



Statement of Conformity

Reference No. : M00-CERT-CE-2203MAT104
Conformity Report Reference : 22-03-MAT-104
Issued Date : Apr. 18, 2022

This statement of conformity is based on the Electromagnetic Compatibility Directive of 2014/30/EU and complied with the following EMC standards:

Emission: EN 55032:2015 EN 55032:2015+A11:2020 CISPR32:2015 CISPR32:2015+A1:2019 AS/NZS CISPR 32:2015, Class B EN 61000-3-2:2006 +A1:2009 +A2:2009 EN 61000-3-3:2013	Immunity: EN 55035:2017+A11:2020 EN 61000-4-2:2009 EN IEC 61000-4-3:2020 EN 61000-4-4:2012 EN 61000-4-5:2014+A1:2017 EN 61000-4-6:2014 EN 61000-4-8:2010 EN IEC 61000-4-11:2020
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Company : Phihong Technology Co., Ltd.
Address : No. 568, Fuxing 3rd Rd., Guishan District, Taoyuan City, Taiwan.
Product Name : SWITCHING POWER SUPPLY
Regulatory Model: PSAI05R-050QL6



Official stamp of the ETC

(Signature)

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**CONFORMANCE TEST REPORT
FOR
EN 55032 / EN 55035**

Report No.: 22-03-MAT-104

According to:


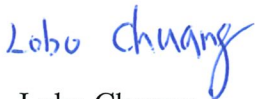

- **Electromagnetic Compatibility Directive: 2014/30/EU**
- **Low Voltage Directive: 2014/35/EU**
- **Radio Equipment Directive: 2014/53/EU**
- **Machinery Directives: 2006/42/EC**

Applicant:	Phihong Technology Co., Ltd.		
Product:	SWITCHING POWER SUPPLY		
Model:	PSAI05R-050QL6		
Brand Name:	PHIHONG		
Date test item received:	2015/08/03	APPENDIX I: 2017/02/15	APPENDIX II: 2022/03/25
Date test campaign completed:	2015/10/08	APPENDIX I: 2017/02/17	APPENDIX II: 2022/04/11
Date of issue:	2015/10/12	APPENDIX I: 2017/02/20	APPENDIX II: 2022/04/18

The test result only corresponds to the tested sample. It is not permitted to copy this report, in part or in full, without the permission of the test laboratory.

Total number of pages of APPENDIX II test report: 10 pages

Total number of pages of ANNEX C test photos: 02 pages

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Laboratory Introduction: Taiwan Testing and Certification Center is recognized, filed and mutual recognition arrangement as following:

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- ② Recognized : BSMI, NCC, FCC(TW1112), ISED(Industry Canada Site # 2949A-2)
- ③ Filing : VCCI (C-13518, R-13177, G-10098, T-11682)
- ④ MRA : Australia, New Zealand, Singapore

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Report Version History:

Report No.	Refer No.:	Date of issue	Difference
15-08-MAT-026	Initial	2015/10/12	----
17-02-MAT-051	15-08-MAT-026	2017/02/20	1. Adds EN 55032 standard for a new report. 2. According to the added standards as above, only EMI will be influenced, it re-tests the test items.
22-03-MAT-104	17-02-MAT-051	2022/04/18	1. Adds EN 55035 standard, updates standard from EN 55032:2015 to EN 55032:2015+A11:2020, from CISPR32:2015 to CISPR32:2015+A1:2019, from EN 61000-4-3:2006+A1:2008+A2:2010 to EN IEC 61000-4-3:2020, from IEC 61000-4-3:2006+A1:2007+A2:2010 to IEC 61000-4-3:2020, from EN 61000-4-5:2006 to EN 61000-4-5:2014+A1:2017, from IEC 61000-4-5:2005 to IEC 61000-4-5:2014/AMD1:2017, from IEC 61000-4-6:2013 to IEC 61000-4-6:2013/AC: 2015, from EN 61000-4-11:2004 to EN IEC 61000-4-11:2020, from IEC 61000-4-11:2004 to IEC 61000-4-11:2020 to re-test. 2. According to the updated standards as above and the differences of EN 55035 and 55024, some of the test items will be influenced, it re-tests RS, Surge and CS test items. 3. As customer's request, it removes all of manufacturer's information, modified product name from SWITCHING ADAPTER to SWITCHING POWER SUPPLY, deletes EN 55022, EN 55024 standard and combines EN 55032 with EN 55035 standard for a one report.

1 GENERAL INFORMATION

Applicant	: Phihong Technology Co., Ltd.	
Address	: No. 568, Fuxing 3rd Rd., Guishan District, Taoyuan City, Taiwan.	
EUT	: SWITCHING POWER SUPPLY	
Brand Name	: PHIHONG	
Model No.	: PSAI05R-050QL6	
Test Standard	Emissions	Immunity
	EN 55032:2015	EN 55035:2017+A11:2020
	EN 55032:2015+A11:2020	EN 61000-4-2:2009
	CISPR32:2015	IEC 61000-4-2:2008
	CISPR32:2015+A1:2019	EN IEC 61000-4-3:2020
	AS/NZS CISPR 32:2015, Class B	IEC 61000-4-3:2020
	EN 61000-3-2:2006 +A1:2009 +A2:2009	EN 61000-4-4:2012
	IEC 61000-3-2:2005 +A1:2008 +A2:2009	IEC 61000-4-4:2012
	EN 61000-3-3:2013	EN 61000-4-5:2014+A1:2017
	IEC 61000-3-3:2013	IEC 61000-4-5:2014/AMD1:2017
		EN 61000-4-6:2014
		IEC 61000-4-6:2013/AC: 2015
		EN 61000-4-8:2010
		IEC 61000-4-8:2009
		EN IEC 61000-4-11:2020
		IEC 61000-4-11:2020

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This testing is not intended to believe the sellers from their legal and/or contractual obligations.

The compliance test is only certified for the test equipment and the results of the testing report relate only to the item tested. The compliance test of this report was conducted in accordance with the appropriate standards. When the EMC measurement uncertainty can meet the requirements of CISPR 16-4-2 standard, it is not included in the verification of test result. It's not intention to assure the quality and performance of the product.

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2.6 The Worst Mode for test:

2.6.1 Operating Conditions of the EUT.

Refer to EN55032 / CISPR 32:

The operational conditions of the EUT shall be determined by the manufacturer according to the typical use of the EUT with respect to the expected highest level of emission. The determined operational mode and the rationale for the conditions shall be stated in the test report.

The EUT shall be operated within the rated (normal) operating voltage range and typical load conditions (mechanical and electrical) for which it is designed. Actual loads should be used whenever possible . If a simulator is used ,it shall represent the actual load with respect to its radio frequency and functional characteristics.

The test programmers or other means of exercising the equipment should ensure that various parts of a system exercised in a manner that permits detection of all system disturbances. For example, in a computer system , tape and disk drivers should be put through a mechanical read-write-erase sequence ; and various portions of memories should be addressed . Any mechanical activities should be performed.

Refer to AS/NZS CISPR 32:

The operational conditions of the EUT shall be determined by the manufacturer according to the typical use of the EUT with respect to the expected highest level of emission. The determined operational mode and the rationale for the conditions shall be stated in the test report.

The EUT shall be operated within the rated (normal) operating voltage range and typical load conditions (mechanical and electrical) for which it is designed. Actual loads should be used whenever possible. If a simulator is used, it shall represent the actual load with respect to its radio frequency and functional characteristics.

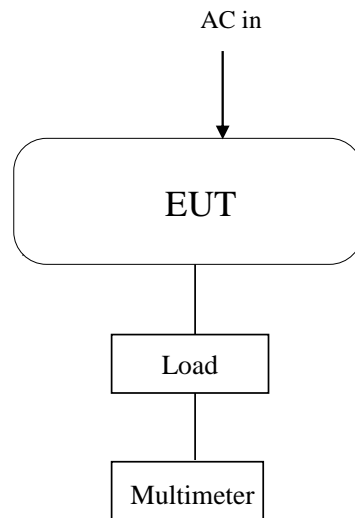
The test programmes or other means of exercising the equipment should ensure that various parts of a system exercised in a manner that permits detection of all system disturbances. For example, in a computer system, tape and disk drivers should be put through a mechanical read-write-erase sequence; and various portions of memories should be addressed . Any mechanical activities should be performed and visual display units should be operated as in Annex B.

Refer to EN55035:

The test shall be made exercising all primary functions in the most representative mode consistent with typical applications The test sample shall be configured in a manner consistent with typical installation practice.

If the equipment is part of a system or can be connected to auxiliary equipment, then the equipment shall be test while connected to the minimum representative configuration of auxiliary equipment necessary to exercise the ports in a similar manner to that described in CISPR22.

The configuration and mode of operating during the tests shall be precisely noted in the test report. It is not always possible to test every function of the apparatus; in such cases , the most critical mode of operation shall be selected.

2.6.2 Testing Setup Block Diagram

3 SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Conducted Emissions

■-PASS

QP EMI value to the limit: -10.81 dB at 2.6620 MHz

3.1.2 Radiated Emissions

■-PASS

QP EMI value to the limit: -4.57 dB at 61.1022 MHz

3.1.3 Harmonics Current Emissions

■-Pass

The harmonics current values were under the limits of the class A equipment of the EN 61000-3-2.

3.1.4 Voltage Fluctuations and Flicker

■-Pass

The voltage fluctuations and flicker values were under the limits of the EN 61000-3-3 requirements.

3.2 Immunity:

3.2.1 Immunity Criteria:

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

Performance criterion A: The EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

Performance criterion B: The EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

Performance criterion C: Temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

3.2.2 Electrostatic Discharge Immunity:

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion B (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.3 RF Radiated Fields Immunity:

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion A

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.4 EFT/Burst Immunity:

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion B (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.5 Surge Immunity:

- - No Degradation of Function
- - Distortion of Function
- - Error of Function

Requirement: Criterion B (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.6 RF Common Mode Immunity:

- - No Degradation of Function
- - Distortion of Function
- - Error of Function

Requirement: Criterion A

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.7 Power Frequency Magnetic Field Immunity:

- - No Degradation of Function
- - Distortion of Function
- - Error of Function

Requirement: Criterion A

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.8 Voltage Interruptions and Voltage Dips Immunity:

- - No Degradation of Function
- - Distortion of Function
- - Error of Function

Requirement: Criterion C (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.3 Summary of test Results and Applied Level:

Manufacturer level requirements: (Custom's Specification)

Summary of test Results and Applied Level			
Emission			
Test Standard	Test Item	Test Result	Applied Level and M.U.
EN 55022: 2010 + AC:2011 / CISPR 22:2008 / AS/NZS CISPR 22:2009 + A1:2010, Class B	Radiated Emission	PASS	Class B @ 30MHz~1GHz, U=±4.74dB @ 1GHz~6GHz, U=±4.96dB
EN 55022: 2010 + AC:2011 / CISPR 22:2008 / AS/NZS CISPR 22:2009 + A1:2010, Class B	Conducted Emission	PASS	Class B @ AC Port: 0.15MHz~30MHz, U=±2.92dB @ ISN: 0.15MHz~30MHz, U=±3.00dB
EN 61000-3-2:2006 +A1:2009 +A2:2009 / IEC 61000-3-2:2005 +A1:2008 +A2:2009, Class A	Harmonic Current Emission	PASS	Class A @MU, U=±1.283%
EN 61000-3-3:2013 / IEC 61000-3-3:2013	Voltage Fluctuation and Flicker Test	PASS	All parameter @MU, U=±1.283%
Immunity [EN 55024:2010]			
EN 61000-4-2:2009 / IEC 61000-4-2:2008	Electrostatic Discharge Test (ESD)	PASS	@ Contact Discharge up to <u>±4KV</u> @ Air Discharge up to <u>±8KV</u> @ measurement uncertainty U=±56V
EN 61000-4-3:2006+A1:2008+ A2:2010 / IEC 61000-4-3:2006+A1:2007+A2:2010	Radiated , RF Immunity (RS)	PASS	@ Frequency: <u>80MHz-1000MHz</u> @ 3V/m (Unmodulated) , 1KHz Amplitude Modulated with modulation depth 80% @ measurement uncertainty U=±1.37
EN 61000-4-4:2012 / IEC 61000-4-4:2012	Electrical Fast Transient/burst Test (EFT)	PASS	@ Power port : <u>±1KV</u> @ measurement uncertainty U=±2.95V
EN 61000-4-5:2006 / IEC 61000-4-5:2005	Surge Immunity	PASS	@ Power port : <u>±0.5KV, ±1KV</u> @ measurement uncertainty U=±3.55V
EN 61000-4-6:2014 / IEC 61000-4-6:2013	Conducted , RF Immunity (CS)	PASS	@ Frequency: <u>0.15MHz-80MHz</u> @ 3V/m (Unmodulated) , 1KHz Amplitude Modulated with modulation depth 80% @ measurement uncertainty U=±2.3
EN 61000-4-8:2010 / IEC 61000-4-8:2009	Power Frequency Magnetic Field (MS)	PASS	1A/m , 50Hz
EN 61000-4-11:2004 / IEC 61000-4-11:2004	Voltage dips, short interruptions and voltage variations on power supply input lines	PASS	>95% Voltage variation , 5s >95% Voltage DIP , 10ms 30% Voltage DIP , 500ms @ measurement uncertainty U=±3.55

Note : Measurement uncertainty U=±X . Means the expanded measure uncertainty U=±X , the coverage factor k=2, approximately a 95% level of confidence.

4 TEST DATA & RELATED INFORMATIONS

4.1 Emissions:

4.1.1 Conducted Emissions Test:

4.1.1.1 Conducted Emissions Test Data:

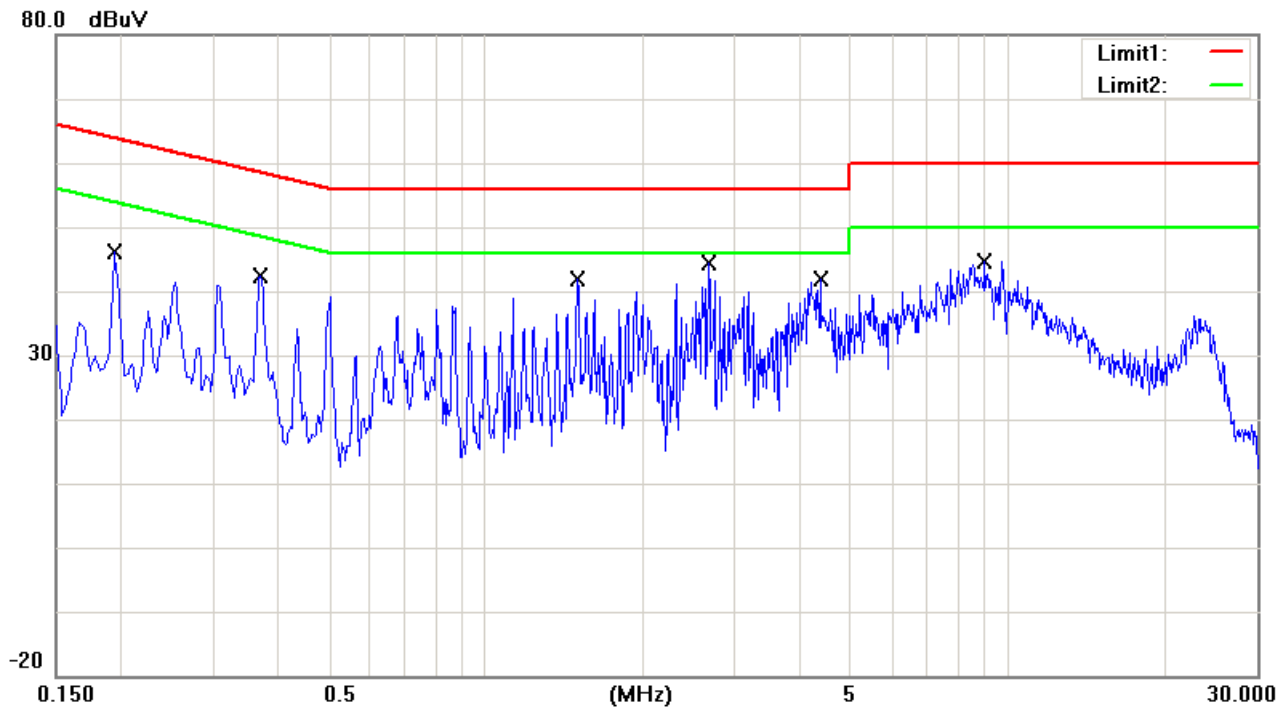
A. Operating Conditions of the EUT: Full Load

