

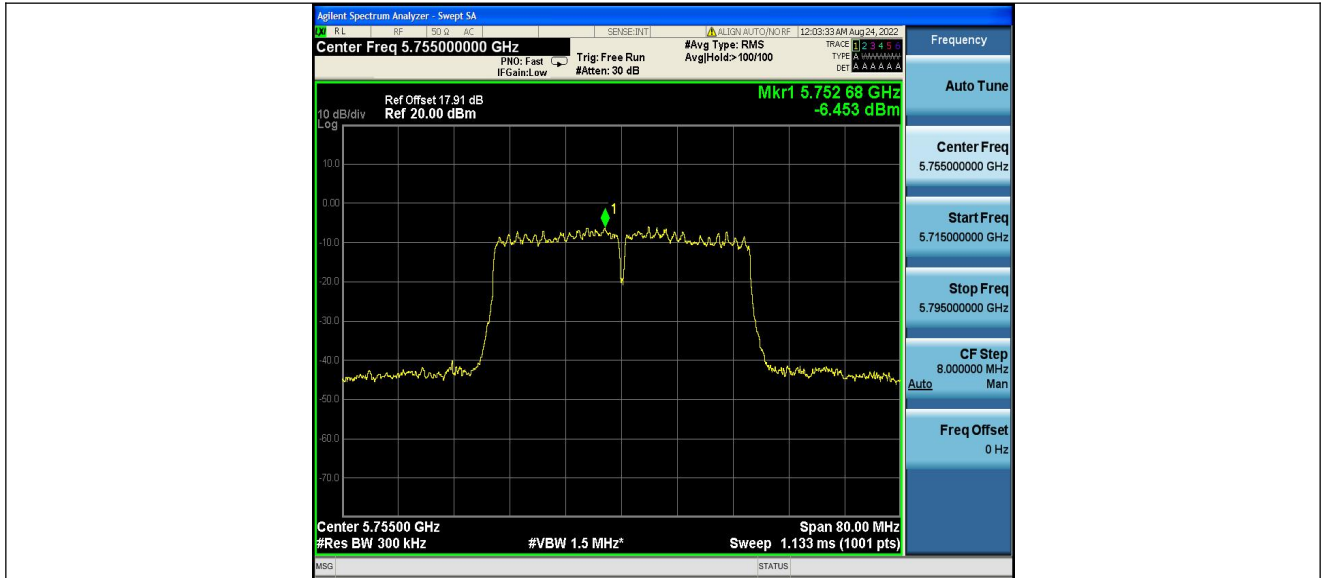


11N20SISO Ant1_5825



11N40SISO Ant1_5190

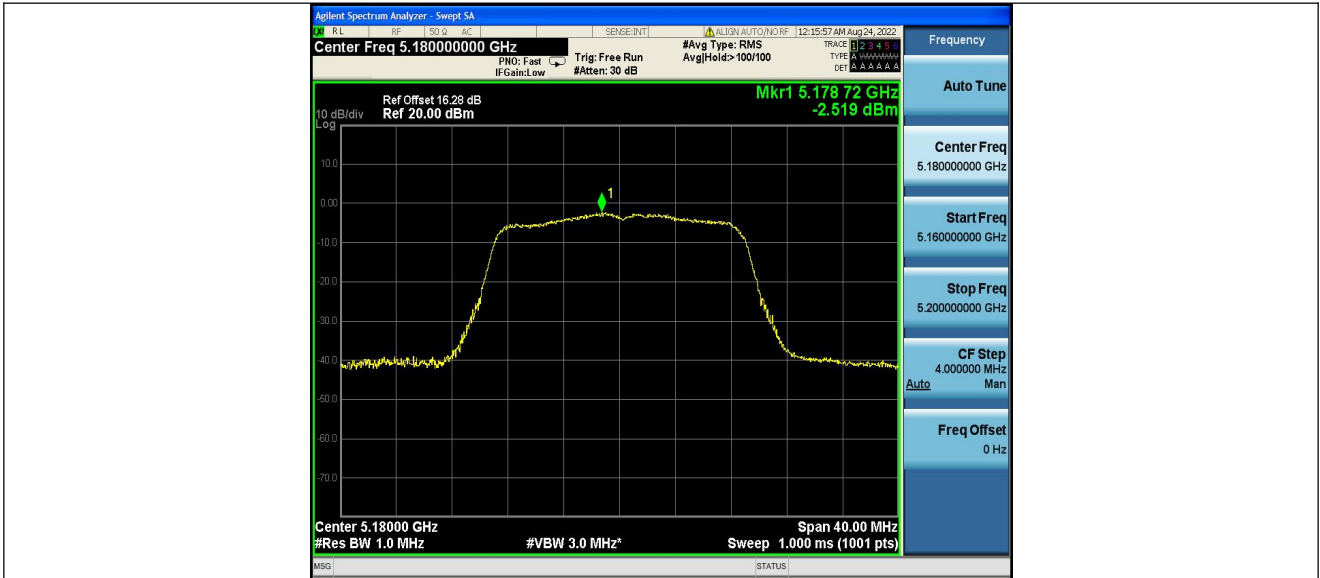




11N40SISO Ant1_5795



11AC20SISO Ant1_5180







11AC20SISO Ant1_5825



11AC40SISO Ant1_5190

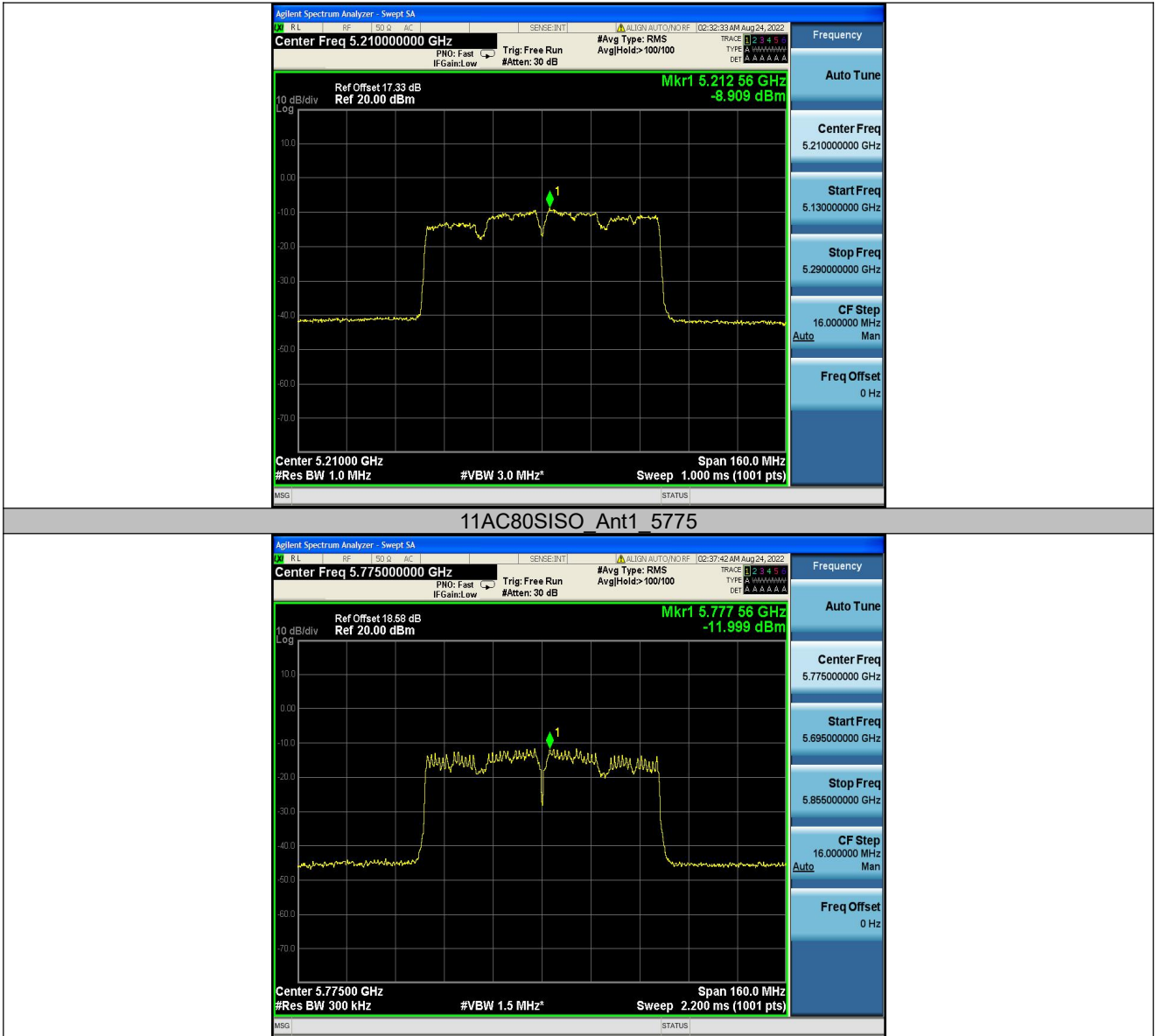


11AC40SISO Ant1_5230



11AC40SISO Ant1_5755





Note. The Duty Cycle Factor is included in the test graphs parameter Settings.



9.3 Antenna Requirement

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

9.4 Result

The EUT'S antenna, permanent attached antenna, is IFA Antenna. The antenna's gain is 5G WiFi Band 1: 2.37dBi, 5G WiFi Band 4: 3.74dBi and meets the requirement.



10 Frequency Stability

Test Requirement : FCC Part15 E Section 15.407 (g)

