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EMI TEST REPORT

On Model Name: Analog Telephone Adapter

Model Number: HT702

Brand Name: Grandstream

Prepared for Grandstream Networks, INC

FCC ID Number: YZZHT70X

According to FCC 47 CFR Part 15(2012), Subpart B

Test Report #: SHE-1212-10929-FCC

Tested by: Daomen Galanz
Daomen /Engineer Company Name

Reviewed by: Jawen Yin ECMG
Jawen Yin/ Senior Engineer Company Name

QC Manager: Swall Zhang ECMG
Swall Zhang/QC Manager Company Name

Test Report Released by: Swall Zhang January 10th, 2013
Swall Zhang Date

Test Location

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

Test Site Location	*: Galanz*
	25 South Ronggui Rd.,Shunde, Foshan,Guangdong, China
Tel	*: (86)-757-23612785*
Fax	*: (86)-757-23612537*

Test Facility

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

- *CNAL – LAB Code: L2244*

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

- *FCC – Registration No.: 580210*

Galanz 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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List Attached Files

Exhibit Type	File Description	File Name
Test Report	Test Report	YZZHT70X _Test report.pdf
Operation Description	Technical Description	YZZHT70X_operation description.pdf
External Photos	External Photos	YZZHT70X_External Photos
Internal Photos	Internal Photos	YZZHT70X_Internal Photos
Block Diagram	Block Diagram	YZZHT70X_Block Diagram.pdf
Schematics	Circuit Diagram	YZZHT70X _Schematics.pdf
ID Label/Location	Label and Location	YZZHT70X _Label & Location.pdf
User Manual	User Manual	YZZHT70X _User Manual.pdf
Test set-up photos	Test set-up photos	YZZHT70X _Test Set-up Photos

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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 duplicated 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 dAnalog Telephone Adapter 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 DAnalog Telephone Adapter

Test Sample	*: Analog Telephone Adapter*
Model Numbers	*: HT702*
Model Tested	*: HT702*
Receipt Date	*: December 26th, 2012*
Date Tested	*: December 27th, 2012 to January 6th, 2013*
Applicant	*: Grandstream Networks, INC*
Address	*5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*
Telephone	*: (86)-755-26014600*
Fax	*: (86)-755-26014601*
Manufacturer	*: Grandstream Networks, INC*
Address	*5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*
Telephone	*: (86)-755-26014600*
Fax	*: (86)-755-26014601*
Factory	*: Grandstream Networks, INC*
Address	*5F, Bldg #1, No.2 Kefa Rd., Science & Technology Park, Shenzhen, China*
Telephone	*: (86)-755-26014600*
Fax	*: (86)-755-26014601*

EUT Description

Grandstream Networks, INC., model tested HT702 (referred to as the EUT in this report) is an Analog Telephone Adapter.

Technical specifications of the EUT are as belows:

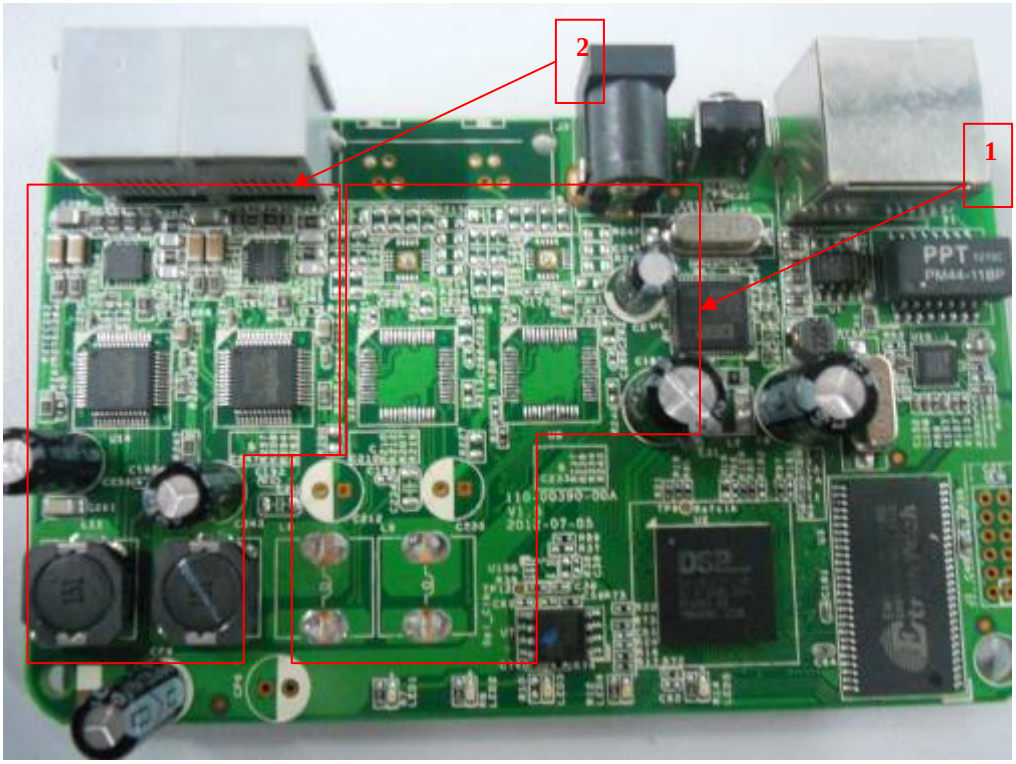
Parameter		***Range***
Basic parameters	*Rated voltage*	*12VDC*
	Rated Current	*0.5A*
I/O Ports	*Power Cable*	*Power adapter connection*
	INTERNET Port (RJ-45)	*Connect to the internal LAN network, pc or router.*
	RESET	*Factory Reset button. Press for 7 seconds to reset factory default settings.*
	PHONE1 (RJ-11)	*FXS port to be connected to analog phones / fax machines.*
	PHONE2 (RJ-11)	*FXS port to be connected to analog phones / fax machines.*
Adapter #1 (Mass power)	*Input*	*100-240VAC 50/60Hz 0.18A*
	Output	*12VDC,0.5A*
	Model	*SDF1200050A1BB*
	Brand name	*Mass power*
Adapter #2 (UE power)	*Input*	*100-240VAC 50/60Hz 0.2A*
	Output	*12VDC,0.5A*
	Model	*UE06L8-120050SPAU*
	Brand name	*UE power*

NOTE: For more detailed informations or features please refer to user's manual of EUT.

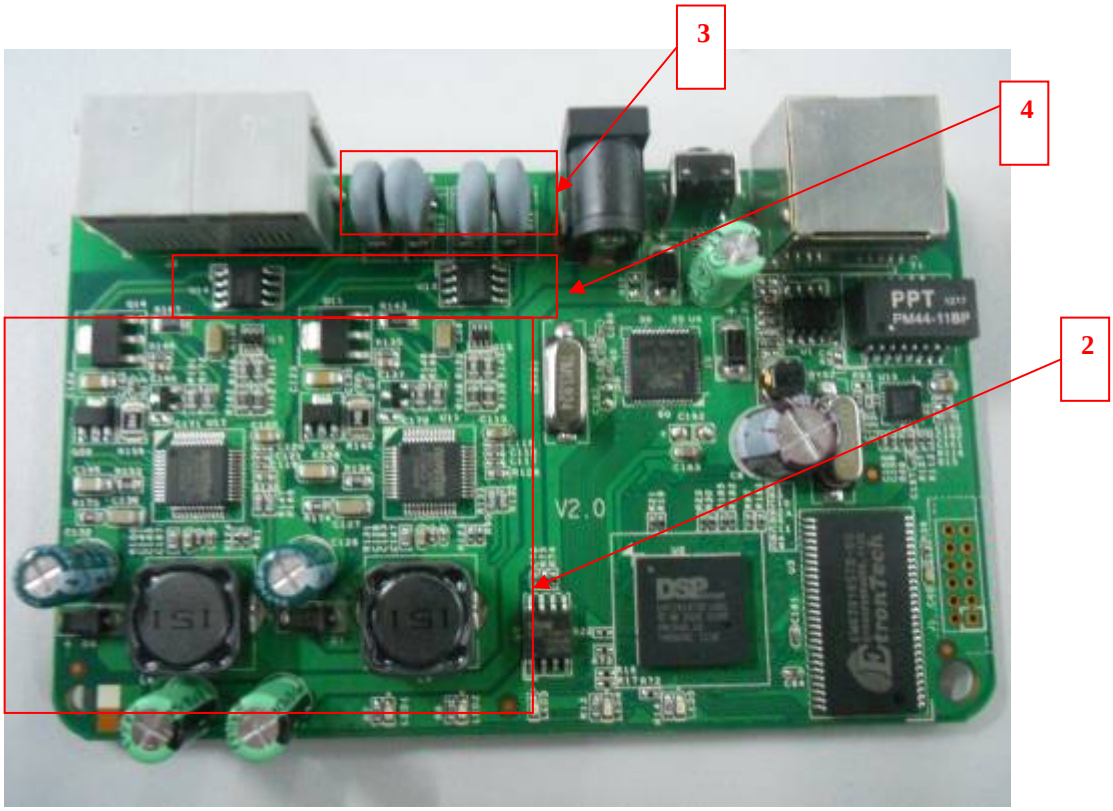
EUT Model derived

The previous model of HT702(Version 1.5A) and new model of HT702 (Version 2.0A) are the same product.Changes between these two models are as belows:

1. *Upgraded mainboard hardware version number from Version 1.5A to Version 2.0A;*
2. *Changed partial PCB layout, for example,we deleted two unused SLIC circuits (see Arrow 1) and replaced two integrated chips (N681622YG) by discrete circuit for better performance (see Arrow2);*
3. *Added four 50 ohm PTCs (see Arrow 3) and two High Voltage protector ICs for TISP61089 (See Arrow 4).*
4. *Anything else are the same as before.*



Previous mainboard (HT702 V1.5)–Top View



New mainboard (HT702 V2.0)–Top View

Test Summary

The Electromagnetic Compatibility requirements on model HT702 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 -2003	*Conducted Emission*	*Passed*	*AC Input Port*	*Attachment 1*
FCC Part 15.109 ANSI C63.4 -2003	*Radiated Emission*	*Passed*	*Enclosure*	*Attachment 2*

Test Mode Justification

Pre-scan has been conducted to determine the worst-case from all possible combinations between available operation modes. The following mode was chosen for the final test as described below.

Connected to PC mode:
Connected an notebook PC to INTERNET port of the EUT by an RJ-45 signal line and ping "192.168.0.162 –t" to EUT,then connected two phones to PHONE1 and PHONE2 port of the EUT and established a call link between them and measured it.

EUT Exercise Software

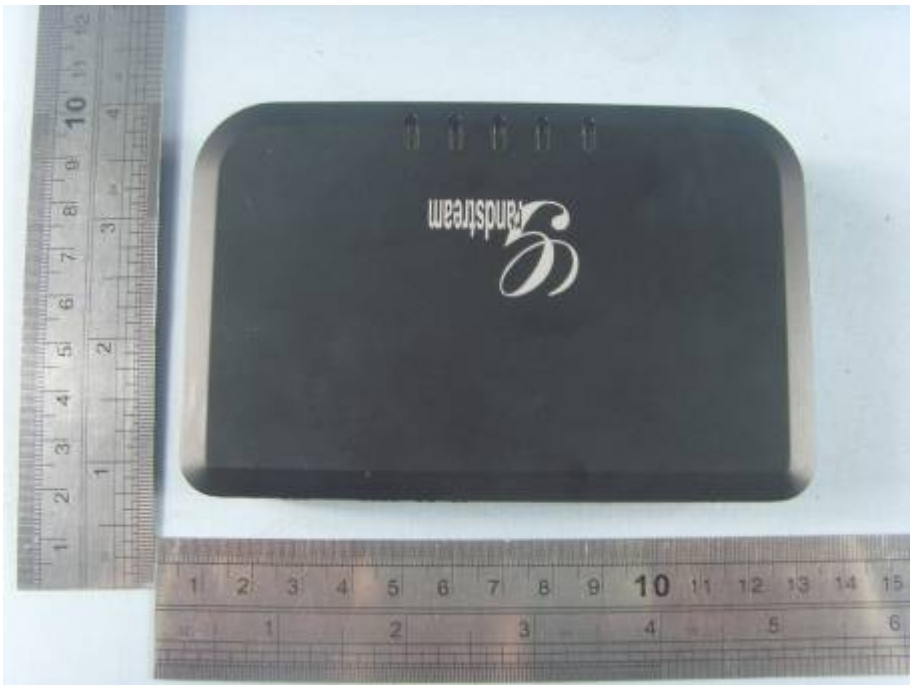
No test sofware support this test.

Equipment Modification

Any modifications installed previous to testing by Grandstream Networks, INC., will be incorporated in each production model sold or leased in United States.

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

EUT Sample Photos for model HT702

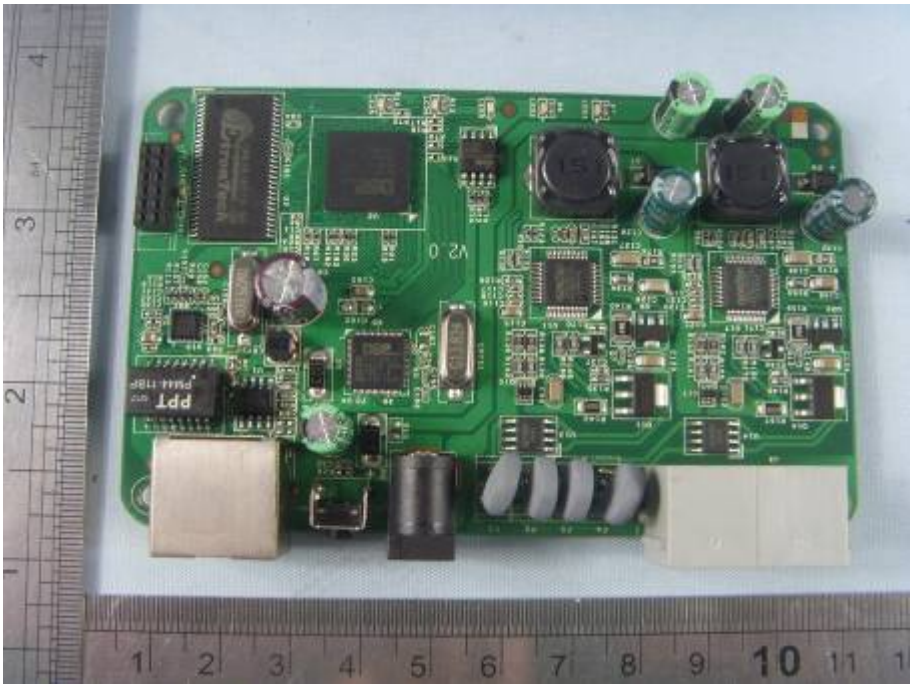


EUT- Front&Top View

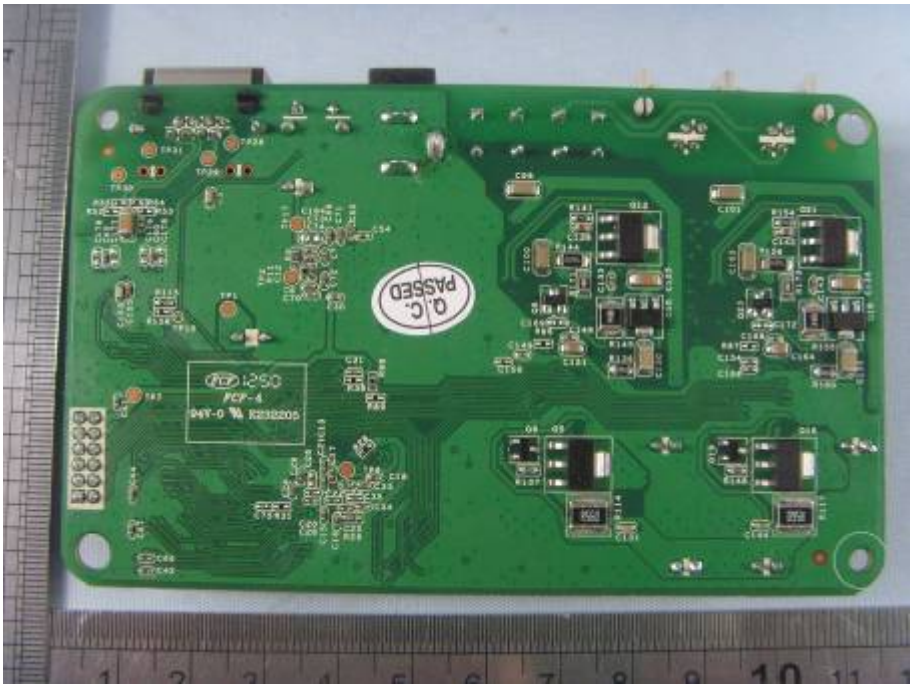
EUT- Rear View

I/O Ports view

EUT-Uncovered View



Mainboard- Top View



Mainboard- Bottom View

Power Adaptor #1 View (Manufacturer: Mass Power)

Power Adaptor #2 View (Manufacturer: UE power)

