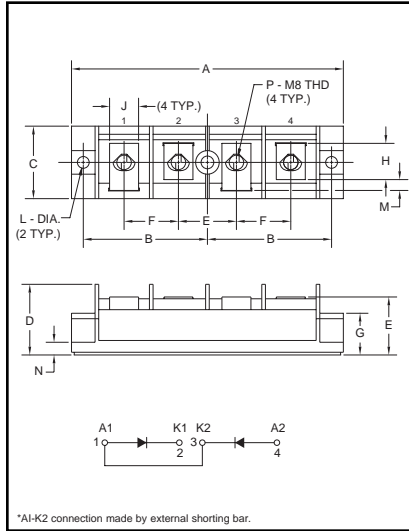


**Dual Diode  
POW-R-BLOK™ Modules  
250 Amperes/1200-1600 Volts**



**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	



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

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

### Absolute Maximum Ratings

Characteristics	Symbol	CD511225	CD511625	Units
Peak Reverse Blocking Voltage	$V_{RRM}$	1200	1600	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5\text{ms}$	$V_{RSM}$	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, $T_C = 64^\circ\text{C}$	$I_{F(AV)}$	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	$\text{A}^2\text{sec}$
Storage Temperature	$T_{STG}$	-40 to 125	-40 to 125	$^\circ\text{C}$
Operating Temperature	$T_j$	-40 to 125	-40 to 125	$^\circ\text{C}$
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



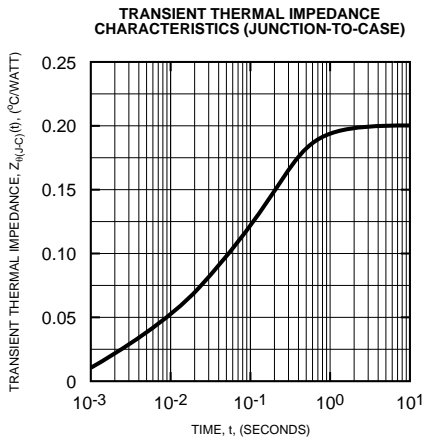
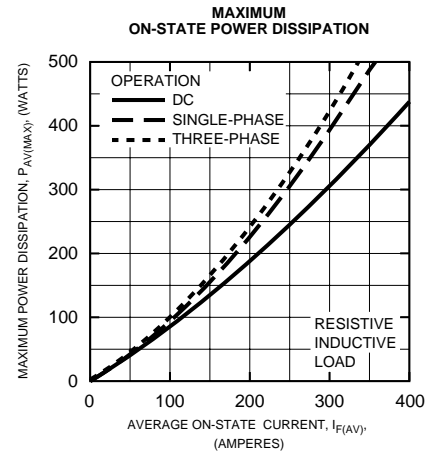
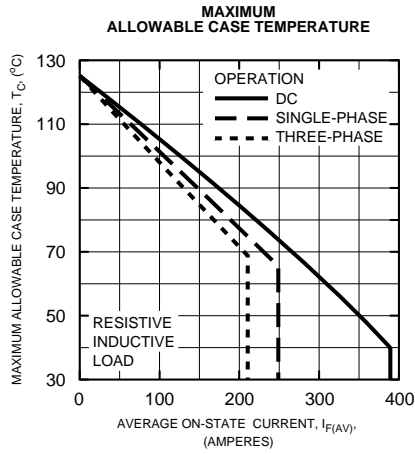
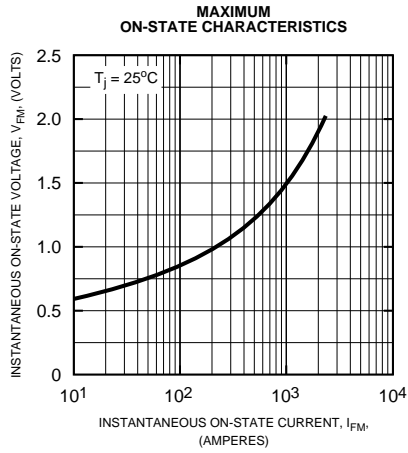
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CD511225, CD511625  
Dual Diode POW-R-BLOK™ Modules  
250 Amperes/1200-1600 Volts

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

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

**CD511225, CD511625**  
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