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

10.1 Test Procedure

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

10.2 Test Result

TestMode	Antenna	Frequency [MHz]	Voltage		Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
			Voltage [Vdc]	Temperature (°C)				
11A	Ant1	5180	NV	NT	60000.00	11.583012	20	PASS
			LV	NT	60000.00	11.583012	20	PASS
			HV	NT	60000.00	11.583012	20	PASS
		5220	NV	NT	60000.00	11.494253	20	PASS
			LV	NT	60000.00	11.494253	20	PASS
			HV	NT	60000.00	11.494253	20	PASS
		5240	NV	NT	60000.00	11.450382	20	PASS
			LV	NT	60000.00	11.450382	20	PASS
			HV	NT	60000.00	11.450382	20	PASS
		5745	NV	NT	60000.00	10.443864	20	PASS
			LV	NT	60000.00	10.443864	20	PASS
			HV	NT	60000.00	10.443864	20	PASS
		5785	NV	NT	60000.00	10.371651	20	PASS
			LV	NT	60000.00	10.371651	20	PASS
			HV	NT	60000.00	10.371651	20	PASS
		5825	NV	NT	60000.00	10.300429	20	PASS
			LV	NT	60000.00	10.300429	20	PASS
			HV	NT	60000.00	10.300429	20	PASS
11N20SISO	Ant1	5180	NV	NT	60000.00	11.583012	20	PASS
			LV	NT	60000.00	11.583012	20	PASS
			HV	NT	60000.00	11.583012	20	PASS
		5220	NV	NT	60000.00	11.494253	20	PASS
			LV	NT	60000.00	11.494253	20	PASS
			HV	NT	60000.00	11.494253	20	PASS
		5240	NV	NT	60000.00	11.450382	20	PASS
			LV	NT	60000.00	11.450382	20	PASS
			HV	NT	60000.00	11.450382	20	PASS
		5745	NV	NT	60000.00	10.443864	20	PASS
			LV	NT	60000.00	10.443864	20	PASS
			HV	NT	60000.00	10.443864	20	PASS
		5785	NV	NT	60000.00	10.371651	20	PASS
			LV	NT	60000.00	10.371651	20	PASS
			HV	NT	60000.00	10.371651	20	PASS



			HV	NT	60000.00	10.371651	20	PASS
		5825	NV	NT	60000.00	10.300429	20	PASS
			LV	NT	60000.00	10.300429	20	PASS
			HV	NT	60000.00	10.300429	20	PASS
11N40SISO	Ant1	5190	NV	NT	80000.00	15.414258	20	PASS
			LV	NT	80000.00	15.414258	20	PASS
			HV	NT	80000.00	15.414258	20	PASS
		5230	NV	NT	80000.00	15.296367	20	PASS
			LV	NT	80000.00	15.296367	20	PASS
			HV	NT	80000.00	15.296367	20	PASS
		5755	NV	NT	80000.00	13.900956	20	PASS
			LV	NT	80000.00	13.900956	20	PASS
			HV	NT	80000.00	13.900956	20	PASS
		5795	NV	NT	80000.00	13.805004	20	PASS
			LV	NT	80000.00	13.805004	20	PASS
			HV	NT	80000.00	13.805004	20	PASS
11AC20SIS O	Ant1	5180	NV	NT	60000.00	11.583012	20	PASS
			LV	NT	60000.00	11.583012	20	PASS
			HV	NT	60000.00	11.583012	20	PASS
		5220	NV	NT	60000.00	11.494253	20	PASS
			LV	NT	60000.00	11.494253	20	PASS
			HV	NT	60000.00	11.494253	20	PASS
		5240	NV	NT	60000.00	11.450382	20	PASS
			LV	NT	60000.00	11.450382	20	PASS
			HV	NT	60000.00	11.450382	20	PASS
		5745	NV	NT	60000.00	10.443864	20	PASS
			LV	NT	60000.00	10.443864	20	PASS
			HV	NT	60000.00	10.443864	20	PASS
		5785	NV	NT	60000.00	10.371651	20	PASS
			LV	NT	60000.00	10.371651	20	PASS
			HV	NT	60000.00	10.371651	20	PASS
		5825	NV	NT	60000.00	10.300429	20	PASS
			LV	NT	60000.00	10.300429	20	PASS
			HV	NT	60000.00	10.300429	20	PASS
11AC40SIS O	Ant1	5190	NV	NT	80000.00	15.414258	20	PASS
			LV	NT	80000.00	15.414258	20	PASS
			HV	NT	80000.00	15.414258	20	PASS
		5230	NV	NT	80000.00	15.296367	20	PASS
			LV	NT	80000.00	15.296367	20	PASS
			HV	NT	80000.00	15.296367	20	PASS
		5755	NV	NT	80000.00	13.900956	20	PASS
			LV	NT	80000.00	13.900956	20	PASS
			HV	NT	80000.00	13.900956	20	PASS
		5795	NV	NT	80000.00	13.805004	20	PASS
			LV	NT	80000.00	13.805004	20	PASS
			HV	NT	80000.00	13.805004	20	PASS
11AC80SIS O	Ant1	5210	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5775	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS



TestMode	Antenna	Channel	Temperature					Limit (ppm)	Verdict
			Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)			
11A	Ant1	5180	NV	-30	40000.00	7.722008	20	PASS	
			NV	-20	40000.00	7.722008	20	PASS	
			NV	-10	40000.00	7.722008	20	PASS	
			NV	0	40000.00	7.722008	20	PASS	
			NV	10	40000.00	7.722008	20	PASS	
			NV	20	40000.00	7.722008	20	PASS	
			NV	30	40000.00	7.722008	20	PASS	
			NV	40	40000.00	7.722008	20	PASS	
		5220	NV	50	40000.00	7.722008	20	PASS	
			NV	-30	40000.00	7.662835	20	PASS	
			NV	-20	40000.00	7.662835	20	PASS	
			NV	-10	40000.00	7.662835	20	PASS	
			NV	0	40000.00	7.662835	20	PASS	
			NV	10	40000.00	7.662835	20	PASS	
			NV	20	40000.00	7.662835	20	PASS	
			NV	30	40000.00	7.662835	20	PASS	
		5240	NV	40	40000.00	7.662835	20	PASS	
			NV	50	40000.00	7.662835	20	PASS	
			NV	-30	40000.00	7.633588	20	PASS	
			NV	-20	40000.00	7.633588	20	PASS	
			NV	-10	40000.00	7.633588	20	PASS	
			NV	0	40000.00	7.633588	20	PASS	
			NV	10	40000.00	7.633588	20	PASS	
			NV	20	40000.00	7.633588	20	PASS	
		5745	NV	30	40000.00	7.633588	20	PASS	
			NV	40	40000.00	7.633588	20	PASS	
			NV	50	40000.00	7.633588	20	PASS	
			NV	-30	40000.00	6.962576	20	PASS	
			NV	-20	40000.00	6.962576	20	PASS	
			NV	-10	40000.00	6.962576	20	PASS	
			NV	0	40000.00	6.962576	20	PASS	
			NV	10	40000.00	6.962576	20	PASS	
		5785	NV	20	40000.00	6.962576	20	PASS	
			NV	30	40000.00	6.962576	20	PASS	
			NV	40	40000.00	6.962576	20	PASS	
			NV	50	40000.00	6.962576	20	PASS	
			NV	-30	40000.00	6.914434	20	PASS	
			NV	-20	40000.00	6.914434	20	PASS	
			NV	-10	40000.00	6.914434	20	PASS	
			NV	0	40000.00	6.914434	20	PASS	
		5825	NV	10	40000.00	6.914434	20	PASS	
			NV	20	40000.00	6.914434	20	PASS	
			NV	30	40000.00	6.914434	20	PASS	
			NV	40	40000.00	6.914434	20	PASS	
			NV	50	40000.00	6.914434	20	PASS	
			NV	-30	40000.00	6.866953	20	PASS	
		5825	NV	-20	40000.00	6.866953	20	PASS	
			NV	-10	40000.00	6.866953	20	PASS	
NV	0		40000.00	6.866953	20	PASS			
NV	10		40000.00	6.866953	20	PASS			
NV	20		40000.00	6.866953	20	PASS			
NV	20		40000.00	6.866953	20	PASS			



11N20SISO	Ant1		NV	30	40000.00	6.866953	20	PASS
			NV	40	40000.00	6.866953	20	PASS
			NV	50	40000.00	6.866953	20	PASS
		5180	NV	-30	40000.00	7.722008	20	PASS
			NV	-20	40000.00	7.722008	20	PASS
			NV	-10	40000.00	7.722008	20	PASS
			NV	0	40000.00	7.722008	20	PASS
			NV	10	40000.00	7.722008	20	PASS
			NV	20	40000.00	7.722008	20	PASS
			NV	30	40000.00	7.722008	20	PASS
			NV	40	40000.00	7.722008	20	PASS
			NV	50	40000.00	7.722008	20	PASS
			5220	NV	-30	40000.00	7.662835	20
		NV		-20	40000.00	7.662835	20	PASS
		NV		-10	40000.00	7.662835	20	PASS
		NV		0	40000.00	7.662835	20	PASS
		NV		10	40000.00	7.662835	20	PASS
		NV		20	40000.00	7.662835	20	PASS
		NV		30	40000.00	7.662835	20	PASS
		NV		40	40000.00	7.662835	20	PASS
		NV		50	40000.00	7.662835	20	PASS
		5240		NV	-30	40000.00	7.633588	20
			NV	-20	40000.00	7.633588	20	PASS
			NV	-10	40000.00	7.633588	20	PASS
			NV	0	40000.00	7.633588	20	PASS
			NV	10	40000.00	7.633588	20	PASS
			NV	20	40000.00	7.633588	20	PASS
			NV	30	40000.00	7.633588	20	PASS
			NV	40	40000.00	7.633588	20	PASS
			NV	50	40000.00	7.633588	20	PASS
			5745	NV	-30	40000.00	6.962576	20
		NV		-20	40000.00	6.962576	20	PASS
		NV		-10	40000.00	6.962576	20	PASS
		NV		0	40000.00	6.962576	20	PASS
		NV		10	40000.00	6.962576	20	PASS
		NV		20	40000.00	6.962576	20	PASS
		NV		30	40000.00	6.962576	20	PASS
		NV		40	40000.00	6.962576	20	PASS
		NV		50	40000.00	6.962576	20	PASS
		5785		NV	-30	40000.00	6.914434	20
			NV	-20	40000.00	6.914434	20	PASS
			NV	-10	40000.00	6.914434	20	PASS
			NV	0	40000.00	6.914434	20	PASS
			NV	10	40000.00	6.914434	20	PASS
			NV	20	40000.00	6.914434	20	PASS
			NV	30	40000.00	6.914434	20	PASS
			NV	40	40000.00	6.914434	20	PASS
			NV	50	40000.00	6.914434	20	PASS
5825	NV		-30	40000.00	6.866953	20	PASS	
	NV	-20	40000.00	6.866953	20	PASS		
	NV	-10	40000.00	6.866953	20	PASS		
	NV	0	40000.00	6.866953	20	PASS		
	NV	10	40000.00	6.866953	20	PASS		
	NV	20	40000.00	6.866953	20	PASS		
	NV	30	40000.00	6.866953	20	PASS		
	NV	40	40000.00	6.866953	20	PASS		



