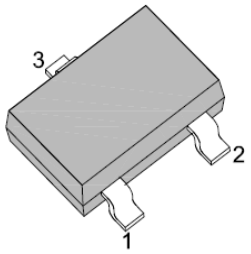
Multiple Terminals SMD Switching Diodes

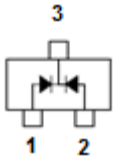
Features

- Low forward voltage and low current leakage
- High speed switching application
- RoHS Compliant



SOT-323

Mechanical Data



Case:	SOT-323, Plastic Package
Terminals:	Solderable per MIL-STD-202, Method 208
Weight:	Approx. 0.0052 gram

Maximum Ratings & Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	BAV70WS	Unit
	Marking Code	A4/JA	
V_R	Reverse Voltage	70	V
I_F	Forward Current	200	mA
I_{FM}	Peak Forward Surge Current	500	mA
P_d	Total Device Dissipation FR–5 Board (Note 1) TA=25°C	200	mW
	Derate above 25°C	1.6	mW/°C
$R_{th(JA)}$	Thermal Resistance Junction to Ambient	625	°C/W
P_d	Total Device Dissipation Alumina Substrate (Note 2), TA=25°C	300	mW
	Derate above 25°C	2.4	mW/°C
$R_{th(JA)}$	Thermal Resistance Junction to Ambient	417	°C/W
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150	°C

Note:

1. FR-5 board is 1.0”x0.75”x0.062”
2. Alumina=0.4”x0.3”x0.024” 99.5% Alumina

Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	Min.	Max.	Unit	Conditions
$V_{(BR)R}$	Reverse Breakdown Voltage	70	-	V	I_R=100μA
V_F	Maximum Instantaneous Forward Voltage	-	0.715	V	I_F=1mA
		-	0.855		I_F=10mA
		-	1.000		I_F=50mA
		-	1.250		I_F=150mA
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	-	60	μA	V_R=25V, T_J=150°C
		-	2.5		V_R=70V
		-	100		V_R=70V, T_J=150°C
C_T	Total Capacitance	-	1.5	pF	V_R=0V, f=1MHz
T_{rr}	Reverse Recovery Time	-	6.0	nS	I_F=I_R=10mA, I_R(REC)=1mA, V_R=5.0V R_L=100Ω

