FCC DoC Test Report

Report No.: FD170406D24

Test Model: HSTNS-5200

Series Model: HPE ProLiant DL380 Gen10, EXP805

Received Date: Apr. 6, 2017

Test Date: Apr. 15 ~ 28, 2017

Issued Date: May 23, 2017

Applicant: HON HAI PRECISION IND. CO., LTD.

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Table of Contents

Release Control Record **3**

1 Certificate of Conformity **4**

2 Summary of Test Results **5**

2.1 Measurement Uncertainty 5
2.2 Modification Record 5

3 General Information **6**

3.1 Features of EUT 6
3.2 General Description of EUT 6
3.3 Operating Modes of EUT and Determination of Worst Case Operating Mode 9
3.4 Test Program Used and Operation Descriptions 14
3.5 Primary Clock Frequencies of Internal Source 14

4 Configuration and Connections with EUT **15**

4.1 Connection Diagram of EUT and Peripheral Devices 15
4.2 Configuration of Peripheral Devices and Cable Connections 19

5 Conducted Emissions at Mains Ports **21**

5.1 Limits 21
5.2 Test Instruments 21
5.3 Test Arrangement 22
5.4 Test Results of Input Power: 120Vac, 60Hz 23
5.5 Test Results of Input Power: 240Vac, 60Hz 51
5.6 Test Results of Input Power: 380Vdc, 60Hz 67
5.7 Test Results of Input Power: -48Vdc 71

6 Radiated Emissions up to 1 GHz **75**

6.1 Limits 75
6.2 Test Instruments 76
6.3 Test Arrangement 77
6.4 Test Results 78

7 Radiated Emissions above 1 GHz **80**

7.1 Limits 80
7.2 Test Instruments 81
7.3 Test Arrangement 82
7.4 Test Results 83

8 Pictures of Test Arrangements **87**

8.1 Conducted Emissions at Mains Ports 87
8.2 Radiated Emissions up to 1 GHz 91
8.3 Radiated Emissions above 1 GHz 92

Appendix – Information on the Testing Laboratories **93**

Release Control Record

Issue No.	Description	Date Issued
FD170406D24	Original release.	May 23, 2017

1 Certificate of Conformity

Product: Server

Brand: HPE

Test Model: HSTNS-5200

Series Model: HPE ProLiant DL380 Gen10, EXP805

Sample Status: Engineering sample

Applicant: HON HAI PRECISION IND. CO., LTD.

Test Date: Apr. 15 ~ 28, 2017

Standards: 47 CFR FCC Part 15, Subpart B, Class A
ICES-003:2016 Issue 6, Class A
ANSI C63.4:2014

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** May 23, 2017
Albee Chu / Specialist

Approved by : _____ , **Date:** May 23, 2017
Henry Lai / Director

2 Summary of Test Results

47 CFR FCC Part 15, Subpart B / ICES-003:2016 Issue 6, Class A ANSI C63.4:2014				
FCC Clause	ICES-003 Clause	Test Item	Result/Remarks	Verdict
15.107	6.1	AC Power Line Conducted Emissions	Minimum passing Class A margin is -3.21 dB at 0.17734 MHz	Pass
15.109	6.2.1	Radiated Emissions up to 1 GHz	Minimum passing Class A margin is -6.49 dB at 223.51 MHz	Pass
	6.2.2	Radiated Emissions above 1 GHz	Minimum passing Class A margin is -12.51 dB at 11992.33 MHz	Pass

Note: There is no deviation to the applied test methods and requirements covered by the scope of this report.

2.1 Measurement Uncertainty

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

The 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	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.77 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	4.01 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.07 dB
	6GHz ~ 18GHz	4.71 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 Features of EUT

The tests reported herein were performed according to the method specified by HON HAI PRECISION IND. CO., LTD., for detailed feature description, please refer to the manufacturer's specifications or user's manual.

3.2 General Description of EUT

Product	Server
Brand	HPE
Test Model	HSTNS-5200
Series Model	HPE ProLiant DL380 Gen10, EXP805
Model Difference	For marketing purpose
Sample Status	Engineering sample
Operating Software	Win CISPR 32
Power Supply Rating	Refer to note as below
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. The EUT is a Server with the following constructions:

Model	
HSTNS-5200	
Marketing Name	
HPE ProLiant DL380 Gen10, EXP805	
Interface	
Server 1 (3.5” HDD)	Server 2 (2.5” HDD)
❙ LAN (10/100/1000Mbps)*8 or 4 ❙ iLO (1000Mbps)*1 ❙ VGA*1 ❙ USB 3.0*2 ❙ AC Jack*2	❙ LAN (10/100/1000Mbps)*8 or 4 ❙ iLO (1000Mbps)*1 ❙ iLO USB*1 ❙ VGA*1 ❙ USB 3.0*3 ❙ RS-232 *1 ❙ AC Jack*2
Server 1 (3.5” HDD)	
❙ 4*3.5HDD (SAS) + 2*2.5 HDD (SATA)+1*ODD (with DP*1+USB 2.0*1+USB 3.0*1 module (optional)) ❙ 8*3.5HDD (SAS)+ 2*2.5 HDD (SATA)+1*ODD (with DP*1+USB 2.0*1+USB 3.0*1 module (optional)) ❙ 12*3.5HDD (SAS)+4*3.5HDD (SAS) ❙ 12*3.5 HDD (SAS)+ 4*3.5HDD (SAS)+ 3*3.5HDD (SAS)	
Server 2 (2.5” HDD)	
❙ 8*2.5HDD (SAS)+ 2*2.5 HDD (SAS)+1*ODD (with DP*1+USB 2.0*1+USB 3.0*1 module (optional)) ❙ 16*2.5HDD (SAS)+ 2*2.5 HDD (SAS)+1*ODD(with DP*1+USB 2.0*1+USB 3.0*1 module (optional)) ❙ 24*2.5 HDD (SAS) ❙ 24*2.5HDD (SAS) + 6*2.5HDD (SATA)	
Rated input voltage / frequency	
100-240Vac, 50-60Hz	

2. The EUT was configured with the following key components:

Brand Name	Model No.	Specification	Server 1 (3.5” HDD)	Server 2 (2.5” HDD)
			Quantity	
Motherboard				
HPE	Moab		1	1
CPU (2011 Pin)				
Intel	8180M	2.5GHz, 28C, 205W	2	2
	8180	2.5GHz, 28C, 205W		
	8176	2.1GHz, 28C, 165W		
	8170M	2.1GHz, 26C, 165W		
	8170	2.1GHz, 26C, 165W		
	8168	2.7GHz, 24C, 205W		
	8160M	2.1GHz, 24C, 150W		
	8156	3.6GHz, 4C, 105W		
	8153	2.0GHz, 16C, 125W		
	6154	3.0GHz, 18C, 200W		
	6152	2.1GHz, 22C, 140W		
	6150	2.7GHz, 18C, 165W		
	6142	2.6GHz, 16C, 145W		
	6140M	2.3GHz, 18C, 140W		
	6140	2.3GHz, 18C, 140W		
	6138	2.0GHz, 20C, 125W		
	6136	3.0GHz, 12C, 150W		
	6134	3.2GHz, 8C, 130W		
	6130	2.1GHz, 16C, 120W		
	6126	2.6GHz, 12C, 125W		
	5122	3.6GHz, 4C, 105W		
Memory				
Hynix	8GB 2666	HPE 8GB 1Rx8 PC4-2666V-R Kit	24	24
3.5” HDD				
Seagate	HPE CL 600GB	12G SAS 10K	12	-
Seagate	HP CL 300GB	12G SAS 15K	7	-
2.5” HDD				
HP	12G SAS 300G	HP 300GB 12G SAS 15K2.5in SC ENT HDD	0	24
Seagate	6G SATA 1TB	1TB SATA 2.5 6G-SGT	2	6
ODD				
hp	GUB0N	5VDC, 1.8A	1	1
H250 Card				
HP	804397-001	H250 Card	1	2
Aroc Card				
Foxconn	804334-001	P450 AROC card	1	0
Switching Power Supply (All power supplies are redundant power)				
HPE (Chicony Power Technology)	HSTNS-PC40-1 (R500A001H)	I/P: 100-240V, 50-60Hz,5.8-2.8A DC O/P:+12V, 41.7A, 500W	2	
HPE (LITEON)	HSTNS-PL40-1 (PS-2501-3CH)	I/P: 100-240V, 50-60Hz,5.8-2.8A DC O/P:+12V, 41.7A, 500W	2	
HPE (DELTA)	HSTNS-PD40-1 (DPS-500AB-31A)	I/P: 100-240V, 50-60Hz,5.8-2.8A DC O/P:+12V, 42A, 500W	2	
HPE (LITEON)	HSTNS-PL41-1 (PS-2801-2CH)	I/P:100-240V, 50-60Hz,9.4-4.5A DC O/P:+12V, 66.7A, 800W	2	

HPE (Chicony Power Technology)	HSTNS-PC41-1 (R800A001H)	I/P:100-240V, 50-60Hz,9.4-4.5A DC O/P:+12V, 66.7A, 800W	2
HPE (DELTA)	HSTNS-PD41-1 (DPS-800AB-34A)	I/P:100-240V, 50-60Hz,9.4-4.5A DC O/P:+12V, 67A, 800W	2
HPE (DELTA)	HSTNS-PD60 (DPS-800AB-20A)	I/P:100-127V, 50-60Hz,5.8A OR 200-240V, 50-60Hz, 4.5A DC O/P:+12V, 41.7A OR +12V, 66.7A, 800W	2
HPE (DELTA)	HSTNS-PD44-1 (DPS-800AB-35A)	I/P:200-240V, 50-60Hz,4.35A-3.62A DC O/P:+12V, 67A, 800W	2
HPE (LITEON)	HSTNS-PL45-1 (PS-2801-3CH)	I/P:200-277V, 50-60Hz,4.5-3.2A or 380VDC, 2.3A DC O/P:+12V, 66.7A, 800W	2
HPE (LITEON)	HSTNS-PL62 (PS-2162-2C-LF)	I/P: 200-240V, 50-60Hz,8.7A DC O/P:+12V, 133.33A, 1600W	2
HPE (ARTESYN)	HSTNS-PR62 (830262-001)	I/P: 200-240V, 50-60Hz,8.7A DC O/P:+12V, 133.33A, 1600W	2
HPE (FLEXTRONICS)	HSTNS-PF46-1 (HPM-S-0800DDLDD-103)	I/P:-40V~-72V, 24A DC O/P:+12V, 66.67A, 800W	2

3.3 Operating Modes of EUT and Determination of Worst Case Operating Mode

1. The EUT is designed with AC power supply of 100-240Vac, 50-60Hz. For radiated emission evaluation, 230Vac/50Hz (for EN 55032 & AS/NZS CISPR 32), 120Vac/60Hz (for FCC Part 15), 110Vac/60Hz (for BSMI CNS 13438), 100Vac/50Hz (for VCCI) had been covered during the pre-test. The worst radiated emission data was founded at **230Vac/50Hz** and recorded in the applied test report.

2. The EUT was configured with all components for pre-testing and the configurations were as the following:

Server 1 (3.5" HDD)																																		
Item	**Vendor/ Model No./ Spec.**			**Mode**																														
				1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
CPU	Intel	5122	3.6GHz		V																													
		8180	2.5GHz	V																														
		8176	2.1GHz																				V											
		8170M	2.1GHz				V																											
		8170	2.1GHz					V																										
		8168	2.7GHz						V																									
		8160M	2.1GHz							V																								
		8156	3.6GHz			V																			V	V	V	V	V	V	V	V	V
		8153	2.0GHz								V																							
		6154	3.0GHz									V																						
		6152	2.1GHz										V																					
		6150	2.7GHz											V																				
		6142	2.6GHz												V																			
		6140M	2.3GHz													V																		
		6140	2.3GHz														V																	
		6138	2.0GHz															V																
		6136	3.0GHz																V															
		6134	3.2GHz																	V														
		6130	2.1GHz																		V													
		6126	2.6GHz																			V												
		8180M	2.5GHz																					V										
USB Speed	2.0																								V									
	3.0			V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V	V	V
AC Power	HSTNS-PC40-1 (R500A001H)				V																													
	HSTNS-PL40-1 (PS-2501-3CH)					V									V	V	V	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V	V
	HSTNS-PD40-1 (DPS-500AB-31A)						V																											
	HSTNS-PL41-1 (PS-2801-2CH)							V																										
	HSTNS-PC41-1 (R800A001H)	V																																
	HSTNS-PD41-1 (DPS-800AB-34A)								V																									
	HSTNS-PD60 (DPS-800AB-20A)									V																								

Server 1 (3.5” HDD)																															
Item	Vendor/ Model No./ Spec.	Mode																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
AC Power	HSTNS-PD44-1 (DPS-800AB-35A)								V																						
	HSTNS-PL45-1 (PS-2801-3CH)									V																					
	HSTNS-PL62 (PS-2162-2C-LF)										V																				
	HSTNS-PR62 (830262-001)											V																			
DC Power	HSTNS-PF46-1 (HPM-S-0800DDLDD-103)																							V							
3.5” HDD	Seagate HPE CL 600GB	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*12	*8	*4	*12	*12
	Seagate HP CL 300GB	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*4			*7	*7
2.5” HDD	HP 12G SAS 300G																														
	Seagate 6G SATA 1TB																											*2	*2		
ODD	HP GUB0N																											*1	*1		
Memory	Hynix 8GB 2666	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
H250 Card	HP804397-001	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Resolution	VGA, 1920 x 1200 (60Hz)	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V				V	V	V
	VGA, 1600 x 1200 (60Hz)																									V					
	VGA, 1280 x 1024 (60Hz)																										V				
	VGA, 800 x 600 (60Hz)																											V			
Voltage	230Vac	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V			V	V	V	V	V		
	110Vac																						V								
	100Vac																													V	
	220Vac																														V
	-60Vdc																							V							
Operating condition		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V		V	V
Standby condition																													V		

The worst emission level was found when tested under **Mode 3**. Therefore the EUT was tested under this mode for the test and its test data was recorded in this report.

Server 2 (2.5” HDD)																																	
Item	Vendor/ Model No./ Spec.			Mode																													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CPU	Intel	5122	3.6GHz	V																													
		8180	2.5GHz									V																					
		8176	2.1GHz					V																									
		8170M	2.1GHz											V																			
		8170	2.1GHz						V																								
		8168	2.7GHz		V																												
		8160M	2.1GHz												V																		
		8156	3.6GHz														V								V	V	V	V	V	V	V	V	V
		8153	2.0GHz								V																						
		6154	3.0GHz							V																							
		6152	2.1GHz													V																	
		6150	2.7GHz				V																										
		6142	2.6GHz															V															
		6140M	2.3GHz																V														
		6140	2.3GHz																	V													
		6138	2.0GHz			V																											
		6136	3.0GHz																		V												
		6134	3.2GHz																			V											
		6130	2.1GHz																				V										
		6126	2.6GHz																					V									
		8180M	2.5GHz										V																				
USB Speed	2.0																																
	3.0			V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V	V
AC Power	HSTNS-PC40-1 (R500A001H)			V																													
	HSTNS-PL40-1 (PS-2501-3CH)				V																												
	HSTNS-PD40-1 (DPS-500AB-31A)					V																											
	HSTNS-PL41-1 (PS-2801-2CH)						V									V	V	V	V	V	V	V	V	V	V		V	V	V	V	V	V	V
	HSTNS-PC41-1 (R800A001H)							V																									
	HSTNS-PD41-1 (DPS-800AB-34A)								V																								
	HSTNS-PD60 (DPS-800AB-20A)									V																							
	HSTNS-PD44-1 (DPS-800AB-35A)										V																						
	HSTNS-PL45-1 (PS-2801-3CH)											V																					
	HSTNS-PL62 (PS-2162-2C-LF)												V																				
	HSTNS-PR62 (830262-001)													V																			
DC Power	HSTNS-PF46-1 (HPM-S-0800DDLDD-103)														V											V							

Server 1 (3.5” HDD)																															
Item	Vendor/ Model No./ Spec.	Mode																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
2.5” HDD	HP 12G SAS 300G	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*24	*16	*8	*24	*24	*24
	Seagate 6G SATA 1TB	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6	*6		*2	*2	*6	*6	*6
ODD	HP GUB0N																										1	*1			
Memory	Hynix 8GB 2666	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
H250 Card	HP804397-001	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
Resolution	VGA, 1920 x 1200 (60Hz)	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V				V	V	V
	VGA, 1600 x 1200 (60Hz)																									V					
	VGA, 1280 x 1024 (60Hz)																										V				
	VGA, 800 x 600 (60Hz)																											V			
Voltage	230Vac	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V			V	V	V	V	V		
	110Vac																						V								
	100Vac																													V	
	220Vac																														V
	-60Vdc																							V							
Operating condition		V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V		V	V
Standby condition																													V		

The worst emission level was found when tested under **Mode14**. Therefore the EUT was tested under this mode for the test and its test data was recorded in this report.

3. Per pre-test result and client's requirement, the final test mode was as the following:

Test Mode		Test Condition		Adapter		Input Power
Conducted emission test						
1	A	3.5"HDD	Mode 3	1	HPE (Chicony) / HSTNS-PC40-1 (R500A001H)	120Vac/ 60Hz
	B			2	HPE (LITEON) / HSTNS-PL40-1 (PS-2501-3CH)	
	C			3	HPE (DELTA) / HSTNS-PD40-1 (DPS-500AB-31A)	
	D			4	HPE (LITEON) / HSTNS-PL41-1 (PS-2801-2CH)	
	E			5	HPE (Chicony) / HSTNS-PC41-1 (R800A001H)	
	F			6	HPE (DELTA) / HSTNS-PD41-1 (DPS-800AB-34A)	
	G			7	HPE (DELTA) / HSTNS-PD60 (DPS-800AB-20A)	
	H			8	HPE (DELTA) / HSTNS-PD44-1 (DPS-800AB-35A)	240Vac/ 60Hz
	I			9	HPE (LITEON) / HSTNS-PL45-1 (PS-2801-3CH)	240Vac/ 60Hz & 380Vdc
	J			10	HPE (LITEON) / HSTNS-PL62 (PS-2162-2C-LF)	240Vac/ 60Hz
	K			11	HPE (ARTESYN) / HSTNS-PR62 (830262-001)	240Vac/ 60Hz
	L			12	HPE (FLEXTRONICS) / HSTNS-PF46-1 (HPM-S-0800DDLDD-103)	-48Vdc
2	A	2.5"HDD	Mode 14	1	HPE (Chicony) / HSTNS-PC40-1 (R500A001H)	120Vac/ 60Hz
	B			2	HPE (LITEON) / HSTNS-PL40-1 (PS-2501-3CH)	
	C			3	HPE (DELTA) / HSTNS-PD40-1 (DPS-500AB-31A)	
	D			4	HPE (LITEON) / HSTNS-PL41-1 (PS-2801-2CH)	
	E			5	HPE (Chicony) / HSTNS-PC41-1 (R800A001H)	
	F			6	HPE (DELTA) / HSTNS-PD41-1 (DPS-800AB-34A)	
	G			7	HPE (DELTA) / HSTNS-PD60 (DPS-800AB-20A)	
	H			8	HPE (DELTA) / HSTNS-PD44-1 (DPS-800AB-35A)	240Vac/ 60Hz
	I			9	HPE (LITEON) / HSTNS-PL45-1 (PS-2801-3CH)	240Vac/ 60Hz & 380Vdc
	J			10	HPE (LITEON) / HSTNS-PL62 (PS-2162-2C-LF)	240Vac/ 60Hz
	K			11	HPE (ARTESYN) / HSTNS-PR62 (830262-001)	240Vac/ 60Hz
	L			12	HPE (FLEXTRONICS) / HSTNS-PF46-1 (HPM-S-0800DDLDD-103)	-48Vdc
Radiated emission						
2		2.5"HDD	Mode 14	4	HPE (LITEON) / HSTNS-PL41-1 (PS-2801-2CH)	230Vac/ 50Hz

3.4 Test Program Used and Operation Descriptions

For 3.5" HDD

a. Turned on the power of all equipments.
b. EUT ran a test program to enable all functions.
c. EUT read and wrote messages to/ from HDD.
d. EUT sent and received messages to/ from Server PCs (kept in a remote area) via hubs with UTP LAN cables (10m).
e. EUT sent "H" patterns to LCD monitor. Then it displayed color bar patterns on its screen.
f. Steps c-e were repeated.

For 2.5" HDD

a. Turned on the power of all equipments.
b. EUT ran a test program to enable all functions.
c. EUT read and wrote messages to/ from HDD and ext. HDDs.
d. EUT sent and received messages to/ from Server PCs (kept in a remote area) via hubs with UTP LAN cables (10m).
e. EUT sent "H" patterns to LCD monitor. Then it displayed color bar patterns on its screen.
f. EUT sent messages to modem.
g. Steps c-f were repeated.

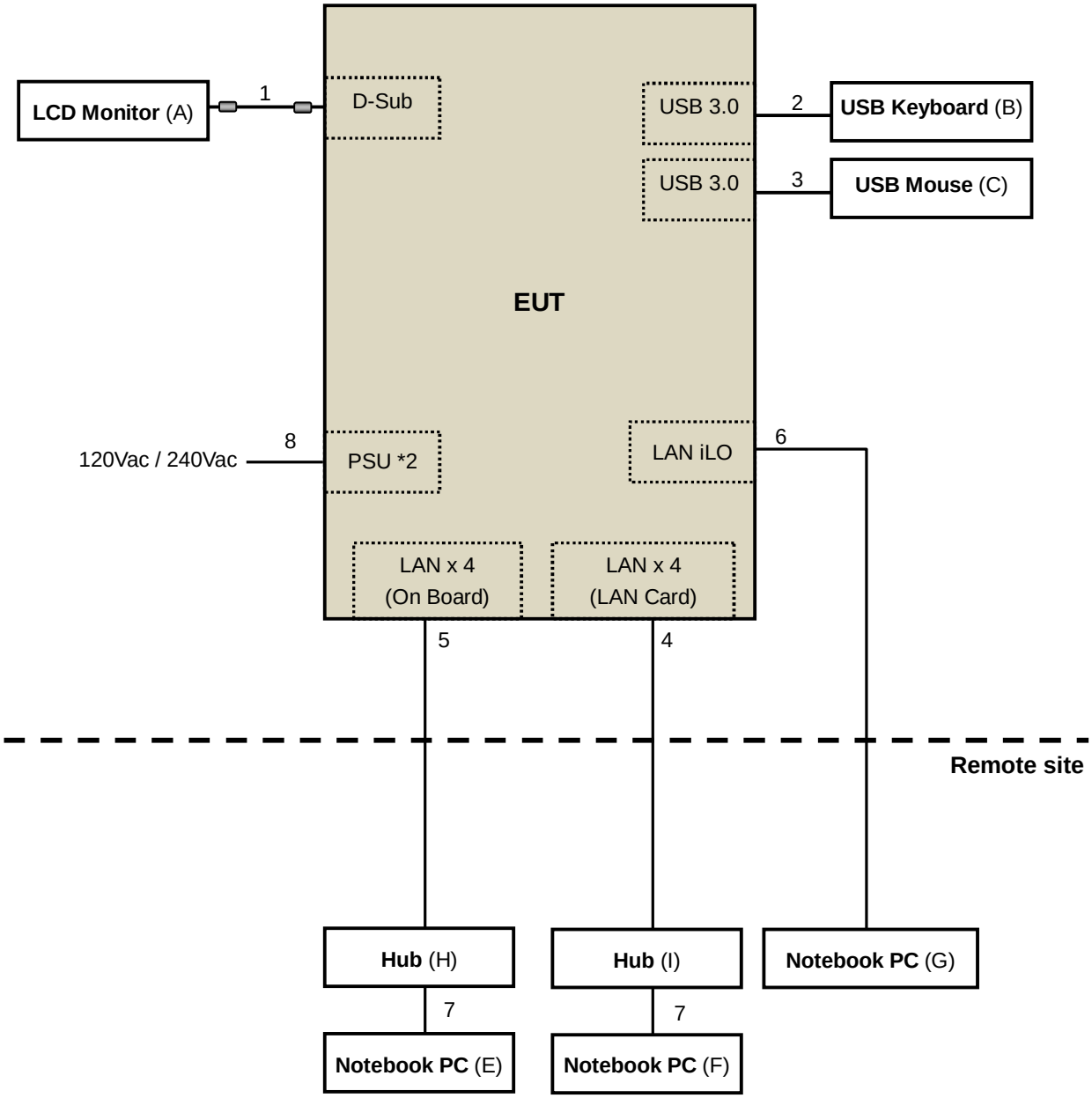
3.5 Primary Clock Frequencies of Internal Source

The highest frequency generated or used within the EUT or on which the EUT operates or tunes is 3600 MHz, provided by HON HAI PRECISION IND. CO., LTD., for detailed internal source, please refer to the manufacturer's specifications.

