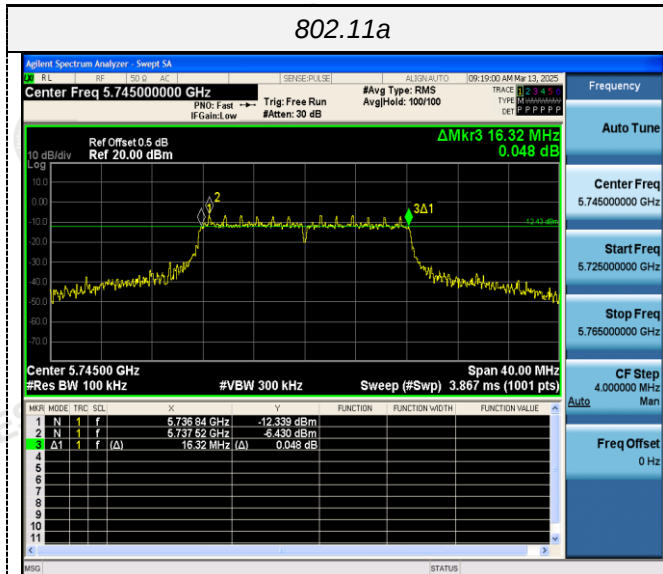
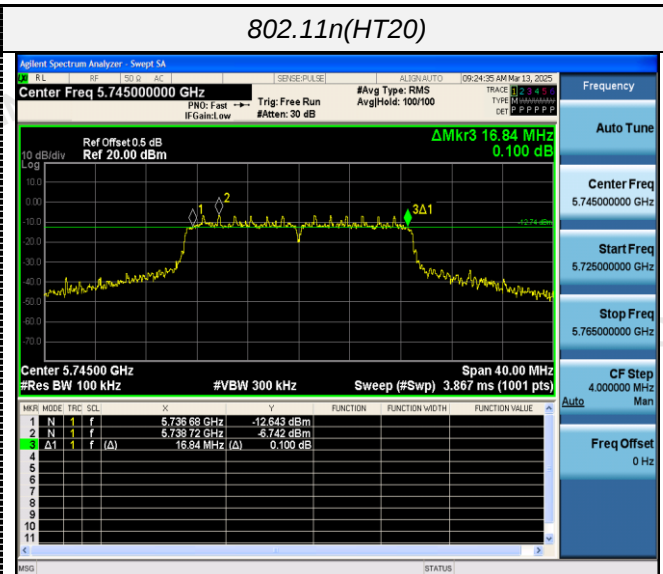


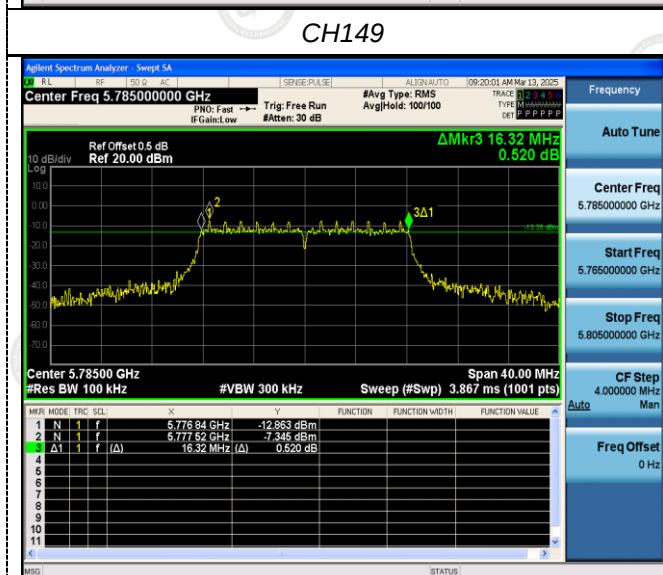
802.11a



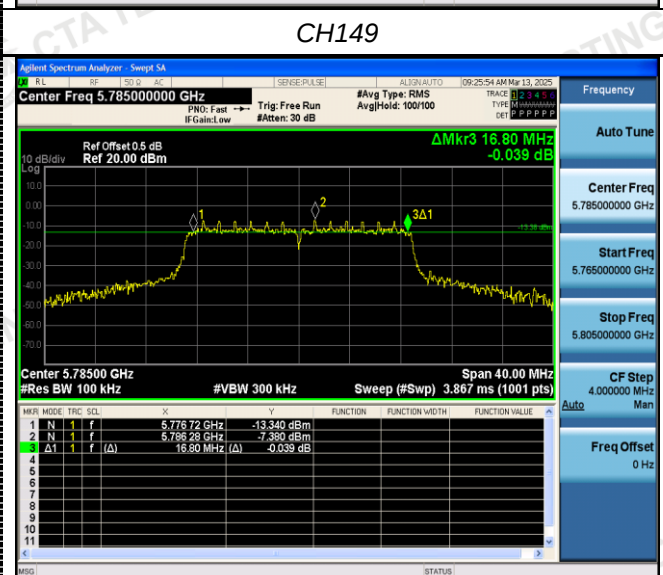
802.11n(HT20)



