

1-4F, Huafeng Science Park, Xin'an Sixth Road, 82<sup>th</sup> District, Bao'an,

Shenzhen, China.

Telephone: +86-755-29451282, Fax: +86-755-22639141

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# **TEST REPORT**

**Applicant:** Shenzhen Firstview Electronic Co. Ltd.

**Address of Applicant:** 3-4/F, Block B, Huafeng 1st Technology Zone Baoan Main

Road, Baoan District, Shenzhen, China

**Equipment Under Test (EUT)** 

Product Name: 8 inch Tablet PC

Model No.: VTA0801, VTA0801S, VTA0801E, M845

FCC ID: YW5VTA0801

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart B:2013

Date of sample receipt: November 5, 2014

Date of Test: November 5, 2014 To November 19, 2014

Date of report issue: November 19, 2014

Test Result: PASS \*

Authorized Signature:

Kevin Yu Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the EBO product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. 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 EBO International Electrical Approvals or testing done by EBO International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by EBO International Electrical Approvals in writing.

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<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



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### 2 Version

Version No.	Date	Description
00	November 19, 2014	Original

Prepared By:	Jason	Date:	November 19, 2014
	Project Engineer		
Check By:	Coury	Date:	November 19, 2014
	Poviowor		



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### 4 Test Summary

Test Item	Section in CFR 47	Result	
Conducted Emission	Part15.107 PASS		
Radiated Emissions	Part15.109	PASS	

PASS: The EUT complies with the essential requirements in the standard.



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### 5 General Information

### 5.1 Client Information

Applicant:	Shenzhen Firstview Electronic Co. Ltd.				
Address of Applicant:	3-4/F, Block B, Huafeng 1st Technology Zone Baoan Main Road,				
	Baoan District, Shenzhen, China				
Manufacturer:	Shenzhen Firstview Electronic Co., Ltd.				
Address of Manufacturer:	F3-6, Block B, Huafeng 1st Technology Zone, Baoan Main Road,				
	Baoan District, Shenzhen, P.R.China				

### 5.2 General Description of EUT

Product Name:	8 inch Tablet PC
Model No.:	VTA0801, VTA0801S, VTA0801E, M845
Test Model No.:	VTA0801
Power supply:	Input: DC 5V, 2000mA from adapter
	Or
	DC 3.7V, 4000mAh Li-ion Battery

### 5.3 Test mode

Test mode:	
REC mode	Keep the EUT in REC mode
TF Card playing mode	Keep the EUT in TF Card playing mode
PC mode	Keep the EUT in data exchanging with PC mode
Test voltage:	
AC 120V/60Hz	



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### 5.4 Test Facility

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

#### • CNAS —Registration No.: CNAS L5775

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

### • FCC —Registration No.: 600491

Global United Technology Services Co., Ltd., Shenzhen 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 files. Registration 600491, July 20, 2010.

#### Industry Canada (IC)

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A-2, June 26, 2013.

### 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China



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### 5.6 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC Approval
HP	Printer	CB495A	05257893	DoC
Apple	PC	A1278	C1MN99ERDTY3	DoC

#### 5.7 Deviation from Standards

Biconical, log.per. antenna and horn antenna were used instead of dipole antenna. Semi-anechoic Chamber was used as alternation of open air test sites, and all test suites were performed with radiated method in it.

#### 5.8 Abnormalities from Standard Conditions

None.

### 5.9 Other Information Requested by the Customer

None



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### 6 Test Instruments list

Radia	Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.0(L)*6.0(W)* 6.0(H)	GTS250	Mar. 29 2014	Mar. 28 2015	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	ESU EMI Test Receiver	R&S	ESU26	GTS203	July 01 2014	June 30 2015	
4	BiConiLog Antenna	SCHWARZBECK	VULB9163	GTS214	July 01 2014	June 30 2015	
5	Double -ridged waveguide horn	SCHWARZBECK	9120D	GTS208	June 27 2014	June 26 2015	
6	RF Amplifier	HP	8347A	GTS204	July 01 2014	June 30 2015	
7	Preamplifier	HP	8349B	GTS206	July 01 2014	June 30 2015	
8	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
9	Coaxial cable	GTS	N/A	GTS210	Mar. 29 2014	Mar. 28 2015	
10	Coaxial Cable	GTS	N/A	GTS211	Mar. 29 2014	Mar. 28 2015	
11	Thermo meter	N/A	N/A	GTS256	Mar. 29 2014	Mar. 28 2015	

