

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

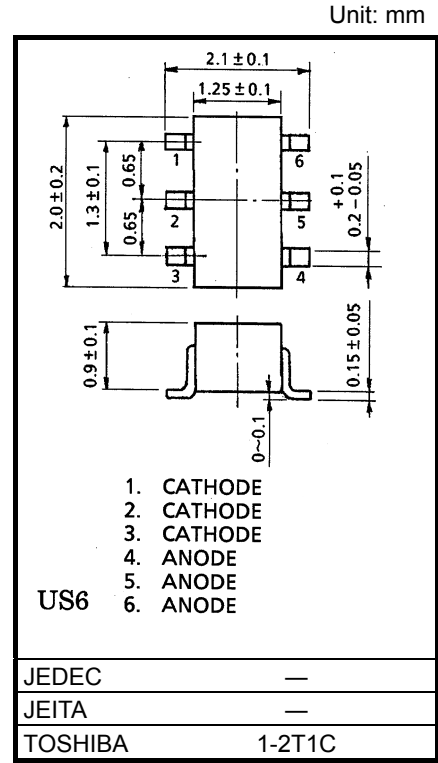
HN2S02FU

High Speed Switching Application

- HN2S02FU is composed of 3 independent diodes.
- Low forward voltage: $V_F(3) = 0.54V$ (typ.)
- Low reverse current: $I_R = 5\mu A$ (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	200 **	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).

* :This is absolute maximum rating of single diode (Q1 or Q2 or Q3).

In the case of using 2 ro 3 diodes, the absolute maximum ratings per diodes is 75 % of the single diode one.

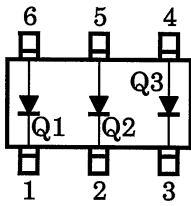
** :Total rating

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

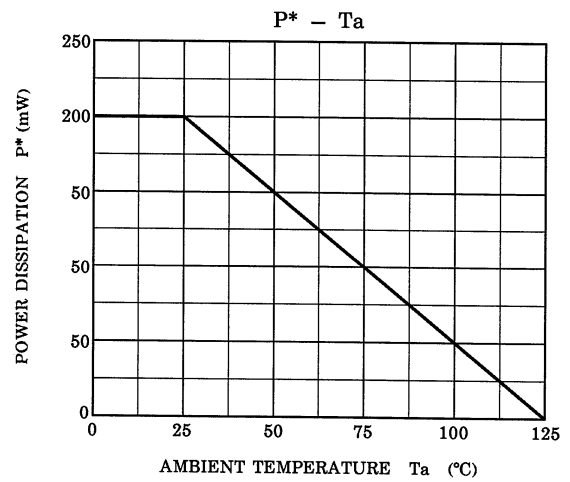
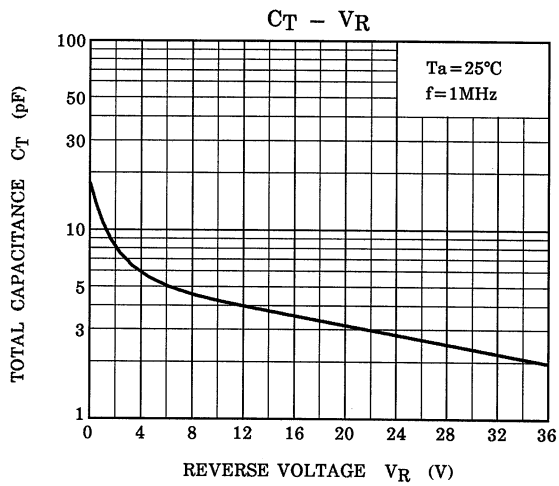
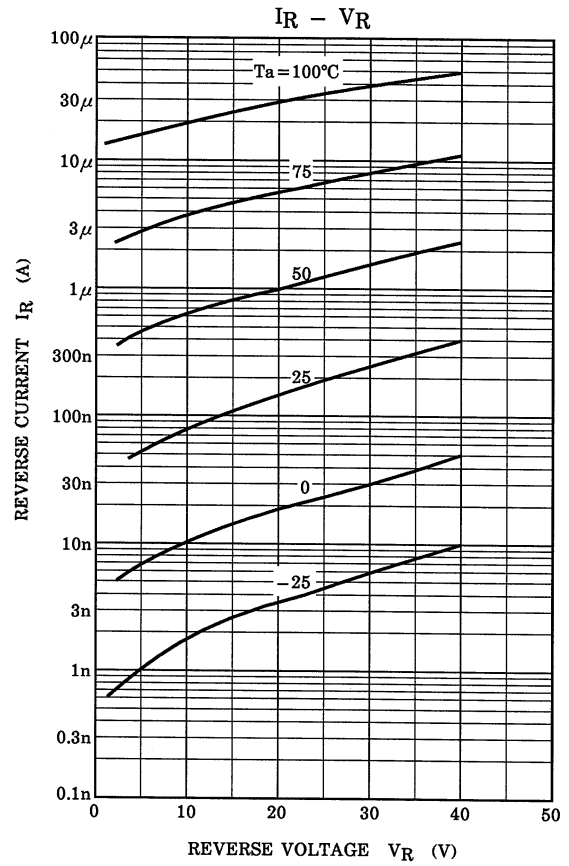
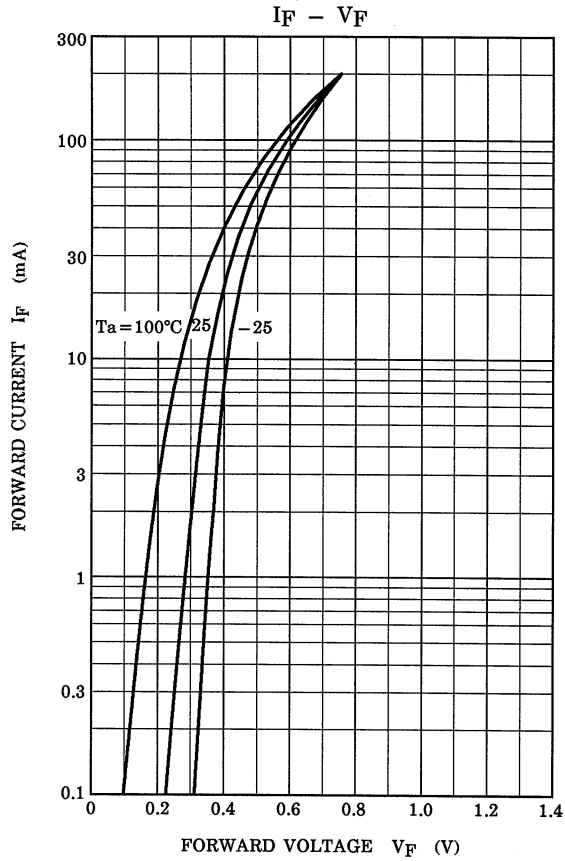
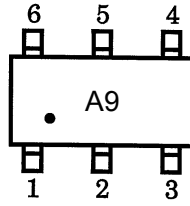
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.28	—	V
	$V_F(2)$	—	$I_F = 10mA$	—	0.36	—	
	$V_F(3)$	—	$I_F = 100mA$	—	0.54	0.60	
Reverse current	I_R	—	$V_R = 40V$	—	—	5	μA
Total capacitance	C_T	—	$V_R = 0, f = 1MHz$	—	18	—	pF

Start of commercial production
2000-01

Pin Assignment (Top View)



Marking



* : Total Rating

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