UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	QQGQ, QQGQ7 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	POE injector
Model:	ADPE01-0B1, PE15, PE30, PE60
Rating:	Input: 100-240V~ 50-60Hz 0.6A Output: 52 Vdc, 0.58A
Applicant Name and Address:	SHENZHEN HI-NET TECHNOLOGY LTD RM A1, 9 FL, SILVERCORP INT TOWER 707-713 NATHAN RD MONG KOK HONG KONG

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

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Prepared by: KinSang Tang Reviewed by: Brian Wong

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.

ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.

iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

POE, provided with appliance inlet and provided with RJ45 output terminal. All electronic components are mounted on PWB and housed in a plastic enclosure.

Model Differences

All models are identical to each other except for the model name.

Technical Considerations

- Equipment mobility : movable
- Connection to the mains : pluggable A
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : +10%, -10% (declared by manufacturer)
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class I (earthed)
- Considered current rating of protective device as part of the building installation (A) : 20
- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : up to 2000
- Altitude of test laboratory (m) : below 2000
- Mass of equipment (kg) : 0.16
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of: 40°C
- The means of connection to the mains supply is: Detachable power cord, Pluggable A,
- The product is intended for use on the following power systems: TN

- The equipment disconnect device is considered to be: Appliance inlet,
- The following accessible locations (with circuit/schematic designation) are within a limited current circuit: CY3 secondary
- The following circuit locations (with circuit/schematic designation) were investigated as a limited power source (LPS): Outputs
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual,
- LEDs provided in the product are considered low power devices: Yes,

Additional Information

N/A

Additional Standards

The product fulfills the requirements of: N/A

Markings and instructions

Clause Title	Marking or Instruction Details
Limited Power Source Marking (Optional)	"LPS" or "Limited Power Source." may be marked on unit.
1.7.1 Power rating - Ratings	Ratings (voltage, frequency/dc, current)
1.7.1 Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
1.7.1 Power rating - Model	Model Number
1.7.6 Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.

Special Instructions to UL Representative

Inspect the transformer(s) listed in table "Electric Strength Test Special Constructions" per AA1.1- (C): When the tests are conducted at other location, inspect test record and specification sheet provided by the component manufacturer. Verify the specification sheet indicates 100% routine test specified in the table be conducted at the component manufacturer.

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
All Models	T1	-	Primary-Secondary	3000	4242	1

Earthing Continuity Test Exemptions - This test is not required for the following models:

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Electric Strength Test Exemptions - This test is not required for the following models:

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Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

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Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A					

1.5.1	**TABLE: list of critical components**					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
01. Enclosure	SABIC JAPAN L L C (E207780)	EXRL0930	HWI 2, V-0, 115 degree C, Minimum thickness 1.5mm, two parts sealed by screw, measured overall dimension See supplementary ID 7-01 for details.	QMFZ2/8	UL	
02. PWB	Interchangeable	Interchangeable	Minimum V-1 or better, 130 degree C	ZPMV2/8	UL, CUL	
03. AC Inlet	YUEQING YANHUI ELECTRONIC CO LTD (E334847)	DB-14	Rated 250Vac, 10A, 70 degree C, C14 type	AXUT2/8	UL, CUL	
03a. AC Inlet (Alternative)	SHENZHEN KANGYONGDA ELECTRONICS CO LTD (E362692)	DE-14-3	Rated 250Vac, 10A, 70 degree C, C14 type	AXUT2/8	UL, CUL	
04. Fuse (F1)	LITTELFUSE WICKMANN WERKE (E67006)	392	Rated T2A, 250Vac	JDYX2/8	UL, CUL	
04a. Fuse (F1) (Alternative)	WALTER ELECTRONIC CO LTD (E56092)	2010	Rated T2A, 250Vac	JDYX2/8	UL, CUL	
04b. Fuse (F1) (Alternative)	Interchangeable	Interchangeable	Rated T2A, 250Vac	JDYX/7	UL, CUL	
05. X-capacitor (CX1, CX2) (Optional)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD (E208107)	MPX	Minimum 250Vac, maximum 0.22uF, 110 degree C, type X2, Meets with the 21 days damp heat steady-state test of IEC 60384-14.	FOWX2/8	UL, CUL	
05a. X-capacitor (CX1, CX2) (Optional) (Alternative)	TENTA ELECTRIC INDUSTRIAL CO LTD (E222911)	MEX	Minimum 250Vac, maximum 0.22uF, 100 degree C, type X2, Meets with the 21 days damp heat steady-state test of IEC	FOWX2/8	UL, CUL	

