BAS116/BAW156/BAV170/BAV199

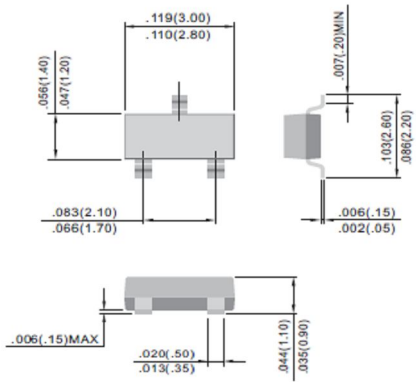
Surface Mount Low Leakage Switching Diodes

Votage 100 Volts Power 250mWatts

FEATURES

- Suface mount package ideally suited for automatic insertion.
- Very low leakage current. 2pA typical at VR=75V.
- Low capacitance. 2pF max at VR=0V, f=1MHz
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

SOT-23



Unit: inch (mm)

MECHANICAL DATA

- Case: SOT-23 plastic
- Terminals: Solderable per MIL-STD-202G, Method 208
- Approx weight: 0.008 gram
- Marking: BAS116: P1,BAW156:P4,BAV170:P3,BAV199:P2

ABSOLUTE RATINGS (each diode)

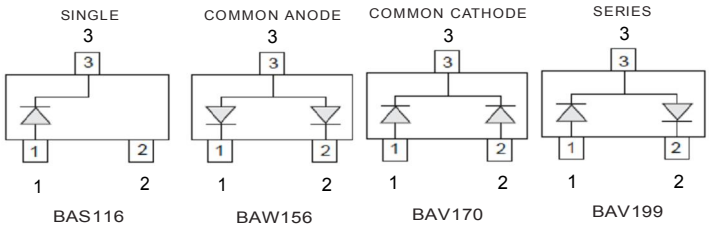
PARAMETER	Symbol	Value	Units
Reverse Voltage	V_R	75	V
Peak Reverse Vltage	V_{RM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at t=1.0us	I_{FSM}	2.0	A

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	P_{TOT}	250	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	500	°C/W
Junction Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

NOTE:

1. FR-5 Board = 1.0 x 0.75 x 0.062 in.
2.



ELECTRICAL CHARACTERISTICS (each diode) (T_A=25°C, unless otherwise noted)

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	I_R=100 uA	75			V
Reverse Current	I_R	V_R=75 V V_R=75 V, T_J=150 °C		0.002 8.0	5 80	nA
Forward Voltage	V_F	I_F=1mA I_F=10mA I_F=50mA I_F=150mA			0.9 1.0 1.1 1.25	V
Total Capacitance	C_T	V_R=0 V, f=1MHz			2.0	pF
Reverse Recovery Time	T_{RR}	I_F=I_R=10mA, R_L=100&			3.0	us

CHARACTERISTIC CURVES (each diode)

Fig. 1 Reverse Leakage vs. JunctionTemperature

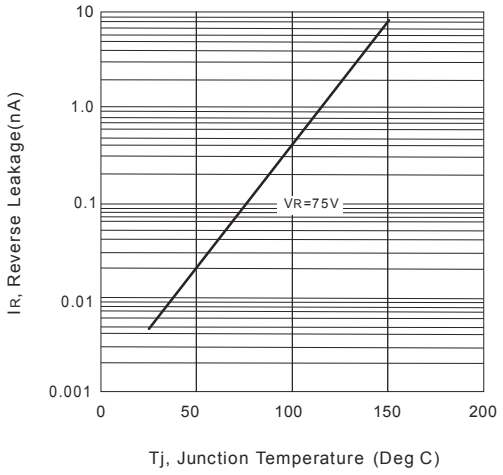


Fig. 2 Forward Current vs. Forward Voltage

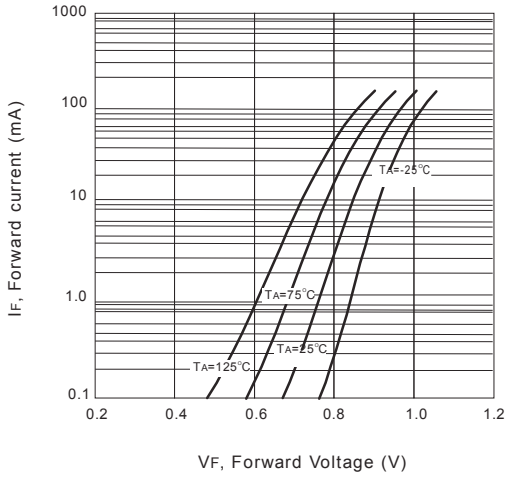


Fig. 3 Total capacitance vs. Reverse Voltage