1F,2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China.

Tel: +86-755-27559792

Fax: +86-755-86116468

# **FCC TEST REPORT**

Report No.: GTI20150544F-4

Page 1 of 19

Product name:	7.0" PAD
Trademark:	1
Model/Type reference:	700P71C
Listed Model(s):	See the page 6
FCC ID:	ROU00014
Test Standards:	47 CFR FCC Part 15 Subpart B - Unintentional Radiators ANSI C63.4: 2009
Annligant	
Applicant	Shenzhen KTC Technology Co., Ltd.
	Northern Wuhe Road, Gangtou, Buji, Longgang, Shenzhen, China
	Northern Wuhe Road, Gangtou, Buji, Longgang, Shenzhen, China
Address of applicant:	Northern Wuhe Road, Gangtou, Buji, Longgang, Shenzhen, China Sept. 20, 2015

Test result	Pass *

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



**GENERAL DESCRIPTION OF EUT** 7.0" PAD Equipment: Model Name: 700P71C Shenzhen KTC Technology Co., Ltd. Manufacturer: Northern Wuhe Road, Gangtou, Buji, Longgang, Shenzhen, Manufacturer Address: China DC 3.7V form 2800mAh by rechargeable battery or Power Rating: DC 5.0V form adapter

> SevinLi Compiled By:

Reviewed By:

Approved By:

(Walter Chen)

This test report consists of 19 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by GTI. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of compiler, reviewer and approver. Any objections must be raised to GTI within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.





		Table of Contents	Page
1.	. SUN	MMARY	4
	1.1.	TEST STANDARDS	4
	1.2.	TEST DESCRIPTION.	4
	1.3.	TEST FACILITY	4
	1.4.	MEASUREMENT UNCERTAINTY	4
2.	. GEN	NERAL INFORMATION	6
	2.1.	ENVIRONMENTAL CONDITIONS	
	2.2.	GENERAL DESCRIPTION OF EUT	ε
	2.3.	DESCRIPTION OF TEST MODES	
	2.4.	DESCRIPTION OF PERIPHERAL DURING TESTING	
	2.5.	Measurement Instruments List	8
3.	. EMC	C EMISSION TEST	g
	3.1.	CONDUCTED EMISSION MEASUREMENT	g
	3.2.	RADIATED EMISSION	
4.	EUT	TEST PHOTO	18
5.	. PHC	DTOGRAPHS OF EUT CONSTRUCTIONAL	19



# **SUMMARY**

#### **Test Standards**

The tests were performed according to following standards:

47 CFR FCC Part 15 Subpart B - Unintentional Radiators

ANSI C63.4: 2014 – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

### **Test Description**

Emission Measurement requirements			
Radiated Emission Part15.109 PASS			
Conducted Disturbance	Part15.107	PASS	

Remark: The measurement uncertainty is not included in the test result.

# **Test Facility**

#### 1.3.1 Address of the test laboratory

Shenzhen General Testing & Inspection Technology Co., Ltd.

Add: 1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China.

#### 1.3.2 Laboratory accreditation

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

#### IC Registration No.: 9783A

The 3m alternate test site of Shenzhen GTI Technology Co., Ltd.EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

#### FCC-Registration No.: 214666

Shenzhen GTI Technology Co., Ltd. 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 214666, Sep 19, 2011

#### **Measurement Uncertainty**

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements—and is documented in the Shenzhen General Testing & Inspection Technology Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.



Page 5 of 19 Report No.: GTI20150544F-4

Hereafter the best measurement capability for General Testing & Inspection laboratory is reported:

#### A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U(dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	3.2	

#### B. Radiated Measurement:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.7 dB	(1)
Radiated Emission	1~18GHz	5.0 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.



**GENERAL INFORMATION** 

#### **Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

gg			
Normal Temperature:	25°C		
Relative Humidity:	55 %		
Air Pressure:	101KPa		

# **General Description of EUT**

Product Name:	7.0" PAD			
Model/Type reference:	700P71C			
Listed Model(s):	700P***, &&700******  (& could be "A-Z" or "a-z", * could be "0-99", "A-Z", "a-z", "-", "/" or blank, means different client code, no impact on Products safety and EMC characteristics)			
Power supply:	DC 3.7V from battery, 2800mAh Model: 347095			
	Model: PS06B050K1500UU			
Adapter1 information:	Input: 100-240VAC, 50/60Hz, 0.25A			
	Output: 5V 1500mA			
	Model: SA69-050150U			
Adapter2 information:	Input: 100-240VAC, 50/60Hz, 0.3A			
	Output: 5V 1500mA			
	Model: EP29-050150WULZ			
Adapter3 information:	Input: 100-240VAC, 50/60Hz, 0.35A			
	Output: 5V 1500mA			
Hardware version:	EM_T8270			
Software version:	Software version: X1-US-01			
The EUT Supports BT2.1+EDR, BT 4.0, WIFI 2.4G-802.11b/g/n(HT20)/N(HT40), GPS function.				

