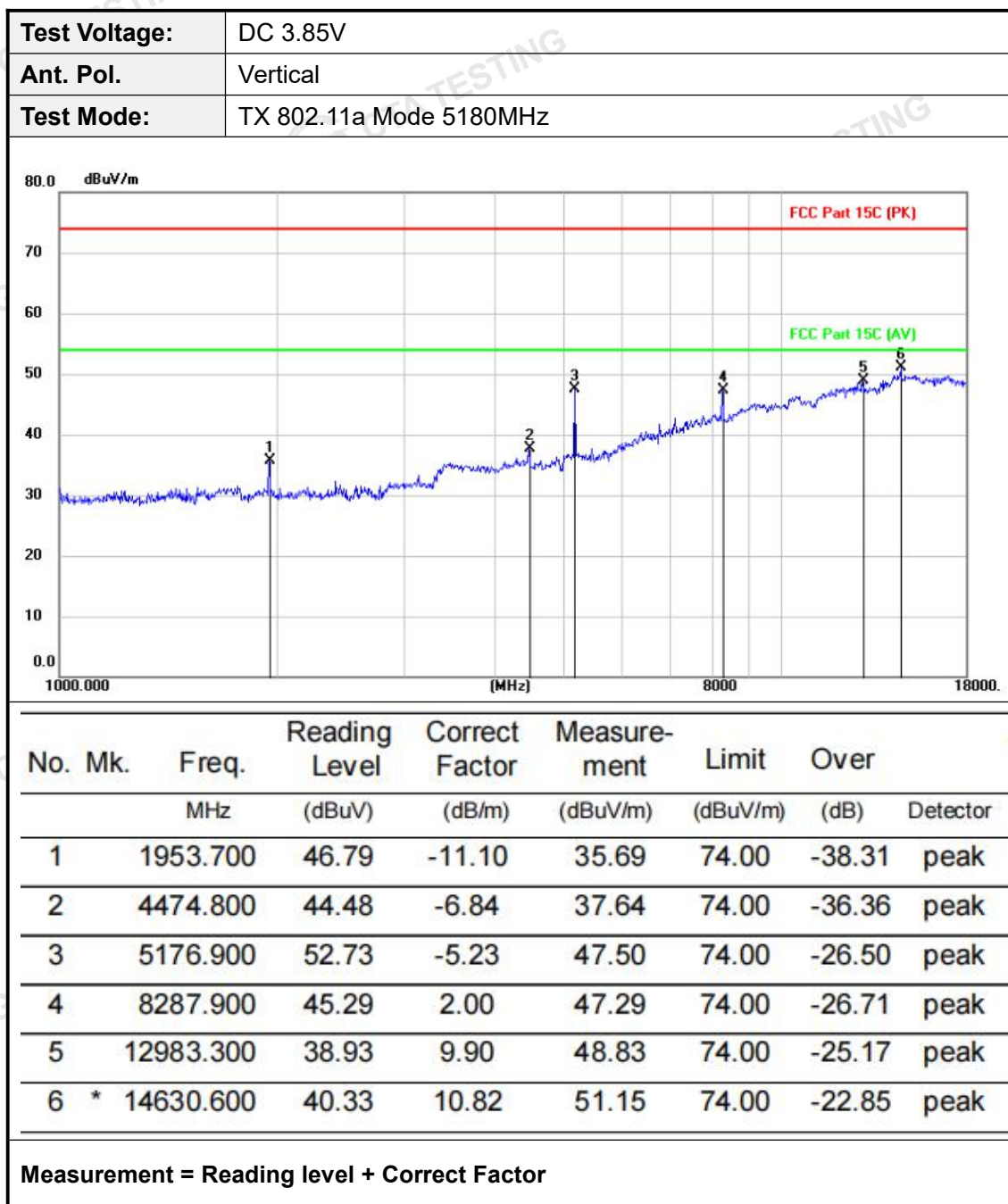
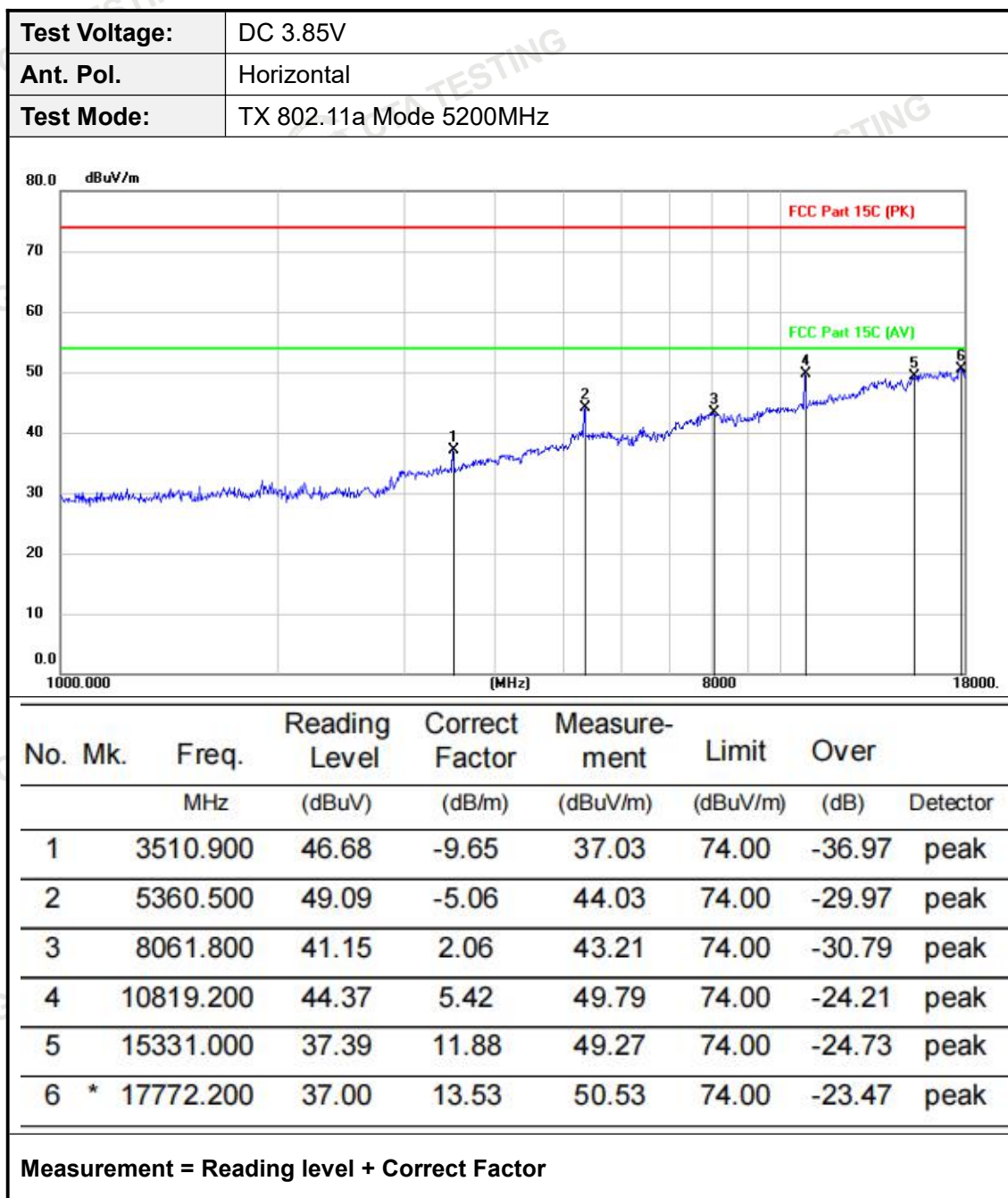
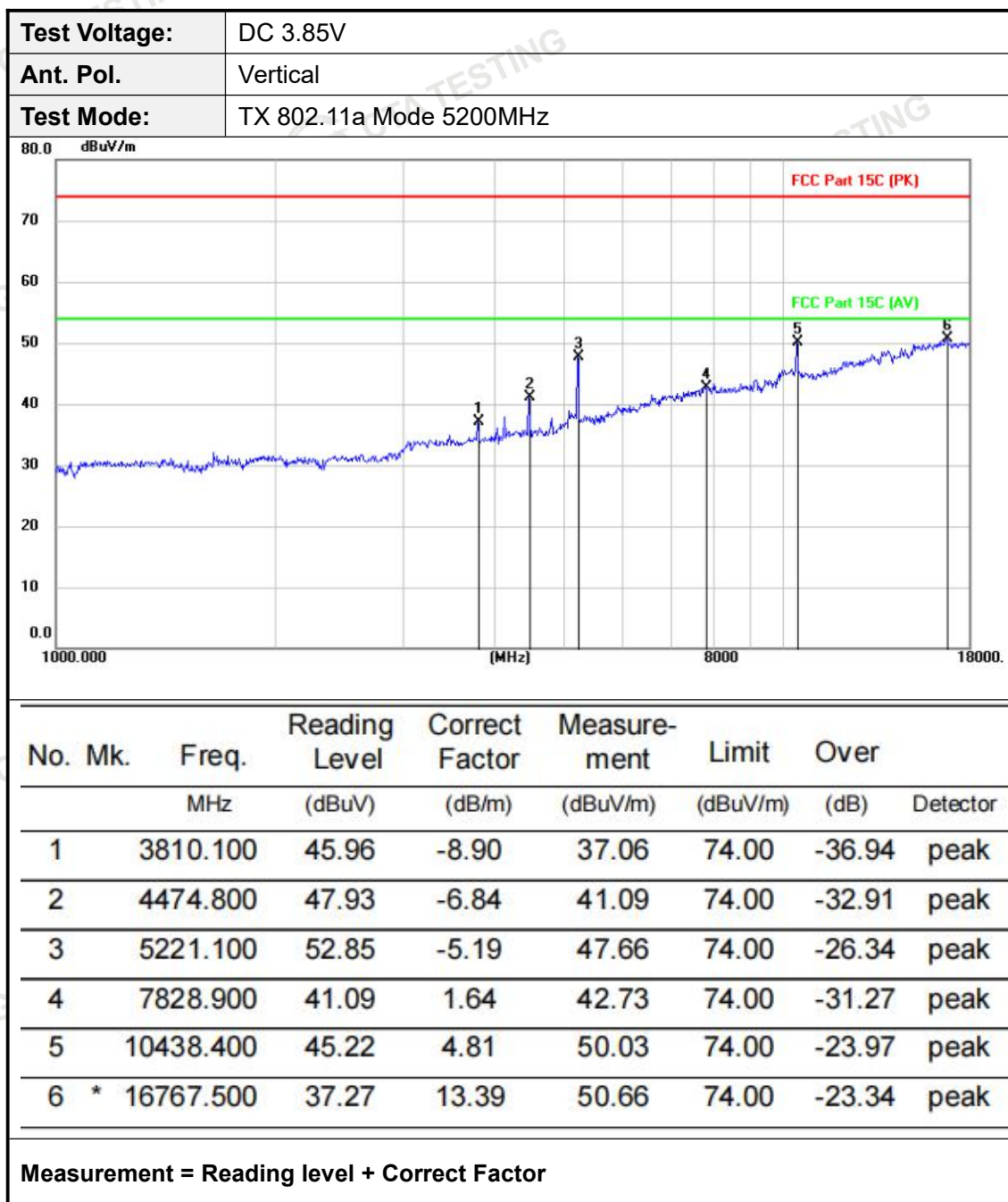
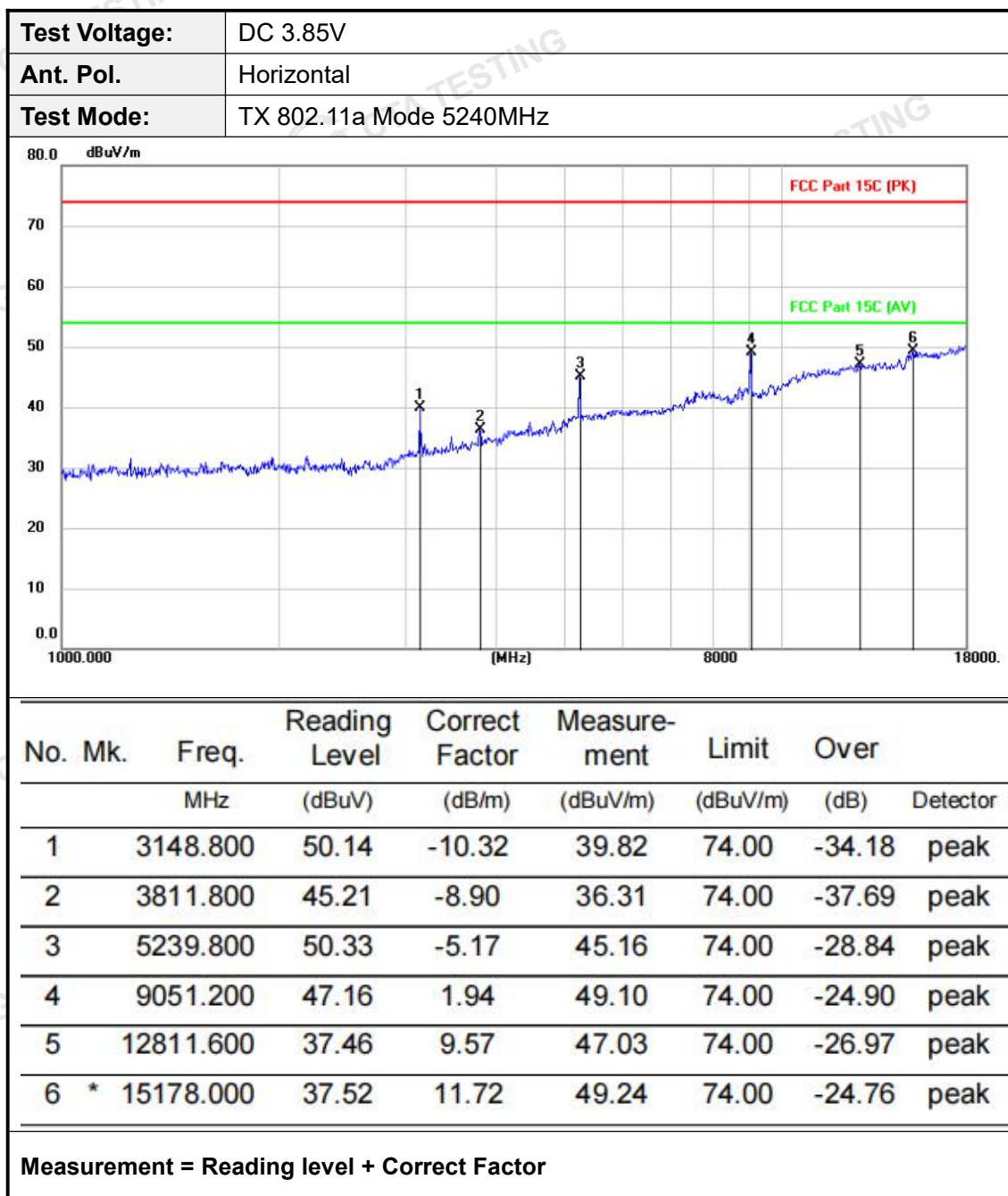
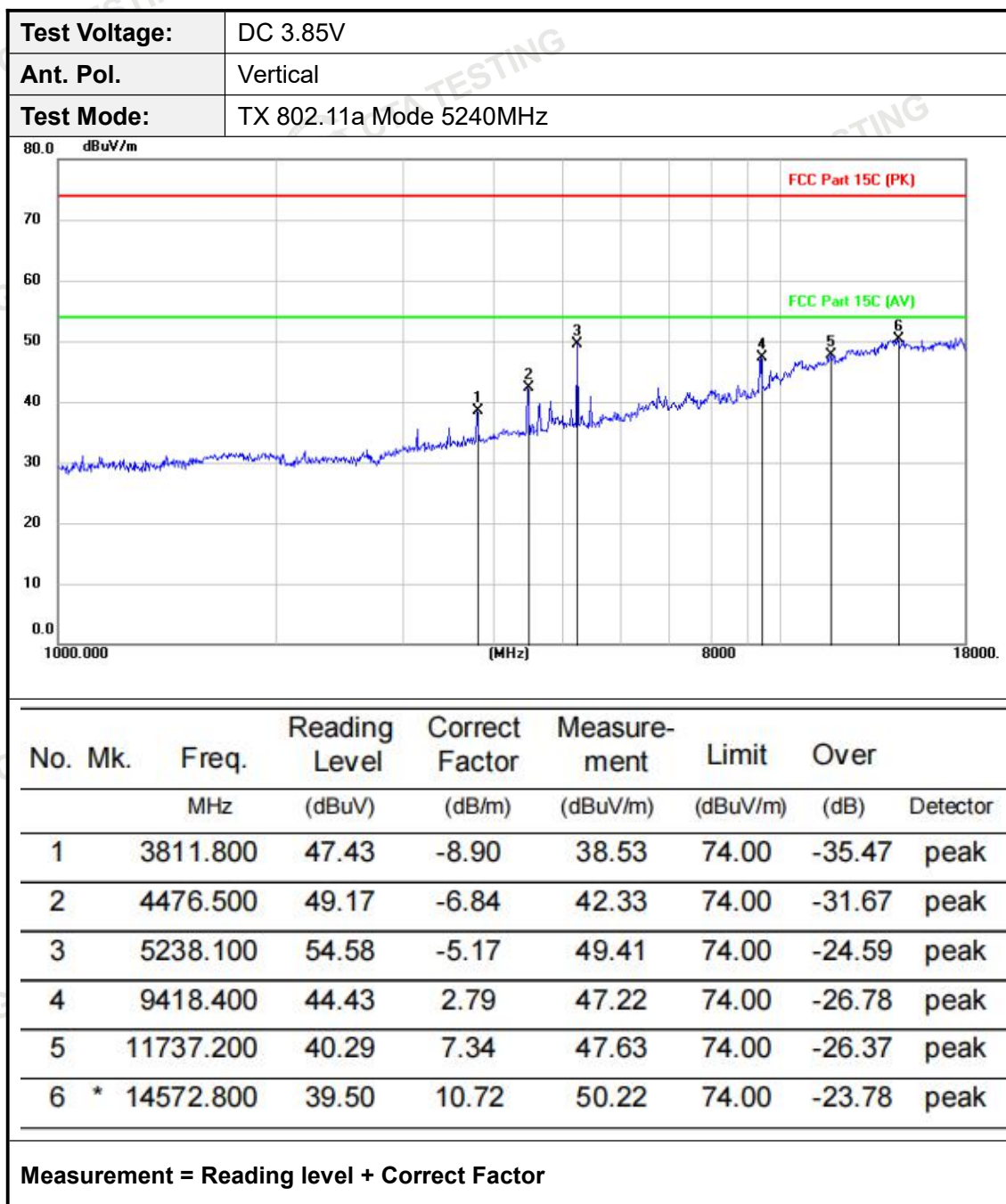












