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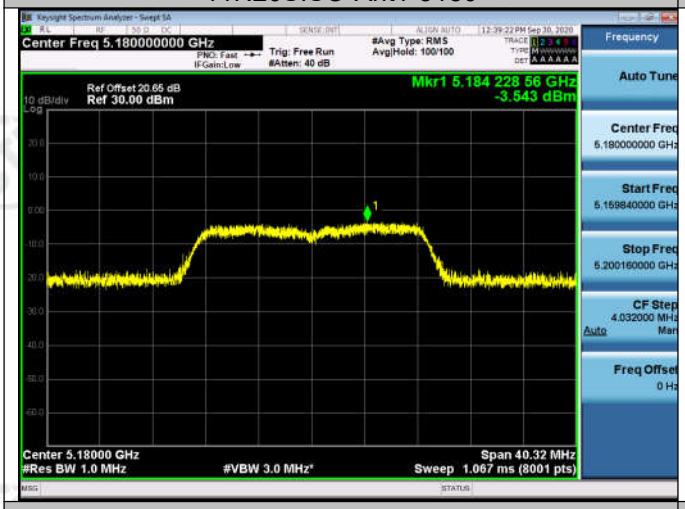

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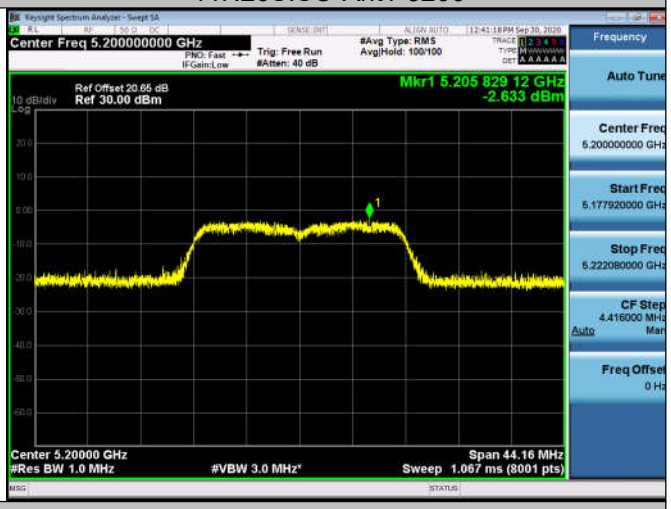

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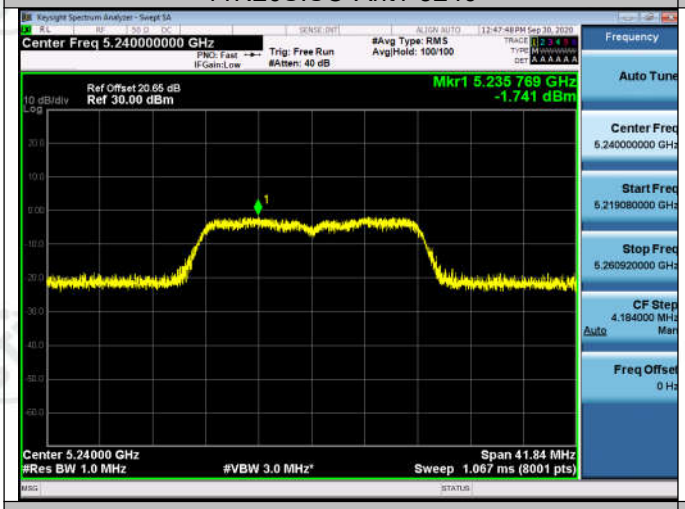

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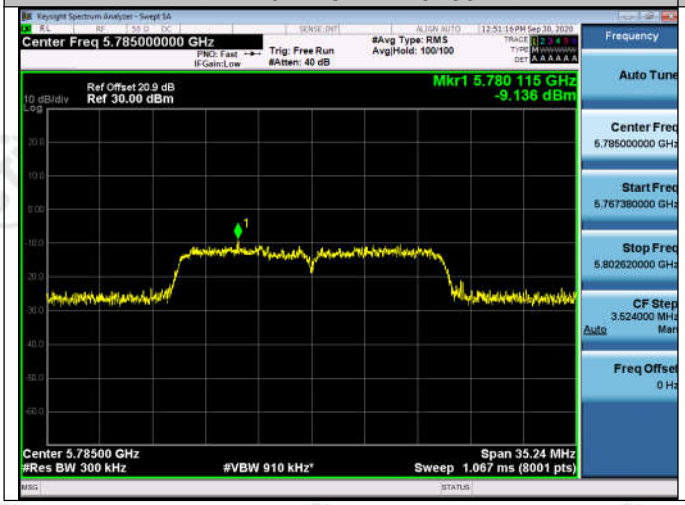
11N20SISO-Ant1-5785



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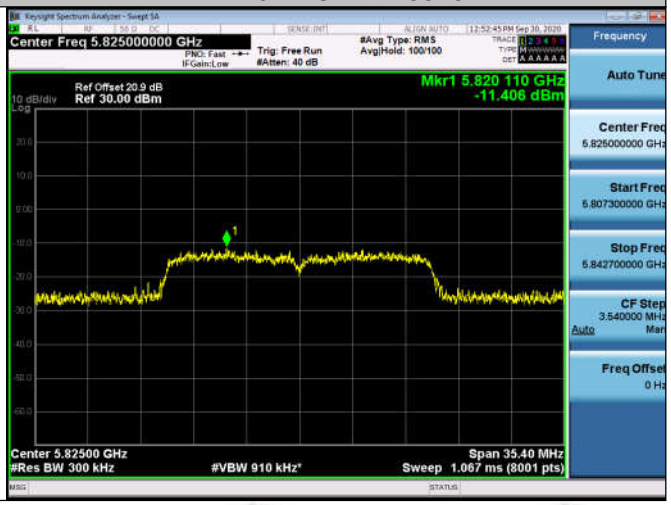

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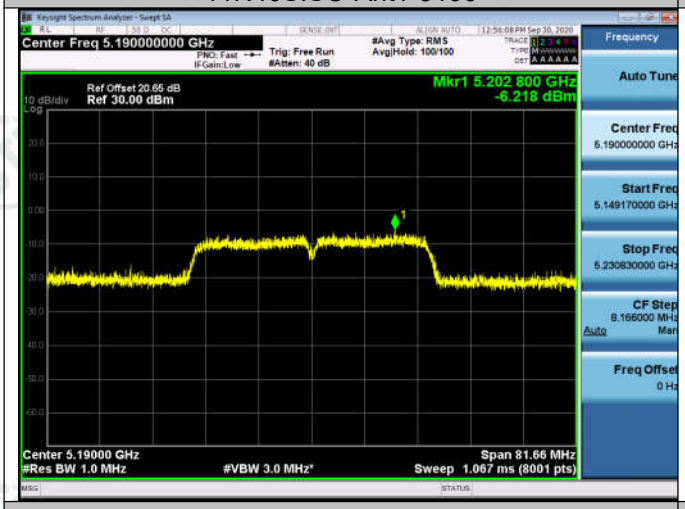

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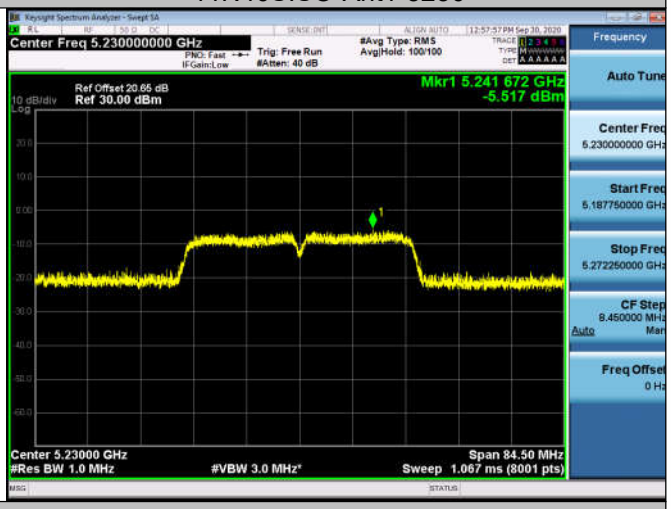

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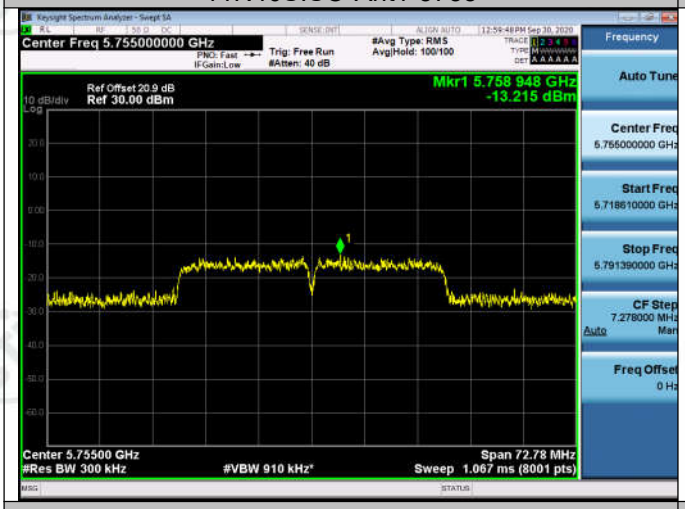
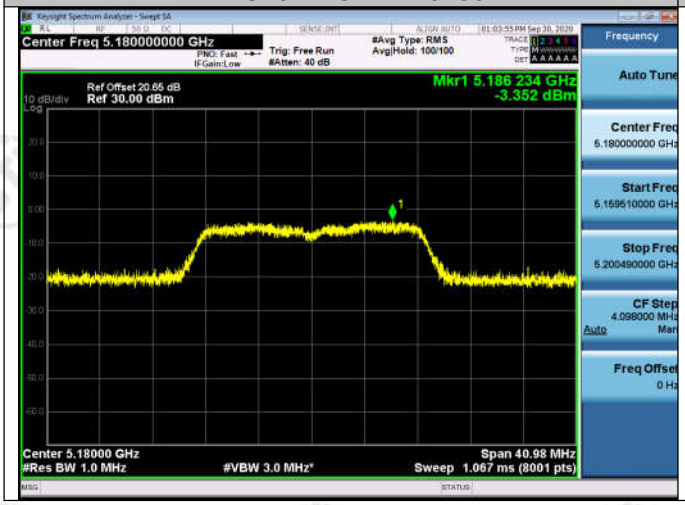


11N40SISO-Ant1-5795

11AC20SISO-Ant1-5180



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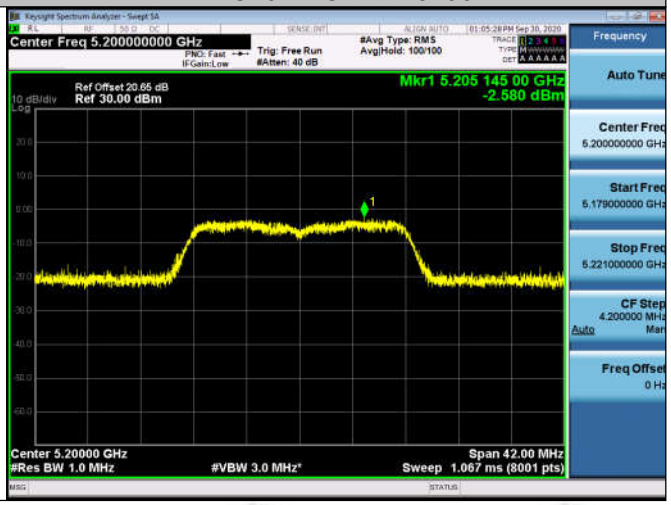

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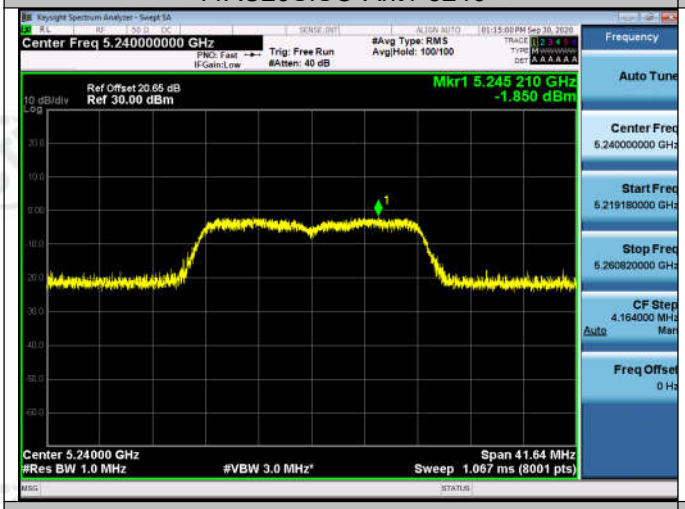

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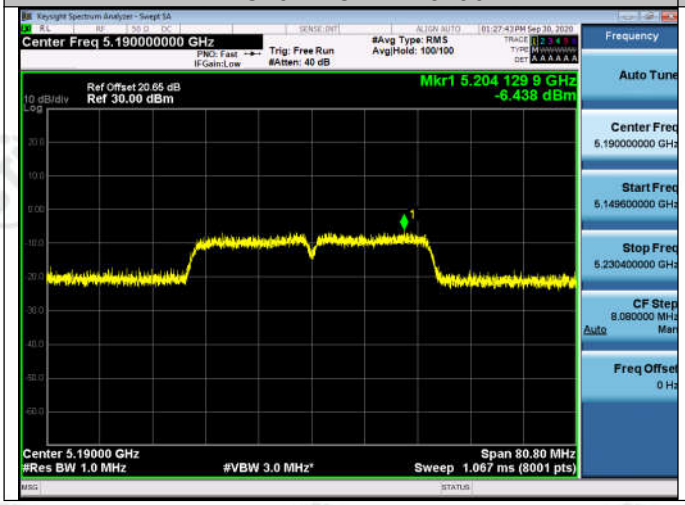
11AC20SISO-Ant1-5785

11AC20SISO-Ant1-5825

11AC40SISO-Ant1-5190



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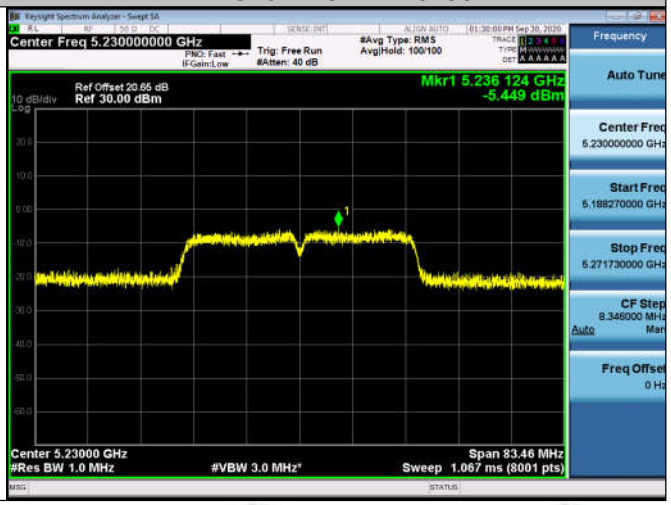
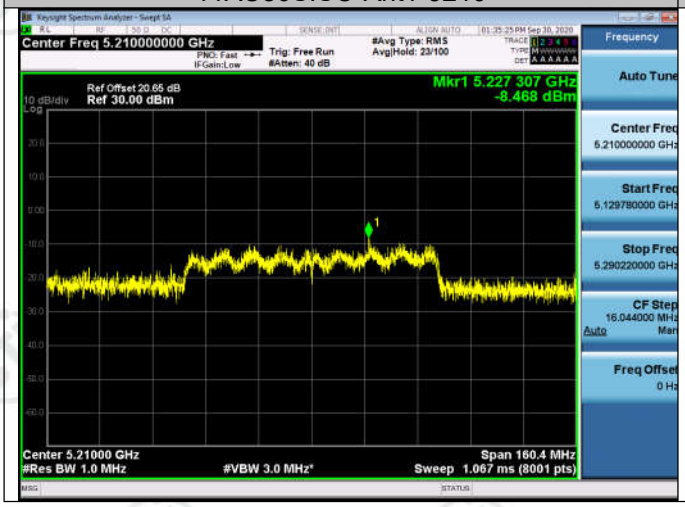


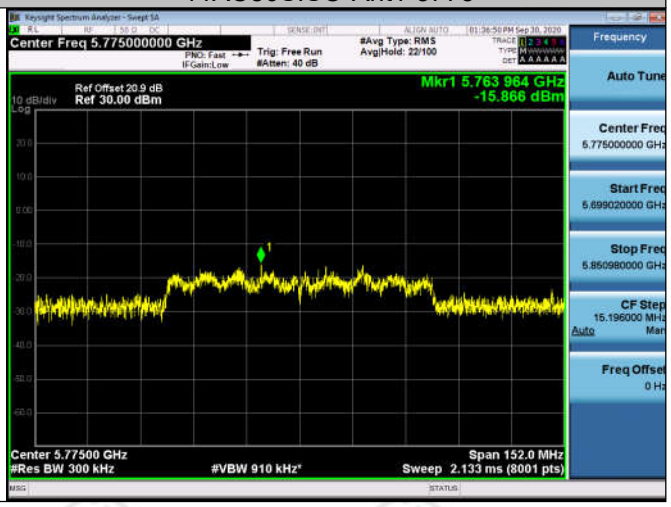
11AC40SISO-Ant1-5755

11AC40SISO-Ant1-5795

11AC80SISO-Ant1-5210



11AC80SISO-Ant1-5775



Appendix D): Band Edge Measurements

Result Table

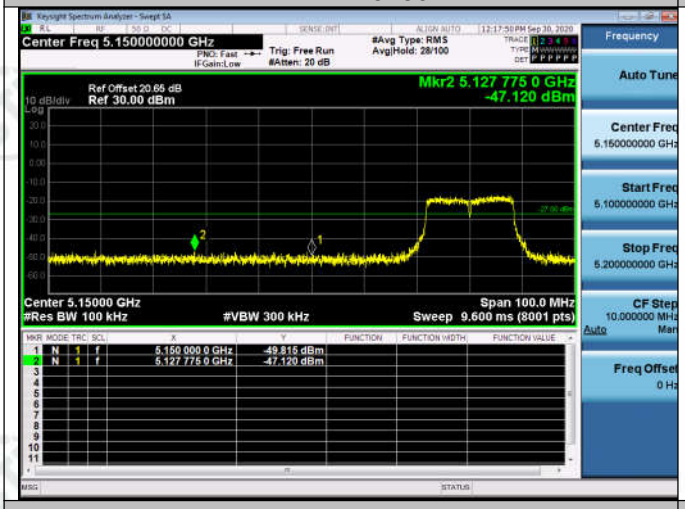
Test Mode	Antenna	Channel	Max.Level [dBm]	Verdict
11A	Ant1	5180	-47.12	PASS
11A	Ant1	5240	-48.104	PASS
Test Mode	**Antenna**	**Channel**	**Max.Level [dBm]**	**Verdict**
11N20SISO	Ant1	5180	-46.787	PASS
11N20SISO	Ant1	5240	-46.201	PASS
Test Mode	**Antenna**	**Channel**	**Max.Level [dBm]**	**Verdict**
11N40SISO	Ant1	5190	-49.748	PASS
11N40SISO	Ant1	5230	-52.83	PASS
Test Mode	**Antenna**	**Channel**	**Max.Level [dBm]**	**Verdict**
11AC20SISO	Ant1	5180	-47.043	PASS
11AC20SISO	Ant1	5240	-48.299	PASS
Test Mode	**Antenna**	**Channel**	**Max.Level [dBm]**	**Verdict**
11AC40SISO	Ant1	5190	-49.002	PASS
11AC40SISO	Ant1	5230	-43.076	PASS
Test Mode	**Antenna**	**Channel**	**Max.Level [dBm]**	**Verdict**
11AC80SISO	Ant1	5210	-50.369	PASS

