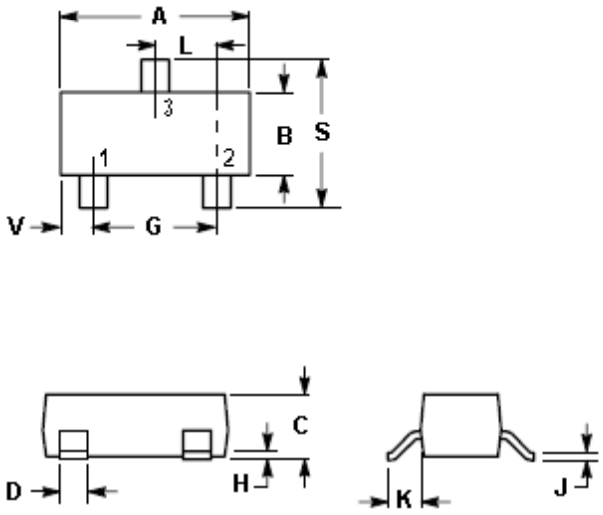
1SS181

Plastic-Encapsulate Diodes

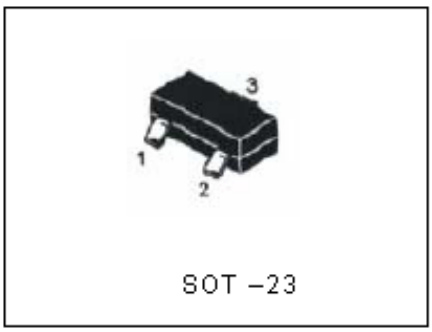


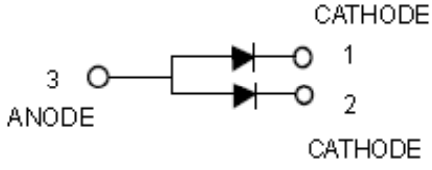
NOTES:

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

PIN 1. BASE
2. EMITTER
3. COLLECTOR





Ultra High Speed Switching Application

·Low forward voltage : $V_{F(3)}$ = 0.92V (typ.)
·Fast reverse recovery time : t_{rr} = 1.6ns (typ.)
·Small total capacitance : C_T = 2.2pF (typ.)
·Pb-Free package is available
·We declare that the material of product compliance with RoHS requirements

MARKING: A3

1SS181

Plastic-Encapsulate Diodes

Maximum Ratings (T_A=25°C unless otherwise specified)			
Parameter	**Symbol**	**Limit**	**Unit**
Maximum (peak) reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Maximum (peak) forward current	I_{FM}	300*	mA
Average forward current	I_O	100*	mA
Surge current (10ms)	I_{FSM}	2*	A
Power Dissipation	P_D	150	mW
Junction Temperature	T_J	125	°C
Operating/ Storage Temperature Range	T_{STG}	-55~+150	°C

* : Unit rating. Total rating = Unit rating × 1.5.

Electrical Characteristics (T_A=25°C unless otherwise specified)						
Parameter	**Symbol**	**Test conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Forward Voltage	$V_{F(1)}$	I_F= 1mA	—	0.61	—	V
	$V_{F(2)}$	I_F= 10mA	—	0.74	—	
	$V_{F(3)}$	I_F= 100mA	—	0.9	1.2	
Reverse Voltage Leakage Current	$I_{R(1)}$	V_R=30V	—	—	0.1	μA
	$I_{R(2)}$	V_R=80V	—	—	0.5	
Total capacitance	C_T	V_R=0V, f=1MHz	—	2.2	4	pF
Reveres Recovery Time	t_{rr}	I_F=10mA (Fig. 5)	—	1.6	4	ns

Electrical characteristic curves

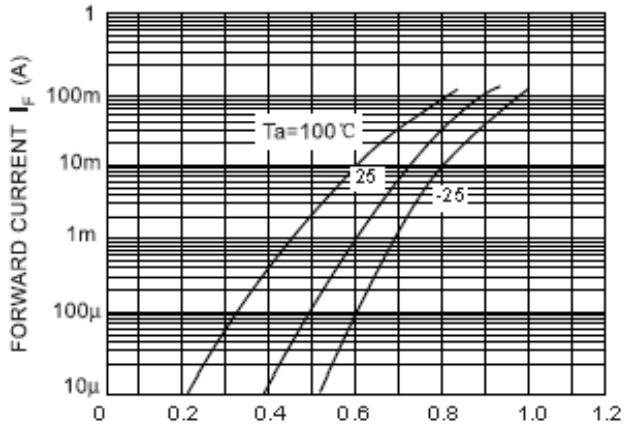


Fig.1 FORWARD VOLTAGE V_F(V)

