



FCC DOC TEST REPORT

According to

**47 CFR, Part 2, Part 15, CISPR PUB. 22,
ICES 003 Issue 6**

Applicant	: Panasonic India Pvt. Ltd.
Address	: 6th Floor, "SPIC BUILDING" Annexe, No. 88, Mount Road, Guindy, Chennai - 600 032.
Equipment	: Network Bullet Camera
Model No.	: PI-SPN400
Trade Name	: Panasonic

I HEREBY CERTIFY THAT :

The sample was received on May. 18, 2015 and the testing was carried out on Jun. 26, 2015 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Ray Chou
EMC/RF B.U. Assistant Manager



FCC TEST REPORT

Issued by:

Cerpass Technology Co.,Ltd

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The test record, data evaluation & Equipment. Under Test configurations represented herein are true and accurate accounts of the measurements of the samples EMC characteristics under the conditions specified in this report.

Laboratory Accreditation:

☒ Cerpass Technology Corporation Test Laboratory

NVLAP LAB Code:	200954-0
TAF LAB Code:	1439



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History of this test report

■ ORIGINAL.

□ Additional attachment as following record:

Report No	Version	Date	Description
SEFD1605060	Rev 01	May 16, 2016	Initial Issue



1. Summary of Test Procedure and Test Result

1.1. Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 – 2014 and the energy emitted by this equipment was passed Part 2, Part 15, CISPR PUB. 22.

The energy emitted by this equipment was passed both Radiated and Conducted Emissions Class B limits.

Test Item	Normative References	Test Result	Remarks
Conducted Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(AV) is -2.35 dB at 0.3220 MHz
Radiated Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(QP) is -2.84 dB at 37.7599 MHz



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Product Name:	Network Bullet Camera	
Model Name:	PI-SPN400	
Adapter #1	Model No.:	ADS-12B-12012Gz
	INPUT:	100-240V~ 50/60Hz Max. 0.3A
	OUTPUT:	12V, 1.0A
Adapter 2#	Model No.:	A12-3A-10
	INPUT:	120VAC 60Hz 46W
	OUTPUT:	24VAC 1500mA

Note: Please refer to user manual.

I/O PORT:

I/O PORT TYPE	Quantity
1). RJ45 Port	1
2). BNC Port	1
3). Audio Port	2
4). SD Card Port	1
5). Alarm in Port	2
6). Alarm out Port	1
7). RS485 Port	2
8). RS232 Port	2



2.2. Test Manner

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. Turn on the power of all equipment.
- c. The complete test system included Notebook PC, SD Card, Earphone, DVR, Monitor and EUT for EMI test.
- d. The test mode of RE as follow:

Test Mode 1. Full system with Adapter #1 + POE

Test Mode 2. Full system with Adapter #2 + POE

Test Mode 3. Full system with POE

The "Test Mode 1,2,3" were reported as final data.

The test mode of CE as follow:

Test Mode 1. Full system with Adapter #1 + POE

Test Mode 2. Full system with Adapter #2 + POE

The "Test Mode 1,2" were reported as final data.

- e. The maximum operating frequency is above 108MHz, the test frequency range is from 30MHz to 18GHz.

**2.3. Description of Test System**

No	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded,1.5m (R33021)
2	DVR	Dahua	N/A	Non-Shielded,1.5m
3	Earphone	SALAR	V18	N/A
4	Monitor	PTS	PTS-1401C	Non-Shielded,1.8m
5	SD Card	Kingston	N/A	N/A

Use Cable:

No	Cable	Quantity	Description
A	LAN Cable	1	Non-Shielded,>3.0 m
B	LAN Cable	1	Non-Shielded,>3.0 m
C	DC Cable	1	Non-Shielded,1.5m
D	BNC Cable	1	Shielded,>3.0m
E	Audio Cable	1	Non-Shielded, 1.8m



2.4. General Information of Test

Test Site :	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
FCC Registration Number :	TW1079, TW1061,390316, 228391, 641184
IC Registration Number :	4934B-1, 4934E-1, 4934E-2
VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-3428, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
Frequency Range Investigated :	Conducted Emission Test: from 150 kHz to 30 MHz Radiated Emission Test: from 30 MHz to 18,000 MHz
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 10 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.

2.5. Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE / NEUTRAL	3.25 dB
Radiated Emission	30 MHz ~ 1,000 MHz	Vertical / Horizontal	3.93 dB
	1,000 MHz ~ 18,000 MHz	Vertical / Horizontal	5.18 dB

Test results and Measurement uncertainty without any relationship in the test report.



3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2014 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

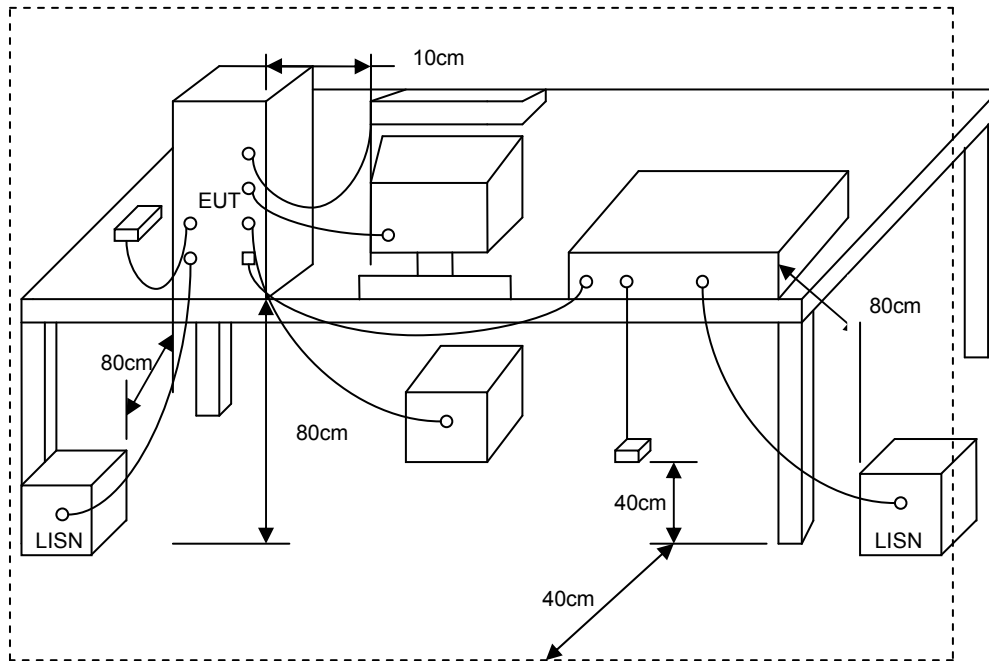
Conducted Emission Limits:

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

3.2. Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

3.3. Typical test Setup

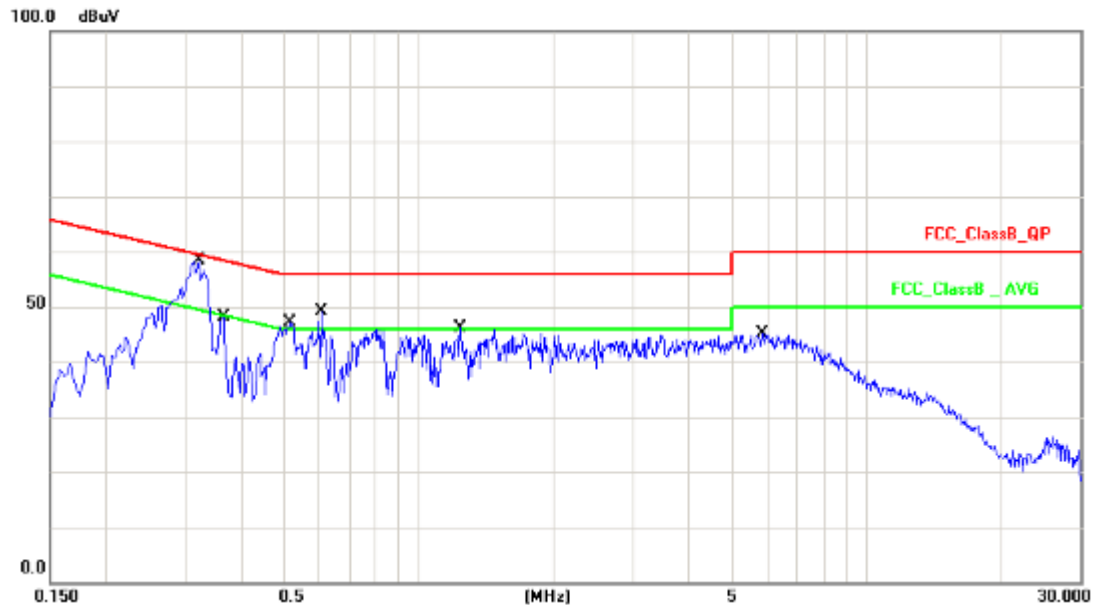


3.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2015.03.29	2016.03.28
AMN	R&S	ESH2-Z5	100182	2014.09.04	2015.09.03
Two-Line V-Network	R&S	ENV216	100325	/	/
ISN	FCC	FCC-TLISN-T2-02	20379	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T4-02	20380	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T8-02	20381	2015.03.29	2016.03.28
ISN	TESEQ	ISN ST08	30175	2015.03.29	2016.03.28
Current Probe	R&S	EZ-17	100303	2015.03.29	2016.03.28
Passive Voltage Probe	R&S	ESH2-Z3	100026	2015.03.29	2016.03.28
Pulse Limiter	R&S	ESH3-Z2	100529	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A

