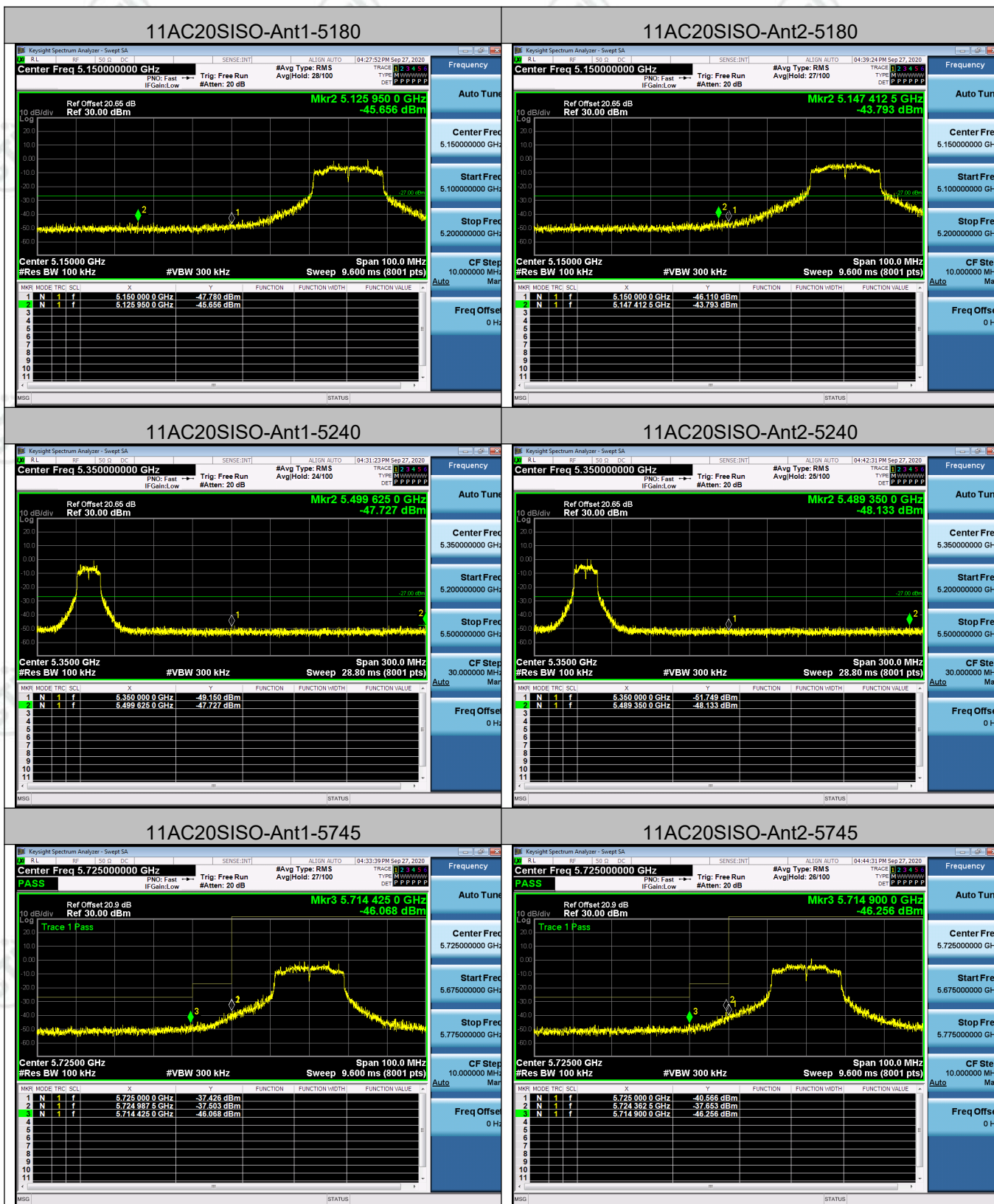
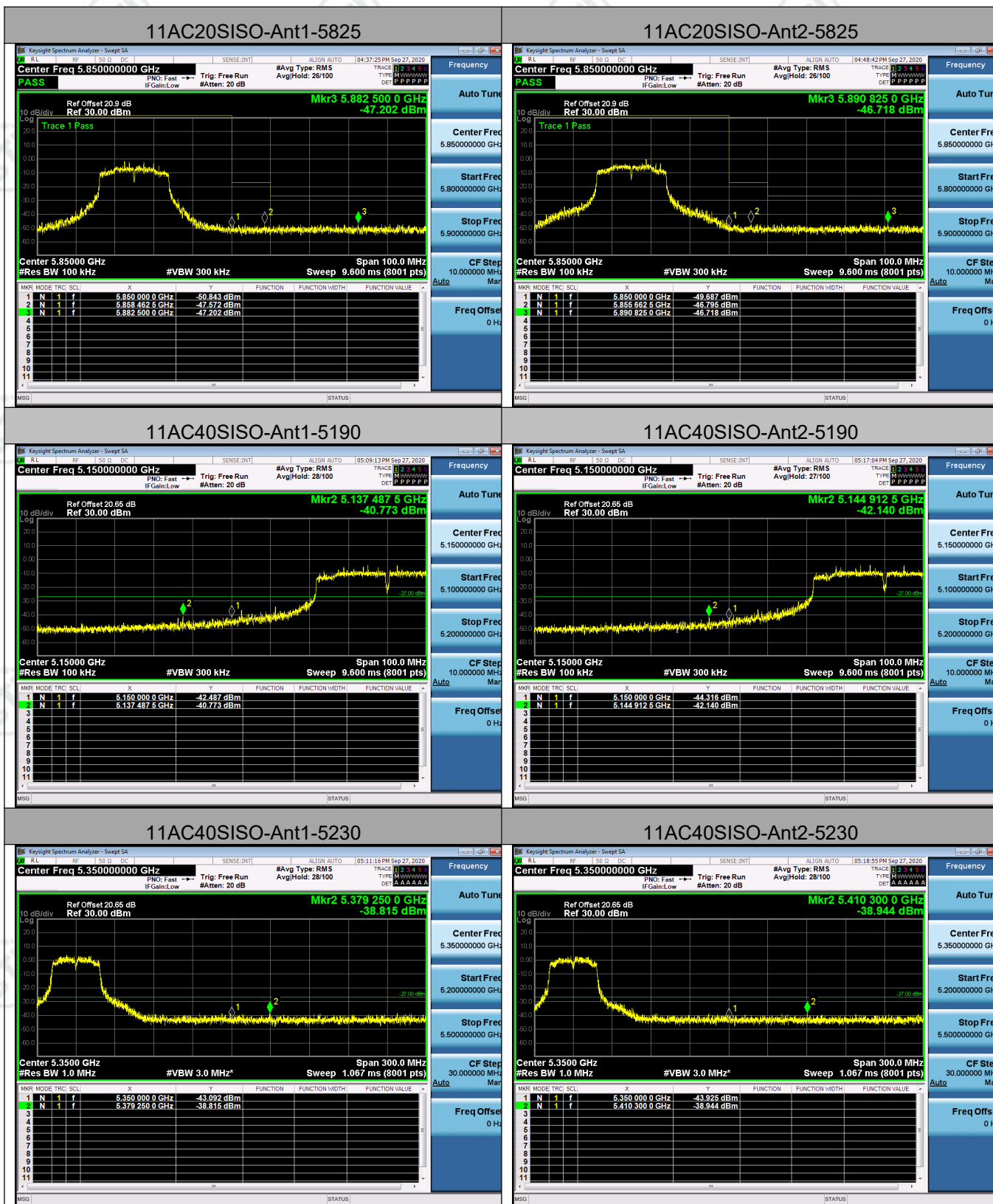
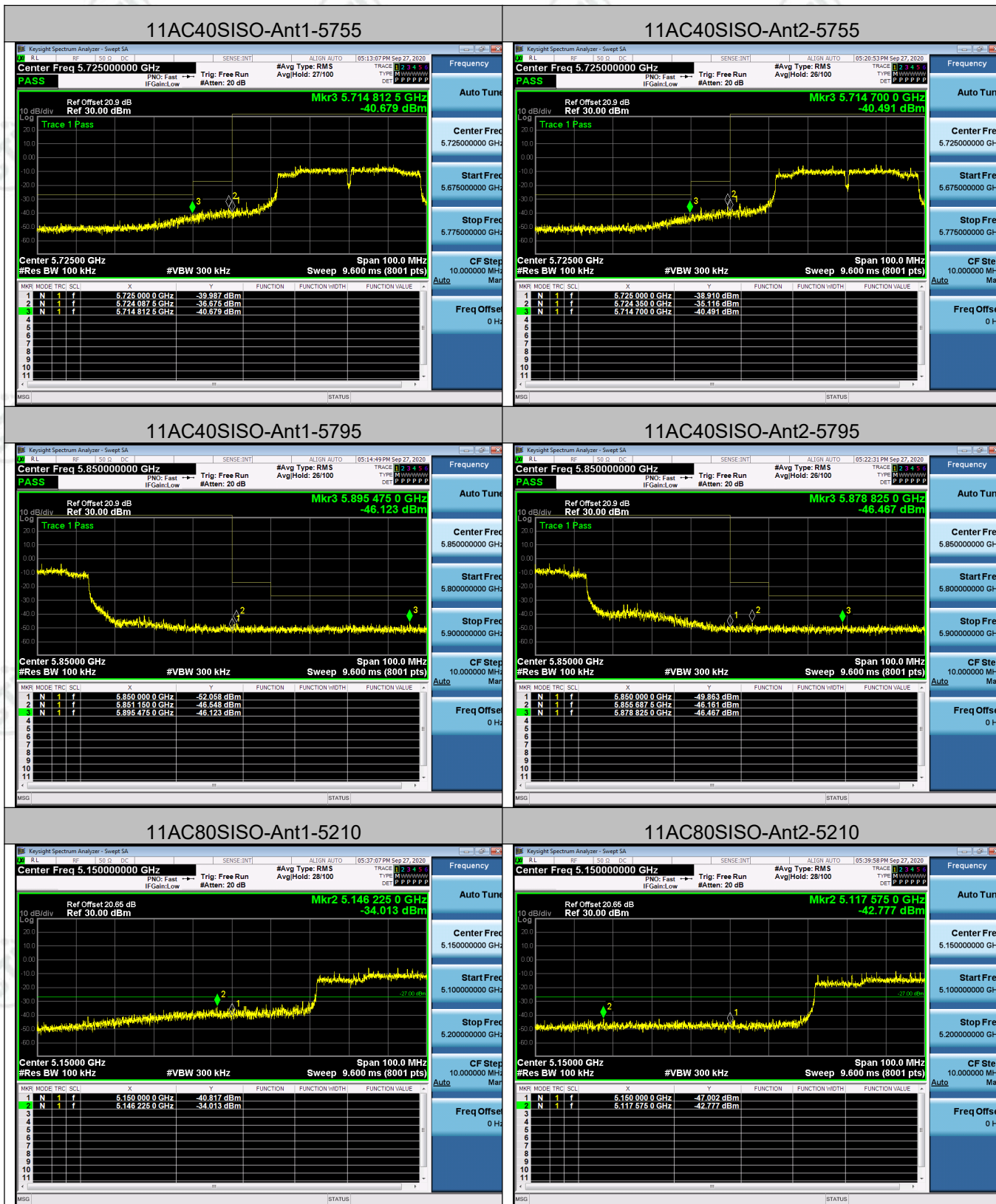
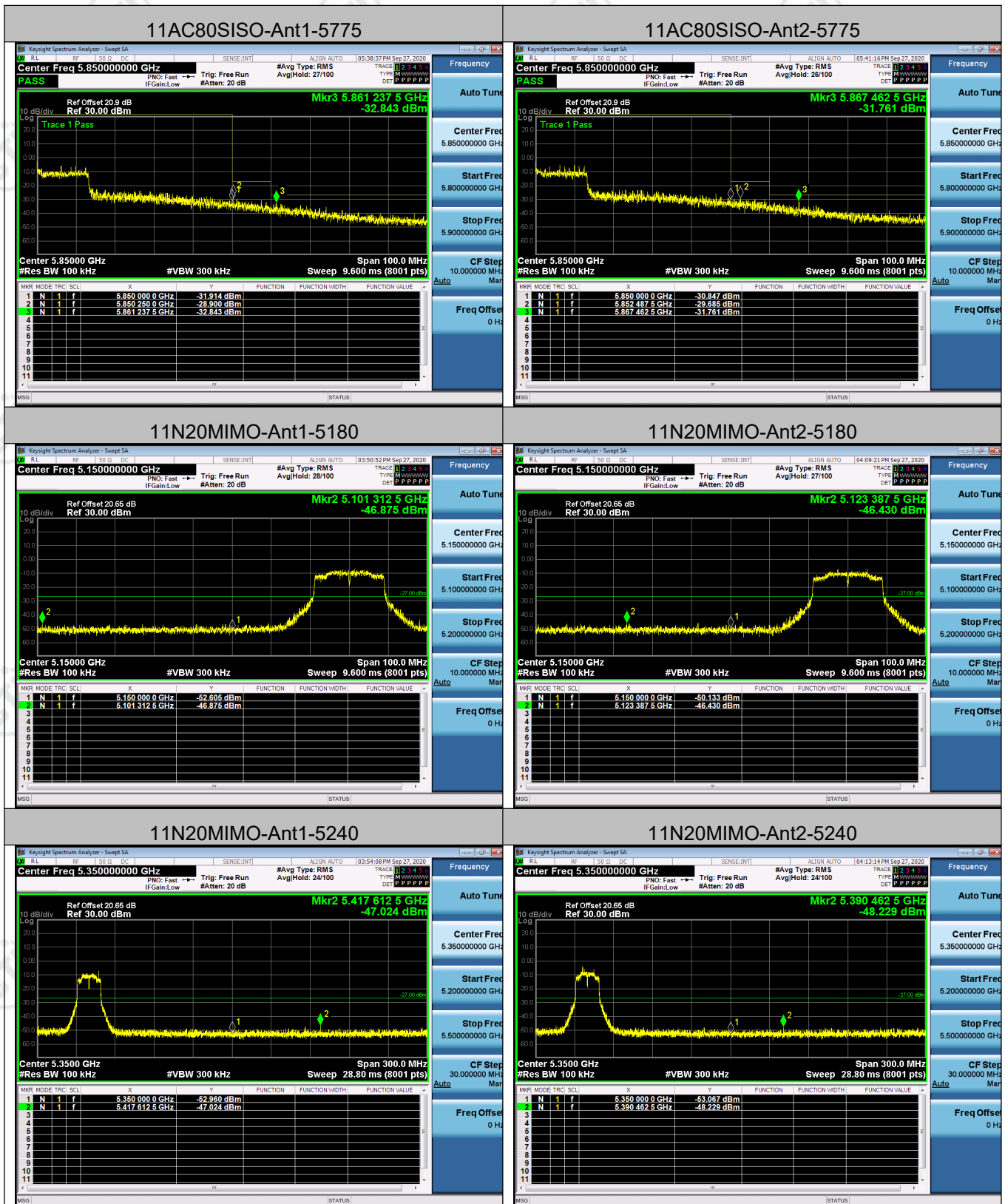
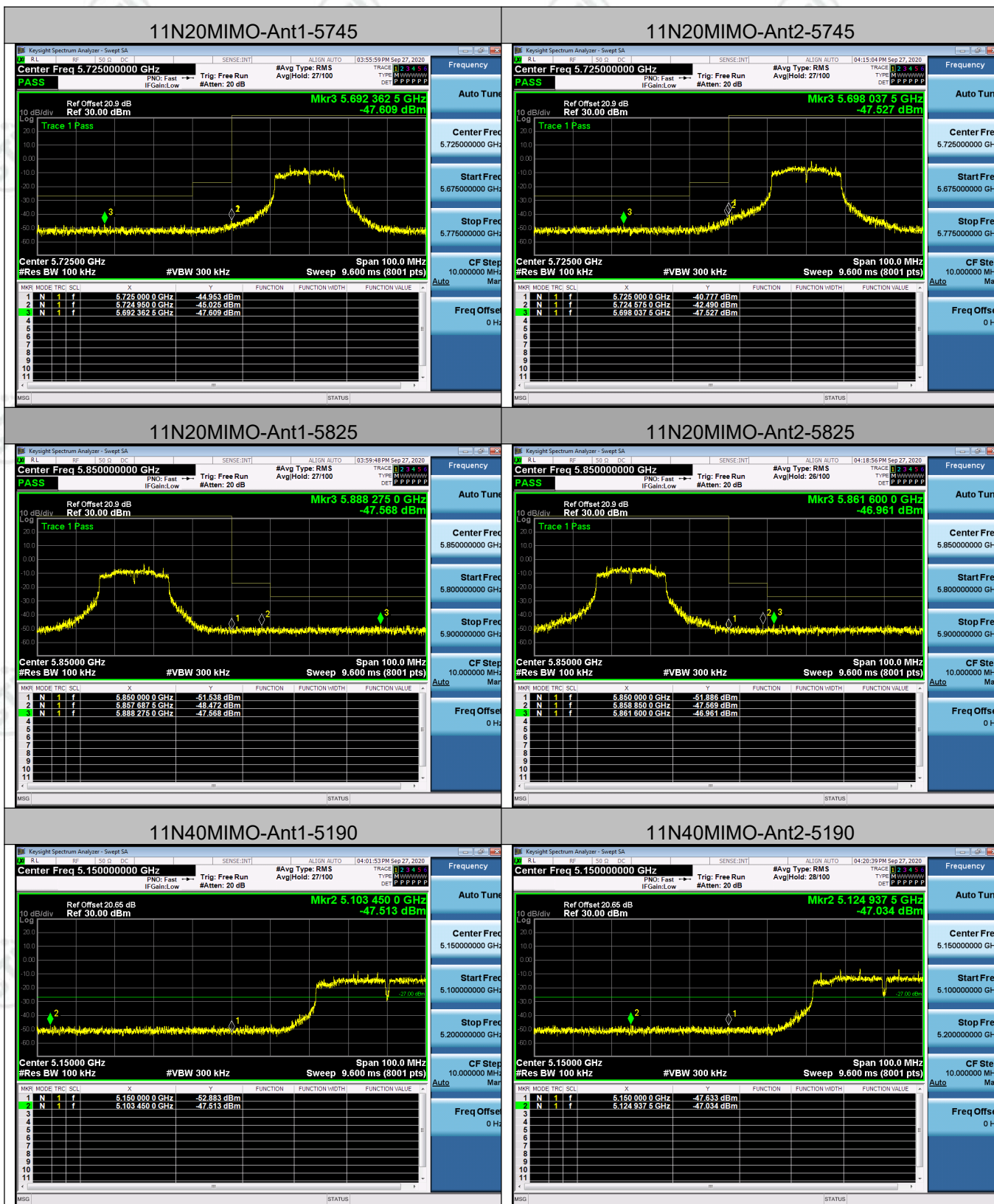