Typical Characteristics Curves

Fig1- Typical Forward Characteristics

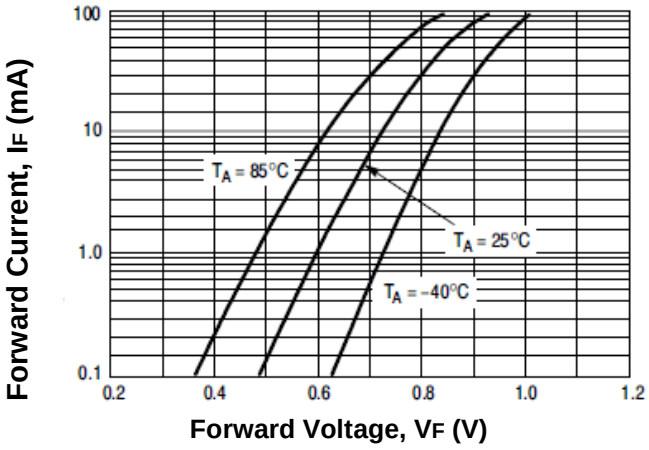


Fig.2- Typical Reverse Characteristics

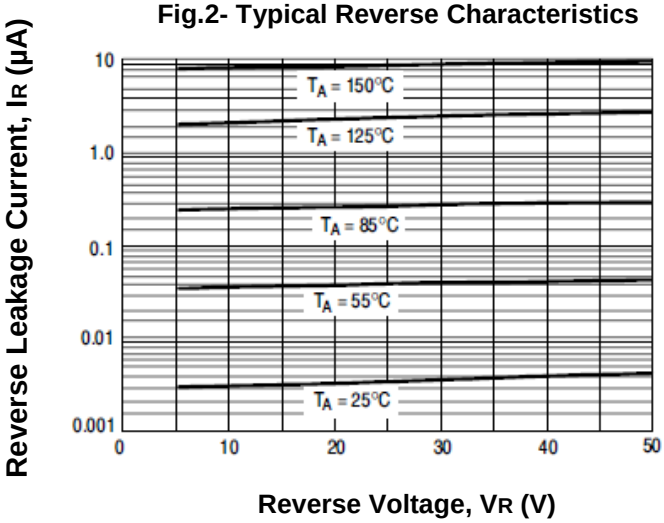


Fig.3- Typical Junction Capacitance

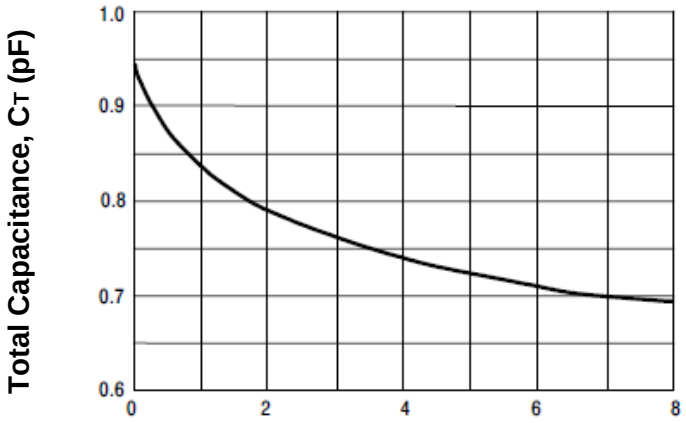
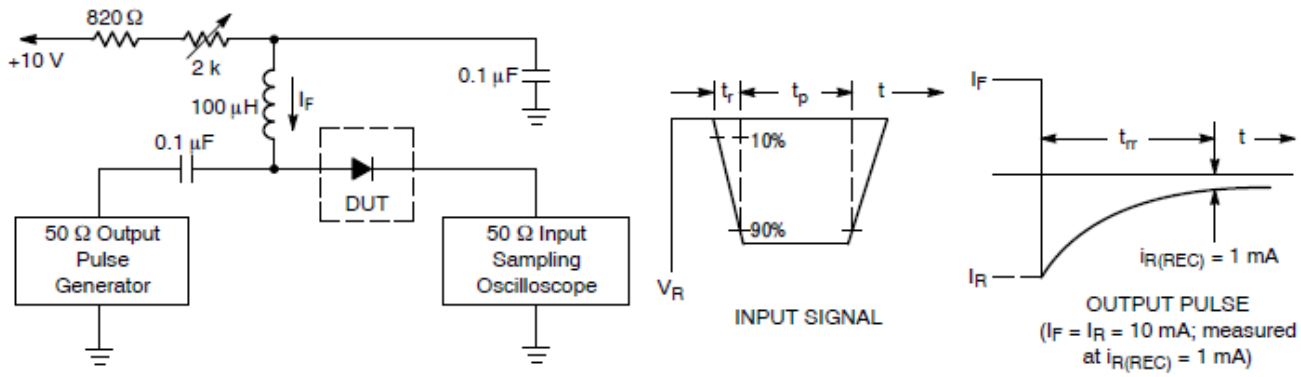
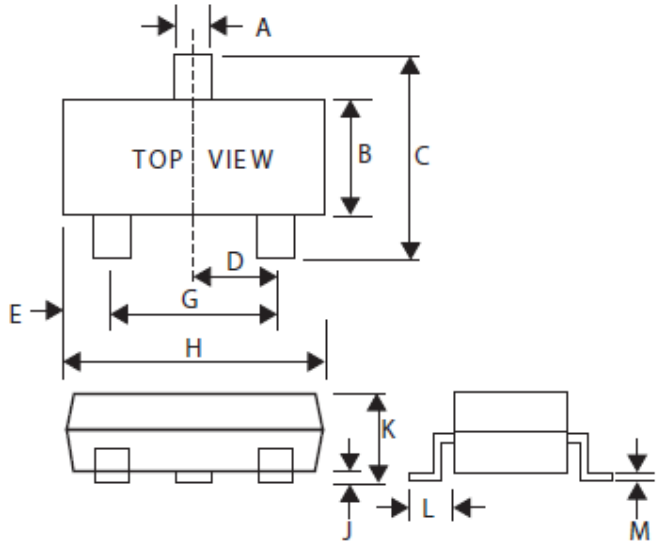


Fig.4- Recovery Time Equivalent Test Circuit



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Dimensions in mm



SOT-323		
Dim	Min	Max
A	0.30	0.40
B	1.15	1.35
C	2.00	2.40
D	-	0.65
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.00	0.10
K	0.80	1.00
L	0.42	0.53
M	0.10	0.25

SOT-323

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