Con	Conducted Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Shielding Room	ZhongYu Electron	7.0(L)x3.0(W)x3.0(H)	GTS264	July 01 2014	June 30 2015	
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	July 01 2014	June 30 2015	
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	July 01 2014	June 30 2015	
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July 01 2014	June 30 2015	
5	LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	GTS226	July 01 2014	June 30 2015	
6	Coaxial Cable	GTS	N/A	GTS227	July 01 2014	June 30 2015	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	



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Gen	General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Barometer	ChangChun	DYM3	GTS257	July 08 2014	July 07 2015	



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# 7 Test Results and Measurement Data

#### 7.1 Conducted Emissions

Test Requirement:	FCC Part15 B Section 15.107				
Test Method:	ANSI C63.4:2003				
Test Frequency Range:	150KHz to 30MHz				
Class / Severity:	Class B				
Receiver setup:	RBW=9KHz, VBW=30KHz, Sv	weep time=auto			
Limit:	Fraguency range (MHz)	Limit (c	lBuV)		
	Frequency range (MHz)  Quasi-peak  Avera				
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
Test setup:	* Decreases with the logarithm  Reference Plane	of the frequency.			
Today	LISN  40cm 80cm Filter AC power  Equipment  Test table/Insulation plane  Remark: EUT: Equipment Under Test LISN Line Impedence Stabilization Network Test table height=0.8m				
Test procedure:	<ol> <li>The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.</li> </ol>				
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.3 for details. All of the mode were tested and found the "PC mode" is the worst case. Only the data of worst case was reported.				
Test results:	Pass				

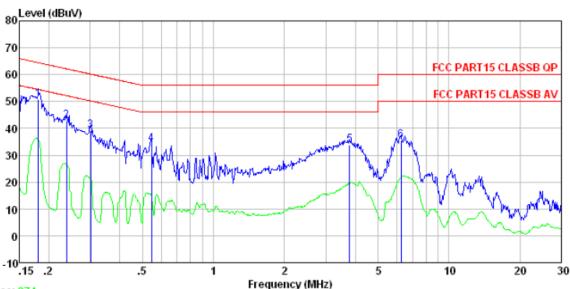


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#### **Measurement Data**

Test mode: PC mode	LINE	
--------------------	------	--



Trace: 274

: Shielded room

Site Condition : FCC PART15 CLASSB QP LISN-2013 LINE Test Engineer: Mike

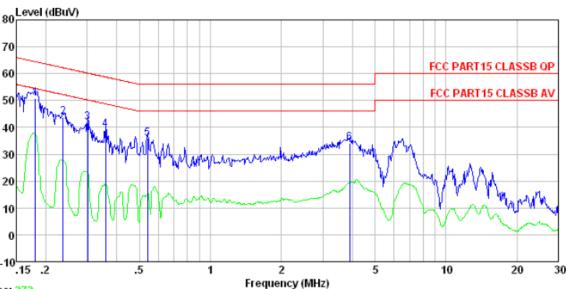
	Freq	Read	LISN Factor				Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1 2 3 4 5 6	0.302 0.546	39. 04 34. 05 33. 49	0.12 0.11 0.13 0.19	0.10 0.11 0.15	42. 96 39. 25 34. 29	62.17 60.19 56.00 56.00	-20. 94 -21. 71 -22. 17	QP QP QP QP



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Trace: 272

Site : Shielded room

Condition : FCC PART15 CLASSB QP LISN-2013 NEUTRAL

Test Engineer: Mike

	Freq		LISN Factor					Remark
	MHz	dBu∜	dB	dB	dBuV	dBuV	dB	
1 2 3 4 5 6	0. 237 0. 302 0. 360	41.54 38.91 35.51	0. 06 0. 06 0. 06 0. 07	0.10 0.10	43.84 41.70 39.07 35.69	62. 22 60. 19 58. 74 56. 00	-18.38 -18.49 -19.67 -20.31	QP QP QP QP

#### Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss
- 4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.