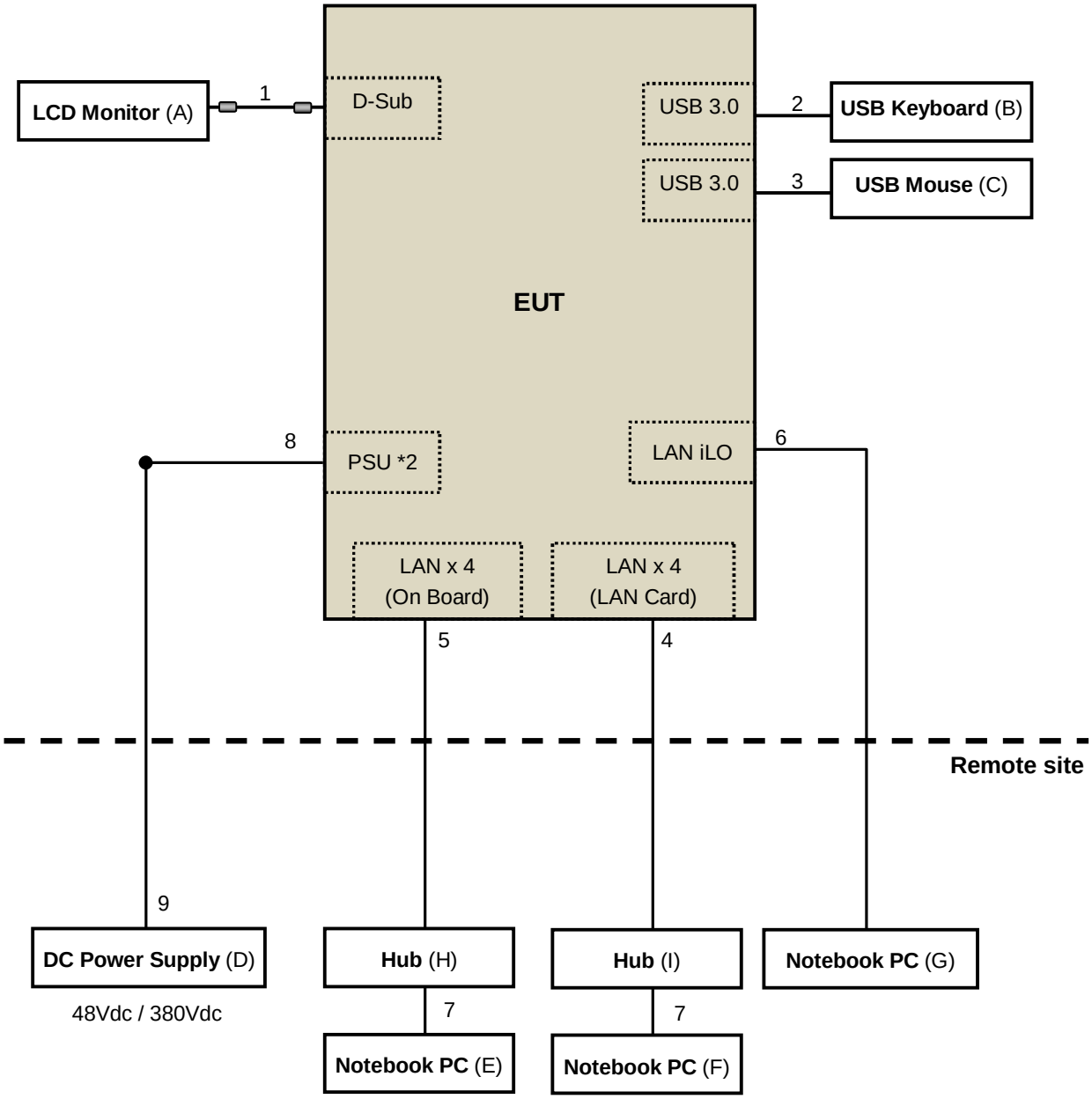
4 Configuration and Connections with EUT

4.1 Connection Diagram of EUT and Peripheral Devices

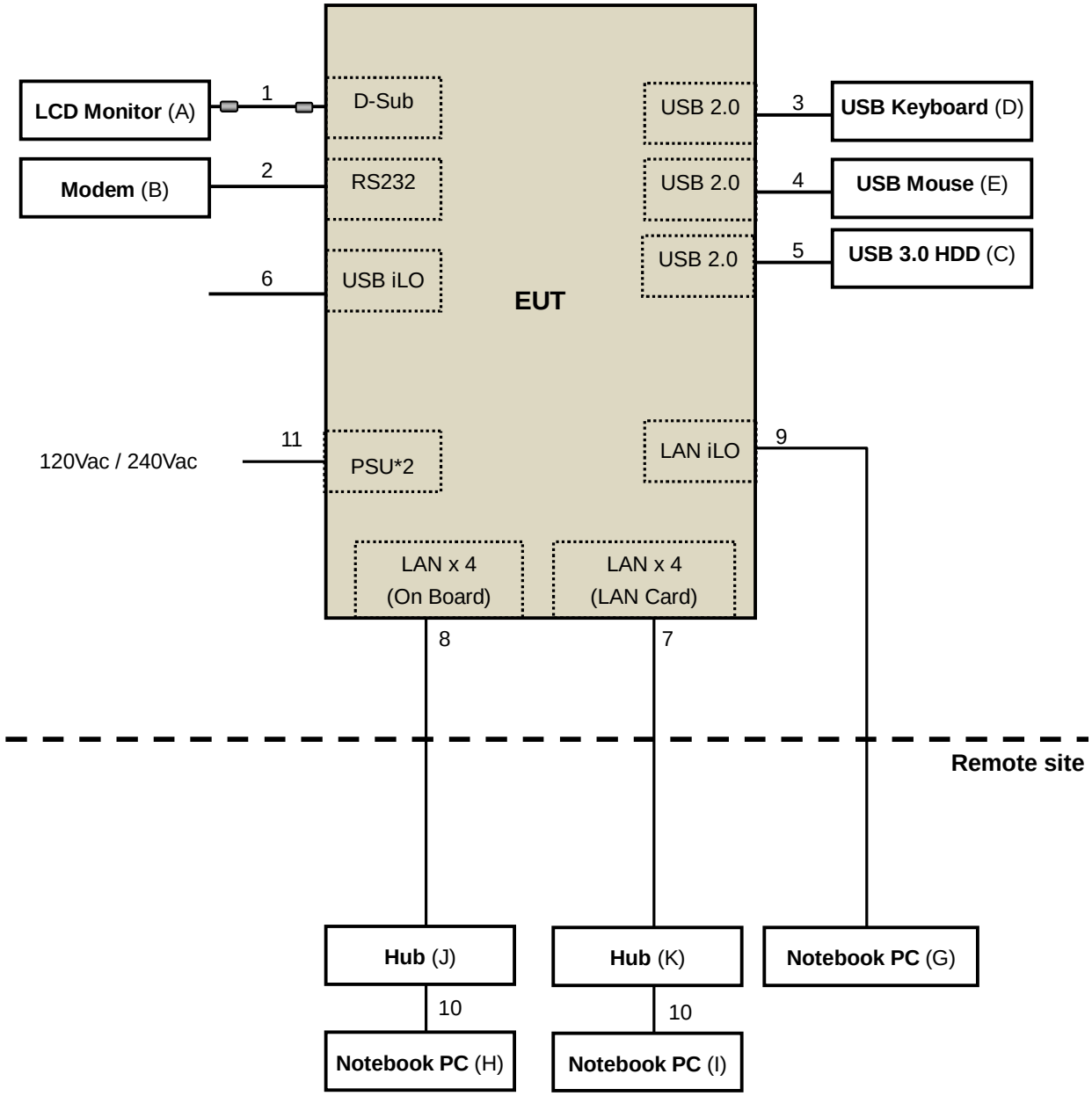
For 3.5" HDD – AC Power



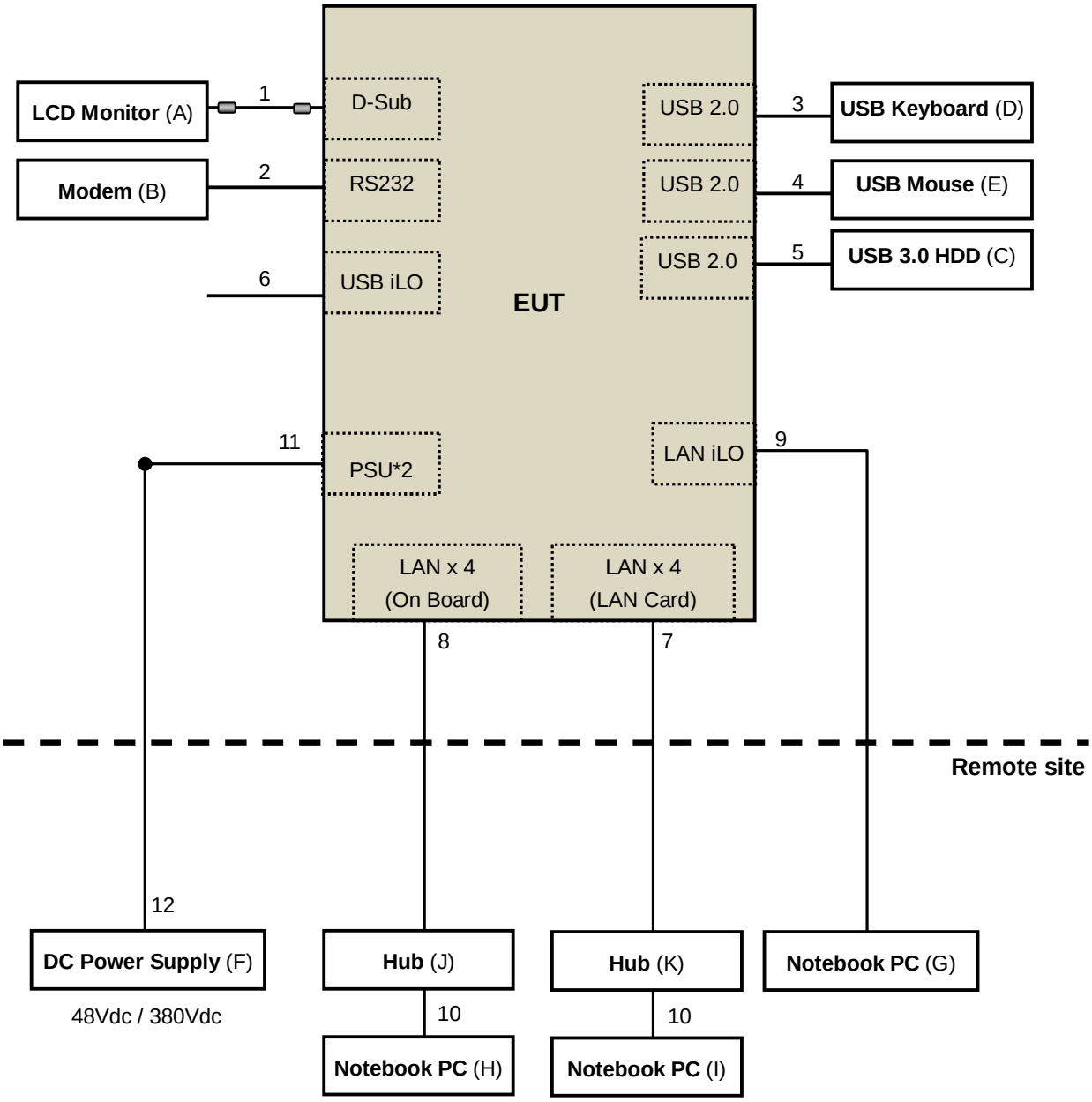
For 3.5” HDD – DC Power



For 2.5” HDD – AC Power



For 2.5” HDD – DC Power



4.2 Configuration of Peripheral Devices and Cable Connections

For 3.5" HDD

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	24" LCD MONITOR	HP	LA2405wg	CN41210F8Z	FCC DoC Approved	Provided by Lab
B.	USB Keyboard	HP	KU-1060	N/A	FCC DoC Approved	Supplied by client
C.	USB Mouse	HP	MODGUO	N/A	FCC DoC Approved	Supplied by client
D.	DC Power supply	CHROMA	62150H-600S	62150EC00479	N/A	Provided by Lab
E.	Notebook PC	ASUS	PU401L	ECNXBC012528528	FCC DoC Approved	Provided by Lab
F.	Notebook PC	ASUS	PU401L	F2NXBC00354908D	FCC DoC Approved	Provided by Lab
G.	Notebook PC	SONY	SVS151A12P	275548477001024	FCC DoC Approved	Provided by Lab
H.	HUB	DELL	PowerConnect 2608	CN-0N3857-28298-515-0504	FCC DoC Approved	Provided by Lab
I.	HUB	DELL	PowerConnect 2608	CN-0N3857-28298-53Q-0079	FCC DoC Approved	Provided by Lab

Note:
1. All power cords of the above support units are non-shielded (1.8m).
2. Items D-I acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	D-Sub cable	1	1.8	Y	2	Provided by Lab
2.	USB cable	1	1.8	Y	0	Provided by Lab
3.	USB cable	1	1.8	Y	0	Provided by Lab
4.	LAN cable	4	10	N	0	Provided by Lab
5.	LAN cable	4	10	N	0	Provided by Lab
6.	LAN cable	1	10	N	0	Provided by Lab
7.	LAN cable	2	1.8	N	0	Provided by Lab
8.	AC power cord	2	1.8	N	0	Supplied by client
	DC power cord	2	1.8	N	0	Supplied by client
9.	DC power cord	1	10	N	0	Provided by Lab

Note: The core(s) is(are) originally attached to the cable(s).

For 2.5” HDD

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	24" LCD MONITOR	HP	LA2405wg	CN41210F8Z	FCC DoC Approved	Provided by Lab
B.	MODEM	ACEEX	1414	980020502	IFAXDM1414	Provided by Lab
C.	USB 3.0 Hard Disk	WD	WDBUZG0010BBK-PESN	WX51E940FMSW	FCC DoC Approved	Provided by Lab
D.	USB Keyboard	HP	KU-1060	N/A	FCC DoC Approved	Supplied by client
E.	USB Mouse	HP	MODGUO	N/A	FCC DoC Approved	Supplied by client
F.	DC Power supply	CHROMA	62150H-600S	62150EC00479	N/A	Provided by Lab
G.	Notebook PC	ASUS	PU401L	ECNXBC012528528	FCC DoC Approved	Provided by Lab
H.	Notebook PC	ASUS	PU401L	F2NXBC00354908D	FCC DoC Approved	Provided by Lab
I.	Notebook PC	SONY	SVS151A12P	275548477001024	FCC DoC Approved	Provided by Lab
J.	HUB	DELL	PowerConnect 2608	CN-0N3857-28298-515-0504	FCC DoC Approved	Provided by Lab
K.	HUB	DELL	PowerConnect 2608	CN-0N3857-28298-53Q-0079	FCC DoC Approved	Provided by Lab

Note:
1. All power cords of the above support units are non-shielded (1.8m).
2. Items F-K acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	D-Sub cable	1	1.8	Y	2	Provided by Lab
2.	RS232 cable	1	1.2	Y	0	Provided by Lab
3.	USB cable	1	1.8	Y	0	Provided by Lab
4.	USB cable	1	1.8	Y	0	Provided by Lab
5.	USB cable	1	0.5	Y	0	Provided by Lab
6.	USB to RS232 cable	1	1.5	Y	0	Provided by Lab
7.	LAN cable	4	10	N	0	Provided by Lab
8.	LAN cable	4	10	N	0	Provided by Lab
9.	LAN cable	1	10	N	0	Provided by Lab
10.	LAN cable	2	1.0	N	0	Provided by Lab
11.	AC power cord	2	1.8	N	0	Supplied by client
	DC power cord	2	1.8	N	0	Supplied by client
12.	DC power cord	1	10	N	0	Provided by Lab

Note: The core(s) is(are) originally attached to the cable(s).

5 Conducted Emissions at Mains Ports

5.1 Limits

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	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 linearly with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100276	Apr. 10, 2017	Apr. 09, 2018
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ENV216	101196	Apr. 20, 2017	Apr. 19, 2018
LISN With Adapter (for EUT)	AD10	C10Ada-002	Apr. 20, 2017	Apr. 19, 2018
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 23, 2016	Nov. 22, 2017
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 04, 2016	May 03, 2017
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C10.01	Feb. 14, 2017	Feb. 13, 2018
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-011484	May 12, 2016	May 11, 2017
ROHDE & SCHWARZ Artificial Mains Network (For TV EUT)	ESH3-Z5	100220	Nov. 08, 2016	Nov. 07, 2017
LISN With Adapter (for TV EUT)	100220	N/A	Nov. 08, 2016	Nov. 07, 2017

Notes: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 10.
3. The VCCI Site Registration No. C-1852.
4. Tested Date: Apr. 24 ~ 28, 2017.

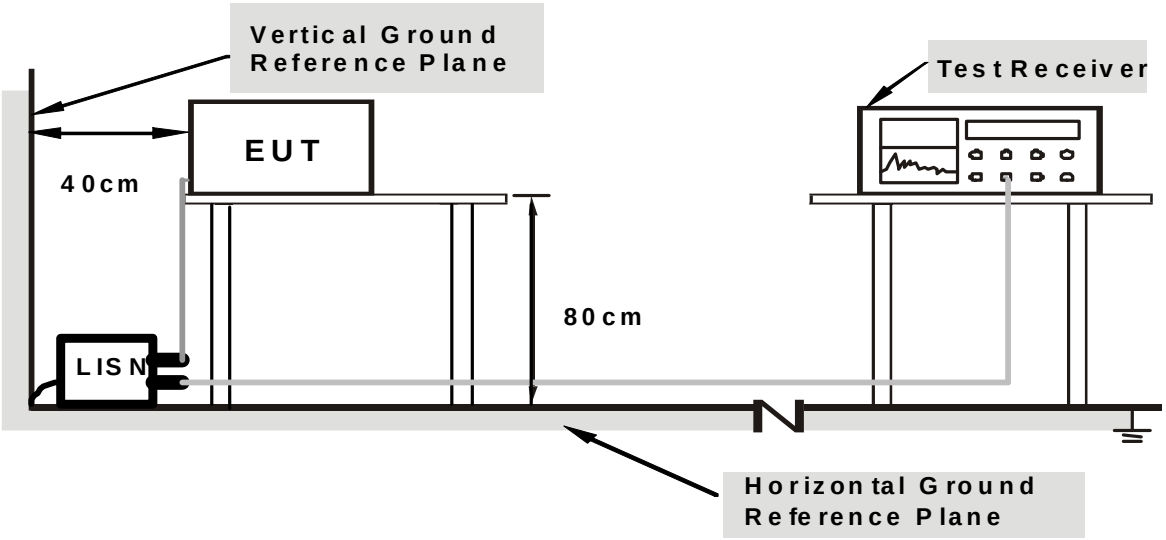
5.3 Test Arrangement

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The test results of conducted emissions at mains ports are recorded of six worst margins for quasi-peak (mandatory) [and average (if necessary)] values against the limits at frequencies of interest unless the margin is 20 dB or greater.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.



