



Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial
Zone, Gushu 2nd Road, Bao'an District, Shenzhen
518126, P.R. China

TEST REPORT

FCC ID: 2ABCS-A6102

Applicant : Truly Industrial (ShanWei) Ltd

Address : Truly Industrial Area, Shanwei City, Guangdong Province,
People's Republic of China

Equipment Under Test (EUT):

Name : 3D PAD

Model : A6102, A6100, N103D

In Accordance with: FCC CFR47 Part 15 Section 15C: 2013

Report No : STI130621090-5

Date of Test : December 19- December 22, 2013

Date of Issue : December 23, 2013

Test Result: **PASS**

In the configuration tested, the EUT complied with the standards specified above

Authorized Signature

A handwritten signature in black ink, appearing to read "Mark Zhu", is written over a horizontal line.

(Mark Zhu)

General Manager

The manufacture should ensure that all the products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of Shenzhen Certification Technology Service Co., Ltd. Or test done by Shenzhen Certification Technology Service Co., Ltd. Approvals in connection with, distribution or use of the product described in this report must be approved by Shenzhen Certification Technology Service Co., Ltd. Approvals in writing.

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1. General Information

1.1. Description of Device (EUT)

EUT	: 3D PAD
Model No.	: A6102, A6100, N103D
DIFF	: All model's the function, software and electric circuit are the same, only with a model named different. The test model: A6102.
Trade mark	: TRULY
Power supply	: DC 3.7V Supply by battery DC 5V from adapter with AC 120V/60Hz adapter
Adapter	: Manufacturer: Ktec Model No.:KAS29A0500250D5
Radio Technology	: NFC, Bluetooth 4.0, Bluetooth 2.1+EDR, IEEE 802.11a,b,g,n/HT20,n/HT40, GSM 850/1900, WCDMA BAND II/V
Operation frequency	: NFC:13.56MHz IEEE 802.11a: 5745MHz-5825MHz IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412-2462MHz, IEEE 802.11n HT40:2422-2452MHz Bluetooth 4.0: 2402-2480MHz Bluetooth 2.1+EDR: 2402-2480MHz GSM 850: 824.2MHz—848.8MHz GSM 1900: 1850.2MHz—1909.8MHz WCDMA BAND II: 1852.4MHz—1907.6MHz WCDMA BAND V: 826.4MHz—846.6MHz
Antenna Type and Gain	: NFC: Integrated loop antenna, PK Gain: 0dBi PIFA Antenna, max gain 1 dBi for WIFI, PIFA Antenna, max gain 1 dBi for BT. PIFA Antenna, max gain 1.5 dBi for GSM PIFA Antenna, max gain 1.5 dBi for WCDMA
Applicant	: Truly Industrial (ShanWei) Ltd
Address	: Truly Industrial Area, Shanwei City, Guangdong Province, People's Republic of China
Manufacturer	: Truly Industrial (ShanWei) Ltd
Address	: Truly Industrial Area, Shanwei City, Guangdong Province, People's Republic of China

Note: This report only test for NFC, for other radio test see other test report.

1.2. Accessories of device (EUT)

Accessories 1 : Adapter
M/N : KAS29A0500250D5

1.3. Test Lab information

Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
FCC Registered No.:197647

2. Summary of test

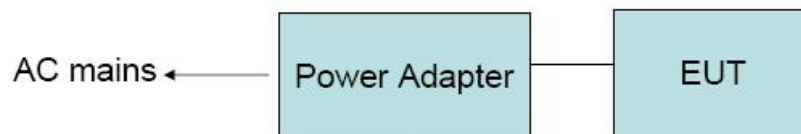
2.1. Summary of test result

Description of Test Item	Standard	Results
20dB Bandwidth	FCC Part 15: 15.225 ANSI C63.4 :2003	PASS
Radiated Emission (9KHz-1GHz)	FCC Part 15: 15. 225&209 ANSI C63.4 :2003	PASS
Power Line Conducted Emissions (150KHz-30MHz)	FCC Part 15: 15.207 ANSI C63.4 :2003	PASS
Frequency stability	FCC Part 15: 15.225 ANSI C63.4 :2003	PASS
Antenna Requirement	FCC Part 15: 15.203	PASS

2.2. Assistant equipment used for test

N/A

2.3. Block Diagram



2.4. Test mode

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
1	CH1	13.56
Note: According exploratory test, EUT will have maximum output power in those data rate. so those data rate were used for all test.		

2.5. Test Conditions

Temperature range	21-25℃
Humidity range	40-75%
Pressure range	86-106kPa

2.6. Measurement Uncertainty (95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for Power point Conducted Emissions Test	2.42dB	
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB	Polarize: V
	2.57dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.54dB	Polarize: V
	4.1dB	Polarize: H
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	2.08dB	Polarize: H
	2.56dB	Polarize: V
Uncertainty for radio frequency	1×10^{-9}	
Uncertainty for conducted RF Power	0.65dB	
Uncertainty for temperature	0.2°C	
Uncertainty for humidity	1%	
Uncertainty for DC and low frequency voltages	0.06%	

2.7. Test Equipment

Equipment	Manufacture	Model No.	Serial No.	Last cal.	Cal Interval
3m Semi-Anechoic	ETS-LINDGREN	N/A	SEL0017	Nov. 16, 13	1 Year
Spectrum analyzer	Agilent	E4407B	MY49510055	Oct. 30, 13	1 Year
Receiver	R&S	ESCI	101165	Oct. 30, 13	1 Year
Receiver	R&S	ESCI	101202	Oct. 30, 13	1 Year
Bilog Antenna	SCHWARZBECK	VULB 9168	9168-438	Mar.12, 13	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	Mar.12, 13	1 Year
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170 D(1432)	Mar.12, 13	1 Year
Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	Mar.12, 13	1 Year
L.I.S.N.	SCHWARZBECK	NSLK8126	8126466	Oct. 30, 13	1 Year
Cable	Resenberger	N/A	No.1	Oct. 30, 13	1 Year
Cable	SCHWARZBECK	N/A	No.2	Oct. 30, 13	1 Year
Cable	SCHWARZBECK	N/A	No.3	Oct. 30, 13	1 Year
Power Meter	Anritsu	ML2487A	6K00001491	Oct. 30, 13	1 Year
Power sensor	Anritsu	ML2491A	32516	Oct. 30, 13	1 Year
Pre-amplifier	SCHWARZBECK	BBV9743	9743-019	Oct. 30, 13	1 Year
Pre-amplifier	Quietek	AP-180C	CHM-0602012	Oct. 30, 13	1 Year

3. 20dB bandwidth

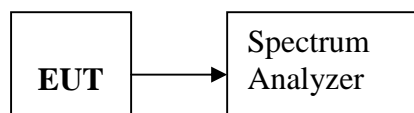
3.1. Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

