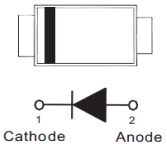
BAT42W-AU

SURFACE MOUNT SCHOTTKY DIODES

Voltage	30 V	Current	0.2 A

SOD-123



Features

- Low power loss, high efficiency
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: SOD-123 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0004 ounces, 0.001 grams

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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Maximum Rms Voltage	V_{RMS}	21	V
Maximum Dc Blocking Voltage	V_{DC}	30	V
Maximum Average Forward Current	$I_{F(AV)}$	0.2	A
Peak Forward Surge Current: 1 ms Single Half Sine-Wave Superimposed On Rated Load	I_{FSM}	4	A
Typical Junction Capacitance Measured at 1 MHZ And Applied V_R = 0 V	C_J	4	pF
Typical Thermal Resistance	$R_{\theta JA}$ (1)	510	°C/W
Operating Junction Temperature Range	T_J	-55~125	°C
Storage Temperature Range	T_{STG}	-55~125	°C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 10 mA, T_J = 25 °C	-	-	0.4	V
		I_F = 200 mA, T_J = 25 °C	-	-	1	
		I_F = 10 mA,T_J= 100 °C	-	0.24	-	
		I_F = 200 mA,T_J= 100 °C	-	0.61	-	
Reverse Current	I_R (2)	V_R = 24 V, T_J = 25 °C	-	0.1	-	uA
		V_R = 30 V, T_J = 25 °C	-	-	0.5	
		V_R = 30 V, T_J = 100 °C	-	20	-	

