DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

We; Samsung Techwin Co., Ltd.
DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT;

Report No:	**KES-E1-15T0075**
Type of equipment:	**NETWORK CAMERA**
Model Name:	**SNO-L5083RP**
Applicant:	**Samsung Techwin Co., Ltd.**
Address:	**84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea**
Manufacturer :	**TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO.,LTD**
Address:	**No.11 Weiliu Road. Micro-Electronic Industrial Park Jingang Road Tianjin 300385, China**
Test standards :	**AS/NZS CISPR22:2009+A1:2010**
Classification:	**C-Tick**

The above equipment was tested by EMC compliance Testing Laboratory for with the requirements of C-tick Rules and Regulations. The results of testing in this report apply to the product / system which was tested only.

MAR. 13. 2015
(Date of issue)

(Name and signature of authorized person)

AS/NZS EMI Test Report

Test Report No.	:	KES-E1-15T0075
Date of Issue	:	03. 13. 2015
Description of Product	:	NETWORK CAMERA
Model No.	:	SNO-L5083RP
Variant Model	:	-
Applicant	:	**Samsung Techwin Co., Ltd.**
Address	:	84, Jeongdong-ro, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
Manufacturer	:	TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO.,LTD
Address	:	No.11 Weiliu Road. Micro-Electronic Industrial Park Jingang Road Tianjin 300385, China
Applicable Regulation	:	AS/NZS CISPR22:2009 + A1:2010

Date of Receipt	**:**	02. 26.2015
Test Date	:	03. 04. 2015

Tested by:
Young suk, song
Test Engineer

Reviewed by:
Dong Hun, Jang
Technical Manager

Testing Laboratories for Safety and RF Compliance
C-3701 40, Simin-daero 365beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 431-716, Korea
Tel: +82-31-425-6200 / Fax: +82-31-424-0450

Testing Laboratories for EMC Compliance
473-29, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea
Tel : +82-31-883-5092 / Fax: +82-31-883-5169

Revision history

Revision	Date of issue	Test report No.	Description
-	02. 26. 2015	KES-E1-15T0050	Initial

TABLE OF CONTENTS

1. General Information

1.1 Introduction

The EMI Test Report for CE Declaration of Conformity is prepared on behalf of named applicant in accordance with the EMC Directive(2004/108/EC) of the European Economic Community. The test results reported in this document relate only to the item that was tested.

All radiated emission, conducted emission measurements required by the EMC Directive were performed manually at KES Co., Ltd. (here in after called KES), 473-29, Gayeo-ro, Yeoju-si, Gyeonggi-do, Korea

The radiated emission measurements performed on 10 meter, Open Area Test Site, test range maintained by KES. Complete ANSI63.4;2009 description and site attenuation measurement data records are maintained at the test facility and have been placed on file with the Federal Communications Commission.

The KES EMC test facilities in and Yeoju-si are designated testing laboratory according to ISO/IEC 17025 by Radio Research Agency(RRA), Korea Communication Commission.

1.2 Product Description for Equipment Under Test (EUT)

Samsung Techwin Co., Ltd., NETWORK CAMERA, Model No: SNO-L5083RP or the "E.U.T". as referred to in this report is base model.

Main Specifications of EUT are:

	SNO-L5083R
Video	
Imaging Device	1/2.9" 1.37M CMOS
Total Pixels	1,312(H) x 1,069(V)
Effective Pixels	1,305(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color:0.07Lux(1/30sec,F1.4,50IRE),0.001Lux(2sec,50IRE) Color:0.02Lux(1/30sec,F1.4,30IRE) B/W : 0 Lux (IR LED on)
Lens	
Focal Length (Zoom Ratio)	3~10mm V/F
Max. Aperture Ratio	F1.4
Angular Field of View	H:82.0°(Wide)~26.5°(Tele)(±5%), V: 59.7°(Wide)~19.9°(Tele) (±5%) D: 96.6°(Wide)~32.4(Tele)
Min. Object Distance	0.5m
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board type
Operational	
IR Viewable Length	15m
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	True Day & Night
Backlight Compensation	Off / BLC
Contrast Enhancement	SSDR(SamsungSuperDynamicRange) (Off / On)
Digital Noise Reduction	SSNR(Off / On)
Motion Detection	Off / On (4ea rectangler zones)
Privacy Masking	Off / On (6ea rectangler zones)
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
LDC(Lens distortion control)	On/Off (5 levels with Min/Max)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Flip / Mirror / Hallway view
Intelligent Video Analytics	Motion Detection with metadata, Tampering
Alarm Triggers	Motiondetection, Tampering Detection, SD card error
Alarm Events	FileuploadviaFTPandE-Mail LocalstoragerecordingatEvent NotificationviaE-Mail
Network	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MJPEG
Resolution	1280x1024/1280x960/ 1280x720 / 1024x768 / 800x600 / 720x576 / 640x480 / 320x240
Max. Framerate	H.264:Max30fpsatallresolutions MJPEG:Max1fpsat1280x1024/1280x960/1280x720,Max.15fpsatotherresolution
Video Quality Ajustment	H.264:TargetBitrateLevelControl

	MJPEG:QualityLevelControl
Bitrate control method	H.264:CBRorVBR MJPEG:VBR
Streaming Capability	Multiple Streaming(Up to 3 Profiles)
Audio I/O	Line-in
Audio Compression Format	G.711u-law/G.726Selectable G.726(ADPCM)8KHz,G.7118KHz G.726:16Kbps,24Kbps,32Kbps,40Kbps
Audio Communication	Uni-directional
IP	IPv4, IPv6
Protocol	TCP/IP,UDP/IP,RTP(UDP),RTP(TCP),RTCP,RTSP,NTP,HTTP,HTTPS,SSL,DHCP,PPPoE,FTP,SMTP,ICMP,IGMP,SNMPv1/v2c/v3(MIB-2),ARP,DNS,DDNS,QoS,PIM-SM,UPnP,Bonjour
Security	HTTPS(SSL)LoginAuthentication DigestLoginAuthentication IPAddressFiltering UseraccessLog 802.1XAuthentication
Streaming Method	Unicast / Multicast
Max. User Access	6 users at Unicast Mode
Edge storage	MicroSD/SDHCMax32G,NAS (MotionimagesrecordedintheSDmemorycardcanbedownloaded) (ManualrecordingatLocalPC)
Application Programming Interface	ONVIFProfileS,G SUNAPI(HTTPAPI)
Webpage Language	English,French,German,Spanish,Italian,Chinese,Korean, Russian,Japanese,Swedish,Denish,Portuguese,Turkish,Polish,Czech,Rumanian,Serbian,Dutch,Croatia,Hungary,Greek,Finnish,Norwegian
Web Viewer	SupportedOS:WindowsXP/VISTA/7/8/8.1,MACOSX10.7~10.10 SupportedBrowser:MicrosoftInternetExplorer(Ver.8~11),MozillaFirefox(Ver.9~35), Google Chrome (Ver. 15~40), Apple Safari (Ver. 8.0.2(Mac OS X 10.10), 8.0.2(Mac OS X 10.9), 6.0.2 (Mac OS X 10.8, 10.7 only), 5.1.7) * Mac OS X only
Central Management Software	SmartViewer
Environmental	
Operating Temperature / Humidity	-30° C ~ +55° C / Less than 90% RH
Storage Temperature / Humidity	-30° C~+60° C(-22° F~+140° F)/ Less than 90% RH
Ingress Protection	IP66
Vandal Resistance	IK10
Electrical	
Input Voltage / Current	PoE
Power Consumption	Max. 7.0W
Mechanical	
Color / Material	Dark gray / Metal
Dimension (WxHxD)	Φ70 x 245.8mm (excluding Sun sheild)
Weight	800g

