

TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS321

Unit: mm

## Low-Voltage High-Speed Switching

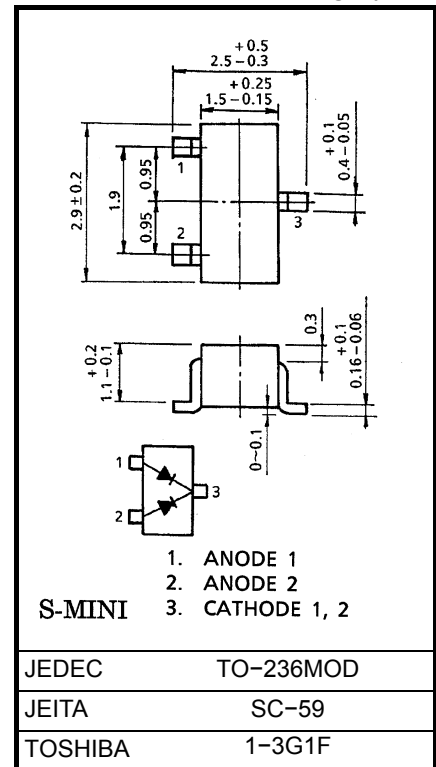
- Low forward voltage:  $V_F = 0.42\text{ V (typ.)}$
- Low reverse current:  $I_R = 500\text{ nA (max)}$
- Small package: SC-59

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

Characteristics	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	12	V
Reverse voltage	$V_R$	10	V
Maximum (peak) forward current	$I_{FM}$	150*	mA
Average forward current	$I_O$	50*	mA
Surge current (10 ms)	$I_{FSM}$	1000*	mA
Power dissipation	P	150	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to 125	$^\circ\text{C}$

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).

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

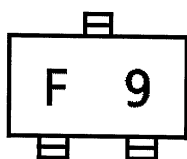


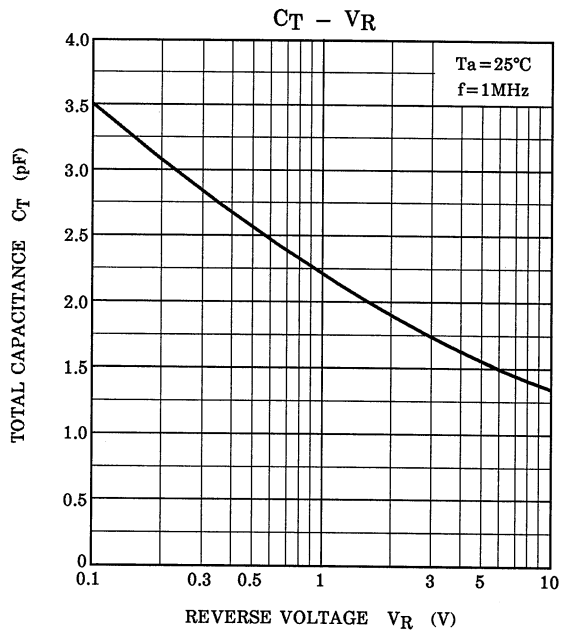
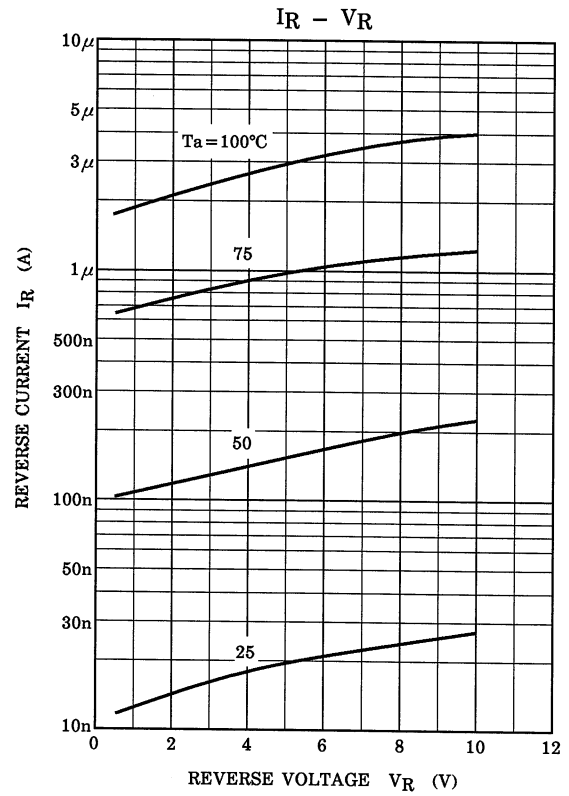
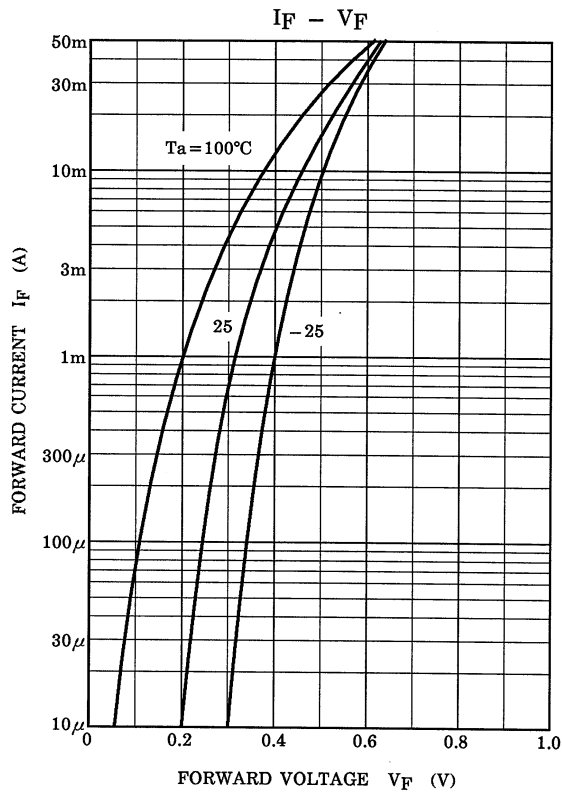
Weight: 0.012 g (typ.)

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

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	—	$I_F = 1\text{ mA}$	—	0.32	—	V
	$V_F (2)$	—	$I_F = 10\text{ mA}$	—	0.42	—	
	$V_F (3)$	—	$I_F = 50\text{ mA}$	—	0.63	1.00	
Reverse current	$I_R$	—	$V_R = 10\text{ V}$	—	—	500	nA
Total capacitance	$C_T$	—	$V_R = 0, f = 1\text{ MHz}$	—	3.2	4.5	pF

## Marking





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