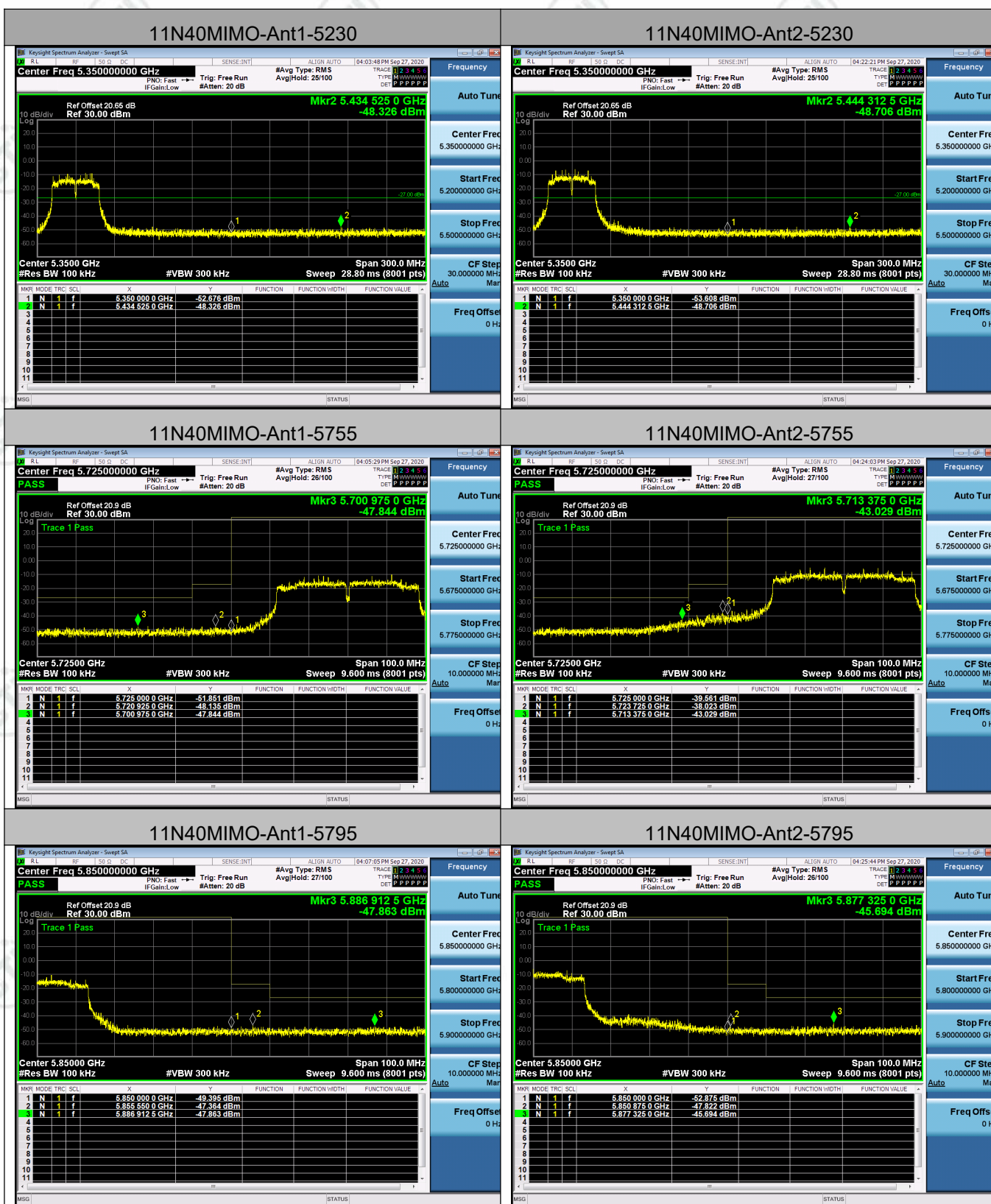


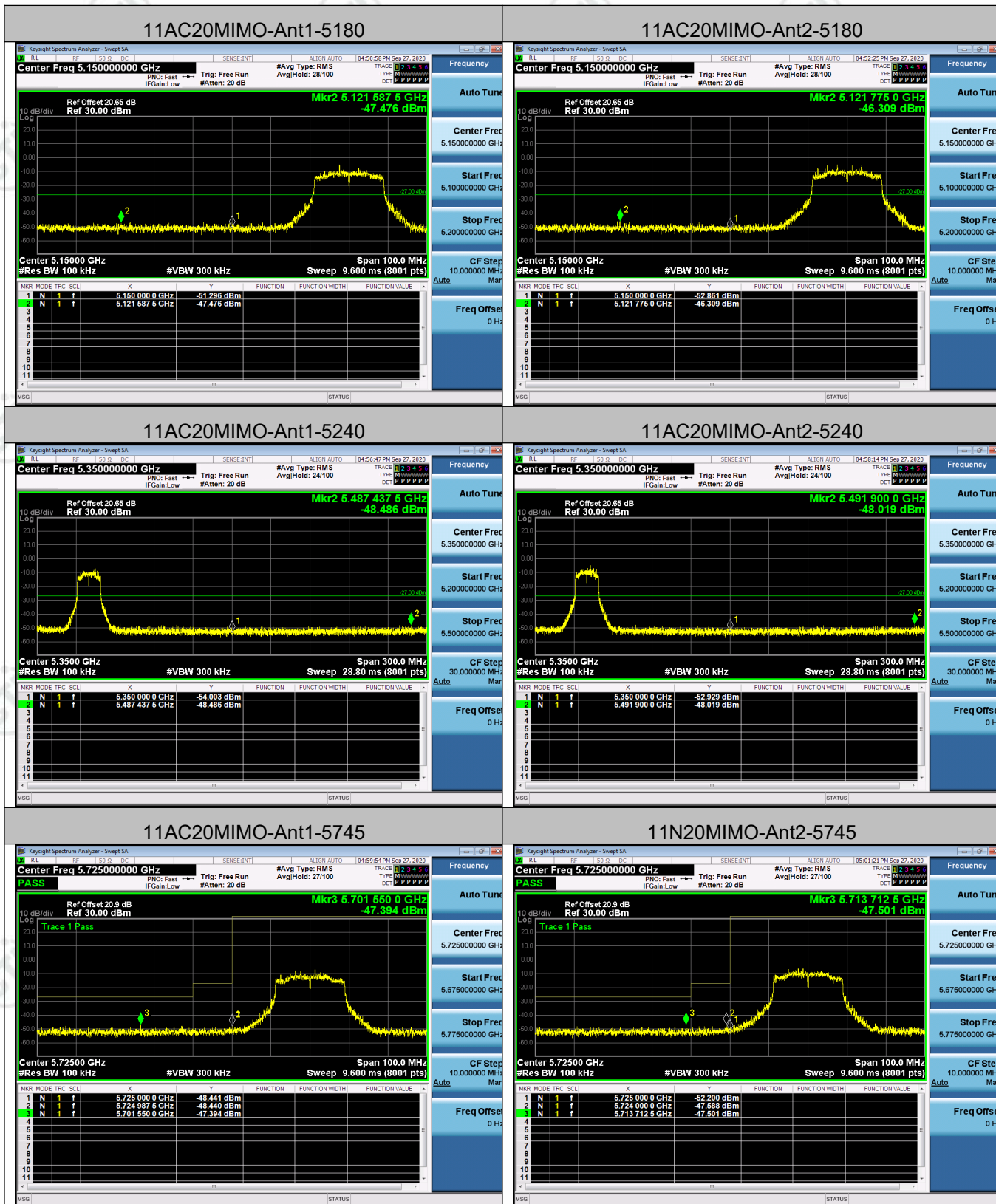


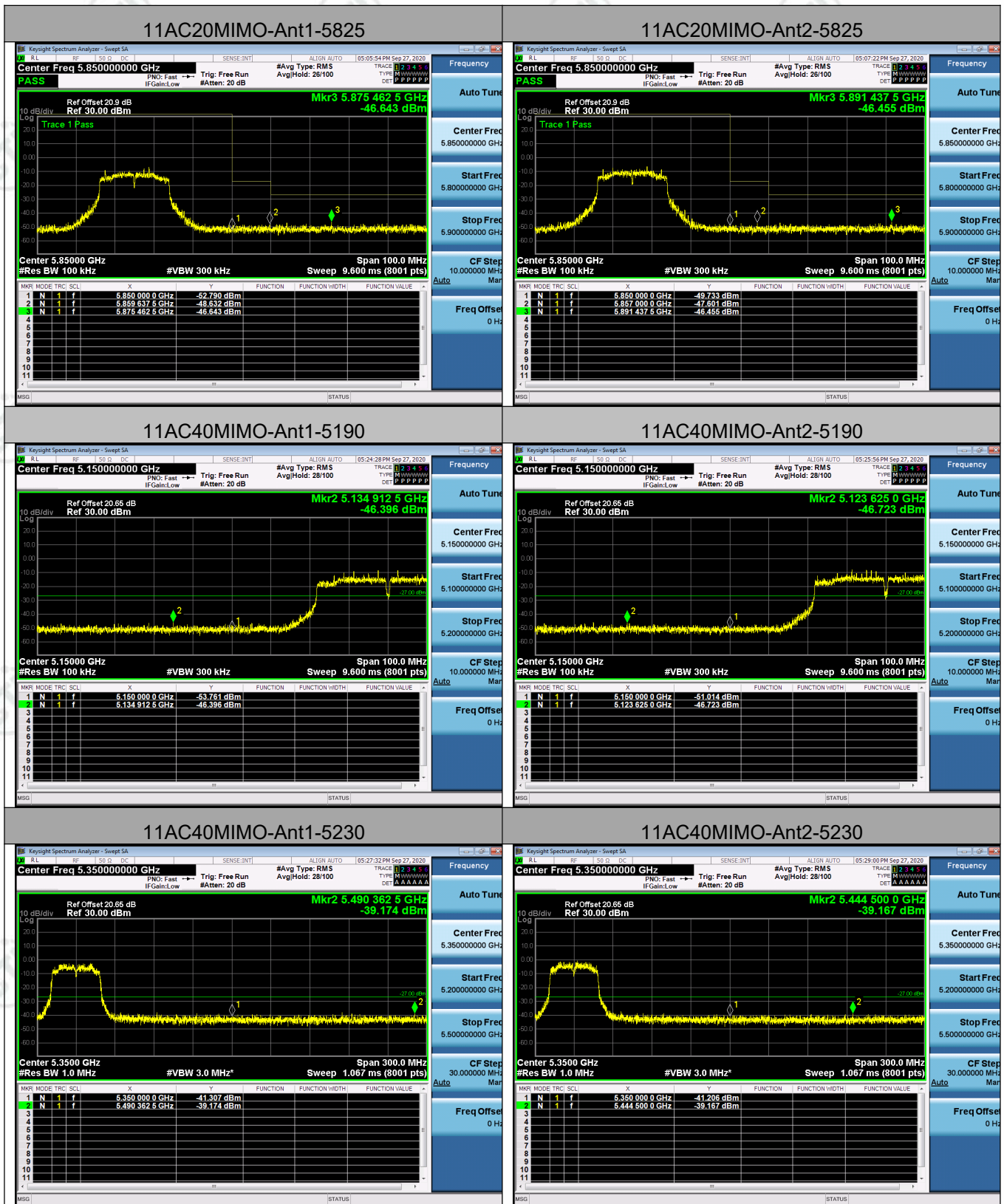


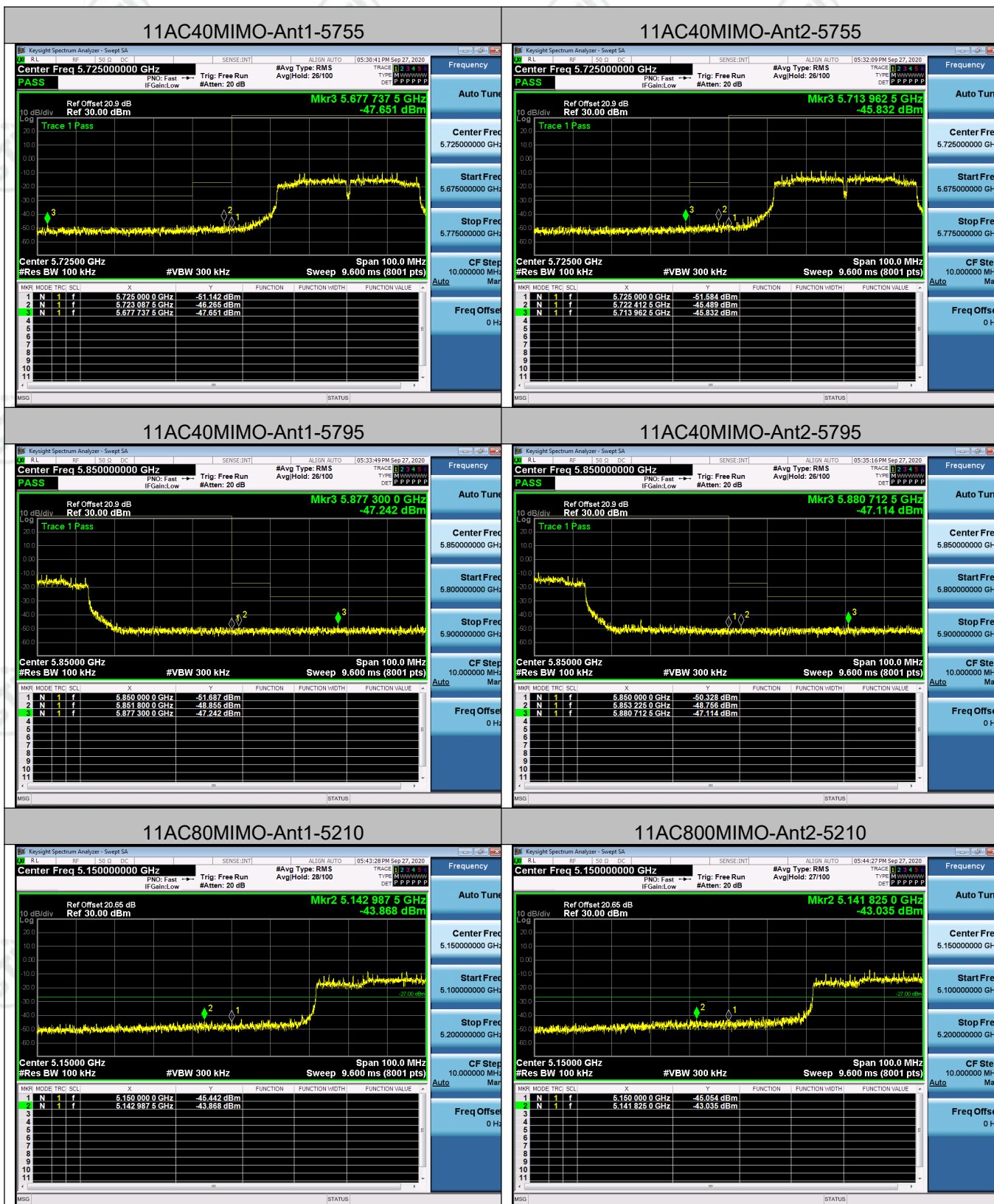


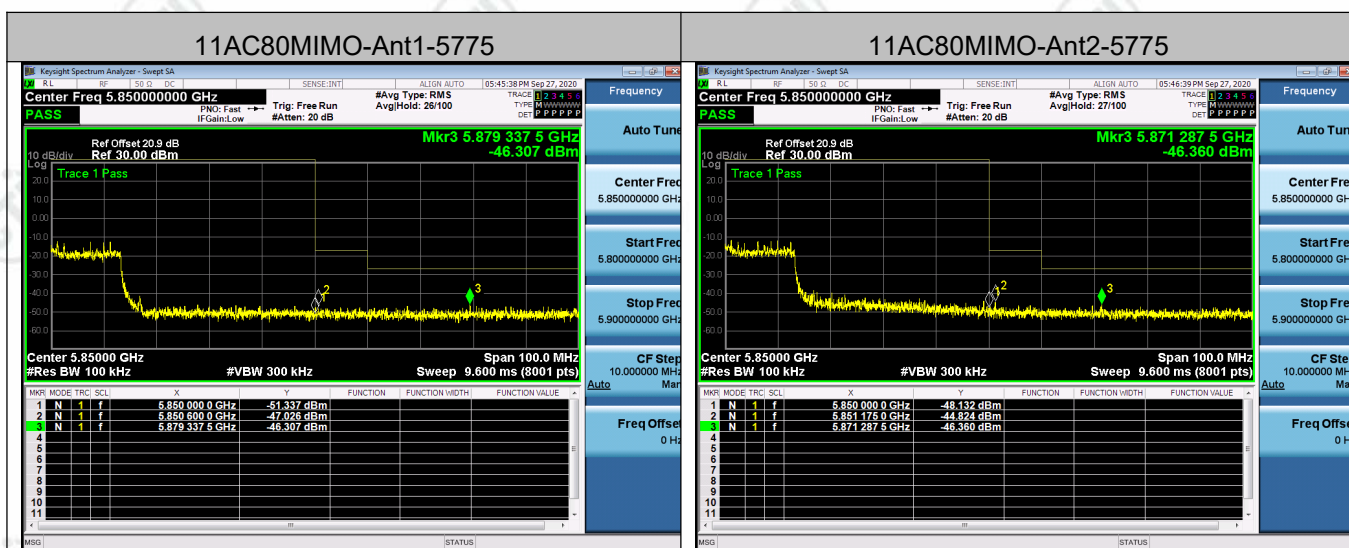












Appendix E): Frequency Stability

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	5179.97	-5.79151	20	PASS
11A	5180	Ant1	TN	VN	5179.94	-11.58301	20	PASS
11A	5180	Ant1	TN	VH	5180.00	0.00000	20	PASS
11A	5200	Ant1	TN	VL	5199.94	-11.53846	20	PASS
11A	5200	Ant1	TN	VN	5200.02	2.88462	20	PASS
11A	5200	Ant1	TN	VH	5199.97	-5.76923	20	PASS
11A	5240	Ant1	TN	VL	5240.05	8.58779	20	PASS
11A	5240	Ant1	TN	VN	5240.00	0.00000	20	PASS
11A	5240	Ant1	TN	VH	5240.06	11.45038	20	PASS
11A	5745	Ant1	TN	VL	5745.03	5.22193	20	PASS
11A	5745	Ant1	TN	VN	5745.02	2.61097	20	PASS
11A	5745	Ant1	TN	VH	5744.97	-5.22193	20	PASS
11A	5785	Ant1	TN	VL	5784.94	-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	5199.97	-5.76923	20	PASS
11A	5200	Ant1	VN	40	5200.05	8.65385	20	PASS
11A	5200	Ant1	VN	50	5200.02	2.88462	20	PASS
11A	5240	Ant1	VN	-30	5239.99	-2.86260	20	PASS
11A	5240	Ant1	VN	-20	5239.99	-2.86260	20	PASS
11A	5240	Ant1	VN	-10	5239.94	-11.45038	20	PASS
11A	5240	Ant1	VN	0	5239.99	-2.86260	20	PASS
11A	5240	Ant1	VN	10	5239.94	-11.45038	20	PASS
11A	5240	Ant1	VN	20	5239.97	-5.72519	20	PASS
11A	5240	Ant1	VN	30	5240.02	2.86260	20	PASS
11A	5240	Ant1	VN	40	5240.02	2.86260	20	PASS
11A	5240	Ant1	VN	50	5239.99	-2.86260	20	PASS
11A	5745	Ant1	VN	-30	5744.96	-7.83290	20	PASS
11A	5745	Ant1	VN	-20	5745.08	13.05483	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	5745.02	2.61097	20	PASS
11A	5745	Ant1	VN	20	5745.00	0.00000	20	PASS
11A	5745	Ant1	VN	30	5744.97	-5.22193	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	5784.91	-15.55748	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	5785.00	0.00000	20	PASS