Note: Support units were connected to second LISN.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

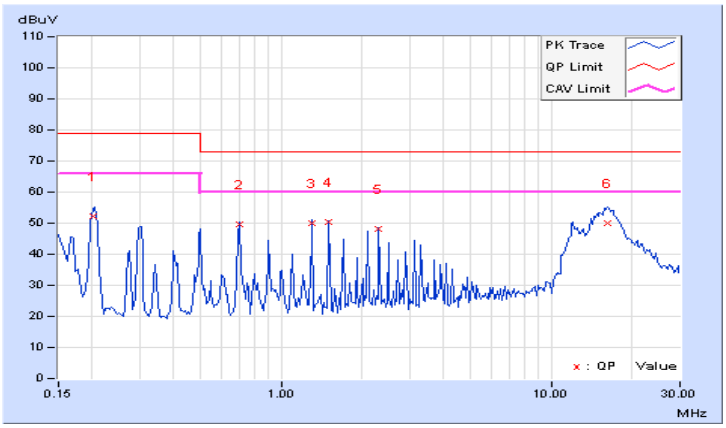
5.4 Test Results of Input Power: 120Vac, 60Hz

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1A		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20087	9.99	42.41	38.51	52.40	48.50	79.00	66.00	-26.60	-17.50
2	0.70078	10.06	39.51	36.07	49.57	46.13	73.00	60.00	-23.43	-13.87
3	1.30078	10.08	40.09	36.49	50.17	46.57	73.00	60.00	-22.83	-13.43
4	1.50136	10.08	40.18	36.95	50.26	47.03	73.00	60.00	-22.74	-12.97
5	2.30469	10.11	37.90	34.58	48.01	44.69	73.00	60.00	-24.99	-15.31
6	16.10547	10.50	39.57	34.78	50.07	45.28	73.00	60.00	-22.93	-14.72

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

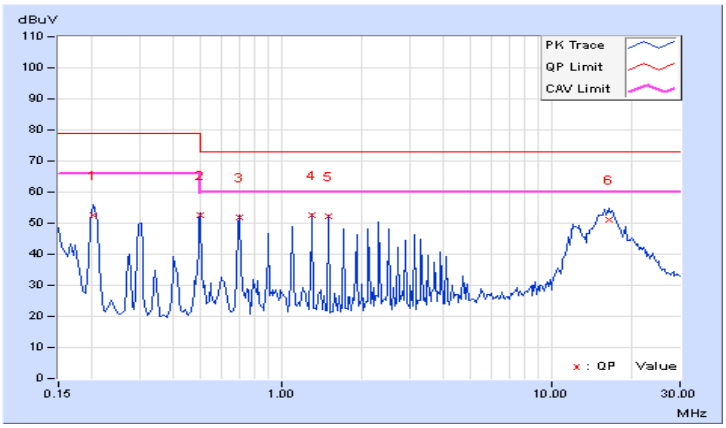


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1A		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20078	9.99	42.53	38.73	52.52	48.72	79.00	66.00	-26.48	-17.28
2	0.50156	10.02	42.46	39.05	52.48	49.07	73.00	60.00	-20.52	-10.93
3	0.70078	10.03	41.75	38.36	51.78	48.39	73.00	60.00	-21.22	-11.61
4	1.30078	10.04	42.39	39.02	52.43	49.06	73.00	60.00	-20.57	-10.94
5	1.50391	10.04	42.05	38.72	52.09	48.76	73.00	60.00	-20.91	-11.24
6	16.30469	10.44	40.58	35.41	51.02	45.85	73.00	60.00	-21.98	-14.15

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

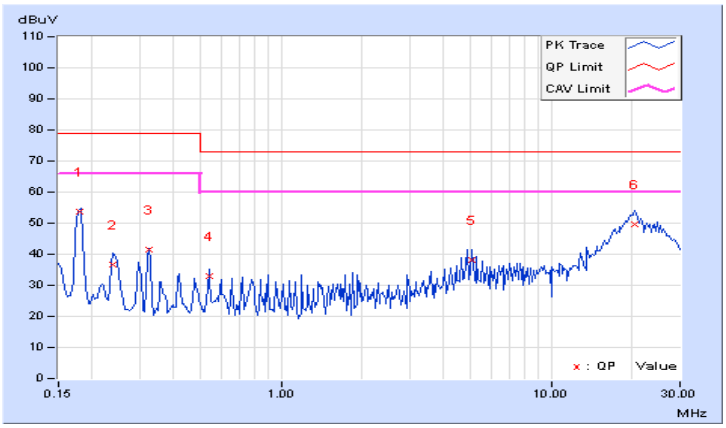


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1B		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17997	9.99	43.62	35.54	53.61	45.53	79.00	66.00	-25.39	-20.47
2	0.23984	10.00	26.77	21.47	36.77	31.47	79.00	66.00	-42.23	-34.53
3	0.32578	10.02	31.55	29.05	41.57	39.07	79.00	66.00	-37.43	-26.93
4	0.54063	10.05	22.90	18.07	32.95	28.12	73.00	60.00	-40.05	-31.88
5	5.10156	10.24	27.87	27.66	38.11	37.90	73.00	60.00	-34.89	-22.10
6	20.40625	10.59	39.05	32.71	49.64	43.30	73.00	60.00	-23.36	-16.70

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

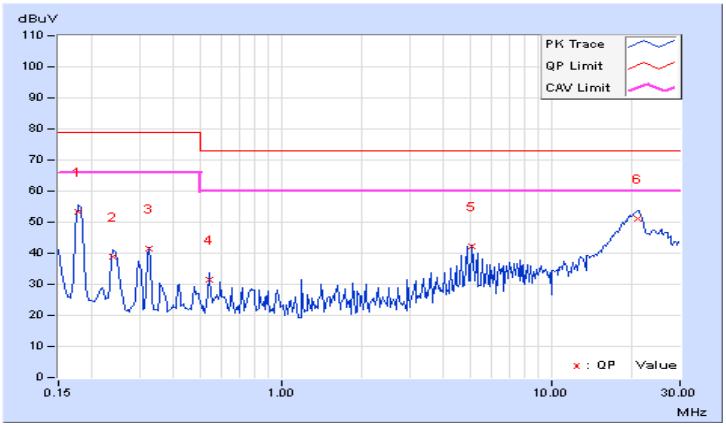


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1B		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	43.27	34.89	53.26	44.88	79.00	66.00	-25.74	-21.12
2	0.23984	10.00	28.98	22.22	38.98	32.22	79.00	66.00	-40.02	-33.78
3	0.32578	10.01	31.45	28.80	41.46	38.81	79.00	66.00	-37.54	-27.19
4	0.54063	10.02	21.63	17.34	31.65	27.36	73.00	60.00	-41.35	-32.64
5	5.10156	10.21	31.84	31.81	42.05	42.02	73.00	60.00	-30.95	-17.98
6	20.85938	10.53	40.58	34.70	51.11	45.23	73.00	60.00	-21.89	-14.77

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

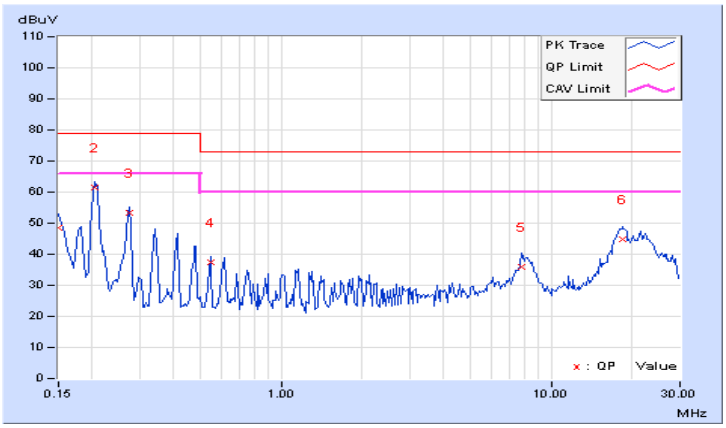


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1C		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	38.64	32.37	48.63	42.36	79.00	66.00	-30.37	-23.64
2	0.20469	9.99	51.60	45.16	61.59	55.15	79.00	66.00	-17.41	-10.85
3	0.27500	10.01	43.20	37.25	53.21	47.26	79.00	66.00	-25.79	-18.74
4	0.54844	10.05	27.45	21.30	37.50	31.35	73.00	60.00	-35.50	-28.65
5	7.81641	10.31	25.49	20.71	35.80	31.02	73.00	60.00	-37.20	-28.98
6	18.49219	10.55	34.18	26.69	44.73	37.24	73.00	60.00	-28.27	-22.76

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

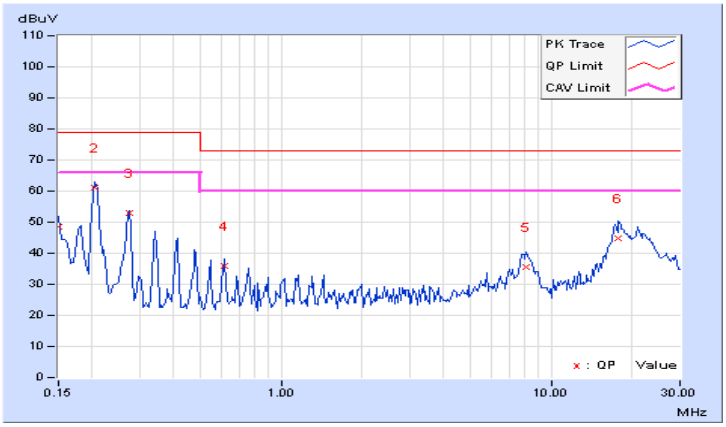


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1C		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	38.68	32.43	48.67	42.42	79.00	66.00	-30.33	-23.58
2	0.20469	9.99	51.20	44.63	61.19	54.62	79.00	66.00	-17.81	-11.38
3	0.27500	10.00	42.78	36.56	52.78	46.56	79.00	66.00	-26.22	-19.44
4	0.61875	10.02	25.93	20.59	35.95	30.61	73.00	60.00	-37.05	-29.39
5	8.09375	10.28	25.25	20.38	35.53	30.66	73.00	60.00	-37.47	-29.34
6	17.75000	10.46	34.53	26.93	44.99	37.39	73.00	60.00	-28.01	-22.61

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

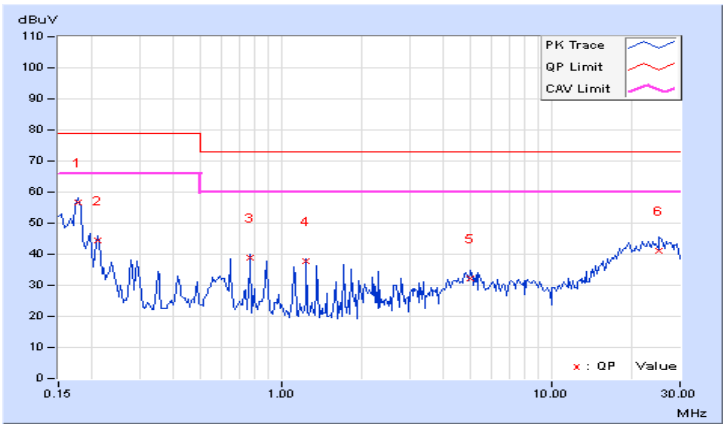


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1D		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	46.68	43.40	56.67	53.39	79.00	66.00	-22.33	-12.61
2	0.20859	9.99	34.34	25.42	44.33	35.41	79.00	66.00	-34.67	-30.59
3	0.76719	10.06	28.90	25.48	38.96	35.54	73.00	60.00	-34.04	-24.46
4	1.23828	10.07	27.89	24.54	37.96	34.61	73.00	60.00	-35.04	-25.39
5	5.01953	10.24	21.86	15.95	32.10	26.19	73.00	60.00	-40.90	-33.81
6	25.03906	10.74	30.38	23.89	41.12	34.63	73.00	60.00	-31.88	-25.37

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

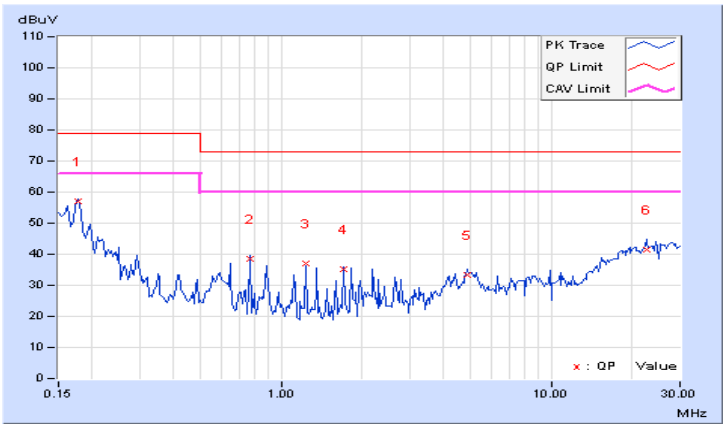


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1D		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	47.15	43.93	57.14	53.92	79.00	66.00	-21.86	-12.08
2	0.76719	10.03	28.37	24.69	38.40	34.72	73.00	60.00	-34.60	-25.28
3	1.23828	10.03	26.90	23.53	36.93	33.56	73.00	60.00	-36.07	-26.44
4	1.71094	10.04	25.03	21.61	35.07	31.65	73.00	60.00	-37.93	-28.35
5	4.90625	10.20	23.06	15.46	33.26	25.66	73.00	60.00	-39.74	-34.34
6	22.66797	10.59	30.81	23.72	41.40	34.31	73.00	60.00	-31.60	-25.69

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

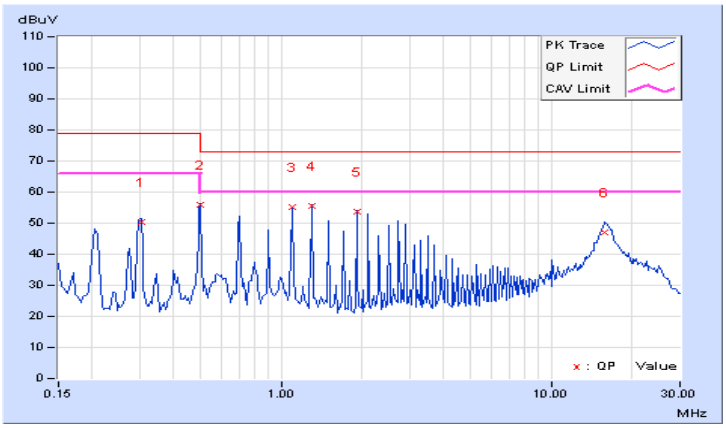


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1E		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.30234	10.02	40.41	37.12	50.43	47.14	79.00	66.00	-28.57	-18.86
2	0.50156	10.05	45.78	42.41	55.83	52.46	73.00	60.00	-17.17	-7.54
3	1.10156	10.07	44.99	41.65	55.06	51.72	73.00	60.00	-17.94	-8.28
4	1.30078	10.08	45.51	42.29	55.59	52.37	73.00	60.00	-17.41	-7.63
5	1.90234	10.09	43.78	40.36	53.87	50.45	73.00	60.00	-19.13	-9.55
6	15.84766	10.50	36.52	31.74	47.02	42.24	73.00	60.00	-25.98	-17.76

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

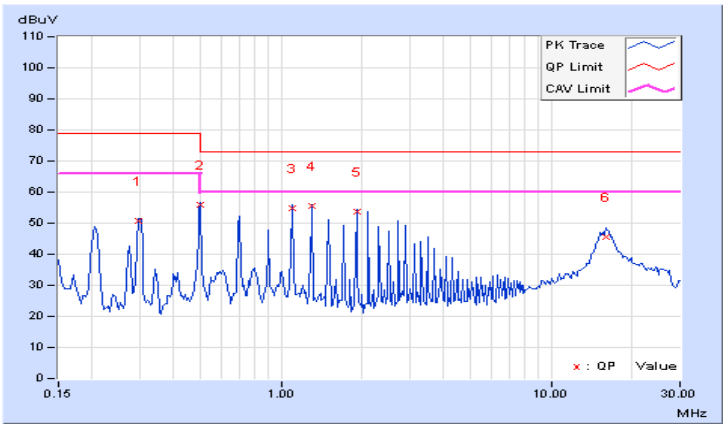


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1E		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.29844	10.00	40.78	37.29	50.78	47.29	79.00	66.00	-28.22	-18.71
2	0.50156	10.02	45.76	42.39	55.78	52.41	73.00	60.00	-17.22	-7.59
3	1.10156	10.03	44.95	41.55	54.98	51.58	73.00	60.00	-18.02	-8.42
4	1.30078	10.04	45.55	42.31	55.59	52.35	73.00	60.00	-17.41	-7.65
5	1.90234	10.05	43.64	40.22	53.69	50.27	73.00	60.00	-19.31	-9.73
6	15.91016	10.43	35.30	29.87	45.73	40.30	73.00	60.00	-27.27	-19.70

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

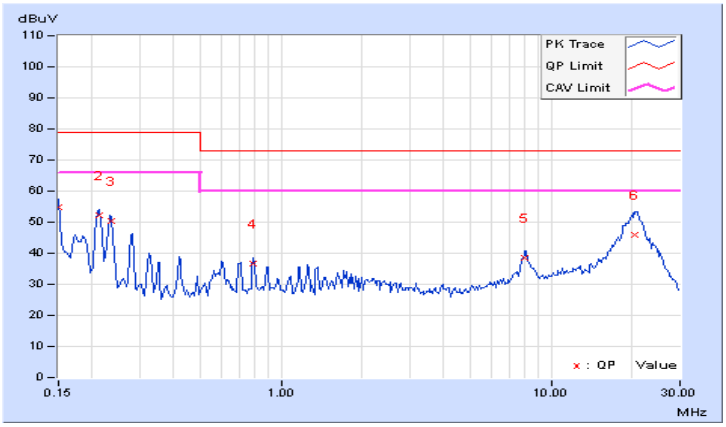


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1F		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	44.90	39.17	54.89	49.16	79.00	66.00	-24.11	-16.84
2	0.21250	9.99	42.21	35.12	52.20	45.11	79.00	66.00	-26.80	-20.89
3	0.23594	10.00	40.39	37.54	50.39	47.54	79.00	66.00	-28.61	-18.46
4	0.78807	10.06	26.75	25.52	36.81	35.58	73.00	60.00	-36.19	-24.42
5	8.01563	10.32	28.17	23.42	38.49	33.74	73.00	60.00	-34.51	-26.26
6	20.43750	10.59	35.49	28.99	46.08	39.58	73.00	60.00	-26.92	-20.42

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

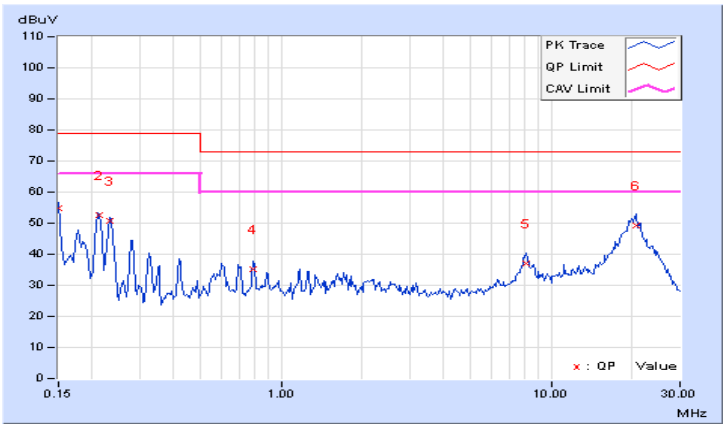


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1F		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	44.80	39.07	54.79	49.06	79.00	66.00	-24.21	-16.94
2	0.21114	9.99	42.59	35.80	52.58	45.79	79.00	66.00	-26.42	-20.21
3	0.23203	9.99	40.79	38.13	50.78	48.12	79.00	66.00	-28.22	-17.88
4	0.78680	10.03	25.17	24.30	35.20	34.33	73.00	60.00	-37.80	-25.67
5	8.06250	10.28	26.87	22.45	37.15	32.73	73.00	60.00	-35.85	-27.27
6	20.77734	10.52	38.69	30.12	49.21	40.64	73.00	60.00	-23.79	-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

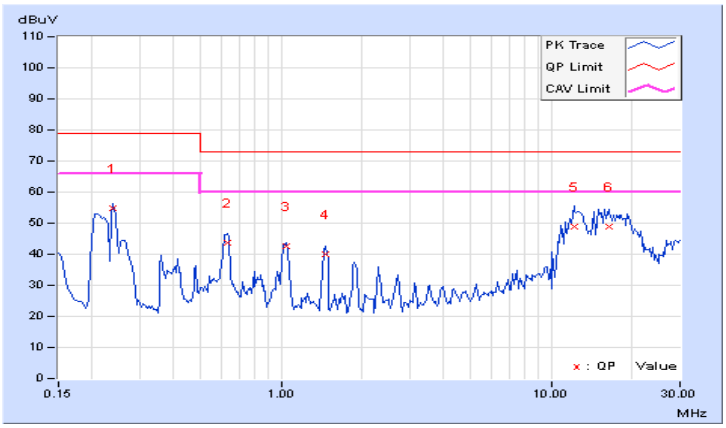


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1G		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.23984	10.00	44.99	39.14	54.99	49.14	79.00	66.00	-24.01	-16.86
2	0.63438	10.05	33.82	23.41	43.87	33.46	73.00	60.00	-29.13	-26.54
3	1.04688	10.07	32.34	20.57	42.41	30.64	73.00	60.00	-30.59	-29.36
4	1.45703	10.08	30.01	16.45	40.09	26.53	73.00	60.00	-32.91	-33.47
5	12.16797	10.42	38.40	26.51	48.82	36.93	73.00	60.00	-24.18	-23.07
6	16.29297	10.51	38.30	27.32	48.81	37.83	73.00	60.00	-24.19	-22.17

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

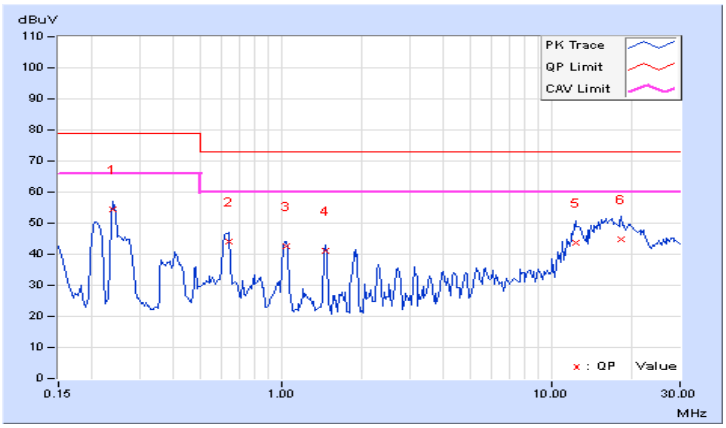


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1G		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.23984	10.00	44.58	39.26	54.58	49.26	79.00	66.00	-24.42	-16.74
2	0.63828	10.02	33.88	21.26	43.90	31.28	73.00	60.00	-29.10	-28.72
3	1.04688	10.03	32.42	20.47	42.45	30.50	73.00	60.00	-30.55	-29.50
4	1.45313	10.04	30.90	16.98	40.94	27.02	73.00	60.00	-32.06	-32.98
5	12.30469	10.37	33.25	21.62	43.62	31.99	73.00	60.00	-29.38	-28.01
6	18.26953	10.47	34.30	24.97	44.77	35.44	73.00	60.00	-28.23	-24.56

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

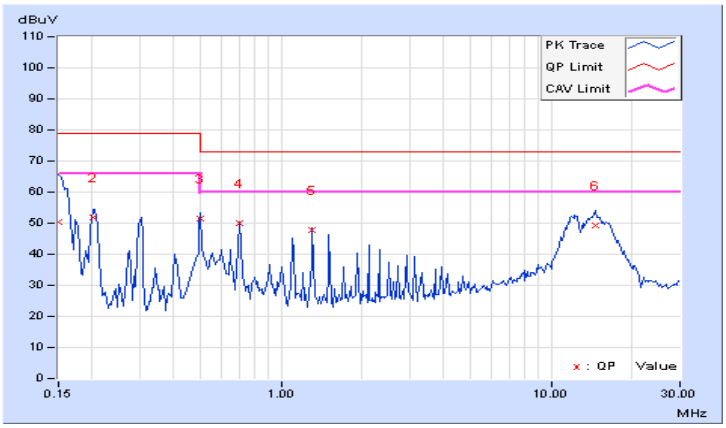


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2A		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	40.44	26.94	50.43	36.93	79.00	66.00	-28.57	-29.07
2	0.20291	9.99	41.97	37.61	51.96	47.60	79.00	66.00	-27.04	-18.40
3	0.50156	10.05	41.60	38.20	51.65	48.25	73.00	60.00	-21.35	-11.75
4	0.70341	10.06	40.05	36.54	50.11	46.60	73.00	60.00	-22.89	-13.40
5	1.30469	10.08	37.82	34.48	47.90	44.56	73.00	60.00	-25.10	-15.44
6	14.55078	10.47	38.78	33.61	49.25	44.08	73.00	60.00	-23.75	-15.92

