

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	QQGQ2, QQGQ8 (Power Supplies for Information Technology Equipment Including Electrical Business Equipment)
Product:	DC/DC Converter
Model:	Picor Series
Rating:	Input: 28, 48Vdc Output Voltage: 28Vmax Output Power 60W max See Enclosure Miscellaneous for model details.
Applicant Name and Address:	VICOR CORP 25 FRONTAGE RD ANDOVER MA 01810 UNITED STATES

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: Gerard Soprych

Reviewed by: David Keen

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

The Picor Series of DC-DC converters are designed for building-in. The input is intended to be supplied from a TNV-2 or other non-hazardous secondary circuit. Basic Insulation is provided from input to output with a dielectric rating of 2250Vdc.

Model Differences

See Miscellaneous Enclosure for model nomenclature.

Technical Considerations

- Equipment mobility : for building-in
- Connection to the mains : -
- Operating condition : continuous
- Access location : For building in
- Over voltage category (OVC) : OVC II
- Mains supply tolerance (%) or absolute mains supply values : N/A
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : -
- Class of equipment : Class I (earthed)
- Considered current rating (A) : 10

- Pollution degree (PD) : PD 2
- IP protection class : IP X0
- Altitude of operation (m) : 2000
- Altitude of test laboratory (m) : 50
- Mass of equipment (kg) : 0.0076kg
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: max. case temperature of 100°C

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 secondary output circuits are SELV: All
- The following secondary output circuits are at hazardous energy levels: All
- The power supply terminals and/or connectors are: Not investigated for field wiring
- 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: Not been conducted
- The following end-product enclosures are required: Mechanical, Fire, Electrical
- The input to the DC-DC converter is intended to be supplied from a TNV-2 or other non-hazardous secondary circuit.
- The DC-DC converters were evaluated with a fast acting Littlefuse Nano² Fuse rated 10A. A littlefuse Nana² Fuse rated less than 10 A may be used in the application.
- Basic Insulation is provided from input to output with a dielectric rating of 2250Vdc. ,

Picor Cool Power DC-DC Converter Model Number: PI31aa-bb-ccde

Sample model number: PI3101-00-HVIZ

PI = constant	Picor
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31 =	Low Power DC-DC converter
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aa =	Defines Electrical Ratings		
	Vin Nom (Range) Vdc	Vout (Vdc)	Pout (W)
01	48 (36-75)	3.3	60
04	48 (36-75)	5.0	60
05	48 (36-75)	12.0	60
06	28 (16-50)	12.0	60
07	28 (16-50)	24.0	60
08	28 (16-50)	3.3	60
09	28 (16-50)	5.0	60
10	48 (41-57)	18.0	60
11	28 (16-50)	15.0	60
12	28 (16-50)	28.0	60
00-49 are reserved for isolating converters			
50-99 are reserved for non-isolating converters			

bb =	Model Variation
00	Base model, no variation
01	Narrow input voltage range
02 – 99	Base model variation, non-safety related

cc =	Package Size
HV	Half VIC

d =	Product Grade
C	Commercial (0 to +100C)
I	Industrial (-40 to +100C)
M	Military (-55 to +100C)

e =	Environmental Designation (non-safety related) May be any alphanumeric character, non inclusive list shown below
Z	RoHS
G	Green