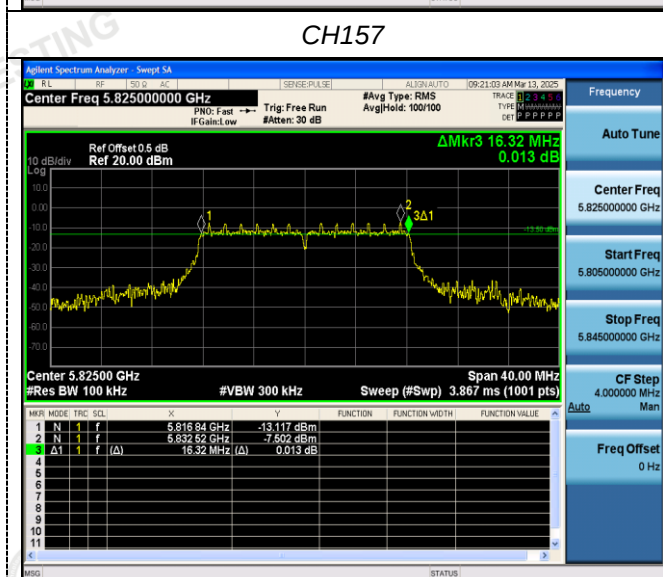
CH149



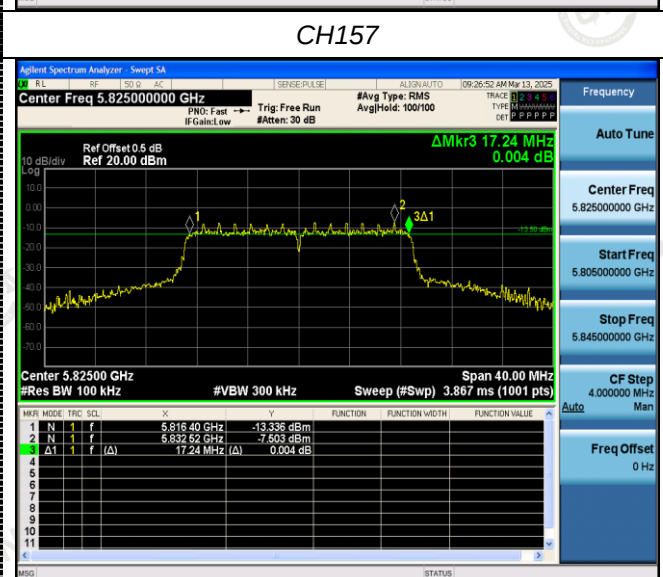
CH149



CH157



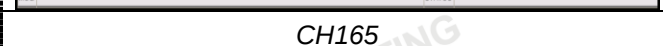
CH157



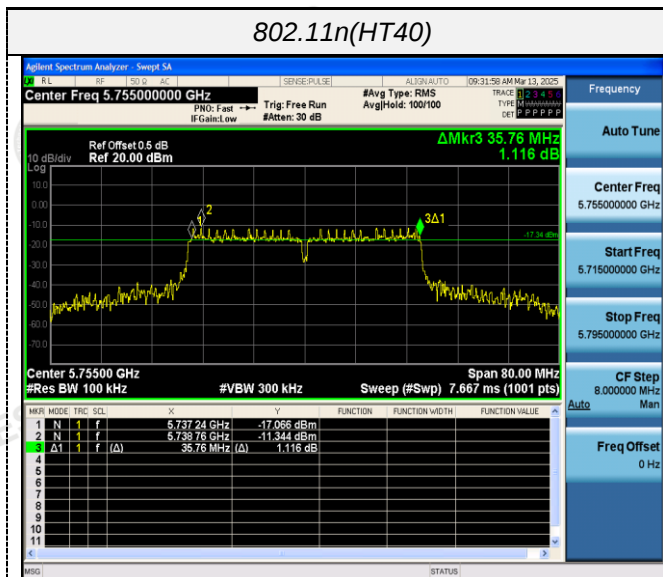
CH165



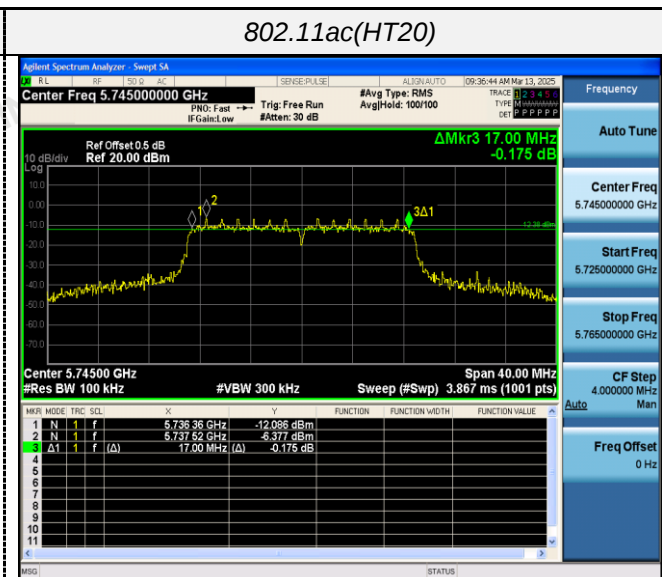
CH165



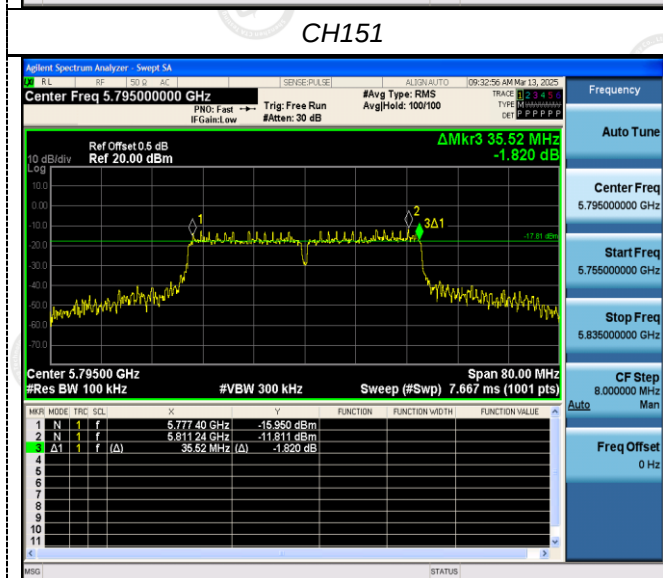
802.11n(HT40)



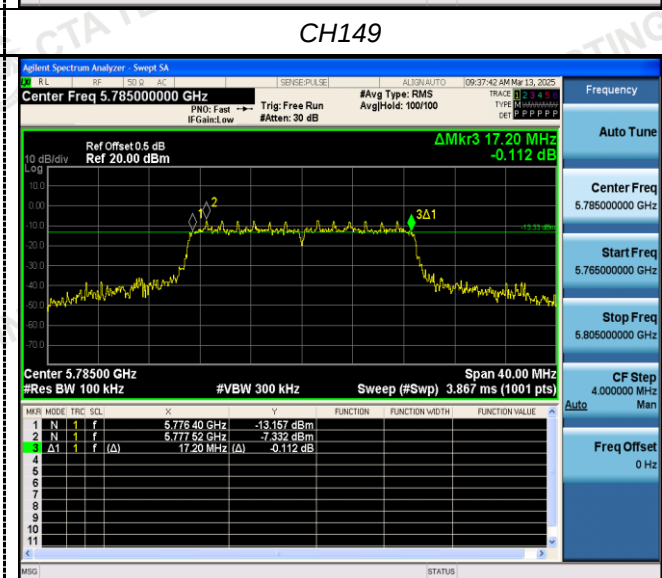
802.11ac(HT20)



