

# DSR520

## High-Speed Switching Applications

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

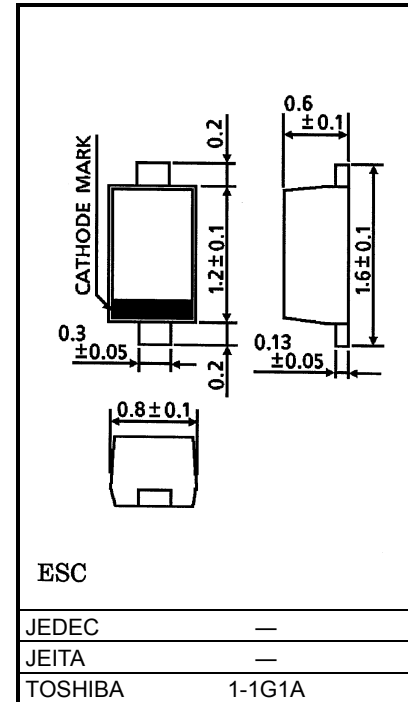
### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	32	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	$^\circ C$
Storage temperature range	$T_{stg}$	-55~125	$^\circ C$
Operating temperature range	$T_{opr}$	-40~100	$^\circ C$

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

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: mm

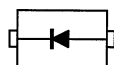


Weight: 1.4 mg (typ.)

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

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	—	$I_F = 1 \text{ mA}$	—	0.21	—	V
	$V_F$ (2)	—	$I_F = 10 \text{ mA}$	—	0.28	—	
	$V_F$ (3)	—	$I_F = 200 \text{ mA}$	—	0.52	0.6	
Reverse current	$I_R$	—	$V_R = 30 \text{ V}$	—	—	5	$\mu A$
Total capacitance	$C_T$	—	$V_R = 0, f = 1 \text{ MHz}$	—	18	—	pF

### Equivalent Circuit (Top View)



### Marking

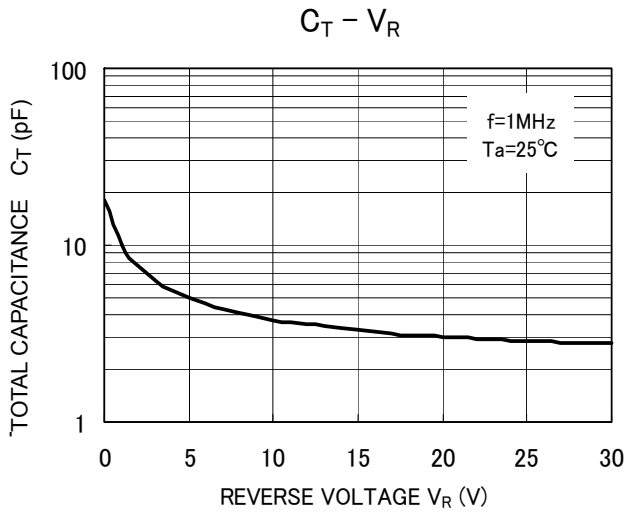
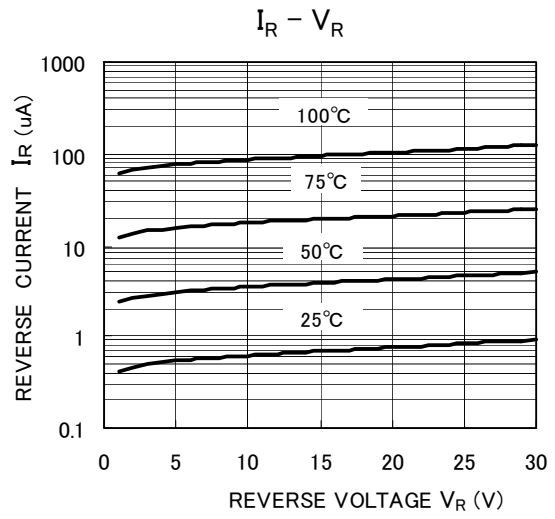
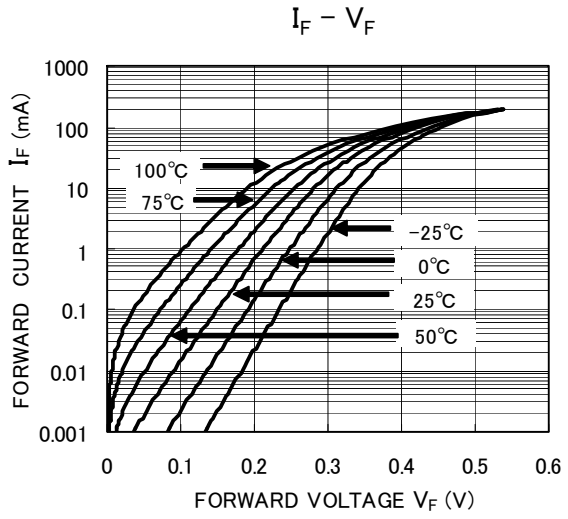


**Handling Precaution**

Schottky barrier diodes have reverse current characteristic compared to the other diodes.

There is a possibility SBD may cause thermal runaway when it is used under high temperature or high voltage.

Please take forward and reverse loss into consideration during design.



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