

High-speed switching diode

1SS133

●Applications

High speed switching

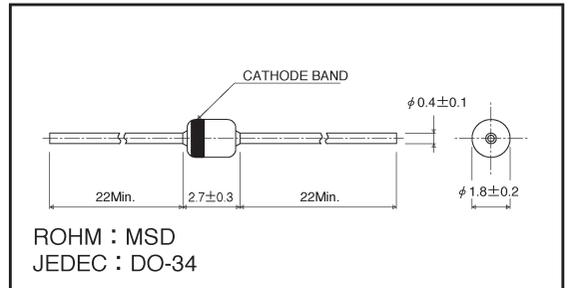
●Features

- 1) Glass sealed envelope. (MSD)
- 2) High reliability.
- 3) High speed. (typical recovery time = 1.5ns)

●Construction

Silicon epitaxial planar

●External dimensions (Units: mm)



●Cathode band colors

Type	Color
1SS133	Yellow

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit	Parameter	Symbol	Limits	Unit
Peak reverse voltage	V_{RM}	90	V	Surge current (1s)	I_{surge}	600	mA
DC reverse voltage	V_R	80	V	Power dissipation	P	300	mW
Peak forward current	I_{FM}	400	mA	Junction temperature	T_j	175	°C
Mean rectifying current	I_o	130	mA	Storage temperature	T_{stg}	-65~+175	°C

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	—	0.92	1.2	V	$I_F=100\text{mA}$
Reverse current	I_R	—	0.020	0.5	μA	$V_R=80\text{V}$
Capacitance between terminals	C_T	—	1.55	2	pF	$V_R=0.5\text{V}$, $f=1\text{MHz}$
Reverse recovery time	t_{rr}	—	1.5	4	ns	$V_R=6\text{V}$, $I_F=10\text{mA}$, $R_L=50\Omega$

● Electrical characteristic curves (Ta = 25°C unless specified otherwise)

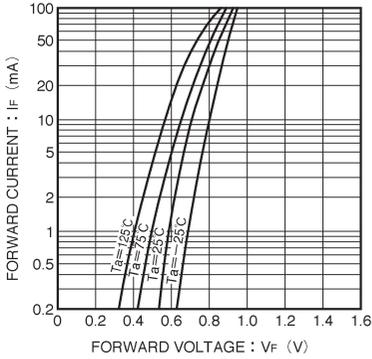


Fig. 1 Forward characteristics

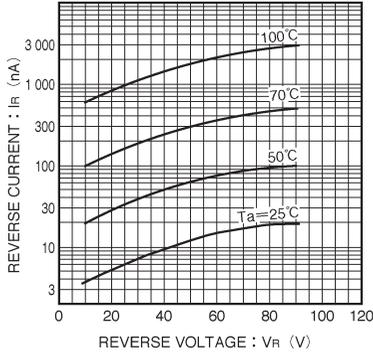


Fig. 2 Reverse characteristics

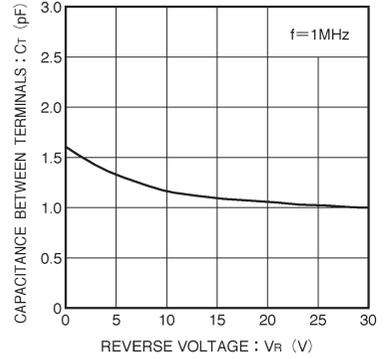


Fig. 3 Capacitance between terminals characteristics

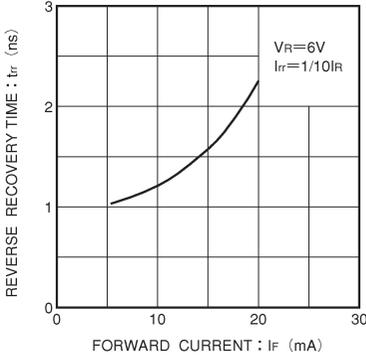


Fig. 4 Reverse recovery time characteristics

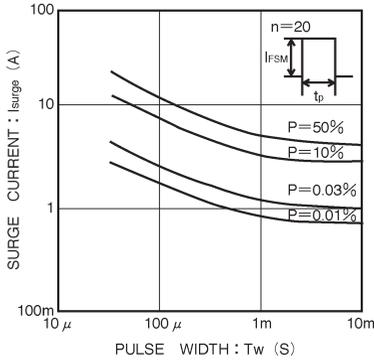


Fig. 5 Surge current characteristics

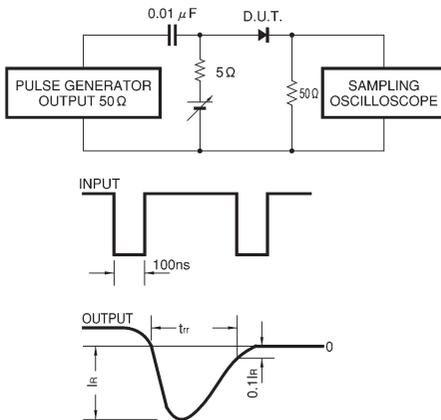


Fig. 6 Reverse recovery time (t_r) measurement circuit