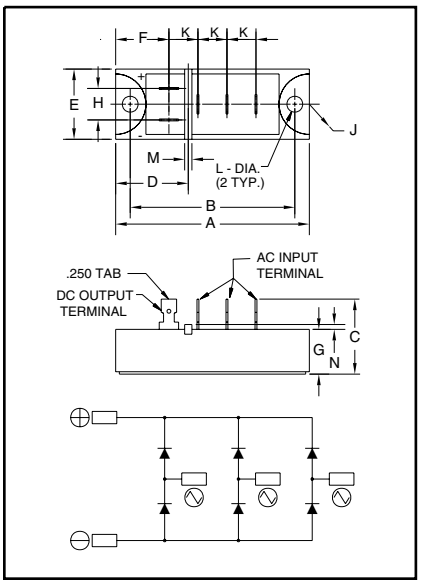
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

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 Volts (x100)	Current Rating Amperes (x10)
ME70	12	03
	16	

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ME701203, ME701603
Three-Phase Diode Bridge Modules
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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 < 5ms	V_{RSM}	1350	1700	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	960	1280	Volts
DC Output Current, T_C = 103°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	A^2sec
Storage Temperature	T_{STG}	-40 to 125	-40 to 125	°C
Operating Temperature	T_j	-40 to 150	-40 to 125	°C
Maximum Mounting Torque M6 Mounting Screw	—	26	26	in.-lb.
Module Weight (Typical)	—	120	120	Grams
V Isolation	V_{RMS}	2500	2500	Volts

Electrical and Thermal Characteristics, T_j = 25°C unless otherwise specified

Characteristics	Symbol	Test Conditions	ME701203/ME701603	Units
Blocking State Maximums				
Reverse Leakage Current, Peak	I_{RRM}	T_j = 150°C, V_{RRM} = Rated	2.0	mA
Conducting State Maximums				
Peak On-State Voltage	V_{FM}	I_{FM} = 30A	1.25	Volts
Thermal Maximums				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	0.7	°C/Watt
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.1	°C/Watt

ME701203, ME701603
Three-Phase Diode Bridge Modules
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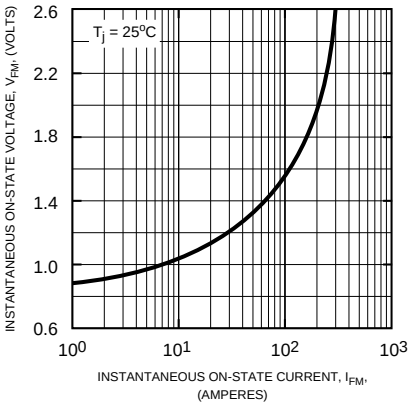
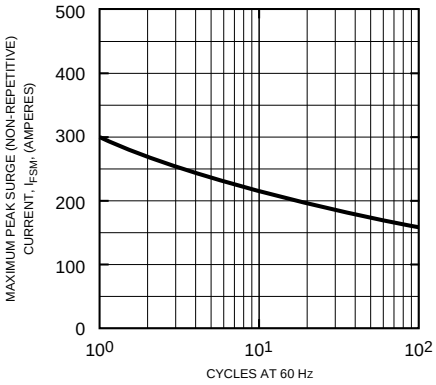
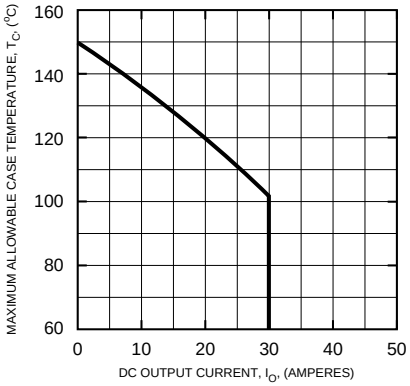
MAXIMUM ON-STATE CHARACTERISTICS



MAXIMUM ALLOWABLE PEAK SURGE (NON-REPETITIVE) CURRENT



MAXIMUM ALLOWABLE CASE TEMPERATURE



MAXIMUM ON-STATE POWER DISSIPATION