Switching Diodes Silicon Epitaxial Planar

1SS307E

1. Applications

- General-Purpose Rectifiers

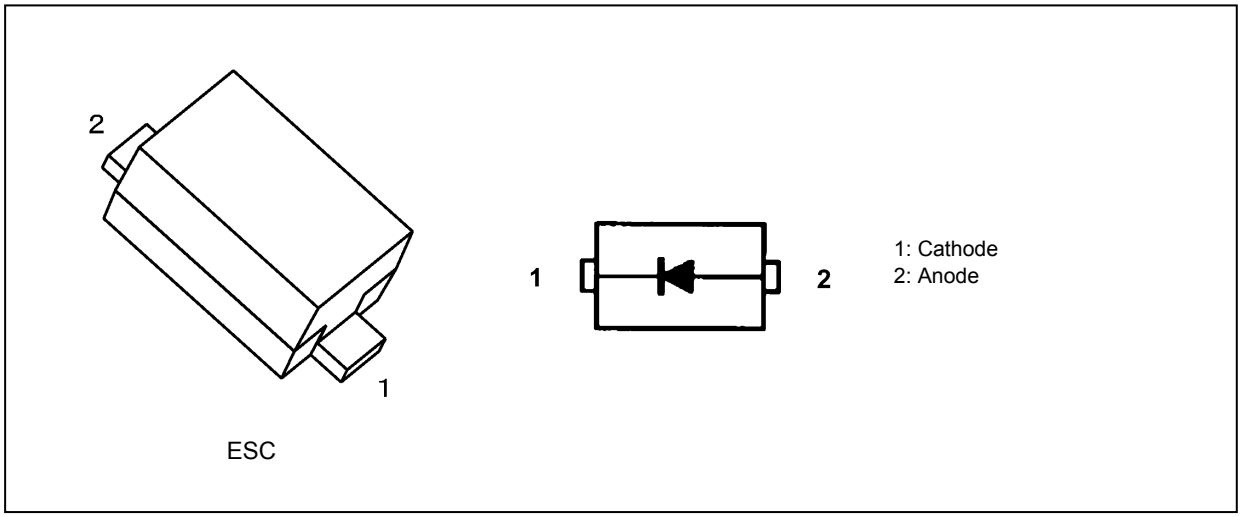
2. Features

(1) Very low reverse current. : I_R = 10 nA (max)

(2) AEC-Q101 qualified (Note 1)

Note 1: For detail information, please contact to our sales.

3. Packaging and Internal Circuit



Start of commercial production
2015-04

2015-06-11
Rev.3.0

4. Absolute Maximum Ratings (Note) (Unless otherwise specified, T_a = 25 °C)

Characteristics	Symbol	Note	Rating	Unit
Peak reverse voltage	V_{RM}		85	V
Reverse voltage	V_R		80	
Peak forward current	I_{FM}		300	mA
Average rectified current	I_O		100	
Power dissipation	P_D	(Note 1)	150	mW
Non-repetitive peak forward surge current	I_{FSM}	(Note 2)	1	A
Junction temperature	T_j		150	°C
Storage temperature	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.
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).

Note 1: Mounted on a glass epoxy circuit board of 20 mm × 20 mm, Pad dimension of 4 mm × 4 mm.

Note 2: Measured with a 10 ms pulse.

5. Electrical Characteristics (Unless otherwise specified, T_a = 25 °C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F	I_F = 100 mA	—	0.9	1.3	V
Reverse current	I_R	V_R = 80 V	—	—	10	nA
Total capacitance	C_t	V_R = 0 V, f = 1 MHz	—	2.0	6.0	pF

6. Marking

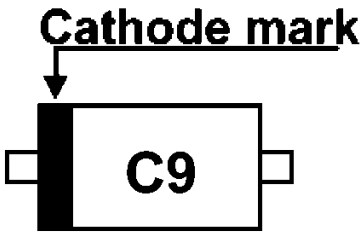


Fig. 6.1 Marking

7. Land Pattern Dimensions (for reference only)

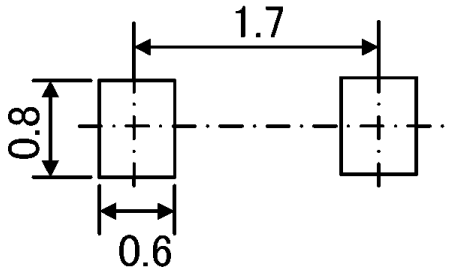


Fig. 7.1 ESC (Unit: mm)

