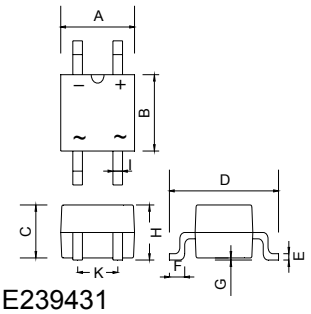
MB05S-MB10S

SILICON BRIDGE RECTIFIERS

RoHS COMPLIANT



MBS		
Dim	Min	Max
A	4.40	4.80
B	3.40	3.80
C	2.35	2.65
D	6.50	7.00
E	0.15	0.35
F	0.90	1.50
G	0.20MAX	
H	2.50	2.80
I	0.50	0.80
K	2.30	2.70
All Dimensions in mm		

FEATURES

- Glass：passivated chip junctions
- High surge overload rating: 30A peak
- Saves space on printed circuit boards
- This series is UL recognized under Component Index, file number E239431
- Plastic material has U/L flammability classification94V-O
- 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

Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
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[1)] 0.8[2)]							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	30							A
Current squared time t < 8.3ms , Ta = 25℃	I^2t	3.74							A^2s

Thermal Characteristics

Characteristic	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNITS
Typical junction capacitance per leg (NOTE 3)	C_J	13							p F
Typical thermal resistance per leg (NOTE 1) (NOTE 2)	$R_{\Theta JC}$ $R_{\Theta JA}$ $R_{\theta JL}$	29 73 25							℃/W
Operating junction temperature range	T_J	- 55 ---- + 150							℃
Storage temperature range	T_{STG}	- 55 ---- + 150							℃

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	MB05S	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNITS
Maximum instantaneous forward voltage at 0.4 A	V_F	1.0							V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=125℃	I_R	5.0 100							μ A

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

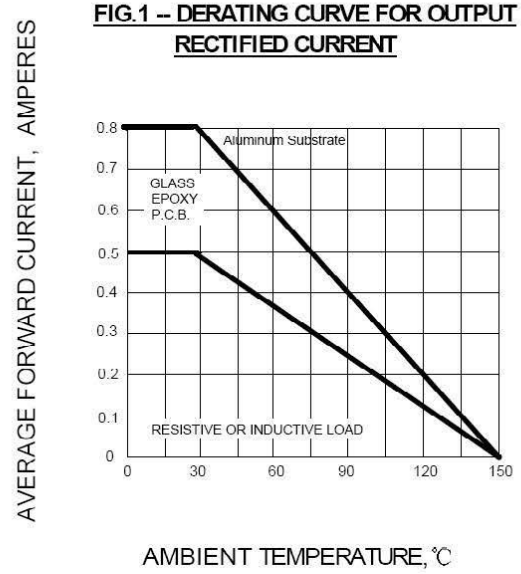


FIG.2 -- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

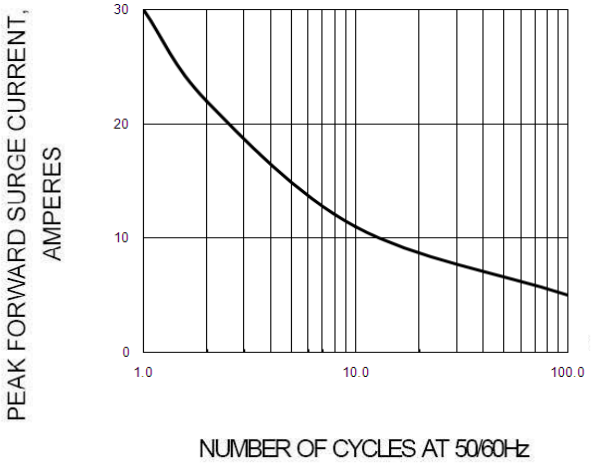


FIG.3 -- TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

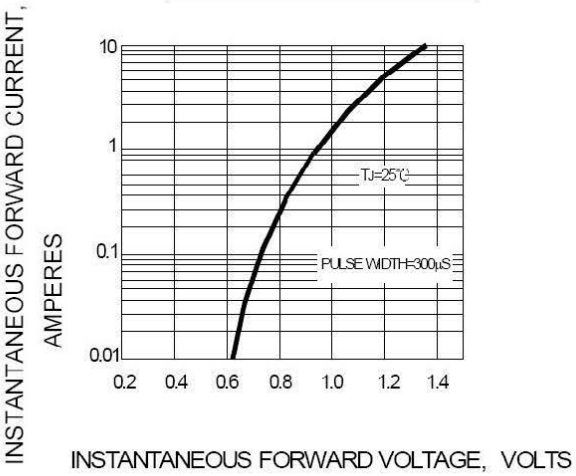


FIG.4 -- TYPICAL REVERSE CHARACTERISTIC

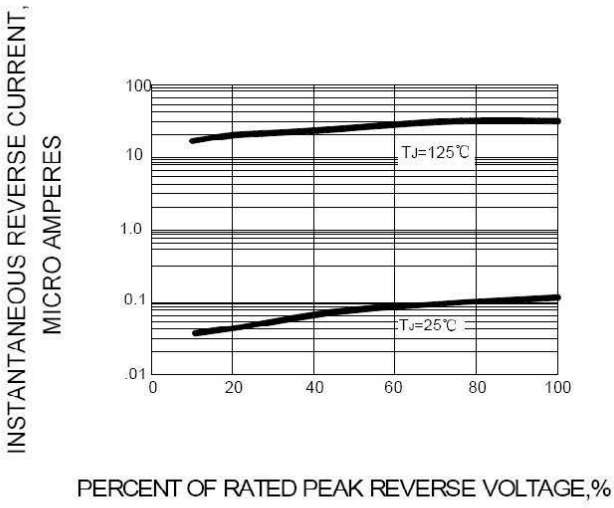
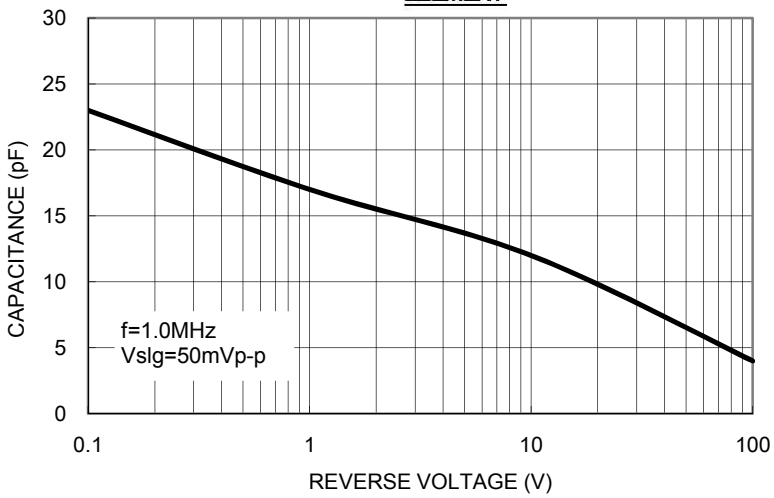


FIG.5 -- TYPICAL JUNCTION CAPACITANCE PER ELEMENT



PACKAGE INFORMATION

Device	Package	Shipping
MB05S-MB10S	MBS	3000/Tape&Reel