




Report No. STR15068010S-1

<b>TEST REPORT</b> <b>EN 60950-22</b> <b>Information technology equipment</b> <b>Safety – Part 22: Equipment to be installed outdoors</b>		
Report Reference No. .... STR15068010S-1		
Tested by (+ signature) ..... Niki Xie		<i>Niki Xie</i>
Compiled by (+ signature) ..... Eric Pan		<i>Eric Pan</i>
Approved by (+ signature) ..... Ailis Ma		<i>Ailis Ma</i>
Date of issue ..... June 25, 2015		
Total number of pages ..... 22 pages		
Testing laboratory ..... Shenzhen SEM.Test Technology Co., Ltd.		
Address ..... 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101)		
Testing location ..... As above		
Applicant's name ..... ZTE Corporation		
Address ..... ZTE Plaza, Keji Road South, High-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China		
<b>Test specification:</b>		
Standard ..... EN 60 950-22 : 2006+A11: 2008		
Test procedure ..... CE Attestation		
Non-standard test method ..... N/A		
Test Report Form No. .... EN 60950_22A		
Test Report Form(s) Originator ..... SEM. test		
Master TRF ..... Dated 2007-03		
<b>This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of SEM.Test.</b>		
Tel: +86-755-33663308      Fax: +86-755-33663309 <a href="http://www.semtest.com.cn">http://www.semtest.com.cn</a>		
Test item description ..... LTE Outdoor CPE		
Trade Mark ..... AirMaster		
Manufacturer ..... KZ BroadBand Technologies Co., Ltd. 1601 Tower C, Skyworth Building, High-Tech Industrial Park, Nanshan District, Shenzhen, China		
Model/Type reference ..... AirMaster 4000V, WF820, WF820+, WF820_V8, ZTE WF820, ZTE WF820+, ZTEWF820_V8		
Ratings ..... 24V $\overline{\text{---}}$ , 0.75A		

<b>Summary of testing:</b>	
<b>Tests performed (name of test and test clause):</b>  - EN 60950-22: 2006+A11: 2008  The submitted samples were found to comply with the requirements of above specification.	<b>Testing location:</b> 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101)
<b>Copy of marking plate</b> 	
<b>Note:</b> ---The heights of graphical symbols aren't less than 5 mm. ---The heights of letters and numerals either shown separately or with or as part of symbols aren't less than 2 mm.	

<b>Test item particulars</b> .....	
Temperature range .....	-20~55℃
Overvoltage category .....	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
IP protection class .....	IP54
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object .....	N/A
- test object does meet the requirement .....	P (Pass)
- test object does not meet the requirement .....	F (Fail)
<b>Testing</b> .....	
Date of receipt of test item .....	June 1, 2015
Date (s) of performance of tests .....	June 1, 2015 – June 15, 2016
<b>General remarks:</b>	

The test results presented in this report relate only to the object tested.  
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.  
"(see Enclosure #)" refers to additional information appended to the report.  
"(see appended table)" refers to a table appended to the report.

Throughout this report a comma (point) is used as the decimal separator.

**This Test Report Form is intended for the investigation of safety of equipment to be installed outdoors in accordance with EN 60950-22. It can only be used together with the EN 60950-1 requirements.**

**General product information:**

- The EUT is the LTE Outdoor CPE with approved switching power supply, the unit for outdoor use;
- The LTE Outdoor CPE has an adapter with the model XY018-240075D, and the adapter had passed the CE tests of the standard EN 60950-1:2006+A11:2009+A1:2010+A12:2011;
- The electronic data of the adapter as below:  
Input: 100-240V~ 50-60Hz, 0.5A Max  
Output: 24.0V==, 0.75A
- This report includes the model AirMaster 4000V, WF820, WF820+, WF820\_V8, ZTE WF820, ZTE WF820+, ZTEWF820\_V8All the tests on the model AirMaster 4000V.
- Max. specified operating temperature is 55°C.

