







11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5220



11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5260













11AC40SISO_Ant1_5270



11AC40SISO_Ant1_5310



11AC40SISO_Ant1_5510



11AC40SISO_Ant1_5550



11AC40SISO_Ant1_5670



11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210





11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5775



8.4 FREQUENCY STABILITY

8.4.1 Applicable Standard

According to FCC Part 15.407(g)
ANSI C63.10 Section 6.8

8.4.2 Conformance 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 users manual.

8.4.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.4.4 Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 10 kHz.

Set Span= Entire absence of modulation emissions band

Set the video bandwidth (VBW) =30 kHz. width

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

Allow the trace to stabilize.

The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

Beginning at each temperature level specified in user manual , the frequency shall be measured within one minute after application of primary power to the transmitter and at intervals of no more than one minute thereafter until ten minutes have elapsed or until sufficient measurements are obtained to indicate clearly that the frequency has stabilized within the applicable tolerance, whichever time period is greater. During each test, the ambient temperature shall not be allowed to rise more than 10° centigrade above the respective beginning ambient temperature level

Measure and record the results in the test report.

8.4.5 Test Results

Voltage								
TestMode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	-20000.00	-3.861004	20	PASS
			LV	NT	-20000.00	-3.861004	20	PASS
			HV	NT	-20000.00	-3.861004	20	PASS
		5220	NV	NT	-20000.00	-3.831418	20	PASS
			LV	NT	-20000.00	-3.831418	20	PASS
			HV	NT	-20000.00	-3.831418	20	PASS
		5240	NV	NT	-40000.00	-7.633588	20	PASS
			LV	NT	-20000.00	-3.816794	20	PASS
			HV	NT	-20000.00	-3.816794	20	PASS
		5260	NV	NT	-20000.00	-3.802281	20	PASS
			LV	NT	-20000.00	-3.802281	20	PASS
			HV	NT	-20000.00	-3.802281	20	PASS
5300	NV	NT	-20000.00	-3.773585	20	PASS		
	LV	NT	-20000.00	-3.773585	20	PASS		

			HV	NT	-20000.00	-3.773585	20	PASS	
			5320	NV	NT	-20000.00	-3.759398	20	PASS
				LV	NT	-20000.00	-3.759398	20	PASS
				HV	NT	-20000.00	-3.759398	20	PASS
			5500	NV	NT	-20000.00	-3.636364	20	PASS
				LV	NT	-20000.00	-3.636364	20	PASS
				HV	NT	-20000.00	-3.636364	20	PASS
			5580	NV	NT	-20000.00	-3.584229	20	PASS
				LV	NT	-40000.00	-7.168459	20	PASS
				HV	NT	-20000.00	-3.584229	20	PASS
			5700	NV	NT	-20000.00	-3.508772	20	PASS
				LV	NT	-20000.00	-3.508772	20	PASS
				HV	NT	-20000.00	-3.508772	20	PASS
			5745	NV	NT	-20000.00	-3.481288	20	PASS
				LV	NT	-20000.00	-3.481288	20	PASS
				HV	NT	-20000.00	-3.481288	20	PASS
			5785	NV	NT	-20000.00	-3.457217	20	PASS
				LV	NT	-20000.00	-3.457217	20	PASS
				HV	NT	-20000.00	-3.457217	20	PASS
			5825	NV	NT	-20000.00	-3.433476	20	PASS
				LV	NT	-20000.00	-3.433476	20	PASS
				HV	NT	-20000.00	-3.433476	20	PASS
			5180	NV	NT	-40000.00	-7.722008	20	PASS
				LV	NT	-40000.00	-7.722008	20	PASS
				HV	NT	-40000.00	-7.722008	20	PASS
			5220	NV	NT	-40000.00	-7.662835	20	PASS
				LV	NT	-20000.00	-3.831418	20	PASS
				HV	NT	-40000.00	-7.662835	20	PASS
			5240	NV	NT	-40000.00	-7.633588	20	PASS
				LV	NT	-40000.00	-7.633588	20	PASS
				HV	NT	-40000.00	-7.633588	20	PASS
			5260	NV	NT	-40000.00	-7.604563	20	PASS
				LV	NT	-40000.00	-7.604563	20	PASS
				HV	NT	-40000.00	-7.604563	20	PASS
			5300	NV	NT	-20000.00	-3.773585	20	PASS
				LV	NT	-40000.00	-7.547170	20	PASS
HV	NT	-20000.00		-3.773585	20	PASS			
5320	NV	NT	-20000.00	-3.759398	20	PASS			
	LV	NT	-40000.00	-7.518797	20	PASS			
	HV	NT	-40000.00	-7.518797	20	PASS			
5500	NV	NT	-40000.00	-7.272727	20	PASS			
	LV	NT	-40000.00	-7.272727	20	PASS			
	HV	NT	-40000.00	-7.272727	20	PASS			
5580	NV	NT	-40000.00	-7.168459	20	PASS			
	LV	NT	-40000.00	-7.168459	20	PASS			
	HV	NT	-40000.00	-7.168459	20	PASS			
5700	NV	NT	-40000.00	-7.017544	20	PASS			
	LV	NT	-40000.00	-7.017544	20	PASS			
	HV	NT	-40000.00	-7.017544	20	PASS			
5745	NV	NT	-40000.00	-6.962576	20	PASS			
	LV	NT	-40000.00	-6.962576	20	PASS			
	HV	NT	-40000.00	-6.962576	20	PASS			
5785	NV	NT	-40000.00	-6.914434	20	PASS			
	LV	NT	-40000.00	-6.914434	20	PASS			
	HV	NT	-40000.00	-6.914434	20	PASS			

		5825	NV	NT	-40000.00	-6.866953	20	PASS		
			LV	NT	-40000.00	-6.866953	20	PASS		
			HV	NT	-20000.00	-3.433476	20	PASS		
		11N40SISO	Ant1	5190	NV	NT	0.00	0.000000	20	PASS
					LV	NT	0.00	0.000000	20	PASS
					HV	NT	0.00	0.000000	20	PASS
				5230	NV	NT	0.00	0.000000	20	PASS
					LV	NT	-40000.00	-7.648184	20	PASS
					HV	NT	0.00	0.000000	20	PASS
5270	NV			NT	-40000.00	-7.590133	20	PASS		
	LV			NT	-80000.00	-15.180266	20	PASS		
	HV			NT	-40000.00	-7.590133	20	PASS		
5310	NV	NT	-80000.00	-15.065913	20	PASS				
	LV	NT	-40000.00	-7.532957	20	PASS				
	HV	NT	-40000.00	-7.532957	20	PASS				
5510	NV	NT	-40000.00	-7.259528	20	PASS				
	LV	NT	-40000.00	-7.259528	20	PASS				
	HV	NT	-40000.00	-7.259528	20	PASS				
5550	NV	NT	0.00	0.000000	20	PASS				
	LV	NT	0.00	0.000000	20	PASS				
	HV	NT	0.00	0.000000	20	PASS				
5670	NV	NT	0.00	0.000000	20	PASS				
	LV	NT	-40000.00	-7.054674	20	PASS				
	HV	NT	-40000.00	-7.054674	20	PASS				
5755	NV	NT	-80000.00	-13.900956	20	PASS				
	LV	NT	-40000.00	-6.950478	20	PASS				
	HV	NT	-80000.00	-13.900956	20	PASS				
5795	NV	NT	-40000.00	-6.902502	20	PASS				
	LV	NT	-40000.00	-6.902502	20	PASS				
	HV	NT	0.00	0.000000	20	PASS				
11AC20SISO	Ant1	5180	NV	NT	-40000.00	-7.722008	20	PASS		
			LV	NT	-40000.00	-7.722008	20	PASS		
			HV	NT	-40000.00	-7.722008	20	PASS		
		5220	NV	NT	-40000.00	-7.662835	20	PASS		
			LV	NT	-40000.00	-7.662835	20	PASS		
			HV	NT	-40000.00	-7.662835	20	PASS		
		5240	NV	NT	-40000.00	-7.633588	20	PASS		
			LV	NT	-40000.00	-7.633588	20	PASS		
			HV	NT	-40000.00	-7.633588	20	PASS		
		5260	NV	NT	-40000.00	-7.604563	20	PASS		
			LV	NT	-40000.00	-7.604563	20	PASS		
			HV	NT	-40000.00	-7.604563	20	PASS		
		5300	NV	NT	-40000.00	-7.547170	20	PASS		
			LV	NT	-40000.00	-7.547170	20	PASS		
			HV	NT	-40000.00	-7.547170	20	PASS		
		5320	NV	NT	-40000.00	-7.518797	20	PASS		
			LV	NT	-40000.00	-7.518797	20	PASS		
			HV	NT	-40000.00	-7.518797	20	PASS		
		5500	NV	NT	-40000.00	-7.272727	20	PASS		
			LV	NT	-40000.00	-7.272727	20	PASS		
			HV	NT	-40000.00	-7.272727	20	PASS		
		5580	NV	NT	-40000.00	-7.168459	20	PASS		
			LV	NT	-40000.00	-7.168459	20	PASS		
			HV	NT	-40000.00	-7.168459	20	PASS		
		5700	NV	NT	-40000.00	-7.017544	20	PASS		

		5745	LV	NT	-40000.00	-7.017544	20	PASS		
			HV	NT	-40000.00	-7.017544	20	PASS		
			NV	NT	-40000.00	-6.962576	20	PASS		
			LV	NT	-40000.00	-6.962576	20	PASS		
			HV	NT	-40000.00	-6.962576	20	PASS		
			NV	NT	-40000.00	-6.914434	20	PASS		
		5785	LV	NT	-40000.00	-6.914434	20	PASS		
			HV	NT	-40000.00	-6.914434	20	PASS		
			NV	NT	-40000.00	-6.866953	20	PASS		
		5825	LV	NT	-40000.00	-6.866953	20	PASS		
			HV	NT	-40000.00	-6.866953	20	PASS		
			NV	NT	-40000.00	-7.707129	20	PASS		
11AC40SISO	Ant1	5190	LV	NT	0.00	0.000000	20	PASS		
			HV	NT	-40000.00	-7.707129	20	PASS		
			NV	NT	-40000.00	-7.648184	20	PASS		
		5230	LV	NT	-40000.00	-7.648184	20	PASS		
			HV	NT	0.00	0.000000	20	PASS		
			NV	NT	-40000.00	-7.590133	20	PASS		
		5270	LV	NT	-80000.00	-15.180266	20	PASS		
			HV	NT	-40000.00	-7.590133	20	PASS		
			NV	NT	-40000.00	-7.532957	20	PASS		
		5310	LV	NT	-40000.00	-7.532957	20	PASS		
			HV	NT	-80000.00	-15.065913	20	PASS		
			NV	NT	-40000.00	-7.259528	20	PASS		
		5510	LV	NT	-40000.00	-7.259528	20	PASS		
			HV	NT	-40000.00	-7.259528	20	PASS		
			NV	NT	-40000.00	-7.207207	20	PASS		
		5550	LV	NT	0.00	0.000000	20	PASS		
			HV	NT	-40000.00	-7.207207	20	PASS		
			NV	NT	-40000.00	-7.054674	20	PASS		
		5670	LV	NT	0.00	0.000000	20	PASS		
			HV	NT	-40000.00	-7.054674	20	PASS		
			NV	NT	-40000.00	-6.950478	20	PASS		
		5755	LV	NT	-40000.00	-6.950478	20	PASS		
			HV	NT	-40000.00	-6.950478	20	PASS		
			NV	NT	-40000.00	-6.902502	20	PASS		
		5795	LV	NT	-40000.00	-6.902502	20	PASS		
			HV	NT	-40000.00	-6.902502	20	PASS		
			NV	NT	0.00	0.000000	20	PASS		
		11AC80SISO	Ant1	5210	LV	NT	0.00	0.000000	20	PASS
					HV	NT	0.00	0.000000	20	PASS
					NV	NT	0.00	0.000000	20	PASS
5290	LV			NT	-80000.00	-15.122873	20	PASS		
	HV			NT	0.00	0.000000	20	PASS		
	NV			NT	0.00	0.000000	20	PASS		
5530	LV			NT	0.00	0.000000	20	PASS		
	HV			NT	0.00	0.000000	20	PASS		
	NV			NT	0.00	0.000000	20	PASS		
5610	LV	NT	0.00	0.000000	20	PASS				
	HV	NT	-80000.00	-14.260250	20	PASS				
	NV	NT	0.00	0.000000	20	PASS				
5775	LV	NT	-80000.00	-13.852814	20	PASS				
	HV	NT	0.00	0.000000	20	PASS				
	NV	NT	0.00	0.000000	20	PASS				

TestMode	Antenna	Frequency[MHz]	Temperature					Limit (ppm)	Verdict
			Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)		
11A	Ant1	5180	NV	-30	-20000.00	-3.861004	20	PASS	
			NV	-20	-20000.00	-3.861004	20	PASS	
			NV	-10	-20000.00	-3.861004	20	PASS	
			NV	0	-20000.00	-3.861004	20	PASS	
			NV	10	-20000.00	-3.861004	20	PASS	
			NV	20	-20000.00	-3.861004	20	PASS	
			NV	30	-20000.00	-3.861004	20	PASS	
			NV	40	-20000.00	-3.861004	20	PASS	
			NV	50	-20000.00	-3.861004	20	PASS	
		5220	NV	-30	-20000.00	-3.831418	20	PASS	
			NV	-20	-20000.00	-3.831418	20	PASS	
			NV	-10	-20000.00	-3.831418	20	PASS	
			NV	0	-20000.00	-3.831418	20	PASS	
			NV	10	-20000.00	-3.831418	20	PASS	
			NV	20	-40000.00	-7.662835	20	PASS	
			NV	30	-20000.00	-3.831418	20	PASS	
			NV	40	-20000.00	-3.831418	20	PASS	
			NV	50	-20000.00	-3.831418	20	PASS	
		5240	NV	-30	-40000.00	-7.633588	20	PASS	
			NV	-20	-20000.00	-3.816794	20	PASS	
			NV	-10	-20000.00	-3.816794	20	PASS	
			NV	0	-20000.00	-3.816794	20	PASS	
			NV	10	-20000.00	-3.816794	20	PASS	
			NV	20	-20000.00	-3.816794	20	PASS	
			NV	30	-20000.00	-3.816794	20	PASS	
			NV	40	-20000.00	-3.816794	20	PASS	
			NV	50	-20000.00	-3.816794	20	PASS	
		5260	NV	-30	-20000.00	-3.802281	20	PASS	
			NV	-20	-20000.00	-3.802281	20	PASS	
			NV	-10	-20000.00	-3.802281	20	PASS	
			NV	0	-20000.00	-3.802281	20	PASS	
			NV	10	-20000.00	-3.802281	20	PASS	
			NV	20	-20000.00	-3.802281	20	PASS	
			NV	30	-20000.00	-3.802281	20	PASS	
			NV	40	-20000.00	-3.802281	20	PASS	
			NV	50	-20000.00	-3.802281	20	PASS	
		5300	NV	-30	-20000.00	-3.773585	20	PASS	
			NV	-20	-40000.00	-7.547170	20	PASS	
			NV	-10	-20000.00	-3.773585	20	PASS	
			NV	0	-40000.00	-7.547170	20	PASS	
			NV	10	-20000.00	-3.773585	20	PASS	
			NV	20	-20000.00	-3.773585	20	PASS	
			NV	30	-20000.00	-3.773585	20	PASS	
			NV	40	-20000.00	-3.773585	20	PASS	
			NV	50	-20000.00	-3.773585	20	PASS	
		5320	NV	-30	-20000.00	-3.759398	20	PASS	
			NV	-20	-20000.00	-3.759398	20	PASS	
			NV	-10	-20000.00	-3.759398	20	PASS	
			NV	0	-20000.00	-3.759398	20	PASS	
			NV	10	-20000.00	-3.759398	20	PASS	

