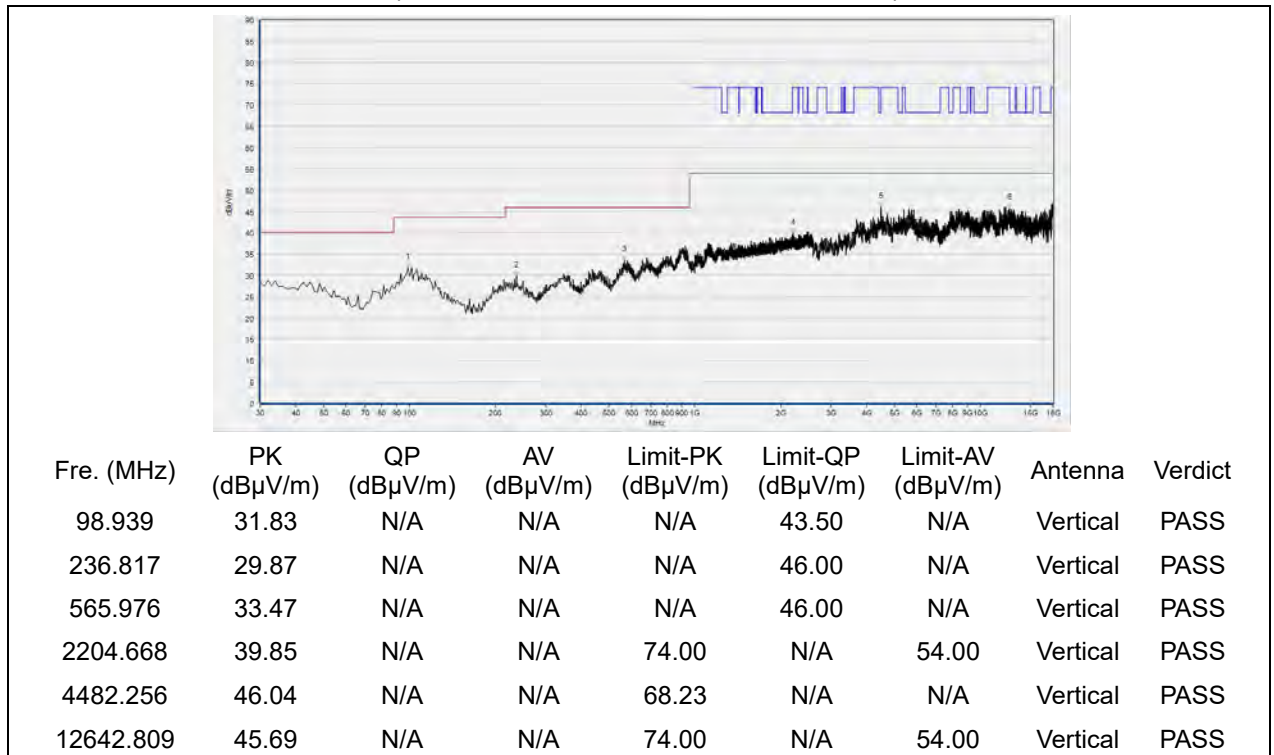
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
96.026	30.58	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
218.368	28.59	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
661.131	34.46	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
3816.843	45.05	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4728.706	45.85	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
12202.280	46.71	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 60

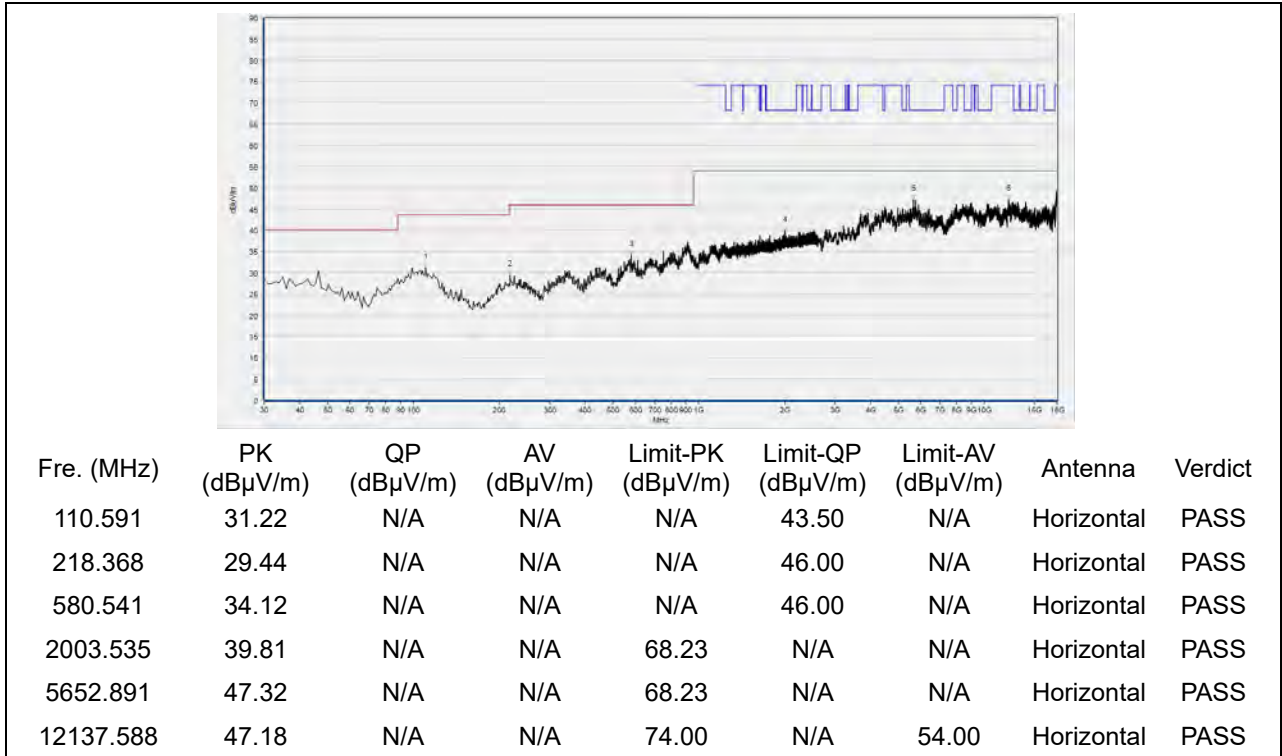


(Antenna Horizontal, 30MHz to 18GHz)

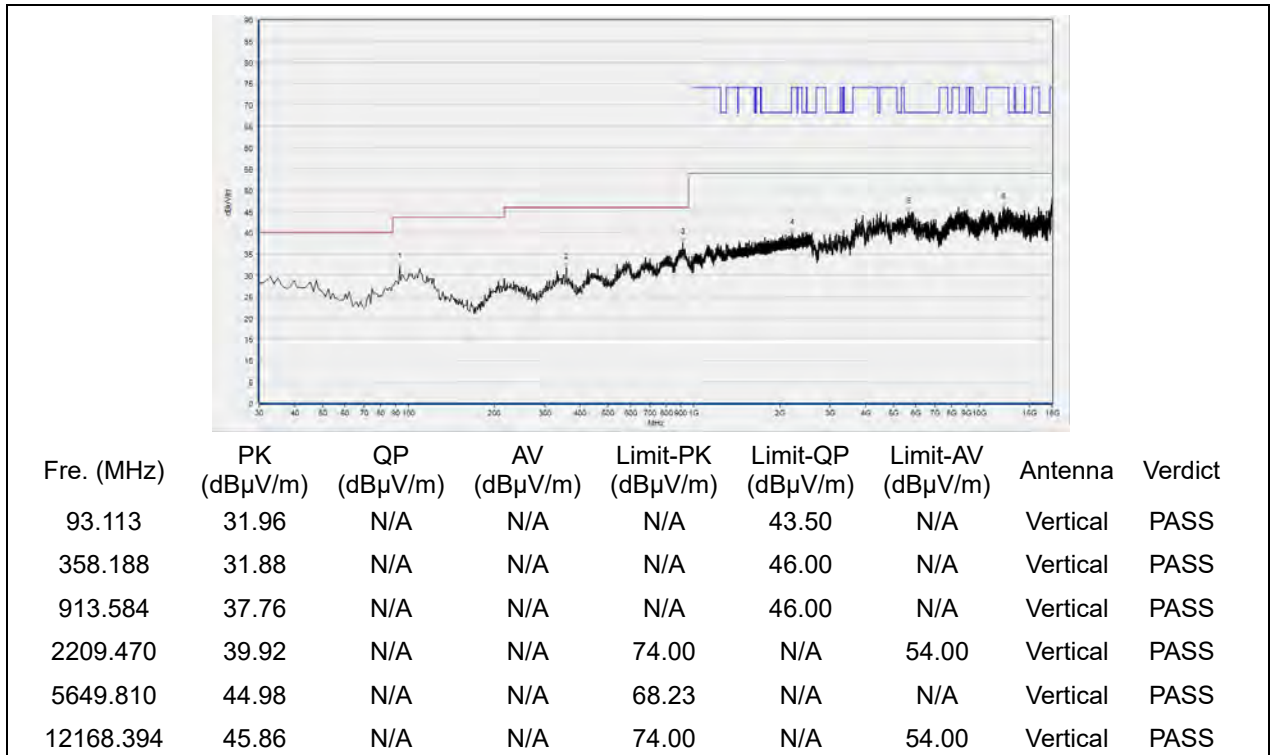


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 64

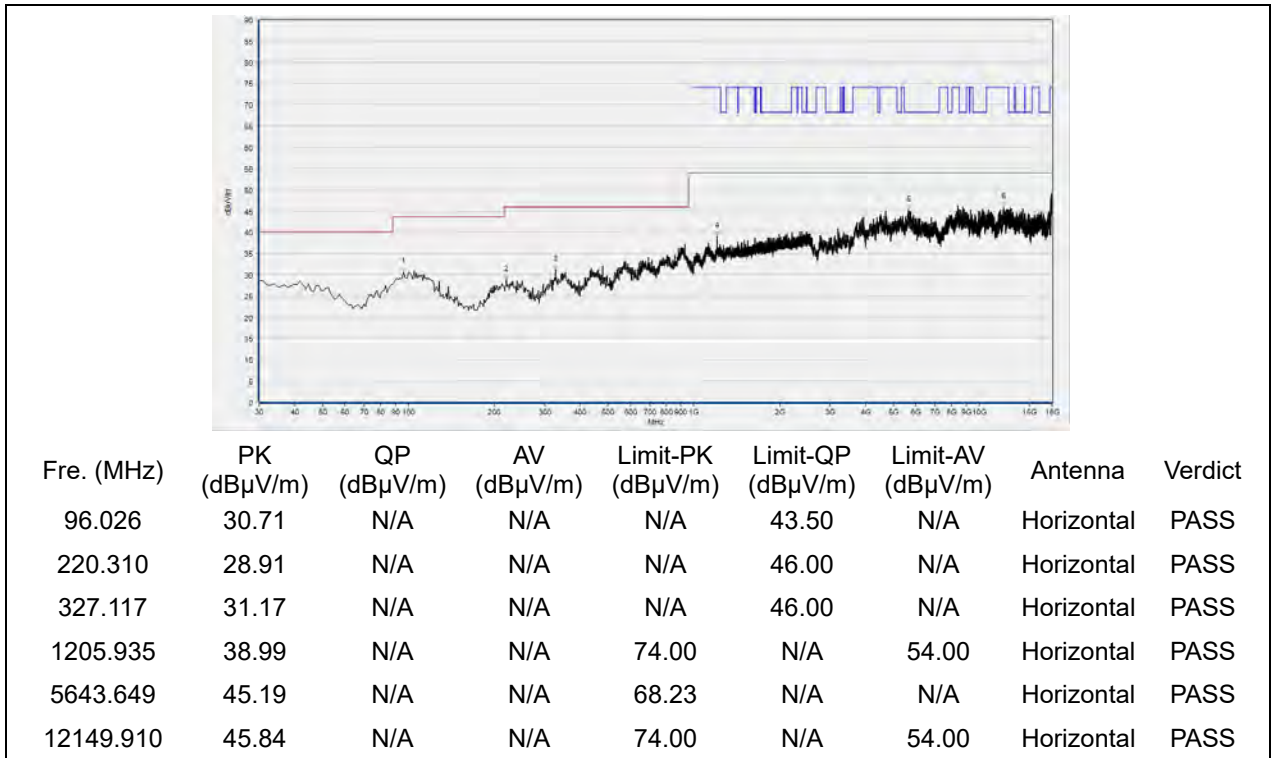


(Antenna Horizontal, 30MHz to 18GHz)

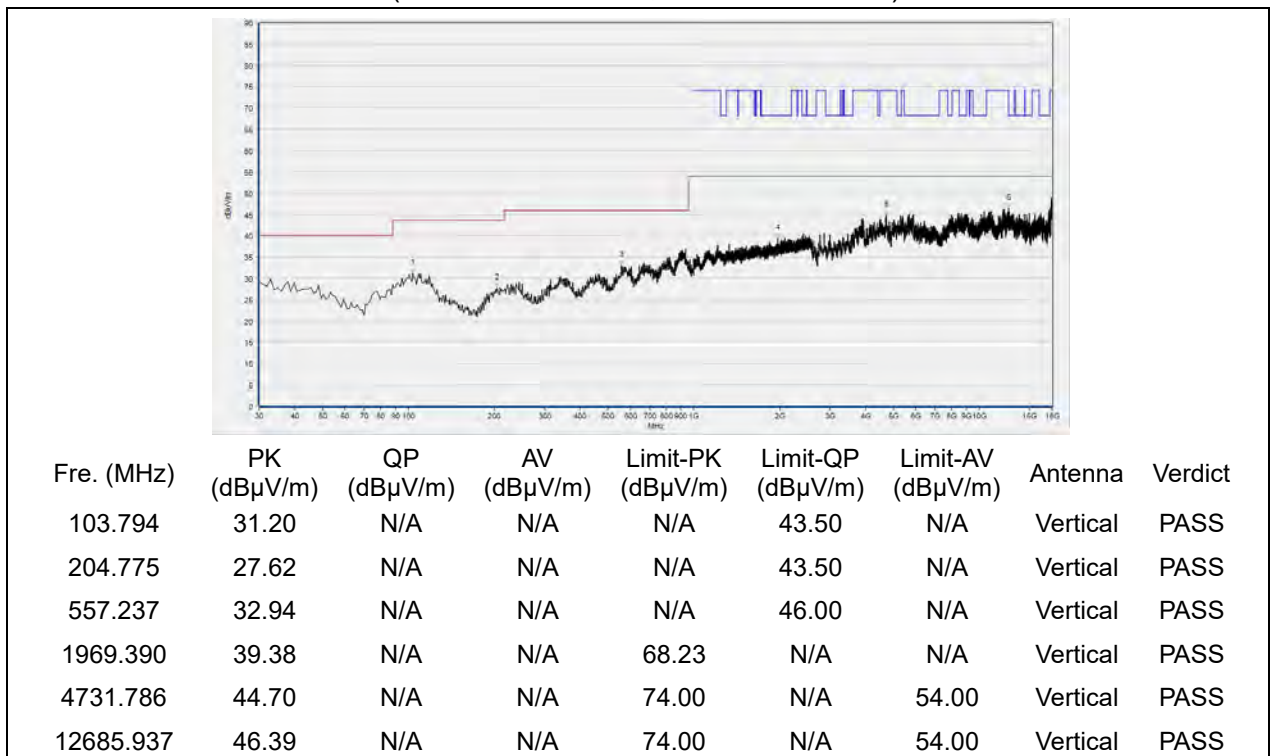


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 100

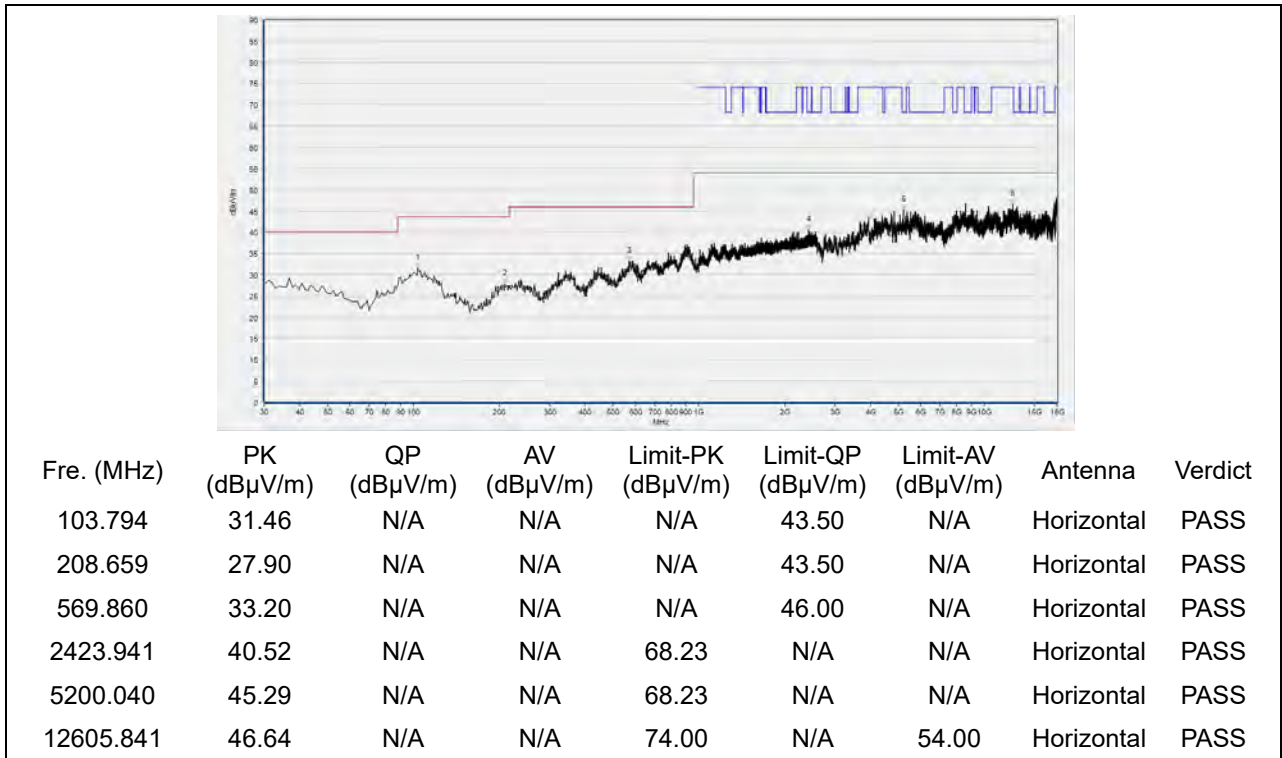


(Antenna Horizontal, 30MHz to 18GHz)

