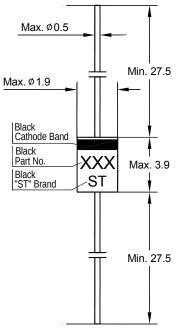
1SS171

Silicon Epitaxial Planar Switching Diode

for high speed switching circuits



Glass Case DO-35
Dimensions in mm

Features

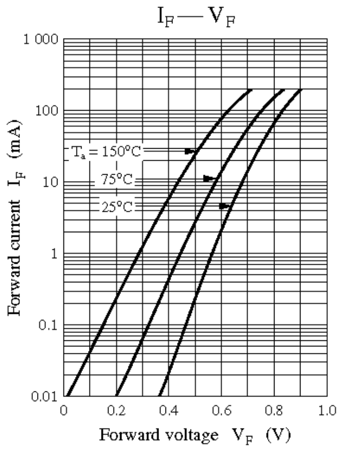
- High switching speed
- Small terminal capacitance
- Large forward current

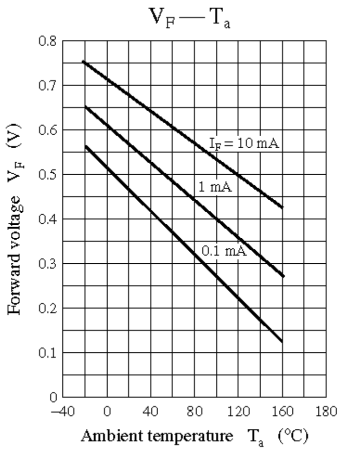
Absolute Maximum Ratings (T_a = 25 °C)

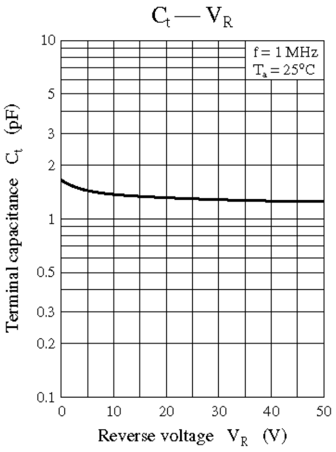
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	80	V
Reverse Voltage	V_R	80	V
Average Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	600	mA
Non-Repetitive Peak Forward Surge Current (at t = 1 s)	I_{FSM}	1	A
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	- 65 to + 175	°C

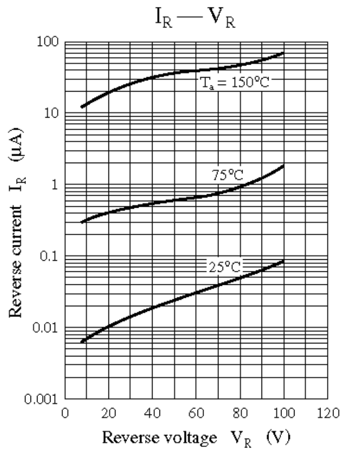
Electrical Characteristics at T_a = 25 °C

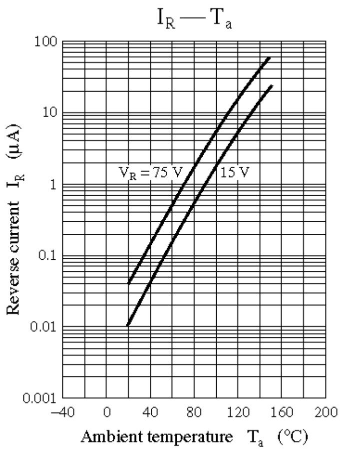
Parameter	Symbol	Max.	Unit
Forward Voltage at I_F = 200 mA	V_F	1.1	V
Reverse Current at V_R = 15 V at V_R = 75 V	I_R	50 500	nA
Terminal Capacitance at V_R = 0 V, f = 1 MHz	C_T	4	pF
Reverse Recovery Time at I_F = 10 mA, I_{rr} = 0.1 I_R, R_L = 100 Ω	t_{rr}	20	ns


I_F — V_F
1 000
100
10
1
0.1
0.01
0
0.2
0.4
0.6
0.8
1.0
T_a = 150°C
75°C
25°C
Forward current I_F (mA)
Forward voltage V_F (V)


V_F — T_a
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−40
0
40
80
120
160
180
I_F = 10 mA
1 mA
0.1 mA
Forward voltage V_F (V)
Ambient temperature T_a (°C)


C_t — V_R
10
5
3
2
1
0.5
0.3
0.2
0.1
0
10
20
30
40
50
f = 1 MHz
T_a = 25°C
Terminal capacitance C_t (pF)
Reverse voltage V_R (V)


I_R — V_R
100
10
1
0.1
0.01
0.001
0
20
40
60
80
100
120
T_a = 150°C
75°C
25°C
Reverse current I_R (μA)
Reverse voltage V_R (V)


I_R — T_a
100
10
1
0.1
0.01
0.001
−40
0
40
80
120
160
200
V_R = 75 V
15 V
Reverse current I_R (μA)
Ambient temperature T_a (°C)