



NVNT	n40	5755	Ant1	-0.95	0.26	-0.69	30	Pass
NVNT	n40	5795	Ant1	-1.2	0.26	-0.94	30	Pass
NVNT	ac20	5180	Ant1	5.11	0.2	5.31	11	Pass
NVNT	ac20	5220	Ant1	5	0.13	5.13	11	Pass
NVNT	ac20	5240	Ant1	4.95	0.13	5.08	11	Pass
NVNT	ac20	5260	Ant1	4.59	0.13	4.72	11	Pass
NVNT	ac20	5300	Ant1	4.46	0.2	4.66	11	Pass
NVNT	ac20	5320	Ant1	4.78	0.13	4.91	11	Pass
NVNT	ac20	5500	Ant1	4.77	0.13	4.9	11	Pass
NVNT	ac20	5580	Ant1	4.72	0.13	4.85	11	Pass
NVNT	ac20	5700	Ant1	5.51	0.13	5.64	11	Pass
NVNT	ac20	5745	Ant1	2.42	0.13	2.55	30	Pass
NVNT	ac20	5785	Ant1	2.36	0.13	2.49	30	Pass
NVNT	ac20	5825	Ant1	2.34	0.13	2.47	30	Pass
NVNT	ac40	5190	Ant1	1.39	0.26	1.65	11	Pass
NVNT	ac40	5230	Ant1	1.25	0.26	1.51	11	Pass
NVNT	ac40	5270	Ant1	0.86	0.26	1.12	11	Pass
NVNT	ac40	5310	Ant1	1.21	0.26	1.47	11	Pass
NVNT	ac40	5510	Ant1	1.67	0.26	1.93	11	Pass
NVNT	ac40	5550	Ant1	1.61	0.26	1.87	11	Pass
NVNT	ac40	5670	Ant1	2.03	0.26	2.29	11	Pass
NVNT	ac40	5755	Ant1	-0.46	0.26	-0.2	30	Pass
NVNT	ac40	5795	Ant1	-0.71	0.26	-0.45	30	Pass
NVNT	ac80	5210	Ant1	-3.26	0.51	-2.75	11	Pass
NVNT	ac80	5290	Ant1	-3.49	0.75	-2.74	11	Pass
NVNT	ac80	5530	Ant1	-2.64	0.48	-2.16	11	Pass
NVNT	ac80	5610	Ant1	-2.6	0.51	-2.09	11	Pass
NVNT	ac80	5775	Ant1	-4.72	0.51	-4.21	30	Pass

Test Graphs

PSD NVNT a 5180MHz Ant1



PSD NVNT a 5220MHz Ant1



PSD NVNT a 5240MHz Ant1



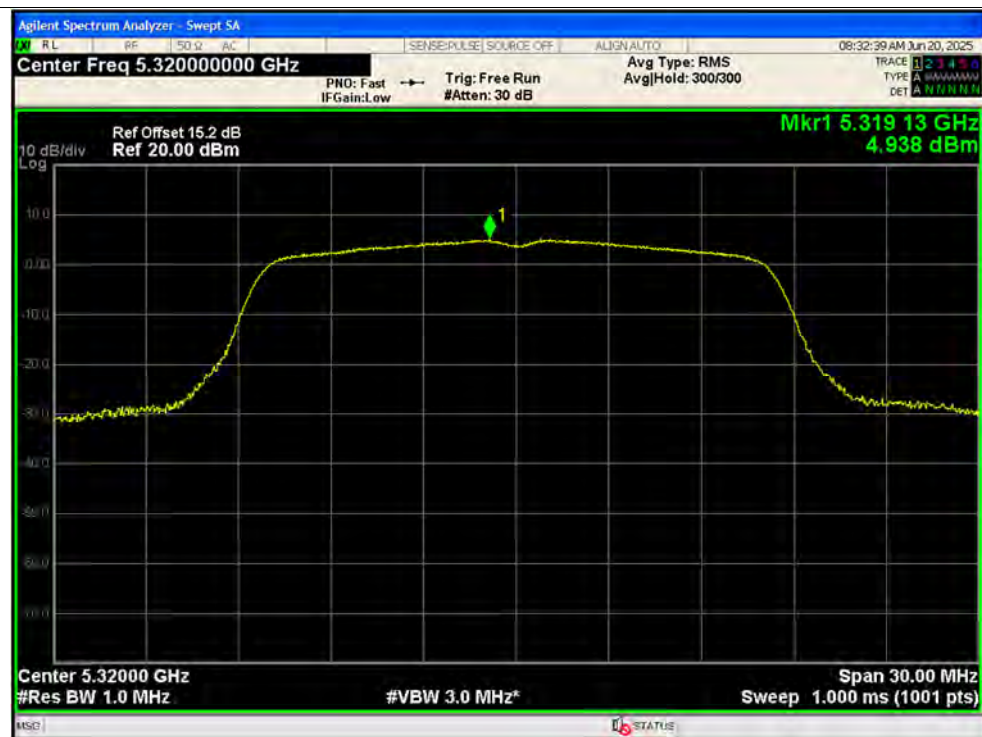
PSD NVNT a 5260MHz Ant1



PSD NVNT a 5300MHz Ant1



PSD NVNT a 5320MHz Ant1



PSD NVNT a 5500MHz Ant1



PSD NVNT a 5580MHz Ant1



PSD NVNT a 5700MHz 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 5240MHz Ant1



PSD NVNT n20 5260MHz Ant1



PSD NVNT n20 5300MHz Ant1

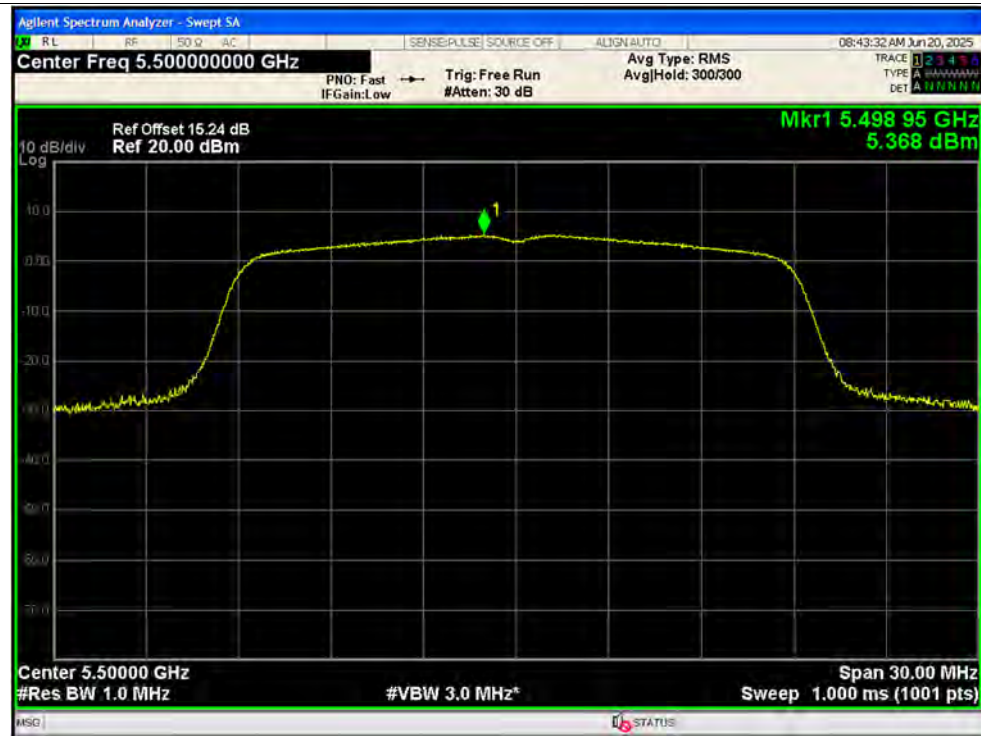


PSD NVNT n20 5320MHz Ant1





PSD NVNT n20 5500MHz Ant1



PSD NVNT n20 5580MHz Ant1



PSD NVNT n20 5700MHz 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



PSD NVNT n40 5270MHz Ant1



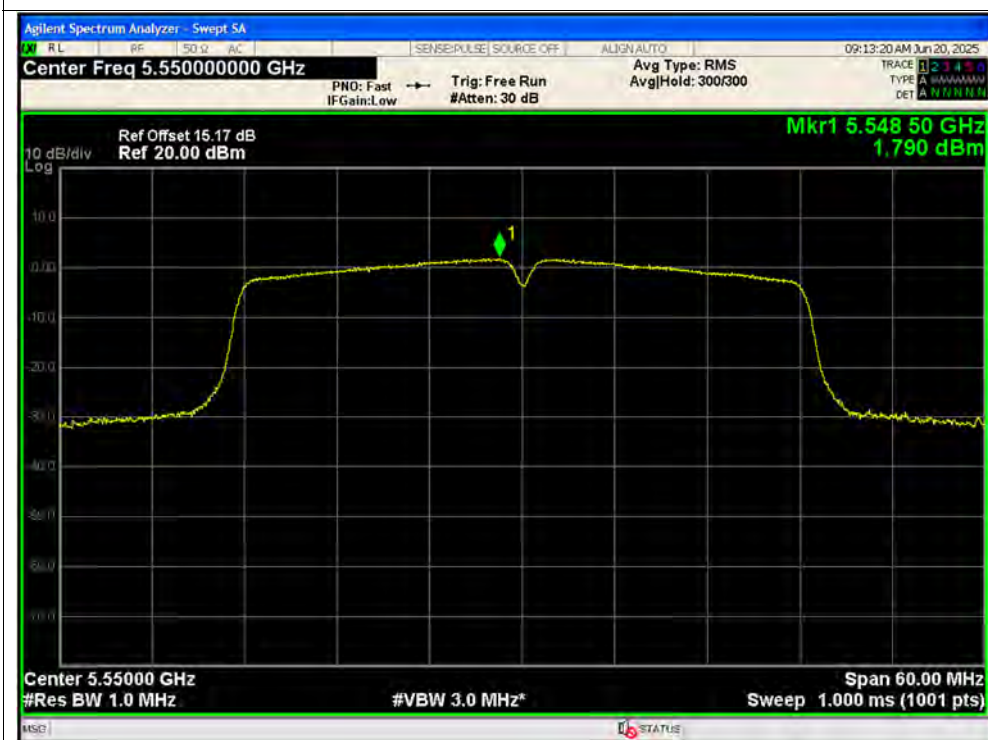
PSD NVNT n40 5310MHz Ant1



PSD NVNT n40 5510MHz Ant1



PSD NVNT n40 5550MHz Ant1



PSD NVNT n40 5670MHz 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 5700MHz 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 5670MHz 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 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	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
20C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
20C 4.45V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
-10C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
0C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
10C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
30C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
40C 3.88V	Carrier	5180	Ant1	5180.001	1000	0.19	25	Pass
50C 3.88V	Carrier	5180	Ant1	5180	0	0	25	Pass
55C 3.88V	Carrier	5180	Ant1	5180	0	0	25	Pass
20C 3.5V	Carrier	5260	Ant1	5260	0	0	25	Pass
20C 3.88V	Carrier	5260	Ant1	5260	0	0	25	Pass
20C 4.45V	Carrier	5260	Ant1	5260	0	0	25	Pass
-10C 3.88V	Carrier	5260	Ant1	5260	0	0	25	Pass
0C 3.88V	Carrier	5260	Ant1	5260	0	0	25	Pass
10C 3.88V	Carrier	5260	Ant1	5260	0	0	25	Pass
30C 3.88V	Carrier	5260	Ant1	5260	0	0	25	Pass
40C 3.88V	Carrier	5260	Ant1	5259.999	-1000	-0.19	25	Pass
50C 3.88V	Carrier	5260	Ant1	5259.999	-1000	-0.19	25	Pass
55C 3.88V	Carrier	5260	Ant1	5259.999	-1000	-0.19	25	Pass
20C 3.5V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
20C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
20C 4.45V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
-10C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
0C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
10C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
30C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
40C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
50C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
55C 3.88V	Carrier	5500	Ant1	5499.998	-2000	-0.36	25	Pass
20C 3.5V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
20C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
20C 4.45V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
-10C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass



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0C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
10C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
30C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
40C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass
50C 3.88V	Carrier	5745	Ant1	5744.996	-4000	-0.7	25	Pass
55C 3.88V	Carrier	5745	Ant1	5744.997	-3000	-0.52	25	Pass



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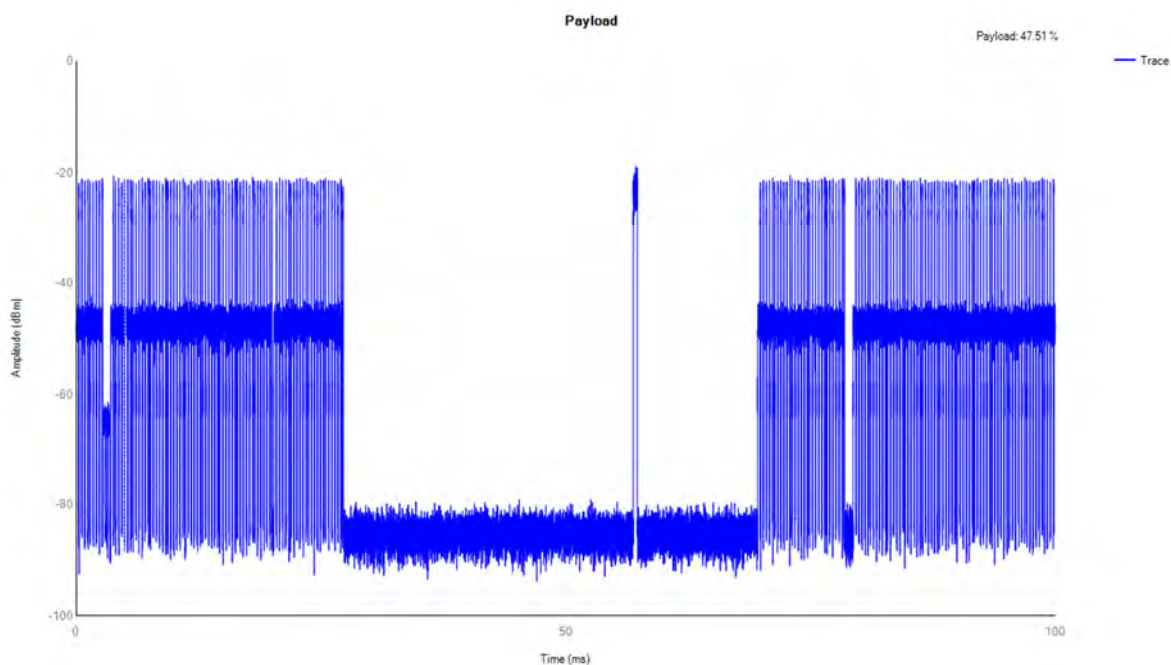
A.6. Dynamic Frequency Selection

Payload

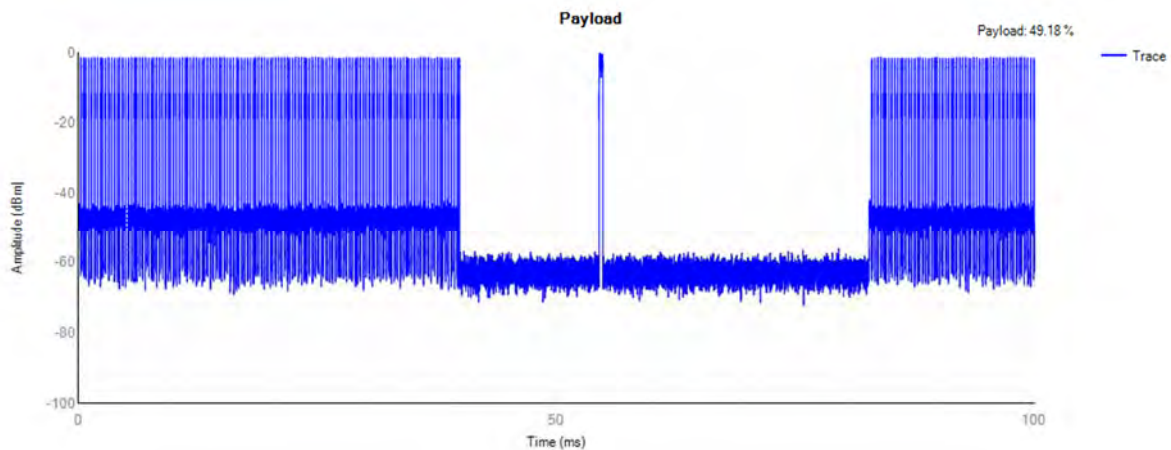
Mode	Frequency (MHz)	Result	Verdict
ac20	5320	47.51	Pass
ac20	5500	49.18	Pass
ac80	5290	63.58	Pass
ac80	5530	27.93	Pass

Test Graphs

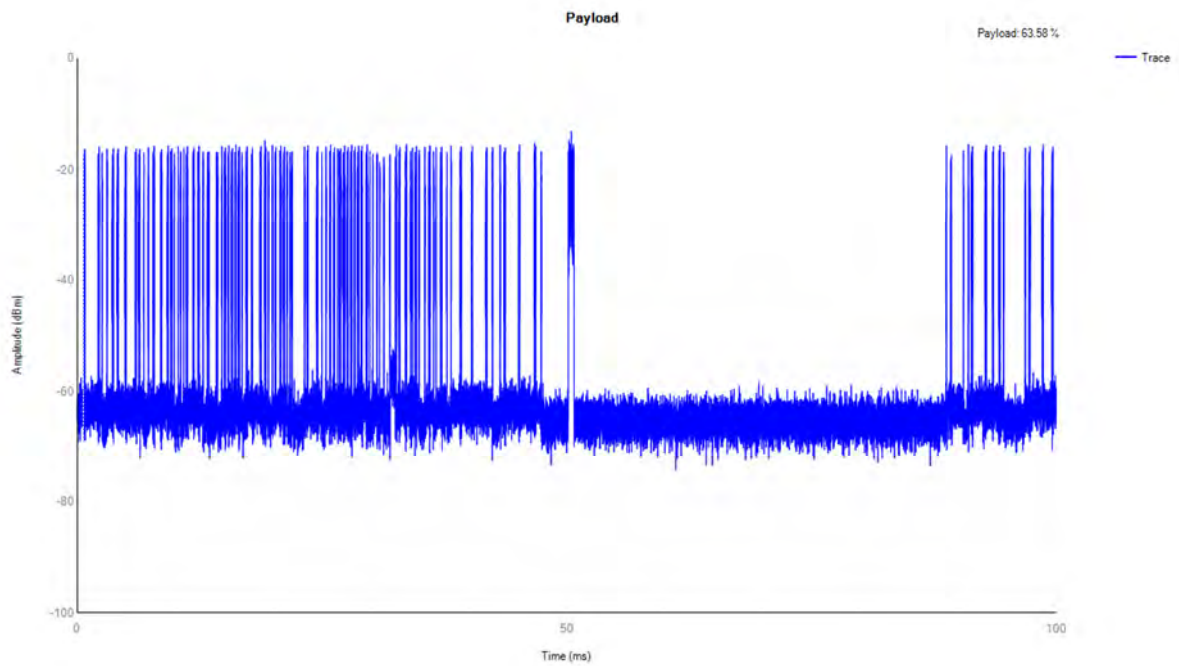
ac20 5320MHz Payload



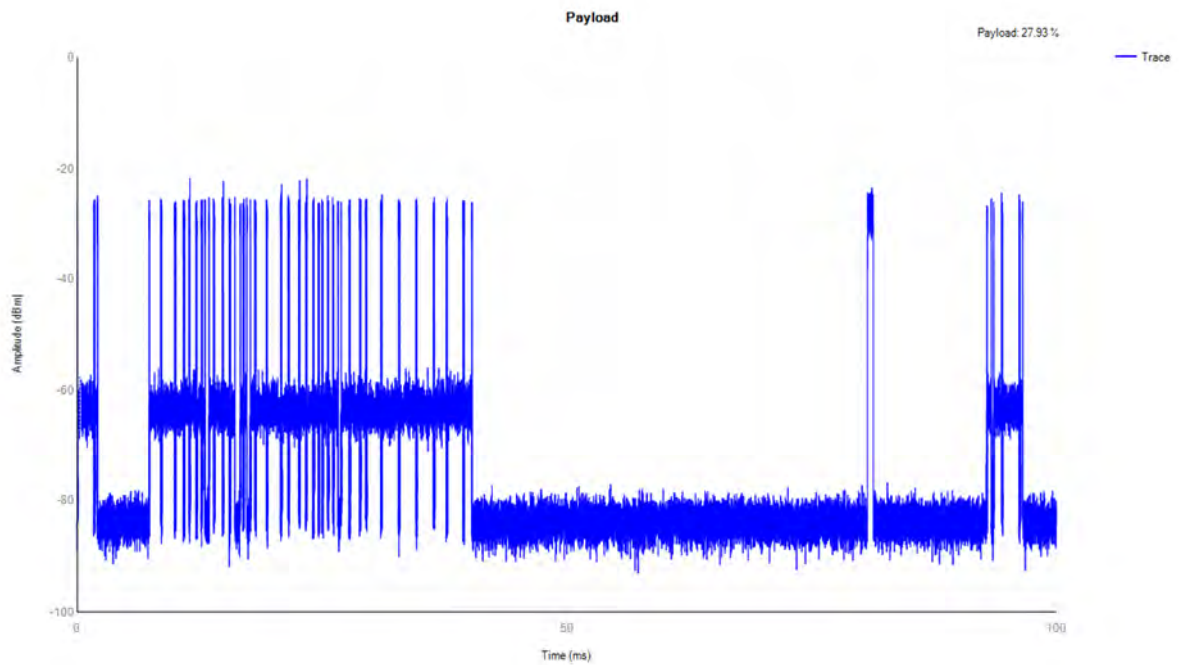
ac20 5500MHz Payload



ac80 5290MHz Payload



ac80 5530MHz Payload





Detection Thresholds

Mode	Frequency (MHz)	Type	Result	Verdict
ac20	5260	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