1.3 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
NETWORK CAMERA	SNO-L5083RP	-	TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONIC CO., LTD	E.U.T

1.4 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Notebook	RT3290LE	5CD242B042	HP	-
Switching Adapter	Series PPP009L-E	WCNWVOA3U3G6FB	LITE-ON TECHNOLOGY(CHANGZHOU) Co., Ltd	-
POE Switch	FSD-804PS(V3)	A310129100013(000)	PLANET Technology Corp.	-
MIKE	CMK-303	-	CAMAC	-

1.5 External I/O Cabling

Description	Length (m)	Port / From	Port/To	Remarks
NETWORK CAMERA	3.0	RJ-45 / EUT	RJ-45 / POE Switch	Unshielded
	1.2	MIC	MIC	Unshielded
POE Switch	3.0	RJ-45 / POE Switch	RJ-45 / Notebook	Unshielded

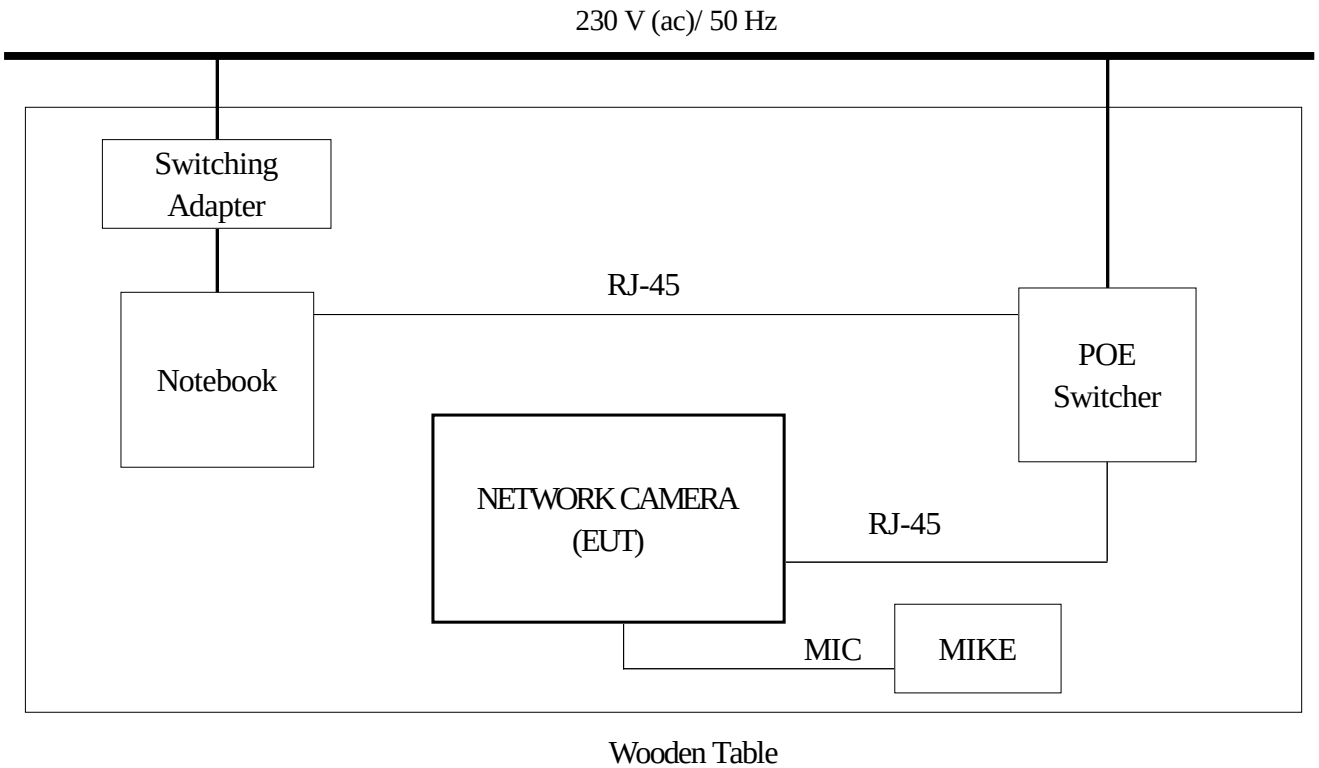
1.6 Special Accessories

As shown in section 1.8, all interface cables used for compliance testing are shielded as normally supplied or by use respective component manufacturers.

1.7 EUT Modifications

No modifications were made to the EUT in order to achieve and maintain compliance to the standards described in this report.

1.8 Configuration of Test System



1.9 Operating condition

- Ping test
- web view monitoring

Test standards and results

Specifications	Description	Test Point	Remark
CISPR22, Class A	Conducted Emission	AC Input Port	N/A(1)
CISPR22, Class A	Radiated Emission	Enclosure	C

Note : C=Complies N/C=Not Complies N/T=Not Tested N/A=Not Applicable

Note (1) : This device is operate by POE power. Test is not applicable.

2. Test Performed

2.1 Conducted Emission Measurements

2.1.1 Test Description

The power line conducted emission measurements were performed in a shielded enclosure. The EUT was placed on a wooden table, 80 centimeters height above the floor. Power was fed to the EUT through a 50 ohm/ 50 micro henry Line Impedance Stabilization Network (LISN). The ground plane that was electrically bonded to the shield room ground system and all power lines entering the shield room were filtered.

