

DATA SHEET

BAS116/BAW156/BAV170/BAV199

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE

100 Volts

POWER

250mWatts

SOT- 23

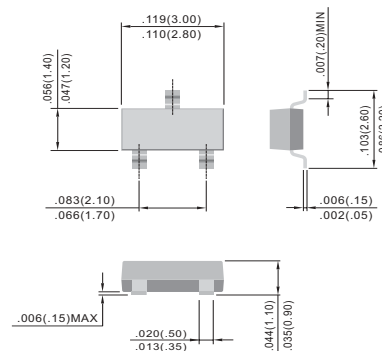
Unit: inch (mm)

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
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

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)

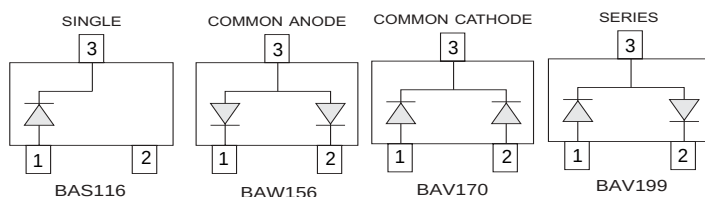
PARAMETER	Sym bol	Value	Units
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current at $t \leq 1.0\mu s$	I_{FSM}	2.0	A

THERMAL CHARACTERISTICS

PARAMETER	Sym bol	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-5 Board = 1.0 x 0.75 x 0.062 in.



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

PARAMETER	Sym bol	Test Condition	M I N .	TYP .	M A X .	U nits
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\text{ }\mu\text{A}$	75			V
Reverse Current	I_R	$V_R=75\text{ V}$ $V_R=75\text{ V}, T_J=150\text{ }^\circ\text{C}$		0.002 8.0	5 80	nA
Forward Voltage	V_F	$I_F=1\text{ mA}$ $I_F=10\text{ mA}$ $I_F=50\text{ mA}$ $I_F=150\text{ mA}$			0.9 1.0 1.1 1.25	V
Total Capacitance	C_T	$V_R=0\text{ V}, f=1\text{ MHz}$			2.0	pF
Reverse Recovery Time	T_{RR}	$I_F=I_R=10\text{ mA}, R_L=100\Omega$			3.0	us

CHARACTERISTIC CURVES (each diode)

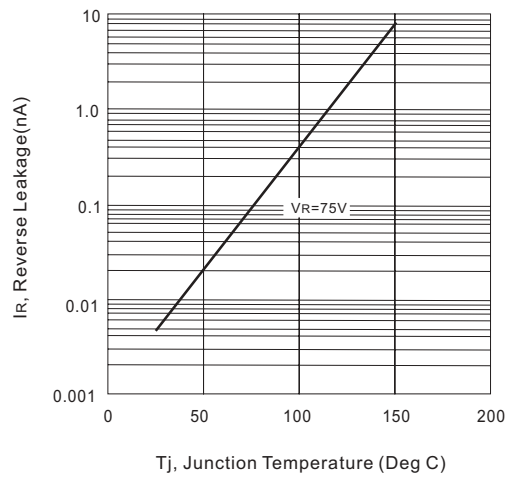


Fig. 1-Reverse Leakage vs. Junction Temperature

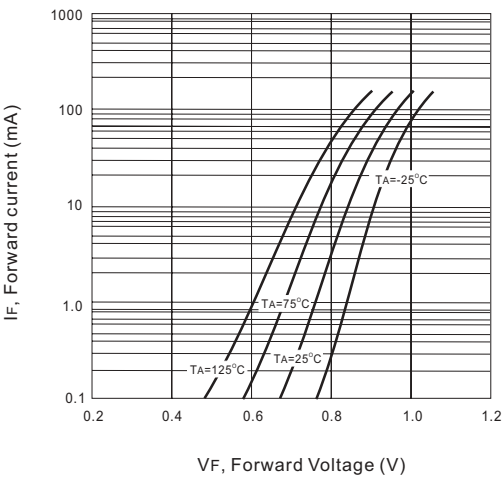


Fig. 2-Forward Current vs. Forward Voltage

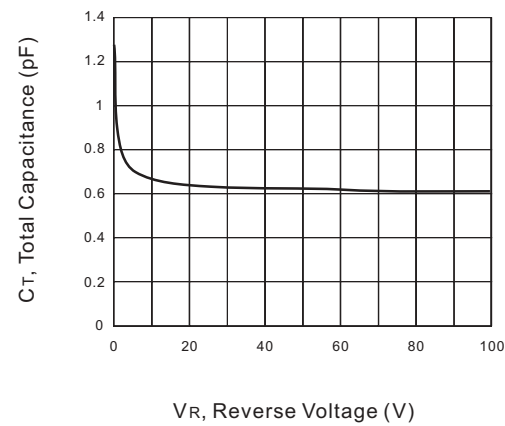
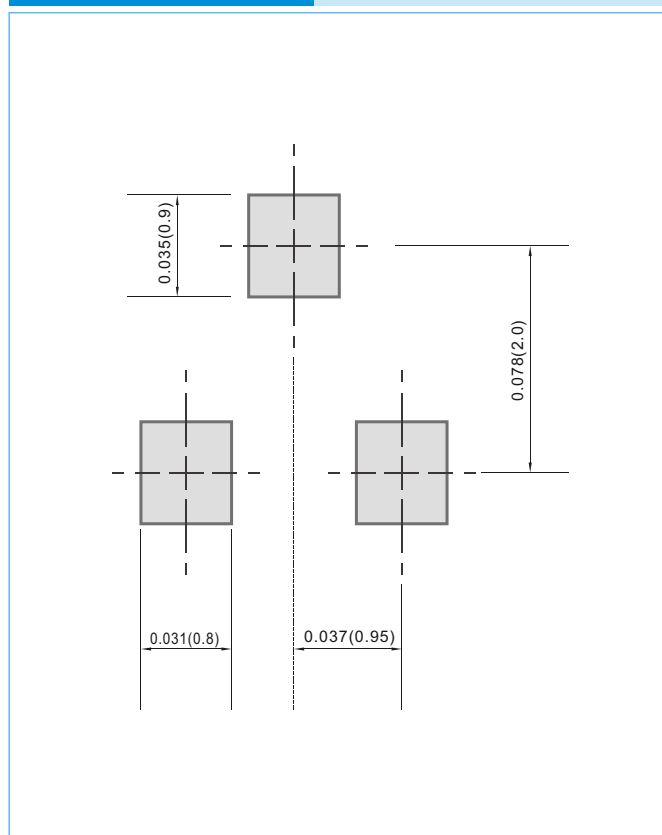


Fig. 3- Total capacitance vs. Reverse Voltage

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