

# TEST REPORT

**REPORT NUMBER: I12MQ0028-FCC-PART15B\_Rev1**

**ON**

**Type of Equipment:** Pkard Reader  
**Type of Designation:** TSS-PK1  
**Manufacturer:** Beijing HuaHuiXinTong Technology Co., Ltd.

**ACCORDING TO**  
**Part 15B: Radio Frequency Devices, Oct 1, 2011**

**China Telecommunication Technology Labs.**

***Month date, year***

*Apr 11, 2012*

***Signature***

A handwritten signature in black ink, appearing to be 'He Guili', written in a cursive style.

He Guili  
**Director**

**FCC Part 15B**  
**Equipment: TSS-PK1**

**REPORT NO.: I12MQ0028-FCC-PART15B\_Rev1**

**FCC ID:** CONTSS-PK1

**Report Date:** 2012-04-11

**Test Firm Name:** China Telecommunication Technology Labs

**Registration Number:** 840587

#### Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 15B. The sample tested was found to comply with the requirements defined in the applied rules.

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## 1 General Information

### 1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Parts 15B.

The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex C.

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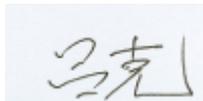
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FCC Part 15B  
Equipment: TSS-PK1

REPORT NO.: I12MQ0028-FCC-PART15B\_Rev1

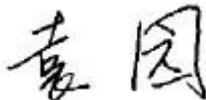
## 1.2 Testers

Name: Lu Ke  
Position: Engineer  
Department: Department of EMC test  
Signature:



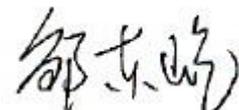
Editor of this test report:

Name: Yuan Yuan  
Position: Engineer  
Department: Department of EMC test  
Date: 2012-04-11  
Signature:



Technical responsibility for area of testing:

Name: Zou Dongyi  
Position: Manager  
Department: Department of EMC test  
Date: 2012-04-11  
Signature:



### 1.3 Testing Laboratory information

#### 1.3.1 Location

Name: China Telecommunication Technology Labs.  
Address: No. 11, Yue Tan Nan Jie, Xi Cheng District  
BEIJING  
P. R. CHINA, 100083  
Tel: +86 10 68094053  
Fax: +86 10 68011404  
Email: [emc@chinattl.com](mailto:emc@chinattl.com)

#### 1.3.2 Details of accreditation status

Accredited by: China National Accreditation Service for Conformity  
Assessment (CNAS)  
Registration number: CNAS Registration No. CNAS L0570  
Standard: ISO/IEC 17025:2005

#### 1.3.3 Test location, where different from section 1.3.1

Name: -----  
Street: -----  
City: -----  
Country: -----  
Telephone: -----  
Fax: -----  
Postcode: -----

## 1.4 Details of applicant or manufacturer

### 1.4.1 Applicant

Name: Beijing HuaHuiXinTong Technology Co., Ltd.  
Address: Room619, 6F, 18# Building, No.7 Xinx Road, Haidian  
District, Beijing  
Country: China  
Telephone: (+86) 10 6296 7290  
Fax: (+86) 10 6296 7290  
Contact: Fan Chen  
Telephone: (+86) 10 6296 7290  
Email: [chenfan@ewcdma.com](mailto:chenfan@ewcdma.com)

### 1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name: --  
Address: --

### 1.4.3 Manufactory (if different from applicant in section 1.4.1)

Name: --  
Address: --

## 2 Test Item

### 2.1 General Information

Manufacturer: Beijing HuaHuiXinTong Technology Co., Ltd.  
 Name: Pkard Reader  
 Model Number: TSS-PK1  
 Serial Number: --  
 Production Status: Product  
 Receipt date of test item: 2012-02-15

### 2.2 Outline of EUT

EUT is a Card Reader.

### 2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

### 2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	Pkard Reader	Beijing HuaHuiXinTong Technology Co., Ltd.	TSS-PK 1	--	None
B	Computer	HP	--	--	None
C	Monitor	HP	LP2001	--	None
D	Mouse	HP	--	--	None
E	Keyboard	HP	--	--	None
F	Printer	HP	C6414A	--	None
G	Iphone	--	--	--	None

Cables:

Item	Cable Type	Manufacturer	Length	Shield	Quantity	Remarks
--	--	--	--	--	--	None

### 2.5 Other Information

----

### 3 Summary of Test Results

A brief summary of the tests carried out is shown as following.

