

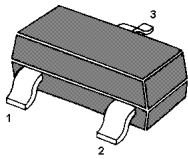
BAV23 / SE / CC / CA-CH

Silicon Epitaxial Planar Diodes

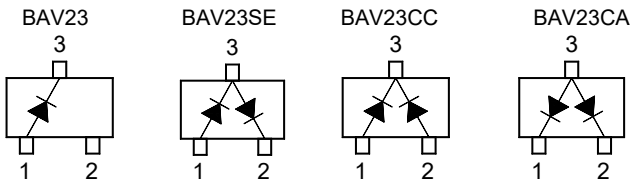
High voltage switching diode

Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant



SOT-23 Plastic Package



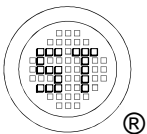
Absolute Maximum Ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V _{RRM}	250	V
Reverse Voltage	V _R	200	V
Forward Current	I _{F(AV)}	400	mA
Repetitive Peak Forward Current	I _{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	I _{FSM}	1.7 3 9	A
Power Dissipation ¹⁾	P _D	350	mW
Operating Junction and Storage Temperature Range	T _j , T _{stg}	- 65 to + 150	°C

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	R _{θJA}	357	°C/W

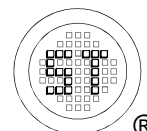
¹⁾ Device mounted on FR-4 PCB with minimum recommended pad layout.



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

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$	$V_{(BR)R}$	250	-	V
Forward Voltage at $I_F = 100\ \text{mA}$ at $I_F = 200\ \text{mA}$	V_F	- -	1 1.25	V
Reverse Current at $V_R = 200\ \text{V}$, $T_j = 25^\circ\text{C}$ at $V_R = 200\ \text{V}$, $T_j = 150^\circ\text{C}$	I_R	- -	100 100	nA μA
Total Capacitance at $V_R = 0\ \text{V}$, $f = 1\ \text{MHz}$	C_{tot}	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\ \text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\ \Omega$	t_{rr}	-	50	ns



