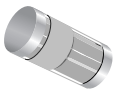
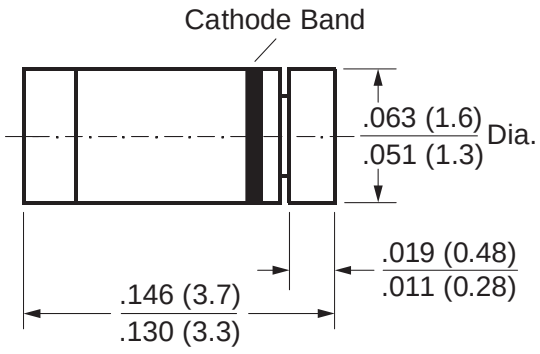
Schottky Diode



MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

Features

- For general purpose applications
- This diode features low turn-on voltage and high break-down voltage. This device is protected by a PN junction guardring against excessive voltage, such as electrostatic discharges.
- This diode is also available in the DO-35 case with type designation BAT46 and in the SOD-123 case with type designation BAT46W.

Mechanical Data

Case: MiniMELF Glass Case (SOD-80)
Weight: approx. 0.05g
Cathode Band Color: Green
Packaging Codes/Options:
D1/10K per 13" reel (8mm tape), 20K/box
D2/2.5K per 7" reel (8mm tape), 20K/box

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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 < 10ms, T_{amb} = 25°C	I_{FSM}	750(1)	mA
Power Dissipation at T_{amb} = 80°C	P_{tot}	200(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\Theta JA}$	0.3(1)	°C/mW
Junction Temperature	T_j	125	°C
Ambient Operating Temperature Range	T_{amb}	–55 to +125	°C
Storage Temperature Range	T_S	–65 to +150	°C

Electrical Characteristics

(T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	100µA pulses	100	—	—	V
Leakage Current Pulse Test t_p = 300µs, δ < 2%	I_R	V_R = 1.5V	—	—	0.5	µA
		V_R = 1.5V, Tj = 60°C	—	—	5	
		V_R = 10V	—	—	0.8	
		V_R = 10V, Tj = 60°C	—	—	7.5	
		V_R = 50V	—	—	2	
		V_R = 50V, Tj = 60°C	—	—	15	
		V_R = 75V	—	—	5	
		V_R = 75V, Tj = 60°C	—	—	20	
Forward Voltage Pulse Test t_p < 300µs, δ < 2%	V_F	I_F = 0.1mA	—	—	0.25	V
		I_F = 10mA	—	—	0.45	
		I_F = 250mA	—	—	1	
Capacitance	C_{tot}	V_R = 0V, f = 1MHz	—	10	—	pF
		V_R = 1V, f = 1MHz	—	6	—	

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