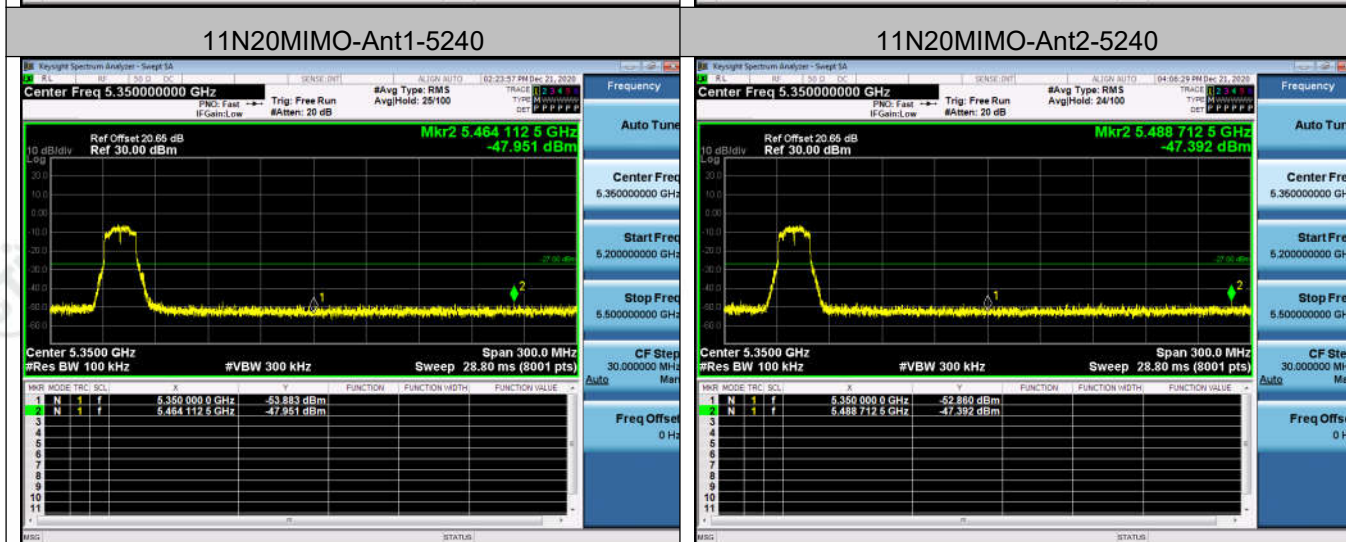
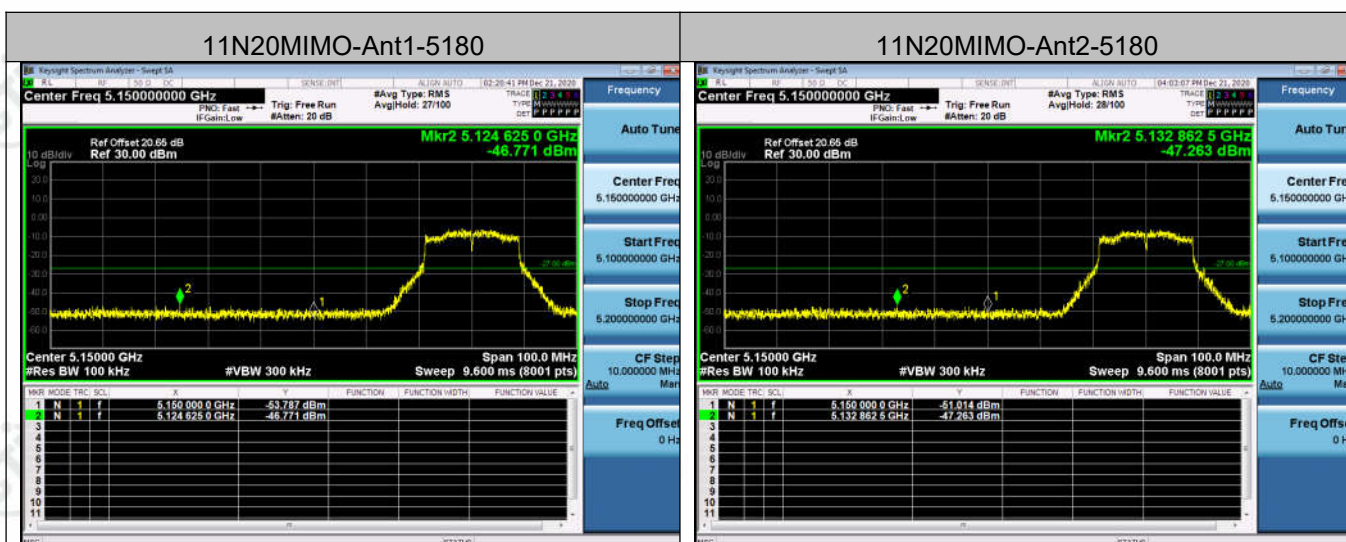
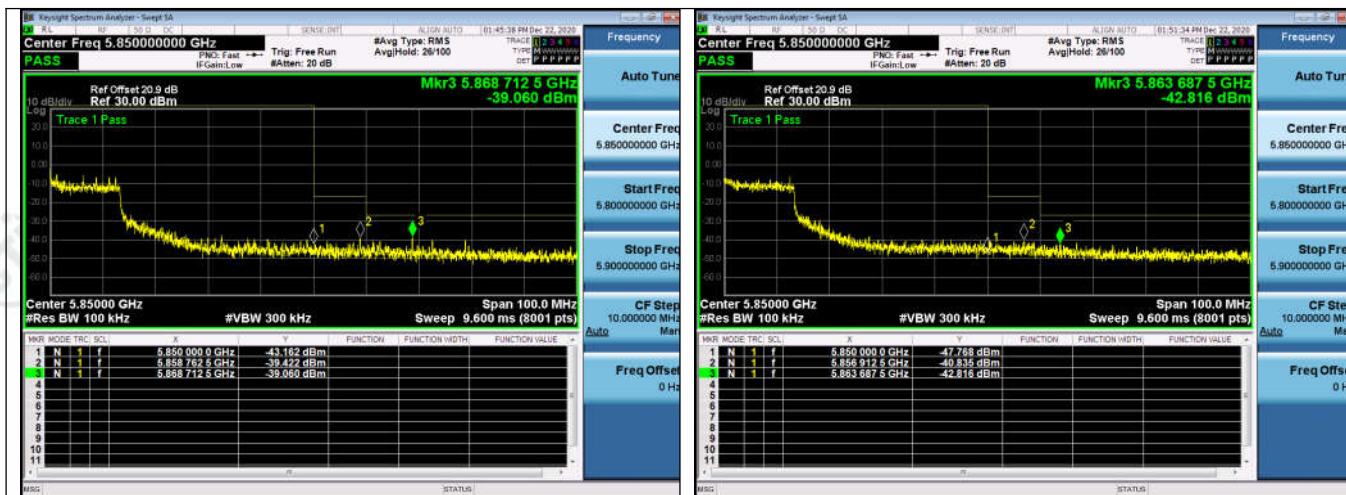
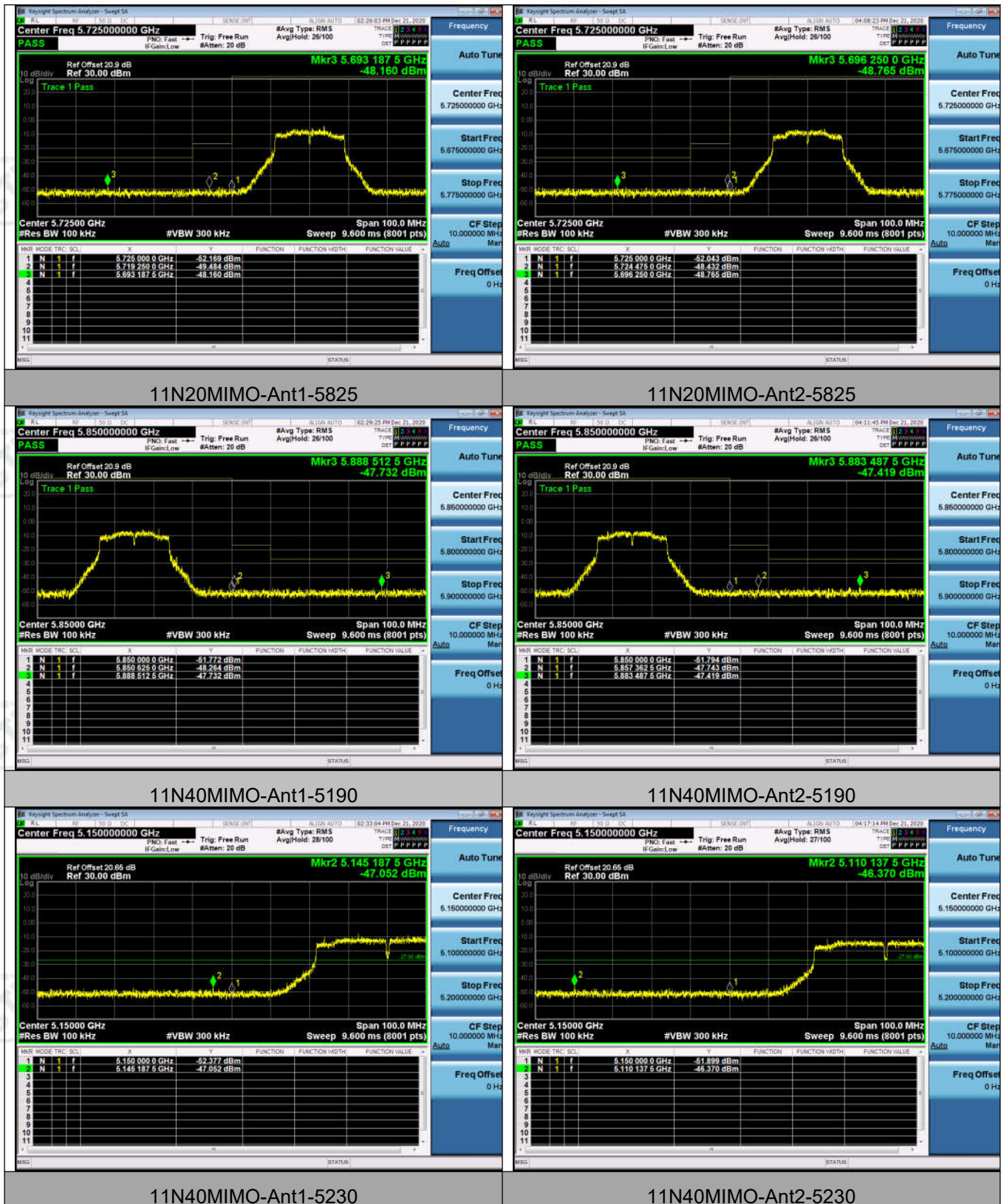
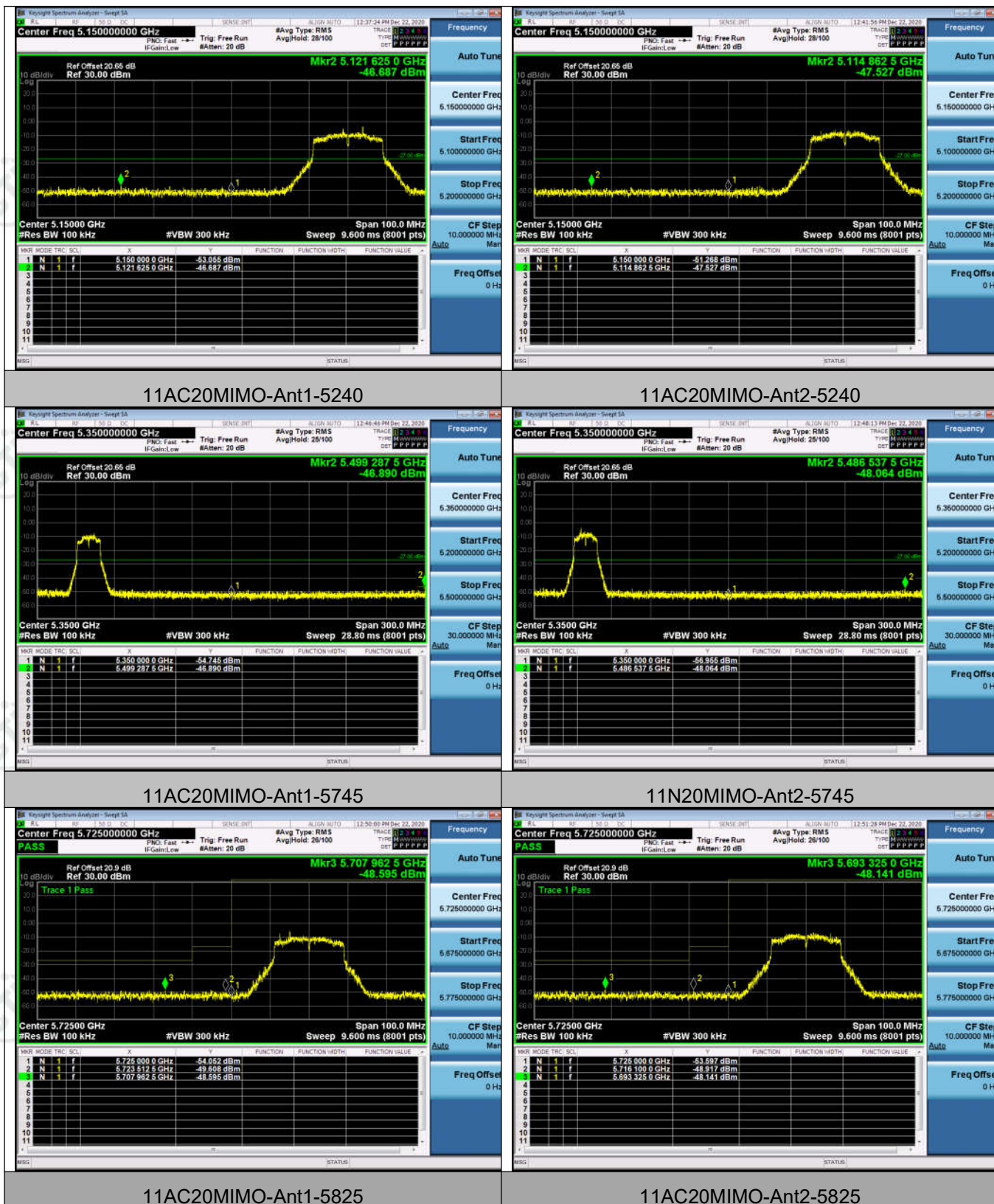


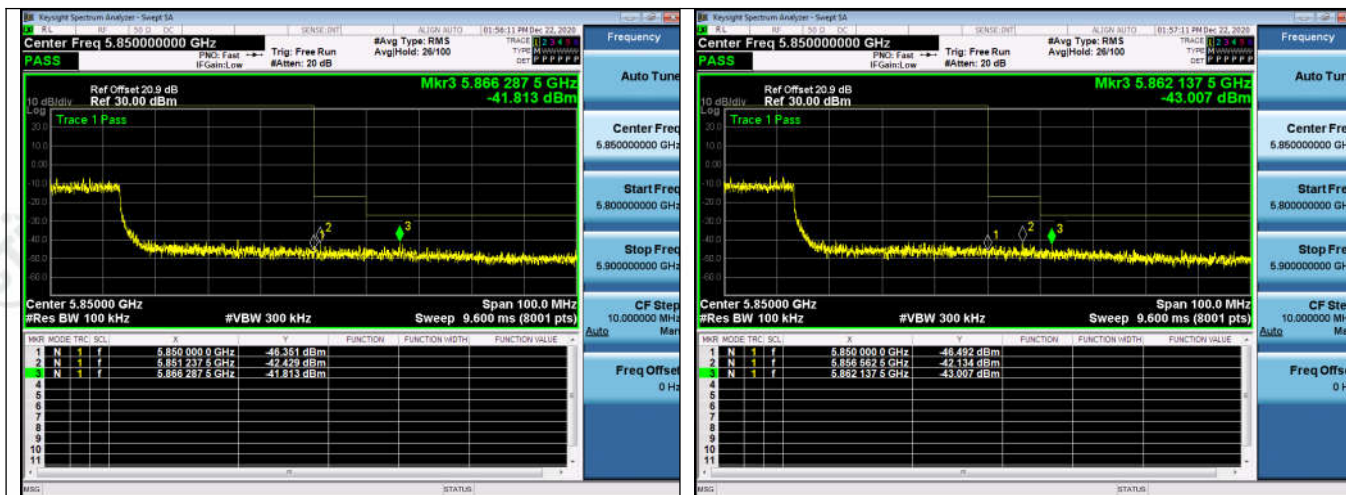












Appendix E): Frequency Stability

Frequency Error vs. Voltage:

Voltage vs. Frequency Stability								
Test Mode	Test	Ant	Temp.	Volt.	Deviation[MHz]	Deviation[ppm]	Limit[ppm]	Verdict
11A	5180	Ant1	TN	VL	5180.015	2.895753	20	PASS
11A	5180	Ant1	TN	VN	5180	0.00000	20	PASS
11A	5180	Ant1	TN	VH	5180	0.00000	20	PASS
11A	5200	Ant1	TN	VL	5200.06	11.538462	20	PASS
11A	5200	Ant1	TN	VN	5200.03	5.769231	20	PASS
11A	5200	Ant1	TN	VH	5200.03	5.769231	20	PASS
11A	5240	Ant1	TN	VL	5240.03	5.725191	20	PASS
11A	5240	Ant1	TN	VN	5240.015	2.862595	20	PASS
11A	5240	Ant1	TN	VH	5240.06	11.450382	20	PASS
11A	5745	Ant1	TN	VL	5745.045	7.832898	20	PASS
11A	5745	Ant1	TN	VN	5745.015	2.610966	20	PASS
11A	5745	Ant1	TN	VH	5744.985	-2.610966	20	PASS
11A	5785	Ant1	TN	VL	5784.97	-10.37165	20	PASS
11A	5785	Ant1	TN	VN	5785.00	0.00000	20	PASS
11A	5785	Ant1	TN	VH	5784.97	-5.18583	20	PASS
11A	5825	Ant1	TN	VL	5825.05	7.72532	20	PASS
11A	5825	Ant1	TN	VN	5825.00	0.00000	20	PASS
11A	5825	Ant1	TN	VH	5825.03	5.15022	20	PASS
11A	5180	Ant2	TN	VL	5179.97	-5.79151	20	PASS
11A	5180	Ant2	TN	VN	5179.97	-5.79151	20	PASS
11A	5180	Ant2	TN	VH	5180.00	0.00000	20	PASS
11A	5200	Ant2	TN	VL	5199.96	-8.65385	20	PASS
11A	5200	Ant2	TN	VN	5199.93	-14.42308	20	PASS
11A	5200	Ant2	TN	VH	5199.93	-14.42308	20	PASS
11A	5240	Ant2	TN	VL	5239.99	-2.86260	20	PASS
11A	5240	Ant2	TN	VN	5240.02	2.86260	20	PASS
11A	5240	Ant2	TN	VH	5240.00	0.00000	20	PASS
11A	5745	Ant2	TN	VL	5745.05	7.83290	20	PASS
11A	5745	Ant2	TN	VN	5745.00	0.00000	20	PASS
11A	5745	Ant2	TN	VH	5744.97	-5.22193	20	PASS
11A	5785	Ant2	TN	VL	5784.99	-2.59291	20	PASS
11A	5785	Ant2	TN	VN	5785.00	0.00000	20	PASS

11A	5785	Ant2	TN	VH	5784.97	-5.18583	20	PASS
11A	5825	Ant2	TN	VL	5825.00	0.00000	20	PASS
11A	5825	Ant2	TN	VN	5825.00	0.00000	20	PASS
11A	5825	Ant2	TN	VH	5825.02	2.57511	20	PASS
11N20	5180	Ant1	TN	VL	5179.96	-8.68726	20	PASS
11N20	5180	Ant1	TN	VN	5179.97	-5.79151	20	PASS
11N20	5180	Ant1	TN	VH	5180.09	17.37452	20	PASS
11N20	5200	Ant1	TN	VL	5200.03	5.76923	20	PASS
11N20	5200	Ant1	TN	VN	5200.03	5.76923	20	PASS
11N20	5200	Ant1	TN	VH	5200.00	0.00000	20	PASS
11N20	5240	Ant1	TN	VL	5240.00	0.00000	20	PASS
11N20	5240	Ant1	TN	VN	5240.02	2.86260	20	PASS
11N20	5240	Ant1	TN	VH	5239.94	-11.45038	20	PASS
11N20	5745	Ant1	TN	VL	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	TN	VN	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	TN	VH	5745.03	5.22193	20	PASS
11N20	5785	Ant1	TN	VL	5784.94	-10.37165	20	PASS
11N20	5785	Ant1	TN	VN	5784.96	-7.77874	20	PASS
11N20	5785	Ant1	TN	VH	5784.97	-5.18583	20	PASS
11N20	5825	Ant1	TN	VL	5824.96	-7.72532	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	5190.00	0.00000	20	PASS
11N40	5190	Ant1	TN	VN	5189.91	-17.34104	20	PASS
11N40	5190	Ant1	TN	VH	5189.97	-5.78035	20	PASS
11N40	5230	Ant1	TN	VL	5229.97	-5.73614	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	5755.06	10.42572	20	PASS
11N40	5755	Ant1	TN	VN	5755.00	0.00000	20	PASS
11N40	5755	Ant1	TN	VH	5755.00	0.00000	20	PASS
11N40	5795	Ant1	TN	VL	5795.03	5.17688	20	PASS
11N40	5795	Ant1	TN	VN	5795.00	0.00000	20	PASS
11N40	5795	Ant1	TN	VH	5795.00	0.00000	20	PASS
11N20	5180	Ant2	TN	VL	5180.00	0.00000	20	PASS
11N20	5180	Ant2	TN	VN	5179.96	-8.68726	20	PASS
11N20	5180	Ant2	TN	VH	5179.96	-8.68726	20	PASS

11N20	5200	Ant2	TN	VL	5200.00	0.00000	20	PASS
11N20	5200	Ant2	TN	VN	5200.00	0.00000	20	PASS
11N20	5200	Ant2	TN	VH	5200.00	0.00000	20	PASS
11N20	5240	Ant2	TN	VL	5239.96	-8.58779	20	PASS
11N20	5240	Ant2	TN	VN	5239.99	-2.86260	20	PASS
11N20	5240	Ant2	TN	VH	5239.94	-11.45038	20	PASS
11N20	5745	Ant2	TN	VL	5744.96	-7.83290	20	PASS
11N20	5745	Ant2	TN	VN	5744.94	-10.44386	20	PASS
11N20	5745	Ant2	TN	VH	5744.96	-7.83290	20	PASS
11N20	5785	Ant2	TN	VL	5785.00	0.00000	20	PASS
11N20	5785	Ant2	TN	VN	5785.06	10.37165	20	PASS
11N20	5785	Ant2	TN	VH	5784.99	-2.59291	20	PASS
11N20	5825	Ant2	TN	VL	5824.96	-7.72532	20	PASS
11N20	5825	Ant2	TN	VN	5825.00	0.00000	20	PASS
11N20	5825	Ant2	TN	VH	5824.99	-2.57511	20	PASS
11N40	5190	Ant2	TN	VL	5189.97	-5.78035	20	PASS
11N40	5190	Ant2	TN	VN	5189.91	-17.34104	20	PASS
11N40	5190	Ant2	TN	VH	5190.00	0.00000	20	PASS
11N40	5230	Ant2	TN	VL	5230.00	0.00000	20	PASS
11N40	5230	Ant2	TN	VN	5230.00	0.00000	20	PASS
11N40	5230	Ant2	TN	VH	5229.97	-5.73614	20	PASS
11N40	5755	Ant2	TN	VL	5755.09	15.63858	20	PASS
11N40	5755	Ant2	TN	VN	5755.00	0.00000	20	PASS
11N40	5755	Ant2	TN	VH	5755.09	15.63858	20	PASS
11N40	5795	Ant2	TN	VL	5795.00	0.00000	20	PASS
11N40	5795	Ant2	TN	VN	5795.00	0.00000	20	PASS
11N40	5795	Ant2	TN	VH	5795.09	15.53063	20	PASS
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	5180.05	8.68726	20	PASS
11AC20	5200	Ant1	TN	VL	5200.02	2.88462	20	PASS
11AC20	5200	Ant1	TN	VN	5199.94	-11.53846	20	PASS
11AC20	5200	Ant1	TN	VH	5199.94	-11.53846	20	PASS
11AC20	5240	Ant1	TN	VL	5239.97	-5.72519	20	PASS
11AC20	5240	Ant1	TN	VN	5240.00	0.00000	20	PASS
11AC20	5240	Ant1	TN	VH	5240.06	11.45038	20	PASS
11AC20	5745	Ant1	TN	VL	5745.00	0.00000	20	PASS

11AC20	5745	Ant1	TN	VN	5745.03	5.22193	20	PASS
11AC20	5745	Ant1	TN	VH	5744.94	-10.44386	20	PASS
11AC20	5785	Ant1	TN	VL	5784.93	-12.96456	20	PASS
11AC20	5785	Ant1	TN	VN	5784.97	-5.18583	20	PASS
11AC20	5785	Ant1	TN	VH	5784.96	-7.77874	20	PASS
11AC20	5825	Ant1	TN	VL	5824.99	-2.57511	20	PASS
11AC20	5825	Ant1	TN	VN	5825.08	12.87554	20	PASS
11AC20	5825	Ant1	TN	VH	5824.97	-5.15022	20	PASS
11AC40	5190	Ant1	TN	VL	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	TN	VN	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	TN	VH	5190.00	0.00000	20	PASS
11AC40	5230	Ant1	TN	VL	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	TN	VN	5229.96	-7.64818	20	PASS
11AC40	5230	Ant1	TN	VH	5230.00	0.00000	20	PASS
11AC40	5755	Ant1	TN	VL	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	TN	VN	5754.96	-6.95048	20	PASS
11AC40	5755	Ant1	TN	VH	5754.96	-6.95048	20	PASS
11AC40	5795	Ant1	TN	VL	5794.96	-6.90250	20	PASS
11AC40	5795	Ant1	TN	VN	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	TN	VH	5795.08	13.80500	20	PASS
11AC80	5210	Ant1	TN	VL	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	TN	VN	5209.92	-15.35509	20	PASS
11AC80	5210	Ant1	TN	VH	5210.00	0.00000	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
11AC20	5180	Ant2	TN	VL	5179.93	-14.47876	20	PASS
11AC20	5180	Ant2	TN	VN	5180.00	0.00000	20	PASS
11AC20	5180	Ant2	TN	VH	5179.96	-8.68726	20	PASS
11AC20	5200	Ant2	TN	VL	5199.93	-14.42308	20	PASS
11AC20	5200	Ant2	TN	VN	5199.97	-5.76923	20	PASS
11AC20	5200	Ant2	TN	VH	5199.93	-14.42308	20	PASS
11AC20	5240	Ant2	TN	VL	5240.02	2.86260	20	PASS
11AC20	5240	Ant2	TN	VN	5239.91	-17.17557	20	PASS
11AC20	5240	Ant2	TN	VH	5240.00	0.00000	20	PASS
11AC20	5745	Ant2	TN	VL	5744.99	-2.61097	20	PASS
11AC20	5745	Ant2	TN	VN	5744.91	-15.66580	20	PASS

11AC20	5745	Ant2	TN	VH	5744.96	-7.83290	20	PASS
11AC20	5785	Ant2	TN	VL	5785.00	0.00000	20	PASS
11AC20	5785	Ant2	TN	VN	5784.93	-12.96456	20	PASS
11AC20	5785	Ant2	TN	VH	5784.93	-12.96456	20	PASS
11AC20	5825	Ant2	TN	VL	5824.94	-10.30043	20	PASS
11AC20	5825	Ant2	TN	VN	5825.00	0.00000	20	PASS
11AC20	5825	Ant2	TN	VH	5824.97	-5.15022	20	PASS
11AC40	5190	Ant2	TN	VL	5190.00	0.00000	20	PASS
11AC40	5190	Ant2	TN	VN	5190.00	0.00000	20	PASS
11AC40	5190	Ant2	TN	VH	5190.04	7.70713	20	PASS
11AC40	5230	Ant2	TN	VL	5230.04	7.64818	20	PASS
11AC40	5230	Ant2	TN	VN	5230.00	0.00000	20	PASS
11AC40	5230	Ant2	TN	VH	5229.92	-15.29637	20	PASS
11AC40	5755	Ant2	TN	VL	5755.00	0.00000	20	PASS
11AC40	5755	Ant2	TN	VN	5755.00	0.00000	20	PASS
11AC40	5755	Ant2	TN	VH	5755.00	0.00000	20	PASS
11AC40	5795	Ant2	TN	VL	5795.04	6.90250	20	PASS
11AC40	5795	Ant2	TN	VN	5795.04	6.90250	20	PASS
11AC40	5795	Ant2	TN	VH	5794.96	-6.90250	20	PASS
11AC80	5210	Ant2	TN	VL	5210.00	0.00000	20	PASS
11AC80	5210	Ant2	TN	VN	5210.00	0.00000	20	PASS
11AC80	5210	Ant2	TN	VH	5209.92	-15.35509	20	PASS
11AC80	5775	Ant2	TN	VL	5775.08	13.85281	20	PASS
11AC80	5775	Ant2	TN	VN	5775.08	13.85281	20	PASS
11AC80	5775	Ant2	TN	VH	5775.08	13.85281	20	PASS

Frequency Error vs. Temperature:

Temperature vs. Frequency Stability								
Test Mode	Test	Ant	Volt.	Temp.	Deviation[MHz]	Deviation[ppm]	Limit[ppm]	Verdict
11A	5180	Ant1	VN	-30	5179.96	-8.68726	20	PASS
11A	5180	Ant1	VN	-20	5180.03	5.79151	20	PASS
11A	5180	Ant1	VN	-10	5179.99	-2.89575	20	PASS
11A	5180	Ant1	VN	0	5179.96	-8.68726	20	PASS
11A	5180	Ant1	VN	10	5179.97	-5.79151	20	PASS
11A	5180	Ant1	VN	20	5179.96	-8.68726	20	PASS
11A	5180	Ant1	VN	30	5179.99	-2.89575	20	PASS
11A	5180	Ant1	VN	40	5179.94	-11.58301	20	PASS
11A	5180	Ant1	VN	50	5179.99	-2.89575	20	PASS
11A	5200	Ant1	VN	-30	5200.00	0.00000	20	PASS
11A	5200	Ant1	VN	-20	5199.99	-2.88462	20	PASS
11A	5200	Ant1	VN	-10	5199.97	-5.76923	20	PASS
11A	5200	Ant1	VN	0	5199.99	-2.88462	20	PASS
11A	5200	Ant1	VN	10	5199.99	-2.88462	20	PASS
11A	5200	Ant1	VN	20	5200.06	11.53846	20	PASS
11A	5200	Ant1	VN	30	5199.69	-5.76923	20	PASS
11A	5200	Ant1	VN	40	5200.10	8.65385	20	PASS
11A	5200	Ant1	VN	50	5200.07	2.88462	20	PASS
11A	5240	Ant1	VN	-30	5239.69	-2.25487	20	PASS
11A	5240	Ant1	VN	-20	5239.99	-2.86260	20	PASS
11A	5240	Ant1	VN	-10	5239.94	-10.45062	20	PASS
11A	5240	Ant1	VN	0	5239.92	-2.86260	20	PASS
11A	5240	Ant1	VN	10	5239.93	-10.45038	20	PASS
11A	5240	Ant1	VN	20	5239.99	-5.72519	20	PASS
11A	5240	Ant1	VN	30	5240.01	2.86258	20	PASS
11A	5240	Ant1	VN	40	5240.02	2.86260	20	PASS
11A	5240	Ant1	VN	50	5239.99	-2.86268	20	PASS
11A	5745	Ant1	VN	-30	5744.96	-7.83290	20	PASS
11A	5745	Ant1	VN	-20	5744.07	10.05483	20	PASS
11A	5745	Ant1	VN	-10	5744.99	-2.61097	20	PASS
11A	5745	Ant1	VN	0	5745.02	2.61097	20	PASS
11A	5745	Ant1	VN	10	5745.09	2.61258	20	PASS
11A	5745	Ant1	VN	20	5745.00	0.00000	20	PASS

11A	5745	Ant1	VN	30	5744.89	-3.22193	20	PASS
11A	5745	Ant1	VN	40	5745.00	0.00000	20	PASS
11A	5745	Ant1	VN	50	5745.00	0.00000	20	PASS
11A	5785	Ant1	VN	-30	5785.00	0.00000	20	PASS
11A	5785	Ant1	VN	-20	5784.93	-10.55736	20	PASS
11A	5785	Ant1	VN	-10	5784.97	-5.18583	20	PASS
11A	5785	Ant1	VN	0	5785.00	0.00000	20	PASS
11A	5785	Ant1	VN	10	5784.99	-1.354826	20	PASS
11A	5785	Ant1	VN	20	5784.94	-5.37165	20	PASS
11A	5785	Ant1	VN	30	5784.91	-10.55748	20	PASS
11A	5785	Ant1	VN	40	5784.99	-2.59291	20	PASS
11A	5785	Ant1	VN	50	5785.00	0.00000	20	PASS
11A	5825	Ant1	VN	-30	5824.97	-5.15022	20	PASS
11A	5825	Ant1	VN	-20	5824.91	-10.30043	20	PASS
11A	5825	Ant1	VN	-10	5825.02	2.57513	20	PASS
11A	5825	Ant1	VN	0	5825.00	0.00000	20	PASS
11A	5825	Ant1	VN	10	5824.97	-5.15022	20	PASS
11A	5825	Ant1	VN	20	5824.95	-7.12689	20	PASS
11A	5825	Ant1	VN	30	5824.96	-7.72532	20	PASS
11A	5825	Ant1	VN	40	5824.94	-10.30043	20	PASS
11A	5825	Ant1	VN	50	5824.96	-7.72532	20	PASS
11A	5180	Ant2	VN	-30	5179.97	-5.79151	20	PASS
11A	5180	Ant2	VN	-20	5179.96	-8.68726	20	PASS
11A	5180	Ant2	VN	-10	5179.97	-5.79151	20	PASS
11A	5180	Ant2	VN	0	5179.96	-2.89457	20	PASS
11A	5180	Ant2	VN	10	5179.97	-5.79151	20	PASS
11A	5180	Ant2	VN	20	5179.97	-5.79151	20	PASS
11A	5180	Ant2	VN	30	5180.03	5.79151	20	PASS
11A	5180	Ant2	VN	40	5179.99	-2.89575	20	PASS
11A	5180	Ant2	VN	50	5180.03	5.79151	20	PASS
11A	5200	Ant2	VN	-30	5200.06	8.65385	20	PASS
11A	5200	Ant2	VN	-20	5200.06	8.65385	20	PASS
11A	5200	Ant2	VN	-10	5200.06	8.65385	20	PASS
11A	5200	Ant2	VN	0	5199.94	-11.53846	20	PASS
11A	5200	Ant2	VN	10	5200.06	11.53846	20	PASS
11A	5200	Ant2	VN	20	5200.05	8.65385	20	PASS
11A	5200	Ant2	VN	30	5199.91	-17.30769	20	PASS

