

VCCI Test Report

Product Name : Network Camera

Model No. : MD8565-N

Applicant : VIVOTEK INC.

Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei City,
235, Taiwan, R.O.C.

Date of Receipt : 2017/01/17

Issued Date : 2017/03/01

Report No. : 1710390R-ITJPP01V00

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Test Report

Issued Date : 2017/03/01

Report No. : 1710390R-ITJPP01V00



Product Name : Network Camera

Applicant : VIVOTEK INC.

Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho , New Taipei City,
235, Taiwan, R.O.C.

Manufacturer : VIVOTEK INC.

Model No. : MD8565-N

EUT Rated Voltage : DC 12V, By PoE

EUT Test Voltage : AC 100V/50Hz, By PoE

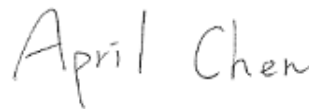
Trade Name : VIVOTEK

Applicable Standard : VCCI: 2016-11 Class B

Test Result : Complied

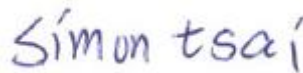
Performed Location : DEKRA Testing and Certification Co., Ltd.
Linkou Laboratory
No. 5-22, Ruishukeng
Linkou District, New Taipei City, 24451, Taiwan
TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By :



(Adm. Specialist / April Chen)

Reviewed By :



(Engineer / Simon Tsai)

Approved By :



(Director / Vincent Lin)

Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scopes:

Taiwan R.O.C.	:	BSMI, NCC, TAF
Norway	:	DNV
USA	:	FCC
Japan	:	VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd.Web Site :

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd.laboratories can be founded in our Web site : http://www.dekra.com.tw/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

Hsin Chu Laboratory:

No.75-2, 3rd Lin, WangYe Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan (R.O.C.)

No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan

No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan

TEL:+886-3-592-8858 / FAX:+886-3-592-8859

TEL:+886-3-582-8001 / FAX:+886-3-5828-958 E-Mail : info.tw@dekra.com

Lin Kou Laboratory

No. 5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan (R.O.C.)

TEL : +886-2-8601-3788 / FAX : +886-2-8601-3789 E-Mail : info.tw@dekra.com

Suzhou (China) Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu,China

TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : info.tw@dekra.com

TABLE OF CONTENTS

Description	Page
1. General Information	5
1.1. EUT Description.....	5
1.2. Mode of Operation	6
1.3. Tested System Details	7
1.4. Configuration of Tested System	8
1.5. EUT Exercise Software	10
2. Technical Test	11
2.1. Summary of Test Result.....	11
2.2. List of Test Equipment.....	12
2.3. Measurement Uncertainty	13
2.4. Test Environment	14
3. Conducted Emission	15
3.1. Test Specification	15
3.2. Test Setup	15
3.3. Limit	15
3.4. Test Procedure.....	16
3.5. Deviation from Test Standard	16
3.6. Test Result	17
3.7. Test Photograph.....	23
4. Conducted Emissions (Telecommunication Ports).....	24
4.1. Test Specification	24
4.2. Test Setup	24
4.3. Limit	24
4.4. Test Procedure.....	25
4.5. Deviation from Test Standard	25
4.6. Test Result	26
4.7. Test Photograph.....	38
5. Radiated Emission	41
5.1. Test Specification	41
5.2. Test Setup	41
5.3. Limit	42
5.4. Test Procedure.....	43
5.5. Deviation from Test Standard	43
5.6. Test Result	44
5.7. Test Photograph.....	52
6. Attachment.....	55
EUT Photograph	55

1. General Information

1.1. EUT Description

Product Name	Network Camera
Trade Name	VIVOTEK
Model No.	MD8565-N

1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode
Mode 1: DC 12V Mode 2: PoE
Final Test Mode
Conducted Emission
Mode 1: DC 12V
Impedance Stabilization Network Radiated Emission
Mode 1: DC 12V Mode 2: PoE

Note:

According to pre-test data, we choose the worst case mode 1,2 as the final and full testing.

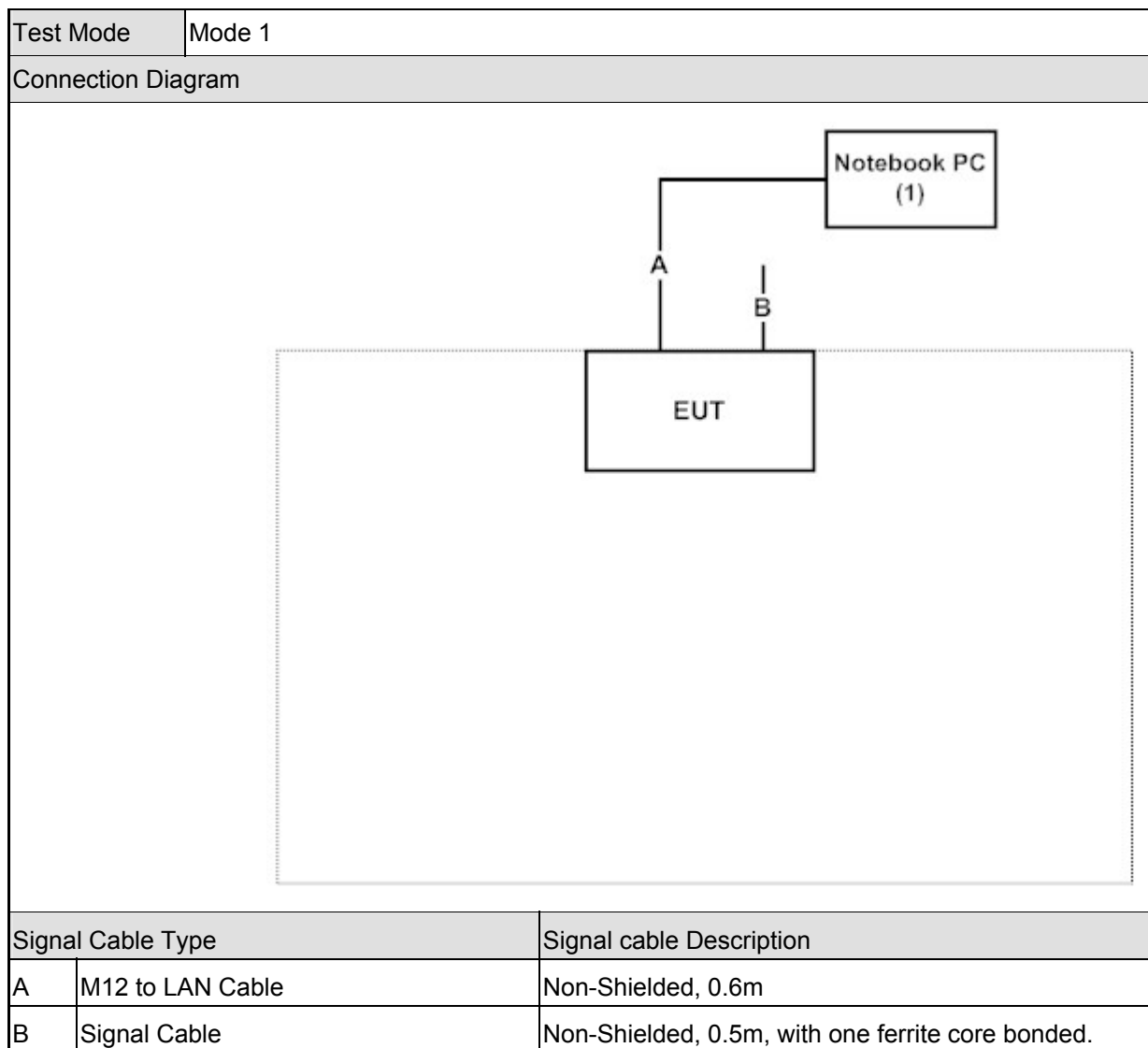
1.3. Tested System Details

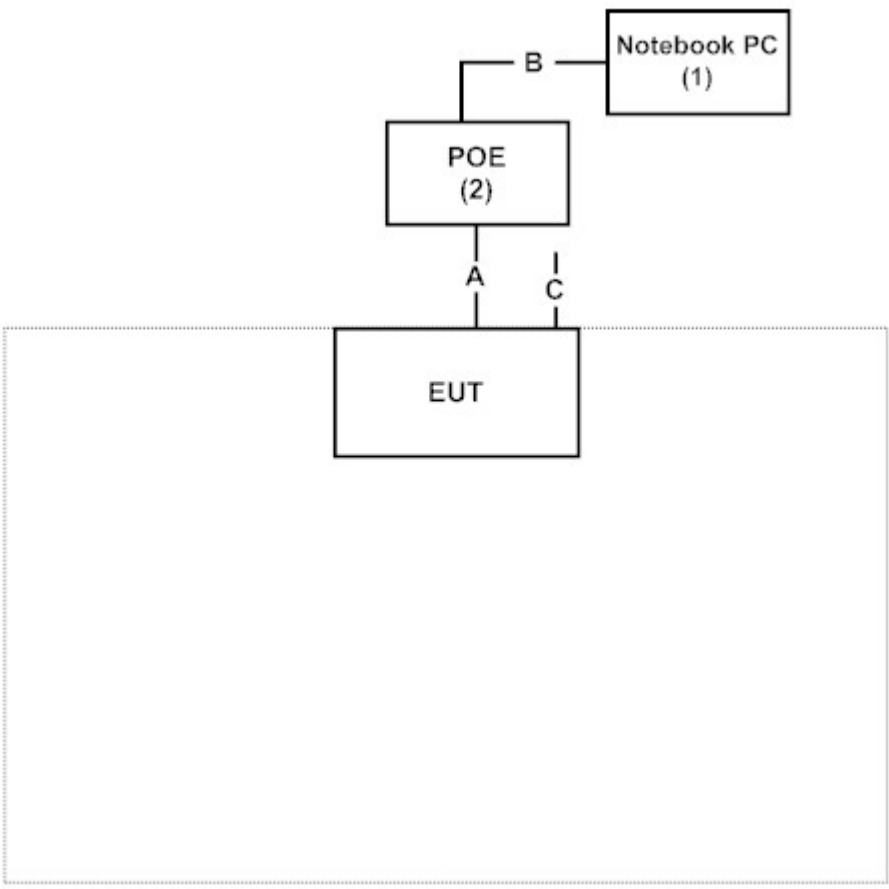
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Test Mode		Mode 1			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m

Test Mode		Mode 2			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m
2	POE	N/A	N/A	N/A	N/A

1.4. Configuration of Tested System



Test Mode		Mode 2
Connection Diagram		
		
Signal Cable Type		Signal cable Description
A	M12 to LAN Cable	Non-Shielded, 0.6m
B	LAN Cable	Non-Shielded, 7m
C	Signal Cable	Non-Shielded, 0.5m, with one ferrite core bonded.

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	The EUT will start to operate and display the video figure from the signal source.
4	The EUT will display “video figure” on monitor.
5	SD card works while the EUT is recording.
6	Repeat the above procedure (3) to (5).

