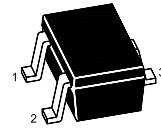
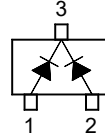


BAV70CCW

Silicon Epitaxial Planar Switching Diode

Features

- Fast switching diode
- Ultra small surface mount package



SOT-323 Plastic Package
1. Anode 2. Anode 3. Cathode

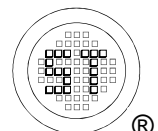
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta JA}$	625	$^\circ\text{C/W}$

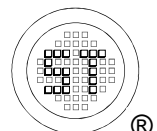
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{BR(R)}$	100	-	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 $V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$ at $V_R = 75 \text{ V}, T_J = 150^\circ\text{C}$	I_R	- - - -	30 2.5 60 100	nA μA μA μA
Diode Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_{tot}	-	2	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}, I_{rr} = 0.1 \times I_R, V_R = 6 \text{ V}, R_L = 100 \Omega$	t_{rr}	-	4	ns



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Electrical Characteristics Curves

Fig 1. Power Derating Curve

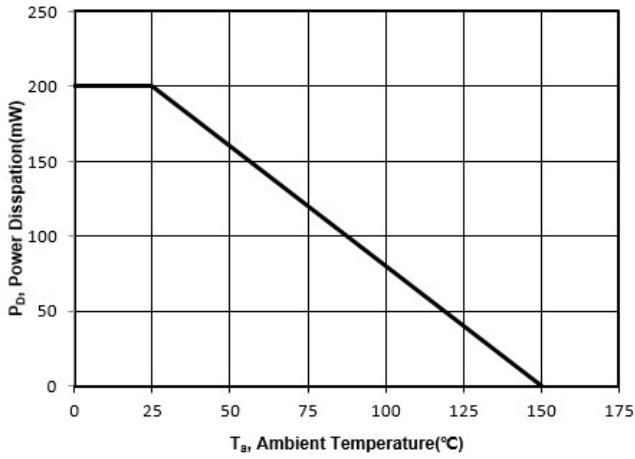


Fig 2. Forward Characteristics

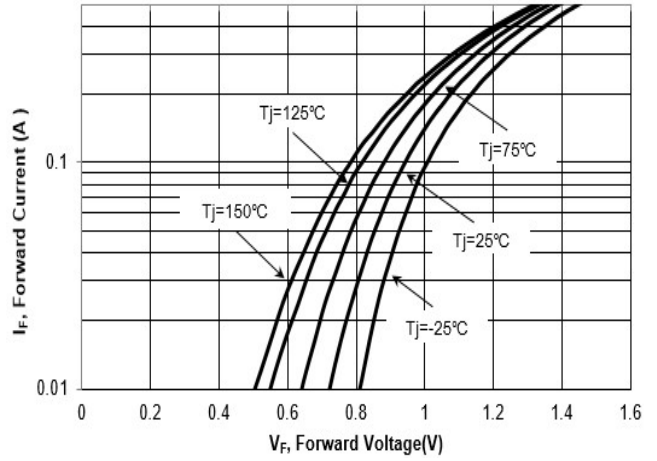


Fig 3. Reverse Current vs. Reverse Voltage

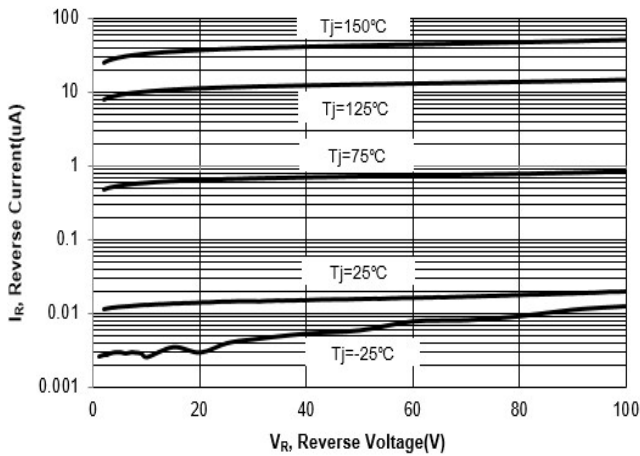
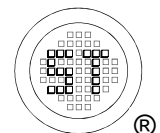
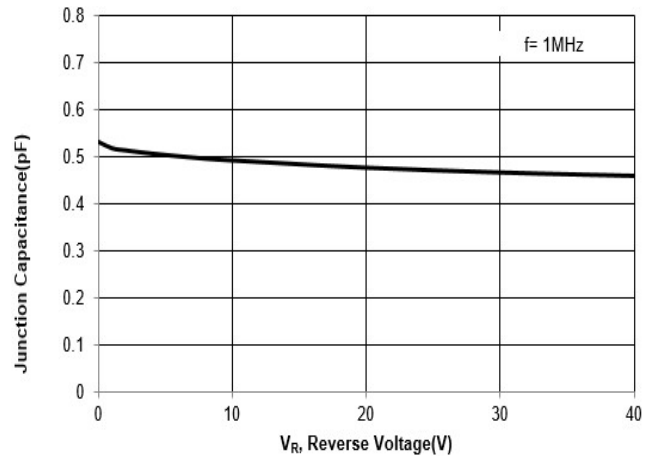


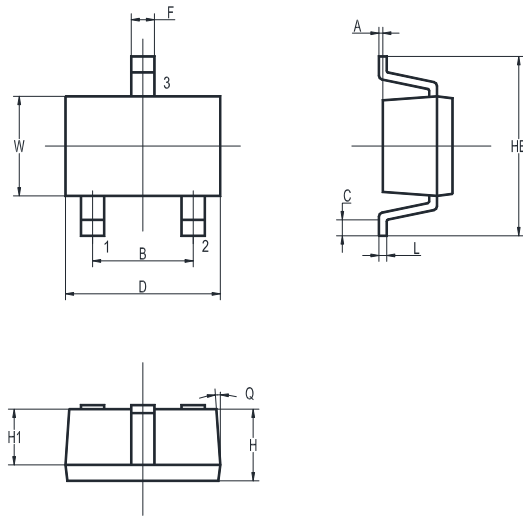
Fig 4. Total Capacitance vs. Reverse Voltage



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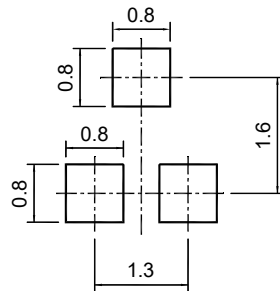
Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

Recommended Soldering Footprint

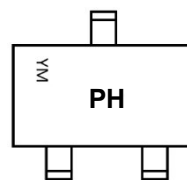


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

- " PH " = Part No.
 - " YM " = Date Code Marking
 - " Y " = Year
 - " M " = Month
- Font type: Arial



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