

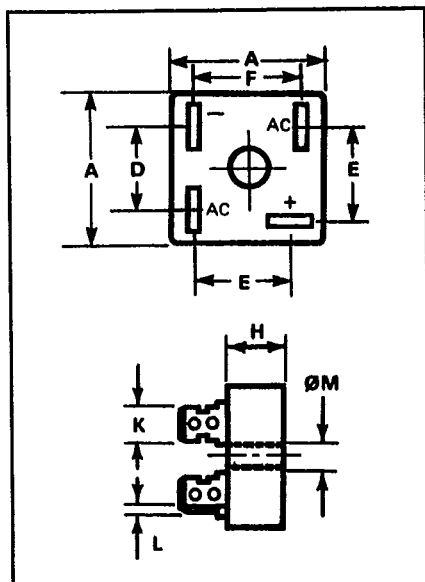


Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412) 925-7272
Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

**MB12A10, MB12A25
MB12A35** T-23-07

Modular Single Phase Assemblies

10-35 Amperes/50-800 Volts



MB12A10, MB12A25, MB12A35
50-800 Volts, Outline Drawing

Dimension	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	1.115	1.135	28.32	28.83
D	.552	.572	14.02	14.53
E	.642	.662	16.30	16.82
F	.702	.722	17.83	18.34
H	—	.447	—	11.357
J	—	1.00	—	25.4
ØM	.190	.196	4.82	4.98

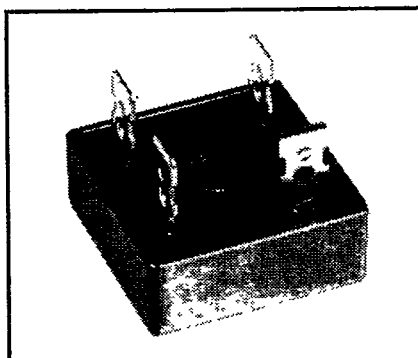
Note: ØM is hole for No. 8 screw.
Terminals — .25" Universal Tab.

Notes:

Polarity Marking — Inputs marked by "AC";

Positive output marked by "+";

Negative output marked by "-".



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Description

The Powerex MB12A10, MB12A25, and MB12A35 are Single Phase Bridge Circuits.

Features:

- ☐ Electrically Isolated Case
- ☐ Low V_F
- ☐ Low Leakage
- ☐ High Surge Current Ratings

Applications:

- ☐ Motor Controls
- ☐ AC to DC Converters
- ☐ Power Supplies
- ☐ Battery Chargers

Ordering Information

Example: Select the complete ten digit part number you desire from the table — i.e. MB12A25V20 is a 200 Volts, 25 Amperes Modular Single Phase Assembly.

Type	Voltage		Current Rating	
	V_{RRM}	Code	$I_{T(AV)}$	Code
MB12	50	V05	10	A10
	100	V10	25	A25
	200	V20	35	A35
	400	V40		
	600	V60		
	800	V80		



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Maximum Ratings

Ratings	Symbol	MB12A10	MB12A25	MB12A35	Units
Repetitive Peak Reverse Voltage	V_{RRM}	50 ~ 800	50 ~ 800	50 ~ 800	Volts
Average DC Output Current, $T_j = 50^\circ\text{C}$ ①	I_O	10	25	35	Amperes
Non-repetitive Peak Surge, One Cycle (60 Hz)	I_{TSM}	200	300	400	Amperes
Storage Temperature	T_{stg}	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Operating Temperature	T_j	-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Mounting Torque	—	20	20	20	in.-lb.
Weight	—	31	31	31	Grams

① 60 Hz, resistive or inductive load; for capacitive load, derate current by 20%.

Electrical Characteristics

Characteristics	Symbol	Test Conditions	MB12A10	MB12A25	MB12A35	Units
Voltage — Blocking State Maximums						
Reverse Leakage Per Cell	I_{RRM}	Rated Voltage @ 25°C	10	10	10	μA
Current — Conducting State Maximums						
Peak On-State Voltage, Per Cell	V_{FM}	$T_j = 25^\circ\text{C}$ @ 5A DC	1.2	—	—	Volts
		$T_j = 25^\circ\text{C}$ @ 12.5A DC	—	1.2	—	Volts
		$T_j = 25^\circ\text{C}$ @ 1.75A DC	—	—	1.2	Volts
Thermal						
Typical Thermal Resistance, Junction-to-Case	$R_{th(j-c)}$	—	1.5	1.5	1.5	$^\circ\text{C/Watt}$