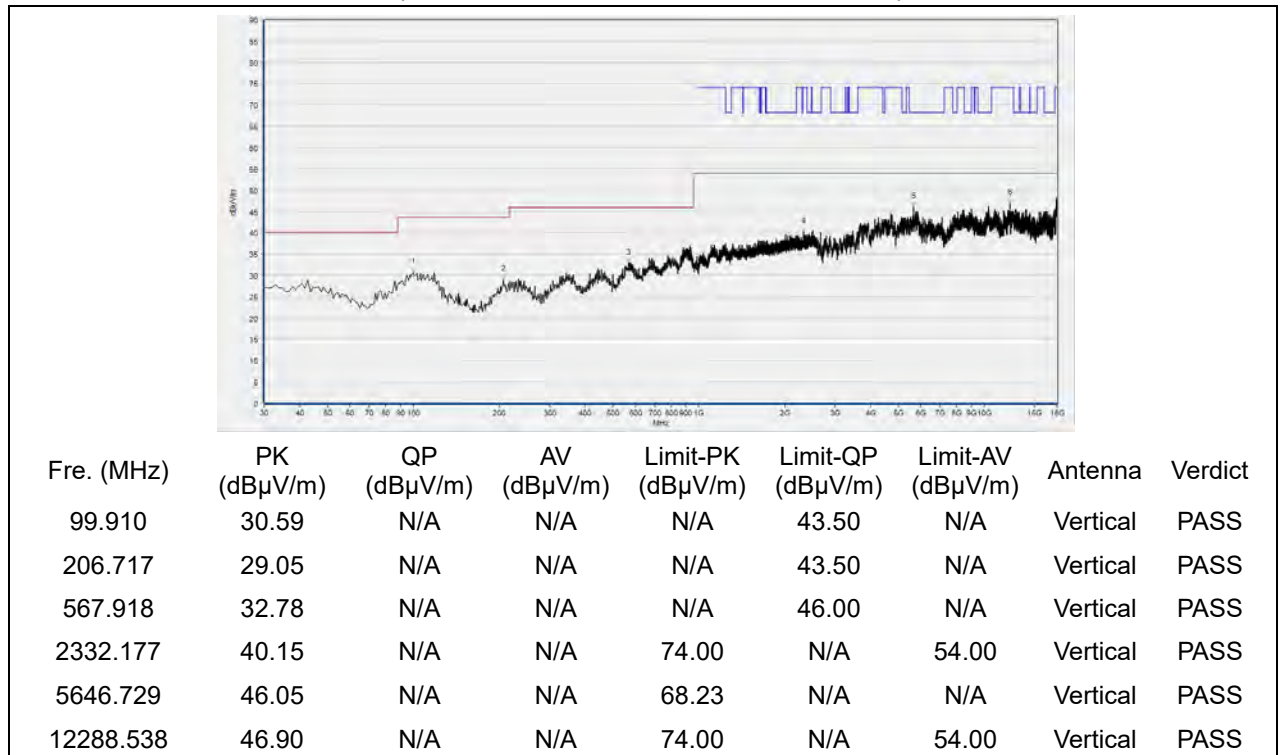


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 120

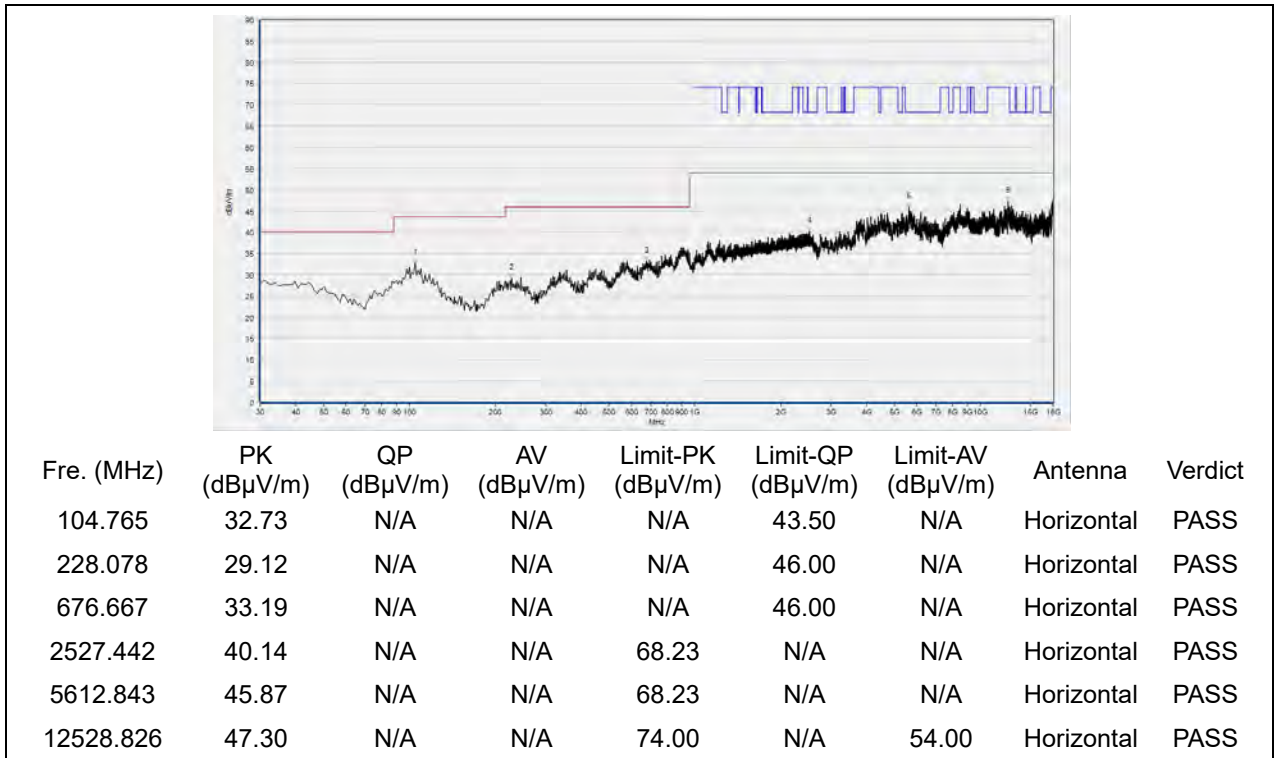


(Antenna Horizontal, 30MHz to 18GHz)

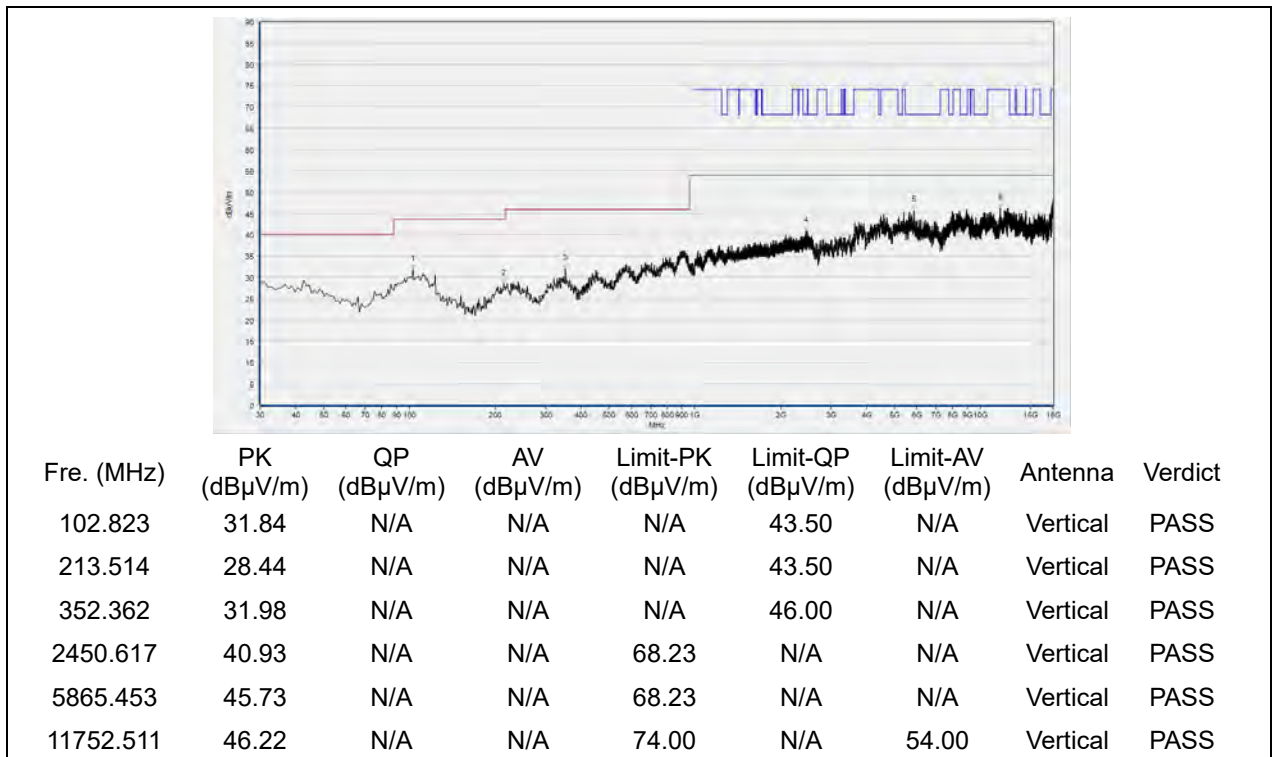


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 144



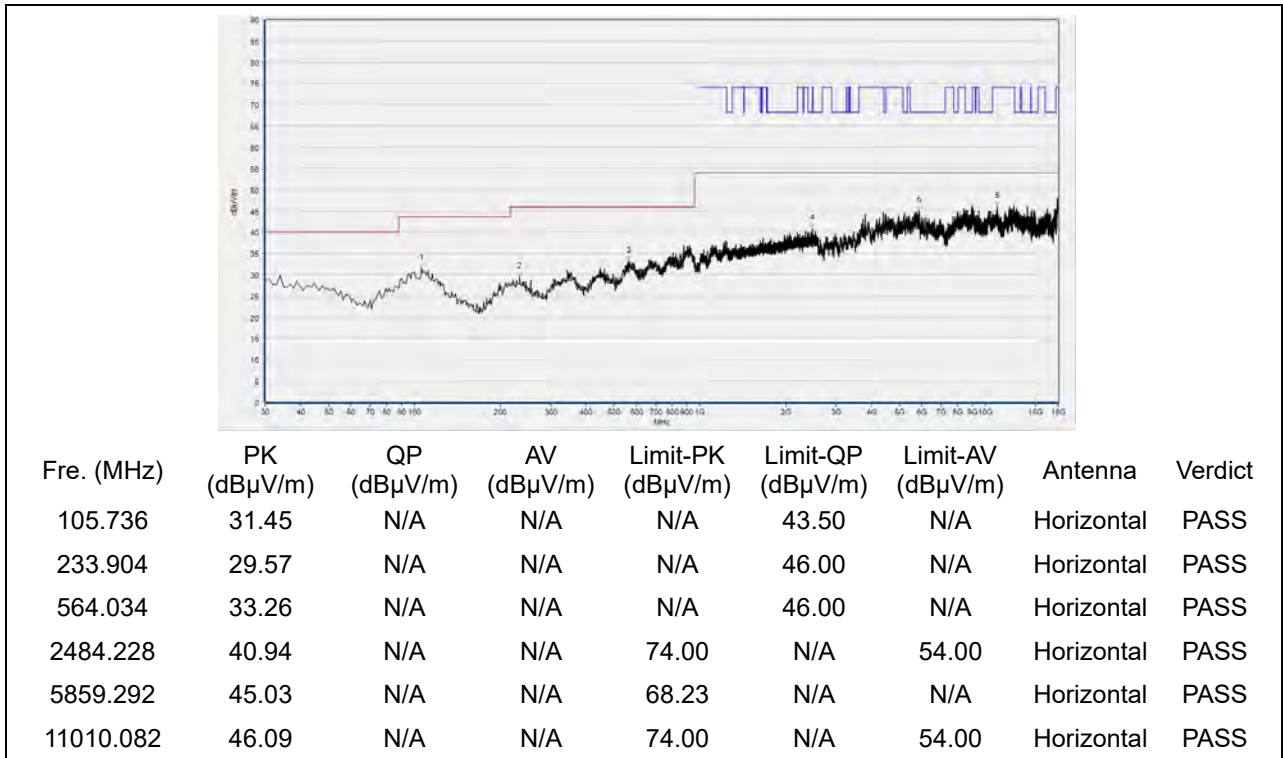
(Antenna Horizontal, 30MHz to 18GHz)



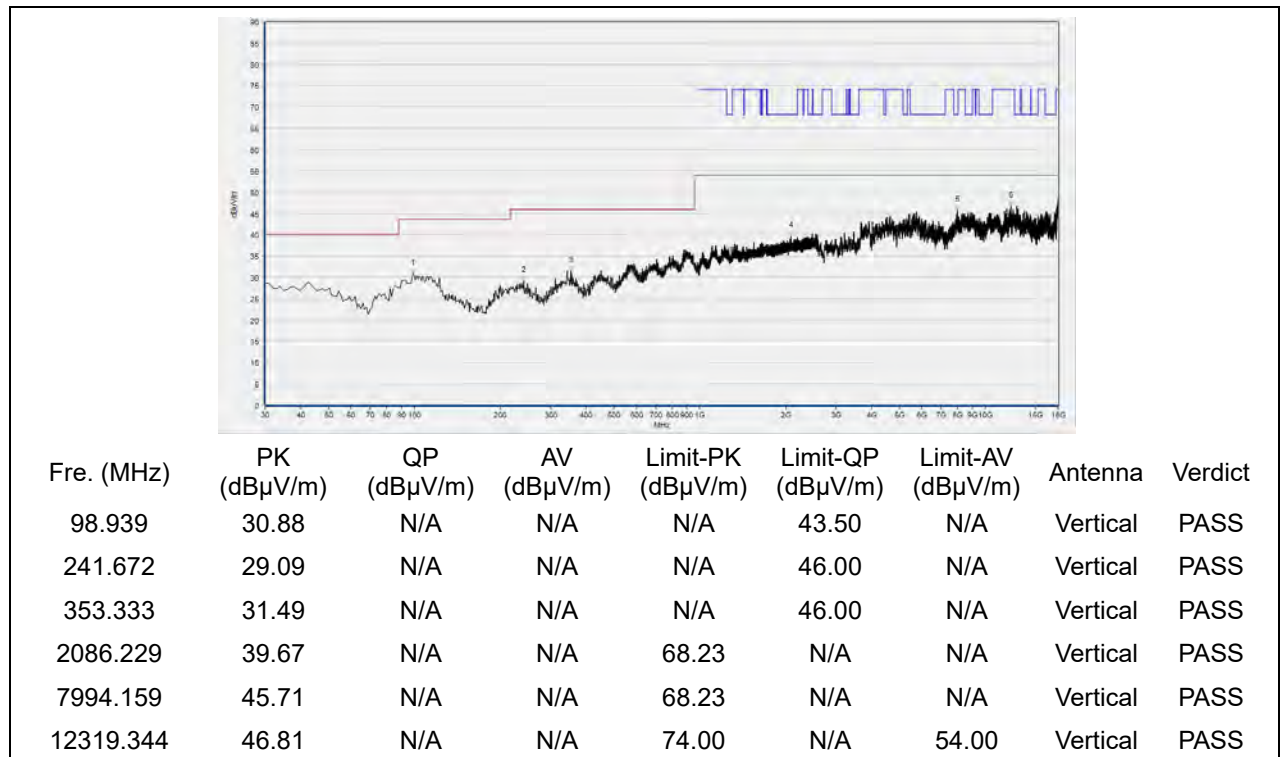
(Antenna Vertical, 30MHz to 18GHz)