**3.5. Test Result and Data**

Test Mode :	Mode 1: Full system with Adapter #1 + POE					
AC Power :	AC 120V/60Hz	Phase :	LINE			
Equipment :	Network Bullet Camera	Model No :	PI-SPN400			
Temperature :	23°C	Humidity :	55%			
Pressure(mbar) :	1002	Date :	2015/06/25			

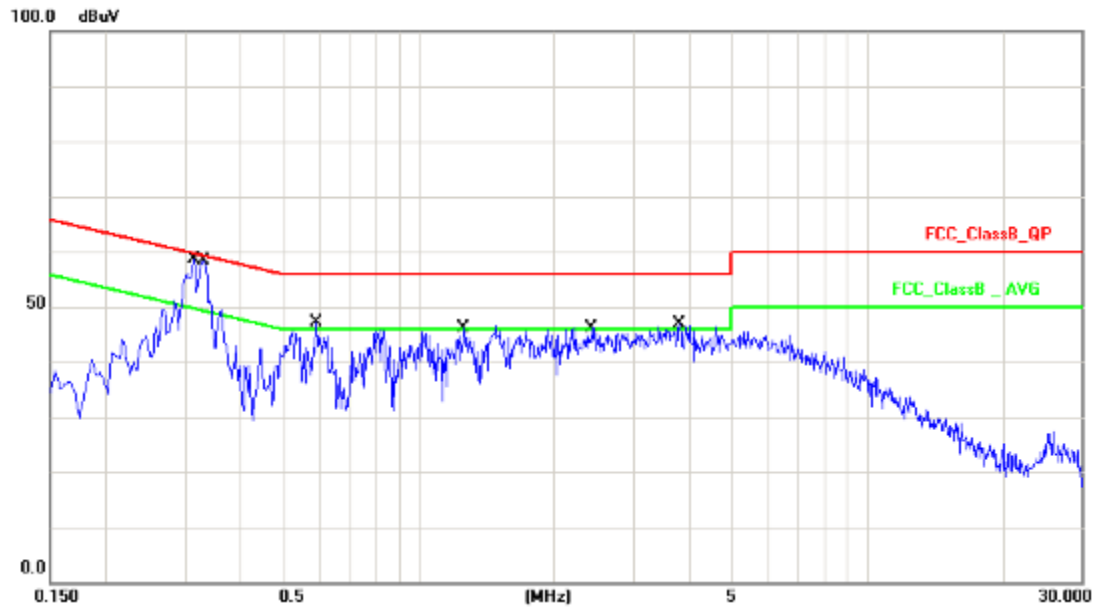


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3220	10.14	46.42	56.56	59.65	-3.09	QP
2	0.3220	10.14	35.28	45.42	49.65	-4.23	AVG
3	0.3660	10.15	33.78	43.93	58.59	-14.66	QP
4	0.3660	10.15	22.04	32.19	48.59	-16.40	AVG
5	0.5180	10.16	35.81	45.97	56.00	-10.03	QP
6	0.5180	10.16	26.34	36.50	46.00	-9.50	AVG
7	0.6060	10.15	35.72	45.87	56.00	-10.13	QP
8	0.6060	10.15	23.85	34.00	46.00	-12.00	AVG
9	1.2420	10.16	32.80	42.96	56.00	-13.04	QP
10	1.2420	10.16	22.76	32.92	46.00	-13.08	AVG
11	5.8580	10.25	31.24	41.49	60.00	-18.51	QP
12	5.8580	10.25	21.67	31.92	50.00	-18.08	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system with Adapter #1 + POE		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/25

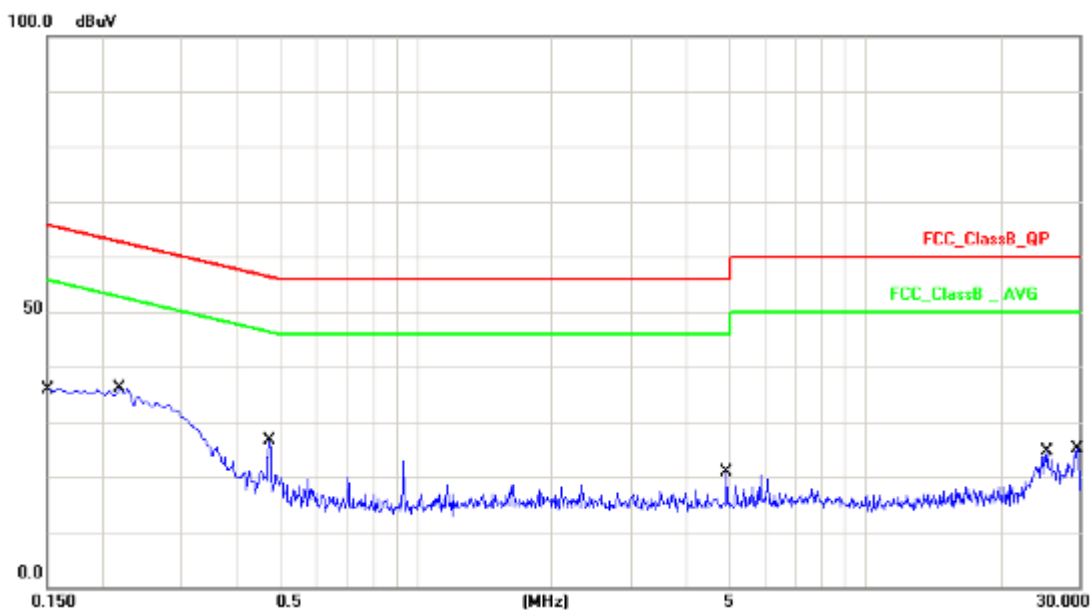


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3140	10.14	43.02	53.16	59.86	-6.70	QP
2	0.3140	10.14	31.62	41.76	49.86	-8.10	AVG
3	0.3300	10.14	43.46	53.60	59.45	-5.85	QP
4	0.3300	10.14	33.80	43.94	49.45	-5.51	AVG
5	0.5899	10.15	32.42	42.57	56.00	-13.43	QP
6	0.5899	10.15	20.94	31.09	46.00	-14.91	AVG
7	1.2579	10.18	30.36	40.54	56.00	-15.46	QP
8	1.2579	10.18	20.11	30.29	46.00	-15.71	AVG
9	2.4219	10.19	29.70	39.89	56.00	-16.11	QP
10	2.4219	10.19	17.11	27.30	46.00	-18.70	AVG
11	3.8020	10.22	29.52	39.74	56.00	-16.26	QP
12	3.8020	10.22	18.55	28.77	46.00	-17.23	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/25

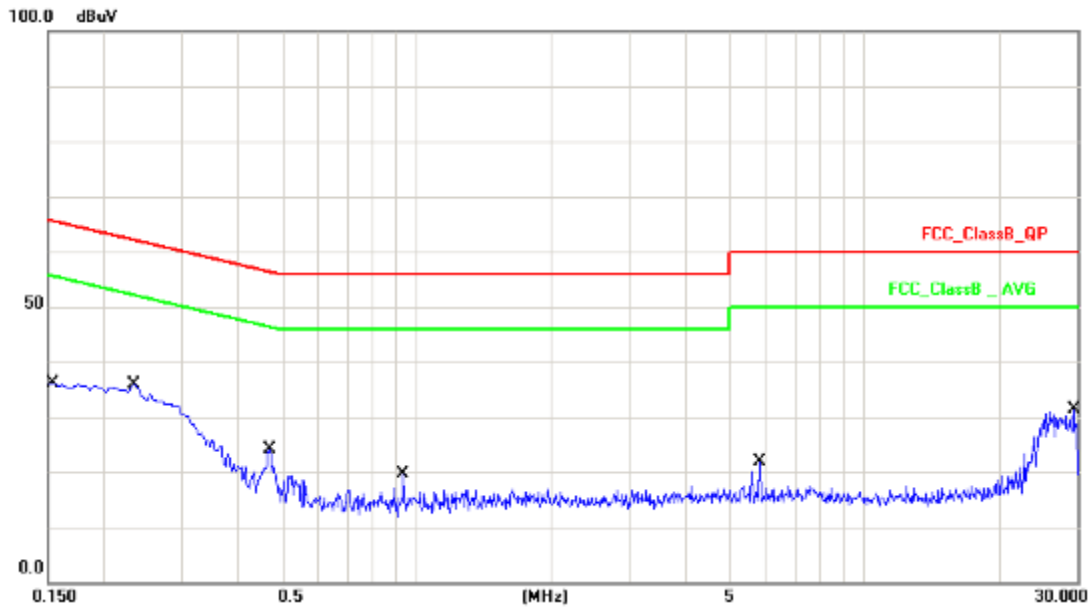


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.13	19.23	29.36	65.99	-36.63	QP
2	0.1500	10.13	0.53	10.66	55.99	-45.33	AVG
3	0.2180	10.12	18.37	28.49	62.89	-34.40	QP
4	0.2180	10.12	-1.33	8.79	52.89	-44.10	AVG
5	0.4700	10.16	10.97	21.13	56.51	-35.38	QP
6	0.4700	10.16	6.98	17.14	46.51	-29.37	AVG
7	4.9100	10.24	5.64	15.88	56.00	-40.12	QP
8	4.9100	10.24	0.18	10.42	46.00	-35.58	AVG
9	25.4860	10.43	10.75	21.18	60.00	-38.82	QP
10	25.4860	10.43	7.47	17.90	50.00	-32.10	AVG
11	29.6980	10.44	12.15	22.59	60.00	-37.41	QP
12	29.6980	10.44	7.20	17.64	50.00	-32.36	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/25



