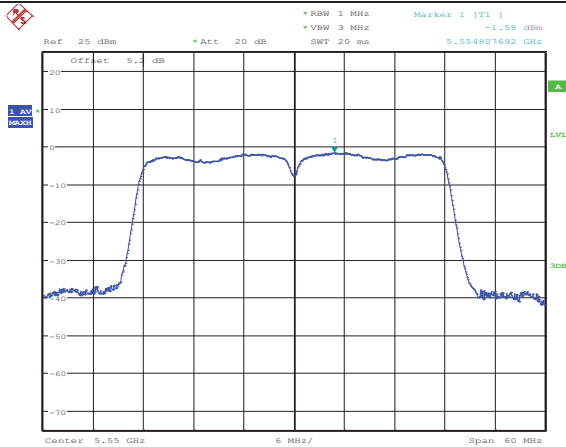
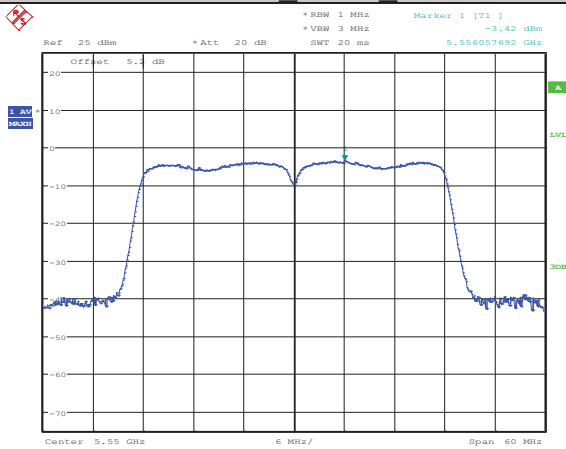




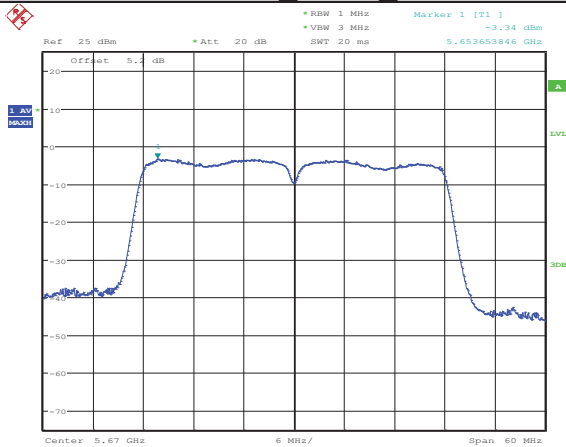
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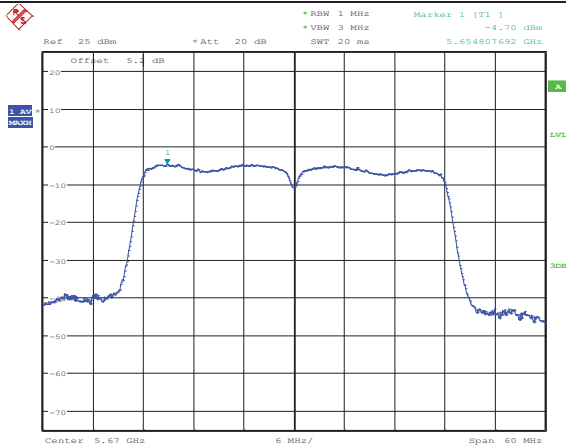
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11N40 ANT1 5670



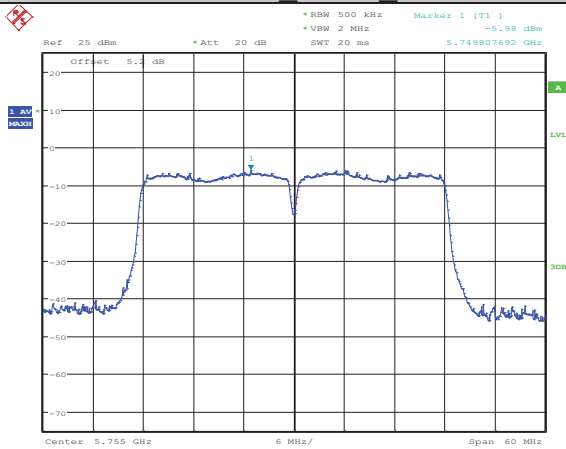
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11N40 ANT2 5670



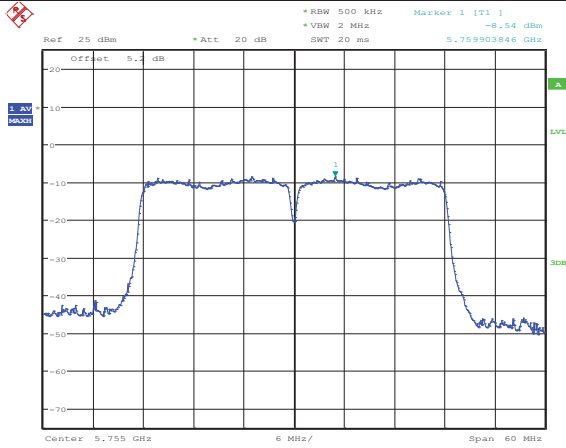
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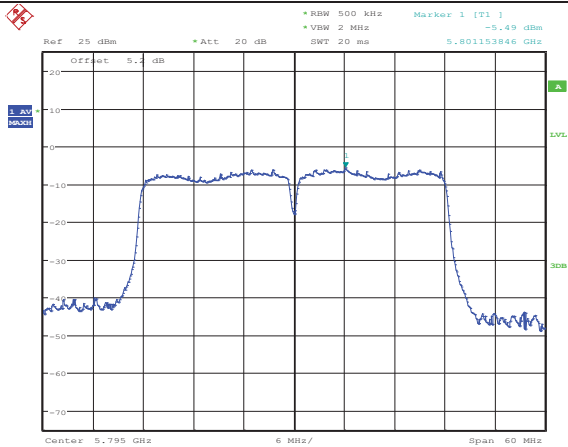
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11N40 ANT2 5755



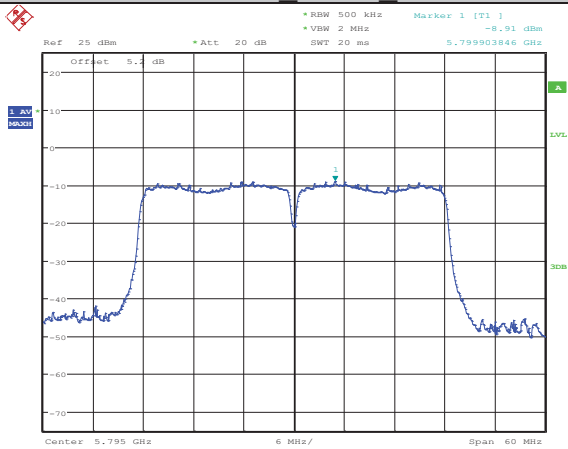
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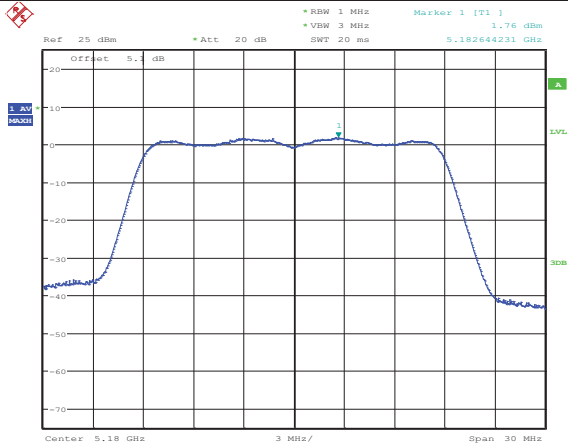
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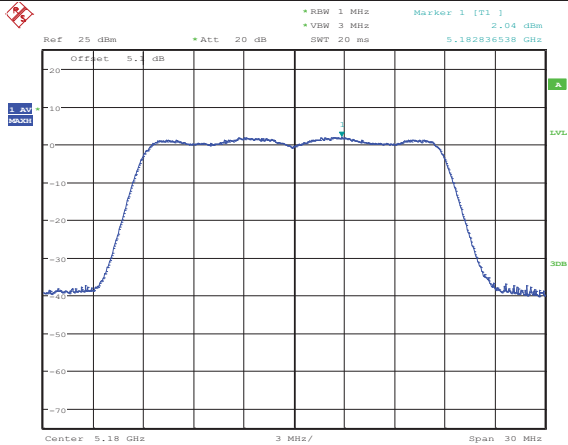
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11AC20 ANT1 5180



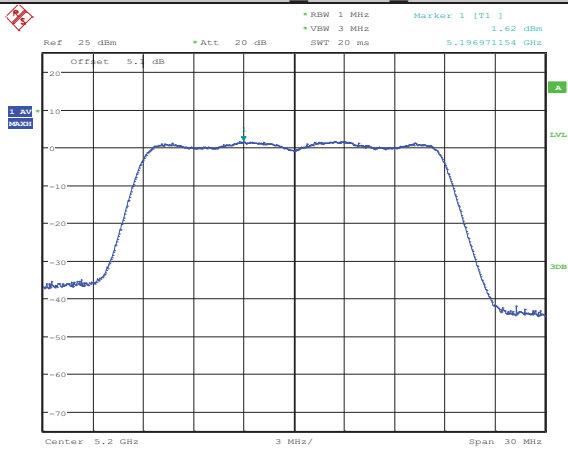
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11AC20 ANT2 5180



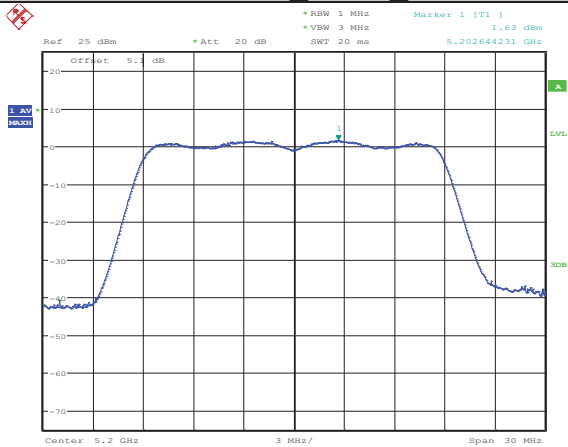
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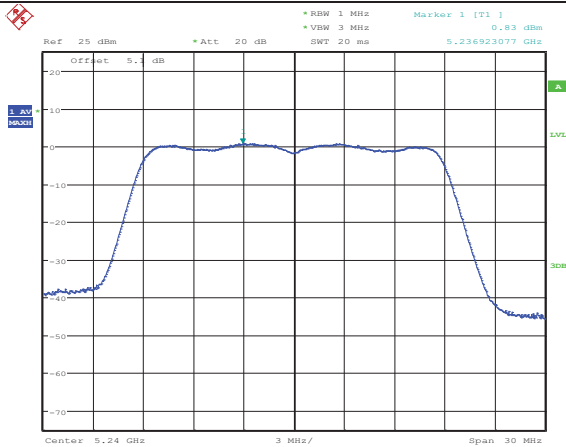
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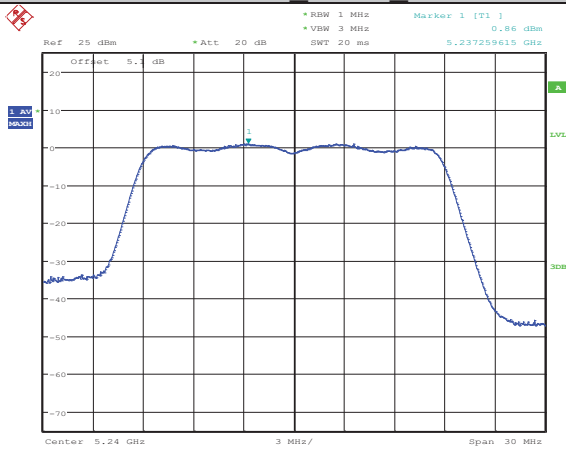
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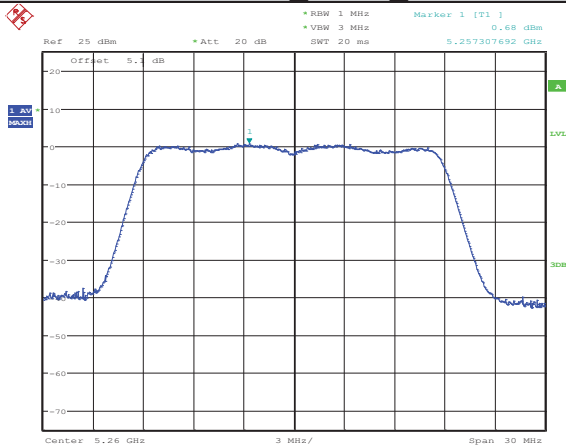
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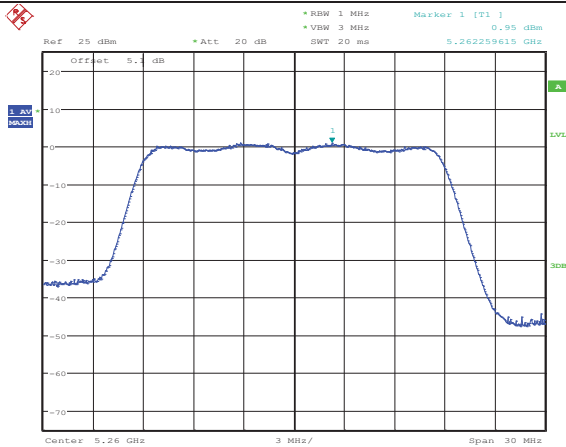
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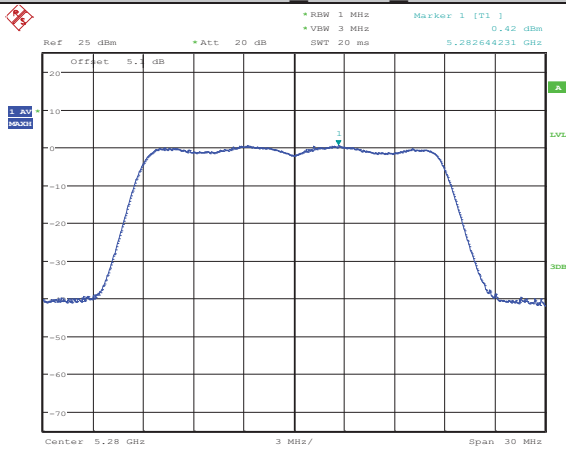
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11AC20 ANT2 5260



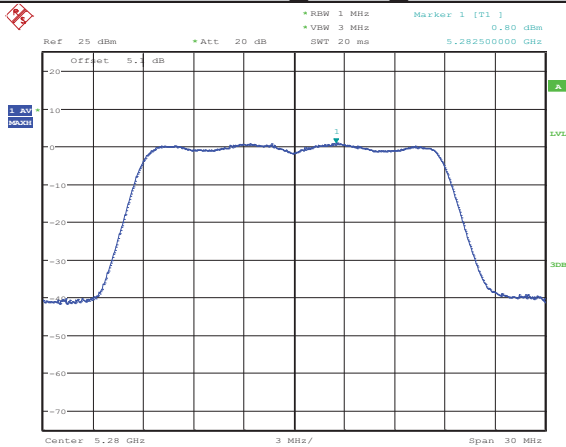
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11AC20 ANT1 5280



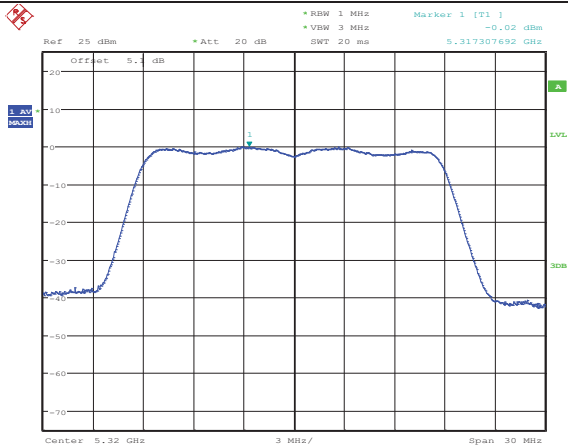
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11AC20 ANT2 5280



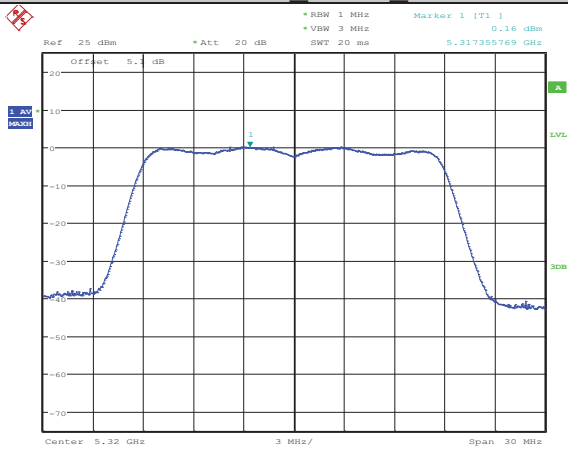
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11AC20 ANT1 5320



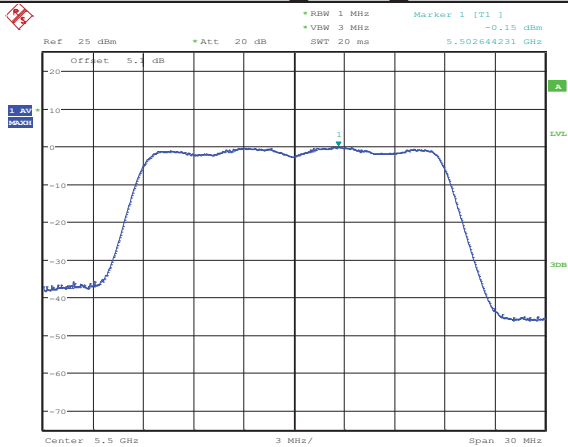
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11AC20 ANT2 5320



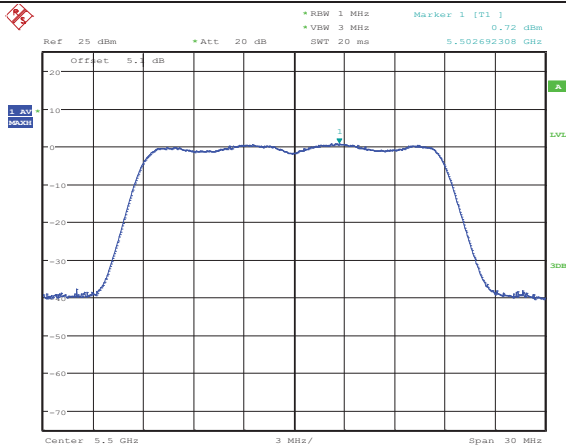
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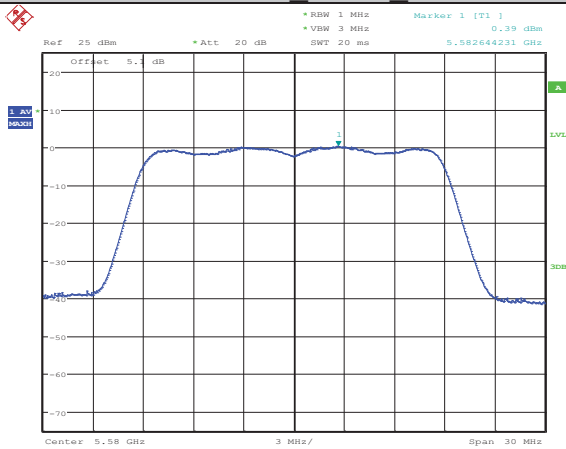
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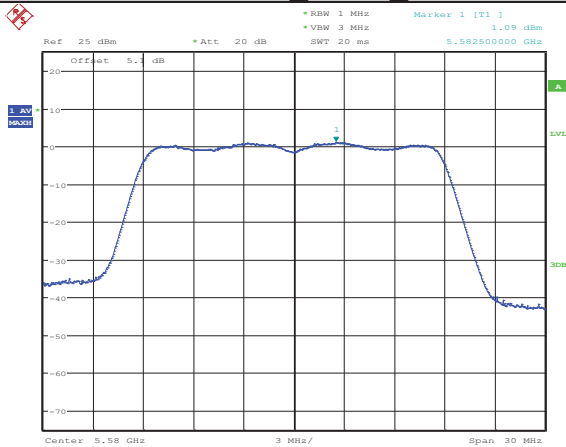
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11AC20 ANT1 5580



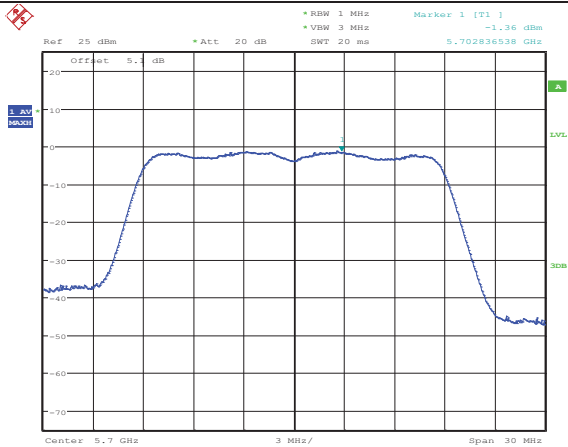
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11AC20 ANT2 5580



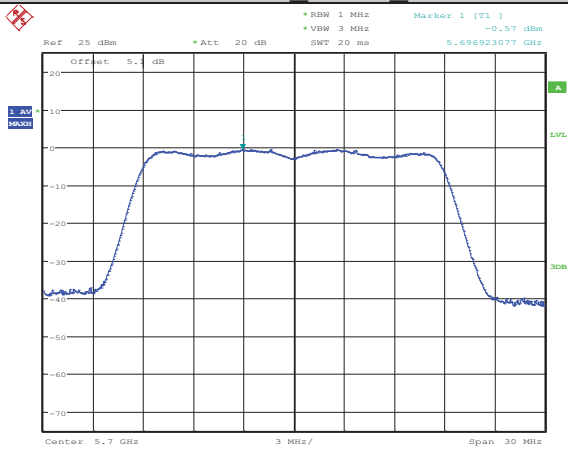
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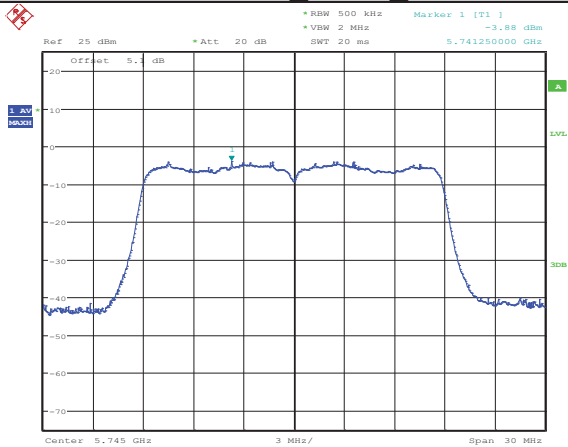
Date: 20.JUN.2018 20:59:34

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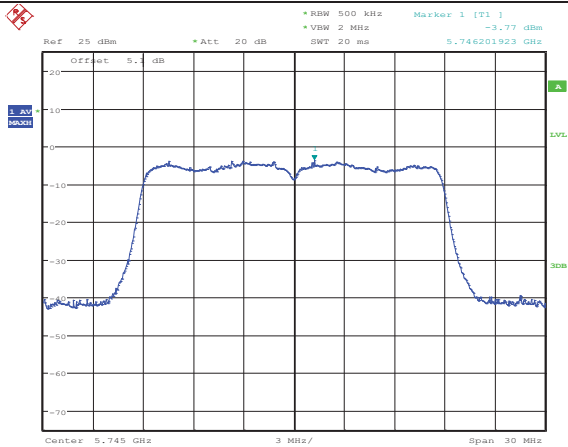
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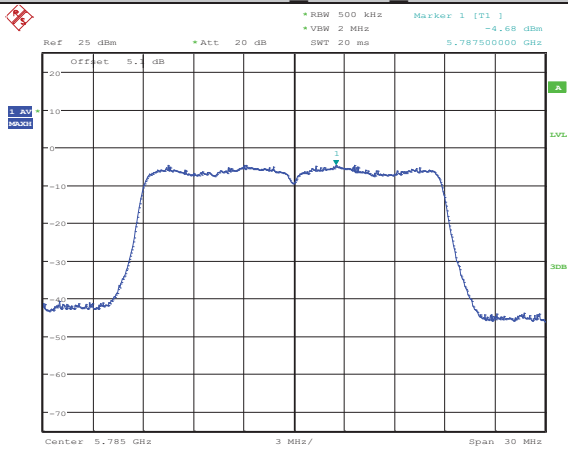
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11AC20 ANT2 5745



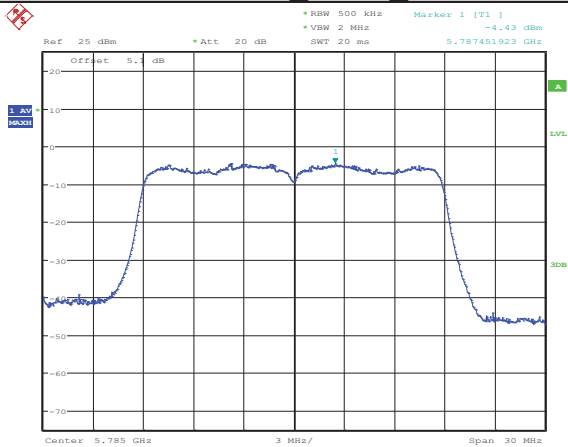
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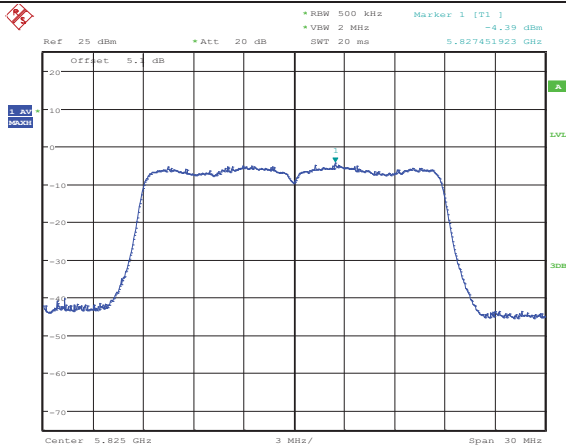
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11AC20 ANT2 5785



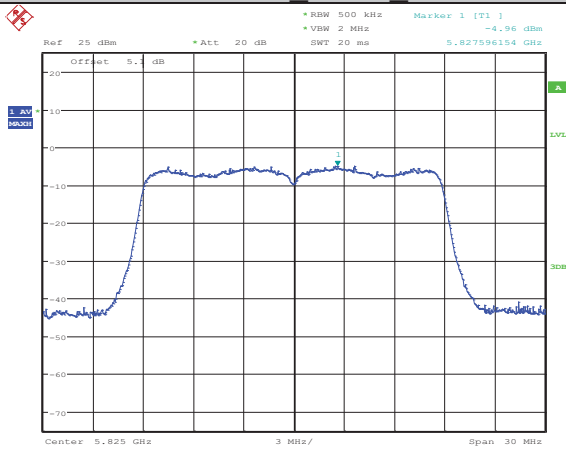
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11AC20 ANT1 5825



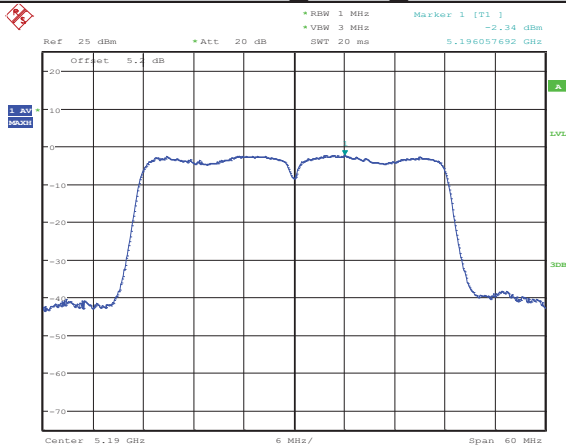
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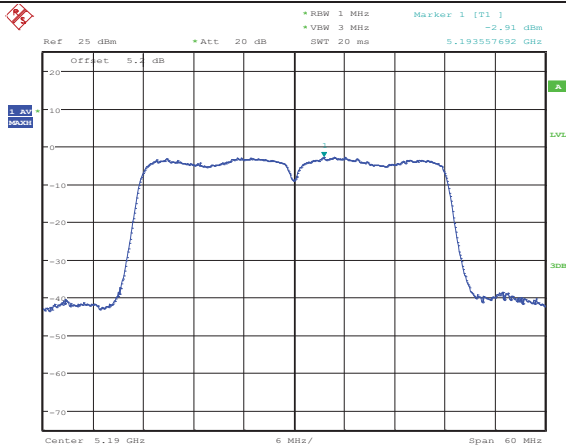
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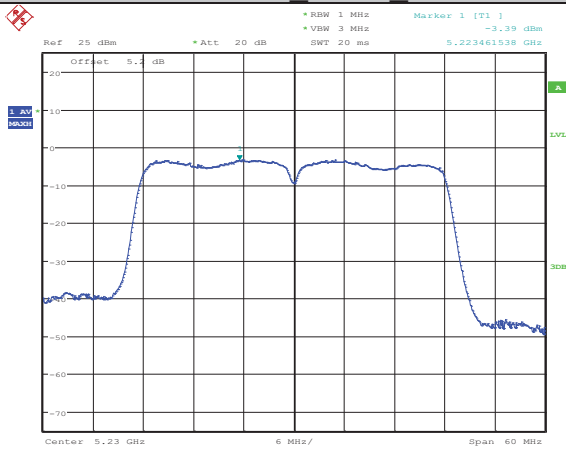
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11AC40 ANT2 5190



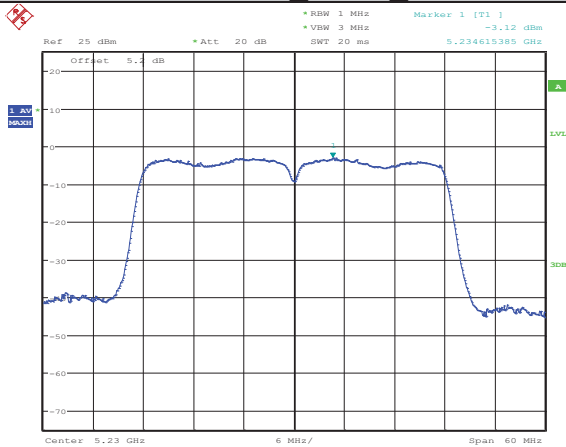
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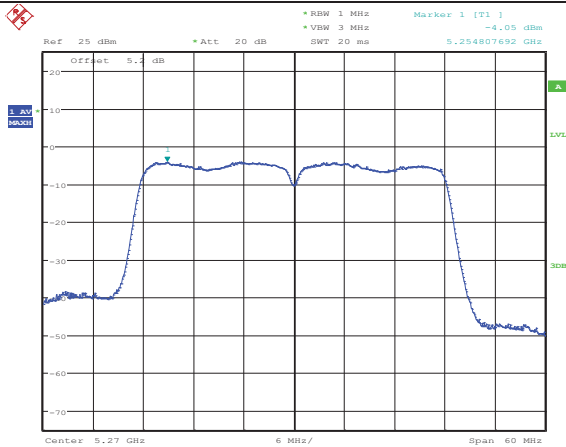
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11AC40 ANT2 5230