TestMode	Antenna	ChName	Channel	FreqRange [MHz]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	Low	5745	5650~5700	-42.6	<=-2.11	PASS
				5700~5720	-40.73	<=14.85	PASS
				5720~5725	-40.39	<=25.78	PASS
				5760~5650	-42.81	<=-27	PASS
		High	5825	5850~5855	-42.79	<=20.10	PASS
				5855~5875	-41.85	<=12.52	PASS
				5875~5925	-41.04	<=-5.18	PASS
				5925~5935	-41.89	<=-27	PASS
11N20SISO	Ant1	Low	5745	5650~5700	-41.58	<=-19.64	PASS
				5700~5720	-42.25	<=14.73	PASS
				5720~5725	-42.57	<=17.65	PASS
				5760~5650	-42.48	<=-27	PASS
		High	5825	5850~5855	-41.64	<=19.80	PASS
				5855~5875	-41.67	<=13.54	PASS
				5875~5925	-40.15	<=5.91	PASS
				5925~5935	-40.75	<=-27	PASS
11N40SISO	Ant1	Low	5755	5650~5700	-42.37	<=-23.41	PASS
				5700~5720	-41.86	<=15.20	PASS
				5720~5725	-42.63	<=25.28	PASS
				5780~5650	-42.81	<=-27	PASS
		High	5795	5850~5855	-42.78	<=19.80	PASS
				5855~5875	-41.95	<=12.07	PASS
				5875~5925	-40.41	<=-16.42	PASS
				5925~5935	-41.88	<=-27	PASS
11AC20SISO	Ant1	Low	5745	5650~5700	-40.91	<=3.08	PASS
				5700~5720	-41.52	<=13.44	PASS
				5720~5725	-42.33	<=22.11	PASS
				5760~5650	-43.44	<=-27	PASS
		High	5825	5850~5855	-41.91	<=21.33	PASS
				5855~5875	-41.16	<=13.88	PASS
				5875~5925	-41.47	<=1.32	PASS
				5925~5935	-41.56	<=-27	PASS
11AC40SISO	Ant1	Low	5755	5650~5700	-41.53	<=-26.30	PASS

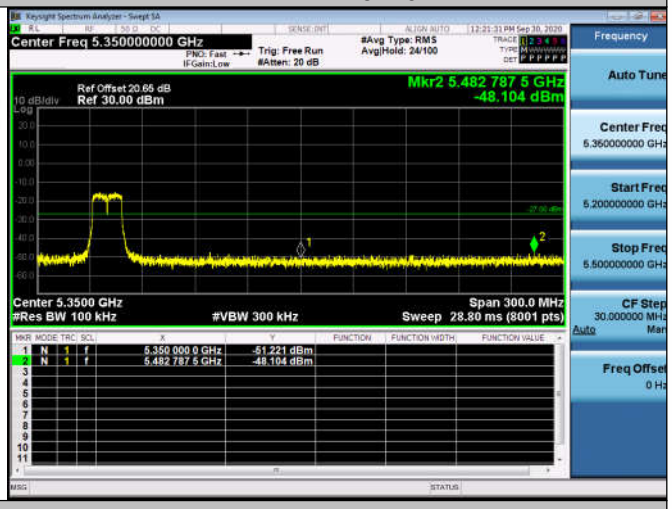
				5700~5720	-42.11	<=11.65	PASS
				5720~5725	-42.19	<=24.66	PASS
				5780~5650	-42.35	<=-27	PASS
		High	5795	5850~5855	-41.63	<=26.94	PASS
				5855~5875	-41.65	<=15.26	PASS
				5875~5925	-39.84	<=-9.71	PASS
				5925~5935	-41.6	<=-27	PASS
11AC80SISO	Ant1	Low	5775	5650~5700	-42.22	<=-7.53	PASS
				5700~5720	-41.82	<=14.82	PASS
				5720~5725	-42.1	<=21.65	PASS
				5800~5650	-43.59	<=-27	PASS
		High	5775	5850~5855	-41.93	<=18.32	PASS
				5855~5875	-41.66	<=10.13	PASS
				5875~5925	-40.47	<=9.87	PASS
				5925~5935	-41.15	<=-27	PASS

Test Graph

11A-Ant1-5180



11A-Ant1-5240



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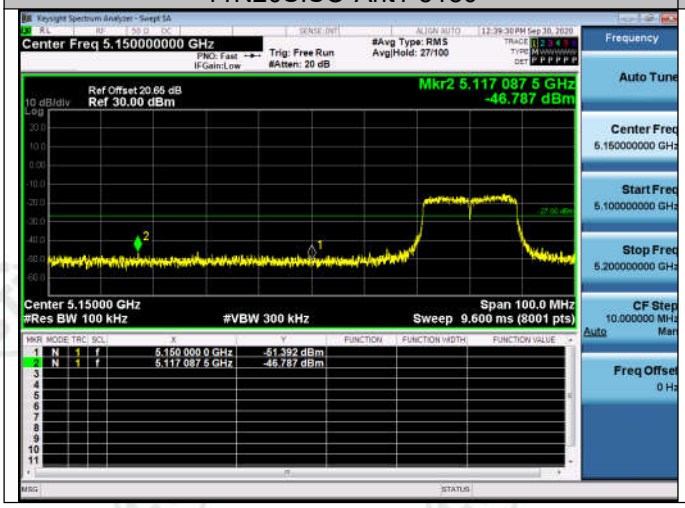

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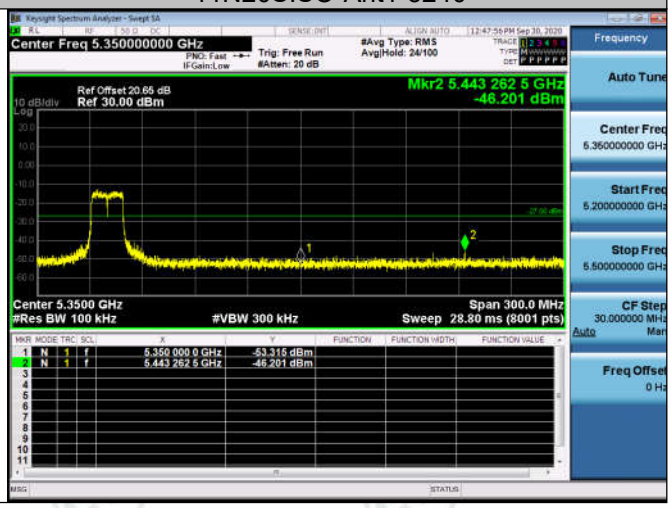

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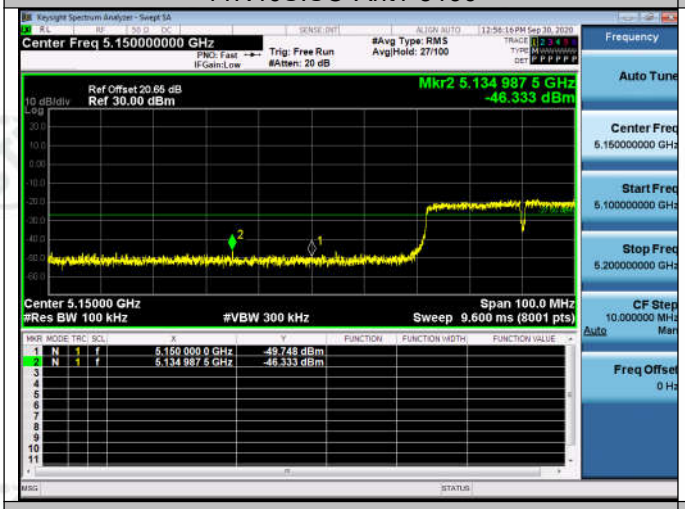

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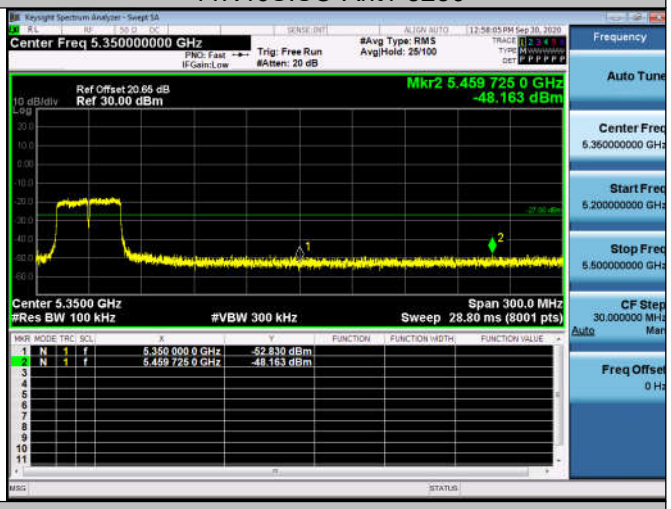
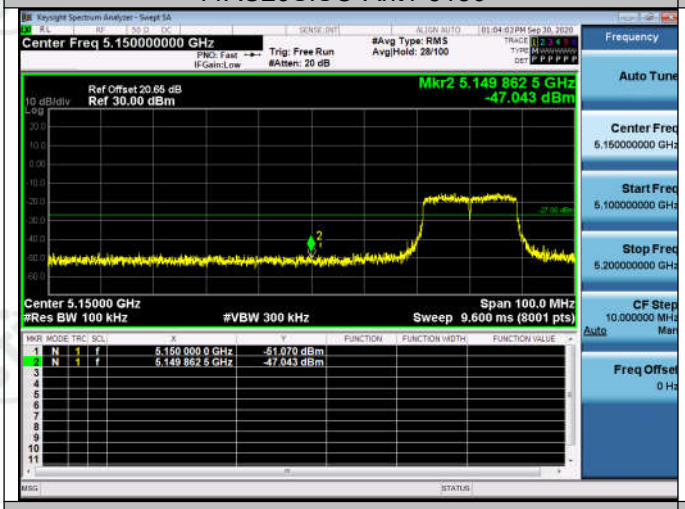
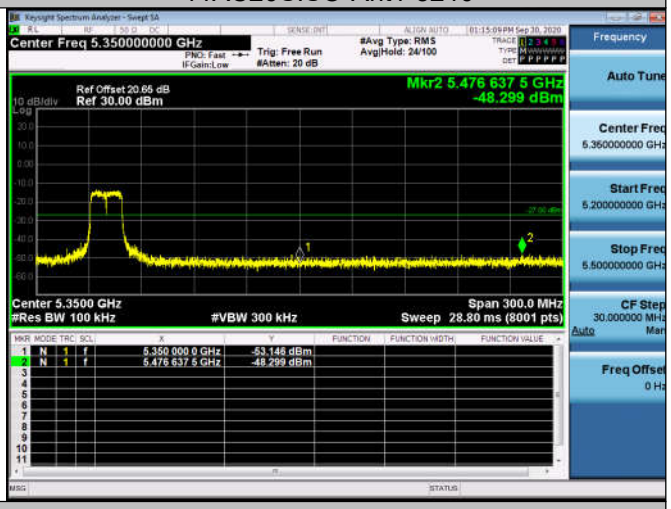


11AC20SISO-Ant1-5180



11AC20SISO-Ant1-5240



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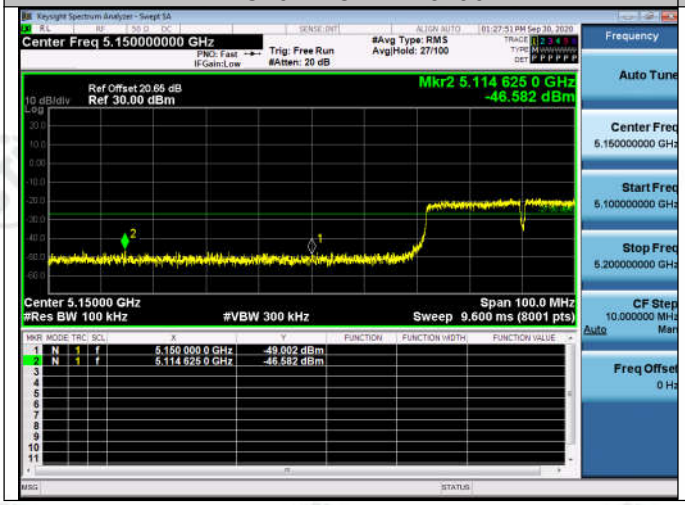

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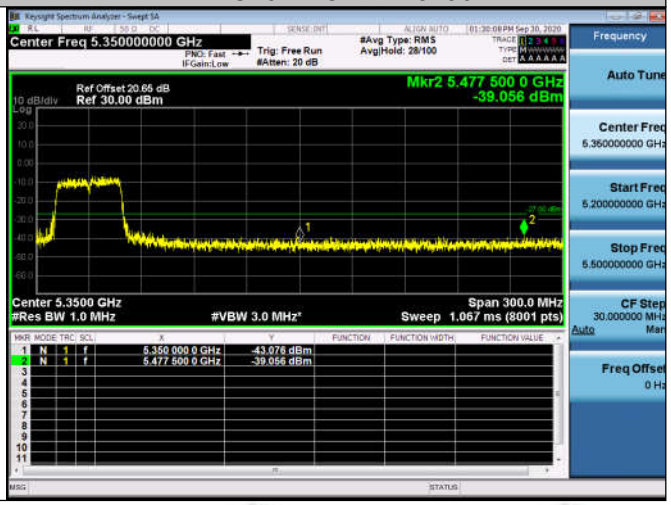
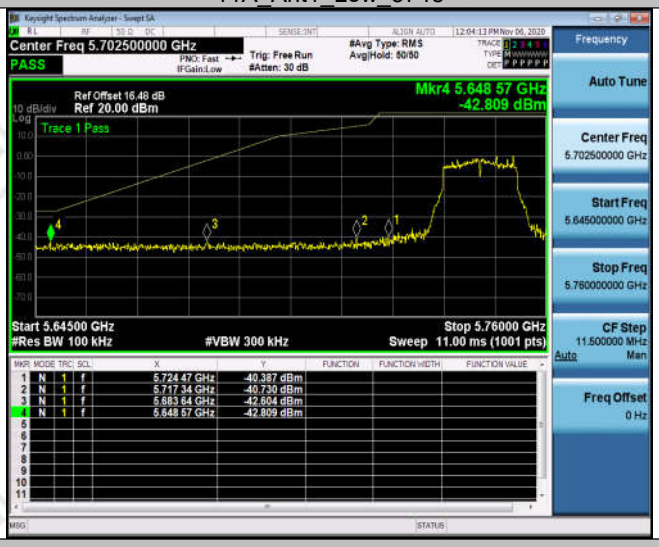
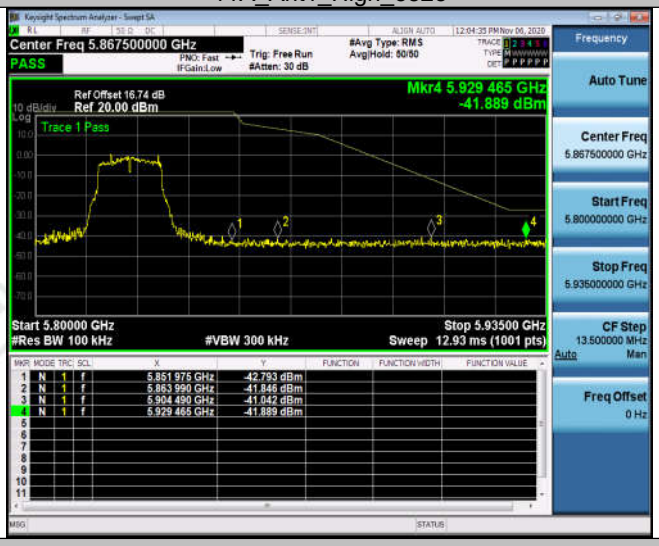


