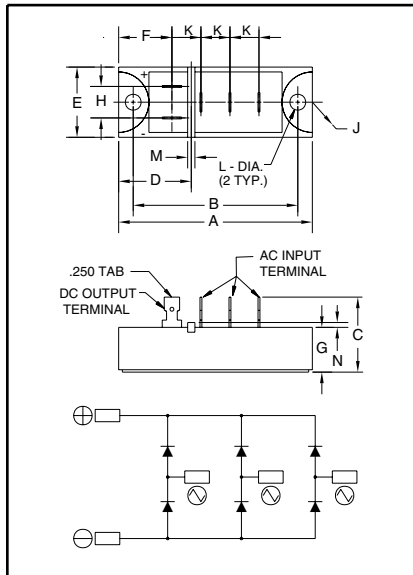


## Three-Phase Diode Bridge Modules 30 Amperes/1200-1600 Volts



Outline Drawing

| Dimension | Inches           | Millimeters  |
|-----------|------------------|--------------|
| A         | 3.150            | 80           |
| B         | 2.677±0.012      | 68±0.3       |
| C         | 1.220            | 31           |
| D         | 1.181            | 30           |
| E         | 1.142            | 29           |
| F         | 0.866            | 22           |
| G         | 0.728            | 18.5         |
| H         | 0.512            | 13           |
| J         | 0.492 R          | R12.5        |
| K         | 0.472            | 12           |
| L         | 0.256±0.008 Dia. | Dia. 6.5±0.2 |
| M         | 0.118            | 3            |
| N         | 0.079            | 2            |



ME701203, ME701603  
Three-Phase Diode Bridge Modules  
30 Amperes/1200-1600 Volts

### Description:

Powerex Three-Phase Diode Bridge Modules are designed for use in three-phase bridge application. The modules are isolated consisting of six rectifier diodes. These ME70 Modules have been tested and recognized by Underwriters Laboratories (QQQX2 Power Switching Semiconductors).

### Features:

- ☐ Isolated Mounting
- ☐ Planar Chips
- ☐ UL Recognized 

### 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: ME701603 is a 1600 Volt, 30 Ampere Three-Phase Diode Bridge Module.

| Type | Voltage<br>Volts (x100) | Current Rating<br>Amperes (x10) |
|------|-------------------------|---------------------------------|
| ME70 | 12<br>16                | 03                              |



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

**ME701203, ME701603**  
**Three-Phase Diode Bridge Modules**  
30 Amperes/1200-1600 Volts

#### Absolute Maximum Ratings

| Characteristics                                                            | Symbol      | ME701203   | ME701603   | 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                  |
| DC Output Current, $T_C = 103^\circ\text{C}$                               | $I_O$       | 30         | 30         | Amperes                |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)              | $I_{FSM}$   | 300        | 300        | Amperes                |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)              | $I_{FSM}$   | 275        | 275        | Amperes                |
| $I^2t$ (for Fusing), 8.3 milliseconds                                      | $I^2t$      | 375        | 375        | $\text{A}^2\text{sec}$ |
| Storage Temperature                                                        | $T_{STG}$   | -40 to 125 | -40 to 125 | $^\circ\text{C}$       |
| Operating Temperature                                                      | $T_J$       | -40 to 150 | -40 to 125 | $^\circ\text{C}$       |
| Maximum Mounting Torque M6 Mounting Screw                                  | —           | 26         | 26         | in.-lb.                |
| Module Weight (Typical)                                                    | —           | 120        | 120        | 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                                      | ME701203/ME701603 | Units                 |
|-----------------------------------------------|-------------------|------------------------------------------------------|-------------------|-----------------------|
| <b>Blocking State Maximums</b>                |                   |                                                      |                   |                       |
| Reverse Leakage Current, Peak                 | $I_{RRM}$         | $T_j = 150^\circ\text{C}$ , $V_{RRM} = \text{Rated}$ | 2.0               | mA                    |
| <b>Conducting State Maximums</b>              |                   |                                                      |                   |                       |
| Peak On-State Voltage                         | $V_{FM}$          | $I_{FM} = 30\text{A}$                                | 1.25              | Volts                 |
| <b>Thermal Maximums</b>                       |                   |                                                      |                   |                       |
| Thermal Resistance, Junction-to-Case          | $R_{\theta(J-C)}$ | Per Module                                           | 0.7               | $^\circ\text{C/Watt}$ |
| Thermal Resistance, Case-to-Sink (Lubricated) | $R_{\theta(C-S)}$ | Per Module                                           | 0.1               | $^\circ\text{C/Watt}$ |

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