2.1.2 Test Equipments

Description	Manufacturer	Model Number	Serial Number	Cal. Due
EMI Receiver/Signal Analyzer	Narda S.T.S / PMM	PMM 9010F	020WW31006	04. 04. 2015
LISN	R&S	ENV216	101137	02. 10. 2016
LISN	EMCO	3810/2	2228	-
8-Wire ISN CAT3	Schwarzbeck Mess	CAT3 8158	8158-0019	04.08.2015
8-Wire ISN CAT5	Schwarzbeck Mess	NTFM 8158	8158-0030	05.21.2015
8-Wire ISN CAT6	Schwarzbeck Mess	NTFM 8158	8158-0029	08.15.2015
Electro wave Shieldroom	SEMITEC	-	-	-

2.1.3 Test Environments

Ambient Temperatures : see the data
Relative Humidity : see the data

2.1.4 Test Limits

Frequency (MHz)	CISPR Publication 22			
	Class B		Class A	
	QP	AV	QP	AV
0.15 to 0.50	66 to 56	56 to 46	79	66
0.50 to 5.00	56	46	73	60
5.00 to 30.00	60	50	73	60

- Telecommunication

Frequency (㎒)	CISPR 22(Voltage)			
	Class B (㏈㎶)		Class A (㏈㎶)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.50	84.0 to 74.0	74.0 to 64.0	97.0 to 87.0	84.0 to 74.0
0.50 to 30.00	74.0	64.0	87.0	74.0

Frequency (㎒)	CISPR 22(Current)			
	Class B (㏈㎂)		Class A (㏈㎂)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.50	40.0 to 30.0	30.0 to 20.0	53.0 to 43.0	40.0 to 30.0
0.50 to 30.00	30.0	20.0	43.0	30.0

2.1.5 Test Procedure

The conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The analyzer's 6 ㏈ bandwidth was set to 9 ㎑. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 ㎑ to 30 ㎒. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".

The conducted emission test was performed with the EUT exercise program loaded, and the emissions were scanned between 150 ㎑ to 30 ㎒ on the HOT side and NEUTRAL side, herein referred to as H and N, respectively.

2.1.6 Test Results

According to the data in section 2.1.7, the EUT complied with the CISPR22 standards.

2.1.7 Test Data

Temperature: ℃ Humidity: R.H. Test Date: Tested by:

Polarization: HOT

N/A

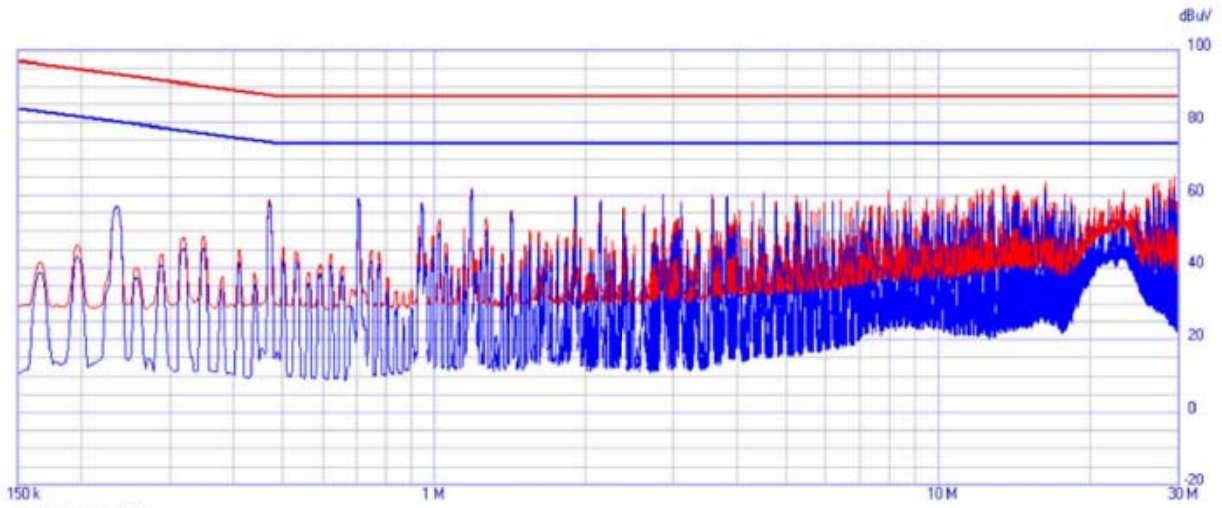
Polarization: NEUTRAL

N/A

- Telecommunication

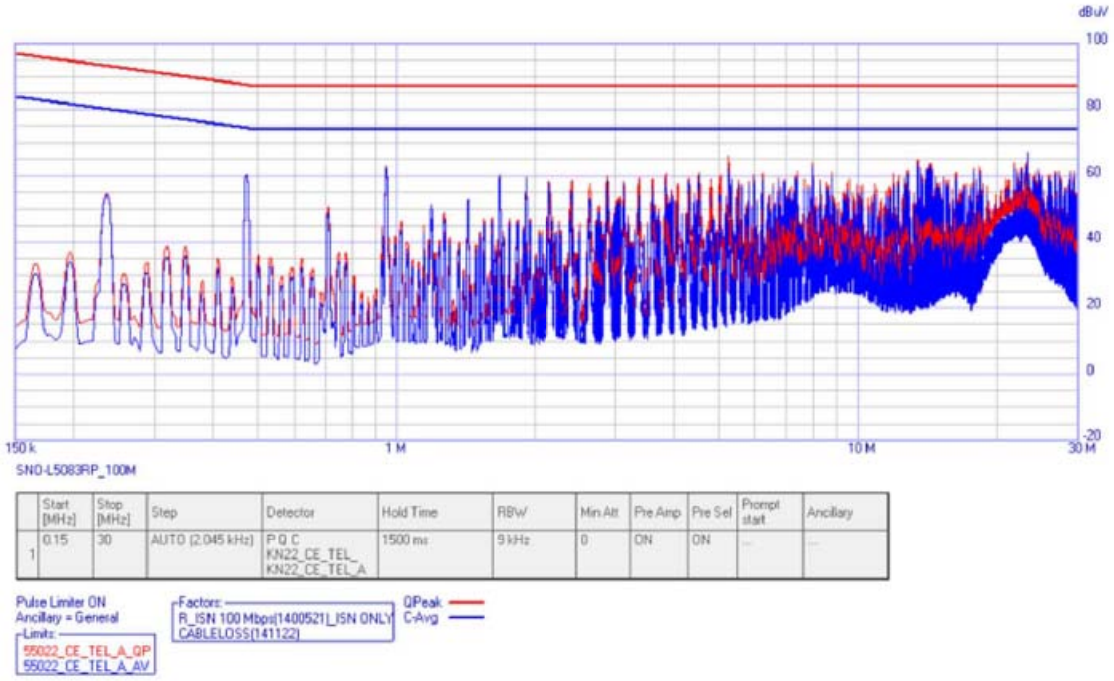
Temperature: 20.1 ℃ Humidity: 36.0 % R.H. Test Date: 03. 04. 2015 Tested by: Young suk, song