Test System Details

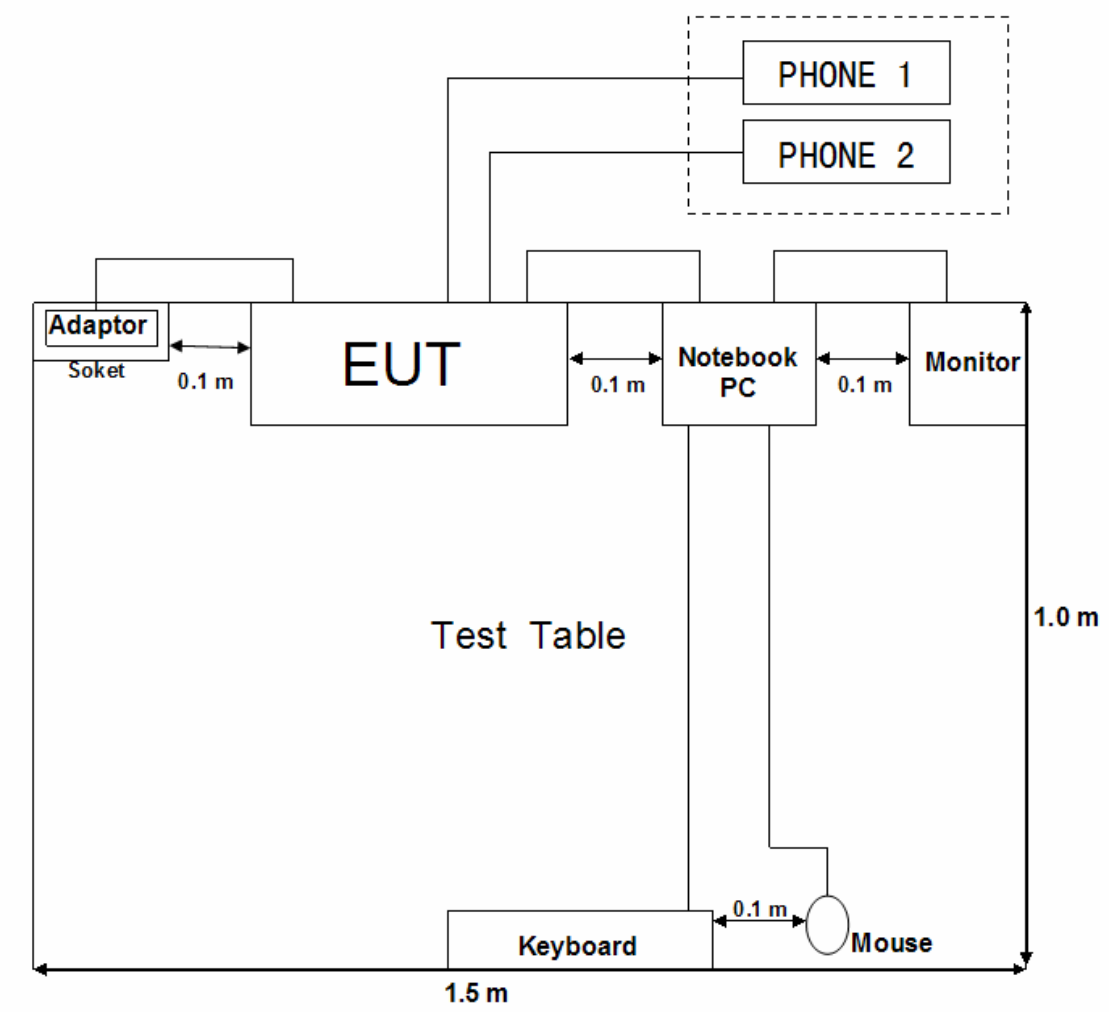
EUT			
Model Number:	HT702		
Model Tested:	HT702		
Description:	ANALOG TELEPHONE ADAPTER		
Input:	AC 120V/60Hz		
Manufacturer:	Grandstream Networks, INC		
Support Equipment			
Description	**Model Number**	**Serial Number**	**Manufacturer**
Notebook PC	ThinkPad x121e	---	Lenovo
Adapter Of Notebook PC	ThinkPad 57Y4614	---	Lenovo
Mouse	MO32B0	23-033131	IBM
Keyboard	SK-1788	---	Lenovo
Monitor	TFT1780PS	B8879HA021638	AOC
Analog Phones(2pcs)	2957E	---	Daerxun Technology Co., Ltd

Continue on to next page…

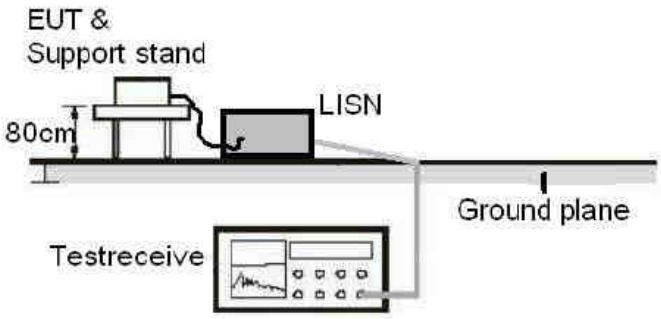
Cable Description					
Description	**From**	**To**	**Length (Meters)**	**Shielded (Y/N)**	**Ferrite (Y/N)**
Power Cord Of Notebook PC	Adapter	Notebook PC	1.6	N	Y
	Adapter	Plug	1.2	N	Y
AC power cord of monitor	Monitor	Plug	1.2	N	Y
Mouse cord	Mouse	Plug	1.2	N	Y
Keyboard cord	Keyboard	Plug	1.2	N	Y
VGA Cord	Monitor	PC	1.2	Y	Y
RJ-45 Cord	EUT	Notebook PC	1.5	N	N
Power cord of Adapter #1 (Mass power)	EUT	Plug	1.8	N	N
Power cord of Adapter #2 (UE power)	EUT	Plug	1.8	N	N
Note:The "EUT" means "ANALOG TELEPHONE ADAPTER".					

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.