3.8. Conducted Emission

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.207:

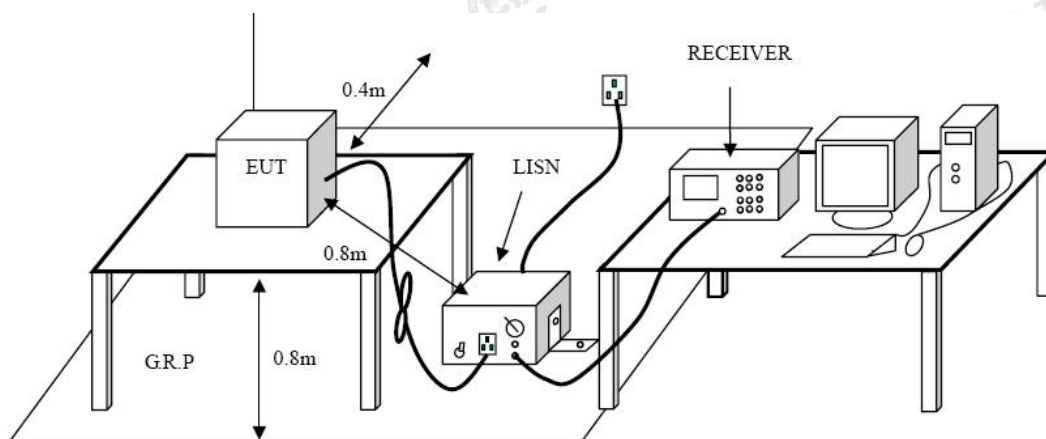
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

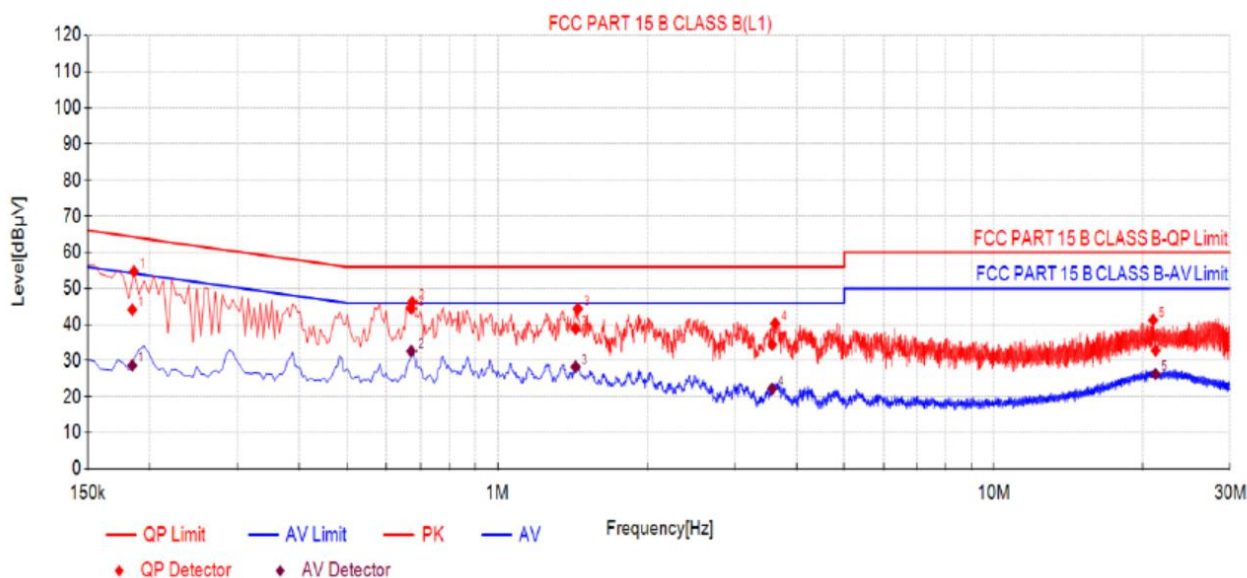
Test Mode

Please refer to the clause 2.2.

Test Results

Pre-scan 802.11a/n(HT20/HT40)/ac(HT20/HT40/HT80) modulation, and found the 802.11a modulation 5200MHz which it is worse case, so only show the test data for worse case.

Test Voltage:	AC 120V/60 Hz
Terminal:	Line



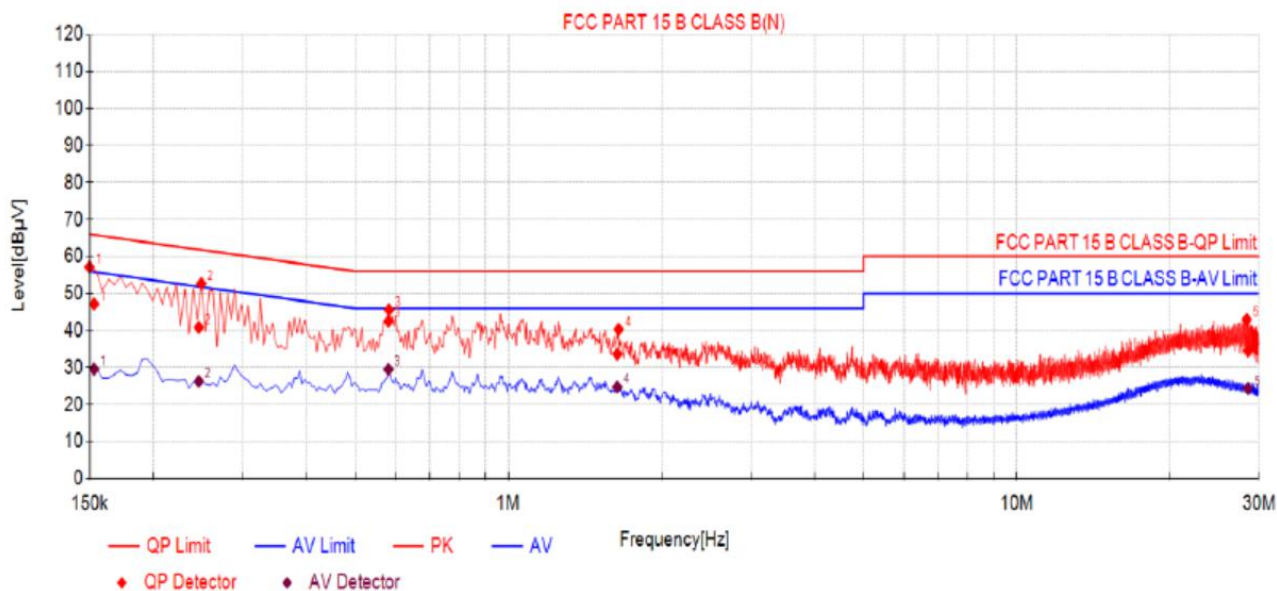
Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading[dB μV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.1846	10.50	33.59	44.09	64.28	20.19	18.20	28.70	54.28	25.58	PASS
2	0.6735	10.50	33.92	44.42	56.00	11.58	22.14	32.64	46.00	13.36	PASS
3	1.4361	10.50	28.35	38.85	56.00	17.15	17.78	28.28	46.00	17.72	PASS
4	3.5792	10.50	23.97	34.47	56.00	21.53	11.71	22.21	46.00	23.79	PASS
5	21.2060	10.50	22.33	32.83	60.00	27.17	15.80	26.30	50.00	23.70	PASS

Note:

- 1). Value (dBμV)= Reading (dBμV)+ Factor (dB)
- 2). Factor (dB)=insertion loss of LISN (dB) + Cable loss (dB)
- 3). Margin(dB) = Limit (dBμV) - Level (dBμV)

Test Voltage:	AC 120V/60 Hz
Terminal:	Neutral



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Verdict
1	0.1531	10.50	36.68	47.18	65.83	18.65	19.11	29.61	55.83	26.22	PASS
2	0.2460	10.50	30.37	40.87	61.89	21.02	15.81	26.31	51.89	25.58	PASS
3	0.5805	10.50	32.03	42.53	56.00	13.47	19.03	29.53	46.00	16.47	PASS
4	1.6376	10.50	23.15	33.65	56.00	22.35	14.26	24.76	46.00	21.24	PASS
5	28.5238	10.50	24.05	34.55	60.00	25.45	13.88	24.38	50.00	25.62	PASS

Note:

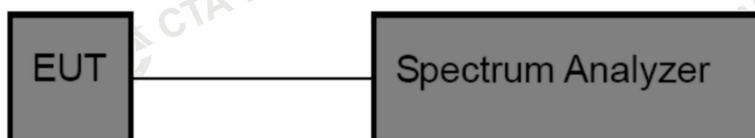
- 1). Value (dBμV) = Reading (dBμV) + Factor (dB)
- 2). Factor (dB) = insertion loss of LISN (dB) + Cable loss (dB)
- 3). Margin (dB) = Limit (dBμV) - Level (dBμV)

3.9. Conducted Spurious Emission

Limit

LIMITS AND MEASUREMENT RESULT		
Applicable Limits	Measurement Result	
	Test channel	Criteria
-27dBm/MHz	5150MHz-5250MHz	PASS

Test Configuration



Test Procedure

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

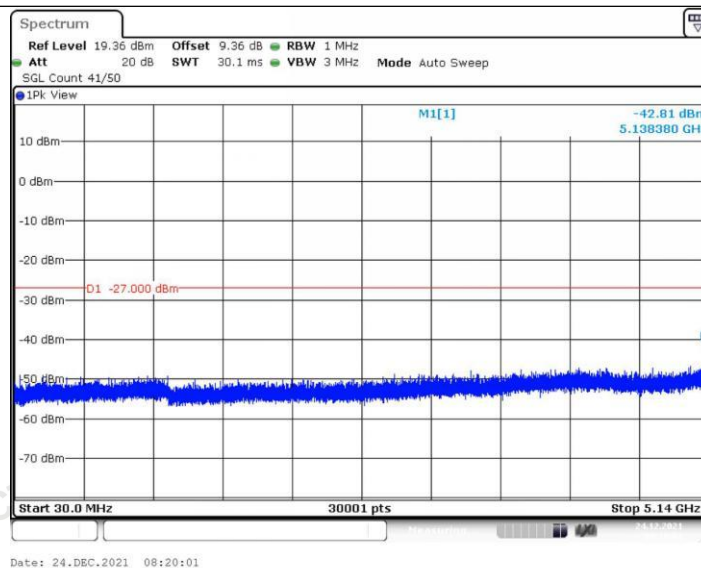
Test Mode

Please refer to the clause 2.2.

