

Features

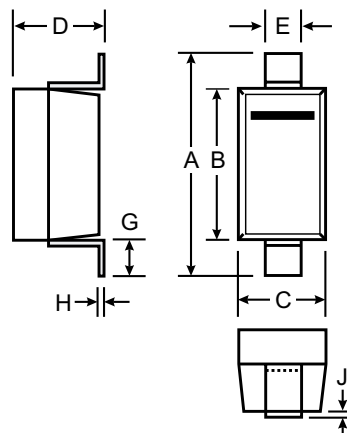
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance

Mechanical Data

- Case: SOD-123, Plastic
- Polarity: Cathode Band
- Leads: Solderable per MIL-STD-202, Method 208
- Marking: Date Code and Type Code

Type Code: SH

- Weight: 0.01 grams (approx.)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.15 Typical	
J	—	0.10
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	B0520W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Average Rectified Output Current @ $T_L = 95^\circ\text{C}$	I_O	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	5.5	A
Power Dissipation (Note 1)	P_d	410	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	244	K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +125	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	B0520W	Unit
Maximum Forward Voltage Drop @ $I_F = 0.1\text{A}, T_j = 25^\circ\text{C}$ (Note 3) @ $I_F = 0.5\text{A}, T_j = 25^\circ\text{C}$	V_{FM}	0.330 0.385	V
Maximum Reverse Current @ $V_R = 10\text{V}, T_j = 25^\circ\text{C}$ (Note 3) @ $V_R = 20\text{V}, T_j = 25^\circ\text{C}$	I_{RM}	75 250	μA
@ $V_R = 10\text{V}, T_j = 100^\circ\text{C}$ @ $V_R = 20\text{V}, T_j = 100^\circ\text{C}$		5.0 8.0	mA
Junction Capacitance (Note 2)	C_j	170	pF

- Notes:
1. Valid provided that leads are kept at ambient temperature.
 2. Measured at 1.0MHz and Applied Reverse Voltage of 0V DC.
 3. Pulse Test: Pulse width = 300 μs , Duty Cycle $\leq 2\%$.

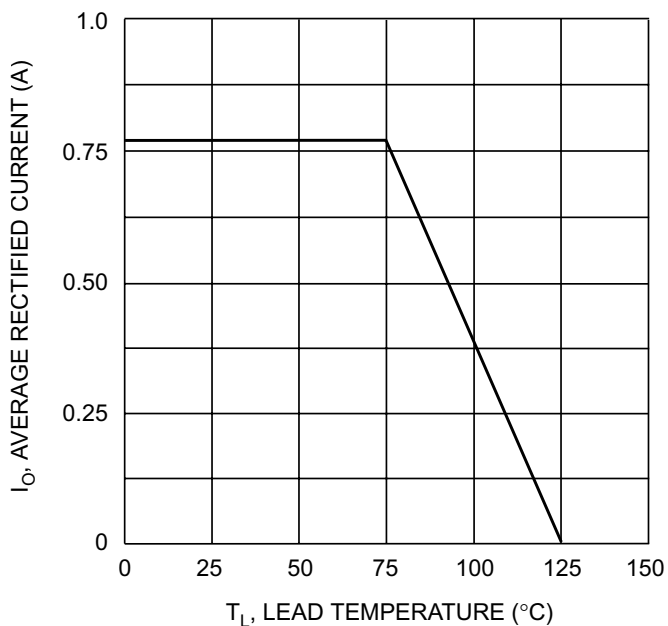


Fig. 1 Forward Current Derating Curve

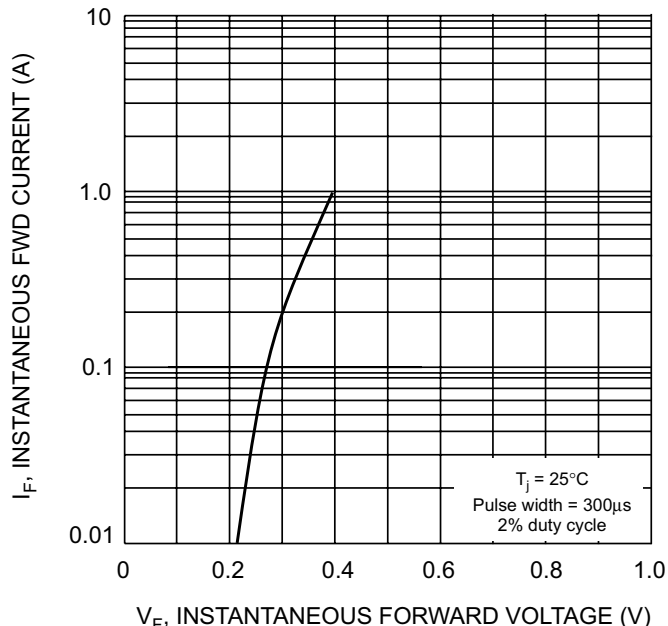


Fig. 2 Typical Forward Characteristics

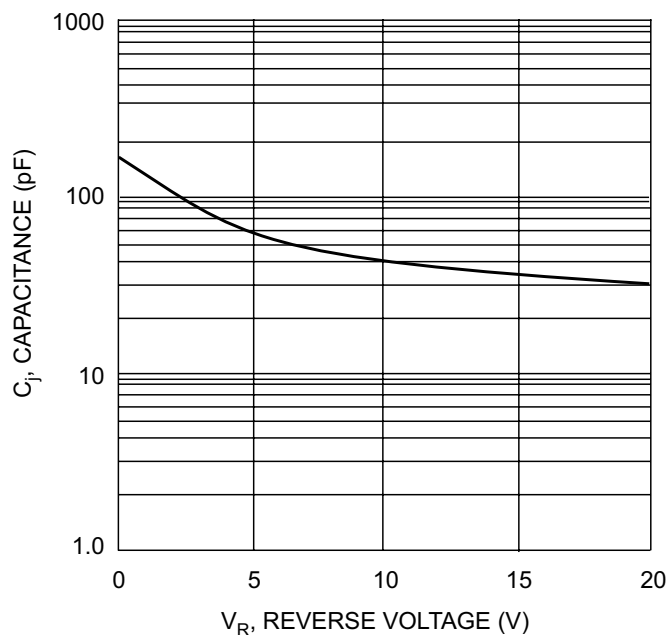


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage