

DCMPV15-xxV Series



CE Report

RoHS



FEATURES

- Ultra wide voltage input (100-1000VDC)
- Multiple protections
- Low power consumption, green environmental protection, no-load loss<0.6W
- EMI level: CLASS B
- High efficiency, up to 83%
- 100% high-temperature aging and testing
- 3 Years Warranty

DESCRIPTION

The DCMPV15-xxV series products are DC-DC switching power supply modules with high efficiency and reliability for 100-1000VDC ultra-high voltage input. They can be widely used in photovoltaic power generation and high-voltage frequency conversion, providing stable working voltage for load equipment. Moreover, their built-in multiple protection functions can enhance the safety of the power supply and its load in case of abnormal operation of the module power supply Can. When this series of products is applied in environments with poor electromagnetic compatibility, it is necessary to refer to the recommended circuit.

MODEL NUMBERING

DCMPV15-xxV



SELECTION GUIDE

Product Model	Input Voltage (Vdc) Standard Value(range)	Output Voltage (Vdc)	Output Current (A) (Max./Min.)	Efficiency % (Min./Typ.)	Ripple & Noise (mVp-p)
DCMPV15-05V	100-1000 Vdc	5	3	76	100
DCMPV15-12V		12	1.25	81	100
DCMPV15-15V		15	1.00	81	100
DCMPV15-24V		24	0.625	83	100

INPUT CHARACTERISTICS

Parameter	Conditions
Nominal voltage input	600VDC
Input voltage range	100~ 1000VDC
Input current (typical value)	40m A / 600VDC
Inrush current (typical value)	20 A / 600VDC
Recommended values for external fuses	2A/1000V

OUTPUT CHARACTERISTICS

Parameter	Conditions
Output voltage accuracy	$\pm 1.0\%$ ($\pm 2.0\%$ max)
Line regulation	$\pm 1.0\%$
Load regulation	$\pm 1.0\%$
Start up time (typical value)	2000ms/600VDC (TYP) at full load
Output hold time (typical value)	30ms/600VDC at full load

PROTECTIVE CHARACTERISTICS

Parameter	Conditions
Output overcurrent protection	$\geq 110\% \sim 300\% I_o$
Short circuit protection	Hiccup mode, recovers automatically after fault condition is removed
Output overvoltage protection	None

Remarks: This product does not support hot plug

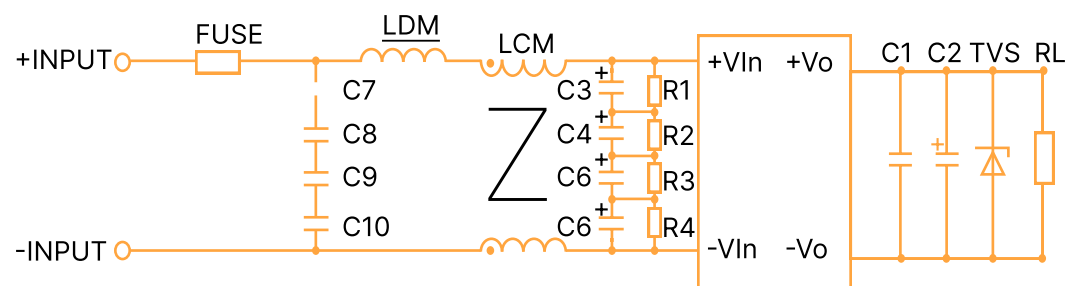
SAFETY AND ELECTROMAGNETIC COMPATIBILITY

Parameter		Conditions
Safety and Electromagnetic Compatibility	safety standards	EN62368,EN60601,UL62368
	Insulation voltage	I/P-O/P:3.0KVAC
	insulation resistance	I/P-O/P:>100M Ohms/500VDC 25°C 70% RH
	Conduction and Radiation	EN55011, EN55022 (CISPR22) CLASS B
	electrostatic discharge	IEC/EN 61000-4-2 level 4 8kV/15kV
	Radio frequency radiation immunity	IEC/EN 61000-4-3
	Electric fast transient pulse train	IEC/EN 61000-4-4 level 3 2kV

OTHER

Parameter	Conditions
Surge	IEC/EN 61000-4-5 level 4 1kV (2KV
MTBF	200K hrs min. MIL-HDBK-217F @ 25°C
Volume	70*48*23.5mm (L*W*H)
Weight	115g
Packing	116
Packaging box volume	360*300*250mm

CIRCUIT DESIGN AND APPLICATION



Component	Recommend Value
C3/C4/C5/C6	10uF/400VDC Pin
C7/C8/C9/C10	224K/275VAC
R1/R2/R3/R4	1MΩ/0.25W
LDM	1.2mH/0.38A
LCM	10mH
FUSE	2A/1000V, required

