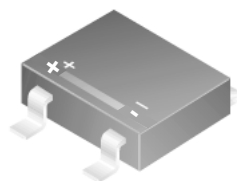


MB10S

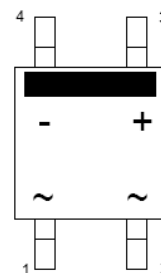
0.5 A Bridge Rectifiers

Features

- Low-Leakage
- Surge Overload Rating: 35 A Peak
- Ideal for Printed Circuit Board
- UL Certified: UL #E111753 and E326243



SOIC-4
Polarity symbols molded
or mark on body



Ordering Information

Part Number	Marking	Package	Packing Method
MB10S	MB10S	SOIC-4	Tape and Reel

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter		Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage		1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage		700	V
V_R	DC Reverse Voltage (Rated V_R)		1000	V
$I_{F(AV)}$	Average Rectified Forward Current, at $T_A = 50^\circ\text{C}$	On Glass-Epoxy PCB	0.5	A
		On Aluminum Substrate	0.8	
I_{FSM}	Non-Repetitive Peak Forward Surge Current: 8.3 ms Single Half-Sine Wave		35	A
T_{STG}	Storage Temperature Range		-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature		-55 to +150	$^\circ\text{C}$

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	1.4	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, per Leg ⁽¹⁾	85	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead, per Leg ⁽¹⁾	20	°C/W

Note:

1. Device mounted on PCB with 0.5 inch x 0.5 inch (13 x 13 mm) lead length.

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Parameter	Test Conditions	Value	Units
V_F	Forward Voltage, per Bridge	0.5 A	1.0	V
I_R	Reverse Current, per Leg at Rated V_R	$T_A = 25^\circ\text{C}$	5.0	μA
		$T_A = 125^\circ\text{C}$	0.5	mA
I^2t	I^2t Rating for Fusing	$t < 8.3 \text{ ms}$	5.0	A^2s
C_T	Total Capacitance, per Leg	$V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$	13	pF

