

## **FCC TEST REPORT**

FCC ID: 2AI3Z-C7028

On Behalf of

Video Plus Print Company Ltd.

Video Brochure

Model No.: C7028, C7014, C7021, C7006

Prepared for : Video Plus Print Company Ltd.

Address #1005, 10/F1, Hermes Commercial Centre, 4-4A Hillwood

Road, TST, Kowloon, HongKong

Prepared By : Shenzhen Alpha Product Testing Co., Ltd.

Address Building B, East Area of Nanchang Second Industrial Zone,

Gushu 2<sup>nd</sup> Road, Bao'an District, Shenzhen 518126, P.R. China

Report Number : T1861207 01
Date of Receipt : July 02, 2016
Date of Test : July 02-07, 2016
Date of Report : July 08, 2016

Version Number : REV0

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## TEST REPORT DECLARATION

**Applicant** : Video Plus Print Company Ltd.

Manufacturer Video Plus Print Company Ltd.

**EUT Description** Video Brochure

> : C7028, C7014, C7021, C7006 (A) Model No.

N/A Trademark

Charge: DC 5V, Work: DC 3.7V Ratings Supply

DC 5V from USB port, DC 3.7V from battery Test Voltage

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Measurement Standard Used:

#### FCC Rules and Regulations Part 15 Subpart B Class B 2016, ANSI C63.4:2014

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC Part15 requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Project Manager

Reak Yang Reak Yang Tested by (name + signature)....: **Test Engineer** 

Simple Guan

Date of issue....: July 08, 2016

Approved by (name + signature).....:

#### Report No.: T1861207 01

## 1. SUMMARY OF STANDARDS AND RESULTS

# 1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

EMISSION							
<b>Description of Test Item</b>	Standard	Limits	Results				
Power Line Conducted	FCC Part 15:2016	Class B	D				
Emission Test	ANSI C63.4:2014	Class B	ı				
Dadistal Essissian Tast	FCC Part 15:2016	Class D	P				
Radiated Emission Test	ANSI C63.4:2014	Class B	r				

Note: 1. P is an abbreviation for Pass.

- 2. F is an abbreviation for Fail.
- 3. N/A is an abbreviation for Not Applicable.

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#### 2. GENERAL INFORMATION

### 2.1.Description of Device (EUT)

Description : Video Brochure

Model Number : C7028, C7014, C7021, C7006

Diff

There is no difference between all the models, except the appearance

color and model name, so this report performs the model C7028

Test Voltage : DC 5V from USB port, DC 3.7V from battery

AC Adapter : N/A

Highest frequency: 369MHz

Software version : 1.11.7.20160505\_release

Hardware version : ATJ2273\_For\_Disney\_V3\_20160523

Trademark : N/A

Applicant : Video Plus Print Company Ltd.

Address #1005, 10/F1, Hermes Commercial Centre, 4-4A Hillwood Road, TST,

. Kowloon, HongKong

Manufacturer : Video Plus Print Company Ltd.

Address #1005, 10/F1, Hermes Commercial Centre, 4-4A Hillwood Road, TST,

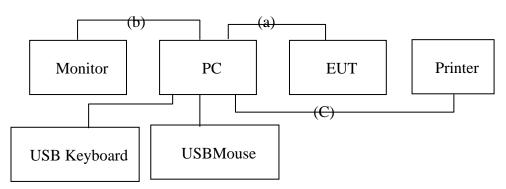
· Kowloon, HongKong

Sample Type : Prototype production

# 2.2.Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or DOC
1	Personal	DELL	D11M	CN-0LV772-C088	DOC
1	Computer	222	21111	7-378-H8UR	200
2	Monitor	Monitor DELL		CN-011HFV-7287	DOC
	Monitor	DELL	E2014Hf	2-397-CHEM	DOC
2	USB	ACER	ACER SK-9625		DOC
3	Keyboard	ACER	SK-9023	37E0100	DOC
4	USB Mouse	ACER	MS.11200.014	M-UAY-ACR2	DOC
5.	Printer	HP	HP1020	CNCJ410726	DOC

# 2.3.Block Diagram of connection between EUT and simulators



Signal Cable Description of the above Support Units									
No.	Port Name	Cable	Length	Shielded (Yes or No)	Detachable (Yes or No)				
(a)	USB Port	USB Cable	150CM	Yes(Shielding and foil shields)	Yes				
(b)	VGA Port	VGA Cable	120CM	Yes(Shielding)	Yes				
(C)	Serial Port	Serial Cable	150CM	Yes(Shielding)	Yes				

**EUT: Video Brochure** 

# 2.4.Test mode Description

No.	Test Mode				
<b>※</b> 1.	Exchange data with PC				
2.	Playing				
3.	/				
Note: * is worst case mode for, so this report only reflected the					

Note: \*\* is worst case mode for, so this report only reflected the worst mode.

