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EMI TEST REPORT

On Model Name: 7” PAD

Model Number: 700P***, BCR76

Brand Name: N/A

Prepared for Shenzhen KTC Technology Co., Ltd.

FCC ID Number: ROU00004

According to FCC 47 CFR Part 15, Subpart B

Test Report #: SHE-1306-11006-FCC

Tested by:		ECMG	
	Engineer	Company Name	
Reviewed by:		ECMG	
	Senior Engineer	Company Name	
QC Manager:		ECMG	
	QC Manager	Company Name	
Test Report Released by:		July 10th, 2013	
	Swall Zhang	Date	

Test Location

Tests performed in a Certified ANSI Semi-Anechoic Chamber and Shielded Room.

Test Site Location:	*Shenzhen Academy of Metrology and quality Inspection.* *No.4, TongFa Road, Xili Street, Nanshan District, Shenzhen, China* *.*

Accreditation Bodies

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

- *CNAL – LAB Code: L0579*

SMQ EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

- *FCC – Registration No.: 806614*

SMQ EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission.The acceptance letter from the FCC was maintained in our files.

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Exhibit Type	File Description	File Name
Test Report	Test Report	ROU00004 _Test report.pdf
Operation Description	Technical Description	ROU00004_operation description.pdf
External Photos	External Photos	ROU00004_External Photos.pdf
Internal Photos	Internal Photos	ROU00004_Internal Photos.pdf
Block Diagram	Block Diagram	ROU00004_Block Diagram.pdf
Schematics	Circuit Diagram	ROU00004 _Schematics.pdf
ID Label/Location	Label and Location	ROU00004 _Label & Location.pdf
User Manual	User Manual	ROU00004_User Manual.pdf
Test setup photos	Test setup photos	ROU00004 _Test Setup Photos.pdf

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Opinions and Interpretations

This test report relates to the abovementioned equipment under test (EUT).Without the permission of ECMG Electronic Technical Testing Corp (Shenzhen) Test Lab this test report is not permitted to be duplic ated in extracts.This test report does not entitle to carry any test mark on this or similar products. The manufacturer has sole responsibility of continued compliance of the device.

Statement of Measurement Uncertainty

The data and results referenced in the document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities that can account for a nominal measurement error. Furthermore, component and process variability of devices similar to that tested may result in additional deviation.

Administrative Data

Test Sample	*: 7" PAD*
Model Numbers	*: 700P***, BCR76*
Model Tested	*: 700P21A*
Receipt Date	*: July 4th, 2013*
Date Tested	*: July 6th to 8th, 2013*
Applicant	*: Shenzhen KTC Technology Co., Ltd.*
Address	*Northern Wuhe Road,Gangtou,Buji, Longgang,Shenzhen,China*
Telephone	*: (86)-755-33688121*
Fax	*: (86)-755-33615329*
Manufacturer	*: Shenzhen KTC Technology Co., Ltd.*
Address	*Northern Wuhe Road, Gangtou, Buji, Longgang,Shenzhen,China*
Telephone	*: (86)-755-33688121*
Fax	*: (86)-755-33615329*
Factory	*: Shenzhen KTC Technology Co., Ltd.*
Address	*The workshop No#1，Northern Wuhe Road,Gangtou,Buji,Longgang,Shenzhen, China*
Telephone	*: (86)-755-33688121*
Fax	*: (86)-755-33615329*

EUT Description

Shenzhen KTC Technology Co., Ltd., model tested 700P21A (referred to as the EUT in this report) is an 7" PAD.

Technical specifications of the EUT are as belows:

Parameter		***Range***
Basic parameters	*Rated voltage*	*5VDC*
	Rated Current	*2A*
I/O Ports	*Power Jack*	*5V DC Power connector port*
	Mini USB Port	*USB devices may be connected via the USB port.*
	SD Card Slot	*SD card could be inserted in for picture/music/video files storage*
	HDMI	*High-Definition Multimedia Interface*
	Earphone Jack	*Earphone connector port*
Power Adapter #1	*Input*	*100-240V AC 50/60Hz,0.3A*
	Output	*5V DC,2.0 A*
	Model	*WEF0500200A1BA*
	Brand name& Manufacturer	*Mass Power*
Power Adapter #2	*Input*	*100-240V AC 50/60Hz,0.45A*
	Output	*5V DC,2000 mA*
	Model	*ASSA1A-050200*
	Brand name& Manufacturer	*AQUIL STAR PRECISION INDUSTRIAL(SHENZHEN)CO.,LTD*
Power Adapter #3	*Input*	*100-240V AC 50/60Hz,0.45A*
	Output	*5V DC,2000 m A*
	Model	*ASSA1E-050200*
	Brand name& Manufacturer	*AQUIL STAR PRECISION INDUSTRIAL(SHENZHEN)CO.,LTD*
Power Adapter #4	*Input*	*100-240V AC 50/60Hz,350mA Max.*
	Output	*5V DC,2.0 A*
	Model	*EP08-050200EUEZ*
	Brand name& Manufacturer	*Shenzhen Everest Electronics Co., Ltd.*

NOTE:

1. *For more detailed informations or features please refer to user's manual of EUT.*
2. *Pre-Scan has been conducted to determine the worst-case from all possible combinations between available power adapter, the worst-case power adapter #1(Mass Power) was selected for the all testing.*

EUT model Derived

*700P***,BCR76 model designations as follows:*

700: express screen size is 7 inches;

"P": express PAD;

The first "": can be 0-9,express various front panel style;*

The second "": can be 0-9,express various rear cover style;*

The third "": can be A-Z,express various surface frame color.*

Model BCR76 is identical to model 700P21A except for brand name.

Model 700P21A was selected for the final testing.

Test Mode Justification

The EUT is a portable device that has three orientations; therefore, X, Y and Z orientations have been investigated, and the worst case was found to be at Y position.

Pre-scan has been conducted to determine the worst-case from all possible combinations between available operation mode.the following mode were selected for the final testing:

For connected to PC mode:
Connected the EUT to PC by an USB cable,an exercise software which "Winthrax.EXE" runs on windows XP system and control EUT operating on an exchange data mode and measured it.

For TF card Playing Mode:
Let EUT runs on TF Card playing mode and measured it.

EUT Exercise Software

No test sofware support this test.

Equipment Modification

Any modifications installed previous to testing by Shenzhen KTC Tech nology Co., Ltd. will be incorporated in each production model sold or leased in United States.

There were no modifications installed by ECMG Electronic Technical Tes ting Corp (Shenzhen). Test personnel.

