

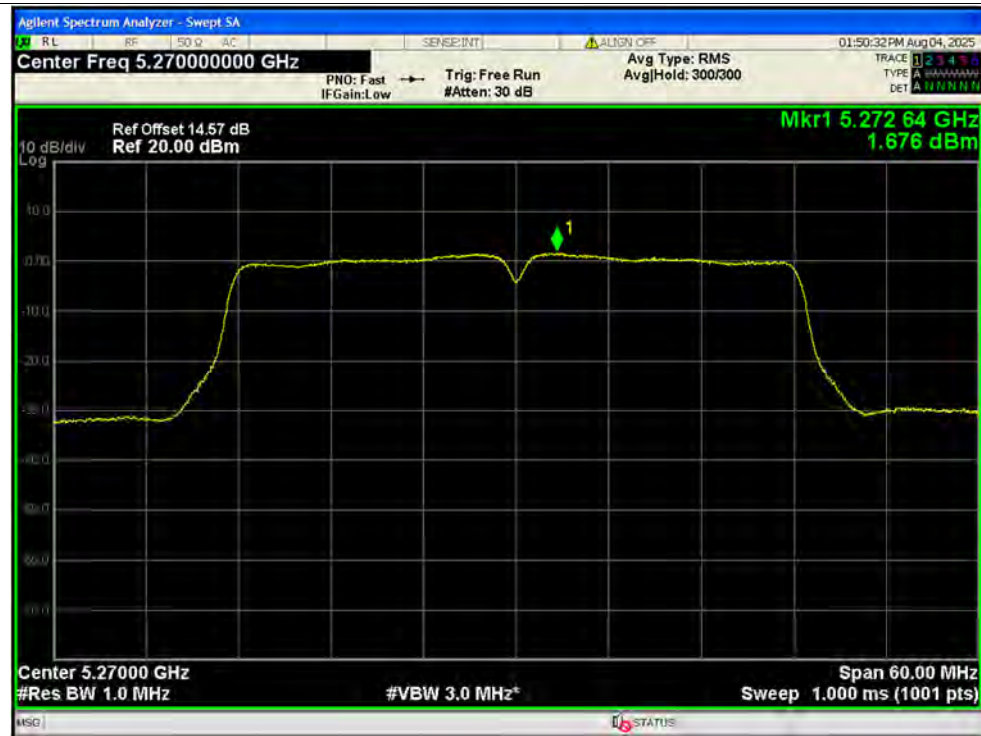
PSD NVNT n40 5190MHz Ant1



PSD NVNT n40 5230MHz Ant1



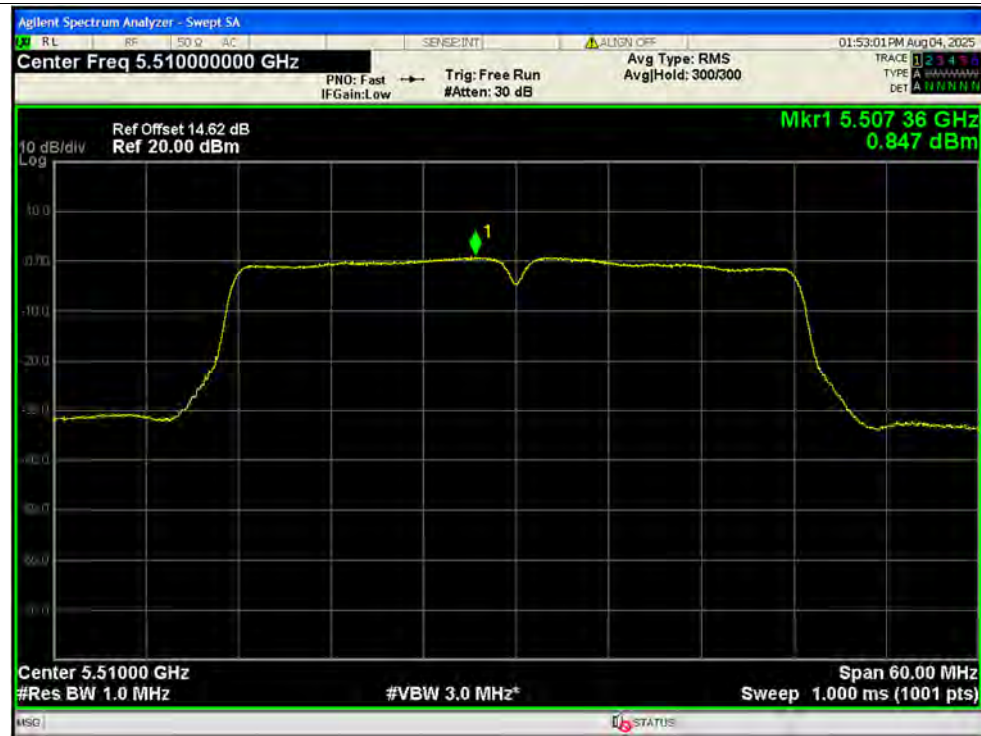
PSD NVNT n40 5270MHz Ant1



PSD NVNT n40 5310MHz Ant1



PSD NVNT n40 5510MHz Ant1



PSD NVNT n40 5550MHz Ant1



PSD NVNT n40 5710MHz Ant1



PSD NVNT n40 5755MHz Ant1



PSD NVNT n40 5795MHz Ant1



PSD NVNT ac20 5180MHz Ant1

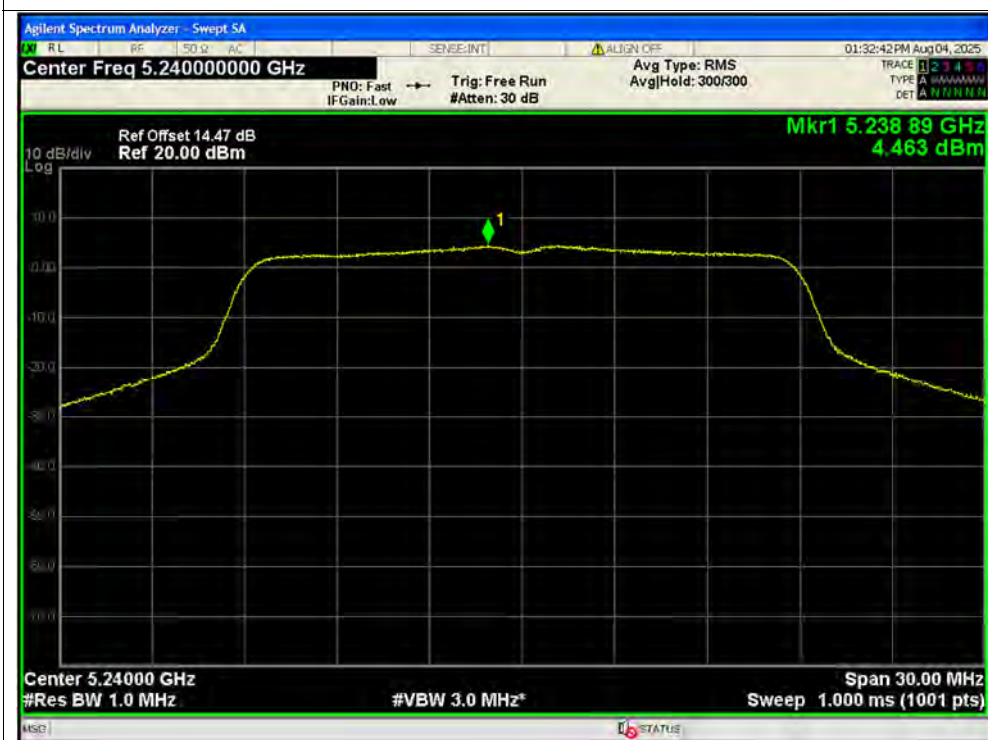




PSD NVNT ac20 5220MHz Ant1



PSD NVNT ac20 5240MHz Ant1



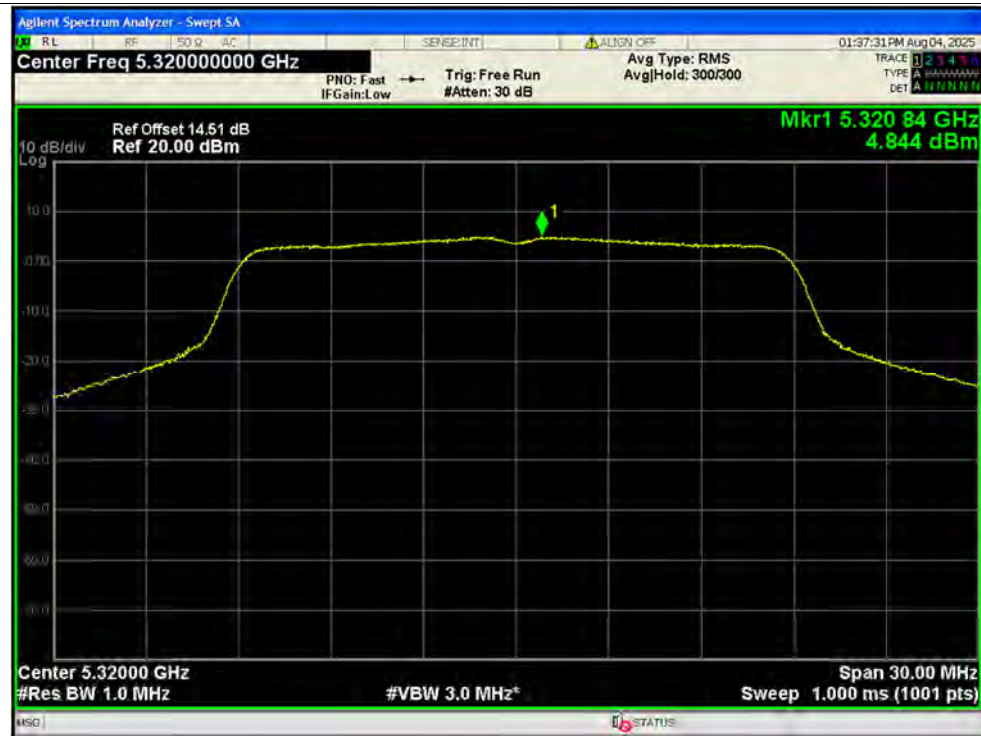
PSD NVNT ac20 5260MHz Ant1



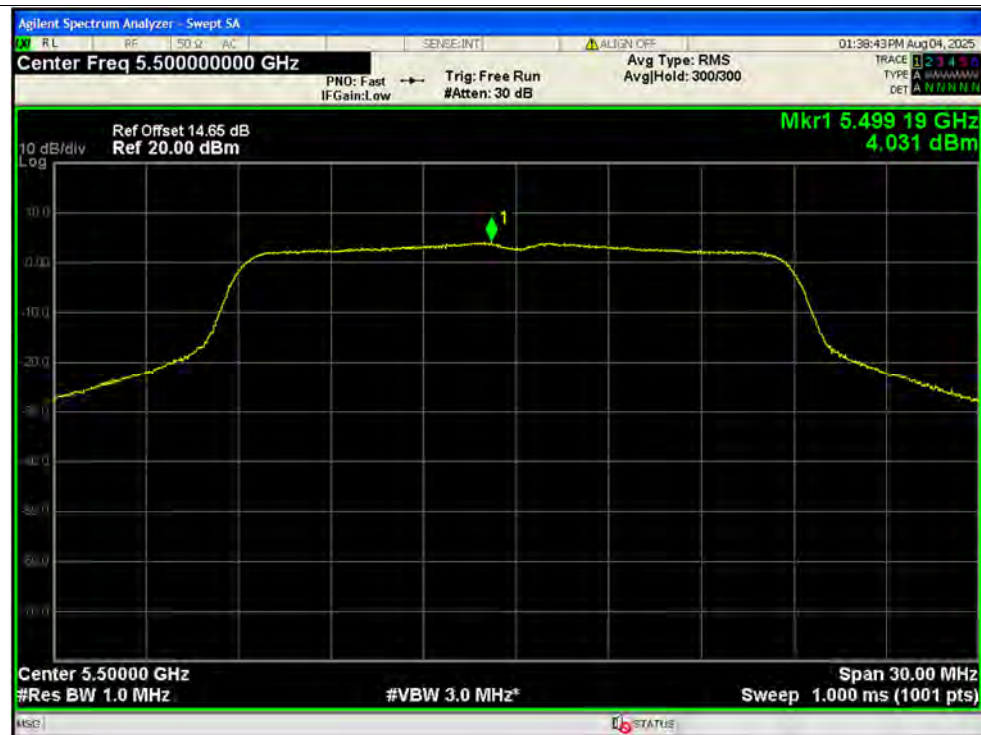
PSD NVNT ac20 5300MHz Ant1



PSD NVNT ac20 5320MHz Ant1



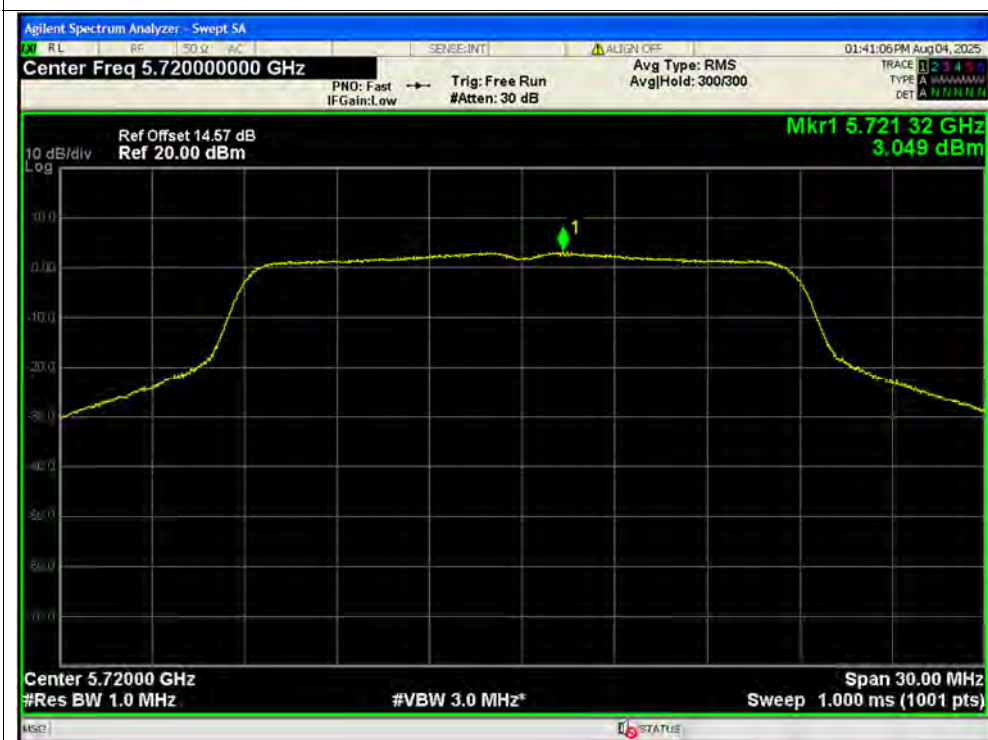
PSD NVNT ac20 5500MHz Ant1



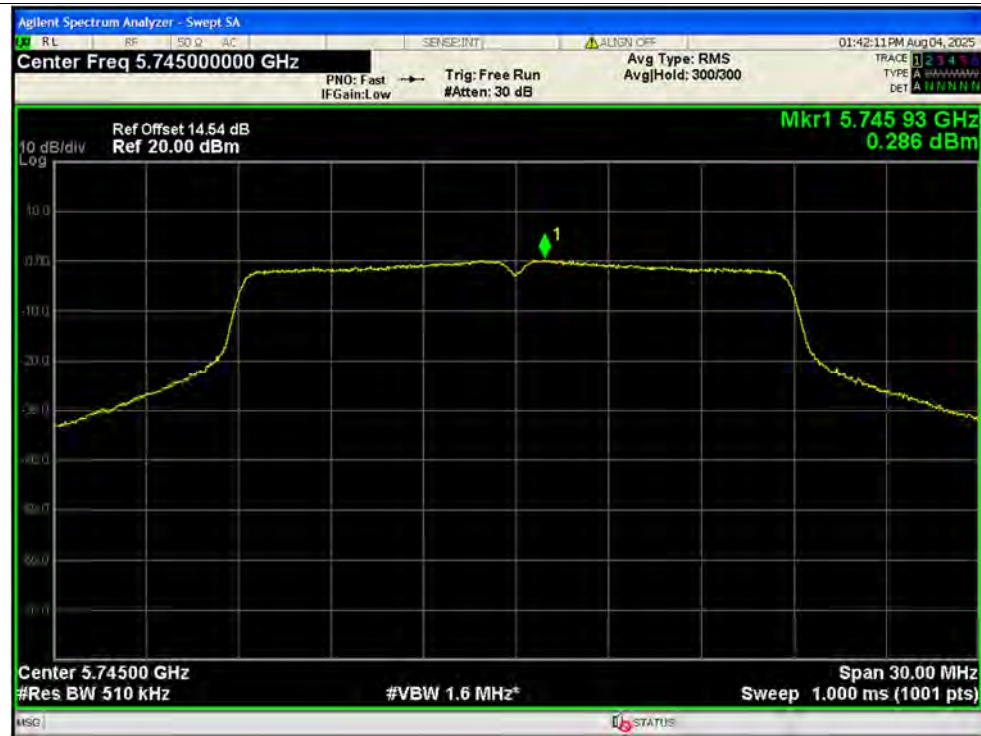
PSD NVNT ac20 5580MHz Ant1



PSD NVNT ac20 5720MHz Ant1



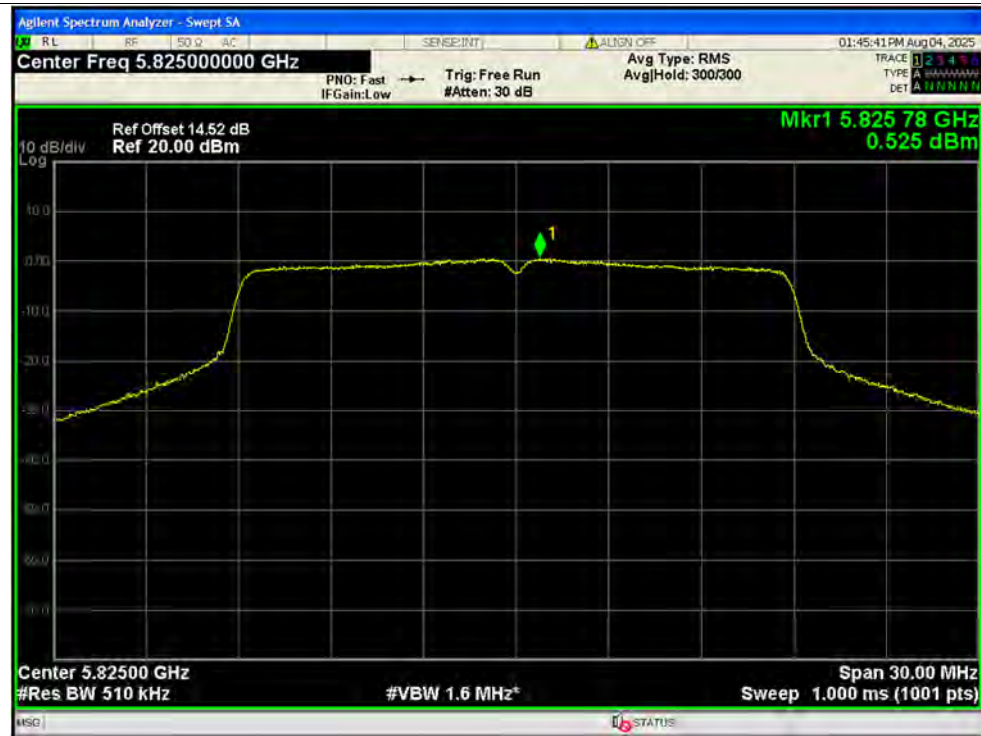
PSD NVNT ac20 5745MHz Ant1



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 5550MHz 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 3.5V	CW	5180	Ant1	5179.995	-5000	-0.97	25	Pass
20C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
20C 4.4V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
-30C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
-20C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
-10C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
0C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
10C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
30C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
40C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
50C 3.88V	CW	5180	Ant1	5179.994	-6000	-1.16	25	Pass
60C 3.88V	CW	5180	Ant1	5179.993	-7000	-1.35	25	Pass
70C 3.88V	CW	5180	Ant1	5179.993	-7000	-1.35	25	Pass
75C 3.88V	CW	5180	Ant1	5179.993	-7000	-1.35	25	Pass
20C 3.5V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
20C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
20C 4.4V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
-30C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
-20C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
-10C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
0C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
10C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
30C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
40C 3.88V	CW	5260	Ant1	5259.992	-8000	-1.52	25	Pass
50C 3.88V	CW	5260	Ant1	5259.991	-9000	-1.71	25	Pass
60C 3.88V	CW	5260	Ant1	5259.991	-9000	-1.71	25	Pass
70C 3.88V	CW	5260	Ant1	5259.991	-9000	-1.71	25	Pass
75C 3.88V	CW	5260	Ant1	5259.991	-9000	-1.71	25	Pass
20C 3.5V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
20C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
20C 4.4V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
-30C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
-20C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
-10C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass



0C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
10C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
30C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
40C 3.88V	CW	5500	Ant1	5499.991	-9000	-1.64	25	Pass
50C 3.88V	CW	5500	Ant1	5499.99	-10000	-1.82	25	Pass
60C 3.88V	CW	5500	Ant1	5499.99	-10000	-1.82	25	Pass
70C 3.88V	CW	5500	Ant1	5499.99	-10000	-1.82	25	Pass
75C 3.88V	CW	5500	Ant1	5499.99	-10000	-1.82	25	Pass
20C 3.5V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
20C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
20C 4.4V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
-30C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
-20C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
-10C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
0C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
10C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
30C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
40C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
50C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
60C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
70C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass
75C 3.88V	CW	5745	Ant1	5744.99	-10000	-1.74	25	Pass