Electrical Characteristic Curve

Fig 1. Power Derating Curve

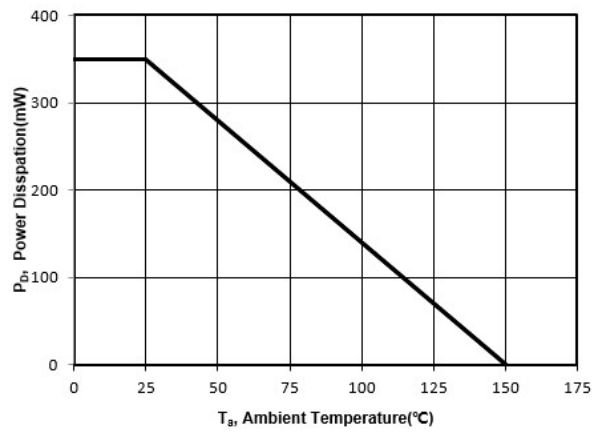


Fig 2. Forward Characteristic Curve

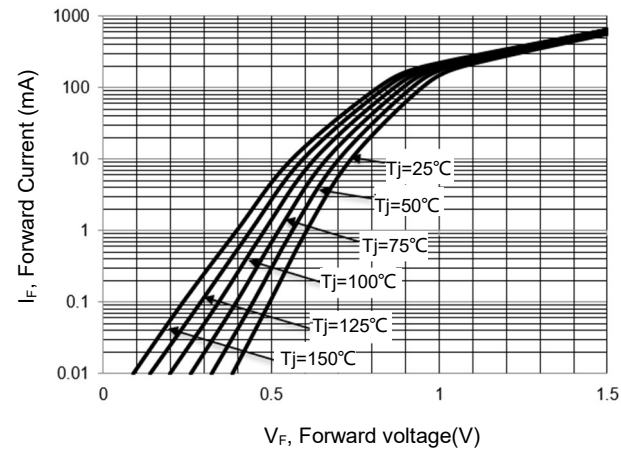


Fig 3. Reverse Characteristic Curve

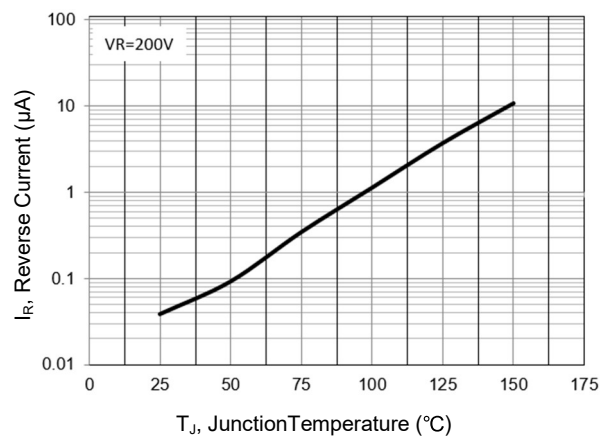
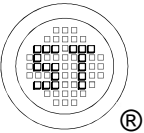
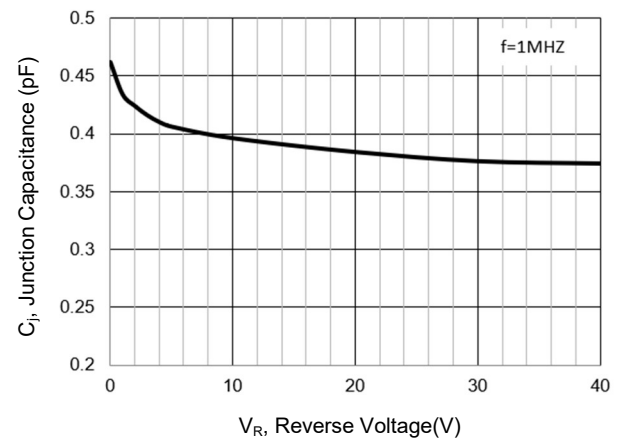
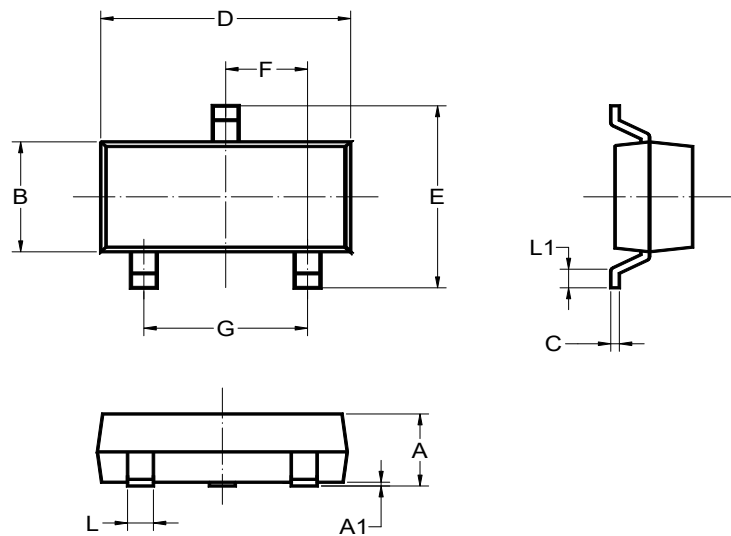


Fig 4. Junction Capacitance



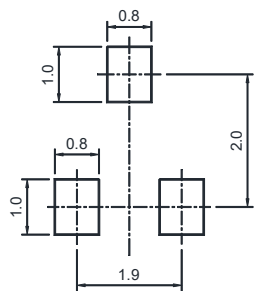
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint

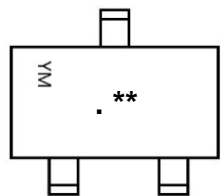


Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" ** " = Part No.
BAV23: HC, BAV23SE: PY
BAV23CC: PZ, BAV23CA: RA
" . " = HAF (Halogen and Antimony Free)
" YM " = Date Code Marking
" Y " = Year
" M " = Month



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