Specification Clause	Name of Test	Result
15.109	Radiated Emission	Pass
15.107	Conducted Emission	Pass

Note: The EUT complies with the requirements of the Class B digital devices.

TTL Test Report

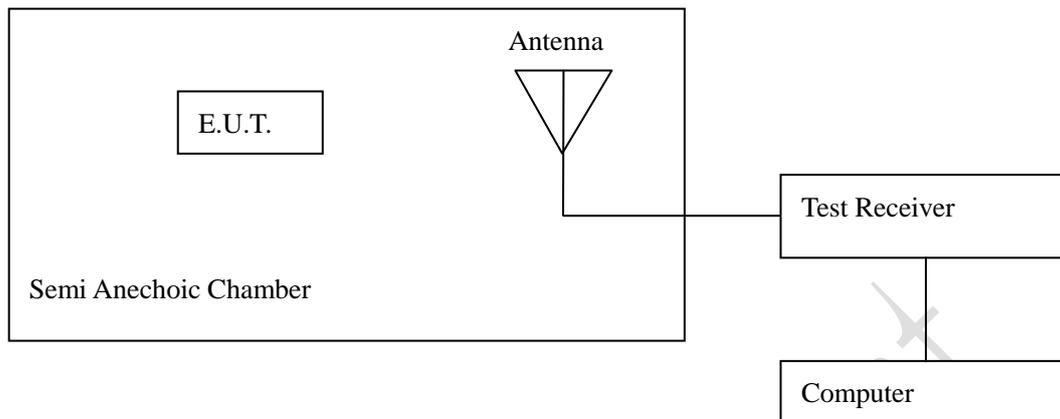
## 4 Test Results

### 4.1 Radiated Emission

<b>Specifications:</b>	15.109, ANSI C63.4-2003					
<b>Date of Tests</b>	2012-04-10					
<b>Test conditions:</b>	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
<b>Operation Mode</b>	Transfer data					
<b>Test Results:</b>	Pass					
<b>Test equipment Used:</b>						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESIB26	100211	2013-01-10	Normal
7330	Ultra Broadband Antenna	SCHWARZBECK	VULB 9160	--	2013-11-24	Normal
7330	Double-Ridged Horn Antenna	R/S	HF906	100037	2013-01-24	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3m	--	2013-11-16	Normal

<b>Limit Level Construction:</b> According to Part 15.109(a).			
<b>Limits</b>			
Frequency [MHz]	Field Strength [ $\mu$ V/m]	Field Strength [dB $\mu$ V/m]	Measurement distance [m]
30 -88	100	40.0	3
88-216	150	43.5	3
216 - 960	200	46.0	3
Above 960	500	54.0	3
Note: The tighter limit applies at the band edges.			

## Test Configuration



The measuring distance between E.U.T and antenna is 3m.

### Test Setup:

The EUT was placed in an anechoic chamber, see figure RE. The EUT is tested as tabletop EUT. The EUT is positioned on an 80cm height wood table.

The EUT is used as the peripheral equipment of the PC.

The setup is according to Figure 11a of ANSI C63.4-2003.

