

PSD NVNT a 5785MHz Ant1



PSD NVNT a 5825MHz Ant1





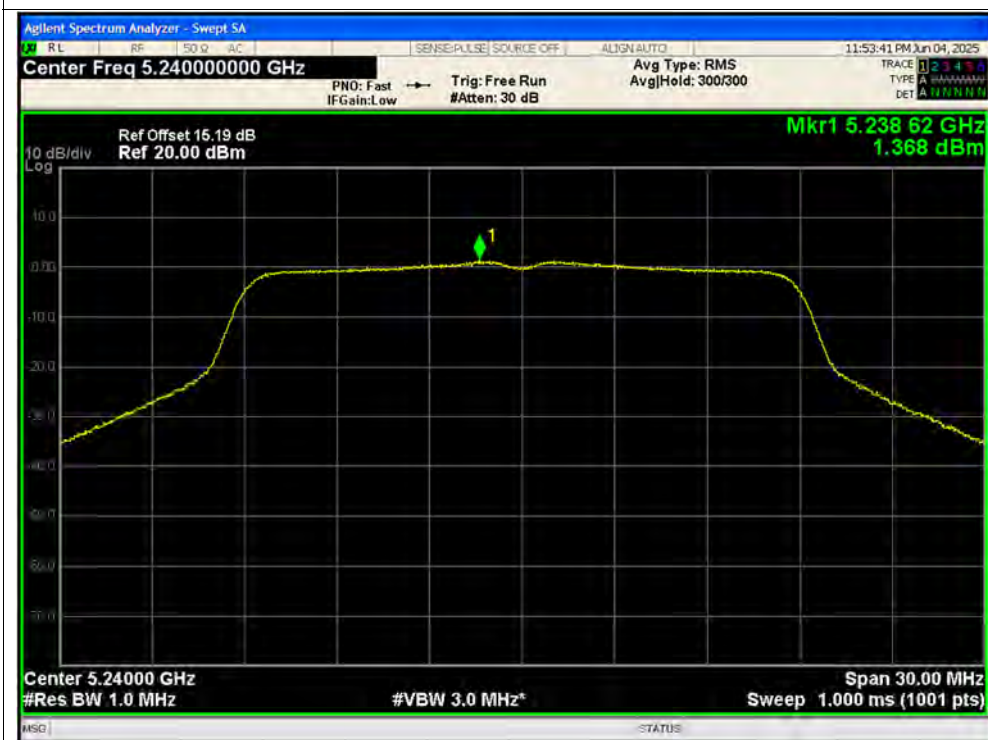
PSD NVNT n20 5180MHz Ant1



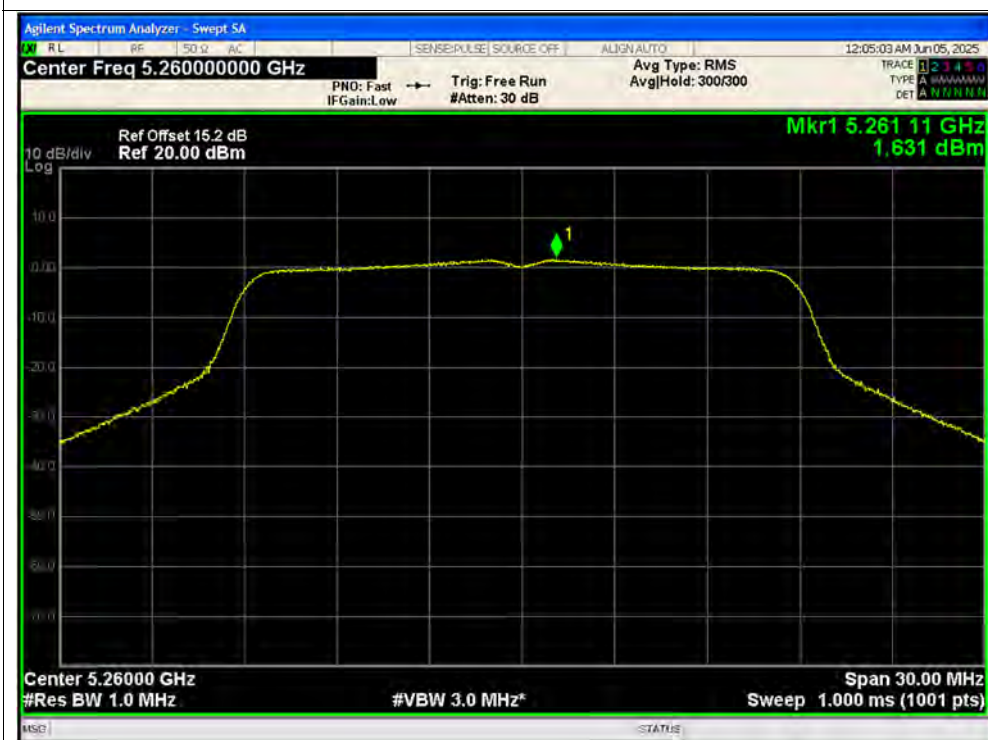
PSD NVNT n20 5220MHz Ant1



PSD NVNT n20 5240MHz Ant1



PSD NVNT n20 5260MHz Ant1

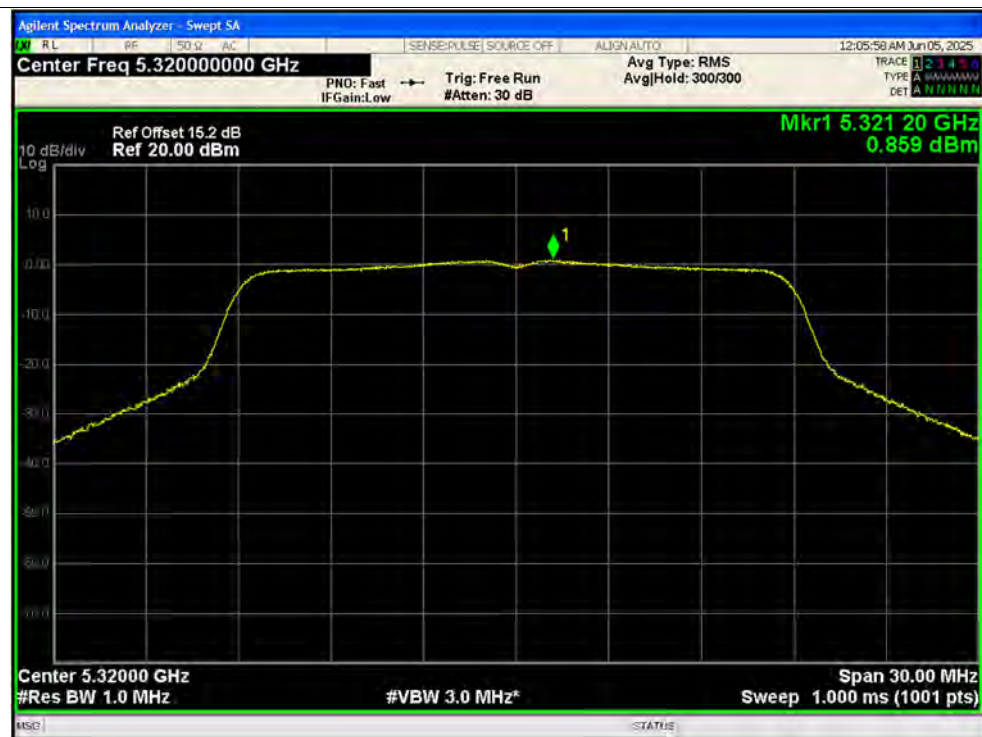




PSD NVNT n20 5300MHz Ant1



PSD NVNT n20 5320MHz Ant1



PSD NVNT n20 5500MHz Ant1



PSD NVNT n20 5580MHz Ant1





PSD NVNT n20 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



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

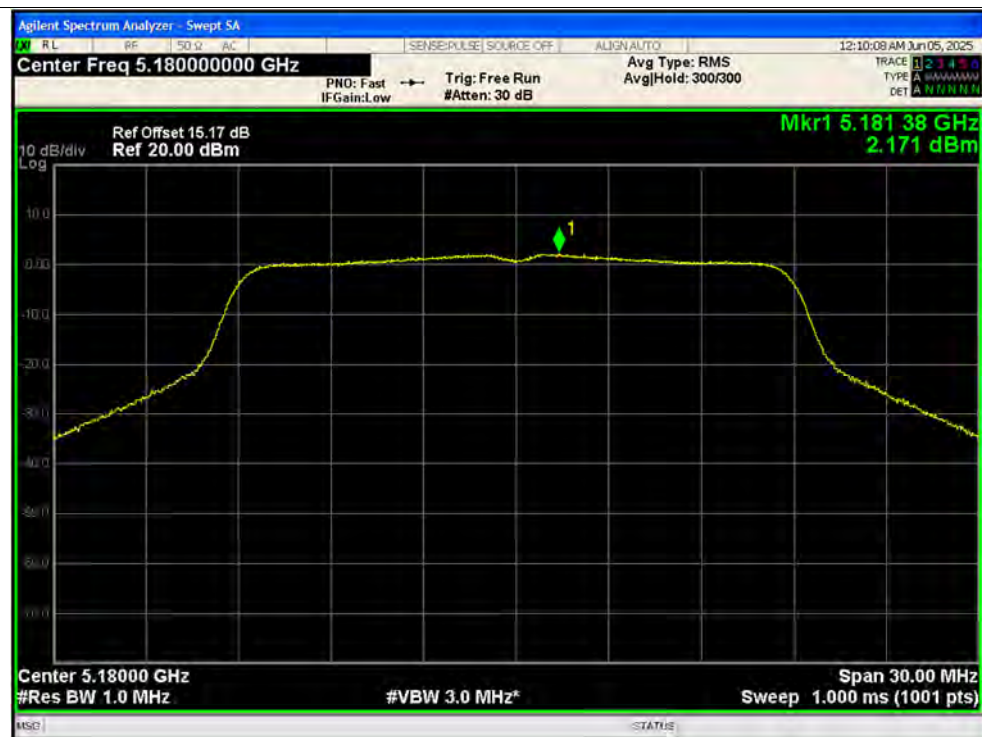




PSD NVNT n40 5795MHz Ant1



PSD NVNT ac20 5180MHz Ant1





PSD NVNT ac20 5220MHz Ant1



PSD NVNT ac20 5240MHz Ant1



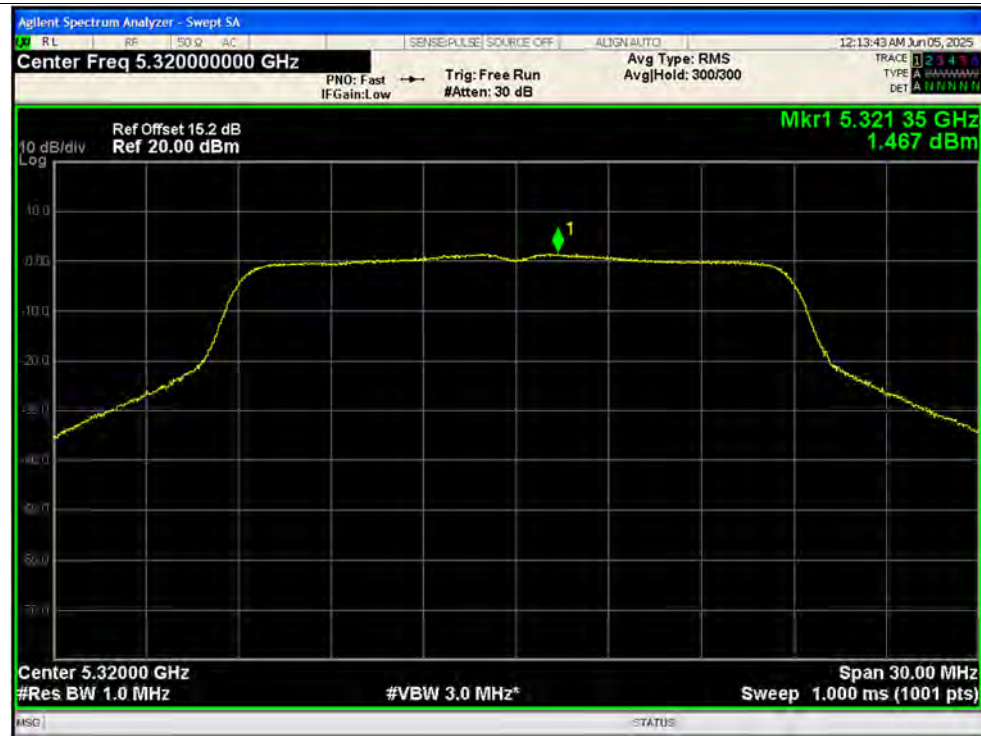
PSD NVNT ac20 5260MHz Ant1



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



**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	5179.955	-45000	-8.69	25	Pass
20C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
20C 4.4V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
-30C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
-20C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
-10C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
0C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
10C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
30C 3.8V	Carrier	5180	Ant1	5179.954	-46000	-8.88	25	Pass
40C 3.8V	Carrier	5180	Ant1	5179.953	-47000	-9.07	25	Pass
50C 3.8V	Carrier	5180	Ant1	5179.953	-47000	-9.07	25	Pass
60C 3.8V	Carrier	5180	Ant1	5179.953	-47000	-9.07	25	Pass
70C 3.8V	Carrier	5180	Ant1	5179.953	-47000	-9.07	25	Pass
75C 3.8V	Carrier	5180	Ant1	5179.953	-47000	-9.07	25	Pass
20C 3.5V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
20C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
20C 4.4V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
-30C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
-20C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
-10C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
0C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
10C 3.8V	Carrier	5260	Ant1	5259.952	-48000	-9.13	25	Pass
30C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
40C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
50C 3.8V	Carrier	5260	Ant1	5259.95	-50000	-9.51	25	Pass
60C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
70C 3.8V	Carrier	5260	Ant1	5259.951	-49000	-9.32	25	Pass
75C 3.8V	Carrier	5260	Ant1	5259.95	-50000	-9.51	25	Pass
20C 3.5V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
20C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
20C 4.4V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
-30C 3.8V	Carrier	5500	Ant1	5499.948	-52000	-9.45	25	Pass
-20C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
-10C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass



0C 3.8V	Carrier	5500	Ant1	5499.948	-52000	-9.45	25	Pass
10C 3.8V	Carrier	5500	Ant1	5499.948	-52000	-9.45	25	Pass
30C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
40C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
50C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
60C 3.8V	Carrier	5500	Ant1	5499.948	-52000	-9.45	25	Pass
70C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
75C 3.8V	Carrier	5500	Ant1	5499.947	-53000	-9.64	25	Pass
20C 3.5V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
20C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
20C 4.4V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
-30C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
-20C 3.8V	Carrier	5745	Ant1	5744.945	-55000	-9.57	25	Pass
-10C 3.8V	Carrier	5745	Ant1	5744.945	-55000	-9.57	25	Pass
0C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
10C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
30C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
40C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
50C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
60C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
70C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass
75C 3.8V	Carrier	5745	Ant1	5744.944	-56000	-9.75	25	Pass



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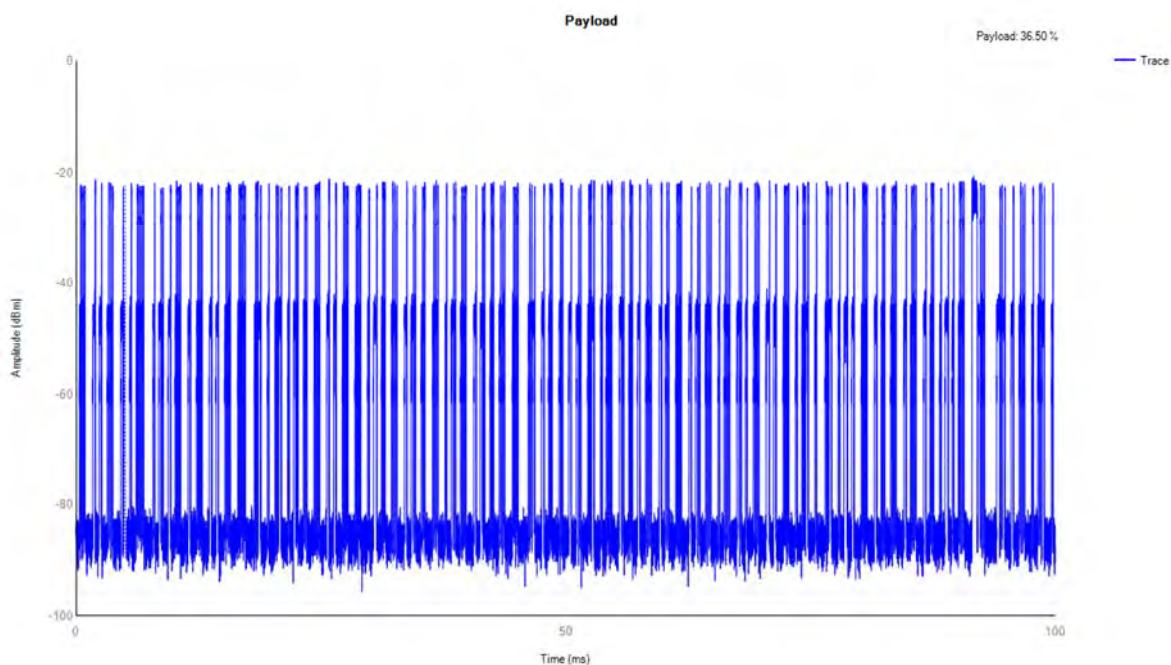
A.6. Dynamic Frequency Selection

Payload

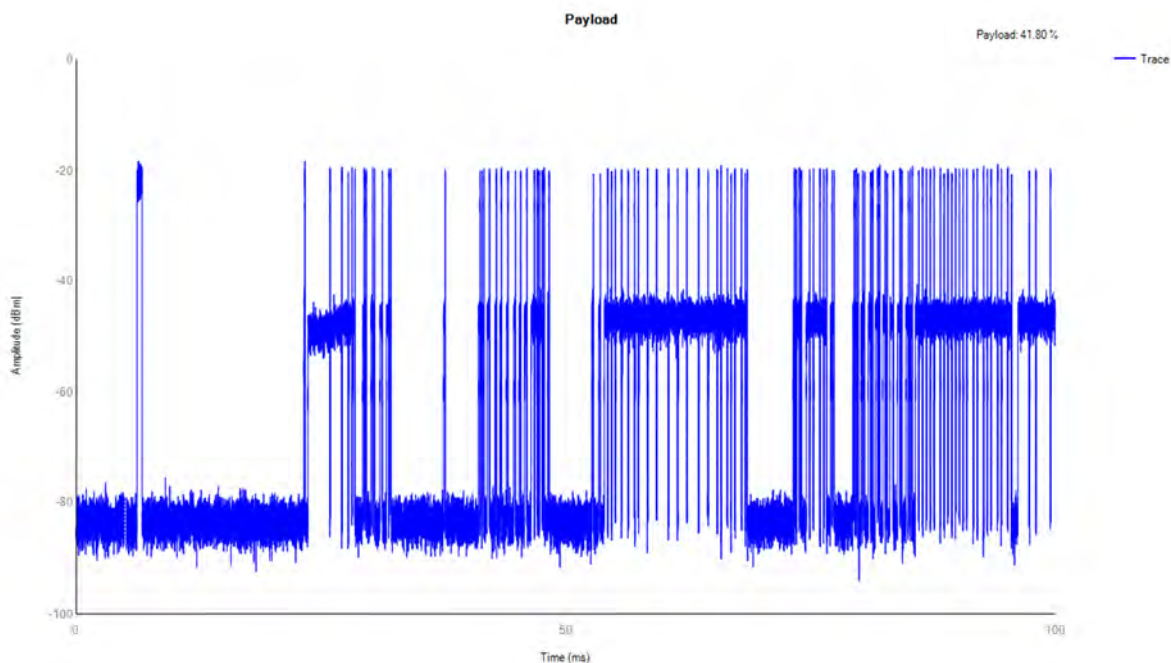
Mode	Frequency (MHz)	Result	Verdict
ac20	5260	36.5	Pass
ac20	5500	41.8	Pass
ac40	5270	31.01	Pass
ac40	5510	33.53	Pass

