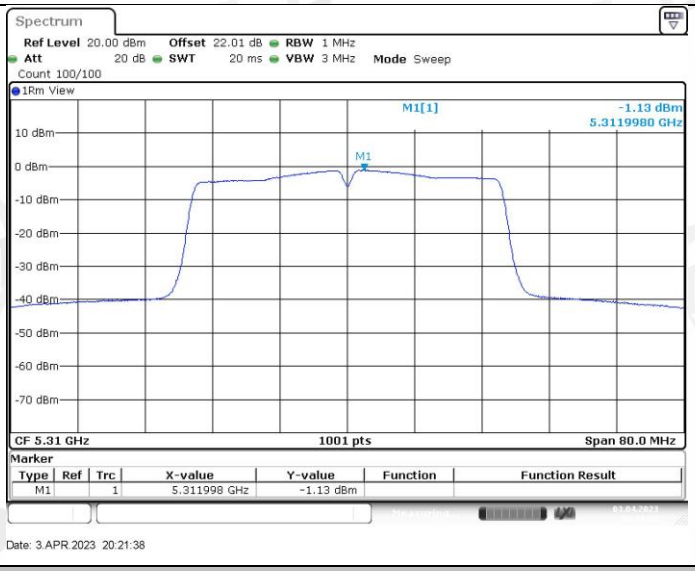
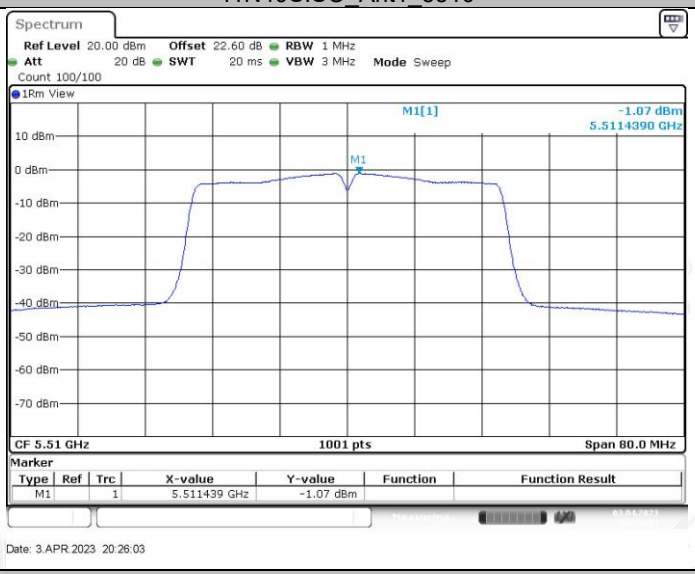


11N40SISO_Ant1_5510



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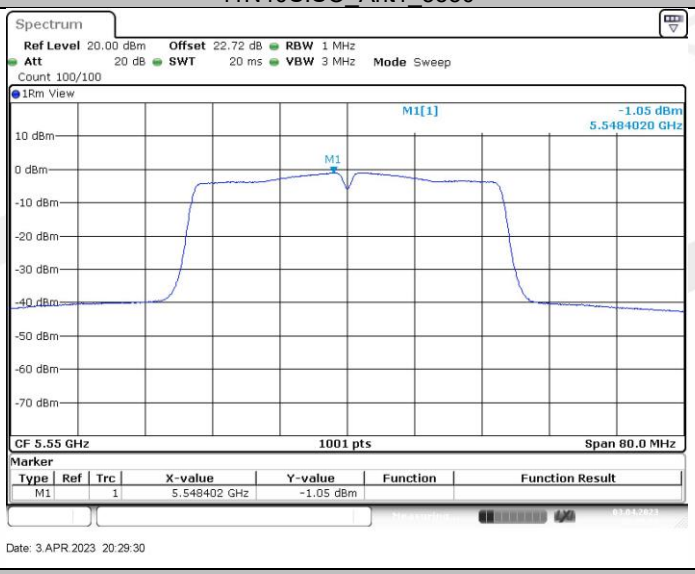

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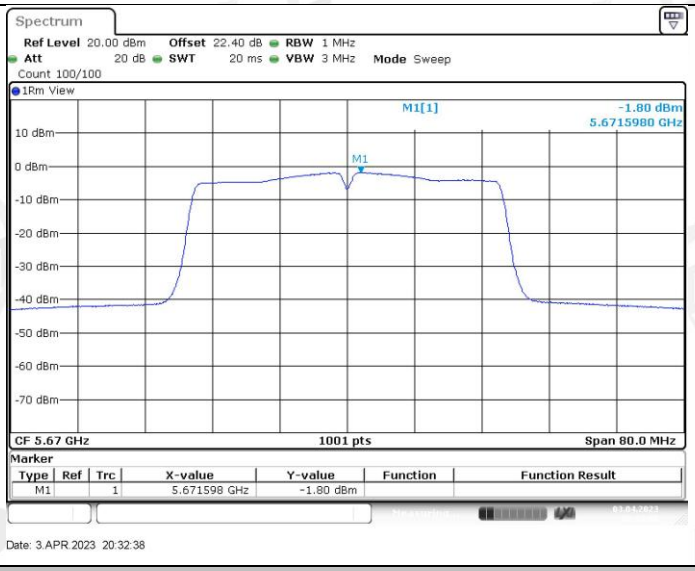

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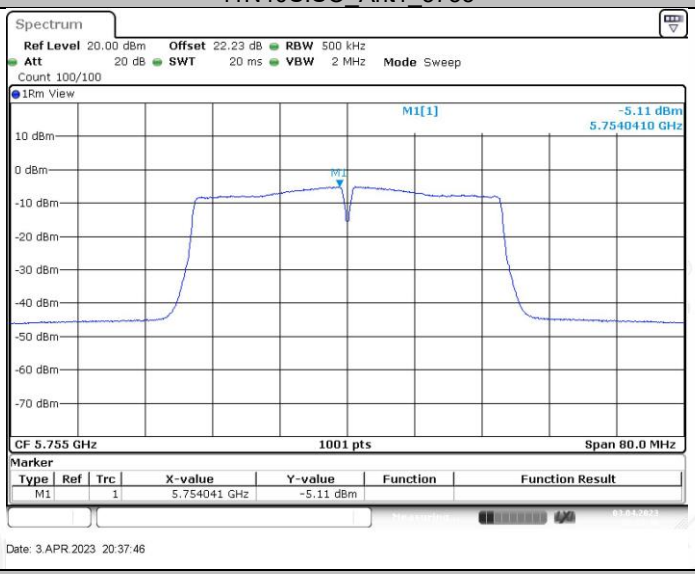

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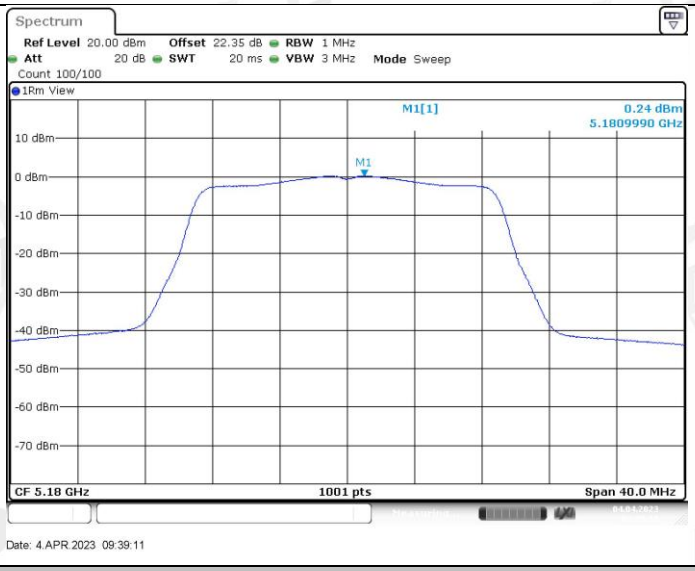
11AC20SISO_Ant1_5180



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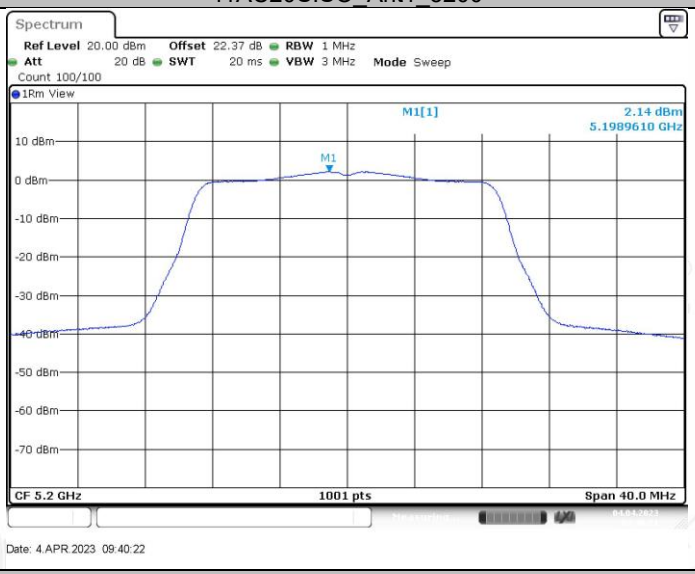

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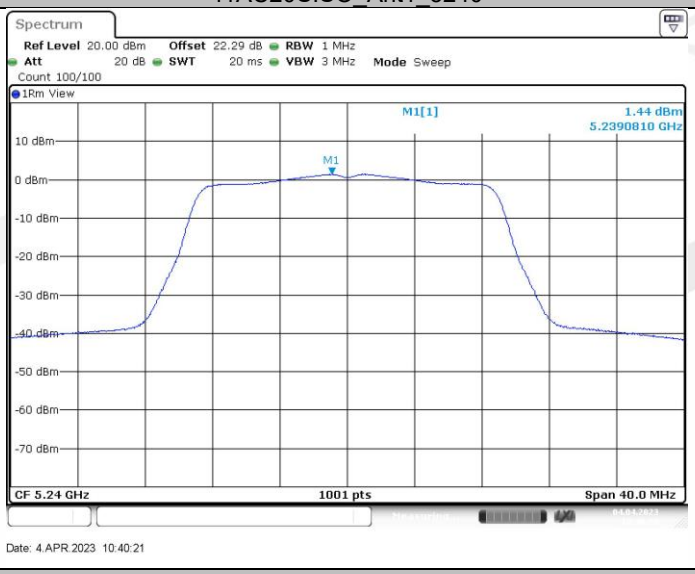

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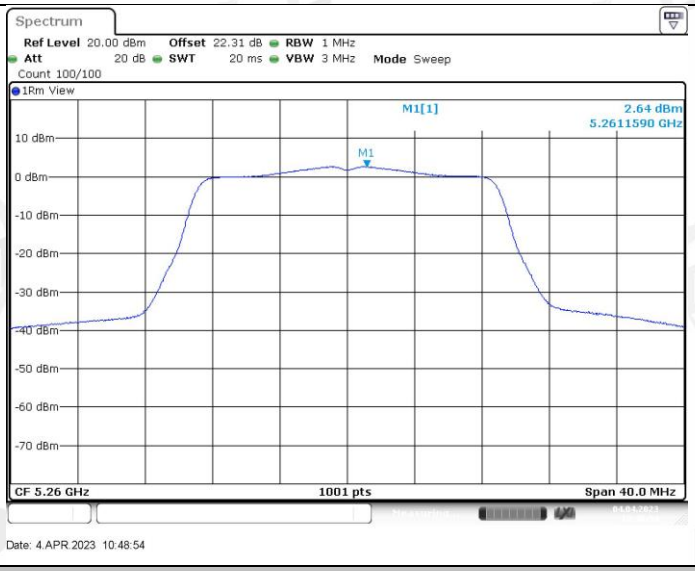

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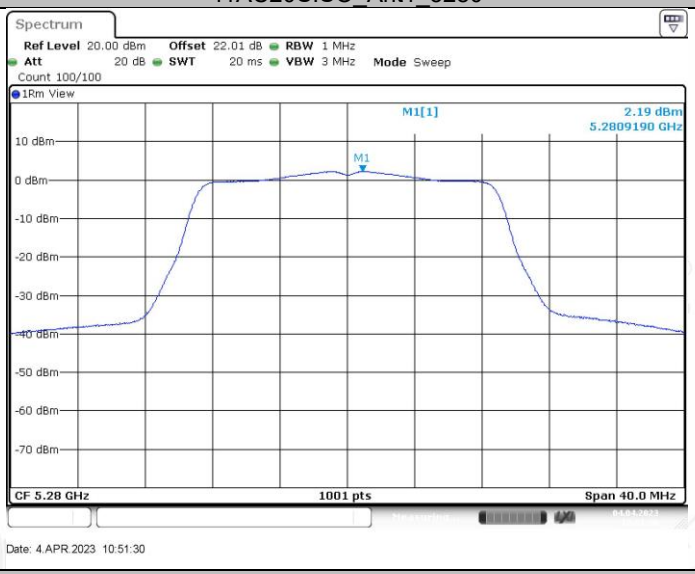

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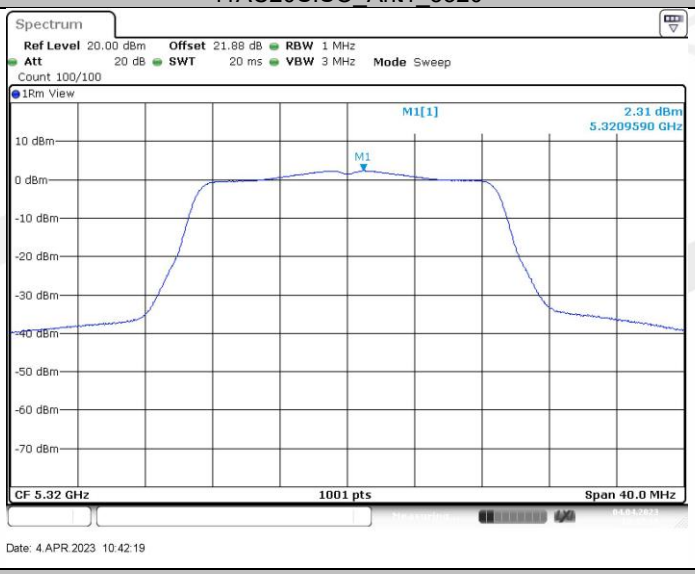

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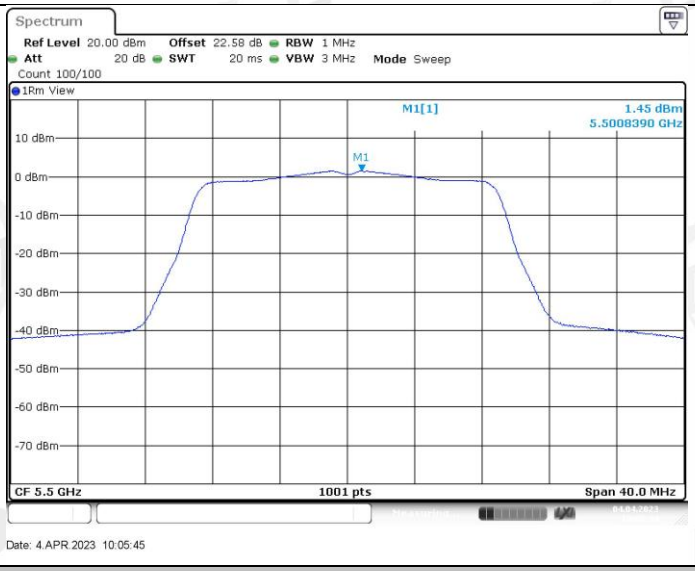

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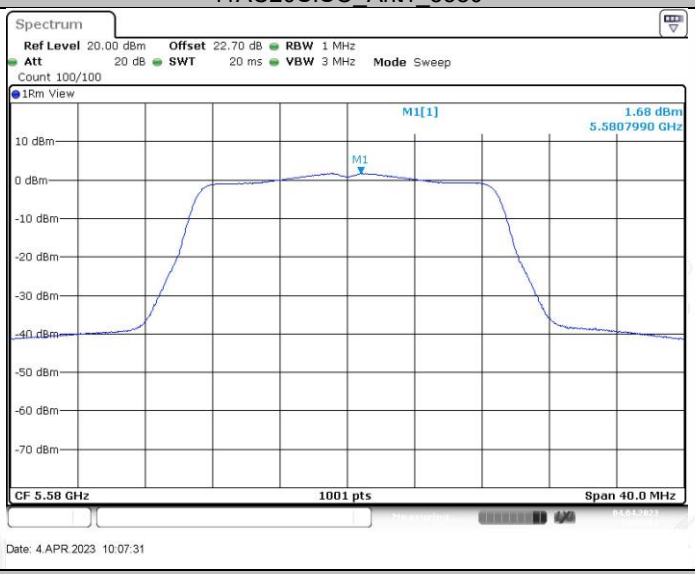

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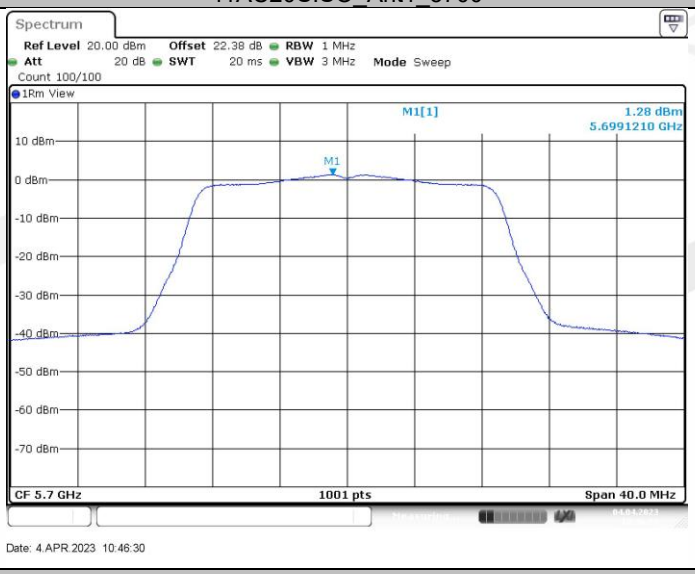

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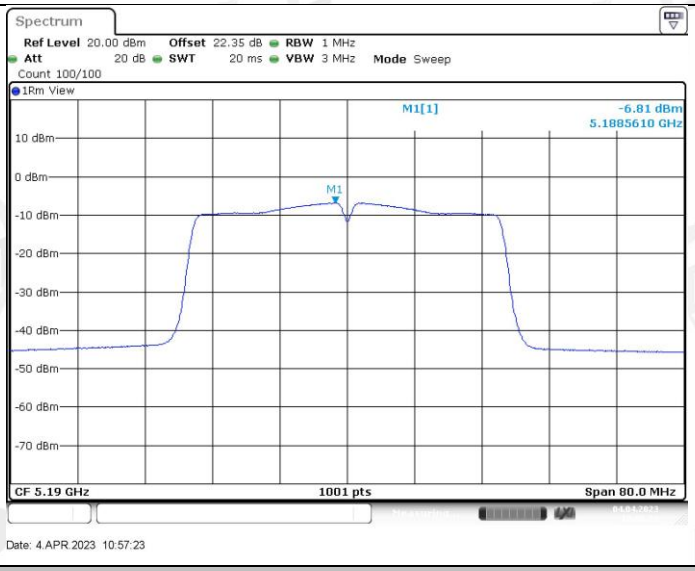

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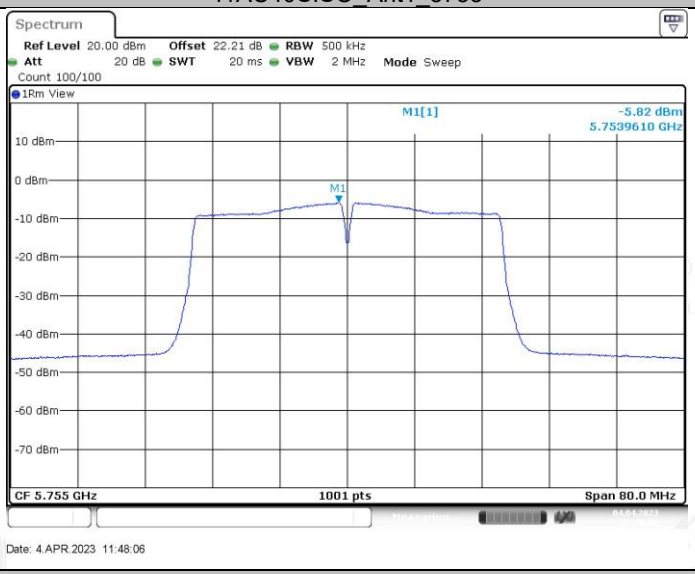

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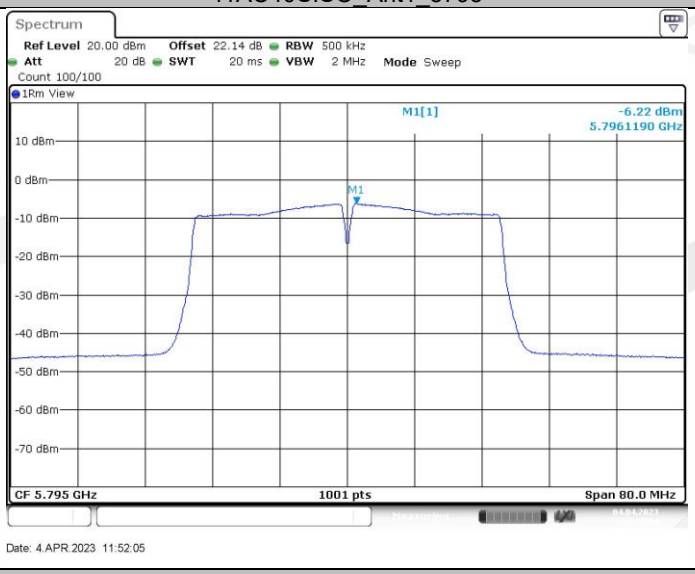

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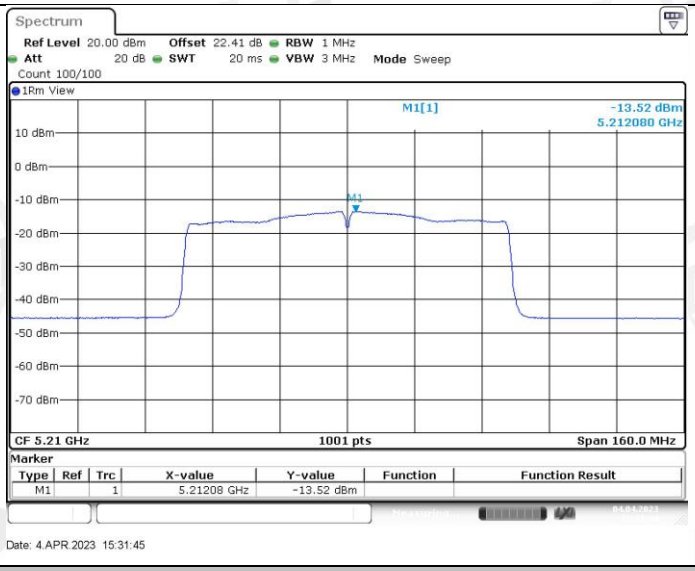

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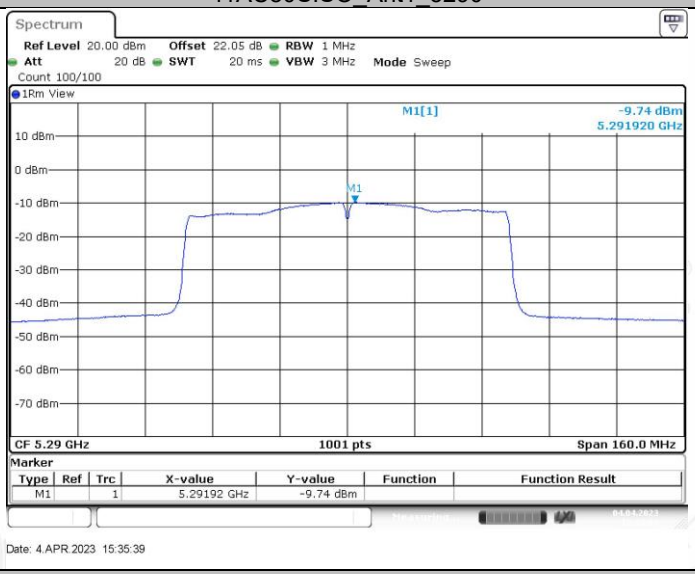

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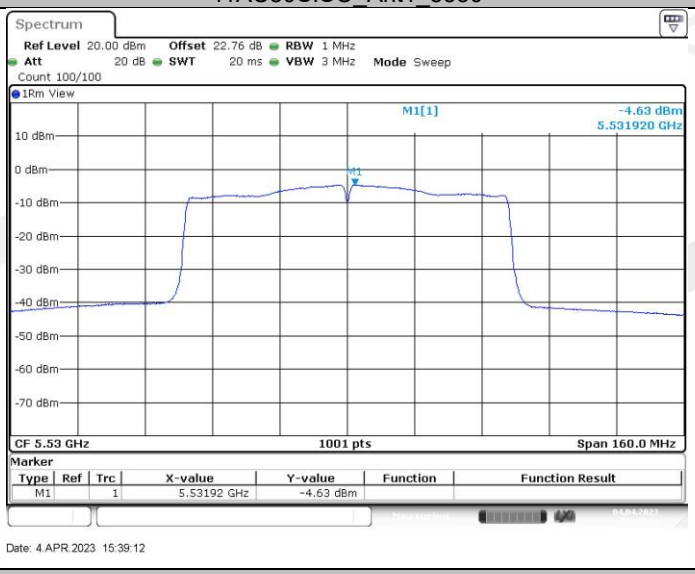