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

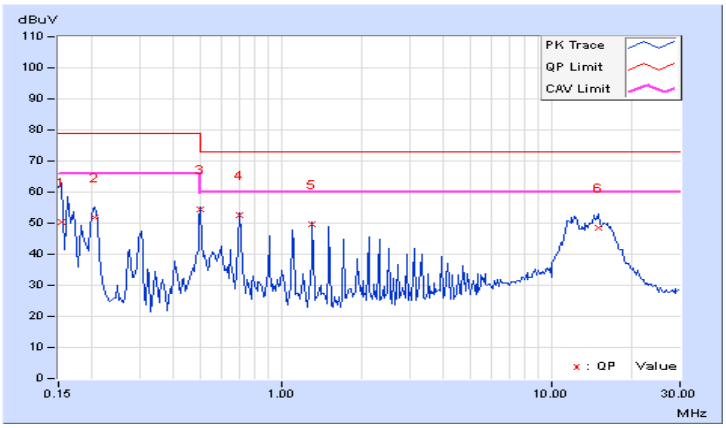


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2A		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15391	9.99	40.34	21.33	50.33	31.32	79.00	66.00	-28.67	-34.68
2	0.20469	9.99	42.01	37.02	52.00	47.01	79.00	66.00	-27.00	-18.99
3	0.50156	10.02	44.33	40.97	54.35	50.99	73.00	60.00	-18.65	-9.01
4	0.70469	10.03	42.45	38.98	52.48	49.01	73.00	60.00	-20.52	-10.99
5	1.30469	10.04	39.45	36.00	49.49	46.04	73.00	60.00	-23.51	-13.96
6	14.89453	10.42	37.95	32.83	48.37	43.25	73.00	60.00	-24.63	-16.75

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

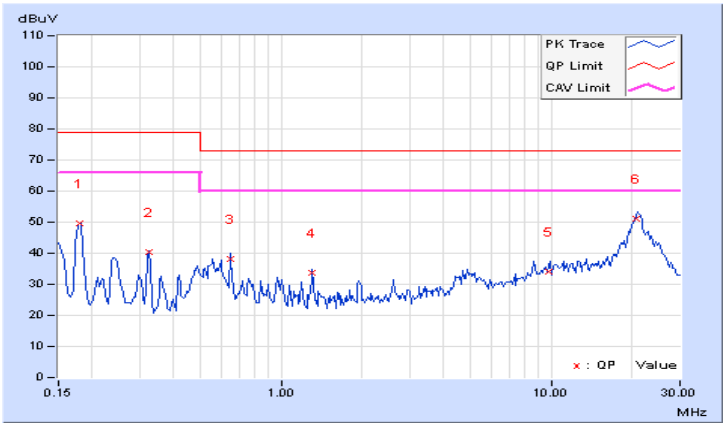


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2B		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17870	9.99	39.56	33.07	49.55	43.06	79.00	66.00	-29.45	-22.94
2	0.32578	10.02	30.41	28.04	40.43	38.06	79.00	66.00	-38.57	-27.94
3	0.65000	10.05	28.10	27.63	38.15	37.68	73.00	60.00	-34.85	-22.32
4	1.30078	10.08	23.76	23.10	33.84	33.18	73.00	60.00	-39.16	-26.82
5	9.85881	10.37	23.79	19.98	34.16	30.35	73.00	60.00	-38.84	-29.65
6	20.79412	10.61	40.48	34.87	51.09	45.48	73.00	60.00	-21.91	-14.52

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

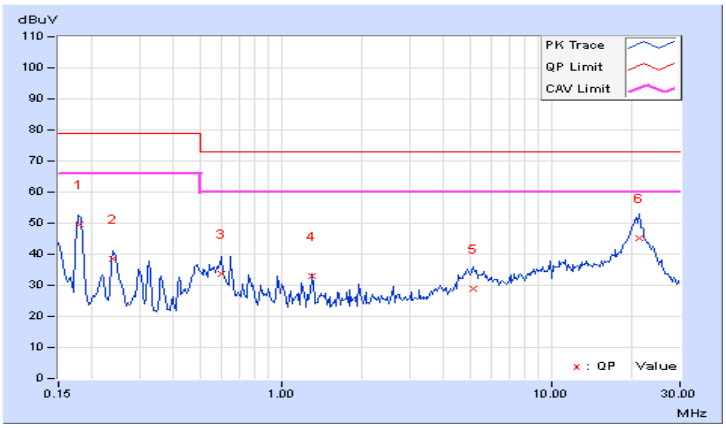


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2B		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17862	9.99	39.62	33.35	49.61	43.34	79.00	66.00	-29.39	-22.66
2	0.23984	10.00	28.50	21.53	38.50	31.53	79.00	66.00	-40.50	-34.47
3	0.60313	10.02	23.76	18.99	33.78	29.01	73.00	60.00	-39.22	-30.99
4	1.30078	10.04	23.05	22.31	33.09	32.35	73.00	60.00	-39.91	-27.65
5	5.14844	10.21	18.69	12.12	28.90	22.33	73.00	60.00	-44.10	-37.67
6	21.08984	10.53	34.77	27.14	45.30	37.67	73.00	60.00	-27.70	-22.33

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

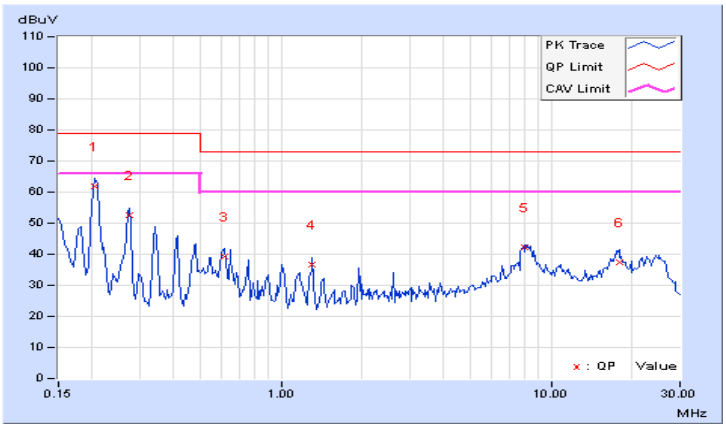


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2C		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20469	9.99	51.84	45.51	61.83	55.50	79.00	66.00	-17.17	-10.50
2	0.27500	10.01	42.57	36.29	52.58	46.30	79.00	66.00	-26.42	-19.70
3	0.61875	10.05	29.15	25.80	39.20	35.85	73.00	60.00	-33.80	-24.15
4	1.30078	10.08	26.55	24.97	36.63	35.05	73.00	60.00	-36.37	-24.95
5	7.97521	10.32	31.82	29.93	42.14	40.25	73.00	60.00	-30.86	-19.75
6	17.83203	10.54	26.81	19.27	37.35	29.81	73.00	60.00	-35.65	-30.19

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

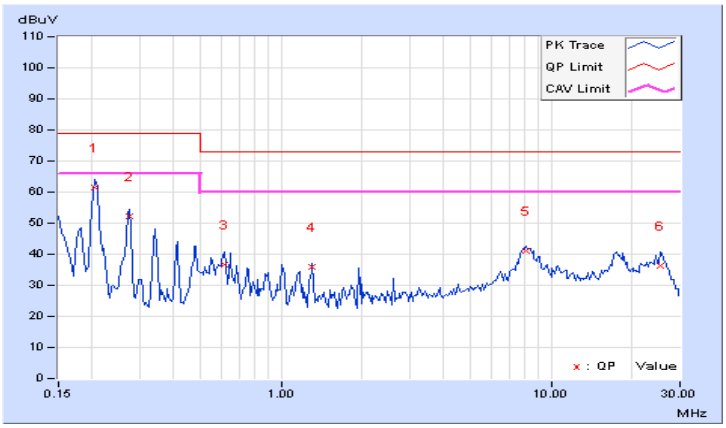


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2C		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20469	9.99	51.64	45.01	61.63	55.00	79.00	66.00	-17.37	-11.00
2	0.27500	10.00	42.11	35.85	52.11	45.85	79.00	66.00	-26.89	-20.15
3	0.61993	10.02	26.82	23.49	36.84	33.51	73.00	60.00	-36.16	-26.49
4	1.30078	10.04	25.74	24.26	35.78	34.30	73.00	60.00	-37.22	-25.70
5	8.11328	10.28	30.99	28.54	41.27	38.82	73.00	60.00	-31.73	-21.18
6	25.44531	10.67	25.49	18.95	36.16	29.62	73.00	60.00	-36.84	-30.38

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

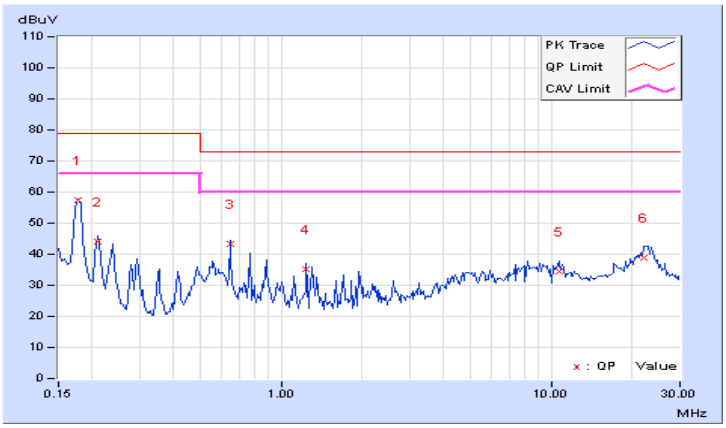


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2D		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	47.36	44.10	57.35	54.09	79.00	66.00	-21.65	-11.91
2	0.20859	9.99	33.90	24.82	43.89	34.81	79.00	66.00	-35.11	-31.19
3	0.65000	10.05	33.31	29.79	43.36	39.84	73.00	60.00	-29.64	-20.16
4	1.23828	10.07	25.15	21.96	35.22	32.03	73.00	60.00	-37.78	-27.97
5	10.65625	10.38	24.09	20.51	34.47	30.89	73.00	60.00	-38.53	-29.11
6	22.16221	10.65	28.07	18.91	38.72	29.56	73.00	60.00	-34.28	-30.44

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

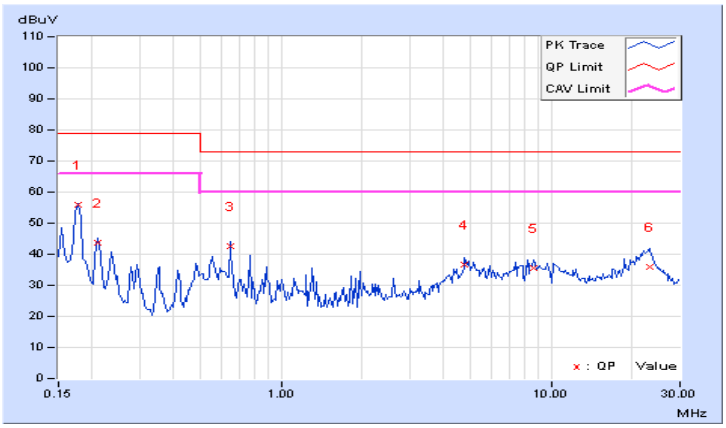


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 2D		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	45.82	42.50	55.81	52.49	79.00	66.00	-23.19	-13.51
2	0.20859	9.99	33.84	26.04	43.83	36.03	79.00	66.00	-35.17	-29.97
3	0.65000	10.02	32.51	29.12	42.53	39.14	73.00	60.00	-30.47	-20.86
4	4.76172	10.20	26.59	19.35	36.79	29.55	73.00	60.00	-36.21	-30.45
5	8.66016	10.30	25.18	23.34	35.48	33.64	73.00	60.00	-37.52	-26.36
6	23.16406	10.60	25.43	16.28	36.03	26.88	73.00	60.00	-36.97	-33.12

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

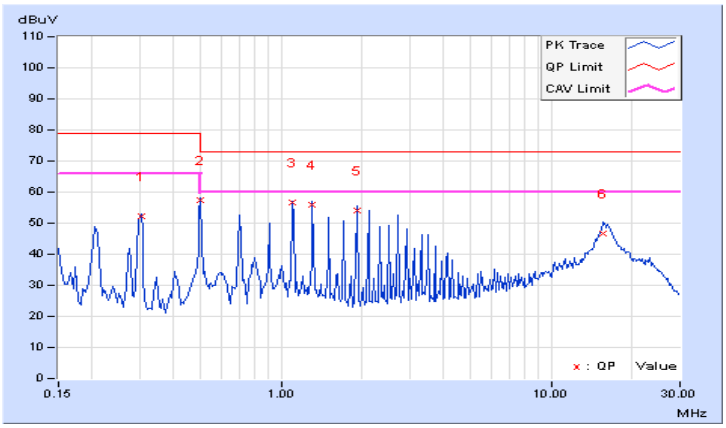


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2E		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.30234	10.02	42.10	38.82	52.12	48.84	79.00	66.00	-26.88	-17.16
2	0.50156	10.05	47.22	44.02	57.27	54.07	73.00	60.00	-15.73	-5.93
3	1.10547	10.07	46.49	43.27	56.56	53.34	73.00	60.00	-16.44	-6.66
4	1.30469	10.08	45.94	42.99	56.02	53.07	73.00	60.00	-16.98	-6.93
5	1.91016	10.09	44.08	41.72	54.17	51.81	73.00	60.00	-18.83	-8.19
6	15.65625	10.49	36.18	31.33	46.67	41.82	73.00	60.00	-26.33	-18.18

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

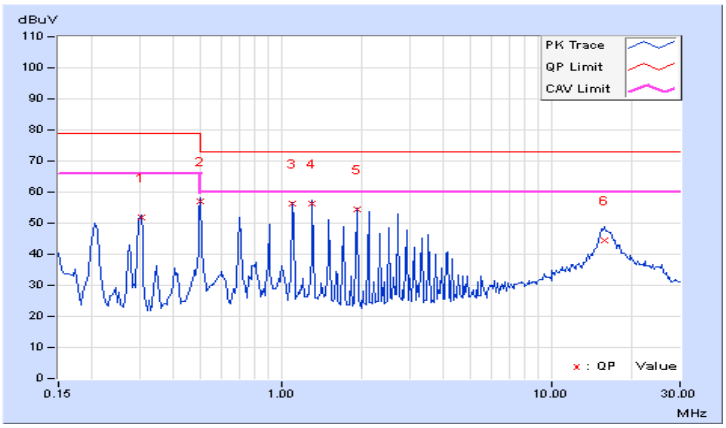


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2E		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.30234	10.01	41.86	38.52	51.87	48.53	79.00	66.00	-27.13	-17.47
2	0.50156	10.02	47.12	43.92	57.14	53.94	73.00	60.00	-15.86	-6.06
3	1.10547	10.03	46.17	43.04	56.20	53.07	73.00	60.00	-16.80	-6.93
4	1.30469	10.04	46.30	43.20	56.34	53.24	73.00	60.00	-16.66	-6.76
5	1.90625	10.05	44.31	41.11	54.36	51.16	73.00	60.00	-18.64	-8.84
6	15.78516	10.43	34.03	29.78	44.46	40.21	73.00	60.00	-28.54	-19.79

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

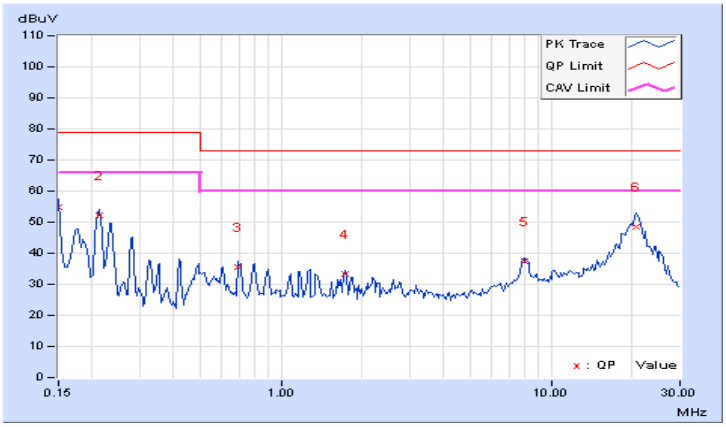


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2F		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	44.79	38.95	54.78	48.94	79.00	66.00	-24.22	-17.06
2	0.21250	9.99	42.13	35.00	52.12	44.99	79.00	66.00	-26.88	-21.01
3	0.69688	10.05	25.48	25.31	35.53	35.36	73.00	60.00	-37.47	-24.64
4	1.71875	10.08	23.38	21.35	33.46	31.43	73.00	60.00	-39.54	-28.57
5	7.94634	10.32	26.93	22.74	37.25	33.06	73.00	60.00	-35.75	-26.94
6	20.75671	10.60	37.90	29.15	48.50	39.75	73.00	60.00	-24.50	-20.25

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

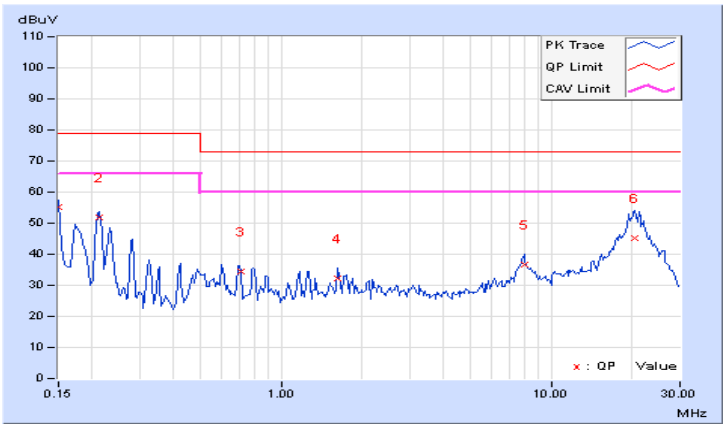


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2F		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	45.05	39.15	55.04	49.14	79.00	66.00	-23.96	-16.86
2	0.21250	9.99	41.69	35.06	51.68	45.05	79.00	66.00	-27.32	-20.95
3	0.70851	10.03	24.58	24.34	34.61	34.37	73.00	60.00	-38.39	-25.63
4	1.62101	10.04	22.23	19.52	32.27	29.56	73.00	60.00	-40.73	-30.44
5	7.92987	10.28	26.53	22.07	36.81	32.35	73.00	60.00	-36.19	-27.65
6	20.52344	10.52	34.68	29.03	45.20	39.55	73.00	60.00	-27.80	-20.45

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

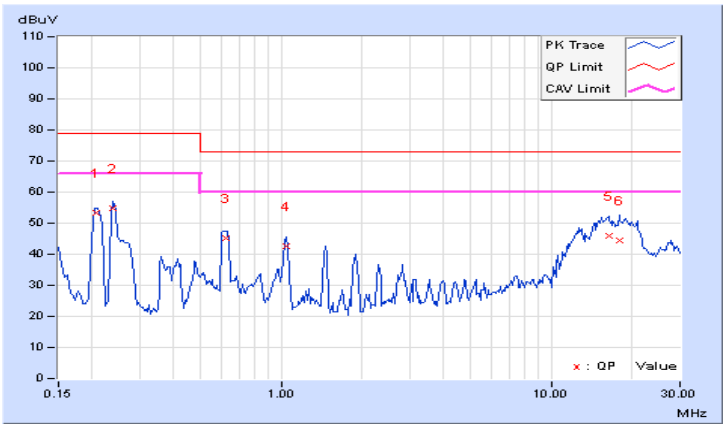


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2G		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20724	9.99	43.24	39.18	53.23	49.17	79.00	66.00	-25.77	-16.83
2	0.23984	10.00	44.95	38.87	54.95	48.87	79.00	66.00	-24.05	-17.13
3	0.62374	10.05	34.99	27.32	45.04	37.37	73.00	60.00	-27.96	-22.63
4	1.04688	10.07	32.53	23.60	42.60	33.67	73.00	60.00	-30.40	-26.33
5	16.30078	10.51	35.59	25.95	46.10	36.46	73.00	60.00	-26.90	-23.54
6	17.87500	10.54	34.03	25.52	44.57	36.06	73.00	60.00	-28.43	-23.94

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

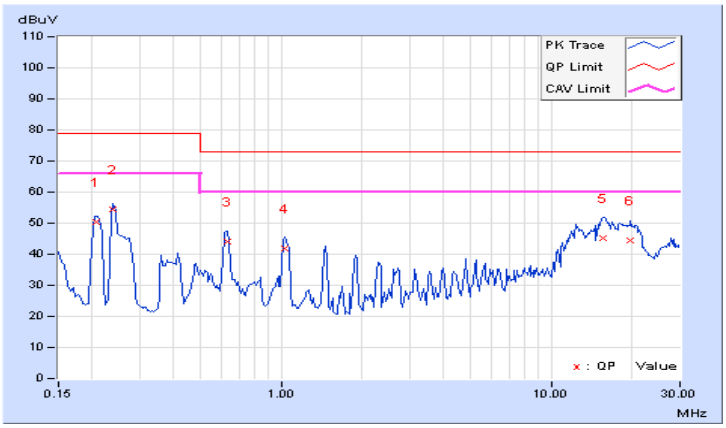


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2G		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.20724	9.99	40.33	36.44	50.32	46.43	79.00	66.00	-28.68	-19.57
2	0.23984	10.00	44.42	38.87	54.42	48.87	79.00	66.00	-24.58	-17.13
3	0.63047	10.02	34.12	25.96	44.14	35.98	73.00	60.00	-28.86	-24.02
4	1.03125	10.03	31.67	24.13	41.70	34.16	73.00	60.00	-31.30	-25.84
5	15.48828	10.43	34.92	25.36	45.35	35.79	73.00	60.00	-27.65	-24.21
6	19.64844	10.49	34.03	25.40	44.52	35.89	73.00	60.00	-28.48	-24.11

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



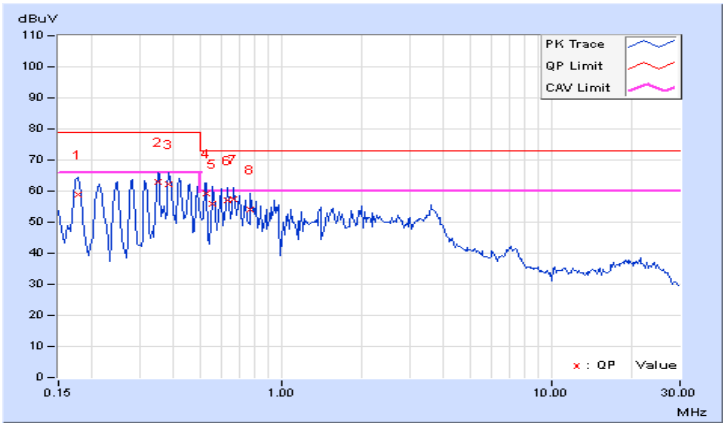
5.5 Test Results of Input Power: 240Vac, 60Hz