# 2.5.Test Facility

Shenzhen Alpha Product Testing Co., Ltd. Building B, East Area of Nanchang Second, Industrial Zone, Gushu 2nd Road, Bao'an, Shenzhen, China

March 25, 2015 File on Federal Communication Commission

Registration Number: 203110

July 18, 2014 Certificated by IC Registration Number: 12135A

#### 2.6. Measurement Uncertainty

(95% confidence levels, k=2)

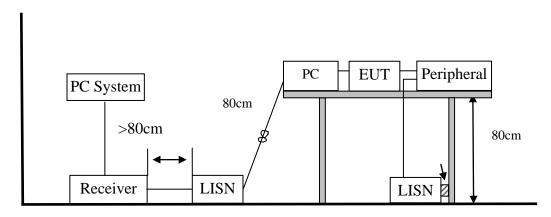
Test Item	Uncertainty	
Uncertainty for Conduction emission	2.71dB	
test	2.7 Tub	
	3.90 dB (Distance:	
Uncertainty for Radiation Emission test	3m Polarize: V)	
(<1G)	3.92 dB (Distance:	
	3m Polarize: H)	
	4.26 dB (Distance:	
Uncertainty for Radiation Emission test	3m Polarize: V)	
(>1G)	4.28 dB (Distance:	
	3m Polarize: H)	

## 3. POWER LINE CONDUCTED EMISSION TEST

## 3.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	101165	2016.01.17	1 Year
2.	L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2016.01.17	1 Year
3.	L.I.S.N.#2	ROHDE&SCH WARZ	ENV216	101043	2016.01.17	1 Year
4.	Pulse Limiter	Schwarzbeck	9516F	9618	2016.01.17	1 Year
5	Cable	Resenberger	SUCOFLEX 104	MY6562/4	2016.01.17	1 Year

# 3.2.Block Diagram of Test Setup



#### 3.3. Power Line Conducted Emission Test Limits

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

Notes:

- 1. Emission level=Read level + LISN factor-Preamp factor + Cable loss
- 2. \* Decreasing linearly with logarithm of frequency.
- 3. The lower limit shall apply at the transition frequencies.

#### 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

#### 3.5. Operating Condition of EUT

- (1) Setup the EUT as shown as Section 3.2.
- (2) Turn on the power of all equipment.
- (3) Let the EUT work in test mode and 15 minutes before taking the test.

#### 3.6.Test Procedure

- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). 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 C63.4:2014 on conducted Emission test.
- (2) The frequency range from 150kHz to 30MHz is checked, the bandwidth of test receiver (R&S TEST RECEIVER ESCI) is set at 9kHz.
- (3) The frequency range from 30MHz to 1000MHz was pre-scanned with a Peak detector and all final readings of measurement from Test Receiver are Quasi-Peak and Average values.
- (4) The test results are reported on Section 3.7.

#### 3.7. Conducted Disturbance at Mains Terminals Test Results

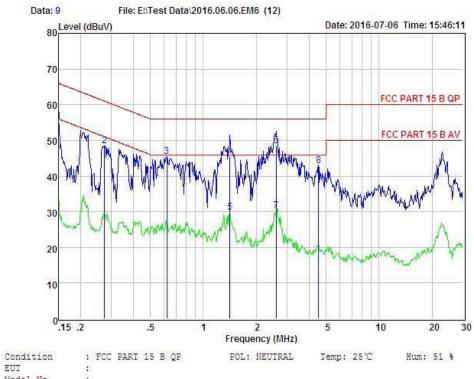
EUT	:	Video Brochure	Test Date	:	2016.07.06
M/N	:	C7028	Temperature	:	25℃
Test Engineer	:	Reak Yang	Humidity	:	51%
Test Mode	:	Exchange data with PC			
Test Desults		DACC			

Test Results : **PASS** 

Note: 1. The test results are listed in next pages.

- 2. This mode is worst case mode, so this report only reflected the worst mode.
- 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out.
- 4. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.