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	10.13	19.16	29.29	65.78	-36.49	QP
2	0.1539	10.13	0.04	10.17	55.78	-45.61	AVG
3	0.2340	10.13	20.56	30.69	62.30	-31.61	QP
4	0.2340	10.13	14.83	24.96	52.30	-27.34	AVG
5	0.4700	10.15	11.22	21.37	56.51	-35.14	QP
6	0.4700	10.15	8.30	18.45	46.51	-28.06	AVG
7	0.9340	10.17	5.12	15.29	56.00	-40.71	QP
8	0.9340	10.17	2.65	12.82	46.00	-33.18	AVG
9	5.8460	10.26	6.67	16.93	60.00	-43.07	QP
10	5.8460	10.26	-1.08	9.18	50.00	-40.82	AVG
11	29.4660	10.28	18.24	28.52	60.00	-31.48	QP
12	29.4660	10.28	12.86	23.14	50.00	-26.86	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Dian



3.6. Test Photographs

ADS-12B-1212012Gz

Front View



Rear View





HKA-A24150-230

Front View



Rear View





4. Test of Radiated Emission

4.1. Test Limit

Below 1GHz (for digital device)

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

Class A Radiated Emission limit at 10m (for others)

Frequency (MHz)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 - 960	210	46.4
Above 960	300	49.5

Class B Radiated Emission limit at 3m (for others)

Frequency (MHz)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

Above 1GHz(for all device)

Frequency (MHz)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

NOTE: (1) The lower limit shall apply at the transition frequencies.
 (2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
 (3) The measurement above 1GHz is at close-in distances 3m, and determine the limit L2 corresponding to the close-in distance d2 by applying the following relation: $L2 = L1 (d1/d2)$, where L1 is the specified limit in microvolts per metre (uV/m) at the distance d1 (10m), L2 is the new limit for distance d2 (3m).
 So the new Class A limit above 1GHz at 3m is as following table:



Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5 th harmonic of the highest frequency or 40GHz, whichever is lower

4.2. Test Procedures

Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 15 cm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC 120VAC/60Hz power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 3 or 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.



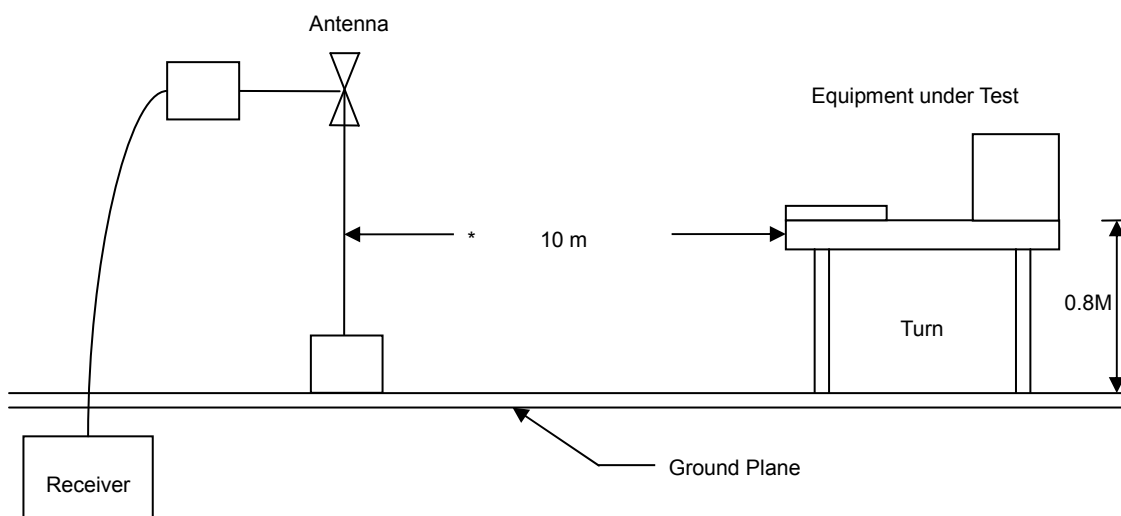
- Set the spectrum analyzer/ Receiver in the following setting as:
Below 1GHz:
RBW=120KHz / VBW=300KHz / Sweep=AUTO
Above 1GHz:
Peak: RBW=1MHz, VBW=3MHz / Sweep=AUTO
Average: RBW=1MHz / VBW=10Hz / Sweep=AUTO
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 or 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recording at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. Below 1GHz the Q.P. reading and above 1GHz the Peak and Average reading are presented.
- The test data of the worst-case condition(s) was recorded.

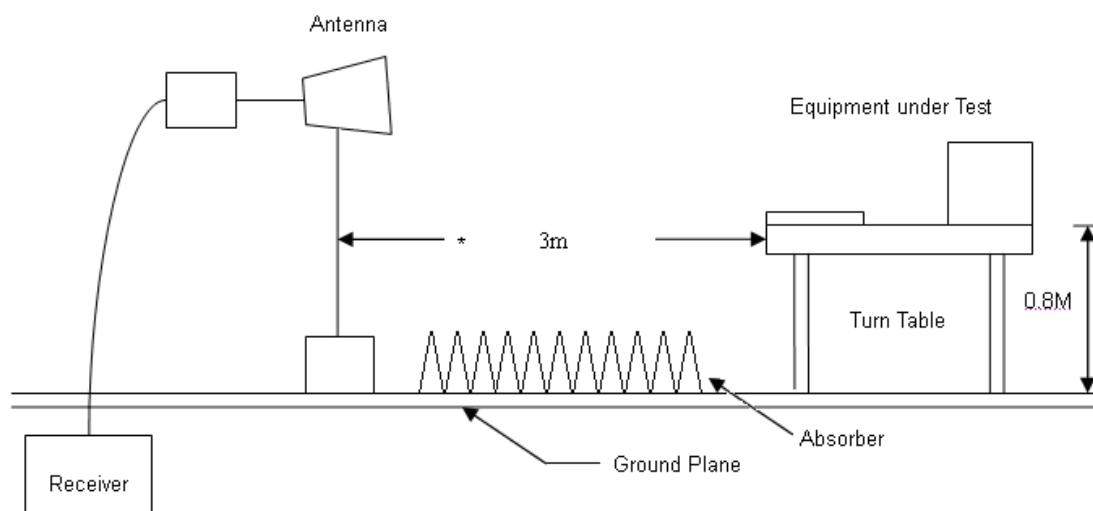
4.3. Typical test Setup

Below 1GHz Test Setup





Above 1GHz Test Setup

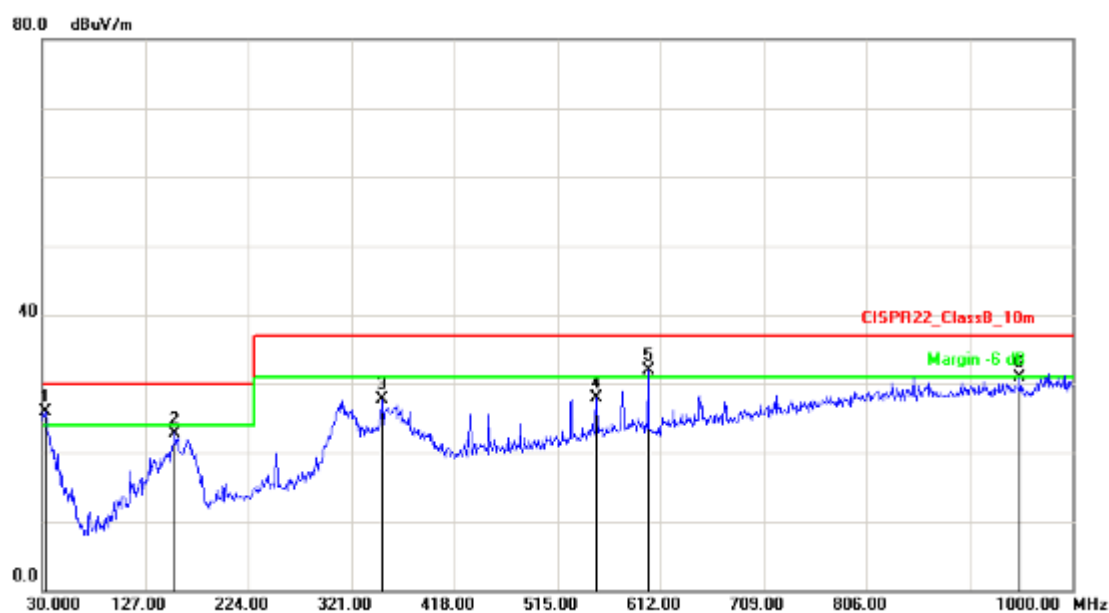
**4.4. Measurement Equipment**

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI7	100968	2015.03.29	2016.03.28
Preamplifier	Agilent	87405B	My39500554	2015.03.29	2016.03.28
Preamplifier	Agilent	8449B	3008A02342	2015.03.29	2016.03.28
Bilog Antenna	Sunol Science	JB1	A072414-3	2014.08.05	2015.08.04
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2015.04.20	2016.04.19
Spectrum Analyzer	R&S	FSP40	100324	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-001	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A



