APPLICATION FOR VERIFICATION
On behalf of
YANGZHOU PAIRUI IMP. & EXP.CO.,LTD

Product Name: Switching mode power supply

Model No.: IS30-5, IS30-24, IS30-12

Prepared For : YANGZHOU PAIRUI IMP.&EXP.CO.,LTD
ROOM 1518 DEXIN MANSION, NO.545 MUSEUM ROAD, YANGZHOU, JIAGNSU, CHINA 225009

Prepared By: UL-CCIC Company Limited
No. 2, Chengwan Road, Suzhou Industrial Park,
Suzhou 215122 ,China

Report Number : 4787334197B.2
Date of Test : Aug 01-10, 2016
Date of Report : Aug 16, 2016

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TEST REPORT FOR VERIFICATION

Applicant	:	YANGZHOU PAIRUI IMP.&EXP.CO.,LTD
Manufacturer	:	TIANCHANG PAIRUI ELECTRONICS CO.,LTD
EUT Description	:	Switching mode power supply
		(A) Model No. : IS30-5, IS30-24, IS30-12
		(B) Power Supply : AC 100~240V/50~60Hz
		(C) Test Voltage : 120V/60Hz

Test Procedure Used:

FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS A OCTOBER 2015 AND ANSI C63.4-2014

The device described above is tested by UL-CCIC Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class A) limits both radiated and conducted emissions.

The test results are contained in this test report and UL-CCIC Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (Equipment under test), which was tested in 3 m anechoic chamber on Aug 01-10, 2016 is technically compliance with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of UL-CCIC Co., Ltd.

Date of Test : Aug 01-10, 2016

Prepared By:

Jissea Liu/Engineer

Approved Signatory:

Linda Ni / Senior Project Engineer

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminals	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014	15.107(b) Class A	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2015 AND ANSI C63.4-2014	15.109(b) Class A	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : Switching mode power supply

Type of EUT : ☑ Production ☐ Pre-product ☐ Pro-type

Model No. : IS30-5, IS30-24, IS30-12

Power : 30W

Input :

Model Number	AC Input
IS30-5, IS30-24, IS30-12	100~240V~50/60Hz

Output :

Model Number	DC Output
IS30-5	5V 6A
IS30-12	12V 2.5A
IS30-24	24V 1.3A

Note : The three models are all same except output, Base on the pre-scan IS30-5 and IS30-24 were tested and recorded in the report.

Applicant : YANGZHOU PAIRUI IMP.&EXP.CO.,LTD
ROOM 1518 DEXIN MANSION, NO.545 MUSEUM ROAD, YANGZHOU, JIAGNSU, CHINA 225009

Manufacturer : TIANCHANG PAIRUI ELECTRONICS CO.,LTD
#286 RENMING ROAD, EAST RENHE TOWN, TIANCHANG CITY, ANHUI, CHINA 239331

2.2 Load

Model Number	Full Load (Ω)	Half Load (Ω)
IS30-5	0.8	1.7
IS30-24	18.5	37

2.3 Description of Test Facility

Site Description (No.3 3m Chamber)	:	Sept. 17, 1998 file on Jan 15, 2015 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	:	Audix Technology (Shanghai) Co., Ltd.
Site Location	:	3F 34Bldg 680 Guiping Rd, Caohejing Hi-Tech Park, Shanghai 200233, China
FCC registration Number	:	91789
NVLAP Lab Code	:	200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : U = 3.4dB
Radiated Emission Expanded Uncertainty (30-200MHz):
U = 4.6dB (Horizontal)
U = 4.3dB (Vertical)
Radiated Emission Expanded Uncertainty (200M-1GHz):
U = 4.5dB (Horizontal)
U = 5.4dB (Vertical)

3 CONDUCTED EMISSION TEST

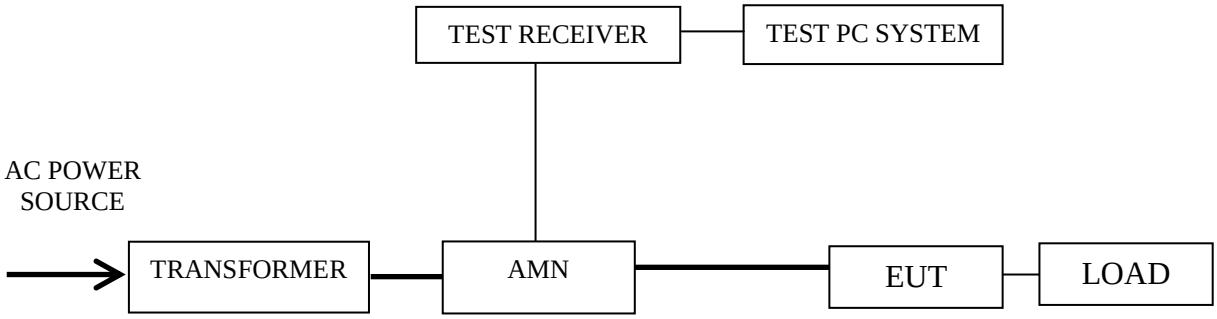
3.1 Test Equipment

The following test equipment are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101302	Apr 27, 2016	Apr 26, 2017
2.	Artificial Mains Network (AMN)	R&S	ENV4200	100125	Jun 27, 2016	Jun 26, 2017
3.	Software	Audix	e3	6.111206	--	--

3.2 Block Diagram of Test Setup

3.2.1 Conducted Disturbance Test Setup



—— : Signal Line
▬ : Power Line

3.3 Conducted Emission Limits [FCC Part 15 Subpart B (Class A)]

Frequency Range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 ~ 0.5	79	66
0.5 ~ 30	73	60

NOTE 1 - RF Line Voltage dB (μV) = 20 lg RF Line Voltage (μV)
NOTE 2 - The lower limit shall apply at the transition frequency.

3.4 Test Configuration

The EUT (listed in Sec2.2) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner which tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Set up the EUT as shown in Sec.3.2.

3.5.2 Turn on the power of all equipments.

3.5.3 Turn on the power of EUT.

3.5.4 Set the EUT on the test modes, and then test.

3.6 Test Procedures

The EUT was placed upon a non-metallic table, which is 0.8 m above the horizontal conducting ground plane and 0.4 m from a vertical reference plane. The EUT was connected to the power mains through an Artificial Mains Network (AMN) to provide a 50 Ω coupling impedance for the measuring equipment. Both sides of AC line (Line & Neutral) were checked to find out the maximum conducted emission according to EN 55022: 2010+AC: 2011 regulations during conducted disturbance test.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4 during conducted emission test.

The I.F. bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency range is swept from 150 kHz to 30 MHz.

All the following records are the disturbance levels and the frequencies of the highest disturbances, and if the emissions not reported below are too low against the prescribed limits.

Model Number	Test Mode	Data Page
IS30-5	Full Load	P10 – P11
	Half Load	P12 – P13
IS30-24	Full Load	P14 – P15
	Half Load	P16 – P17

NOTE 1 – "QP" means "Quasi-Peak" values, "AV" means "Average" values.
NOTE 2 – The worst case is for IS30-24 model. (Test Mode: Full Load. The worst emission is detected at 0.155MHz (Average Value), with corrected signal level of 51.47 (μV) (limit is 79.00 dB(μV)), when the Neutral of the EUT is connected to AMN.

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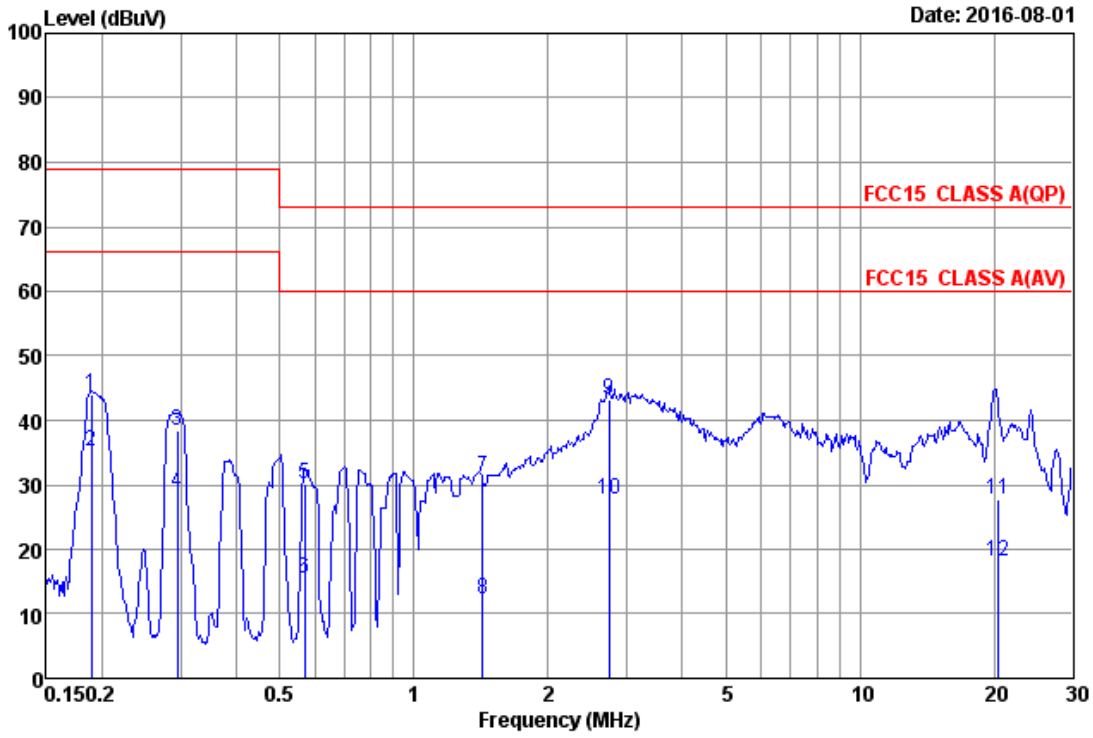

Site no : Audix (Shanghai) shielded 3
Data no :127
AMN : ENV4200-2016
AMN Phase :LINE
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
Engineer :Wency
EUT : Switching mode power supply
M/N : IS30-5
Power Rating : 120V/60Hz
Test Mode : Full Load