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1H		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	49.08	38.17	59.07	48.16	79.00	66.00	-19.93	-17.84
2	0.35177	10.03	53.00	43.72	63.03	53.75	79.00	66.00	-15.97	-12.25
3	0.38438	10.04	52.04	42.60	62.08	52.64	79.00	66.00	-16.92	-13.36
4	0.52763	10.05	49.11	38.97	59.16	49.02	73.00	60.00	-13.84	-10.98
5	0.56016	10.05	45.95	38.68	56.00	48.73	73.00	60.00	-17.00	-11.27
6	0.63047	10.05	46.83	37.93	56.88	47.98	73.00	60.00	-16.12	-12.02
7	0.66563	10.05	47.30	37.97	57.35	48.02	73.00	60.00	-15.65	-11.98
8	0.77109	10.06	44.04	37.18	54.10	47.24	73.00	60.00	-18.90	-12.76

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

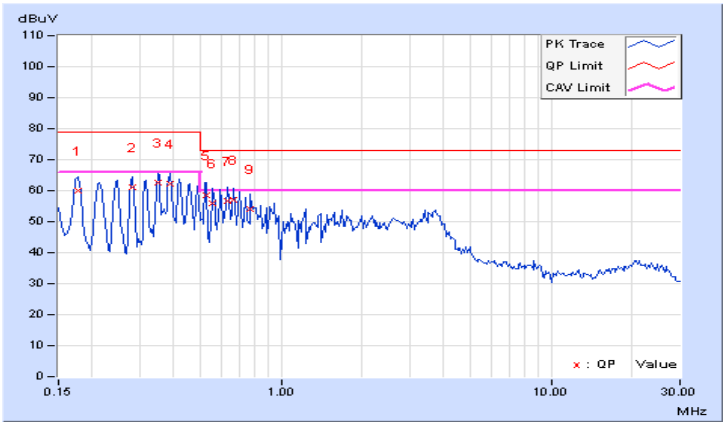


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1H		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	50.17	40.32	60.16	50.31	79.00	66.00	-18.84	-15.69
2	0.28281	10.00	51.29	41.80	61.29	51.80	79.00	66.00	-17.71	-14.20
3	0.34922	10.01	52.68	43.05	62.69	53.06	79.00	66.00	-16.31	-12.94
4	0.38828	10.02	52.14	42.88	62.16	52.90	79.00	66.00	-16.84	-13.10
5	0.52891	10.02	48.55	38.64	58.57	48.66	73.00	60.00	-14.43	-11.34
6	0.56016	10.02	45.87	38.83	55.89	48.85	73.00	60.00	-17.11	-11.15
7	0.63047	10.02	46.69	38.11	56.71	48.13	73.00	60.00	-16.29	-11.87
8	0.66953	10.02	46.99	37.75	57.01	47.77	73.00	60.00	-15.99	-12.23
9	0.77109	10.03	44.20	37.36	54.23	47.39	73.00	60.00	-18.77	-12.61

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

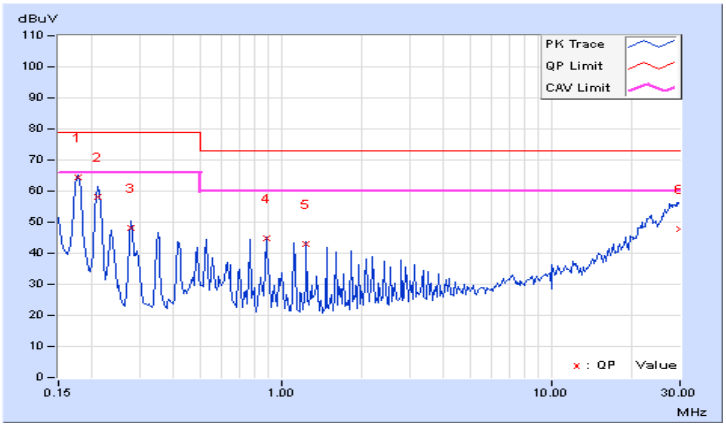


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1I		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	54.58	49.22	64.57	59.21	79.00	66.00	-14.43	-6.79
2	0.20859	9.99	48.21	38.69	58.20	48.68	79.00	66.00	-20.80	-17.32
3	0.27891	10.01	38.13	28.04	48.14	38.05	79.00	66.00	-30.86	-27.95
4	0.88438	10.06	34.74	31.37	44.80	41.43	73.00	60.00	-28.20	-18.57
5	1.23828	10.07	32.77	29.26	42.84	39.33	73.00	60.00	-30.16	-20.67
6	29.99949	10.87	36.74	26.80	47.61	37.67	73.00	60.00	-25.39	-22.33

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

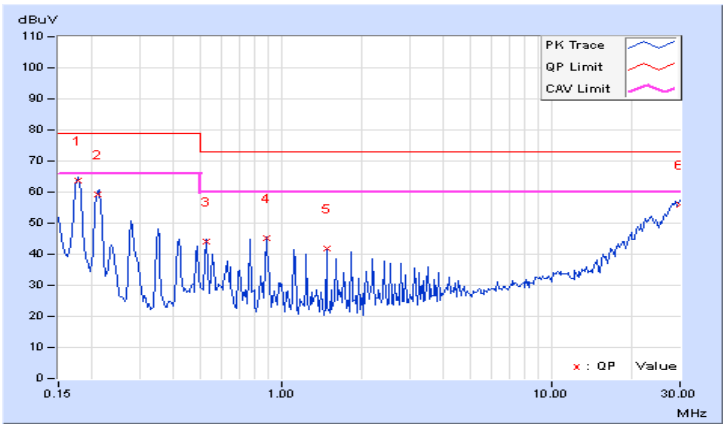


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1I		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	53.80	49.54	63.79	59.53	79.00	66.00	-15.21	-6.47
2	0.20995	9.99	49.40	38.76	59.39	48.75	79.00	66.00	-19.61	-17.25
3	0.52891	10.02	34.00	30.59	44.02	40.61	73.00	60.00	-28.98	-19.39
4	0.88438	10.03	34.99	31.52	45.02	41.55	73.00	60.00	-27.98	-18.45
5	1.47266	10.04	31.81	28.17	41.85	38.21	73.00	60.00	-31.15	-21.79
6	29.81778	10.79	45.09	38.94	55.88	49.73	73.00	60.00	-17.12	-10.27

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

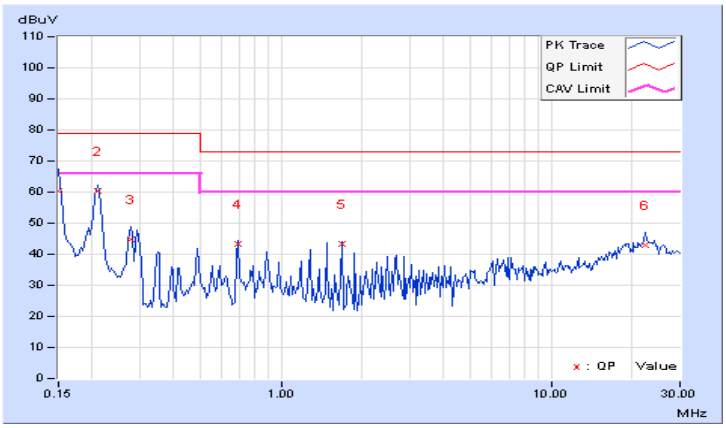


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1J		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	50.44	41.78	60.43	51.77	79.00	66.00	-18.57	-14.23
2	0.20859	9.99	50.35	43.16	60.34	53.15	79.00	66.00	-18.66	-12.85
3	0.27891	10.01	34.79	25.55	44.80	35.56	79.00	66.00	-34.20	-30.44
4	0.68906	10.05	33.20	30.67	43.25	40.72	73.00	60.00	-29.75	-19.28
5	1.67578	10.08	33.18	29.97	43.26	40.05	73.00	60.00	-29.74	-19.95
6	22.32813	10.65	32.25	26.09	42.90	36.74	73.00	60.00	-30.10	-23.26

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

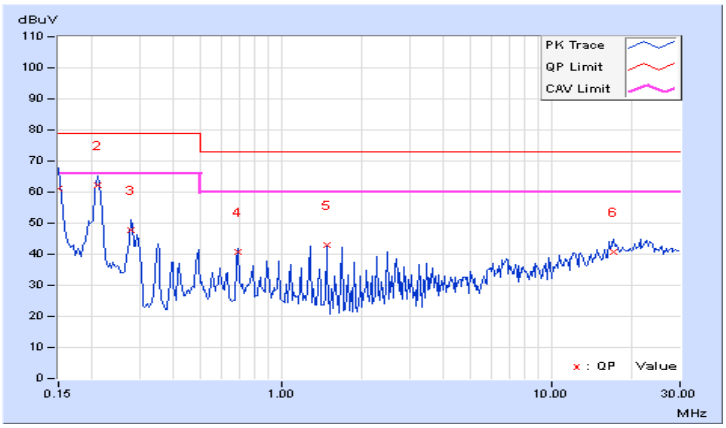


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1J		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	50.98	41.74	60.97	51.73	79.00	66.00	-18.03	-14.27
2	0.20859	9.99	52.08	43.60	62.07	53.59	79.00	66.00	-16.93	-12.41
3	0.27891	10.00	37.66	28.92	47.66	38.92	79.00	66.00	-31.34	-27.08
4	0.68906	10.02	30.77	27.31	40.79	37.33	73.00	60.00	-32.21	-22.67
5	1.47656	10.04	32.84	29.98	42.88	40.02	73.00	60.00	-30.12	-19.98
6	17.03125	10.45	30.47	24.91	40.92	35.36	73.00	60.00	-32.08	-24.64

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



Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1K		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	46.85	23.59	56.84	33.58	79.00	66.00	-22.16	-32.42
2	0.18906	9.99	49.96	42.94	59.95	52.93	79.00	66.00	-19.05	-13.07
3	0.23984	10.00	41.80	32.34	51.80	42.34	79.00	66.00	-27.20	-23.66
4	0.27891	10.01	47.12	43.51	57.13	53.52	79.00	66.00	-21.87	-12.48
5	0.41953	10.04	41.74	38.45	51.78	48.49	79.00	66.00	-27.22	-17.51
6	0.98203	10.07	34.90	24.75	44.97	34.82	73.00	60.00	-28.03	-25.18

Remarks:

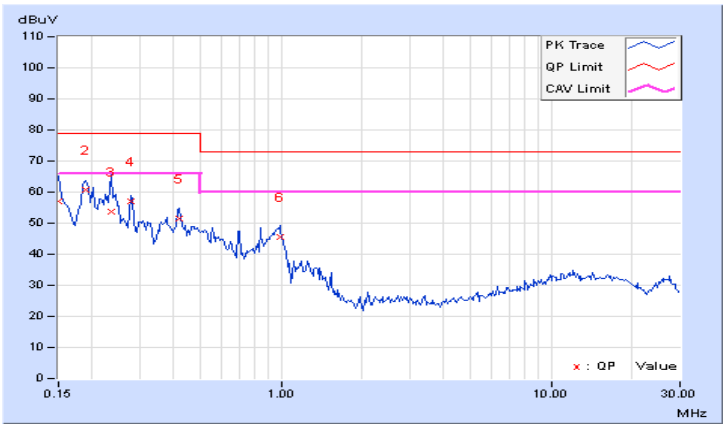
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	23℃, 79%RH
Tested by	Jary Huang		
Test Mode	Mode 1K		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	46.99	24.31	56.98	34.30	79.00	66.00	-22.02	-31.70
2	0.18906	9.99	50.89	44.67	60.88	54.66	79.00	66.00	-18.12	-11.34
3	0.23594	10.00	43.70	32.28	53.70	42.28	79.00	66.00	-25.30	-23.72
4	0.27891	10.00	46.99	44.14	56.99	54.14	79.00	66.00	-22.01	-11.86
5	0.41953	10.02	41.64	38.25	51.66	48.27	79.00	66.00	-27.34	-17.73
6	0.99375	10.03	35.47	25.69	45.50	35.72	73.00	60.00	-27.50	-24.28

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

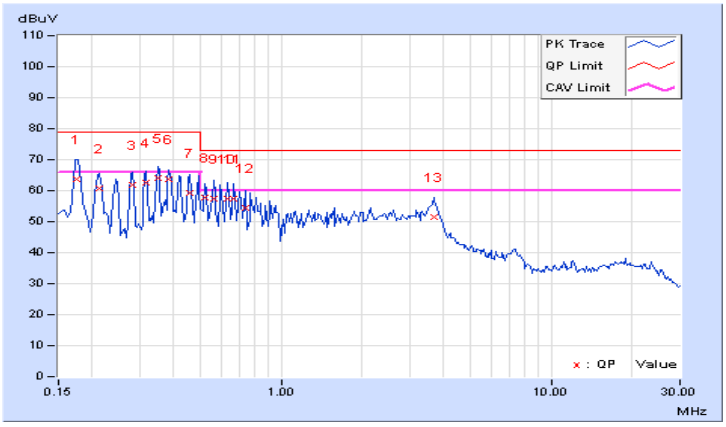


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2H		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17606	9.99	53.79	39.85	63.78	49.84	79.00	66.00	-15.22	-16.16
2	0.21250	9.99	50.76	40.26	60.75	50.25	79.00	66.00	-18.25	-15.75
3	0.28281	10.01	51.95	41.63	61.96	51.64	79.00	66.00	-17.04	-14.36
4	0.31797	10.02	52.56	41.80	62.58	51.82	79.00	66.00	-16.42	-14.18
5	0.35177	10.03	54.09	44.02	64.12	54.05	79.00	66.00	-14.88	-11.95
6	0.38438	10.04	53.49	43.07	63.53	53.11	79.00	66.00	-15.47	-12.89
7	0.45859	10.04	49.11	39.76	59.15	49.80	79.00	66.00	-19.85	-16.20
8	0.52500	10.05	47.56	38.43	57.61	48.48	73.00	60.00	-15.39	-11.52
9	0.56406	10.05	47.46	37.78	57.51	47.83	73.00	60.00	-15.49	-12.17
10	0.63438	10.05	47.20	37.07	57.25	47.12	73.00	60.00	-15.75	-12.88
11	0.66563	10.05	47.54	38.10	57.59	48.15	73.00	60.00	-15.41	-11.85
12	0.73594	10.06	44.53	37.17	54.59	47.23	73.00	60.00	-18.41	-12.77
13	3.68010	10.19	41.39	33.36	51.58	43.55	73.00	60.00	-21.42	-16.45

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

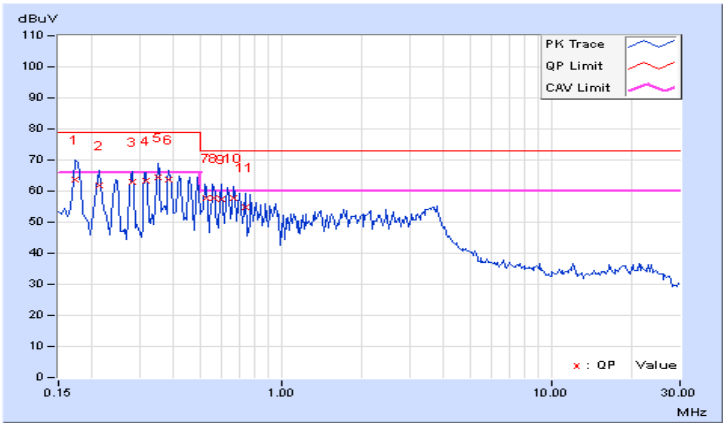


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2H		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17344	9.99	53.65	40.81	63.64	50.80	79.00	66.00	-15.36	-15.20
2	0.21250	9.99	51.72	41.15	61.71	51.14	79.00	66.00	-17.29	-14.86
3	0.28026	10.00	52.87	42.66	62.87	52.66	79.00	66.00	-16.13	-13.34
4	0.31533	10.01	53.15	42.77	63.16	52.78	79.00	66.00	-15.84	-13.22
5	0.35177	10.01	54.31	44.22	64.32	54.23	79.00	66.00	-14.68	-11.77
6	0.38438	10.02	53.57	43.46	63.59	53.48	79.00	66.00	-15.41	-12.52
7	0.52755	10.02	47.70	38.94	57.72	48.96	73.00	60.00	-15.28	-11.04
8	0.56271	10.02	47.75	38.61	57.77	48.63	73.00	60.00	-15.23	-11.37
9	0.59922	10.02	47.40	37.03	57.42	47.05	73.00	60.00	-15.58	-12.95
10	0.66698	10.02	47.93	38.87	57.95	48.89	73.00	60.00	-15.05	-11.11
11	0.73849	10.03	44.94	37.80	54.97	47.83	73.00	60.00	-18.03	-12.17

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

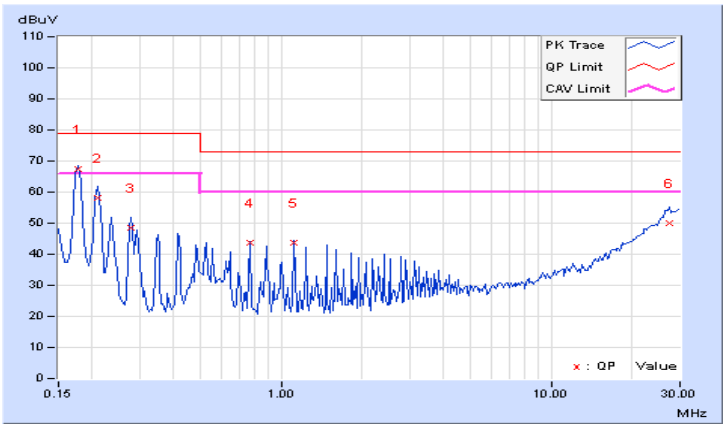


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2I		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	57.32	52.50	67.31	62.49	79.00	66.00	-11.69	-3.51
2	0.20859	9.99	48.31	39.48	58.30	49.47	79.00	66.00	-20.70	-16.53
3	0.27891	10.01	38.48	27.14	48.49	37.15	79.00	66.00	-30.51	-28.85
4	0.76583	10.06	33.66	29.51	43.72	39.57	73.00	60.00	-29.28	-20.43
5	1.11847	10.07	33.49	30.11	43.56	40.18	73.00	60.00	-29.44	-19.82
6	27.29299	10.80	39.24	33.51	50.04	44.31	73.00	60.00	-22.96	-15.69

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

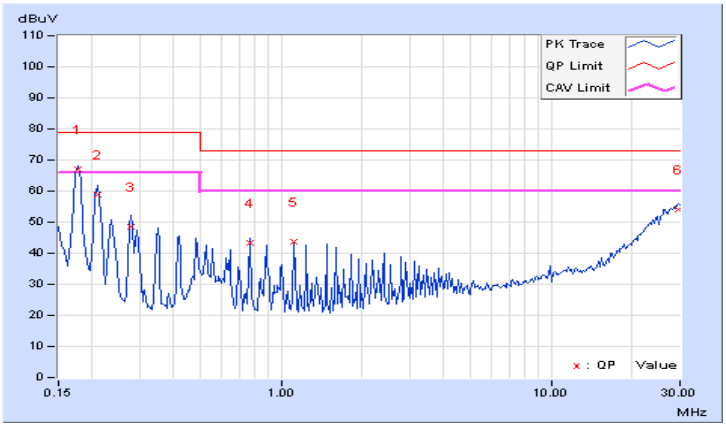


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2I		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	57.14	52.40	67.13	62.39	79.00	66.00	-11.87	-3.61
2	0.20859	9.99	49.06	39.53	59.05	49.52	79.00	66.00	-19.95	-16.48
3	0.27891	10.00	38.54	28.85	48.54	38.85	79.00	66.00	-30.46	-27.15
4	0.76591	10.03	33.42	29.72	43.45	39.75	73.00	60.00	-29.55	-20.25
5	1.11847	10.03	33.59	30.15	43.62	40.18	73.00	60.00	-29.38	-19.82
6	29.45167	10.78	43.35	37.58	54.13	48.36	73.00	60.00	-18.87	-11.64

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

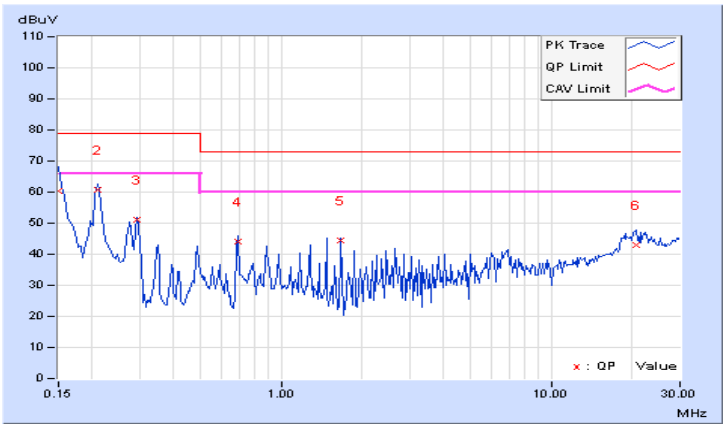


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2J		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	50.54	40.88	60.53	50.87	79.00	66.00	-18.47	-15.13
2	0.20859	9.99	50.67	43.71	60.66	53.70	79.00	66.00	-18.34	-12.30
3	0.29453	10.01	41.01	37.61	51.02	47.62	79.00	66.00	-27.98	-18.38
4	0.68906	10.05	34.16	31.57	44.21	41.62	73.00	60.00	-28.79	-18.38
5	1.67188	10.08	34.52	31.92	44.60	42.00	73.00	60.00	-28.40	-18.00
6	20.67578	10.60	32.50	26.80	43.10	37.40	73.00	60.00	-29.90	-22.60

