

MB14SAT THRU MB120SAT

SURFACE MOUNT SCHOTTKY BRIDGE RECTIFIERS

Forward Current-1A

Reverse Voltage-40V to 200V

FEATURES

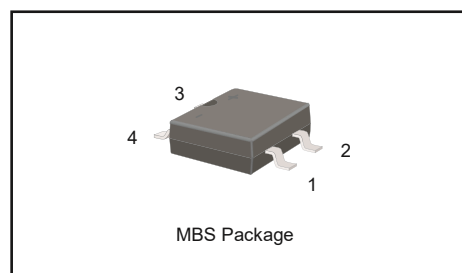
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Reverse voltage: 40V to 200V
- ◆ Forward current: 1A
- ◆ High surge current capability

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	MB14SAT	MB16SAT	MB18SAT	MB110SAT	MB115ST	MB120SAT	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						$^\circ\text{C}/\text{W}$
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.

Dated: 05/2016

Rev:1.0

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

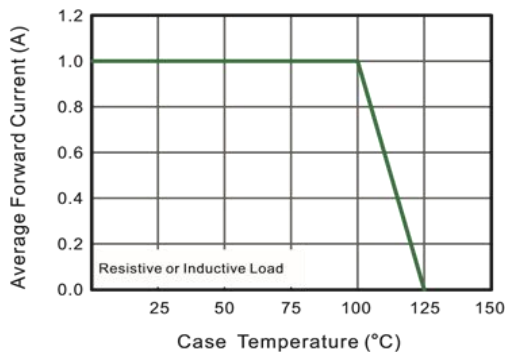


Fig.2 Typical Reverse Characteristics

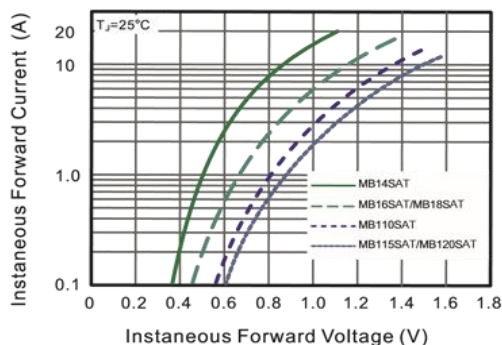
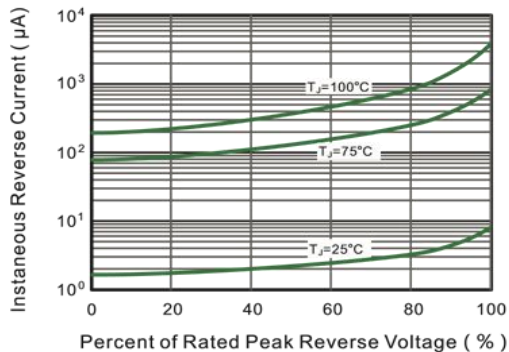