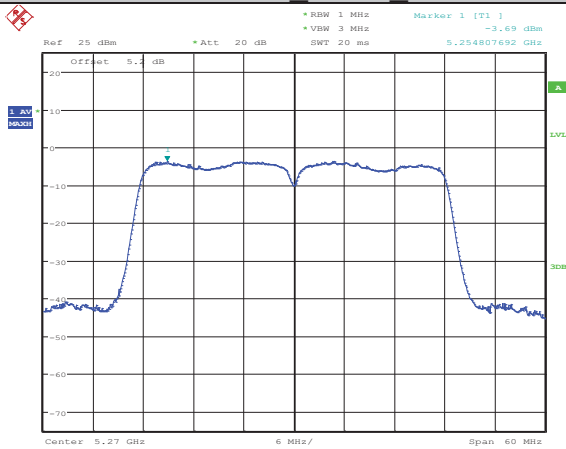
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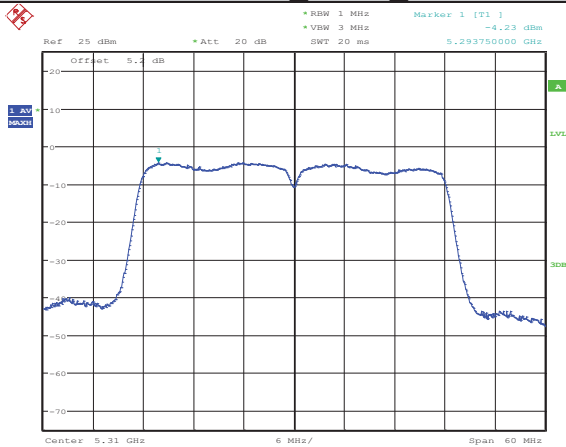
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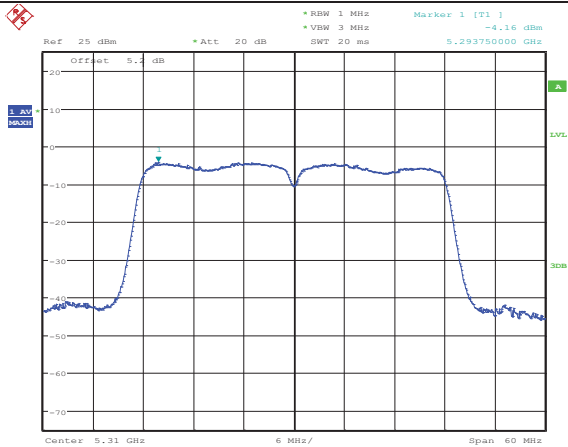
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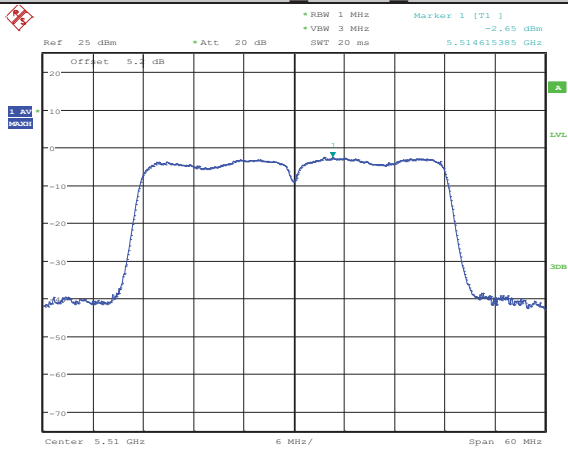
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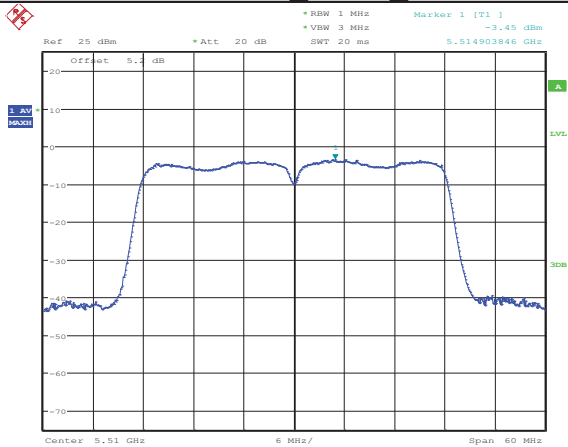
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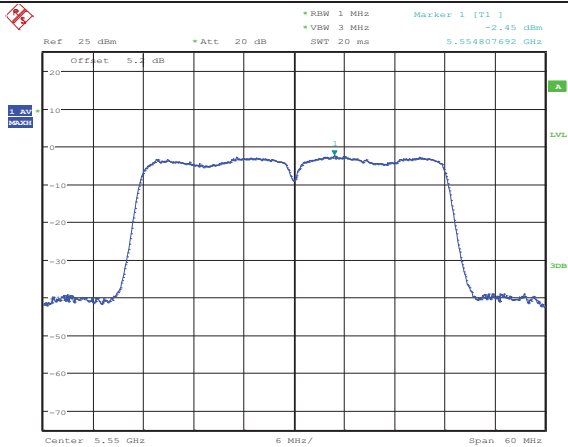
Date: 21.JUN.2018 11:16:58

11AC40 ANT2 5510



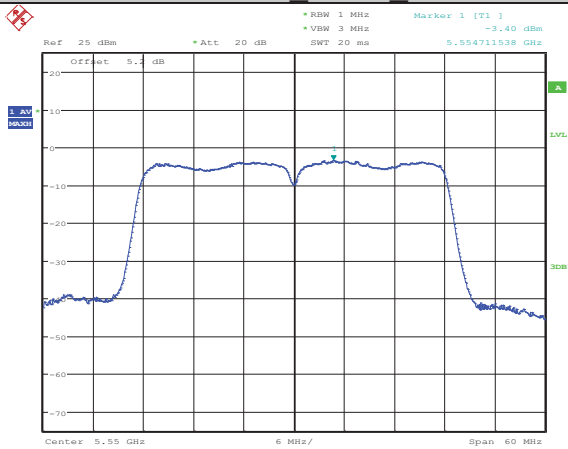
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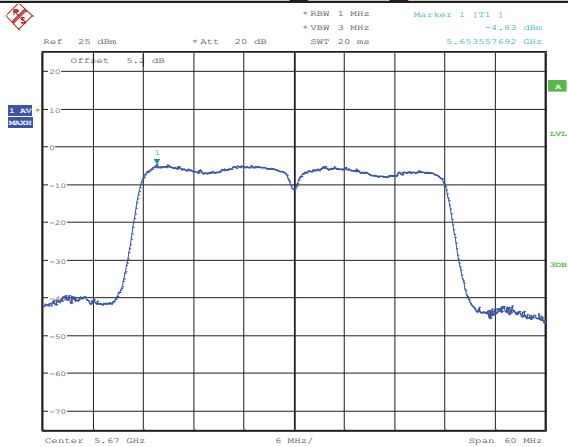
Date: 21.JUN.2018 11:19:48

11AC40 ANT2 5550



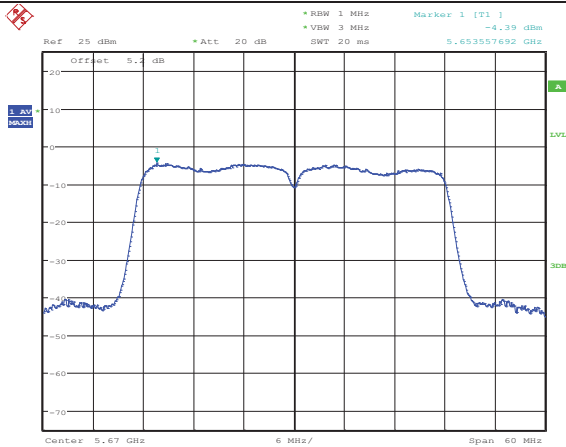
Date: 21.JUN.2018 18:48:07

11AC40 ANT1 5670



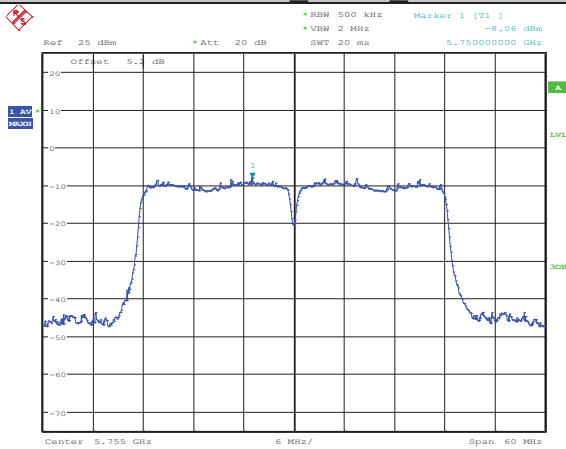
Date: 21.JUN.2018 15:10:01

11AC40 ANT2 5670



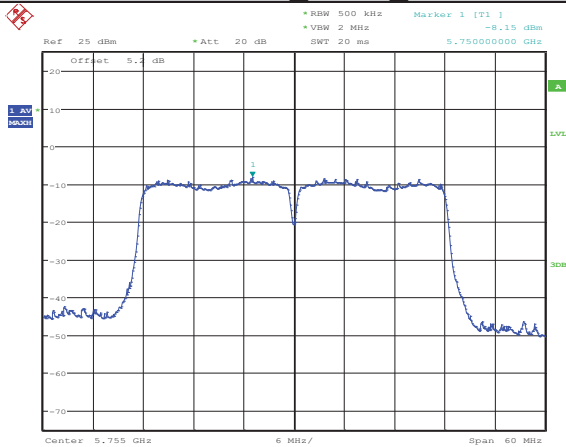
Date: 21.JUN.2018 18:50:43

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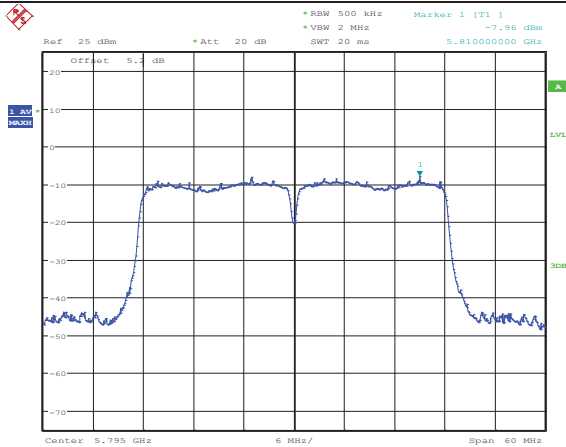
Date: 21.JUN.2018 15:12:29

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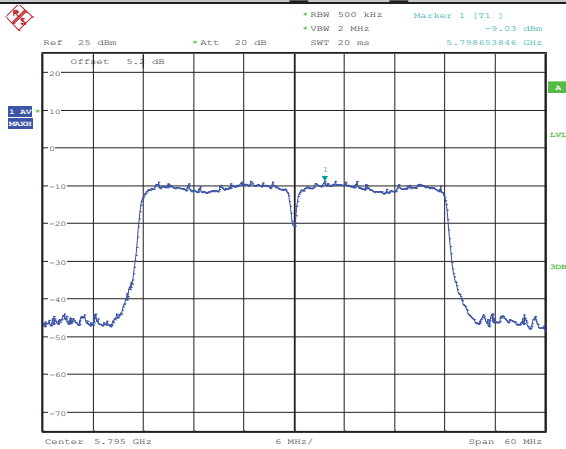
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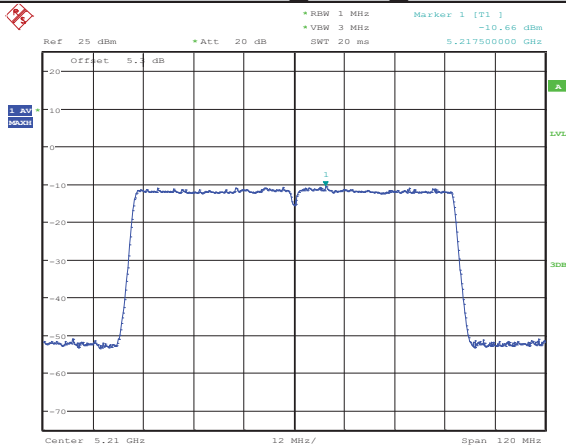
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11AC40 ANT2 5795



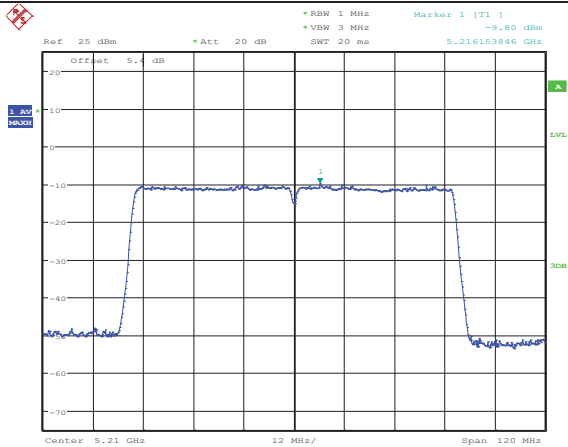
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11AC80 ANT1 5210



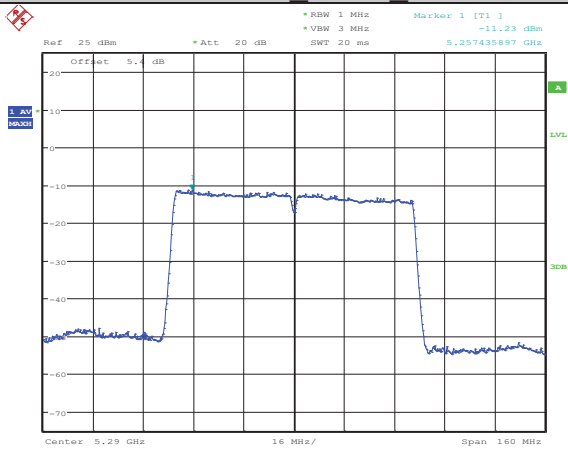
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11AC80 ANT2 5210



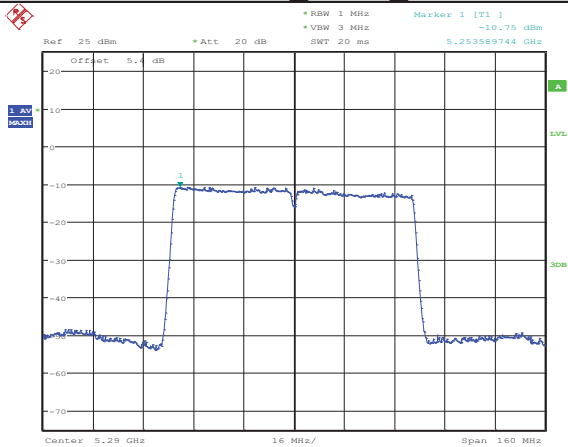
Date: 21.JUN.2018 18:59:58

11AC80 ANT1 5290



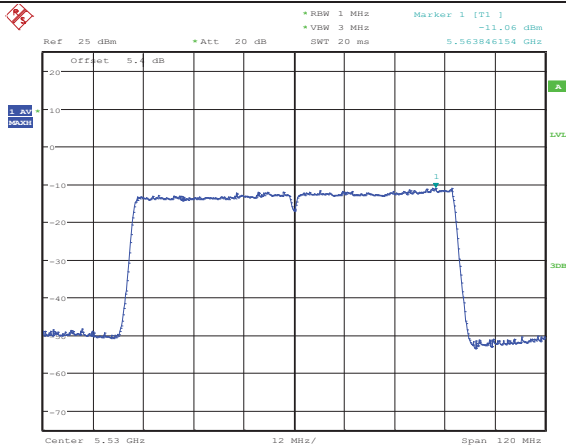
Date: 21.JUN.2018 15:31:32

11AC80 ANT2 5290



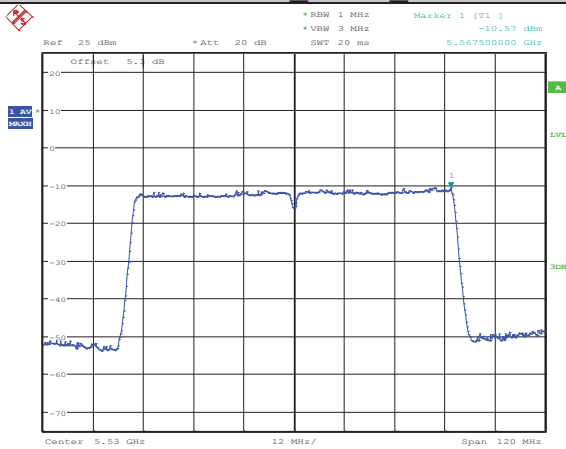
Date: 21.JUN.2018 19:03:14

11AC80 ANT1 5530



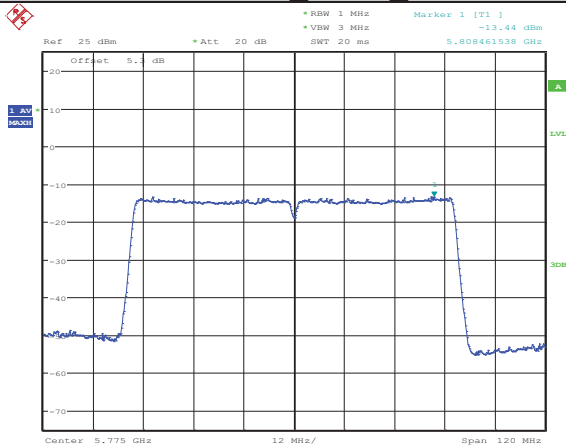
Date: 21.JUN.2018 15:38:34

11AC80 ANT2 5530



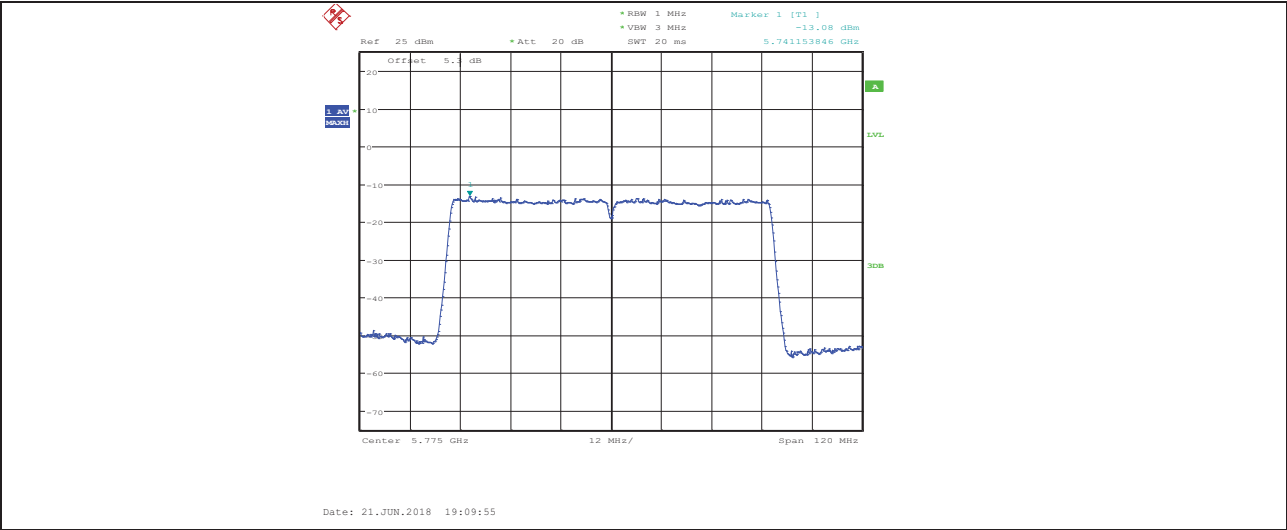
Date: 21.JUN.2018 19:06:58

11AC80 ANT1 5775



Date: 21.JUN.2018 15:42:33

11AC80 ANT2 5775



7. Frequency Stability Measurement

7.1. Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

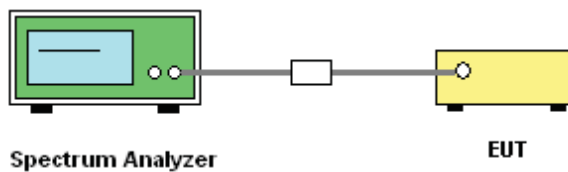
7.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

7.3. Test Procedures

- (1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- (2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- (3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

7.4. Test Setup



7.5. Test Result

Voltage								
Test Mode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (kHz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	ANT1	5180	NV	NT	-75	-14.478764	20	PASS
11A	ANT1	5180	LV	NT	-75	-14.478764	20	PASS
11A	ANT1	5180	HV	NT	-75	-14.478764	20	PASS
11A	ANT2	5180	NV	NT	0	0	20	PASS
11A	ANT2	5180	LV	NT	-60	-11.583012	20	PASS
11A	ANT2	5180	HV	NT	0	0	20	PASS
11A	ANT1	5200	NV	NT	-75	-14.423077	20	PASS
11A	ANT1	5200	LV	NT	-75	-14.423077	20	PASS
11A	ANT1	5200	HV	NT	-75	-14.423077	20	PASS
11A	ANT2	5200	NV	NT	-60	-11.538462	20	PASS
11A	ANT2	5200	LV	NT	-60	-11.538462	20	PASS
11A	ANT2	5200	HV	NT	-60	-11.538462	20	PASS
11A	ANT1	5240	NV	NT	-75	-14.312977	20	PASS

11A	ANT1	5240	LV	NT	-75	-14.312977	20	PASS
11A	ANT1	5240	HV	NT	-75	-14.312977	20	PASS
11A	ANT2	5240	NV	NT	-60	-11.450382	20	PASS
11A	ANT2	5240	LV	NT	-60	-11.450382	20	PASS
11A	ANT2	5240	HV	NT	-60	-11.450382	20	PASS
11A	ANT1	5260	NV	NT	-75	-14.258555	20	PASS
11A	ANT1	5260	LV	NT	-75	-14.258555	20	PASS
11A	ANT1	5260	HV	NT	-75	-14.258555	20	PASS
11A	ANT2	5260	NV	NT	-60	-11.406844	20	PASS
11A	ANT2	5260	LV	NT	-60	-11.406844	20	PASS
11A	ANT2	5260	HV	NT	-60	-11.406844	20	PASS
11A	ANT1	5280	NV	NT	-75	-14.204545	20	PASS
11A	ANT1	5280	LV	NT	-75	-14.204545	20	PASS
11A	ANT1	5280	HV	NT	-75	-14.204545	20	PASS
11A	ANT2	5280	NV	NT	-60	-11.363636	20	PASS
11A	ANT2	5280	LV	NT	-60	-11.363636	20	PASS
11A	ANT2	5280	HV	NT	-60	-11.363636	20	PASS
11A	ANT1	5320	NV	NT	-75	-14.097744	20	PASS
11A	ANT1	5320	LV	NT	-75	-14.097744	20	PASS
11A	ANT1	5320	HV	NT	-75	-14.097744	20	PASS
11A	ANT2	5320	NV	NT	-60	-11.278195	20	PASS
11A	ANT2	5320	LV	NT	-60	-11.278195	20	PASS
11A	ANT2	5320	HV	NT	-60	-11.278195	20	PASS
11A	ANT1	5500	NV	NT	-60	-10.909091	20	PASS
11A	ANT1	5500	LV	NT	-75	-13.636364	20	PASS
11A	ANT1	5500	HV	NT	-75	-13.636364	20	PASS
11A	ANT2	5500	NV	NT	-60	-10.909091	20	PASS
11A	ANT2	5500	LV	NT	-60	-10.909091	20	PASS
11A	ANT2	5500	HV	NT	-60	-10.909091	20	PASS
11A	ANT1	5580	NV	NT	-75	-13.44086	20	PASS
11A	ANT1	5580	LV	NT	-60	-10.752688	20	PASS
11A	ANT1	5580	HV	NT	-75	-13.44086	20	PASS
11A	ANT2	5580	NV	NT	-60	-10.752688	20	PASS
11A	ANT2	5580	LV	NT	0	0	20	PASS
11A	ANT2	5580	HV	NT	-60	-10.752688	20	PASS
11A	ANT1	5700	NV	NT	-75	-13.157895	20	PASS
11A	ANT1	5700	LV	NT	-75	-13.157895	20	PASS
11A	ANT1	5700	HV	NT	-75	-13.157895	20	PASS
11A	ANT2	5700	NV	NT	-60	-10.526316	20	PASS
11A	ANT2	5700	LV	NT	-60	-10.526316	20	PASS
11A	ANT2	5700	HV	NT	-60	-10.526316	20	PASS

11A	ANT1	5745	NV	NT	-75	-13.05483	20	PASS
11A	ANT1	5745	LV	NT	-75	-13.05483	20	PASS
11A	ANT1	5745	HV	NT	-75	-13.05483	20	PASS
11A	ANT2	5745	NV	NT	-60	-10.443864	20	PASS
11A	ANT2	5745	LV	NT	-60	-10.443864	20	PASS
11A	ANT2	5745	HV	NT	-60	-10.443864	20	PASS
11A	ANT1	5785	NV	NT	-75	-12.964564	20	PASS
11A	ANT1	5785	LV	NT	-75	-12.964564	20	PASS
11A	ANT1	5785	HV	NT	-75	-12.964564	20	PASS
11A	ANT2	5785	NV	NT	-60	-10.371651	20	PASS
11A	ANT2	5785	LV	NT	-60	-10.371651	20	PASS
11A	ANT2	5785	HV	NT	-60	-10.371651	20	PASS
11A	ANT1	5825	NV	NT	-75	-12.875536	20	PASS
11A	ANT1	5825	LV	NT	-75	-12.875536	20	PASS
11A	ANT1	5825	HV	NT	-75	-12.875536	20	PASS
11A	ANT2	5825	NV	NT	-60	-10.300429	20	PASS
11A	ANT2	5825	LV	NT	-60	-10.300429	20	PASS
11A	ANT2	5825	HV	NT	-60	-10.300429	20	PASS
11N20	ANT1	5180	NV	NT	-60	-11.583012	20	PASS
11N20	ANT1	5180	LV	NT	-60	-11.583012	20	PASS
11N20	ANT1	5180	HV	NT	-45	-8.687259	20	PASS
11N20	ANT2	5180	NV	NT	-60	-11.583012	20	PASS
11N20	ANT2	5180	LV	NT	0	0	20	PASS
11N20	ANT2	5180	HV	NT	-60	-11.583012	20	PASS
11N20	ANT1	5200	NV	NT	-45	-8.653846	20	PASS
11N20	ANT1	5200	LV	NT	-45	-8.653846	20	PASS
11N20	ANT1	5200	HV	NT	-60	-11.538462	20	PASS
11N20	ANT1	5240	NV	NT	-60	-11.450382	20	PASS
11N20	ANT1	5240	LV	NT	-60	-11.450382	20	PASS
11N20	ANT1	5240	HV	NT	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	NT	-60	-11.450382	20	PASS
11N20	ANT2	5240	LV	NT	-60	-11.450382	20	PASS
11N20	ANT2	5240	HV	NT	-60	-11.450382	20	PASS
11N20	ANT1	5260	NV	NT	-60	-11.406844	20	PASS
11N20	ANT1	5260	LV	NT	-60	-11.406844	20	PASS
11N20	ANT1	5260	HV	NT	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	NT	-60	-11.406844	20	PASS
11N20	ANT2	5260	LV	NT	-60	-11.406844	20	PASS
11N20	ANT2	5260	HV	NT	-60	-11.406844	20	PASS
11N20	ANT1	5280	NV	NT	-45	-8.522727	20	PASS
11N20	ANT1	5280	LV	NT	-60	-11.363636	20	PASS

11N20	ANT1	5280	HV	NT	-60	-11.363636	20	PASS
11N20	ANT2	5280	NV	NT	-60	-11.363636	20	PASS
11N20	ANT2	5280	LV	NT	0	0	20	PASS
11N20	ANT2	5280	HV	NT	-60	-11.363636	20	PASS
11N20	ANT1	5320	NV	NT	-75	-14.097744	20	PASS
11N20	ANT1	5320	LV	NT	-60	-11.278195	20	PASS
11N20	ANT1	5320	HV	NT	-60	-11.278195	20	PASS
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11N20	ANT2	5320	LV	NT	-60	-11.278195	20	PASS
11N20	ANT2	5320	HV	NT	-60	-11.278195	20	PASS
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11N20	ANT1	5500	HV	NT	-30	-5.454545	20	PASS
11N20	ANT2	5500	NV	NT	0	0	20	PASS
11N20	ANT2	5500	LV	NT	-60	-10.909091	20	PASS
11N20	ANT2	5500	HV	NT	0	0	20	PASS
11N20	ANT1	5580	NV	NT	-45	-8.064516	20	PASS
11N20	ANT1	5580	LV	NT	-45	-8.064516	20	PASS
11N20	ANT1	5580	HV	NT	-45	-8.064516	20	PASS
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11N20	ANT2	5580	HV	NT	-60	-10.752688	20	PASS
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11N20	ANT1	5700	LV	NT	-60	-10.526316	20	PASS
11N20	ANT1	5700	HV	NT	-60	-10.526316	20	PASS
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11N20	ANT2	5700	LV	NT	-60	-10.526316	20	PASS
11N20	ANT2	5700	HV	NT	-60	-10.526316	20	PASS
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11N20	ANT1	5745	LV	NT	-60	-10.443864	20	PASS
11N20	ANT1	5745	HV	NT	-60	-10.443864	20	PASS
11N20	ANT2	5745	NV	NT	-60	-10.443864	20	PASS
11N20	ANT2	5745	LV	NT	-60	-10.443864	20	PASS
11N20	ANT2	5745	HV	NT	-60	-10.443864	20	PASS
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11N20	ANT1	5785	HV	NT	-60	-10.371651	20	PASS
11N20	ANT2	5785	NV	NT	-60	-10.371651	20	PASS
11N20	ANT2	5785	LV	NT	-60	-10.371651	20	PASS
11N20	ANT2	5785	HV	NT	-60	-10.371651	20	PASS
11N20	ANT1	5825	NV	NT	-60	-10.300429	20	PASS

11N20	ANT1	5825	LV	NT	-60	-10.300429	20	PASS
11N20	ANT1	5825	HV	NT	-60	-10.300429	20	PASS
11N20	ANT2	5825	NV	NT	-60	-10.300429	20	PASS
11N20	ANT2	5825	LV	NT	-60	-10.300429	20	PASS
11N20	ANT2	5825	HV	NT	-60	-10.300429	20	PASS
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11N40	ANT1	5190	LV	NT	-30	-5.780347	20	PASS
11N40	ANT1	5190	HV	NT	-30	-5.780347	20	PASS
11N40	ANT2	5190	NV	NT	0	0	20	PASS
11N40	ANT2	5190	LV	NT	-60	-11.560694	20	PASS
11N40	ANT2	5190	HV	NT	-60	-11.560694	20	PASS
11N40	ANT1	5230	NV	NT	-30	-5.736138	20	PASS
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11N40	ANT1	5230	HV	NT	-60	-11.472275	20	PASS
11N40	ANT2	5230	NV	NT	-60	-11.472275	20	PASS
11N40	ANT2	5230	LV	NT	-60	-11.472275	20	PASS
11N40	ANT2	5230	HV	NT	-60	-11.472275	20	PASS
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11N40	ANT1	5270	LV	NT	-60	-11.385199	20	PASS
11N40	ANT1	5270	HV	NT	-60	-11.385199	20	PASS
11N40	ANT2	5270	NV	NT	-60	-11.385199	20	PASS
11N40	ANT2	5270	LV	NT	0	0	20	PASS
11N40	ANT2	5270	HV	NT	-60	-11.385199	20	PASS
11N40	ANT1	5310	NV	NT	-90	-16.949153	20	PASS
11N40	ANT1	5310	LV	NT	-90	-16.949153	20	PASS
11N40	ANT1	5310	HV	NT	-90	-16.949153	20	PASS
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11N40	ANT2	5310	LV	NT	-90	-16.949153	20	PASS
11N40	ANT2	5310	HV	NT	-90	-16.949153	20	PASS
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11N40	ANT1	5510	HV	NT	-30	-5.444646	20	PASS
11N40	ANT2	5510	NV	NT	0	0	20	PASS
11N40	ANT2	5510	LV	NT	0	0	20	PASS
11N40	ANT2	5510	HV	NT	0	0	20	PASS
11N40	ANT1	5550	NV	NT	-30	-5.405405	20	PASS
11N40	ANT1	5550	LV	NT	-30	-5.405405	20	PASS
11N40	ANT1	5550	HV	NT	0	0	20	PASS
11N40	ANT2	5550	NV	NT	0	0	20	PASS
11N40	ANT2	5550	LV	NT	0	0	20	PASS
11N40	ANT2	5550	HV	NT	0	0	20	PASS

11N40	ANT1	5670	NV	NT	-90	-15.873016	20	PASS
11N40	ANT1	5670	LV	NT	-90	-15.873016	20	PASS
11N40	ANT1	5670	HV	NT	-90	-15.873016	20	PASS
11N40	ANT2	5670	NV	NT	-90	-15.873016	20	PASS
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11N40	ANT2	5670	HV	NT	-60	-10.582011	20	PASS
11N40	ANT1	5755	NV	NT	-60	-10.425717	20	PASS
11N40	ANT1	5755	LV	NT	-60	-10.425717	20	PASS
11N40	ANT1	5755	HV	NT	-60	-10.425717	20	PASS
11N40	ANT2	5755	NV	NT	-60	-10.425717	20	PASS
11N40	ANT2	5755	LV	NT	-60	-10.425717	20	PASS
11N40	ANT2	5755	HV	NT	-60	-10.425717	20	PASS
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11N40	ANT1	5795	LV	NT	-30	-5.176877	20	PASS
11N40	ANT1	5795	HV	NT	-30	-5.176877	20	PASS
11N40	ANT2	5795	NV	NT	0	0	20	PASS
11N40	ANT2	5795	LV	NT	-60	-10.353753	20	PASS
11N40	ANT2	5795	HV	NT	0	0	20	PASS
11AC20	ANT1	5180	NV	NT	-45	-8.687259	20	PASS
11AC20	ANT1	5180	LV	NT	-45	-8.687259	20	PASS
11AC20	ANT1	5180	HV	NT	-45	-8.687259	20	PASS
11AC20	ANT2	5180	NV	NT	0	0	20	PASS
11AC20	ANT2	5180	LV	NT	0	0	20	PASS
11AC20	ANT2	5180	HV	NT	0	0	20	PASS
11AC20	ANT1	5200	NV	NT	-45	-8.653846	20	PASS
11AC20	ANT1	5200	LV	NT	-30	-5.769231	20	PASS
11AC20	ANT1	5200	HV	NT	-45	-8.653846	20	PASS
11AC20	ANT2	5200	NV	NT	0	0	20	PASS
11AC20	ANT2	5200	LV	NT	0	0	20	PASS
11AC20	ANT2	5200	HV	NT	-60	-11.538462	20	PASS
11AC20	ANT1	5240	NV	NT	-60	-11.450382	20	PASS
11AC20	ANT1	5240	LV	NT	-45	-8.587786	20	PASS
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11AC20	ANT1	5260	HV	NT	-60	-11.406844	20	PASS
11AC20	ANT2	5260	NV	NT	-60	-11.406844	20	PASS
11AC20	ANT2	5260	LV	NT	-60	-11.406844	20	PASS