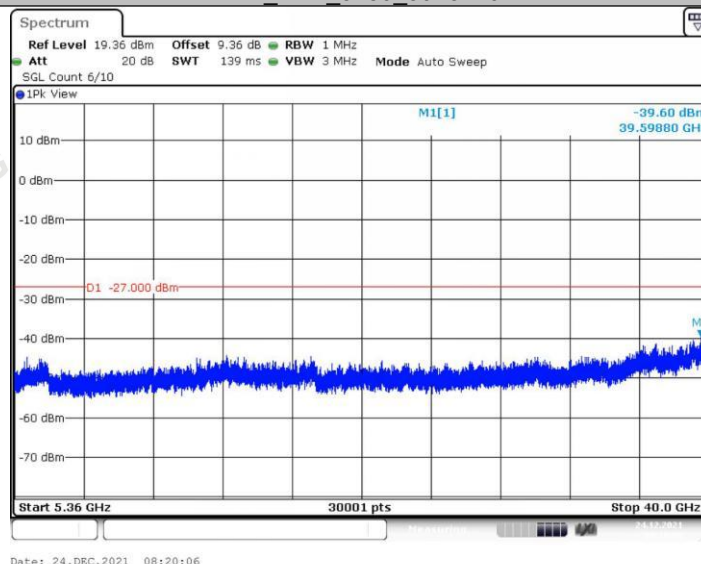
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	Max. Fre [MHz]	Max. Level [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	30~5140	5138.38	-42.81	≤-27	PASS
			5360~40000	39598.8	-39.6	≤-27	PASS
		5200	30~5140	5122.54	-46.42	≤-27	PASS
			5360~40000	39158.9	-39.77	≤-27	PASS
		5240	30~5140	5126.8	-46.65	≤-27	PASS
			5360~40000	39612.6	-40.27	≤-27	PASS
11N20SISO	Ant1	5180	30~5140	5139.4	-46.25	≤-27	PASS
			5360~40000	39548	-39.79	≤-27	PASS
		5200	30~5140	2410.75	-45.1	≤-27	PASS
			5360~40000	39817	-40.39	≤-27	PASS
		5240	30~5140	4202.26	-45.48	≤-27	PASS
			5360~40000	39330.9	-40.01	≤-27	PASS
11N40SISO	Ant1	5190	30~5140	5139.91	-37.03	≤-27	PASS
			5360~40000	39095.3	-40.21	≤-27	PASS
		5230	30~5140	3795.18	-46.19	≤-27	PASS
			5360~40000	39252.4	-39.68	≤-27	PASS
11AC20SISO	Ant1	5180	30~5140	5008.42	-46.45	≤-27	PASS
			5360~40000	39140.4	-40.31	≤-27	PASS
		5200	30~5140	5107.89	-46.64	≤-27	PASS
			5360~40000	39838.9	-40.68	≤-27	PASS
		5240	30~5140	5015.06	-46.15	≤-27	PASS
			5360~40000	39791.6	-39.97	≤-27	PASS
11AC40SISO	Ant1	5190	30~5140	5137.7	-46.16	≤-27	PASS
			5360~40000	39102.3	-40.45	≤-27	PASS
		5230	30~5140	4310.08	-45.77	≤-27	PASS
			5360~40000	39247.8	-40.06	≤-27	PASS
11AC80SISO	Ant1	5210	30~5140	5136	-41.14	≤-27	PASS
			5360~40000	39776.6	-40.13	≤-27	PASS