11N40SISO	Ant1	5190	NV	50	40000.00	6.866953	20	PASS		
			NV	-30	40000.00	7.707129	20	PASS		
			NV	-20	40000.00	7.707129	20	PASS		
			NV	-10	40000.00	7.707129	20	PASS		
			NV	0	40000.00	7.707129	20	PASS		
			NV	10	40000.00	7.707129	20	PASS		
			NV	20	40000.00	7.707129	20	PASS		
			NV	30	40000.00	7.707129	20	PASS		
		5230	NV	40	40000.00	7.707129	20	PASS		
			NV	50	40000.00	7.707129	20	PASS		
			NV	-30	40000.00	7.648184	20	PASS		
			NV	-20	40000.00	7.648184	20	PASS		
			NV	-10	40000.00	7.648184	20	PASS		
			NV	0	40000.00	7.648184	20	PASS		
			NV	10	40000.00	7.648184	20	PASS		
			NV	20	40000.00	7.648184	20	PASS		
		5755	NV	30	40000.00	7.648184	20	PASS		
			NV	40	40000.00	7.648184	20	PASS		
			NV	50	40000.00	7.648184	20	PASS		
			NV	-30	40000.00	6.950478	20	PASS		
			NV	-20	40000.00	6.950478	20	PASS		
			NV	-10	40000.00	6.950478	20	PASS		
			NV	0	40000.00	6.950478	20	PASS		
			NV	10	40000.00	6.950478	20	PASS		
		5795	NV	20	40000.00	6.950478	20	PASS		
			NV	30	40000.00	6.950478	20	PASS		
			NV	40	40000.00	6.950478	20	PASS		
			NV	50	40000.00	6.950478	20	PASS		
			NV	-30	40000.00	6.902502	20	PASS		
			NV	-20	40000.00	6.902502	20	PASS		
			NV	-10	40000.00	6.902502	20	PASS		
			NV	0	40000.00	6.902502	20	PASS		
		11AC20SISO	Ant1	5180	NV	10	40000.00	6.902502	20	PASS
					NV	20	40000.00	6.902502	20	PASS
					NV	30	40000.00	6.902502	20	PASS
NV	40				40000.00	6.902502	20	PASS		
NV	50				40000.00	6.902502	20	PASS		
NV	-30				40000.00	7.722008	20	PASS		
NV	-20				40000.00	7.722008	20	PASS		
NV	-10				40000.00	7.722008	20	PASS		
5220	NV			0	40000.00	7.722008	20	PASS		
	NV			10	40000.00	7.722008	20	PASS		
	NV			20	40000.00	7.722008	20	PASS		
	NV			30	40000.00	7.722008	20	PASS		
	NV			40	40000.00	7.722008	20	PASS		
	NV			50	40000.00	7.722008	20	PASS		
	NV			-30	40000.00	7.662835	20	PASS		
5240	NV	-20	40000.00	7.662835	20	PASS				
	NV	-10	40000.00	7.662835	20	PASS				
	NV	0	40000.00	7.662835	20	PASS				
	NV	10	40000.00	7.662835	20	PASS				
	NV	20	40000.00	7.662835	20	PASS				
	NV	30	40000.00	7.662835	20	PASS				
	NV	40	40000.00	7.662835	20	PASS				
NV	50	40000.00	7.662835	20	PASS					
NV	-30	40000.00	7.633588	20	PASS					



