

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# HN2S01FU

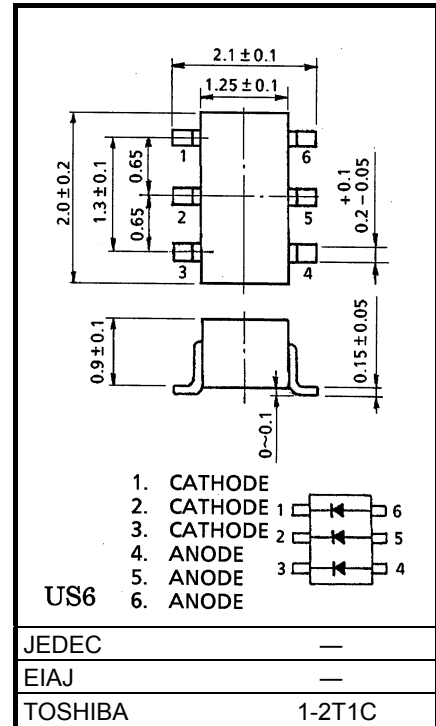
Low Voltage High Speed Switching Application

Unit: mm

- HN2S01FU is composed of 3 independent diodes.
- Low reverse current:  $V_F = 0.23V$  (typ.) @  $I_F = 5mA$

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	$V_{RM}$	15	V
Reverse voltage	$V_R$	10	V
Maximum (peak) forward current	$I_{FM}$	200 *	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	$T_{stg}$	-55~125	°C
Operating temperature range	$T_{opr}$	-40~100	°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.

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

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	—	$I_F = 1mA$	—	0.18	—	V
	$V_F$ (2)	—	$I_F = 5mA$	—	0.23	0.30	
	$V_F$ (3)	—	$I_F = 100mA$	—	0.35	0.50	
Reverse current	$I_R$	—	$V_R = 10V$	—	—	20	μA
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	20	40	pF

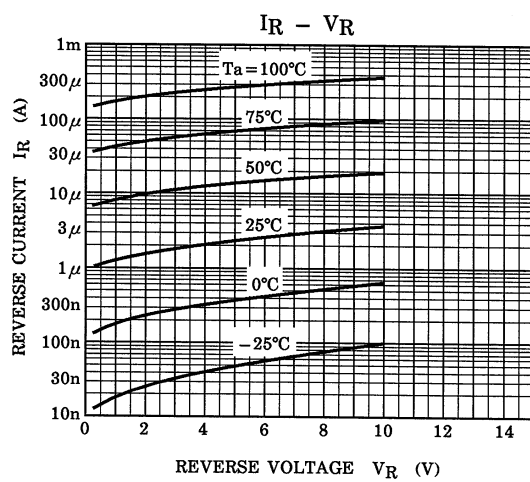
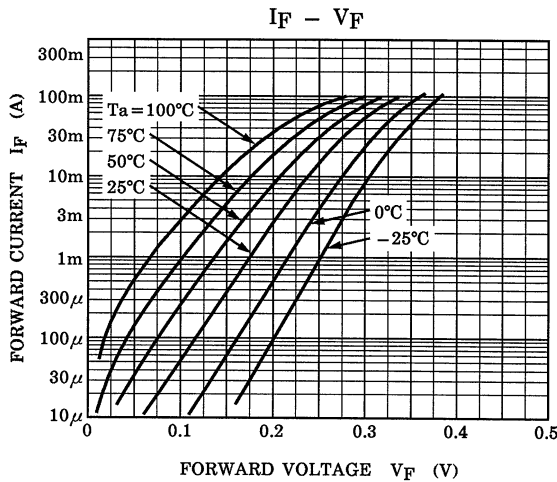
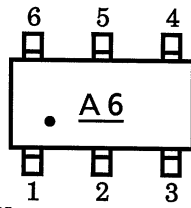
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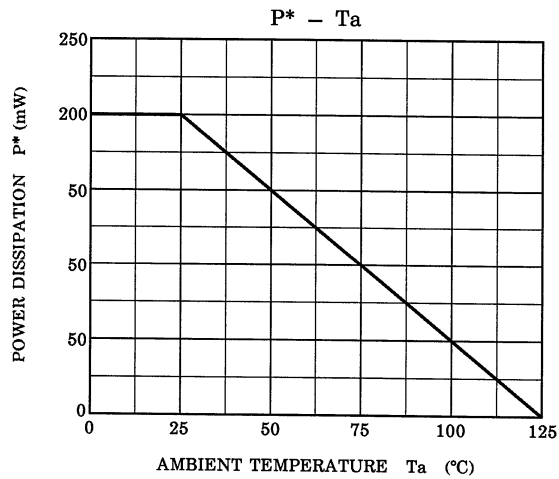
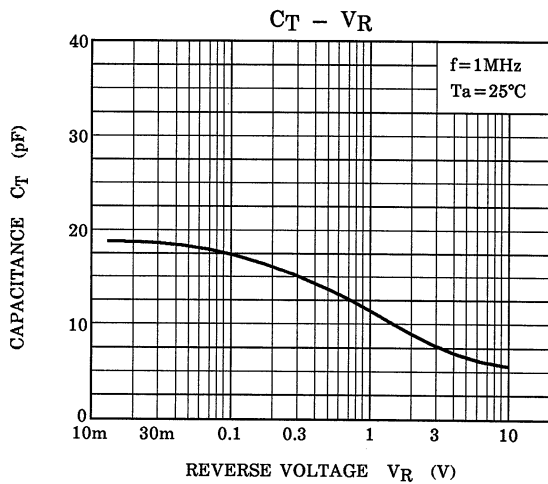
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For your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.

- The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, etc.). These TOSHIBA products are neither intended for usage in equipment that requires extraordinarily high quality and/or reliability or a product that may cause loss of human life or bodily injury ("Unintended Usage"). Unintended use of TOSHIBA products listed in this document shall be made at the customer's own risk.
- The products described in this document shall not be used or embedded to any downstream products of which manufacture, use and/or sale are prohibited under any applicable laws and regulations.

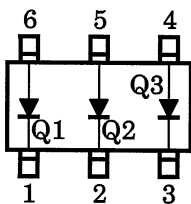


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\* : Total Rating

**Pin Assignment (Top View)**



**Marking**