2. Technical Test

2.1. Summary of Test Result

- ☒ No deviations from the test standards
- ☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	VCCI: 2016-11 Class B	Yes	No
Impedance Stabilization Network	VCCI: 2016-11 Class B	Yes	No
Radiated Emission	VCCI: 2016-11 Class B	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100369	2016/10/13
LISN	R&S	ESH3-Z5	836679/017	2017/01/18
LISN	R&S	ENV216	100097	2017/01/18
Coaxial Cable	QTK(Arnist)	RG 400	LC018-RG	2016/06/23

Impedance Stabilization Network / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2016/11/08
EMI Test Receiver	R&S	ESCS 30	100369	2016/10/13
LISN	R&S	ESH3-Z5	836679/017	2017/01/18
LISN	R&S	ENV216	100097	2017/01/18
RF Current Probe	FCC	F-65 10KHz~1GHz	198	2016/11/08
Impedance Stabilization Network	Teseq	ISN T800	29414	2016/09/01
Coaxial Cable	QTK(Arnist)	RG 400	LC018-RG	2016/06/23
BALANCED TELECOM ISN	FCC	FCC-TLISN-T2-02	20316	2016/08/09
Coupling Decoupling Network	Teseq	CDN ST08A	33998	2016/09/10

Radiated Emission / Site 7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2930	2016/08/17
EMI Test Receiver	R&S	ESR7	1316.3003K07-10145	2016/02/02
Coaxial Cable	QTK(Arnist)	RG 214	LC007-RG	2016/06/20
Pre-Amplifier	QTK	AP/0100A	CHM/1009094	2016/06/20
Site7 NSA	QTK	N/A	N/A	2016/06/20

Radiated Emission / CB7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESU26	100433	2016/09/08
Horn Antenna	ETS-Lindgren	3117	00202723	2016/07/20
Horn Antenna	SCHWARZBECK	9120D	576	2016/11/24
Pre-Amplifier	COM-POWER	PAM-118	443019	2016/07/19
Pre-Amplifier	EMCI	EMC051845SE	980359	2016/09/19
CB7 VSWR	QTK	N/A	N/A	2016/06/24

VCCI Test Site:

Test Item	Test Site	VCCI No.
Conducted Emission	SR1	C-2428
Conducted Emission	SR2	C-3837
Conducted Emission	SR8	C-3723
Conducted Emission (Telecommunication Port)	SR1	T-1473
Conducted Emission (Telecommunication Port)	SR2	T-1955
Conducted Emission (Telecommunication Port)	SR8	T-1887
Radiated Emission	Site 1	R-2231
Radiated Emission	Site 2	R-2232
Radiated Emission	Site 3	R-2233
Radiated Emission	Site 4	R-2592
Radiated Emission	Site 5	R-2593
Radiated Emission	Site 6	R-2828
Radiated Emission	Site 7	R-3748
Radiated Emission	CB7	R-3107
Radiated Emission (Above 1GHz)	CB7(9x6x6_Chamber)	G-35
Radiated Emission (Above 1GHz)	CB8(9x6x6_Chamber)	G-947

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

2.4. Test Environment

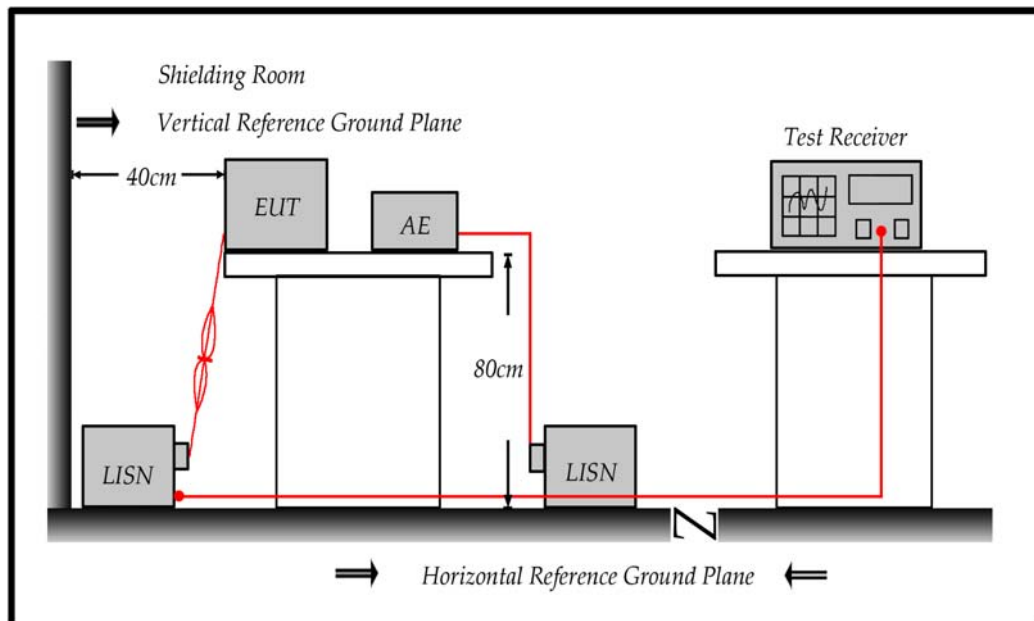
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	19.4
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission

3.1. Test Specification

According to EMC Standard : VCCI

3.2. Test Setup



3.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

(Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to VCCI on conducted measurement.

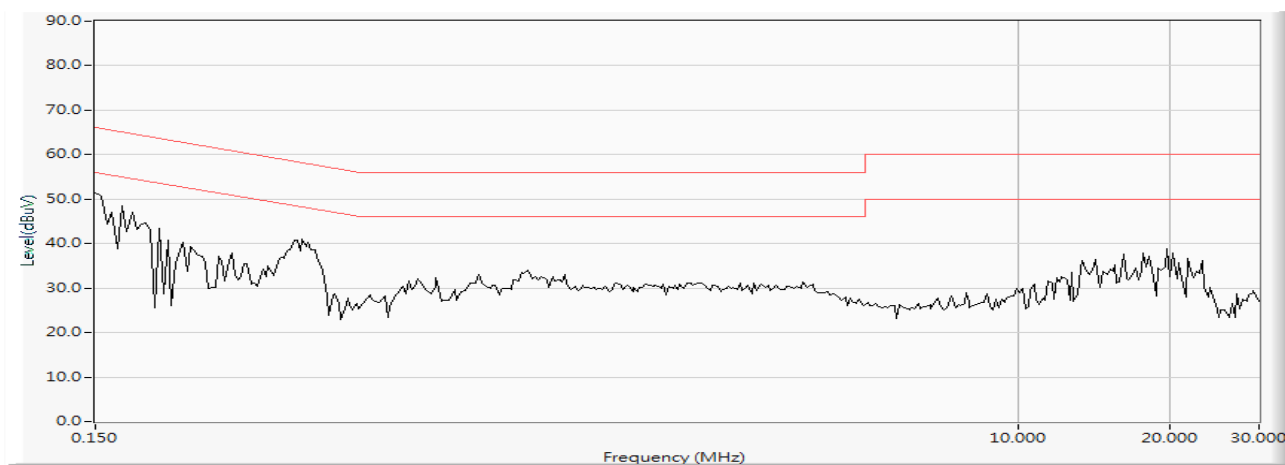
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

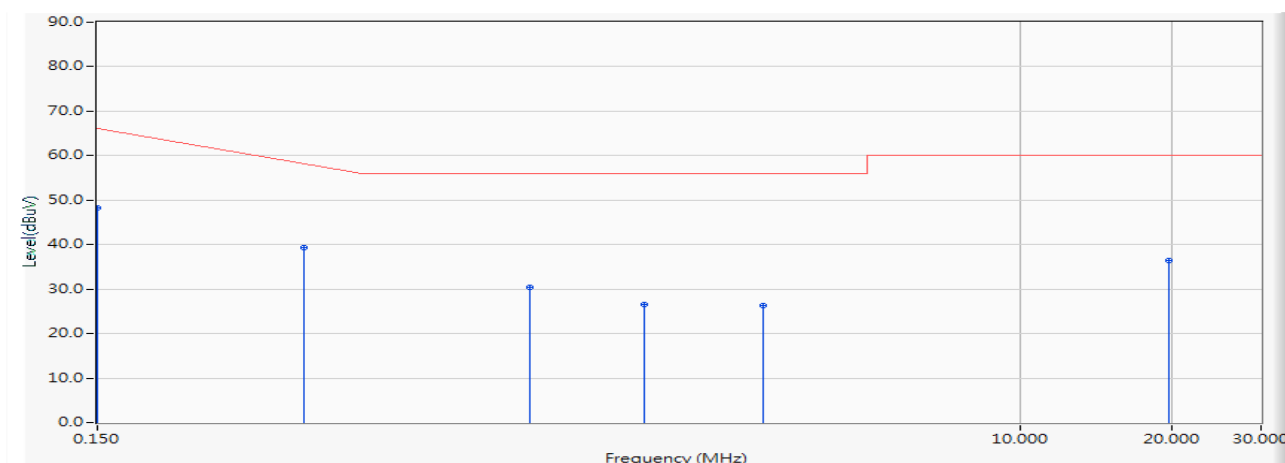
No deviation.

3.6. Test Result

Site : SR8	Time : 2017/02/03 - 13:29
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : ENV216_L1_1296_1602 - Line1
Power : AC 100V/50Hz	Note: Mode 1



Site : SR8	Time : 2017/02/03 - 13:31
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV216_L1_1296_1602 - Line1
Power : AC 100V/50Hz	Note: Mode 1

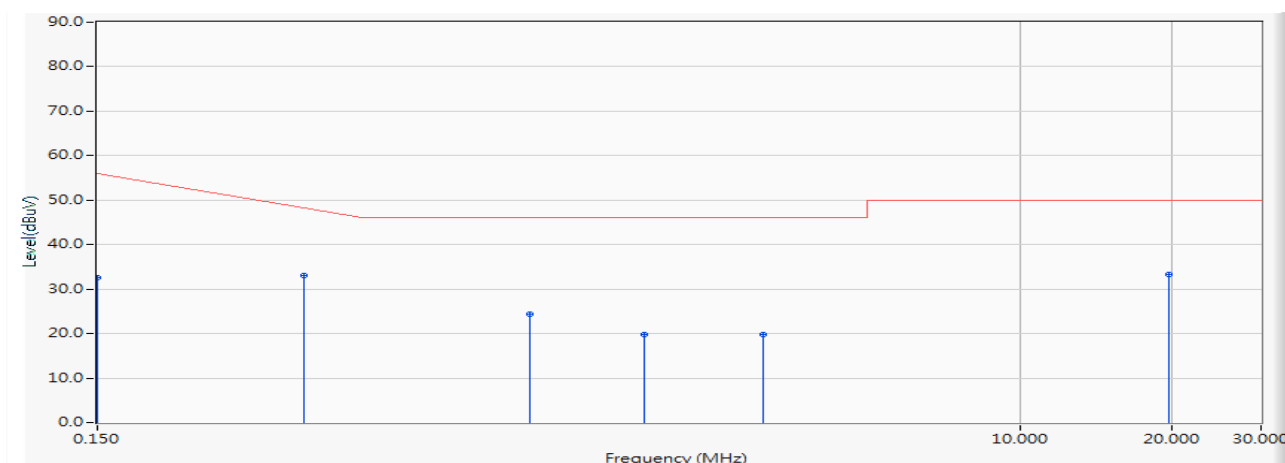


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.150	9.687	38.690	48.377	-17.623	66.000	QUASIPeAK
2		0.384	9.682	29.710	39.392	-19.922	59.314	QUASIPeAK
3		1.076	9.704	20.790	30.494	-25.506	56.000	QUASIPeAK
4		1.814	9.737	16.770	26.507	-29.493	56.000	QUASIPeAK
5		3.107	9.768	16.500	26.268	-29.732	56.000	QUASIPeAK
6		19.709	9.998	26.460	36.458	-23.542	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:31
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : ENV216_L1_1296_1602 - Line1
Power : AC 100V/50Hz	Note: Mode 1

