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America

CERTIFICATE

No. U8V 18 04 21433 570

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

Production Facility(ies): 67768

Certification Mark:

Product:
Converter
DC-DC Converter

Model(s):
DCM290P138T600A41
Type: VICHIP DCM4623 Series
High Voltage Panel Mold DCM
(see attachment for additional model nomenclature, rating information & License Conditions)

Parameters:

Rated Input Voltage:	290 V DC
Rated Output Voltage:	13.8 V DC
Rated Output Power:	600 W Max

Tested according to:
CAN/CSA C22.2 No.60950-1:2007/A2:2014
UL 60950-1:2007/R:2014-10
EN 60950-1:2006/A2:2013

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.

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Date, 2018-04-13

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High voltage panel mold DCM
Model Matrix: DCMbbbwdddefffxyz

Example: DCM290P138T600A41

DCM = Constant

DCM Family Converter Module	
DCM	Standard version
MDCM	MIL-COTS version

bbb = 290

Nominal Input Voltage (Maximum Voltage Range)							
120	120V (90-150)	210	210V (140-310)	290	290V (160-420)	380	380V (340-420)
175	200V (90-260)	270	270V (160-420)	300	300V (180-420)		
255	210V (90-420)	275	275V (120-420)	360	360V (300-420)		

w = P

Package Type and Lead designator	
P	Panel Mold Through-hole
L / N	Panel Mold Lead-less

ddd = 138

Output Voltage Designator, Vout = Designator / 10, any 3 digit number from 000 to 540. Non-inclusive list of examples below.					
033	3.3V	138	13V	280	28V
050	5V	150	15V	420	42V
090	9V	220	22V	480	48V
120	12V	240	24V	528	52.8V

e = T

Product Grade	
T	-40 to 125C
M	-55 to 125C
C	0 to 85C

fff = 600

Output Power, any 3 digit number from 000 – 600. Non-inclusive list of examples below.							
100	100W	250	250W	400	400W	500	500W
150	150W	375	375W	450	450W	600	600W

x = A

Revision (non-safety related)	
x	Any alphanumeric character

y = 4

Package Size	
4	4623

z = 1

Functionality (non-safety related), any alphanumeric character, non-inclusive list of examples below.	
0	No communication
1	Communication enabled
R	Reversible

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25 Frontage Road
Andover, MA 01810

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Alternate: High voltage panel mold DCM
Model Matrix: DCM4623cddewwxxyzz

Example: DCM4623TD2G53F0T01

DCM = Constant

Product Function	
DCM	DC-DC Converter Module

4623 = Constant

Package Size (mm)	
4623	46 x 23

c = T

Lead Designator			
T	Through-Hole	L / N	Leadless

dd = D2

Maximum Input Voltage = 1st character + 2nd character (see table below, not to exceed 420V)							
1st character		2nd character					
A	100V	0	0 V	4	40 V	8	80 V
B	200V	1	10 V	5	50 V	9	90 V
C	300V	2	20 V	6	60 V		
D	400V	3	30 V	7	70 V		
Examples: D2 = 420V (400V+20V), B1 = 210 (200V+10V), A2 = 120V (100V+20V)							

e = G

Range Ratio (Vin high / Vin low, defines low line)							
A	1.10	G	1.95	N	3.45	U	6.12
B	1.21	H	2.14	P	3.80	V	6.73
C	1.33	J	2.36	Q	4.18	W	7.40
D	1.46	K	2.59	R	4.60	X	8.14
E	1.61	L	2.85	S	5.05	Y	8.95
F	1.77	M	3.14	T	5.60	Z	9.85

ww = 53

Maximum Output Voltage including trim (any 2 digits up to 60), non-inclusive list of examples			
04	4Vdc (3.3V nominal +10% trim)	26	26Vdc (24V nominal +10% trim)
06	6Vdc (5V nominal +10% trim)	31	31Vdc (28V nominal +10% trim)
13	13Vdc (12V nominal +10% trim)	53	53Vdc (48V nominal +10% trim)
17	17Vdc (15V nominal + 10 trim)		

xx = F0

Maximum Output Power = 1st character + 2nd character (see table below, not to exceed 600W)					
1st character		2nd character			
A	100 W	0	0 W	5	50 W
B	200 W	1	10 W	6	60 W
C	300 W	2	20 W	7	70 W
D	400 W	3	30 W	8	80 W
E	500 W	4	40 W	9	90 W
F	600 W				
Examples: F0 = 600W (600W+0W), D0 = 400W (400W+0W), B5 = 250W (200W+50W), A5 = 150W (100W+50W)					

y = T

Product Grade			Options (non-safety related), any alphanumeric combination, non-inclusive list of examples below	
C	-20 to 100°C		00	Analog Communication
T	-40 to 100°C		01	Digital Communication
M	-55 to 100°C			

zz = 01

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License Conditions:

Special Considerations – The following items are considerations that were used when evaluating these products.

The high voltage panel mold VICHIP DCM4623 series of DC-DC converters are designed for building-in.

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

1. See de-rating curves for maximum output power, chip temperature, and input voltage. The de-rating curves represent the maximum operating conditions of the product family. Some model numbers may be rated less than the maximum operating conditions.
2. Max Output: The DCM has an MNL of 600W as a standalone device or up to 690W when used in an array.
3. The output is separated from the input by reinforced insulation.
4. The output is considered to be SELV.
5. Outputs above 240W are considered to be at a hazardous energy level.
6. FUSING: The DCMs were evaluated with an EATON PC-Tron series fuse rated 5A and a Littelfuse 487 series rated 8A max.

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