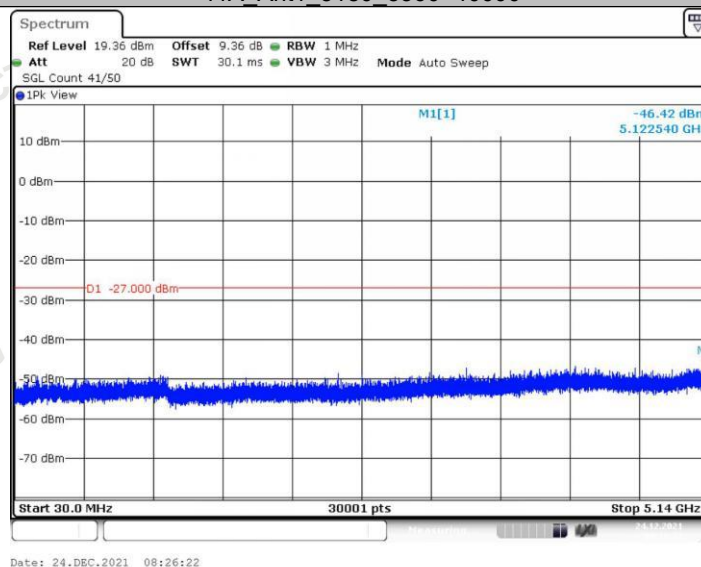
Test Graphs



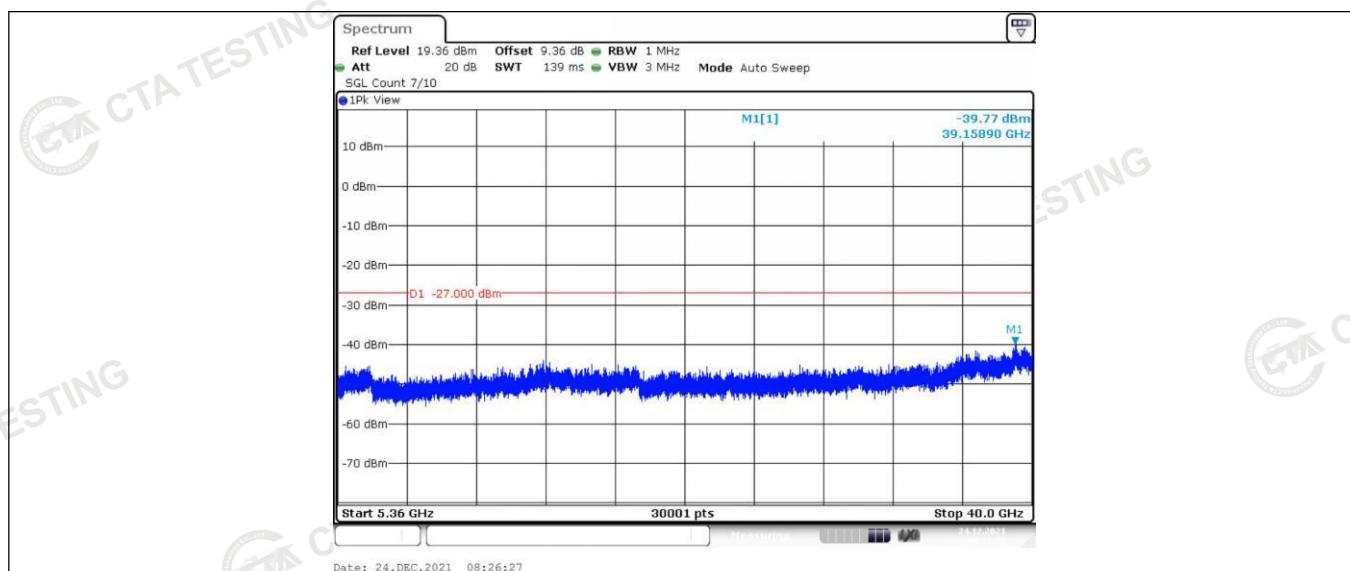
11A_Ant1_5180_30~5140



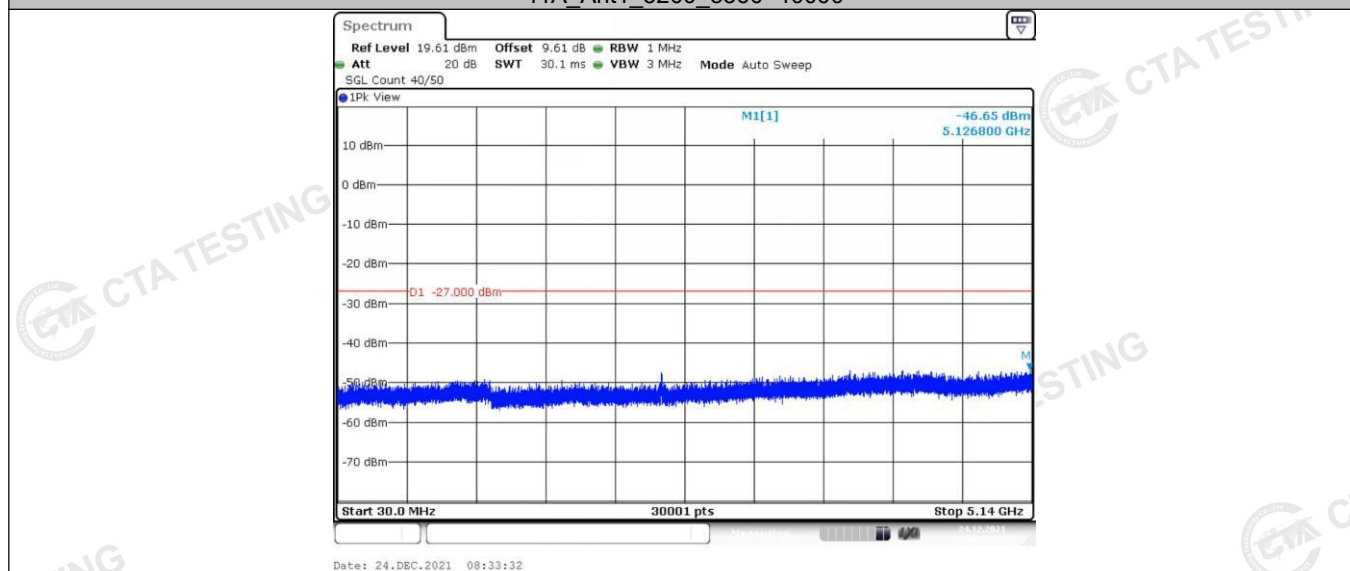
11A_Ant1_5180_5360~40000



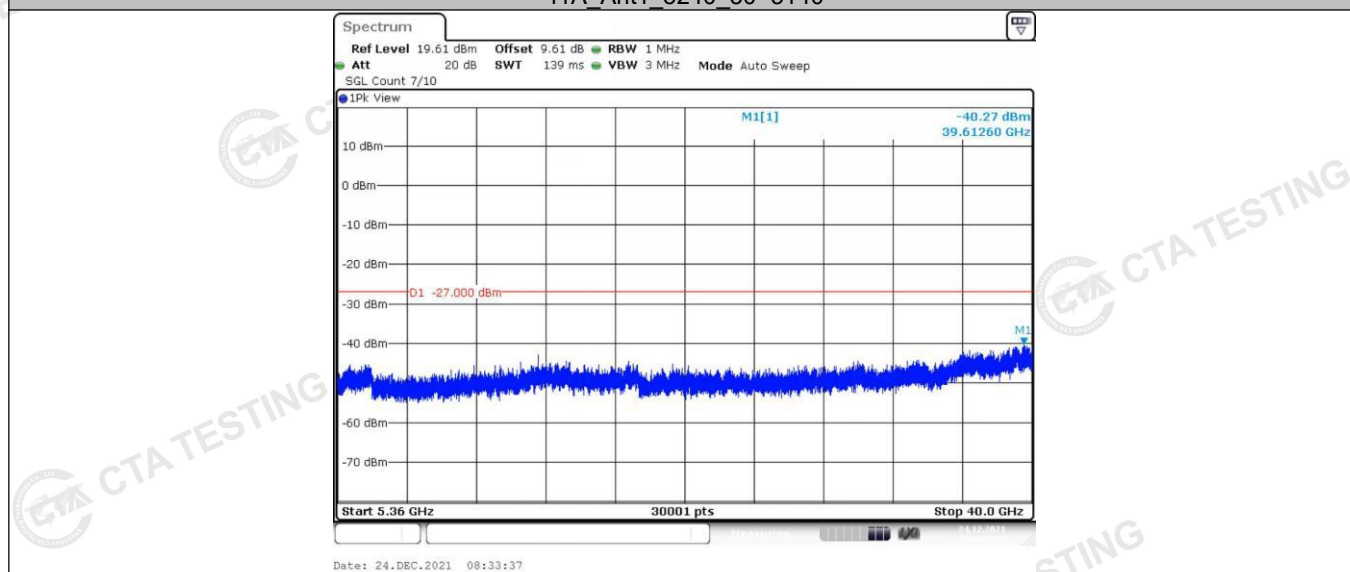
11A_Ant1_5200_30~5140



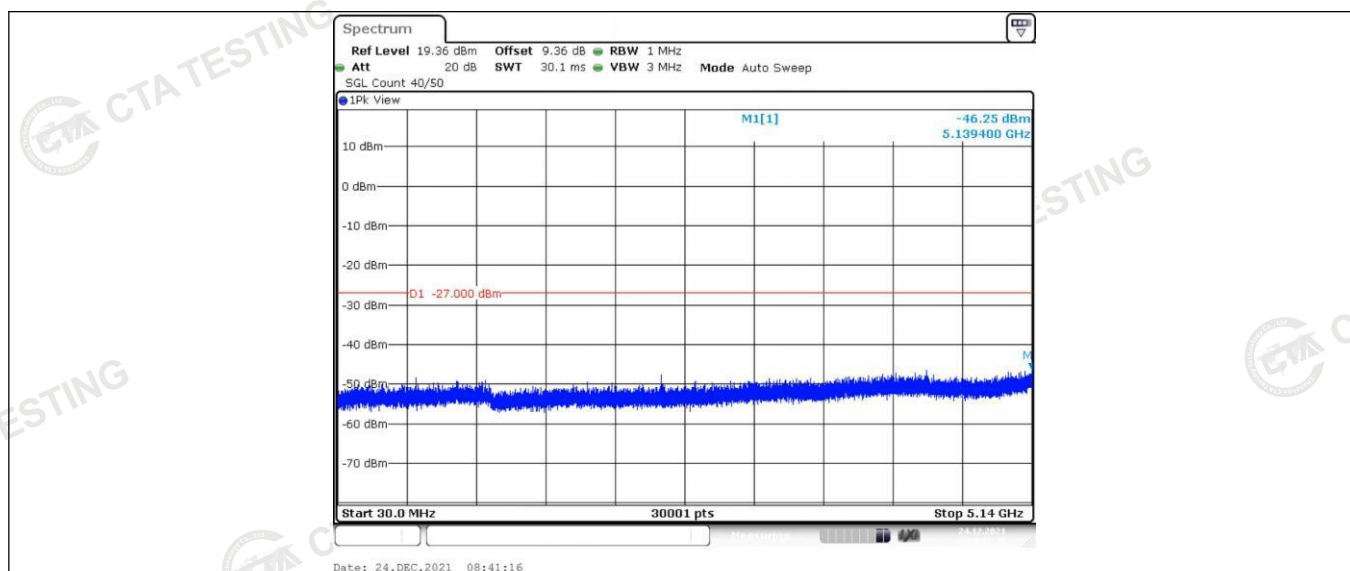
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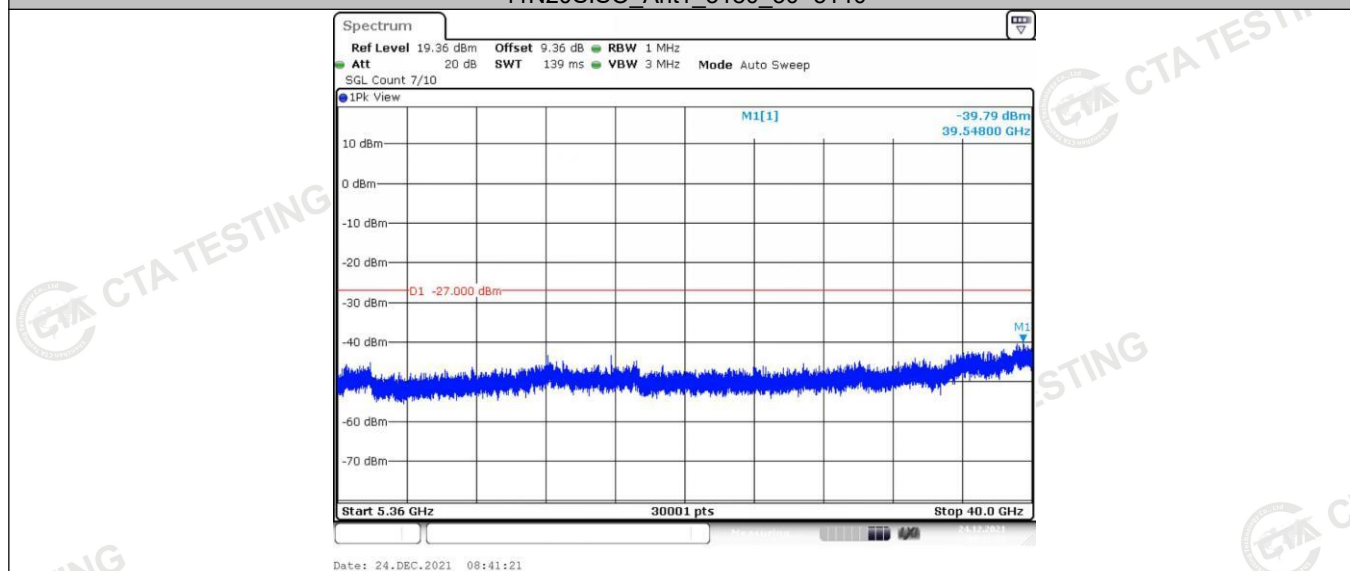
11A_Ant1_5240_30~5140



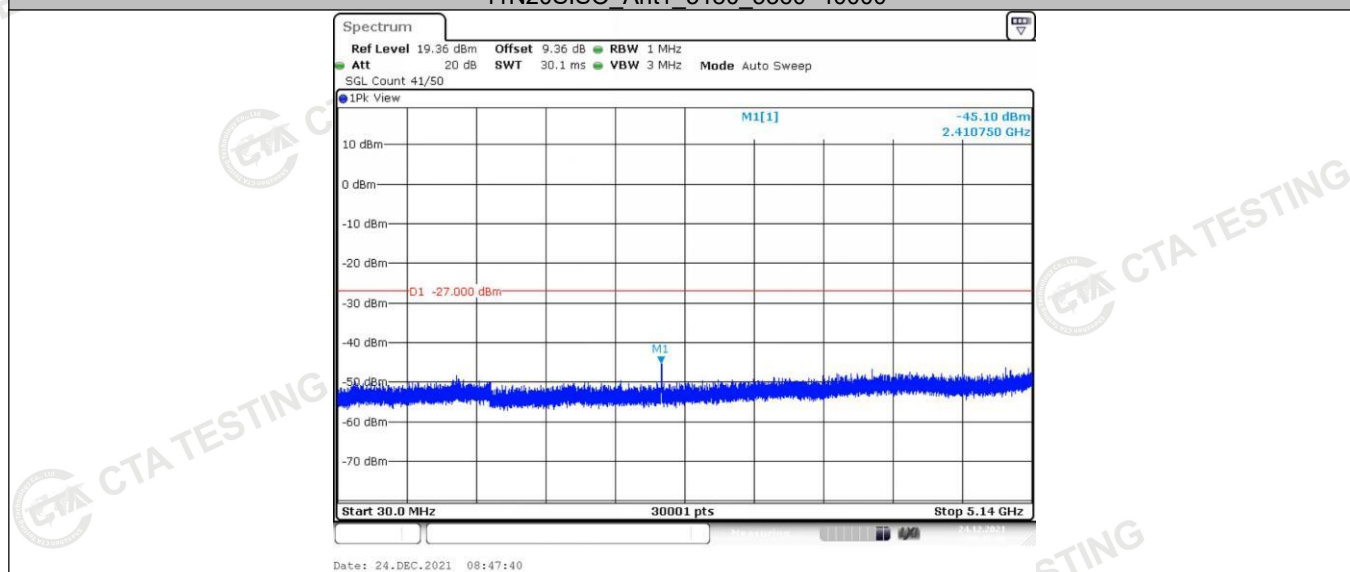
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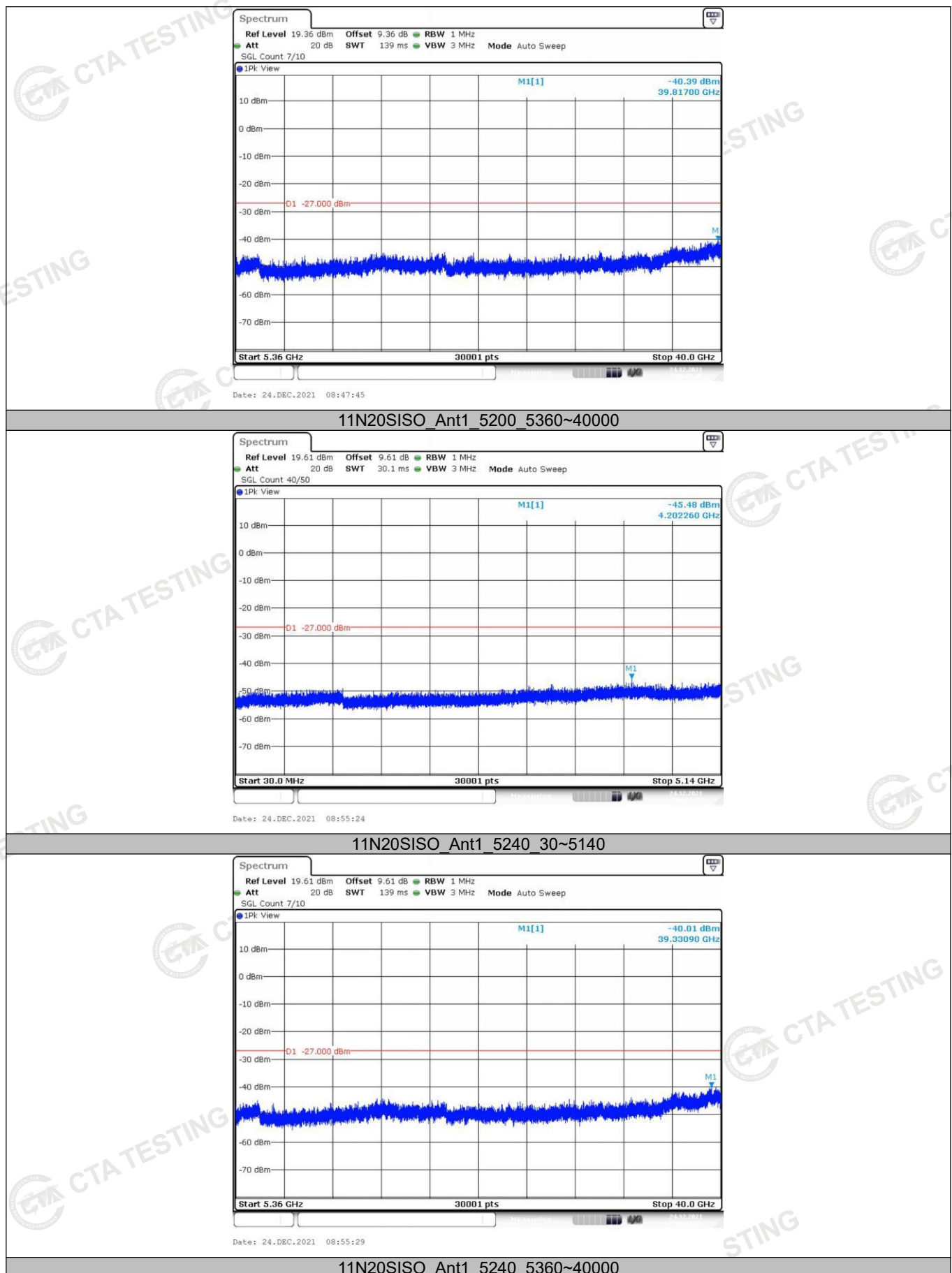
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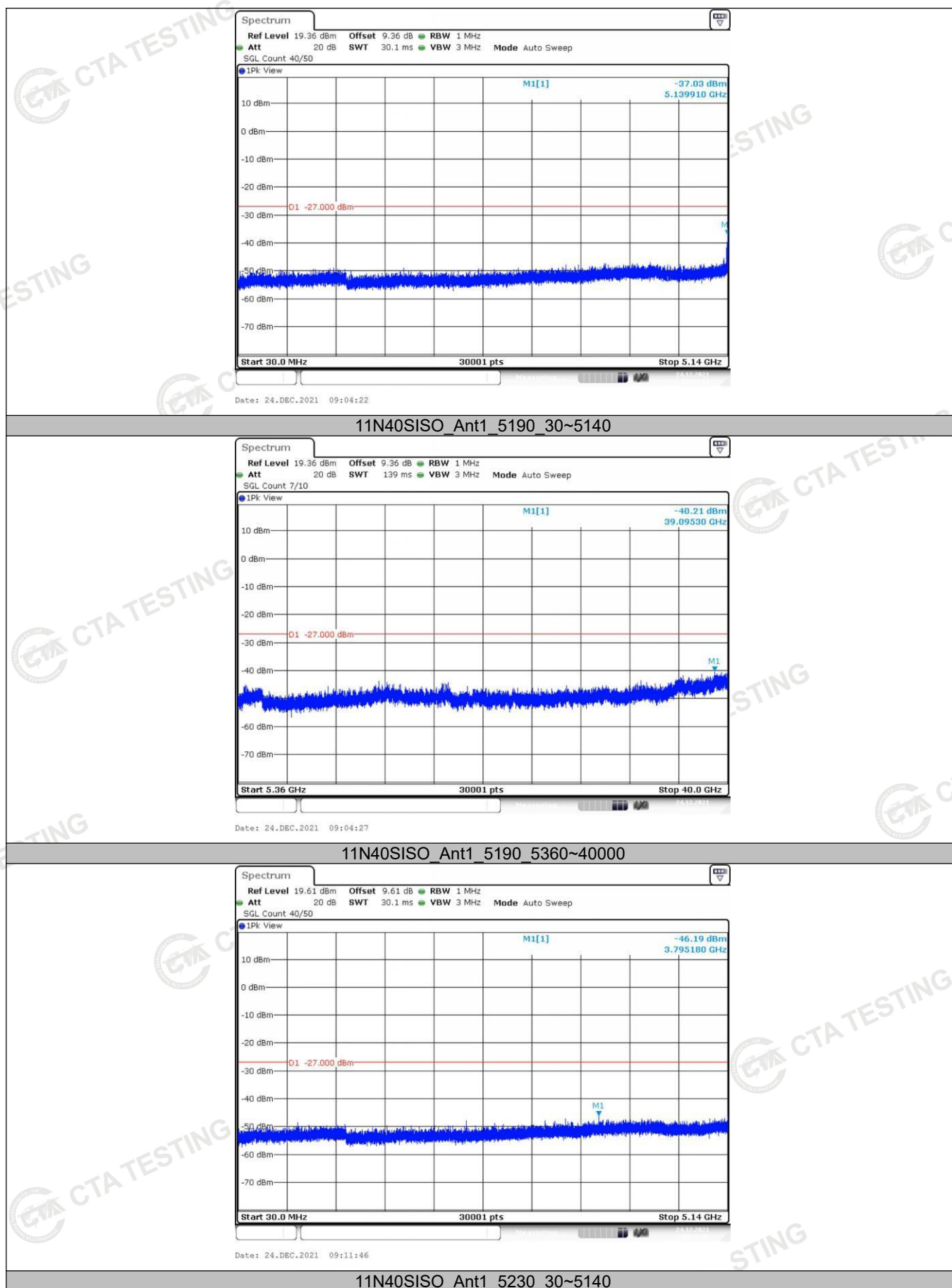