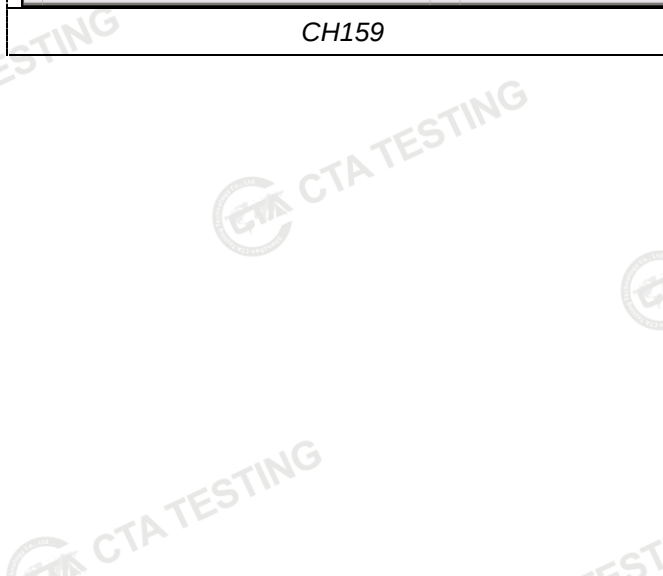
CH151



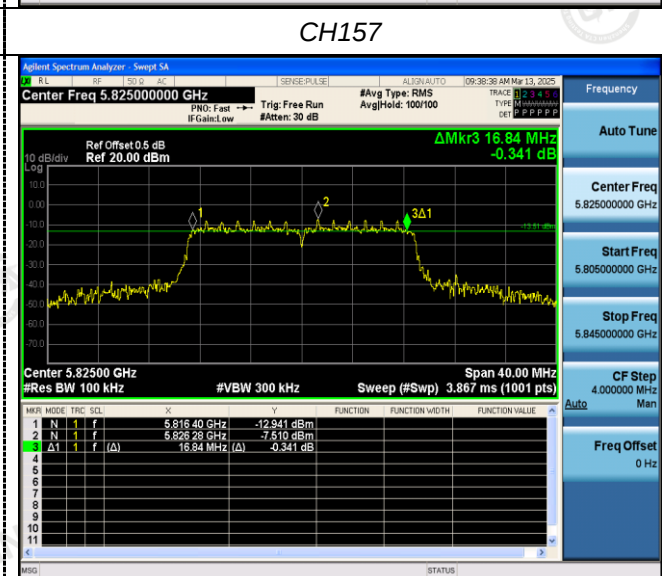
CH149



CH159

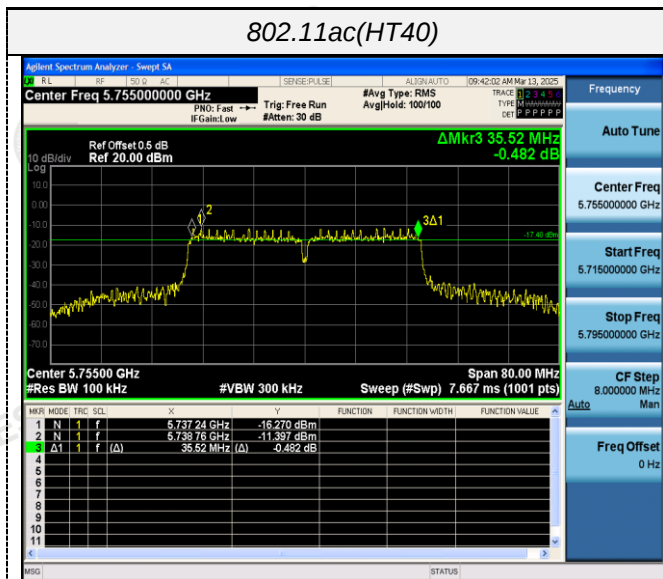


CH157

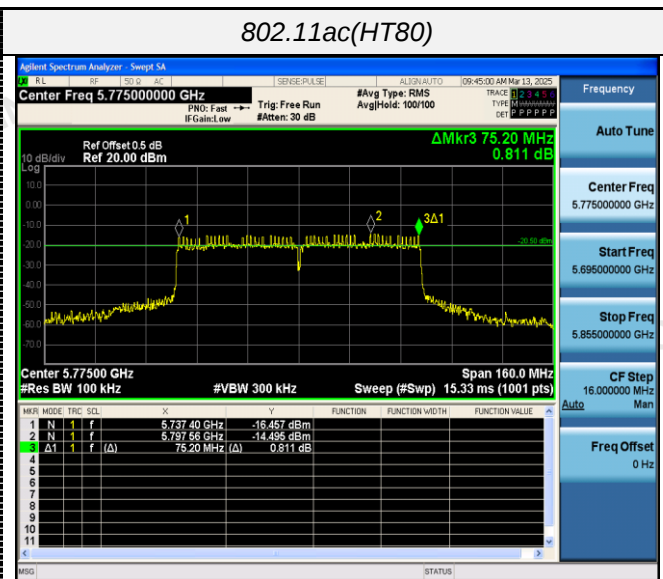


CH165

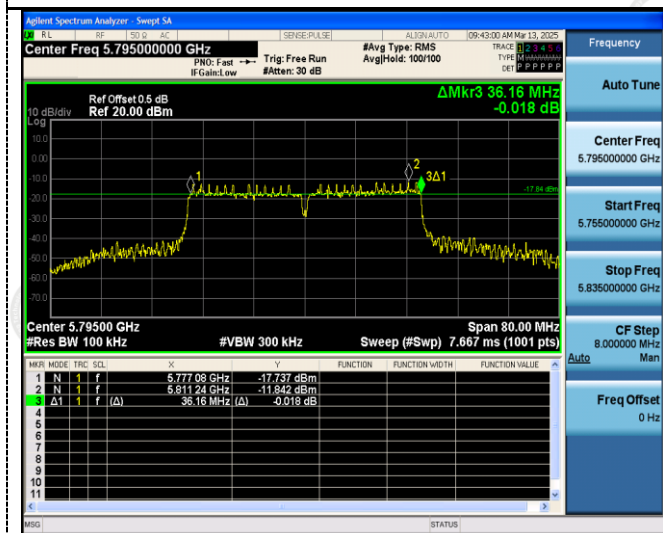
802.11ac(HT40)



802.11ac(HT80)



CH151



CH155



CH159

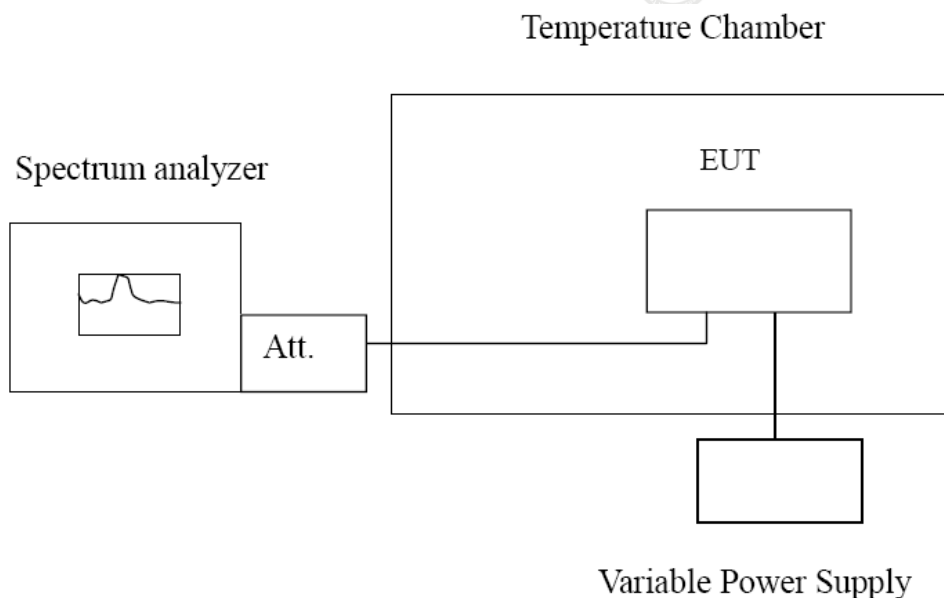


4.7 Frequency Stability

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.

TEST CONFIGURATION



TEST PROCEDURE

Frequency Stability under Temperature Variations:

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Frequency Stability under Voltage Variations:

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency. Reduce the input voltage to specify extreme voltage variation ($\pm 15\%$) and endpoint, record the maximum frequency change.

TEST RESULTS

Record worst case as below:

Reference Frequency: 802.11ac channel=36 frequency=5180MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 3.8	-30	110.63	0.021357	Within the band of operation	Pass
	-20	174.63	0.033712		
	-10	145.48	0.028085		
	0	146.81	0.028342		
	10	146.07	0.028199		
	20	99.81	0.019268		
	30	167.55	0.032346		
	40	129.68	0.025035		
	50	128.39	0.024786		
DC 4.2	25	195.63	0.037766	Within the band of operation	Pass
DC 3.4	25	118.84	0.022942		

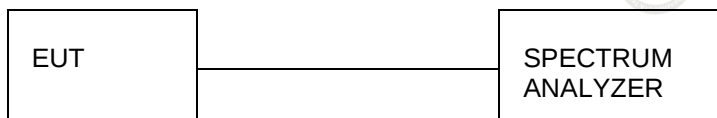
Reference Frequency: 802.11ac channel=149 frequency=5745MHz					
Voltage (V)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
DC 3.8	-30	135.51	0.023587	Within the band of operation	Pass
	-20	129.60	0.022559		
	-10	167.41	0.029140		
	0	169.83	0.029561		
	10	136.66	0.023788		
	20	144.98	0.025236		
	30	116.41	0.020263		
	40	168.17	0.029272		
	50	160.86	0.028000		
DC 4.2	25	150.65	0.026223	Within the band of operation	Pass
DC 3.4	25	129.98	0.022625		

4.8 On Time and Duty Cycle

Standard Applicable

None; for reporting purpose only.