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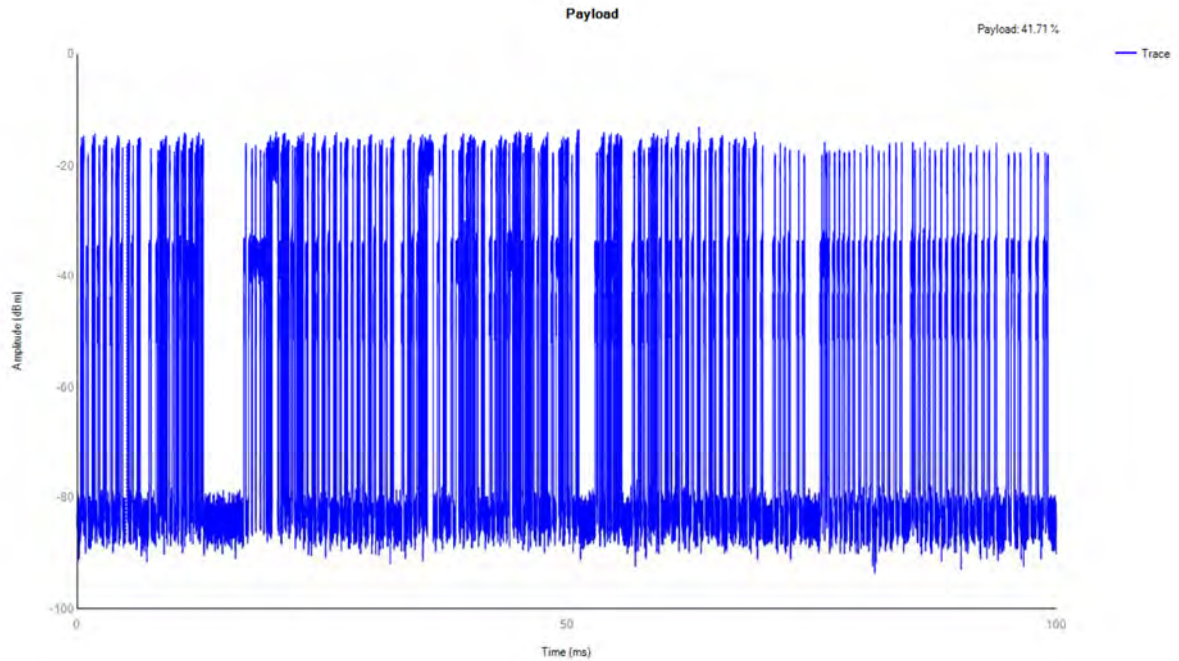
A.6. Dynamic Frequency Selection

Payload

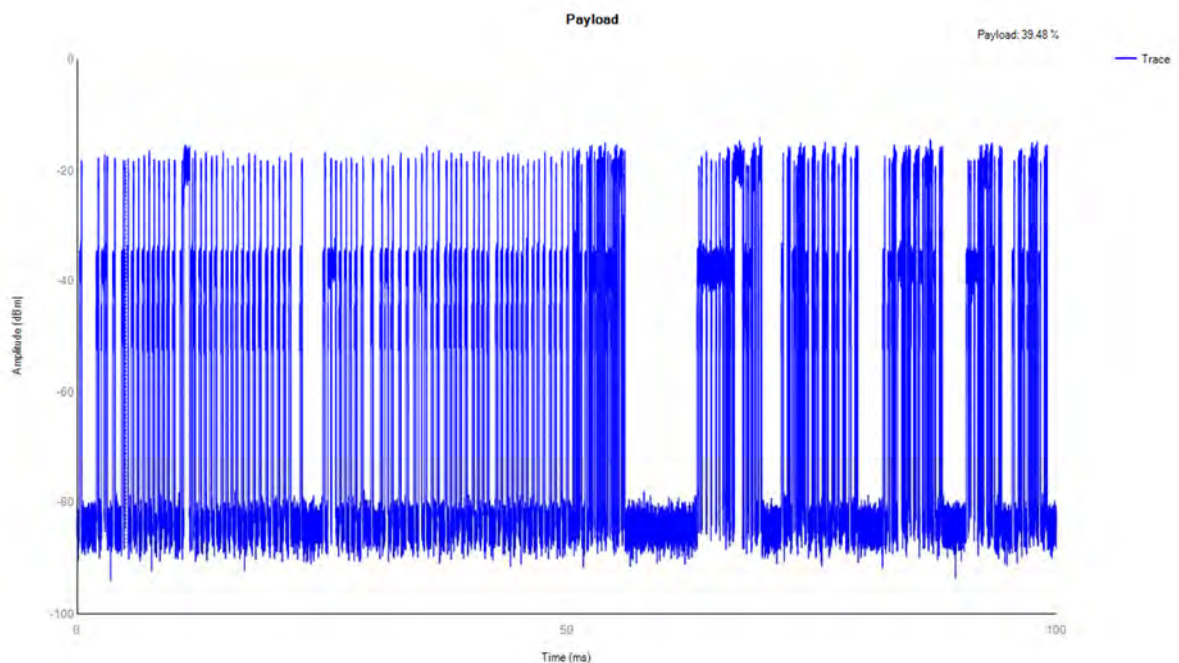
Mode	Frequency (MHz)	Result	Verdict
ac20	5320	41.71	Pass
ac20	5500	39.48	Pass
ac80	5290	41.02	Pass
ac80	5530	30.32	Pass

Test Graphs

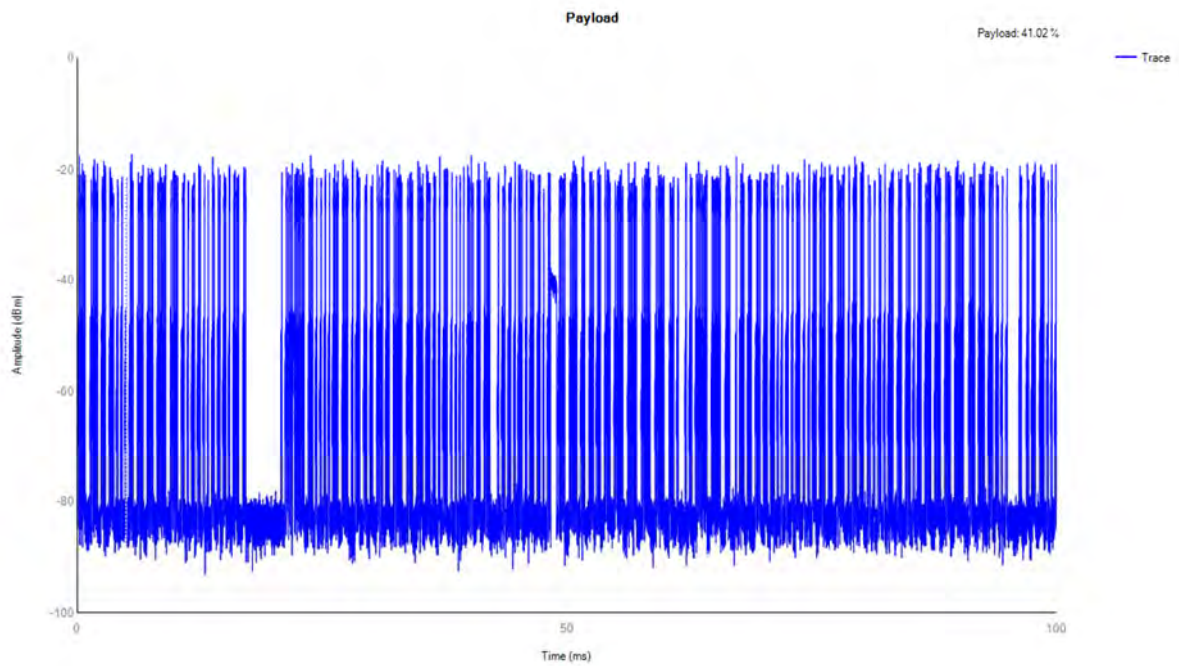
ac20 5320MHz Payload



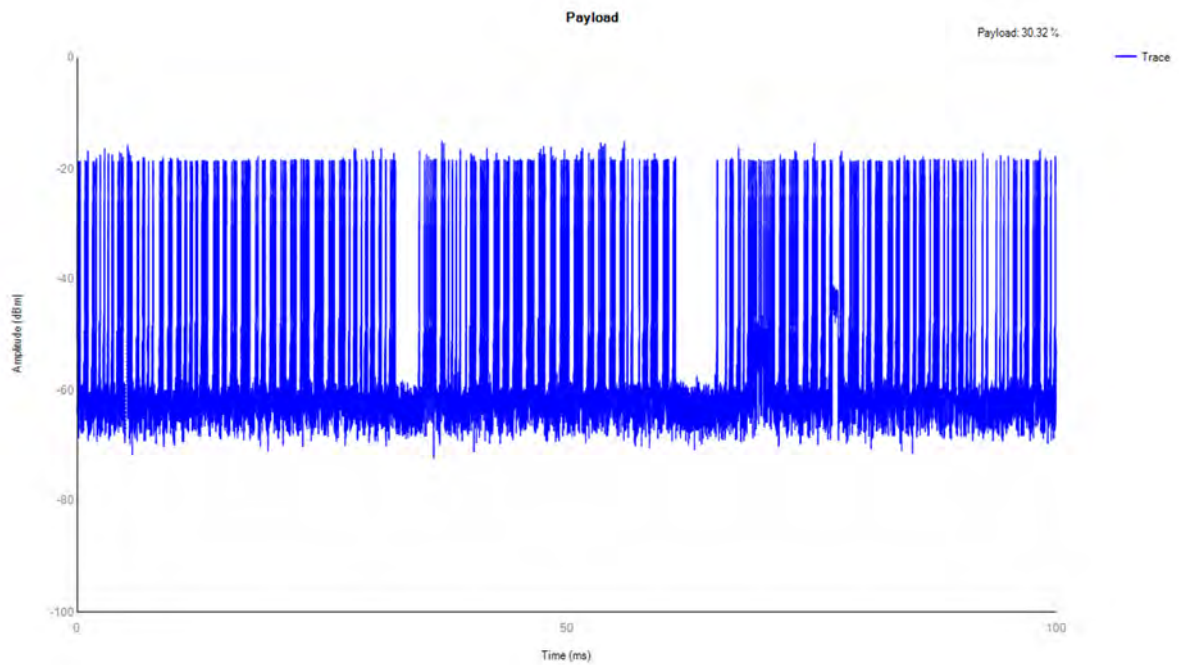
ac20 5500MHz Payload



ac80 5290MHz Payload



ac80 5530MHz Payload





Detection Thresholds

Mode	Frequency (MHz)	Type	Result	Verdict
ac20	5320	DFS_FCC_T0	See test Graph	Pass
ac20	5500	DFS_FCC_T0	See test Graph	Pass
ac80	5290	DFS_FCC_T0	See test Graph	Pass
ac80	5530	DFS_FCC_T0	See test Graph	Pass

Spectrum analyzer settings:

Span: Zero

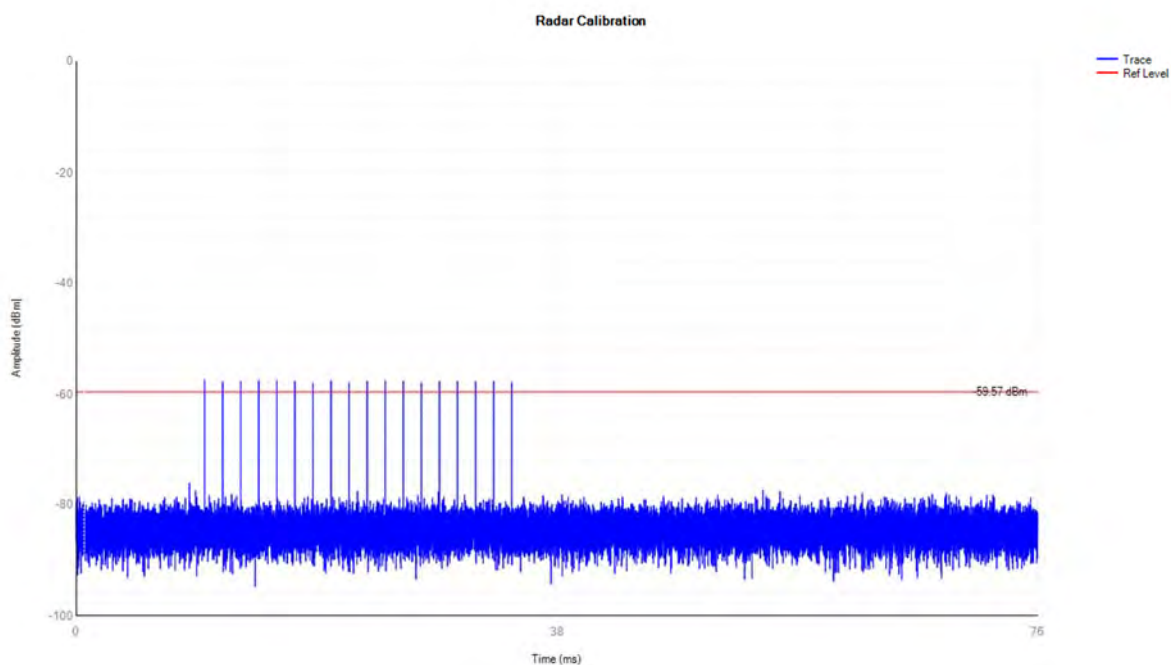
Detector Type: Peak

RBW: 3MHz

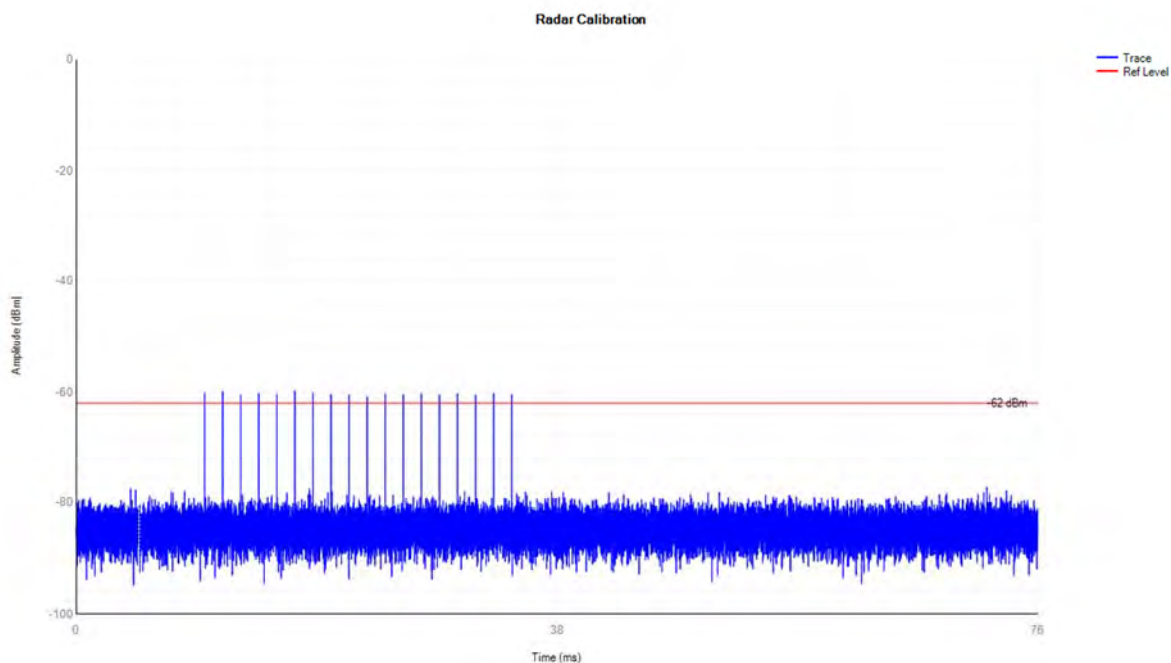
VBW: 3MHz

Test Graphs

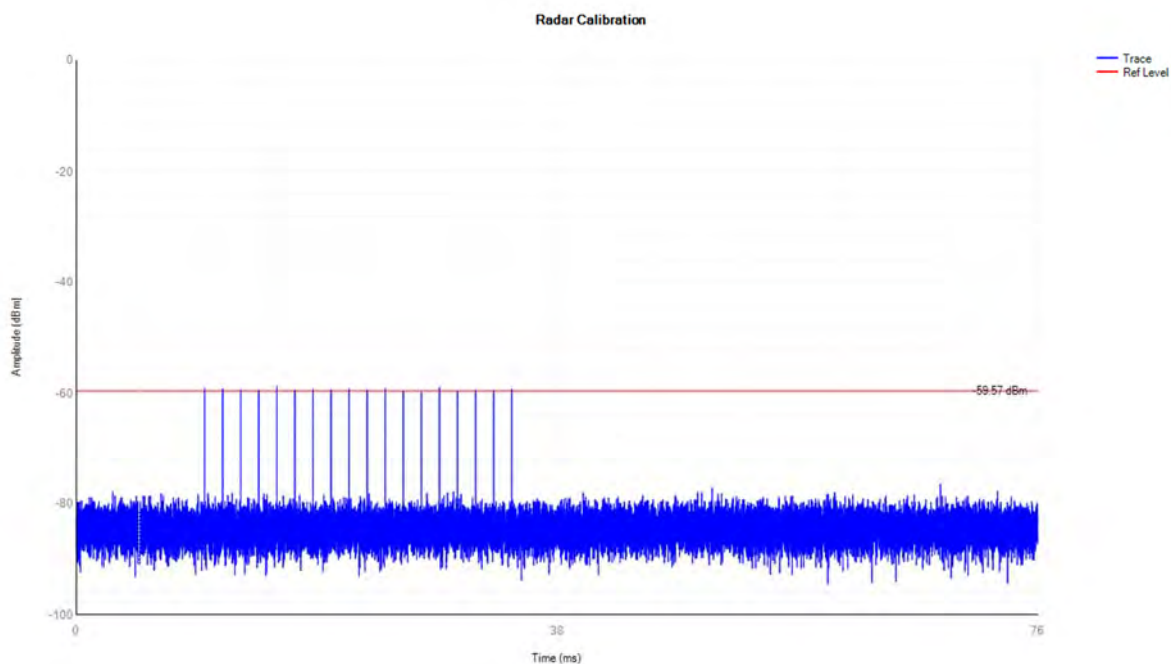
5320MHz DFS_FCC_T0



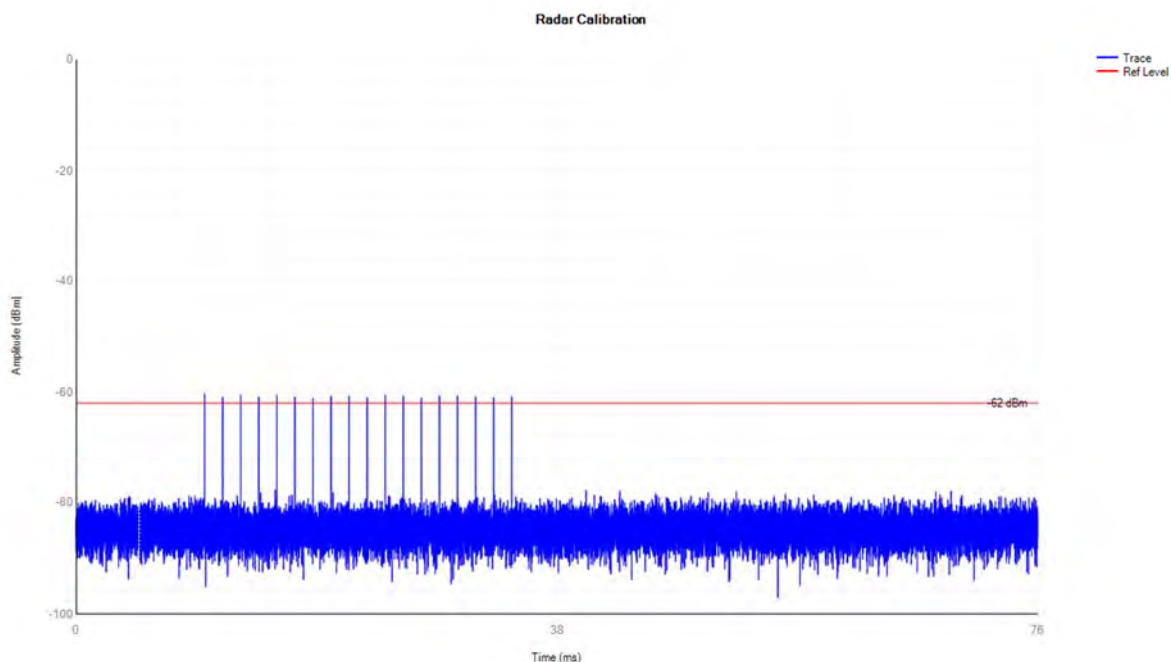
5500MHz DFS_FCC_T0



5290MHz DFS_FCC_T0



5530MHz DFS_FCC_T0





Channel Move Time and Channel Closing Transmission Time

Mode	Frequency (MHz)	Channel Move Time (s)	Limit Channel Move Time (s)	Close Transmission Time (s)	Limit Close Transmission Time (s)	Close Transmission Time after 200ms(s)	Limit Close Transmission Time after 200ms (s)	Verdict
ac20	5320	0.84	10	0.036	0.26	0.009	0.06	Pass
ac20	5500	0.848	10	0.033	0.26	0.008	0.06	Pass
ac80	5290	0.112	10	0.067	0.26	0	0.06	Pass
ac80	5530	0.879	10	0.057	0.26	0.009	0.06	Pass

Spectrum analyzer settings:

Span: Zero

Detector type: Peak

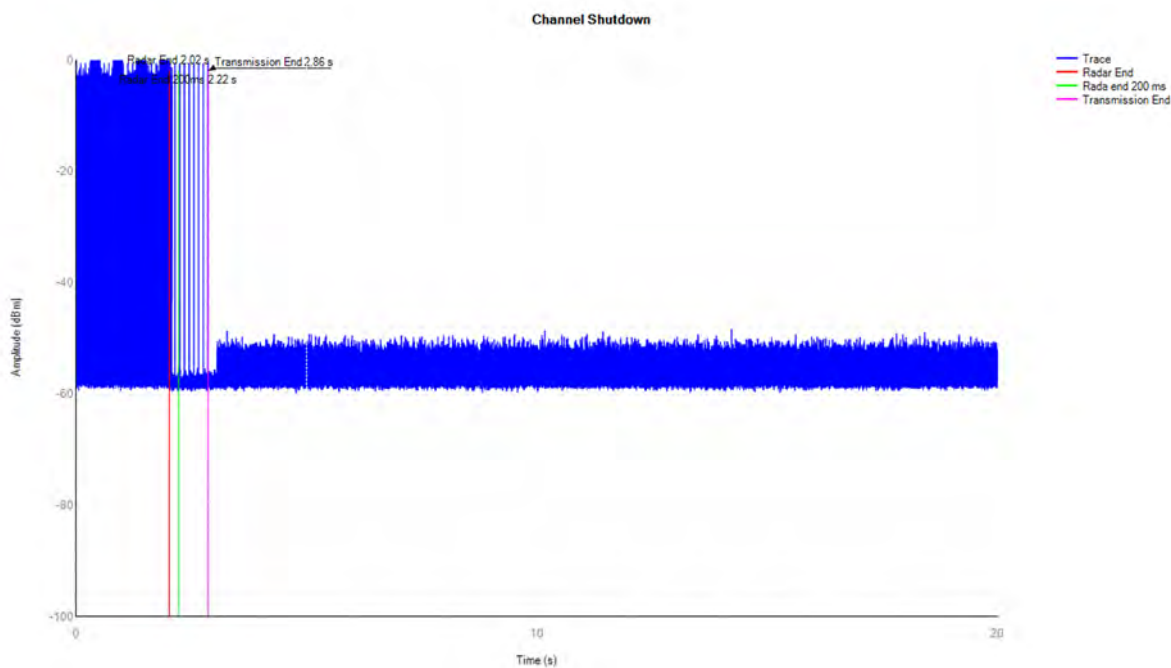
RBW: 3MHz

VBW: 3MHz

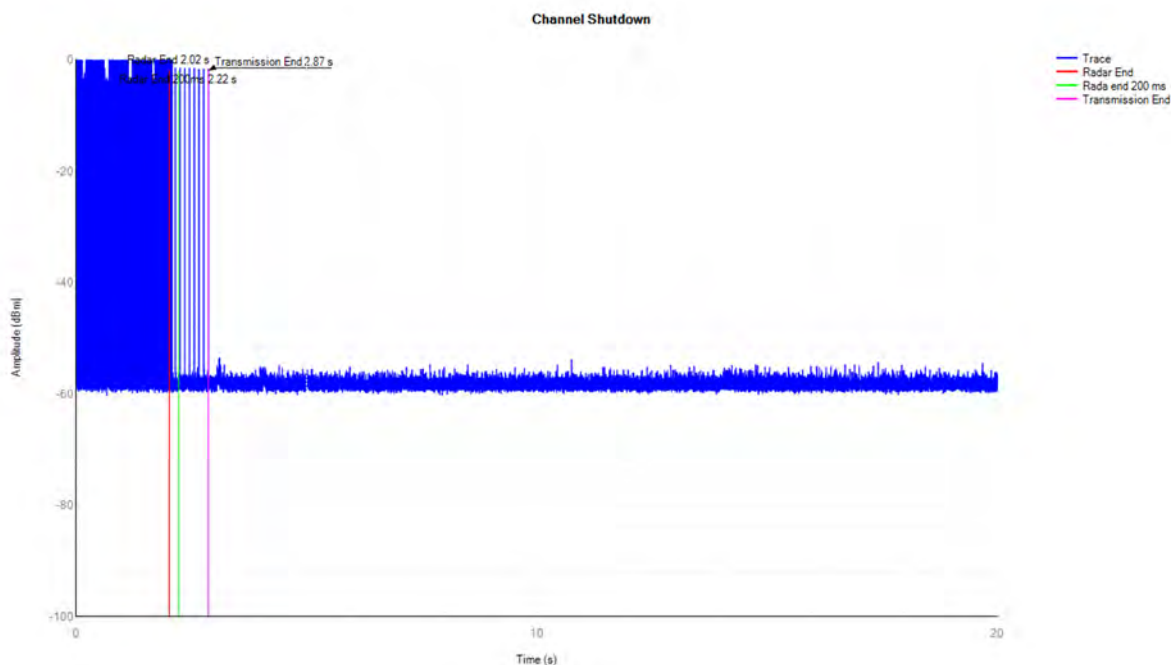
Sweep time: 20s

Test Graphs

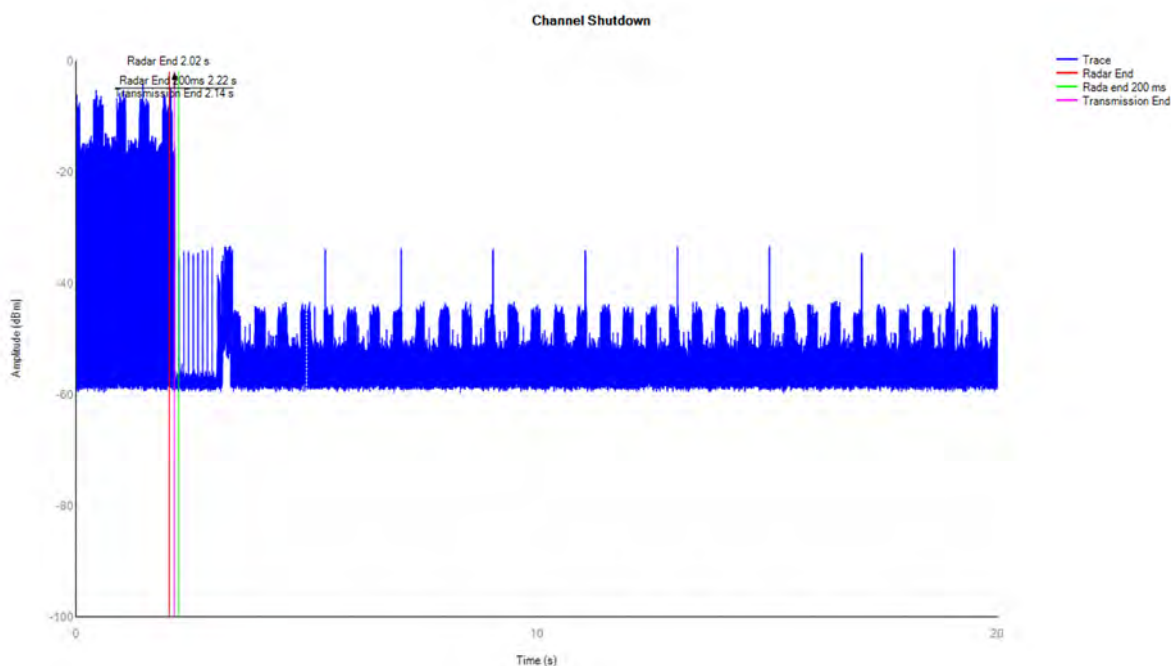
ac20 5320MHz Shutdown



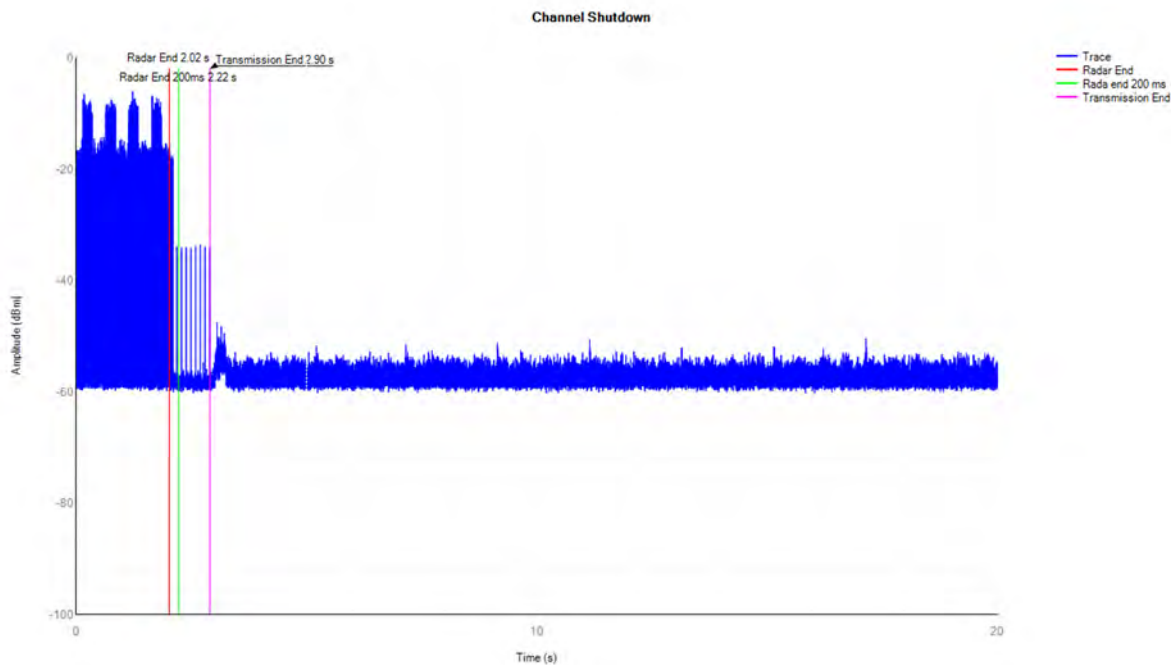
ac20 5500MHz Shutdown



ac80 5290MHz Shutdown



ac80 5530MHz Shutdown



Note: The signal above the noise floor after the radar signal ends is the signal which leaked from other channels that have been moved following the Master device.



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Non-Occupancy Period

Mode	Frequency (MHz)	Result	Verdict
ac20	5320	See test Graph	Pass
ac20	5500	See test Graph	Pass

Spectrum analyzer settings:

Span: Zero

Detector type: Peak

RBW: 3MHz

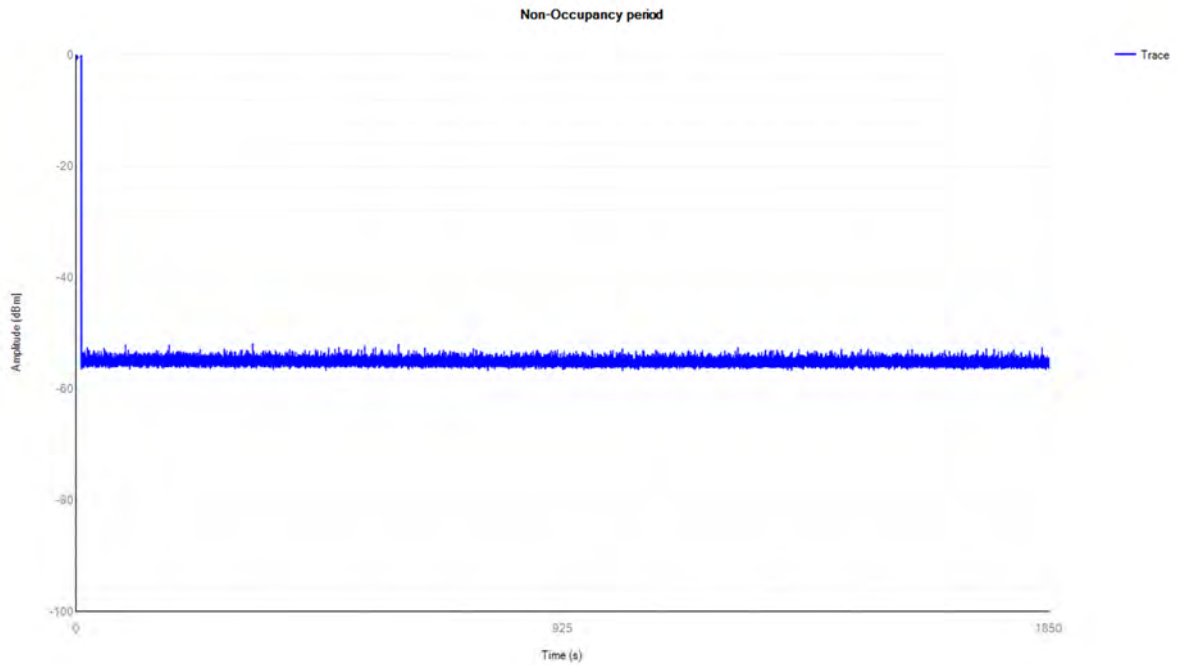
VBW: 3MHz

Sweep time: 1850s

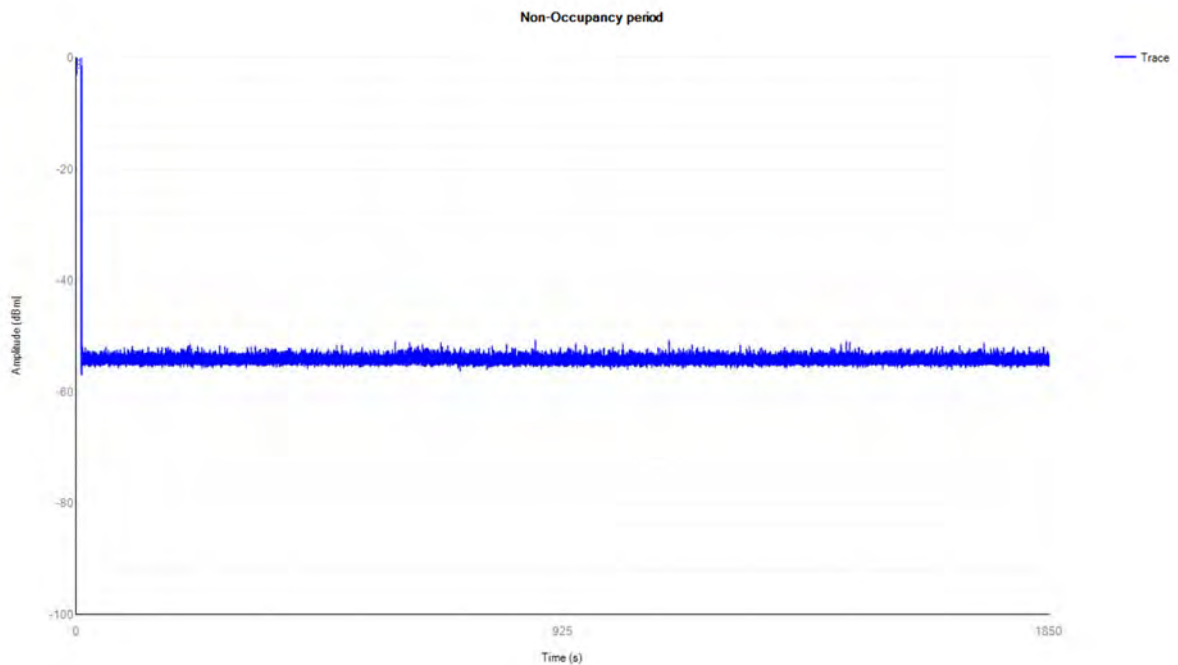


Test Graphs

ac20 5320MHz Non-Occupancy



ac20 5500MHz Non-Occupancy





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+DC source+PC+PC adapter+Data cable+Antenna+SIM card+Router +WIFI TX

Test voltage: AC 120V/60Hz

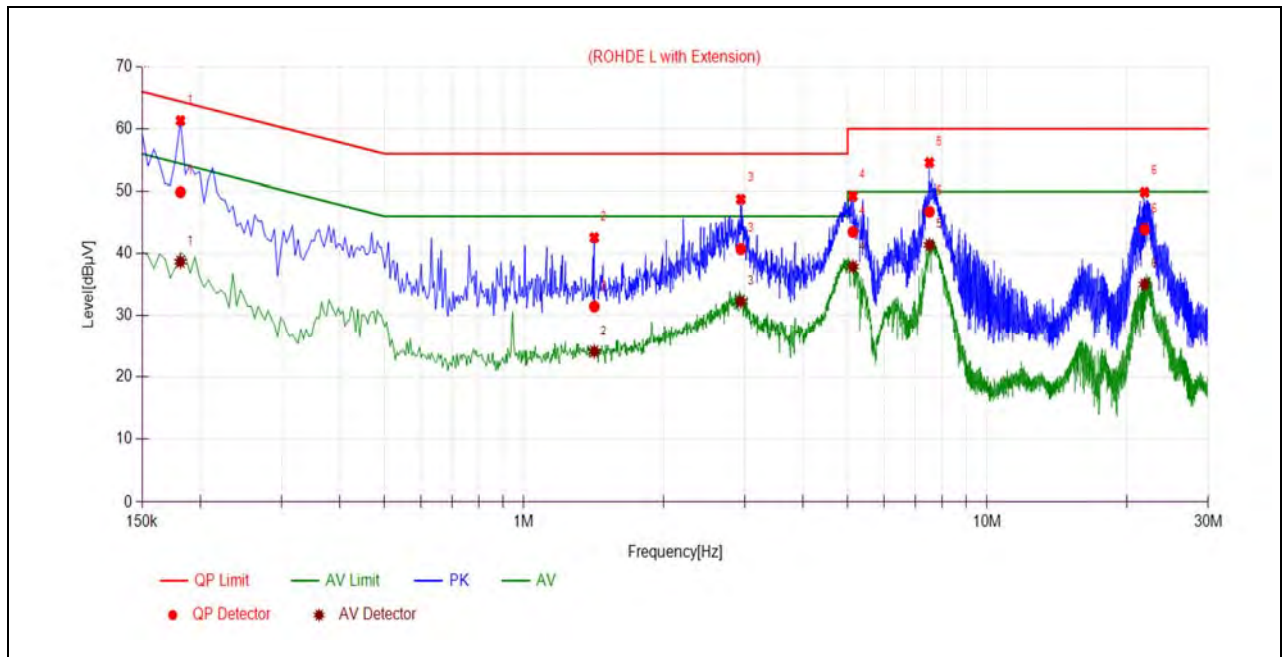
The measurement results are obtained as below:

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

U_R : Receiver Reading

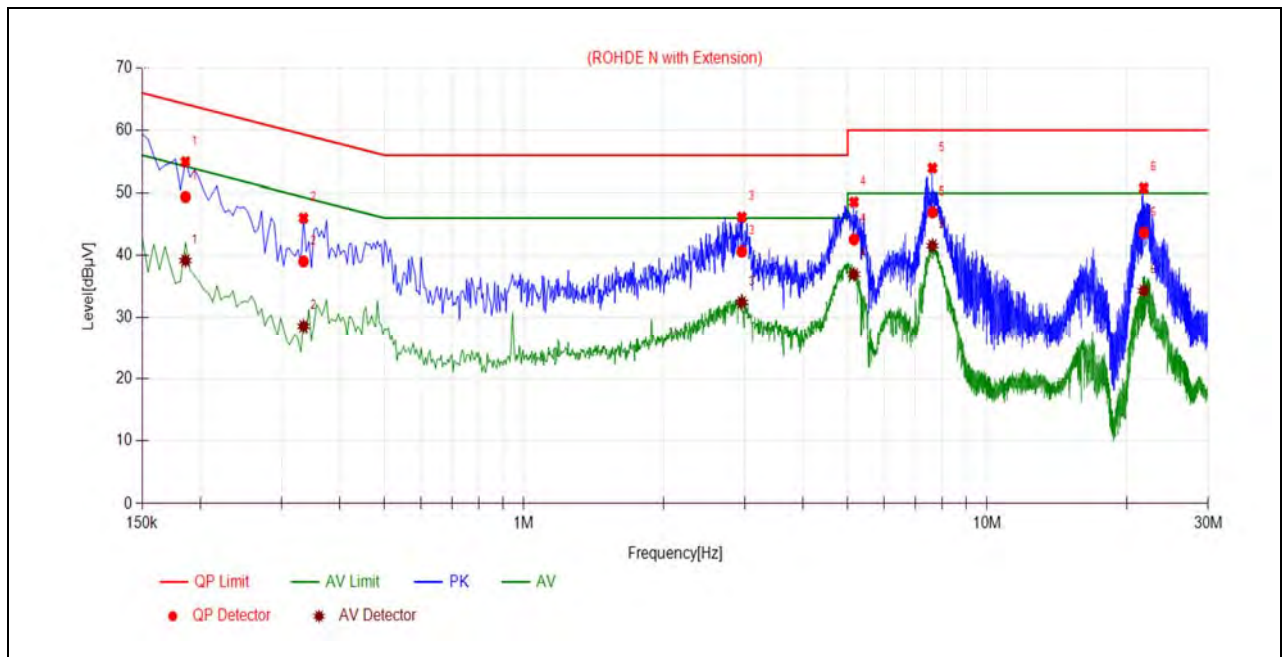
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1815	49.91	38.71	64.42	54.42	Line	PASS
2	1.4189	31.49	24.11	56.00	46.00		PASS
3	2.9398	40.73	32.32	56.00	46.00		PASS
4	5.1314	43.51	37.91	60.00	50.00		PASS
5	7.5081	46.75	41.41	60.00	50.00		PASS
6	21.8682	43.94	35.05	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	0.1860	49.39	39.19	64.21	54.21	Neutral	PASS
2	0.3345	39.04	28.63	59.34	49.34		PASS
3	2.9536	40.62	32.49	56.00	46.00		PASS
4	5.1581	42.57	37.00	60.00	50.00		PASS
5	7.6198	46.92	41.56	60.00	50.00		PASS
6	21.7705	43.66	34.36	60.00	50.00		PASS

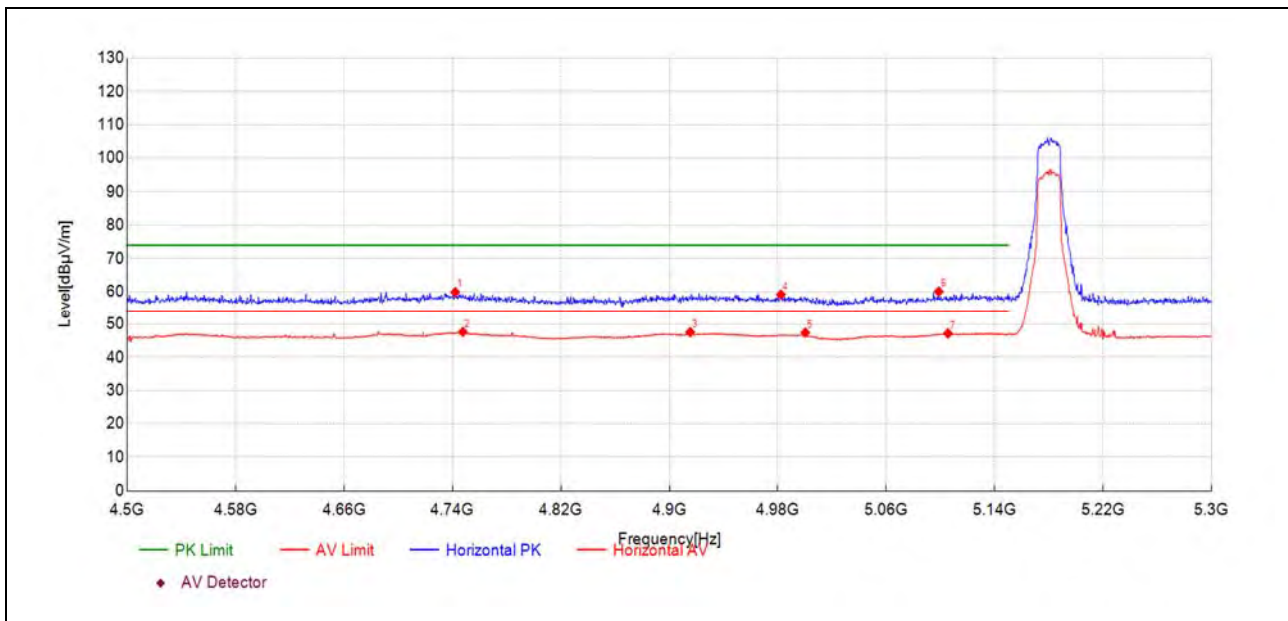
A.8. Restricted Frequency Bands

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

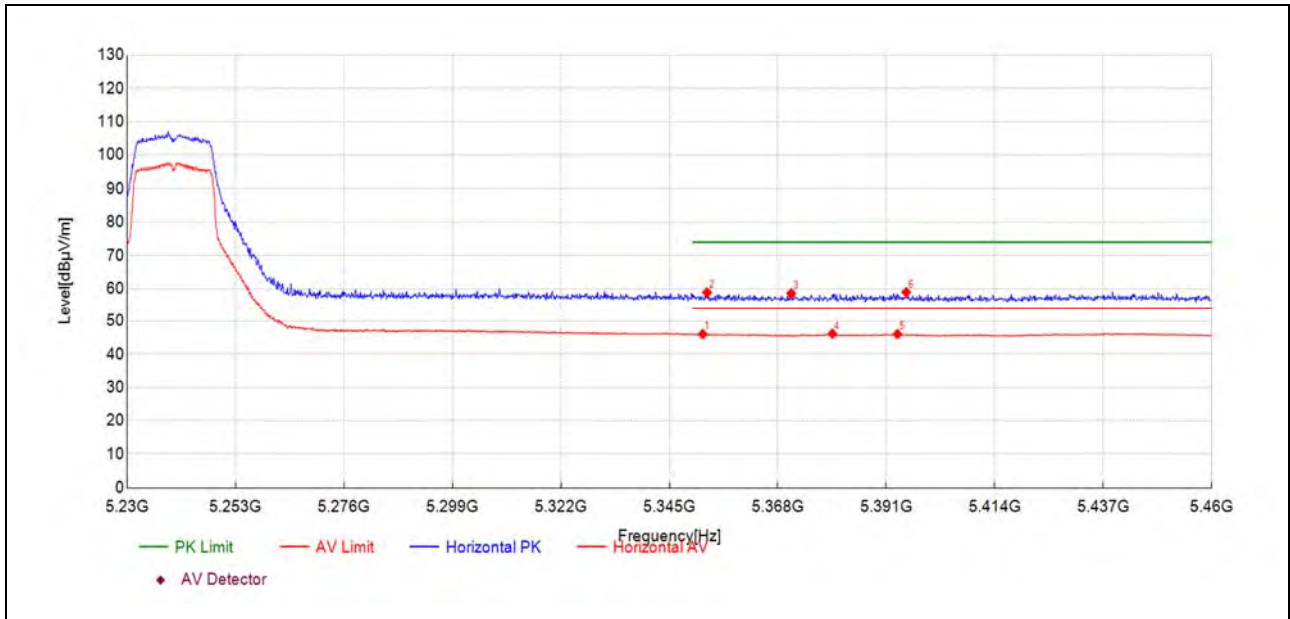
Plot for Channel 36



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4742.12	39.5	59.86	20.320	74.00	14.14	150	84	PK	PASS
4747.72	27.3	47.61	20.320	54.00	6.39	150	340	AV	PASS
4915.41	27.4	47.57	20.140	54.00	6.43	150	124	AV	PASS
4982.24	39.3	59.14	19.860	74.00	14.86	150	186	PK	PASS
5000.25	27.5	47.42	19.880	54.00	6.58	150	217	AV	PASS
5098.70	39.5	60.03	20.510	74.00	13.97	150	206	PK	PASS