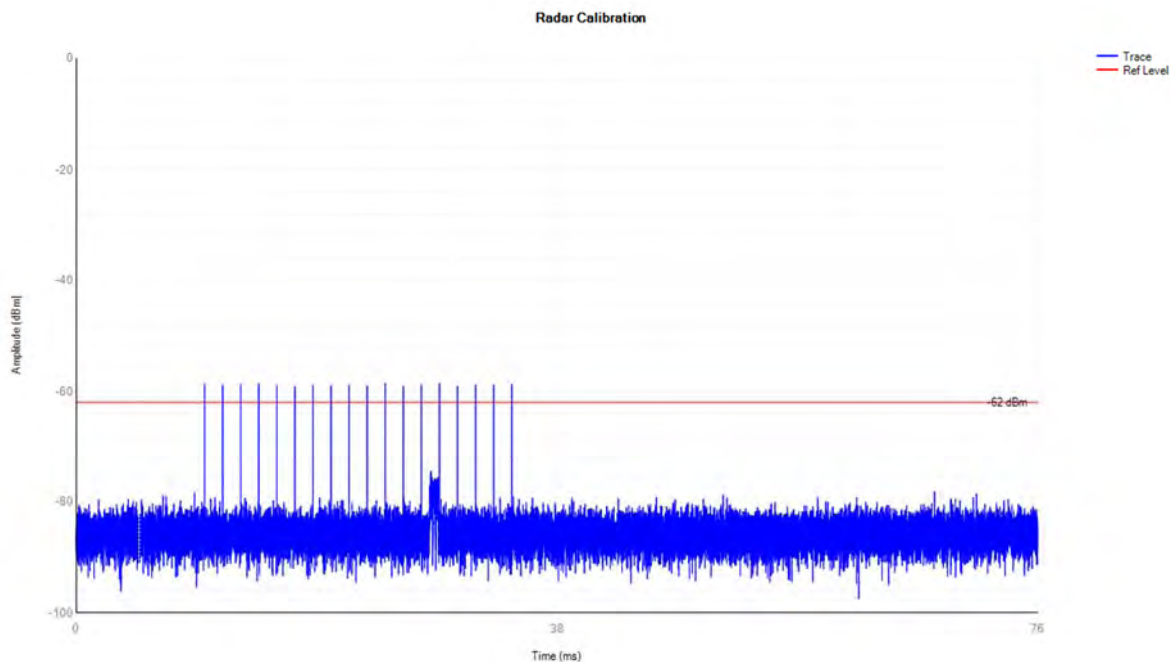
Detector Type: Peak

RBW: 3MHz

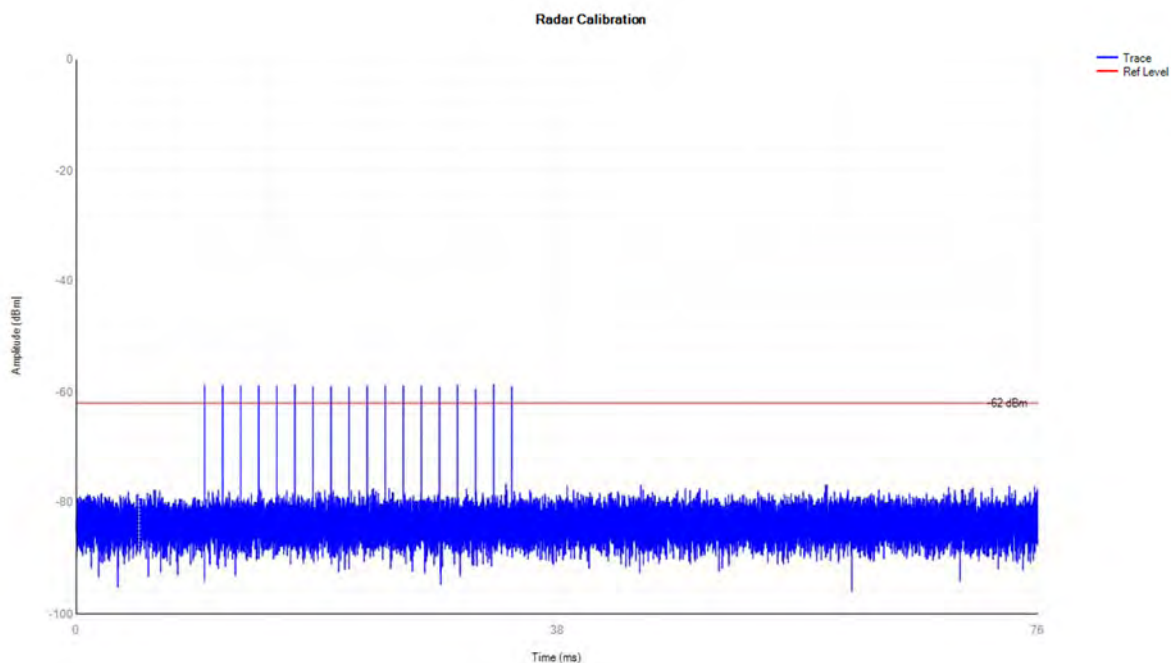
VBW: 3MHz

Test Graphs

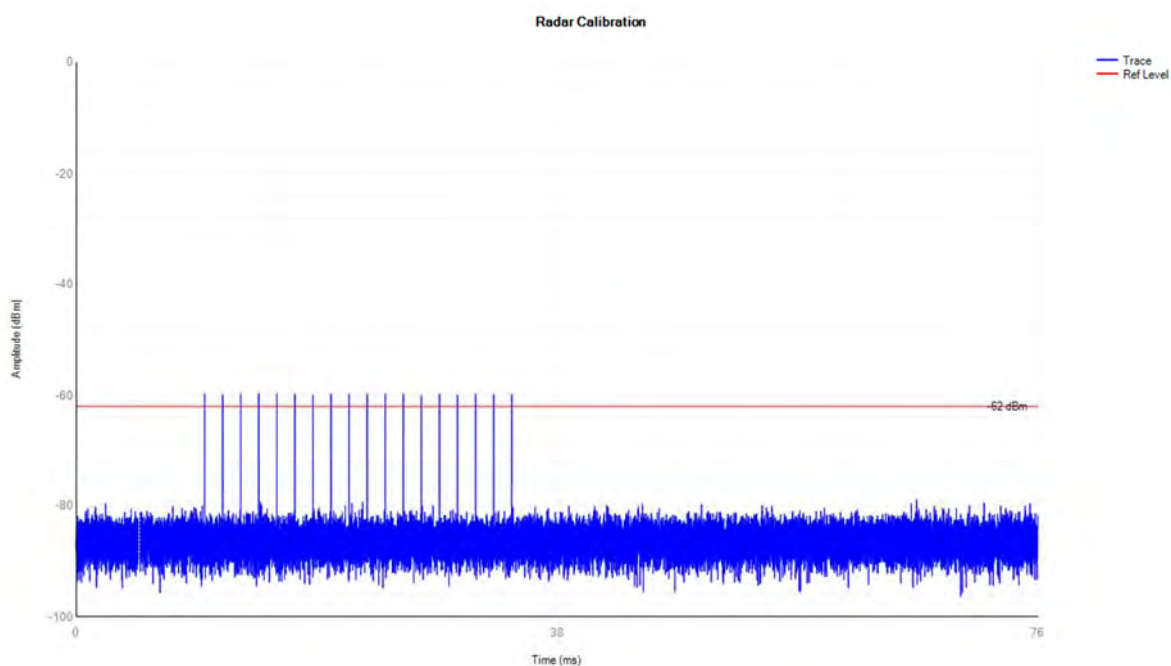
5320MHz DFS_FCC_T0



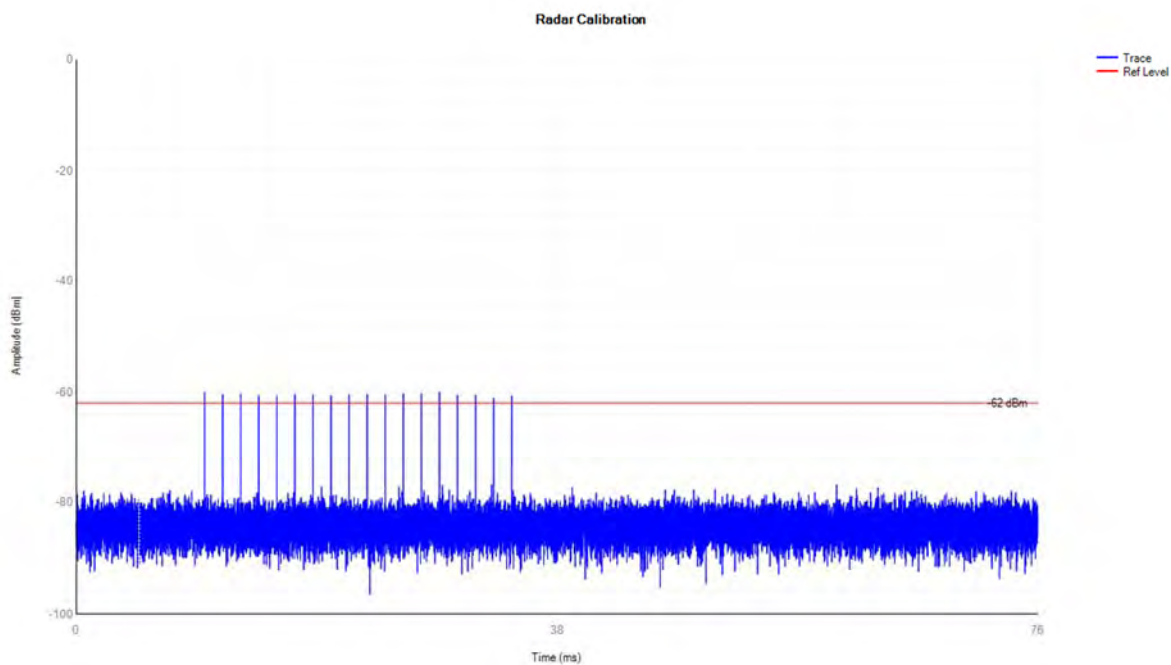
5500MHz DFS_FCC_T0



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	0.877	10	0.032	0.26	0.013	0.06	Pass
ac20	5500	0.716	10	0.013	0.26	0.011	0.06	Pass
ac80	5290	0.725	10	0.018	0.26	0.014	0.06	Pass
ac80	5530	0.854	10	0.025	0.26	0.016	0.06	Pass

Spectrum analyzer settings:

Span: Zero

Detector type: Peak

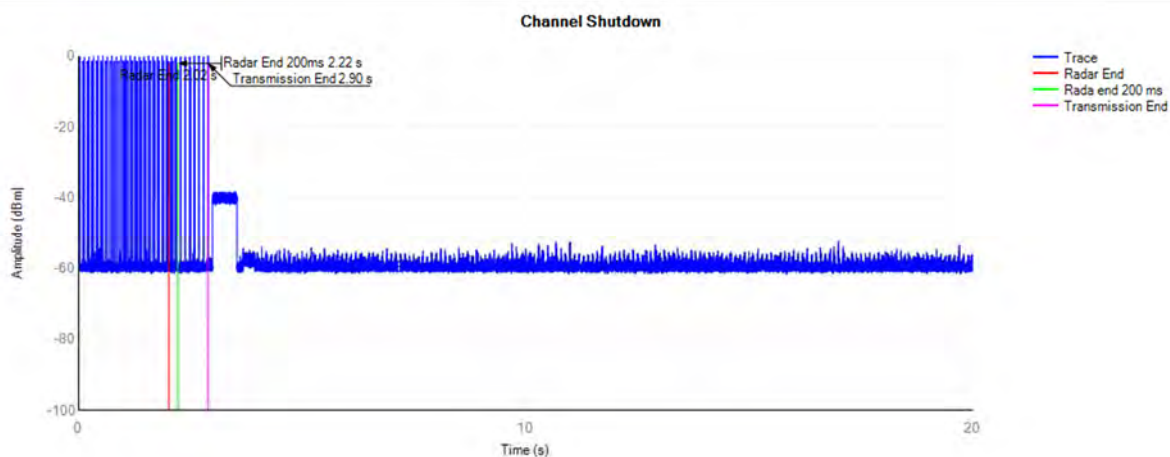
RBW: 3MHz

VBW: 3MHz

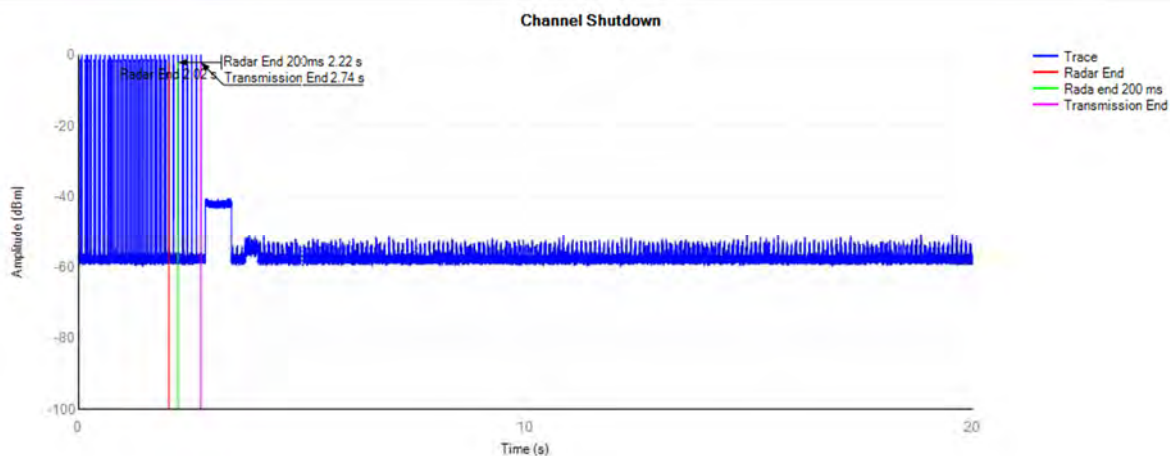
Sweep time: 20s

Test Graphs

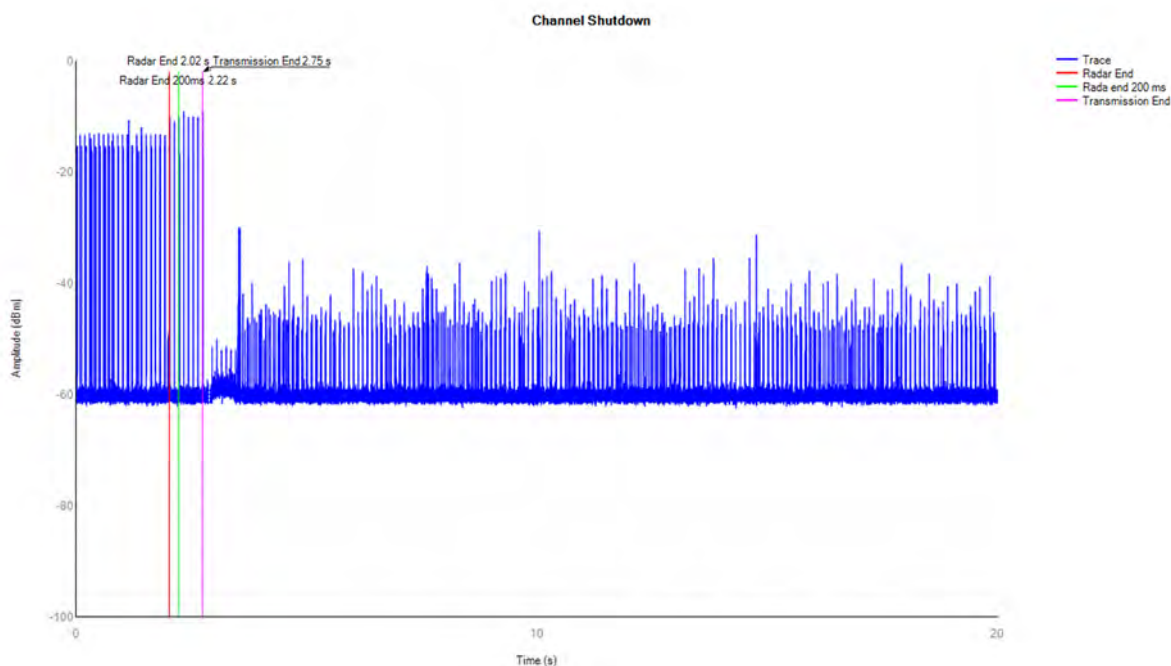
ac20 5320MHz Shutdown



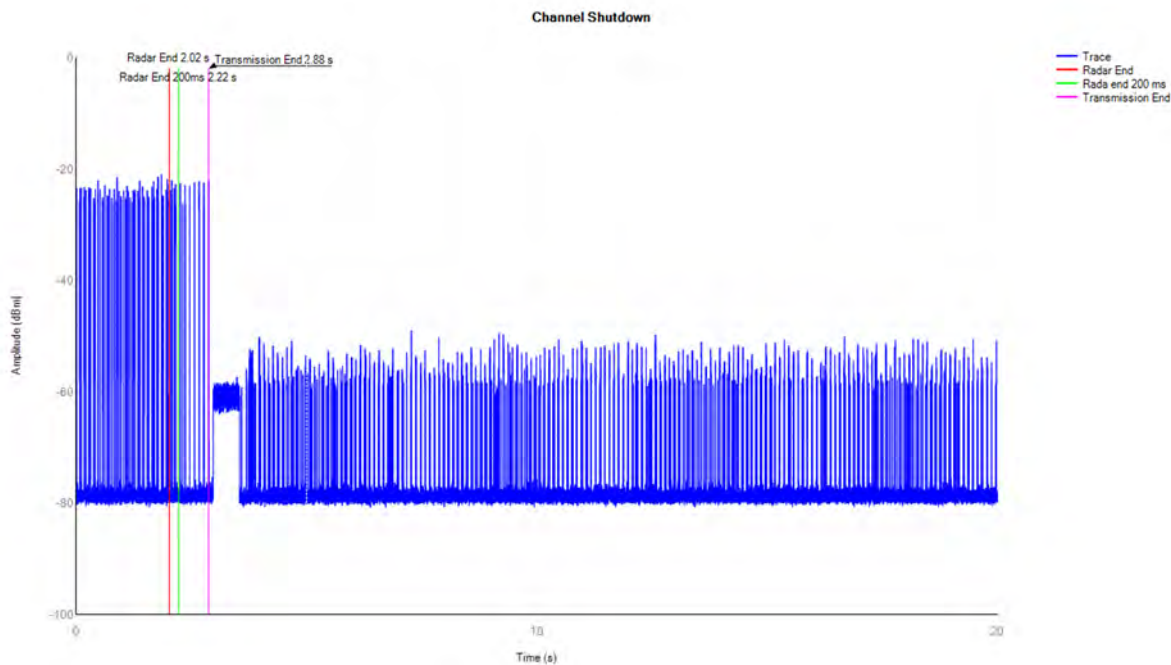
ac20 5500MHz Shutdown



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	5260	See test Graph	Pass
ac20	5500	See test Graph	Pass

Spectrum analyzer settings:

Span: Zero

Detector type: Peak

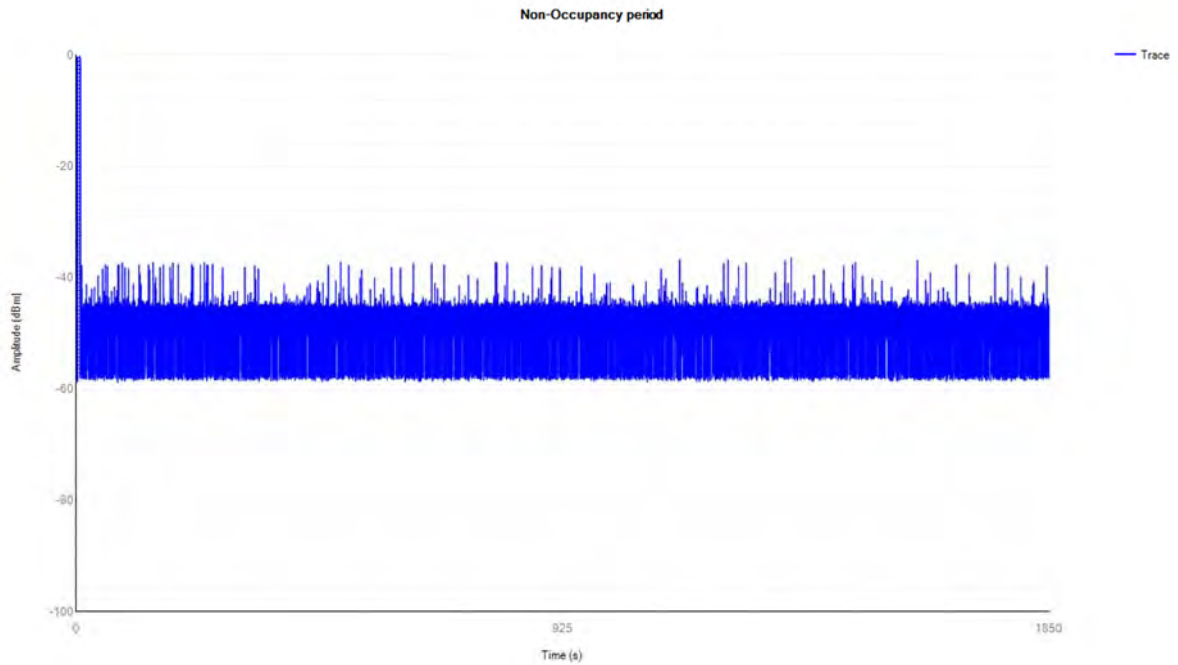
RBW: 3MHz

VBW: 3MHz

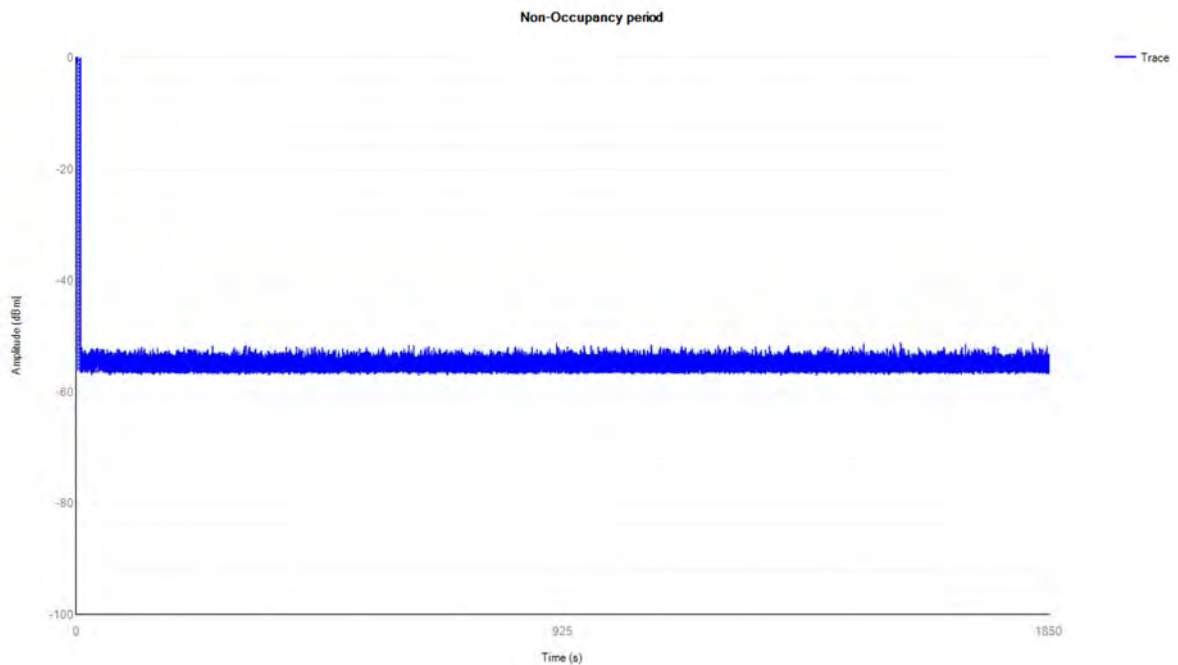
Sweep time: 1850s

Test Graphs

ac20 5260MHz 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+Adapter+DATA Cable+Earphone+WIFI TX

Test voltage: AC 120V/60Hz

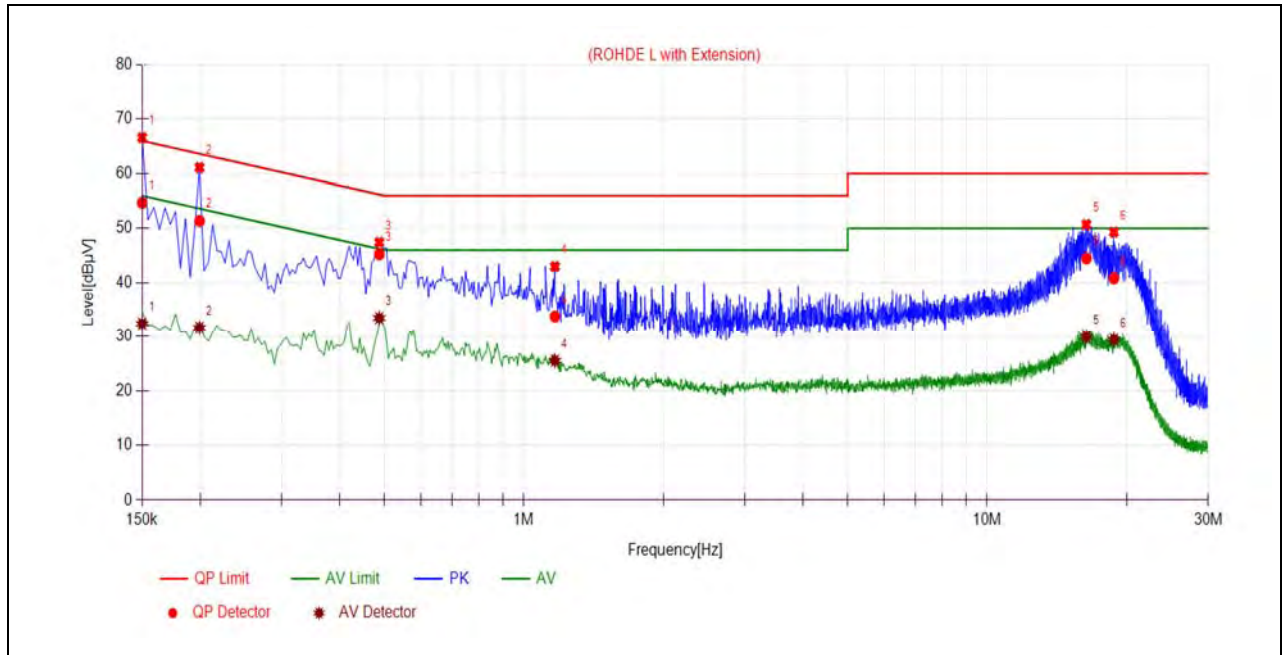
The measurement results are obtained as below:

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

U_R : Receiver Reading

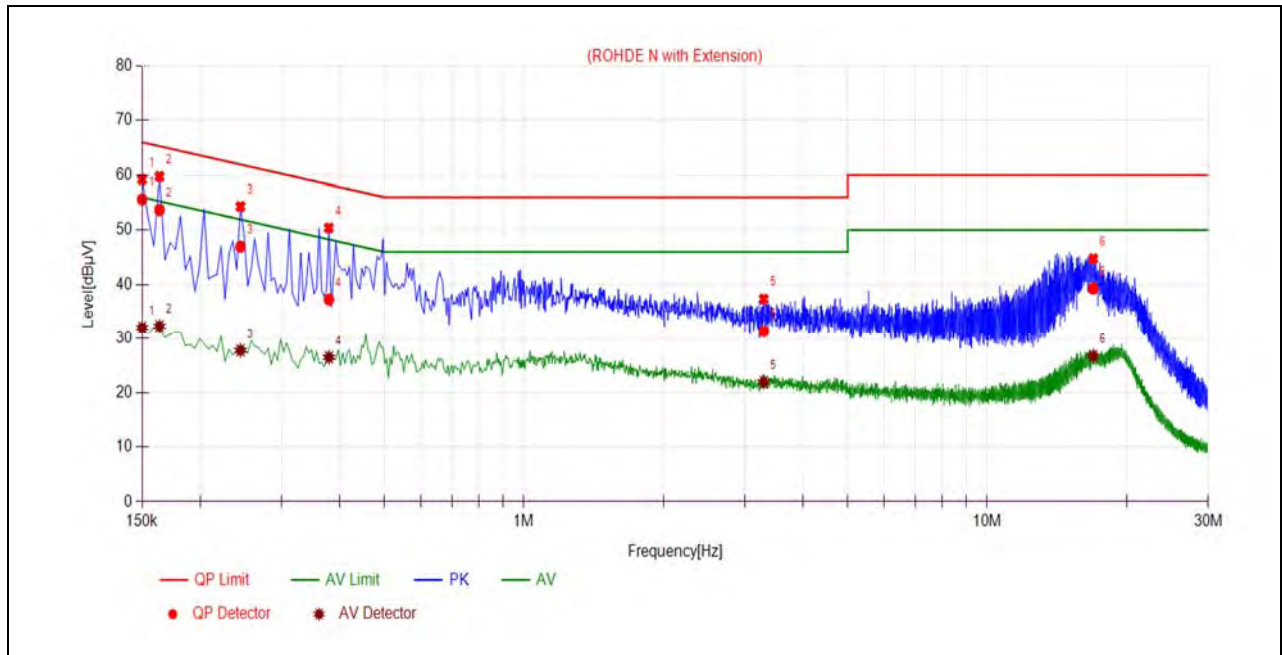
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1500	54.70	32.42	66.00	56.00	Line	PASS
2	0.1995	51.37	31.67	63.63	53.63		PASS
3	0.4875	45.24	33.48	56.21	46.21		PASS
4	1.1670	33.75	25.48	56.00	46.00		PASS
5	16.3756	44.47	29.92	60.00	50.00		PASS
6	18.7725	40.81	29.40	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	0.1500	55.62	32.06	66.00	56.00	Neutral	PASS
2	0.1635	53.70	32.33	65.28	55.28		PASS
3	0.2445	46.97	27.77	61.94	51.94		PASS
4	0.3795	37.27	26.47	58.29	48.29		PASS
5	3.2955	31.36	21.93	56.00	46.00		PASS
6	16.9396	39.27	26.71	60.00	50.00		PASS

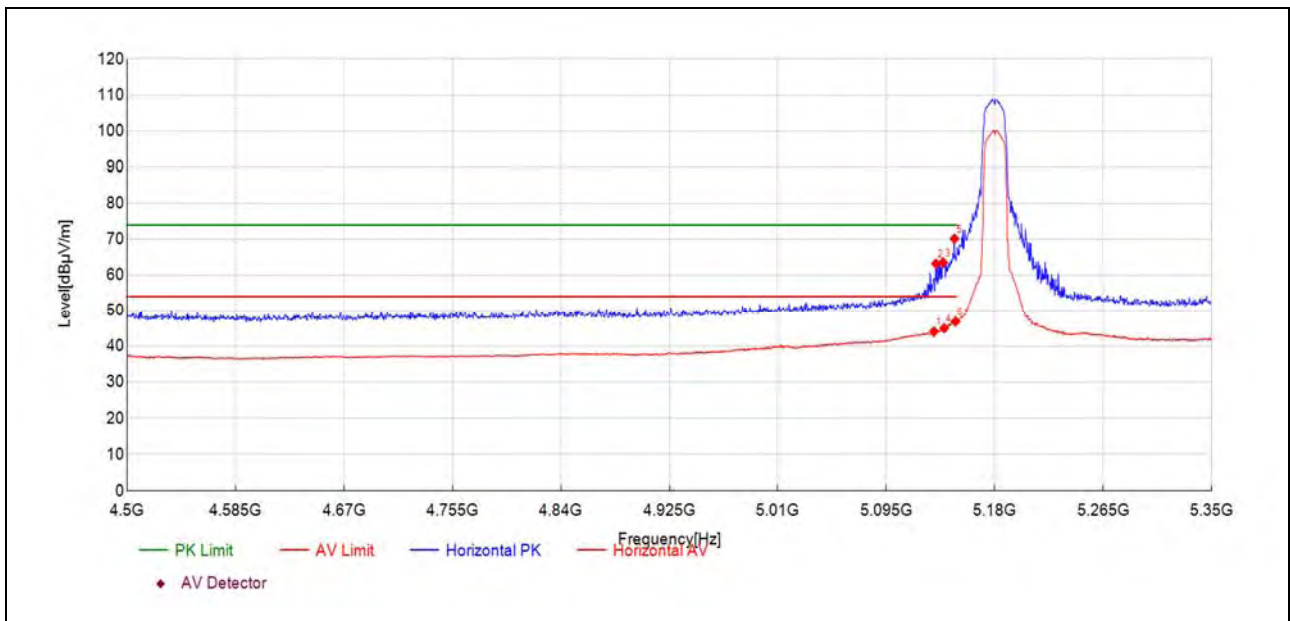
A.8. Restricted Frequency Bands

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

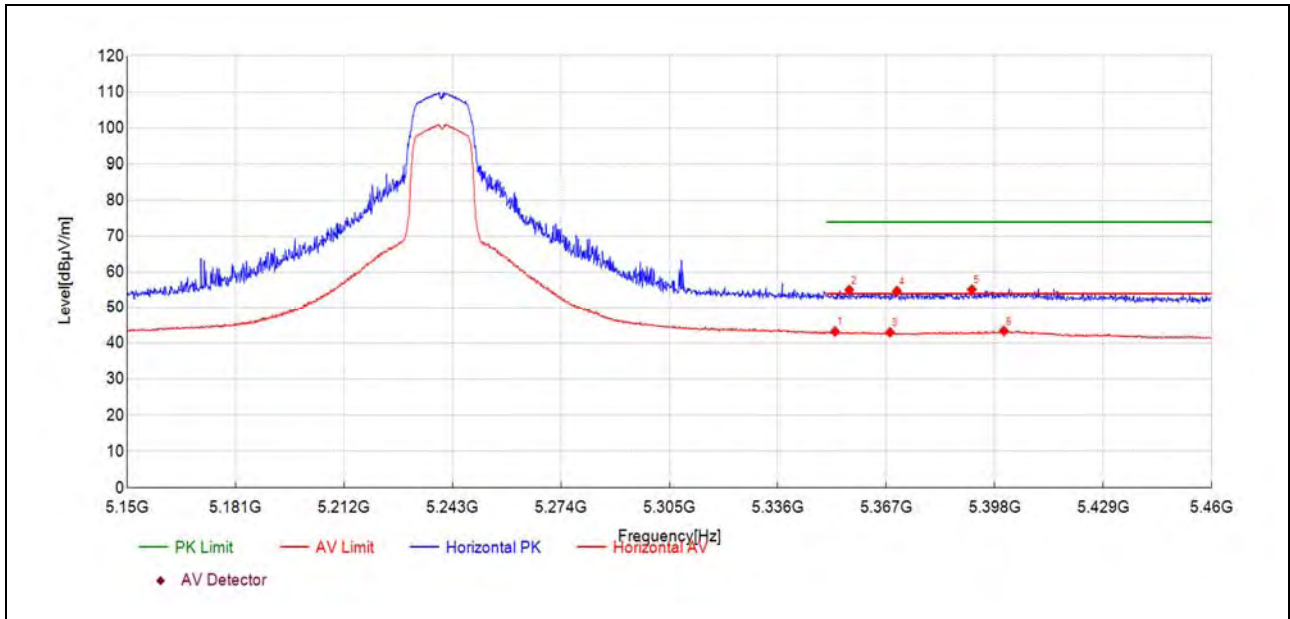
Plot for Channel 36



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5132.29	29.8	44.06	14.270	54.00	9.94	150	190	AV	PASS
5133.99	48.9	63.20	14.300	74.00	10.80	150	166	PK	PASS
5139.52	49.2	63.57	14.400	74.00	10.43	150	185	PK	PASS
5140.37	30.6	45.01	14.420	54.00	8.99	150	147	AV	PASS
5148.45	55.6	70.18	14.560	74.00	3.82	150	185	PK	PASS
5149.30	32.3	46.90	14.580	54.00	7.10	150	157	AV	PASS

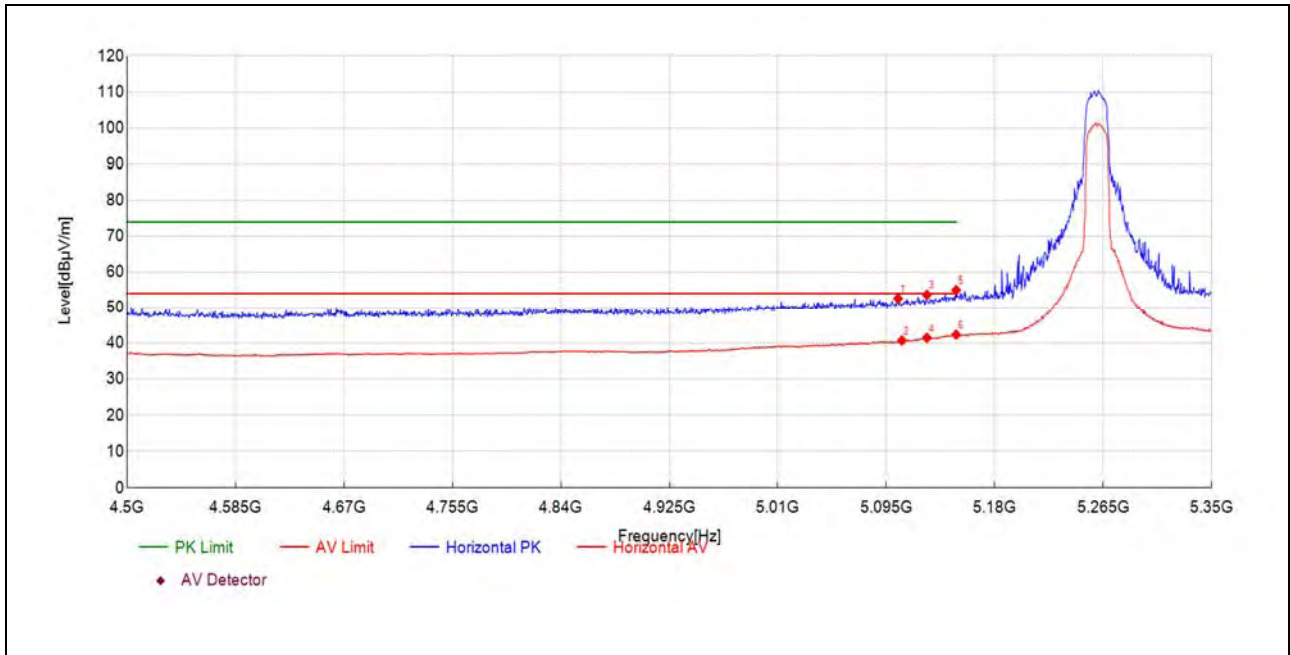


Plot for Channel 48



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5352.38	28.2	43.22	15.010	54.00	10.78	150	83	AV	PASS
5356.41	40.0	55.05	15.070	74.00	18.95	150	74	PK	PASS
5368.04	27.8	43.00	15.230	54.00	11.00	150	83	AV	PASS
5370.06	39.5	54.76	15.260	74.00	19.24	150	55	PK	PASS
5391.46	39.6	55.16	15.560	74.00	18.84	150	74	PK	PASS
5400.61	27.7	43.39	15.670	54.00	10.61	150	78	AV	PASS

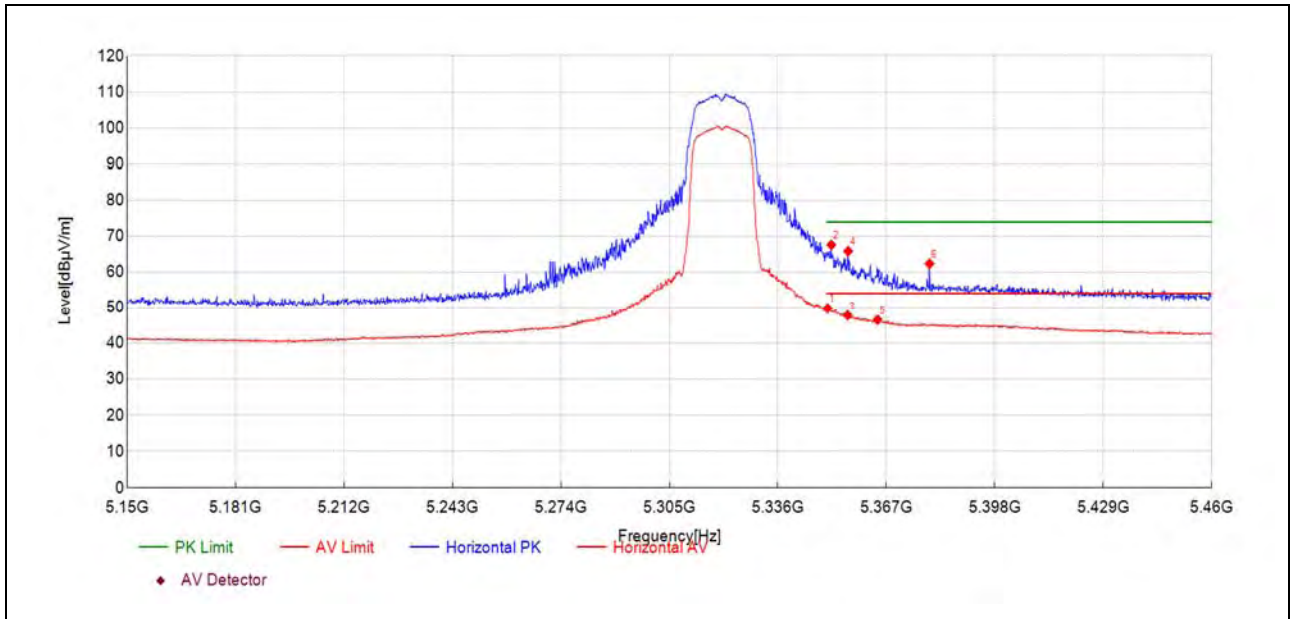
Plot for Channel 52



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5104.23	38.9	52.63	13.760	74.00	21.37	150	66	PK	PASS
5107.20	26.9	40.74	13.810	54.00	13.26	150	56	AV	PASS
5126.76	39.5	53.69	14.170	74.00	20.31	150	98	PK	PASS
5126.76	27.3	41.48	14.170	54.00	12.52	150	56	AV	PASS
5149.72	40.4	55.00	14.590	74.00	19.00	150	89	PK	PASS
5149.72	27.8	42.37	14.590	54.00	11.63	150	84	AV	PASS