Test Graphs

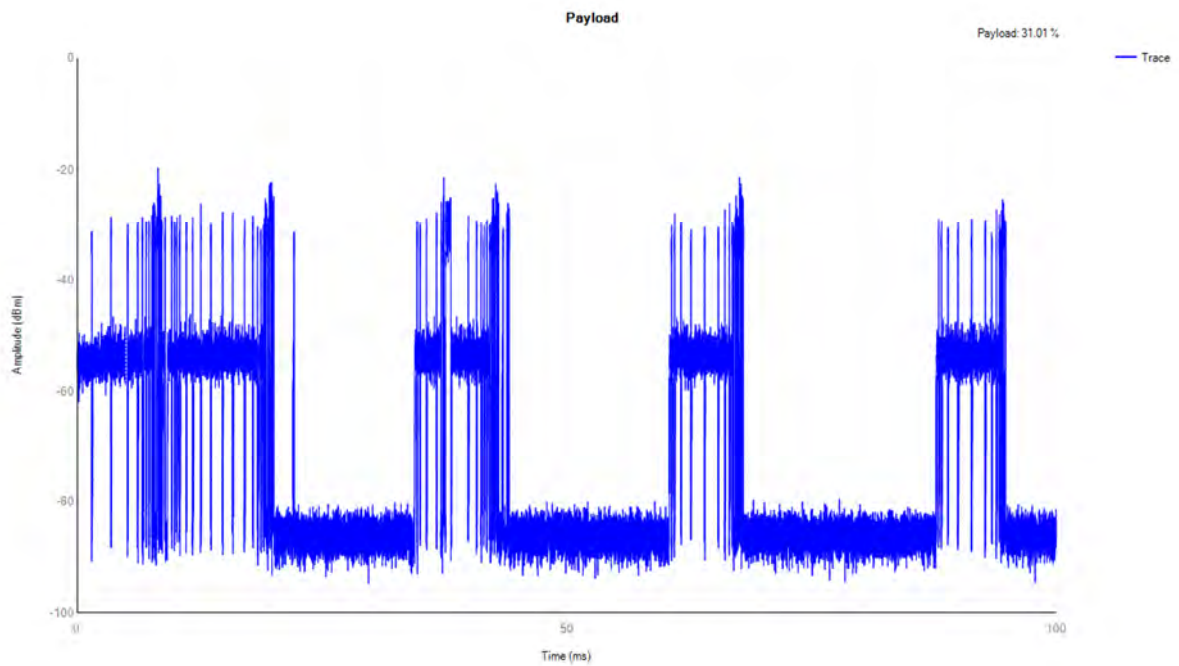
ac20 5260MHz Payload



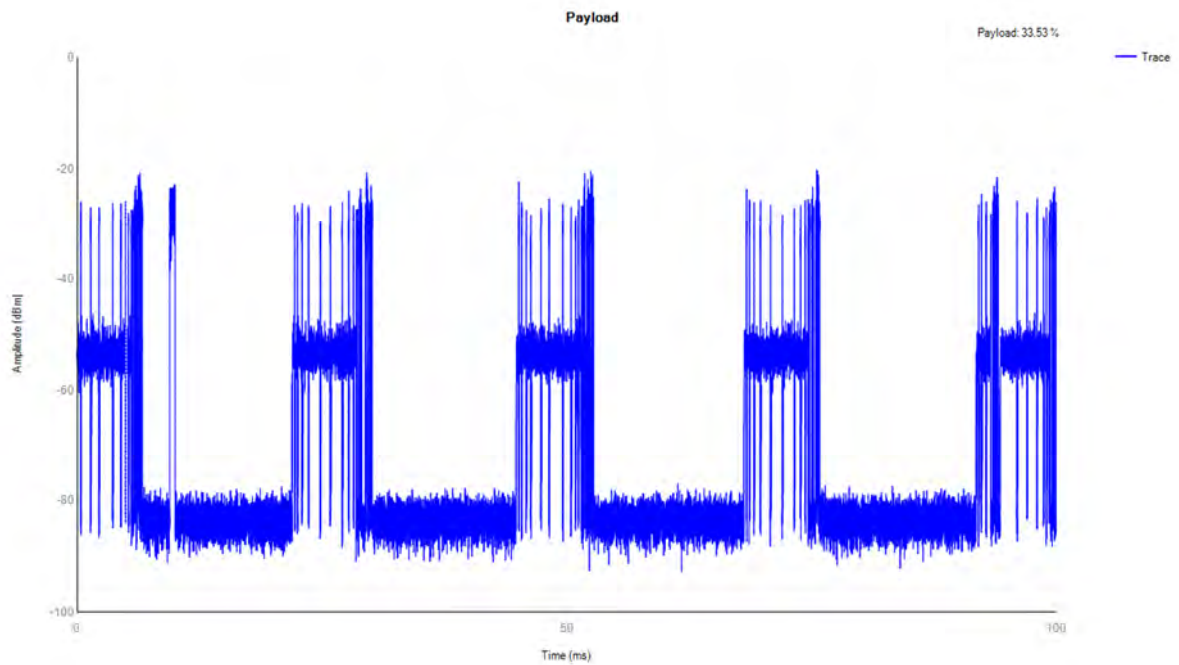
ac20 5500MHz Payload



ac40 5270MHz Payload



ac40 5510MHz 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
ac40	5270	DFS_FCC_T0	See test Graph	Pass
ac40	5510	DFS_FCC_T0	See test Graph	Pass

Spectrum analyzer settings:

Span: Zero

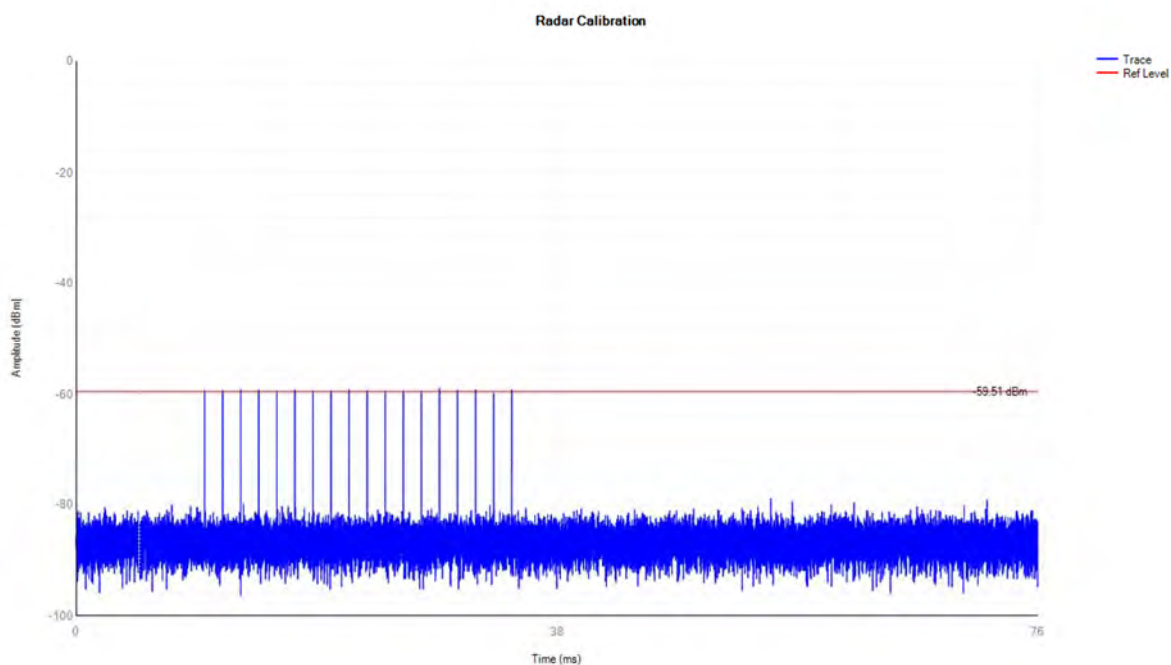
Detector Type: Peak

RBW: 3MHz

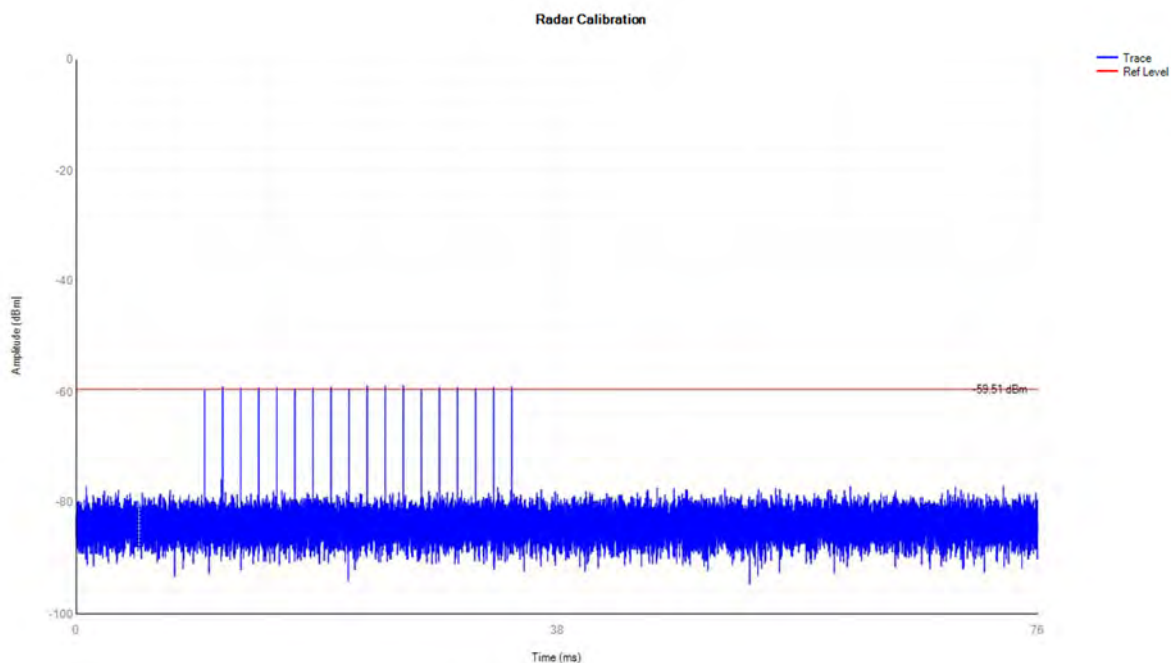
VBW: 3MHz

Test Graphs

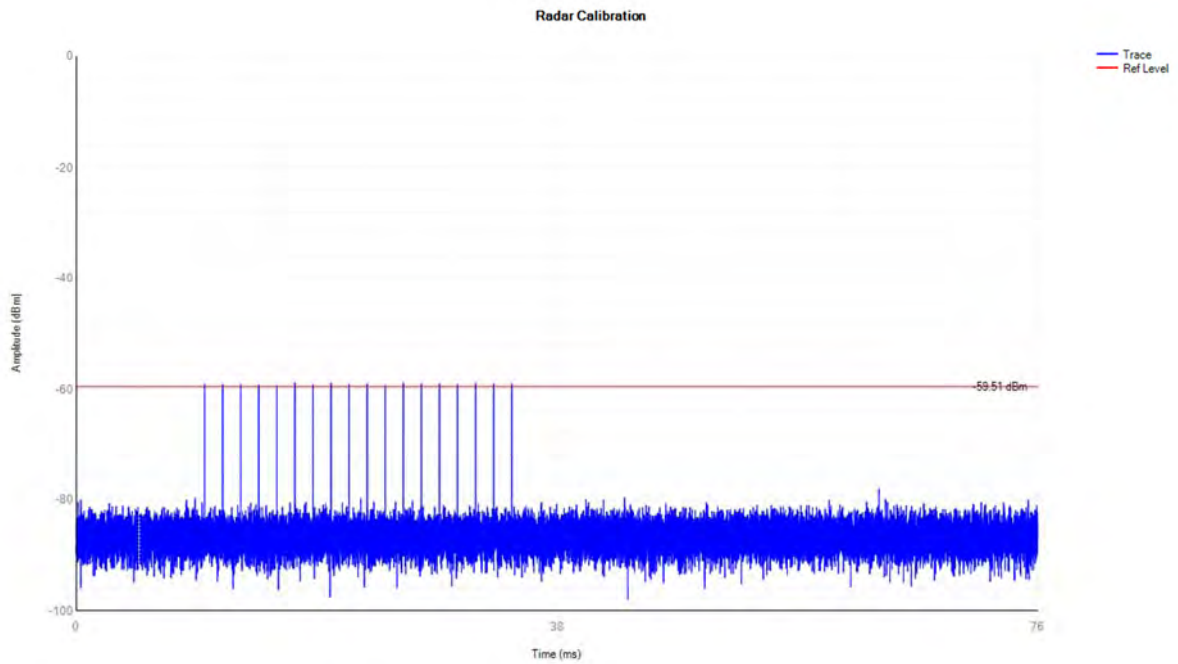
5260MHz DFS_FCC_T0



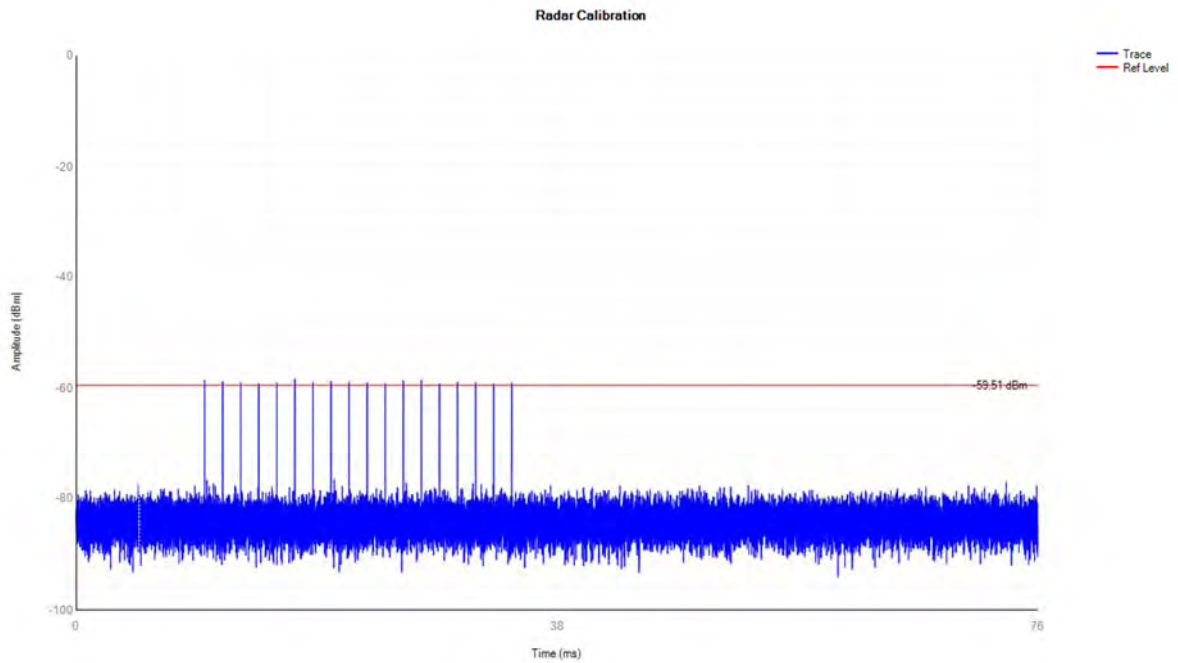
5500MHz DFS_FCC_T0



5270MHz DFS_FCC_T0



5510MHz 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	5260	0.895	10	0.021	0.26	0.009	0.06	Pass
ac20	5500	0.81	10	0.021	0.26	0.008	0.06	Pass
ac40	5270	0.76	10	0.01	0.26	0.007	0.06	Pass
ac40	5510	0.802	10	0.011	0.26	0.008	0.06	Pass

Spectrum analyzer settings:

Span: Zero

Detector type: Peak

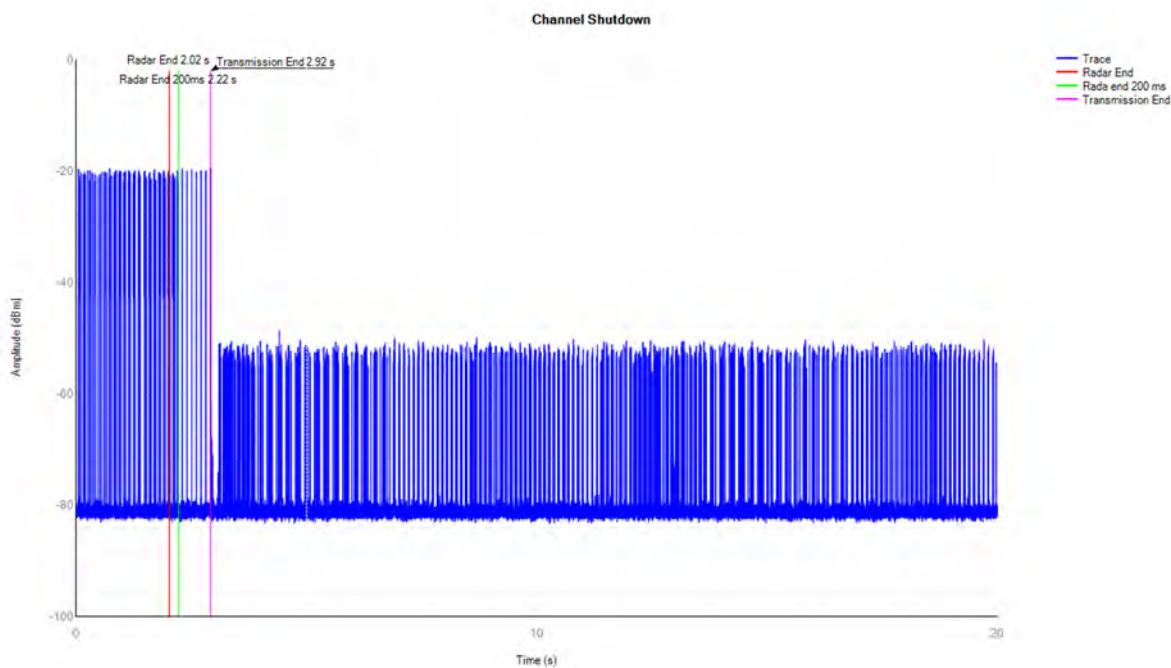
RBW: 3MHz

VBW: 3MHz

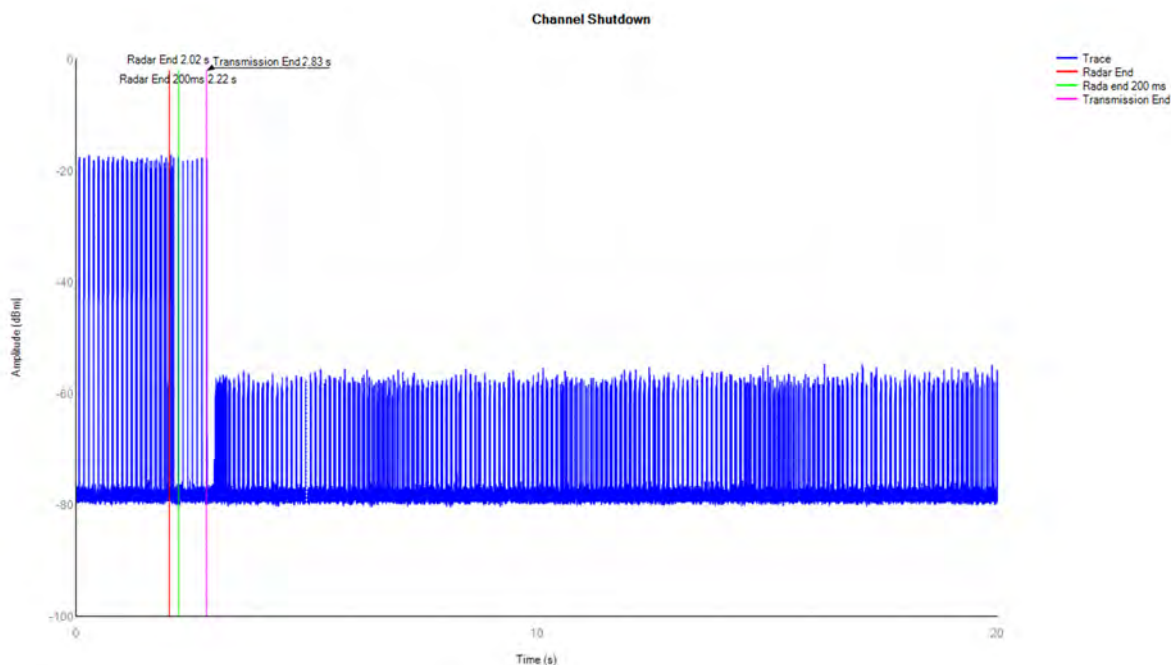
Sweep time: 20s

Test Graphs

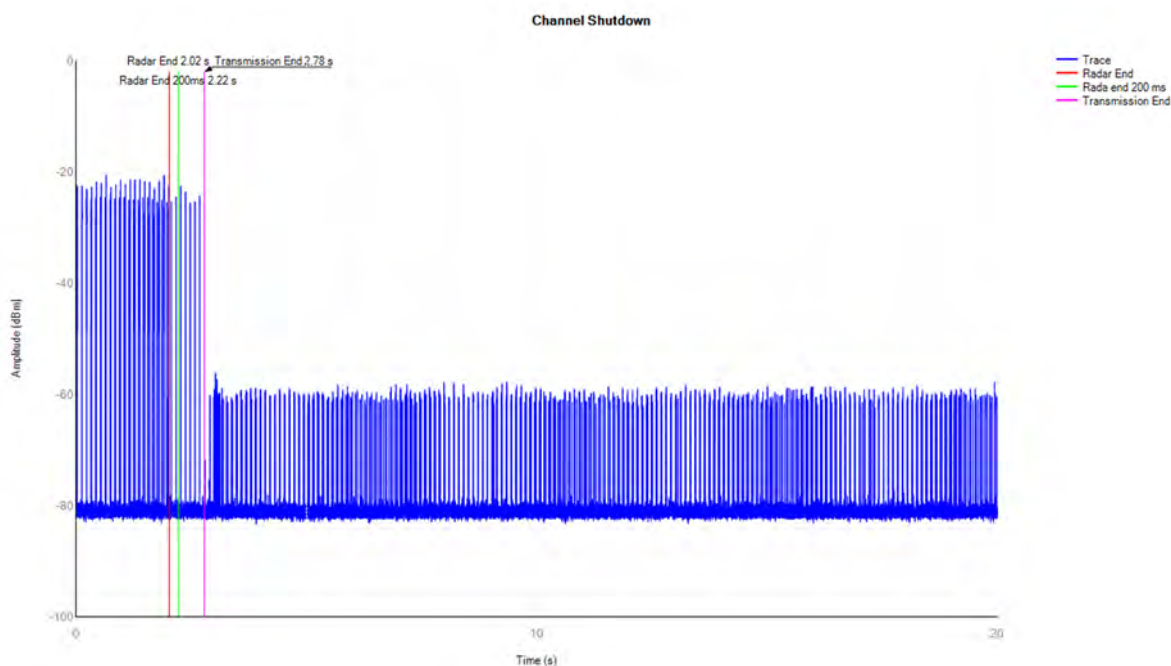
ac20 5260MHz Shutdown



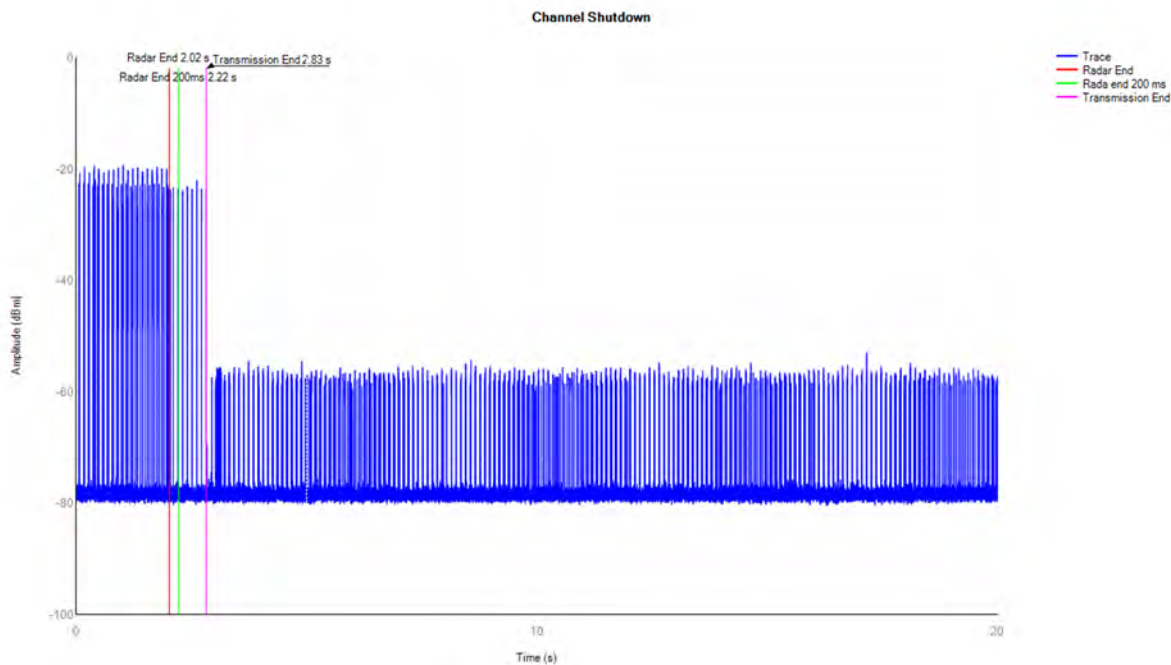
ac20 5500MHz Shutdown



ac40 5270MHz Shutdown



ac40 5510MHz 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

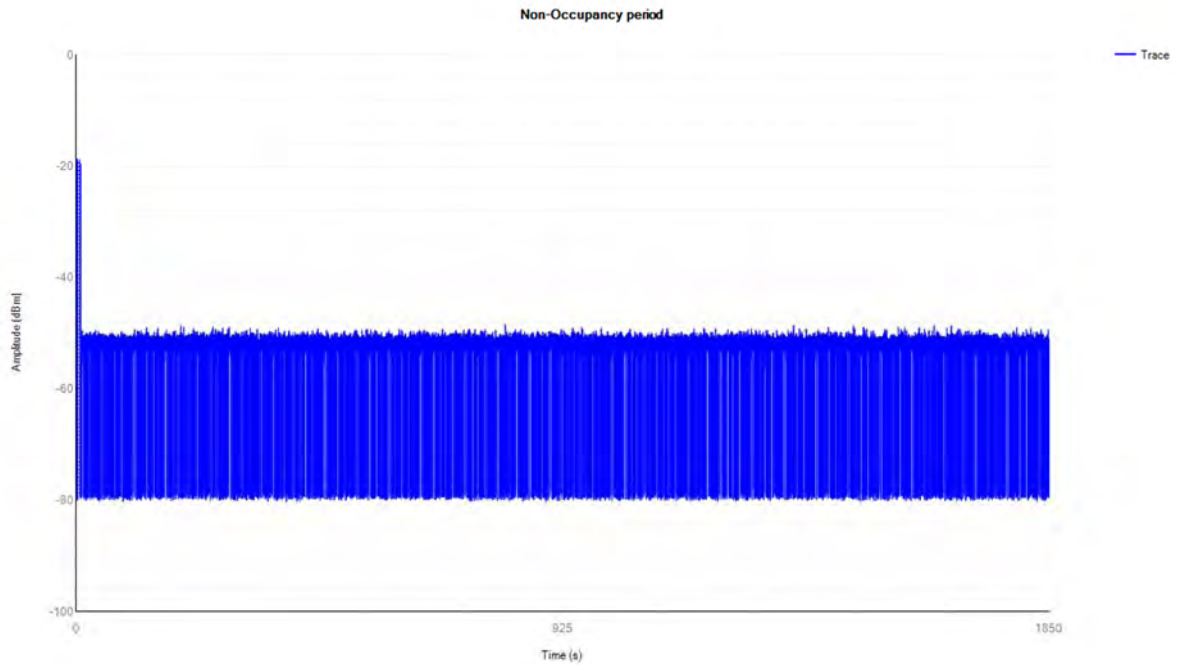
RBW: 3MHz

VBW: 3MHz

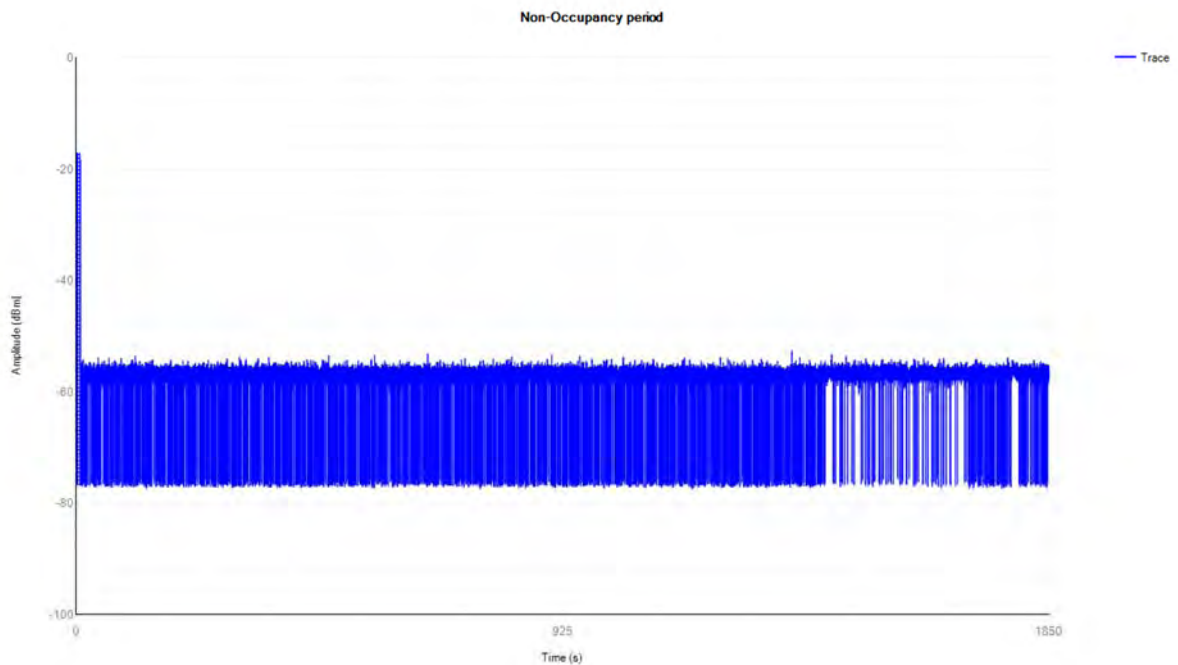
Sweep time: 1850s

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+DC Source+WIFI TX

Test voltage: AC 120V/60Hz

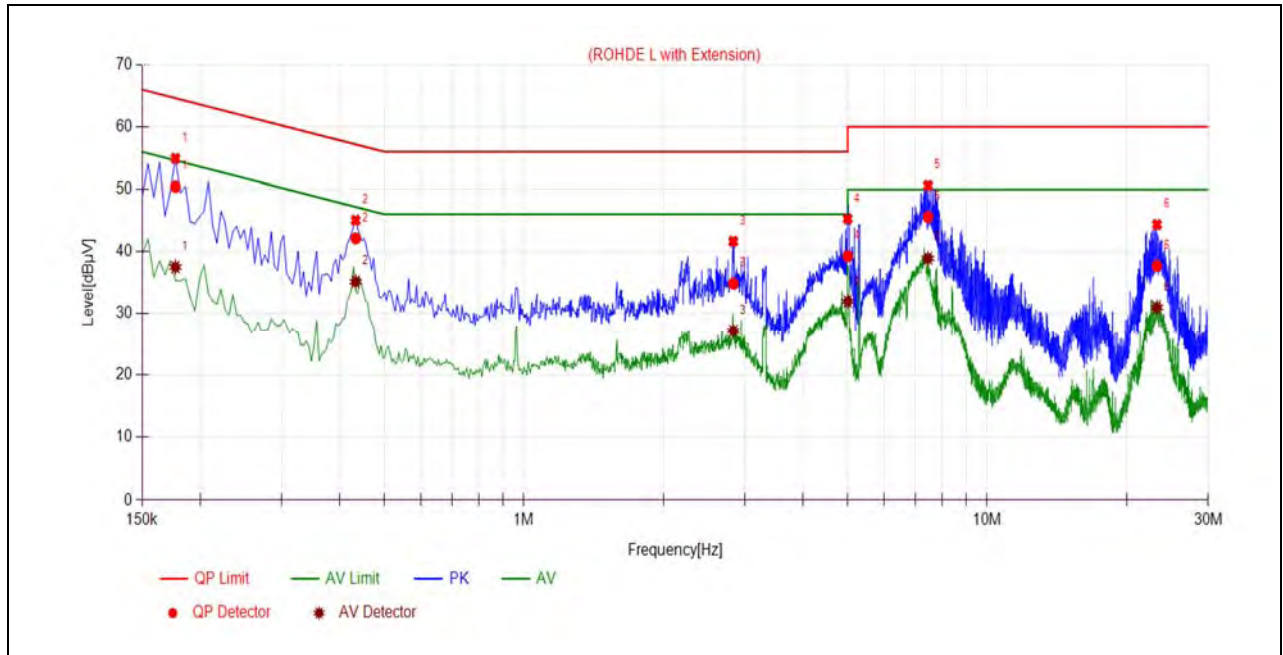
The measurement results are obtained as below:

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

U_R : Receiver Reading

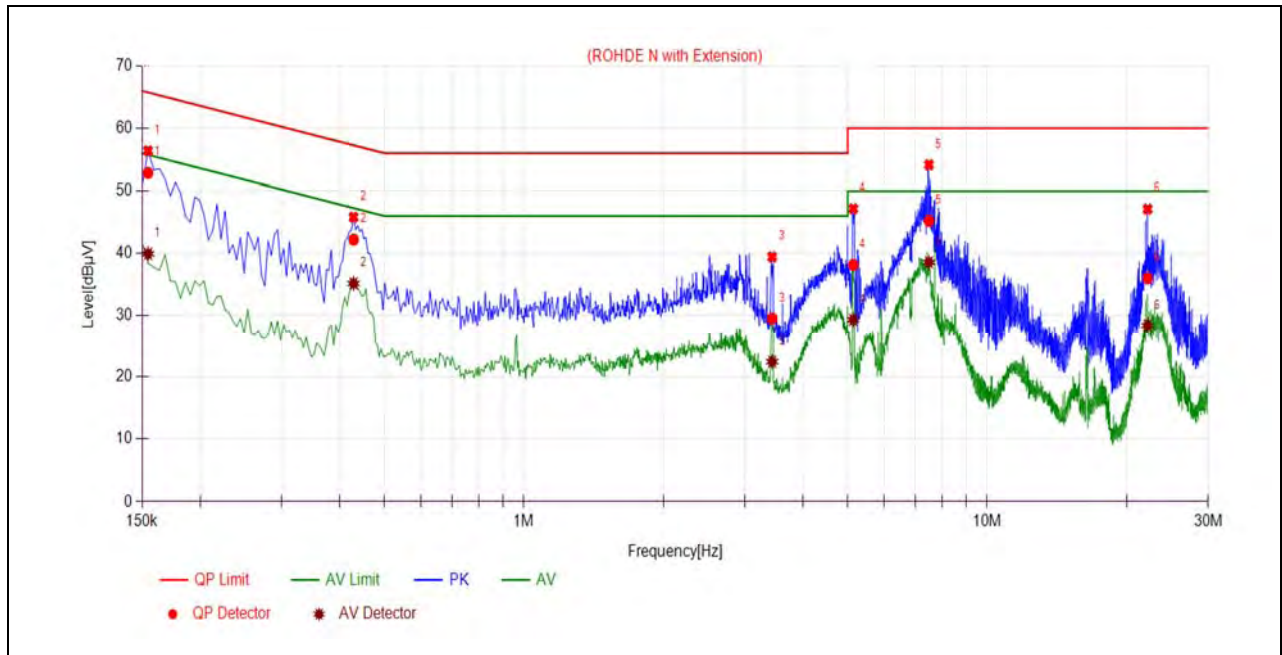
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1770	50.42	37.52	64.62	54.62	Line	PASS
2	0.4335	42.14	35.16	57.18	47.18		PASS
3	2.8322	34.87	27.19	56.00	46.00		PASS
4	5.0010	39.27	31.98	60.00	50.00		PASS
5	7.4528	45.58	38.92	60.00	50.00		PASS
6	23.2508	37.71	31.03	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	0.1545	52.85	39.96	65.75	55.75	Neutral	PASS
2	0.4290	42.23	35.19	57.27	47.27		PASS
3	3.4351	29.55	22.46	56.00	46.00		PASS
4	5.1401	38.18	29.34	60.00	50.00		PASS
5	7.4888	45.22	38.58	60.00	50.00		PASS
6	22.1979	36.02	28.42	60.00	50.00		PASS