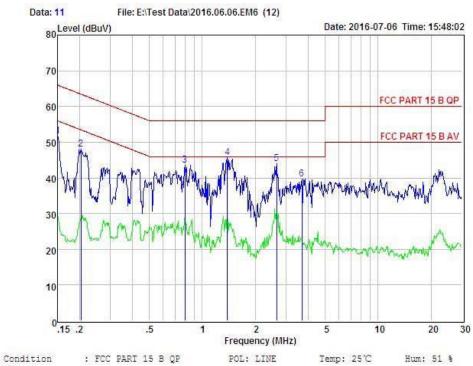


EUT	:
Model No	:
Test Mode	
Power	:
Test Engineer	:
Remark	:

Item	Freq	Read Level	LISN Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.150	45.62	0.03	-9.49	0.10	55.24	66.00	-10.76	Peak
2	0.274	38.89	0.03	-9.56	0.10	48.58	60.98	-12.40	Peak
3	0.621	35.81	0.03	-9.59	0.10	45.53	56.00	-10.47	Peak
4	1.418	35.63	0.05	-9.66	0.10	45.44	56.00	-10.56	QP
5	1.418	19.90	0.05	-9.66	0.10	29.71	46.00	-16.29	Average
6	2.594	38.53	0.06	-9.76	0.11	48.46	56.00	-7.54	QP
7	2.594	20.40	0.06	-9.76	0.11	30.33	46.00	-15.67	Average
8	4.525	32.69	0.09	-9.90	0.12	42.80	56.00	-13.20	Peak

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





EUT :
Model No :
Test Mode :
Power :
Test Engineer :
Remark :

Item	Freq	Read Level	LISN Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
	0.450	44.00						44.00	
1		41.99	0.03	-9.49	0.10	51.61	66.00	-14.39	Peak
2	0.204	38.45	0.03	-9.52	0.10	48.10	63.45	-15.35	Peak
3	0.796	33.84	0.00	-9.60	0.10	43.54	56.00	-12.46	Peak
4	1,388	35.90	0.05	-9.66	0.10	45.71	56.00	-10.29	Peak
5	2.650	33.94	0.06	-9.76	0.11	43.87	56.00	-12.13	Peak
6	3.681	29.70	0.08	-9.86	0.12	39.76	56.00	-16.24	Peak

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

## 4. RADIATED EMISSION TEST

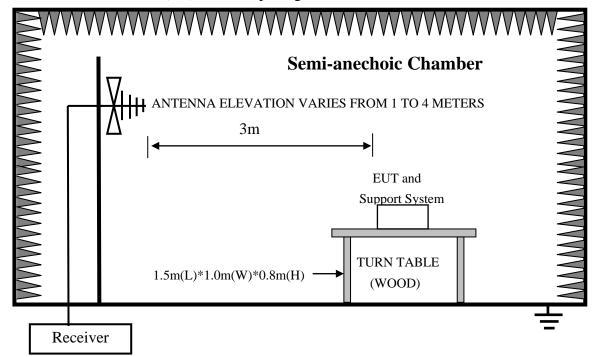
# 4.1.Test Equipment

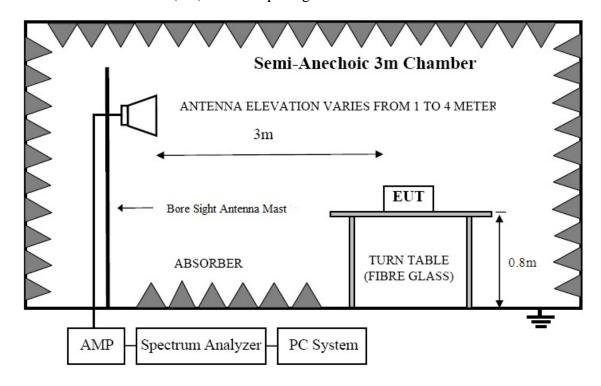
For fr	For frequency range 30MHz~1GHz (At Semi Anechoic Chamber)											
Item	Equipment Manufacturer Model No. Serial No. Last Cal.											
1	Test Receiver	Rohde&Schwarz	ESCI	101165	2016.01.17	1 Year						
2	Amplifier HP		HP8347A	2834A00455	2016.01.19	1 Year						
3	Bilog Antenna	Schwarzbeck	VULB 9168	9168-438	2016.01.19	2 Year						
4	Cable	Resenberger	SUCOFLEX 104	309972/4	2016.01.17	1 Year						