11A	5785	Ant1	VN	20	5784.94	-10.37165	20	PASS
11A	5785	Ant1	VN	30	5784.91	-15.55748	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	5824.94	-10.30043	20	PASS
11A	5825	Ant1	VN	-10	5825.02	2.57511	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	5824.96	-7.72532	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	5179.99	-2.89575	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	5200.05	8.65385	20	PASS
11A	5200	Ant2	VN	-20	5200.05	8.65385	20	PASS
11A	5200	Ant2	VN	-10	5200.05	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	5200.05	8.65385	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	5239.97	-5.72519	20	PASS
11A	5240	Ant2	VN	20	5239.99	-2.86260	20	PASS
11A	5240	Ant2	VN	30	5240.02	2.86260	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	5744.97	-5.22193	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	5784.99	-2.59291	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	5824.99	-2.57511	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	-2.57511	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	5.79151	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	-8.68726	20	PASS
11N20	5200	Ant1	VN	-30	5199.99	-2.88462	20	PASS
11N20	5200	Ant1	VN	-20	5200.05	8.65385	20	PASS
11N20	5200	Ant1	VN	-10	5199.99	-2.88462	20	PASS
11N20	5200	Ant1	VN	0	5199.93	-14.42308	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	5199.93	-14.42308	20	PASS
11N20	5200	Ant1	VN	40	5199.96	-8.65385	20	PASS
11N20	5200	Ant1	VN	50	5199.99	-2.88462	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	-18.27676	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	-15.66580	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	2.59291	20	PASS

