

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS181

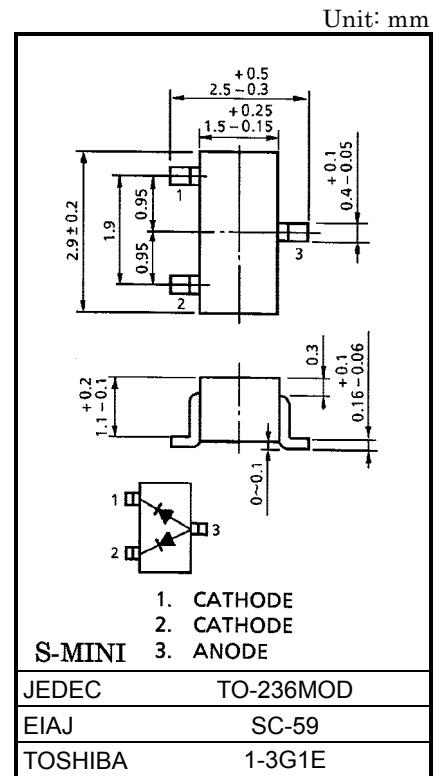
Ultra High Speed Switching Application

- Small package : SC-59
- 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.)

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	T_{stg}	-55~125	$^\circ C$

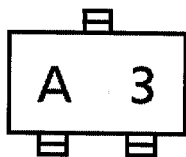
*: Unit rating. Total rating = Unit rating $\times$ 1.5.



Electrical Characteristics

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	—	$I_F = 1mA$	—	0.61	—	V
	$V_F (2)$	—	$I_F = 10mA$	—	0.74	—	
	$V_F (3)$	—	$I_F = 100mAs$	—	0.92	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}	—	$I_F = 10mA$ (Fig.1)	—	1.6	4.0	ns

Marking



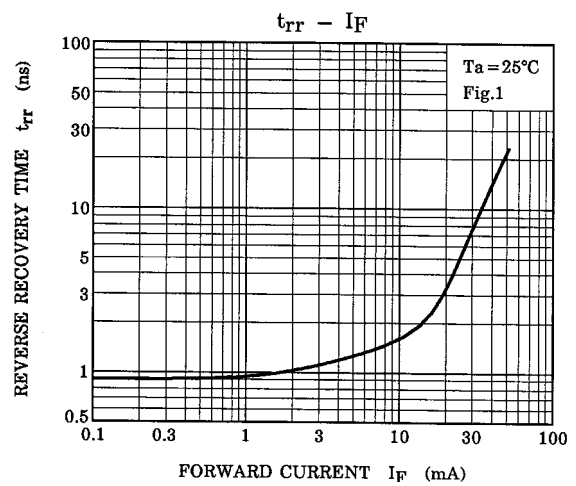
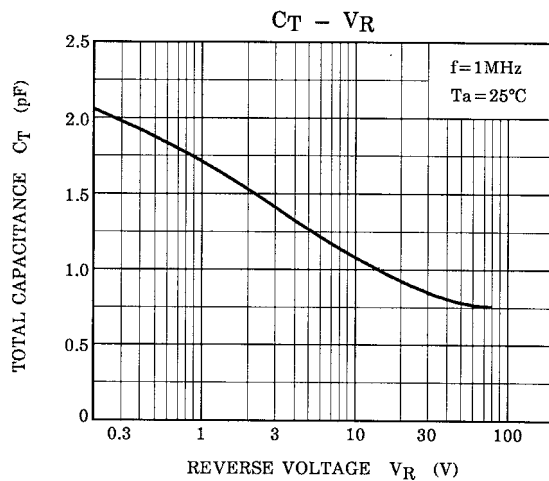
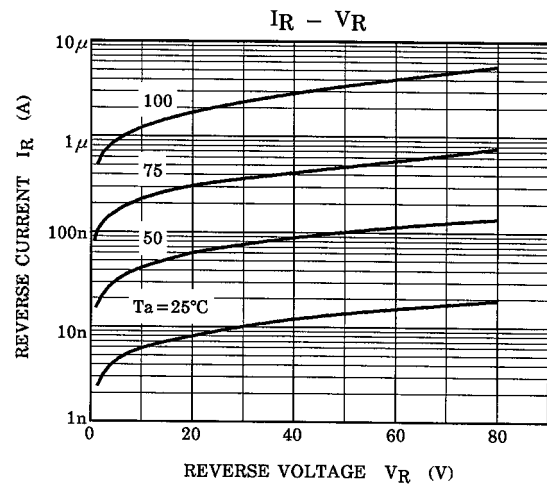
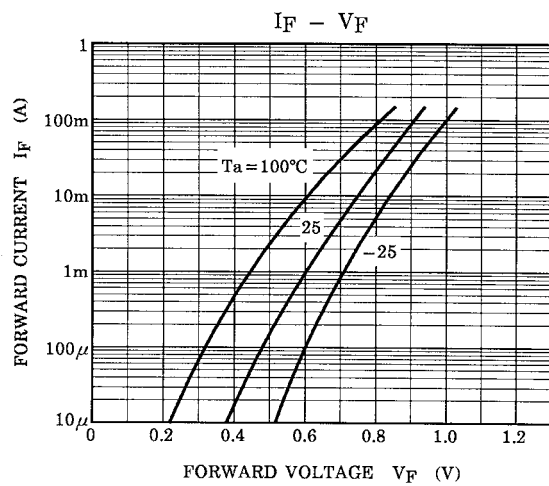
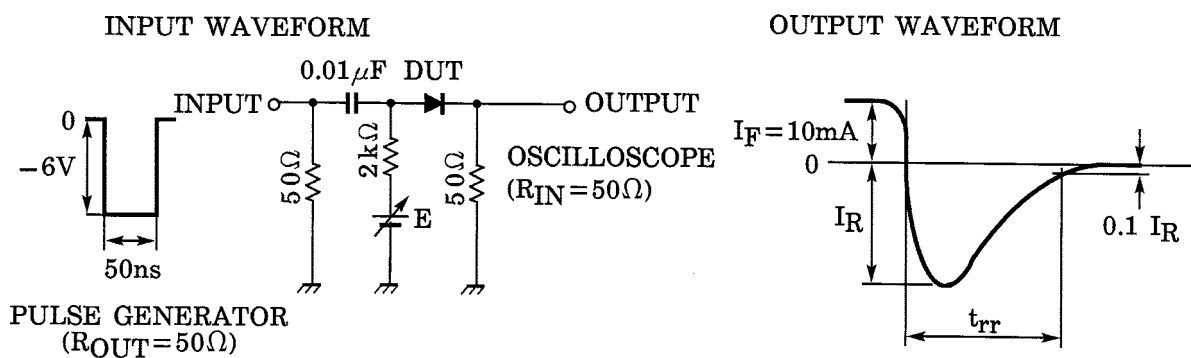


Fig.1 Reverse recovery time (t_{rr}) test circuit



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