4.5. Test Result and Data (30MHz~1GHz)

Test Mode :	Mode 1: Full system with Adapter #1 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

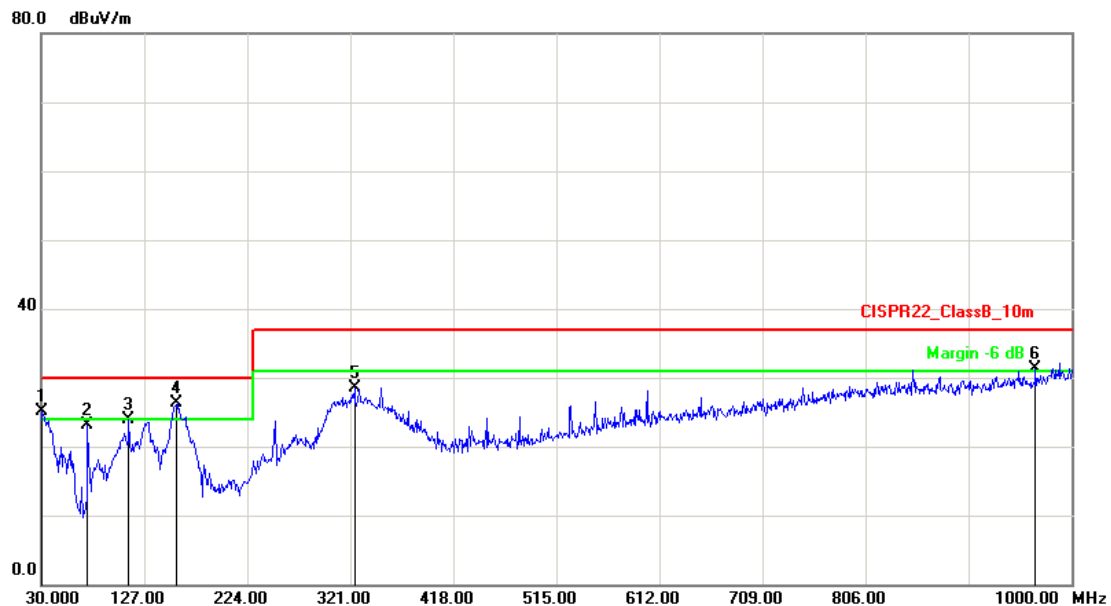


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-2.08	28.06	25.98	30.00	-4.02	QP	200	316
2	155.1299	-10.68	33.48	22.80	30.00	-7.20	QP	100	0
3	350.1000	-6.37	34.05	27.68	37.00	-9.32	QP	200	260
4	551.8600	-1.34	29.23	27.89	37.00	-9.11	QP	200	285
5	600.3600	-0.16	32.16	32.00	37.00	-5.00	QP	100	135
6	950.5299	5.00	25.88	30.88	37.00	-6.12	QP	100	46

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system with Adapter #1 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

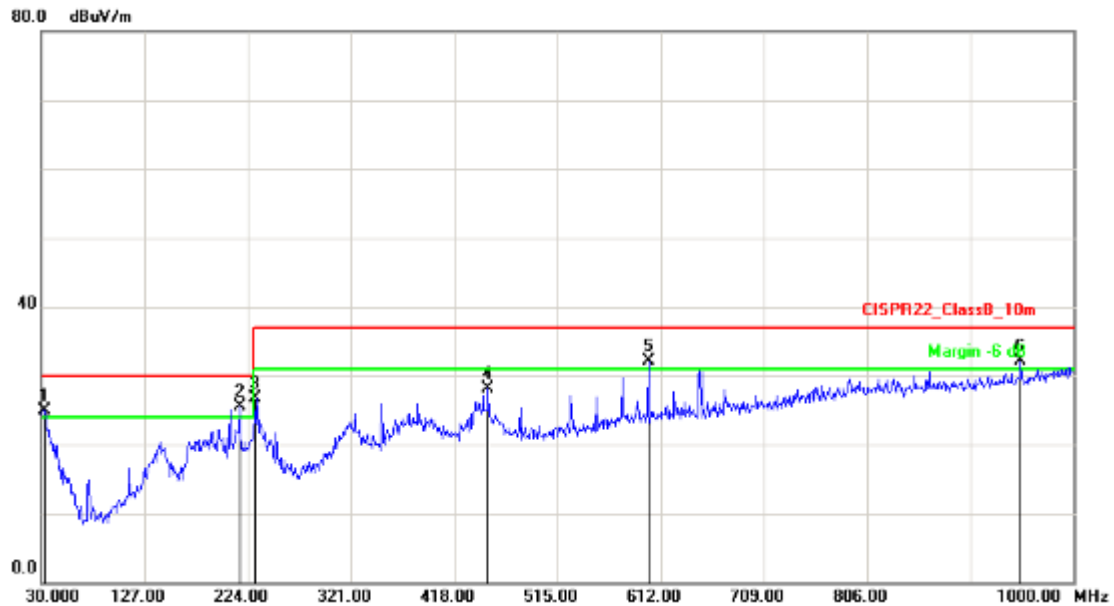


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9700	-1.20	26.38	25.18	30.00	-4.82	QP	200	197
2	73.6500	-16.11	39.29	23.18	30.00	-6.82	QP	100	30
3	112.4500	-12.14	36.00	23.86	30.00	-6.14	QP	200	161
4	158.0399	-10.73	36.95	26.22	30.00	-3.78	QP	100	242
5	324.8800	-7.17	35.67	28.50	37.00	-8.50	QP	200	125
6	966.0500	5.28	25.94	31.22	37.00	-5.78	QP	200	59

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

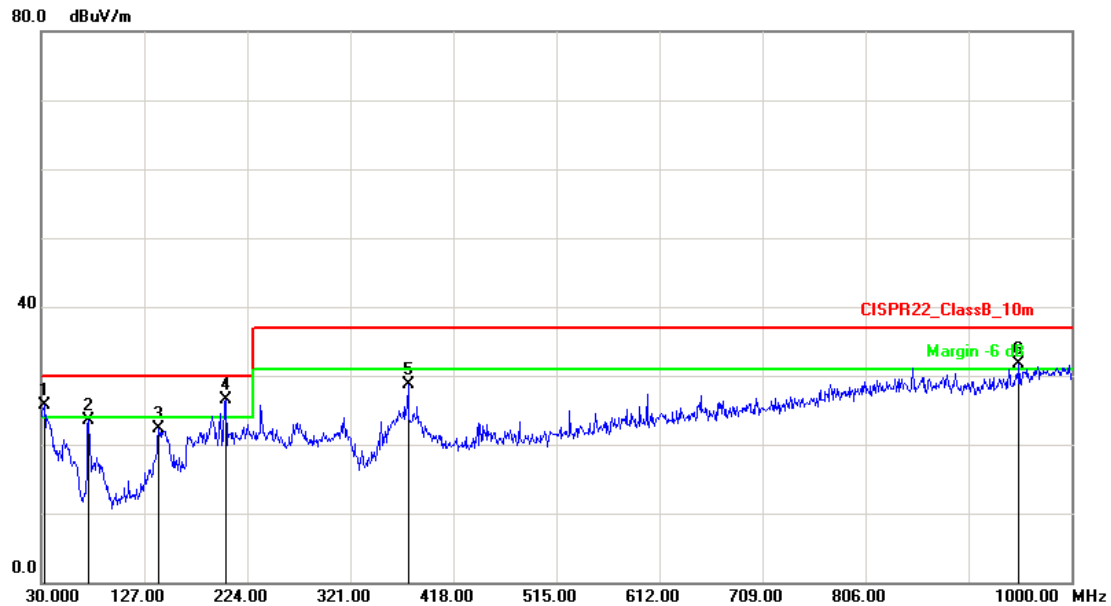


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-2.08	26.97	24.89	30.00	-5.11	QP	100	258
2	216.2400	-10.87	36.29	25.42	30.00	-4.58	QP	100	0
3	231.7599	-9.78	36.50	26.72	37.00	-10.28	QP	100	0
4	450.0099	-3.69	31.78	28.09	37.00	-8.91	QP	100	0
5	600.3600	-0.16	32.34	32.18	37.00	-4.82	QP	100	325
6	950.5299	5.00	27.06	32.06	37.00	-4.94	QP	100	55