11N20	5785	Ant1	VN	-20	5785.03	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	-10.30043	20	PASS
11N20	5825	Ant1	VN	-20	5824.96	-7.72532	20	PASS
11N20	5825	Ant1	VN	-10	5824.97	-5.15022	20	PASS
11N20	5825	Ant1	VN	0	5824.97	-5.15022	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	5189.91	-17.34104	20	PASS
11N40	5190	Ant1	VN	50	5189.97	-5.78035	20	PASS
11N40	5230	Ant1	VN	-30	5230.09	17.20841	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	5229.97	-5.73614	20	PASS
11N40	5230	Ant1	VN	50	5229.97	-5.73614	20	PASS
11N40	5755	Ant1	VN	-30	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	-20	5755.03	5.21286	20	PASS

11N40	5755	Ant1	VN	-10	5754.94	-10.42572	20	PASS
11N40	5755	Ant1	VN	0	5755.06	10.42572	20	PASS
11N40	5755	Ant1	VN	10	5755.06	10.42572	20	PASS
11N40	5755	Ant1	VN	20	5754.97	-5.21286	20	PASS
11N40	5755	Ant1	VN	30	5755.03	5.21286	20	PASS
11N40	5755	Ant1	VN	40	5755.00	0.00000	20	PASS
11N40	5755	Ant1	VN	50	5755.09	15.63858	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	5795.00	0.00000	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	5199.91	-17.30769	20	PASS
11N20	5200	Ant2	VN	30	5199.91	-17.30769	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	5239.97	-5.72519	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	5744.99	-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	-10.44386	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	5744.94	-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	5784.99	-2.59291	20	PASS
11N20	5785	Ant2	VN	0	5784.99	-2.59291	20	PASS
11N20	5785	Ant2	VN	10	5784.91	-15.55748	20	PASS
11N20	5785	Ant2	VN	20	5784.94	-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	15.45064	20	PASS
11N20	5825	Ant2	VN	40	5824.94	-10.30043	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	5189.94	-11.56069	20	PASS

11N40	5190	Ant2	VN	10	5189.91	-17.34104	20	PASS
11N40	5190	Ant2	VN	20	5189.94	-11.56069	20	PASS
11N40	5190	Ant2	VN	30	5189.94	-11.56069	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	5229.94	-11.47228	20	PASS
11N40	5230	Ant2	VN	-20	5230.00	0.00000	20	PASS
11N40	5230	Ant2	VN	-10	5229.97	-5.73614	20	PASS
11N40	5230	Ant2	VN	0	5229.97	-5.73614	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	5755.03	5.21286	20	PASS
11N40	5755	Ant2	VN	-20	5755.03	5.21286	20	PASS
11N40	5755	Ant2	VN	-10	5754.97	-5.21286	20	PASS
11N40	5755	Ant2	VN	0	5754.97	-5.21286	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	-5.17688	20	PASS
11N40	5795	Ant2	VN	-20	5794.97	-5.17688	20	PASS
11N40	5795	Ant2	VN	-10	5795.03	5.17688	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	-11.58301	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	-8.68726	20	PASS
11AC20	5200	Ant1	VN	-30	5200.00	0.00000	20	PASS
11AC20	5200	Ant1	VN	-20	5199.91	-17.30769	20	PASS
11AC20	5200	Ant1	VN	-10	5199.97	-5.76923	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	5239.97	-5.72519	20	PASS
11AC20	5240	Ant1	VN	20	5240.02	2.86260	20	PASS
11AC20	5240	Ant1	VN	30	5239.93	-14.31298	20	PASS
11AC20	5240	Ant1	VN	40	5240.02	2.86260	20	PASS
11AC20	5240	Ant1	VN	50	5239.99	-2.86260	20	PASS
11AC20	5745	Ant1	VN	-30	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	-20	5745.02	2.61097	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	2.61097	20	PASS
11AC20	5745	Ant1	VN	20	5744.97	-5.22193	20	PASS
11AC20	5745	Ant1	VN	30	5745.05	7.83290	20	PASS
11AC20	5745	Ant1	VN	40	5744.99	-2.61097	20	PASS
11AC20	5745	Ant1	VN	50	5745.05	7.83290	20	PASS
11AC20	5785	Ant1	VN	-30	5784.96	-7.77874	20	PASS
11AC20	5785	Ant1	VN	-20	5784.96	-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	5784.96	-7.77874	20	PASS

11AC20	5785	Ant1	VN	30	5784.96	-7.77874	20	PASS
11AC20	5785	Ant1	VN	40	5784.99	-2.59291	20	PASS
11AC20	5785	Ant1	VN	50	5784.93	-12.96456	20	PASS
11AC20	5825	Ant1	VN	-30	5824.91	-15.45064	20	PASS
11AC20	5825	Ant1	VN	-20	5824.99	-2.57511	20	PASS
11AC20	5825	Ant1	VN	-10	5824.94	-10.30043	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	5189.96	-7.70713	20	PASS
11AC40	5190	Ant1	VN	-10	5190.00	0.00000	20	PASS
11AC40	5190	Ant1	VN	0	5189.96	-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	7.70713	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	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	-10	5229.96	-7.64818	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	5229.94	-11.47228	20	PASS
11AC40	5230	Ant1	VN	30	5229.96	-7.64818	20	PASS
11AC40	5230	Ant1	VN	40	5230.00	0.00000	20	PASS
11AC40	5230	Ant1	VN	50	5229.96	-7.64818	20	PASS
11AC40	5755	Ant1	VN	-30	5755.04	6.95048	20	PASS
11AC40	5755	Ant1	VN	-20	5755.00	0.00000	20	PASS
11AC40	5755	Ant1	VN	-10	5755.04	6.95048	20	PASS
11AC40	5755	Ant1	VN	0	5755.04	6.95048	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	5755.08	13.90096	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	5795.08	13.80500	20	PASS
11AC40	5795	Ant1	VN	-20	5795.08	13.80500	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	5209.92	-15.35509	20	PASS
11AC80	5210	Ant1	VN	-20	5209.92	-15.35509	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	5775.08	13.85281	20	PASS
11AC80	5775	Ant1	VN	30	5775.08	13.85281	20	PASS
11AC80	5775	Ant1	VN	40	5775.08	13.85281	20	PASS
11AC80	5775	Ant1	VN	50	5775.08	13.85281	20	PASS
11AC20	5180	Ant2	VN	-30	5179.93	-14.47876	20	PASS
11AC20	5180	Ant2	VN	-20	5179.91	-17.37452	20	PASS
11AC20	5180	Ant2	VN	-10	5179.93	-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	-11.58301	20	PASS
11AC20	5180	Ant2	VN	30	5179.97	-5.79151	20	PASS
11AC20	5180	Ant2	VN	40	5179.94	-11.58301	20	PASS

11AC20	5180	Ant2	VN	50	5179.96	-8.68726	20	PASS
11AC20	5200	Ant2	VN	-30	5199.94	-11.53846	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	5189.92	-15.41426	20	PASS
11AC40	5190	Ant2	VN	40	5189.92	-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	5229.92	-15.29637	20	PASS
11AC40	5230	Ant2	VN	10	5229.96	-7.64818	20	PASS
11AC40	5230	Ant2	VN	20	5229.92	-15.29637	20	PASS
11AC40	5230	Ant2	VN	30	5230.04	7.64818	20	PASS
11AC40	5230	Ant2	VN	40	5230.08	15.29637	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	5754.92	-13.90096	20	PASS
11AC40	5755	Ant2	VN	30	5755.04	6.95048	20	PASS
11AC40	5755	Ant2	VN	40	5754.92	-13.90096	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	5794.96	-6.90250	20	PASS
11AC40	5795	Ant2	VN	-10	5794.96	-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	5795.08	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	-15.35509	20	PASS
11AC80	5210	Ant2	VN	-10	5210.08	15.35509	20	PASS
11AC80	5210	Ant2	VN	0	5209.92	-15.35509	20	PASS
11AC80	5210	Ant2	VN	10	5210.00	0.00000	20	PASS
11AC80	5210	Ant2	VN	20	5210.08	15.35509	20	PASS
11AC80	5210	Ant2	VN	30	5209.92	-15.35509	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:



Antenna 1 is FPC antenna and antenna 2 is FPC antenna . The best case gain of antenna 1 is 3.10dBi and the best case gain of antenna 2 is 4.15dBi.

Appendix G) AC Power Line Conducted Emission

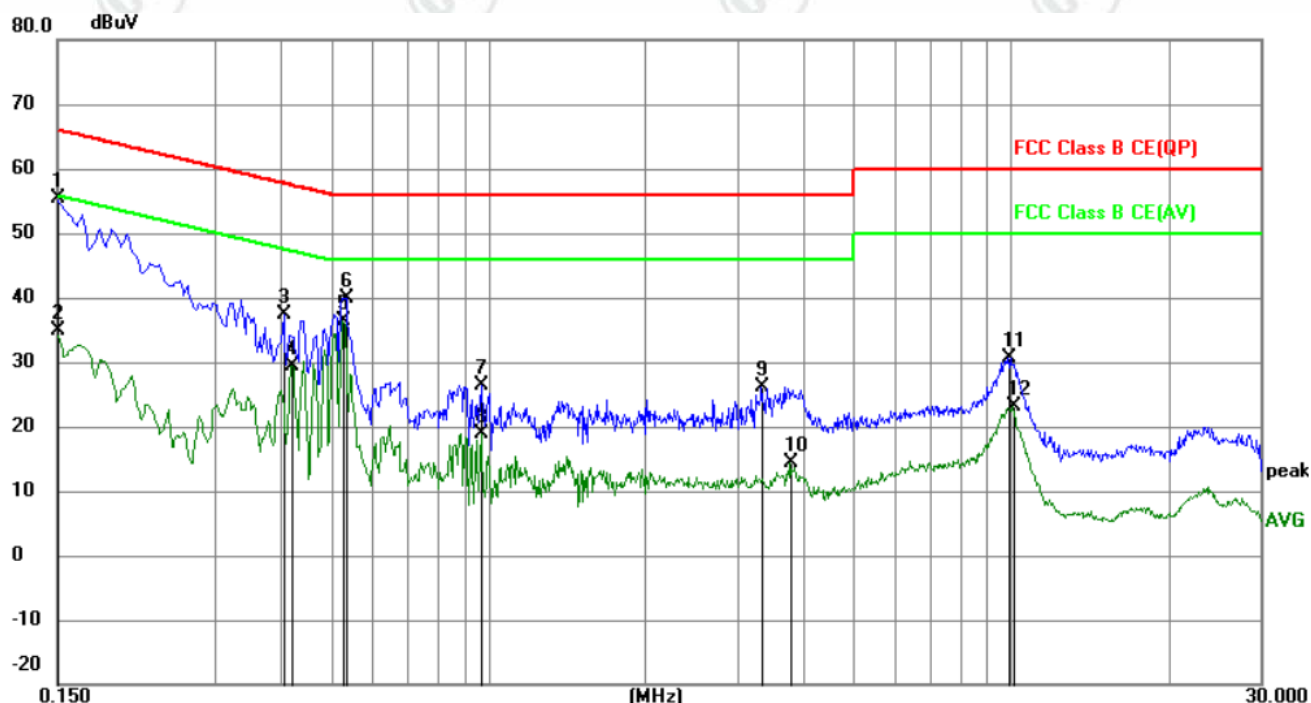
Test Procedure:	Test frequency range :150KHz-30MHz 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all 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.														
Limit:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBμV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></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	Frequency range (MHz)	Limit (dBμV)		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 (dBμV)														
	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.

