

TOSHIBA Diode Epitaxial Schottky Barrier Type

HN2S04FU

High-Speed Switching Application

- The HN2S04FU consists of three separate diodes.
- Low forward voltage: $V_F(3) = 0.36V$ (typ.)
- Low reverse current: $I_R = 50 \mu A$ (max)
- Small total capacitance: $C_T = 46 pF$ (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	V_{RM}	25	V
Reverse voltage	V_R	20	V
Maximum (peak) forward current	I_{FM}	450 *	mA
Average forward current	I_O	200 *	mA
Surge current (10 ms)	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

*: Per one diode.

When more than one diode is used, the surge current rating is reduced to 75% of I_{FSM} .

**: Total rating

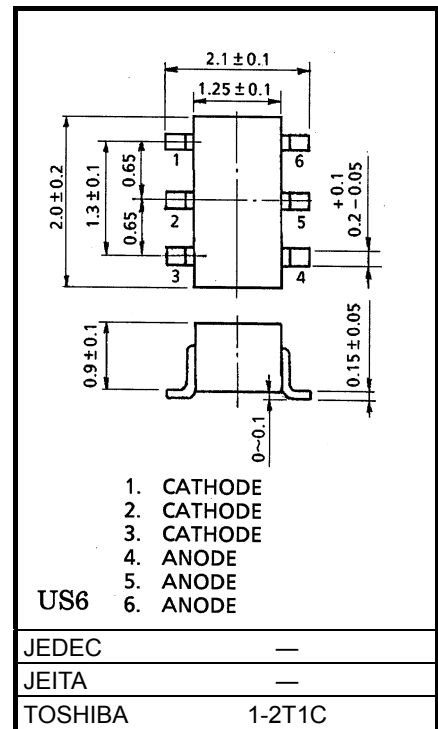
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

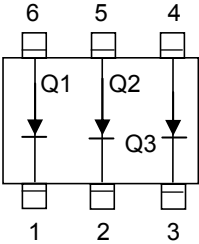
Electrical Characteristics (Q1, Q2, Q3 Common, Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1 mA$	—	0.16	—	V
	$V_F(2)$	$I_F = 10 mA$	—	0.22	—	
	$V_F(3)$	$I_F = 200 mA$	—	0.36	0.42	
Reverse current	I_R	$V_R = 20 V$	—	—	50	μA
Total capacitance	C_T	$V_R = 0, f = 1MHz$	—	46	—	pF

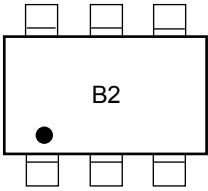
Unit: mm

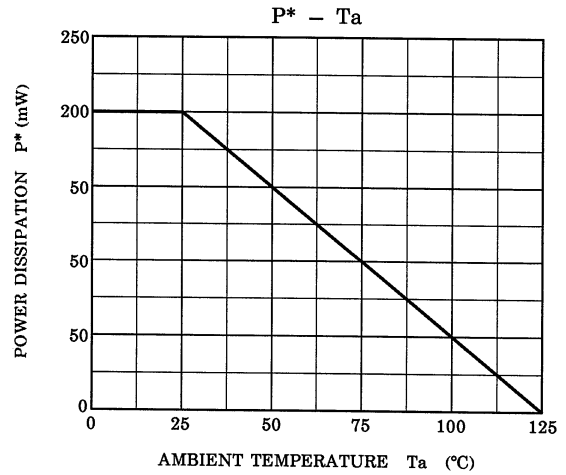
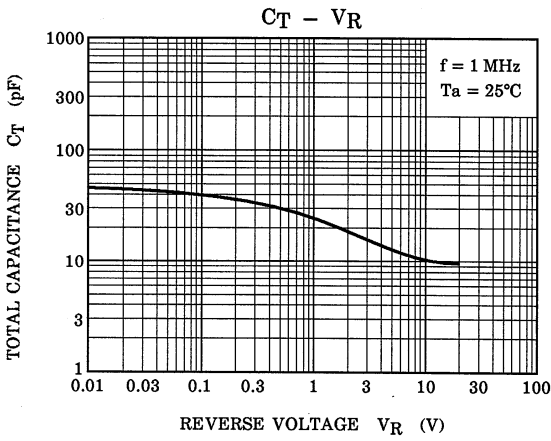
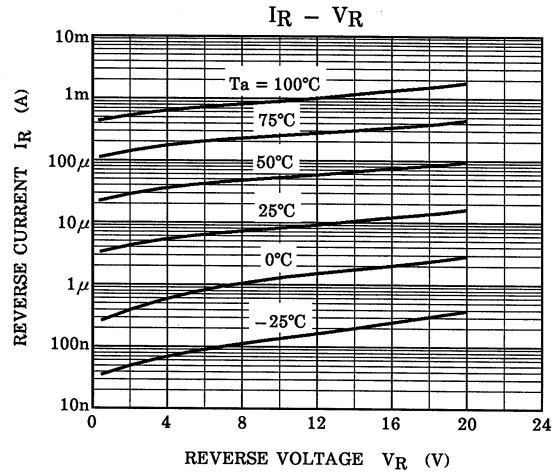
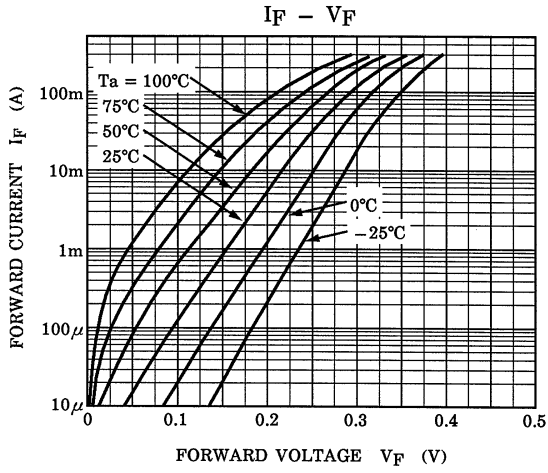


Pin Assignment (top view)



Marking





* : Total Rating

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