



TEST REPORT

Report No.: DHQ-19MA2565VTSHPB-A2

Test Model: DH-IPC-HDBW7442HP-Z

Received: Mar.26, 2019

ISSUED: Aug.14, 2019

Applicant: ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.

Address: No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Location: No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)

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1. TEST PROGRAM.....	3
2. Summary of Test Procedure and Test Results	4
3. Test Configuration of Equipment under Test	5
3.1. Manufacturer information.....	5
3.2. Feature of Equipment under Test.....	5
3.3. Description of support units	5
3.4. Model List	6
3.5. Measurement Uncertainty	6
4. Test of Conducted Emission	8
4.1. Test Limit	8
4.2. Test Procedures	9
4.3. Typical Test Setup	9
4.4. Measurement Equipment	10
4.5. Test Result and Data	11
4.6. Test Photographs	17
5. Test of Radiated Emission	19
5.1. Test Limit	19
5.2. Test Procedures	20
5.3. Typical Test Setup	20
5.4. Measurement Equipment	21
5.5. Test Result and Data (30MHz ~ 1GHz).....	22
5.6. Test Result and Data (1GHz ~ 18GHz).....	28
5.7. Test Photographs (30MHz ~ 1000MHz).....	34
5.8. Test Photographs (1000MHz ~ 18000MHz)	35
6. Photographs of EUT	36



1. TEST PROGRAM

PRODUCT: IP CAMERA

TEST MODEL: DH-IPC-HDBW5442RP-ASE; DH-IPC-HDBW5241RP-S;
DH-IPC-HDBW5241RP-ASE

SERIES MODEL: Refer to model list

APPLICANT: ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

TESTED: Mar.26 to Apr.15, 2019

STANDARDS: 47 CFR FCC Part15, Subpart B, Class B
ANSI C63.4:2014

We, BUREAU VERITAS ADT (Shanghai) Corporation, declare that the equipment above has been tested and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

PREPARED BY : , **DATE:** Aug.14, 2019

Leon Yun

Testing Engineer

APPROVED BY : , **DATE:** Aug.14, 2019

Daniel Sun

Testing Manager





2. Summary of Test Procedure and Test Results

EMISSION (47 CFR FCC Part15, Subpart B)		
Test Item	Normative References	Test Result
Conducted Emission	47 CFR FCC Part15, Subpart B 15.107	Meets the Class B requirements
Radiated Emission	47 CFR FCC Part15, Subpart B 15.109	Meets the Class B requirements

Special Comment: All tests were performed on 120Vac 60Hz.

3. Test Configuration of Equipment under Test

3.1. Manufacturer information

Manufacturer : ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

Address : No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

3.2. Feature of Equipment under Test

Product Name:	IP CAMERA
Test Model:	DH-IPC-HDBW7442HP-Z
Series Model:	Refer to model list
Model Discrepancy:	Refer to model list
EUT Power Rating:	12VDC/2A; POE(802.3at);24VAC/1.5A

Note: Please refer to user manual.

Special Comment: This report is updated report based on history report DHQ-19MA2565VTSHPB-A1 for adding model names. Compared with standards, no necessary test need. All test results can refer to history report DHQ-19MA2565VTSHPB-A1.

3.3. Description of support units

NO.	PRODUCT	BRAND	MODEL NO.
1	PC	Lenovo	Thinkpad L470
2	AC adapter	HONOR	ADS-12AM-12 12012EPCN
3	Cable	--	--
4	POE injector	TP-LINK	TL-POE150S
5	DVR	DAHUA	DH-XVR7208AN-4KL-X
6	Monitor	Doffler	BT751LSD00033



3.4. Model List

Test Model: DH-IPC-HDBW7442HP-Z

Series Model : DH-IPC-HDBW7442HP-Z; DH-IPC-HDBW7442HN-Z;
IPC-HDBW7442HP-Z; IPC-HDBW7442HN-Z; DH-IPC-HDBW7442H-Z;
IPC-HDBW7442H-Z; IPC-HDBW7241H-Z-27135-DC12AC24V;
DH-IPC-HDBW7241HP-Z; DH-IPC-HDBW7241HN-Z; IPC-HDBW7241HP-Z;
IPC-HDBW7241HN-Z; DH-IPC-HDBW7241H-Z; IPC-HDBW7241H-Z;
IPC-HDBW7442H-Z-0410-DC12AC24V; DH-IPC-HDBW7442HP-ZFR;
DH-IPC-HDBW7442HN-ZFR; IPC-HDBW7442HP-ZFR; IPC-HDBW7442HN-ZFR;
DH-IPC-HDBW7442H-ZFR; IPC-HDBW7442H-ZFR;
DH-IPC-HDBW7442HP-Z4FR; DH-IPC-HDBW7442HN-Z4FR; IPC-HDBW7442HP-Z4FR;
IPC-HDBW7442HN-Z4FR; DH-IPC-HDBW7442H-Z4FR; IPC-HDBW7442H-Z4FR;
DH-IPC-HDBW7241HP-Z5; DH-IPC-HDBW7241HN-Z5; IPC-HDBW7241HP-Z5;
IPC-HDBW7241HN-Z5; DH-IPC-HDBW7241H-Z5; IPC-HDBW7241H-Z5;
IPC-HDBW7241H-Z5-0735-DC12AC24V; DH-IPC-HDBW7842HP-Z;
DH-IPC-HDBW7842HN-Z; IPC-HDBW7842HP-Z; IPC-HDBW7842HN-Z;
DH-IPC-HDBW7842H-Z; IPC-HDBW7842H-Z; IPC-HDBW7842H-Z-0410-DC12AC24V;
DH-IPC-HDBW7442HP-Z4; DH-IPC-HDBW7442HN-Z4; IPC-HDBW7442HP-Z4;
IPC-HDBW7442HN-Z4; DH-IPC-HDBW7442H-Z4; IPC-HDBW7442H-Z4;
IPC-HDBW7442H-ZE-2712-DC12AC24V; IPC-HDBW7842H-ZE-2712-DC12AC24V;
IPC-HDBW7442H-ZEFR-2712-DC12AC24V; IPC-HDBW7241H-Z5E-0735-DC12AC24V;
DH-IPC-HDBW5842HP-ZHE; DH-IPC-HDBW5842HN-ZHE; IPC-HDBW5842HP-ZHE;
IPC-HDBW5842HN-ZHE; DH-IPC-HDBW5842H-ZHE; IPC-HDBW5842H-ZHE; N85DV7Z;
IPC-HDBW5842H-ZEH-2712F-DC12AC24V; IPC-HDBW5842H-ZEH-2712-DC12AC24V;
IPC-HDBW5842H-ZEH-2712

Note: All models only have different model name and sensor.

3.5. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.



Measurement		Value
Conducted emissions		2.55 dB
Radiated emissions	30 MHz ~ 1GHz	3.22 dB
	Above 1GHz	2.89 dB

4. Test of Conducted Emission

4.1. Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.107)

FREQUENCY (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

- NOTES:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



4.4. Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	E1R1001	Mar.04, 2020
LISN ROHDE & SCHWARZ	ENV216	E1L1011	Jul.18, 2019
Software ADT	ADT_Cond_V7.3.0	N/A	N/A

4.5. Test Result and Data

4.5.1 Conducted Emission Test Data

For DC12V port test on AC adapter

Phase : LINE

Location: Conduction 1

Date: 4/4/2019

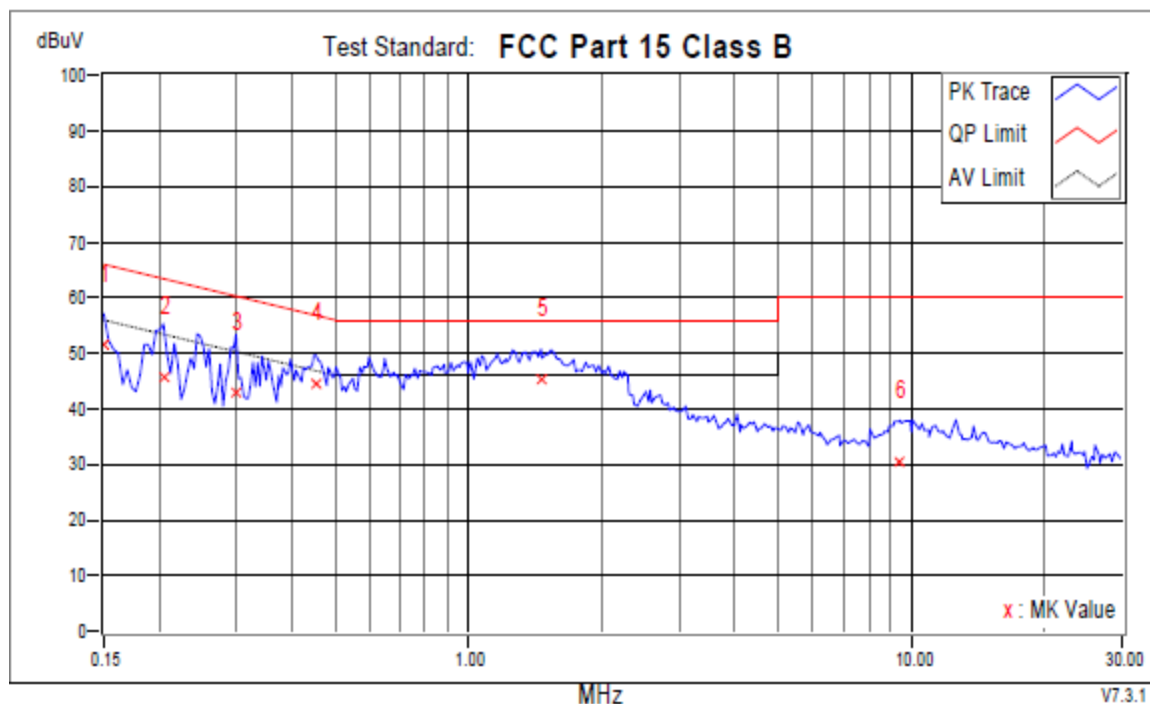
Time: 1:50:12 PM

Phase L1

Temperatuer (C): 22

Humidity (%): 48

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV	Emission dBuV	Limit dBuV	Margins dB	Notes
			QP	AV	QP	AV	
1	0.15000	9.87	41.70	25.32	51.57	35.19	66.00 56.00 -14.43 -20.81
2	0.20474	9.88	35.66	17.22	45.54	27.10	63.42 53.42 -17.87 -26.31
3	0.29858	9.73	33.28	19.26	43.01	28.99	60.28 50.28 -17.27 -21.29
+4	0.45107	9.75	34.78	26.91	44.53	36.66	56.86 46.86 -12.33 -10.20
5	1.45747	9.70	35.76	25.59	45.46	35.29	56.00 46.00 -10.54 -10.71
6	9.41432	10.39	19.92	13.99	30.31	24.38	60.00 50.00 -29.69 -25.62