			60384-14.			
05b. X-capacitor (CX1, CX2) (Optional) (Alternative)	HONGZHI ENTERPRISES LTD (E192572)	MPX	Minimum 250Vac, maximum 0.22uF, 100 degree C, type X2, Meets with the 21 days damp heat steady-state test of IEC 60384-14.	FOWX2/8	UL, CUL	
05c. X-capacitor (CX1, CX2) (Optional) (Alternative)	SHEN ZHEN SHI ZHC TECHNOLOGY CO LTD (E467226)	MPX	Minimum 250Vac, maximum 0.22uF, 110 degree C, type X2, Meets with the 21 days damp heat steady-state test of IEC 60384-14.	FOWX2/8	UL, CUL	
06. Varistor (VR1) (Optional)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD (E330837)	UL: 14D471K VDE: STE-14D471K	Minimum 300Vac, 85 degree C complied with 6KV/3KA test. Coating Material, rated V-0, 105 degree C	VZCA2/8	UL, CUL	
06a. Varistor (VR1) (Optional) (Alternative)	GUANGXI NEW FUTURE INFORMATION INDUSTRY CO LTD (E323753)	14D471K	Minimum 300Vac, 85 degree C complied with 6KV/3KA test. Coating Material, rated V-0, 105 degree C	VZCA2/8	UL, CUL	
06b. Varistor (VR1) (Optional) (Alternative)	HONGZHI ENTERPRISES LTD (E324904)	UL: HEL14D471K VDE: 14D471K	Minimum 300Vac, 85 degree C complied with 6KV/3KA test. Coating Material, rated V-0, 105 degree C	VZCA2/8	UL, CUL	
06c. Varistor (VR1) (Optional) (Alternative)	BRIGHTKING (SHENZHEN) CO LTD (E327997)	14D471K	Minimum 300Vac, 85 degree C complied with 6KV/3KA test. Coating Material, rated V-0, 105 degree C	VZCA2/8	UL, CUL	
07. Bleeder resistors (R1, R2, R1A, R2A)	Interchangeable	Interchangeable	Rated 2.0M ohm, 1/4W	--	--	
08. Thermistor (RH1) (Optional)	Interchangeable	Interchangeable	Rated 3A, 10ohm at 25 degree C	XGPU2/8	UL	
09. Bridge diode (BD1)	Interchangeable	Interchangeable	Minimum 600V, Minimum 2A	--	--	
10. Line filter (LF1) (Optional)	SHENZHEN RUIGEN	PE30-LF1	Rated 130 degree C	--	--	

	TECHNOLOGY CO LTD					
10-01. Core	Interchangeable	Interchangeable	Ferrite. Measured overall 18.0mm by 10.0mm by 7.0mm	--	--	
10-02. Magnet wire	Interchangeable	Interchangeable	Rated 130 degree C	OBMW2	UL	
10-03. Varnish	Interchangeable	Interchangeable	Minimum 130 degree C	OBOR2	UL	
11. Electrolytic capacitor (C1)	Interchangeable	Interchangeable	Rated 33-68uF, 400V, 105 degree C	--	--	
12. Y-capacitor (CY1, CY2, CY3) (Optional)	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD (E208107)	CD	Maximum 2200pF, minimum 250Vac, 125 degree C, Y1 type, Meets with the 21 days damp heat steady-state test of IEC 60384-14.	FOWX2/8	UL, CUL	
12a. Y-capacitor (CY1, CY2, CY3) (Optional) (Alternative)	MURATA MFG CO LTD (E37921)	KX	Maximum 2200pF, minimum 250Vac, 125 degree C, Y1 type, Meets with the 21 days damp heat steady-state test of IEC 60384-14.	FOWX2	UL	
13. Optocoupler (U2)	EVERLIGHT ELECTRONICS CO LTD (E214129)	EL817	Dti = 0.4mm, ext dcr=7.6mm,110 degree C	FPQU2/8	UL, CUL	
13a. Optocoupler (U2) (Alternative)	COSMO ELECTRONICS CORP (E169586)	K1010	Dti = 0.4mm, ext dcr=6.5mm,115 degree C	FPQU2/8	UL, CUL	
13b. Optocoupler (U2) (Alternative)	LITE-ON TECHNOLOGY CORP (E113898)	LTV-817	Dti = 0.4mm, ext dcr=7.0mm,110 degree C	FPQU2/8	UL, CUL	
13c. Optocoupler (U2) (Alternative)	HUBEI KENTO ELECTRONIC CO LTD (E341140)	JC817	Dti = 0.4mm, ext dcr=6.0mm,110 degree C	FPQU2/8	UL, CUL	
13d. Optocoupler (U2) (Alternative)	CHANGZHOU GALAXY CENTURY MICRO-ELECTRONICS CO LTD (E340048)	PC817	Dti = 0.4mm, ext dcr=7.5mm,100 degree C	FPQU2/8	UL, CUL	
14. Transformer (T1)	SHENZHEN	PQ26-30W	Class B, See supplementary ID	--	--	