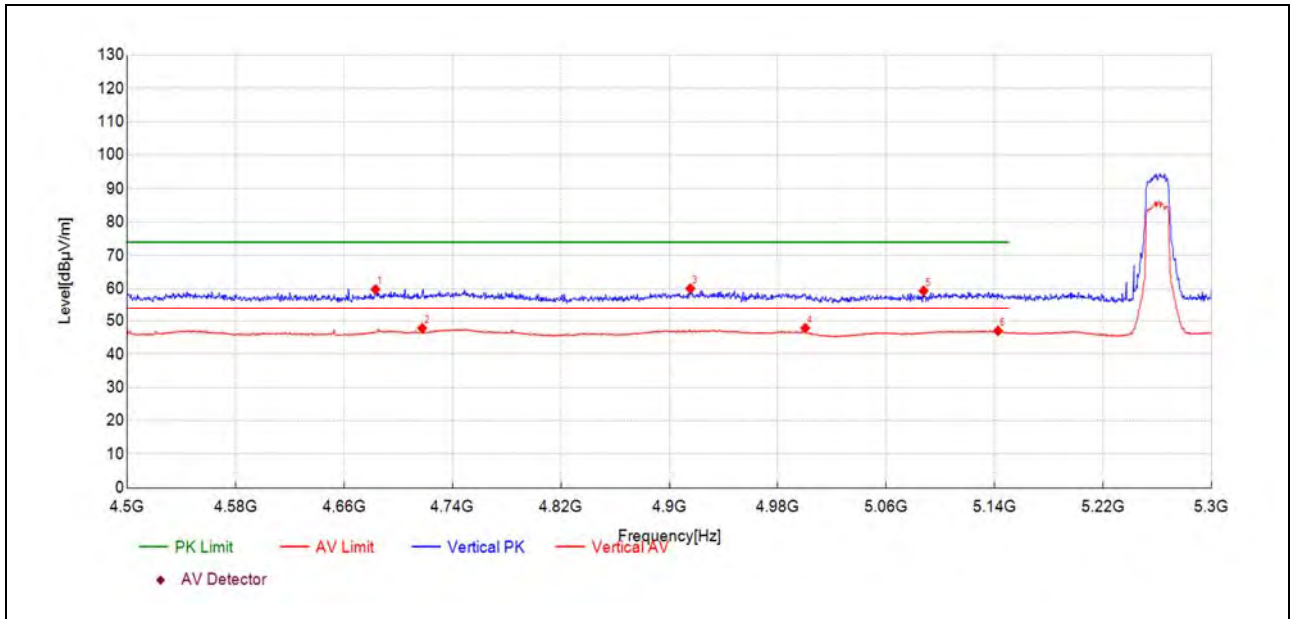


Plot for Channel 48



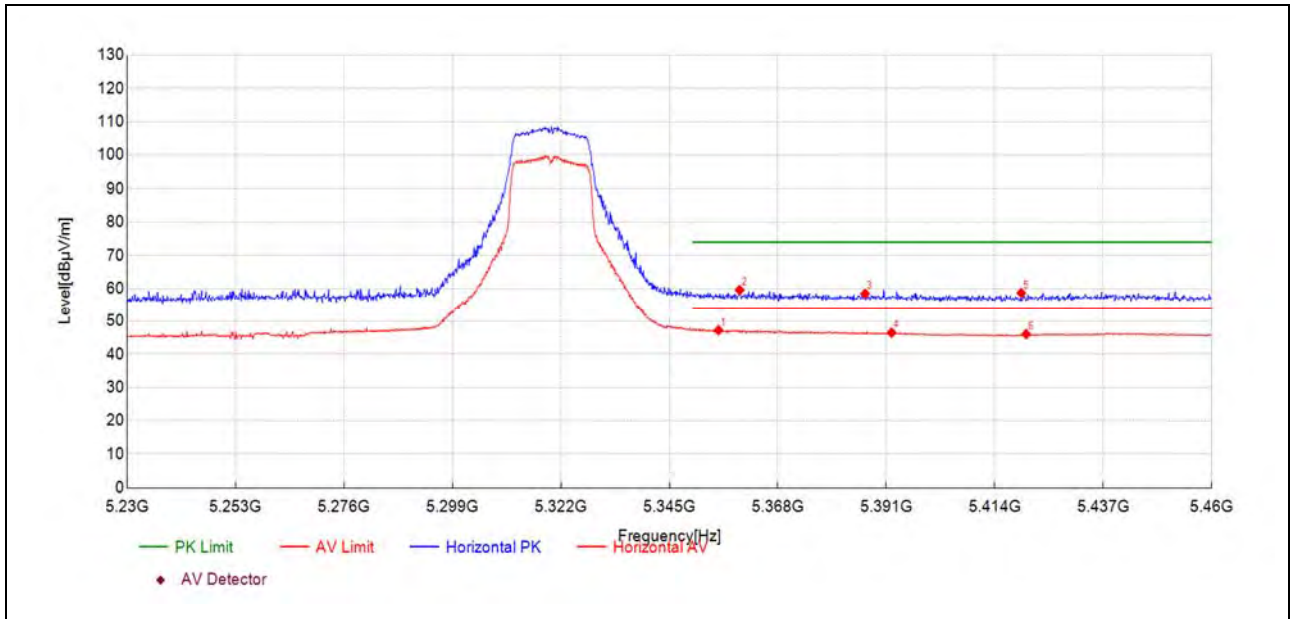
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5352.08	26.1	46.05	19.940	54.00	7.95	150	328	AV	PASS
5353.00	38.9	58.84	19.930	74.00	15.16	150	345	PK	PASS
5370.83	38.7	58.58	19.900	74.00	15.42	150	359	PK	PASS
5379.57	26.3	46.17	19.870	54.00	7.83	150	30	AV	PASS
5393.38	26.2	46.05	19.840	54.00	7.95	150	355	AV	PASS
5395.22	39.1	58.97	19.840	74.00	15.03	150	214	PK	PASS

Plot for Channel 52



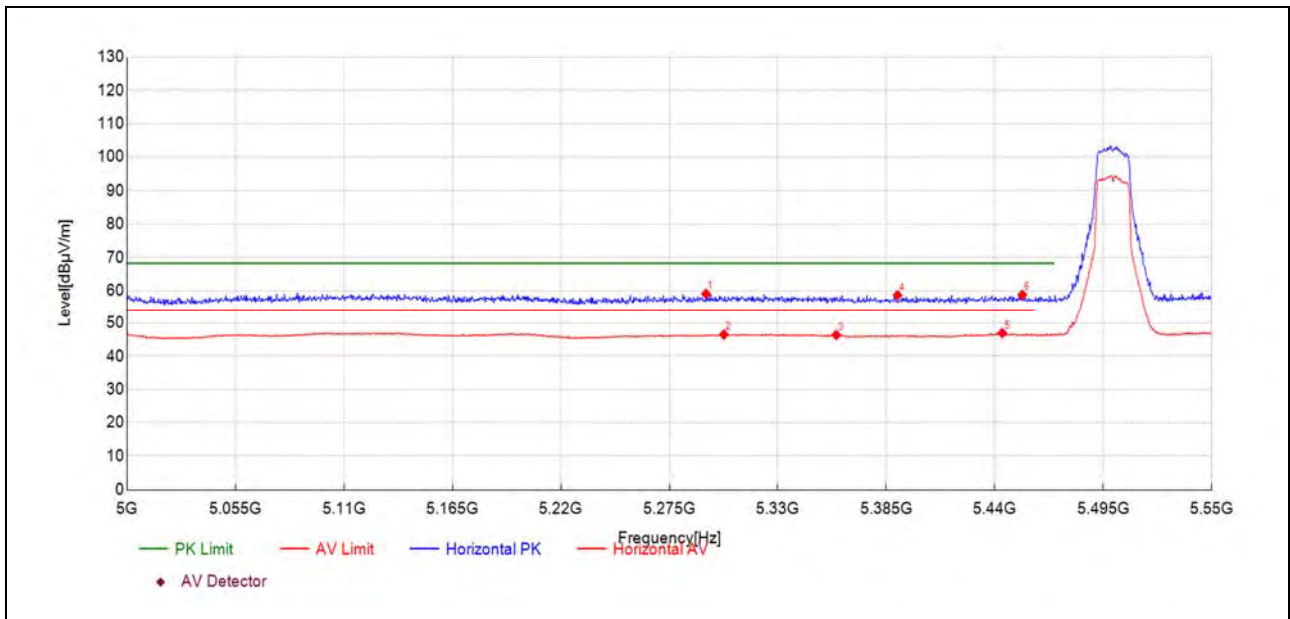
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4683.29	39.6	59.79	20.240	74.00	14.21	150	249	PK	PASS
4717.71	27.5	47.82	20.300	54.00	6.18	150	2	AV	PASS
4915.41	39.9	60.05	20.140	74.00	13.95	150	168	PK	PASS
5000.25	28.0	47.88	19.880	54.00	6.12	150	85	AV	PASS
5087.49	38.9	59.33	20.440	74.00	14.67	150	219	PK	PASS
5142.32	26.7	47.03	20.360	54.00	6.97	150	0	AV	PASS

Plot for Channel 64



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5355.41	27.3	47.24	19.930	54.00	6.76	150	286	AV	PASS
5359.90	39.7	59.59	19.920	74.00	14.41	150	275	PK	PASS
5386.48	38.6	58.47	19.860	74.00	15.53	150	326	PK	PASS
5392.12	26.6	46.49	19.850	54.00	7.51	150	295	AV	PASS
5419.61	38.6	58.68	20.090	74.00	15.32	150	306	PK	PASS
5420.65	26.0	46.05	20.100	54.00	7.95	150	360	AV	PASS

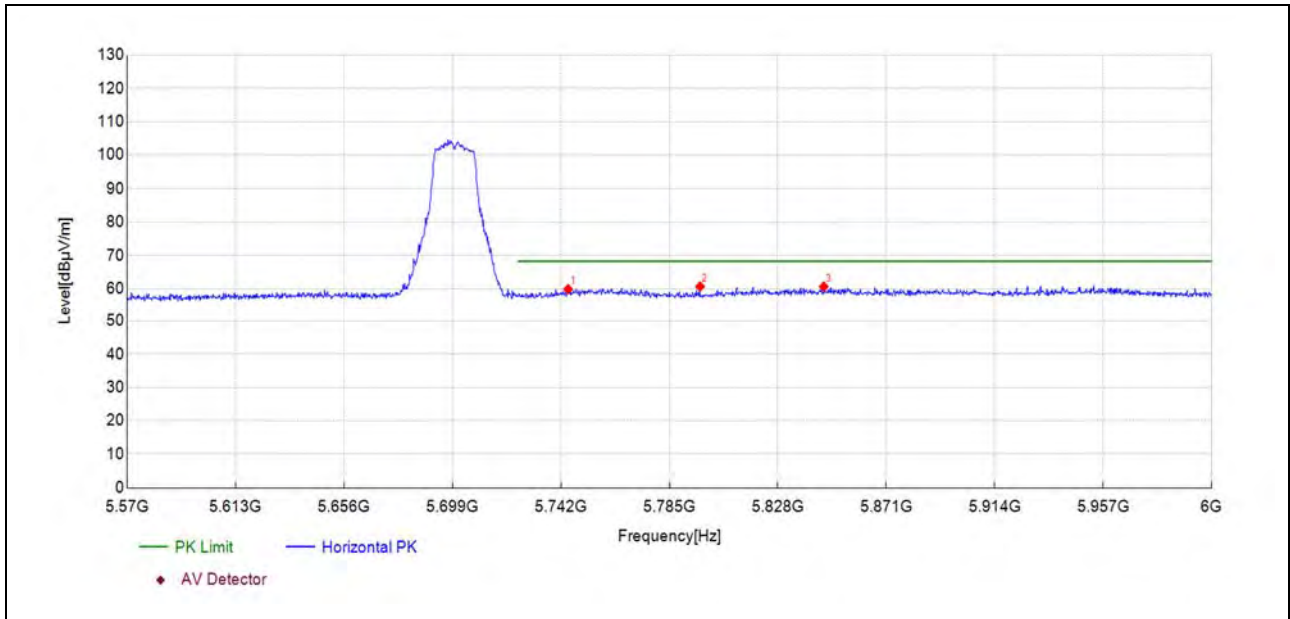
Plot for Channel 100



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5293.57	38.8	59.04	20.200	68.23	9.19	150	2	PK	PASS
5302.65	26.3	46.52	20.230	54.00	7.48	150	310	AV	PASS
5359.60	26.5	46.41	19.920	54.00	7.59	150	199	AV	PASS
5390.70	38.8	58.64	19.850	68.23	9.59	150	55	PK	PASS
5443.80	26.6	46.96	20.400	54.00	7.04	150	291	AV	PASS
5453.98	38.3	58.74	20.450	68.23	9.49	150	228	PK	PASS

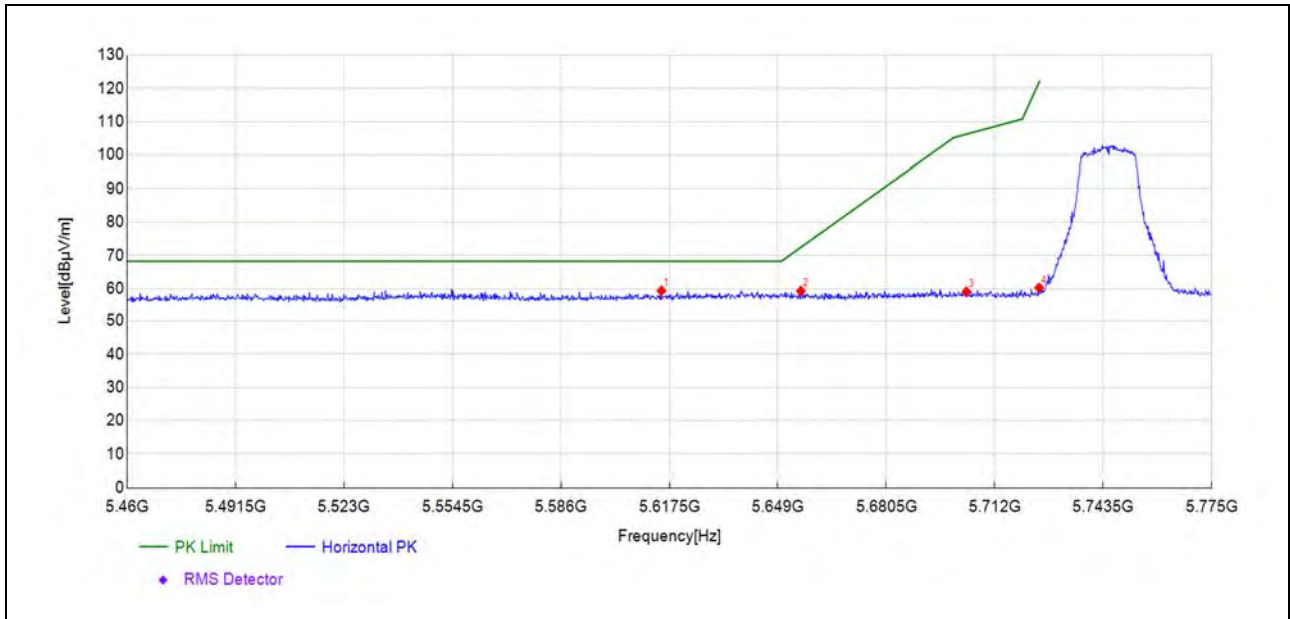


Plot for Channel 140



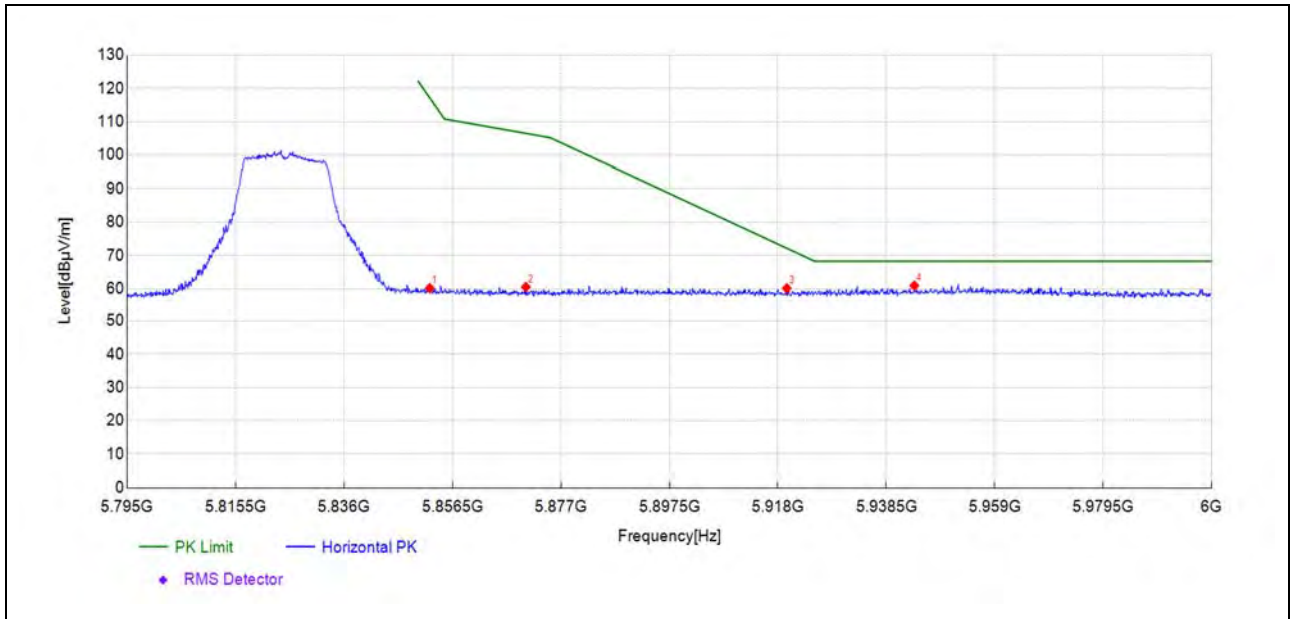
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5744.88	38.3	59.86	21.560	68.23	8.37	150	151	PK	PASS
5797.15	39.0	60.67	21.700	68.23	7.56	150	188	PK	PASS
5846.20	38.2	60.63	22.400	68.23	7.60	150	351	PK	PASS

Plot for Channel 149



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5615.22	39.0	59.38	20.390	68.23	8.85	150	357	PK	PASS
5655.71	38.3	59.31	20.990	72.46	13.15	150	70	PK	PASS
5703.77	38.2	59.10	20.930	106.29	47.19	150	183	PK	PASS
5724.89	39.0	60.28	21.260	121.98	61.70	150	296	PK	PASS

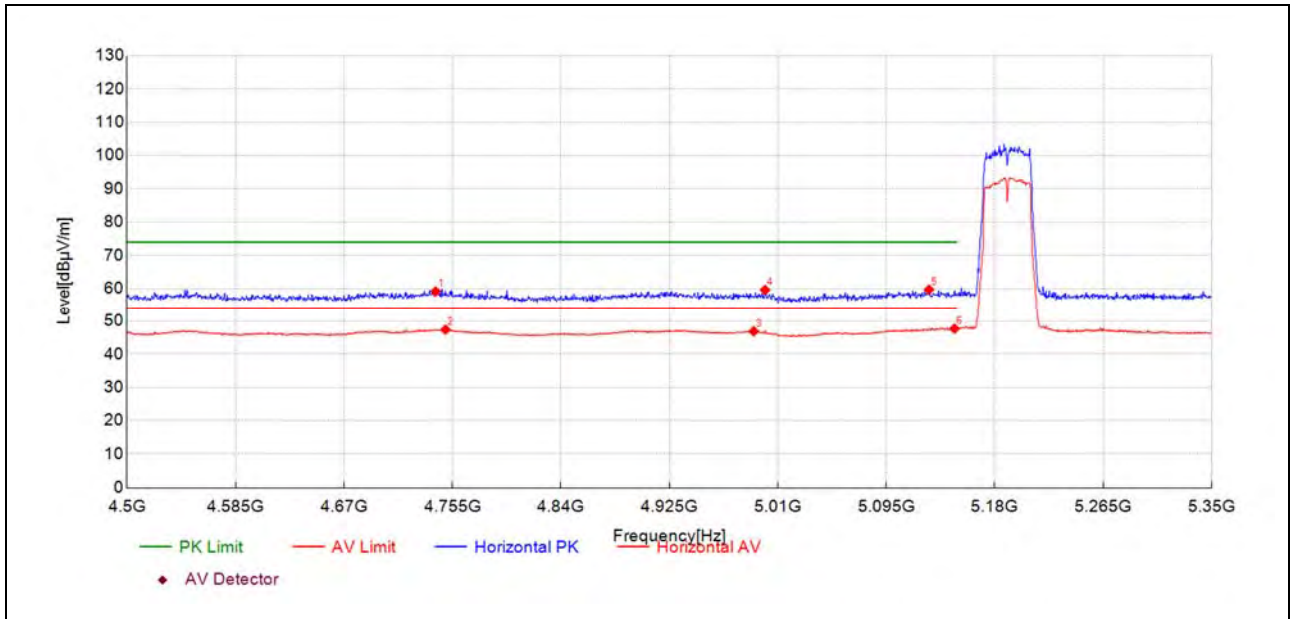
Plot for Channel 165



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5852.22	37.7	60.16	22.430	117.16	57.00	150	207	PK	PASS
5870.38	38.4	60.51	22.150	106.52	46.01	150	360	PK	PASS
5919.70	38.2	60.11	21.880	72.15	12.04	150	19	PK	PASS
5943.80	38.9	60.92	22.070	68.23	7.31	150	4	PK	PASS