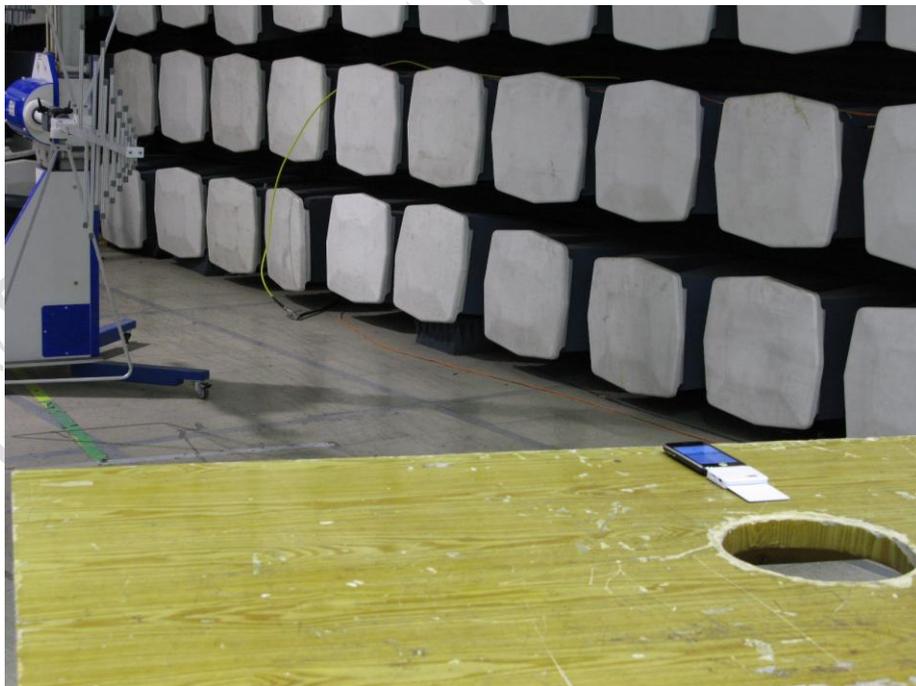


Figure RE (Pkard Reader+IPhone)



Figure: Ports (Pkard Reader+IPhone)



Figure RE (Pkard Reader+PC)

### Test Method

During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. The measurement was done by the automated test system.

RBW:100kHz

### Test Data (Pkard Reader+IPhone) :

Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Antenna Height [cm]	Turntable Azimuth [degree]	Antenna Polarisation (V/H)
32.240000	23.5	40	100	147	V
38.880000	27.5	40	100	291	V
48.000000	22.4	40	100	135	V
80.000000	17.9	40	117	212	V
776.200000	24.9	46	100	45	V
958.560000	27.8	46	175	279	V
73.160000	13.9	40	200	135	H
381.480000	15.2	46	100	262	H
430.080000	16.9	46	100	290	H
585.720000	21.3	46	175	-8	H
778.240000	24.9	46	100	159	H
874.120000	30.0	46	200	-25	H

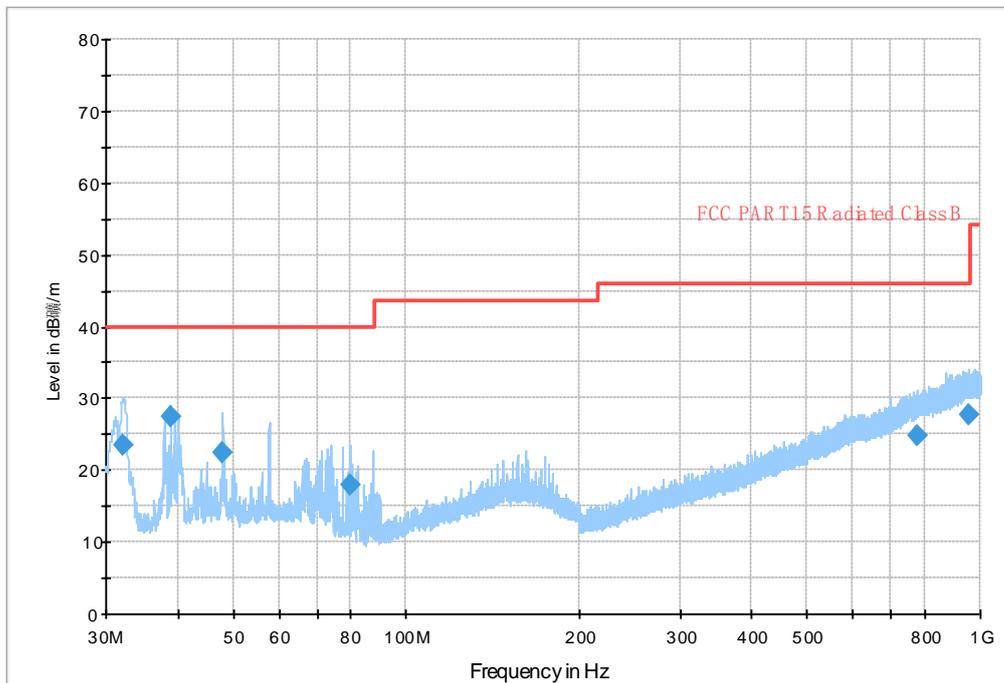
### Test Data (Pkard Reader+PC) :