Test Summary

The Electromagnetic Compatibility requirements on model 700P21A for this test are stated below. All results listed in this report relate exclusively to this above-mentioned model as the Equipment under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

Emission Tests				
Specifications	***Description***	***Test Results***	***Test Point***	***Remark***
FCC Part 15.107 ANSI C63.4 -2009	*Conducted Emission*	*Passed*	*AC Input Port*	*Attachment 1*
FCC Part 15.109 ANSI C63.4 -2009	*Radiated Emission*	*Passed*	*Enclosure*	*Attachment 2*

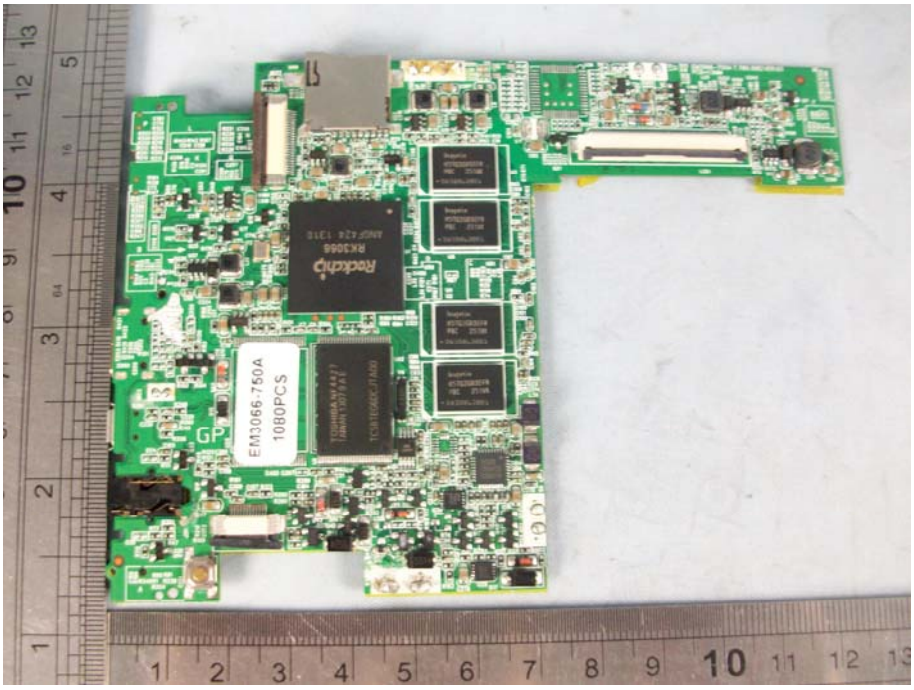
EUT Sample Photos for model 700P21A

EUT-Front View

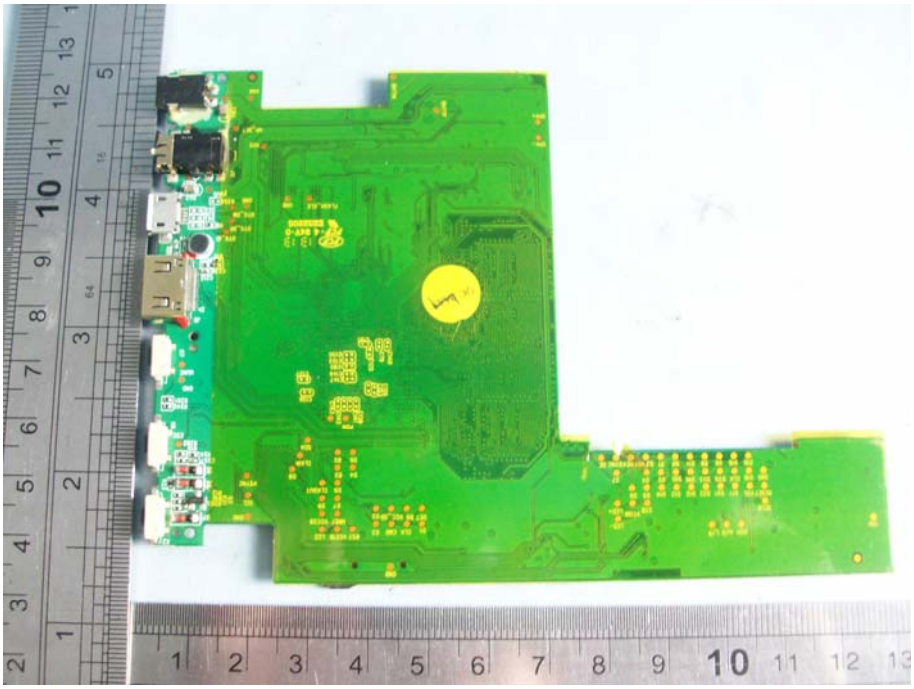
EUT-Rear View

EUT-Side View

EUT-Uncovered View



Main board –Top View



Main board –Bottom View

Power Adaptor View (Manufacturer: Mass Power)

Power Adaptor View (Manufacturer: AQUIL)

Power Adaptor View (Manufacturer: AQUIL)

Power Adaptor View (Manufacturer: Everest)

Test System Details

EUT			
Model Number:	700P***,BCR76		
Model Tested:	700P21A		
Description:	7" PAD		
Input:	DC5V		
Manufacturer:	Shenzhen KTC Technology Co., Ltd.		
Support Equipment			
Description	**Model Number**	**Serial Number**	**Manufacturer**
LCD TV	KLV-32BX320	---	SONY
PC Host	Think Centre M57e	---	Lenovo
Monitor	9227-AE1	VITCW36	Lenovo
Mouse	MO28UOL	44AC107	Lenovo
Keyboard	KU-0225	0683207	Lenovo
Printer	K30141	---	Canon
Modem	ZXDSL 931 Series	---	ZTE