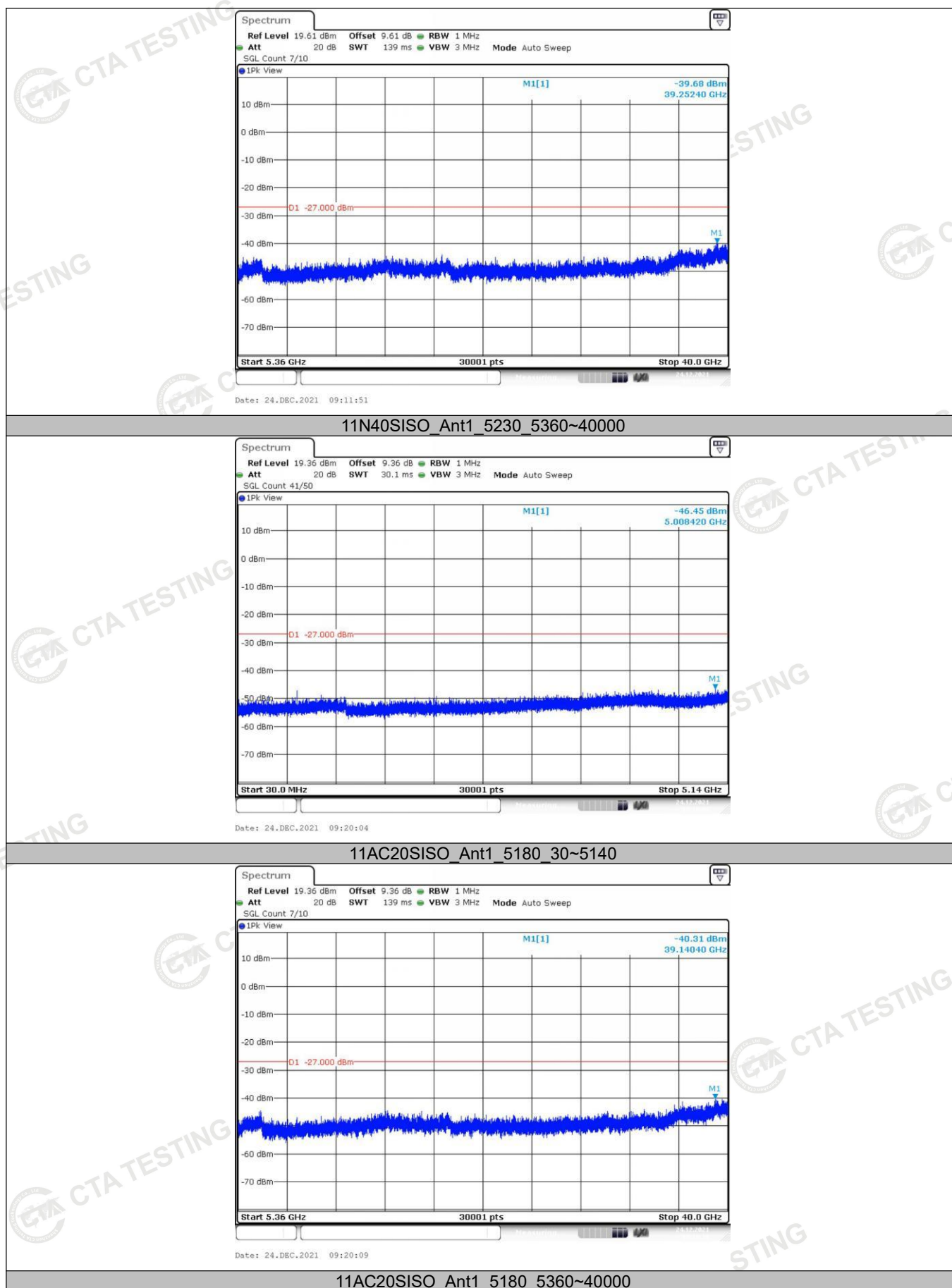
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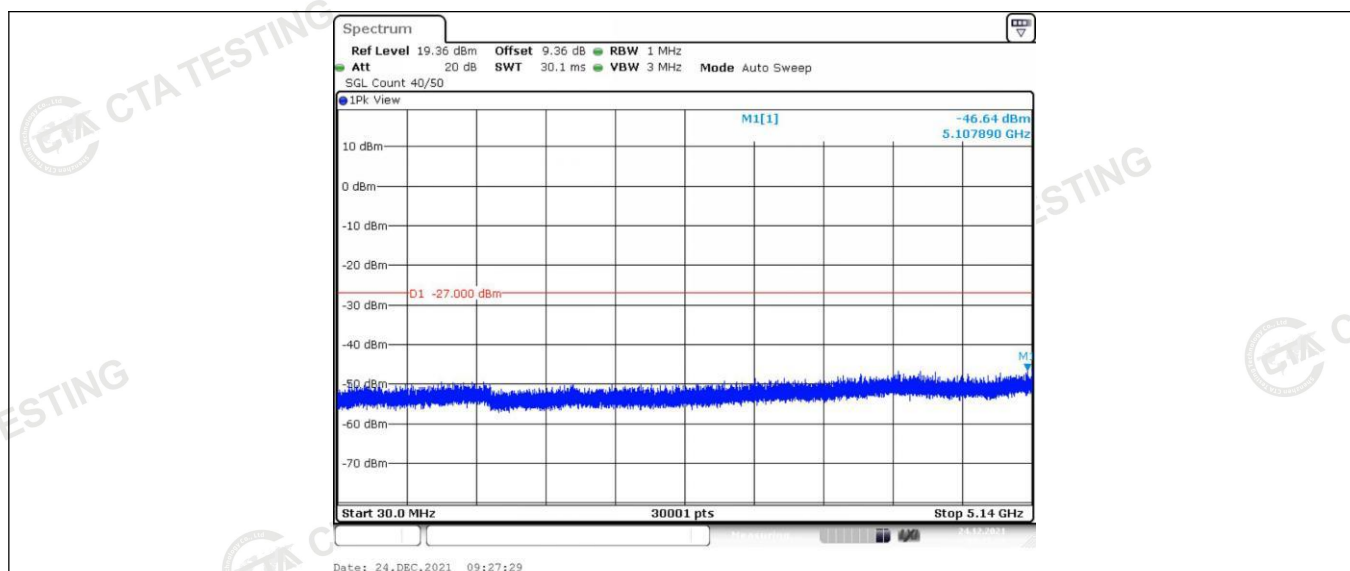


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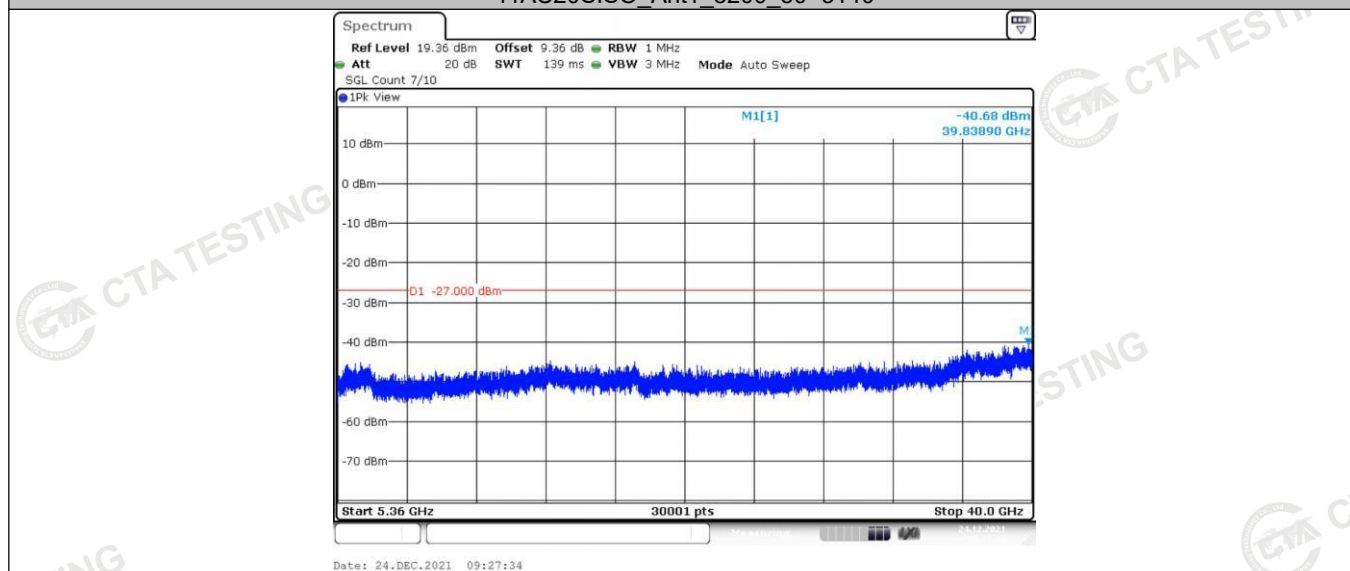




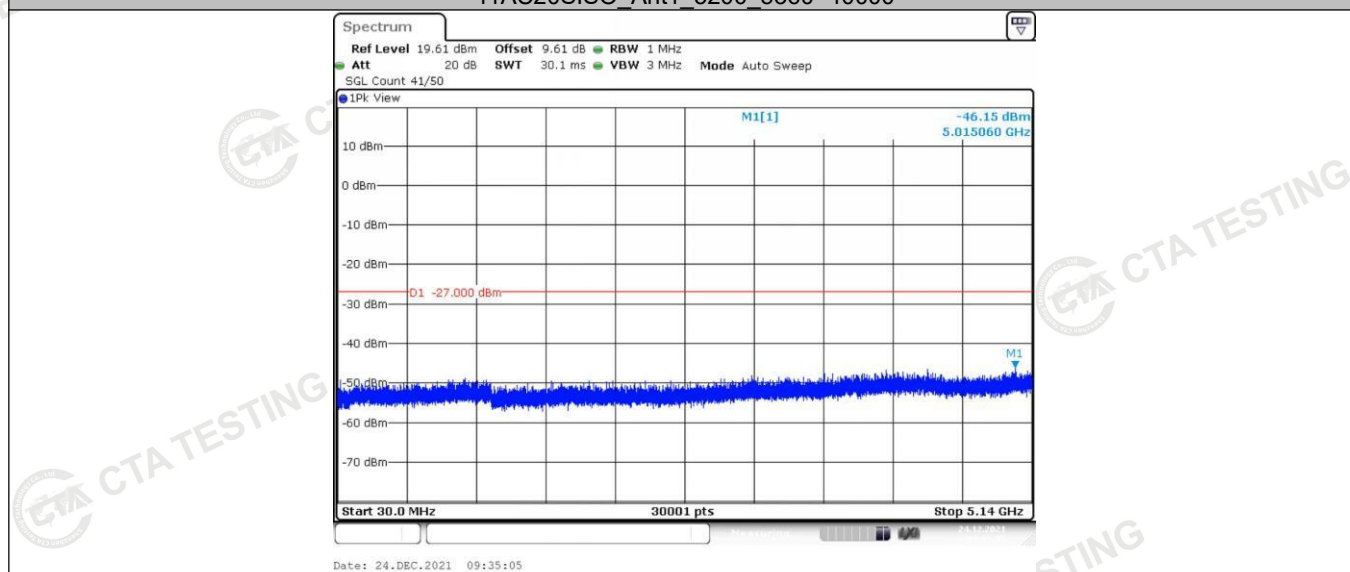




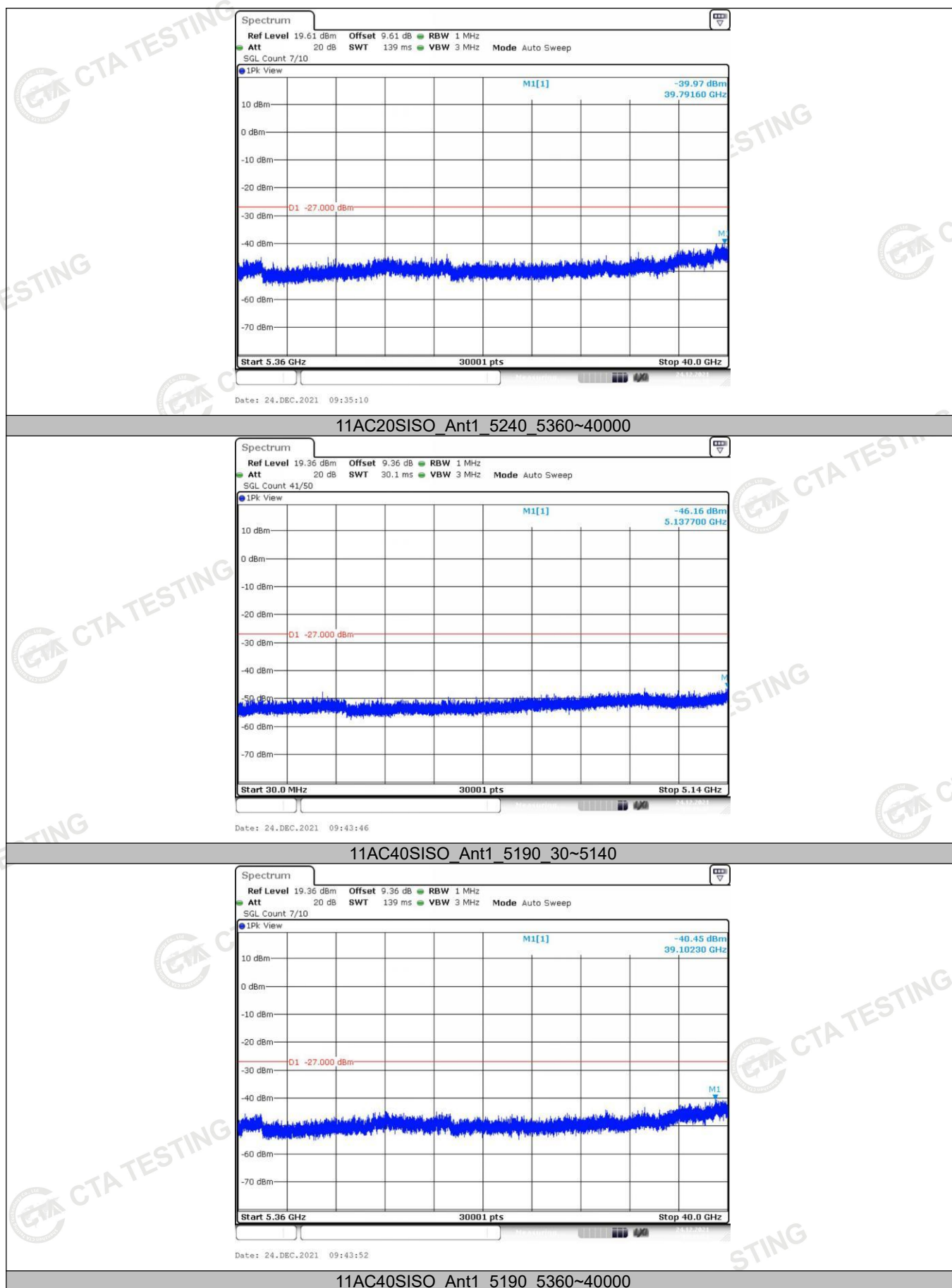
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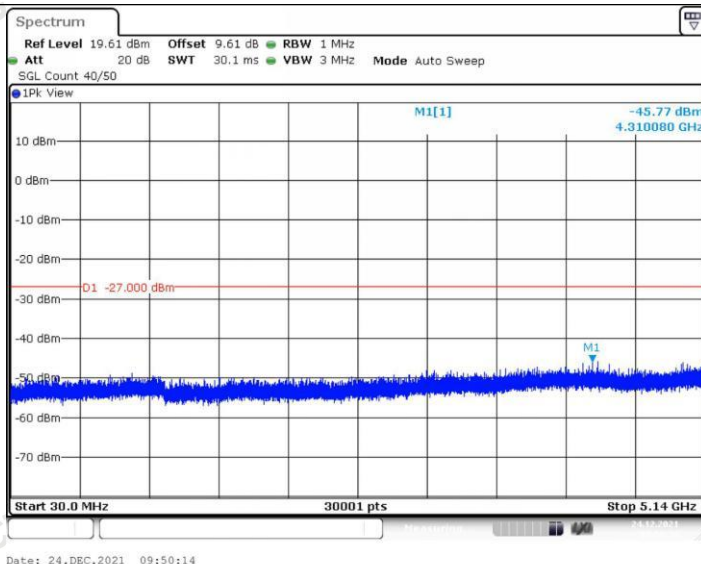