Frequency [MHz]	Level [dBµV/m]	Limit [dBµV/m]	Antenna Height [cm]	Turntable Azimuth [degree]	Antenna Polarisation (V/H)
31.960000	36.7	40.0	100	-14	V
57.760000	33.0	40.0	100	12	V
96.560000	34.7	43.5	225	12	V
190.760000	32.9	43.5	100	86	V
689.440000	32.9	46.0	100	53	V
958.200000	32.0	46.0	175	9	V
57.760000	20.7	40.0	175	118	H
64.240000	32.9	40.0	225	291	H
96.560000	31.3	43.5	200	-8	H
190.760000	35.2	43.5	125	143	H
701.880000	33.3	46.0	125	-25	H
899.360000	36.8	46.0	125	82	H

Remarks: --

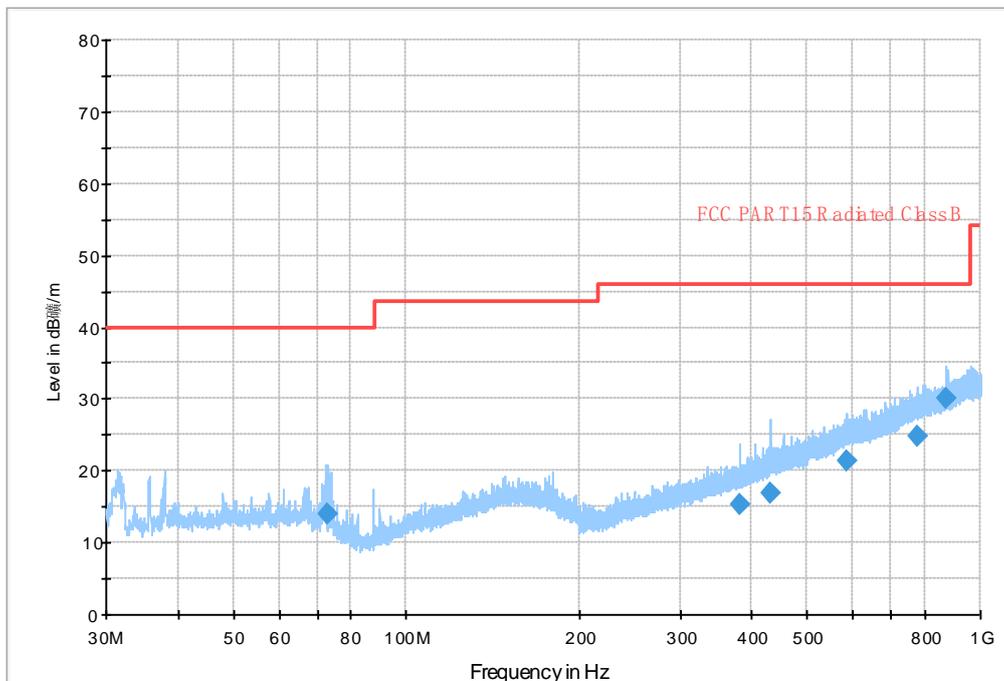
Graphical Results:

FCC



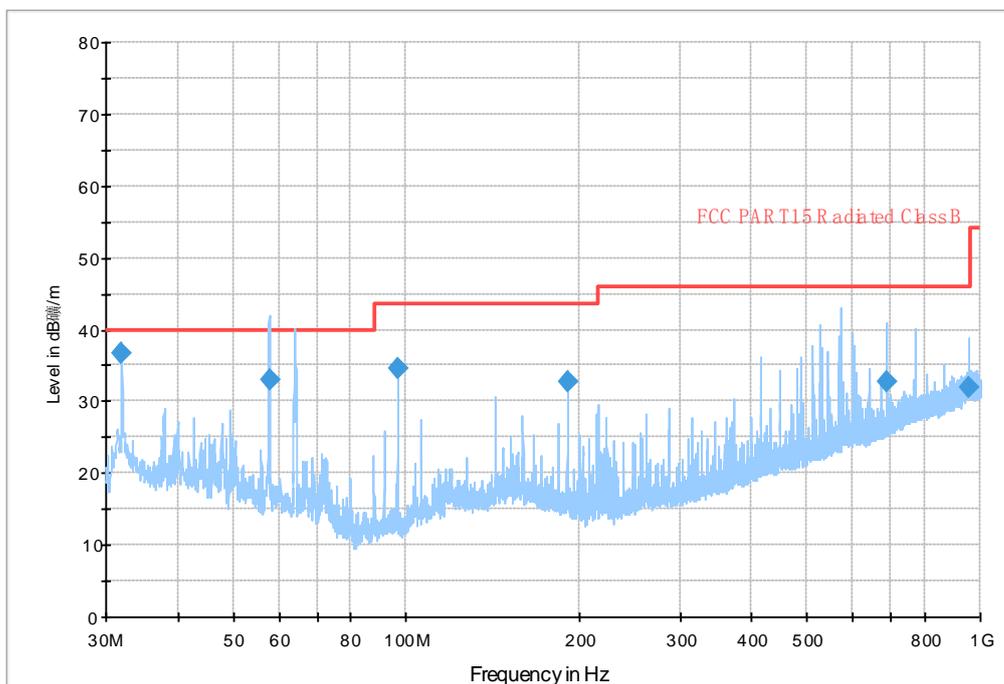
Graphical results vertical (Pkard Reader+IPhone)