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL

Location: Conduction 1

Date: 4/4/2019

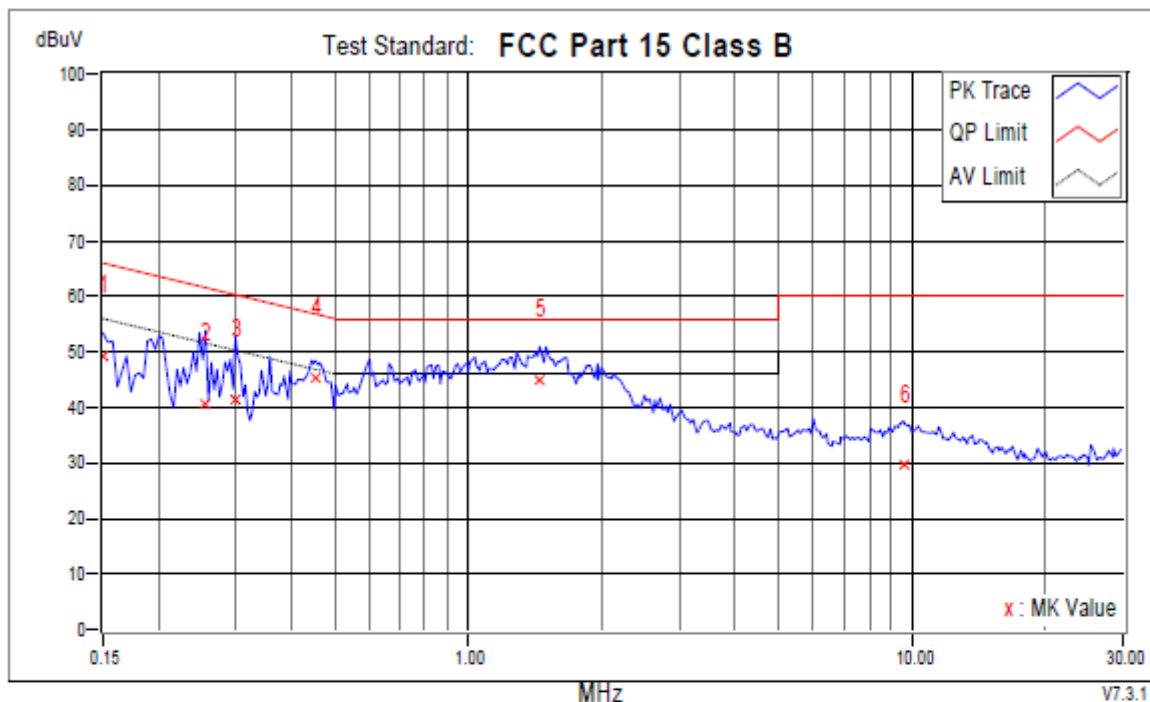
Time: 1:55:08 PM

Phase N

Temperature (C): 22

Humidity (%): 48

Approved by:



No.	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.88	39.52	25.16	49.40	35.04	66.00	56.00	-16.60	-20.96	
2	0.25557	9.87	30.92	17.65	40.79	27.52	61.57	51.57	-20.79	-24.06	
3	0.29858	9.90	31.38	19.64	41.28	29.54	60.28	50.28	-19.00	-20.74	
+4	0.45107	9.88	35.44	27.53	45.32	37.41	56.86	46.86	-11.53	-9.44	
5	1.44965	9.94	34.80	24.17	44.74	34.11	56.00	46.00	-11.26	-11.89	
6	9.57072	10.42	19.16	12.77	29.58	23.19	60.00	50.00	-30.42	-26.81	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

For POE port test on POE adapter

Phase : LINE

Location: Conduction 1

Date: 4/4/2019

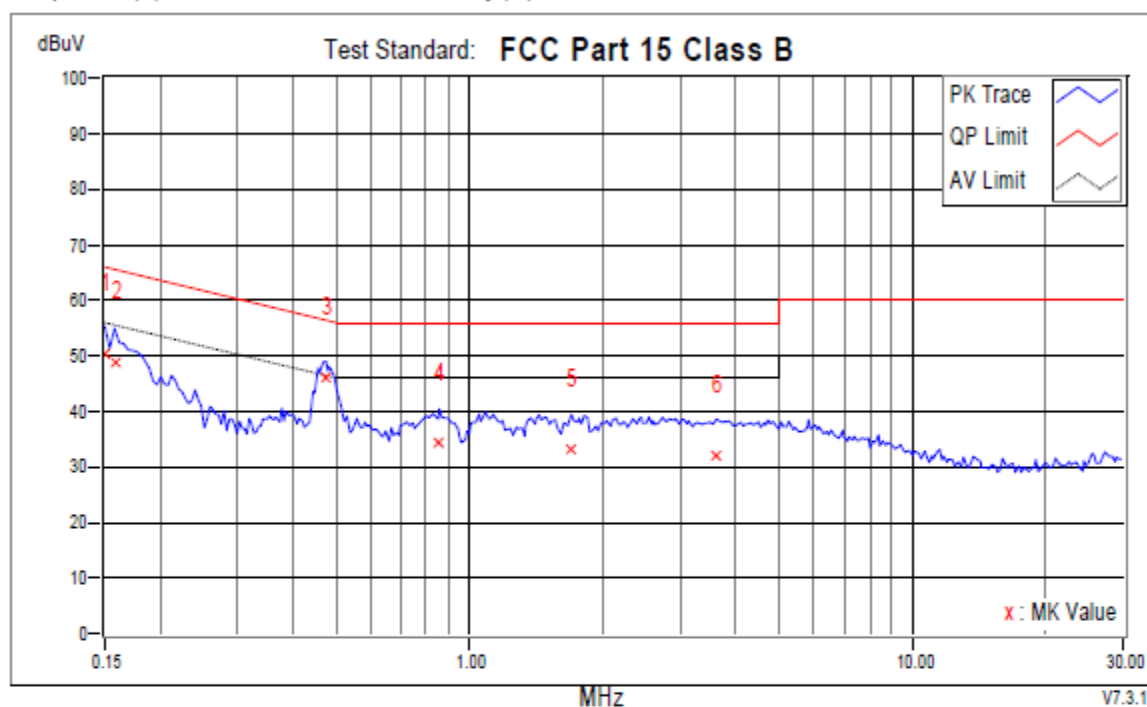
Time: 2:24:34 PM

Phase L1

Temperature (C): 22

Humidity (%): 48

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.87	40.46	21.98	50.33	31.85	66.00	56.00	-15.67	-24.15	
2	0.15782	9.87	38.96	22.09	48.83	31.96	65.58	55.58	-16.74	-23.61	
+3	0.47453	9.75	36.20	28.65	45.95	38.40	56.43	46.43	-10.48	-8.03	
4	0.85380	9.62	24.90	18.15	34.52	27.77	56.00	46.00	-21.48	-18.23	
5	1.69989	9.75	23.56	17.07	33.31	26.82	56.00	46.00	-22.69	-19.18	
6	3.60406	9.95	22.18	14.80	32.13	24.75	56.00	46.00	-23.87	-21.25	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL

Location: Conduction 1

Date: 4/4/2019

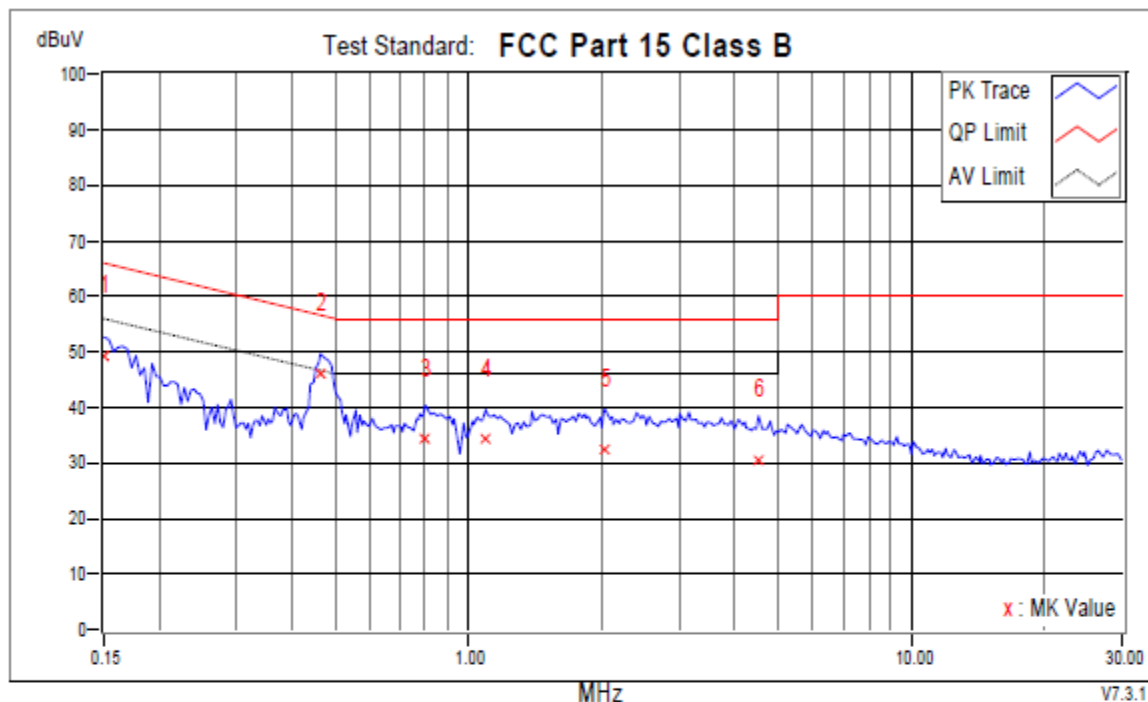
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Phase N

Temperature (C): 22

Humidity (%): 48

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.88	39.26	20.06	49.14	29.94	66.00	56.00	-16.86	-26.06	
+2	0.46280	9.88	36.30	28.86	46.18	38.74	56.64	46.64	-10.46	-7.90	
3	0.79906	9.92	24.54	18.15	34.46	28.07	56.00	46.00	-21.54	-17.93	
4	1.09384	9.92	24.32	18.45	34.24	28.37	56.00	46.00	-21.76	-17.63	
5	2.02442	9.97	22.64	16.01	32.61	25.98	56.00	46.00	-23.39	-20.02	
6	4.51509	9.82	20.62	13.32	30.44	23.14	56.00	46.00	-25.56	-22.86	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