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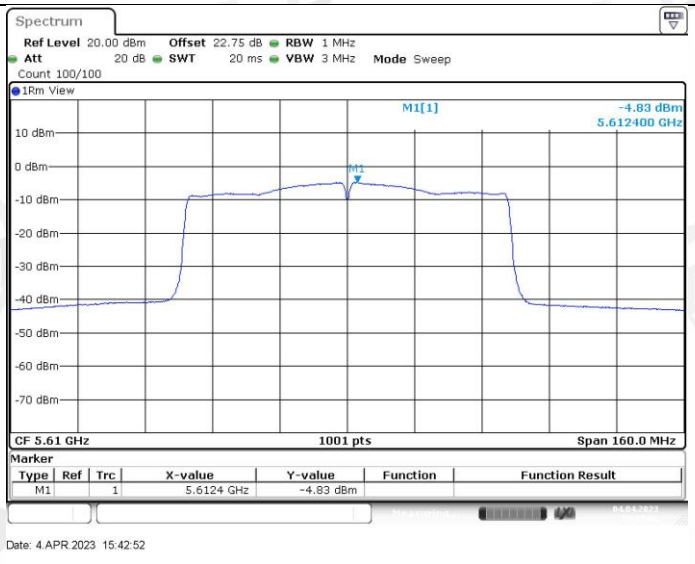

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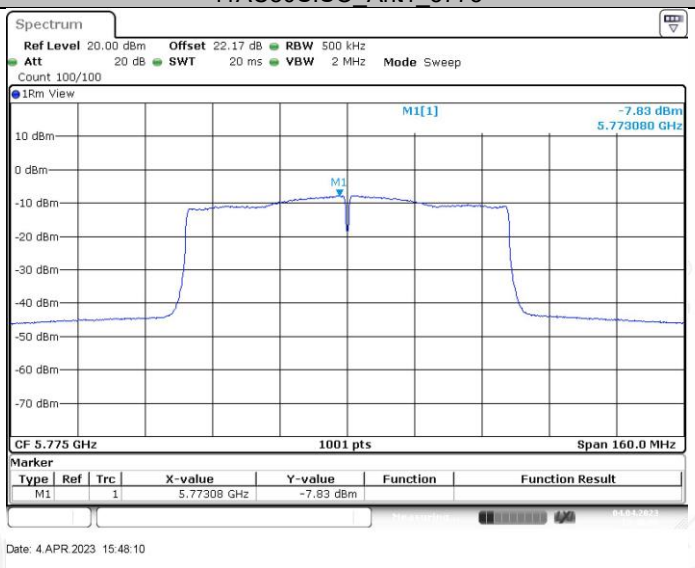


9. Frequency Stability Measurement

9.1. Limit of Frequency Stability

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.

9.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

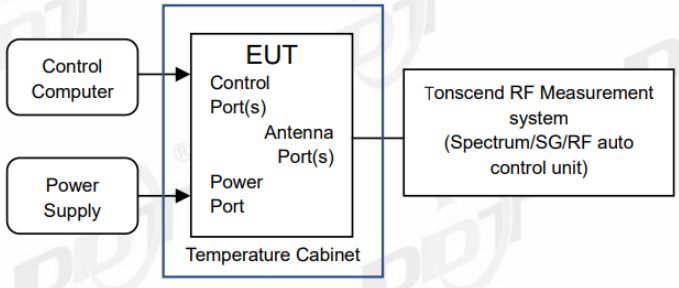
9.3. Test procedures

(1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.

(2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.

(3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

9.4. Test setup



9.5. Test result

Voltage								
Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	20000.00	3.861004	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5200	NV	NT	-20000.00	-3.846154	20	PASS
			LV	NT	20000.00	3.846154	20	PASS
			HV	NT	20000.00	3.846154	20	PASS
		5240	NV	NT	20000.00	3.816794	20	PASS
			LV	NT	20000.00	3.816794	20	PASS
			HV	NT	20000.00	3.816794	20	PASS
		5260	NV	NT	40000.00	7.604563	20	PASS
			LV	NT	20000.00	3.802281	20	PASS
			HV	NT	20000.00	3.802281	20	PASS
		5280	NV	NT	20000.00	3.787879	20	PASS
			LV	NT	20000.00	3.787879	20	PASS
			HV	NT	40000.00	7.575758	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	0.00	0.000000	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	20000.00	3.584229	20	PASS
			HV	NT	20000.00	3.584229	20	PASS
		5700	NV	NT	0.00	0.000000	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	40000.00	6.962576	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5785	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	20000.00	3.457217	20	PASS
		5825	NV	NT	20000.00	3.433476	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	20000.00	3.433476	20	PASS
11N20SISO	Ant1	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5200	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-20000.00	-3.846154	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5240	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5260	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	20000.00	3.802281	20	PASS
		5280	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5320	NV	NT	20000.00	3.759398	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5500	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5580	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS

			HV	NT	20000.00	3.584229	20	PASS
		5700	NV	NT	0.00	0.000000	20	PASS
			LV	NT	20000.00	3.508772	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5745	NV	NT	20000.00	3.481288	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	20000.00	3.481288	20	PASS
		5785	NV	NT	40000.00	6.914434	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	20000.00	3.457217	20	PASS
		5825	NV	NT	20000.00	3.433476	20	PASS
			LV	NT	0.00	0.000000	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	-40000.00	-7.648184	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-40000.00	-7.648184	20	PASS
		5270	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5310	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5510	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	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	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5755	NV	NT	40000.00	6.950478	20	PASS
			LV	NT	40000.00	6.950478	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5795	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
11AC80SISO	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
		5290	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	80000.00	15.122873	20	PASS
		5530	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
		5610	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

Temperature								
Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
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	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	50	20000.00	3.861004	20	PASS
		5200	NV	-30	20000.00	3.846154	20	PASS
			NV	-20	20000.00	3.846154	20	PASS
			NV	-10	-20000.00	-3.846154	20	PASS
			NV	0	-20000.00	-3.846154	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	40000.00	7.692308	20	PASS
			NV	30	20000.00	3.846154	20	PASS
			NV	40	20000.00	3.846154	20	PASS
			NV	50	20000.00	3.846154	20	PASS
		5240	NV	-30	20000.00	3.816794	20	PASS
			NV	-20	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	20000.00	3.802281	20	PASS
			NV	50	40000.00	7.604563	20	PASS
		5280	NV	-30	20000.00	3.787879	20	PASS
			NV	-20	40000.00	7.575758	20	PASS
			NV	-10	20000.00	3.787879	20	PASS
			NV	0	20000.00	3.787879	20	PASS
			NV	10	20000.00	3.787879	20	PASS
			NV	20	40000.00	7.575758	20	PASS
			NV	30	20000.00	3.787879	20	PASS
			NV	40	40000.00	7.575758	20	PASS
			NV	50	40000.00	7.575758	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	0.00	0.000000	20	PASS
			NV	10	40000.00	7.518797	20	PASS
			NV	20	20000.00	3.759398	20	PASS
			NV	30	20000.00	3.759398	20	PASS
			NV	40	40000.00	7.518797	20	PASS
			NV	50	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	10	20000.00	3.636364	20	PASS
			NV	20	20000.00	3.636364	20	PASS
			NV	30	20000.00	3.636364	20	PASS

			NV	40	20000.00	3.636364	20	PASS
			NV	50	40000.00	7.272727	20	PASS
		5580	NV	-30	20000.00	3.584229	20	PASS
			NV	-20	20000.00	3.584229	20	PASS
			NV	-10	40000.00	7.168459	20	PASS
			NV	0	40000.00	7.168459	20	PASS
			NV	10	20000.00	3.584229	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	20000.00	3.584229	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	40000.00	7.168459	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	40000.00	7.017544	20	PASS
			NV	30	20000.00	3.508772	20	PASS
			NV	40	20000.00	3.508772	20	PASS
			NV	50	20000.00	3.508772	20	PASS
		5745	NV	-30	20000.00	3.481288	20	PASS
			NV	-20	20000.00	3.481288	20	PASS
			NV	-10	40000.00	6.962576	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	40000.00	6.962576	20	PASS
			NV	50	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	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
		5825	NV	-30	20000.00	3.433476	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-20000.00	-3.861004	20	PASS
			NV	10	-20000.00	-3.861004	20	PASS
			NV	20	0.00	0.000000	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
		5200	NV	-30	20000.00	3.846154	20	PASS
			NV	-20	-20000.00	-3.846154	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-20000.00	-3.846154	20	PASS
			NV	10	-20000.00	-3.846154	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
		5240	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	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	0.00	0.000000	20	PASS
			NV	50	-20000.00	-3.816794	20	PASS
		5260	NV	-30	0.00	0.000000	20	PASS
			NV	-20	20000.00	3.802281	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	20000.00	3.802281	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	20000.00	3.802281	20	PASS
		5280	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	-20000.00	-3.787879	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	20000.00	3.787879	20	PASS
			NV	50	20000.00	3.787879	20	PASS
		5320	NV	-30	-20000.00	-3.759398	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-20000.00	-3.759398	20	PASS
			NV	10	20000.00	3.759398	20	PASS
			NV	20	0.00	0.000000	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	0.00	0.000000	20	PASS
			NV	-20	20000.00	3.636364	20	PASS
			NV	-10	-20000.00	-3.636364	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	20000.00	3.636364	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5580	NV	-30	0.00	0.000000	20	PASS
			NV	-20	-20000.00	-3.584229	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	-20000.00	-3.584229	20	PASS
			NV	30	20000.00	3.584229	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5700	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	20000.00	3.508772	20	PASS
			NV	50	0.00	0.000000	20	PASS

		5745	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	40000.00	6.962576	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	20000.00	3.481288	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	20000.00	3.481288	20	PASS
		5785	NV	-30	20000.00	3.457217	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	20000.00	3.457217	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
		5825	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	20000.00	3.433476	20	PASS
			NV	10	20000.00	3.433476	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
11N40SISO	Ant1	5190	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	-40000.00	-7.707129	20	PASS
			NV	50	40000.00	7.707129	20	PASS
		5230	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	40000.00	7.648184	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5270	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	40000.00	7.590133	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
		5310	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	7.532957	20	PASS
			NV	30	40000.00	7.532957	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5510	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	40000.00	7.259528	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
		5550	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	-40000.00	-7.207207	20	PASS
		5670	NV	-30	40000.00	7.054674	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	40000.00	7.054674	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
		5755	NV	-30	0.00	0.000000	20	PASS
			NV	-20	40000.00	6.950478	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	40000.00	6.950478	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	40000.00	6.950478	20	PASS
			NV	30	40000.00	6.950478	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
		5795	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	6.902502	20	PASS
			NV	30	-40000.00	-6.902502	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	0.00	0.000000	20	PASS
11AC80SISO	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
			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	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
		5610	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
		5775	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

10. Dynamic Frequency Selection

10.1. Applicability of DFS requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	☐Master	☒Client Without Radar Detection	☐Client with Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	☐Master Device or Client with Radar Detection	☒Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	☐Master Device or Client with Radar Detection	☒Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

10.2. Limit

(1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

(2) DFS Response Requirements

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

10.3. Parameters of radar test waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of

specific test waveforms.

Table 5 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	$\text{Roundup}\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot10^6}{\text{PRI}_{\mu\text{sec}}}\right)\right\}$	60%	30
		Test B			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.
Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a
Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4

10.4. Calibration of radar waveform

Radar Waveform Calibration Procedure:

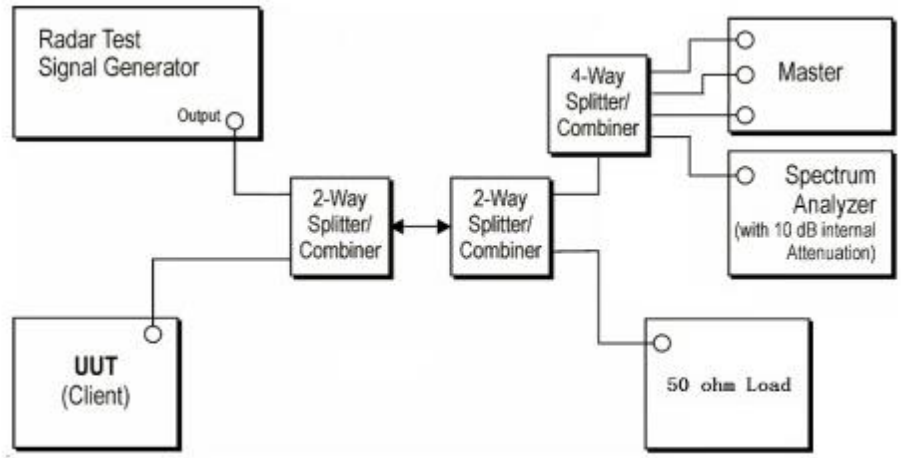
(1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master

(2) The interference Radar Detection Threshold Level is -62dBm + 0dBi +1dB = -61dBm that had been taken into account the output power range and antenna gain.

(3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB.

(4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was - -62dBm + 0dBi +1dB = -61dBm. Capture the spectrum analyzer plots on short pulse radar waveform.

