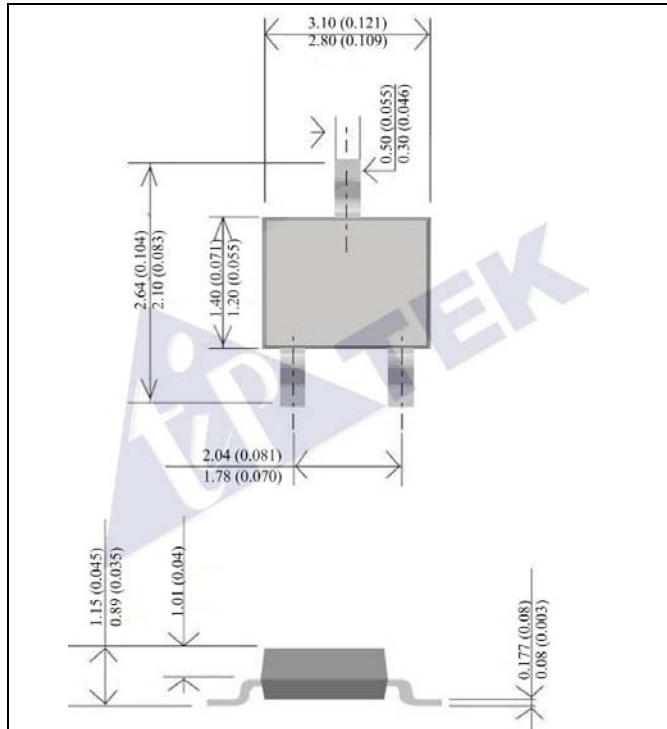


SURFACE MOUNT SWITCHING DIODES



CASE : SOT-23

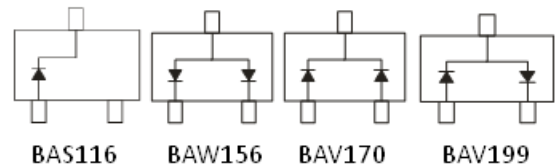
DIMENSIONS IN MILLIMETERS AND (INCHES)

FEATURES

- FAST SWITCHING SPEED
- ELECTRICALLY IDENTICAL TO STANDARD 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°C (NOTE 1)		P_D	150	mW
JUNCTION TEMPERATURE		T_J	-65 TO +150	°C
STORAGE TEMPERATURE		T_{stg}	-65 TO +150	°C
ELECTRICAL CHARACTERISTICS (AT $T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)				
PARAMETER		SYMBOL	VALUE	UNITS
REVERSE BREAKDOWN VOLTAGE	$I_R = 100 \mu\text{A}$	$V_{BR(R)}$	MIN. 85	V
MAXIMUM FORWARD VOLTAGE	$I_F = 1.0\text{mA}$	V_F	0.9	V
	$I_F = 10\text{mA}$		1.0	
	$I_F = 50\text{mA}$		1.1	
	$I_F = 150\text{mA}$		1.25	
MAXIMUM DC REVERSE CURRENT AT 75V	$T_J = 25^\circ\text{C}$	I_R	5.0	nA
	$T_J = 150^\circ\text{C}$		80	
TYPICAL TOTAL CAPACITANCE (NOTE 2)		C_T	2	pF
MAXIMUM REVERSE RECOVERY ($I_F = I_R = 10\text{mA}$, $I_{tr} = 0.1 \times I_R$, $R_L = 100 \Omega$)		t_{rr}	3.0	μs

NOTE: 1.DEVICE MOUNTED ON FR-4 PC BOARD WITH RECOMMENDED PAD LAYOUT.

2. C_J AT $V_R = 0$, $f = 1\text{MHz}$

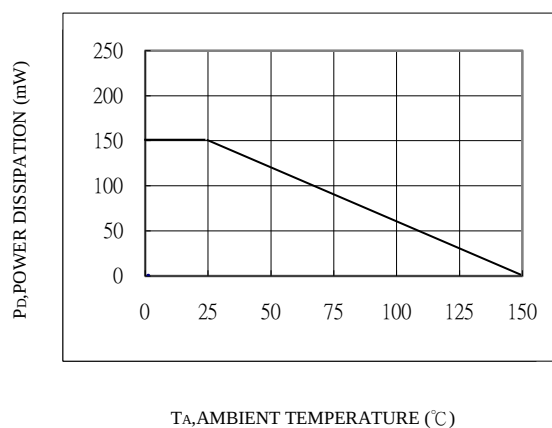


Fig.1-POWER DERATING CURVE

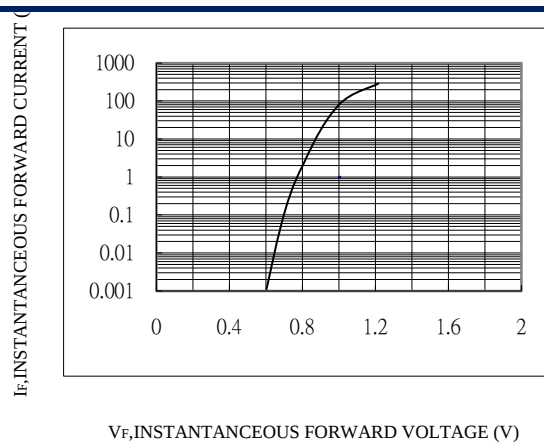


Fig.2-TYPICAL FORWARD CHARACTERISTICS

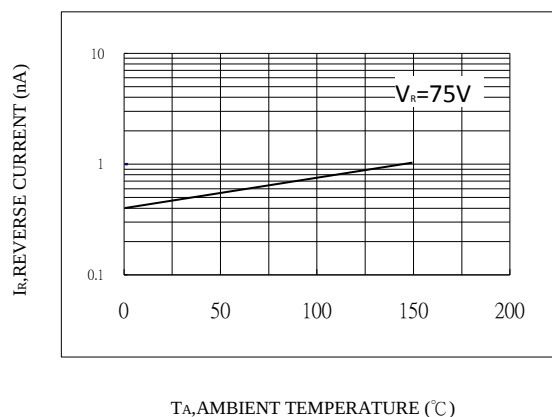


Fig.3-TYPICAL REVERSE CHARACTERISTICS

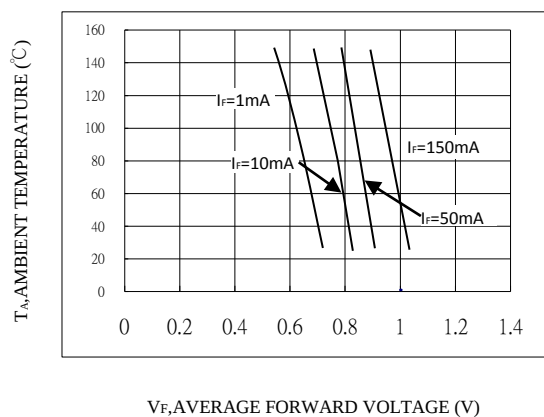


Fig.4-TYPICAL FORWARD VOLTAGE VS AMBIENT TEMPERATURE