Note: For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Shenzhen General Testing & Inspection Technology Co., Ltd.

1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China
Tel.: (86)755-27588991 Fax: (86)755-86116468 Http://www.sz-ctc.com.cn



# **Description of Test Modes**

Frequency range investigated: conduction (150 kHz to 30 MHz), radiation (30MHz to the 5th harmonic of the highest fundamental frequency).

The device was a tablet pc. As the function of the EUT, the operation mode selected to test as follow:

Test Mode	ode Function Description			
1	USB Data Transfer	Link PC+ WIFI Idle + BT Idle + GPS RX + Earphone		
2	PC Operation	PC Operation + Adapter1		
3 PC Operation		PC Operation + Adapter2		
4 PC Operation PC Operation + Adapter3				
Remark: Link with PC means data application transferred mode between EUT and PC				

Test Item	EUT Configure Mode
AC Conducted Emission	Mode 1
Radiated Emissions <1GHz	Mode 1
Radiated Emissions ≥1GHz	Mode 1

Note1: We tested all test mode, the worse is test mode 1 that represents for this test report.

# **Description of Peripheral during Testing**

No.	Product	Manufacturer	Serial No.	Certification
1	PC	Lenovo	H435	DOC
2	PC Power Supply	Bestec	ATX-250-12Z	DOC
3	Display	DELL	U2412M	DOC
4	Printer	HP	PJ1008	DOC
5	USB Flash	TRANSCEND	TS2GJFV30	DOC
6	Mouse	DELL	N889	DOC
7	Keyboard	DELL	SK-8185	DOC

Shenzhen General Testing & Inspection Technology Co., Ltd.

1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China
Tel.: (86)755-27588991 Fax: (86)755-86116468 Http://www.sz-ctc.com.cn



**Measurement Instruments List** 

Condu	Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until	
1	LISN	R&S	ENV216	101112	Jan. 07, 2016	
2	LISN	R&S	ENV216	101113	Jan. 07, 2016	
3	EMI Test Receiver	R&S	ESCI	100920	Jan. 07, 2016	
4	Cable	Schwarzbeck	AK9515E	33156	Jan. 07, 2016	

Radiat	Radiated Emission								
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until				
1	Log-Bicon Antenna	Schwarzbeck	CBL6141A	4180	Jan. 07, 2016				
2	Spectrum Analyzer	HP	8563E	02052	Jan. 07, 2016				
3	Horn Antenna	Schwarzbeck	BBHA 9120D	648	Jan. 07, 2016				
4	Pre-Amplifier	HP	8447D	1937A03050	Jan. 07, 2016				
5	Pre-Amplifier	EMCI	EMC051835	980075	Jan. 07, 2016				
6	EMI Test Receiver	R&S	ESCI	100658	Jan. 07, 2016				
7	Antenna Mast	UC	UC3000	N/A	N/A				
8	Turn Table	UC	UC3000	N/A	N/A				
9	Cable Below 1GHz	Schwarzbeck	AK9515E	33155	Jan. 07, 2016				
10	Cable Above 1GHz	Hubersuhner	SUCOFLEX1 02	DA1580	Jan. 07, 2016				

Note: 1. The Cal. Interval was one year.



# **EMC EMISSION TEST**

#### **Conducted Emission Measurement**

#### **LIMIT**

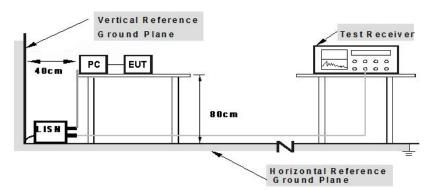
For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following:

FREQUENCY (MHz)	Class A	(dBuV)	Class B (dBuV)		
PREQUENCY (WITZ)	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	
0.50 -5.0	73.00	60.00	56.00	46.00	
5.0 -30.0	73.00	60.00	60.00	50.00	

#### **TEST PROCEDURE**

- a) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2014.
- b) Support equipment, if needed, was placed as per ANSI C63.4-2014.
- c) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2014.
- d) An USB Line connection between the EUT and PC which received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- e) All support equipments received AC power from a second LISN, if any.
- f) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- g) Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
- h) During the above scans, the emissions were maximized by cable manipulation.