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.190	10.50	0.04	33.40	43.94	79.00	35.06	QP
2	0.190	10.50	0.04	24.70	35.24	66.00	30.76	Average
3	0.295	10.43	0.04	28.00	38.47	79.00	40.53	QP
4	0.295	10.43	0.04	18.30	28.77	66.00	37.23	Average
5	0.569	10.35	0.05	19.80	30.20	73.00	42.80	QP
6	0.569	10.35	0.05	5.20	15.60	60.00	44.40	Average
7	1.426	10.33	0.07	20.91	31.31	73.00	41.69	QP
8	1.426	10.33	0.07	1.91	12.31	60.00	47.69	Average
9	2.736	10.33	0.10	32.69	43.12	73.00	29.88	QP
10	2.736	10.33	0.10	17.19	27.62	60.00	32.38	Average
11	20.440	10.36	0.26	17.20	27.82	73.00	45.18	QP
12	20.440	10.36	0.26	7.60	18.22	60.00	41.78	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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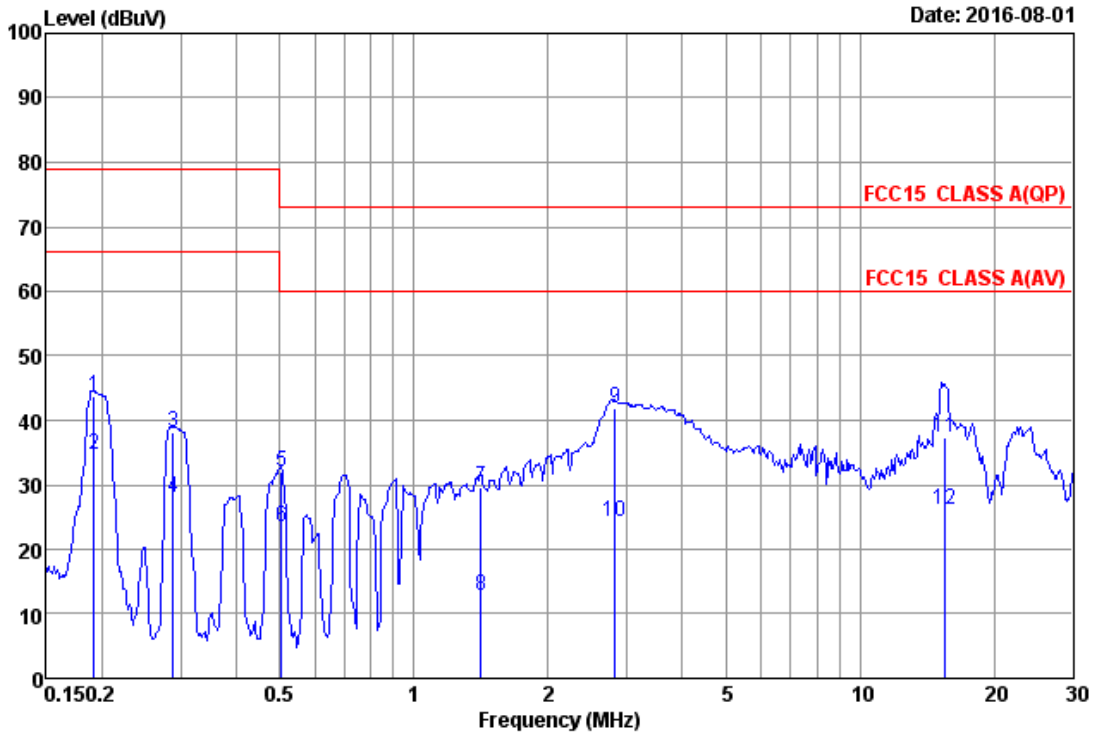

Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-5
Power Rating : 120V/60Hz
Test Mode : Full Load

Data no :128
AMN Phase :NEUTRAL
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.192	10.49	0.04	33.30	43.83	79.00	35.17	QP
2	0.192	10.49	0.04	24.20	34.73	66.00	31.27	Average
3	0.289	10.42	0.04	27.61	38.07	79.00	40.93	QP
4	0.289	10.42	0.04	17.41	27.87	66.00	38.13	Average
5	0.506	10.34	0.05	21.50	31.89	73.00	41.11	QP
6	0.506	10.34	0.05	13.00	23.39	60.00	36.61	Average
7	1.411	10.34	0.07	19.30	29.71	73.00	43.29	QP
8	1.411	10.34	0.07	2.50	12.91	60.00	47.09	Average
9	2.827	10.36	0.10	31.30	41.76	73.00	31.24	QP
10	2.827	10.36	0.10	13.70	24.16	60.00	35.84	Average
11	15.480	10.42	0.23	26.81	37.46	73.00	35.54	QP
12	15.480	10.42	0.23	15.51	26.16	60.00	33.84	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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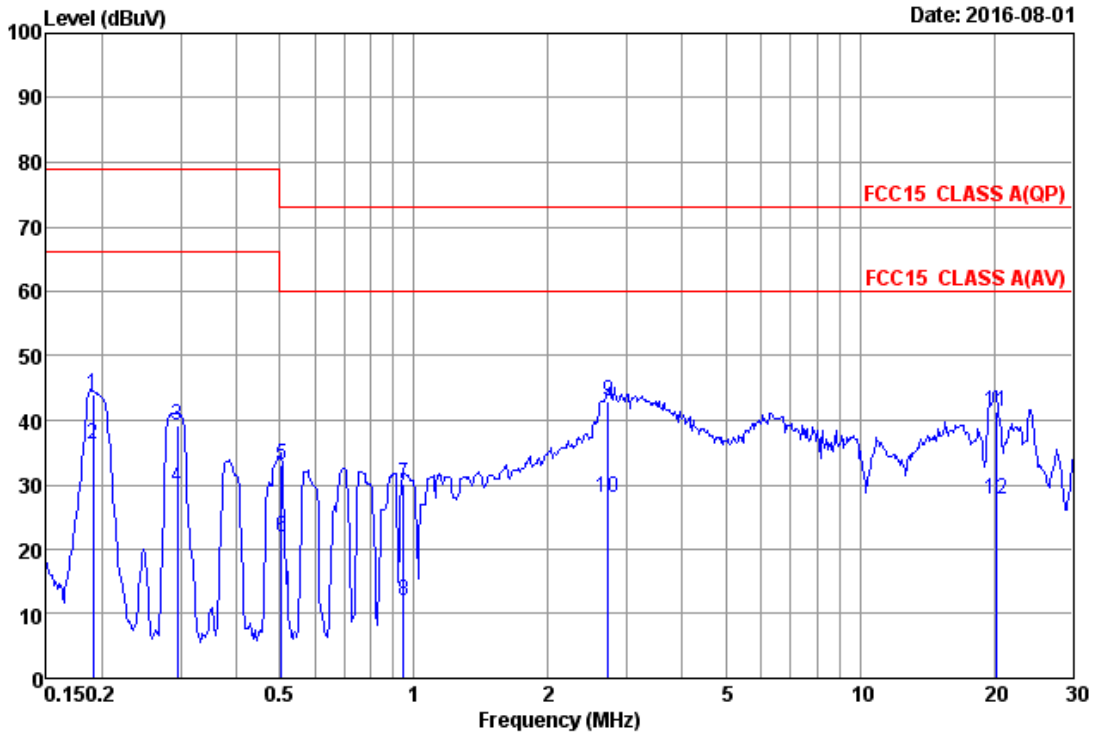

Site no : Audix (Shanghai) shielded 3 Data no :126
AMN : ENV4200-2016 AMN Phase :LINE
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI Engineer :Wency
EUT : Switching mode power supply
M/N : IS30-5
Power Rating : 120V/60Hz
Test Mode : Half Load

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.191	10.50	0.04	33.50	44.04	79.00	34.96	QP
2	0.191	10.50	0.04	25.60	36.14	66.00	29.86	Average
3	0.295	10.43	0.04	28.81	39.28	79.00	39.72	QP
4	0.295	10.43	0.04	19.11	29.58	66.00	36.42	Average
5	0.505	10.35	0.05	22.80	33.20	73.00	39.80	QP
6	0.505	10.35	0.05	11.60	22.00	60.00	38.00	Average
7	0.946	10.34	0.06	19.80	30.20	73.00	42.80	QP
8	0.946	10.34	0.06	1.70	12.10	60.00	47.90	Average
9	2.732	10.33	0.10	32.39	42.82	73.00	30.18	QP
10	2.732	10.33	0.10	17.69	28.12	60.00	31.88	Average
11	20.200	10.35	0.26	30.70	41.31	73.00	31.69	QP
12	20.200	10.35	0.26	17.10	27.71	60.00	32.29	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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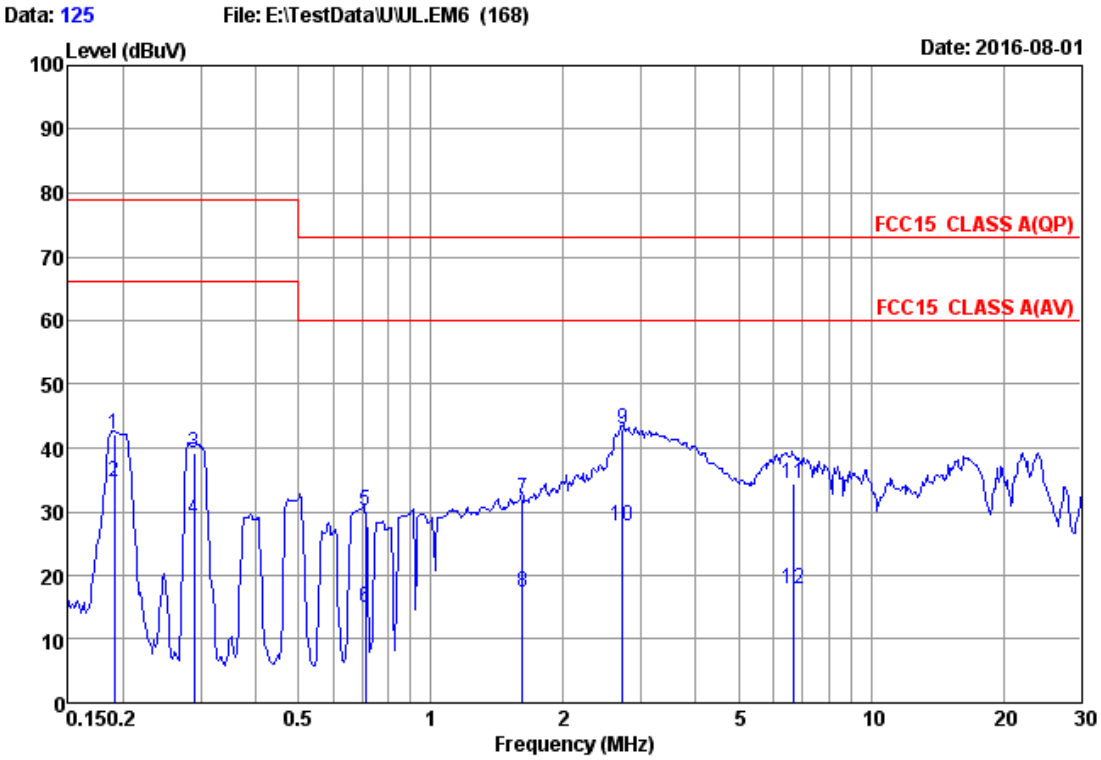

Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-5
Power Rating : 120V/60Hz
Test Mode : Half Load

