

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

HN2S02JE

High-speed Switching Applications

Unit: mm

- HN2S02JE is composed of two independent diodes.
- Low forward voltage: V_F (3) = 0.54V (typ.)
- Low reverse current: I_R = 5 μ A (max)

Absolute Maximum Ratings (Ta = 25°C)

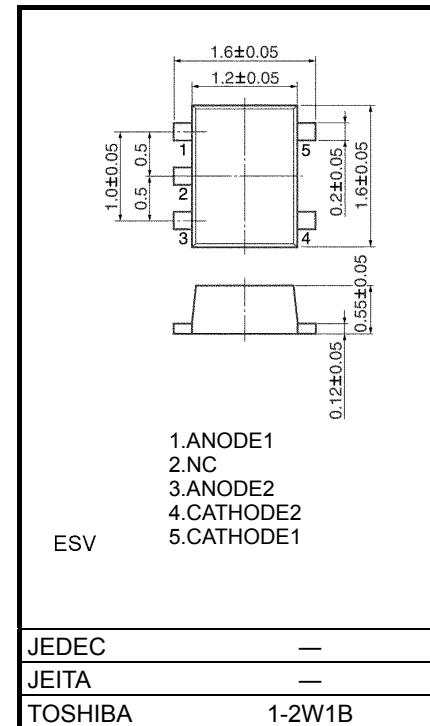
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	V_{RM}	45	V
Reverse voltage	V_R	40	V
Maximum (peak) forward current	I_{FM}	300 *	mA
Average forward current	I_O	100 *	mA
Surge current (10ms)	I_{FSM}	1 *	A
Power dissipation	P	100 **	mW
Junction temperature	T_j	125	°C
Storage temperature 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.).

* : Unit rating (Total rating = unit rating \times 1.5)

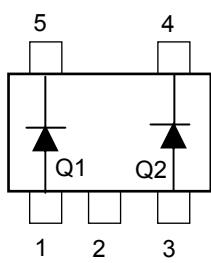
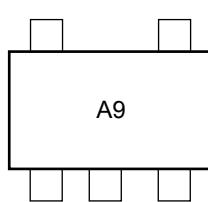
** : Total rating