Conducted Calibration Setup:



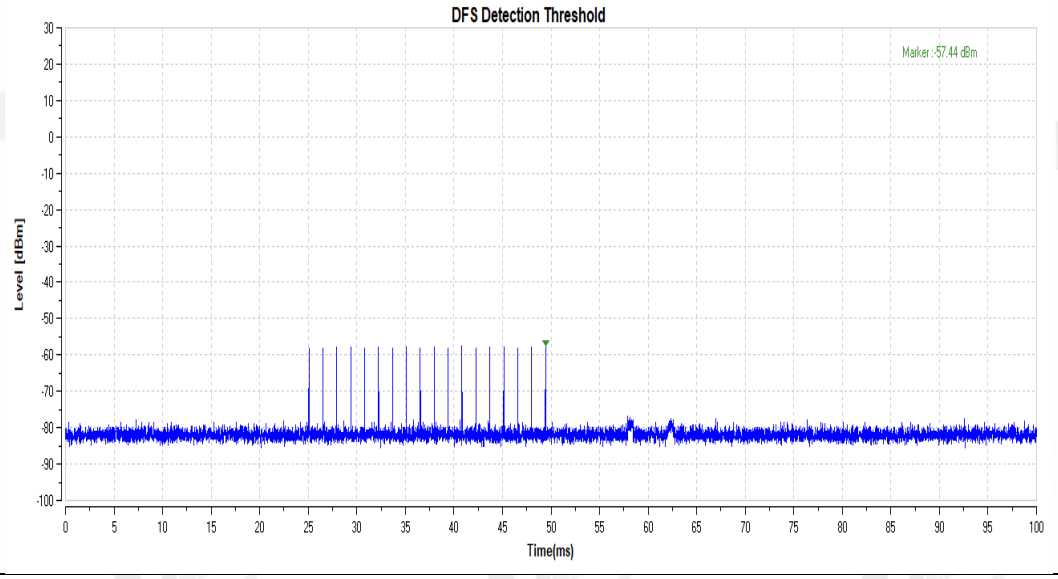
Note: 1. Use the software "Web" to set the frequency channel.

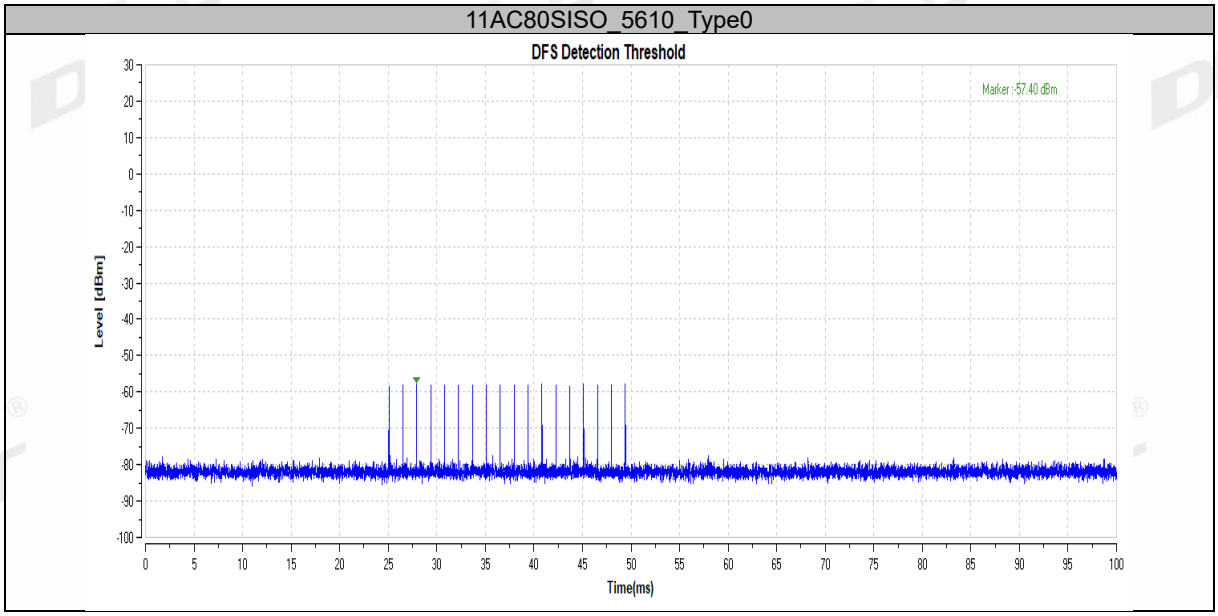
2. EUT is not support TPC and not with Radar detection.

Radar Waveform Calibration Result:

Frequency [MHz]	Radar Type	Result [dBm]	Limit [dBm]	Verdict
5320	Type0	-57.44	-57.38	PASS
5610	Type0	-57.40	-57.38	PASS

11A_5320_Type0





10.5. Channel closing transmission time, channel move time and non-occupancy period

Block diagram of test setup Test Procedure:

(1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.

(2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.

(3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.

(4) EUT will associate with the master at channel. The file “iperf.exe” specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Test Software in order to properly load the network for the entire period of the test.

(5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.

(6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.

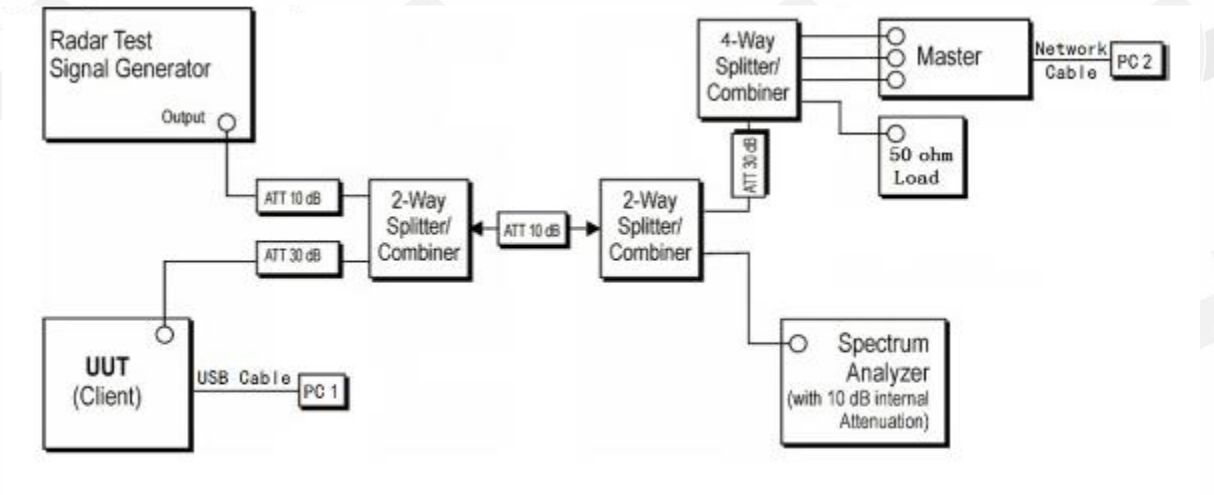
(7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the

(8) spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =S (12000ms) / B (4000); where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: C (ms)= N X Dwell (0.3ms); where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

10.6. Test setup

Setup for Client with injection at the Master

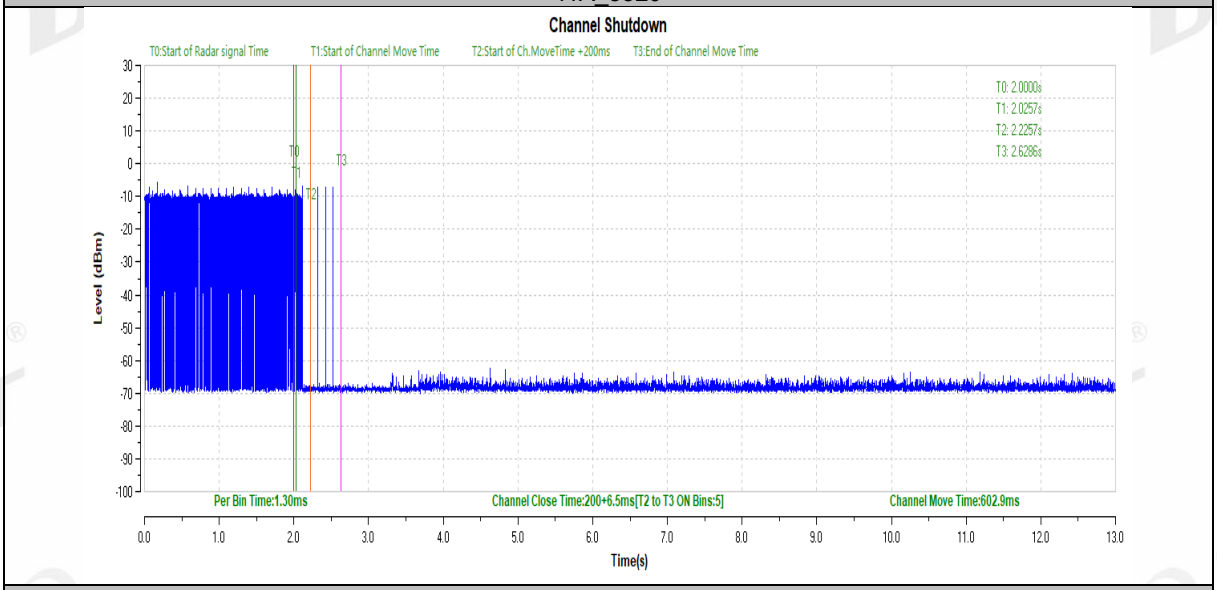


10.7. Test result

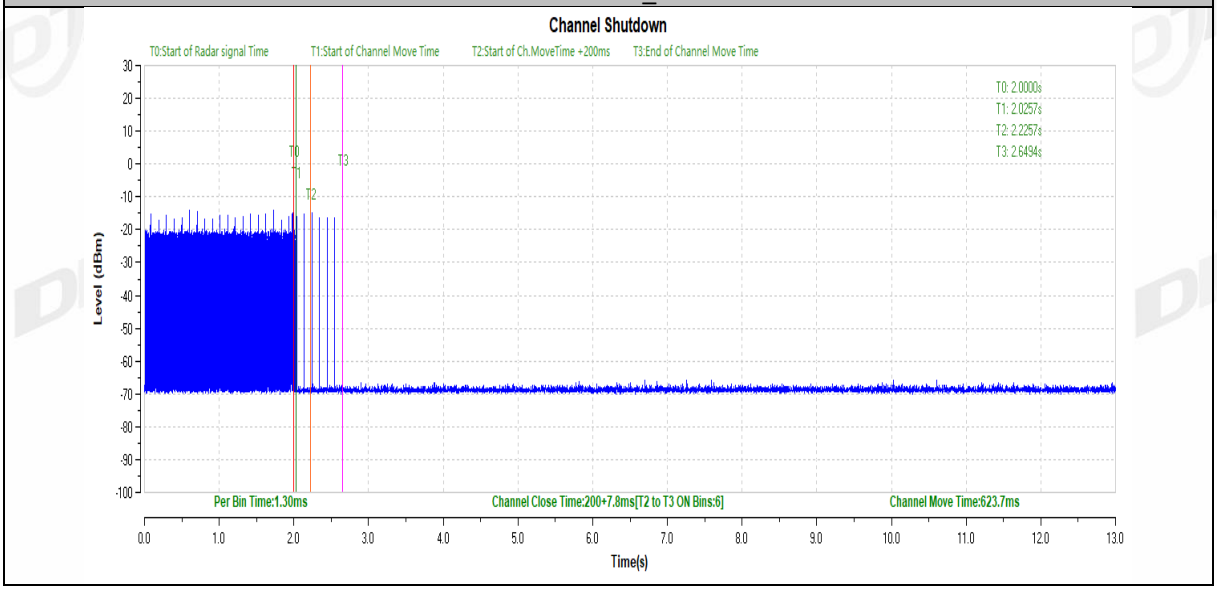
Test Mode	Frequency [MHz]	CCTT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11A	5320	200+6.5	200+60	602.9	10000	PASS
11AC80SISO	5610	200+7.8	200+60	623.7	10000	PASS

Test plots as follows:

11A_5320



11AC80SISO_5610

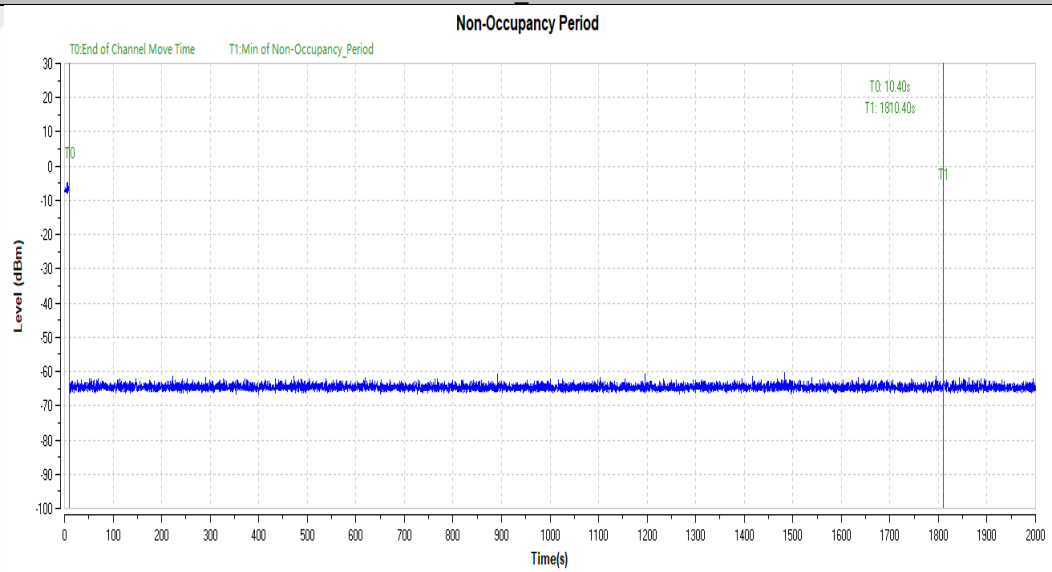


Non-Occupancy Period

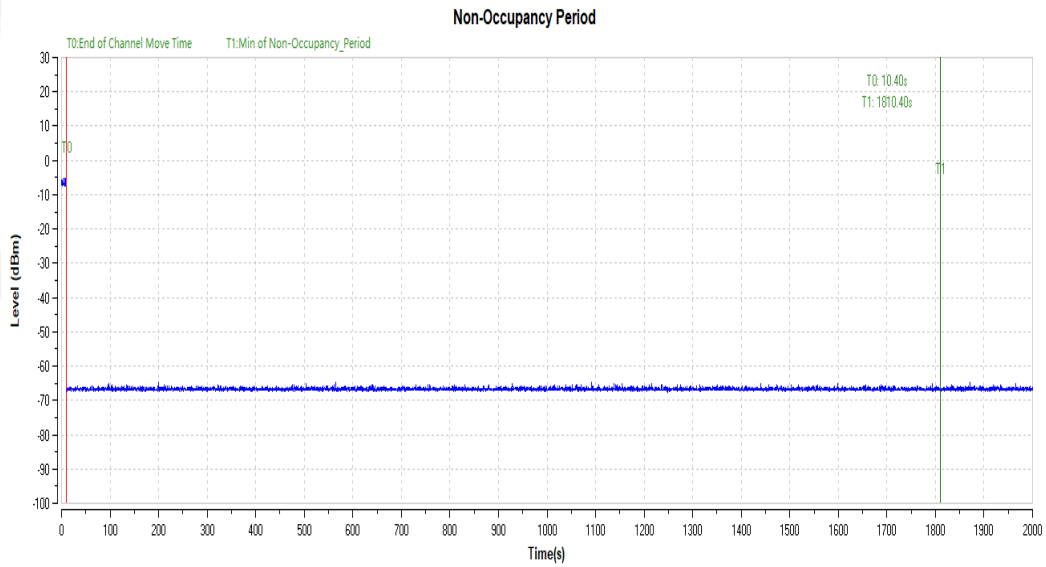
Test Mode	Frequency [MHz]	Result	Limit[s]	Verdict
11A	5320	see test graph	≥1800	PASS
11AC80SISO	5610	see test graph	≥1800	PASS

Test plots as follows:

11A_5320



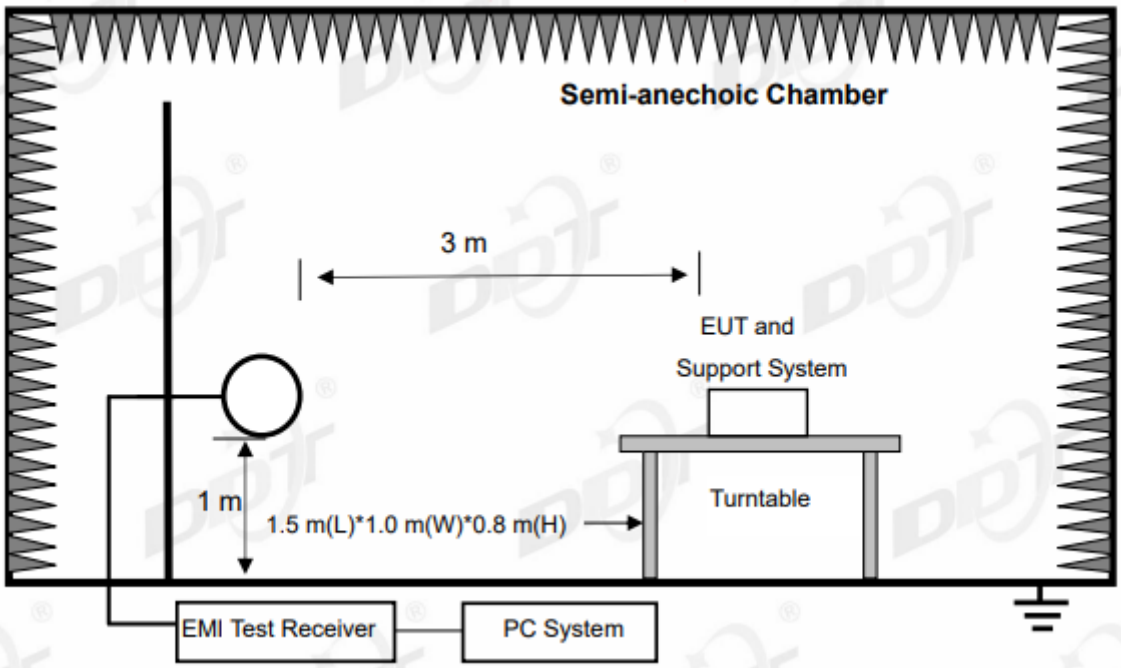
11AC80SISO_5610



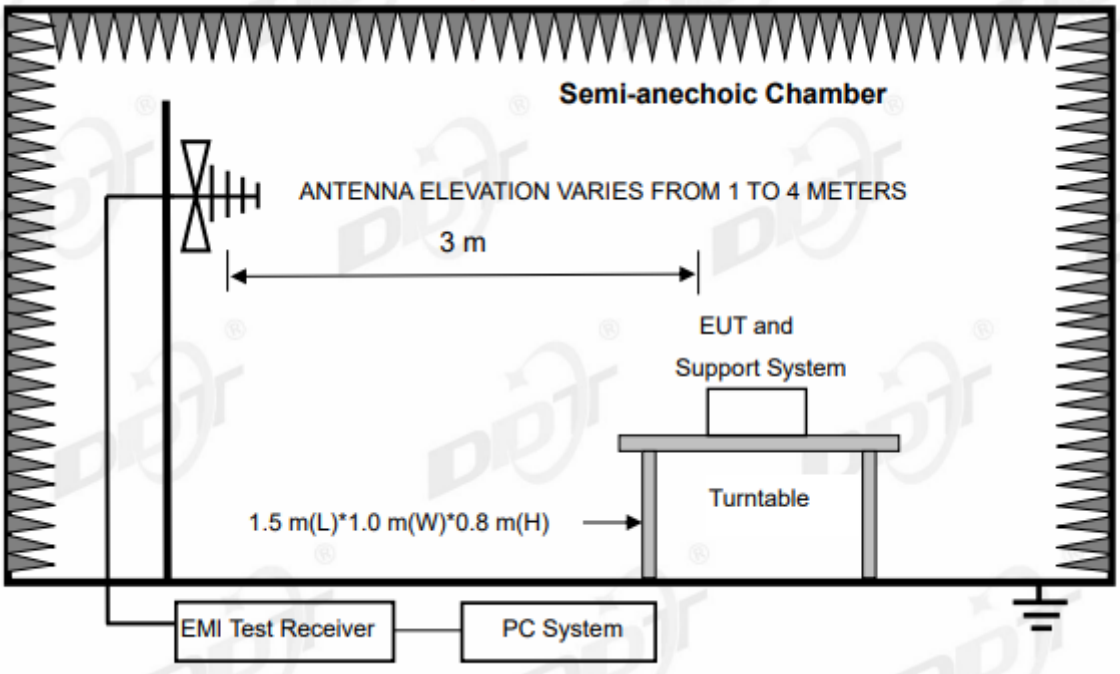
11. Emissions in Restricted Frequency Bands

11.1. Block diagram of test setup

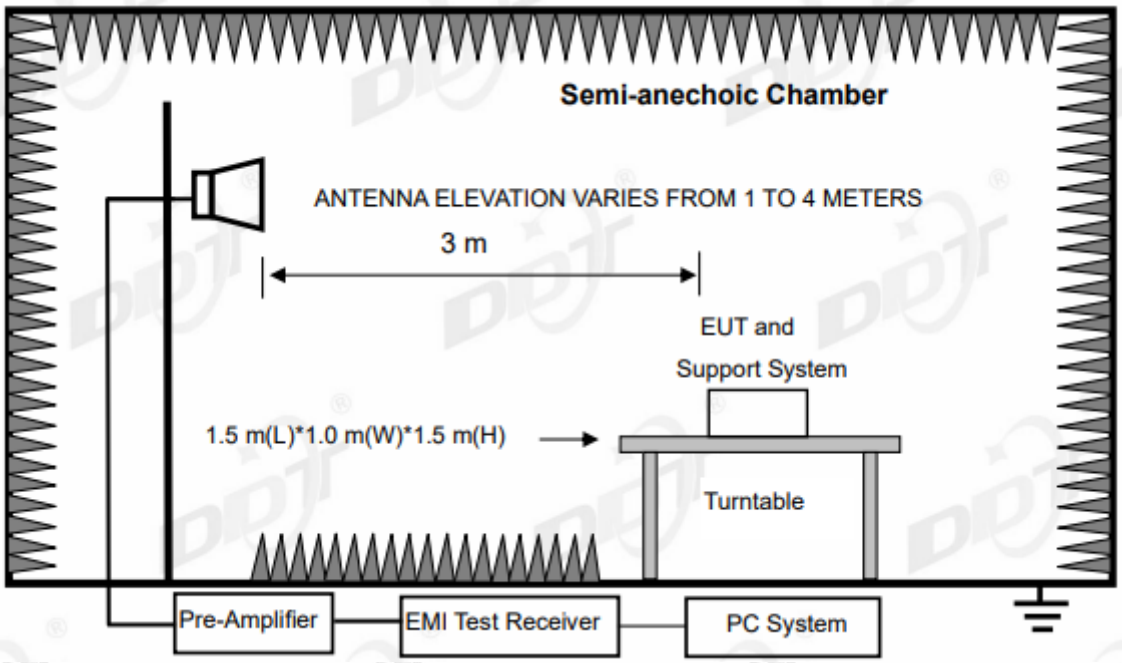
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

11.2. Limit

(1) FCC 15.205 Restricted frequency band

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
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&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	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	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			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

(2) FCC 15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

11.3. Test Procedure

(1) EUT height should be 0 m for below 1 GHz at a semi‐anechoic chamber while EUT height should be 0 m for above 1GHz at full chamber or semi‐anechoic chamber ground with absorbers

(2) Setup EUT and assistant system according clause 2.3 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	3 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the

loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 40 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 40 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so below final test was performed with frequency range from 30 MHz to 18 GHz.

(5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(6) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90kHz,110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(8) For emissions above 1 GHz, both Peak and Average level were measured with Spectrum

Analyzer, and the RBW is set at 1 MHz, VBW is set at 3MHz for Peak measure, the RBW is set at 1 MHz, VBW is set at 10 Hz for AV value.

11.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits.

Note1: According exploratory test no any obvious emission was detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

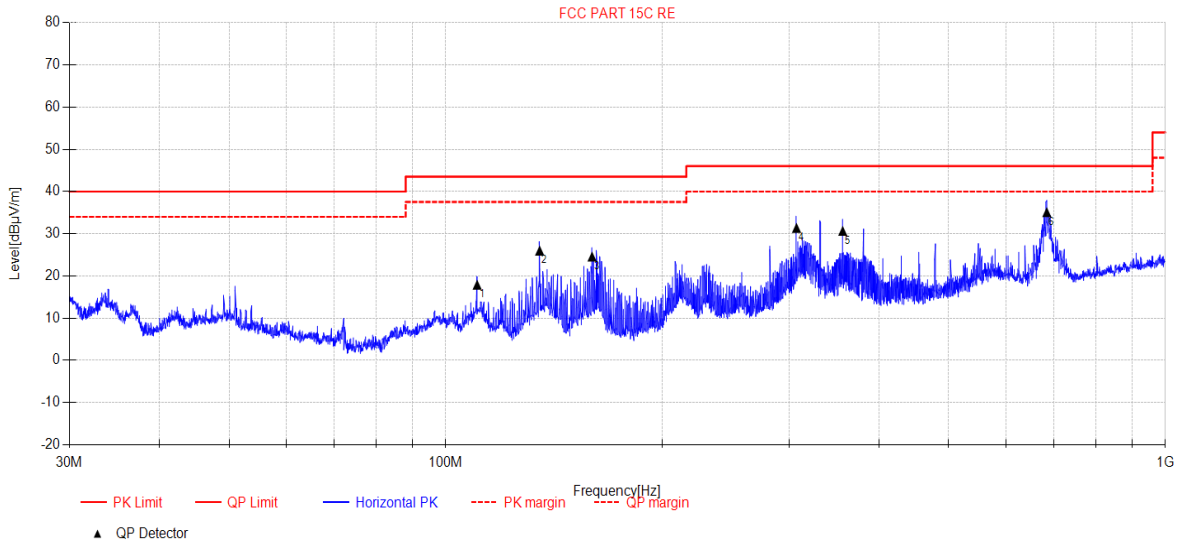
Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 802.11a20 mode.

Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit. And the BT+ 5GWIFI is the worst simultaneous case and reported.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-29	**Tested By**:	Junchang Du
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC BELOW 1G\20230329-111915_H		
Memo:			



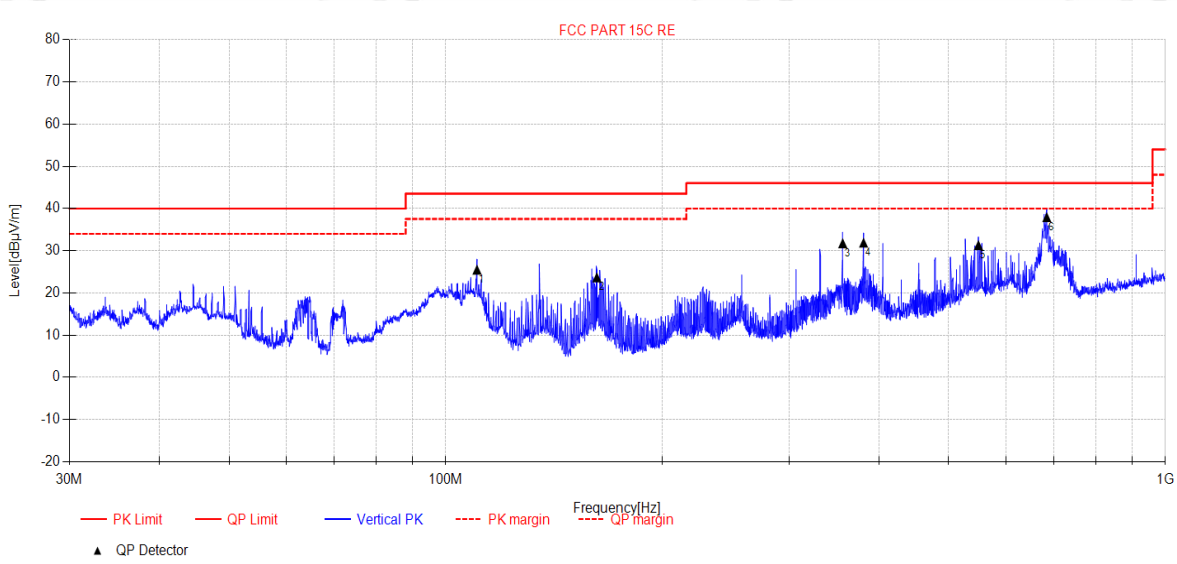
Final Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	110.62	37.94	10.38	1.72	-32.23	17.81	43.50	25.69	QP	Horizontal
2	135.09	48.7	7.50	1.90	-32.20	25.90	43.50	17.60	QP	Horizontal
3	159.73	46.64	7.97	2.07	-32.20	24.48	43.50	19.02	QP	Horizontal
4	307.26	47.27	13.45	2.89	-32.32	31.29	46.00	14.71	QP	Horizontal
5	356.25	45.04	14.72	3.15	-32.34	30.57	46.00	15.43	QP	Horizontal
6	684.32	43.57	19.79	4.48	-32.84	35.00	46.00	11.00	QP	Horizontal

Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-29	**Tested By**:	Junchang Du
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC BELOW 1G\20230329-112010_V		
Memo:	5G WIFI		



Final Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV/m]**	**Antenna Factor [dB]**	**Cable Loss [dB]**	**AMP [dB]**	**Result [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	110.54	45.53	10.39	1.72	-32.23	25.41	43.50	18.09	QP	Vertical
2	162.21	45.61	8.10	2.09	-32.20	23.60	43.50	19.90	QP	Vertical
3	356.25	46.14	14.72	3.15	-32.34	31.67	46.00	14.33	QP	Vertical
4	380.79	45.86	15.02	3.29	-32.35	31.82	46.00	14.18	QP	Vertical
5	549.86	42.12	17.80	3.93	-32.62	31.23	46.00	14.77	QP	Vertical
6	684.32	46.42	19.79	4.48	-32.84	37.85	46.00	8.15	QP	Vertical

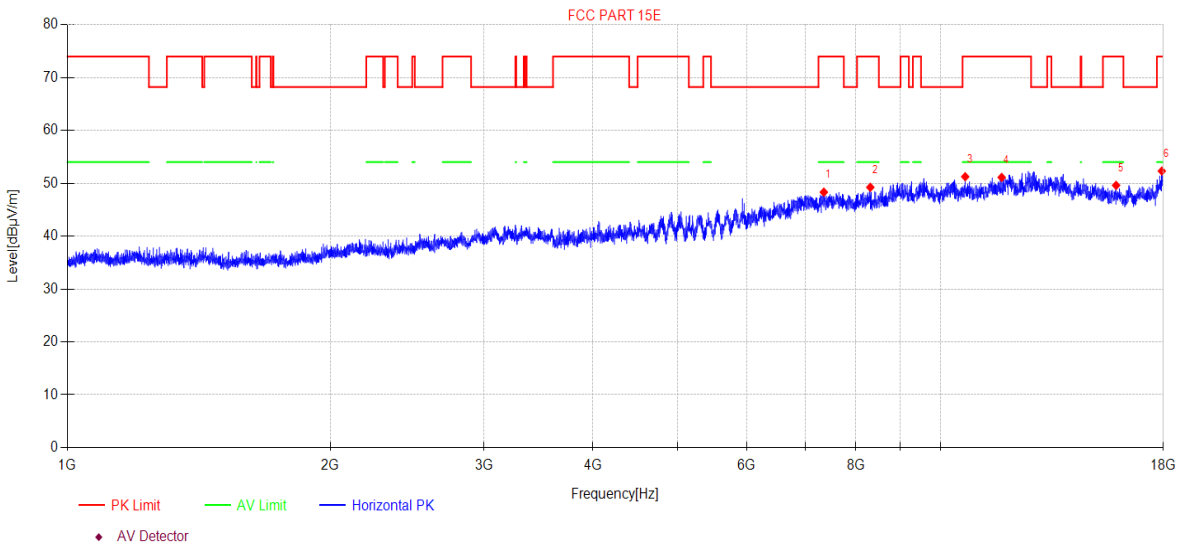
Note:
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\2		
Memo:	11A 5180		

Test Graph



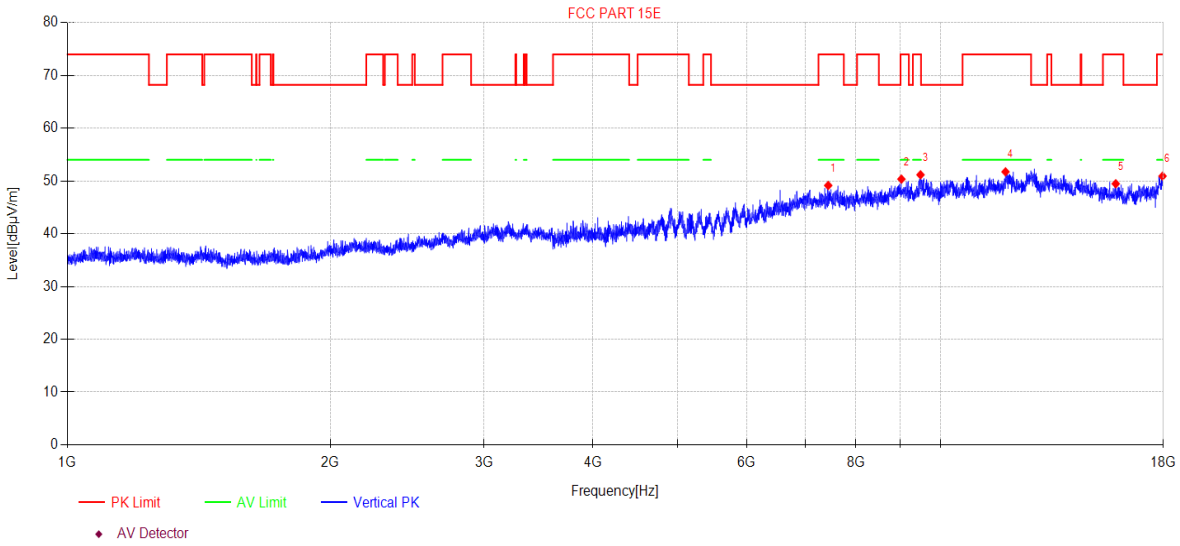
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7352.38	44.96	7.87	36.50	-41.00	48.33	74.00	25.67	PK	Horizontal
2	8310.86	44.82	7.72	37.20	-40.50	49.24	74.00	24.76	PK	Horizontal
3	10674.36	44.54	8.17	39.07	-40.53	51.25	74.00	22.75	PK	Horizontal
4	11752.72	43.36	8.26	38.80	-39.30	51.12	74.00	22.88	PK	Horizontal
5	15891.89	41.51	10.31	38.11	-40.32	49.61	74.00	24.39	PK	Horizontal
6	17927.32	40.33	11.30	41.36	-40.67	52.32	74.00	21.68	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\3		
Memo:	11A 5180		

Test Graph



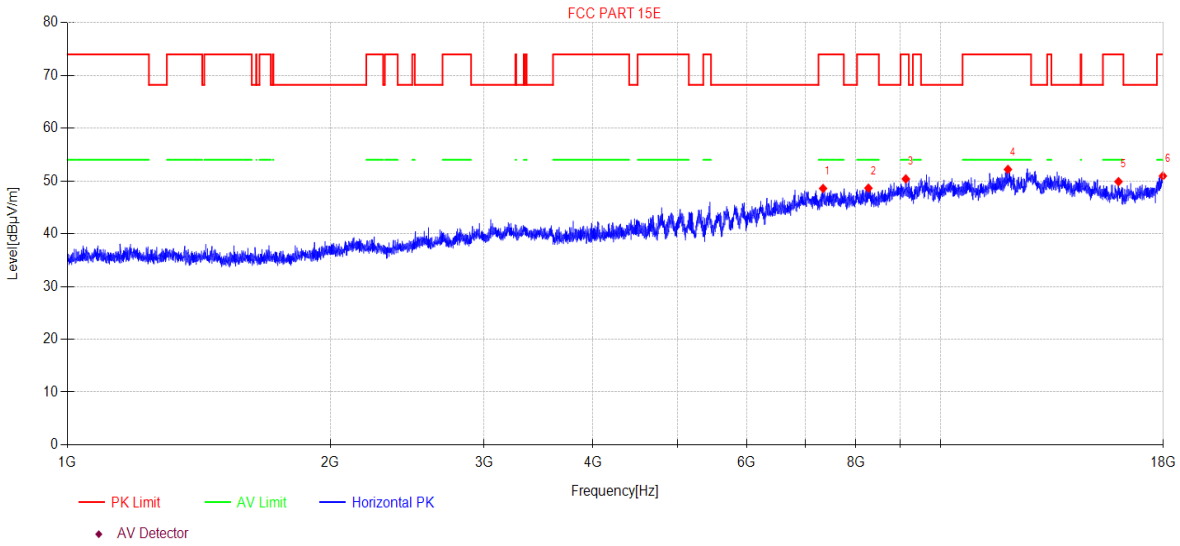
Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV]**	**Cable Loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7437.87	45.79	7.86	36.50	-41.00	49.15	74.00	24.85	PK	Vertical
2	9021.78	44.01	7.57	38.20	-39.43	50.35	74.00	23.65	PK	Vertical
3	9487.07	44.94	7.81	38.40	-39.98	51.17	74.00	22.83	PK	Vertical
4	11872.20	43.78	8.26	38.80	-39.10	51.74	74.00	22.26	PK	Vertical
5	15878.12	41.36	10.30	38.12	-40.31	49.47	74.00	24.53	PK	Vertical
6	17963.62	38.71	11.32	41.58	-40.69	50.92	74.00	23.08	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\4		
Memo:	11A 5200		

