

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

HN1D02FU

ULTRA HIGH SPEED SWITCHING APPLICATION.

- HN1D02FU is composed of 2 unit of cathode common.
- Low Forward Voltage : $V_F(3) = 0.90\text{V}$ (Typ.)
- Fast Reverse Recovery Time : $t_{rr} = 1.6\text{ns}$ (Typ.)
- Small Total Capacitance : $C_T = 0.9\text{pF}$ (Typ.)

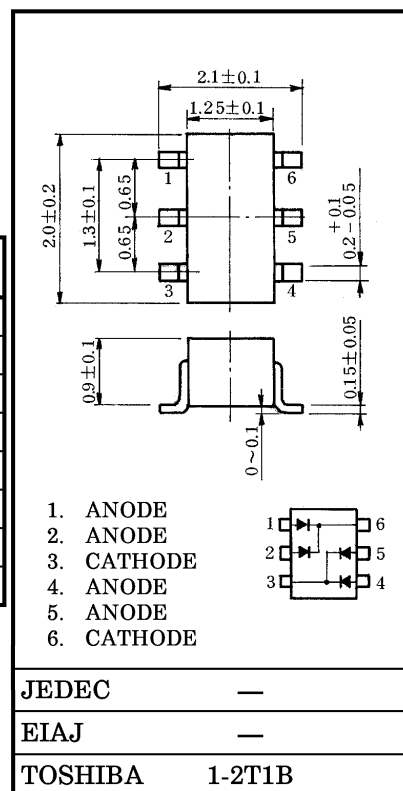
Unit in mm

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300*	mA
Average Forward Current	I_O	100*	mA
Surge Current (10ms)	I_{FSM}	2*	A
Power Dissipation	P	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55 \sim 125$	$^\circ\text{C}$

* : This is Maximum Ratings of single diode (Q1 or Q2 or Q3 or Q4).

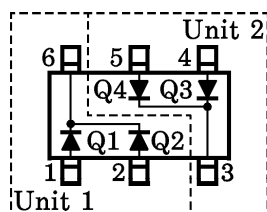
In the case of using Unit 1 and Unit 2 independently or simultaneously, the Maximum Ratings per diode is 75% of the single diode one.

ELECTRICAL CHARACTERISTICS (Q1, Q2, Q3, Q4 COMMON, $T_a = 25^\circ\text{C}$)

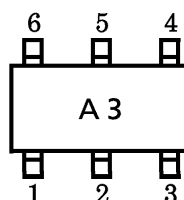
Weight : 6.8mg

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F(1)$	$I_F = 1\text{mA}$	—	0.60	—	V
	$V_F(2)$	$I_F = 10\text{mA}$	—	0.72	—	
	$V_F(3)$	$I_F = 100\text{mA}$	—	0.90	1.20	
Reverse Current	$I_R(1)$	$V_R = 30\text{V}$	—	—	0.1	μA
	$I_R(2)$	$V_R = 80\text{V}$	—	—	0.5	
Total Capacitance	C_T	$V_R = 0, f = 1\text{MHz}$	—	0.9	3.0	pF
Reverse Recovery Time	t_{rr}	$I_F = 10\text{mA}$ (Fig. 1)	—	1.6	4.0	ns

PIN ASSIGNMENT (TOP VIEW)



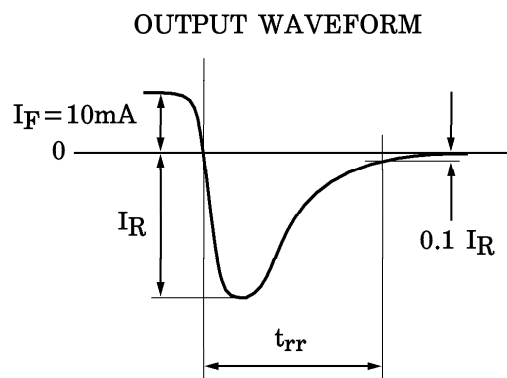
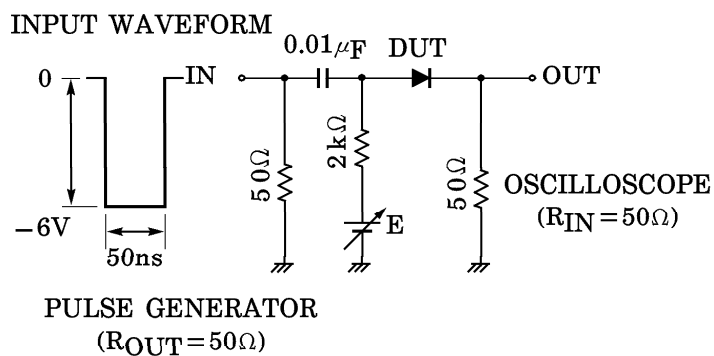
Marking