			NV	20	-20000.00	-3.759398	20	PASS	
			NV	30	-20000.00	-3.759398	20	PASS	
			NV	40	-20000.00	-3.759398	20	PASS	
			NV	50	-20000.00	-3.759398	20	PASS	
		5500	NV	-30	-20000.00	-3.636364	20	PASS	
			NV	-20	-20000.00	-3.636364	20	PASS	
			NV	-10	-20000.00	-3.636364	20	PASS	
			NV	0	-20000.00	-3.636364	20	PASS	
			NV	10	-20000.00	-3.636364	20	PASS	
			NV	20	-40000.00	-7.272727	20	PASS	
			NV	30	-20000.00	-3.636364	20	PASS	
			NV	40	-20000.00	-3.636364	20	PASS	
			NV	50	-20000.00	-3.636364	20	PASS	
			5580	NV	-30	-20000.00	-3.584229	20	PASS
				NV	-20	-20000.00	-3.584229	20	PASS
				NV	-10	-20000.00	-3.584229	20	PASS
		NV		0	-20000.00	-3.584229	20	PASS	
		NV		10	-20000.00	-3.584229	20	PASS	
		NV		20	-20000.00	-3.584229	20	PASS	
		NV		30	-20000.00	-3.584229	20	PASS	
		NV		40	-20000.00	-3.584229	20	PASS	
		5700	NV	-30	-20000.00	-3.508772	20	PASS	
			NV	-20	-20000.00	-3.508772	20	PASS	
			NV	-10	-20000.00	-3.508772	20	PASS	
			NV	0	-20000.00	-3.508772	20	PASS	
			NV	10	-20000.00	-3.508772	20	PASS	
			NV	20	-20000.00	-3.508772	20	PASS	
			NV	30	-20000.00	-3.508772	20	PASS	
			NV	40	-20000.00	-3.508772	20	PASS	
		5745	NV	-30	-60000.00	-10.443864	20	PASS	
			NV	-20	-20000.00	-3.481288	20	PASS	
			NV	-10	-20000.00	-3.481288	20	PASS	
			NV	0	-20000.00	-3.481288	20	PASS	
			NV	10	-20000.00	-3.481288	20	PASS	
			NV	20	-20000.00	-3.481288	20	PASS	
			NV	30	-20000.00	-3.481288	20	PASS	
			NV	40	-20000.00	-3.481288	20	PASS	
		5785	NV	-30	-20000.00	-3.457217	20	PASS	
			NV	-20	-20000.00	-3.457217	20	PASS	
			NV	-10	-20000.00	-3.457217	20	PASS	
			NV	0	-20000.00	-3.457217	20	PASS	
			NV	10	-20000.00	-3.457217	20	PASS	
			NV	20	-20000.00	-3.457217	20	PASS	
			NV	30	-40000.00	-6.914434	20	PASS	
			NV	40	-20000.00	-3.457217	20	PASS	
		5825	NV	-30	-20000.00	-3.433476	20	PASS	
			NV	-20	-20000.00	-3.433476	20	PASS	
			NV	-10	-20000.00	-3.433476	20	PASS	
			NV	0	-20000.00	-3.433476	20	PASS	
			NV	10	-20000.00	-3.433476	20	PASS	
			NV	20	-20000.00	-3.433476	20	PASS	

			NV	30	-20000.00	-3.433476	20	PASS	
			NV	40	-20000.00	-3.433476	20	PASS	
			NV	50	-20000.00	-3.433476	20	PASS	
11N20SISO	Ant1	5180	NV	-30	-40000.00	-7.722008	20	PASS	
			NV	-20	-20000.00	-3.861004	20	PASS	
			NV	-10	-20000.00	-3.861004	20	PASS	
			NV	0	-40000.00	-7.722008	20	PASS	
			NV	10	-20000.00	-3.861004	20	PASS	
			NV	20	-20000.00	-3.861004	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	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	
		NV		40	-40000.00	-7.662835	20	PASS	
		NV		50	-40000.00	-7.662835	20	PASS	
		5240		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	
			5260	NV	-30	-40000.00	-7.604563	20	PASS
				NV	-20	-40000.00	-7.604563	20	PASS
				NV	-10	-20000.00	-3.802281	20	PASS
		NV		0	-40000.00	-7.604563	20	PASS	
		NV		10	-40000.00	-7.604563	20	PASS	
		NV		20	-40000.00	-7.604563	20	PASS	
		NV		30	-20000.00	-3.802281	20	PASS	
		NV		40	-20000.00	-3.802281	20	PASS	
		NV		50	-40000.00	-7.604563	20	PASS	
		5300		NV	-30	-20000.00	-3.773585	20	PASS
				NV	-20	-20000.00	-3.773585	20	PASS
				NV	-10	-40000.00	-7.547170	20	PASS
			NV	0	-40000.00	-7.547170	20	PASS	
			NV	10	-40000.00	-7.547170	20	PASS	
			NV	20	-40000.00	-7.547170	20	PASS	
			NV	30	-20000.00	-3.773585	20	PASS	
			NV	40	-40000.00	-7.547170	20	PASS	
			NV	50	-20000.00	-3.773585	20	PASS	
			5320	NV	-30	-40000.00	-7.518797	20	PASS
				NV	-20	-40000.00	-7.518797	20	PASS
				NV	-10	-40000.00	-7.518797	20	PASS
NV	0	-40000.00		-7.518797	20	PASS			
NV	10	-40000.00		-7.518797	20	PASS			
NV	20	-40000.00		-7.518797	20	PASS			
			NV	30	-40000.00	-7.518797	20	PASS	

			NV	40	-40000.00	-7.518797	20	PASS	
			NV	50	-40000.00	-7.518797	20	PASS	
		5500	NV	-30	-20000.00	-3.636364	20	PASS	
			NV	-20	-40000.00	-7.272727	20	PASS	
			NV	-10	-40000.00	-7.272727	20	PASS	
			NV	0	-40000.00	-7.272727	20	PASS	
			NV	10	-40000.00	-7.272727	20	PASS	
			NV	20	-40000.00	-7.272727	20	PASS	
			NV	30	-40000.00	-7.272727	20	PASS	
			NV	40	-40000.00	-7.272727	20	PASS	
			NV	50	-40000.00	-7.272727	20	PASS	
			5580	NV	-30	-40000.00	-7.168459	20	PASS
				NV	-20	-40000.00	-7.168459	20	PASS
		NV		-10	-40000.00	-7.168459	20	PASS	
		NV		0	-40000.00	-7.168459	20	PASS	
		NV		10	-40000.00	-7.168459	20	PASS	
		NV		20	-40000.00	-7.168459	20	PASS	
		NV		30	-40000.00	-7.168459	20	PASS	
		NV		40	-40000.00	-7.168459	20	PASS	
		NV		50	-40000.00	-7.168459	20	PASS	
		5700	NV	-30	-40000.00	-7.017544	20	PASS	
			NV	-20	-20000.00	-3.508772	20	PASS	
			NV	-10	-40000.00	-7.017544	20	PASS	
			NV	0	-20000.00	-3.508772	20	PASS	
			NV	10	-40000.00	-7.017544	20	PASS	
			NV	20	-40000.00	-7.017544	20	PASS	
			NV	30	-40000.00	-7.017544	20	PASS	
			NV	40	-20000.00	-3.508772	20	PASS	
			NV	50	-40000.00	-7.017544	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	
			NV	50	-40000.00	-6.962576	20	PASS	
		5785	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	-20000.00	-3.457217	20	PASS	
			NV	20	-20000.00	-3.457217	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	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	-40000.00	-7.707129	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	-40000.00	-7.707129	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	-40000.00	-7.707129	20	PASS
		5230	NV	-30	-40000.00	-7.648184	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-40000.00	-7.648184	20	PASS
			NV	0	-40000.00	-7.648184	20	PASS
			NV	10	0.00	0.000000	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
			5270	NV	-30	-40000.00	-7.590133	20
		NV		-20	-80000.00	-15.180266	20	PASS
		NV		-10	-40000.00	-7.590133	20	PASS
		NV		0	-40000.00	-7.590133	20	PASS
		NV		10	-40000.00	-7.590133	20	PASS
		NV		20	0.00	0.000000	20	PASS
		NV		30	-80000.00	-15.180266	20	PASS
		NV		40	-40000.00	-7.590133	20	PASS
		NV		50	-40000.00	-7.590133	20	PASS
		5310		NV	-30	-40000.00	-7.532957	20
			NV	-20	-40000.00	-7.532957	20	PASS
			NV	-10	-40000.00	-7.532957	20	PASS
			NV	0	-40000.00	-7.532957	20	PASS
			NV	10	-40000.00	-7.532957	20	PASS
			NV	20	-80000.00	-15.065913	20	PASS
			NV	30	-40000.00	-7.532957	20	PASS
			NV	40	-40000.00	-7.532957	20	PASS
			NV	50	-40000.00	-7.532957	20	PASS
			5510	NV	-30	0.00	0.000000	20
		NV		-20	0.00	0.000000	20	PASS
		NV		-10	-40000.00	-7.259528	20	PASS
		NV		0	-40000.00	-7.259528	20	PASS
		NV		10	-40000.00	-7.259528	20	PASS
		NV		20	-40000.00	-7.259528	20	PASS
		NV		30	0.00	0.000000	20	PASS
		NV		40	-40000.00	-7.259528	20	PASS
		NV		50	0.00	0.000000	20	PASS
		5550		NV	-30	0.00	0.000000	20
			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		-40000.00	-7.207207	20	PASS		
NV	20		-40000.00	-7.207207	20	PASS		
NV	30		-40000.00	-7.207207	20	PASS		
NV	40		0.00	0.000000	20	PASS		
NV	50		0.00	0.000000	20	PASS		

		5670	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	-40000.00	-7.054674	20	PASS		
			NV	30	-40000.00	-7.054674	20	PASS		
			NV	40	0.00	0.000000	20	PASS		
			NV	50	0.00	0.000000	20	PASS		
		5755	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	0.00	0.000000	20	PASS		
			NV	20	0.00	0.000000	20	PASS		
			NV	30	-40000.00	-6.950478	20	PASS		
			NV	40	-40000.00	-6.950478	20	PASS		
			NV	50	-80000.00	-13.900956	20	PASS		
		5795	NV	-30	-40000.00	-6.902502	20	PASS		
			NV	-20	-40000.00	-6.902502	20	PASS		
			NV	-10	-80000.00	-13.805004	20	PASS		
			NV	0	-40000.00	-6.902502	20	PASS		
			NV	10	-80000.00	-13.805004	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	-80000.00	-13.805004	20	PASS		
		11AC20SISO	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
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					NV	30	-40000.00	-7.722008	20	PASS
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					NV	50	-40000.00	-7.722008	20	PASS
5220	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		
	NV			40	-40000.00	-7.662835	20	PASS		
	NV			50	-40000.00	-7.662835	20	PASS		
5240	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		
5260	NV			-30	-40000.00	-7.604563	20	PASS		

			NV	-20	-40000.00	-7.604563	20	PASS
			NV	-10	-40000.00	-7.604563	20	PASS
			NV	0	-40000.00	-7.604563	20	PASS
			NV	10	-40000.00	-7.604563	20	PASS
			NV	20	-40000.00	-7.604563	20	PASS
			NV	30	-20000.00	-3.802281	20	PASS
			NV	40	-40000.00	-7.604563	20	PASS
			NV	50	-40000.00	-7.604563	20	PASS
		5300	NV	-30	-40000.00	-7.547170	20	PASS
		5300	NV	-20	-40000.00	-7.547170	20	PASS
		5300	NV	-10	-40000.00	-7.547170	20	PASS
		5300	NV	0	-40000.00	-7.547170	20	PASS
		5300	NV	10	-40000.00	-7.547170	20	PASS
		5300	NV	20	-40000.00	-7.547170	20	PASS
		5300	NV	30	-40000.00	-7.547170	20	PASS
		5300	NV	40	-60000.00	-11.320755	20	PASS
		5300	NV	50	-40000.00	-7.547170	20	PASS
		5320	NV	-30	-40000.00	-7.518797	20	PASS
		5320	NV	-20	-40000.00	-7.518797	20	PASS
		5320	NV	-10	-40000.00	-7.518797	20	PASS
		5320	NV	0	-40000.00	-7.518797	20	PASS
		5320	NV	10	-40000.00	-7.518797	20	PASS
		5320	NV	20	-40000.00	-7.518797	20	PASS
		5320	NV	30	-40000.00	-7.518797	20	PASS
		5320	NV	40	-40000.00	-7.518797	20	PASS
		5320	NV	50	-40000.00	-7.518797	20	PASS
		5500	NV	-30	-40000.00	-7.272727	20	PASS
		5500	NV	-20	-40000.00	-7.272727	20	PASS
		5500	NV	-10	-40000.00	-7.272727	20	PASS
		5500	NV	0	-40000.00	-7.272727	20	PASS
		5500	NV	10	-40000.00	-7.272727	20	PASS
		5500	NV	20	-40000.00	-7.272727	20	PASS
		5500	NV	30	-40000.00	-7.272727	20	PASS
		5500	NV	40	-40000.00	-7.272727	20	PASS
		5500	NV	50	-40000.00	-7.272727	20	PASS
		5580	NV	-30	-40000.00	-7.168459	20	PASS
		5580	NV	-20	-40000.00	-7.168459	20	PASS
		5580	NV	-10	-40000.00	-7.168459	20	PASS
		5580	NV	0	-40000.00	-7.168459	20	PASS
		5580	NV	10	-40000.00	-7.168459	20	PASS
		5580	NV	20	-40000.00	-7.168459	20	PASS
		5580	NV	30	-40000.00	-7.168459	20	PASS
		5580	NV	40	-20000.00	-3.584229	20	PASS
		5580	NV	50	-40000.00	-7.168459	20	PASS
		5700	NV	-30	-40000.00	-7.017544	20	PASS
		5700	NV	-20	-40000.00	-7.017544	20	PASS
		5700	NV	-10	-40000.00	-7.017544	20	PASS
		5700	NV	0	-40000.00	-7.017544	20	PASS
		5700	NV	10	-40000.00	-7.017544	20	PASS
		5700	NV	20	-40000.00	-7.017544	20	PASS
		5700	NV	30	-40000.00	-7.017544	20	PASS
		5700	NV	40	-40000.00	-7.017544	20	PASS
		5700	NV	50	-40000.00	-7.017544	20	PASS
		5745	NV	-30	-20000.00	-3.481288	20	PASS
		5745	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	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		
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			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		
		11AC40SISO	Ant1	5190	NV	20	-40000.00	-6.866953	20	PASS
					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	0.00	0.000000	20	PASS
					NV	-20	-80000.00	-15.414258	20	PASS
					NV	-10	-40000.00	-7.707129	20	PASS
				5230	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	-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
				5270	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				
NV	30	-40000.00	-7.648184		20	PASS				
NV	40	-80000.00	-15.296367		20	PASS				
5310	NV	50	0.00	0.000000	20	PASS				
	NV	-30	-40000.00	-7.590133	20	PASS				
	NV	-20	-40000.00	-7.590133	20	PASS				
	NV	-10	-80000.00	-15.180266	20	PASS				
	NV	0	-40000.00	-7.590133	20	PASS				
	NV	10	-40000.00	-7.590133	20	PASS				
	NV	20	-40000.00	-7.590133	20	PASS				
			NV	30	-40000.00	-7.590133	20	PASS		
			NV	40	-40000.00	-7.590133	20	PASS		
			NV	50	-80000.00	-15.180266	20	PASS		
			NV	-30	0.00	0.000000	20	PASS		
			NV	-20	-40000.00	-7.532957	20	PASS		
			NV	-10	-40000.00	-7.532957	20	PASS		