Plot for Channel 149

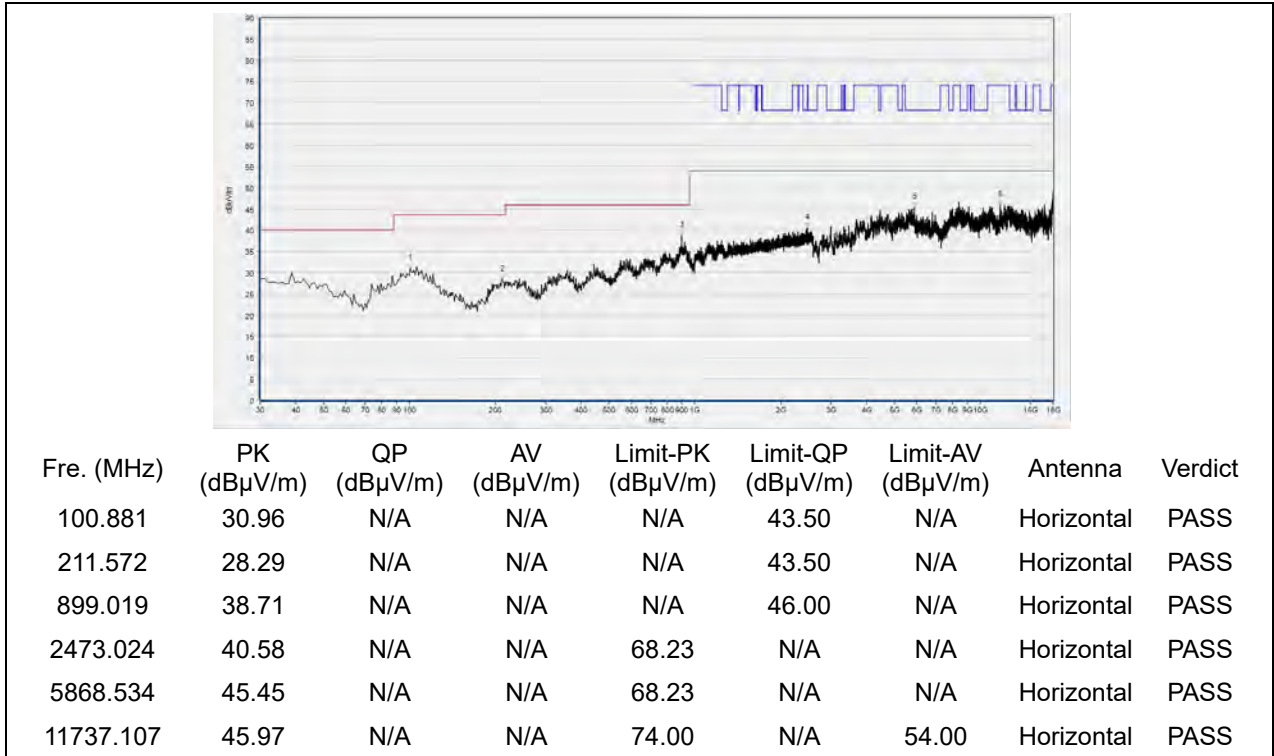


(Antenna Horizontal, 30MHz to 18GHz)

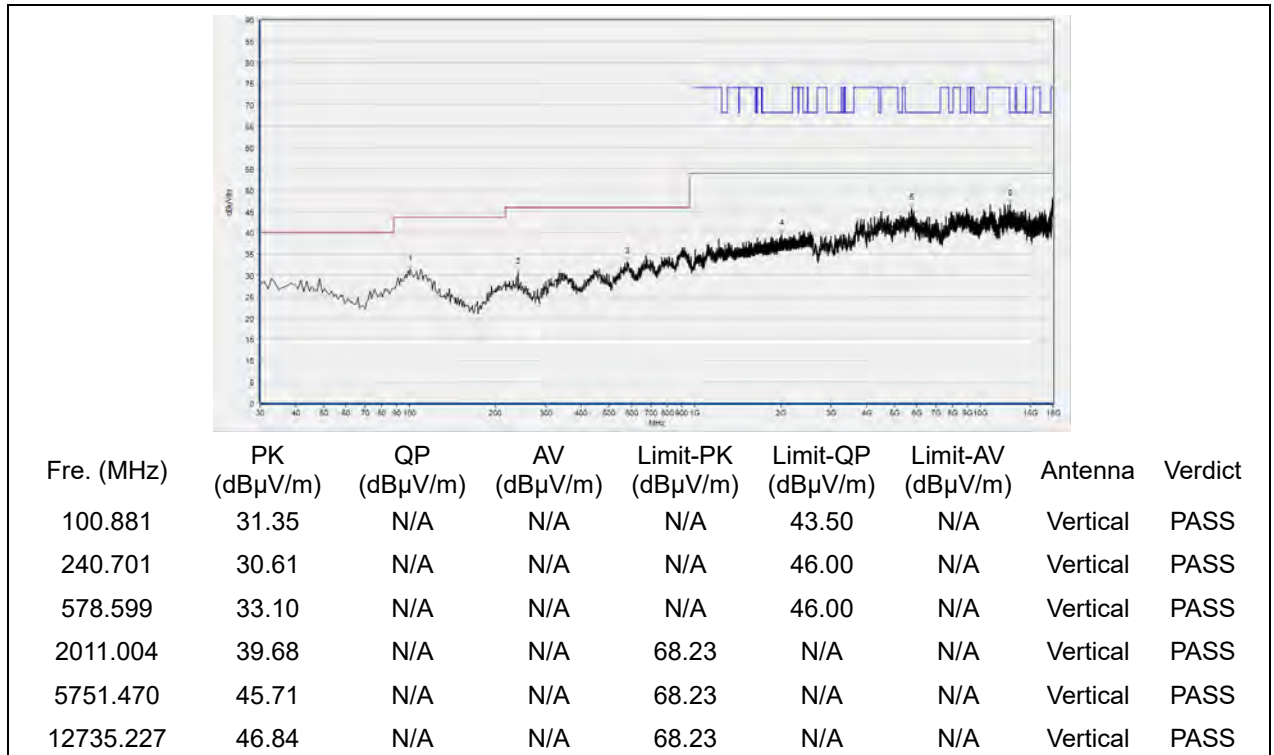


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 157

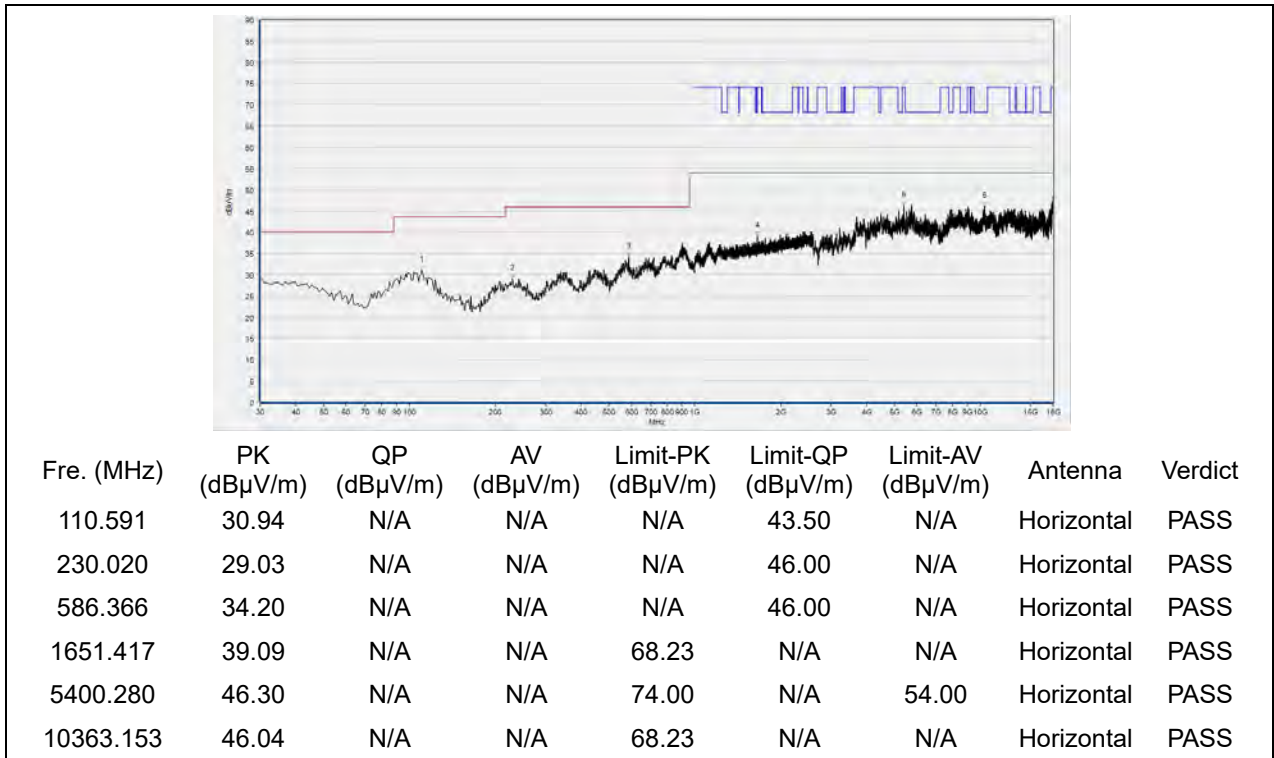


(Antenna Horizontal, 30MHz to 18GHz)

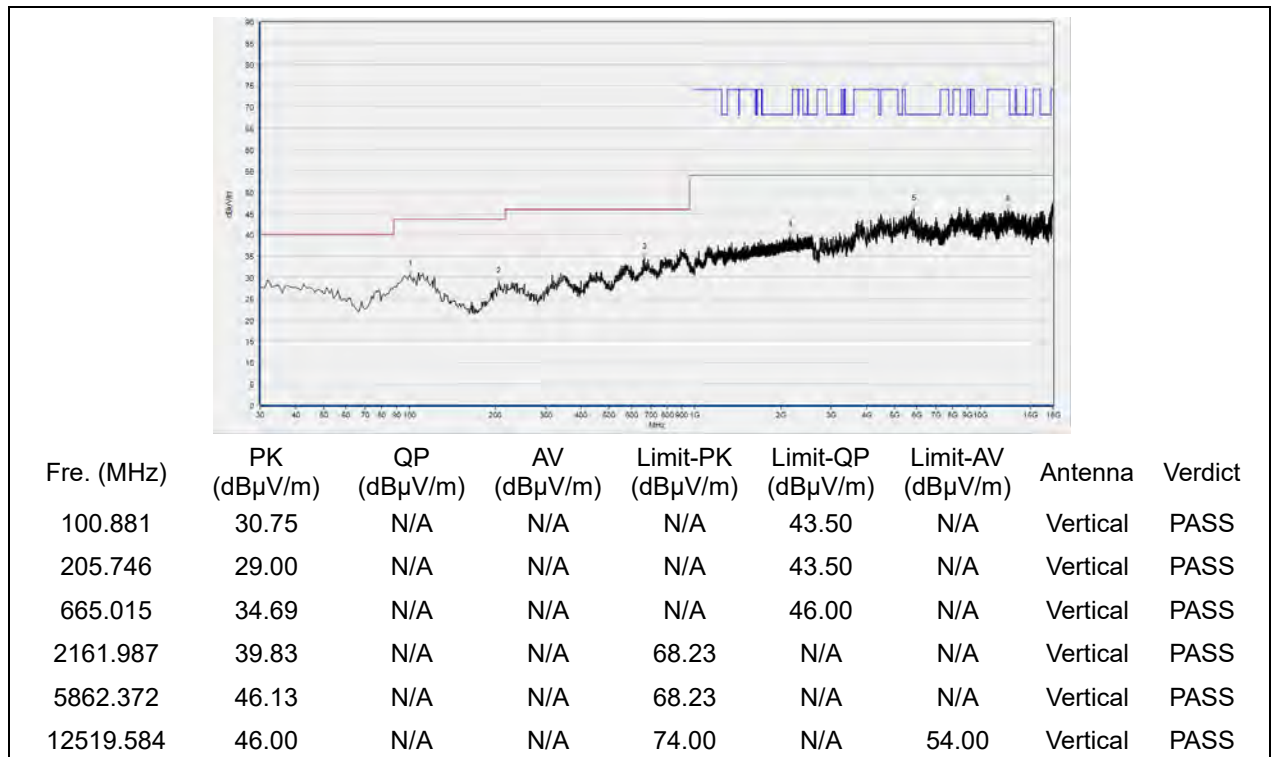


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 165



(Antenna Horizontal, 30MHz to 18GHz)

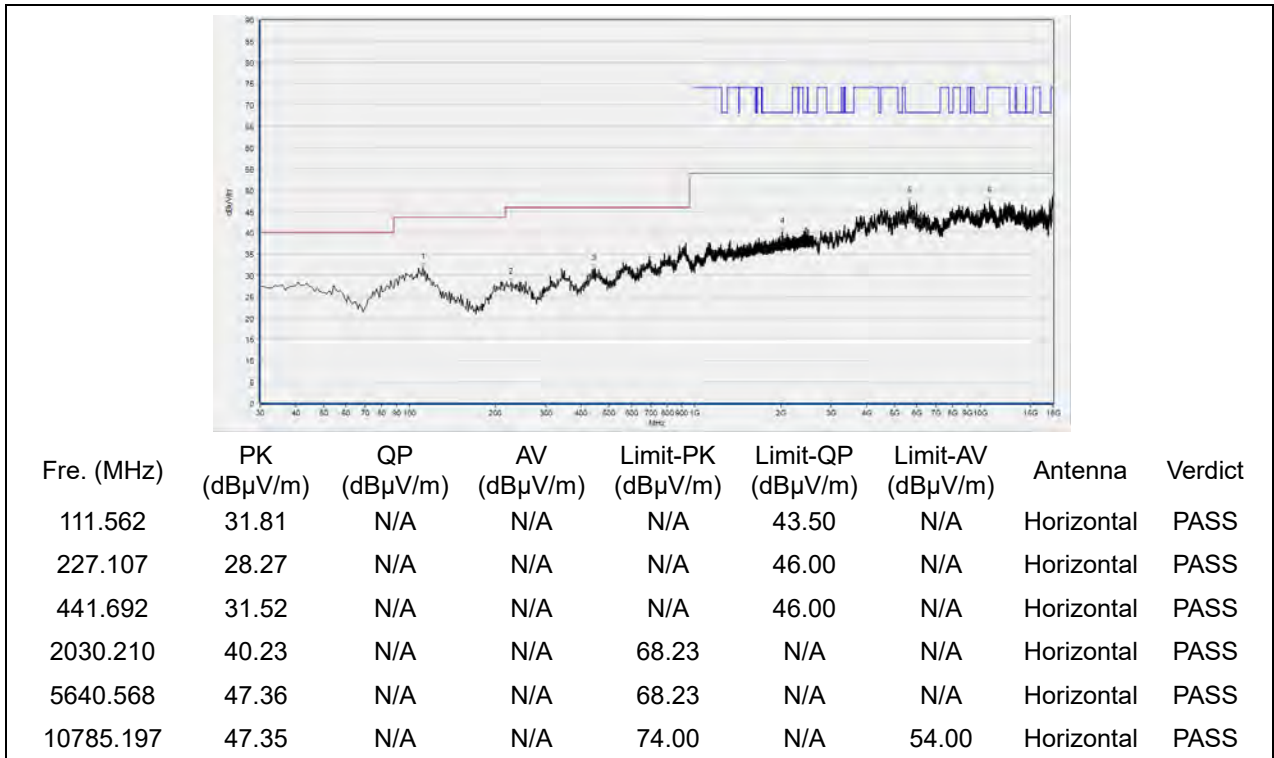


(Antenna Vertical, 30MHz to 18GHz)