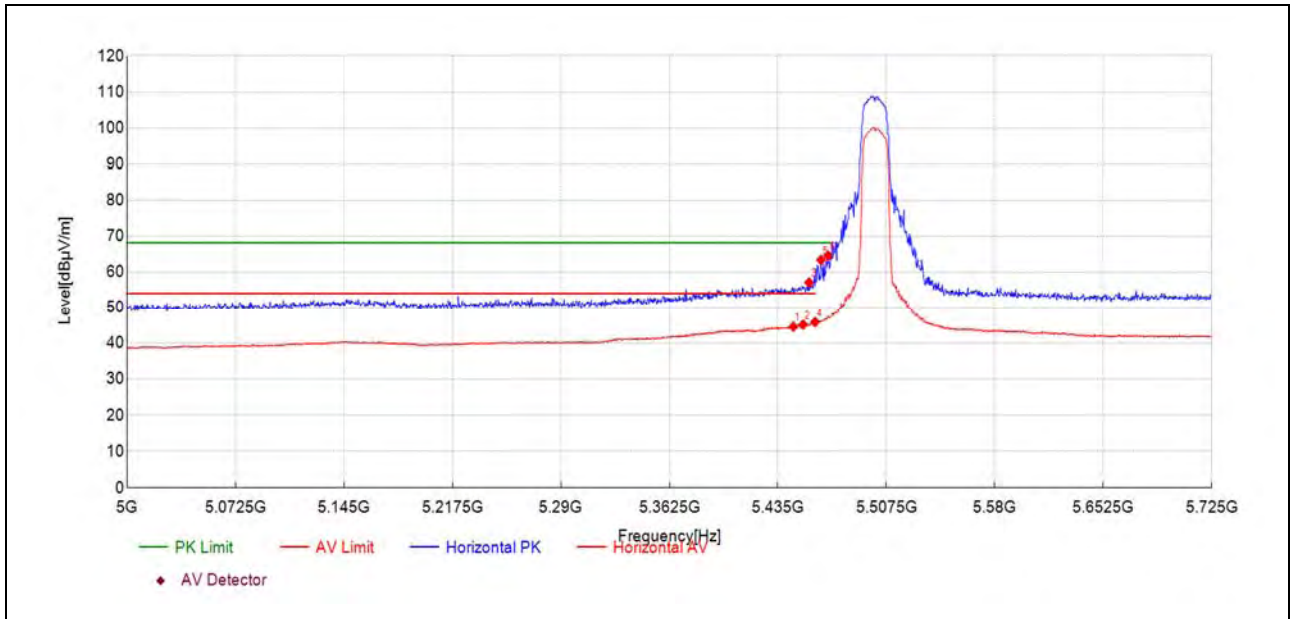


Plot for Channel 64



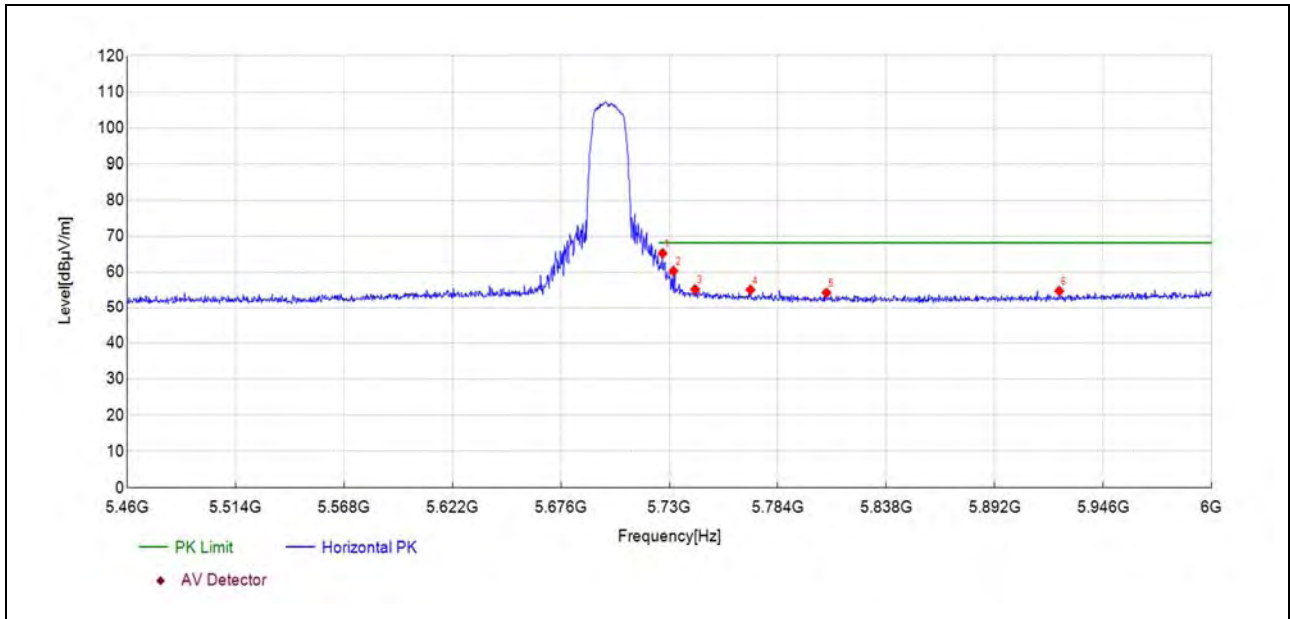
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.21	34.8	49.80	14.980	54.00	4.20	150	166	AV	PASS
5351.29	52.6	67.62	15.000	74.00	6.38	150	147	PK	PASS
5355.94	32.7	47.78	15.060	54.00	6.22	150	166	AV	PASS
5356.10	50.8	65.88	15.070	74.00	8.12	150	142	PK	PASS
5364.47	31.4	46.53	15.180	54.00	7.47	150	161	AV	PASS
5379.36	47.0	62.38	15.390	74.00	11.62	150	161	PK	PASS

Plot for Channel 100



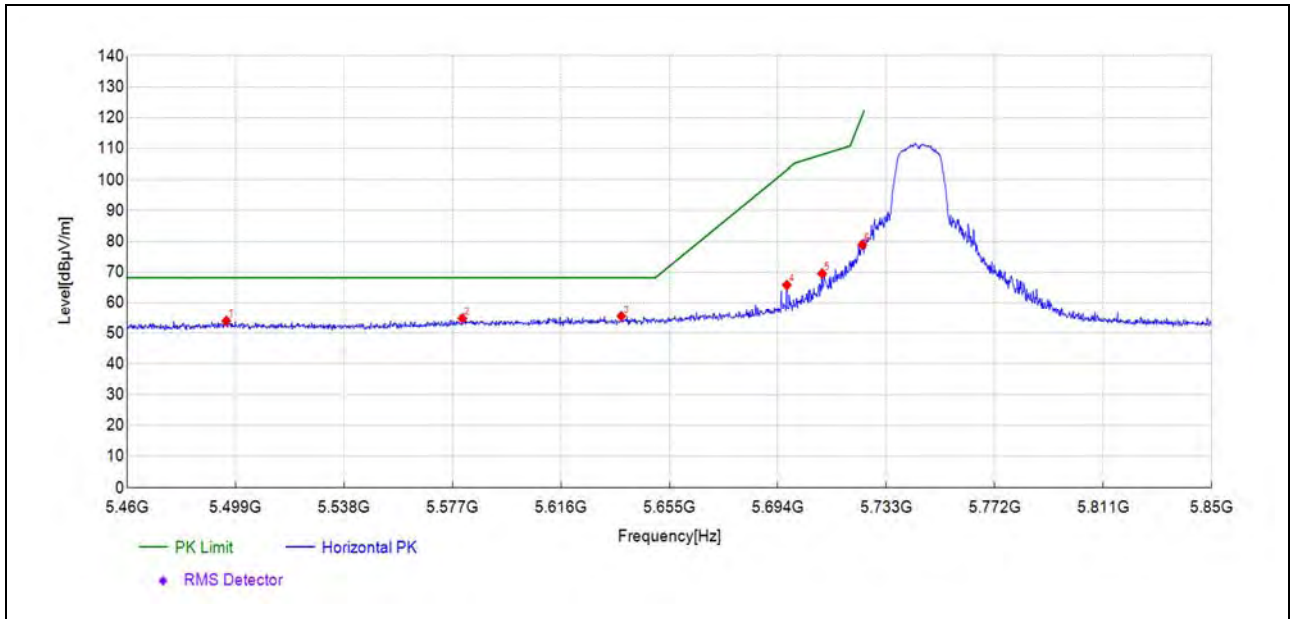
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5445.37	29.5	44.59	15.120	54.00	9.41	150	162	AV	PASS
5451.90	30.1	45.16	15.080	54.00	8.84	150	152	AV	PASS
5455.89	42.0	57.10	15.090	68.23	11.13	150	157	PK	PASS
5459.88	30.8	45.88	15.110	54.00	8.12	150	152	AV	PASS
5463.87	48.3	63.40	15.120	68.23	4.83	150	138	PK	PASS
5468.58	49.5	64.62	15.140	68.23	3.61	150	152	PK	PASS

Plot for Channel 140



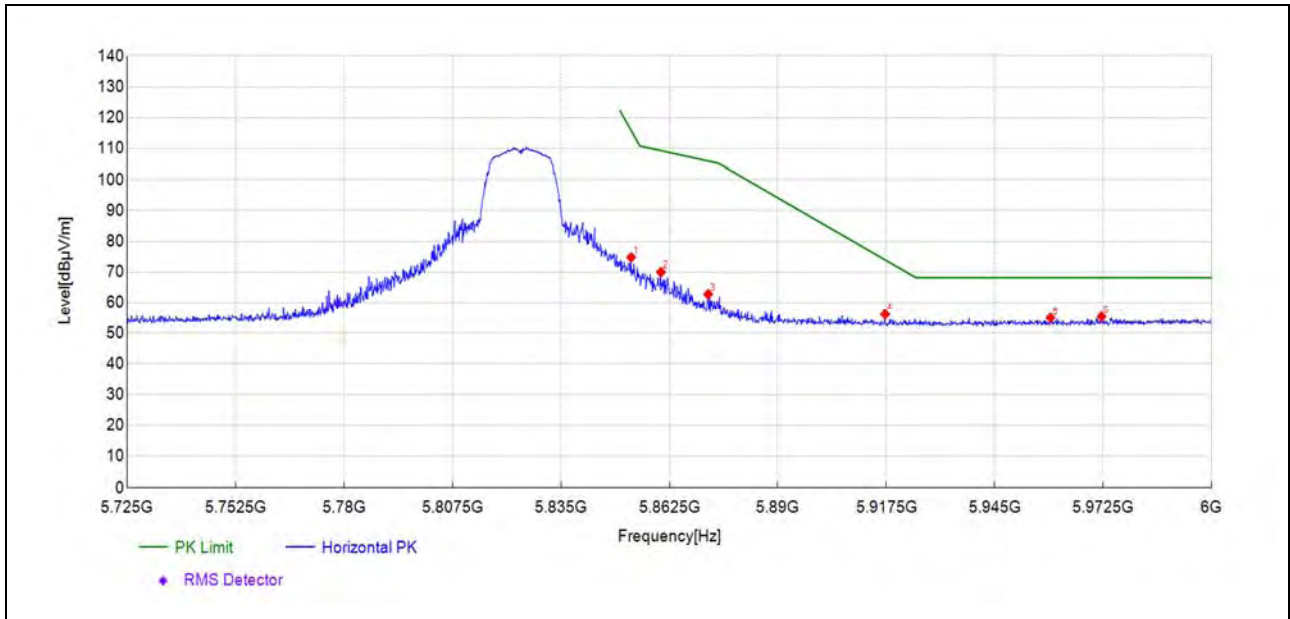
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5726.62	49.0	65.25	16.250	68.23	2.98	150	176	PK	PASS
5732.03	44.1	60.35	16.260	68.23	7.88	150	172	PK	PASS
5742.83	39.0	55.23	16.280	68.23	13.00	150	184	PK	PASS
5770.39	39.0	55.13	16.170	68.23	13.10	150	172	PK	PASS
5808.20	38.3	54.25	15.990	68.23	13.98	150	151	PK	PASS
5924.09	38.5	54.79	16.340	68.23	13.44	150	105	PK	PASS

Plot for Channel 149



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5495.70	38.6	53.84	15.240	68.23	14.39	150	157	PK	PASS
5580.57	39.2	54.68	15.530	68.23	13.55	150	182	PK	PASS
5637.73	39.6	55.41	15.830	68.23	12.82	150	186	PK	PASS
5697.24	49.7	65.82	16.170	103.19	37.37	150	182	PK	PASS
5709.92	53.3	69.55	16.220	108.01	38.46	150	182	PK	PASS
5724.36	62.7	78.94	16.240	120.76	41.82	150	165	PK	PASS

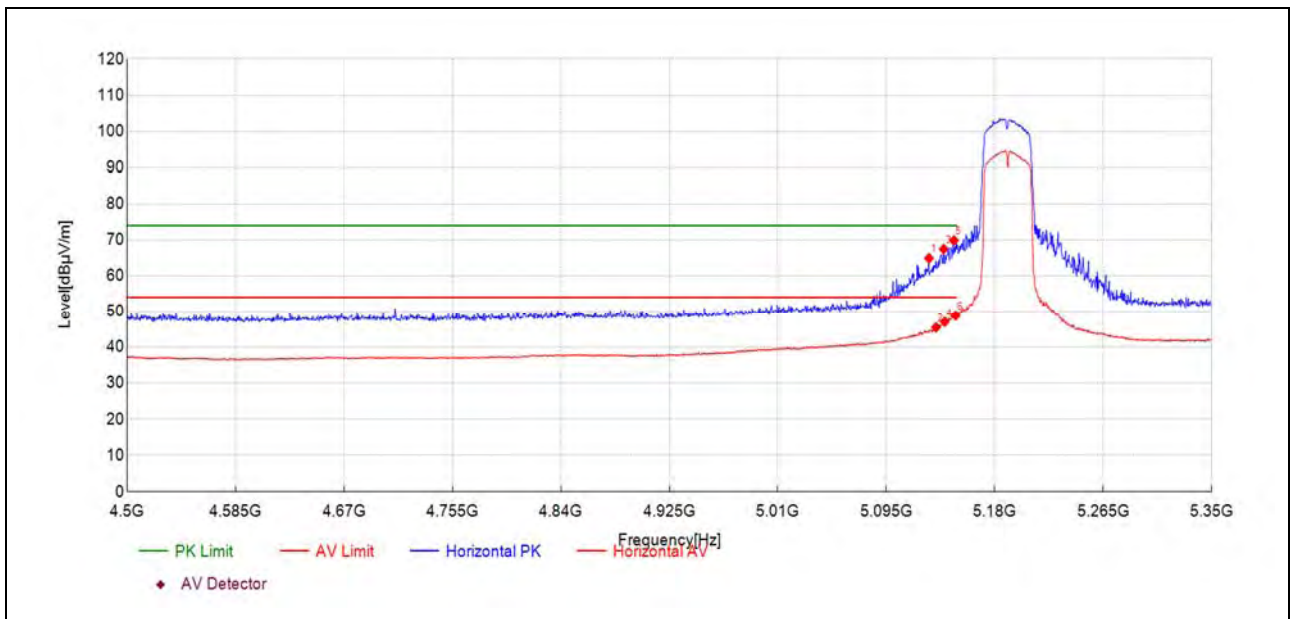
Plot for Channel 165



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5852.80	58.8	74.82	15.980	115.84	41.02	150	180	PK	PASS
5860.37	54.0	70.04	16.010	109.33	39.29	150	175	PK	PASS
5872.34	46.8	62.84	16.050	105.98	43.14	150	192	PK	PASS
5917.18	39.8	56.09	16.280	74.01	17.92	150	180	PK	PASS
5959.14	38.2	54.90	16.660	68.23	13.33	150	142	PK	PASS
5972.07	38.5	55.31	16.810	68.23	12.92	150	213	PK	PASS

**802.11n (HT40) Mode**

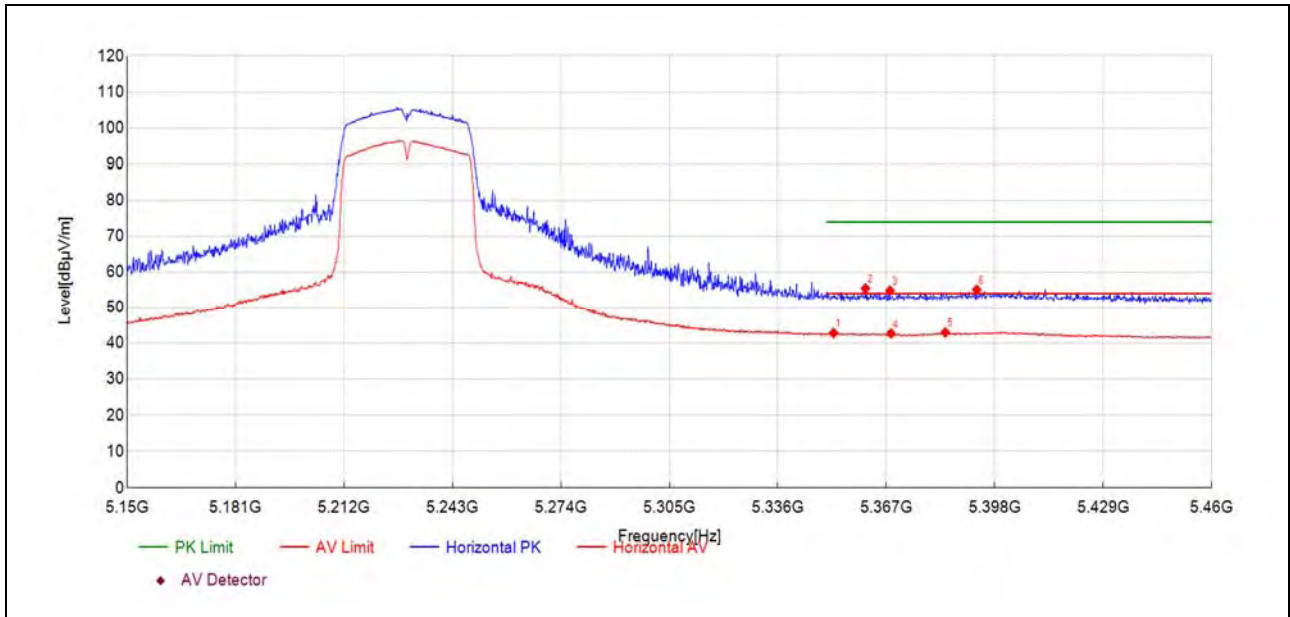
Plot for Channel 38



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5128.46	50.7	64.93	14.200	74.00	9.07	150	166	PK	PASS
5133.99	31.2	45.49	14.300	54.00	8.51	150	208	AV	PASS
5139.94	53.1	67.47	14.410	74.00	6.53	150	189	PK	PASS
5140.80	32.7	47.08	14.420	54.00	6.92	150	152	AV	PASS
5148.02	55.4	69.91	14.550	74.00	4.09	150	161	PK	PASS
5149.30	34.3	48.85	14.580	54.00	5.15	150	161	AV	PASS

