

High-speed switching diode

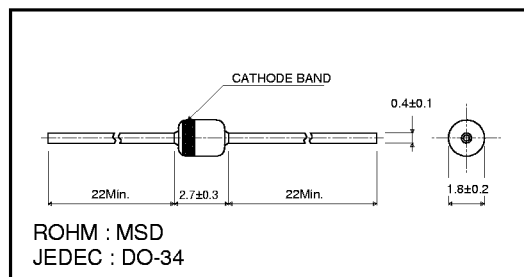
1SS133

! Applications
High speed switching

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

! Construction
Silicon epitaxial planar

! External dimensions (Units : mm)



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

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	$^\circ\text{C}$
Mean rectifying current	I_o	130	mA	Storage temperature	T_{stg}	$-65\sim+175$	$^\circ\text{C}$

! Cathode band colors

Type	Color
1SS133	Yellow

! Electrical characteristics ($T_a=25^\circ\text{C}$ unless specified otherwise)

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	$V_R=6\text{V}$, $I_F=10\text{mA}$, $R_L=50$

Diodes

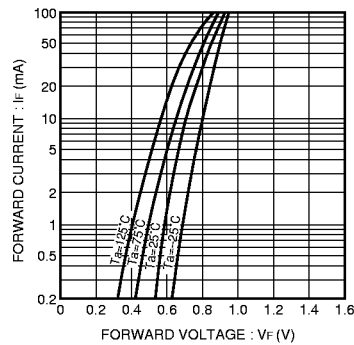
! Electrical characteristics curves ($T_a=25^\circ\text{C}$)

Fig. 1 Forward characteristics

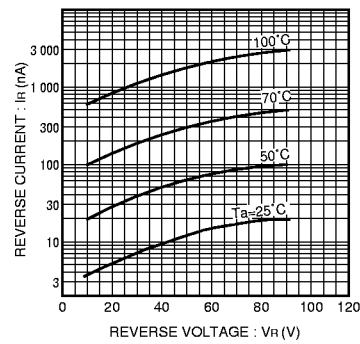


Fig. 2 Reverse characteristics

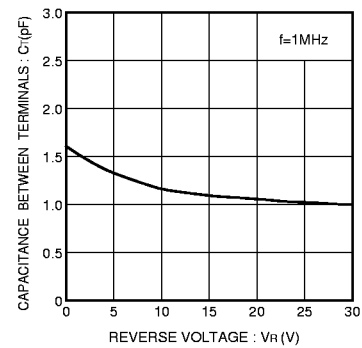


Fig. 3 Capacitance between terminals characteristics

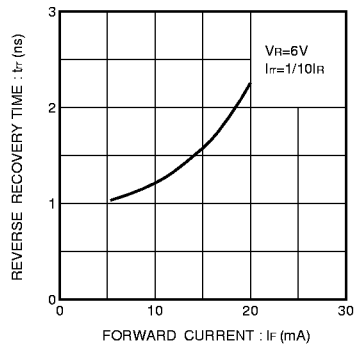


Fig. 4 Reverse recovery time characteristics

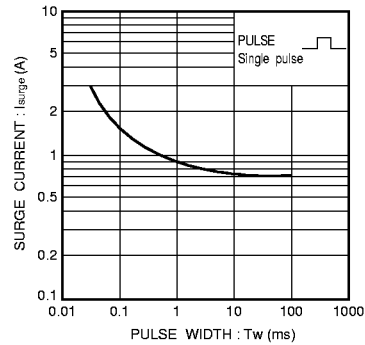
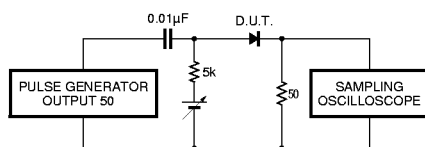


Fig. 5 Surge current characteristics

Fig. 6 Reverse recovery time (t_r) measurement circuit