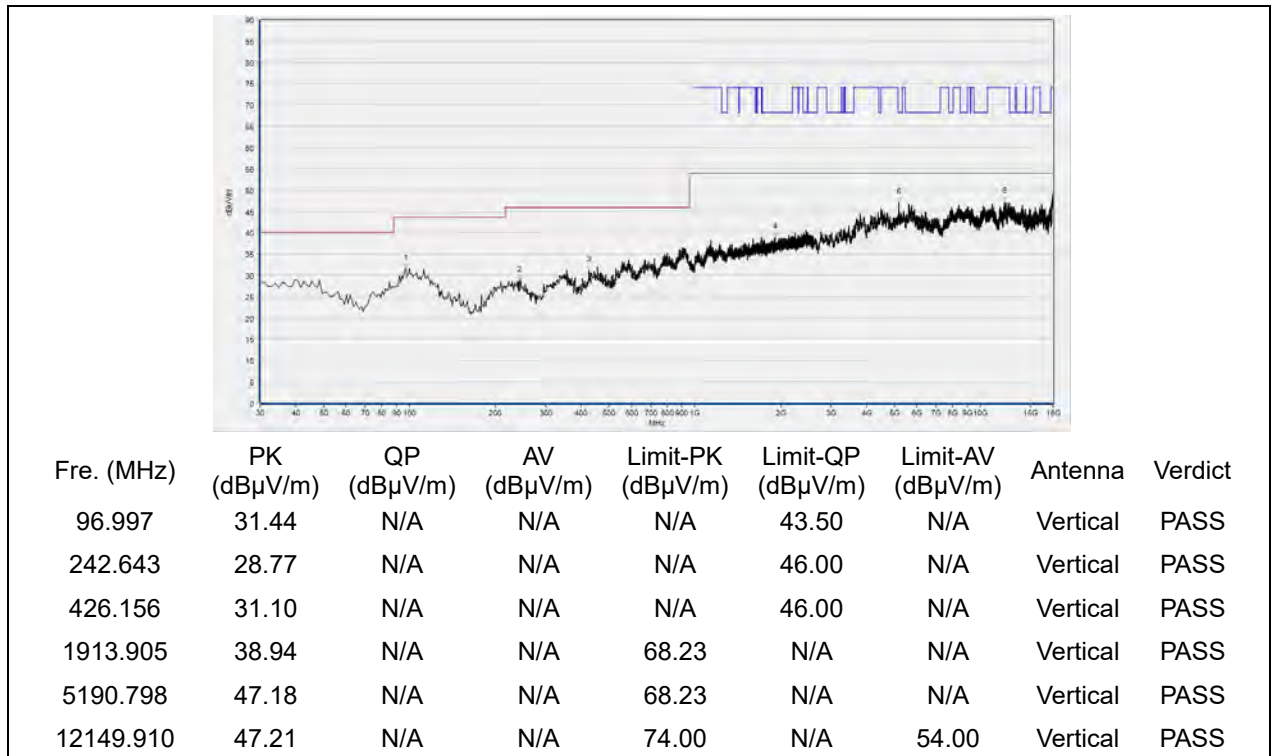


802.11n (HT40) mode

Plot for Channel 38

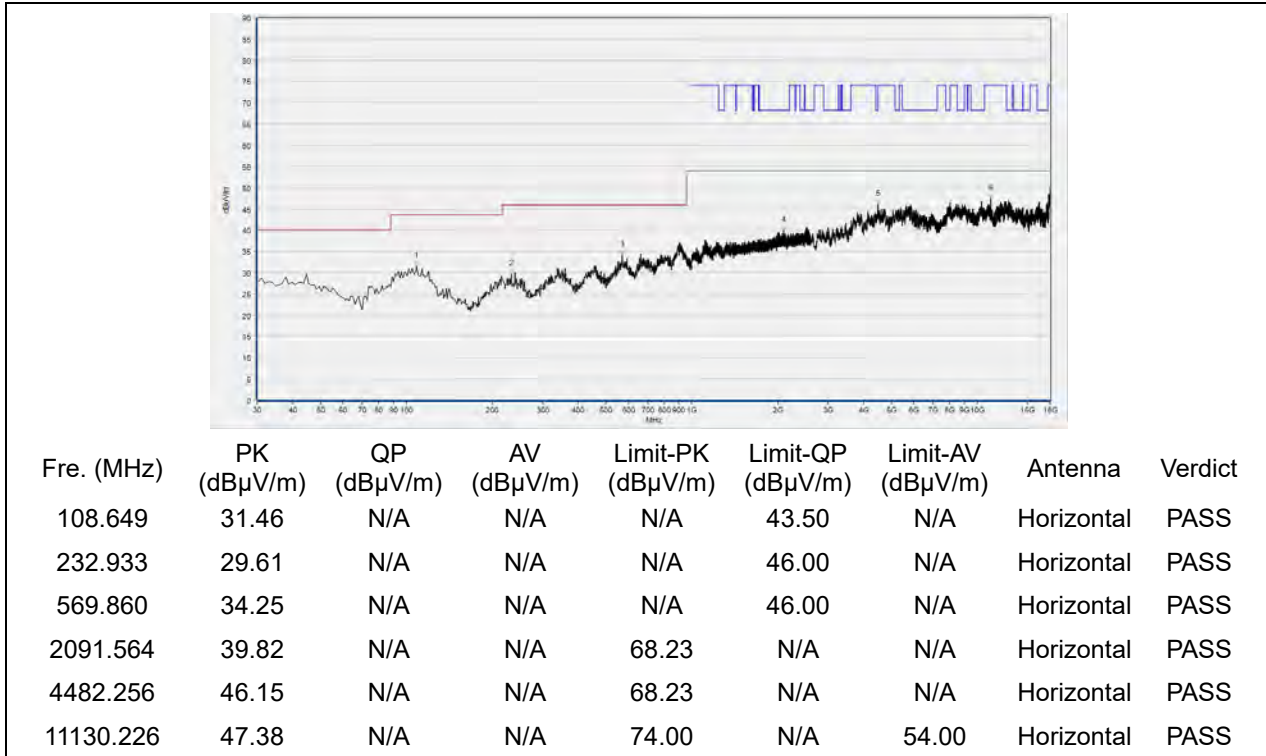


(Antenna Horizontal, 30MHz to 18GHz)

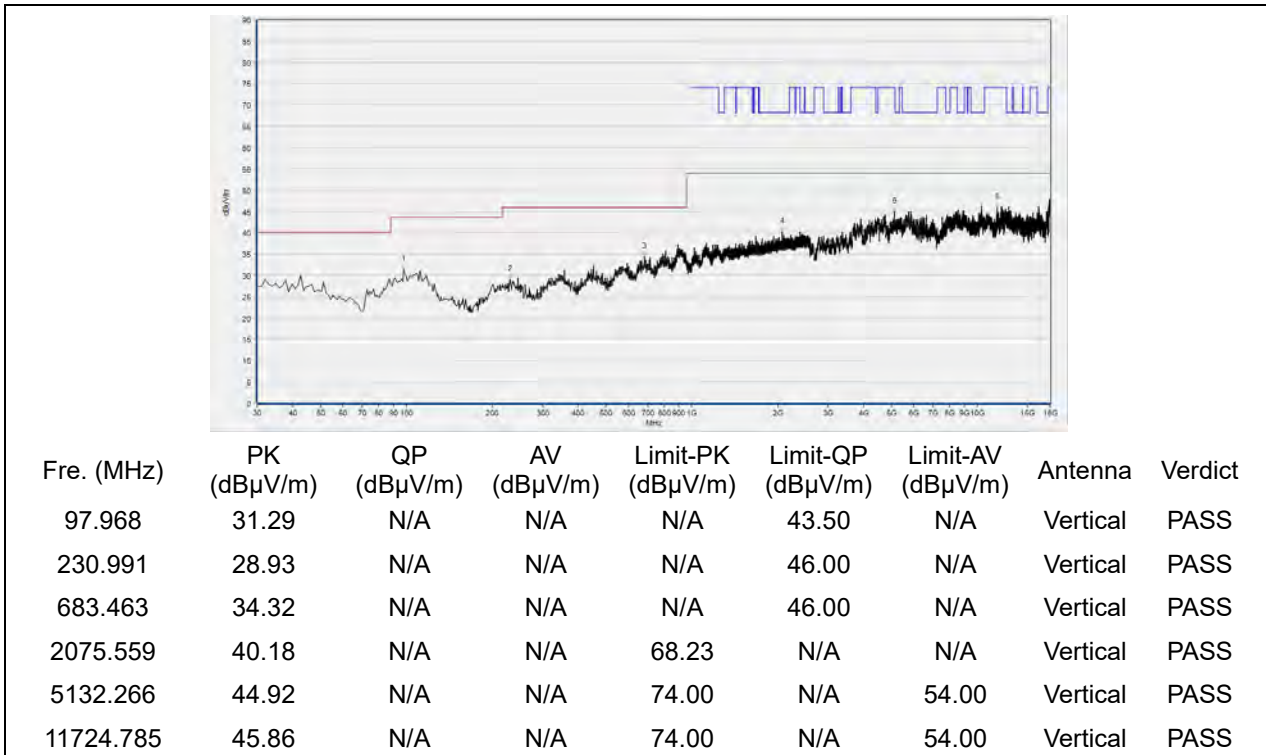


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 46

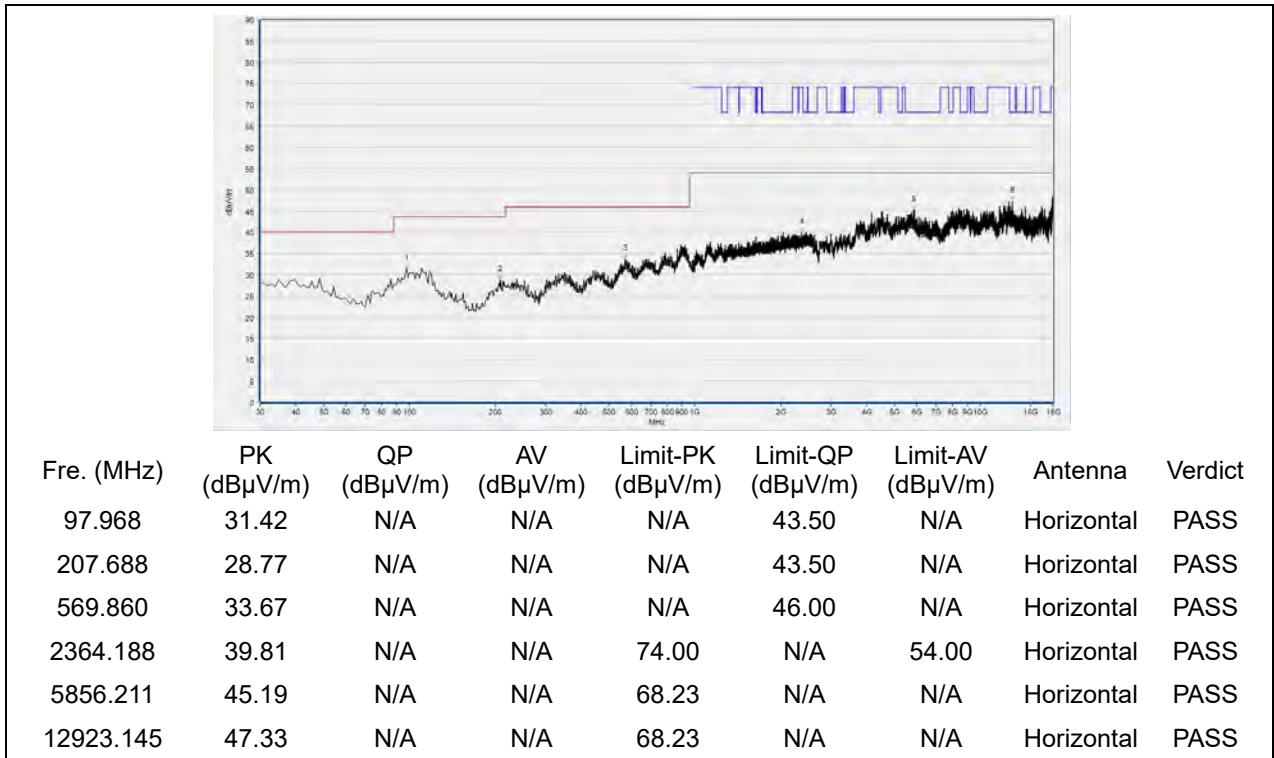


(Antenna Horizontal, 30MHz to 18GHz)

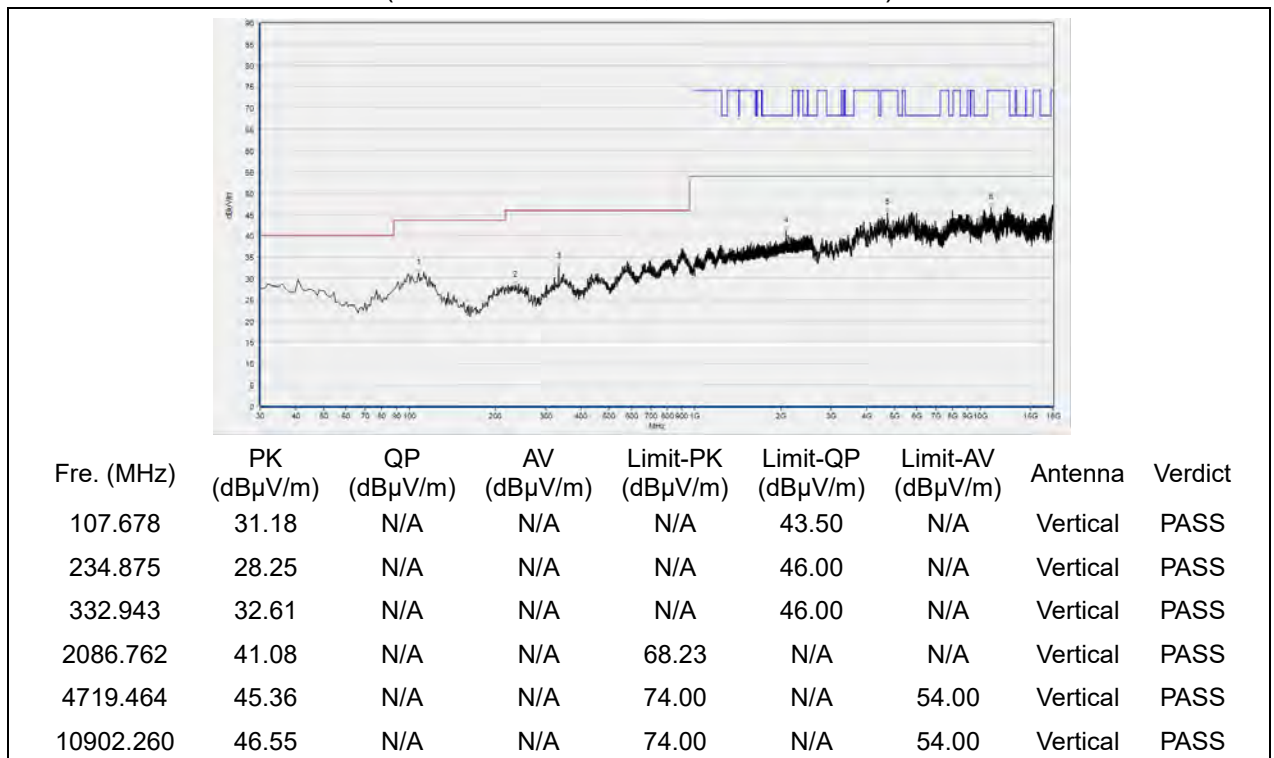


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 54

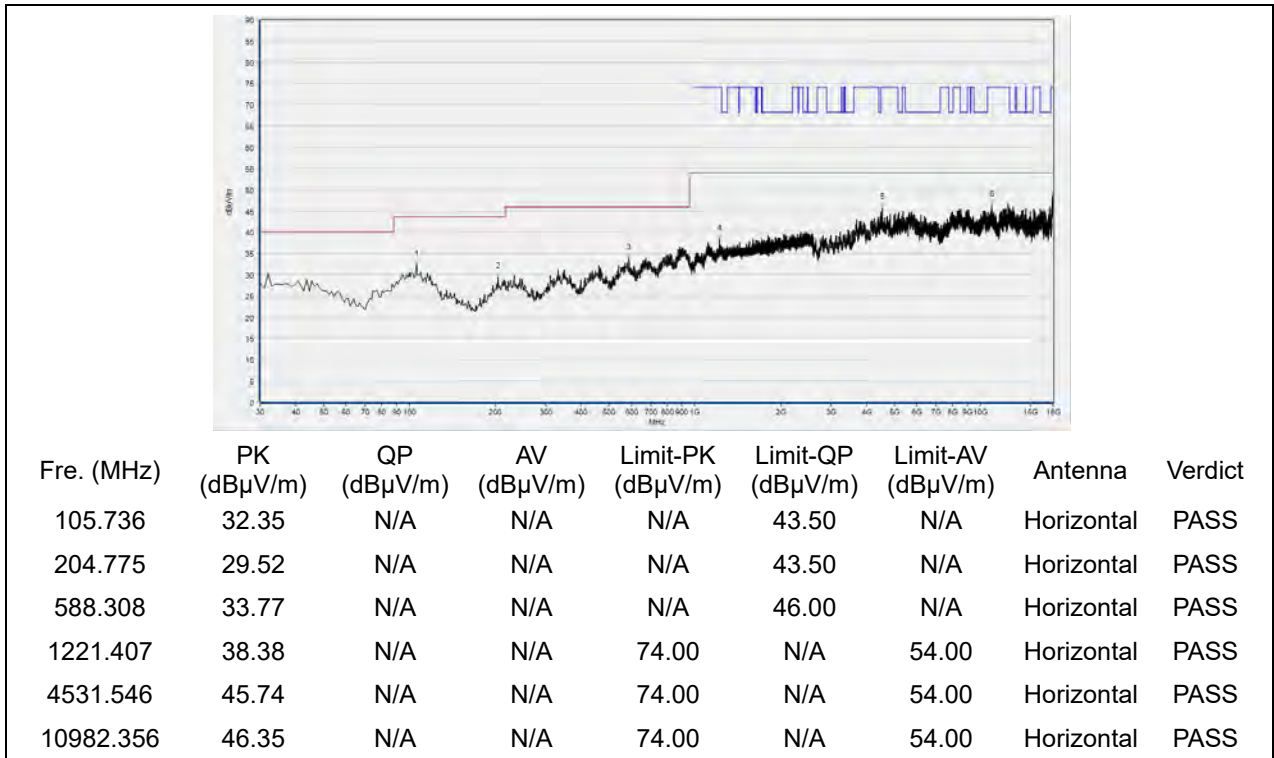


(Antenna Horizontal, 30MHz to 18GHz)