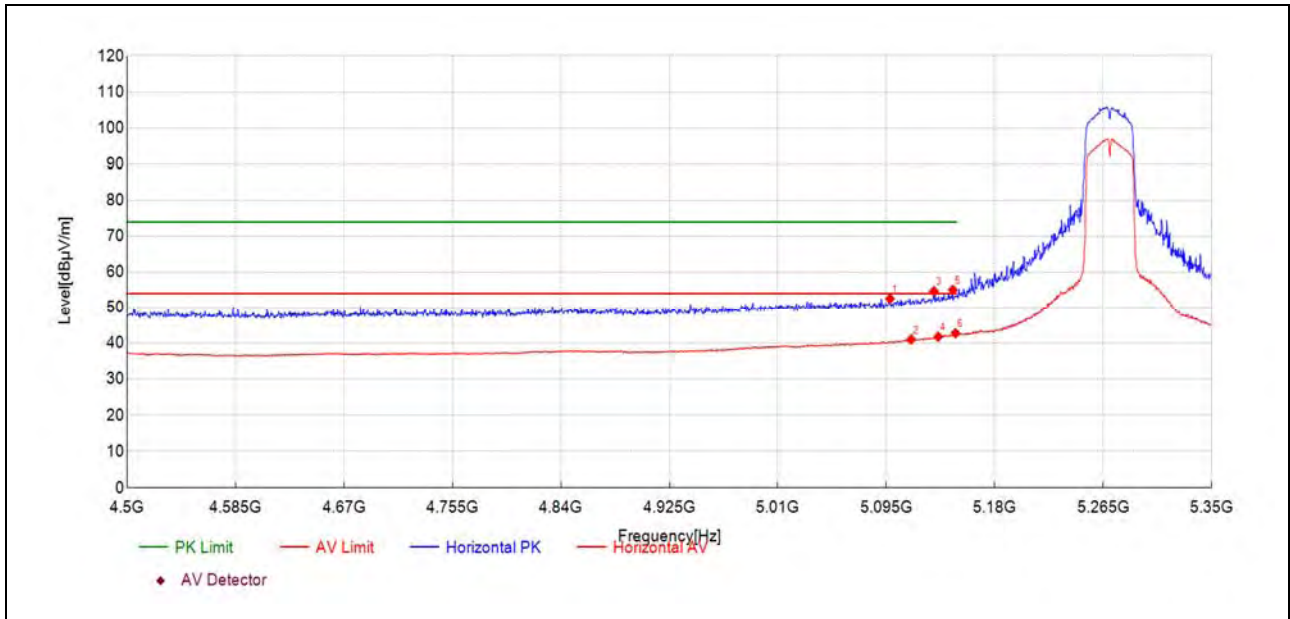


Plot for Channel 46



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5351.91	27.8	42.81	15.010	54.00	11.19	150	84	AV	PASS
5361.06	40.3	55.47	15.130	74.00	18.53	150	70	PK	PASS
5368.04	39.7	54.88	15.230	74.00	19.12	150	107	PK	PASS
5368.35	27.5	42.71	15.240	54.00	11.29	150	84	AV	PASS
5383.86	27.5	42.98	15.450	54.00	11.02	150	79	AV	PASS
5392.85	39.5	55.11	15.580	74.00	18.89	150	74	PK	PASS

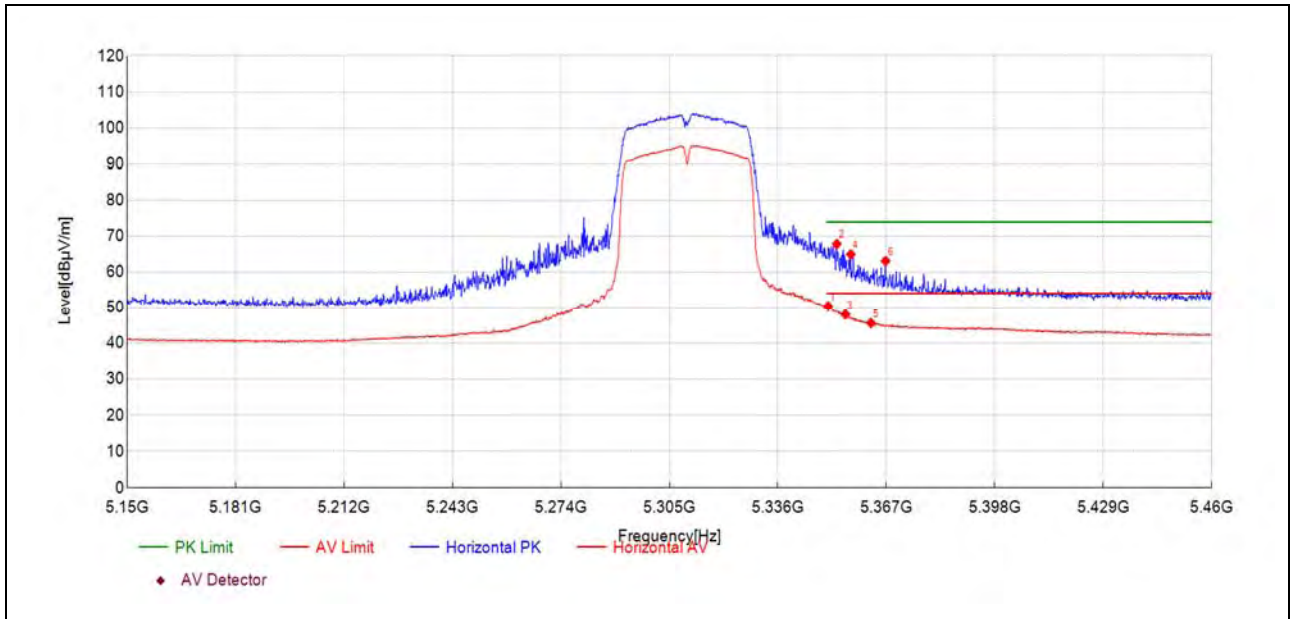
Plot for Channel 54



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5097.85	38.9	52.61	13.670	74.00	21.39	150	58	PK	PASS
5114.43	27.1	41.02	13.940	54.00	12.98	150	49	AV	PASS
5132.29	40.4	54.67	14.270	74.00	19.33	150	49	PK	PASS
5135.69	27.4	41.77	14.330	54.00	12.23	150	77	AV	PASS
5147.17	40.5	55.04	14.540	74.00	18.96	150	58	PK	PASS
5149.30	28.2	42.76	14.580	54.00	11.24	150	54	AV	PASS



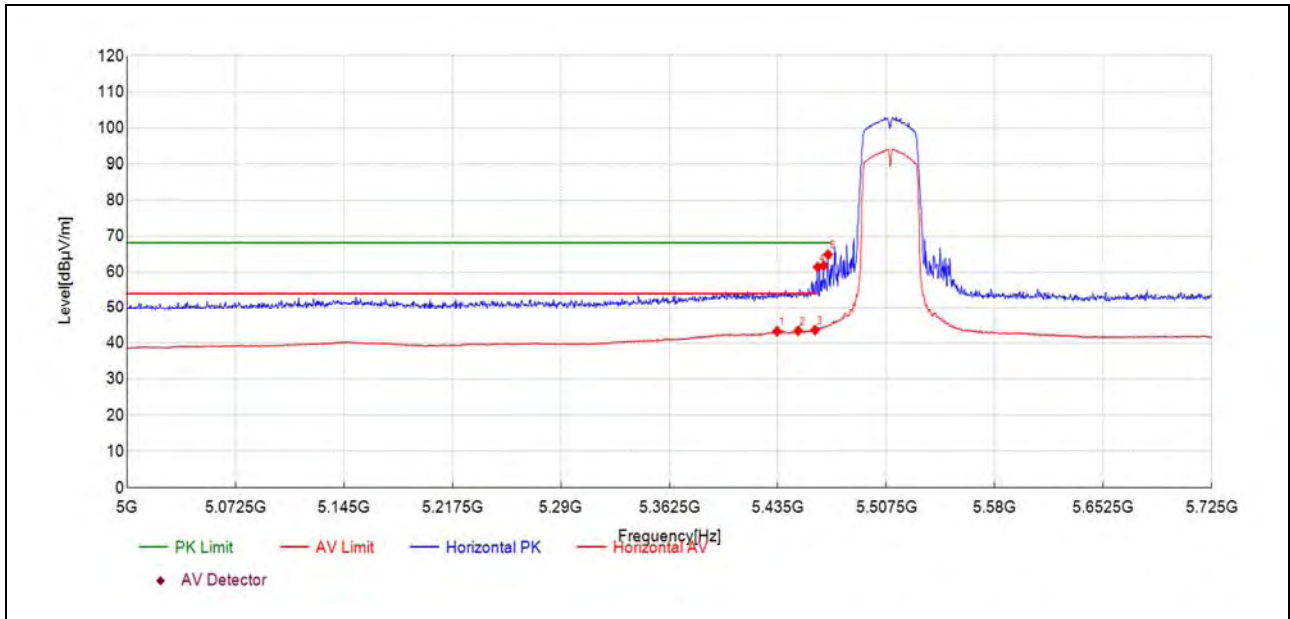
Plot for Channel 62



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.36	35.4	50.43	14.990	54.00	3.57	150	180	AV	PASS
5352.84	52.8	67.83	15.020	74.00	6.17	150	180	PK	PASS
5355.32	33.0	48.08	15.050	54.00	5.92	150	162	AV	PASS
5356.87	49.9	64.96	15.080	74.00	9.04	150	185	PK	PASS
5362.61	30.5	45.62	15.160	54.00	8.38	150	185	AV	PASS
5366.80	47.9	63.13	15.220	74.00	10.87	150	176	PK	PASS

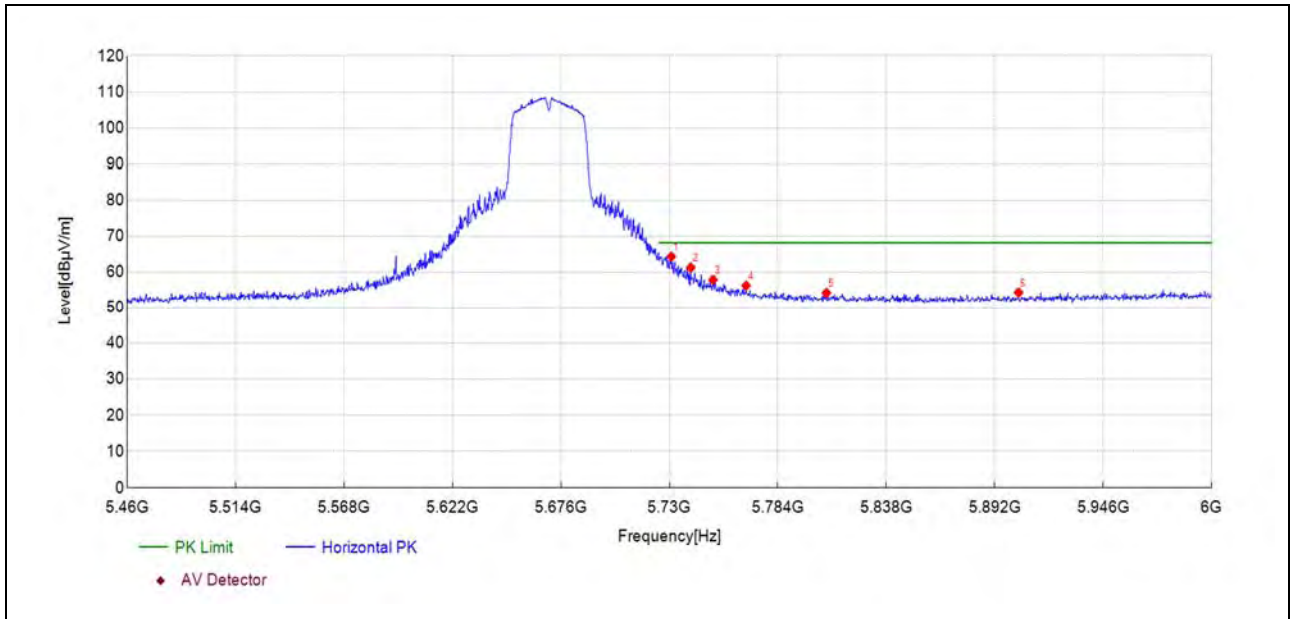


Plot for Channel 102



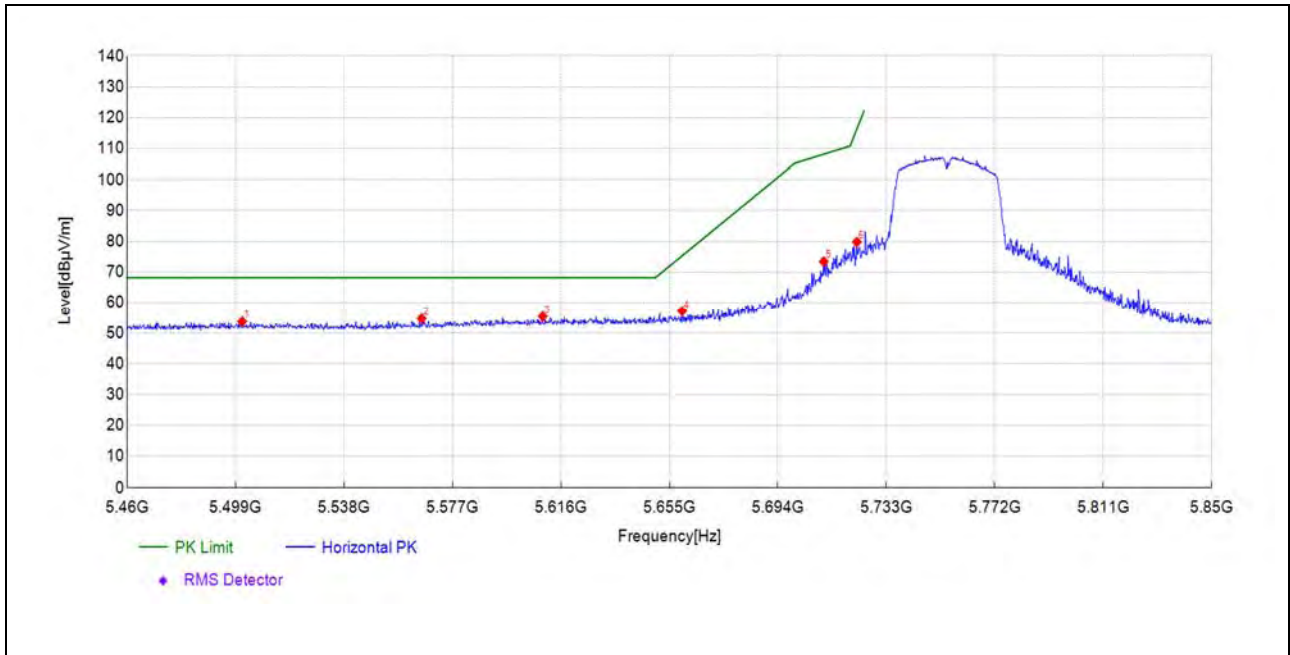
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5434.49	28.0	43.26	15.260	54.00	10.74	150	155	AV	PASS
5448.64	28.4	43.43	15.080	54.00	10.57	150	158	AV	PASS
5459.88	28.5	43.63	15.110	54.00	10.37	150	162	AV	PASS
5461.69	46.3	61.38	15.110	68.23	6.85	150	174	PK	PASS
5465.68	46.7	61.84	15.130	68.23	6.39	150	155	PK	PASS
5468.58	49.8	64.90	15.140	68.23	3.33	150	146	PK	PASS

Plot for Channel 134



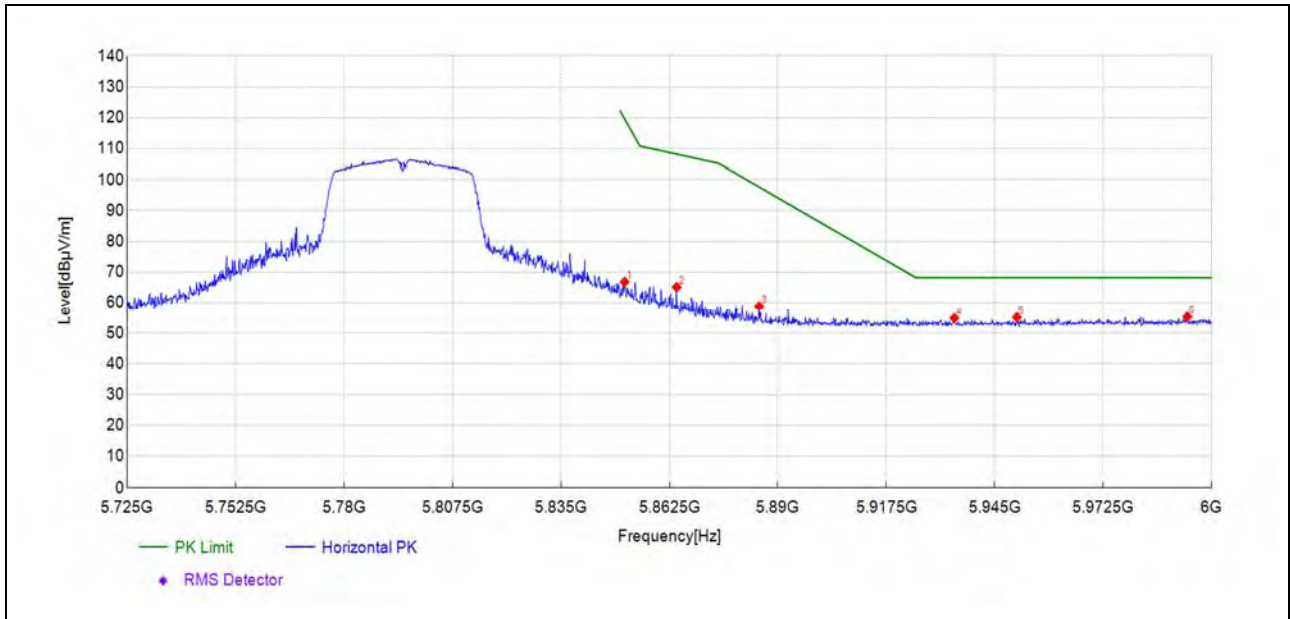
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5730.95	48.1	64.34	16.260	68.23	3.89	150	99	PK	PASS
5740.67	45.0	61.30	16.280	68.23	6.93	150	91	PK	PASS
5751.75	41.6	57.88	16.280	68.23	10.35	150	87	PK	PASS
5768.22	40.1	56.25	16.190	68.23	11.98	150	91	PK	PASS
5808.20	38.2	54.21	15.990	68.23	14.02	150	82	PK	PASS
5903.83	38.2	54.33	16.180	68.23	13.90	150	212	PK	PASS

Plot for Channel 151



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5501.36	38.4	53.68	15.250	68.23	14.55	150	163	PK	PASS
5565.94	39.4	54.68	15.250	68.23	13.55	150	163	PK	PASS
5609.44	39.5	55.39	15.890	68.23	12.84	150	184	PK	PASS
5659.58	41.3	57.16	15.880	75.32	18.16	150	184	PK	PASS
5710.51	57.3	73.47	16.220	108.17	34.70	150	155	PK	PASS
5722.41	63.6	79.83	16.250	116.32	36.49	150	201	PK	PASS

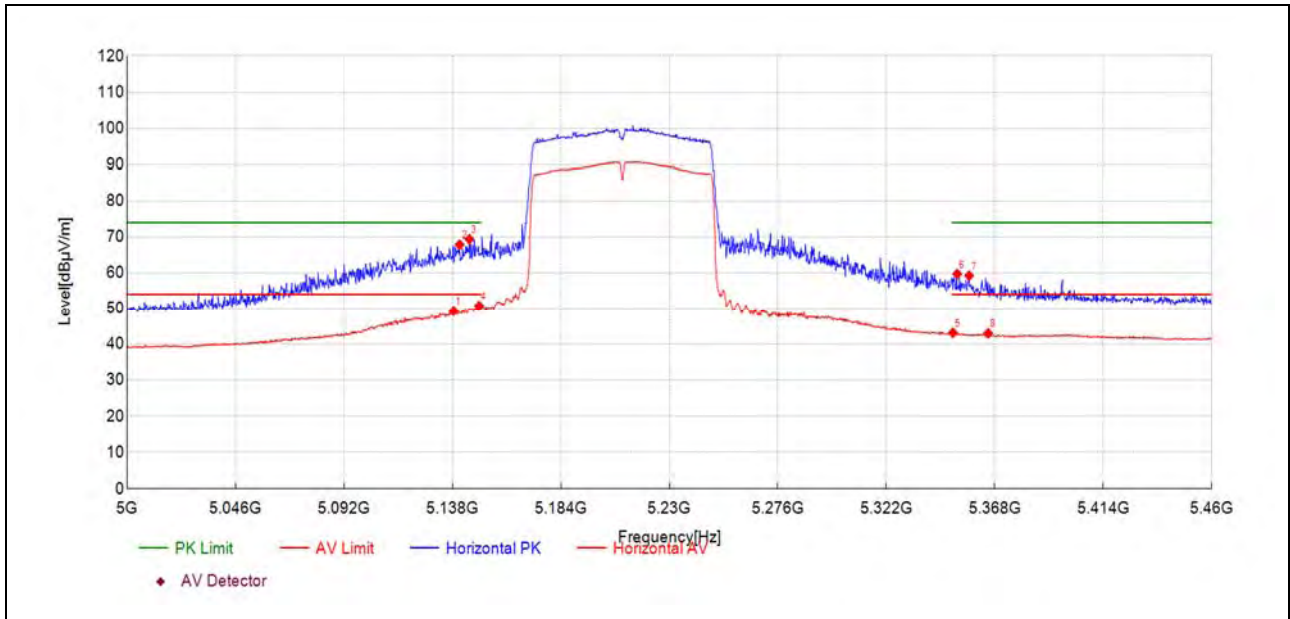
Plot for Channel 159



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5851.15	50.9	66.85	15.970	119.61	52.76	150	170	PK	PASS
5864.36	49.1	65.09	16.020	108.21	43.12	150	166	PK	PASS
5885.27	42.7	58.81	16.100	97.63	38.82	150	195	PK	PASS
5934.79	38.4	54.82	16.430	68.23	13.41	150	149	PK	PASS
5950.61	38.5	55.08	16.560	68.23	13.15	150	114	PK	PASS
5993.81	38.2	55.29	17.080	68.23	12.94	150	258	PK	PASS

