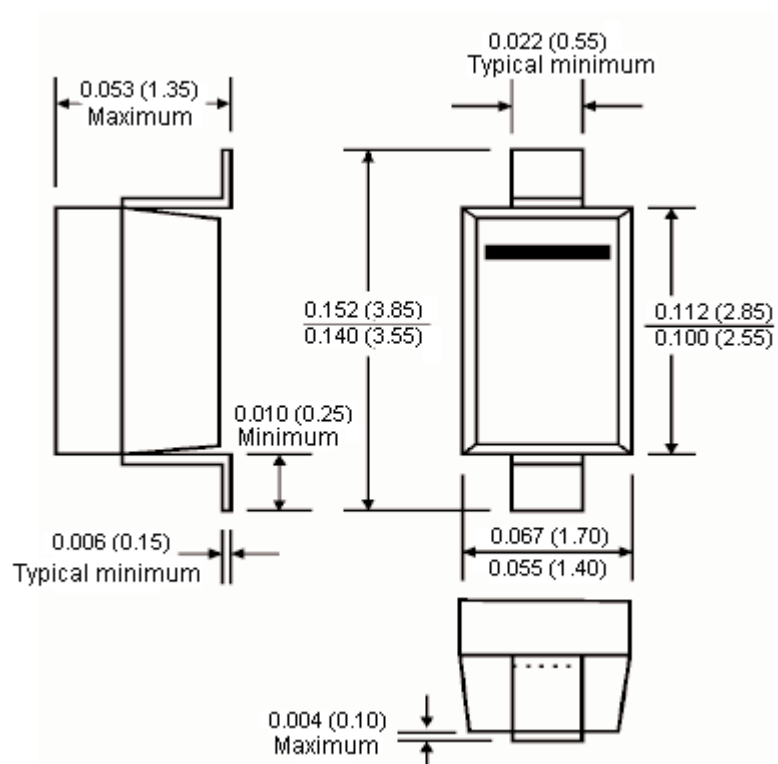


**Features:**

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

**SOD-123**

Dimensions : Inches (Millimetres)

Mechanical Data

Case	: SOD-123, plastic.
Terminals	: Solderable per MIL-STD-202, Method 208.
Polarity	: Cathode band.
Marking	: BAT42W S7.
Weight	: 0.01 grams (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 $t < 1.0s$		500	
Non-Repetitive Peak Forward Surge Current at $t < 10mS$	I_{FSM}	4.0	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

Electrical Characteristics

Type Number	Symbol	Minimum	Maximum	Units
Forward Voltage Drop All Types $I_F = 200mA$ BAT42W $I_F = 10mA$ BAT42W $I_F = 50mA$	V_F	- - -	1.0 0.40 0.65	V
Maximum Peak Reverse Current $V_R = 25V$ $V_R = 25V, T_J = 100^\circ C$	I_R	-	500 100	nA μA
Junction Capacitance $V_R = 0, f = 1.0MHz$	C_j	-	10	pF
Reverse Recovery Time (Note 2)	t_{rr}	-	5.0	nS

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

Part Number Table

Description	Part Number
Diode, Schottky, SOD-123	BAT42W

Notes:

International Sales Offices:

**AUSTRALIA – Farnell**

Tel No: ++61 1300 361 005
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Tel No: ++358 9 560 7780
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