FCC



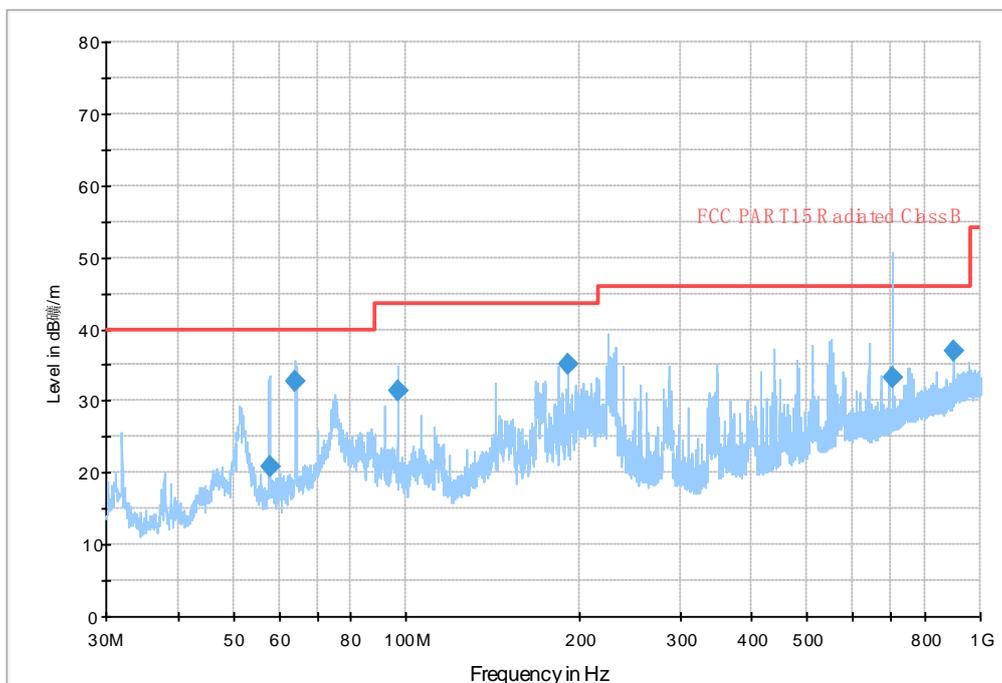
Graphical results horizontal (Pkard Reader+IPhone)

FCC



Graphical results vertical (Pkard Reader+PC)

FCC



Graphical results horizontal (Pkard Reader+PC)