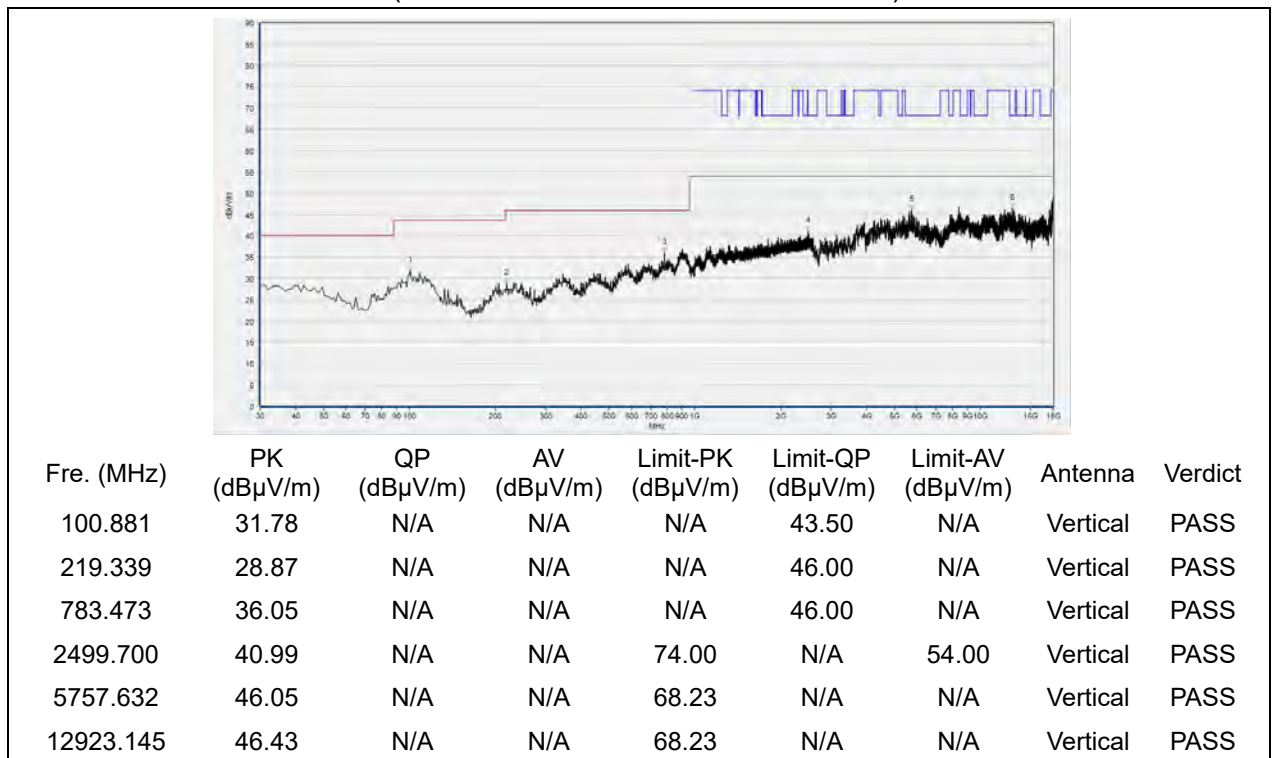


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 62

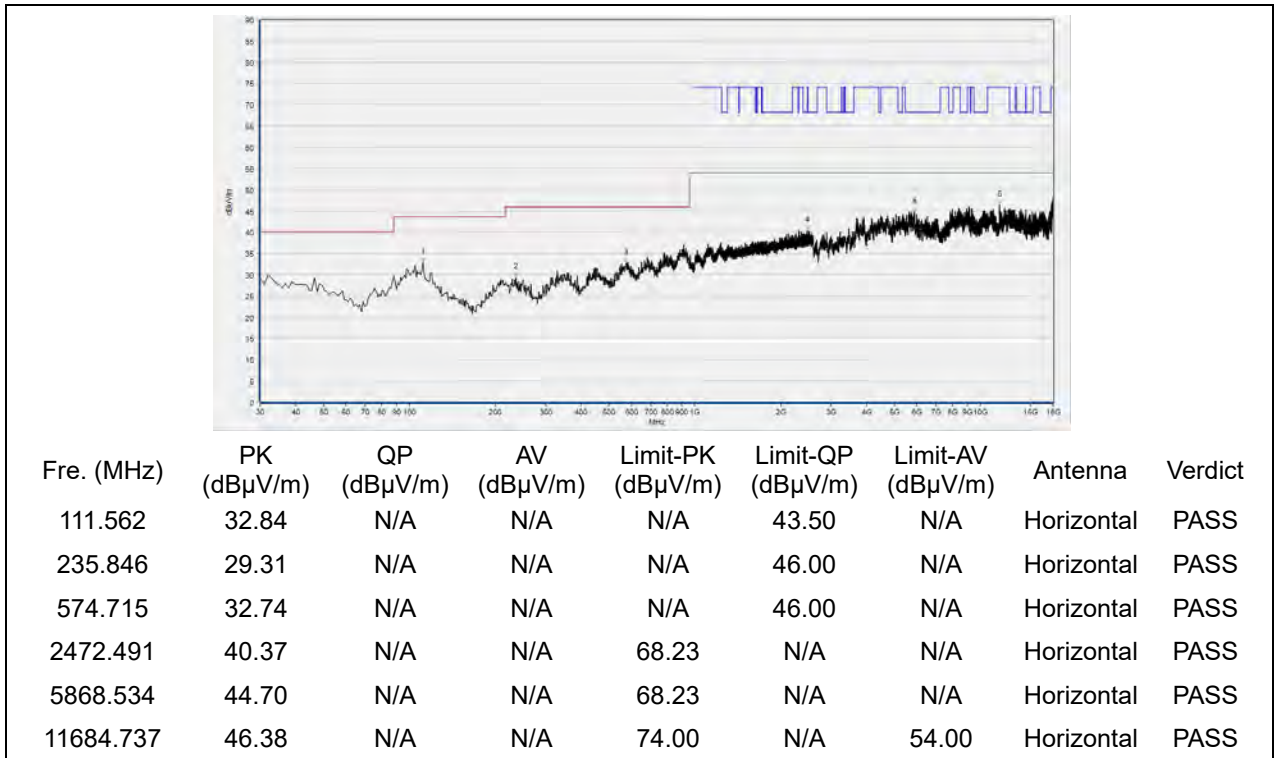


(Antenna Horizontal, 30MHz to 18GHz)

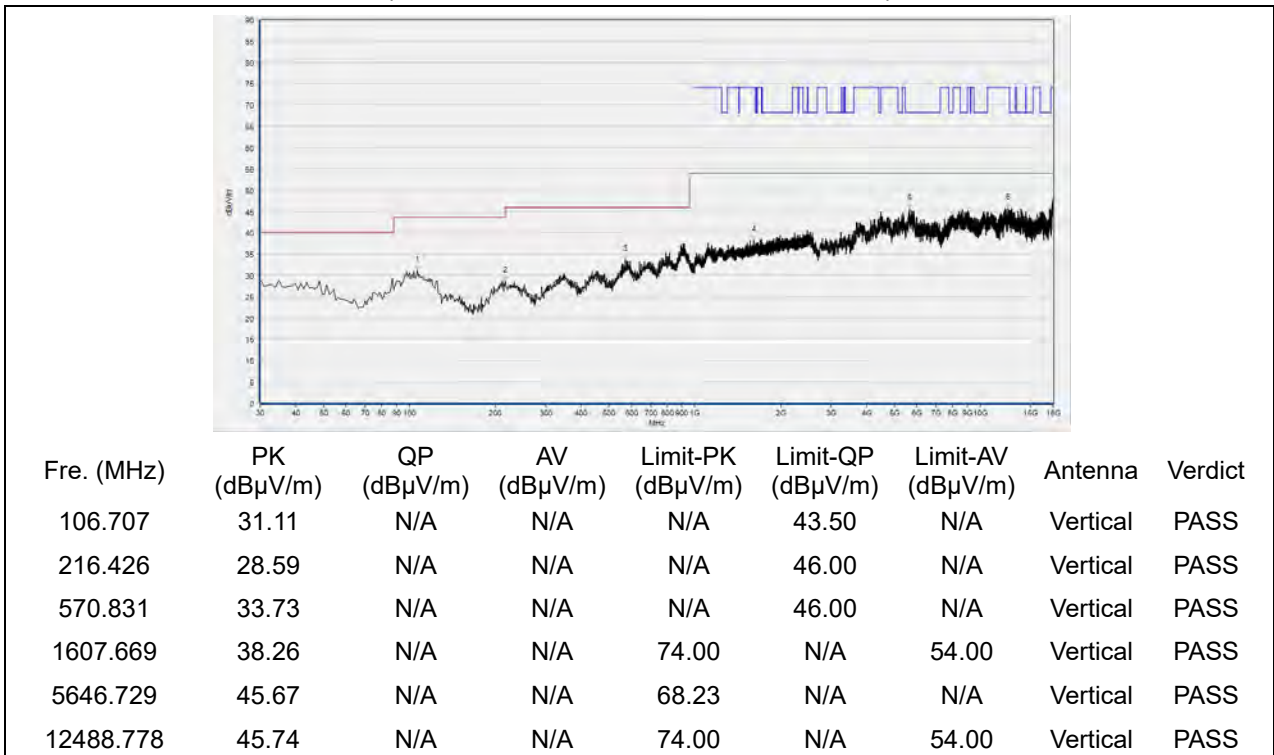


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 102

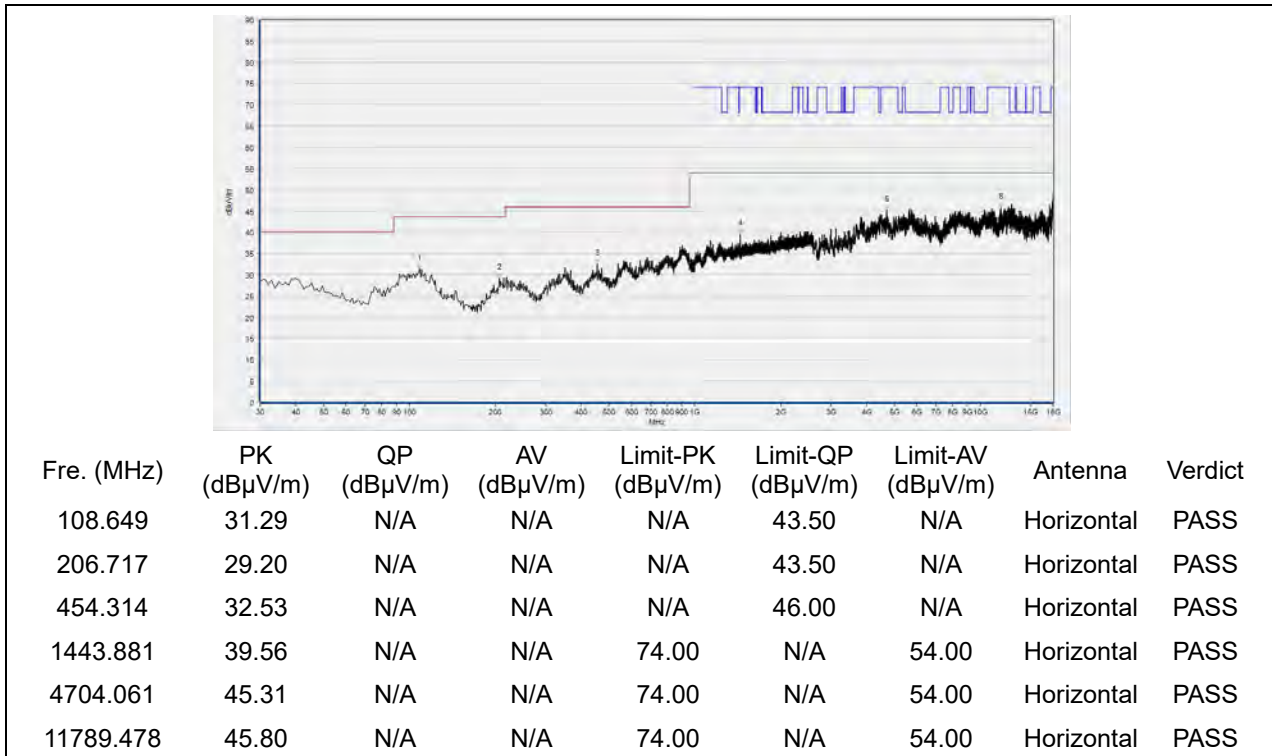


(Antenna Horizontal, 30MHz to 18GHz)