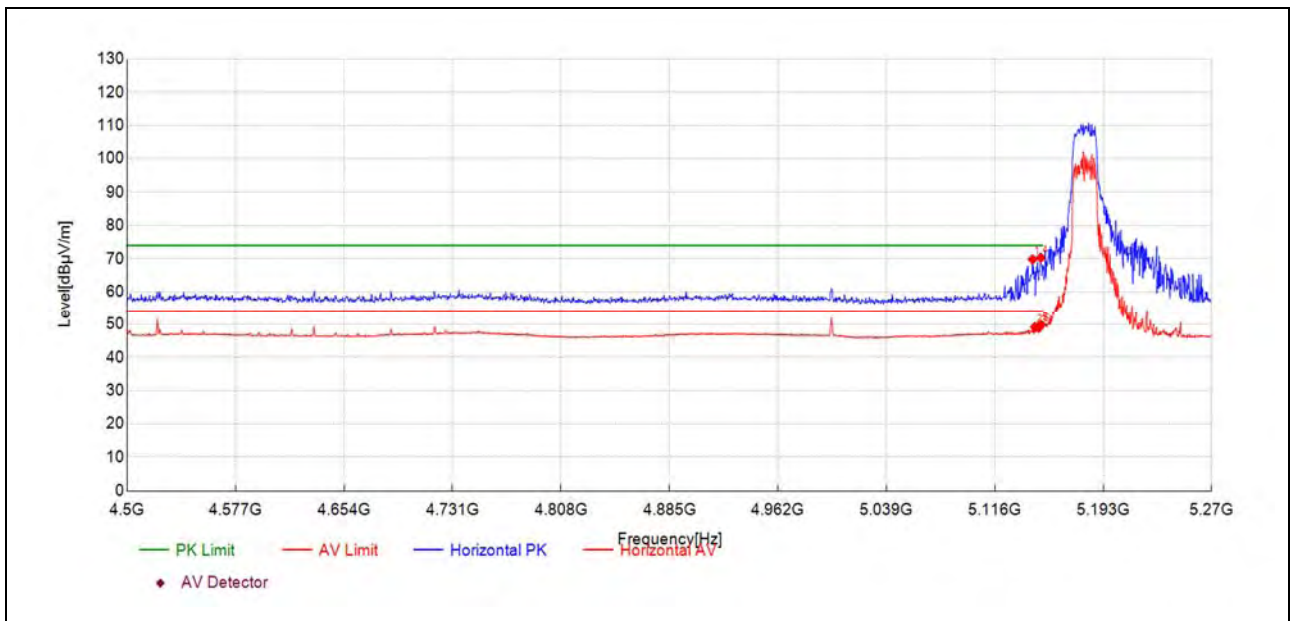
A.8. Restricted Frequency Bands

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

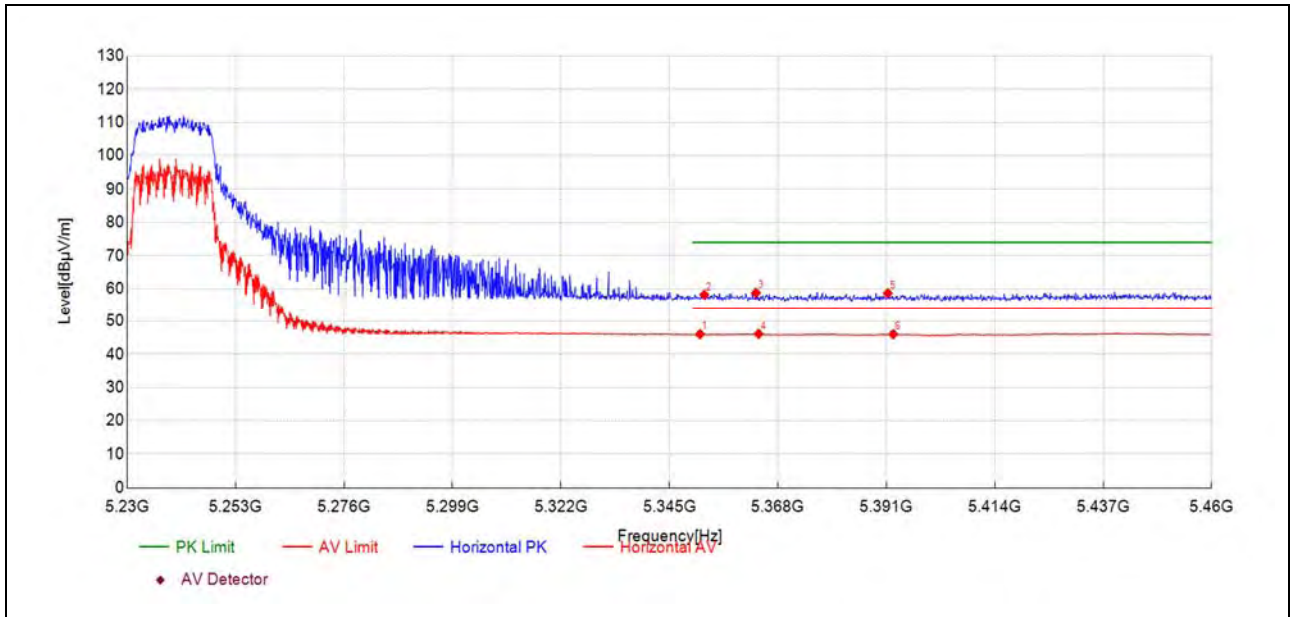
Plot for Channel 36



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5142.89	49.5	69.79	20.340	74.00	4.21	150	67	PK	PASS
5144.43	28.8	49.15	20.340	54.00	4.85	150	59	AV	PASS
5147.12	28.5	48.86	20.340	54.00	5.14	150	89	AV	PASS
5148.66	50.0	70.28	20.320	74.00	3.72	150	67	PK	PASS
5148.66	29.5	49.82	20.320	54.00	4.18	150	67	AV	PASS
5149.43	29.3	49.57	20.320	54.00	4.43	150	6	AV	PASS

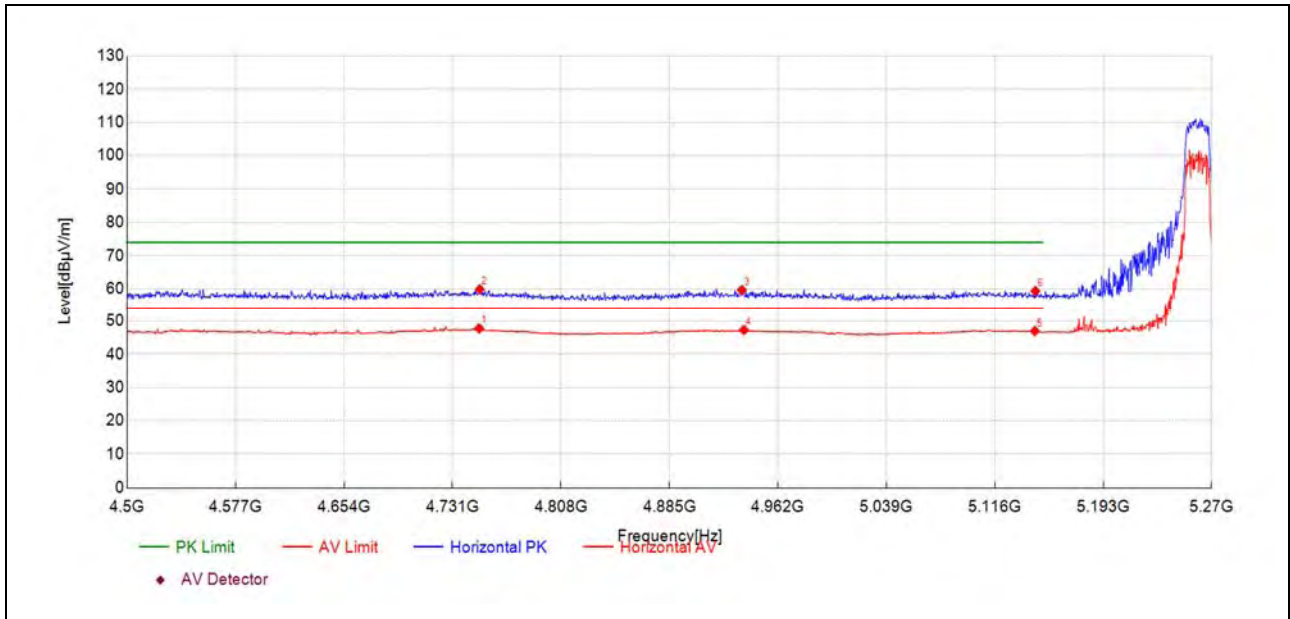


Plot for Channel 48



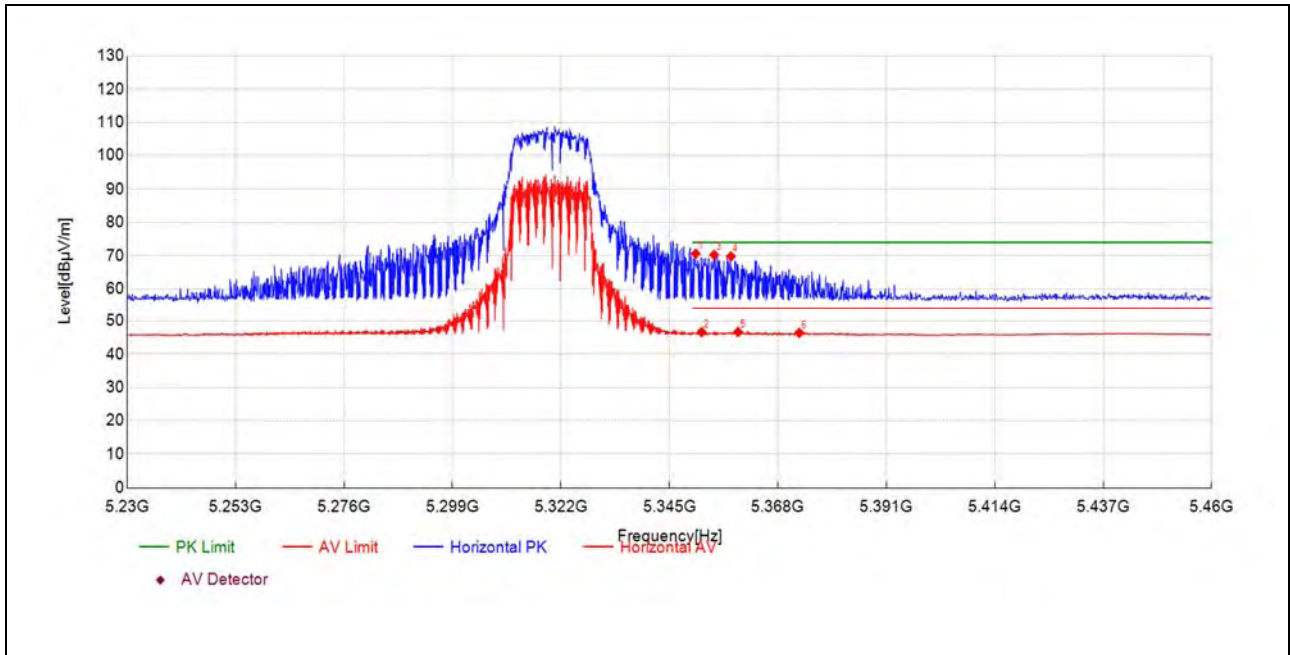
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5351.50	26.1	46.04	19.940	54.00	7.96	150	358	AV	PASS
5352.42	38.2	58.18	19.940	74.00	15.82	150	313	PK	PASS
5363.35	38.8	58.73	19.910	74.00	15.27	150	305	PK	PASS
5363.93	26.2	46.13	19.910	54.00	7.87	150	145	AV	PASS
5391.31	38.8	58.64	19.850	74.00	15.36	150	3	PK	PASS
5392.46	26.2	46.02	19.850	54.00	7.98	150	153	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
4749.99	27.5	47.78	20.320	54.00	6.22	150	9	AV	PASS
4750.38	39.5	59.84	20.320	74.00	14.16	150	266	PK	PASS
4936.42	39.7	59.62	19.950	74.00	14.38	150	349	PK	PASS
4937.96	27.4	47.30	19.940	54.00	6.70	150	0	AV	PASS
5144.43	26.6	46.98	20.340	54.00	7.02	150	280	AV	PASS
5144.81	39.0	59.31	20.340	74.00	14.69	150	0	PK	PASS

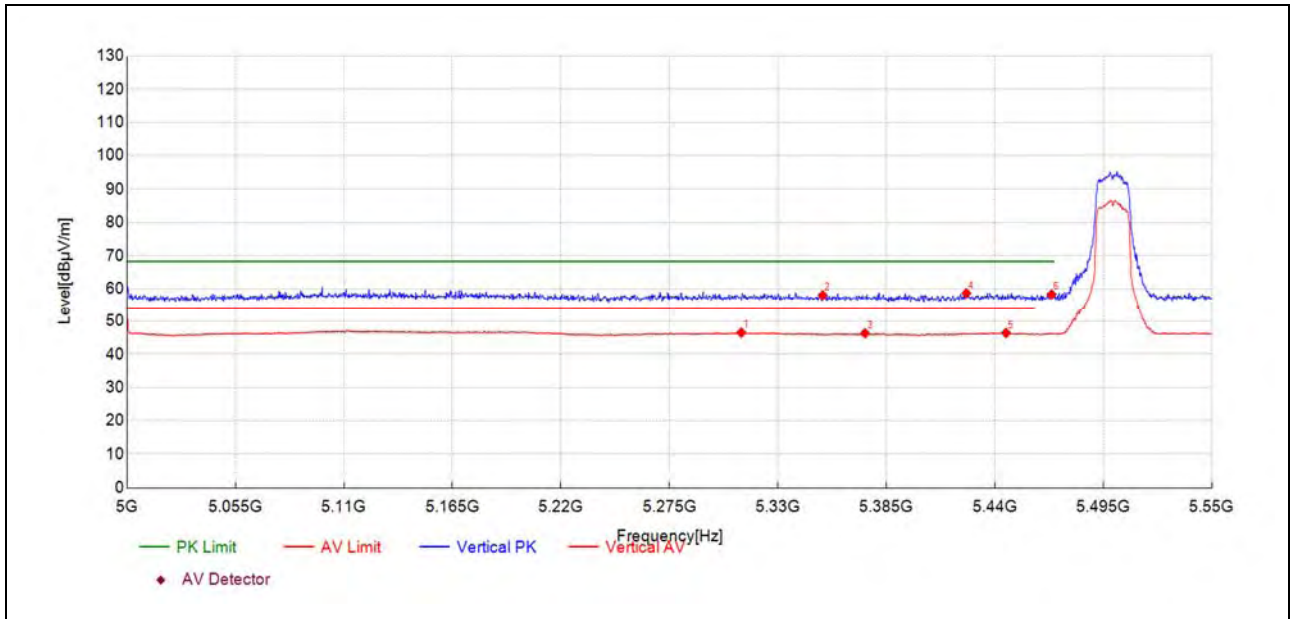
Plot for Channel 64



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.58	50.6	70.57	19.940	74.00	3.43	150	10	PK	PASS
5351.85	26.7	46.67	19.940	54.00	7.33	150	63	AV	PASS
5354.49	50.3	70.21	19.930	74.00	3.79	150	63	PK	PASS
5358.06	49.8	69.76	19.920	74.00	4.24	150	56	PK	PASS
5359.55	26.8	46.68	19.920	54.00	7.32	150	63	AV	PASS
5372.56	26.6	46.45	19.890	54.00	7.55	150	63	AV	PASS

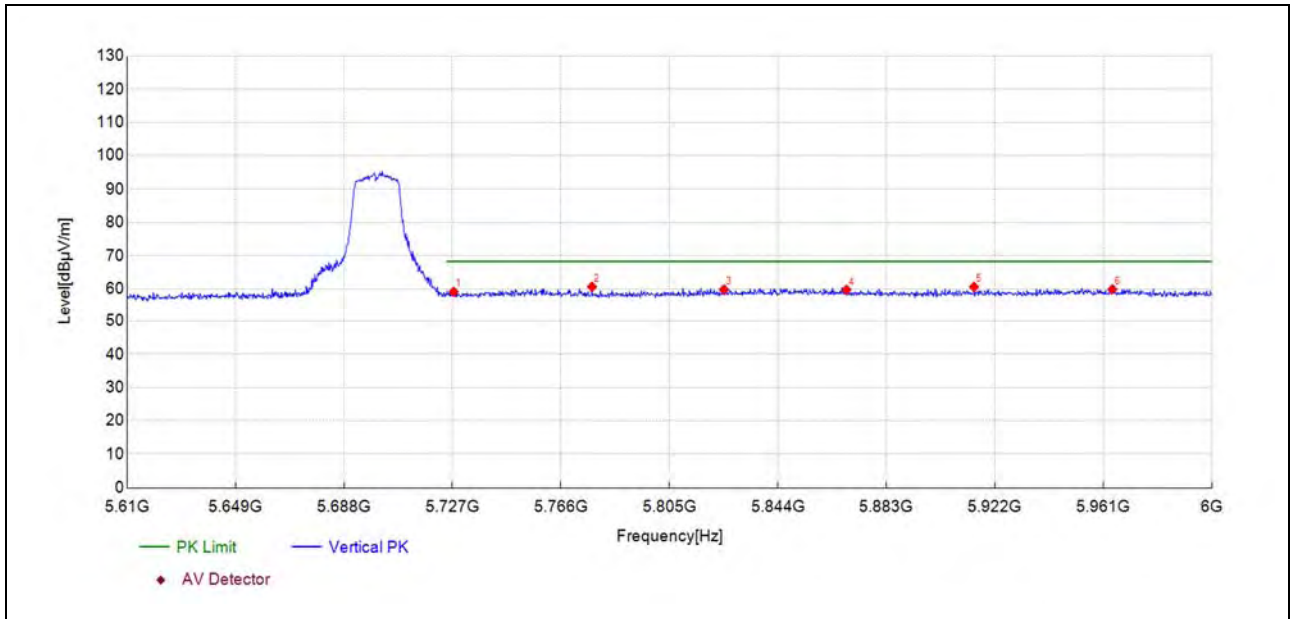


Plot for Channel 100



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5311.46	26.3	46.51	20.180	54.00	7.49	150	292	AV	PASS
5352.73	38.1	58.02	19.930	68.23	10.21	150	64	PK	PASS
5374.19	26.4	46.31	19.890	54.00	7.69	150	357	AV	PASS
5425.64	38.5	58.61	20.160	68.23	9.62	150	261	PK	PASS
5445.72	26.0	46.39	20.420	54.00	7.61	150	230	AV	PASS
5468.83	37.9	58.28	20.380	68.23	9.95	150	284	PK	PASS

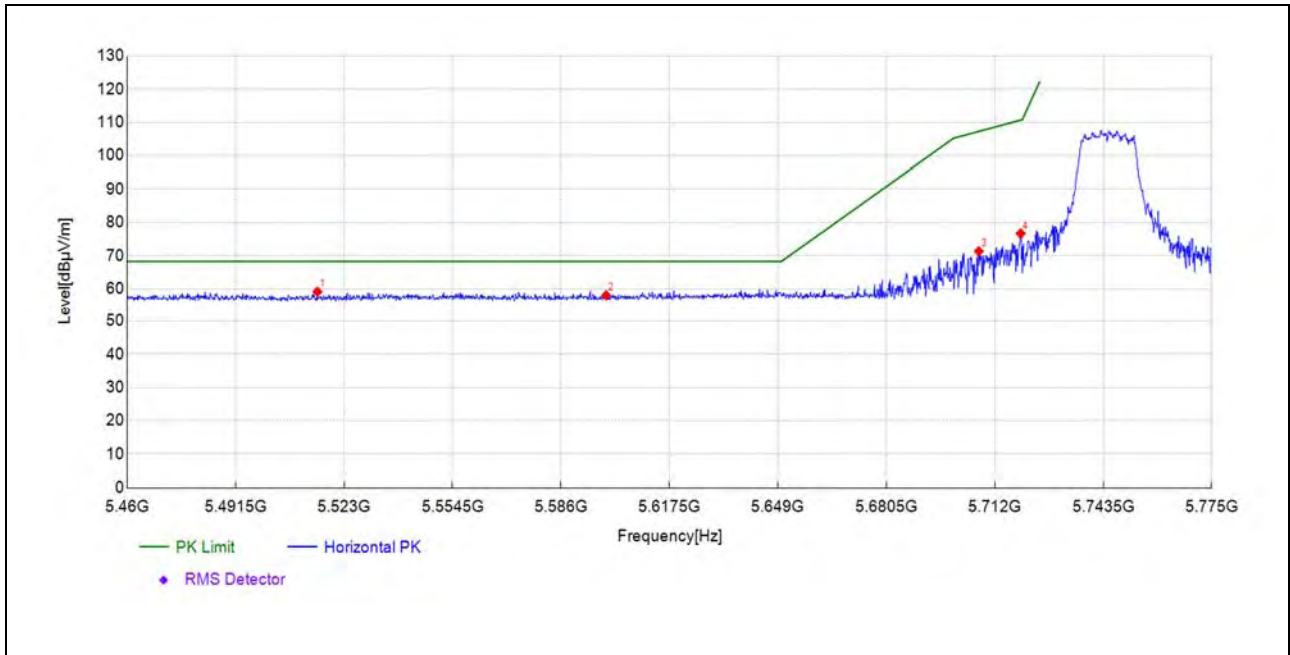
Plot for Channel 140



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5727.45	37.8	59.09	21.290	68.23	9.14	150	15	PK	PASS
5777.20	39.0	60.62	21.670	68.23	7.61	150	132	PK	PASS
5824.61	37.7	59.80	22.070	68.23	8.43	150	316	PK	PASS
5868.70	37.5	59.70	22.190	68.23	8.53	150	316	PK	PASS
5914.55	38.7	60.58	21.840	68.23	7.65	150	0	PK	PASS
5964.30	37.9	59.86	22.010	68.23	8.37	150	259	PK	PASS



