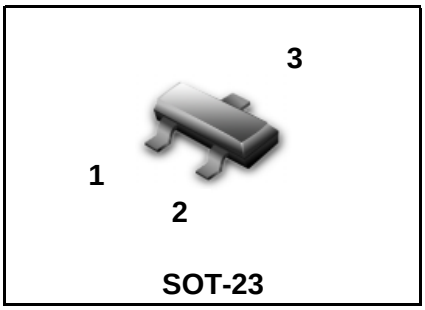
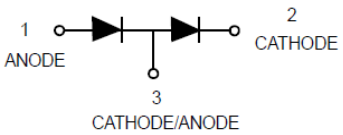
Dual Switching Diode



●FEATURES

1) We declare that the material of product compliant with RoHS requirements and Halogen Free.
2) S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



●MAXIMUM RATINGS(Ta = 25℃)

Parameter	Symbol	Limits	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

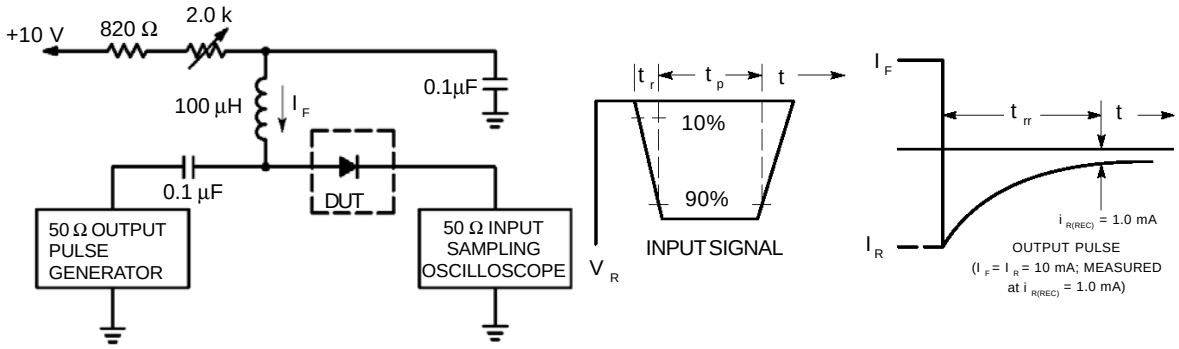
●THERMAL CHARACTERISTICS

Total Device Dissipation, FR−5 Board (Note 1) @ T_A = 25°C Derate above 25°C	P_D	 225 1.8	 mW mW/℃
Thermal Resistance, Junction–to–Ambient(Note 1)	$R_{\Theta JA}$	556	℃/W
Total Device Dissipation, Alumina Substrate (Note 2) @ T_A = 25°C Derate above 25°C	P_D	 300 2.4	 mW mW/℃
Thermal Resistance, Junction–to–Ambient(Note 2)	$R_{\Theta JA}$	417	℃/W
Junction and Storage temperature	T_J,Tstg	−55～+150	℃

1. FR–5 = 1.0×0.75×0.062 in.
2. Alumina = 0.4×0.3×0.024 in. 99.5% alumina.

●ELECTRICAL CHARACTERISTICS (Ta= 25℃)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage (I_{BR} = 100μAdc)	V_{BR}	100	–	–	V
Reverse Voltage Leakage Current (V_R = 50Vdc) (VR = 100 Vdc) (V R = 50 Vdc,125°C)	I_R	– – –	– – –	1.0 3.0 100	μA
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C	–	–	1.5	pF
Forward Voltage (IF = 1.0 mAdc) (IF = 10 mAdc) (I_F = 100 mAdc)	V_F	0.55 0.67 0.75	– – –	0.7 0.82 1.1	V
Reverse Recovery Time (I_F = I_R = 10 mAdc) (Figure 1)	trr	–	–	4	ns



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

Figure 1. Recovery Time Equivalent Test Circuit

ELECTRICAL CHARACTERISTIC CURVES(Ta=25℃)