Test Date: Oct. 05, 2015

Temperature: 23 °C

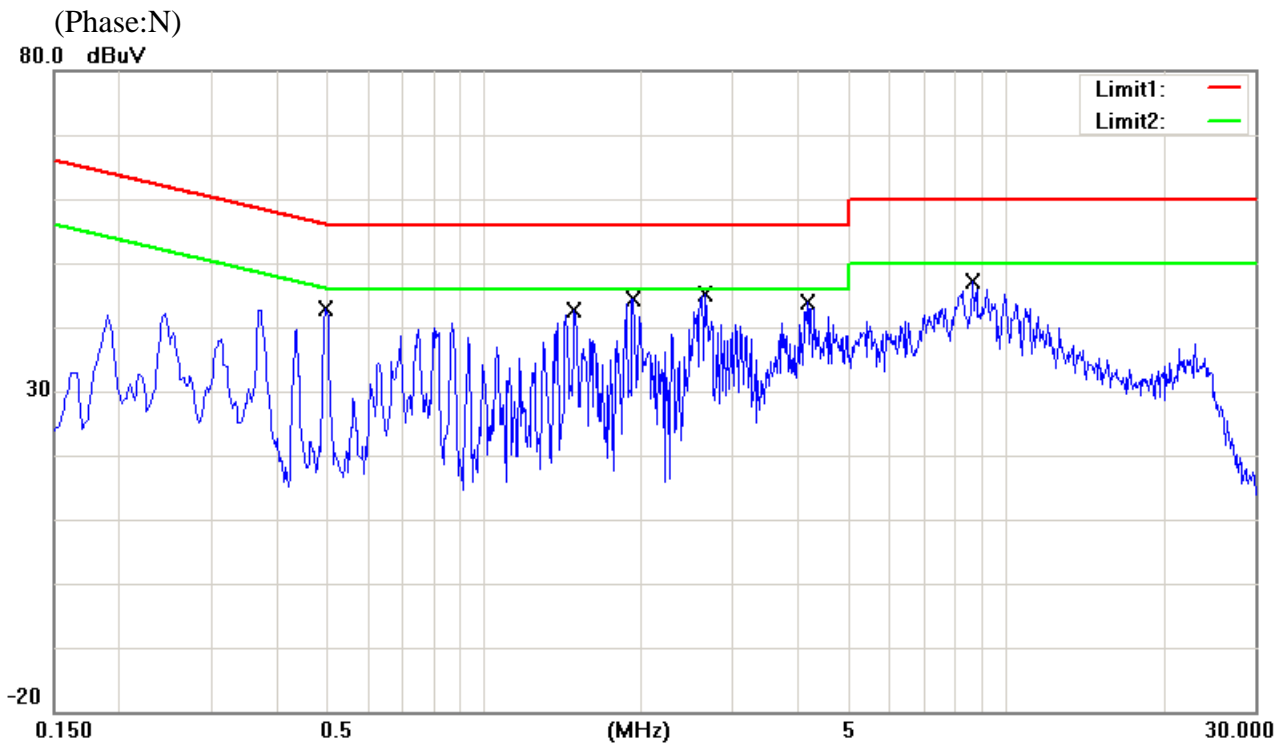
Humidity: 59 %

(Phase:L)



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	0.1940	36.54	QP	9.65	46.19	63.86	-17.67
2	0.3700	32.72	QP	9.66	42.38	58.50	-16.12
3	1.5020	32.15	QP	9.69	41.84	56.00	-14.16
4	2.6780	34.68	QP	9.72	44.40	56.00	-11.60
5	4.3660	32.04	QP	9.74	41.78	56.00	-14.22
6	9.0460	34.80	QP	9.81	44.61	60.00	-15.39

- Notes:
- 1) Place of measurement: EMC LAB. of the ETC (2F)
 - 2) The EUT was placed 0.8m above reference ground plane.
 - 3) Example calculation : result for 0.1940 MHz: $36.54 + 9.65 = 46.19 \text{ dB}\mu\text{V}$
 - 4) ① If the data table appeared symbol of "****" means the value was too low to be measured.
 ② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.
 ③ If the data table appeared symbol of "#" means the noise was low, so record the peak value.
 - 5) The expanded measure uncertainty, mean the coverage factor $k=2$, approximately a 95% level of confidence.
 $\pm 2.92\text{dB. (0.15MHz}\sim\text{30MHz)}$



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	0.4980	33.27	QP	9.64	42.91	56.03	-13.12
2	1.4900	32.90	QP	9.67	42.57	56.00	-13.43
3	1.9340	34.62	QP	9.69	44.31	56.00	-11.69
4	2.6620	35.49	QP	9.70	45.19	56.00	-10.81
5	4.1660	34.15	QP	9.72	43.87	56.00	-12.13
6	8.6740	37.25	QP	9.81	47.06	60.00	-12.94

- Notes:
- 1) Place of measurement: EMC LAB. of the ETC (2F)
 - 2) The EUT was placed 0.8m above reference ground plane.
 - 3) Example calculation : result for 0.4980 MHz: $33.27 + 9.64 = 42.91 \text{ dB}\mu\text{V}$
 - 4) ① If the data table appeared symbol of "***" means the value was too low to be measured.
 ② If the data table appeared symbol of "----" means the Q.P. value is under the limit for AVG. so, the AVG. value doesn't need to be measured.
 ③ If the data table appeared symbol of “#” means the noise was low, so record the peak value.
 - 5) The expanded measure uncertainty, mean the coverage factor $k=2$, approximately a 95% level of confidence.
 $\pm 2.92\text{dB. (0.15MHz}\sim\text{30MHz)}$

4.1.2 Radiated Emissions Test:

4.1.2.1 Radiated Emissions Test Data:

A. Operating Conditions of the EUT: Full Load

Test Date: Oct. 07, 2015

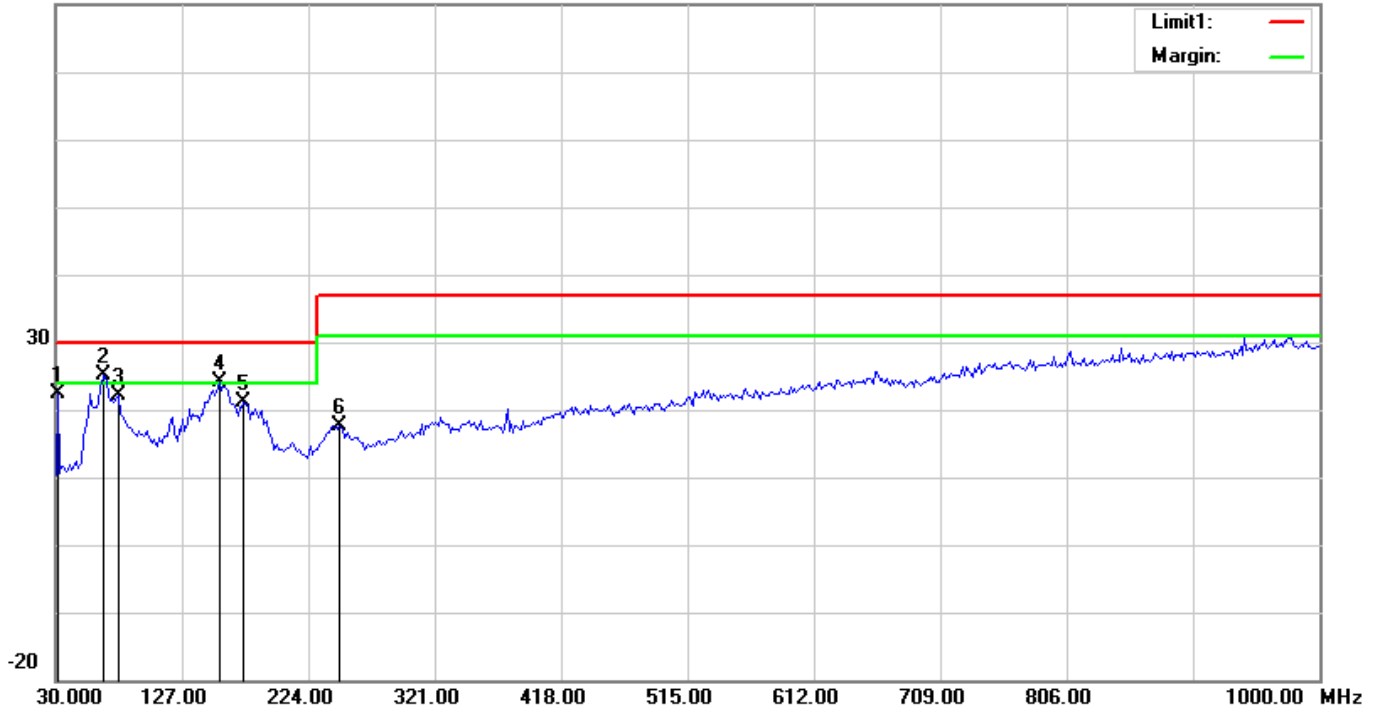
Temperature: 26 °C

Humidity: 60 %

Measurement Distance: 10m (30MHz~1GHz)

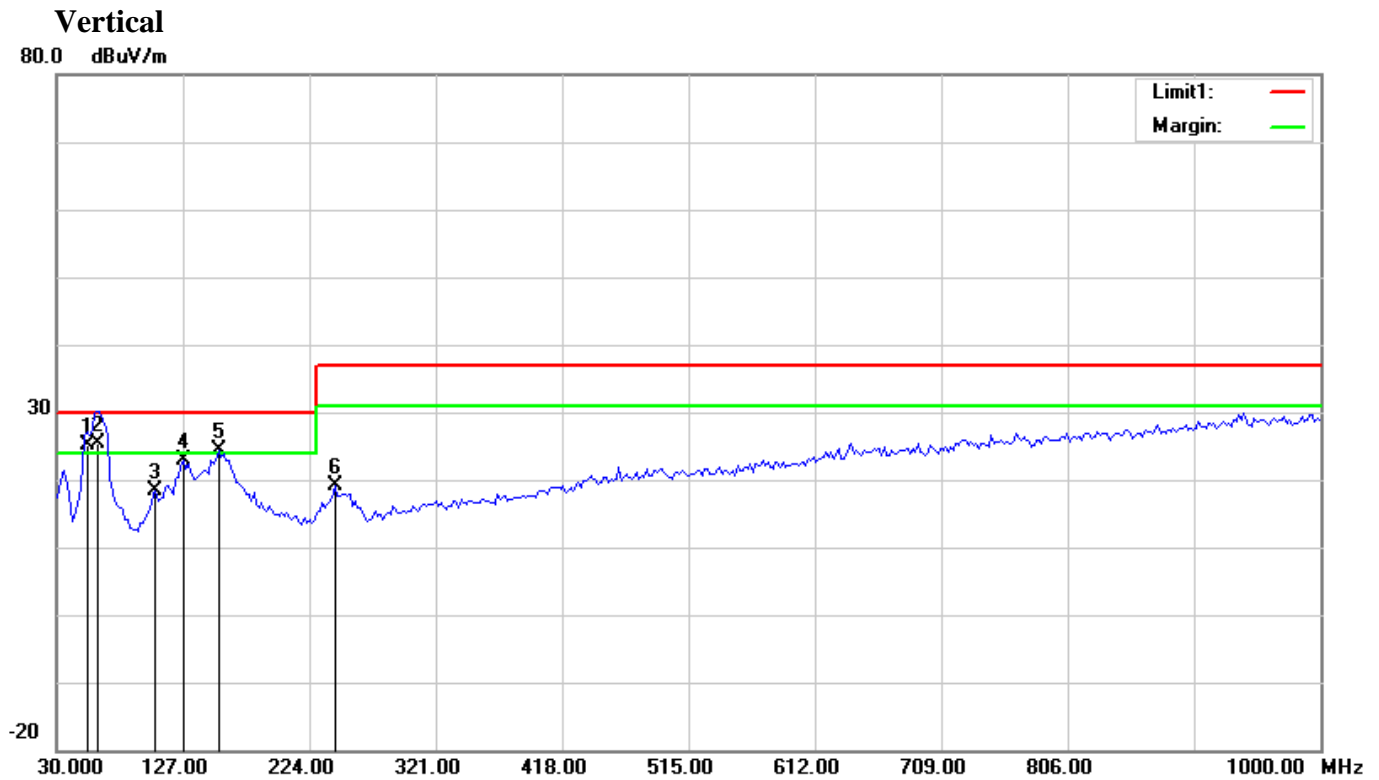
Horizontal

80.0 dBuV/m



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	31.5545	39.79	QP	-17.52	22.27	30.00	-7.73
2	67.3077	42.72	QP	-17.70	25.02	30.00	-4.98
3	78.1891	40.98	QP	-18.97	22.01	30.00	-7.99
4	155.9135	30.11	QP	-6.06	24.05	30.00	-5.95
5	174.5673	29.96	QP	-8.77	21.19	30.00	-8.81
6	247.6282	30.48	QP	-12.84	17.64	37.00	-19.36

- Notes:
- 1) Place of Measurement: Measuring site of the ETC (1F)
 - 2) Measurement Distance: 10 m
 - 3) Height of table on which the EUT was placed: 0.8 m
 - 4) Height of Receiving Antenna: 1 - 4 m
 - 5) Example Calculation : result for 31.5545 MHz: $39.79 + (-17.52) = 22.27 \text{ dB}\mu\text{V/m}$
 - 6) ① If the data table appeared symbol of "***" means the value was too low to be measured.
 ② If the data table appeared symbol of "#" means the noise was low, so record the peak value.
 - 7) The expanded measure uncertainty, mean the coverage factor $k=2$, approximately a 95% level of confidence.
 - + 4.94dB / - 4.94dB ($30\text{MHz} \leq f \leq 300\text{MHz}$)
 - + 4.94dB / - 4.94dB ($300\text{MHz} \leq f \leq 1\text{GHz}$)
 - + 5.1dB / - 5.1dB ($1\text{GHz} \leq f \leq 6\text{GHz}$)
 - + 4.58dB / - 4.58dB ($6\text{GHz} \leq f \leq 18\text{GHz}$)



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	53.3267	41.56	QP	-16.40	25.16	30.00	-4.84
2	61.1022	41.62	QP	-16.19	25.43	30.00	-4.57
3	105.8116	34.06	QP	-15.78	18.28	30.00	-11.72
4	127.1944	34.44	QP	-11.48	22.96	30.00	-7.04
5	154.4088	29.96	QP	-5.66	24.30	30.00	-5.70
6	243.8277	32.71	QP	-13.55	19.16	37.00	-17.84

- Notes:
- 1) Place of Measurement: Measuring site of the ETC (1F)
 - 2) Measurement Distance: 10 m
 - 3) Height of table on which the EUT was placed: 0.8 m
 - 4) Height of Receiving Antenna: 1 - 4 m
 - 5) Example Calculation : result for 53.3267 MHz: $41.56 + (-16.40) = 25.16 \text{ dB}\mu\text{V/m}$
 - 6) ① If the data table appeared symbol of "****" means the value was too low to be measured.
 ② If the data table appeared symbol of "#" means the noise was low, so record the peak value.
 - 7) The expanded measure uncertainty, mean the coverage factor $k=2$, approximately a 95% level of confidence.
 - + 4.98dB / - 4.98dB ($30\text{MHz} \leq f \leq 300\text{MHz}$)
 - + 4.98dB / - 4.98dB ($300\text{MHz} \leq f \leq 1\text{GHz}$)
 - + 5.18dB / - 5.18dB ($1\text{GHz} \leq f \leq 6\text{GHz}$)
 - + 4.9dB / - 4.9dB ($6\text{GHz} \leq f \leq 18\text{GHz}$)

4.1.3 Harmonics Current Emissions Test:**4.1.3.1 Harmonics Current Emissions Test Data:**A. Operating Conditions of the EUT: Full Load

Test Date: Oct. 05, 2015

Test Specification	IEC 61000-3-2:2005 +A1:2008 +A2:2009	
Climatic Condition	Ambient Temperature: <u>23</u> °C	Relative Humidity: <u>51</u> % RH
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz	

Test data see the next page.



Report title:	
Company Name:	
Date of test:	15:35 5.Oct 2015
Measurement file name:	Harmonics_3_2_Ed3.rsd
Tester:	
Standard used:	EN/IEC 61000-3-2 Ed.3 Long cyclic Equipment class A <= 150% of the limit (Limit factor: 1.00)
Observation time:	180s
Windows width:	10 periods - (EN/IEC 61000-4-7 Edition 2002 + A1:2008)
Customer:	
E. U. T.:	Switching Power Supply (PSAIO5R-050QL6)
Temperature :	
Humidity :	

Test Result	
E. U. T.:	PASS
Power Source:	PASS

E. U. T. Result

Check harmonics 2..40 [exception odd 21..39]:

Harmonic(s) > 150%:	
Order (n):	None
Harmonic(s) with average > 100%:	
Order (n):	None

Check odd harmonics 21..39:

All Partial Odd Harmonics below partial limits.	
Harmonic(s) > 150%:	
Order (n):	None
Harmonic(s) with average > 150%:	
Order (n):	None

Power Source Result

First dataset out of limit:	
DS (time):	None
Harmonic(s) out of limit:	
Order (n):	None

Average harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	28.153E-3			
2	1.243E-3			PASS
3	25.541E-3	1.110	2.30	PASS
4	1.333E-3			PASS
5	23.663E-3	2.076	1.14	PASS
6	1.141E-3			PASS
7	21.373E-3	2.776	770.00E-3	PASS
8	933.519E-6			PASS
9	18.591E-3	4.648	400.00E-3	PASS
10	885.563E-6			PASS
11	15.582E-3	4.722	330.00E-3	PASS
12	870.195E-6			PASS
13	12.430E-3	5.919	210.00E-3	PASS
14	1.044E-3			PASS
15	9.508E-3	6.338	150.00E-3	PASS
16	915.070E-6			PASS
17	7.098E-3	5.363	132.35E-3	PASS
18	1.306E-3			PASS
19	5.335E-3	4.505	118.42E-3	PASS
20	883.021E-6			PASS
21	4.423E-3			PASS
22	879.094E-6			PASS
23	4.162E-3			PASS
24	866.974E-6			PASS
25	4.115E-3			PASS
26	849.693E-6			PASS
27	3.954E-3			PASS
28	995.798E-6			PASS
29	3.622E-3			PASS
30	826.698E-6			PASS
31	3.131E-3			PASS
32	969.885E-6			PASS
33	2.642E-3			PASS
34	835.042E-6			PASS
35	2.164E-3			PASS
36	831.112E-6			PASS
37	1.910E-3			PASS
38	836.413E-6			PASS
39	1.739E-3			PASS
40	840.161E-6			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum harmonic current results

Hn	I _{eff} [A]	% of Limit	Limit [A]	Result
1	28.951E-3			
2	1.493E-3			PASS
3	26.150E-3	0.758	3.45	PASS
4	1.524E-3			PASS
5	24.204E-3	1.415	1.71	PASS
6	1.418E-3			PASS
7	21.781E-3	1.886	1.15	PASS
8	1.058E-3			PASS
9	18.925E-3	3.154	600.00E-3	PASS
10	981.455E-6			PASS
11	15.943E-3	3.221	495.00E-3	PASS
12	981.013E-6			PASS
13	12.661E-3	4.019	315.00E-3	PASS
14	1.221E-3			PASS
15	9.726E-3	4.322	225.00E-3	PASS
16	1.165E-3			PASS
17	7.275E-3	3.665	198.52E-3	PASS
18	1.482E-3			PASS
19	5.561E-3	3.131	177.63E-3	PASS
20	1.021E-3			PASS
21	4.677E-3			PASS
22	985.655E-6			PASS
23	4.845E-3			PASS
24	984.512E-6			PASS
25	4.393E-3			PASS
26	970.415E-6			PASS
27	4.179E-3			PASS
28	1.153E-3			PASS
29	3.801E-3			PASS
30	929.380E-6			PASS
31	3.287E-3			PASS
32	1.103E-3			PASS
33	2.852E-3			PASS
34	947.595E-6			PASS
35	2.351E-3			PASS
36	931.953E-6			PASS
37	2.058E-3			PASS
38	990.702E-6			PASS
39	1.863E-3			PASS
40	957.472E-6			PASS

Harmonic currents less than 0.6% of the input current measured under the test conditions, or less than 5 mA, whichever is greater, are disregarded.