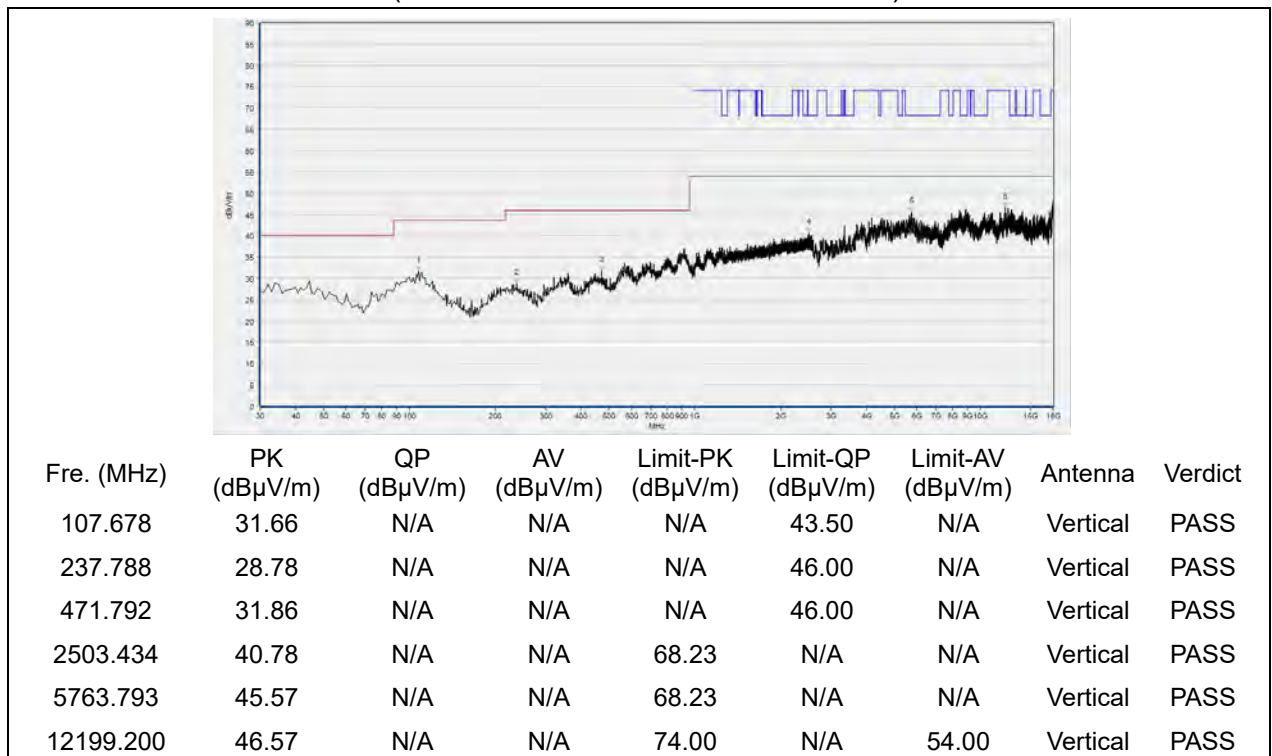


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 126

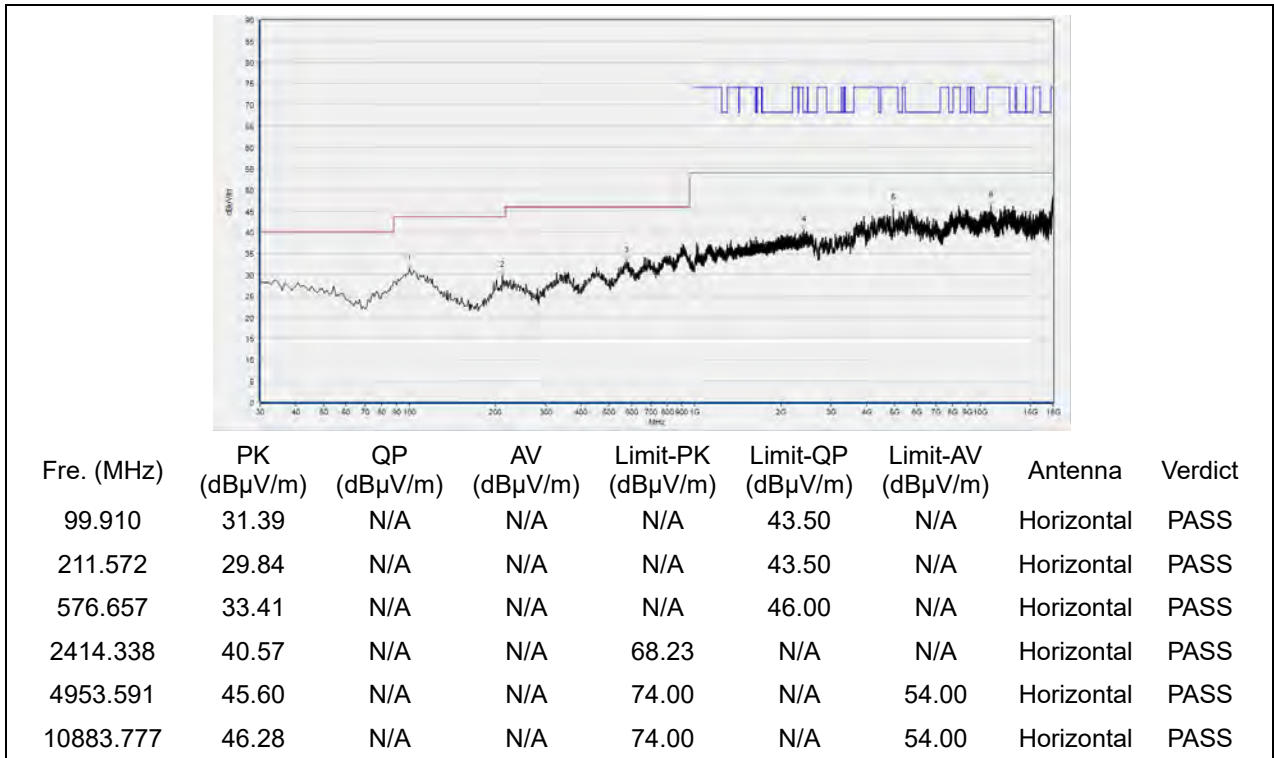


(Antenna Horizontal, 30MHz to 18GHz)

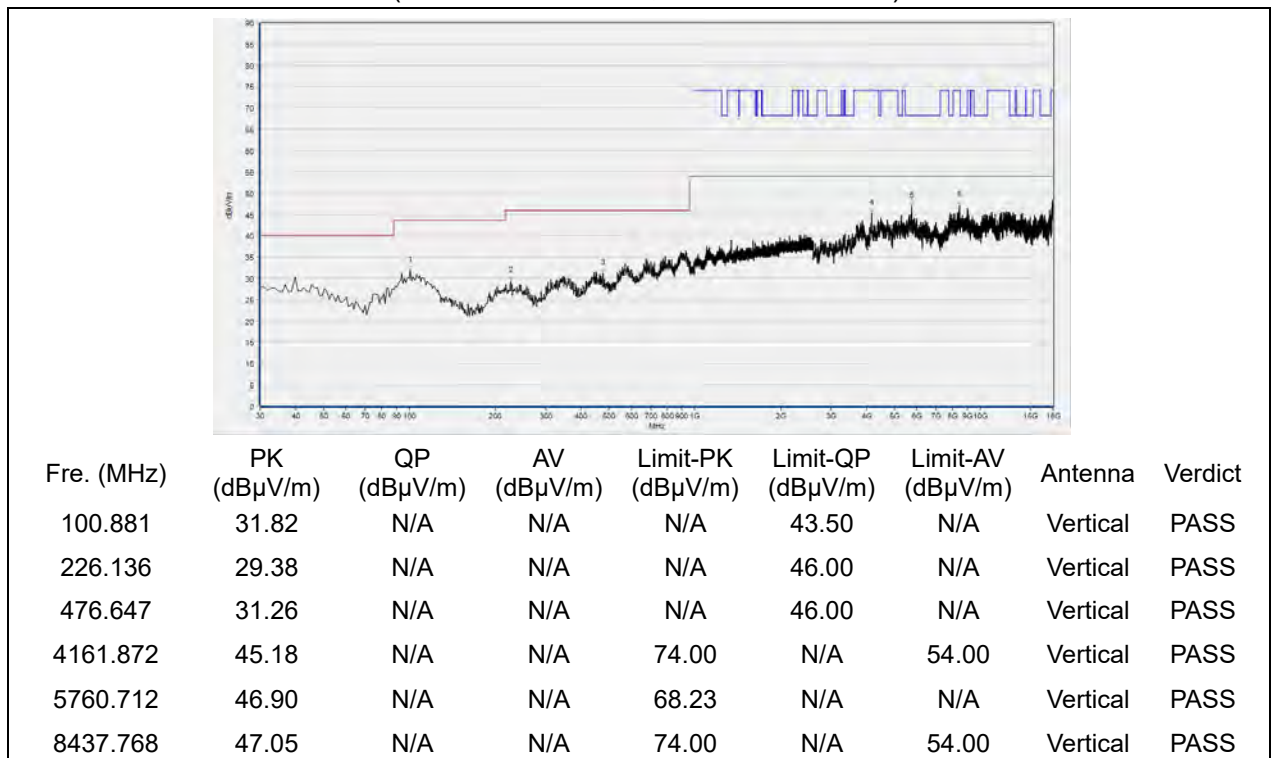


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 142

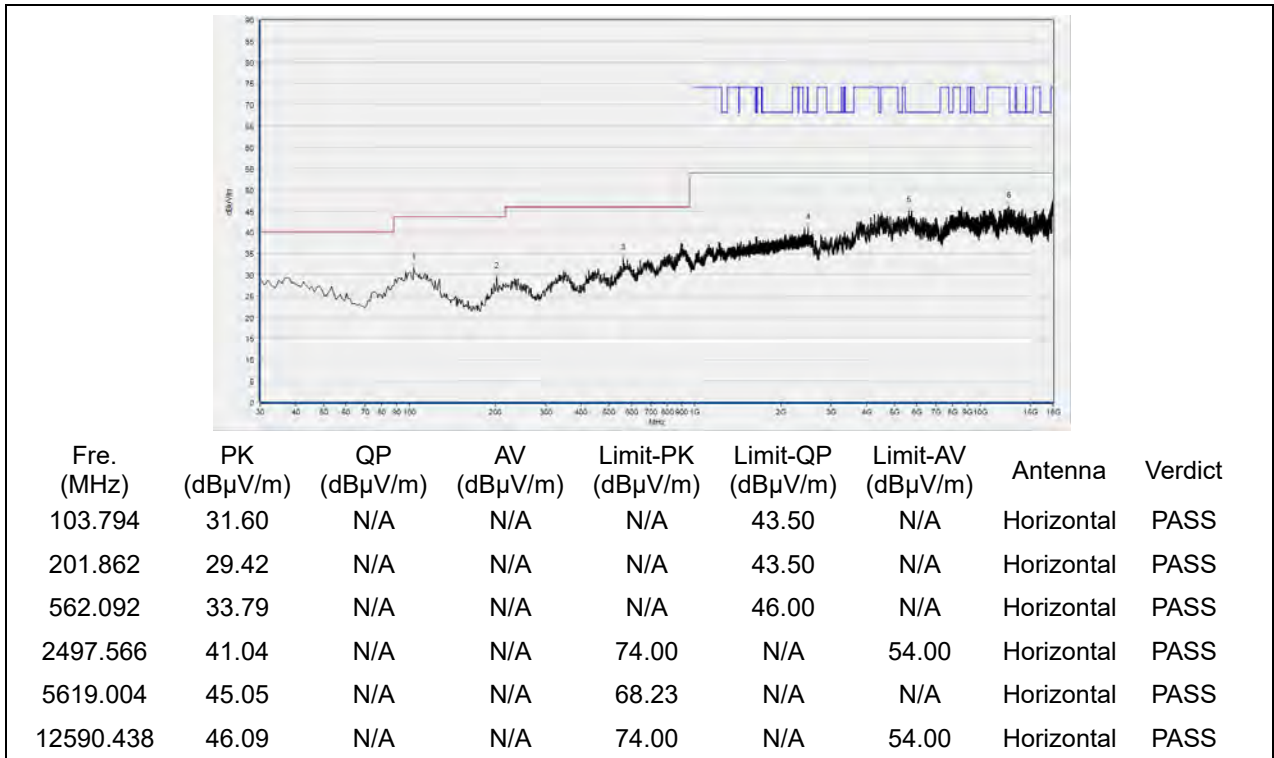


(Antenna Horizontal, 30MHz to 18GHz)

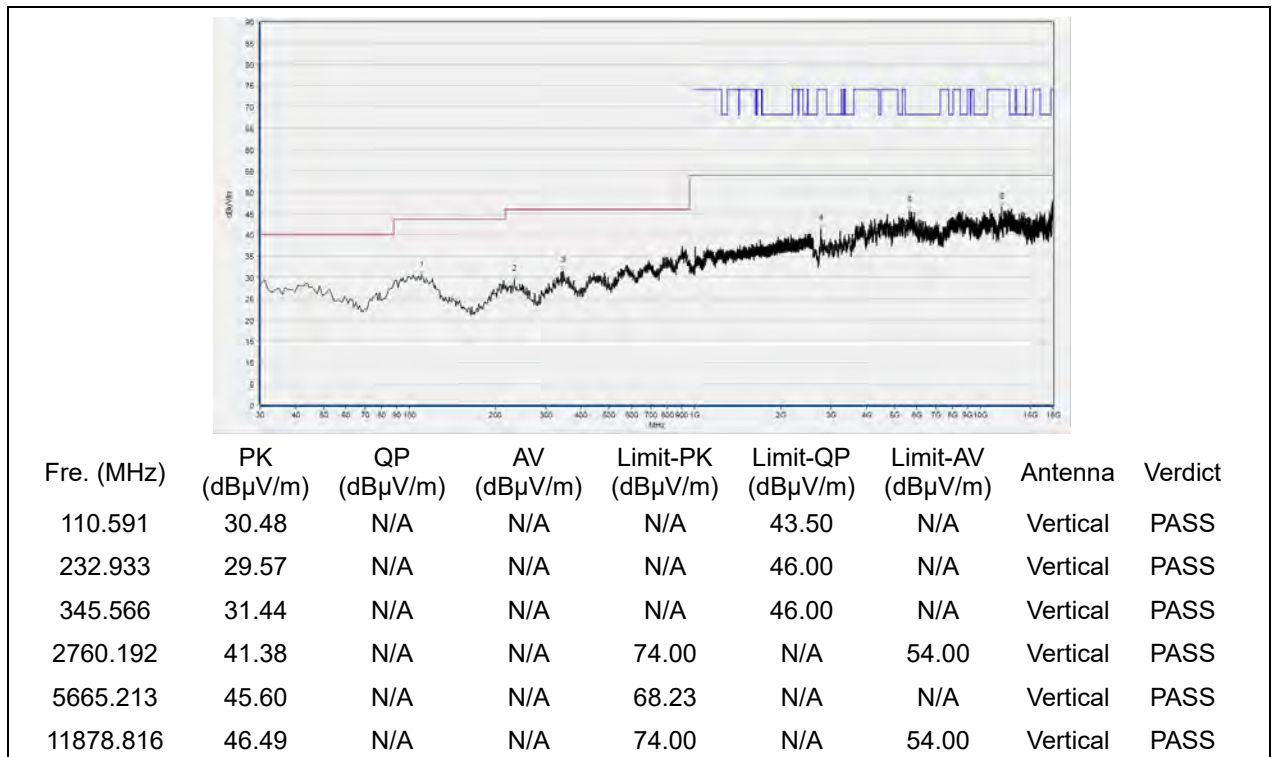


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 151



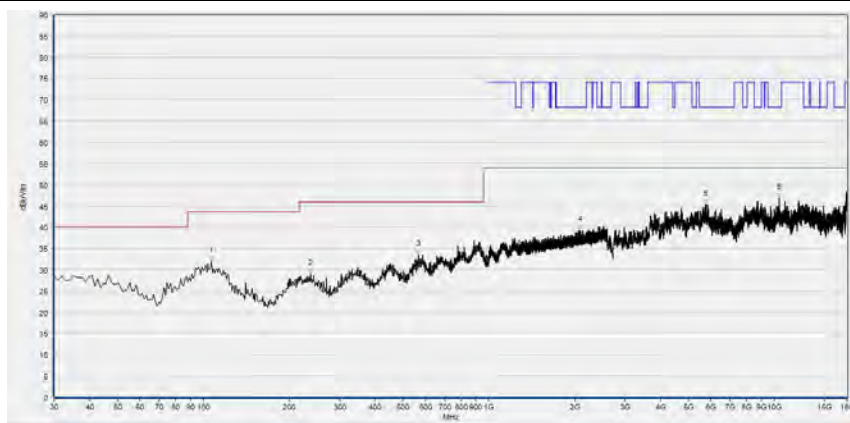
(Antenna Horizontal, 30MHz to 18GHz)



(Antenna Vertical, 30MHz to 18GHz)

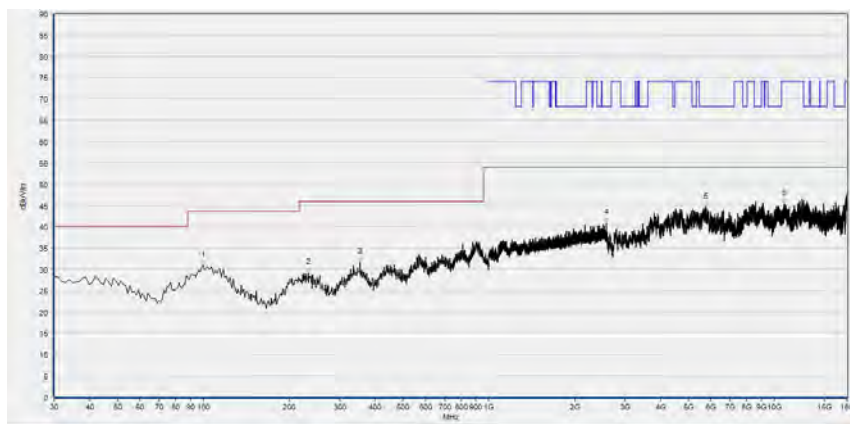


Plot for Channel 159



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
106.707	31.93	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
236.817	28.94	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
566.947	33.44	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2086.229	39.40	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
5751.470	45.48	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS
10421.684	46.86	N/A	N/A	68.23	N/A	N/A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



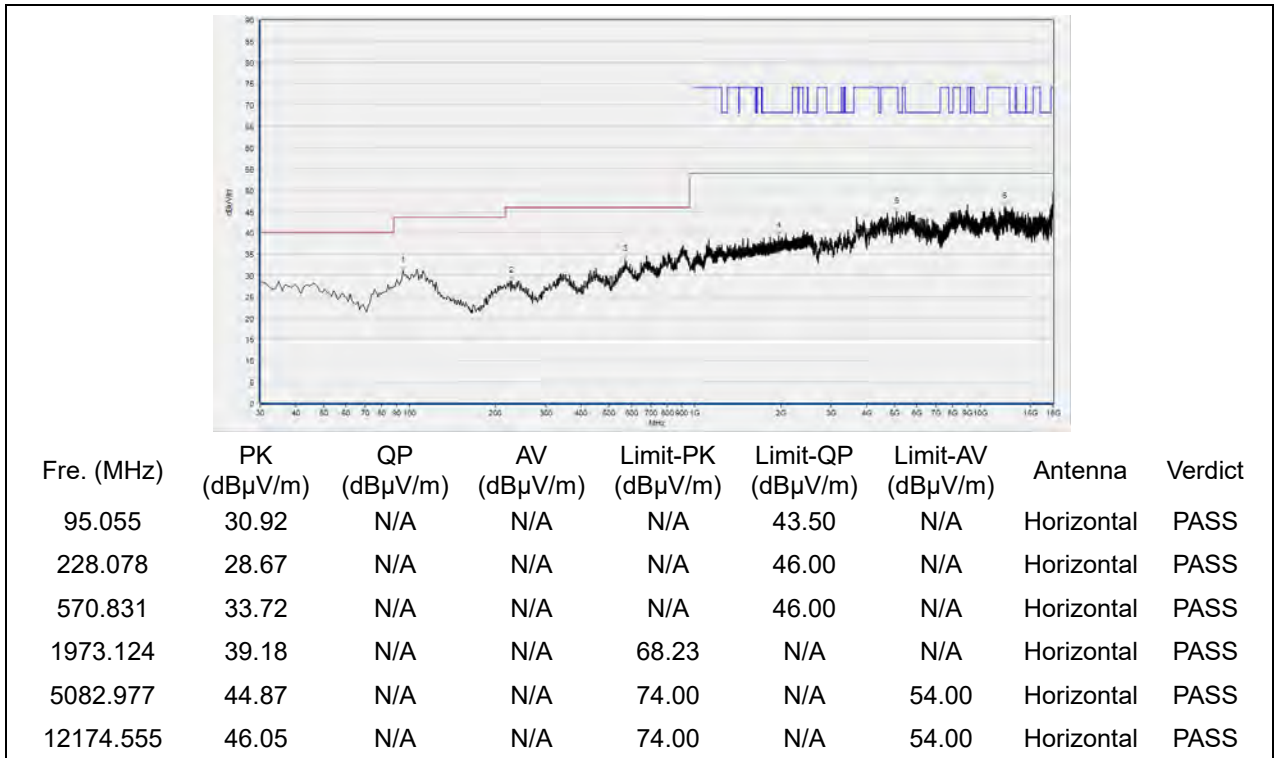
Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
99.910	30.89	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
232.933	29.18	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
354.304	31.66	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2575.458	40.85	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5742.228	44.60	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
10812.923	45.42	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

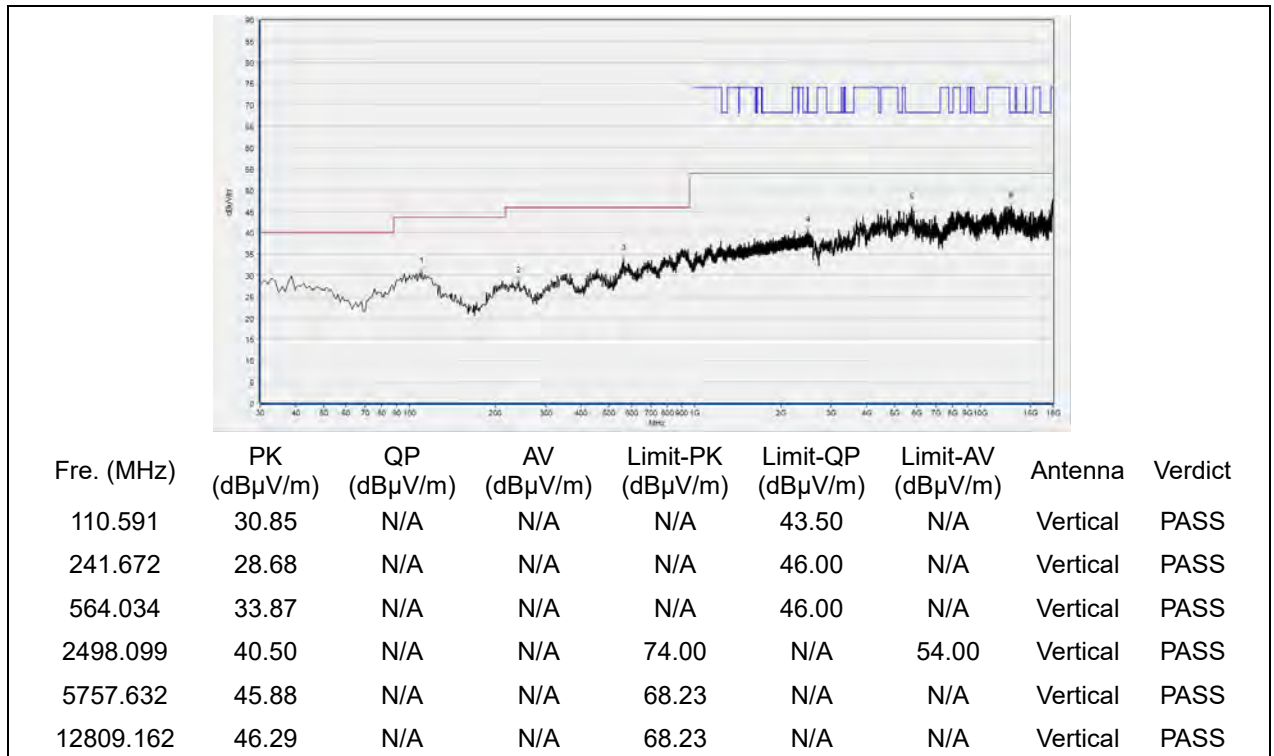


802.11ac (VHT80) Mode

Plot for Channel 42

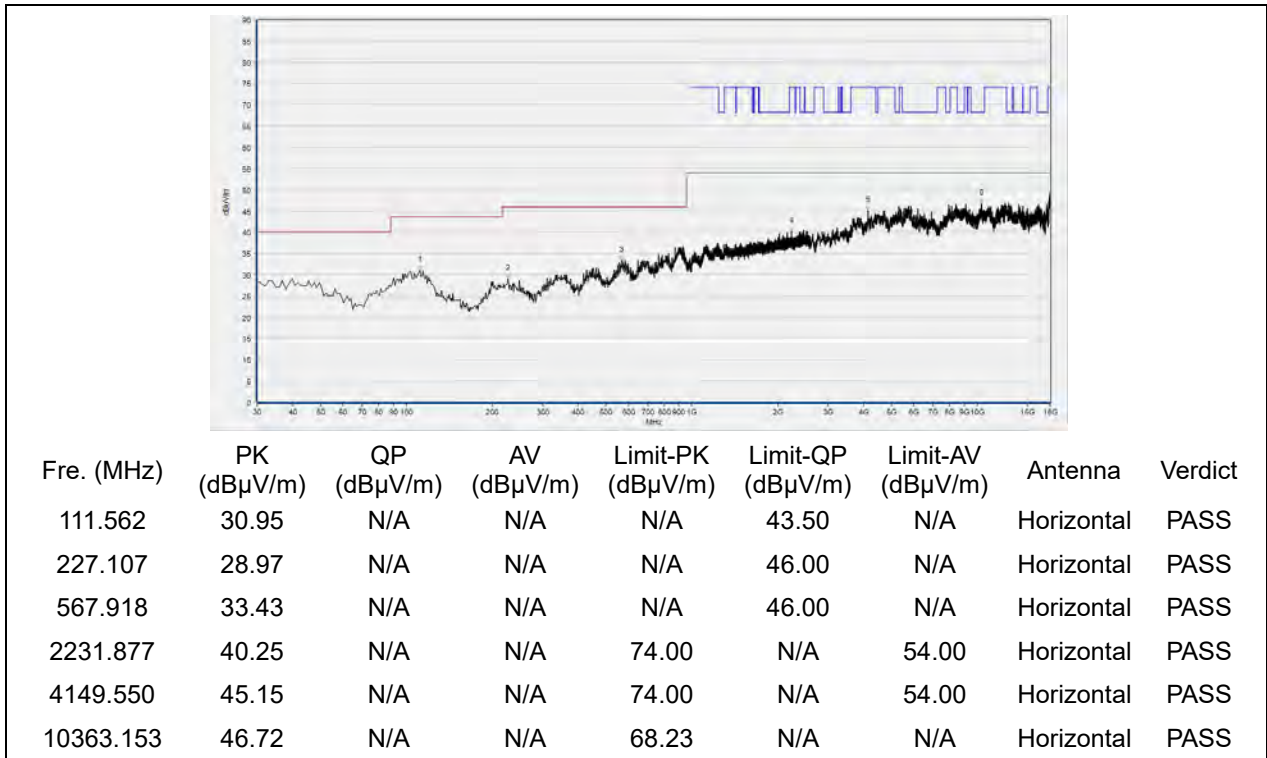


(Antenna Horizontal, 30MHz to 18GHz)

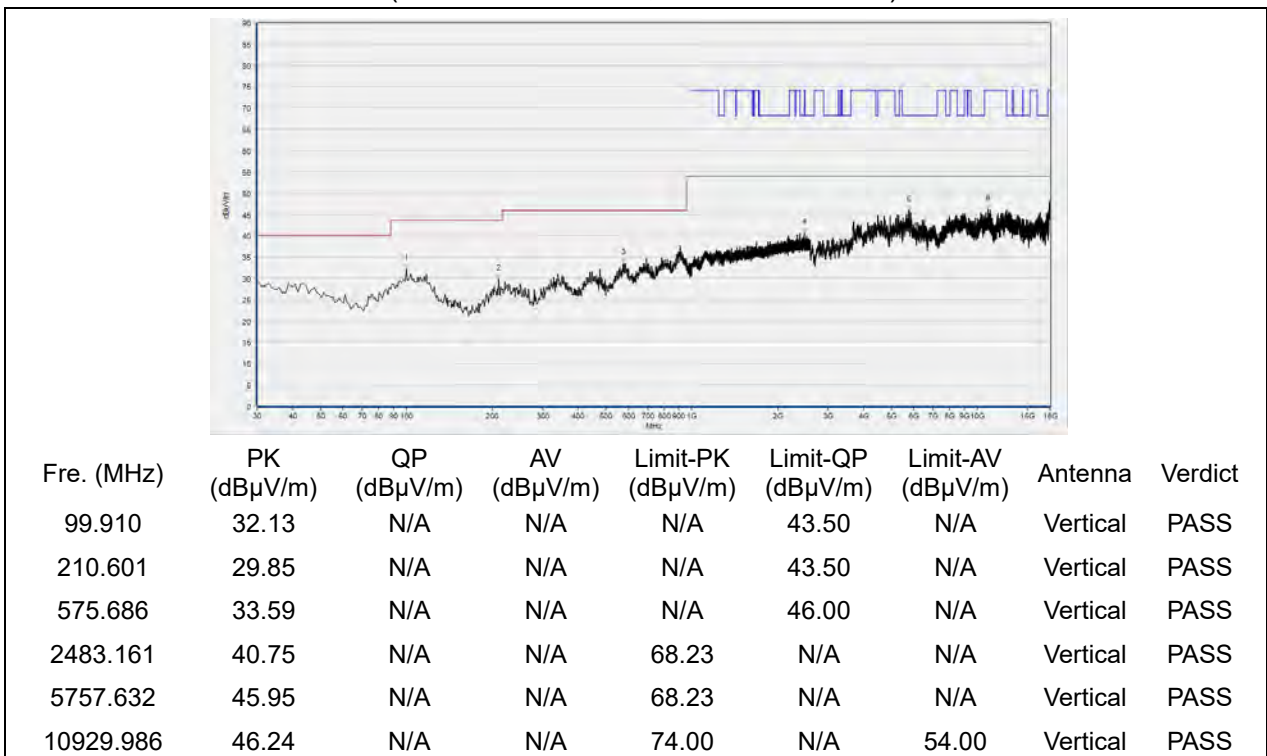


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 58

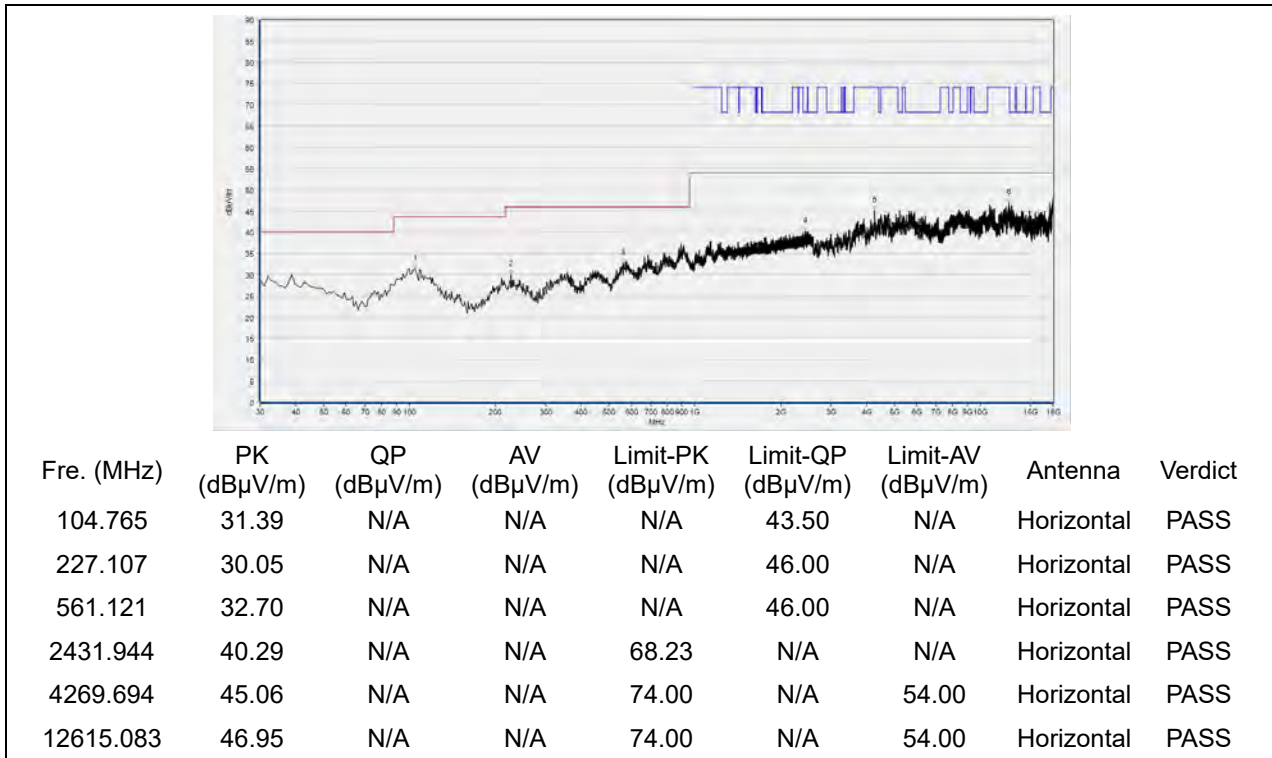


(Antenna Horizontal, 30MHz to 18GHz)