		5510	NV	0	-40000.00	-7.532957	20	PASS		
			NV	10	-40000.00	-7.532957	20	PASS		
			NV	20	-40000.00	-7.532957	20	PASS		
			NV	30	-40000.00	-7.532957	20	PASS		
			NV	40	-40000.00	-7.532957	20	PASS		
			NV	50	-40000.00	-7.532957	20	PASS		
		5550	NV	-30	-80000.00	-14.519056	20	PASS		
			NV	-20	-80000.00	-14.519056	20	PASS		
			NV	-10	-80000.00	-14.519056	20	PASS		
			NV	0	-40000.00	-7.259528	20	PASS		
			NV	10	-40000.00	-7.259528	20	PASS		
			NV	20	-40000.00	-7.259528	20	PASS		
			NV	30	-40000.00	-7.259528	20	PASS		
			NV	40	-40000.00	-7.259528	20	PASS		
		5670	NV	-30	-40000.00	-7.207207	20	PASS		
			NV	-20	0.00	0.000000	20	PASS		
			NV	-10	-40000.00	-7.207207	20	PASS		
			NV	0	0.00	0.000000	20	PASS		
			NV	10	-40000.00	-7.207207	20	PASS		
			NV	20	0.00	0.000000	20	PASS		
			NV	30	-40000.00	-7.207207	20	PASS		
			NV	40	0.00	0.000000	20	PASS		
		5755	NV	-30	-40000.00	-7.054674	20	PASS		
			NV	-20	0.00	0.000000	20	PASS		
			NV	-10	-40000.00	-7.054674	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	-40000.00	-7.054674	20	PASS		
			NV	40	-40000.00	-7.054674	20	PASS		
		5795	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	0.00	0.000000	20	PASS		
			NV	10	-80000.00	-13.900956	20	PASS		
			NV	20	0.00	0.000000	20	PASS		
			NV	30	-40000.00	-6.950478	20	PASS		
			NV	40	-40000.00	-6.950478	20	PASS		
		5210	NV	-30	-80000.00	-13.805004	20	PASS		
			NV	-20	0.00	0.000000	20	PASS		
			NV	-10	-40000.00	-6.902502	20	PASS		
			NV	0	-40000.00	-6.902502	20	PASS		
		11AC80SISO	Ant1	5210	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
		11AC80SISO	Ant1	5210	NV	50	0.00	0.000000	20	PASS
					NV	-30	0.00	0.000000	20	PASS
NV	-20				-80000.00	-15.355086	20	PASS		
NV	-10				0.00	0.000000	20	PASS		
11AC80SISO	Ant1	5210	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
		5290	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
			5530	NV	-30	0.00	0.000000	20
		NV		-20	0.00	0.000000	20	PASS
		NV		-10	80000.00	14.466546	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
		5610		NV	-30	0.00	0.000000	20
			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
			5775	NV	-30	0.00	0.000000	20
		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

8.5 UNDESIRABLE RADIATED SPURIOUS EMISSION

8.5.1 Applicable Standard

According to FCC Part 15.407 (b)
According to 789033 D02 Section II(G)

8.5.2 Conformance Limit

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209 The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

Restricted Frequency(MHz)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB $\mu\text{V/m}$)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	2400/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The provisions of §15.205 apply to intentional radiators operating under this section, 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

- Remark:
1. Emission level in $\text{dBuV/m} = 20 \log(\mu\text{V/m})$
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

8.5.3 Test Configuration

Test according to clause 6.2 radio frequency test setup

8.5.4 Test Procedure

■ Unwanted Emissions Measurements below 1000 MHz

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

The EUT was placed on a turn table which is 0.8m above ground plane.

And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Repeat above procedures until all frequency measured was complete.

We use software control the EUT, Let EUT hopping on and transmit with highest power, All the modes have been tested and the worst result was reported.

Use the following spectrum analyzer settings:

Set RBW=120kHz for $f < 1 \text{ GHz}$ (30MHz to 1GHz), 200Hz for $f < 150\text{KHz}$ (9KHz to 150KHz), 9KHz for $< 30\text{MHz}$

(150KHz to 30KHz).

Set the VBW > RBW.

Detector = Peak.

Trace mode = max hold.

Follow the guidelines in ANSI C63.10-2013 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Repeat above procedures until all frequency measured was complete.

■ Unwanted Maximum peak Emissions Measurements above 1000 MHz

Maximum emission levels are measured by setting the analyzer as follows:

RBW = 1 MHz.

VBW \geq 3 MHz.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately $1/x$, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

■ Unwanted Average Emissions Measurements above 1000 MHz

Method VB (Averaging using reduced video bandwidth): Alternative method.

RBW = 1 MHz.

Video bandwidth. • If the EUT is configured to transmit with duty cycle \geq 98 percent, set $\text{VBW} \leq \text{RBW}/100$ (i.e., 10 kHz) but not less than 10 Hz.

• If the EUT duty cycle is $<$ 98 percent, set $\text{VBW} \geq 1/T$, where T is defined in section II.B.1.a).

Video bandwidth mode or display mode • The instrument shall be set to ensure that video filtering is applied in the power domain. Typically, this requires setting the detector mode to RMS and setting the Average-VBW Type to Power (RMS).

• As an alternative, the analyzer may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some analyzers require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage"

regardless of the display mode.

Detector = Peak.

Sweep time = auto.

Trace mode = max hold.

Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 percent duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of $1/x$, where x is the duty cycle. For example, use at least 200 traces if the duty cycle is 25 percent. (If a specific emission is demonstrated to be continuous—i.e., 100 percent duty cycle—rather than turning on and off with the transmit cycle, at least 50 traces shall be averaged.)

■ Band edge measurements.

Unwanted band-edge emissions may be measured using either of the special band-edge measurement techniques (the marker-delta or integration methods) described below. Note that the marker-delta method is primarily a radiated measurement technique that requires the 99% occupied bandwidth edge to be within 2 MHz of the authorized band edge, whereas the integration method can be used in either a radiated or conducted measurement without any special requirement with regards to the displacement of the unwanted emission(s) relative to the authorized bandwidth.

Marker-Delta Method.

The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

8.5.5 Test Results

The voltage 120V & 240V and the modes 802.11a/n/ac has been tested and the worst result recorded as below:

- For Undesirable radiated Spurious Emission in U-NII – 1
All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:
- : Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode:		802.11a		Frequency(MHz): 5180	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5447.752	V	48.53	-46.7	-27	-19.7
10964.61	V	54.15	-41.08	-27	-14.08
17919.53	V	64.26	-30.97	-27	-3.97
5483.296	H	46.89	-48.34	-27	-21.34
10893.53	H	54.05	-41.18	-27	-14.18
17989.59	H	63.89	-31.34	-27	-4.34

Test mode:		802.11a		Frequency(MHz): 5200	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5414.003	V	46.83	-48.4	-27	-21.4
11169.32	V	54.87	-40.36	-27	-13.36
17981.80	V	64.39	-30.84	-27	-3.84
5544.654	H	46.95	-48.28	-27	-21.28
11129.04	H	53.98	-41.25	-27	-14.25
17984.39	H	64.23	-31	-27	-4

Test mode:		802.11a		Frequency(MHz): 5240	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5527.054	V	47.10	-48.13	-27	-21.13
10295.04	V	52.72	-42.51	-27	-15.51
17963.61	V	64.28	-30.95	-27	-3.95
5630.247	H	47.05	-48.18	-27	-21.18
10693.87	H	53.01	-42.22	-27	-15.22
17997.39	H	63.99	-31.24	-27	-4.24

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 5180					
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5447.752	V	48.53	74.00	-25.47	peak
5447.752	V	30.42	54.00	-23.58	AVG
10964.61	V	54.15	74.00	-19.85	peak
10964.61	V	36.29	54.00	-17.71	AVG
17919.53	V	64.26	74.00	-9.74	peak
17919.53	V	46.36	54.00	-7.64	AVG
5483.296	H	46.89	74.00	-27.11	peak
5483.296	H	28.39	54.00	-25.61	AVG
10893.53	H	54.05	74.00	-19.95	peak
10893.53	H	36.72	54.00	-17.28	AVG
17989.59	H	63.89	74.00	-10.11	peak
17989.59	H	45.38	54.00	-8.62	AVG

Frequency: 5200					
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5414.003	V	46.83	74.00	-27.17	peak
5414.003	V	28.75	54.00	-25.25	AVG
11169.32	V	54.87	74.00	-19.13	peak
11169.32	V	36.81	54.00	-17.19	AVG
17981.80	V	64.39	74.00	-9.61	peak
17981.8	V	46.33	54.00	-7.67	AVG
5544.654	H	46.95	74.00	-27.05	peak
5544.654	H	28.89	54.00	-25.11	AVG
11129.04	H	53.98	74.00	-20.02	peak
11129.04	H	35.71	54.00	-18.29	AVG
17984.39	H	64.23	74.00	-9.77	peak
17984.39	H	46.38	54.00	-7.62	AVG

Frequency: 5240					
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5527.054	V	47.10	74.00	-26.90	peak
5527.054	V	30.14	54.00	-23.86	AVG
10295.04	V	52.72	74.00	-21.28	peak
10295.04	V	34.15	54.00	-19.85	AVG
17963.61	V	64.28	74.00	-9.72	peak
17963.61	V	46.33	54.00	-7.67	AVG
5630.247	H	47.05	74.00	-26.95	peak
5630.247	H	30.19	54.00	-23.81	AVG
10693.87	H	53.01	74.00	-20.99	peak
10693.87	H	35.08	54.00	-18.92	AVG
17997.39	H	63.99	74.00	-10.01	peak
17997.39	H	45.39	54.00	-8.61	AVG

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5145.092	H	59.25	-35.98	-27	Pass
5146.717	V	58.59	-36.64	-27	Pass

Test mode: 802.11a Frequency(MHz): 5240

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5358.266	H	59.71	-35.52	-27	Pass
5350.407	V	59.67	-35.56	-27	Pass

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency(MHz): 5180

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5146.717	V	58.59	74.00	-15.41	peak
5146.717	V	40.55	54.00	-13.45	AVG
5145.092	H	59.25	74.00	-14.75	peak
5145.092	H	42.36	54.00	-11.64	AVG

Test mode: 802.11a Frequency(MHz): 5240

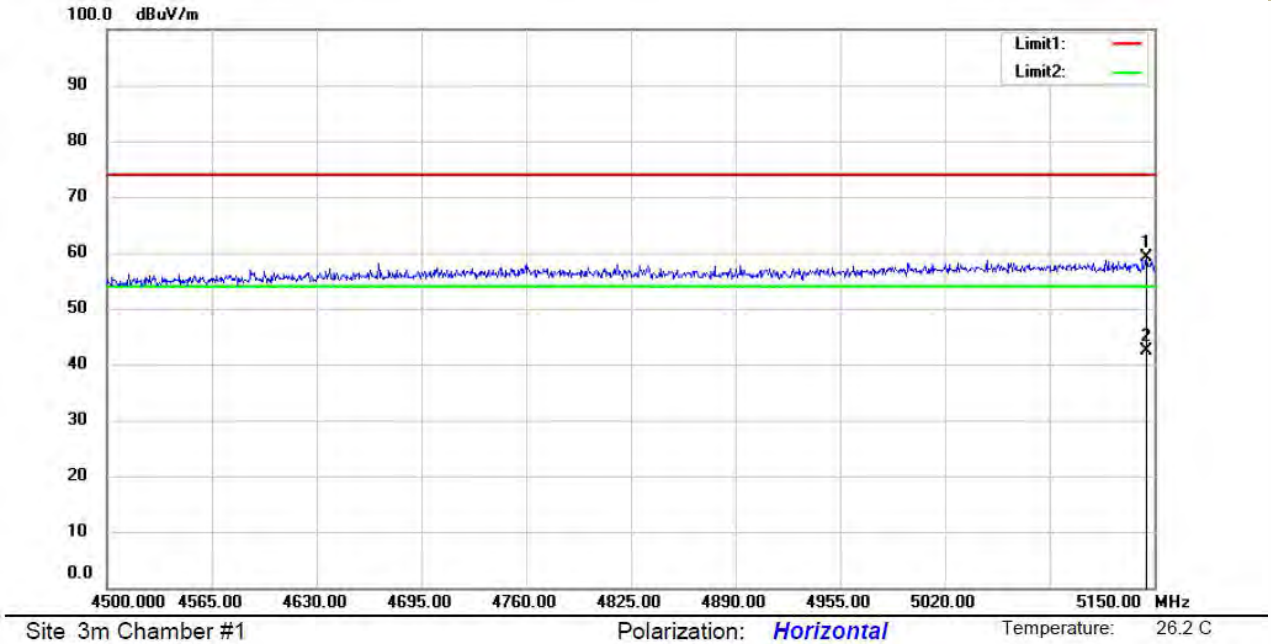
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5350.407	V	59.67	74.00	-14.33	peak
5350.407	V	41.66	54.00	-12.34	AVG
5358.266	H	59.71	74.00	-14.29	peak
5358.266	H	41.79	54.00	-12.21	AVG

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

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Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