Maximum harmonic voltage results

Hn	Ueff [V]	Ueff [%]	Limit [%]	Result
1	231.68	100.731		
2	108.31E-3	0.047	0.2	PASS
3	61.13E-3	0.027	0.9	PASS
4	35.98E-3	0.016	0.2	PASS
5	37.89E-3	0.016	0.4	PASS
6	32.12E-3	0.014	0.2	PASS
7	67.89E-3	0.030	0.3	PASS
8	28.47E-3	0.012	0.2	PASS
9	81.37E-3	0.035	0.2	PASS
10	8.76E-3	0.004	0.2	PASS
11	54.77E-3	0.024	0.1	PASS
12	7.34E-3	0.003	0.1	PASS
13	43.00E-3	0.019	0.1	PASS
14	29.01E-3	0.013	0.1	PASS
15	63.59E-3	0.028	0.1	PASS
16	24.90E-3	0.011	0.1	PASS
17	13.96E-3	0.006	0.1	PASS
18	19.20E-3	0.008	0.1	PASS
19	53.30E-3	0.023	0.1	PASS
20	23.19E-3	0.010	0.1	PASS
21	65.29E-3	0.028	0.1	PASS
22	15.62E-3	0.007	0.1	PASS
23	31.47E-3	0.014	0.1	PASS
24	9.30E-3	0.004	0.1	PASS
25	30.90E-3	0.013	0.1	PASS
26	14.04E-3	0.006	0.1	PASS
27	49.90E-3	0.022	0.1	PASS
28	15.21E-3	0.007	0.1	PASS
29	43.65E-3	0.019	0.1	PASS
30	15.11E-3	0.007	0.1	PASS
31	22.84E-3	0.010	0.1	PASS
32	13.36E-3	0.006	0.1	PASS
33	41.45E-3	0.018	0.1	PASS
34	19.54E-3	0.008	0.1	PASS
35	36.20E-3	0.016	0.1	PASS
36	8.42E-3	0.004	0.1	PASS
37	28.17E-3	0.012	0.1	PASS
38	14.46E-3	0.006	0.1	PASS
39	34.17E-3	0.015	0.1	PASS
40	16.59E-3	0.007	0.1	PASS

4.1.4 Voltage Fluctuations and Flicker Test:**4.1.4.1 Voltage Fluctuations and Flicker Test Data:**A. Operating Conditions of the EUT: Full Load

Test Date: Oct. 05, 2015

Test Specification	IEC 61000-3-3 :2013	
Climatic Condition	Ambient Temperature: <u>23</u> °C	Relative Humidity: <u>60</u> % RH
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz	

Test data see the next page.

Test Report

Report title:	
Company Name:	
Date of test:	15:50 5.Oct 2015
Tester:	
Standard used:	EN/IEC 61000-3-3 Ed.3 Flicker
Short time (Pst):	10 min
Observation time:	10 min (1 Flicker measurement)
Flickermeter:	230V / 50Hz according IEC 61000-4-15 Ed.2
Flicker Impedance:	Zref (IEC 60725)
Customer:	
E. U. T.:	
Temperature :	
Humidity :	

Test Result	PASS
-------------	------

Maximum Flicker results

	EUT values	Limit	Result
Pst	0.028	1.00	PASS
Plt	0.028	0.65	PASS
dc [%]	0.000	3.30	PASS
dmax [%]	0.051	7.00	PASS
dt [s]	0.000	0.50	PASS

4.2 Immunity:

4.2.1 Electrostatic Discharge Immunity Test:

4.2.1.1 Electrostatic Discharge Immunity Test Data:

A. Operating Conditions of the EUT: Full Load

Project number	PSAI05R-050QL6	Test Dated	2015/10/8
Test Specification	IEC 61000-4-2:2008		
Test Equipment	Calibration Date	Recommended Recal. Date	
Electrostatic Discharge Simulator/ EMTEST/ Noiseken	Jul. 04, 2015	Jul. 03, 2016	
Climatic Condition	Ambient Temperature : <u>20</u> °C		Relative Humidity : <u>38</u> %RH
	Atmospheric Pressure: <u>997</u> mbar		
Test Set-up	<input checked="" type="checkbox"/> Table-top Equipment <input type="checkbox"/> Floor-standing Equipment		
Power Supply System	<input checked="" type="checkbox"/> AC Power: <u>230</u> Vac <u>50</u> Hz <input type="checkbox"/> DC Power: <u> </u> Vdc		
Energy-Storage Capacitor : <u>150</u> pF		Discharge Resistor : <u>330</u> Ω	
Operating Conditions of The Device	Full Load		

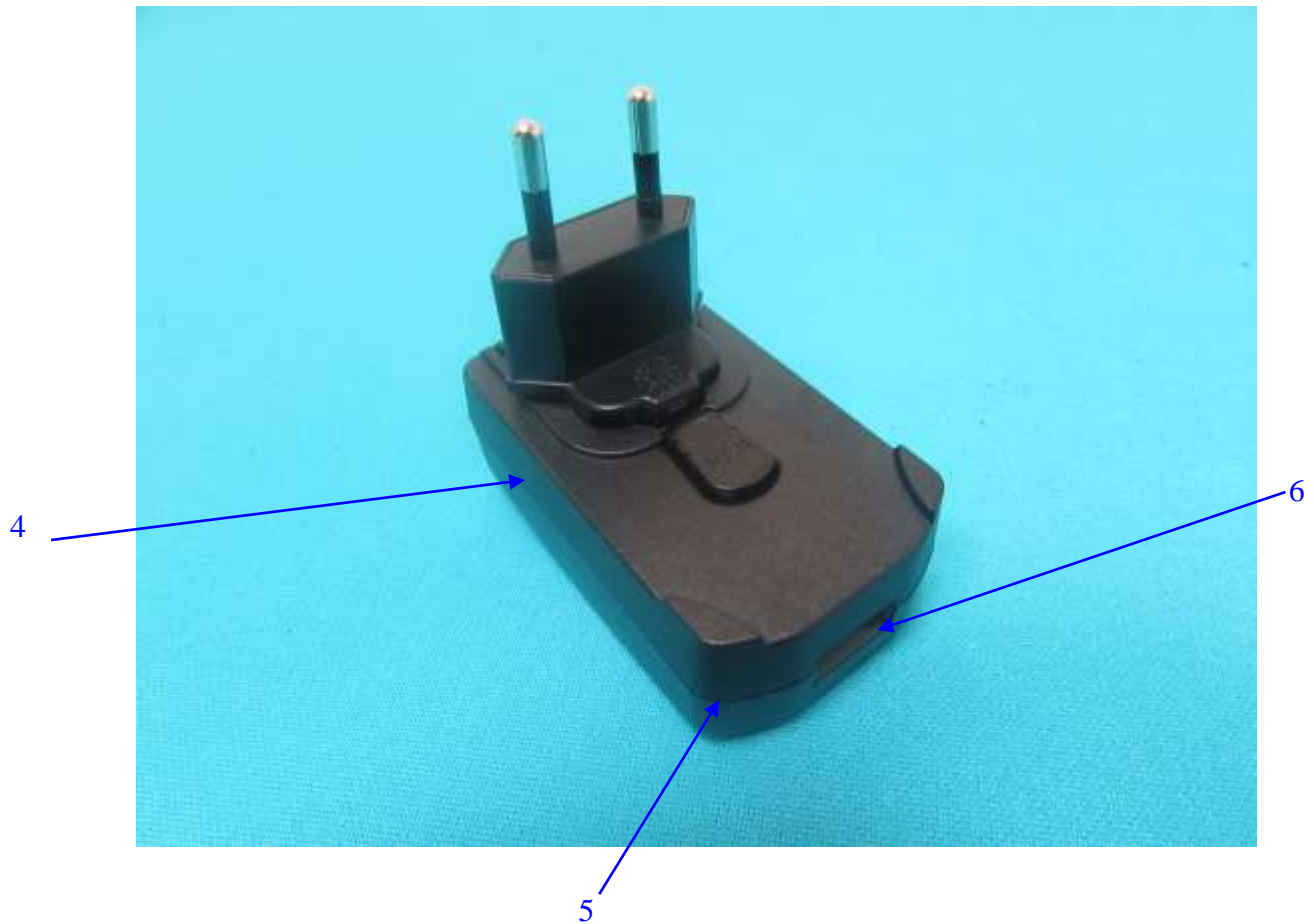
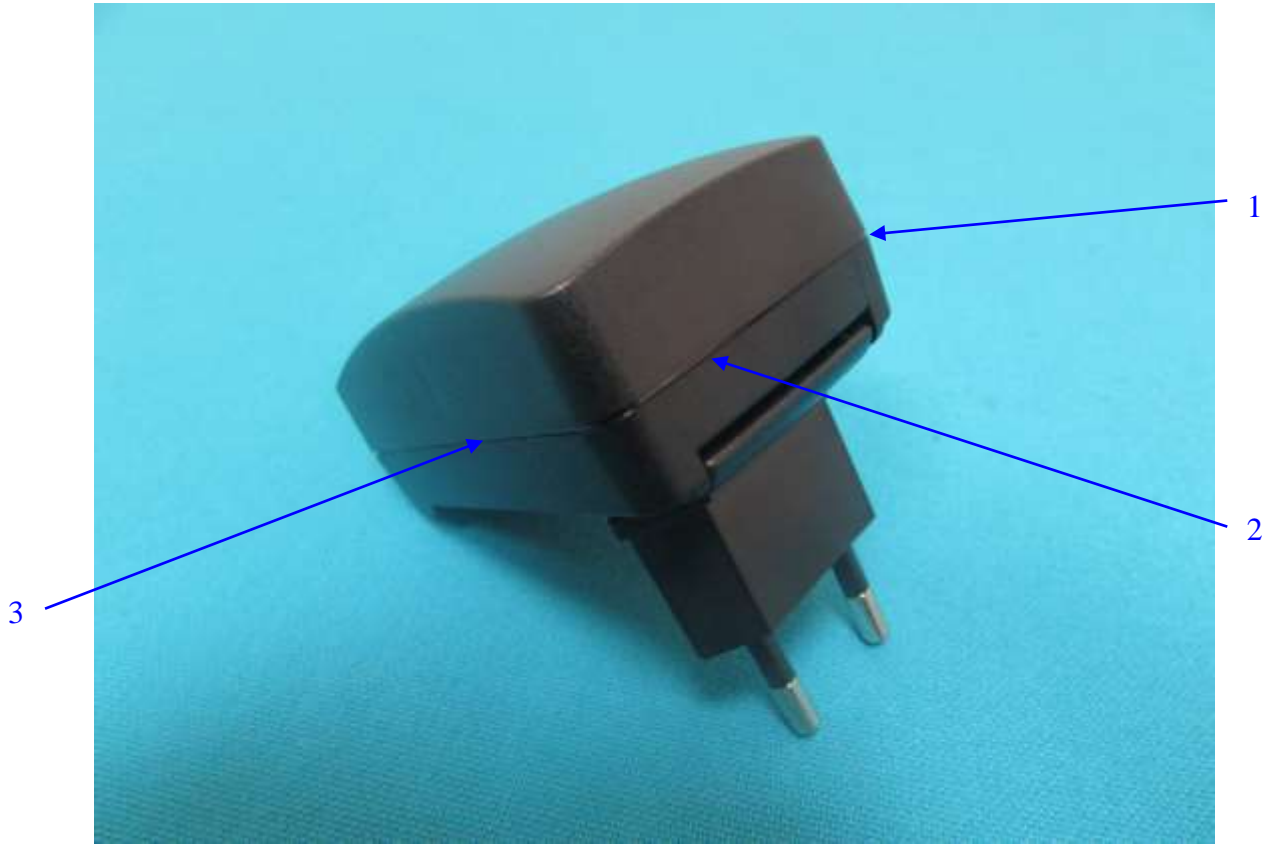
Test Points	Contact Discharge (kv) :					Air Discharge (kv) : Criterion					Test times and voltage at each condition	
	2	4	6	8	___	2	4	8	12	15	25..neg	25..pos
1.EUT-VCP	<u>A</u>	<u>A</u>										
2.EUT-HCP	<u>A</u>	<u>A</u>										
3.1~6							<u>A</u>	<u>A</u>				

*The test point of esd . Blue color mean test point apply air discharge , red color mean test point apply contact discharge.

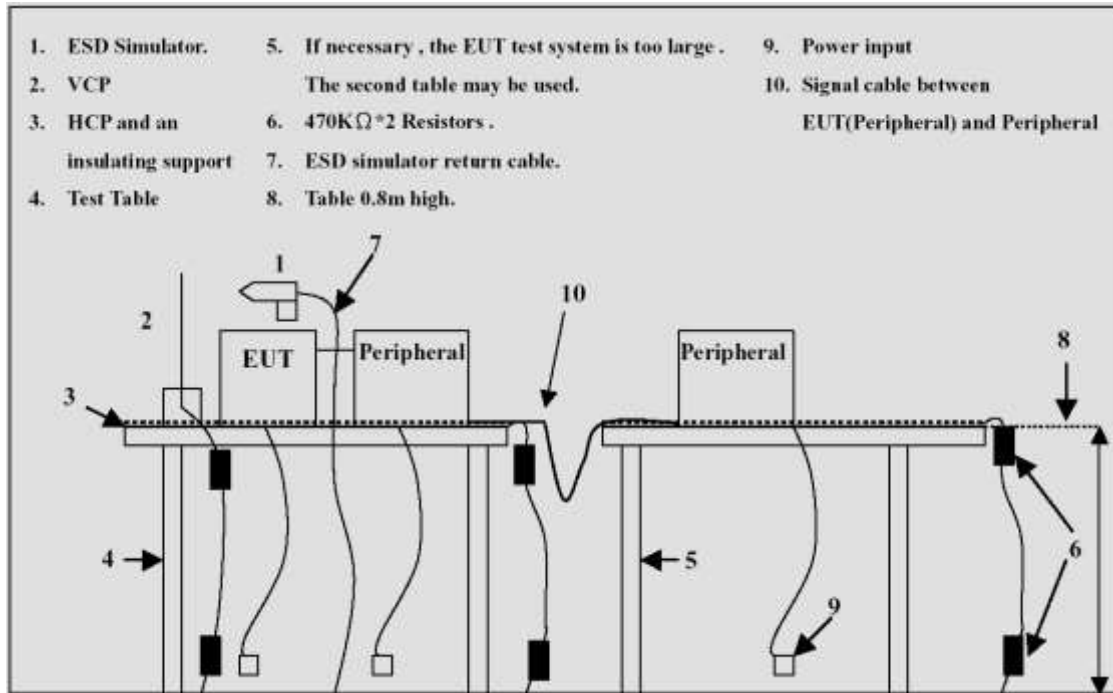
Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply		
Criterion Required:	<u>B</u>	Criterion Met:	<u>A</u>

Note:"A" means the EUT normal performance within limits specified by manufacturer , requestor or purchaser.

"B" means the EUT temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention.