**802.11ac (VHT80) Mode**

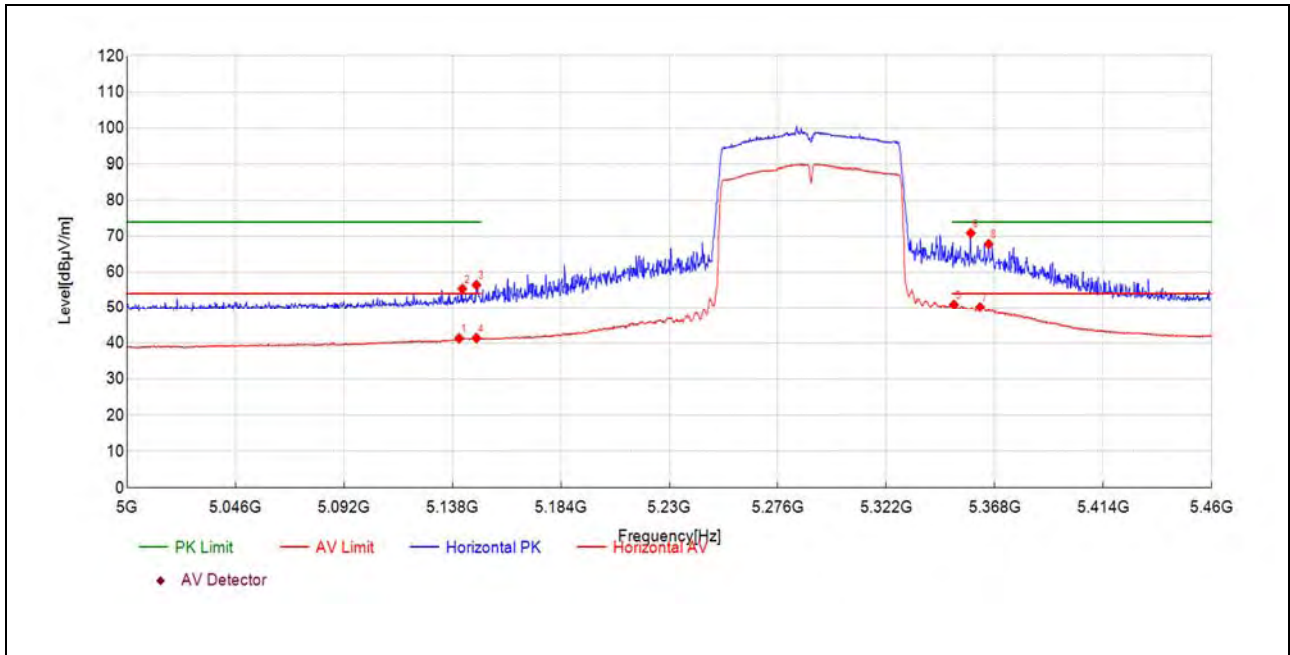
Plot for Channel 42



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5138.53	35.0	49.33	14.380	54.00	4.67	150	205	AV	PASS
5141.06	53.4	67.87	14.430	74.00	6.13	150	144	PK	PASS
5145.20	54.9	69.39	14.500	74.00	4.61	150	196	PK	PASS
5149.34	36.2	50.79	14.580	54.00	3.21	150	205	AV	PASS
5350.24	28.2	43.13	14.980	54.00	10.87	150	167	AV	PASS
5352.08	44.7	59.73	15.010	74.00	14.27	150	158	PK	PASS
5357.14	44.2	59.27	15.080	74.00	14.73	150	158	PK	PASS
5365.19	27.8	42.98	15.190	54.00	11.02	150	167	AV	PASS



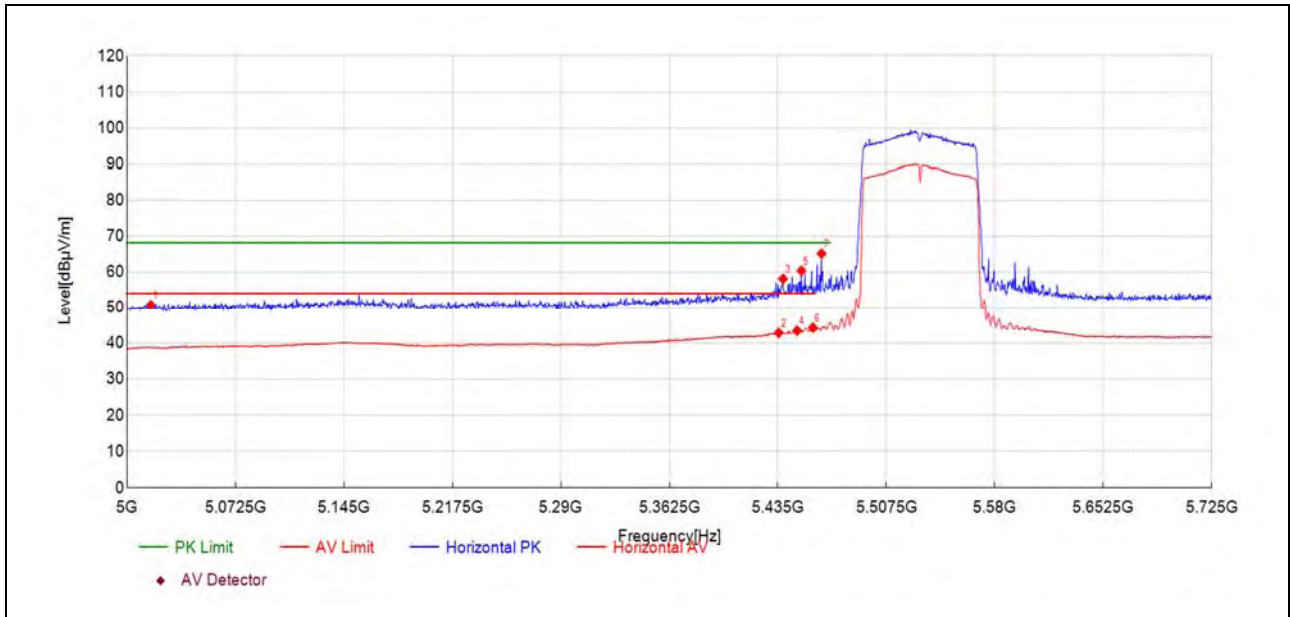
Plot for Channel 58



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5140.83	26.9	41.33	14.420	54.00	12.67	150	198	AV	PASS
5142.21	40.9	55.35	14.450	74.00	18.65	150	156	PK	PASS
5148.19	41.9	56.46	14.560	74.00	17.54	150	189	PK	PASS
5148.19	26.8	41.40	14.560	54.00	12.60	150	146	AV	PASS
5350.70	35.9	50.93	14.990	54.00	3.07	150	161	AV	PASS
5357.83	55.8	70.89	15.090	74.00	3.11	150	161	PK	PASS
5361.74	35.0	50.17	15.140	54.00	3.83	150	170	AV	PASS
5365.42	52.7	67.87	15.200	74.00	6.13	150	194	PK	PASS



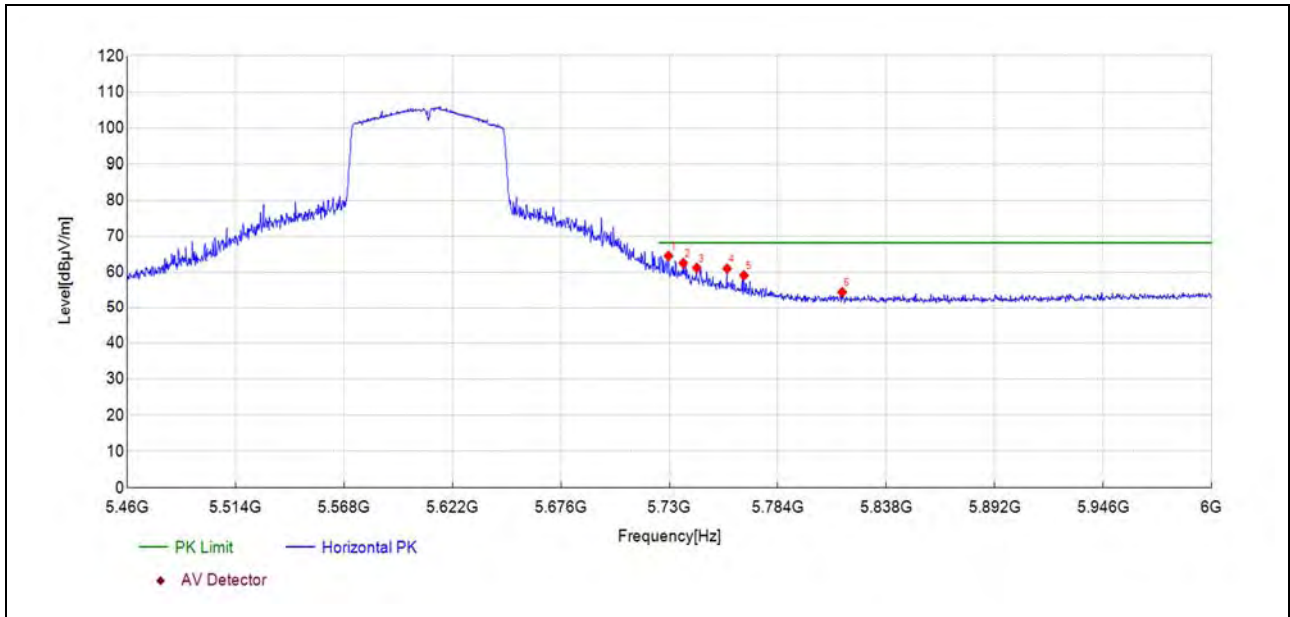
Plot for Channel 106



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5015.96	37.7	50.79	13.140	68.23	17.44	150	190	PK	PASS
5435.58	27.6	42.87	15.250	54.00	11.13	150	176	AV	PASS
5438.48	42.9	58.14	15.210	68.23	10.09	150	153	PK	PASS
5447.91	28.4	43.48	15.090	54.00	10.52	150	167	AV	PASS
5450.81	45.4	60.42	15.070	68.23	7.81	150	176	PK	PASS
5458.43	29.2	44.33	15.100	54.00	9.67	150	176	AV	PASS
5464.23	50.1	65.17	15.120	68.23	3.06	150	148	PK	PASS

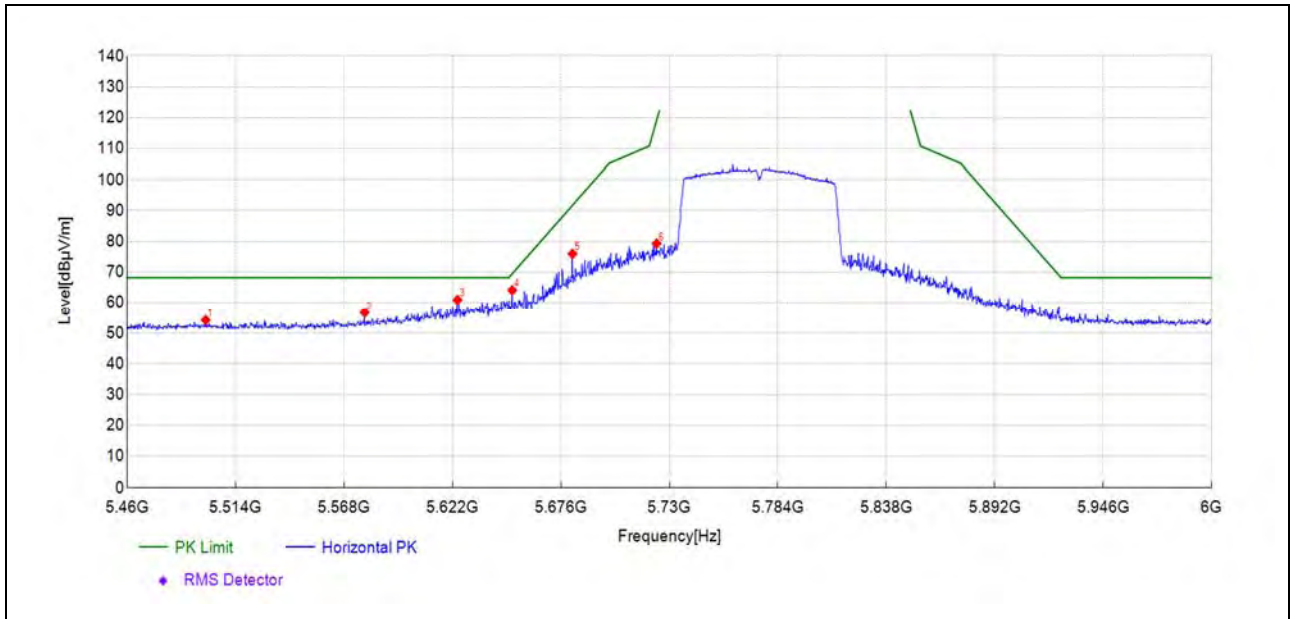


Plot for Channel 122



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5729.59	48.3	64.54	16.260	68.23	3.69	150	94	PK	PASS
5736.89	46.3	62.54	16.270	68.23	5.69	150	94	PK	PASS
5743.64	44.9	61.21	16.280	68.23	7.02	150	102	PK	PASS
5758.77	44.8	61.00	16.240	68.23	7.23	150	98	PK	PASS
5767.14	42.9	59.11	16.190	68.23	9.12	150	76	PK	PASS
5816.04	38.5	54.45	15.980	68.23	13.78	150	106	PK	PASS

Plot for Channel 155



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5499.17	38.9	54.17	15.260	68.23	14.06	150	106	PK	PASS
5578.32	41.2	56.64	15.490	68.23	11.59	150	181	PK	PASS
5624.51	45.1	60.95	15.860	68.23	7.28	150	164	PK	PASS
5651.80	48.3	64.10	15.820	69.56	5.46	150	185	PK	PASS
5681.78	59.9	75.99	16.060	91.75	15.76	150	190	PK	PASS
5723.65	63.1	79.30	16.240	119.16	39.86	150	198	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.

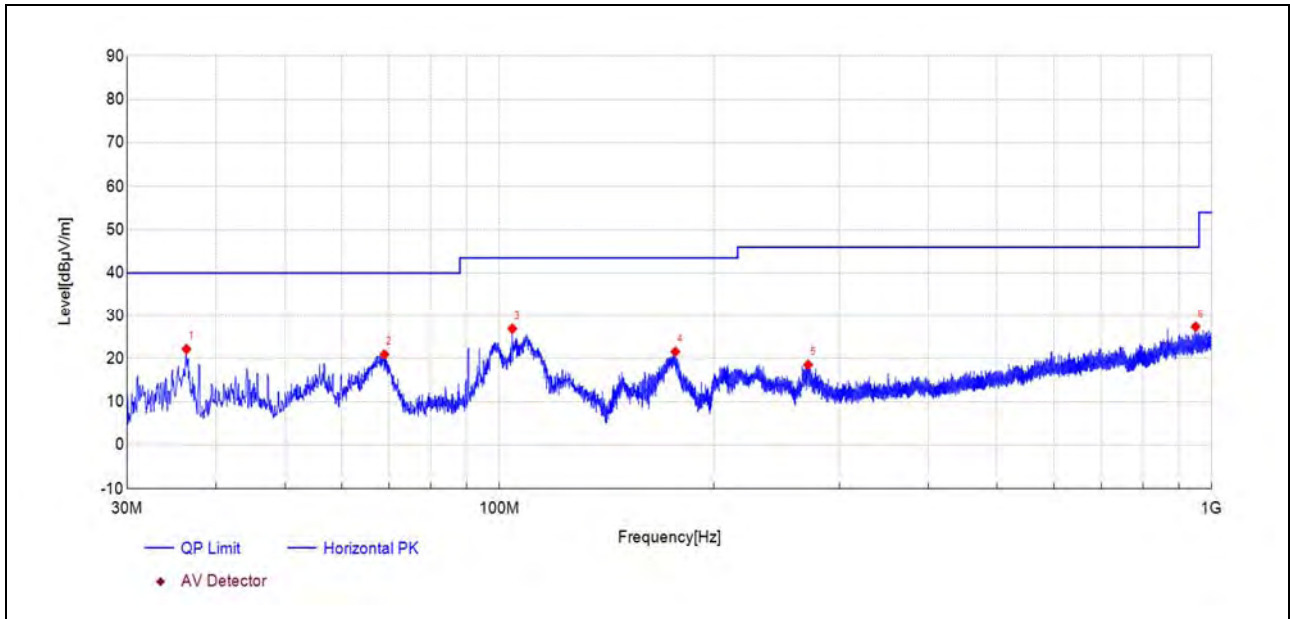
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

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.

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.

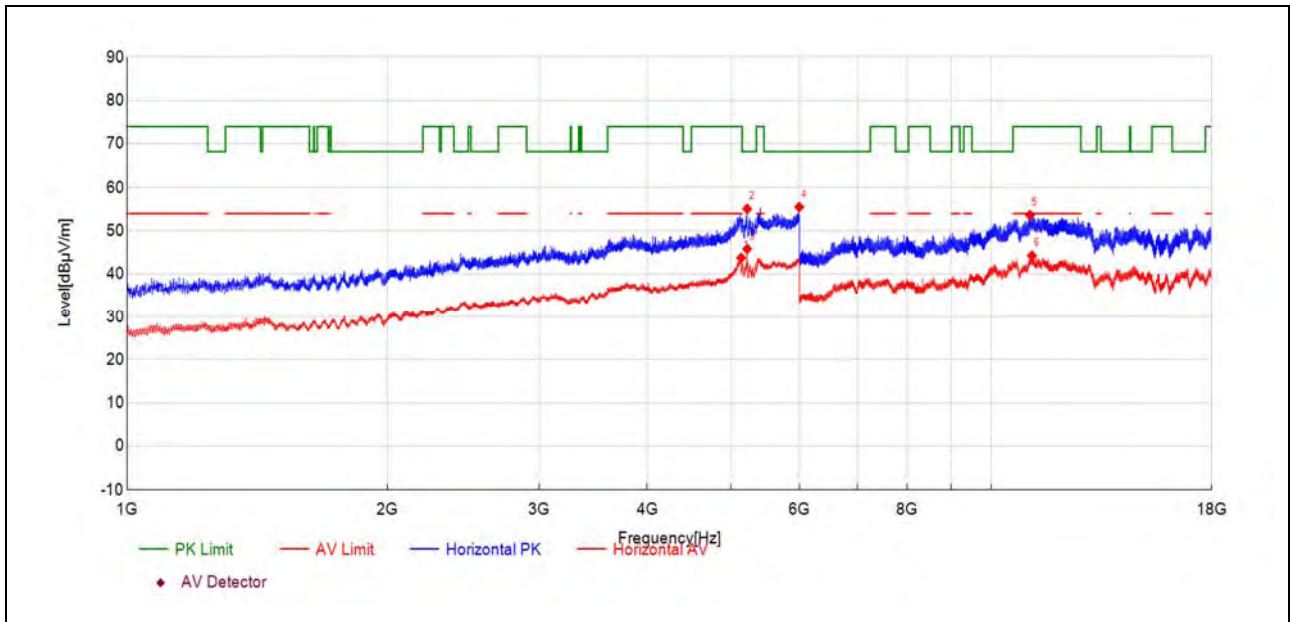
**802.11a Mode**

Plot for Channel 44



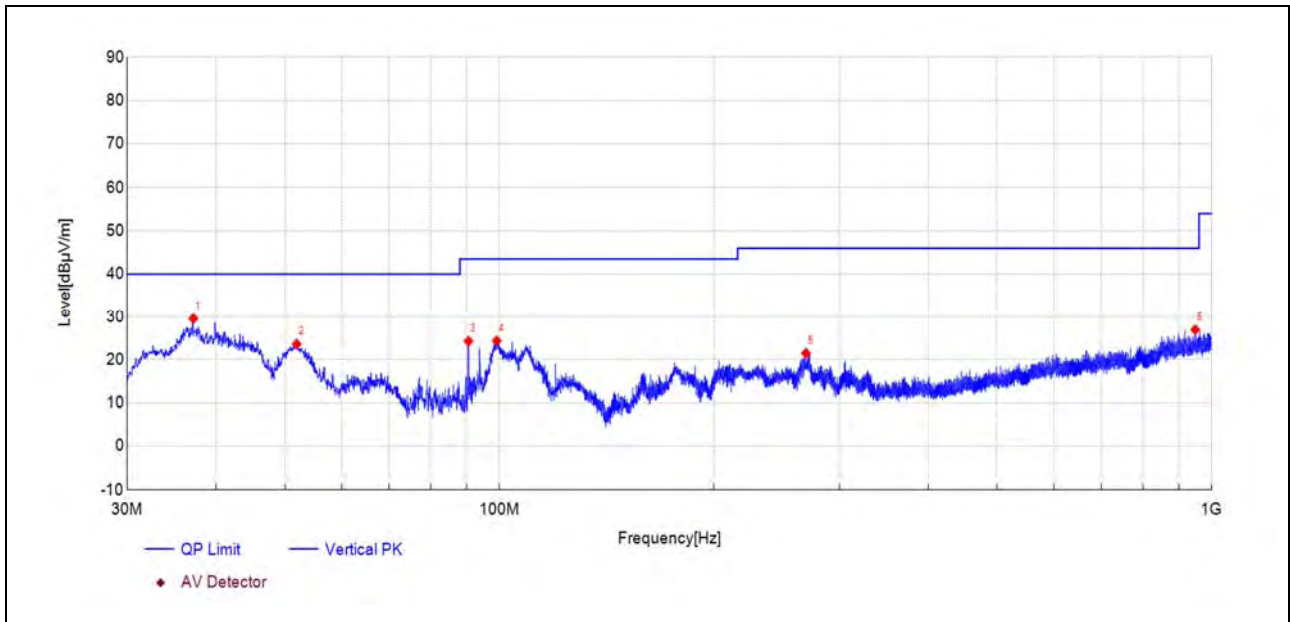
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.35	51.6	22.16	-29.480	40.00	17.84	150	231	PK	PASS
68.95	51.7	20.92	-30.820	40.00	19.08	150	323	PK	PASS
104.26	56.4	26.89	-29.540	43.50	16.61	150	36	PK	PASS
176.57	52.1	21.57	-30.570	43.50	21.93	150	22	PK	PASS
271.20	45.3	18.53	-26.810	46.00	27.47	150	238	PK	PASS
949.41	38.3	27.34	-10.930	46.00	18.66	150	50	PK	PASS



