

DESCRIPTION and APPLICATIONS

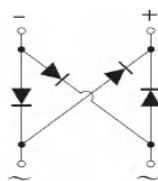
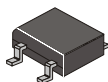
Suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

FEATURES

- * Ideal for printed circuit board
- * Reliable low cost construction utilizing molded plastic technique
- * High surge current capability

MECHANICAL DATA

- * Polarity: Symbol molded on body
- * Mounting position: Any



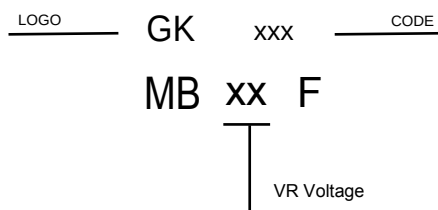
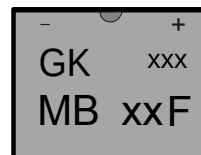
Internal Schematic

VOLTAGE RANGE

50 to 1000 Volts

CURRENT

0.6 Ampere



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	UNIT
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	0.6							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	25							A
Maximum Forward Voltage Drop per Bridge Element at 0.3A D.C.	1.0							V
Maximum DC Reverse Current Ta=25°C	5.0							μA
at Rated DC Blocking Voltage Ta=125°C	500							μA
Typical Thermal Resistance R _{JA} (Note 1)	75							°C/W
Operating Temperature Range, T _J	-55 — +150							°C
Storage Temperature Range, T _{STG}	-55 — +150							°C

NOTE 1: Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

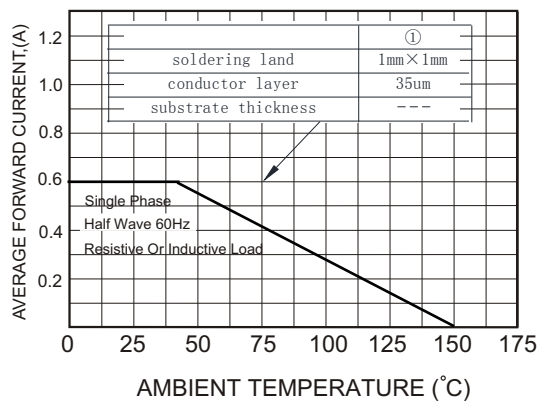


FIG.2-TYPICAL FORWARD CHARACTERISTICS

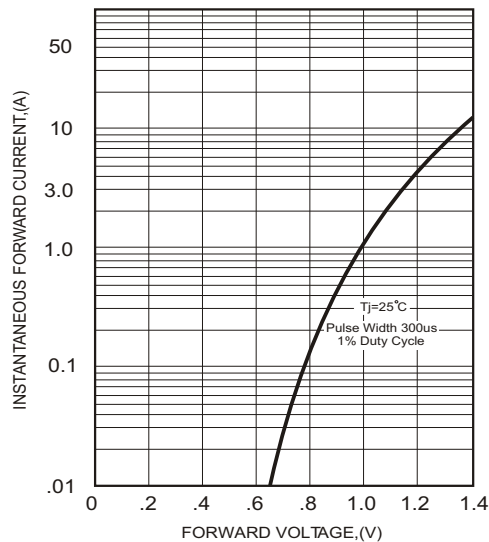


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

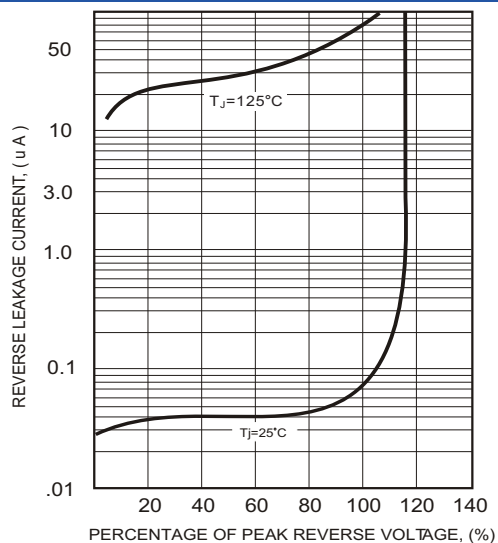
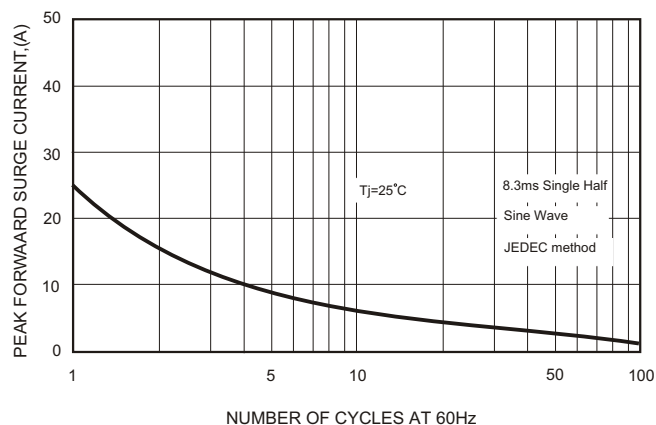
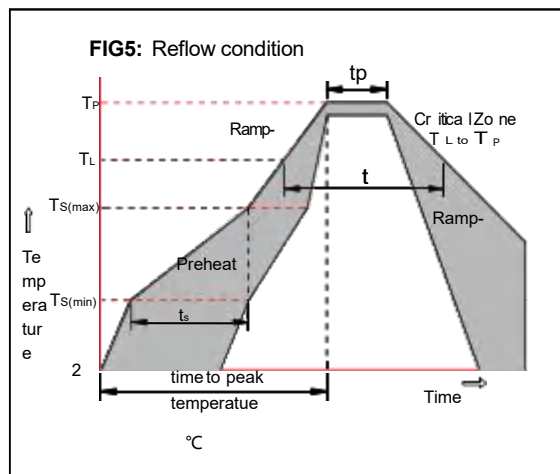