TEST POINTS

4.2.1.2 Electrostatic Discharge Immunity Test Block Diagram



4.2.2 Radio Frequency Electromagnetic Field Test:

4.2.2.1 Radio Frequency Electromagnetic Field Test Data:

A. Operating Conditions of the EUT: Full Load

Test Date	Oct. 07 , 2015		
Test Specification	IEC 61000-4-3:2006+A1:2007+A2:2010		
Model Number		Series :	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer :	
Climatic Condition	Ambient Temperature: <u>27</u> °C Atmospheric Pressure: <u>996</u> mbar	Relative Humidity: <u>45</u> % RH	
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Frequency Range : <u>80</u> MHz ~ <u>1000</u> MHz	Field Strength : <u>3</u> V/m	Modulation (AM 1kHz 80%)		
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : ≤ 1 % of preceding frequency value	Dwell Time : <u>5</u> s		
Frequency Range (MHz)	Polarization of Antenna	EUT Position (Angle)	Test Result	Comments
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	0	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	90	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	180	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	270	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	0	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	90	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	180	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	270	A	

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply			
Criterion Required:	A	Criterion Met:	A	PASS

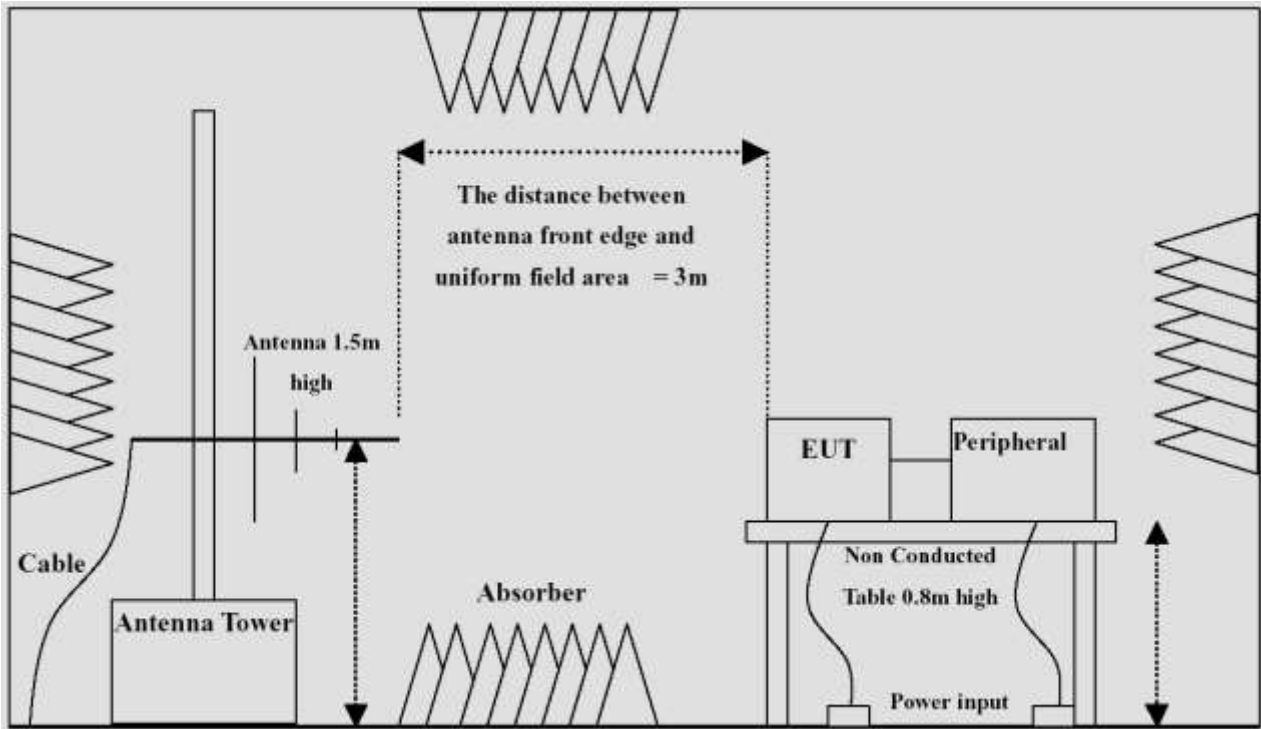
(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

The frequency range is scanned as specified. However , when specified in Annex A, an additional comprehensive functional test shall carried out at a limited number of frequencies. And additional frequencies tested for Korean KN24 . The selected frequencies are : 80 , 120 , 145 , 160 , 230 , 375 , 434 , 435 , 460 , 600 , 814 , 835 , 863 , and 900MHz(±1%).

4.2.2.2 RF Radiated Fields Immunity Test Block Diagram

4.2.3 Fast Transients Common Mode Test:

4.2.3.1 Fast Transients Common Mode Test Data:

A. Operating Conditions of the EUT: Full Load

A. Test Port : Main Power

Test Date	Oct. 08 , 2015		
Test Specification	IEC 61000-4-4:2012		
Model Number		Series : N\A	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer : N\A	
Climatic Condition	Ambient Temperature: <u>27</u> °C Relative Humidity: <u>45</u> % RH Atmospheric Pressure: <u>996</u> mbar		
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Set-up	Table-top Equipment		

Pulse: 5 /50ns		Repetition Rate: <u>2.5kHz</u> above 2.0kV		Test time: <u>1</u> min/each condition	
Burst: 15ms /300ms		<u>5kHz</u> below and equal 2.0kV			
Applied Voltage	Test Line	Severity Level	Test Duration (min)	Test Result	Comments
±1KV	L	2	1	A	
	N	2	1	A	
	L+N	2	1	A	

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply				
Criterion Required:	1KV	B	Criterion Met:	A	PASS

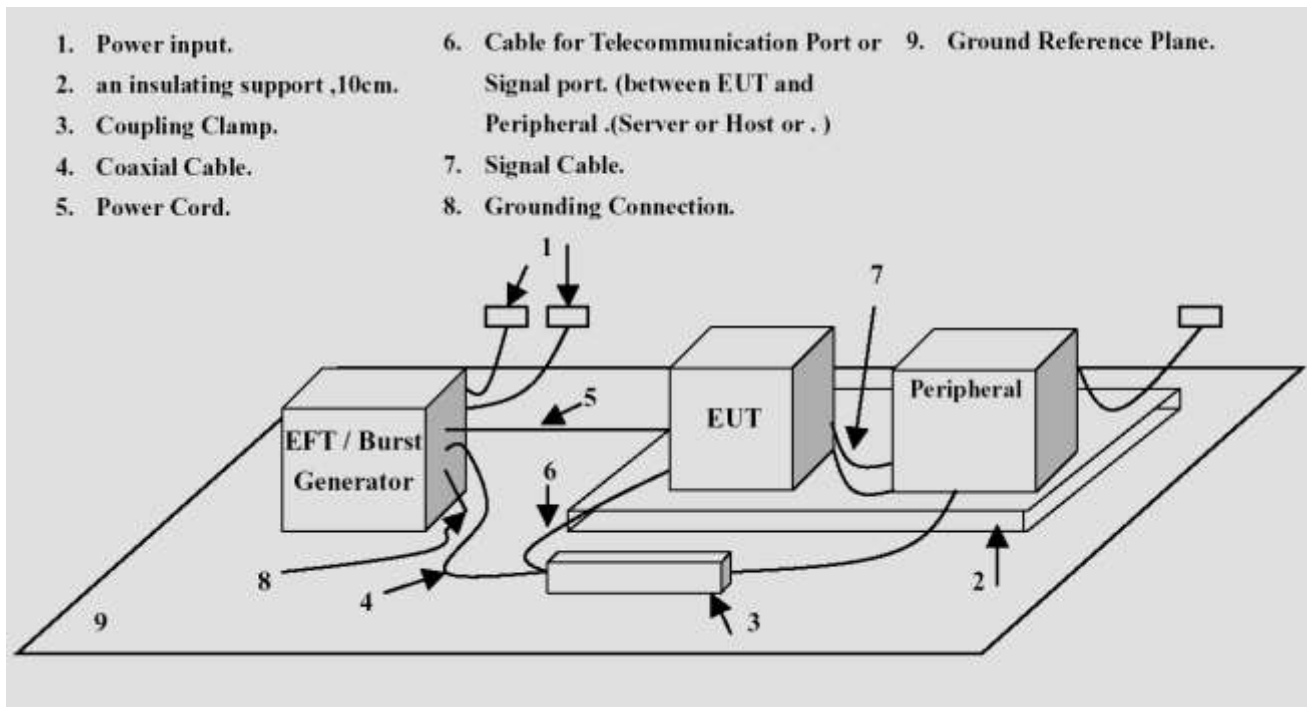
(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

4.2.3.2 EFT/Burst Immunity Test Block Diagram



4.2.4 Surges, Common and Differential Mode Test:

4.2.4.1 Surges, Common and Differential Mode Test Data:

A. Operating Conditions of the EUT: Full Load

Test Date	Oct. 07 , 2015		
Test Specification	IEC 61000-4-5:2005		
Model Number		Series : N\A	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer : N\A	
Climatic Condition	Ambient Temperature: <u>27</u> °C		Relative Humidity: <u>45</u> % RH
	Atmospheric Pressure: <u>998</u> mbar		
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		

Waveform: 1.2/50µs (8/20µs)		Repetition rate: <u>60</u> sec		Times: <u>5</u> times/each condition		
Applied Voltage(KV)	Mode	Test Line	Severity Level	Phase Angle	Test Result	Comments
±0.5	Differential Mode	L - N	1	0°/90°/180°/270°	A	
±1.0	Differential Mode	L - N	2	0°/90°/180°/270°	A	

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply				
Criterion Required:	0.5KV , 1KV	B	Criterion Met:	A	PASS

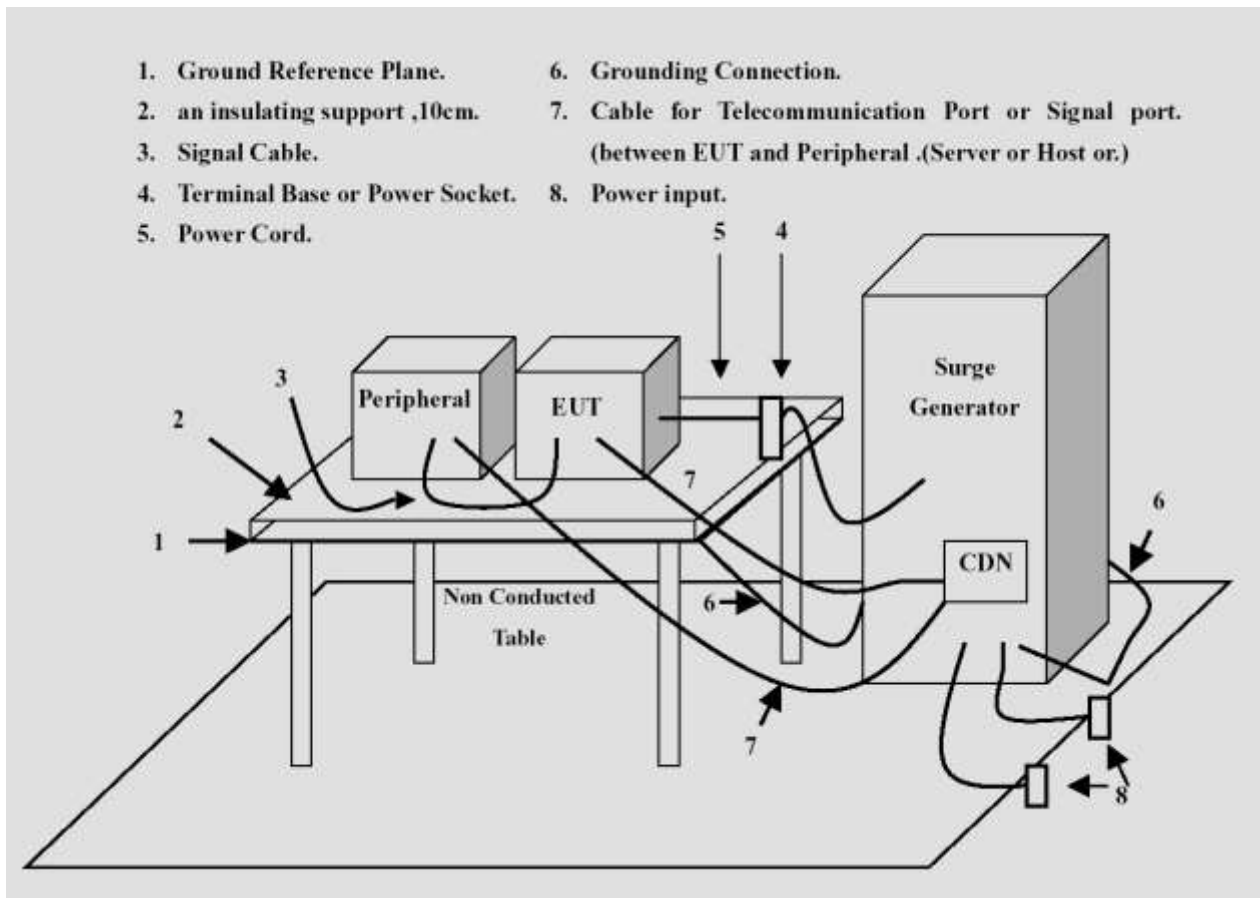
(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

4.2.4.2 Surges, Common and Differential Mode Test Block Diagram



4.2.5 RF Common Mode, 0.15~80MHz Test:

4.2.5.1 RF Common Mode, 0.15~80MHz Test Data:

A. Operating Conditions of the EUT: Full Load

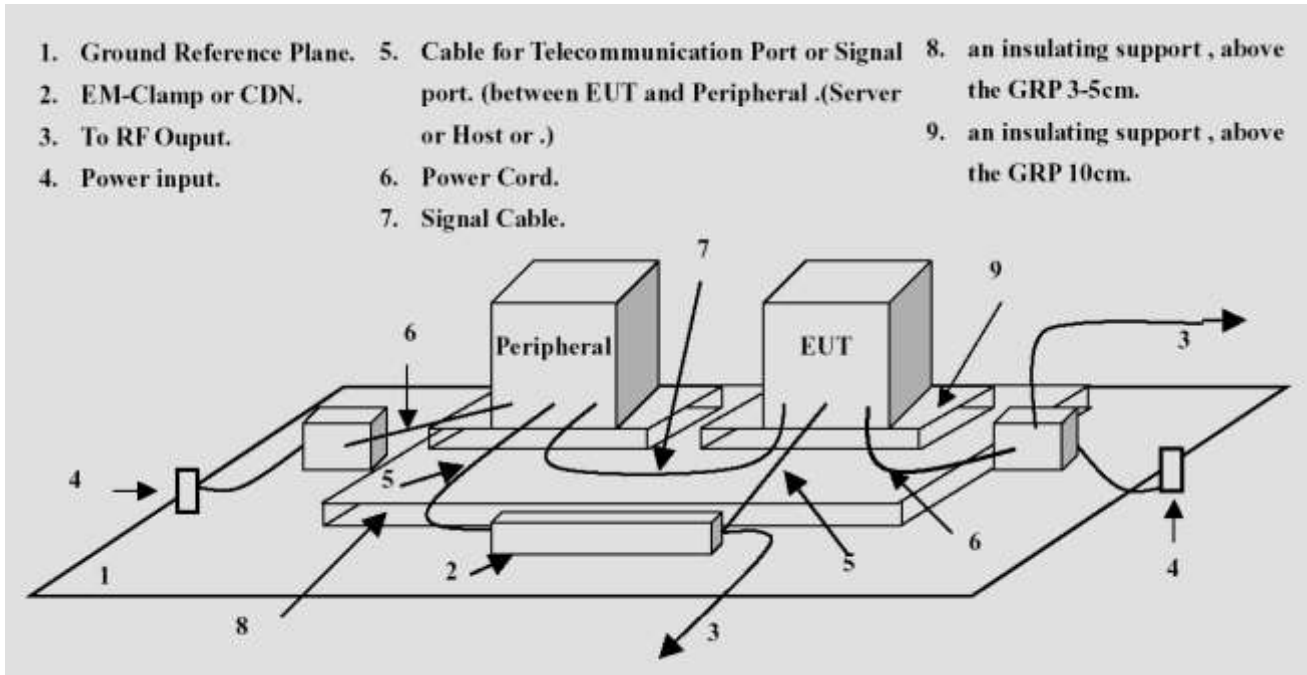
Test Date	Oct. 06 , 2015		
Test Specification	IEC 61000-4-6:2013		
Model Number		Series : N\A	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer : N\A	
Climatic Condition	Ambient Temperature: <u>21</u> °C		Relative Humidity: <u>45</u> % RH
	Atmospheric Pressure: <u>998</u> mbar		
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		

Frequency Range : <u>0.15</u> MHz ~ <u>80</u> MHz	Test Voltage : <u>3</u> V	Modulation (AM 1kHz 80%)
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : ≤ 1 % of preceding frequency value	Dwell Time : <u>3.0</u> s
Frequency Range (MHz)	Tested Line	Test Result
0.15~80	Power Line (M2)	A

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply			
Criterion Required:	A	Criterion Met:	A	PASS

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

4.2.5.2 RF Common Mode Immunity Test Block Diagram

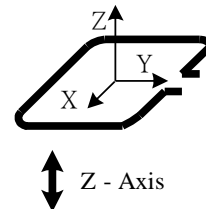
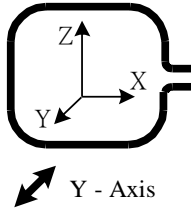
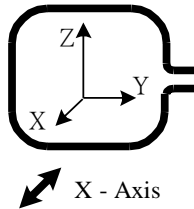


4.2.6 Power Frequency Magnetic Field Immunity Test:

4.2.6.1 Power Frequency Magnetic Field Immunity Test Data:

A. Operating Conditions of the EUT: Full Load

Test Date	Oct. 08 , 2015		
Test Specification	IEC 61000-4-8:2009		
Model Number		Series : N\A	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer : N\A	
Climatic Condition	Ambient Temperature: <u>27</u> °C		Relative Humidity: <u>45</u> % RH
	Atmospheric Pressure: <u>996</u> mbar		
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		

