

# 1SS133

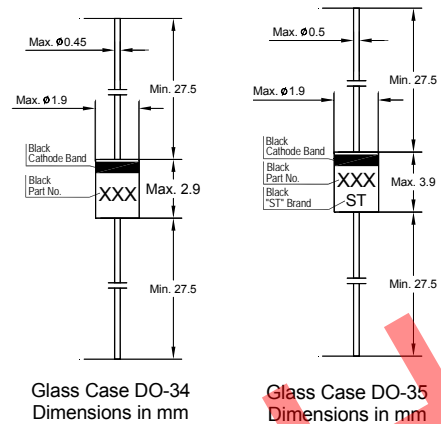
## Silicon Epitaxial Planar Switching Diode

### Features

- Glass sealed envelope
- High speed
- High reliability

### Applications

- High-speed switching

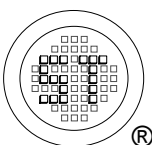


### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	90	V
DC Reverse Voltage	$V_R$	80	V
Average Rectified Forward Current	$I_{F(AV)}$	130	mA
Peak Forward Current	$I_{FM}$	400	mA
Surge Forward Current at $t < 1\text{ s}$	$I_{FSM}$	600	mA
Power Dissipation	$P_{tot}$	300	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 175	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 100\text{ mA}$	$V_F$	1.2	V
Reverse Current at $V_R = 80\text{ V}$	$I_R$	0.5	$\mu\text{A}$
Capacitance between Terminals at $V_R = 0.5\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	2	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $V_R = 6\text{ V}$ , $R_L = 50\ \Omega$	$t_{rr}$	4	ns



**SEMTECH ELECTRONICS LTD.**  
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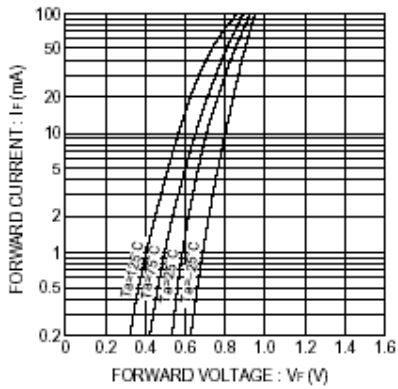


Fig. 1 Forward characteristics

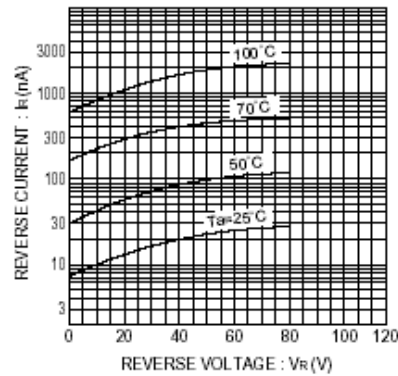


Fig. 2 Reverse characteristics

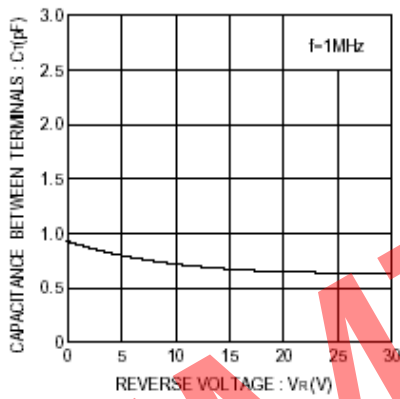


Fig. 3 Capacitance between terminals characteristics

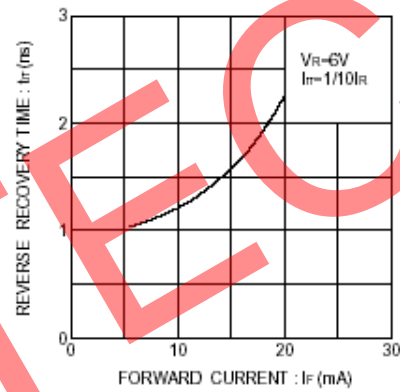


Fig. 4 Reverse recovery time characteristics

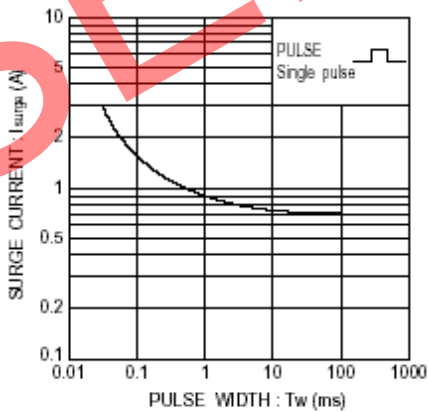


Fig.5 Surge current characteristics

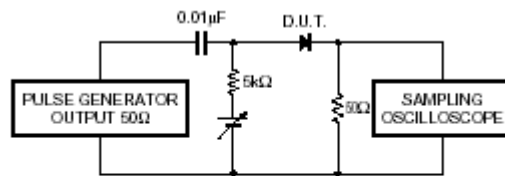


Fig. 6 Reverse recovery time ( $t_r$ ) measurement circuit