**Attachment No. 1: Photos of EUT**

4	CONDITIONS FOR OUTDOOR EQUIPMENT		P
4.1	Ambient air temperature		P
	Suitability for use at any temperature in the range specified by the manufacturer. If not specified by the manufacturer, the range is taken as -33°C to +40°C	Specified by the manufacturer. -20°C to +55°C	P
4.2	AC mains supply		N/A
	Suitability for the highest Overvoltage Category expected in the installation location	Powered by switching power supply.	N/A
	Components used to reduce the Overvoltage Category comply with IEC 61643-series		N/A
	Reference to installation instructions .....		N/A
4.3	Rise of earth potential		N/A
	Special earthing conditions		N/A
	Reference to installation instructions .....		N/A
5	MARKING AND INSTRUCTIONS		P
	Special installation features for protection from conditions in the OUTDOOR LOCATION (see 1.7.2 of IEC 60950-1)		P
	OUTDOOR ENCLOSURE classification according to IEC 60529 (IP Code)	IP54	P
6	PROTECTION FROM ELECTRICAL SHOCK IN AN OUTDOOR LOCATION		P
6.1	Voltage limits of user-accessible parts in OUTDOOR LOCATIONS (2.2.2 and 2.2.3 of IEC 60950-1 with voltage limits of IEC60950-22)		P
	Voltages under normal conditions (V) .....	The unit by 24V dc powered	P
	Voltages under fault conditions (V).....		P
6.2	Limited current circuits in outdoor locations		N/A
	The requirements of 2.4 of IEC60950-1 apply without change		N/A
7	WIRING TERMINALS FOR CONNECTION OF EXTERNAL CONDUCTORS		N/A
	The mains supply terminations powered via the normal building installation wiring are as specified in 3.3 of IEC 60950-1		N/A
	The mains supply terminations powered directly from the mains distribution system are as specified in IEC 60364		N/A
8	CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES		P
8.1	General		P

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	Protection against corrosion by use of suitable materials or by application of a protective coating		N/A
	Parts serving as a functional part of an OUTDOOR ENCLOSURE (e.g., dials, connectors, etc.) comply with the same environmental protection requirements as for the OUTDOOR ENCLOSURE	Connectors and lower part of cooling plate.	P
	Use of OUTDOOR ENCLOSURE to carry current during normal operation		N/A
	Connection of a conductive part of an OUTDOOR ENCLOSURE to protective earth for carrying fault currents (see 2.6 of IEC 60950-1 and 8.3 of this standard)	(see separate test report IEC 60950-1 and 8.3 of this report)	P
8.2	Resistance to ultra-violet radiation		P
	Resistance of non-metallic parts of an OUTDOOR ENCLOSURE to degradation by ultra-violet (UV) radiation	UV protected material used.	P
	Parts providing mechanical support:		N/A
	Tensile strength test (ISO 527)	(see appended table 8.2a)	N/A
	Flexural strength test (ISO 178)	(see appended table 8.2b)	N/A
	Parts providing impact resistance:		N/A
	Charpy impact test (ISO 179)	(see appended tables 8.2c and 8.2.d)	N/A
	Izod impact test (ISO 180)	(see appended tables 8.2e and 8.2.f)	N/A
	Tensile impact test (ISO 8256)	(see appended tables 8.2g and 8.2.h)	N/A
	All parts:		N/A
	Flammability classification (1.2.12 and annex A of IEC 60950-1)	(see separate test report IEC 60950-1)	N/A
8.3	Resistance to corrosion		N/A
8.3.1	General		N/A
	Resistance of metallic parts of an OUTDOOR ENCLOSURE to the effects of water-borne contaminants		N/A
	Alternate method for 8.3.2-8.3.4 (IEC 61587-1)		N/A
8.3.2	Test apparatus		N/A
	Salt-spray test (IEC 60068-2-11)		N/A
	Test in a water-saturated sulphur dioxide atmosphere (water-saturated sulphur dioxide atmosphere as described in Annex A; chamber as described in ISO 3231)		N/A
8.3.3	Test procedure		N/A

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8.3.4	Compliance criteria		N/A
8.4	Bottoms of FIRE ENCLOSURES		P
	Comply with 4.6.2 of IEC 60950-1		P
	Bottom of FIRE ENCLOSURE of OUTDOOR EQUIPMENT mounted directly and permanently on a non-combustible surface (e.g., concrete or metal)		N/A
8.5	Gaskets		P
	If gaskets are used as the method for protection against the ingress of potential contaminants, requirements of 8.5.1 through 8.5.3 apply		P
8.5.1	General		N/A
8.5.2	Oil resistance	There is no oil or coolant	N/A
8.5.3	Securing means		N/A
9	PROTECTION OF EQUIPMENT WITHIN AN OUTDOOR ENCLOSURE		P
9.1	Protection from moisture	IP54	P
9.2	Protection from plants and vermin		P
9.3	Protection from excessive dust	IP54	P
10	MECHANICAL STRENGTH OF ENCLOSURES		P
10.1	General	See IEC 60950-1 test report	P
10.2	Impact test (4.2.5 of IEC 60950-1)		P
	Compliance criteria:		P
	- after test the level of protection remains in accordance with 9.1 of this standard		P
	- after test the requirements of 4.2.1 of IEC 60950-1 are met		P
11	OUTDOOR EQUIPMENT CONTAINING VENTED BATTERIES		N/A
	Adequate ventilation in the compartment housing a vented battery, where gassing is possible during normal usage or over-charging	No such compartments.	N/A
	Protection against the risk of ignition of local concentrations of hydrogen and oxygen in a compartment containing both a battery and electrical components		N/A
	Hydrogen gas concentration measurement test		N/A
	Measured hydrogen gas concentration (% by volume) .....		—