3.2. Test Procedure

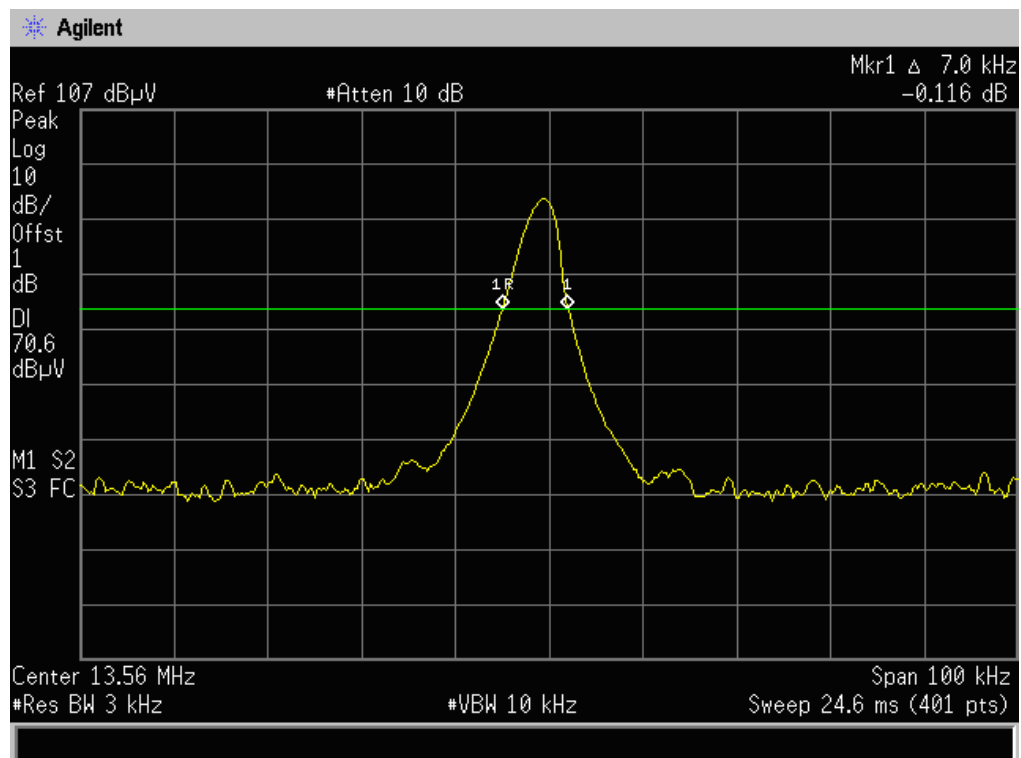
The transmitter output was coupled to a spectrum analyzer via a antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 3KHz RBW and 10kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

3.3. Test Setup



3.4. Test Result

EUT: 3D PAD M/N: A6102				
Test date: 2013-12-21		Test site: RF site		Tested by: Simple
Mode	Freq (MHz)	20dB Bandwidth (KHz)	Limit (kHz)	Conclusion
Tx Mode	13.56	7.0	/	PASS



4. Radiated emissions

4.1. Limit(FCC 15.209)

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Note:

- a) The tighter limit applies at the band edges.

For example: F.S limit at 88MHz is 100uV/m

- b) If measurement is made at 3m distance, then F.S Limit at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d2/d1)^2$.

For example:

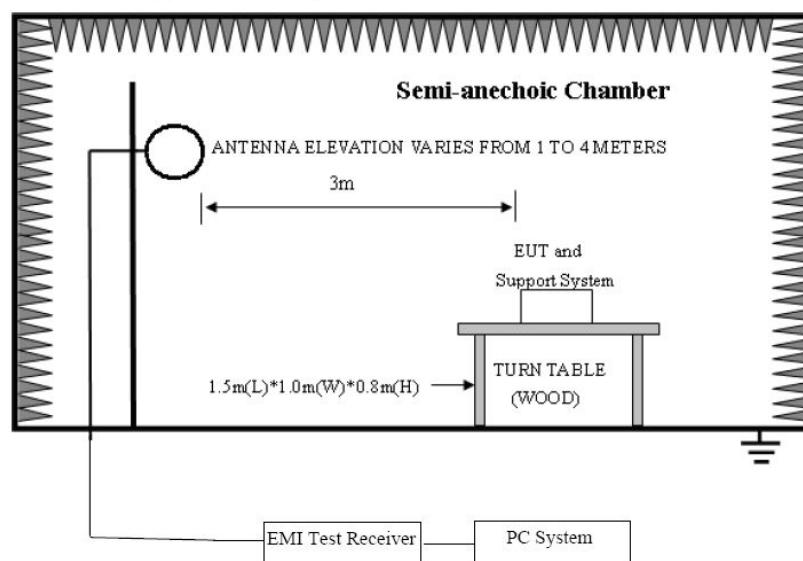
F.S Limit at 30m(d2) distance is 30uV/m(L_{d2}), then F.S Limit at 3m($d1$) distance is

$$L_{d1} = 30\text{uV/m} * (30/3)^2 = 100 * 30\text{uV/m} = 69.54 \text{ dBuV/m}$$

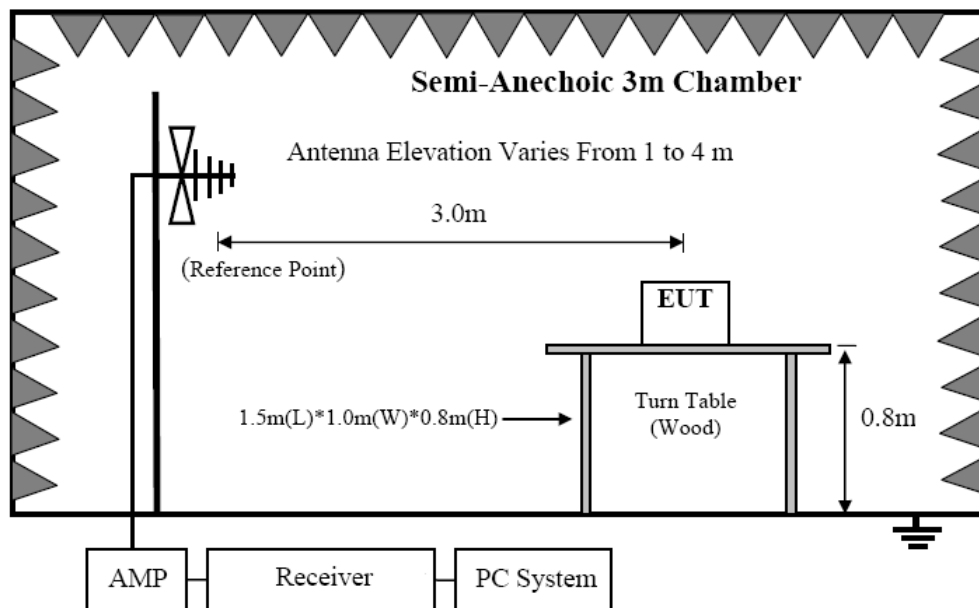
4.2. Block Diagram of Test setup

In 3m Anechoic Chamber Test Setup Diagram for below 30MHz

4.2. Block diagram of test setup



In 3m Anechoic Chamber Test Setup Diagram for frequency 30MHz-1GHz



4.3. Test Procedure

Procedure of Preliminary Test

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 4.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4:2003.

Mains cables, telephone lines or other connections to auxiliary equipment located outside the test are shall drape to the floor, be fitted with ferrite clamps or ferrite tubes placed on the floor at the point where the cable reaches the floor and then routed to the place where they leave the turntable. No extension cords shall be used to mains receptacle.