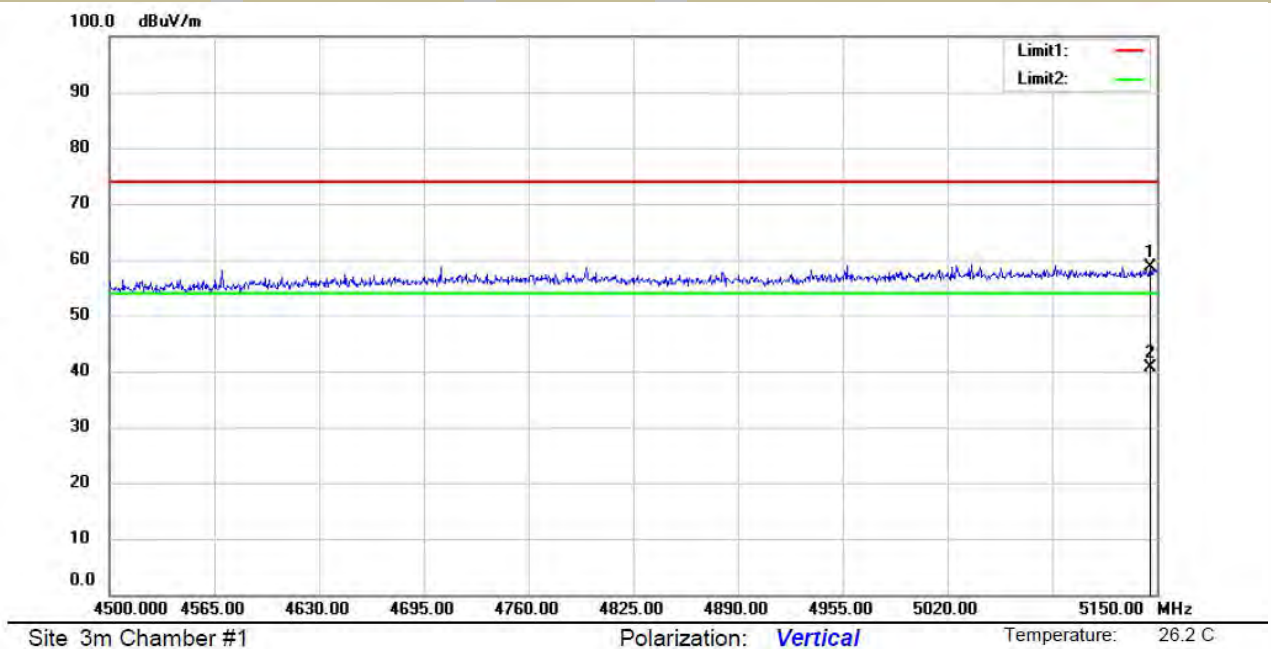
802.11a 802.11n(HT20) 802.11n(HT40)
 5180 5200 5240 Ant.Pol H



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Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

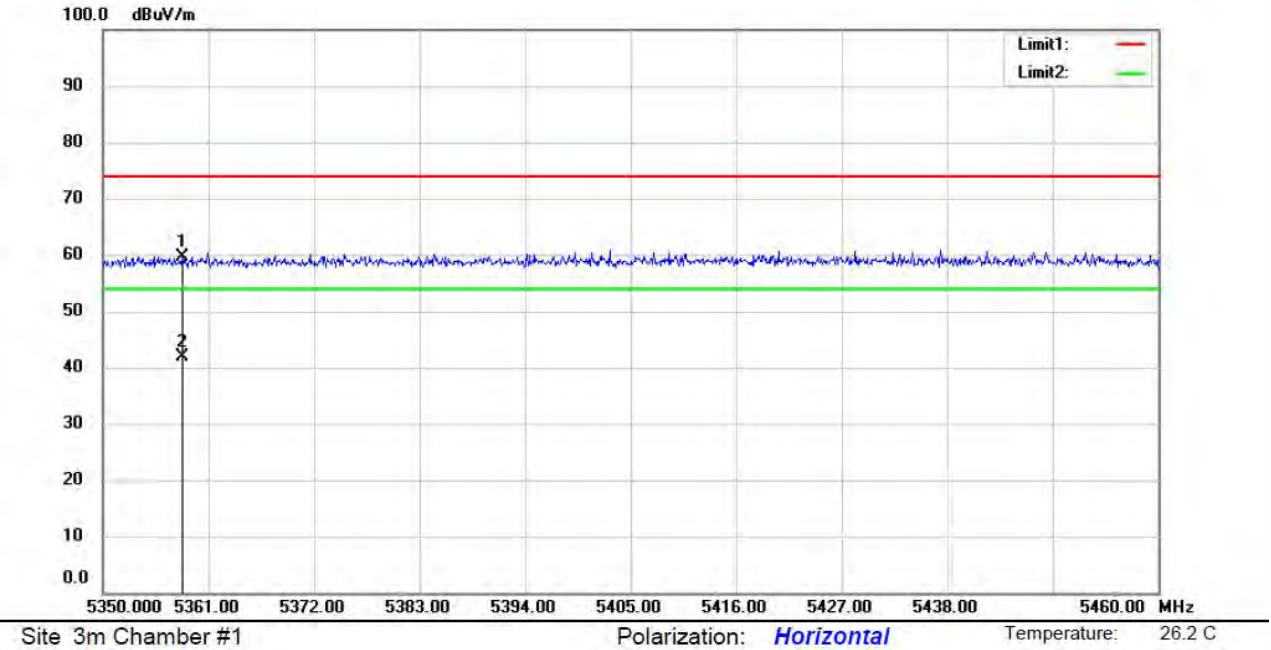
802.11a 802.11n(HT20) 802.11n(HT40)
 5180 5200 5240 Ant.Pol V



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Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

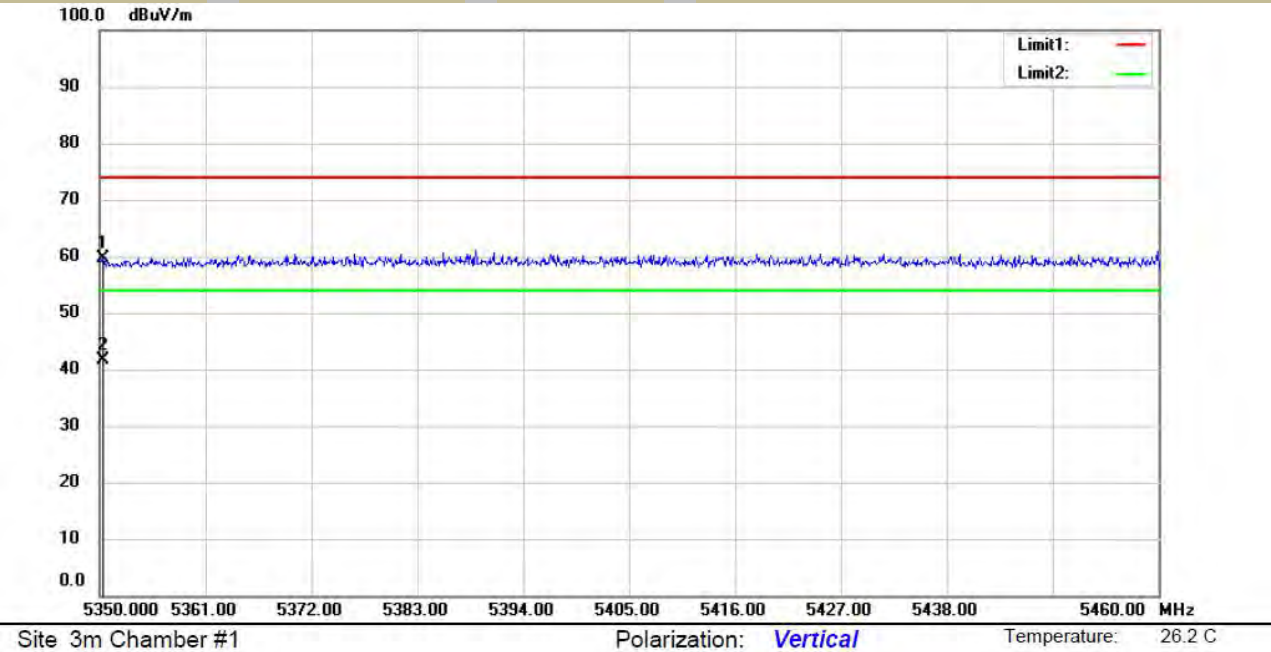
802.11a 802.11n(HT20) 802.11n(HT40)
 5180 5200 5240 Ant.Pol H



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Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

802.11a 802.11n(HT20) 802.11n(HT40)
 5180 5200 5240 Ant.Pol V



- For Undesirable radiated Spurious Emission in U-NII -2A
All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:
- : Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode: 802.11a Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5740.342	V	50.02	-45.21	-27	-18.21
10757.42	V	53.96	-41.27	-27	-14.27
17994.79	V	64.05	-31.18	-27	-4.18
5673.537	H	47.59	-47.64	-27	-20.64
11743.72	H	54.27	-40.96	-27	-13.96
17989.59	H	64.11	-31.12	-27	-4.12

Test mode: 802.11a Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5403.060	V	47.03	-48.2	-27	-21.2
12203.96	V	54.98	-40.25	-27	-13.25
17984.39	V	64.16	-31.07	-27	-4.07
5461.942	H	47.47	-47.76	-27	-20.76
11145.14	H	55.18	-40.05	-27	-13.05
17981.80	H	64.12	-31.11	-27	-4.11

Test mode: 802.11a Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5439.885	V	46.91	-48.32	-27	-21.32
11137.09	V	53.82	-41.41	-27	-14.41
17862.65	V	64.05	-31.18	-27	-4.18
5397.597	H	47.00	-48.23	-27	-21.23
10673.80	H	53.63	-41.6	-27	-14.6
17994.79	H	63.82	-31.41	-27	-4.41

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 802.11a		Frequency(MHz): 5260			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5740.342	V	50.02	74.00	-23.98	peak
5740.342	V	32.29	54.00	-21.71	AVG
10757.42	V	53.96	74.00	-20.04	peak
10757.42	V	35.71	54.00	-18.29	AVG
17994.79	V	64.05	74.00	-9.95	peak
17994.79	V	46.33	54.00	-7.67	AVG
5673.537	H	47.59	74.00	-26.41	peak
5673.537	H	30.18	54.00	-23.82	AVG
11743.72	H	54.27	74.00	-19.73	peak
11743.72	H	36.29	54.00	-17.71	AVG
17989.59	H	64.11	74.00	-9.89	peak
17989.59	H	46.33	54.00	-7.67	AVG

Frequency: 802.11a		Frequency(MHz): 5280			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5403.060	V	47.03	74.00	-26.97	peak
5403.060	V	30.23	54.00	-23.77	AVG
12203.96	V	54.98	74.00	-19.02	peak
12203.96	V	36.81	54.00	-17.19	AVG
17984.39	V	64.16	74.00	-9.84	peak
17984.39	V	46.73	54.00	-7.27	AVG
5461.942	H	47.47	74.00	-26.53	peak
5461.942	H	30.29	54.00	-23.71	AVG
11145.14	H	55.18	74.00	-18.82	peak
11145.14	H	38.26	54.00	-15.74	AVG
17981.80	H	64.12	74.00	-9.88	peak
17981.8	H	46.71	54.00	-7.29	AVG

Frequency: 802.11a		Frequency(MHz): 5320			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5439.885	V	46.91	74.00	-27.09	peak
5439.885	V	28.99	54.00	-25.01	AVG
11137.09	V	53.82	74.00	-20.18	peak
11137.09	V	35.78	54.00	-18.22	AVG
17862.65	V	64.05	74.00	-9.95	peak
17862.65	V	46.38	54.00	-7.62	AVG
5397.597	H	47.00	74.00	-27.00	peak
5397.597	H	29.93	54.00	-24.07	AVG
10673.80	H	53.63	74.00	-20.37	peak
10673.80	H	35.72	54.00	-18.28	AVG
17994.79	H	63.82	74.00	-10.18	peak
17994.79	H	45.36	54.00	-8.64	AVG

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5140.055	H	58.77	-36.46	-27	Pass
5121.140	V	58.47	-36.76	-27	Pass

Test mode: 802.11a Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5354.582	H	59.79	-35.44	-27	Pass
5359.548	V	59.56	-35.67	-27	Pass

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5121.140	V	58.47	74.00	-15.53	peak
5121.140	V	41.38	54.00	-12.62	AVG
5140.055	H	58.77	74.00	-15.23	peak
5140.055	H	41.82	54.00	-12.18	AVG

Test mode: 802.11a Frequency(MHz): 5320

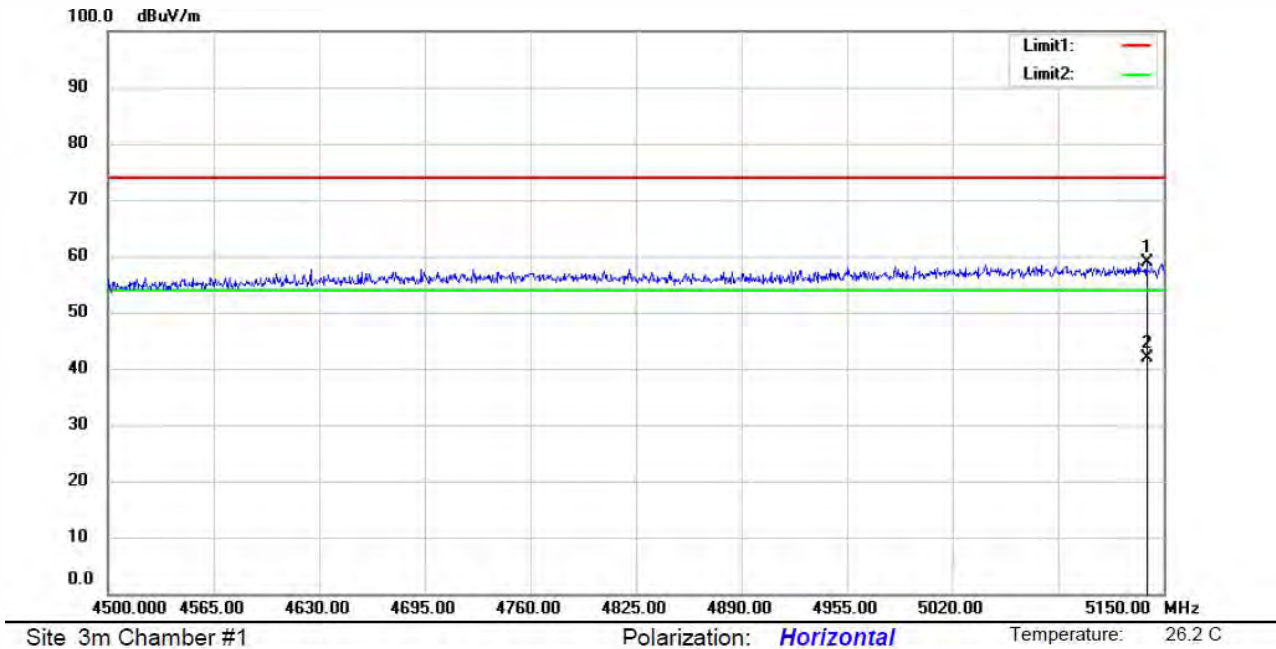
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5359.548	V	59.56	74.00	-14.44	peak
5359.548	V	41.36	54.00	-12.64	AVG
5354.582	H	59.79	74.00	-14.21	peak
5354.582	H	41.92	54.00	-12.08	AVG

