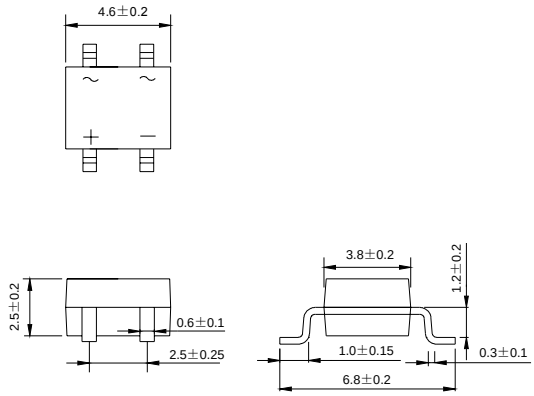
MB05S-MB10S

Silicon Bridge Rectifiers

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 0.5 A

MBS



Dimensions in millimeters

Features

- This series is UL recognized under Component Index, file number E239431
- Glass passivated chip junctions
- Plastic materrial has U/L flammability classification 94V-O
- High surge overload rating: 35A peak
- Saves space on printed circuit boards
- High temperature soldering guaranteed:
- 260°C/10 seconds at 5 lbs. (2.3kg) 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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

		MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNITS
Maximum recurrent 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 forw ard output current @T_A=25℃	$I_{F(AV)}$	0.5							A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load	I_{FSM}	35.0							A
Maximum instantaneous forw ard 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
Typical junction capacitance per leg (NOTE 3)	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

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Ratings AND Charactieristic Curves

FIG.1 -- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

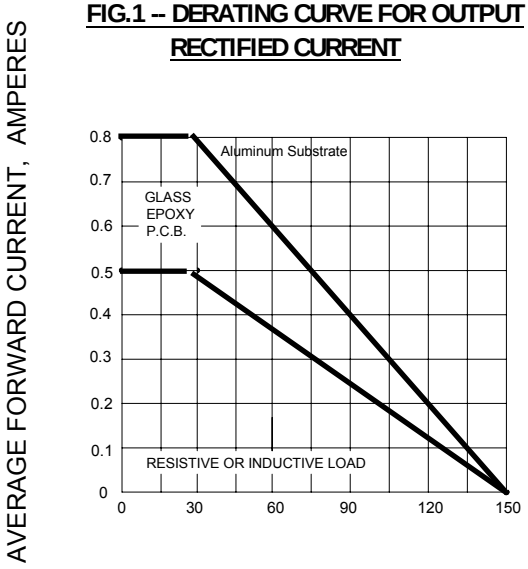

FIG.2 -- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

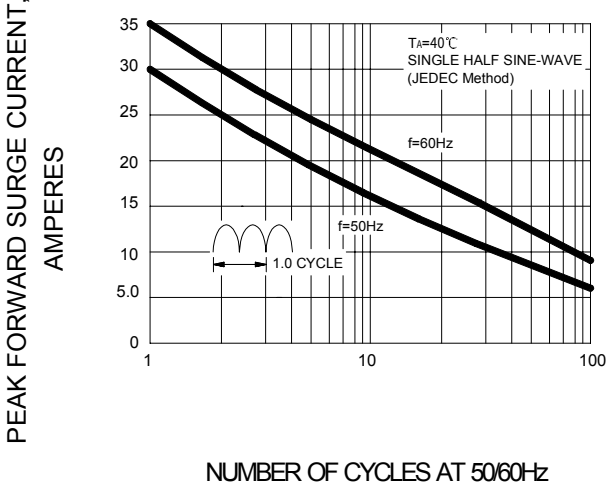

FIG.3 -- TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

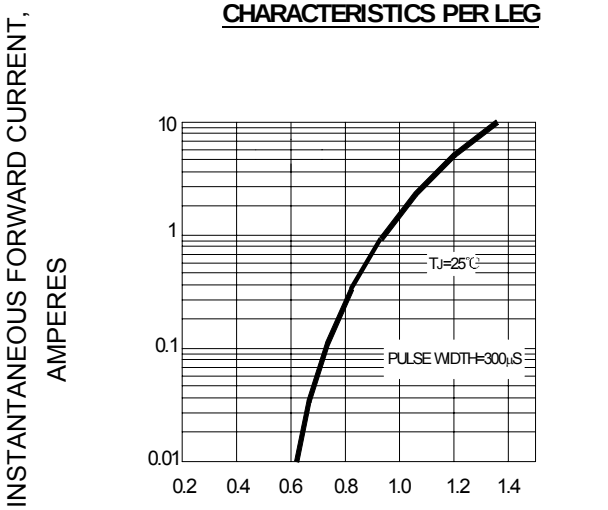

FIG.4 -- TYPICAL REVERSE CHARACTERISTIC

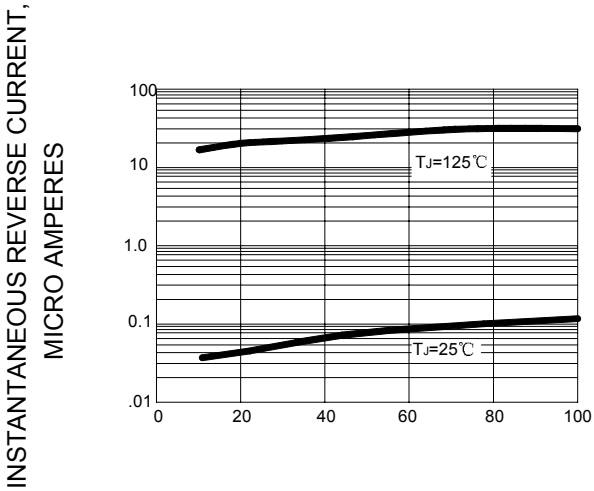

FIG.5 -- TYPICAL JUNCTION CAPACITANCE PER ELEMENT