

BAS116-AU/BAW156-AU/BAV170-AU/BAV199-AU

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE 100 Volts **POWER** 250mWatts

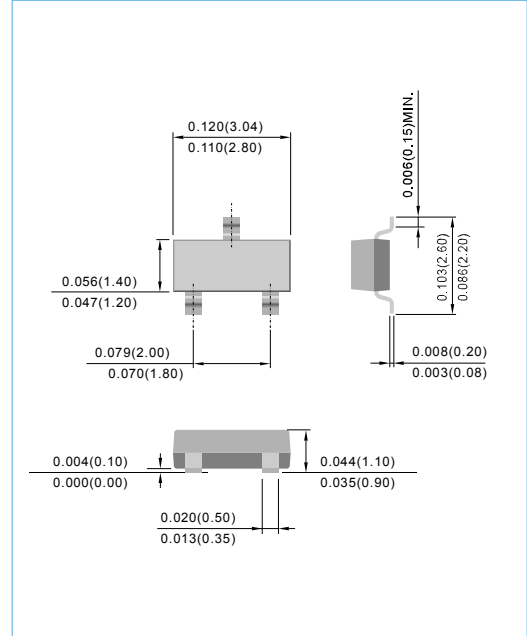
SOT-23 Unit : inch(mm)

FEATURES

- Surface 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
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23 plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight: 0.0084 grams
- Marking: BAS116-AU: PA,BAW156-AU:P4,BAV170-AU:P3,BAV199-AU:PB



ABSOLUTE RATINGS (each diode)

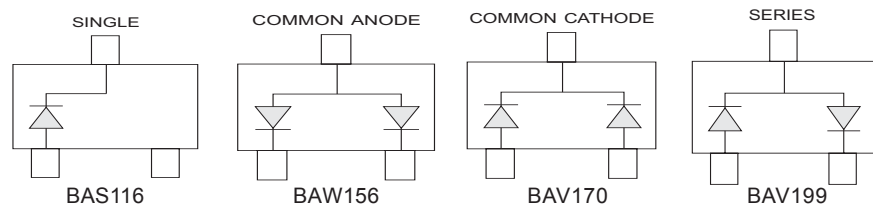
PARAMETER	Symbol	Value	Units
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at $t=1.0\mu s$	I_{FSM}	4.0	A

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	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

NOTE:

1. FR-4 Board = 70 x 60 x 1mm.



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

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100 \mu A$	75	-	-	V
Reverse Current	I_R	$V_R=75 V$ $V_R=75 V, T_J=150 ^\circ C$	-	0.002 8.0	5 80	nA
Forward Voltage	V_F	$I_F=1 mA$ $I_F=10 mA$ $I_F=50 mA$ $I_F=150 mA$	-	-	0.9 1.0 1.1 1.25	V
Total Capacitance	C_j	$V_R=0 V, f=1 MHz$	-	-	2.0	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10 mA, R_L=100 \Omega$	-	-	3.0	us

CHARACTERISTIC CURVES (each diode)

