

**COVER PAGE FOR TEST REPORT**

Product Category:	Power Supplies for Information Technology Equipment Including Electrical Business Equipment
Product Category CCN:	QQGQ2, QQGQ8
Test Procedure:	Component Recognition
Product:	DC/DC Converter
Model/Type Reference:	VIPAC Series
Rating(s):	Input:375Vdc, 3.4A max
Standards:	See Enclosure Miscellaneous for additional model details 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)
Applicant Name and Address:	VICOR CORP 25 FRONTAGE RD ANDOVER MA 01810 UNITED STATES
This Report includes the following parts, in addition to this cover page:	
<ol style="list-style-type: none"> <li>1. Specific Inspection Criteria</li> <li>2. Specific Technical Criteria</li> <li>3. Clause Verdicts</li> <li>4. Critical Components</li> <li>5. Test Results</li> <li>6. National Differences</li> <li>7. Enclosures</li> </ol>	

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## SPECIFIC TECHNICAL CRITERIA

<b>UL 60950-1:2005 (2nd Edition)</b> <b>Information technology equipment - Safety -</b> <b>Part 1: General requirements</b>	
Report Reference No .....	E135493-A12-UL-1
Compiled by .....	Gerard Soprych
Reviewed by .....	David Keen
Date of issue .....	2010-05-05
Standards .....	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)
Test procedure .....	Component Recognition
Non-standard test method .....	N/A
<b>Test item</b> description .....	DC/DC Converter
Trademark .....	Vicor
Model and/or type reference .....	VIPAC Series
Rating(s) .....	Input:375Vdc, 3.4A max
See Enclosure Miscellaneous for additional model details	

<b>Particulars: test item vs. test requirements</b>	
Equipment mobility .....	for building-in
Connection to the mains .....	-
Operating condition .....	continuous
Over voltage category .....	OVC II
Mains supply tolerance (%) .....	N/A
Tested for IT power systems .....	No
IT testing, phase-phase voltage (V) .....	-
Class of equipment .....	Class I (earthed)
Mass of equipment (kg) .....	0.64kg
Pollution degree .....	PD 2
IP protection class .....	IP X0

<b>GENERAL PRODUCT INFORMATION:</b>	
CA1.0	<b>Report Summary</b>
CA1.1	N/A
CB1.0	<b>Product Description</b>
CB1.1	The VIPAC Array is a configurable DC-DC Power Supply built using up to 4 Vicor FastTrak DC-DC converters.
CC1.0	<b>Model Differences</b>
CC1.1	See Miscellaneous Enclosure for model nomenclature.
CD1.0	<b>Additional Information</b>
CD1.1	The nameplate is marked with the nominal Input Voltage. The product was evaluated across the entire rated input range.
CE1.0	<b>Technical Considerations</b>
CE2.0	The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: max. baseplate temperature of 100°C --
CF1.0	<b>Engineering Conditions of Acceptability</b>
CF1.1	For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.  When installed in an end-product, consideration must be given to the following:
CF1.5	The following secondary output circuits are SELV: All
CF1.6	The following secondary output circuits are at hazardous energy levels: All
CF1.11	The power supply terminals and/or connectors are: Not investigated for field wiring
CF1.13	The investigated Pollution Degree is: 2
CF1.15	Proper bonding to the end-product main protective earthing termination is: Required
CF1.16	An investigation of the protective bonding terminals has: Not been conducted
CF1.19	The following end-product enclosures are required: Mechanical, Fire, Electrical
CF2.0	The maximum baseplate temperature of the DC-DC converters used in the, VIPAC Array is 100degC and should be verified in the end application. The recommended , method to determine compliance is to monitor the VIAPC Array cold-plate and limit the maximum, value to 95degC.,

## MISC ENCLOSURE

### VIPAC Array Family Tree Model Number VA-aaaaaaabcd

VA = VIPAC Array
Nominal Input Voltage (range), 300 Vdc (180-375) or 375 Vdc (250-425), 5A Max

a = DC-DC converter configuration		Max Output Voltage	Max Output Power
A	2 Mini	48 Vdc	600 W
B	1 Mini & 2 Micro	48 Vdc	600 W
C	3 Micro	48 Vdc	450 W
E	1 Micro & 2 Mini	48 Vdc	750 W
F	4 Micro	48 Vdc	600 W
J	1 Maxi	48 Vdc	600 W
K	1 Mini	48 Vdc	300 W
H	2 Micro	48 Vdc	300 W

aaaaaa =	0-9, sequential assigned number, represents customer configuration
c =	0-9, represents model number error check
d =	Optional Suffix, any alphanumeric character, non-safety related, E = RoHS compliant

#### LICENSE CONDITIONS:

1. The VIPAC Array is a Class I component power supply designed for building-in.
2. The maximum baseplate temperature of the DC-DC converters used in the VIPAC Array is 100°C and should be verified in the end application. The recommended method to determine compliance is to monitor the VIAPC Array cold-plate and limit the maximum value to 95°C.
3. The nameplate is marked with the nominal Input Voltage. The product was evaluated across the entire rated input range.
4. Secondary outputs 2-48V comply with SELV; higher output voltages are non-SELV.

## Product Overview

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**VA-A****2 MINIS**

- 3.62" x 6.69" x 0.78"<sup>[a]</sup>  
(92,0 x 170,0 x 19,8 mm)
- 1.3 lb (590 g)
- Single or dual output
- Up to 600 W

**VA-B****1 MINI, 2 MICROS**

- 3.62" x 6.69" x 0.78"<sup>[a]</sup>  
(92,0 x 170,0 x 19,8 mm)
- 1.3 lb (590 g)
- Single, dual or triple outputs
- Up to 600 W total

**VA-C****3 MICROS**

- 3.62" x 6.69" x 0.78"<sup>[a]</sup>  
(92,0 x 170,0 x 19,3 mm)
- 1.1 lb (499 g)
- Dual or triple outputs
- Up to 450 W total

**VA- J****1 MAXI**

- 3.62" x 6.69" x 0.78"<sup>[a]</sup>  
(92,0 x 170,0 x 19,8 mm)
- 1.1 lb (499 g)
- Single output
- Up to 600 W
- Current share option

**VA-E****1 MICRO, 2 MINIS**

- 3.62" x 7.52" x 0.78"<sup>[a]</sup>  
(92,0 x 191,0 x 19,8 mm)
- 1.4 lb (635 g)
- Dual or triple outputs
- Up to 750 W total

**VA-F****4 MICROS**

- 3.62" x 7.52" x 0.78"<sup>[a]</sup>  
(92,0 x 191,0 x 19,3 mm)
- 1.3 lb (608 g)
- Dual, triple or quad outputs
- Up to 600 W total

**VA-K****1 MINI**

- 3.62" x 4.39" x 0.78"<sup>[a]</sup>  
(92,0 x 112,0 x 19,8 mm)
- 0.7 lb (318 g)
- Single output
- Up to 300 W
- Current share option

**VA-H****2 MICROS**

- 3.62" x 4.39" x 0.78"<sup>[a]</sup>  
(92,0 x 112,0 x 19,8 mm)
- 0.7 lb (318 g)
- Single or dual outputs
- Up to 300 W