For fr	For frequency range above 1GHz (At Semi Anechoic Chamber (3m))											
Item	Equipment	Last Cal.	Cal. Interval									
1	Spectrum Analyzer	Agilent	E4407B	MY49510055	2016.01.17	1 Year						
2	Horn Antenna	Schwarzbeck	BBHA 9120 D	BBHA 9120 D(1201)	2016.01.21	1 Year						
3	Amplifier	Agilent	8449B	3008A02664	2016.01.19	1 Year						
4	Cable	Resenberger	SUCOFLEX 104	329112/4	2016.01.17	1 Year						

## 4.2.Block Diagram of Test Setup

In Semi Anechoic Chamber (3m) Test Setup Diagram for 30MHz~1000MHz





#### 4.3. Radiated Emission Limit

Frequency	Distance	Field Strengths Limits		
MHz	(Meters)	dB(μV)/m		
30 ~ 88	3	40.0		
88 ~ 216	3	43.5		
216 ~ 960	3	46.0		
960 ~ 1000	3	54.0		
Above 1GHz	3	74(Peak) 54(Average)		

Notes:

- 1. Emission level = Read level + Antenna Factor Preamp Factor + Cable Loss
- 2. The smaller limit shall apply at the cross point between two frequency bands.
- 3. Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
- 4. Frequency range of radiated measurements:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or

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	40 GHz, whichever is lower.

#### 4.4.Configuration of EUT on Test

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

#### 4.5. Operating Condition of EUT

- (1) Setup the EUT as shown as Section 4.2.
- (2) Turn on the power of all equipment.
- (3) Let the EUT work in test mode and 15 minutes before taking the test.

#### 4.6.Test Procedure

- (1) The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4:2014 on Radiated Emission test.
- (2) For the radiated emission test above 1GHz:
  - Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- (3) The frequency range from 30MHz to 1000MHz is checked, the bandwidth of test receiver (R&S TEST RECEIVER ESCI) is set at 120kHz.
- (4) The frequency range from above 1GHz is checked, the bandwidth of spectrum analyzer (Analyzer Spectrum Analyzer E4407B) is set at 1MHz.
- (5) The frequency range from 30MHz to 1000MHz was pre-scanned with a peak detector and all final readings of measurement from Test Receiver are Quasi-Peak values, the frequency range from 1GHz to 6GHz was pre-scanned with a peak detector and all final readings of measurement from Spectrum Analyzer are peak and average values checked, all measurement distance is 3m in 3m semi anechoic chamber.
- (6) The test results are reported on Section 4.7.

#### 4.7. Radiated Disturbance Test Results

Frequency Range	:	30MHz~1000MHz			
EUT	:	Video Brochure	Test Date	:	2016.07.04
M/N	:	C7028	Temperature	:	23℃
Test Engineer	:	Reak Yang	Humidity	:	56%
Test Mode	:	Exchange data with PC			
Test Results	:	PASS			

Note: 1. The test results are listed in next pages.

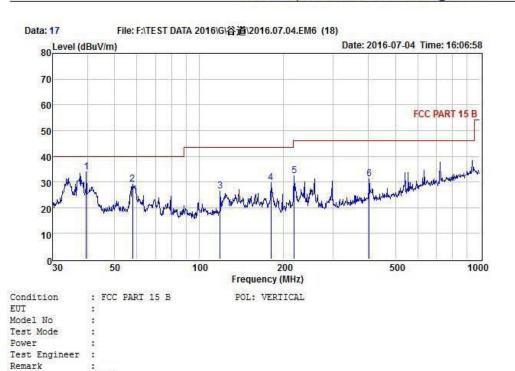
- 2. This mode is worst case mode, so this report only reflected the worst mode.
- 3. If the limits for the measurement with the quasi-peak detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the quasi-peak detector need not be carried out.

Frequency Range	:	Above 1GHz			
EUT	:	Video Brochure	Test Date	:	2016.07.04
M/N	:	C7028	Temperature	:	23℃
Test Engineer	:	Reak Yang	Humidity	:	56%
Test Mode	:	Exchange data with PC			
Test Results	:	PASS			

Note: 1. The test results are listed in next pages.

- 2. This mode is worst case mode, so this report only reflected the worst mode.
- 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.