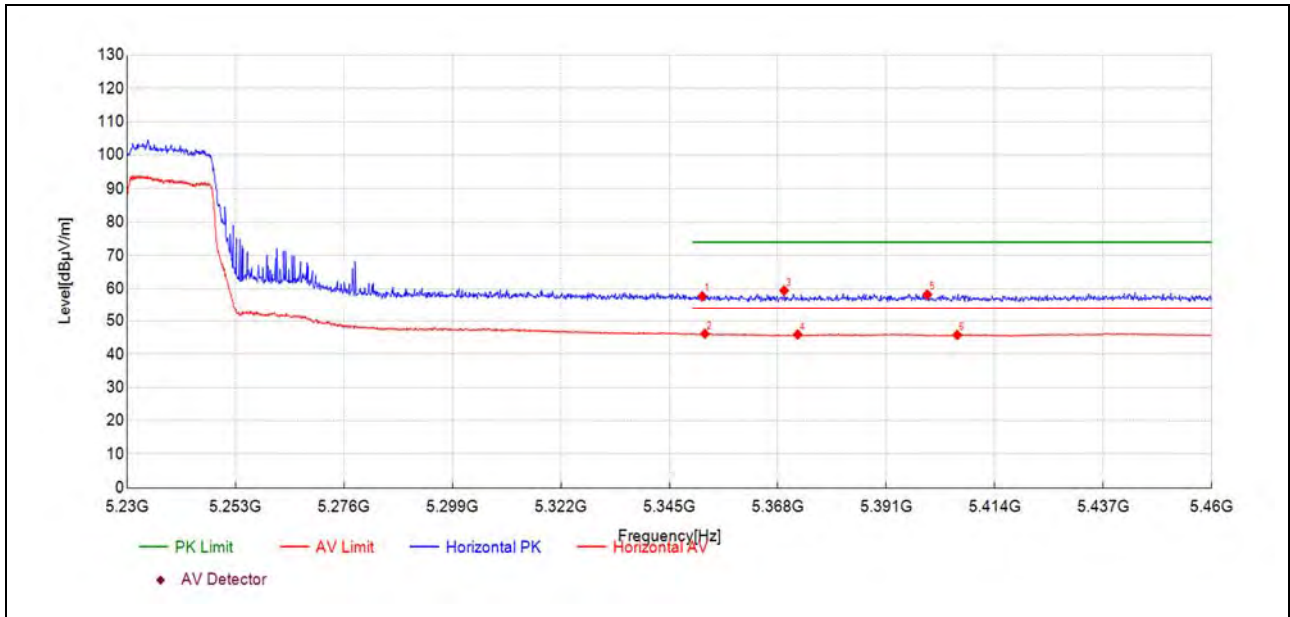
**802.11n (HT40) Mode**

Plot for Channel 38



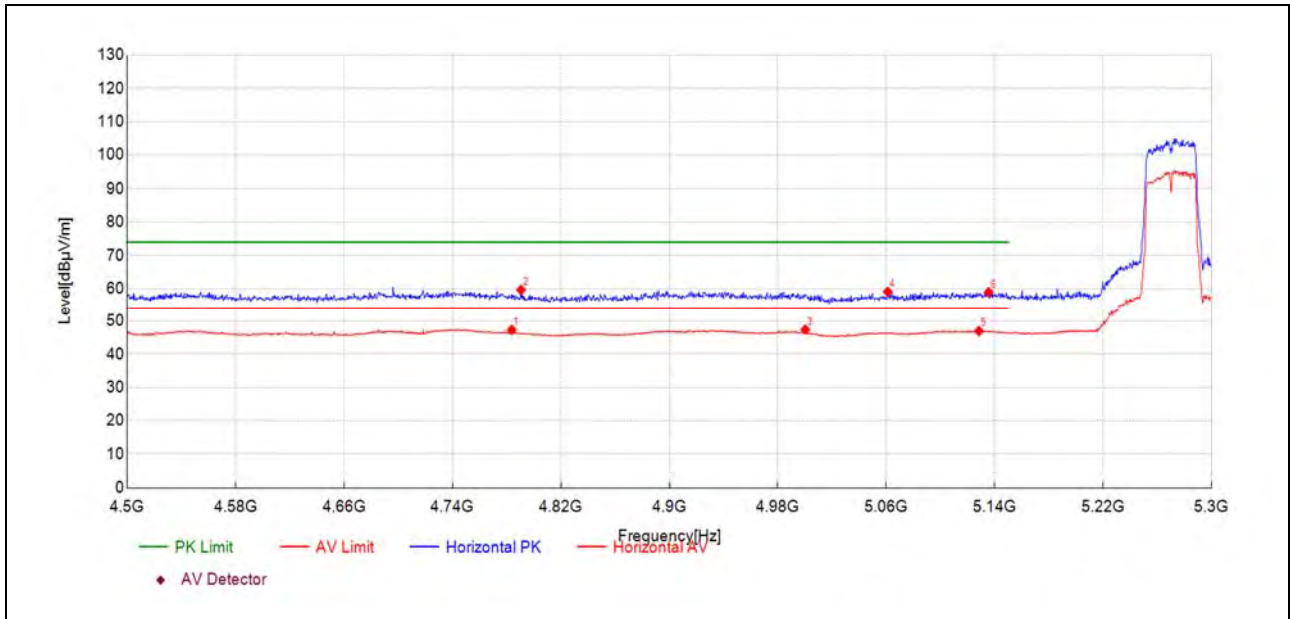
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4741.95	38.8	59.14	20.320	74.00	14.86	150	0	PK	PASS
4749.60	27.1	47.40	20.320	54.00	6.60	150	154	AV	PASS
4991.12	27.0	46.89	19.870	54.00	7.11	150	319	AV	PASS
5000.05	39.7	59.58	19.880	74.00	14.42	150	154	PK	PASS
5128.46	39.3	59.68	20.400	74.00	14.32	150	299	PK	PASS
5148.45	27.4	47.70	20.320	54.00	6.30	150	288	AV	PASS

Plot for Channel 46



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5351.96	37.8	57.72	19.940	74.00	16.28	150	338	PK	PASS
5352.54	26.2	46.15	19.930	54.00	7.85	150	328	AV	PASS
5369.33	39.5	59.43	19.900	74.00	14.57	150	72	PK	PASS
5372.21	26.0	45.91	19.900	54.00	8.09	150	287	AV	PASS
5399.71	38.4	58.26	19.830	74.00	15.74	150	358	PK	PASS
5406.04	25.9	45.77	19.900	54.00	8.23	150	298	AV	PASS

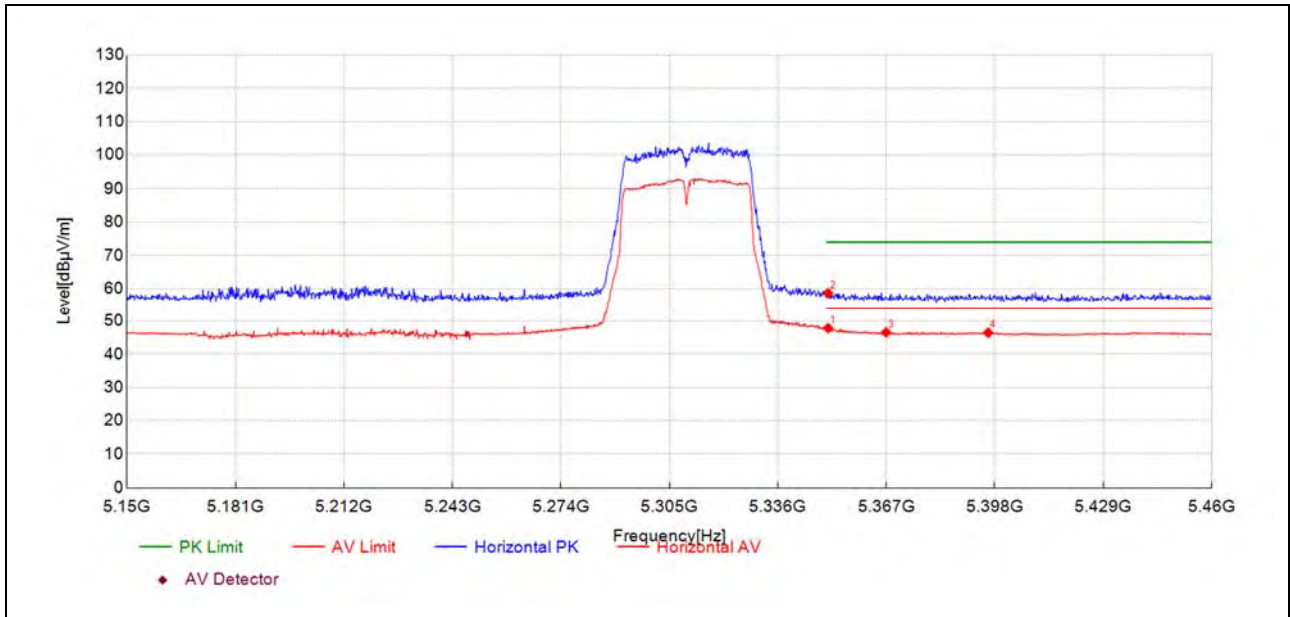
Plot for Channel 54



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4783.74	27.6	47.34	19.730	54.00	6.66	150	103	AV	PASS
4790.55	40.0	59.64	19.610	74.00	14.36	150	214	PK	PASS
5000.25	27.5	47.42	19.880	54.00	6.58	150	355	AV	PASS
5061.08	38.8	59.05	20.270	74.00	14.95	150	360	PK	PASS
5128.31	26.6	46.99	20.400	54.00	7.01	150	72	AV	PASS
5135.52	38.6	58.93	20.380	74.00	15.07	150	92	PK	PASS

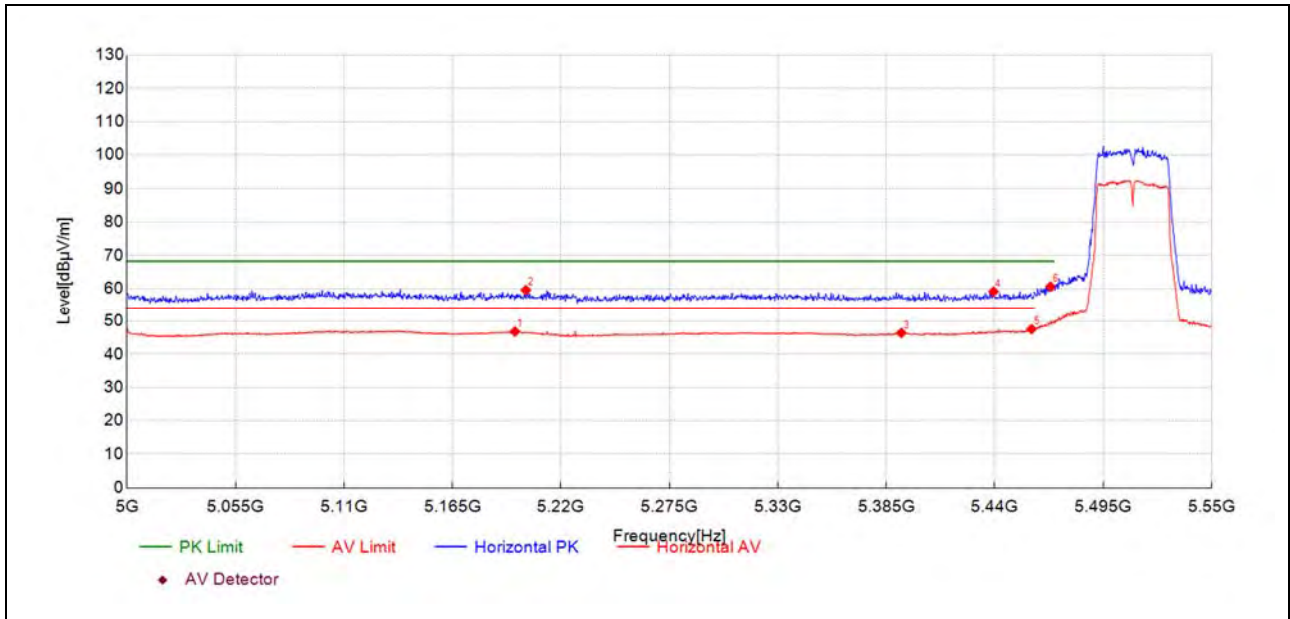


Plot for Channel 62



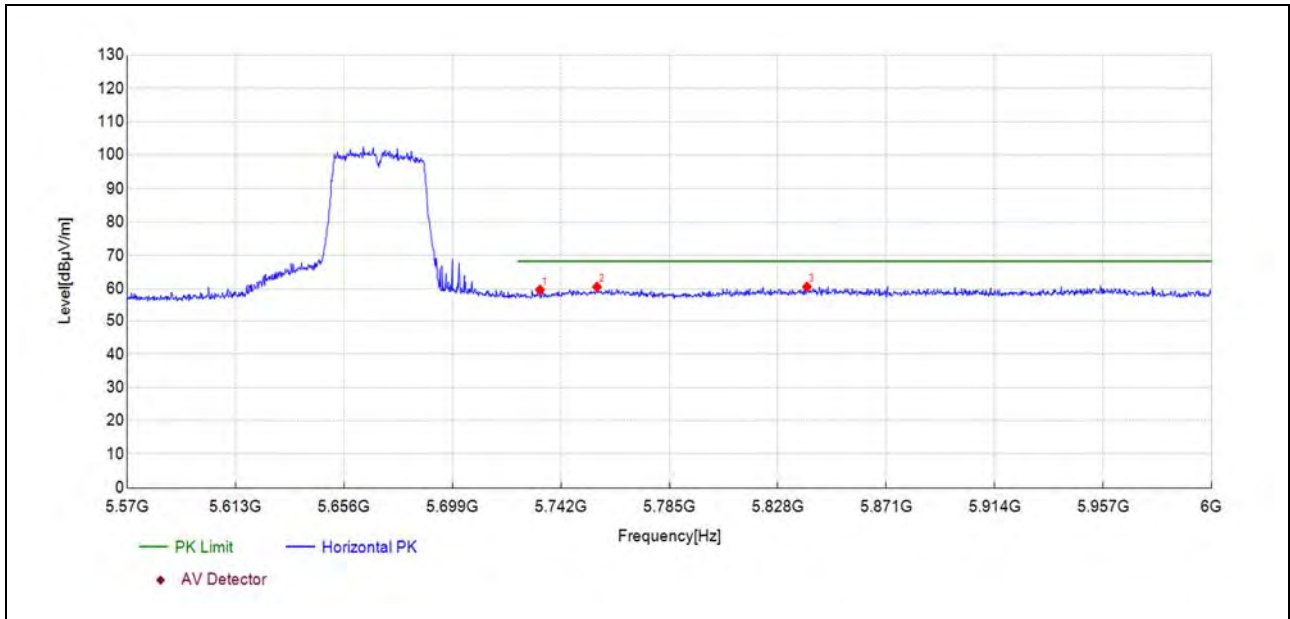
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.36	27.9	47.84	19.940	54.00	6.16	150	293	AV	PASS
5350.36	38.7	58.65	19.940	74.00	15.35	150	293	PK	PASS
5366.95	26.7	46.59	19.910	54.00	7.41	150	304	AV	PASS
5396.11	26.6	46.47	19.840	54.00	7.53	150	283	AV	PASS

Plot for Channel 102



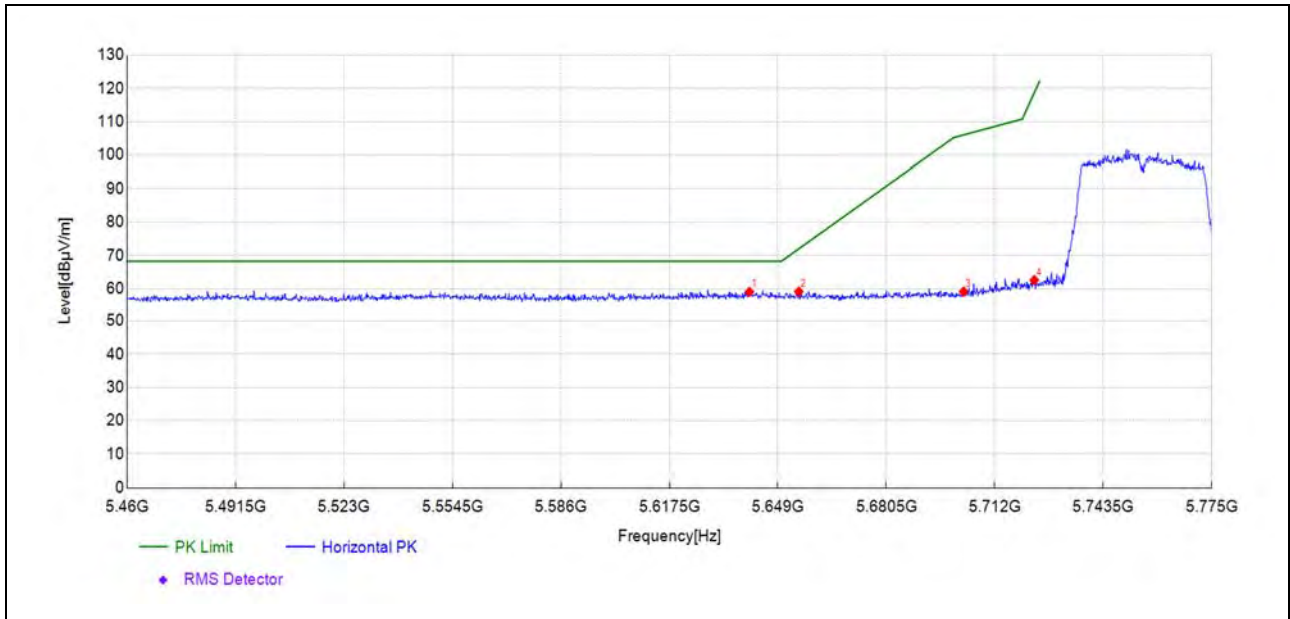
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5196.72	26.4	46.83	20.420	54.00	7.17	150	185	AV	PASS
5202.23	39.2	59.55	20.390	68.23	8.68	150	356	PK	PASS
5392.62	26.6	46.43	19.840	54.00	7.57	150	84	AV	PASS
5439.39	38.8	59.11	20.330	68.23	9.12	150	64	PK	PASS
5458.65	27.1	47.57	20.430	54.00	6.43	150	288	AV	PASS
5468.28	40.3	60.62	20.370	68.23	7.61	150	278	PK	PASS

Plot for Channel 134



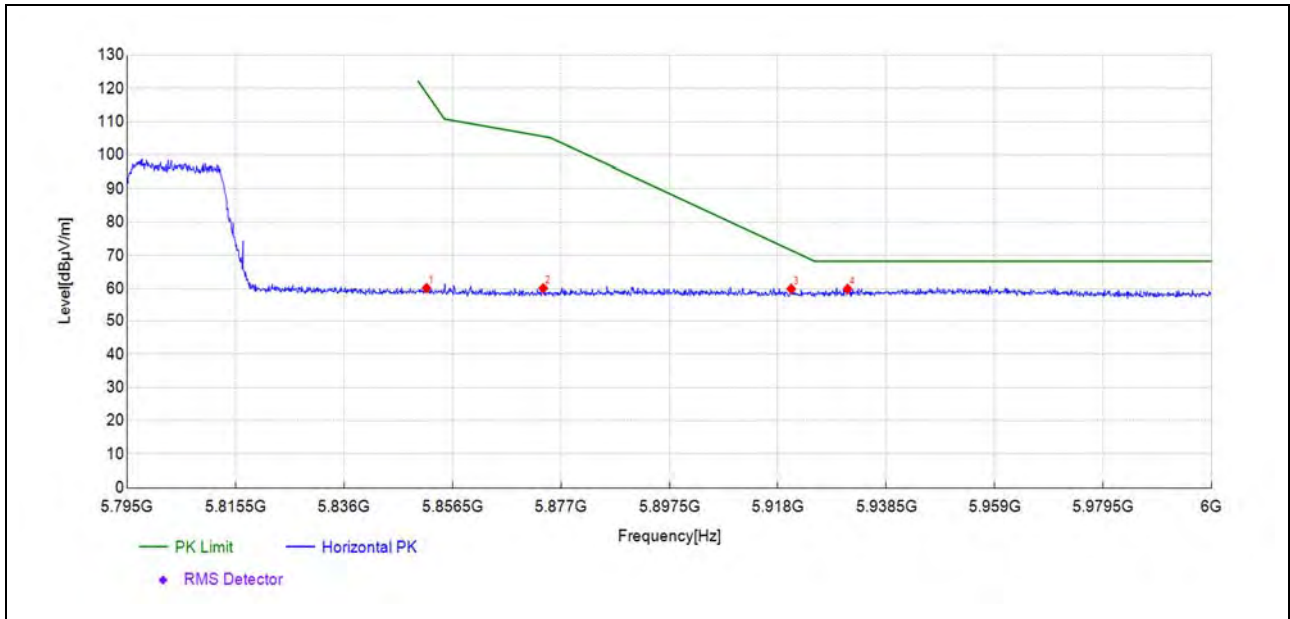
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5733.70	38.3	59.67	21.390	68.23	8.56	150	163	PK	PASS
5756.28	38.9	60.55	21.650	68.23	7.68	150	10	PK	PASS
5839.53	38.3	60.60	22.300	68.23	7.63	150	0	PK	PASS