[10 Mbps]



Frequency [MHz]	Q-Peak [dBμV]	Limit [dBμV]	Margin [dB]	C-Avg [dBμV]	Limit [dBμV]	Margin [dB]	Factor (ISN) [dB]	Factor (Cable Loss) [dB]
0.195	46.340	94.820	-48.480	43.170	81.820	-38.650	10.200	0.030
0.236	56.750	93.240	-36.490	56.820	80.240	-23.420	10.170	0.030
0.318	48.510	90.770	-42.260	45.110	77.770	-32.660	10.110	0.030
0.348	48.650	90.000	-41.350	45.250	77.000	-31.750	10.090	0.030
0.473	58.620	87.460	-28.840	57.670	74.460	-16.790	10.050	0.030
16.269	63.500	87.000	-23.500	61.120	74.000	-12.880	9.870	0.270
26.629	63.170	87.000	-23.830	59.900	74.000	-14.100	9.910	0.370
27.199	63.310	87.000	-23.690	59.910	74.000	-14.090	9.920	0.380
28.833	64.320	87.000	-22.680	60.820	74.000	-13.180	9.950	0.410
29.293	64.780	87.000	-22.220	61.190	74.000	-12.810	9.960	0.440

[100 Mbps]



Frequency [MHz]	Q-Peak [dBµV]	Limit [dBµV]	Margin [dB]	C-Avg [dBµV]	Limit [dBµV]	Margin [dB]	Factor (ISN) [dB]	Factor (Cable Loss) [dB]
0.236	54.550	93.240	-38.690	54.360	80.240	-25.880	9.700	0.030
0.473	60.300	87.460	-27.160	59.960	74.460	-14.500	9.590	0.030
5.236	66.080	87.000	-20.920	62.310	74.000	-11.690	9.330	0.180
7.958	63.910	87.000	-23.090	62.660	74.000	-11.340	9.290	0.260
13.445	64.530	87.000	-22.470	63.610	74.000	-10.390	9.260	0.300
21.774	63.770	87.000	-23.230	62.310	74.000	-11.690	9.590	0.210
23.203	67.120	87.000	-19.880	66.670	74.000	-7.330	9.420	0.240

[1 000 Mbps]

N/A

2.2 Radiated Emission Measurements

2.2.1 Test Description

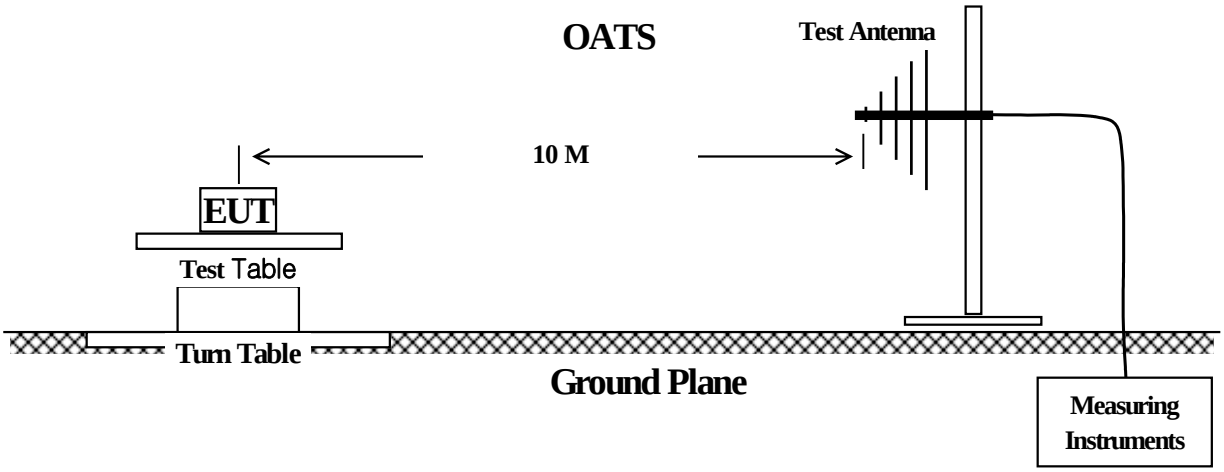
The radiated emissions measurements were performed on the ten-meter, open-field test site. The EUT was placed on a nonconductive turntable approximately 0.8 meters above the ground plane.

The frequency spectrum from 30 ㎒ to 1 000 ㎒ and 1 000 ㎒ to 6 000 ㎒ was scanned and maximum emission levels at each frequency recorded.

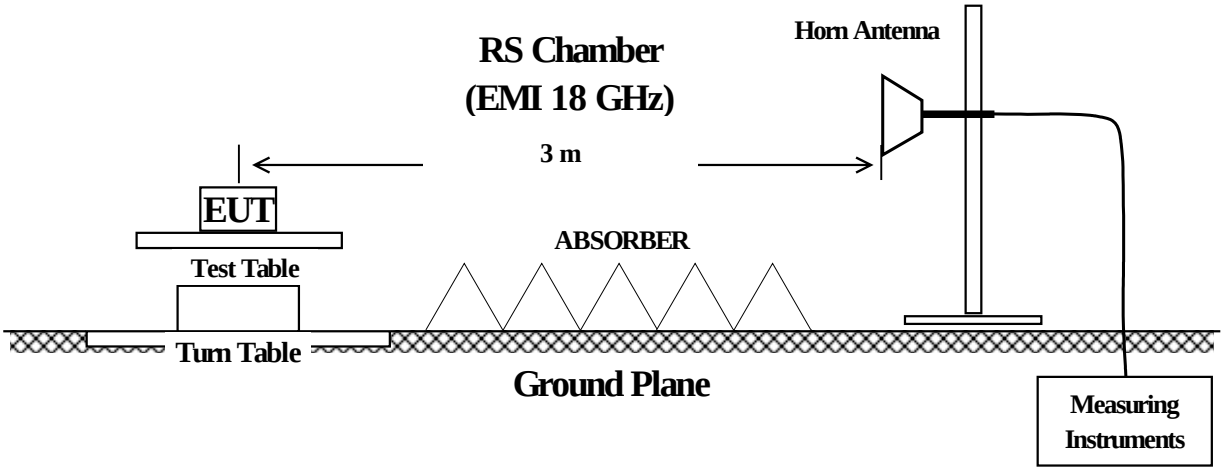
The system was rotated 360°, and the antenna was varied in the height between 1.0 and 4.0 meters in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

