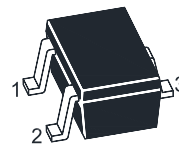
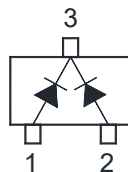


BAV70E

Silicon Epitaxial Planar Switching Diode



1. Anode 2. Anode 3. Cathode
SOT-523 Plastic Package

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

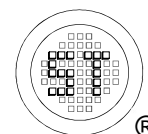
Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	70	V
Continuous Forward Current	$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	500	mA
Total Power Dissipation ¹⁾	P_{tot}	225	mW
Total Power Dissipation ²⁾	P_{tot}	360	mW
Operating Junction and Storage Temperature Range	T_J, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	555 ¹⁾ 345 ²⁾	$^\circ\text{C/W}$

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

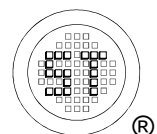
²⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with 1-inch square copper plate.



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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	70	-	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	- - - -	715 855 1000 1250	mV
Reverse Current at $V_R = 70\text{ V}$ at $V_R = 50\text{ V}$	I_R	- -	5 100	μA nA
Total Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_{tot}	-	1.5	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$, $V_R = 6\text{ V}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\text{ }\Omega$	t_{rr}	-	6	ns



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Electrical Characteristics Curves