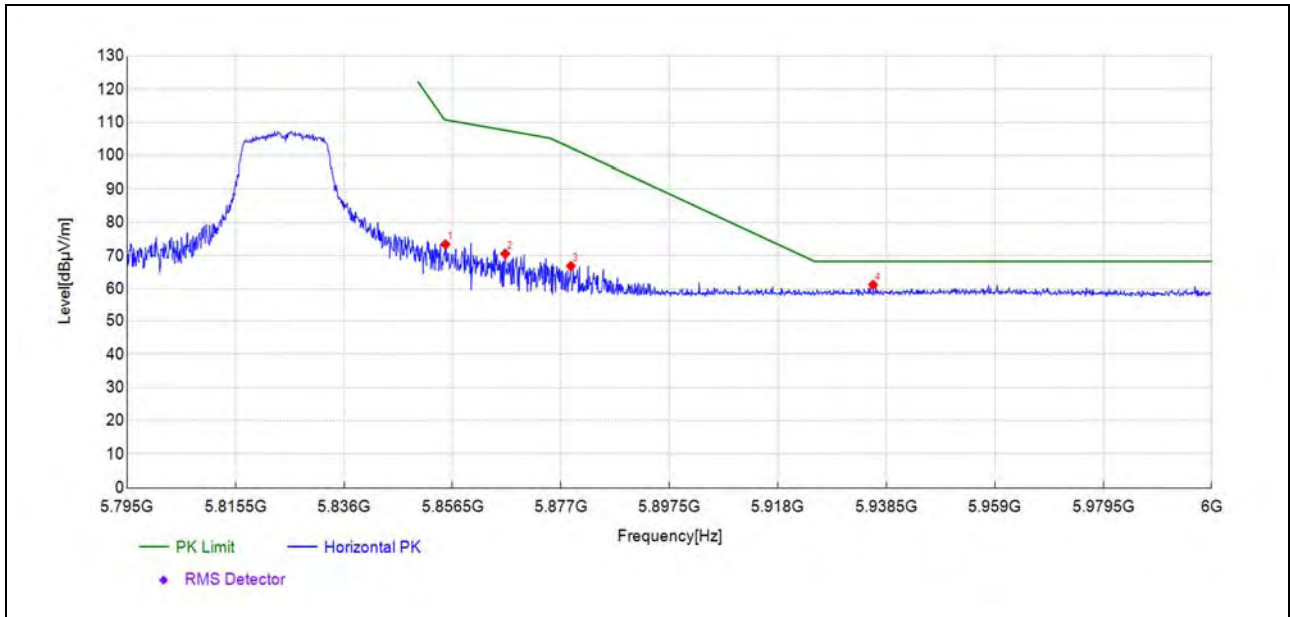
Plot for Channel 149



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5515.31	38.9	59.12	20.230	68.23	9.11	150	301	PK	PASS
5599.14	37.9	58.01	20.130	68.23	10.22	150	138	PK	PASS
5707.40	50.3	71.33	20.990	107.30	35.97	150	60	PK	PASS
5719.53	55.5	76.70	21.170	110.70	34.00	150	60	PK	PASS



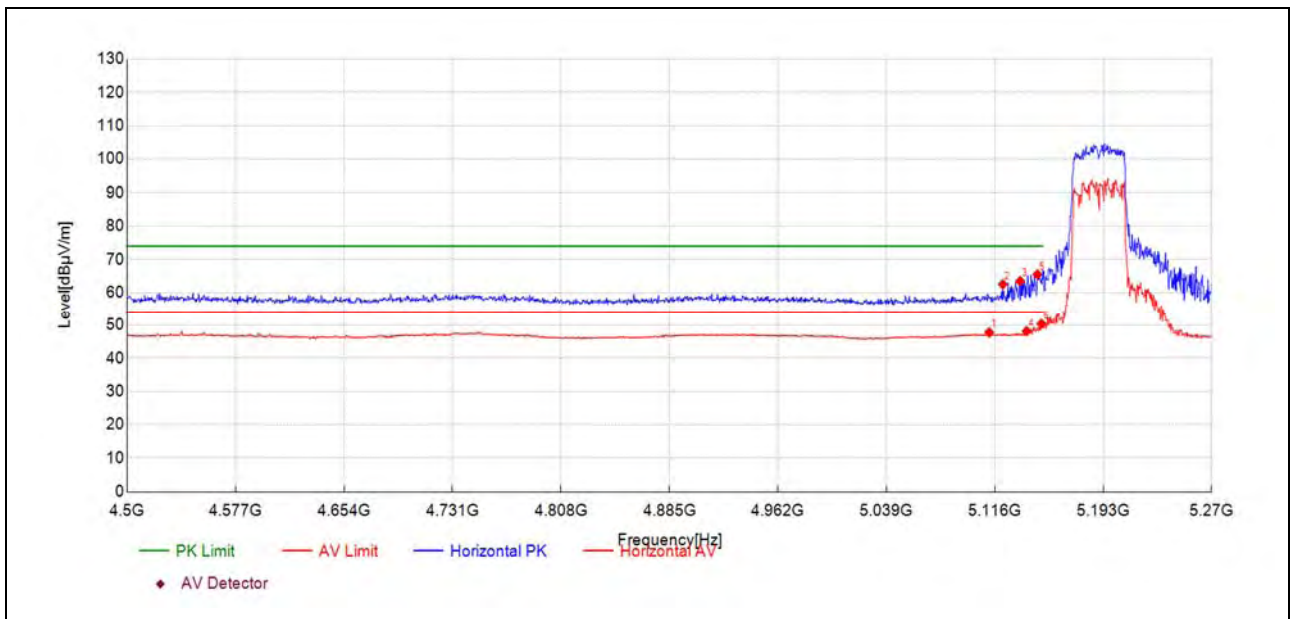
Plot for Channel 165



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5855.20	51.0	73.40	22.390	110.77	37.37	150	3	PK	PASS
5866.48	48.4	70.58	22.220	107.62	37.04	150	65	PK	PASS
5878.89	44.9	66.89	22.040	102.35	35.46	150	359	PK	PASS
5936.01	39.2	61.21	22.010	68.23	7.02	150	360	PK	PASS

**802.11n (HT40) Mode**

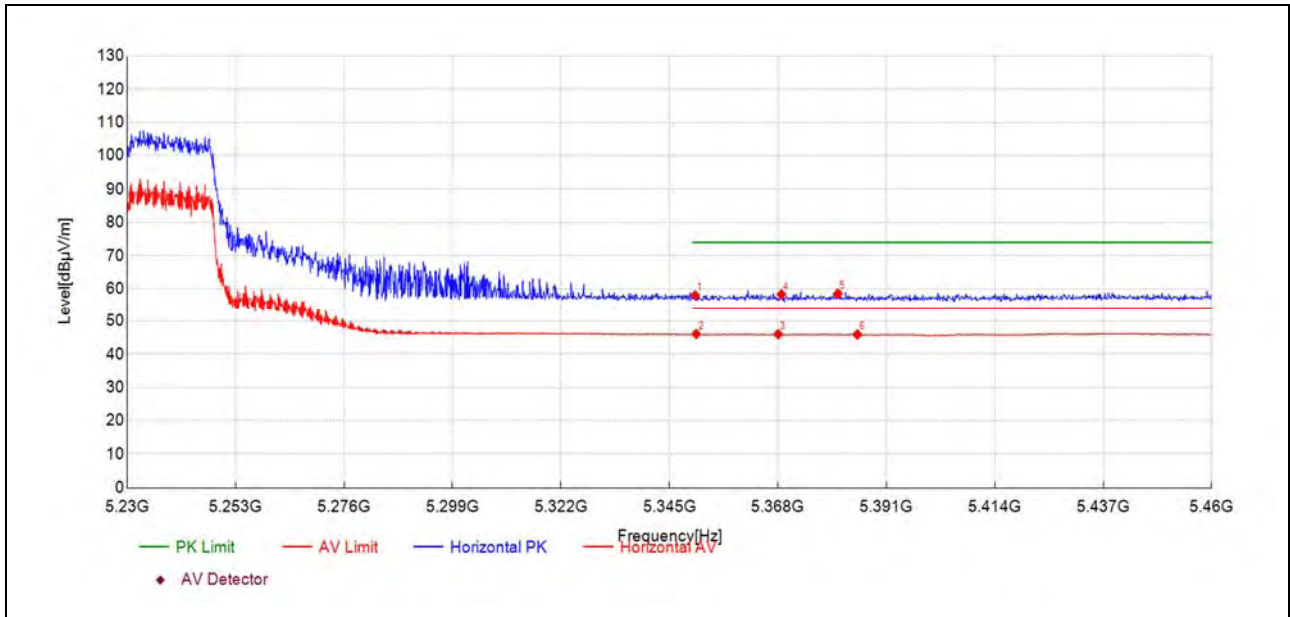
Plot for Channel 38



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5112.07	27.3	47.77	20.480	54.00	6.23	150	18	AV	PASS
5121.70	42.1	62.51	20.440	74.00	11.49	150	54	PK	PASS
5134.03	43.1	63.47	20.380	74.00	10.53	150	0	PK	PASS
5138.65	27.8	48.12	20.360	54.00	5.88	150	78	AV	PASS
5146.35	45.2	65.49	20.340	74.00	8.51	150	69	PK	PASS
5149.05	30.1	50.38	20.320	54.00	3.62	150	62	AV	PASS



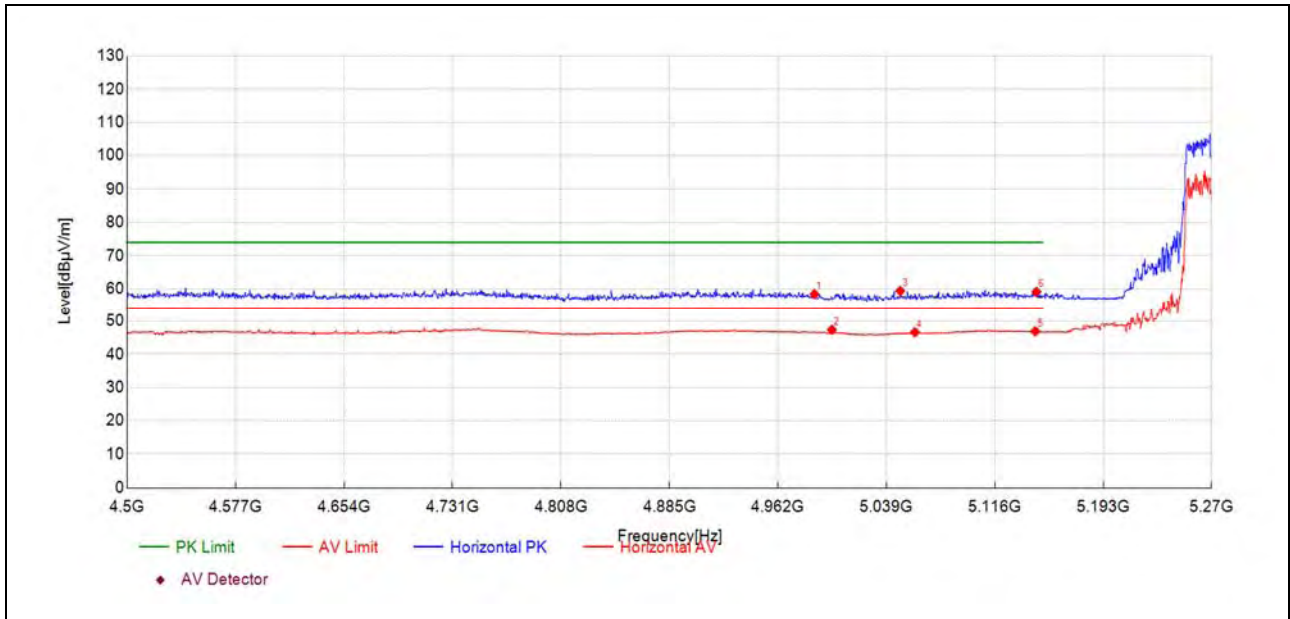
Plot for Channel 46



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.47	38.1	57.99	19.940	74.00	16.01	150	32	PK	PASS
5350.70	26.2	46.11	19.940	54.00	7.89	150	147	AV	PASS
5368.07	26.1	46.02	19.900	54.00	7.98	150	316	AV	PASS
5368.76	38.4	58.32	19.900	74.00	15.68	150	224	PK	PASS
5380.73	38.7	58.52	19.870	74.00	15.48	150	94	PK	PASS
5384.87	26.1	45.95	19.860	54.00	8.05	150	355	AV	PASS

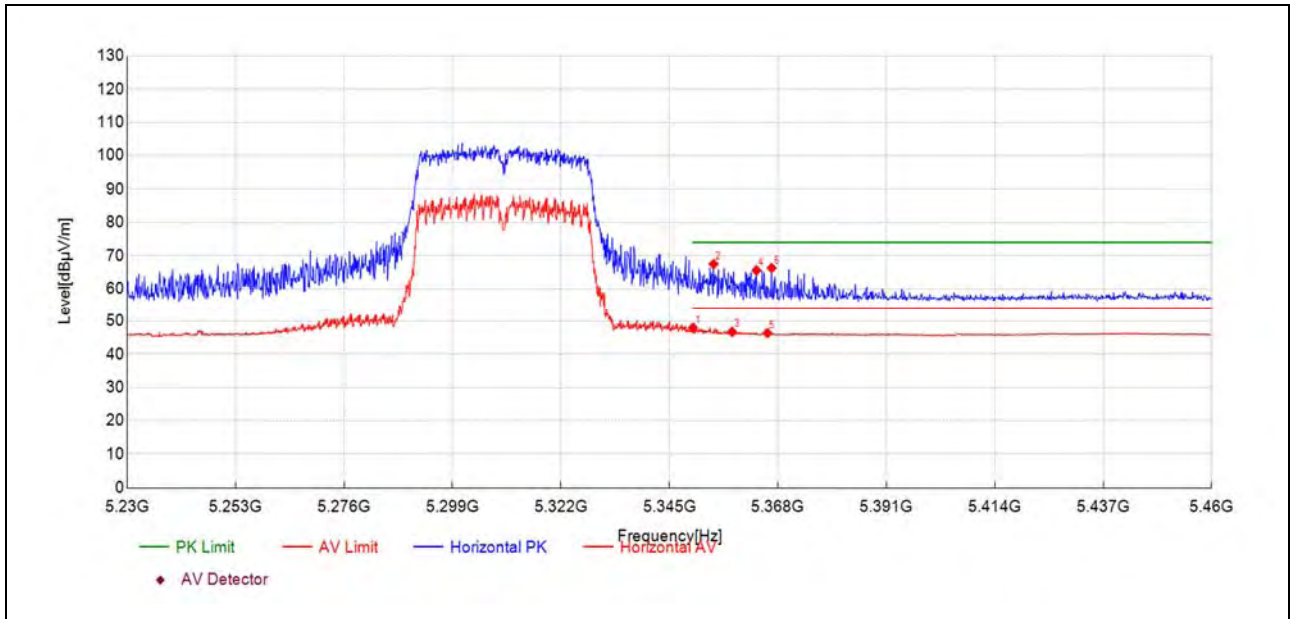


Plot for Channel 54



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
4988.04	38.5	58.39	19.870	74.00	15.61	150	351	PK	PASS
5000.37	27.5	47.36	19.880	54.00	6.64	150	278	AV	PASS
5048.90	39.1	59.33	20.200	74.00	14.67	150	360	PK	PASS
5059.30	26.4	46.62	20.260	54.00	7.38	150	124	AV	PASS
5144.81	26.6	46.89	20.340	54.00	7.11	150	208	AV	PASS
5145.58	38.7	59.07	20.340	74.00	14.93	150	147	PK	PASS

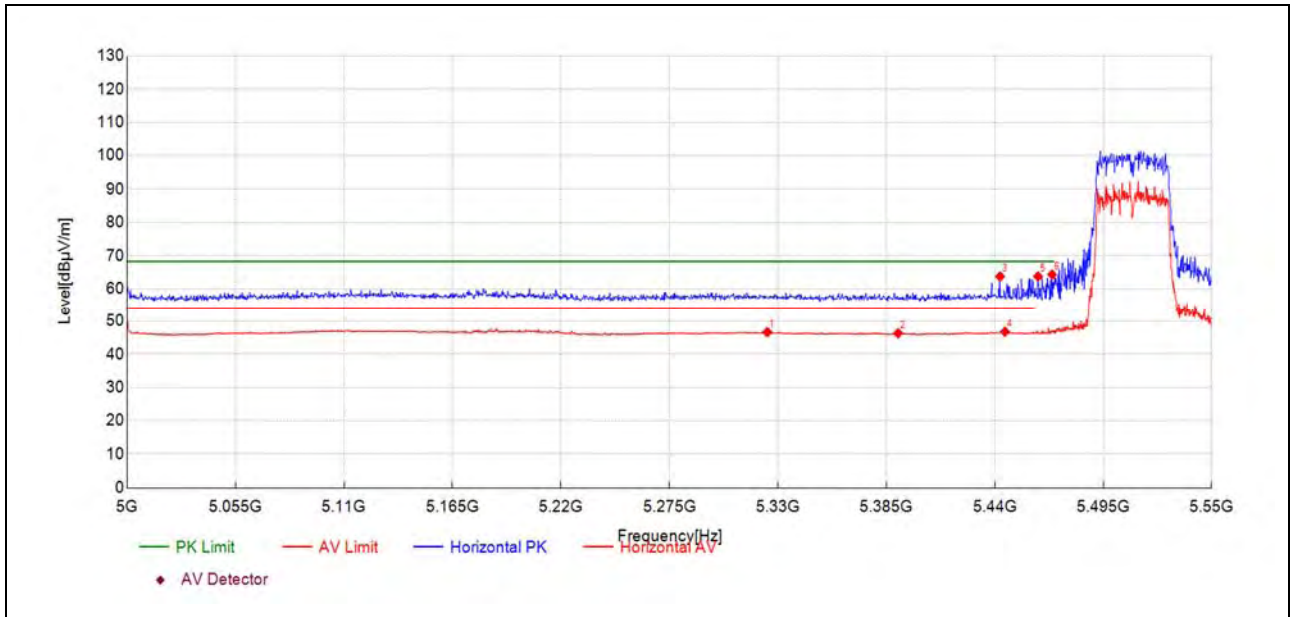
Plot for Channel 62



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5350.01	28.0	47.96	19.940	54.00	6.04	150	69	AV	PASS
5354.38	47.6	67.48	19.930	74.00	6.52	150	69	PK	PASS
5358.29	26.8	46.74	19.920	54.00	7.26	150	54	AV	PASS
5363.47	45.6	65.54	19.910	74.00	8.46	150	54	PK	PASS
5365.77	26.5	46.36	19.910	54.00	7.64	150	62	AV	PASS
5366.69	46.4	66.26	19.910	74.00	7.74	150	62	PK	PASS