11A_Ant1_Low_5745

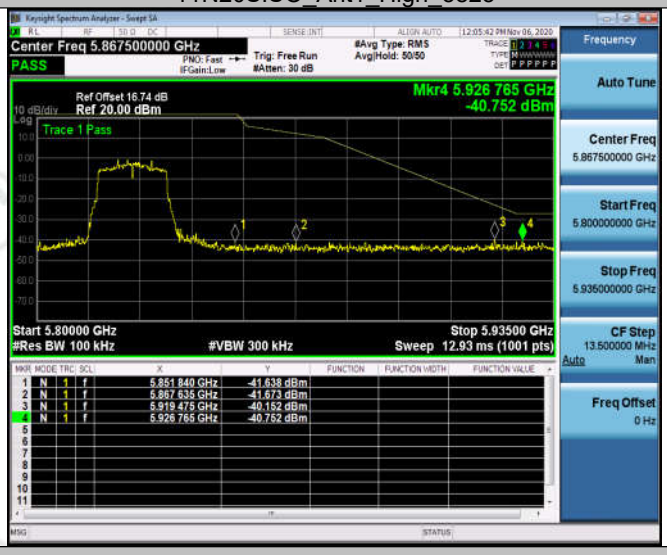


11A_Ant1_High_5825



11N20SISO_Ant1_Low_5745

11N20SISO_Ant1_High_5825



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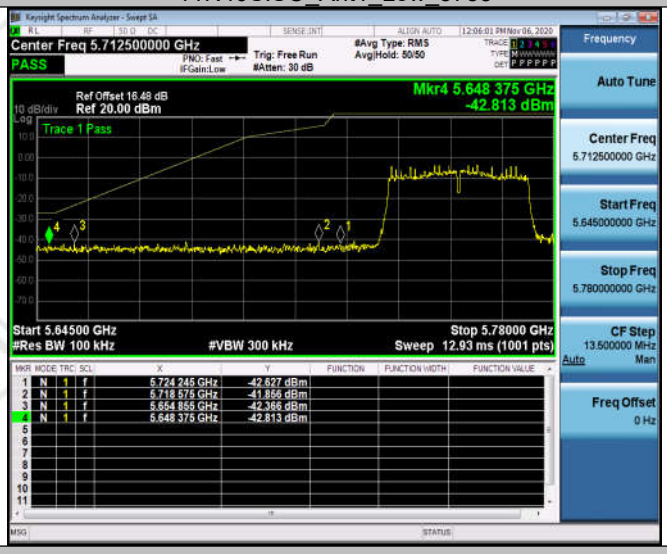

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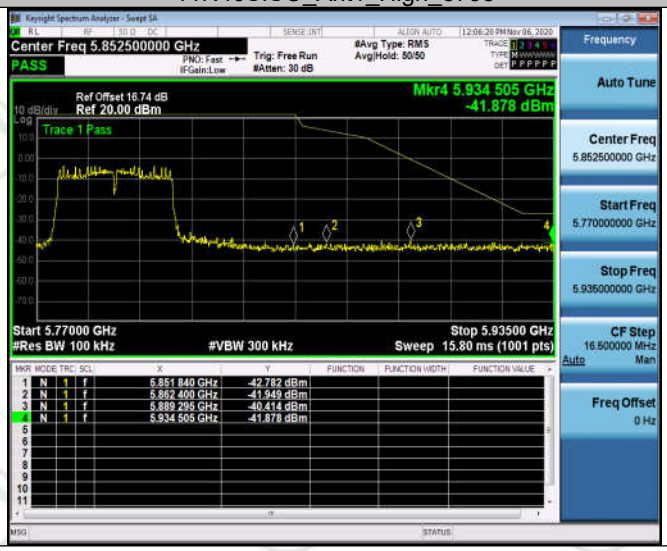

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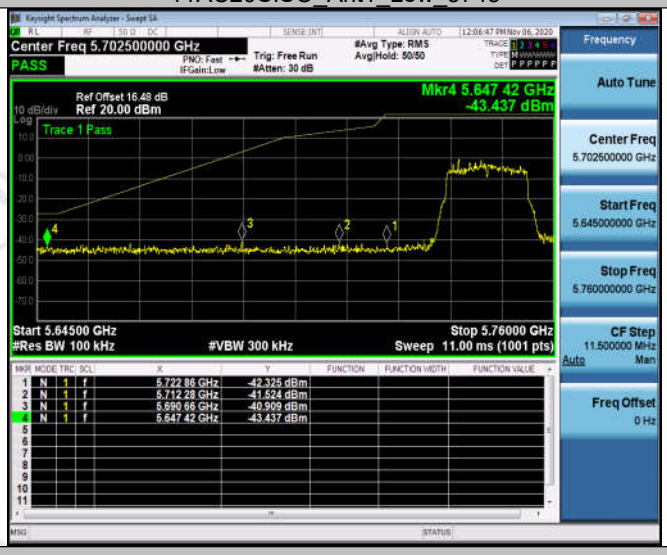

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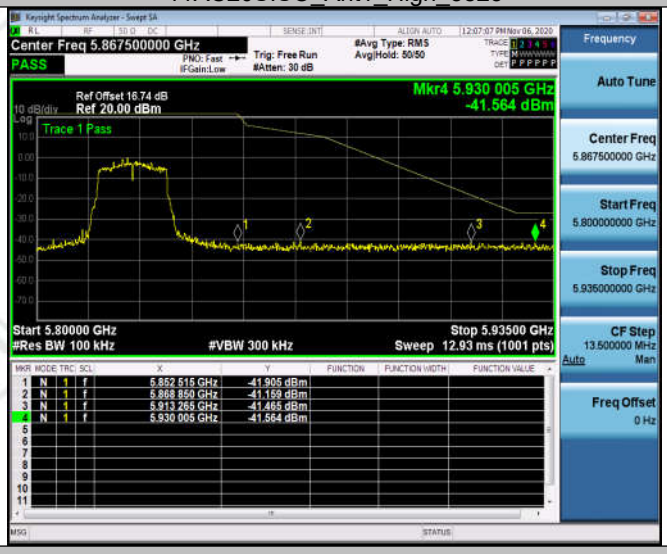

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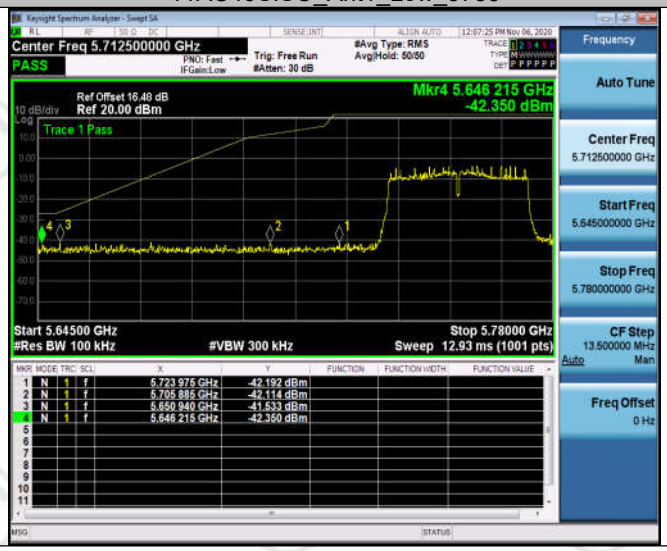

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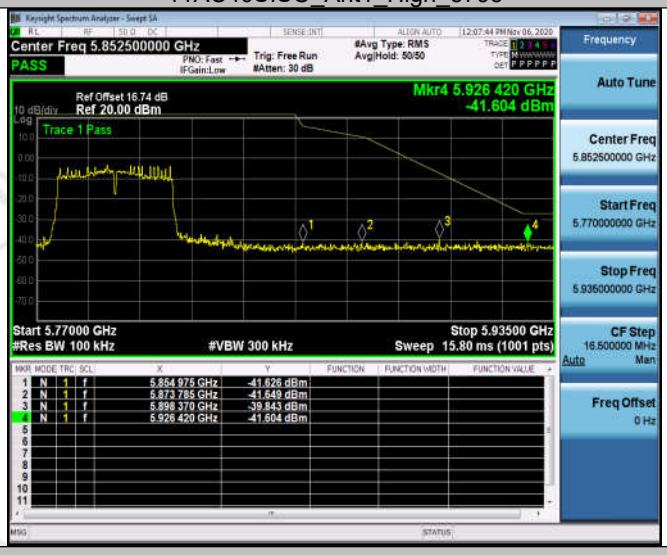
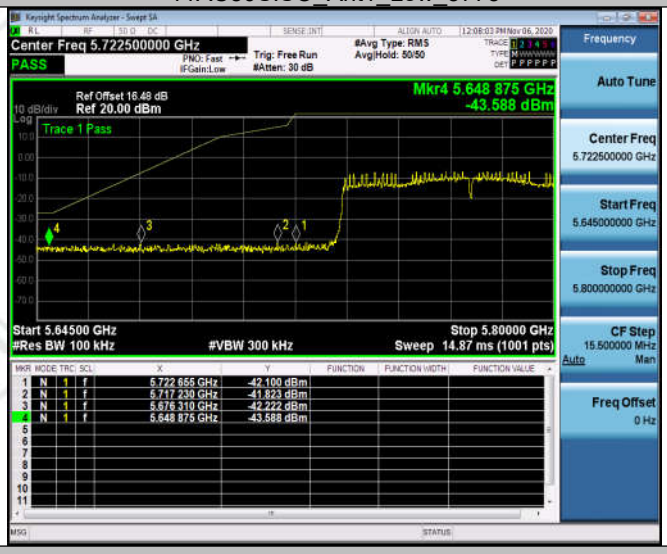
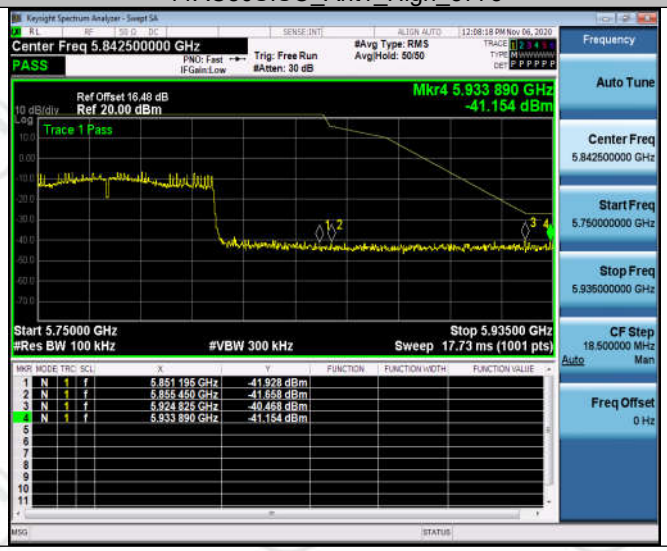


11AC80SISO_Ant1_Low_5775



11AC80SISO_Ant1_High_5775



Appendix E): Frequency Stability

Frequency Error vs. Voltage:

Voltage vs. Frequency Stability								
Test Mode	Test	Ant	Temp.	Volt.	Deviation[MHz]	Deviation[ppm]	Limit[ppm]	Verdict
11AC20	5180	Ant1	TN	VL	5179.99	-2.89575	20	PASS
11AC20	5180	Ant1	TN	VN	5180.02	2.89575	20	PASS
11AC20	5180	Ant1	TN	VH	5179.99	-2.89575	20	PASS
11AC20	5200	Ant1	TN	VL	5179.99	-2.89575	20	PASS
11AC20	5200	Ant1	TN	VN	5200.03	5.76923	20	PASS
11AC20	5200	Ant1	TN	VH	5200.00	0.00000	20	PASS
11AC20	5240	Ant1	TN	VL	5240.00	0.00000	20	PASS
11AC20	5240	Ant1	TN	VN	5240.08	14.31298	20	PASS
11AC20	5240	Ant1	TN	VH	5240.06	11.45038	20	PASS
11AC20	5745	Ant1	TN	VL	5744.94	-10.44386	20	PASS
11AC20	5745	Ant1	TN	VN	5744.94	-10.44386	20	PASS
11AC20	5745	Ant1	TN	VH	5744.93	-13.05483	20	PASS
11AC20	5785	Ant1	TN	VL	5785.02	2.59291	20	PASS
11AC20	5785	Ant1	TN	VN	5784.97	-5.18583	20	PASS
11AC20	5785	Ant1	TN	VH	5784.99	-2.59291	20	PASS
11AC20	5825	Ant1	TN	VL	5824.91	-15.45064	20	PASS
11AC20	5825	Ant1	TN	VN	5825.06	10.30043	20	PASS
11AC20	5825	Ant1	TN	VH	5825.00	0.00000	20	PASS
11AC40	5190	Ant1	TN	VL	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	TN	VN	5179.99	-2.89575	20	PASS
11AC40	5190	Ant1	TN	VH	5179.99	-2.89575	20	PASS
11AC40	5230	Ant1	TN	VL	5229.92	-15.29637	20	PASS
11AC40	5230	Ant1	TN	VN	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	TN	VH	5230.00	0.00000	20	PASS
11AC80	5210	Ant1	TN	VL	5210.08	15.35509	20	PASS
11AC80	5210	Ant1	TN	VN	5210.08	15.35509	20	PASS
11AC80	5210	Ant1	TN	VH	5210.08	15.35509	20	PASS
11AC80	5775	Ant1	TN	VL	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	TN	VN	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	TN	VH	5775.00	0.00000	20	PASS
11AC40	5755	Ant1	TN	VL	5754.92	-13.90096	20	PASS
11AC40	5755	Ant1	TN	VN	5755.04	6.95048	20	PASS

11AC40	5755	Ant1	TN	VH	5755.00	0.00000	20	PASS
11AC40	5795	Ant1	TN	VL	5795.04	6.90250	20	PASS
11AC40	5795	Ant1	TN	VN	5794.96	-6.90250	20	PASS
11AC40	5795	Ant1	TN	VH	5794.96	-6.90250	20	PASS
11A	5180	Ant1	TN	VL	5179.99	-2.89575	20	PASS
11A	5180	Ant1	TN	VN	5180.03	5.79151	20	PASS
11A	5180	Ant1	TN	VH	5179.99	-2.89575	20	PASS
11A	5200	Ant1	TN	VL	5199.97	-5.76923	20	PASS
11A	5200	Ant1	TN	VN	5199.97	-5.76923	20	PASS
11A	5200	Ant1	TN	VH	5199.94	-11.53846	20	PASS
11A	5240	Ant1	TN	VL	5239.91	-17.17557	20	PASS
11A	5240	Ant1	TN	VN	5239.91	-17.17557	20	PASS
11A	5240	Ant1	TN	VH	5239.91	-17.17557	20	PASS
11A	5745	Ant1	TN	VL	5745.03	5.22193	20	PASS
11A	5745	Ant1	TN	VN	5744.97	-5.22193	20	PASS
11A	5745	Ant1	TN	VH	5745.03	5.22193	20	PASS
11A	5785	Ant1	TN	VL	5784.96	-7.77874	20	PASS
11A	5785	Ant1	TN	VN	5784.93	-12.96456	20	PASS
11A	5785	Ant1	TN	VH	5784.99	-2.59291	20	PASS
11A	5825	Ant1	TN	VL	5824.97	-5.15022	20	PASS
11A	5825	Ant1	TN	VN	5825.08	12.87554	20	PASS
11A	5825	Ant1	TN	VH	5824.97	-5.15022	20	PASS
11N20	5180	Ant1	TN	VL	5180.00	0.00000	20	PASS
11N20	5180	Ant1	TN	VN	5180.05	8.68726	20	PASS
11N20	5180	Ant1	TN	VH	5179.99	-2.89575	20	PASS
11N20	5200	Ant1	TN	VL	5200.00	0.00000	20	PASS
11N20	5200	Ant1	TN	VN	5199.94	-11.53846	20	PASS
11N20	5200	Ant1	TN	VH	5200.02	2.88462	20	PASS
11N20	5240	Ant1	TN	VL	5240.00	0.00000	20	PASS
11N20	5240	Ant1	TN	VN	5239.94	-11.45038	20	PASS
11N20	5240	Ant1	TN	VH	5240.00	0.00000	20	PASS
11N20	5745	Ant1	TN	VL	5745.02	2.61097	20	PASS
11N20	5745	Ant1	TN	VN	5745.00	0.00000	20	PASS
11N20	5745	Ant1	TN	VH	5744.94	-10.44386	20	PASS
11N20	5785	Ant1	TN	VL	5784.99	-2.59291	20	PASS
11N20	5785	Ant1	TN	VN	5784.96	-7.77874	20	PASS
11N20	5785	Ant1	TN	VH	5785.02	2.59291	20	PASS

11N20	5825	Ant1	TN	VL	5824.94	-10.30043	20	PASS
11N20	5825	Ant1	TN	VN	5824.91	-15.45064	20	PASS
11N20	5825	Ant1	TN	VH	5824.94	-10.30043	20	PASS
11N40	5190	Ant1	TN	VL	5190.03	5.78035	20	PASS
11N40	5190	Ant1	TN	VN	5190.03	5.78035	20	PASS
11N40	5190	Ant1	TN	VH	5190.03	5.78035	20	PASS
11N40	5230	Ant1	TN	VL	5230.00	0.00000	20	PASS
11N40	5230	Ant1	TN	VN	5229.97	-5.73614	20	PASS
11N40	5230	Ant1	TN	VH	5230.00	0.00000	20	PASS
11N40	5755	Ant1	TN	VL	5754.94	-10.42572	20	PASS
11N40	5755	Ant1	TN	VN	5755.09	15.63858	20	PASS
11N40	5755	Ant1	TN	VH	5755.09	15.63858	20	PASS
11N40	5795	Ant1	TN	VL	5795.06	10.35375	20	PASS
11N40	5795	Ant1	TN	VN	5795.06	10.35375	20	PASS
11N40	5795	Ant1	TN	VH	5795.06	10.35375	20	PASS

Frequency Error vs. Temperature:

Temperature vs. Frequency Stability								
Test Mode	Test	Ant	Volt.	Temp.	Deviation[MHz]	Deviation[ppm]	Limit[ppm]	Verdict
11AC20	5180	Ant1	VN	-30	5180.03	5.79151	20	PASS
11AC20	5180	Ant1	VN	-20	5180.06	11.58301	20	PASS
11AC20	5180	Ant1	VN	-10	5180.06	11.58301	20	PASS
11AC20	5180	Ant1	VN	0	5180.06	11.58301	20	PASS
11AC20	5180	Ant1	VN	10	5180.06	11.58301	20	PASS
11AC20	5180	Ant1	VN	20	5180.05	8.68726	20	PASS
11AC20	5180	Ant1	VN	30	5180.09	17.37452	20	PASS
11AC20	5180	Ant1	VN	40	5180.00	0.00000	20	PASS
11AC20	5180	Ant1	VN	50	5180.03	5.79151	20	PASS
11AC20	5200	Ant1	VN	-30	5200.00	0.00000	20	PASS
11AC20	5200	Ant1	VN	-20	5200.09	17.30769	20	PASS
11AC20	5200	Ant1	VN	-10	5200.03	5.76923	20	PASS
11AC20	5200	Ant1	VN	0	5199.91	-17.30769	20	PASS
11AC20	5200	Ant1	VN	10	5200.05	8.65385	20	PASS
11AC20	5200	Ant1	VN	20	5199.97	-5.76923	20	PASS
11AC20	5200	Ant1	VN	30	5199.94	-11.53846	20	PASS
11AC20	5200	Ant1	VN	40	5199.96	-8.65385	20	PASS
11AC20	5200	Ant1	VN	50	5200.02	2.88462	20	PASS
11AC20	5240	Ant1	VN	-30	5240.03	5.72519	20	PASS
11AC20	5240	Ant1	VN	-20	5240.03	5.72519	20	PASS
11AC20	5240	Ant1	VN	-10	5240.03	5.72519	20	PASS
11AC20	5240	Ant1	VN	0	5240.08	14.31298	20	PASS
11AC20	5240	Ant1	VN	10	5240.03	5.72519	20	PASS
11AC20	5240	Ant1	VN	20	5239.96	-8.58779	20	PASS
11AC20	5240	Ant1	VN	30	5239.97	-5.72519	20	PASS
11AC20	5240	Ant1	VN	40	5239.93	-14.31298	20	PASS
11AC20	5240	Ant1	VN	50	5239.91	-17.17557	20	PASS
11AC20	5745	Ant1	VN	-30	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	-20	5745.03	5.22193	20	PASS
11AC20	5745	Ant1	VN	-10	5745.03	5.22193	20	PASS
11AC20	5745	Ant1	VN	0	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	10	5744.97	-5.22193	20	PASS
11AC20	5745	Ant1	VN	20	5744.91	-15.66580	20	PASS
11AC20	5745	Ant1	VN	30	5744.97	-5.22193	20	PASS

11AC20	5745	Ant1	VN	40	5744.97	-5.22193	20	PASS
11AC20	5745	Ant1	VN	50	5745.03	5.22193	20	PASS
11AC20	5785	Ant1	VN	-30	5784.91	-15.55748	20	PASS
11AC20	5785	Ant1	VN	-20	5785.00	0.00000	20	PASS
11AC20	5785	Ant1	VN	-10	5785.00	0.00000	20	PASS
11AC20	5785	Ant1	VN	0	5785.03	5.18583	20	PASS
11AC20	5785	Ant1	VN	10	5785.03	5.18583	20	PASS
11AC20	5785	Ant1	VN	20	5785.00	0.00000	20	PASS
11AC20	5785	Ant1	VN	30	5785.02	2.59291	20	PASS
11AC20	5785	Ant1	VN	40	5784.94	-10.37165	20	PASS
11AC20	5785	Ant1	VN	50	5785.00	0.00000	20	PASS
11AC20	5825	Ant1	VN	-30	5825.03	5.15022	20	PASS
11AC20	5825	Ant1	VN	-20	5824.96	-7.72532	20	PASS
11AC20	5825	Ant1	VN	-10	5825.09	15.45064	20	PASS
11AC20	5825	Ant1	VN	0	5824.96	-7.72532	20	PASS
11AC20	5825	Ant1	VN	10	5825.08	12.87554	20	PASS
11AC20	5825	Ant1	VN	20	5825.00	0.00000	20	PASS
11AC20	5825	Ant1	VN	30	5825.05	7.72532	20	PASS
11AC20	5825	Ant1	VN	40	5824.91	-15.45064	20	PASS
11AC20	5825	Ant1	VN	50	5824.97	-5.15022	20	PASS
11AC40	5190	Ant1	VN	-30	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	-20	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	-10	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	0	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	VN	10	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	VN	20	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	VN	30	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	40	5190.00	0.00000	20	PASS
11AC40	5190	Ant1	VN	50	5190.04	7.70713	20	PASS
11AC40	5230	Ant1	VN	-30	5229.96	-7.64818	20	PASS
11AC40	5230	Ant1	VN	-20	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	-10	5230.04	7.64818	20	PASS
11AC40	5230	Ant1	VN	0	5229.92	-15.29637	20	PASS
11AC40	5230	Ant1	VN	10	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	20	5230.04	7.64818	20	PASS
11AC40	5230	Ant1	VN	30	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	40	5230.08	15.29637	20	PASS

11AC40	5230	Ant1	VN	50	5230.04	7.64818	20	PASS
11AC40	5755	Ant1	VN	-30	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	-20	5754.96	-6.95048	20	PASS
11AC40	5755	Ant1	VN	-10	5755.08	13.90096	20	PASS
11AC40	5755	Ant1	VN	0	5755.08	13.90096	20	PASS
11AC40	5755	Ant1	VN	10	5754.96	-6.95048	20	PASS
11AC40	5755	Ant1	VN	20	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	30	5754.96	-6.95048	20	PASS
11AC40	5755	Ant1	VN	40	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	50	5755.08	13.90096	20	PASS
11AC40	5795	Ant1	VN	-30	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	-20	5795.04	6.90250	20	PASS
11AC40	5795	Ant1	VN	-10	5795.04	6.90250	20	PASS
11AC40	5795	Ant1	VN	0	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	10	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	20	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	30	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	40	5794.96	-6.90250	20	PASS
11AC40	5795	Ant1	VN	50	5794.96	-6.90250	20	PASS
11AC80	5210	Ant1	VN	-30	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	-20	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	-10	5210.08	15.35509	20	PASS
11AC80	5210	Ant1	VN	0	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	10	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	20	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	30	5210.08	15.35509	20	PASS
11AC80	5210	Ant1	VN	40	5210.08	15.35509	20	PASS
11AC80	5210	Ant1	VN	50	5210.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	-30	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	-20	5774.92	-13.85281	20	PASS
11AC80	5775	Ant1	VN	-10	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	0	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	10	5774.92	-13.85281	20	PASS
11AC80	5775	Ant1	VN	20	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	30	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	40	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	50	5775.08	13.85281	20	PASS

11A	5180	Ant1	VN	-30	5180.03	5.79151	20	PASS
11A	5180	Ant1	VN	-20	5180.03	5.79151	20	PASS
11A	5180	Ant1	VN	-10	5179.97	-5.79151	20	PASS
11A	5180	Ant1	VN	0	5180.03	5.79151	20	PASS
11A	5180	Ant1	VN	10	5180.00	0.00000	20	PASS
11A	5180	Ant1	VN	20	5179.93	-14.47876	20	PASS
11A	5180	Ant1	VN	30	5180.00	0.00000	20	PASS
11A	5180	Ant1	VN	40	5180.02	2.89575	20	PASS
11A	5180	Ant1	VN	50	5180.05	8.68726	20	PASS
11A	5200	Ant1	VN	-30	5200.00	0.00000	20	PASS
11A	5200	Ant1	VN	-20	5199.96	-8.65385	20	PASS
11A	5200	Ant1	VN	-10	5200.03	5.76923	20	PASS
11A	5200	Ant1	VN	0	5199.97	-5.76923	20	PASS
11A	5200	Ant1	VN	10	5199.96	-8.65385	20	PASS
11A	5200	Ant1	VN	20	5200.03	5.76923	20	PASS
11A	5200	Ant1	VN	30	5199.94	-11.53846	20	PASS
11A	5200	Ant1	VN	40	5200.03	5.76923	20	PASS
11A	5200	Ant1	VN	50	5199.97	-5.76923	20	PASS
11A	5240	Ant1	VN	-30	5239.99	-2.86260	20	PASS
11A	5240	Ant1	VN	-20	5240.03	5.72519	20	PASS
11A	5240	Ant1	VN	-10	5239.96	-8.58779	20	PASS
11A	5240	Ant1	VN	0	5239.97	-5.72519	20	PASS
11A	5240	Ant1	VN	10	5239.96	-8.58779	20	PASS
11A	5240	Ant1	VN	20	5240.00	0.00000	20	PASS
11A	5240	Ant1	VN	30	5240.03	5.72519	20	PASS
11A	5240	Ant1	VN	40	5240.03	5.72519	20	PASS
11A	5240	Ant1	VN	50	5240.00	0.00000	20	PASS
11A	5745	Ant1	VN	-30	5745.09	15.66580	20	PASS
11A	5745	Ant1	VN	-20	5744.93	-13.05483	20	PASS
11A	5745	Ant1	VN	-10	5745.05	7.83290	20	PASS
11A	5745	Ant1	VN	0	5744.96	-7.83290	20	PASS
11A	5745	Ant1	VN	10	5745.03	5.22193	20	PASS
11A	5745	Ant1	VN	20	5745.02	2.61097	20	PASS
11A	5745	Ant1	VN	30	5745.00	0.00000	20	PASS
11A	5745	Ant1	VN	40	5745.02	2.61097	20	PASS
11A	5745	Ant1	VN	50	5744.96	-7.83290	20	PASS
11A	5785	Ant1	VN	-30	5784.94	-10.37165	20	PASS

11A	5785	Ant1	VN	-20	5784.96	-7.77874	20	PASS
11A	5785	Ant1	VN	-10	5784.96	-7.77874	20	PASS
11A	5785	Ant1	VN	0	5784.97	-5.18583	20	PASS
11A	5785	Ant1	VN	10	5785.02	2.59291	20	PASS
11A	5785	Ant1	VN	20	5785.03	5.18583	20	PASS
11A	5785	Ant1	VN	30	5784.94	-10.37165	20	PASS
11A	5785	Ant1	VN	40	5784.96	-7.77874	20	PASS
11A	5785	Ant1	VN	50	5785.08	12.96456	20	PASS
11A	5825	Ant1	VN	-30	5824.96	-7.72532	20	PASS
11A	5825	Ant1	VN	-20	5825.02	2.57511	20	PASS
11A	5825	Ant1	VN	-10	5825.00	0.00000	20	PASS
11A	5825	Ant1	VN	0	5824.93	-12.87554	20	PASS
11A	5825	Ant1	VN	10	5825.00	0.00000	20	PASS
11A	5825	Ant1	VN	20	5824.96	-7.72532	20	PASS
11A	5825	Ant1	VN	30	5825.00	0.00000	20	PASS
11A	5825	Ant1	VN	40	5825.00	0.00000	20	PASS
11A	5825	Ant1	VN	50	5825.03	5.15022	20	PASS
11N20	5180	Ant1	VN	-30	5180.08	14.47876	20	PASS
11N20	5180	Ant1	VN	-20	5180.08	14.47876	20	PASS
11N20	5180	Ant1	VN	-10	5179.94	-11.58301	20	PASS
11N20	5180	Ant1	VN	0	5179.91	-17.37452	20	PASS
11N20	5180	Ant1	VN	10	5180.08	14.47876	20	PASS
11N20	5180	Ant1	VN	20	5179.93	-14.47876	20	PASS
11N20	5180	Ant1	VN	30	5180.03	5.79151	20	PASS
11N20	5180	Ant1	VN	40	5180.03	5.79151	20	PASS
11N20	5180	Ant1	VN	50	5180.02	2.89575	20	PASS
11N20	5200	Ant1	VN	-30	5199.97	-5.76923	20	PASS
11N20	5200	Ant1	VN	-20	5200.00	0.00000	20	PASS
11N20	5200	Ant1	VN	-10	5200.09	17.30769	20	PASS
11N20	5200	Ant1	VN	0	5200.02	2.88462	20	PASS
11N20	5200	Ant1	VN	10	5200.05	8.65385	20	PASS
11N20	5200	Ant1	VN	20	5200.05	8.65385	20	PASS
11N20	5200	Ant1	VN	30	5199.97	-5.76923	20	PASS
11N20	5200	Ant1	VN	40	5199.97	-5.76923	20	PASS
11N20	5200	Ant1	VN	50	5199.97	-5.76923	20	PASS
11N20	5240	Ant1	VN	-30	5239.99	-2.86260	20	PASS
11N20	5240	Ant1	VN	-20	5239.91	-17.17557	20	PASS

11N20	5240	Ant1	VN	-10	5240.02	2.86260	20	PASS
11N20	5240	Ant1	VN	0	5240.08	14.31298	20	PASS
11N20	5240	Ant1	VN	10	5240.02	2.86260	20	PASS
11N20	5240	Ant1	VN	20	5240.08	14.31298	20	PASS
11N20	5240	Ant1	VN	30	5239.99	-2.86260	20	PASS
11N20	5240	Ant1	VN	40	5240.00	0.00000	20	PASS
11N20	5240	Ant1	VN	50	5240.03	5.72519	20	PASS
11N20	5745	Ant1	VN	-30	5744.93	-13.05483	20	PASS
11N20	5745	Ant1	VN	-20	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	VN	-10	5745.02	2.61097	20	PASS
11N20	5745	Ant1	VN	0	5745.05	7.83290	20	PASS
11N20	5745	Ant1	VN	10	5744.93	-13.05483	20	PASS
11N20	5745	Ant1	VN	20	5745.00	0.00000	20	PASS
11N20	5745	Ant1	VN	30	5744.94	-10.44386	20	PASS
11N20	5745	Ant1	VN	40	5744.99	-2.61097	20	PASS
11N20	5745	Ant1	VN	50	5745.00	0.00000	20	PASS
11N20	5785	Ant1	VN	-30	5785.05	7.77874	20	PASS
11N20	5785	Ant1	VN	-20	5785.06	10.37165	20	PASS
11N20	5785	Ant1	VN	-10	5785.06	10.37165	20	PASS
11N20	5785	Ant1	VN	0	5784.91	-15.55748	20	PASS
11N20	5785	Ant1	VN	10	5784.93	-12.96456	20	PASS
11N20	5785	Ant1	VN	20	5785.02	2.59291	20	PASS
11N20	5785	Ant1	VN	30	5784.97	-5.18583	20	PASS
11N20	5785	Ant1	VN	40	5785.09	15.55748	20	PASS
11N20	5785	Ant1	VN	50	5785.05	7.77874	20	PASS
11N20	5825	Ant1	VN	-30	5824.90	-18.02575	20	PASS
11N20	5825	Ant1	VN	-20	5824.94	-10.30043	20	PASS
11N20	5825	Ant1	VN	-10	5825.02	2.57511	20	PASS
11N20	5825	Ant1	VN	0	5825.03	5.15022	20	PASS
11N20	5825	Ant1	VN	10	5825.03	5.15022	20	PASS
11N20	5825	Ant1	VN	20	5825.03	5.15022	20	PASS
11N20	5825	Ant1	VN	30	5825.03	5.15022	20	PASS
11N20	5825	Ant1	VN	40	5825.03	5.15022	20	PASS
11N20	5825	Ant1	VN	50	5825.03	5.15022	20	PASS
11N40	5190	Ant1	VN	-30	5190.00	0.00000	20	PASS
11N40	5190	Ant1	VN	-20	5189.97	-5.78035	20	PASS
11N40	5190	Ant1	VN	-10	5190.00	0.00000	20	PASS

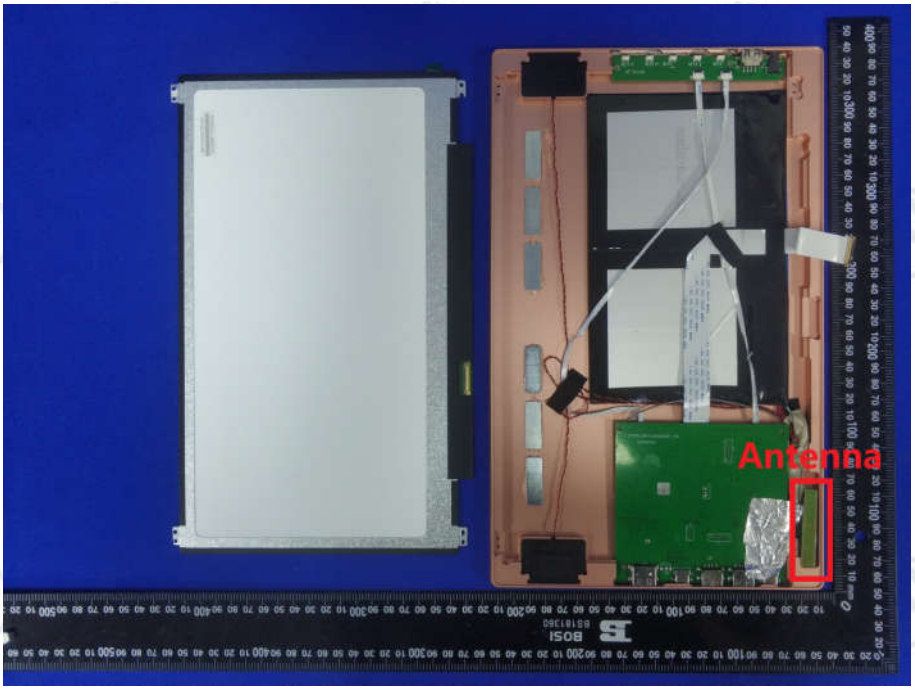
11N40	5190	Ant1	VN	0	5189.94	-11.56069	20	PASS
11N40	5190	Ant1	VN	10	5190.00	0.00000	20	PASS
11N40	5190	Ant1	VN	20	5189.94	-11.56069	20	PASS
11N40	5190	Ant1	VN	30	5190.00	0.00000	20	PASS
11N40	5190	Ant1	VN	40	5190.06	11.56069	20	PASS
11N40	5190	Ant1	VN	50	5190.03	5.78035	20	PASS
11N40	5230	Ant1	VN	-30	5229.97	-5.73614	20	PASS
11N40	5230	Ant1	VN	-20	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	-10	5230.03	5.73614	20	PASS
11N40	5230	Ant1	VN	0	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	10	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	20	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	30	5229.94	-11.47228	20	PASS
11N40	5230	Ant1	VN	40	5230.09	17.20841	20	PASS
11N40	5230	Ant1	VN	50	5230.03	5.73614	20	PASS
11N40	5755	Ant1	VN	-30	5754.97	-5.21286	20	PASS
11N40	5755	Ant1	VN	-20	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	-10	5755.06	10.42572	20	PASS
11N40	5755	Ant1	VN	0	5754.94	-10.42572	20	PASS
11N40	5755	Ant1	VN	10	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	20	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	30	5754.94	-10.42572	20	PASS
11N40	5755	Ant1	VN	40	5754.97	-5.21286	20	PASS
11N40	5755	Ant1	VN	50	5755.00	0.00000	20	PASS
11N40	5795	Ant1	VN	-30	5795.06	10.35375	20	PASS
11N40	5795	Ant1	VN	-20	5794.91	-15.53063	20	PASS
11N40	5795	Ant1	VN	-10	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	0	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	10	5795.03	5.17688	20	PASS
11N40	5795	Ant1	VN	20	5794.97	-5.17688	20	PASS
11N40	5795	Ant1	VN	30	5794.91	-15.53063	20	PASS
11N40	5795	Ant1	VN	40	5794.94	-10.35375	20	PASS
11N40	5795	Ant1	VN	50	5795.09	15.53063	20	PASS

Appendix F) Antenna Requirement

15.203 requirement:
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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.407(a)(1) (2) requirement:
The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density shall be reduced by the by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is Built-in dual-band antenna. The best case gain of the antenna is 3.0 dBi.