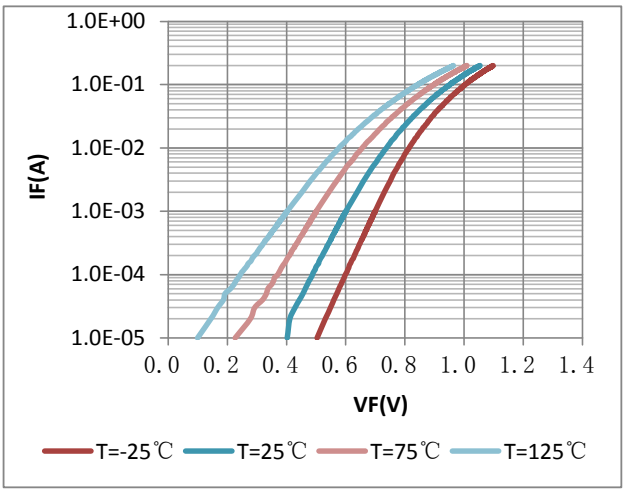


Fig 2. Forward character

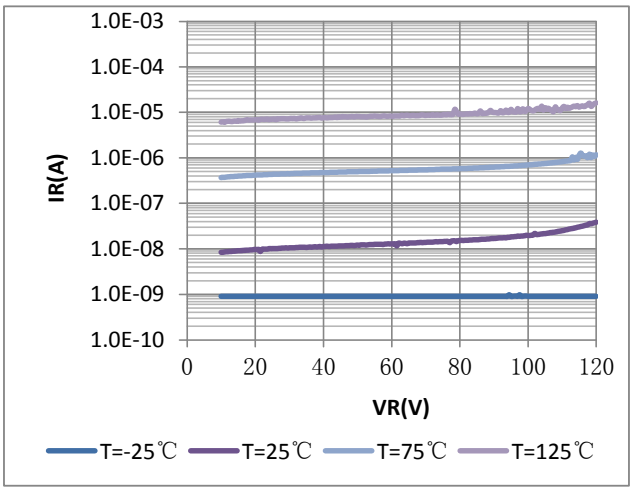


Fig 3. Reverese character

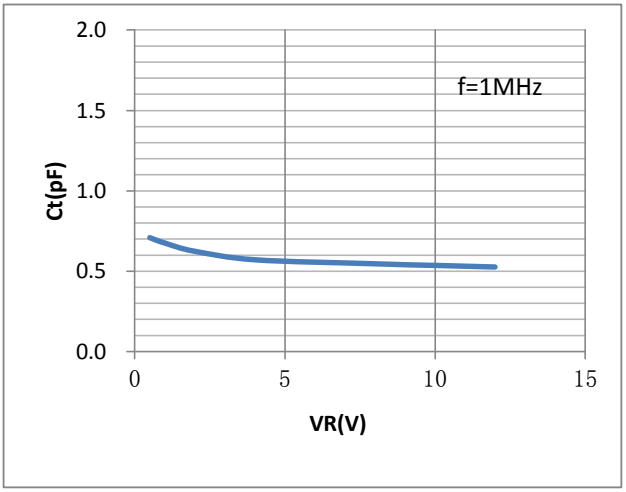


Fig 4. Capacitance

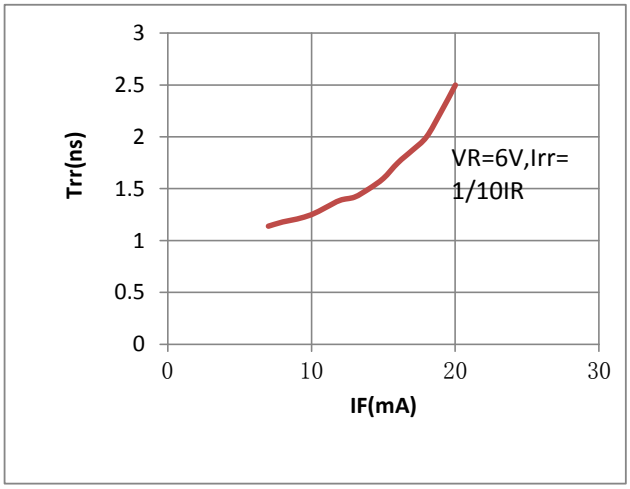


Fig 5. Reverse recover time characteristics

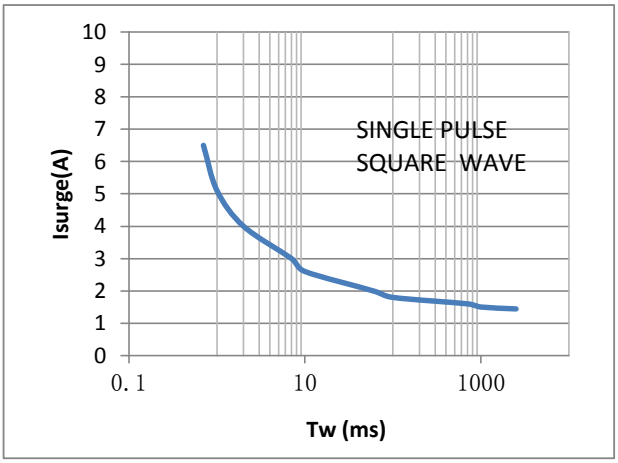
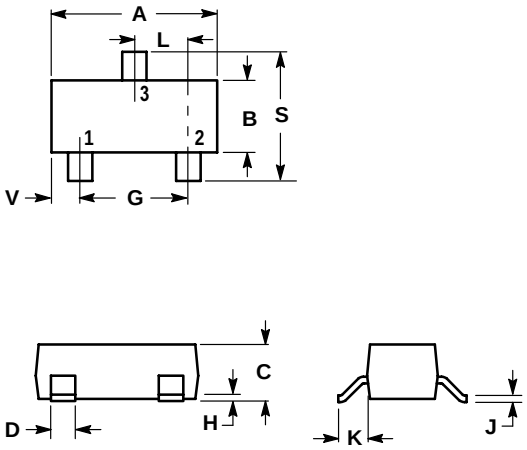


Fig 6. Surge current characteristics

SOT-23



NOTES:

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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60