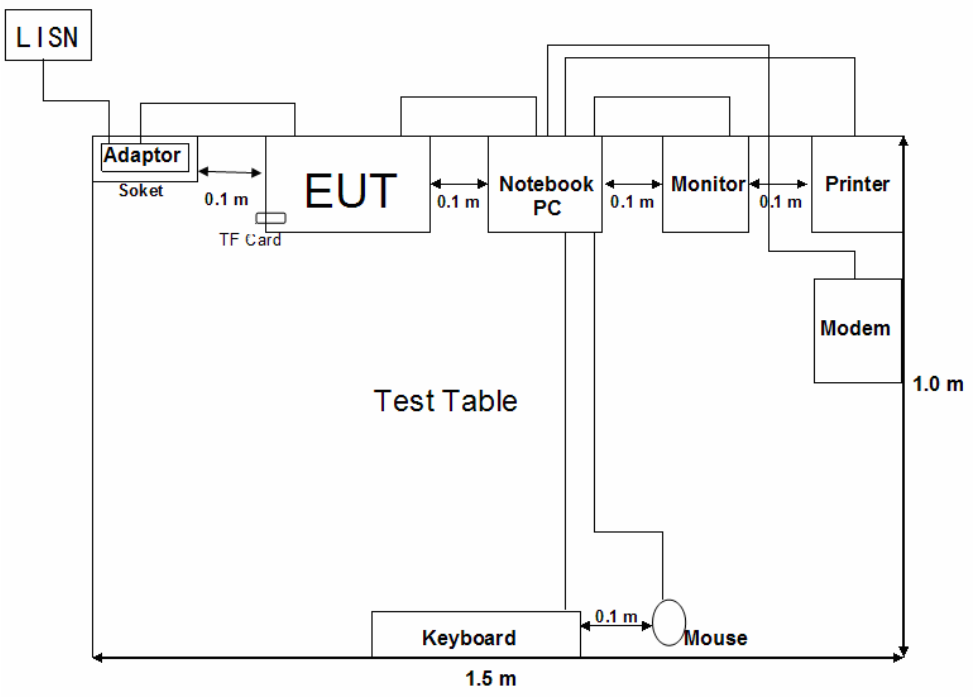
Continue on to next page…

Cable Description					
Description	**From**	**To**	**Length (Meters)**	**Shielded (Y/N)**	**Ferrite (Y/N)**
Mouse Cord	Mouse	Plug	1.2	N	Y
Keyboard Cord	keyboard	Plug	1.2	N	Y
Printer cord	Printer	PC	1.2	N	Y
VGA Cable	Monitor	PC	1.2	Y	Y
HDMI Cable	EUT	LCD TV	1.2	Y	Y
USB Cord	EUT	PC	1.2	Y	Y
Headphone Cable	EUT	Headphone	1.2	N	N
Cord of Power Adapter #1	EUT	Plug	1.8	N	Y
Cord of Power Adapter #2	EUT	Plug	1.8	N	N
Cord of Power Adapter #3	EUT	Plug	1.8	N	N
Cord of Power Adapter #4	EUT	Plug	1.8	N	N
Note:The "EUT" means "7" PAD".					

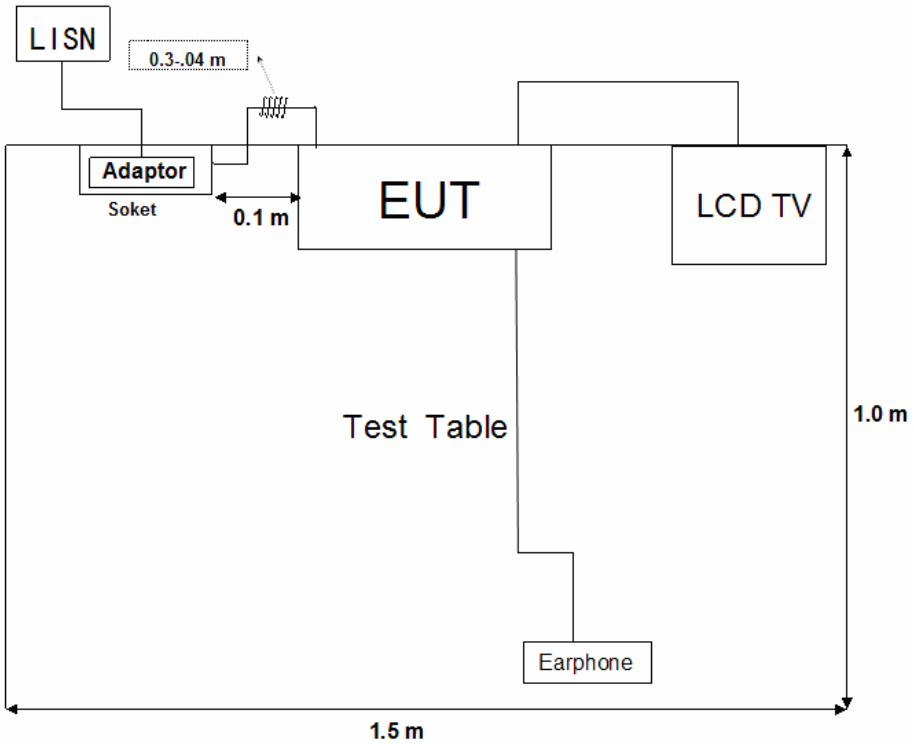
NOTE:The EUT has been tested as an independent unit together with other necessary accessories or support units. The above support units or accessories were used to form a representative test configuration during the test tests.

Configuration of Tested System

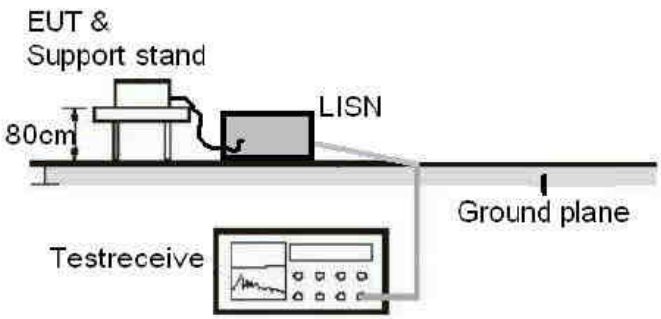
Connected to PC:



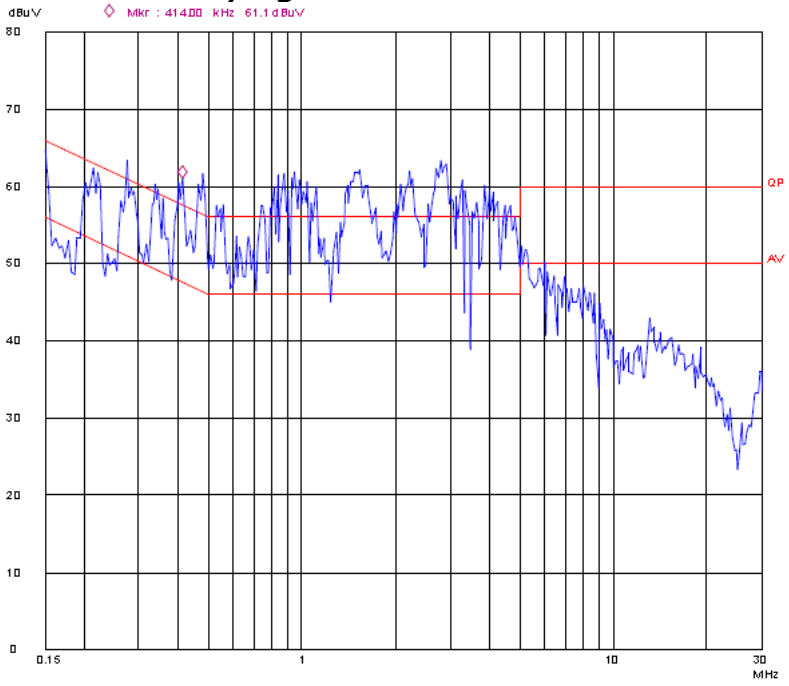
TF Card playing mode:



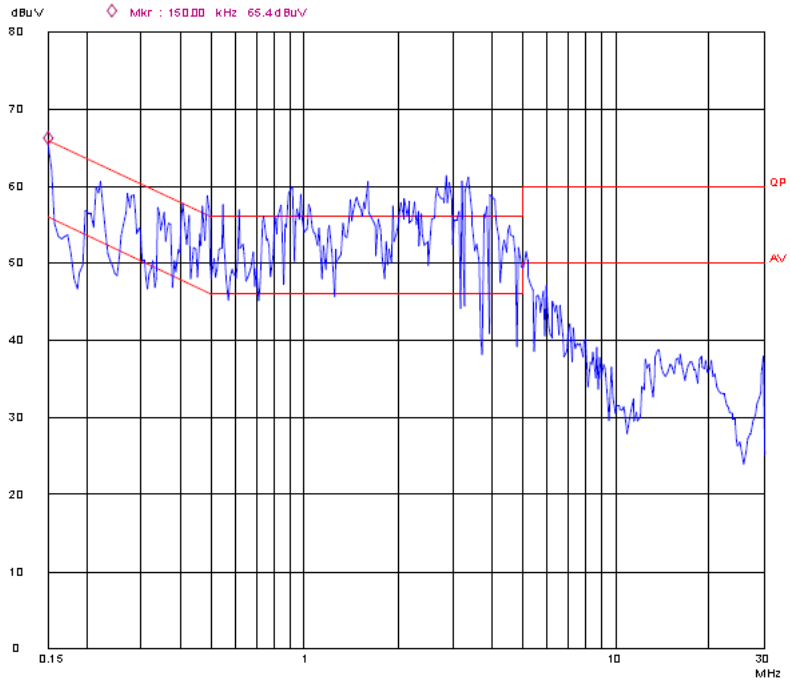
ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Shenzhen KTC Technology Co., Ltd.	**TEST STANDERD:**	FCC Part 15, Subpart B, Section 15.107
MODEL NUMBERS:	700P***,BCR76	**PRODUCT:**	7" PAD
MODEL TESTED:	700P21A	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	23°C	**HUMIDITY:**	51%
ATM PRESSURE:	103kPa	**GROUNDING:**	None
TESTED BY:	SEWEN GUO	**DATE OF TEST:**	June 25th, 2013
TEST REFERENCE:	ANSI C63.4 -2009		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4 -2009 for conduc ted emissions. The measurement was using a AMN on each line and an EMI recei ver peak scan was made at the frequency measurement range. The six highest significant peaks were then marked, and these signals were then quasi-peaked and averaged.The frequency range investigated was from 150KHz to 30MHz.		
TEST SET UP			
TESTED RANGE:	150kHz to 30MHz		
TEST VOLTAGE:	AC 120V/60Hz		
RESULTS:	The EUT meets the requirements of test reference for Conducted Emissions. The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.		
M. UNCERTAINTY:	Freq. $\pm$ 2x10^{-7} x Center Freq., Amp $\pm$ 2.6 dB		

TF Card Palying mode:

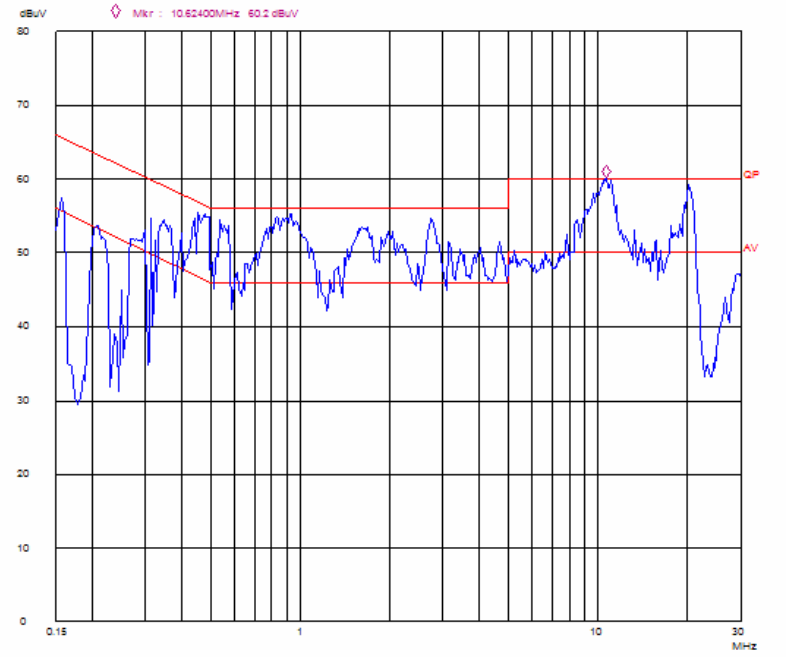


Line L Conducted Emission Graph

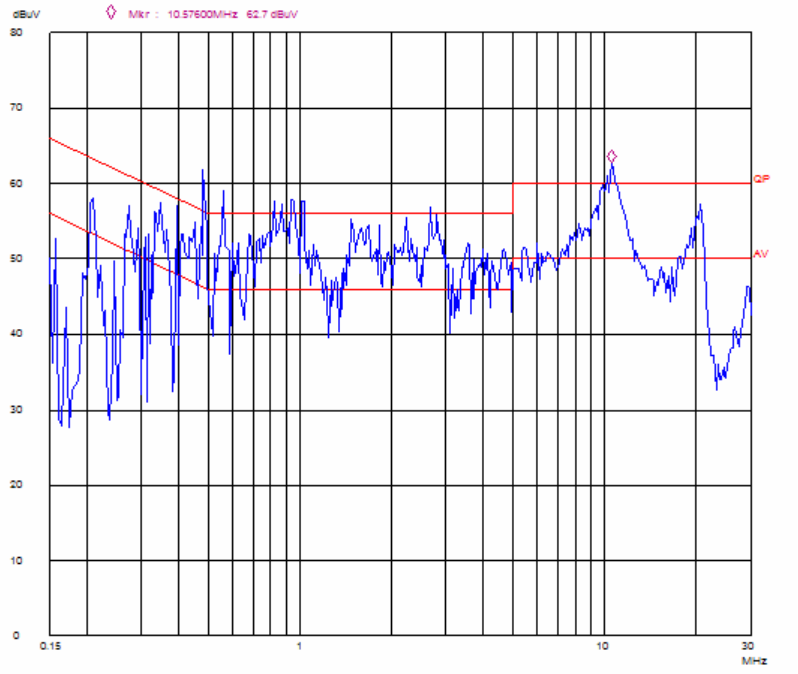


Line N Conducted Emission Graph

Connected to PC :



Line L Conducted Emission Graph



Line N Conducted Emission Graph

Test Data:

Lines	Frequency (MHz)	Corrected QP Level (dBuV)	Limits QP (dBuV)	Margin QP (dB)	Frequency (MHz)	Corrected AV Level (dBuV)	Limits AV (dBuV)	Margin QP (dB)
TF Card Playing Mode								
L	0.482	54.7	56.3	-1.6	0.482	40.3	46.3	-6.0
L	0.946	54.0	56	-2.0	0.946	35.0	46	-11.0
L	2.862	53.2	56	-2.8	2.862	35.8	46	-10.2
N	0.487	54.9	56.4	-1.5	0.487	40.7	46.4	-5.7
N	0.906	53	56	-3.0	0.906	34	46	-12.0
N	1.470	52.6	56	-3.4	1.470	35.4	46	-10.6
Connected to PC Mode								
L	0.494	49.0	56.1	-7.1	0.494	39.0	46.1	-7.1
L	10.624	54.9	60	-5.1	10.624	42.2	50	-7.8
L	20.060	51.4	60	-8.6	20.060	43.4	50	-6.6
N	0.484	51.7	56.3	-4.6	0.484	32.3	46.3	-14.0
N	0.934	46.9	56	-9.1	0.934	25.2	46	-20.8
N	10.576	55.7	60	-4.3	10.576	39.7	50	-10.3

Note :

1. *All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not use.*
2. *"QP" means "Quasi-Peak" values, "AV" means "Average" values.*
3. *The other emissions levels are too low against official limits that are not be recorded.*

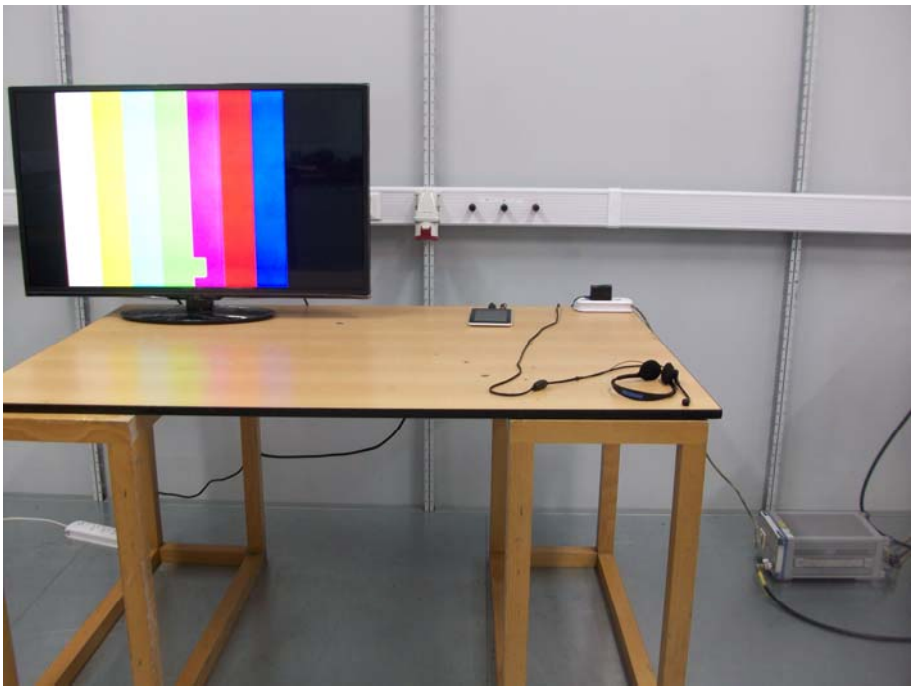
Test Equipment List:

Test Equipment	*Model No.*	*Manufacturer*	*Serial No.*	*Last Cal.*	*Cal. Due*
EMI test receiver	*ESCS30*	*Rohde & Schwarz*	*SB2603*	*2012-07-22*	*2013-07-21*
AMN	*ESH2-Z5*	*Rohde & Schwarz*	*SB3321*	*2012-07-22*	*2013-07-21*
Shielded Room	*RF-1 9*4.5*3(m)*	*EMC*	*A9901141*	*2012-07-22*	*2013-07-21*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST).					

TESTED BY: _____ ***ECMG***
ENGINEER ***COMPANY NAME***

REVIEWED BY: _____ ***ECMG***
SENIOR ENGINEER ***COMPANY NAME***

EUT Model: 700P21A



Conducted Emission Test Set-up -TF Card Playing Mode

Conducted Emission Test Set-up -Connected to PC

ATTACHMENT 2 – RADIATED EMISSION MEASUREMENT

CLIENT:	Shenzhen KTC Technology Co., Ltd.	**TEST STANDERD:**	FCC Part 15,Subpart B, Section 15.109
MODEL NUMBERS:	700P***,BCR76	**PRODUCT:**	7" PAD
EUT MODEL:	700P21A	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	23°C	**HUMIDITY:**	49%RH
ATM PRESSURE:	103.0kPa	**GROUNDING:**	None
TESTED BY:	Sewen Guo	**DATE OF TEST:**	June 25th, 2013
TEST REFERENCE:	ANSI C63.4 -2009		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4 -2009 for radiated emissions. An EMI receiver peak scan was made at the frequency measurement range (pre-scan) in an Anechoic chamber.signal discrimination was then performed and the significant peaks marked.these peaks were then quasi-peaked in the frequency range of 30 MHz to 1GHz and average and peak in the frequency range of 1GHz to 10GHz at an full anechoic chamber. The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor are given as follows: FS= RA + AF + CF - AG Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain		
TEST MODE	TF Card playing mode&Connected to PC mode		
TESTED RANGE:	30MHz to 10GHz		
TEST VOLTAGE:	AC 120V/60Hz		
RESULTS:	The EUT meet the requirements of test reference for radiated emissions.The test results relate only to the equipment under test provided by client.		
CHANGES OR MODIFICATIONS:	There were no modifications installed by ECMG Electronic Technical Testing Corp (Shenzhen). Test personnel.		
M. UNCERTAINTY:	Freq. $\pm$ $2x10^{-7}$ x Center Freq., Amp $\pm$ 2.6 dB		

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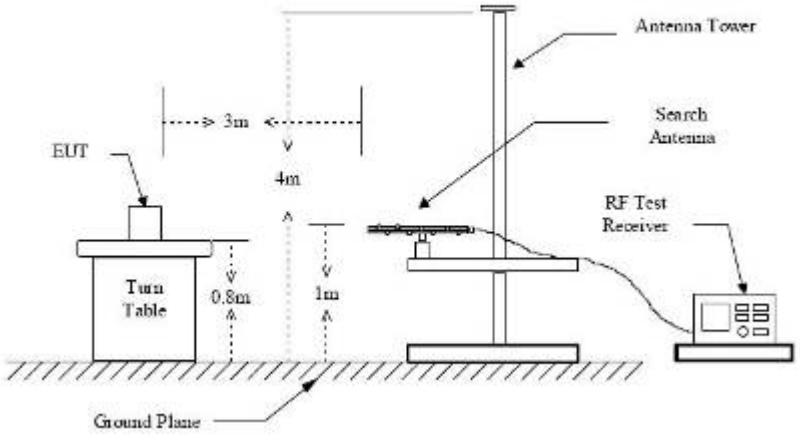
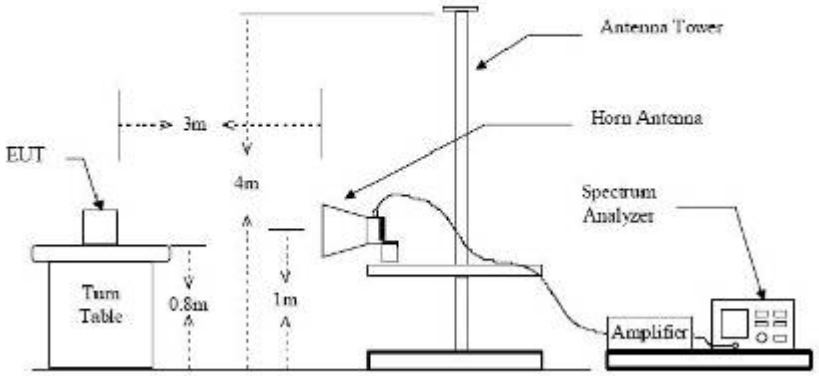
TEST SET-UP:	Figure 1 : Frequencies measured below 1 GHz configuration  Figure 2 : Frequencies measured above 1 GHz configuration 

15.109 Limits of Radiated Emission :

The field strength of radiated emissions at a distance of 3 meters shall not exceed the following values:

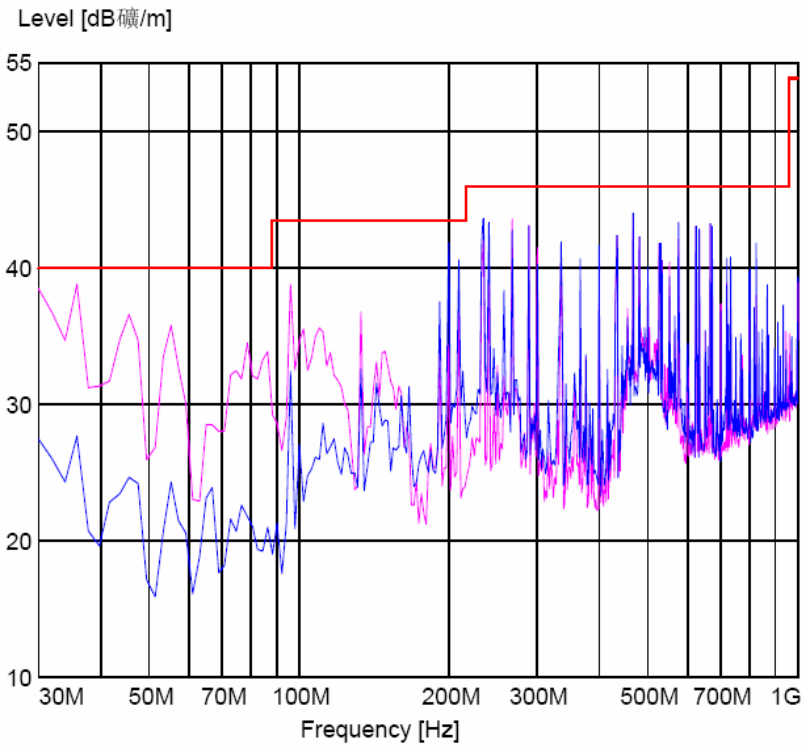
Frequency of Emission (MHz)	*Field Strength (μV/m)*	*Field Strength (dBμV/m)*
30 - 88	*100*	*40.0*
88 -216	*150*	*43.5*
216 - 960	*200*	*46.0*
Above 960	*500*	*54.0*

1) Emission Level dB (μV/m) = 20 log Emission Level (μV/m)