11A	5200	Ant2	VN	40	5200.03	5.76923	20	PASS
11A	5200	Ant2	VN	50	5200.04	8.65458	20	PASS
11A	5240	Ant2	VN	-30	5240.00	0.00000	20	PASS
11A	5240	Ant2	VN	-20	5240.00	0.00000	20	PASS
11A	5240	Ant2	VN	-10	5239.96	-8.58779	20	PASS
11A	5240	Ant2	VN	0	5240.00	0.00000	20	PASS
11A	5240	Ant2	VN	10	5239.98	-5.72514	20	PASS
11A	5240	Ant2	VN	20	5239.99	-2.86260	20	PASS
11A	5240	Ant2	VN	30	5240.00	0.00000	20	PASS
11A	5240	Ant2	VN	40	5240.00	0.00000	20	PASS
11A	5240	Ant2	VN	50	5239.99	-2.86260	20	PASS
11A	5745	Ant2	VN	-30	5744.99	-2.61097	20	PASS
11A	5745	Ant2	VN	-20	5745.00	0.00000	20	PASS
11A	5745	Ant2	VN	-10	5744.97	-5.22193	20	PASS
11A	5745	Ant2	VN	0	5745.03	5.22193	20	PASS
11A	5745	Ant2	VN	10	5744.93	-13.05483	20	PASS
11A	5745	Ant2	VN	20	5744.99	-2.61097	20	PASS
11A	5745	Ant2	VN	30	5745.00	0.00000	20	PASS
11A	5745	Ant2	VN	40	5744.91	-15.66580	20	PASS
11A	5745	Ant2	VN	50	5744.97	-5.22193	20	PASS
11A	5785	Ant2	VN	-30	5785.00	0.00000	20	PASS
11A	5785	Ant2	VN	-20	5785.06	10.37165	20	PASS
11A	5785	Ant2	VN	-10	5784.99	-2.59291	20	PASS
11A	5785	Ant2	VN	0	5785.00	0.00000	20	PASS
11A	5785	Ant2	VN	10	5784.97	-5.18583	20	PASS
11A	5785	Ant2	VN	20	5784.99	-2.59291	20	PASS
11A	5785	Ant2	VN	30	5784.97	-5.18583	20	PASS
11A	5785	Ant2	VN	40	5784.97	-5.18583	20	PASS
11A	5785	Ant2	VN	50	5785.08	12.96456	20	PASS
11A	5825	Ant2	VN	-30	5824.93	-12.87554	20	PASS
11A	5825	Ant2	VN	-20	5824.90	-18.02575	20	PASS
11A	5825	Ant2	VN	-10	5825.03	5.15022	20	PASS
11A	5825	Ant2	VN	0	5825.05	7.72532	20	PASS
11A	5825	Ant2	VN	10	5825.00	0.00000	20	PASS
11A	5825	Ant2	VN	20	5824.99	-2.57511	20	PASS
11A	5825	Ant2	VN	30	5825.02	2.57511	20	PASS
11A	5825	Ant2	VN	40	5824.97	-5.15022	20	PASS

11A	5825	Ant2	VN	50	5824.99	-2.57525	20	PASS
11N20	5180	Ant1	VN	-30	5179.94	-11.58301	20	PASS
11N20	5180	Ant1	VN	-20	5179.94	-11.58301	20	PASS
11N20	5180	Ant1	VN	-10	5180.03	5.79158	20	PASS
11N20	5180	Ant1	VN	0	5179.97	-5.79151	20	PASS
11N20	5180	Ant1	VN	10	5180.02	2.89575	20	PASS
11N20	5180	Ant1	VN	20	5180.02	2.89575	20	PASS
11N20	5180	Ant1	VN	30	5179.97	-5.79151	20	PASS
11N20	5180	Ant1	VN	40	5179.97	-5.79151	20	PASS
11N20	5180	Ant1	VN	50	5179.96	-8.68725	20	PASS
11N20	5200	Ant1	VN	-30	5199.99	-2.88463	20	PASS
11N20	5200	Ant1	VN	-20	5200.05	7.65385	20	PASS
11N20	5200	Ant1	VN	-10	5199.99	-2.88462	20	PASS
11N20	5200	Ant1	VN	0	5199.93	-10.42308	20	PASS
11N20	5200	Ant1	VN	10	5199.94	-11.53846	20	PASS
11N20	5200	Ant1	VN	20	5200.02	2.88462	20	PASS
11N20	5200	Ant1	VN	30	5199.97	-14.42308	20	PASS
11N20	5200	Ant1	VN	40	5199.96	-8.65385	20	PASS
11N20	5200	Ant1	VN	50	5200.00	0.00000	20	PASS
11N20	5240	Ant1	VN	-30	5240.06	11.45038	20	PASS
11N20	5240	Ant1	VN	-20	5239.99	-2.86260	20	PASS
11N20	5240	Ant1	VN	-10	5239.99	-2.86260	20	PASS
11N20	5240	Ant1	VN	0	5240.00	0.00000	20	PASS
11N20	5240	Ant1	VN	10	5239.97	-5.72519	20	PASS
11N20	5240	Ant1	VN	20	5240.00	0.00000	20	PASS
11N20	5240	Ant1	VN	30	5239.93	-14.31298	20	PASS
11N20	5240	Ant1	VN	40	5240.02	2.86260	20	PASS
11N20	5240	Ant1	VN	50	5239.94	-11.45038	20	PASS
11N20	5745	Ant1	VN	-30	5744.99	-2.61097	20	PASS
11N20	5745	Ant1	VN	-20	5744.90	-16.27676	20	PASS
11N20	5745	Ant1	VN	-10	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	VN	0	5744.91	-15.66580	20	PASS
11N20	5745	Ant1	VN	10	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	VN	20	5744.91	-14.55389	20	PASS
11N20	5745	Ant1	VN	30	5744.96	-7.83290	20	PASS
11N20	5745	Ant1	VN	40	5744.97	-5.22193	20	PASS
11N20	5745	Ant1	VN	50	5744.99	-2.61097	20	PASS

11N20	5785	Ant1	VN	-30	5785.02	2.49291	20	PASS
11N20	5785	Ant1	VN	-20	5784.96	5.18583	20	PASS
11N20	5785	Ant1	VN	-10	5784.99	-2.59291	20	PASS
11N20	5785	Ant1	VN	0	5784.94	-10.37165	20	PASS
11N20	5785	Ant1	VN	10	5784.94	-10.37165	20	PASS
11N20	5785	Ant1	VN	20	5784.94	-10.37165	20	PASS
11N20	5785	Ant1	VN	30	5784.99	-2.59291	20	PASS
11N20	5785	Ant1	VN	40	5784.93	-12.96456	20	PASS
11N20	5785	Ant1	VN	50	5785.05	7.77874	20	PASS
11N20	5825	Ant1	VN	-30	5824.94	-10.31243	20	PASS
11N20	5825	Ant1	VN	-20	5824.96	-7.72532	20	PASS
11N20	5825	Ant1	VN	-10	5824.97	-5.15023	20	PASS
11N20	5825	Ant1	VN	0	5824.96	-5.15023	20	PASS
11N20	5825	Ant1	VN	10	5824.93	-12.87554	20	PASS
11N20	5825	Ant1	VN	20	5824.91	-15.45064	20	PASS
11N20	5825	Ant1	VN	30	5824.94	-10.30043	20	PASS
11N20	5825	Ant1	VN	40	5825.00	0.00000	20	PASS
11N20	5825	Ant1	VN	50	5824.96	-7.72532	20	PASS
11N40	5190	Ant1	VN	-30	5190.03	5.78035	20	PASS
11N40	5190	Ant1	VN	-20	5189.97	-5.78035	20	PASS
11N40	5190	Ant1	VN	-10	5190.03	5.78035	20	PASS
11N40	5190	Ant1	VN	0	5190.03	5.78035	20	PASS
11N40	5190	Ant1	VN	10	5189.97	-5.78035	20	PASS
11N40	5190	Ant1	VN	20	5190.00	0.00000	20	PASS
11N40	5190	Ant1	VN	30	5189.97	-5.78035	20	PASS
11N40	5190	Ant1	VN	40	5189.93	-10.34104	20	PASS
11N40	5190	Ant1	VN	50	5189.97	-5.78035	20	PASS
11N40	5230	Ant1	VN	-30	5230.09	8.20841	20	PASS
11N40	5230	Ant1	VN	-20	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	-10	5229.97	-5.73614	20	PASS
11N40	5230	Ant1	VN	0	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	10	5229.97	-5.73614	20	PASS
11N40	5230	Ant1	VN	20	5230.03	5.73614	20	PASS
11N40	5230	Ant1	VN	30	5230.00	0.00000	20	PASS
11N40	5230	Ant1	VN	40	5229.96	-5.73614	20	PASS
11N40	5230	Ant1	VN	50	5229.96	-5.73614	20	PASS
11N40	5755	Ant1	VN	-30	5755.00	0.00000	20	PASS

11N40	5755	Ant1	VN	-20	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	-10	5754.91	-10.42572	20	PASS
11N40	5755	Ant1	VN	0	5755.06	6.42572	20	PASS
11N40	5755	Ant1	VN	10	5755.06	6.42572	20	PASS
11N40	5755	Ant1	VN	20	5754.97	-5.21386	20	PASS
11N40	5755	Ant1	VN	30	5755.03	5.21287	20	PASS
11N40	5755	Ant1	VN	40	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	50	5755.09	12.63858	20	PASS
11N40	5795	Ant1	VN	-30	5795.03	5.17688	20	PASS
11N40	5795	Ant1	VN	-20	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	-10	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	0	5794.97	-5.17688	20	PASS
11N40	5795	Ant1	VN	10	5795.97	-5.17688	20	PASS
11N40	5795	Ant1	VN	20	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	30	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	40	5795.00	0.00000	20	PASS
11N40	5795	Ant1	VN	50	5794.94	-10.35375	20	PASS
11N20	5180	Ant2	VN	-30	5179.96	-8.68726	20	PASS
11N20	5180	Ant2	VN	-20	5179.94	-11.58301	20	PASS
11N20	5180	Ant2	VN	-10	5179.99	-2.89575	20	PASS
11N20	5180	Ant2	VN	0	5179.93	-14.47876	20	PASS
11N20	5180	Ant2	VN	10	5179.96	-8.68726	20	PASS
11N20	5180	Ant2	VN	20	5179.99	-2.89575	20	PASS
11N20	5180	Ant2	VN	30	5180.05	8.68726	20	PASS
11N20	5180	Ant2	VN	40	5179.97	-5.79151	20	PASS
11N20	5180	Ant2	VN	50	5179.91	-17.37452	20	PASS
11N20	5200	Ant2	VN	-30	5199.96	-8.65385	20	PASS
11N20	5200	Ant2	VN	-20	5199.96	-8.65385	20	PASS
11N20	5200	Ant2	VN	-10	5200.02	2.88462	20	PASS
11N20	5200	Ant2	VN	0	5200.05	8.65385	20	PASS
11N20	5200	Ant2	VN	10	5199.96	-8.65385	20	PASS
11N20	5200	Ant2	VN	20	5199.92	-7.30769	20	PASS
11N20	5200	Ant2	VN	30	5199.92	-7.30769	20	PASS
11N20	5200	Ant2	VN	40	5199.97	-5.76923	20	PASS
11N20	5200	Ant2	VN	50	5200.03	5.76923	20	PASS
11N20	5240	Ant2	VN	-30	5239.94	-11.45038	20	PASS
11N20	5240	Ant2	VN	-20	5239.99	-2.86260	20	PASS

11N20	5240	Ant2	VN	-10	5239.93	-5.72025	20	PASS
11N20	5240	Ant2	VN	0	5239.99	-2.86260	20	PASS
11N20	5240	Ant2	VN	10	5239.97	-5.72519	20	PASS
11N20	5240	Ant2	VN	20	5239.97	-5.72519	20	PASS
11N20	5240	Ant2	VN	30	5240.00	0.00000	20	PASS
11N20	5240	Ant2	VN	40	5239.99	-2.86260	20	PASS
11N20	5240	Ant2	VN	50	5239.99	-2.86260	20	PASS
11N20	5745	Ant2	VN	-30	5744.94	-10.44386	20	PASS
11N20	5745	Ant2	VN	-20	5744.93	-2.61097	20	PASS
11N20	5745	Ant2	VN	-10	5744.96	-7.83290	20	PASS
11N20	5745	Ant2	VN	0	5744.99	-2.61097	20	PASS
11N20	5745	Ant2	VN	10	5745.03	5.22193	20	PASS
11N20	5745	Ant2	VN	20	5744.94	-10.45982	20	PASS
11N20	5745	Ant2	VN	30	5744.97	-5.22193	20	PASS
11N20	5745	Ant2	VN	40	5744.93	-13.05483	20	PASS
11N20	5745	Ant2	VN	50	5744.95	-10.44386	20	PASS
11N20	5785	Ant2	VN	-30	5784.97	-5.18583	20	PASS
11N20	5785	Ant2	VN	-20	5784.96	-7.77874	20	PASS
11N20	5785	Ant2	VN	-10	5784.96	-2.59291	20	PASS
11N20	5785	Ant2	VN	0	5784.99	-2.59291	20	PASS
11N20	5785	Ant2	VN	10	5784.91	-12.55748	20	PASS
11N20	5785	Ant2	VN	20	5784.93	-10.37165	20	PASS
11N20	5785	Ant2	VN	30	5784.99	-2.59291	20	PASS
11N20	5785	Ant2	VN	40	5784.94	-10.37165	20	PASS
11N20	5785	Ant2	VN	50	5784.97	-5.18583	20	PASS
11N20	5825	Ant2	VN	-30	5825.02	2.57511	20	PASS
11N20	5825	Ant2	VN	-20	5825.00	0.00000	20	PASS
11N20	5825	Ant2	VN	-10	5824.93	-12.87554	20	PASS
11N20	5825	Ant2	VN	0	5824.96	-7.72532	20	PASS
11N20	5825	Ant2	VN	10	5824.91	-15.45064	20	PASS
11N20	5825	Ant2	VN	20	5824.99	-2.57511	20	PASS
11N20	5825	Ant2	VN	30	5825.09	6.45064	20	PASS
11N20	5825	Ant2	VN	40	5824.94	-10.30025	20	PASS
11N20	5825	Ant2	VN	50	5824.96	-7.72532	20	PASS
11N40	5190	Ant2	VN	-30	5189.94	-11.56069	20	PASS
11N40	5190	Ant2	VN	-20	5189.97	-5.78035	20	PASS
11N40	5190	Ant2	VN	-10	5189.97	-5.78035	20	PASS

11N40	5190	Ant2	VN	0	5189.92	-1.56069	20	PASS
11N40	5190	Ant2	VN	10	5189.89	-1.34104	20	PASS
11N40	5190	Ant2	VN	20	5189.94	-11.06069	20	PASS
11N40	5190	Ant2	VN	30	5189.94	-11.06069	20	PASS
11N40	5190	Ant2	VN	40	5189.97	-5.78035	20	PASS
11N40	5190	Ant2	VN	50	5190.00	0.00000	20	PASS
11N40	5230	Ant2	VN	-30	5229.93	-16.47228	20	PASS
11N40	5230	Ant2	VN	-20	5230.00	0.00000	20	PASS
11N40	5230	Ant2	VN	-10	5229.96	-5.73615	20	PASS
11N40	5230	Ant2	VN	0	5229.96	-5.73615	20	PASS
11N40	5230	Ant2	VN	10	5230.00	0.00000	20	PASS
11N40	5230	Ant2	VN	20	5230.00	0.00000	20	PASS
11N40	5230	Ant2	VN	30	5230.00	0.00000	20	PASS
11N40	5230	Ant2	VN	40	5229.94	-11.47228	20	PASS
11N40	5230	Ant2	VN	50	5229.97	-5.73614	20	PASS
11N40	5755	Ant2	VN	-30	5755.00	0.00000	20	PASS
11N40	5755	Ant2	VN	-20	5755.00	0.00000	20	PASS
11N40	5755	Ant2	VN	-10	5754.93	-5.21258	20	PASS
11N40	5755	Ant2	VN	0	5754.97	-10.21286	20	PASS
11N40	5755	Ant2	VN	10	5755.00	0.00000	20	PASS
11N40	5755	Ant2	VN	20	5755.00	0.00000	20	PASS
11N40	5755	Ant2	VN	30	5754.94	-10.42572	20	PASS
11N40	5755	Ant2	VN	40	5755.09	15.63858	20	PASS
11N40	5755	Ant2	VN	50	5755.09	15.63858	20	PASS
11N40	5795	Ant2	VN	-30	5794.97	-5.17635	20	PASS
11N40	5795	Ant2	VN	-20	5794.97	-5.17635	20	PASS
11N40	5795	Ant2	VN	-10	5795.03	-3.17688	20	PASS
11N40	5795	Ant2	VN	0	5794.94	-10.35375	20	PASS
11N40	5795	Ant2	VN	10	5795.00	0.00000	20	PASS
11N40	5795	Ant2	VN	20	5794.97	-5.17688	20	PASS
11N40	5795	Ant2	VN	30	5795.00	0.00000	20	PASS
11N40	5795	Ant2	VN	40	5795.00	0.00000	20	PASS
11N40	5795	Ant2	VN	50	5794.97	-5.17688	20	PASS
11AC20	5180	Ant1	VN	-30	5179.96	-8.68726	20	PASS
11AC20	5180	Ant1	VN	-20	5179.94	-10.58298	20	PASS
11AC20	5180	Ant1	VN	-10	5180.00	0.00000	20	PASS
11AC20	5180	Ant1	VN	0	5180.00	0.00000	20	PASS