11AC20	ANT2	5260	HV	NT	-60	-11.406844	20	PASS
11AC20	ANT1	5280	NV	NT	-60	-11.363636	20	PASS
11AC20	ANT1	5280	LV	NT	-45	-8.522727	20	PASS
11AC20	ANT1	5280	HV	NT	-60	-11.363636	20	PASS
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11AC20	ANT2	5280	HV	NT	-60	-11.363636	20	PASS
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11AC20	ANT1	5500	HV	NT	-45	-8.181818	20	PASS
11AC20	ANT2	5500	NV	NT	0	0	20	PASS
11AC20	ANT2	5500	LV	NT	0	0	20	PASS
11AC20	ANT2	5500	HV	NT	0	0	20	PASS
11AC20	ANT1	5580	NV	NT	-45	-8.064516	20	PASS
11AC20	ANT1	5580	LV	NT	-45	-8.064516	20	PASS
11AC20	ANT1	5580	HV	NT	-45	-8.064516	20	PASS
11AC20	ANT2	5580	NV	NT	0	0	20	PASS
11AC20	ANT2	5580	LV	NT	0	0	20	PASS
11AC20	ANT2	5580	HV	NT	-60	-10.752688	20	PASS
11AC20	ANT1	5700	NV	NT	-60	-10.526316	20	PASS
11AC20	ANT1	5700	LV	NT	-60	-10.526316	20	PASS
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11AC20	ANT2	5700	HV	NT	-60	-10.526316	20	PASS
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11AC20	ANT1	5745	LV	NT	-60	-10.443864	20	PASS
11AC20	ANT1	5745	HV	NT	-75	-13.05483	20	PASS
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11AC20	ANT2	5745	LV	NT	-60	-10.443864	20	PASS
11AC20	ANT2	5745	HV	NT	0	0	20	PASS
11AC20	ANT1	5785	NV	NT	-60	-10.371651	20	PASS
11AC20	ANT1	5785	LV	NT	-60	-10.371651	20	PASS
11AC20	ANT1	5785	HV	NT	-60	-10.371651	20	PASS
11AC20	ANT2	5785	NV	NT	-60	-10.371651	20	PASS

11AC20	ANT2	5785	LV	NT	-60	-10.371651	20	PASS
11AC20	ANT2	5785	HV	NT	-60	-10.371651	20	PASS
11AC20	ANT1	5825	NV	NT	-60	-10.300429	20	PASS
11AC20	ANT1	5825	LV	NT	-60	-10.300429	20	PASS
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11AC20	ANT2	5825	NV	NT	-60	-10.300429	20	PASS
11AC20	ANT2	5825	LV	NT	0	0	20	PASS
11AC20	ANT2	5825	HV	NT	-60	-10.300429	20	PASS
11AC40	ANT1	5190	NV	NT	-30	-5.780347	20	PASS
11AC40	ANT1	5190	LV	NT	-30	-5.780347	20	PASS
11AC40	ANT1	5190	HV	NT	-30	-5.780347	20	PASS
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11AC40	ANT2	5190	LV	NT	-60	-11.560694	20	PASS
11AC40	ANT2	5190	HV	NT	-60	-11.560694	20	PASS
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11AC40	ANT1	5230	HV	NT	-90	-17.208413	20	PASS
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11AC40	ANT1	5310	HV	NT	-90	-16.949153	20	PASS
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11AC40	ANT1	5510	NV	NT	-30	-5.444646	20	PASS
11AC40	ANT1	5510	LV	NT	0	0	20	PASS
11AC40	ANT1	5510	HV	NT	-30	-5.444646	20	PASS
11AC40	ANT2	5510	NV	NT	0	0	20	PASS
11AC40	ANT2	5510	LV	NT	0	0	20	PASS
11AC40	ANT2	5510	HV	NT	0	0	20	PASS
11AC40	ANT1	5550	NV	NT	-30	-5.405405	20	PASS
11AC40	ANT1	5550	LV	NT	-30	-5.405405	20	PASS
11AC40	ANT1	5550	HV	NT	-30	-5.405405	20	PASS

11AC40	ANT2	5550	NV	NT	0	0	20	PASS
11AC40	ANT2	5550	LV	NT	-60	-10.810811	20	PASS
11AC40	ANT2	5550	HV	NT	0	0	20	PASS
11AC40	ANT1	5670	NV	NT	-90	-15.873016	20	PASS
11AC40	ANT1	5670	LV	NT	-90	-15.873016	20	PASS
11AC40	ANT1	5670	HV	NT	-90	-15.873016	20	PASS
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11AC40	ANT2	5670	HV	NT	-90	-15.873016	20	PASS
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11AC40	ANT1	5755	HV	NT	-30	-5.212858	20	PASS
11AC40	ANT2	5755	NV	NT	-60	-10.425717	20	PASS
11AC40	ANT2	5755	LV	NT	-60	-10.425717	20	PASS
11AC40	ANT2	5755	HV	NT	-60	-10.425717	20	PASS
11AC40	ANT1	5795	NV	NT	-30	-5.176877	20	PASS
11AC40	ANT1	5795	LV	NT	-30	-5.176877	20	PASS
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11AC40	ANT2	5795	LV	NT	-60	-10.353753	20	PASS
11AC40	ANT2	5795	HV	NT	0	0	20	PASS
11AC80	ANT1	5210	NV	NT	-60	-11.516315	20	PASS
11AC80	ANT1	5210	LV	NT	-60	-11.516315	20	PASS
11AC80	ANT1	5210	HV	NT	-60	-11.516315	20	PASS
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11AC80	ANT2	5210	HV	NT	-60	-11.516315	20	PASS
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11AC80	ANT1	5290	HV	NT	-90	-17.013233	20	PASS
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11AC80	ANT1	5530	NV	NT	-60	-10.84991	20	PASS
11AC80	ANT1	5530	LV	NT	0	0	20	PASS
11AC80	ANT1	5530	HV	NT	-60	-10.84991	20	PASS
11AC80	ANT2	5530	NV	NT	-60	-10.84991	20	PASS
11AC80	ANT2	5530	LV	NT	-60	-10.84991	20	PASS
11AC80	ANT2	5530	HV	NT	-60	-10.84991	20	PASS
11AC80	ANT1	5775	NV	NT	-60	-10.38961	20	PASS
11AC80	ANT1	5775	LV	NT	-60	-10.38961	20	PASS

11AC80	ANT1	5775	HV	NT	-60	-10.38961	20	PASS
11AC80	ANT2	5775	NV	NT	-60	-10.38961	20	PASS
11AC80	ANT2	5775	LV	NT	-60	-10.38961	20	PASS
11AC80	ANT2	5775	HV	NT	-60	-10.38961	20	PASS

Temperature								
Test Mode	Antenna	Channel	Voltage [Vdc]	Temperature (°C)	Deviation (kHz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	ANT1	5180	NV	-30	-75	-14.478764	20	PASS
11A	ANT1	5180	NV	-20	-60	-11.583012	20	PASS
11A	ANT1	5180	NV	-10	-60	-11.583012	20	PASS
11A	ANT1	5180	NV	0	-75	-14.478764	20	PASS
11A	ANT1	5180	NV	10	-75	-14.478764	20	PASS
11A	ANT1	5180	NV	20	-60	-11.583012	20	PASS
11A	ANT1	5180	NV	30	-60	-11.583012	20	PASS
11A	ANT1	5180	NV	40	-75	-14.478764	20	PASS
11A	ANT1	5180	NV	50	-75	-14.478764	20	PASS
11A	ANT2	5180	NV	-30	-60	-11.583012	20	PASS
11A	ANT2	5180	NV	-20	-60	-11.583012	20	PASS
11A	ANT2	5180	NV	-10	-60	-11.583012	20	PASS
11A	ANT2	5180	NV	0	0	0	20	PASS
11A	ANT2	5180	NV	10	0	0	20	PASS
11A	ANT2	5180	NV	20	0	0	20	PASS
11A	ANT2	5180	NV	30	0	0	20	PASS
11A	ANT2	5180	NV	40	-60	-11.583012	20	PASS
11A	ANT2	5180	NV	50	-60	-11.583012	20	PASS
11A	ANT1	5200	NV	-30	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	-20	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	-10	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	0	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	10	-60	-11.538462	20	PASS
11A	ANT1	5200	NV	20	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	30	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	40	-75	-14.423077	20	PASS
11A	ANT1	5200	NV	50	-75	-14.423077	20	PASS
11A	ANT2	5200	NV	-30	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	-20	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	-10	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	0	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	10	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	20	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	30	-60	-11.538462	20	PASS

11A	ANT2	5200	NV	40	-60	-11.538462	20	PASS
11A	ANT2	5200	NV	50	0	0	20	PASS
11A	ANT1	5240	NV	-30	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	-20	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	-10	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	0	-60	-11.450382	20	PASS
11A	ANT1	5240	NV	10	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	20	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	30	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	40	-75	-14.312977	20	PASS
11A	ANT1	5240	NV	50	-75	-14.312977	20	PASS
11A	ANT2	5240	NV	-30	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	-20	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	-10	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	0	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	10	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	20	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	30	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	40	-60	-11.450382	20	PASS
11A	ANT2	5240	NV	50	-60	-11.450382	20	PASS
11A	ANT1	5260	NV	-30	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	-20	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	-10	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	0	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	10	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	20	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	30	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	40	-75	-14.258555	20	PASS
11A	ANT1	5260	NV	50	-75	-14.258555	20	PASS
11A	ANT2	5260	NV	-30	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	-20	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	-10	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	0	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	10	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	20	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	30	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	40	-60	-11.406844	20	PASS
11A	ANT2	5260	NV	50	-60	-11.406844	20	PASS
11A	ANT1	5280	NV	-30	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	-20	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	-10	-75	-14.204545	20	PASS

11A	ANT1	5280	NV	0	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	10	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	20	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	30	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	40	-75	-14.204545	20	PASS
11A	ANT1	5280	NV	50	-75	-14.204545	20	PASS
11A	ANT2	5280	NV	-30	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	-20	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	-10	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	0	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	10	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	20	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	30	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	40	-60	-11.363636	20	PASS
11A	ANT2	5280	NV	50	-60	-11.363636	20	PASS
11A	ANT1	5320	NV	-30	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	-20	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	-10	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	0	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	10	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	20	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	30	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	40	-75	-14.097744	20	PASS
11A	ANT1	5320	NV	50	-75	-14.097744	20	PASS
11A	ANT2	5320	NV	-30	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	-20	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	-10	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	0	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	10	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	20	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	30	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	40	-60	-11.278195	20	PASS
11A	ANT2	5320	NV	50	-60	-11.278195	20	PASS
11A	ANT1	5500	NV	-30	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	-20	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	-10	-60	-10.909091	20	PASS
11A	ANT1	5500	NV	0	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	10	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	20	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	30	-75	-13.636364	20	PASS
11A	ANT1	5500	NV	40	-75	-13.636364	20	PASS

11A	ANT1	5500	NV	50	-60	-10.909091	20	PASS
11A	ANT2	5500	NV	-30	-60	-10.909091	20	PASS
11A	ANT2	5500	NV	-20	-60	-10.909091	20	PASS
11A	ANT2	5500	NV	-10	0	0	20	PASS
11A	ANT2	5500	NV	0	0	0	20	PASS
11A	ANT2	5500	NV	10	0	0	20	PASS
11A	ANT2	5500	NV	20	-60	-10.909091	20	PASS
11A	ANT2	5500	NV	30	-60	-10.909091	20	PASS
11A	ANT2	5500	NV	40	0	0	20	PASS
11A	ANT2	5500	NV	50	-60	-10.909091	20	PASS
11A	ANT1	5580	NV	-30	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	-20	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	-10	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	0	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	10	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	20	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	30	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	40	-75	-13.44086	20	PASS
11A	ANT1	5580	NV	50	-75	-13.44086	20	PASS
11A	ANT2	5580	NV	-30	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	-20	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	-10	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	0	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	10	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	20	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	30	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	40	-60	-10.752688	20	PASS
11A	ANT2	5580	NV	50	-60	-10.752688	20	PASS
11A	ANT1	5700	NV	-30	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	-20	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	-10	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	0	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	10	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	20	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	30	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	40	-75	-13.157895	20	PASS
11A	ANT1	5700	NV	50	-75	-13.157895	20	PASS
11A	ANT2	5700	NV	-30	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	-20	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	-10	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	0	-60	-10.526316	20	PASS

11A	ANT2	5700	NV	10	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	20	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	30	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	40	-60	-10.526316	20	PASS
11A	ANT2	5700	NV	50	-60	-10.526316	20	PASS
11A	ANT1	5745	NV	-30	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	-20	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	-10	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	0	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	10	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	20	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	30	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	40	-75	-13.05483	20	PASS
11A	ANT1	5745	NV	50	-75	-13.05483	20	PASS
11A	ANT2	5745	NV	-30	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	-20	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	-10	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	0	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	10	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	20	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	30	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	40	-60	-10.443864	20	PASS
11A	ANT2	5745	NV	50	-60	-10.443864	20	PASS
11A	ANT1	5785	NV	-30	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	-20	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	-10	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	0	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	10	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	20	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	30	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	40	-75	-12.964564	20	PASS
11A	ANT1	5785	NV	50	-75	-12.964564	20	PASS
11A	ANT2	5785	NV	-30	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	-20	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	-10	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	0	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	10	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	20	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	30	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	40	-60	-10.371651	20	PASS
11A	ANT2	5785	NV	50	-60	-10.371651	20	PASS

11A	ANT1	5825	NV	-30	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	-20	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	-10	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	0	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	10	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	20	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	30	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	40	-75	-12.875536	20	PASS
11A	ANT1	5825	NV	50	-75	-12.875536	20	PASS
11A	ANT2	5825	NV	-30	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	-20	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	-10	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	0	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	10	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	20	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	30	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	40	-60	-10.300429	20	PASS
11A	ANT2	5825	NV	50	-60	-10.300429	20	PASS
11N20	ANT1	5180	NV	-30	-60	-11.583012	20	PASS
11N20	ANT1	5180	NV	-20	-45	-8.687259	20	PASS
11N20	ANT1	5180	NV	-10	-45	-8.687259	20	PASS
11N20	ANT1	5180	NV	0	-60	-11.583012	20	PASS
11N20	ANT1	5180	NV	10	-45	-8.687259	20	PASS
11N20	ANT1	5180	NV	20	-45	-8.687259	20	PASS
11N20	ANT1	5180	NV	30	-45	-8.687259	20	PASS
11N20	ANT1	5180	NV	40	-60	-11.583012	20	PASS
11N20	ANT1	5180	NV	50	-45	-8.687259	20	PASS
11N20	ANT2	5180	NV	-30	-60	-11.583012	20	PASS
11N20	ANT2	5180	NV	-20	0	0	20	PASS
11N20	ANT2	5180	NV	-10	0	0	20	PASS
11N20	ANT2	5180	NV	0	-60	-11.583012	20	PASS
11N20	ANT2	5180	NV	10	-60	-11.583012	20	PASS
11N20	ANT2	5180	NV	20	-60	-11.583012	20	PASS
11N20	ANT2	5180	NV	30	-60	-11.583012	20	PASS
11N20	ANT2	5180	NV	40	0	0	20	PASS
11N20	ANT2	5180	NV	50	-60	-11.583012	20	PASS
11N20	ANT1	5200	NV	-30	-15	-2.884615	20	PASS
11N20	ANT1	5200	NV	-20	-45	-8.653846	20	PASS
11N20	ANT1	5200	NV	-10	-60	-11.538462	20	PASS
11N20	ANT1	5200	NV	0	-45	-8.653846	20	PASS
11N20	ANT1	5200	NV	10	-15	-2.884615	20	PASS

11N20	ANT1	5200	NV	20	-45	-8.653846	20	PASS
11N20	ANT1	5200	NV	30	-45	-8.653846	20	PASS
11N20	ANT1	5200	NV	40	-60	-11.538462	20	PASS
11N20	ANT1	5200	NV	50	-60	-11.538462	20	PASS
11N20	ANT1	5240	NV	-30	-45	-8.587786	20	PASS
11N20	ANT1	5240	NV	-20	-60	-11.450382	20	PASS
11N20	ANT1	5240	NV	-10	-60	-11.450382	20	PASS
11N20	ANT1	5240	NV	0	-60	-11.450382	20	PASS
11N20	ANT1	5240	NV	10	-60	-11.450382	20	PASS
11N20	ANT1	5240	NV	20	-60	-11.450382	20	PASS
11N20	ANT1	5240	NV	30	-45	-8.587786	20	PASS
11N20	ANT1	5240	NV	40	-45	-8.587786	20	PASS
11N20	ANT1	5240	NV	50	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	-30	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	-20	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	-10	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	0	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	10	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	20	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	30	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	40	-60	-11.450382	20	PASS
11N20	ANT2	5240	NV	50	-60	-11.450382	20	PASS
11N20	ANT1	5260	NV	-30	-60	-11.406844	20	PASS
11N20	ANT1	5260	NV	-20	-60	-11.406844	20	PASS
11N20	ANT1	5260	NV	-10	-60	-11.406844	20	PASS
11N20	ANT1	5260	NV	0	-60	-11.406844	20	PASS
11N20	ANT1	5260	NV	10	-45	-8.555133	20	PASS
11N20	ANT1	5260	NV	20	-45	-8.555133	20	PASS
11N20	ANT1	5260	NV	30	-45	-8.555133	20	PASS
11N20	ANT1	5260	NV	40	-60	-11.406844	20	PASS
11N20	ANT1	5260	NV	50	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	-30	0	0	20	PASS
11N20	ANT2	5260	NV	-20	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	-10	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	0	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	10	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	20	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	30	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	40	-60	-11.406844	20	PASS
11N20	ANT2	5260	NV	50	-60	-11.406844	20	PASS
11N20	ANT1	5280	NV	-30	-45	-8.522727	20	PASS

11N20	ANT1	5280	NV	-20	-45	-8.522727	20	PASS
11N20	ANT1	5280	NV	-10	-60	-11.363636	20	PASS
11N20	ANT1	5280	NV	0	-45	-8.522727	20	PASS
11N20	ANT1	5280	NV	10	-60	-11.363636	20	PASS
11N20	ANT1	5280	NV	20	-60	-11.363636	20	PASS
11N20	ANT1	5280	NV	30	-45	-8.522727	20	PASS
11N20	ANT1	5280	NV	40	-60	-11.363636	20	PASS
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11N20	ANT2	5580	NV	-30	0	0	20	PASS
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11N40	ANT2	5795	NV	0	0	0	20	PASS
11N40	ANT2	5795	NV	10	0	0	20	PASS
11N40	ANT2	5795	NV	20	-60	-10.353753	20	PASS
11N40	ANT2	5795	NV	30	-60	-10.353753	20	PASS
11N40	ANT2	5795	NV	40	0	0	20	PASS
11N40	ANT2	5795	NV	50	0	0	20	PASS
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11AC20	ANT1	5180	NV	-20	-60	-11.583012	20	PASS
11AC20	ANT1	5180	NV	-10	-15	-2.895753	20	PASS
11AC20	ANT1	5180	NV	0	-60	-11.583012	20	PASS
11AC20	ANT1	5180	NV	10	-45	-8.687259	20	PASS
11AC20	ANT1	5180	NV	20	-45	-8.687259	20	PASS
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11AC20	ANT2	5180	NV	-10	-60	-11.583012	20	PASS
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11AC20	ANT1	5200	NV	-20	-15	-2.884615	20	PASS
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11AC20	ANT1	5200	NV	40	-15	-2.884615	20	PASS
11AC20	ANT1	5200	NV	50	-45	-8.653846	20	PASS
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11AC20	ANT2	5200	NV	50	0	0	20	PASS
11AC20	ANT1	5240	NV	-30	-60	-11.450382	20	PASS
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11AC40	ANT1	5310	NV	50	-90	-16.949153	20	PASS
11AC40	ANT2	5310	NV	-30	-60	-11.299435	20	PASS
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11AC40	ANT2	5310	NV	20	-90	-16.949153	20	PASS
11AC40	ANT2	5310	NV	30	-60	-11.299435	20	PASS
11AC40	ANT2	5310	NV	40	-90	-16.949153	20	PASS
11AC40	ANT2	5310	NV	50	-90	-16.949153	20	PASS
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11AC80	ANT2	5210	NV	-10	-60	-11.516315	20	PASS
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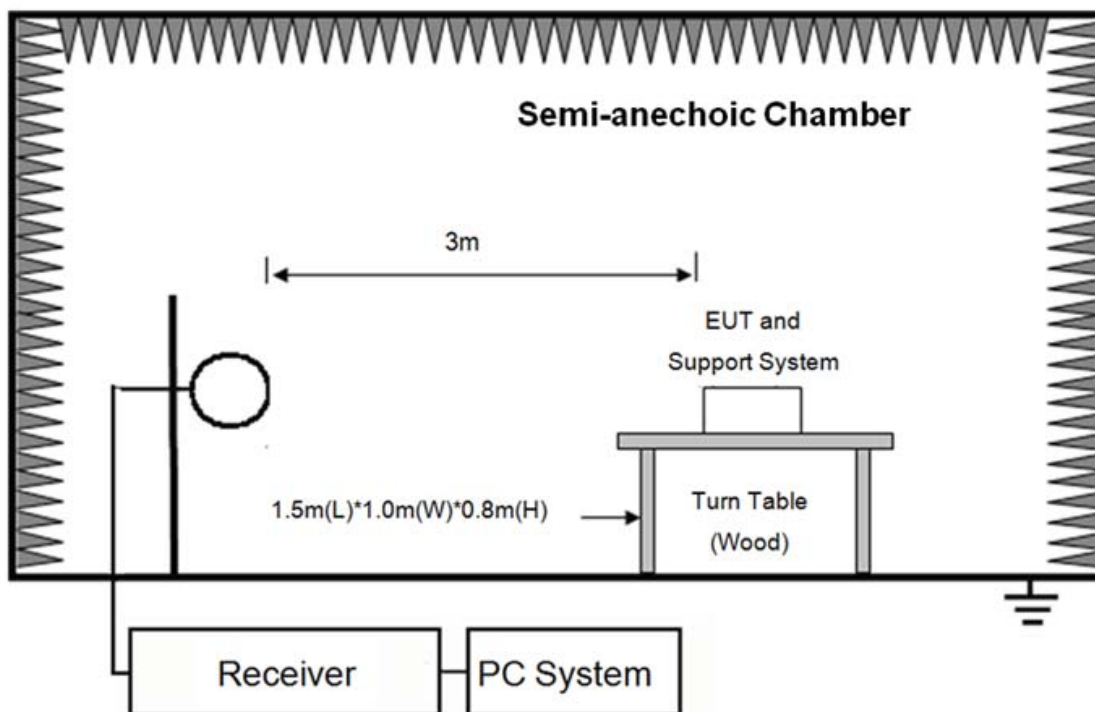
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11AC80	ANT1	5530	NV	50	-60	-10.84991	20	PASS
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11AC80	ANT2	5530	NV	40	-60	-10.84991	20	PASS
11AC80	ANT2	5530	NV	50	-60	-10.84991	20	PASS
11AC80	ANT1	5775	NV	-30	-60	-10.38961	20	PASS

11AC80	ANT1	5775	NV	-20	-60	-10.38961	20	PASS
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11AC80	ANT1	5775	NV	50	-60	-10.38961	20	PASS
11AC80	ANT2	5775	NV	-30	-60	-10.38961	20	PASS
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11AC80	ANT2	5775	NV	-10	-60	-10.38961	20	PASS
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11AC80	ANT2	5775	NV	10	-60	-10.38961	20	PASS
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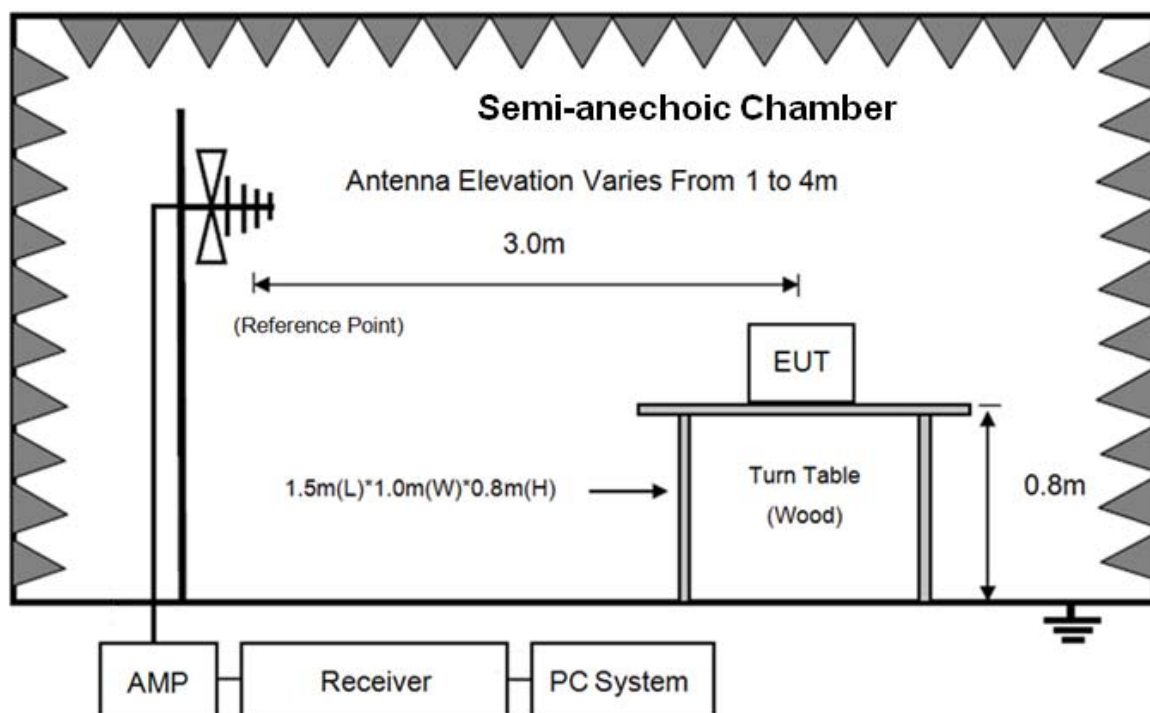
8. Emissions in restricted frequency bands

8.1. Block diagram of test setup

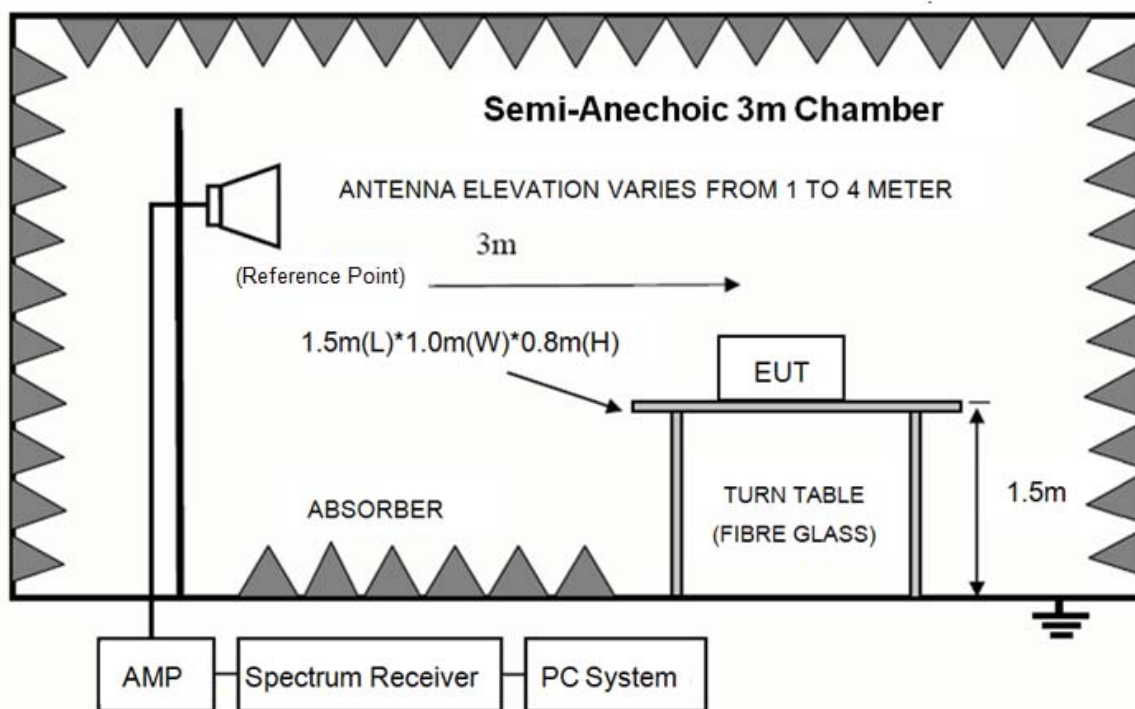
In 3m Anechoic Chamber Test Setup Diagram for 9kHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for 30MHz-1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

8.2. Limit

8.3.1 FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

8.3.2 FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	$2400/F(\text{kHz})$	$67.6-20\log(F)$
0.490 ~ 1.705	30	$24000/F(\text{kHz})$	$87.6-20\log(F)$
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V/m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V/m}) + 40\log(30\text{m}/3\text{m})$$

8.3.3 Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions or comply with 15.209 limits.

8.3. Test Procedure

- (1) EUT height should be 0.8m for below 1GHz at a semi - anechoic chamber while EUT height should be 1.5m for above 1GHz at full chamber or semi - anechoic chamber ground with absorbers
- (2) Setup EUT and assistant system according clause 2.3 and 8.2
- (3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test distance
9kHz-30MHz	Active Loop antenna	3m
30MHz-1GHz	Trilog Broadband Antenna	3m
1GHz-18GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3m
18GHz-40GHz	Horn Antenna(18GHz-40GHz)	1m

According ANSI C63.10:2013 clause 6.4.4.2 and 6.5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30MHz, the Trilog Broadband Antenna or Horn Antenna was located

3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9kHz to 40GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9kHz to 40GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9kHz to 30MHz and 18GHz to 40GHz, so below final test was performed with frequency range from 30MHz to 18GHz.

(5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(6) The emissions from 9kHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90kHz, 110-490kHz, for emissions from 9kHz-90kHz, 110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9kHz to 1GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9kHz-150kHz	200Hz
150kHz-30MHz	9kHz
30MHz-1GHz	120kHz

(8) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz, Peak detector for Peak measure, RMS detector for AV value

8.4. Test result

PASS. (See below detailed test result)

All the emissions except fundamental emission from 9kHz to 40GHz were comply with 15.209 limit.

Note1: According exploratory test no any obvious emission was detected from 9kHz to 30MHz and 18GHz to 40GHz, so the final test was performed with frequency range from 30MHz to 18GHz and recorded in below.

Note2: For emissions below 1GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1GHz, the final test was only performed with EUT working in 11a mode.