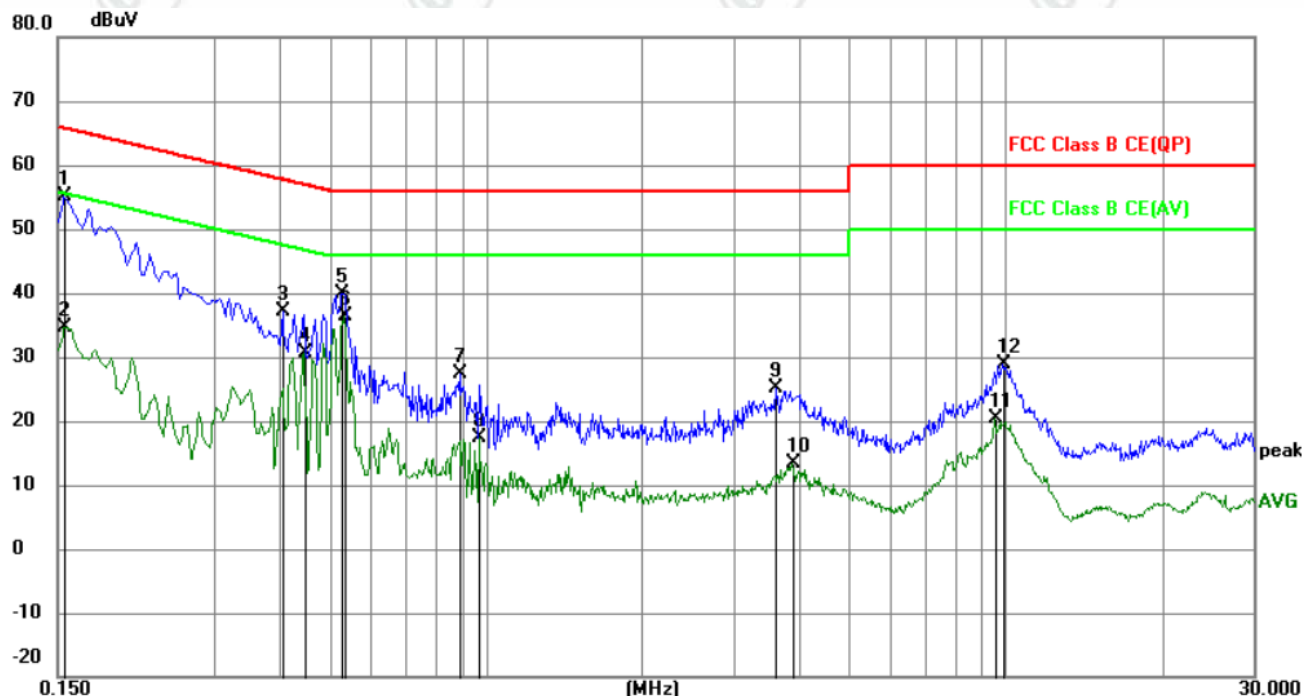
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1500	45.44	9.87	55.31	66.00	-10.69	QP	
2		0.1500	24.94	9.87	34.81	56.00	-21.19	AVG	
3		0.4065	27.34	9.97	37.31	57.72	-20.41	QP	
4		0.4200	19.33	9.97	29.30	47.45	-18.15	AVG	
5	*	0.5280	26.32	9.98	36.30	46.00	-9.70	AVG	
6		0.5325	30.01	9.99	40.00	56.00	-16.00	QP	
7		0.9735	16.61	9.84	26.45	56.00	-29.55	QP	
8		0.9735	9.16	9.84	19.00	46.00	-27.00	AVG	
9		3.3315	16.41	9.79	26.20	56.00	-29.80	QP	
10		3.7860	4.57	9.78	14.35	46.00	-31.65	AVG	
11		9.8925	20.82	9.78	30.60	60.00	-29.40	QP	
12		10.0770	13.30	9.78	23.08	50.00	-26.92	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	45.33	9.87	55.20	65.75	-10.55	QP	
2		0.1545	24.76	9.87	34.63	55.75	-21.12	AVG	
3		0.4065	27.10	9.97	37.07	57.72	-20.65	QP	
4		0.4470	20.60	9.96	30.56	46.93	-16.37	AVG	
5		0.5280	29.86	9.98	39.84	56.00	-16.16	QP	
6	*	0.5325	26.39	9.99	36.38	46.00	-9.62	AVG	
7		0.8925	17.42	9.85	27.27	56.00	-28.73	QP	
8		0.9735	7.57	9.84	17.41	46.00	-28.59	AVG	
9		3.6105	15.44	9.78	25.22	56.00	-30.78	QP	
10		3.8895	3.67	9.78	13.45	46.00	-32.55	AVG	
11		9.5100	10.70	9.78	20.48	50.00	-29.52	AVG	
12		9.8969	19.01	9.78	28.79	60.00	-31.21	QP	

Notes:

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

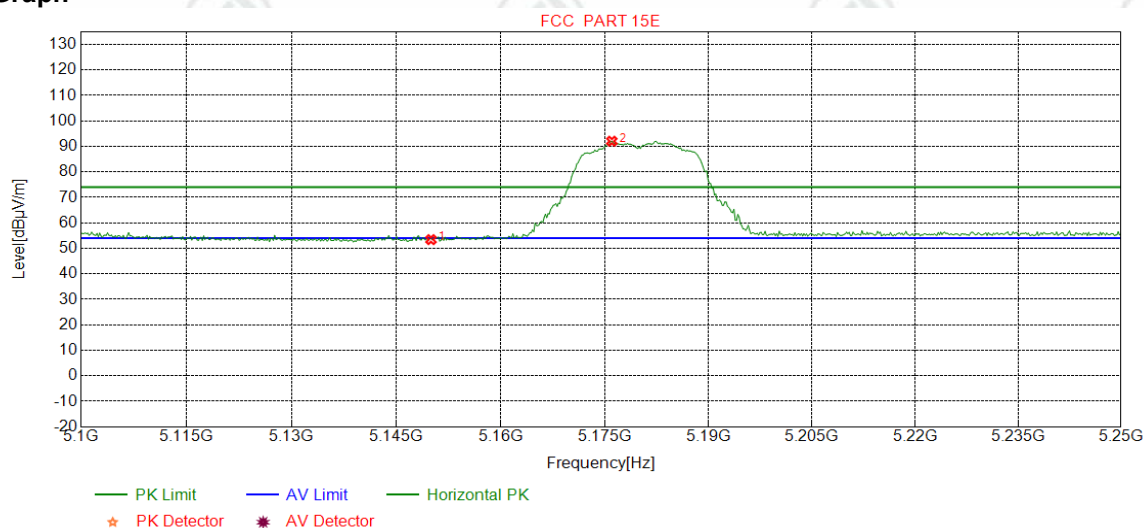
Appendix H) Restricted bands around fundamental frequency (Radiated Emission)

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		

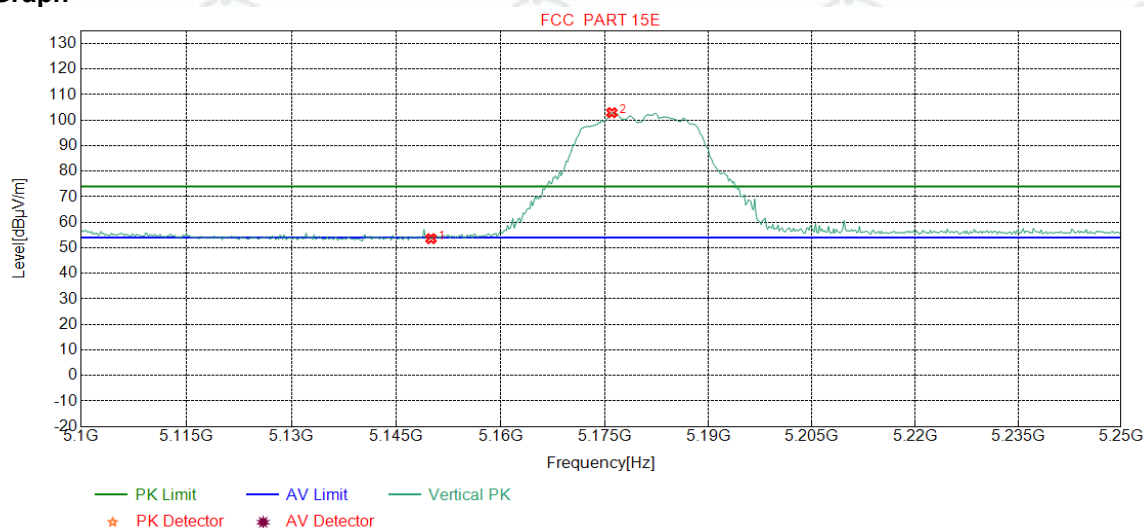
Test Graph



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	46.45	53.44	74.00	20.56	Pass	Horizontal
2	5176.0325	34.68	15.34	-42.74	84.80	92.08	74.00	-18.08	Pass	Horizontal

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

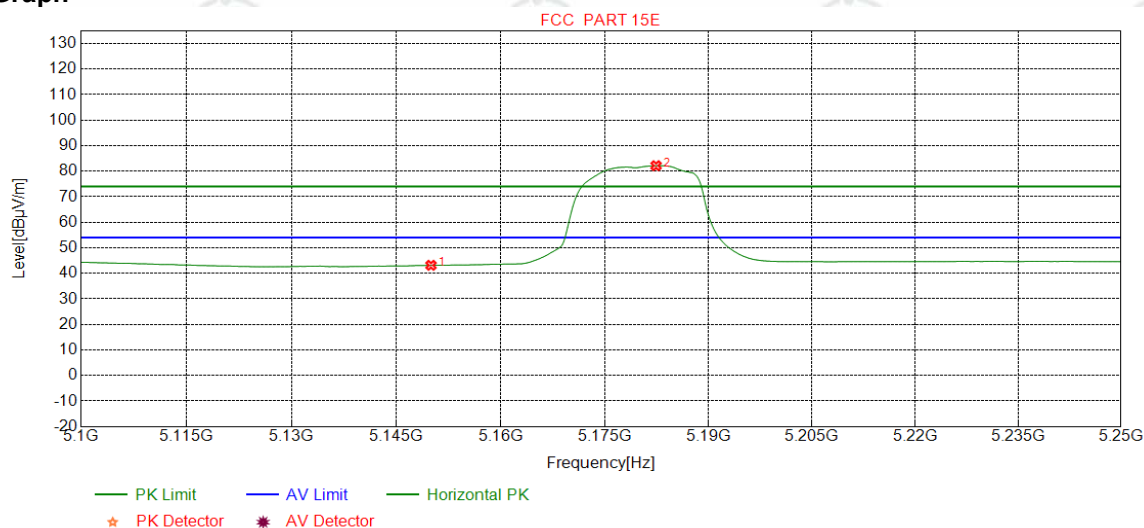
Test Graph



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	46.61	53.60	74.00	20.40	Pass	Vertical
2	5176.0325	34.68	15.34	-42.74	95.66	102.94	74.00	-28.94	Pass	Vertical

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

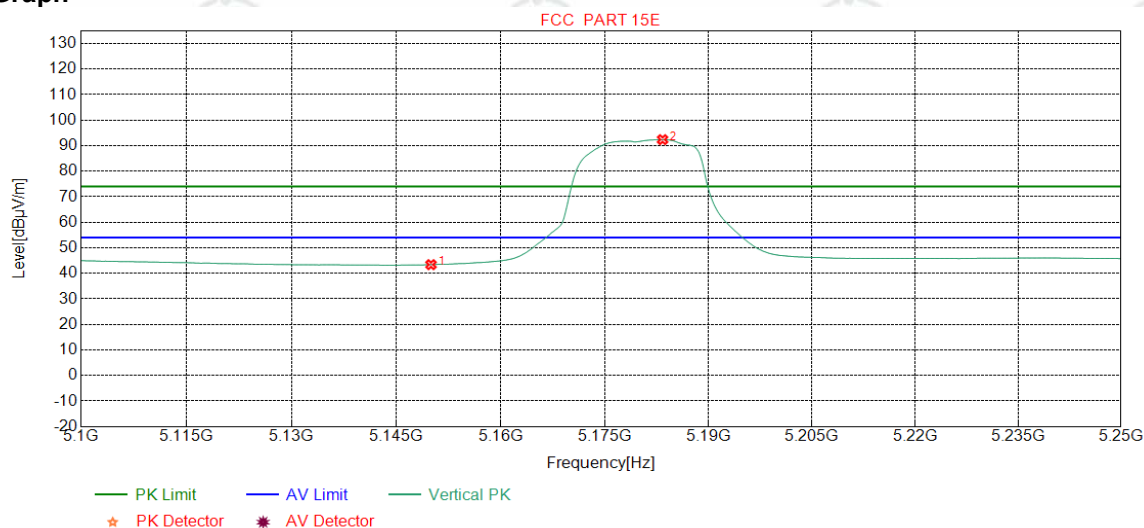
Test Graph



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	36.17	43.16	54.00	10.84	Pass	Horizontal
2	5182.4155	34.68	15.40	-42.73	74.83	82.18	54.00	-28.18	Pass	Horizontal

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

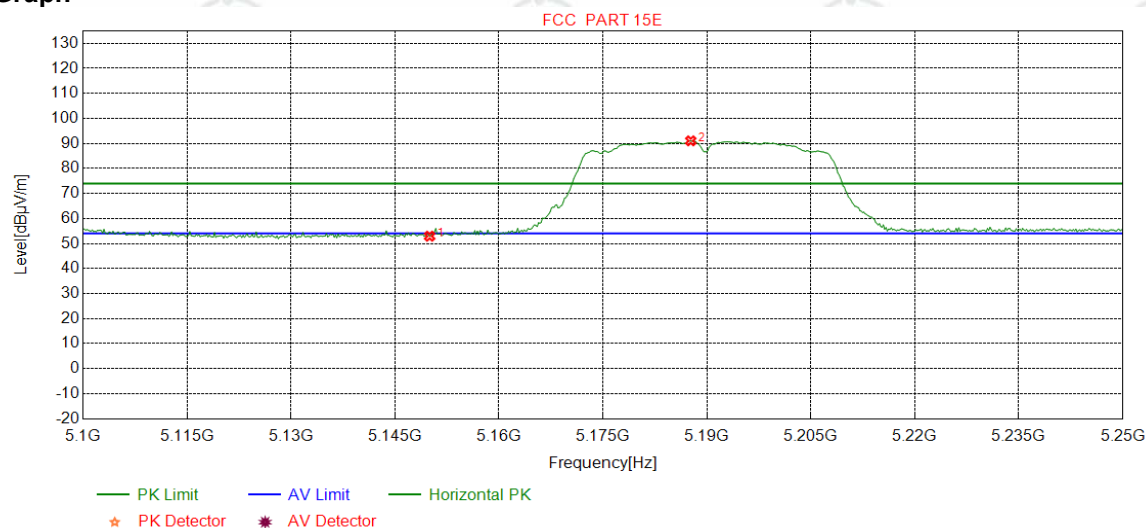
Test Graph



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	36.43	43.42	54.00	10.58	Pass	Vertical
2	5183.3542	34.68	15.41	-42.73	85.03	92.39	54.00	-38.39	Pass	Vertical