Appendix G) AC Power Line Conducted Emission

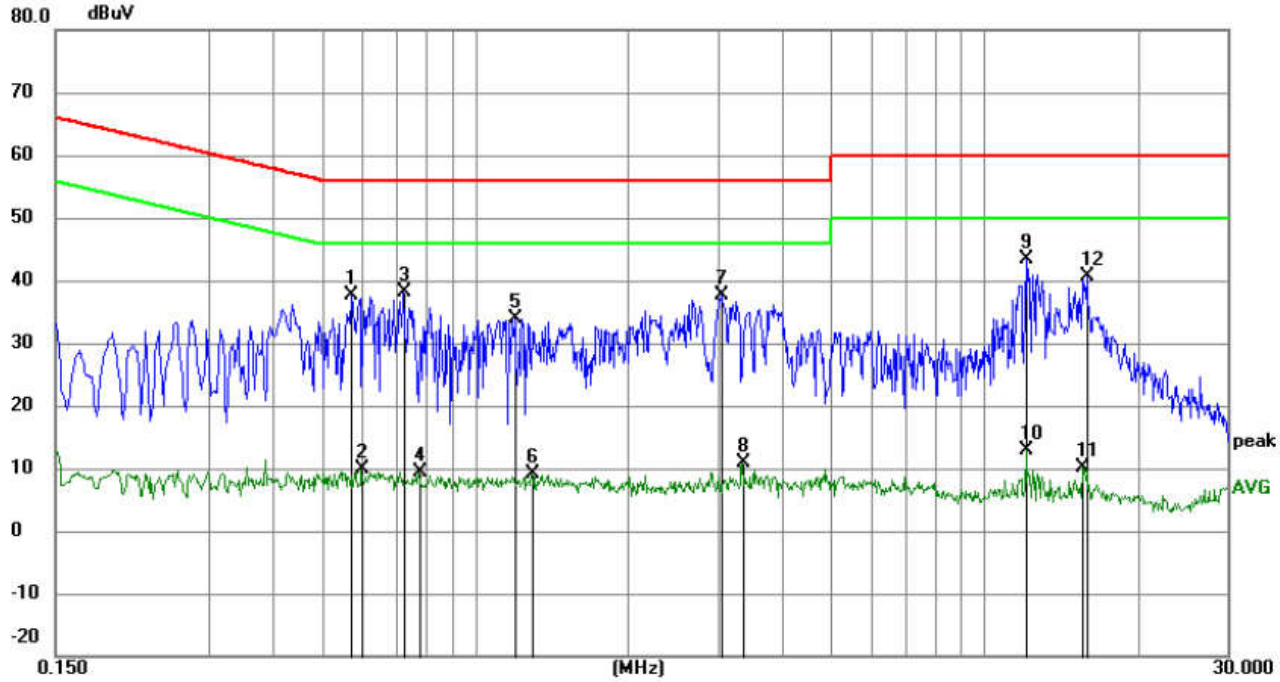
<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1)The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBμV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.
NOTE : The lower limit is applicable at the transition frequency</td></tr>
</table>

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

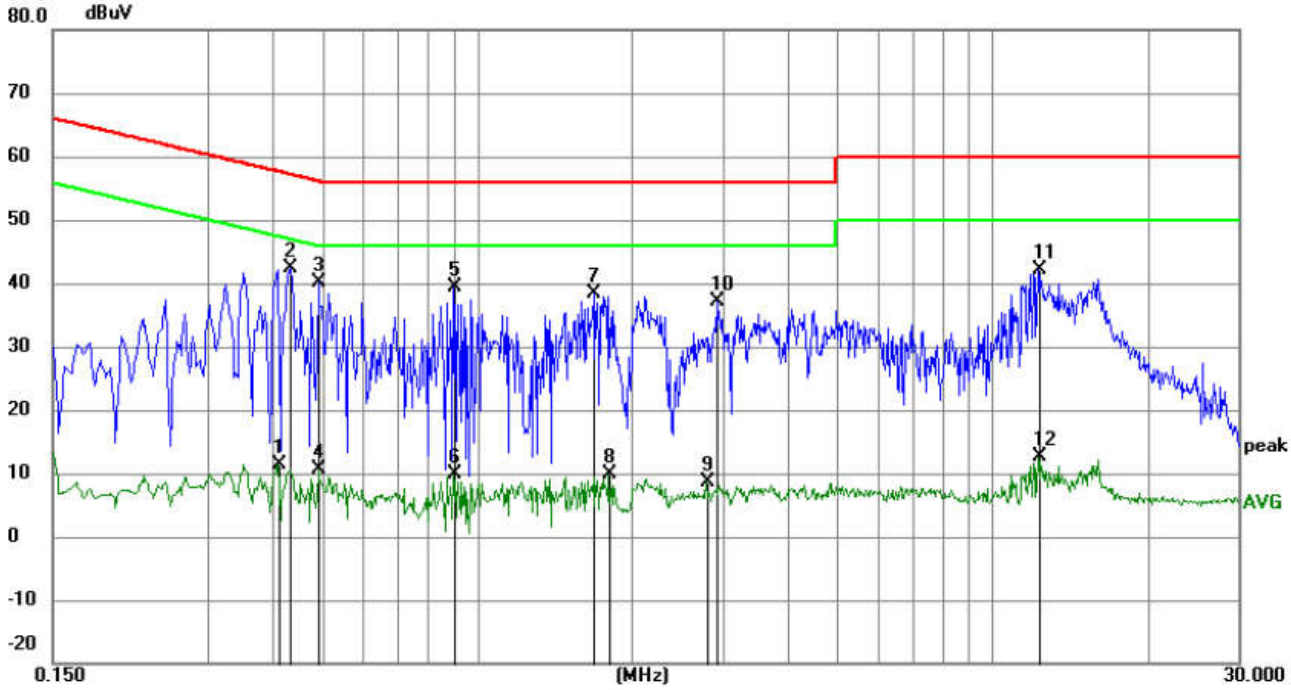
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.5731	27.56	10.04	37.60	56.00	-18.40	QP	
2		0.6000	-0.12	10.07	9.95	46.00	-36.05	AVG	
3		0.7258	28.37	9.87	38.24	56.00	-17.76	QP	
4		0.7752	-0.38	9.86	9.48	46.00	-36.52	AVG	
5		1.1981	24.14	9.82	33.96	56.00	-22.04	QP	
6		1.2925	-0.64	9.82	9.18	46.00	-36.82	AVG	
7		3.0525	27.86	9.79	37.65	56.00	-18.35	QP	
8		3.3494	1.07	9.79	10.86	46.00	-35.14	AVG	
9	*	12.0615	33.57	9.84	43.41	60.00	-16.59	QP	
10		12.0615	3.04	9.84	12.88	50.00	-37.12	AVG	
11		15.5579	0.30	9.93	10.23	50.00	-39.77	AVG	
12		15.9495	30.61	9.94	40.55	60.00	-19.45	QP	

Neutral line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.4107	1.52	9.97	11.49	47.63	-36.14	AVG	
2	*	0.4334	32.44	9.96	42.40	57.19	-14.79	QP	
3		0.4919	30.22	9.95	40.17	56.14	-15.97	QP	
4		0.4919	0.76	9.95	10.71	46.14	-35.43	AVG	
5		0.9012	29.43	9.85	39.28	56.00	-16.72	QP	
6		0.9012	0.11	9.85	9.96	46.00	-36.04	AVG	
7		1.6838	28.46	9.80	38.26	56.00	-17.74	QP	
8		1.8008	0.00	9.80	9.80	46.00	-36.20	AVG	
9		2.7915	-1.08	9.79	8.71	46.00	-37.29	AVG	
10		2.9264	27.44	9.79	37.23	56.00	-18.77	QP	
11		12.2728	32.16	9.85	42.01	60.00	-17.99	QP	
12		12.2728	2.73	9.85	12.58	50.00	-37.42	AVG	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Appendix H) Restricted bands around fundamental frequency (Radiated Emission)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
h. Test the EUT in the lowest channel, the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

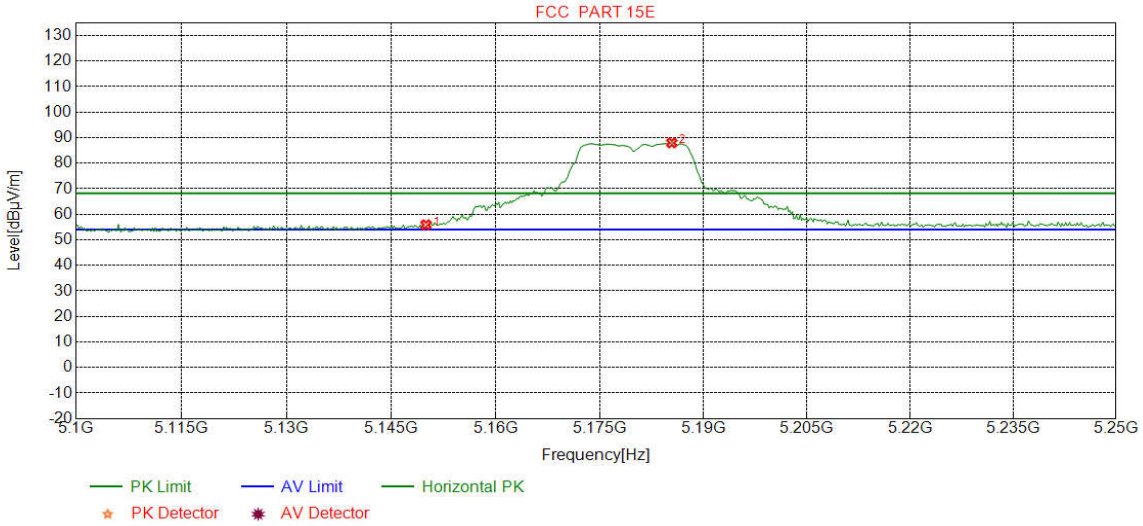
Frequency	Limit (dBμV/m @3cm)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Note: For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz (68.2 dBμV/m @3cm).

Test plot as follows:

Mode:	802.11 a(HT20Mbps) Transmitting	Channel:	5180
Remark:	PK		

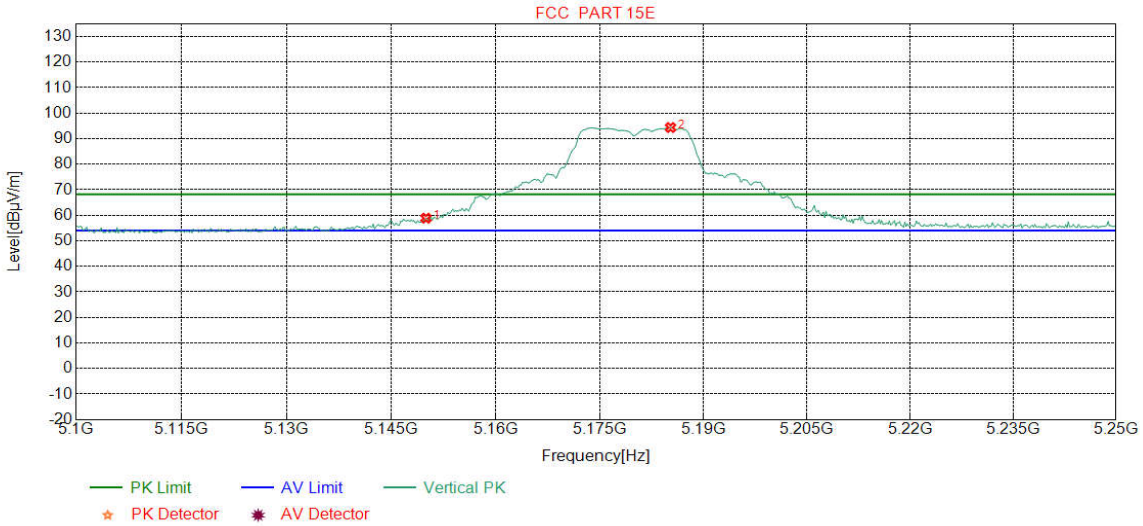
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	48.91	55.90	68.20	12.30	Pass	Horizontal
2	5185.4193	34.69	15.43	-42.73	80.59	87.98	68.20	-19.78	Pass	Horizontal

Mode:	802.11 a(HT20Mbps) Transmitting	Channel:	5180
Remark:	PK		

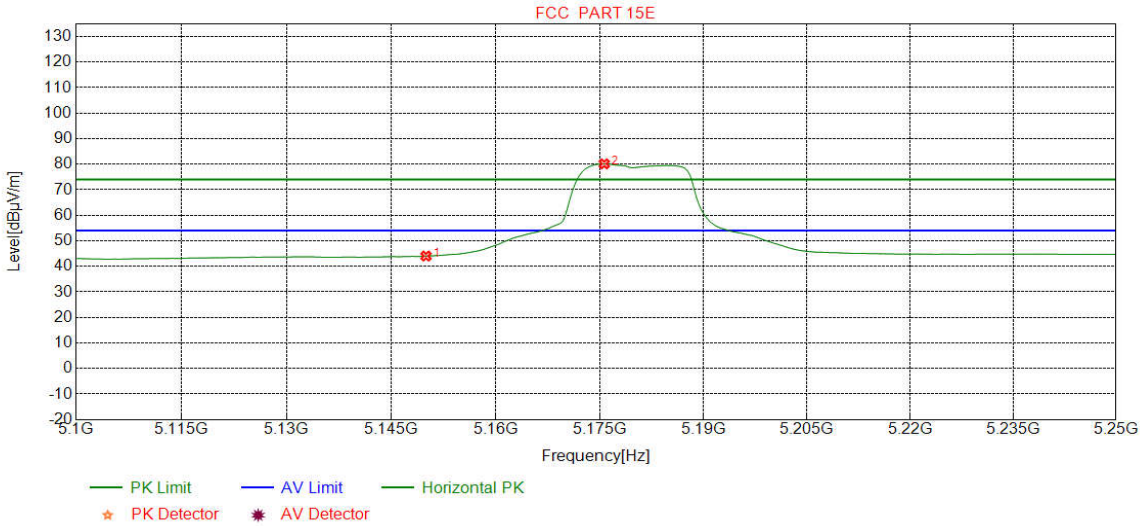
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	51.90	58.89	74.00	15.11	Pass	Vertical
2	5185.2315	34.69	15.43	-42.74	87.00	94.38	74.00	-20.38	Pass	Vertical

Mode:	802.11 a(HT20Mbps) Transmitting	Channel:	5180
Remark:	AV		

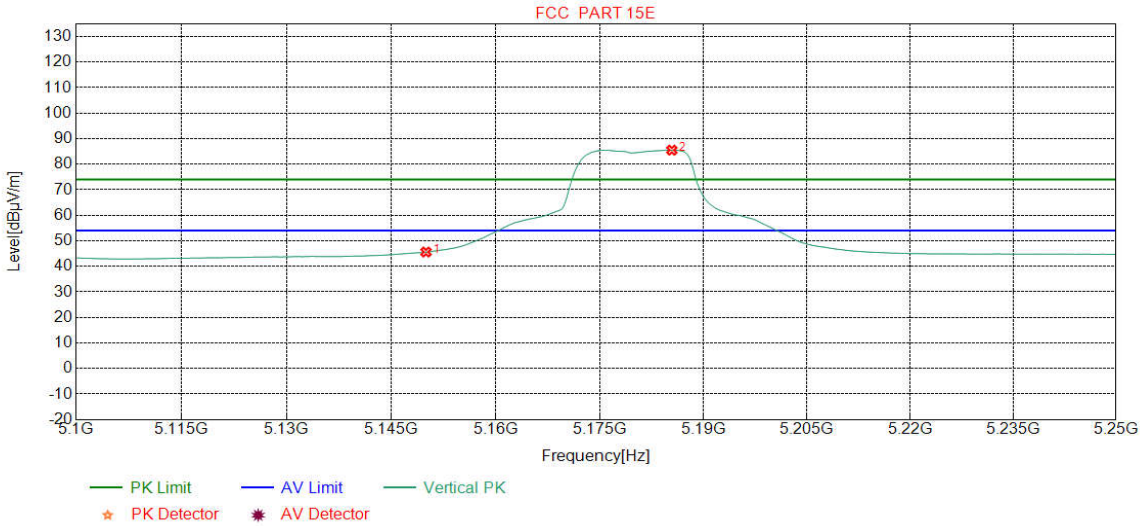
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	37.05	44.04	54.00	9.96	Pass	Horizontal
2	5175.6571	34.68	15.33	-42.73	72.88	80.16	54.00	-26.16	Pass	Horizontal