The antenna was placed at 3 meter away from the EUT as stated in ANSI C63.10:2009. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.

The Receiver quickly scanned from 9KHz to 30MHz and 30MHz to 1GHz The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

The test mode(s) described in clause 2.4 were scanned during the preliminary test:

After the preliminary scan, we found the test mode producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.

The Receiver scanned from 9KHz to 30MHz and 30MHz to 1GHz. Emissions were scanned and

measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 200Hz for 9 KHz to 150 KHz measure, 10 KHz for 150 KHz to 30MHz measure and 120 KHz for 30 MHz to 1GHz measure .

4.4. Test Result

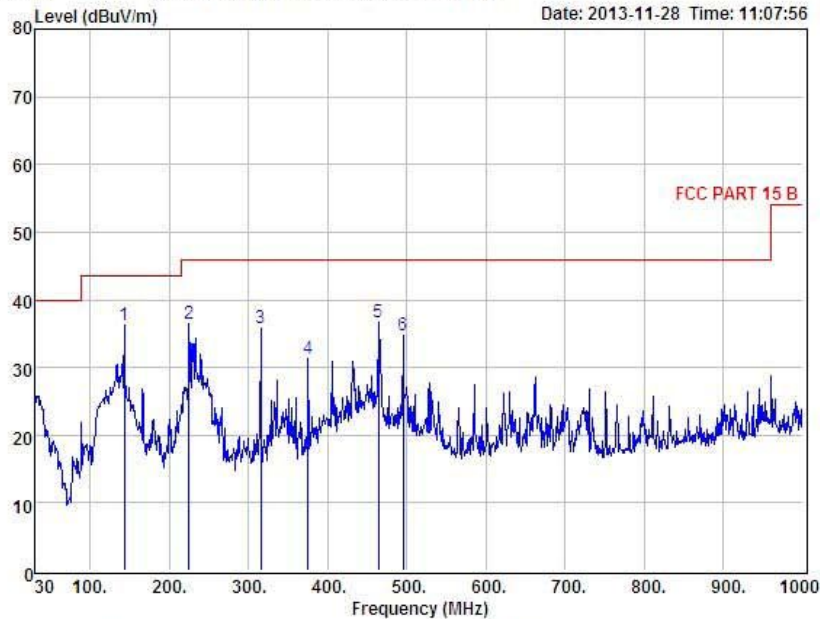
PASS. (See below detailed test result)



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Data: 11 File: E:\TEST DATA\TUTURY\RE设置.EM6 (47)

Date: 2013-11-28 Time: 11:07:56



Condition : FCC PART 15 B 3m POL: HORIZONTAL
 EUT : 3D PAD
 Model No : A6102
 Test Mode : Link mode
 Power : DC 5V From Adapter AC 120V/60Hz
 Test Engineer : Simple
 Remark :
 Temp : 24
 Hum : 56%

Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	143.49	53.73	13.64	31.51	0.38	36.24	43.50	-7.26	QP
2	224.97	56.12	10.98	31.17	0.55	36.48	46.00	-9.52	QP
3	315.18	53.28	13.19	31.30	0.57	35.74	46.00	-10.26	QP
4	375.32	46.85	14.32	30.90	1.01	31.28	46.00	-14.72	QP
5	464.56	50.09	16.11	30.62	1.00	36.58	46.00	-9.42	QP
6	495.60	47.75	16.46	30.62	1.07	34.66	46.00	-11.34	QP

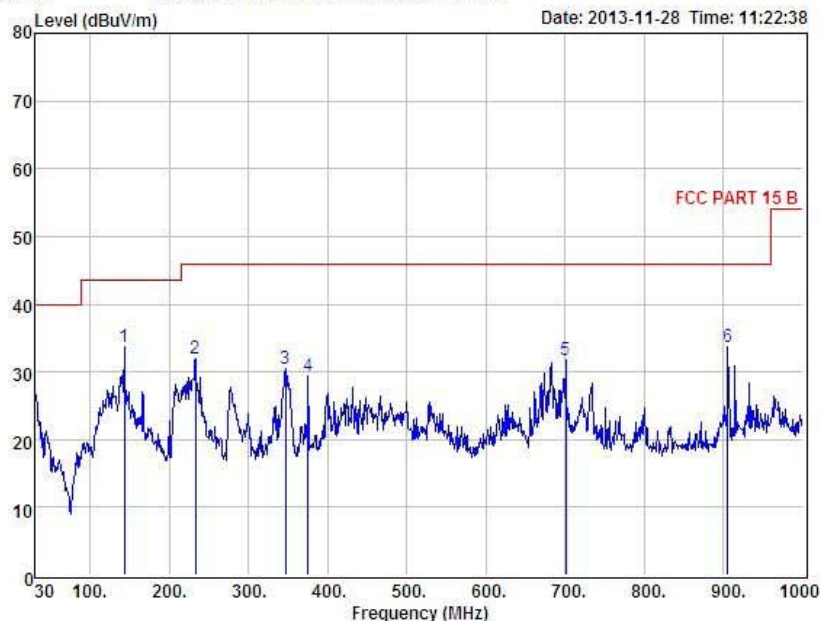
Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss



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Data: 12 File: E:\TEST DATA\TUTURY\设置.EM6 (47)

Date: 2013-11-28 Time: 11:22:38



Condition : FCC PART 15 B 3m POL: VERTICAL
EUT : 3D PAD
Model No : A6102
Test Mode : Link mode
Power : DC 5V From Adapter AC 120V/60Hz
Test Engineer : Simple
Remark :
Temp : 24
Hum : 56%

Item	Freq MHz	Read Level dBuV	Antenna Factor dB	Preamplifier Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	143.49	51.18	13.64	31.51	0.38	33.69	43.50	-9.81	QP
2	232.73	51.06	11.26	31.02	0.56	31.86	46.00	-14.14	QP
3	347.19	46.62	13.77	30.66	0.69	30.42	46.00	-15.58	QP
4	375.32	45.01	14.32	30.90	1.01	29.44	46.00	-16.56	QP
5	700.27	41.47	19.67	30.07	0.71	31.78	46.00	-14.22	QP
6	904.94	39.70	21.72	29.11	1.44	33.75	46.00	-12.25	QP

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

Radiated Emissions Result of Inside band (13.56MHZ)

EUT	3D PAD	Model Name	A6102
Temperature	26°C	Relative Humidity	58%
Pressure	960hPa	Test voltage	DC 5V From adapter with AC 120V/60Hz adapter
Test Mode	TX	Antenna polarization	X/Y/Z
Distance	3m		

Channel (13.56MHZ)									
Fre. MHz	Position X/Y/Z	Reading dBuV	Antenna Factor dB	Cable Loss dB	Amplifier Gain dB	Correct Factor dB	Measure Result dBuV/m	Limit dBuV/m	Margin dB
13.56	X	124.68 (PK)	10.6	0.33	24.65	-13.94	110.77	124	-13.23
13.56	X	112.97 (AV)	10.6	0.33	24.65	-13.94	99.06	104	-4.94
--	X	--	--	--	--	--	--	--	--
13.56	Y	113.52 (PK)	10.6	0.33	24.65	-13.94	99.61	124	-24.39
13.56	Y	101.19 (AV)	10.6	0.33	24.65	-13.94	87.28	104	-16.72
--	Y	--	--	--	--	--	--	--	--
13.56	Z	104.79 (PK)	10.6	0.33	24.65	-13.94	90.88	124	-33.12
13.56	Z	97.58(AV)	10.6	0.33	24.65	-13.94	83.67	104	-20.33
--	Z	--	--	--	--	--	--	--	--

Notes: --Means other frequency and mode comply with standard requirements and at least have 20dB margin.