Plot for Channel 151



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5640.74	38.2	59.05	20.840	68.23	9.18	150	65	PK	PASS
5655.08	38.1	59.13	20.990	71.99	12.86	150	178	PK	PASS
5702.99	38.2	59.11	20.920	106.07	46.96	150	47	PK	PASS
5723.47	41.3	62.57	21.240	118.75	56.18	150	65	PK	PASS

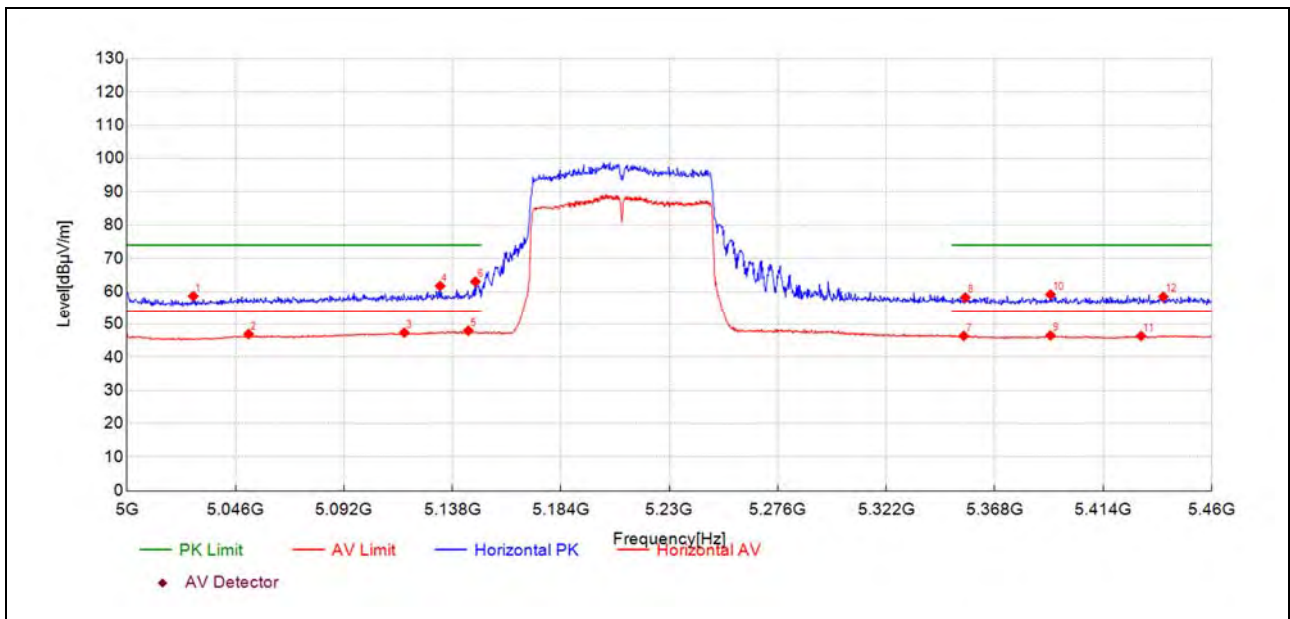
Plot for Channel 159



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5851.61	37.7	60.16	22.440	118.56	58.40	150	94	PK	PASS
5873.66	38.0	60.13	22.110	105.61	45.48	150	255	PK	PASS
5920.52	38.1	59.94	21.880	71.54	11.60	150	264	PK	PASS
5931.19	38.0	59.95	21.970	68.23	8.28	150	330	PK	PASS

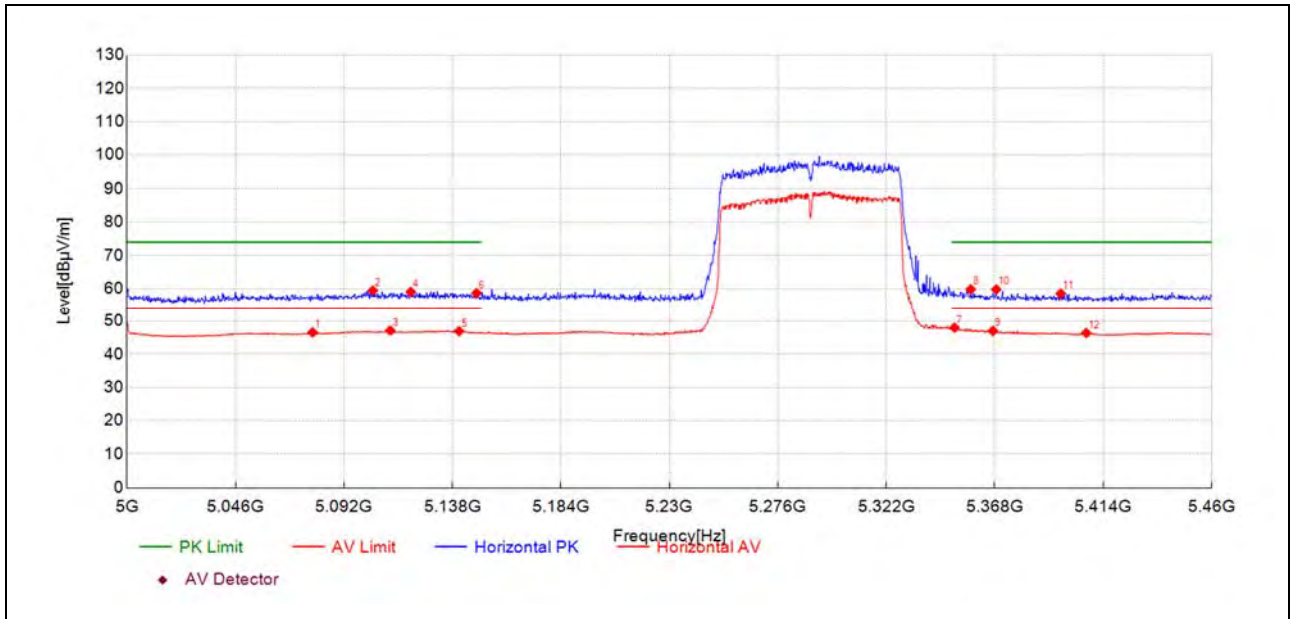
**802.11ac (VHT80) Mode**

Plot for Channel 42



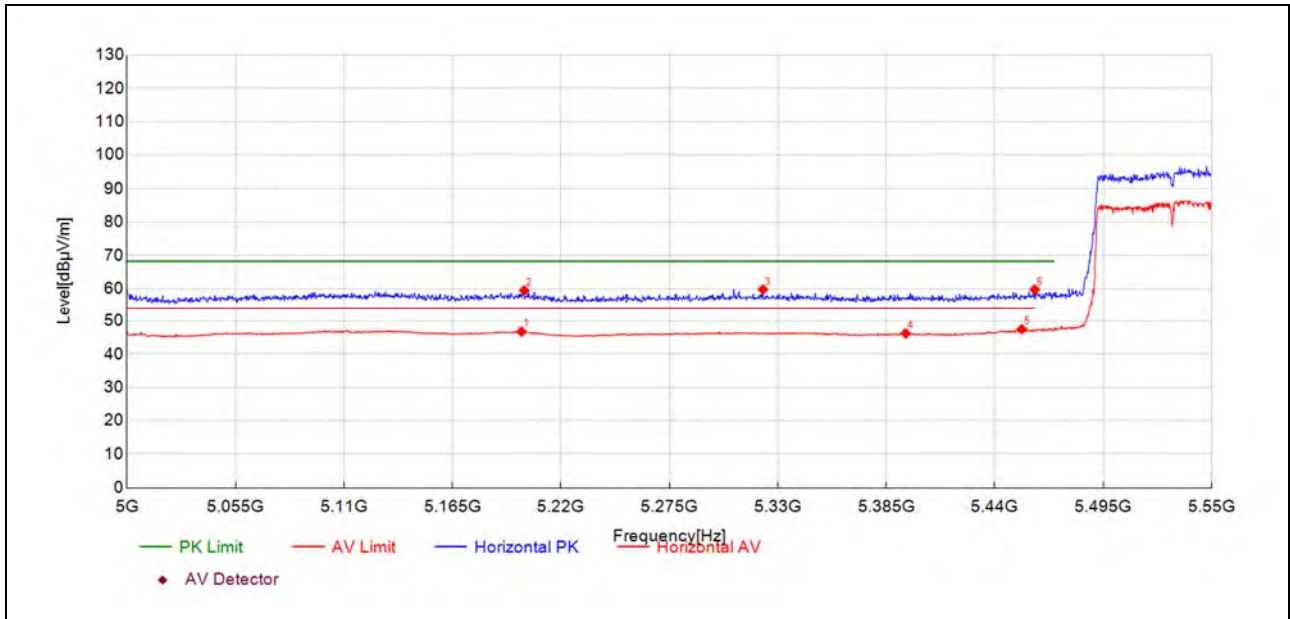
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5028.07	38.6	58.64	20.060	74.00	15.36	150	225	PK	PASS
5051.55	26.7	46.94	20.210	54.00	7.06	150	215	AV	PASS
5117.59	26.9	47.37	20.440	54.00	6.63	150	286	AV	PASS
5132.78	41.3	61.70	20.380	74.00	12.30	150	276	PK	PASS
5144.74	27.6	47.96	20.340	54.00	6.04	150	296	AV	PASS
5147.73	42.7	62.99	20.320	74.00	11.01	150	351	PK	PASS
5354.84	26.5	46.41	19.930	54.00	7.59	150	286	AV	PASS
5355.53	38.3	58.24	19.930	74.00	15.76	150	4	PK	PASS
5391.66	26.7	46.52	19.850	54.00	7.48	150	359	AV	PASS
5391.66	39.3	59.14	19.850	74.00	14.86	150	61	PK	PASS
5430.09	26.2	46.37	20.210	54.00	7.63	150	52	AV	PASS
5439.52	38.1	58.47	20.330	74.00	15.53	150	296	PK	PASS

Plot for Channel 58



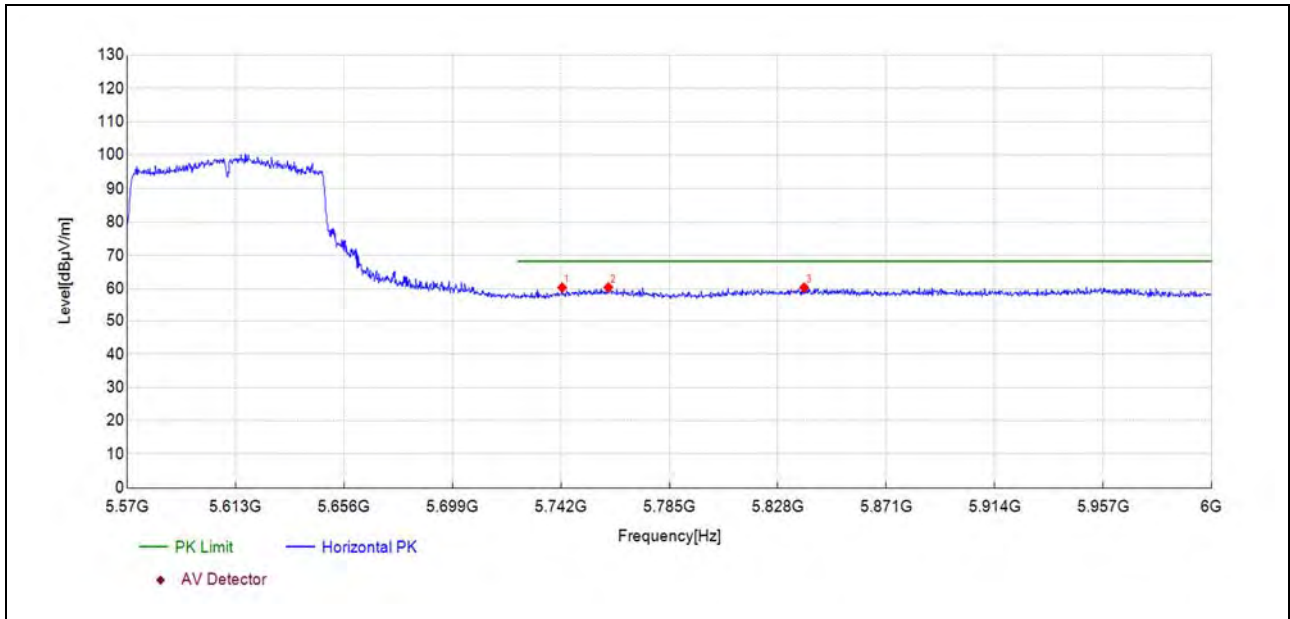
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5078.70	26.2	46.57	20.380	54.00	7.43	150	135	AV	PASS
5104.24	38.9	59.43	20.500	74.00	14.57	150	157	PK	PASS
5111.61	26.7	47.14	20.480	54.00	6.86	150	0	AV	PASS
5120.35	38.6	59.02	20.440	74.00	14.98	150	0	PK	PASS
5140.83	26.6	46.94	20.360	54.00	7.06	150	1	AV	PASS
5148.19	38.3	58.66	20.320	74.00	15.34	150	0	PK	PASS
5350.93	28.1	47.99	19.940	54.00	6.01	150	299	AV	PASS
5357.83	39.9	59.81	19.920	74.00	14.19	150	299	PK	PASS
5367.26	27.1	47.05	19.910	54.00	6.95	150	289	AV	PASS
5368.64	39.9	59.77	19.900	74.00	14.23	150	299	PK	PASS
5396.03	38.7	58.52	19.840	74.00	15.48	150	0	PK	PASS
5406.84	26.5	46.38	19.920	54.00	7.62	150	280	AV	PASS

Plot for Channel 106



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5200.03	26.4	46.80	20.420	54.00	7.20	150	218	AV	PASS
5201.40	39.1	59.47	20.400	68.23	8.76	150	248	PK	PASS
5322.46	39.6	59.75	20.120	68.23	8.48	150	114	PK	PASS
5394.82	26.4	46.26	19.840	54.00	7.74	150	218	AV	PASS
5453.70	27.1	47.54	20.450	54.00	6.46	150	288	AV	PASS
5460.31	39.3	59.74	20.420	68.23	8.49	150	300	PK	PASS

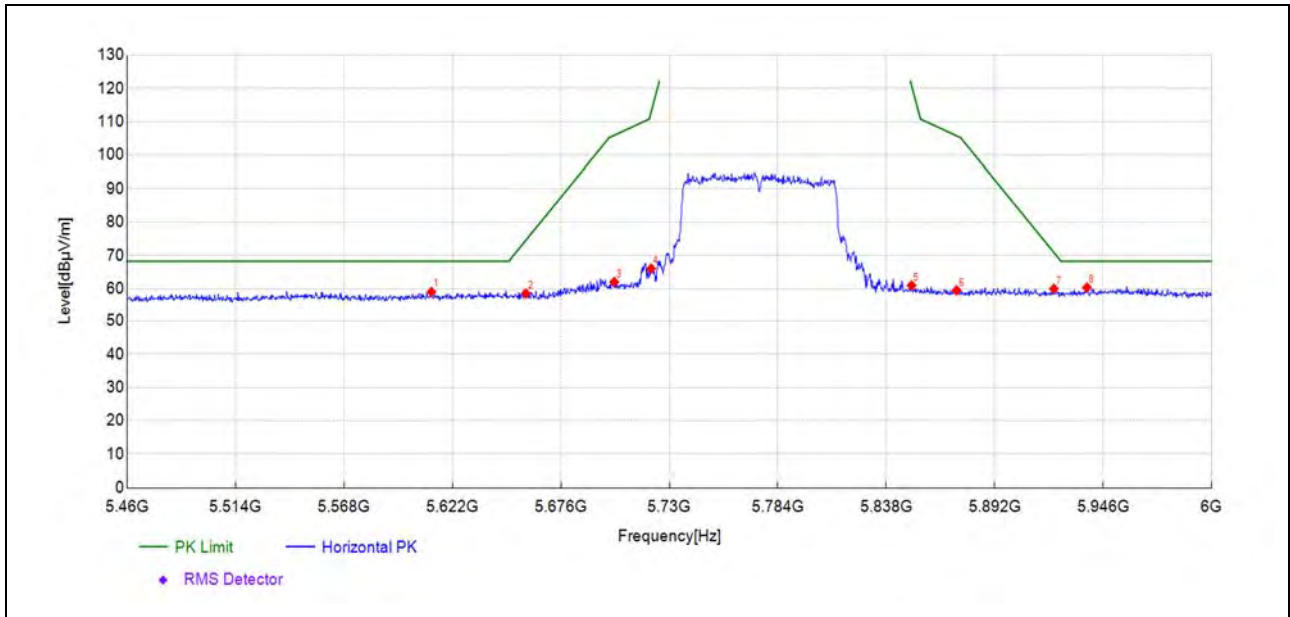
Plot for Channel 122



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5742.52	38.8	60.32	21.530	68.23	7.91	150	0	PK	PASS
5760.80	38.7	60.38	21.650	68.23	7.85	150	68	PK	PASS
5838.45	38.1	60.34	22.290	68.23	7.89	150	191	PK	PASS



Plot for Channel 155



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5611.55	38.7	59.00	20.330	68.23	9.23	150	3	PK	PASS
5658.55	37.6	58.58	20.980	74.56	15.98	150	197	PK	PASS
5702.58	41.1	62.03	20.920	105.95	43.92	150	28	PK	PASS
5720.95	44.8	66.04	21.200	113.00	46.96	150	75	PK	PASS
5850.62	38.5	60.98	22.450	120.83	59.85	150	3	PK	PASS
5873.04	37.4	59.49	22.120	105.78	46.29	150	360	PK	PASS
5921.39	38.1	59.98	21.890	70.90	10.92	150	66	PK	PASS
5937.87	38.3	60.36	22.030	68.23	7.87	150	264	PK	PASS



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.

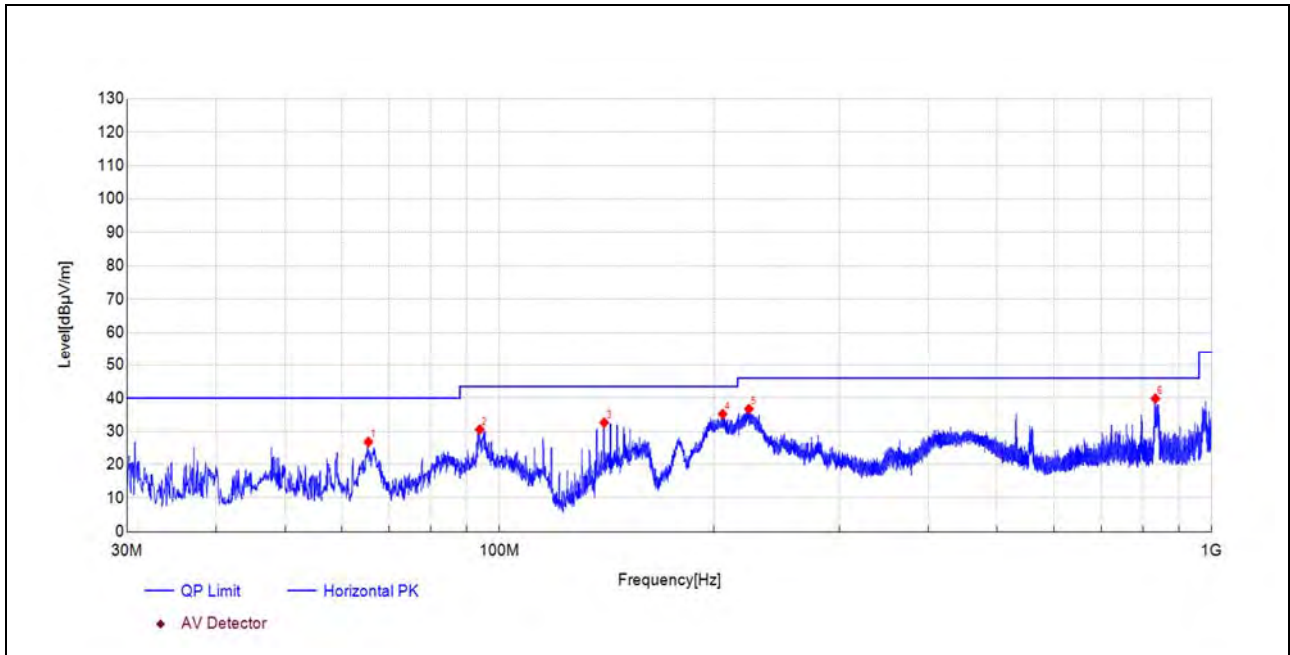
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 40GHz harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note4: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