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	Max. allowed gas concentration for the mixture location in proximity to an ignition source (% by volume) .....	≤ 1% by volume	—
	Max. allowed gas concentration for the mixture location not in proximity to an ignition source (% by volume) .....	≤ 2% by volume	—
	Overcharging of rechargeable battery (see 4.3.8 of IEC 60950-1)	(see separate test report IEC 60950-1)	N/A

A	ANNEX A, WATER-SATURATED SULPHUR DIOXIDE ATMOSPHERE (see 8.3.2 and 8.3.3)	N/A
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B	ANNEX B, WATER SPRAY TEST (see 9.1)	P
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C	ANNEX C, ULTRAVIOLET LIGHT CONDITIONING TEST (see 8.2)	N/A
C.1	Test apparatus .....	N/A
C.2	Mounting of test samples .....	N/A
C.3	Carbon-arc light-exposure apparatus.....	N/A
C.4	Xenon-arc light-exposure apparatus .....	N/A

D	ANNEX D, GASKET TESTS (see 8.5)		P
D.1	Gasket tests		P
D.2	Tensile strength and elongation tests (for gaskets that can stretch)		P
	Tensile strength (%) .....:	Not less than 75%	P
	Elongation (%) .....:	Not less than 60%	P
	Visible deterioration, deformation, melting, cracking or hardening of the material .....:	There is no visible deterioration, deformation, melting, or cracking of the material.	P
D.3	Compression test (for gaskets with closed cell construction)		N/A
	Initial thickness of the specimen (mm) .....:		N/A
	Thickness of the specimen after test a) (mm), compression set after test a) (%).....:		N/A
	Thickness of the specimen after test b) (mm), compression set after test b) (%).....:		N/A
	Thickness of the specimen after test c) (mm), compression set after test c) (%).....:		N/A
	Visible cracks or deterioration .....:		N/A
D.4	Oil immersion test		N/A



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	Swelling (%).....:		N/A
	Shrinking (%).....:		N/A

E	ANNEX E, RATIONALE		—
E.1	General		—
E.2	Electric shock		—
E.3	Energy related hazards		—
E.4	Fire		—
E.5	Mechanical hazards		—
E.6	Heat related hazards		—
E.7	Radiation		—
E.8	Chemical hazards		—
E.9	Biological hazards		—
E.10	Explosion hazards		—

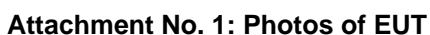


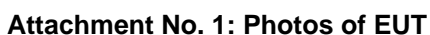
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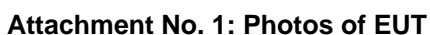
IEC 60950-22:2005 – COMMON MODIFICATIONS		
Contents	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions	P
General	Delete all the “country” notes in the reference document according to the following list: 4.1 Note 3 4.3 Note 8.5 Note 10.2 Note D.3 Note D.4 Note	P

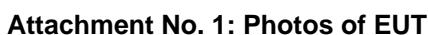
ZA	NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS	—
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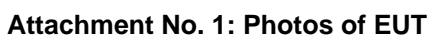
ZB	SPECIAL NATIONAL CONDITIONS		N/A
4.1	In <b>Finland, Norway and Sweden</b> , the temperature in winter may be extremely low. For OUTDOOR EQUIPMENT this will demand special design so that the equipment can withstand transport, erection and operation/service at temperatures down to -50°C		N/A
10.2	In <b>Finland, Norway and Sweden</b> there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.		N/A
D.3	In <b>Finland, Norway and Sweden</b> there are additional requirements for the minimum ambient temperature. See 4.1 of this annex.		N/A

