

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1-14, 2nd Ed-(Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Component Recognition
CCN:	QQJQ2, QQJQ8 (Power Supplies for Use in Audio/Video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	Power Supply, Open frame Building-in type
Model:	LPT62, LPT63, LPT64
Rating:	<p>Model: LPT62 Input: AC 100-250V, 50/60/440Hz, 2.3A or DC 120-300V 1.5A Output: 8A +5Vdc, 3.5A +12Vdc, 1A -12Vdc Maximum output power: 60W convection cooling, 80W with 30CFM forced air</p> <p>Model: LPT63 Input: AC 100-250V, 50/60/440Hz, 2.3A or DC 120-300V 1.5A Output: 8A +5Vdc, 3.3A +15Vdc, 1A -15Vdc Maximum output power: 60W convection cooling, 80W with 30CFM forced air</p> <p>Model: LPT64 Input: AC 100-250V, 50/60/440Hz, 2.3A or DC 120-300V 1.5A Output: 8A +5Vdc, 3.5A +12Vdc, 1A -5Vdc Maximum output power: 60W convection cooling, 80W with 30CFM forced air</p>
Applicant Name and Address:	<p>ASTEC INTERNATIONAL LTD 16TH FL LU PLAZA 2 WING YIP ST KWUN TONG KOWLOON HONG KONG</p>

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.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: ChiWah Leung / Project handler Reviewed By: Paul Wan / Reviewer

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

Power supply for building-in without enclosure (open frame). The differences between the three models are the output rating and the secondary turn number of the main transformer.

Model Differences

Model LPT62, LPT63 and LPT64 have same input rating, almost same components, but the output rating and the secondary turn number of the main transformer is changed. See electrical ratings and transformer P/N for reference.

The transformer of the three models are similar, except of turn number of secondary windings.

Test Item Particulars

Classification of use by	Skilled person
Supply Connection	AC Mains DC Mains
Supply % Tolerance	+10%/-10% for AC; +20%/-15% for DC
Supply Connection – Type	For terminal input
Considered current rating of protective device as part of building or equipment installation	20 A; building;
Equipment mobility	for building-in
Over voltage category (OVC)	OVC II
Class of equipment	Class I
Access location	N/A
Pollution degree (PD)	PD 2
Manufacturer's specified maximum operating ambient (°C)	50
IP protection class	IPX0
Power Systems	TN
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	<1.0

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 50°C
- The product is intended for use on the following power systems : TN
- Considered current rating of protective device as part of the building installation (A) : 20
- Mains supply tolerance (%) or absolute mains supply values : +10%/-10%
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Engineering Conditions of Acceptability

For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC. When installed in an end-product, consideration must be given to the following:

- The following output circuits are at ES1 energy levels : All
- The following output circuits are at PS3 energy levels : All
- The maximum investigated branch circuit rating is : 20 A
- The investigated Pollution Degree is : 2
- Proper bonding to the end-product main protective earthing termination is : Required
- An investigation of the protective bonding terminals has : been conducted
- The following end-product enclosures are required : Electrical, Fire, Mechanical
- The following magnetic devices (e.g. transformers or inductor) are provided with an OBJY2 insulation system with the indicated rating greater than Class A (105°C) : T1 (Class F)
- These power supplies are not directly connected to protective earth of the branch circuit. Suitable earthing means is to be provided by the end product.
- The power supplies have been evaluated for use in 25°C and 50°C ambient.
- These power supplies were evaluated under the assumption that the power source is a TN-S system as defined by UL 60950-1, Second Edition.
- Maximum output power: 60W convection cooling, 80W with 30CFM forced air.
- Connection to the supply: The power supply is provided with a three pins mains input connector, connection to the supply must be evaluated in the end product.
- For DC input applications, a suitable DC rated fuse be provided by End System.

Additional Information

Tested in the following conditions:

LPT62 with forced cooling:			LPT63 with forced cooling:			LPT64 with forced cooling:		
	(60VA)	(80VA)		(60VA)	(80VA)		(60VA)	(80VA)
+5V	8A	8A	+5V	8A	8A	+5V	8A	8A
+12V	0.84A	2.43A	+15V	0.84A	2.17A	+12V	1.42A	2.92A
-12V	1A	1A	-15V	0.65A	0.50A	-5V	1A	1A