



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

MFB1AF  
THRU  
MFB1JF

*TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SUPER FAST BRIDGE RECTIFIER*

*VOLTAGE RANGE - 50 to 600 Volts*

*CURRENT - 1.0 Ampere*

**FEATURES**

- \* High surge current capability
- \* Ideal for printed circuit board
- \* Glass passivated junction

**MECHANICAL DATA**

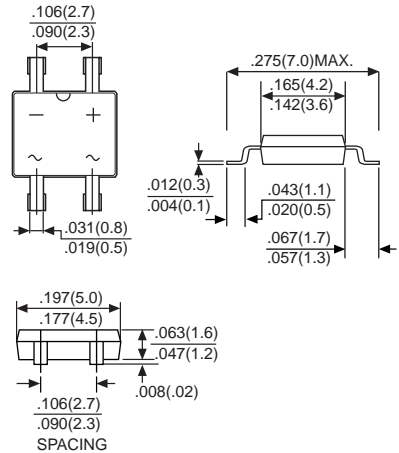
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 0.08 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



MBF



Dimensions in inches and (millimeters)

	SYMBOL	MFB1AF	MFB1BF	MFB1DF	MFB1GF	MFB1JF	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	Volts
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	Volts
Maximum Average Forward Output Current at TA=50°C (Note 1)	I <sub>O</sub>	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30					Amps
Maximum DC Forward Voltage Drop per Bridge Element at 1.0A DC	V <sub>F</sub>	1.0			1.3	1.7	Volts
Maximum Reverse Current at rated DC Blocking Voltage per element	I <sub>R</sub>	@TA = 25°C		5.0			µAmps
		@TA = 125°C		50			
Maximum Reverse Recovery Time (Note 4)	t <sub>rr</sub>	35					nS
Typical Junction Capacitance ( Note 2)	C <sub>J</sub>	13					pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	85					°C/W
Operating and Storage Temperature Range	T <sub>J,TSTG</sub>	-50 to + 150					°C

- NOTES: 1. Mounted on P.C. board with 4x(5x5mm<sup>2</sup>) copper pad.  
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.  
3. Thermal resistance junction to ambient.  
4. Measured with I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1 A, I<sub>rr</sub> = 0.25 A.

# RATING AND CHARACTERISTIC CURVES ( MFB1AF THRU MFB1JF )

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

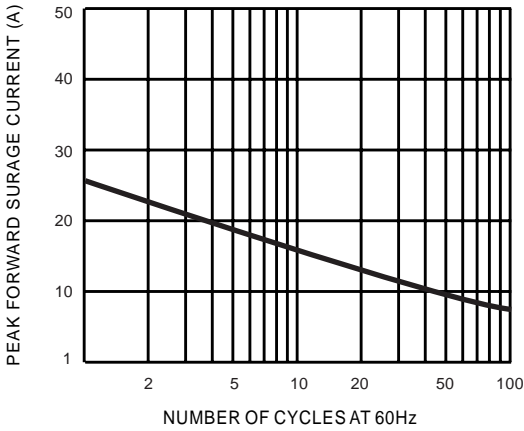


FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

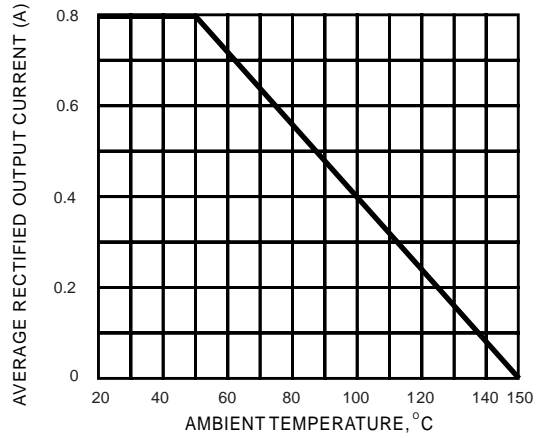


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

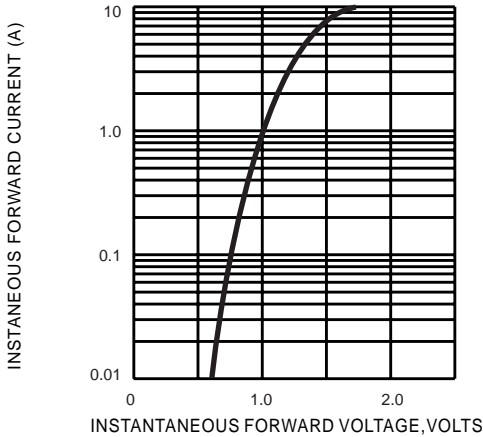


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

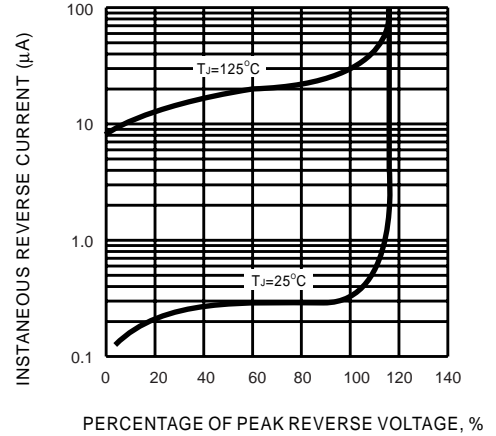
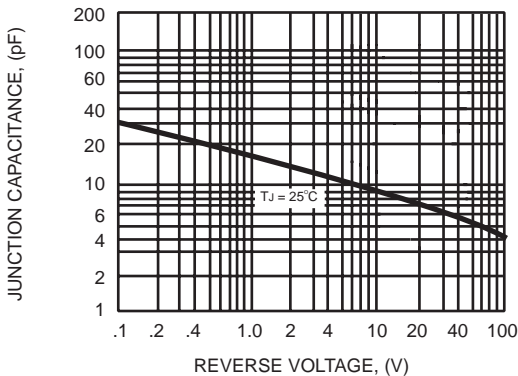


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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