

## 0.5 A Single-Phase Glass Passivated Bridge Rectifiers

Rectifier Reverse Voltage 100 to 1000V

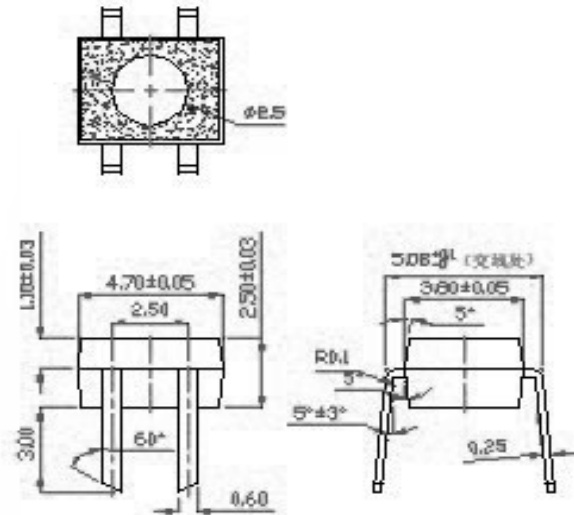
MINI-DIP

### Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Ideal for surface mount application
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

### Mechanical Data

Case: Molded plastic  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Polarity: Marked on body  
 Mounting Position: Any  
 Weight: 0.0044 ounce, 0.125 grams (approx)



Dimensions in millimeters(1mm = 0.0394")

**Parameter** **Symbol** **unit**

### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

		MB1M	MB2M	MB4M	MB6M	MB8M	MB10M	
Maximum repetitive peak reverse voltage	VRRM	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=40°C (*3)	IF(AV)	0.5 0.8*						A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	35						A
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	5						A <sup>2</sup> sec
Typical thermal resistance per element (1)	ReJA	110						°C /W
Typical junction capacitance per element (2)	Cj	13.0						pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150						°C

**Parameter** **Symbol** **Unit**

### Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

		MB1M	MB2M	MB4M	MB6M	MB8M	MB10M	
Maximum instantaneous forward voltage drop per leg at 0.5A	VF	1.0						V
Maximum DC reverse current at rated DC blocking voltage per element	IR	5.0 500						μA

**Notes:** (1)Thermal resistance from Junction to Ambient on P.C.board mounting.  
 (2)Measured at 2.0MHz and applied reverse voltage of 4.0 volts.  
 (3)R-load on aluminum substrate TA=25°C.

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### Rating and Characteristic Curves ( $T_A=25^\circ\text{C}$ Unless otherwise noted ) MB1M thru MB10M

FIG. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

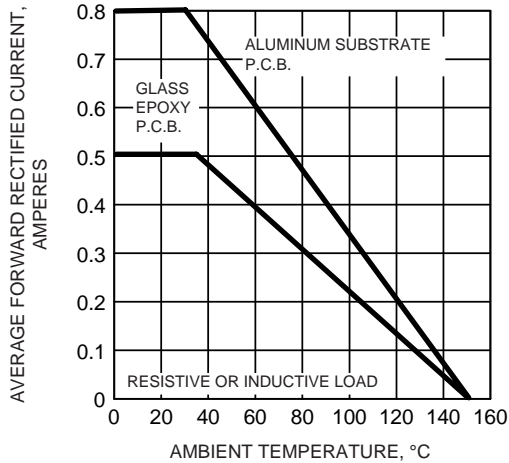


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

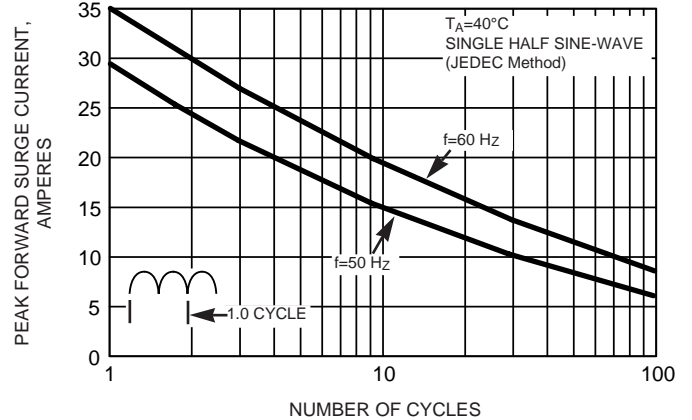


FIG. 3 - TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

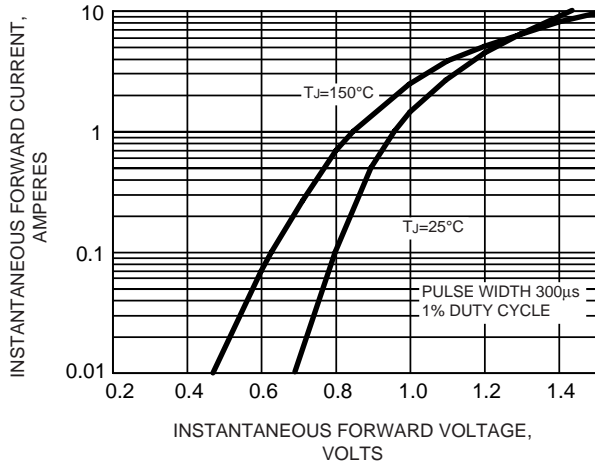


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

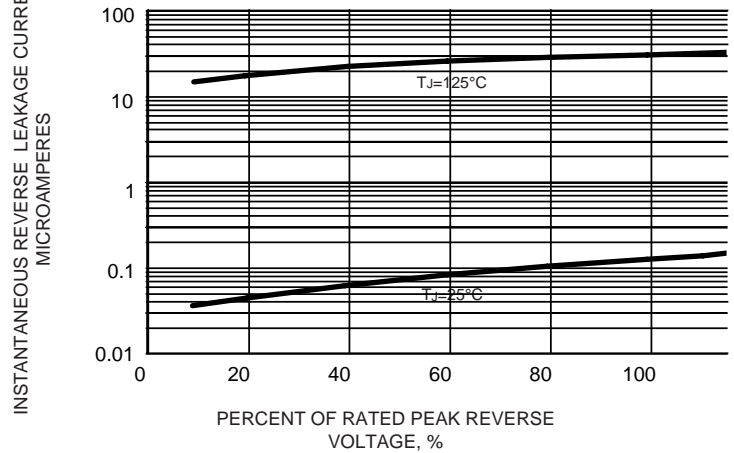


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