11AC20	5180	Ant1	VN	10	5180.02	2.89575	20	PASS
11AC20	5180	Ant1	VN	20	5179.96	-8.68726	20	PASS
11AC20	5180	Ant1	VN	30	5179.97	-5.79151	20	PASS
11AC20	5180	Ant1	VN	40	5180.00	0.00000	20	PASS
11AC20	5180	Ant1	VN	50	5179.96	-8.68359	20	PASS
11AC20	5200	Ant1	VN	-30	5200.00	0.00000	20	PASS
11AC20	5200	Ant1	VN	-20	5200.00	0.00000	20	PASS
11AC20	5200	Ant1	VN	-10	5200.00	0.00000	20	PASS
11AC20	5200	Ant1	VN	0	5199.99	-2.88462	20	PASS
11AC20	5200	Ant1	VN	10	5199.96	-8.65385	20	PASS
11AC20	5200	Ant1	VN	20	5200.02	2.88462	20	PASS
11AC20	5200	Ant1	VN	30	5199.94	-11.53846	20	PASS
11AC20	5200	Ant1	VN	40	5200.02	2.88462	20	PASS
11AC20	5200	Ant1	VN	50	5200.00	0.00000	20	PASS
11AC20	5240	Ant1	VN	-30	5239.96	-8.58779	20	PASS
11AC20	5240	Ant1	VN	-20	5239.97	-5.72519	20	PASS
11AC20	5240	Ant1	VN	-10	5239.94	-11.45038	20	PASS
11AC20	5240	Ant1	VN	0	5240.00	0.00000	20	PASS
11AC20	5240	Ant1	VN	10	5239.96	-5.74528	20	PASS
11AC20	5240	Ant1	VN	20	5240.02	3.86260	20	PASS
11AC20	5240	Ant1	VN	30	5239.93	-12.31298	20	PASS
11AC20	5240	Ant1	VN	40	5240.03	2.86260	20	PASS
11AC20	5240	Ant1	VN	50	5239.97	-2.86324	20	PASS
11AC20	5745	Ant1	VN	-30	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	-20	5745.00	0.00000	20	PASS
11AC20	5745	Ant1	VN	-10	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	0	5745.05	7.83290	20	PASS
11AC20	5745	Ant1	VN	10	5745.02	2.60258	20	PASS
11AC20	5745	Ant1	VN	20	5744.97	-3.22193	20	PASS
11AC20	5745	Ant1	VN	30	5745.05	5.83290	20	PASS
11AC20	5745	Ant1	VN	40	5744.98	-1.61097	20	PASS
11AC20	5745	Ant1	VN	50	5745.05	-7.83269	20	PASS
11AC20	5785	Ant1	VN	-30	5784.95	-7.77874	20	PASS
11AC20	5785	Ant1	VN	-20	5784.95	-7.77874	20	PASS
11AC20	5785	Ant1	VN	-10	5784.97	-5.18583	20	PASS
11AC20	5785	Ant1	VN	0	5784.96	-7.77874	20	PASS
11AC20	5785	Ant1	VN	10	5785.08	12.96456	20	PASS

11AC20	5785	Ant1	VN	20	5784.99	-2.59351	20	PASS
11AC20	5785	Ant1	VN	30	5784.99	-2.59351	20	PASS
11AC20	5785	Ant1	VN	40	5784.99	-2.59351	20	PASS
11AC20	5785	Ant1	VN	50	5784.93	-2.96456	20	PASS
11AC20	5825	Ant1	VN	-30	5824.91	-5.45064	20	PASS
11AC20	5825	Ant1	VN	-20	5824.99	-2.57511	20	PASS
11AC20	5825	Ant1	VN	-10	5824.94	-1.30043	20	PASS
11AC20	5825	Ant1	VN	0	5825.00	0.00000	20	PASS
11AC20	5825	Ant1	VN	10	5825.00	0.00000	20	PASS
11AC20	5825	Ant1	VN	20	5824.93	-12.87554	20	PASS
11AC20	5825	Ant1	VN	30	5825.03	5.15022	20	PASS
11AC20	5825	Ant1	VN	40	5824.99	-2.57511	20	PASS
11AC20	5825	Ant1	VN	50	5824.96	-7.72532	20	PASS
11AC40	5190	Ant1	VN	-30	5190.04	7.70713	20	PASS
11AC40	5190	Ant1	VN	-20	5189.92	-7.70713	20	PASS
11AC40	5190	Ant1	VN	-10	5190.00	0.00000	20	PASS
11AC40	5190	Ant1	VN	0	5189.93	-7.70713	20	PASS
11AC40	5190	Ant1	VN	10	5189.92	-15.41426	20	PASS
11AC40	5190	Ant1	VN	20	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	30	5190.04	-1.70613	20	PASS
11AC40	5190	Ant1	VN	40	5190.00	0.00000	20	PASS
11AC40	5190	Ant1	VN	50	5190.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	-30	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	-20	5229.97	-7.64819	20	PASS
11AC40	5230	Ant1	VN	-10	5229.95	-11.34819	20	PASS
11AC40	5230	Ant1	VN	0	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	10	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	20	5229.92	-10.47238	20	PASS
11AC40	5230	Ant1	VN	30	5229.93	-6.54818	20	PASS
11AC40	5230	Ant1	VN	40	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	50	5229.89	-1.64818	20	PASS
11AC40	5755	Ant1	VN	-30	5755.04	0.95048	20	PASS
11AC40	5755	Ant1	VN	-20	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	-10	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	0	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	10	5754.96	-6.95048	20	PASS
11AC40	5755	Ant1	VN	20	5755.04	6.95048	20	PASS

11AC40	5755	Ant1	VN	30	5755.02	3.90006	20	PASS
11AC40	5755	Ant1	VN	40	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	50	5755.04	6.95048	20	PASS
11AC40	5795	Ant1	VN	-30	5795.07	3.80511	20	PASS
11AC40	5795	Ant1	VN	-20	5795.07	3.80511	20	PASS
11AC40	5795	Ant1	VN	-10	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	0	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	10	5795.04	6.90250	20	PASS
11AC40	5795	Ant1	VN	20	5795.04	6.90250	20	PASS
11AC40	5795	Ant1	VN	30	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	40	5795.00	0.00000	20	PASS
11AC40	5795	Ant1	VN	50	5794.96	-6.90250	20	PASS
11AC80	5210	Ant1	VN	-30	5209.93	-5.36509	20	PASS
11AC80	5210	Ant1	VN	-20	5209.93	-5.36509	20	PASS
11AC80	5210	Ant1	VN	-10	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	0	5209.92	-15.35509	20	PASS
11AC80	5210	Ant1	VN	10	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	20	5209.92	-15.35509	20	PASS
11AC80	5210	Ant1	VN	30	5210.00	0.00000	20	PASS
11AC80	5210	Ant1	VN	40	5209.92	-15.35509	20	PASS
11AC80	5210	Ant1	VN	50	5210.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	-30	5775.08	13.85281	20	PASS
11AC80	5775	Ant1	VN	-20	5775.08	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	5775.00	0.00000	20	PASS
11AC80	5775	Ant1	VN	20	5775.05	12.85271	20	PASS
11AC80	5775	Ant1	VN	30	5775.05	12.85271	20	PASS
11AC80	5775	Ant1	VN	40	5775.05	12.85271	20	PASS
11AC80	5775	Ant1	VN	50	5775.05	12.85271	20	PASS
11AC20	5180	Ant2	VN	-30	5179.92	-14.47876	20	PASS
11AC20	5180	Ant2	VN	-20	5179.91	-17.37452	20	PASS
11AC20	5180	Ant2	VN	-10	5179.96	-14.47876	20	PASS
11AC20	5180	Ant2	VN	0	5180.00	0.00000	20	PASS
11AC20	5180	Ant2	VN	10	5180.00	0.00000	20	PASS
11AC20	5180	Ant2	VN	20	5179.94	-1.58301	20	PASS
11AC20	5180	Ant2	VN	30	5179.93	-5.79051	20	PASS

11AC20	5180	Ant2	VN	40	5179.94	-1.58301	20	PASS
11AC20	5180	Ant2	VN	50	5179.96	-6.68726	20	PASS
11AC20	5200	Ant2	VN	-30	5200.00	0.00000	20	PASS
11AC20	5200	Ant2	VN	-20	5199.97	-5.76923	20	PASS
11AC20	5200	Ant2	VN	-10	5199.99	-2.88462	20	PASS
11AC20	5200	Ant2	VN	0	5199.99	-2.88462	20	PASS
11AC20	5200	Ant2	VN	10	5199.97	-5.76923	20	PASS
11AC20	5200	Ant2	VN	20	5199.99	-2.88462	20	PASS
11AC20	5200	Ant2	VN	30	5199.99	-2.88462	20	PASS
11AC20	5200	Ant2	VN	40	5199.94	-11.53846	20	PASS
11AC20	5200	Ant2	VN	50	5200.05	8.65385	20	PASS
11AC20	5240	Ant2	VN	-30	5240.03	5.72519	20	PASS
11AC20	5240	Ant2	VN	-20	5239.99	-2.86260	20	PASS
11AC20	5240	Ant2	VN	-10	5239.94	-11.45038	20	PASS
11AC20	5240	Ant2	VN	0	5240.02	2.86260	20	PASS
11AC20	5240	Ant2	VN	10	5239.99	-2.86260	20	PASS
11AC20	5240	Ant2	VN	20	5239.97	-5.72519	20	PASS
11AC20	5240	Ant2	VN	30	5239.99	-2.86260	20	PASS
11AC20	5240	Ant2	VN	40	5239.96	-8.58779	20	PASS
11AC20	5240	Ant2	VN	50	5239.97	-5.72519	20	PASS
11AC20	5745	Ant2	VN	-30	5744.96	-7.83290	20	PASS
11AC20	5745	Ant2	VN	-20	5744.99	-2.61097	20	PASS
11AC20	5745	Ant2	VN	-10	5745.00	0.00000	20	PASS
11AC20	5745	Ant2	VN	0	5744.91	-15.66580	20	PASS
11AC20	5745	Ant2	VN	10	5745.00	0.00000	20	PASS
11AC20	5745	Ant2	VN	20	5744.94	-10.44386	20	PASS
11AC20	5745	Ant2	VN	30	5744.93	-13.05483	20	PASS
11AC20	5745	Ant2	VN	40	5744.94	-10.44386	20	PASS
11AC20	5745	Ant2	VN	50	5744.94	-10.44386	20	PASS
11AC20	5785	Ant2	VN	-30	5784.97	-5.18583	20	PASS
11AC20	5785	Ant2	VN	-20	5784.99	-2.59291	20	PASS
11AC20	5785	Ant2	VN	-10	5784.99	-2.59291	20	PASS
11AC20	5785	Ant2	VN	0	5784.99	-2.59291	20	PASS
11AC20	5785	Ant2	VN	10	5784.91	-15.55748	20	PASS
11AC20	5785	Ant2	VN	20	5784.93	-12.96456	20	PASS
11AC20	5785	Ant2	VN	30	5784.99	-2.59291	20	PASS
11AC20	5785	Ant2	VN	40	5784.94	-10.37165	20	PASS

11AC20	5785	Ant2	VN	50	5784.94	-10.37165	20	PASS
11AC20	5825	Ant2	VN	-30	5824.97	-5.15022	20	PASS
11AC20	5825	Ant2	VN	-20	5824.96	-7.72532	20	PASS
11AC20	5825	Ant2	VN	-10	5824.96	-7.72532	20	PASS
11AC20	5825	Ant2	VN	0	5824.97	-5.15022	20	PASS
11AC20	5825	Ant2	VN	10	5824.93	-12.87554	20	PASS
11AC20	5825	Ant2	VN	20	5824.96	-7.72532	20	PASS
11AC20	5825	Ant2	VN	30	5824.96	-7.72532	20	PASS
11AC20	5825	Ant2	VN	40	5824.99	-2.57511	20	PASS
11AC20	5825	Ant2	VN	50	5824.93	-12.87554	20	PASS
11AC40	5190	Ant2	VN	-30	5189.96	-7.70713	20	PASS
11AC40	5190	Ant2	VN	-20	5189.96	-7.70713	20	PASS
11AC40	5190	Ant2	VN	-10	5189.92	-15.41426	20	PASS
11AC40	5190	Ant2	VN	0	5190.00	0.00000	20	PASS
11AC40	5190	Ant2	VN	10	5190.00	0.00000	20	PASS
11AC40	5190	Ant2	VN	20	5189.96	-7.70713	20	PASS
11AC40	5190	Ant2	VN	30	5189.93	-15.41426	20	PASS
11AC40	5190	Ant2	VN	40	5189.93	-15.41426	20	PASS
11AC40	5190	Ant2	VN	50	5189.96	-7.70713	20	PASS
11AC40	5230	Ant2	VN	-30	5229.96	-7.64818	20	PASS
11AC40	5230	Ant2	VN	-20	5230.00	0.00000	20	PASS
11AC40	5230	Ant2	VN	-10	5230.00	0.00000	20	PASS
11AC40	5230	Ant2	VN	0	5229.91	-15.20007	20	PASS
11AC40	5230	Ant2	VN	10	5229.95	-8.64819	20	PASS
11AC40	5230	Ant2	VN	20	5229.91	-15.29637	20	PASS
11AC40	5230	Ant2	VN	30	5230.04	7.64819	20	PASS
11AC40	5230	Ant2	VN	40	5230.06	5.29637	20	PASS
11AC40	5230	Ant2	VN	50	5230.00	0.00000	20	PASS
11AC40	5755	Ant2	VN	-30	5754.96	-6.95048	20	PASS
11AC40	5755	Ant2	VN	-20	5754.96	-6.95048	20	PASS
11AC40	5755	Ant2	VN	-10	5755.00	0.00000	20	PASS
11AC40	5755	Ant2	VN	0	5755.00	0.00000	20	PASS
11AC40	5755	Ant2	VN	10	5755.04	6.95048	20	PASS
11AC40	5755	Ant2	VN	20	5754.91	-3.90086	20	PASS
11AC40	5755	Ant2	VN	30	5755.02	6.90048	20	PASS
11AC40	5755	Ant2	VN	40	5754.99	-13.90006	20	PASS
11AC40	5755	Ant2	VN	50	5755.00	0.00000	20	PASS

11AC40	5795	Ant2	VN	-30	5795.04	6.90250	20	PASS
11AC40	5795	Ant2	VN	-20	5794.97	-6.90250	20	PASS
11AC40	5795	Ant2	VN	-10	5794.97	-6.90250	20	PASS
11AC40	5795	Ant2	VN	0	5795.00	0.00000	20	PASS
11AC40	5795	Ant2	VN	10	5794.92	-13.80500	20	PASS
11AC40	5795	Ant2	VN	20	5795.00	0.00000	20	PASS
11AC40	5795	Ant2	VN	30	5795.00	0.00000	20	PASS
11AC40	5795	Ant2	VN	40	5795.07	13.80500	20	PASS
11AC40	5795	Ant2	VN	50	5795.04	6.90250	20	PASS
11AC80	5210	Ant2	VN	-30	5210.08	15.35509	20	PASS
11AC80	5210	Ant2	VN	-20	5209.92	-10.34409	20	PASS
11AC80	5210	Ant2	VN	-10	5210.09	5.36509	20	PASS
11AC80	5210	Ant2	VN	0	5209.93	-15.35509	20	PASS
11AC80	5210	Ant2	VN	10	5210.00	0.00000	20	PASS
11AC80	5210	Ant2	VN	20	5210.07	5.35509	20	PASS
11AC80	5210	Ant2	VN	30	5209.93	-5.35509	20	PASS
11AC80	5210	Ant2	VN	40	5210.00	0.00000	20	PASS
11AC80	5210	Ant2	VN	50	5210.00	0.00000	20	PASS
11AC80	5775	Ant2	VN	-30	5775.00	0.00000	20	PASS
11AC80	5775	Ant2	VN	-20	5775.00	0.00000	20	PASS
11AC80	5775	Ant2	VN	-10	5775.00	0.00000	20	PASS
11AC80	5775	Ant2	VN	0	5775.08	13.85281	20	PASS
11AC80	5775	Ant2	VN	10	5775.08	13.85281	20	PASS
11AC80	5775	Ant2	VN	20	5774.92	-13.85281	20	PASS
11AC80	5775	Ant2	VN	30	5775.00	0.00000	20	PASS
11AC80	5775	Ant2	VN	40	5775.08	13.85281	20	PASS
11AC80	5775	Ant2	VN	50	5775.00	0.00000	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:	Please see Internal photos
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Antenna 1 is FPC antenna and antenna 2 is FPC antenna . The best case gain of antenna 1 is 1.5dBi and the best case gain of antenna 2 is 1.5dBi.
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Appendix G) AC Power Line Conducted Emission