Item	Freq	Read Level	Antenna Factor	Preamp Factor		Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
4	39.58	E0 E0	14.07	30.84	0.17	33.90	40.00	-6.10	Peak
1	AND THE STATE OF T	D. C.	541 N 27 C / A	74-6-7-3		A 10 B	500 Sec. 2	112535-S-7.54	
2	57.80	46.98	12.91	30.89	0.23	29.23	40.00	-10.77	Peak
3	118.60	43.80	12.06	29.74	0.35	26.47	43.50	-17.03	Peak
4	180.02	46.74	11.68	29.01	0.47	29.88	43.50	-13.62	Peak
5	218.31	49.65	10.53	28.45	0.63	32.36	46.00	-13.64	Peak
6	403 25	42 88	14 84	27 30	0.72	31 14	46 00	-14 86	Peak

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

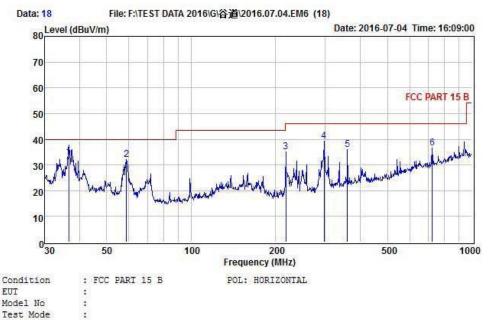
: 23C

: 56%

Temp

Hum



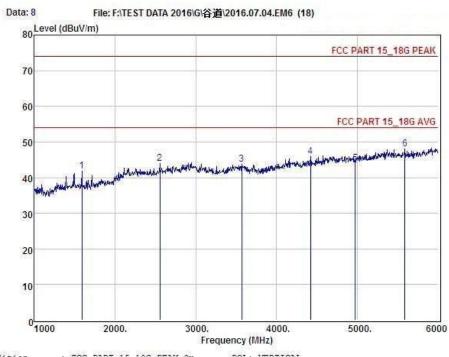


EUT : Model No : Test Mode : Power : Test Engineer : Remark : Temp : 23C Hum : 56%

Item	Freq	Read Level	Antenna Factor	Preamp Factor		Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	36.64	50.23	13.39	30.83	0.10	32.89	40.00	-7.11	QP
2	58.82	50.09	12.75	30.89	0.32	32.27	40.00	-7.73	Peak
3	217.54	52.29	10.53	28.46	0.59	34.95	46.00	-11.05	Peak
4	297.22	53.58	12.76	28.03	0.94	39.25	46.00	-6.75	Peak
5	360.45	48.92	14.03	27.65	0.66	35.96	46.00	-10.04	Peak
6	721.73	41.16	19.92	25.69	1.26	36.65	46.00	-9.35	Peak

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





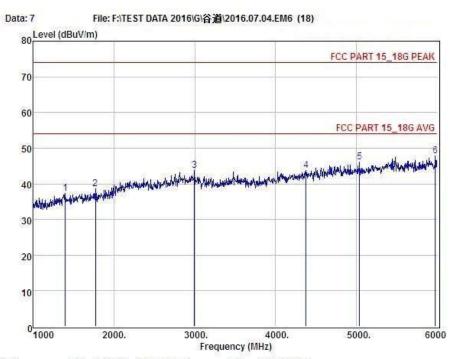
Condition : FCC PART 15\_18G PEAK 3m POL: VERTICAL EUT :
Model No :
Test Mode :
Power :
Test Engineer :
Remark :

Temp : 23C Hum : 56%

er carre			0						
Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
113	595.00	48.76	24.86	34.74	3.05	41.93	74.00	-32.07	Peak
225	555.00	47.12	27.67	34.98	4.06	43.87	74.00	-30.13	Peak
333	570.00	44.99	28.69	34.90	4.90	43.68	74.00	-30.32	Peak
444	420.00	44.44	30.42	34.49	5.45	45.82	74.00	-28.18	Peak
549	970.00	40.64	31.53	34.05	5.80	43.92	74.00	-30.08	Peak
655	585.00	43.31	32.01	33.53	6.18	47.97	74.00	-26.03	Peak

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





Condition : FCC PART 15\_18G PEAK 3m POL: HORIZONTAL EUT :

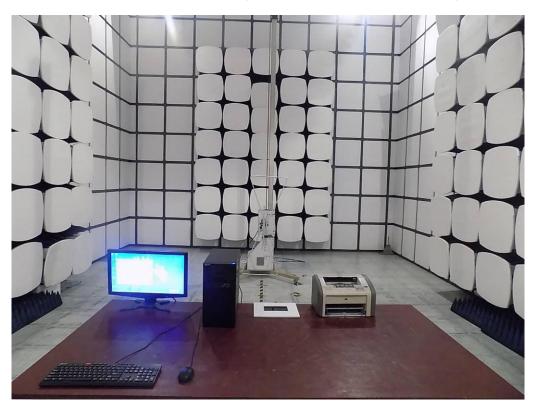
Model No : Test Mode : Fower : Test Engineer : Remark : Temp : 23C Hum : 56%

