Unit: mm

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 = 0.9pF (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	Α	
Power dissipation	Р	150	mW	
Junction temperature	Tj	125	°C	
Storage temperature range	T _{stg}	-55 to 125	°C	

1. ANODE
2. N.C.
S-MINI
3. CATHODE

JEDEC

JEITA

SC-59

TOSHIBA

1-3G1B

Weight: 0.012g (typ.)

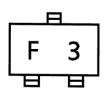
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in

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 Condition	Min	Тур.	Max	Unit
Forward voltage	V _{F (1)}	I _F =1mA	_	0.60	_	V
	V _{F (2)}	I _F = 10mA	_	0.72	_	
	V _{F (3)}	I _F = 100mA	_	0.90	1.20	
Reverse current —	I _{R (1)}	V _R = 30V	_	_	0.1	μА
	I _{R (2)}	V _R = 80V	_	_	0.5	
Total capacitance	C _T	$V_R = 0$, $f = 1MH_z$	_	0.9	3.0	pF
Reverse recovery time	t _{rr}	I _F = 10mA (Fig.1)	-	1.6	4.0	ns

Marking



Start of commercial production 1982-05

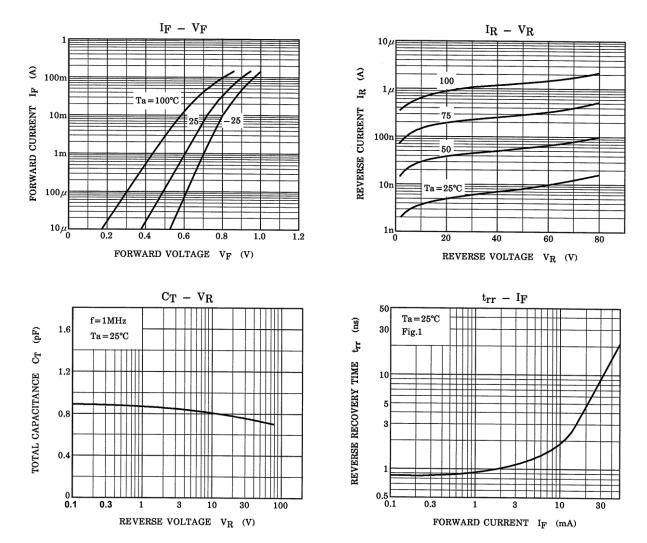
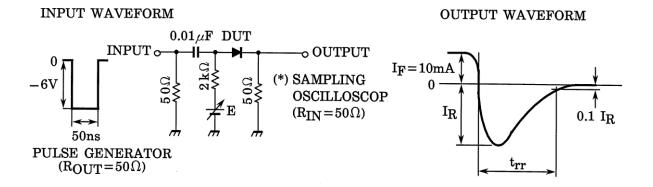


Fig.1 Reverse recovery time (t_{rr}) test circuit



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