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

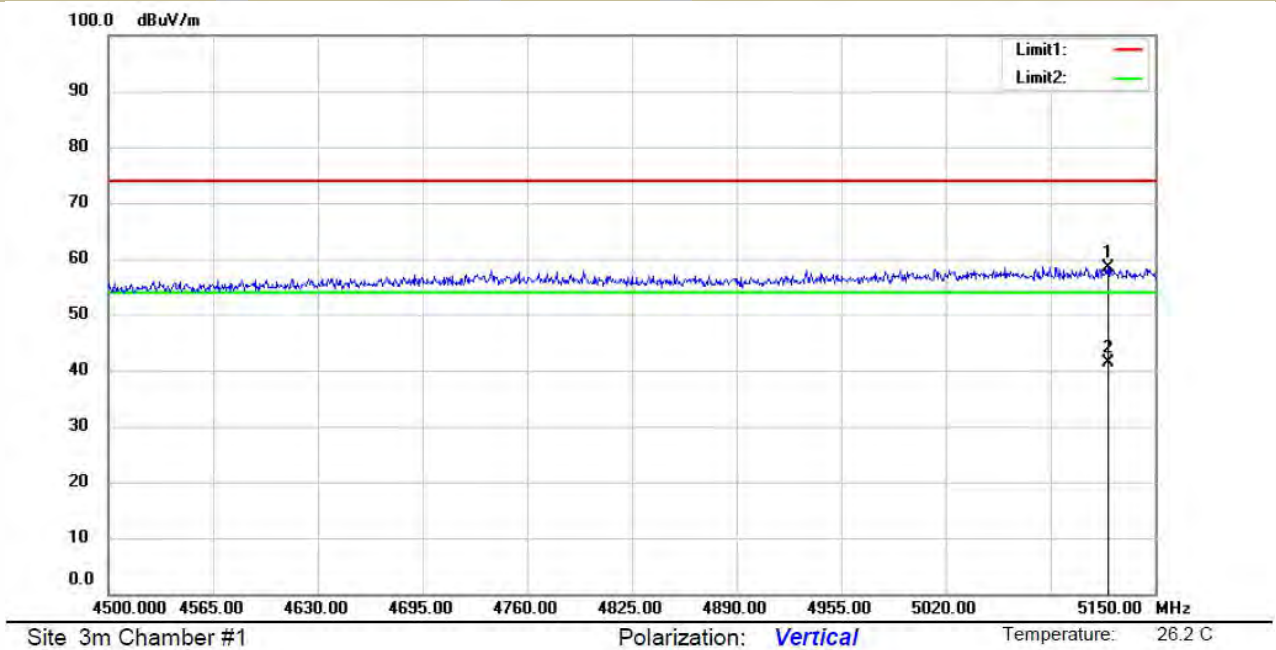
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5260 5300 5320 Ant.Pol H



U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

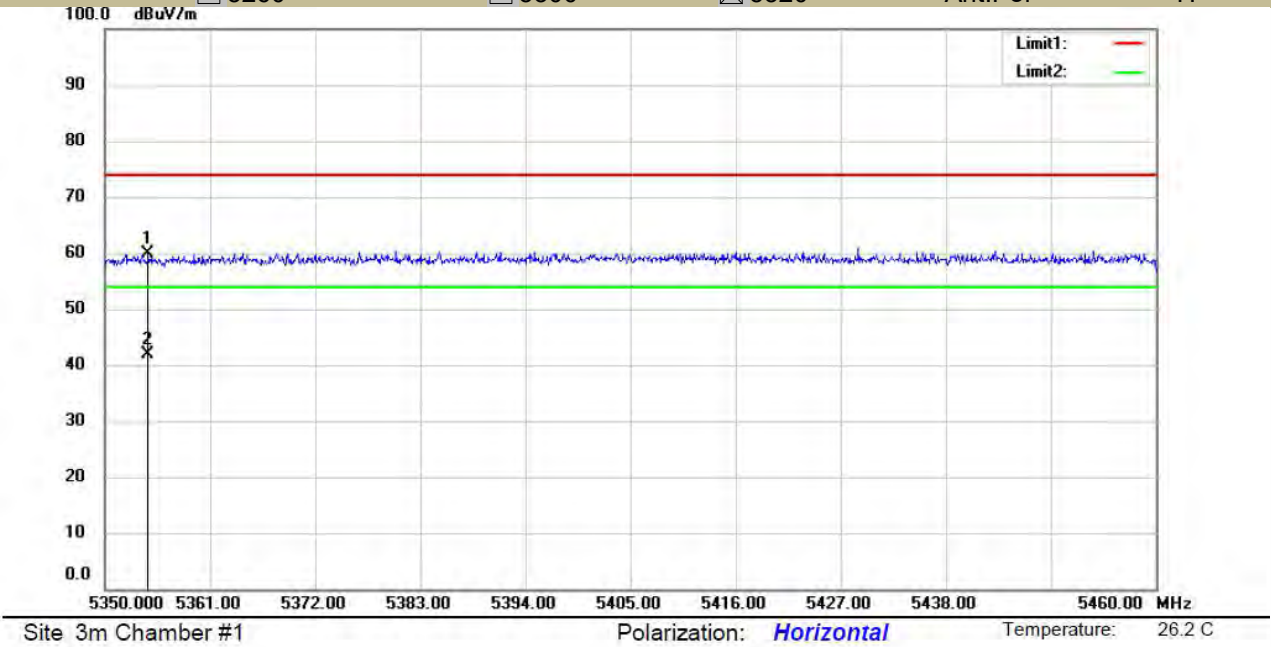
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5260 5300 5320 Ant.Pol V



U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

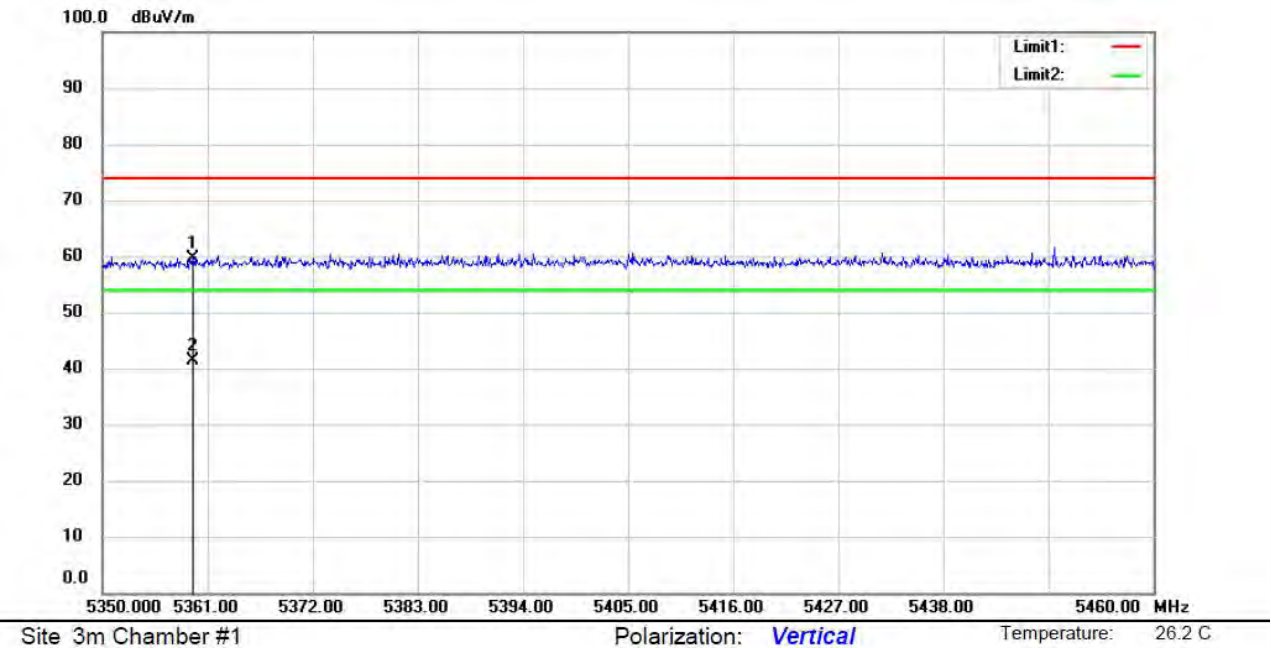
5260 802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5300 5320 Ant.Pol H



U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5260 802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5300 5320 Ant.Pol V



- For Undesirable radiated Spurious Emission in U-NII -2C
All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:
- : Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode:		802.11a		Frequency(MHz):		5500	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
5396.037	V	46.58	-48.65	-27	-21.65		
11135.48	V	54.61	-40.62	-27	-13.62		
17994.79	V	63.99	-31.24	-27	-4.24		
5460.363	H	46.99	-48.24	-27	-21.24		
11090.51	H	54.91	-40.32	-27	-13.32		
17986.99	H	64.65	-30.58	-27	-3.58		

Test mode:		802.11a		Frequency(MHz):		5580	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
5595.367	V	46.73	-48.5	-27	-21.5		
11104.94	V	53.63	-41.6	-27	-14.6		
17981.80	V	64.00	-31.23	-27	-4.23		
5586.479	H	47.21	-48.02	-27	-21.02		
10945.61	H	54.31	-40.92	-27	-13.92		
17994.79	H	64.86	-30.37	-27	-3.37		

Test mode:		802.11a		Frequency(MHz):		5700	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
5596.176	V	46.91	-48.32	-27	-21.32		
10715.53	V	54.69	-40.54	-27	-13.54		
17919.53	V	64.74	-30.49	-27	-3.49		
5531.049	H	47.15	-48.08	-27	-21.08		
11117.79	H	54.20	-41.03	-27	-14.03		
17883.32	H	63.79	-31.44	-27	-4.44		

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 802.11a		Frequency(MHz): 5500			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5396.037	V	46.58	74.00	-27.42	peak
5396.037	V	28.45	54.00	-25.55	AVG
11135.48	V	54.61	74.00	-19.39	peak
11135.48	V	36.57	54.00	-17.43	AVG
17994.79	V	63.99	74.00	-10.01	peak
17994.79	V	45.38	54.00	-8.62	AVG
5460.363	H	46.99	74.00	-27.01	peak
5460.363	H	28.71	54.00	-25.29	AVG
11090.51	H	54.91	74.00	-19.09	peak
11090.51	H	36.84	54.00	-17.16	AVG
17986.99	H	64.65	74.00	-9.35	peak
17986.99	H	46.29	54.00	-7.71	AVG

Frequency: 802.11a		Frequency(MHz): 5580			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5595.367	V	46.73	74.00	-27.27	peak
5595.367	V	28.93	54.00	-25.07	AVG
11104.94	V	53.63	74.00	-20.37	peak
11104.94	V	35.18	54.00	-18.82	AVG
17981.80	V	64.00	74.00	-10.00	peak
17981.8	V	46.23	54.00	-7.77	AVG
5586.479	H	47.21	74.00	-26.79	peak
5586.479	H	30.29	54.00	-23.71	AVG
10945.61	H	54.31	74.00	-19.69	peak
10945.61	H	36.38	54.00	-17.62	AVG
17994.79	H	64.86	74.00	-9.14	peak
17994.79	H	46.72	54.00	-7.28	AVG

Frequency: 802.11a		Frequency(MHz): 5700			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5596.176	V	46.91	74.00	-27.09	peak
5596.176	V	28.64	54.00	-25.36	AVG
10715.53	V	54.69	74.00	-19.31	peak
10715.53	V	36.88	54.00	-17.12	AVG
17919.53	V	64.74	74.00	-9.26	peak
17919.53	V	46.79	54.00	-7.21	AVG
5531.049	H	47.15	74.00	-26.85	peak
5531.049	H	30.38	54.00	-23.62	AVG
11117.79	H	54.20	74.00	-19.80	peak
11117.79	H	36.29	54.00	-17.71	AVG
17883.32	H	63.79	74.00	-10.21	peak
17883.32	H	45.71	54.00	-8.29	AVG

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11a Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5466.917	H	60.17	-35.06	-27	Pass
5467.703	V	59.81	-35.42	-27	Pass

Test mode: 802.11a Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5728.100	H	60.44	-34.79	-27	Pass
5729.510	V	59.64	-35.59	-27	Pass

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11a Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5467.703	V	59.81	74.00	-14.19	peak
5467.703	V	41.83	54.00	-12.17	AVG
5466.917	H	60.17	74.00	-13.83	peak
5466.917	H	42.22	54.00	-11.78	AVG

Test mode: 802.11a Frequency(MHz): 5700

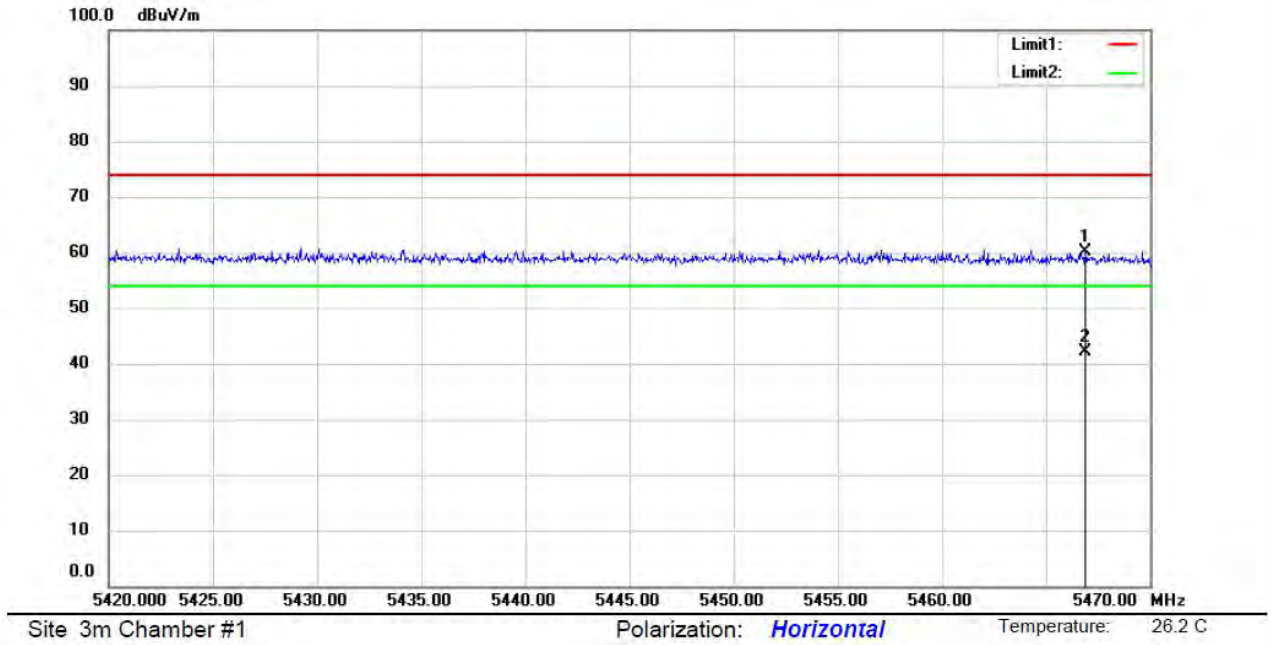
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5729.510	V	59.64	74.00	-14.36	peak
5729.510	V	41.19	54.00	-12.81	AVG
5728.100	H	60.44	74.00	-13.56	peak
5728.100	H	42.45	54.00	-11.55	AVG