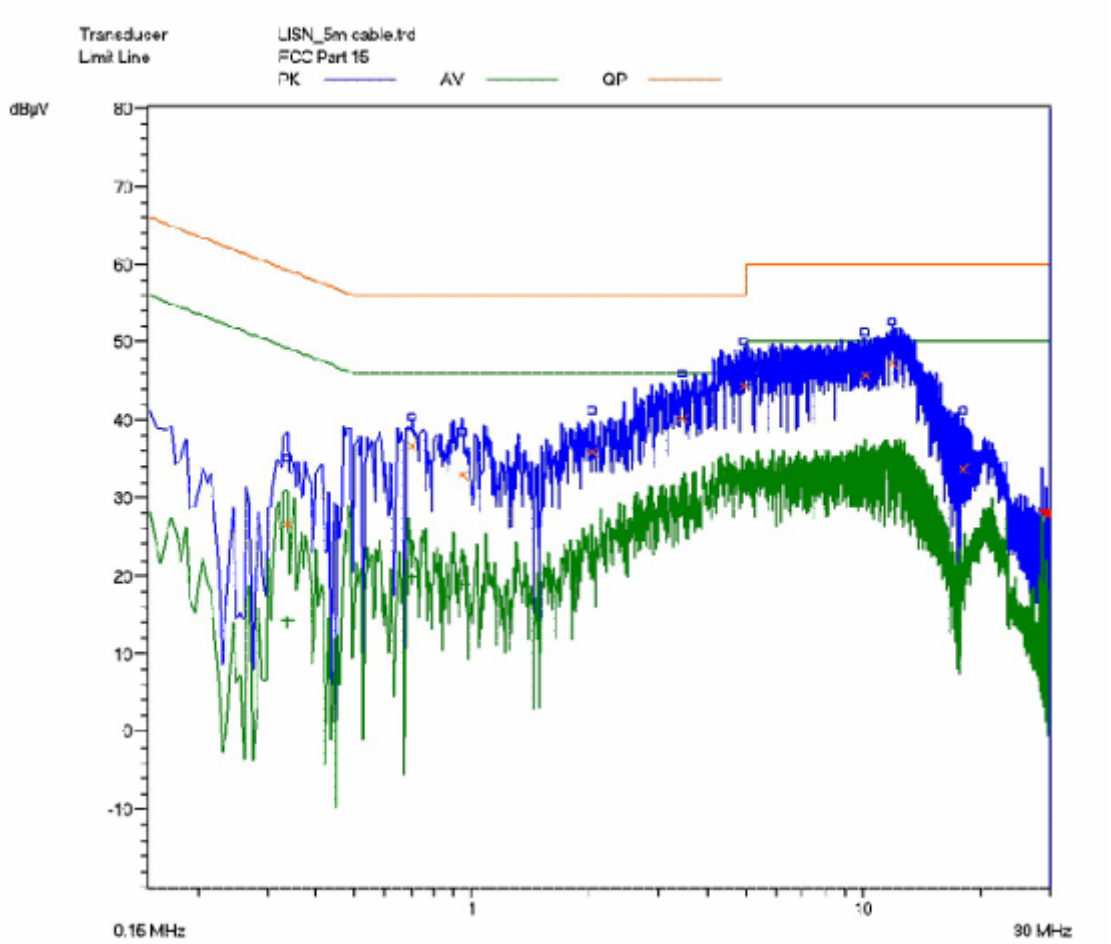
Configuration of Tested System



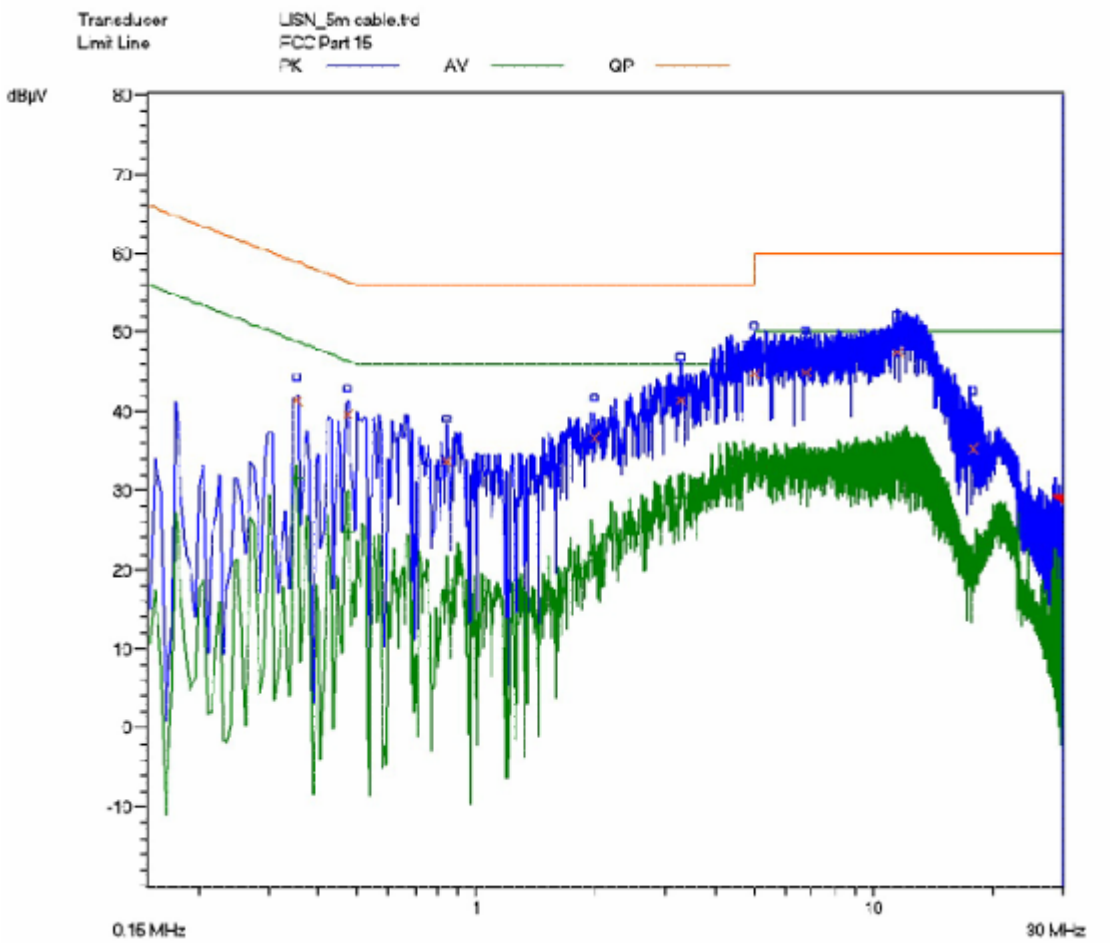
ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

CLIENT:	Grandstream Networks, INC	**TEST STANDERD:**	FCC Part 15, Subpart B, Section 15.107
MODEL NUMBERS:	HT702	**PRODUCT:**	Analog Telephone Adapter
MODEL TESTED:	HT702	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	23°C	**HUMIDITY:**	51%
ATM PRESSURE:	103kPa	**GROUNDING:**	None
TESTED BY:	Sewen Guo	**DATE OF TEST:**	December 27th , 2012
TEST REFERENCE:	ANSI C63.4 -2003		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4 -2003 for conducted emissions. The measurement was using a AMN on each line and an EMI receiver 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.		
DESCRIPTION OF TEST MODE	Connected to PC		
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. ± $2x10^{-7}$ x Center Freq., Amp ± 2.6 dB		

Adaptor #1:(Mass power)