Mode:	802.11 a(HT20Mbps) Transmitting	Channel:	5180
Remark:	AV		

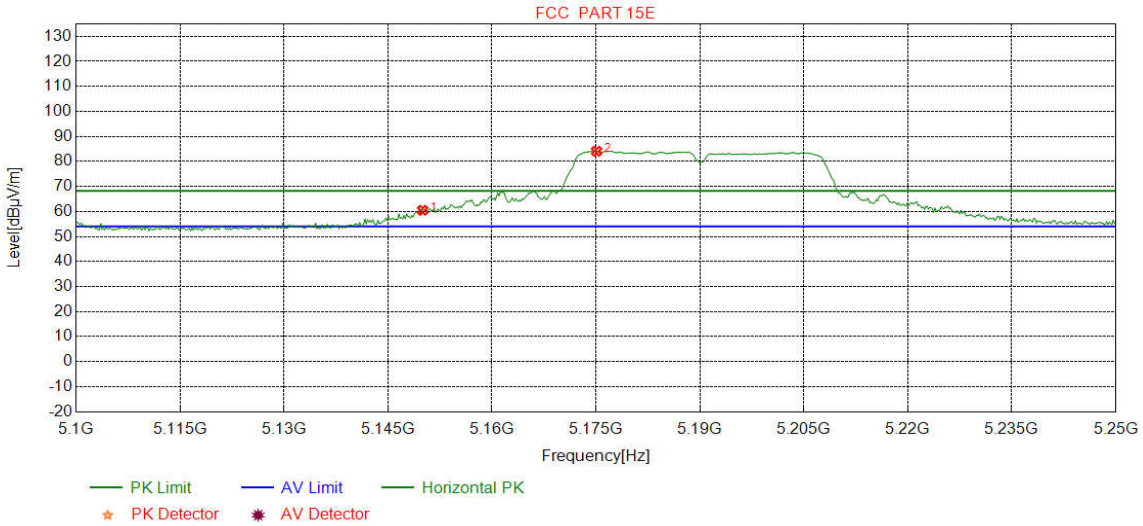
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	38.63	45.62	54.00	8.38	Pass	Vertical
2	5185.4193	34.69	15.43	-42.73	78.13	85.52	54.00	-31.52	Pass	Vertical

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5190
Remark:	PK		

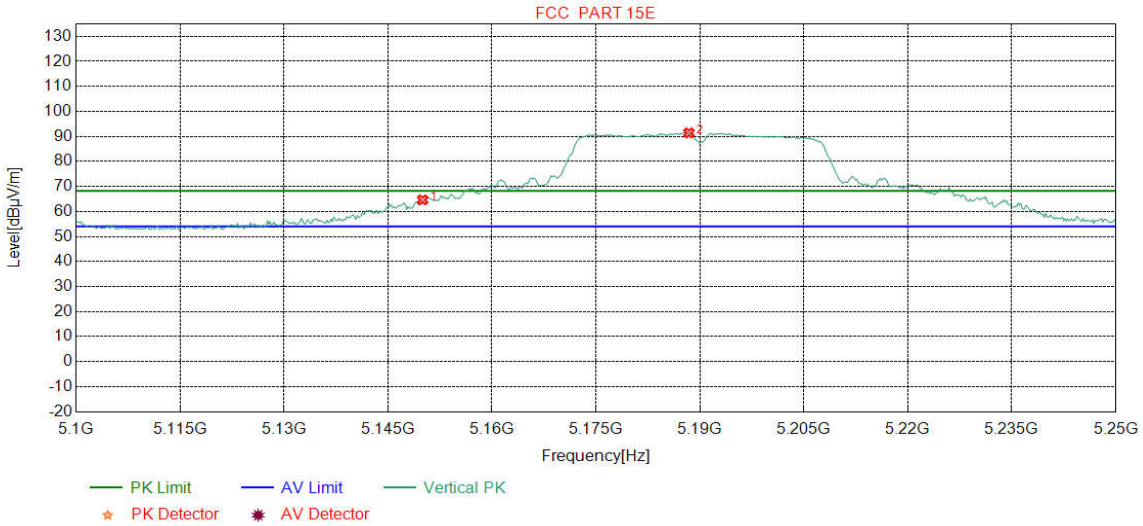
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	53.48	60.47	68.20	7.73	Pass	Horizontal
2	5175.0939	34.68	15.33	-42.74	76.82	84.09	68.20	-15.89	Pass	Horizontal

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5190
Remark:	PK		

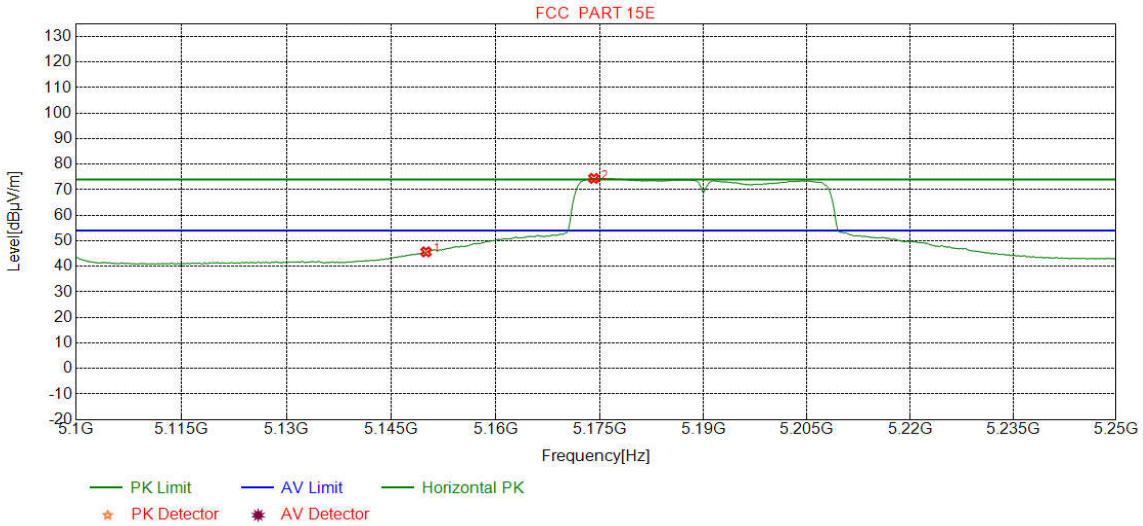
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	57.67	64.66	68.20	3.54	Pass	Vertical
2	5188.4230	34.69	15.46	-42.73	84.01	91.43	68.20	-23.23	Pass	Vertical

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5190
Remark:	AV		

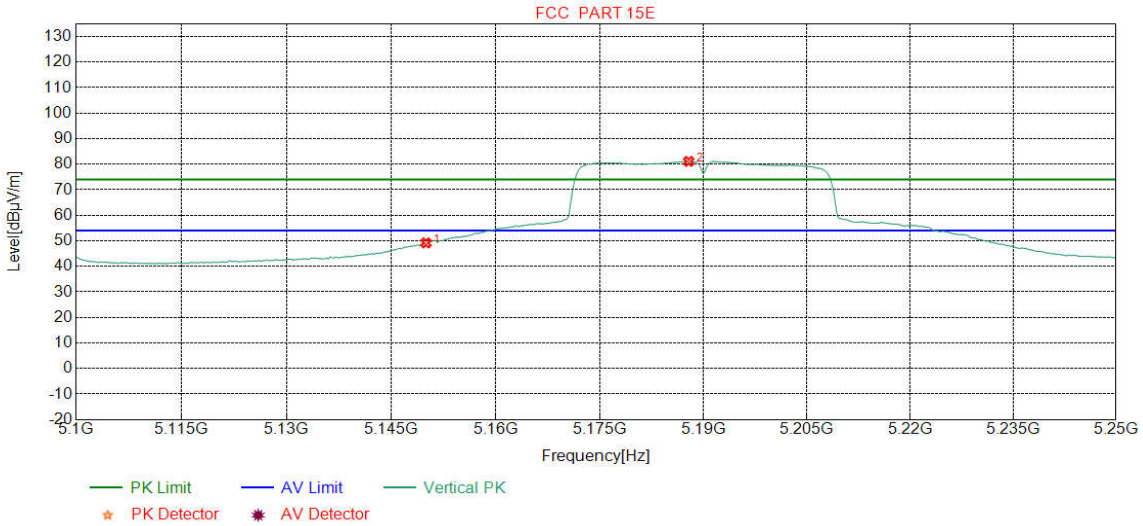
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	38.69	45.68	54.00	8.32	Pass	Horizontal
2	5174.1552	34.67	15.32	-42.73	67.21	74.47	54.00	-20.47	Pass	Horizontal

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5190
Remark:	AV		

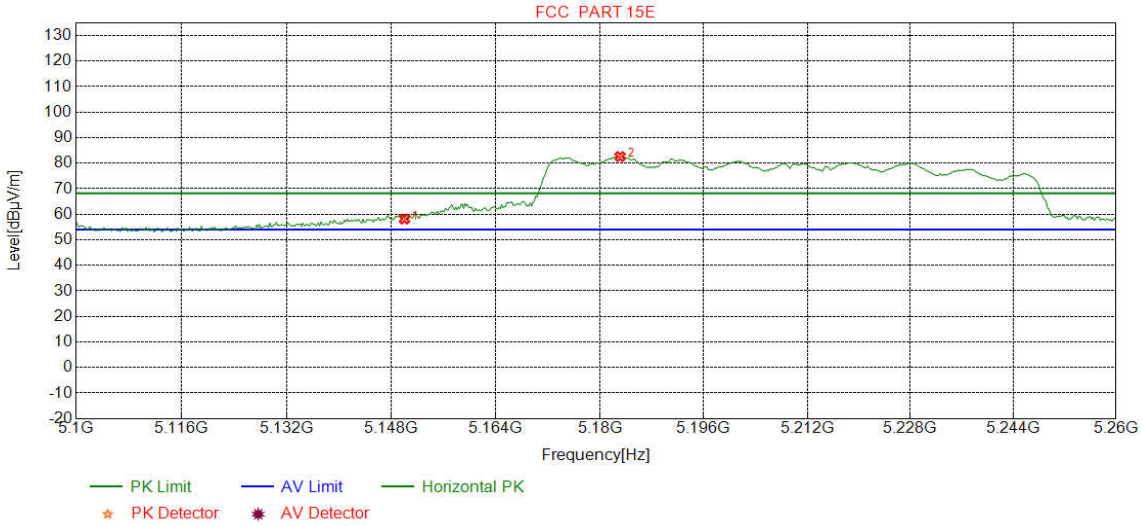
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	42.21	49.20	54.00	4.80	Pass	Vertical
2	5187.8598	34.69	15.45	-42.73	73.71	81.12	54.00	-27.12	Pass	Vertical

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5210
Remark:	PK		

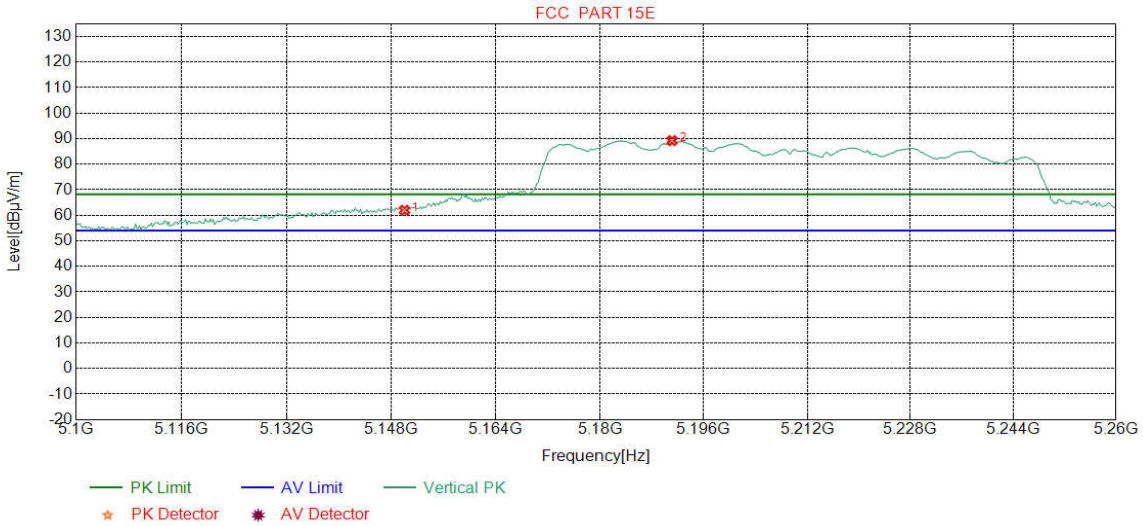
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	57.67	64.66	68.20	3.54	Pass	Horizontal
2	5188.4230	34.69	15.46	-42.73	84.01	91.43	68.20	-23.23	Pass	Horizontal

Mode:	802.11 n(HT40Mbps) Transmitting	Channel:	5210
Remark:	PK		

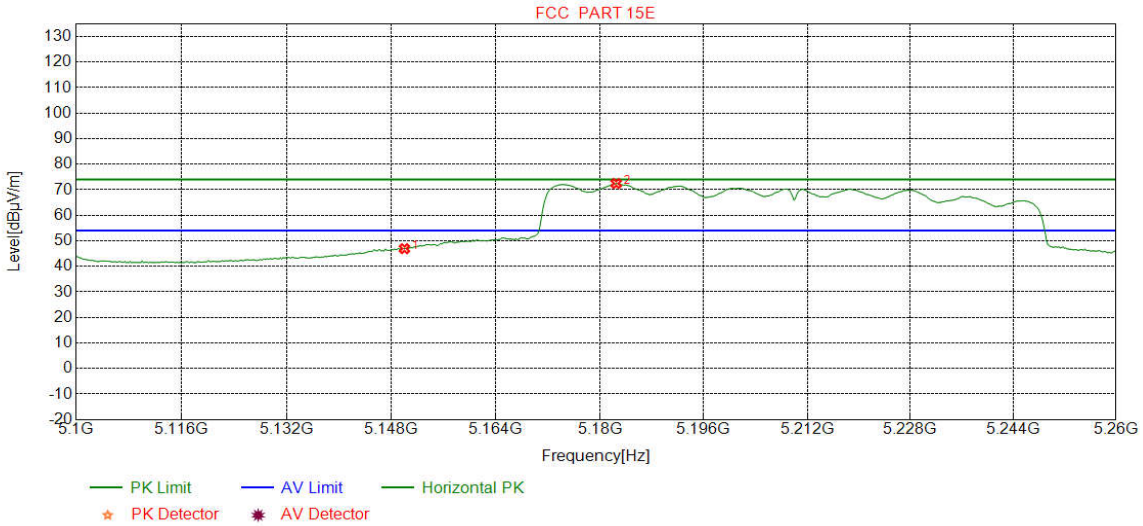
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	54.98	61.97	74.00	12.03	Pass	Vertical
2	5191.1139	34.69	15.48	-42.72	81.80	89.25	74.00	-15.25	Pass	Vertical

Mode:	802.11 ac(VHT80Mbps) Transmitting	Channel:	5210
Remark:	AV		

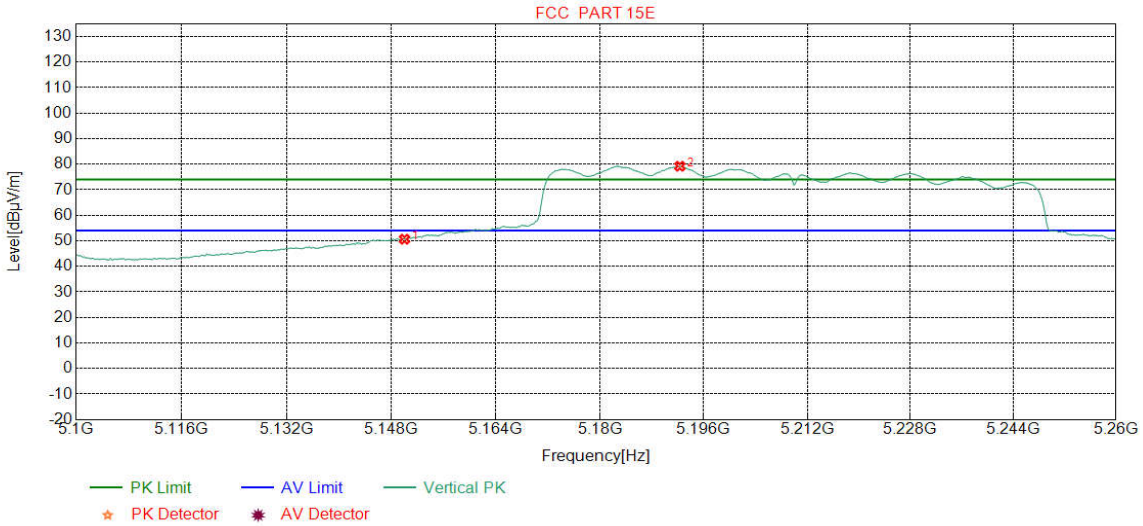
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	39.95	46.94	54.00	7.06	Pass	Horizontal
2	5182.5031	34.68	15.40	-42.73	65.12	72.47	54.00	-18.47	Pass	Horizontal

Mode:	802.11 ac(VHT80Mbps) Transmitting	Channel:	5210
Remark:	AV		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity
1	5150.0000	34.65	15.08	-42.74	43.65	50.64	54.00	3.36	Pass	Vertical
2	5192.3154	34.69	15.49	-42.72	71.76	79.22	54.00	-25.22	Pass	Vertical

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix I) Unwanted Emissions in the Restricted Bands (Radiated Emission)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre)
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBμV/cm)	Remark	Measurement distance (cm)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test result: PASS

Radiated Spurious Emissions test Data:

Radiated Emission below 1GHz

Mode:			802.11a(HT20Mbps)					Channel:		5180	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	76.4676	7.77	1.02	-31.95	58.31	35.15	40.00	4.85	Pass	H	PK
2	135.0615	7.45	1.36	-32.01	57.00	33.80	43.50	9.70	Pass	H	PK
3	240.5111	11.95	1.84	-31.89	53.37	35.27	46.00	10.73	Pass	H	PK
4	405.0395	15.48	2.40	-31.77	44.01	30.12	46.00	15.88	Pass	H	PK
5	600.0290	19.00	2.96	-31.50	45.28	35.74	46.00	10.26	Pass	H	PK
6	862.1492	21.65	3.53	-31.75	41.71	35.14	46.00	10.86	Pass	H	PK
7	43.7754	12.98	0.74	-31.61	41.85	23.96	40.00	16.04	Pass	V	PK
8	74.1394	8.21	1.00	-31.98	53.31	30.54	40.00	9.46	Pass	V	PK
9	167.2687	8.30	1.51	-31.96	51.12	28.97	43.50	14.53	Pass	V	PK
10	239.9290	11.94	1.84	-31.90	47.37	29.25	46.00	16.75	Pass	V	PK
11	600.0290	19.00	2.96	-31.50	44.82	35.28	46.00	10.72	Pass	V	PK
12	854.7765	21.56	3.52	-31.75	43.67	37.00	46.00	9.00	Pass	V	PK

