



DESCRIPTION

The 1SS181 is available in SOT-23 package.

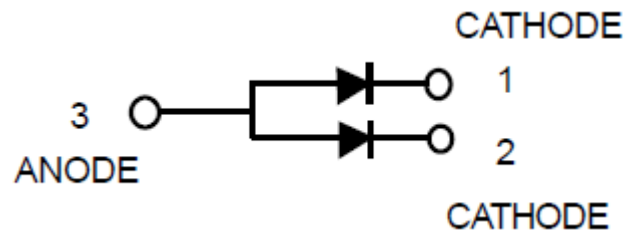
FEATURES

- Low forward voltage : $V_F(3) = 0.92V$ (typ.)
- Fast reverse recovery time : $t_{RR} = 1.6ns$ (typ.)
- Small total capacitance : $C_T = 2.2pF$ (typ.)
- RoHS Compliant
- Available in SOT-23 package

ORDERING INFORMATION

Package Type	Part Number
SOT-23	1SS181
Note	3,000Tape/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



ABSOLUTE MAXIMUM RATINGS

$T_A = 25^\circ C$

V_{RM} , Maximum (peak) reverse voltage	85 V
V_R , Reverse voltage	80 V
I_{FM} , Maximum (peak) forward current	300mA ^{Note1}
I_O , Average forward current	100mA ^{Note1}
I_{FSM} , Surge current (10ms)	2A ^{Note1}
P_D , Power dissipation	150mW
T_J , Junction temperature	125 °C
T_{STG} , Storage temperature range	-55 °C ~+125 °C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Unit rating. Total rating = Unit rating \times 1.5



ELECTRICAL CHARACTERISTICS

T_A = 25°C

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Forward voltage	V _{F(1)}	I _F = 1mA	-	0.61	-	V
	V _{F(2)}	I _F = 10mA	-	0.74	-	
	V _{F(3)}	I _F = 100mA	-	0.90	1.20	
Reverse current	I _{R(1)}	V _R = 30V	-	-	0.1	μA
	I _{R(2)}	V _R = 80V	-	-	0.5	
Total capacitance	C _T	V _R = 0, f = 1MHz	-	2.2	4.0	pF
Reverse recovery time	t _{RR}	I _F = 10mA (Figure 5)	-	1.6	4.0	ns