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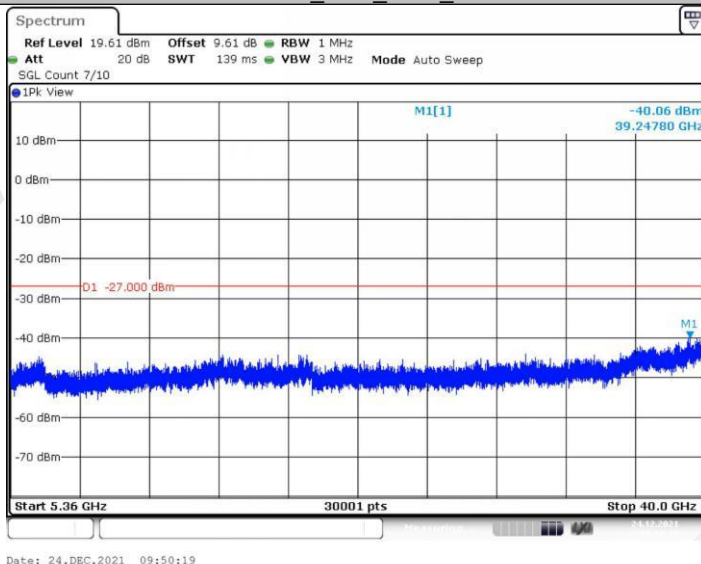


11AC20SISO_Ant1_5240_30~5140

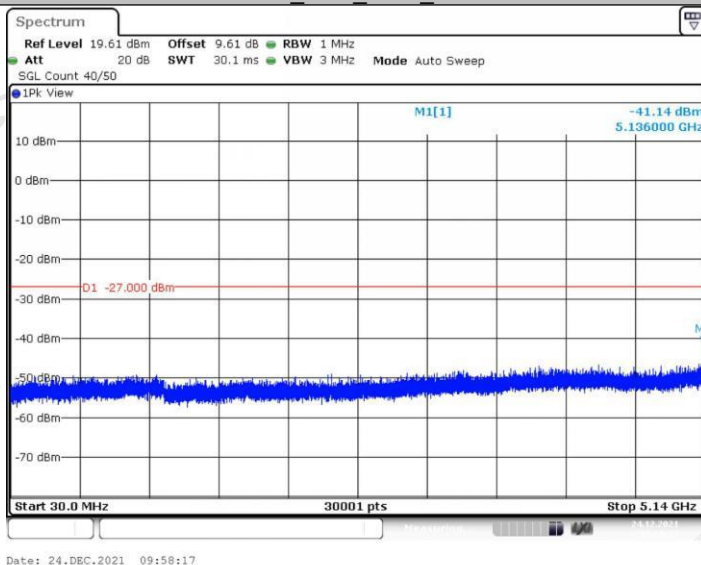




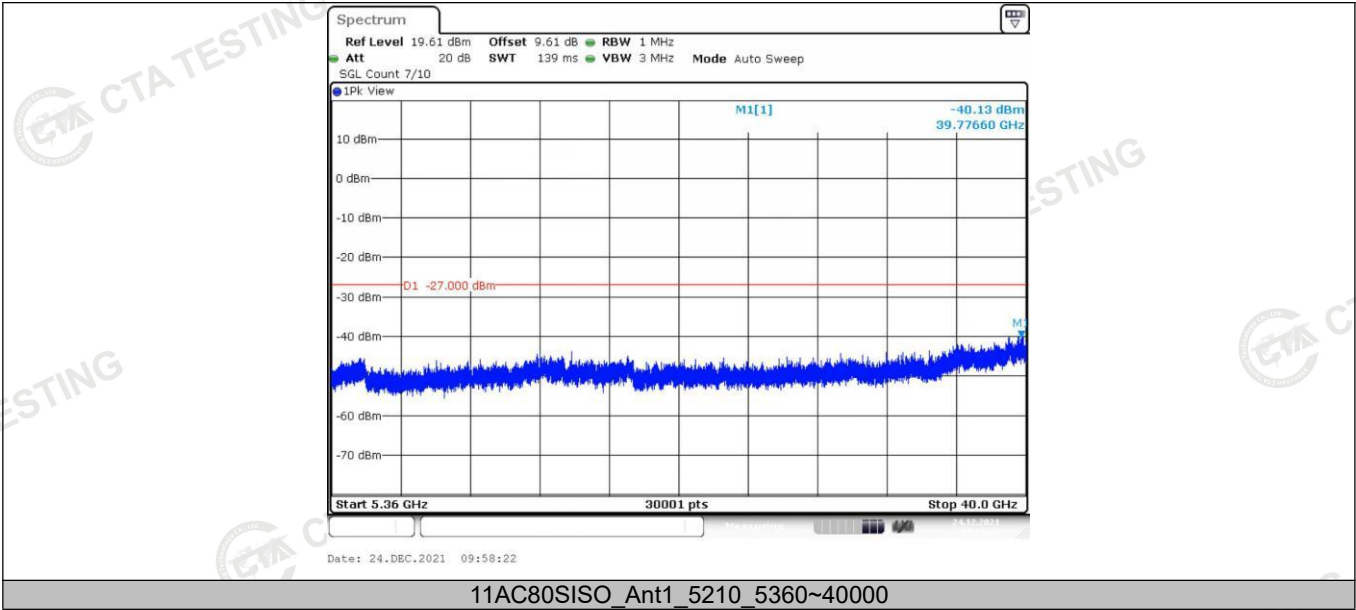
11AC40SISO_Ant1_5230_30~5140



11AC40SISO_Ant1_5230_5360~40000



11AC80SISO_Ant1_5210_30~5140

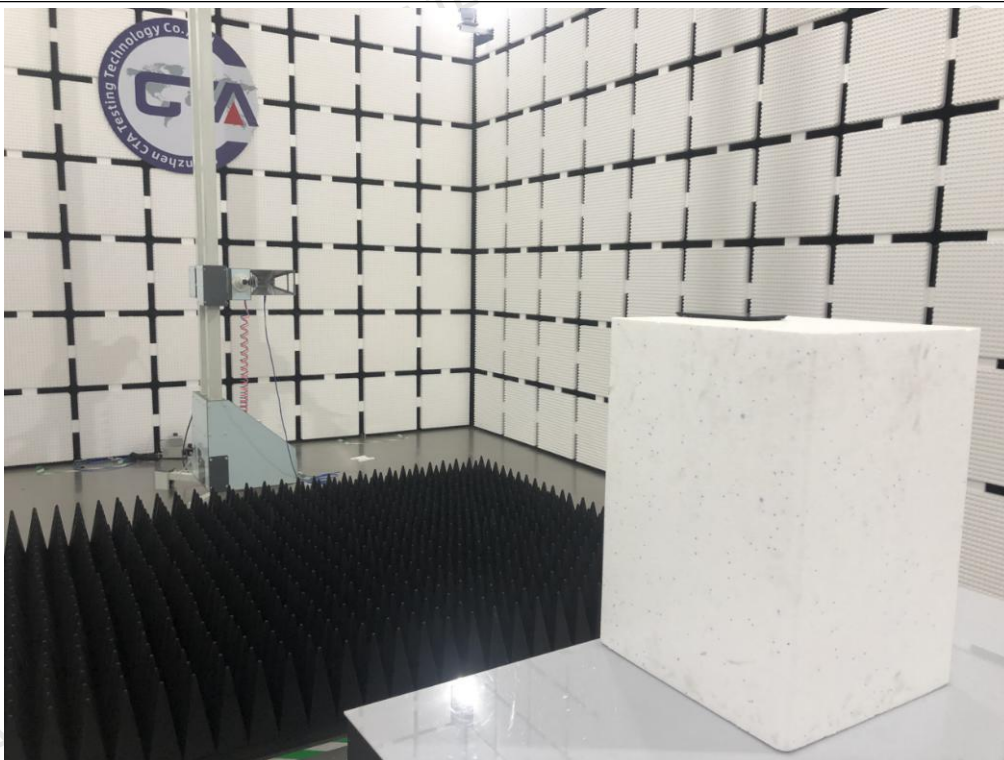


4. EUT TEST PHOTOS

Radiated Measurement (Below 1GHz)



Radiated Measurement (Above 1GHz)



Conducted Emission



5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

External Photographs

Photo 1



Photo 2



Photo 3



Photo 4

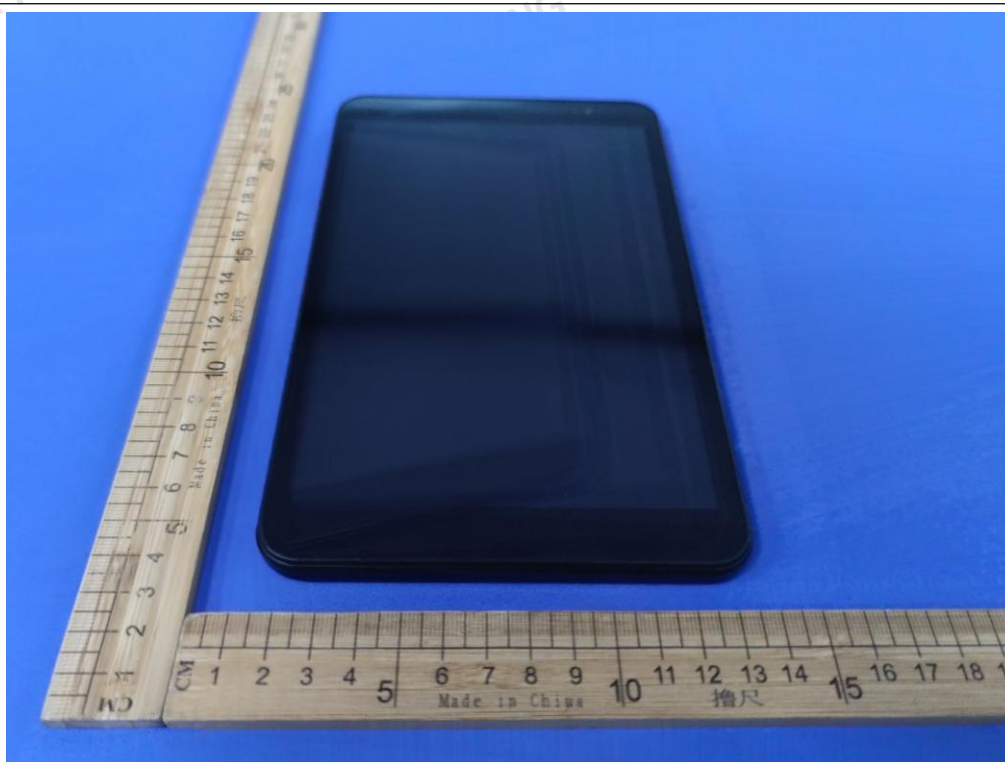
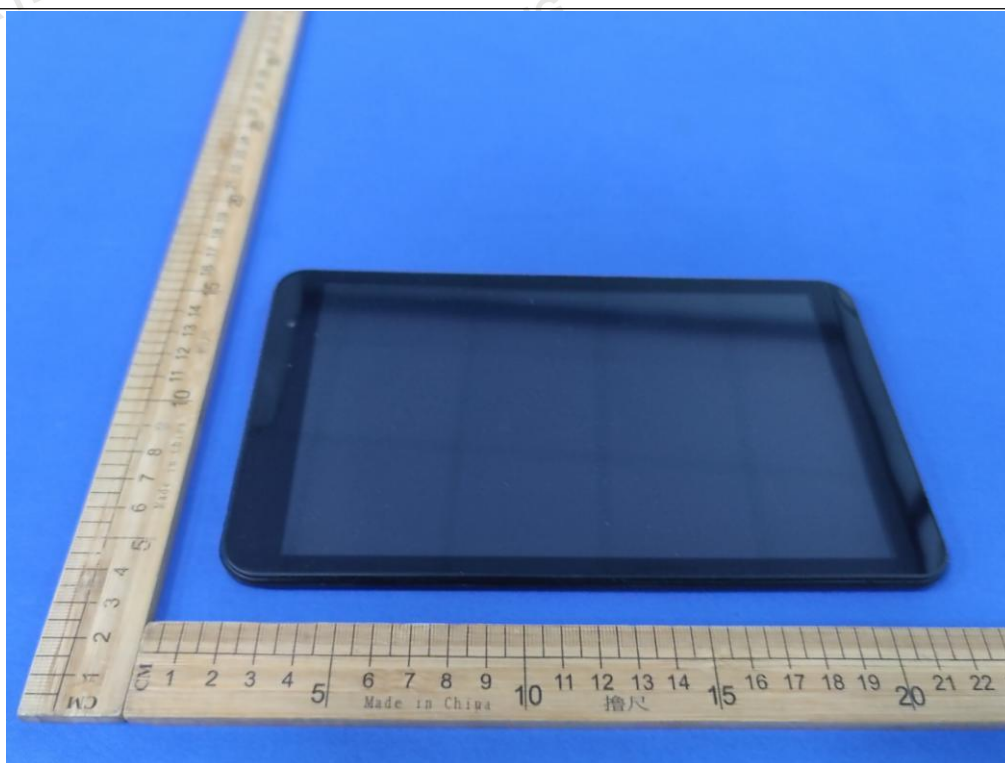