			NV	-20	40000.00	7.633588	20	PASS		
			NV	-10	40000.00	7.633588	20	PASS		
			NV	0	40000.00	7.633588	20	PASS		
			NV	10	40000.00	7.633588	20	PASS		
			NV	20	40000.00	7.633588	20	PASS		
			NV	30	40000.00	7.633588	20	PASS		
			NV	40	40000.00	7.633588	20	PASS		
			NV	50	40000.00	7.633588	20	PASS		
		5745	NV	-30	40000.00	6.962576	20	PASS		
			NV	-20	40000.00	6.962576	20	PASS		
			NV	-10	40000.00	6.962576	20	PASS		
			NV	0	40000.00	6.962576	20	PASS		
			NV	10	40000.00	6.962576	20	PASS		
			NV	20	40000.00	6.962576	20	PASS		
			NV	30	40000.00	6.962576	20	PASS		
			NV	40	40000.00	6.962576	20	PASS		
		5785	NV	50	40000.00	6.962576	20	PASS		
			NV	-30	40000.00	6.914434	20	PASS		
			NV	-20	40000.00	6.914434	20	PASS		
			NV	-10	40000.00	6.914434	20	PASS		
			NV	0	40000.00	6.914434	20	PASS		
			NV	10	40000.00	6.914434	20	PASS		
			NV	20	40000.00	6.914434	20	PASS		
			NV	30	40000.00	6.914434	20	PASS		
		5825	NV	40	40000.00	6.914434	20	PASS		
			NV	50	40000.00	6.914434	20	PASS		
			NV	-30	40000.00	6.866953	20	PASS		
			NV	-20	40000.00	6.866953	20	PASS		
			NV	-10	40000.00	6.866953	20	PASS		
			NV	0	40000.00	6.866953	20	PASS		
			NV	10	40000.00	6.866953	20	PASS		
			NV	20	40000.00	6.866953	20	PASS		
		11AC40SIS O	Ant1	5190	NV	30	40000.00	6.866953	20	PASS
					NV	40	40000.00	6.866953	20	PASS
					NV	50	40000.00	6.866953	20	PASS
					NV	-30	40000.00	7.707129	20	PASS
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					NV	0	40000.00	7.707129	20	PASS
					NV	10	40000.00	7.707129	20	PASS
				5230	NV	20	40000.00	7.707129	20	PASS
					NV	30	40000.00	7.707129	20	PASS
NV	40				40000.00	7.707129	20	PASS		
NV	50				40000.00	7.707129	20	PASS		
NV	-30				40000.00	7.648184	20	PASS		
NV	-20				40000.00	7.648184	20	PASS		
NV	-10				40000.00	7.648184	20	PASS		
NV	0	40000.00	7.648184		20	PASS				
5755	NV	10	40000.00	7.648184	20	PASS				
	NV	20	40000.00	7.648184	20	PASS				
	NV	30	40000.00	7.648184	20	PASS				
	NV	40	40000.00	7.648184	20	PASS				
	NV	50	40000.00	7.648184	20	PASS				
			NV	-30	40000.00	6.950478	20	PASS		
			NV	-20	40000.00	6.950478	20	PASS		
			NV	-10	40000.00	6.950478	20	PASS		



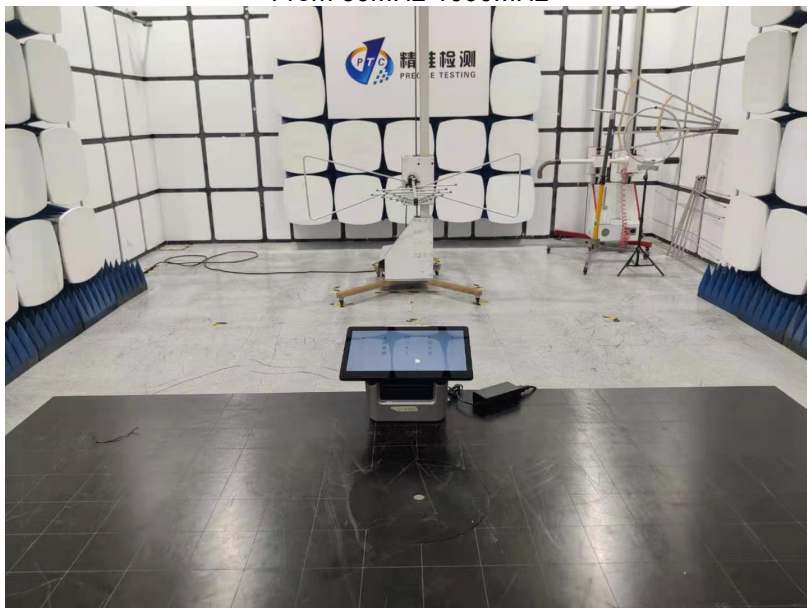
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			NV	10	40000.00	6.950478	20	PASS
			NV	20	40000.00	6.950478	20	PASS
			NV	30	40000.00	6.950478	20	PASS
			NV	40	40000.00	6.950478	20	PASS
			NV	50	40000.00	6.950478	20	PASS
		5795	NV	-30	40000.00	6.902502	20	PASS
			NV	-20	40000.00	6.902502	20	PASS
			NV	-10	40000.00	6.902502	20	PASS
			NV	0	40000.00	6.902502	20	PASS
			NV	10	40000.00	6.902502	20	PASS
			NV	20	40000.00	6.902502	20	PASS
			NV	30	40000.00	6.902502	20	PASS
			NV	40	40000.00	6.902502	20	PASS
11AC80SIS O	Ant1	5210	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	0.00	0.000000	20	PASS
		5775	NV	50	0.00	0.000000	20	PASS
			NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS

11 Test Setup

Conducted Emissions

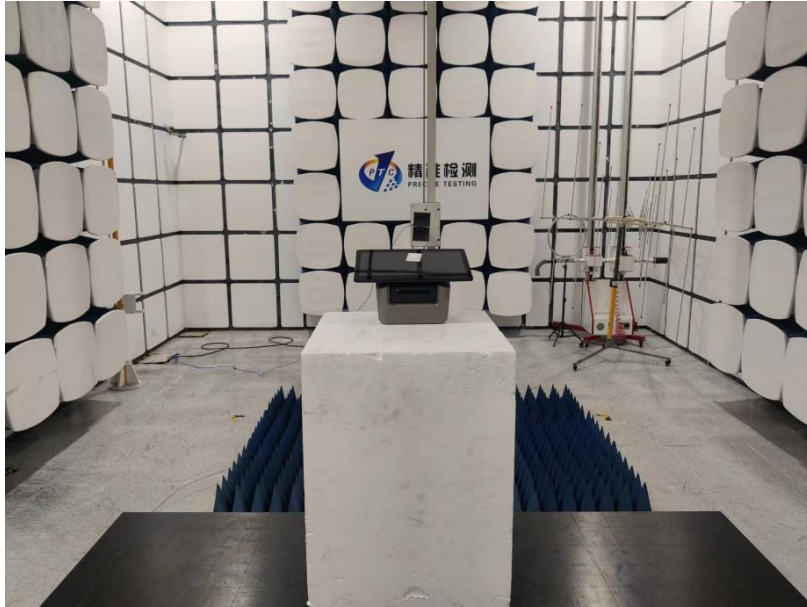


Radiated Spurious Emissions
From 30MHz-1000MHz



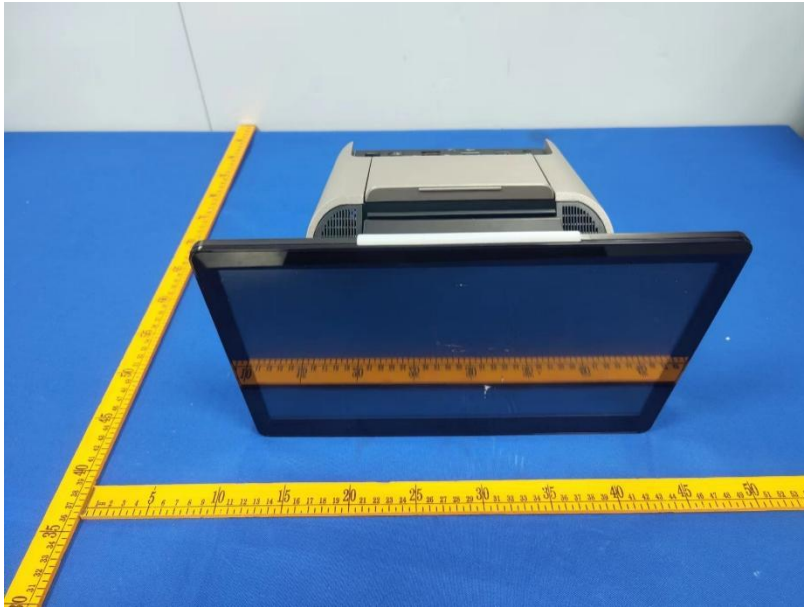


Test frequency from Above 1GHz

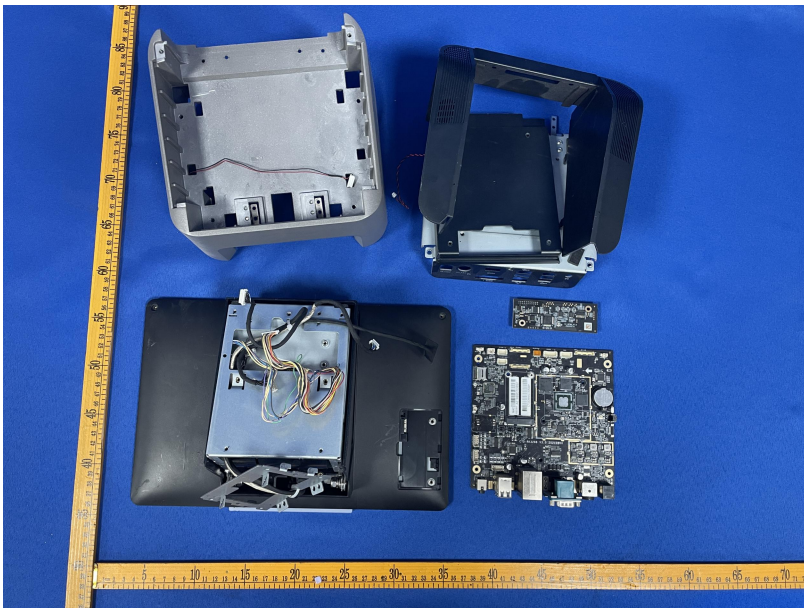