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

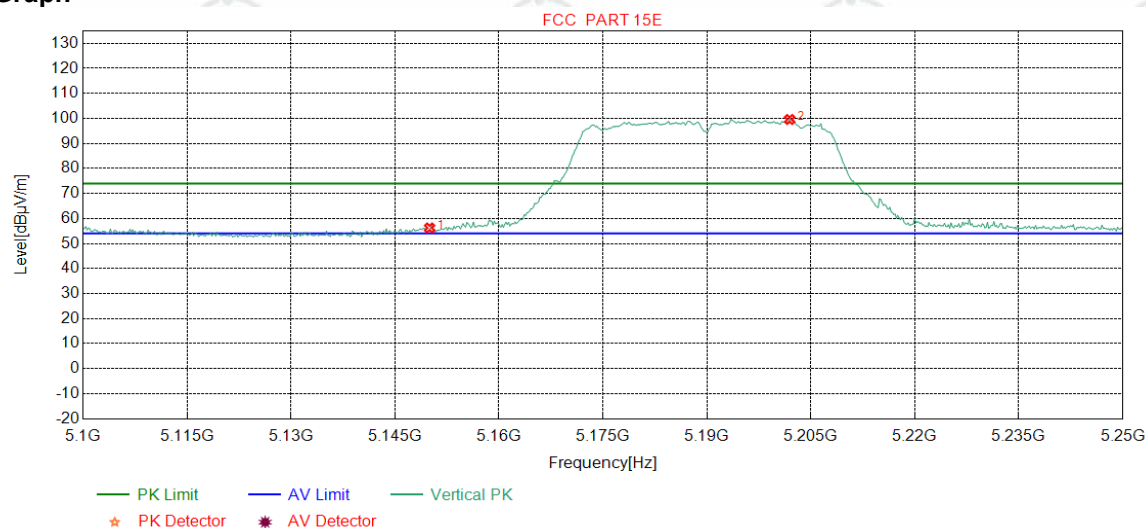
Test Graph



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	45.93	52.92	74.00	21.08	Pass	Horizontal
2	5187.6721	34.69	15.45	-42.73	83.62	91.03	74.00	-17.03	Pass	Horizontal

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

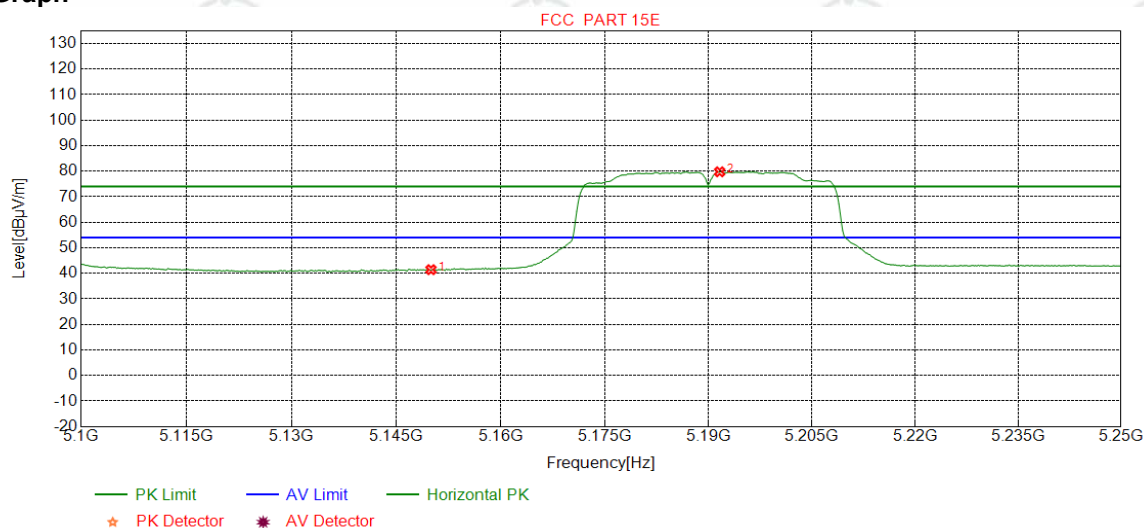
Test Graph



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	49.23	56.22	74.00	17.78	Pass	Vertical
2	5201.9399	34.70	15.56	-42.72	92.03	99.57	74.00	-25.57	Pass	Vertical

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

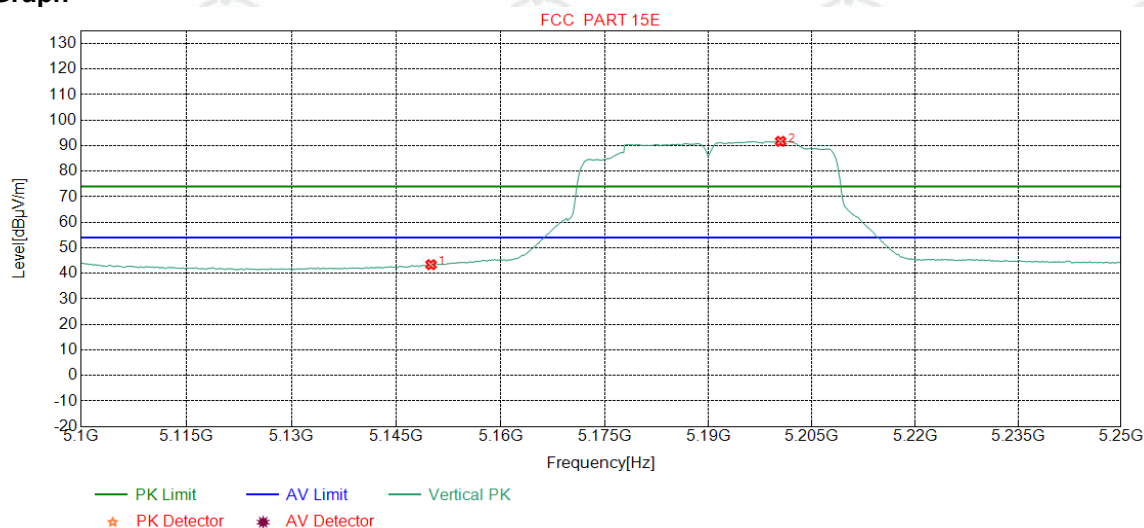
Test Graph



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	34.46	41.45	54.00	12.55	Pass	Horizontal
2	5191.6145	34.69	15.49	-42.72	72.33	79.79	54.00	-25.79	Pass	Horizontal

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

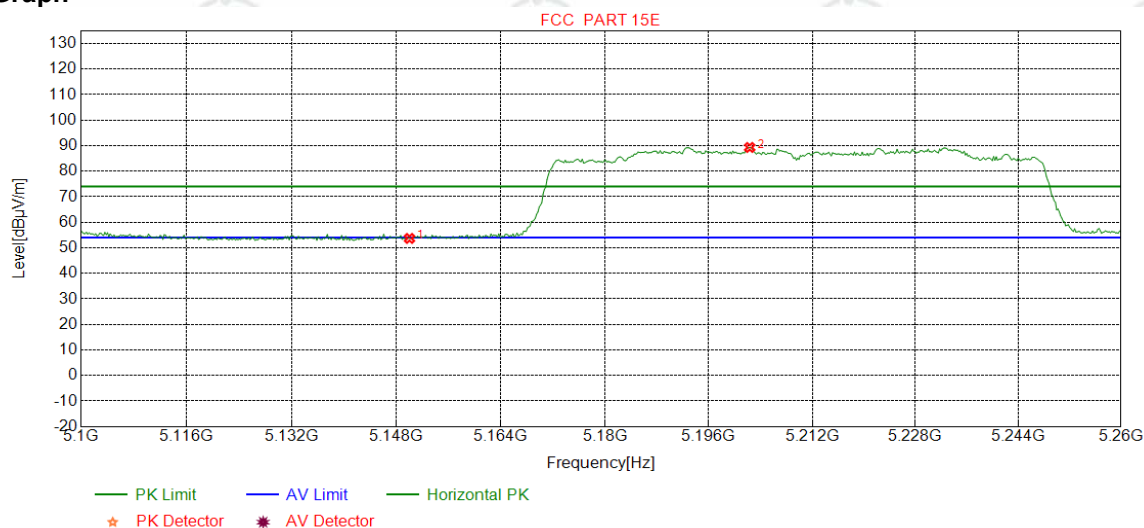
Test Graph



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	36.43	43.42	54.00	10.58	Pass	Vertical
2	5200.4380	34.70	15.57	-42.72	84.17	91.72	54.00	-37.72	Pass	Vertical

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

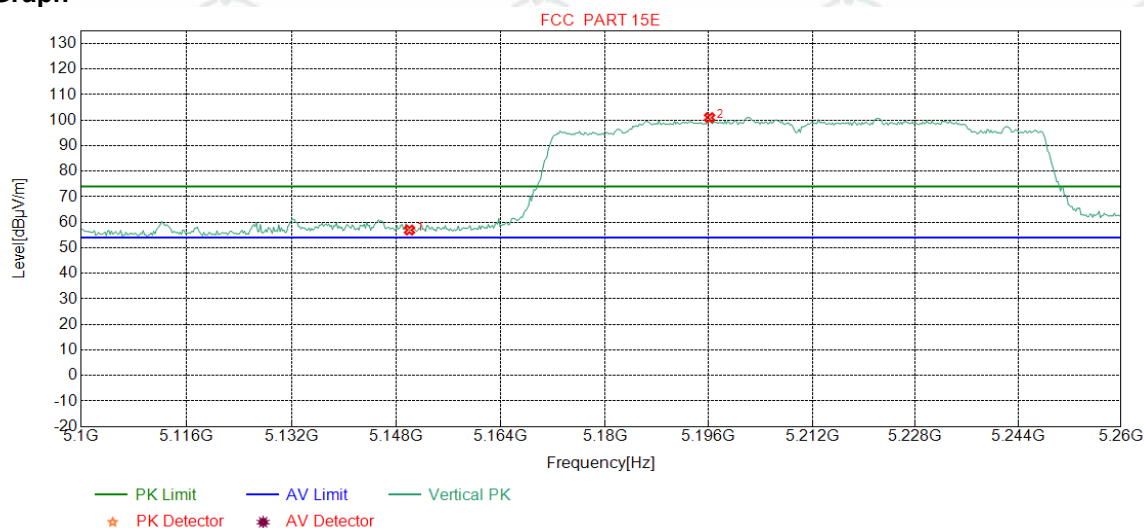
Test Graph



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	46.70	53.69	74.00	20.31	Pass	Horizontal
2	5202.3279	34.70	15.56	-42.72	81.79	89.33	74.00	-15.33	Pass	Horizontal

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

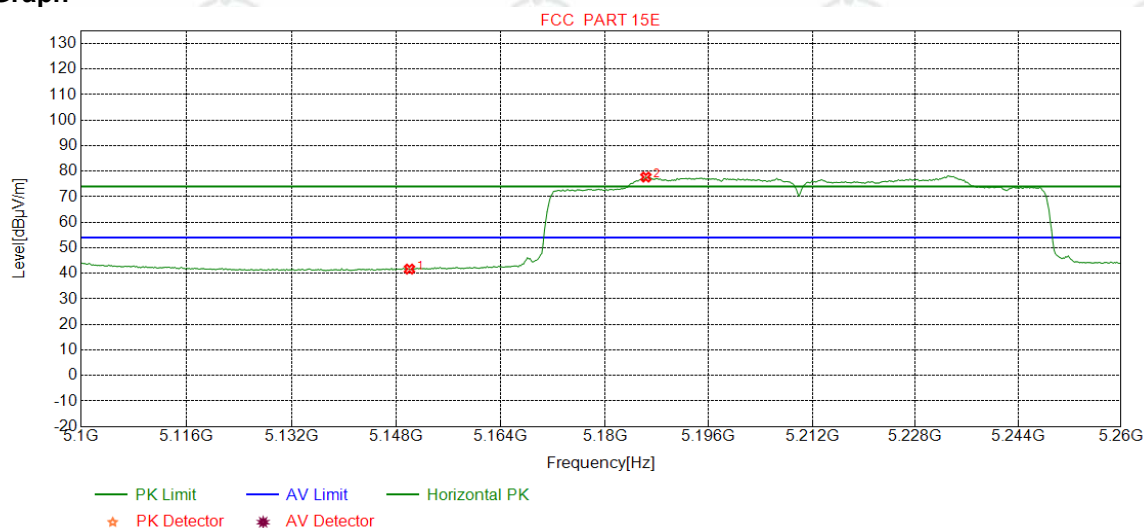
Test Graph



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	49.99	56.98	74.00	17.02	Pass	Vertical
2	5196.1202	34.70	15.53	-42.72	93.50	101.01	74.00	-27.01	Pass	Vertical