Data no :125
AMN Phase :NEUTRAL
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.191	10.49	0.04	31.70	42.23	79.00	36.77	QP
2	0.191	10.49	0.04	24.10	34.63	66.00	31.37	Average
3	0.290	10.42	0.04	28.61	39.07	79.00	39.93	QP
4	0.290	10.42	0.04	18.41	28.87	66.00	37.13	Average
5	0.709	10.33	0.06	19.80	30.19	73.00	42.81	QP
6	0.709	10.33	0.06	4.60	14.99	60.00	45.01	Average
7	1.613	10.35	0.07	21.70	32.12	73.00	40.88	QP
8	1.613	10.35	0.07	6.90	17.32	60.00	42.68	Average
9	2.732	10.36	0.10	32.49	42.95	73.00	30.05	QP
10	2.732	10.36	0.10	17.29	27.75	60.00	32.25	Average
11	6.654	10.38	0.15	23.80	34.33	73.00	38.67	QP
12	6.654	10.38	0.15	7.40	17.93	60.00	42.07	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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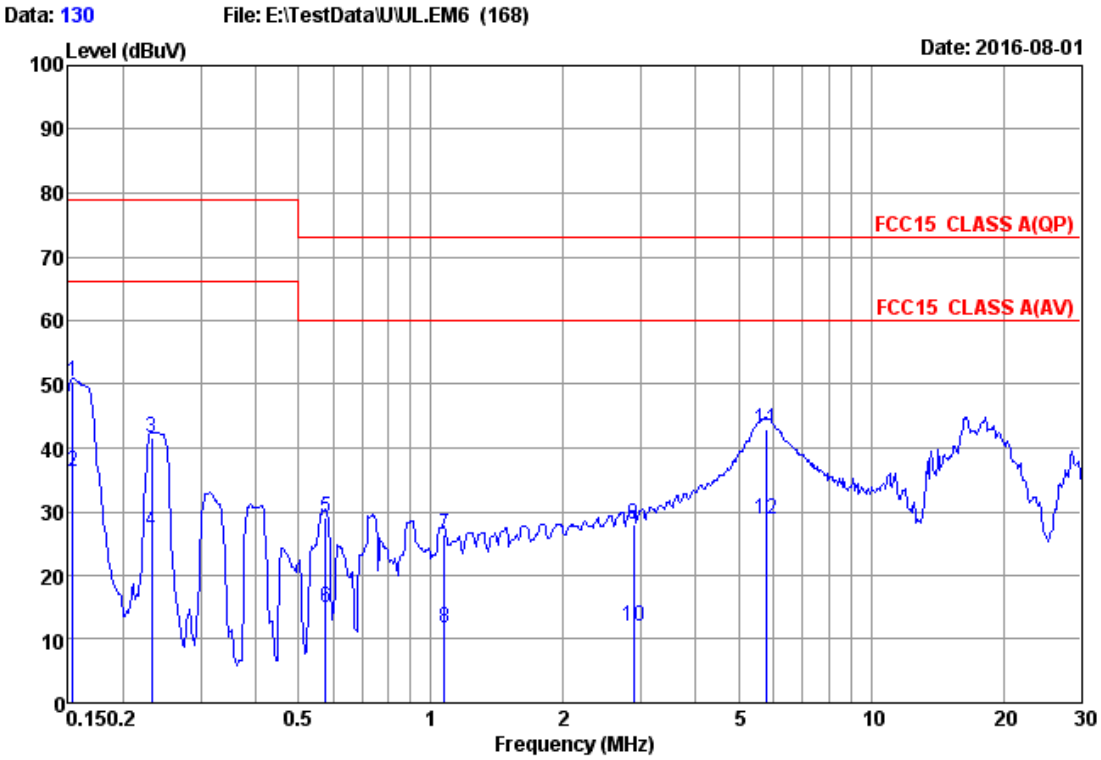

Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-24
Power Rating : 120V/60Hz
Test Mode : Full Load

Data no :130
AMN Phase :LINE
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.154	10.55	0.03	39.80	50.38	79.00	28.62	QP
2	0.154	10.55	0.03	25.70	36.28	66.00	29.72	Average
3	0.232	10.47	0.04	31.20	41.71	79.00	37.29	QP
4	0.232	10.47	0.04	16.50	27.01	66.00	38.99	Average
5	0.576	10.35	0.05	18.80	29.20	73.00	43.80	QP
6	0.576	10.35	0.05	4.60	15.00	60.00	45.00	Average
7	1.071	10.34	0.06	16.10	26.50	73.00	46.50	QP
8	1.071	10.34	0.06	1.30	11.70	60.00	48.30	Average
9	2.893	10.33	0.10	17.60	28.03	73.00	44.97	QP
10	2.893	10.33	0.10	1.50	11.93	60.00	48.07	Average
11	5.792	10.32	0.14	32.40	42.86	73.00	30.14	QP
12	5.792	10.32	0.14	18.30	28.76	60.00	31.24	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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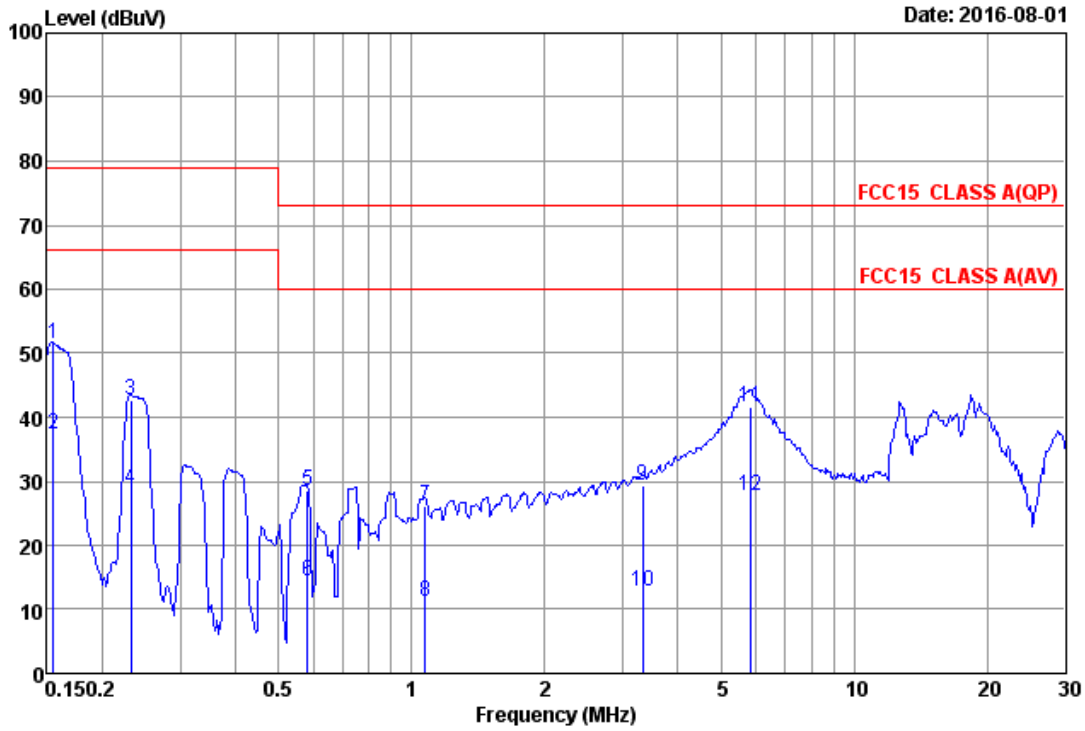

Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-24
Power Rating : 120V/60Hz
Test Mode : Full Load

Data no :129
AMN Phase :NEUTRAL
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.155	10.54	0.03	40.90	51.47	79.00	27.53	QP
2	0.155	10.54	0.03	26.80	37.37	66.00	28.63	Average
3	0.232	10.46	0.04	32.30	42.80	79.00	36.20	QP
4	0.232	10.46	0.04	18.40	28.90	66.00	37.10	Average
5	0.582	10.34	0.05	18.20	28.59	73.00	44.41	QP
6	0.582	10.34	0.05	4.00	14.39	60.00	45.61	Average
7	1.075	10.34	0.06	15.80	26.20	73.00	46.80	QP
8	1.075	10.34	0.06	0.70	11.10	60.00	48.90	Average
9	3.322	10.36	0.11	18.90	29.37	73.00	43.63	QP
10	3.322	10.36	0.11	2.30	12.77	60.00	47.23	Average
11	5.821	10.37	0.14	31.20	41.71	73.00	31.29	QP
12	5.821	10.37	0.14	17.20	27.71	60.00	32.29	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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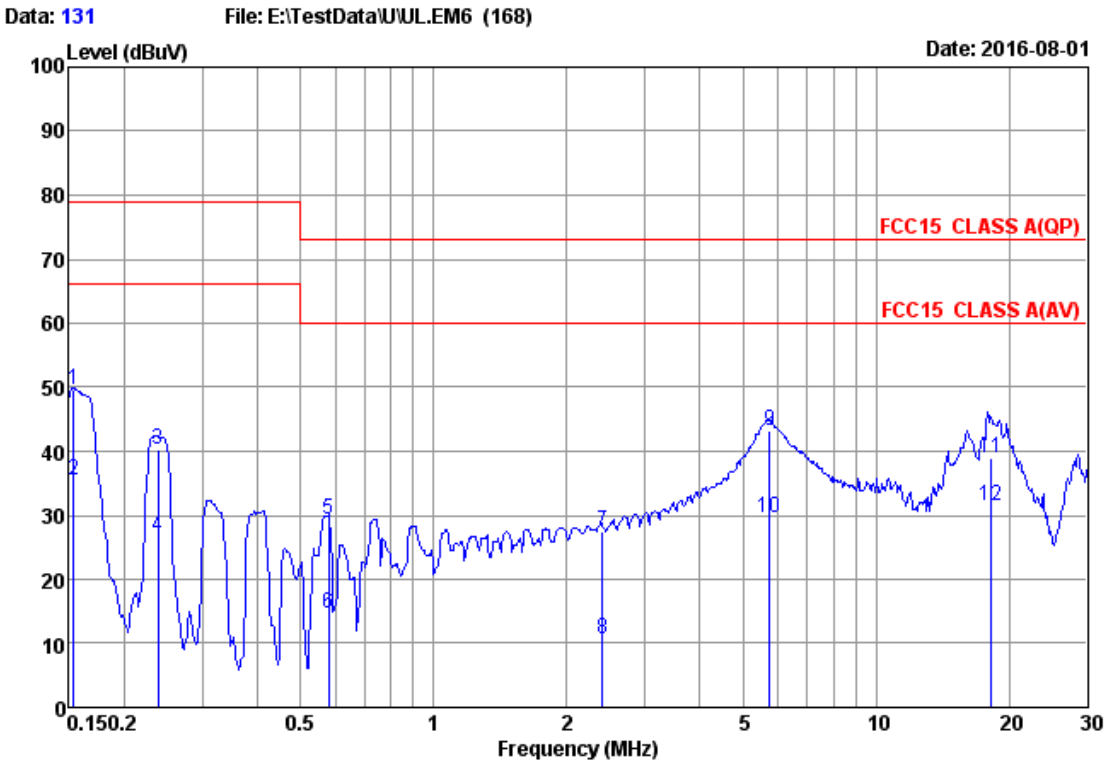

Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-24
Power Rating : 120V/60Hz
Test Mode : Half Load

Data no :131
AMN Phase :LINE
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.153	10.55	0.03	39.01	49.59	79.00	29.41	QP
2	0.153	10.55	0.03	24.81	35.39	66.00	30.61	Average
3	0.238	10.46	0.04	29.81	40.31	79.00	38.69	QP
4	0.238	10.46	0.04	16.11	26.61	66.00	39.39	Average
5	0.580	10.35	0.05	18.90	29.30	73.00	43.70	QP
6	0.580	10.35	0.05	4.30	14.70	60.00	45.30	Average
7	2.403	10.33	0.09	17.10	27.52	73.00	45.48	QP
8	2.403	10.33	0.09	0.30	10.72	60.00	49.28	Average
9	5.734	10.32	0.14	32.70	43.16	73.00	29.84	QP
10	5.734	10.32	0.14	19.10	29.56	60.00	30.44	Average
11	18.230	10.33	0.25	28.40	38.98	73.00	34.02	QP
12	18.230	10.33	0.25	20.80	31.38	60.00	28.62	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