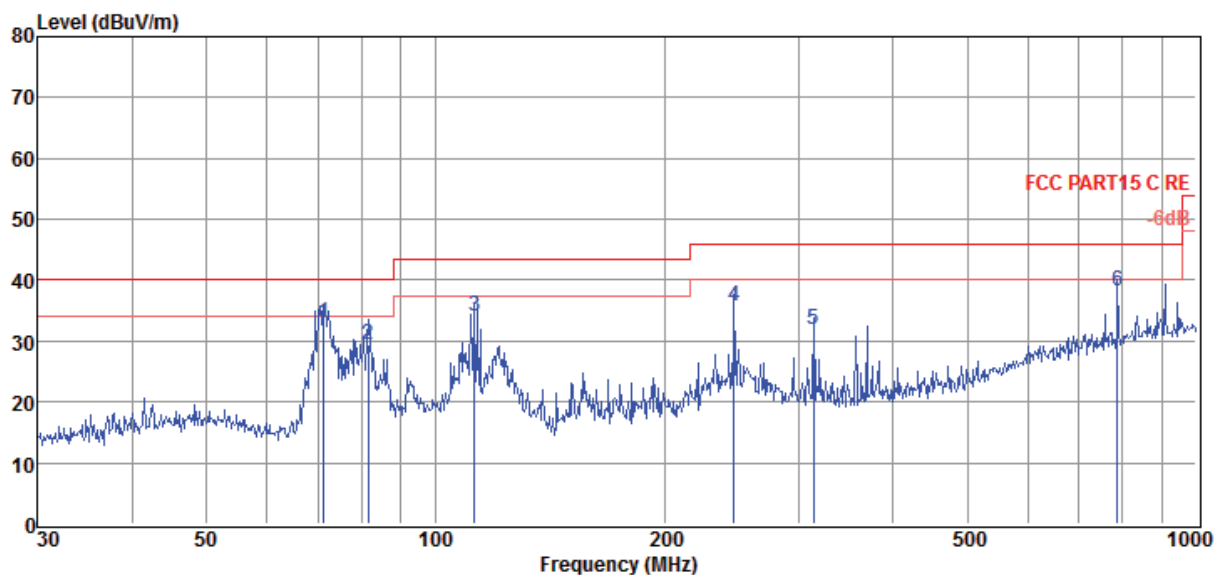
Note3: For below test data, when the limit tabular marked "/" means this frequency point is the fundamental emission and no need comply with this limit.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1# **D:\2018 RE1# Report Data\Q18061110-1E\RE.EM6**
Test Date : 2018-07-12 **Tested By** : Michael
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR **Model Number** : ENCHANT 1300
Power Supply : AC 120V/60Hz **Test Mode** : Tx Mode
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa **Antenna/Distance** : 2017 VULB 9163 1#/3m/HORIZONTAL
Memo :

Data: 3



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	71.33	19.72	8.97	4.19	32.88	40.00	-7.12	QP	HORIZONTAL
2	81.50	17.27	7.88	4.26	29.41	40.00	-10.59	QP	HORIZONTAL
3	112.52	19.43	10.01	4.51	33.95	43.50	-9.55	QP	HORIZONTAL
4	246.82	18.00	12.43	5.28	35.71	46.00	-10.29	QP	HORIZONTAL
5	314.38	12.69	13.61	5.59	31.89	46.00	-14.11	QP	HORIZONTAL
6	787.85	9.70	21.12	7.28	38.10	46.00	-7.90	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

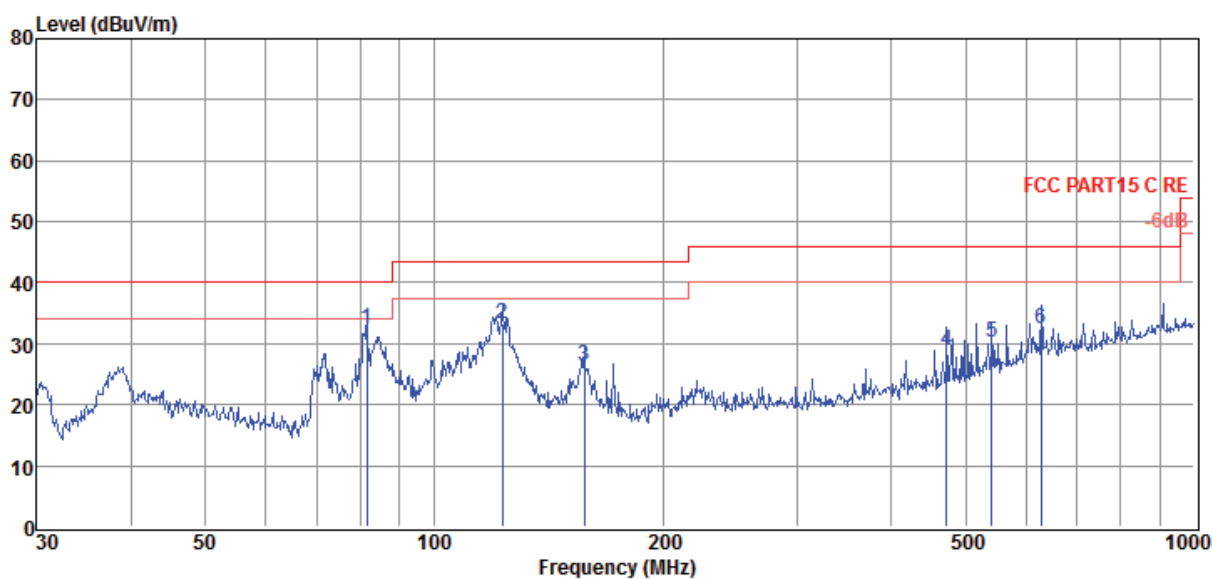
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1# **D:\2018 RE1# Report Data\Q18061110-1E\RE.EM6**
Test Date : 2018-07-12 **Tested By** : Michael
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR **Model Number** : ENCHANT 1300
Power Supply : AC 120V/60Hz **Test Mode** : Tx Mode
Condition : Temp:24.5°C, Humi:55.5%,
 Press:100.1kPa **Antenna/Distance** : 2017 VULB 9163 1#/3m/VERTICAL
Memo :

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	81.50	20.43	7.88	4.26	32.57	40.00	-7.43	QP	VERTICAL
2	122.83	19.83	8.93	4.59	33.35	43.50	-10.15	QP	VERTICAL
3	157.56	13.12	8.46	4.81	26.39	43.50	-17.11	QP	VERTICAL
4	472.18	6.37	16.91	5.48	28.76	46.00	-17.24	QP	VERTICAL
5	541.37	6.11	18.33	5.91	30.35	46.00	-15.65	QP	VERTICAL
6	629.48	6.09	19.49	6.78	32.36	46.00	-13.64	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor(dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH36									
4808.00	47.18	34.69	43.92	7.39	45.34	68.20	-22.86	Peak	HORIZONTAL
6423.00	44.67	35.70	43.33	8.26	45.30	68.20	-22.90	Peak	HORIZONTAL
7834.00	44.26	37.13	43.75	9.08	46.72	68.20	-21.48	Peak	HORIZONTAL
9500.00	46.52	37.70	44.25	10.63	50.60	68.20	-17.60	Peak	HORIZONTAL
11608.00	44.03	38.66	44.16	11.01	49.54	68.20	-18.66	Peak	HORIZONTAL
12832.00	45.25	39.13	44.31	11.29	51.36	68.20	-16.84	Peak	HORIZONTAL
5165.00	45.94	35.17	43.70	7.68	45.09	68.20	-23.11	Peak	VERTICAL
6831.00	45.09	36.43	43.45	8.31	46.38	68.20	-21.82	Peak	VERTICAL
8055.00	45.86	37.21	43.82	9.29	48.54	68.20	-19.66	Peak	VERTICAL
9262.00	44.95	37.60	44.18	10.51	48.88	68.20	-19.32	Peak	VERTICAL
11829.00	45.04	38.80	44.13	10.99	50.70	68.20	-17.50	Peak	VERTICAL
12934.00	43.85	39.23	44.33	11.32	50.07	68.20	-18.13	Peak	VERTICAL
11a CH40									
4468.00	46.99	34.09	44.12	7.05	44.01	68.20	-24.19	Peak	HORIZONTAL
6355.00	45.29	35.70	43.31	8.25	45.93	68.20	-22.27	Peak	HORIZONTAL
7511.00	44.20	37.00	43.65	8.79	46.34	68.20	-21.86	Peak	HORIZONTAL
9398.00	44.89	37.66	44.22	10.58	48.91	68.20	-19.29	Peak	HORIZONTAL
11778.00	43.81	38.77	44.13	10.99	49.44	68.20	-18.76	Peak	HORIZONTAL
13937.00	43.46	39.97	44.58	12.30	51.15	68.20	-17.05	Peak	HORIZONTAL
4604.00	46.96	34.37	44.04	7.18	44.47	68.20	-23.73	Peak	VERTICAL
5590.00	45.50	35.54	43.45	7.95	45.54	68.20	-22.66	Peak	VERTICAL
7018.00	45.06	36.81	43.51	8.35	46.71	68.20	-21.49	Peak	VERTICAL
8327.00	43.75	37.27	43.90	9.60	46.72	68.20	-21.48	Peak	VERTICAL
9313.00	44.19	37.63	44.19	10.53	48.16	68.20	-20.04	Peak	VERTICAL
11761.00	44.92	38.76	44.14	10.99	50.53	68.20	-17.67	Peak	VERTICAL
11a CH48									
6202.00	45.49	35.70	43.26	8.23	46.16	68.20	-22.04	Peak	HORIZONTAL
7222.00	44.63	36.89	43.57	8.53	46.48	68.20	-21.72	Peak	HORIZONTAL
8531.00	43.94	37.31	43.96	9.84	47.13	68.20	-21.07	Peak	HORIZONTAL
9585.00	46.38	37.78	44.28	10.67	50.55	68.20	-17.65	Peak	HORIZONTAL
11251.00	45.94	38.70	44.21	11.04	51.47	68.20	-16.73	Peak	HORIZONTAL
12509.00	43.57	38.81	44.23	11.16	49.31	68.20	-18.89	Peak	HORIZONTAL
13835.00	45.05	39.93	44.56	12.19	52.61	68.20	-15.59	Peak	HORIZONTAL
7035.00	44.77	36.81	43.51	8.36	46.43	68.20	-21.77	Peak	VERTICAL
8259.00	44.62	37.25	43.88	9.53	47.52	68.20	-20.68	Peak	VERTICAL
9653.00	46.27	37.85	44.30	10.71	50.53	68.20	-17.67	Peak	VERTICAL
12152.00	43.19	38.87	44.14	11.03	48.95	68.20	-19.25	Peak	VERTICAL
13172.00	44.31	39.47	44.39	11.52	50.91	68.20	-17.29	Peak	VERTICAL
Conclusion: Pass									
Note: -27 dBm/MHz Limit=95.2+EIRP[dBm]=95.2-27=68.2 dBμV/m For transmitters operating in the 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz-5725MHz, 5725MHz-5850MHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.									

Note:1. 30MHz~40GHz: (11a, 11n20, n40, 11ac20, 11ac40, 11ac80 mode ANT 1 ANT 2 mode all have been tested, only 11a ANT 2 mode is the worst case and reported.)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH52									
4808.00	46.57	34.69	43.92	7.39	44.73	68.20	-23.47	Peak	HORIZONTAL
6491.00	45.60	35.70	43.35	8.27	46.22	68.20	-21.98	Peak	HORIZONTAL
7698.00	44.02	37.08	43.71	8.96	46.35	68.20	-21.85	Peak	HORIZONTAL
9075.00	45.64	37.53	44.12	10.41	49.46	68.20	-18.74	Peak	HORIZONTAL
12186.00	44.88	38.86	44.15	11.04	50.63	68.20	-17.57	Peak	HORIZONTAL
13206.00	47.11	39.51	44.40	11.56	53.78	68.20	-14.42	Peak	HORIZONTAL
4978.00	48.10	34.96	43.81	7.56	46.81	68.20	-21.39	Peak	VERTICAL
6287.00	47.15	35.70	43.29	8.24	47.80	68.20	-20.40	Peak	VERTICAL
7562.00	45.46	37.02	43.67	8.84	47.65	68.20	-20.55	Peak	VERTICAL
8854.00	44.69	37.44	44.06	10.20	48.27	68.20	-19.93	Peak	VERTICAL
9823.00	45.65	38.02	44.35	10.80	50.12	68.20	-18.08	Peak	VERTICAL
12373.00	45.81	38.83	44.19	11.11	51.56	68.20	-16.64	Peak	VERTICAL
11a CH56									
4587.00	46.44	34.34	44.05	7.17	43.90	68.20	-24.30	Peak	HORIZONTAL
5964.00	46.48	35.69	43.22	8.19	47.14	68.20	-21.06	Peak	HORIZONTAL
7392.00	45.25	36.96	43.62	8.68	47.27	68.20	-20.93	Peak	HORIZONTAL
9466.00	45.61	37.69	44.24	10.61	49.67	68.20	-18.53	Peak	HORIZONTAL
11472.00	44.15	38.61	44.18	11.02	49.60	68.20	-18.60	Peak	HORIZONTAL
13291.00	45.30	39.59	44.42	11.64	52.11	68.20	-16.09	Peak	HORIZONTAL
4757.00	46.31	34.61	43.95	7.34	44.31	68.20	-23.89	Peak	VERTICAL
6236.00	45.11	35.70	43.27	8.24	45.78	68.20	-22.42	Peak	VERTICAL
7426.00	45.26	36.97	43.63	8.71	47.31	68.20	-20.89	Peak	VERTICAL
8378.00	44.70	37.28	43.91	9.66	47.73	68.20	-20.47	Peak	VERTICAL
9347.00	46.33	37.64	44.20	10.55	50.32	68.20	-17.88	Peak	VERTICAL
11795.00	44.55	38.78	44.13	10.99	50.19	68.20	-18.01	Peak	VERTICAL
11a CH64									
5080.00	47.15	35.08	43.75	7.63	46.11	68.20	-22.09	Peak	HORIZONTAL
6151.00	45.57	35.70	43.25	8.23	46.25	68.20	-21.95	Peak	HORIZONTAL
7443.00	45.46	36.98	43.63	8.73	47.54	68.20	-20.66	Peak	HORIZONTAL
9075.00	44.94	37.53	44.12	10.41	48.76	68.20	-19.44	Peak	HORIZONTAL
11999.00	44.95	38.90	44.10	10.97	50.72	68.20	-17.48	Peak	HORIZONTAL
13937.00	43.26	39.97	44.58	12.30	50.95	68.20	-17.25	Peak	HORIZONTAL
4723.00	46.42	34.56	43.97	7.30	44.31	68.20	-23.89	Peak	VERTICAL
5301.00	48.09	35.30	43.62	7.77	47.54	68.20	-20.66	Peak	VERTICAL
6916.00	45.20	36.62	43.47	8.32	46.67	68.20	-21.53	Peak	VERTICAL
8378.00	44.85	37.28	43.91	9.66	47.88	68.20	-20.32	Peak	VERTICAL
9347.00	44.54	37.64	44.20	10.55	48.53	68.20	-19.67	Peak	VERTICAL
10384.00	46.93	38.43	44.34	10.96	51.98	68.20	-16.22	Peak	VERTICAL
Conclusion: Pass									
Note: -27 dBm/MHz Limit= $95.2 + \text{EIRP}[\text{dBm}] = 95.2 - 27 = 68.2 \text{ dB}\mu\text{V/m}$ For transmitters operating in the 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz-5725MHz, 5725MHz-5850MHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz .									

Note:1. 30MHz~40GHz: (11a, 11n20, n40, 11ac20, 11ac40, 11ac80 mode ANT 1 ANT 2 mode all have been tested, only 11a ANT 2 mode is the worst case and reported.)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH110									
4247.00	47.65	33.34	44.25	6.83	43.57	68.20	-24.63	Peak	HORIZONTAL
7307.00	45.03	36.92	43.59	8.61	46.97	68.20	-21.23	Peak	HORIZONTAL
8939.00	44.99	37.48	44.08	10.30	48.69	68.20	-19.51	Peak	HORIZONTAL
10180.00	46.56	38.31	44.37	10.92	51.42	68.20	-16.78	Peak	HORIZONTAL
12424.00	44.09	38.82	44.21	11.13	49.83	68.20	-18.37	Peak	HORIZONTAL
13767.00	42.56	39.91	44.54	12.12	50.05	68.20	-18.15	Peak	HORIZONTAL
4128.00	46.62	32.94	44.32	6.71	41.95	68.20	-26.25	Peak	VERTICAL
6661.00	46.00	36.05	43.40	8.29	46.94	68.20	-21.26	Peak	VERTICAL
8939.00	44.47	37.48	44.08	10.30	48.17	68.20	-20.03	Peak	VERTICAL
10554.00	46.38	38.53	44.32	10.98	51.57	68.20	-16.63	Peak	VERTICAL
12509.00	43.10	38.81	44.23	11.16	48.84	68.20	-19.36	Peak	VERTICAL
14736.00	42.31	41.55	44.34	12.74	52.26	68.20	-15.94	Peak	VERTICAL
11a CH116									
6066.00	46.09	35.70	43.22	8.22	46.79	68.20	-21.41	Peak	HORIZONTAL
7477.00	44.45	36.99	43.64	8.76	46.56	68.20	-21.64	Peak	HORIZONTAL
8837.00	44.14	37.43	44.05	10.18	47.70	68.20	-20.50	Peak	HORIZONTAL
10367.00	46.90	38.42	44.34	10.95	51.93	68.20	-16.27	Peak	HORIZONTAL
11574.00	44.94	38.64	44.16	11.01	50.43	68.20	-17.77	Peak	HORIZONTAL
14447.00	42.20	41.34	44.44	12.59	51.69	68.20	-16.51	Peak	HORIZONTAL
4859.00	47.14	34.77	43.88	7.44	45.47	68.20	-22.73	Peak	VERTICAL
6525.00	45.20	35.76	43.36	8.27	45.87	68.20	-22.33	Peak	VERTICAL
7630.00	44.99	37.05	43.69	8.90	47.25	68.20	-20.95	Peak	VERTICAL
9296.00	44.19	37.62	44.19	10.52	48.14	68.20	-20.06	Peak	VERTICAL
11421.00	43.69	38.63	44.19	11.02	49.15	68.20	-19.05	Peak	VERTICAL
13393.00	44.17	39.69	44.45	11.75	51.16	68.20	-17.04	Peak	VERTICAL
11a CH140									
5556.00	47.59	35.52	43.47	7.93	47.57	68.20	-20.63	Peak	HORIZONTAL
6610.00	45.48	35.94	43.38	8.28	46.32	68.20	-21.88	Peak	HORIZONTAL
7783.00	43.99	37.11	43.73	9.03	46.40	68.20	-21.80	Peak	HORIZONTAL
9109.00	44.03	37.54	44.13	10.43	47.87	68.20	-20.33	Peak	HORIZONTAL
11285.00	44.34	38.69	44.21	11.03	49.85	68.20	-18.35	Peak	HORIZONTAL
12339.00	44.41	38.83	44.18	11.10	50.16	68.20	-18.04	Peak	HORIZONTAL
6474.00	44.80	35.70	43.34	8.27	45.43	68.20	-22.77	Peak	VERTICAL
8106.00	44.21	37.22	43.83	9.35	46.95	68.20	-21.25	Peak	VERTICAL
9041.00	44.50	37.52	44.11	10.39	48.30	68.20	-19.90	Peak	VERTICAL
12458.00	45.82	38.81	44.21	11.14	51.56	68.20	-16.64	Peak	VERTICAL
13478.00	44.46	39.78	44.47	11.83	51.60	68.20	-16.60	Peak	VERTICAL
14447.00	42.38	41.34	44.44	12.59	51.87	68.20	-16.33	Peak	VERTICAL
Conclusion: Pass									
Note: -27 dBm/MHz Limit=95.2+EIRP[dBm]=95.2-27=68.2 dBμV/m For transmitters operating in the 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz-5725MHz, 5725MHz-5850MHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.									

Note:1. 30MHz~40GHz: (11a, 11n20, n40, 11ac20, 11ac40, 11ac80 mode ANT 1 ANT 2 mode all have been tested, only 11a ANT 2 mode is the worst case and reported.)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor (dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11a CH149									
4213.00	47.30	33.22	44.27	6.79	43.04	68.20	-25.16	Peak	HORIZONTAL
5964.00	46.11	35.69	43.22	8.19	46.77	68.20	-21.43	Peak	HORIZONTAL
7732.00	44.98	37.09	43.72	8.99	47.34	68.20	-20.86	Peak	HORIZONTAL
9092.00	44.32	37.54	44.13	10.42	48.15	68.20	-20.05	Peak	HORIZONTAL
10248.00	47.12	38.35	44.36	10.93	52.04	68.20	-16.16	Peak	HORIZONTAL
12679.00	44.84	38.98	44.27	11.23	50.78	68.20	-17.42	Peak	HORIZONTAL
4009.00	48.84	32.53	44.39	6.59	43.57	68.20	-24.63	Peak	VERTICAL
6219.00	44.38	35.70	43.27	8.24	45.05	68.20	-23.15	Peak	VERTICAL
8650.00	44.48	37.36	43.99	9.97	47.82	68.20	-20.38	Peak	VERTICAL
10452.00	46.84	38.47	44.33	10.97	51.95	68.20	-16.25	Peak	VERTICAL
12747.00	45.40	39.05	44.29	11.25	51.41	68.20	-16.79	Peak	VERTICAL
14141.00	43.28	40.42	44.55	12.43	51.58	68.20	-16.62	Peak	VERTICAL
11a CH157									
4808.00	47.18	34.69	43.92	7.39	45.34	68.20	-22.86	Peak	HORIZONTAL
6423.00	44.67	35.70	43.33	8.26	45.30	68.20	-22.90	Peak	HORIZONTAL
7834.00	44.26	37.13	43.75	9.08	46.72	68.20	-21.48	Peak	HORIZONTAL
9500.00	46.52	37.70	44.25	10.63	50.60	68.20	-17.60	Peak	HORIZONTAL
11608.00	44.03	38.66	44.16	11.01	49.54	68.20	-18.66	Peak	HORIZONTAL
12832.00	45.25	39.13	44.31	11.29	51.36	68.20	-16.84	Peak	HORIZONTAL
5165.00	45.94	35.17	43.70	7.68	45.09	68.20	-23.11	Peak	VERTICAL
6831.00	45.09	36.43	43.45	8.31	46.38	68.20	-21.82	Peak	VERTICAL
8055.00	45.86	37.21	43.82	9.29	48.54	68.20	-19.66	Peak	VERTICAL
9262.00	44.95	37.60	44.18	10.51	48.88	68.20	-19.32	Peak	VERTICAL
11829.00	45.04	38.80	44.13	10.99	50.70	68.20	-17.50	Peak	VERTICAL
12934.00	43.85	39.23	44.33	11.32	50.07	68.20	-18.13	Peak	VERTICAL
11a CH165									
4468.00	46.99	34.09	44.12	7.05	44.01	68.20	-24.19	Peak	HORIZONTAL
6355.00	45.29	35.70	43.31	8.25	45.93	68.20	-22.27	Peak	HORIZONTAL
7511.00	44.20	37.00	43.65	8.79	46.34	68.20	-21.86	Peak	HORIZONTAL
9398.00	44.89	37.66	44.22	10.58	48.91	68.20	-19.29	Peak	HORIZONTAL
11778.00	43.81	38.77	44.13	10.99	49.44	68.20	-18.76	Peak	HORIZONTAL
13937.00	43.46	39.97	44.58	12.30	51.15	68.20	-17.05	Peak	HORIZONTAL
4604.00	46.96	34.37	44.04	7.18	44.47	68.20	-23.73	Peak	VERTICAL
5590.00	45.50	35.54	43.45	7.95	45.54	68.20	-22.66	Peak	VERTICAL
7018.00	45.06	36.81	43.51	8.35	46.71	68.20	-21.49	Peak	VERTICAL
8327.00	43.75	37.27	43.90	9.60	46.72	68.20	-21.48	Peak	VERTICAL
9313.00	44.19	37.63	44.19	10.53	48.16	68.20	-20.04	Peak	VERTICAL
11761.00	44.92	38.76	44.14	10.99	50.53	68.20	-17.67	Peak	VERTICAL
Conclusion: Pass									
Note: $-27 \text{ dBm/MHz Limit} = 95.2 + \text{EIRP}[\text{dBm}] = 95.2 - 27 = 68.2 \text{ dB}\mu\text{V/m}$ For transmitters operating in the 5150MHz-5250MHz, 5250MHz-5350MHz, 5470MHz-5725MHz, 5725MHz-5850MHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.									

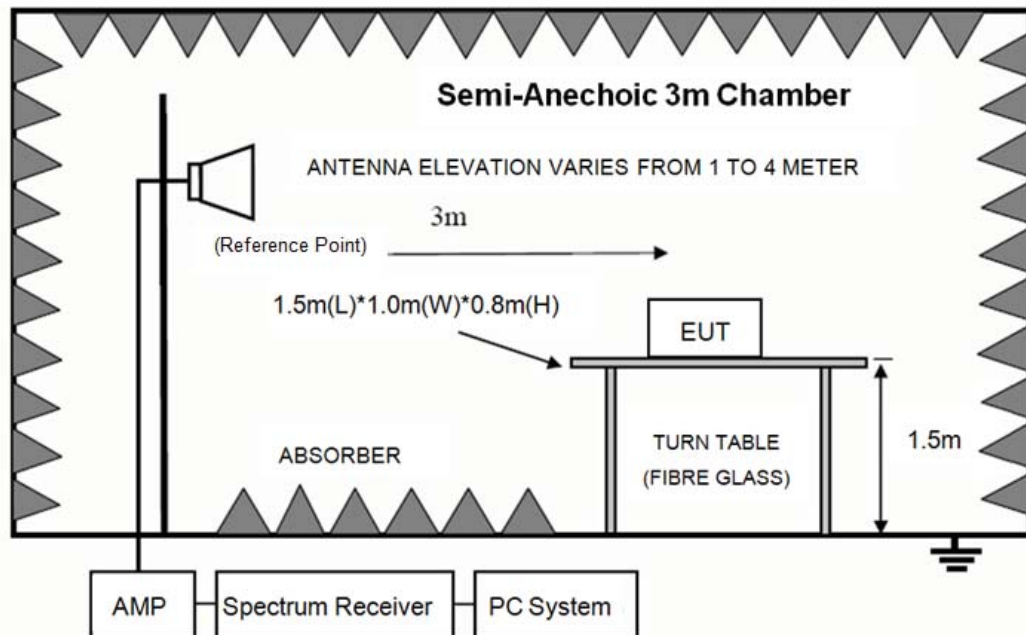
Note: 1. 30MHz~40GHz: (11a, 11n20, n40, 11ac20, 11ac40, 11ac80 mode ANT 1 ANT 2 mode all have been tested, only 11a ANT 2 mode is the worst case and reported.)

2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

9. Band Edge Compliance

9.1. Block diagram of test setup



9.2. Limit

For transmitters operating in the 5.15-5.25 GHz and 5.725-5.85 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

$$-27 \text{ dBm/MHz Limit} = 95.2 + \text{EIRP}[\text{dBm}] = 95.2 - 27 = 68.2 \text{ dB}\mu\text{V/m}$$

9.3. Test Procedure

Same with clause 8.3 except change investigated frequency range from 5.15-5.25GHz, 5250-5350GHz, 5470-5725GHz, 5.725-5.85GHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

9.4. Test result

PASS. (See below detailed test result)

Note1: As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)).

However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit

Note2: 11a, 11n20, n40, 11ac20, 11ac40, 11ac80 mode ANT 1 ANT 2 mode all have been tested, only 11a ANT 2 mode is the worst case and reported.

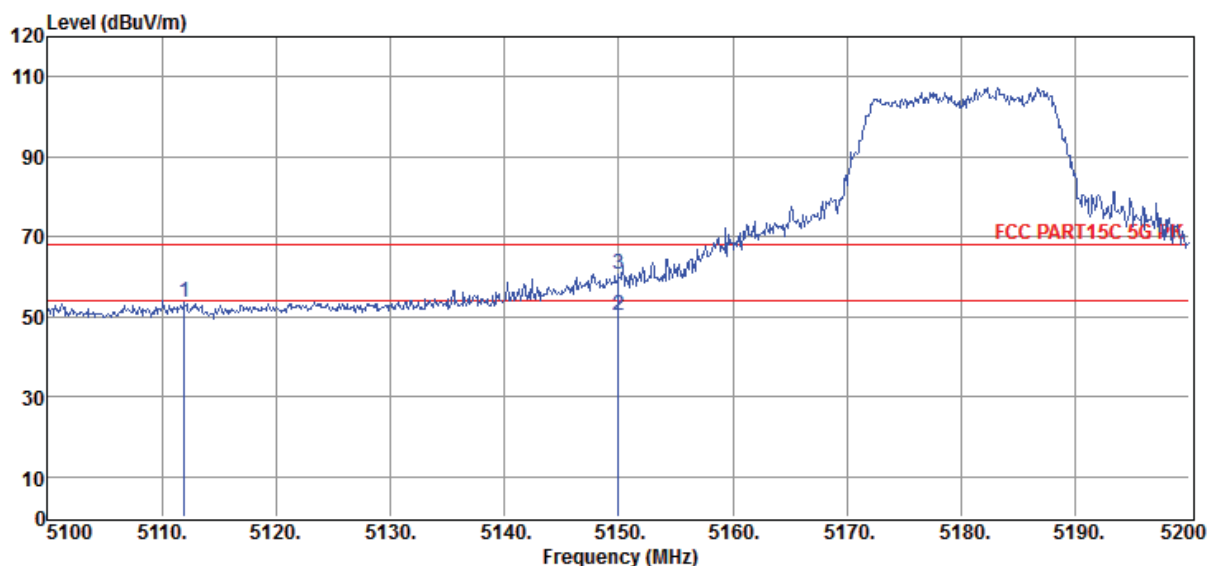
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5180MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 79



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5112.00	54.38	35.11	43.73	7.65	53.41	68.20	-14.79	Peak	HORIZONTAL
2	5150.00	51.00	35.15	43.71	7.67	50.11	54.00	-3.89	Average	HORIZONTAL
3	5150.00	61.43	35.15	43.71	7.67	60.54	68.20	-7.66	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

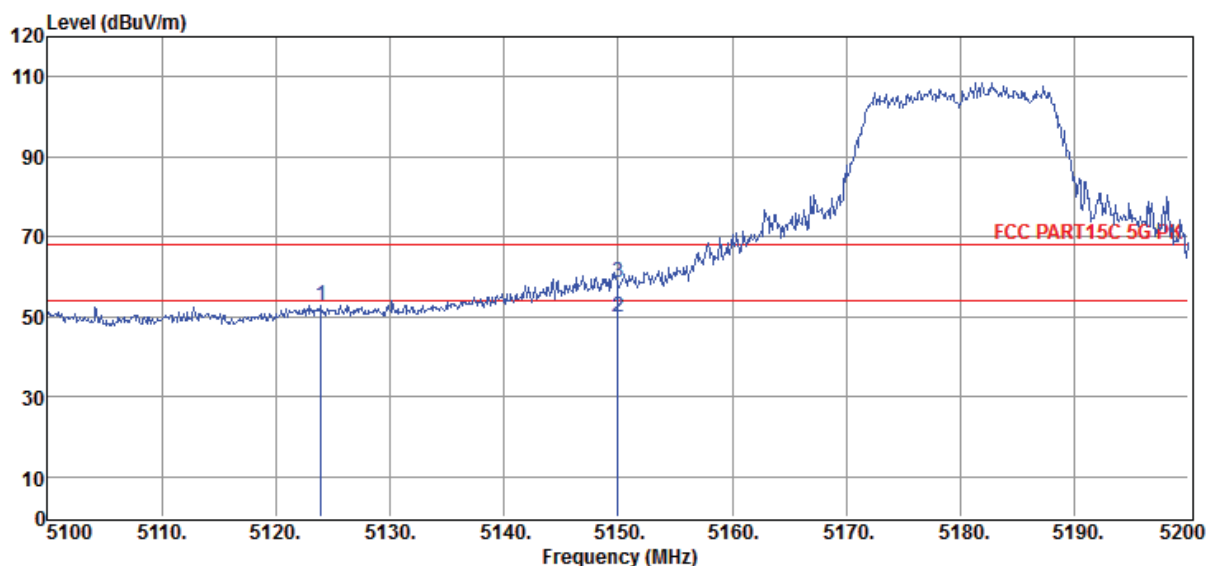
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5180MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 78



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5124.00	53.64	35.12	43.73	7.66	52.69	68.20	-15.51	Peak	VERTICAL
2	5150.00	50.70	35.15	43.71	7.67	49.81	54.00	-4.19	Average	VERTICAL
3	5150.00	59.40	35.15	43.71	7.67	58.51	68.20	-9.69	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

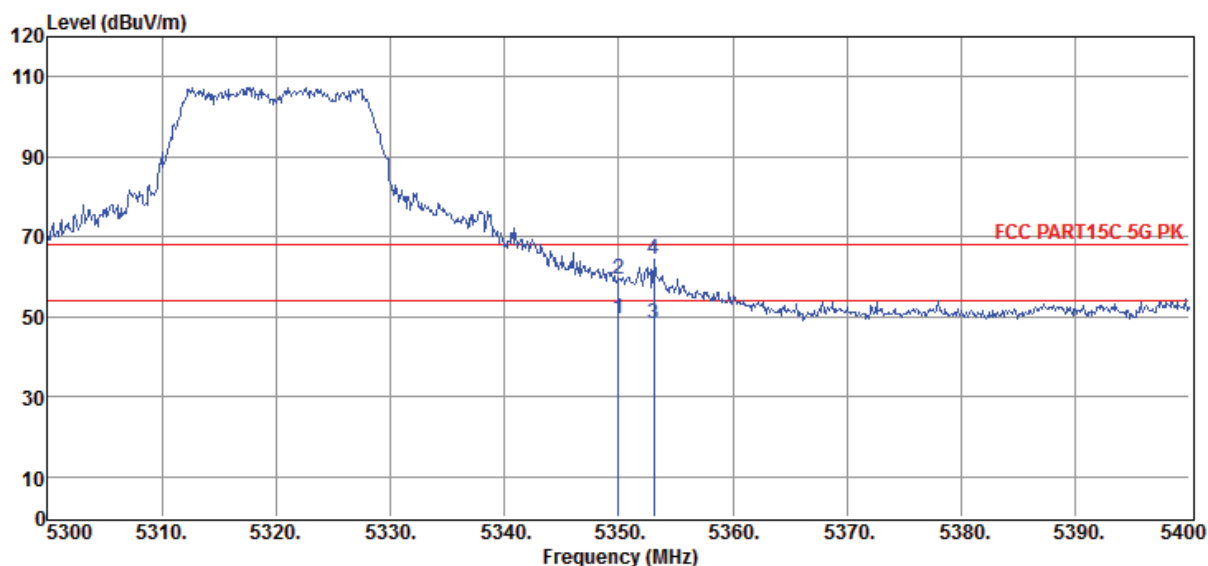
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5320MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 81



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	50.00	35.35	43.59	7.80	49.56	54.00	-4.44	Average	HORIZONTAL
2	5350.00	59.97	35.35	43.59	7.80	59.53	68.20	-8.67	Peak	HORIZONTAL
3	5353.10	48.51	35.35	43.59	7.80	48.07	54.00	-5.93	Average	HORIZONTAL
4	5353.10	64.88	35.35	43.59	7.80	64.44	68.20	-3.76	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