8. Characteristics Curves (Note)

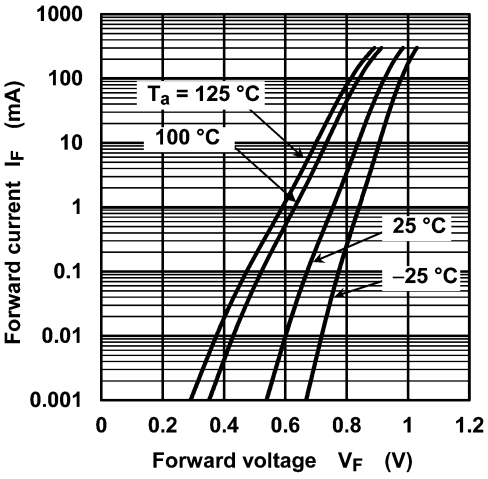


Fig. 8.1 I_F - V_F

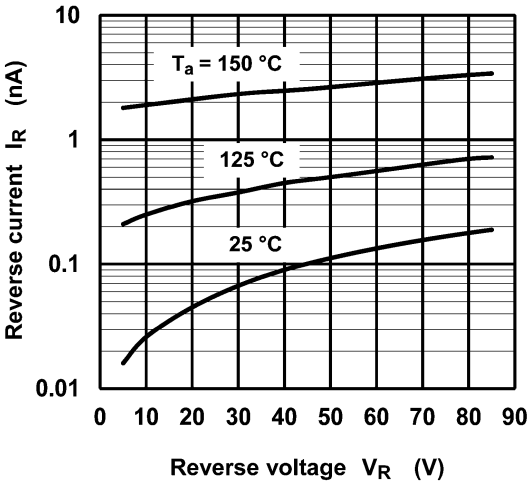


Fig. 8.2 I_R - V_R

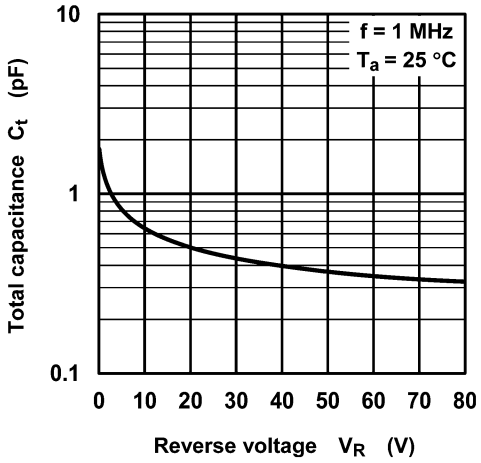


Fig. 8.3 C_t - V_R

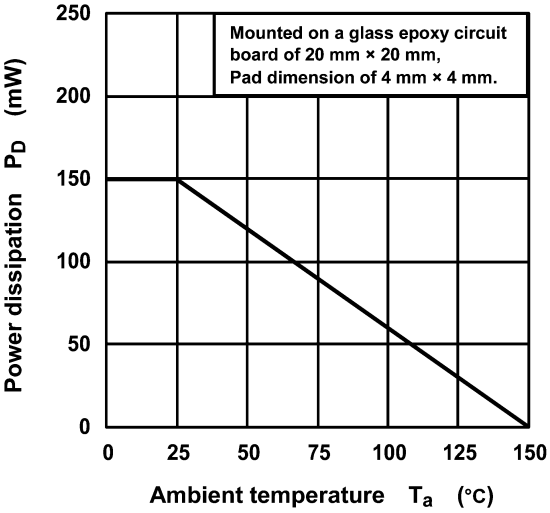
