

SURFACE MOUNT FAST SWITCHING DIODE	REVERSE VOLTAGE – 80 Volts FORWARD CURRENT – 0.1 Ampere
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FEATURES

- Fast Switching Speed
- For general purpose switching applications

MECHANICAL DATA

- Case: SOT-23 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

SOT-23

SOT-23		
Dim.	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	2.25	2.55
E1	1.20	1.40
e	0.95 Typ.	
e1	1.80	2.00
L	0.55 Ref.	
L1	0.30	0.50
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	1SS190	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	85	V
DC Blocking Voltage	V_R	80	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	100	mA
Non-Repetitive Peak Forward Surge Current @t=10ms	I_{FSM}	2	A
Power Dissipation	P_D	150	mW
Operating Temperature Range	T_J	125	°C
Storage Temperature Range	T_{STG}	-55~+125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 100\mu A$	V_{BR}	80	--	--	V
Maximum Forward Voltage	$I_F = 1mA$	V_F	--	0.61	--	V
	$I_F = 10mA$		--	0.74	--	
	$I_F = 100mA$		--	0.92	1.2	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$V_R = 30V$	I_R	--	--	0.1	uA
	$V_R = 80V$		--	--	0.5	
Typical Diode Capacitance	$V_R = 0V, f = 1MHz$	C_D	--	2.2	4	pF
Reverse Recovery time	$I_{rr} = 1mA,$ $I_F = I_R = 10mA,$ $R_L = 100\Omega$	trr	--	1.6	4	nS

RATING AND CHARACTERISTIC CURVES 1SS190



Fig.1 Typical Forward Characteristics

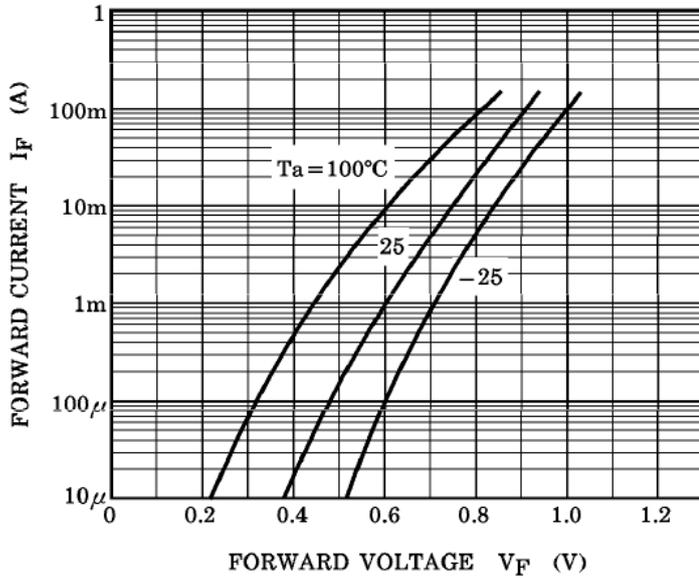


Fig.2 Typical Reverse Characteristics

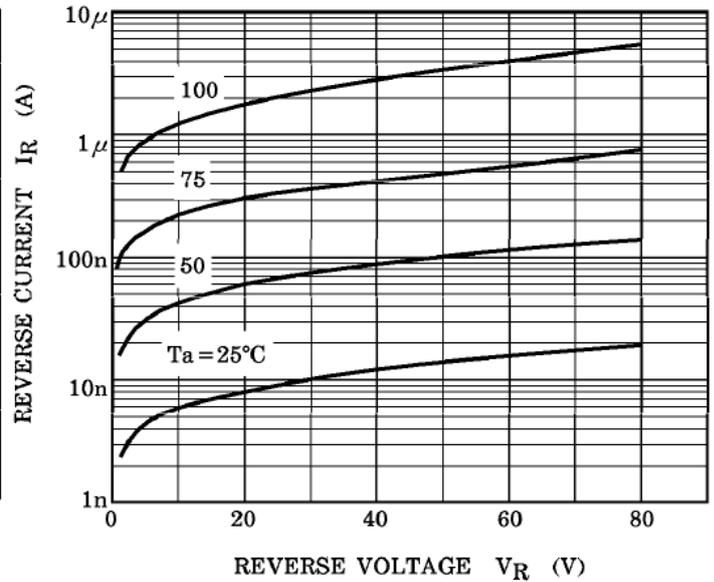


Fig.3 Total Capacitance vs. Reverse Voltage

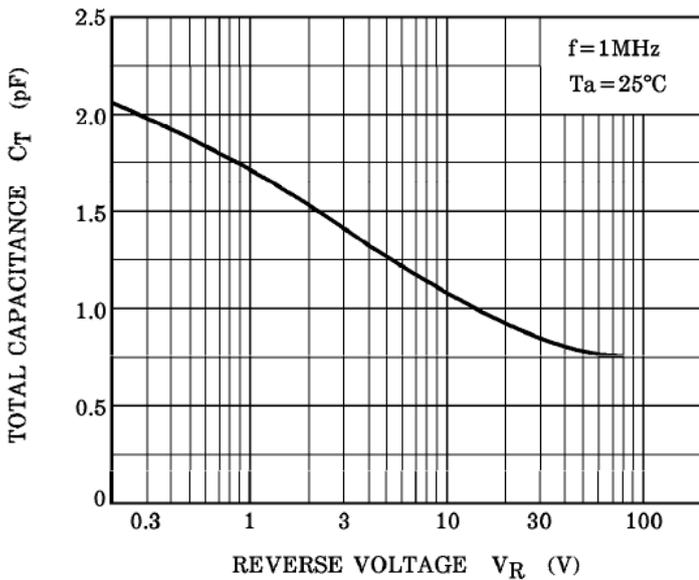
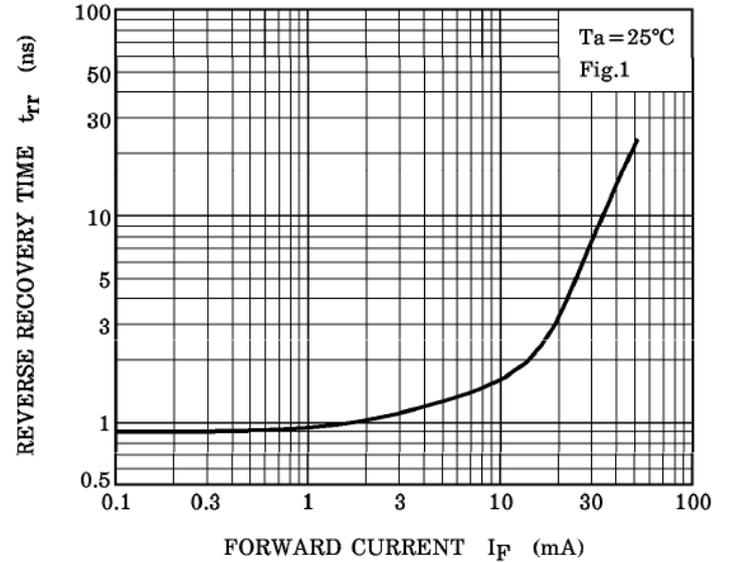


Fig.4 Reverse Recovery Time vs. Forward Current



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
1SS190	E3	

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