

1SS420

High-Speed Switching Applications

- Low reverse current: $I_R = 5 \mu\text{A}$ (max)

Absolute Maximum Ratings (Ta = 25°C)

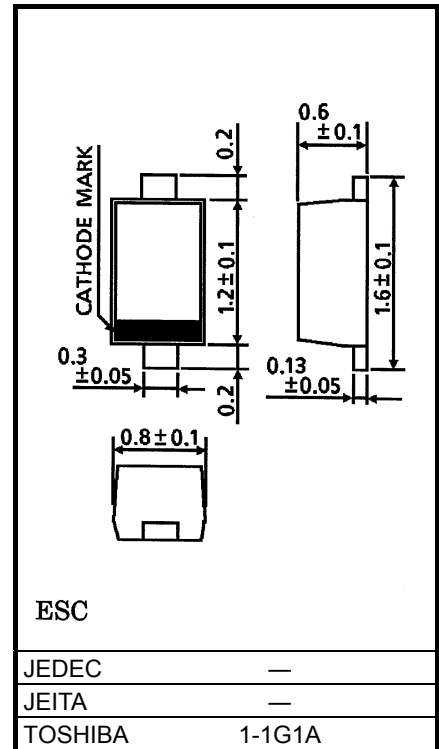
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	35	V
Reverse voltage	V_R	30	V
Maximum (peak) forward current	I_{FM}	300	mA
Average forward current	I_O	200	mA
Surge current (10 ms)	I_{FSM}	1	A
Power dissipation	P^*	150	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55 to 125	°C
Operating temperature range	T_{opr}	-40 to 100	°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).

- * Mounted on a glass-epoxy circuit board of 20 × 20 mm, pad dimensions of 4 × 4 mm.

Unit: mm



ESC

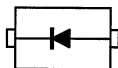
JEDEC	—
JEITA	—
TOSHIBA	1-1G1A

Weight: 0.0014 g (typ.)

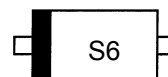
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 1 \text{ mA}$	—	0.29	—	V
	V_F (2)	—	$I_F = 10 \text{ mA}$	—	0.36	—	
	V_F (3)	—	$I_F = 200 \text{ mA}$	—	0.52	0.6	
Reverse current	I_R	—	$V_R = 30 \text{ V}$	—	—	5	μA
Total capacitance	C_T	—	$V_R = 0, f = 1 \text{ MHz}$	—	20	—	pF

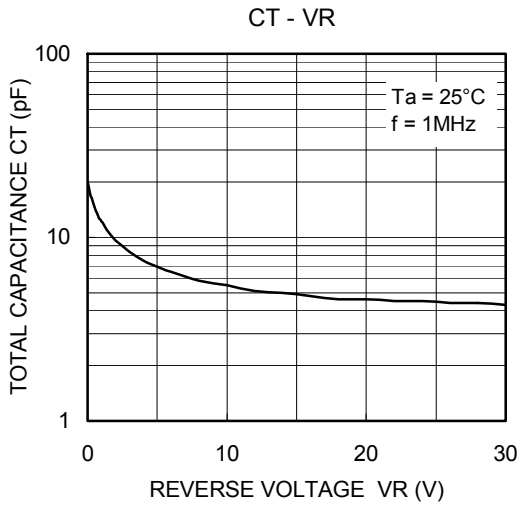
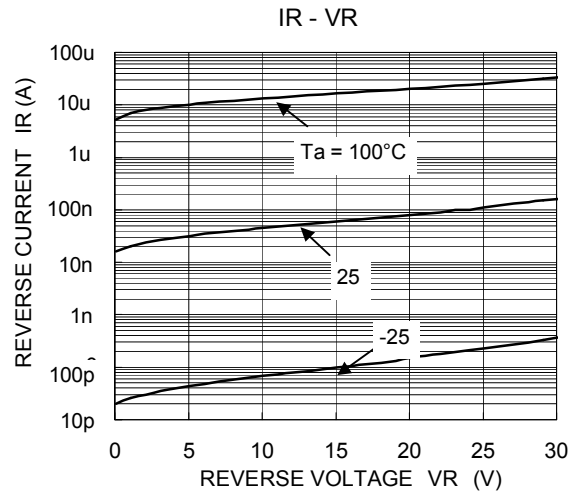
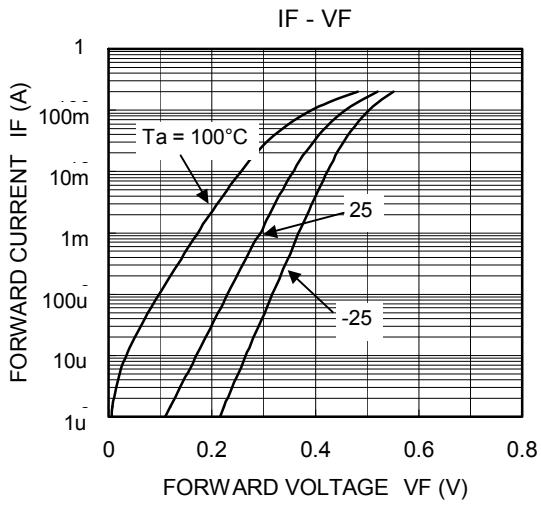
Equivalent Circuit (Top View)



Marking



Start of commercial production
2004-03



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