



## SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIERS

Forward Current-1A

Reverse Voltage-40V to 200V

### FEATURES

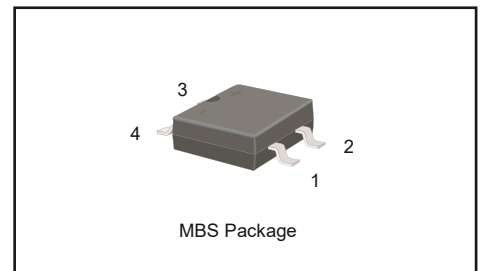
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Reverse voltage: 40V to 200V
- ◆ Forward current: 1A
- ◆ High surge current capability

### MECHANICAL DATA

- ◆ Case: MBS molded plastic body
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Weight: Approximated 0.1 grams

### PINNING

PIN	DESCRIPTION
1	Input Pin ( ~ )
2	Input Pin ( ~ )
3	Output Anode ( + )
4	Output Cathode ( - )



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derating by 20 %.

PARAMETER	SYMBOL	MB14S-PJ	MB16S-PJ	MB18S-PJ	MB110S-PJ	MB115-PJ	MB120S-PJ	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	60	80	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	1.0						A
Peak Forward Surge Current (Note1)	$I_{FSM}$	40			30			A
Maximum Forward Voltage at 1.0 A	$V_F$	0.55	0.70	0.85	0.90			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	0.3 10			0.2 5	0.1 2		mA
Typical Junction Capacitance (Note2)	$C_J$	110	80					pF
Typical Thermal Resistance (Note3)	$R_{\theta JA}$	100						$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +125						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

Notes: 1. Measured at 8.3 ms single half sine wave superimposed on rated load (JEDEC Method).

