TOSHIBA Diode Silicon Epitaxial Planar Type

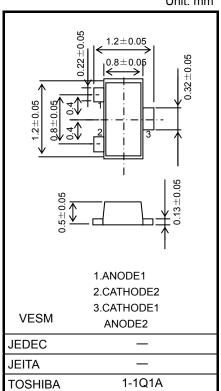
1SS362FV

Ultra-High-Speed Switching Applications

- Small package
- Excellent in forward current and forward voltage characteristics: V_{F (3)} = 0.97 V (typ.)
- Fast reverse recovery time: t_{rr} = 1.6 ns (typ.)
- Small total capacitance: C_T = 0.9 pF (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	Ι _Ο	100 *	mA	
Surge current (10 ms)	I _{FSM}	1 *	А	
Power dissipation	Р	150 **	mW	
Junction temperature	Tj	150	°C	
Storage temperature range	T _{stg}	–55 to 150	°C	



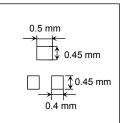
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

Weight: 1.5 mg (typ.)

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 × 0.7

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



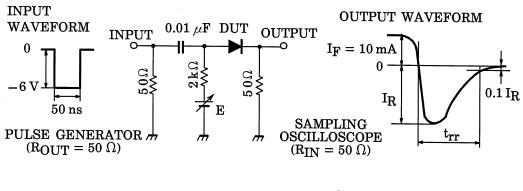
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V _{F (1)}	-	I _F = 1 mA	_	0.63	_	
	V _{F (2)}	-	I _F = 10 mA	_	0.75	_	V
	V _{F (3)}	-	I _F = 100 mA	_	0.97	1.20	
Reverse current	I _{R (1)}	_	V _R = 30 V	_	-	0.1	
	I _{R (2)}	_	V _R = 80 V	_	_	0.5	μA
Total capacitance	CT	_	V _R = 0 V, f = 1 MHz	_	0.9	_	pF
Reverse recovery time	t _{rr}	_	I _F = 10 mA (Fig. 1)	_	1.6	4.0	ns

Unit: mm

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Fig. 1 Reverse Recovery Time (trr) Test Circuit



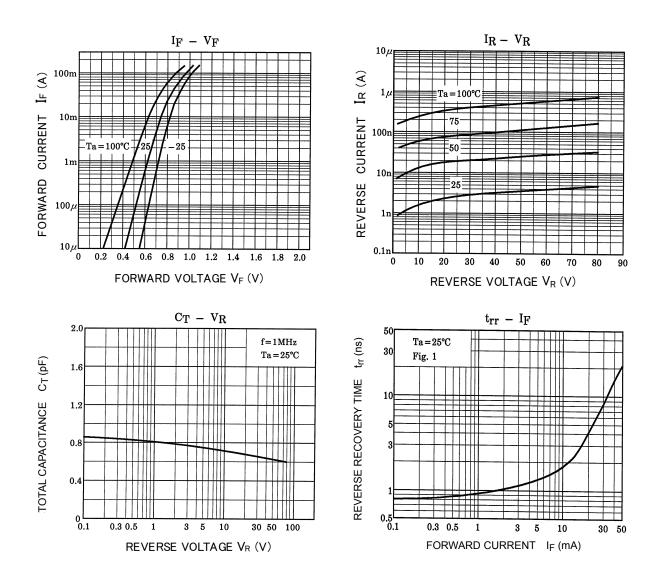
Marking

Equivalent Circuit (Top View)





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