

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS362FV

Ultra-High-Speed Switching Applications

- Small package
- Excellent in forward current and forward voltage characteristics: $V_F(3) = 0.97 \text{ V (typ.)}$
- Fast reverse recovery time: $t_{rr} = 1.6 \text{ ns (typ.)}$
- Small total capacitance: $C_T = 0.9 \text{ pF (typ.)}$

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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 (10 ms)	I_{FSM}	1 *	A
Power dissipation	P	150 **	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$

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.).

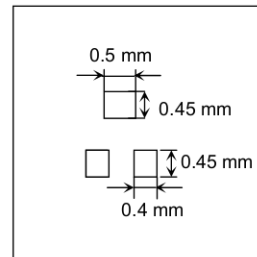
*: Unit rating. Total rating = unit rating $\times$ 0.7

**: Mounted on an FR4 board (25.4 mm $\times$ 25.4 mm $\times$ 1.6 mm (t))

Unit: mm

JEDEC	—
JEITA	—
TOSHIBA	1-1Q1A

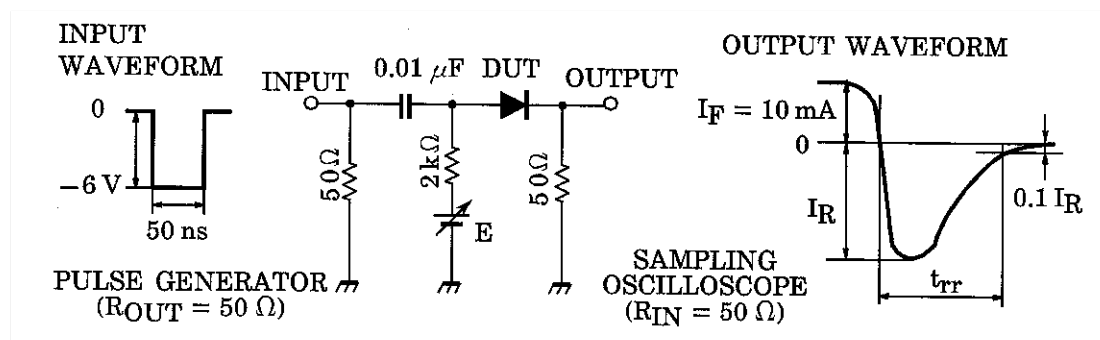
Weight: 1.5 mg (typ.)



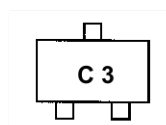
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1 \text{ mA}$	—	0.63	—	V
	$V_F(2)$	—	$I_F = 10 \text{ mA}$	—	0.75	—	
	$V_F(3)$	—	$I_F = 100 \text{ mA}$	—	0.97	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	—	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	0.9	—	pF
Reverse recovery time	t_{rr}	—	$I_F = 10 \text{ mA}$ (Fig. 1)	—	1.6	4.0	ns

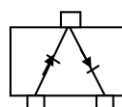
Start of commercial production
2004-09

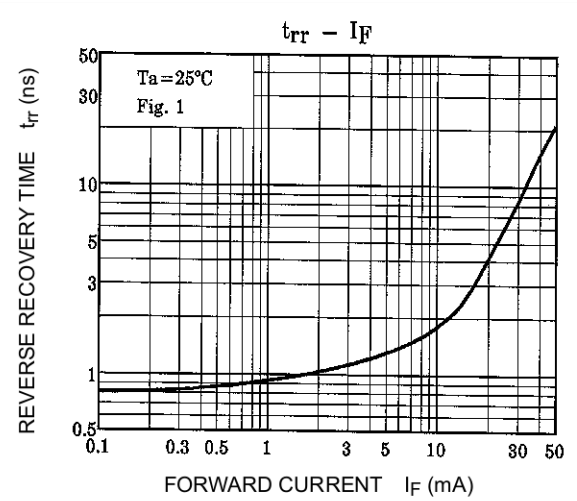
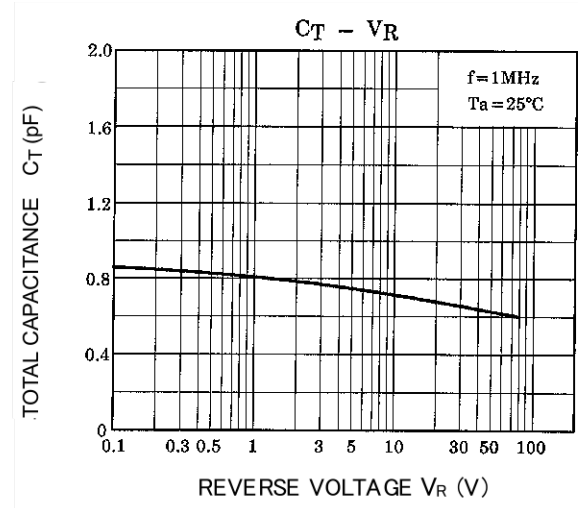
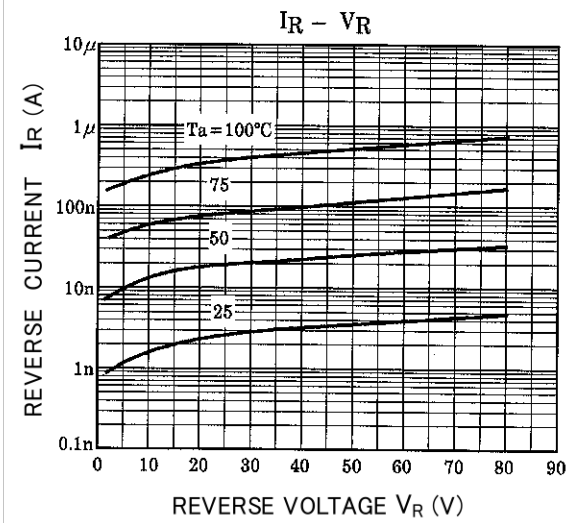
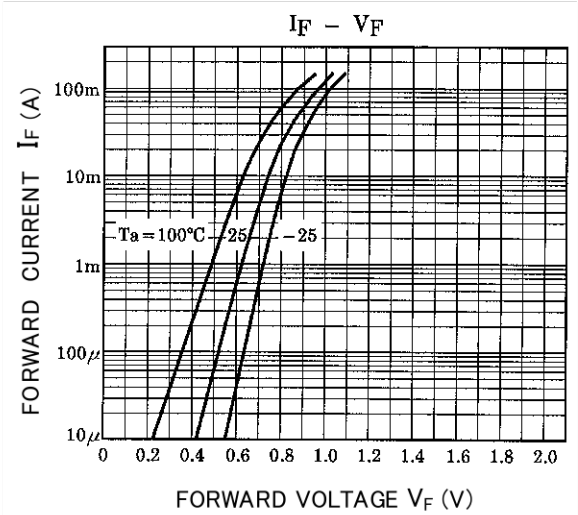
Fig. 1 Reverse Recovery Time (t_{rr}) Test Circuit

Marking



Equivalent Circuit (Top View)





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