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

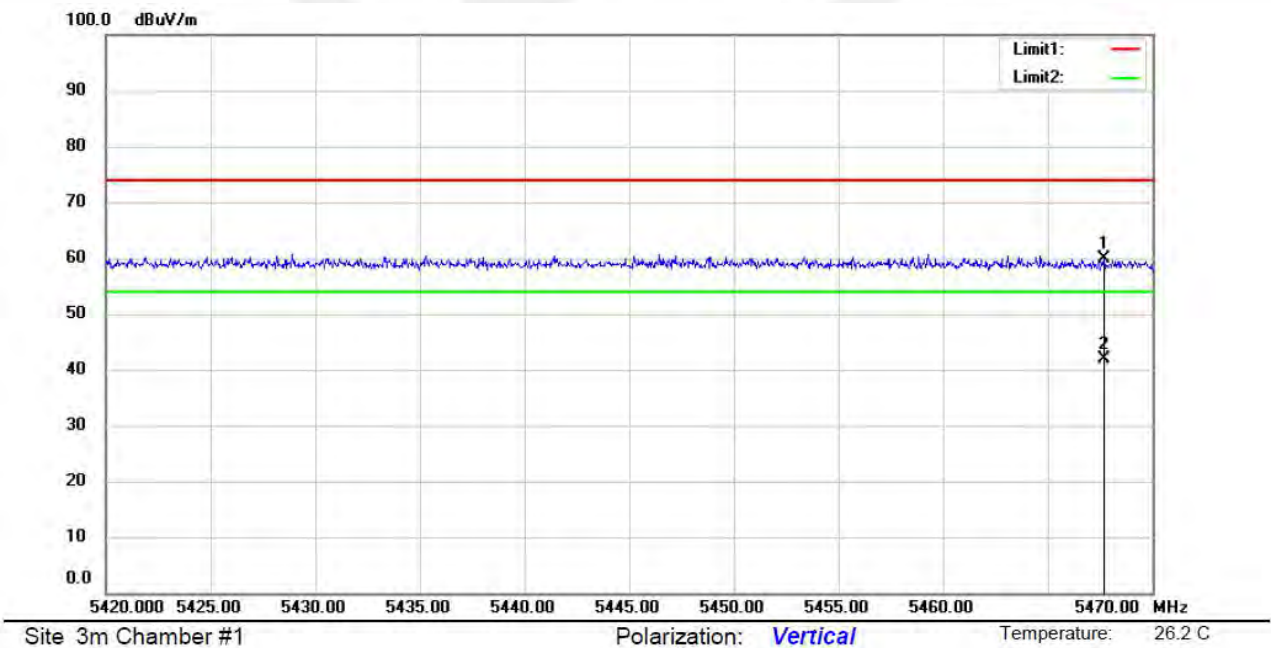
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5580 5700 Ant.Pol H



U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

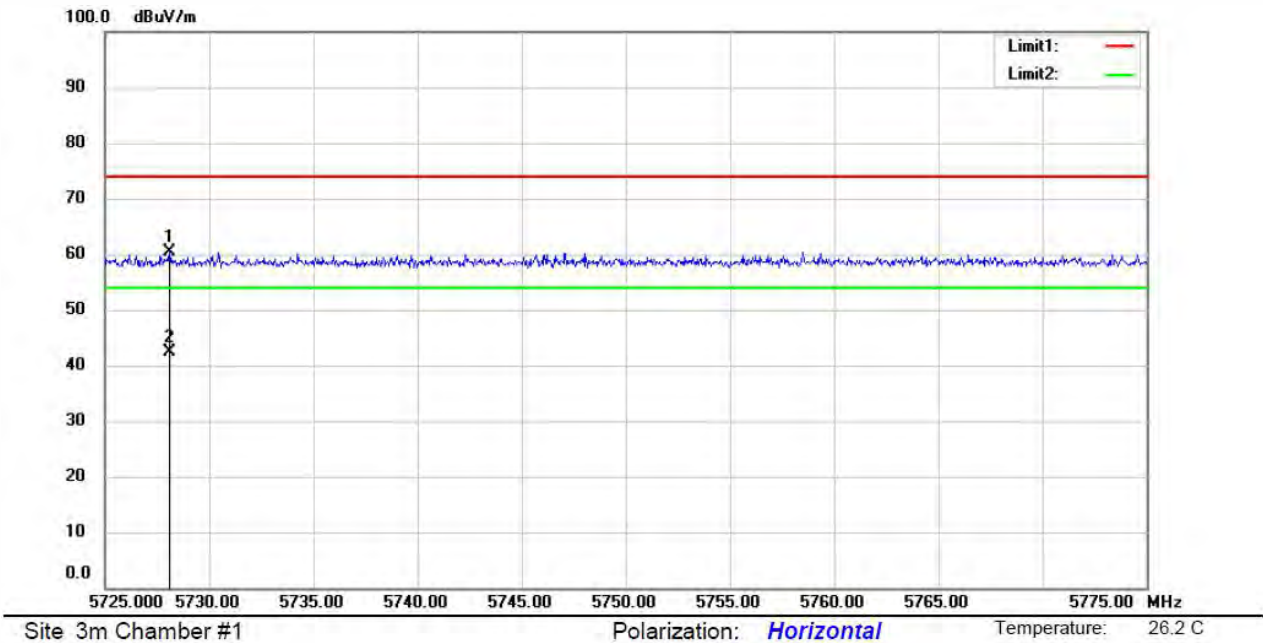
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5580 5700 Ant.Pol V



U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

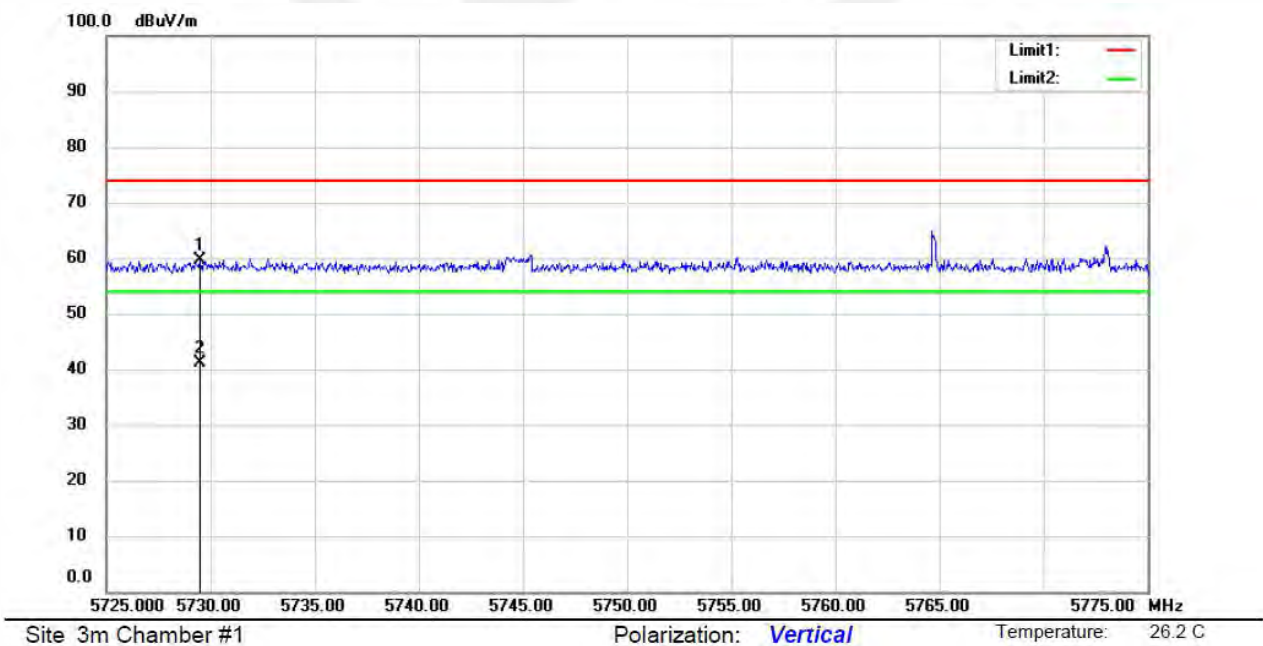
5500 802.11a 5580 802.11n(HT20) 802.11 ac (VHT20)
 5700 Ant.Pol H



U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5500 802.11a 5580 802.11n(HT20) 802.11 ac (VHT20)
 5700 Ant.Pol V



- For Undesirable radiated Spurious Emission in U-NII -3

All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:

- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode: 802.11a Frequency(MHz): 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5448.539	V	47.00	-48.23	-27	-21.23
11782.82	V	54.37	-40.86	-27	-13.86
18000.00	V	64.85	-30.38	-27	-3.38
5508.713	H	46.85	-48.38	-27	-21.38
11004.29	H	54.52	-40.71	-27	-13.71
17880.73	H	64.48	-30.75	-27	-3.75

Test mode: 802.11a Frequency(MHz): 5785

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5500.757	V	46.69	-48.54	-27	-21.54
11154.80	V	54.80	-40.43	-27	-13.43
18000.00	V	64.22	-31.01	-27	-4.01
5587.287	H	47.47	-47.76	-27	-20.76
11143.53	H	54.47	-40.76	-27	-13.76
17997.39	H	64.30	-30.93	-27	-3.93

Test mode: 802.11a Frequency(MHz): 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5551.871	V	46.74	-48.49	-27	-21.49
11377.86	V	55.02	-40.21	-27	-13.21
17997.39	V	64.75	-30.48	-27	-3.48
5435.955	H	46.89	-48.34	-27	-21.34
11077.69	H	54.35	-40.88	-27	-13.88
17994.79	H	64.00	-31.23	-27	-4.23

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).

(2) Emission Level= Reading Level+Probe Factor +Cable Loss.

(3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77

d is the measurement distance in 3 meters

Frequency: 802.11a		Frequency(MHz): 5745			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5448.539	V	47.00	74.00	-27.00	peak
5448.539	V	30.11	54.00	-23.89	AVG
11782.82	V	54.37	74.00	-19.63	peak
11782.82	V	36.91	54.00	-17.09	AVG
18000.00	V	64.85	74.00	-9.15	peak
18000	V	46.81	54.00	-7.19	AVG
5508.713	H	46.85	74.00	-27.15	peak
5508.713	H	28.64	54.00	-25.36	AVG
11004.29	H	54.52	74.00	-19.48	peak
11004.29	H	36.91	54.00	-17.09	AVG
17880.73	H	64.48	74.00	-9.52	peak
17880.73	H	46.72	54.00	-7.28	AVG

Frequency: 802.11a		Frequency(MHz): 5785			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5500.757	V	46.69	74.00	-27.31	peak
5500.757	V	28.73	54.00	-25.27	AVG
11154.80	V	54.80	74.00	-19.20	peak
11154.80	V	36.87	54.00	-17.13	AVG
18000.00	V	64.22	74.00	-9.78	peak
18000	V	46.28	54.00	-7.72	AVG
5587.287	H	47.47	74.00	-26.53	peak
5587.287	H	30.15	54.00	-23.85	AVG
11143.53	H	54.47	74.00	-19.53	peak
11143.53	H	36.71	54.00	-17.29	AVG
17997.39	H	64.30	74.00	-9.70	peak
17997.39	H	46.28	54.00	-7.72	AVG

Frequency: 802.11a		Frequency(MHz): 5825			
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
5551.871	V	46.74	74.00	-27.26	peak
5551.871	V	28.91	54.00	-25.09	AVG
11377.86	V	55.02	74.00	-18.98	peak
11377.86	V	38.33	54.00	-15.67	AVG
17997.39	V	64.75	74.00	-9.25	peak
17997.39	V	46.85	54.00	-7.15	AVG
5435.955	H	46.89	74.00	-27.11	peak
5435.955	H	28.91	54.00	-25.09	AVG
11077.69	H	54.35	74.00	-19.65	peak
11077.69	H	36.55	54.00	-17.45	AVG
17994.79	H	64.00	74.00	-10.00	peak
17994.79	H	46.81	54.00	-7.19	AVG

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4)Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Spurious Emission in band edge

Test mode: 802.11a Frequency: 5745

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5722.719	H	60.39	-34.84	23.43	Pass
5720.587	V	60.04	-35.19	17.29	Pass

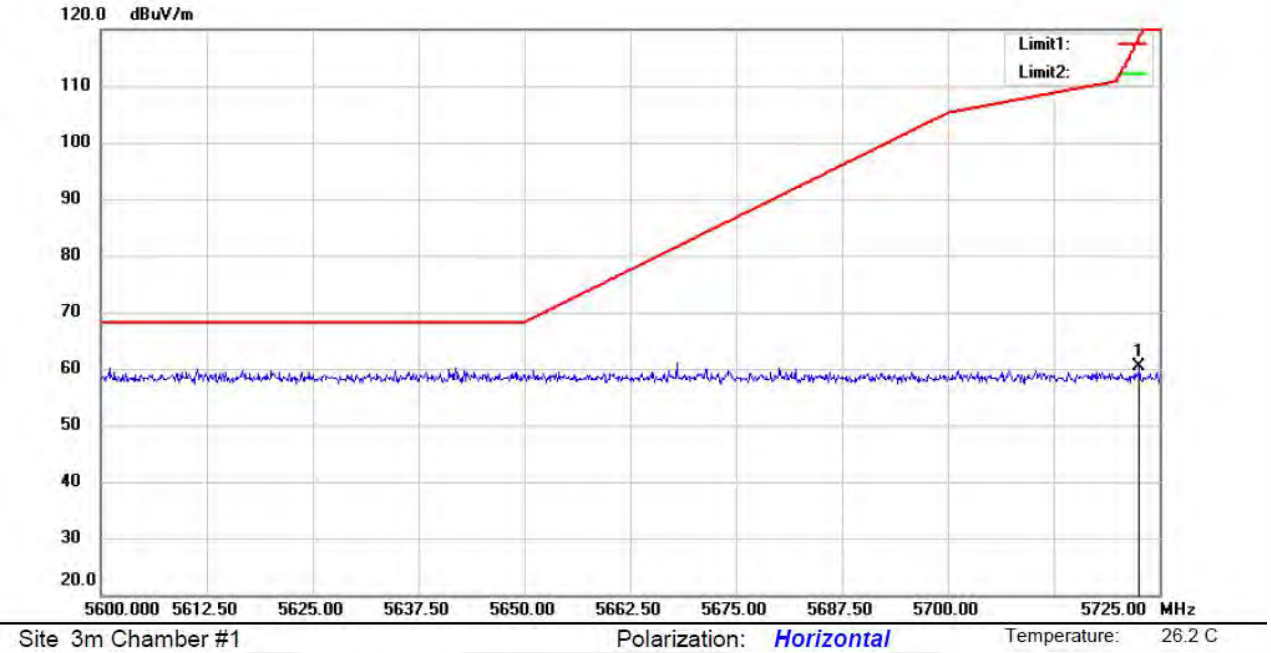
Test mode: 802.11a Frequency: 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5854.256	V	59.32	-35.91	17.74	Pass
5852.294	H	59.98	-35.25	23.39	Pass