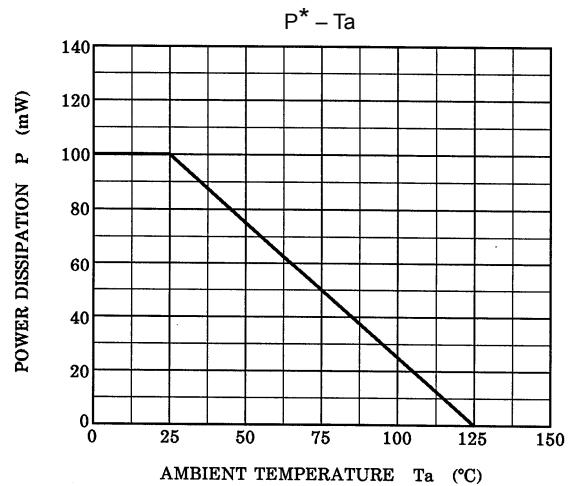
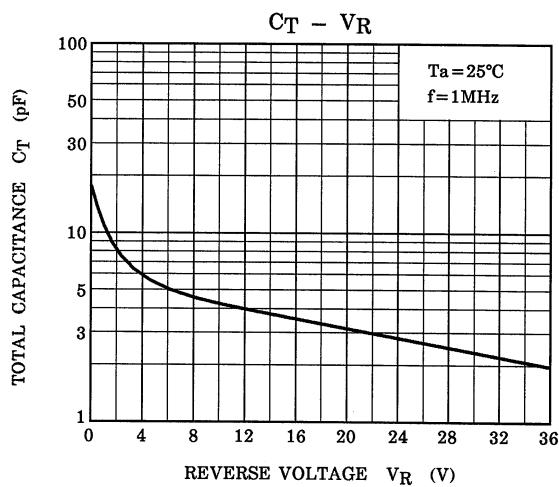
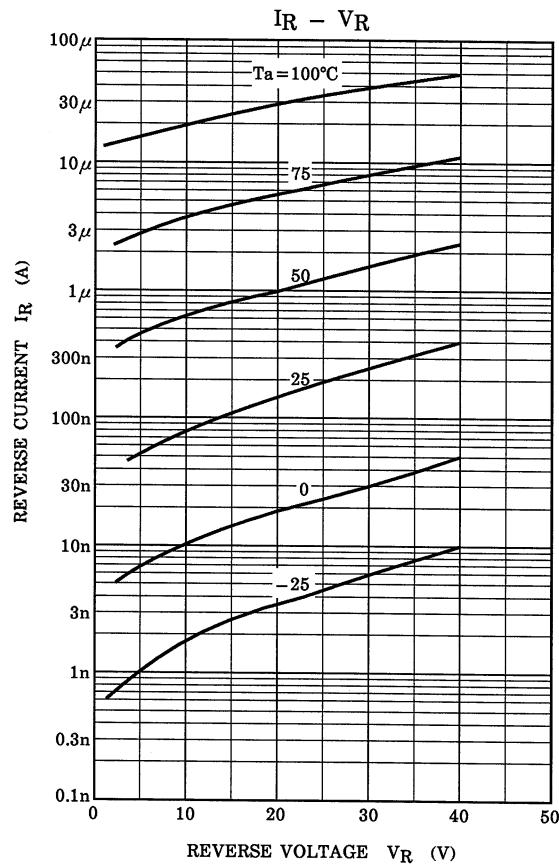
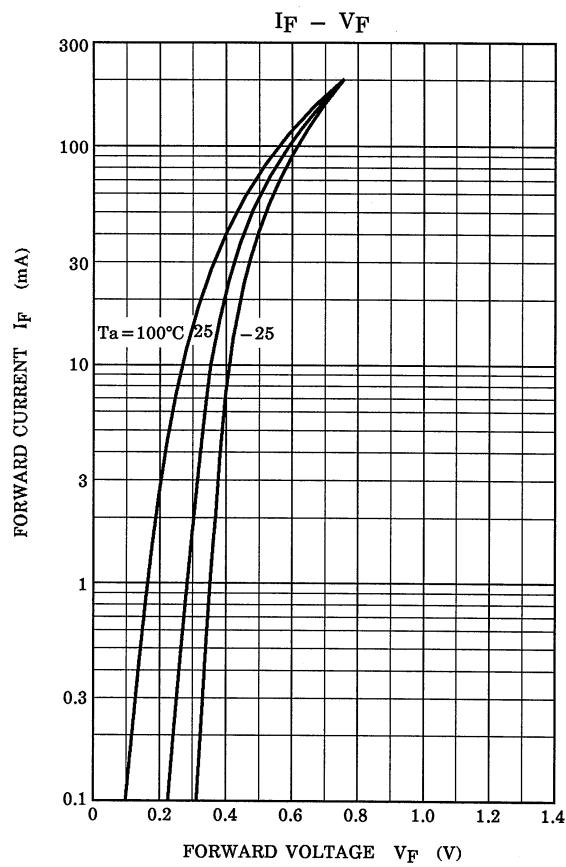
Weight: 0.003g (typ.)

Electrical Characteristics (Q1, Q2, Q3 Common, Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 1\text{mA}$	—	0.28	—	V
	V_F (2)	—	$I_F = 10\text{mA}$	—	0.36	—	
	V_F (3)	—	$I_F = 100\text{mA}$	—	0.54	0.60	
Reverse current	I_R	—	$V_R = 40\text{V}$	—	—	5	μA
Total capacitance	C_T	—	$V_R = 0, f = 1\text{MHz}$	—	18	—	pF

Pin Assignment (Top View)**Marking**

Start of commercial production
2002-06



*:Total Rating

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