

TECHNICAL REPORT



Report No.: TW2007343E

File Reference No.: 2020-08-03

Applicant: Dongguan Cstouch Electronic Co., Ltd

Product: Touch Screen

Brand Name: N/A

Model No.: DC1011161, WWX101202, WWX101256, WWX222-080-V01, WWX255-101-V1, WWX233-101-V04, WWX236-080-V0, WWX256-101-V2

Test Standards: FCC Part 15 Subpart B

Test Result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of electromagnetic compatibility

Approved By

A handwritten signature in black ink that reads 'Terry Tong'.

Terry Tong

Manager

Dated: August 03, 2020

**Results appearing herein relate only to the sample tested**

**The technical reports is issued errors and omissions exempt and is subject to withdrawal at**

**SHENZHEN TIMEWAY TESTING LABORATORIES.**

**Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West,  
Tong Le Village, Nanshan District, Shenzhen, China**

Tel (755) 83448688

Fax (755) 83442996

Email: [info@timeway-lab.com](mailto:info@timeway-lab.com)



### **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

#### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

#### **FCC-Registration No.: 744189**

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

#### **Industry Canada (IC) —Registration No.:5205A**

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

#### **A2LA (Certification Number:5013.01)**

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

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## 1.0 General Details

### 1.1 Test Lab Details

Name : SHENZHEN TIMEWAY TESTING LABORATORIES.  
Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China  
Telephone: (755) 83448688  
Fax: (755) 83442996

### 1.2 Applicant Details

Applicant: Dongguan Cstouch Electronic Co., Ltd  
Address: Room 401, Building 9, Number 1, Huili second street, Fenghuanggang Road, Tangxia town, Dongguan city, China.  
Telephone: --  
Fax: --

### 1.3 Description of EUT

Product: Touch Screen  
Manufacturer: Dongguan Cstouch Electronic Co., Ltd  
Address: Room 401, Building 9, Number 1, Huili second street, Fenghuanggang Road, Tangxia town, Dongguan city, China.  
Brand Name: N/A  
Model Number: DC1011161  
Adding Model Number: WWX101202, WWX101256, WWX222-080-V01, WWX255-101-V1, WWX233-101-V04, WWX236-080-V0, WWX256-101-V2  
The Difference between models: Differences in appearance and size.  
Rating : Input: 5V, 2A

### 1.4 Submitted Sample: 1 Sample

### 1.5 Test Duration

Date of Receipt of Test Item: July 28, 2020  
Date of Receipt of Test Item: July 28, 2020  
Date of Test: July 28, 2020 ~ August 03, 2020

### 1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB  
Radiated Emissions Uncertainty =4.7dB

### 1.7 Test Engineer

The sample tested by

Print Name: Leo Lau



## 2.0 List of Measurement Equipment

### 2.1 Conducted Emission Test

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESH3	860905/006	RS	2020.06.23	1 Year
Spectrum Analyzer	ESA-L1500A	US37451154	HP	2020.06.23	1 Year
PULSE LIMITER	ESH3-Z2	100281	RS	2020.06.23	1 Year
LISN	ESH3-Z5	100294	RS	2020.06.23	1 Year
LISN	ESH3-Z5	100253	RS	2020.06.23	1 Year
LISN	NNB42	00012	SCHAFFNER	2020.01.07	1 Year

### 2.2 Radiated electromagnetic disturbance test

Name	Model No	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESPI 3	100379	RS	2020.06.23	1 Year
Spectrum Analyzer	E4407B	MY50441392	HP/Agilent	2020.06.23	1 Year
Amplifier	BBV9743	#218	HP/Agilent	2020.06.23	1 Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2018.07.04	3 Year
Horn Antenna	BBHA 9120D	9120D-631	RS	2018.07.09	3 Year
Amplifier	8449B	3008A00160	HP/Agilent	2020.06.23	1 Year