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

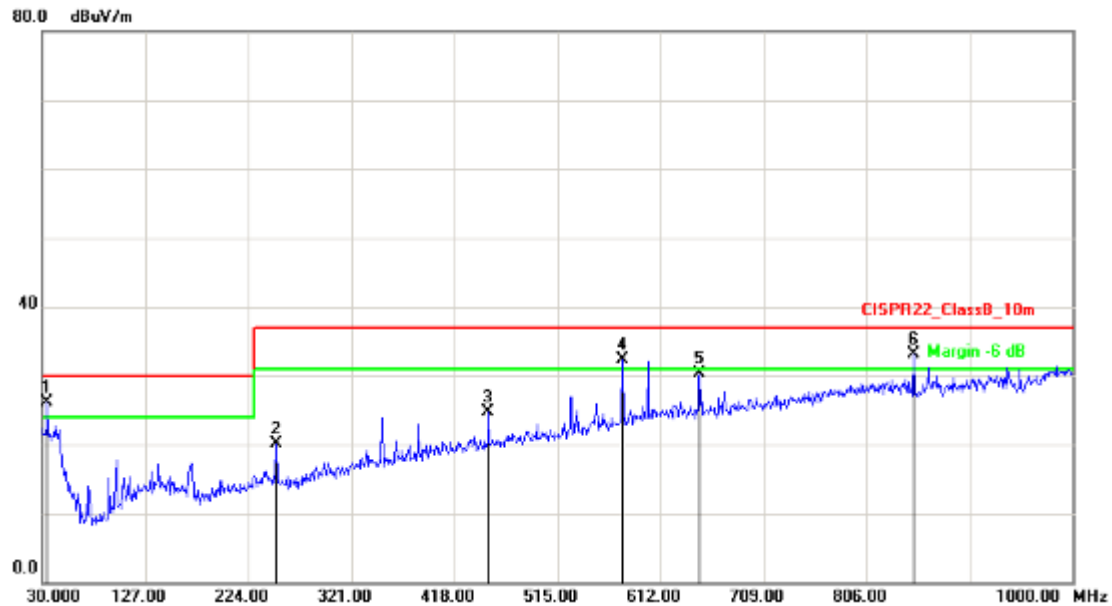


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9100	-2.08	27.78	25.70	30.00	-4.30	QP	200	299
2	74.6200	-16.05	39.59	23.54	30.00	-6.46	QP	200	305
3	140.5800	-10.43	32.73	22.30	30.00	-7.70	QP	200	44
4	203.6300	-10.99	37.48	26.49	30.00	-3.51	QP	200	141
5	375.3200	-5.56	34.20	28.64	37.00	-8.36	QP	200	89
6	950.5300	5.00	26.62	31.62	37.00	-5.38	QP	200	37

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

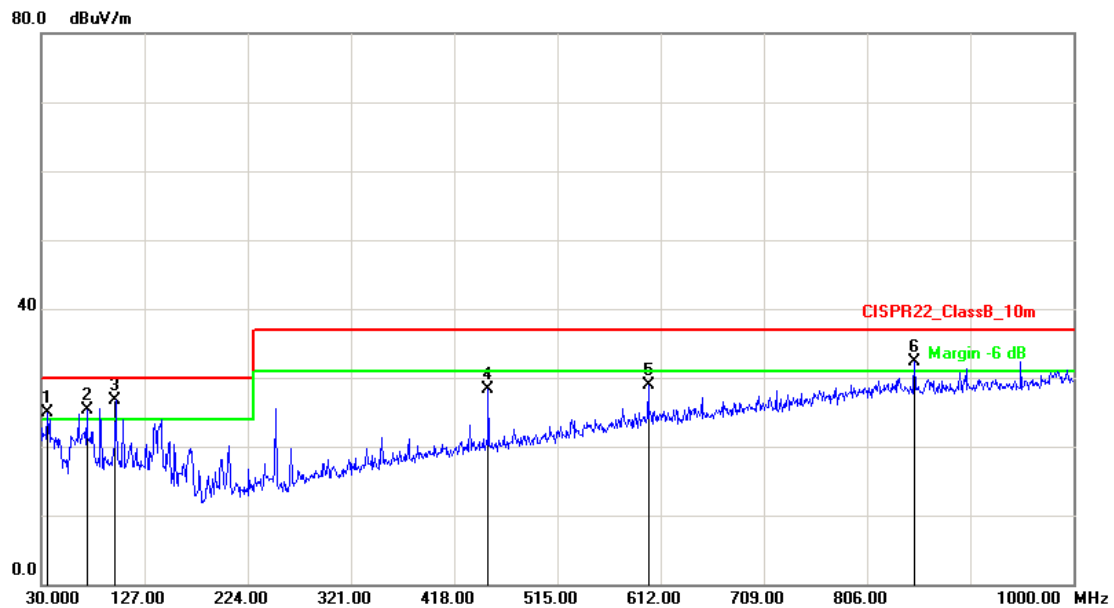


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	34.8500	-2.95	29.12	26.17	30.00	-3.83	QP	200	359
2	250.1899	-9.45	29.54	20.09	37.00	-16.91	QP	200	90
3	450.0099	-3.69	28.43	24.74	37.00	-12.26	QP	195	360
4	576.1100	-0.75	33.13	32.38	37.00	-4.62	QP	100	314
5	648.8600	0.56	29.76	30.32	37.00	-6.68	QP	100	44
6	850.6200	3.77	29.28	33.05	37.00	-3.95	QP	100	66

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

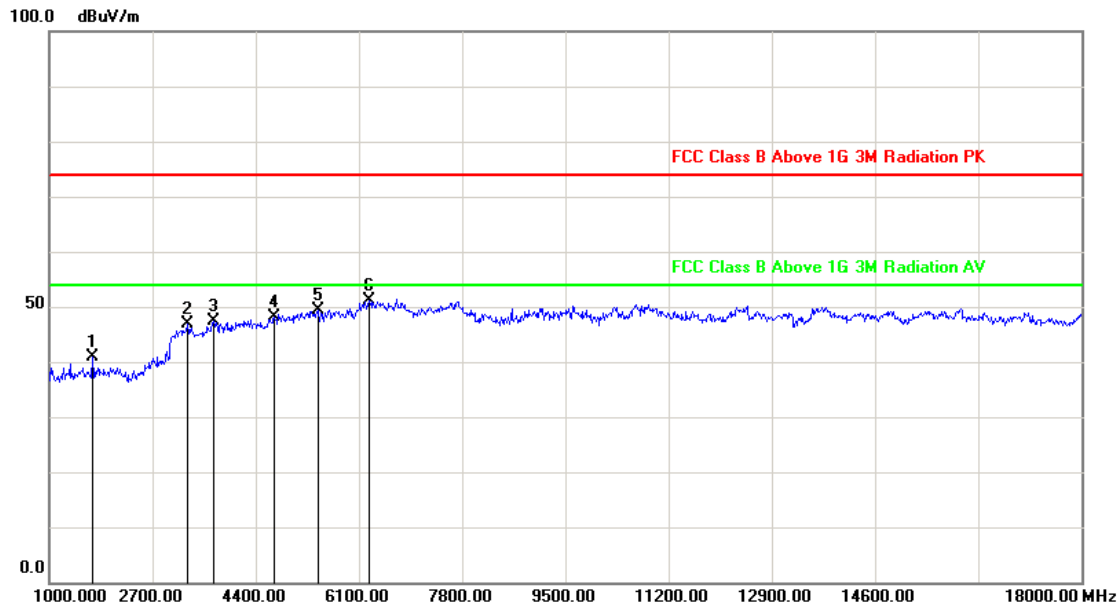


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	35.8200	-3.39	28.26	24.87	30.00	-5.13	QP	200	0
2	72.6800	-16.16	41.41	25.25	30.00	-4.75	QP	100	65
3	99.8399	-13.63	40.32	26.69	30.00	-3.31	QP	200	0
4	450.0100	-3.69	32.01	28.32	37.00	-8.68	QP	100	186
5	600.3600	-0.16	29.16	29.00	37.00	-8.00	QP	100	79
6	850.6200	3.77	28.59	32.36	37.00	-4.64	QP	200	355

Note: Measurement Level = Reading Level + Correct Factor

**4.6. Test Result and Data (1GHz ~ 18GHz)**

Test Mode :	Mode 1: Full system with Adapter #1 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

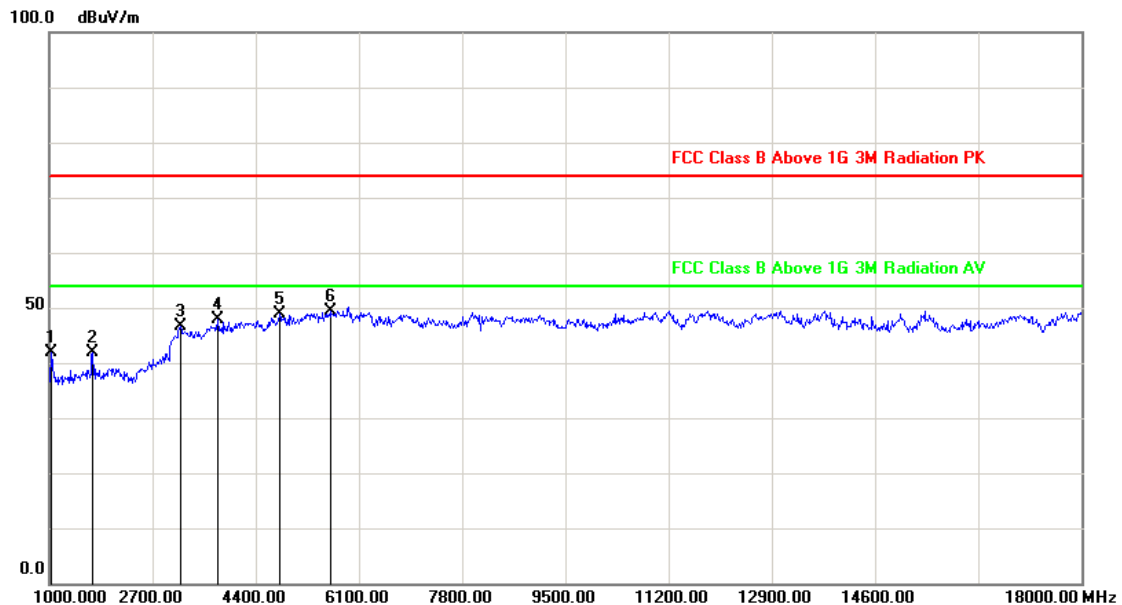


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1714.000	-3.89	44.76	40.87	74.00	-33.13	peak	100	148
2	3278.000	1.68	45.08	46.76	74.00	-27.24	peak	100	72
3	3703.000	3.26	44.10	47.36	74.00	-26.64	peak	100	328
4	4706.000	6.12	42.09	48.21	74.00	-25.79	peak	100	260
5	5437.000	7.58	41.73	49.31	74.00	-24.69	peak	100	1
6	6270.000	9.46	41.58	51.04	74.00	-22.96	peak	100	40

