

1SS300

Ultra High Speed Switching Applications

- Small package : SC-70
- 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.)

Absolute Maximum Ratings (Ta = 25°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	100	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~125	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

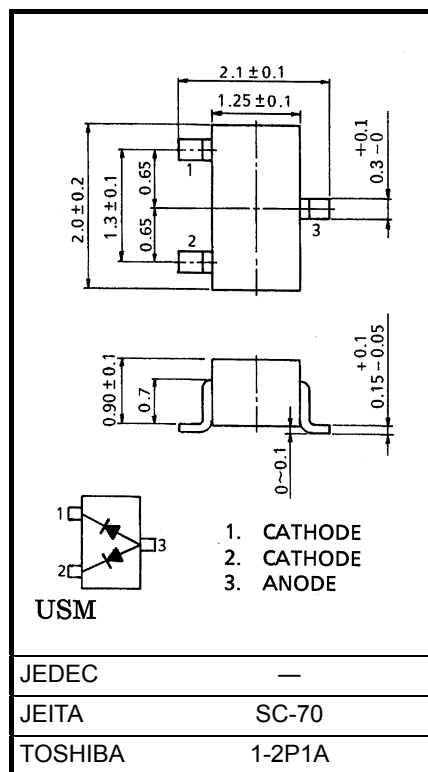
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

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

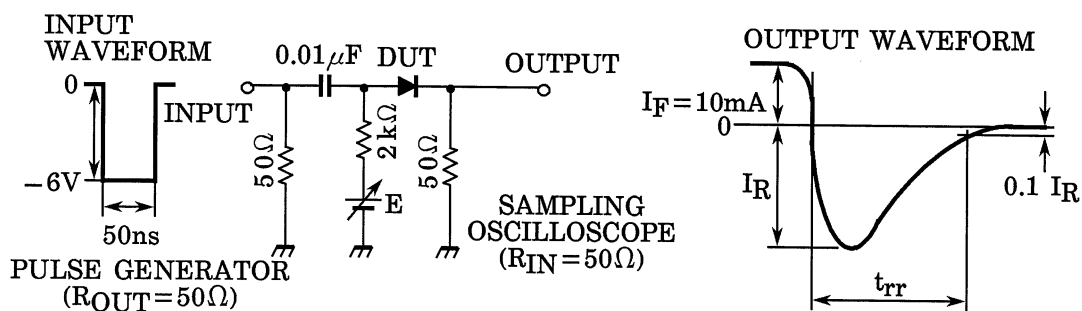
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 1\text{mA}$	—	0.61	—	V
	V_F (2)	—	$I_F = 10\text{mA}$	—	0.74	—	
	V_F (3)	—	$I_F = 100\text{mA}$	—	0.92	1.20	
Reverse current	I_R (1)	—	$V_R = 30\text{V}$	—	—	0.1	μA
	I_R (2)	—	$V_R = 80\text{V}$	—	—	0.5	
Total capacitance	C_T	—	$V_R = 0, f = 1\text{MHz}$	—	2.2	4.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10\text{mA}$, Fig.1	—	1.6	4.0	ns

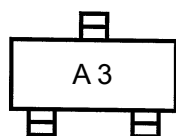
Unit: mm

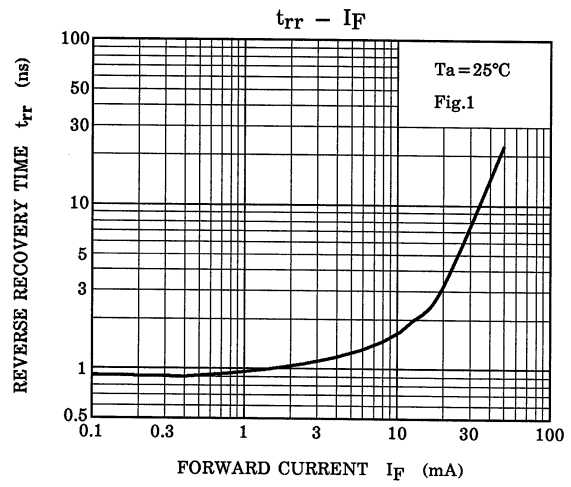
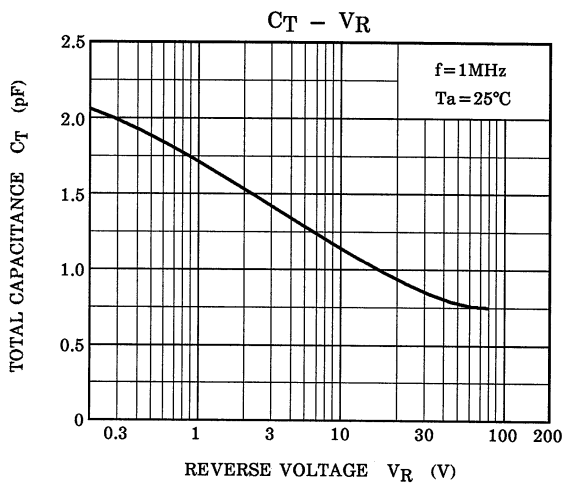
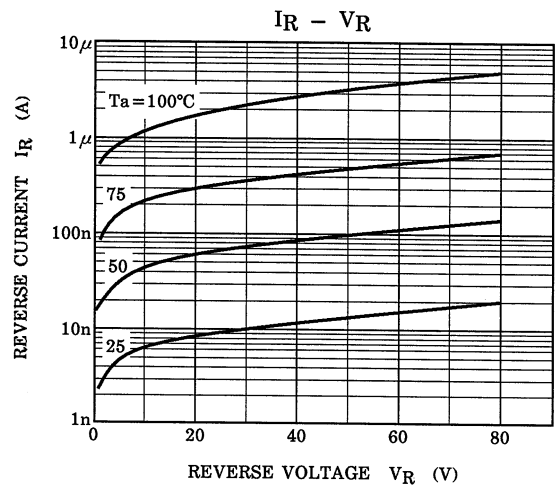
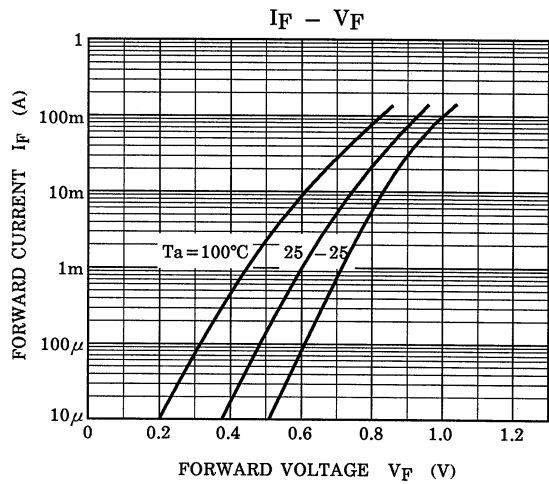


Weight: 0.006g (typ.)

Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

Marking





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