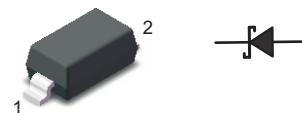


FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-123 and symbol

MECHANICAL DATA

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0.00056oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	MBR0520	MBR0530	MBR0540	Units
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V
RMS reverse voltage reverse voltage (DC)	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Current at Ta=25°C	I_O	0.5			A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25			A
Maximum Instantaneous Forward Voltage $I_F=0.1A$ $I_F=0.5A$ $I_F=1A$	V_F	0.330 0.390 —	0.375 0.430 —	— 0.510 0.620	V
Reverse current $V_R=10V$ $V_R=15V$ $V_R=20V$ $V_R=30V$ $V_R=40V$	I_R	75 — 250 — —	— 20 — 130 —	— — 10 — 20	uA
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	200			°C/W
Junction temperature	T_j	-55 ~ +125			°C
Storage temperature	T_{stg}	-55 ~ +150			°C

Fig.1 Forward Current Derating Curve

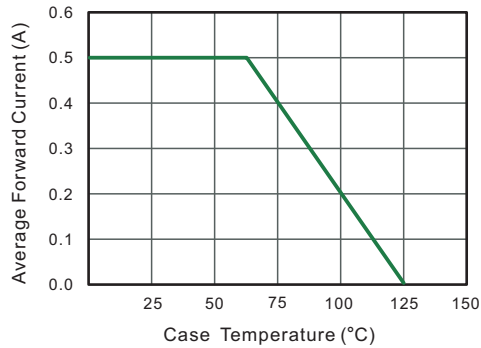


Fig.2 Typical Reverse Characteristics

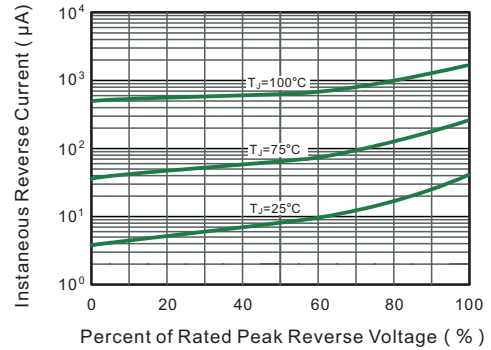


Fig.3 TYPICAL FORWARD VOLTAGE

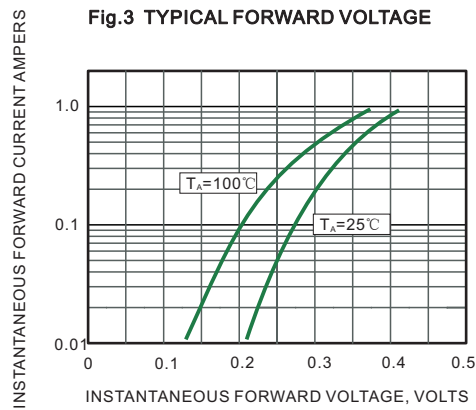


Fig.4 Typical Junction Capacitance

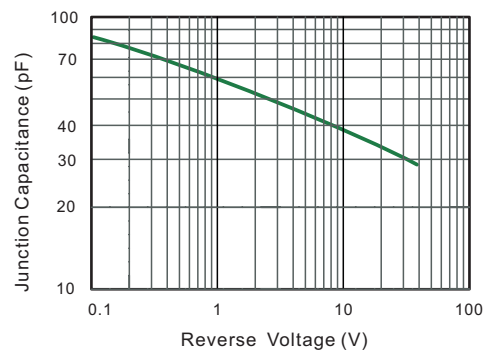


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

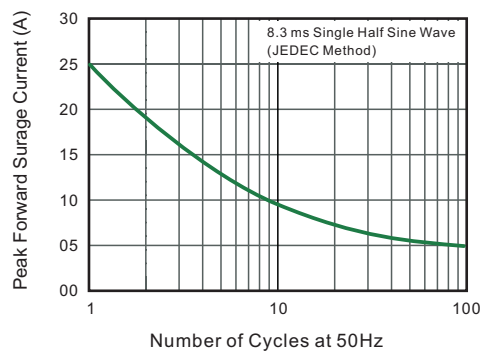
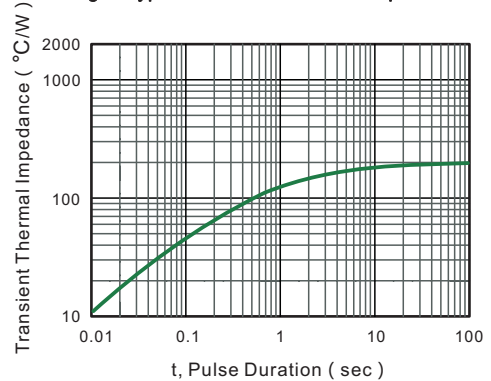


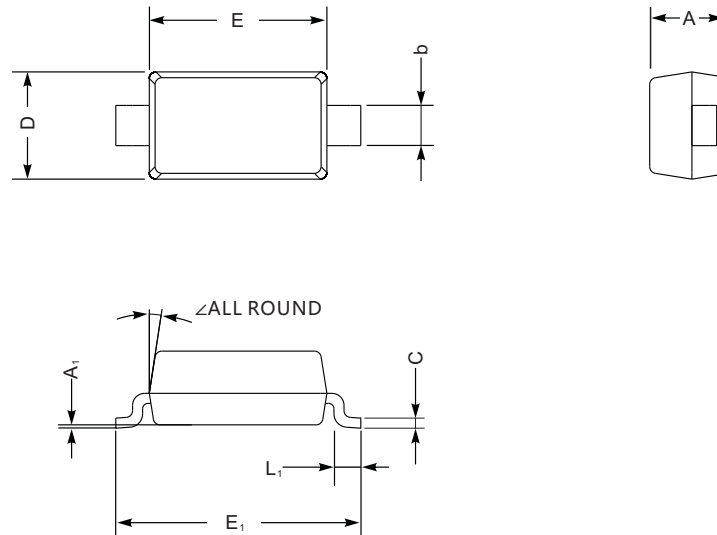
Fig.6 Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

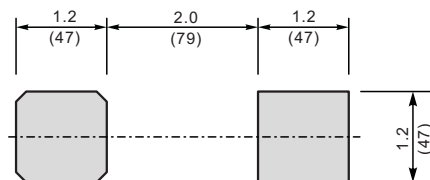
SOD-123



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{(\text{mil})}$