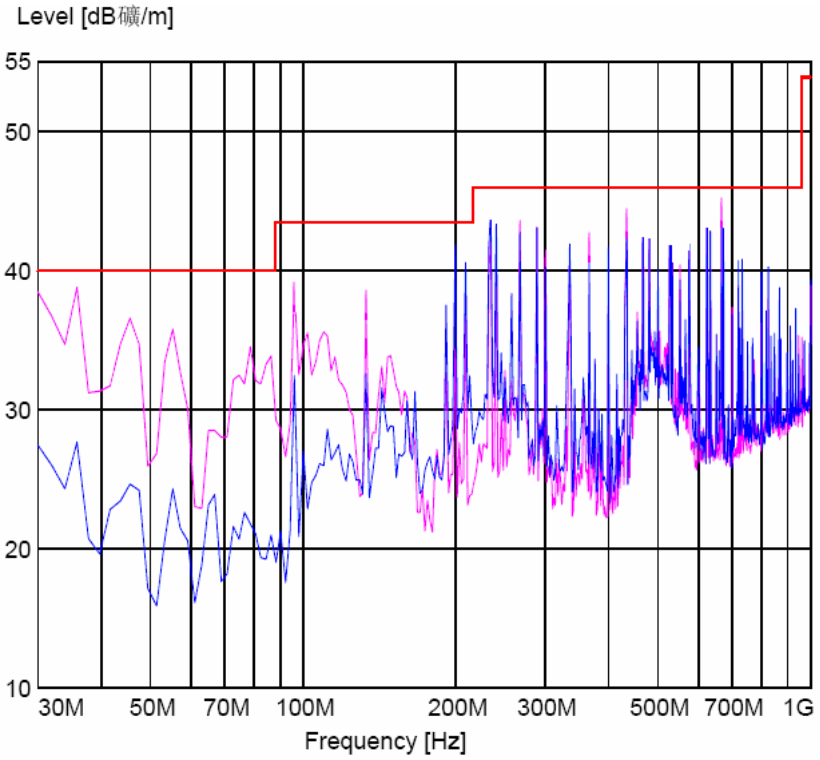
2) The tighter limit applies at the band edges.

3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

TF Card Playing Mode:



Radiated Emission Test Plot- Horizontal&Vertical



Radiated Emission Test Plot -Horizontal&Vertical

Test Data:

Below 1GHz:

Frequency [MHz]	*Antenna Polarization [V/H]*	*Corrected Reading [dBμV/m]*	*Delta, QP [dB]*	*3 Meters Limits [dBμV/m]*
TF Card Playing Mode				
35.010	*H*	*33.7*	*-6.3*	*40*
96.028	*H*	*38.3*	*-5.2*	*43.5*
480.325	*H*	*43.6*	*-2.4*	*46*
35.010	*V*	*38.1*	*-1.9*	*40*
270.483	*V*	*43.0*	*-3.0*	*46*
480.325	*V*	*41.7*	*-4.3*	*46*
Connected to PC mode				
35.010	*H*	*34.7*	*-5.3*	*40*
96.028	*H*	*39.3*	*-4.2*	*43.5*
247.025	*H*	*43.6*	*-2.4*	*46*
35.010	*V*	*38.1*	*-1.9*	*40*
425.820	*V*	*42.3*	*-3.7*	*46*
680.320	*V*	*43.7*	*-2.3*	*46*

Note:All readings are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 60 s sweep time. A video filter was not used.

Above 1GHz:

TF Card Playing Mode:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Preamp Factor (dB)	Reading Level (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization (H/V)
Peak Measurement								
1.070	1.39	23.9	-33.6	-13.29	45.60	74	-28.4	H
1.190	1.41	24.2	-33.6	-13.51	45.70	74	-28.3	H
1.330	1.58	24.5	-33.6	-12.88	46.80	74	-27.2	H
1.060	1.39	23.9	-33.6	-9.99	48.90	74	-25.1	V
1.190	1.41	24.2	-33.6	-4.11	55.10	74	-18.9	V
1.330	1.58	24.5	-33.6	-10.28	49.40	74	-24.6	V
Average Measurement								
1.130	1.41	24.0	-33.6	-27.61	31.40	54	-22.6	H
1.330	1.58	24.5	-33.6	-29.68	30.00	54	-24.0	H
1.670	1.82	27.1	-33	-29.22	32.70	54	-21.3	H
1.130	1.41	24.0	-33.6	-25.41	33.60	54	-20.4	V
1.400	1.61	25.1	-33.6	-24.81	35.50	54	-18.5	V
1.580	1.76	26.7	-33.6	-28.46	33.60	54	-20.4	V

Note:

1. *The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level =Reading Level + Antenna Factor + Cable Loss-Preamplifier Factor.*
2. *The limits shown are based on Peak value and Average value detector above 1GHz,the bandwidth of Test Receiver was set at 1MHz above 1GHz.*
3. *The other emission levels are 20dB below the official limits that are not reported.*

Above 1GHz:

Connected to PC:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Preamp Factor (dB)	Reading Level (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Polarization (H/V)
Peak Measurement								
1.070	1.39	23.9	-33.6	-12.99	45.90	74	-28.1	H
1.130	1.41	24.0	-33.6	-12.41	46.60	74	-27.4	H
1.520	1.71	26.1	-33.6	-20.91	40.50	74	-33.5	H
1.200	1.46	24.7	-33.6	-6.16	53.60	74	-20.4	V
1.330	1.58	24.5	-33.6	1.92	61.60	74	-12.4	V
2.130	2.01	28	-33	-11.61	51.40	74	-22.6	V
Average Measurement								
1.130	1.41	24.0	-33.6	-25.31	33.70	54	-20.3	H
1.370	1.60	24.8	-33.6	-28.90	31.10	54	-22.9	H
1.630	1.82	27.1	-33	-29.32	32.60	54	-21.4	H
1.300	1.52	24.2	-33.6	-24.32	35.00	54	-19.0	V
1.360	1.60	24.8	-33.6	-24.10	35.90	54	-18.1	V
1.730	1.87	26.8	-33.0	-25.77	35.90	54	-18.1	V

Note:

1. *The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows: Emission Level =Reading Level + Antenna Factor + Cable Loss-Preamplifier Factor.*
2. *The limits shown are based on Peak value and Average value detector above 1GHz,the bandwidth of Test Receiver was set at 1MHz above 1GHz.*
3. *The other emission levels are 20dB below the official limits that are not reported.*

Test Equipment List:

Test Equipment	*Model No.*	*Manufacturer*	*Serial No.*	*Last Cal.*	*Cal. Due Date*
EMI Test Receiver	*ESI26*	*R&S*	*SB3436*	*2013-01-25*	*2014-01-24*
Bilog Antenna	*CBL6112B*	*Chase*	*SB3440*	*2013-01-25*	*2014-01-24*
Horn Antenna	*HF906*	*Rohde& Schwarz*	*SB3435*	*2013-01-25*	*2014-01-24*
Chamber	*9X6X6*	*Albatross Projects*	*N/A*	*2013-03-21*	*2015-03-20*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated and traceable to the National Institute of Standards and Technology (NIST)					

