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[Powerex Inc.](#)
[ME501210](#)

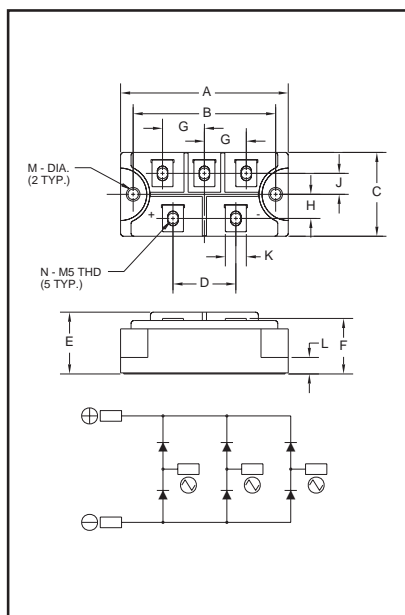
For any questions, you can email us directly:
sales@integrated-circuit.com



ME501210
ME501610

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

**Three-Phase
Diode Bridge Modules**
100 Amperes/1200-1600 Volts



Outline Drawing

| Dimension | Inches | Millimeters |
|-----------|-------------|-------------|
| A | 3.15 | 80 |
| B | 2.677±0.010 | 68±0.25 |
| C | 1.57 | 40 |
| D | 1.18 | 30 |
| E | 1.16 | 29.5 |
| F | 1.04 | 26.5 |
| G | 0.79 | 20 |
| H | 0.45 | 11.5 |
| J | 0.41 | 10.5 |
| K | 0.39 | 10 |
| L | 0.31 | 8 |
| M | 0.216 Dia. | Dia. 5.5 |
| N | M5 Metric | M5 |



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Three-Phase Diode Bridge Modules
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Description:

Powerex Three-Phase Diode Bridge Modules are designed for use in three-phase bridge applications. The modules are isolated consisting of six rectifier diodes.

Features:

- Isolated Mounting
- Planar Chips

Applications:

- Inverters
- DC Power Supplies
- AC Motor Control Front End

Ordering Information:

Select the complete eight digit module part number you desire from the table below.
 Example: ME501210 is a 1200 Volt, 100 Ampere Three-Phase Diode Bridge Module.

| Type | Voltage Volts (x100) | Current Rating Amperes (x10) |
|------|-------------------------|---------------------------------|
| ME50 | 12 | 10 |
| | 16 | |



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Absolute Maximum Ratings

| Characteristics | Symbol | ME501210 | ME501610 | 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 |
| DC Output Current, $T_C = 102^\circ C$ | I_O | 100 | 100 | Amperes |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz) | I_{FSM} | 1000 | 1000 | Amperes |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz) | I_{FSM} | 910 | 910 | Amperes |
| i^2t (for Fusing), 8.3 milliseconds | i^2t | 4200 | 4200 | A ² sec |
| Storage Temperature | T_{STG} | -40 to 125 | -40 to 125 | °C |
| Operating Temperature | T_j | -40 to 150 | -40 to 150 | °C |
| Maximum Mounting Torque M5 Mounting Screw | — | 17 | 17 | in.-lb. |
| Maximum Mounting Torque M5 Terminal Screw | — | 17 | 17 | in.-lb. |
| Module Weight (Typical) | — | 220 | 220 | 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 | ME501210/ME501610 | Units |
|---|-------------------|--|-------------------|------------------------------|
| Blocking State Maximums | | | | |
| Reverse Leakage Current, Peak | I_{RRM} | $T_j = 150^\circ\text{C}$, $V_{RRM} = \text{Rated}$ | 10 | mA |
| Conducting State Maximums | | | | |
| Peak On-State Voltage | V_{FM} | $I_{FM} = 100\text{A}$ | 1.2 | Volts |
| Thermal Maximums | | | | |
| 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 | 0.06 | $^\circ\text{C}/\text{Watt}$ |



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