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
114	100.00	44.30	25.14	34.82	2.68	37.30	74.00	-36.70	Peak
217	775.00	45.21	24.92	34.83	3.38	38.68	74.00	-35.32	Peak
329	995.00	46.02	28.20	34.98	4.43	43.67	74.00	-30.33	Peak
443	375.00	42.42	30.34	34.51	5.42	43.67	74.00	-30.33	Peak
550	140.00	42.76	31.58	33.99	5.85	46.20	74.00	-27.80	Peak
659	975.00	42.42	32,75	33.71	6.40	47.86	74.00	-26.14	Peak

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

# 5. PHOTOGRAPH

5.1.Photos of Radiated Emission Test (In Semi Anechoic Chamber)

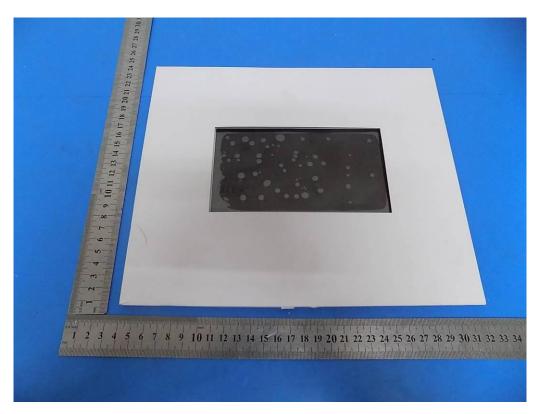




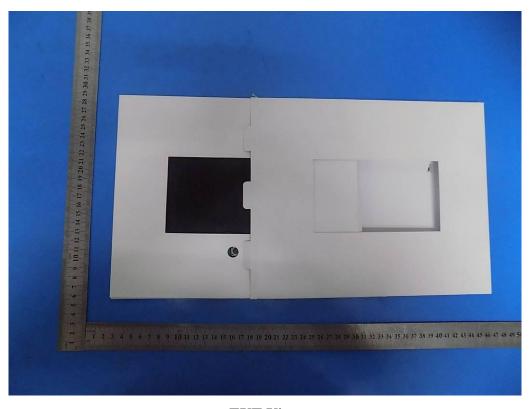
# 5.2.Photos of Power Line Conducted Emission Test