Photo 5



Photo 6



Internal Photographs

Photo 1

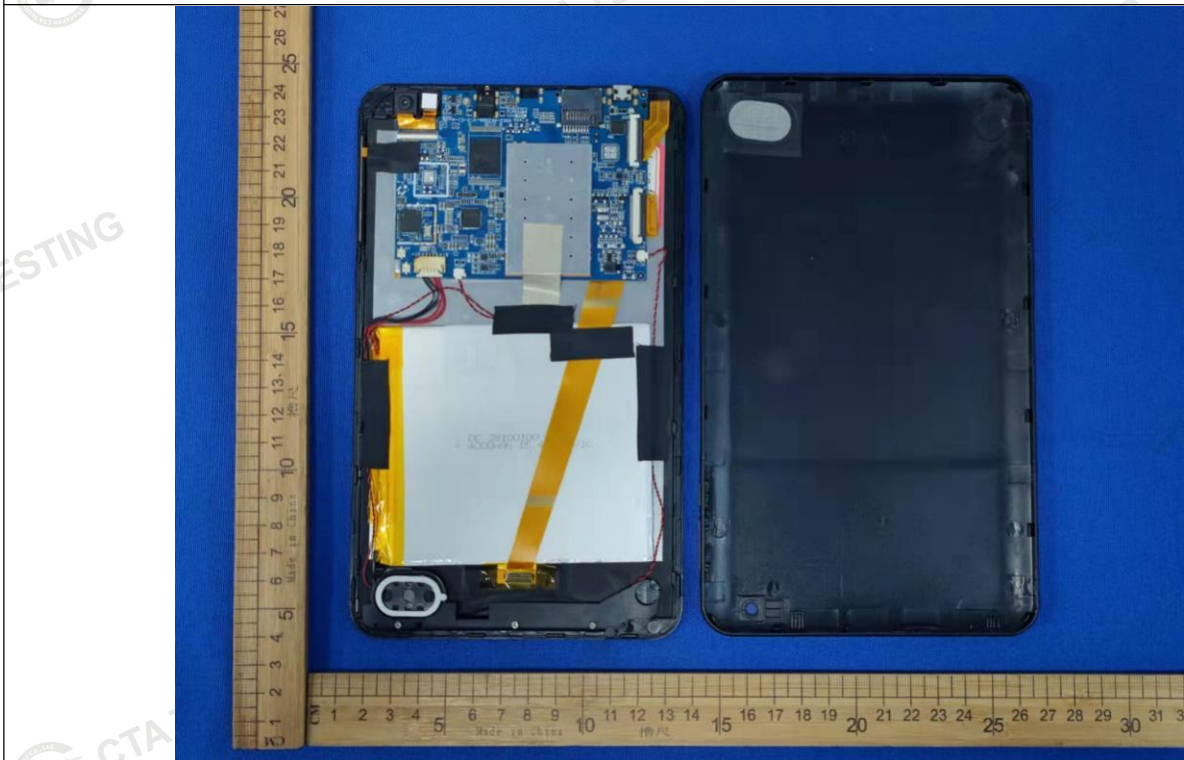


Photo 2

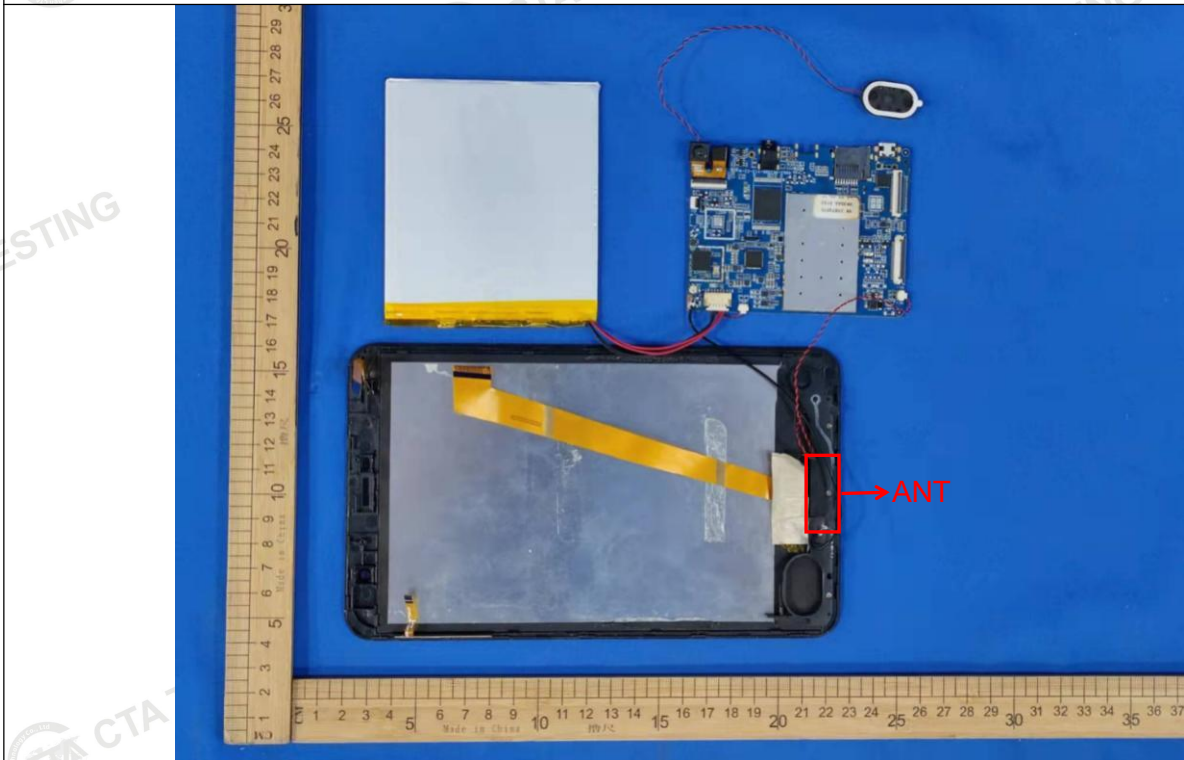


Photo 3

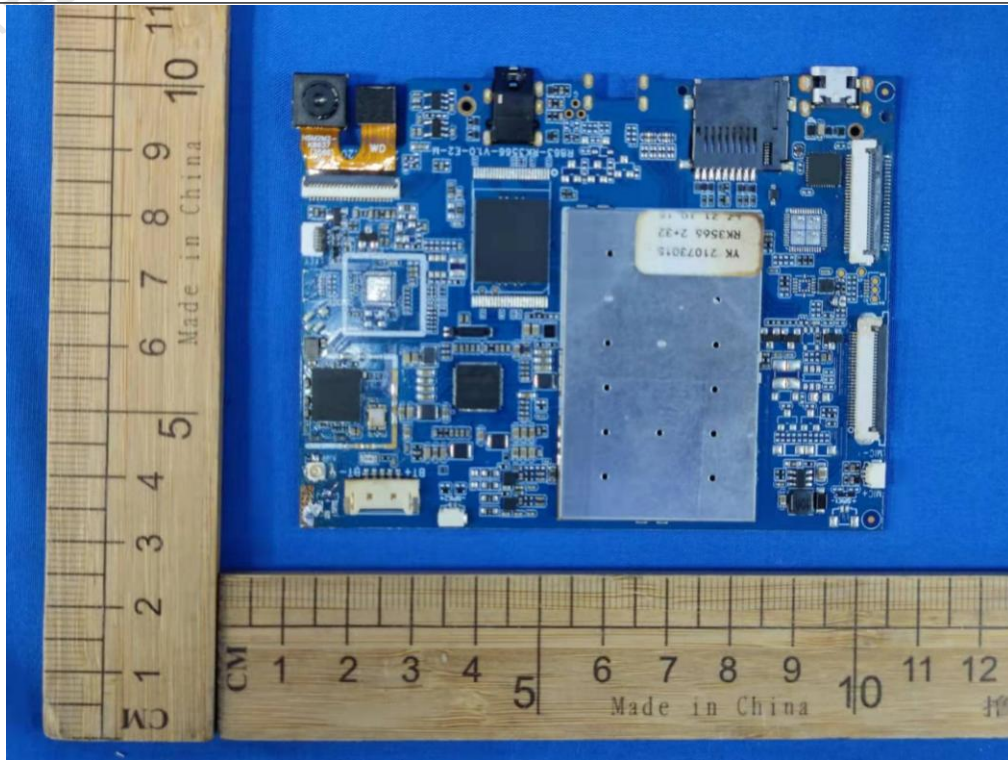


Photo 4

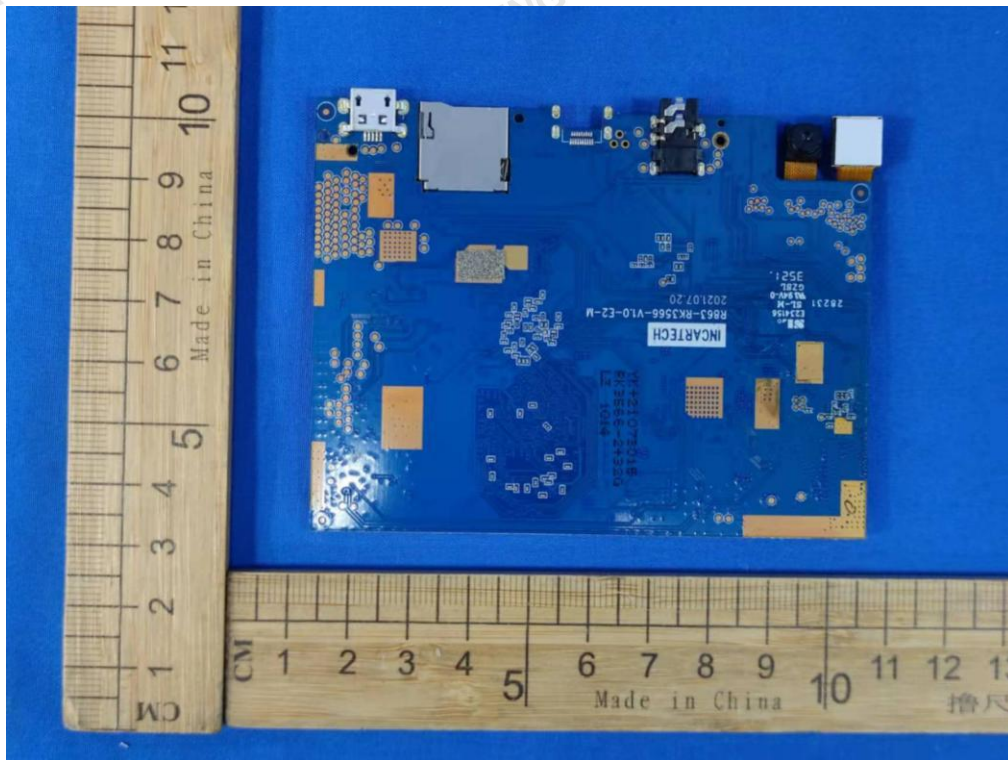


Photo 5

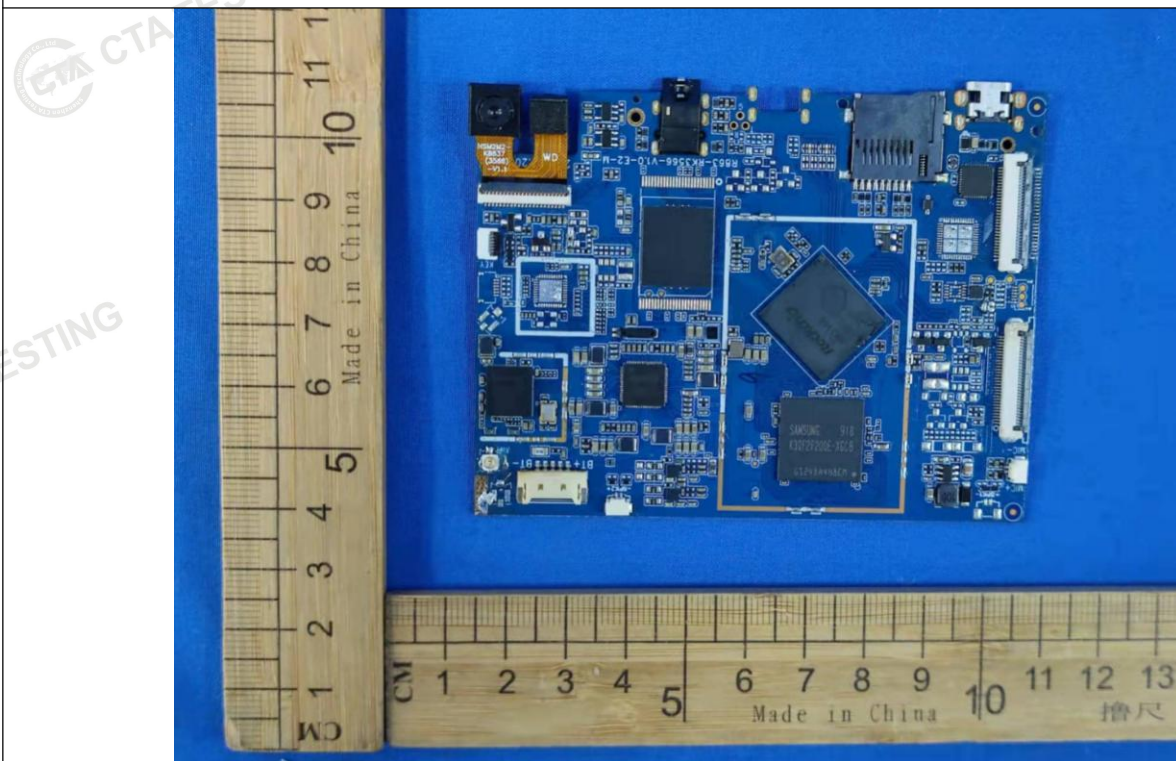


