

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

**1SS424**

## High-Speed Switching Applications

Unit: mm

- Low forward voltage :  $V_F$  (3) = 0.50 V (typ.)

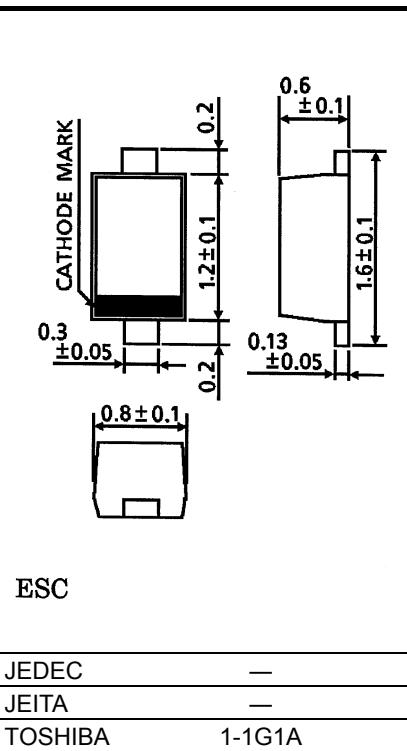
**Absolute Maximum Ratings (Ta = 25°C)**

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	30	V
Reverse voltage	$V_R$	20	V
Maximum (peak) forward current	$I_{FM}$	300	mA
Average forward current	$I_O$	200	mA
Surge current (10 ms)	$I_{FSM}$	1	A
Power dissipation	$P^*$	150	mW
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55~125	°C
Operating temperature range	$T_{opr}$	-40~100	°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.).

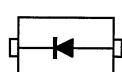
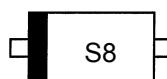
\*: Mounted on a glass-epoxy circuit board of 20 × 20 mm, pad dimensions of 4 × 4 mm.

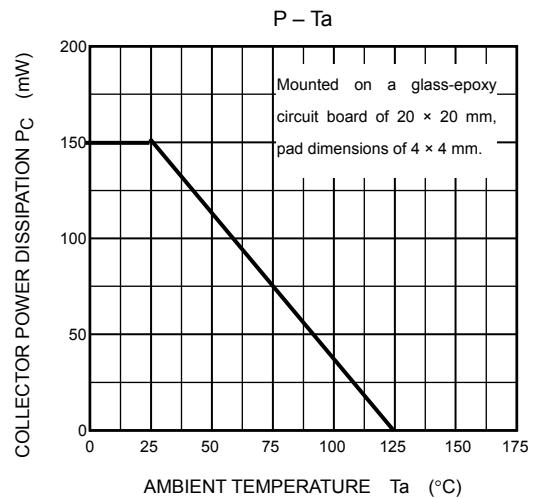
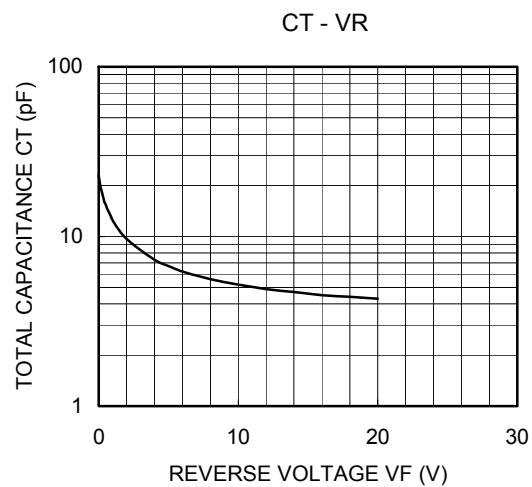
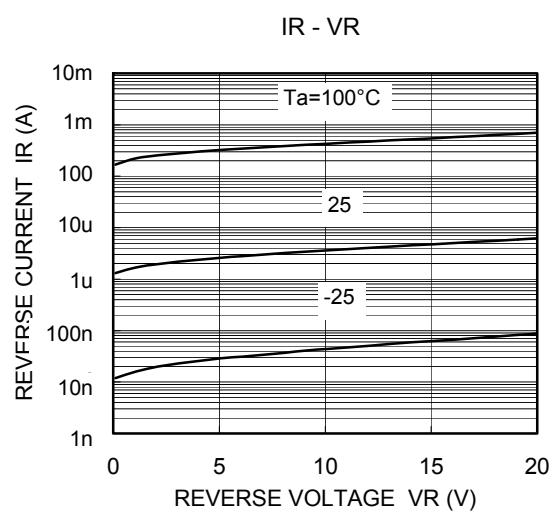
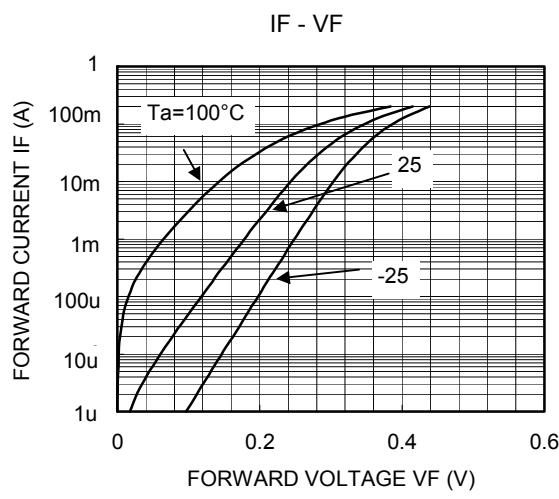


Weight: 1.4 mg (typ.)

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

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	—	$I_F = 1$ mA	—	0.18	—	V
	$V_F$ (2)	—	$I_F = 5$ mA	—	0.23	—	
	$V_F$ (3)	—	$I_F = 200$ mA	—	0.42	0.5	
Reverse current	$I_R$ (1)	—	$V_R = 10$ V	—	—	30	$\mu$ A
	$I_R$ (2)	—	$V_R = 20$ V	—	—	50	
Total capacitance	$C_T$	—	$V_R = 0$ , $f = 1$ MHz	—	20	—	pF

**Equivalent Circuit (Top View)****Marking**



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