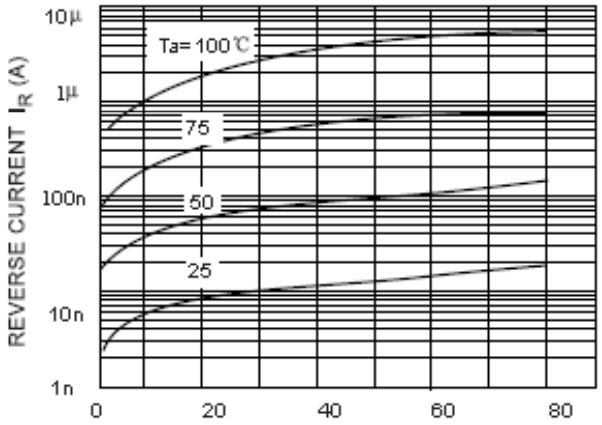


Fig.2 REVERSE VOLTAGE V_R(V)

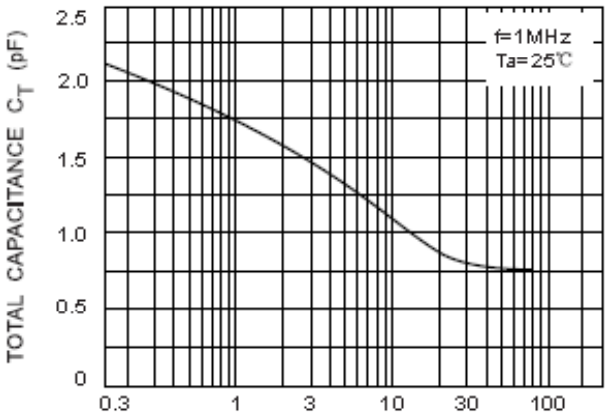


Fig.3 REVERSE VOLTAGE V_R(V)

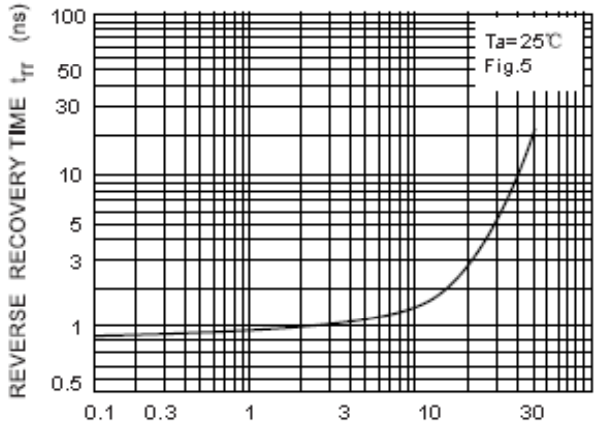


Fig.4 FORWARD CURRENT I_F(mA)

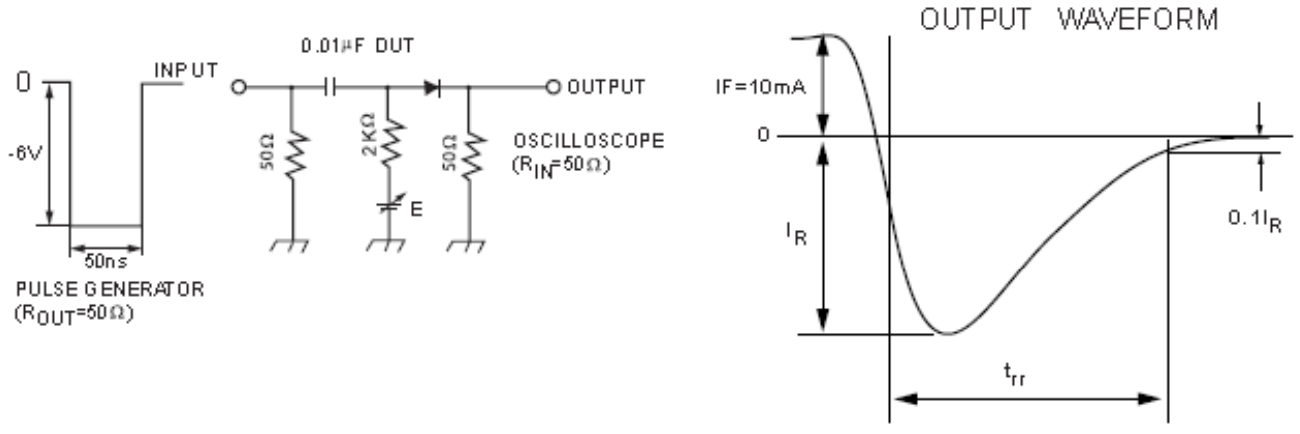


Fig.5 Reverse recovery time (t_{rr}) test circuit