	RUIGEN TECHNOLOGY CO LTD		4-01 for details.			
14-1. Insulation system	SHENZHEN RUIGEN TECHNOLOGY CO LTD (E360298)	RG-B	Class B	OBJY2	UL	
14-2. Magnet wire	Interchangeable	MW 28, MW 75,	130 degree C	OBMW2	UL	
14-3. Triple Wire	FURUKAWA ELECTRIC CO LTD (E206440)	TEX-B	Rated 130 degree C	OBJT2	UL	
14-4. Core	--	--	Ferrite, Measured overall 26.8mm by 18.9mm by 19.2mm	--	--	
14-5. Bobbin	SUMITOMO BAKELITE CO LTD (E41429)	PM-9820	Phenolic (PF), rated V-0, 150 degree C, Minimum 0.51mm thickness.	QMFZ2	UL	
14-6. Insulation Tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111)	PZ* (b)	Rated 130 degree C	OANZ2	UL	
14-6a. Insulation Tape (Alternative)	3M COMPANY (E17385)	1350-1 (b)	Rated 130 degree C	OANZ2	UL	
14-7. Varnish	HITACHI CHEMICAL CO LTD (E72979)	WP-2952F-2G	130 degree C.	OBOR2	UL	
14-8. Tube	GREAT HOLDING INDUSTRIAL CO LTD (E156256)	TFL	Rated 200 degree C, 150V, VW-1	YDPU2	UL	
15. Label	Interchangeable	Interchangeable	Minimum 80 degree C, suitable for use on plastic surface	PGDQ2 or PGJI2 or PGGU2	UL	
16. Glue (Fix component in position)	Interchangeable	Interchangeable	Minimum V-2. Minimum 105 degree C	QMFZ2/8	UL, CUL	
17. RJ45 Interface	Interchangeable	Interchangeable	Maximum 30Vac or 60Vdc	DUXR7	UL, CUL	
17a. Plastic of RJ45 Interface	Interchangeable	Interchangeable	Minimum V-2. Minimum 80 degree C	QMFZ2/8	UL, CUL	
18. Mylar sheet (below the PWB)	CHENGDU KANGLONGXIN	KLX FRPC-1880	V-0, 125 degree C, minimum 0.4mm thick	QMFZ2/8	UL, CUL	

	PLASTICS CO LTD (E315185)					
19. Silicone Molding Resin (below the U1)	Interchangeable	Interchangeable	Rated V-0, 150°C, overall size: 20.0 mm by 20.0 mm by 3.0 mm	QMFZ2/8	UL, CUL	
20. Silicone Molding Resin (above the T1)	Interchangeable	Interchangeable	Rated V-0, 150°C, overall size: 20.0 mm by 20.0 mm by 8.0 mm	QMFZ2/8	UL, CUL	
21. Heat sink (below the PWB)	Interchangeable	Interchangeable	Aluminium alloy, See supplementary ID 7-02 for details	--	--	

Enclosures

Type	Supplement Id	Description
Photographs	3-01	Overall view of unit
Photographs	3-02	Overall view of unit
Photographs	3-03	Inside view of unit
Photographs	3-04	Inside view of unit
Photographs	3-05	Top view of PCB
Photographs	3-06	Bottom view of PCB
Photographs	3-07	Top view of T1
Photographs	3-08	Bottom view of T1
Photographs	3-09	Inside view of T1
Diagrams	4-01	T1 SPEC
Diagrams	4-02	LF1 SPEC
Schematics + PWB	5-01	Schematics
Schematics + PWB	5-02	PCB Layout
Manuals	6-01	Operating Manual
Miscellaneous	7-01	Enclosure Drawing
Miscellaneous	7-02	Heat sink drawing
Miscellaneous	7-03	Mylar sheet drawing
Miscellaneous	7-04	Marking Label for DELL
Miscellaneous	7-05	Marking Label for Hi-Net
Miscellaneous	7-06	Marking Label
Miscellaneous	7-07	US Plug with Ground
Miscellaneous	7-08	Model List