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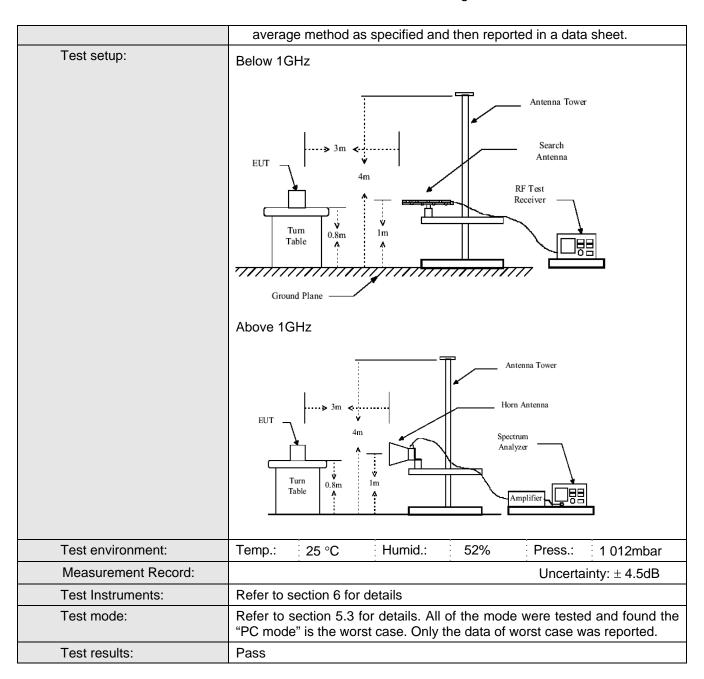
### 7.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109						
Test Method:	ANSI C63.4:2003						
Test Frequency Range:	30MHz to 6GHz						
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)						
Receiver setup:							
-	Frequency	Detector	RBW	VBW	Remark		
	30MHz- 1GHz	Quasi-peal	k 120kHz	300kHz	Quasi-peak Value		
	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
	7.0010 10112	Peak	1MHz	10Hz	Average Value		
Limit:					T		
	Freque	ency	Limit (dBuV	/m @3m)	Remark		
	30MHz-8	88MHz	40.0	00	Quasi-peak Value		
	88MHz-2	16MHz	43.5	50	Quasi-peak Value		
	216MHz-9	60MHz	46.0	00	Quasi-peak Value		
	960MHz-	-1GHz	54.0	00	Quasi-peak Value		
	Above 1	ICH <del>z</del>	54.0	00	Average Value		
	Above	IGHZ	74.0	00	Peak Value		
Test Procedure:	ground at a 3	3 meter camb e position of	er. The table the highest ra	was rotated diation.	0.8 meters above the I 360 degrees to		
					ble-height antenna		
	ground to de	termine the need to the desired the desire	naximum valu	e of the field	r meters above the d strength. Both are set to make the		
	4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.						
	5. The test-rece Bandwidth w			ak Detect F	unction and Specified		
	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or						



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#### Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



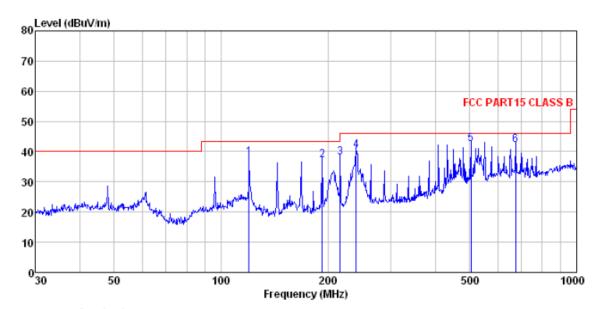
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#### **Measurement Data**