#### **TEST SETUP**



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

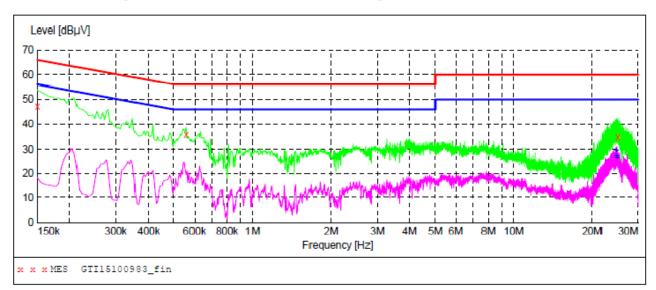


#### **TEST RESULTS**

Test mode: Mode 1 **Polarization:** 

Report No.: GTI20150544F-4

SCAN TABLE: "Vol(9K-30M)FIN-N"
Short Description: 150K-30M Voltage Short Description:



#### MEASUREMENT RESULT: "GTI15100983 fin"

10/9/2015 4:15PM

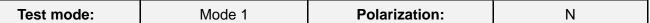
Frequency MHz	Level dBµV		Limit dBµV	Margin dB	Detector	Line	PE
0.150000	47.20	9.5	66	18.8	QP	L1	GND
0.558500	35.80	9.6	56	20.2	QP	ь1	GND
25.025000	34.60	10.8	60	25.4	QP	L1	GND

# MEASUREMENT RESULT: "GTI15100983\_fin2"

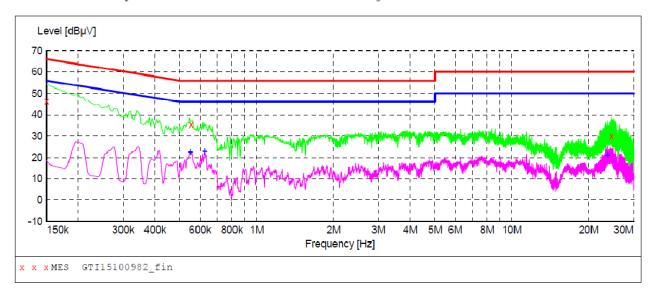
10/9/2015 4: Frequency MHz	Level	Transd dB		_	Detector	Line	PE
24.593000 24.638000 24.818000	29.30	10.8	50	20.7	AV	L1 L1 L1	GND GND GND

Tel.: (86)755-27588991 Fax: (86)755-86116468 Http://www.sz-ctc.com.cn

Page 11 of 19 Report No.: GTI20150544F-4



SCAN TABLE: "Vol(9K-30M)FIN-N"
Short Description: 150K-30M Voltage



#### MEASUREMENT RESULT: "GTI15100982\_fin"

1	0/9/2015 4:1	1PM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
	MHz	dΒμV	dB	dΒμV	dB			
	0 150000	46.20	0 5		10.7	0.5		CILID
	0.150000	46.30	9.5	66	19.7	QP	N	GND
	0.554000	35.50	9.6	56	20.5	QP	N	GND
	24.611000	29.90	10.8	60	30.1	OP	N	GND

# MEASUREMENT RESULT: "GTI15100982\_fin2"

1PM						
Level	Transd	Limit	Margin	Detector	Line	PE
dBuV	dB	dBuV	dB			
'						
22.40	9.6	46	23.6	AV	N	GND
22.80	9.6	46	23.2	AV	N	GND
21.00	10.8	50	29.0	AV	N	GND
	Level dBµV 22.40 22.80	Level Transd dB	Level Transd Limit dBμV dB dBμV 22.40 9.6 46 22.80 9.6 46	Level dBμV         Transd dB dBμV         Limit dBμV         Margin dB           22.40         9.6         46         23.6           22.80         9.6         46         23.2	Level Transd dBμV         Limit dBμV         Margin dB         Detector dB           22.40         9.6         46         23.6         AV           22.80         9.6         46         23.2         AV	Level dBμV       Transd dB dBμV       Limit dB dBμV       Margin dB       Detector Line dBμV         22.40       9.6       46       23.6       AV       N         22.80       9.6       46       23.2       AV       N