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

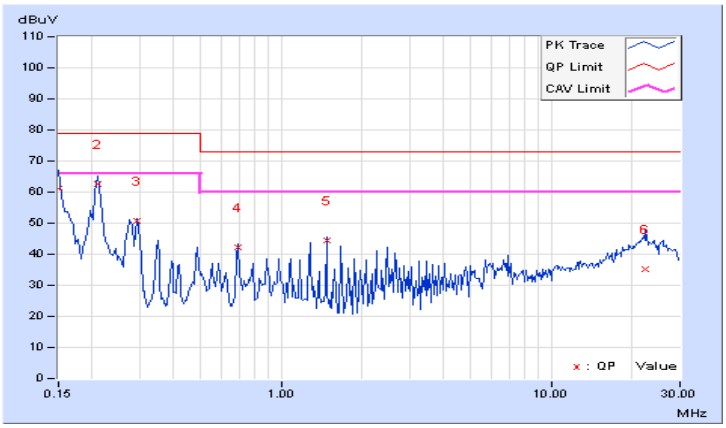


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2J		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	51.27	41.04	61.26	51.03	79.00	66.00	-17.74	-14.97
2	0.20859	9.99	52.53	44.02	62.52	54.01	79.00	66.00	-16.48	-11.99
3	0.29453	10.00	40.57	37.16	50.57	47.16	79.00	66.00	-28.43	-18.84
4	0.68906	10.02	32.11	28.87	42.13	38.89	73.00	60.00	-30.87	-21.11
5	1.47529	10.04	34.53	31.79	44.57	41.83	73.00	60.00	-28.43	-18.17
6	22.39802	10.58	24.58	17.45	35.16	28.03	73.00	60.00	-37.84	-31.97

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



Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2K		

Phase Of Power : Line (L)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	49.63	23.74	59.62	33.73	79.00	66.00	-19.38	-32.27
2	0.20859	9.99	42.27	36.64	52.26	46.63	79.00	66.00	-26.74	-19.37
3	0.27891	10.01	46.90	43.51	56.91	53.52	79.00	66.00	-22.09	-12.48
4	0.41953	10.04	42.25	39.06	52.29	49.10	79.00	66.00	-26.71	-16.90
5	0.55625	10.05	34.57	29.22	44.62	39.27	73.00	60.00	-28.38	-20.73
6	0.96641	10.07	34.15	23.93	44.22	34.00	73.00	60.00	-28.78	-26.00

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

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	240Vac, 60Hz	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2K		

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.15000	9.99	50.11	23.66	60.10	33.65	79.00	66.00	-18.90	-32.35
2	0.20469	9.99	42.71	31.55	52.70	41.54	79.00	66.00	-26.30	-24.46
3	0.23594	10.00	42.44	31.05	52.44	41.05	79.00	66.00	-26.56	-24.95
4	0.27891	10.00	45.66	42.80	55.66	52.80	79.00	66.00	-23.34	-13.20
5	0.41953	10.02	41.62	38.49	51.64	48.51	79.00	66.00	-27.36	-17.49
6	0.97813	10.03	34.64	24.70	44.67	34.73	73.00	60.00	-28.33	-25.27

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

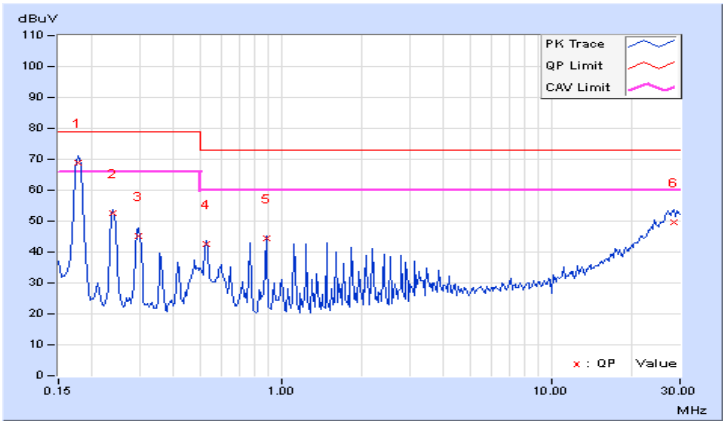
5.6 Test Results of Input Power: 380Vdc, 60Hz

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	380Vdc	**Environmental Conditions**	22℃, 78%RH
Tested by	Jary Huang		
Test Mode	Mode 1I		

Phase Of Power : Positive (+)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	59.04	52.72	69.03	62.71	79.00	66.00	-9.97	-3.29
2	0.23984	10.00	42.64	39.31	52.64	49.31	79.00	66.00	-26.36	-16.69
3	0.29844	10.01	35.34	31.13	45.35	41.14	79.00	66.00	-33.65	-24.86
4	0.53146	10.05	32.70	29.26	42.75	39.31	73.00	60.00	-30.25	-20.69
5	0.88438	10.06	34.54	31.41	44.60	41.47	73.00	60.00	-28.40	-18.53
6	28.38808	10.83	38.98	36.40	49.81	47.23	73.00	60.00	-23.19	-12.77

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

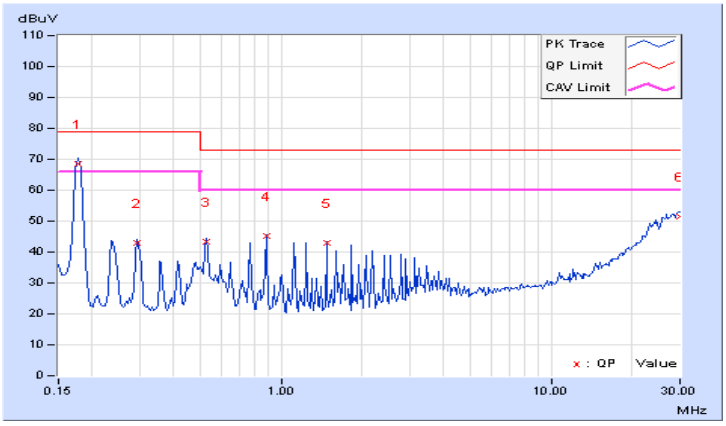


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	380Vdc	**Environmental Conditions**	22℃, 78%RH
Tested by	Jary Huang		
Test Mode	Mode 1I		

Phase Of Power : Negative (-)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	58.47	52.56	68.46	62.55	79.00	66.00	-10.54	-3.45
2	0.29453	10.00	32.97	29.61	42.97	39.61	79.00	66.00	-36.03	-26.39
3	0.52891	10.02	33.31	30.05	43.33	40.07	73.00	60.00	-29.67	-19.93
4	0.88438	10.03	35.00	31.98	45.03	42.01	73.00	60.00	-27.97	-17.99
5	1.47266	10.04	32.85	29.94	42.89	39.98	73.00	60.00	-30.11	-20.02
6	29.92410	10.79	40.76	39.32	51.55	50.11	73.00	60.00	-21.45	-9.89

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

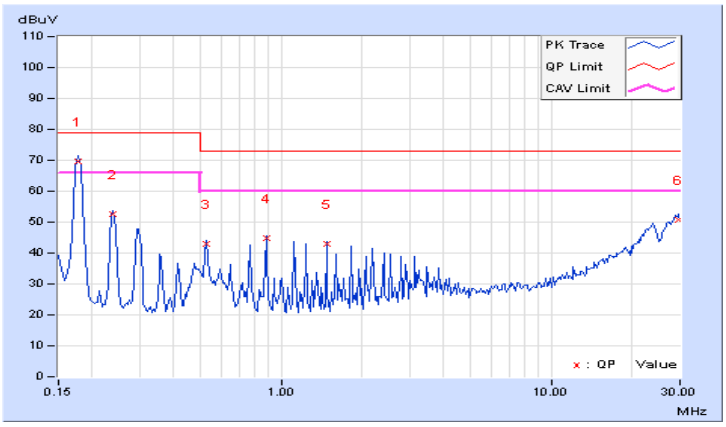


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	380Vdc	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2I		

Phase Of Power : Positive (+)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.17734	9.99	59.52	52.69	69.51	62.68	79.00	66.00	-9.49	-3.32
2	0.23984	10.00	42.52	39.17	52.52	49.17	79.00	66.00	-26.48	-16.83
3	0.52891	10.05	32.98	29.60	43.03	39.65	73.00	60.00	-29.97	-20.35
4	0.88436	10.06	34.90	31.90	44.96	41.96	73.00	60.00	-28.04	-18.04
5	1.47266	10.08	33.01	29.92	43.09	40.00	73.00	60.00	-29.91	-20.00
6	29.66415	10.86	39.95	34.47	50.81	45.33	73.00	60.00	-22.19	-14.67

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

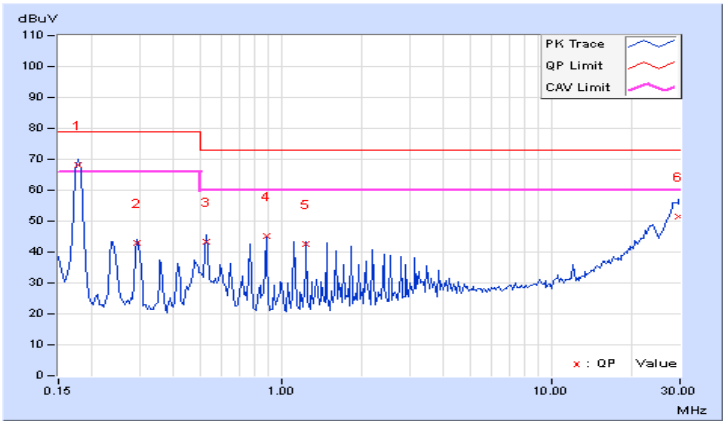


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	380Vdc	**Environmental Conditions**	20℃, 62%RH
Tested by	Jary Huang		
Test Mode	Mode 2I		

Phase Of Power : Negative (-)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	**0.17734**	**9.99**	**58.27**	**52.80**	**68.26**	**62.79**	**79.00**	**66.00**	**-10.74**	**-3.21**
2	0.29453	10.00	33.09	29.59	43.09	39.59	79.00	66.00	-35.91	-26.41
3	0.52891	10.02	33.21	29.83	43.23	39.85	73.00	60.00	-29.77	-20.15
4	0.88309	10.03	35.20	32.08	45.23	42.11	73.00	60.00	-27.77	-17.89
5	1.23828	10.03	32.64	29.60	42.67	39.63	73.00	60.00	-30.33	-20.37
6	29.73866	10.78	40.61	38.80	51.39	49.58	73.00	60.00	-21.61	-10.42

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



5.7 Test Results of Input Power: -48Vdc

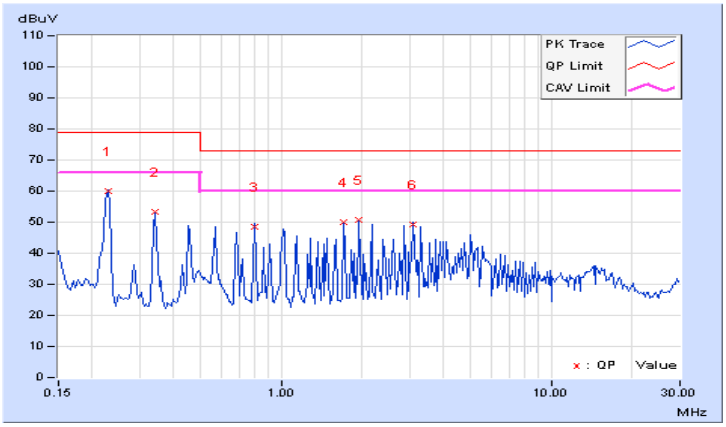
LISN

Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	-48Vdc	**Environmental Conditions**	21℃, 77%RH
Tested by	Jary Huang		
Test Mode	Mode 1L		

Phase Of Power : Positive (+)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.22812	10.00	49.98	47.30	59.98	57.30	79.00	66.00	-19.02	-8.70
2	0.34141	10.03	43.32	43.26	53.35	53.29	79.00	66.00	-25.65	-12.71
3	0.79453	10.06	38.32	37.54	48.38	47.60	73.00	60.00	-24.62	-12.40
4	1.70703	10.08	39.80	39.74	49.88	49.82	73.00	60.00	-23.12	-10.18
5	1.93750	10.09	40.70	40.60	50.79	50.69	73.00	60.00	-22.21	-9.31
6	3.07422	10.15	39.23	39.15	49.38	49.30	73.00	60.00	-23.62	-10.70

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

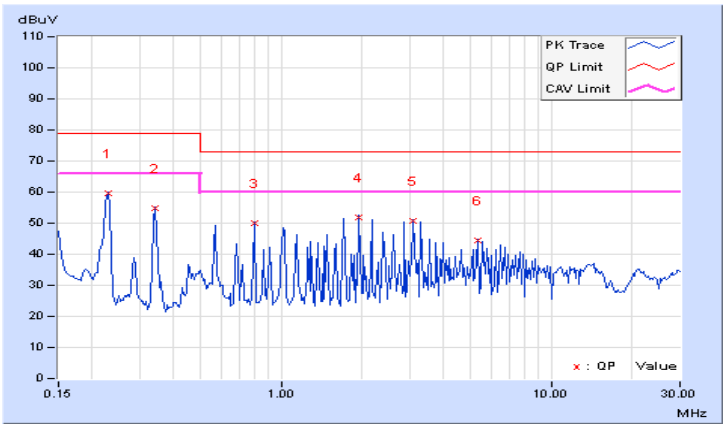


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	-48Vdc	**Environmental Conditions**	21℃, 77%RH
Tested by	Jary Huang		
Test Mode	Mode 1L		

Phase Of Power : Negative (-)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.22812	9.99	49.62	47.74	59.61	57.73	79.00	66.00	-19.39	-8.27
2	0.34141	10.01	44.92	44.26	54.93	54.27	79.00	66.00	-24.07	-11.73
3	0.79844	10.03	39.88	39.06	49.91	49.09	73.00	60.00	-23.09	-10.91
4	1.93359	10.05	41.68	41.51	51.73	51.56	73.00	60.00	-21.27	-8.44
5	3.07422	10.12	40.62	40.52	50.74	50.64	73.00	60.00	-22.26	-9.36
6	5.35156	10.21	34.38	34.25	44.59	44.46	73.00	60.00	-28.41	-15.54

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

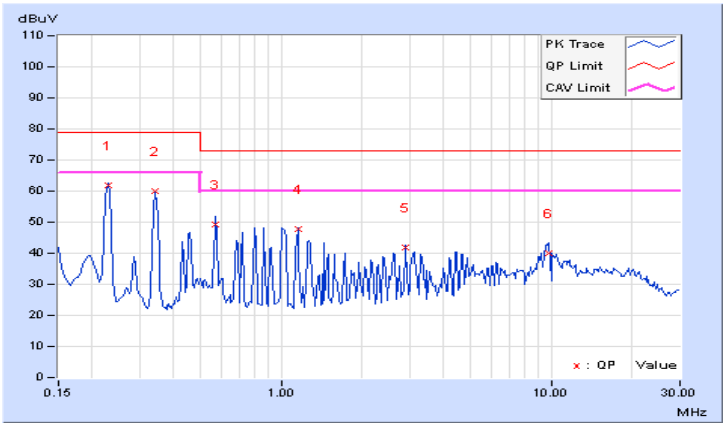


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	-48Vdc	**Environmental Conditions**	22℃, 78%RH
Tested by	Jary Huang		
Test Mode	Mode 2L		

Phase Of Power : Positive (+)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.22814	10.00	51.88	49.24	61.88	59.24	79.00	66.00	-17.12	-6.76
2	0.34269	10.03	49.81	47.38	59.84	57.41	79.00	66.00	-19.16	-8.59
3	0.57188	10.05	39.31	35.12	49.36	45.17	73.00	60.00	-23.64	-14.83
4	1.15234	10.07	37.56	33.31	47.63	43.38	73.00	60.00	-25.37	-16.62
5	2.87500	10.14	31.70	29.31	41.84	39.45	73.00	60.00	-31.16	-20.55
6	9.84120	10.37	29.74	21.45	40.11	31.82	73.00	60.00	-32.89	-28.18

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

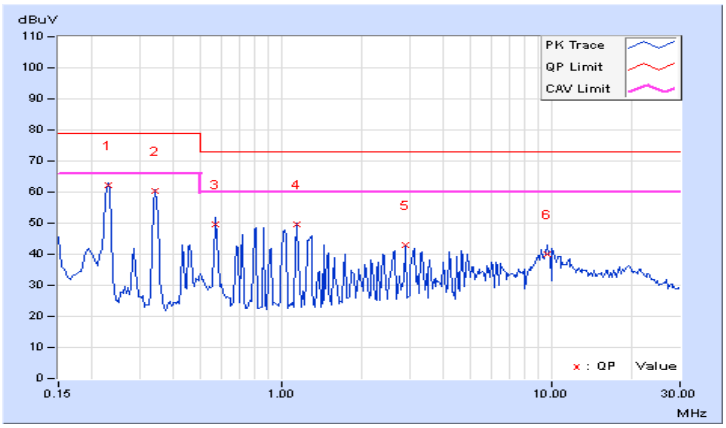


Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	-48Vdc	**Environmental Conditions**	22℃, 78%RH
Tested by	Jary Huang		
Test Mode	Mode 2L		

Phase Of Power : Negative (-)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	0.22940	9.99	52.11	49.56	62.10	59.55	79.00	66.00	-16.90	-6.45
2	0.34141	10.01	50.22	48.54	60.23	58.55	79.00	66.00	-18.77	-7.45
3	0.57188	10.02	39.73	35.40	49.75	45.42	73.00	60.00	-23.25	-14.58
4	1.14972	10.03	39.63	35.32	49.66	45.35	73.00	60.00	-23.34	-14.65
5	2.87500	10.11	32.90	31.15	43.01	41.26	73.00	60.00	-29.99	-18.74
6	9.65234	10.32	29.86	20.82	40.18	31.14	73.00	60.00	-32.82	-28.86

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



6 Radiated Emissions up to 1 GHz

6.1 Limits

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dBµV/m)				
Frequencies (MHz)	FCC 15B / ICES-003, Class A	FCC 15B / ICES-003, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	39	29.5	40	30
88-216	43.5	33.1		
216-230	46.4	35.6		
230-960			47	37
960-1000	49.5	43.5		

Radiated Emissions Limits at 3 meters (dBµV/m)				
Frequencies (MHz)	FCC 15B / ICES-003, Class A	FCC 15B / ICES-003, Class B	CISPR 22, Class A	CISPR 22, Class B
30-88	49.5	40	50.5	40.5
88-216	54	43.5		
216-230	56.9	46		
230-960			57.5	47.5
960-1000	60	54		

Notes:
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. QP detector shall be applied if not specified.

6.2 Test Instruments

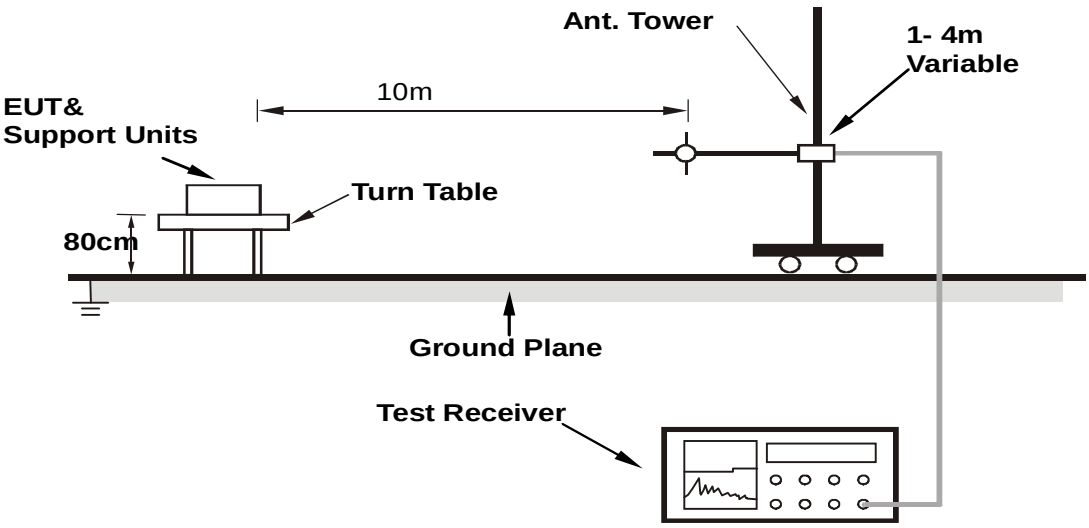
Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Sonoma Preamplifier	310N	352922	Feb. 20, 2017	Feb. 19, 2018
Sonoma Preamplifier	310N	352921	Feb. 20, 2017	Feb. 19, 2018
Agilent Test Receiver	N9038A	MY50010158	Aug. 04, 2016	Aug. 03, 2017
Agilent Test Receiver	N9038A	MY51210114	Sep. 09, 2016	Sep. 08, 2017
Schwarzbeck Antenna	VULB9168	9168-316	Dec. 13, 2016	Dec. 12, 2017
Schwarzbeck Antenna	VULB9168	9168-317	Dec. 13, 2016	Dec. 12, 2017
Max Full. Turn Table & Tower	MF7802	MF7802121	NA	NA
Max Full. Tower	MF7802	MF780208105	NA	NA
Software	Radiated_V8.7.08	NA	NA	NA
JYEBAO RF cable With 5dB PAD	LMR-600	CABLE-CH8-01.V	Jun. 27, 2016	Jun. 26, 2017
JYEBAO RF cable With 5dB PAD	LMR-600	CABLE-CH8-02.H	Jun. 27, 2016	Jun. 26, 2017
WOKEN RF cable With 5dB PAD	8D	CABLE-CH8-03.3M	Jun. 27, 2016	Jun. 26, 2017

Notes:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Chamber No. 8.
3. The Industry Canada Reference No. IC 7450E-8.
4. The VCCI Site Registration No. R-2946.
5. The FCC Site Registration No. 493821.
6. Tested Date: Apr. 25, 2017.

6.3 Test Arrangement

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is up to 1 GHz.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency up to 1GHz.