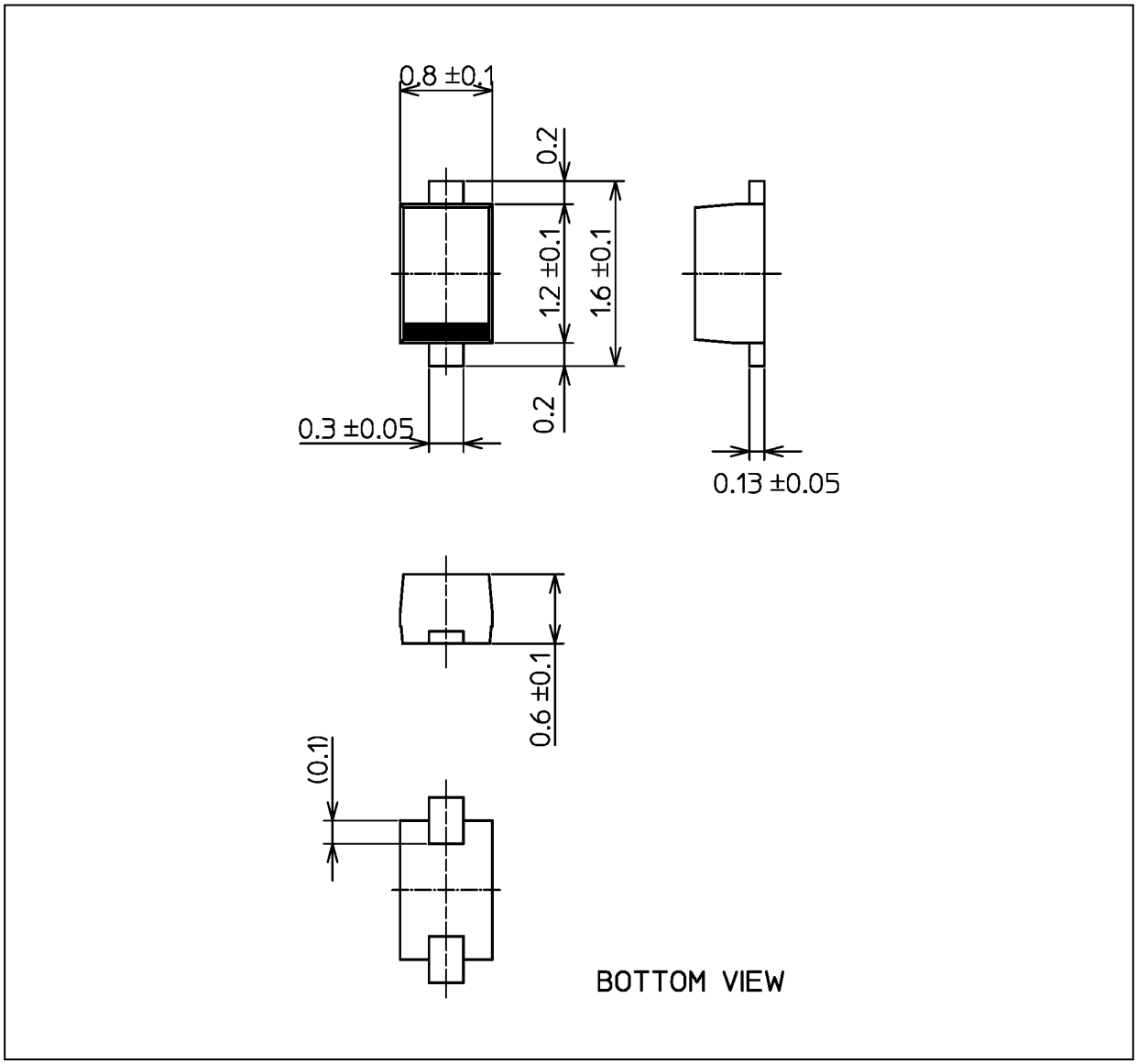


Fig. 8.4 P_D - T_a

Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

Package Dimensions

Unit: mm



Weight: 1.4 mg (typ.)

Package Name(s)
TOSHIBA: 1-1G1S
Nickname: ESC

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