**Radiated Emission** 

#### **LIMITS**

LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 3m)
FREQUENCT (MHZ)	dBuV/m	dBuV/m
30 ~ 88	39.0	40.0
88 ~ 216	43.5	43.5
216 ~ 960	46.5	46.0
Above 960	49.5	54.0

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (at	3m) dBuV/m	Class B (at 3m) dBuV/m				
FREQUENCT (MITZ)	Peak	Avg	Peak	Avg			
Above 1000	80	60	74	54			

#### Notes:

- 1) The limit for radiated test was performed according to as following: CISPR 22/ FCC PART 15B /ICES-003.
- 2) The tighter limit applies at the band edges.
- 3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### **TEST PROCEDURE**

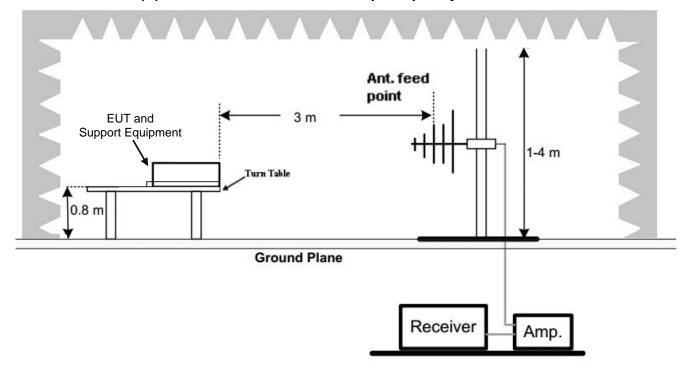
- a) The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c) The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP (AV) Limits and then no additional QP Mode measurement performed.



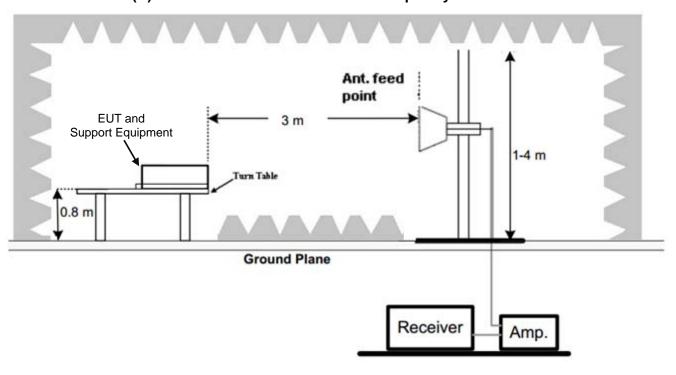
#### **TEST SETUP**

For the actual test configuration, please refer to the related Item –EUT Test Photos.

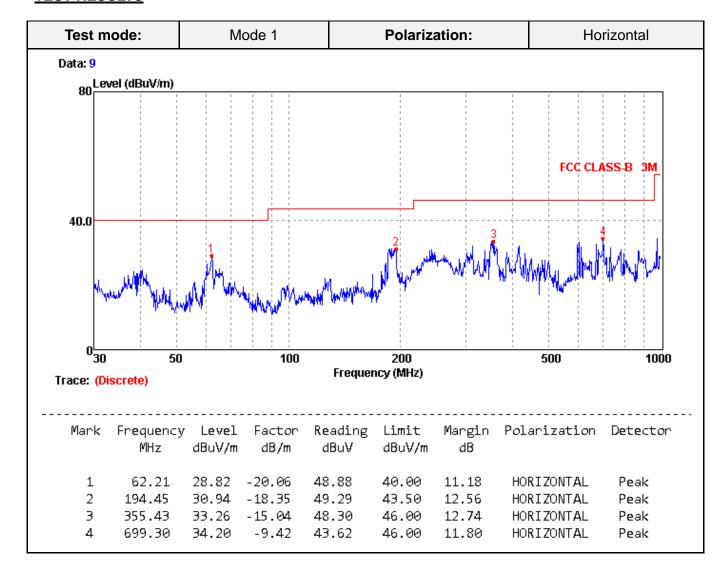
#### (A) Radiated Emission Test Set-Up Frequency below 1 GHz