Correct Factor=Cable Loss+ Antenna Factor- Amplifier Gain

Measurement Result=Reading + Correct Factor

Margin=Measurement Result-Limit

--Spectrum setting:

a. Peak setting RBW=10KHz, VBW=30KHz.

b. AV setting RBW=1MHz, VBW=10Hz.

4.5. Field strength

4.5.1. Limit

Please see the section 15.225(b) and 15.225(c)

15.225(b): Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter (50.5dBuV/m) at 30 meters

15.225(c): Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (40.5dBuV/m) at 30 meters

Note: 30m to 3m correction factor calculation:

$$40 * \log(30\text{m}/3\text{m}) = 40$$

4.5.2. Test Result:

EUT	3D PAD	Model Name	A6102
Temperature	26°C	Relative Humidity	56%
Pressure	960hPa	Test voltage	DC 5V From adapter with AC 120V/60Hz adapter
Test Mode	TX	Distance	3m

Freq. (MHz)	Position X/Y/Z	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
13.235	X	Peak	45.72	-13.94	31.78	80.50	-48.72
13.434	X	Peak	46.38	-13.94	32.44	90.50	-58.06
13.498	X	Peak	45.14	-13.94	31.20	90.50	-59.30
13.602	X	Peak	48.93	-13.93	35.00	90.50	-55.50
13.815	X	Peak	46.49	-13.93	32.56	80.50	-47.94
13.933	X	Peak	47.18	-13.93	33.25	80.50	-47.25

Freq. (MHz)	Position X/Y/Z	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
13.135	Y	Peak	45.79	-13.94	31.85	80.50	-48.65
13.341	Y	Peak	48.24	-13.94	34.30	80.50	-46.20
13.439	Y	Peak	46.32	-13.94	32.38	90.50	-58.12
13.516	Y	Peak	45.89	-13.94	31.95	90.50	-58.55
13.658	Y	Peak	46.71	-13.93	32.78	90.50	-57.72
13.813	Y	Peak	47.43	-13.93	33.50	80.50	-47.00

Freq. (MHz)	Position X/Y/Z	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limits 3m (dBuV/m)	Margin (dBuV/m)
13.201	Z	Peak	44.64	-13.94	30.70	80.50	-49.80
13.387	Z	Peak	46.53	-13.94	32.59	80.50	-47.91
13.436	Z	Peak	45.72	-13.94	31.78	90.50	-58.72
13.596	Z	Peak	46.89	-13.93	32.96	90.50	-57.54
13.722	Z	Peak	47.28	-13.93	33.35	80.50	-47.15
13.851	Z	Peak	45.74	-13.93	31.81	80.50	-48.69

5. Frequency stability

5.1. Test limit

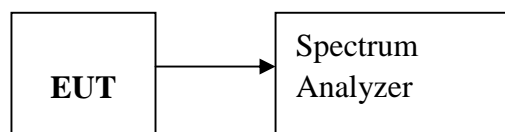
Please refer section 15.225e.

Regulation 15.225(e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (± 100 ppm) of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

5.2. Test Procedure

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3. Test Setup



5.4. Test Results

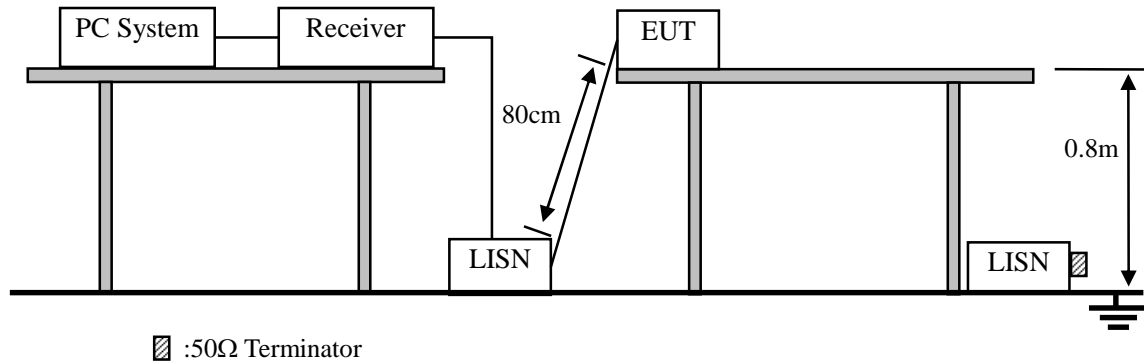
PASS.

Detailed information please see the following page.

Assigned Frequency(MHz): 13.56MHz				
Voltage: DC 5V				
Voltage	Temperature	Measured Frequency (MHz)	Frequency stability	Limit
Low 4.25V	+20°C	13.56072	0.00072	±100 ppm ±0.001356MHz
Normal 5V	-20°C	13.56069	0.00069	
	-10°C	13.55951	-0.00049	
	0°C	13.56042	0.00042	
	+10°C	13.55937	-0.00063	
	+20°C	13.56045	0.00045	
	+30°C	13.56061	0.00061	
	+40°C	13.55983	-0.00017	
	+50°C	13.55972	-0.00028	
High 5.75V	+20°C	13.56058	0.00058	

6. Power Line Conducted Emissions

6.1. Block Diagram of Test Setup



6.2. Limit

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

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

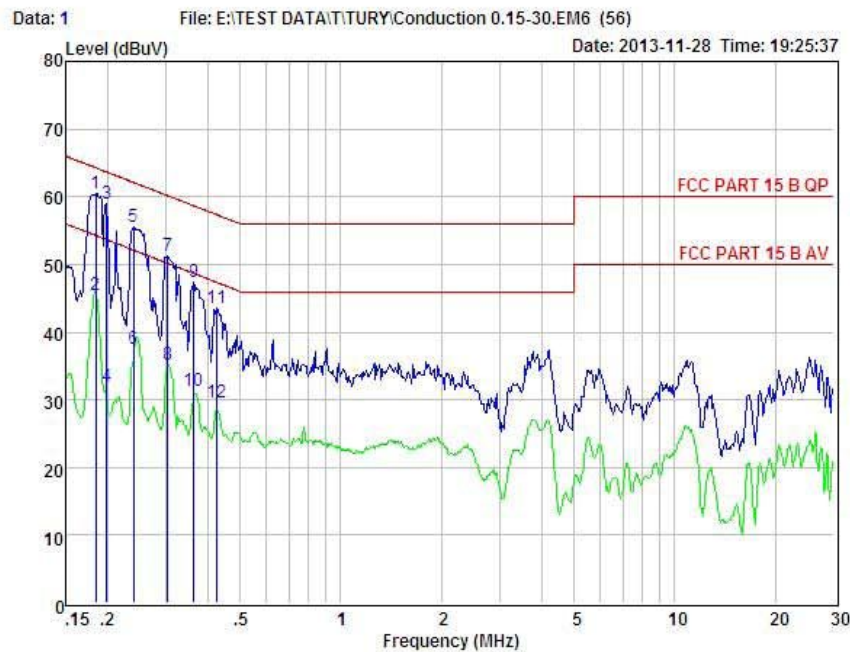
6.3. Test Procedure

- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
- (2) Setup the EUT and simulator as shown in 10.1
- (3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N1), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2009 and ANSI C64.10:2009 on conducted Emission test.
- (4) The bandwidth of test receiver is set at 10KHz.
- (5) The frequency range from 150 KHz to 30MHz is checked.

