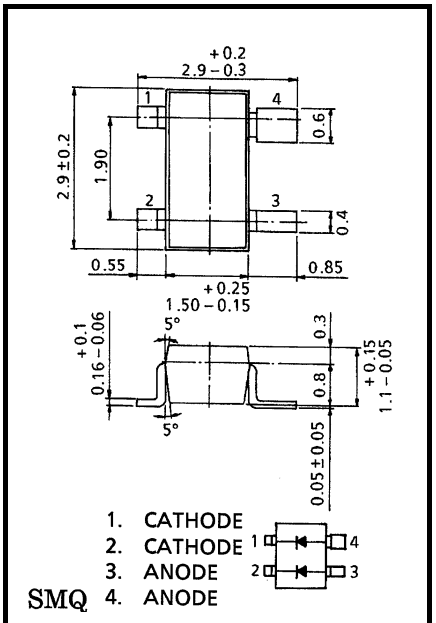
TOSHIBA Diode Silicon Epitaxial Planar Type

1SS306

High Voltage, High Speed Switching Applications

Unit: mm

- Low forward voltage : $V_{F\ (2)}$ = 0.90V (typ.)
- Fast reverse recovery time : t_{rr} = 30ns (max)
- Small total capacitance : C_T = 1.5pF (typ.)
- Small package : SC-61



JEDEC	—
JEITA	SC-61
TOSHIBA	2-3J1A

Weight: 0.013g (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	250	V
Reverse voltage	V_R	200	V
Maximum (peak) forward current	I_{FM}	300 (*)	mA
Average forward current	I_O	100 (*)	mA
Surge current (10ms)	I_{FSM}	2 (*)	A
Power dissipation	P	150	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55~125	°C

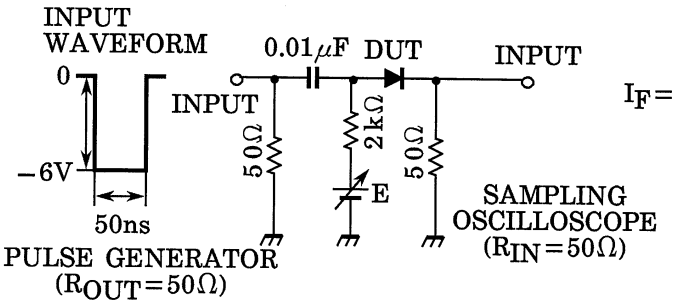
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

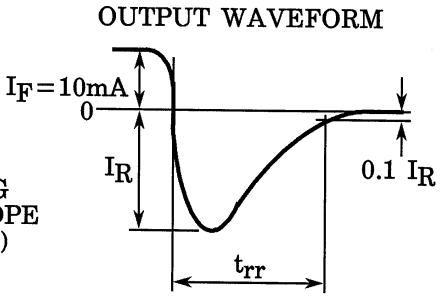
*: Unit rating. Total rating = unit rating × 1.5

Electrical Characteristics (Ta = 25°C)

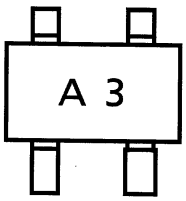
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	I_F = 10mA	—	0.72	1.0	V
	$V_{F\ (2)}$	—	I_F = 100mA	—	0.9	1.2	
Reverse current	$I_{R\ (1)}$	—	V_R = 50V	—	—	0.1	μA
	$I_{R\ (2)}$	—	V_R = 200V	—	—	1.0	
Total capacitance	C_T	—	V_R = 0, f = 1MHz	—	1.5	3.0	pF
Reverse recovery time	t_{rr}	—	I_F = 10mA Fig.1	—	30	60	ns

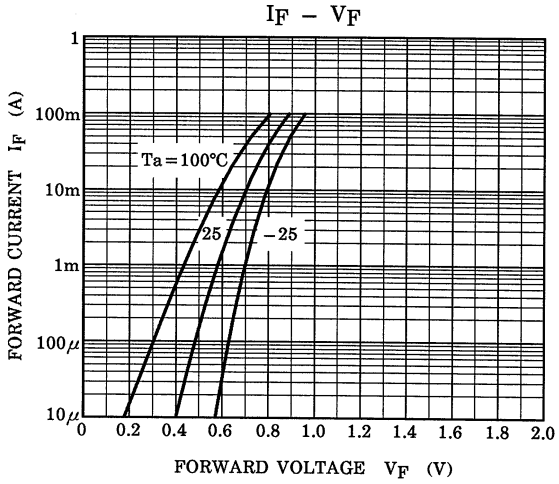
Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

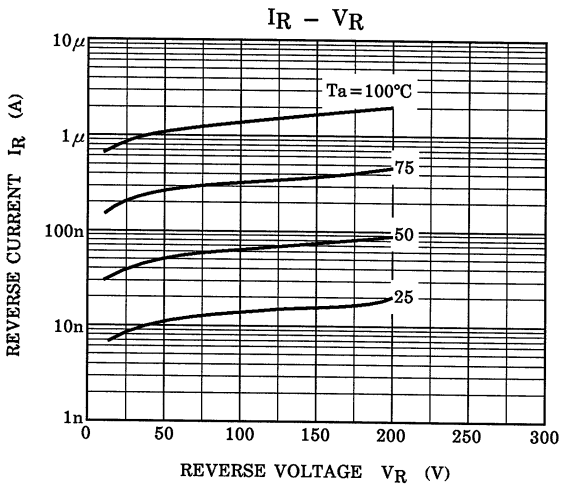


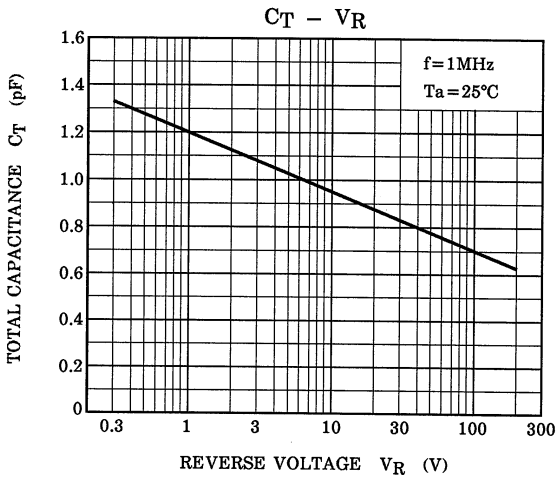


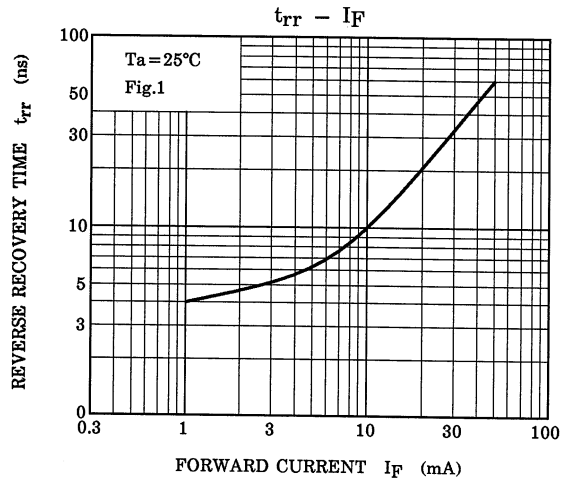
Marking











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