TYPICAL CHARACTERISTICS

Figure 1. Forward Voltage $V_F(V)$

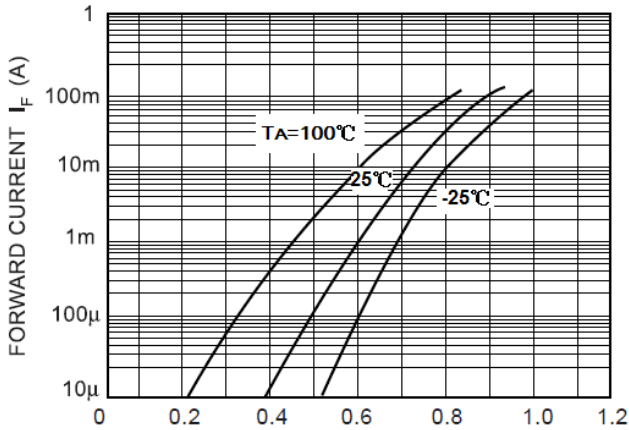


Figure 2. Reverse Voltage $V_R(V)$

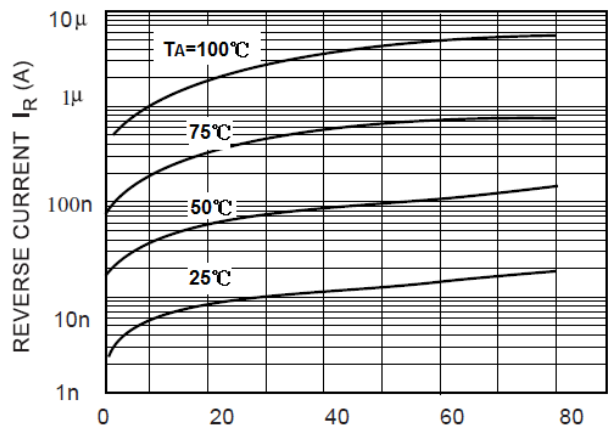


Figure 3. Reverse Voltage $V_R(V)$

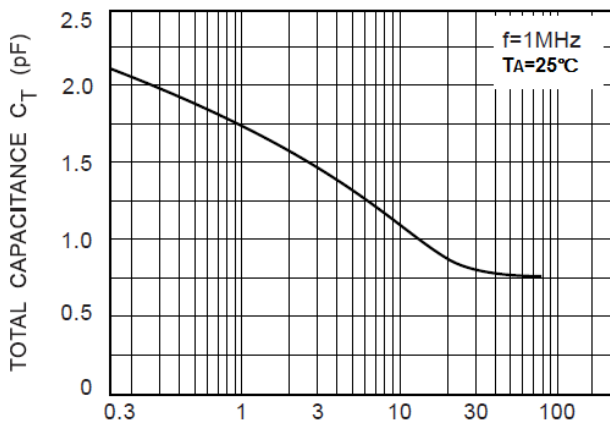


Figure 4. Forward Current $I_F(\text{mA})$

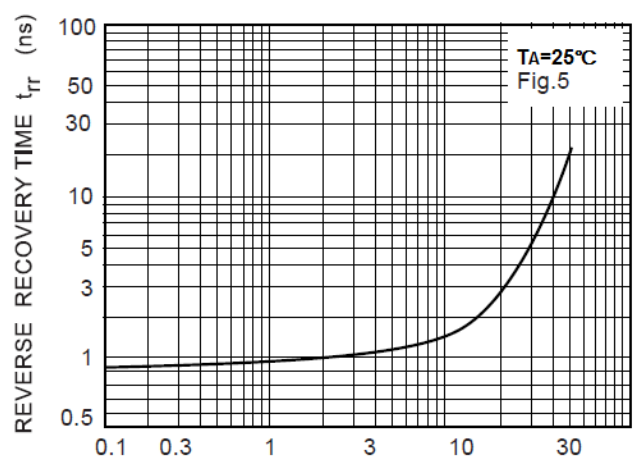
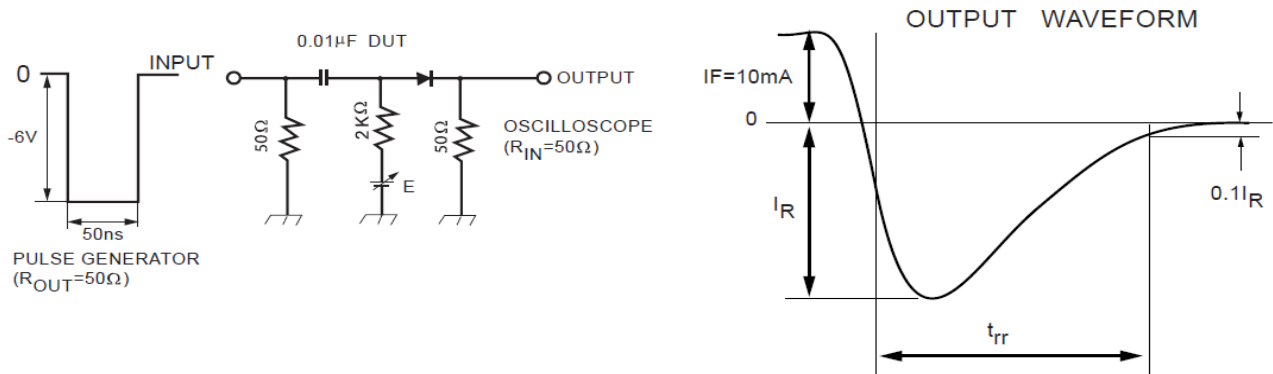


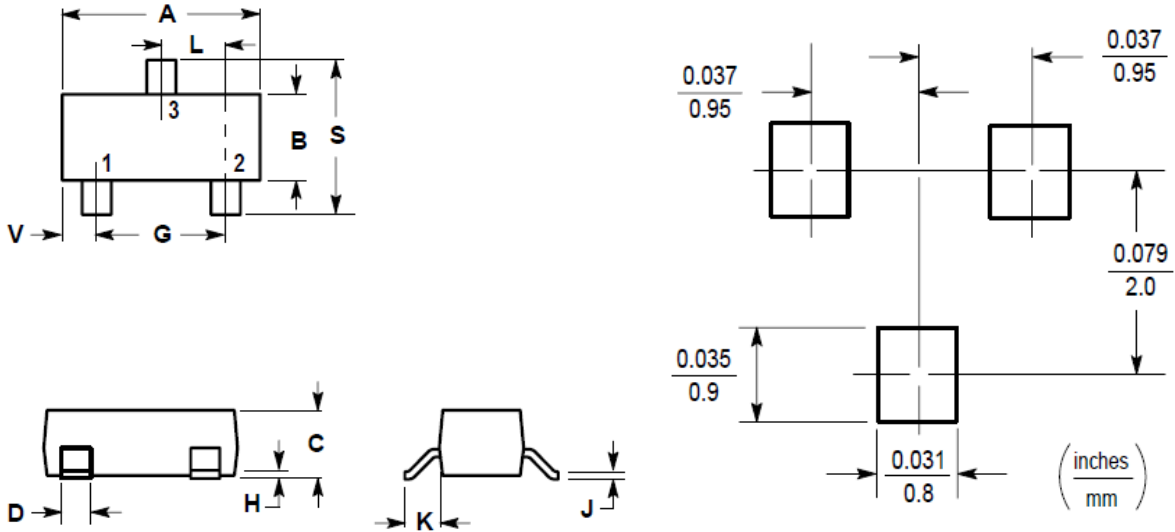
Figure 5. Reverse recovery time (t_{RR}) test circuit





PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	0.89	1.11	0.0350	0.0440
D	0.37	0.50	0.0150	0.0200
G	1.78	2.04	0.0701	0.0807
H	0.013	0.100	0.0005	0.0040
J	0.085	0.177	0.0034	0.0070
K	0.35	0.69	0.0140	0.0285
L	0.89	1.02	0.0350	0.0401
S	2.10	2.64	0.0830	0.1039
V	0.45	0.60	0.0177	0.0236



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