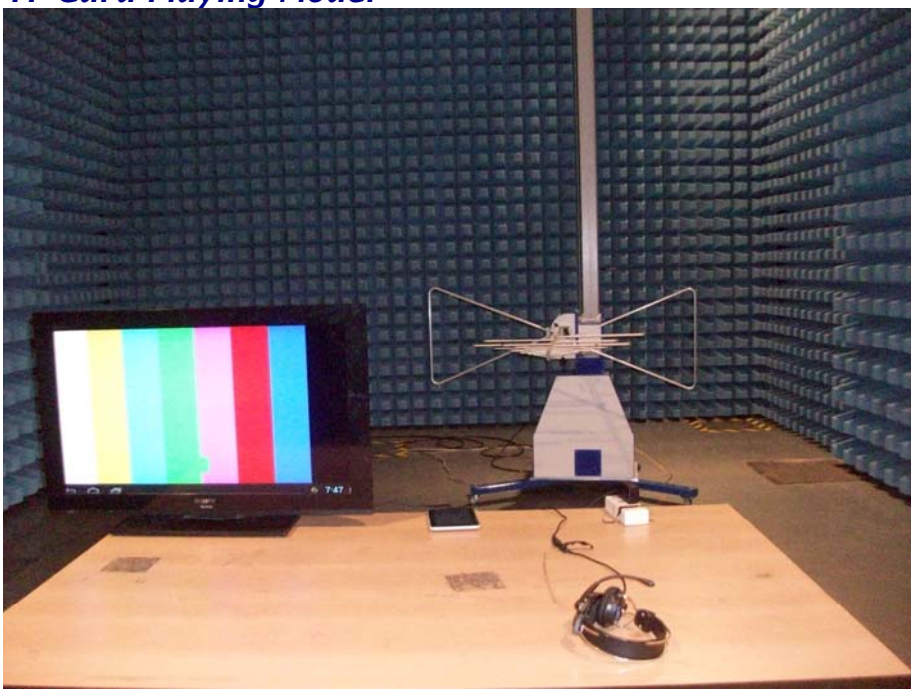
TESTED BY:  ***ECMG***

ENGINEER ***COMPANY NAME***

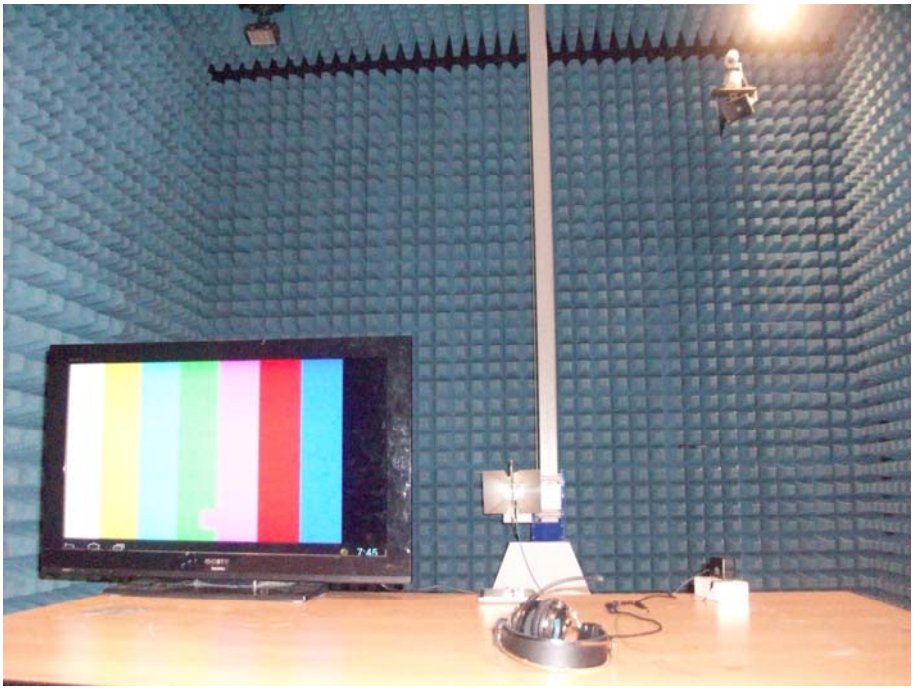
REVIEWED BY:  ***ECMG***

SENIOR ENGINEER **COMPANY NAME**

EUT Model: 700P21A
TF Card Playing Mode:



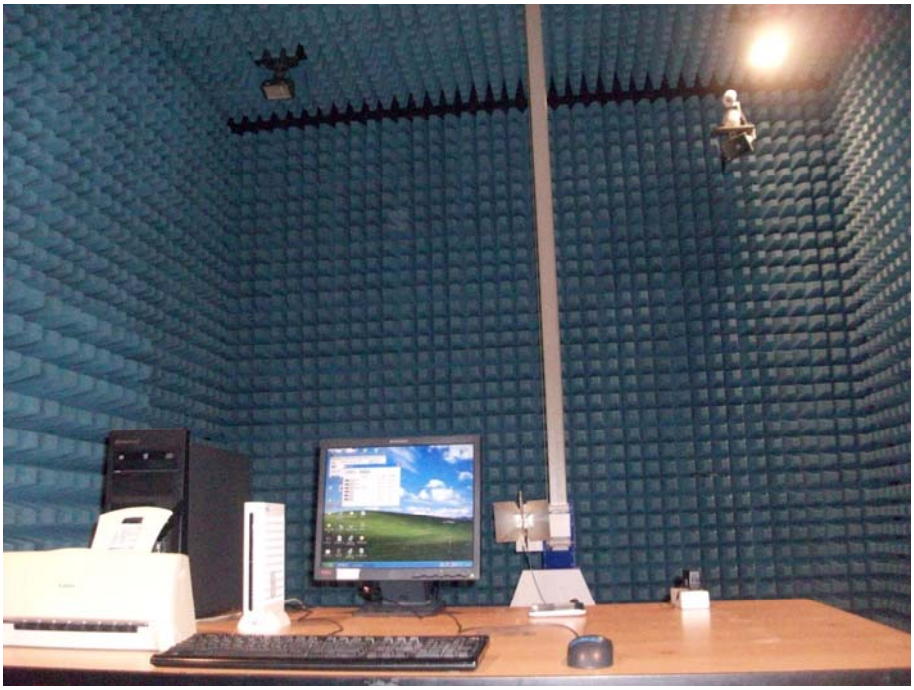
Radiated Emission Test Set-up -below 1GHz



Radiated Emission Test Set-up-Above 1GHz

Connected to PC :

Radiated Emission Test Set-up-Below 1GHz



Radiated Emission Test Set-up –Above 1GHz