

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

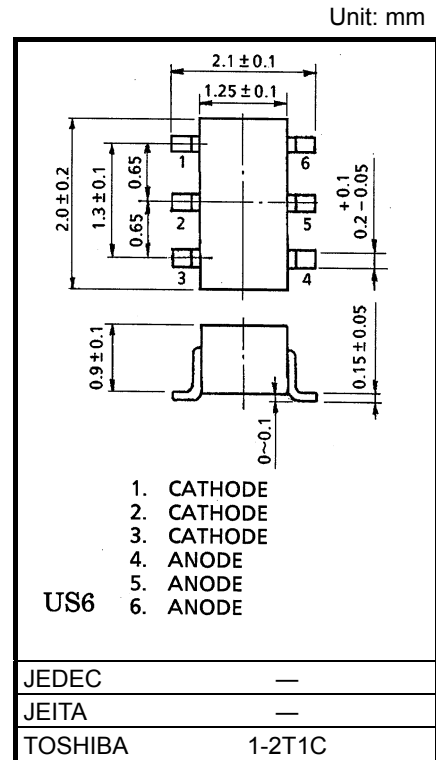
# HN2S03FU

## High Speed Switching Application

- HN2S03FU is composed of 3 independent diodes.
- Low forward voltage :  $V_F(3) = 0.50V$  (typ.)
- Low reverse current :  $I_R = 0.5\mu A$  (max)
- Small total capacitance :  $C_T = 3.9pF$  (typ.)

## Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	$V_{RM}$	25	V
Reverse voltage	$V_R$	20	V
Maximum (peak) forward current	$I_{FM}$	100 *	mA
Average forward current	$I_O$	50 *	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 110	°C



Weight: 6.2 mg (typ.)

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 or 3 diodes, the absolute maximum ratings per diodes is 75 % of the single diode one.

\*\* :Total rating

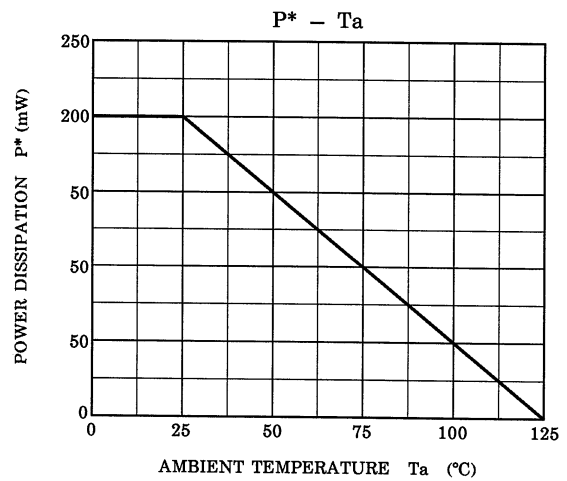
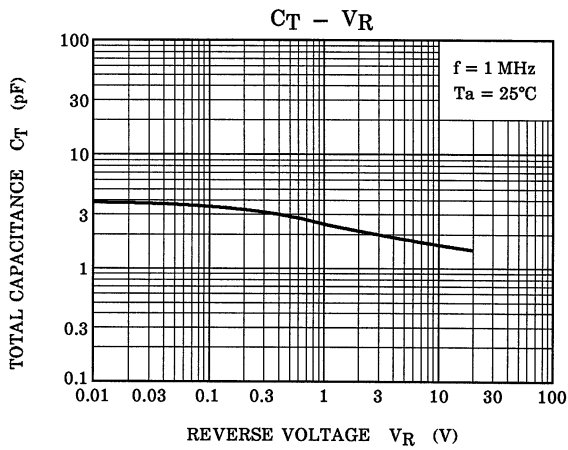
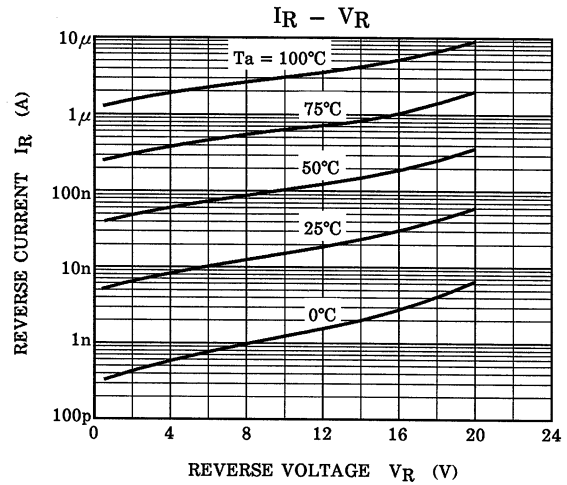
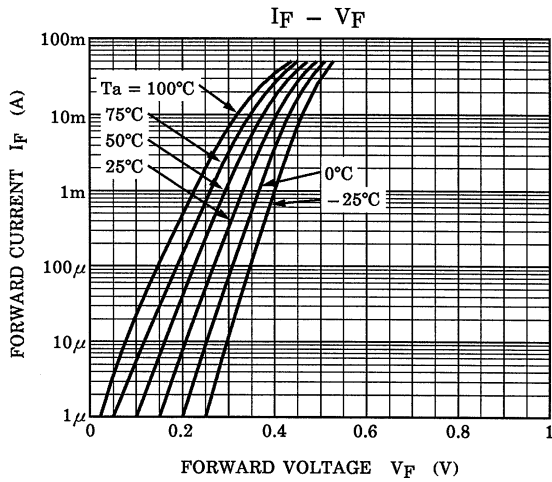
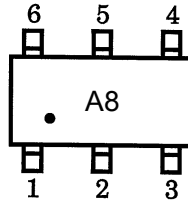
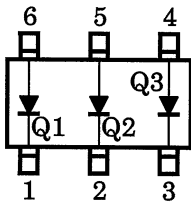
## Electrical Characteristics (Q1, Q2, Q3 Common, Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.33	—	V
	$V_F(2)$	—	$I_F = 5mA$	—	0.38	—	
	$V_F(3)$	—	$I_F = 50mA$	—	0.50	0.55	
Reverse current	$I_R$	—	$V_R = 20V$	—	—	0.5	$\mu A$
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	3.9	—	pF

Start of commercial production  
2001-11

## Pin Assignment (Top View)

## Marking



\* : Total Rating

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