Unit: mm

**TOSHIBA Diode Silicon Epitaxial Planar Type** 

# **1SS184**

#### **Ultra High-Speed Switching Applications**

• AEC-Q101 Qualified (Note1)

• Small package: SC-59

• Low forward voltage:  $V_{F(3)} = 0.90 \text{ V (typ.)}$ 

• Fast reverse recovery time: t<sub>rr</sub> = 1.6 ns (typ.)

• Small total capacitance: C<sub>T</sub> = 0.9 pF (typ.)

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

### **Absolute Maximum Ratings (Ta = 25°C)**

Characteristics	Symbol	Rating	Unit	
Maximum (peak) reverse voltage	$V_{RM}$	85	V	
Reverse voltage	VR	80	V	
Maximum (peak) forward current	IFM	300*	mA	
Average forward current	l <sub>O</sub>	100*	mA	
Surge current (10 ms)	I <sub>FSM</sub>	2*	Α	
Power dissipation	Р	150	mW	
Junction temperature	Tj	125	°C	
Storage temperature	T <sub>stg</sub>	−55 to 125	°C	

Junction temperature T<sub>j</sub> 125 °C

Storage temperature T<sub>stg</sub> -55 to 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).

\*: Unit rating. Total rating = unit rating  $\times$  1.5.

#### **Electrical Characteristics (Ta = 25°C)**

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Forward voltage	VF (1)	I <sub>F</sub> = 1 mA	_	0.60	_	V
	VF (2)	IF = 10 mA	_	0.72	_	
	VF (3)	I <sub>F</sub> = 100 mA	_	0.90	1.20	
Reverse current	I <sub>R (1)</sub>	V <sub>R</sub> = 30 V	_	_	0.1	μА
	I <sub>R (2)</sub>	V <sub>R</sub> = 80 V	_	_	0.5	
Total capacitance	CT	V <sub>R</sub> = 0 V, f = 1 MHz	_	0.9	3.0	pF
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> = 10 mA (Fig.1)	_	1.6	4.0	ns

29±02

ANODE
2. ANODE
3. CATHODE

S-MINI

JEDEC TO-236MOD
JEITA SC-59
TOSHIBA 2-3F1S

Weight: 12 mg (typ.)

## Marking

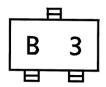
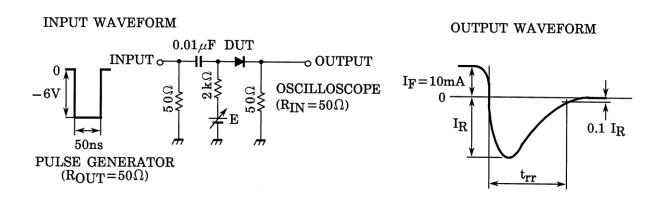
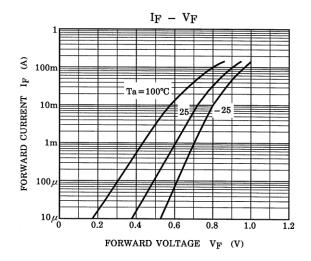
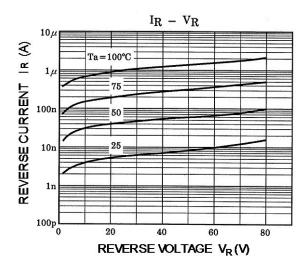


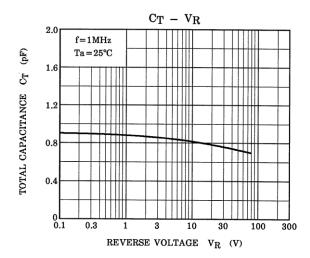
Fig.1 Reverse Recovery Time (trr) Test Circuit

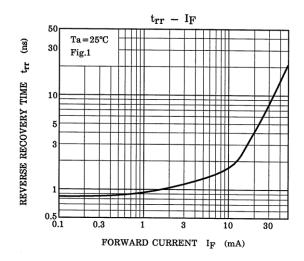


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