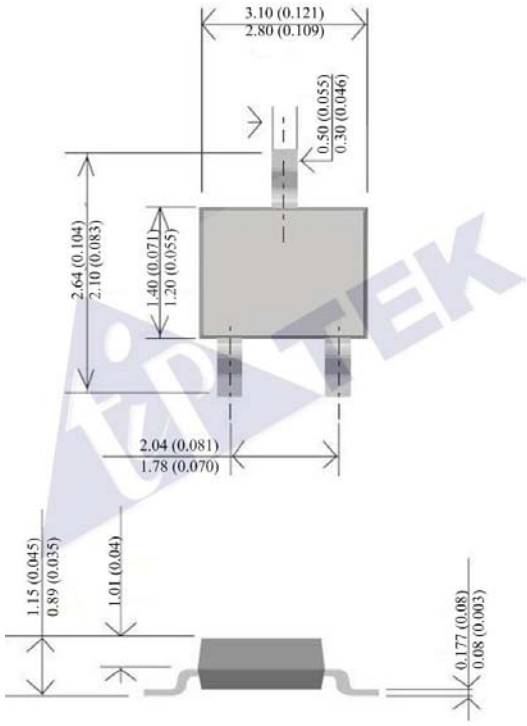
SURFACE MOUNT SWITCHING DIODES



CASE：SOT-23

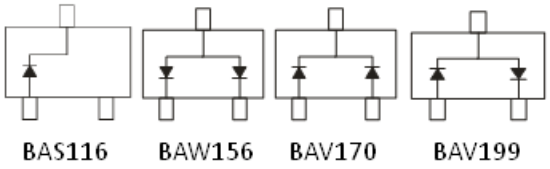
DIMENSIONS IN MILLIMETERS AND (INCHES)

FEATURES

- FAST SWITCHING SPEED
- ELECTRICALLY IDENTICAL TO STANDERD JEDEC
- HIGH CONDUCTANCE
- SURFACE MOUNT PACKAGE IDEALLY SUITED FOR AUTOMATIC INSERTION
- 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-23 PLASTIC CASE
- TERMINALS：SOLDERABLE PER MIL-STD-202, METHOD208
- APPROX.WEIGHT:0.008GRAM
- Pb Free: BAS116/BAW156/BAV170/BAV199
  Halogen Free: BAS116-H /BAW156-H /BAV170-H /BAV199-H



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED.

PARAMETER		SYMBOL	VALUE	UNITS
MAXIMUM REVERSE VOLTAGE		V_R	85	V
RMS REVERSE VOLTAGE		$V_{R(RMS)}$	60	V
FORWARD CONTINUOUS CURRENT	SINGLE DIODE	I_F	215	mA
	DOUBLE DIODE		125	
NON-REPETITIVE PEAK FORWARD SURGE CURRENT @t=1.0s		I_{FSM}	500	mA
POWER DISSIPATION DERATE ABOVE 25℃(NOTE 1)		P_D	150	mW
JUNCTION TEMPERATURE		T_J	-65 TO +150	℃
STORAGE TEMPERATURE		T_{stg}	-65 TO +150	℃

ELECTRICAL CHARACTERISTICS (AT T_A =25°C UNLESS OTHERWISE NOTED)

PARAMETER		SYMBOL	VALUE	UNITS
REVERSE BREAKDOWN VOLTAGE	I_R=100 μA	$V_{BR(R)}$	MIN. 85	V
MAXIMUM FORWARD VOLTAGE	I_F=1.0mA	V_F	0.9	V
	I_F=10mA		1.0	
	I_F=50mA		1.1	
	I_F=150mA		1.25	
MAXIMUM DC REVERSE CURRENT AT 75V	Tj=25℃	I_R	5.0	nA
	Tj=150℃		80	
TYPICAL TOTAL CAPACITANCE (NOTE 2)		C_T	2	pF
MAXIMUM REVERSE RECOVERY (I_F=I_R=10mA,I_{rr}=0.1xI_R,R_L=100Ω)		t_{rr}	3.0	μs