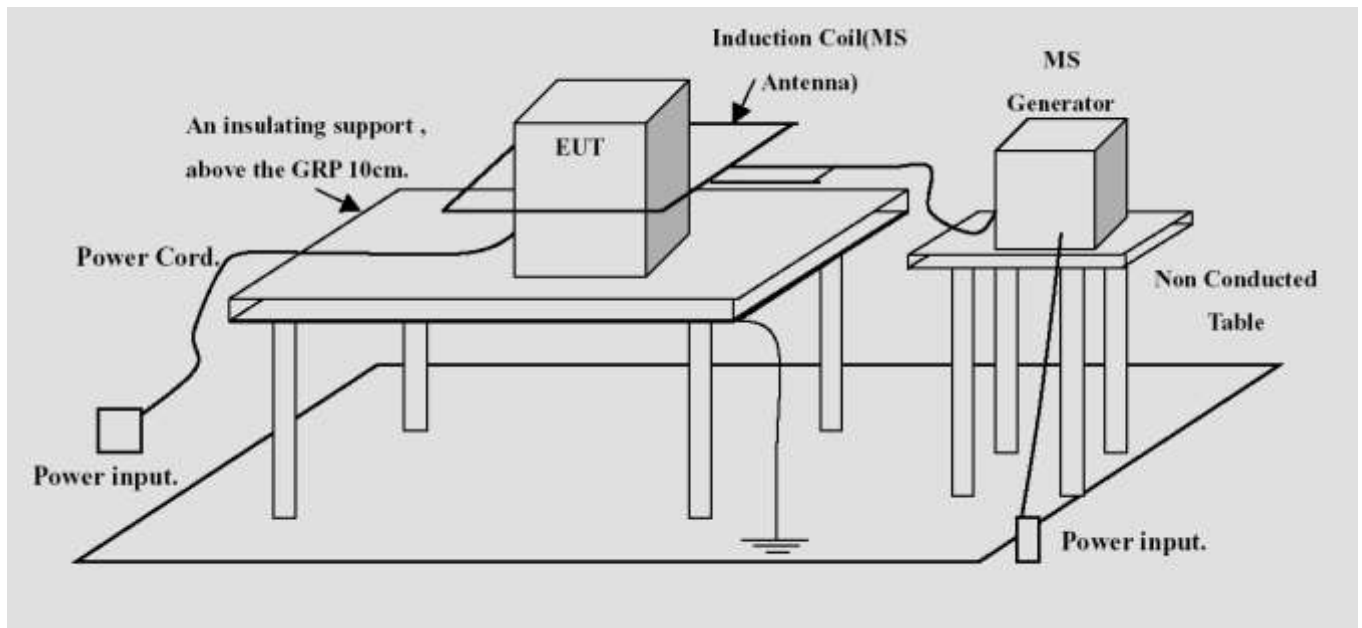


Magnetic field frequency: <u>50</u> Hz		Continuous magnetic field strength: <u>1</u> A/m	
Magnetic field direction	Testing result		
X - Axis	A		
Y - Axis	A		
Z - Axis	A		

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply			
Criterion Required:	A	Criterion Met:	A	PASS

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

4.2.6.2 Power Frequency Magnetic Field Immunity Test Block Diagram



4.2.7 Voltage Dips and Interruptions Test:

4.2.7.1 Voltage Dips and Interruptions Test Data:

A. Operating Conditions of the EUT: Full Load

Test Date	Oct. 06 , 2015		
Test Specification	IEC 61000-4-11:2004		
Model Number		Series : N\A	
Power Supply Model Num.	PSAI05R-050QL6	Manufacturer : N\A	
Climatic Condition	Ambient Temperature: <u>27</u> °C		Relative Humidity: <u>45</u> % RH
	Atmospheric Pressure: <u>996</u> mbar		
Test Mode	Full Load		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		

Test mode	Voltage dips	Durations (ms)	Phase	Criterion Required	Result
Voltage interruptions	100%	5000	0° / 180°	C	B
Voltage dips in % U _T	100%	10	0° ~ 360° step 45	B	A
	30%	500		C	A

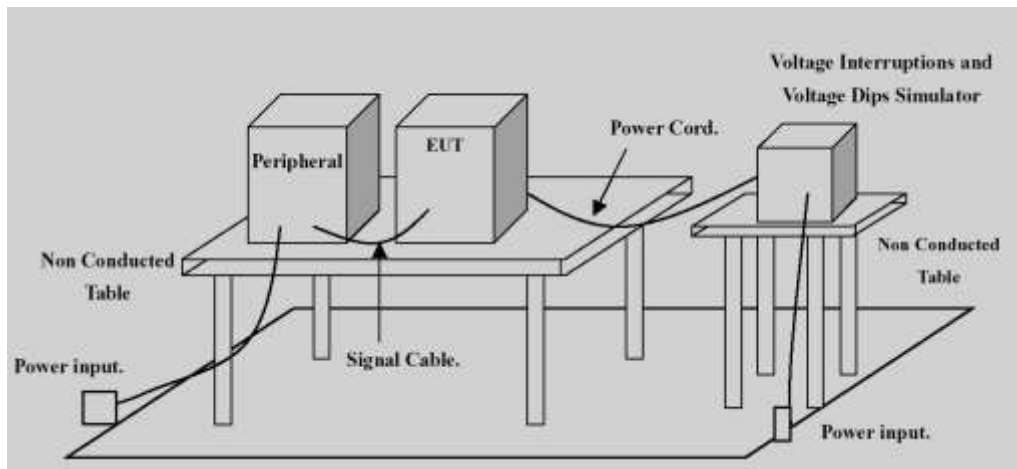
Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply
----------------	---

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

4.2.7.2 Voltage Interruptions and Voltage Dips Immunity Test Block Diagram

5 EQUIPMENTS LIST FOR TESTING

5.1 Test Equipment for Conducted Emissions

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EMI Receiver	R&S	ESCI	13054418-001 (100941)	May. 04, 2015	May. 03, 2016
2	V-LISN	R&S	ENV216	13057719-001 (101029)	May. 13, 2015	May. 12, 2016
3	V-LISN	R&S	ENV216	13057719-002 (101030)	May. 13, 2015	May. 12, 2016

5.2 Test Equipment for Radiated Emissions Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EMI Receiver	R&S	ESIB7	13054417-001	Jul. 29, 2015	Jul. 28, 2016
2	EMI Receiver	R&S	ESU(20Hz~8GHz)	13054419-001(100234)	Apr. 26, 2015	Apr. 25, 2016
3	Bilog Antenna	SCHWARZBECK	VULB 9161	13057318-002	Jul. 02, 2015	Jul. 01, 2016
4	Bilog Antenna	SCHWARZBECK	VULB 9161	13057318-001	Jul. 27, 2015	Jul. 26, 2016
5	Amplifier	Agilent	8447D	13040715-001	Mar. 23, 2015	Mar. 22, 2016
6	Amplifier	Agilent	8447D	13040715-002	Mar. 31, 2015	Mar. 30, 2016

5.3 Test Equipment for Harmonics Current Emissions and Voltage Fluctuations , Flicker Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	Power Source	EMTEST	ACS 500N6	13046502-003	Mar. 05, 2015	Mar. 04, 2016
2	Digital Power Analyzer	EMTEST	DPA 500N	13046502-003	Mar. 05, 2015	Mar. 04, 2016

5.4 Test Equipment for ESD Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	ESD Simulator	Noiseken	ESS-2000	13033704-001	Jul. 04, 2015	Jul. 03, 2016

5.5 Test Equipment for RS Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	RF Power Amplifier	AR	120S1G4M1	333619	Jul. 07, 2015	Jul.06, 2016
2	RF Power Amplifier	AR	250W1000A	13052908-001	Jul. 07, 2015	Jul.06, 2016
3	RF Power Amplifier	AR	250A250A	13052907-001	Jul. 07, 2015	Jul.06, 2016
4	Signal Generator	R&S	IMS	13045401-001	Oct. 02, 2015	Oct.01, 2016
5	Bilog Antenna	AR	AT5080	326133	Jul. 07, 2015	Jul.06, 2016

5.6 Test Equipment for EFT Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EFT Generator / Clamp	Noiseken	FNS-AXII	13035301-001	Aug. 26, 2015	Aug. 27, 2016

5.7 Test Equipment for SURGE Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	LIGHTNING SURGE SIMULATOR	Noiseken	LSS-15AX	13033709-001	Jul. 15, 2015	Jul. 14, 2016

5.8 Test Equipment for CS Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	Signal Generator	IFR	2023	112282	Feb. 17, 2015	Feb. 16, 2016
2	RF Power Amplifier	AR	25A250A	13052909-001	Aug. 22, 2015	Aug. 21, 2016
3	Coupling Decoupling Network	Luethi	CDN L-801 M2/32	2785	Sep.24. 2015	Sep.25. 2016

5.9 Test Equipment for MS Test

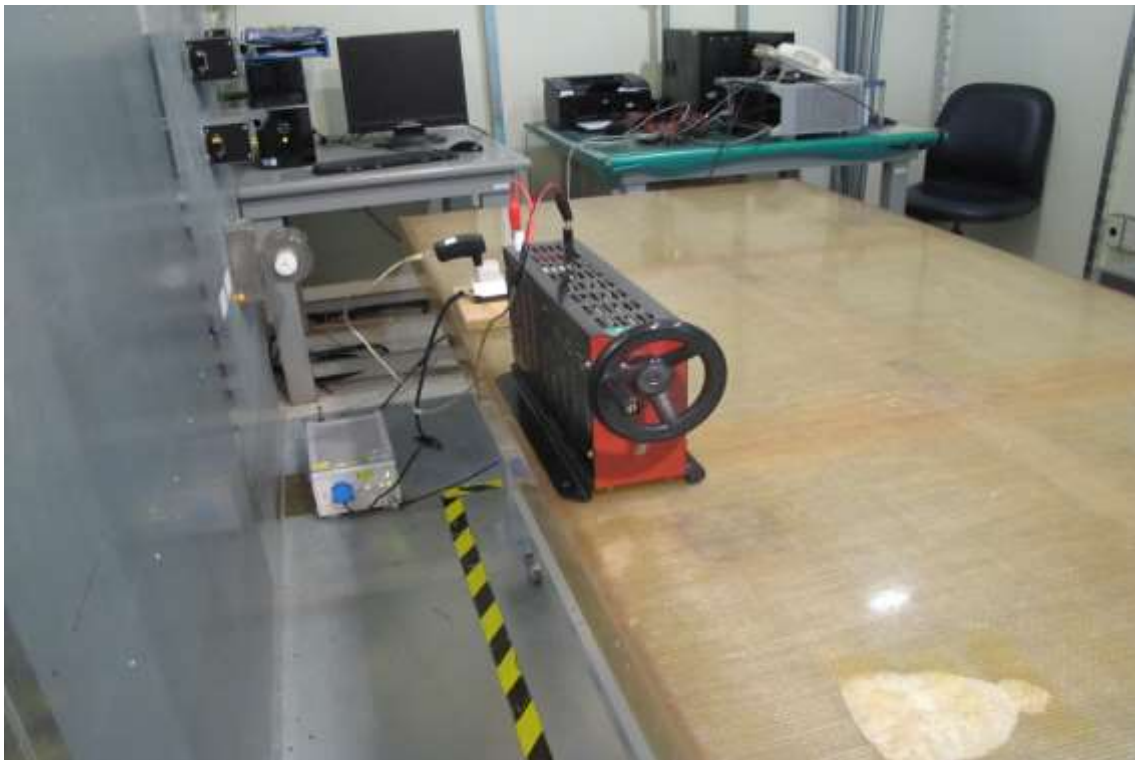
Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	Oscillation and Surge and MS Test System	EMC-PARTNER	MIG06030 MI	13045801-001	Oct. 07, 2015	Oct. 06, 2016
2	Magnetic Field Antenna	EMC-PARTNER	MF1000-1	13070701-001	N.C.R.	N.C.R.

5.10 Test Equipment for DIP Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EMS MULTIFUNCTION GENERATOR	TESEQ	NSG3040	13046509-001	Feb. 10, 2015	Feb. 09, 2016

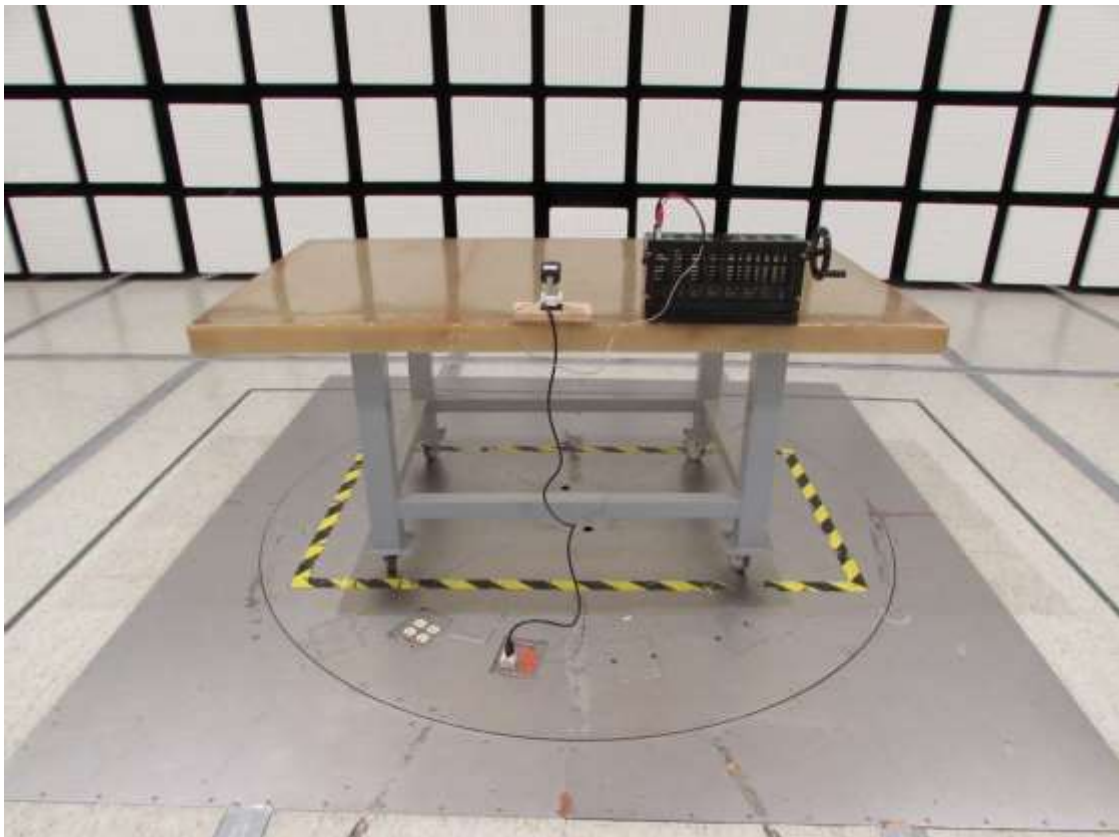
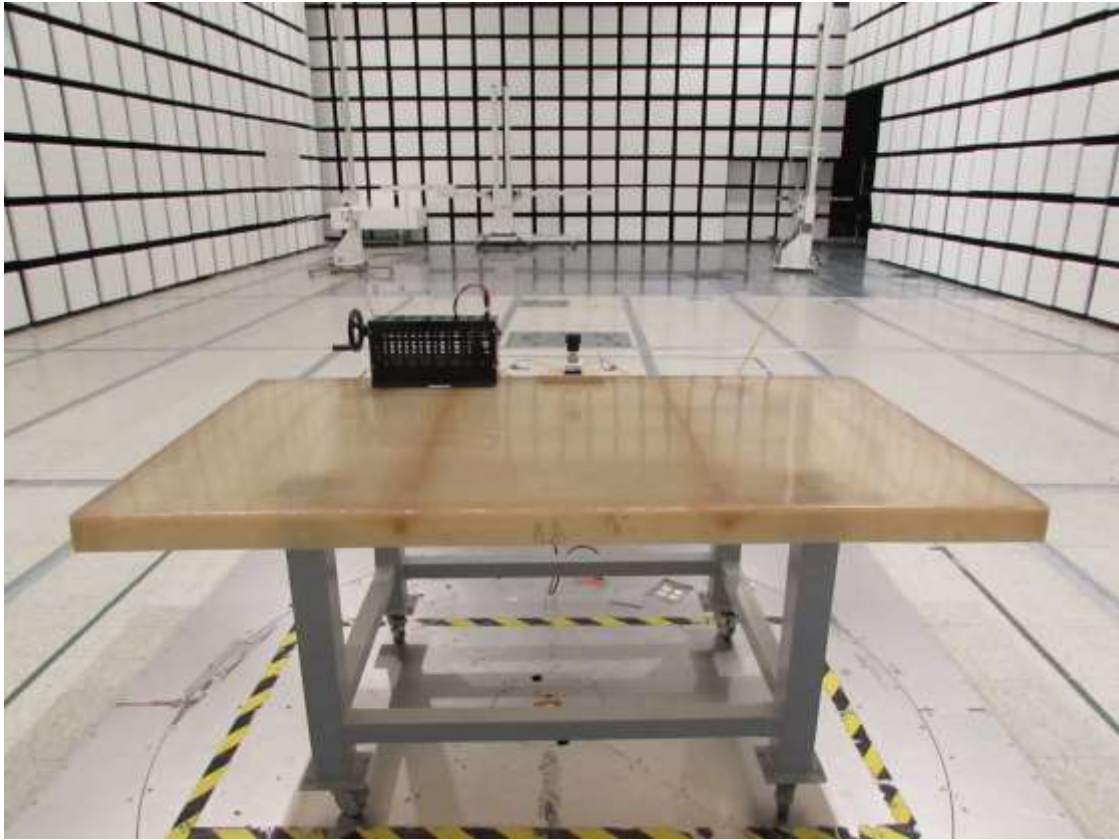
ANNEX A: PHOTOS**1. Conducted Emissions Test Setup Photos**