For AC24V

Phase : LINE

Location: Conduction 1

Date: 4/4/2019

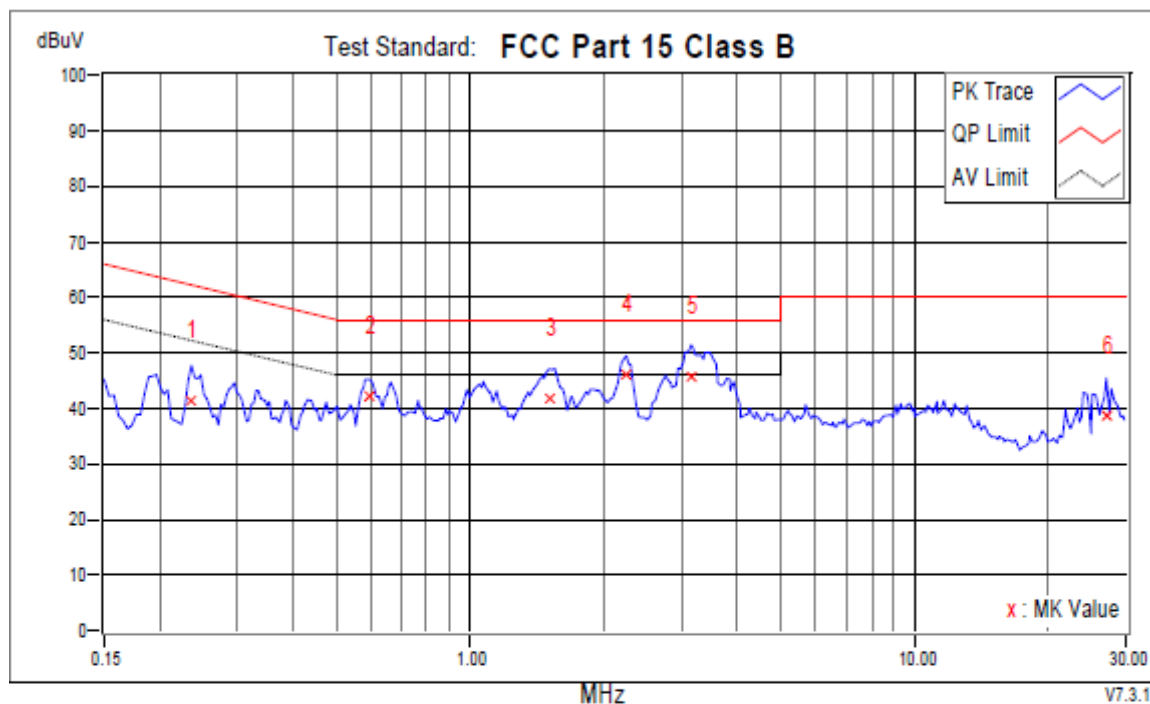
Time: 2:41:12 PM

Phase L1

Temperatuer (C): 22

Humidity (%): 48

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.23602	9.83	31.42	25.05	41.25	34.88	62.24	52.24	-20.98	-17.35	
2	0.59183	9.69	32.42	23.61	42.11	33.30	56.00	46.00	-13.89	-12.70	
3	1.50439	9.71	32.16	23.86	41.87	33.57	56.00	46.00	-14.13	-12.43	
4	2.24729	9.83	36.38	28.11	46.21	37.94	56.00	46.00	-9.79	-8.06	
+5	3.14268	9.91	35.90	28.44	45.81	38.35	56.00	46.00	-10.19	-7.65	
6	27.01632	10.28	28.48	20.36	38.76	30.64	60.00	50.00	-21.24	-19.36	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL

Location: Conduction 1

Date: 4/4/2019

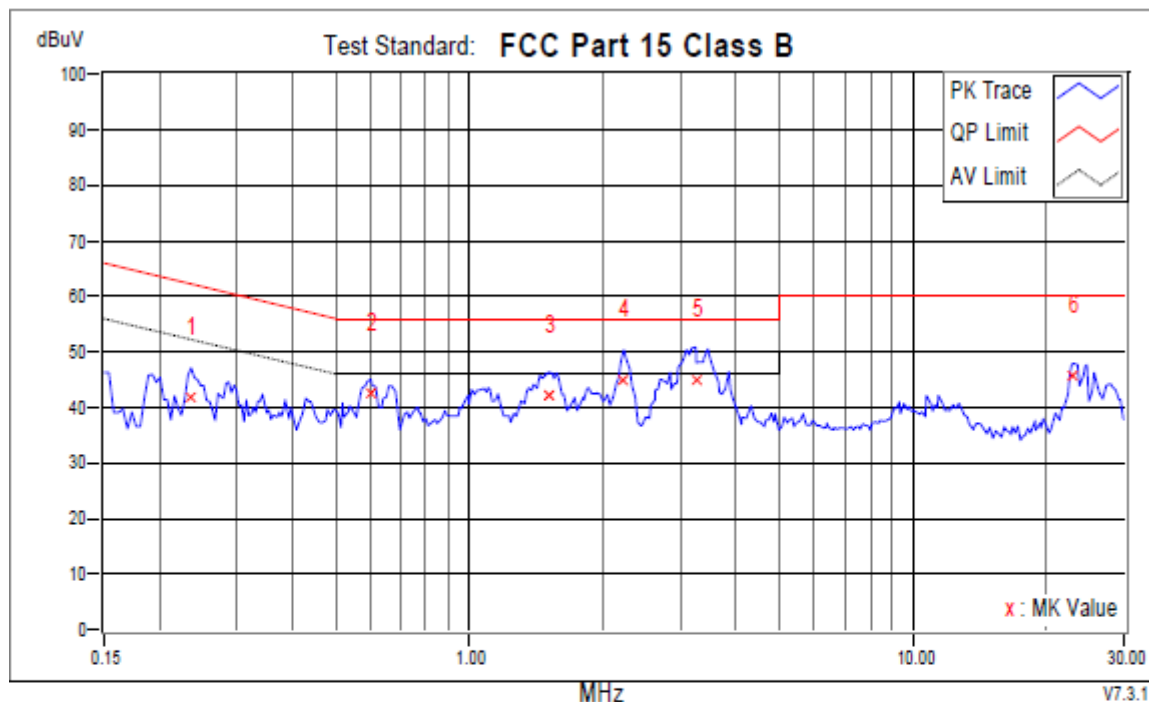
Time: 2:35:48 PM

Phase N

Temperature (C): 22

Humidity (%): 48

Approved by:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
			QP	AV	QP	AV	QP	AV	QP	AV	
1	0.23602	9.86	31.90	26.49	41.76	36.35	62.24	52.24	-20.48	-15.89	
2	0.59965	9.86	32.62	22.67	42.48	32.53	56.00	46.00	-13.52	-13.47	
3	1.51221	9.94	32.36	23.76	42.30	33.70	56.00	46.00	-13.70	-12.30	
4	2.23165	9.99	35.12	27.35	45.11	37.34	56.00	46.00	-10.89	-8.66	
+5	3.24043	10.03	35.08	29.16	45.11	39.19	56.00	46.00	-10.89	-6.81	
6	22.82480	10.34	35.30	25.05	45.64	35.39	60.00	50.00	-14.36	-14.61	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

4.6. Test Photographs







5. Test of Radiated Emission

5.1. Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.109)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

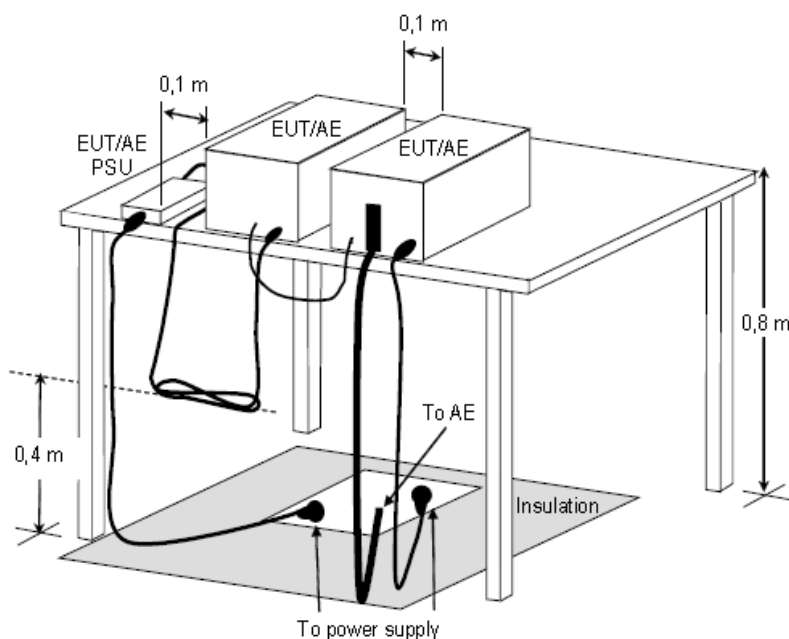
FREQUENCY (MHz)	Class A ($\text{dB}\mu\text{V/m}$) (at 3m)		Class B ($\text{dB}\mu\text{V/m}$) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

- Note:** (1) The lower limit shall apply at the transition frequencies.
 (2) Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$).
 (3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.2. Test Procedures

- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

5.3. Typical Test Setup



**Figure D.8 – Example measurement arrangement for table-top EUT
(Radiated emission measurement)**



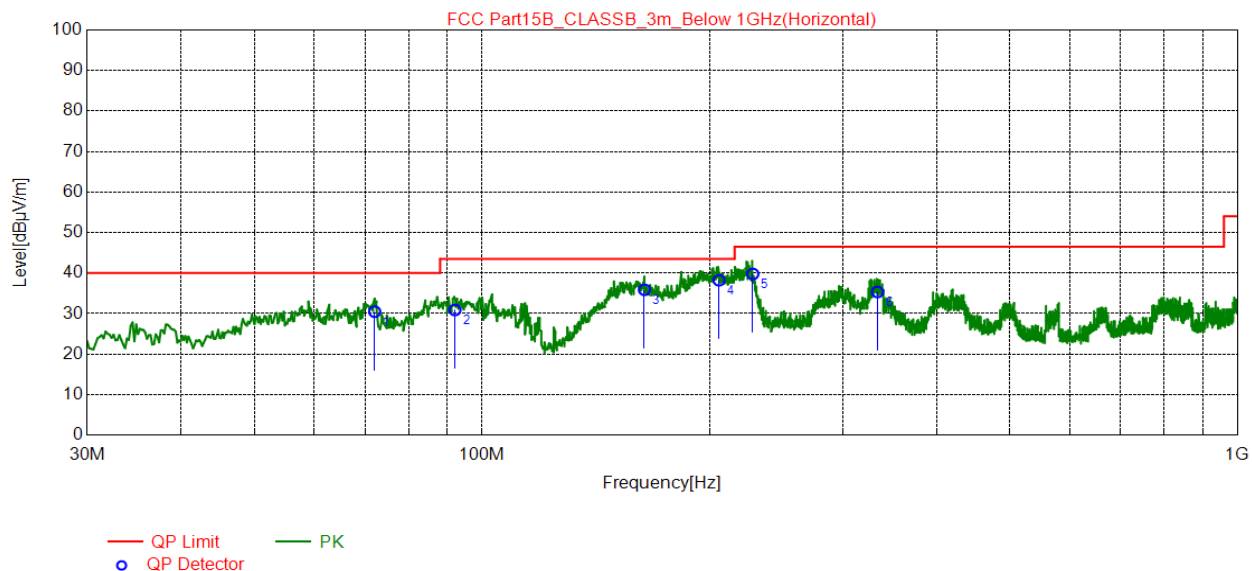
5.4. Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
EMI Test Spectrum ROHDE & SCHWARZ	ESR7	E1R1005	Dec.03, 2019
Spectrum Analyzer Keysight	N9030B	E1S1003	Jul.23, 2019
Broad-Band Antenna Schwarzbeck	VULB9168	E1A1001	Feb.27, 2020
Double Riaged Vroadband Horn Antenna Schwarzbeck	BBHA9120D	E1A1017	Aug.26, 2019
Preamplifier Agilent	8447D	E1A2001	Oct.17, 2019
Preamplifier Agilent	EMC051845SE	E1A2009	Jul.23, 2019

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

For DC12V port test on AC adapter

Position: Horizontal

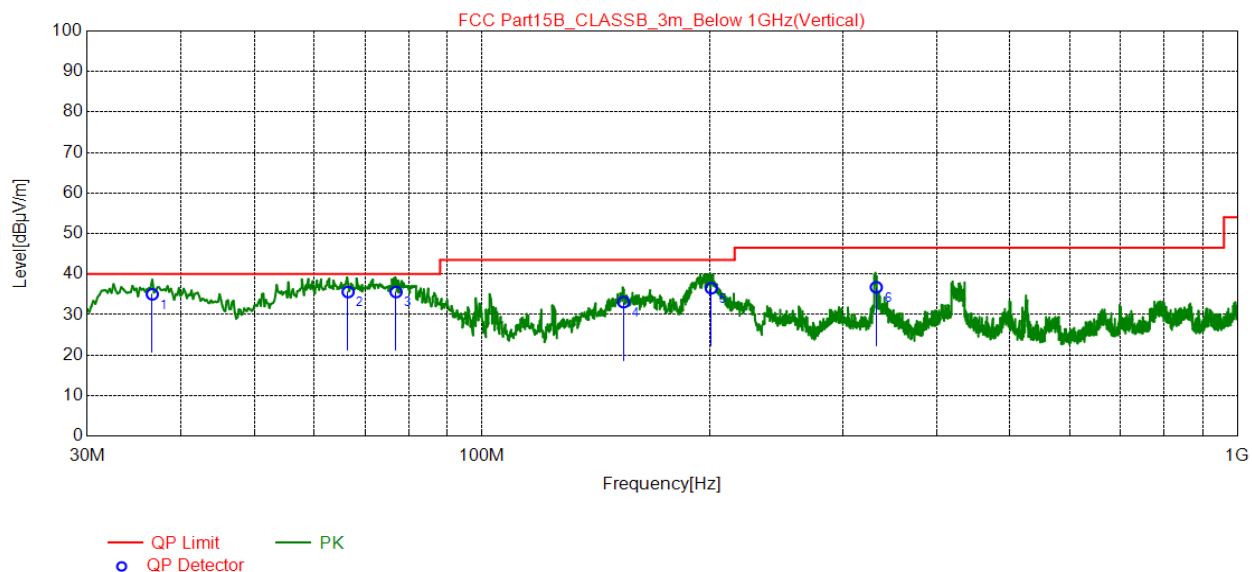


NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	72.098	42.91	-12.45	30.46	40.00	9.54	200	117	Horizontal
2	92.080	45.17	-14.29	30.88	43.50	12.62	200	161	Horizontal
3	164.05	44.99	-9.11	35.88	43.50	7.62	200	189	Horizontal
4	205.95	50.32	-12.09	38.23	43.50	5.27	100	140	Horizontal
5	228.26	50.97	-11.18	39.79	46.50	6.71	100	134	Horizontal
6	333.80	44.2	-8.86	35.34	46.50	11.16	100	215	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

Position: Vertical



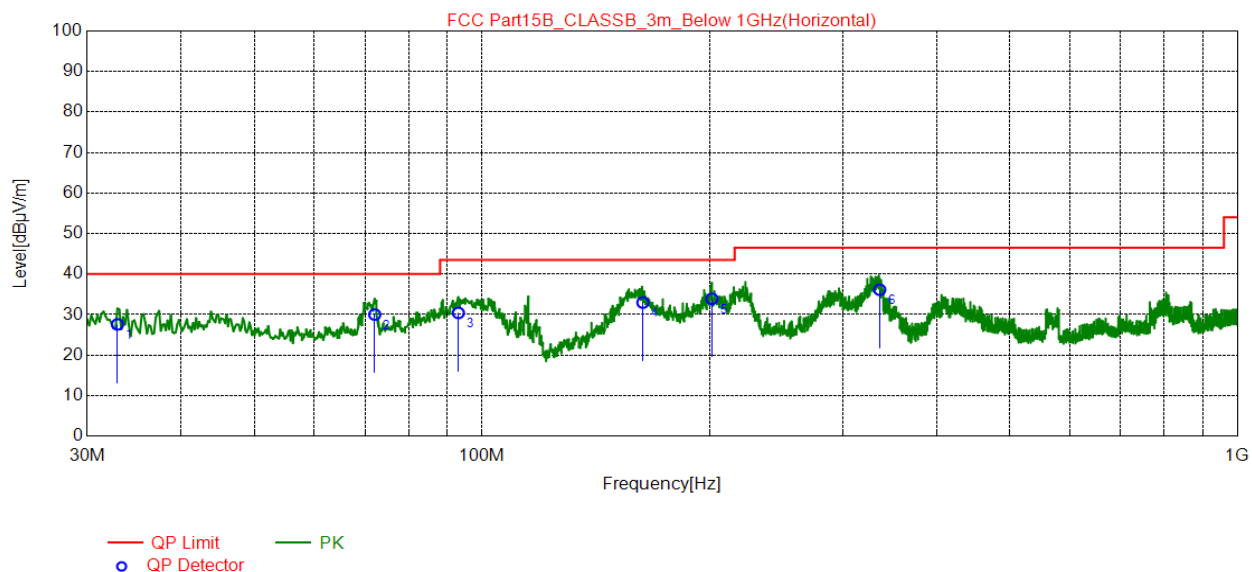
NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.596	44.88	-9.88	35.00	40.00	5.00	100	143	Vertical
2	66.472	47.14	-11.56	35.58	40.00	4.42	100	6	Vertical
3	76.948	48.83	-13.25	35.58	40.00	4.42	100	134	Vertical
4	153.96	42.23	-9.15	33.08	43.50	10.42	100	118	Vertical
5	201.10	48.82	-12.31	36.51	43.50	6.99	100	31	Vertical
6	332.64	45.59	-8.85	36.74	46.50	9.76	100	187	Vertical

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

For POE port test on POE adapter

Position: Horizontal

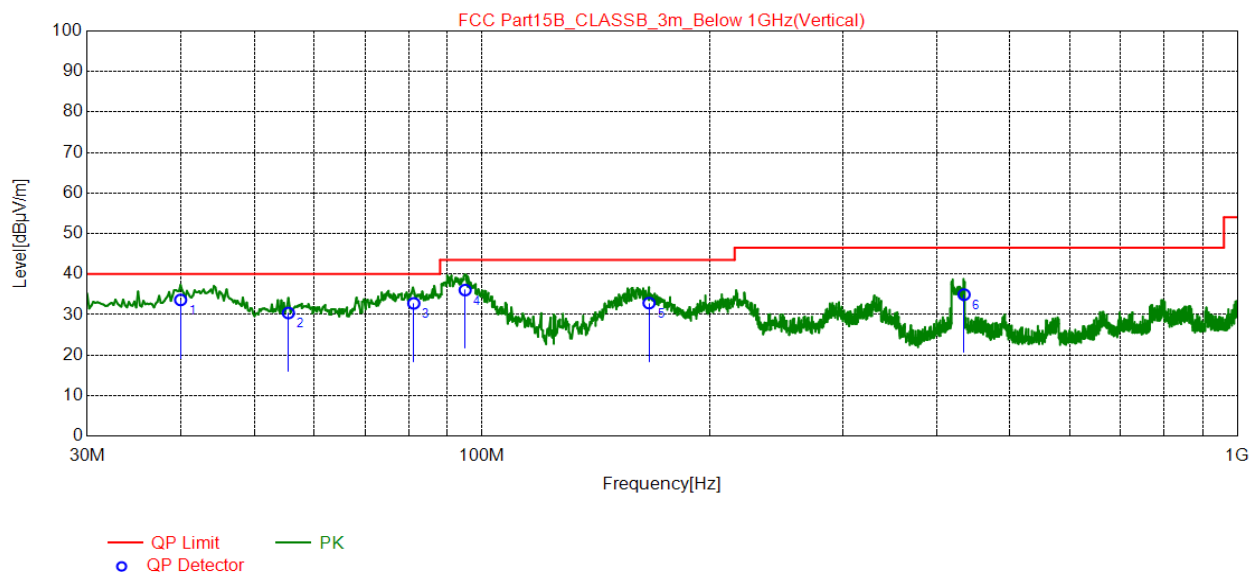


NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.910	37.94	-10.35	27.59	40.00	12.41	100	343	Horizontal
2	72.098	42.45	-12.45	30.00	40.00	10.00	200	207	Horizontal
3	93.050	44.6	-14.19	30.41	43.50	13.09	200	126	Horizontal
4	163.27	42.04	-9.07	32.97	43.50	10.53	200	326	Horizontal
5	201.49	46.21	-12.29	33.92	43.50	9.58	100	159	Horizontal
6	336.13	45.03	-8.90	36.13	46.50	10.37	100	237	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