### 2.3 Auxiliary Equipment

Device	Manufacturer	Model	Rating
N/A			

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### 3.0 Technical Details

#### 3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

#### 3.2 Test Standards

**FCC Part 15 Subpart B**

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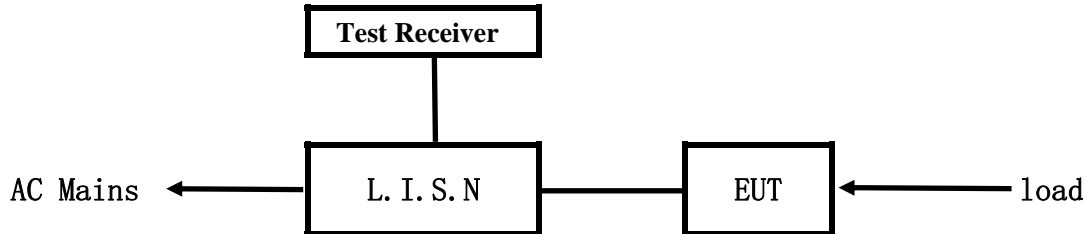
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#### 4.0 Conducted Power line Test

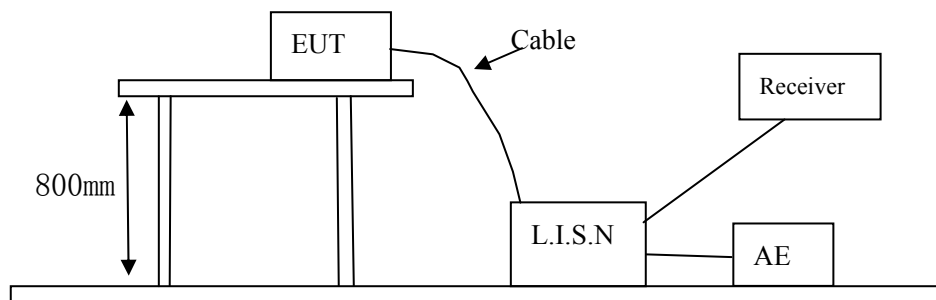
##### 4.1 Schematics of the test



EUT: Equipment Under Test

##### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2014. Cables and peripherals were moved to find the maximum emission levels for each frequency.  
 Test Voltage: 120V~, 60Hz  
 Block diagram of Test setup



##### 4.3 Power line conducted Emission Limit

Frequency(MHz)	Class A Limits dB(μV)		Class B Limits dB(μV)	
	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
0.15 ~ 0.50	79.00	66.00	66.00~56.00*	56.00~46.00*
0.50 ~ 5.0	73.00	60.00	56.00	46.00
5.00 ~ 30.00	73.00	60.00	60.00	50.00

- Notes:
- \*decreasing linearly with logarithm of frequency.
  - The tighter limit shall apply at the transition frequencies

##### 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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**A: Conducted Emission on Live Terminal (150kHz to 30MHz)**

