

Ultra High Speed Switching Application

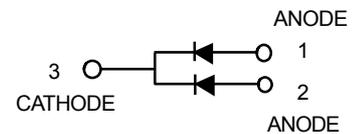
1SS184



SOT -23

Features

- Low forward voltage : $V_{F(3)} = 0.9V$ (typ.)
- Fast reverse recovery time : $t_{rr} = 1.6ns$ (typ.)
- Small total capacitance : $C_T = 0.9pF$ (typ.)
- We declare that the material of product compliance with RoHS requirements.
- RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"



Device Marking

1SS184 = B3

Maximum Ratings ($T_A = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	85	V
Reverse voltage	V_R	80	V
Maximum (peak) forward current	I_{FM}	300 *	mA
Average forward current	I_O	100 *	mA
Surge current (10ms)	I_{FSM}	2 *	A
Power dissipation	P	150	mW
Junction temperature	T_J	125	$^\circ C$
Storage temperature range	T_{stg}	-55~+125	$^\circ C$

* : Unit rating. Total rating = Unit rating \times 0.7.

Electrical Characteristics ($T_A = 25^\circ C$)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F(1)}$	—	$I_F = 1mA$	—	0.60	—	V
	$V_{F(2)}$	—	$I_F = 10mA$	—	0.72	—	
	$V_{F(3)}$	—	$I_F = 100mA$	—	0.90	1.20	
Reverse current	$I_{R(1)}$	—	$V_R = 30V$	—	—	0.1	A
	$I_{R(2)}$	—	$V_R = 80V$	—	—	0.5	
Total capacitance	C_T	—	$V_R = 0, f = 1MHz$	—	0.9	3.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10mA$ (Fig.1)	—	1.6	4.0	ns

Electrical characteristic curves

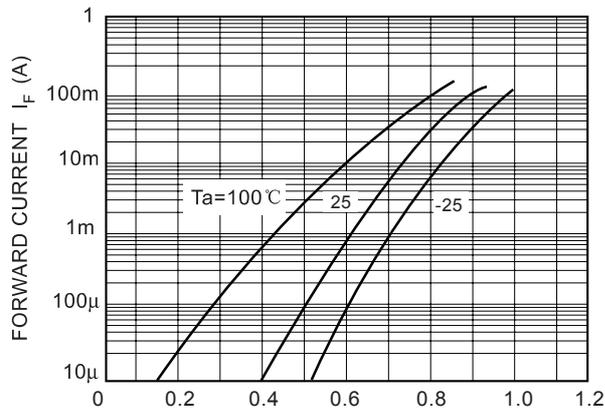


Fig.1 FORWARD VOLTAGE V_F (V)

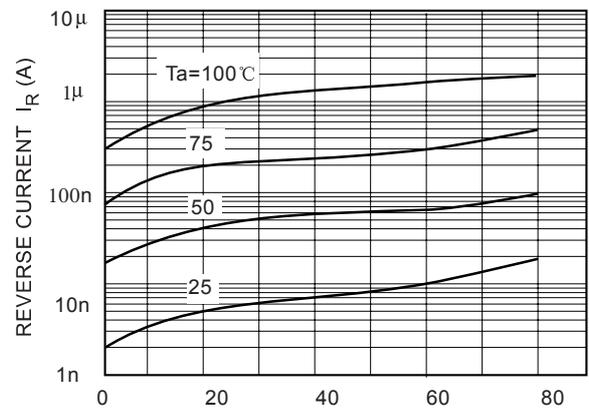


Fig.2 REVERSE VOLTAGE V_R (V)

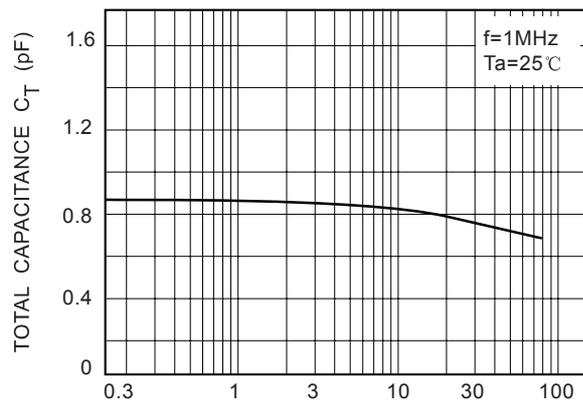


Fig.3 REVERSE VOLTAGE V_R (V)

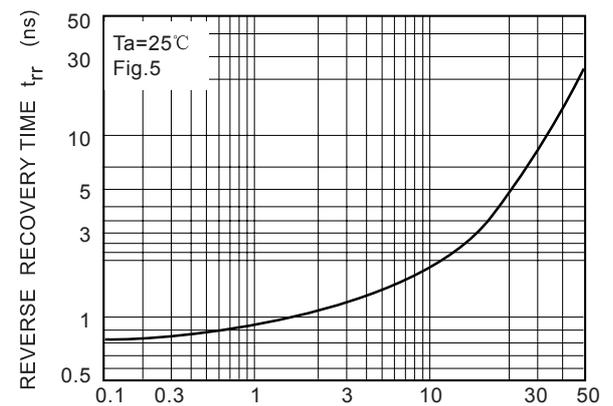


Fig.4 FORWARD CURRENT I_F (mA)

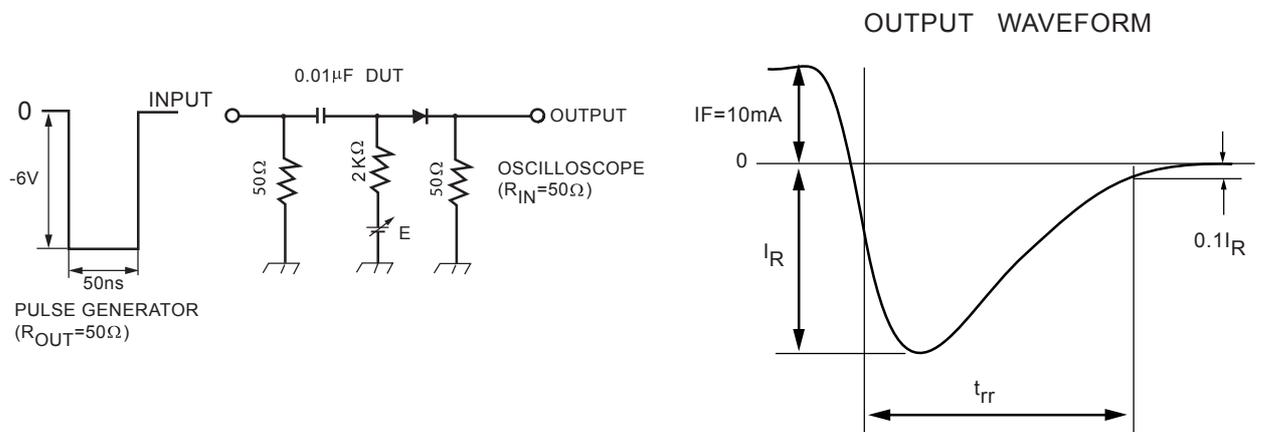


Fig.5 Reverse recovery time (t_{rr}) test circuit