Test Graph



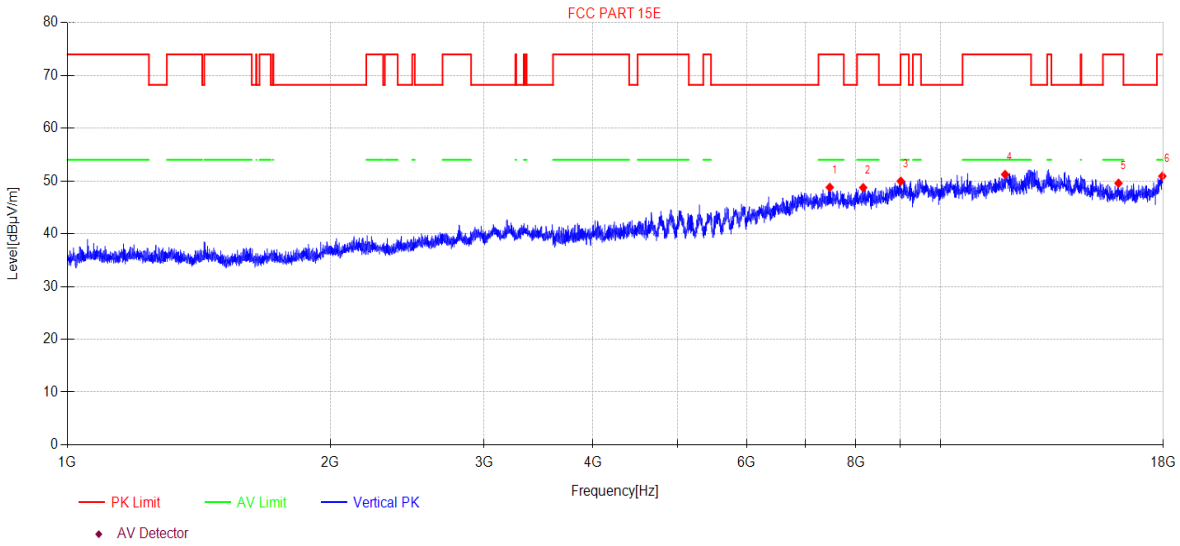
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7337.52	45.20	7.88	36.50	-41.00	48.58	74.00	25.42	PK	Horizontal
2	8270.13	44.34	7.73	37.14	-40.57	48.64	74.00	25.36	PK	Horizontal
3	9126.68	44.06	7.63	38.25	-39.55	50.39	74.00	23.61	PK	Horizontal
4	11947.93	44.04	8.27	38.85	-38.98	52.18	74.00	21.82	PK	Horizontal
5	15993.26	41.99	10.37	37.91	-40.40	49.87	74.00	24.13	PK	Horizontal
6	17979.20	38.61	11.34	41.68	-40.69	50.94	74.00	23.06	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\5		
Memo:	11A 5200		

Test Graph



Suspected Data List

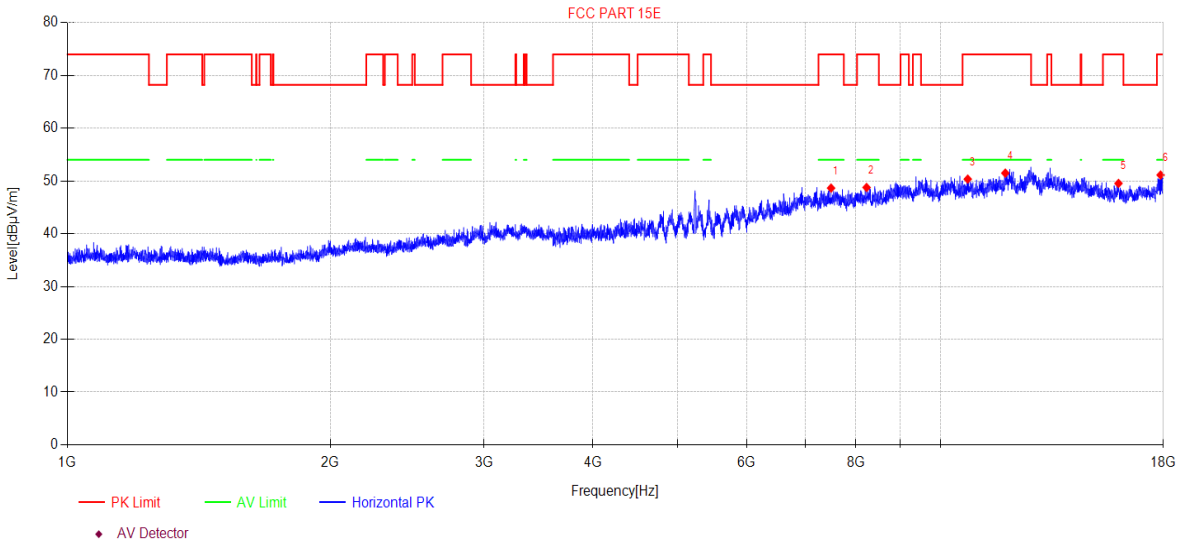
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7468.03	45.47	7.86	36.46	-41.00	48.79	74.00	25.21	PK	Vertical
2	8156.20	44.73	7.75	37.01	-40.75	48.74	74.00	25.26	PK	Vertical
3	9006.15	43.61	7.56	38.20	-39.41	49.96	74.00	24.04	PK	Vertical
4	11858.49	43.31	8.26	38.80	-39.13	51.24	74.00	22.76	PK	Vertical
5	15993.26	41.70	10.37	37.91	-40.40	49.58	74.00	24.42	PK	Vertical
6	17953.24	38.76	11.32	41.52	-40.68	50.92	74.00	23.08	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\6		
Memo:	11A 5240		

Test Graph



Suspected Data List

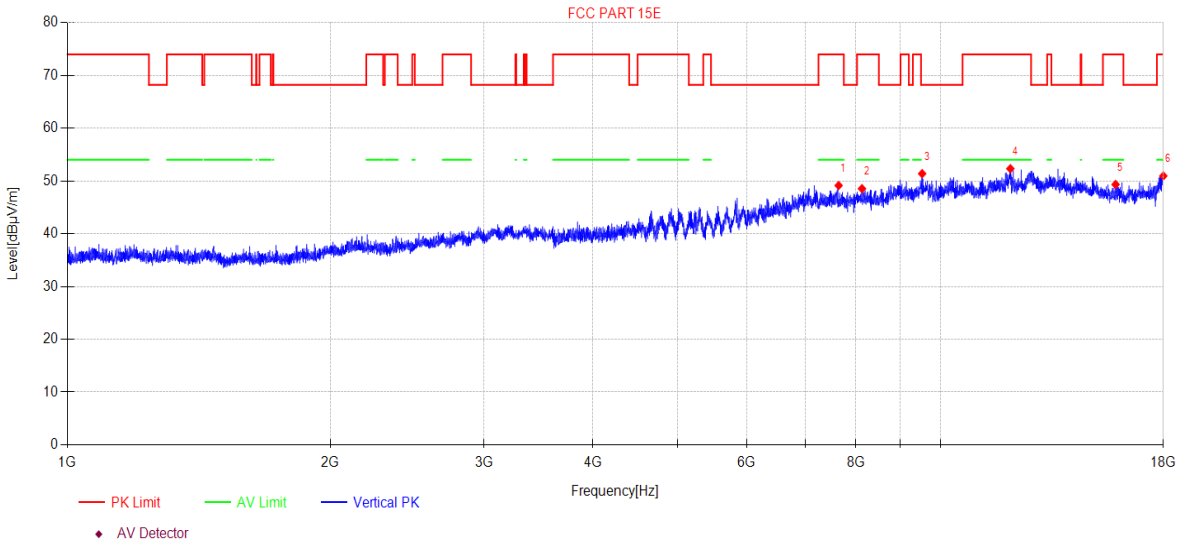
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7493.97	45.38	7.86	36.41	-41.00	48.65	74.00	25.35	PK	Horizontal
2	8229.60	44.56	7.74	37.10	-40.63	48.77	74.00	25.23	PK	Horizontal
3	10745.55	43.60	8.18	39.10	-40.53	50.35	74.00	23.65	PK	Horizontal
4	11865.34	43.55	8.26	38.80	-39.12	51.49	74.00	22.51	PK	Horizontal
5	15993.26	41.66	10.37	37.91	-40.40	49.54	74.00	24.46	PK	Horizontal
6	17870.42	39.52	11.26	40.99	-40.65	51.12	74.00	22.88	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\7		
Memo:	11A 5240		

Test Graph



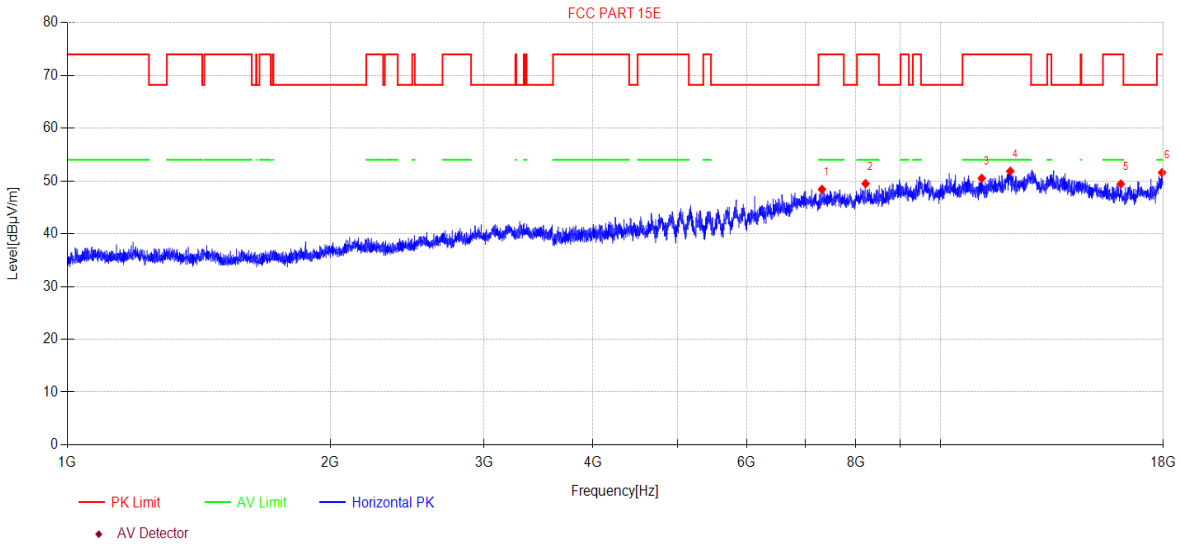
Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV]**	**Cable Loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7644.91	45.81	7.84	36.49	-41.00	49.14	74.00	24.86	PK	Vertical
2	8130.31	44.57	7.76	37.00	-40.79	48.54	74.00	25.46	PK	Vertical
3	9528.28	45.18	7.83	38.40	-40.03	51.38	68.20	16.82	PK	Vertical
4	12024.14	44.00	8.30	38.95	-38.92	52.33	74.00	21.67	PK	Vertical
5	15868.95	41.21	10.30	38.13	-40.31	49.33	74.00	24.67	PK	Vertical
6	18000.00	38.50	11.35	41.80	-40.70	50.95	74.00	23.05	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\8		
Memo:	11A 5260		

Test Graph



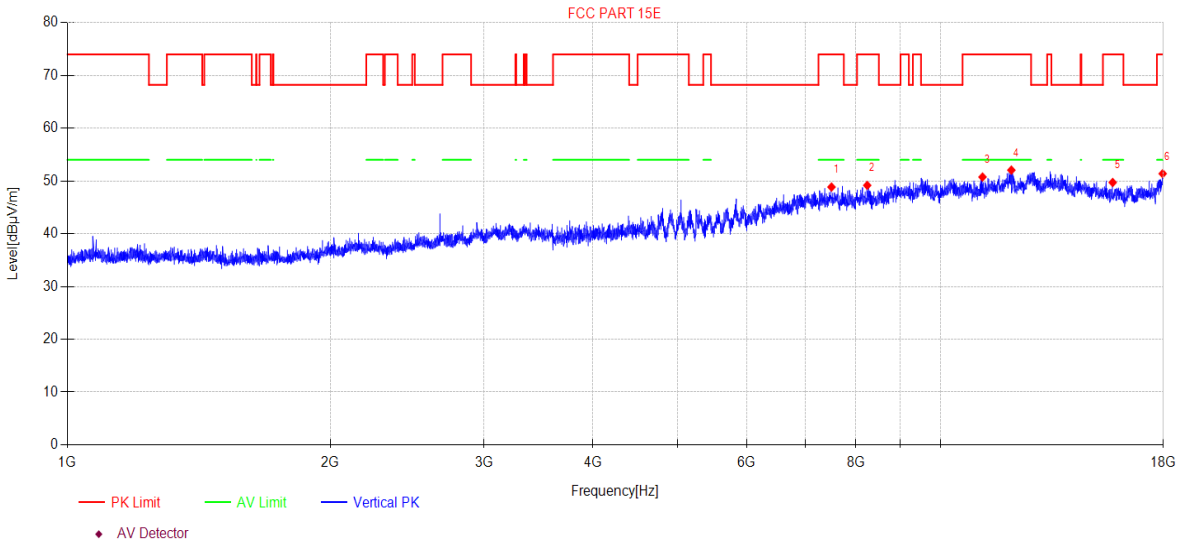
Suspected Data List										
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7316.35	45.04	7.88	36.50	-41.00	48.42	74.00	25.58	PK	Horizontal
2	8208.22	45.33	7.74	37.10	-40.67	49.50	74.00	24.50	PK	Horizontal
3	11150.51	43.44	8.22	39.10	-40.26	50.50	74.00	23.50	PK	Horizontal
4	12020.66	43.54	8.30	38.94	-38.92	51.86	74.00	22.14	PK	Horizontal
5	16090.62	41.61	10.40	37.81	-40.39	49.43	74.00	24.57	PK	Horizontal
6	17937.68	39.53	11.31	41.43	-40.68	51.59	74.00	22.41	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\9		
Memo:	11A 5260		