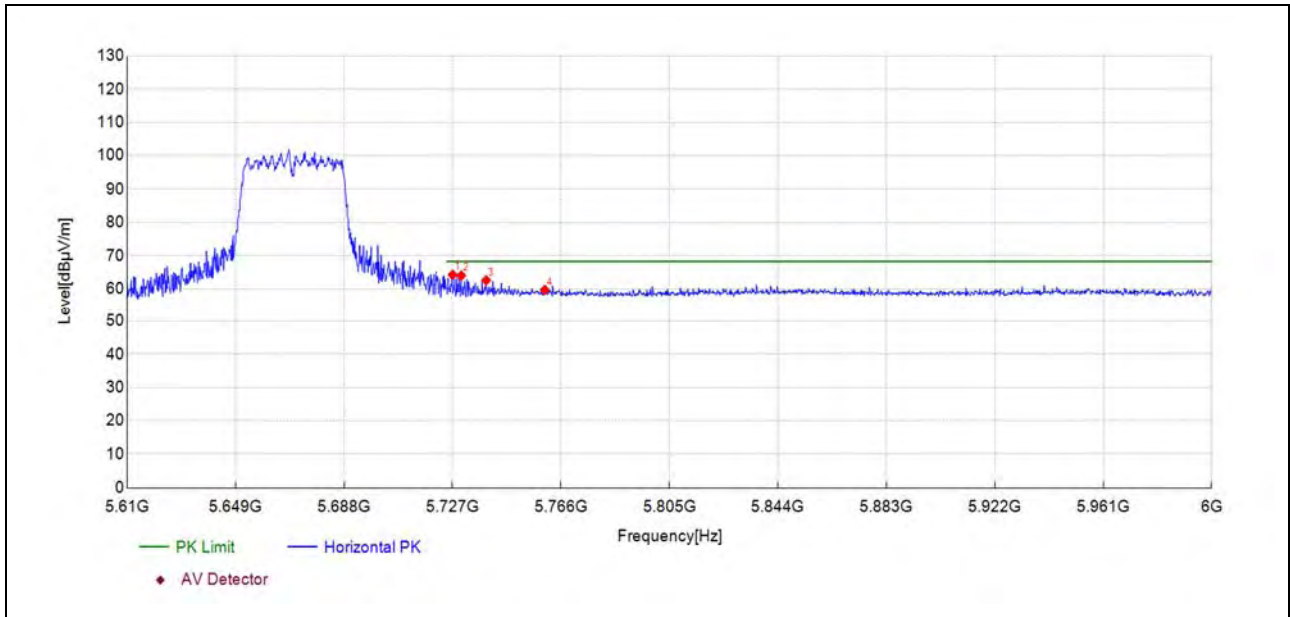
Plot for Channel 102



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5324.66	26.6	46.65	20.100	54.00	7.35	150	217	AV	PASS
5390.97	26.5	46.32	19.850	54.00	7.68	150	79	AV	PASS
5442.70	43.3	63.70	20.370	68.23	4.53	150	57	PK	PASS
5445.17	26.4	46.77	20.410	54.00	7.23	150	224	AV	PASS
5461.96	43.3	63.72	20.410	68.23	4.51	150	64	PK	PASS
5469.11	43.9	64.27	20.380	68.23	3.96	150	50	PK	PASS

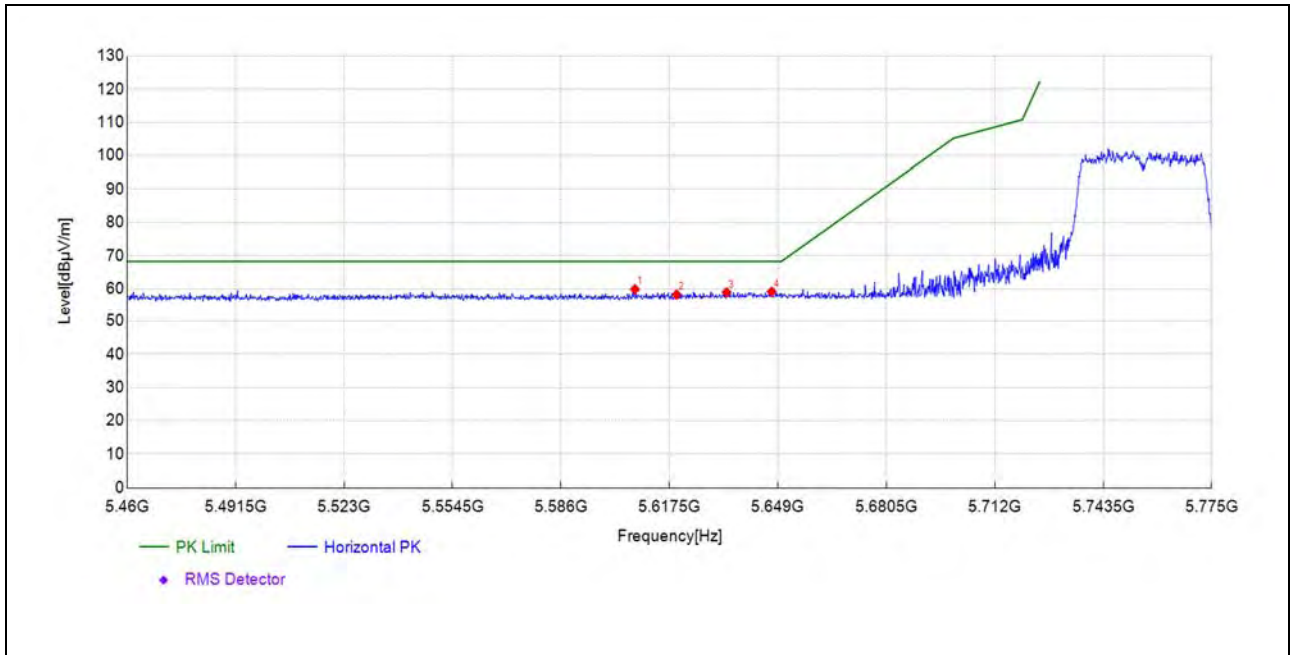


Plot for Channel 134



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5727.06	42.9	64.22	21.290	68.23	4.01	150	66	PK	PASS
5730.18	42.6	63.95	21.340	68.23	4.28	150	360	PK	PASS
5739.15	41.1	62.55	21.480	68.23	5.68	150	320	PK	PASS
5760.23	38.0	59.66	21.650	68.23	8.57	150	114	PK	PASS

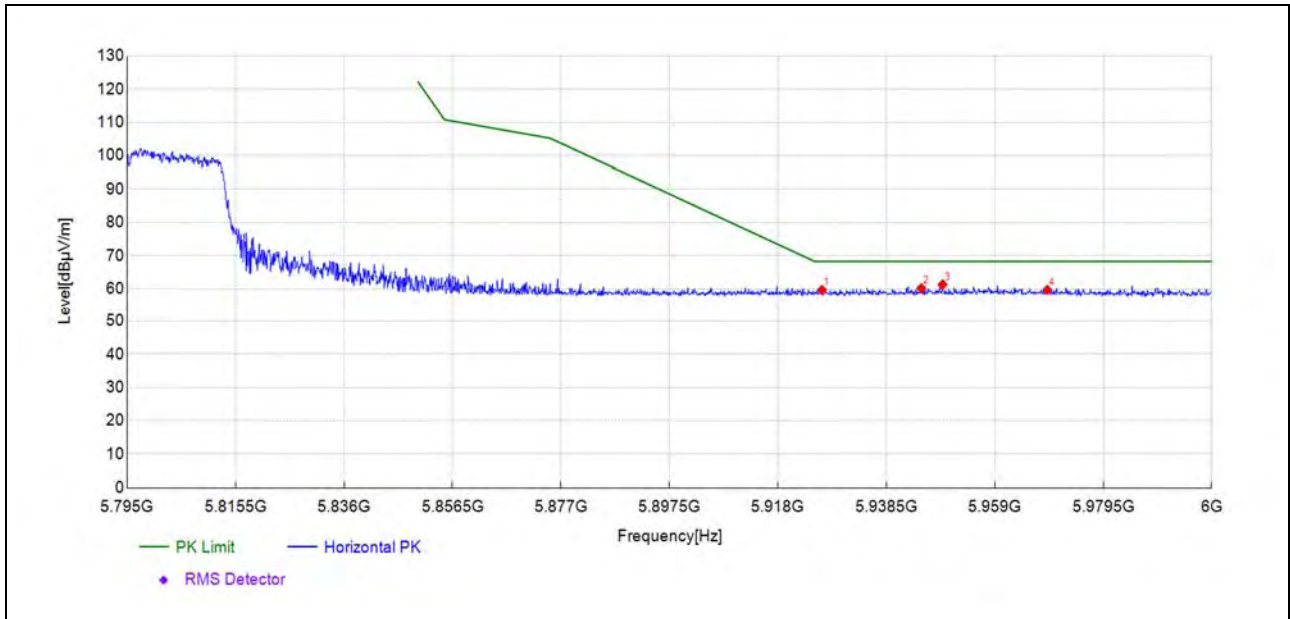
Plot for Channel 151



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
5607.49	39.6	59.87	20.260	68.23	8.36	150	2	PK	PASS
5619.63	37.8	58.24	20.470	68.23	9.99	150	251	PK	PASS
5634.12	38.2	58.94	20.730	68.23	9.29	150	216	PK	PASS
5647.20	38.2	59.12	20.960	68.23	9.11	150	89	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
5926.37	37.7	59.63	21.930	68.23	8.60	150	109	PK	PASS
5945.14	38.1	60.13	22.080	68.23	8.10	150	151	PK	PASS
5949.13	39.2	61.28	22.110	68.23	6.95	150	200	PK	PASS
5968.93	37.7	59.65	21.970	68.23	8.58	150	229	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.

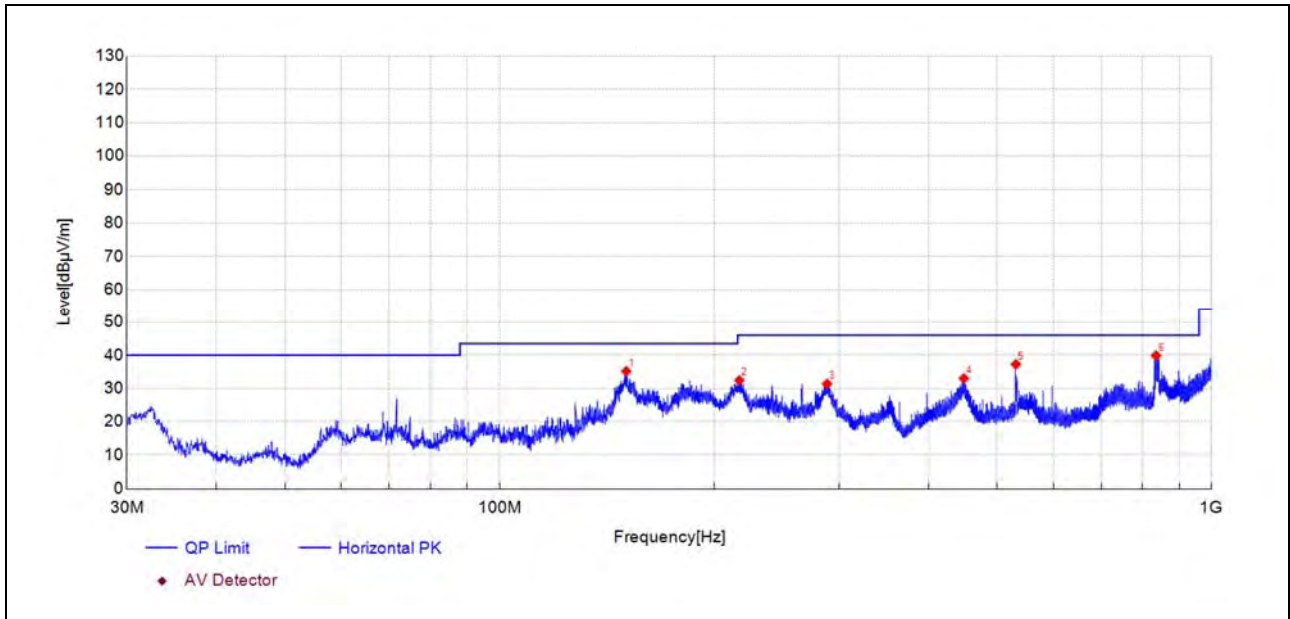
Note3: For the frequency, which started from 18GHz to 40GHz harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

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.



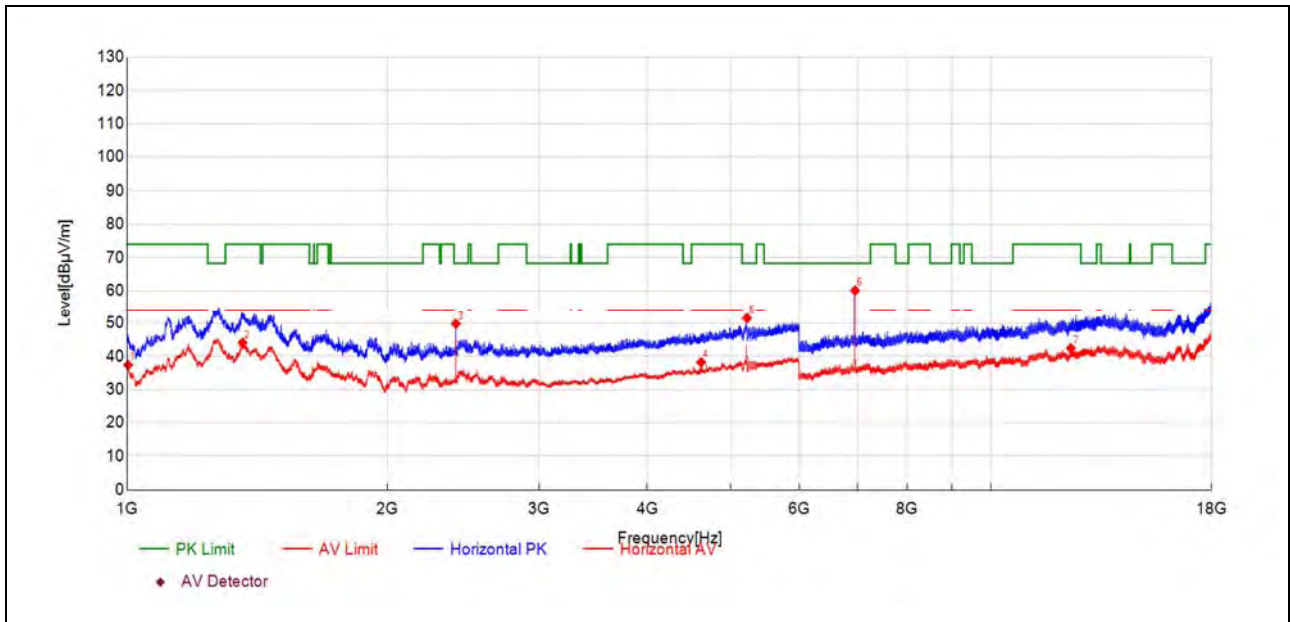
802.11a Mode

Plot for Channel 44



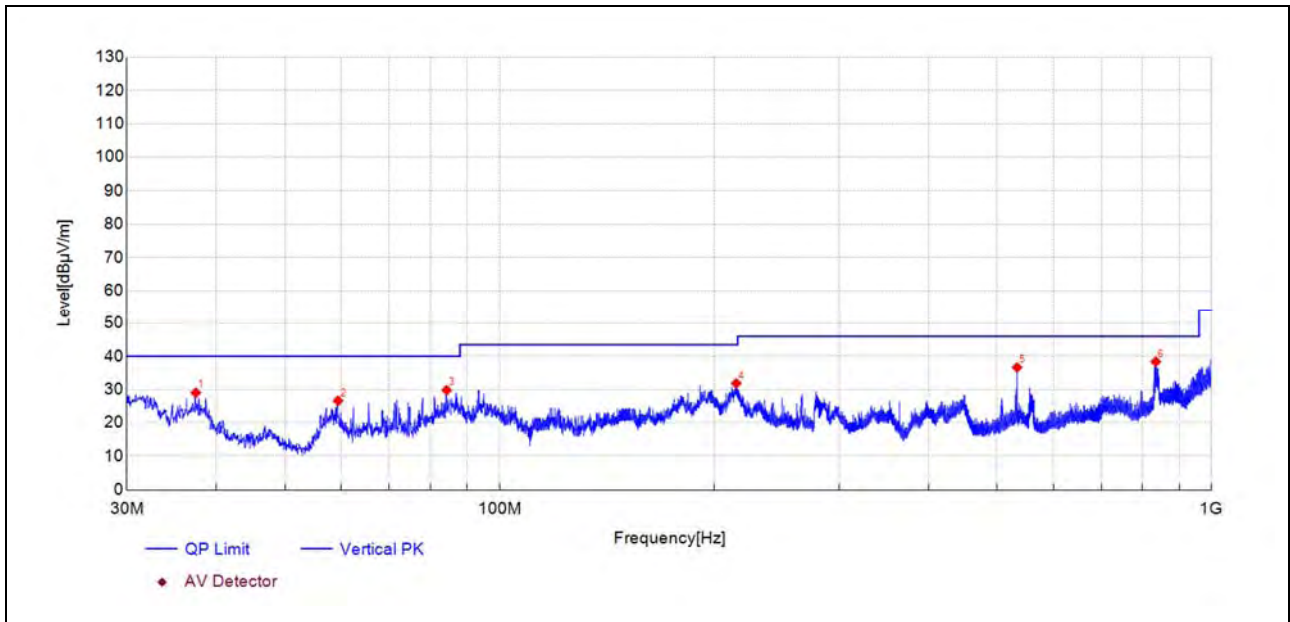
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
150.67	68.5	35.20	-33.310	43.50	8.30	150	249	PK	PASS
217.22	61.8	32.41	-29.410	46.00	13.59	150	299	PK	PASS
288.37	58.7	31.39	-27.310	46.00	14.61	150	189	PK	PASS
448.77	56.2	33.02	-23.180	46.00	12.98	150	219	PK	PASS
531.03	58.7	37.26	-21.400	46.00	8.74	150	299	PK	PASS
835.38	55.8	39.92	-15.890	46.00	6.08	150	258	PK	PASS



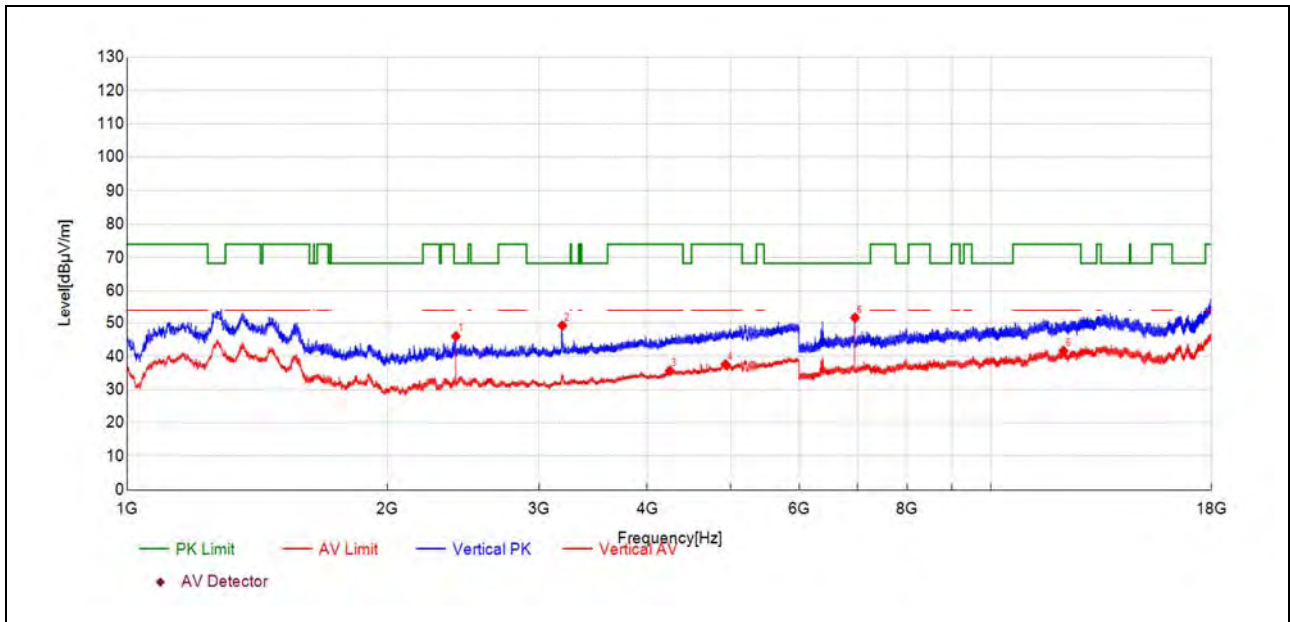
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1003.00	43.1	37.37	-5.760	54.00	16.63	150	237	AV	PASS
1360.54	49.2	44.06	-5.170	54.00	9.94	150	225	AV	PASS
2402.14	49.9	49.80	-0.080	68.23	18.43	150	6	PK	PASS
4617.36	30.3	38.19	7.940	54.00	15.81	150	194	AV	PASS
5217.42	41.4	51.50	10.150	68.23	16.73	150	69	PK	PASS
6959.54	64.6	60.04	-4.570	68.23	8.19	150	308	PK	PASS
12368.27	39.4	42.40	3.000	54.00	11.60	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
37.47	58.9	29.04	-29.900	40.00	10.96	150	264	PK	PASS
59.34	57.4	26.64	-30.720	40.00	13.36	150	52	PK	PASS
84.32	64.0	29.81	-34.200	40.00	10.19	150	102	PK	PASS
215.04	61.4	31.85	-29.570	43.50	11.65	150	214	PK	PASS
533.16	58.0	36.64	-21.380	46.00	9.36	150	343	PK	PASS
834.75	54.3	38.38	-15.900	46.00	7.62	150	222	PK	PASS