TEST CONFIGURATION

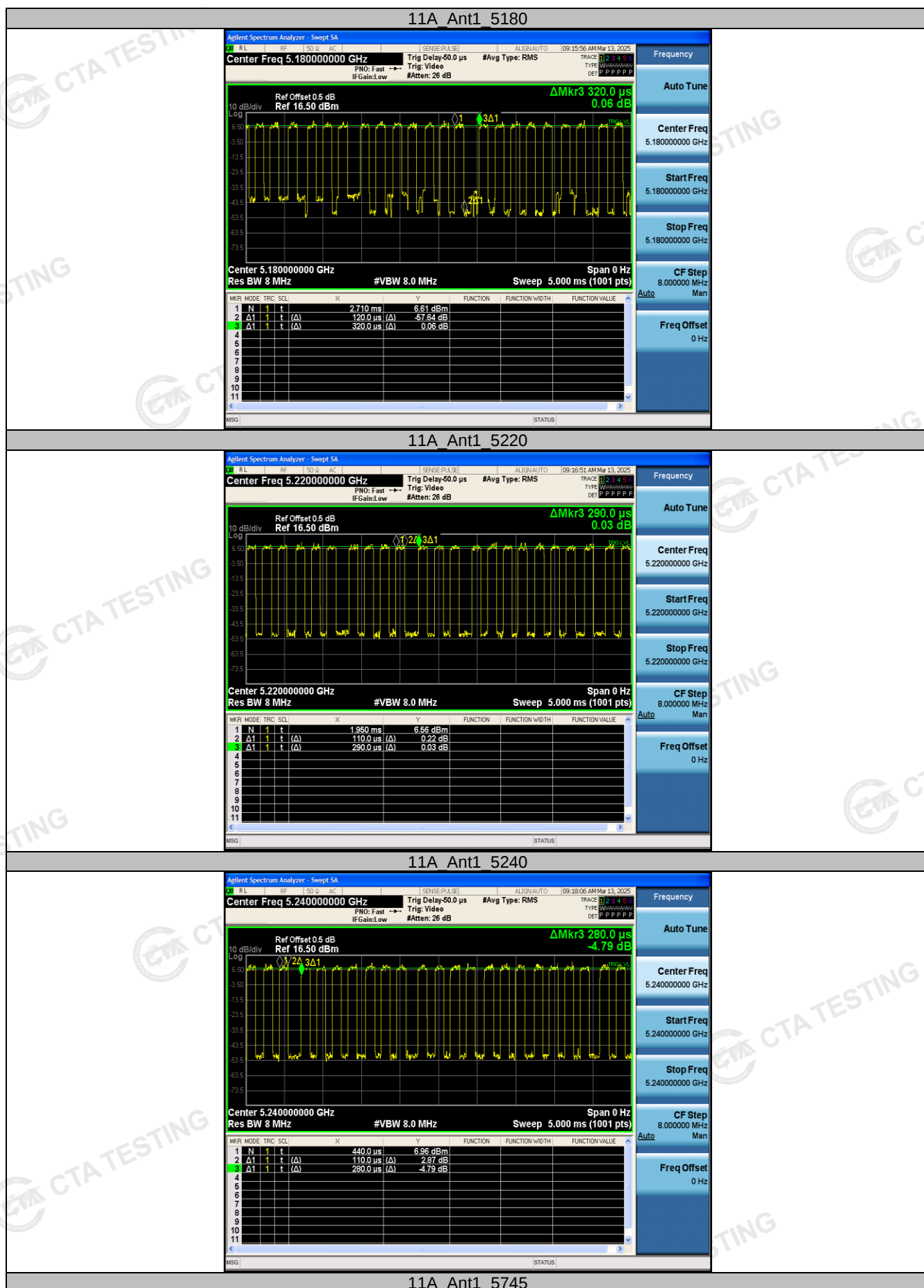


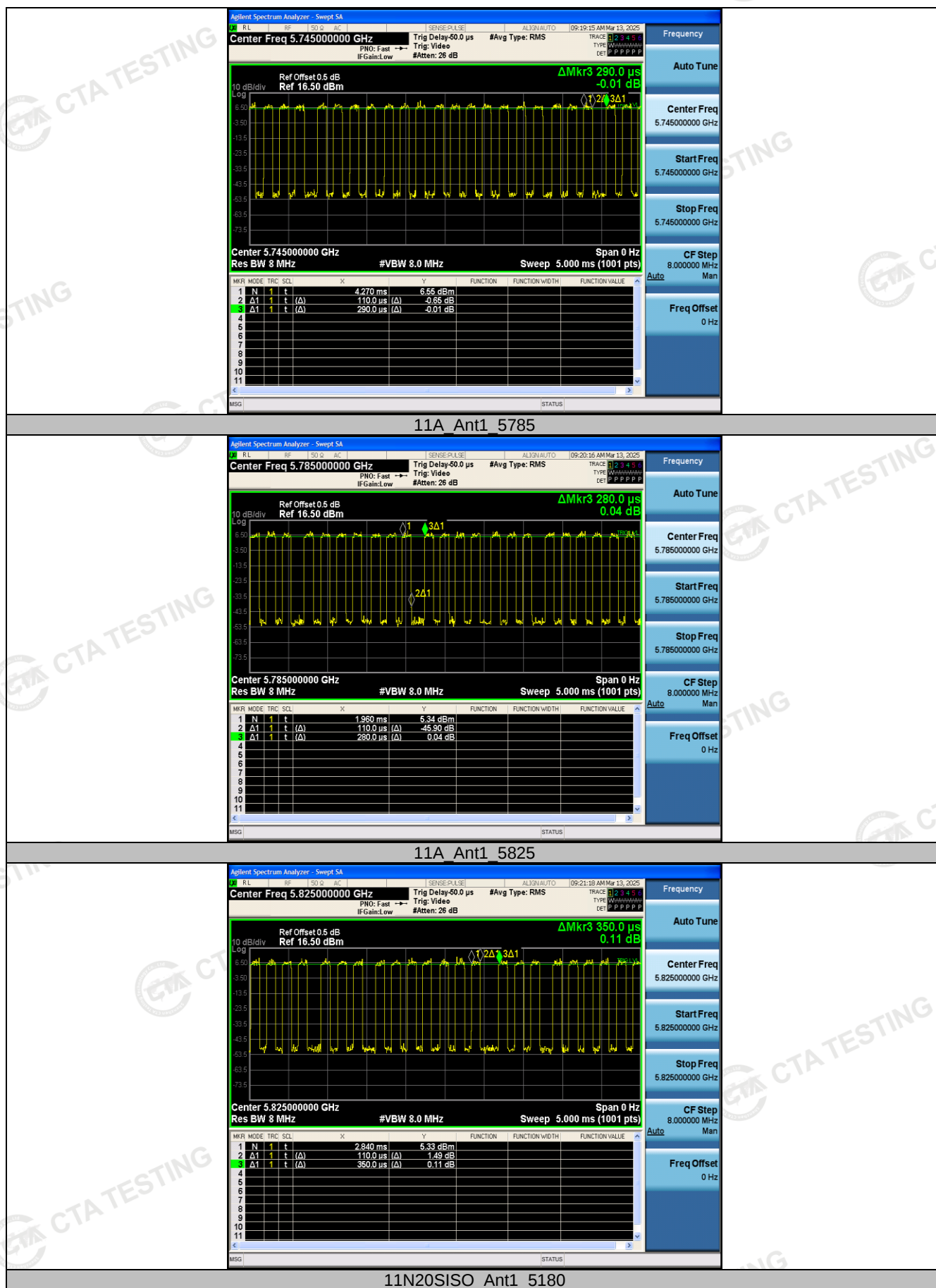
Test Procedures

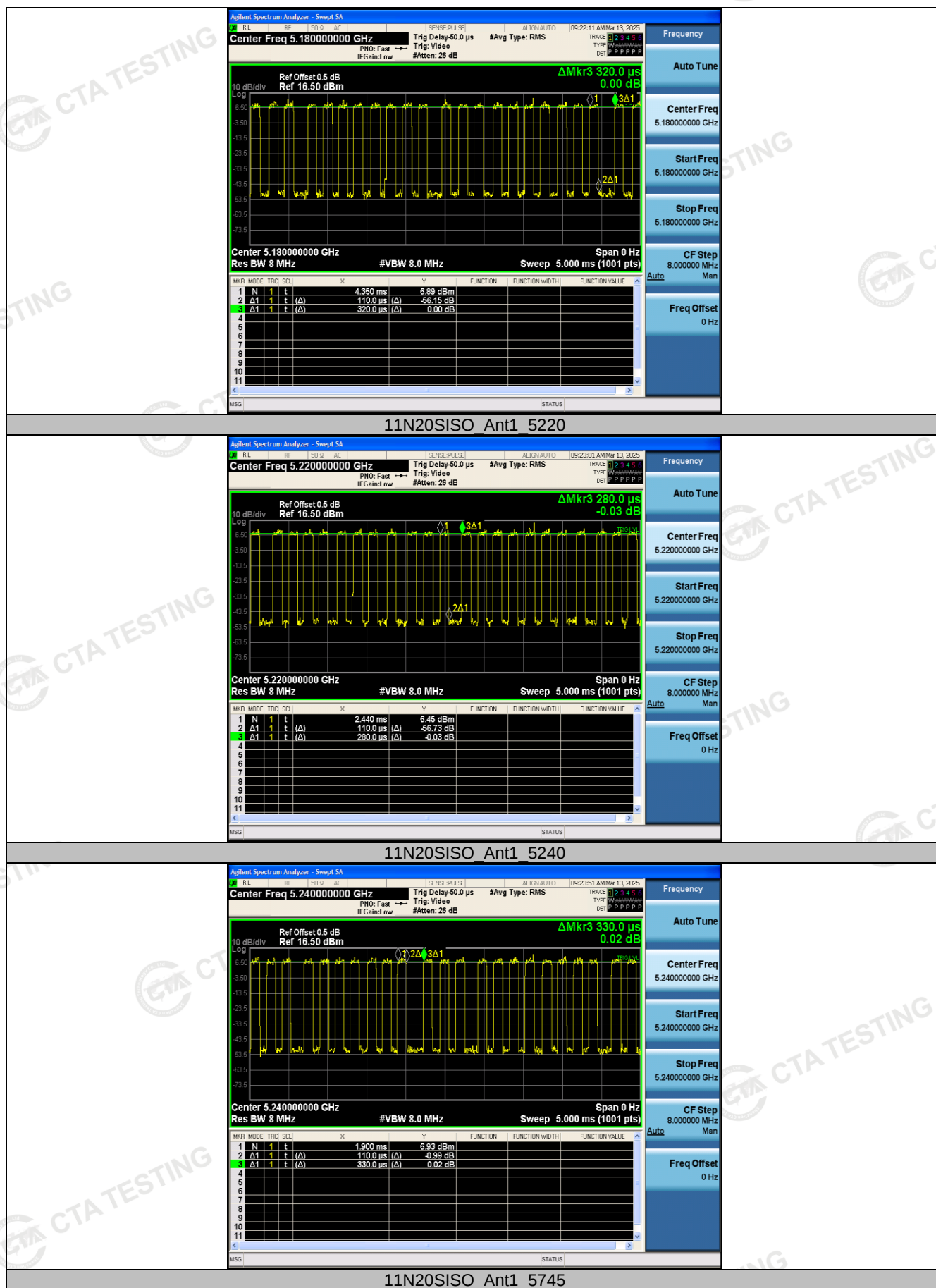
- 1). Set the Centre frequency of the spectrum analyzer to the transmitting frequency;
- 2). Set the span=0MHz, RBW=8MHz, VBW=8MHz, Sweep time=5ms;
- 3). Detector = peak;
- 4). Trace mode = Single hold.