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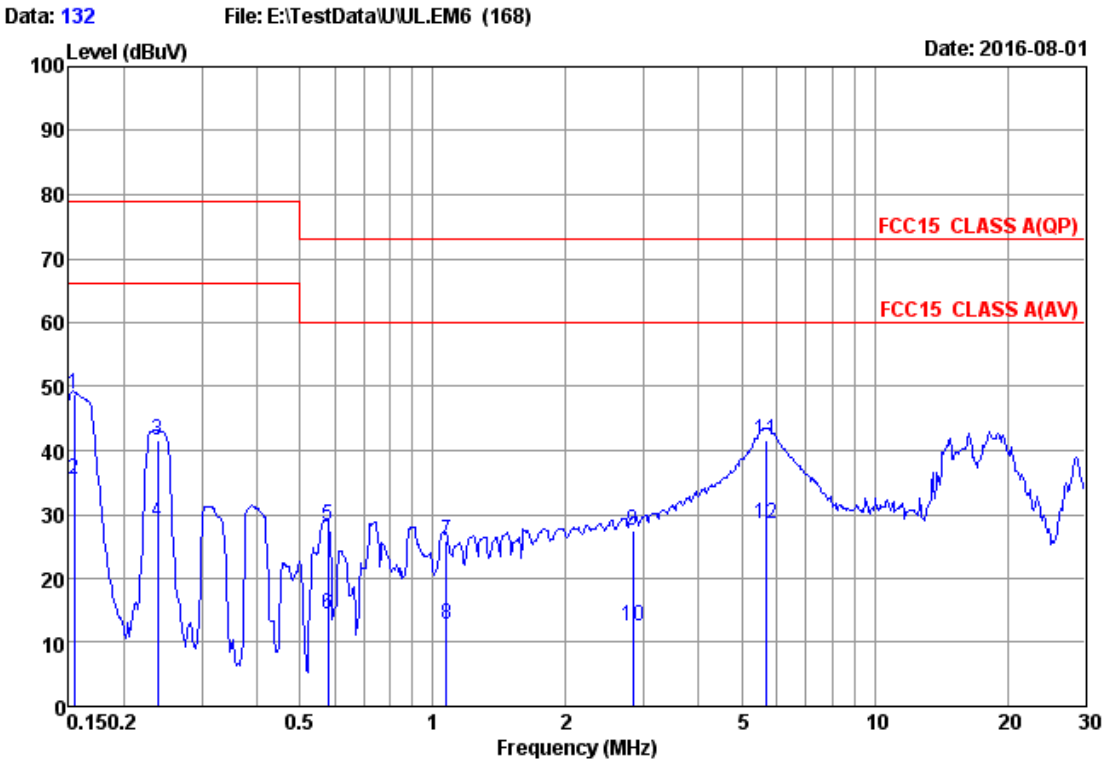


Site no : Audix (Shanghai) shielded 3
AMN : ENV4200-2016
Limit : FCC15 CLASS A(QP)
Env/Ins : 23'C/52%RH /ESCI
EUT : Switching mode power supply
M/N : IS30-24
Power Rating : 120V/60Hz
Test Mode : Half Load

Data no :132
AMN Phase :NEUTRAL
Engineer :Wency

	Freq (MHz)	AMN. Factor (dB)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV)	Limits (dBµV)	Margin (dB)	Remark
1	0.154	10.54	0.03	38.30	48.87	79.00	30.13	QP
2	0.154	10.54	0.03	25.00	35.57	66.00	30.43	Average
3	0.239	10.45	0.04	31.00	41.49	79.00	37.51	QP
4	0.239	10.45	0.04	18.30	28.79	66.00	37.21	Average
5	0.580	10.34	0.05	18.00	28.39	73.00	44.61	QP
6	0.580	10.34	0.05	4.00	14.39	60.00	45.61	Average
7	1.073	10.34	0.06	15.50	25.90	73.00	47.10	QP
8	1.073	10.34	0.06	2.40	12.80	60.00	47.20	Average
9	2.835	10.36	0.10	17.00	27.46	73.00	45.54	QP
10	2.835	10.36	0.10	2.20	12.66	60.00	47.34	Average
11	5.686	10.37	0.14	31.20	41.71	73.00	31.29	QP
12	5.686	10.37	0.14	17.90	28.41	60.00	31.59	Average

Remark: 1.Emission Level= AMN Factor + Cable loss + Reading.

4 RADIATED EMISSION TEST

4.1 Test Equipment

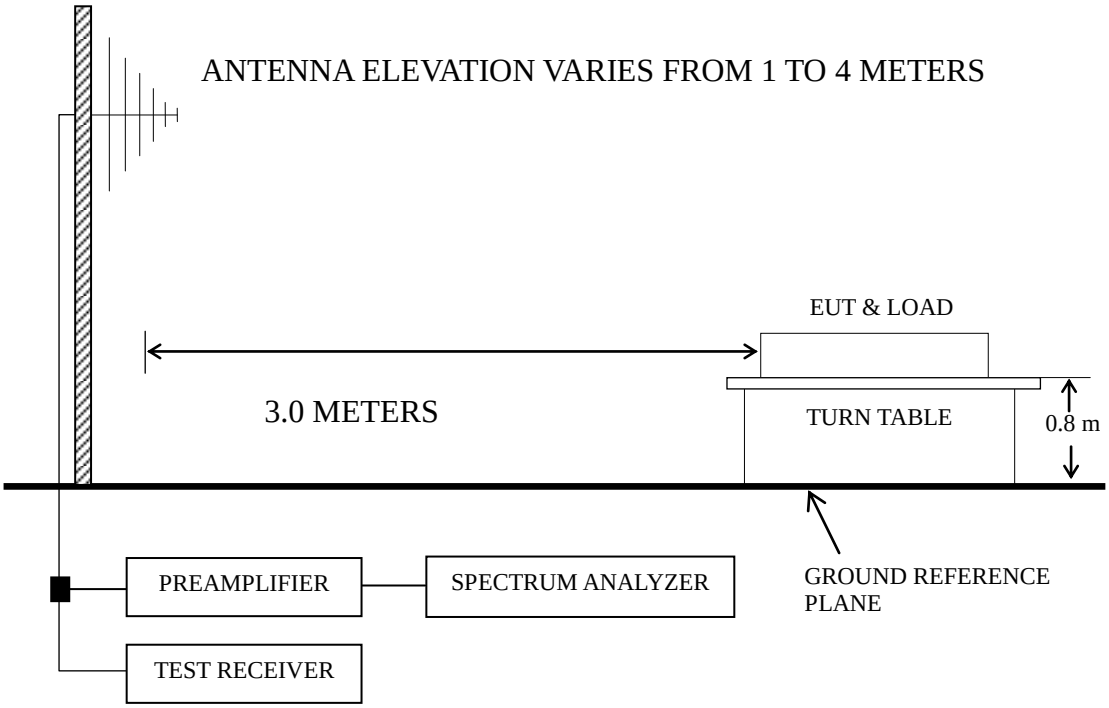
The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	May 07, 2016	May 06, 2017
2.	Preamplifier	Agilent	8447D	2944A06664	Apr 27, 2016	Apr 26, 2017
3.	Bi-log Antenna	TESEQ	CBL6112D	23192	Mar 28, 2016	Mar 27, 2017
4.	Spectrum	Agilent	E7405A	MY45107028	Feb 26, 2016	Feb 25, 2017
5.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 18, 2016	Sep 17, 2016
6.	Software	Audix	e3	6.2007-9-10	--	--

4.2 Block Diagram of Test Setup

4.2.1 Radiated emission test setup

4.2.1.1 Below 1GHz



: 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B (Class A)]

Frequency (MHz)	Distance (m)	Field strength limits		Converted Field Strength Limits By 3 Meters Measuring Distance
		(μV/m)	dB (μV/m)	dB (μV/m)
30 ~ 88	10	90	39.00	49.50
88 ~ 216	10	150	43.50	54.00
216 ~ 960	10	210	46.50	57.00
Above 960	10	300	49.50	60.00

NOTE 1 – The lower limit shall apply at the transition frequency.
NOTE 2 – Measuring distance of 10 m is a primary requirement. In this case, the limits with measuring distance of 3 m shall be the above limit value increased 20lg(10/3)=10.5.
NOTE 3 – 1 μV/m is regarded as 0 dB (μV/m).

4.4 Test Configuration

The configuration of the EUT is same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna or Horn Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESCI was set at 120 kHz

The frequency range from 30 MHz to 1GHz was checked.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Model Number	Test Mode	Data Page
IS30-5	Full Load	P21 – P22
	Half Load	P23 – P24
IS30-24	Full Load	P25 – P26
	Half Load	P27 – P28

NOTE 1 – The emission levels that are 20dB below the official limit are not reported.
NOTE 2 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.
NOTE 3 – All readings are Quasi-Peak values.
NOTE 4 – The worst case is for IS30-5 model. (Test mode: Full Load). The worst emission at horizontal polarization was detected at 174.28MHz with corrected signal level of 50.32dB (μV/m) (limit is 54.00dB (μV/m)), when the antenna was 2.00 m height and the turntable was at 240°. The worst emission at vertical polarization was detected at 67.91MHz with corrected signal level of 48.93 dB (μV/m) (limit is 49.50 dB (μV/m)), when the antenna was 1.00 m height and the turntable was at 120°.

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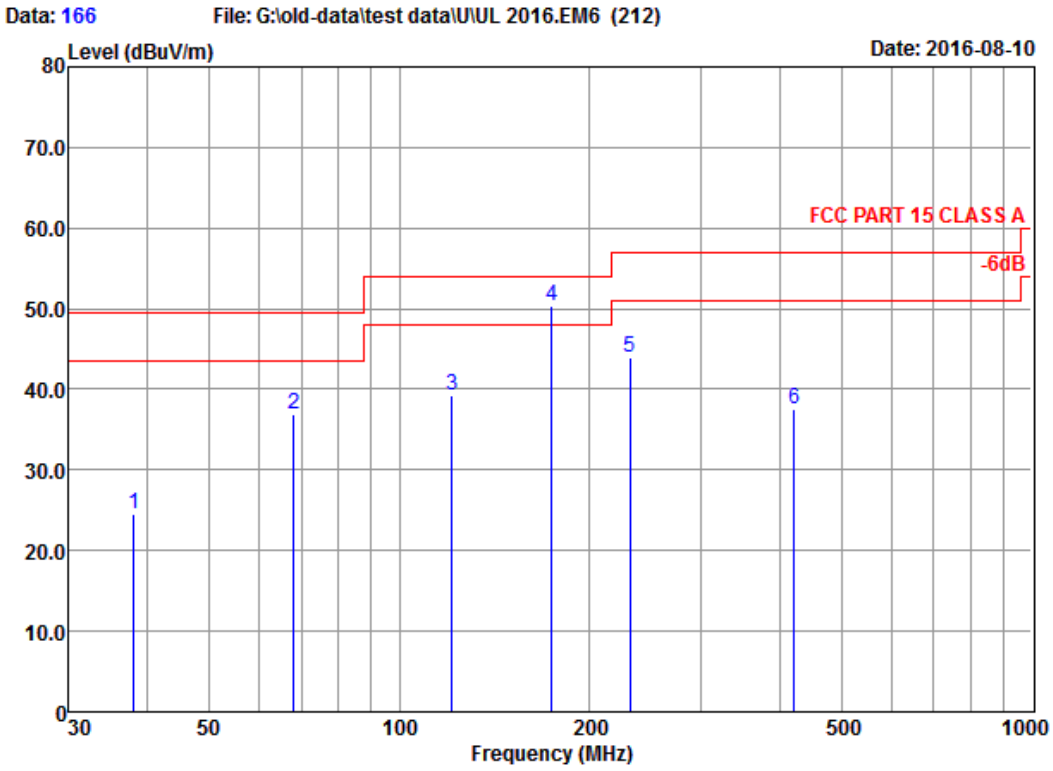

