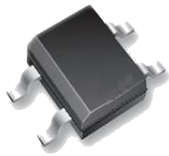
MB05F-MB10F

SILICON BRIDGE RECTIFIERS



VOLTAGE RANGE: 50 - 1000V
CURRENT: 0.5 A

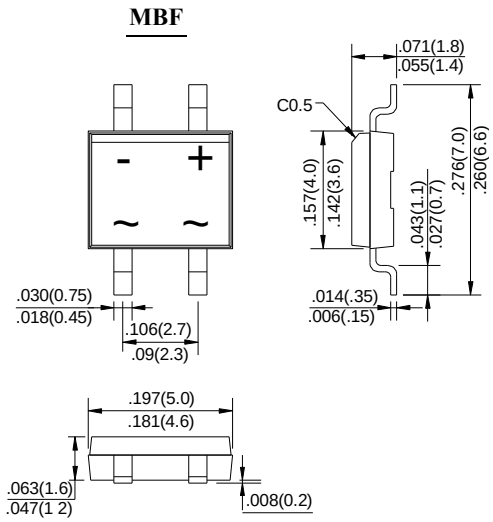
Features

- Glass passivated chip junctions
- Plastic materrial has U/L flammability classification 94V-O
- Highsurge overloadrating:25Apeak
- Saves space on printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs2(0kg) tension

Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols marked on body Dimensions in inches and (millimeters)
- Mounting Position: Any
- Weight: 0.0078 ounce, 0.22 gram

RoHS COMPLIANT



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Unit
Maximum recurrentpeakreverse 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 current @T_A=25℃	$I_{F(AV)}$	0.5							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	25							A
Maximum instantaneous forward voltage @ 0.4 A	V_F	1.0							V
Maximum reverse current @T_A=25℃	I_R	5.0							μA
at rated DC blocking voltage @T_A=100℃		0.5							mA
Typicaljunctioncapacitance perleg(NOTE3)	C_J	13							pF
Typical thermal resistance per leg (NOTE 1)	$R_{\theta JA}$	85							℃/W
(NOTE 2)	$R_{\theta JL}$	20							
Operating junction temperature range	T_J	- 55 ---- + 150							℃
Storage temperature range	T_{STG}	- 55 ---- + 150							℃

NOTES: (1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
(2) On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

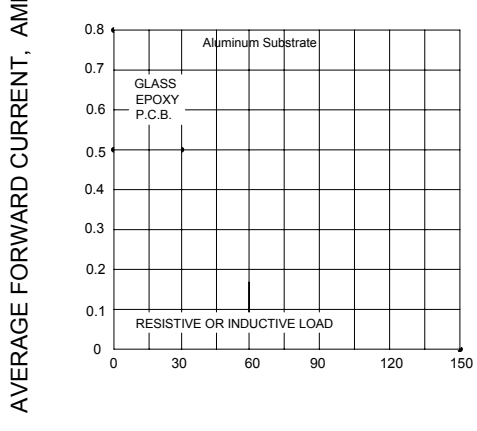


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

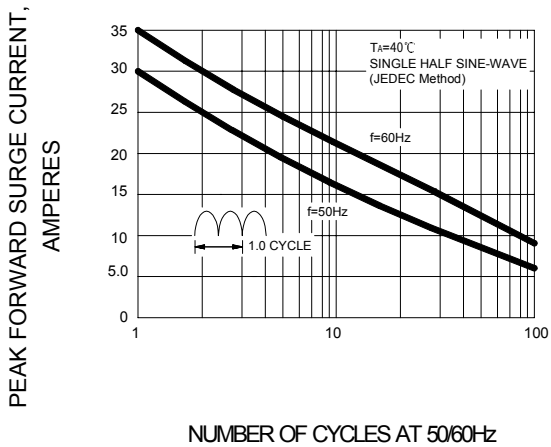


FIG.3 – TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

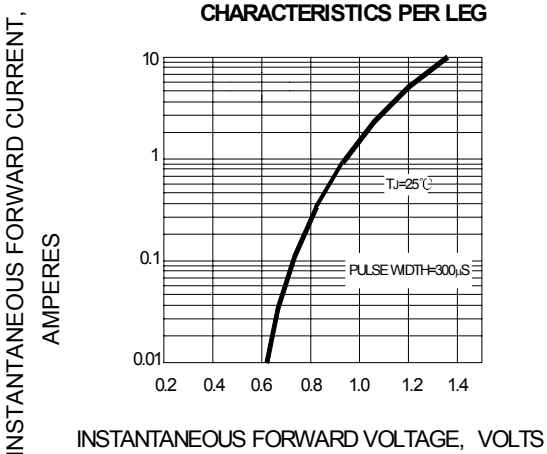


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

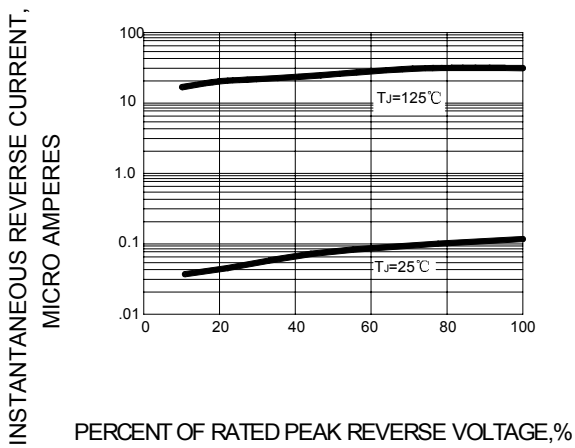


FIG.5 – TYPICAL JUNCTION CAPACITANCE PER ELEMENT