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system with Adapter #1 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

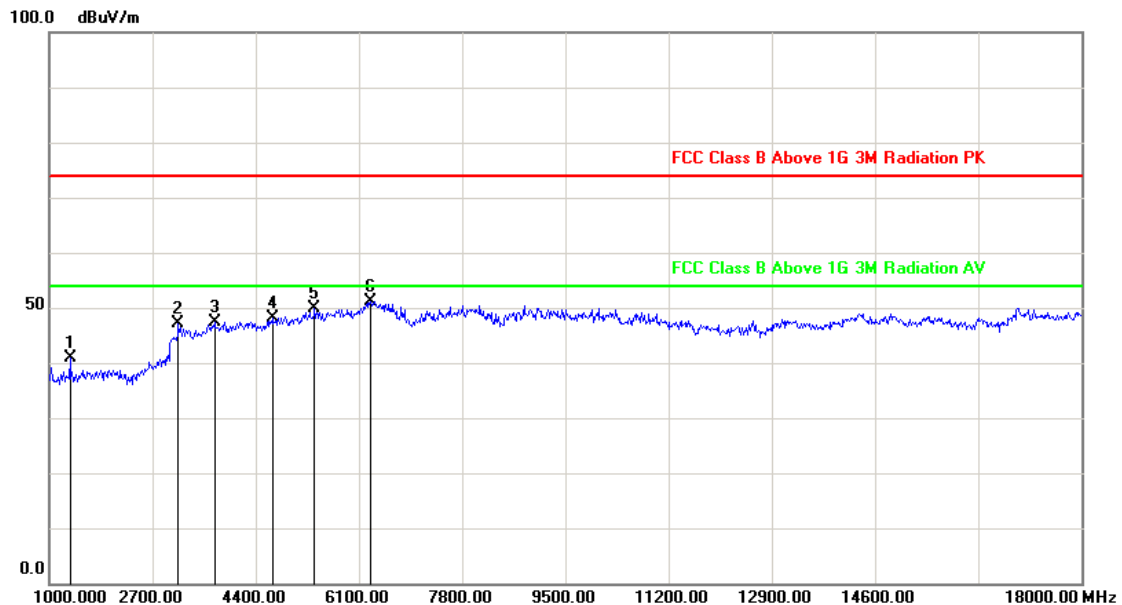


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1034.000	-6.73	48.61	41.88	74.00	-32.12	peak	100	15
2	1714.000	-3.89	45.86	41.97	74.00	-32.03	peak	100	298
3	3159.000	1.24	45.44	46.68	74.00	-27.32	peak	100	27
4	3771.000	3.51	44.35	47.86	74.00	-26.14	peak	100	84
5	4791.000	6.33	42.48	48.81	74.00	-25.19	peak	100	82
6	5641.000	7.93	41.38	49.31	74.00	-24.69	peak	100	40

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23℃	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

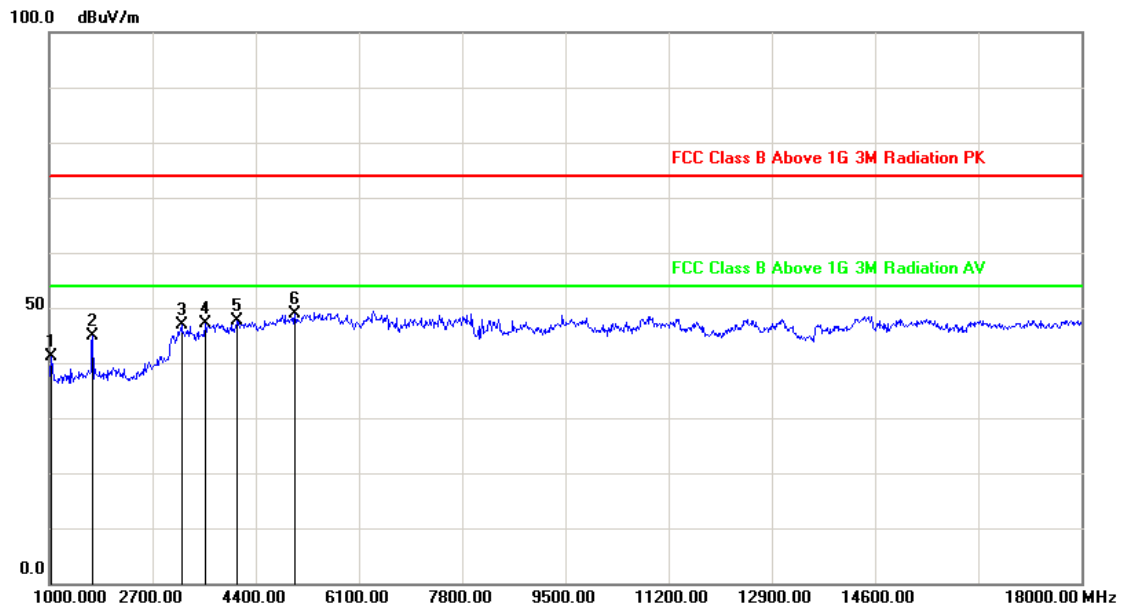


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1340.000	-5.45	46.35	40.90	74.00	-33.10	peak	100	121
2	3125.000	1.11	46.00	47.11	74.00	-26.89	peak	100	0
3	3720.000	3.32	44.15	47.47	74.00	-26.53	peak	100	288
4	4672.000	6.03	42.21	48.24	74.00	-25.76	peak	100	109
5	5369.000	7.47	42.43	49.90	74.00	-24.10	peak	100	33
6	6287.000	9.52	41.72	51.24	74.00	-22.76	peak	100	248

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system with Adapter #2 + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

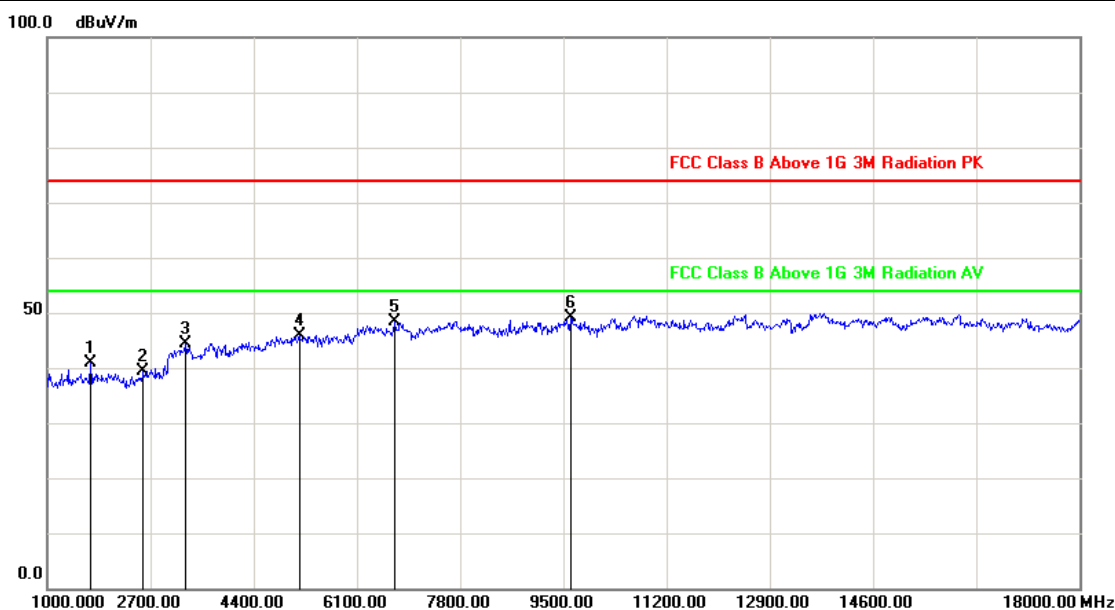


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1034.000	-6.73	47.87	41.14	74.00	-32.86	peak	100	2
2	1714.000	-3.89	48.78	44.89	74.00	-29.11	peak	100	8
3	3176.000	1.30	45.52	46.82	74.00	-27.18	peak	100	28
4	3567.000	2.75	44.47	47.22	74.00	-26.78	peak	100	48
5	4094.000	4.59	42.92	47.51	74.00	-26.49	peak	100	358
6	5046.000	6.93	41.99	48.92	74.00	-25.08	peak	100	247

