DATA SHEET

BAS116/BAW156/BAV170/BAV199

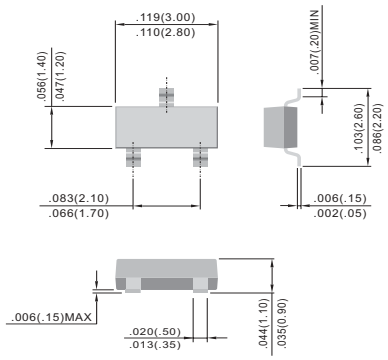
SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE 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)

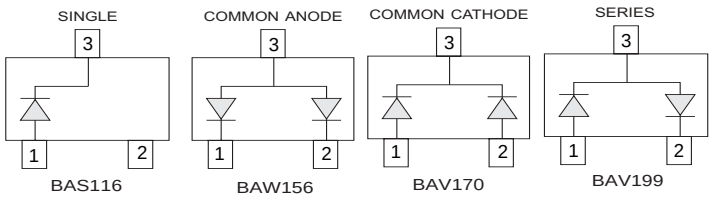
PARAMETER	Symbol	Value	Units
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at t=1.0us	I_{FSM}	2.0	A

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.



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=100Ω			3.0	us

CHARACTERISTIC CURVES (each diode)

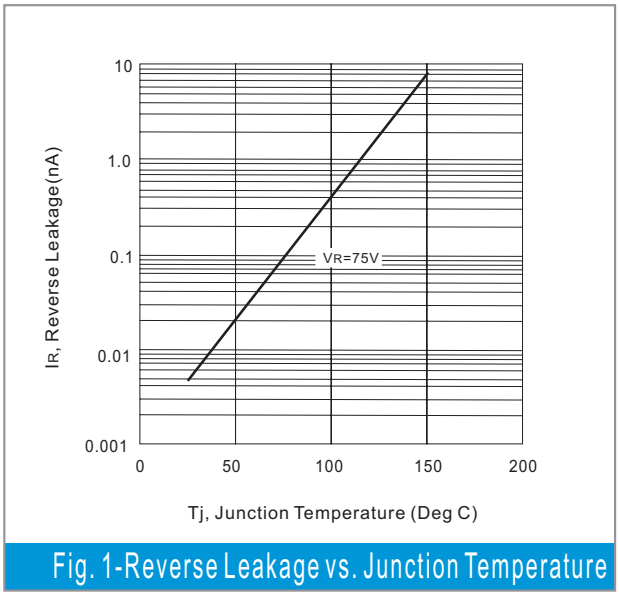


Fig. 1-Reverse Leakage vs. Junction Temperature

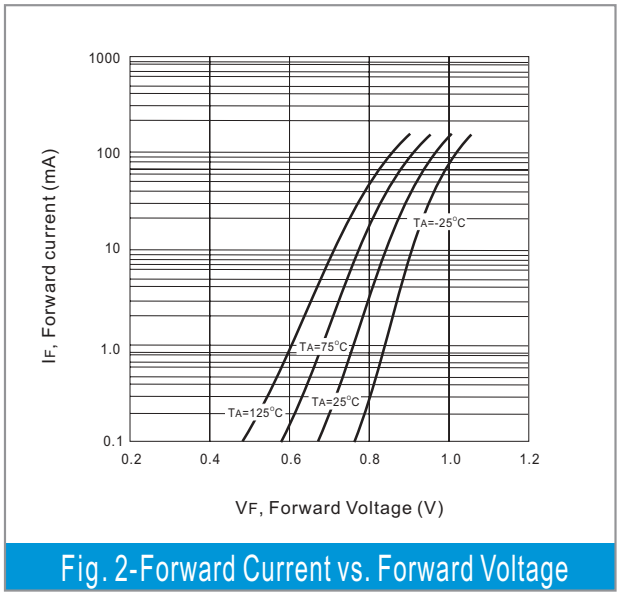


Fig. 2-Forward Current vs. Forward Voltage

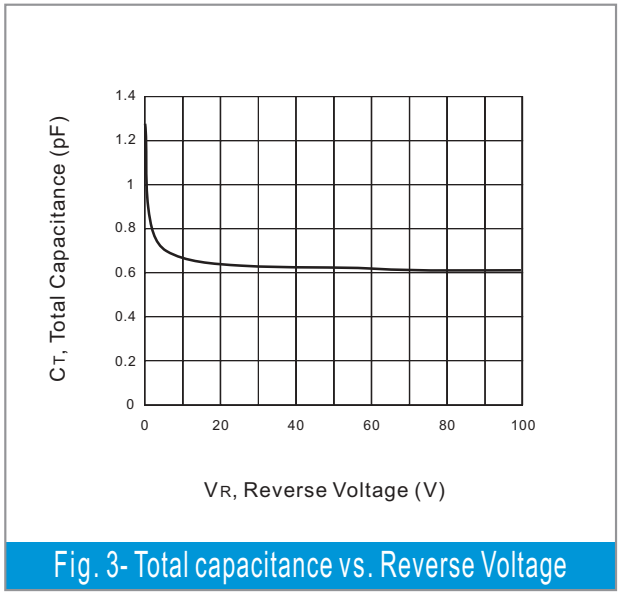
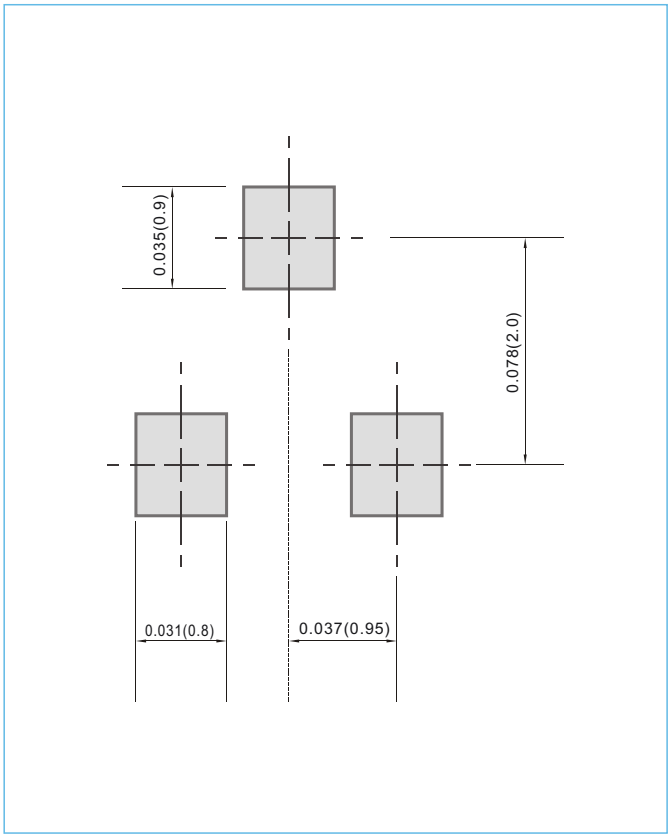


Fig. 3- Total capacitance vs. Reverse Voltage

MOUNTING PAD LAYOUT

SOT-23 Unit: inch (mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3.0K per 7" plastic Reel

LEGAL STATEMENT

IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.