

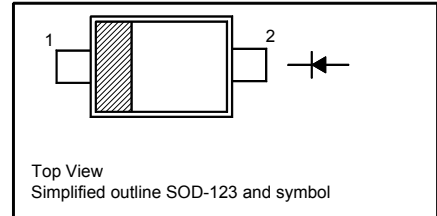
BAT46W-HAF

Surface Mount Schottky Barrier Diode

Features

- High breakdown voltage
- Low forward voltage
- Surface mount device
- Halogen and Antimony Free(HAF),
RoHS compliant

PIN	DESCRIPTION
1	Cathode
2	Anode



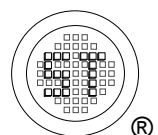
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Forward Current	I_F	150	mA
Repetitive Peak Forward Current (at $t_p < 1$ s)	I_{FRM}	350	mA
Surge Forward Current (at $t_p < 10$ ms)	I_{FSM}	750	mA
Power Dissipation	P_{tot}	200	mW
Operating Junction Temperature Range	T_j	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$

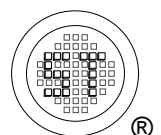
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



BAT46W-HAF

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	100	-	-	V
Forward Voltage at $I_F = 0.1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 250 \text{ mA}$	V_F	- - -	- - -	0.25 0.45 1	V
Reverse Current at $V_R = 1.5 \text{ V}$ at $V_R = 10 \text{ V}$ at $V_R = 50 \text{ V}$ at $V_R = 75 \text{ V}$ at $V_R = 1.5 \text{ V}, T_j = 60^\circ\text{C}$ at $V_R = 10 \text{ V}, T_j = 60^\circ\text{C}$ at $V_R = 50 \text{ V}, T_j = 60^\circ\text{C}$ at $V_R = 75 \text{ V}, T_j = 60^\circ\text{C}$	I_R	- - - - - - - -	- - - - - - - -	0.5 0.8 2 5 5 7.5 15 20	μA
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ at $V_R = 1 \text{ V}, f = 1 \text{ MHz}$	C_T	- -	11 6	40 35	pF



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Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

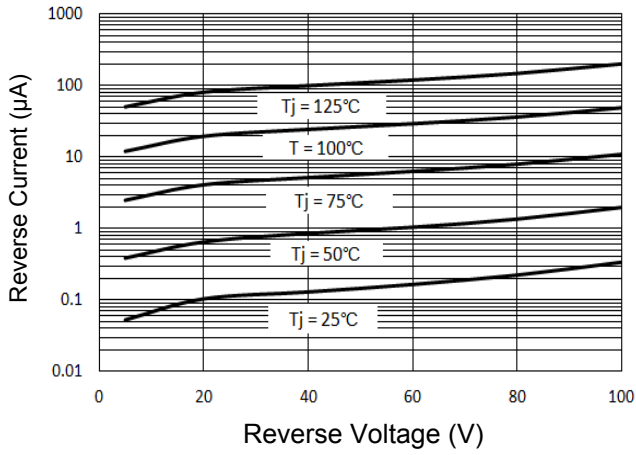


Fig 2. Forward Characteristics Curve

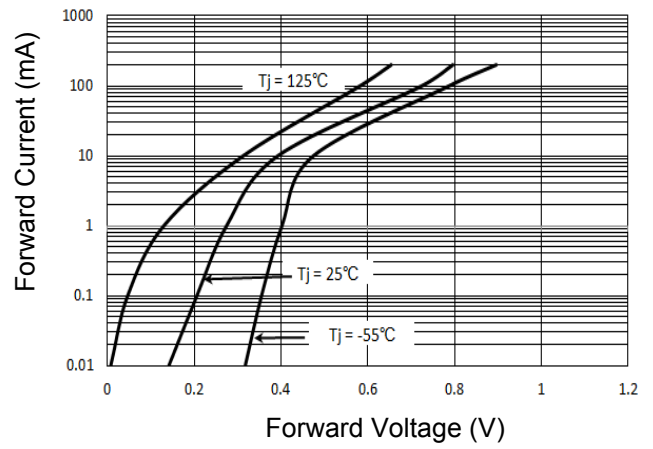
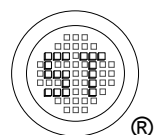
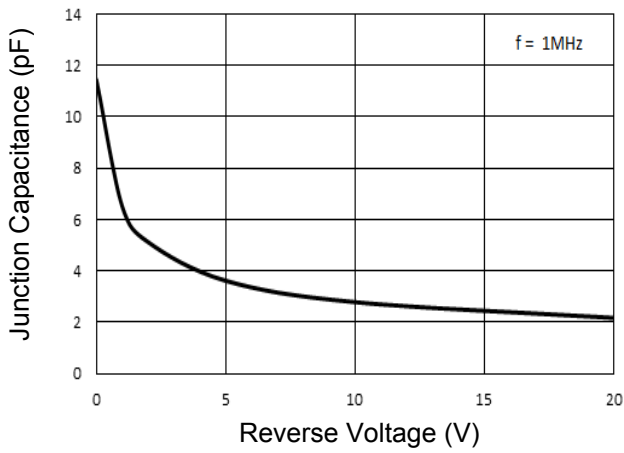


Fig 3. Junction Capacitance

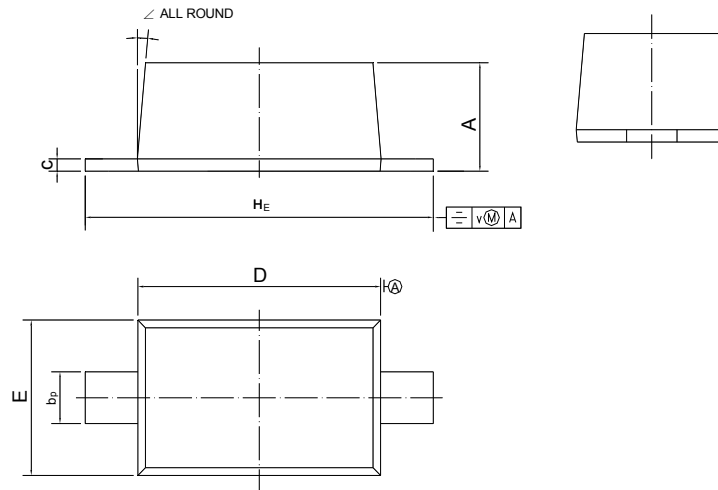


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PACKAGE OUTLINE

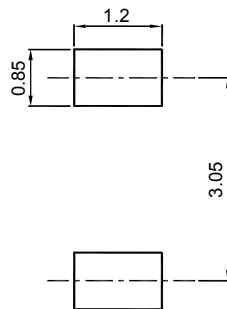
Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b _P	c	D	E	H _E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.100	2.7 2.6	1.65 1.55	3.85 3.55	0.2	5°

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	(inch)	mm	(inch)	
SOD-123	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

- " XH " = Part No.
 - " III " = Cathode line
 - " • " = HAF (Halogen and Antimony Free)
- Font type: Arial