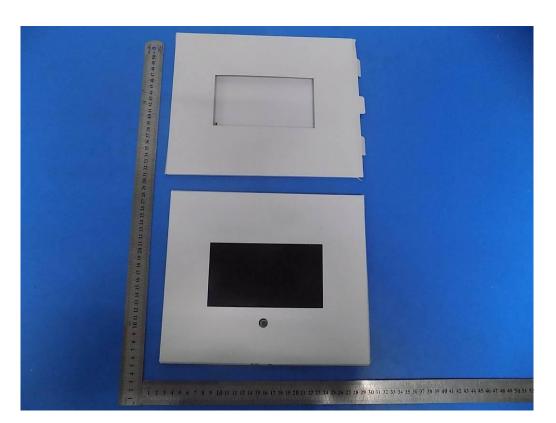
# 6. PHOTOS OF THE EUT



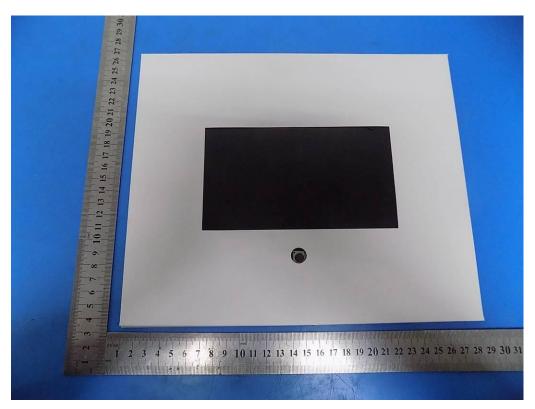
**EUT View** 



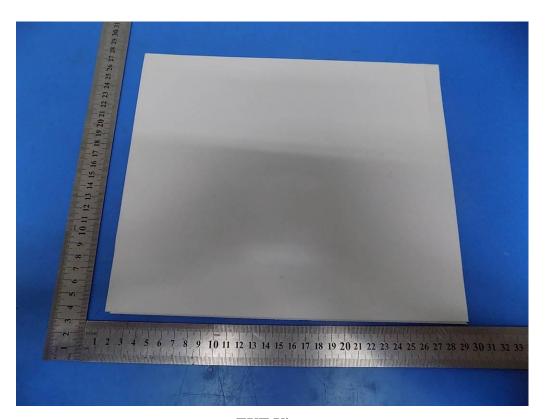
**EUT View** 



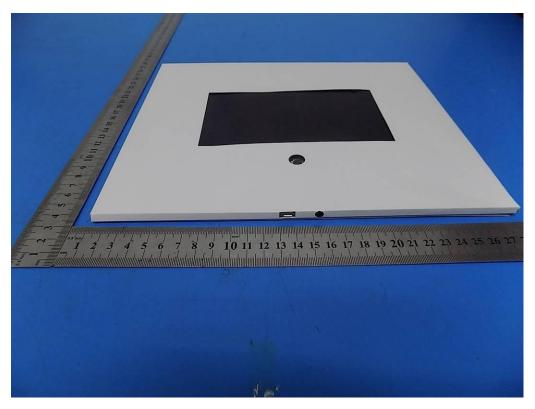
**EUT View** 



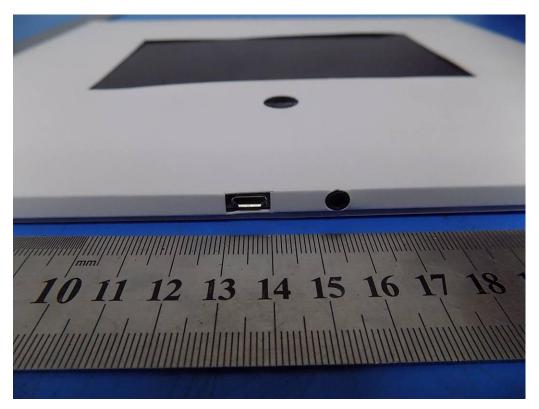
**EUT View** 



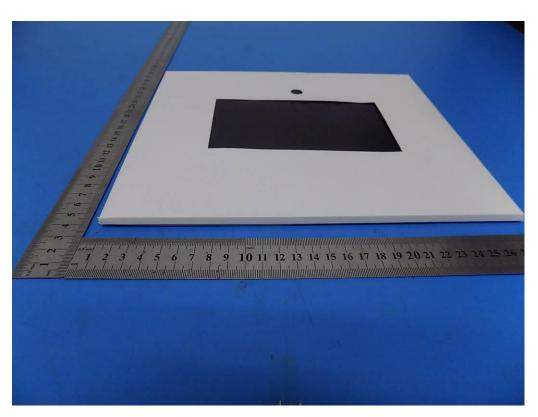
**EUT View** 



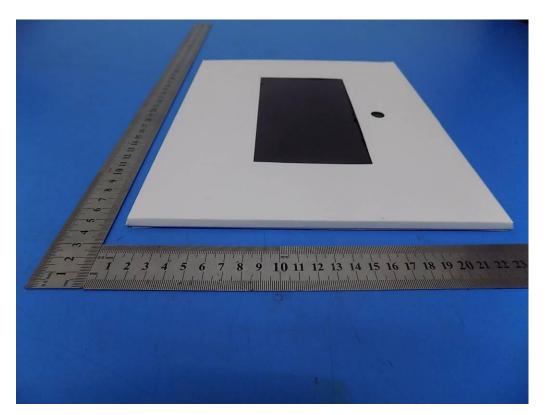
**EUT View** 



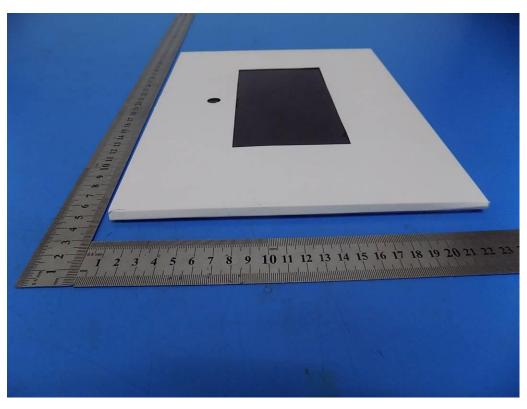