Position: Vertical



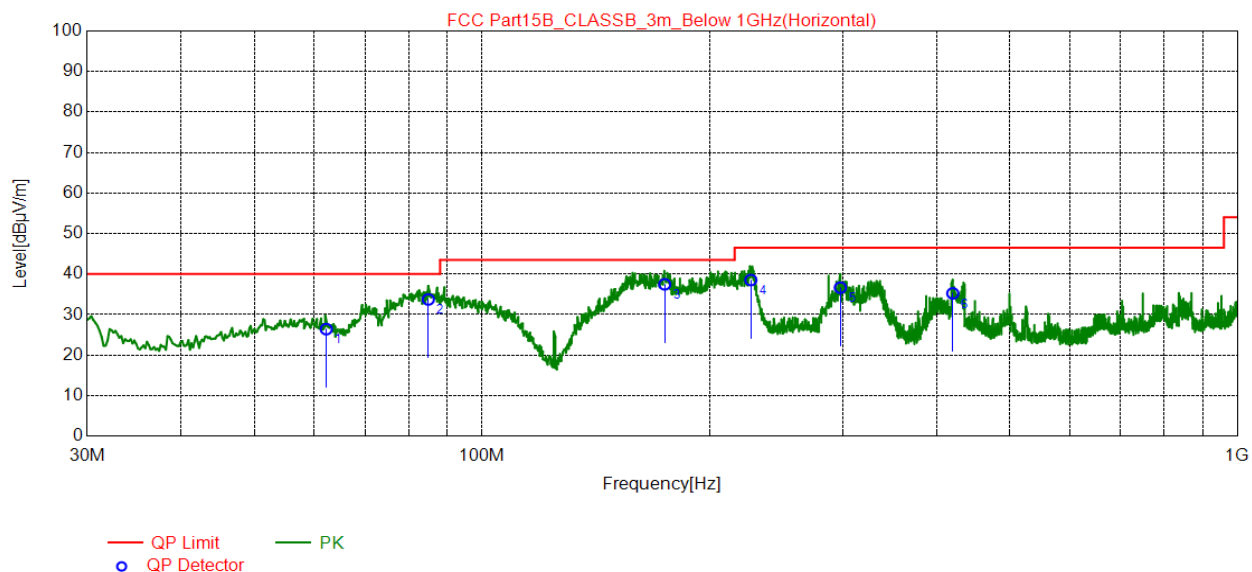
NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	39.894	43.08	-9.47	33.61	40.00	6.39	100	150	Vertical
2	55.414	40.55	-10.16	30.39	40.00	9.61	100	50	Vertical
3	81.216	46.62	-13.85	32.77	40.00	7.23	100	150	Vertical
4	94.990	50.04	-13.99	36.05	43.50	7.45	100	84	Vertical
5	166.38	42.04	-9.21	32.83	43.50	10.67	100	168	Vertical
6	434.68	41.94	-7.01	34.93	46.50	11.57	100	202	Vertical

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

For AC24V

Position: Horizontal

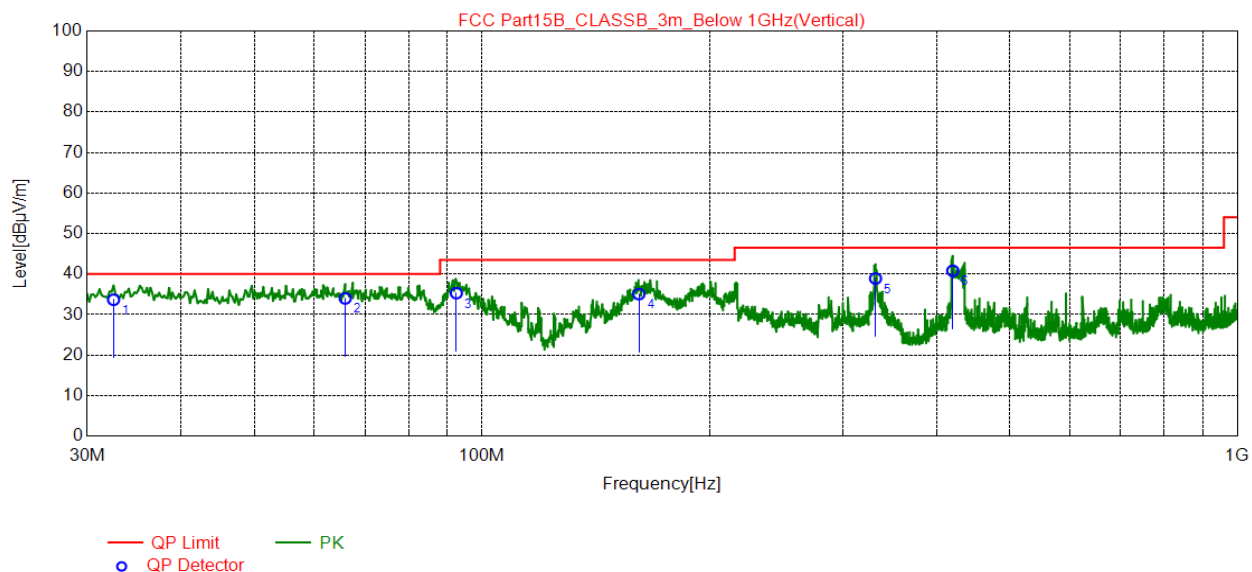


NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	62.204	37.3	-10.90	26.40	40.00	13.60	200	130	Horizontal
2	84.902	47.87	-14.13	33.74	40.00	6.26	200	165	Horizontal
3	174.53	47.81	-10.33	37.48	43.50	6.02	100	142	Horizontal
4	226.91	49.77	-11.23	38.54	46.50	7.96	100	142	Horizontal
5	298.10	45.9	-9.26	36.64	46.50	9.86	100	170	Horizontal
6	419.94	42.68	-7.45	35.23	46.50	11.27	100	255	Horizontal

REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

Position: Vertical



NO.	Freq. [MHz]	QP Reading [dB μ V/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	32.522	44.05	-10.39	33.66	40.00	6.34	100	183	Vertical
2	65.890	45.47	-11.47	34.00	40.00	6.00	200	341	Vertical
3	92.468	49.53	-14.25	35.28	43.50	8.22	100	214	Vertical
4	161.33	44.04	-8.99	35.05	43.50	8.45	100	60	Vertical
5	331.86	47.73	-8.83	38.90	46.50	7.60	200	237	Vertical
6	419.94	48.26	-7.45	40.81	46.50	5.69	100	312	Vertical

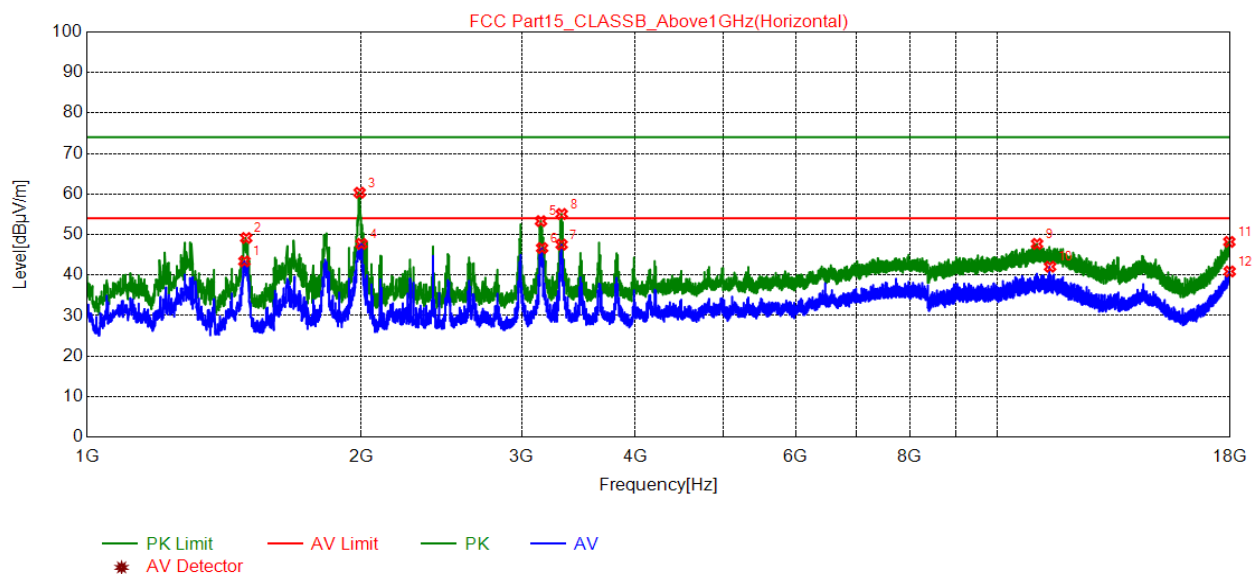
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