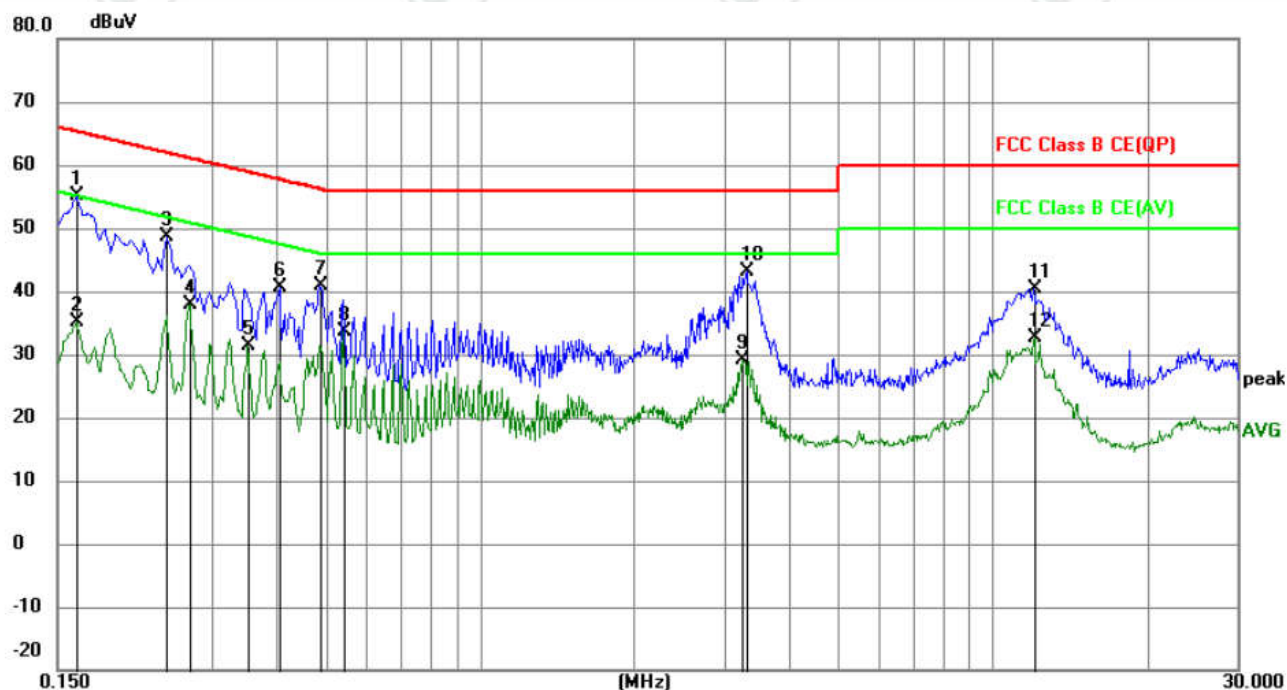
Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. 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.															
Limit:	<table border="1"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr> <tr> <th>Quasi-peak</th><th>Average</th></tr> </thead> <tbody> <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> </tbody> </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		Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)															
	Quasi-peak	Average														
0.15-0.5	66 to 56*	56 to 46*														
0.5-5	56	46														
5-30	60	50														

Measurement Data

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

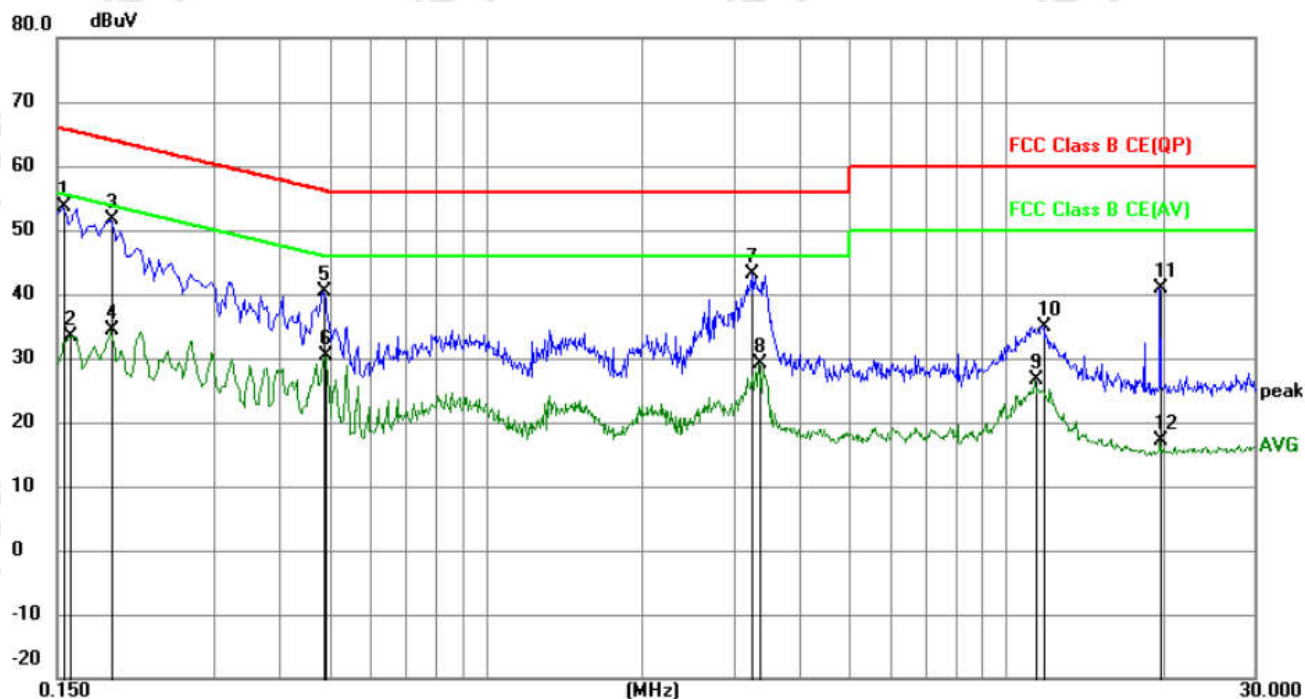
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1635	45.25	9.87	55.12	65.28	-10.16	QP	
2		0.1635	25.31	9.87	35.18	55.28	-20.10	AVG	
3		0.2445	38.67	9.96	48.63	61.94	-13.31	QP	
4		0.2714	27.94	10.01	37.95	51.07	-13.12	AVG	
5		0.3525	21.26	10.02	31.28	48.90	-17.62	AVG	
6		0.4065	30.58	9.97	40.55	57.72	-17.17	QP	
7		0.4875	30.93	9.95	40.88	56.21	-15.33	QP	
8		0.5415	23.68	10.00	33.68	46.00	-12.32	AVG	
9		3.2415	19.30	9.79	29.09	46.00	-16.91	AVG	
10		3.3270	33.23	9.79	43.02	56.00	-12.98	QP	
11		12.0075	30.54	9.84	40.38	60.00	-19.62	QP	
12		12.0659	22.81	9.84	32.65	50.00	-17.35	AVG	

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1545	43.82	9.87	53.69	65.75	-12.06	QP	
2		0.1590	23.63	9.87	33.50	55.52	-22.02	AVG	
3		0.1905	41.77	9.87	51.64	64.01	-12.37	QP	
4		0.1905	24.50	9.87	34.37	54.01	-19.64	AVG	
5		0.4875	30.42	9.95	40.37	56.21	-15.84	QP	
6		0.4920	20.37	9.95	30.32	46.13	-15.81	AVG	
7		3.2460	33.34	9.79	43.13	56.00	-12.87	QP	
8		3.3630	19.24	9.79	29.03	46.00	-16.97	AVG	
9		11.3865	16.85	9.82	26.67	50.00	-23.33	AVG	
10		11.8590	25.10	9.84	34.94	60.00	-25.06	QP	
11		19.7970	31.01	9.97	40.98	60.00	-19.02	QP	
12		19.7970	7.11	9.97	17.08	50.00	-32.92	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.

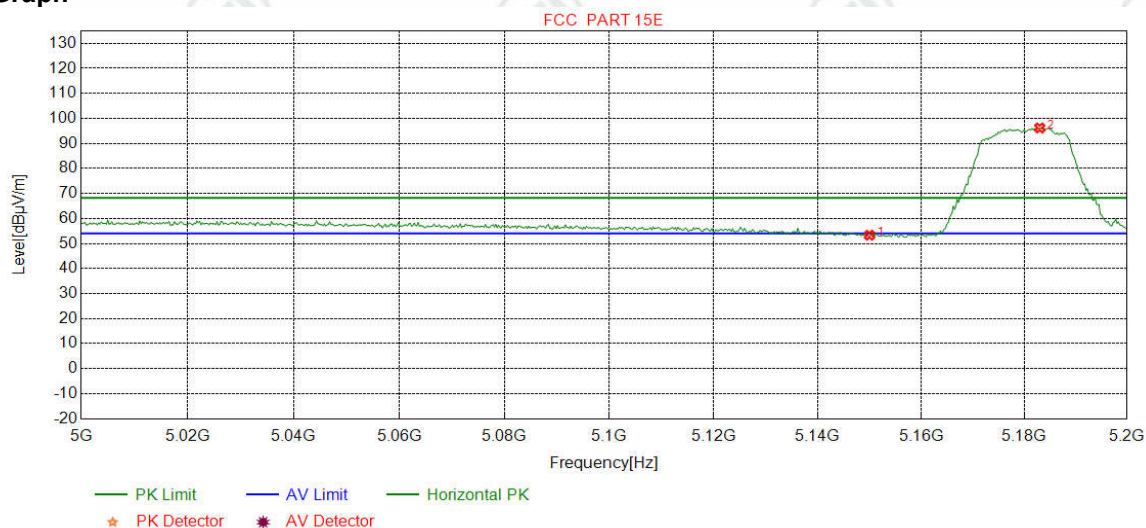
Appendix H) Restricted bands around fundamental frequency (Radiated Emission)

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: - The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - 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. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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: - 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). - Test the EUT in the lowest channel , the Highest channel - 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. - 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	

Test plot as follows:

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

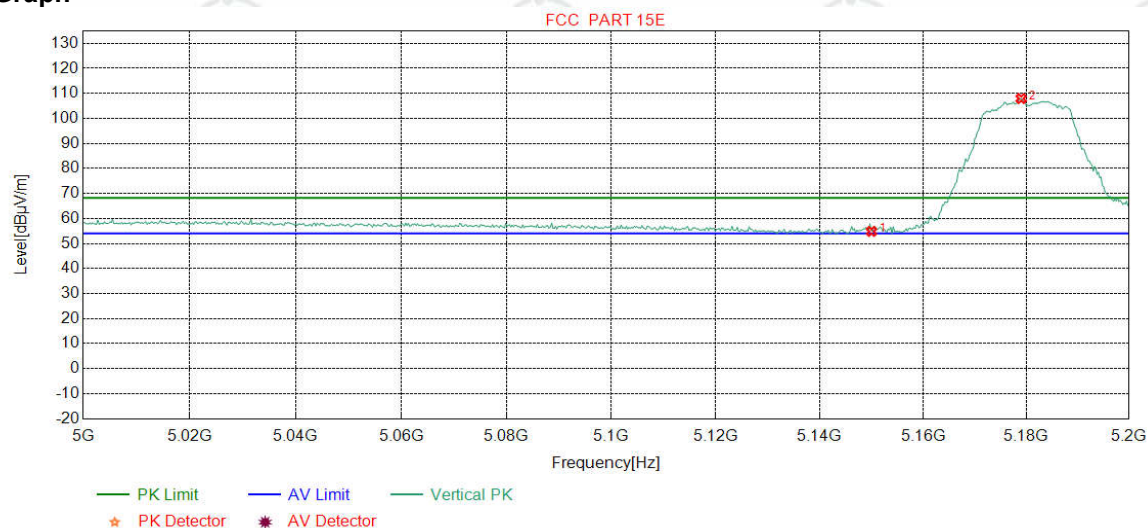
Test Graph



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	46.34	53.33	74.00	20.67	Pass	Horizontal
2	5182.9787	34.68	15.40	-42.72	88.83	96.19	74.00	-22.19	Pass	Horizontal

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

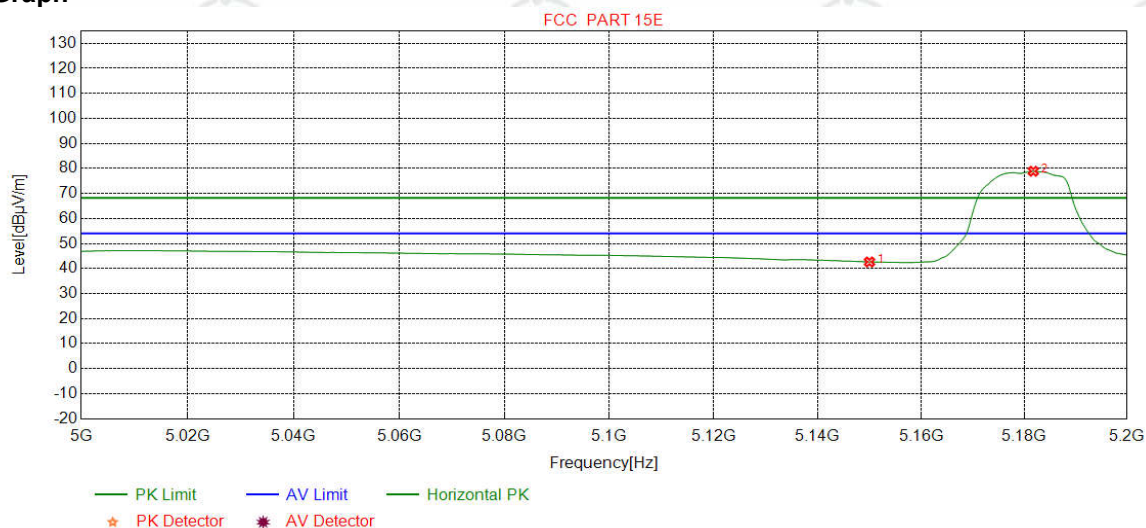
Test Graph



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	47.85	54.84	74.00	19.16	Pass	Vertical
2	5178.9737	34.68	15.36	-42.73	100.61	107.92	74.00	-33.92	Pass	Vertical

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

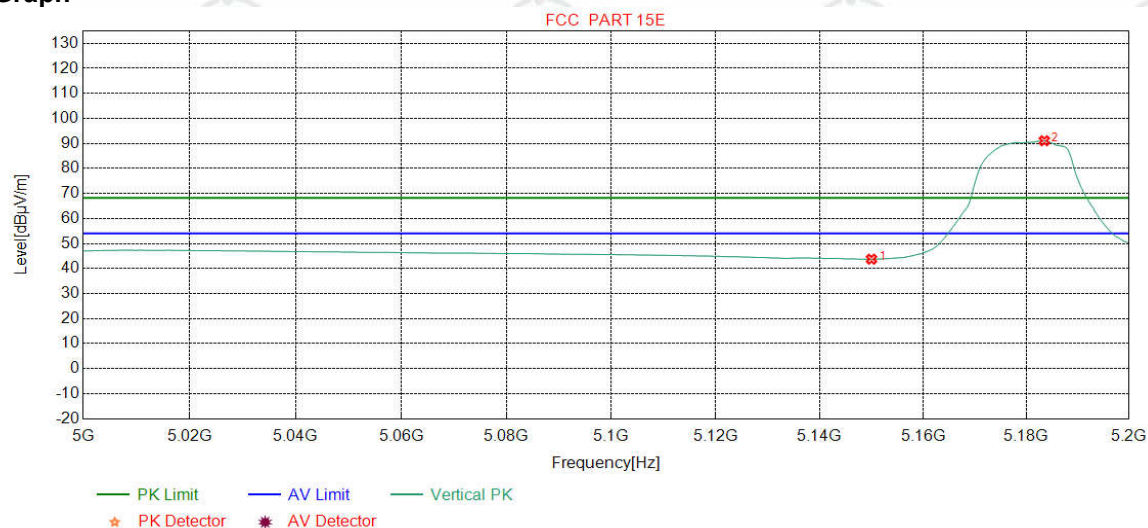
Test Graph



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	35.63	42.62	54.00	11.38	Pass	Horizontal
2	5181.7272	34.68	15.39	-42.72	71.53	78.88	54.00	-24.88	Pass	Horizontal

