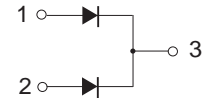
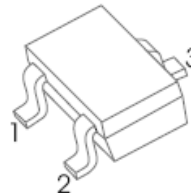


**Silicon Epitaxial Planar Switching Diode****PRIMARY CHARACTERISTICS**

$V_{RM}$	100V
$I_F$	100mA
$V_F@I_F=1mA$	0.715V
$T_{J,Max}$	150°C

**SCHEMATIC DIAGRAM****SOT-323 PACKAGE****MARKING: A4****FEATURES**

- Fast switching diode
- Ultra small surface mount package
- Moisture Sensitivity Level 1

**MECHANICAL DATA**

- Case : Molded plastic, SOT-323
- Polarity : Shown above
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Continuous Forward Current	$I_F$	Single diode loaded 175	mA
		Double diode loaded 100	
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	at t = 1 s 0.5	A
		at t = 1 ms 1	
		at t = 1 $\mu$ s 4	
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	- 65 to + 150	°C

**Silicon Epitaxial Planar Switching Diode****Characteristics at  $T_a = 25\text{ }^\circ\text{C}$** 

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{BR(R)}$	75	-	V
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Reverse Leakage Current at $V_R = 25\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$ at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	- - - -	30 2.5 60 100	nA $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Diode Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_{tot}$	-	2	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}, I_{rr} = 0.1 I_R, R_L = 100\text{ }\Omega$	$t_{rr}$	-	4	ns