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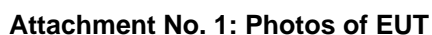
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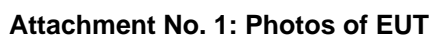
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<b>8.2</b>	<b>TABLE: Resistance to ultra-violet radiation</b>		
8.2f)	Izod impact test (ISO 180) - notched		
Material identification (manufacturer, type designation) .....			—
Shape and dimensions of test samples.....:			—
Conditioning for Set 1 of samples.....:			—
Conditioning for Set 2 of samples (including Annex C) .....			—
Test method (according to Table 1 of ISO 180) .....			—
Test conditions (T °C, RH %) .....			—
Set 1 (without Annex C conditioning)		Set 2 (after Annex C conditioning)	
Test sample #	Izod impact strength (kJ/m <sup>2</sup> )	Test sample #	Izod impact strength (kJ/m <sup>2</sup> )
Arithmetic mean for Set 1 (kJ/m <sup>2</sup> ).....:			
Arithmetic mean for Set 2 (kJ/m <sup>2</sup> ).....:			
Retention (%) .....			
Supplementary information:			

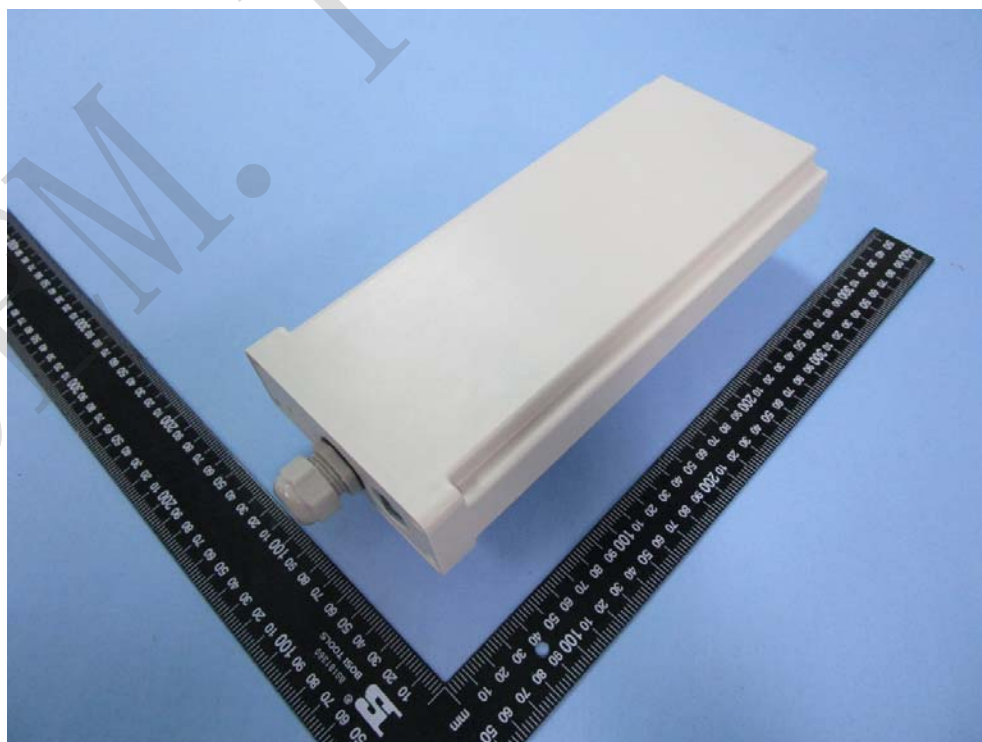
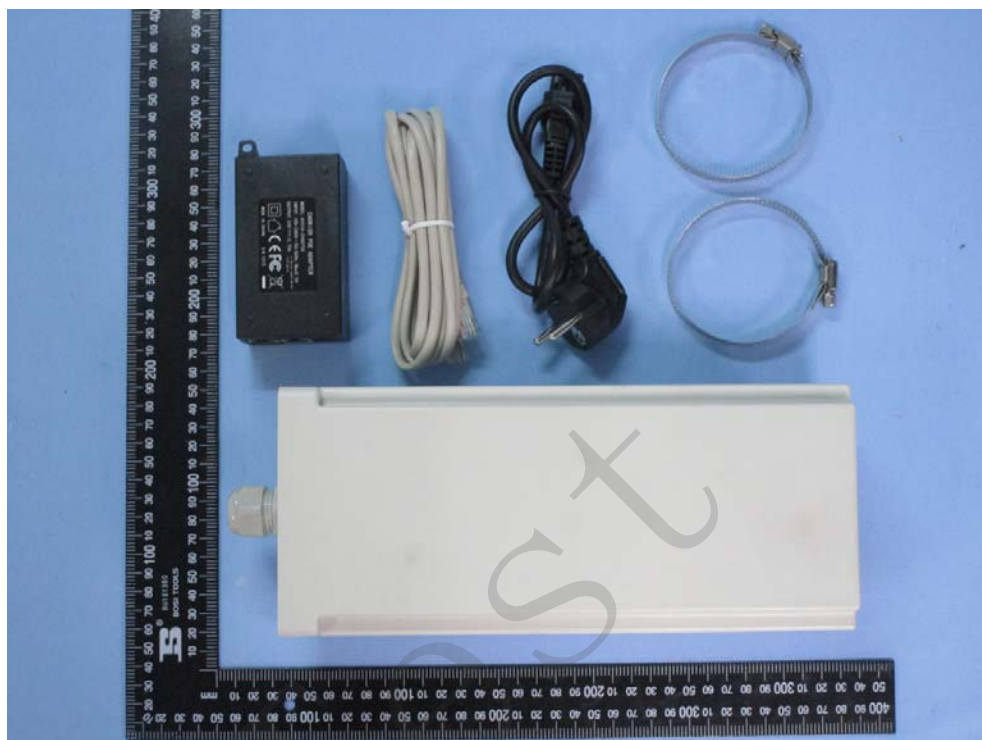
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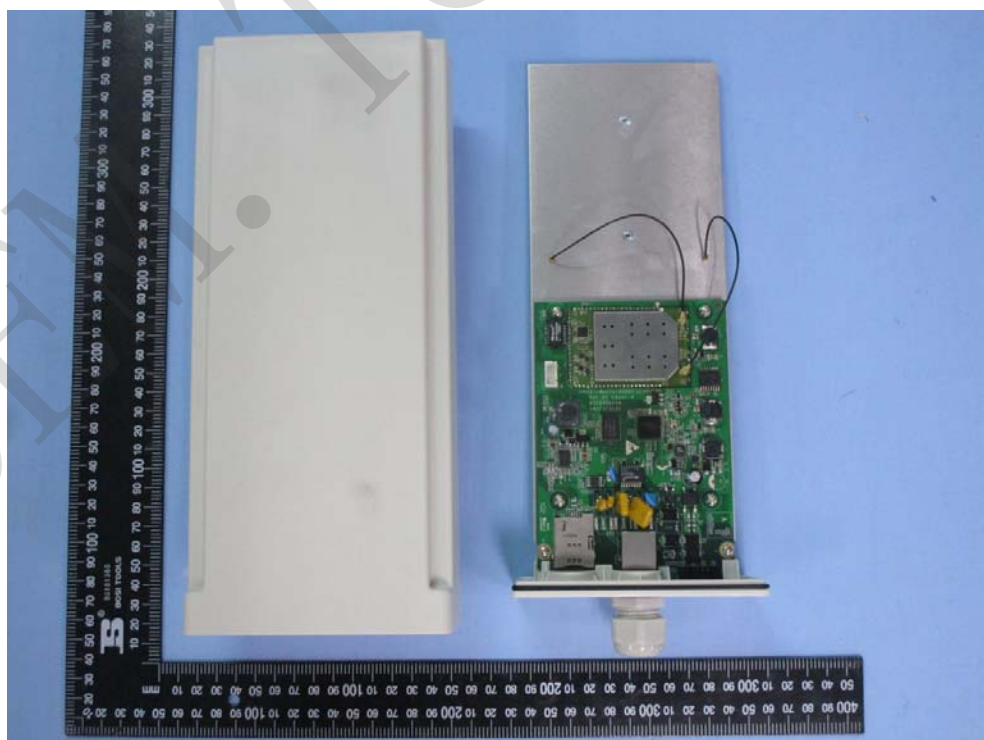
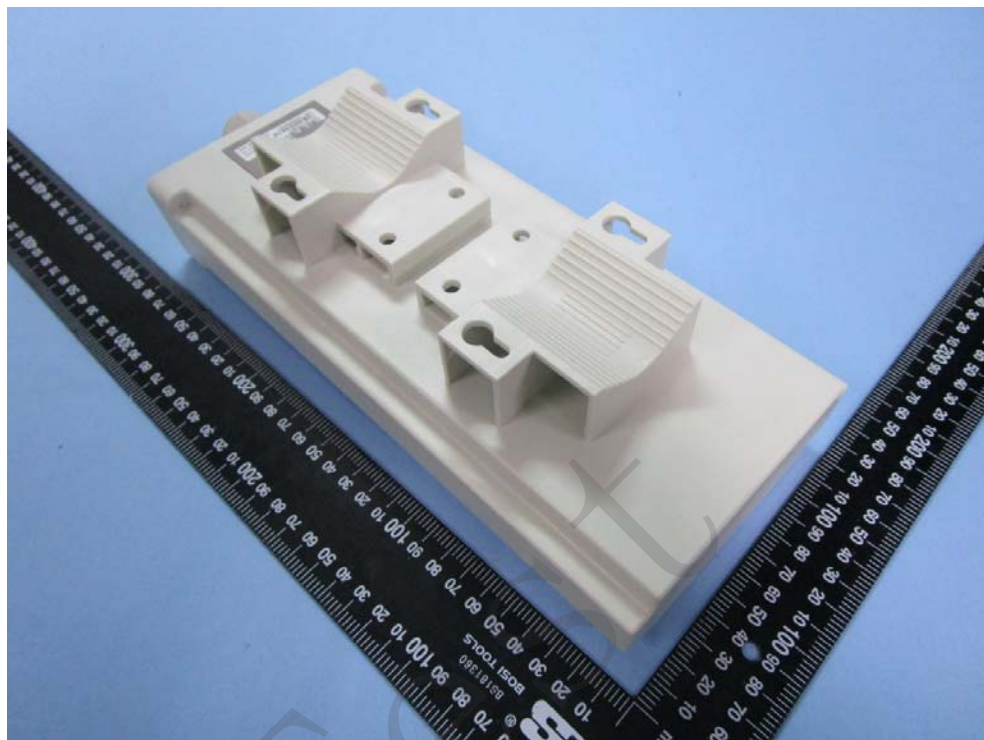
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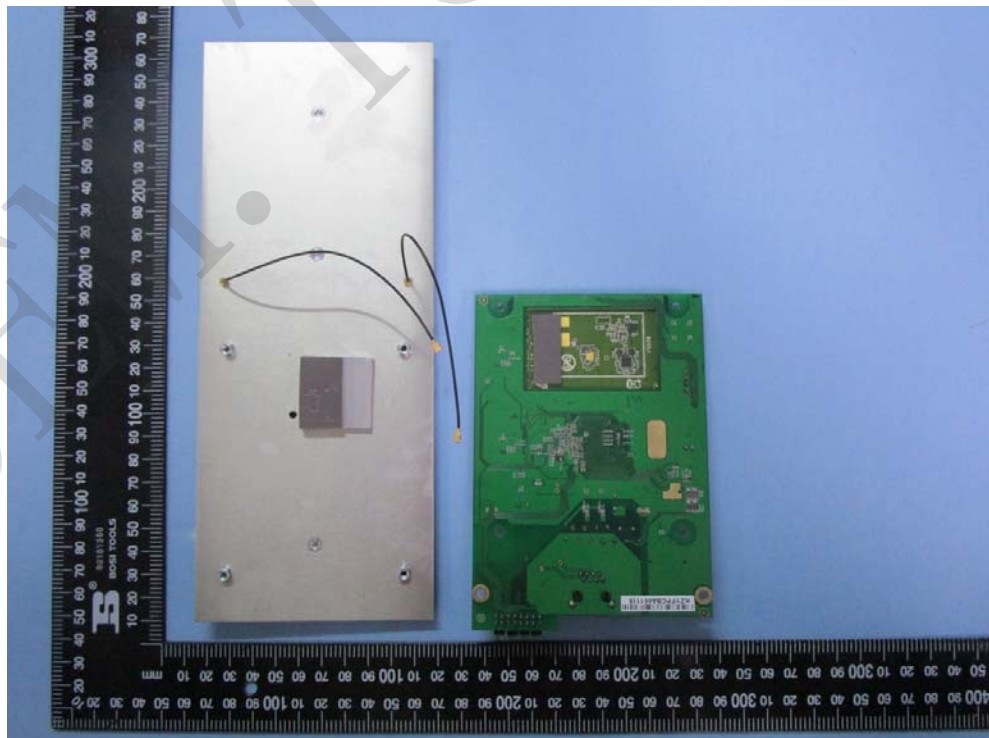
Model: AirMaster 4000V



