

# Switching diode

## 1SS133

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### ●Applications

High speed switching

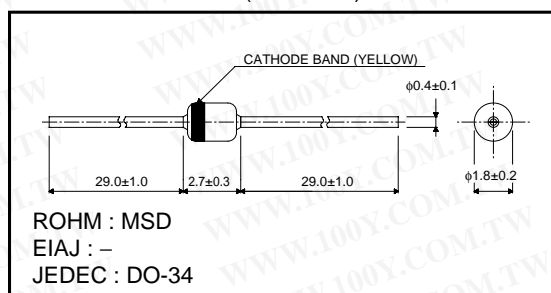
### ●Features

- 1) Glass sealed envelope. (MSD)
- 2) High speed. ( $t_{rr}=1.2\text{ns Typ.}$ )
- 3) High reliability.

### ●Construction

Silicon epitaxial planar

### ●External dimensions (Units : mm)



### ●Absolute maximum ratings ( $T_a=25^\circ\text{C}$ )

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

### ●Electrical characteristics ( $T_a=25^\circ\text{C}$ )

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

Diodes

●Electrical characteristics curves (Ta=25°C)

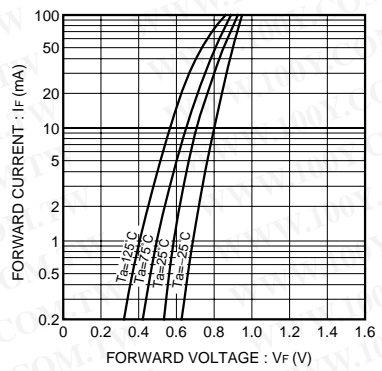


Fig. 1 Forward characteristics

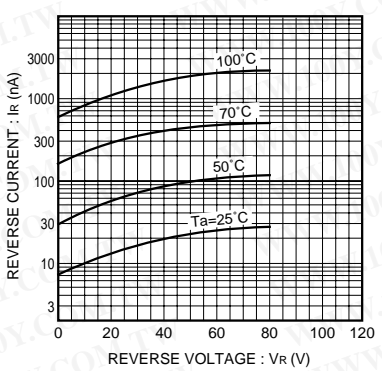


Fig. 2 Reverse characteristics

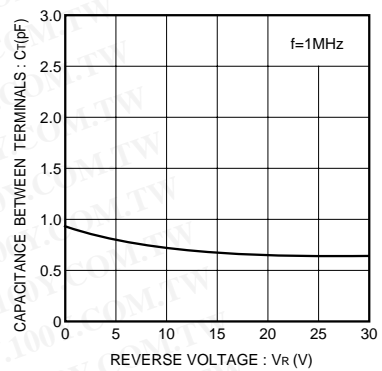


Fig. 3 Capacitance between terminals characteristics

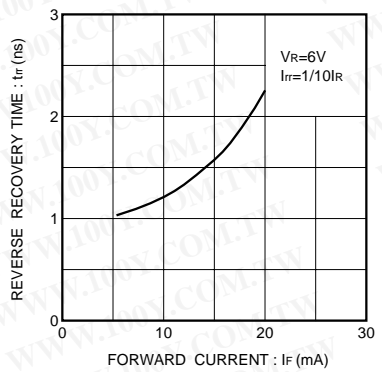


Fig. 4 Reverse recovery time characteristics

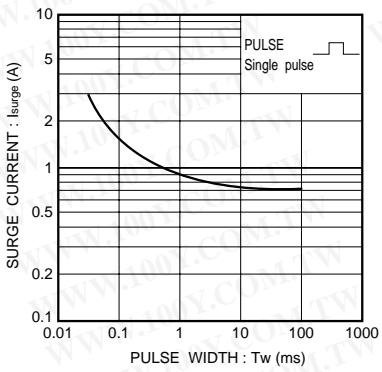


Fig. 5 Surge current characteristics

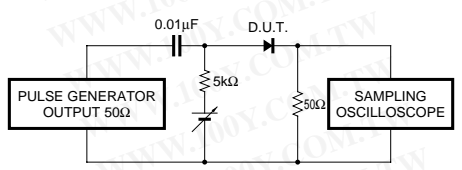


Fig. 6 Reverse recovery time (tr) measurement circuit