NOTE: 1.DEVICE MOUNTED ON FR-4 PC BOARD WITH RECOMMENDED PAD LAYOUT.
2. C_J AT V_R=0,f=1MHZ

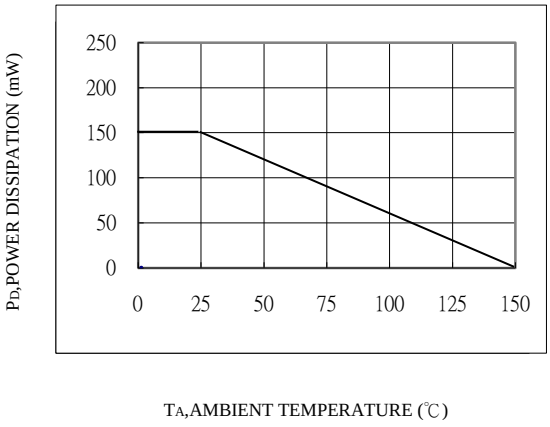


Fig.1-POWER DERATING CURVE

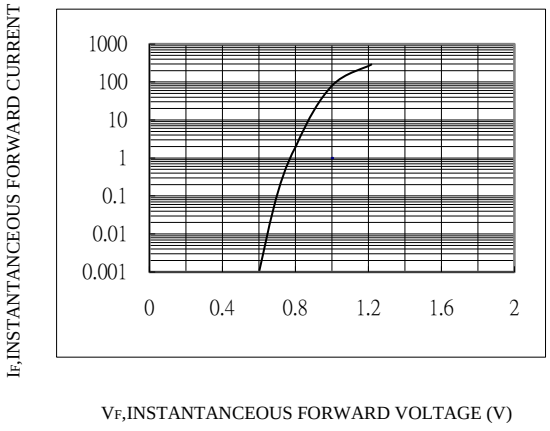


Fig.2-TYPICAL FORWARD CHARACTERISTICS

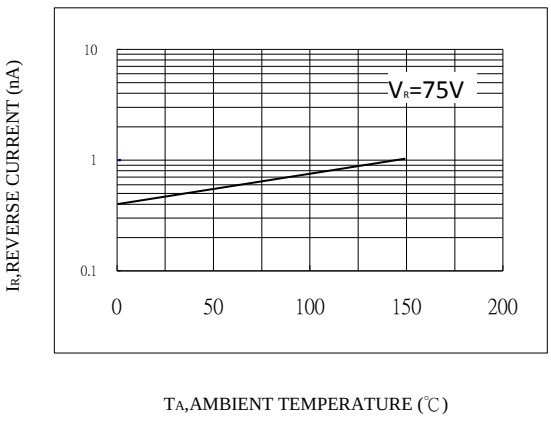


Fig.3-TYPICAL REVERSE CHARACTERISTICS

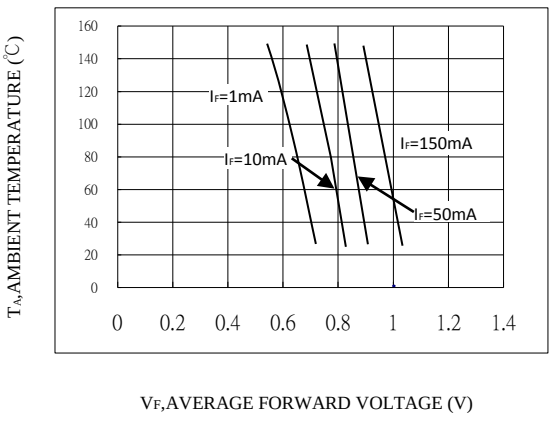


Fig.4-TYPICAL FORWARD VOLTAGE VS AMBIENT TEMPERATURE