Photo 6

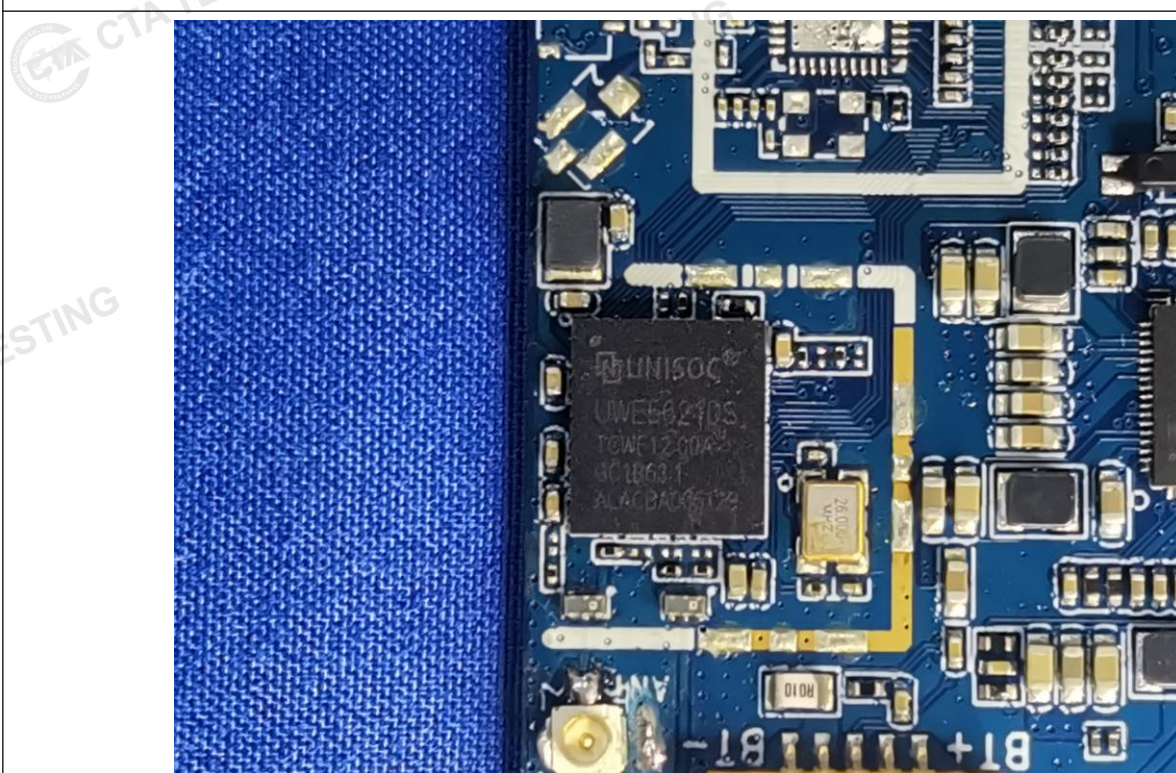


Photo 7

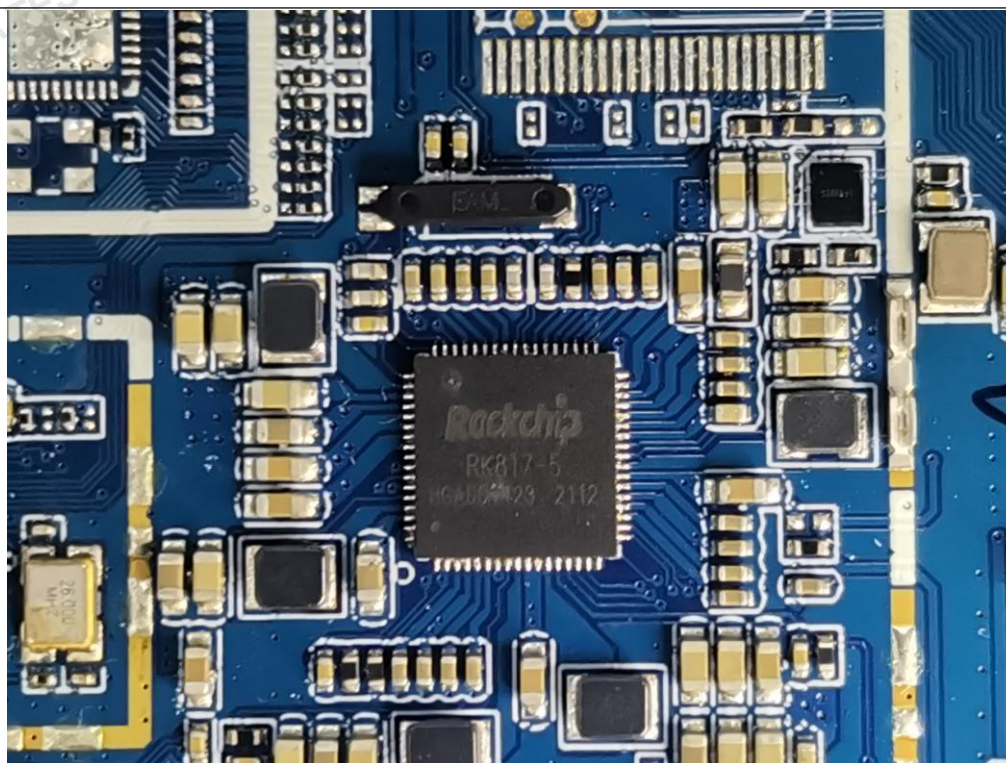


Photo 8



Photo 9

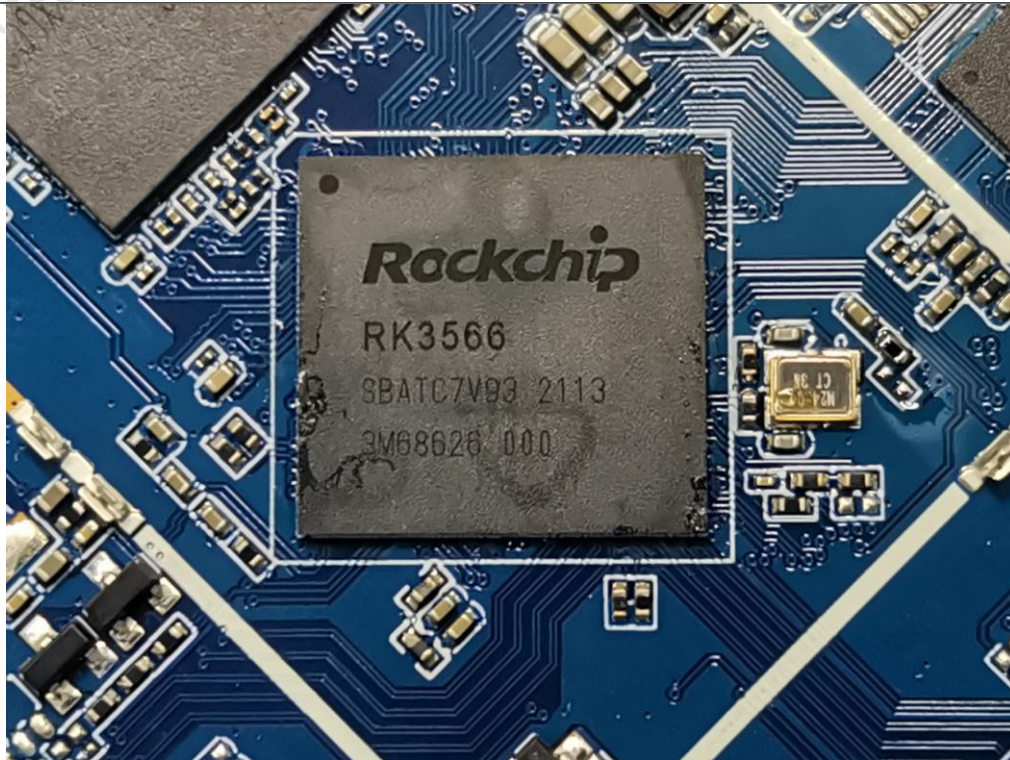


Photo 10

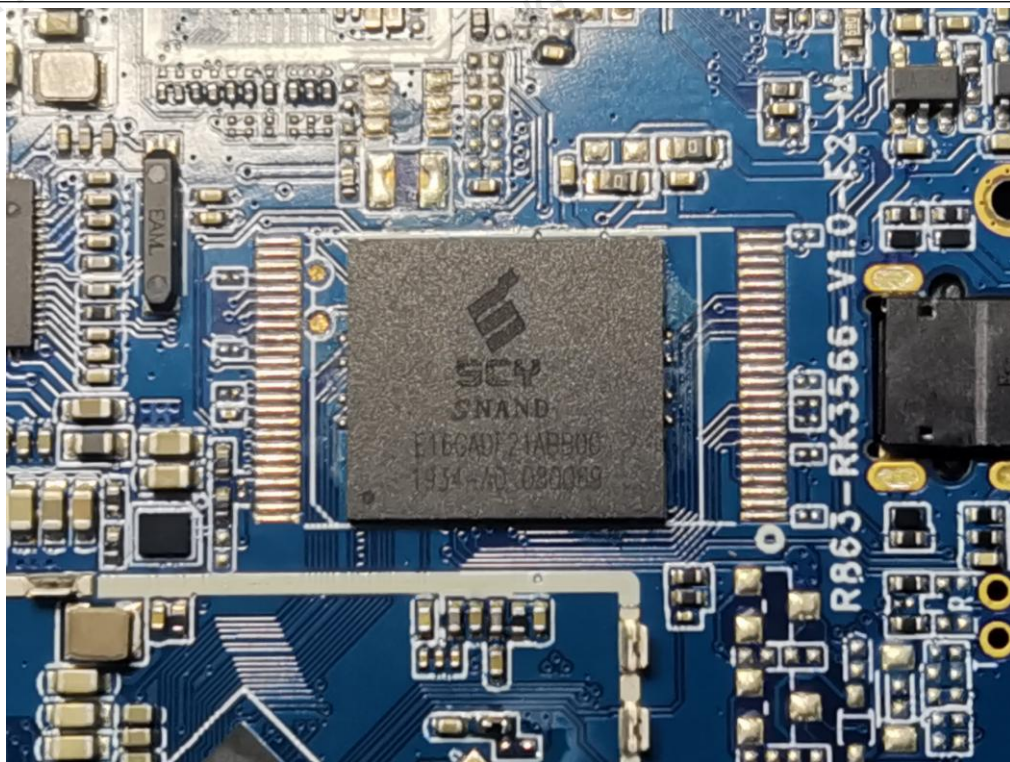
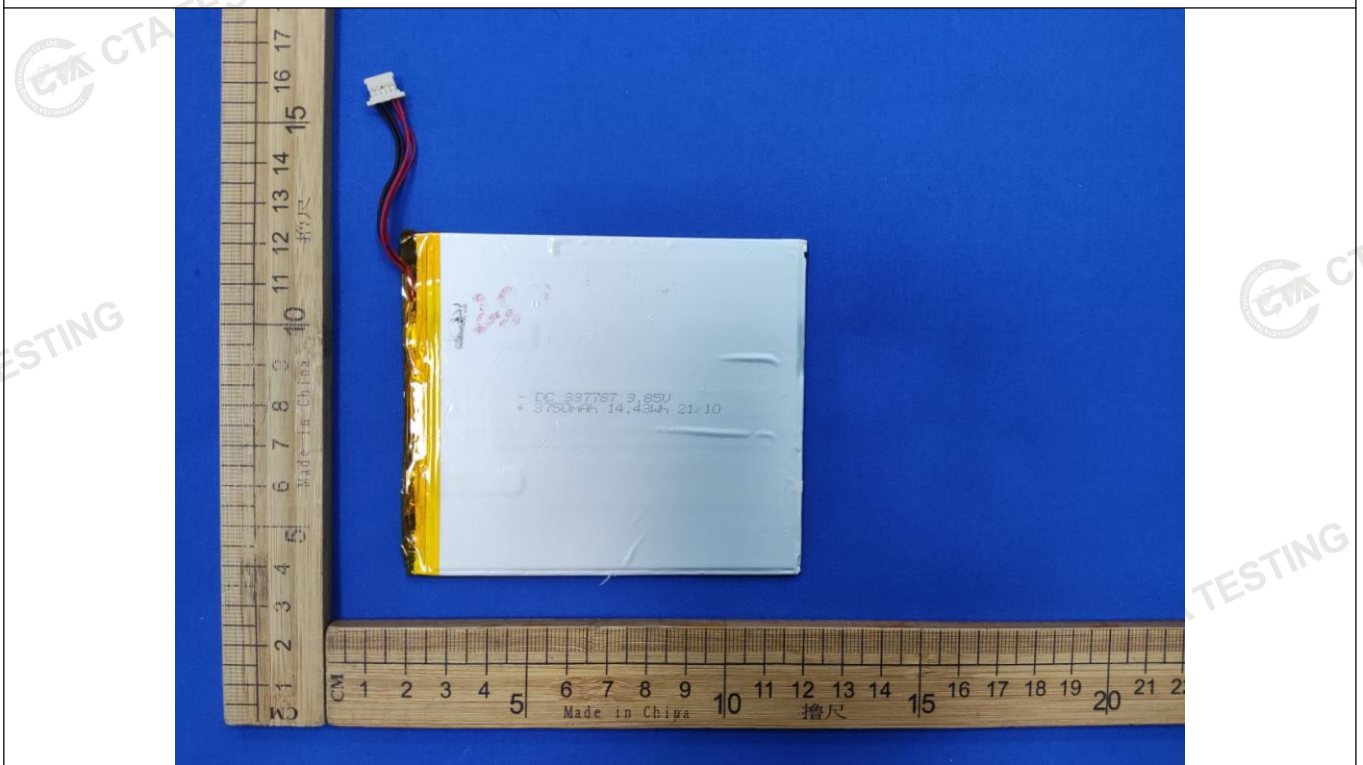


Photo 11



--THE END--