Typical Performance Characteristics

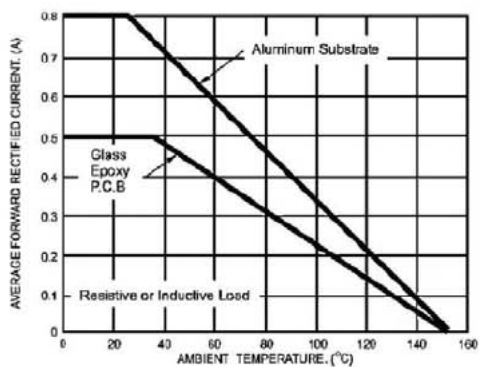


Figure 1. Derating Curve for Output Rectified Current

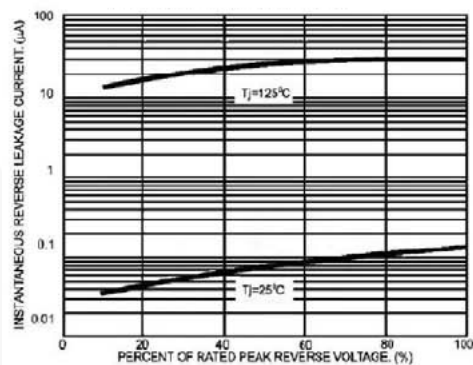


Figure 2. Typical Reverse Leakage Characteristics Per Leg

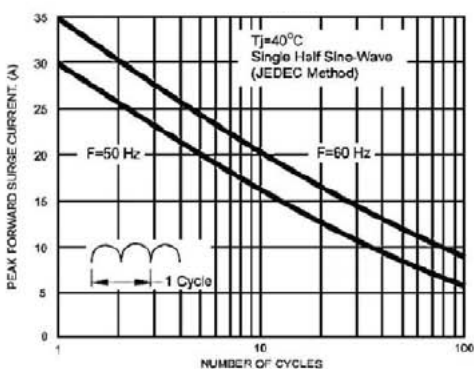


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

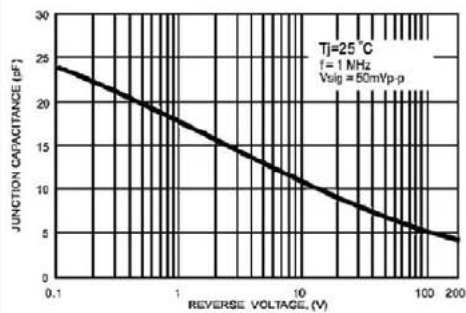


Figure 4. Typical Junction Capacitance Per Leg

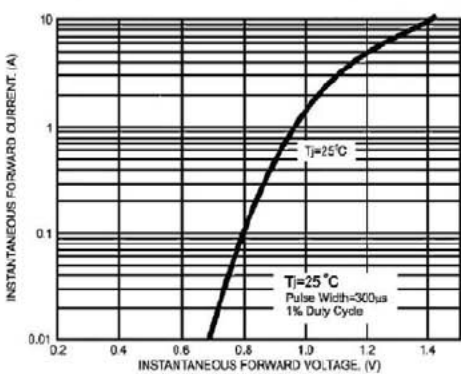


Figure 5. Typical Forward Voltage Characteristics Per Leg

Physical Dimensions

SOIC-4

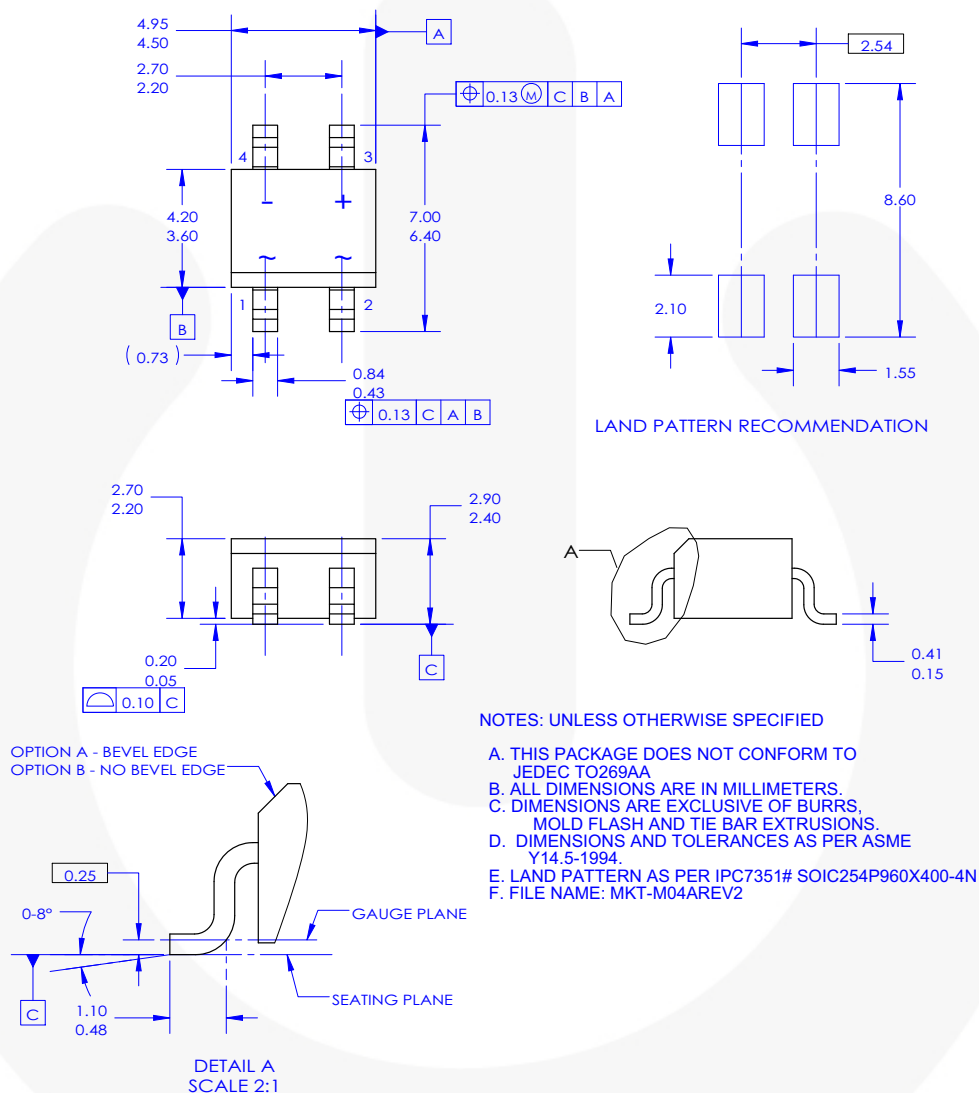


Figure 6. 4-LEAD, SOIC, JEDEC TO269AA, 3.95 MM WIDE BODY (Active)


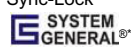



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FACT®	mWSaver®	SuperSOT™-3	VCX™
FAST®	OptoHiT™	SuperSOT™-6	VisualMax™
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