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

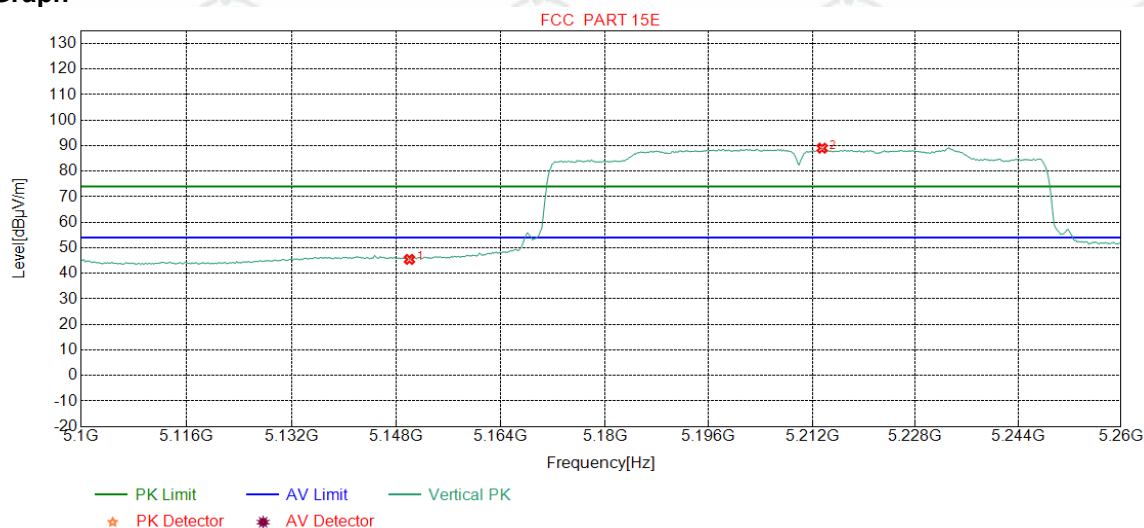
Test Graph



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	34.70	41.69	54.00	12.31	Pass	Horizontal
2	5186.3079	34.69	15.44	-42.73	70.31	77.71	54.00	-23.71	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	41.87	22.37	40.00	17.63	Pass	H	PK
2	66.4756	9.92	0.93	-31.97	45.25	24.13	40.00	15.87	Pass	H	PK
3	107.4137	10.93	1.22	-32.03	41.44	21.56	43.50	21.94	Pass	H	PK
4	304.0524	13.29	2.07	-31.60	40.99	24.75	46.00	21.25	Pass	H	PK
5	600.0290	19.00	2.96	-31.50	36.76	27.22	46.00	18.78	Pass	H	PK
6	844.9785	21.44	3.50	-31.82	33.42	26.54	46.00	19.46	Pass	H	PK
7	56.2896	12.19	0.86	-31.92	41.87	23.00	40.00	17.00	Pass	V	PK
8	84.8105	8.21	1.06	-32.00	42.27	19.54	40.00	20.46	Pass	V	PK
9	150.0010	7.55	1.45	-32.01	47.33	24.32	43.50	19.18	Pass	V	PK
10	292.3142	13.05	2.04	-31.78	41.72	25.03	46.00	20.97	Pass	V	PK
11	600.0290	19.00	2.96	-31.50	42.79	33.25	46.00	12.75	Pass	V	PK
12	875.0515	21.80	3.55	-31.70	33.41	27.06	46.00	18.94	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	1863.0363	30.80	4.01	-42.87	50.55	42.49	74.00	31.51	Pass	H	PK
2	2590.0000	32.54	4.79	-43.10	48.46	42.69	74.00	31.31	Pass	H	PK
3	3210.1210	33.28	5.70	-43.09	50.19	46.08	74.00	27.92	Pass	H	PK
4	4479.6480	34.47	6.68	-42.81	49.77	48.11	74.00	25.89	Pass	H	PK
5	6500.0000	35.90	8.67	-42.50	49.83	51.90	74.00	22.10	Pass	H	PK
6	10360.000	38.30	7.29	-42.03	46.48	50.04	74.00	23.96	Pass	H	PK
7	1432.8933	28.33	3.40	-42.82	51.49	40.40	74.00	33.60	Pass	V	PK
8	1931.7932	31.25	4.15	-43.03	49.85	42.22	74.00	31.78	Pass	V	PK
9	2699.1199	32.72	4.89	-43.10	50.39	44.90	74.00	29.10	Pass	V	PK
10	3799.7800	33.64	6.12	-43.04	49.89	46.61	74.00	27.39	Pass	V	PK
11	6477.9978	35.90	8.58	-42.51	49.98	51.95	74.00	22.05	Pass	V	PK
12	9353.2927	37.63	6.75	-42.07	49.43	51.74	74.00	22.26	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	1658.4158	29.45	3.84	-42.76	51.26	41.79	74.00	32.21	Pass	H	PK
2	2422.9923	32.29	4.65	-43.11	50.27	44.10	74.00	29.90	Pass	H	PK
3	3377.3377	33.35	5.68	-43.10	49.58	45.51	74.00	28.49	Pass	H	PK
4	5019.8020	34.52	7.09	-42.79	50.34	49.16	74.00	24.84	Pass	H	PK
5	6392.1892	35.88	8.54	-42.53	49.85	51.74	74.00	22.26	Pass	H	PK
6	9130.1815	37.67	6.63	-42.02	49.28	51.56	74.00	22.44	Pass	H	PK
7	1540.7041	28.67	3.53	-43.02	50.35	39.53	74.00	34.47	Pass	V	PK
8	2067.6568	31.79	4.38	-43.18	50.15	43.14	74.00	30.86	Pass	V	PK
9	2702.4202	32.72	4.89	-43.09	50.36	44.88	74.00	29.12	Pass	V	PK
10	6486.7987	35.90	8.61	-42.50	49.44	51.45	74.00	22.55	Pass	V	PK
11	7615.5558	36.55	6.59	-42.12	48.90	49.92	74.00	24.08	Pass	V	PK
12	10252.637	38.15	7.27	-42.04	49.40	52.78	74.00	21.22	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	1620.4620	29.20	3.69	-42.85	50.74	40.78	74.00	33.22	Pass	H	PK
2	2434.5435	32.31	4.66	-43.11	50.69	44.55	74.00	29.45	Pass	H	PK
3	2810.7811	32.90	5.03	-43.10	50.25	45.08	74.00	28.92	Pass	H	PK
4	3841.0341	33.67	6.28	-43.03	50.13	47.05	74.00	26.95	Pass	H	PK
5	6347.0847	35.87	8.68	-42.53	50.23	52.25	74.00	21.75	Pass	H	PK
6	7630.5065	36.55	6.45	-42.13	49.49	50.36	74.00	23.64	Pass	H	PK
7	1734.3234	29.95	3.89	-42.68	50.38	41.54	74.00	32.46	Pass	V	PK
8	2103.9604	31.85	4.54	-43.18	50.21	43.42	74.00	30.58	Pass	V	PK
9	3189.7690	33.28	5.69	-43.10	50.93	46.80	74.00	27.20	Pass	V	PK
10	4265.6766	34.17	6.38	-42.89	50.99	48.65	74.00	25.35	Pass	V	PK
11	6491.7492	35.90	8.64	-42.51	49.49	51.52	74.00	22.48	Pass	V	PK
12	8947.8974	37.59	6.85	-42.00	48.88	51.32	74.00	22.68	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	1712.8713	29.80	3.89	-42.66	50.83	41.86	74.00	32.14	Pass	H	PK
2	2342.1342	32.18	4.66	-43.13	50.24	43.95	74.00	30.05	Pass	H	PK
3	2824.5325	32.92	5.03	-43.10	50.37	45.22	74.00	28.78	Pass	H	PK
4	4275.5776	34.19	6.42	-42.89	48.97	46.69	74.00	27.31	Pass	H	PK
5	8863.3682	37.40	6.86	-42.00	48.61	50.87	74.00	23.13	Pass	H	PK
6	11244.562	38.75	7.70	-42.00	48.93	53.38	74.00	20.62	Pass	H	PK
7	1387.2387	28.29	3.33	-42.70	51.16	40.08	74.00	33.92	Pass	V	PK
8	2129.8130	31.88	4.43	-43.17	50.76	43.90	74.00	30.10	Pass	V	PK
9	2669.9670	32.67	4.86	-43.10	50.42	44.85	74.00	29.15	Pass	V	PK
10	3474.1474	33.39	5.74	-43.10	50.30	46.33	74.00	27.67	Pass	V	PK
11	6480.1980	35.90	8.59	-42.51	49.93	51.91	74.00	22.09	Pass	V	PK
12	8891.5446	37.46	6.90	-42.00	48.62	50.98	74.00	23.02	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	1852.0352	30.72	3.95	-42.83	50.34	42.18	74.00	31.82	Pass	H	PK
2	2336.6337	32.17	4.67	-43.14	50.48	44.18	74.00	29.82	Pass	H	PK
3	2694.7195	32.71	4.88	-43.09	51.94	46.44	74.00	27.56	Pass	H	PK
4	3730.4730	33.58	6.02	-43.05	50.09	46.64	74.00	27.36	Pass	H	PK
5	6355.8856	35.87	8.67	-42.53	49.56	51.57	74.00	22.43	Pass	H	PK
6	9204.3602	37.66	6.61	-42.04	49.41	51.64	74.00	22.36	Pass	H	PK
7	2301.4301	32.12	4.68	-43.14	49.66	43.32	74.00	30.68	Pass	V	PK
8	3195.2695	33.28	5.72	-43.10	51.26	47.16	74.00	26.84	Pass	V	PK
9	4259.0759	34.16	6.36	-42.90	51.28	48.90	74.00	25.10	Pass	V	PK
10	6481.2981	35.90	8.59	-42.51	49.98	51.96	74.00	22.04	Pass	V	PK
11	9128.4564	37.67	6.63	-42.02	49.62	51.90	74.00	22.10	Pass	V	PK
12	10404.445	38.37	7.54	-42.03	48.91	52.79	74.00	21.21	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	2075.3575	31.81	4.42	-43.19	49.84	42.88	74.00	31.12	Pass	H	PK
2	2343.7844	32.18	4.66	-43.13	50.62	44.33	74.00	29.67	Pass	H	PK
3	3199.6700	33.28	5.75	-43.10	49.80	45.73	74.00	28.27	Pass	H	PK
4	4603.4103	34.50	6.76	-42.80	51.14	49.60	74.00	24.40	Pass	H	PK
5	6436.7437	35.89	8.47	-42.51	50.19	52.04	74.00	21.96	Pass	H	PK
6	9234.2617	37.65	6.66	-42.04	48.81	51.08	74.00	22.92	Pass	H	PK
7	2570.4070	32.51	4.82	-43.10	51.18	45.41	74.00	28.59	Pass	V	PK
8	3193.0693	33.28	5.71	-43.10	50.16	46.05	74.00	27.95	Pass	V	PK
9	4255.2255	34.16	6.34	-42.90	52.30	49.90	74.00	24.10	Pass	V	PK
10	6490.6491	35.90	8.63	-42.50	50.38	52.41	74.00	21.59	Pass	V	PK
11	7533.3267	36.59	6.45	-42.11	49.25	50.18	74.00	23.82	Pass	V	PK
12	8924.3212	37.53	6.88	-42.00	48.76	51.17	74.00	22.83	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	1783.8284	30.27	3.33	-42.70	51.00	41.90	74.00	32.10	Pass	H	PK
2	2240.3740	32.04	4.03	-43.16	51.18	44.09	74.00	29.91	Pass	H	PK
3	3046.2046	33.22	4.64	-43.10	50.53	45.29	74.00	28.71	Pass	H	PK
4	3799.2299	33.64	5.19	-43.04	49.75	45.54	74.00	28.46	Pass	H	PK
5	6493.3993	35.90	7.50	-42.50	49.15	50.05	74.00	23.95	Pass	H	PK
6	9020.9681	37.70	6.80	-42.01	49.57	52.06	74.00	21.94	Pass	H	PK
7	1723.3223	29.87	3.28	-42.66	50.89	41.38	74.00	32.62	Pass	V	PK
8	2469.1969	32.36	4.07	-43.11	51.08	44.40	74.00	29.60	Pass	V	PK
9	3187.5688	33.28	4.69	-43.10	50.99	45.86	74.00	28.14	Pass	V	PK
10	4253.0253	34.15	5.49	-42.89	51.27	48.02	74.00	25.98	Pass	V	PK
11	6490.0990	35.90	7.47	-42.50	50.38	51.25	74.00	22.75	Pass	V	PK
12	8896.7598	37.47	6.91	-42.00	49.22	51.60	74.00	22.40	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	74.00	31.21	Pass	H	PK
2	2845.4345	32.95	4.47	-43.09	50.11	44.44	74.00	29.56	Pass	H	PK
3	3934.5435	33.75	5.46	-43.02	49.65	45.84	74.00	28.16	Pass	H	PK
4	4821.2321	34.50	6.01	-42.80	49.53	47.24	74.00	26.76	Pass	H	PK
5	7500.5667	36.60	6.53	-42.10	49.32	50.35	74.00	23.65	Pass	H	PK
6	9212.6475	37.66	6.62	-42.04	49.28	51.52	74.00	22.48	Pass	H	PK
7	1876.7877	30.89	3.54	-42.90	49.87	41.40	74.00	32.60	Pass	V	PK
8	2171.0671	31.94	3.78	-43.16	50.36	42.92	74.00	31.08	Pass	V	PK
9	2731.5732	32.77	4.28	-43.10	50.42	44.37	74.00	29.63	Pass	V	PK
10	4253.5754	34.16	5.49	-42.90	50.63	47.38	74.00	26.62	Pass	V	PK
11	6495.5996	35.90	7.52	-42.50	49.43	50.35	74.00	23.65	Pass	V	PK
12	9234.8823	37.65	6.66	-42.04	48.99	51.26	74.00	22.74	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	2175.4675	31.95	3.80	-43.17	50.61	43.19	74.00	30.81	Pass	H	PK
2	2696.9197	32.72	4.26	-43.11	50.11	43.98	74.00	30.02	Pass	H	PK
3	3218.3718	33.29	4.84	-43.10	50.07	45.10	74.00	28.90	Pass	H	PK
4	5012.1012	34.51	5.96	-42.80	50.65	48.32	74.00	25.68	Pass	H	PK
5	6500.0000	35.90	7.56	-42.50	49.06	50.02	74.00	23.98	Pass	H	PK
6	8491.1661	36.60	6.65	-42.01	49.50	50.74	74.00	23.26	Pass	H	PK
7	2426.2926	32.30	4.01	-43.12	50.21	43.40	74.00	30.60	Pass	V	PK
8	3185.3685	33.27	4.69	-43.10	51.06	45.92	74.00	28.08	Pass	V	PK
9	4265.1265	34.17	5.49	-42.89	50.40	47.17	74.00	26.83	Pass	V	PK
10	7422.3615	36.52	6.46	-42.11	48.96	49.83	74.00	24.17	Pass	V	PK
11	9018.6679	37.70	6.80	-42.01	48.57	51.06	74.00	22.94	Pass	V	PK