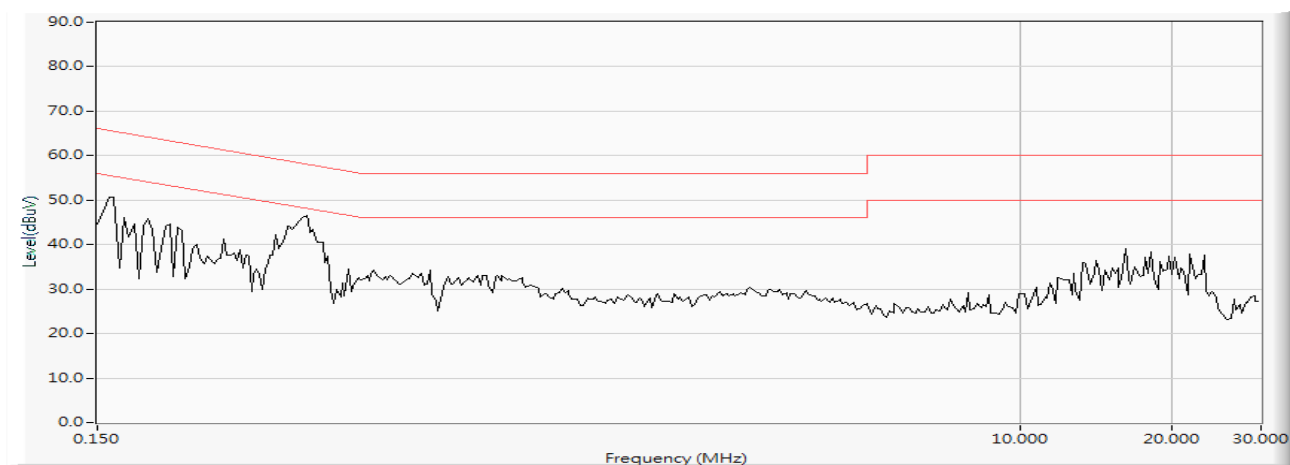


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.150	9.687	22.940	32.627	-23.373	56.000	AVERAGE
2	*	0.384	9.682	23.440	33.122	-16.192	49.314	AVERAGE
3		1.076	9.704	14.610	24.314	-21.686	46.000	AVERAGE
4		1.814	9.737	10.110	19.847	-26.153	46.000	AVERAGE
5		3.107	9.768	10.020	19.788	-26.212	46.000	AVERAGE
6		19.709	9.998	23.220	33.218	-16.782	50.000	AVERAGE

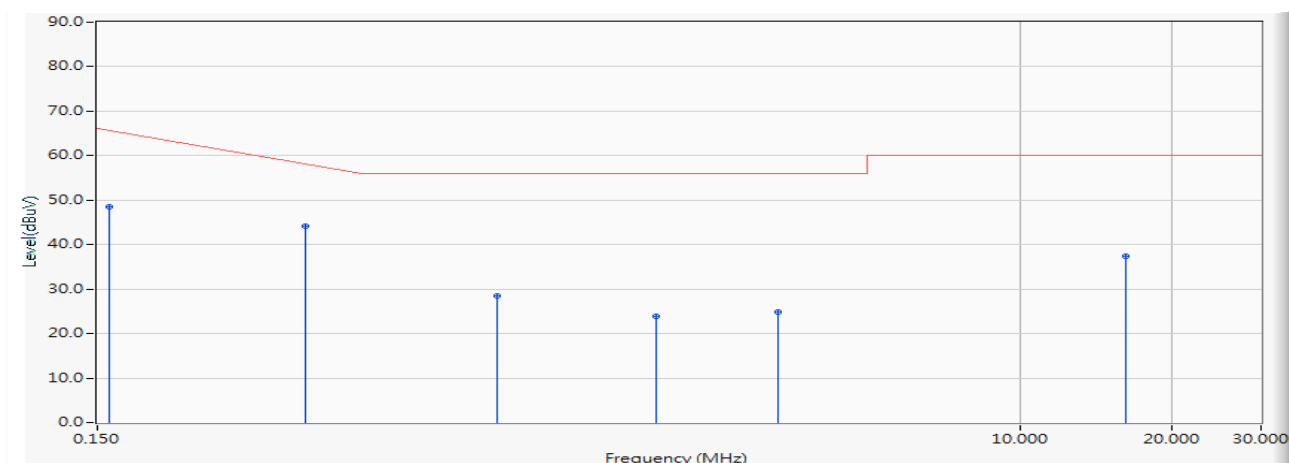
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:32
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : ENV216_N_1296_1602 - Line2
Power : AC 100V/50Hz	Note: Mode 1



Site : SR8	Time : 2017/02/03 - 13:33
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV216_N_1296_1602 - Line2
Power : AC 100V/50Hz	Note: Mode 1

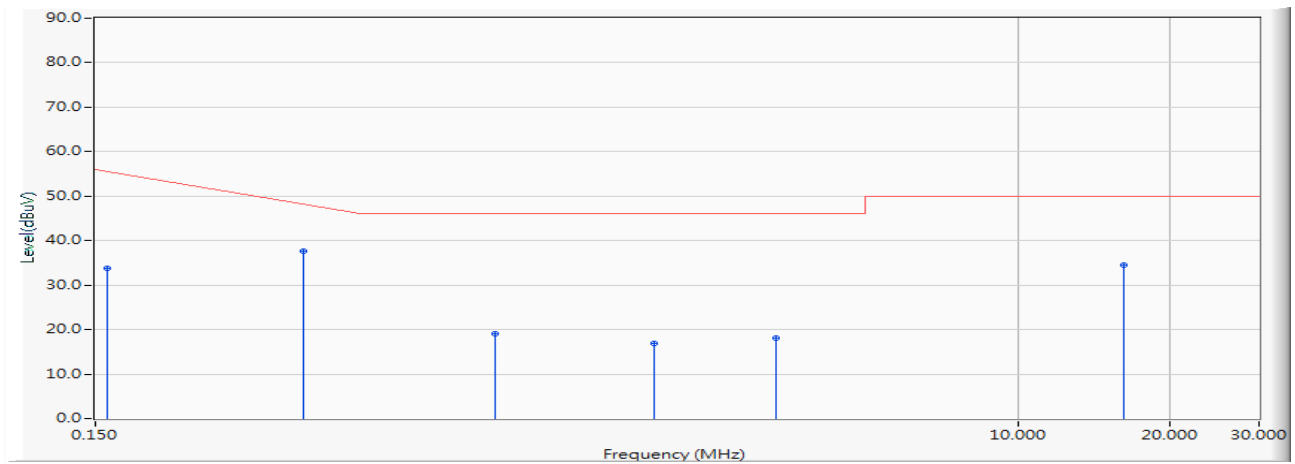


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.665	38.880	48.545	-17.226	65.771	QUASIPeAK
2	*	0.388	9.662	34.520	44.182	-15.018	59.200	QUASIPeAK
3		0.923	9.689	18.800	28.489	-27.511	56.000	QUASIPeAK
4		1.908	9.720	14.140	23.860	-32.140	56.000	QUASIPeAK
5		3.322	9.750	15.000	24.750	-31.250	56.000	QUASIPeAK
6		16.228	10.041	27.340	37.381	-22.619	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:33
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : ENV216_N_1296_1602 - Line2
Power : AC 100V/50Hz	Note: Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.665	24.050	33.715	-22.056	55.771	AVERAGE
2	*	0.388	9.662	27.880	37.542	-11.658	49.200	AVERAGE
3		0.923	9.689	9.400	19.089	-26.911	46.000	AVERAGE
4		1.908	9.720	7.150	16.870	-29.130	46.000	AVERAGE
5		3.322	9.750	8.430	18.180	-27.820	46.000	AVERAGE
6		16.228	10.041	24.560	34.601	-15.399	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.7. Test Photograph

Test Mode : Mode 1: DC 12V

Description : Front View of Conducted Test



Test Mode : Mode 1: DC 12V

Description : Back View of Conducted Test

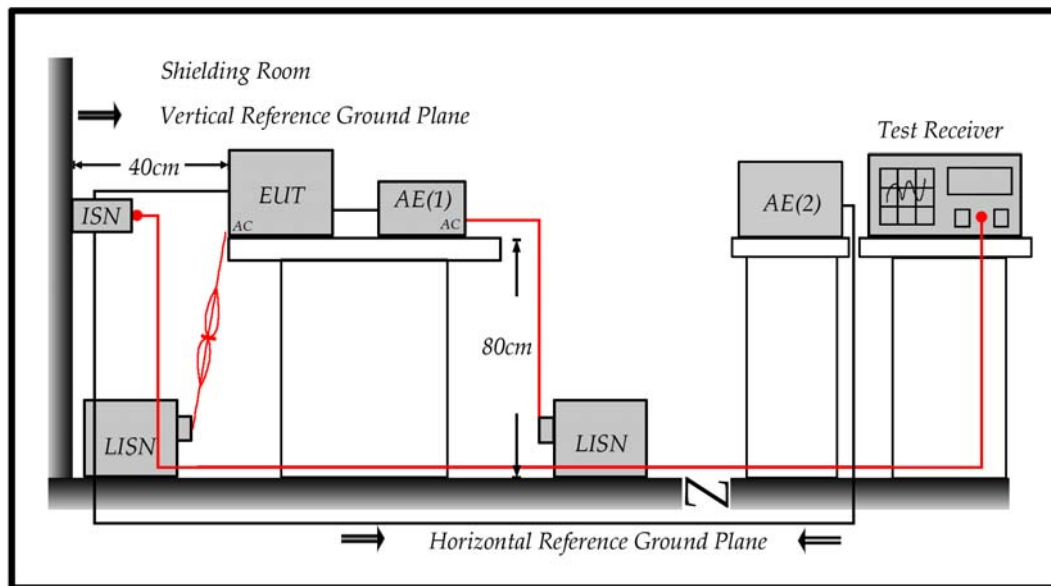


4. Conducted Emissions (Telecommunication Ports)

4.1. Test Specification

According to EMC Standard : VCCI

4.2. Test Setup



4.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	84 – 74	74 – 64
0.50 - 30	74	64

Remarks:

The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz.

4.4. Test Procedure

Telecommunication Port:

The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.

Both alternative cables are tested related to the LCL requested. The measurement range is from 150kHz to 30MHz. The bandwidth of measurement is set to 9kHz.

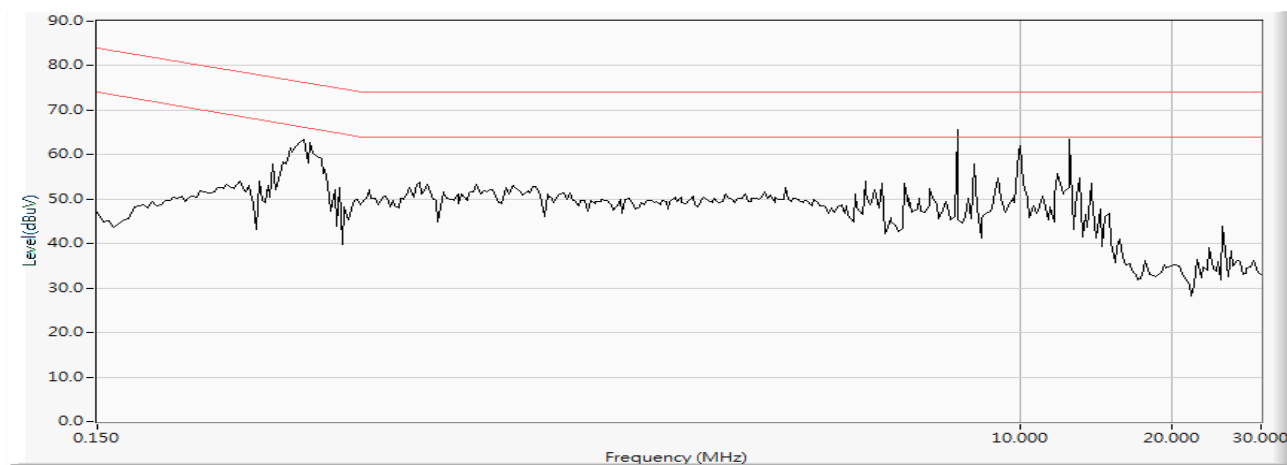
The 75dB LCL ISN is used for cat. 6 cable, the 65dB LCL ISN is used for cat. 5 cable, 55dB LCL ISN is used for cat. 3.

4.5. Deviation from Test Standard

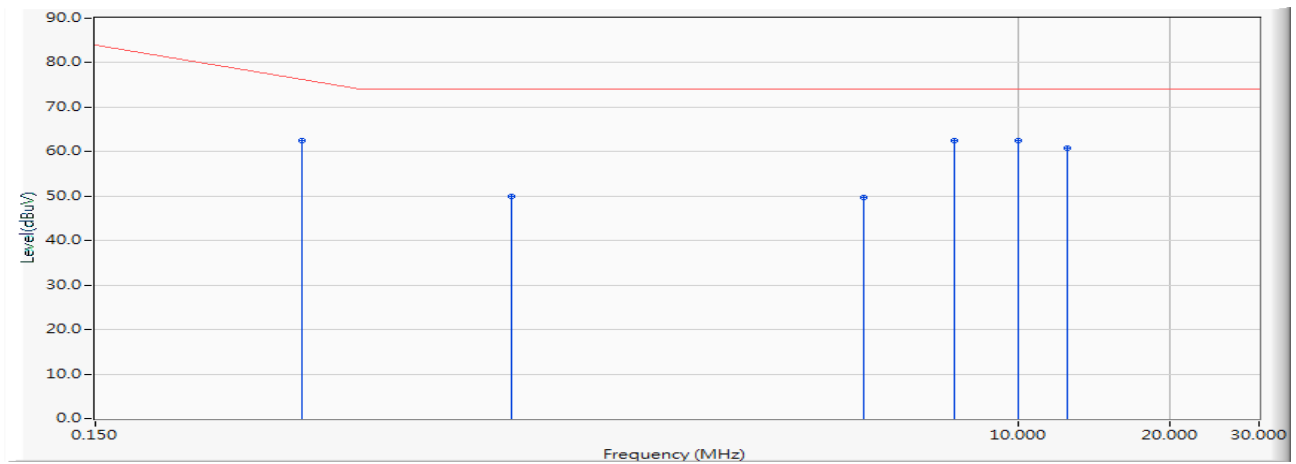
No deviation.

4.6. Test Result

Site : SR8	Time : 2017/02/03 - 13:22
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 10M



Site : SR8	Time : 2017/02/03 - 13:24
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 10M

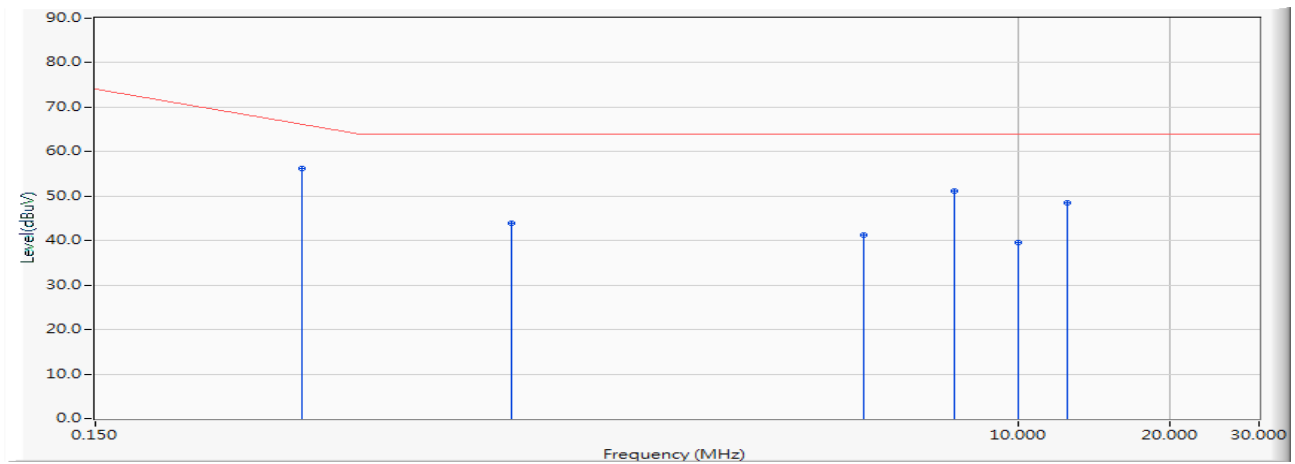


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.384	9.805	52.710	62.515	-14.799	77.314	QUASIPeAK
2		0.998	9.661	40.240	49.901	-24.099	74.000	QUASIPeAK
3		4.943	9.597	40.130	49.727	-24.273	74.000	QUASIPeAK
4	*	7.500	9.620	52.910	62.530	-11.470	74.000	QUASIPeAK
5		10.000	9.646	52.770	62.416	-11.584	74.000	QUASIPeAK
6		12.500	9.704	51.050	60.754	-13.246	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:24
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 10M

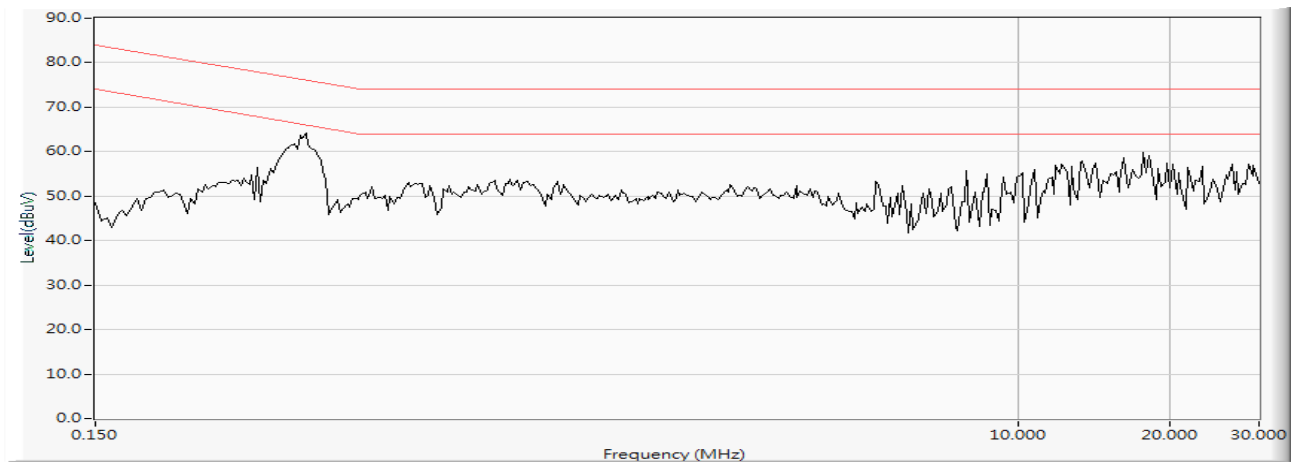


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.384	9.805	46.380	56.185	-11.129	67.314	AVERAGE
2		0.998	9.661	34.190	43.851	-20.149	64.000	AVERAGE
3		4.943	9.597	31.550	41.147	-22.853	64.000	AVERAGE
4		7.500	9.620	41.520	51.140	-12.860	64.000	AVERAGE
5		10.000	9.646	29.840	39.486	-24.514	64.000	AVERAGE
6		12.500	9.704	38.700	48.404	-15.596	64.000	AVERAGE

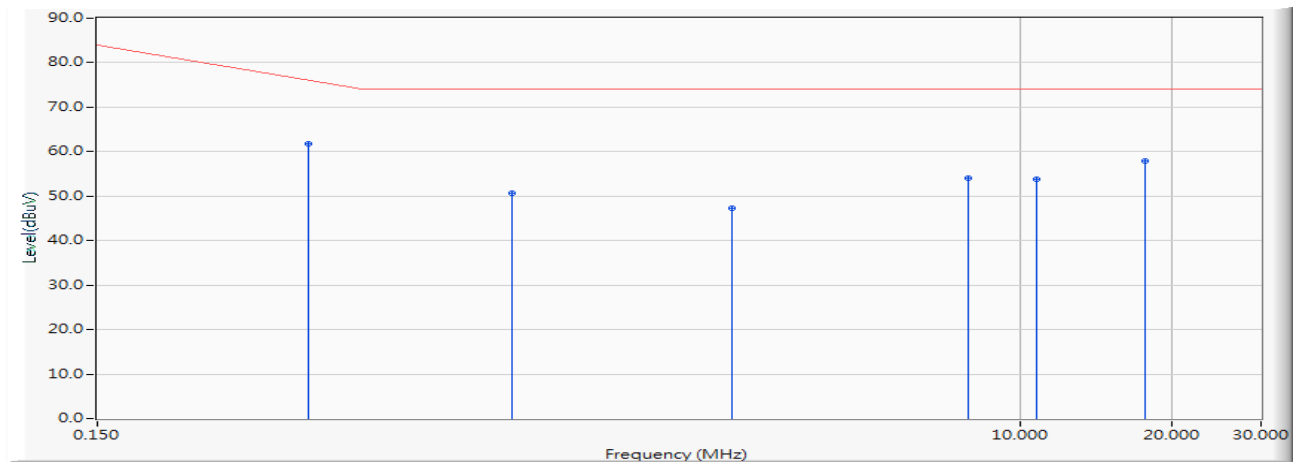
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:26
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 100M



Site : SR8	Time : 2017/02/03 - 13:27
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 100M

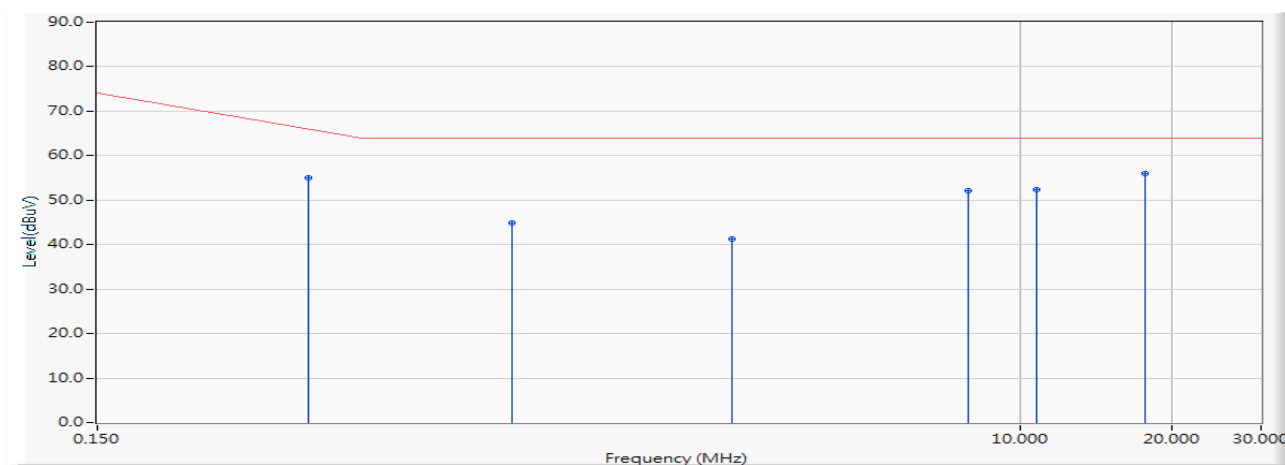


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.392	9.800	51.870	61.670	-15.416	77.086	QUASIPeAK
2		0.994	9.661	41.090	50.751	-23.249	74.000	QUASIPeAK
3		2.705	9.615	37.690	47.305	-26.695	74.000	QUASIPeAK
4		7.923	9.618	44.530	54.148	-19.852	74.000	QUASIPeAK
5		10.795	9.667	44.260	53.927	-20.073	74.000	QUASIPeAK
6		17.693	9.822	48.140	57.962	-16.038	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:27
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 100V/50Hz	Note: Mode 1,ISN 100M