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :166
Limit :FCC PART 15 CLASS A Ant. pol. :HORIZONTAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-5
Power Rating:120V/60Hz
Test Mode :Full Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	37.94	14.30	0.62	9.62	24.54	49.50	24.96
2	67.91	7.21	0.82	28.95	36.98	49.50	12.52
3	121.12	12.14	1.13	25.93	39.20	54.00	14.80
4	174.28	10.64	1.38	38.30	50.32	54.00	3.68
5	231.72	11.62	1.58	30.76	43.96	57.00	13.04
6	420.58	16.32	2.09	19.24	37.65	57.00	19.35

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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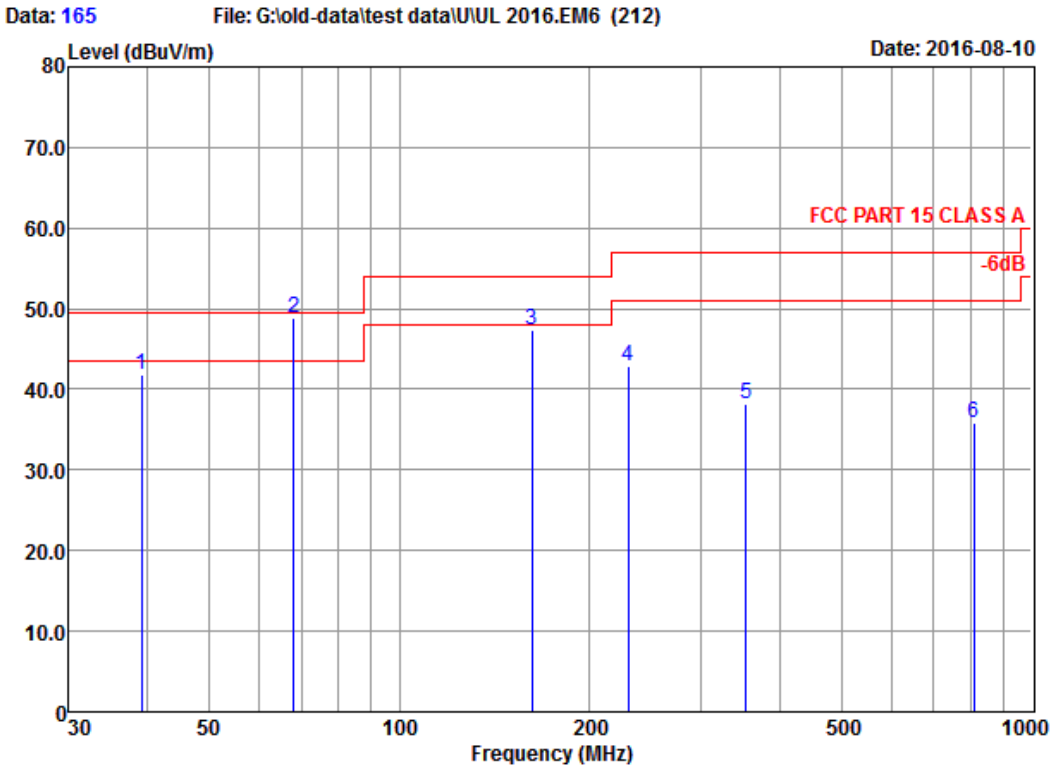

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :165
Limit :FCC PART 15 CLASS A Ant. pol. :VERTICAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-5
Power Rating:120V/60Hz
Test Mode :Full Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m	Margin (dB)
1	39.02	13.92	0.63	27.27	41.82	49.50	7.68
2	67.91	7.21	0.82	40.90	48.93	49.50	0.57
3	162.04	11.21	1.33	34.87	47.41	54.00	6.59
4	230.10	11.50	1.58	29.85	42.93	57.00	14.07
5	352.94	15.19	1.92	20.97	38.08	57.00	18.92
6	810.27	20.30	2.91	12.72	35.93	57.00	21.07

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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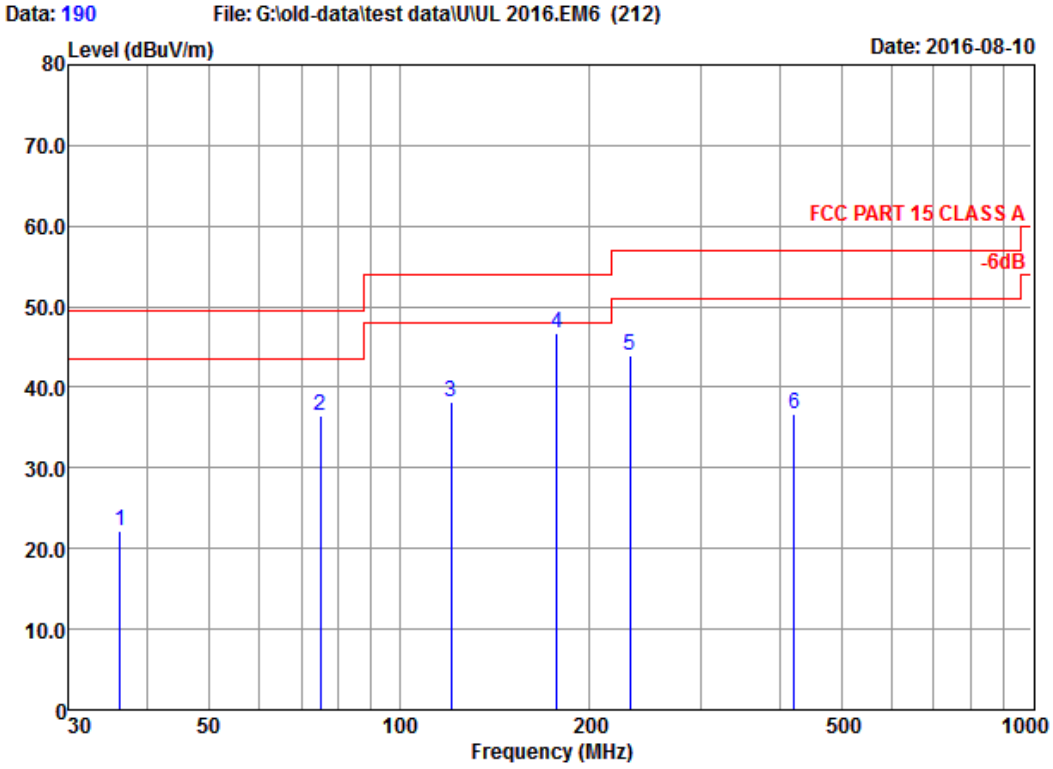

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :190
Limit :FCC PART 15 CLASS A Ant. pol. :HORIZONTAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-5
Power Rating:120V/60Hz
Test Mode :Half Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	36.13	15.04	0.61	6.45	22.10	49.50	27.40
2	74.92	8.30	0.86	27.42	36.58	49.50	12.92
3	120.70	12.12	1.13	24.94	38.19	54.00	15.81
4	177.51	10.47	1.40	34.82	46.69	54.00	7.31
5	231.72	11.62	1.58	30.76	43.96	57.00	13.04
6	420.58	16.32	2.09	18.24	36.65	57.00	20.35

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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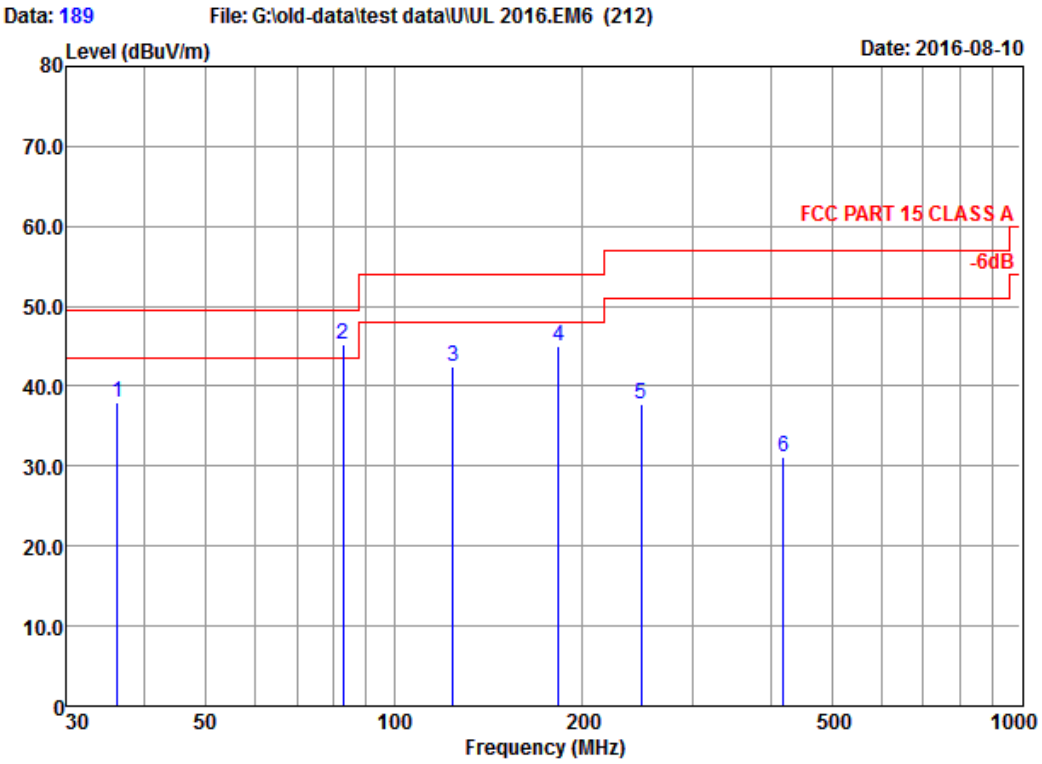

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :189
Limit :FCC PART 15 CLASS A Ant. pol. :VERTICAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-5
Power Rating:120V/60Hz
Test Mode :Half Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	36.13	15.04	0.61	22.38	38.03	49.50	11.47
2	82.94	9.59	0.90	34.64	45.13	49.50	4.37
3	124.13	12.26	1.15	29.10	42.51	54.00	11.49
4	183.20	10.23	1.42	33.28	44.93	54.00	9.07
5	247.68	12.52	1.63	23.51	37.66	57.00	19.34
6	417.64	16.28	2.09	12.88	31.25	57.00	25.75