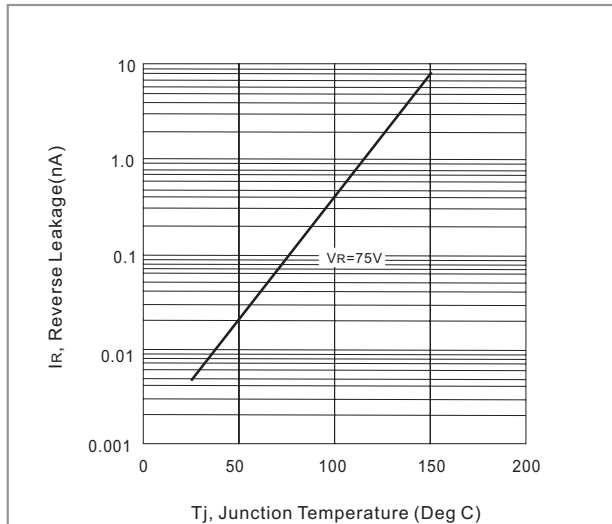


Fig. 1-Reverse Leakage vs. Junction Temperature

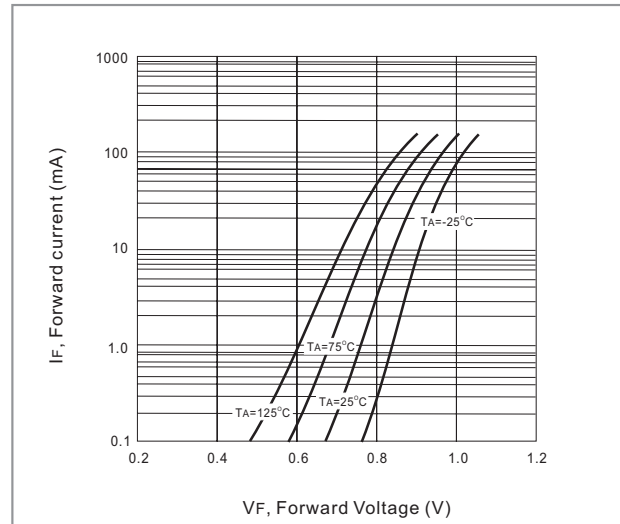


Fig. 2-Forward Current vs. Forward Voltage

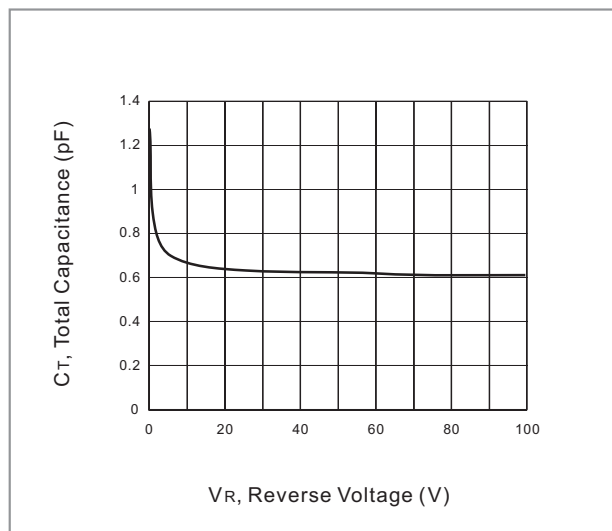
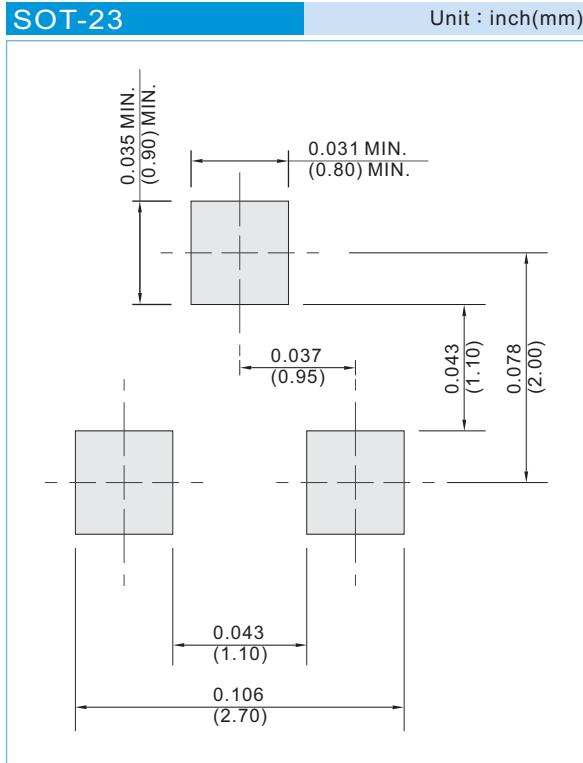


Fig. 3- Total capacitance vs. Reverse Voltage

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

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