HIGH VOLTAGE SWITCHING DIODE

- **Applications**
  High speed switching
- **Features**
  1) Small surface mounting type.
  2) High Speed. (t_{rr} = 50ns max.)
  3) High reliability with high surge current handing capability.

SC-76 / SOD-323
USC

CATHODE ANODE

- **Construction**
  Silicon epitaxial planar

- **Device Marking and Ordering Information**

Type	BAV21WS
Marking	HT3

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	250	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	625	mAdc

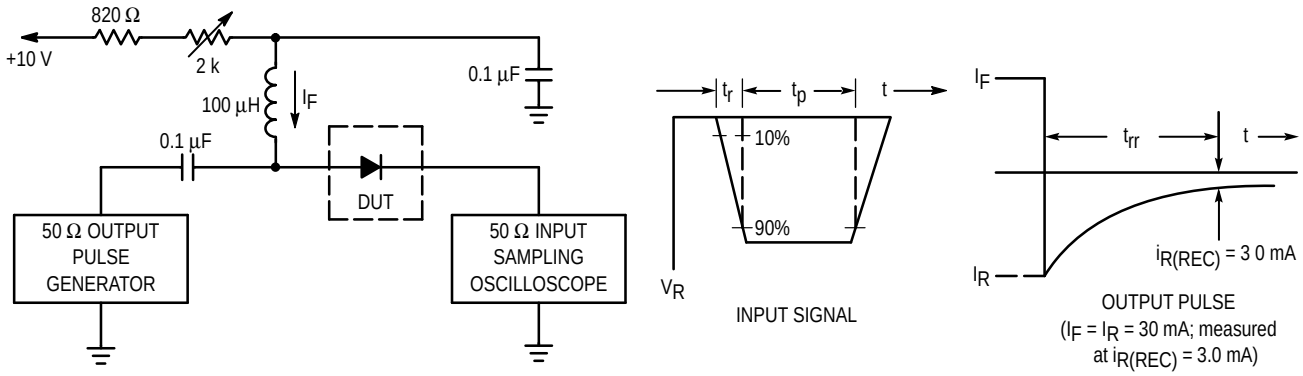
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR–5 Board,* T_A = 25°C	P_D	200	mW
Derate above 25°C		1.57	mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	–55 to+150	°C

*FR–5 Minimum Pad

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current	I_R			μAdc
(V_R = 200 Vdc)		–	1.0	
(V_R = 200 Vdc, T_J = 150°C)		–	100	
Reverse Breakdown Voltage (I_{BR} = 100 μAdc)	$V_{(BR)}$	250	–	Vdc
Forward Voltage	V_F			mV
(I_F = 100 mAdc)		–	1000	
(I_F = 200 mAdc)		–	1250	
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	–	5.0	pF
Reverse Recovery Time (I_F = I_R = 30 mAdc, R_L = 100 Ω)	t_{rr}	–	50	ns



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 30 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 30 mA.
3. t_p >> t_{rr}

Figure 1. Recovery Time Equivalent Test Circuit

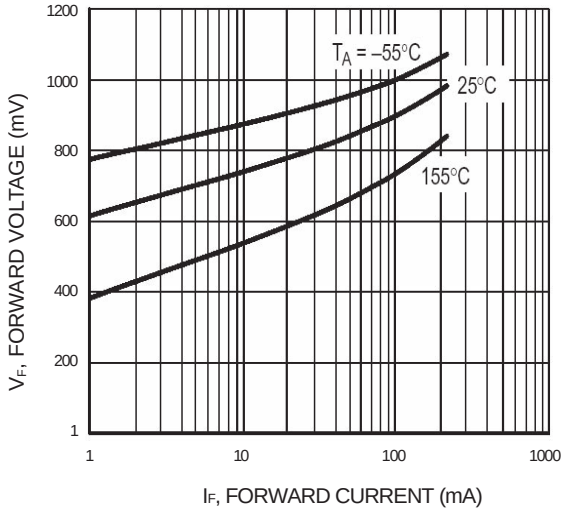


Figure 2. Forward Voltage

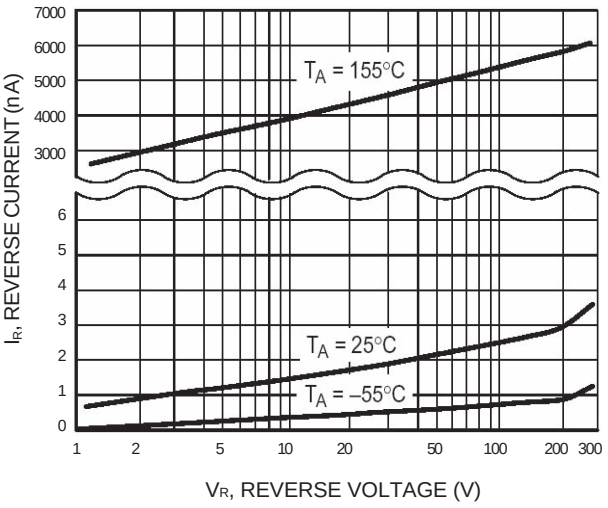
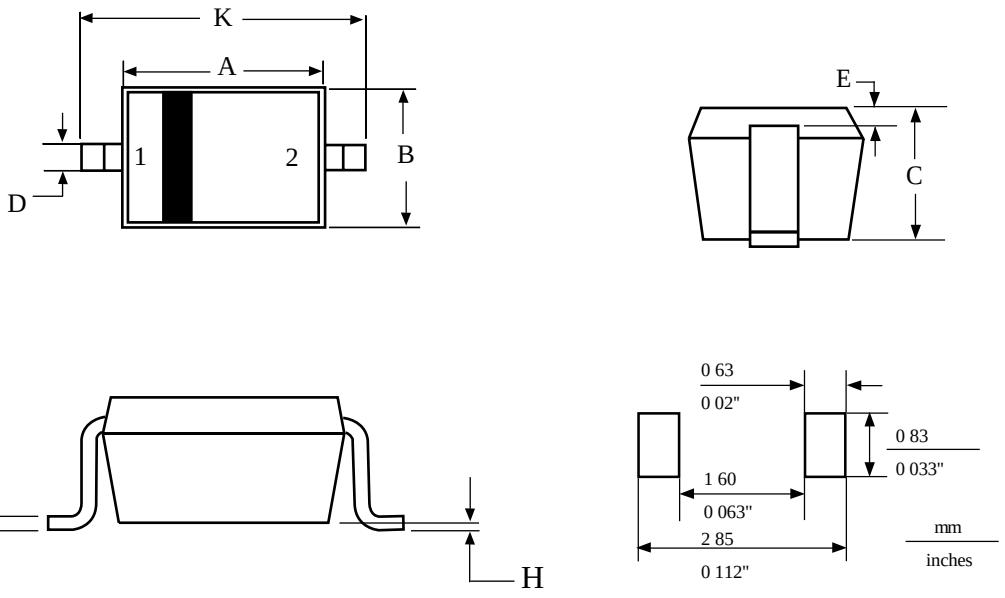


Figure 3. Reverse Leakage

SC-76 / SOD–323



NOTES:

1. DIMENSIONING AND TOLERANCING
   PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1 60	1 80	0 063	0 071
b	1 15	1 35	0 045	0 053
C	0 80	1 00	0 031	0 039
D	0 25	0 40	0 010	0 016
E	0 15 REF		0 006 REF	
H	0 00	0 10	0 000	0 004
J	0 089	0 177	0 0035	0 0070
K	2 30	2 70	0 091	0 106

PIN:1:CATHODE
2:ANODE