

MB1S THRU MB10S

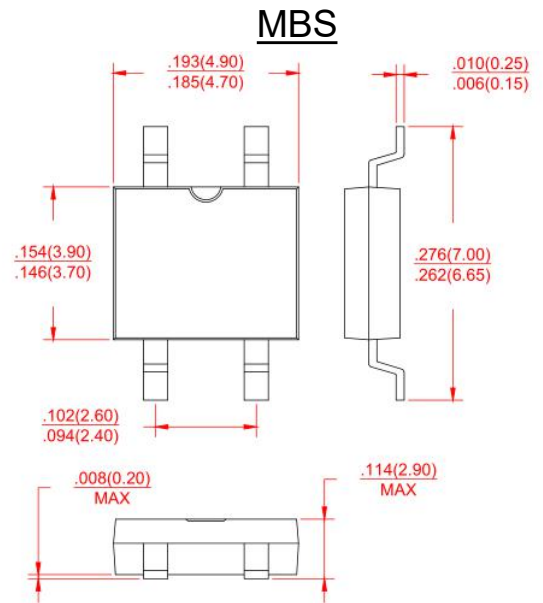
VOLTAGE RANGE	50 to 1000 Volts
CURRENT	1.0 Ampere

Features

- Glass passivated chip:45mil&50mil
- Glass passivated chip junction
- Ideal for surface mounted applications
- Low leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds at terminals

Mechanical Data

- Case: Molded plastic body
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Molded on body
- LeadP: Plated terminals solderable per MIL-STD-202E method 208C
- Weight: 0.04 ounce, 1.02 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