Full Load

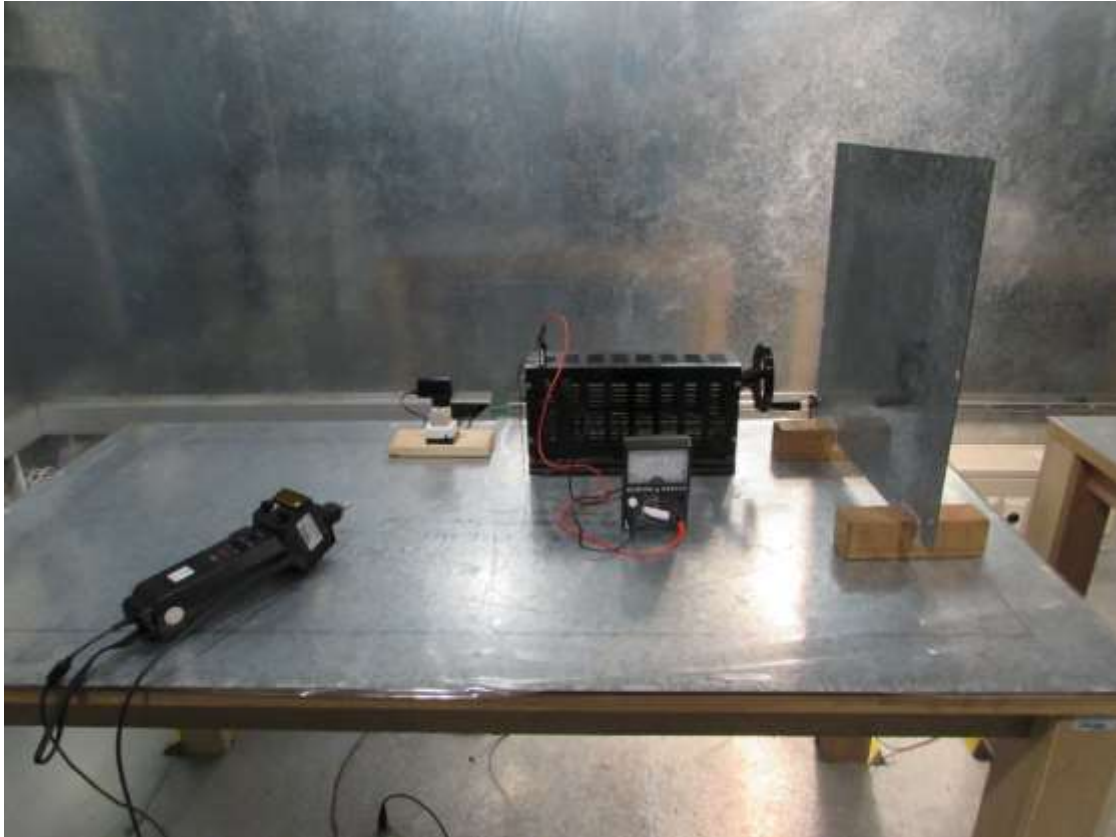
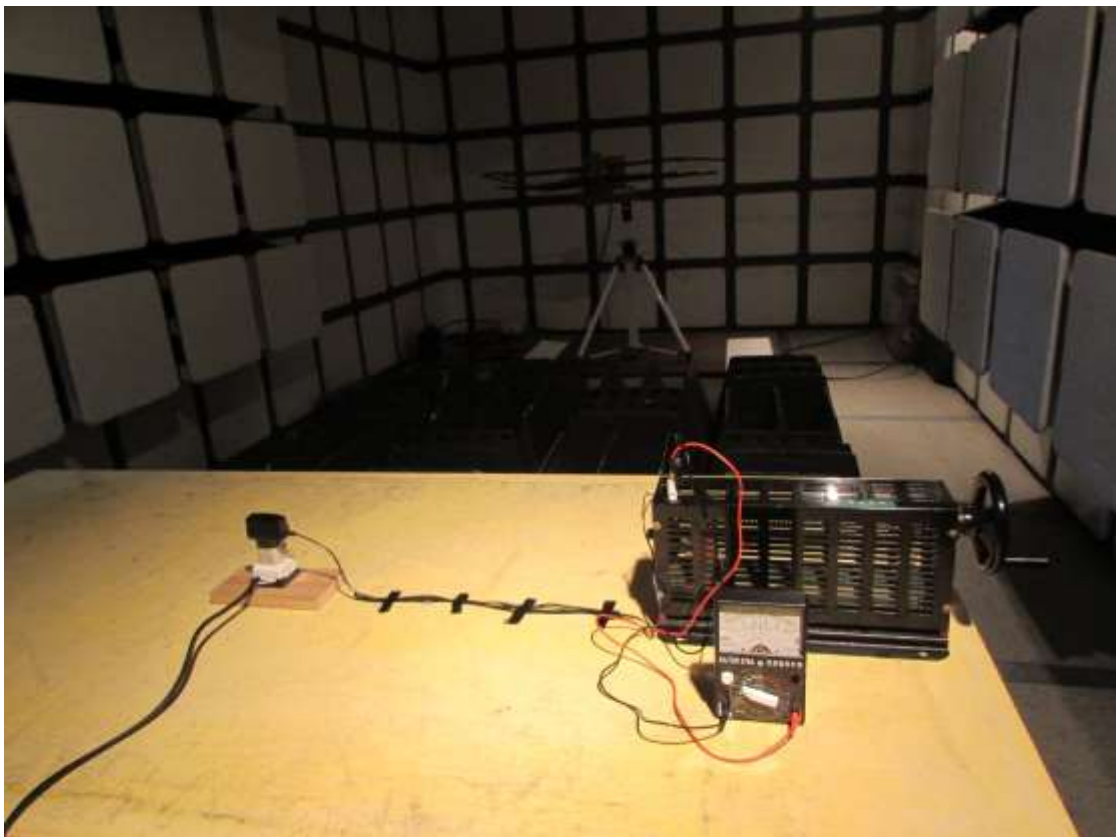


2. Radiated Emissions Test Setup Photos (30MHz~1GHz)

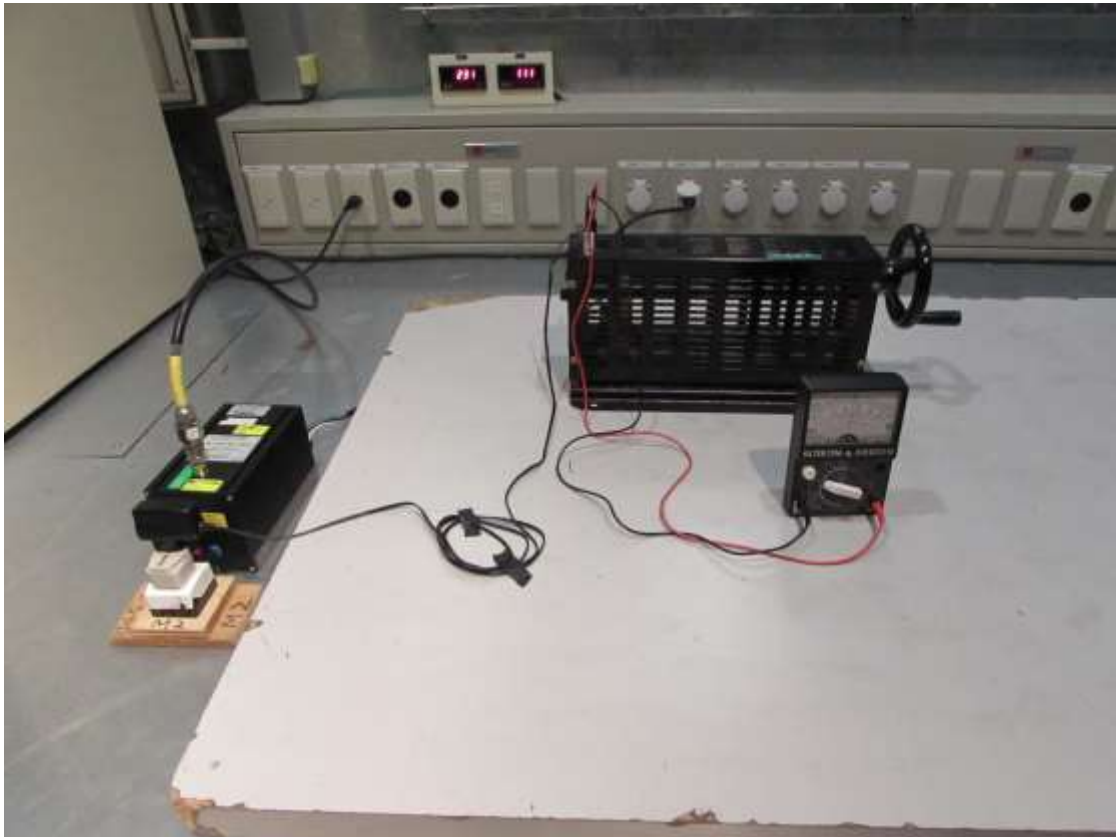
Full Load



3. Harmonics Current Emissions Test Setup Photo**4. Voltage Fluctuations and Flicker Test Setup Photo**

5. Electrostatic Discharge Immunity Test Setup Photo**6. RF Radiated Fields Immunity Test Setup Photo**

7. EFT/Burst Immunity Test Setup Photo**8. Surge Immunity Test Setup Photo**

9. RF Common Mode Immunity Test Setup Photo

10. Power Frequency Magnetic Field Immunity Test Setup Photo**11. Voltage Interruptions and Voltage Dips Immunity Test Setup Photo**

12. Outside view 1 of EUT**13. Outside view 2 of EUT**

14. Inside view 1

APPENDIX I

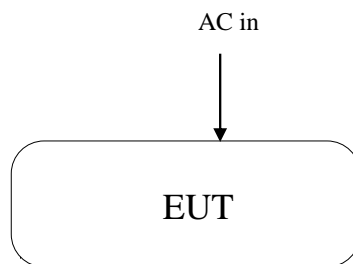
The test data is recorded from Feb. 15 to Feb. 17, 2017 for evaluation purposes only. The test data may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory.

*Adds EN 55032 to re-test.

1. GENERAL SPECIFICATION**1.1 Tested Peripheral:**

The EUT was pre-tested and final tested under the following mode:

Product	Manufacturer	Model No.	I/O Cable
----	----	----	----

2The Worst Mode for test:**2.1 Testing Setup Block Diagram**

3 SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Conducted Emissions

-PASS

QP EMI value to the limit: -14.04 dB at 0.1940 MHz

3.1.2 Radiated Emissions

-PASS

QP EMI value to the limit: -3.69 dB at 99.1584 MHz

3.1.3 Harmonics Current Emissions

-N/A

Adds EN 55032 standard, after estimating, it didn't need to re-test.

3.1.4 Voltage Fluctuations and Flicker

-N/A

Adds EN 55032 standard, after estimating, it didn't need to re-test.

3.2 Summary of test Results and Applied Level:

Manufacturer level requirements:

Summary of test Results and Applied Level			
Emission			
Test Standard	Test Item	Test Result	Applied Level and M.U.
EN 55032:2015, Class B	Radiated Emission	PASS	Class B @ 30MHz~1GHz, U=±4.98dB @ 1GHz~6GHz, U=±5.18dB
EN 55032:2015, Class B	Conducted Emission	PASS	Class B @ AC Port: 0.15MHz~30MHz, U=±2.92dB @ ISN: 0.15MHz~30MHz, U=±3.00dB
EN 61000-3-2:2006 +A1:2009 +A2:2009 / IEC 61000-3-2:2005 +A1:2008 +A2:2009, Class A	Harmonic Current Emission	N/A	Adds EN 55032 standard, after estimating, it didn't need to re-test.
EN 61000-3-3:2013 / IEC 61000-3-3:2013	Voltage Fluctuation and Flicker Test	N/A	Adds EN 55032 standard, after estimating, it didn't need to re-test.

Note : Measurement uncertainty $U=\pm X$. Means the expanded measure uncertainty $U=\pm X$, the coverage factor $k=2$, approximately a 95% level of confidence.

4TEST DATA & RELATED INFORMATIONS

4.1 Emissions:

4.1.1 Conducted Emissions Test:

4.1.1.1 Conducted Emissions Test Data:

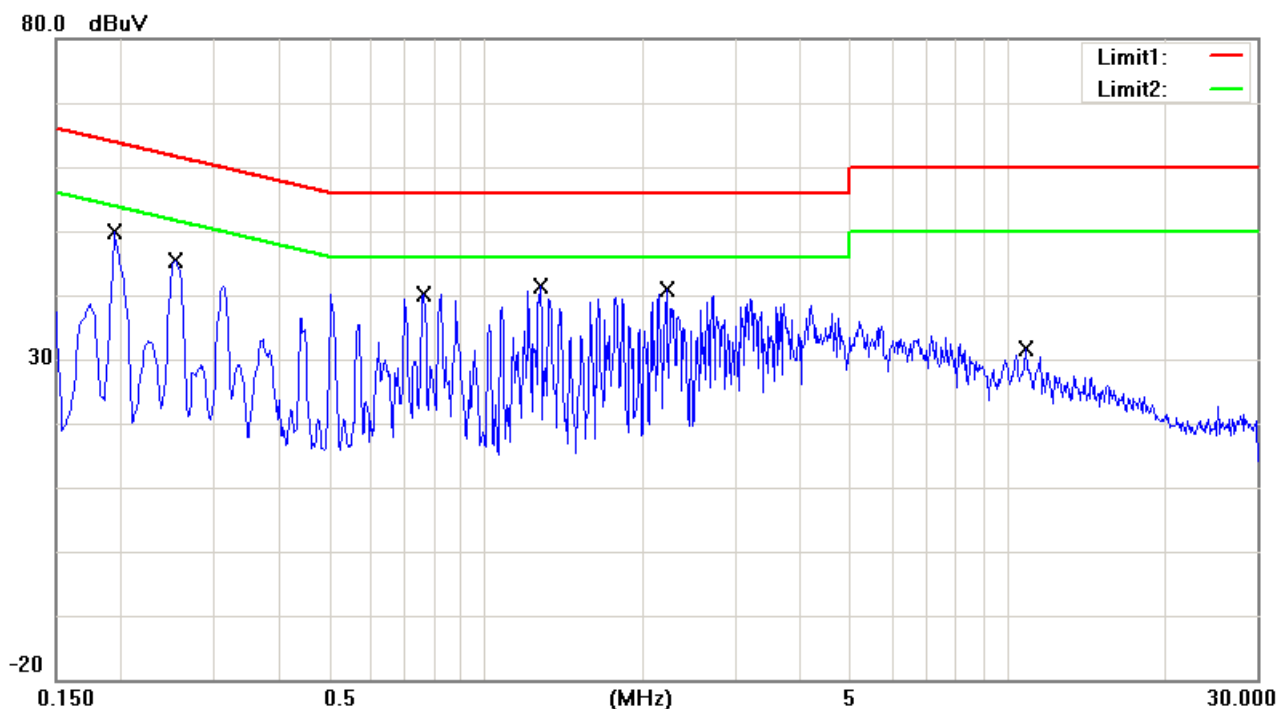
A. Operating Conditions of the EUT: Full Load

Test Date: 2017/02/17

Temperature: 20 °C

Humidity: 58 %

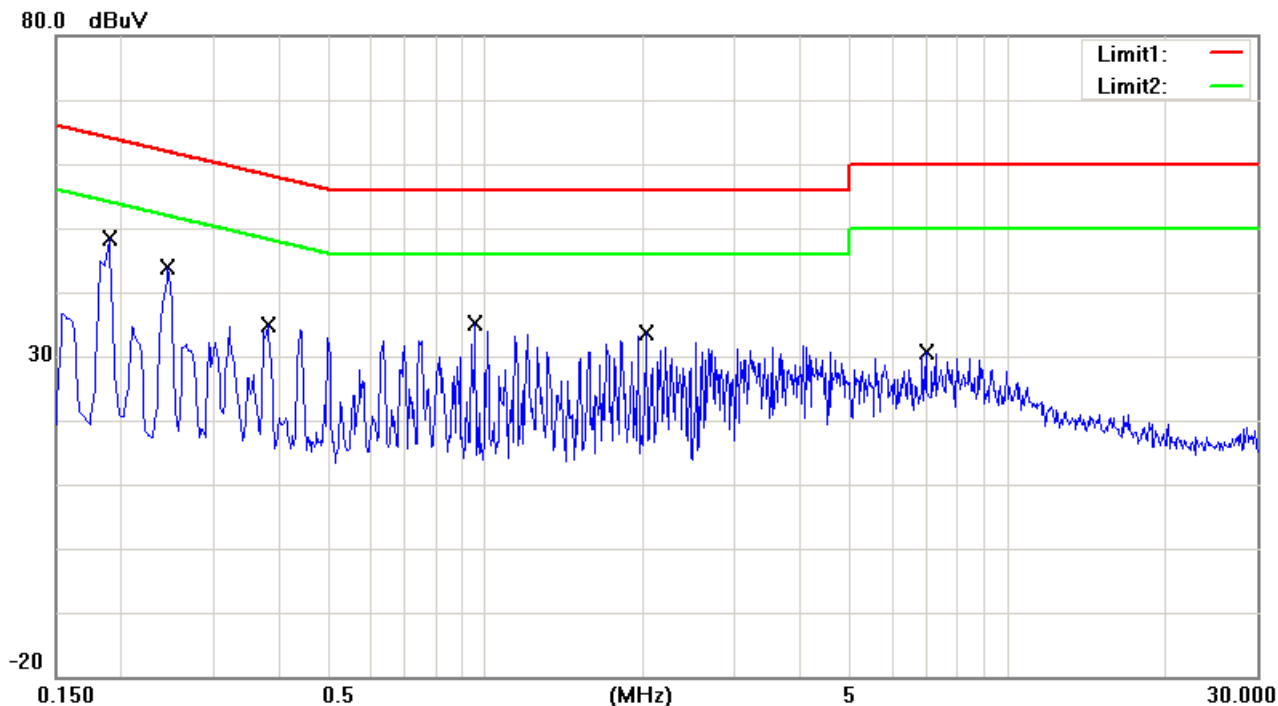
(Phase:L) AC Power: 230 Vac 50 Hz



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	0.1940	40.17	QP	9.65	49.82	63.86	-14.04	
2	0.2540	35.70	QP	9.65	45.35	61.63	-16.28	
3	0.7620	30.56	QP	9.66	40.22	56.00	-15.78	
4	1.2700	31.79	QP	9.66	41.45	56.00	-14.55	
5	2.2180	31.10	QP	9.69	40.79	56.00	-15.21	
6	10.8380	21.63	QP	9.88	31.51	60.00	-28.49	