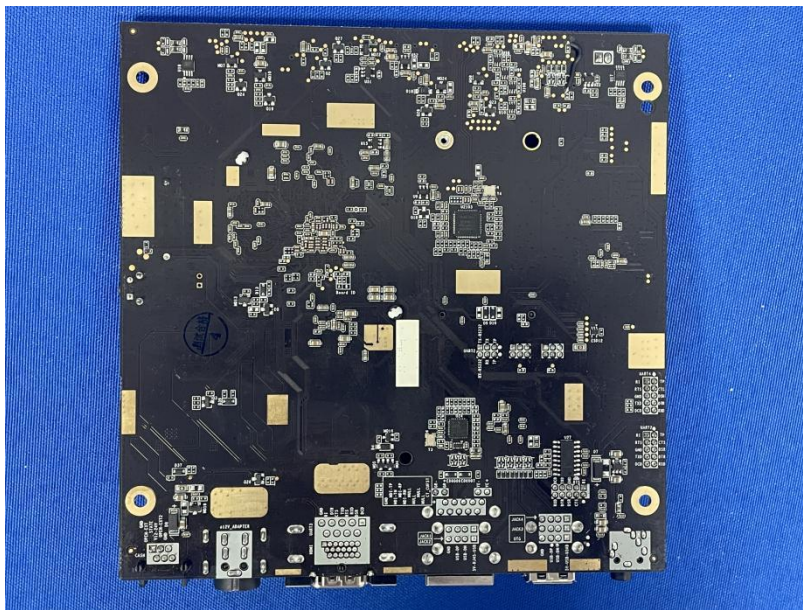
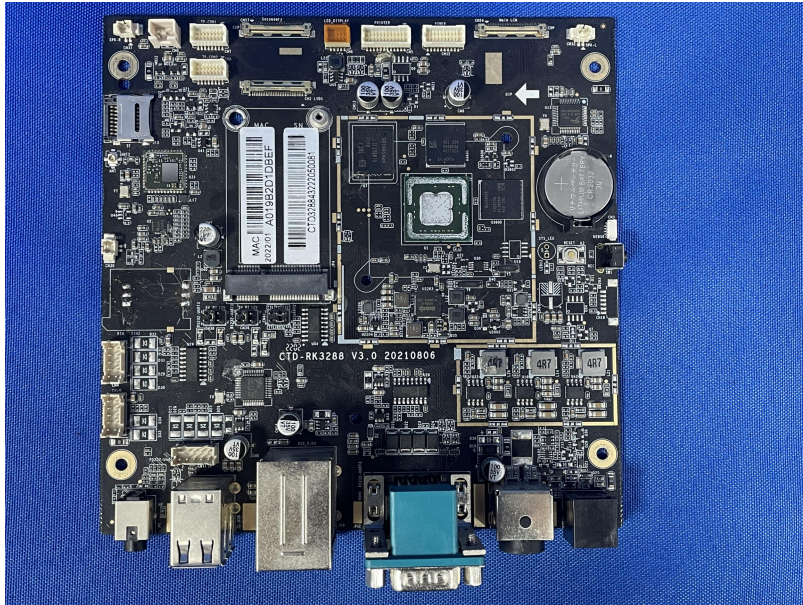
12 EUT PHOTOS

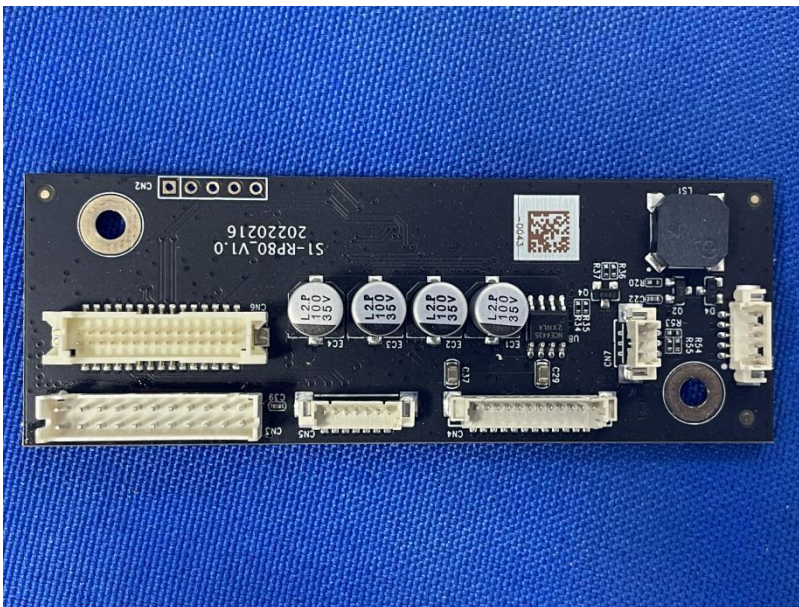
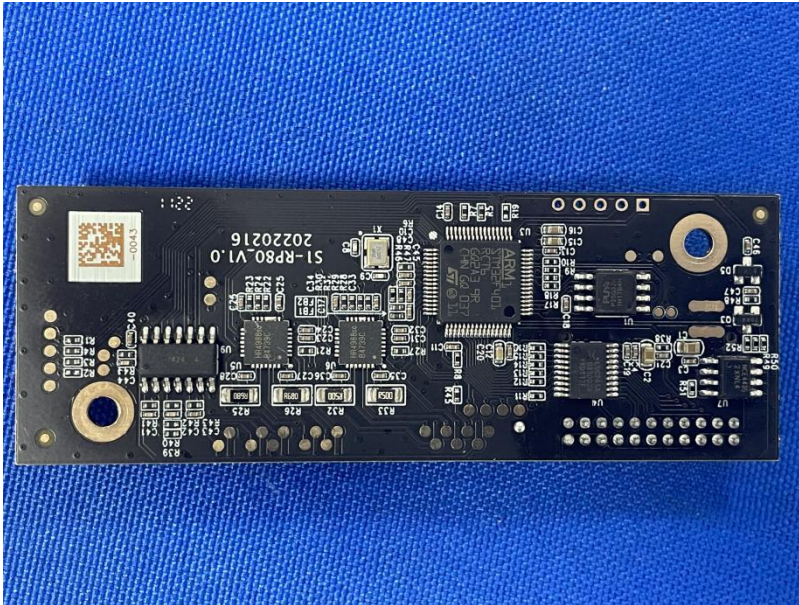














*******THE END REPORT*******