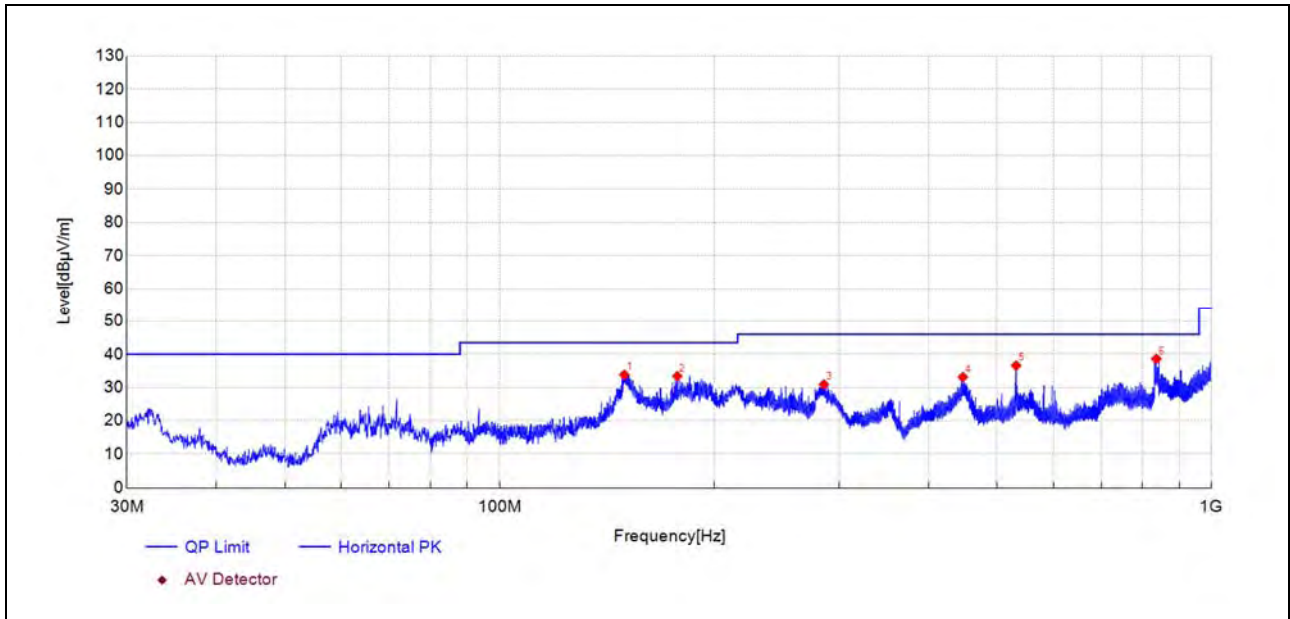


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2402.14	46.1	46.01	-0.080	68.23	22.22	150	248	PK	PASS
3189.72	46.0	49.22	3.250	68.23	19.01	150	206	PK	PASS
4245.82	28.7	35.67	6.940	54.00	18.33	150	163	AV	PASS
4926.39	28.5	37.57	9.120	54.00	16.43	150	38	AV	PASS
6959.54	56.2	51.58	-4.570	68.23	16.65	150	307	PK	PASS
12125.76	38.7	41.65	2.940	54.00	12.35	150	337	AV	PASS

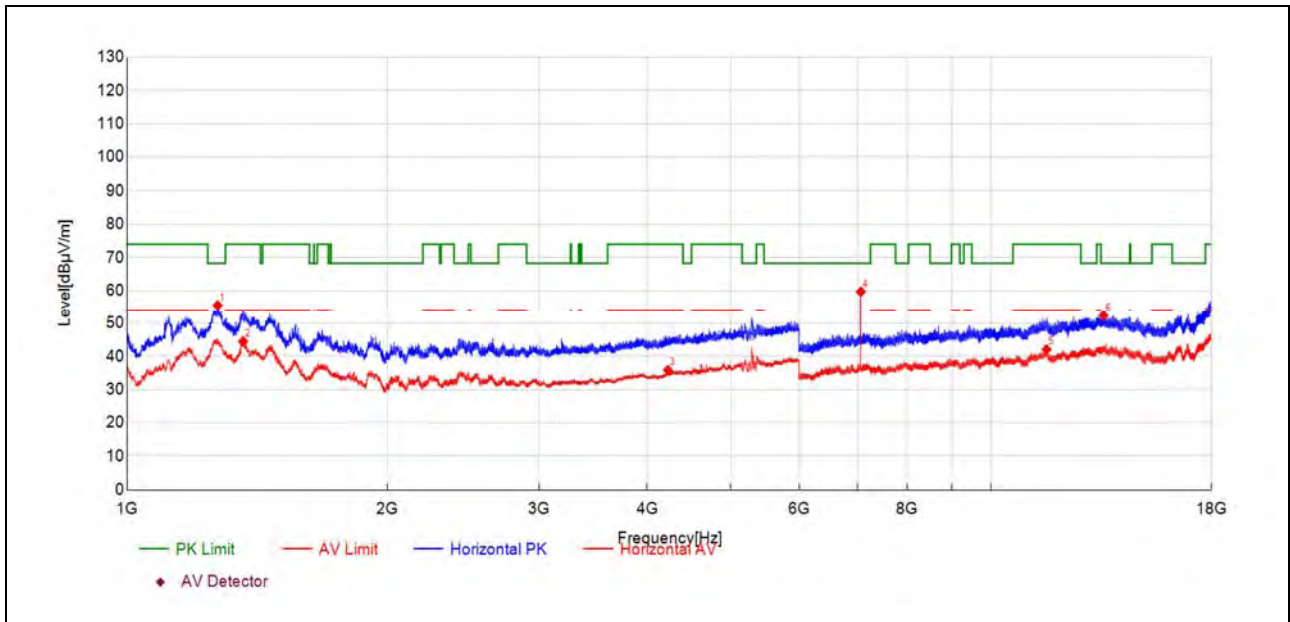


Plot for Channel 60



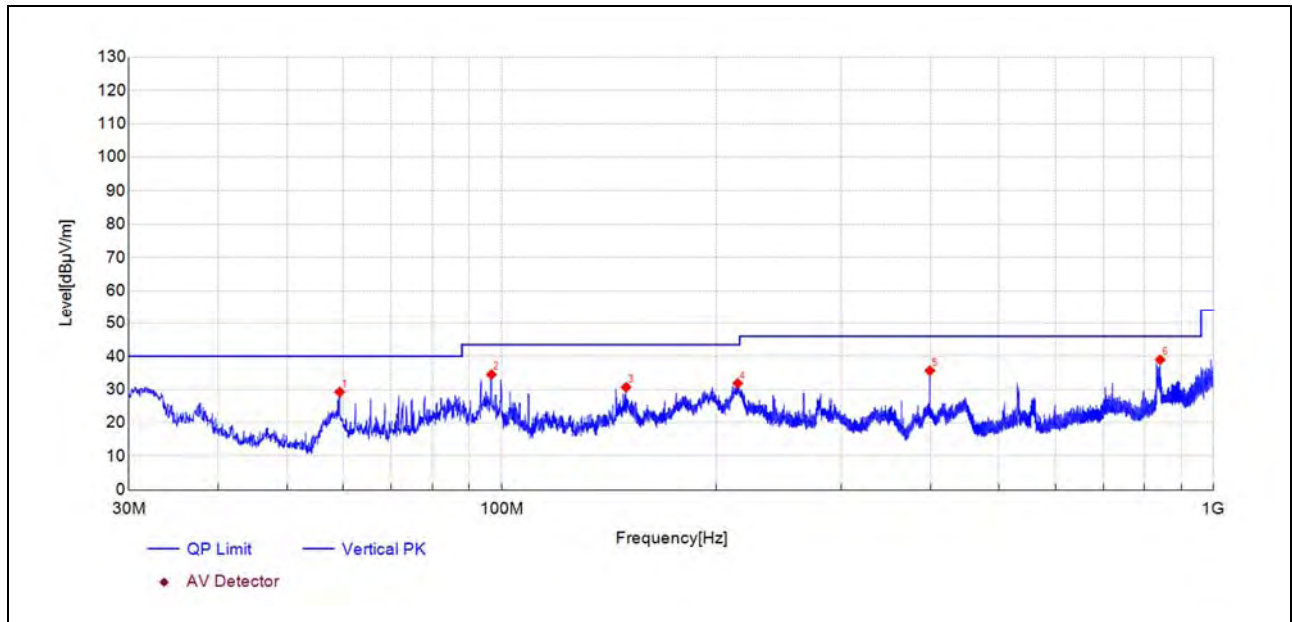
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
149.75	67.2	33.82	-33.390	43.50	9.68	150	228	PK	PASS
177.69	65.2	33.38	-31.770	43.50	10.12	150	169	PK	PASS
285.41	58.3	30.88	-27.380	46.00	15.12	150	189	PK	PASS
447.46	56.3	33.12	-23.210	46.00	12.88	150	240	PK	PASS
531.52	58.0	36.59	-21.400	46.00	9.41	150	208	PK	PASS
836.06	54.5	38.60	-15.880	46.00	7.40	150	258	PK	PASS



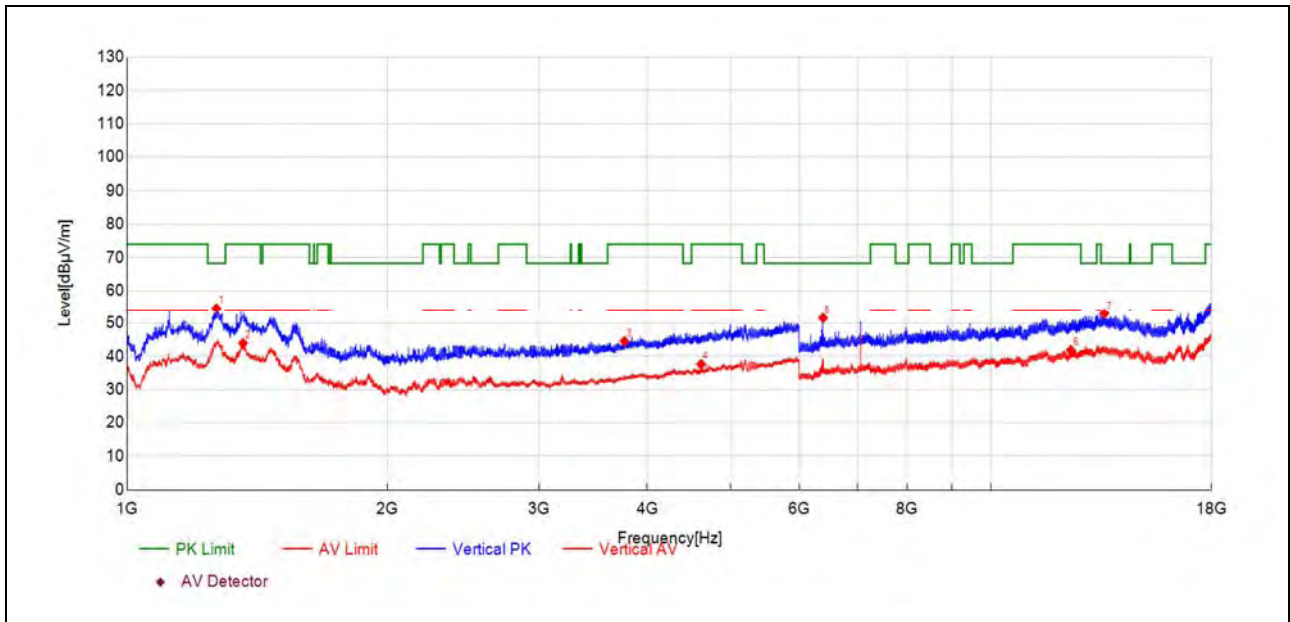
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1273.03	60.7	55.54	-5.140	68.23	12.69	150	112	PK	PASS
1362.54	49.6	44.50	-5.140	54.00	9.50	150	216	AV	PASS
4226.82	29.2	35.87	6.710	54.00	18.13	150	164	AV	PASS
7066.54	63.8	59.68	-4.150	68.23	8.55	150	314	PK	PASS
11593.73	38.9	42.07	3.140	54.00	11.93	150	265	AV	PASS
13491.31	47.4	52.30	4.860	68.23	15.93	150	251	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
59.30	60.0	29.25	-30.710	40.00	10.75	150	78	PK	PASS
96.84	64.9	34.50	-30.410	43.50	9.00	150	139	PK	PASS
149.66	64.1	30.71	-33.390	43.50	12.79	150	198	PK	PASS
214.65	61.4	31.86	-29.580	43.50	11.64	150	198	PK	PASS
399.49	59.8	35.67	-24.160	46.00	10.33	150	310	PK	PASS
841.25	54.7	38.96	-15.760	46.00	7.04	150	220	PK	PASS

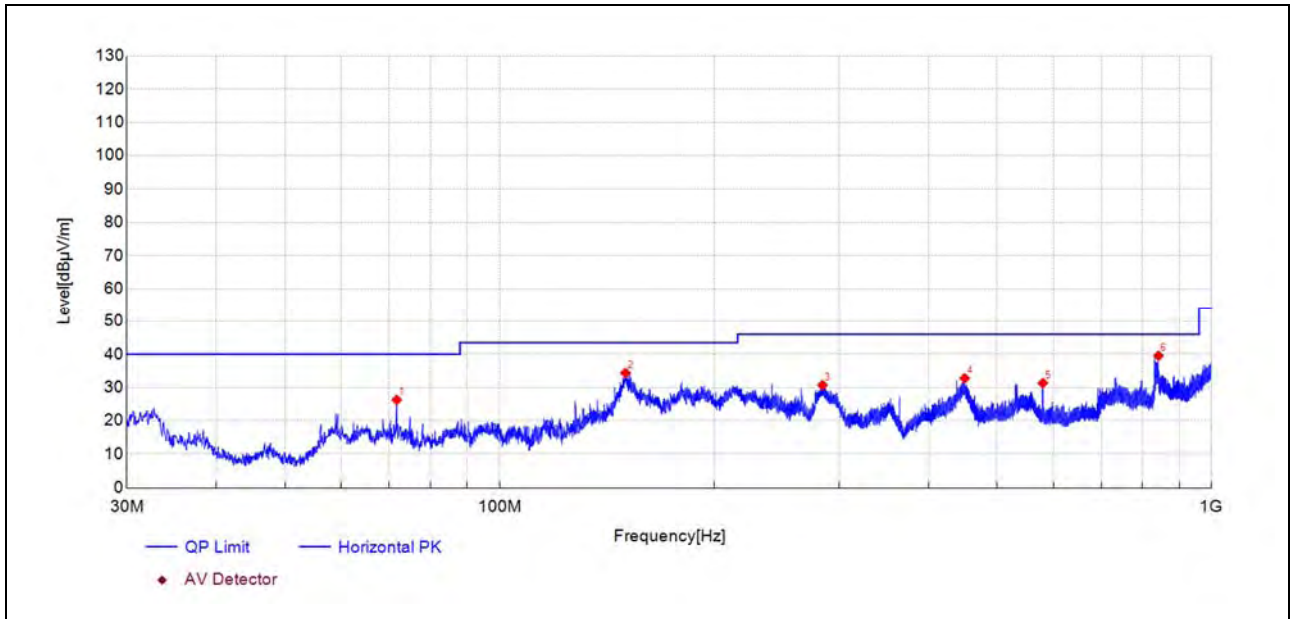


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1269.03	59.8	54.60	-5.160	68.23	13.63	150	155	PK	PASS
1362.04	49.1	43.92	-5.150	54.00	10.08	150	208	AV	PASS
3764.28	39.2	44.52	5.290	74.00	29.48	150	239	PK	PASS
4617.36	29.7	37.61	7.940	54.00	16.39	150	30	AV	PASS
6389.02	56.9	51.57	-5.360	68.23	16.66	150	147	PK	PASS
12368.77	38.9	41.86	3.000	54.00	12.14	150	344	AV	PASS
13521.31	48.1	52.95	4.900	68.23	15.28	150	37	PK	PASS