Fig 1. Power Derating Curve

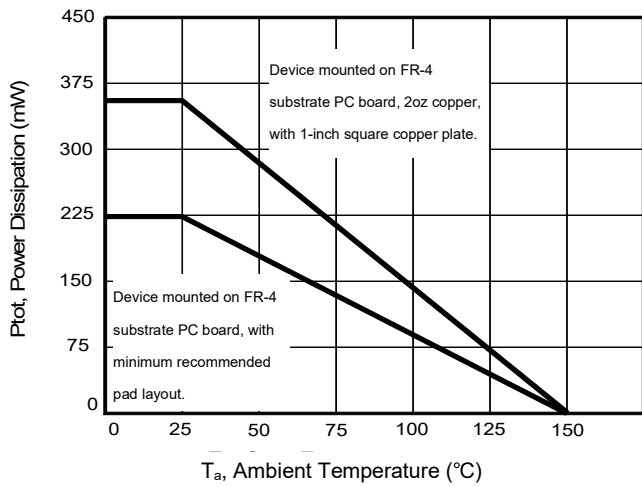


Fig 2. Capacitance Characteristics

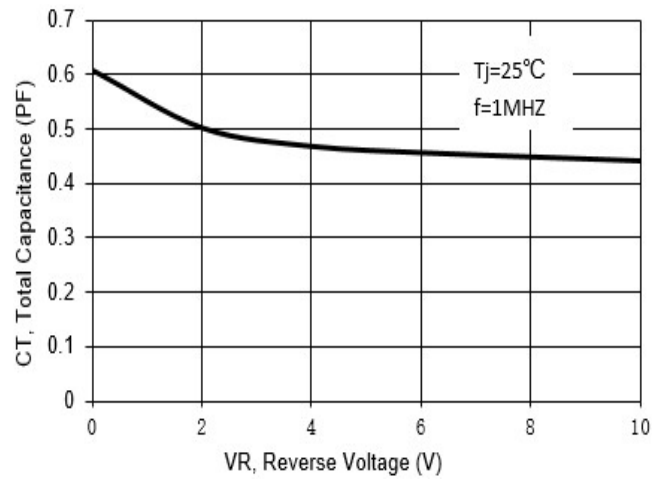


Fig 3. Reverse Characteristics

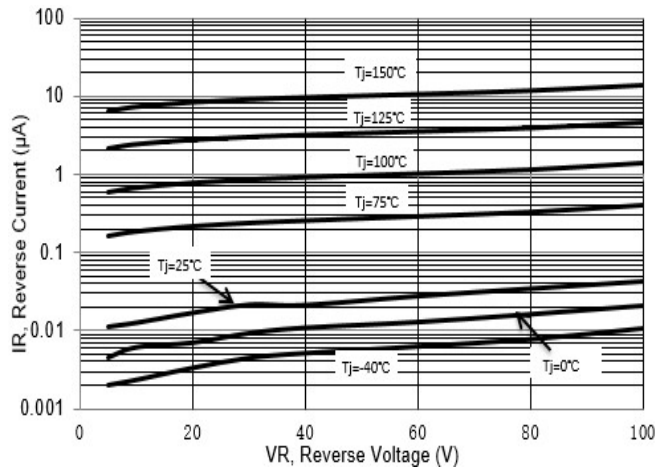


Fig 4. Forward Characteristics

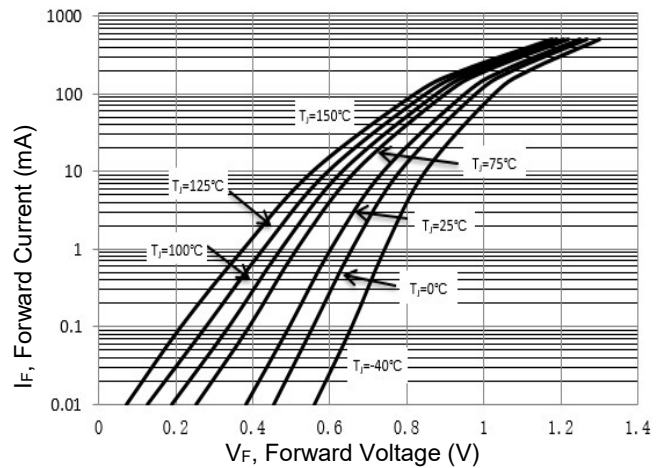
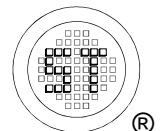
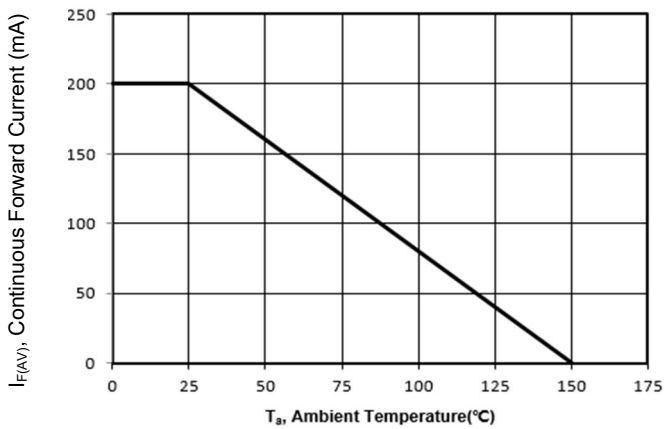


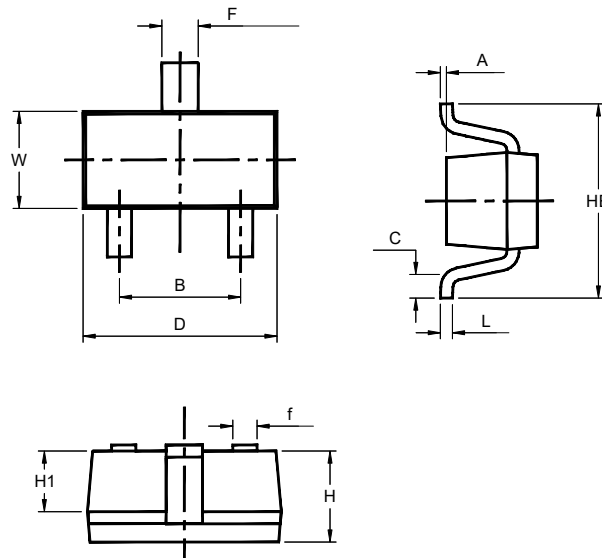
Fig 5. $I_{F(AV)}$ Derating Curve



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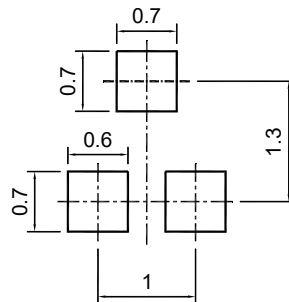
Package Outline Dimensions (Units: mm)

SOT-523



UNIT	A	B	C	D	H	H1	HE	F	f	L	W
mm	0.1 MAX.	1.05 0.95	0.17 MIN.	1.7 1.5	0.85 0.65	0.6 0.4	1.7 1.5	0.35 0.25	0.25 0.15	0.15 0.05	0.9 0.7

Recommended Soldering Footprint

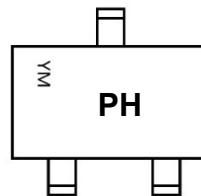


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000

Marking information

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



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