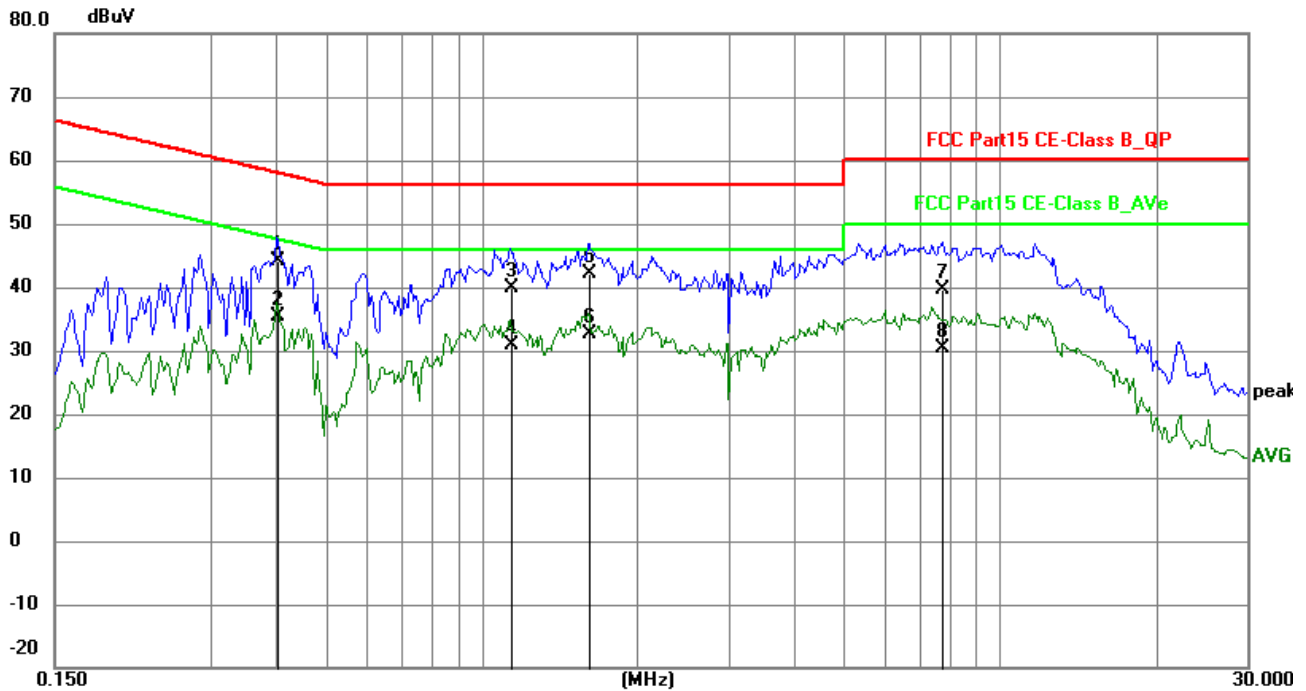
**EUT Operating Environment**

Temperature: 25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition : WORKING**

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.4035	34.46	9.76	44.22	57.78	-13.56	QP	P
2	0.4035	25.66	9.76	35.42	47.78	-12.36	AVG	P
3	1.1367	30.19	9.79	39.98	56.00	-16.02	QP	P
4	1.1367	21.04	9.79	30.83	46.00	-15.17	AVG	P
5	1.6086	32.31	9.80	42.11	56.00	-13.89	QP	P
6	1.6086	22.95	9.80	32.75	46.00	-13.25	AVG	P
7	7.7619	29.52	10.05	39.57	60.00	-20.43	QP	P
8	7.7619	20.29	10.05	30.34	50.00	-19.66	AVG	P

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**B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)**