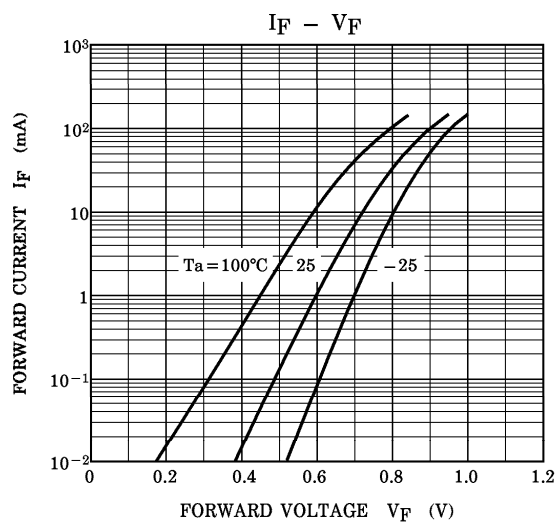
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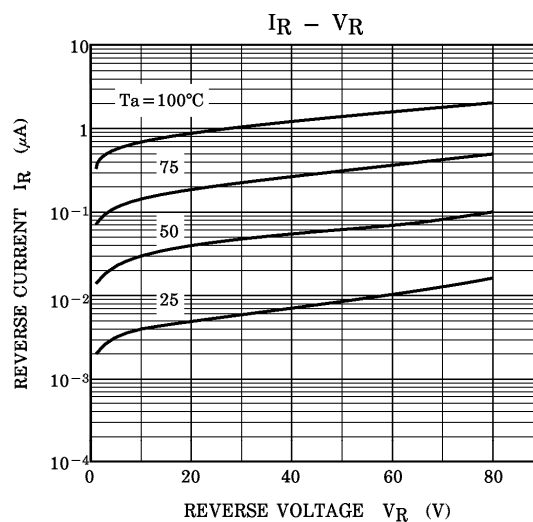
Fig. 1 REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



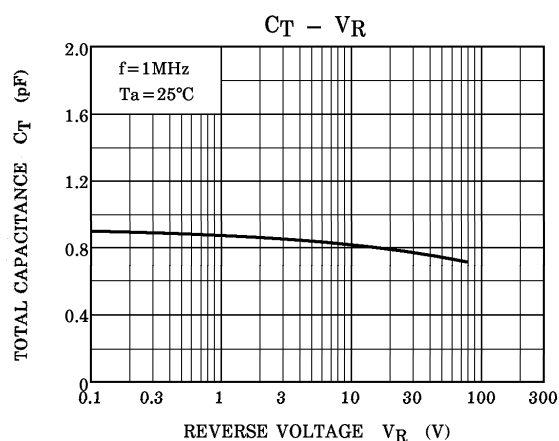
Q1, Q2, Q3, Q4, COMMON



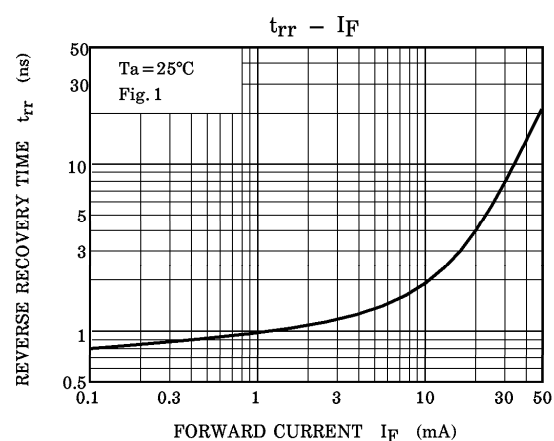
Q1, Q2, Q3, Q4, COMMON



Q1, Q2, Q3, Q4, COMMON



Q1, Q2, Q3, Q4, COMMON



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