Fig.4 Typical Junction Capacitance

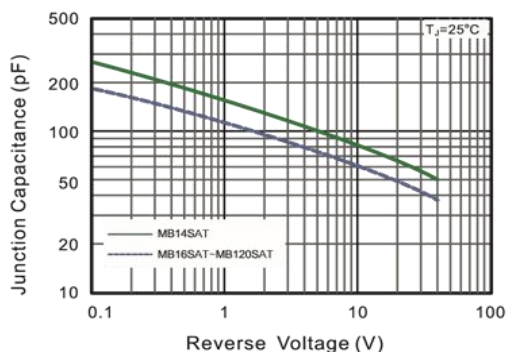


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

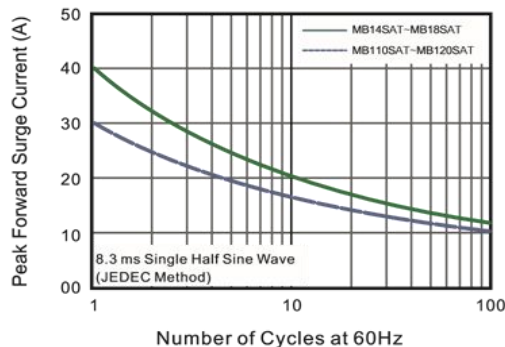
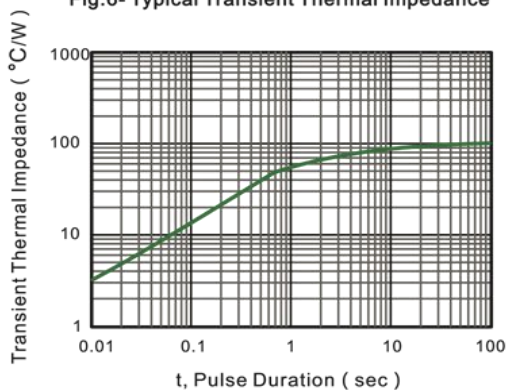
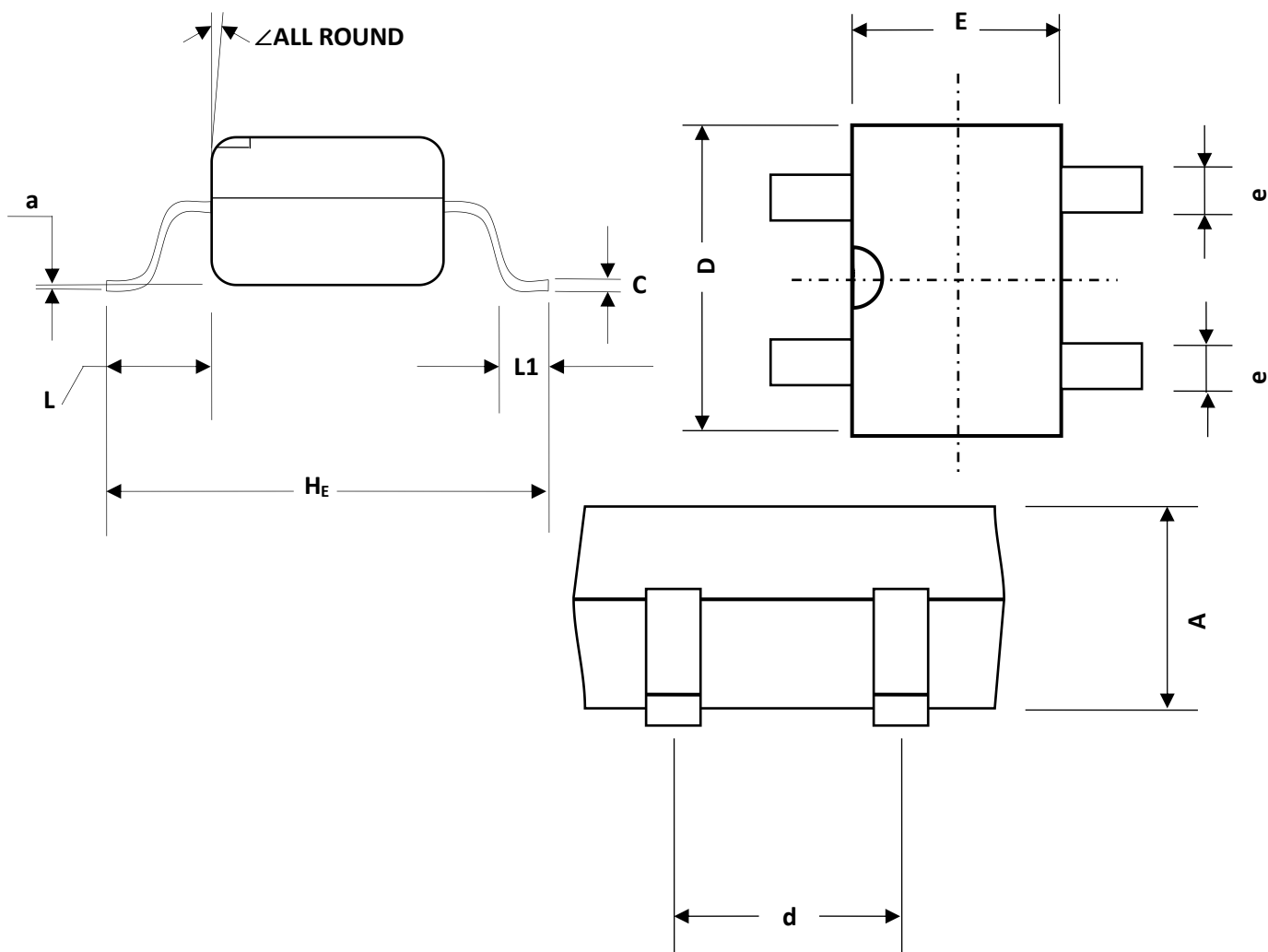


Fig.6 Typical Transient Thermal Impedance



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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°
	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
MB14SAT thru MB120SAT	MBS	3,000/Tape & Reel (13 inches)

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