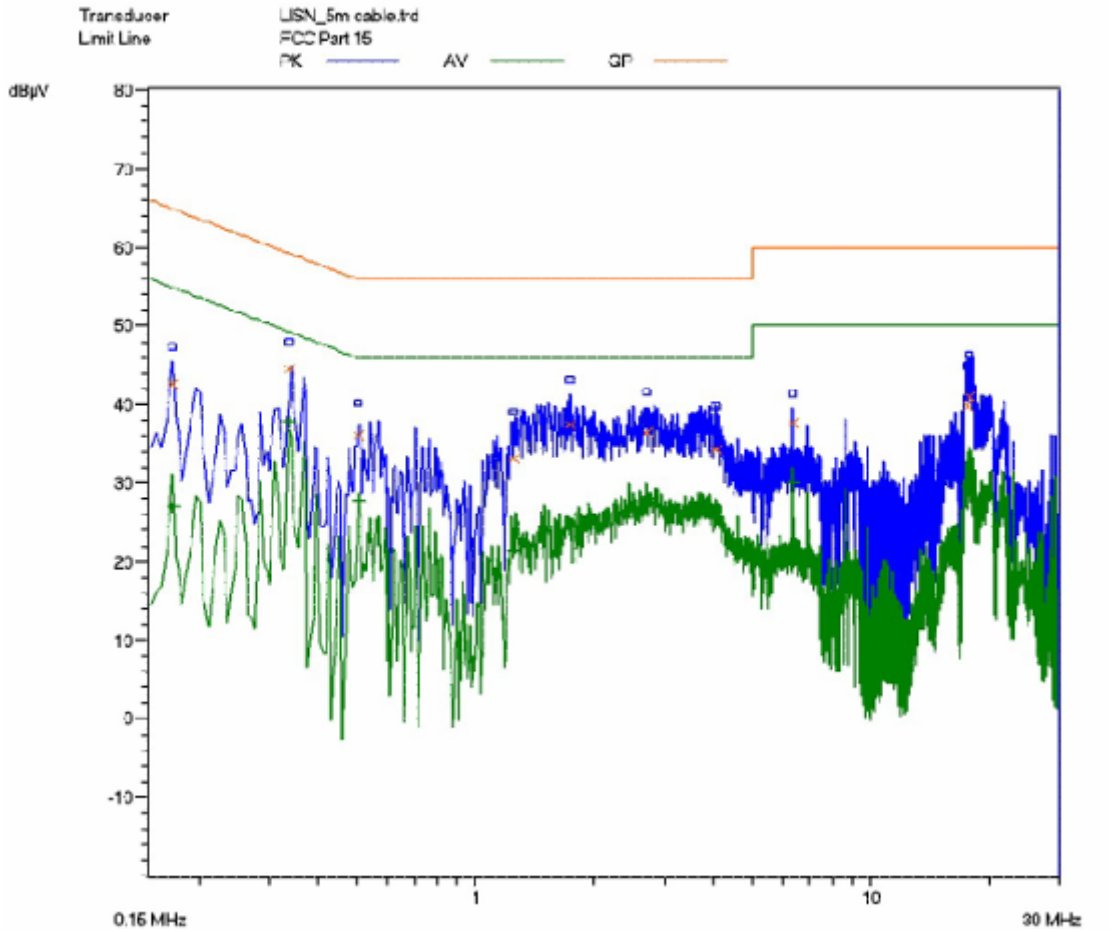


Line L Conducted Emission Graph

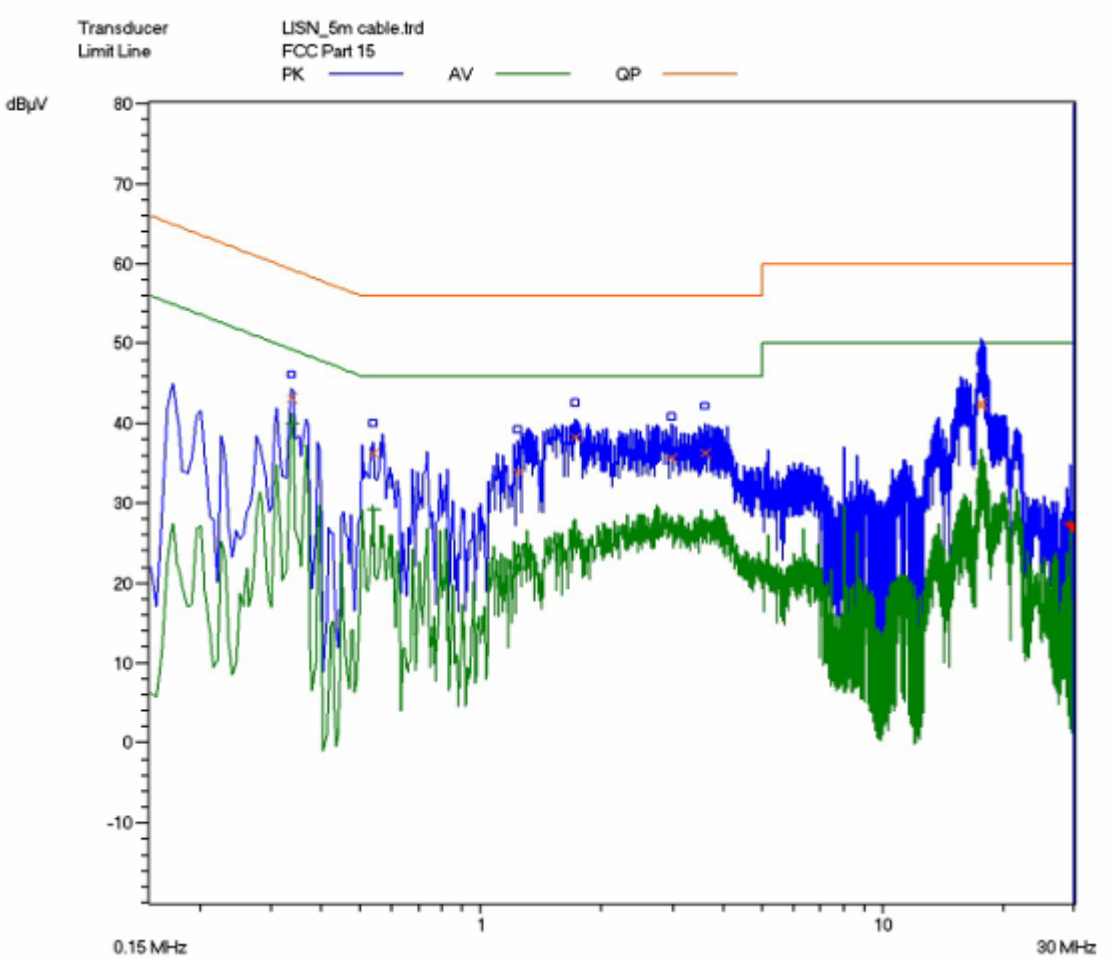


Line N Conducted Emission Graph

Adaptor #2:(UE power)



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 AVE Level (dBuV)	Limits AVE (dBuV)	Margin AVE (dB)
Mass power								
L	3.455	40.2	56	-15.8	3.455	29.0	46	-17.0
L	4.960	44.4	56	-11.6	4.960	32.0	46	-14.0
L	10.180	45.8	60	-14.2	10.180	32.5	50	-17.5
N	3.285	41.4	56	-14.6	3.285	29.1	46	-16.9
N	5.000	44.8	56	-11.2	5.000	31.9	46	-14.1
N	6.740	45.0	60	-15.0	6.740	32.3	50	-17.7
Note: 1) All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not used. 2) Other emission levels are too low against official limta that are not report.								

Lines	Frequency (MHz)	Corrected QP Level (dBuV)	Limits QP (dBuV)	Margin QP (dB)	Frequency (MHz)	Corrected AVE Level (dBuV)	Limits AVE (dBuV)	Margin AVE (dB)
UE power								
L	0.170	42.7	65.0	-22.3	0.170	27.1	55.0	-27.9
L	0.335	44.5	59.3	-14.8	0.335	38.0	49.3	-11.3
L	0.505	36.1	56.0	-19.9	0.505	27.8	46.0	-18.2
N	0.335	43.3	59.3	-16.0	0.335	40.1	49.3	-9.2
N	0.535	36.4	56.0	-19.6	0.535	29.2	46.0	-16.8
N	1.230	33.9	56.0	-22.1	1.230	22.0	46.0	-24.0
Note: 1) All readings are using a bandwidth of 9 kHz, with a 500 ms sweep time. A video filter was not used. 2) Other emission levels are too low against official limta that are not report.								

Test Equipment List:

Test Equipment	*Model No.*	*Manufacturer*	*Serial No.*	*Last Cal.*	*Cal. Interval*
Receiver	*SMR4503*	*SCHAFFNER*	*11725*	*2012.07.08*	*2013.07.08*
Line impedance stabilization network	*4825/2*	*ETS*	*1161*	*2012.07.08*	*2013.07.08*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated.					

TESTED BY: Daomen ***GALANZ***

ENGINEER ***COMPANY NAME***

REVIEWED BY: Jamenyan ***ECMG***

SENIOR ENGINEER ***COMPANY NAME***

Conducted Emission Test Set-up –front view

Conducted Emission Test Set-up –rear view

ATTACHMENT 2 – RADIATED EMISSION MEASUREMENT

CLIENT:	Grandstream Networks, INC	**TEST STANDERD:**	FCC Part 15,Subpart B, Section 15.109
MODEL NUMBERS:	HT702	**PRODUCT:**	Analog Telephone Adapter
EUT MODEL:	HT702	**EUT DESIGNATION:**	Home or Office
TEMPERATURE:	23°C	**HUMIDITY:**	49%RH
ATM PRESSURE:	103.0kPa	**GROUNDING:**	None
TESTED BY:	Daomen	**DATE OF TEST:**	December 29th , 2012
TEST REFERENCE:	ANSI C63.4 -2003		
TEST PROCEDURE:	The EUT was set up according to the guidelines of ANSI C63.4 -2003 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 frequ ency range of 30 MHz to 1GHz and average and peak in the frequency range of 1 GHz to 3GHz at an anechoic chamber. The following dAnalog Telephone Adapter lists the significant emission frequencies, measured levels, corre ction factors (including cable and antenna correction factors), and the corrected rea dings 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	Conneced to PC		
TESTED RANGE:	9K-30MHz and 30MHz to 2,000MHz		
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:

Frequency measured at 9KHz to 30MHz:

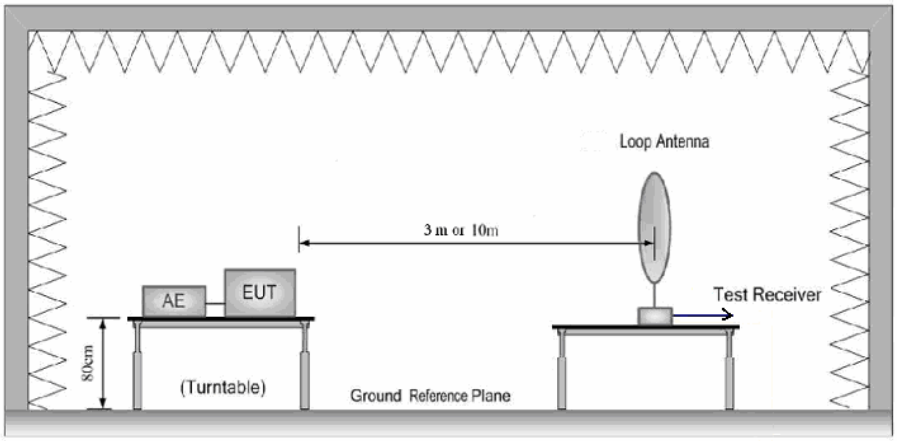


Figure 1 : Frequencies measured below 1 GHz configuration

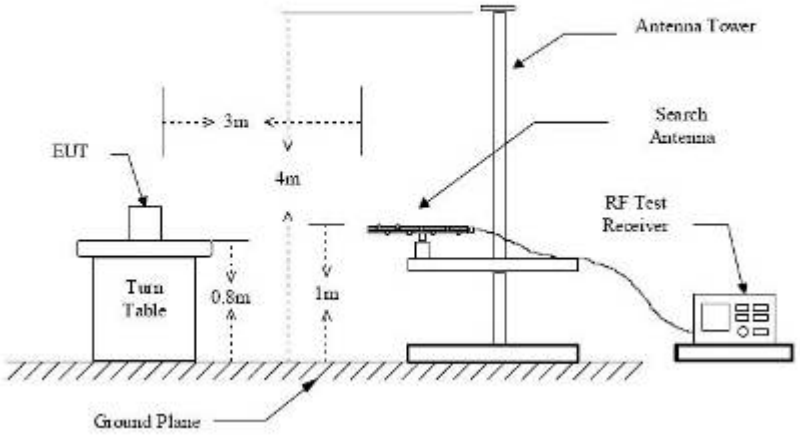
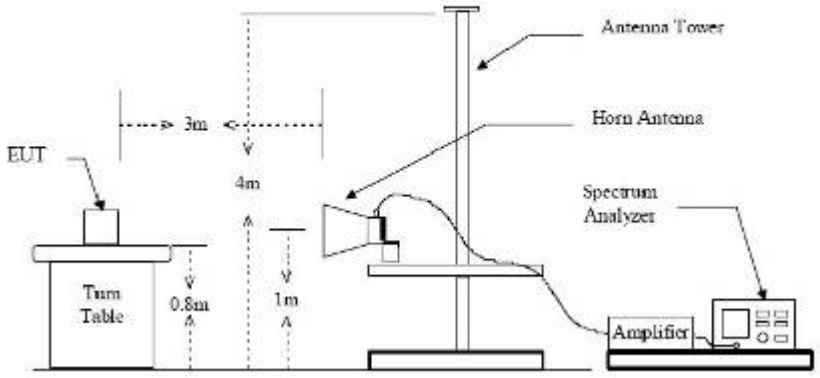
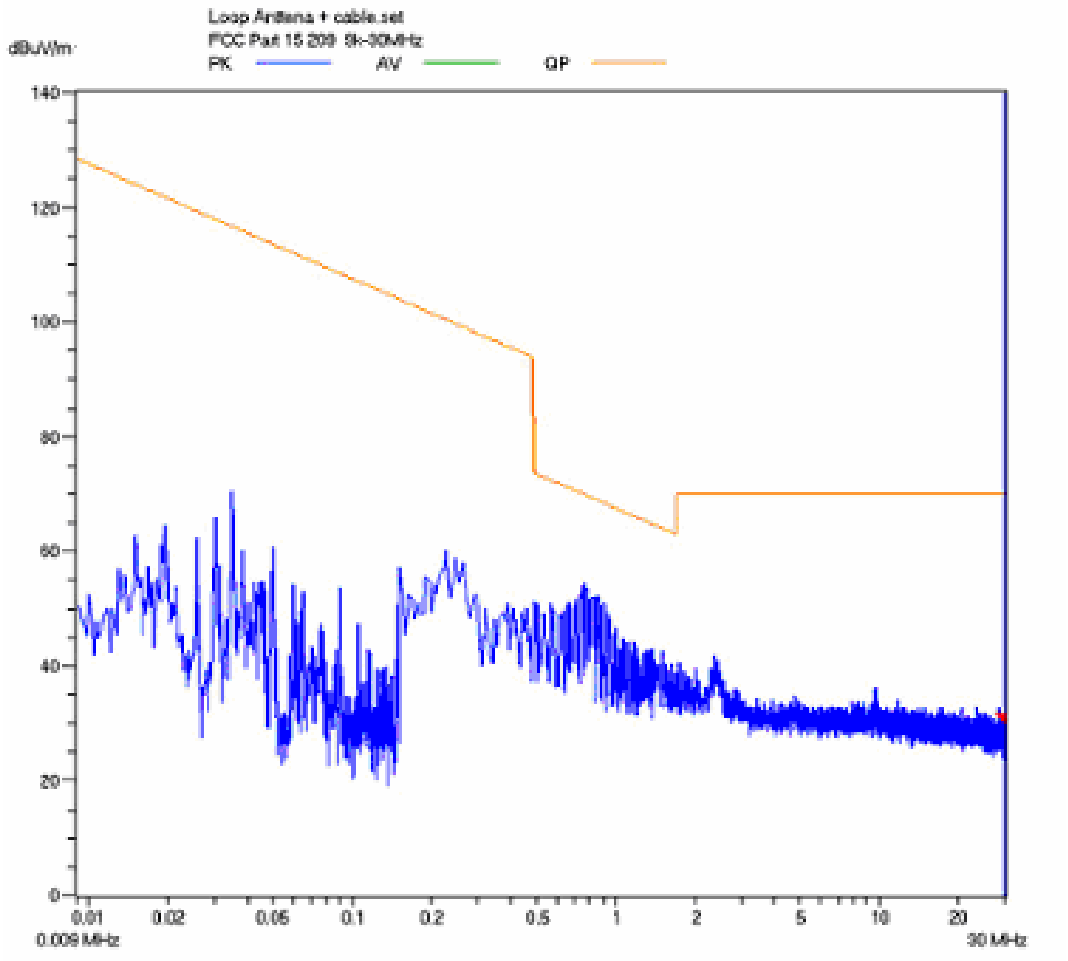


Figure 2 : Frequencies measured above 1 GHz configuration



Adaptor #2(UE power)

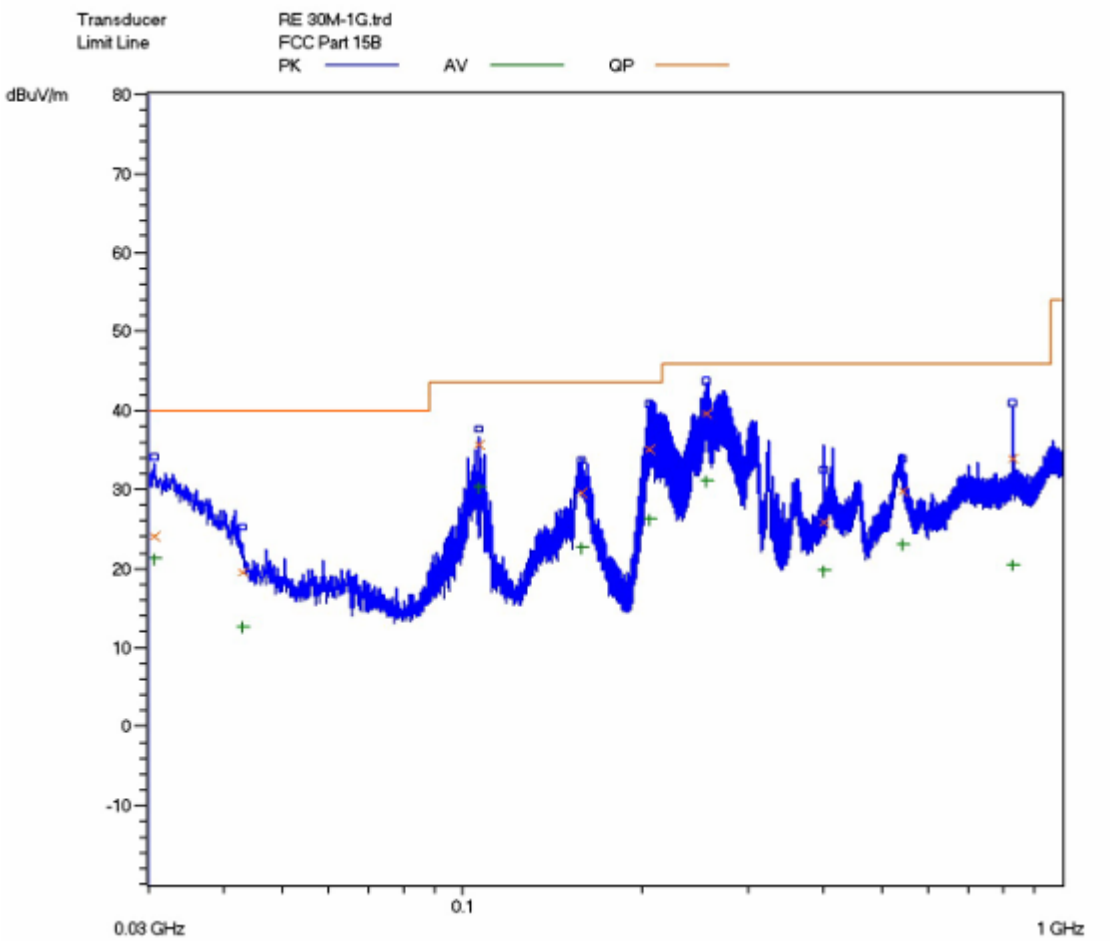
9KHz-30MHz:



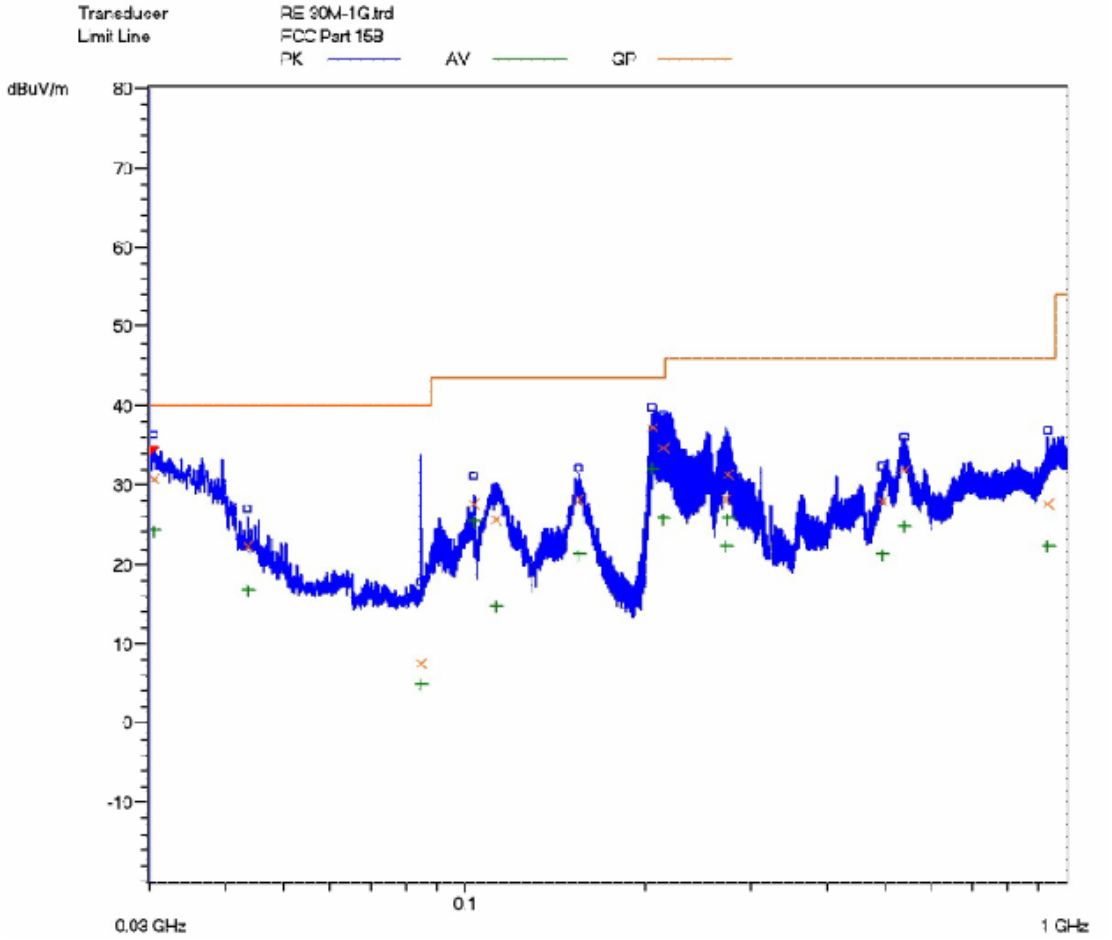
Radiated Filed Strength Emission Test Plot (Peak,maxhold)

Adaptor #1(Mass power)

30MHz-1000MHz:

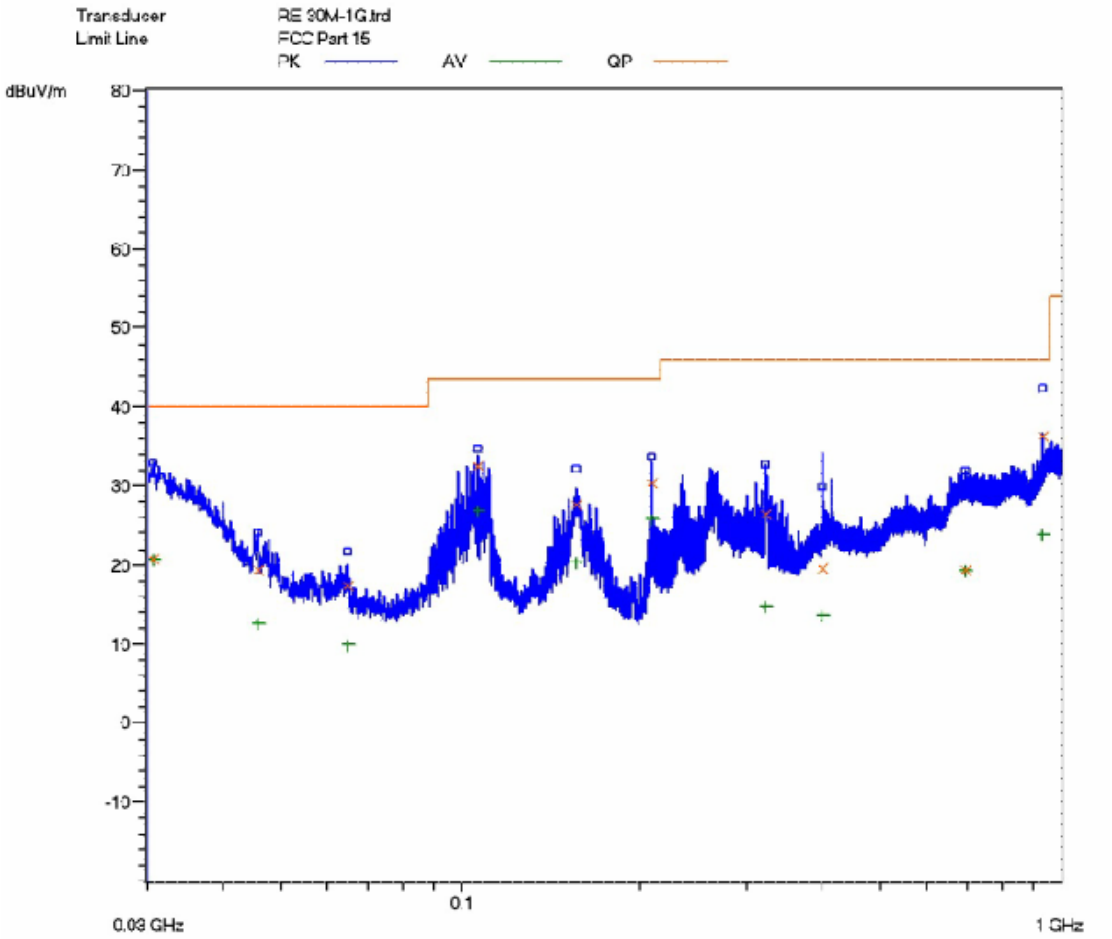


Horizontal: Radiated Emission Test Plot (Peak,maxhold)

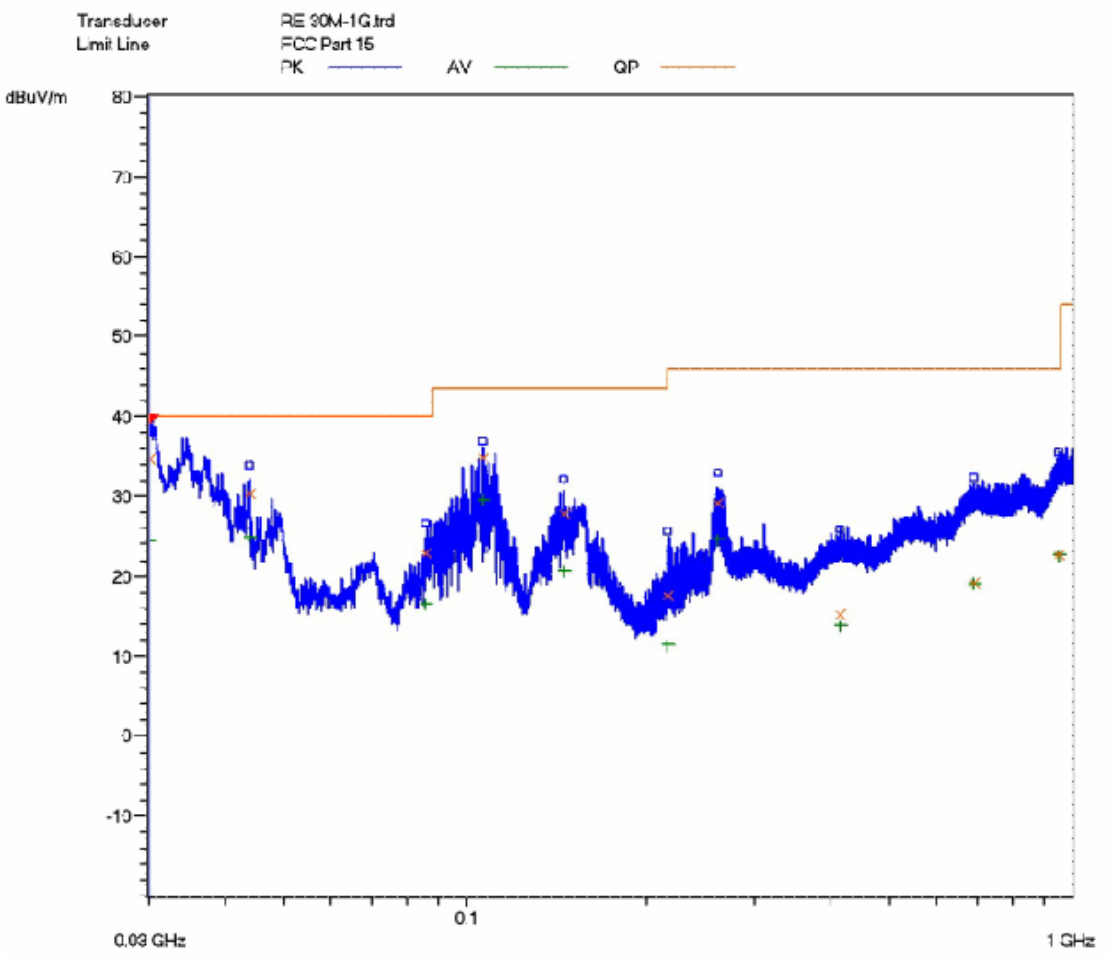


Vertical: Radiated Emission Test Plot (Peak,maxhold)