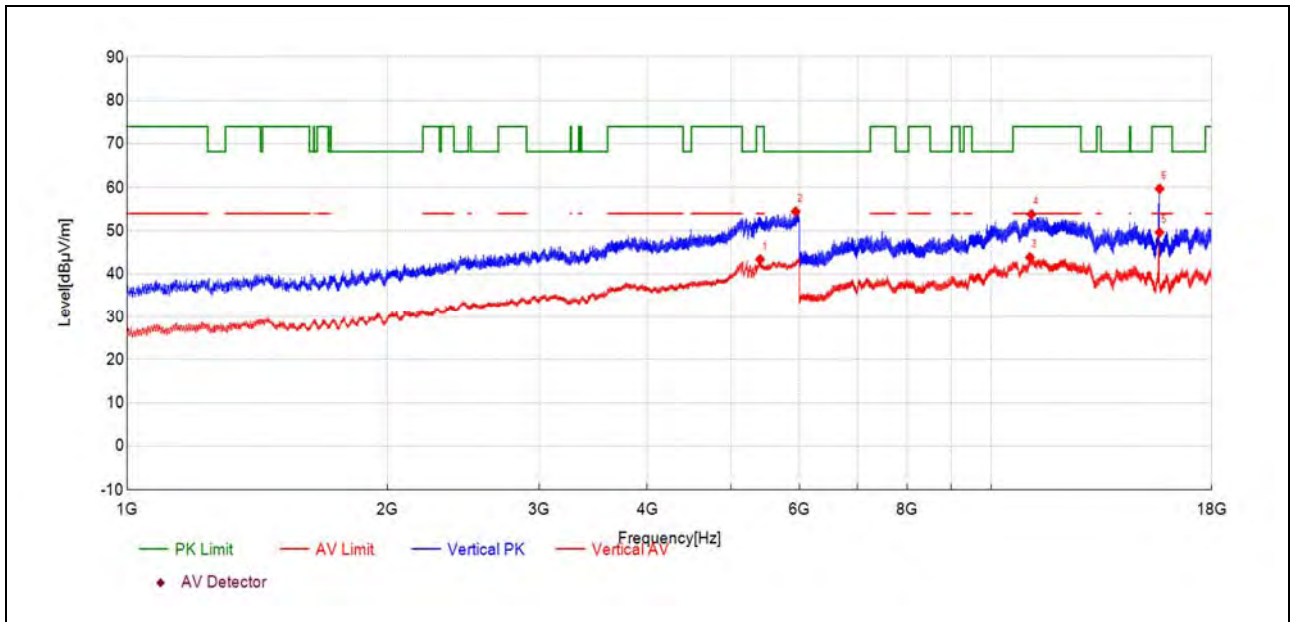
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5137.19	27.0	43.74	16.790	54.00	10.26	150	148	AV	PASS
5220.38	38.7	55.08	16.410	-	-	150	162	PK	NA
5220.84	29.4	45.81	16.420	-	-	150	148	AV	NA
5996.82	36.1	55.53	19.400	68.23	12.70	150	113	PK	PASS
11090.12	40.2	53.67	13.500	74.00	20.33	150	274	PK	PASS
11149.17	30.5	44.29	13.750	54.00	9.71	150	263	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

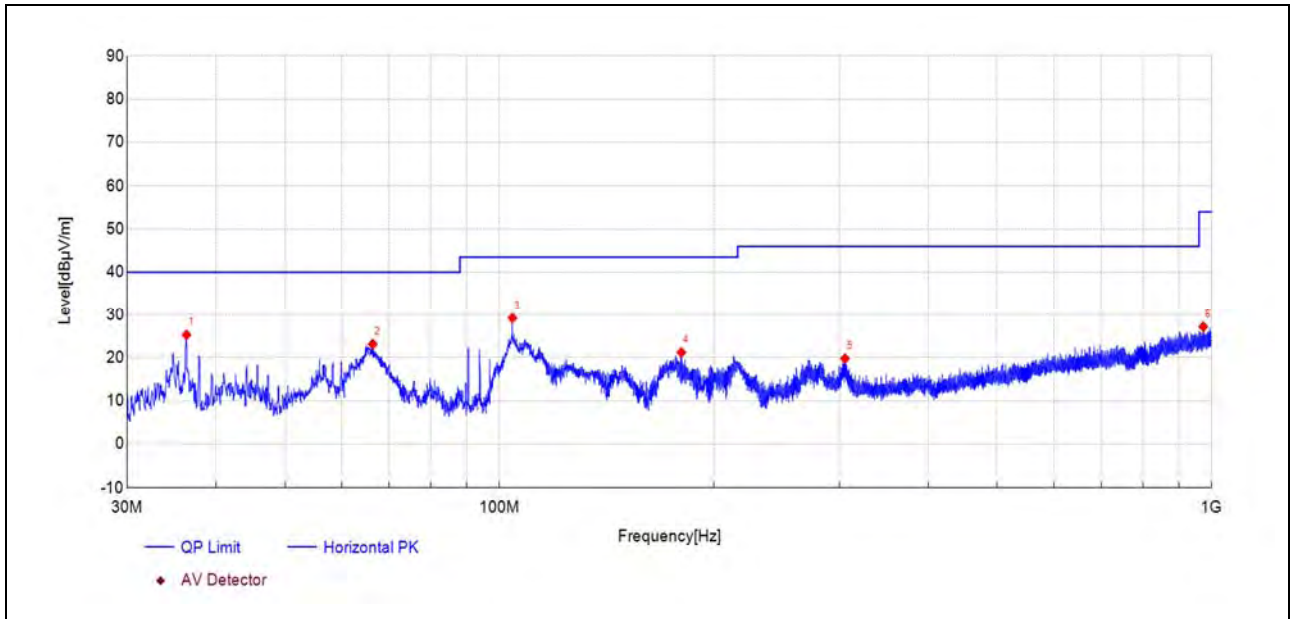
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
37.18	58.9	29.54	-29.320	40.00	10.46	150	308	PK	PASS
51.92	51.6	23.61	-27.980	40.00	16.39	150	246	PK	PASS
90.48	55.8	24.28	-31.470	43.50	19.22	150	100	PK	PASS
99.12	54.0	24.34	-29.610	43.50	19.16	150	343	PK	PASS
269.41	48.6	21.46	-27.100	46.00	24.54	150	9	PK	PASS
948.10	37.9	26.92	-11.000	46.00	19.08	150	163	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

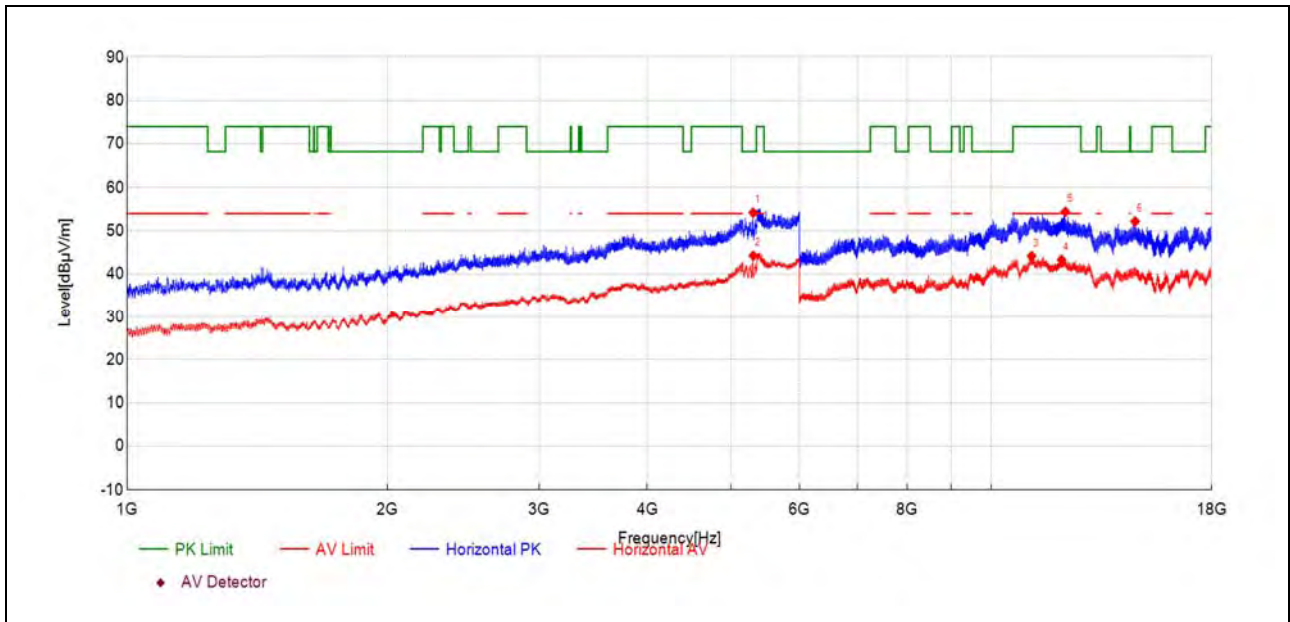
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5403.13	25.2	43.38	18.150	54.00	10.62	150	306	AV	PASS
5940.45	35.7	54.46	18.800	68.23	13.77	150	110	PK	PASS
11088.68	30.4	43.88	13.490	54.00	10.12	150	26	AV	PASS
11133.33	40.1	53.82	13.710	74.00	20.18	150	123	PK	PASS
15661.35	37.0	49.65	12.610	54.00	4.35	150	198	AV	PASS
15665.19	47.2	59.75	12.530	74.00	14.25	150	210	PK	PASS

Plot for Channel 60



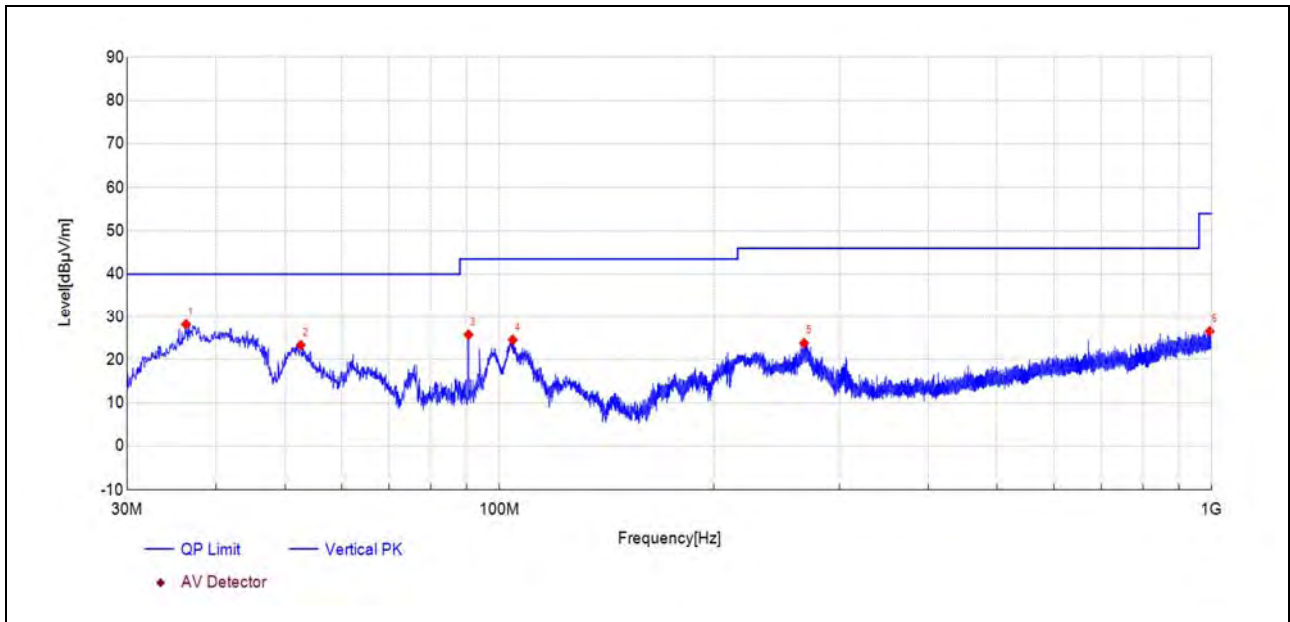
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.35	54.8	25.27	-29.480	40.00	14.73	150	194	PK	PASS
66.38	53.8	23.10	-30.700	40.00	16.90	150	289	PK	PASS
104.31	58.7	29.18	-29.520	43.50	14.32	150	98	PK	PASS
180.02	51.6	21.19	-30.360	43.50	22.31	150	248	PK	PASS
305.59	44.9	19.77	-25.130	46.00	26.23	150	92	PK	PASS
973.08	38.3	27.16	-11.130	54.00	26.84	150	351	PK	PASS



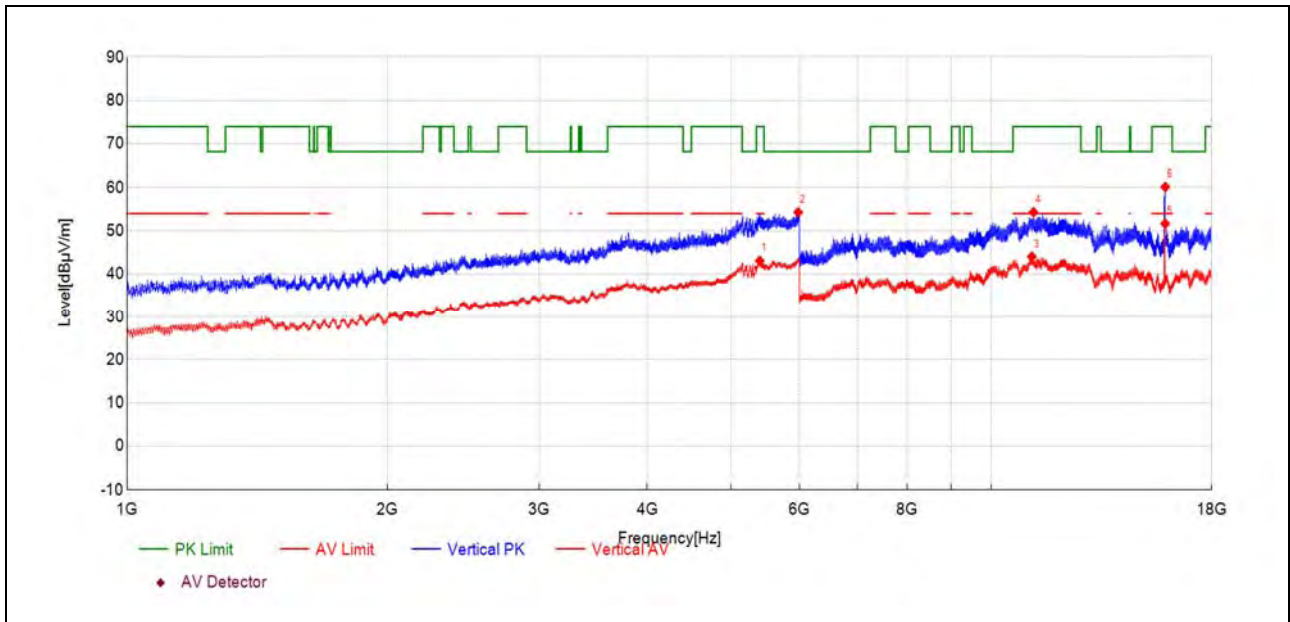
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5305.39	37.3	54.20	16.870	-	-	150	159	PK	NA
5306.30	27.4	44.27	16.880	-	-	150	166	AV	NA
11138.13	30.5	44.19	13.720	54.00	9.81	150	264	AV	PASS
12062.16	28.9	43.32	14.430	54.00	10.68	150	5	AV	PASS
12187.45	39.6	54.42	14.790	74.00	19.58	150	253	PK	PASS
14678.75	36.8	52.18	15.420	68.23	16.05	150	340	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

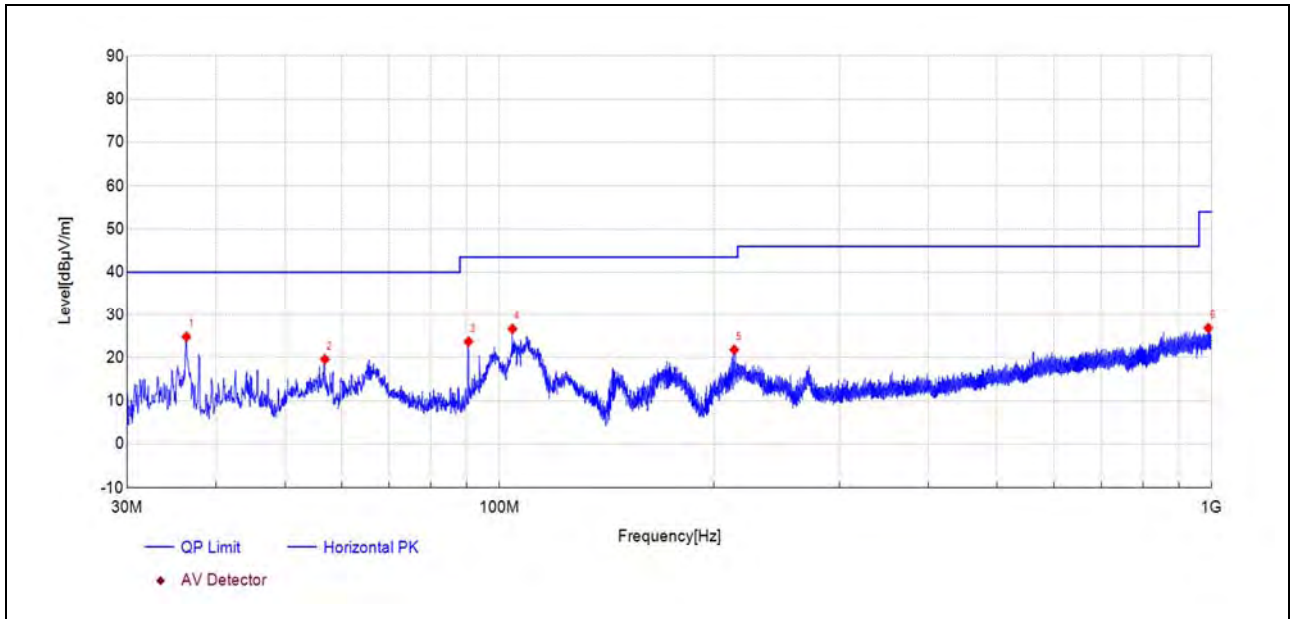
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.31	57.7	28.20	-29.500	40.00	11.80	150	342	PK	PASS
52.60	51.2	23.34	-27.850	40.00	16.66	150	240	PK	PASS
90.48	57.2	25.77	-31.470	43.50	17.73	150	84	PK	PASS
104.40	54.0	24.56	-29.470	43.50	18.94	150	77	PK	PASS
267.76	51.0	23.81	-27.210	46.00	22.19	150	213	PK	PASS
993.74	37.0	26.54	-10.470	54.00	27.46	150	105	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

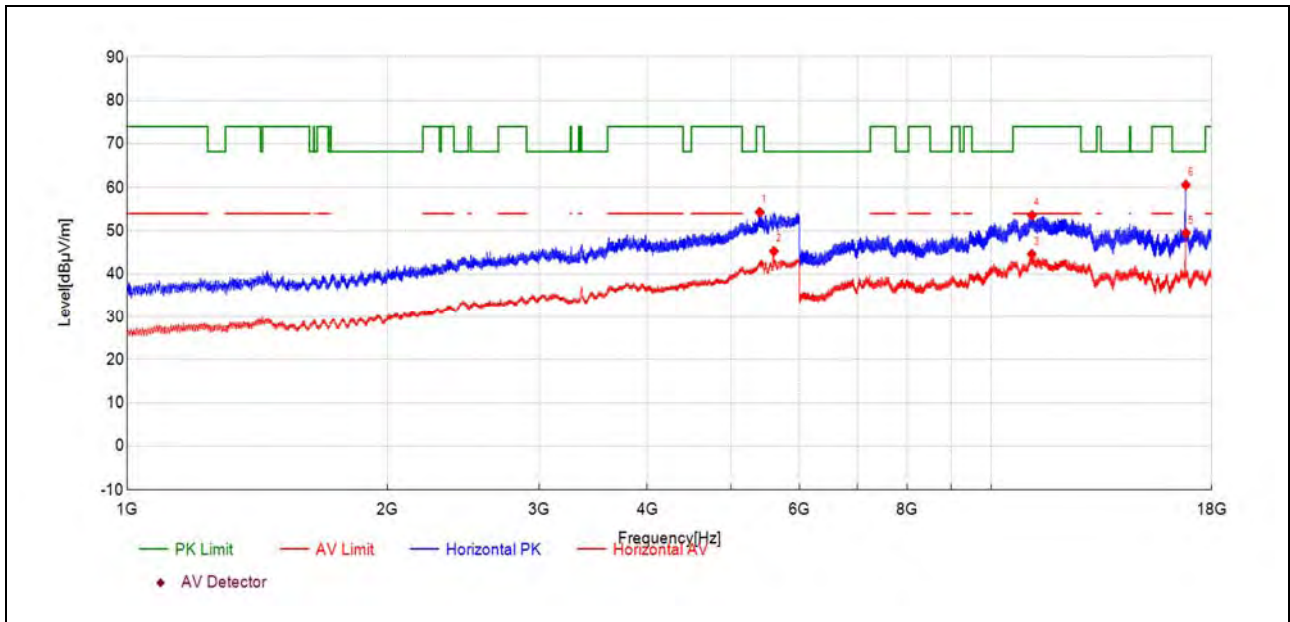
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5397.67	24.9	43.09	18.160	54.00	10.91	150	131	AV	PASS
5980.45	35.0	54.31	19.290	68.23	13.92	150	117	PK	PASS
11144.37	30.3	44.04	13.740	54.00	9.96	150	264	AV	NA
11193.81	40.4	54.32	13.880	74.00	19.68	150	146	PK	PASS
15899.92	39.4	51.66	12.240	54.00	2.34	150	211	AV	NA
15904.72	47.8	60.15	12.310	74.00	13.85	150	211	PK	PASS