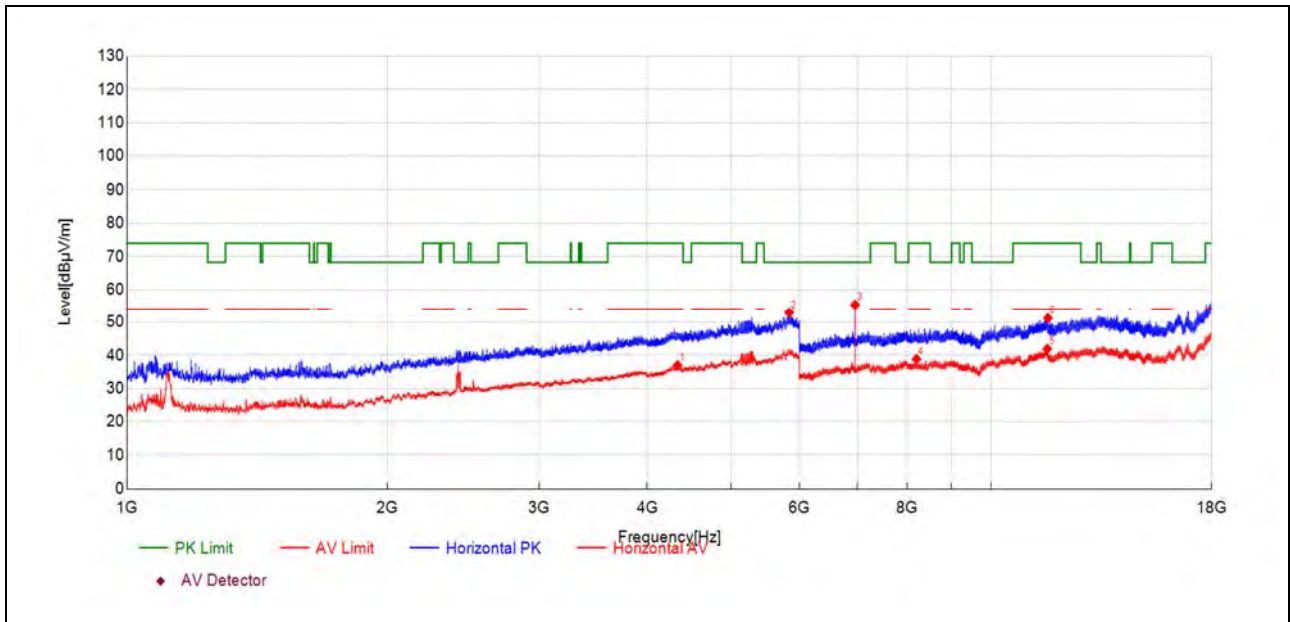
**802.11a Mode**

Plot for Channel 44



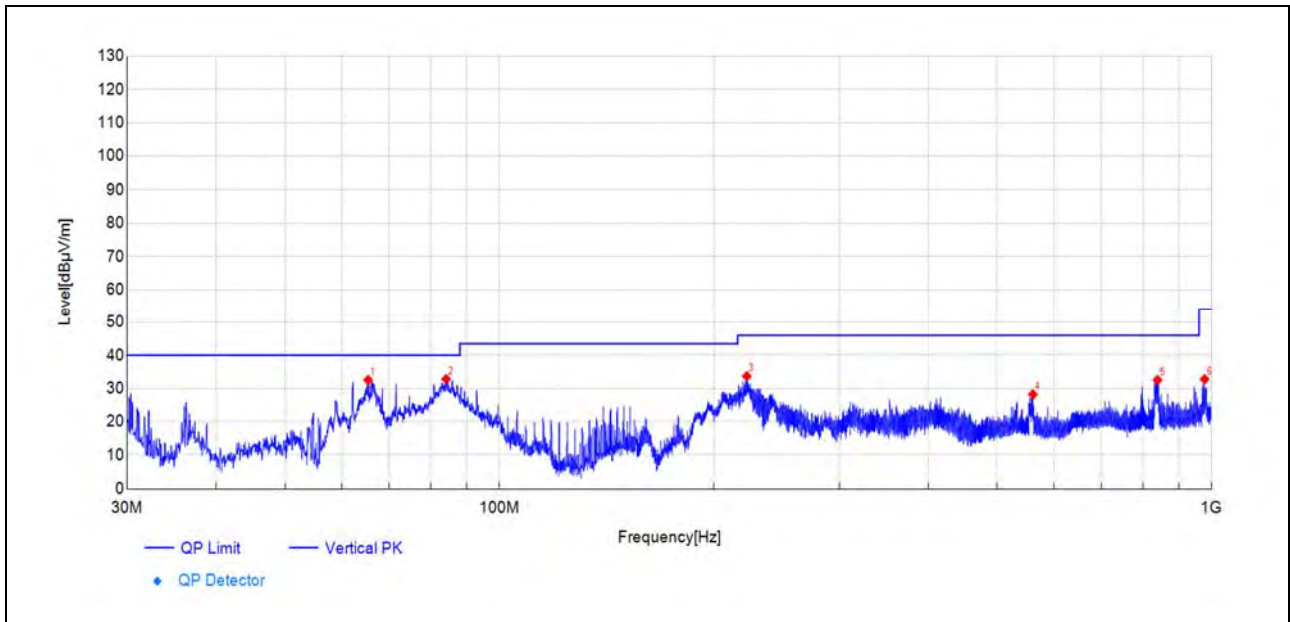
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
65.46	59.6	26.81	-32.830	40.00	13.19	150	349	PK	PASS
93.83	61.4	30.54	-30.870	43.50	12.96	150	134	PK	PASS
140.29	66.2	32.62	-33.580	43.50	10.88	150	240	PK	PASS
205.77	65.3	35.19	-30.120	43.50	8.31	150	240	PK	PASS
224.06	65.8	36.75	-29.010	46.00	9.25	150	79	PK	PASS
833.64	55.8	39.87	-15.920	46.00	6.13	150	53	PK	PASS



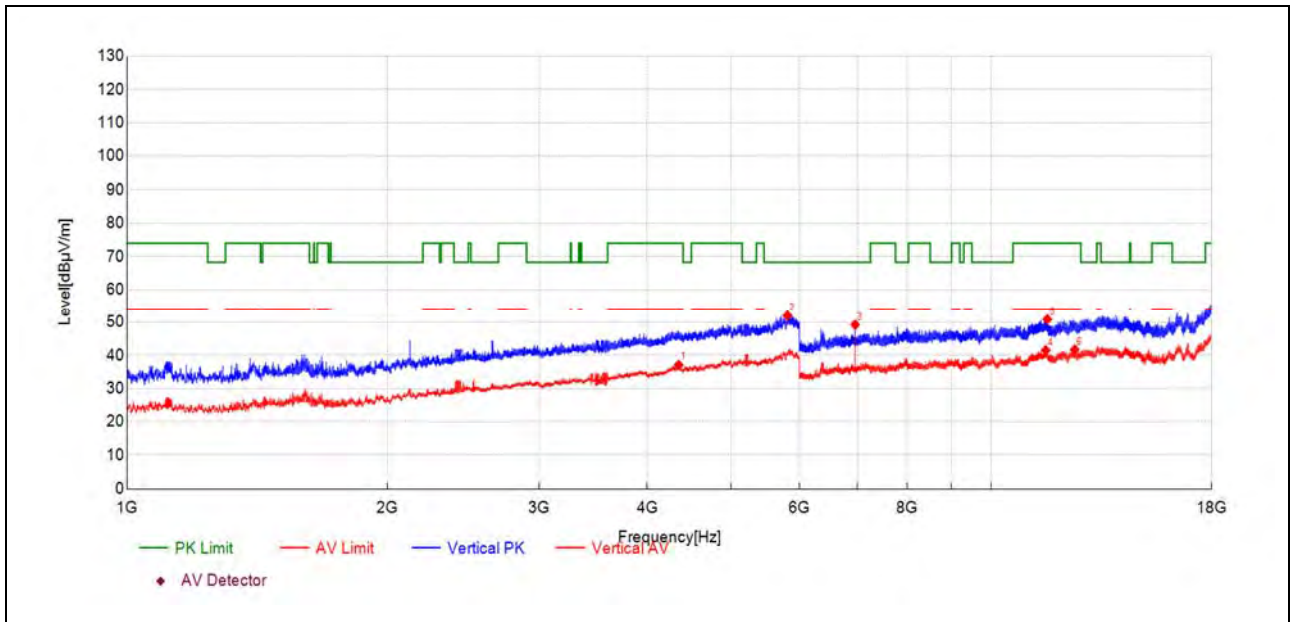
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4337.33	29.6	37.01	7.410	54.00	16.99	150	215	AV	PASS
5837.48	39.2	52.96	13.810	68.23	15.27	150	359	PK	PASS
6960.04	60.0	55.40	-4.570	68.23	12.83	150	273	PK	PASS
8197.09	42.0	38.87	-3.170	54.00	15.13	150	168	AV	PASS
11612.73	38.9	41.92	2.980	54.00	12.08	150	23	AV	PASS
11633.73	48.6	51.21	2.630	74.00	22.79	150	1	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
65.41	65.4	32.54	-32.810	40.00	7.46	150	337	PK	PASS
84.18	67.1	32.81	-34.250	40.00	7.19	150	350	PK	PASS
222.51	62.8	33.71	-29.090	46.00	12.29	150	350	PK	PASS
560.96	49.1	28.24	-20.840	46.00	17.76	150	350	PK	PASS
839.21	48.4	32.53	-15.820	46.00	13.47	150	350	PK	PASS
977.30	46.4	32.81	-13.610	54.00	21.19	150	350	PK	PASS

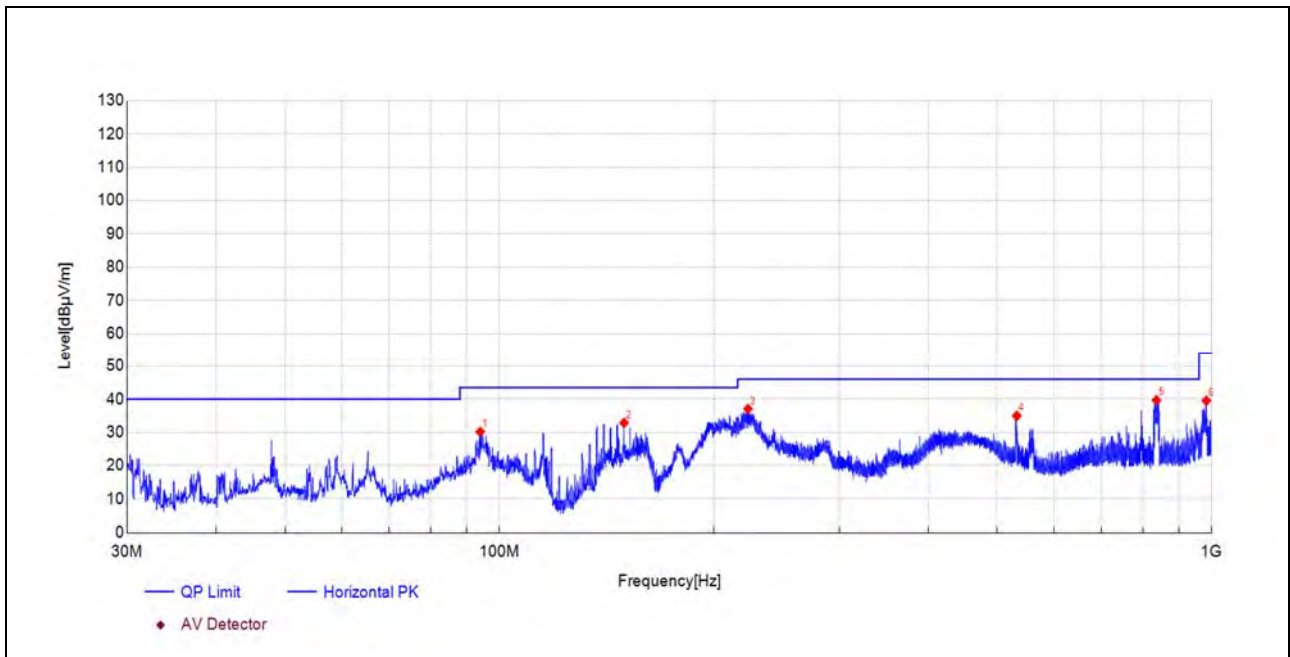


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4349.83	29.6	37.08	7.480	54.00	16.92	150	117	AV	PASS
5811.48	38.7	52.00	13.280	68.23	16.23	150	103	PK	PASS
6960.04	53.8	49.22	-4.570	68.23	19.01	150	150	PK	PASS
11565.73	38.6	41.51	2.910	54.00	12.49	150	150	AV	PASS
11615.73	47.9	50.86	2.930	74.00	23.14	150	46	PK	PASS
12492.27	38.1	41.69	3.560	54.00	12.31	150	67	AV	PASS

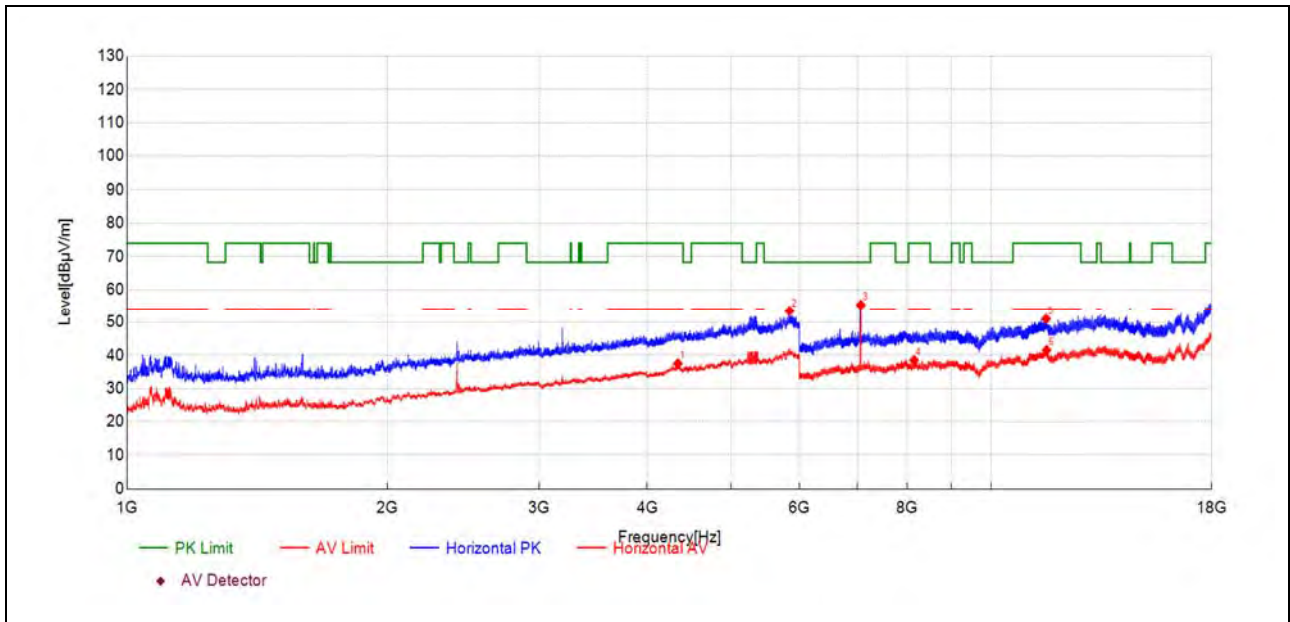


Plot for Channel 60



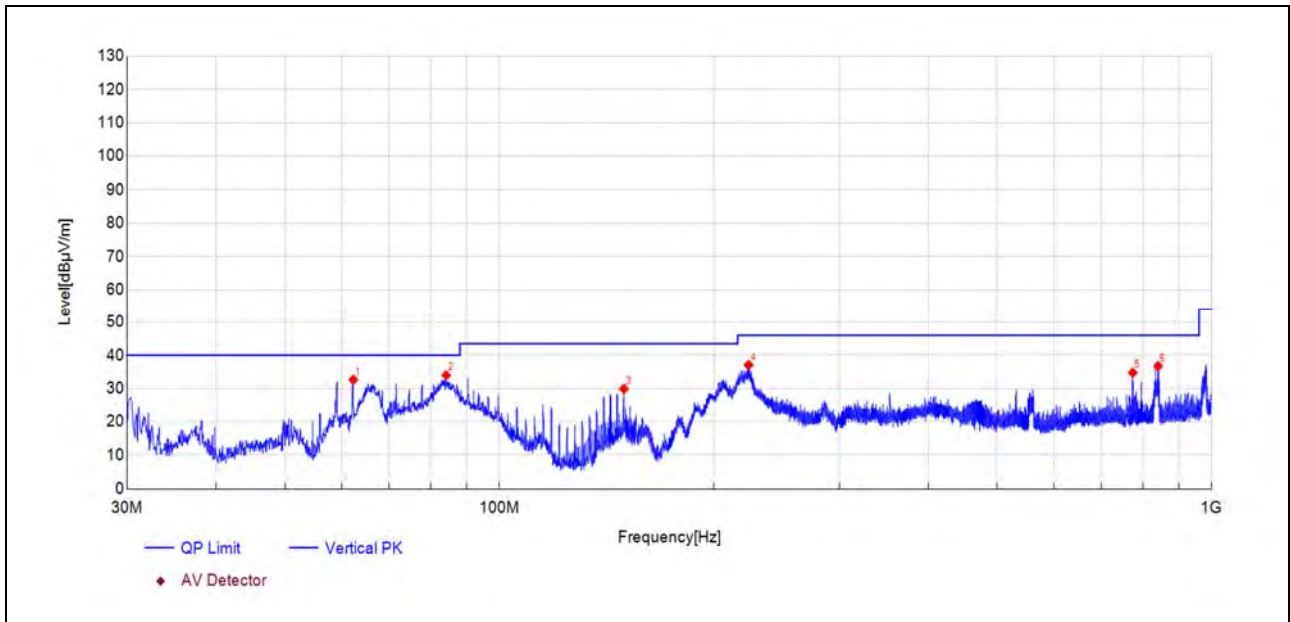
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
93.97	61.0	30.17	-30.850	43.50	13.33	150	334	PK	PASS
149.61	66.3	32.89	-33.390	43.50	10.61	150	254	PK	PASS
223.38	66.1	37.07	-29.040	46.00	8.93	150	78	PK	PASS
532.49	56.4	35.00	-21.390	46.00	11.00	150	227	PK	PASS
836.55	55.6	39.69	-15.870	46.00	6.31	150	53	PK	PASS
982.83	53.0	39.56	-13.480	54.00	14.44	150	106	PK	PASS



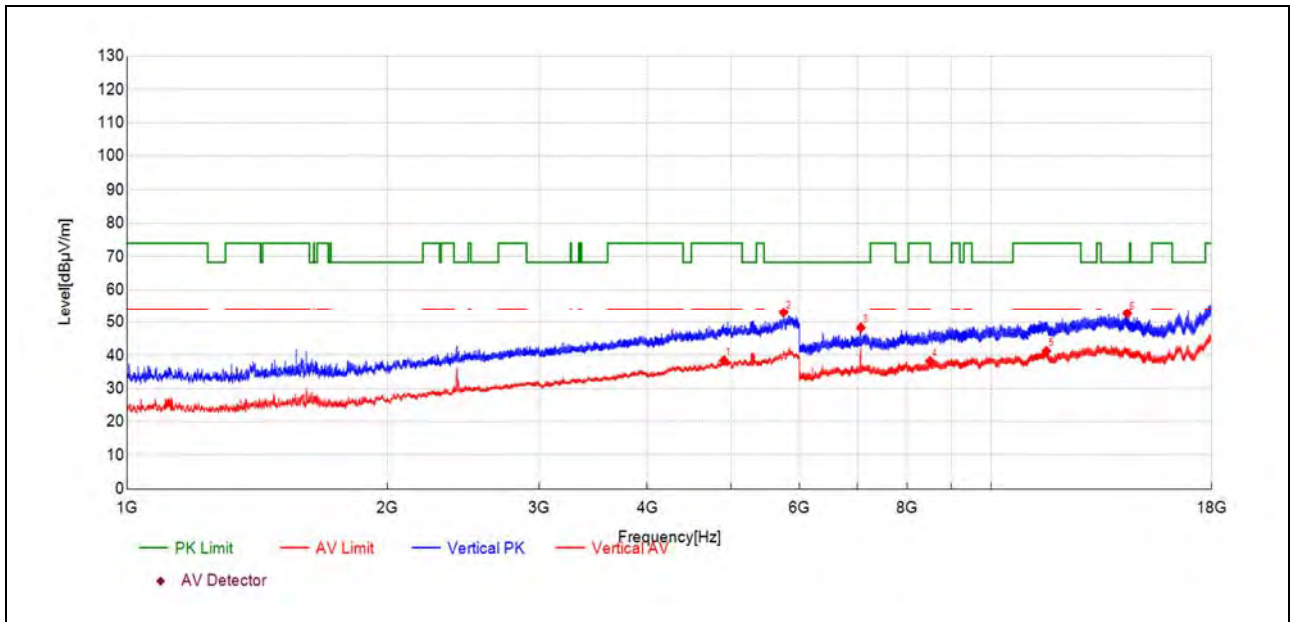
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4339.33	30.1	37.50	7.430	54.00	16.50	150	172	AV	PASS
5844.48	39.5	53.48	13.940	68.23	14.75	150	349	PK	PASS
7066.54	59.5	55.33	-4.150	68.23	12.90	150	275	PK	PASS
8143.09	42.0	38.49	-3.510	54.00	15.51	150	170	AV	PASS
11577.23	48.0	51.00	3.010	74.00	23.00	150	11	PK	PASS
11592.73	38.4	41.56	3.130	54.00	12.44	150	0	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
62.35	64.4	32.63	-31.750	40.00	7.37	150	309	PK	PASS
84.18	68.2	33.98	-34.250	40.00	6.02	150	16	PK	PASS
149.51	63.3	29.91	-33.390	43.50	13.59	150	189	PK	PASS
223.77	66.1	37.07	-29.020	46.00	8.93	150	189	PK	PASS
774.61	51.7	34.75	-16.980	46.00	11.25	150	309	PK	PASS
840.72	52.5	36.75	-15.790	46.00	9.25	150	150	PK	PASS

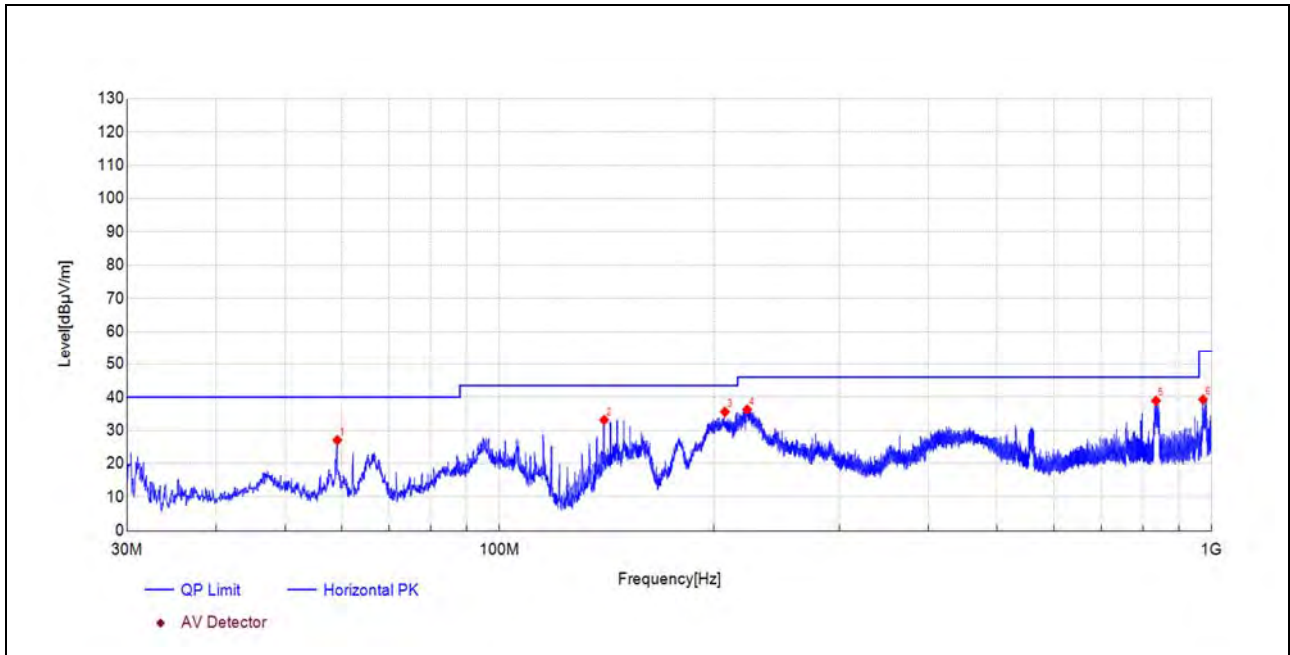


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4906.89	29.1	38.41	9.360	54.00	15.59	150	7	AV	PASS
5752.48	40.1	52.97	12.860	68.23	15.26	150	298	PK	PASS
7066.54	52.5	48.31	-4.150	68.23	19.92	150	169	PK	PASS
8495.60	40.7	38.27	-2.420	54.00	15.73	150	0	AV	PASS
11588.23	38.2	41.25	3.100	54.00	12.75	150	251	AV	PASS
14371.85	48.0	52.66	4.620	68.23	15.57	150	335	PK	PASS