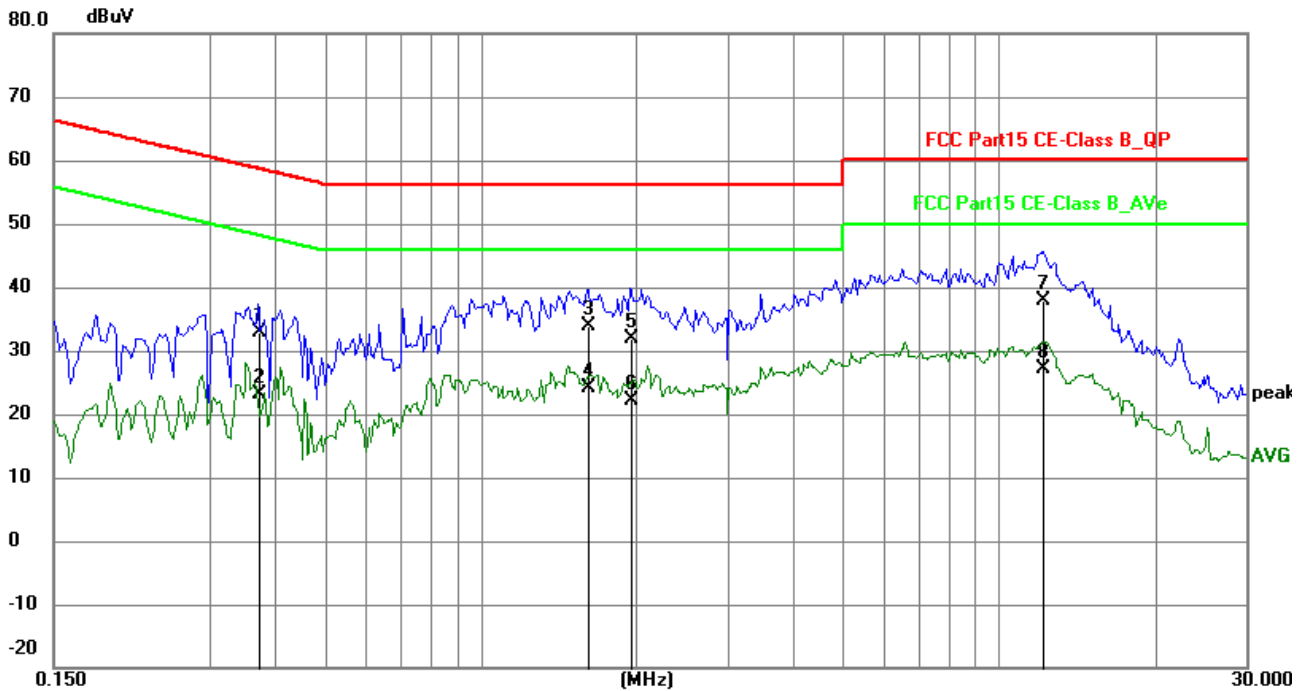
**EUT Operating Environment**

Temperature: 25°C Humidity:75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition : WORKING**

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3723	23.04	9.76	32.80	58.45	-25.65	QP	P
2	0.3723	13.28	9.76	23.04	48.45	-25.41	AVG	P
3	1.6086	24.10	9.80	33.90	56.00	-22.10	QP	P
4	1.6086	14.25	9.80	24.05	46.00	-21.95	AVG	P
5	1.9440	22.08	9.80	31.88	56.00	-24.12	QP	P
6	1.9440	12.34	9.80	22.14	46.00	-23.86	AVG	P
7	12.1532	27.71	10.25	37.96	60.00	-22.04	QP	P
8	12.1532	16.76	10.25	27.01	50.00	-22.99	AVG	P

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## 5.0 Radiated Disturbance Test

### 5.1 Schematics of the test

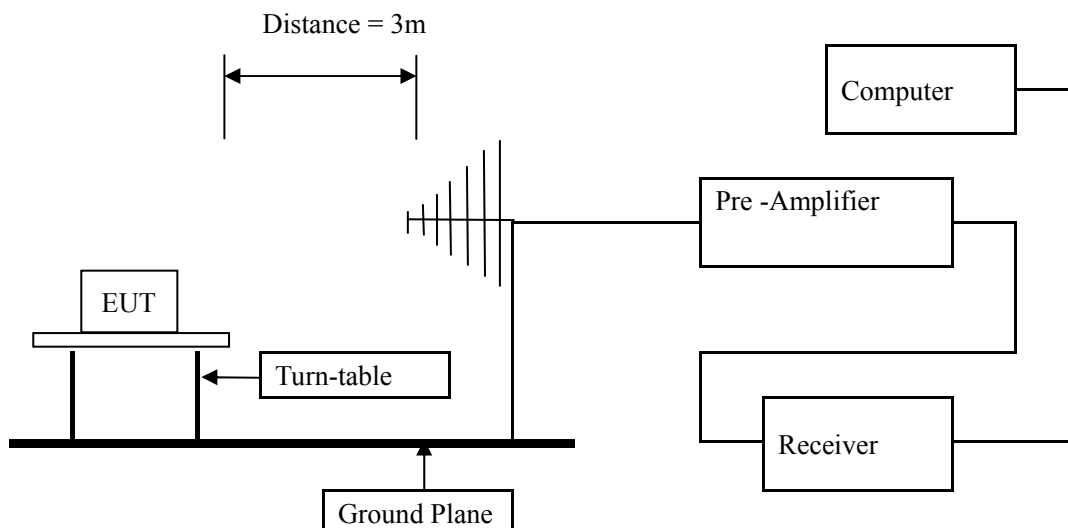


### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4 –2014, The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak 0values with a resolution bandwidth of 120kHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

Test Voltage: 120V~, 60Hz

#### Block diagram of Test setup



### 5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: The lower limit shall apply at the transition frequencies

### 5.4 Test result

The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

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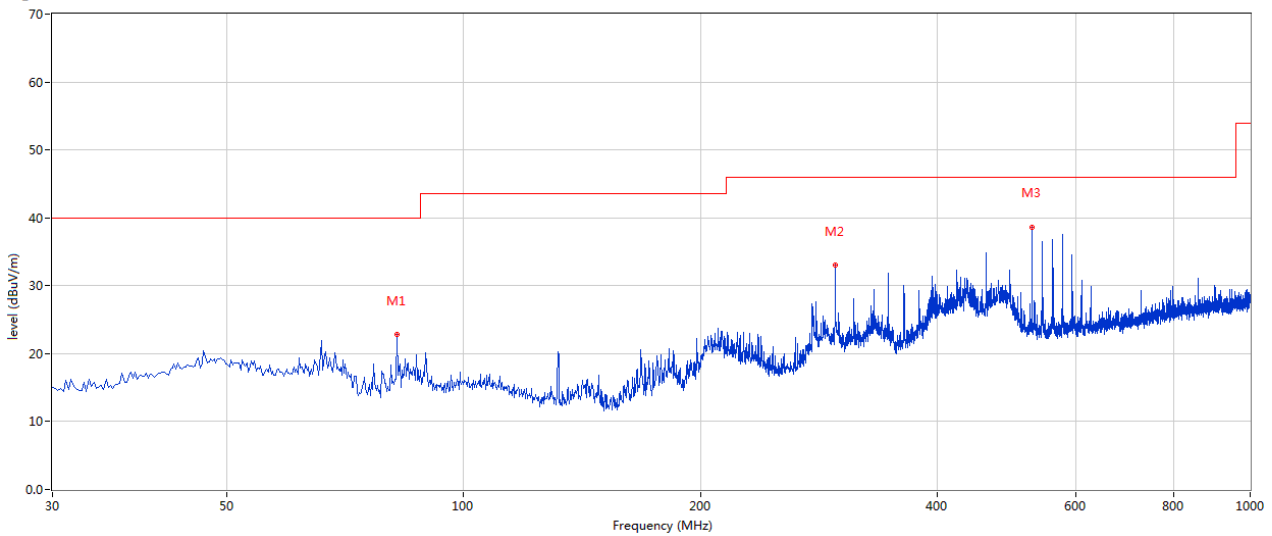
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**A: Radiated Disturbance (30MHz----1000MHz)**

Project Number:	CASE4	Test Time:	2020-07-31_16.17.29
EUT Name:	Touch Screen	Test Engineer:	KENT
Manufacturer:	Dongguan Cstouch Electronic Co., Ltd	Test Standard:	FCC PART 15B
Model:	DC10111161	Work Addition:	WORKING
Temp.( °C):	25	Load:	
Hum.:	65%	Remark:	

FCC\_FCC Part 15B Class B 30MHz-1GHz



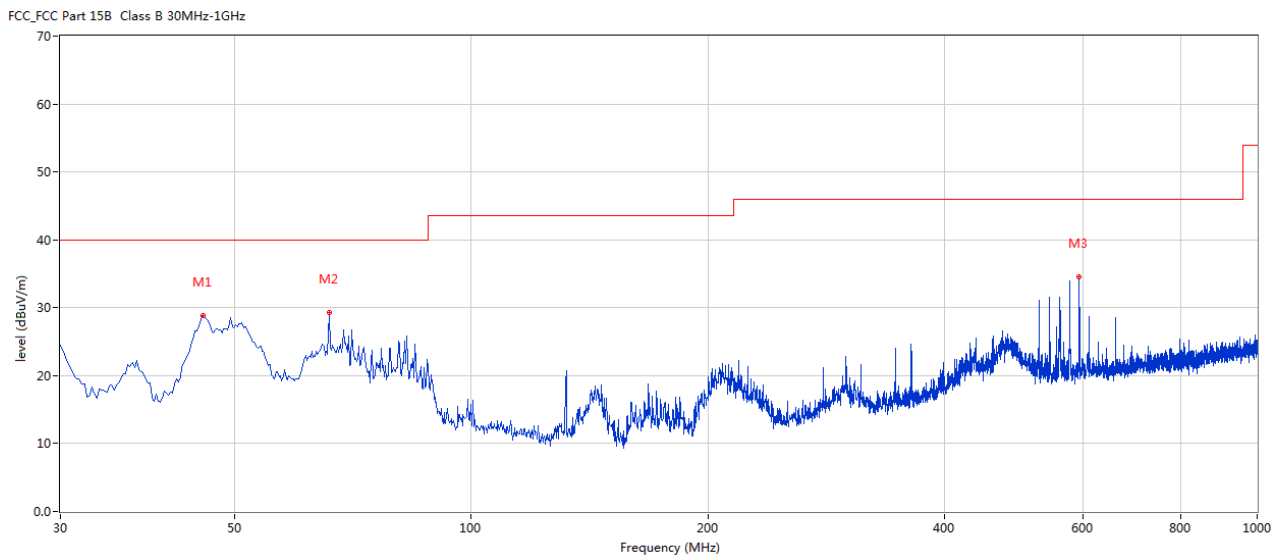
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	82.367	22.80	-17.12	40.0	-17.20	Peak	0.00	200	H	Pass
2	296.926	33.00	-11.07	46.0	-13.00	Peak	110.00	100	H	Pass
3	527.971	38.68	-6.62	46.0	-7.32	Peak	121.00	200	H	Pass

