Hottech
Semiconductor

MB05S-MB10S

SURFACE MOUNT BRIDGE RECTIFIER

FEATURES

- UL Recognized Component
- High surge current capability
- Ideal for Printed Circuit Board
- Plastic Package - UL Flammability Classification 94V-0
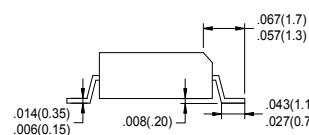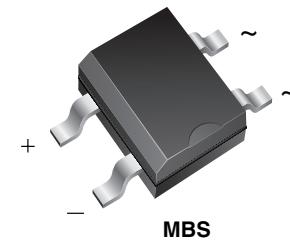
MECHANICAL DATA

- Case: Transfer Molded Epoxy
- Mounting Position: Any
- Terminals: Plated leads solderable per MTL-STD-750，Method 2026
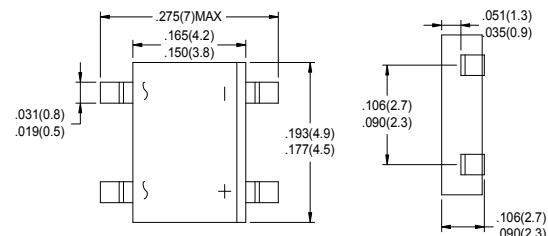
Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

Characteristic		Symbol	MB 05S	MB 1S	MB 2S	MB 4S	MB 6S	MB 8S	MB 10S	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @T_A = 40°C		$I_{F(AV)}$	0.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	30							A
I^2t Rating for Fusing (t < 8.3ms)		I^2t	5.0							A^2s
Forward Voltage per element @I_F = 0.5A		V_{FM}	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A=25°C @T_A=100°C	I_{RM}	5.0 500							μA
Typical Junction Capacitance per leg (Note1)		C_j	13							pF
Typical Thermal Resistance per leg (Note 2)		$R_{\theta JA}$ $R_{\theta JL}$	70 20							°C/W
Operating and Storage Temperature Range		T_j, T_{STG}	-55 to +150							°C

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
2. On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

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Typical Characteristics
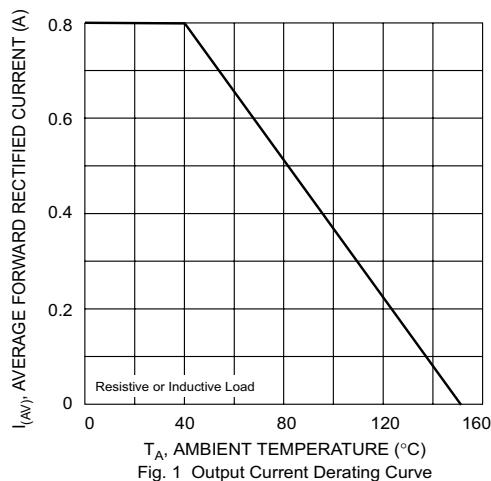
Fig. 1 Output Current Derating Curve
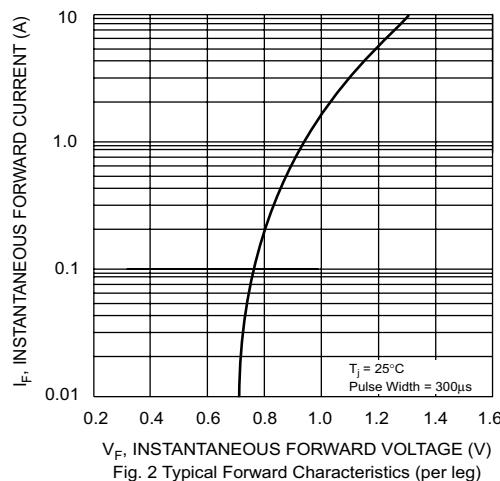
Fig. 2 Typical Forward Characteristics (per leg)
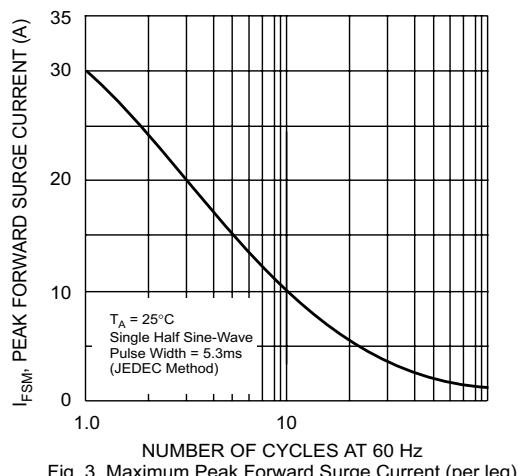
Fig. 3 Maximum Peak Forward Surge Current (per leg)
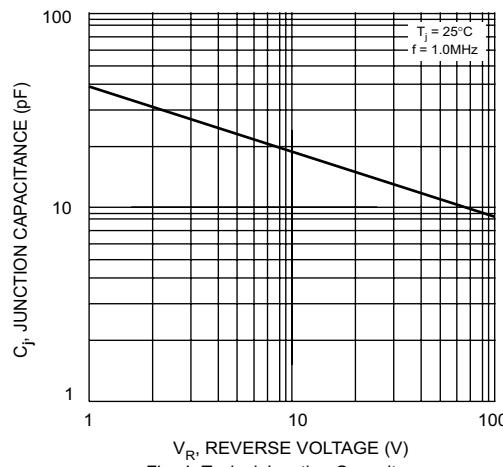
Fig. 4 Typical Junction Capacitance
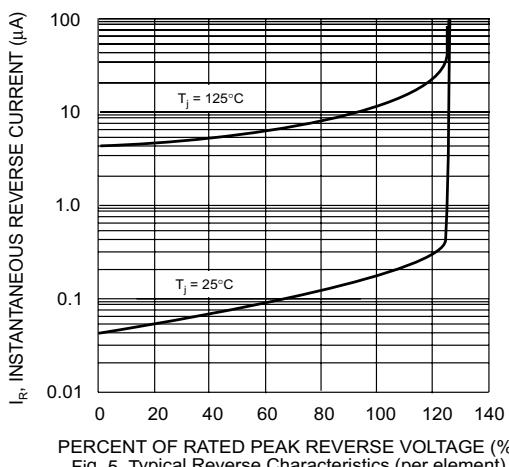
Fig. 5 Typical Reverse Characteristics (per element)