**EUT View** 



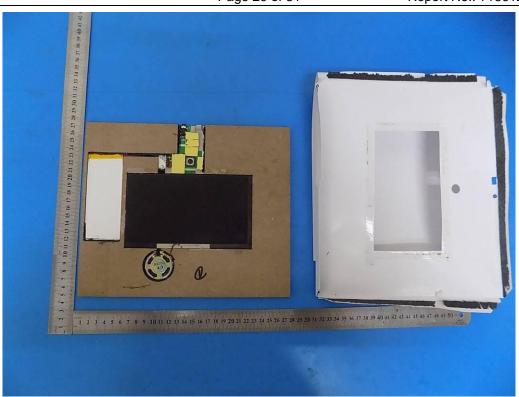
**EUT View** 



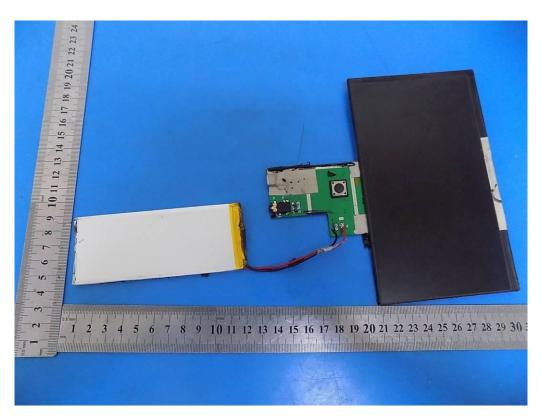
**EUT View** 



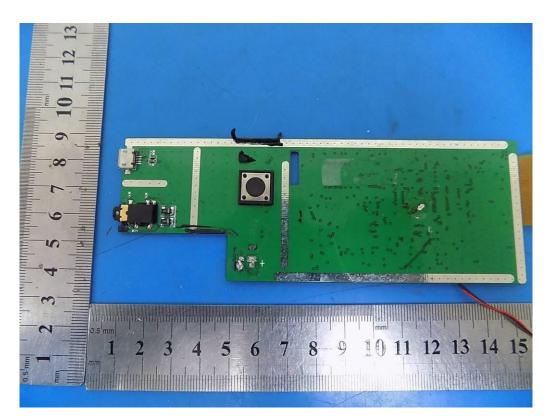
**EUT View** 



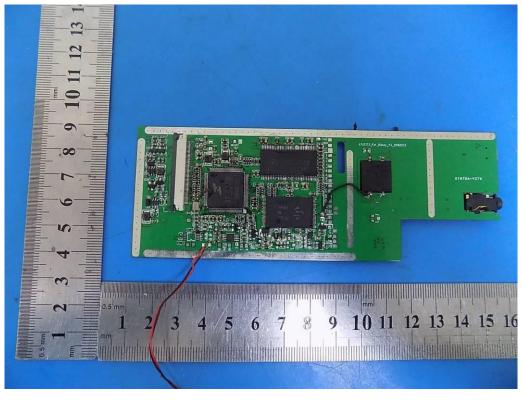
**EUT View** 



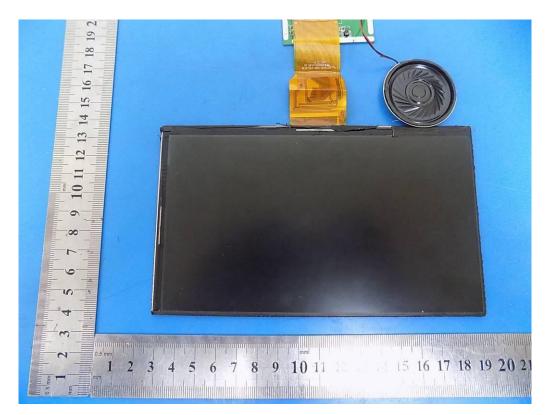
**EUT View** 



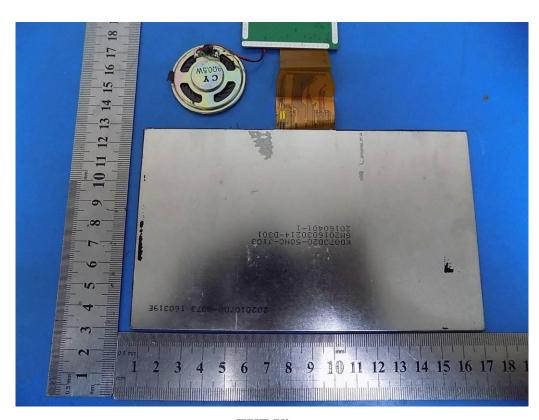
**EUT View** 



**EUT View** 



**EUT View** 



EUT View
----END OF REPORT----