### 4.2 Conducted Emission

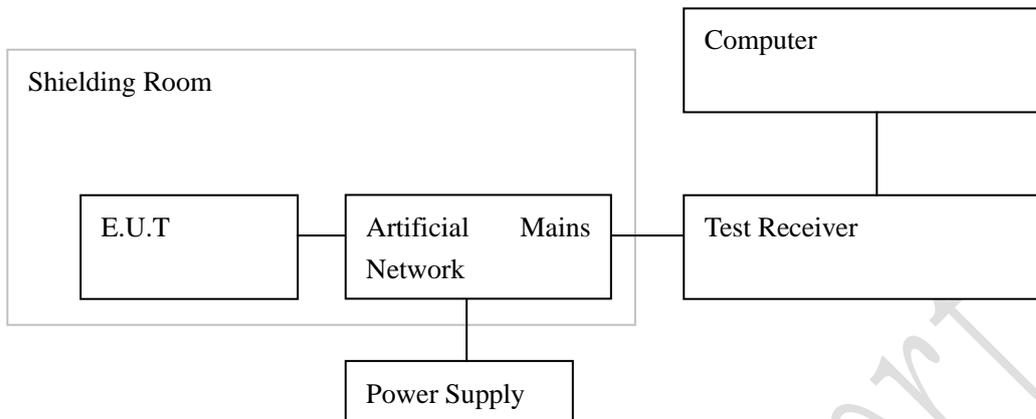
<b>Specifications:</b>	15.107, ANSI C63.4-2003					
<b>Date of Tests</b>	2012-04-10					
<b>Test conditions:</b>	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
<b>Operation Mode</b>	Transfer data					
<b>Test Results:</b>	Pass					
<b>Test equipment Used:</b>						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7330	EMI Test Receiver	R/S	ESI40	839283/007	2012-02-15	Normal
7330	Artificial Mains Network	R/S	ESH2-Z5	837480/002	2013-04-06	Normal
7330	Artificial Mains Network	R/S	ESH2-Z5	100268	2013-01-28	Normal
714	Shielding Room	ETS	--	19003	2013-11-15	Normal

<b>Limit Level Construction:</b> According to Part 15.107 (a)
--

<b>Limits for Conducted Emission</b>		
<b>Frequency of Emission [MHz]</b>	<b>Conducted limit [dBµV]</b>	
	<b>Quasi-peak</b>	<b>Average</b>
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5	56	46
5 - 30	60	50

\* Decreases with the logarithm of the frequency.

## Test Configuration



### Test Setup:

The EUT was placed in a shielding room, see figure CE. The EUT is positioned on an 80cm height wood table. The EUT is used as the peripheral equipment of the PC.

The setup is according to Figure 10a of ANSI C63.4-2003.



Figure CE

**Test Method:**

During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2003. The AC power line of the Notebook was connected to the artificial mains network then to EMI receiver. The measurement was done by the automated test system.

**RBW:** 9kHz

**Line N:**

Detector (QP/AV)	Frequency (MHz)	Level (dBµV)	Transducer (dB)	Limit (dB)	PE
QP	1.135500	44.8	10.1	56	Grounded
QP	1.176000	45.4	10.2	56	Grounded
QP	1.212000	46.6	10.2	56	Grounded

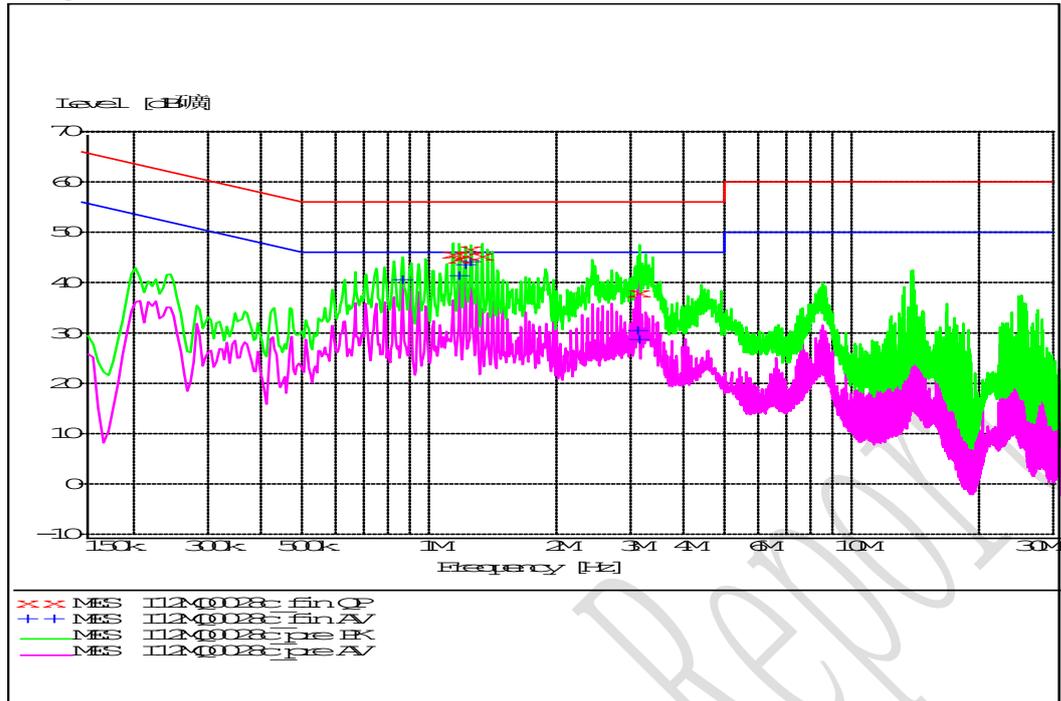
**Remarks: The test result is the worst case.**