6.4. Test Result

PASS. (See below detailed test data)

Shenzhen Certification Technology Service Co., Ltd.
 2F, Building B, East Area of Nanchang Second Industrial Zone,
 Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
 Tel: 4006788199 Fax: +86-755-26736857
 Website: <http://www.cessz.com> Email: Service@cessz.com



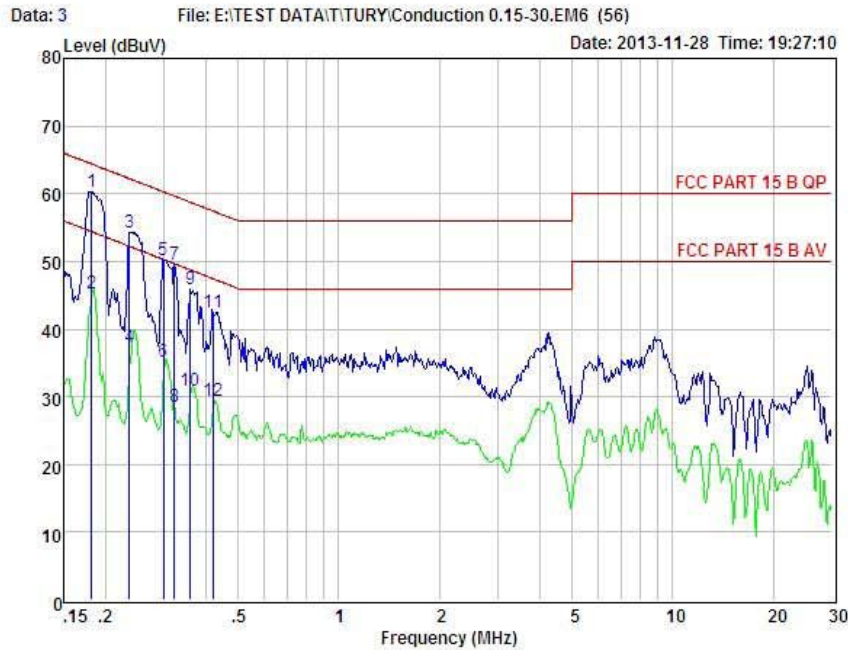
Condition : FCC PART 15 B QP POL: NEUTRAL Temp:24 °C Hum:56 %
 EUT : 3D PAD
 Model No : A6102
 Test Mode : Link mode
 Power : DC 5V From Adapter AC 120V/60Hz
 Test Engineer: Simple
 Remark :

Item	Freq MHz	Read dBuV	LISN Factor dB	Preamp Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	0.184	50.54	0.03	-9.72	0.10	60.39	64.28	-3.89	QP
2	0.184	35.54	0.03	-9.72	0.10	45.39	54.28	-8.89	Average
3	0.199	49.11	0.03	-9.72	0.10	58.96	63.67	-4.71	QP
4	0.199	22.11	0.03	-9.72	0.10	31.96	53.67	-21.71	Average
5	0.239	45.63	0.03	-9.72	0.10	55.48	62.13	-6.65	QP
6	0.239	27.63	0.03	-9.72	0.10	37.48	52.13	-14.65	Average
7	0.303	41.32	0.03	-9.72	0.10	51.17	60.15	-8.98	QP
8	0.303	25.32	0.03	-9.72	0.10	35.17	50.15	-14.98	Average
9	0.363	37.56	0.03	-9.72	0.10	47.41	58.65	-11.24	QP
10	0.363	21.56	0.03	-9.72	0.10	31.41	48.65	-17.24	Average
11	0.426	33.76	0.03	-9.72	0.10	43.61	57.33	-13.72	QP
12	0.426	19.76	0.03	-9.72	0.10	29.61	47.33	-17.72	Average

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss



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 Website: <http://www.cessz.com> Email: Service@cessz.com



Condition : FCC PART 15 B QP POL: LINE Temp:24 °C Hum:56 %
 EUT : 3D PAD
 Model No : A6102
 Test Mode : Link mode
 Power : DC 5V From Adapter AC 120V/60Hz
 Test Engineer: Simple
 Remark :

Item	Freq MHz	Read dBuV	LISN Factor dB	Preamplifier Factor dB	Cable Loss dB	Level dBuV	Limit dBuV	Margin dBuV	Remark
1	0.152	50.50	0.03	-9.72	0.10	60.35	64.42	-4.07	QP
2	0.182	35.50	0.03	-9.72	0.10	45.35	54.42	-9.07	Average
3	0.237	44.47	0.03	-9.72	0.10	54.32	62.22	-7.90	QP
4	0.237	27.47	0.03	-9.72	0.10	37.32	52.22	-14.90	Average
5	0.299	40.42	0.03	-9.72	0.10	50.27	60.28	-10.01	QP
6	0.299	25.42	0.03	-9.72	0.10	35.27	50.28	-15.01	Average
7	0.322	39.72	0.03	-9.72	0.10	49.57	59.66	-10.09	QP
8	0.322	18.72	0.03	-9.72	0.10	28.57	49.66	-21.09	Average
9	0.360	36.02	0.03	-9.72	0.10	45.87	58.74	-12.87	QP
10	0.360	21.02	0.03	-9.72	0.10	30.87	48.74	-17.87	Average
11	0.419	32.58	0.03	-9.72	0.10	42.43	57.46	-15.03	QP
12	0.419	19.58	0.03	-9.72	0.10	29.43	47.46	-18.03	Average

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

7. Antenna Requirements

7.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.209, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