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

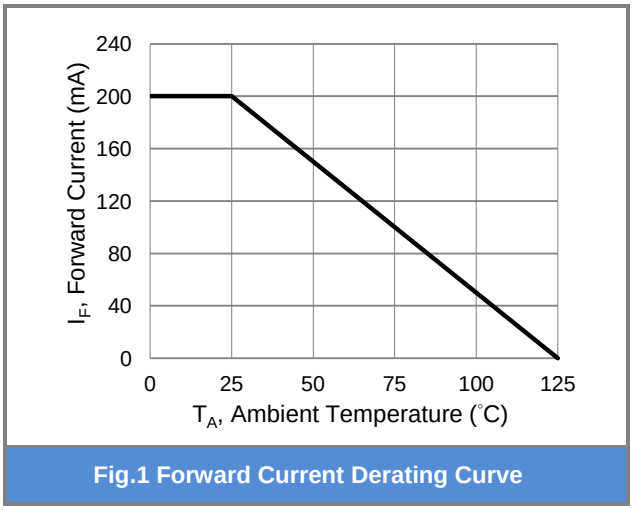

Fig.1 Forward Current Derating Curve

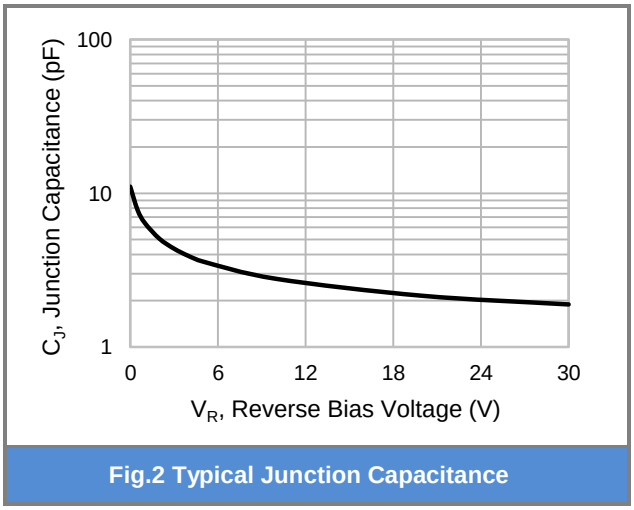

Fig.2 Typical Junction Capacitance

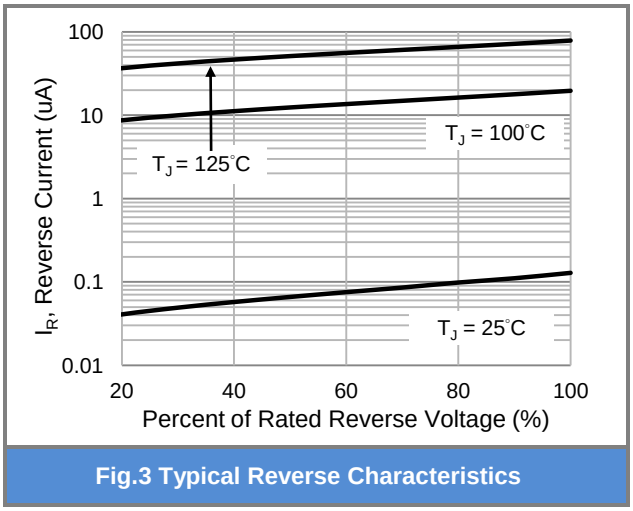

Fig.3 Typical Reverse Characteristics

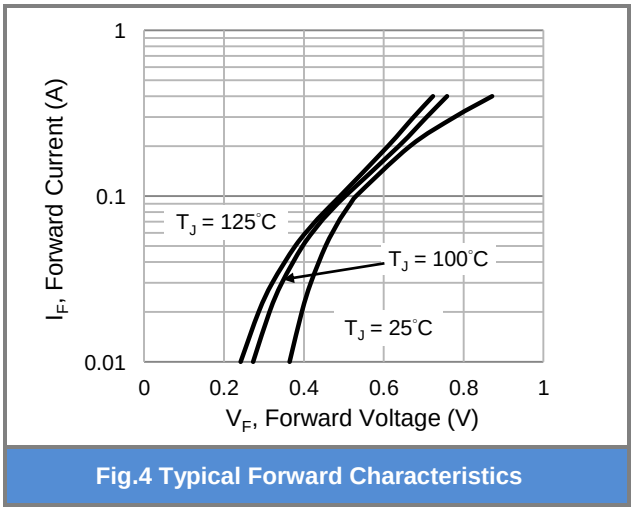

Fig.4 Typical Forward Characteristics

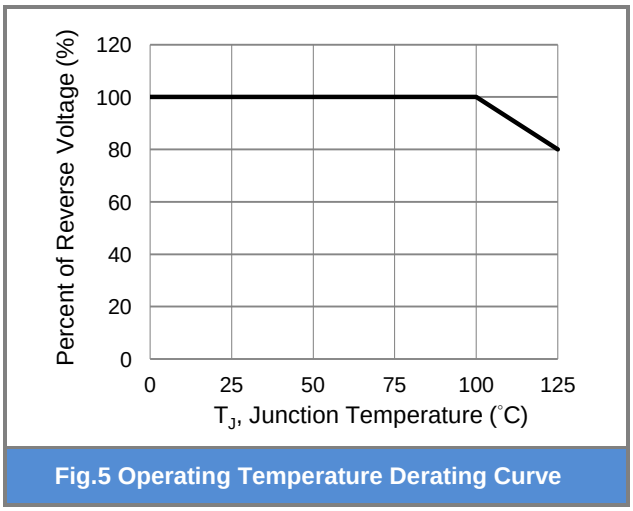

Fig.5 Operating Temperature Derating Curve

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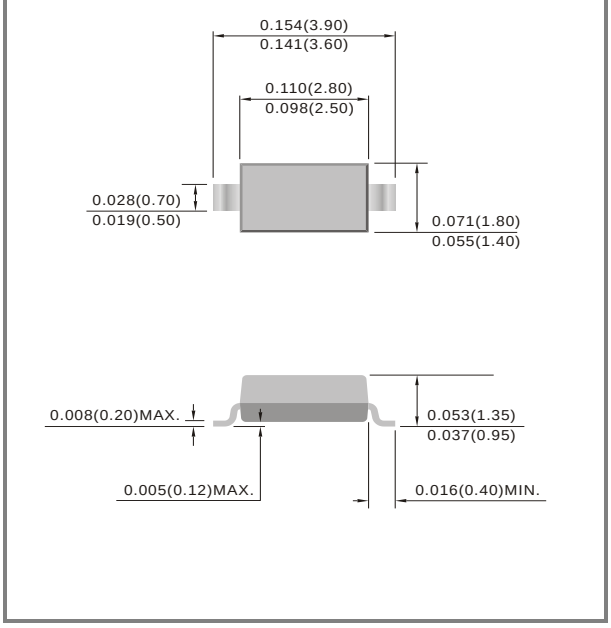
Part No Packing Code Version

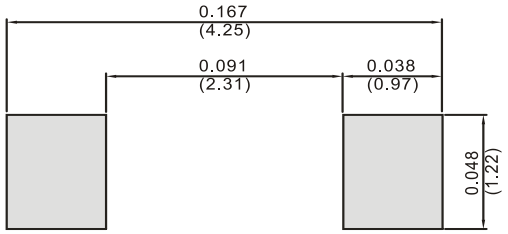
Part No Packing Code	Package Type	Packing Type	Marking	Version
BAT42W-AU_R1_000A1	SOD-123	3K / 7" Reel	L2	Halogen free

Packaging Information & Mounting Pad Layout

SOD-123 Dimension — Unit: inch(mm)



SOD-123 Pad Layout — Unit: inch(mm)



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