Adaptor #2(UE power)



Horizontal: Radiated Emission Test Plot(Peak,maxhold)



Vertical: Radiated Emission Test Plot(Peak,maxhold)

Test Data:

9KHz to 30MHz:

Test No.#:	Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level QP (dBuV/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/
3	/	/	/	/	/	/	/
4	/	/	/	/	/	/	/
5	/	/	/	/	/	/	/
6	/	/	/	/	/	/	/

Note:

1. *The field strength is calculated by adding the antenna factor, cable factor. The basic equation with a sample calculation is as follows: Emission Level =Reading Level + Antenna Factor + Cable Loss.*
2. *For band in 9KHz to 30MHz,Pre-scan has been conducted to determine the worst-case. Apaptor #2 was selected for the fina testing.*
3. *The limits shown are based on quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. the bandwidth of Test Receiver was set at 200Hz in frequency range of 9KHz to 150KHz, 9kHz in the frequency range of 150KHz to 30MHz.*
4. *All emission levels in the frequency range of 9KHz to 30MHz are 20dB below the official limits that are not reported.*

Test Data:
Adaptor #1(Mass power):
Below 1GHz:

Frequency (MHz)	*Cable Loss (dB)*	*Antenna Factor (dB)*	*Preamp Factor (dB)*	*Reading Level QP (dBuV/m)*	*Emission Level (dBuV/m)*	*Limit (dBuV/m)*	*Margin (dB)*
Horizontal							
30.600	*16.7*	*0.02*	*/*	*7.28*	*24.0*	*40.0*	*-16.0*
106.740	*7.7*	*0.02*	*/*	*27.98*	*35.7*	*43.5*	*-7.8*
205.800	*7.2*	*0.12*	*/*	*27.78*	*35.1*	*43.5*	*-8.4*
255.720	*12.2*	*0.12*	*/*	*27.38*	*39.7*	*46.0*	*-6.3*
542.160	*18.2*	*0.30*	*/*	*11.30*	*29.8*	*46.0*	*-16.2*
829.440	*22.4*	*0.42*	*/*	*11.18*	*34.0*	*46.0*	*-12.0*
Vertical							
30.420	*16.7*	*0.02*	*/*	*14.08*	*30.8*	*40.0*	*-9.2*
154.380	*9.6*	*0.02*	*/*	*18.68*	*28.3*	*43.5*	*-15.2*
205.500	*7.2*	*0.02*	*/*	*30.08*	*37.3*	*43.5*	*-16.2*
273.180	*13.4*	*0.12*	*/*	*17.88*	*31.4*	*46.0*	*-14.6*
537.420	*18.2*	*0.30*	*/*	*13.40*	*31.9*	*46.0*	*-14.1*
933.180	*23.8*	*0.44*	*/*	*3.46*	*27.7*	*46.0*	*-18.3*

Note:

1. *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.*
2. *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.*
3. *The other emission levels are 20dB below the official limits that are not reported.*

Above 1GHz:

Frequency (GHz)	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								
1.001	1.39	23.9	33.6	12.71	46.18	74	-27.82	H
1.331	1.58	24.7	33.6	11.80	48.08	74	-25.92	H
1.858	1.93	27.5	33.6	13.16	49.87	74	-24.13	H
1.128	1.40	24.0	33.6	11.79	47.21	74	-26.79	V
1.325	1.58	24.7	33.6	11.87	48.01	74	-25.99	V
1.859	1.93	27.5	33.6	12.84	50.19	74	-23.81	V
Average Measurement								
1.001	1.39	23.9	33.6	30.80	28.09	54	-25.91	H
1.331	1.58	24.7	33.6	33.15	26.73	54	-27.27	H
1.858	1.93	27.5	33.6	33.28	29.75	54	-24.25	H
1.128	1.40	24.0	33.6	29.69	29.31	54	-24.69	V
1.325	1.58	24.7	33.6	29.23	30.65	54	-23.35	V
1.859	1.93	27.5	33.6	33.91	29.12	54	-24.88	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.*

Adaptor #2(UE power):
Below 1GHz:

Frequency (MHz)	*Cable Loss (dB)*	*Antenna Factor (dB)*	*Preamp Factor (dB)*	*Reading Level QP (dBuV/m)*	*Emission Level (dBuV/m)*	*Limit (dBuV/m)*	*Margin (dB)*
Horizontal							
30.660	*16.7*	*0.02*	*/*	*3.98*	*20.7*	*40.0*	*-19.3*
106.740	*7.7*	*0.02*	*/*	*24.88*	*32.6*	*43.5*	*-10.9*
155.640	*9.6*	*0.02*	*/*	*18.08*	*27.7*	*43.5*	*-15.8*
207.360	*7.5*	*0.12*	*/*	*22.68*	*30.3*	*43.5*	*-13.2*
322.740	*13.4*	*0.16*	*/*	*12.94*	*26.5*	*46.0*	*-19.5*
933.120	*23.8*	*0.44*	*/*	*12.06*	*36.3*	*46.0*	*-9.7*
Vertical							
30.060	*16.7*	*0.02*	*/*	*18.08*	*34.8*	*40.0*	*-5.2*
43.800	*14.1*	*0.02*	*/*	*16.38*	*30.5*	*40.0*	*-9.5*
85.500	*6.1*	*0.02*	*/*	*16.68*	*22.8*	*40.0*	*-17.2*
106.740	*7.7*	*0..02*	*/*	*27.28*	*35.0*	*43.5*	*-8.5*
145.260	*8.3*	*0.02*	*/*	*19.48*	*27.8*	*43.5*	*-15.7*
260.760	*12.6*	*0.12*	*/*	*16.48*	*29.2*	*46.0*	*-16.8*

Note:

1. *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.*
2. *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.*
3. *The other emission levels are 20dB below the official limits that are not reported.*

Above 1GHz:

Frequency (GHz)	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								
1.058	1.39	23.9	33.6	13.00	45.89	74	-28.11	H
1.329	1.65	25.5	33.6	17.17	43.58	74	-30.42	H
1.656	1.75	26.5	33.6	18.10	43.75	74	-30.25	H
1.092	1.40	24.0	33.6	17.75	41.25	74	-32.75	V
1.128	1.41	24.1	33.6	15.43	43.68	74	-30.32	V
1.323	1.61	25.1	33.6	16.43	43.97	74	-30.03	V
Average Measurement								
1.058	1.39	23.9	33.6	32.11	26.78	54	-27.22	H
1.329	1.65	25.5	33.6	36.60	24.15	54	-29.85	H
1.656	1.75	26.5	33.6	37.49	24.36	54	-29.64	H
1.092	1.40	24.0	33.6	30.39	28.61	54	-25.39	V
1.128	1.41	24.1	33.6	32.54	26.57	54	-27.43	V
1.323	1.61	25.1	33.6	34.02	26.29	54	-27.71	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*
Receiver	*SMR4503*	*SCHAFFNER*	*11725*	*2012.07.08*	*2013.07.07*
HF Loop Antenna	*HLA6120*	*TESEQ*	*26348*	*2012.09.27*	*2013.09.26*
Double-ridged Wave guide horn	*3115*	*ETS*	*6587*	*2012.08.02*	*2013.08.01*
Microwave system amplifier	*83017A*	*Agilent*	*MY39500438*	*2012.07.11*	*2013.07.10*
Biconilog Antenna	*3142C*	*ETS*	*00042672*	*2012.09.28*	*2013.09.27*
Band-pass Filter	*BRM50702*	*Micro-Tronic*	*S/N-030*	*2012.11.30*	*2013.11.29*
Spectrum Analyzer	*FSP30*	*R&S*	*100755*	*2012.11.30*	*2013.11.29*
Note: All testing were performed using internationally recognized standards. All test instruments were calibrated.					

TESTED BY: Daomen _____ ***GALANZ***

ENGINEER ***COMPANY NAME***

REVIEWED BY: _____ ***ECMG***

SENIOR ENGINEER ***COMPANY NAME***

Radiated Emission Test Set-up (9KHz-30MHz)

Radiated Emission Test Set-up (Below 1GHz)

Radiated Emission Test Set-up (Above 1GHz)

Radiated Emission Test Set-up (rear view)