- Notes:
- 1) Place of measurement: EMC LAB. of the ETC (CE-04)
 - 2) The EUT was placed 0.8m above reference ground plane.
 - 3) The expanded measure uncertainty, mean the coverage factor k=2, approximately a 95% level of confidence.
±2.92dB(0.15MHz~30MHz)

(Phase:N) AC Power: 230 Vac 50 Hz



No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
1	0.1900	38.72	QP	9.63	48.35	64.04	-15.69	
2	0.2460	34.13	QP	9.63	43.76	61.89	-18.13	
3	0.3820	25.20	QP	9.63	34.83	58.24	-23.41	
4	0.9540	25.43	QP	9.65	35.08	56.00	-20.92	
5	2.0300	23.90	QP	9.67	33.57	56.00	-22.43	
6	6.9660	20.73	QP	9.81	30.54	60.00	-29.46	

- Notes:
- 1) Place of measurement: EMC LAB. of the ETC (CE-04)
 - 2) The EUT was placed 0.8m above reference ground plane.
 - 3) The expanded measure uncertainty, mean the coverage factor k=2, approximately a 95% level of confidence.
±2.92dB(0.15MHz~30MHz)

4.1.2 Radiated Emissions Test:

4.1.2.1 Radiated Emissions Test Data:

A. Operating Conditions of the EUT: Full Load

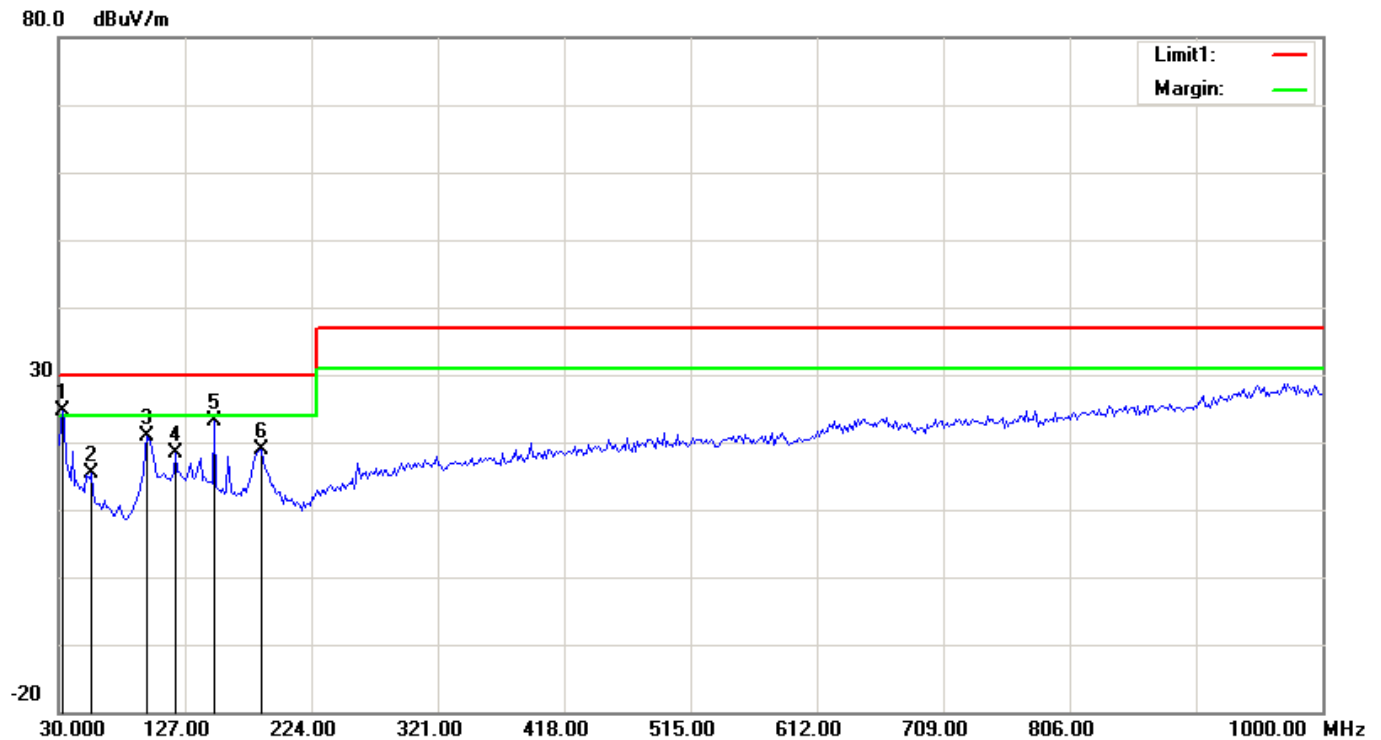
Test Date: 2017/02/15

Temperature: 26 °C

Humidity: 60 %

Measurement Distance: 10m (30MHz~1GHz), AC Power: 230 Vac 50 Hz

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Comment
1	33.1090	41.55	QP	-17.00	24.55	30.00	-5.45	300	262	
2	54.8718	35.57	QP	-20.25	15.32	30.00	-14.68	300	79	
3	98.3974	39.82	QP	-18.95	20.87	30.00	-9.13	398	235	
4	120.1603	34.14	QP	-15.66	18.48	30.00	-11.52	300	23	
5	149.6954	39.98	QP	-16.92	23.06	30.00	-6.94	398	360	
6	185.4487	38.65	QP	-19.67	18.98	30.00	-11.02	398	360	

Notes: 1) Place of Measurement: Measuring site of the ETC (1F)

2) Measurement Distance: 10 m

3) Height of table on which the EUT was placed: 0.8 m

4) Height of Receiving Antenna: 1 - 4 m

5) The expanded measure uncertainty, mean the coverage factor k=2, approximately a 95% level of confidence.

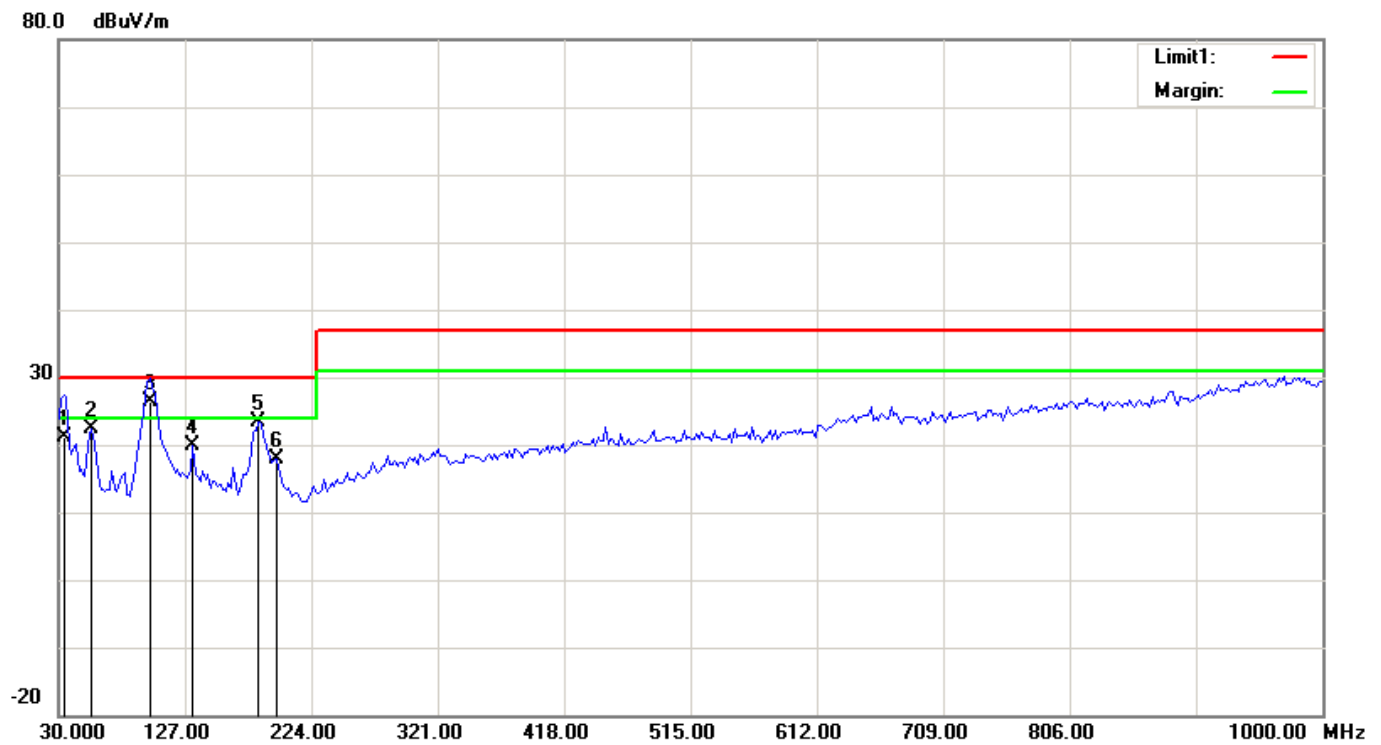
+ 4.94dB / - 4.94dB ($30\text{MHz} \leq f \leq 300\text{MHz}$)

+ 4.94dB / - 4.94dB ($300\text{MHz} \leq f \leq 1\text{GHz}$)

+ 5.1dB / - 5.1dB ($1\text{GHz} \leq f \leq 6\text{GHz}$)

+ 4.58dB / - 4.58dB ($6\text{GHz} \leq f \leq 18\text{GHz}$)

Vertical ,AC Power: 230 Vac 50 Hz



No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Comment
1	34.0080	38.63	QP	-17.46	21.17	30.00	-8.83	199	359	
2	55.2705	42.85	QP	-20.48	22.37	30.00	-7.63	100	309	
3	99.1584	45.03	QP	-18.72	26.31	30.00	-3.69	199	36	
4	133.0261	35.79	QP	-15.87	19.92	30.00	-10.08	199	79	
5	183.5671	42.81	QP	-19.38	23.43	30.00	-6.57	100	360	
6	197.1743	37.05	QP	-19.13	17.92	30.00	-12.08	100	360	

Notes: 1) Place of Measurement: Measuring site of the ETC (1F)

2) Measurement Distance: 10 m

3) Height of table on which the EUT was placed: 0.8 m

4) Height of Receiving Antenna: 1 - 4 m

5) The expanded measure uncertainty, mean the coverage factor $k=2$, approximately a 95% level of confidence.

+ 4.98dB / - 4.98dB ($30\text{MHz} \leq f \leq 300\text{MHz}$)

+ 4.98dB / - 4.98dB ($300\text{MHz} \leq f \leq 1\text{GHz}$)

+ 5.18dB / - 5.18dB ($1\text{GHz} \leq f \leq 6\text{GHz}$)

+ 4.9dB / - 4.9dB ($6\text{GHz} \leq f \leq 18\text{GHz}$)



5EQUIPMENTS LIST FOR TESTING

5.1 Test Equipment for Conducted Emissions

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EMI Receiver	R&S	ESCI	13054418-001 (100941)	Jan.16,2017	Jan.15,2018
2	V-LISN	R&S	ENV216	13057719-002 (101030)	Aug.11,2016	Aug.10,2017
3	Control Computer	Lemel	WLIEG31G8CP	13080462-004	N/A	N/A
4	Software	FARAD	EZ-EMC	EZEMCCE04	N/A	N/A

5.2 Test Equipment for Radiated Emissions Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	EMI Receiver	R&S	ESIB7	13054417-001	Aug. 30, 2016	Aug. 29, 2017
2	EMI Receiver	R&S	ESU(20Hz~8GHz)	13054419-001(100234)	Apr. 23, 2016	Apr. 22, 2017
3	Bilog Hybrid Antenna With 5dB Attenuator	ETC&JYEB AO	MCTD 2786B&FAT-NM 5NF5T3G2WXX	BLB16M04003 &JB-5-002	Mar. 04, 2016	Mar. 03, 2017
4	Bilog Hybrid Antenna With 5dB Attenuator	ETC&JYEB AO	MCTD 2786B&FAT-NM 5NF5T3G2WXX	BLB16M04003 &JB-5-003	Mar. 04, 2016	Mar. 03, 2017
5	Amplifier	EMCI	EMC9135	980345	Oct. 11, 2016	Oct. 10, 2017
6	Amplifier	EMCI	EMC9135	980346	Oct. 11, 2016	Oct. 10, 2017
7	Control Computer	DELL	INSPIRON 660	13080491-001	N/A	N/A
8	Software	FARAD	EZ-EMC	EZEMCN5	N/A	N/A

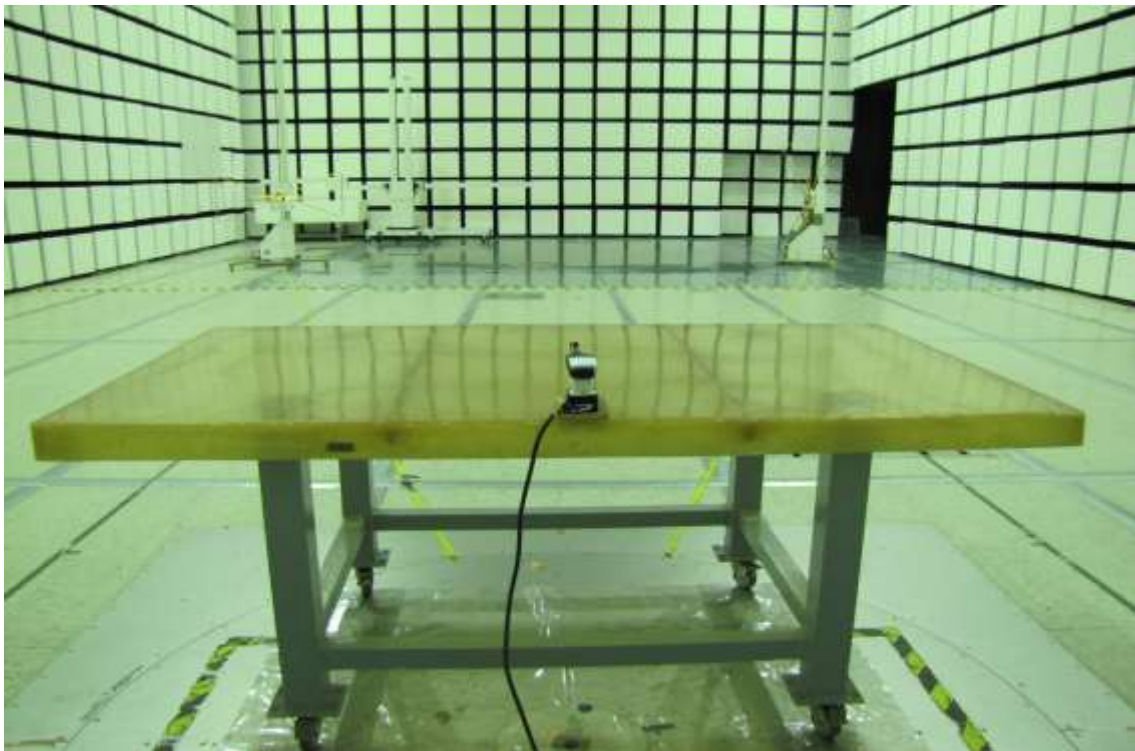
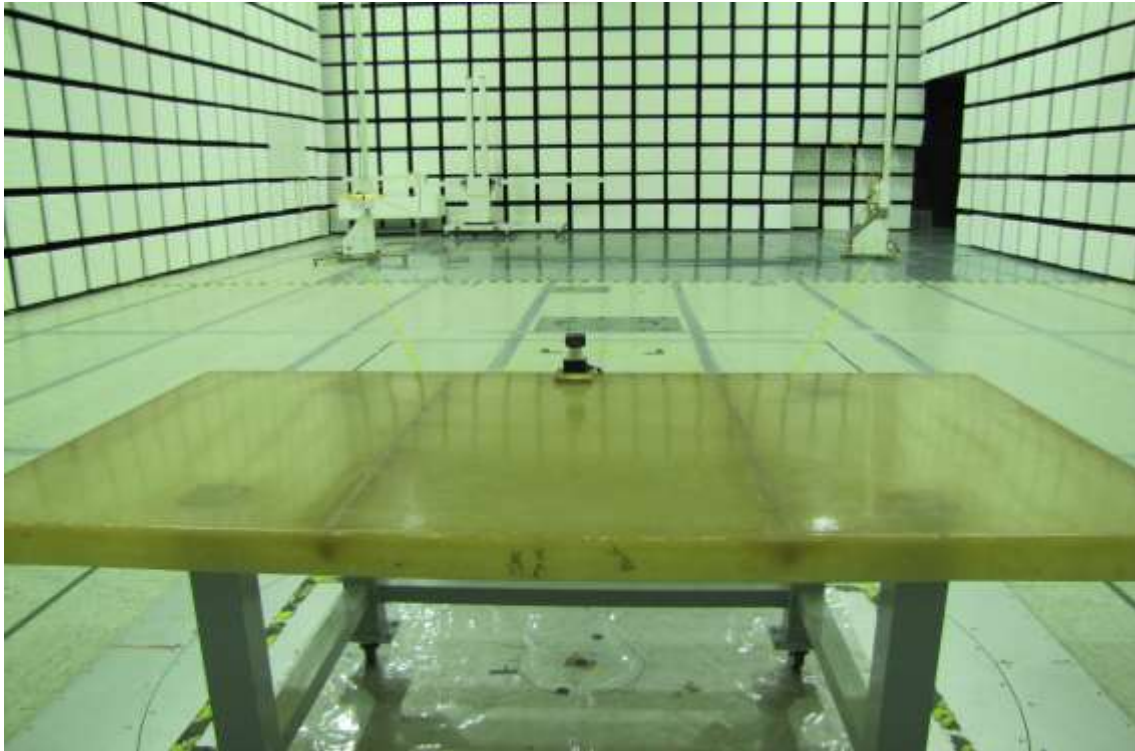
ANNEX B: PHOTOS**1. Conducted Emissions Test Setup Photos**

Full Load



2. Radiated Emissions Test Setup Photos (30MHz~1GHz)

Full Load



APPENDIX II

The test data is recorded from Mar. 25 to Apr. 11, 2022 for evaluation purposes only. The test data may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory.