### Silicon Epitaxial Planar Switching Diode

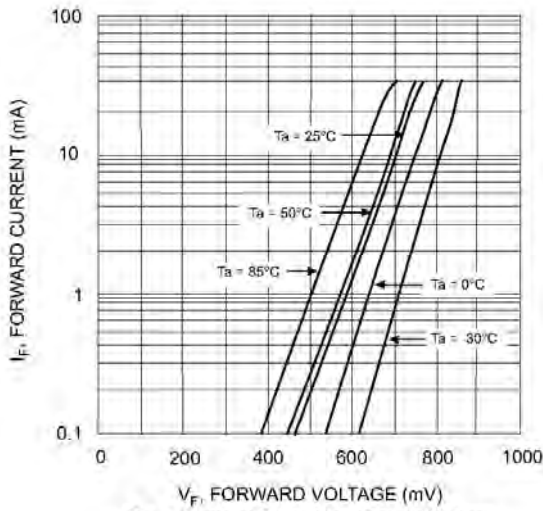


Fig. 1 Forward Current vs. Forward Voltage

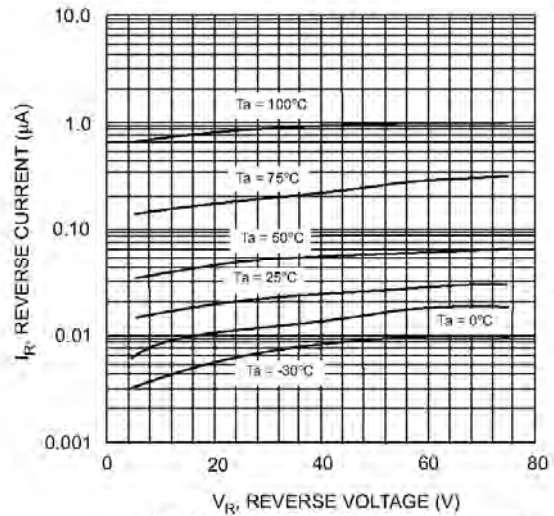


Fig. 2 Reverse Current vs. Reverse Voltage

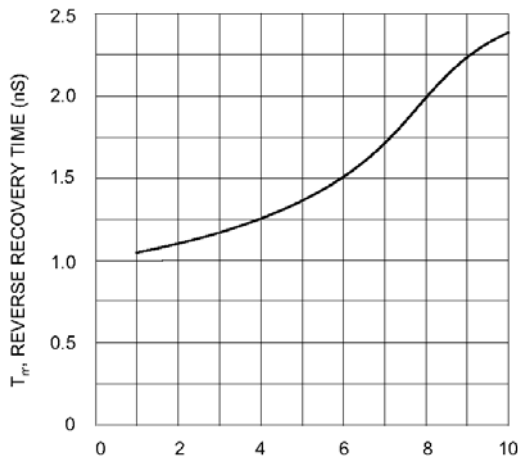


Fig. 3. Reverse Recovery Time vs. Forward Current

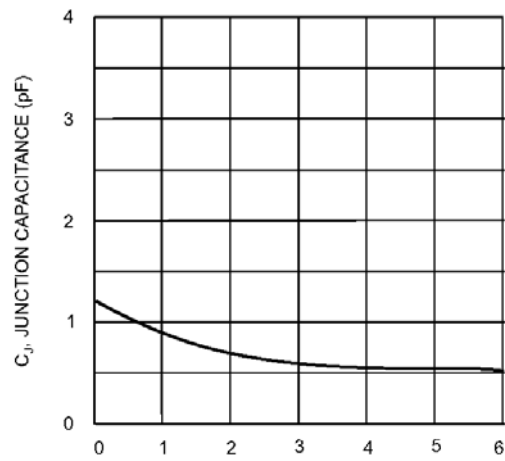
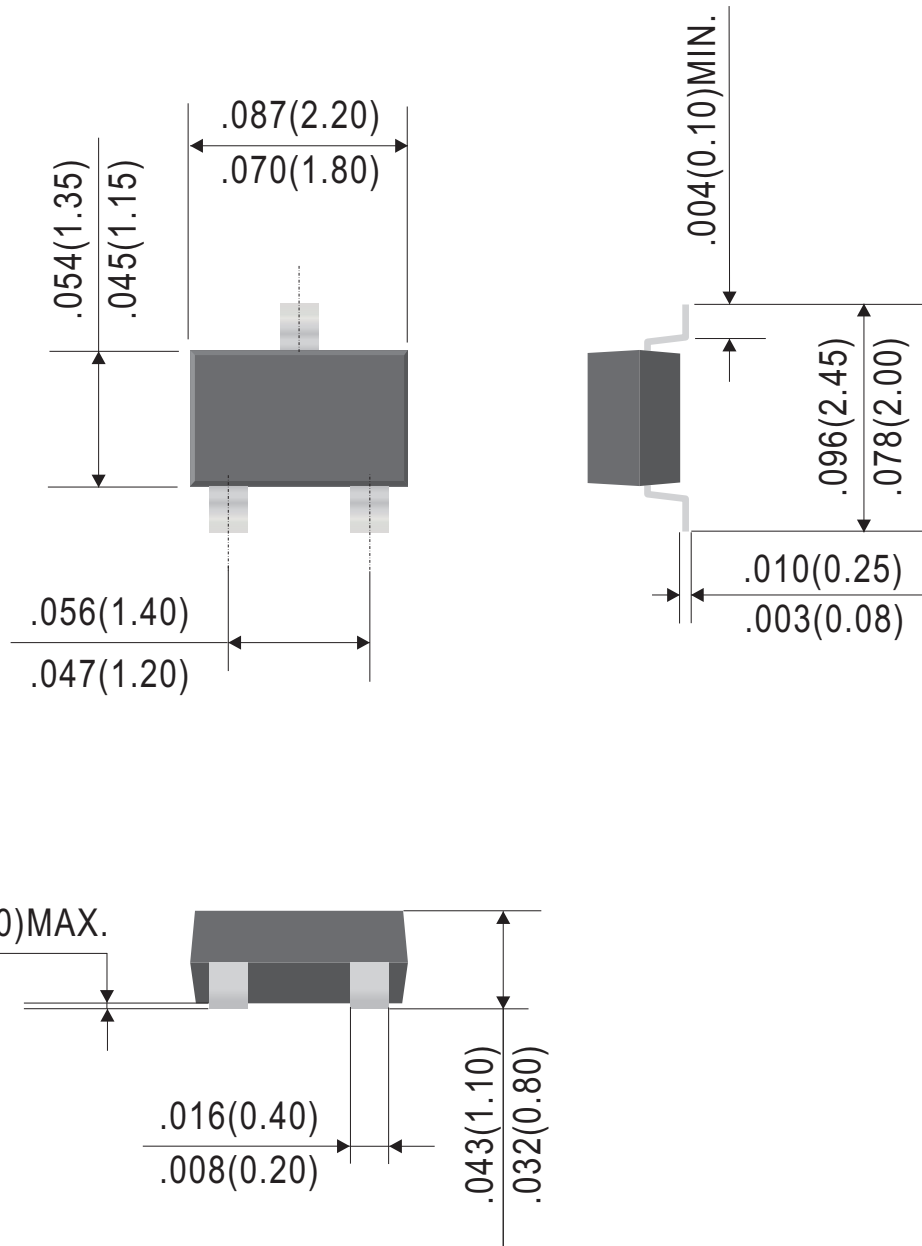