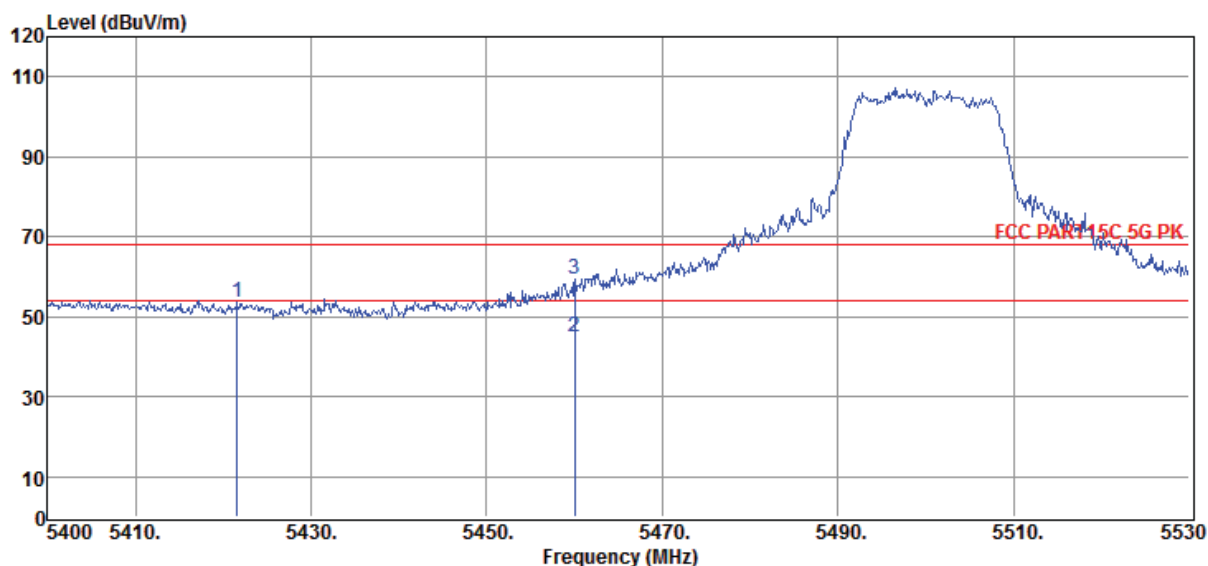
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5500MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 82



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5421.58	53.72	35.42	43.55	7.85	53.44	68.20	-14.76	Peak	VERTICAL
2	5460.00	45.00	35.46	43.52	7.87	44.81	54.00	-9.19	Average	VERTICAL
3	5460.00	59.51	35.46	43.52	7.87	59.32	68.20	-8.88	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

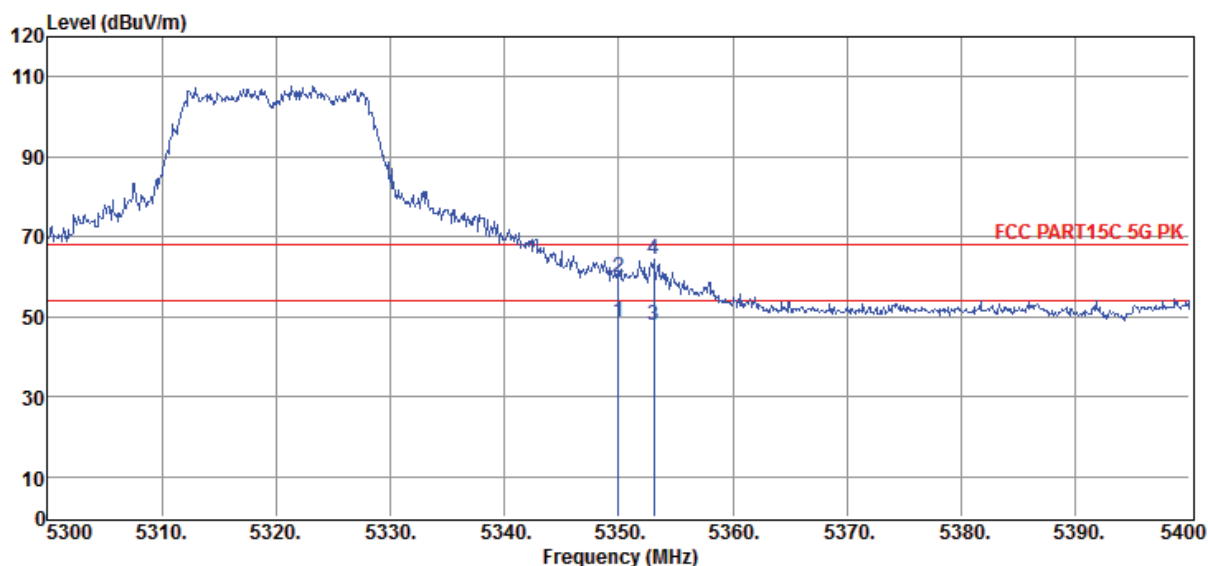
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C,Humi:55.5%, Press:100.1kPa
Memo : 11a 5320MHz POWER14

D:\2018 RE1# Report Data\Y20180604-1E Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

Data: 80



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	49.00	35.35	43.59	7.80	48.56	54.00	-5.44	Average	VERTICAL
2	5350.00	60.28	35.35	43.59	7.80	59.84	68.20	-8.36	Peak	VERTICAL
3	5353.10	48.37	35.35	43.59	7.80	47.93	54.00	-6.07	Average	VERTICAL
4	5353.10	64.78	35.35	43.59	7.80	64.34	68.20	-3.86	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

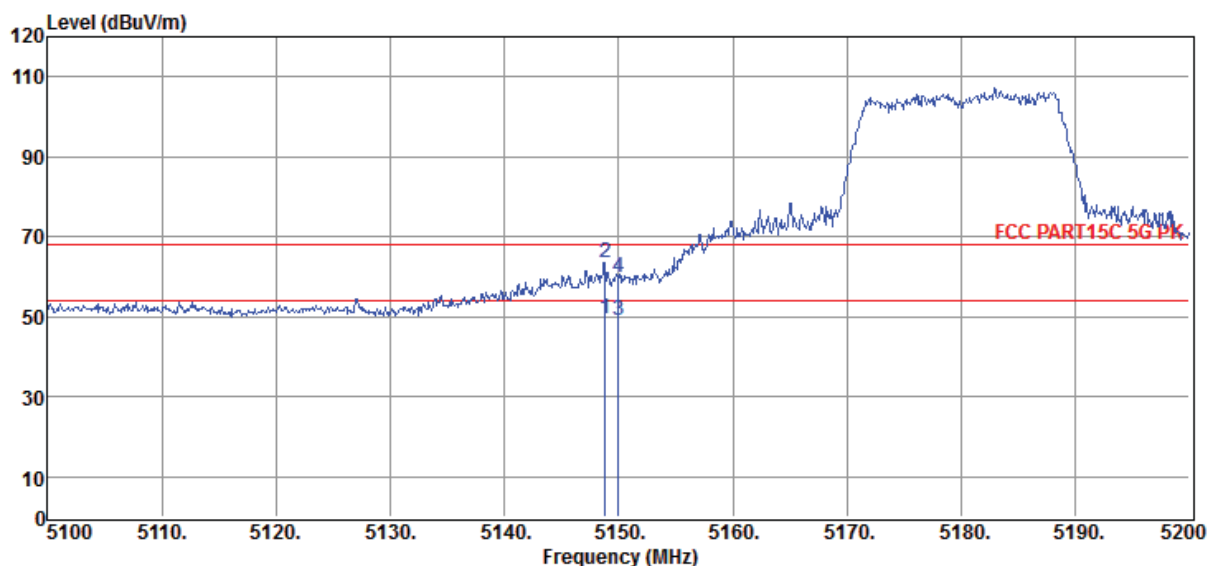
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5180MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 85



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5148.80	50.50	35.15	43.71	7.67	49.61	54.00	-4.39	Average	HORIZONTAL
2	5148.80	64.32	35.15	43.71	7.67	63.43	68.20	-4.77	Peak	HORIZONTAL
3	5150.00	50.00	35.15	43.71	7.67	49.11	54.00	-4.89	Average	HORIZONTAL
4	5150.00	60.71	35.15	43.71	7.67	59.82	68.20	-8.38	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

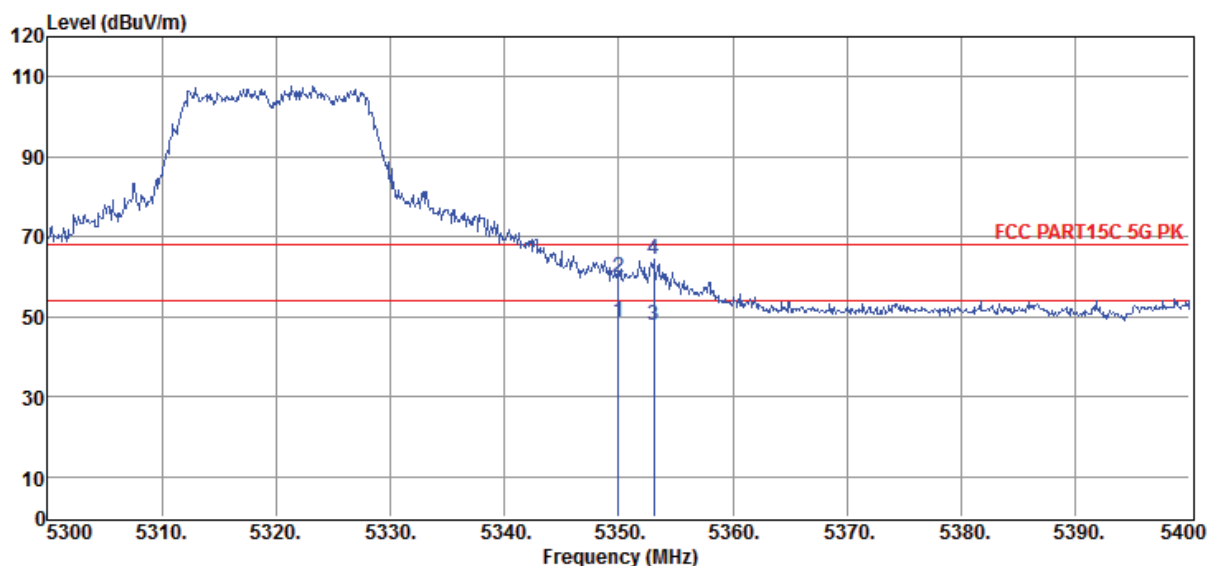
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5320MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 80



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	49.00	35.35	43.59	7.80	48.56	54.00	-5.44	Average	VERTICAL
2	5350.00	60.28	35.35	43.59	7.80	59.84	68.20	-8.36	Peak	VERTICAL
3	5353.10	48.37	35.35	43.59	7.80	47.93	54.00	-6.07	Average	VERTICAL
4	5353.10	64.78	35.35	43.59	7.80	64.34	68.20	-3.86	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

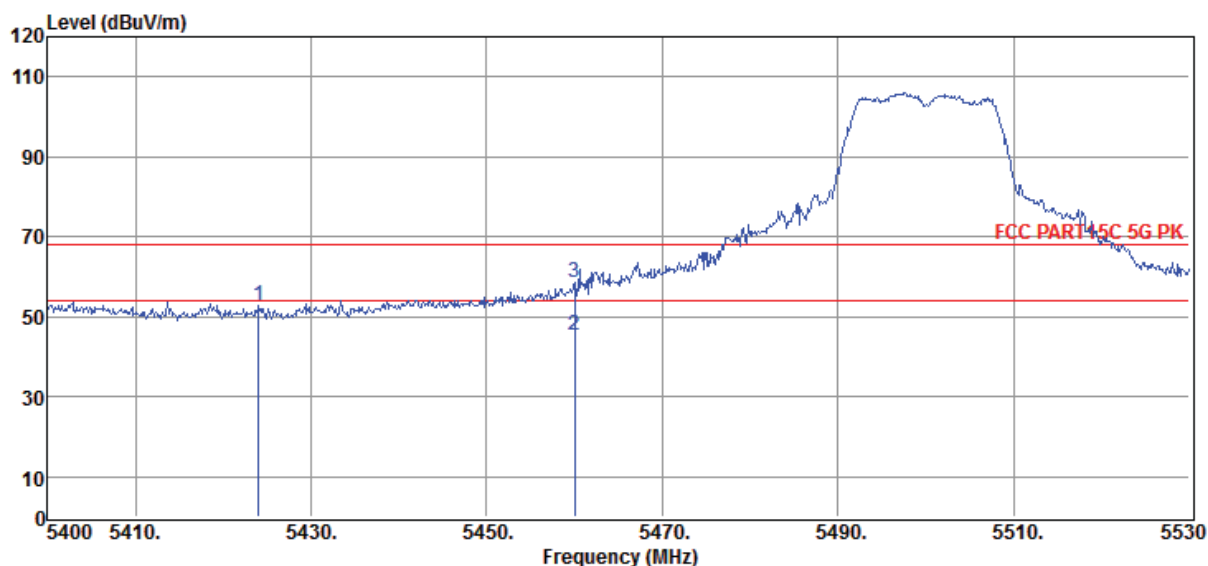
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11a 5500MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 83



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5424.05	53.16	35.42	43.55	7.85	52.88	68.20	-15.32	Peak	HORIZONTAL
2	5460.00	45.50	35.46	43.52	7.87	45.31	54.00	-8.69	Average	HORIZONTAL
3	5460.00	58.82	35.46	43.52	7.87	58.63	68.20	-9.57	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

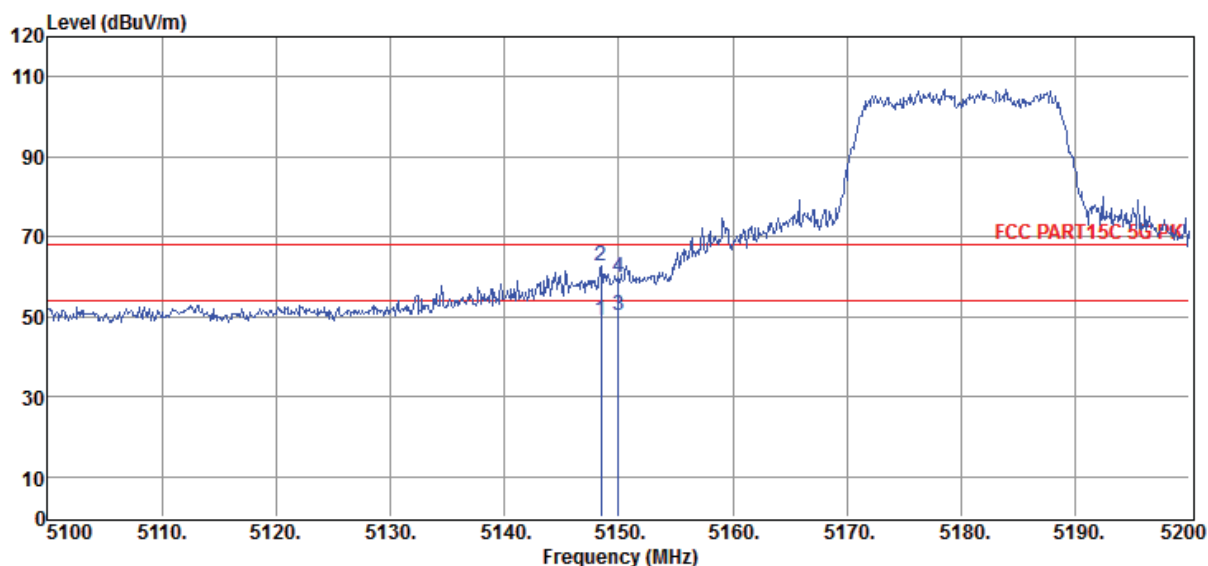
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5180MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 84



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5148.50	50.10	35.15	43.71	7.67	49.21	54.00	-4.79	Average	VERTICAL
2	5148.50	63.38	35.15	43.71	7.67	62.49	68.20	-5.71	Peak	VERTICAL
3	5150.00	51.00	35.15	43.71	7.67	50.11	54.00	-3.89	Average	VERTICAL
4	5150.00	60.78	35.15	43.71	7.67	59.89	68.20	-8.31	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

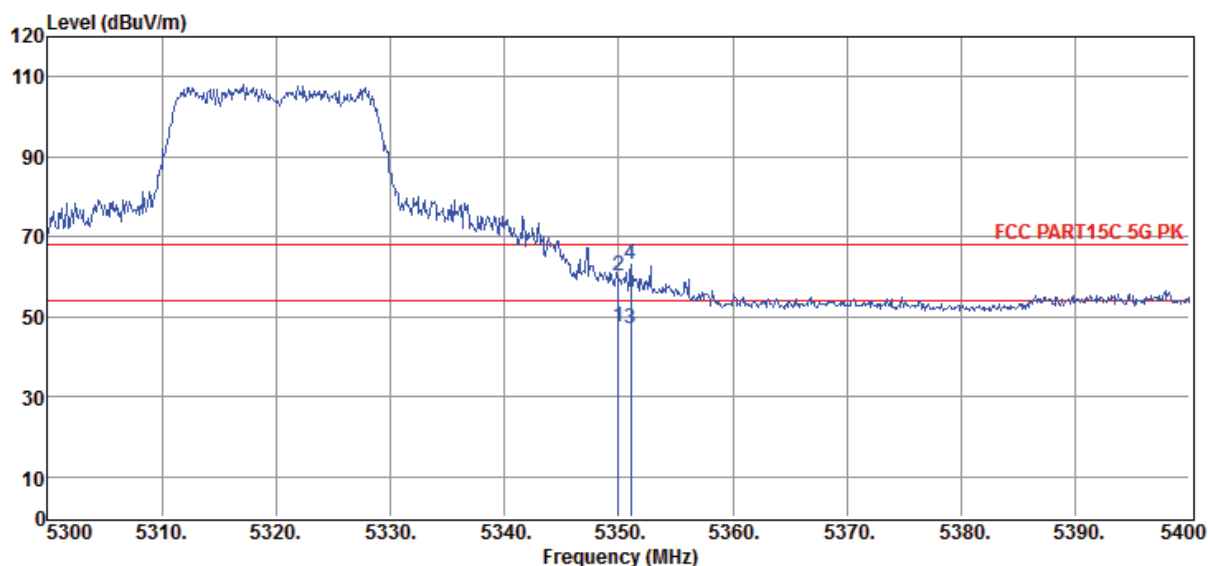
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5320MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 87



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	48.00	35.35	43.59	7.80	47.56	54.00	-6.44	Average	HORIZONTAL
2	5350.00	60.56	35.35	43.59	7.80	60.12	68.20	-8.08	Peak	HORIZONTAL
3	5351.10	47.50	35.35	43.59	7.80	47.06	54.00	-6.94	Average	HORIZONTAL
4	5351.10	63.44	35.35	43.59	7.80	63.00	68.20	-5.20	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

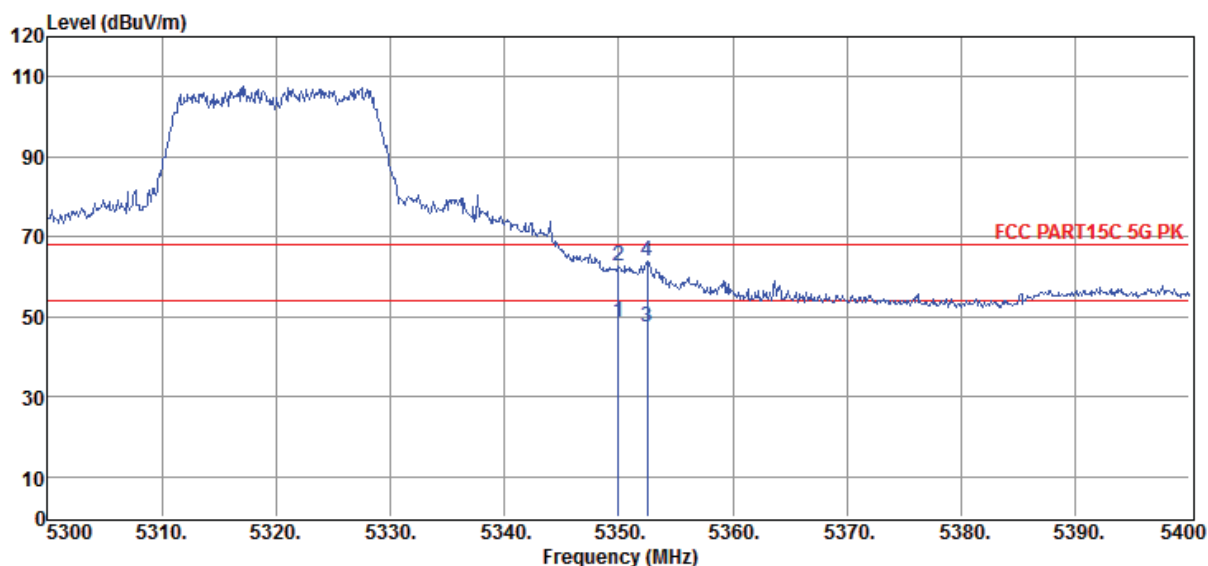
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5320MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 86



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	49.00	35.35	43.59	7.80	48.56	54.00	-5.44	Average	VERTICAL
2	5350.00	63.19	35.35	43.59	7.80	62.75	68.20	-5.45	Peak	VERTICAL
3	5352.50	48.02	35.35	43.59	7.80	47.58	54.00	-6.42	Average	VERTICAL
4	5352.50	64.16	35.35	43.59	7.80	63.72	68.20	-4.48	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

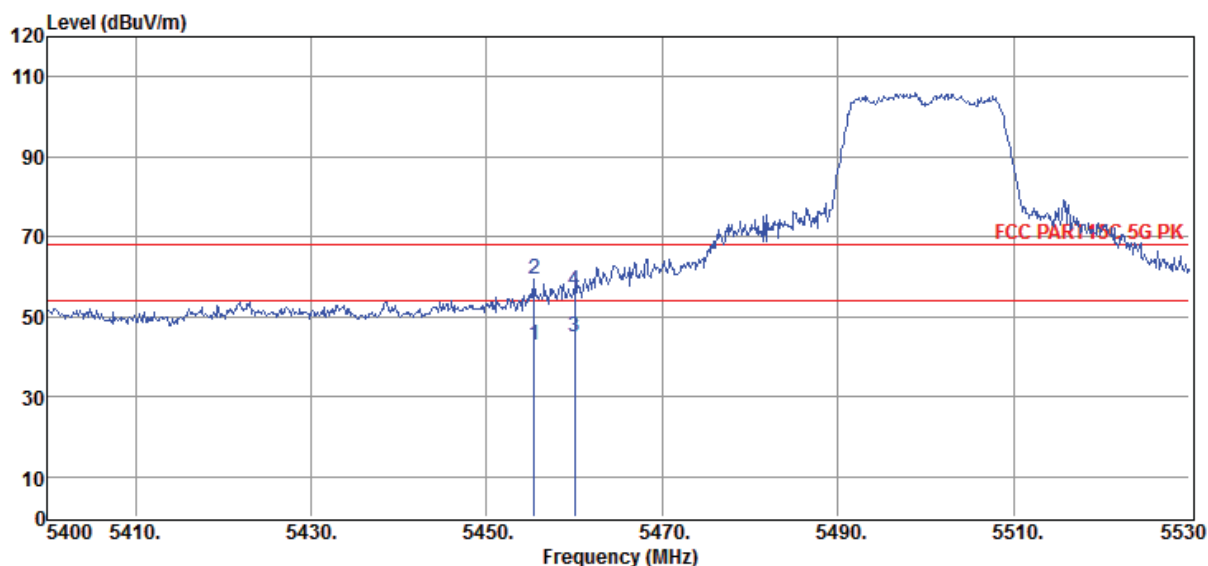
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5500MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 89



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5455.38	43.10	35.46	43.53	7.87	42.90	54.00	-11.10	Average	HORIZONTAL
2	5455.38	59.65	35.46	43.53	7.87	59.45	68.20	-8.75	Peak	HORIZONTAL
3	5460.00	45.00	35.46	43.52	7.87	44.81	54.00	-9.19	Average	HORIZONTAL
4	5460.00	56.70	35.46	43.52	7.87	56.51	68.20	-11.69	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

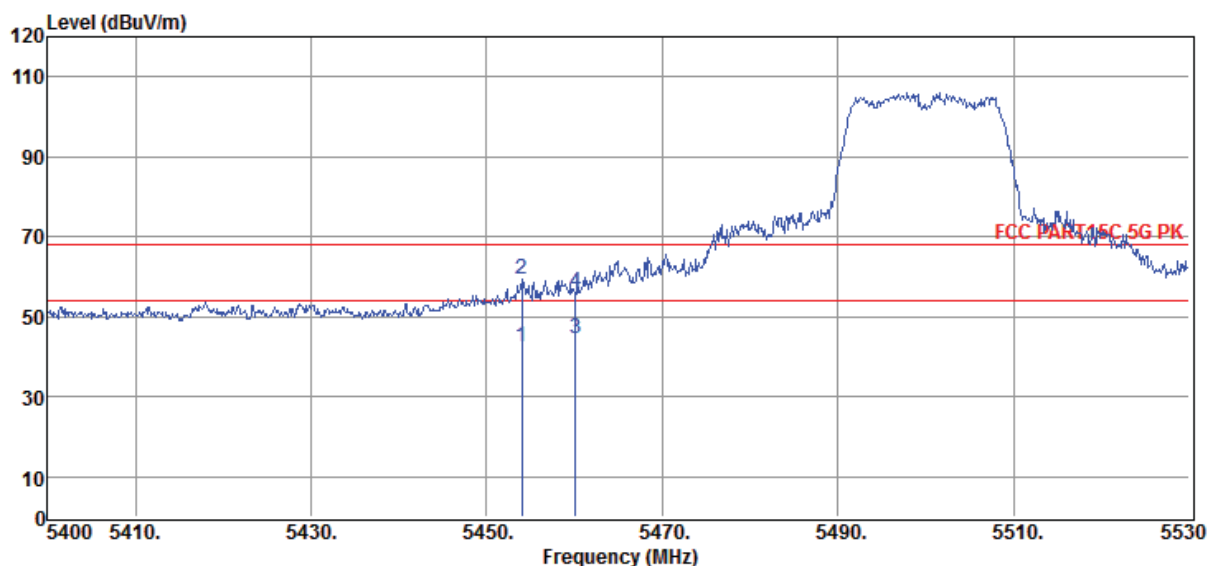
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac20 5500MHz

D:\2018 RE1# Report Data\Y20180604-1E Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

Data: 88



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5453.95	42.80	35.45	43.53	7.87	42.59	54.00	-11.41	Average	VERTICAL
2	5453.95	59.54	35.45	43.53	7.87	59.33	68.20	-8.87	Peak	VERTICAL
3	5460.06	44.80	35.46	43.52	7.87	44.61	54.00	-9.39	Average	VERTICAL
4	5460.06	56.16	35.46	43.52	7.87	55.97	68.20	-12.23	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

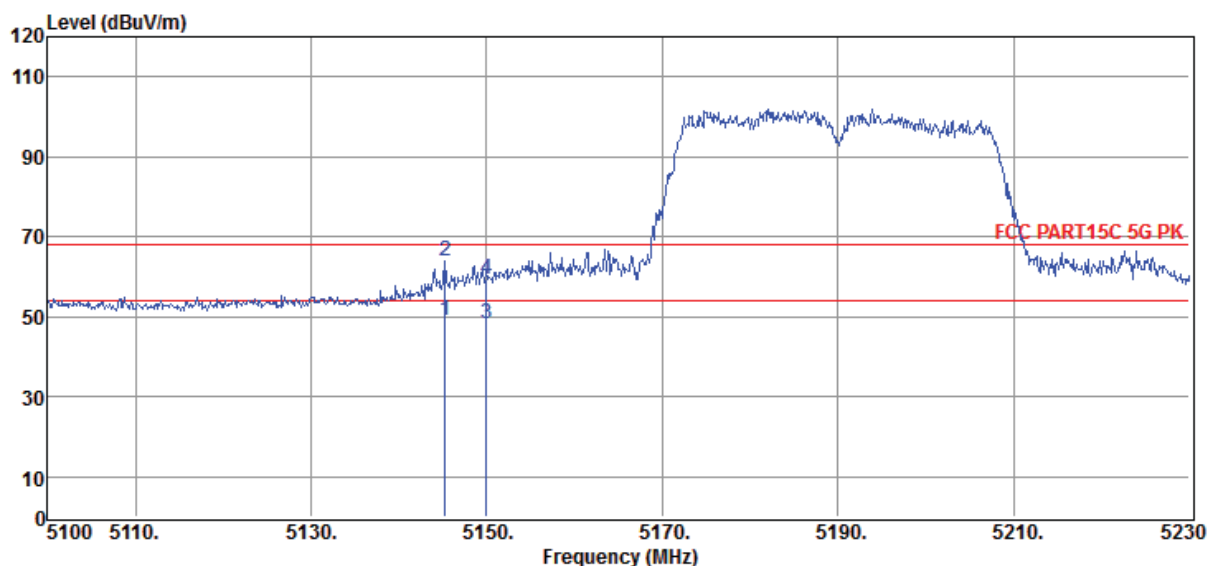
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5190MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 91



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5145.24	49.99	35.15	43.71	7.67	49.10	54.00	-4.90	Average	VERTICAL
2	5145.24	64.72	35.15	43.71	7.67	63.83	68.20	-4.37	Peak	VERTICAL
3	5150.00	49.00	35.15	43.71	7.67	48.11	54.00	-5.89	Average	VERTICAL
4	5150.00	60.24	35.15	43.71	7.67	59.35	68.20	-8.85	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

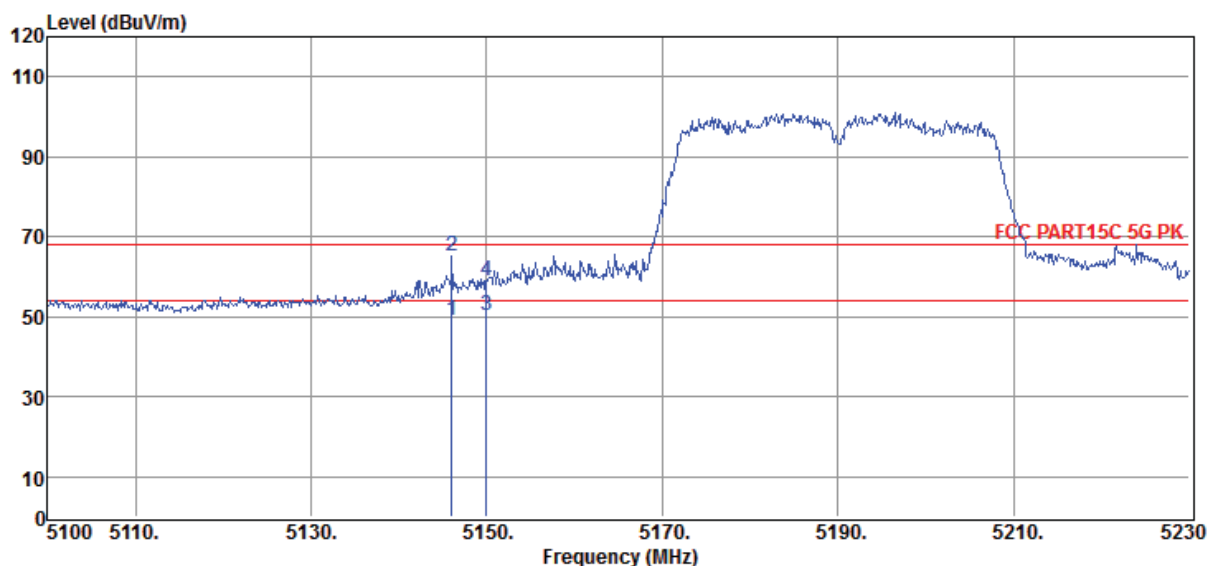
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-10
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5190MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 92



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5146.02	50.00	35.15	43.71	7.67	49.11	54.00	-4.89	Average	HORIZONTAL
2	5146.02	66.17	35.15	43.71	7.67	65.28	68.20	-2.92	Peak	HORIZONTAL
3	5150.00	51.00	35.15	43.71	7.67	50.11	54.00	-3.89	Average	HORIZONTAL
4	5150.00	59.75	35.15	43.71	7.67	58.86	68.20	-9.34	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