2. Measured at 1MHz and applied reverse voltage of 4 V D.C.

3. Mounted on glass epoxy PC board with 1.5"×1.5" (3.81×3.81 cm) copper pad.



## RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

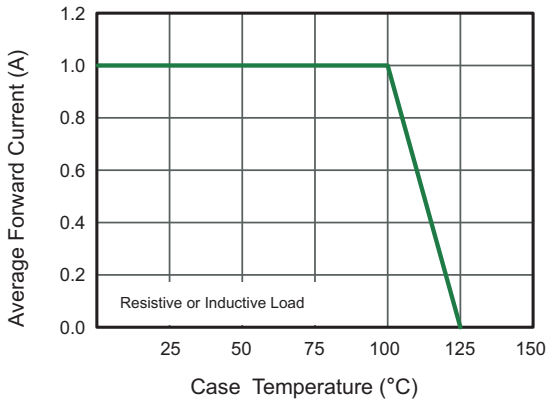


Fig.2 Typical Reverse Characteristics

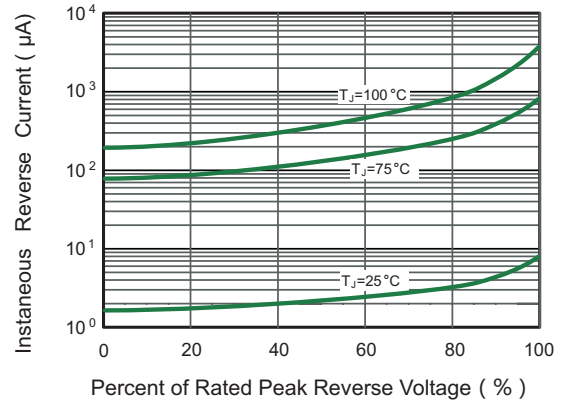


Fig.3 Typical Instantaneous Forward Characteristics

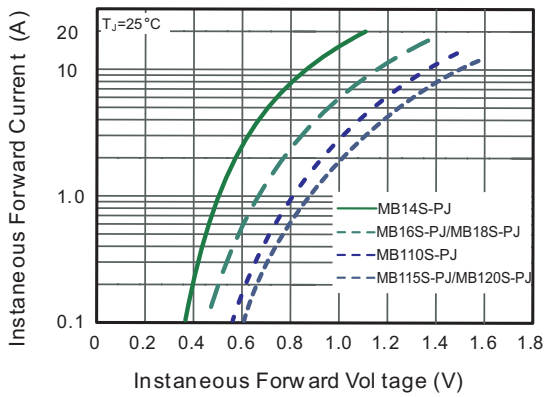


Fig.4 Typical Junction Capacitance

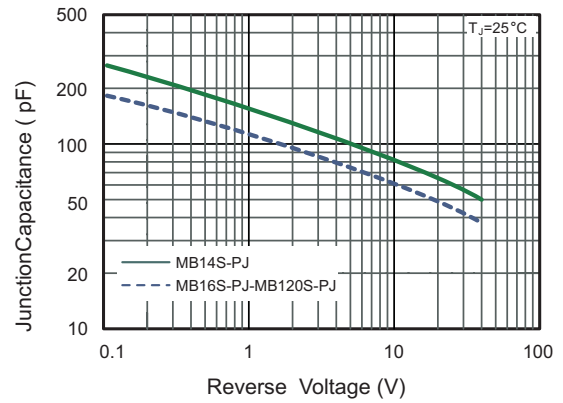


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

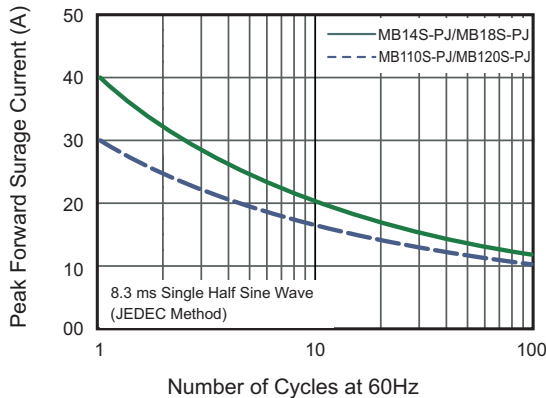
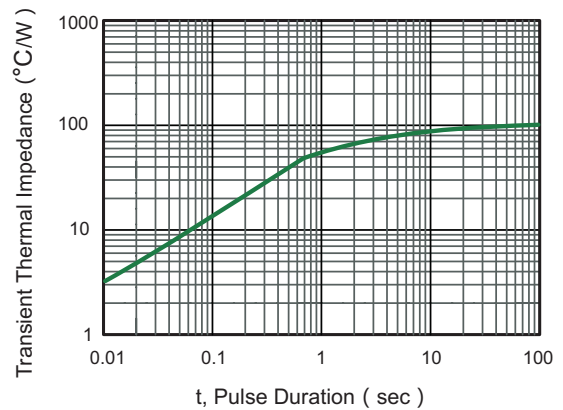
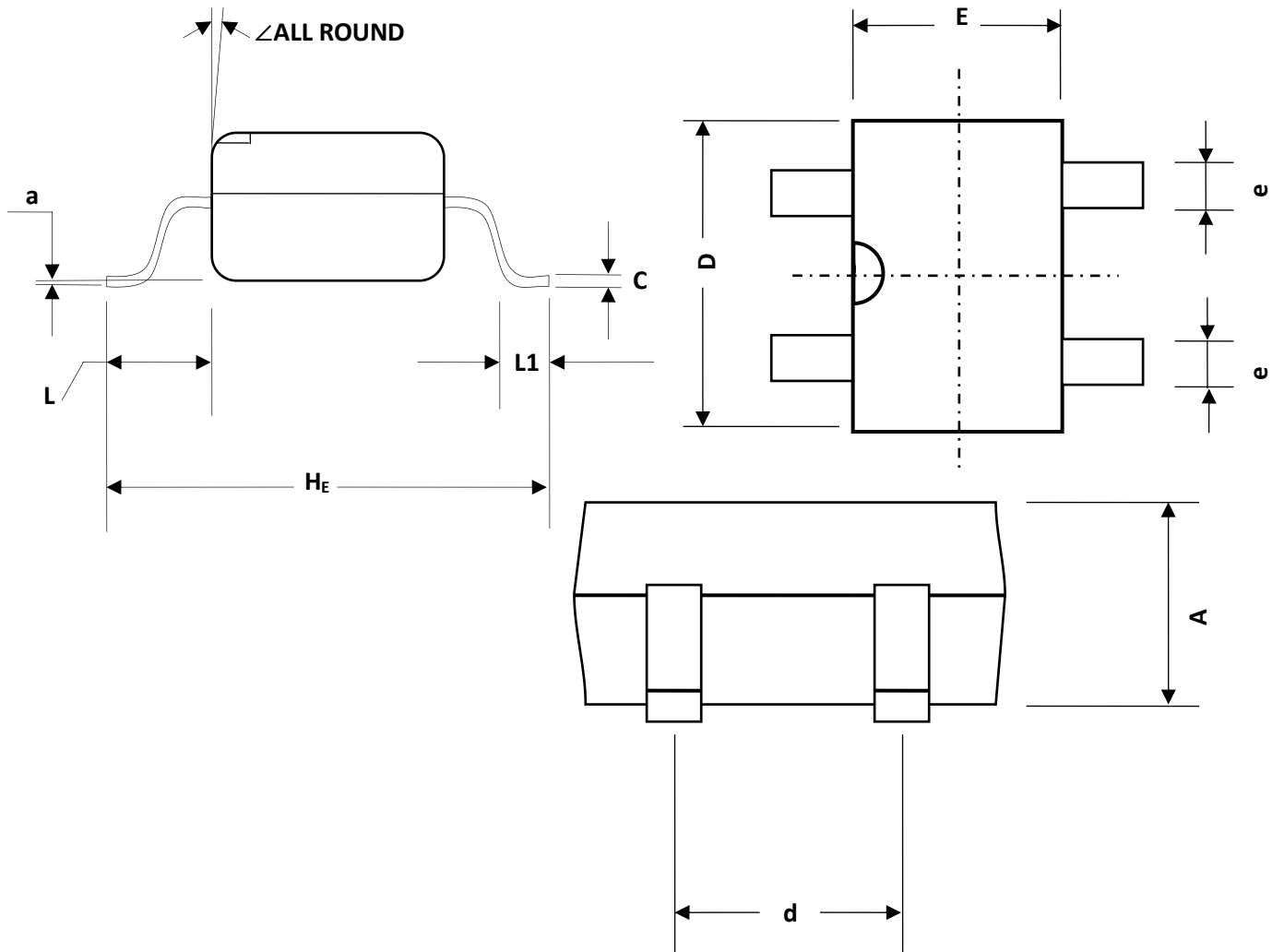


Fig.6- Typical Transient Thermal Impedance





MBS



MBS mechanical data

UNIT		A	C	D	E	$H_E$	d	e	L	L1	a	$\angle$
mm	max	2.6	0.22	5.0	4.1	7.0	2.7	0.7	1.7	1.1	0.2	$7^\circ$
	min	2.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	102	8.7	197	161	276	106	28	67	43	8	
	min	94	5.9	177	142	252	91	20	51	20	—	

ORDERING INFORMATION

Device	Package	Shipping
MB14S-PJ thru MB120S-PJ	MBS	3,000/Tape & Reel (13 inches)