

# Schottky Diode

## SOD-123



RoHS  
Compliant



### Features:

- Low forward voltage drop
- Fast switching time
- Surface mount package ideally suited for automatic insertion

### Mechanical Data

Case	: SOD-123, plastic
Terminals	: Solderable per MIL-STD-202, Method 208
Polarity	: Cathode band
Marking	: BAT42W S7
Weight	: 0.01g (Approximately)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C Ambient Temperature Unless Otherwise Specified.

Type Number	Symbol	BAT42W	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	
Forward Continuous Current (Note 1)	$I_{FM}$	200	mA
Repetitive Peak Forward Current (Note 1) at $t < 1s$		500	
Non-Repetitive Peak Forward Surge Current at $t < 10mS$	$I_{FSM}$	4	A
Power Dissipation (Note 1)	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +125	°C

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.



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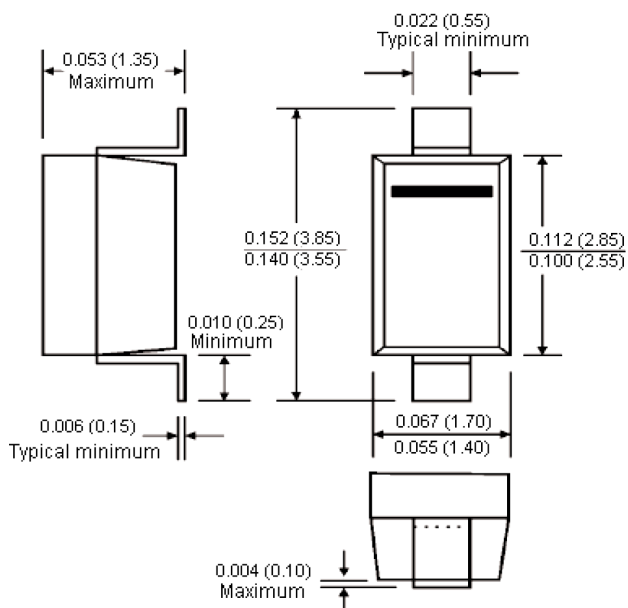


## Electrical Characteristics

Type Number	Symbol	Min.	Max.	Units
Forward Voltage Drop All Types $I_F = 200\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$	$V_F$	-	1 0.4 0.65	V
Maximum Peak Reverse Current $V_R = 25\text{V}$ $V_R = 25\text{V}, T_j = 100^\circ\text{C}$	$I_R$	-	500 100	nA $\mu\text{A}$
Junction Capacitance $V_R = 0, f = 1\text{MHz}$	$C_j$	-	10	pF
Reverse Recovery Time (Note 2)	$t_{rr}$	-	5	nS

- Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.  
 2. Reverse Recovery Test Conditions:  $I_F = I_R = 10\text{mA}$ ,  $I_{rr} = 0.1 \times I_R$ ,  $R_L = 100\Omega$ .  
 3.  $t < 300\mu\text{s}$ , Duty Cycle  $< 2\%$ .

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Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Diode, Schottky, SOD-123	BAT42W

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