- above 1 GHz : Antenna height is fixed to 1.0 m

*** Below 1 GHz**



*** Above 1 GHz**



2.2.2 Test Equipments

Description	Manufacturer	Model Number	Serial Number	Cal. Due
EMI TEST Receiver	R & S	ESVS10	826008/014	04.09.2014
Trilog-Broadband Antenna	SCHWARZBECK	VULB 9168	9168-385	05.09.2015
EMC Analyzer	Agilent	E7405A	US41160306	08.16.2014
PREAMPLIFIER	8449B	H.P	3008A00538	07.23.2015
DOUBLE RIDGED HORN ANTENNA	A.H. SYSTEMS, INC	SAS-571	781	05.13.2015
RS Chamber (EMI 18GHz)	SEMITEC	-	-	-

2.2.3 Test Environments

Temperatures : see the data

Humidity : see the data

2.2.4 Test Limits

*** Below 1 GHz**

Frequency (MHz)	CISPR Publication 22	
	Class B	Class A
	Quasi-peak dB(uV/m)	Quasi-peak dB(uV/m)
0,15 to 30	Under consideration	Under consideration
30 to 230	30	40
230 to 1 000	37	47

*** Above 1 GHz**

Frequency (MHz)	CISPR Publication 22			
	Class B @ 3 m (dBμV/m)		Class A @ 3 m (dBμV/m)	
	PK	AV	PK	AV
1 000 to 3 000	70	50	76	56
3 000 to 6000	74	54	80	60

2.2.5 Test Procedure

Before final measurements of radiated emission were made on the OATS, the EUT was scanned in semi-anechoic chamber in order to determine its emission spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emission in amplitude, direction and frequency. This process was repeated during final radiated emission measurements on the OATS range, at each frequency, in order to ensure that maximum emissions amplitudes were attained.

The radiated emission test was performed with EUT exercise program loaded, and the emissions were scanned between 30 ㎒ to 1 000 ㎒ and 1 000 ㎒ to 6 000 ㎒ using the spectrum analyzer. The spectrum analyzer's 6 ㏈ bandwidth was set to 120 ㎑(1 ㎒), and the analyzer was operated in the CISPR quasi-peak (Peak) detection mode.

Measurements were taken using both HORIZONTAL and VERTICAL antenna polarization, herein referred to as H and V, respectively.

3.1.1 Field Strength Calculation

The Field Strength (FS) is calculated by adding the Antenna Factor (AF) and Cable Factor (CF) and Amplifier Gain(AG) from the Measured Reading (MR). The basic equation with a sample calculation is as follows:

* Below 1 GHz : FS(㏈㎶/m) = MR(㏈㎶) + [AF(㏈/m) + CF(㏈)]

* Above 1 GHz : FS(㏈㎶/m) = MR(㏈㎶) + [AF(㏈/m) + CF(㏈)] - AG

2.2.6 Test Results

According to the data in section 3.2.7, the EUT complied with the CISPR22 standards.

2.2.7 Test Data

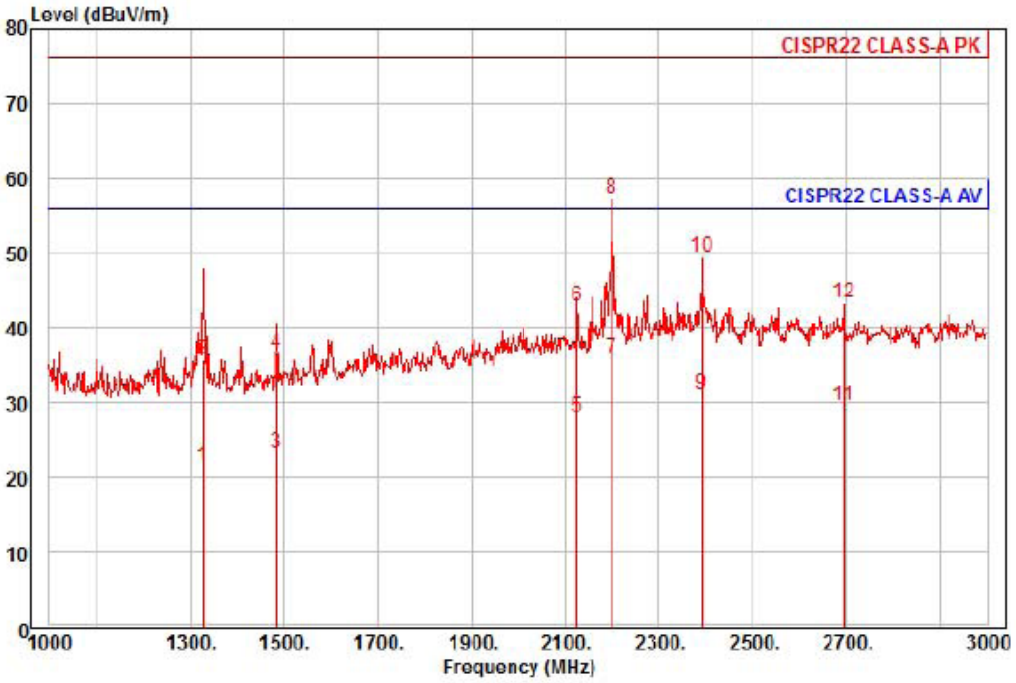
*** Below 1 GHz**

Temperature: 3.0 ℃ Humidity: 42 .0 % R.H. Test Date: 03. 04. 2015 Tested by: Young suk, song

Frequency (㎒)	Amplitude (dB㎶/m)	Antenna		Correction Factor		Corrected Amplitude (dB㎶/m)	Applicable Limit (dB㎶/m)	Margin (dB)
		Polar. (H/V)	Height (m)	Ant. (dB)	Cable (dB)			
185.622	18.200	H	2.900	11.200	3.280	32.680	40.000	7.320
186.152	15.500	V	2.310	11.150	3.290	29.940	40.000	10.060
222.733	12.300	H	2.540	10.730	3.640	26.670	40.000	13.330
222.992	12.800	V	1.290	10.740	3.640	27.180	40.000	12.820
259.767	16.000	H	3.010	12.070	3.970	32.040	47.000	14.960
259.781	18.000	V	2.540	12.070	3.970	34.040	47.000	12.960
297.670	15.200	V	2.310	13.320	4.360	32.880	47.000	14.120
297.735	13.900	H	2.940	13.330	4.360	31.590	47.000	15.410
334.456	16.100	V	2.390	14.150	4.640	34.890	47.000	12.110
350.092	18.400	H	1.260	14.490	4.760	37.650	47.000	9.350
400.498	21.700	H	2.070	15.590	5.140	42.430	47.000	4.570
409.186	15.800	V	2.100	15.780	5.210	36.790	47.000	10.210

