TRR®

MB05S~MB10S

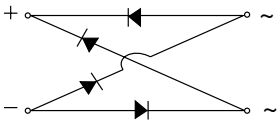
Surface Mount Bridge Rectifiers

Features

- Low forward voltage drop
- Ideal for automated placement
- Glass Passivated chip junction
- Low profile space
- Low leakage current
- High forward surge capability
- High temperature soldering:
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2011/65/EU and WEEE 2002/96/EC

MBS(TO-269AA)

RoHS COMPLIANT



Mechanical Date

- **Case:**MBS Molded plastic over glass passivated chip
- **Terminals:** Solder plated,solderable per
  J-STD-002B and JESD22-B102D
- **Polarity:** Polarity symbols marked on body

Major Ratings and Characteristics

$I_{F(AV)}$	**0.5A**
V_{RRM}	**50 V to 1000 V**
I_{FSM}	**35 A**
I_R	**5 μA**
V_F	**1.0V**
T_j **max.**	**150 °C**

Maximum Ratings & Thermal Characteristics (TA = 25 °C unless otherwise noted)

Items	Symbol	MB 05S	MB 1S	MB 2S	MB 4S	MB 6S	MB 8S	MB 10S	UNIT
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Maximum average forward output rectified current (see Fig.1)	$I_{F(AV)}$	0.5(1)/1.0(2)							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	35							A
Thermal resistance from junction to lead	$R_{\theta JL}$	20(1)							℃/ W
Thermal resistance from junction to ambient	$R_{\theta JA}$	85(1) 70(2)							℃/ W
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +150							℃

Notes: (1)On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads
(2)On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20 mm) mounted on 0.05 x 0.05" (1.3 x 1.3 mm) solder pad

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Test conditions		Symbol	Min	Type	Max	UNIT
Maximum instantaneous forwad voltage drop per leg	I_F=0.4A		V_F	-	-	1.0	V
Reverse current	V_R=V_{DC}	T_A=25℃	I_R	-	-	5	μA
		T_A=125℃		-	-	100	
Typical junction capacitance	4.0 V ,1MHz		C_J	-	13	-	p F