Plot for Channel 120



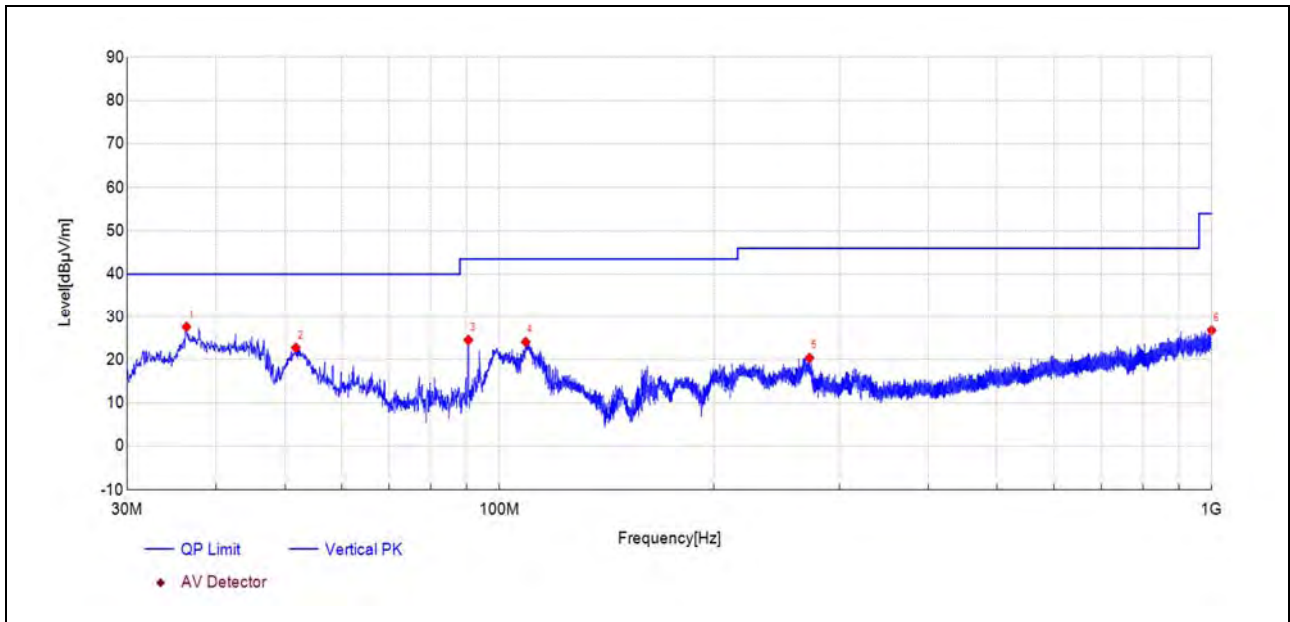
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.35	54.3	24.81	-29.480	40.00	15.19	150	284	PK	PASS
56.87	47.6	19.60	-27.960	40.00	20.40	150	298	PK	PASS
90.48	55.2	23.68	-31.470	43.50	19.82	150	23	PK	PASS
104.31	56.1	26.62	-29.520	43.50	16.88	150	256	PK	PASS
213.63	50.9	21.82	-29.030	43.50	21.68	150	30	PK	PASS
989.09	37.5	26.83	-10.620	54.00	27.17	150	185	PK	PASS



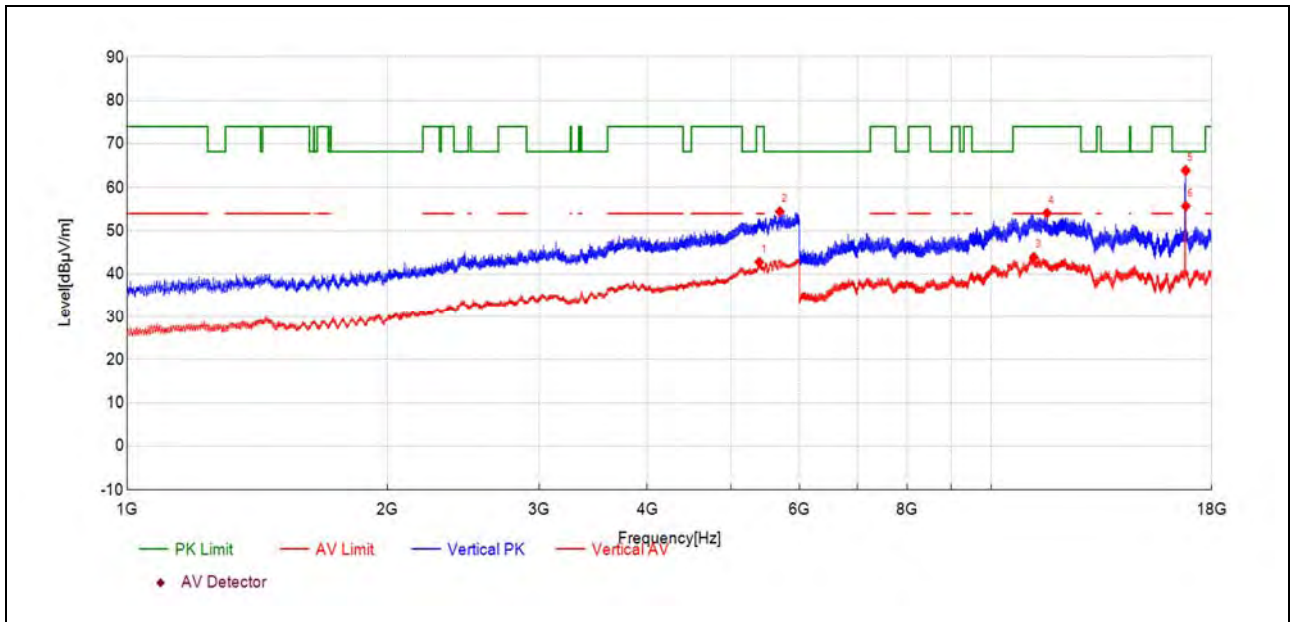
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5396.31	36.6	54.35	17.740	74.00	19.65	150	174	PK	PASS
5605.87	27.2	45.29	18.140	-	-	150	160	AV	NA
11141.97	30.9	44.63	13.740	54.00	9.37	150	66	AV	PASS
11147.73	39.9	53.61	13.750	74.00	20.39	150	269	PK	PASS
16802.35	35.1	49.52	14.400	-	-	150	140	AV	NA
16802.83	46.2	60.61	14.410	68.23	7.62	150	140	PK	PASS



(Antenna Vertical, 30MHz to 1GHz)

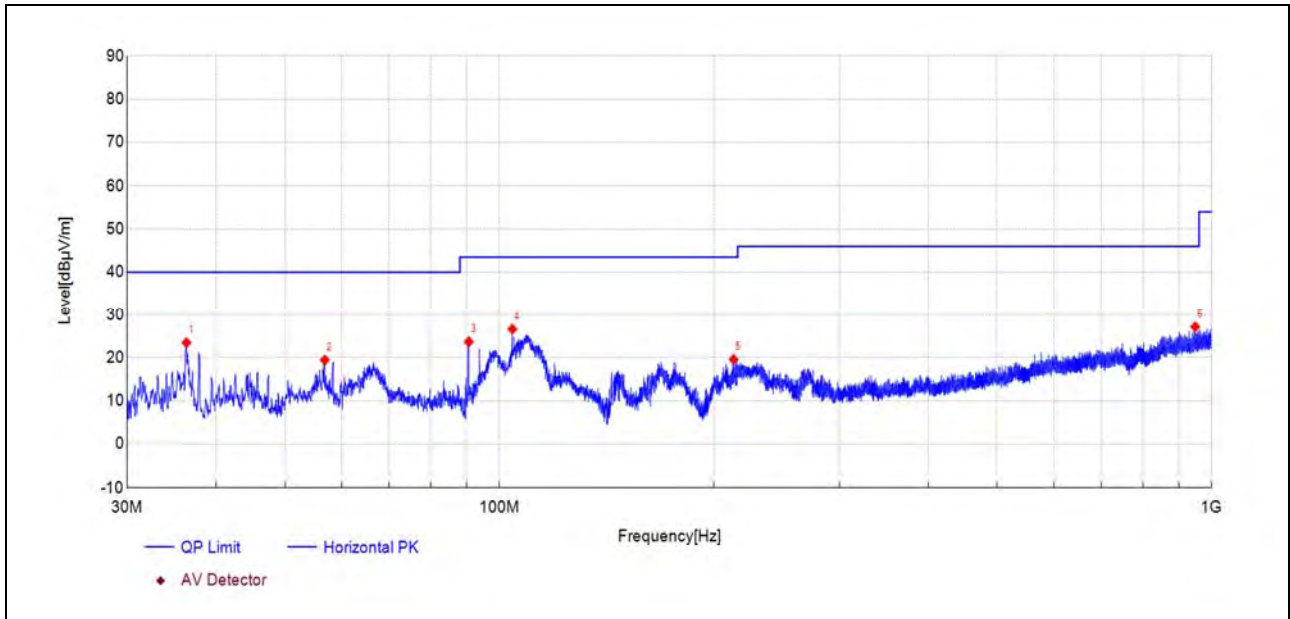
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.35	57.1	27.59	-29.480	40.00	12.41	150	38	PK	PASS
51.78	50.7	22.72	-27.990	40.00	17.28	150	143	PK	PASS
90.43	56.0	24.51	-31.480	43.50	18.99	150	116	PK	PASS
108.86	52.8	24.09	-28.690	43.50	19.41	150	31	PK	PASS
272.46	46.9	20.38	-26.560	46.00	25.62	150	10	PK	PASS
999.37	37.5	26.76	-10.750	54.00	27.24	150	38	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

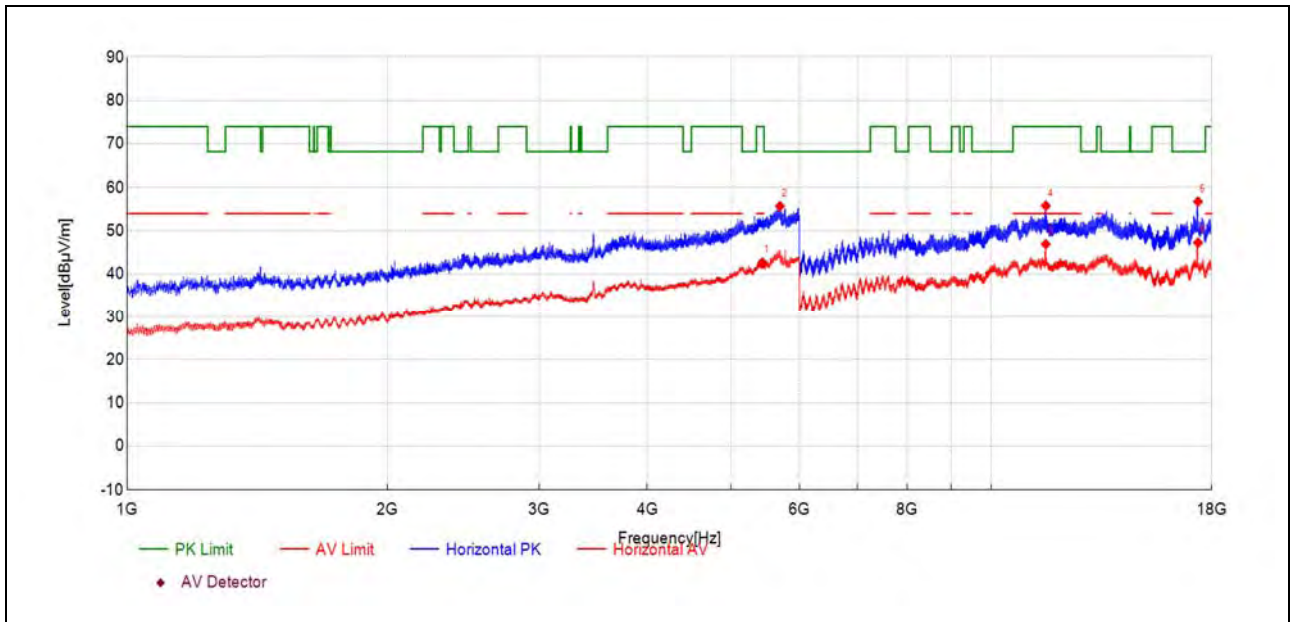
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5391.76	25.1	42.77	17.680	54.00	11.23	150	5	AV	PASS
5694.97	36.0	54.47	18.510	68.23	13.76	150	360	PK	PASS
11202.93	30.1	43.92	13.870	54.00	10.08	150	76	AV	PASS
11604.70	40.1	54.13	14.020	74.00	19.87	150	141	PK	PASS
16795.63	49.5	63.90	14.390	68.23	4.33	150	173	PK	PASS
16800.43	41.4	55.74	14.380	-	-	150	173	AV	NA

Plot for Channel 157



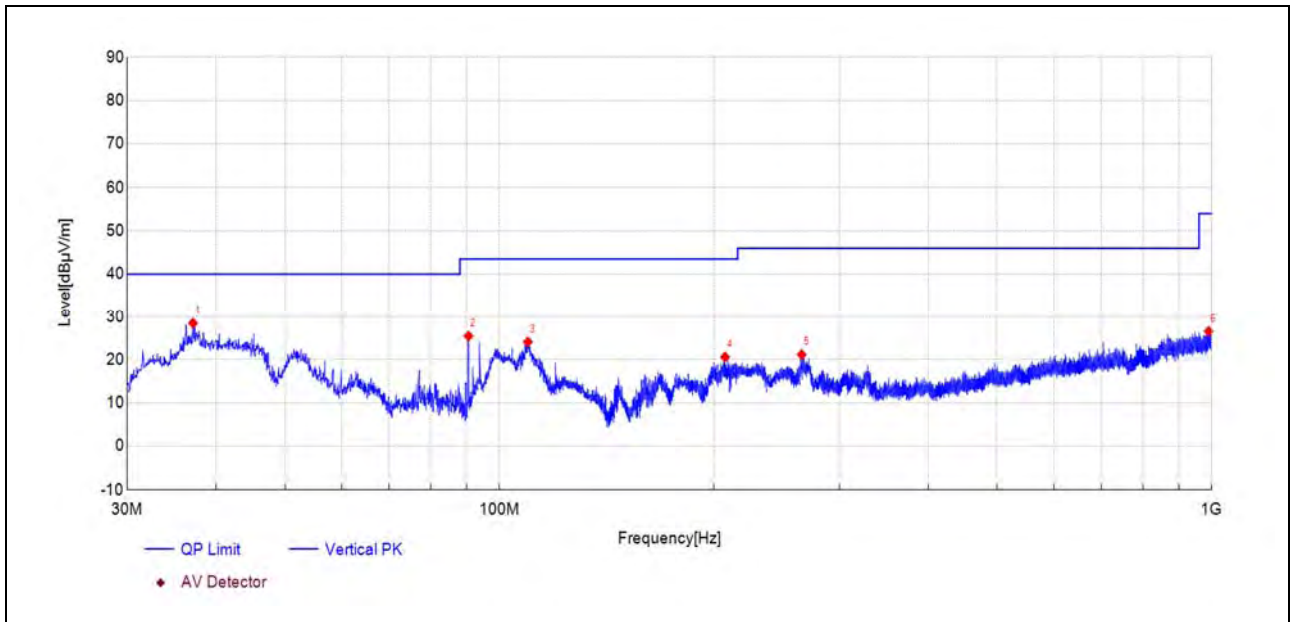
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
36.35	52.9	23.44	-29.480	40.00	16.56	150	316	PK	PASS
56.87	47.4	19.44	-27.960	40.00	20.56	150	9	PK	PASS
90.58	55.1	23.64	-31.440	43.50	19.86	150	9	PK	PASS
104.31	56.1	26.59	-29.520	43.50	16.91	150	281	PK	PASS
213.19	48.7	19.56	-29.090	43.50	23.94	150	43	PK	PASS
948.15	38.1	27.13	-10.990	46.00	18.87	150	225	PK	PASS



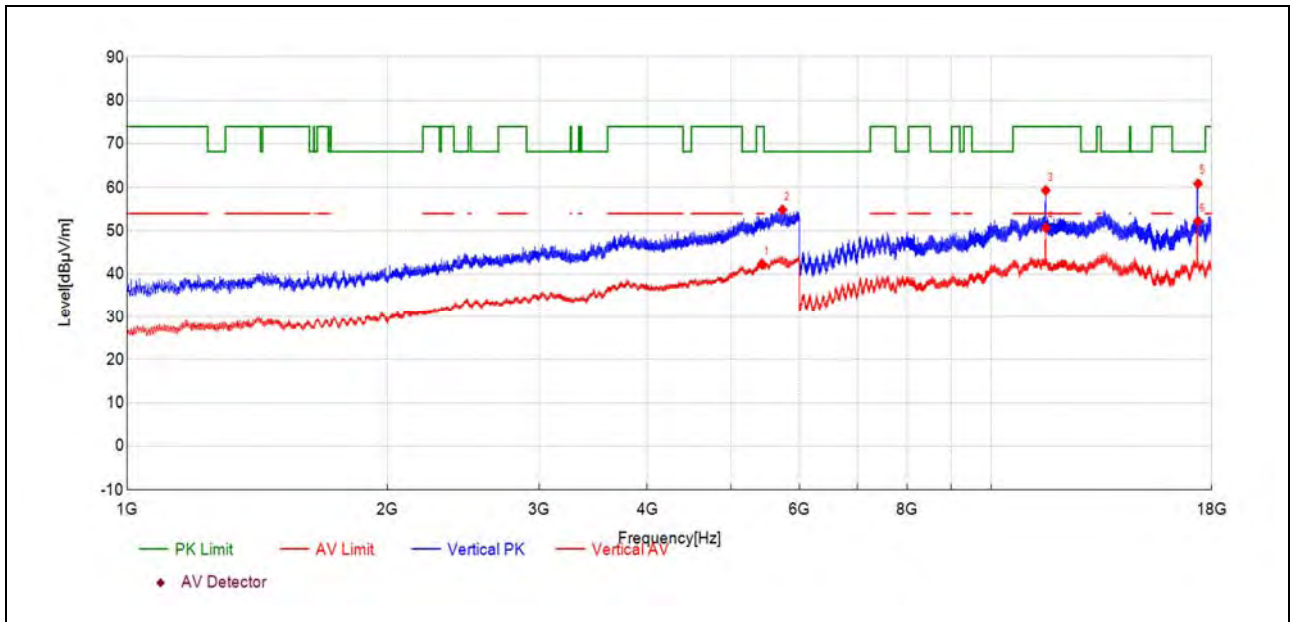
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5435.40	25.1	42.69	17.640	54.00	11.31	150	167	AV	PASS
5697.70	36.3	55.72	19.460	68.23	12.51	150	167	PK	PASS
11568.70	32.7	46.93	14.280	54.00	7.07	150	292	AV	PASS
11569.18	41.5	55.81	14.270	74.00	18.19	150	292	PK	PASS
17353.41	31.8	47.27	15.510	-	-	150	152	AV	NA
17353.41	41.3	56.78	15.510	68.23	11.45	150	132	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
37.13	57.8	28.45	-29.310	40.00	11.55	150	296	PK	PASS
90.48	56.9	25.46	-31.470	43.50	18.04	150	73	PK	PASS
109.64	52.8	24.11	-28.710	43.50	19.39	150	45	PK	PASS
207.37	50.1	20.62	-29.450	43.50	22.88	150	206	PK	PASS
265.62	48.5	21.16	-27.380	46.00	24.84	150	0	PK	PASS
990.06	37.1	26.58	-10.510	54.00	27.42	150	94	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
5429.04	24.7	42.41	17.710	54.00	11.59	150	61	AV	PASS
5734.98	35.4	54.85	19.410	68.23	13.38	150	166	PK	PASS
11566.30	45.1	59.37	14.270	74.00	14.63	150	185	PK	PASS
11570.14	36.4	50.68	14.280	54.00	3.32	150	163	AV	PASS
17353.89	45.4	60.93	15.510	68.23	7.30	150	185	PK	PASS
17354.37	36.8	52.28	15.510	-	-	150	185	AV	NA

END OF REPORT