

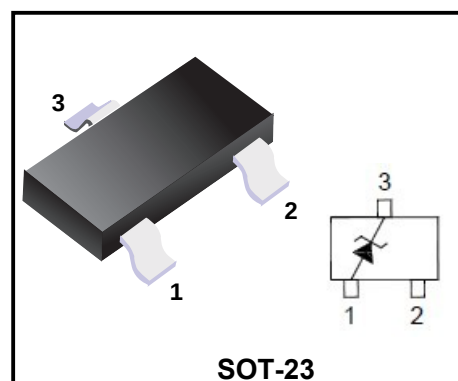
Silicon Epitaxial Planar Switching Diode

Features

- ◆ Small package
- ◆ Low forward voltage
- ◆ Fast reverse recovery time
- ◆ Small total capacitance

Applications

- ◆ Ultra high speed switching application



SOT-23

Marking Code

1SS193

5D

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	100	V
Forward Current	I_F	200	mA
Non-repetitive Peak Forward Surge Current (t = 1 μs)	I_{FSM}	4	A
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Characteristics at Ta=25°C

Parameter	Symbol	min.	Max.	Unit
Forward Voltage at $I_F = 10$ mA	V_F	-	1	V
Reverse Breakdown Voltage at $I_R = 100$ μA	$V_{(BR)R}$	100	-	μA
Reverse Current at $V_R = 20$ V at $V_R = 75$ V	I_R	- -	25 5	nA μA
Reverse Recovery Time at $I_F = I_R = 10$ mA	t_{rr}	-	4	ns
Total Capacitance at $V_R = 0$, f = 1 MHz	C_T	-	4	pF

Typical Characteristics

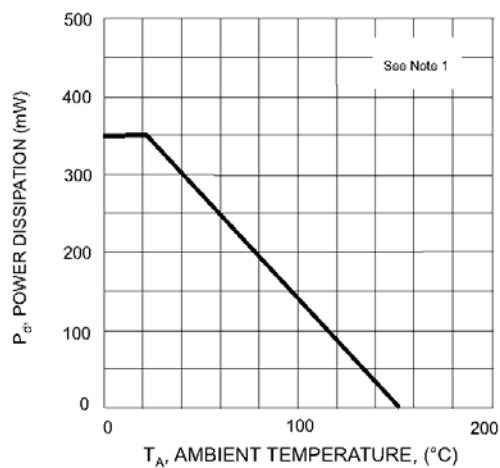


Fig. 1 Power Derating Curve

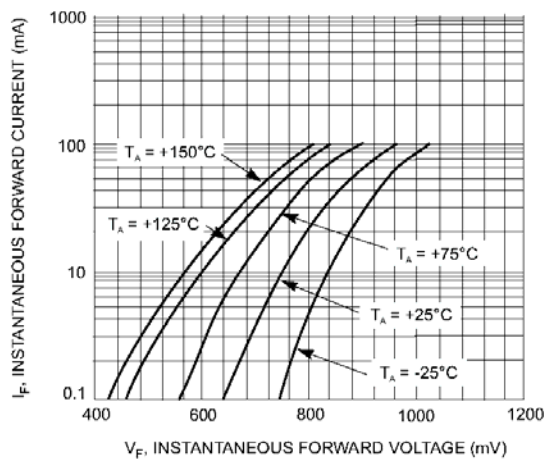


Fig. 2, Typical Forward Characteristics

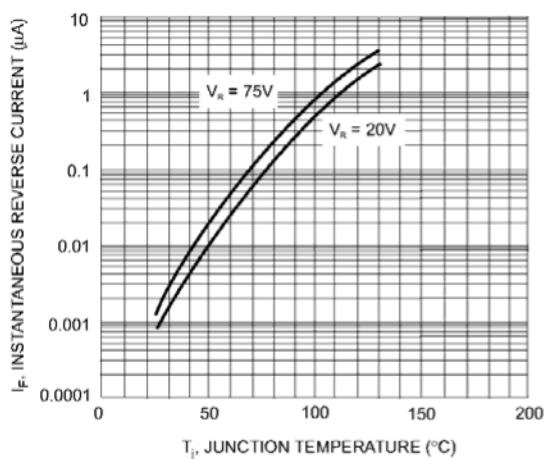


Fig. 3, Typical Reverse Characteristics

Ordering information

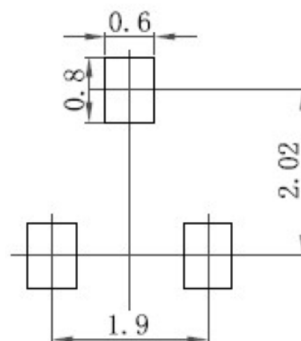
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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