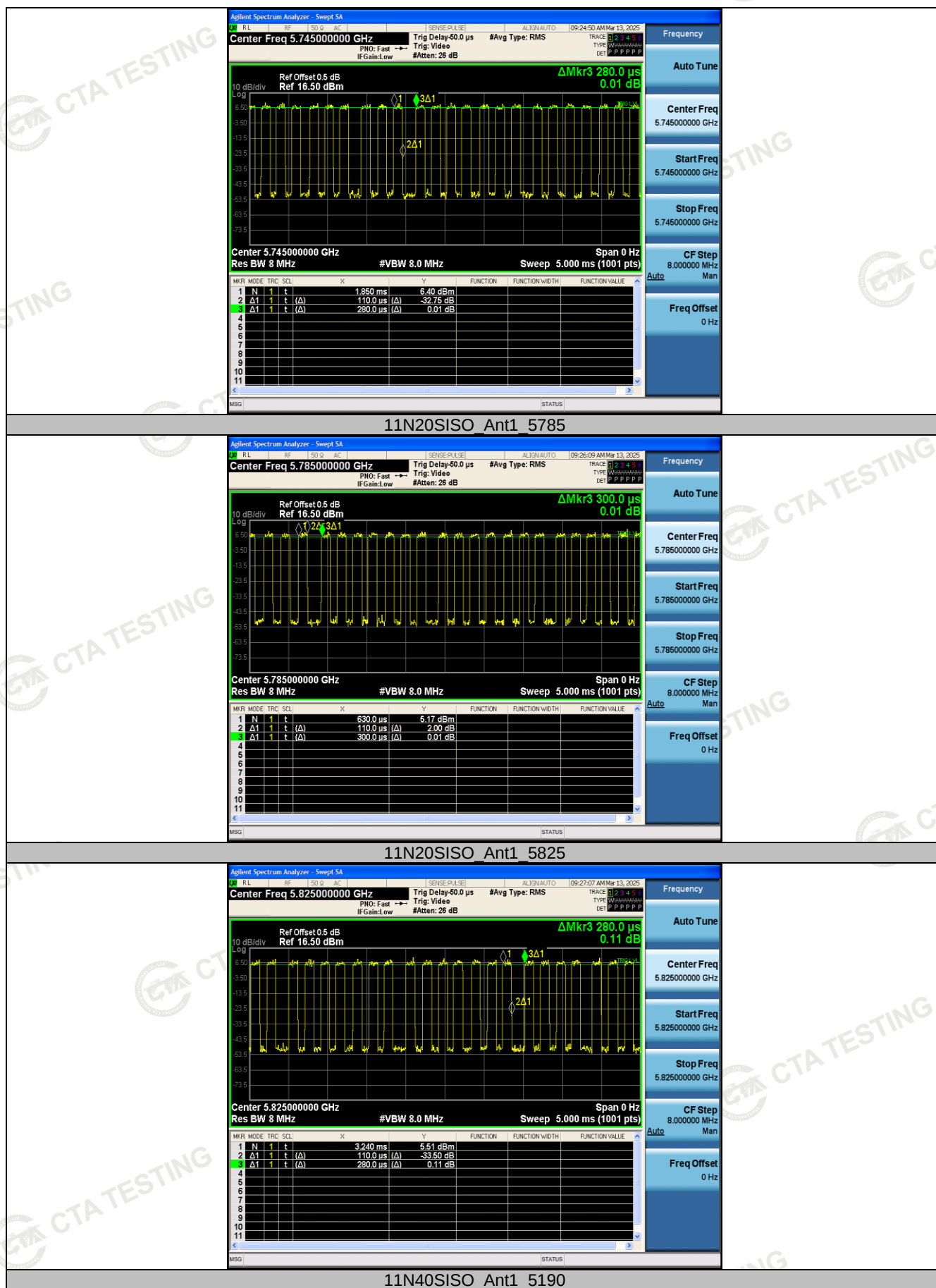
TEST RESULTS

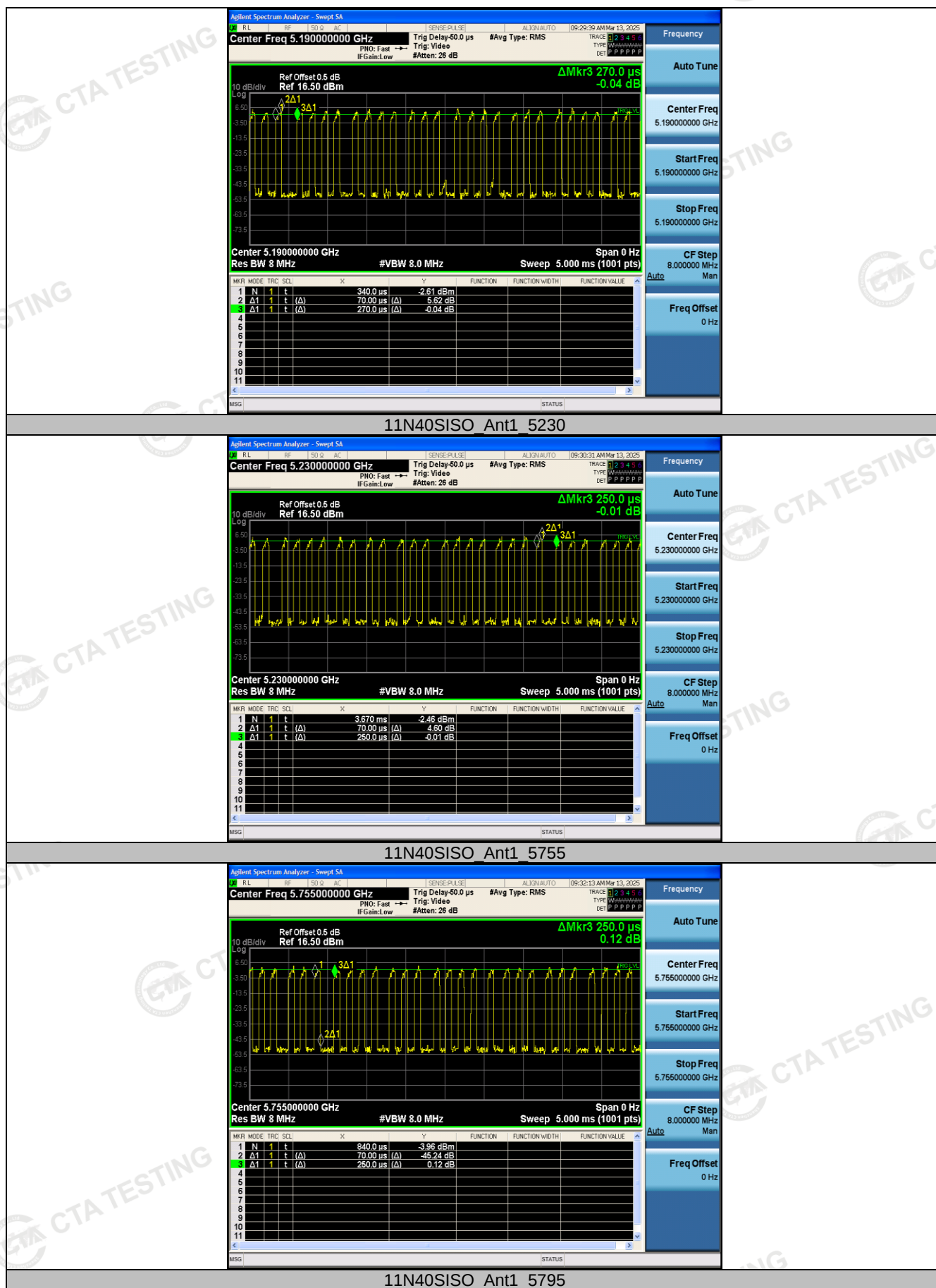
TestMode	Antenna	Freq(MHz)	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Factor (dB)	Limit	Verdict
11A	Ant1	5180	0.12	0.32	37.50	4.26	---	---
		5220	0.11	0.29	37.93	4.21	---	---
		5240	0.11	0.28	39.29	4.06	---	---
		5745	0.11	0.29	37.93	4.21	---	---
		5785	0.11	0.28	39.29	4.06	---	---
		5825	0.11	0.35	31.43	5.03	---	---
11N20SISO	Ant1	5180	0.11	0.32	34.38	4.64	---	---
		5220	0.11	0.28	39.29	4.06	---	---
		5240	0.11	0.33	33.33	4.77	---	---
		5745	0.11	0.28	39.29	4.06	---	---
		5785	0.11	0.30	36.67	4.36	---	---
		5825	0.11	0.28	39.29	4.06	---	---
11N40SISO	Ant1	5190	0.07	0.27	25.93	5.86	---	---
		5230	0.07	0.25	28.00	5.53	---	---
		5755	0.07	0.25	28.00	5.53	---	---
		5795	0.06	0.22	27.27	5.64	---	---
11AC20SISO	Ant1	5180	0.12	0.35	34.29	4.65	---	---
		5220	0.11	0.29	37.93	4.21	---	---
		5240	0.12	0.29	41.38	3.83	---	---
		5745	0.12	0.30	40.00	3.98	---	---
		5785	0.12	0.30	40.00	3.98	---	---
		5825	0.12	0.30	40.00	3.98	---	---
11AC40SISO	Ant1	5190	0.08	0.27	29.63	5.28	---	---
		5230	0.08	0.26	30.77	5.12	---	---
		5755	0.08	0.25	32.00	4.95	---	---
		5795	0.08	0.29	27.59	5.59	---	---
11AC80SISO	Ant1	5210	0.18	0.58	31.03	5.08	---	---
		5775	0.05	0.25	20.00	6.99	---	---

