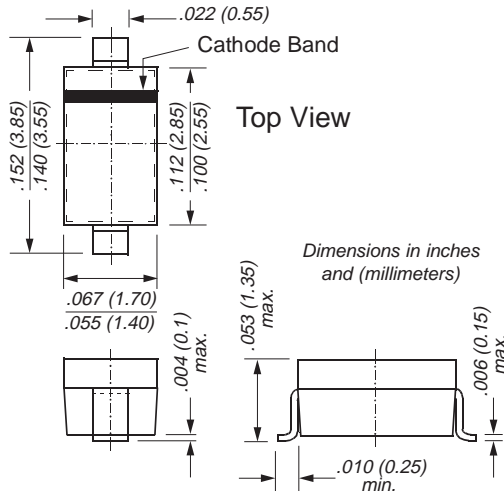




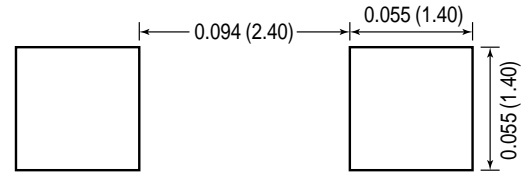
SOD-123

Small Surface Mount Schottky Rectifier

Reverse Voltage 40V
Forward Current 0.5A



Mounting Pad Layout



Mechanical Data

- Case: SOD-123 plastic case
- Polarity: Band denotes cathode end
- Weight: 0.01g
- Marking Code: B4
- Packaging Codes/Options:
 - D3/10K per 13" reel (8mm tape), 30k/box
 - D4/3K per 7" reel (8mm tape), 30k/box

Features

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Low power loss, high efficiency
- High temperature soldering: 250°C/10 seconds at terminals

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	40	V
Working peak reverse voltage	V _{RWM}	40	V
Maximum DC blocking voltage	V _R	40	V
Max. average forward rectified current at rated V _R , T _C = 115°C	I _{F(AV)}	0.5	A
Peak repetitive forward current at rated V _R , 20KHz square wave, T _C = 115°C	I _{FRM}	1.0	A
Peak forward surge current 8.3ms single half sine-wave T _L = 25°C	I _{FSM}	5.5	A
Voltage rate of change at rated V _R , T _J = 25°C	dv/dt	1,000	V/μs
Typical thermal resistance junction to lead	R _{θJL}	118	°C/W
junction to ambient	R _{θJA}	206	°C/W
Operating junction and storage temperature	T _J , T _{STG}	-55 to +150	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Maximum instantaneous forward voltage	at I _F = 0.5A, T _J = 25°C	V _F	0.51	V
	at I _F = 0.5A, T _J = 100°C		0.46	
	at I _F = 1.0A, T _J = 25°C		0.62	
	at I _F = 1.0A, T _J = 100°C		0.61	
Maximum DC reverse current	at V _R = 40V, T _J = 25°C	I _R	20	μA
	at V _R = 40V, T _J = 100°C		5.0	mA
	at V _R = 20V, T _J = 25°C		10	μA

Note: (1) Pulse test: 300ms pulse width, 1% duty cycle.

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Derating Curve Output Rectified Current

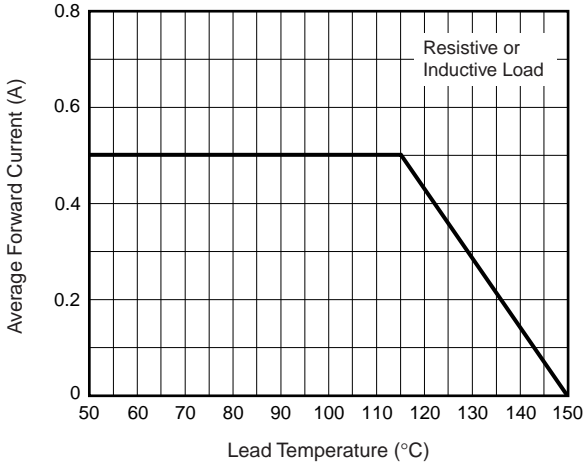


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

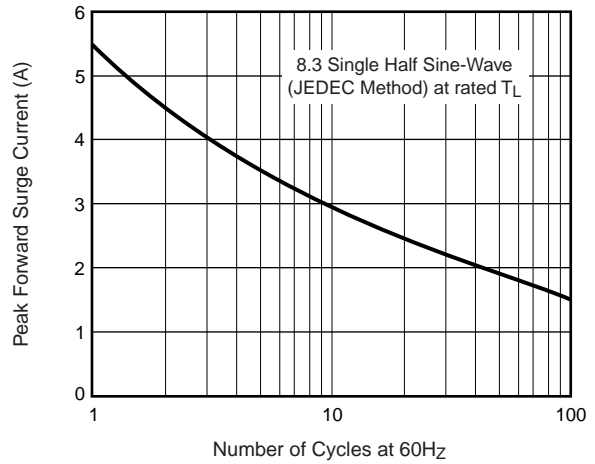


Fig. 3 – Typical Instantaneous Forward Characteristics

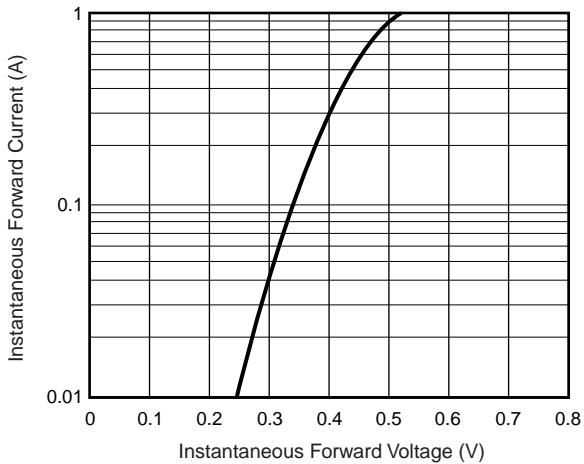


Fig. 4 – Typical Reverse Characteristics

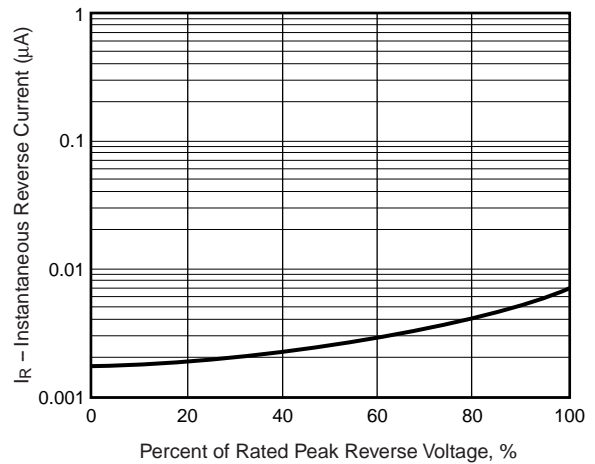


Fig. 5 – Typical Junction Capacitance