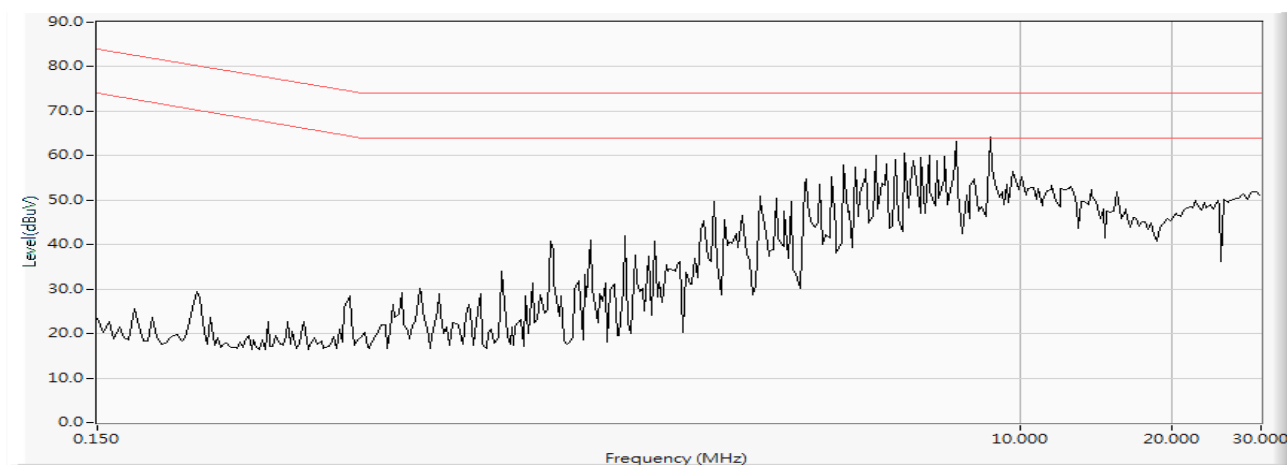


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.392	9.800	45.210	55.010	-12.076	67.086	AVERAGE
2		0.994	9.661	35.300	44.961	-19.039	64.000	AVERAGE
3		2.705	9.615	31.760	41.375	-22.625	64.000	AVERAGE
4		7.923	9.618	42.600	52.218	-11.782	64.000	AVERAGE
5		10.795	9.667	42.600	52.267	-11.733	64.000	AVERAGE
6	*	17.693	9.822	46.200	56.022	-7.978	64.000	AVERAGE

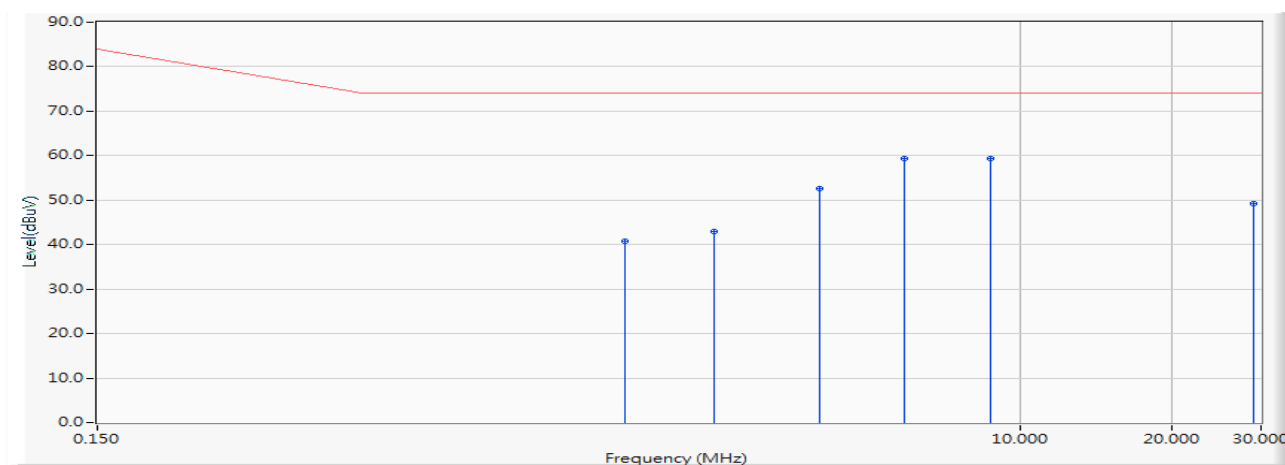
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:46
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 10M



Site : SR8	Time : 2017/02/03 - 13:47
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 10M

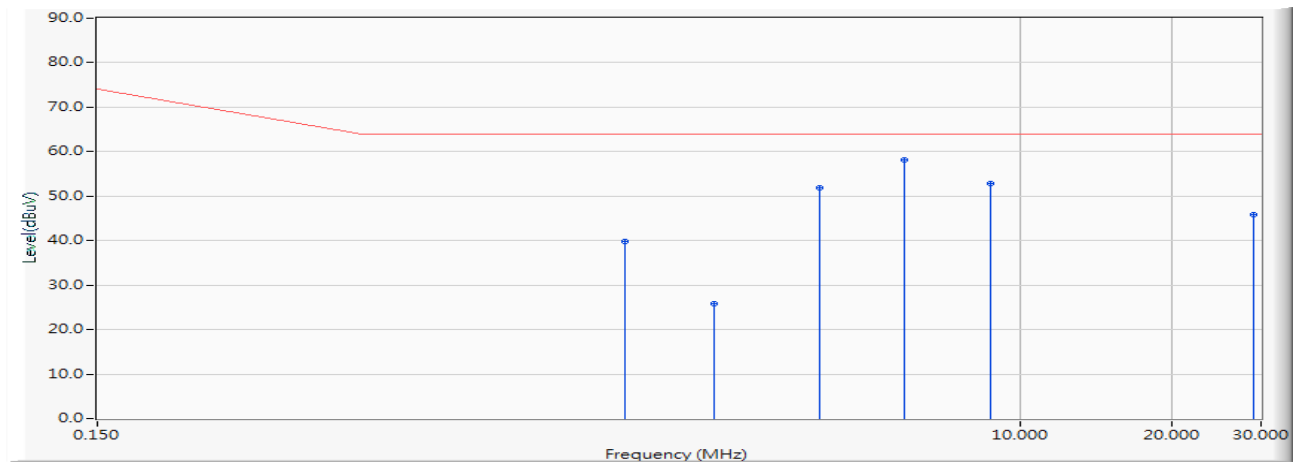


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.654	9.638	31.030	40.669	-33.331	74.000	QUASIPeAK
2		2.494	9.618	33.340	42.957	-31.043	74.000	QUASIPeAK
3		4.017	9.596	42.990	52.586	-21.414	74.000	QUASIPeAK
4	*	5.912	9.600	49.850	59.450	-14.550	74.000	QUASIPeAK
5		8.748	9.629	49.790	59.419	-14.581	74.000	QUASIPeAK
6		29.080	10.528	38.620	49.148	-24.852	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:47
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 10M

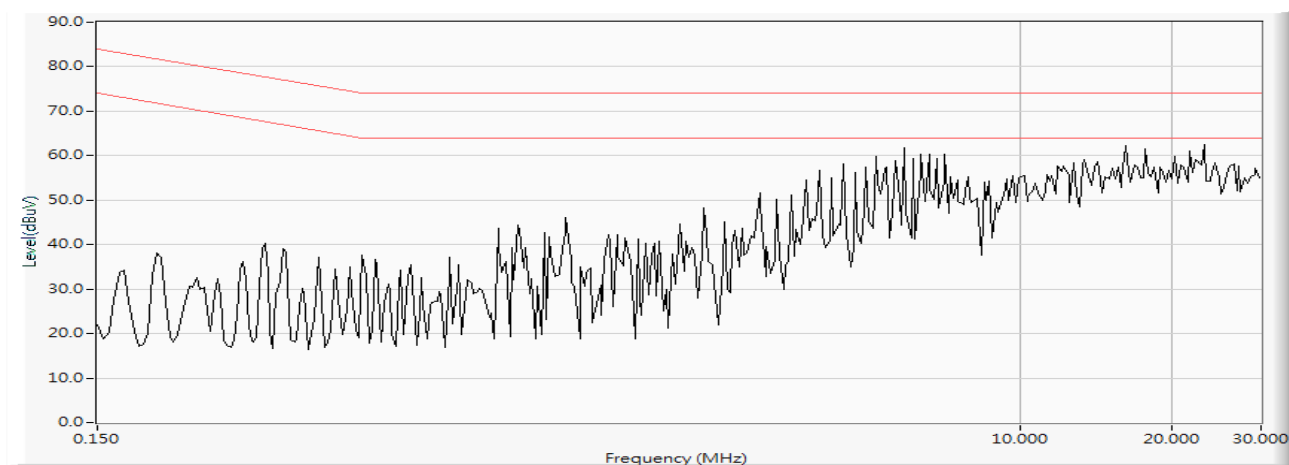


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.654	9.638	30.090	39.729	-24.271	64.000	AVERAGE
2		2.494	9.618	16.300	25.917	-38.083	64.000	AVERAGE
3		4.017	9.596	42.320	51.916	-12.084	64.000	AVERAGE
4	*	5.912	9.600	48.570	58.170	-5.830	64.000	AVERAGE
5		8.748	9.629	43.140	52.769	-11.231	64.000	AVERAGE
6		29.080	10.528	35.360	45.888	-18.112	64.000	AVERAGE

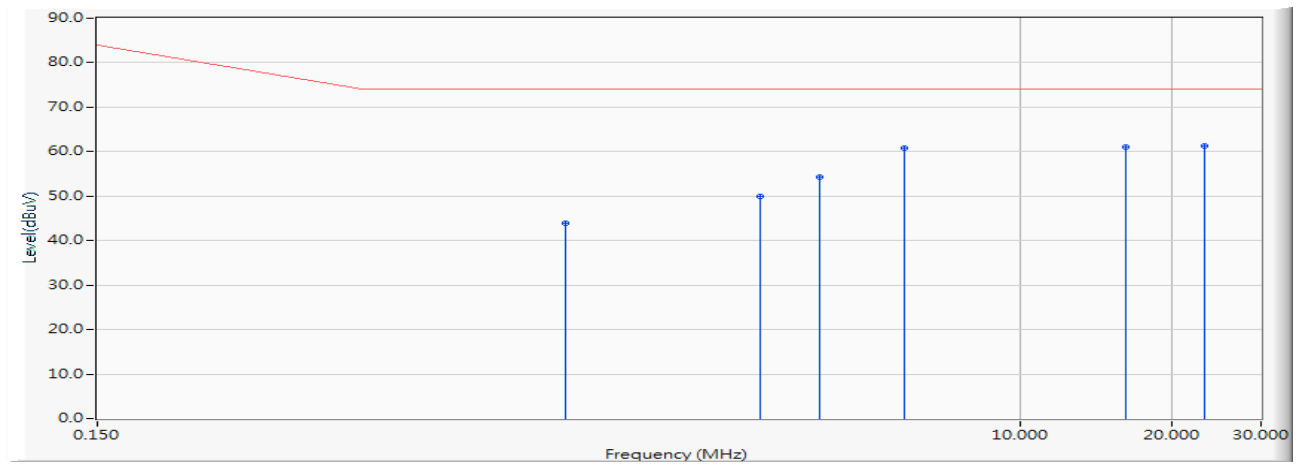
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/02/03 - 13:43
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 100M



