TOSHIBA Diode Silicon Epitaxial Planar Type

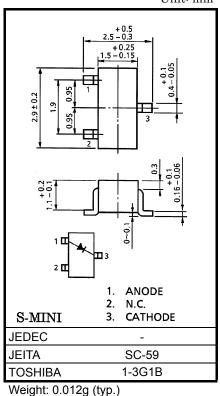
1SS193

Ultra High Speed Switching Application

- Small package : SC-59
- Low forward voltage : $V_{F(3)} = 0.9V$ (typ.)
- Fast reverse recovery time: t_{rr} = 1.6ns (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 (10ms)	I _{FSM}	2	А	
Power dissipation	Р	150	mW	
Junction temperature	Tj	125	°C	
Storage temperature range	T _{stg}	-55~125	°C	



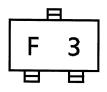
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

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).

Electrical Characteristics (Ta = 25°C)

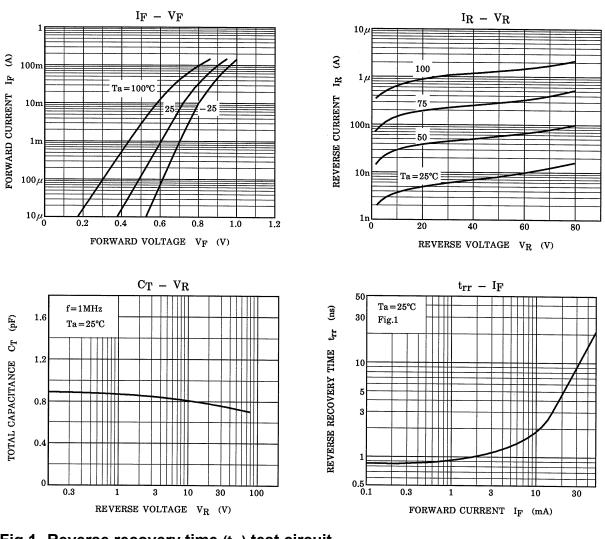
Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit	
Forward voltage	V _{F (1)}	_	I _F =1mA		0.60			
	V _{F (2)}	_	I _F = 10mA		0.72		V	
	V _{F (3)}	_	I _F = 100mA		0.90	1.20		
Reverse current	I _{R (1)}	_	V _R = 30V		—	0.1		
	I _{R (2)}	-	V _R = 80V	-	_	0.5	μΑ	
Total capacitance	CT	_	V _R = 0, f = 1MH _z	_	0.9	3.0	pF	
Reverse recovery time	t _{rr}	_	I _F = 10mA (Fig.1)	_	1.6	4.0	ns	

Marking

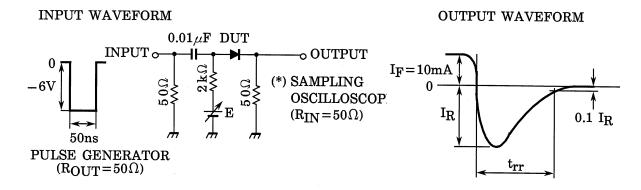


Unit: mm

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