5.6. Test Result and Data (1GHz ~ 18GHz)

For DC12V port test on AC adapter

Position: Horizontal

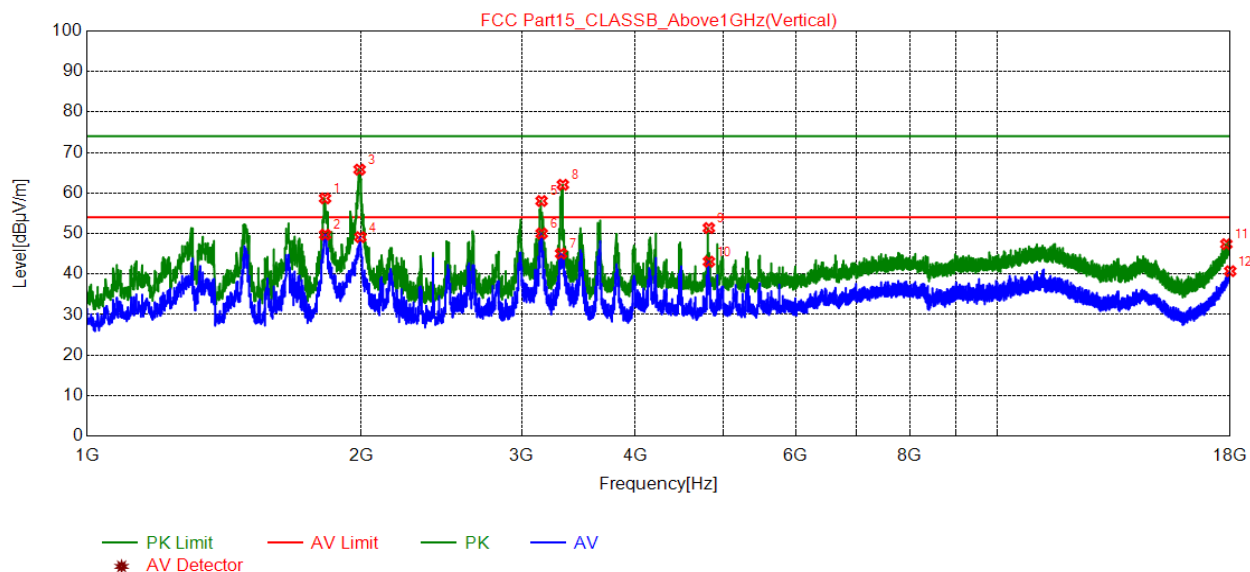


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1488.7500	61.34	43.39	54.00	10.61	100	162	Horizontal	AV
2	1495.5500	67.07	49.15	74.00	24.85	100	162	Horizontal	PK
3	1991.9500	77.14	60.33	74.00	13.67	100	209	Horizontal	PK
4	2001.3000	64.48	47.69	54.00	6.31	100	209	Horizontal	AV
5	3150.5000	67.22	53.31	74.00	20.69	100	162	Horizontal	PK
6	3159.8500	60.54	46.66	54.00	7.34	100	255	Horizontal	AV
7	3319.6500	60.89	47.52	54.00	6.48	100	348	Horizontal	AV
8	3320.5000	68.45	55.08	74.00	18.92	100	348	Horizontal	PK
9	11043.6000	46.25	47.70	74.00	26.30	100	70	Horizontal	PK
10	11414.2000	40.39	42.06	54.00	11.94	100	116	Horizontal	AV
11	17957.5000	36.61	48.19	74.00	25.81	100	70	Horizontal	PK
12	17972.8000	29.17	40.89	54.00	13.11	100	70	Horizontal	AV

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical



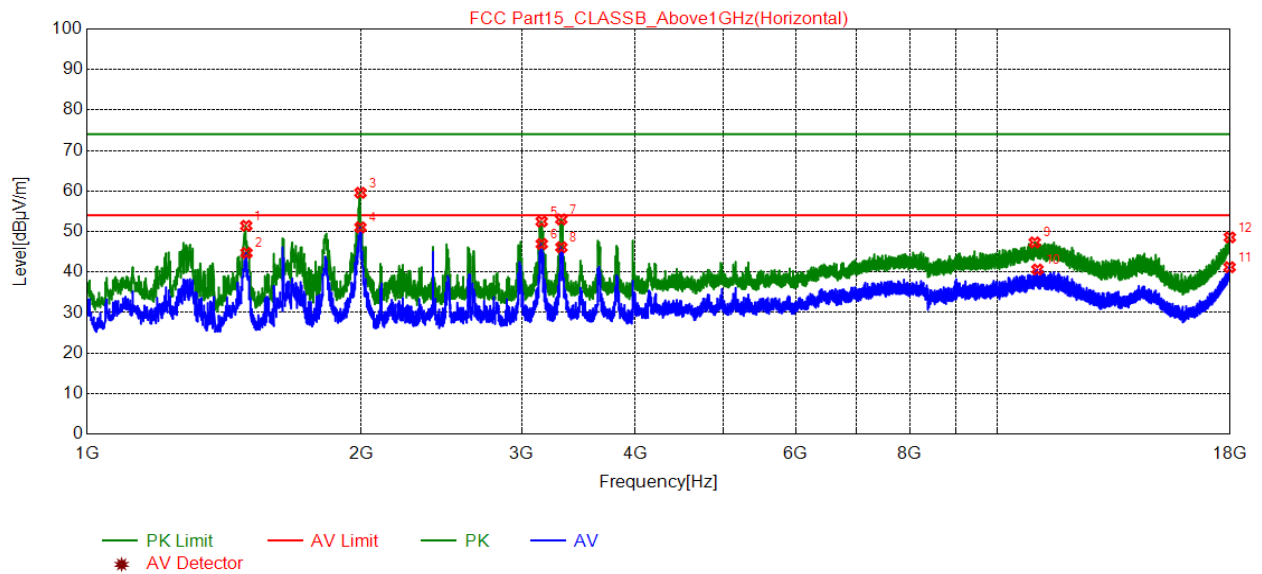
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1825.3500	75.84	58.68	74.00	15.32	100	151	Vertical	PK
2	1826.2000	66.89	49.74	54.00	4.26	100	151	Vertical	AV
3	1991.9500	82.60	65.79	74.00	8.21	100	197	Vertical	PK
4	1996.2000	65.91	49.11	54.00	4.89	100	197	Vertical	AV
5	3155.6000	71.92	58.03	74.00	15.97	100	151	Vertical	PK
6	3156.4500	63.90	50.01	54.00	3.99	100	151	Vertical	AV
7	3315.4000	58.44	45.06	54.00	8.94	100	151	Vertical	AV
8	3329.8500	75.38	62.04	74.00	11.96	100	105	Vertical	PK
9	4817.3500	60.77	51.36	74.00	22.64	100	105	Vertical	PK
10	4818.2000	52.48	43.07	54.00	10.93	100	151	Vertical	AV
11	17822.3500	37.00	47.39	74.00	26.61	100	12	Vertical	PK
12	17999.1500	28.77	40.71	54.00	13.29	100	59	Vertical	AV

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

For POE port test on POE adapter

Position: Horizontal

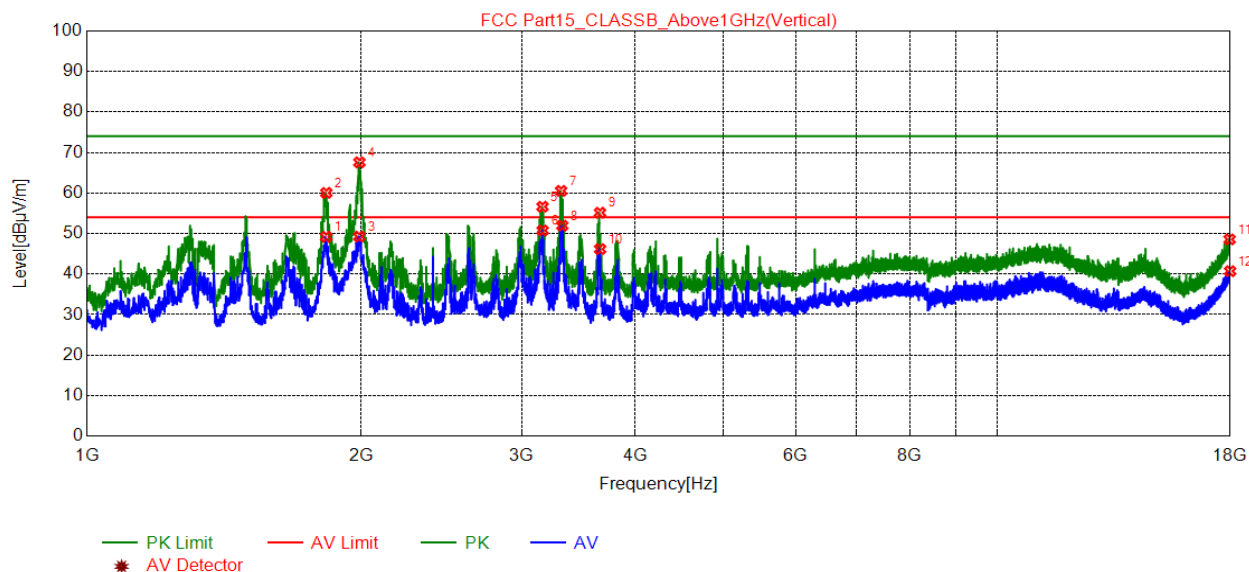


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1495.5500	69.34	51.42	74.00	22.58	100	151	Horizontal	PK
2	1496.4000	62.63	44.71	54.00	9.29	100	151	Horizontal	AV
3	1996.2000	76.36	59.56	74.00	14.44	100	151	Horizontal	PK
4	1996.2000	67.83	51.03	54.00	2.97	100	197	Horizontal	AV
5	3156.4500	66.36	52.47	74.00	21.53	100	105	Horizontal	PK
6	3157.3000	60.83	46.94	54.00	7.06	100	244	Horizontal	AV
7	3317.1000	66.38	53.00	74.00	21.00	100	105	Horizontal	PK
8	3317.9500	59.50	46.12	54.00	7.88	100	336	Horizontal	AV
9	10979.8500	45.98	47.31	74.00	26.69	100	336	Horizontal	PK
10	11054.6500	39.17	40.63	54.00	13.37	100	58	Horizontal	AV
11	17969.4000	29.51	41.20	54.00	12.80	100	58	Horizontal	AV
12	17977.9000	36.80	48.56	74.00	25.44	100	244	Horizontal	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical



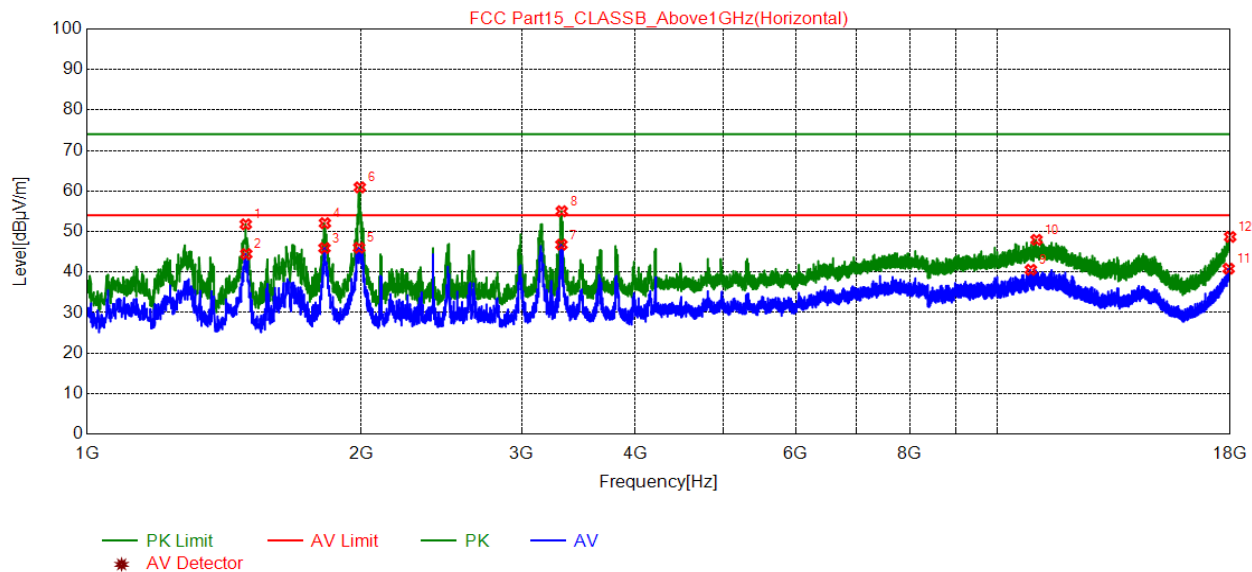
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1830.4500	66.34	49.19	54.00	4.81	100	117	Vertical	AV
2	1831.3000	77.17	60.03	74.00	13.97	100	117	Vertical	PK
3	1990.2500	66.07	49.26	54.00	4.74	100	209	Vertical	AV
4	1991.1000	84.38	67.57	74.00	6.43	100	209	Vertical	PK
5	3163.2500	70.49	56.62	74.00	17.38	100	163	Vertical	PK
6	3164.1000	64.62	50.75	54.00	3.25	100	163	Vertical	AV
7	3315.4000	73.91	60.53	74.00	13.47	100	163	Vertical	PK
8	3325.6000	65.29	51.94	54.00	2.06	100	163	Vertical	AV
9	3657.9500	67.49	55.15	74.00	18.85	100	163	Vertical	PK
10	3658.8000	58.50	46.16	54.00	7.84	100	163	Vertical	AV
11	17970.2500	36.87	48.56	74.00	25.44	100	209	Vertical	PK
12	17994.9000	28.80	40.71	54.00	13.29	100	348	Vertical	AV