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

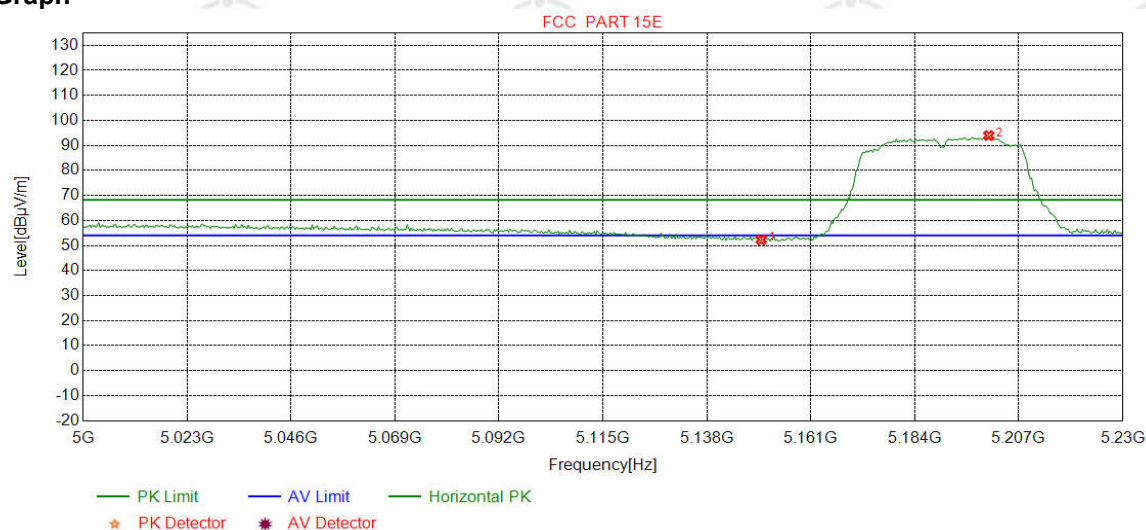
Test Graph



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	36.74	43.73	54.00	10.27	Pass	Vertical
2	5183.4793	34.68	15.41	-42.73	83.71	91.07	54.00	-37.07	Pass	Vertical

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

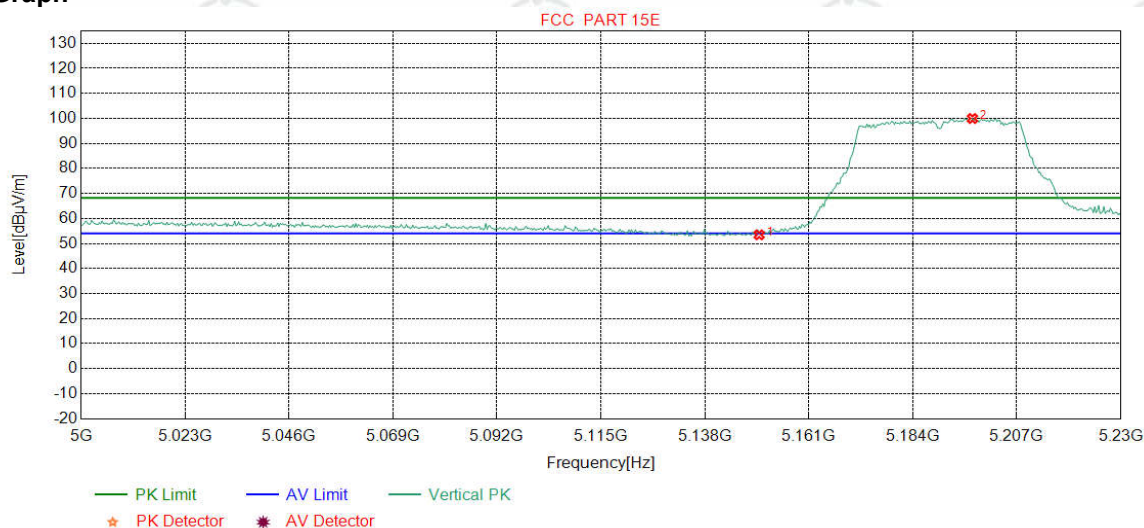
Test Graph



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	45.28	52.27	74.00	21.73	Pass	Horizontal
2	5200.3504	34.70	15.57	-42.72	86.39	93.94	74.00	-19.94	Pass	Horizontal

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

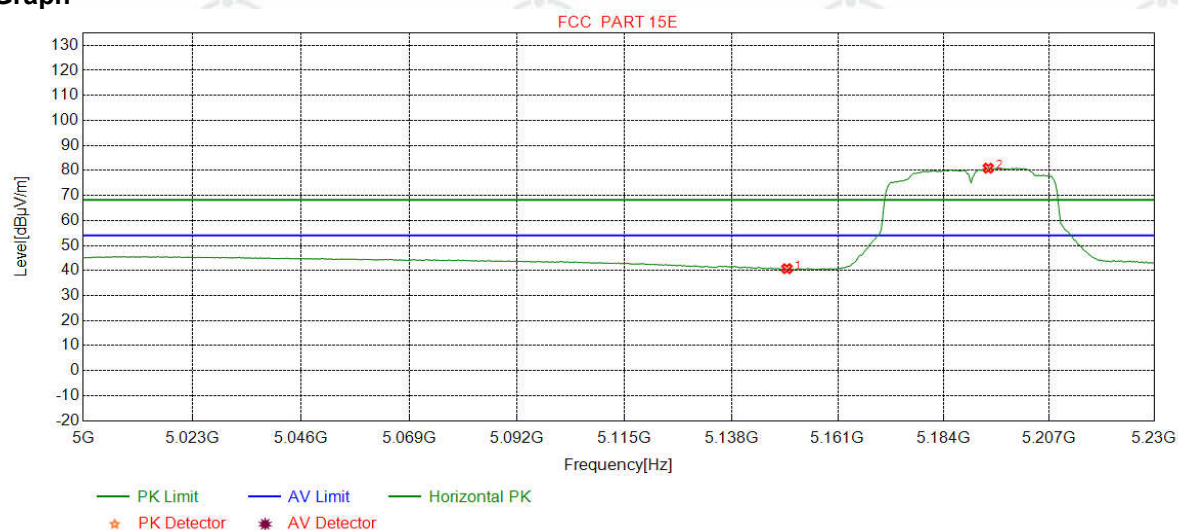
Test Graph



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	46.47	53.46	74.00	20.54	Pass	Vertical
2	5197.1840	34.70	15.54	-42.72	92.44	99.96	74.00	-25.96	Pass	Vertical

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

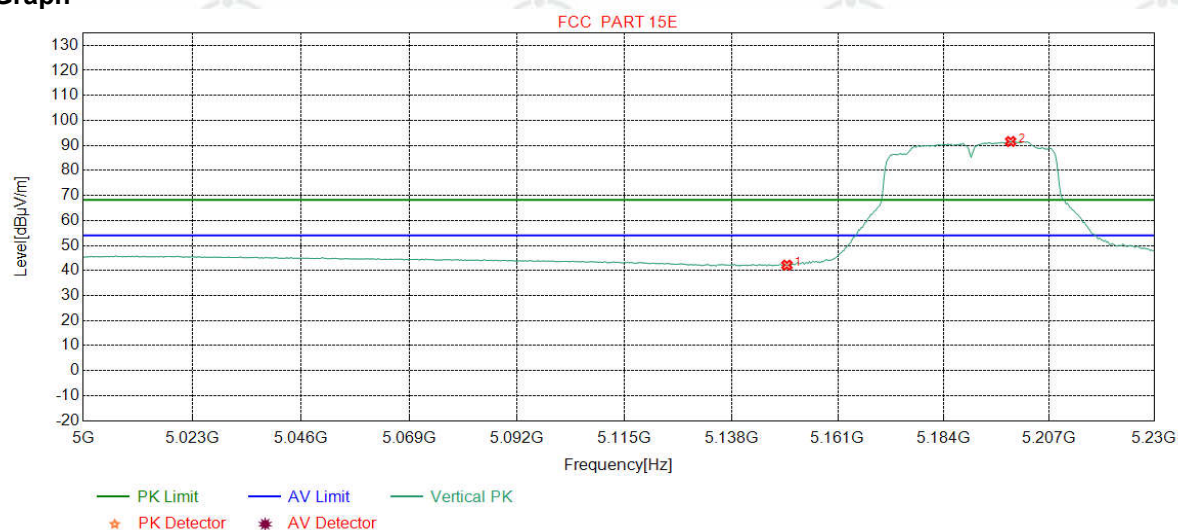
Test Graph



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	33.74	40.73	54.00	13.27	Pass	Horizontal
2	5193.7297	34.69	15.51	-42.72	73.44	80.92	54.00	-26.92	Pass	Horizontal

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

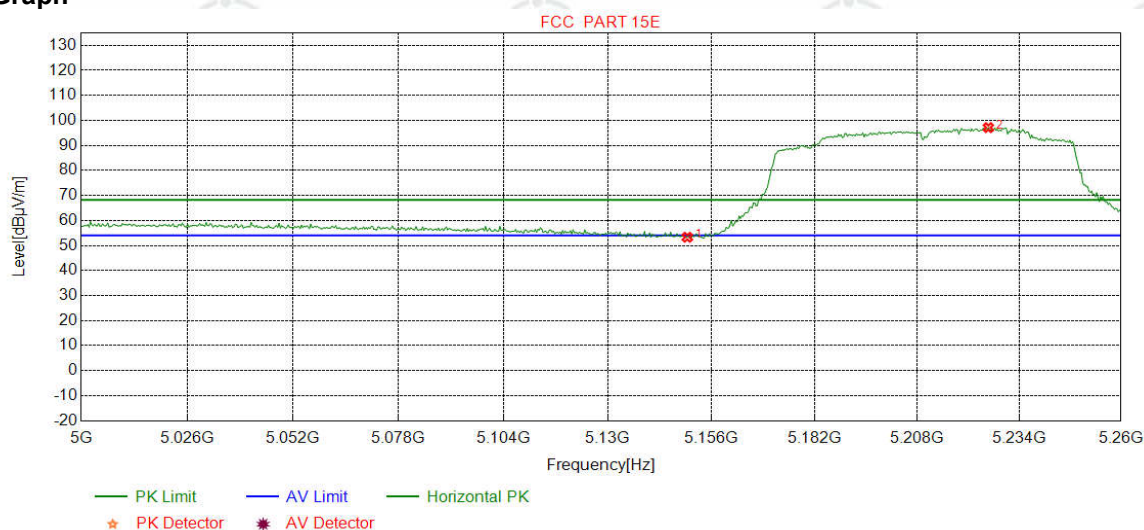
Test Graph



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	35.16	42.15	54.00	11.85	Pass	Vertical
2	5198.6233	34.70	15.56	-42.73	84.05	91.58	54.00	-37.58	Pass	Vertical

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

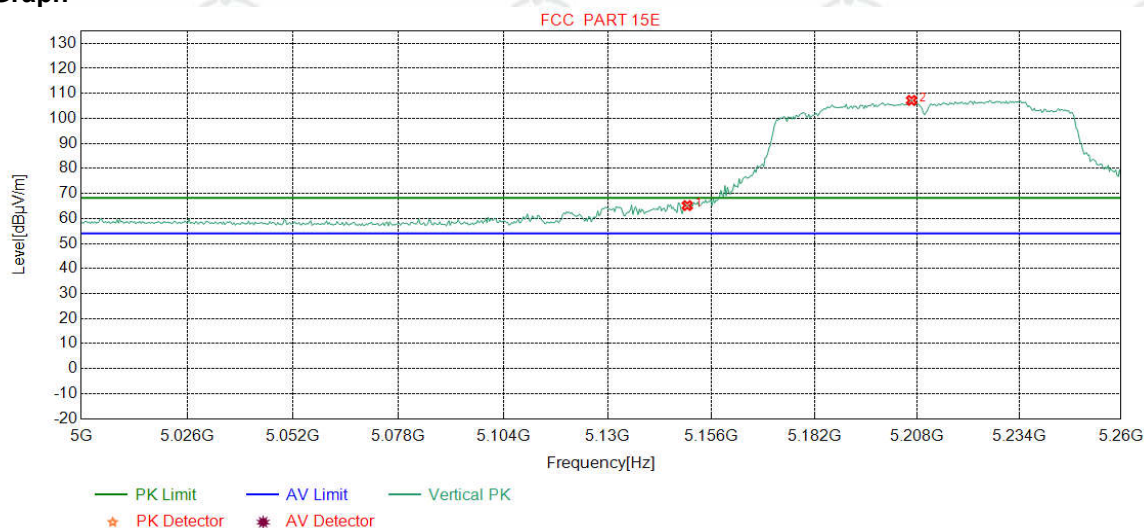
Test Graph



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	46.31	53.30	74.00	20.70	Pass	Horizontal
2	5226.1577	34.73	15.45	-42.71	89.65	97.12	74.00	-23.12	Pass	Horizontal

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

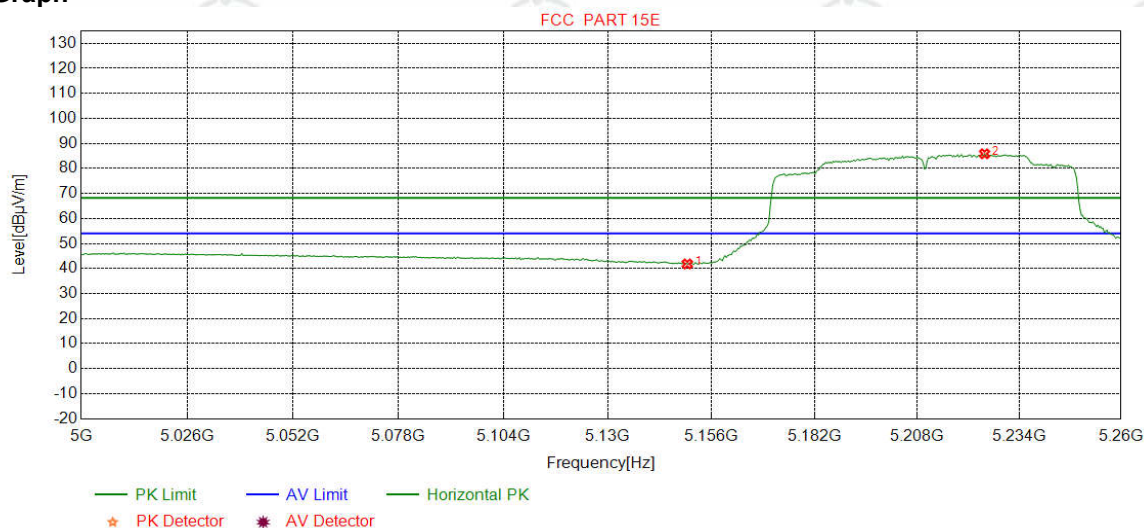
Test Graph



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	58.16	65.15	74.00	8.85	Pass	Vertical
2	5206.6333	34.71	15.54	-42.72	99.68	107.21	74.00	-33.21	Pass	Vertical

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

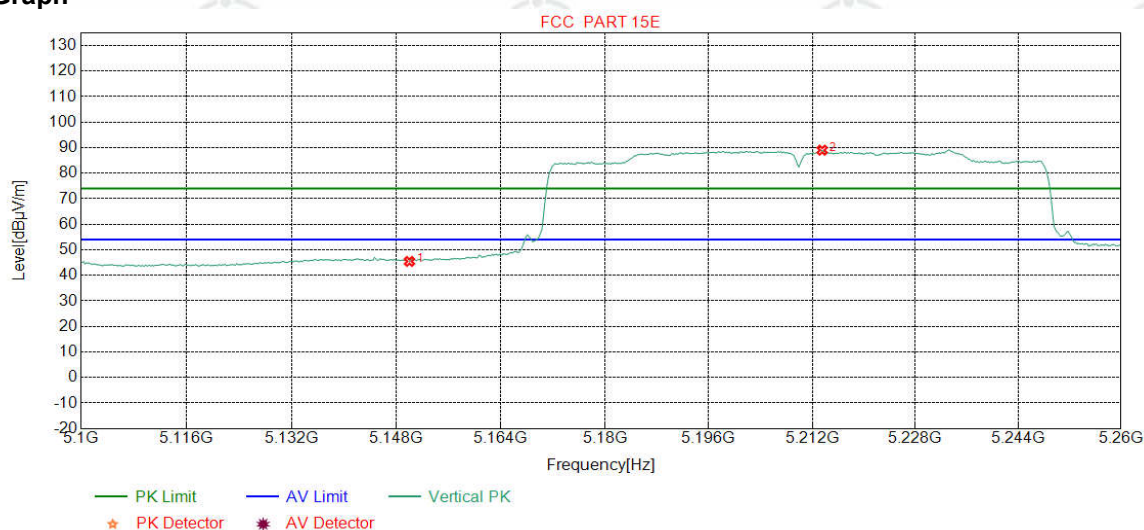
Test Graph



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	34.83	41.82	54.00	12.18	Pass	Horizontal
2	5225.1815	34.73	15.46	-42.72	78.38	85.85	54.00	-31.85	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	38.49	45.48	54.00	8.52	Pass	Vertical
2	5213.5419	34.71	15.51	-42.71	81.53	89.04	54.00	-35.04	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
Test Procedure:		Peak	1MHz	10Hz	Average
	Below 1GHz test procedure as below: - The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - 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. - 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. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - 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: - 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) - Test the EUT in the lowest channel ,the middle channel ,the Highest channel - 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. - 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 MIMO:

Mode:			802.11a(HT20Mbps)					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	36.5967	11.21	0.67	-31.38	48.07	28.57	40.00	11.43	Pass	H	PK
2	147.3817	7.46	1.43	-32.00	45.24	22.13	43.50	21.37	Pass	H	PK
3	235.8546	11.83	1.82	-31.90	60.13	41.88	46.00	4.12	Pass	H	PK
4	366.0416	14.65	2.28	-31.85	54.98	40.06	46.00	5.94	Pass	H	PK
5	524.1674	17.48	2.74	-31.92	46.20	34.50	46.00	11.50	Pass	H	PK
6	982.2472	22.59	3.76	-30.84	38.42	33.93	54.00	20.07	Pass	H	PK
7	36.5967	11.21	0.67	-31.38	47.58	28.08	40.00	11.92	Pass	V	PK
8	150.0010	7.55	1.45	-32.01	46.62	23.61	43.50	19.89	Pass	V	PK
9	235.9516	11.83	1.82	-31.90	55.31	37.06	46.00	8.94	Pass	V	PK
10	366.0416	14.65	2.28	-31.85	51.79	36.87	46.00	9.13	Pass	V	PK
11	600.0290	19.00	2.96	-31.50	44.78	35.24	46.00	10.76	Pass	V	PK
12	879.8050	21.86	3.55	-31.65	40.51	34.27	46.00	11.73	Pass	V	PK

Transmitter Emission above 1GHz
MIMO:

Mode:			802.11 n(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	2449.3949	32.33	4.67	-43.11	49.66	43.55	74.00	30.45	Pass	H	PK
2	3946.0946	33.76	6.25	-43.01	49.69	46.69	74.00	27.31	Pass	H	PK
3	4634.7635	34.50	6.81	-42.80	49.38	47.89	74.00	26.11	Pass	H	PK
4	6474.6975	35.89	8.56	-42.50	49.74	51.69	74.00	22.31	Pass	H	PK
5	9233.6867	37.65	6.66	-42.04	49.26	51.53	74.00	22.47	Pass	H	PK
6	11236.5118	38.74	7.68	-42.00	48.61	53.03	74.00	20.97	Pass	H	PK
7	1114.9615	28.01	2.94	-42.98	58.64	46.61	74.00	27.39	Pass	V	PK
8	1895.4895	31.01	4.18	-42.95	56.33	48.57	74.00	25.43	Pass	V	PK
9	2558.3058	32.49	4.84	-43.10	54.78	49.01	74.00	24.99	Pass	V	PK
10	6492.8493	35.90	8.64	-42.50	49.72	51.76	74.00	22.24	Pass	V	PK
11	9330.2915	37.63	6.72	-42.07	49.50	51.78	74.00	22.22	Pass	V	PK
12	10511.9756	38.50	7.39	-42.00	49.56	53.45	74.00	20.55	Pass	V	PK

Mode:			802.11 n(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	1433.4433	28.33	3.40	-42.82	50.78	39.69	74.00	34.31	Pass	H	PK
2	2125.4125	31.88	4.45	-43.18	50.77	43.92	74.00	30.08	Pass	H	PK
3	3841.0341	33.67	6.28	-43.03	49.84	46.76	74.00	27.24	Pass	H	PK
4	6399.3399	35.88	8.51	-42.52	49.69	51.56	74.00	22.44	Pass	H	PK
5	8351.0176	36.54	6.58	-42.06	49.27	50.33	74.00	23.67	Pass	H	PK
6	9037.6019	37.69	6.77	-42.01	50.16	52.61	74.00	21.39	Pass	H	PK
7	1466.4466	28.37	3.46	-42.97	58.51	47.37	74.00	26.63	Pass	V	PK
8	1995.5996	31.67	4.13	-43.19	59.74	52.35	74.00	21.65	Pass	V	PK
9	3943.8944	33.76	6.25	-43.01	50.44	47.44	74.00	26.56	Pass	V	PK
10	6369.6370	35.87	8.62	-42.52	48.87	50.84	74.00	23.16	Pass	V	PK
11	8593.6797	36.81	6.48	-42.00	49.11	50.40	74.00	23.60	Pass	V	PK
12	10400.4200	38.36	7.54	-42.02	49.14	53.02	74.00	20.98	Pass	V	PK

Mode:			802.11 n(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	1607.8108	29.11	3.64	-42.88	51.34	41.21	74.00	32.79	Pass	H	PK
2	2410.3410	32.27	4.65	-43.12	50.25	44.05	74.00	29.95	Pass	H	PK
3	4071.5072	33.90	6.30	-42.98	50.54	47.76	74.00	26.24	Pass	H	PK
4	6479.6480	35.90	8.58	-42.50	49.41	51.39	74.00	22.61	Pass	H	PK
5	9241.7371	37.65	6.68	-42.05	48.82	51.10	74.00	22.90	Pass	H	PK
6	11218.1109	38.73	7.62	-41.99	48.96	53.32	74.00	20.68	Pass	H	PK
7	1116.6117	28.02	2.94	-42.98	58.68	46.66	74.00	27.34	Pass	V	PK
8	1864.6865	30.81	4.02	-42.88	57.76	49.71	74.00	24.29	Pass	V	PK
9	2547.3047	32.48	4.84	-43.10	54.81	49.03	74.00	24.97	Pass	V	PK
10	6489.5490	35.90	8.63	-42.51	49.21	51.23	74.00	22.77	Pass	V	PK
11	8531.0016	36.67	6.67	-42.00	49.73	51.07	74.00	22.93	Pass	V	PK
12	10399.2700	38.36	7.54	-42.03	48.97	52.84	74.00	21.16	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	1320.6821	28.22	3.33	-42.76	50.85	39.64	74.00	34.36	Pass	H	PK
2	2888.8889	33.02	5.22	-43.10	51.30	46.44	74.00	27.56	Pass	H	PK
3	3876.7877	33.70	6.28	-43.02	49.68	46.64	74.00	27.36	Pass	H	PK
4	6487.3487	35.90	8.62	-42.51	49.44	51.45	74.00	22.55	Pass	H	PK
5	7732.8616	36.51	6.40	-42.15	48.88	49.64	74.00	24.36	Pass	H	PK
6	9700.6100	37.68	6.90	-42.10	49.07	51.55	74.00	22.45	Pass	H	PK
7	1846.5347	30.69	3.93	-42.82	58.49	50.29	74.00	23.71	Pass	V	PK
8	2607.8108	32.57	4.78	-43.10	54.69	48.94	74.00	25.06	Pass	V	PK
9	3832.2332	33.67	6.24	-43.04	50.20	47.07	74.00	26.93	Pass	V	PK
10	6426.2926	35.89	8.48	-42.52	49.64	51.49	74.00	22.51	Pass	V	PK
11	9213.5607	37.66	6.62	-42.04	49.75	51.99	74.00	22.01	Pass	V	PK
12	11306.6653	38.78	7.62	-41.99	49.47	53.88	74.00	20.12	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	1407.5908	28.31	3.35	-42.72	51.05	39.99	74.00	34.01	Pass	H	PK
2	2423.5424	32.29	4.65	-43.11	50.34	44.17	74.00	29.83	Pass	H	PK
3	4580.3080	34.50	6.80	-42.80	49.92	48.42	74.00	25.58	Pass	H	PK
4	6480.7481	35.90	8.59	-42.51	49.26	51.24	74.00	22.76	Pass	H	PK
5	7529.8765	36.59	6.46	-42.11	49.01	49.95	74.00	24.05	Pass	H	PK
6	10221.0111	38.11	7.18	-42.06	48.91	52.14	74.00	21.86	Pass	H	PK
7	1868.5369	30.83	4.04	-42.88	58.32	50.31	74.00	23.69	Pass	V	PK
8	2605.0605	32.57	4.78	-43.10	54.20	48.45	74.00	25.55	Pass	V	PK
9	3877.3377	33.70	6.28	-43.02	50.83	47.79	74.00	26.21	Pass	V	PK
10	6483.4984	35.90	8.60	-42.51	50.11	52.10	74.00	21.90	Pass	V	PK
11	9224.4862	37.66	6.64	-42.05	49.33	51.58	74.00	22.42	Pass	V	PK
12	11221.5611	38.73	7.63	-41.99	49.22	53.59	74.00	20.41	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	1349.8350	28.25	3.33	-42.73	51.25	40.10	74.00	33.90	Pass	H	PK
2	2044.5545	31.76	4.26	-43.19	50.59	43.42	74.00	30.58	Pass	H	PK
3	3121.0121	33.25	5.50	-43.10	51.13	46.78	74.00	27.22	Pass	H	PK
4	6479.6480	35.90	8.58	-42.50	49.68	51.66	74.00	22.34	Pass	H	PK
5	7916.8708	36.43	6.63	-42.18	48.93	49.81	74.00	24.19	Pass	H	PK
6	9683.3592	37.67	6.80	-42.10	49.77	52.14	74.00	21.86	Pass	H	PK
7	1230.4730	28.13	3.11	-42.86	59.21	47.59	74.00	26.41	Pass	V	PK
8	1858.6359	30.77	3.98	-42.85	58.29	50.19	74.00	23.81	Pass	V	PK
9	2628.1628	32.61	4.81	-43.11	54.86	49.17	74.00	24.83	Pass	V	PK
10	6374.5875	35.87	8.60	-42.52	49.32	51.27	74.00	22.73	Pass	V	PK
11	9218.1609	37.66	6.63	-42.04	48.97	51.22	74.00	22.78	Pass	V	PK
12	10377.9939	38.33	7.40	-42.03	49.17	52.87	74.00	21.13	Pass	V	PK

Mode:			802.11 n(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	1651.2651	29.40	3.36	-42.78	50.66	40.64	74.00	33.36	Pass	H	PK
2	2862.4862	32.98	4.49	-43.11	50.64	45.00	74.00	29.00	Pass	H	PK
3	4394.3894	34.35	5.53	-42.84	50.59	47.63	74.00	26.37	Pass	H	PK
4	6484.5985	35.90	7.43	-42.51	49.43	50.25	74.00	23.75	Pass	H	PK
5	7591.0394	36.56	6.68	-42.11	49.34	50.47	74.00	23.53	Pass	H	PK
6	9841.3561	37.74	7.18	-42.10	48.50	51.32	74.00	22.68	Pass	H	PK
7	1118.8119	28.02	2.64	-42.98	61.05	48.73	74.00	25.27	Pass	V	PK
8	1997.2497	31.68	3.65	-43.19	58.28	50.42	74.00	23.58	Pass	V	PK
9	2603.9604	32.57	4.33	-43.10	54.11	47.91	74.00	26.09	Pass	V	PK
10	4458.1958	34.44	5.71	-42.82	50.28	47.61	74.00	26.39	Pass	V	PK
11	7627.8419	36.55	6.47	-42.12	49.18	50.08	74.00	23.92	Pass	V	PK
12	9178.9119	37.66	6.61	-42.03	50.09	52.33	74.00	21.67	Pass	V	PK

Mode:			802.11 n(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	1413.0913	28.31	2.96	-42.73	50.91	39.45	74.00	34.55	Pass	H	PK
2	2701.8702	32.72	4.25	-43.10	50.24	44.11	74.00	29.89	Pass	H	PK
3	4812.4312	34.50	5.91	-42.80	50.37	47.98	74.00	26.02	Pass	H	PK
4	6495.5996	35.90	7.52	-42.50	49.33	50.25	74.00	23.75	Pass	H	PK
5	8917.4612	37.52	6.89	-42.00	49.96	52.37	74.00	21.63	Pass	H	PK
6	11314.2209	38.79	7.60	-42.00	49.30	53.69	74.00	20.31	Pass	H	PK
7	1199.6700	28.10	2.87	-42.89	60.43	48.51	74.00	25.49	Pass	V	PK
8	1868.5369	30.83	3.55	-42.88	57.94	49.44	74.00	24.56	Pass	V	PK
9	2605.0605	32.57	4.34	-43.11	54.73	48.53	74.00	25.47	Pass	V	PK
10	6487.3487	35.90	7.45	-42.50	49.04	49.89	74.00	24.11	Pass	V	PK
11	8360.0573	36.54	6.60	-42.05	50.17	51.26	74.00	22.74	Pass	V	PK
12	10785.9524	38.56	7.30	-42.01	49.20	53.05	74.00	20.95	Pass	V	PK

Mode:			802.11 n(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	1612.7613	29.14	3.26	-42.86	51.10	40.64	74.00	33.36	Pass	H	PK
2	2896.0396	33.03	4.47	-43.09	50.35	44.76	74.00	29.24	Pass	H	PK
3	4572.0572	34.50	5.80	-42.80	49.62	47.12	74.00	26.88	Pass	H	PK
4	6495.0495	35.90	7.52	-42.50	49.68	50.60	74.00	23.40	Pass	H	PK
5	8932.7955	37.55	6.87	-42.00	49.57	51.99	74.00	22.01	Pass	H	PK
6	10283.7523	38.20	7.21	-42.04	49.65	53.02	74.00	20.98	Pass	H	PK
7	1179.8680	28.08	2.81	-42.91	58.44	46.42	74.00	27.58	Pass	V	PK
8	1873.4873	30.87	3.54	-42.89	57.85	49.37	74.00	24.63	Pass	V	PK
9	2594.0594	32.55	4.33	-43.10	54.34	48.12	74.00	25.88	Pass	V	PK
10	6496.6997	35.90	7.53	-42.50	48.70	49.63	74.00	24.37	Pass	V	PK
11	7787.3192	36.49	6.35	-42.17	49.58	50.25	74.00	23.75	Pass	V	PK
12	9661.1774	37.66	6.66	-42.10	49.38	51.60	74.00	22.40	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	1334.4334	28.23	2.93	-42.74	50.30	38.72	74.00	35.28	Pass	H	PK
2	2890.5391	33.02	4.47	-43.09	50.58	44.98	74.00	29.02	Pass	H	PK
3	5008.8009	34.51	5.96	-42.80	50.40	48.07	74.00	25.93	Pass	H	PK
4	6495.5996	35.90	7.52	-42.50	49.25	50.17	74.00	23.83	Pass	H	PK
5	8414.4943	36.57	6.70	-42.04	48.73	49.96	74.00	24.04	Pass	H	PK
6	10488.4659	38.48	7.43	-42.00	49.28	53.19	74.00	20.81	Pass	H	PK
7	1465.8966	28.37	3.02	-42.96	57.00	45.43	74.00	28.57	Pass	V	PK
8	1871.2871	30.85	3.54	-42.88	57.11	48.62	74.00	25.38	Pass	V	PK
9	2594.0594	32.55	4.33	-43.10	54.26	48.04	74.00	25.96	Pass	V	PK
10	4551.7052	34.50	5.79	-42.80	50.43	47.92	74.00	26.08	Pass	V	PK
11	7374.8250	36.47	6.42	-42.12	48.80	49.57	74.00	24.43	Pass	V	PK
12	10234.6823	38.13	7.22	-42.05	49.71	53.01	74.00	20.99	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	1286.0286	28.19	2.90	-42.80	50.48	38.77	74.00	35.23	Pass	H	PK
2	1851.4851	30.72	3.57	-42.84	50.65	42.10	74.00	31.90	Pass	H	PK
3	3214.5215	33.29	4.81	-43.10	49.87	44.87	74.00	29.13	Pass	H	PK
4	6473.5974	35.89	7.33	-42.50	49.19	49.91	74.00	24.09	Pass	H	PK
5	9238.7159	37.65	6.67	-42.05	49.42	51.69	74.00	22.31	Pass	H	PK
6	11236.0157	38.74	7.68	-42.00	49.42	53.84	74.00	20.16	Pass	H	PK
7	1160.0660	28.06	2.75	-42.93	59.75	47.63	74.00	26.37	Pass	V	PK
8	1993.3993	31.66	3.65	-43.19	56.69	48.81	74.00	25.19	Pass	V	PK
9	2602.8603	32.56	4.33	-43.09	54.72	48.52	74.00	25.48	Pass	V	PK
10	6495.0495	35.90	7.52	-42.50	49.16	50.08	74.00	23.92	Pass	V	PK
11	9171.2448	37.67	6.61	-42.04	49.26	51.50	74.00	22.50	Pass	V	PK
12	10256.9171	38.16	7.27	-42.05	49.32	52.70	74.00	21.30	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	1154.0154	28.05	2.73	-42.93	50.89	38.74	74.00	35.26	Pass	H	PK
2	1852.5853	30.73	3.57	-42.84	50.49	41.95	74.00	32.05	Pass	H	PK
3	2726.0726	32.76	4.27	-43.10	50.12	44.05	74.00	29.95	Pass	H	PK
4	3877.8878	33.70	5.36	-43.02	50.12	46.16	74.00	27.84	Pass	H	PK
5	8905.9604	37.49	6.90	-41.99	49.39	51.79	74.00	22.21	Pass	H	PK
6	10394.1596	38.35	7.50	-42.02	49.44	53.27	74.00	20.73	Pass	H	PK
7	1119.3619	28.02	2.64	-42.97	60.26	47.95	74.00	26.05	Pass	V	PK
8	1908.1408	31.09	3.53	-42.97	57.80	49.45	74.00	24.55	Pass	V	PK
9	2604.5105	32.57	4.34	-43.11	55.15	48.95	74.00	25.05	Pass	V	PK
10	6491.1991	35.90	7.48	-42.50	49.44	50.32	74.00	23.68	Pass	V	PK
11	9054.7036	37.69	6.74	-42.01	49.67	52.09	74.00	21.91	Pass	V	PK
12	10257.6838	38.16	7.26	-42.04	49.44	52.82	74.00	21.18	Pass	V	PK

Radiated Emission above 18GHz:

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	19955.438	38.97	0.00	-62.15	69.07	45.89	74.00	28.11	Pass	H	PK
2	23803.832	39.91	0.00	-60.84	67.87	46.94	74.00	27.06	Pass	H	PK
3	26580.343	40.39	0.00	-59.80	66.70	47.29	74.00	26.71	Pass	H	PK
4	29886.635	40.79	0.00	-60.39	67.02	47.42	74.00	26.58	Pass	H	PK
5	33588.063	42.17	0.00	-57.60	63.15	47.72	74.00	26.28	Pass	H	PK
6	39034.601	44.45	0.00	-55.21	60.28	49.52	74.00	24.48	Pass	H	PK
7	19887.675	38.97	0.00	-62.34	69.23	45.86	74.00	28.14	Pass	V	PK
8	23976.319	40.14	0.00	-60.58	67.76	47.32	74.00	26.68	Pass	V	PK
9	27875.755	39.71	0.00	-60.00	67.68	47.39	74.00	26.61	Pass	V	PK
10	30976.999	41.27	0.00	-58.67	65.89	48.49	74.00	25.51	Pass	V	PK
11	35677.267	43.12	0.00	-57.94	62.94	48.12	74.00	25.88	Pass	V	PK
12	39048.681	44.45	0.00	-55.22	59.87	49.10	74.00	24.90	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 chamber. 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) $EIRP = ((E \cdot d)^2) / 30$ 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: $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$ (iii) Or, if d is 3 meters: $EIRP[dBm] = E[dB\mu V/m] - 95.2$				
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 n(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	1196.9197	28.10	3.04	-37.65	49.14	42.63	68.20	25.57	Pass	H	PK
2	2046.2046	31.76	4.27	-36.79	46.48	45.72	68.20	22.48	Pass	H	PK
3	3023.1023	33.21	5.39	-36.79	46.01	47.82	68.20	20.38	Pass	H	PK
4	7062.7709	36.16	6.20	-36.19	42.49	48.66	68.20	19.54	Pass	H	PK
5	9602.9069	37.64	6.64	-36.78	42.38	49.88	68.20	18.32	Pass	H	PK
6	17054.6370	42.25	11.44	-33.61	35.71	55.79	68.20	12.41	Pass	H	PK
7	1196.9197	28.10	3.04	-37.65	51.00	44.49	68.20	23.71	Pass	V	PK
8	2072.6073	31.80	4.41	-36.74	46.53	46.00	68.20	22.20	Pass	V	PK
9	3091.3091	33.24	5.52	-36.82	46.41	48.35	68.20	19.85	Pass	V	PK
10	6310.7811	35.86	8.51	-36.21	43.11	51.27	68.20	16.93	Pass	V	PK
11	8954.2636	37.60	6.85	-36.57	42.44	50.32	68.20	17.88	Pass	V	PK
12	15275.8517	40.68	9.54	-34.90	35.25	50.57	68.20	17.63	Pass	V	PK

Mode:			802.11 n(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	1193.6194	28.09	3.04	-37.66	48.79	42.26	68.20	25.94	Pass	H	PK
2	2047.3047	31.77	4.27	-36.80	46.90	46.14	68.20	22.06	Pass	H	PK
3	3025.8526	33.21	5.40	-36.79	46.46	48.28	68.20	19.92	Pass	H	PK
4	6813.5876	36.03	6.27	-36.19	42.30	48.41	68.20	19.79	Pass	H	PK
5	9760.0840	37.70	6.86	-36.82	43.20	50.94	68.20	17.26	Pass	H	PK
6	16382.225	42.21	10.53	-35.32	34.84	52.26	68.20	15.94	Pass	H	PK
7	1129.2629	28.03	2.97	-37.80	48.01	41.21	68.20	26.99	Pass	V	PK
8	2122.1122	31.87	4.46	-36.49	48.15	47.99	68.20	20.21	Pass	V	PK
9	3090.2090	33.24	5.52	-36.83	45.95	47.88	68.20	20.32	Pass	V	PK
10	6335.5336	35.87	8.62	-36.16	43.18	51.51	68.20	16.69	Pass	V	PK
11	8926.6618	37.54	6.88	-36.49	42.29	50.22	68.20	17.98	Pass	V	PK
12	16984.098	42.20	11.52	-33.68	35.12	55.16	68.20	13.04	Pass	V	PK

Mode:			802.11 n(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	1062.7063	27.96	2.87	-37.94	48.74	41.63	68.20	26.57	Pass	H	PK
2	2120.4620	31.87	4.47	-36.51	46.83	46.66	68.20	21.54	Pass	H	PK
3	3088.5589	33.24	5.52	-36.83	46.63	48.56	68.20	19.64	Pass	H	PK
4	6161.7162	35.83	8.54	-36.21	42.55	50.71	68.20	17.49	Pass	H	PK
5	8831.5888	37.33	6.88	-36.58	42.45	50.08	68.20	18.12	Pass	H	PK
6	17095.273	42.30	11.46	-33.17	34.49	55.08	68.20	13.12	Pass	H	PK
7	1065.4565	27.97	2.87	-37.94	48.55	41.45	68.20	26.75	Pass	V	PK
8	3081.4081	33.23	5.51	-36.83	47.02	48.93	68.20	19.27	Pass	V	PK
9	6831.2221	36.03	6.29	-36.27	42.53	48.58	68.20	19.62	Pass	V	PK
10	8922.0615	37.53	6.88	-36.47	42.45	50.39	68.20	17.81	Pass	V	PK
11	12806.253	39.60	8.07	-35.72	37.35	49.30	68.20	18.90	Pass	V	PK
12	17008.633	42.21	11.59	-33.48	34.77	55.09	68.20	13.11	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	2342.1342	32.18	4.66	-43.13	50.24	43.95	68.20	24.25	Pass	H	PK
2	4275.5776	34.19	6.42	-42.89	48.97	46.69	68.20	21.51	Pass	H	PK
3	5173.2673	34.67	7.54	-42.73	49.11	48.59	68.20	19.61	Pass	H	PK
4	6493.9494	35.90	8.64	-42.50	49.98	52.02	68.20	16.18	Pass	H	PK
5	8863.3682	37.40	6.86	-42.00	48.61	50.87	68.20	17.33	Pass	H	PK
6	11244.562	38.75	7.70	-42.00	48.93	53.38	68.20	14.82	Pass	H	PK
7	2129.8130	31.88	4.43	-43.17	50.76	43.90	68.20	24.30	Pass	V	PK
8	3474.1474	33.39	5.74	-43.10	50.30	46.33	68.20	21.87	Pass	V	PK
9	4256.8757	34.16	6.35	-42.90	51.36	48.97	68.20	19.23	Pass	V	PK
10	5192.5193	34.69	7.47	-42.72	58.22	57.66	68.20	10.54	Pass	V	PK
11	6480.1980	35.90	8.59	-42.51	49.93	51.91	68.20	16.29	Pass	V	PK
12	8891.5446	37.46	6.90	-42.00	48.62	50.98	68.20	17.22	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	2694.7195	32.71	4.88	-43.09	51.94	46.44	68.20	21.76	Pass	H	PK
2	3730.4730	33.58	6.02	-43.05	50.09	46.64	68.20	21.56	Pass	H	PK
3	5217.2717	34.72	7.44	-42.71	49.82	49.27	68.20	18.93	Pass	H	PK
4	6355.8856	35.87	8.67	-42.53	49.56	51.57	68.20	16.63	Pass	H	PK
5	7908.2454	36.44	6.64	-42.19	49.26	50.15	68.20	18.05	Pass	H	PK
6	9204.3602	37.66	6.61	-42.04	49.41	51.64	68.20	16.56	Pass	H	PK
7	2301.4301	32.12	4.68	-43.14	49.66	43.32	68.20	24.88	Pass	V	PK
8	3195.2695	33.28	5.72	-43.10	51.26	47.16	68.20	21.04	Pass	V	PK
9	4259.0759	34.16	6.36	-42.90	51.28	48.90	68.20	19.30	Pass	V	PK
10	5219.4719	34.72	7.44	-42.71	62.66	62.11	68.20	6.09	Pass	V	PK
11	6481.2981	35.90	8.59	-42.51	49.98	51.96	68.20	16.24	Pass	V	PK
12	10404.445	38.37	7.54	-42.03	48.91	52.79	68.20	15.41	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	1062.7063	27.96	2.87	-37.94	48.63	41.52	68.20	26.68	Pass	H	PK
2	1938.9439	31.30	4.14	-36.84	46.34	44.94	68.20	23.26	Pass	H	PK
3	3101.2101	33.24	5.53	-36.81	46.19	48.15	68.20	20.05	Pass	H	PK
4	6881.8255	36.05	6.42	-36.31	42.51	48.67	68.20	19.53	Pass	H	PK
5	8911.3274	37.50	6.90	-36.43	42.59	50.56	68.20	17.64	Pass	H	PK
6	17063.837	42.26	11.45	-33.52	34.71	54.90	68.20	13.30	Pass	H	PK
7	1151.2651	28.05	3.02	-37.76	47.91	41.22	68.20	26.98	Pass	V	PK
8	3198.5699	33.28	5.74	-36.70	46.71	49.03	68.20	19.17	Pass	V	PK
9	6330.5831	35.87	8.60	-36.17	42.13	50.43	68.20	17.77	Pass	V	PK
10	8899.8267	37.48	6.91	-36.39	41.58	49.58	68.20	18.62	Pass	V	PK
11	10476.965	38.47	7.46	-36.81	42.39	51.51	68.20	16.69	Pass	V	PK
12	17028.568	42.23	11.52	-33.58	35.02	55.19	68.20	13.01	Pass	V	PK

Mode:			802.11 n(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	3046.2046	33.22	4.64	-43.10	50.53	45.29	68.20	22.91	Pass	H	PK
2	3799.2299	33.64	5.19	-43.04	49.75	45.54	68.20	22.66	Pass	H	PK
3	5737.6238	35.38	6.99	-42.60	48.97	48.74	68.20	19.46	Pass	H	PK
4	6493.3993	35.90	7.50	-42.50	49.15	50.05	68.20	18.15	Pass	H	PK
5	9020.9681	37.70	6.80	-42.01	49.57	52.06	68.20	16.14	Pass	H	PK
6	11889.259	39.21	7.61	-41.92	49.28	54.18	68.20	14.02	Pass	H	PK
7	1723.3223	29.87	3.28	-42.66	50.89	41.38	68.20	26.82	Pass	V	PK
8	3187.5688	33.28	4.69	-43.10	50.99	45.86	68.20	22.34	Pass	V	PK
9	4253.0253	34.15	5.49	-42.89	51.27	48.02	68.20	20.18	Pass	V	PK
10	5739.8240	35.38	6.99	-42.60	59.63	59.40	68.20	8.80	Pass	V	PK
11	6490.0990	35.90	7.47	-42.50	50.38	51.25	68.20	16.95	Pass	V	PK
12	8896.7598	37.47	6.91	-42.00	49.22	51.60	68.20	16.60	Pass	V	PK

Mode:			802.11 n(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	1964.2464	31.46	3.64	-43.11	50.80	42.79	68.20	25.41	Pass	H	PK
2	2845.4345	32.95	4.47	-43.09	50.11	44.44	68.20	23.76	Pass	H	PK
3	3934.5435	33.75	5.46	-43.02	49.65	45.84	68.20	22.36	Pass	H	PK
4	5786.5787	35.46	7.00	-42.60	50.27	50.13	68.20	18.07	Pass	H	PK
5	7500.5667	36.60	6.53	-42.10	49.32	50.35	68.20	17.85	Pass	H	PK
6	9212.6475	37.66	6.62	-42.04	49.28	51.52	68.20	16.68	Pass	H	PK
7	1876.7877	30.89	3.54	-42.90	49.87	41.40	68.20	26.80	Pass	V	PK
8	2171.0671	31.94	3.78	-43.16	50.36	42.92	68.20	25.28	Pass	V	PK
9	2731.5732	32.77	4.28	-43.10	50.42	44.37	68.20	23.83	Pass	V	PK
10	4253.5754	34.16	5.49	-42.90	50.63	47.38	68.20	20.82	Pass	V	PK
11	5787.6788	35.46	7.00	-42.60	60.35	60.21	68.20	7.99	Pass	V	PK
12	9234.8823	37.65	6.66	-42.04	48.99	51.26	68.20	16.94	Pass	V	PK

Mode:			802.11 n(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	1045.1045	27.95	2.85	-38.01	48.48	41.27	68.20	26.93	Pass	H	PK
2	3066.0066	33.23	5.50	-36.87	46.93	48.79	68.20	19.41	Pass	H	PK
3	6295.9296	35.86	8.44	-36.23	42.74	50.81	68.20	17.39	Pass	H	PK
4	7126.4084	36.23	6.31	-36.32	42.72	48.94	68.20	19.26	Pass	H	PK
5	10415.627	38.38	7.53	-36.60	40.99	50.30	68.20	17.90	Pass	H	PK
6	16999.433	42.20	11.62	-33.45	35.15	55.52	68.20	12.68	Pass	H	PK
7	1064.9065	27.96	2.87	-37.93	49.53	42.43	68.20	25.77	Pass	V	PK
8	3084.7085	33.23	5.51	-36.82	46.21	48.13	68.20	20.07	Pass	V	PK
9	6730.0153	35.99	6.41	-36.21	42.03	48.22	68.20	19.98	Pass	V	PK
10	10272.251	38.18	7.24	-36.66	41.34	50.10	68.20	18.10	Pass	V	PK
11	14314.387	40.01	8.85	-33.79	37.92	52.99	68.20	15.21	Pass	V	PK
12	17076.105	42.28	11.45	-33.38	34.80	55.15	68.20	13.05	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	2260.7261	32.07	4.10	-43.16	49.80	42.81	68.20	25.39	Pass	H	PK
2	3085.8086	33.23	4.62	-43.09	50.44	45.20	68.20	23.00	Pass	H	PK
3	5008.2508	34.51	5.96	-42.80	51.63	49.30	68.20	18.90	Pass	H	PK
4	5775.0275	35.44	7.00	-42.60	48.68	48.52	68.20	19.68	Pass	H	PK
5	6441.1441	35.89	7.10	-42.51	50.08	50.56	68.20	17.64	Pass	H	PK
6	7638.5759	36.54	6.37	-42.12	49.23	50.02	68.20	18.18	Pass	H	PK
7	9188.1125	37.66	6.60	-42.03	49.08	51.31	68.20	16.89	Pass	H	PK
8	2418.0418	32.29	4.01	-43.12	51.05	44.23	68.20	23.97	Pass	V	PK
9	3187.0187	33.27	4.69	-43.10	50.41	45.27	68.20	22.93	Pass	V	PK
10	4622.6623	34.50	5.78	-42.80	50.22	47.70	68.20	20.50	Pass	V	PK
11	5750.8251	35.40	6.99	-42.60	56.36	56.15	68.20	12.05	Pass	V	PK
12	6499.4499	35.90	7.56	-42.50	49.20	50.16	68.20	18.04	Pass	V	PK
13	7988.1992	36.40	6.56	-42.20	49.60	50.36	68.20	17.84	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	1960.9461	31.44	3.64	-43.10	50.05	42.03	68.20	26.17	Pass	H	PK
2	2674.9175	32.68	4.32	-43.10	50.35	44.25	68.20	23.95	Pass	H	PK
3	3935.0935	33.75	5.45	-43.01	49.60	45.79	68.20	22.41	Pass	H	PK
4	5797.0297	35.48	7.00	-42.60	49.44	49.32	68.20	18.88	Pass	H	PK
5	6489.5490	35.90	7.47	-42.50	49.26	50.13	68.20	18.07	Pass	H	PK
6	8779.4520	37.21	6.95	-41.99	48.56	50.73	68.20	17.47	Pass	H	PK
7	2028.6029	31.74	3.65	-43.19	51.02	43.22	68.20	24.98	Pass	V	PK
8	2674.9175	32.68	4.32	-43.10	49.93	43.83	68.20	24.37	Pass	V	PK
9	4264.0264	34.17	5.49	-42.89	52.10	48.87	68.20	19.33	Pass	V	PK
10	5798.1298	35.48	7.00	-42.60	60.21	60.09	68.20	8.11	Pass	V	PK
11	6481.2981	35.90	7.40	-42.51	49.75	50.54	68.20	17.66	Pass	V	PK
12	9191.1794	37.66	6.60	-42.03	49.23	51.46	68.20	16.74	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	1048.9549	27.95	2.86	-37.99	48.59	41.41	68.20	26.79	Pass	H	PK
2	2106.7107	31.85	4.53	-36.61	46.94	46.71	68.20	21.49	Pass	H	PK
3	3167.7668	33.27	5.57	-36.87	46.05	48.02	68.20	20.18	Pass	H	PK
4	6894.8597	36.06	6.47	-36.30	43.45	49.68	68.20	18.52	Pass	H	PK
5	10245.4164	38.14	7.26	-36.50	40.68	49.58	68.20	18.62	Pass	H	PK
6	17115.9744	42.32	11.3	-33.18	34.52	54.97	68.20	13.23	Pass	H	PK
7	1069.8570	27.97	2.88	-37.93	48.35	41.27	68.20	26.93	Pass	V	PK
8	3088.5589	33.24	5.52	-36.83	46.41	48.34	68.20	19.86	Pass	V	PK
9	6377.8878	35.88	8.59	-36.25	43.24	51.46	68.20	16.74	Pass	V	PK
10	10285.2857	38.20	7.21	-36.74	41.37	50.04	68.20	18.16	Pass	V	PK
11	13687.9792	39.51	8.46	-34.13	35.72	49.56	68.20	18.64	Pass	V	PK
12	17106.0071	42.31	11.4	-33.13	34.46	55.04	68.20	13.16	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.