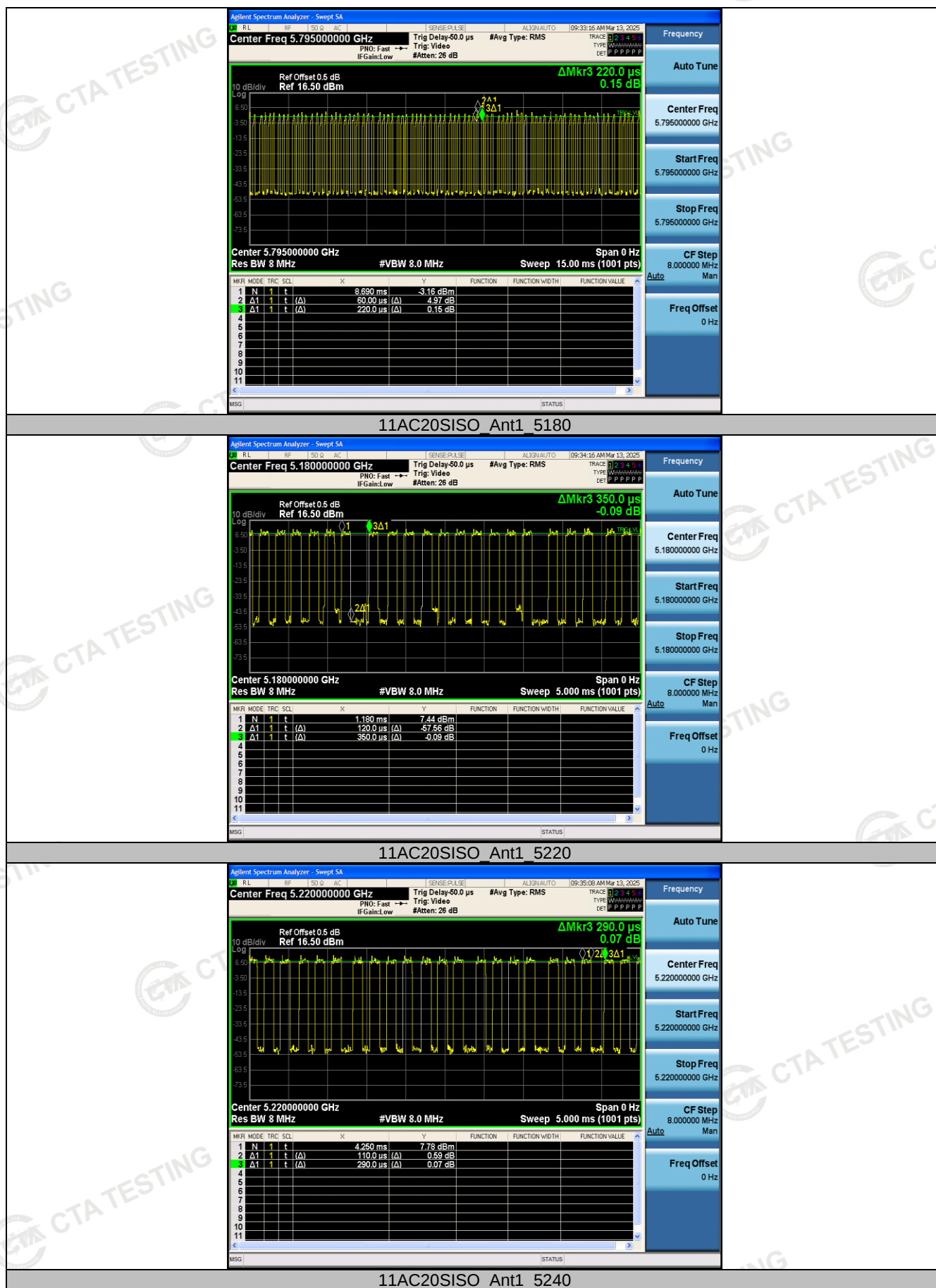


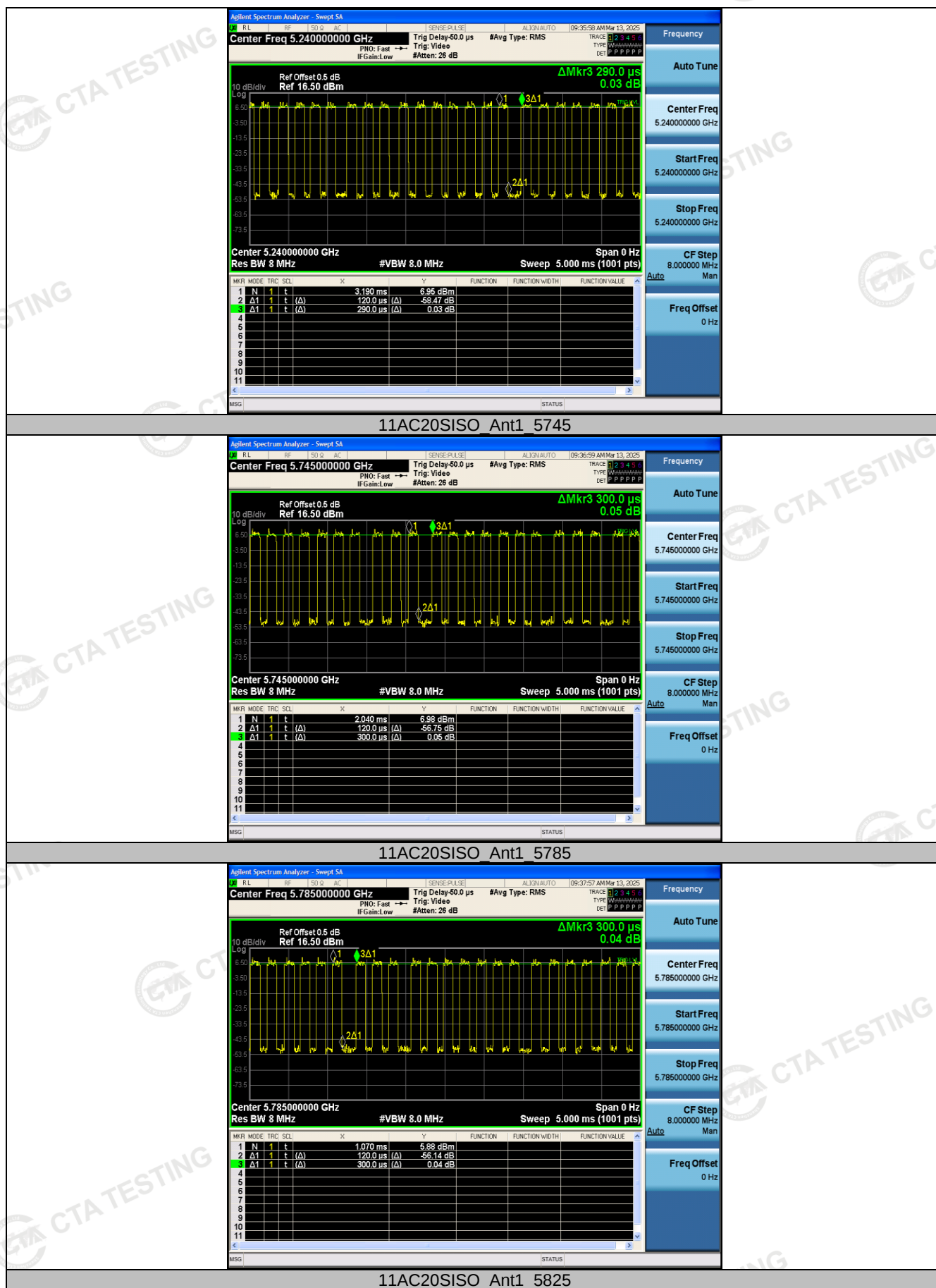


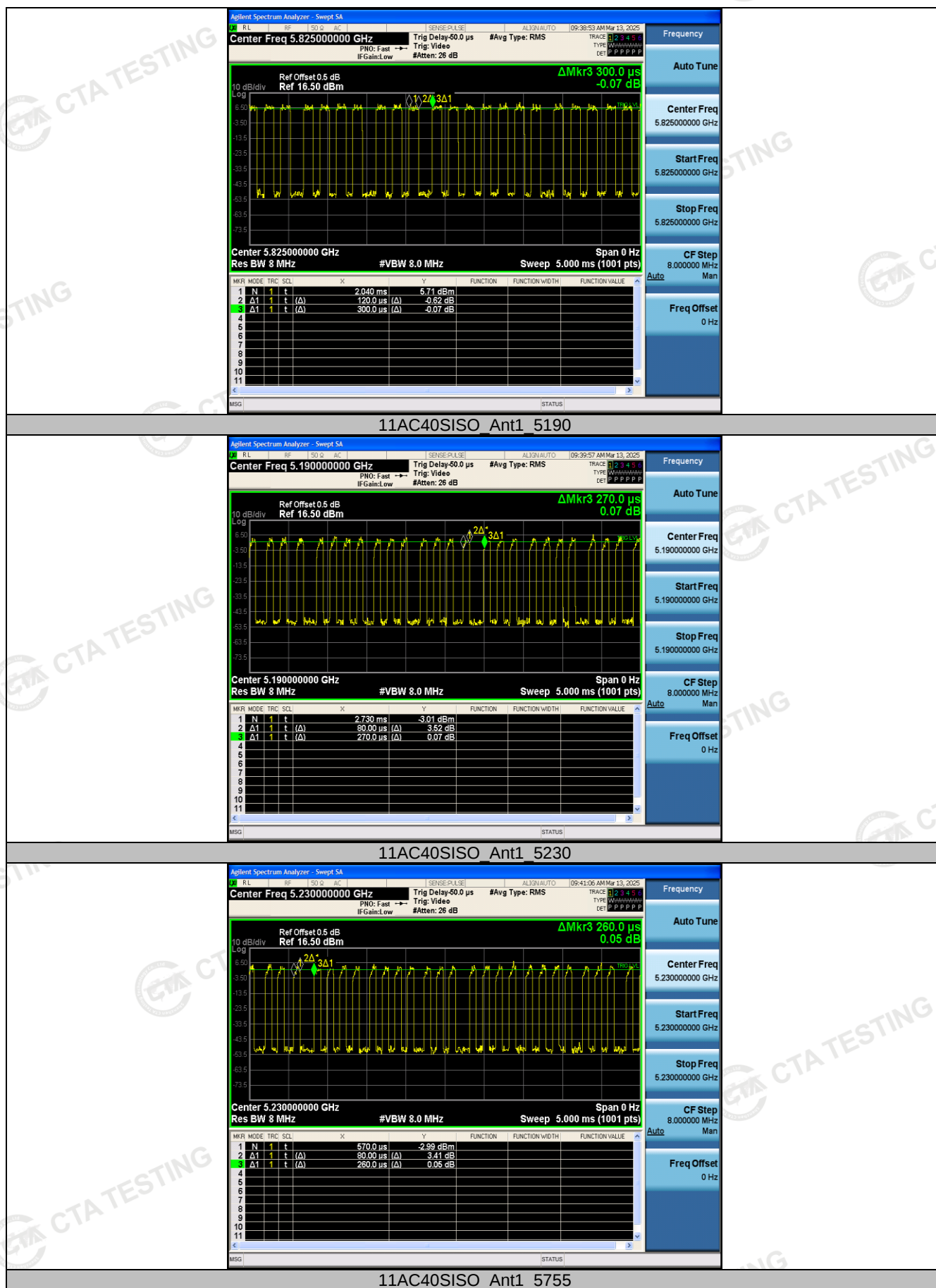


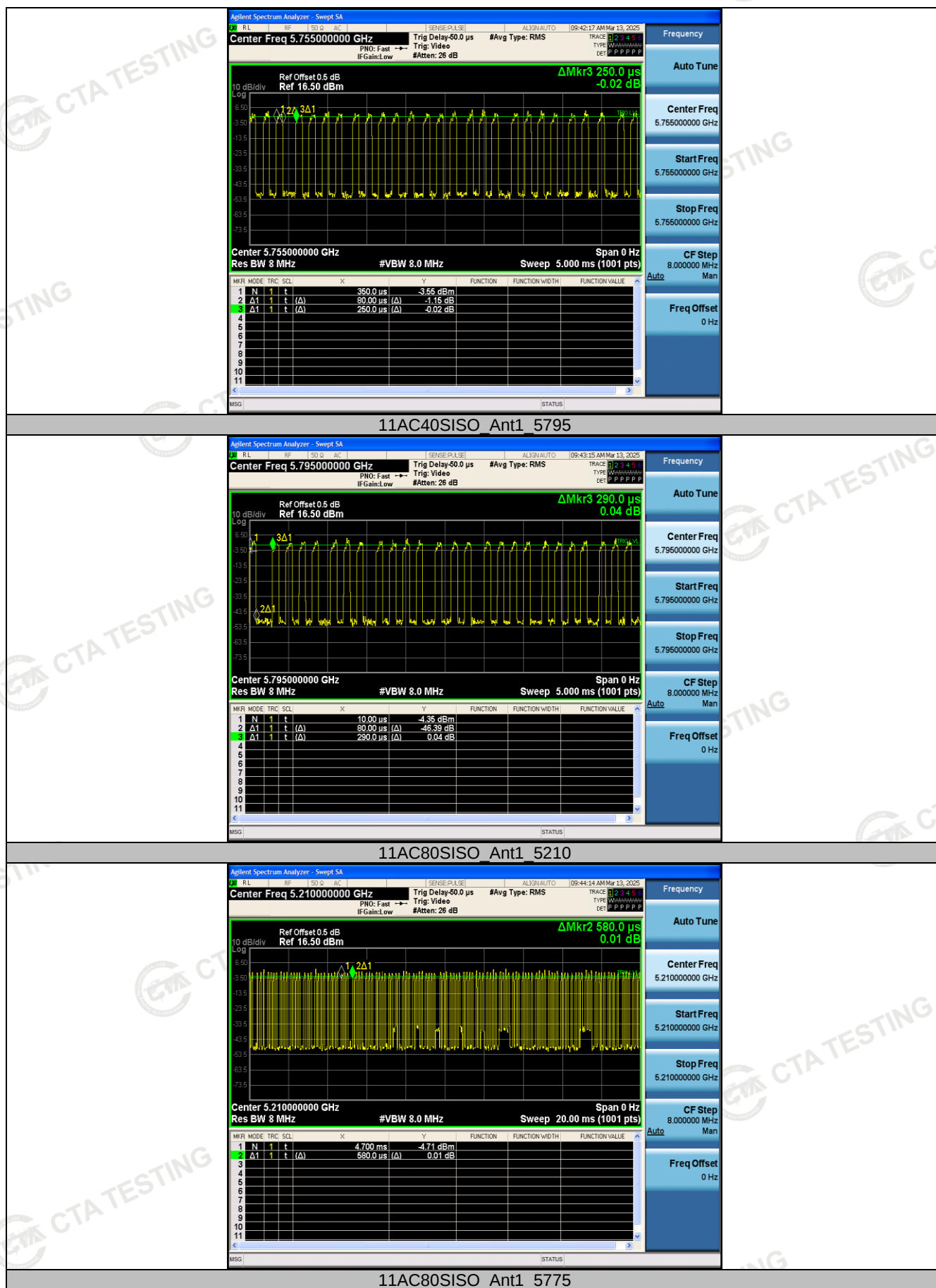