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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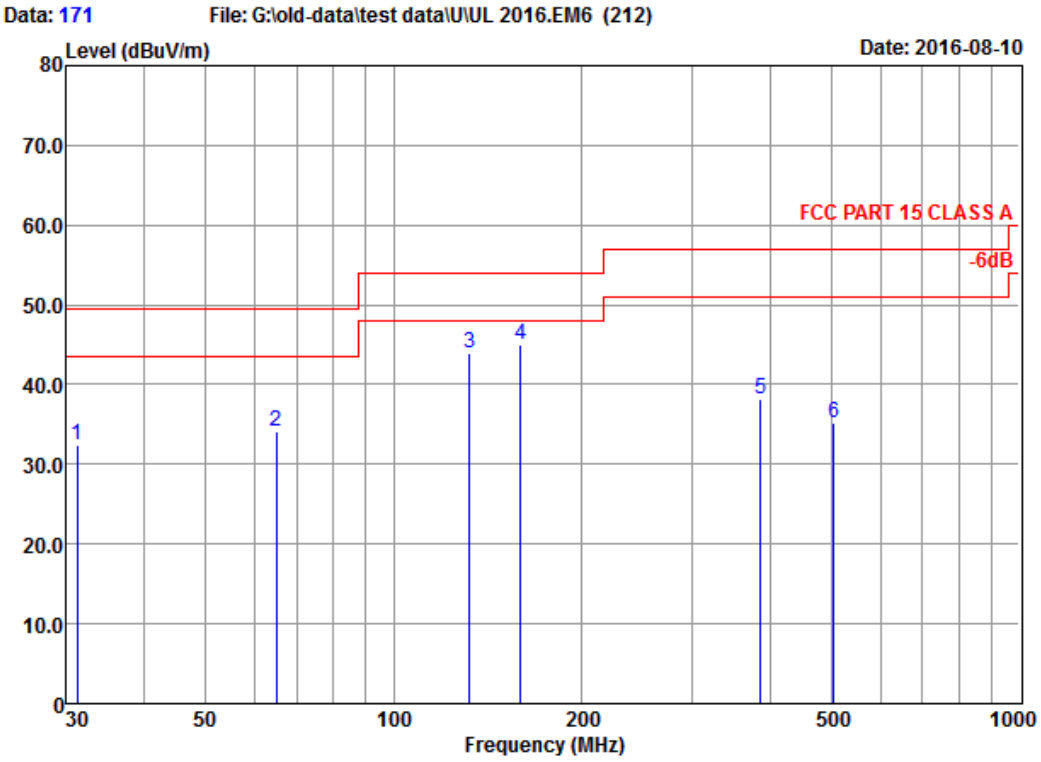

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :171
Limit :FCC PART 15 CLASS A Ant. pol. :HORIZONTAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-24
Power Rating:120V/60Hz
Test Mode :Full Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	31.18	17.62	0.57	14.34	32.53	49.50	16.97
2	64.89	6.90	0.80	26.47	34.17	49.50	15.33
3	132.22	12.86	1.19	29.95	44.00	54.00	10.00
4	159.50	11.32	1.32	32.30	44.94	54.00	9.06
5	385.28	15.95	2.00	20.33	38.28	57.00	18.72
6	504.71	17.54	2.28	15.30	35.12	57.00	21.88

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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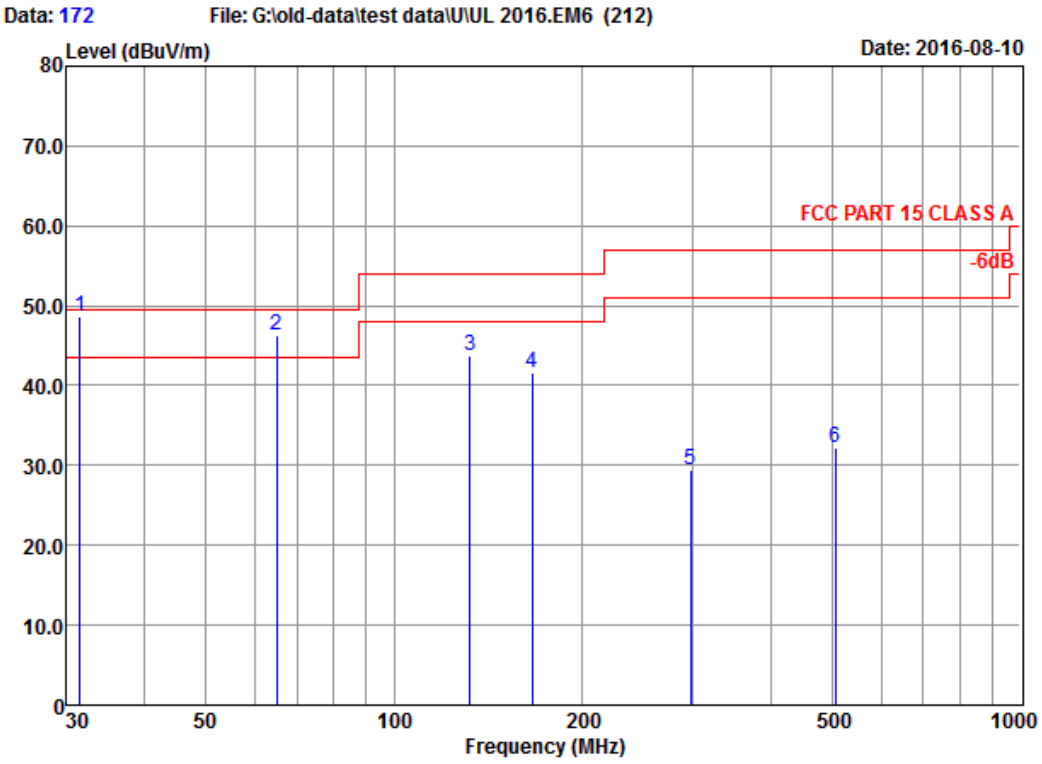

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :172
Limit :FCC PART 15 CLASS A Ant. pol. :VERTICAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-24
Power Rating:120V/60Hz
Test Mode :Full Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	31.46	17.45	0.57	30.60	48.62	49.50	0.88
2	64.89	6.90	0.80	38.50	46.20	49.50	3.30
3	132.22	12.86	1.19	29.69	43.74	54.00	10.26
4	166.07	11.07	1.35	29.28	41.70	54.00	12.30
5	297.22	13.60	1.75	14.00	29.35	57.00	27.65
6	506.48	17.56	2.28	12.45	32.29	57.00	24.71

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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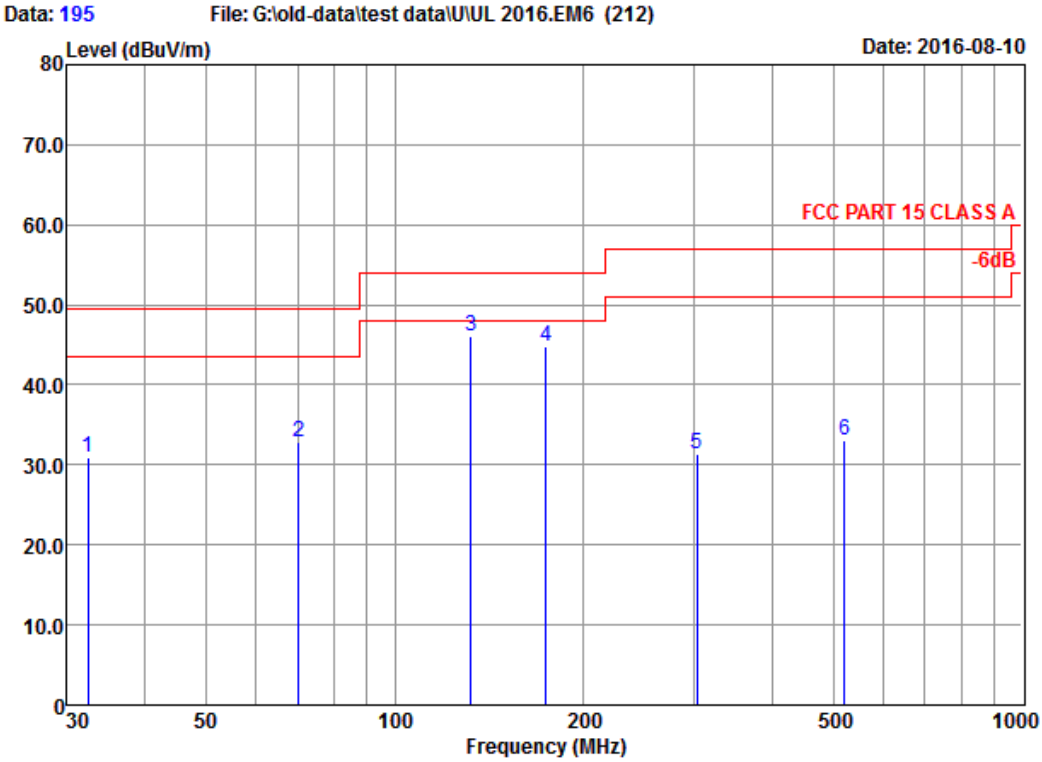

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016
Limit :FCC PART 15 CLASS A
Env. / Ins. :22'C 60%RH/ESCI
EUT :Switching mode power supply
M/N :IS30-24
Power Rating:120V/60Hz
Test Mode :Half Load

Data no. :195
Ant. pol. :HORIZONTAL
Engineer :Eric

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	32.41	16.94	0.58	13.41	30.93	49.50	18.57
2	70.09	7.40	0.84	24.65	32.89	49.50	16.61
3	132.22	12.86	1.19	31.95	46.00	54.00	8.00
4	173.81	10.69	1.38	32.80	44.87	54.00	9.13
5	302.48	13.68	1.76	15.84	31.28	57.00	25.72
6	520.89	17.56	2.32	13.18	33.06	57.00	23.94

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

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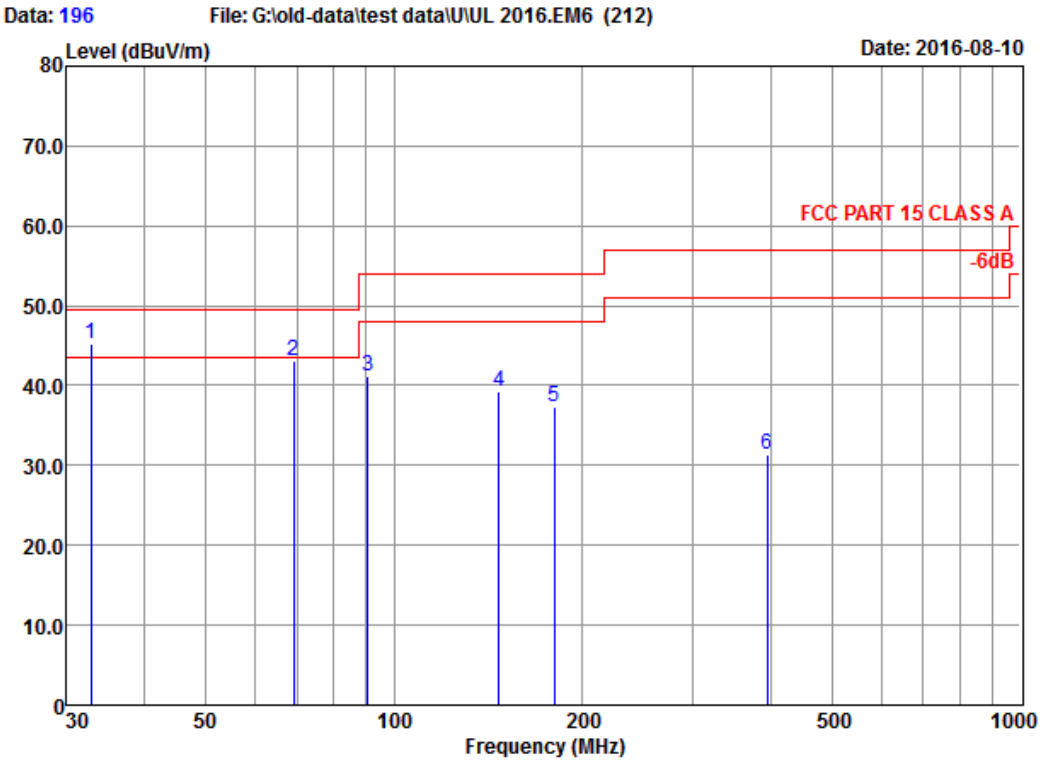

Site no :Audix ACI (3m Chamber)
Dis. / Ant. :3m /CBL6112D-2016 Data no. :196
Limit :FCC PART 15 CLASS A Ant. pol. :VERTICAL
Env. / Ins. :22'C 60%RH/ESCI Engineer :Eric
EUT :Switching mode power supply
M/N :IS30-24
Power Rating:120V/60Hz
Test Mode :Half Load

	Freq. (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBµV)	Emission Level (dBµV/m)	Limits dBµV/m)	Margin (dB)
1	32.75	16.78	0.58	27.88	45.24	49.50	4.26
2	69.11	7.32	0.83	35.03	43.18	49.50	6.32
3	90.86	10.93	0.95	29.32	41.20	54.00	12.80
4	146.89	12.41	1.27	25.67	39.35	54.00	14.65
5	180.02	10.30	1.41	25.52	37.23	54.00	16.77
6	393.47	16.17	2.02	13.14	31.33	57.00	25.67

Remarks:1.Emission Level= Antenna Factor + Cable Loss+ Reading.
2.The emission levels that are 20dB below the offical limits are not reported.

