

TOSHIBA Diode Silicon Epitaxial Planar Type

1SS321

Unit: mm

Low-Voltage High-Speed Switching

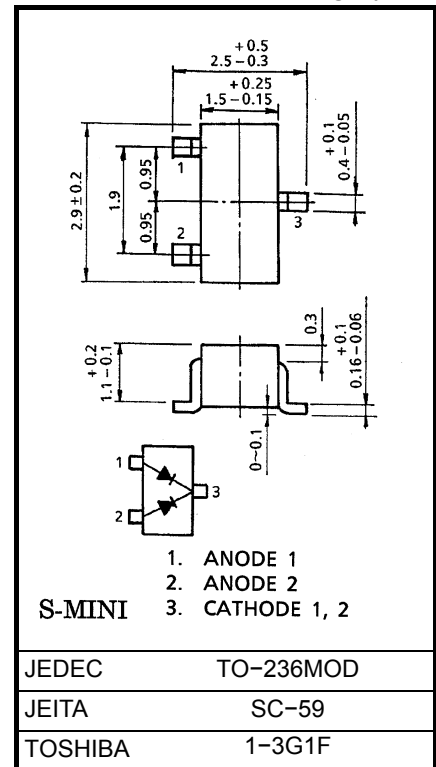
- Low forward voltage: $V_F = 0.42 \text{ V (typ.)}$
- Low reverse current: $I_R = 500 \text{ nA (max)}$
- Small package: SC-59

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.

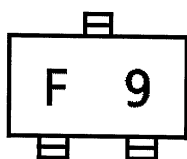


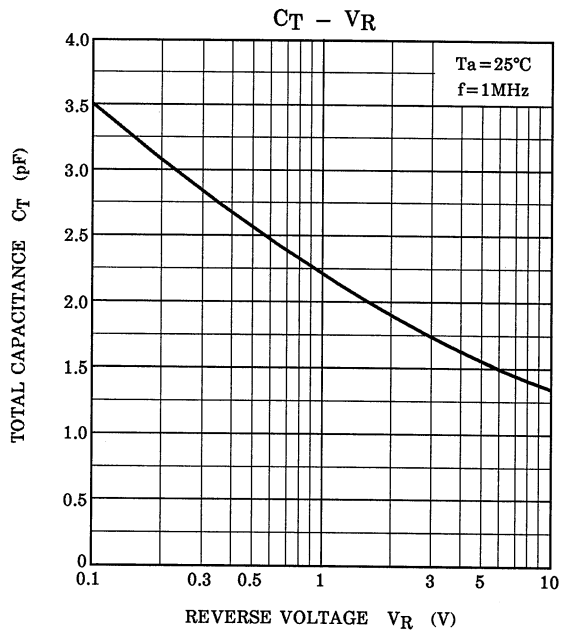
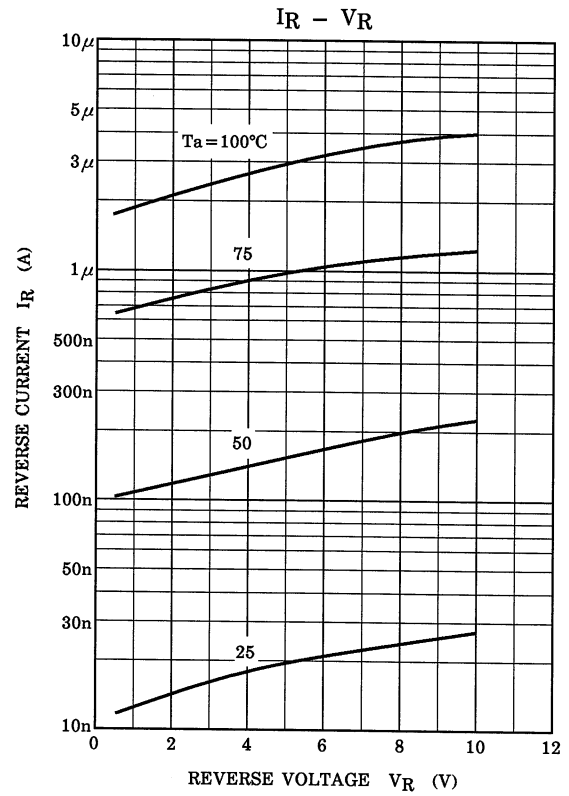
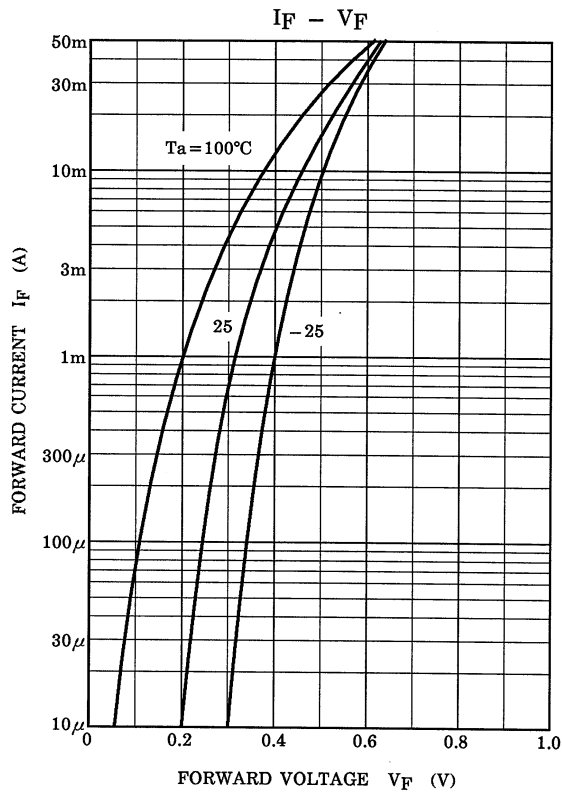
Weight: 0.012 g (typ.)

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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