Transmitter Emission above 1GHz

Mode:			802.11 a(HT20) Transmitting					Channel:		5180	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1322.8823	28.22	3.33	-42.76	56.20	44.99	74.00	29.01	Pass	H	PK
2	2124.3124	31.87	4.45	-43.17	53.74	46.89	74.00	27.11	Pass	H	PK
3	2590.0000	32.54	4.79	-43.10	48.34	42.57	74.00	31.43	Pass	H	PK
4	6349.8350	35.87	8.69	-42.53	49.60	51.63	74.00	22.37	Pass	H	PK
5	7633.9567	36.55	6.41	-42.13	49.24	50.07	74.00	23.93	Pass	H	PK
6	10360.0000	38.30	7.29	-42.03	47.37	50.93	74.00	23.07	Pass	H	PK
7	1303.0803	28.20	3.33	-42.78	58.17	46.92	74.00	27.08	Pass	V	PK
8	2132.0132	31.88	4.42	-43.17	56.71	49.84	74.00	24.16	Pass	V	PK
9	2590.0000	32.54	4.79	-43.10	47.85	42.08	74.00	31.92	Pass	V	PK
10	6494.4995	35.90	8.65	-42.51	49.51	51.55	74.00	22.45	Pass	V	PK
11	9005.9753	37.70	6.82	-42.00	48.82	51.34	74.00	22.66	Pass	V	PK
12	10360.0000	38.30	7.29	-42.03	47.09	50.65	74.00	23.35	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5200	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1311.3311	28.21	3.33	-42.77	57.72	46.49	74.00	27.51	Pass	H	PK
2	2129.2629	31.88	4.43	-43.17	56.32	49.46	74.00	24.54	Pass	H	PK
3	2600.0000	32.56	4.77	-43.10	47.72	41.95	74.00	32.05	Pass	H	PK
4	6434.5435	35.89	8.48	-42.52	49.26	51.11	74.00	22.89	Pass	H	PK
5	7813.9407	36.47	6.37	-42.16	49.48	50.16	74.00	23.84	Pass	H	PK
6	10400.0000	38.36	7.54	-42.02	46.68	50.56	74.00	23.44	Pass	H	PK
7	1302.5303	28.20	3.33	-42.78	57.30	46.05	74.00	27.95	Pass	V	PK
8	2132.0132	31.88	4.42	-43.17	58.00	51.13	74.00	22.87	Pass	V	PK
9	2600.0000	32.56	4.77	-43.10	46.83	41.06	74.00	32.94	Pass	V	PK
10	4256.3256	34.16	6.35	-42.90	55.38	52.99	74.00	21.01	Pass	V	PK
11	8518.3509	36.64	6.66	-42.00	50.32	51.62	74.00	22.38	Pass	V	PK
12	10400.0000	38.36	7.54	-42.02	47.11	50.99	74.00	23.01	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5240	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1302.5303	28.20	3.33	-42.78	56.55	45.30	74.00	28.70	Pass	H	PK
2	2130.9131	31.88	4.42	-43.17	54.72	47.85	74.00	26.15	Pass	H	PK
3	2620.0000	32.59	4.80	-43.10	47.17	41.46	74.00	32.54	Pass	H	PK
4	6499.4499	35.90	8.67	-42.50	49.61	51.68	74.00	22.32	Pass	H	PK
5	7921.4711	36.43	6.62	-42.18	48.72	49.59	74.00	24.41	Pass	H	PK
6	10480.0000	38.47	7.45	-42.00	46.23	50.15	74.00	23.85	Pass	H	PK
7	1305.8306	28.21	3.33	-42.78	57.69	46.45	74.00	27.55	Pass	V	PK
8	2129.8130	31.88	4.43	-43.17	58.08	51.22	74.00	22.78	Pass	V	PK
9	2620.0000	32.59	4.80	-43.10	46.90	41.19	74.00	32.81	Pass	V	PK
10	4258.5259	34.16	6.35	-42.89	54.18	51.80	74.00	22.20	Pass	V	PK
11	7937.5719	36.42	6.60	-42.19	48.94	49.77	74.00	24.23	Pass	V	PK
12	10480.0000	38.47	7.45	-42.00	47.47	51.39	74.00	22.61	Pass	V	PK

Mode:			802.11 n(HT40) Transmitting					Channel:		5190	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1305.2805	28.21	3.33	-42.78	56.78	45.54	74.00	28.46	Pass	H	PK
2	2127.6128	31.88	4.44	-43.18	54.20	47.34	74.00	26.66	Pass	H	PK
3	2595.0000	32.55	4.78	-43.10	47.40	41.63	74.00	32.37	Pass	H	PK
4	6493.3993	35.90	8.64	-42.50	49.23	51.27	74.00	22.73	Pass	H	PK
5	7624.7562	36.55	6.50	-42.12	48.98	49.91	74.00	24.09	Pass	H	PK
6	10380.0000	38.33	7.41	-42.02	47.26	50.98	74.00	23.02	Pass	H	PK
7	1299.2299	28.20	3.33	-42.79	56.98	45.72	74.00	28.28	Pass	V	PK
8	2129.2629	31.88	4.43	-43.17	56.47	49.61	74.00	24.39	Pass	V	PK
9	2595.0000	32.55	4.78	-43.10	47.37	41.60	74.00	32.40	Pass	V	PK
10	6348.1848	35.87	8.68	-42.53	49.39	51.41	74.00	22.59	Pass	V	PK
11	8515.4758	36.63	6.66	-42.00	51.82	53.11	74.00	20.89	Pass	V	PK
12	10380.0000	38.33	7.41	-42.02	46.84	50.56	74.00	23.44	Pass	V	PK

Mode:			802.11 n(HT40) Transmitting					Channel:		5230	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1301.9802	28.20	3.33	-42.78	58.27	47.02	74.00	26.98	Pass	H	PK
2	2127.0627	31.88	4.44	-43.18	55.16	48.30	74.00	25.70	Pass	H	PK
3	2615.0000	32.58	4.79	-43.09	46.39	40.67	74.00	33.33	Pass	H	PK
4	6491.7492	35.90	8.64	-42.51	49.59	51.62	74.00	22.38	Pass	H	PK
5	8782.2891	37.22	6.95	-42.00	49.27	51.44	74.00	22.56	Pass	H	PK
6	10460.0000	38.44	7.49	-42.00	46.43	50.36	74.00	23.64	Pass	H	PK
7	1303.0803	28.20	3.33	-42.78	57.60	46.35	74.00	27.65	Pass	V	PK
8	2130.9131	31.88	4.42	-43.17	58.89	52.02	74.00	21.98	Pass	V	PK
9	2615.0000	32.58	4.79	-43.09	46.70	40.98	74.00	33.02	Pass	V	PK
10	4265.1265	34.17	6.38	-42.89	55.19	52.85	74.00	21.15	Pass	V	PK
11	8501.6751	36.60	6.64	-41.99	50.52	51.77	74.00	22.23	Pass	V	PK
12	10460.0000	38.44	7.49	-42.00	47.42	51.35	74.00	22.65	Pass	V	PK

Mode:			802.11ac(VHT80)					Channel:		5210	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1303.6304	28.20	3.33	-42.78	57.45	46.20	74.00	27.80	Pass	H	PK
2	2124.8625	31.87	4.45	-43.17	55.68	48.83	74.00	25.17	Pass	H	PK
3	2605.0000	32.57	4.78	-43.10	47.99	42.24	74.00	31.76	Pass	H	PK
4	6477.9978	35.90	8.58	-42.51	48.85	50.82	74.00	23.18	Pass	H	PK
5	8563.7782	36.74	6.62	-42.00	49.07	50.43	74.00	23.57	Pass	H	PK
6	10420.0000	38.39	7.53	-42.02	46.92	50.82	74.00	23.18	Pass	H	PK
7	1305.8306	28.21	3.33	-42.78	57.09	45.85	74.00	28.15	Pass	V	PK
8	2129.8130	31.88	4.43	-43.17	58.79	51.93	74.00	22.07	Pass	V	PK
9	2605.0000	32.57	4.78	-43.10	48.42	42.67	74.00	31.33	Pass	V	PK
10	6489.5490	35.90	8.63	-42.51	49.80	51.82	74.00	22.18	Pass	V	PK
11	9323.9662	37.64	6.71	-42.07	48.99	51.27	74.00	22.73	Pass	V	PK
12	10420.0000	38.39	7.53	-42.02	48.15	52.05	74.00	21.95	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5745	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.0308	28.21	2.92	-42.78	58.31	46.66	74.00	27.34	Pass	H	PK
2	2132.5633	31.89	3.71	-43.18	53.14	45.56	74.00	28.44	Pass	H	PK
3	2872.5000	33.00	4.48	-43.10	47.66	42.04	74.00	31.96	Pass	H	PK
4	6484.5985	35.90	7.43	-42.51	49.75	50.57	74.00	23.43	Pass	H	PK
5	8991.8328	37.68	6.83	-41.99	48.96	51.48	74.00	22.52	Pass	H	PK
6	11490.0000	38.89	7.94	-42.00	47.38	52.21	74.00	21.79	Pass	H	PK
7	1309.1309	28.21	2.92	-42.77	58.65	47.01	74.00	26.99	Pass	V	PK
8	2128.1628	31.88	3.70	-43.18	55.66	48.06	74.00	25.94	Pass	V	PK
9	2872.5000	33.00	4.48	-43.10	47.81	42.19	74.00	31.81	Pass	V	PK
10	6489.5490	35.90	7.47	-42.50	50.15	51.02	74.00	22.98	Pass	V	PK
11	8741.1161	37.13	6.90	-42.00	48.79	50.82	74.00	23.18	Pass	V	PK
12	11490.0000	38.89	7.94	-42.00	48.06	52.89	74.00	21.11	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5785	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.5809	28.21	2.92	-42.77	58.87	47.23	74.00	26.77	Pass	H	PK
2	2132.0132	31.88	3.70	-43.16	54.00	46.42	74.00	27.58	Pass	H	PK
3	2892.5000	33.03	4.47	-43.10	47.76	42.16	74.00	31.84	Pass	H	PK
4	6474.1474	35.89	7.34	-42.50	49.13	49.86	74.00	24.14	Pass	H	PK
5	8821.6214	37.31	6.91	-42.00	49.38	51.60	74.00	22.40	Pass	H	PK
6	11570.0000	38.96	7.70	-41.99	45.68	50.35	74.00	23.65	Pass	H	PK
7	1311.3311	28.21	2.92	-42.77	57.92	46.28	74.00	27.72	Pass	V	PK
8	2124.8625	31.87	3.69	-43.17	55.20	47.59	74.00	26.41	Pass	V	PK
9	2892.5000	33.03	4.47	-43.10	47.18	41.58	74.00	32.42	Pass	V	PK
10	6490.6491	35.90	7.48	-42.50	50.04	50.92	74.00	23.08	Pass	V	PK
11	8511.8675	36.63	6.65	-42.00	49.49	50.77	74.00	23.23	Pass	V	PK
12	11570.0000	38.96	7.70	-41.99	46.52	51.19	74.00	22.81	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5825	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.5809	28.21	2.92	-42.77	59.18	47.54	74.00	26.46	Pass	H	PK
2	2128.7129	31.88	3.70	-43.17	53.99	46.40	74.00	27.60	Pass	H	PK
3	2912.5000	33.06	4.50	-43.10	48.09	42.55	74.00	31.45	Pass	H	PK
4	6485.6986	35.90	7.44	-42.51	51.20	52.03	74.00	21.97	Pass	H	PK
5	9204.2136	37.66	6.61	-42.04	49.80	52.03	74.00	21.97	Pass	H	PK
6	11650.0000	39.02	7.54	-41.97	46.70	51.29	74.00	22.71	Pass	H	PK
7	1309.1309	28.21	2.92	-42.77	58.16	46.52	74.00	27.48	Pass	V	PK
8	2133.1133	31.89	3.71	-43.18	57.54	49.96	74.00	24.04	Pass	V	PK
9	2912.5000	33.06	4.50	-43.10	47.87	42.33	74.00	31.67	Pass	V	PK
10	6493.9494	35.90	7.51	-42.50	49.73	50.64	74.00	23.36	Pass	V	PK
11	8493.4662	36.60	6.65	-42.01	50.40	51.64	74.00	22.36	Pass	V	PK
12	11650.0000	39.02	7.54	-41.97	48.18	52.77	74.00	21.23	Pass	V	PK

Mode:			802.11 n(HT40) Transmitting					Channel:		5755	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1279.4279	28.18	2.90	-42.81	58.47	46.74	74.00	27.26	Pass	H	PK
2	2132.5633	31.89	3.71	-43.18	56.48	48.90	74.00	25.10	Pass	H	PK
3	2877.5000	33.00	4.48	-43.10	47.70	42.08	74.00	31.92	Pass	H	PK
4	6489.5490	35.90	7.47	-42.50	49.38	50.25	74.00	23.75	Pass	H	PK
5	8918.2279	37.52	6.89	-42.00	49.35	51.76	74.00	22.24	Pass	H	PK
6	11510.0000	38.91	7.91	-42.00	46.44	51.26	74.00	22.74	Pass	H	PK
7	1310.7811	28.21	2.92	-42.77	57.88	46.24	74.00	27.76	Pass	V	PK
8	2133.1133	31.89	3.71	-43.18	56.19	48.61	74.00	25.39	Pass	V	PK
9	2877.5000	33.00	4.48	-43.10	47.64	42.02	74.00	31.98	Pass	V	PK
10	6485.1485	35.90	7.43	-42.50	49.46	50.29	74.00	23.71	Pass	V	PK
11	8974.9650	37.64	6.84	-42.00	49.20	51.68	74.00	22.32	Pass	V	PK
12	11510.0000	38.91	7.91	-42.00	47.70	52.52	74.00	21.48	Pass	V	PK

Mode:			802.11 n(HT40) Transmitting					Channel:		5795	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1306.9307	28.21	2.92	-42.78	58.91	47.26	74.00	26.74	Pass	H	PK
2	2127.6128	31.88	3.70	-43.18	55.60	48.00	74.00	26.00	Pass	H	PK
3	2897.5000	33.04	4.47	-43.10	48.63	43.04	74.00	30.96	Pass	H	PK
4	6449.9450	35.89	7.13	-42.51	49.82	50.33	74.00	23.67	Pass	H	PK
5	8933.5622	37.55	6.87	-42.00	49.52	51.94	74.00	22.06	Pass	H	PK
6	11590.0000	38.97	7.73	-41.98	44.54	49.26	74.00	24.74	Pass	H	PK
7	1306.9307	28.21	2.92	-42.78	58.64	46.99	74.00	27.01	Pass	V	PK
8	2897.5000	33.04	4.47	-43.10	47.38	41.79	74.00	32.21	Pass	V	PK
9	4264.0264	34.17	5.49	-42.89	52.88	49.65	74.00	24.35	Pass	V	PK
10	6488.9989	35.90	7.47	-42.51	49.19	50.05	74.00	23.95	Pass	V	PK
11	8524.1349	36.65	6.66	-41.99	49.27	50.59	74.00	23.41	Pass	V	PK
12	11590.0000	38.97	7.73	-41.98	46.57	51.29	74.00	22.71	Pass	V	PK

Mode:			802.11 ac(VHT80Mbps) Transmitting					Channel:		5775	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1305.2805	28.21	2.92	-42.78	59.57	47.92	74.00	26.08	Pass	H	PK
2	2132.0132	31.88	3.70	-43.16	58.84	51.26	74.00	22.74	Pass	H	PK
3	2887.5000	33.02	4.47	-43.09	47.66	42.06	74.00	31.94	Pass	H	PK
4	6448.8449	35.89	7.13	-42.51	49.51	50.02	74.00	23.98	Pass	H	PK
5	8335.5224	36.53	6.55	-42.06	49.07	50.09	74.00	23.91	Pass	H	PK
6	11550.0000	38.94	7.67	-41.99	45.30	49.92	74.00	24.08	Pass	H	PK
7	1306.9307	28.21	2.92	-42.78	58.01	46.36	74.00	27.64	Pass	V	PK
8	2126.5127	31.88	3.70	-43.18	55.15	47.55	74.00	26.45	Pass	V	PK
9	2887.5000	33.02	4.47	-43.09	47.85	42.25	74.00	31.75	Pass	V	PK
10	6495.0495	35.90	7.52	-42.50	49.45	50.37	74.00	23.63	Pass	V	PK
11	8870.6914	37.42	6.87	-42.01	49.33	51.61	74.00	22.39	Pass	V	PK
12	11550.0000	38.94	7.67	-41.99	45.52	50.14	74.00	23.86	Pass	V	PK

Radiated Emission above 18GHz:

Mode:			802.11 a(HT20) Transmitting					Channel:		5180	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	20720.0000	38.72	0.00	-63.22	67.41	42.91	74.00	31.09	Pass	H	PK
2	23869.8348	40.00	0.00	-60.74	69.07	48.33	74.00	25.67	Pass	H	PK
3	25900.0000	40.43	0.00	-59.44	63.51	44.50	74.00	29.50	Pass	H	PK
4	31080.0000	41.34	0.00	-58.91	63.97	46.40	74.00	27.60	Pass	H	PK
5	36260.0000	43.14	0.00	-58.07	61.29	46.36	74.00	27.64	Pass	H	PK
6	39119.0848	44.41	0.00	-55.22	62.09	51.28	74.00	22.72	Pass	H	PK
7	20720.0000	38.72	0.00	-63.22	66.79	42.29	74.00	31.71	Pass	V	PK
8	24402.2561	40.39	0.00	-60.20	68.20	48.39	74.00	25.61	Pass	V	PK
9	25900.0000	40.43	0.00	-59.44	63.80	44.79	74.00	29.21	Pass	V	PK
10	31080.0000	41.34	0.00	-58.91	64.07	46.50	74.00	27.50	Pass	V	PK
11	36260.0000	43.14	0.00	-58.07	61.91	46.98	74.00	27.02	Pass	V	PK
12	39023.1609	44.46	0.00	-55.21	61.78	51.03	74.00	22.97	Pass	V	PK

Note:
1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading - Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor
2) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

Appendix J) Unwanted Emissions that fall Outside of the Restricted Bands

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
Above 1GHz	Peak	1MHz	3MHz	Peak

Test Procedure:

a) The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b)The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c) The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f) Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel
j) Test the EUT in the lowest channel or/and the middle channel ,the Highest channel
h) The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
i) Repeat above procedures until all frequencies measured was complete.