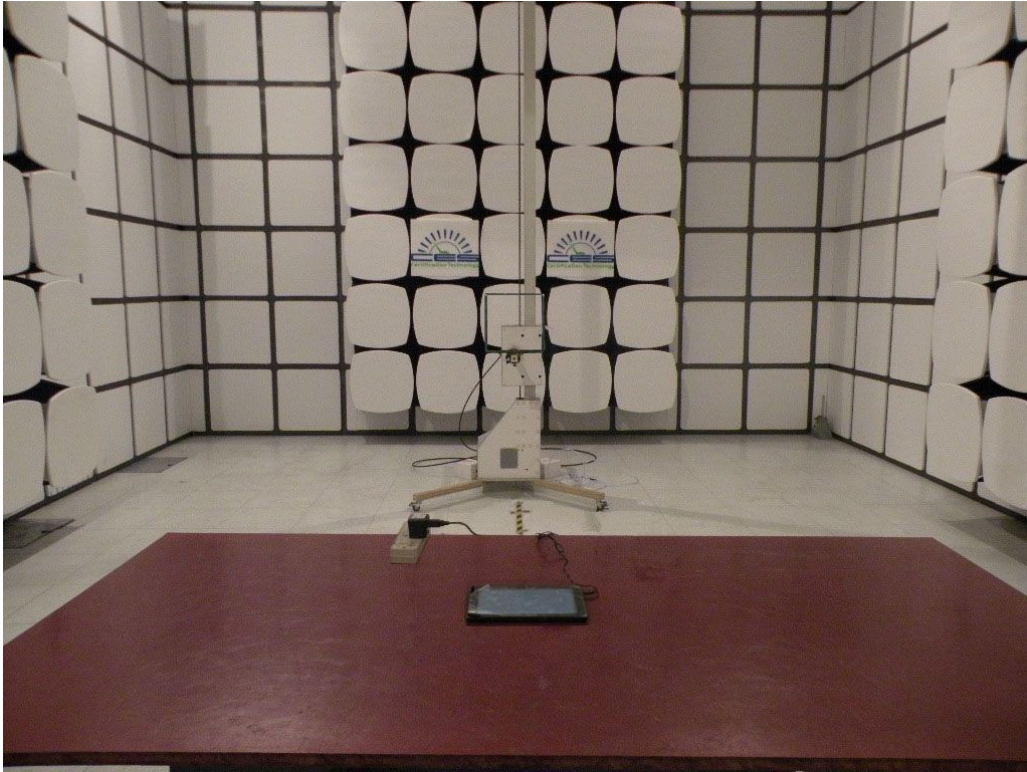
7.2. Result

The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.

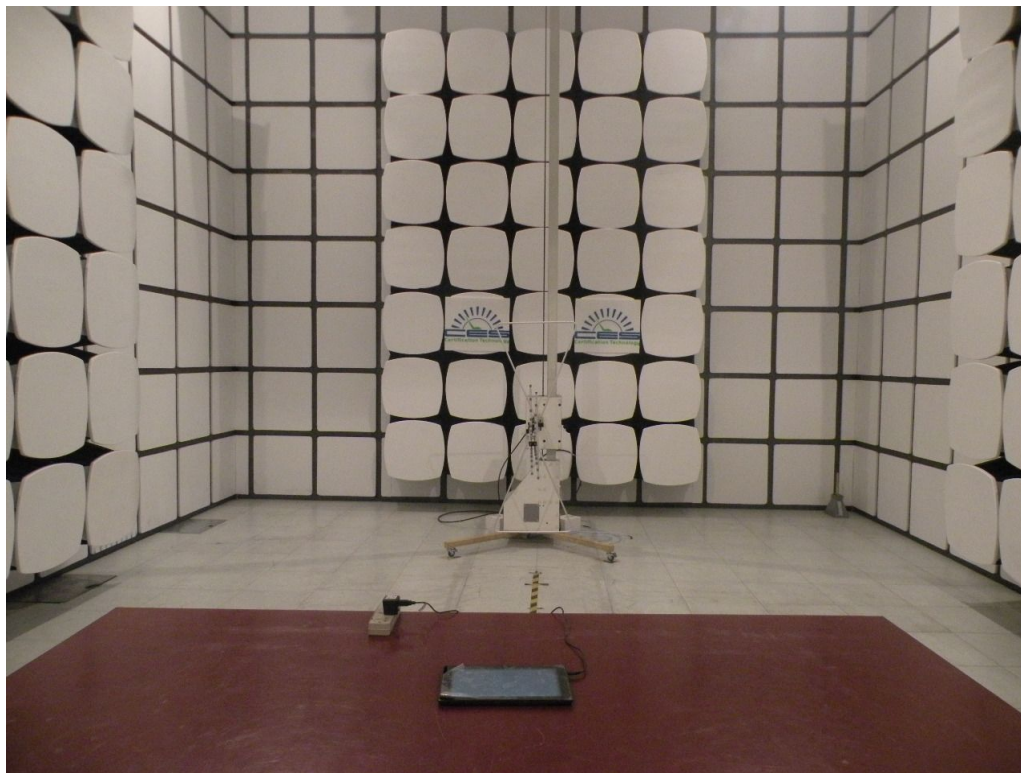
8. Test setup photo

Photographs-Radiated Emission Test Setup in Chamber

Below 30M



Below 30M-1G



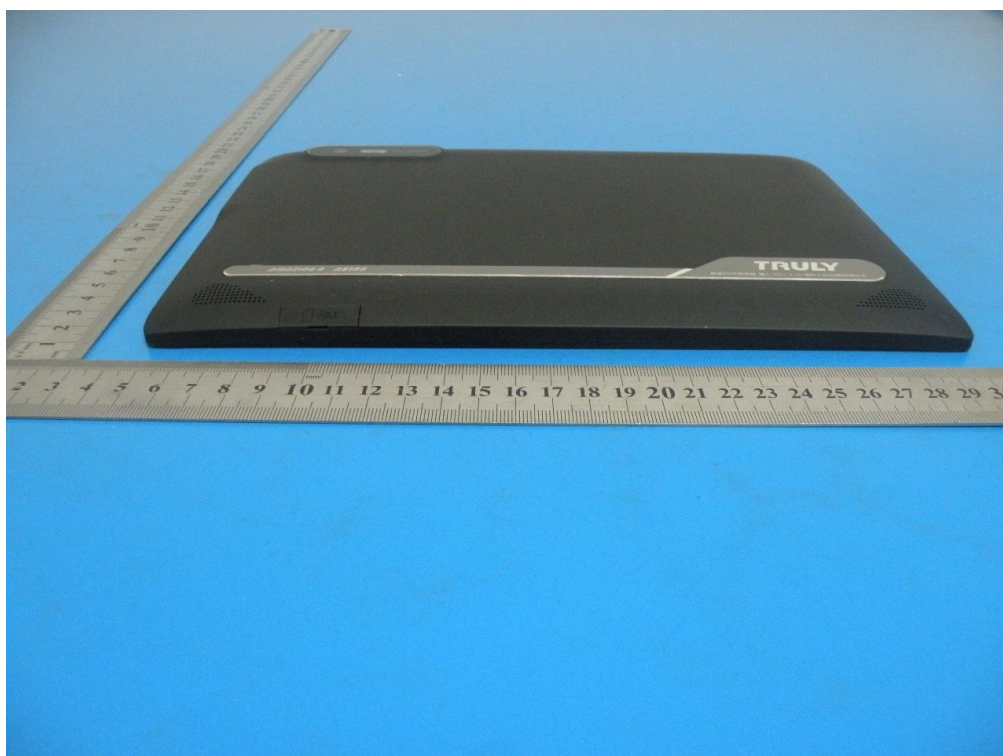
Photographs-Conducted Emission Test Setup