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 PHOTOGRAPHS

6.1 Conducted Emission Test

FRONT VIEW

SIDE VIEW

6.2 Radiated Emission Test

FRONT VIEW OF RADIATED EMISSION TEST

BACK VIEW OF RADIATED EMISSION TEST

SETUP WITH MAXIMUM DETECTED EMISSION AT HORIZONTAL POLARIZATION

SETUP WITH MAXIMUM DETECTED EMISSION AT VERTICAL POLARIZATION

APPENDIX

PHOTOGRAPHS OF EUT

FIGURE 1.
SWITCHING MODE POWER SUPPLY (M/N:IS30-5)
GENERAL APPEARANCE (FRONT VIEW)

FIGURE 2.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
GENERAL APPEARANCE (BACK VIEW)

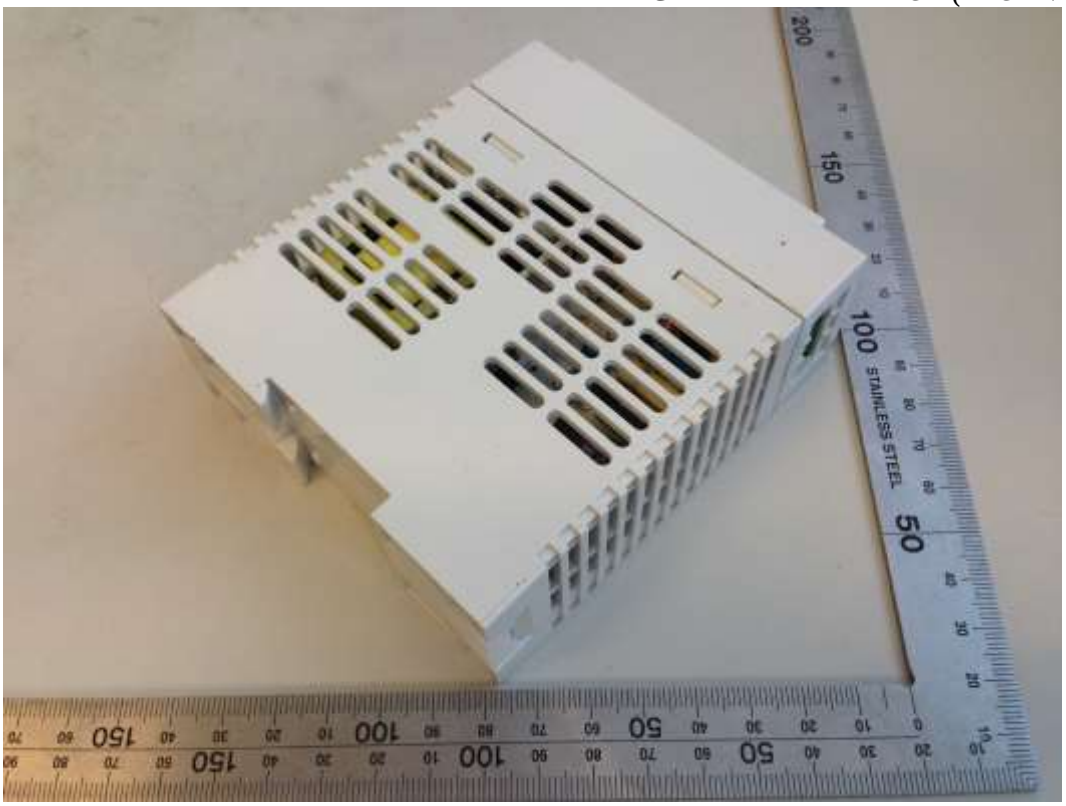

FIGURE 3.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
AC IN

FIGURE 4.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
DC OUTPUT

FIGURE 5.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
COVER REMOVED

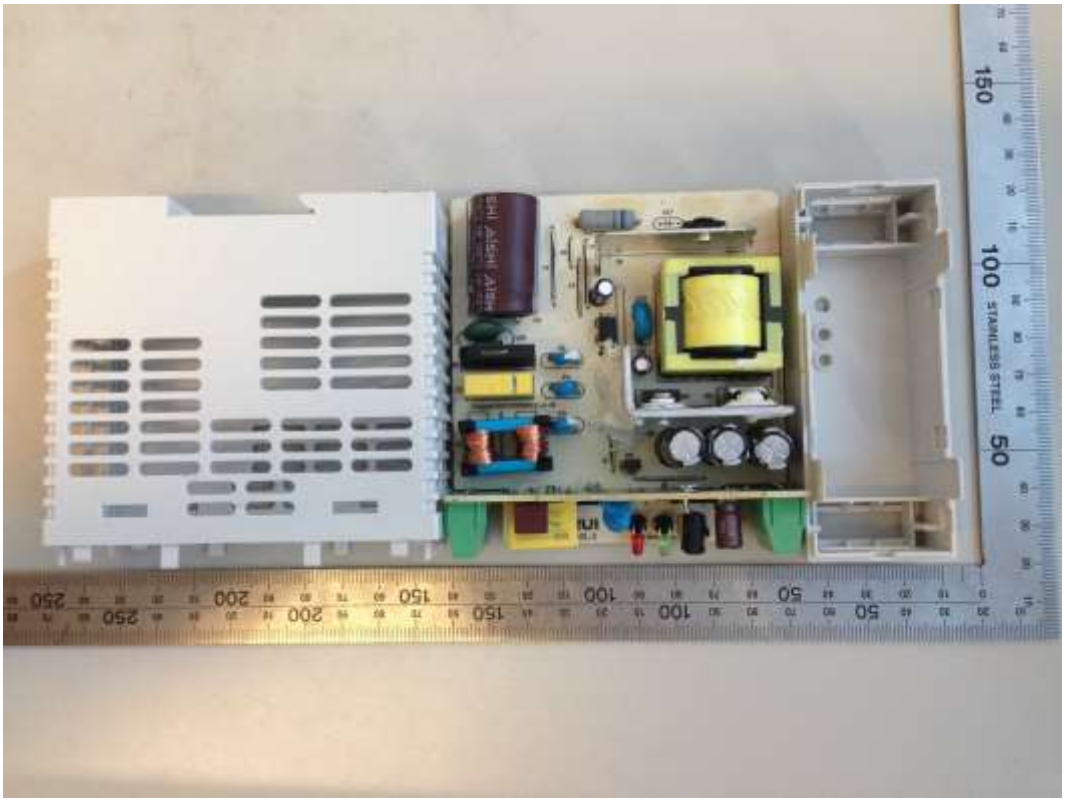

FIGURE 6.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
MAIN BOARD (COMPONENT SIDE)

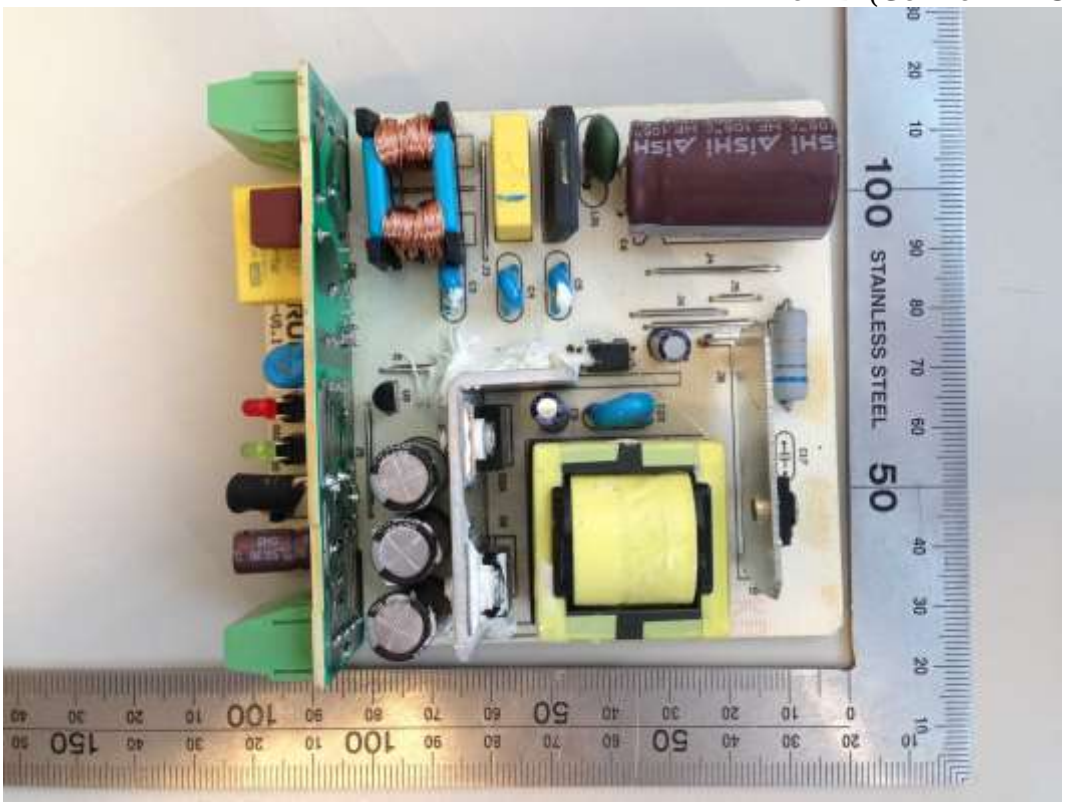

FIGURE 7.
SWITCHING MODE POWER SUPPLY (M/N: IS30-5)
MAIN BOARD (SOLDERED SIDE)