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

For 24V

Position: Horizontal

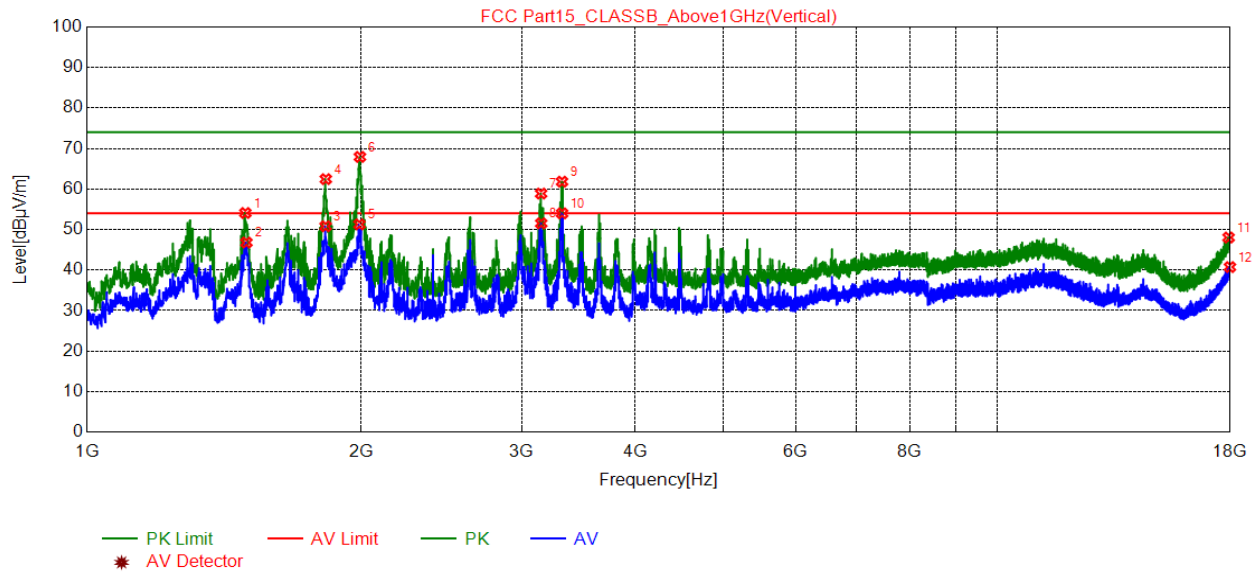


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1493.8500	69.71	51.78	74.00	22.22	100	171	Horizontal	PK
2	1495.5500	62.38	44.46	54.00	9.54	100	218	Horizontal	AV
3	1822.8000	63.07	45.91	54.00	8.09	100	218	Horizontal	AV
4	1824.5000	69.22	52.06	74.00	21.94	100	264	Horizontal	PK
5	1989.4000	62.81	46.00	54.00	8.00	100	171	Horizontal	AV
6	1992.8000	77.71	60.90	74.00	13.10	100	218	Horizontal	PK
7	3317.9500	60.14	46.76	54.00	7.24	100	357	Horizontal	AV
8	3320.5000	68.39	55.02	74.00	18.98	100	357	Horizontal	PK
9	10871.0500	39.49	40.56	54.00	13.44	100	311	Horizontal	AV
10	11030.0000	46.53	47.96	74.00	26.04	100	218	Horizontal	PK
11	17926.0500	29.52	40.83	54.00	13.17	100	71	Horizontal	AV
12	17994.9000	36.77	48.68	74.00	25.32	100	357	Horizontal	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

Position: Vertical

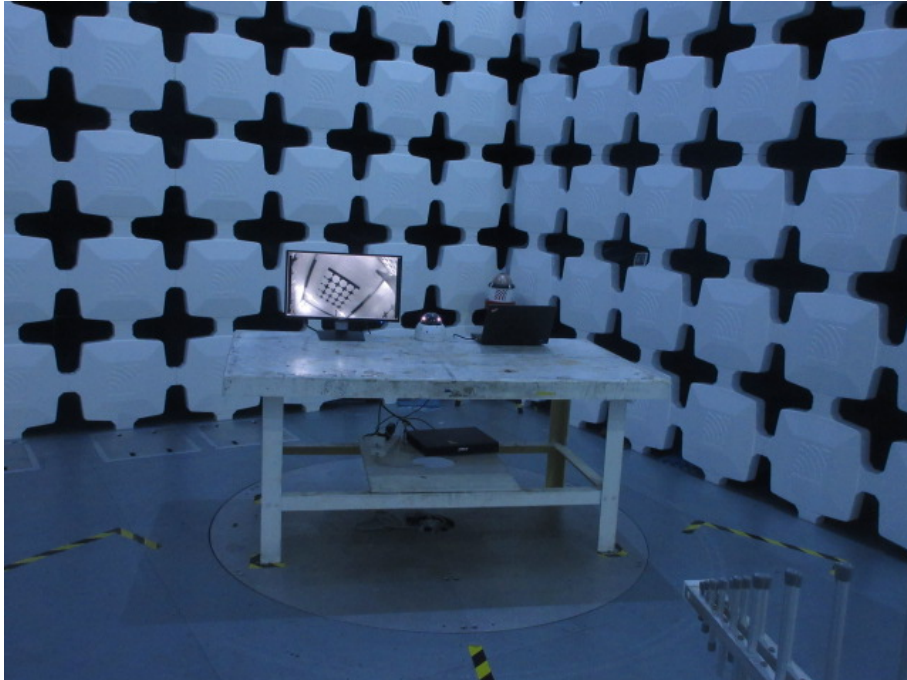
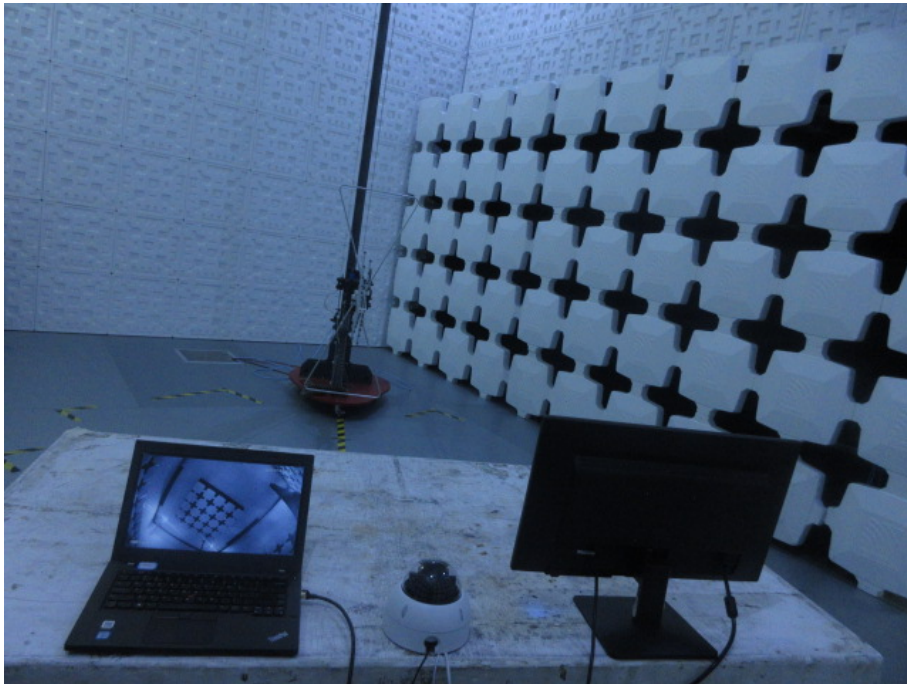


NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1492.1500	72.03	54.09	74.00	19.91	100	243	Vertical	PK
2	1496.4000	64.71	46.79	54.00	7.21	100	290	Vertical	AV
3	1827.9000	67.96	50.81	54.00	3.19	100	150	Vertical	AV
4	1828.7500	79.59	62.44	74.00	11.56	100	104	Vertical	PK
5	1991.1000	68.09	51.28	54.00	2.72	100	196	Vertical	AV
6	1993.6500	84.73	67.93	74.00	6.07	100	196	Vertical	PK
7	3152.2000	72.78	58.88	74.00	15.12	100	150	Vertical	PK
8	3153.0500	65.43	51.53	54.00	2.47	100	150	Vertical	AV
9	3323.0500	75.18	61.82	74.00	12.18	100	104	Vertical	PK
10	3323.9000	67.36	54.00	54.00	0.00	100	150	Vertical	AV
11	17924.3500	36.73	48.03	74.00	25.97	100	12	Vertical	PK
12	17985.5500	28.91	40.74	54.00	13.26	100	196	Vertical	AV