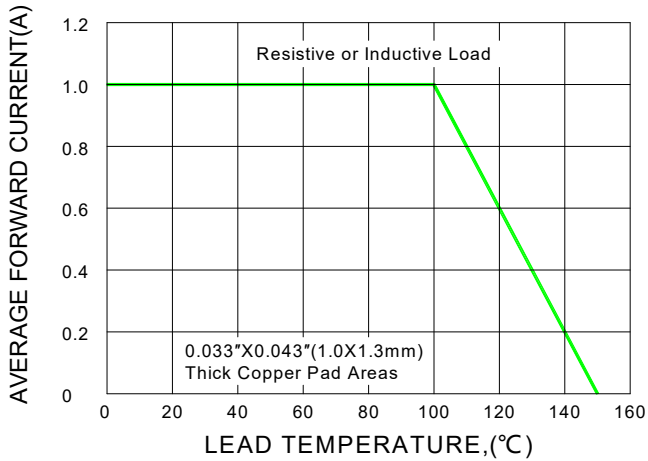
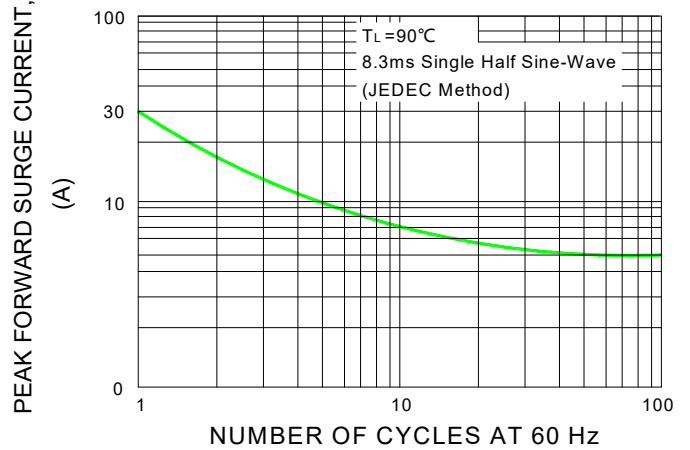
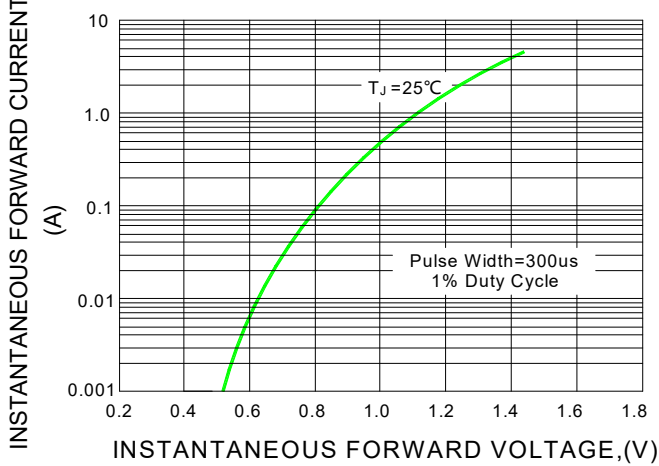
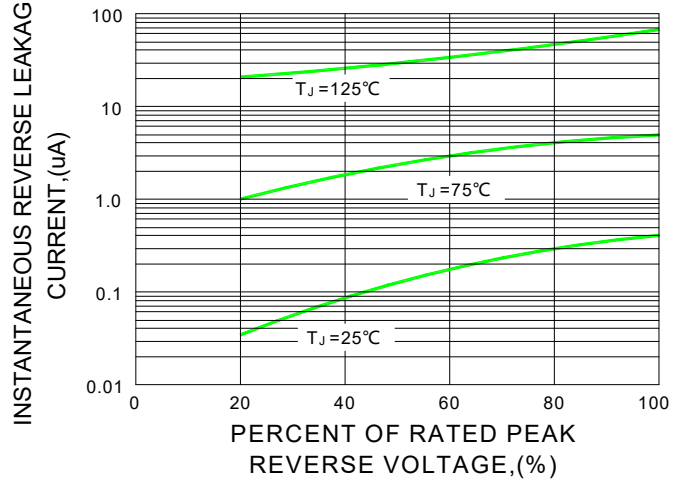
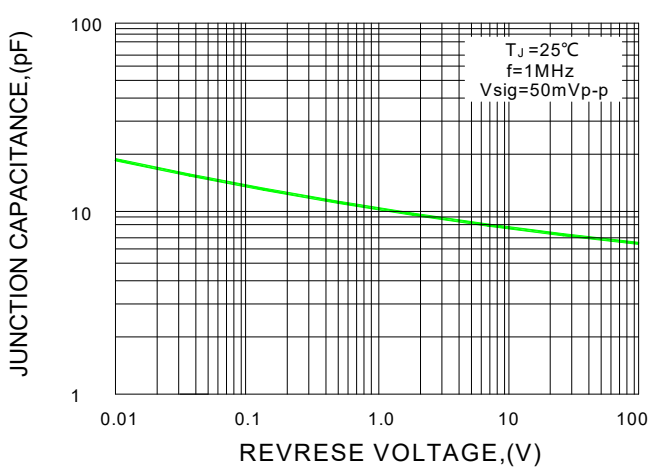
- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOL	MB 1S	MB 2S	MB 3S	MB 4S	MB 6S	MB 8S	MB 10S	UNIT
Maximum Reverse Peak Repetitive Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS 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 Rectified Output Current, 0.06"(1.5mm) lead length at $T_A=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Peak Forward Surge Current 1.0ms single half sine wave superimposed on rated load (JEDEC Method)		65							
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	3.7							A^2s
Maximum Instantaneous Forward Voltage drop Per Bridge element 1.0A	V_F	1.1							Volts
Maximum Reverse Current at rated DC blocking voltage per element	I_R	$T_A=25^\circ\text{C}$							μAmps
		$T_A=125^\circ\text{C}$							
Typical Junction Capacitance (NOTE 1)	C_J	25							pF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	60							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	(-55 to +150)							$^\circ\text{C}$

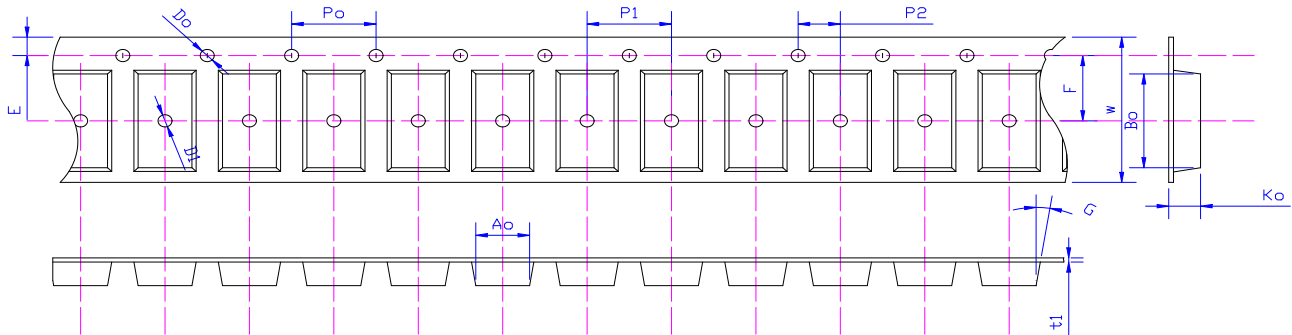
Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on P.C.B. with 0.033"x0.043"(1.00mmx1.30mm) copper pads.

