

SOD-323 Plastic-Encapsulate Diodes

1SS404 Silicon Epitaxial Schottky Barrier Type

High Speed Switching Applications

- Two-pin small packages are suitable for higher mounting densities
- Low forward voltage : $V_F(3) = 0.38\text{ V (typ.)}$
- Low reverse current: $I_R = 50\text{ }\mu\text{A (max)}$
- Small total capacitance: $C_T = 46\text{ pF (typ.)}$

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	25	V
Reverse voltage	V_R	20	V
Maximum (peak) forward current	I_{FM}	700	mA
Average forward current	I_O	300	mA
Power dissipation	P	200 (Note 1)	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-55 \sim 125$	$^\circ\text{C}$
Operating temperature range	T_{opr}	$-40 \sim 100$	$^\circ\text{C}$

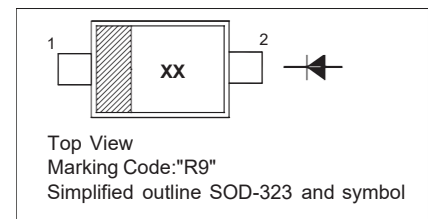
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e.operating temperature/current/voltage, etc.) 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 board of 20 mm × 20 mm, pad dimension 4 mm × 4 mm.

PINNING

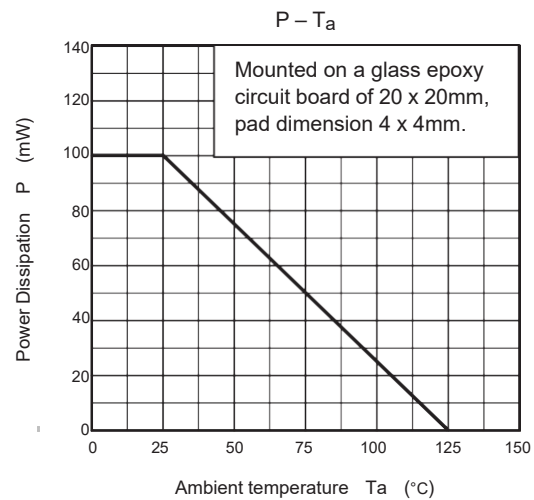
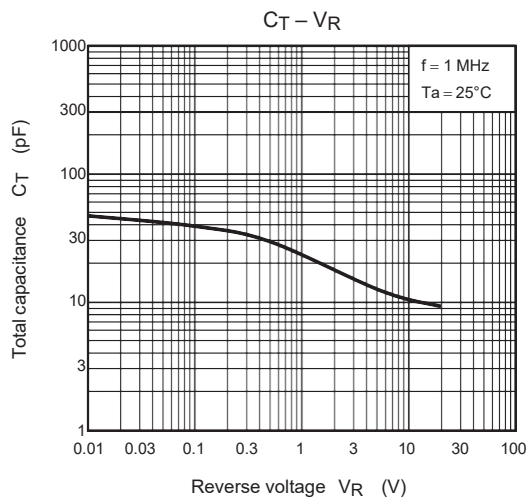
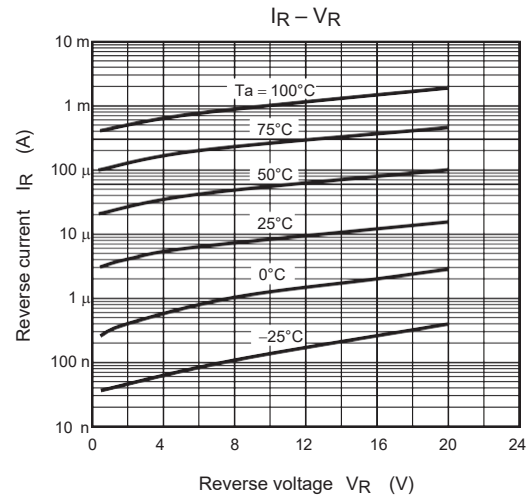
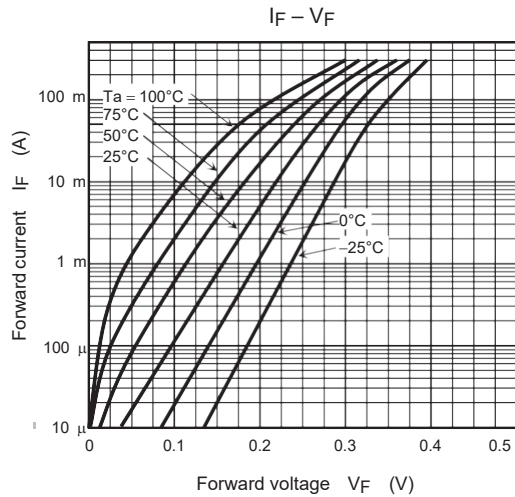
PIN	DESCRIPTION
1	Cathode
2	Anode



Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1\text{ mA}$	—	0.16	—	V
	$V_F(2)$	$I_F = 10\text{ mA}$	—	0.22	—	
	$V_F(3)$	$I_F = 300\text{ mA}$	—	0.38	0.45	
Reverse current	I_R	$V_R = 20\text{ V}$	—	—	50	μA
Total capacitance	C_T	$V_R = 0, f = 1\text{ MHz}$	—	46	—	pF

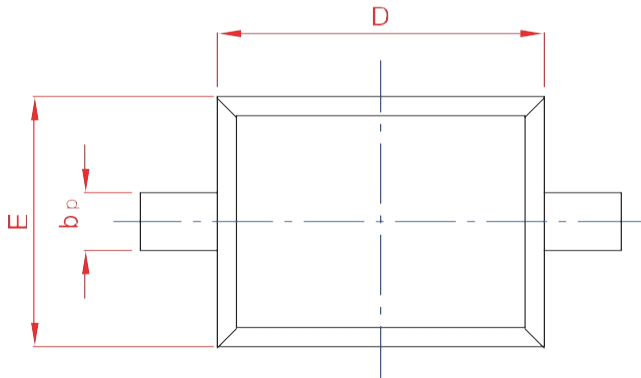
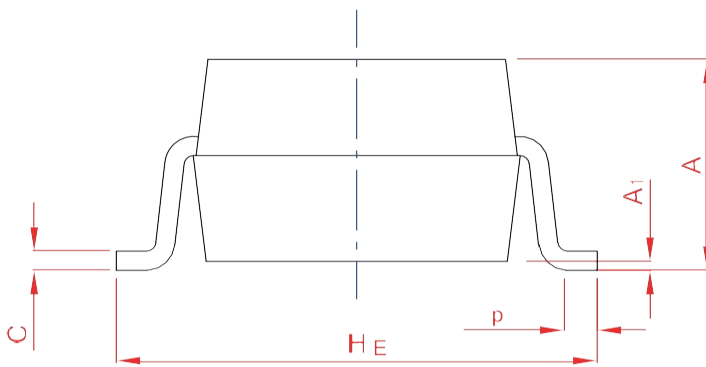
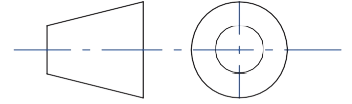
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	H _E	A ₁	L _p
mm	1.20 0.90	0.40 0.25	0.15 0.10	1.80 1.60	1.35 1.15	2.80 2.30	0.10 0.01	0.50 0.20