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

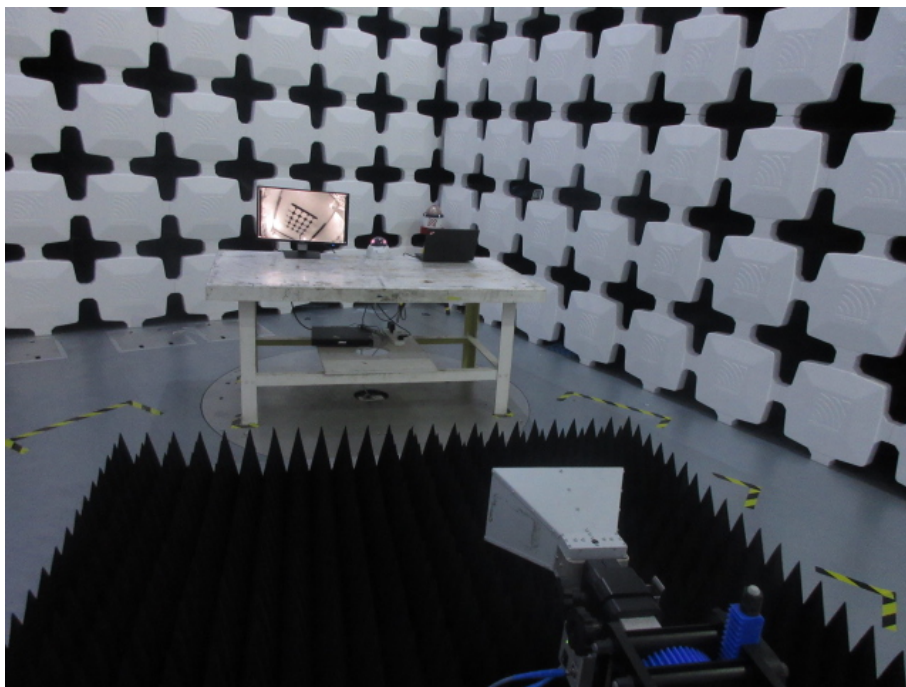
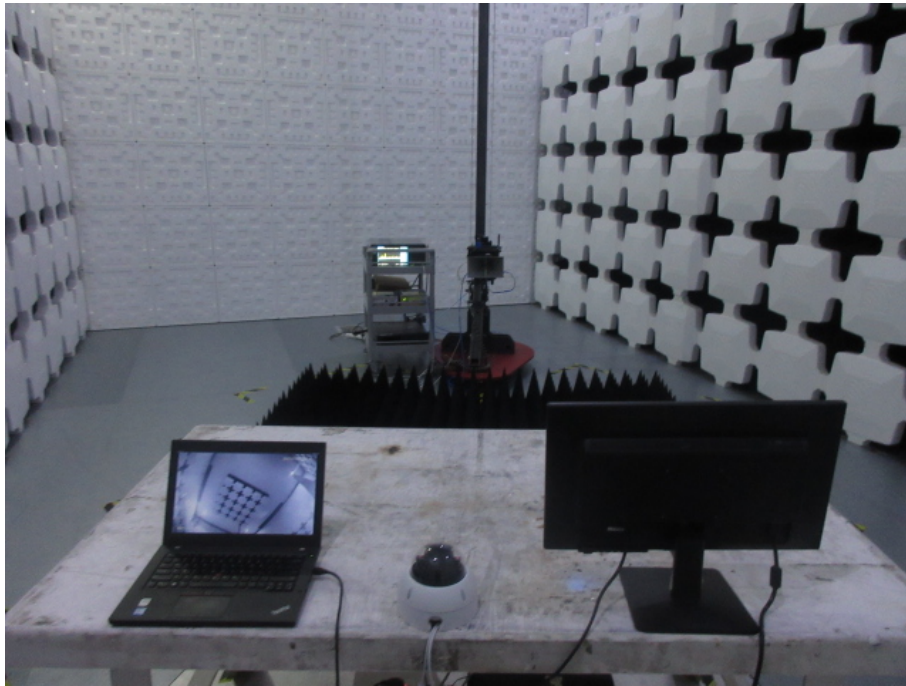
5.7. Test Photographs (30MHz ~ 1000MHz)





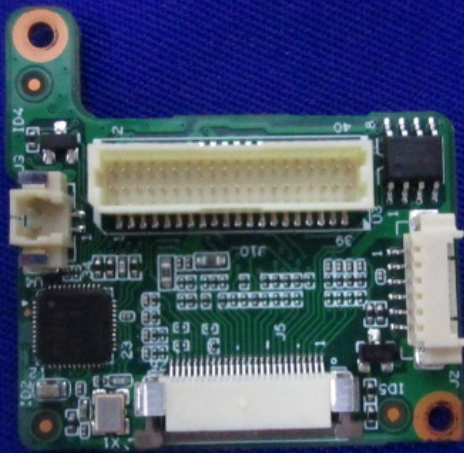
**BUREAU
VERITAS**

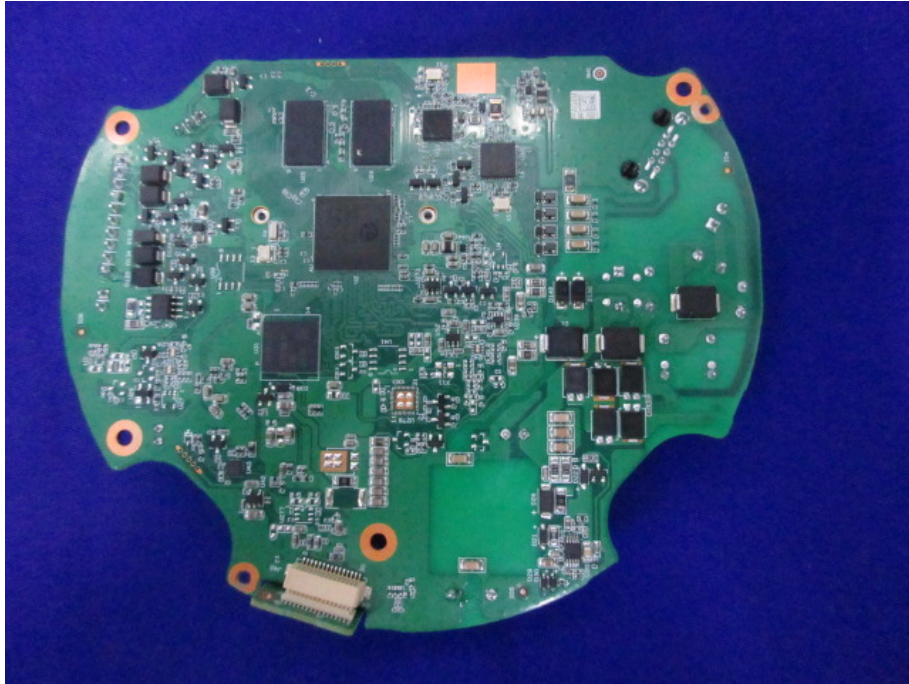
5.8. Test Photographs (1000MHz ~ 18000MHz)

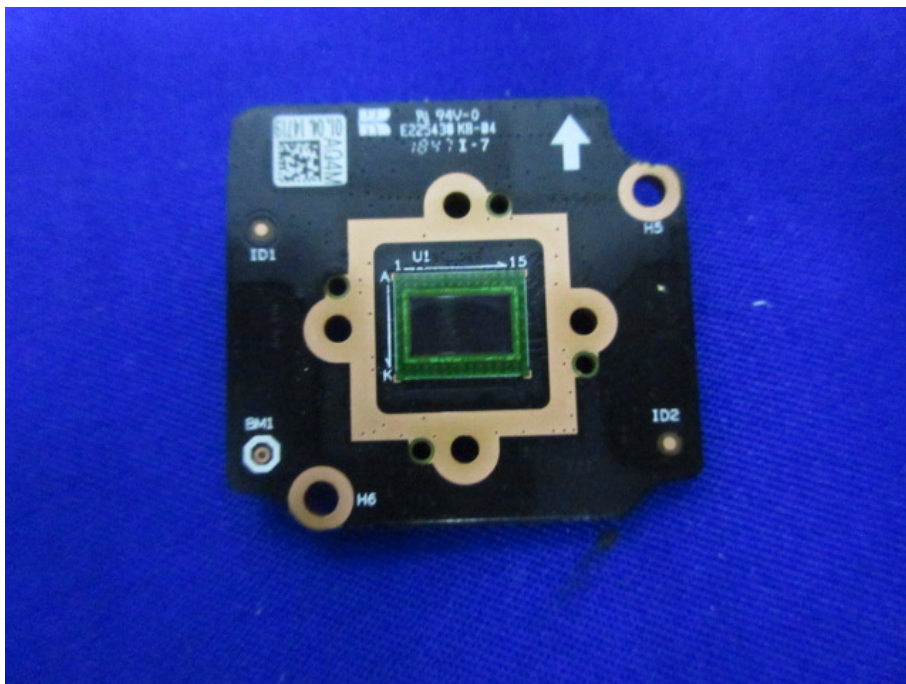
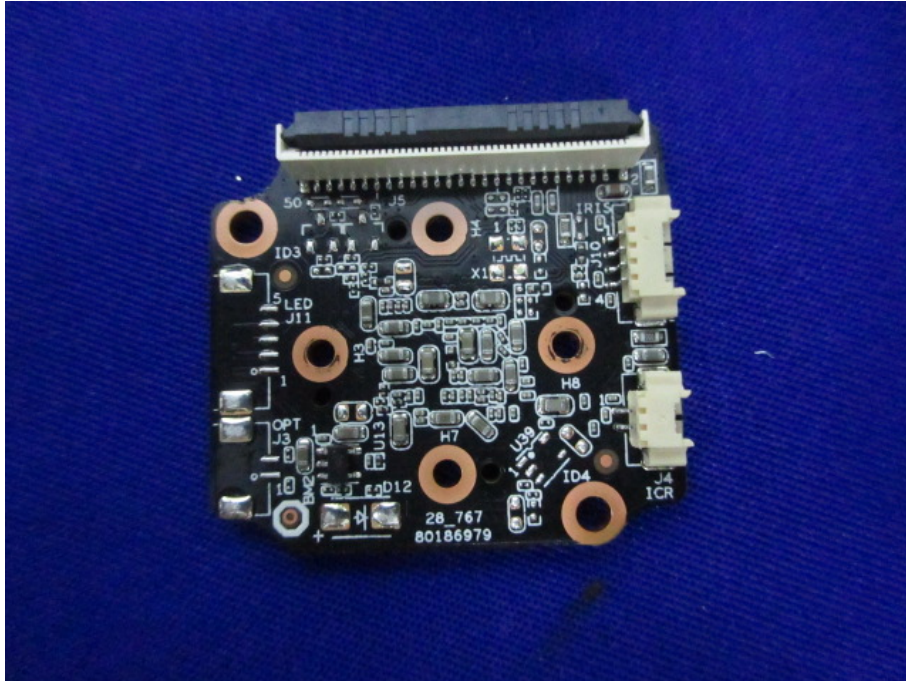


6. Photographs of EUT









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