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**B: Radiated Disturbance (30MHz----1000MHz)**

Project Number:	CASE4	Test Time:	2020-07-31_16.14.30
EUT Name:	Touch Screen	Test Engineer:	KENT
Manufacturer:	Dongguan Cstouch Electronic Co., Ltd	Test Standard:	FCC PART 15B
Model:	DC10111161	Work Addition:	WORKING
Temp.( °C):	25	Load:	
Hum.:	65%	Remark:	



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	45.516	28.79	-11.39	40.0	-11.21	Peak	137.00	100	V	Pass
2	65.881	29.27	-13.87	40.0	-10.73	Peak	2.00	100	V	Pass
3	593.914	34.58	-5.25	46.0	-11.42	Peak	72.00	100	V	Pass

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## 6.0 FCC Label

**This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

**Mark Location: On the product body**

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## 7.0 Photo of testing

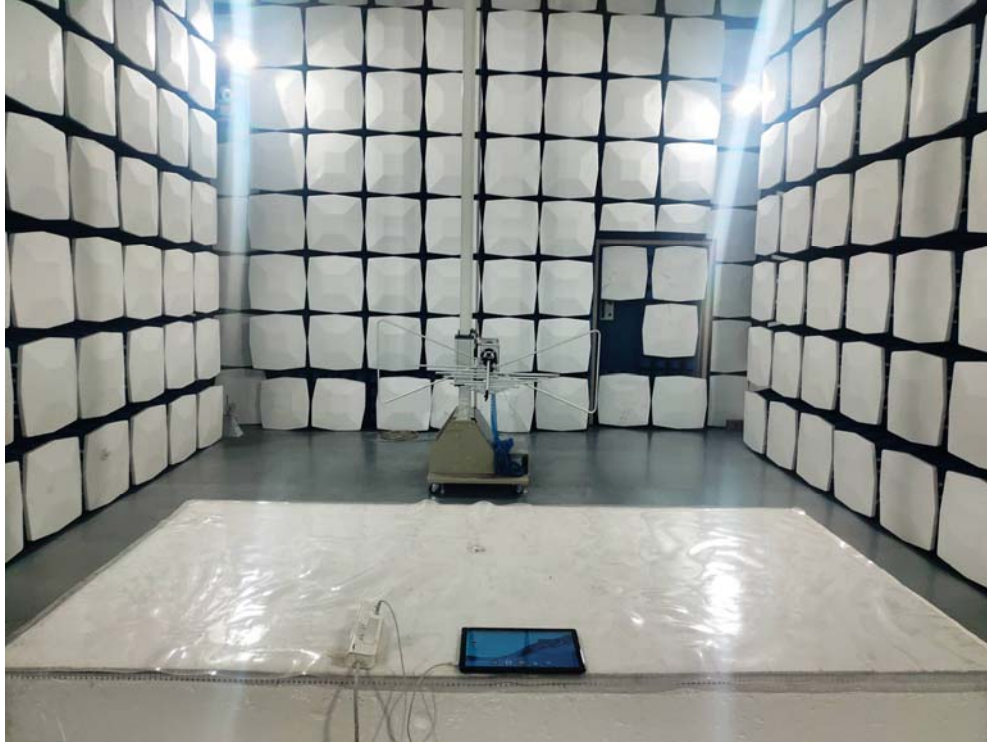
### Conducted Emissions



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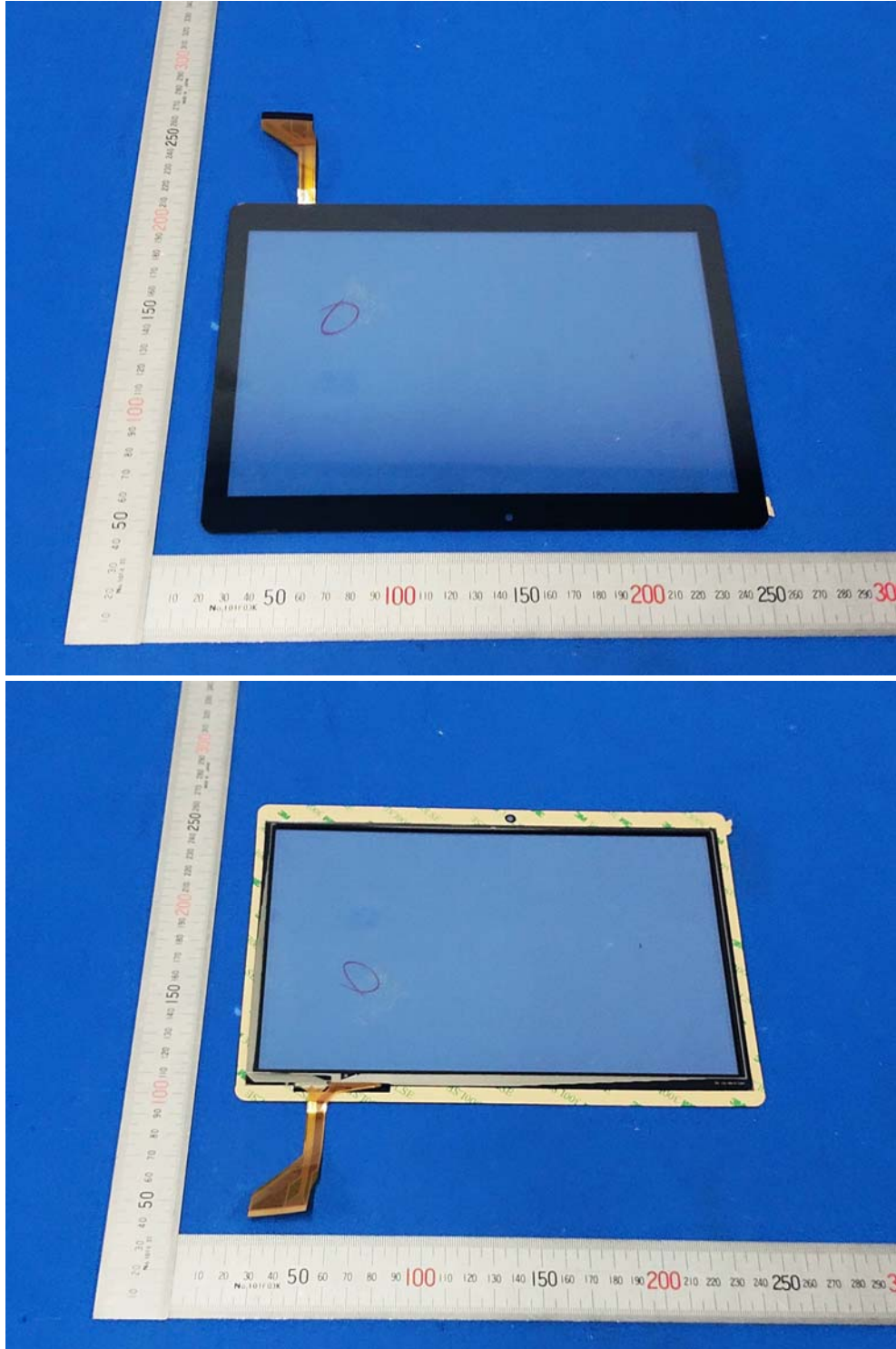
### Radiated Emissions



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Photographs – EUT



**-End of the Report--**

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