Remarks: This product does not support hot plug

OUTPUT CHARACTERISTIC

Model	Fuse	C1	NF	C2/C3	C4	C5	C6	C7	C8	D1	D2
DCMPV15-05V	15Ω/1W	0.1uF/1200V	10mH	0.047uF/1200V	1uF/1200V	47uF/35V	0.1uF/50V	100uF/16V	0.1uuf/50V	D6KE7.5A	-
DCMPV15-12V										D6KE16A	-
DCMPV15-15V										D6KE20A	-
DCMPV15-24V										D6KE30A	-

DERATING CURVE CHART

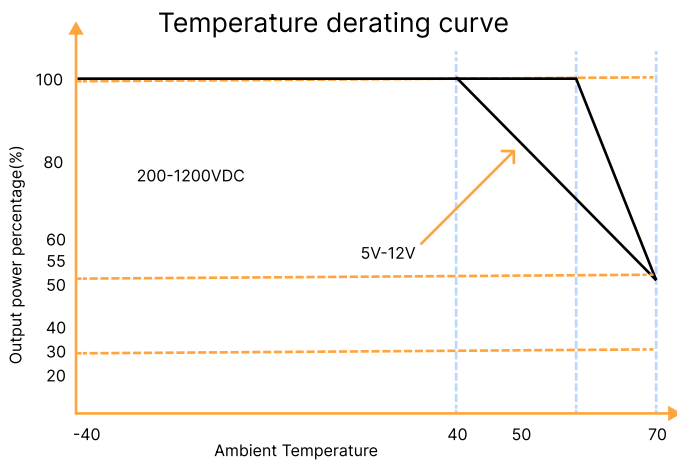


Figure 2: Temperature Derating Curve

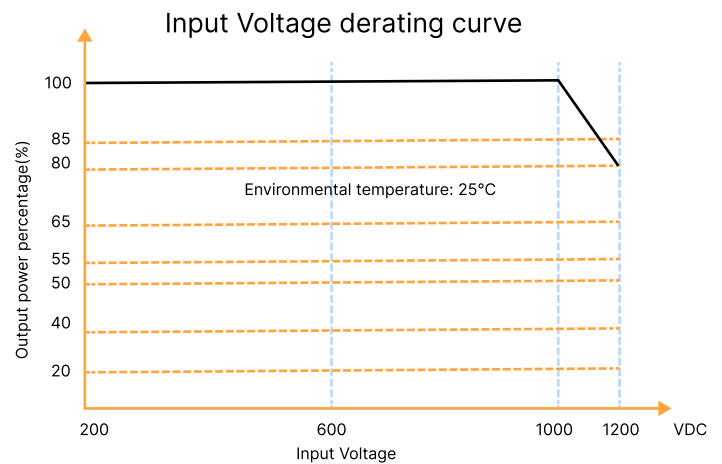


Figure 3: Input voltage derating curve graph

OVERALL DIMENSIONS AND PIN FUNCTIONS

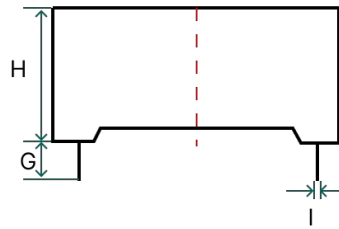
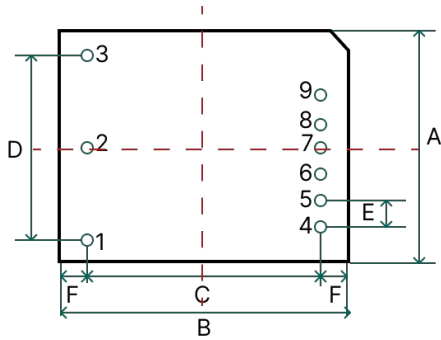


Table 3: Pin Function Table

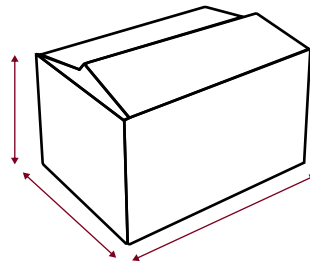
Pin	Function
1	No Pin
2	-Vin
3	+Vin
4	No Pin
5	-Vo
6	No Pin
7	No Pin
8	No Pin
9	+Vo

DIM	A	B	C	D	E	F	G	H	I
	48	70	62	40	5.75	4	>4	23.5	1

Figure 7: Overall dimensions

Note:
 Dimensions in mm
 Terminal diameter tolerance: ± 0.10
 Undeclared tolerance: ± 0.50

PACKAGING METHOD



500Pieces/Outer box

NOTES & INSTRUCTIONS

- 1.The input voltage shall not exceed the specified range value, otherwise permanent and unrecoverable damage maybe caused;
2. Unless otherwise specified,the parameters in this manual are measured at 25 °C,40%~75% humidity, input nominal voltage and output pure resistance mode under full load;
- 3.All index test methods are based on the company's enterprise standards.
- 4.The copyright and the final interpretation right of the product belong to RHENXV.