Fig. 4. Typical Junction Capacitance vs. Reverse Voltage



## Outline Drawing

## SOT-323



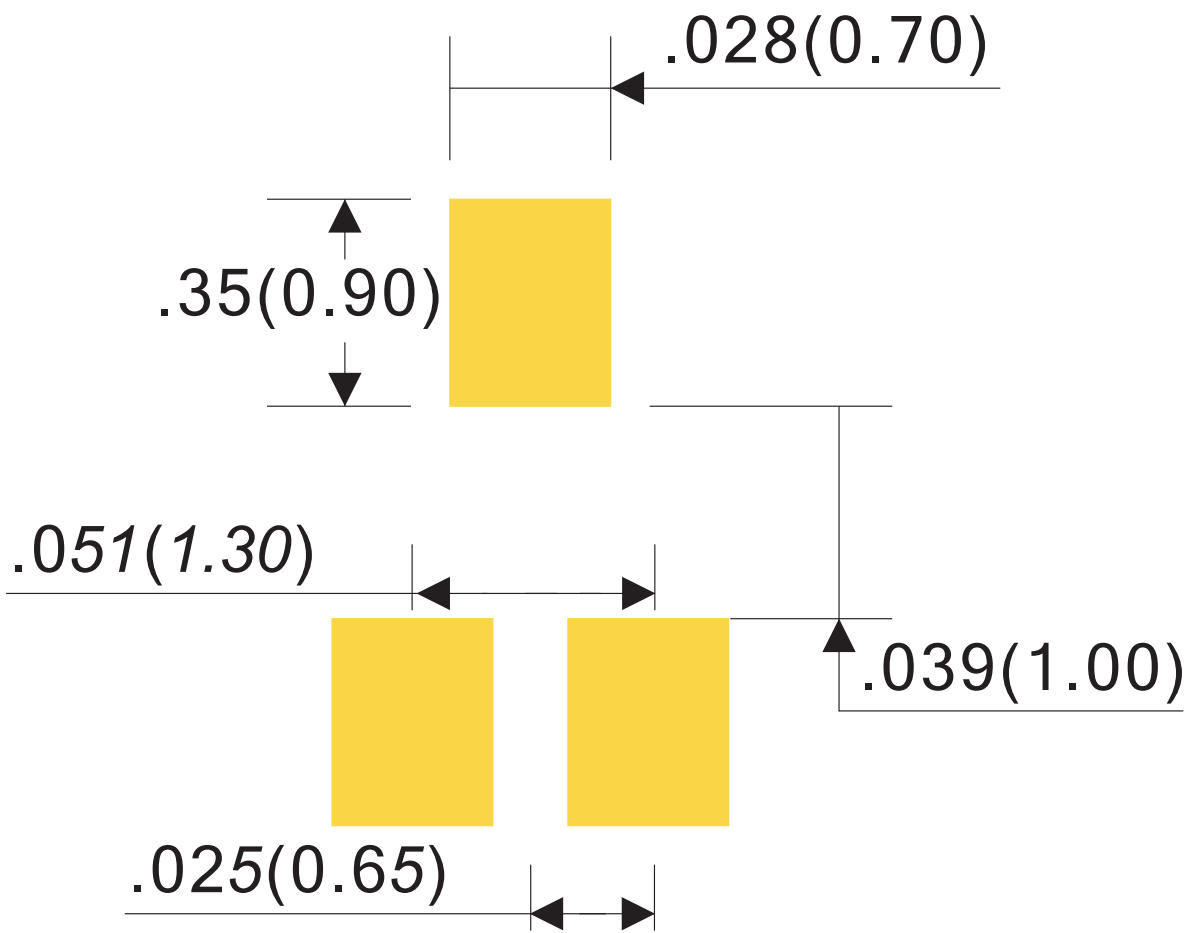
Dimensions in inches and (millimeters)

Rev.D



Suggested Soldering Pad Layout

SOT-323



Dimensions in inches and (millimeters)

RevA

**Ordering Information:**

Device PN	Packing
BAV70WN -T <sup>(1)</sup> H <sup>(2)</sup> -WS <sup>(3)</sup>	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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