DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

MB05F THRU MB10F

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts *CURRENT - 0.8 Ampere*

FEATURES

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

MECHANICAL DATA

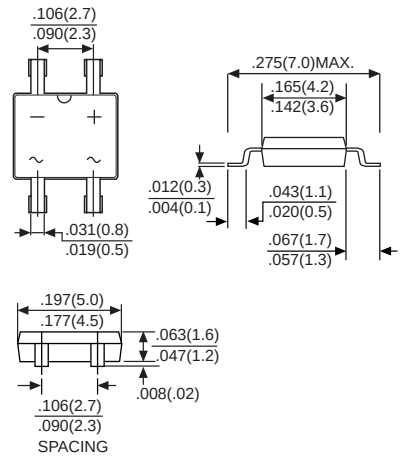
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Terminals: MIL-STD-202E, Method 208 guaranteed
* Polarity: Symbols molded or marked on body
* Mounting position: Any
* Weight: 0.08 gram

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	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Output Current at T_A = 50 °C (Note 1)		I_O	0.8							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	25							Amps
Maximum DC Forward Voltage Drop per Bridge Element at 0.8A DC		V_F	1.1							Volts
Maximum Reverse Current at rated DC Blocking Voltage per element	@T_A = 25°C	I_R	5.0							µAmps
	@T_A = 125°C		100							
Typical Junction Capacitance (Note 2)		C_J	13							pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	95							°C/W
Operating and Storage Temperature Range		$T_{J,TSTG}$	-50 to + 150							°C

NOTES: 1. Mounted on P.C. board with 4x(5x5mm^2) copper pad.
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.

RATING AND CHARACTERISTIC CURVES (MB05F THRU MB10F)

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

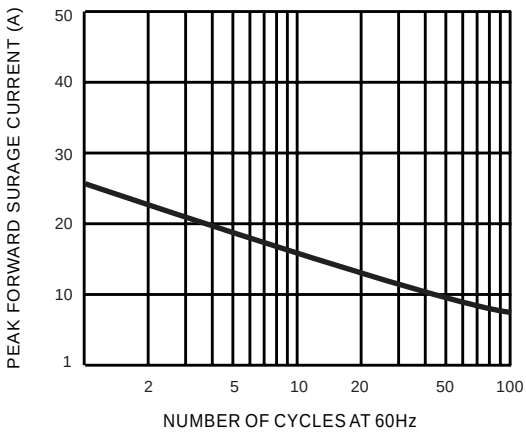


FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

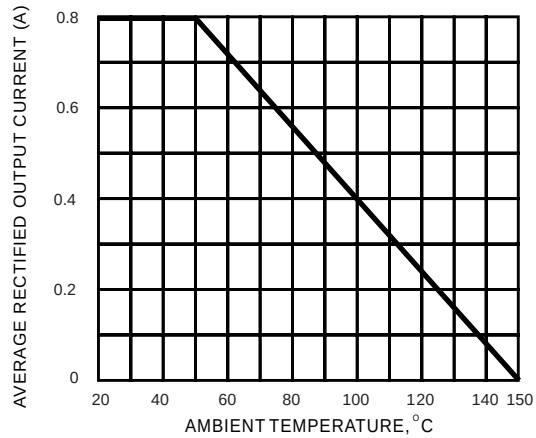


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

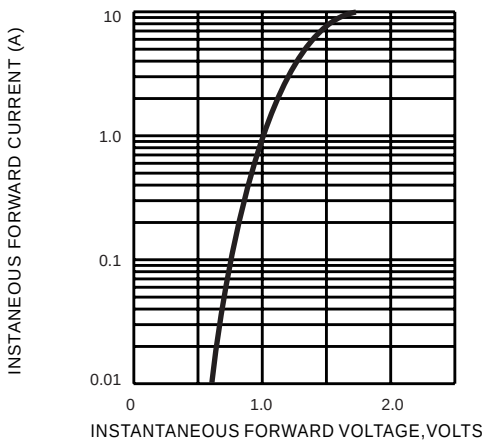


FIG. 4 - TYPICAL REVERSE CHAR ACTEISTICS

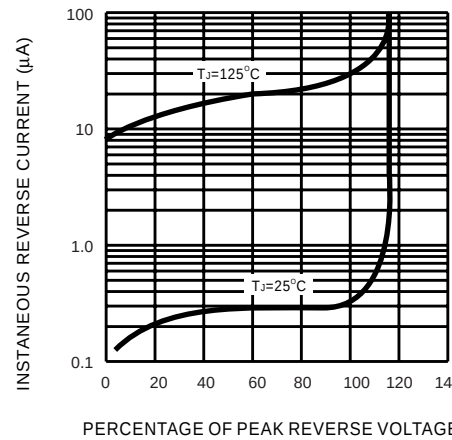


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