Below 1GHz

Test mode: PC mode	Ant Pol. Horizontal
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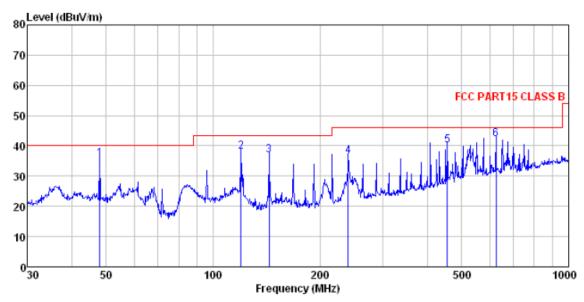
3m chamber
FCC PART15 CLASS B 3m VULB9163-2013M HORIZONTAL
ReadAntenna Cable Preamp Limit Ove Site Condition Over Freq Level Limit Remark Loss Factor Level Factor MHz dBu₹ dB/m ₫Ē dB dBuV/m dBuV/m ₫B 119.856 55.99 12.48 1.36 31.86 37.97 43.50 -5.53 QP 2 192.419 54.9912.56 1.80 32.12 37.23 43.50 -6.27 QP 216.024 55.34 13.07 1.93 32.15 38.19 46.00 -7.81 QP 4 239.987 56.52 14.09 2.07 32.16 40.52 46.00 -5.48 QP 504.706 5 51.97 18.68 3.33 31.53 42.45 46.00 -3.55 QP 20.72 3.99 31.15 42.22 672.845 48.66 46.00



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Test mode: PC mode Ant Pol. Vertica
-------------------------------------



Site : 3m chamber FCC PART15 CLASS B 3m VULB9163-2013M VERTICAL ReadAntenna Cable Preamp Limit O Condition Over Freq Level Factor Loss Factor Level Line Limit Remark MHz dBu∀ dB/m ₫B dB dBuV/m dBuV/m ₫B 47.994 31.98 51.53 15.36 0.75 35.66 40.00 -4.34 QP 31.86 2 119.856 56.11 12.48 1.36 38.09 43.50 -5.41 QP 43.50 3 143.830 10.22 1.53 31.96 36.99 -6.51 QP 57.20 2.07 32.16 14.09 -9.40 QP 4 239.987 36.60 52.60 46.00455.906 17.58 -5.85 QP 5 51.16 31.70 40.15 46.00 -3.92 QP 625.078 48.80 20.54 3.82 31.08 42.08 46.00

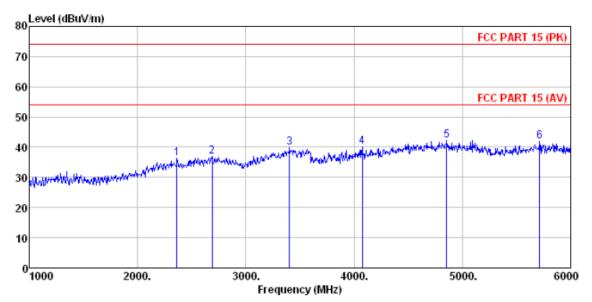


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#### Above 1GHz

Test mode: PC mode	Ant Pol. Horizontal
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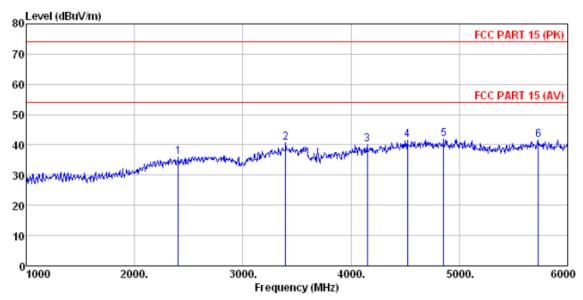
Site Condi	tion :	Read	RT 15 (F Antenna	Cable	Preamp		Limit	Over	TAL Remark
	Freq	rever	Factor	LOSS	Factor	rever	Line	Limit	Remark
	MHz	dBu∜	<u>dB</u> /m	dB	dB	dBuV/m	dBuV/m	<u>d</u> B	
1	2365,000	37.34	27.67	5.36	34.05	36.32	74.00	-37.68	Peak
2	2690,000	36.71	28. 12	5.66		36.81		-37.19	
3	3405,000	37. 18	28.64	6.78	32.87	39.73		-34.27	
4	4075.000	34.47	29.83	7.94	32.09	40.15		-33.85	
5	4855.000	33.95	31.83	8.64	32.11	42.31	74.00	-31.69	Peak
6	5715.000	31.92	32.50	9.81	32.30	41.93	74.00	-32.07	Peak