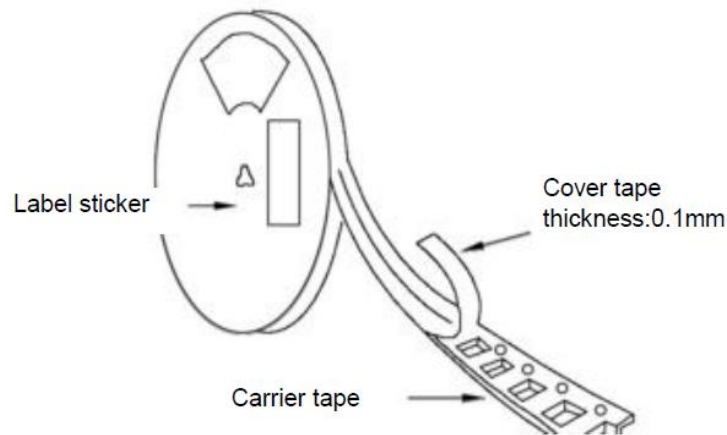
MB1S THRU MB10S
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

Ratings and Characteristic Curves (TA=25°C unless otherwise noted)
FIG.1-FORWARD CURRENT DERATING CURVE

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

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

FIG.4-TYPICAL REVERSE CHARACTERISTICS

FIG.5-TYPICAL JUNCTION CAPACITANCE


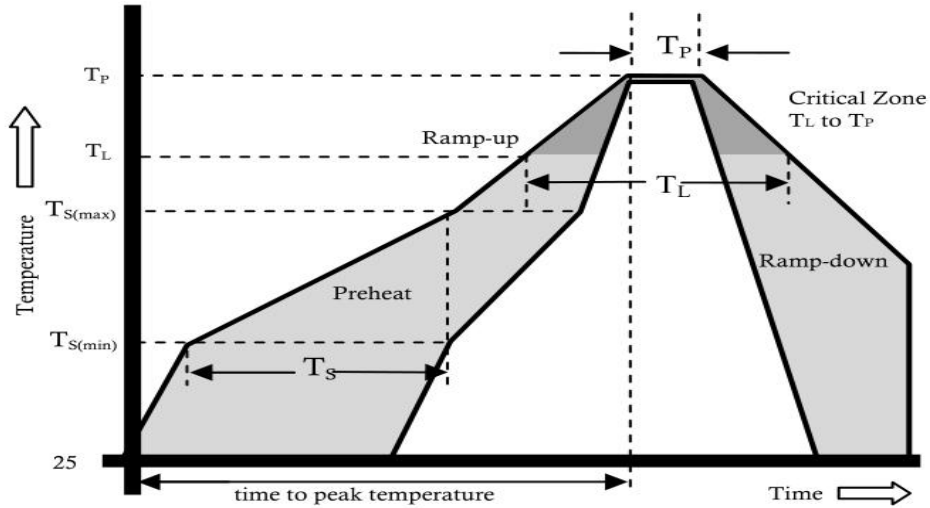
MB1S THRU MB10S
VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

Package Reel Information


Specifications	Ao	Bo	Ko	Po	W	t1
MBS	5.05±0.10	7.10±0.10	3.85±0.10	4.00±0.1	12.0±0.10	0.30±0.02



DEVICE TYPE	Tape Width	13"Reel			07"Reel			
		Q'TY/REEL(pcs)	BOX/CARTON	Q'TY/CARTON(pcs)	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTON	Q'TY/CARTON(pcs)
MBS	13mm	3000	8	24000	NA	NA	NA	NA

Reflow Profile


Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus 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)(Liquidus)	+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)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C