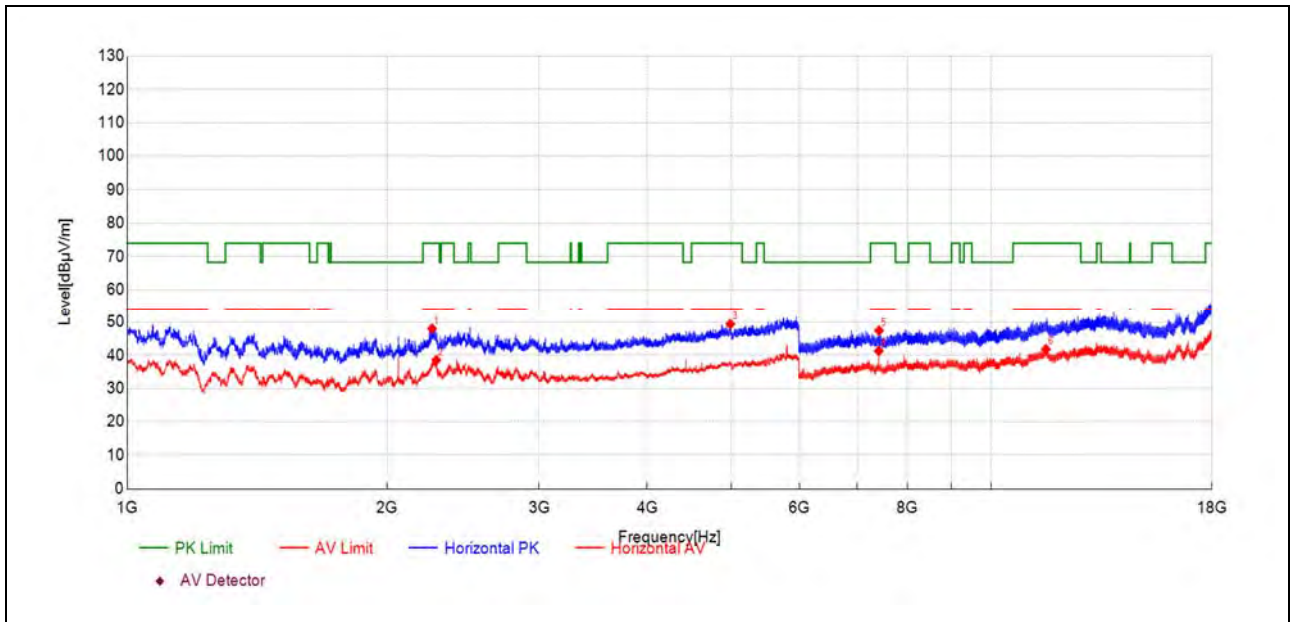


Plot for Channel 120



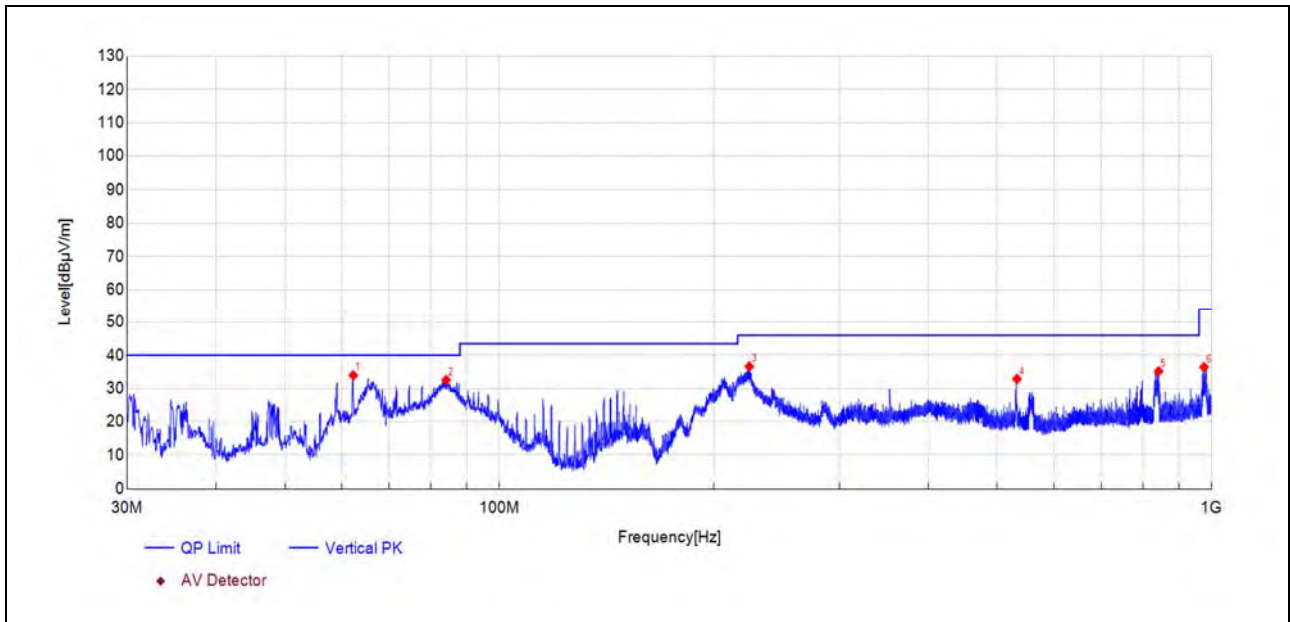
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
59.20	57.7	27.05	-30.680	40.00	12.95	150	79	PK	PASS
140.29	66.7	33.14	-33.580	43.50	10.36	150	242	PK	PASS
207.28	65.6	35.57	-30.010	43.50	7.93	150	214	PK	PASS
222.75	65.3	36.27	-29.070	46.00	9.73	150	54	PK	PASS
835.19	54.8	38.91	-15.900	46.00	7.09	150	107	PK	PASS
972.35	53.0	39.31	-13.730	54.00	14.69	150	92	PK	PASS



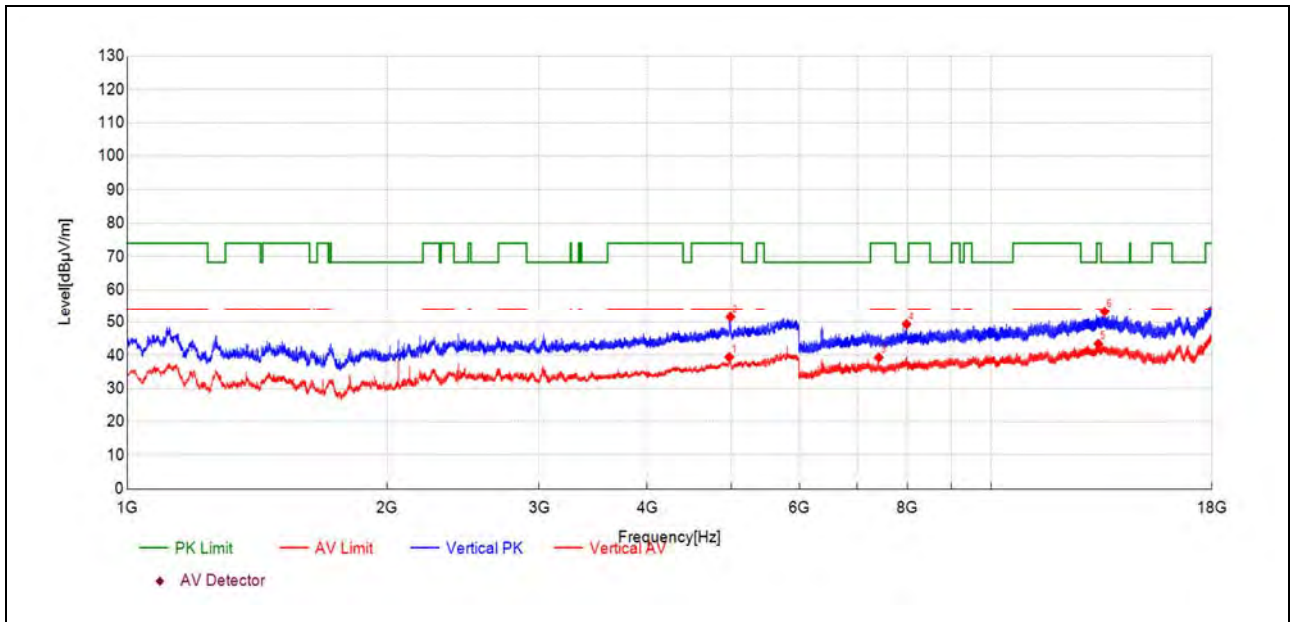
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2254.13	48.7	48.02	-0.630	74.00	25.98	150	38	PK	PASS
2279.63	39.3	38.53	-0.750	54.00	15.47	150	38	AV	PASS
4991.90	40.4	49.40	9.040	74.00	24.60	150	289	PK	PASS
7412.85	45.4	41.29	-4.100	54.00	12.71	150	280	AV	PASS
7417.65	51.6	47.43	-4.170	74.00	26.57	150	350	PK	PASS
11572.19	38.9	41.81	2.960	54.00	12.19	150	350	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

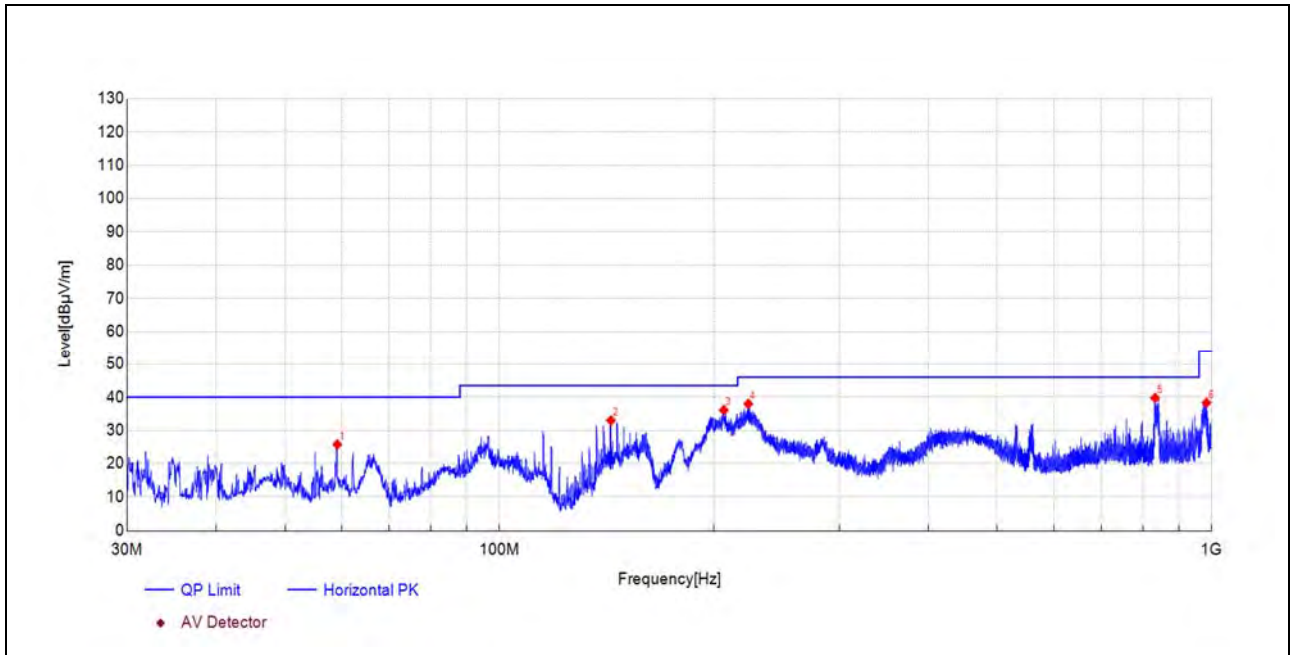
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
62.35	65.7	33.97	-31.750	40.00	6.03	150	318	PK	PASS
84.18	66.8	32.53	-34.250	40.00	7.47	150	78	PK	PASS
224.30	65.6	36.63	-29.000	46.00	9.37	150	198	PK	PASS
532.82	54.3	32.88	-21.390	46.00	13.12	150	91	PK	PASS
842.37	50.9	35.22	-15.720	46.00	10.78	150	117	PK	PASS
975.55	50.1	36.46	-13.630	54.00	17.54	150	117	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

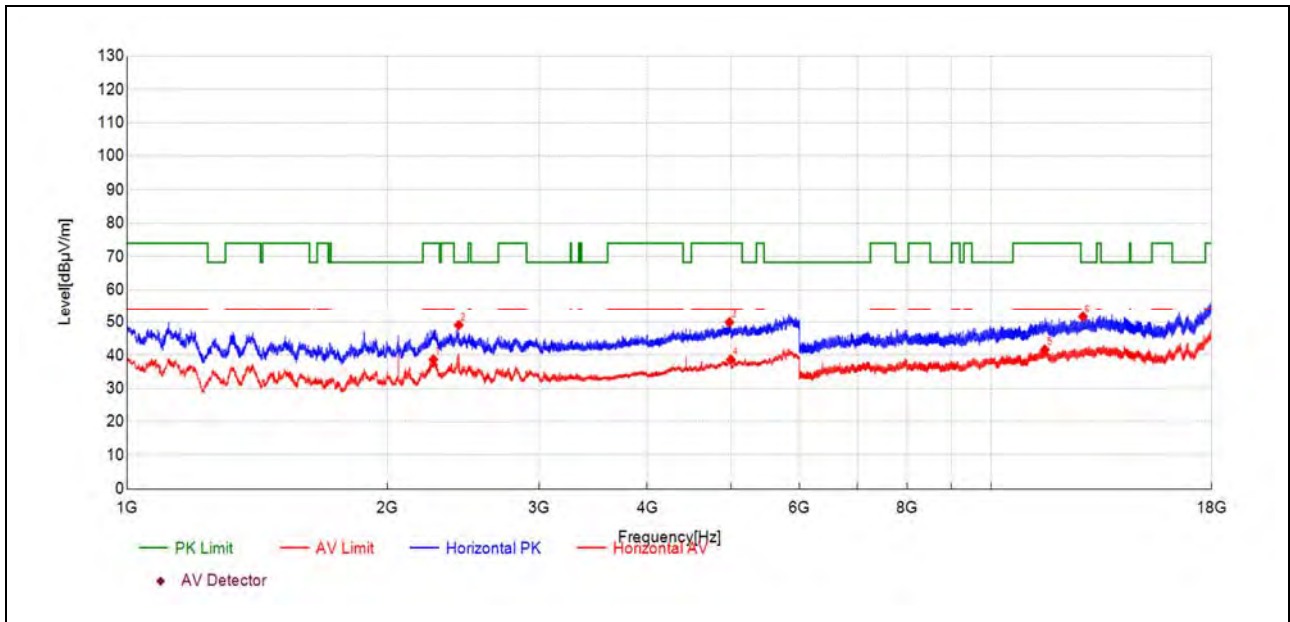
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4977.90	30.4	39.42	8.990	54.00	14.58	150	109	AV	PASS
4993.40	42.5	51.56	9.060	74.00	22.44	150	151	PK	PASS
7413.25	43.4	39.29	-4.110	54.00	14.71	150	116	AV	PASS
7982.87	52.3	49.33	-2.950	68.23	18.90	150	116	PK	PASS
13307.44	37.9	43.42	5.500	54.00	10.58	150	44	AV	PASS
13530.25	48.4	53.26	4.900	68.23	14.97	150	325	PK	PASS

Plot for Channel 157



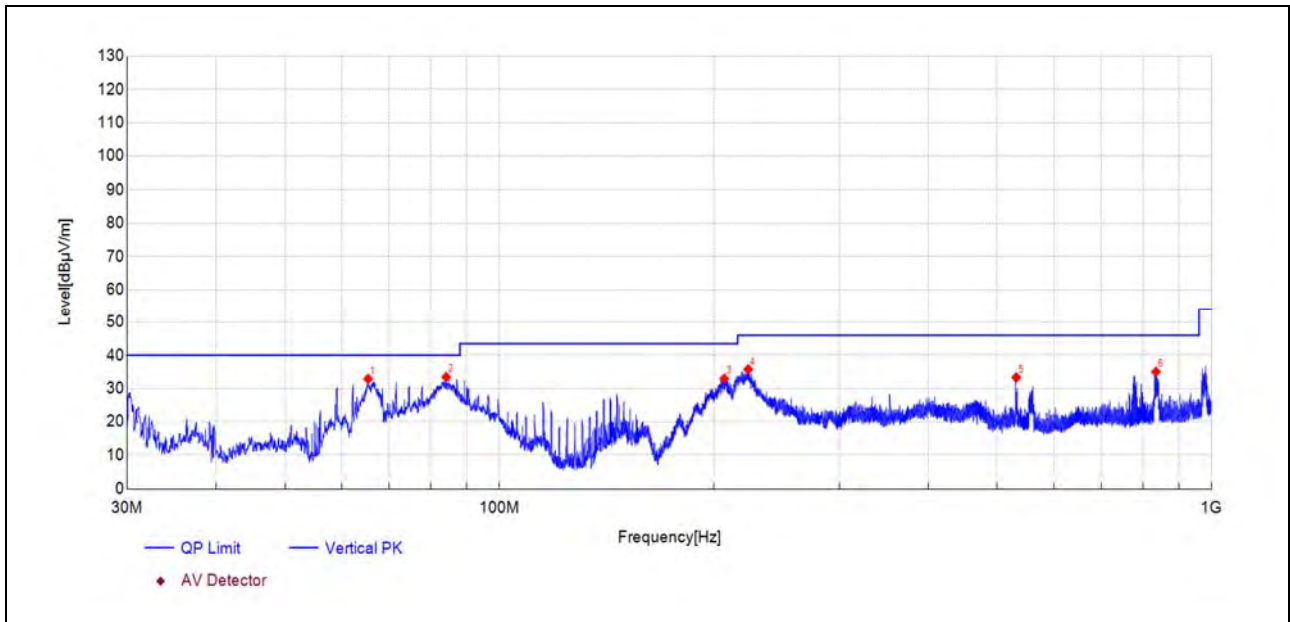
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
59.20	56.4	25.76	-30.680	40.00	14.24	150	78	PK	PASS
143.40	66.5	32.99	-33.550	43.50	10.51	150	267	PK	PASS
206.55	66.2	36.10	-30.070	43.50	7.40	150	226	PK	PASS
223.52	67.0	37.98	-29.040	46.00	8.02	150	91	PK	PASS
832.72	55.7	39.77	-15.940	46.00	6.23	150	118	PK	PASS
983.07	51.8	38.33	-13.480	54.00	15.67	150	52	PK	PASS



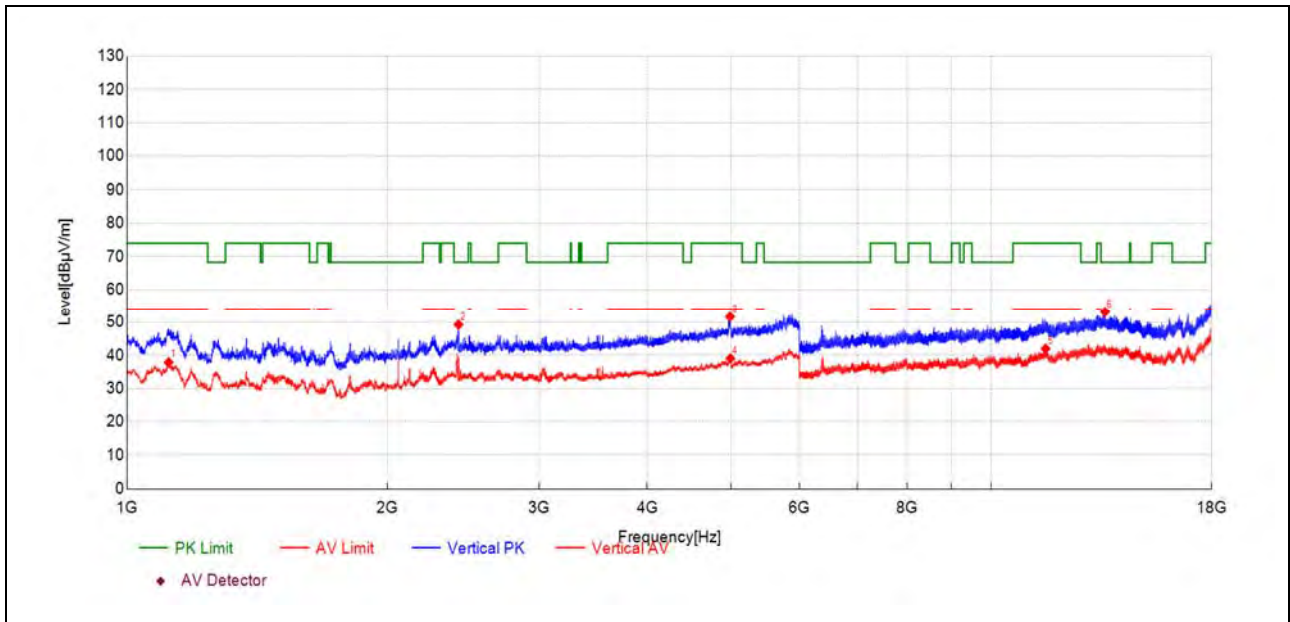
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2262.13	39.3	38.71	-0.540	54.00	15.29	150	39	AV	PASS
2420.14	48.9	49.06	0.210	68.23	19.17	150	344	PK	PASS
4978.40	40.6	49.94	9.320	74.00	24.06	150	54	PK	PASS
4997.90	29.3	38.71	9.420	54.00	15.29	150	11	AV	PASS
11536.98	39.0	41.68	2.680	54.00	12.32	150	141	AV	PASS
12771.03	47.6	51.62	4.000	68.23	16.61	150	72	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
65.41	65.7	32.89	-32.810	40.00	7.11	150	283	PK	PASS
84.18	67.7	33.43	-34.250	40.00	6.57	150	15	PK	PASS
206.84	63.0	32.96	-30.050	43.50	10.54	150	176	PK	PASS
223.48	64.8	35.76	-29.040	46.00	10.24	150	176	PK	PASS
531.56	54.7	33.31	-21.400	46.00	12.69	150	108	PK	PASS
835.19	51.0	35.05	-15.900	46.00	10.95	150	147	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1117.51	42.9	37.87	-4.980	54.00	16.13	150	25	AV	PASS
2419.14	49.1	49.26	0.200	68.23	18.97	150	136	PK	PASS
4986.90	42.3	51.64	9.360	74.00	22.36	150	343	PK	PASS
4991.40	29.7	39.04	9.380	54.00	14.96	150	152	AV	PASS
11562.19	39.1	41.99	2.880	54.00	12.01	150	303	AV	PASS
13546.65	48.3	53.17	4.910	68.23	15.06	150	231	PK	PASS

— END OF REPORT —