Limit:

Transmitter Operation Frequency(MHz)	Limit (EIRP)	Limit (dBμV/m)@3m	Measurement distance (cm)
5150-5350	-27dBm/MHz	68.2dBuV/m	3
5470-5725	-27dBm/MHz	68.2dBuV/m	3

Note:
(i) EIRP = ((E*d)^2) / 30
where:
• E is the field strength in V/m;
• d is the measurement distance in meters;
• EIRP is the equivalent isotropically radiated power in watts.
(ii) Working in dB units, the above equation is equivalent to:
EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
(iii) Or, if d is 3 meters:
EIRP[dBm] = E[dBμV/m] - 95.2

Test result: PASS

Test Data:

For the all emission,out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit. Refer to test item“Unwanted Emissions in the Restricted Bands (Radiated Emission)” test result.

Radiated Emission above 68.2GHz:

Mode:			802.11 a(HT20) Transmitting					Channel:		5180	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1322.8823	28.22	3.33	-42.76	56.20	44.99	68.20	23.21	Pass	H	PK
2	2124.3124	31.87	4.45	-43.17	53.74	46.89	68.20	21.31	Pass	H	PK
3	5173.8174	34.67	7.53	-42.72	48.93	48.41	68.20	19.79	Pass	H	PK
4	6349.8350	35.87	8.69	-42.53	49.60	51.63	68.20	16.57	Pass	H	PK
5	7633.9567	36.55	6.41	-42.13	49.24	50.07	68.20	18.13	Pass	H	PK
6	10360.0000	38.30	7.29	-42.03	47.37	50.93	68.20	17.27	Pass	H	PK
7	1303.0803	28.20	3.33	-42.78	58.17	46.92	68.20	21.28	Pass	V	PK
8	2132.0132	31.88	4.42	-43.17	56.71	49.84	68.20	18.36	Pass	V	PK
9	5172.1672	34.67	7.54	-42.73	52.26	51.74	68.20	16.46	Pass	V	PK
10	6494.4995	35.90	8.65	-42.51	49.51	51.55	68.20	16.65	Pass	V	PK
11	9005.9753	37.70	6.82	-42.00	48.82	51.34	68.20	16.86	Pass	V	PK
12	10360.0000	38.30	7.29	-42.03	47.09	50.65	68.20	17.55	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5200	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1311.3311	28.21	3.33	-42.77	57.72	46.49	68.20	21.71	Pass	H	PK
2	2129.2629	31.88	4.43	-43.17	56.32	49.46	68.20	18.74	Pass	H	PK
3	5206.2706	34.71	7.44	-42.72	48.50	47.93	68.20	20.27	Pass	H	PK
4	6434.5435	35.89	8.48	-42.52	49.26	51.11	68.20	17.09	Pass	H	PK
5	7813.9407	36.47	6.37	-42.16	49.48	50.16	68.20	18.04	Pass	H	PK
6	10400.0000	38.36	7.54	-42.02	46.68	50.56	68.20	17.64	Pass	H	PK
7	1302.5303	28.20	3.33	-42.78	57.30	46.05	68.20	22.15	Pass	V	PK
8	2132.0132	31.88	4.42	-43.17	58.00	51.13	68.20	17.07	Pass	V	PK
9	4256.3256	34.16	6.35	-42.90	55.38	52.99	68.20	15.21	Pass	V	PK
10	5207.3707	34.71	7.44	-42.72	51.56	50.99	68.20	17.21	Pass	V	PK
11	8518.3509	36.64	6.66	-42.00	50.32	51.62	68.20	16.58	Pass	V	PK
12	10399.2700	38.36	7.54	-42.03	49.31	53.18	68.20	15.02	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5240	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1302.5303	28.20	3.33	-42.78	56.55	45.30	68.20	22.90	Pass	H	PK
2	2130.9131	31.88	4.42	-43.17	54.72	47.85	68.20	20.35	Pass	H	PK
3	5235.4235	34.74	7.45	-42.71	47.21	46.69	68.20	21.51	Pass	H	PK
4	6499.4499	35.90	8.67	-42.50	49.61	51.68	68.20	16.52	Pass	H	PK
5	7921.4711	36.43	6.62	-42.18	48.72	49.59	68.20	18.61	Pass	H	PK
6	10480.0000	38.47	7.45	-42.00	46.23	50.15	68.20	18.05	Pass	H	PK
7	1305.8306	28.21	3.33	-42.78	57.69	46.45	68.20	21.75	Pass	V	PK
8	2129.8130	31.88	4.43	-43.17	58.08	51.22	68.20	16.98	Pass	V	PK
9	4258.5259	34.16	6.35	-42.89	54.18	51.80	68.20	16.40	Pass	V	PK
10	5232.1232	34.73	7.45	-42.71	50.26	49.73	68.20	18.47	Pass	V	PK
11	7937.5719	36.42	6.60	-42.19	48.94	49.77	68.20	18.43	Pass	V	PK
12	10480.0000	38.47	7.45	-42.00	47.47	51.39	68.20	16.81	Pass	V	PK

Mode:			802.11n(HT40)					Channel:		5190	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1305.2805	28.21	3.33	-42.78	56.78	45.54	68.20	22.66	Pass	H	PK
2	2127.6128	31.88	4.44	-43.18	54.20	47.34	68.20	20.86	Pass	H	PK
3	5223.8724	34.72	7.44	-42.70	48.36	47.82	68.20	20.38	Pass	H	PK
4	6493.3993	35.90	8.64	-42.50	49.23	51.27	68.20	16.93	Pass	H	PK
5	7624.7562	36.55	6.50	-42.12	48.98	49.91	68.20	18.29	Pass	H	PK
6	10380.0000	38.33	7.41	-42.02	47.26	50.98	68.20	17.22	Pass	H	PK
7	1299.2299	28.20	3.33	-42.79	56.98	45.72	68.20	22.48	Pass	V	PK
8	2129.2629	31.88	4.43	-43.17	56.47	49.61	68.20	18.59	Pass	V	PK
9	2595.0000	32.55	4.78	-43.10	47.37	41.60	68.20	26.60	Pass	V	PK
10	6348.1848	35.87	8.68	-42.53	49.39	51.41	68.20	16.79	Pass	V	PK
11	8515.4758	36.63	6.66	-42.00	51.82	53.11	68.20	15.09	Pass	V	PK
12	10380.0000	38.33	7.41	-42.02	46.84	50.56	68.20	17.64	Pass	V	PK

Mode:			802.11n(HT40)					Channel:		5230	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1301.9802	28.20	3.33	-42.78	58.27	47.02	68.20	21.18	Pass	H	PK
2	2127.0627	31.88	4.44	-43.18	55.16	48.30	68.20	19.90	Pass	H	PK
3	5215.0715	34.72	7.44	-42.72	48.43	47.87	68.20	20.33	Pass	H	PK
4	6491.7492	35.90	8.64	-42.51	49.59	51.62	68.20	16.58	Pass	H	PK
5	8782.2891	37.22	6.95	-42.00	49.27	51.44	68.20	16.76	Pass	H	PK
6	10460.0000	38.44	7.49	-42.00	46.43	50.36	68.20	17.84	Pass	H	PK
7	1303.0803	28.20	3.33	-42.78	57.60	46.35	68.20	21.85	Pass	V	PK
8	2130.9131	31.88	4.42	-43.17	58.89	52.02	68.20	16.18	Pass	V	PK
9	4265.1265	34.17	6.38	-42.89	55.19	52.85	68.20	15.35	Pass	V	PK
10	5216.1716	34.72	7.44	-42.71	52.57	52.02	68.20	16.18	Pass	V	PK
11	8501.6751	36.60	6.64	-41.99	50.52	51.77	68.20	16.43	Pass	V	PK
12	10460.0000	38.44	7.49	-42.00	47.42	51.35	68.20	16.85	Pass	V	PK

Mode:			802.11ac(VHT80)					Channel:		5210	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1303.6304	28.20	3.33	-42.78	57.45	46.20	68.20	22.00	Pass	H	PK
2	2124.8625	31.87	4.45	-43.17	55.68	48.83	68.20	19.37	Pass	H	PK
3	5212.3212	34.71	7.44	-42.71	48.81	48.25	68.20	19.95	Pass	H	PK
4	6477.9978	35.90	8.58	-42.51	48.85	50.82	68.20	17.38	Pass	H	PK
5	8563.7782	36.74	6.62	-42.00	49.07	50.43	68.20	17.77	Pass	H	PK
6	10420.0000	38.39	7.53	-42.02	46.92	50.82	68.20	17.38	Pass	H	PK
7	1305.8306	28.21	3.33	-42.78	57.09	45.85	68.20	22.35	Pass	V	PK
8	2129.8130	31.88	4.43	-43.17	58.79	51.93	68.20	16.27	Pass	V	PK
9	5218.3718	34.72	7.44	-42.71	50.21	49.66	68.20	18.54	Pass	V	PK
10	6489.5490	35.90	8.63	-42.51	49.80	51.82	68.20	16.38	Pass	V	PK
11	9323.9662	37.64	6.71	-42.07	48.99	51.27	68.20	16.93	Pass	V	PK
12	10420.0000	38.39	7.53	-42.02	48.15	52.05	68.20	16.15	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5745	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.0308	28.21	2.92	-42.78	58.31	46.66	68.20	21.54	Pass	H	PK
2	2872.5000	33.00	4.48	-43.10	47.66	42.04	68.20	26.16	Pass	H	PK
3	5745.0000	35.39	6.99	-42.60	46.98	46.76	68.20	21.44	Pass	H	PK
4	8991.8328	37.68	6.83	-41.99	48.96	51.48	68.20	16.72	Pass	H	PK
5	11490.0000	38.89	7.94	-42.00	47.38	52.21	68.20	15.99	Pass	H	PK
6	17590.5727	42.63	12.29	-40.99	50.62	64.55	68.20	3.65	Pass	H	PK
7	1309.1309	28.21	2.92	-42.77	58.65	47.01	68.20	21.19	Pass	V	PK
8	2128.1628	31.88	3.70	-43.18	55.66	48.06	68.20	20.14	Pass	V	PK
9	2872.5000	33.00	4.48	-43.10	47.81	42.19	68.20	26.01	Pass	V	PK
10	5745.0000	35.39	6.99	-42.60	47.86	47.64	68.20	20.56	Pass	V	PK
11	11490.0000	38.89	7.94	-42.00	48.06	52.89	68.20	15.31	Pass	V	PK
12	17235.0000	42.44	11.22	-41.21	45.94	58.39	68.20	9.81	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5785	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.5809	28.21	2.92	-42.77	58.87	47.23	68.20	20.97	Pass	H	PK
2	2892.5000	33.03	4.47	-43.10	47.76	42.16	68.20	26.04	Pass	H	PK
3	5774.4774	35.44	7.00	-42.60	49.48	49.32	68.20	18.88	Pass	H	PK
4	8821.6214	37.31	6.91	-42.00	49.38	51.60	68.20	16.60	Pass	H	PK
5	11570.0000	38.96	7.70	-41.99	45.68	50.35	68.20	17.85	Pass	H	PK
6	17355.0000	42.56	11.03	-41.12	46.09	58.56	68.20	9.64	Pass	H	PK
7	1311.3311	28.21	2.92	-42.77	57.92	46.28	68.20	21.92	Pass	V	PK
8	2892.5000	33.03	4.47	-43.10	47.18	41.58	68.20	26.62	Pass	V	PK
9	5785.0000	35.46	7.00	-42.60	45.25	45.11	68.20	23.09	Pass	V	PK
10	8511.8675	36.63	6.65	-42.00	49.49	50.77	68.20	17.43	Pass	V	PK
11	11570.0000	38.96	7.70	-41.99	46.52	51.19	68.20	17.01	Pass	V	PK
12	17585.2057	42.63	12.32	-40.98	49.86	63.83	68.20	4.37	Pass	V	PK

Mode:			802.11 a(HT20) Transmitting					Channel:		5825	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1308.5809	28.21	2.92	-42.77	59.18	47.54	68.20	20.66	Pass	H	PK
2	2128.7129	31.88	3.70	-43.17	53.99	46.40	68.20	21.80	Pass	H	PK
3	2912.5000	33.06	4.50	-43.10	48.09	42.55	68.20	25.65	Pass	H	PK
4	5868.5369	35.59	7.02	-42.60	49.52	49.53	68.20	18.67	Pass	H	PK
5	11650.0000	39.02	7.54	-41.97	46.70	51.29	68.20	16.91	Pass	H	PK
6	17595.1730	42.62	12.26	-40.98	49.78	63.68	68.20	4.52	Pass	H	PK
7	1309.1309	28.21	2.92	-42.77	58.16	46.52	68.20	21.68	Pass	V	PK
8	2133.1133	31.89	3.71	-43.18	57.54	49.96	68.20	18.24	Pass	V	PK
9	2912.5000	33.06	4.50	-43.10	47.87	42.33	68.20	25.87	Pass	V	PK
10	5825.0000	35.52	7.01	-42.60	45.99	45.92	68.20	22.28	Pass	V	PK
11	11650.0000	39.02	7.54	-41.97	48.18	52.77	68.20	15.43	Pass	V	PK
12	17566.0377	42.65	12.43	-40.99	50.31	64.40	68.20	3.80	Pass	V	PK

Mode:			802.11n(HT40)					Channel:		5755	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1279.4279	28.18	2.90	-42.81	58.47	46.74	68.20	21.46	Pass	H	PK
2	2132.5633	31.89	3.71	-43.18	56.48	48.90	68.20	19.30	Pass	H	PK
3	2877.5000	33.00	4.48	-43.10	47.70	42.08	68.20	26.12	Pass	H	PK
4	5755.0000	35.41	6.99	-42.60	45.08	44.88	68.20	23.32	Pass	H	PK
5	11510.0000	38.91	7.91	-42.00	46.44	51.26	68.20	16.94	Pass	H	PK
6	17569.8713	42.64	12.41	-40.98	50.07	64.14	68.20	4.06	Pass	H	PK
7	1310.7811	28.21	2.92	-42.77	57.88	46.24	68.20	21.96	Pass	V	PK
8	2133.1133	31.89	3.71	-43.18	56.19	48.61	68.20	19.59	Pass	V	PK
9	2877.5000	33.00	4.48	-43.10	47.64	42.02	68.20	26.18	Pass	V	PK
10	5755.0000	35.41	6.99	-42.60	45.49	45.29	68.20	22.91	Pass	V	PK
11	11510.0000	38.91	7.91	-42.00	47.70	52.52	68.20	15.68	Pass	V	PK
12	17574.4716	42.64	12.38	-40.98	50.56	64.60	68.20	3.60	Pass	V	PK

Mode:			802.11n(HT40)					Channel:		5795	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1306.9307	28.21	2.92	-42.78	58.91	47.26	68.20	20.94	Pass	H	PK
2	2127.6128	31.88	3.70	-43.18	55.60	48.00	68.20	20.20	Pass	H	PK
3	2897.5000	33.04	4.47	-43.10	48.63	43.04	68.20	25.16	Pass	H	PK
4	5795.0000	35.47	7.00	-42.59	47.85	47.73	68.20	20.47	Pass	H	PK
5	11590.0000	38.97	7.73	-41.98	44.54	49.26	68.20	18.94	Pass	H	PK
6	17586.7391	42.63	12.31	-40.98	50.36	64.32	68.20	3.88	Pass	H	PK
7	1306.9307	28.21	2.92	-42.78	58.64	46.99	68.20	21.21	Pass	V	PK
8	2126.5127	31.88	3.70	-43.18	55.51	47.91	68.20	20.29	Pass	V	PK
9	2897.5000	33.04	4.47	-43.10	47.38	41.79	68.20	26.41	Pass	V	PK
10	5795.0000	35.47	7.00	-42.59	47.41	47.29	68.20	20.91	Pass	V	PK
11	11590.0000	38.97	7.73	-41.98	46.57	51.29	68.20	16.91	Pass	V	PK
12	17579.0719	42.64	12.36	-40.99	50.57	64.58	68.20	3.62	Pass	V	PK

Mode:			802.11ac(VHT80)					Channel:		5775	
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1305.2805	28.21	2.92	-42.78	59.57	47.92	68.20	20.28	Pass	H	PK
2	2132.0132	31.88	3.70	-43.16	58.84	51.26	68.20	16.94	Pass	H	PK
3	2887.5000	33.02	4.47	-43.09	47.66	42.06	68.20	26.14	Pass	H	PK
4	5775.0000	35.44	7.00	-42.60	47.52	47.36	68.20	20.84	Pass	H	PK
5	11550.0000	38.94	7.67	-41.99	45.30	49.92	68.20	18.28	Pass	H	PK
6	17557.6038	42.65	12.48	-40.98	50.15	64.30	68.20	3.90	Pass	H	PK
7	1306.9307	28.21	2.92	-42.78	58.01	46.36	68.20	21.84	Pass	V	PK
8	2126.5127	31.88	3.70	-43.18	55.15	47.55	68.20	20.65	Pass	V	PK
9	2887.5000	33.02	4.47	-43.09	47.85	42.25	68.20	25.95	Pass	V	PK
10	5795.9296	35.47	7.00	-42.59	49.04	48.92	68.20	19.28	Pass	V	PK
11	11550.0000	38.94	7.67	-41.99	45.52	50.14	68.20	18.06	Pass	V	PK
12	17574.4716	42.64	12.38	-40.98	50.44	64.48	68.20	3.72	Pass	V	PK

Note:
1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level =Receiver Reading - Correct Factor
Final Test Level =Receiver Reading - Correct Factor
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor
2) Scan from 1GHz to 25GHz, the disturbance above 13GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.