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

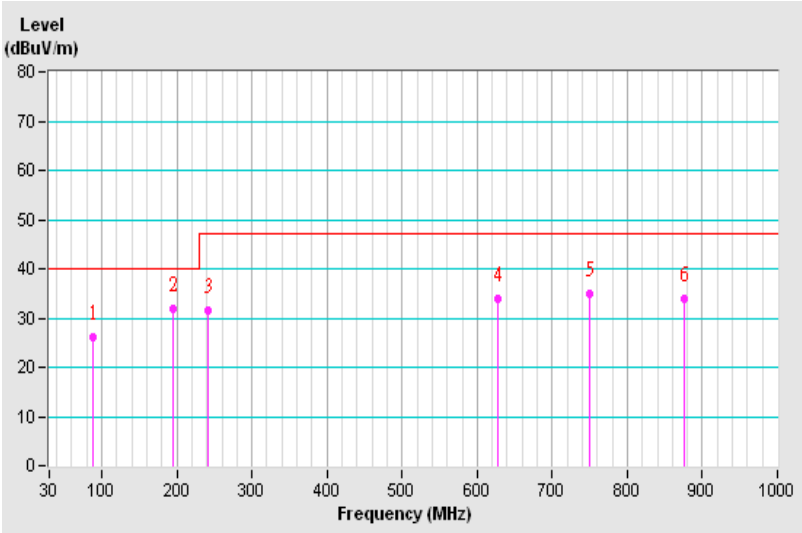
6.4 Test Results

Frequency Range	30MHz ~ 1GHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP), 120kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 70%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Horizontal at 10 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	89.07	26.14 QP	40.00	-13.86	4.00 H	118	45.31	-19.17
2	195.55	32.02 QP	40.00	-7.98	4.00 H	116	48.41	-16.39
3	241.48	31.52 QP	47.00	-15.48	3.62 H	138	46.28	-14.76
4	627.84	33.96 QP	47.00	-13.04	1.59 H	36	38.78	-4.82
5	750.01	35.08 QP	47.00	-11.92	1.41 H	262	37.33	-2.25
6	875.02	33.93 QP	47.00	-13.07	1.00 H	172	34.26	-0.33

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

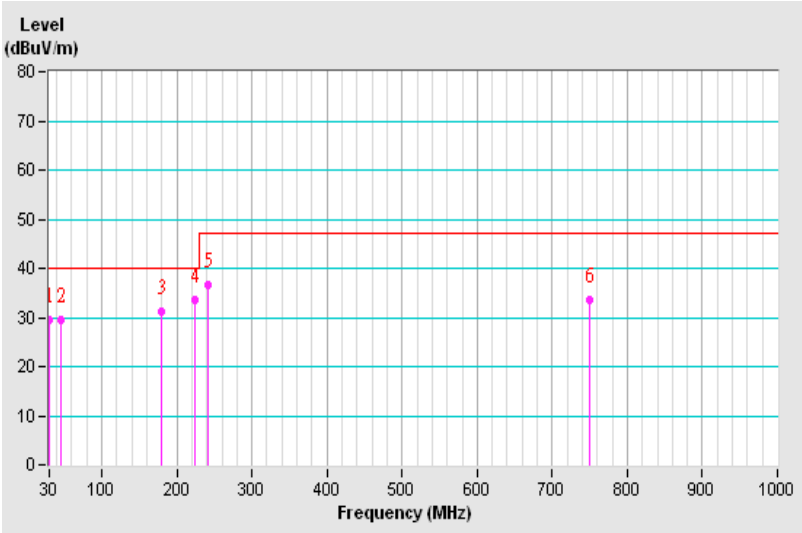


Frequency Range	30MHz ~ 1GHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP), 120kHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 70%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Vertical at 10 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	30.29	29.62 QP	40.00	-10.38	1.15 V	318	44.64	-15.02
2	46.08	29.46 QP	40.00	-10.54	3.43 V	326	42.87	-13.41
3	179.36	31.34 QP	40.00	-8.66	1.82 V	6	45.94	-14.60
4	**223.51**	**33.51 QP**	**40.00**	**-6.49**	**1.00 V**	**24**	**49.51**	**-16.00**
5	241.48	36.65 QP	47.00	-10.35	1.00 V	135	51.29	-14.64
6	750.01	33.53 QP	47.00	-13.47	1.94 V	144	35.94	-2.41

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value



7 Radiated Emissions above 1 GHz

7.1 Limits

Emissions radiated outside of the specified bands, shall be according to the general radiated limits as following:

Radiated Emissions Limits at 10 meters (dBµV/m)				
Frequencies (MHz)	FCC 15B / ICES-003, Class A	FCC 15B / ICES-003, Class B	CISPR 22, Class A	CISPR 22, Class B
1000-3000	Avg: 49.5 Peak: 69.5	Avg: 43.5 Peak: 63.5	Not defined	Not defined
Above 3000			Not defined	Not defined

Radiated Emissions Limits at 3 meters (dBµV/m)				
Frequencies (MHz)	FCC 15B / ICES-003, Class A	FCC 15B / ICES-003, Class B	CISPR 22, Class A	CISPR 22, Class B
1000-3000	Avg: 60 Peak: 80	Avg: 54 Peak: 74	Avg: 56 Peak: 76	Avg: 50 Peak: 70
Above 3000			Avg: 60 Peak: 80	Avg: 54 Peak: 74

Radiated Emissions Limits at 1.5 meters (dBµV/m)				
Frequencies (MHz)	FCC 15B / ICES-003, Class A	FCC 15B / ICES-003, Class B	CISPR 22, Class A	CISPR 22, Class B
Above 18000	Avg: 66 Peak: 86	Avg: 60 Peak: 80	Avg: 66 Peak: 86	Avg: 60 Peak: 80

Notes:
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Frequency Range (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

7.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Agilent Spectrum	E4446A	MY51100009	May 30, 2016	May 29, 2017
Agilent Test Receiver	N9038A	MY51210114	Sep. 09, 2016	Sep. 08, 2017
Agilent Preamplifier	8449B	3008A01924	Feb. 22, 2017	Feb. 21, 2018
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 21, 2017	Feb. 20, 2018
EMCI Preamplifier	EMC184045B	980235	Feb. 22, 2017	Feb. 21, 2018
Schwarzbeck Horn Antenna	BBHA-9170	212	Dec. 30, 2016	Dec. 29, 2017
ETS Horn Antenna	3117	00123980	Dec. 27, 2016	Dec. 26, 2017
Max Full. Turn Table	MF7802	MF7802121	NA	NA
Max Full. Tower	MF7802	MF780208105	NA	NA
Software	Radiated_V8.7.08	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF106-18	Cable-CH8-01	Aug. 15, 2016	Aug. 14, 2017
SUHNER RF cable With 3dB PAD	SF102	Cable-CH8-02(3.6m)	Aug. 15, 2016	Aug. 14, 2017

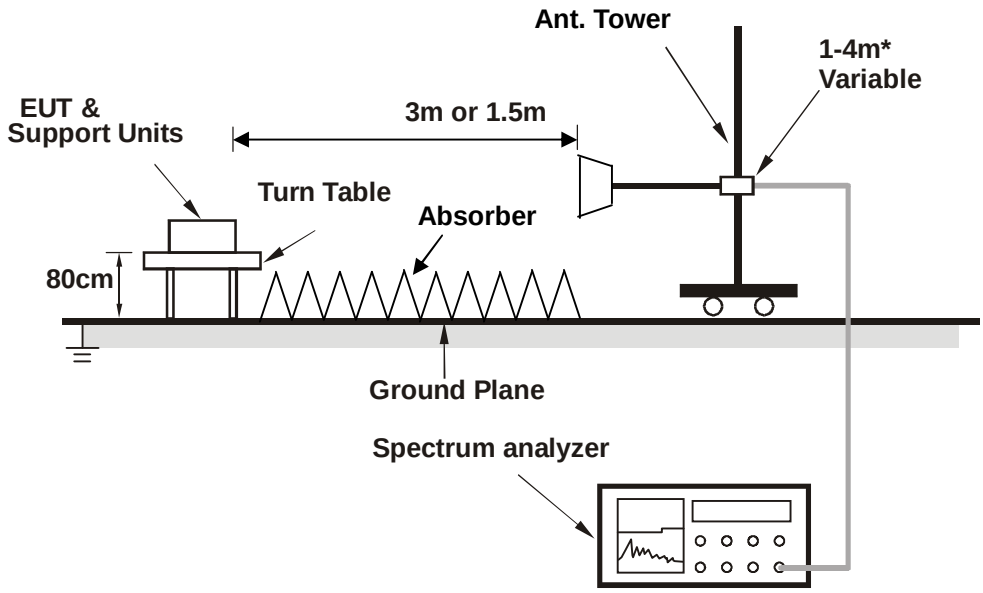
Notes:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Chamber No. 8.
3. The Industry Canada Reference No. IC 7450E-8.
4. The VCCI Site Registration No. G-19
5. The FCC Site Registration No. 493821.
6. Tested Date: Apr. 15 ~ 25, 2017.

7.3 Test Arrangement

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters / 1.5 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The spectrum analyzer system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

Note:

1. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection (PK) at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
2. For measurement of frequency 1 GHz ~ 18 GHz, the EUT was set 3 meters away from the receiver antenna
3. For measurement of frequency 18 GHz ~ 40 GHz, the EUT was set 1.5 meters away from the receiver antenna



* :depends on the EUT height and the antenna 3dB beamwidth both.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

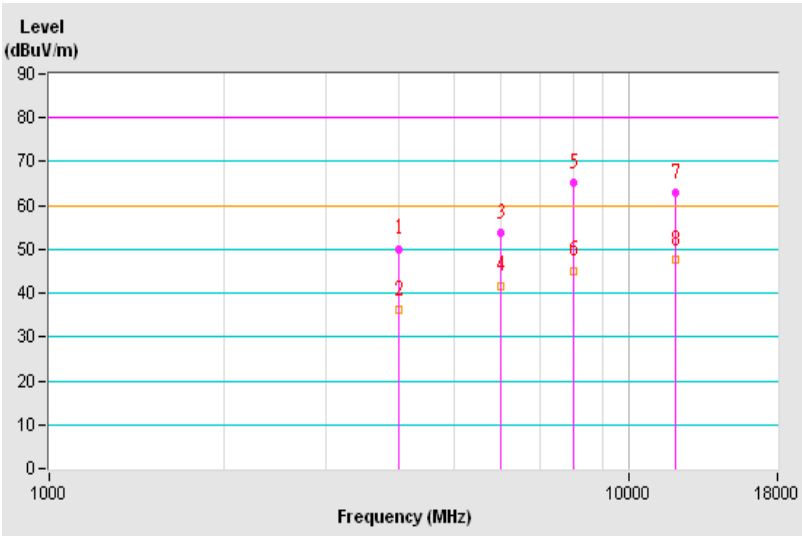
7.4 Test Results

Frequency Range	1GHz ~ 18GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 70%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	4006.25	50.13 PK	80.00	-29.87	1.38 H	360	60.48	-10.35
2	4006.25	36.10 AV	60.00	-23.90	1.38 H	360	46.45	-10.35
3	5997.83	53.90 PK	80.00	-26.10	1.00 H	176	62.00	-8.10
4	5997.83	41.73 AV	60.00	-18.27	1.00 H	176	49.83	-8.10
5	7999.73	65.13 PK	80.00	-14.87	2.02 H	221	72.80	-7.67
6	7999.73	45.16 AV	60.00	-14.84	2.02 H	221	52.83	-7.67
7	11992.33	62.82 PK	80.00	-17.18	1.39 H	0	66.72	-3.90
8	**11992.33**	**47.49 AV**	**60.00**	**-12.51**	**1.39 H**	**0**	**51.39**	**-3.90**

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

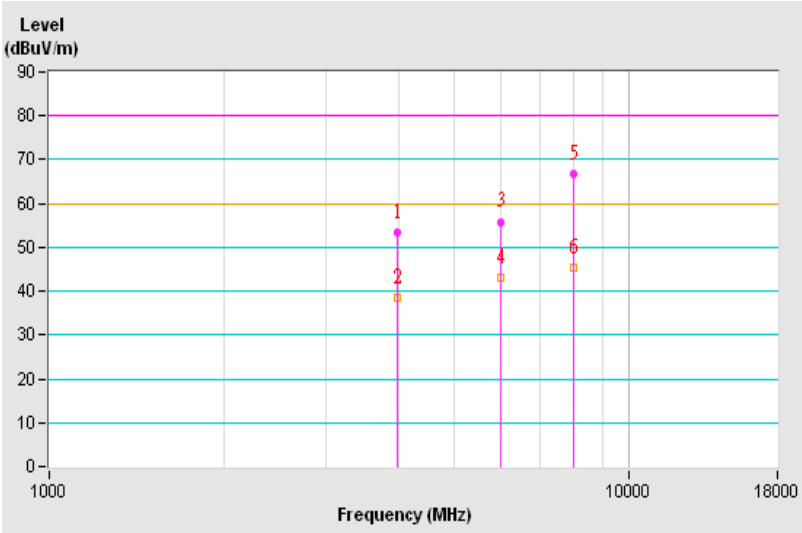


Frequency Range	1GHz ~ 18GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	20℃, 70%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3987.95	53.36 PK	80.00	-26.64	1.80 V	273	63.84	-10.48
2	3987.95	38.34 AV	60.00	-21.66	1.80 V	273	48.82	-10.48
3	5996.78	55.85 PK	80.00	-24.15	2.49 V	351	63.97	-8.12
4	5996.78	42.98 AV	60.00	-17.02	2.49 V	351	51.10	-8.12
5	7999.98	66.84 PK	80.00	-13.16	1.05 V	178	74.51	-7.67
6	7999.98	45.52 AV	60.00	-14.48	1.05 V	178	53.19	-7.67

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

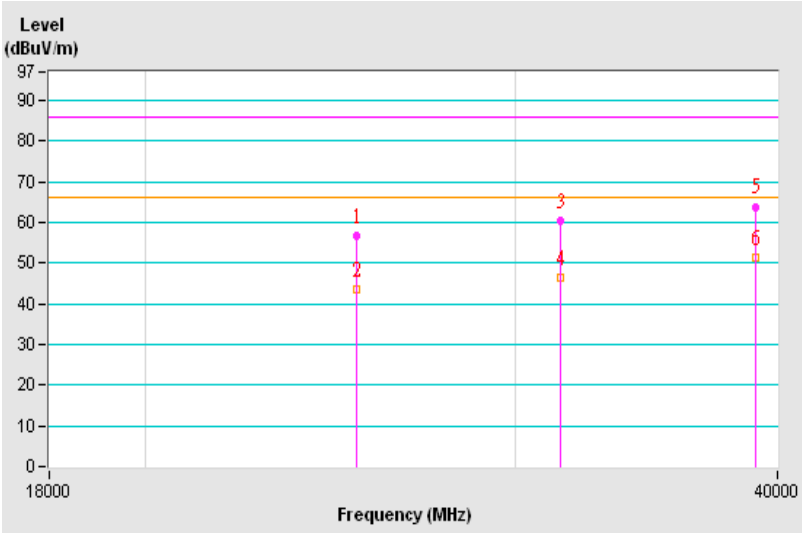


Frequency Range	18GHz ~ 40GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 76%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Horizontal at 1.5 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	25194.45	56.63 PK	86.00	-29.37	1.18 H	278	55.04	1.59
2	25194.45	43.61 AV	66.00	-22.39	1.18 H	278	42.02	1.59
3	31551.82	60.38 PK	86.00	-25.62	1.10 H	182	55.71	4.67
4	31551.82	46.34 AV	66.00	-19.66	1.10 H	182	41.67	4.67
5	39027.67	63.85 PK	86.00	-22.15	1.31 H	346	54.70	9.15
6	39027.67	51.28 AV	66.00	-14.72	1.31 H	346	42.13	9.15

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

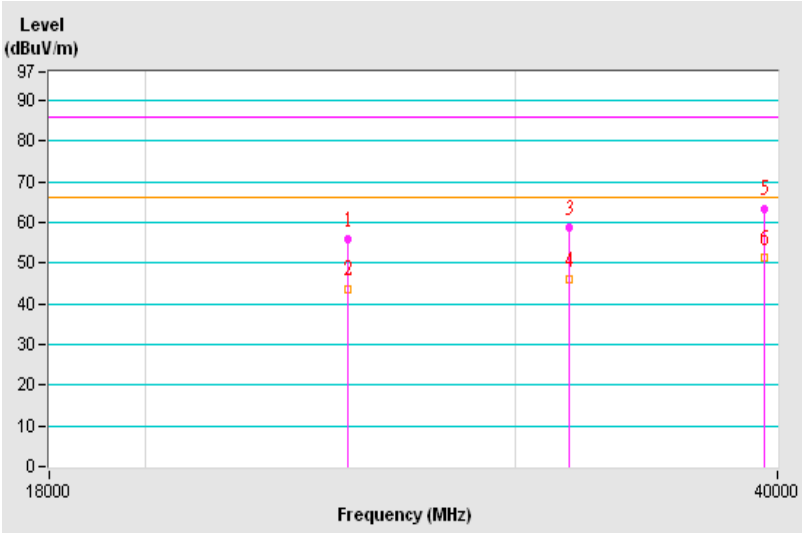


Frequency Range	18GHz ~ 40GHz	**Detector Function & Resolution Bandwidth**	Peak (PK) / Average (AV), 1MHz
Input Power	120Vac, 60Hz	**Environmental Conditions**	23℃, 76%RH
Tested by	Vincent Lin		
Test Mode	Mode 2		

Antenna Polarity & Test Distance : Vertical at 1.5 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	24955.13	56.03 PK	86.00	-29.97	1.10 V	61	53.13	2.90
2	24955.13	43.74 AV	66.00	-22.26	1.10 V	61	40.84	2.90
3	31851.65	58.89 PK	86.00	-27.11	1.14 V	191	53.42	5.47
4	31851.65	46.00 AV	66.00	-20.00	1.14 V	191	40.53	5.47
5	39444.78	63.44 PK	86.00	-22.56	1.38 V	277	54.77	8.67
6	39444.78	51.45 AV	66.00	-14.55	1.38 V	277	42.78	8.67

Remarks:

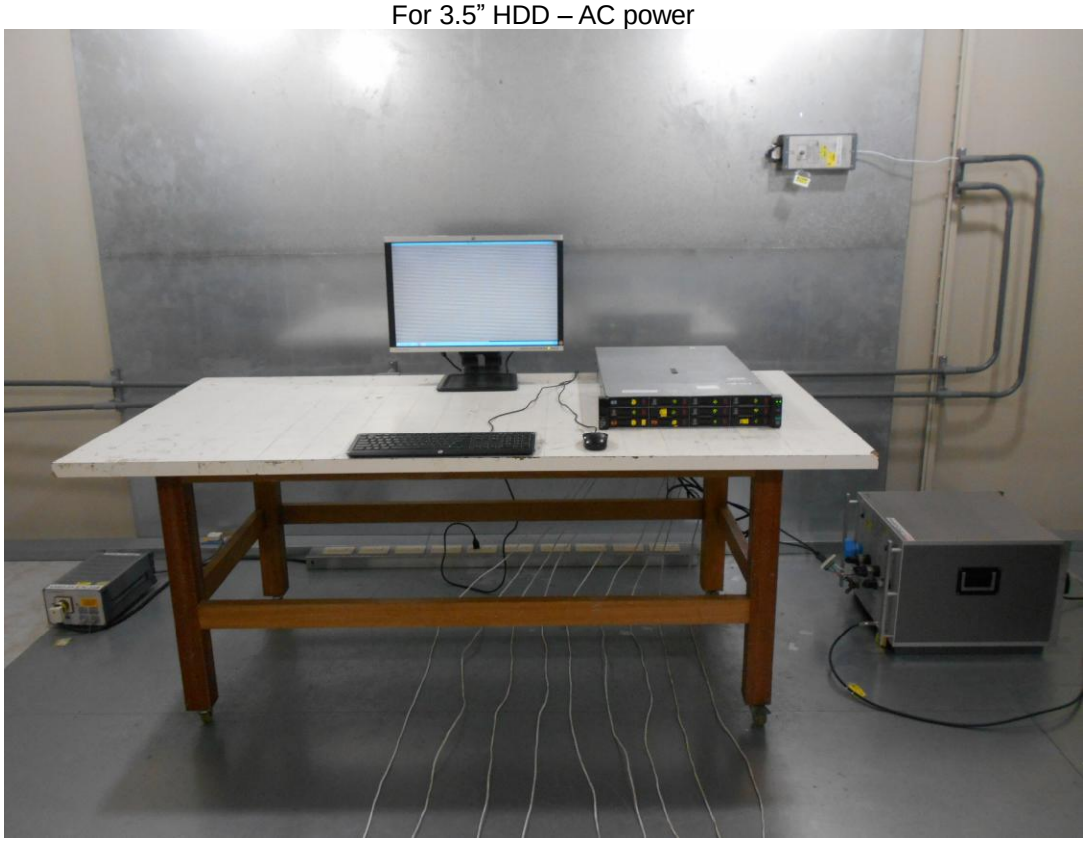
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value

