

MB005-MB010

PRV : 50 - 1000 Volts

Io : 1.0 Ampere

Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Ideal for printed circuit board
- RoHS compliant package

Mechanical Characteristics

- Case : Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Terminals : Plated Lead solderable per

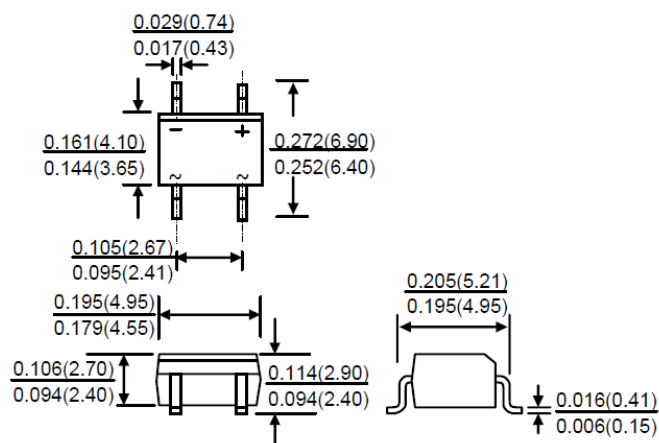
MIL-STD-750, Method 2026

- Polarity : Polarity symbols marked on body
- Mounting position : Any
- Weight : 0.4 gram

Packing & Order Information

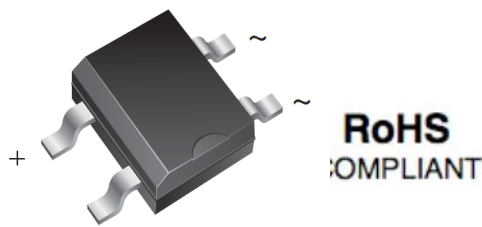
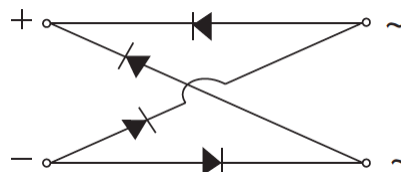
50/Tube ; 1,000/Box

MBS (TO-269AA)



Dimensions in inches and (millimeters)

Graphic symbol



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

	Symbol	MB005	MB01	MB02	MB04	MB06	MB08	MB010	Unit
Maximum recurrent peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Output Rectified Current at Ta = 40°C	IF(AV)	1.0							A
Maximum Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	50							A

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	Symbol	MB005	MB01	MB02	MB04	MB06	MB08	MB010	Unit
Current Squared Time at $t < 8.3$ ms.	I^2t	10							A ² S
Maximum Instantaneous Forward Voltage per element at $I_F = 1.0$ A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	10							μA
	$I_R(H)$	500							μA
Typical Junction Capacitance per element (Note 1)	C_j	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Notes :

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC

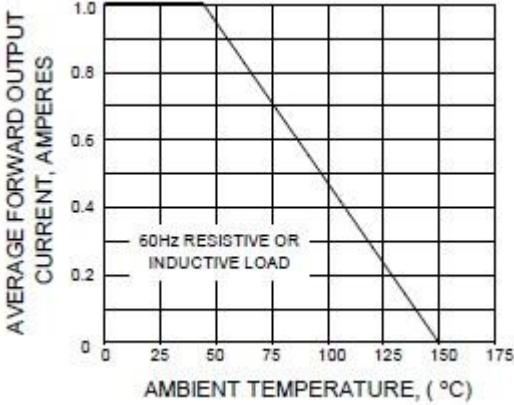
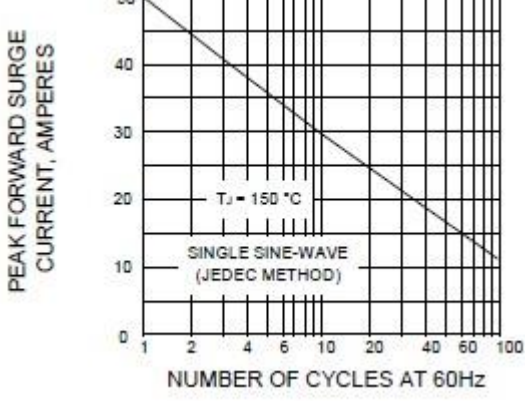
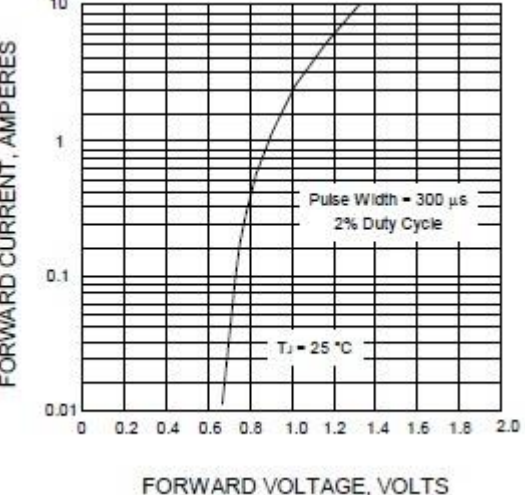
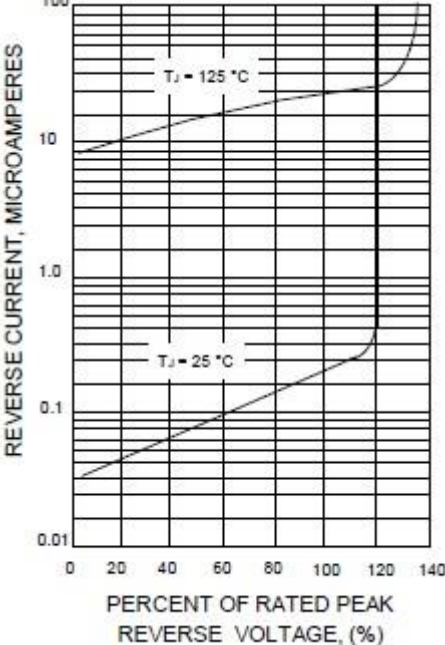
(2) Thermal Resistance from Junction to Ambient on P.C.B. with 0.5" x 0.5" (13mm x 13mm) Copper Pads.

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■ RATING AND CHARACTERISTIC CURVES (MB005 - MB010)

	
<p>Figure 1. DERATING CURVE FOR OUTPUT RECTIFIED CURRENT</p>	<p>Figure 2. MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT</p>
	
<p>Figure 3. TYPICAL FORWARD CHARACTERISTICS</p>	<p>Figure 4. TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT</p>

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