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

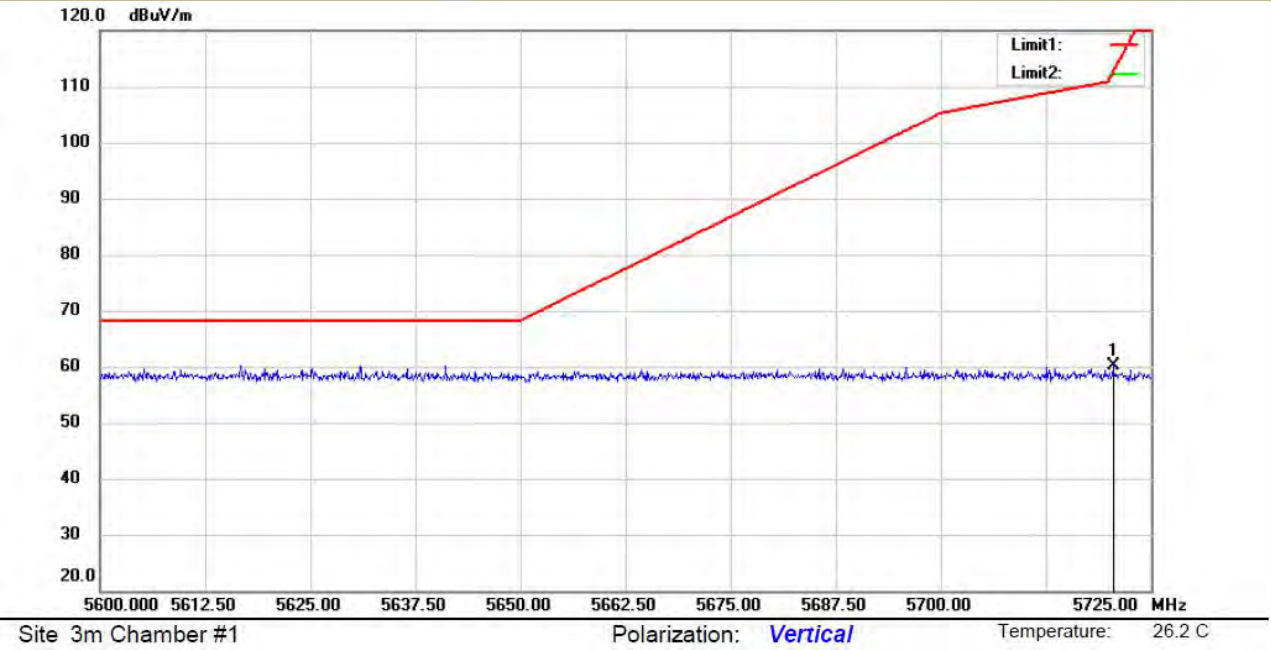
U-NII -3

Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	☒ 802.11a	☒ 5745	☒ 802.11n(HT20)
			☒ 802.11n(HT40)
			Ant.Pol: H

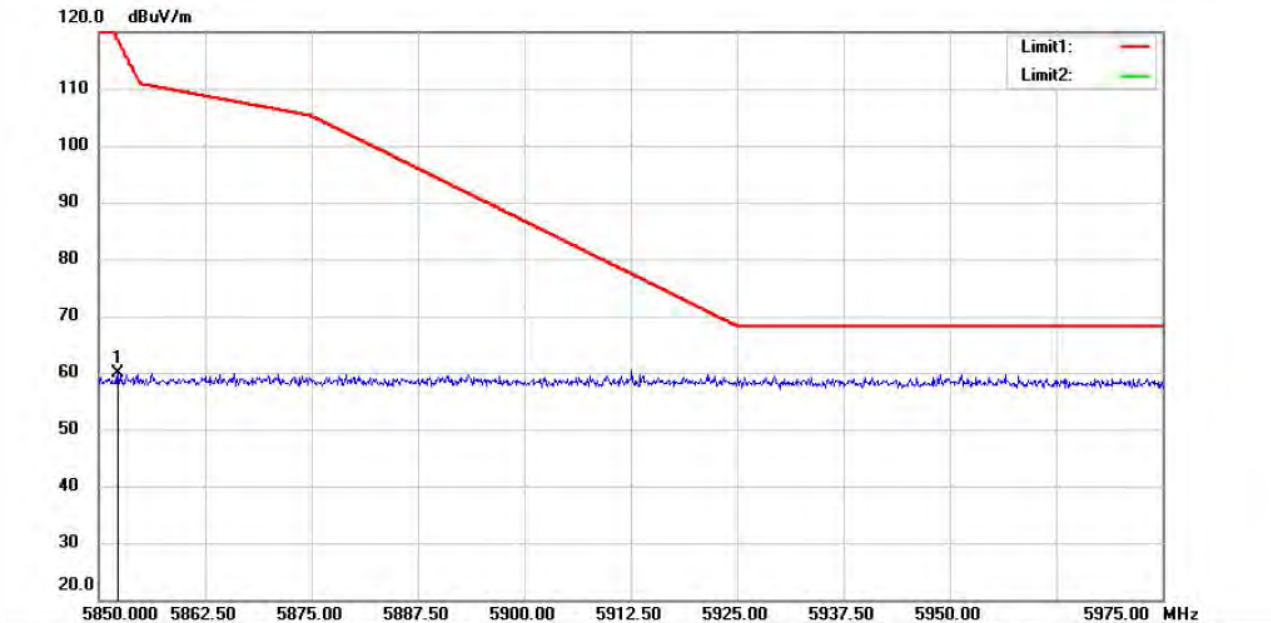


U-NII -3

Test Model	Undesirable radiated	Undesirable radiated	Spurious Emission in Band Edge
	☒ 802.11a	☒ 5745	☒ 802.11n(HT20)
			☒ 802.11n(HT40)
			Ant.Pol: V



	U-NII -3	
Test Model	Undesirable radiated Undesirable radiated Spurious Emission in Band Edge	
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)	
	<input checked="" type="checkbox"/> 5825	Ant. Pol H



Site 3m Chamber #1

Polarization: *Horizontal*

Temperature: 26.2 C

	U-NII -3	
Test Model	Undesirable radiated Undesirable radiated Spurious Emission in Band Edge	
	<input checked="" type="checkbox"/> 802.11a <input type="checkbox"/> 802.11n(HT20) <input type="checkbox"/> 802.11n(HT40)	
	<input checked="" type="checkbox"/> 5825	Ant. Pol V



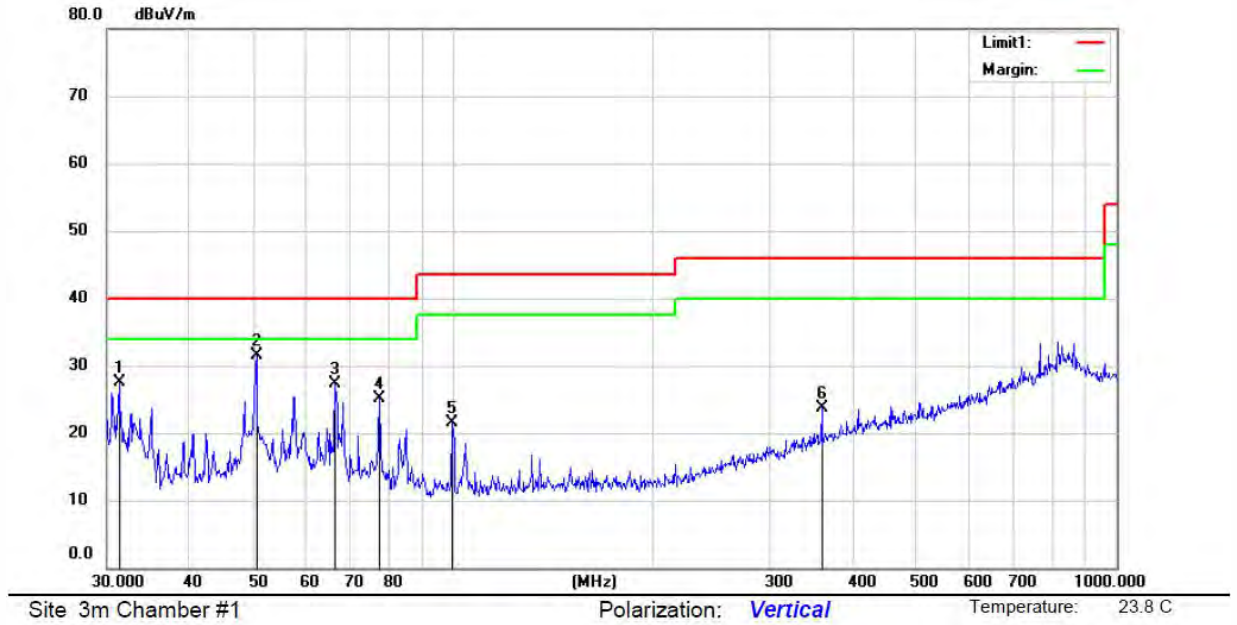
Site 3m Chamber #1

Polarization: *Vertical*

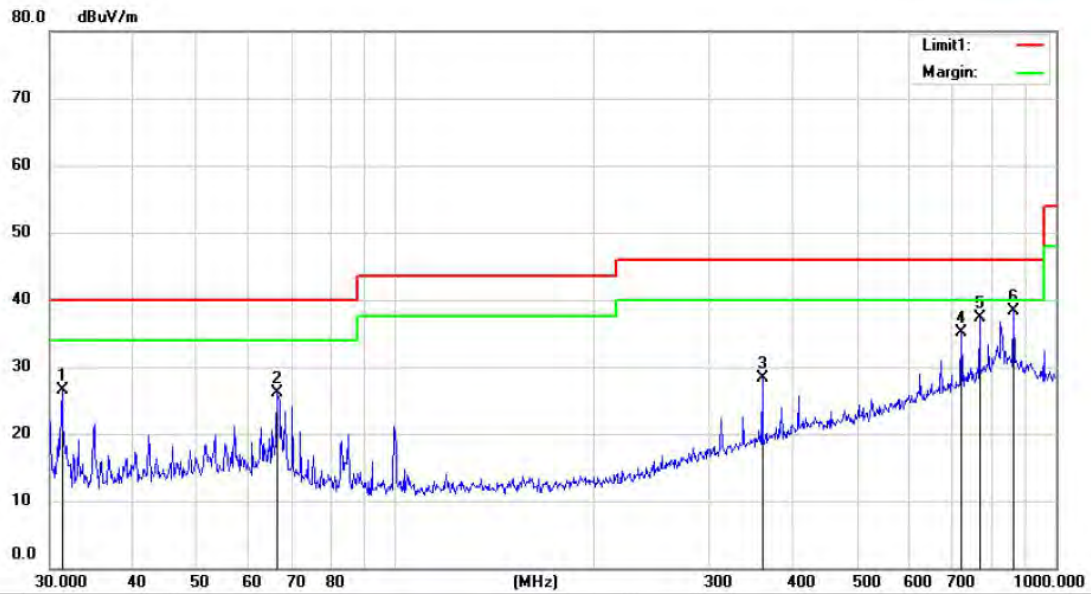
Temperature: 26.2 C

- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
All modes have been tested, and the worst result recorded was report as below:

Test mode: 802.11a Frequency(MHz): 5180



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1		31.3305	41.96	-14.50	27.46	40.00	-12.54	QP		
2	*	50.4310	43.42	-11.96	31.46	40.00	-8.54	QP		
3		66.3534	39.65	-12.40	27.25	40.00	-12.75	QP		
4		77.4570	39.63	-14.55	25.08	40.00	-14.92	QP		
5		99.7902	36.21	-14.76	21.45	43.50	-22.05	QP		
6		360.1320	31.23	-7.44	23.79	46.00	-22.21	QP		



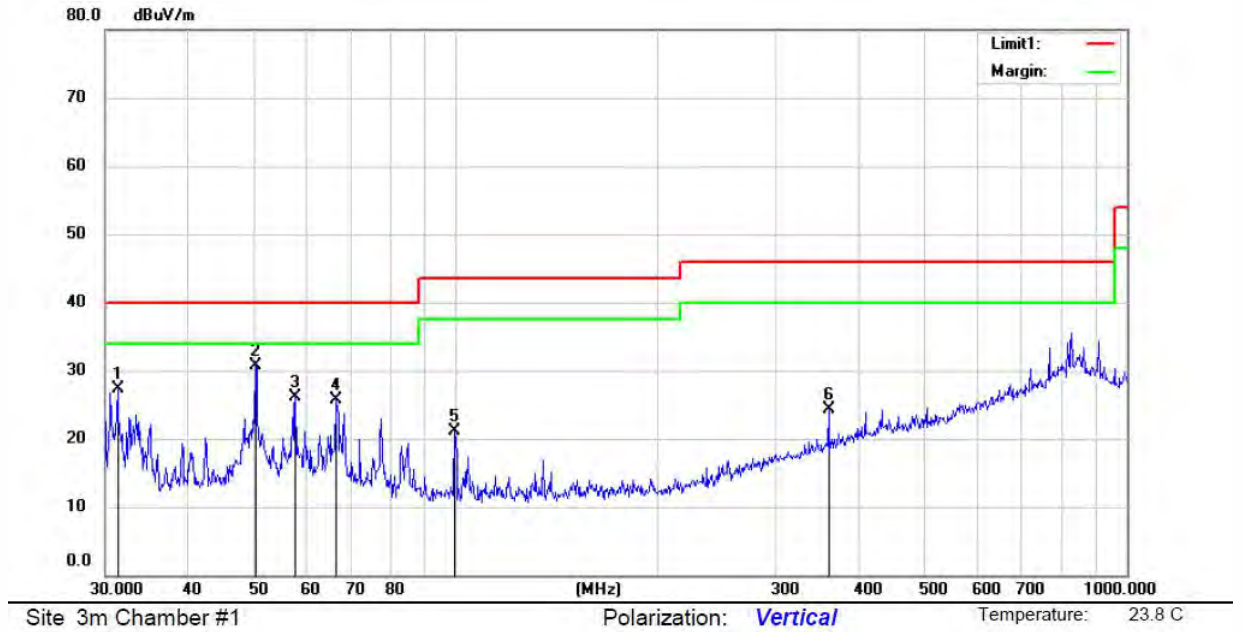
Site 3m Chamber #1

Polarization: *Horizontal*

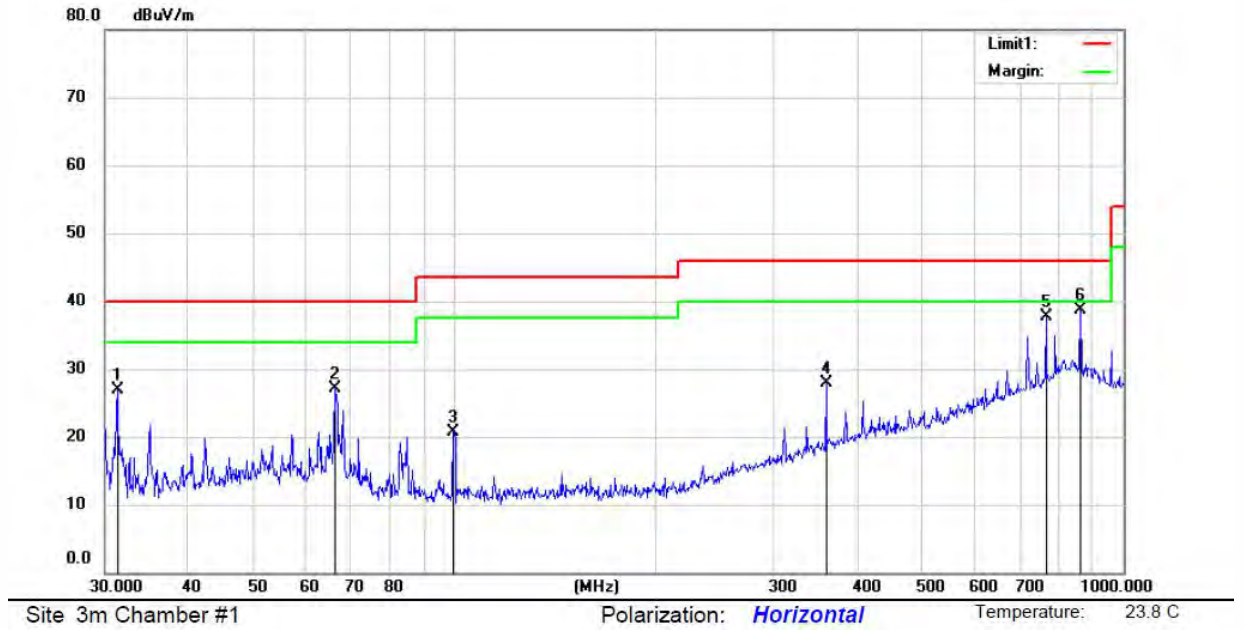
Temperature: 23.8 C

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		31.3442	41.00	-14.50	26.50	40.00	-13.50	QP		
2		66.3534	38.49	-12.40	26.09	40.00	-13.91	QP		
3		360.1320	35.70	-7.44	28.26	46.00	-17.74	QP		
4		720.1458	35.55	-0.43	35.12	46.00	-10.88	QP		
5		768.0745	36.59	0.81	37.40	46.00	-8.60	QP		
6	*	864.1920	36.21	2.08	38.29	46.00	-7.71	QP		

