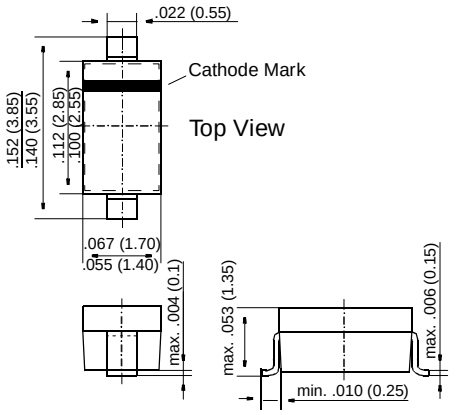
BAT46W

Schottky Diodes

SOD-123



Dimensions in inches and (millimeters)

FEATURES

- For general purpose apllications.
- These diodes feature very low turn-on voltage and fast switching. These devices are 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 designations LL46.

MECHANICAL DATA

Case: SOD-123 Plastic Case
Weight: approx. 0.01 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Forward Continuous Current at T_{amb} = 25 °C	I_F	150 [2)]	mA
Repetitive Peak Forward Current at t_p < 1 s, δ < 0.5, T_{amb} = 25 °C	I_{FRM}	350 [2)]	mA
Surge Forward Current at t_p < 10 ms, T_{amb} = 25 °C	I_{FSM}	750 [2)]	mA
Power Dissipation[1)] at T_{amb} = 65 °C	P_{tot}	150 [2)]	mW
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

[2)] Valid provided that electrodes are kept at ambient temperature

GENERAL SEMICONDUCTOR®

BAT46W

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage tested with 100 µA Pulses	$V_{(BR)R}$	100	–	–	V
Forward Voltage Pulse Test t_p < 300 µs, δ < 2% at I_F = 0.1 mA at I_F = 10 mA at I_F = 250 mA	 V_F V_F V_F	 – – –	 – – –	 0.25 0.45 1	 V V V
Leakage Current Pulse Test t_p < 300 µs, δ < 2% at V_R = 1.5 V at V_R = 1.5 V, T_j = 60 °C at V_R = 10 V at V_R = 10 V, T_j = 60 °C at V_R = 50 V at V_R = 50 V, T_j = 60 °C at V_R = 75 V at V_R = 75 V, T_j = 60 °C	 I_R I_R I_R I_R I_R I_R I_R I_R	 – – – – – – – –	 – – – – – – – –	 0.5 5 0.8 7.5 2 15 5 20	 µA µA µA µA µA µA µA µA
Capacitance at V_R = 0 V, f = 1 MHz at V_R = 1 V, f = 1 MHz	 C_{tot} C_{tot}	 – –	 10 6	 – –	 pF pF
Thermal Resistance Junction to Ambient Air	R_{thJA}	–	–	0.3 [2]	K/mW

[2] Valid provided that electrodes are kept at ambient temperature