Site : SR8	Time : 2017/02/03 - 13:44
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 100M

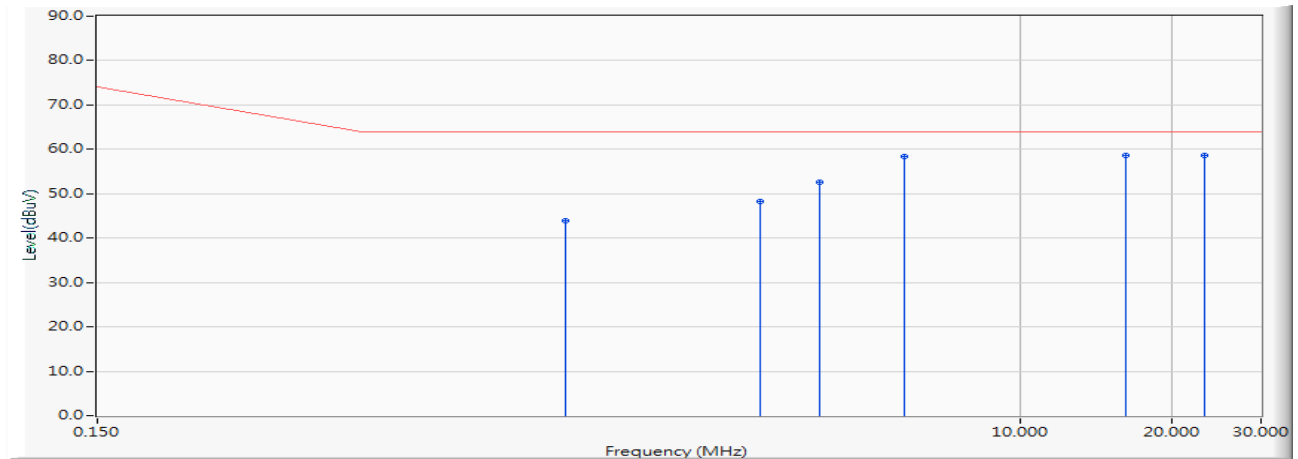


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.267	9.650	34.170	43.820	-30.180	74.000	QUASIPeAK
2		3.072	9.608	40.360	49.968	-24.032	74.000	QUASIPeAK
3		4.017	9.596	44.760	54.356	-19.644	74.000	QUASIPeAK
4		5.908	9.600	51.260	60.860	-13.140	74.000	QUASIPeAK
5		16.228	9.791	51.180	60.971	-13.029	74.000	QUASIPeAK
6	*	23.127	9.990	51.290	61.280	-12.720	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer :	
Site : SR8	Time : 2017/02/03 - 13:44
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : POE	Note: Mode 2,ISN 100M



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.267	9.650	34.160	43.810	-20.190	64.000	AVERAGE
2		3.072	9.608	38.680	48.288	-15.712	64.000	AVERAGE
3		4.017	9.596	43.010	52.606	-11.394	64.000	AVERAGE
4		5.908	9.600	48.780	58.380	-5.620	64.000	AVERAGE
5		16.228	9.791	48.740	58.531	-5.469	64.000	AVERAGE
6	*	23.127	9.990	48.630	58.620	-5.380	64.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

4.7. Test Photograph

Test Mode : Mode 1: DC 12V

Description : Front View of ISN Test



Test Mode : Mode 1: DC 12V

Description : Back View of ISN Test



Test Mode : Mode 2: PoE

Description : Back View of ISN Test



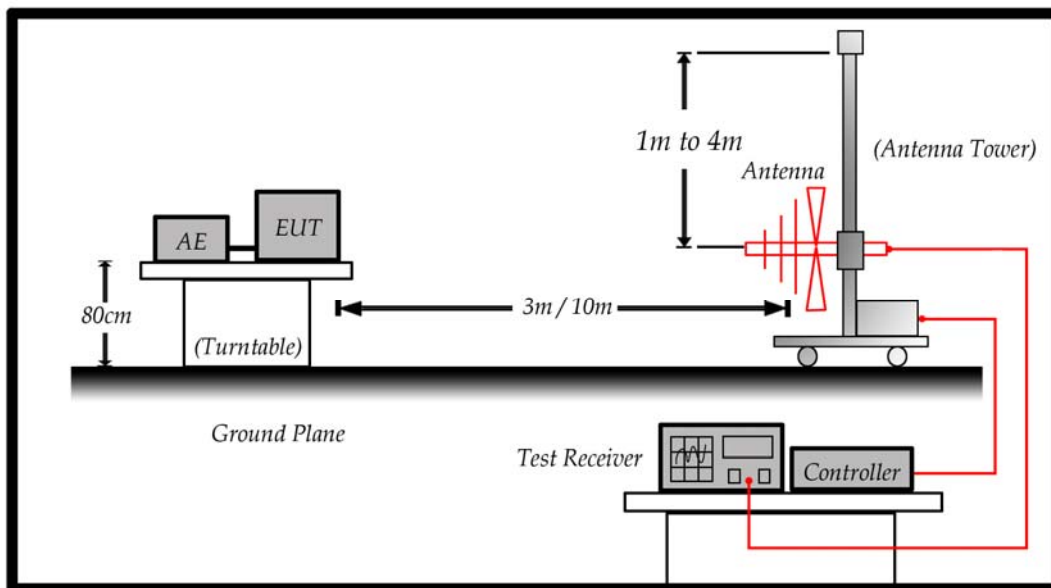
5. Radiated Emission

5.1. Test Specification

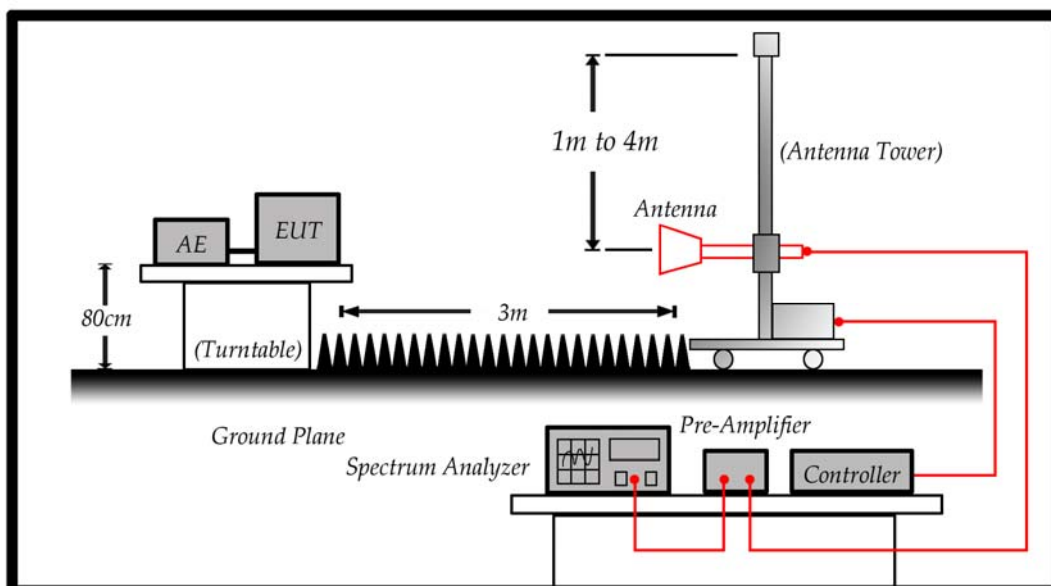
According to EMC Standard : VCCI

5.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



5.3. Limit

Under 1GHz test shall not exceed the following value:

Limits		
Frequency (MHz)	Distance (m)	dBuV/m
30 – 230	10	30
230 – 1000	10	37

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Above 1GHz test shall not exceed the following value:

Limits (dBuV/m)			
Frequency (GHz)	Distance (m)	Peak limit dB(μV/m)	Average limit dB(μV/m)
1-3	3	70	50
3-6	3	74	54

NOTE: The lower limit applies at the transition frequency

5.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 10 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

All cable leaving the table-top EUT for a connection outside the test site (for example, mains cable, telephone lines, connections to auxiliary equipment located outside the test area) shall be fitted with ferrite clamps placed on the floor at the point where the cable reached the floor. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to VCCI on radiated measurement.

Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120kHz. Radiated was performed at an antenna to EUT distance of 10 meters.

Conditional testing procedure:

The highest internal source of an EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes.

If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.

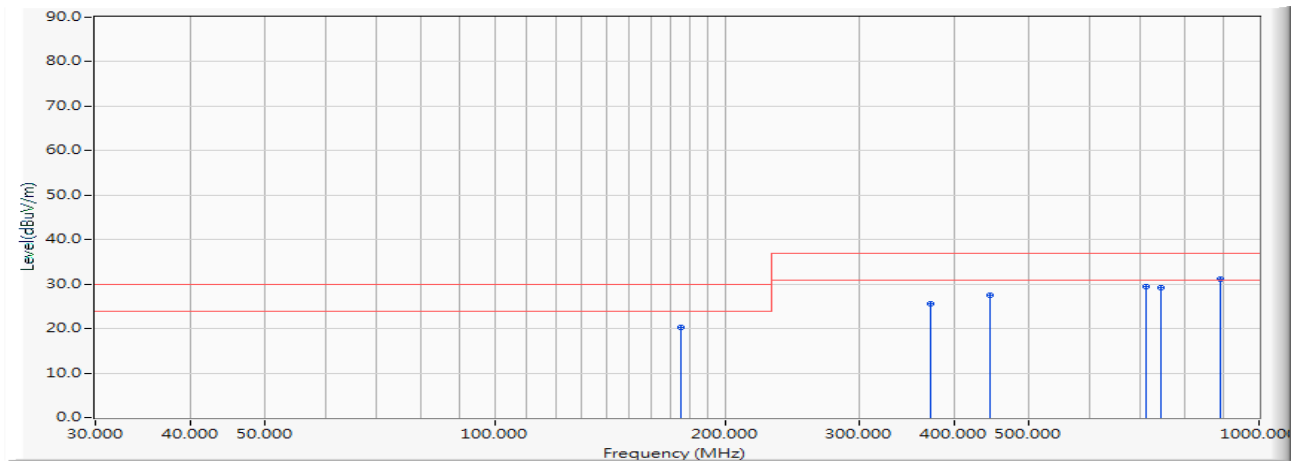
It is placed with absorb on the ground between EUT and Antenna.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Site : SITE7	Time : 2017/01/24 - 19:03
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - HORIZONTAL
Power : AC 100V/50Hz	Note: Mode 1

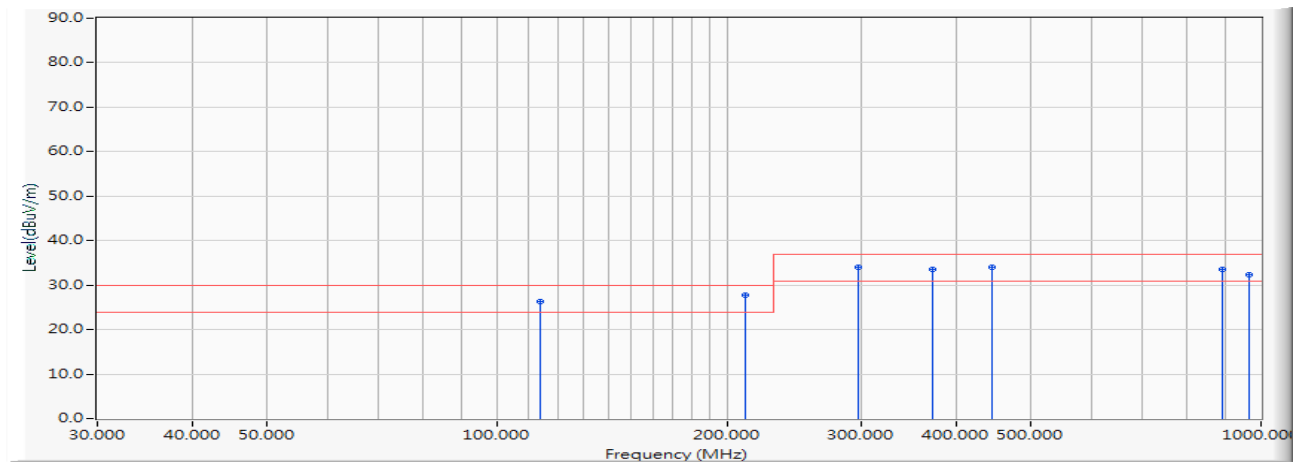


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		174.900	-13.919	34.300	20.381	-9.619	30.000	QUASIPeAK	390.000	124.000
2		371.250	-6.164	31.800	25.636	-11.364	37.000	QUASIPeAK	300.000	22.000
3		445.500	-3.609	31.000	27.391	-9.609	37.000	QUASIPeAK	200.000	114.000
4		711.070	1.144	28.200	29.344	-7.656	37.000	QUASIPeAK	118.000	130.000
5		742.500	1.996	27.300	29.296	-7.704	37.000	QUASIPeAK	122.000	-129.000
6	*	891.000	3.616	27.400	31.016	-5.984	37.000	QUASIPeAK	110.000	-103.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 19:03
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - VERTICAL
Power : AC 100V/50Hz	Note: Mode 1

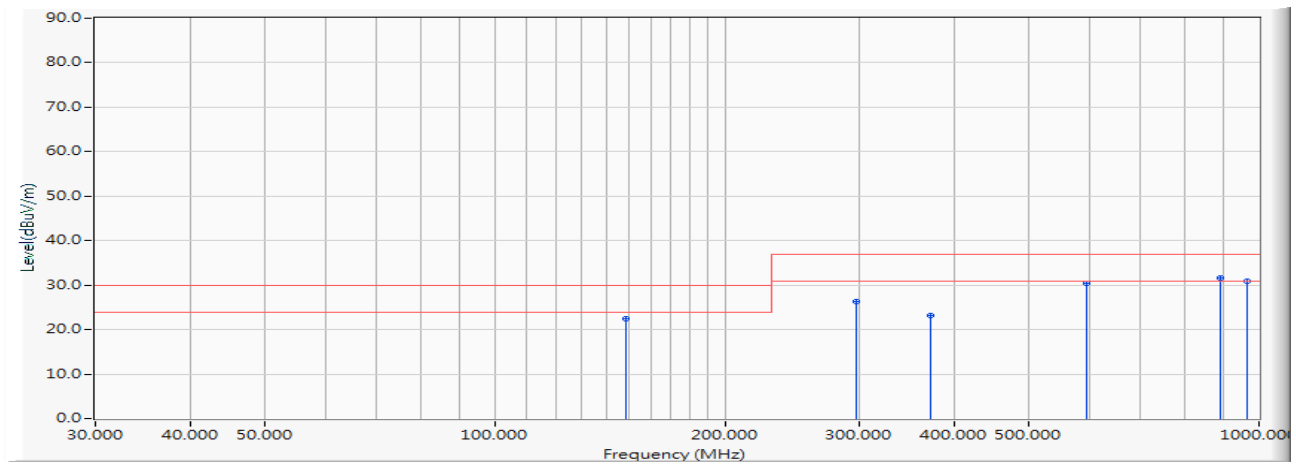


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		114.200	-12.346	38.600	26.254	-3.746	30.000	QUASIPeAK	100.000	156.000
2	*	211.740	-13.759	41.600	27.841	-2.159	30.000	QUASIPeAK	100.000	-180.000
3		297.000	-8.682	42.600	33.918	-3.082	37.000	QUASIPeAK	100.000	-100.000
4		371.250	-6.164	39.800	33.636	-3.364	37.000	QUASIPeAK	100.000	-10.000
5		445.500	-3.609	37.600	33.991	-3.009	37.000	QUASIPeAK	100.000	-99.000
6		891.000	3.616	30.000	33.616	-3.384	37.000	QUASIPeAK	205.000	-87.000
7		965.250	4.444	27.800	32.244	-4.756	37.000	QUASIPeAK	182.000	-114.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 18:59
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - HORIZONTAL
Power : POE	Note: Mode 2

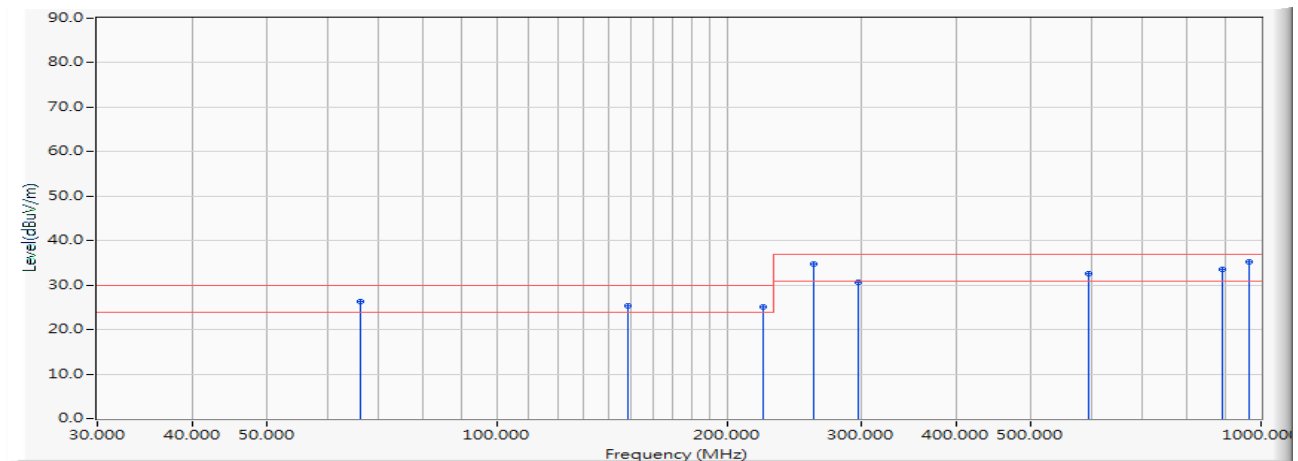


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		148.500	-13.173	35.700	22.527	-7.473	30.000	QUASIPeAK	400.000	-48.000
2		297.000	-8.682	35.000	26.318	-10.682	37.000	QUASIPeAK	390.000	-34.000
3		371.250	-6.164	29.400	23.236	-13.764	37.000	QUASIPeAK	280.000	131.000
4		594.000	-0.240	30.600	30.360	-6.640	37.000	QUASIPeAK	220.000	-29.000
5	*	891.000	3.616	28.000	31.616	-5.384	37.000	QUASIPeAK	100.000	-51.600
6		965.250	4.444	26.400	30.844	-6.156	37.000	QUASIPeAK	100.000	73.600

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE7	Time : 2017/01/24 - 18:59
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112_10M_1606 - VERTICAL
Power : POE	Note: Mode 2

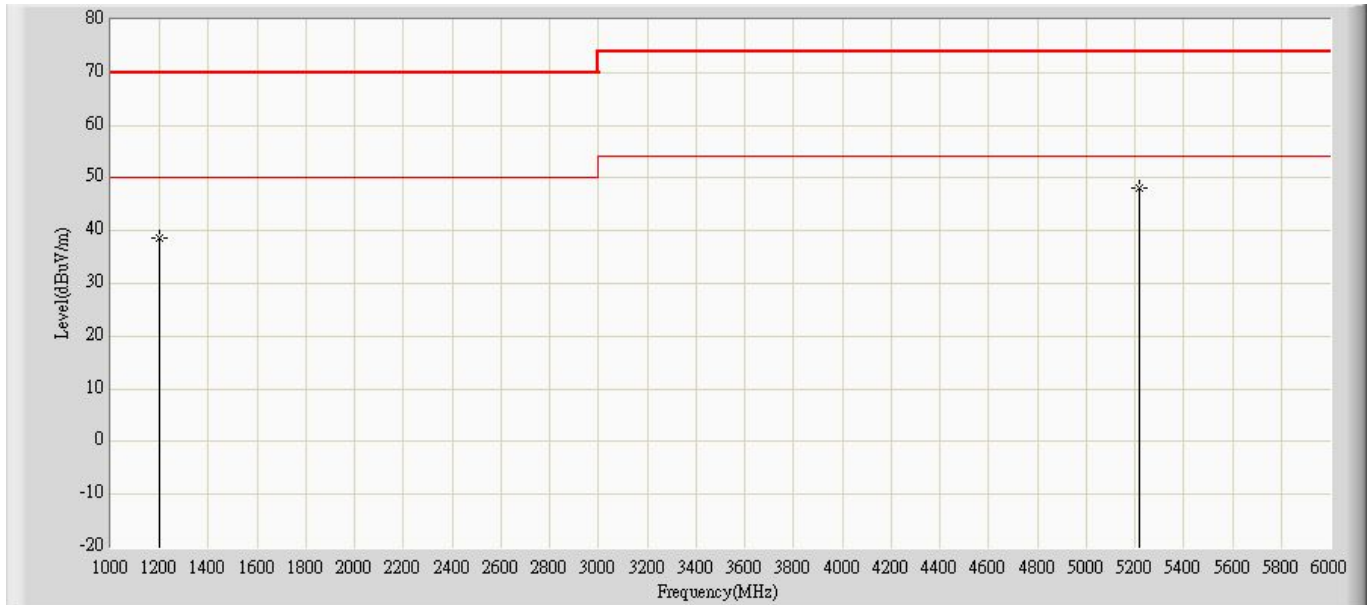


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	66.200	-18.832	45.100	26.269	-3.731	30.000	QUASIPeAK	100.000	133.000
2	148.500	-13.173	38.600	25.427	-4.573	30.000	QUASIPeAK	100.000	-121.000
3	222.750	-13.226	38.300	25.074	-4.926	30.000	QUASIPeAK	100.000	106.000
4	259.870	-8.762	43.600	34.838	-2.162	37.000	QUASIPeAK	100.000	158.000
5	297.000	-8.682	39.300	30.618	-6.382	37.000	QUASIPeAK	100.000	128.000
6	594.000	-0.240	32.800	32.560	-4.440	37.000	QUASIPeAK	310.000	-17.000
7	891.000	3.616	29.900	33.516	-3.484	37.000	QUASIPeAK	210.000	120.000
8	* 965.250	4.444	30.700	35.144	-1.856	37.000	QUASIPeAK	176.000	-116.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site: CB7	Time: 2017/02/06 - 18:31
Limit: VCCI_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_1607	Polarity: Horizontal
EUT: Network Camera	Power : AC 100V/50Hz
Note: Mode 1	

