

DATA SHEET

BAS116W/BAW156W/BAV170W/BAV199W

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE 100 Volts

POWER 200mWatts

SOT-323

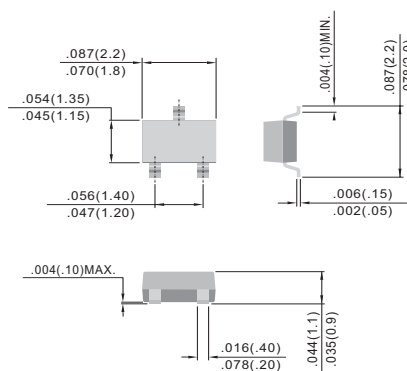
Unit: inch (mm)

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
- Both normal and Pb free product are available :
Normal : 80~95% Sn, 5~20% Pb
Pb free: 98.5% Sn above

MECHANICAL DATA

- Case: SOT-323 plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx weight: 0.0052 gram
- Marking: BAS116W :P1,BAW156W :P4,BAV170W :P3,BAV199W :P2



ABSOLUTE RATINGS (each diode)

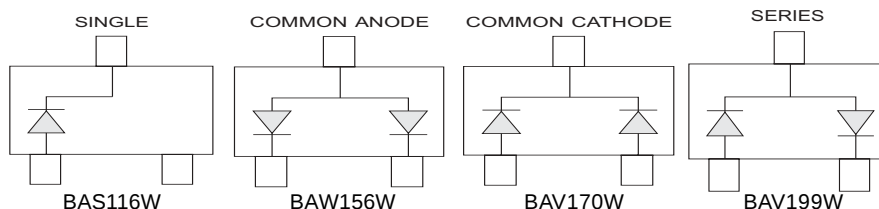
PARAMETER	Sym bol	Value	Units
Reverse Voltage	V _R	75	V
Peak Reverse Voltage	V _{RM}	100	V
Continuous Forward Current	I _F	0.2	A
Non-repetitive Peak Forward Surge Current at t ₁ =1.0us	I _{FSM}	2.0	A

THERMAL CHARACTERISTICS

PARAMETER	Sym bol	Value	Units
Power Dissipation (Note 1)	P _{TOT}	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	R _{θJA}	625	°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) ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

PARAMETER	Sym bol	Test Condition	M I N .	T Y P .	M A X .	U n i t s
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\text{ }\mu\text{A}$	75			V
Reverse Current	I_R	$V_R=75\text{ V}$ $V_R=75\text{ V}, T_J=150^{\circ}\text{C}$		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	μs

CHARACTERISTIC CURVES (each diode)

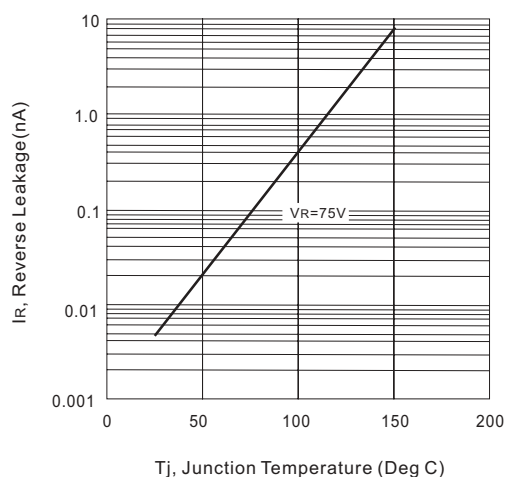


Fig. 1-Reverse Leakage vs. Junction Temperature

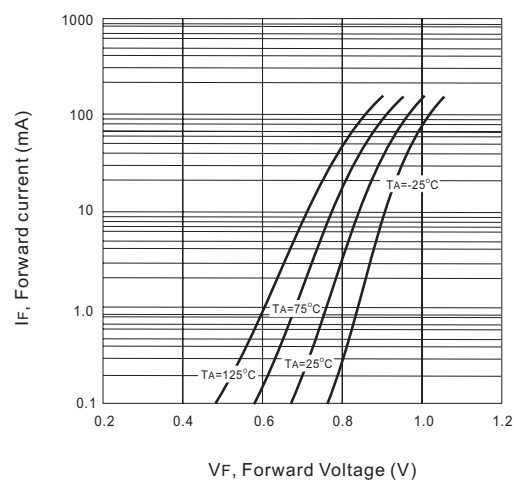


Fig. 2-Forward Current vs. Forward Voltage

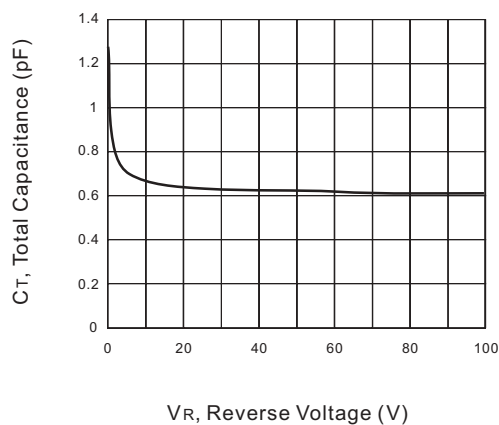
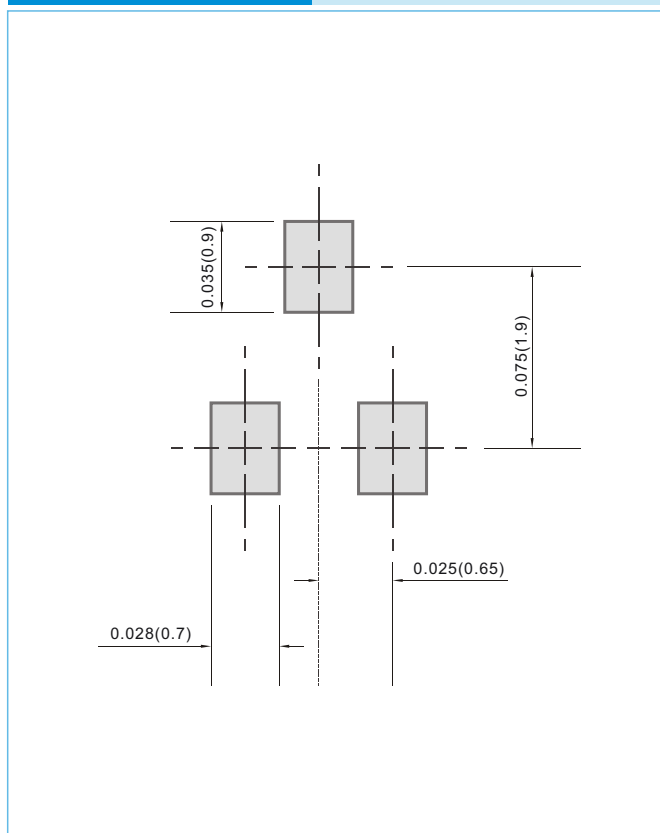


Fig. 3- Total capacitance vs. Reverse Voltage

MOUNTING PAD LAYOUT

SOT-323

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.

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