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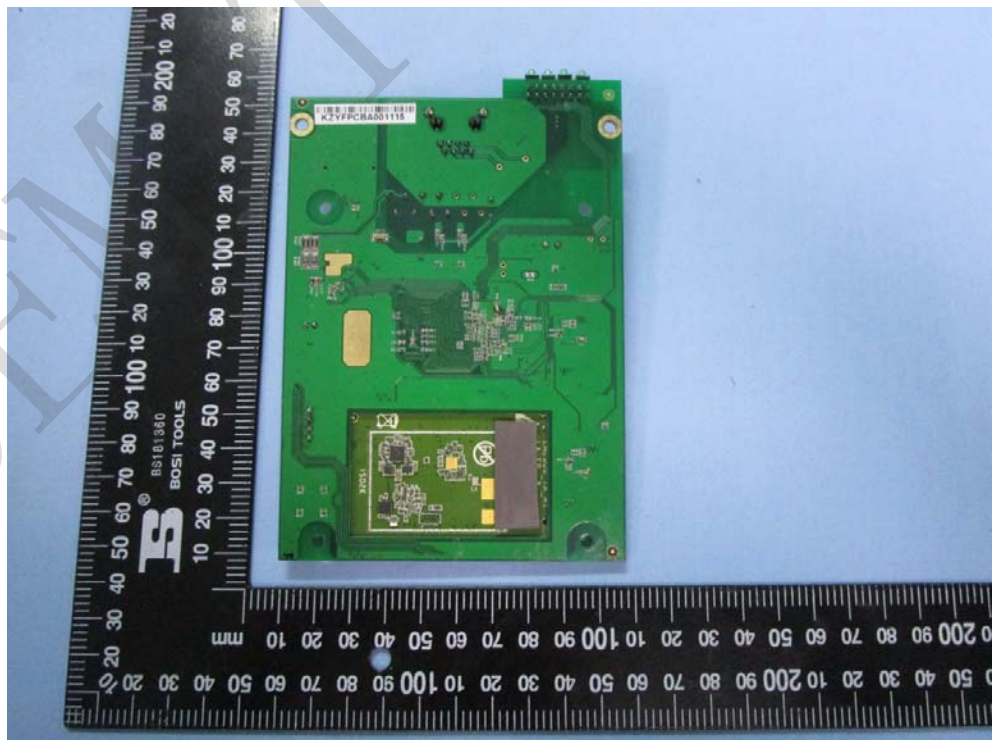
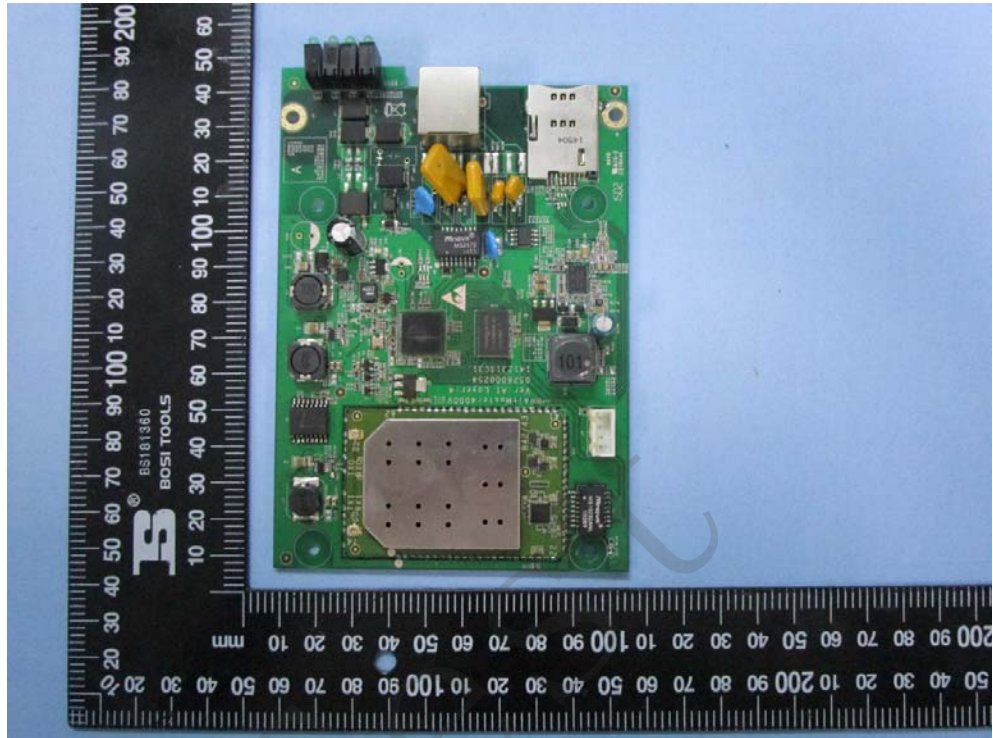