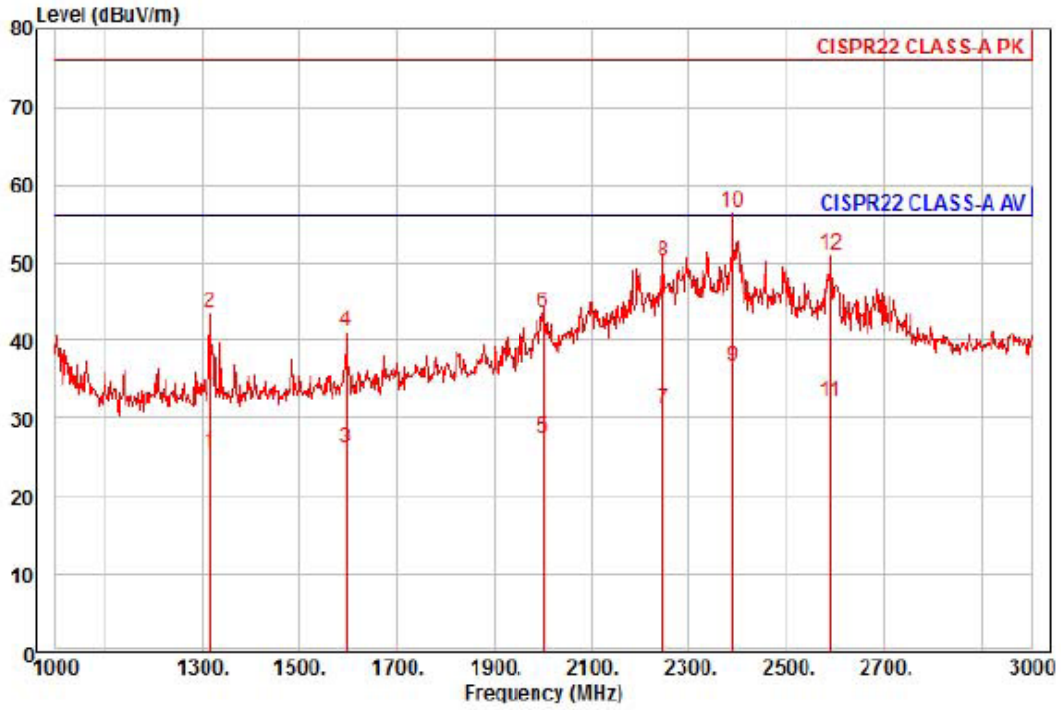
* Above 1 ㎓

Temperature: 20.1 ℃ Humidity: 36.0 % R.H. Test Date: 03. 04. 2015 Tested by: Young suk, song



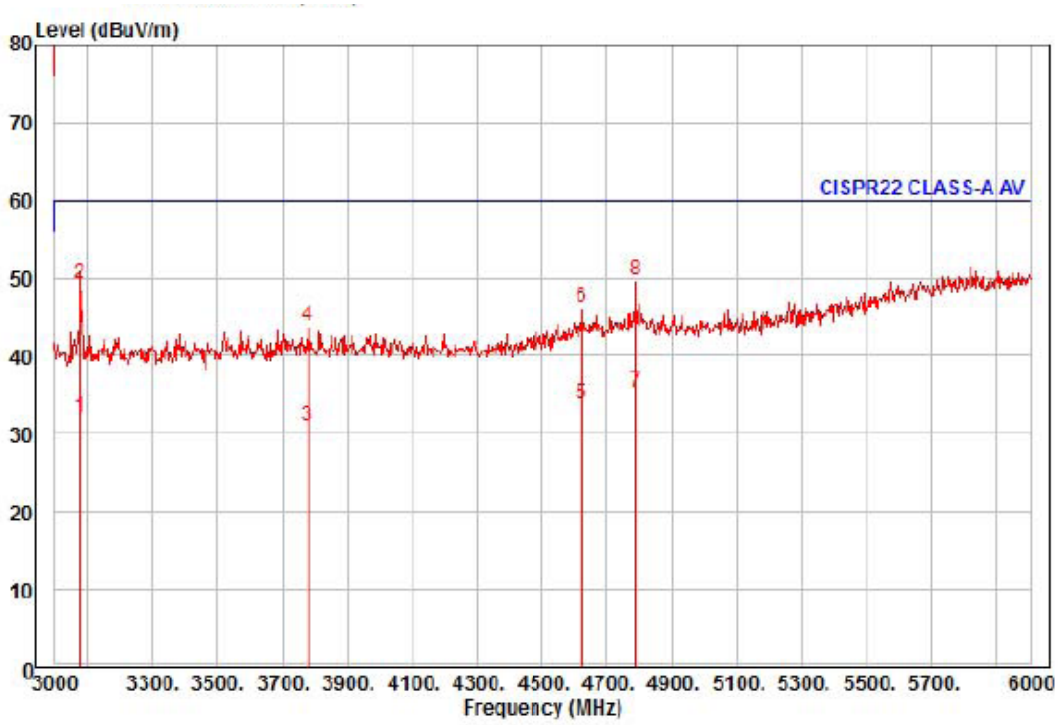
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
EUT : SNO-L5083RP
Mode : C-tik
Memo : 1 - 3GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1328.00	26.68	24.32	6.23	35.65	71	56.00	-34.42	horizontal	Average
2	1328.00	40.93	24.32	6.23	35.65	71	76.00	-40.17	horizontal	Peak
3	1484.00	27.05	24.96	6.61	35.39	147	56.00	-32.77	horizontal	Average
4	1484.00	40.50	24.96	6.61	35.39	147	76.00	-39.32	horizontal	Peak
5	2126.00	25.89	28.46	8.12	34.44	231	56.00	-27.97	horizontal	Average
6	2126.00	40.88	28.46	8.12	34.44	231	76.00	-32.98	horizontal	Peak
7 av	2200.00	33.55	28.62	8.28	34.39	152	56.00	-19.94	horizontal	Average
8 pp	2200.00	54.77	28.62	8.28	34.39	152	76.00	-18.72	horizontal	Peak
9	2392.00	27.77	29.03	8.68	34.26	129	56.00	-24.78	horizontal	Average
10	2392.00	45.94	29.03	8.68	34.26	129	76.00	-26.61	horizontal	Peak
11	2694.00	24.71	29.64	9.32	34.05	117	56.00	-26.38	horizontal	Average
12	2694.00	38.42	29.64	9.32	34.05	117	76.00	-32.67	horizontal	Peak