Test Graph



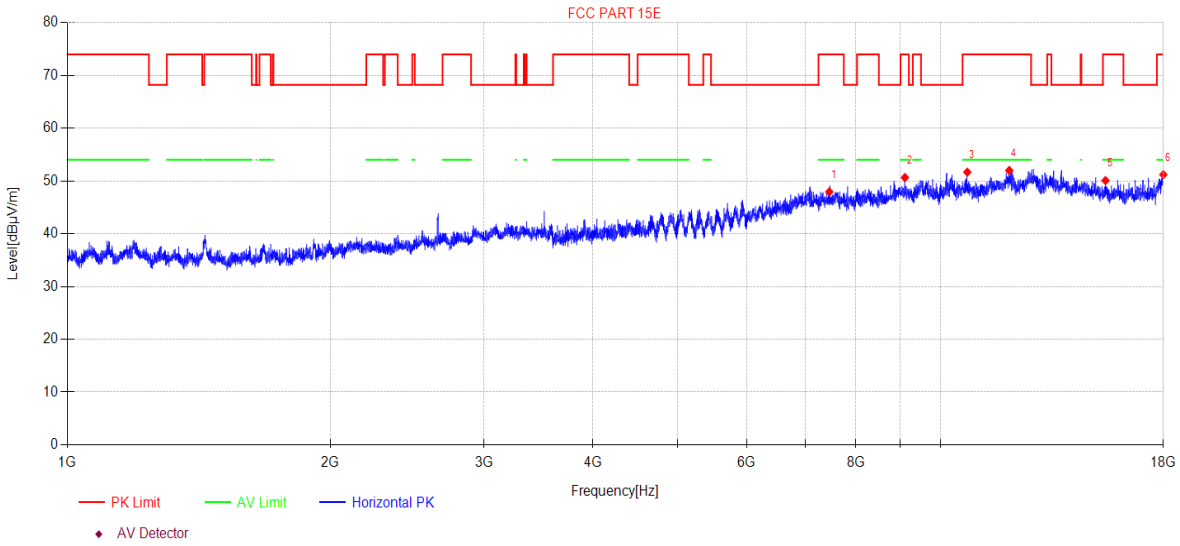
Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV]**	**Cable Loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7502.64	45.60	7.85	36.40	-41.00	48.85	74.00	25.15	PK	Vertical
2	8243.88	44.95	7.73	37.10	-40.61	49.17	74.00	24.83	PK	Vertical
3	11173.09	43.65	8.22	39.10	-40.22	50.75	74.00	23.25	PK	Vertical
4	12055.46	43.67	8.34	39.01	-38.96	52.06	74.00	21.94	PK	Vertical
5	15750.15	41.45	10.24	38.25	-40.23	49.71	74.00	24.29	PK	Vertical
6	17968.81	39.13	11.33	41.61	-40.69	51.38	74.00	22.62	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\10		
Memo:	11A 5280		

Test Graph



Suspected Data List

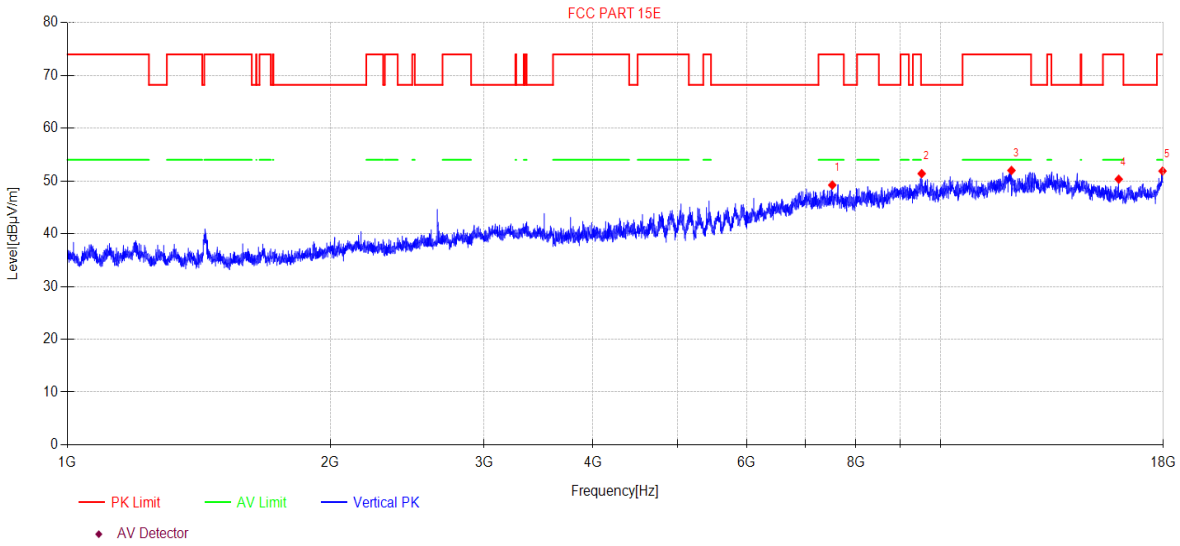
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7459.40	44.60	7.86	36.48	-41.00	47.94	74.00	26.06	PK	Horizontal
2	9105.61	44.37	7.61	38.21	-39.53	50.66	74.00	23.34	PK	Horizontal
3	10733.14	44.92	8.18	39.10	-40.53	51.67	74.00	22.33	PK	Horizontal
4	11989.44	43.76	8.27	38.89	-38.92	52.00	74.00	22.00	PK	Horizontal
5	15452.57	41.38	10.07	38.65	-40.02	50.08	74.00	23.92	PK	Horizontal
6	18000.00	38.76	11.35	41.80	-40.70	51.21	74.00	22.79	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\11		
Memo:	11A 5280		

Test Graph



Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV]**	**Cable Loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	7517.83	45.97	7.85	36.40	-41.00	49.22	74.00	24.78	PK	Vertical
2	9517.27	45.18	7.83	38.40	-40.02	51.39	68.20	16.81	PK	Vertical
3	12058.94	43.58	8.35	39.02	-38.96	51.99	74.00	22.01	PK	Vertical
4	16002.51	42.47	10.37	37.90	-40.40	50.34	74.00	23.66	PK	Vertical
5	17963.62	39.67	11.32	41.58	-40.69	51.88	74.00	22.12	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

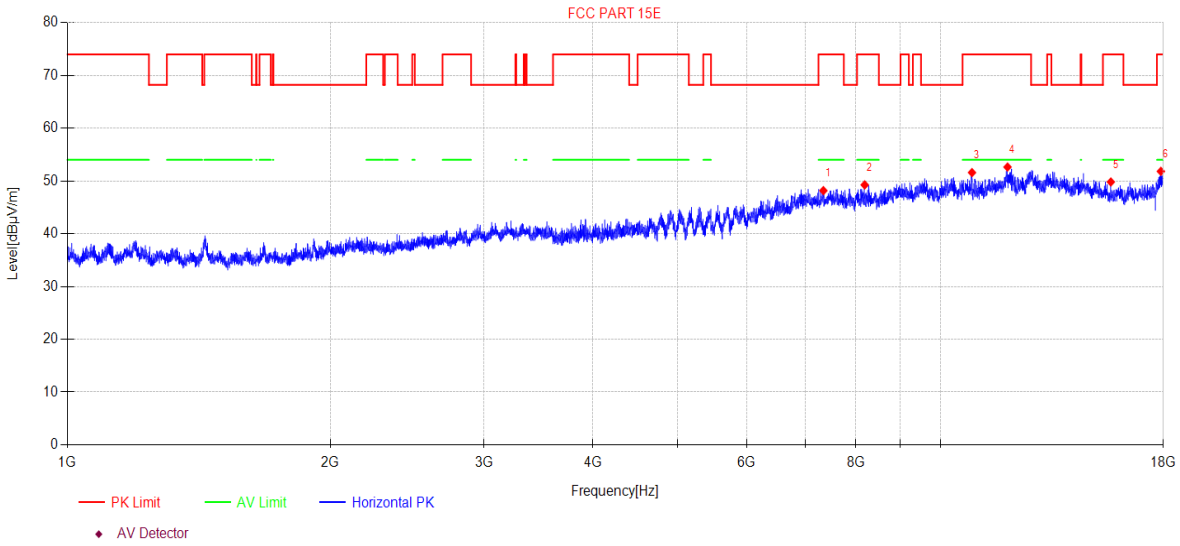
TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\12

Memo: 11A 5320

Test Graph



Suspected Data List

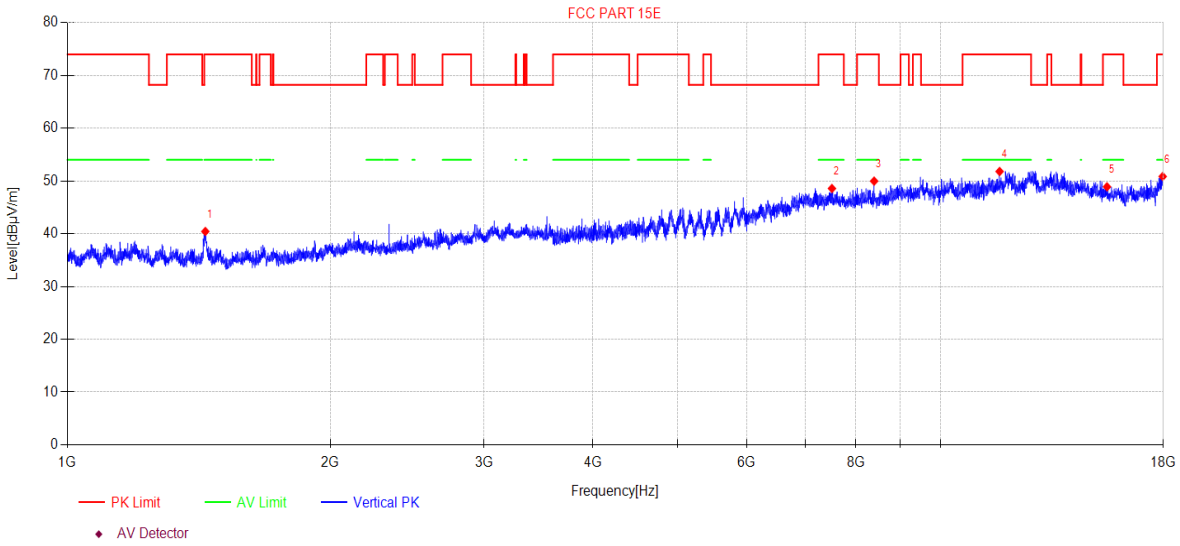
NO.	Freq. [MHz]	Reading [dBµV]	Cable Loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7343.89	44.79	7.88	36.50	-41.00	48.17	74.00	25.83	PK	Horizontal
2	8189.27	45.13	7.75	37.08	-40.70	49.26	74.00	24.74	PK	Horizontal
3	10867.35	44.81	8.19	39.10	-40.51	51.59	74.00	22.41	PK	Horizontal
4	11934.13	44.55	8.27	38.83	-39.01	52.64	74.00	21.36	PK	Horizontal
5	15672.96	41.46	10.19	38.33	-40.17	49.81	74.00	24.19	PK	Horizontal
6	17885.92	40.10	11.27	41.10	-40.65	51.82	74.00	22.18	PK	Horizontal

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:	2023-03-31	**Tested By**:	Bairong
EUT:	Portable Wireless Speaker	**Model Number**:	VIFA062
Test Mode:	Tx mode	**Power Supply**:	AC 120V/60Hz
Condition:	Temp:23.2°C;Humi:66.3%	**Test Site**:	DDT 3# Chamber
File Path:	d:\ts\2023 report data\Q23030821-2E VIFA062\FCC ABOVE 5GWIFI\13		
Memo:	11A 5320		

Test Graph



Suspected Data List										
NO.	**Freq. [MHz]**	**Reading [dBµV]**	**Cable Loss [dB]**	**Antenna Factor [dB]**	**AMP [dB]**	**Level [dBµV/m]**	**Limit [dBµV/m]**	**Margin [dB]**	**Detector**	**Polarity**
1	1438.87	50.52	3.17	25.60	-38.86	40.43	74.00	33.57	PK	Vertical
2	7511.32	45.33	7.85	36.40	-41.00	48.58	74.00	25.42	PK	Vertical
3	8395.36	45.35	7.70	37.29	-40.37	49.97	74.00	24.03	PK	Vertical
4	11688.36	44.14	8.25	38.81	-39.40	51.80	74.00	22.20	PK	Vertical
5	15515.22	40.28	10.11	38.57	-40.06	48.90	74.00	25.10	PK	Vertical
6	17968.81	38.60	11.33	41.61	-40.69	50.85	74.00	23.15	PK	Vertical

Note:
1. Level = Reading + Cable Loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.