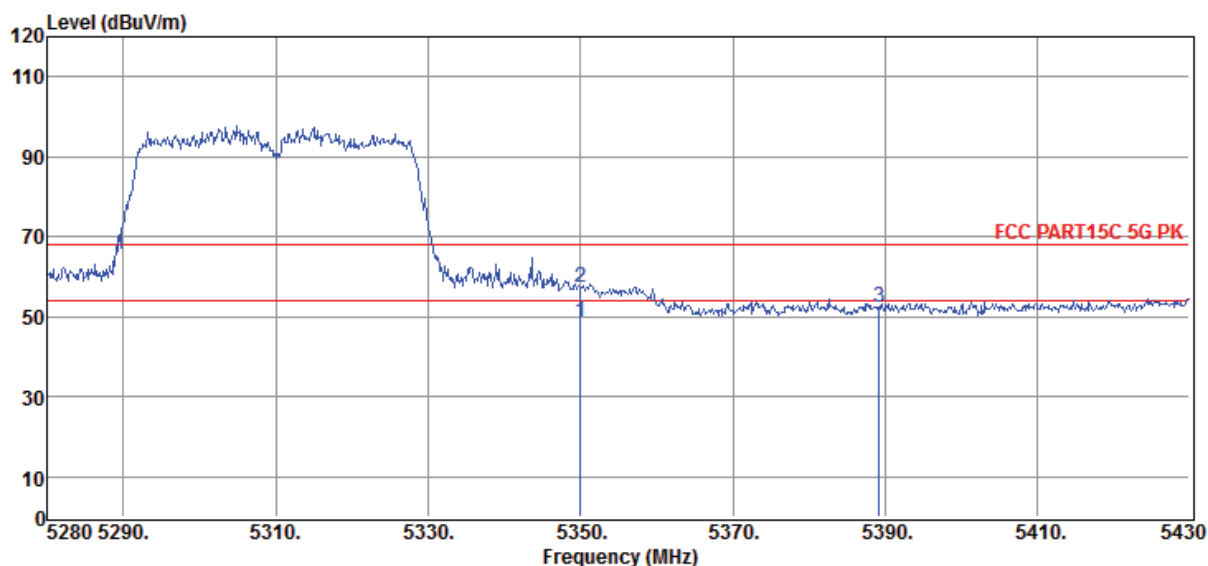
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-20
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5310

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

Data: 94



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	49.18	35.35	43.59	7.80	48.74	54.00	-5.26	Average	HORIZONTAL
2	5350.00	57.75	35.35	43.59	7.80	57.31	68.20	-10.89	Peak	HORIZONTAL
3	5389.20	52.83	35.39	43.57	7.83	52.48	68.20	-15.72	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

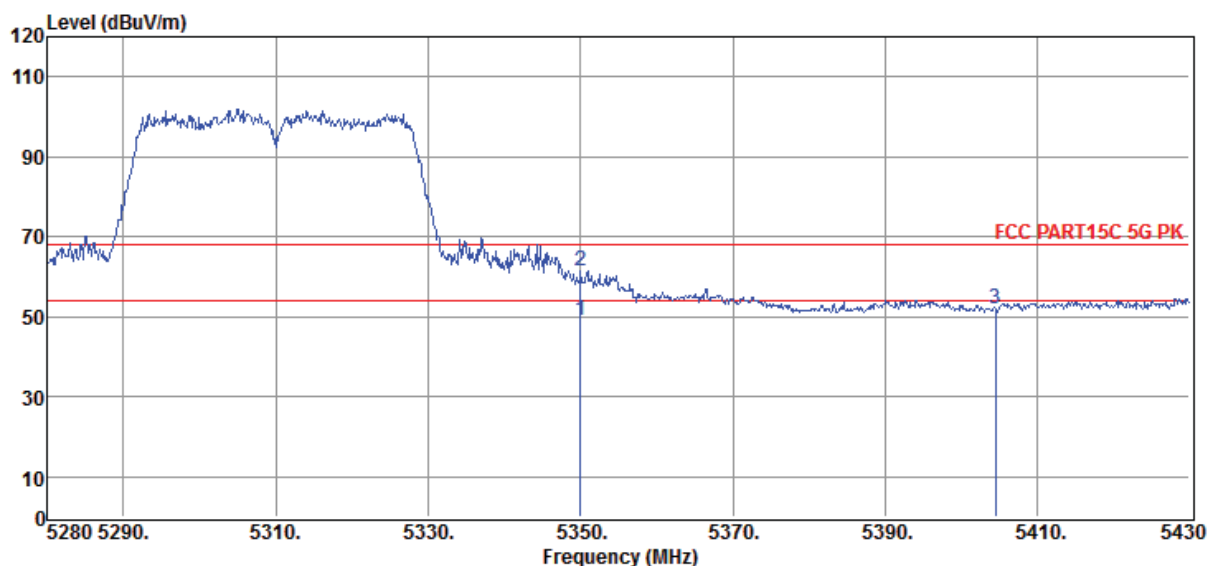
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-20
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5310

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 93



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.00	49.56	35.35	43.59	7.80	49.12	54.00	-4.88	Average	VERTICAL
2	5350.00	62.05	35.35	43.59	7.80	61.61	68.20	-6.59	Peak	VERTICAL
3	5404.50	52.24	35.40	43.56	7.83	51.91	68.20	-16.29	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

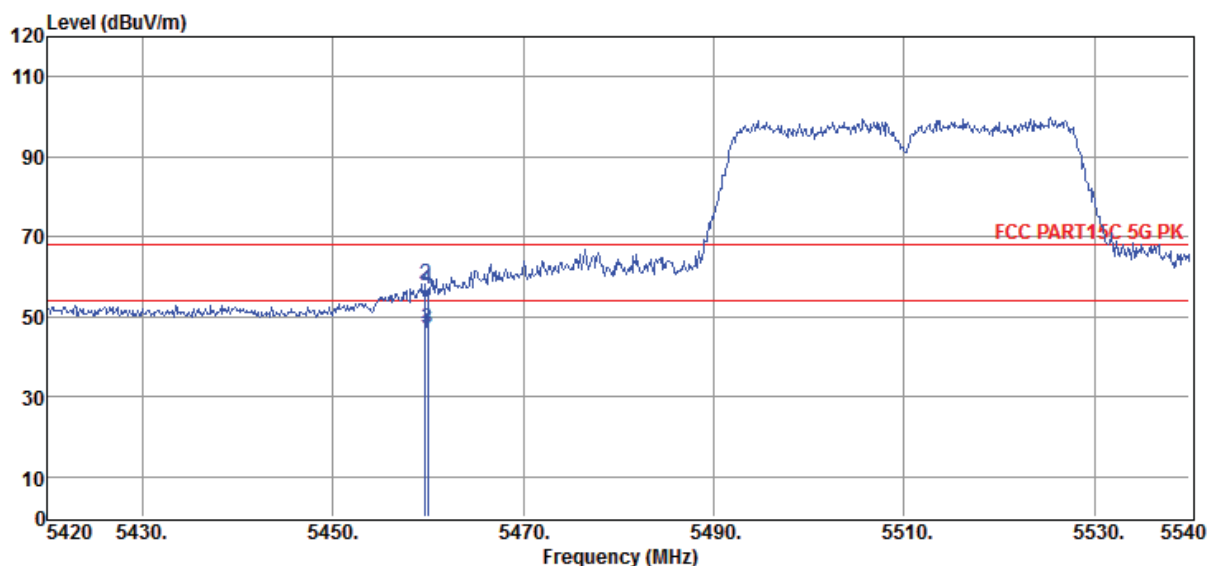
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5510MHz

D:\2018 RE1# Report Data\Y20180604-1E
Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

Data: 96



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5459.72	46.01	35.46	43.52	7.87	45.82	54.00	-8.18	Average	HORIZONTAL
2	5459.72	58.43	35.46	43.52	7.87	58.24	68.20	-9.96	Peak	HORIZONTAL
3	5460.00	47.00	35.46	43.52	7.87	46.81	54.00	-7.19	Average	HORIZONTAL
4	5460.00	56.92	35.46	43.52	7.87	56.73	68.20	-11.47	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

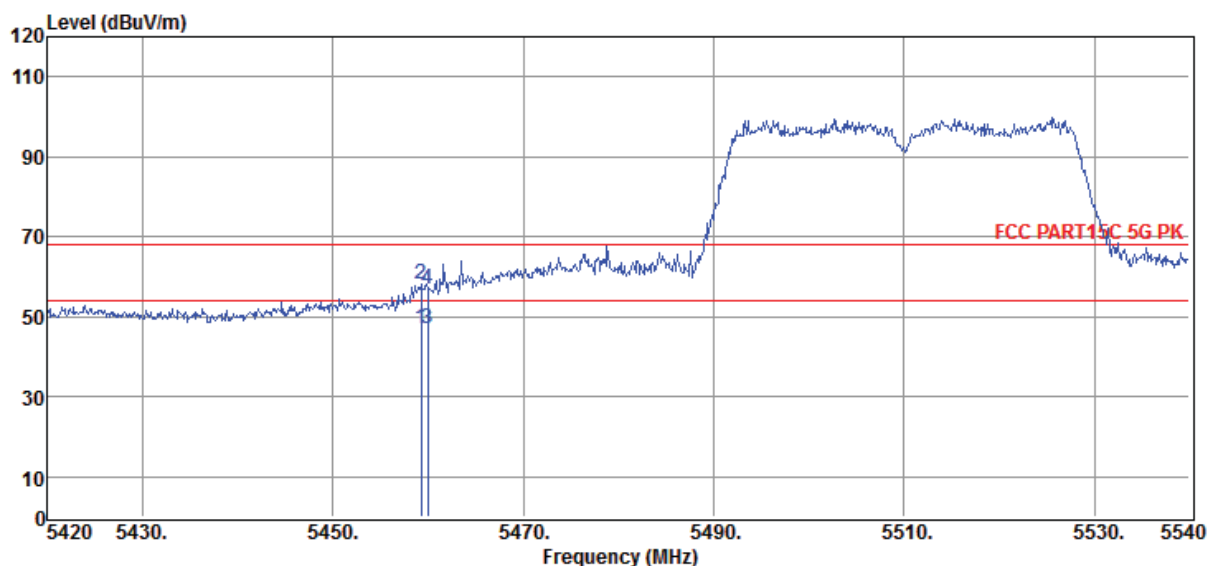
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac40 5510MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 95



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5459.24	47.19	35.46	43.52	7.87	47.00	54.00	-7.00	Average	VERTICAL
2	5459.24	58.31	35.46	43.52	7.87	58.12	68.20	-10.08	Peak	VERTICAL
3	5460.00	47.00	35.46	43.52	7.87	46.81	54.00	-7.19	Average	VERTICAL
4	5460.00	57.07	35.46	43.52	7.87	56.88	68.20	-11.32	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

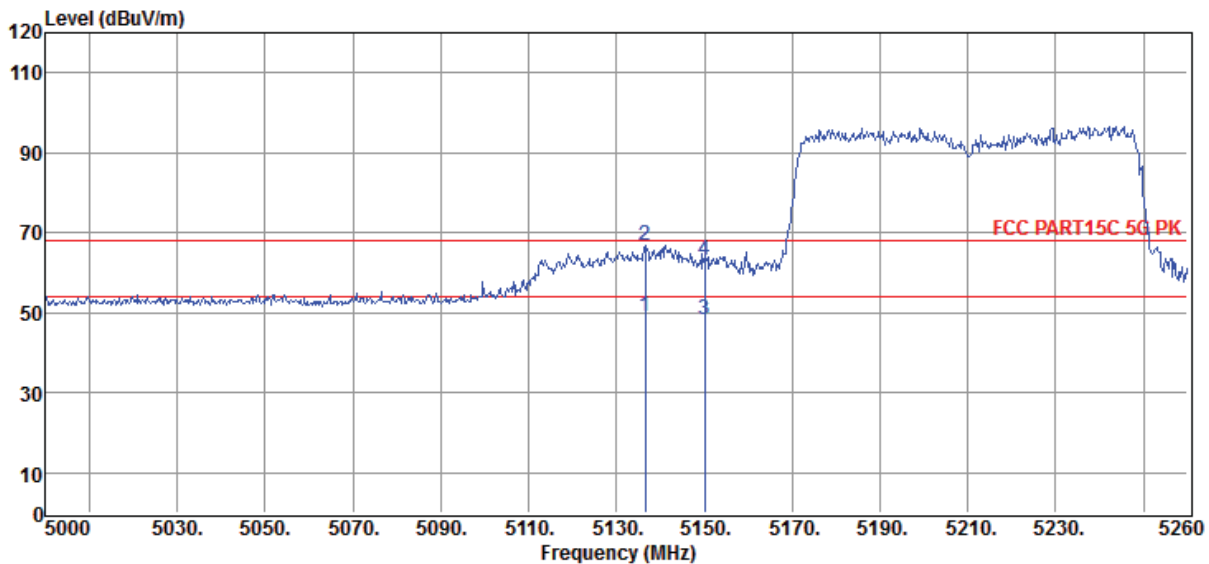
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5210MHz

D:\2018 RE1# Report Data\Y20180604-1E
Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

Data: 99



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5136.50	49.99	35.14	43.72	7.67	49.08	54.00	-4.92	Average	HORIZONTAL
2	5136.50	67.70	35.14	43.72	7.67	66.79	68.20	-1.41	Peak	HORIZONTAL
3	5150.00	49.00	35.15	43.71	7.67	48.11	54.00	-5.89	Average	HORIZONTAL
4	5150.00	64.06	35.15	43.71	7.67	63.17	68.20	-5.03	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

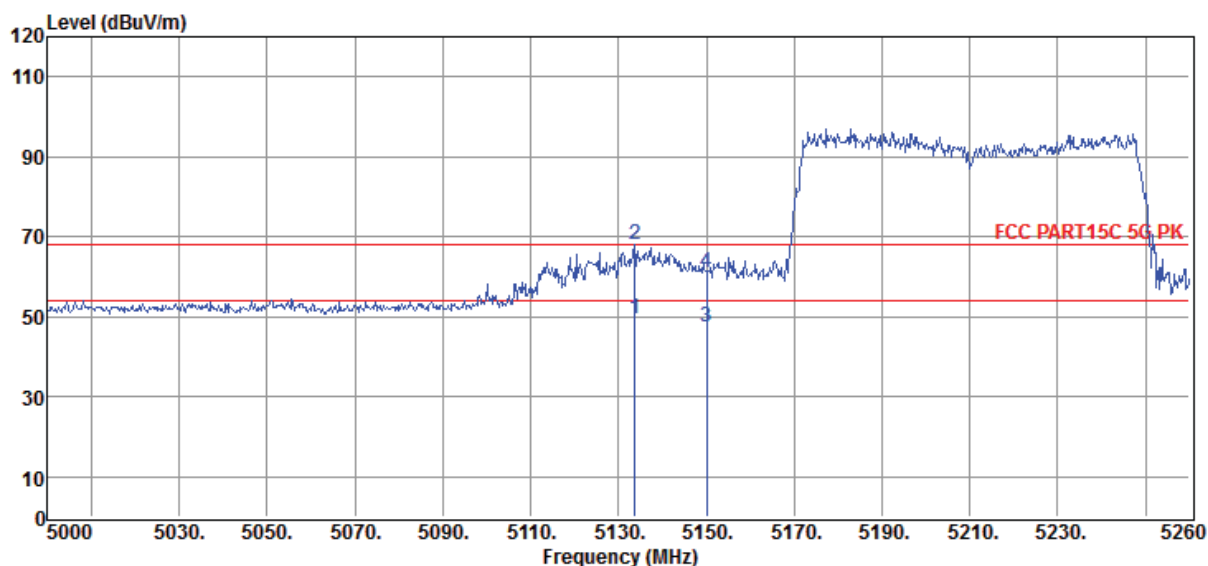
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5210MHz

D:\2018 RE1# Report Data\Y20180604-1E Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

Data: 98



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5133.64	50.51	35.13	43.72	7.66	49.58	54.00	-4.42	Average	VERTICAL
2	5133.64	68.98	35.13	43.72	7.66	68.05	68.20	-0.15	Peak	VERTICAL
3	5150.00	48.50	35.15	43.71	7.67	47.61	54.00	-6.39	Average	VERTICAL
4	5150.00	61.97	35.15	43.71	7.67	61.08	68.20	-7.12	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

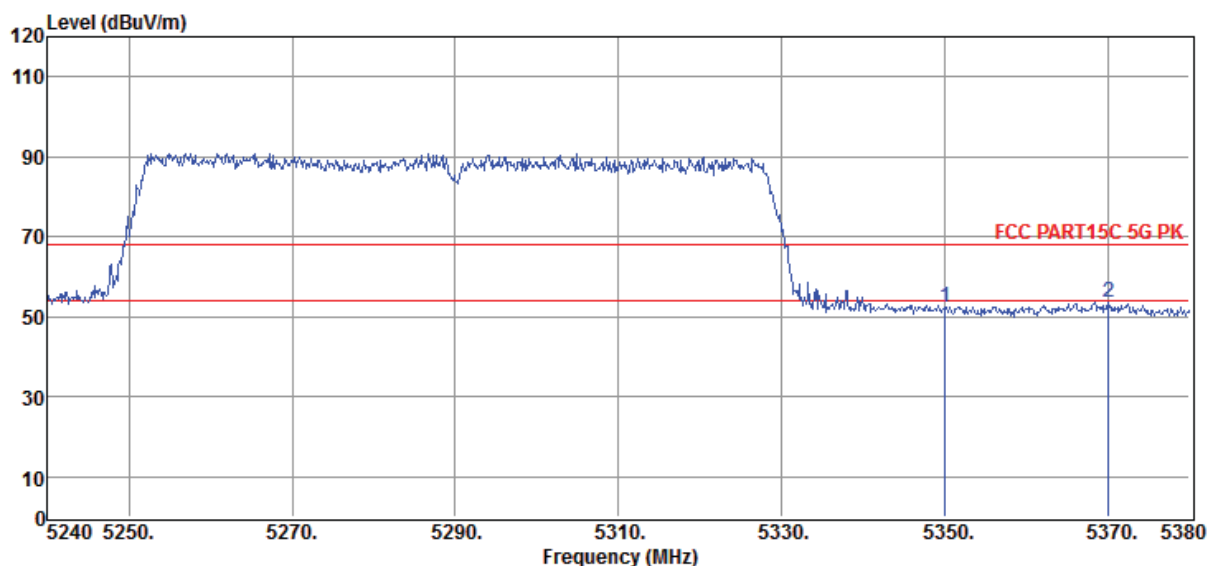
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-20
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5290MHz

D:\2018 RE1# Report Data\Y20180604-1E Enchant1300\RF.EM6
Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

Data: 100



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.04	52.93	35.35	43.59	7.80	52.49	68.20	-15.71	Peak	HORIZONTAL
2	5370.06	54.09	35.37	43.58	7.81	53.69	68.20	-14.51	Peak	HORIZONTAL

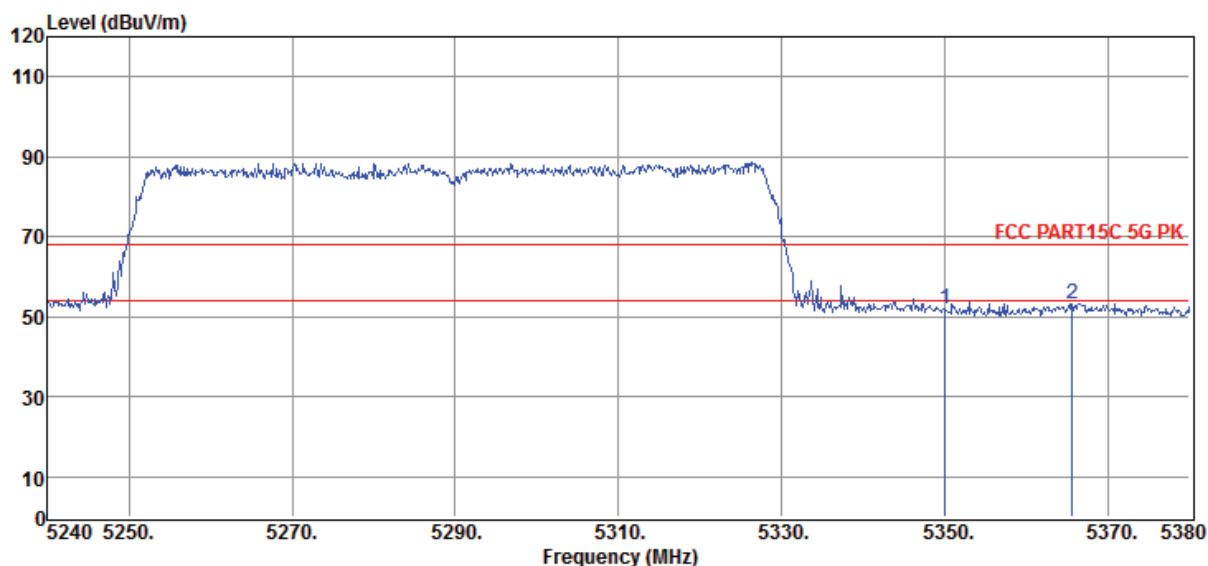
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-20
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5290MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

Data: 101



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5350.04	52.39	35.35	43.59	7.80	51.95	68.20	-16.25	Peak	VERTICAL
2	5365.58	53.73	35.37	43.58	7.81	53.33	68.20	-14.87	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

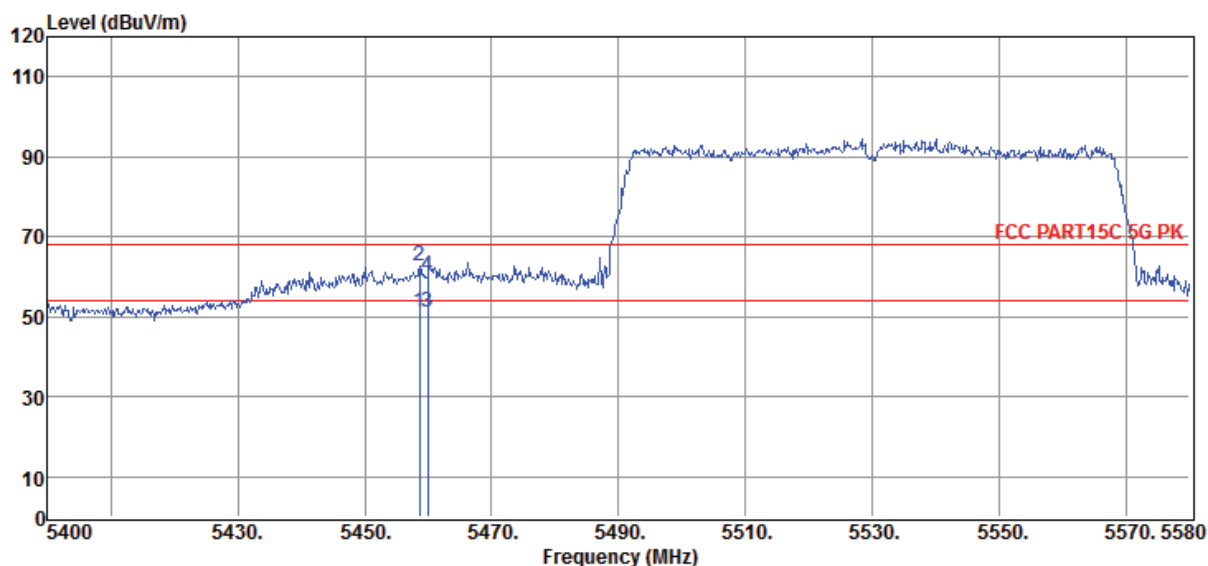
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5530MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/HORIZONTAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 102



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5458.68	51.29	35.46	43.52	7.87	51.10	54.00	-2.90	Average	HORIZONTAL
2	5458.68	63.02	35.46	43.52	7.87	62.83	68.20	-5.37	Peak	HORIZONTAL
3	5460.00	51.50	35.46	43.52	7.87	51.31	54.00	-2.69	Average	HORIZONTAL
4	5460.00	60.20	35.46	43.52	7.87	60.01	68.20	-8.19	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

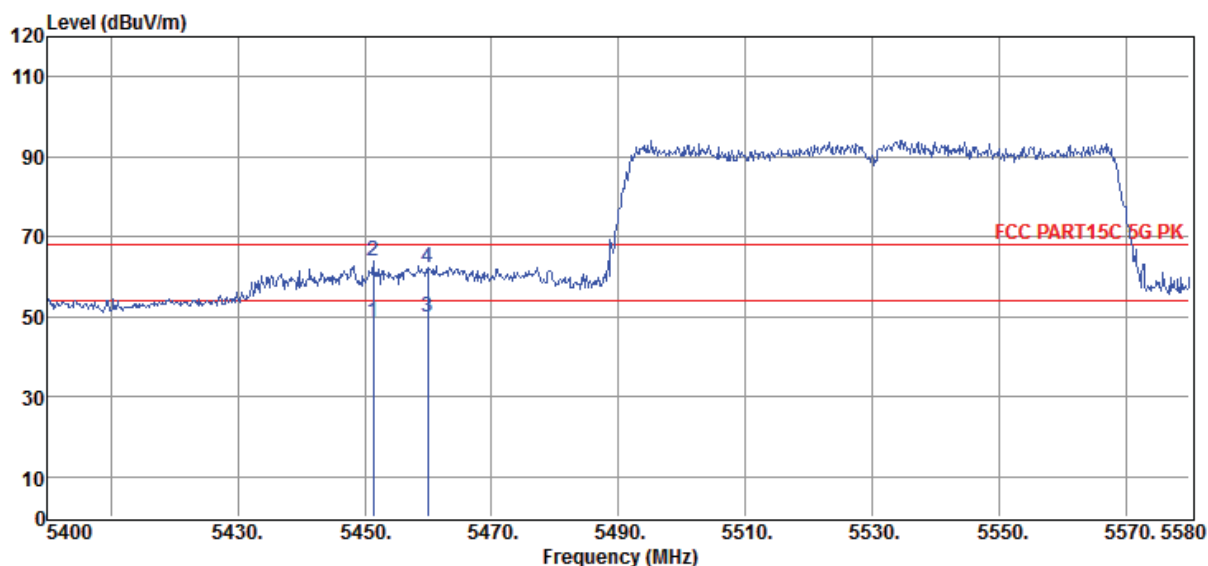
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 1#
Test Date : 2018-06-12
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR
Power Supply : AC 120V/60Hz
Condition : Temp:24.5'C, Humi:55.5%, Press:100.1kPa
Memo : 11ac80 5530MHz

Tested By : Sunny
Model Number : ENCHANT 1300
Test Mode : Tx mode
Antenna/Distance : 2017 HF907/3m/VERTICAL

D:\2018 RE1# Report Data\Y20180604-1E
 Enchant1300\RF.EM6

Data: 103



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	5451.30	49.01	35.45	43.53	7.86	48.79	54.00	-5.21	Average	VERTICAL
2	5451.30	63.95	35.45	43.53	7.86	63.73	68.20	-4.47	Peak	VERTICAL
3	5460.00	50.00	35.46	43.52	7.87	49.81	54.00	-4.19	Average	VERTICAL
4	5460.00	62.28	35.46	43.52	7.87	62.09	68.20	-6.11	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

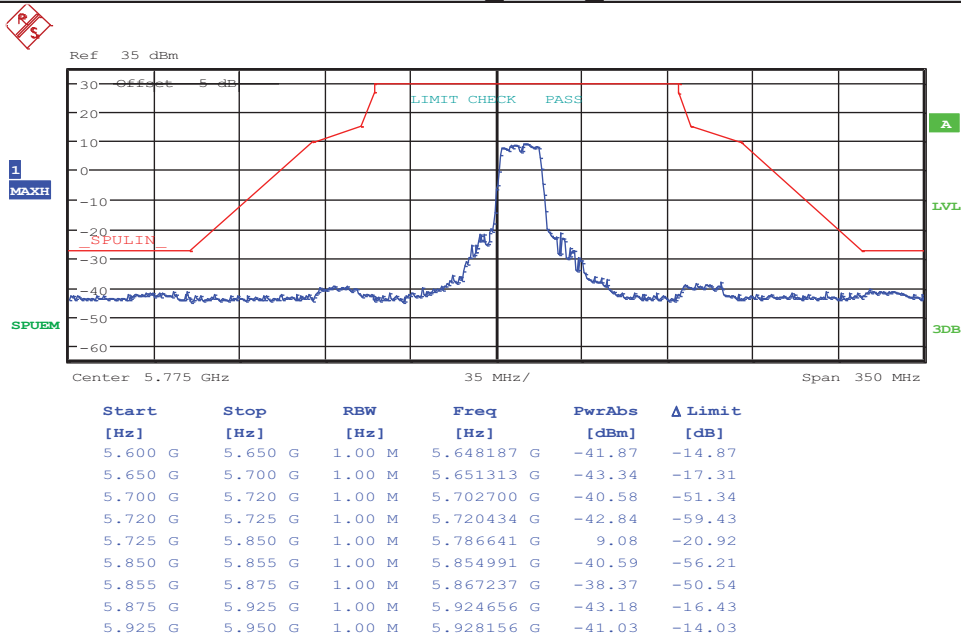
SPUEM

11A ANT2 5745

SPUEM

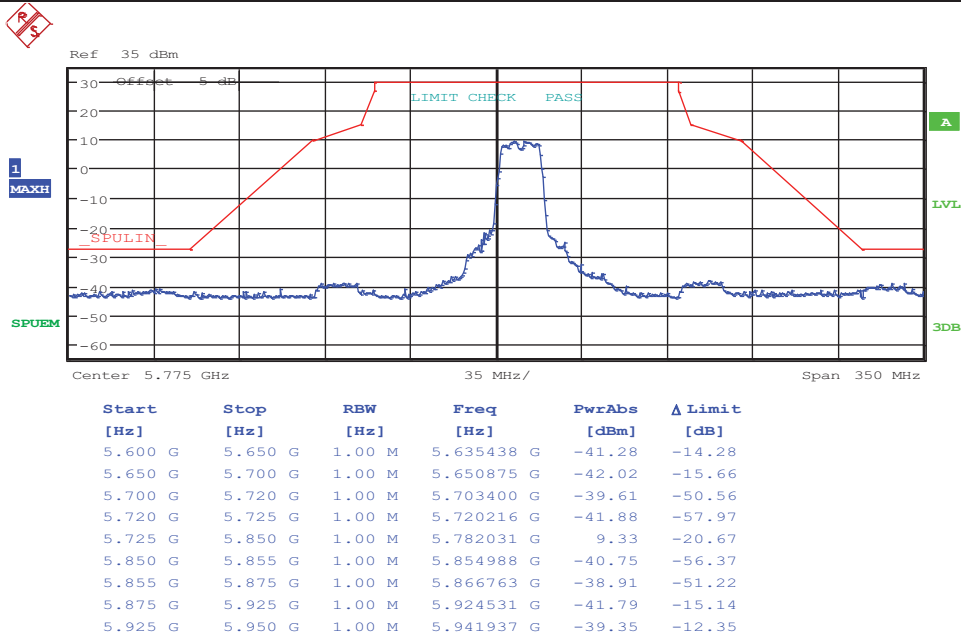
Page 213 of 239

11A_ANT1_5785



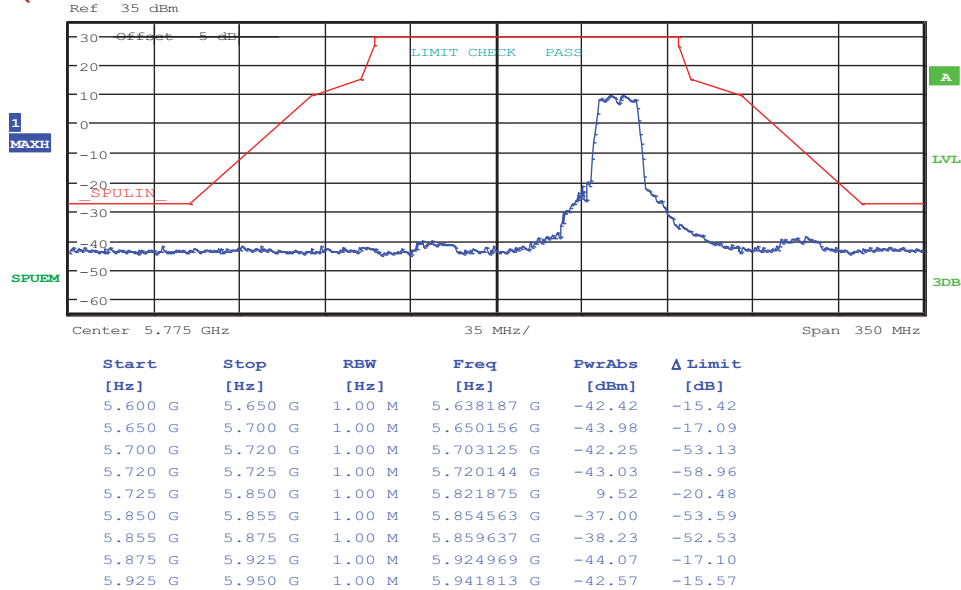
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11A_ANT2_5785



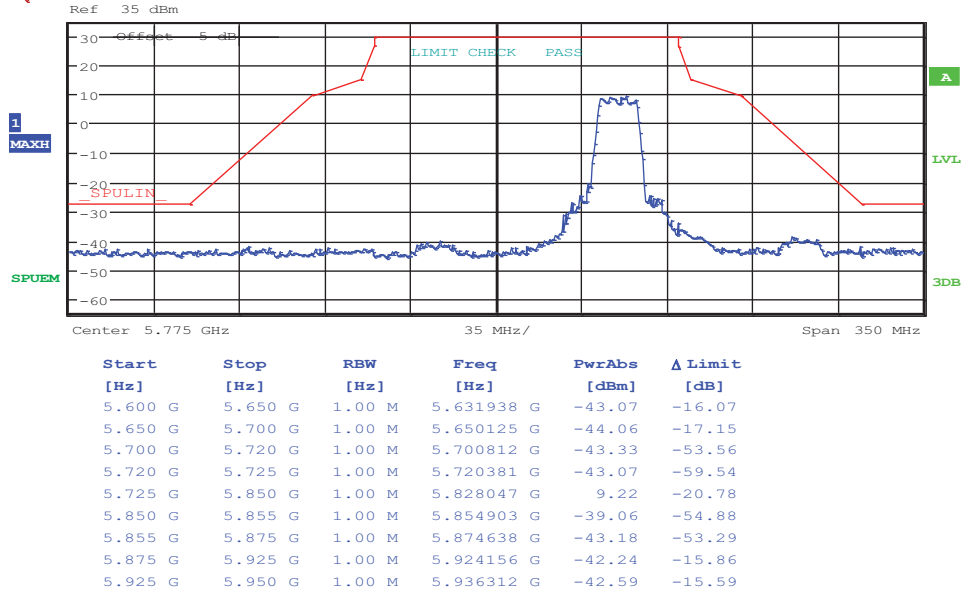
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11A_ANT1_5825



