

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS401

High Speed Switching Applications

- Low forward voltage : $V_F(3) = 0.38\text{ V (typ.)}$
- Low reverse current : $I_R = 50\mu\text{A (max)}$
- Small total capacitance : $C_T = 46\text{ pF (typ.)}$

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

Characteristic	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	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55~125	$^\circ\text{C}$
Operating temperature range	T_{opr}	-40~100	$^\circ\text{C}$

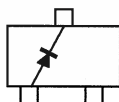
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

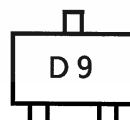
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Circuit	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

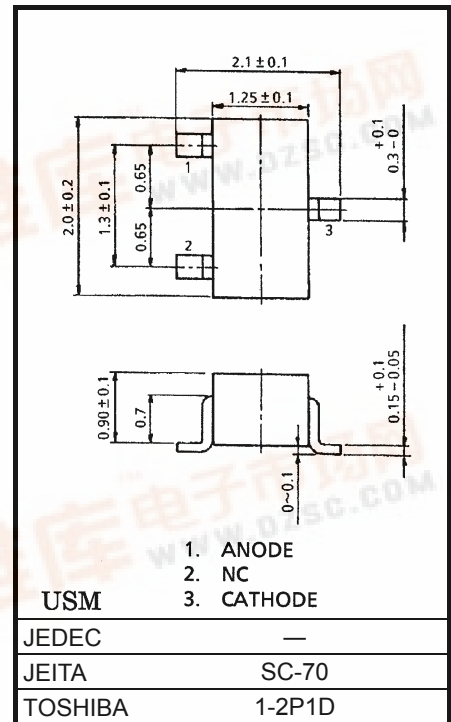
Pin Assignment (Top View)



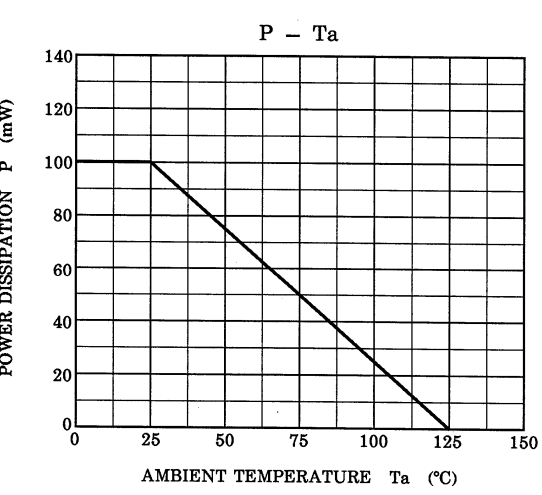
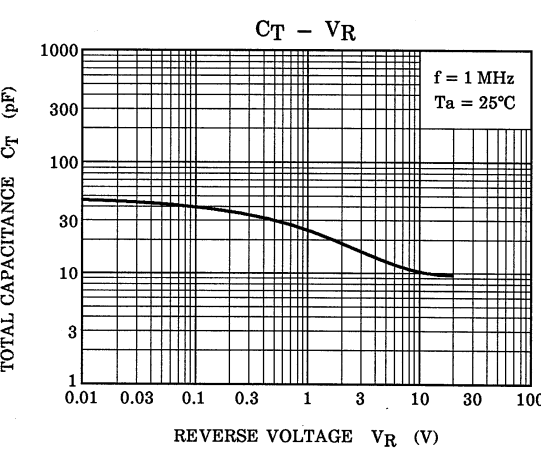
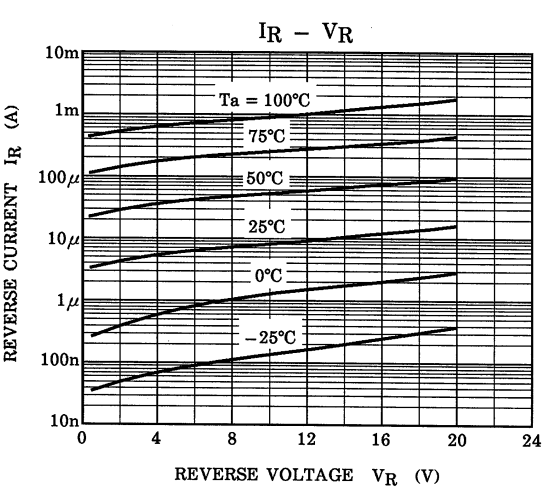
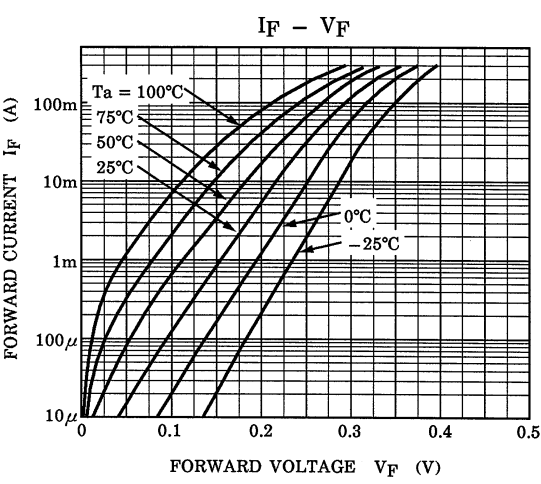
Marking



Unit in mm



Weigh: 0.006 g(typ.)



RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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