**Line L:**

Detector (QP/AV)	Frequency (MHz)	Level (dBµV)	Transducer (dB)	Limit (dB)	PE
QP	1.099500	45.6	10.1	56	Grounded
QP	1.288500	45.4	10.2	56	Grounded
QP	3.039000	38.0	10.2	56	Grounded
AV	0.834000	40.6	10.1	46	Grounded
AV	1.135500	41.3	10.1	46	Grounded
AV	1.176000	43.5	10.2	46	Grounded
AV	1.212000	44.1	10.2	46	Grounded
AV	3.007500	30.5	10.2	46	Grounded
AV	3.039000	28.7	10.2	46	Grounded

**Remarks: The test result is the worst case.**

Graphical results:



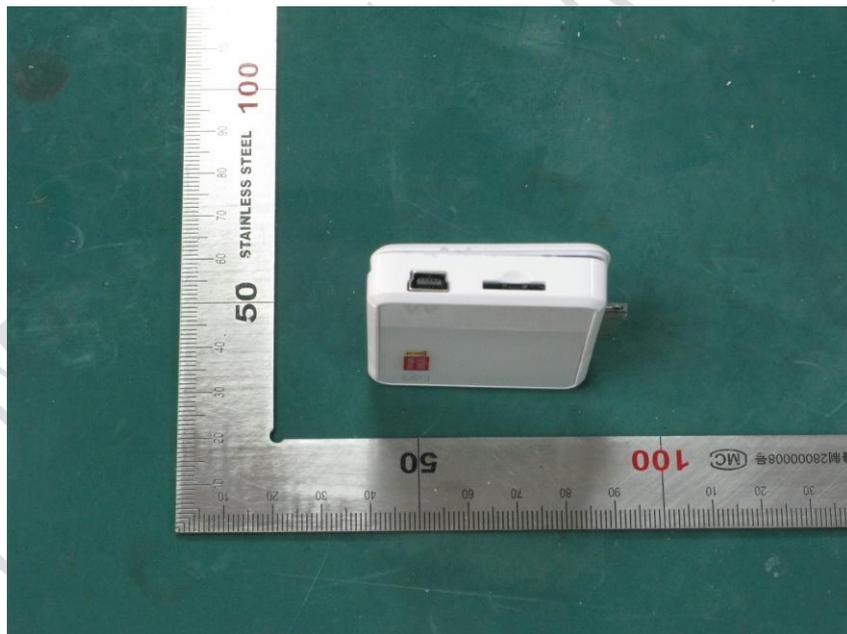
