

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS190

Unit: mm

Ultra High Speed Switching Application

- AEC-Q101 Qualified (Note1)
- 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.)

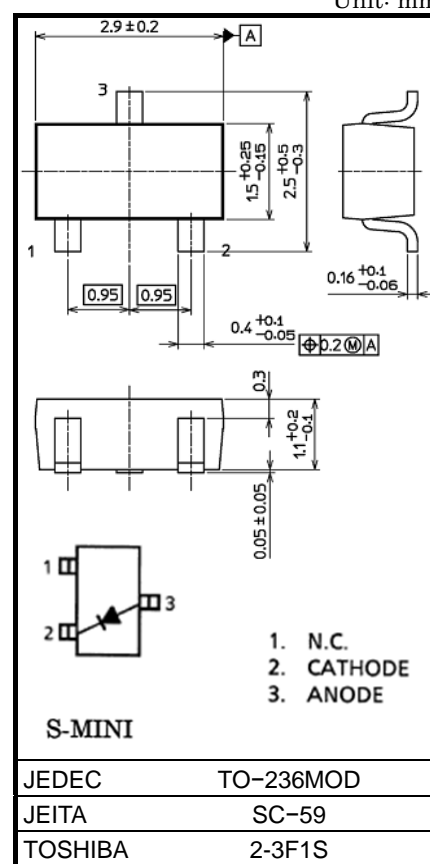
Note1: For detail information, please contact to our sales.

Absolute 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 to 125	$^\circ C$

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).



Weight: 12 mg (typ.)

Start of commercial production
1982-06

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	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 = 100mA	—	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 = 0V, f = 1MHz	—	2.2	4.0	pF
Reverse recovery time	t _{rr}	I _F = 10mA (Fig.1)	—	1.6	4.0	ns

Marking

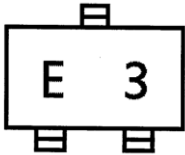
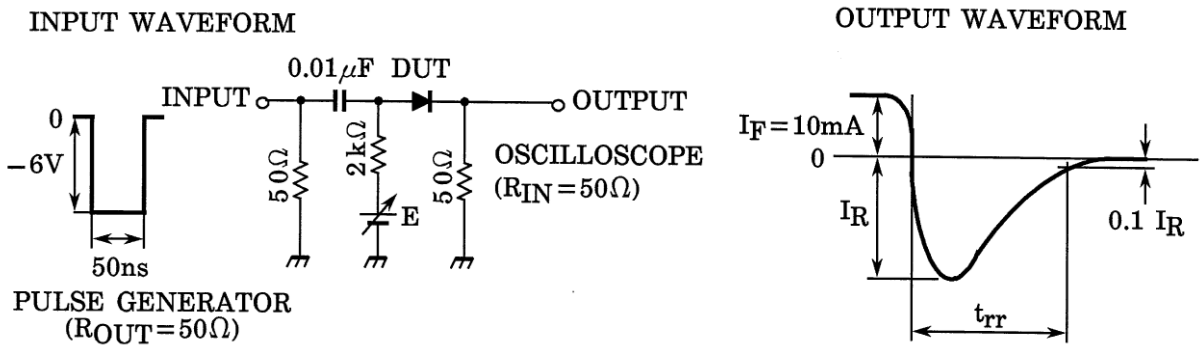
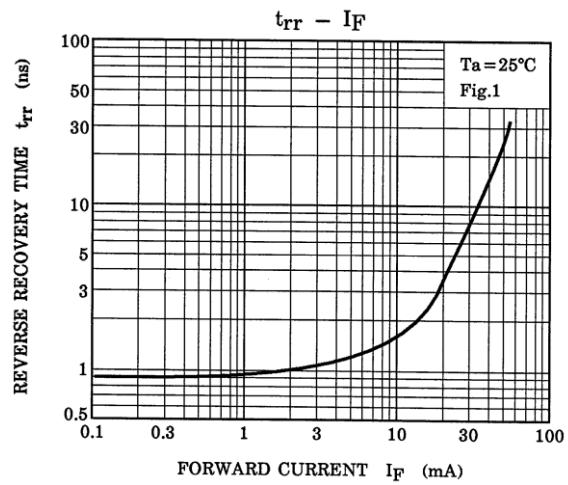
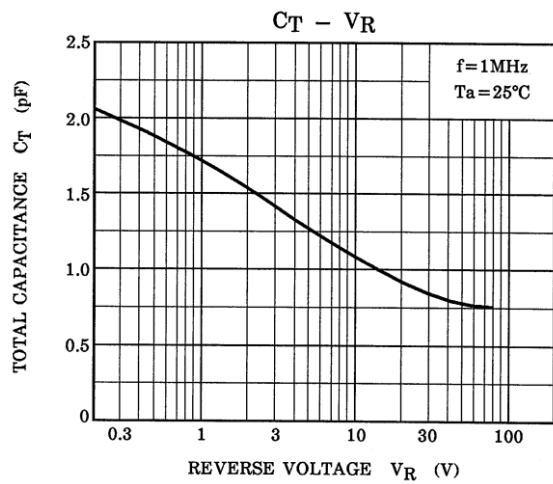
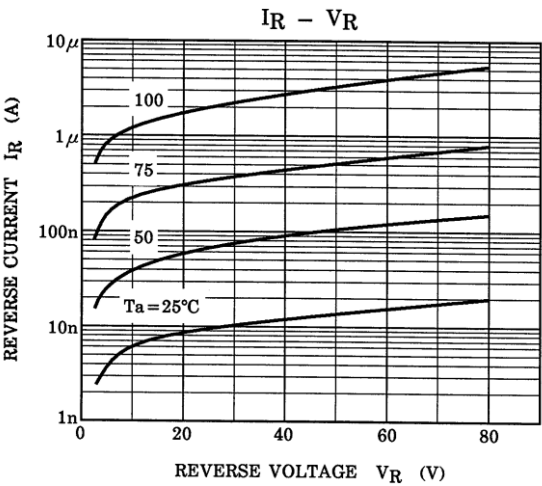
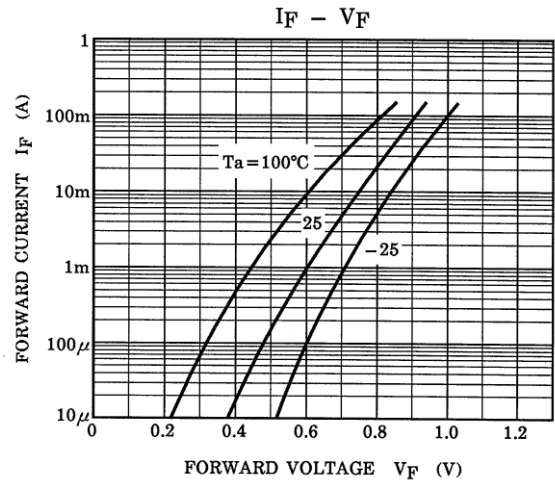


Fig.1 Reverse recovery time (t_{rr}) test circuit





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