*Adds EN 55035 standard and deletes EN 55022, EN 55024 standard.

*As above differences, it re-tests RS, Surge and CS test items for this report.

*Updates standard for detailed see as P.4.

1 GENERAL SPECIFICATION

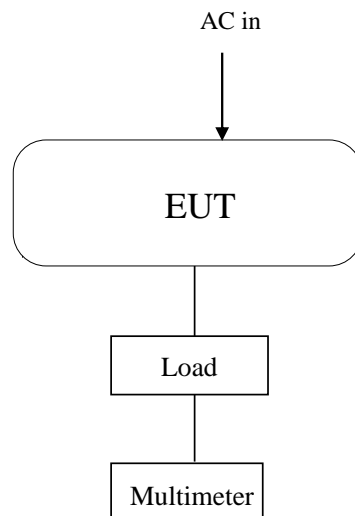
1.1 Tested Peripheral:

The EUT was pre-tested and final tested under the following mode:

Product	Manufacturer	Model No.	I/O Cable
Dummy Load	----	----	1.8m, Unshielded
Multimeter	KILTER	KILTER 370A	1.6m, Undetachable

2 The Worst Mode for test:

2.1 Testing Setup Block Diagram



3SUMMARY OF TEST RESULTS

3.1 Emissions:

3.1.1 Conducted Emissions

-N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

3.1.2 Radiated Emissions

-N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

3.1.3 Harmonics Current Emissions

-N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

3.1.4 Voltage Fluctuations and Flicker

-N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

3.2 Immunity:**3.2.1 Immunity Criteria:**

The results of all of the immunity tests performed on the EUT were evaluated according to the following criteria, and according to the manufacturer's specifications for the EUT:

Performance criterion A: The EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

Performance criterion B: The EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

Performance criterion C: Temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

3.2.2 Electrostatic Discharge Immunity: N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

- | | |
|---|---|
| <input type="checkbox"/> - No Degradation of Function | Requirement: Criterion B (or better) |
| <input type="checkbox"/> - Distortion of Function | - Satisfies Criterion A |
| <input type="checkbox"/> - Error of Function | - Satisfies Criterion B |
| | - Satisfies Criterion C |

3.2.3 RF Radiated Fields Immunity:

- | | |
|--|---------------------------------|
| <input checked="" type="checkbox"/> - No Degradation of Function | Requirement: Criterion A |
| <input type="checkbox"/> - Distortion of Function | - Satisfies Criterion A |
| <input type="checkbox"/> - Error of Function | - Satisfies Criterion B |
| | - Satisfies Criterion C |

3.2.4 EFT/Burst Immunity: N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion B (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.5 Surge Immunity:

- - No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion B (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.6 RF Common Mode Immunity:

- - No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion A

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.7 Power Frequency Magnetic Field Immunity: N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion A

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.2.8 Voltage Interruptions and Voltage Dips Immunity: N/A

Adds EN 55035 standard, after estimating, it didn't need to re-test.

- No Degradation of Function
- Distortion of Function
- Error of Function

Requirement: Criterion C (or better)

- Satisfies Criterion A
- Satisfies Criterion B
- Satisfies Criterion C

3.3 Summary of test Results and Applied Level:

Manufacturer level requirements:

Summary of test Results and Applied Level			
Emission			
Test Standard	Test Item	Test Result	Applied Level and M.U.
EN 55032:2015 EN 55032:2015+A11:2020 CISPR32:2015 CISPR32:2015+A1:2019 AS/NZS CISPR 32:2015, Class B	Radiated Emission	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN 55032:2015 EN 55032:2015+A11:2020 CISPR32:2015 CISPR32:2015+A1:2019 AS/NZS CISPR 32:2015, Class B	Conducted Emission	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN 61000-3-2:2006 +A1:2009 +A2:2009 / IEC 61000-3-2:2005 +A1:2008 +A2:2009, Class A	Harmonic Current Emission	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN 61000-3-3:2013 / IEC 61000-3-3:2013	Voltage Fluctuation and Flicker Test	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
Immunity [EN 55035:2017+A11:2020]			
EN 61000-4-2:2009 / IEC 61000-4-2:2008	Electrostatic Discharge Test (ESD)	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN IEC 61000-4-3:2020 / IEC 61000-4-3:2020	Radiated , RF Immunity (RS) (RS03-10M 1F-N6)	PASS	@Frequency: <u>80MHz-5000MHz</u> @3V/m (Unmodulated) , 1KHz Amplitude Modulated with modulation depth 80% Field strength: 80M-6GHz: 1.80 dB Acoustic measurement:80M-6GHz: 1.98dB (SPL)
EN 61000-4-4:2012 / IEC 61000-4-4:2012	Electrical Fast Transient/burst Test (EFT)	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN 61000-4-5:2014+A1:2017 / IEC 61000-4-5:2014/AMD1:2017	Surge Immunity IMU3000+CDN3000A-08-32 (SURGE02-10M B1)	PASS	@Power port : <u>±0.5KV / ±1KV</u> @I/O Port : <u>N/A</u> Open circuit voltage front time: 0.19 us Open circuit peak voltage: 7.56 % Open circuit voltage duration: 0.49 us
EN 61000-4-6:2014 / IEC 61000-4-6:2013/AC: 2015	Conducted , RF Immunity (CS) (CS01-10M B1)	PASS	@Frequency: <u>0.15MHz-80MHz</u> @3~1V/m (Unmodulated) , 1KHz Amplitude Modulated with modulation depth 80% 150K-230MHz, M2(TESEQ): 1.65 dB
EN 61000-4-8:2010 / IEC 61000-4-8:2009	Power Frequency Magnetic Field (MS)	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.
EN IEC 61000-4-11:2020 / IEC 61000-4-11:2020	Voltage dips,short interruptions and voltage variations on power supply input lines	N/A	Adds EN 55035 standard, after estimating, it didn't need to re-test.

Note : Measurement uncertainty $U=\pm X$. Means the expanded measure uncertainty $U=\pm X$, the coverage factor $k=2$, approximately a 95% level of confidence.



4TEST DATA & RELATED INFORMATIONS

4.1 Immunity:

4.1.1 RF Radiated Fields Immunity Test:

4.1.1.1 RF Radiated Fields Immunity Test Data:

A. Operating Conditions of the EUT

Project number	22-03-MAT-104	Test Dated	Apr. 09, 2022
Test Specification	IEC 61000-4-3 / EN 61000-4-3		
Test Site	RS03-10M 1F-N6		
Climatic Condition	Ambient Temperature: <u>23</u> °C		Relative Humidity: <u>52</u> %RH
	Atmospheric Pressure: <u>990</u> mbar		
Power Supply System	<input checked="" type="checkbox"/> AC Power: <u>230</u> Vac <u>50</u> Hz <input type="checkbox"/> DC Power: <u> </u> Vdc		
Test Mode	Full Load		
Test Set-up	<input checked="" type="checkbox"/> Table-top Equipment <input type="checkbox"/> Floor-standing Equipment		
Test Engineer	Vincent Chang		

Frequency Range : <u>80</u> MHz ~ <u>1000</u> MHz	Field Strength : <u>3</u> V/m	Modulation (AM 1kHz 80%)		
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s	Step Size : ≤ 1 % of preceding frequency value		Dwell Time : <u>5</u> s	
Frequency Range (MHz)	Polarization of Antenna	EUT Position (Angle)	Test Result	Comments
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	0	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	90	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	180	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Vertical	270	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	0	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	90	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	180	A	
<u>80</u> MHz ~ <u>1000</u> MHz	Horizontal	270	A	



Frequency Range : <u>1800/2600/3500/5000</u> MHz		Field Strength : <u>3</u> V/m		Modulation (AM 1kHz 80%)	
Sweep Rate : $\leq 1.5 \times 10^{-3}$ decades/s		Step Size : $\leq 1\%$ of preceding frequency value			Dwell Time : <u>5</u> s
Frequency Range (MHz)	Polarization of Antenna	EUT Position (Angle)	Test Result	Comments	
<u>1800</u> MHz $\pm 1\%$ <u>2600</u> MHz $\pm 1\%$ <u>3500</u> MHz $\pm 1\%$ <u>5000</u> MHz $\pm 1\%$	Vertical	0	A		
	Vertical	90	A		
	Vertical	180	A		
	Vertical	270	A		
	Horizontal	0	A		
	Horizontal	90	A		
	Horizontal	180	A		
	Horizontal	270	A		

Result:	<input checked="" type="checkbox"/> Complied		<input type="checkbox"/> Does not comply	
Criterion Required:	<u>A</u>	Criterion Met:	<u>A</u>	

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

The frequency range is scanned as specified. However , when specified in Annex A, an additional comprehensive functional test shall carried out at a limited number of frequencies. And additional frequencies tested for Korean KN24 . The selected frequencies are : 80 , 120 , 145 , 160 , 230 , 375 , 434 , 435 , 460 , 600 , 814 , 835 , 863 , and 900MHz($\pm 1\%$)).



4.1.2 Surge Immunity Test:

4.1.2.1 Surge Immunity Test Data:

A. Operating Conditions of the EUT

Project number	22-03-MAT-104	Test Dated	Apr. 11, 2022
Test Specification	IEC 61000-4-5 / EN 61000-4-5		
Test Site	SURGE02 – 10M B1		
Climatic Condition	Ambient Temperature: <u>23</u> °C		Relative Humidity: <u>52</u> %RH
	Atmospheric Pressure: <u>984</u> mbar		
Power Supply System	AC Power: <u>230</u> Vac <u>50</u> Hz		
Test Mode	Full Load		
Test Set-up	<input checked="" type="checkbox"/> Table-top Equipment <input type="checkbox"/> Floor-standing Equipment		
Test Engineer	Vincent Chang		

Waveform: 1.2/50µs (8/20µs)	Repetition rate: <u>60</u> sec	Times: <u>5</u> times/each condition
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Applied Voltage(KV)	Mode	Test Line	Severity Level	Phase Angle	Test Result	Comments
±0.5	Differential Mode	L - N	1	0°/90°/180°/270°	A	
±1.0	Differential Mode	L - N	2	0°/90°/180°/270°	A	

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply			
Criterion Required:	0.5KV , 1KV	B	Criterion Met:	A

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

4.1.3 RF Common Mode, 0.15~80MHz Test:

4.1.3.1 RF Common Mode, 0.15~80MHz Test Data:

A. Operating Conditions of the EUT:

Project number	22-03-MAT-104	Test Dated	Apr. 01, 2022
Test Specification	IEC 61000-4-6 / EN 61000-4-6		
Test Site	CS01 – 10M B1		
Climatic Condition	Ambient Temperature: <u>22</u> °C		Relative Humidity: <u>54</u> %RH
	Atmospheric Pressure: <u>989</u> mbar		
Power Supply System	<input checked="" type="checkbox"/> AC Power: <u>230</u> Vac <u>50</u> Hz <input type="checkbox"/> DC Power: <u> </u> Vdc		
Test Mode	Full Load		
Test Set-up	<input type="checkbox"/> Table-top Equipment <input checked="" type="checkbox"/> Floor-standing Equipment		
Test Engineer	Vincent Chang		

Frequency Range	: <u>0.15</u> MHz ~ <u>10</u> MHz	Test Voltage	: <u>3</u> V	Modulation (AM 1kHz 80%)	
	: <u>10</u> MHz ~ <u>30</u> MHz	Test Voltage	: <u>3</u> V to <u>1</u> V		
	: <u>30</u> MHz ~ <u>80</u> MHz	Test Voltage	: <u>1</u> V		
Sweep Rate	: $\leq 1.5 \times 10^{-3}$ decades/s	Step Size	: ≤ 1 % of preceding frequency value	Dwell Time	: <u>3.0</u> s
Frequency Range (MHz)	Tested Line		Test Result		
0.15~80	Power Line (M2)		A		

Result:	<input checked="" type="checkbox"/> Complied <input type="checkbox"/> Does not comply			
Criterion Required:	A	Criterion Met:	A	PASS

(1)Note: " A "means the EUT continued to operate as intended. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended.

(2)Note: " B "means the EUT continued to operate as intended after the test. No degradation of performance or loss of function was allowed below a performance level specified by the manufacturer, when the EUT was used as intended. During the test, degradation of performance was however allowed. No change of actual operating state or stored data was allowed.

(3)Note: " C "means the EUT temporary loss of function was allowed, provided the function was self recoverable or could be restored by the operation of the controls.

(4)Additional Information :

5 EQUIPMENTS LIST FOR TESTING**5.1 Test Equipment for RS Test**

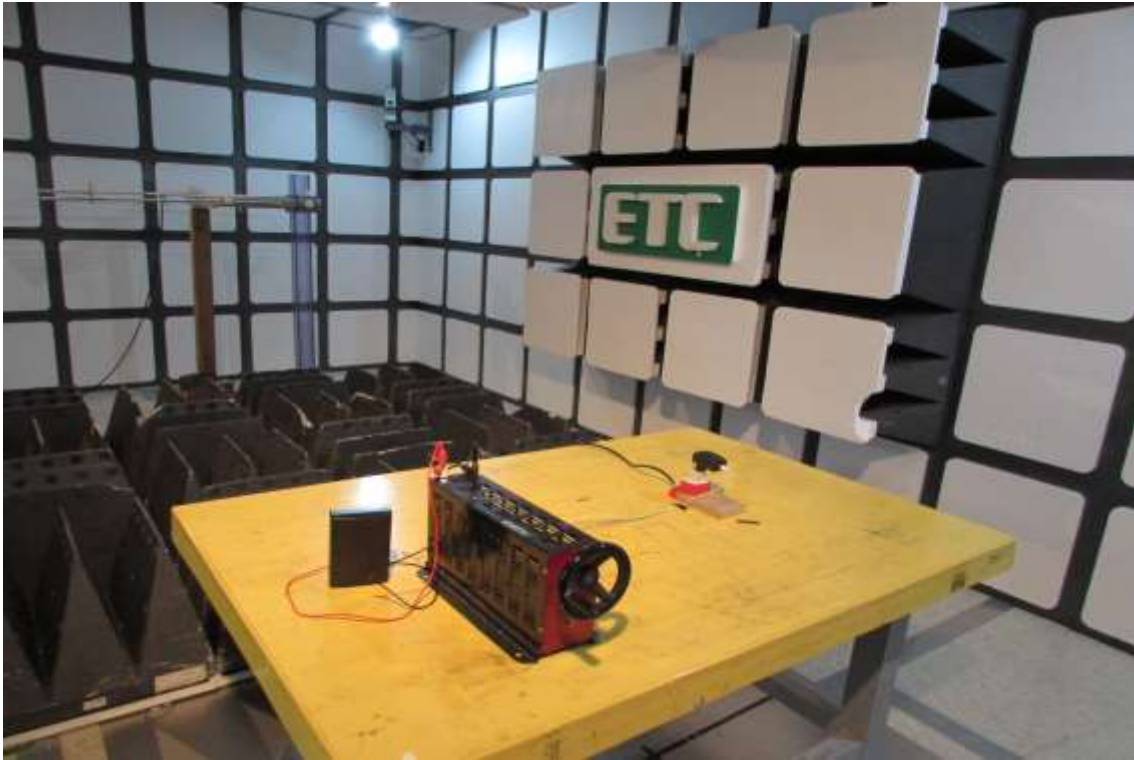
Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	ANTENNA	SCHWARZBECK	VULP 9118E	13057619-001	Mar.02,2022	Mar.01,2023
2	Horn Antenna	SCHWARZBECK	VULB9120D	13057318-003	Mar.15,2022	Mar.14,2023
3	Power Meter	BOONTON	4532	13050615-001	Nov.14,2021	Nov.13,2022
4	Signal Generator	R&S	SMR20	13051711-001	May.16,2021	May.15,2022
5	Power Amplifier	AMETEK	80RF 1000-300	13052925-001	Jan.06,2022	Jan.05,2023
6	Power Amplifier	AR	50S1G4AM1	13052903-001	Apr.28,2021	Apr.27,2022
7	Power Sensor	BOONTON	51011	13053510-003	Nov.14,2021	Nov.13,2022
8	Power Sensor	BOONTON	51011	13053510-001	Nov.14,2021	Nov.13,2022
9	Traveling Wave Tube Amplifier	AR	20T4G18A	13052912-001	Apr.28,2021	Apr.27,2022
10	Signal Generator	KEYSIGHT	N5171B	13051724-001	Nov.29,2021	Nov.28,2022
11	Control Computer	DELL	OPTIPLEX 3050	13084016-002	N/A	N/A
12	Software	AUDIX	i2	20160217b	N/A	N/A

5.2 Test Equipment for SURGE Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	Surge Simulator	EMC Partner	IMU3000	13046511-001	Jul.28,2021	Jul.27,2022
2	Surge CDN	EMC Partner	CDN3000A- 08-32	13057747-001	Jul.28,2021	Jul.27,2022

5.3 Test Equipment for CS Test

Item	Name	Manufacturer	Model	ID(SN)	Calibration Date	Recommended Recal. Date
1	Coupling And Decoupling Network	TESEQ	CDN M016	13057749-001	Jan.11,2022	Jan.10,2023
2	Compact Immunity Test System	TESEQ	NSG 4070B-80	46509	Apr.05,2021	Apr.04,2022
3	6dB 12W Attenuator	RADIALL	R415706	743RS-01	Oct.26,2021	Oct.25,2022

ANNEX C: PHOTOS**1. RF Radiated Fields Immunity Test Setup Photo****(Front)****(Back)**

2. Surge Immunity Test Setup Photo**3. RF Common Mode Immunity Test Setup Photo****(Power)**