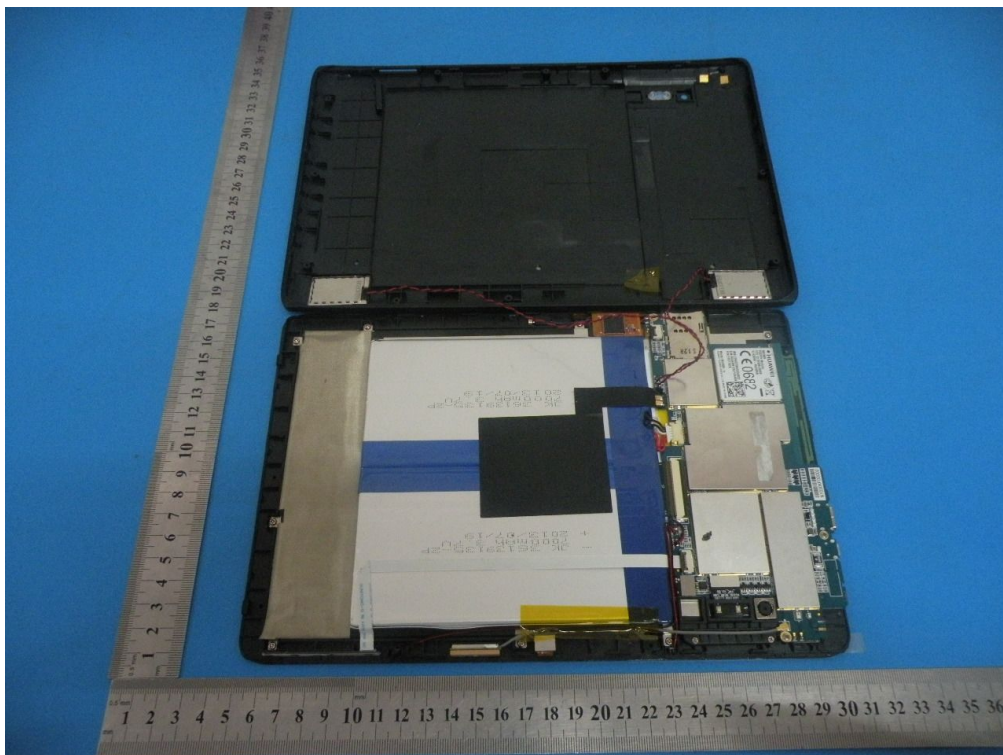
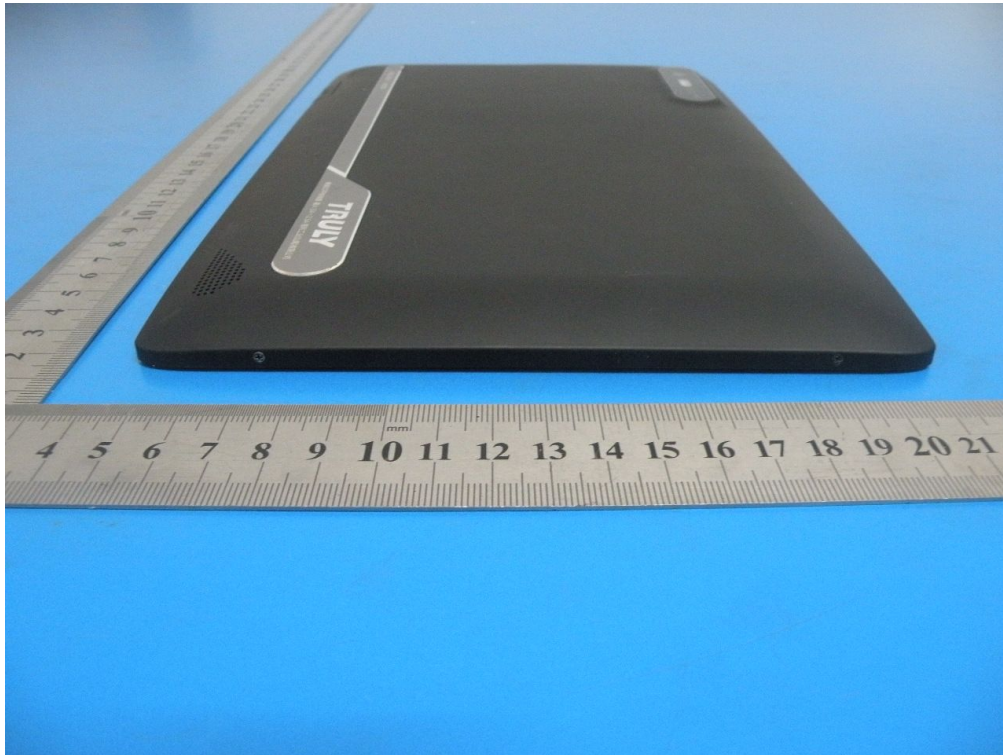


9. Photos of EUT

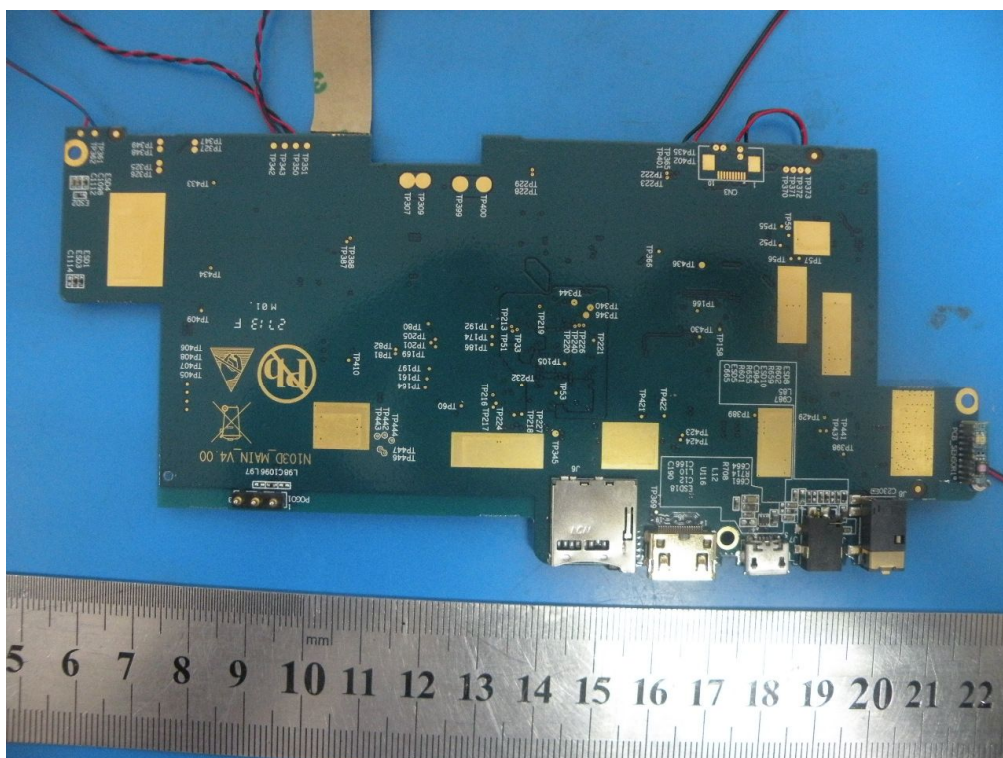
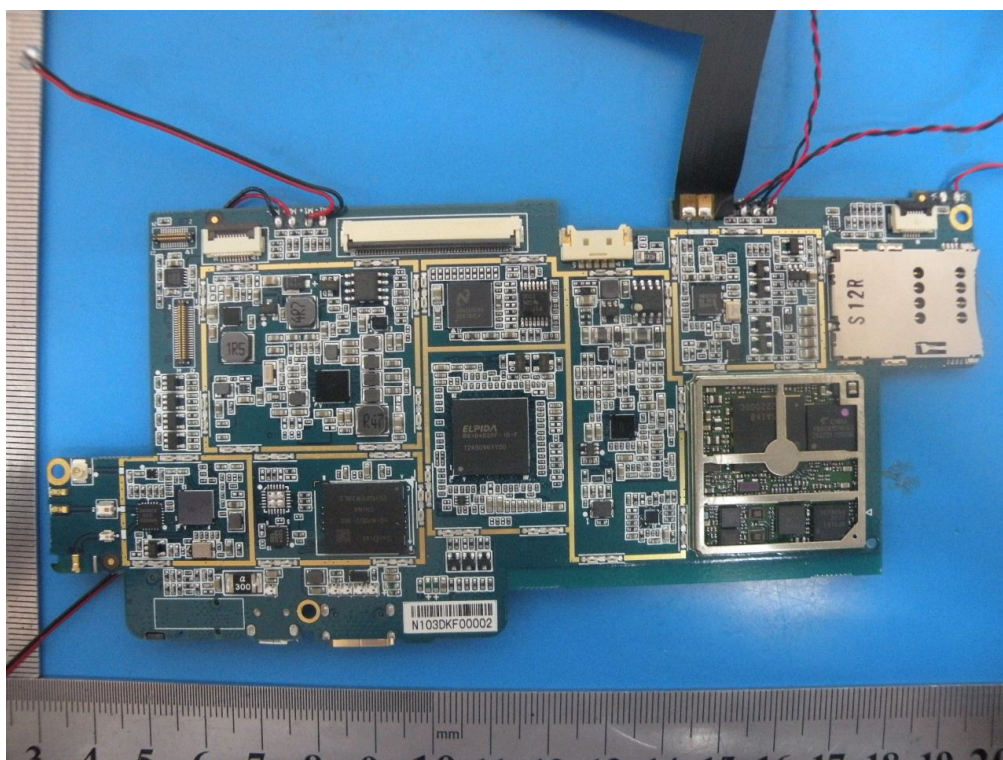