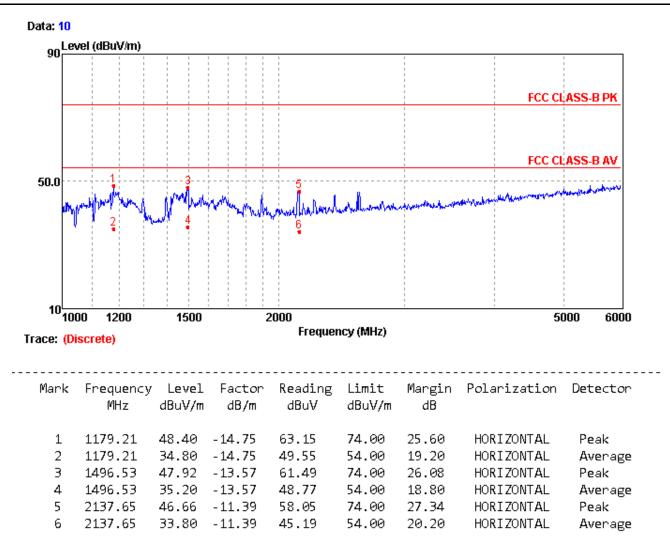
### (B) Radiated Emission Test Set-UP Frequency above 1GHz



#### **TEST RESULTS**

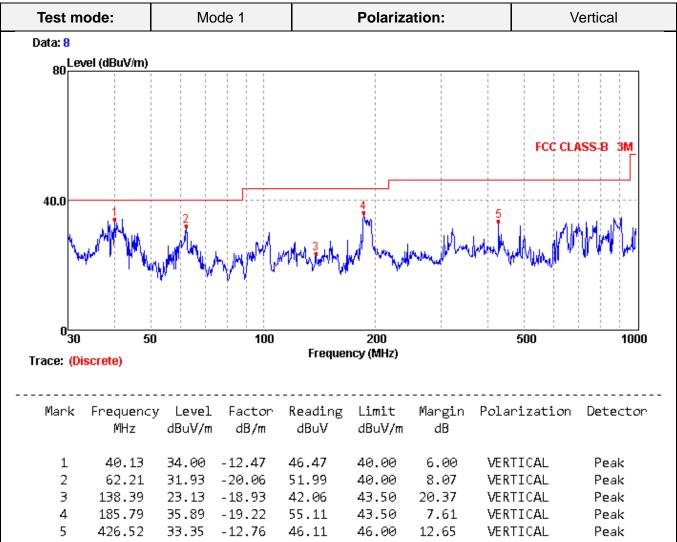




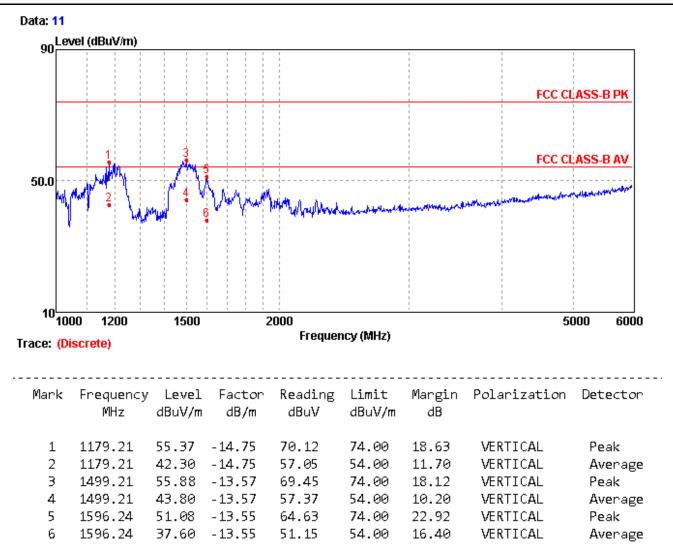


Note: 6GHz-7GHz was not recorded for its signal was very low against the limit.





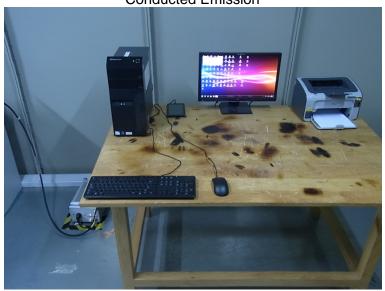




Note: 6GHz-7GHz was not recorded for its signal was very low against the limit.



#### **Conducted Emission**



Radiated Emission below 1GHz



Radiated Emission above 1GHz







# PHOTOGRAPHS OF EUT CONSTRUCTIONAL