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Test mode: PC mode Ant Pol. Vertica
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Site : 3m chamber FCC PART 15 (PK) ReadAntenna C () 3m BBHA9120D ANT(>1GHZ) VERTICAL Cable Preamp Limit Over Condition Level Factor Loss Factor Level Line Limit Remark ₫B MHz dBu∀ dB/m dB dBuV/m dBuV/m ₫B 2405.000 33.99 37.17 27.57 5.40 36.15 74.00 -37.85 Peak 32.87 32.01 2 3395.000 38.10 28.60 6.76 40.59 74.00 -33.41 Peak 3 4150.000 30.06 8.01 40.11 74.00 -33.89 Peak 34.05 31.95 4 5 74.00 -32.26 Peak 8.36 33.96 31.37 41.744520.000 74.00 -32.09 Peak 8.64 33.55 4855.000 31.83 32.11 41.91 74.00 -32.31 Peak 5730.000 31.62 32.53 9.83 32.29 41.69



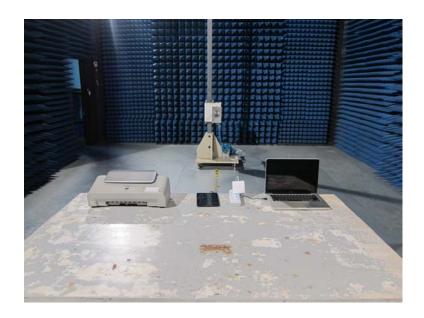
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# 8 Test Setup Photo

Radiated Emission







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#### Conducted Emission





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# 9 EUT Constructional Details

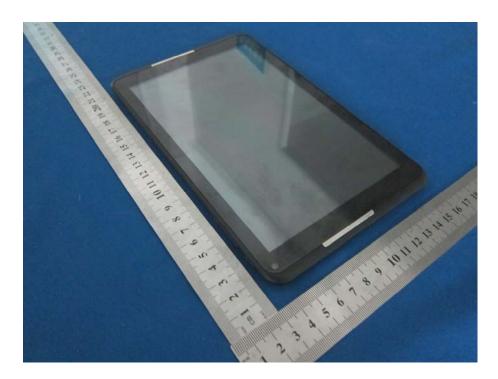






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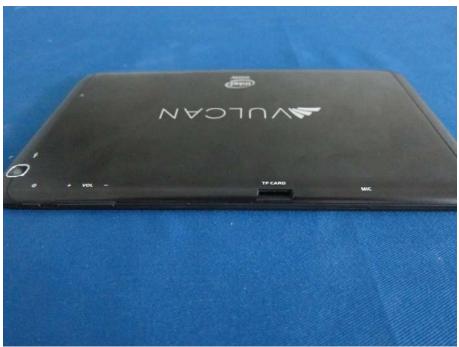




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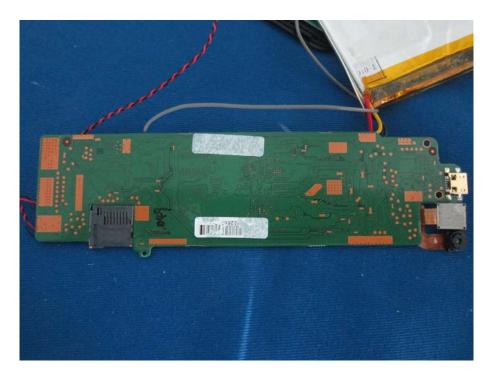






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