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26

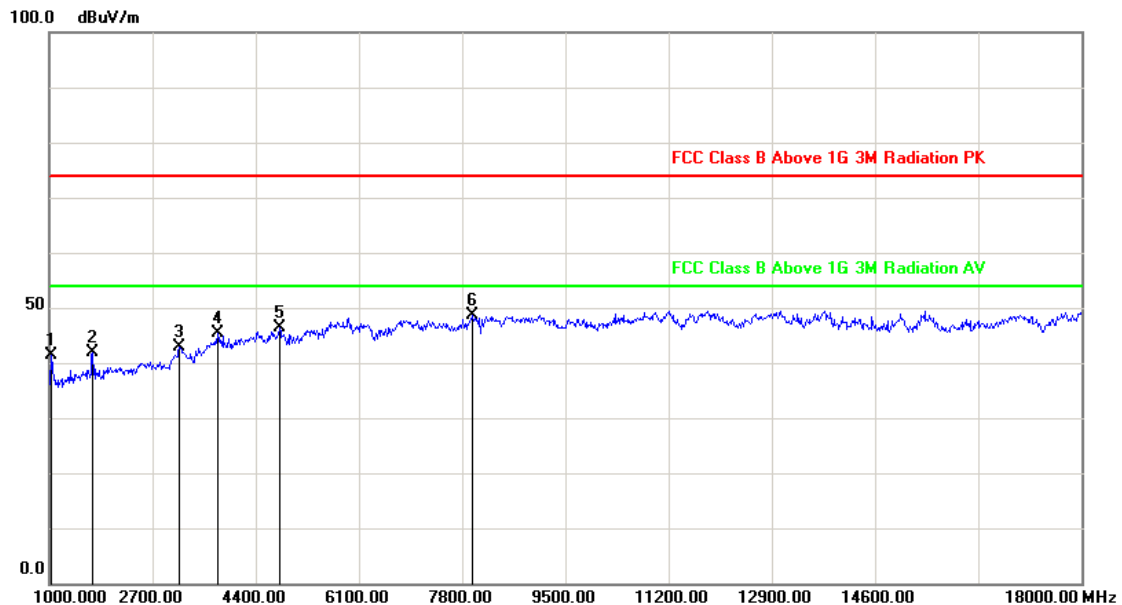


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1714.000	-3.89	44.76	40.87	74.00	-33.13	peak	200	159
2	2581.000	-0.75	40.18	39.43	74.00	-34.57	peak	200	9
3	3278.000	1.68	42.58	44.26	74.00	-29.74	peak	100	71
4	5148.000	7.10	38.88	45.98	74.00	-28.02	peak	100	225
5	6729.000	11.05	37.29	48.34	74.00	-25.66	peak	100	98
6	9619.000	16.79	32.43	49.22	74.00	-24.78	peak	100	123

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Bullet Camera	Model No :	PI-SPN400
Temp :	23°C	Humidity :	56%
Pressure(mbar) :	1002	Date :	2015/06/26



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1034.000	-6.73	48.11	41.38	74.00	-32.62	peak	200	92
2	1714.000	-3.89	45.86	41.97	74.00	-32.03	peak	200	29
3	3142.000	1.18	41.65	42.83	74.00	-31.17	peak	100	228
4	3771.000	3.51	41.85	45.36	74.00	-28.64	peak	100	354
5	4791.000	6.33	39.98	46.31	74.00	-27.69	peak	115	87
6	7970.000	14.29	34.31	48.60	74.00	-25.40	peak	100	124

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Karp



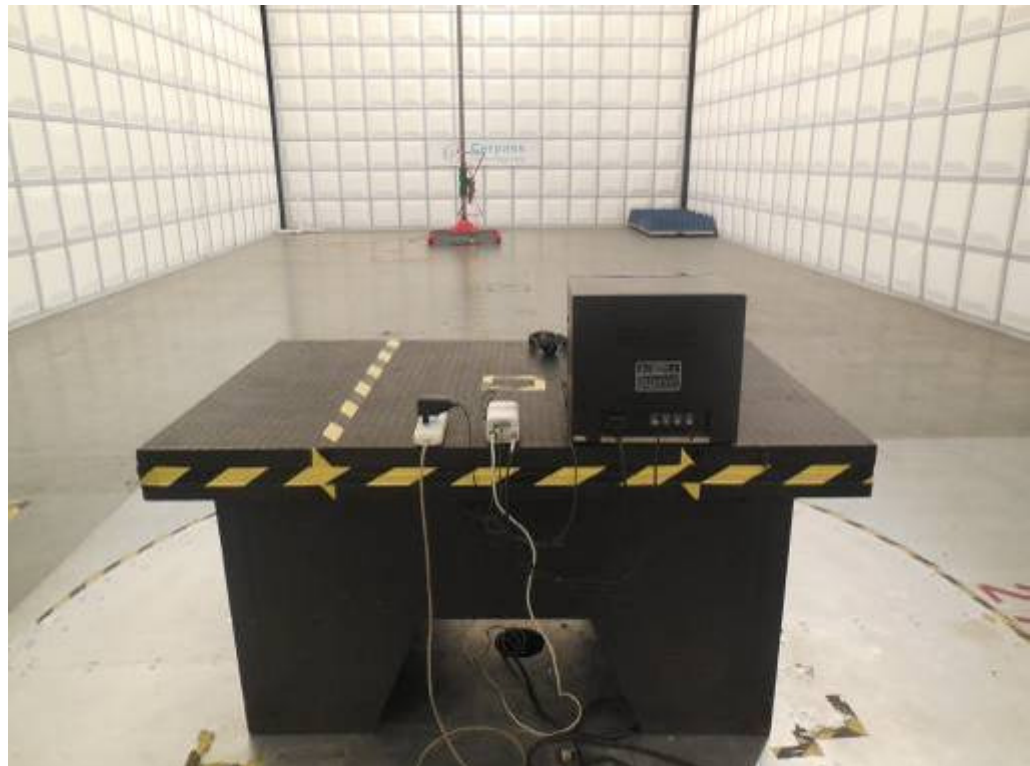
4.7. Test Photographs (30MHz ~ 1GHz)

