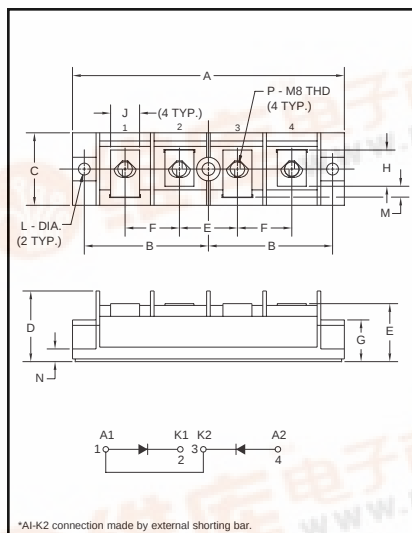


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

Dual Diode
POW-R-BLOK™ Modules
250 Amperes/1200-1600 Volts



Outline Drawing

Dimension	Inches	Millimeters
A	5.906	150
B	2.697±0.02	68.5±0.2
C	1.575	40
D	1.535	39
E	1.260	32
F	1.181	30
G	0.906	23
H	0.787	20
J	0.630	16
K	0.276	7
L	0.256±0.008 Dia.	Dia. 6.5±0.2
M	0.236	6
N	0.197	5
P	M8 Metric	M8



CD511225, CD511625
Dual Diode
POW-R-BLOK™ Modules
250 Amperes/1200-1600 Volts

Description:

Powerex Dual Diode POW-R-BLOK™ Modules are designed for use in applications requiring AC to DC rectification in isolated packaging. The modules are isolated for easy mounting with other components on common heatsinks. POW-R-BLOK™ has been tested and recognized by Underwriters Laboratories (QQQX2 Power Switching Semiconductors).

Features:

- ☐ Isolated Mounting
- ☐ Glass Passivated Chips
- ☐ Metal Baseplate
- ☐ Low Thermal Impedance
- ☐ UL Recognized 

Applications:

- ☐ Battery Supplies
- ☐ AC and DC Motor Power Supplies

Ordering Information:

Select the complete eight digit module part number you desire from the table below.

Example: CD511625 is a 1600 Volt, 250 Ampere Dual Diode POW-R-BLOK™ Module.

Type	Voltage Volts (x100)	Current Rating Amperes (x10)
CD51	12	25
	16	



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Absolute Maximum Ratings

Characteristics	Symbol	CD511225	CD511625	Units
Peak Reverse Blocking Voltage	V_{RRM}	1200	1600	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$	V_{RSM}	1350	1700	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	960	1280	Volts
RMS On-State Current	$I_{F(RMS)}$	390	390	Amperes
Average On-State Current, $T_C = 64^{\circ}C$	$I_{F(AV)}$	250	250	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	5000	5000	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{FSM}	4500	4500	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	100,000	100,000	A^2sec
Storage Temperature	T_{STG}	-40 to 125	-40 to 125	$^{\circ}C$
Operating Temperature	T_J	-40 to 125	-40 to 125	$^{\circ}C$
Maximum Mounting Torque M6 Mounting Screw	—	26	26	in.-lb.
Maximum Mounting Torque M8 Terminal Screw	—	72	72	in.-lb.
Module Weight (Typical)	—	300	300	Grams
V Isolation	V_{RMS}	2500	2500	Volts



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Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	CD511225/CD511625	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	$T_j = 125^\circ\text{C}$, $V_{RRM} = \text{Rated}$	30	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	$I_{FM} = 750\text{A}$	1.3	Volts
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.2	$^\circ\text{C/Watt}$
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.05	$^\circ\text{C/Watt}$



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