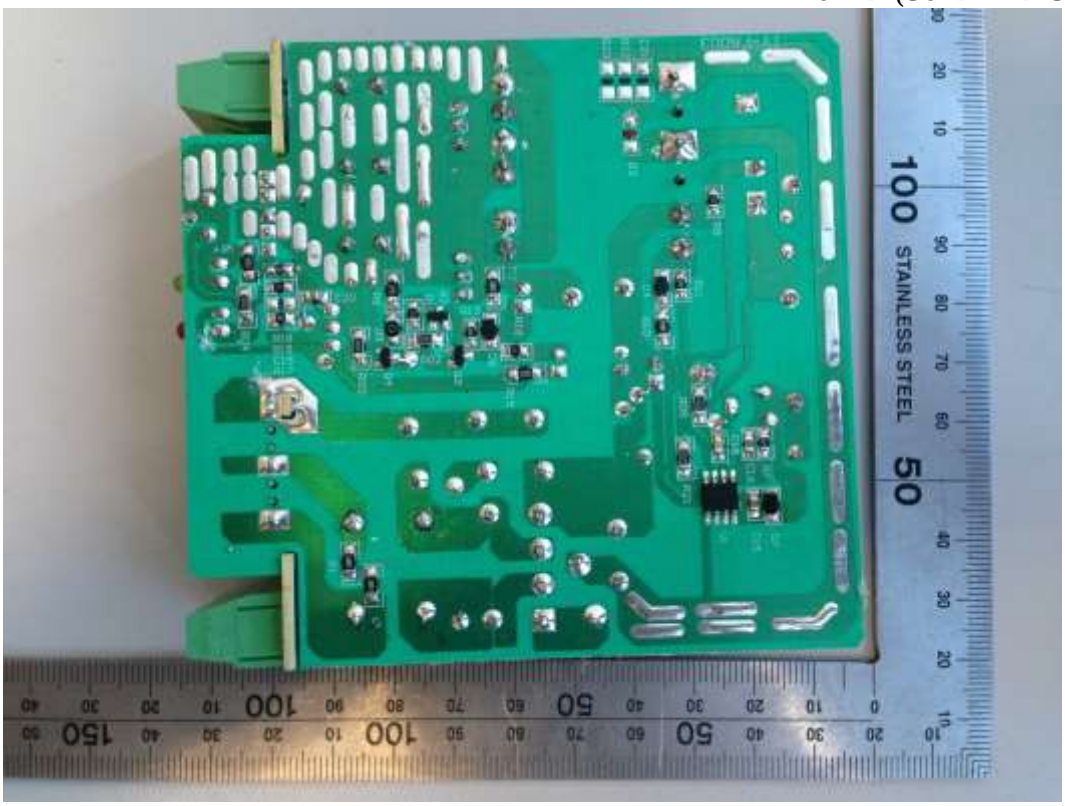

FIGURE 8.
SWITCHING MODE POWER SUPPLY (M/N:IS30-24)
GENERAL APPEARANCE (FRONT VIEW)

FIGURE 9.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
GENERAL APPEARANCE (BACK VIEW)

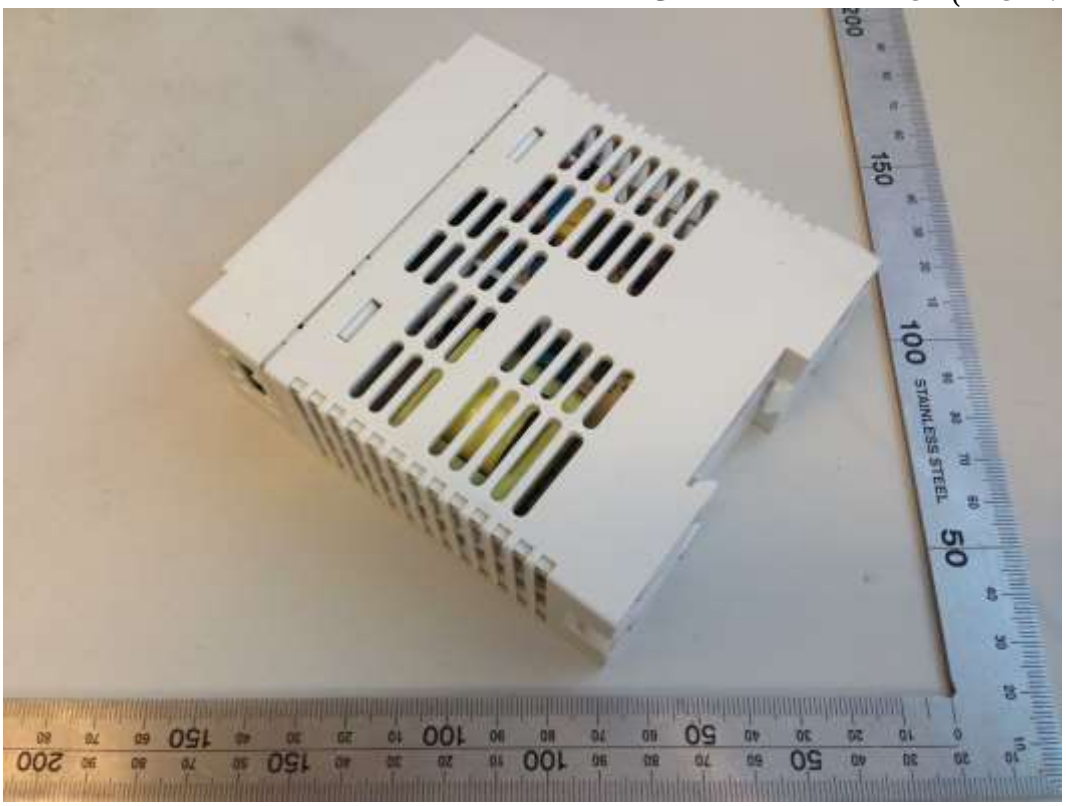

FIGURE 10.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
AC IN

FIGURE 11.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
DC OUTPUT

FIGURE 12.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
COVER REMOVED

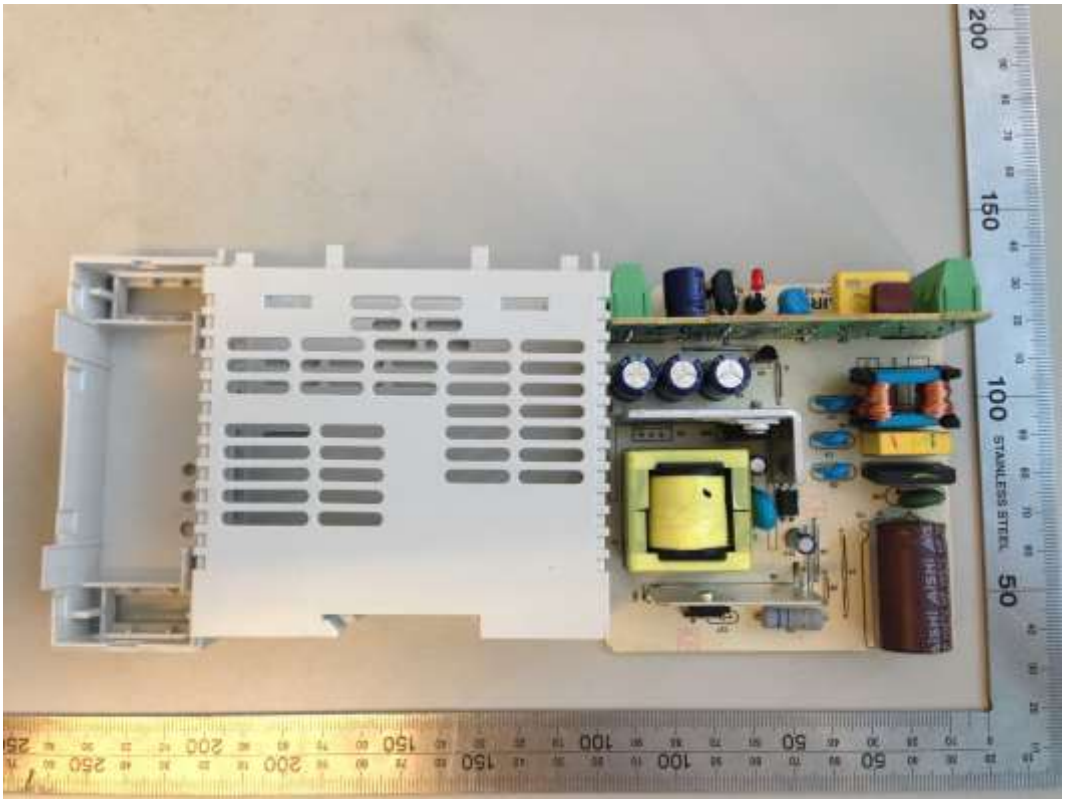

FIGURE 13.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
MAIN BOARD (COMPONENT SIDE)

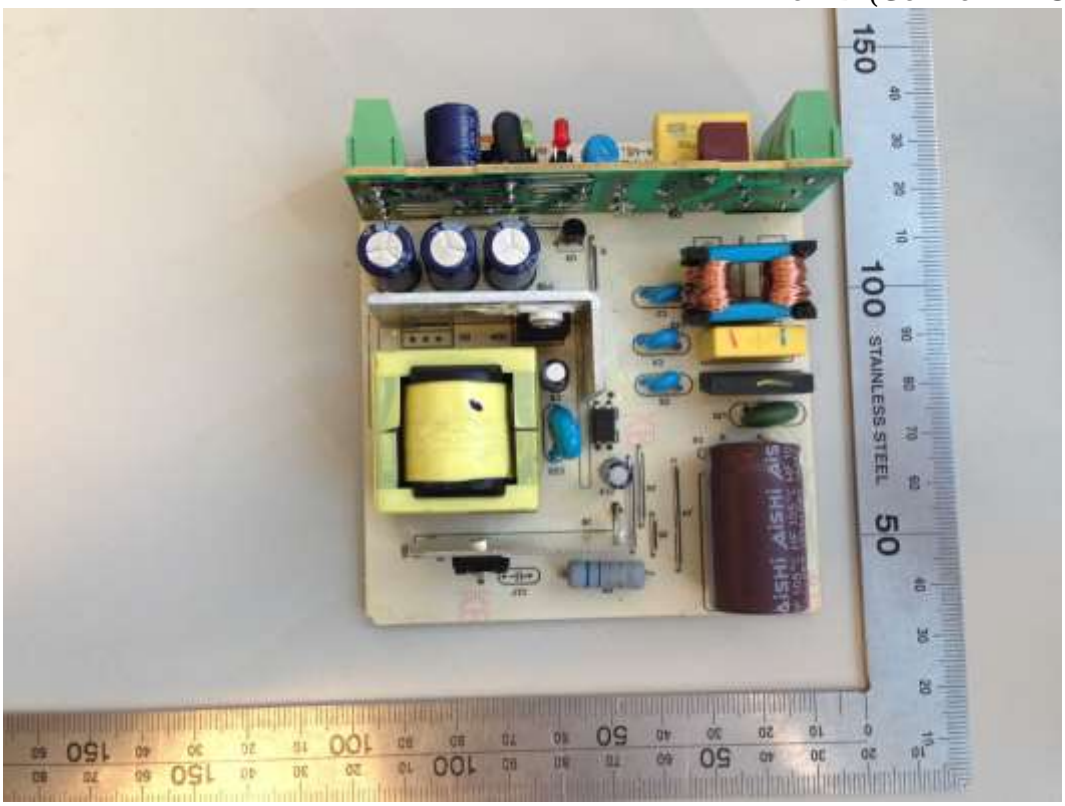

FIGURE 14.
SWITCHING MODE POWER SUPPLY (M/N: IS30-24)
MAIN BOARD (SOLDERED SIDE)