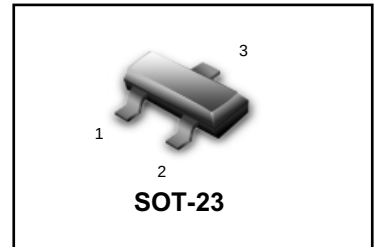


HIGH-SPEED SWITCHING DIODE

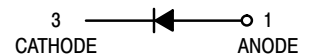
●FEATURES

- 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-Q 101 Qualified and PPAP Capable.



●MAXIMUM RATINGS(Ta = 25°C)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	V
Forward Current	I_F	200	mA
Peak Forward Surge Current	$I_{FM(surge)}$	500	mA



●THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1.) T _A = 25°C	P_D	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (Note 2.) T _A = 25°C	P_D	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T _J , T _{stg}	-55 to +150	°C

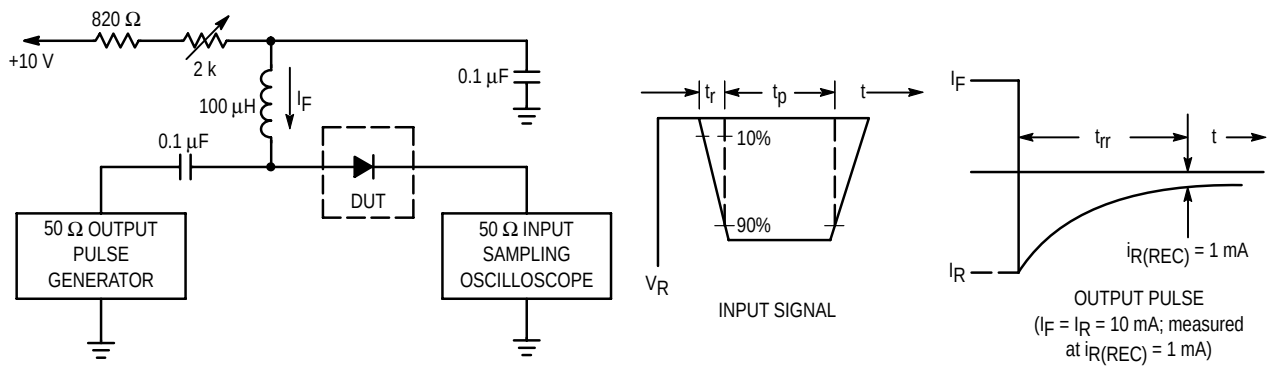
●ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Max.	Unit	Test Conditon
Reverse Breakdown Voltage	V_F		1.0	V	$I_F = 10\text{mA}$
Reverse Breakdown Voltage	V_{BR}	100	—	V	$I_R = 100\mu\text{A}$
Reverse Current	I_{RM}	—	5.0	μA	$V_R = 75\text{V}$
			25	nA	$V_R = 20\text{V}$
Diode Capacitance	Ct	—	4.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	trr	—	4.0	ns	$I_F = I_R = 10\text{mA}$, See Figure 1

1. FR-5 = 1.0×0.75×0.062 in.

2. Alumina = 0.4×0.3×0.024 in. 99.5% alumina.

ELECTRICAL CHARACTERISTICS CURVES



- Notes: 1. A 2.0 k Ω 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. $t_p \gg t_{rr}$

FIG.1 Recovery Time Equivalent Test Circuit

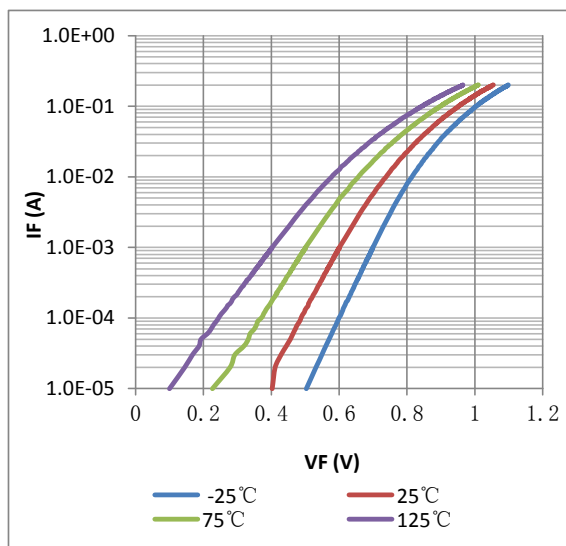


FIG.2 Forward Characteristics

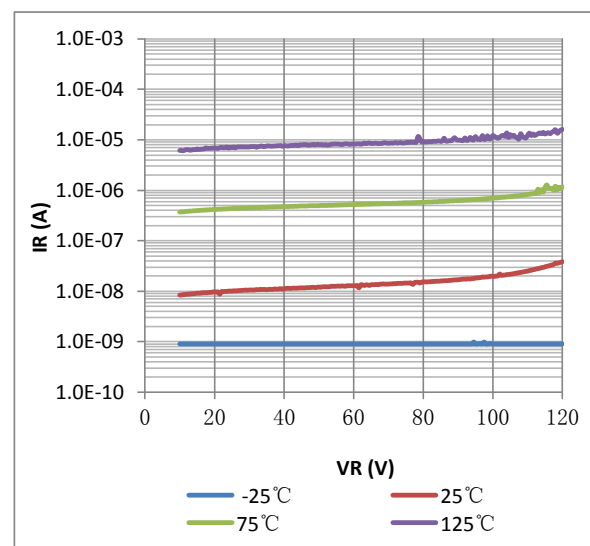


FIG.3 Reverse Characteristics

ELECTRICAL CHARACTERISTICS CURVES

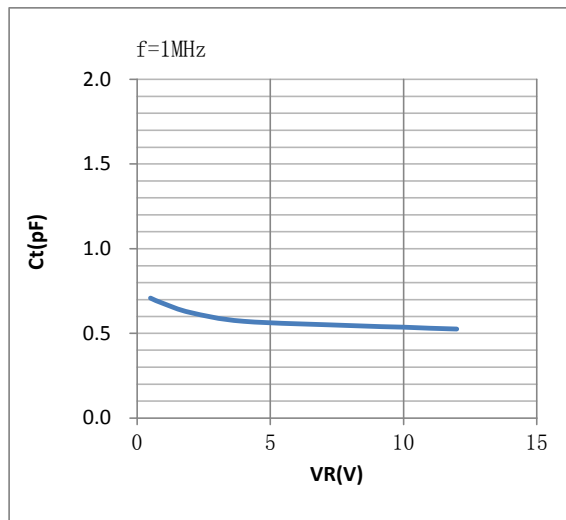
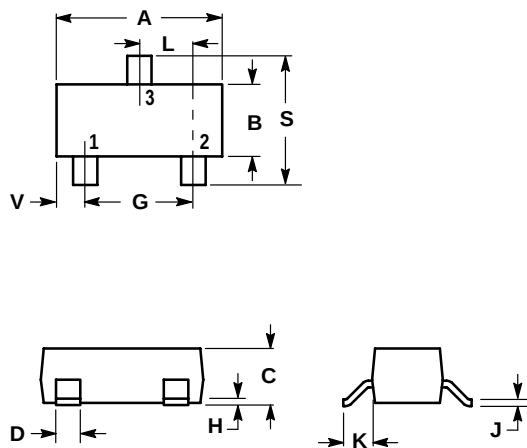


FIG.4 Capacitance

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