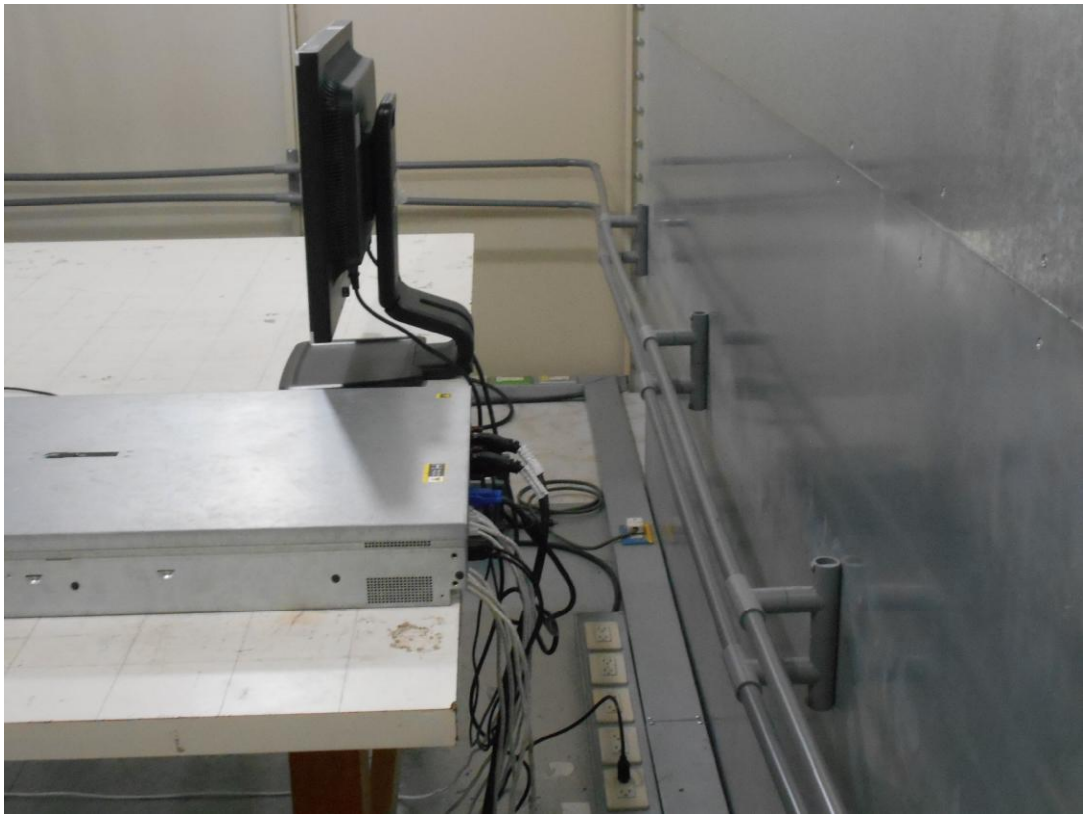


8 Pictures of Test Arrangements

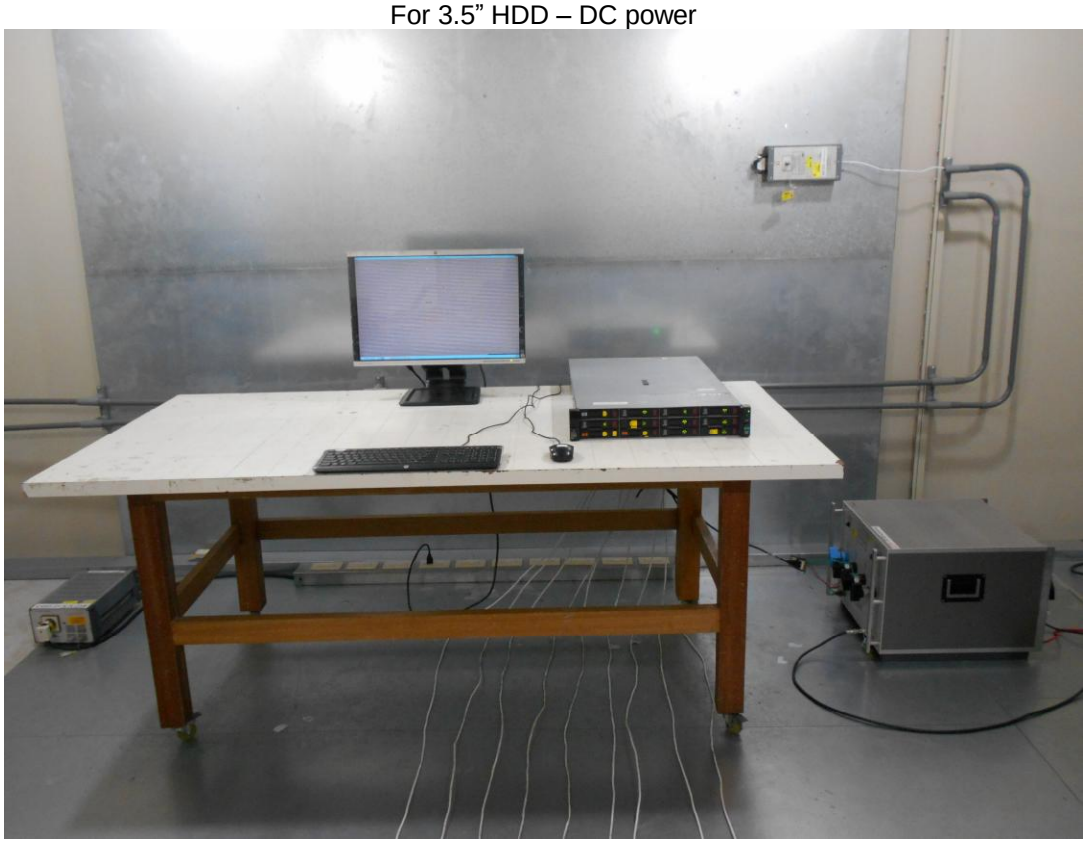
8.1 Conducted Emissions at Mains Ports

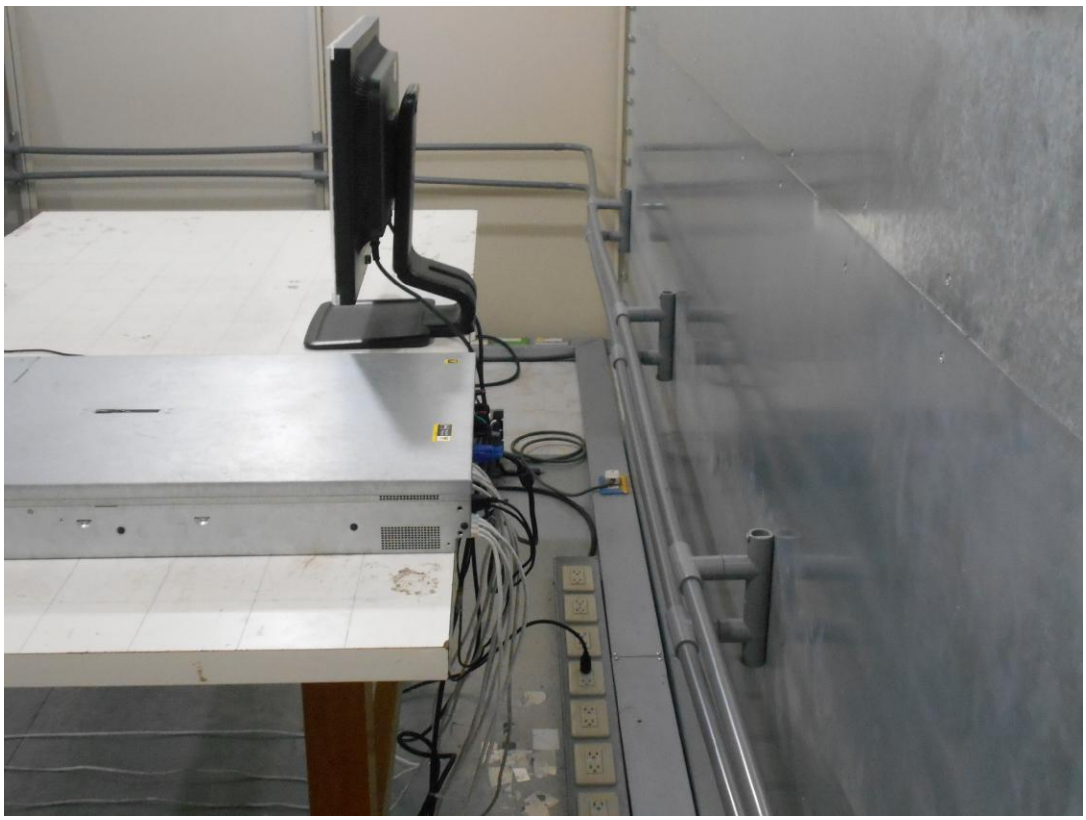
For 3.5” HDD – AC power



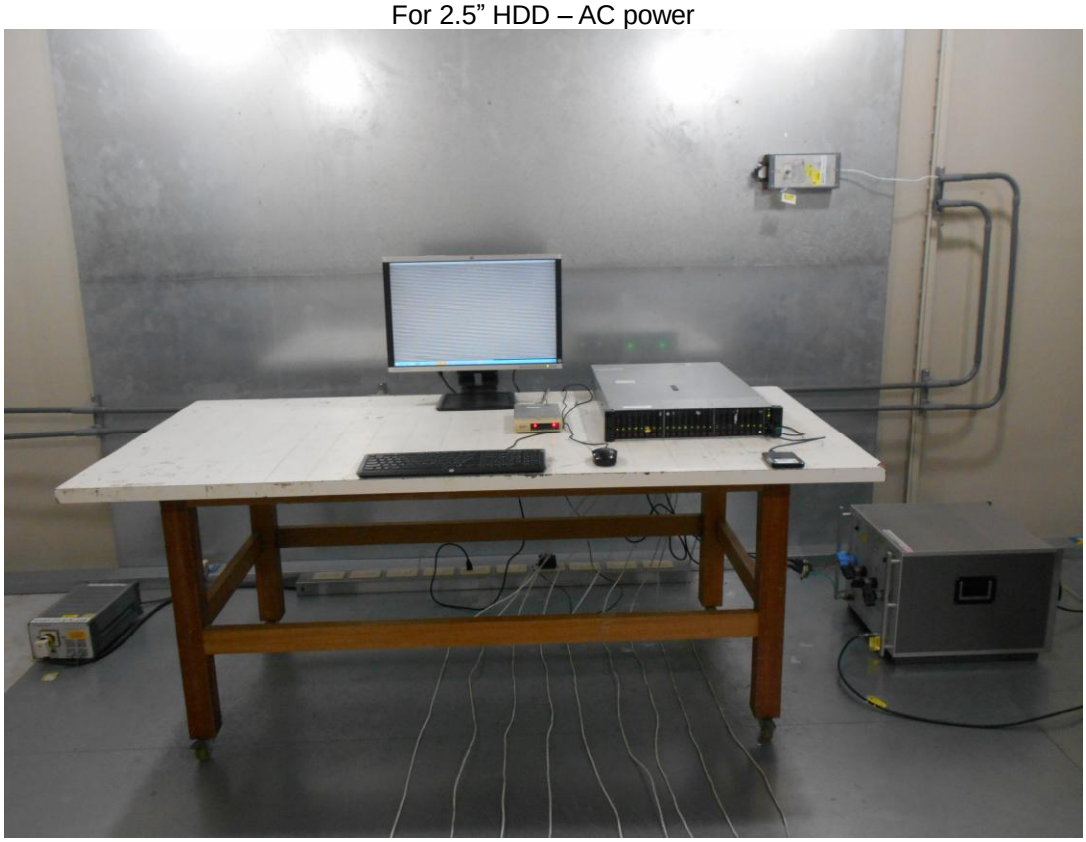


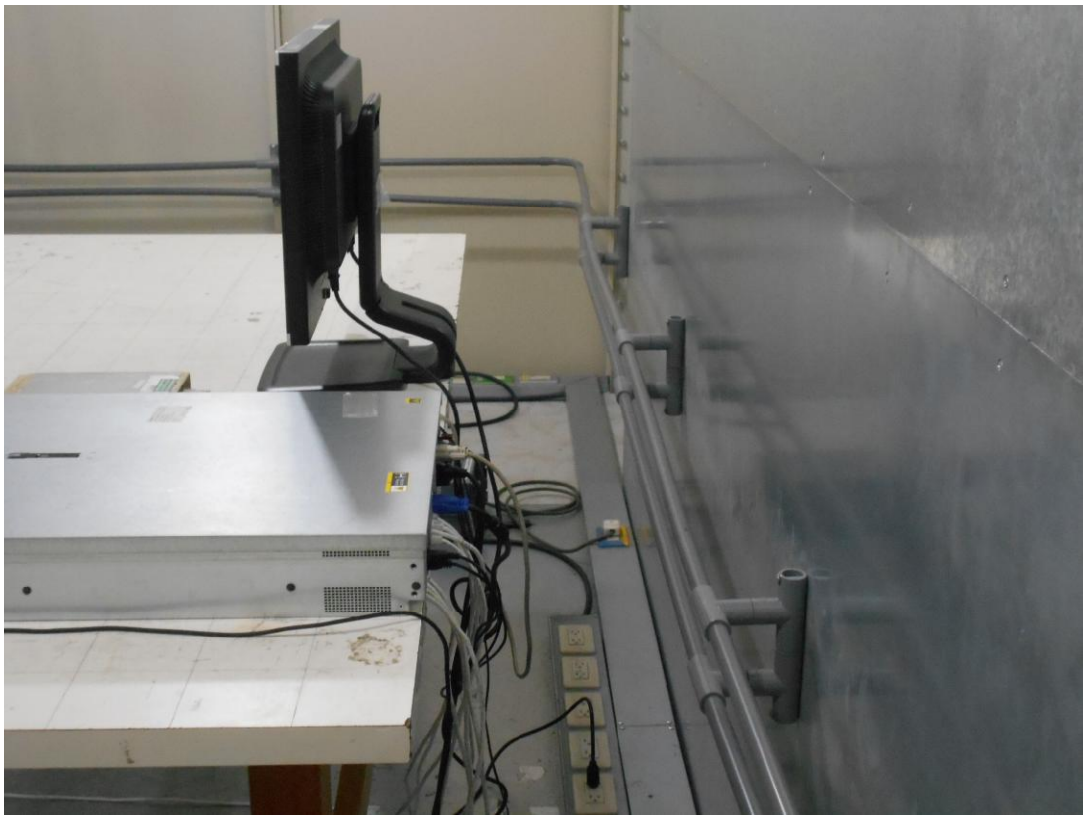
For 3.5” HDD – DC power



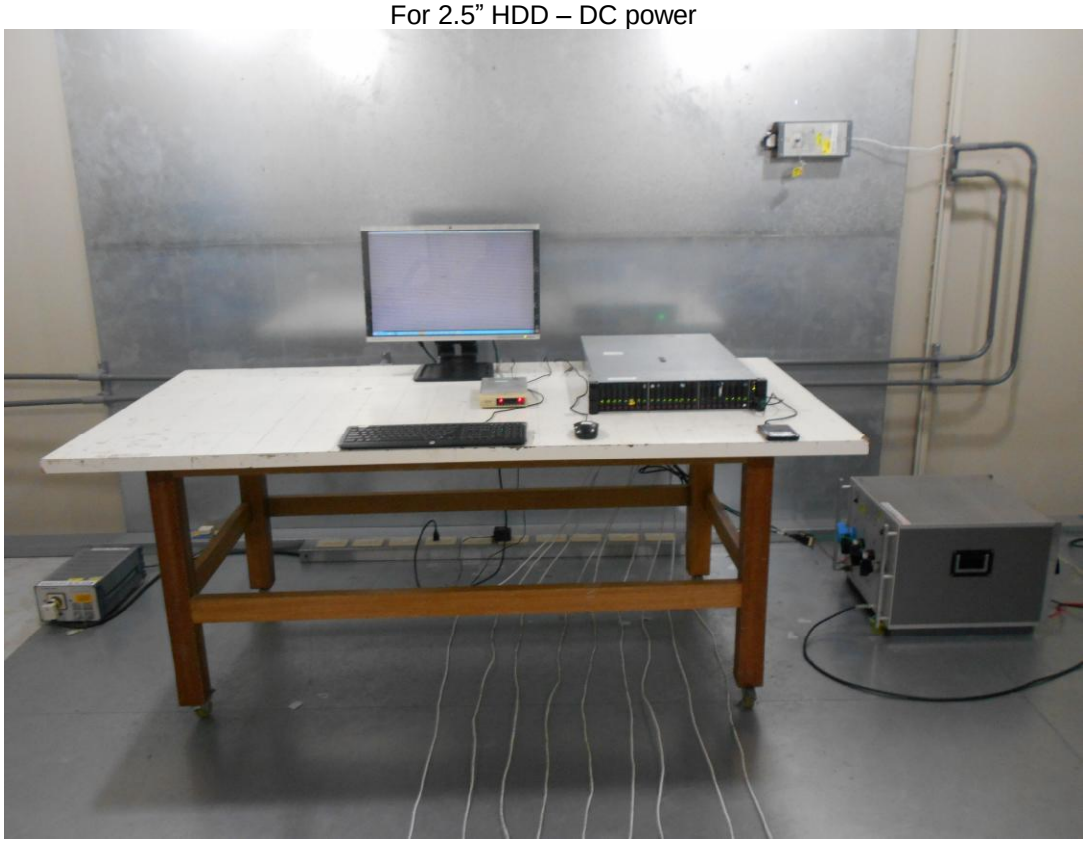


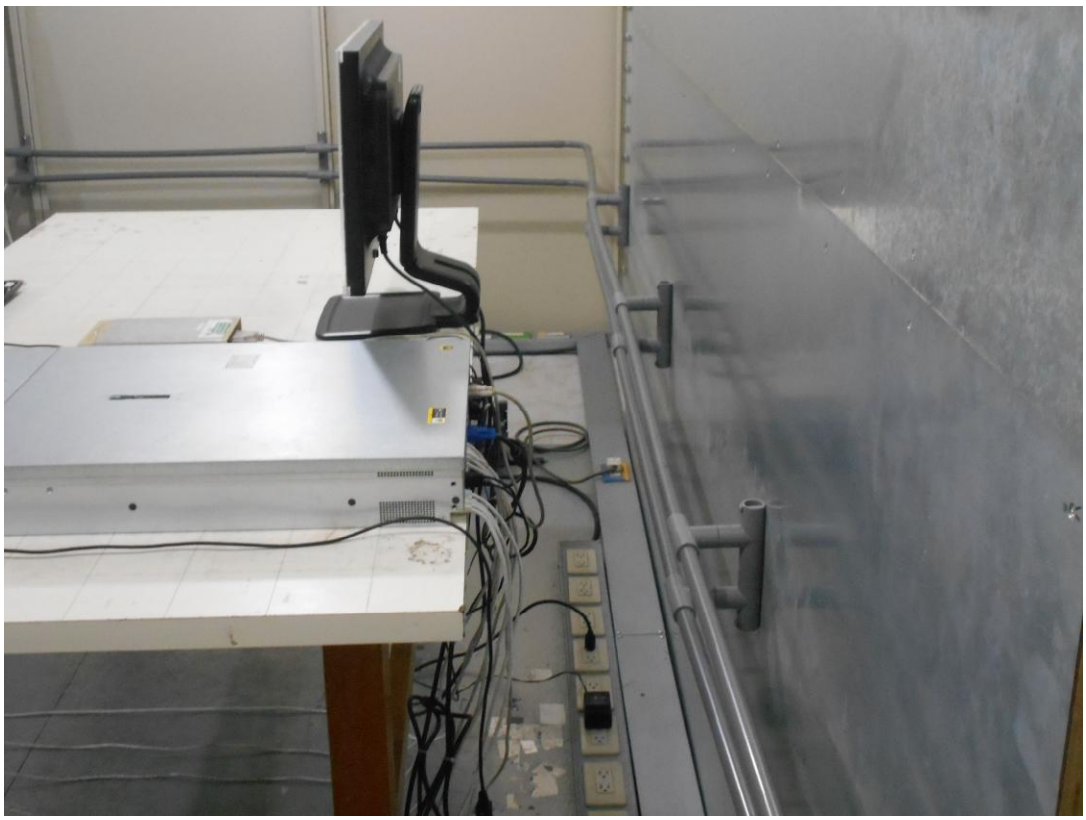
For 2.5” HDD – AC power



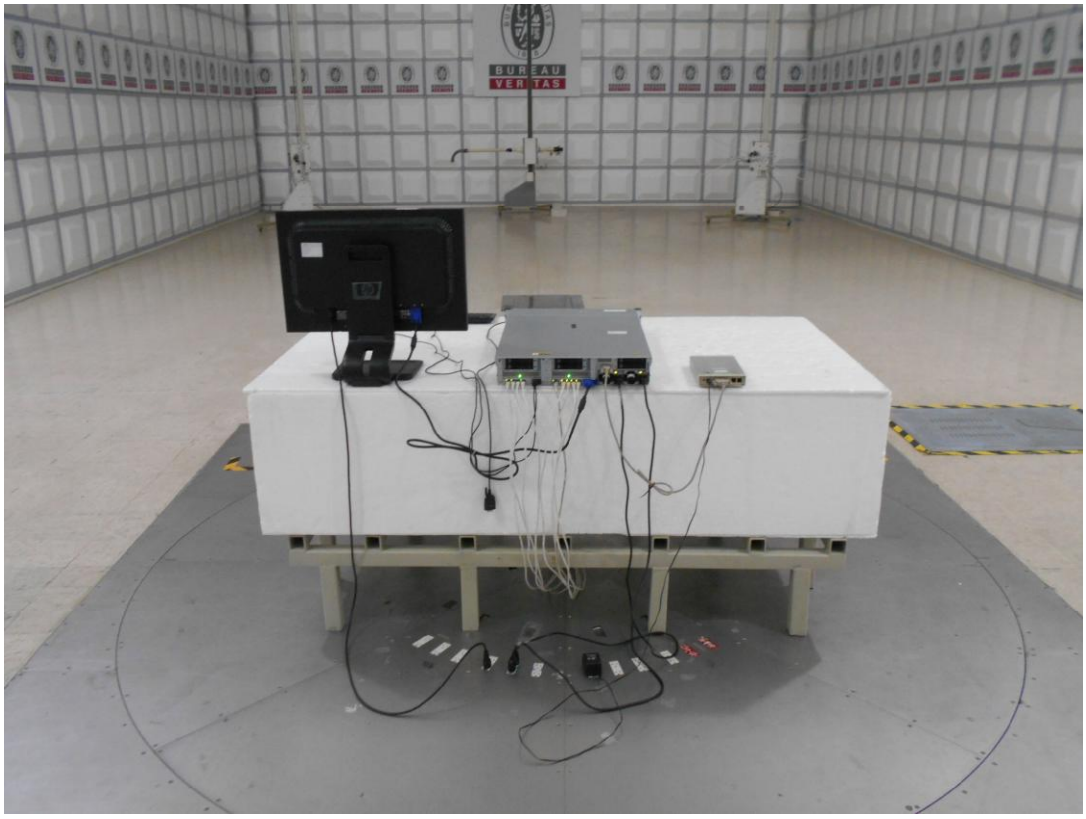


For 2.5” HDD – DC power

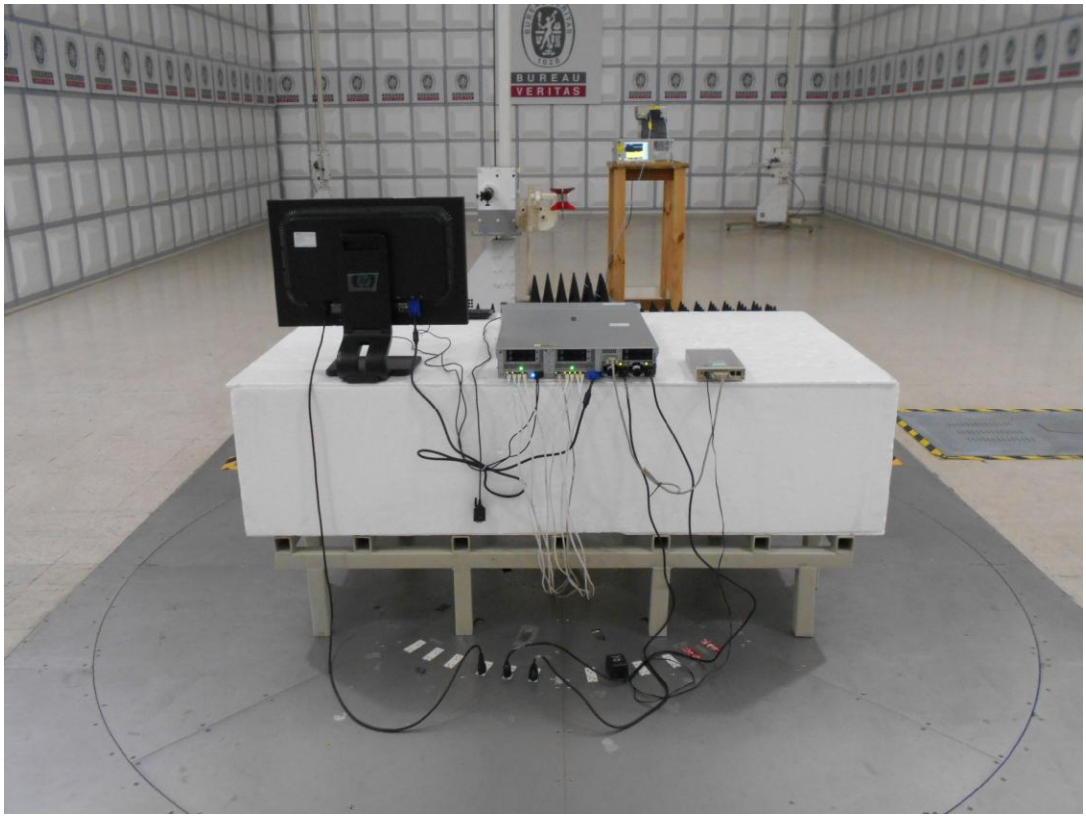




8.2 Radiated Emissions up to 1 GHz



8.3 Radiated Emissions above 1 GHz



Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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