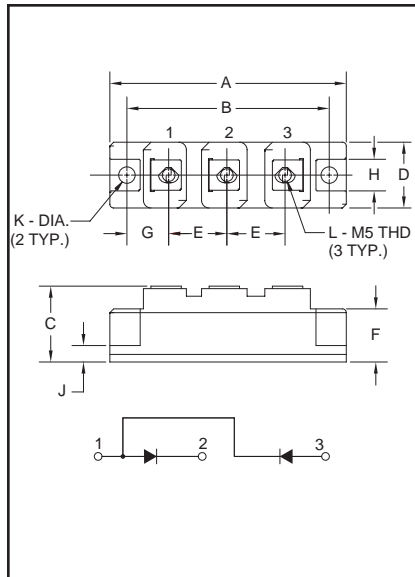


### Dual Diode POW-R-BLOK™ Modules 30 Amperes/800 Volts



Outline Drawing

| Dimension | Inches     | Millimeters |
|-----------|------------|-------------|
| A         | 3.681 Max. | 93.5 Max.   |
| B         | 3.150      | 80          |
| C         | 1.181 Max. | 30 Max.     |
| D         | 1.024 Max. | 26 Max.     |
| E         | 0.787      | 20          |
| F         | 0.827      | 21          |
| 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          |




CC410830  
Dual Diode  
POW-R-BLOK™ Modules  
30 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: CD410830 is an 800 Volt, 30 Ampere Dual Diode POW-R-BLOK™ Module.

| Type | Voltage<br>Volts (x100) | Current Rating<br>Amperes (x30) |
|------|-------------------------|---------------------------------|
| CD41 | 08                      | 30                              |



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

CD410830

Dual Diode POW-R-BLOK™ Modules

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### Absolute Maximum Ratings

| Characteristics  | Symbol       | CD410830   | Units                  |
|--|--------------|------------|------------------------|
| Peak Reverse Blocking Voltage  | $V_{RRM}$    | 800        | Volts                  |
| Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5\text{ms}$ | $V_{RSM}$    | 960        | Volts                  |
| DC Reverse Blocking Voltage  | $V_{R(DC)}$  | 640        | Volts                  |
| RMS On-State Current   | $I_{F(RMS)}$ | 47         | Amperes                |
| Average On-State Current, $T_C = 92^\circ\text{C}$                         | $I_{F(AV)}$  | 30         | Amperes                |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)              | $I_{FSM}$    | 600        | Amperes                |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)              | $I_{FSM}$    | 545        | Amperes                |
| $I^2t$ (for Fusing), 8.3 milliseconds                                      | $I^2t$       | 1500       | $\text{A}^2\text{sec}$ |
| Storage Temperature  | $T_{STG}$    | -40 to 125 | $^\circ\text{C}$       |
| Operating Temperature  | $T_j$        | -40 to 125 | $^\circ\text{C}$       |
| 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                                      | CD410830 | Units                        |
|---|-------------------|--|----------|------------------------------|
| <b>Blocking State Maximums</b>                |                   |  |          |                              |
| Reverse Leakage Current, Peak                 | $I_{RRM}$         | $T_j = 150^\circ\text{C}$ , $V_{RRM} = \text{Rated}$ | 4.0      | mA                           |
| <b>Conducting State Maximums</b>              |                   |  |          |                              |
| Peak On-State Voltage                         | $V_{FM}$          | $I_{FM} = 90\text{A}$                                | 1.4      | Volts                        |
| <b>Thermal Maximums</b>                       |                   |  |          |                              |
| Thermal Resistance, Junction-to-Case          | $R_{\theta(J-C)}$ | Per Module   | 0.8      | $^\circ\text{C}/\text{Watt}$ |
| Thermal Resistance, Case-to-Sink (Lubricated) | $R_{\theta(C-S)}$ | Per Module   | 0.2      | $^\circ\text{C}/\text{Watt}$ |

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