CE graphical results

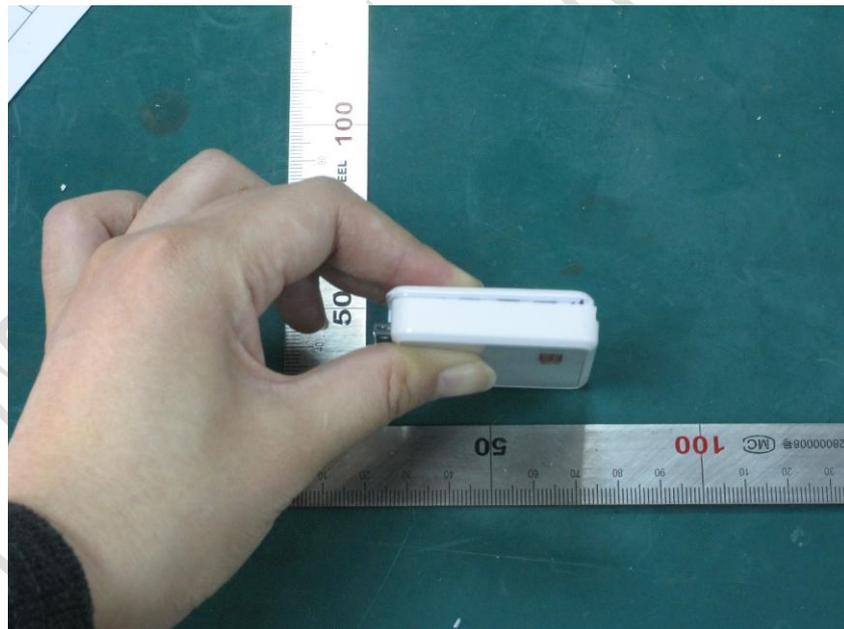
## Annex A External Photos



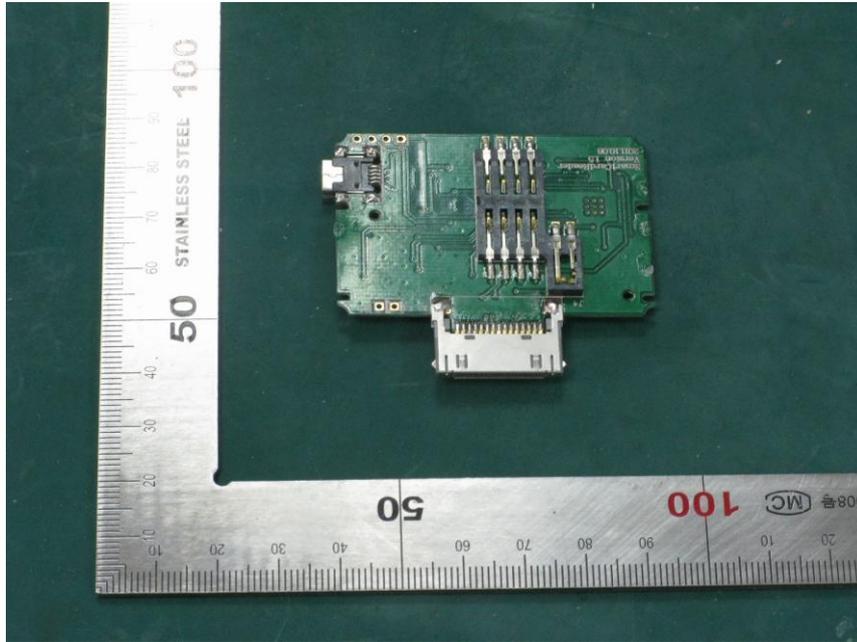
FCC Part 15B  
Equipment: TSS-PK1

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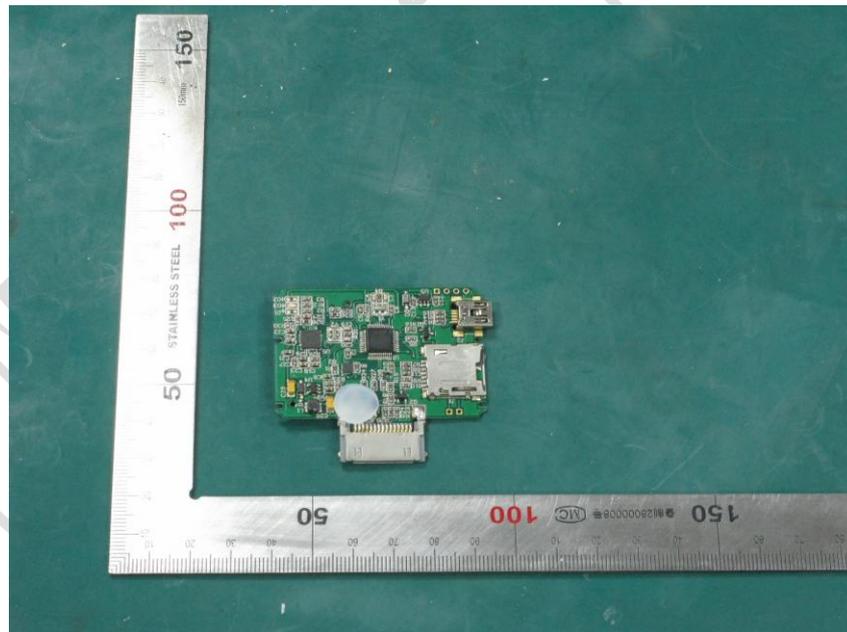




## Annex B Internal Photos



Main board (face)



Main board (back)

## **ANNEX C Deviations from Prescribed Test Methods**

No deviation from Prescribed Test Methods.

————— **The End of this Report** —————

*CTTL Test Report*