

# MB005S - MB10S

## SURFACE MOUNT BRIDGE RECTIFIERS MBS (TO-269AA)

PRV : 50 - 1000 Volts

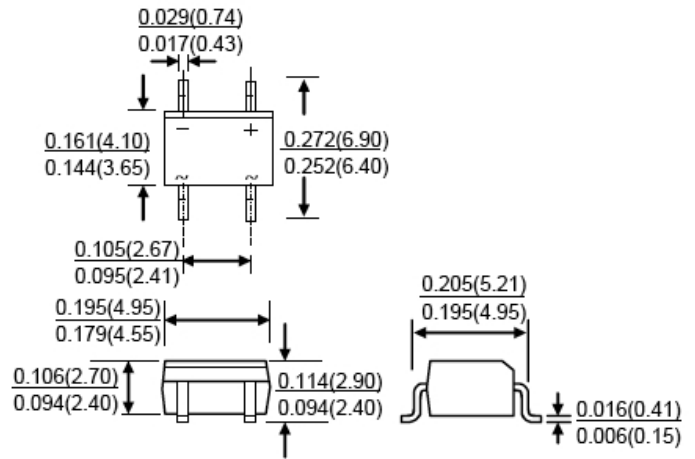
Io : 1.0 Ampere

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* 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



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
60 Hz, resistive or inductive load.

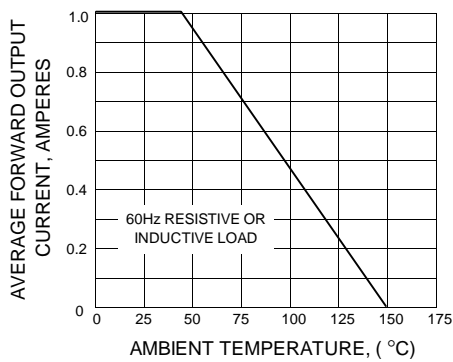
RATING	SYMBOL	MB005S	MB01	MB02	MB04	MB06	MB08S	MB10	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Output Rectified Current at Ta = 40°C	I <sub>F(AV)</sub>	1.0							A
Maximum Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	10							A <sup>2</sup> S
Maximum Instantaneous Forward Voltage per element at I <sub>F</sub> = 1.0 A	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current Ta = 25°C at Rated DC Blocking Voltage Ta = 125°C	I <sub>R</sub>	10							μA
	I <sub>R(H)</sub>	500							μA
Typical Junction Capacitance per element (Note 1)	C <sub>j</sub>	25							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	40							°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150							°C

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

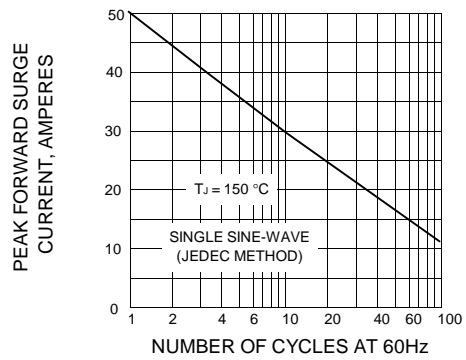
(2) Thermal Resistance from Junction to Ambient on P.C.B. with 0.5" x 0.5" (13mm x 13mm) Copper Pads.

## RATING AND CHARACTERISTIC CURVES ( MB005S - MB10S )

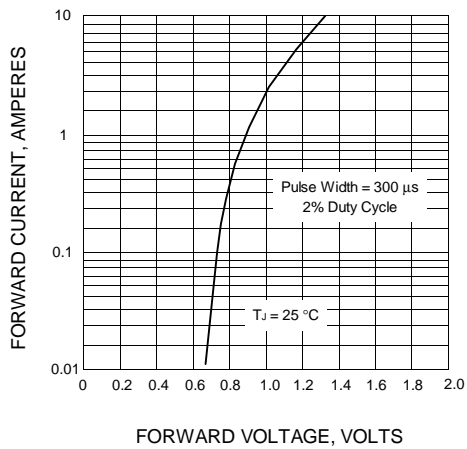
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT**

