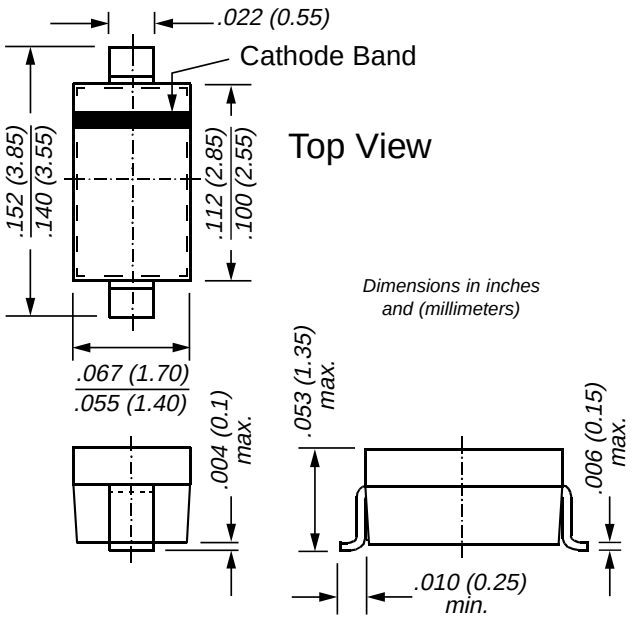
GENERAL SEMICONDUCTOR®

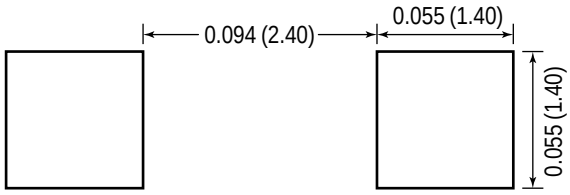
BAT46W

Schottky Diode

SOD-123



Mounting Pad Layout



Mechanical Data

Case: SOD-123 Plastic Case

Weight: approx. 0.01g

Marking Code: L6

Packaging Codes/Options:

D3/10K per 13” reel (8mm tape)

D4/3K per 7” reel (8mm tape)

Features

- For general purpose applications
- This diode features very low turn-on voltage and fast switching.
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.
- This diode is also available in the DO-35 case with type designation BAT46 and in the MiniMELF case with type designation LL46.

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Forward Continuous Current at T_{amb} = 25°C	I_F	150(1)	mA
Repetitive Peak Forward Current at t_p < 1s, δ < 0.5, T_{amb} = 25°C	I_{FRM}	350(1)	mA
Surge Forward Current at t_p < 10 ms, T_{amb} = 25°C	I_{FSM}	750(1)	mA
Power Dissipation(1) at T_{amb} = 65°C	P_{tot}	150(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\Theta JA}$	300(1)	°C/W
Junction Temperature	T_j	125	°C
Ambient Operating Temperature Range	T_{amb}	–55 to +125	°C
Storage Temperature Range	T_S	–55 to +150	°C

Notes:
(1) Valid provided that electrodes are kept at ambient temperature.

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100 µA (pulsed)	100	—	—	V
Leakage Current(1)	I_R	V_R = 1.5V	—	—	0.5	µA
		V_R = 1.5V, Tj = 60°C	—	—	5.0	
		V_R = 10V	—	—	0.8	
		V_R = 10V, Tj = 60°C	—	—	7.5	
		V_R = 50V	—	—	2.0	
		V_R = 50V, Tj = 60°C	—	—	15	
		V_R = 75V	—	—	5.0	
		V_R = 75V, Tj = 60°C	—	—	20	
Forward Voltage(1)	V_F	I_F = 0.1mA	—	—	0.25	V
		I_F = 10mA	—	—	0.45	
		I_F = 250mA	—	—	1.00	
Capacitance	C_{tot}	V_R = 0V, f = 1MHz	—	10	—	pF
		V_R = 1V, f = 1MHz	—	6	—	

Note:
(1) Pulse Test t_p < 300µs, δ < 2%