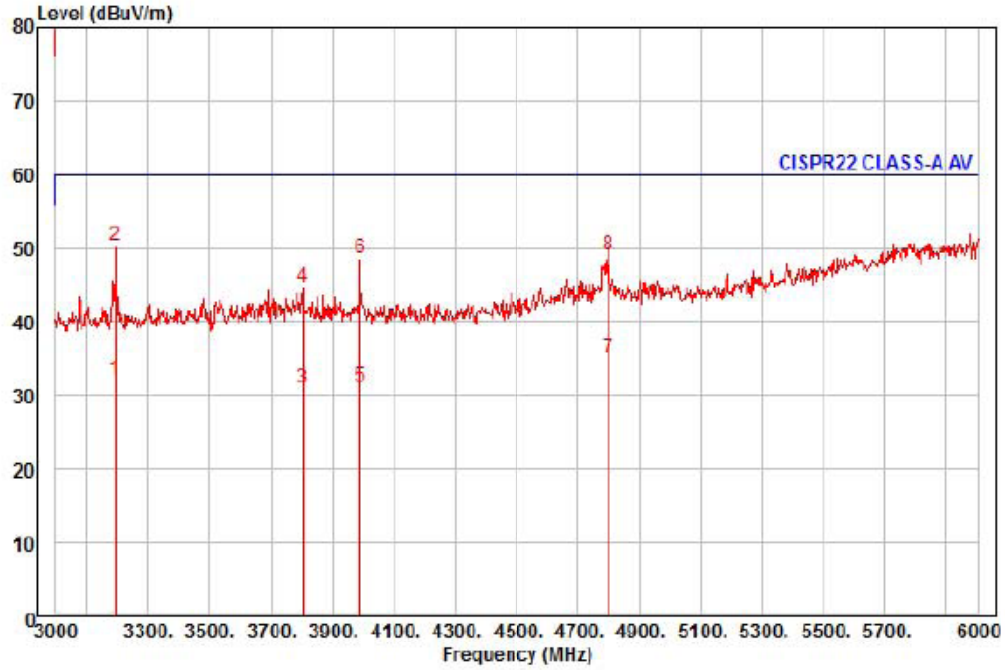
Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
EUT : SNO-L5083RP
Mode : C-tik
Memo : 1 - 3GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	1318.00	30.62	24.28	6.21	35.67	212	56.00	-30.56	vertical	Average
2	1318.00	48.83	24.28	6.21	35.67	212	76.00	-32.35	vertical	Peak
3	1596.00	28.82	25.63	6.88	35.20	288	56.00	-29.87	vertical	Average
4	1596.00	43.79	25.63	6.88	35.20	288	76.00	-34.90	vertical	Peak
5	2002.00	26.04	28.19	7.86	34.53	329	56.00	-28.44	vertical	Average
6	2002.00	42.07	28.19	7.86	34.53	329	76.00	-32.41	vertical	Peak
7	2248.00	28.35	28.72	8.38	34.36	138	56.00	-24.91	vertical	Average
8	2248.00	47.40	28.72	8.38	34.36	138	76.00	-25.86	vertical	Peak
9 pp	2390.00	33.15	29.02	8.68	34.26	133	56.00	-19.41	vertical	Average
10 pk	2390.00	53.10	29.02	8.68	34.26	133	76.00	-19.46	vertical	Peak
11	2590.00	27.54	29.44	9.10	34.12	154	56.00	-24.04	vertical	Average
12	2590.00	46.62	29.44	9.10	34.12	154	76.00	-24.96	vertical	Peak



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) horizontal
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
EUT : SNO-L5083RP
Mode : C-tik
Memo : 3 - 6GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3078.00	25.67	30.28	10.08	33.93	161	60.00	-27.90	horizontal	Average
2	3078.00	42.85	30.28	10.08	33.93	161	80.00	-30.72	horizontal	Peak
3	3780.00	23.24	31.26	11.18	34.72	52	60.00	-29.04	horizontal	Average
4	3780.00	36.12	31.26	11.18	34.72	52	80.00	-36.16	horizontal	Peak
5	4623.00	22.72	32.45	12.55	33.87	75	60.00	-26.15	horizontal	Average
6	4623.00	35.12	32.45	12.55	33.87	75	80.00	-33.75	horizontal	Peak
7 pp	4788.00	23.06	33.01	12.82	33.58	244	60.00	-24.69	horizontal	Average
8 pk	4788.00	37.52	33.01	12.82	33.58	244	80.00	-30.23	horizontal	Peak



Site : chamber
Condition: CISPR22 CLASS-A PK 3m HORN ANT (2014.03.10) vertical
: RBW:1000.000kHz VBW:1000.000kHz SWT:Auto
Project :
EUT : SNO-L5083RP
Mode : C-tik
Memo : 3 - 6GHz

	Freq	Read Level	Ant Factor	Cable Loss	Preamp Factor	TPos	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	deg	dBuV/m	dB		
1	3195.00	25.46	30.32	10.26	34.06	249	60.00	-28.02	vertical	Average
2 pk	3195.00	43.73	30.32	10.26	34.06	249	80.00	-29.75	vertical	Peak
3	3804.00	23.19	31.34	11.21	34.75	203	60.00	-29.01	vertical	Average
4	3804.00	36.81	31.34	11.21	34.75	203	80.00	-35.39	vertical	Peak
5	3990.00	22.85	31.89	11.50	34.96	150	60.00	-28.72	vertical	Average
6	3990.00	40.14	31.89	11.50	34.96	150	80.00	-31.43	vertical	Peak
7 pp	4800.00	22.85	33.06	12.84	33.56	179	60.00	-24.81	vertical	Average
8	4800.00	36.67	33.06	12.84	33.56	179	80.00	-30.99	vertical	Peak