ADS-12B-1212012Gz

Front View



Rear View



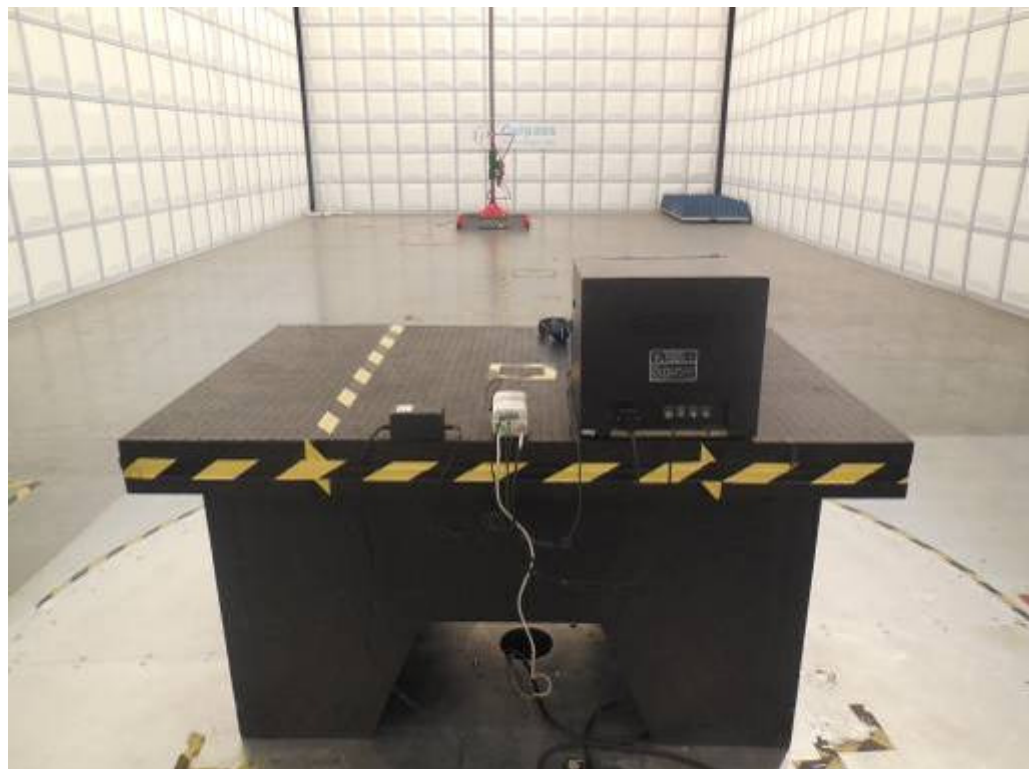


HKA-A24150-230

Front View



Rear View

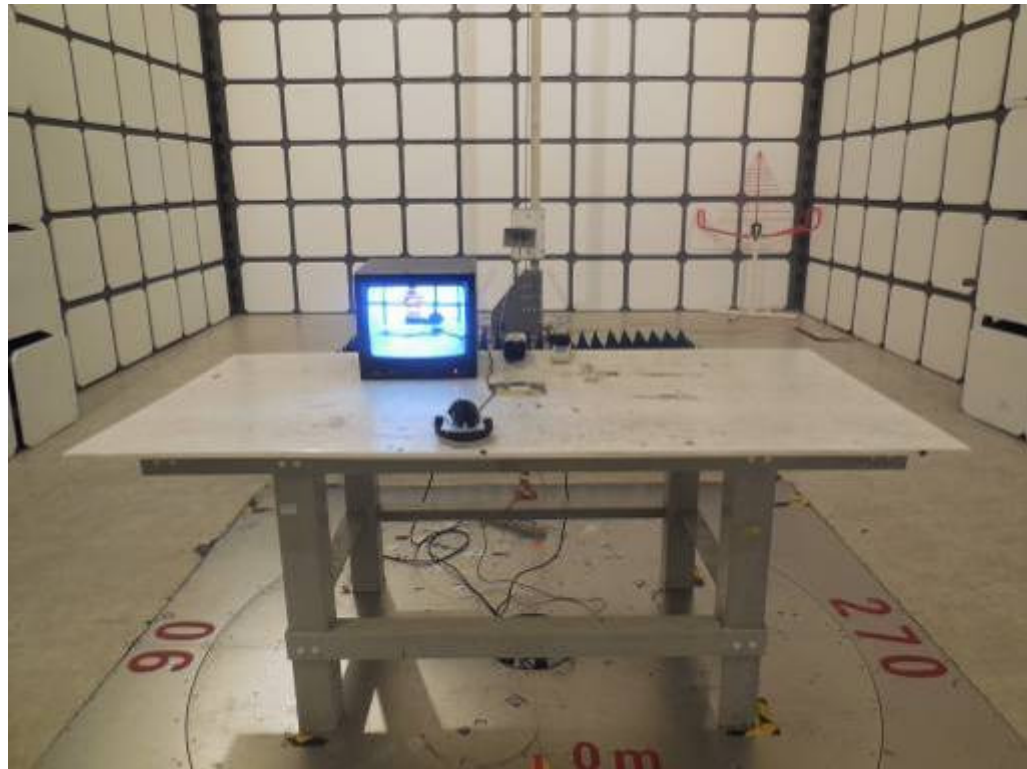




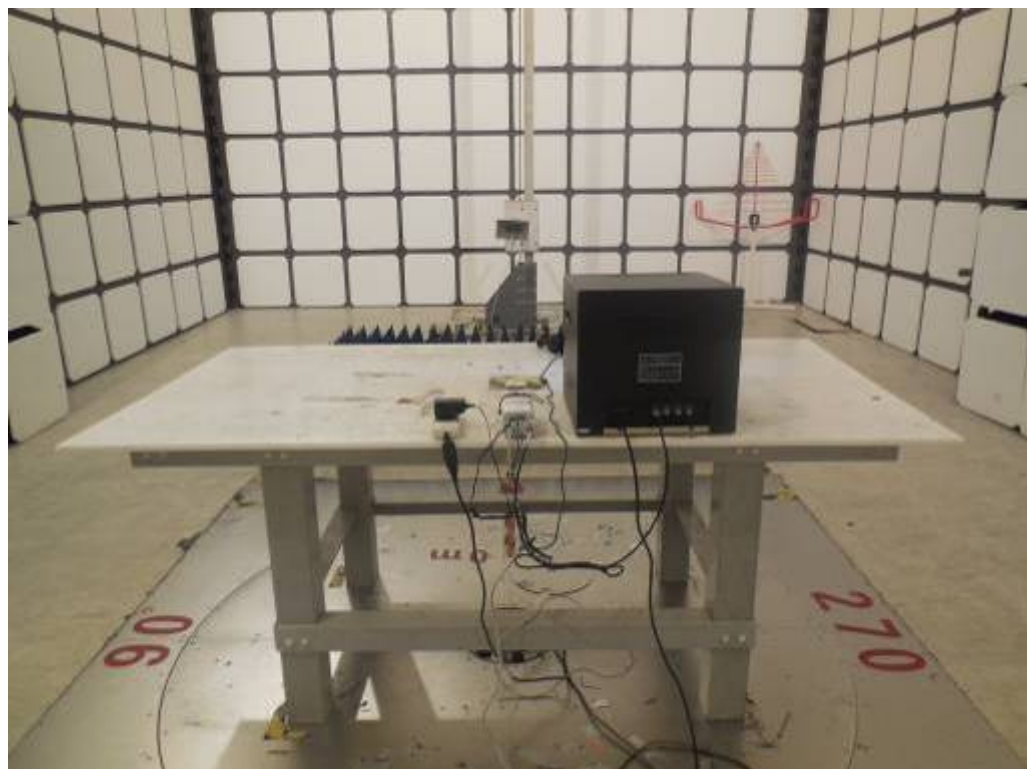
4.8. Test Photographs (1GHz ~ 18GHz)

ADS-12B-1212012Gz

Front View



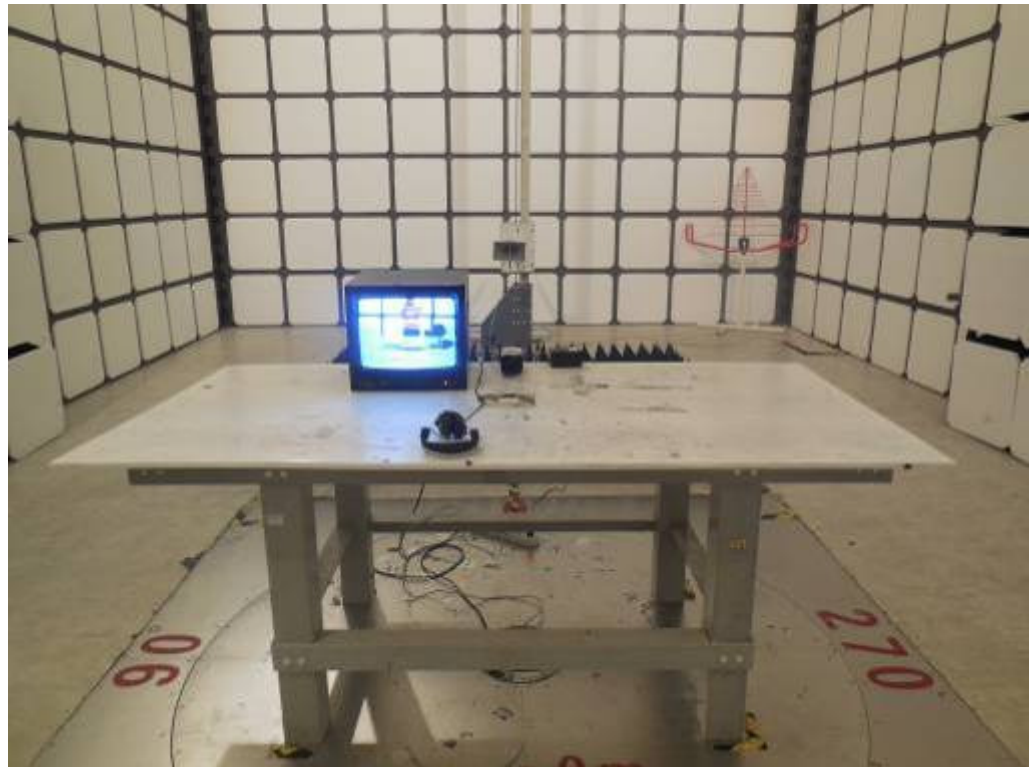
Rear View



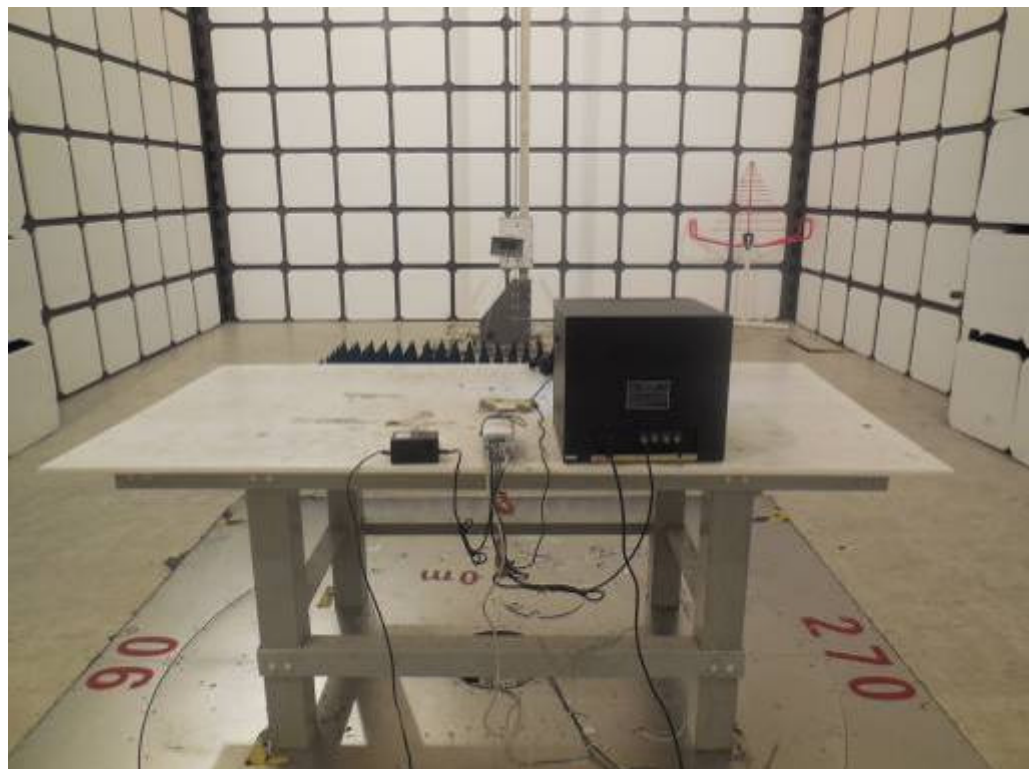


HKA-A24150-230

Front View



Rear View





5. Photographs of EUT

1) EUT Photo



2) EUT Photo





3) EUT Photo



4) EUT Photo

