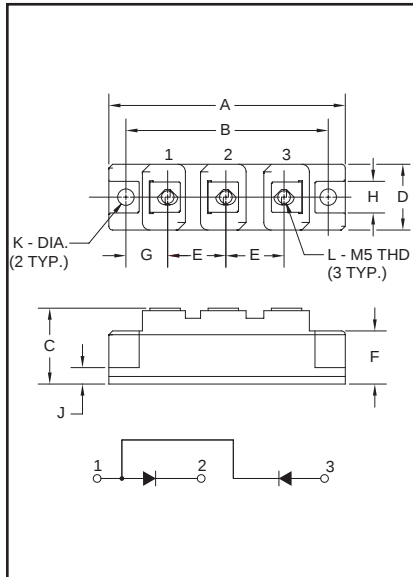


Dual Diode POW-R-BLOK™ Modules 100 Amperes/800 Volts



Outline Drawing

Dimension	Inches	Millimeters
A	3.68 Max.	93.5 Max.
B	3.150	80
C	1.181 Max.	30 Max.
D	1.024 Max.	26 Max.
E	0.827	21
F	0.787	20
G	0.689	17.5
H	0.492	12.5
J	0.256	6.5
K	0.256 Dia.	Dia. 6.5
L	M5 Metric	M5



CDD10810
Dual Diode
POW-R-BLOK™ Modules
100 Amperes/800 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: CDD10810 is an 800 Volt, 100 Ampere Dual Diode POW-R-BLOK™ Module.

Type	Voltage Volts (x100)	Current Rating Amperes (x10)
CDD1	08	10



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

CDD10810

Dual Diode POW-R-BLOK™ Modules

100 Amperes/800 Volts

Absolute Maximum Ratings

Characteristics	Symbol	CDD10810	Units
Peak Reverse Blocking Voltage	V_{RRM}	800	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$	V_{RSM}	960	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	640	Volts
RMS On-State Current	$I_{F(RMS)}$	155	Amperes
Average On-State Current, $T_C = 90^{\circ}C$	$I_{F(AV)}$	100	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{FSM}	2000	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{FSM}	1800	Amperes
I^2t (for Fusing), 8.3 milliseconds	I^2t	16500	A^2sec
Storage Temperature	T_{STG}	-40 to 125	$^{\circ}C$
Operating Temperature	T_J	-40 to 125	$^{\circ}C$
Maximum Mounting Torque M6 Mounting Screw	—	26	in.-lb.
Maximum Mounting Torque M5 Terminal Screw	—	17	in.-lb.
Module Weight (Typical)	—	160	Grams
V Isolation	V_{RMS}	2000	Volts



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CDD10810

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

Characteristics	Symbol	Test Conditions	CDD10810	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	$T_j = 125^\circ\text{C}$, $V_{RRM} = \text{Rated}$	15	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	$I_{FM} = 320\text{A}$	1.25	Volts
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.3	$^\circ\text{C/Watt}$
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.2	$^\circ\text{C/Watt}$

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