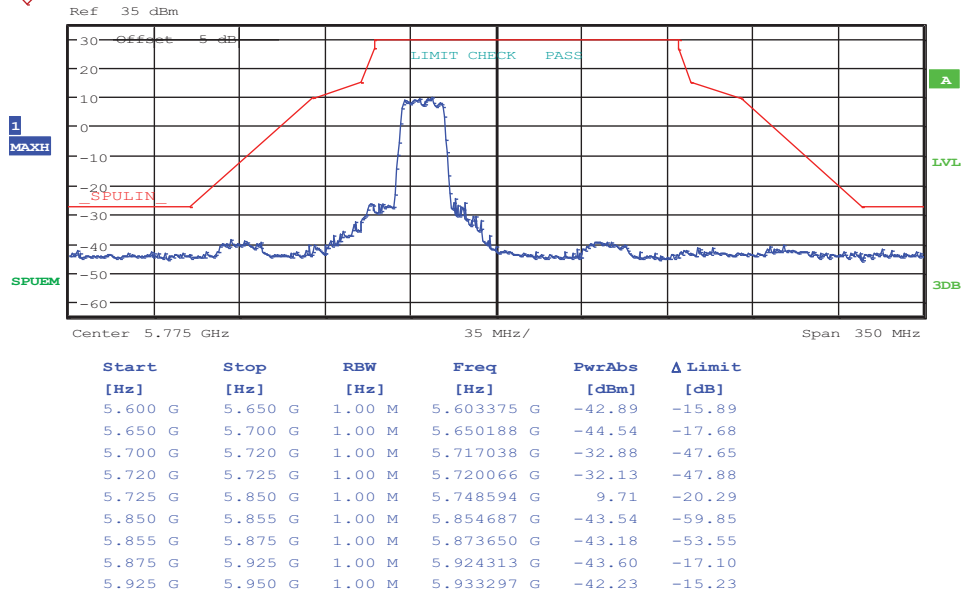
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11A_ANT2_5825



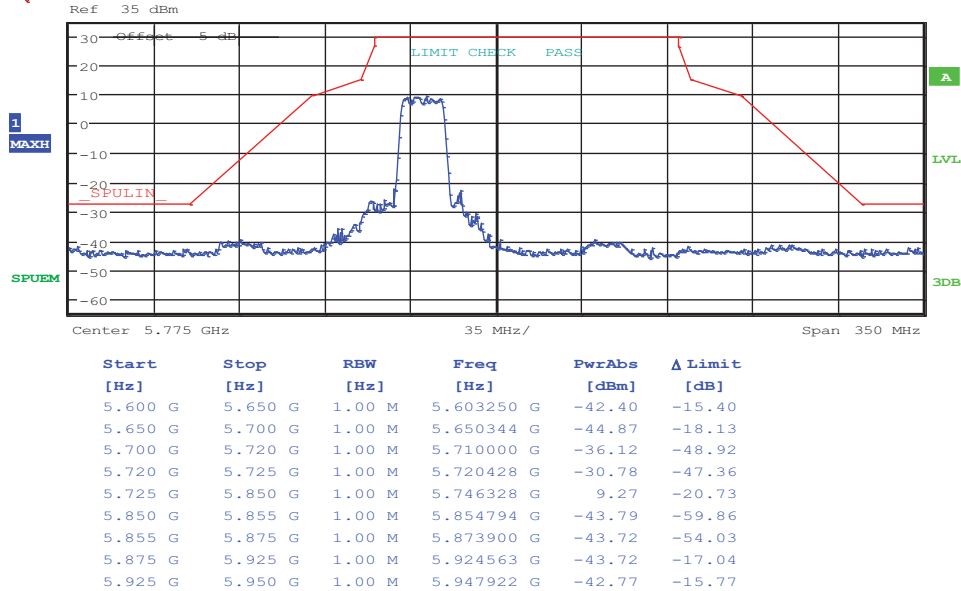
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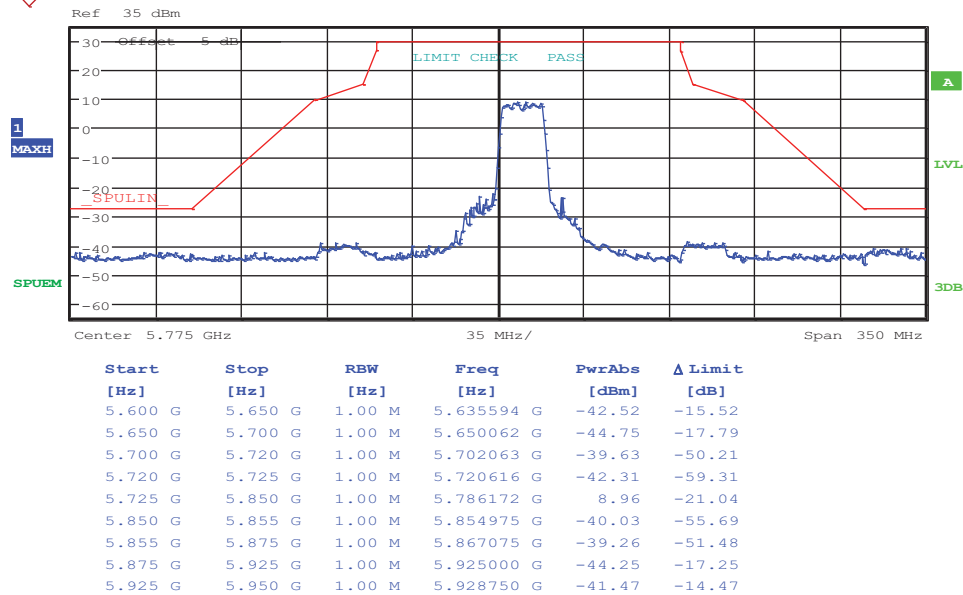
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11N20_ANT2_5745



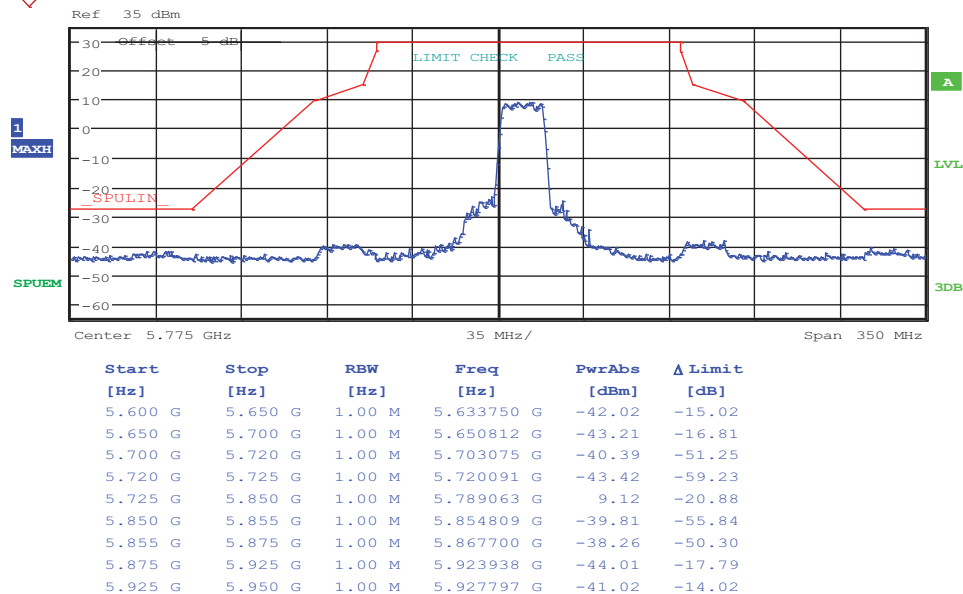
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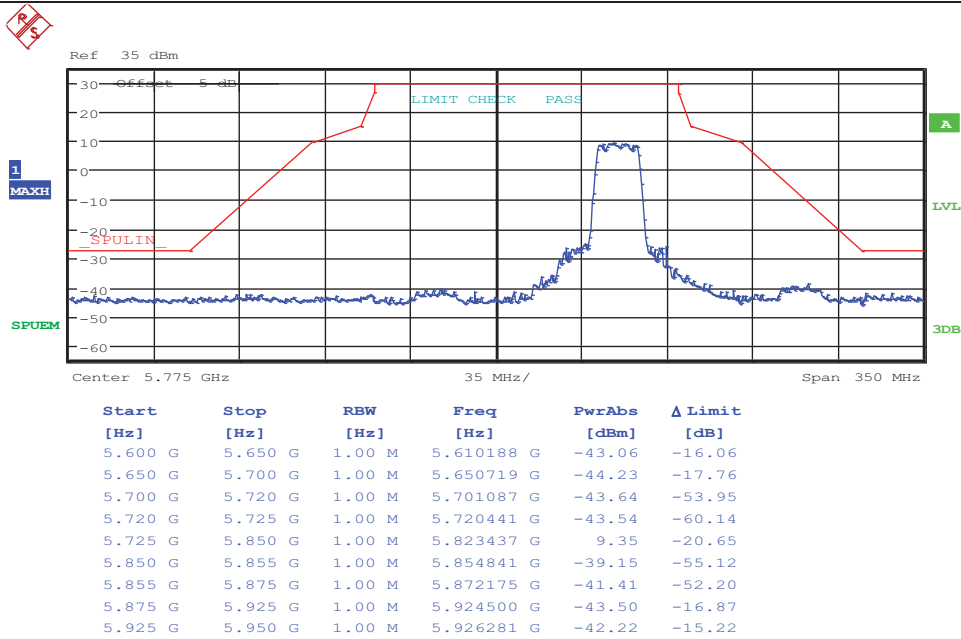
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11N20_ANT2_5785



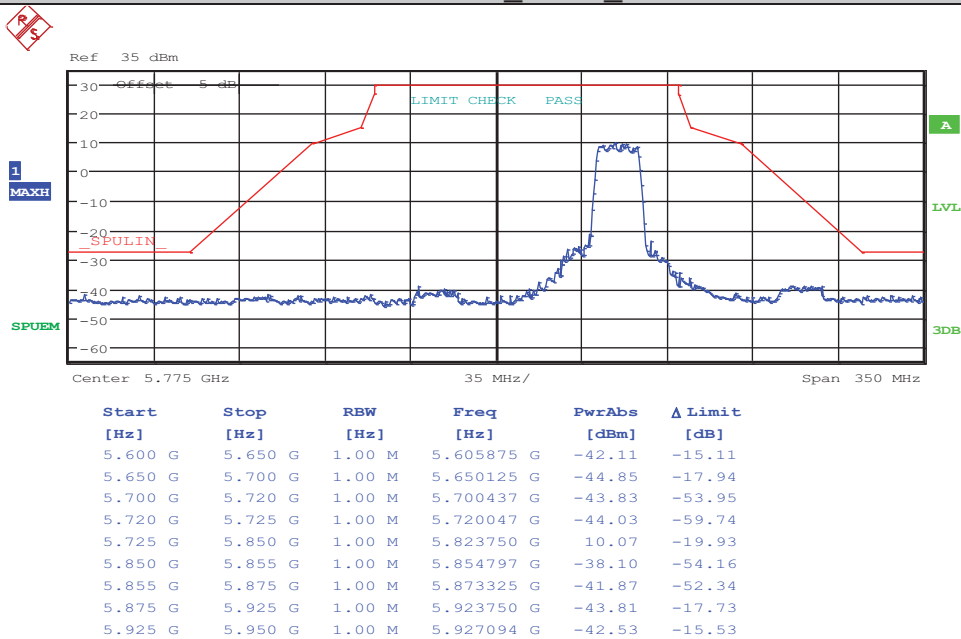
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11N20_ANT1_5825



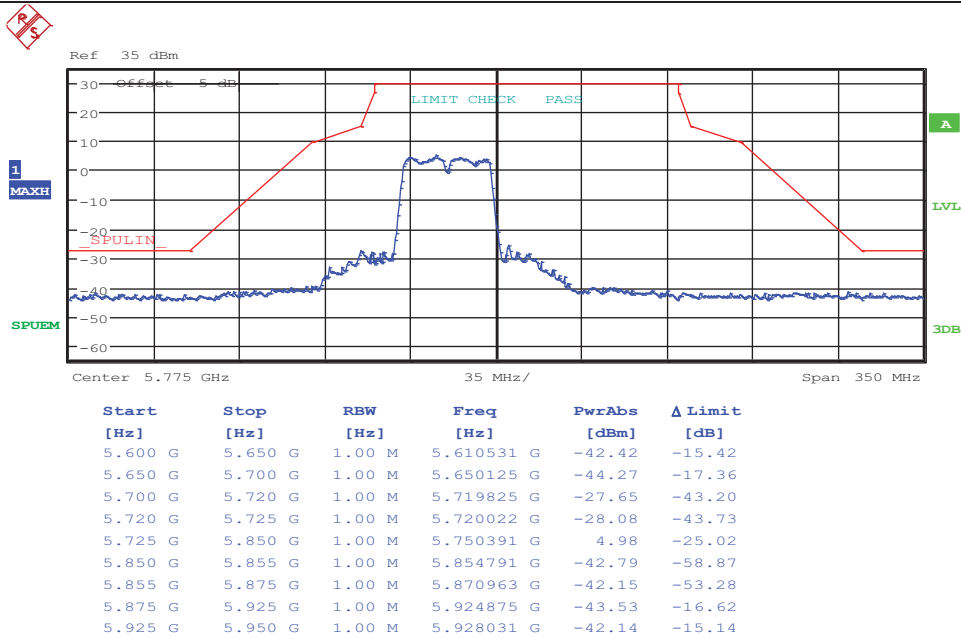
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11N20_ANT1_5825



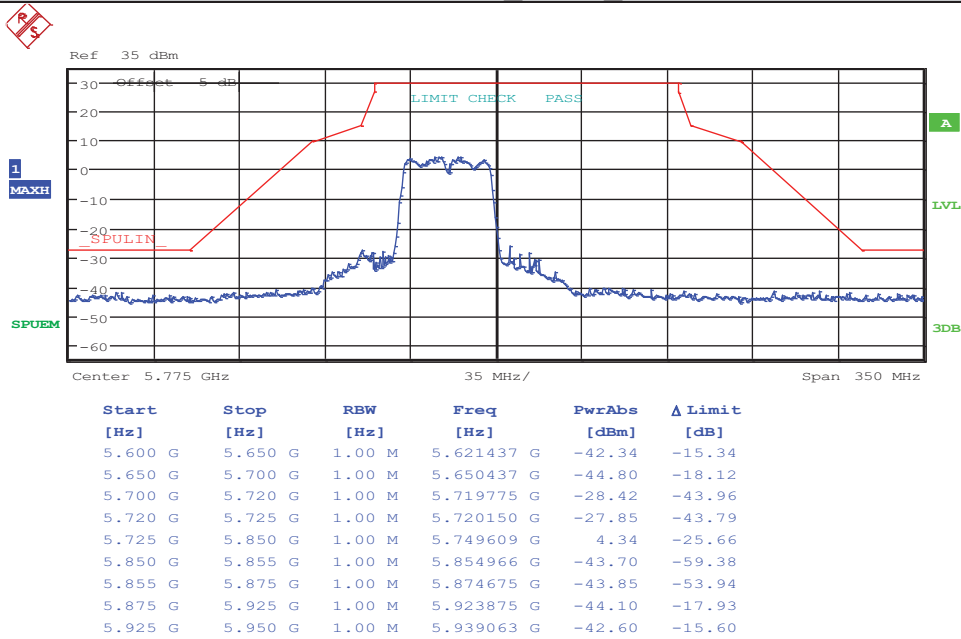
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11N40_ANT1_5755



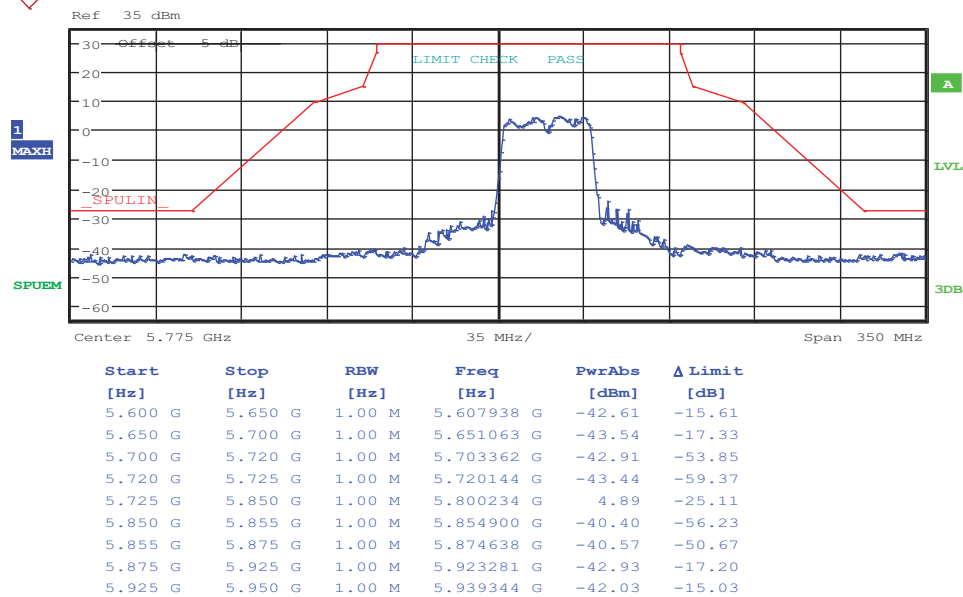
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11N40_ANT2_5755



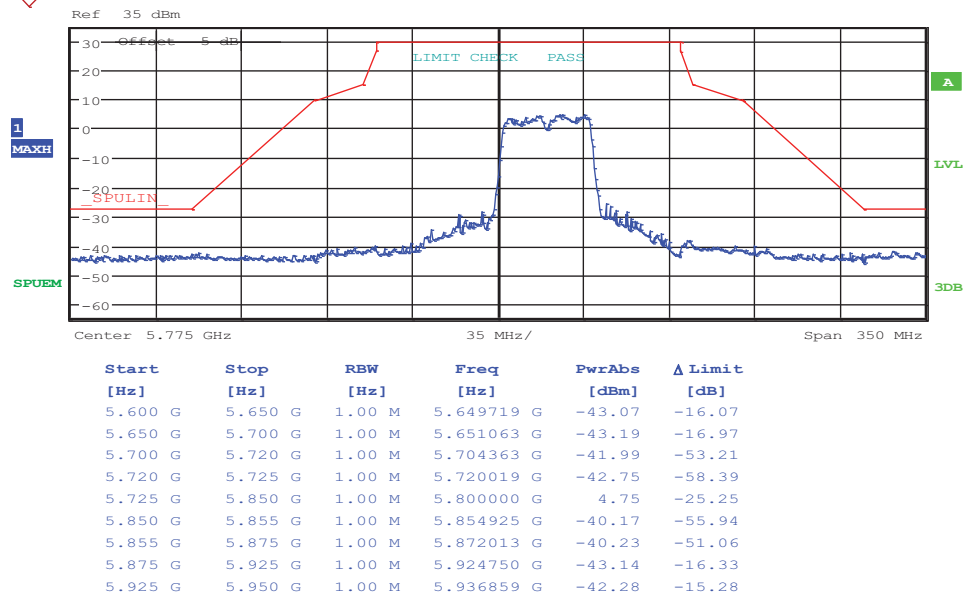
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11N40_ANT1_5795



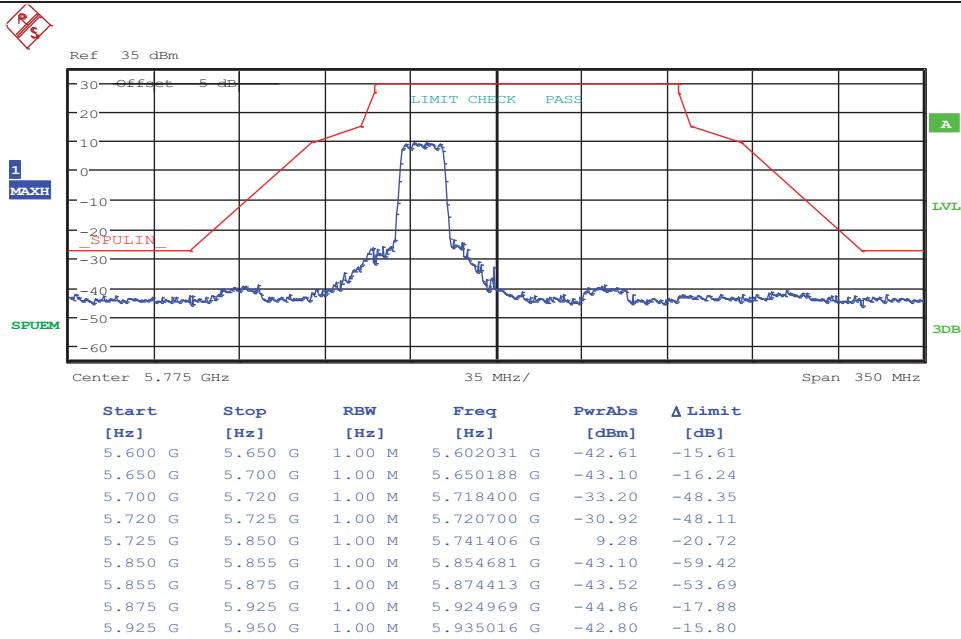
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11N40_ANT2_5795



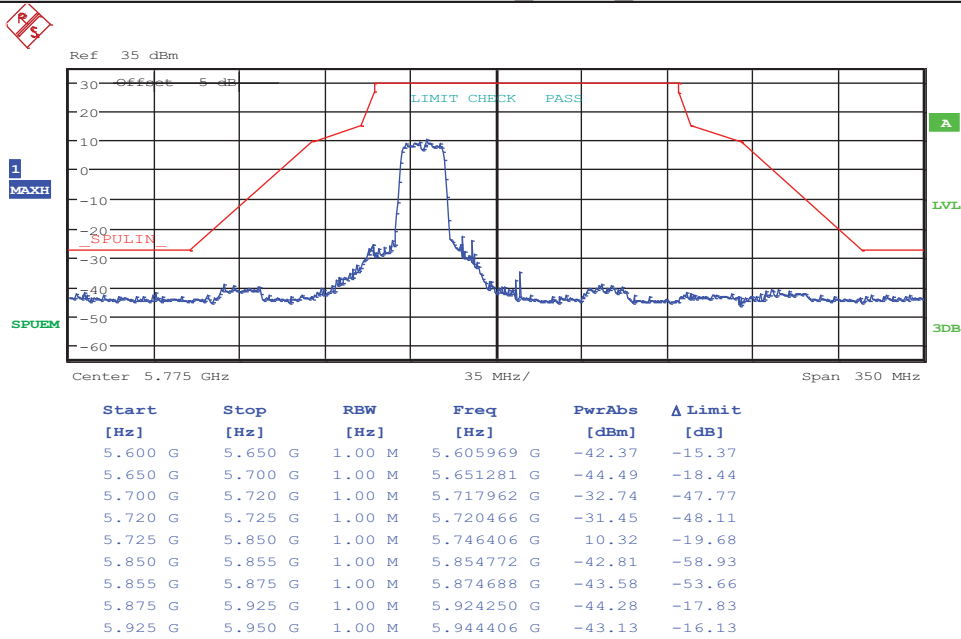
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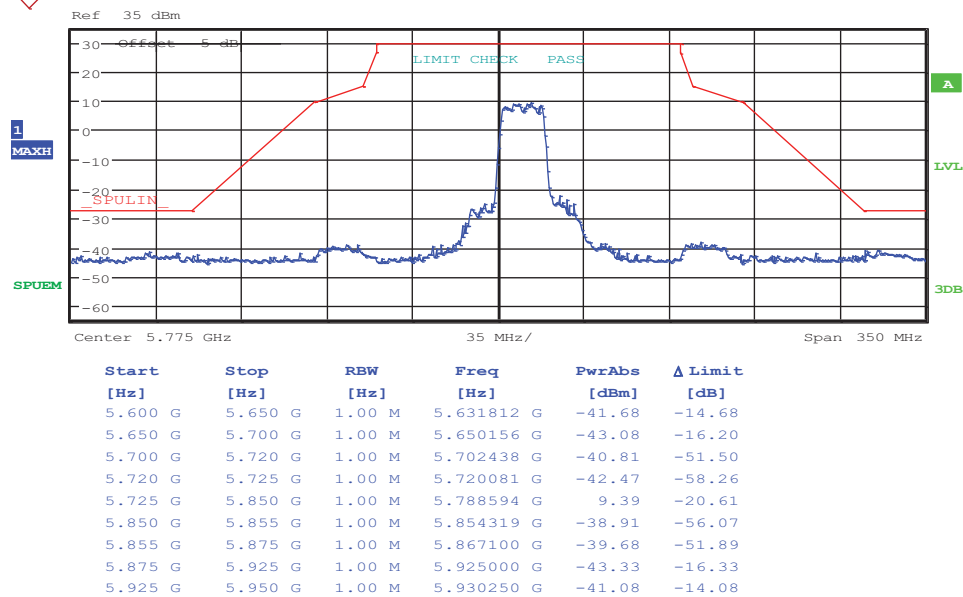
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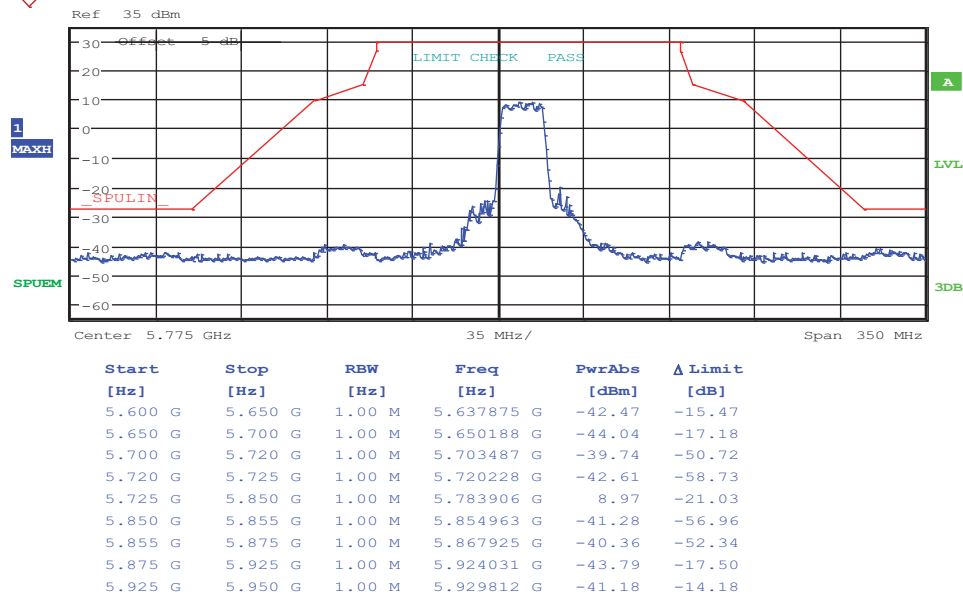
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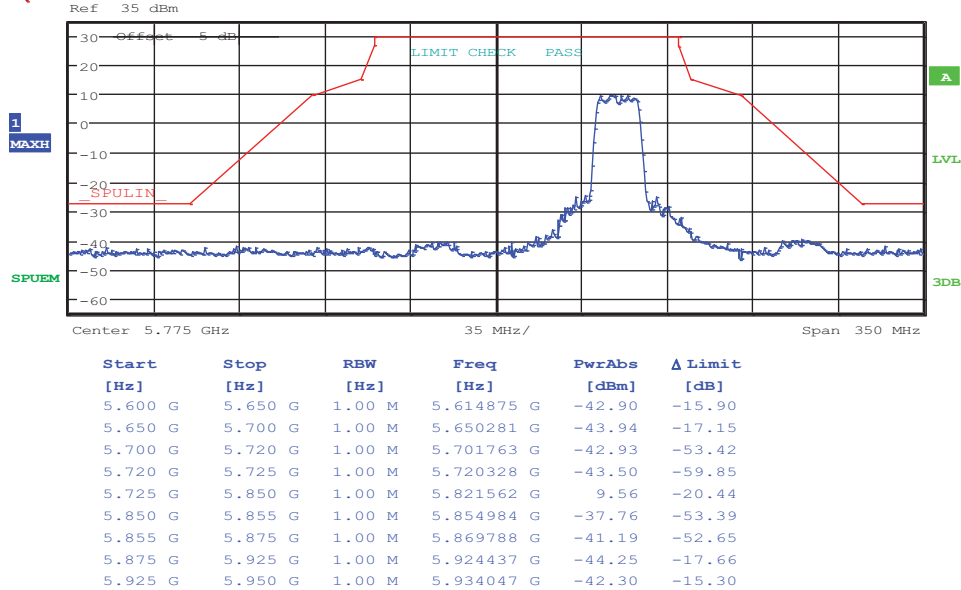
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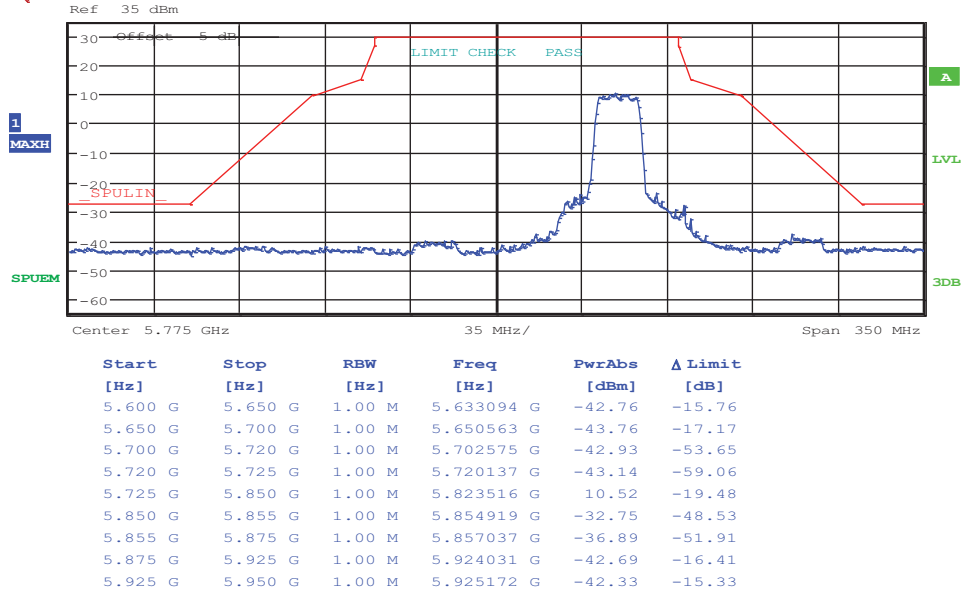
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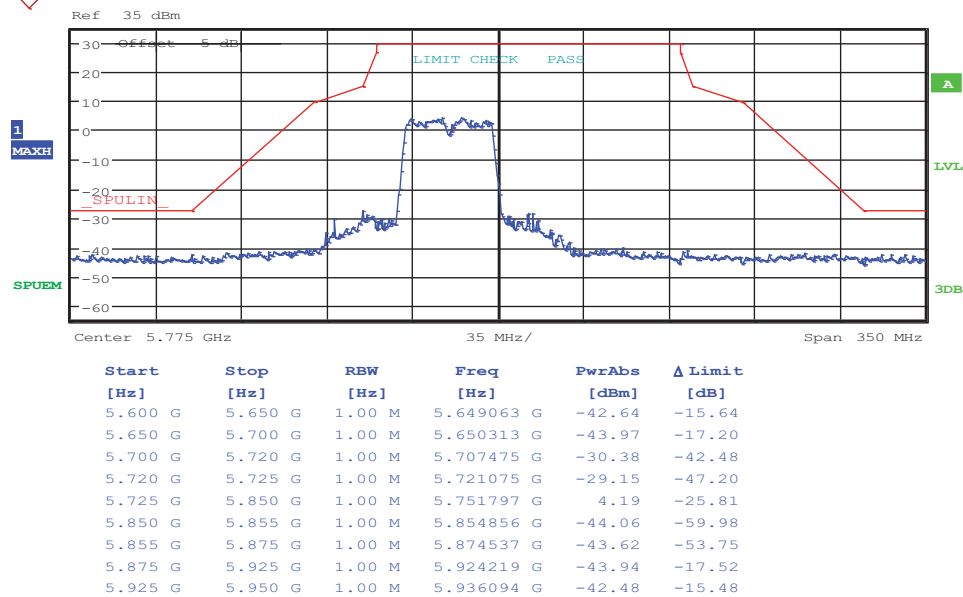
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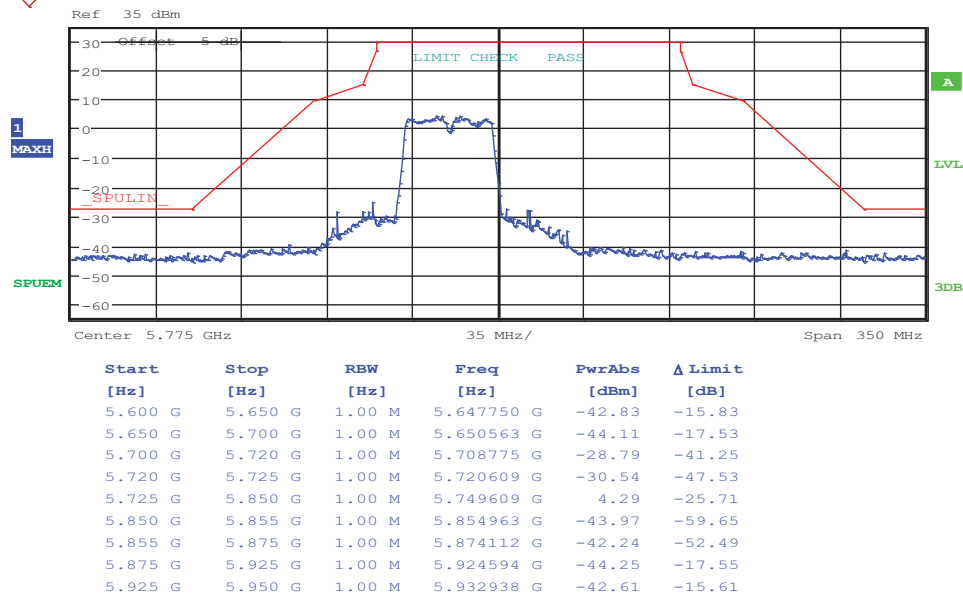
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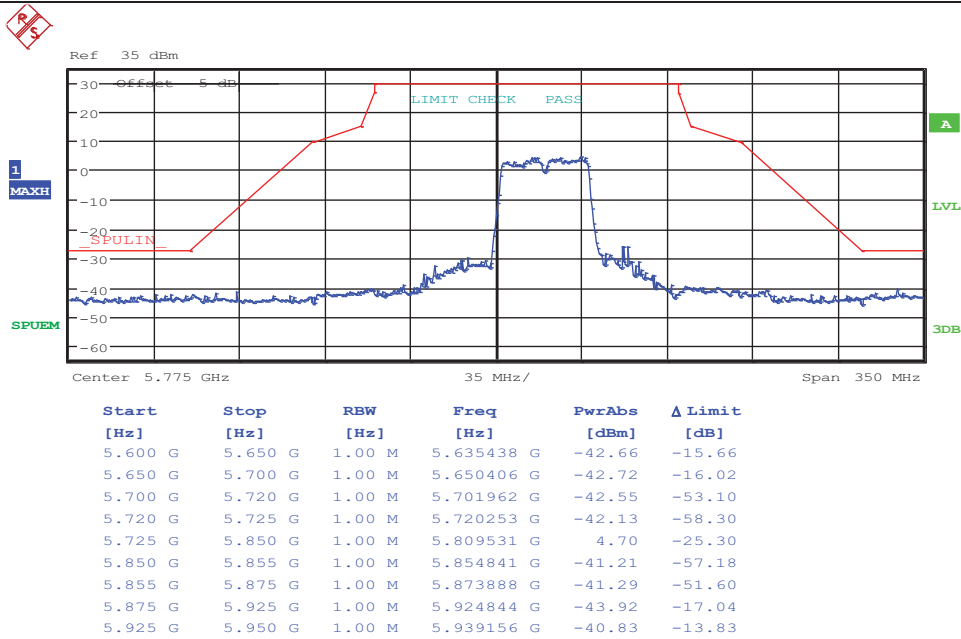
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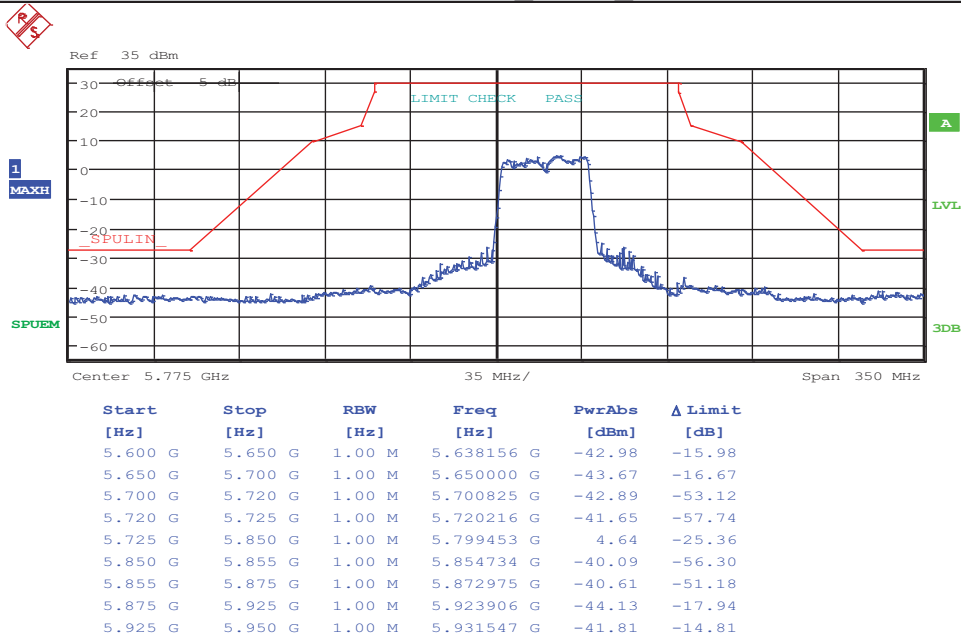
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11AC40_ANT1_5795



