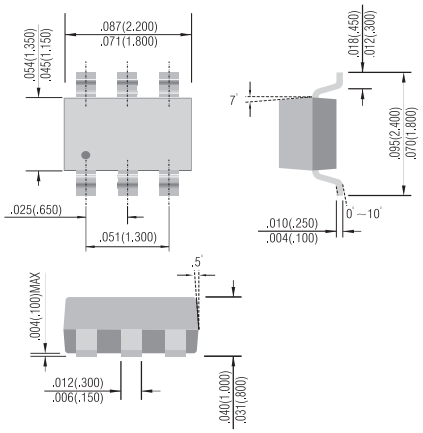
BAS116TW/BAW156DW/BAV170DW/BAV199S

SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES

VOLTAGE 100 Volts **POWER** 200mWatts

SOT-363 Unit: inch (mm)



FEATURES

- Suface mount package ideally suited for automatic insertion.
- Very low leakage current. 2nA typical at VR=75V.
- Low capacitance. 2pF max at VR=0V, f=1MHz
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOT-363 plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight: 0.008 gram
- Marking: BAS116TW :PA,BAW156DW :P4,BAV170DW :P3,BAV199S :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=1.0us	I_{FSM}	4.0	A

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Power Dissipation (Note 1)	P_{TOT}	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R\theta_{JA}$	625	°C/W
Junction Temperature	T_J	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

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

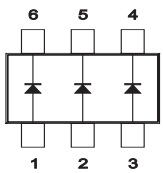


Fig.48
BAS116TW

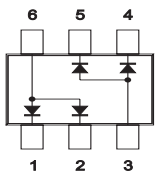


Fig.51
BAW156DW

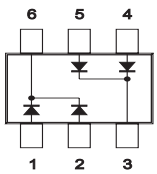


Fig.52
BAV170DW

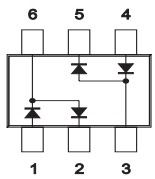


Fig.32
BAV199S

BAS116TW/BAW156DW/BAV170DW/BAV199S

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)

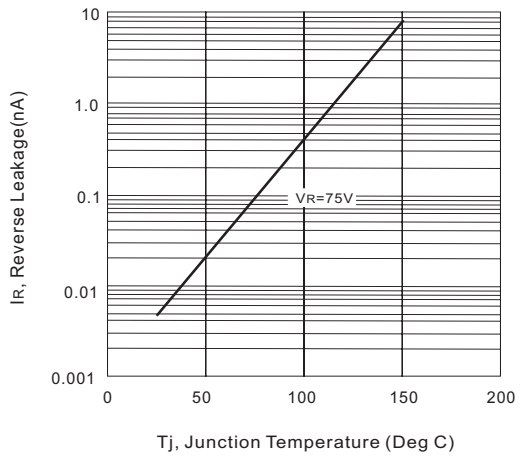


Fig. 1-Reverse Leakage vs. Junction Temperature

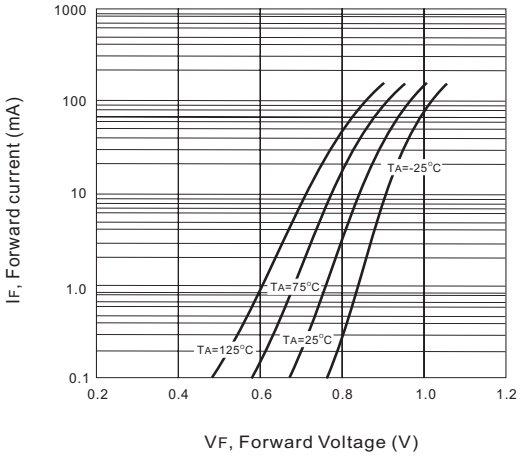


Fig. 2-Forward Current vs. Forward Voltage

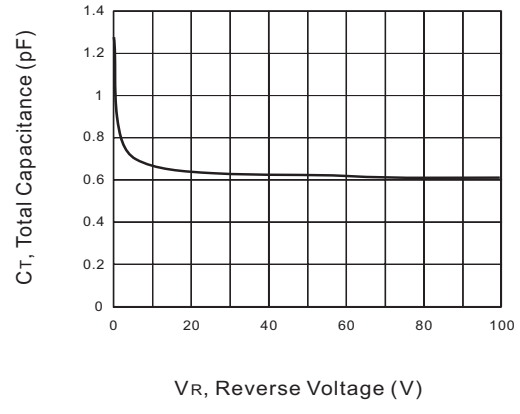


Fig. 3- Total capacitance vs. Reverse Voltage