



America

CERTIFICATE

No. U8V 021433 0581 Rev. 00

Holder of Certificate: **Vicor Corporation**
 25 Frontage Road
 Andover MA 01810
 USA

Certification Mark:



Product: **Converter**
DC-DC Converter

The product was voluntarily tested according to the relevant safety requirements noted above. It can be marked with the certification mark above. The mark must not be altered in any way. This product certification system operated by TÜV SÜD America Inc. most closely resembles system 3 as defined in ISO/IEC 17067. Certification is based on the TÜV SÜD "Testing and Certification Regulations". TÜV SÜD America Inc. is an OSHA recognized NRTL and a Standards Council of Canada accredited certification body.

Test report no.: 72126534-200

Date, 2018-09-21

(William J. Stinson)



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Model(s): VTM2313S60Z01A4T00 / non-isolated SM-ChiP VTM;
NBM2317S54D1464T0R / non-isolated SM-ChiP NBM

Brand Name: Vicor

Tested according to: CAN/CSA C22.2 No.60950-1:2007/A2:2014
EN 60950-1:2005/A2:2013
UL 60950-1:2007/A2:2014

Production Facility(ies): 067768

Parameters:
Rated Input Voltage: 60 V DC; 54 V DC max
Rated Output Voltage: 2.3 V DC; 13.5 V DC max
Rated Output Current: 135 A; 64 A or 750 W max
Protection Class: III
Degree of Protection: IPX0

Conditions of Acceptability – When installed in the end use equipment, the following are among considerations to be made:

1. The SM-ChiPs are rated at full current to a maximum case temperature of 100°C.
2. The SM-ChiP are non-isolating low voltage devices that provide functional insulation.
3. The SM-ChiP VTMs were evaluated with an external overcurrent protection device that did not impact the results of the SELV reliability single fault testing. The need for external overcurrent protection to be considered in the end use product.
4. The NBMs were tested with a Littelfuse 456 Series Fuse rated 125V / 20A
5. The SM-ChiPs to be mounted on minimum V-1 rated PCB



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VICOR SM-ChiP VTM

Model Matrix: VTMaaaaSbbZwwxyzz

Example: VTM2313S60Z01A4T00

VTM = Constant

| Product Function | |
|------------------|-------------------------------|
| VTM | Voltage Transformation Module |

aaaa = 2313

| Package Size Designator (mm) | |
|------------------------------|----------------|
| 1408 | 14 x 08 |
| 2308 | 23 x 08 |
| 2313 | 23 x 13 |

S = Constant

| Lead Designator | |
|-----------------|---------------|
| S | Surface Mount |

bb = 60

| Input Voltage designator Max (range) | |
|--------------------------------------|----------------|
| 52 | 52 Vdc (26-52) |
| 55 | 55 Vdc (26-55) |
| 60 | 60 Vdc (26-60) |

Z = Constant

| Voltage Range Ratio | |
|---------------------|---|
| Z | Z |

ww = 01

| Output Voltage Designator (range) | |
|-----------------------------------|---------------------|
| 01 | 1 Vdc (0.54 – 1.25) |
| 02 | 2 Vdc (0.65 – 2.30) |

xx = A4

| Output Current Designator | | | | | |
|---------------------------|------------|----|------|----|------|
| 50 | 50A | 95 | 95A | A3 | 130A |
| 76 | 76A | A1 | 105A | A4 | 135A |

y = T

| Product Grade (defines the max internal temp, the max external surface temp is limited to 100°C) | | | | | |
|--|------------|---|--------------|---|--------------|
| C | 0 to 100°C | T | -40 to 125°C | M | -55 to 125°C |

zz = 00

| Revision / Options, Z is not used in first option position, reserved for use in isolated VTM series | |
|---|----------------------------|
| zz | Any alphanumeric character |

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VICOR SM-ChiP NBM
Model Matrix: NBMaaaaSbbDwwxyzz

Example: NBM2313S54D164T0R

NBM = Constant

| | |
|------------------|--------------------------|
| Product Function | |
| NBM | Non-isolating Bus Module |

aaaa = 2317

| | |
|------------------------------|---------|
| Package Size Designator (mm) | |
| 2317 | 23 x 17 |

S = Constant

| | |
|-----------------|---------------|
| Lead Designator | |
| S | Surface Mount |

bb = 54

| | |
|--------------------------------------|----------------|
| Input Voltage designator Max (range) | |
| 54 | 54 Vdc (38-54) |

D = Constant

| | |
|---------------------|---|
| Voltage Range Ratio | |
| D | D |

ww = 14

| | |
|---|-----------------------|
| Output Voltage Designator Nominal (range) | |
| 14 | 13.5 Vdc (9.5 – 13.5) |

xx = 64

| | |
|-----------------------------------|------------|
| Output Current / Power Designator | |
| 64 | 64A / 750W |

y = T

| | | | | | |
|--|------------|---|--------------|---|--------------|
| Product Grade (max internal temperature) | | | | | |
| C | 0 to 125°C | T | -40 to 125°C | M | -55 to 125°C |

zz = 0R

| | |
|--------------------|----------------------------|
| Revision / Options | |
| zz | Any alphanumeric character |

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