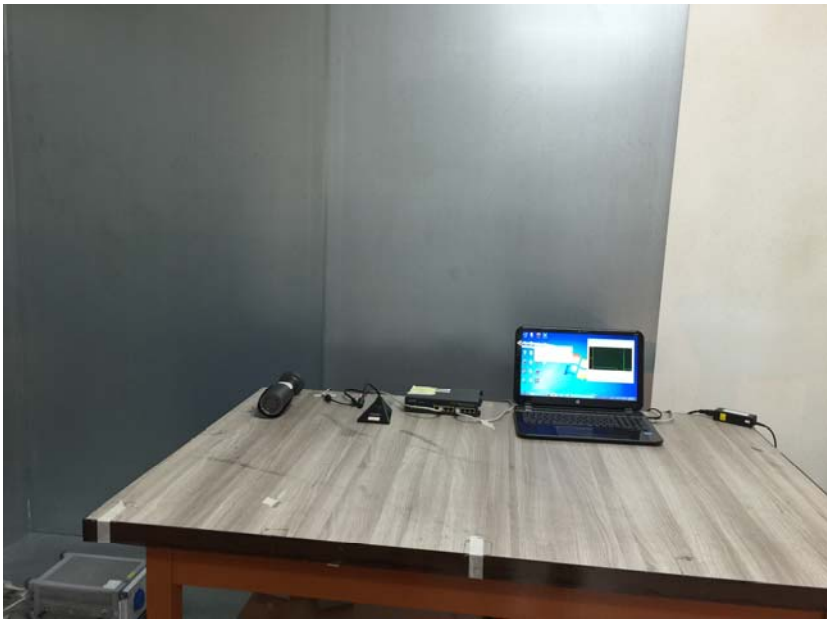
3. Test Setup Photographs

3.1 Conducted Emission

N/A

N/A

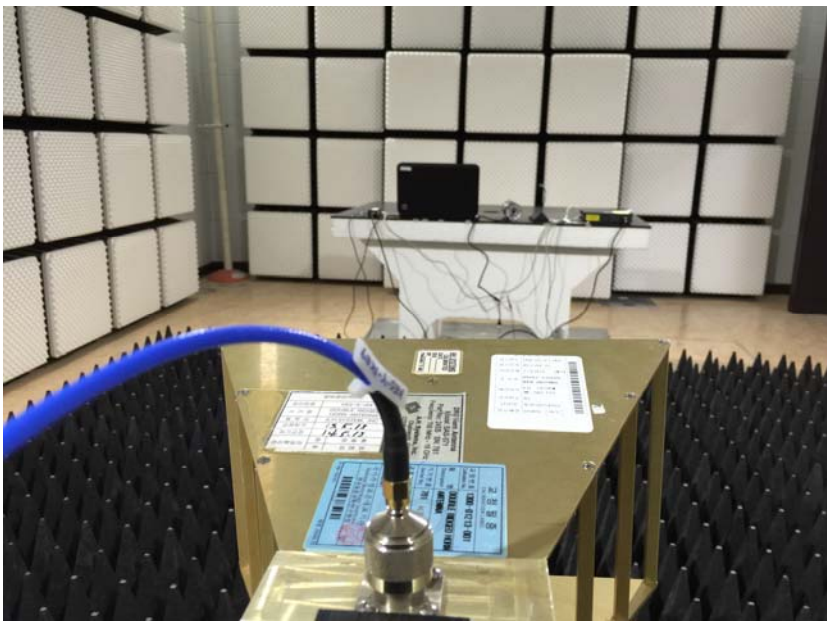
- Telecommunication Emission



3.2 Radiated Emission

*** Blow 1 GHz**

*** Above 1 GHz**



4. External Photographs

[FRONT VIEW]

[REAR VIEW]

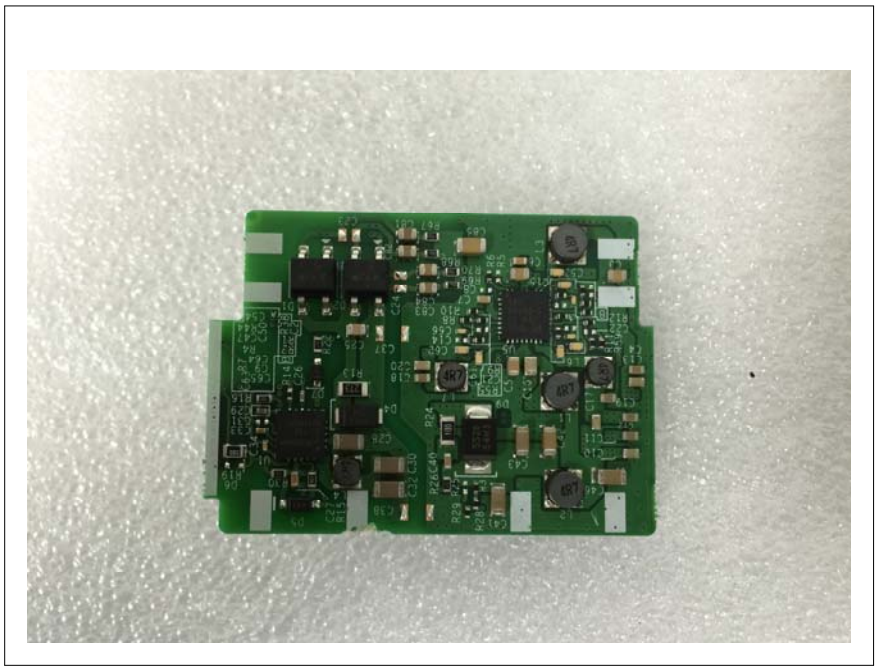
5. Internal Photographs

E.U.T: Internal View(Top) - Main Board

E.U.T: Internal View(Bottom) - Main Board

E.U.T: Internal View(Top) - Sub Board 1

E.U.T: Internal View(Bottom) - Sub Board1



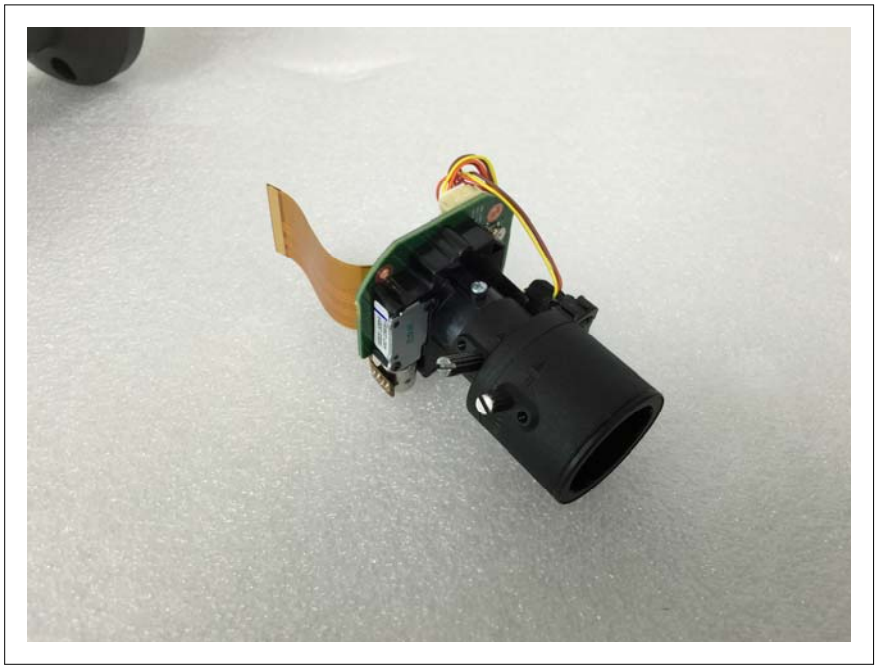
E.U.T: Internal View(Top) - LED Board 1

E.U.T: Internal View(Bottom) - LED Board 1

E.U.T: Internal View(Top) - LED Board 2

E.U.T: Internal View(Bottom) - LED Board 2

E.U.T: Internal View(Top) - CAMERA



E.U.T: Internal View(Bottom) - CAMERA