12	10388.025	38.34	7.46	-42.02	49.52	53.30	74.00	20.70	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	2260.7261	32.07	4.10	-43.16	49.80	42.81	74.00	31.19	Pass	H	PK
2	3085.8086	33.23	4.62	-43.09	50.44	45.20	74.00	28.80	Pass	H	PK
3	5008.2508	34.51	5.96	-42.80	51.63	49.30	74.00	24.70	Pass	H	PK
4	6441.1441	35.89	7.10	-42.51	50.08	50.56	74.00	23.44	Pass	H	PK
5	7638.5759	36.54	6.37	-42.12	49.23	50.02	74.00	23.98	Pass	H	PK
6	9188.1125	37.66	6.60	-42.03	49.08	51.31	74.00	22.69	Pass	H	PK
7	2418.0418	32.29	4.01	-43.12	51.05	44.23	74.00	29.77	Pass	V	PK
8	3187.0187	33.27	4.69	-43.10	50.41	45.27	74.00	28.73	Pass	V	PK
9	3585.8086	33.47	5.14	-43.09	49.29	44.81	74.00	29.19	Pass	V	PK
10	4622.6623	34.50	5.78	-42.80	50.22	47.70	74.00	26.30	Pass	V	PK
11	6499.4499	35.90	7.56	-42.50	49.20	50.16	74.00	23.84	Pass	V	PK
12	7988.1992	36.40	6.56	-42.20	49.60	50.36	74.00	23.64	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	1960.9461	31.44	3.64	-43.10	50.05	42.03	74.00	31.97	Pass	H	PK
2	2674.9175	32.68	4.32	-43.10	50.35	44.25	74.00	29.75	Pass	H	PK
3	3087.4587	33.23	4.62	-43.09	50.47	45.23	74.00	28.77	Pass	H	PK
4	3935.0935	33.75	5.45	-43.01	49.60	45.79	74.00	28.21	Pass	H	PK
5	6489.5490	35.90	7.47	-42.50	49.26	50.13	74.00	23.87	Pass	H	PK
6	8779.4520	37.21	6.95	-41.99	48.56	50.73	74.00	23.27	Pass	H	PK
7	2028.6029	31.74	3.65	-43.19	51.02	43.22	74.00	30.78	Pass	V	PK
8	2674.9175	32.68	4.32	-43.10	49.93	43.83	74.00	30.17	Pass	V	PK
9	3194.1694	33.28	4.70	-43.10	49.96	44.84	74.00	29.16	Pass	V	PK
10	4264.0264	34.17	5.49	-42.89	52.10	48.87	74.00	25.13	Pass	V	PK
11	6481.2981	35.90	7.40	-42.51	49.75	50.54	74.00	23.46	Pass	V	PK
12	9191.1794	37.66	6.60	-42.03	49.23	51.46	74.00	22.54	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	2138.6139	31.89	3.71	-43.16	50.85	43.29	74.00	30.71	Pass	H	PK
2	2721.1221	32.75	4.27	-43.10	50.89	44.81	74.00	29.19	Pass	H	PK
3	3660.0660	33.53	4.99	-43.07	49.53	44.98	74.00	29.02	Pass	H	PK
4	6497.7998	35.90	7.54	-42.50	49.53	50.47	74.00	23.53	Pass	H	PK
5	7914.5943	36.43	6.63	-42.18	49.50	50.38	74.00	23.62	Pass	H	PK
6	9743.2162	37.70	6.87	-42.11	49.14	51.60	74.00	22.40	Pass	H	PK
7	1961.4962	31.45	3.64	-43.11	50.38	42.36	74.00	31.64	Pass	V	PK
8	2658.4158	32.65	4.37	-43.10	50.05	43.97	74.00	30.03	Pass	V	PK
9	3052.8053	33.22	4.65	-43.10	49.86	44.63	74.00	29.37	Pass	V	PK
10	4258.5259	34.16	5.49	-42.89	51.55	48.31	74.00	25.69	Pass	V	PK
11	7390.9261	36.49	6.43	-42.12	49.16	49.96	74.00	24.04	Pass	V	PK
12	9211.1141	37.66	6.62	-42.04	49.09	51.33	74.00	22.67	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	22980.000	38.83	0.00	-63.81	65.14	40.16	74.00	33.84	Pass	H	PK
2	25243.569	40.63	0.00	-59.57	65.68	46.74	74.00	27.26	Pass	H	PK
3	28725.000	40.11	0.00	-60.73	63.38	42.76	74.00	31.24	Pass	H	PK
4	31021.880	41.30	0.00	-58.71	65.02	47.61	74.00	26.39	Pass	H	PK
5	34470.000	42.61	0.00	-58.17	59.19	43.63	74.00	30.37	Pass	H	PK
6	39042.521	44.45	0.00	-55.22	59.50	48.73	74.00	25.27	Pass	H	PK
7	19980.959	38.97	0.00	-62.07	68.14	45.04	74.00	28.96	Pass	V	PK
8	22980.000	38.83	0.00	-63.81	64.03	39.05	74.00	34.95	Pass	V	PK
9	27230.689	40.20	0.00	-60.65	67.74	47.29	74.00	26.71	Pass	V	PK
10	28725.000	40.11	0.00	-60.73	63.74	43.12	74.00	30.88	Pass	V	PK
11	34470.000	42.61	0.00	-58.17	59.14	43.58	74.00	30.42	Pass	V	PK
12	38724.829	44.13	0.00	-55.83	61.11	49.41	74.00	24.59	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	1863.0363	30.80	4.01	-42.87	50.55	42.49	68.20	25.71	Pass	H	PK
2	2590.0000	32.54	4.79	-43.10	48.46	42.69	68.20	25.51	Pass	H	PK
3	3210.1210	33.28	5.70	-43.09	50.19	46.08	68.20	22.12	Pass	H	PK
4	4479.6480	34.47	6.68	-42.81	49.77	48.11	68.20	20.09	Pass	H	PK
5	5171.6172	34.67	7.54	-42.73	51.27	50.75	68.20	17.45	Pass	H	PK
6	10245.7373	38.14	7.26	-42.04	49.40	52.76	68.20	15.44	Pass	H	PK
7	1432.8933	28.33	3.40	-42.82	51.49	40.40	68.20	27.80	Pass	V	PK
8	2699.1199	32.72	4.89	-43.10	50.39	44.90	68.20	23.30	Pass	V	PK
9	4255.7756	34.16	6.34	-42.90	52.39	49.99	68.20	18.21	Pass	V	PK
10	5172.1672	34.67	7.54	-42.73	56.22	55.70	68.20	12.50	Pass	V	PK
11	6477.9978	35.90	8.58	-42.51	49.98	51.95	68.20	16.25	Pass	V	PK
12	9353.2927	37.63	6.75	-42.07	49.43	51.74	68.20	16.46	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	1658.4158	29.45	3.84	-42.76	51.26	41.79	68.20	26.41	Pass	H	PK
2	2422.9923	32.29	4.65	-43.11	50.27	44.10	68.20	24.10	Pass	H	PK
3	3377.3377	33.35	5.68	-43.10	49.58	45.51	68.20	22.69	Pass	H	PK
4	5195.8196	34.70	7.46	-42.73	49.70	49.13	68.20	19.07	Pass	H	PK
5	6392.1892	35.88	8.54	-42.53	49.85	51.74	68.20	16.46	Pass	H	PK
6	9130.1815	37.67	6.63	-42.02	49.28	51.56	68.20	16.64	Pass	H	PK
7	2067.6568	31.79	4.38	-43.18	50.15	43.14	68.20	25.06	Pass	V	PK
8	2702.4202	32.72	4.89	-43.09	50.36	44.88	68.20	23.32	Pass	V	PK
9	4249.7250	34.15	6.32	-42.90	52.60	50.17	68.20	18.03	Pass	V	PK
10	5195.8196	34.70	7.46	-42.73	59.48	58.91	68.20	9.29	Pass	V	PK
11	6486.7987	35.90	8.61	-42.50	49.44	51.45	68.20	16.75	Pass	V	PK
12	10252.637	38.15	7.27	-42.04	49.40	52.78	68.20	15.42	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	1620.4620	29.20	3.69	-42.85	50.74	40.78	68.20	27.42	Pass	H	PK
2	2434.5435	32.31	4.66	-43.11	50.69	44.55	68.20	23.65	Pass	H	PK
3	4553.9054	34.50	6.87	-42.80	50.33	48.90	68.20	19.30	Pass	H	PK
4	5232.1232	34.73	7.45	-42.71	50.48	49.95	68.20	18.25	Pass	H	PK
5	6347.0847	35.87	8.68	-42.53	50.23	52.25	68.20	15.95	Pass	H	PK
6	7630.5065	36.55	6.45	-42.13	49.49	50.36	68.20	17.84	Pass	H	PK
7	3189.7690	33.28	5.69	-43.10	50.93	46.80	68.20	21.40	Pass	V	PK
8	4265.6766	34.17	6.38	-42.89	50.99	48.65	68.20	19.55	Pass	V	PK
9	5234.8735	34.73	7.45	-42.70	60.09	59.57	68.20	8.63	Pass	V	PK
10	6491.7492	35.90	8.64	-42.51	49.49	51.52	68.20	16.68	Pass	V	PK
11	8947.8974	37.59	6.85	-42.00	48.88	51.32	68.20	16.88	Pass	V	PK
12	10598.229	38.52	7.26	-42.00	49.71	53.49	68.20	14.71	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	2343.7844	32.18	4.66	-43.13	50.62	44.33	68.20	23.87	Pass	H	PK
2	4603.4103	34.50	6.76	-42.80	51.14	49.60	68.20	18.60	Pass	H	PK
3	5222.2222	34.72	7.44	-42.70	49.25	48.71	68.20	19.49	Pass	H	PK
4	6436.7437	35.89	8.47	-42.51	50.19	52.04	68.20	16.16	Pass	H	PK
5	9234.2617	37.65	6.66	-42.04	48.81	51.08	68.20	17.12	Pass	H	PK
6	11241.112	38.74	7.69	-41.99	49.54	53.98	68.20	14.22	Pass	H	PK
7	2570.4070	32.51	4.82	-43.10	51.18	45.41	68.20	22.79	Pass	V	PK
8	3193.0693	33.28	5.71	-43.10	50.16	46.05	68.20	22.15	Pass	V	PK
9	4255.2255	34.16	6.34	-42.90	52.30	49.90	68.20	18.30	Pass	V	PK
10	5218.3718	34.72	7.44	-42.71	61.24	60.69	68.20	7.51	Pass	V	PK
11	6490.6491	35.90	8.63	-42.50	50.38	52.41	68.20	15.79	Pass	V	PK
12	7533.3267	36.59	6.45	-42.11	49.25	50.18	68.20	18.02	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	2175.4675	31.95	3.80	-43.17	50.61	43.19	68.20	25.01	Pass	H	PK
2	3218.3718	33.29	4.84	-43.10	50.07	45.10	68.20	23.10	Pass	H	PK
3	5012.1012	34.51	5.96	-42.80	50.65	48.32	68.20	19.88	Pass	H	PK
4	5819.5820	35.51	7.01	-42.60	49.83	49.75	68.20	18.45	Pass	H	PK
5	6500.0000	35.90	7.56	-42.50	49.06	50.02	68.20	18.18	Pass	H	PK
6	8491.1661	36.60	6.65	-42.01	49.50	50.74	68.20	17.46	Pass	H	PK
7	2426.2926	32.30	4.01	-43.12	50.21	43.40	68.20	24.80	Pass	V	PK
8	3185.3685	33.27	4.69	-43.10	51.06	45.92	68.20	22.28	Pass	V	PK
9	4265.1265	34.17	5.49	-42.89	50.40	47.17	68.20	21.03	Pass	V	PK
10	5820.6821	35.51	7.01	-42.60	59.20	59.12	68.20	9.08	Pass	V	PK
11	7422.3615	36.52	6.46	-42.11	48.96	49.83	68.20	18.37	Pass	V	PK
12	10388.025	38.34	7.46	-42.02	49.52	53.30	68.20	14.90	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	2138.6139	31.89	3.71	-43.16	50.85	43.29	68.20	24.91	Pass	H	PK
2	2721.1221	32.75	4.27	-43.10	50.89	44.81	68.20	23.39	Pass	H	PK
3	3660.0660	33.53	4.99	-43.07	49.53	44.98	68.20	23.22	Pass	H	PK
4	5690.8691	35.31	6.98	-42.61	56.63	56.31	68.20	11.89	Pass	H	PK
5	6497.7998	35.90	7.54	-42.50	49.53	50.47	68.20	17.73	Pass	H	PK
6	9743.2162	37.70	6.87	-42.11	49.14	51.60	68.20	16.60	Pass	H	PK
7	2658.4158	32.65	4.37	-43.10	50.05	43.97	68.20	24.23	Pass	V	PK
8	4258.5259	34.16	5.49	-42.89	51.55	48.31	68.20	19.89	Pass	V	PK
9	4998.8999	34.50	5.96	-42.80	51.16	48.82	68.20	19.38	Pass	V	PK
10	5797.5798	35.48	7.00	-42.60	55.70	55.58	68.20	12.62	Pass	V	PK
11	9037.0691	37.69	6.77	-42.00	48.62	51.08	68.20	17.12	Pass	V	PK
12	11459.1306	38.88	7.83	-42.00	49.57	54.28	68.20	13.92	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.

PHOTOGRAPHS OF TEST SETUP On Page 171-173

PHOTOGRAPHS OF EUT Constructional Details On Page 174