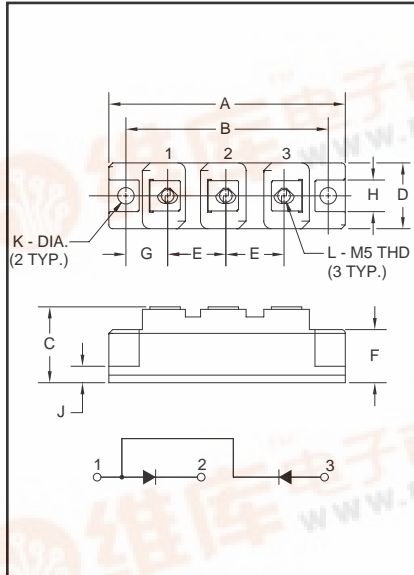


CDD10810

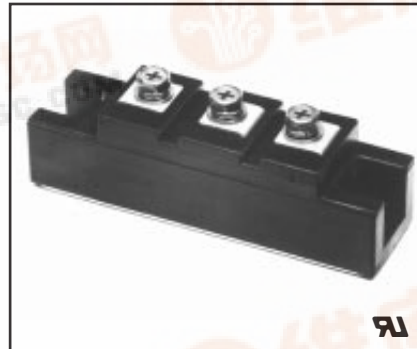
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

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 |



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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 (QQX2 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 |



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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 ² sec |
| Storage Temperature | T_{STG} | -40 to 125 | °C |
| Operating Temperature | T_j | -40 to 125 | °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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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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