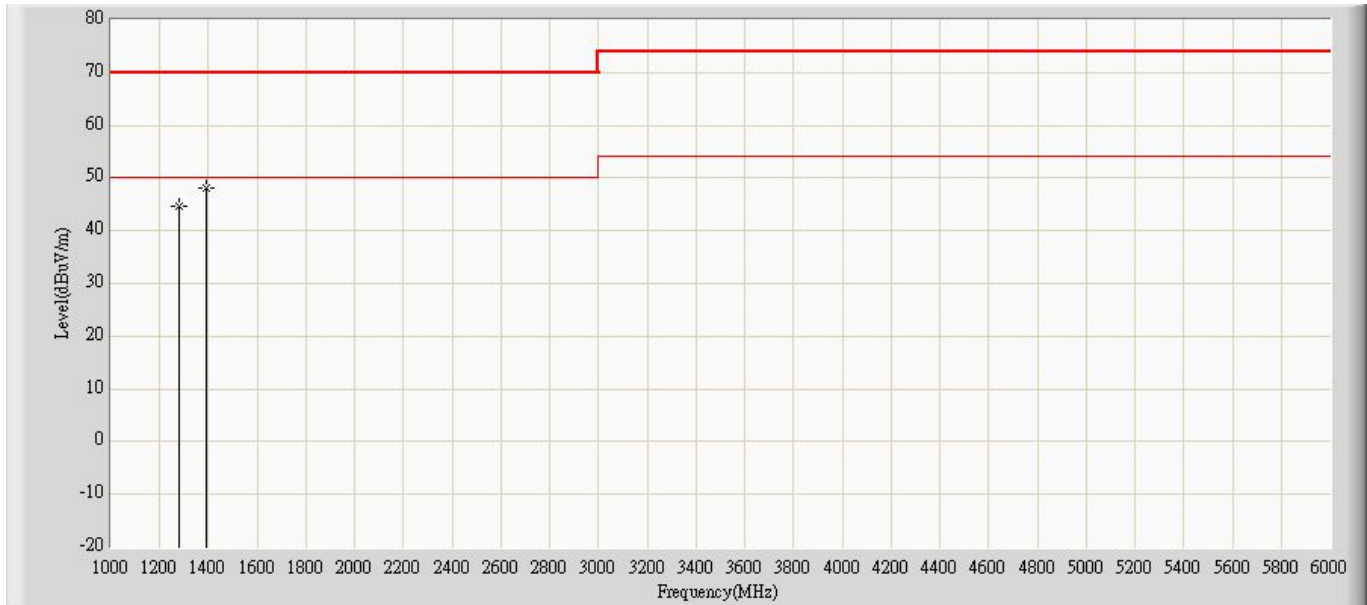


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1200.000	38.713	53.700	-31.287	70.000	-14.987	PK
2		*	5220.000	48.082	49.900	-25.918	74.000	-1.819	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: CB7	Time: 2017/02/06 - 18:33
Limit: VCCI_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_1607	Polarity: Vertical
EUT: Network Camera	Power : AC 100V/50Hz
Note: Mode 1	

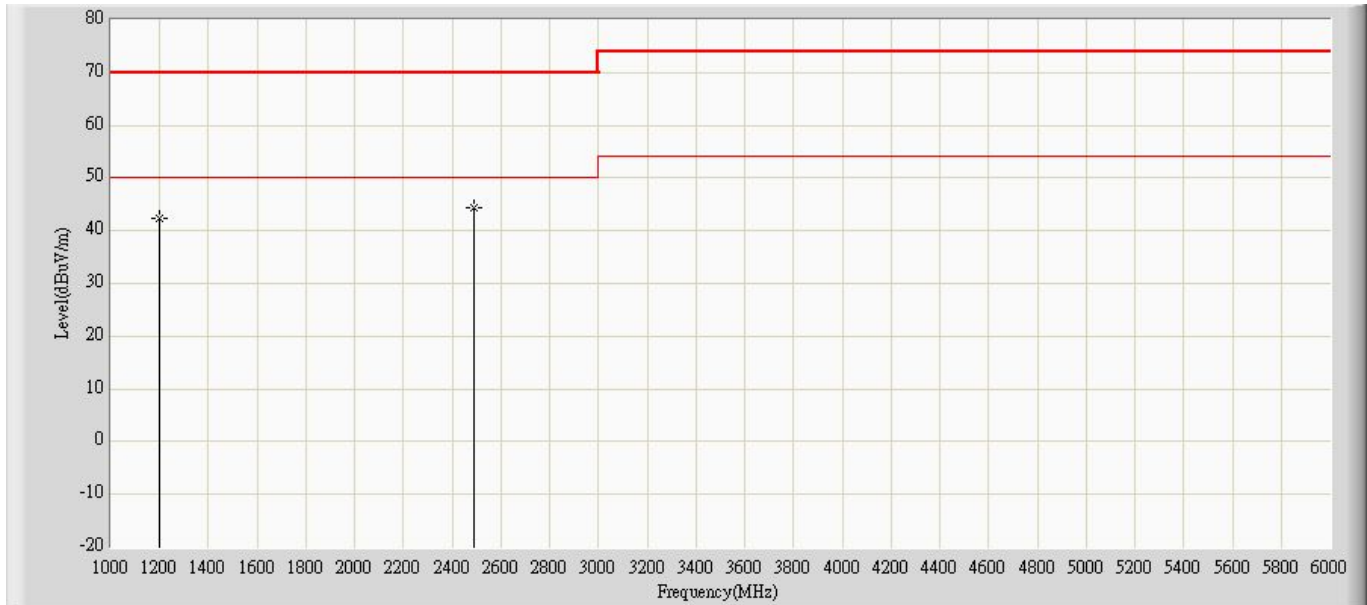


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1278.000	44.779	59.600	-25.221	70.000	-14.821	PK
2		*	1388.000	48.198	62.800	-21.802	70.000	-14.602	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: CB7	Time: 2017/02/06 - 18:20
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_1607	Polarity: Horizontal
EUT: Network Camera	Power: PoE
Note: Mode 2	

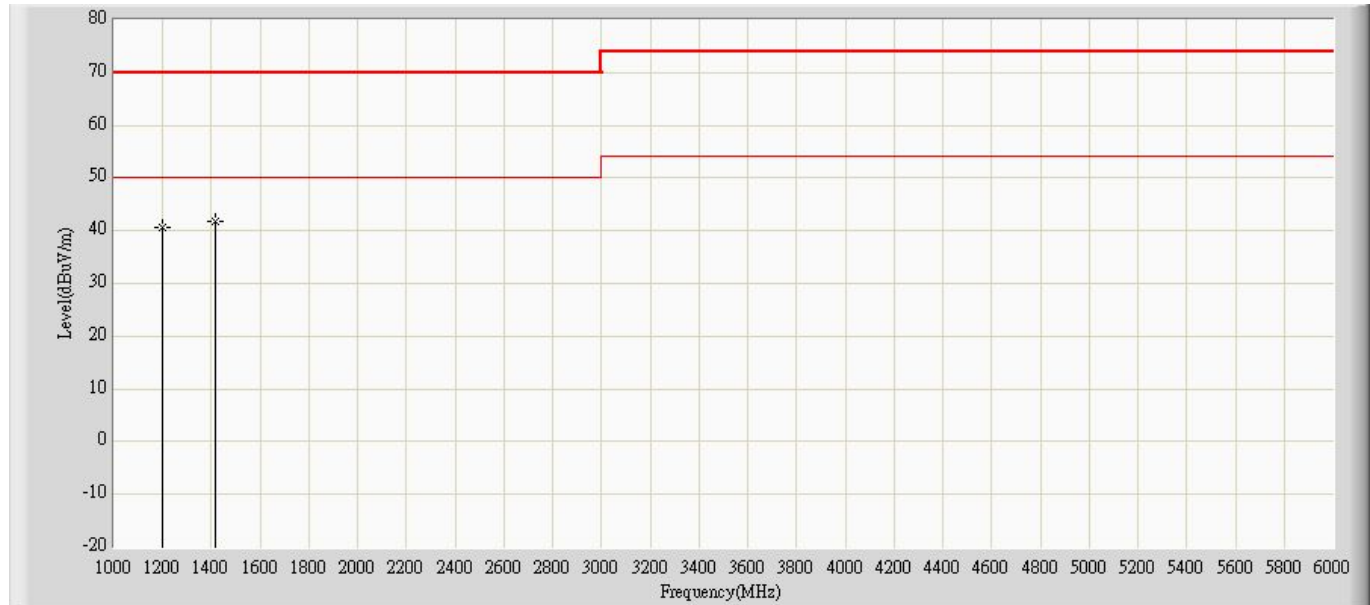


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1200.000	42.313	57.300	-27.687	70.000	-14.987	PK
2		*	2490.000	44.466	52.500	-25.534	70.000	-8.035	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Site: CB7	Time: 2017/02/06 - 18:25
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_1607	Polarity: Vertical
EUT: Network Camera	Power: PoE
Note: Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1200.000	40.713	55.700	-29.287	70.000	-14.987	PK
2		*	1416.000	41.782	56.300	-28.218	70.000	-14.517	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

5.7. Test Photograph

Test Mode : Mode 1: DC 12V

Description : Front View of Radiated Test



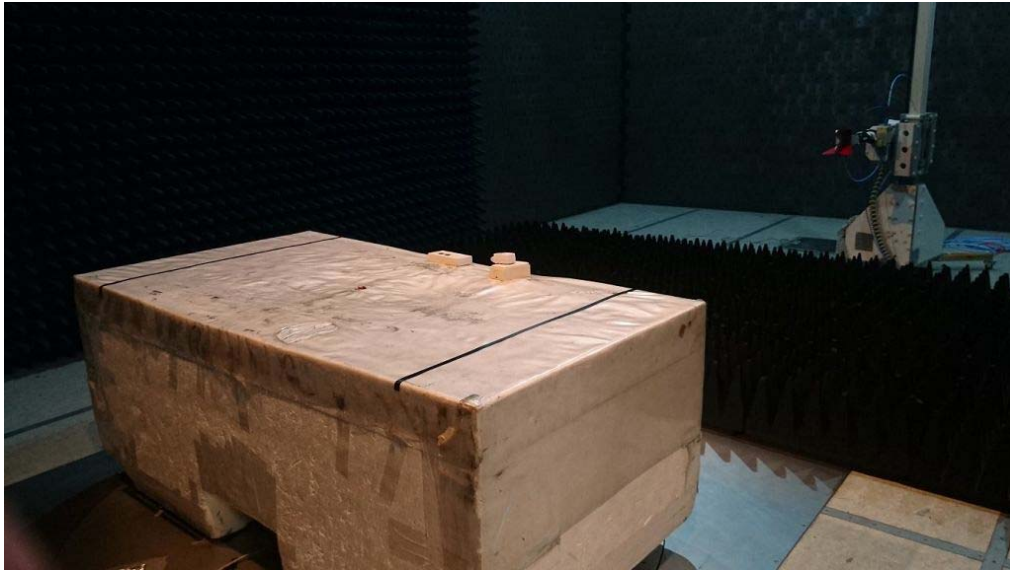
Test Mode : Mode 1: DC 12V

Description : Back View of Radiated Test



Test Mode : Mode 1: DC 12V

Description : Front View of High Frequency Radiated Test



Test Mode : Mode 2: PoE

Description : Front View of Radiated Test



Test Mode : Mode 2: PoE

Description : Back View of Radiated Test



Test Mode : Mode 2: PoE

Description : Front View of High Frequency Radiated Test



6. Attachment

➤ EUT Photograph

(1) EUT Photo_MD8565-N (3.6mm)



(2) EUT Photo_MD8565-N (3.6mm)



(3) EUT Photo_MD8565-N (3.6mm)



(4) EUT Photo_MD8565-N (2.8mm)



(5) EUT Photo_MD8565-N (2.8mm)



(6) EUT Photo_MD8565-N (2.8mm)