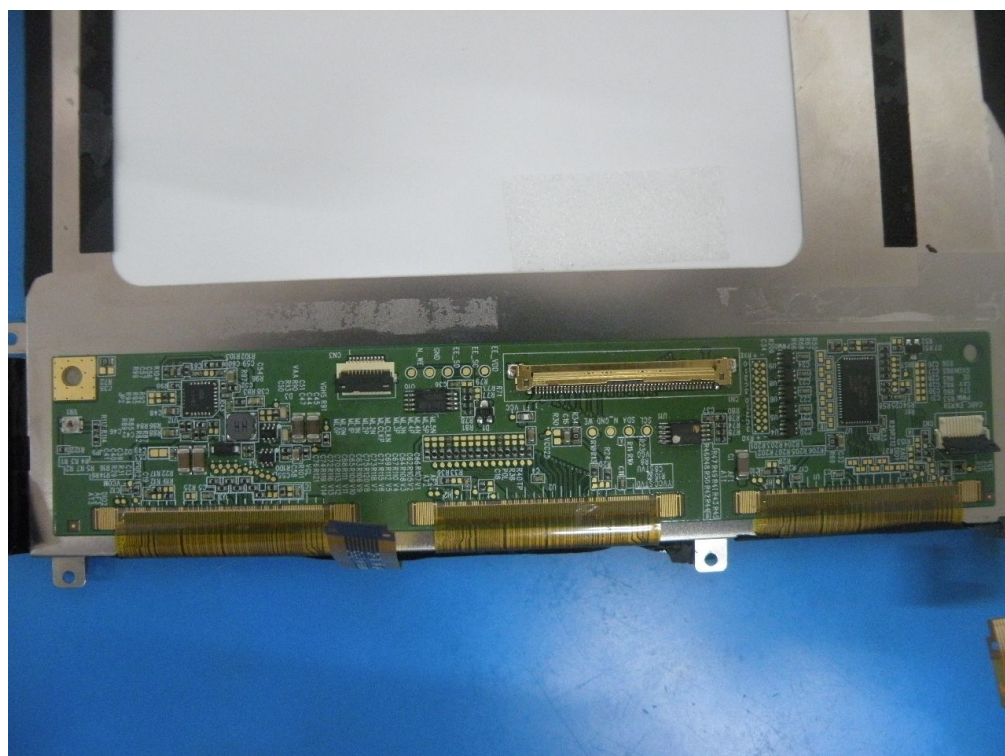
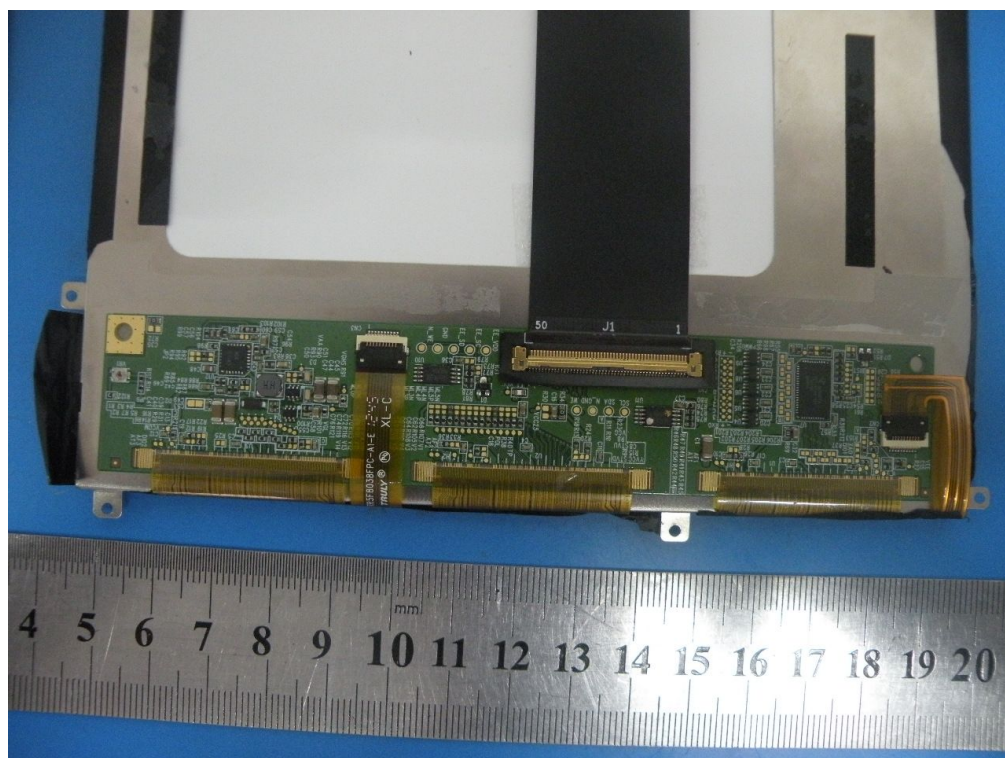














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