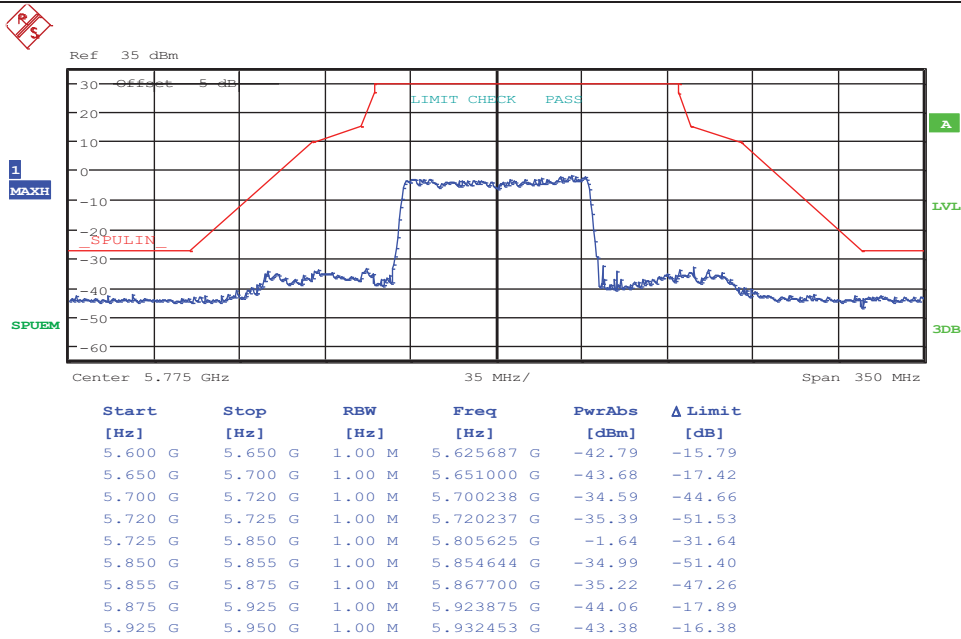
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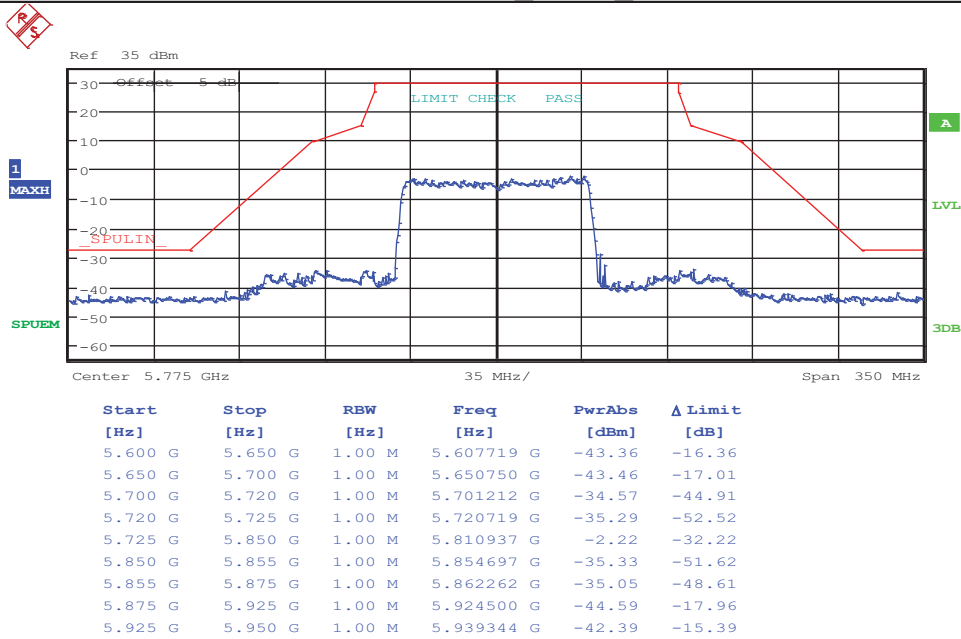
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Date: 7.JUL.2018 11:13:58

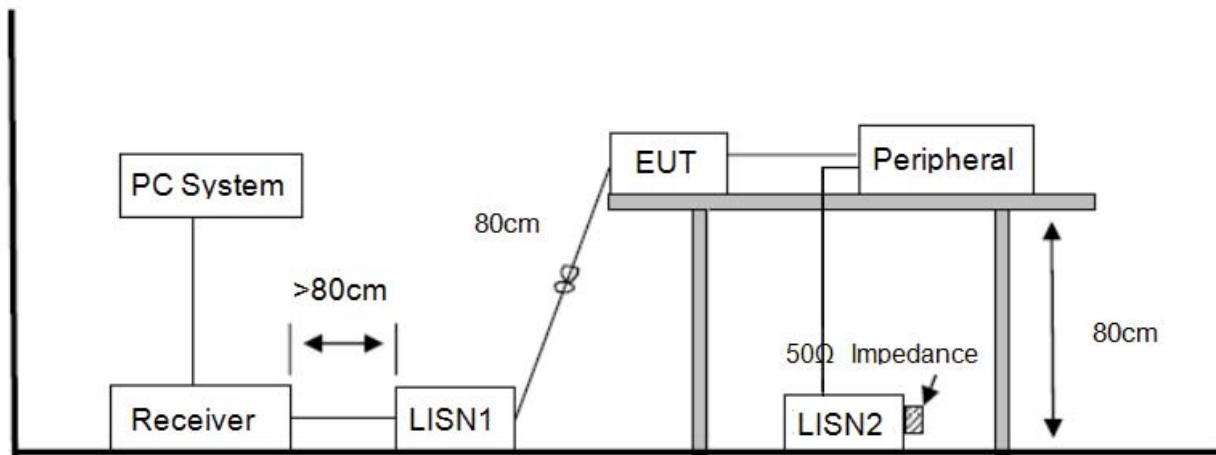
11AC80_ANT2_5775



Date: 7.JUL.2018 11:13:34

10. Power Line Conducted Emission

10.1. Block diagram of test setup



10.2. Power Line Conducted Emission Limits (Class B)

Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

10.3. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.3 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.3 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

10.4. Test Result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

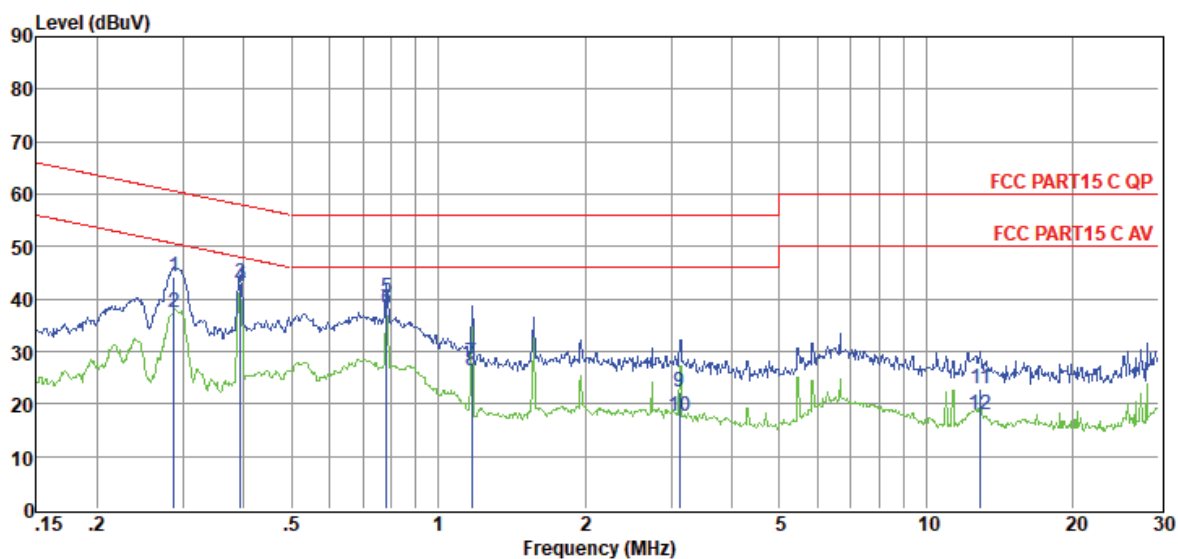
Note2: “----” means peak detection; “----” means average detection

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded worse case (AC 120V/60Hz).

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2018 CE report data\Q18061110-1E\CE.EM6**
Test Date : 2018-07-12 **Tested By** : Elosky
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR **Model Number** : ENCHANT 1300
Power Supply : AC 120V/60Hz **Test Mode** : Tx mode
Condition : Temp:24.5°C, Humi:55.5%, **LISN** : 2017 ENV216/NEUTRAL
Memo :

Data: 14



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.29	24.79	9.40	0.04	9.86	44.09	60.59	-16.50	QP	NEUTRAL
2	0.29	17.97	9.40	0.04	9.86	37.27	50.59	-13.32	Average	NEUTRAL
3	0.39	23.64	9.37	0.04	9.83	42.88	57.99	-15.11	QP	NEUTRAL
4	0.39	23.03	9.37	0.04	9.83	42.27	47.99	-5.72	Average	NEUTRAL
5	0.78	20.99	9.31	0.10	9.86	40.26	56.00	-15.74	QP	NEUTRAL
6	0.78	18.75	9.31	0.10	9.86	38.02	46.00	-7.98	Average	NEUTRAL
7	1.17	8.50	9.29	0.14	9.86	27.79	56.00	-28.21	QP	NEUTRAL
8	1.17	6.98	9.29	0.14	9.86	26.27	46.00	-19.73	Average	NEUTRAL
9	3.12	3.09	9.27	0.11	9.87	22.34	56.00	-33.66	QP	NEUTRAL
10	3.12	-1.70	9.27	0.11	9.87	17.55	46.00	-28.45	Average	NEUTRAL
11	12.92	3.54	9.45	0.12	9.91	23.02	60.00	-36.98	QP	NEUTRAL
12	12.92	-1.48	9.45	0.12	9.91	18.00	50.00	-32.00	Average	NEUTRAL

Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

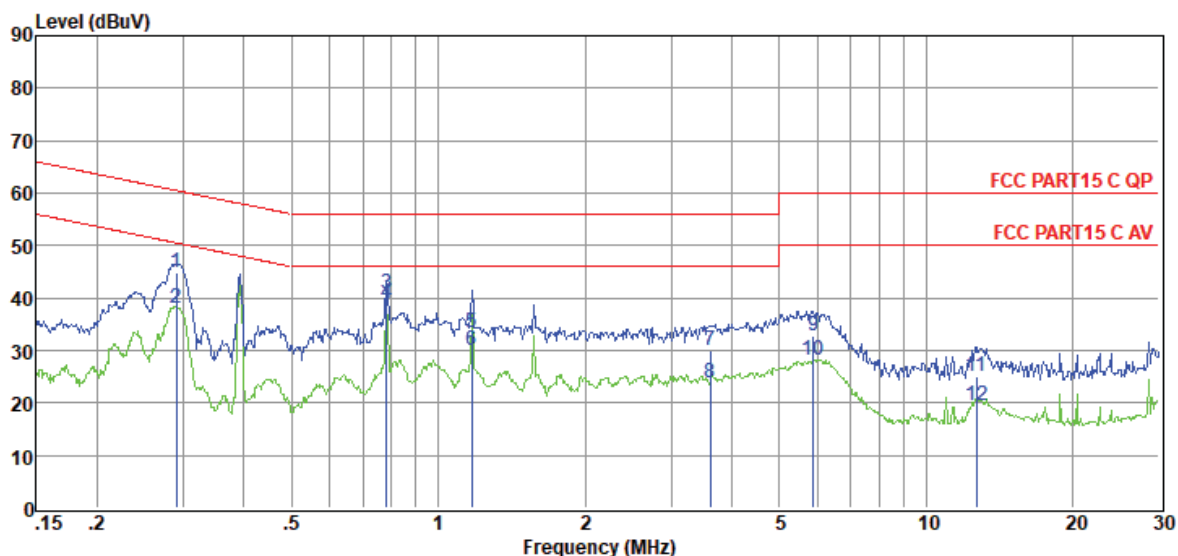
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2018 CE report data\Q18061110-1E\CE.EM6**
Test Date : 2018-07-12 **Tested By** : Elosky
EUT : WIRELESS LARGE MULTI-CHANNEL SOUNDBAR **Model Number** : ENCHANT 1300
Power Supply : AC 120V/60Hz **Test Mode** : Tx mode
Condition : Temp:24.5°C, Humi:55.5%, **LISN** : 2017 ENV216/LINE
Memo :

Data: 16



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.29	25.57	9.53	0.04	9.86	45.00	60.50	-15.50	QP	LINE
2	0.29	18.58	9.53	0.04	9.86	38.01	50.50	-12.49	Average	LINE
3	0.78	21.38	9.56	0.10	9.86	40.90	56.00	-15.10	QP	LINE
4	0.78	19.53	9.56	0.10	9.86	39.05	46.00	-6.95	Average	LINE
5	1.17	13.84	9.57	0.14	9.86	33.41	56.00	-22.59	QP	LINE
6	1.17	10.28	9.57	0.14	9.86	29.85	46.00	-16.15	Average	LINE
7	3.60	10.33	9.63	0.11	9.87	29.94	56.00	-26.06	QP	LINE
8	3.60	4.12	9.63	0.11	9.87	23.73	46.00	-22.27	Average	LINE
9	5.87	13.18	9.67	0.10	9.87	32.82	60.00	-27.18	QP	LINE
10	5.87	8.37	9.67	0.10	9.87	28.01	50.00	-21.99	Average	LINE
11	12.65	5.11	9.83	0.12	9.91	24.97	60.00	-35.03	QP	LINE
12	12.65	-0.25	9.83	0.12	9.91	19.61	50.00	-30.39	Average	LINE

Note: 1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.

2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).

4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

11. Antenna Requirements

11.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Result

The antennas used for this product are integrated antenna and other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 2.52dBi.

12. Dynamic Frequency Selection

12.1. Applicability of DFS requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	☐ Master	☒ Client Without Radar Detection	☐ Client with Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	☐ Master Device or Client with Radar Detection	☒ Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	☐ Master Device or Client with Radar Detection	☒ Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

12.2. Limit

(1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

(2) DFS Response Requirements

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

12.3. Parameters of radar test waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 5 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	Roundup $\left\{ \left(\frac{1}{360} \right) \cdot \left(\frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{SEC}}} \right) \right\}$	60%	30
		Test B			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests. Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A					

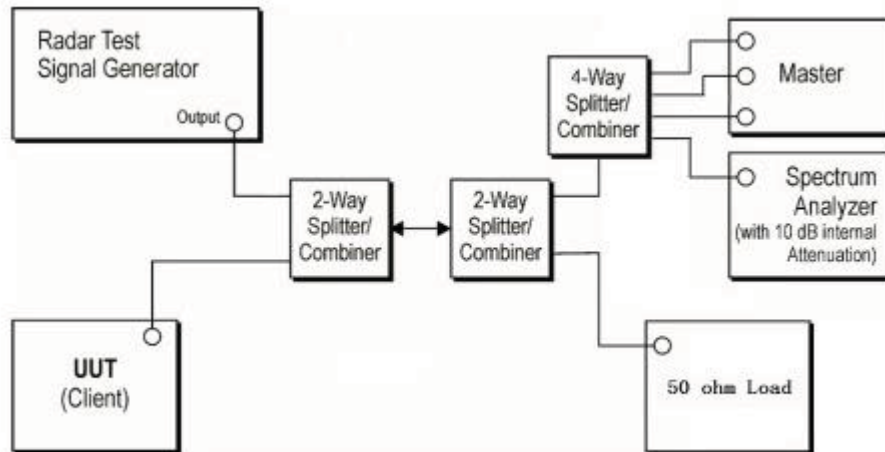
A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4

12.4. Calibration of radar waveform

Radar Waveform Calibration Procedure:

- (1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- (2) The interference Radar Detection Threshold Level is $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$ that had been taken into account the output power range and antenna gain.
- (3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB.
- (4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$. Capture the spectrum analyzer plots on short pulse radar waveform.

Conducted Calibration Setup:

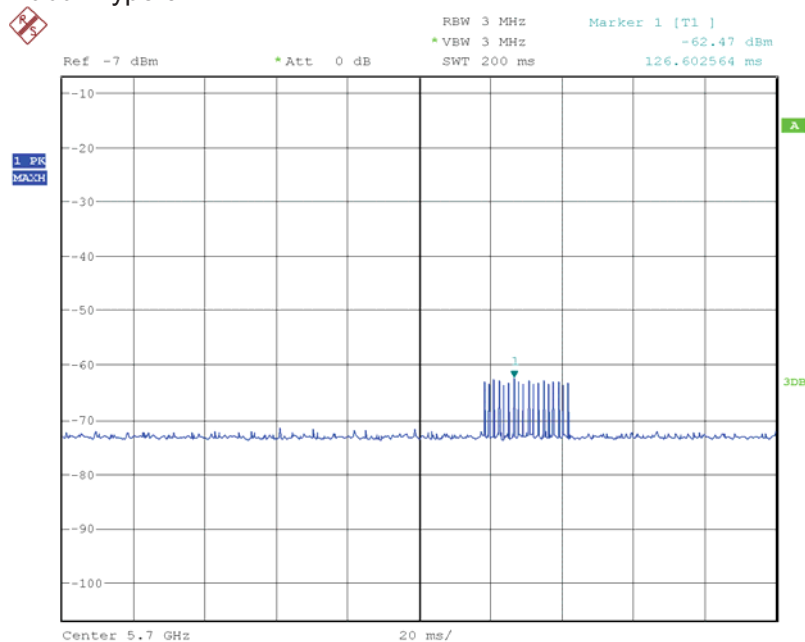


Note: 1. Use the software "Web" to set the frequency channel.

2. EUT is not support TPC.

Radar Waveform Calibration Result:

Radar Type 0



Trial List Table - FCC-13-22						
Save Load Trigger Download All						
Sample Rate 10 MHz						
Trial List						
	Trial Id	Radar Type	Pulse Width (us)	PRI (us)	Number of Pulses	Waveform Length (us)
Download	0	Type 0	1.0	1428.0	18	25704.0
Download	1	Type 0	1.0	1428.0	18	25704.0
Download	2	Type 0	1.0	1428.0	18	25704.0
Download	3	Type 0	1.0	1428.0	18	25704.0
Download	4	Type 0	1.0	1428.0	18	25704.0
Download	5	Type 0	1.0	1428.0	18	25704.0
Download	6	Type 0	1.0	1428.0	18	25704.0
Download	7	Type 0	1.0	1428.0	18	25704.0
Download	8	Type 0	1.0	1428.0	18	25704.0
Download	9	Type 0	1.0	1428.0	18	25704.0
Download	10	Type 0	1.0	1428.0	18	25704.0
Download	11	Type 0	1.0	1428.0	18	25704.0
Download	12	Type 0	1.0	1428.0	18	25704.0
Download	13	Type 0	1.0	1428.0	18	25704.0
Download	14	Type 0	1.0	1428.0	18	25704.0
Download	15	Type 0	1.0	1428.0	18	25704.0
Download	16	Type 0	1.0	1428.0	18	25704.0
Download	17	Type 0	1.0	1428.0	18	25704.0
Download	18	Type 0	1.0	1428.0	18	25704.0
Download	19	Type 0	1.0	1428.0	18	25704.0
Download	20	Type 0	1.0	1428.0	18	25704.0
Download	21	Type 0	1.0	1428.0	18	25704.0
Download	22	Type 0	1.0	1428.0	18	25704.0
Download	23	Type 0	1.0	1428.0	18	25704.0
Download	24	Type 0	1.0	1428.0	18	25704.0
Download	25	Type 0	1.0	1428.0	18	25704.0
Download	26	Type 0	1.0	1428.0	18	25704.0
Download	27	Type 0	1.0	1428.0	18	25704.0

12.5. Channel closing transmission time, channel move time and non-occupancy period

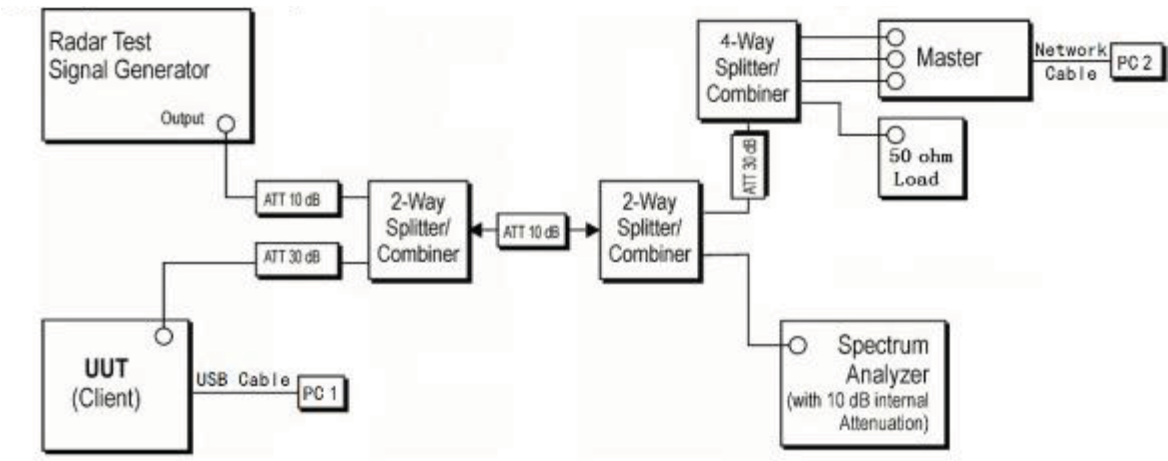
Block diagram of test setup Test Procedure:

- (1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- (2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- (3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- (4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Test Software in order to properly load the network for the entire period of the test.
- (5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- (6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- (7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the
- (8) spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:
$$\text{Dwell (0.3ms)} = S (12000\text{ms}) / B (4000);$$
where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:
$$C (\text{ms}) = N \times \text{Dwell (0.3ms)};$$
where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

12.6. Test setup

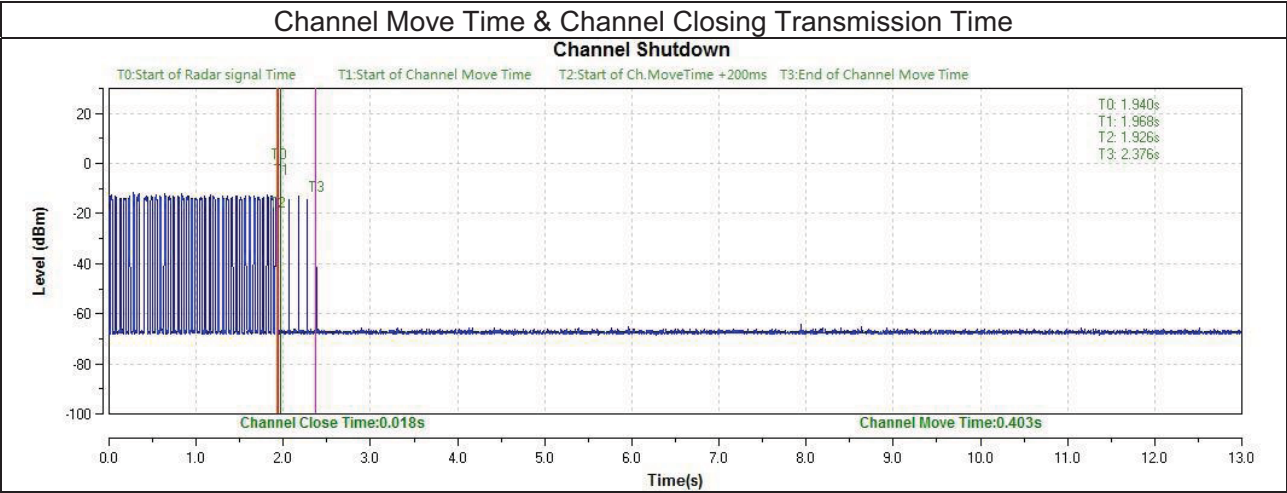
Setup for Client with injection at the Master



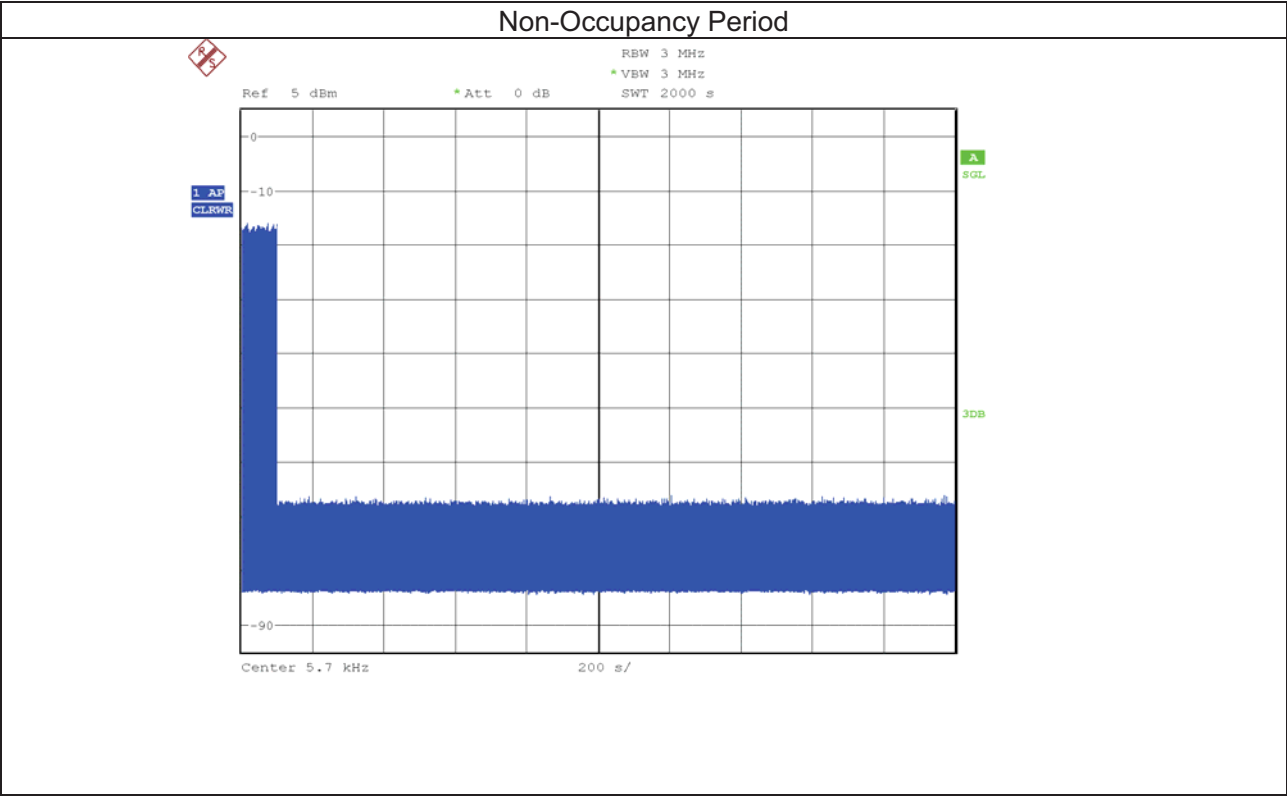
12.7. Test result

BW/Channel	Test Item	Test Result	Limit	Results
80M/5530MHz	Channel Move Time	0.403s	<10 s	pass
	Channel Closing Transmission Time	0.018s	<1s	pass

Test plots as follows:



BW/Channel	Test Item	Test Result	Limit	Results
80M/5530MHz	Non-Occupancy Period	>30min	30min	pass



END OF REPORT