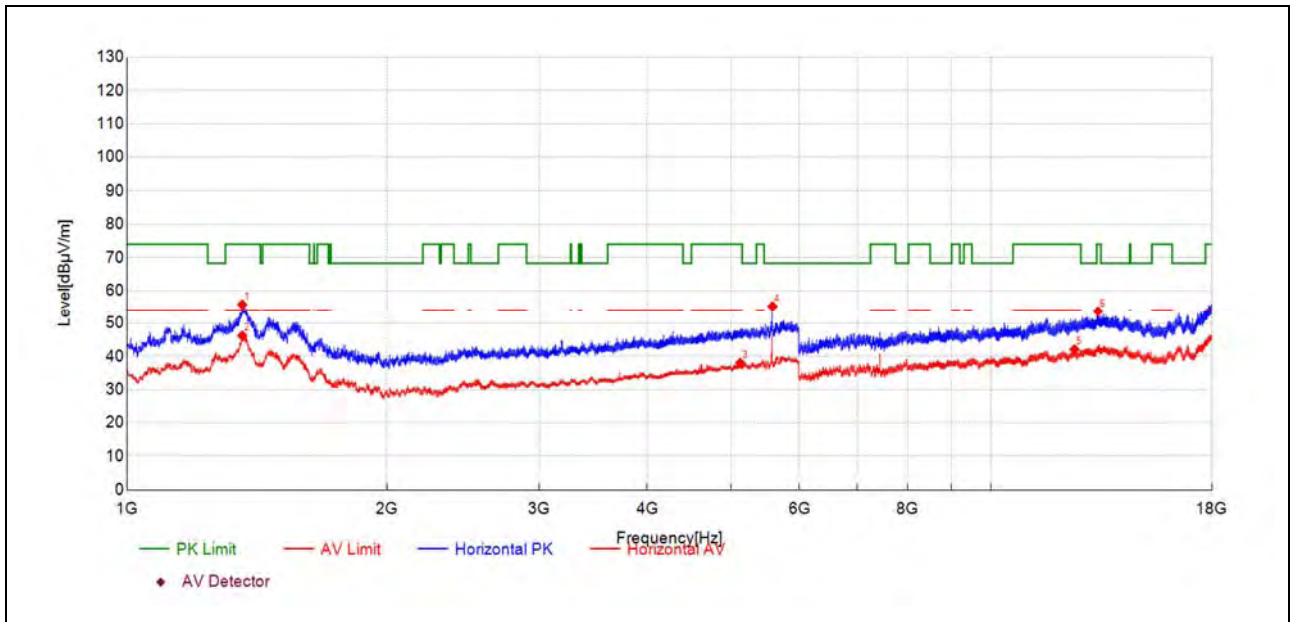


Plot for Channel 116



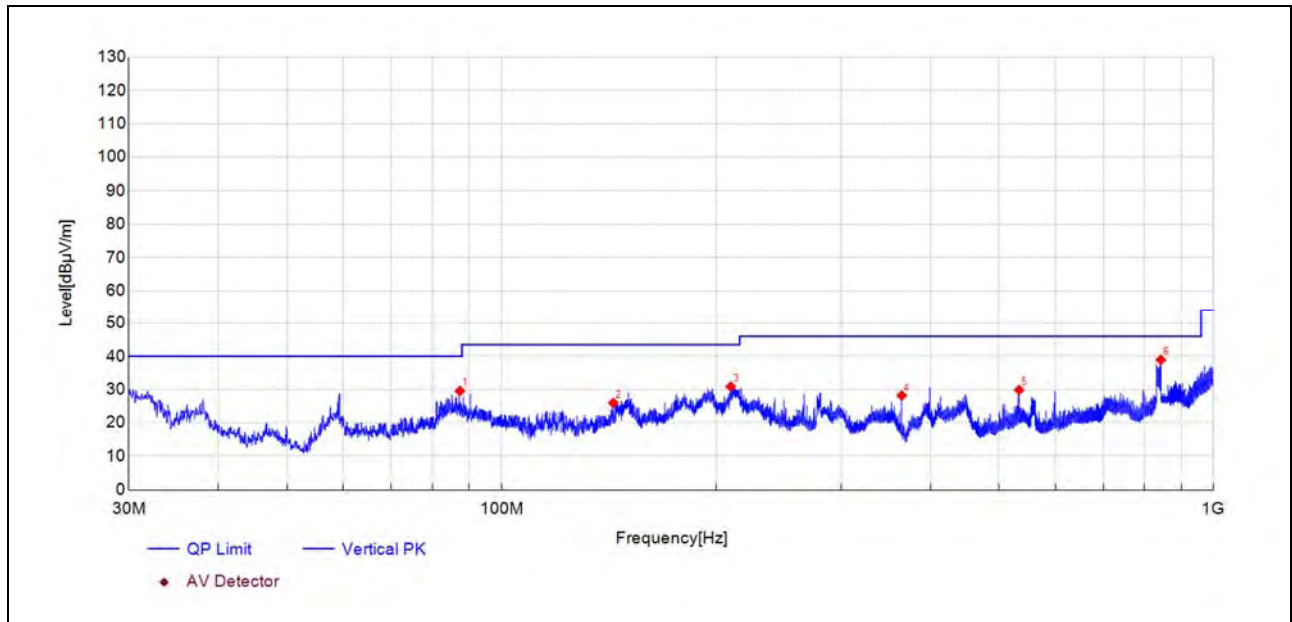
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
71.76	61.1	26.26	-34.810	40.00	13.74	150	157	PK	PASS
150.29	67.7	34.36	-33.360	43.50	9.14	150	248	PK	PASS
284.20	58.1	30.71	-27.420	46.00	15.29	150	188	PK	PASS
449.98	55.9	32.77	-23.150	46.00	13.23	150	238	PK	PASS
579.39	51.7	31.31	-20.430	46.00	14.69	150	268	PK	PASS
842.08	55.3	39.52	-15.730	46.00	6.48	150	268	PK	PASS



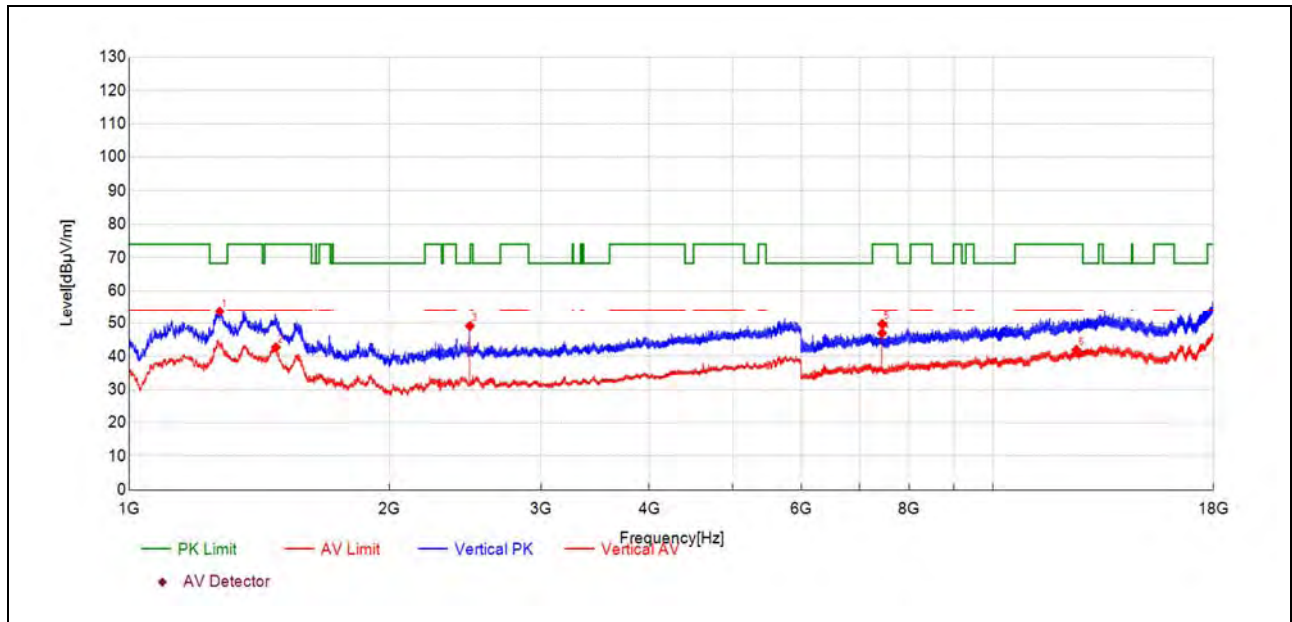
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1359.54	61.0	55.77	-5.250	74.00	18.23	150	228	PK	NA
1359.54	51.5	46.24	-5.250	54.00	7.76	150	228	AV	PASS
5124.91	28.2	38.01	9.840	54.00	15.99	150	301	AV	NA
5584.46	44.2	55.22	10.990	68.23	13.01	150	238	PK	PASS
12486.27	38.5	42.08	3.540	54.00	11.92	150	236	AV	PASS
13297.80	48.1	53.67	5.560	74.00	20.33	150	6	PK	NA



(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
87.43	62.5	29.55	-32.980	40.00	10.45	150	122	PK	PASS
143.59	59.5	25.96	-33.550	43.50	17.54	150	222	PK	PASS
209.94	60.7	30.87	-29.820	43.50	12.63	150	202	PK	PASS
364.81	53.4	28.21	-25.220	46.00	17.79	150	360	PK	PASS
533.16	51.3	29.87	-21.380	46.00	16.13	150	358	PK	PASS
843.14	54.6	38.94	-15.690	46.00	7.06	150	222	PK	PASS

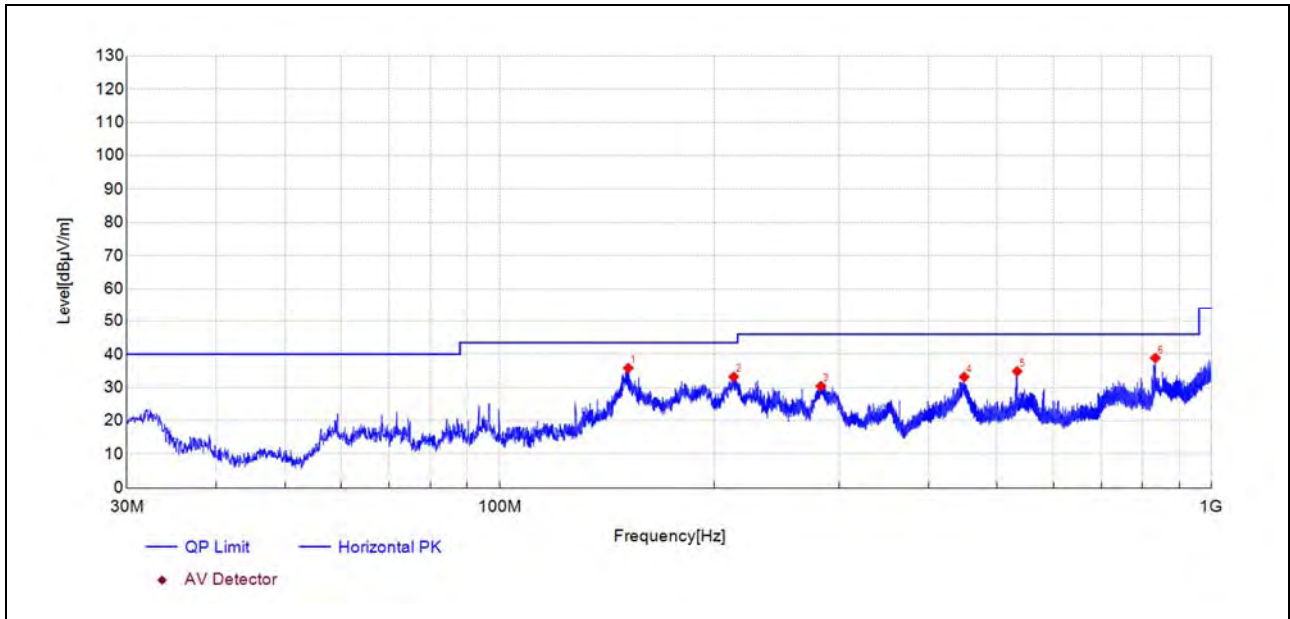


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1273.53	59.0	53.66	-5.340	68.23	14.57	150	164	PK	PASS
1479.05	46.8	42.68	-4.090	54.00	11.32	150	238	AV	PASS
2480.15	48.5	49.13	0.680	68.23	19.10	150	291	PK	PASS
7439.56	51.4	46.94	-4.480	54.00	7.06	150	147	AV	NA
7440.06	54.2	49.67	-4.490	74.00	24.33	150	284	PK	NA
12480.27	38.4	41.91	3.510	54.00	12.09	150	23	AV	PASS

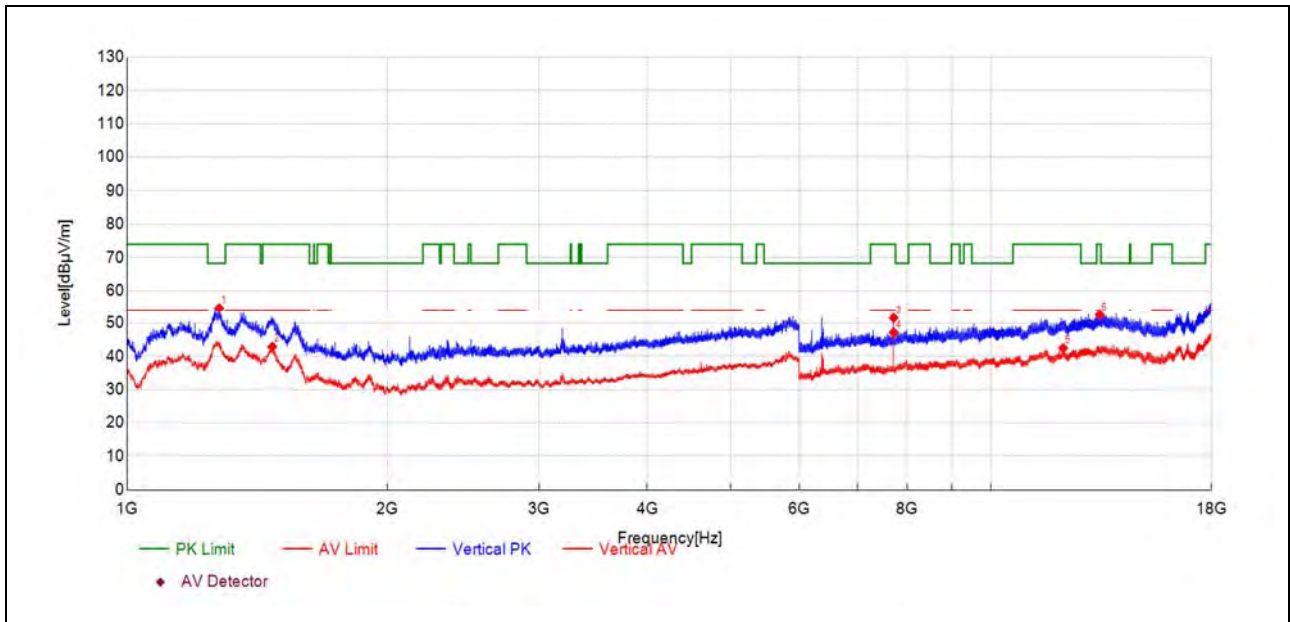


Plot for Channel 157



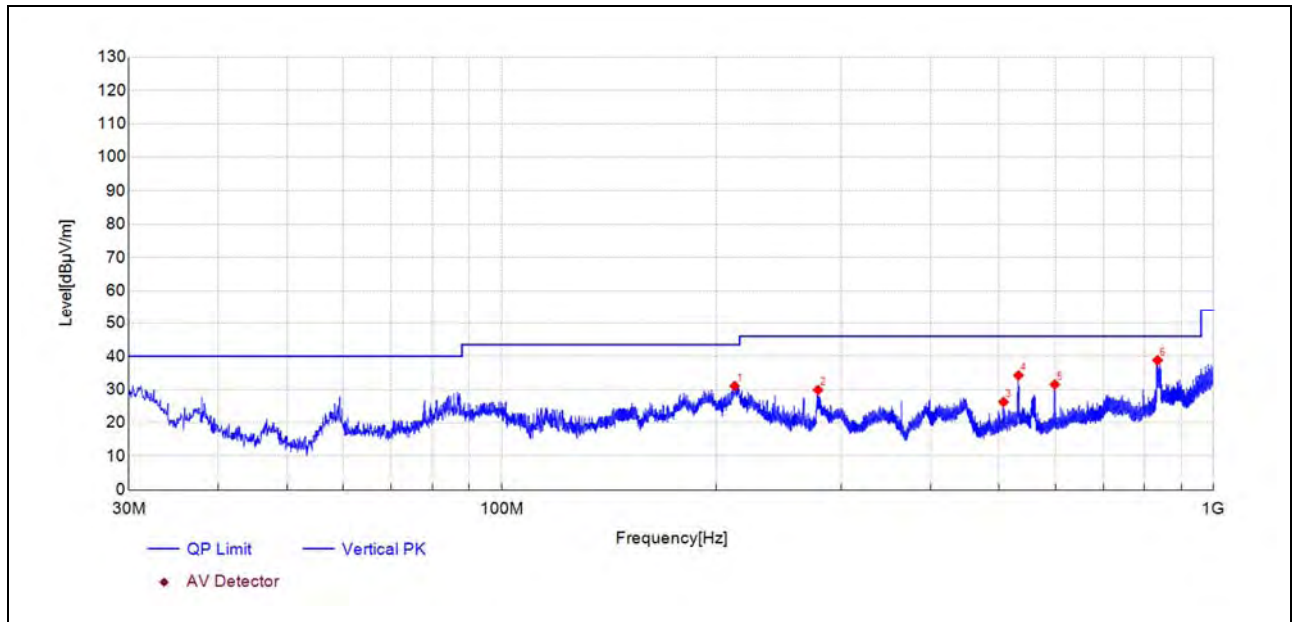
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
151.64	69.1	35.83	-33.270	43.50	7.67	150	222	PK	PASS
213.24	62.9	33.19	-29.660	43.50	10.31	150	152	PK	PASS
282.79	57.9	30.42	-27.480	46.00	15.58	150	152	PK	PASS
449.40	56.3	33.16	-23.160	46.00	12.84	150	242	PK	PASS
533.26	56.2	34.84	-21.380	46.00	11.16	150	222	PK	PASS
833.49	54.8	38.86	-15.930	46.00	7.14	150	360	PK	PASS



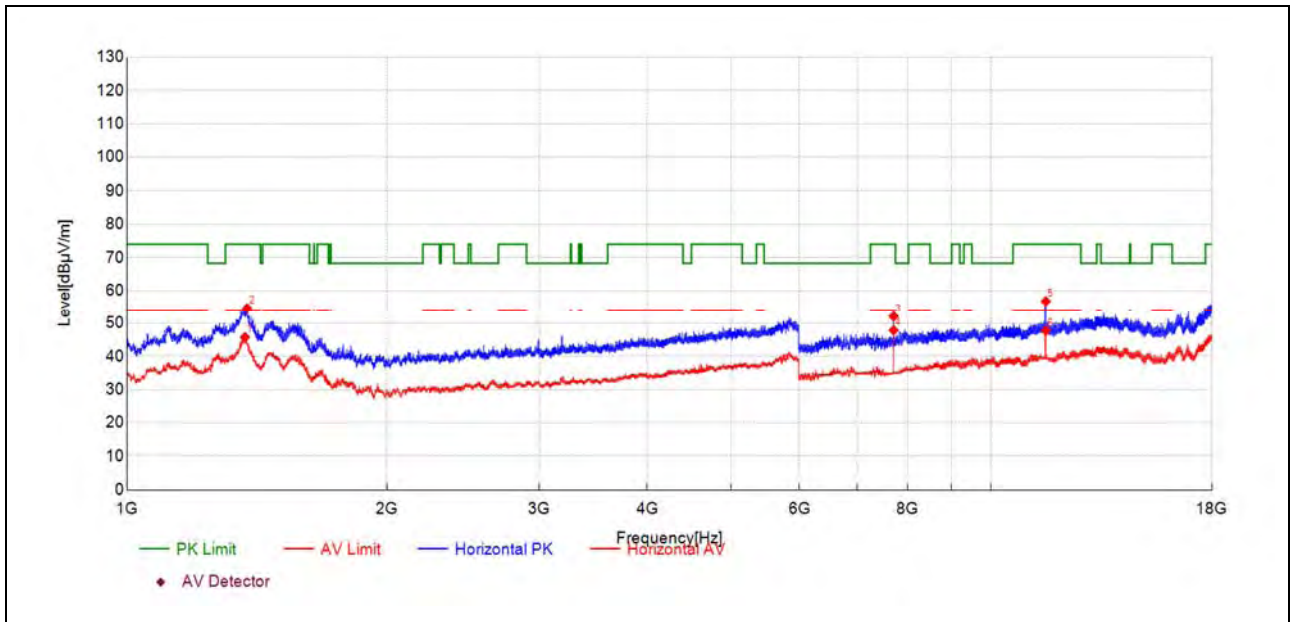
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1278.53	59.8	54.67	-5.170	68.23	13.56	150	155	PK	PASS
1472.55	46.8	42.83	-3.960	54.00	11.17	150	229	AV	PASS
7713.07	55.7	51.59	-4.080	74.00	22.41	150	100	PK	PASS
7713.07	51.3	47.17	-4.080	54.00	6.83	150	100	AV	NA
12115.25	39.5	42.42	2.930	54.00	11.58	150	254	AV	NA
13357.81	47.5	52.51	5.000	74.00	21.49	150	54	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
212.51	60.8	31.07	-29.690	43.50	12.43	150	198	PK	PASS
278.24	57.5	29.86	-27.640	46.00	16.14	150	238	PK	PASS
506.88	47.8	26.24	-21.530	46.00	19.76	150	339	PK	PASS
531.90	55.7	34.25	-21.400	46.00	11.75	150	339	PK	PASS
598.40	51.3	31.51	-19.820	46.00	14.49	150	318	PK	PASS
834.36	54.7	38.80	-15.910	46.00	7.20	150	207	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
1369.04	50.9	45.75	-5.110	54.00	8.25	150	229	AV	PASS
1377.54	59.6	54.59	-5.000	74.00	19.41	150	229	PK	PASS
7713.07	56.1	52.04	-4.080	74.00	21.96	150	145	PK	PASS
7713.07	51.9	47.85	-4.080	54.00	6.15	150	129	AV	PASS
11568.73	53.9	56.79	2.930	74.00	17.21	150	84	PK	PASS
11569.73	44.8	47.74	2.940	54.00	6.26	150	84	AV	PASS

END OF REPORT