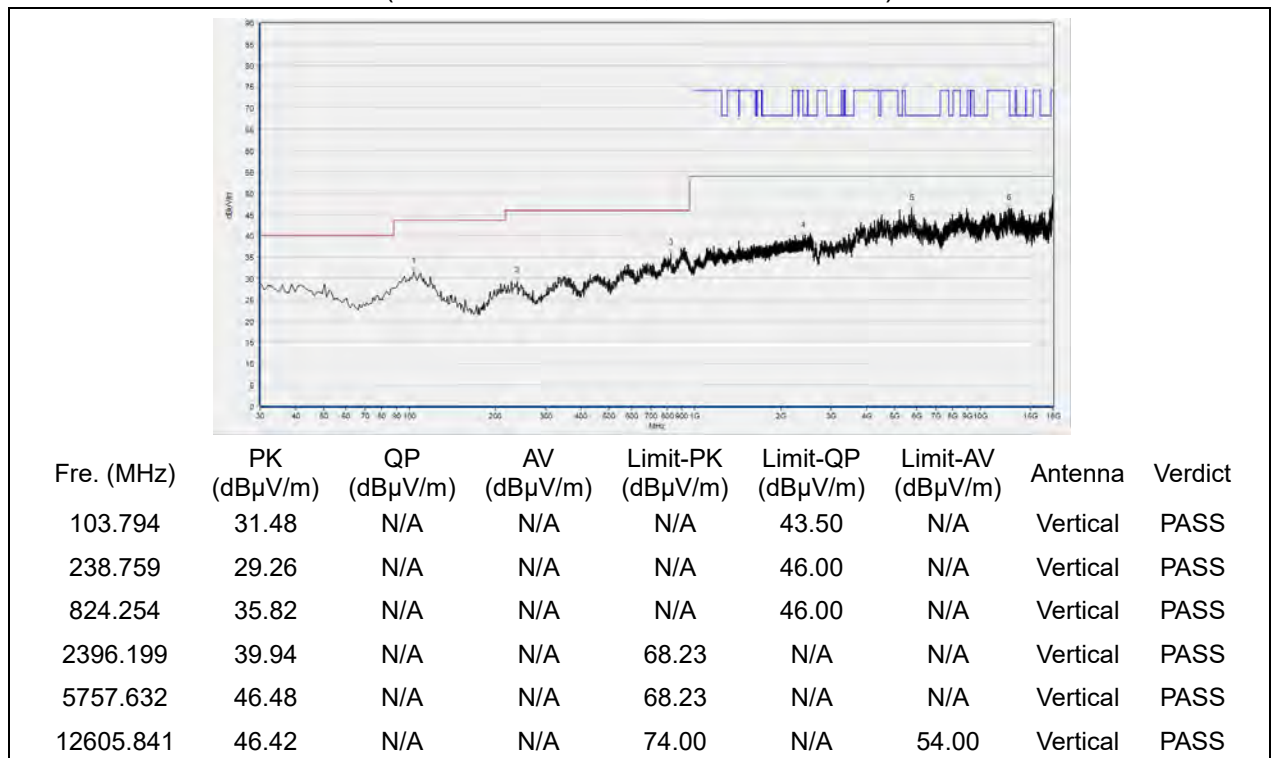


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 106

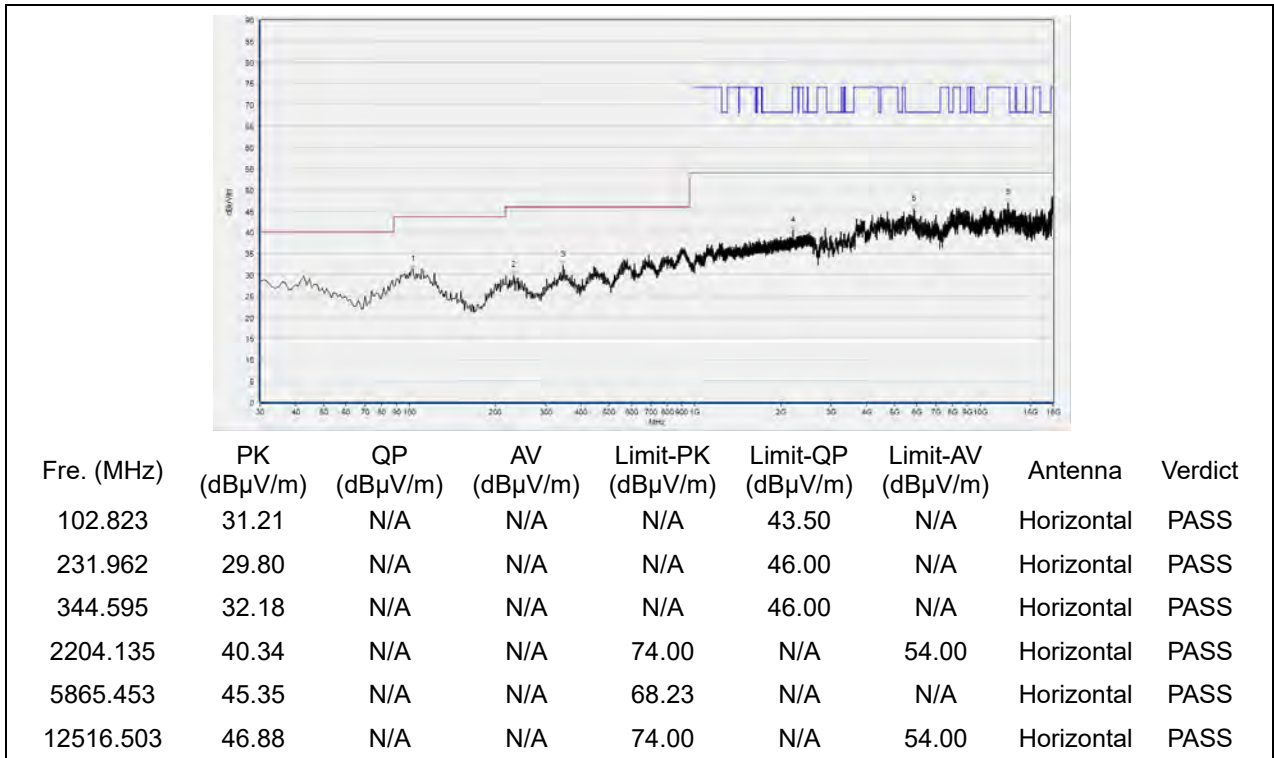


(Antenna Horizontal, 30MHz to 18GHz)

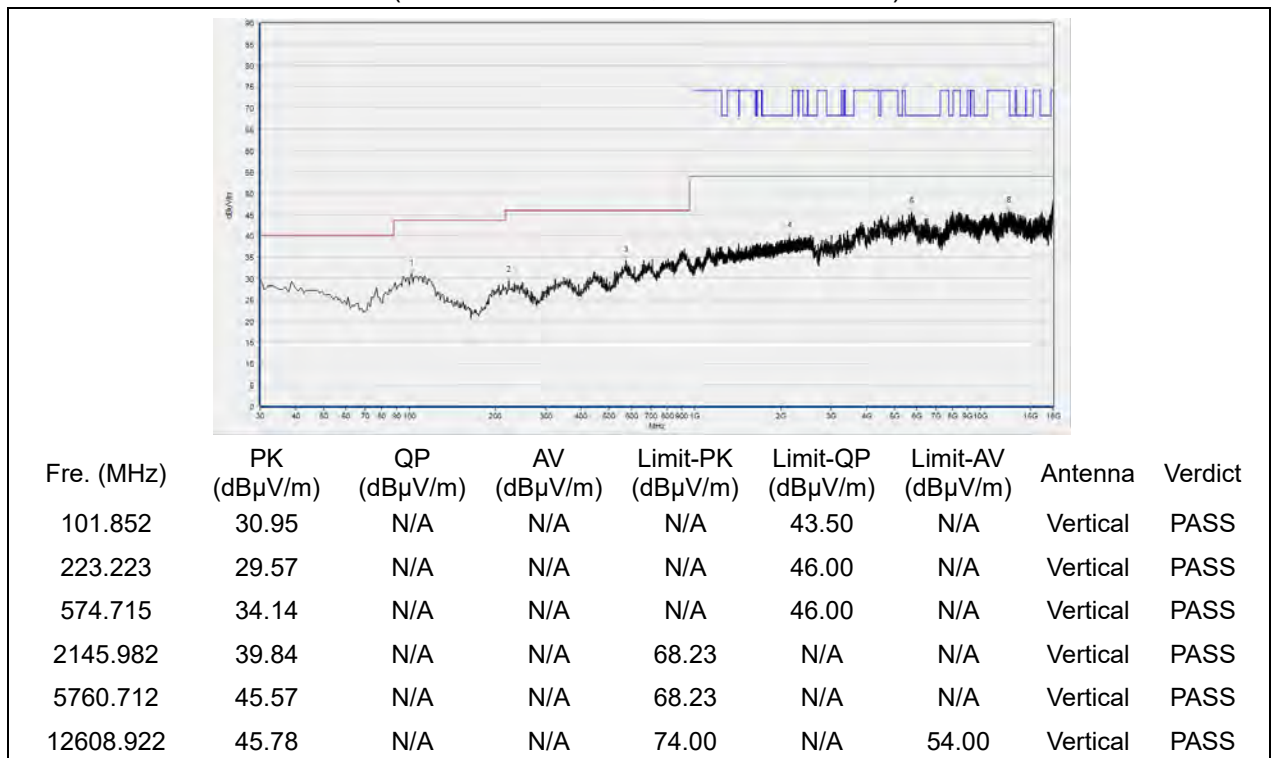


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 122

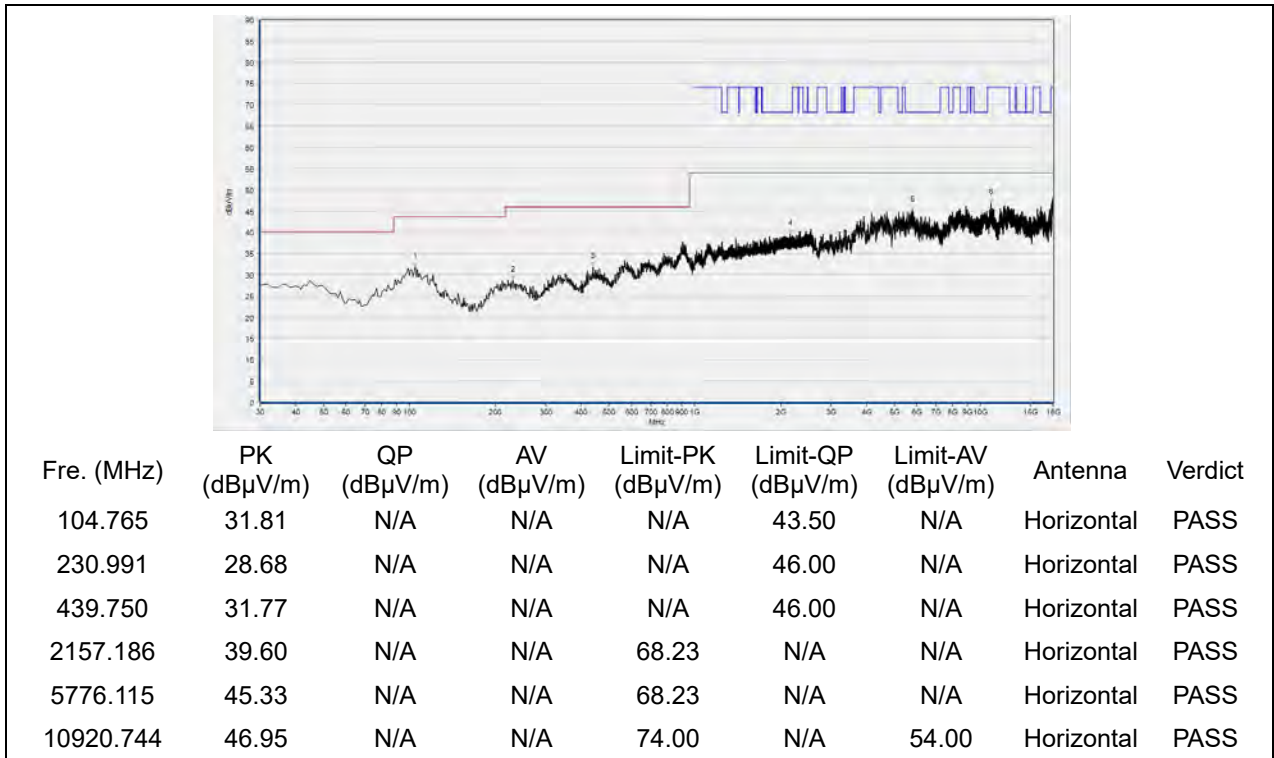


(Antenna Horizontal, 30MHz to 18GHz)

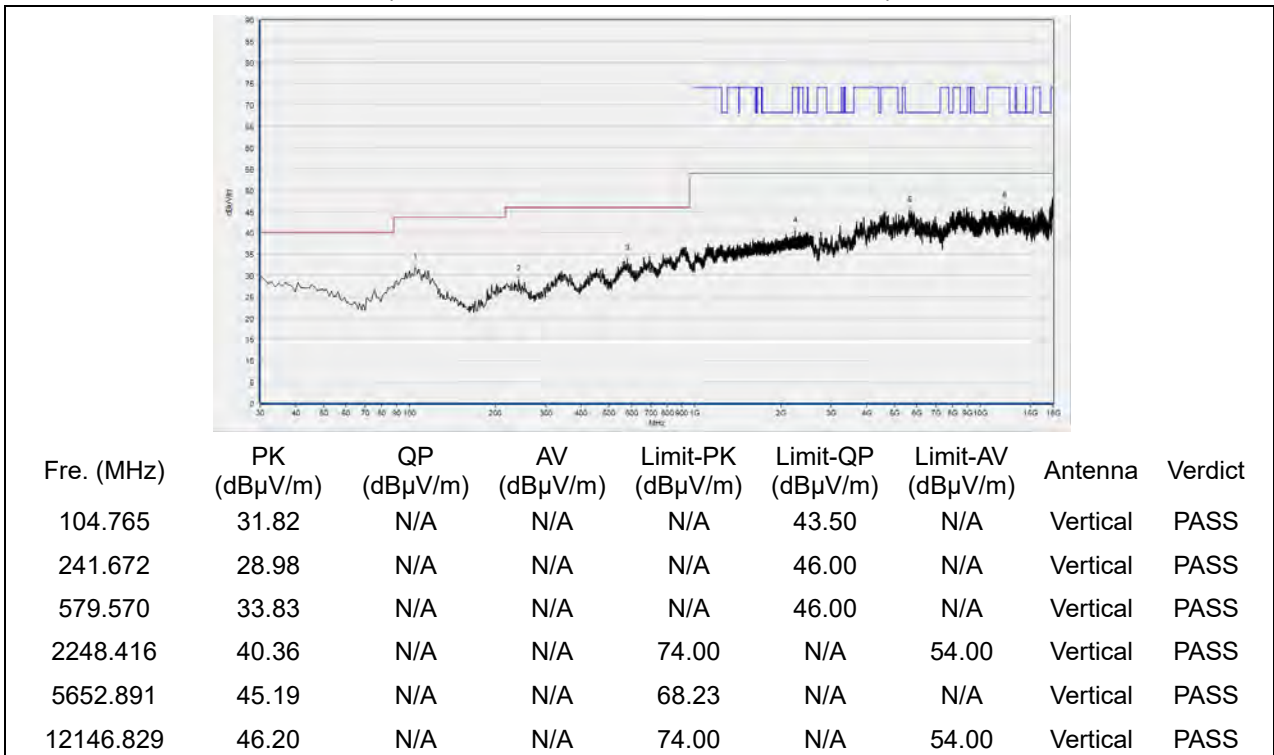


(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 138

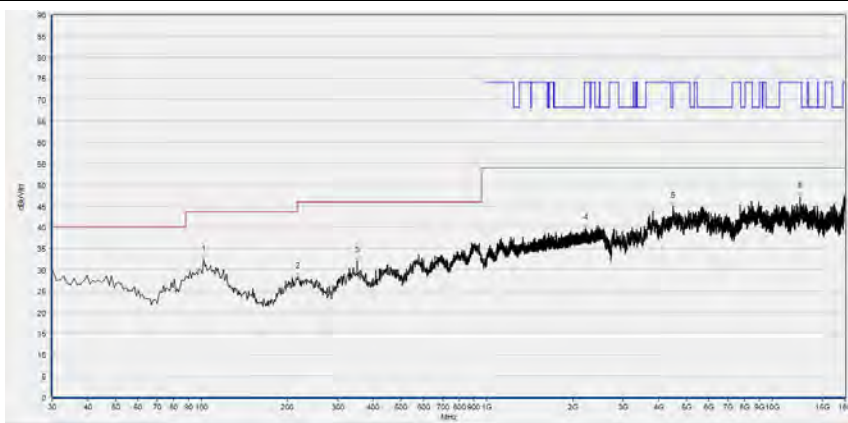


(Antenna Horizontal, 30MHz to 18GHz)



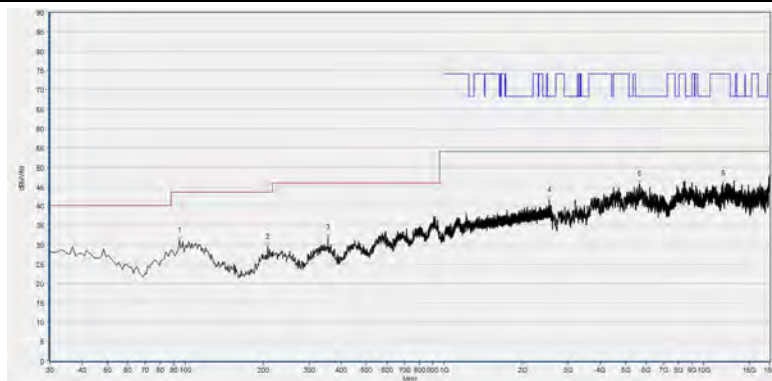
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 155



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
101.852	32.32	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
218.368	28.26	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
351.391	31.95	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
2221.207	39.71	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4500.740	44.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
12531.906	47.02	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
95.055	31.25	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
207.688	29.52	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
355.275	31.78	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
2542.914	41.50	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
5640.568	45.67	N/A	N/A	68.23	N/A	N/A	Vertical	PASS
11866.493	45.99	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

————— END OF REPORT —————