



# MB0405F THRU MB0410F SURFACE MOUNT BRIDGE RECTIFIERS

## Major Ratings and Characteristics

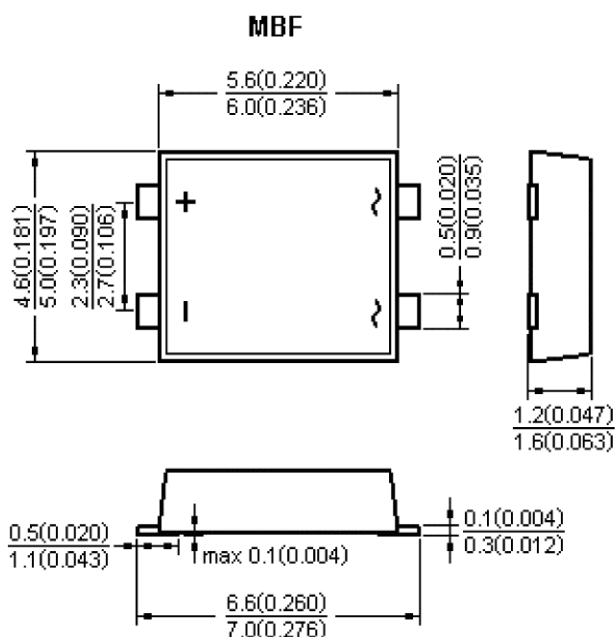
$I_{F(AV)}$	0.4 A
$V_{RRM}$	50-1000 V
$I_{FSM}$	15 A
$I_R$	5.0 $\mu$ A
$V_F$	1.05 V
$T_j$ max.	150 °C

## Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering :  
260 °C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC

## Mechanical Date

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



Dimensions in millimeters and (inches)

## Maximum Ratings & Thermal Characteristics & Electrical Characteristics

( $T_A = 25\text{ °C}$  unless otherwise noted)

	MB- Symbol	0405F	041F	042F	044F	046F	048F	0410F	UNIT
Maximum repetitive 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
Maximum average forward output rectified current	$I_{F(AV)}$	0.4							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	15							A
Maximum instantaneous forward voltage drop per leg at 0.4A	$V_F$	1.05							V
Maximum DC reverse current at rated DC blocking voltage per leg $T_A = 25\text{ °C}$ $T_A = 125\text{ °C}$	$I_R$	5.0 100							$\mu$ A
Thermal resistance per leg (NOTE 1)	$R_{\theta JA}$	120							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							°C

Note1: Mounted on FR-4 P.C.B. With 0.9x1.5 mm copper pad areas  $\neq$  35  $\mu$ m thick)



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Characteristic Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig.1 Forward Current Derating Curve

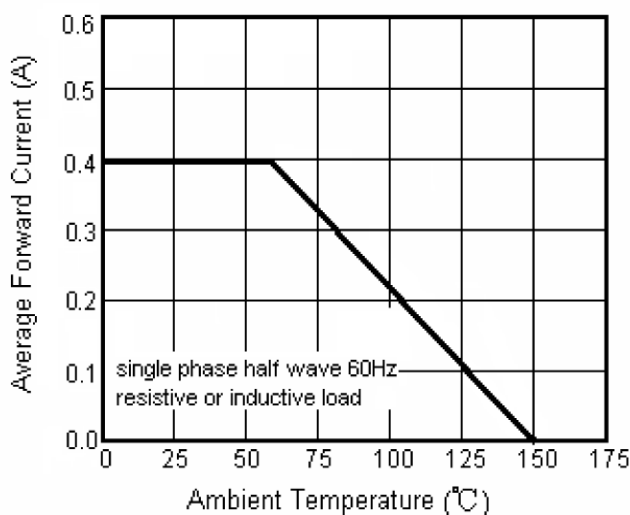


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

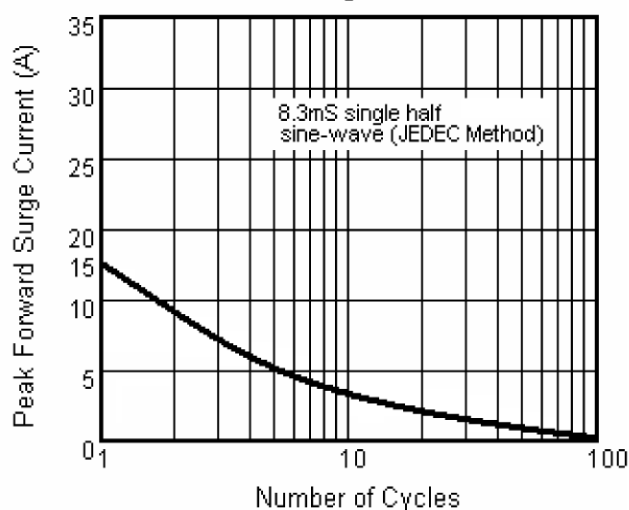


Fig.3 Typical Instantaneous Forward Characteristics

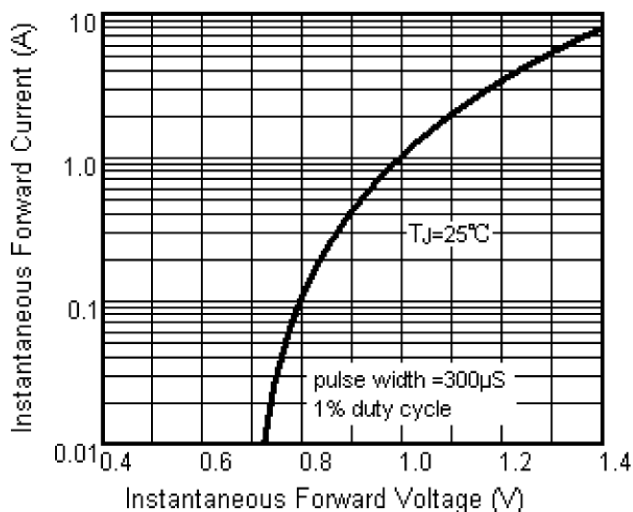


Fig.4 Typical Reverse Characteristics