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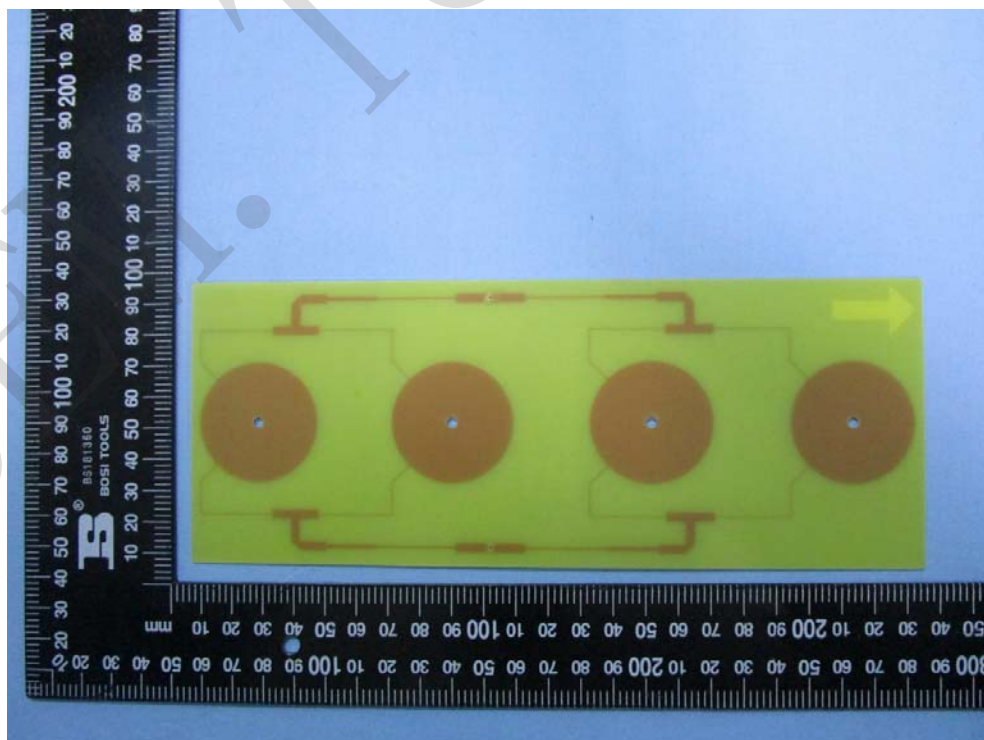
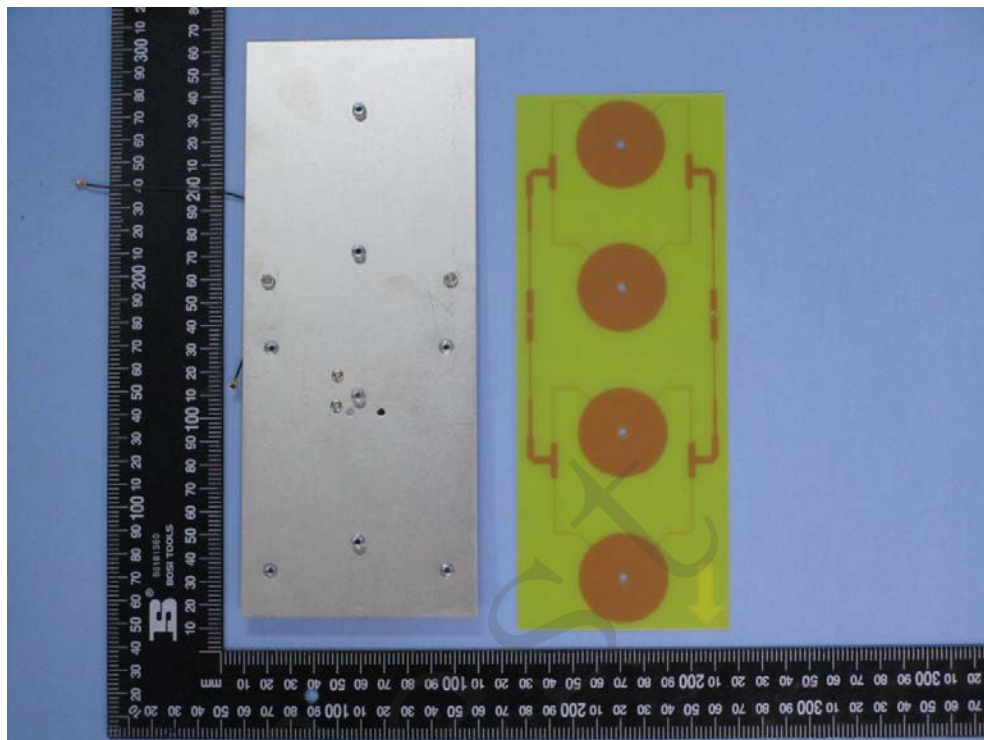




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\*\*\*\*\*End of Test Report\*\*\*\*\*