Test mode: 802.11a Frequency(MHz): 5200

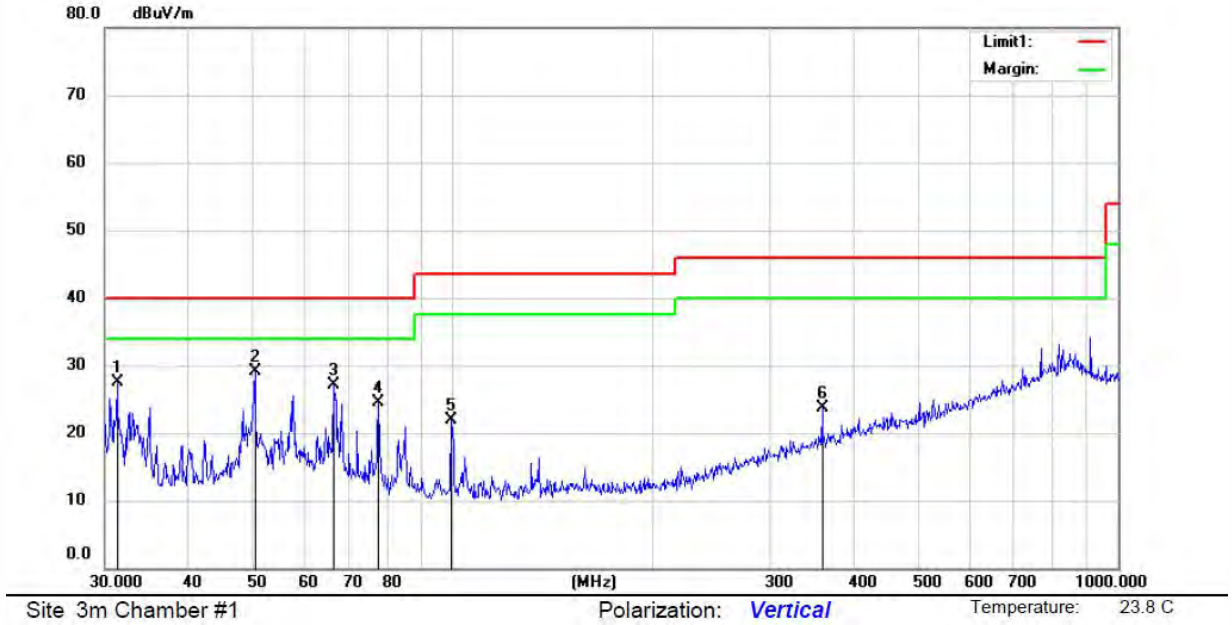


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		31.3442	41.81	-14.50	27.31	40.00	-12.69	QP		
2	*	50.3868	42.61	-11.96	30.65	40.00	-9.35	QP		
3		57.5940	38.11	-12.08	26.03	40.00	-13.97	QP		
4		66.3534	38.03	-12.40	25.63	40.00	-14.37	QP		
5		99.7902	35.85	-14.76	21.09	43.50	-22.41	QP		
6		360.1320	31.72	-7.44	24.28	46.00	-21.72	QP		

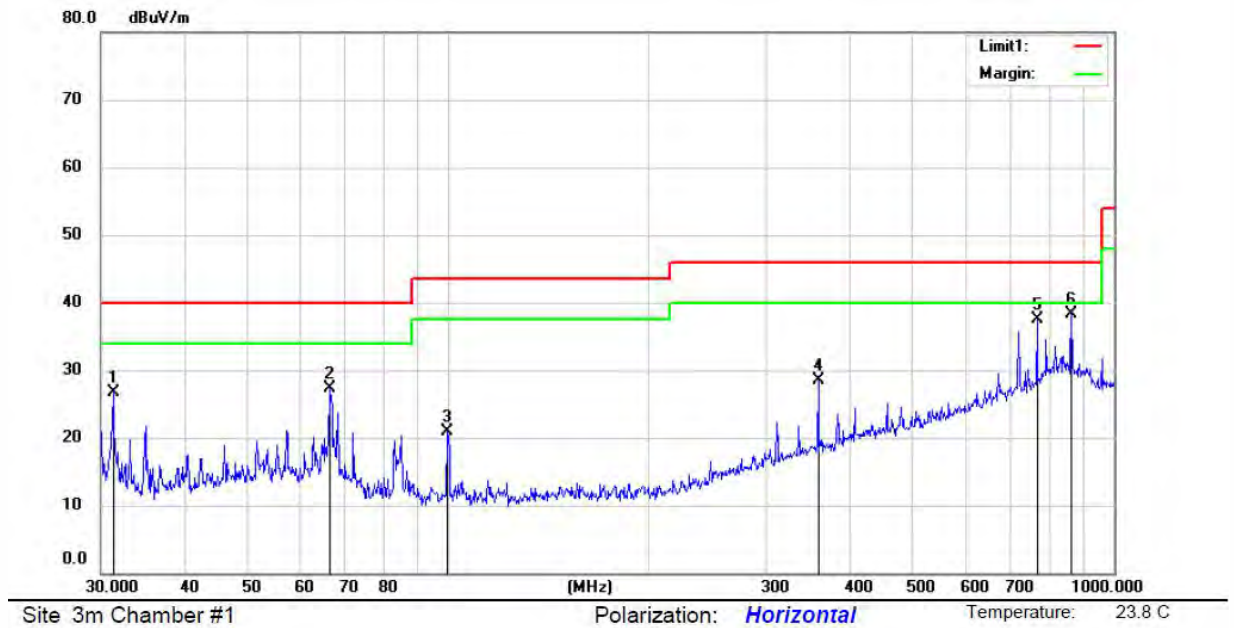


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		31.3442	41.32	-14.50	26.82	40.00	-13.18	QP		
2		66.3534	39.41	-12.40	27.01	40.00	-12.99	QP		
3		99.8340	35.46	-14.76	20.70	43.50	-22.80	QP		
4		360.1320	35.44	-7.44	28.00	46.00	-18.00	QP		
5		768.0745	36.84	0.81	37.65	46.00	-8.35	QP		
6	*	864.1920	36.56	2.08	38.64	46.00	-7.36	QP		

Test mode: 802.11a Frequency(MHz): 5240



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1		31.3442	42.01	-14.50	27.51	40.00	-12.49			QP	
2	*	50.4090	41.00	-11.96	29.04	40.00	-10.96			QP	
3		66.3825	39.49	-12.40	27.09	40.00	-12.91			QP	
4		77.4230	39.09	-14.55	24.54	40.00	-15.46			QP	
5		99.7902	36.57	-14.76	21.81	43.50	-21.69			QP	
6		359.9741	31.16	-7.44	23.72	46.00	-22.28			QP	



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		31.3442	41.30	-14.50	26.80	40.00	-13.20	QP		
2		66.4116	39.78	-12.41	27.37	40.00	-12.63	QP		
3		99.7902	35.66	-14.76	20.90	43.50	-22.60	QP		
4		360.1320	35.93	-7.44	28.49	46.00	-17.51	QP		
5		768.0745	36.66	0.81	37.47	46.00	-8.53	QP		
6	*	864.1920	36.21	2.08	38.29	46.00	-7.71	QP		

8.6 POWER LINE CONDUCTED EMISSIONS

8.6.1 Applicable Standard

According to FCC Part 15.207(a)

8.6.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

8.6.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

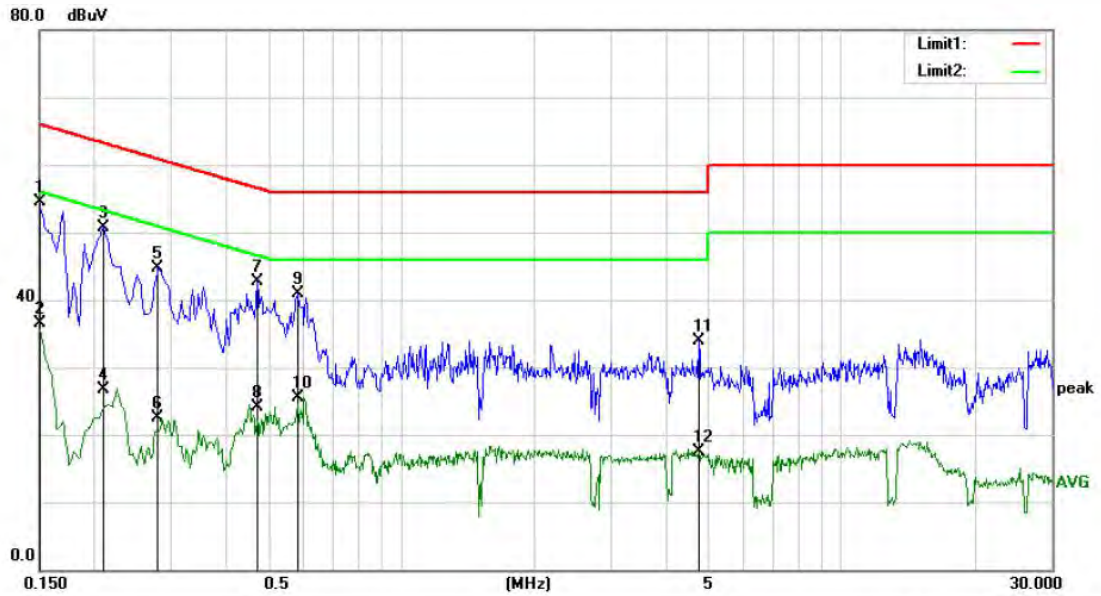
8.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
 Maximum procedure was performed on the highest emissions to ensure EUT compliance.
 Repeat above procedures until all frequency measured were complete.

8.6.5 Test Results

Pass

The 120V &240V voltage have been tested, and the worst result recorded was report as below:

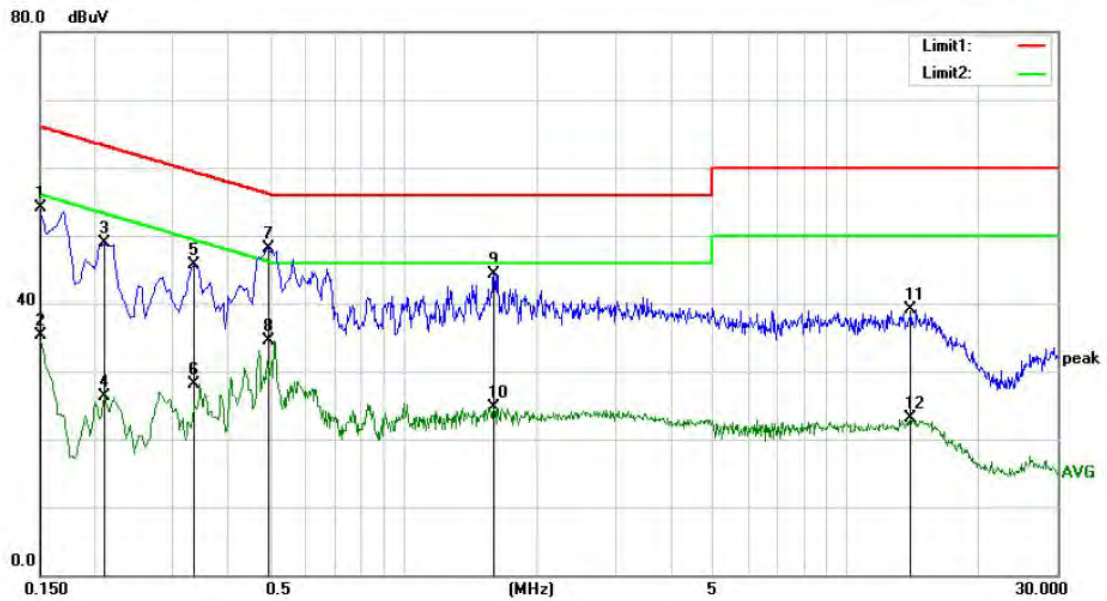


Site Conduction #1

Phase: N

Temperature: 22.4

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	44.88	9.58	54.46	66.00	-11.54	QP	
2		0.1500	26.86	9.58	36.44	56.00	-19.56	AVG	
3		0.2100	41.30	9.41	50.71	63.21	-12.50	QP	
4		0.2100	17.39	9.41	26.80	53.21	-26.41	AVG	
5		0.2800	35.30	9.32	44.62	60.82	-16.20	QP	
6		0.2800	13.26	9.32	22.58	50.82	-28.24	AVG	
7		0.4700	33.45	9.27	42.72	56.51	-13.79	QP	
8		0.4700	14.89	9.27	24.16	46.51	-22.35	AVG	
9		0.5800	31.68	9.26	40.94	56.00	-15.06	QP	
10		0.5800	16.17	9.26	25.43	46.00	-20.57	AVG	
11		4.7250	23.90	9.92	33.82	56.00	-22.18	QP	
12		4.7250	7.52	9.92	17.44	46.00	-28.56	AVG	



Site Conduction #1

Phase: L1

Temperature: 22.4

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1500	44.47	9.58	54.05	66.00	-11.95	QP	
2		0.1500	25.74	9.58	35.32	56.00	-20.68	AVG	
3		0.2100	39.45	9.41	48.86	63.21	-14.35	QP	
4		0.2100	16.85	9.41	26.26	53.21	-26.95	AVG	
5		0.3350	36.48	9.30	45.78	59.33	-13.55	QP	
6		0.3350	18.72	9.30	28.02	49.33	-21.31	AVG	
7	*	0.4950	38.82	9.25	48.07	56.08	-8.01	QP	
8		0.4950	25.20	9.25	34.45	46.08	-11.63	AVG	
9		1.6000	34.40	9.92	44.32	56.00	-11.68	QP	
10		1.6000	14.70	9.92	24.62	46.00	-21.38	AVG	
11		13.9550	28.88	10.17	39.05	60.00	-20.95	QP	
12		13.9550	12.98	10.17	23.15	50.00	-26.85	AVG	

8.7 ANTENNA APPLICATION

8.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

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 15.407 (a), 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.

8.7.2 Result

PASS

The EUT is internal antenna, the antenna gain is 2.5 dBi.

- Note:
- Antennas use a permanently attached antenna which is not replaceable.
 - Not using a standard antenna jack or electrical connector for antenna replacement
 - The antenna has to be professionally installed (please provide method of installation)

Which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---