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

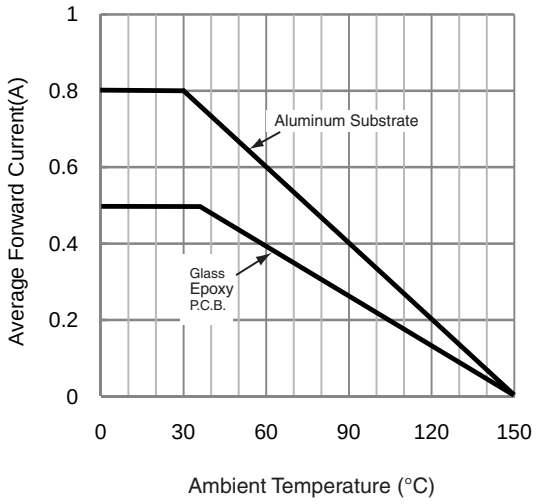


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

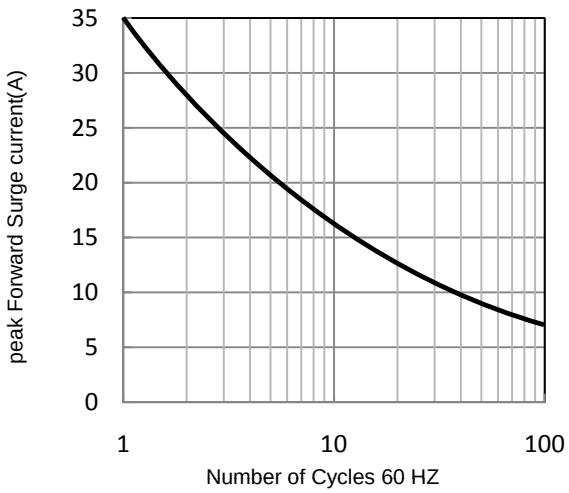


Fig.3 Typical Instantaneous Forward Characteristics

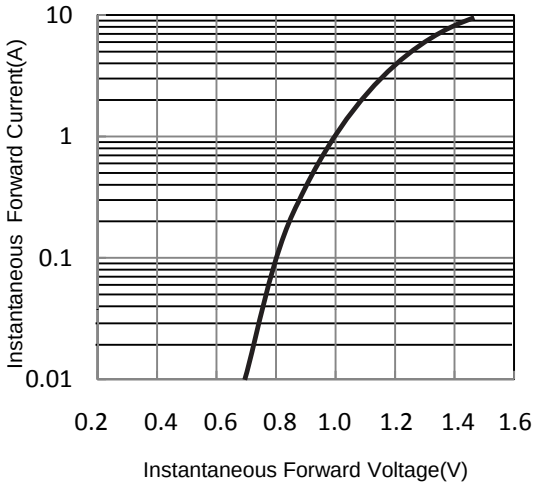
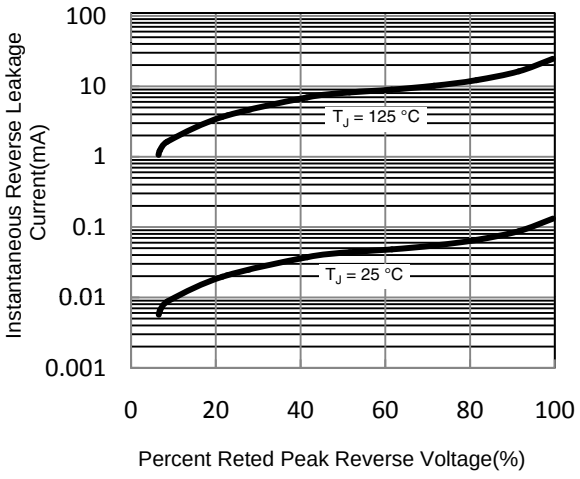
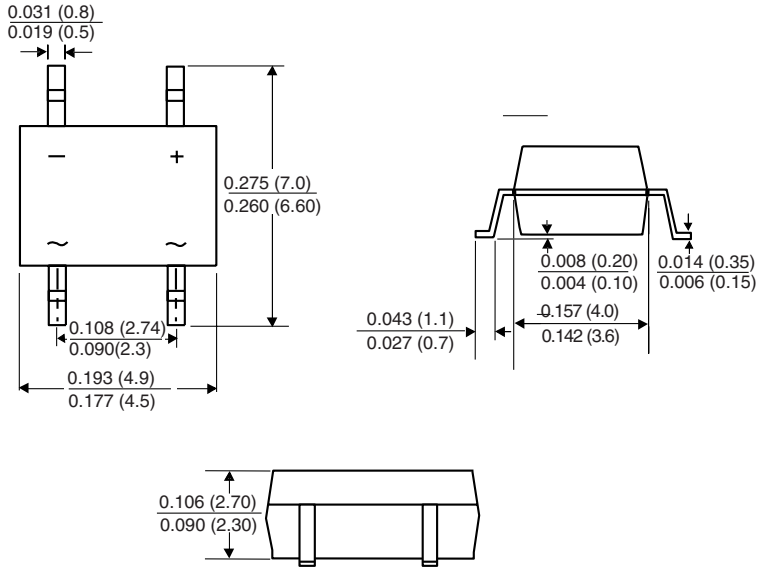


Fig.4 Typicl Reverse Leakage Characteristics

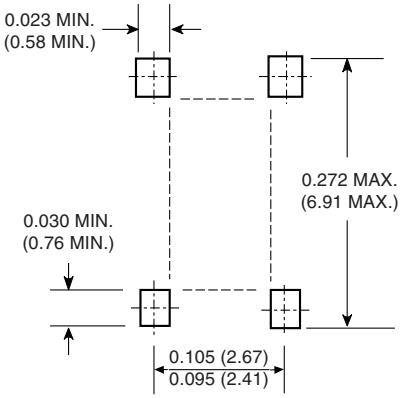


Package Outline

TO-269AA (MBS)



Mounting Pad Layout



Dimensions in millimeters and (inches)

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