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



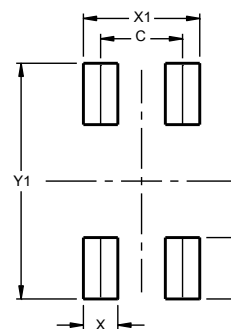
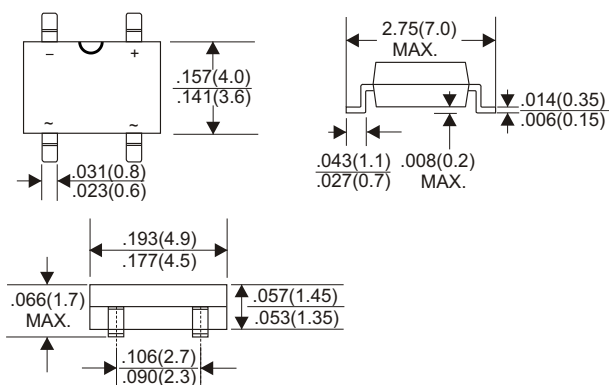
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



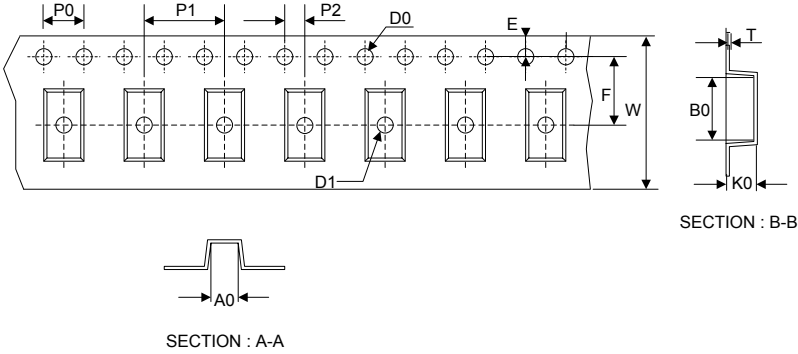
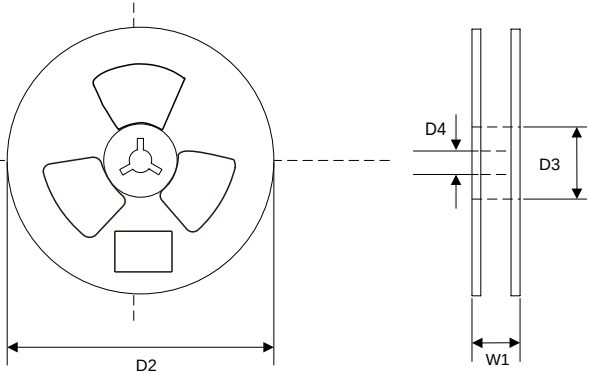
Package Dimensions & Suggested Pad Layout

MBF



Dimensions	Value (in mm)
C	2.50
X	1.10
X1	3.60
Y	2.10
Y1	7.50

Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	8.00±0.20
		P2	2.00±0.20
		D0	1.60±0.15
		D1	1.60±0.15
		E	1.75±0.20
		F	5.50±0.15
		W	12.00±0.20
		A0	5.30±0.20
		B0	7.15±0.20
		K0	1.65±0.15
		T	0.23±0.10
		D2	330.0±5.0
13" Reel		D3	73Min.
		D4	16.0±2.5
		W1	18.0±3.0
		Quantity: 5000PCS	