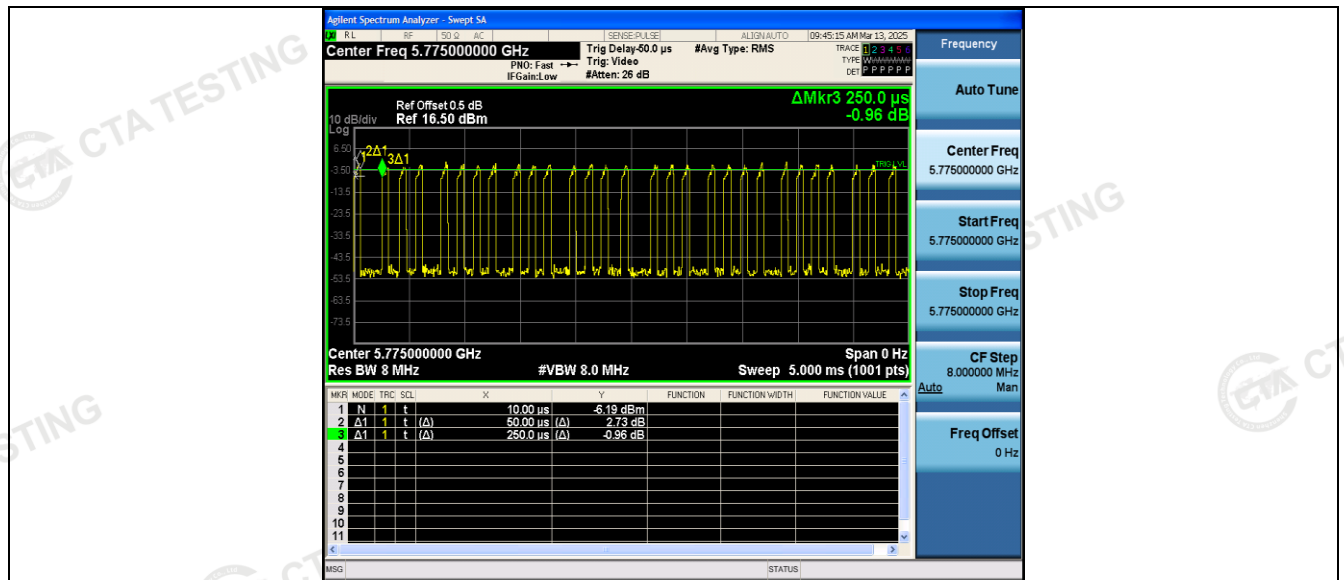












5 Test Setup Photos of the EUT



6 Photos of the EUT

Reference to the test report No. CTA25031101201.

***** End of Report *****