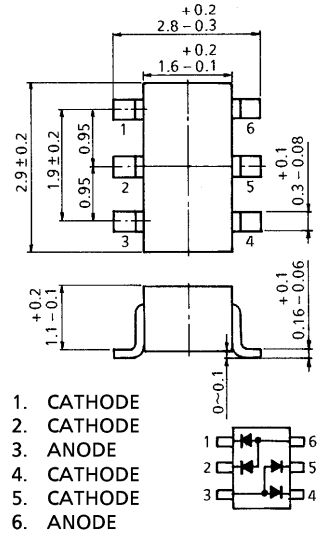
TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

HN1D01F

ULTRA HIGH SPEED SWITCHING APPLICATION.

- Small Package
- Low Forward Voltage : $V_{F(3)}$ = 0.92V (Typ.)
- Fast Reverse Recovery Time : t_{rr} = 1.6ns (Typ.)
- Small Total Capacitance : C_T = 2.2pF (Typ.)

Unit in mm



JEDEC	—
EIAJ	SC-74
TOSHIBA	1-3K1A

Weight : 0.015g

MAXIMUM RATINGS (Ta = 25°C)

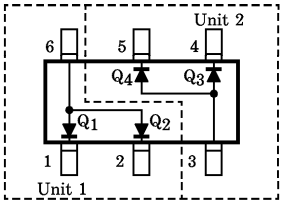
CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300 (*)	mA
Average Forward Current	I_O	100 (*)	mA
Surge Current (10ms)	I_{FSM}	2 (*)	A
Power Dissipation	P	300 (*)	mW
Junction Temperature	T_j	125	°C
Storage Temperature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

(*) This is the Maximum Ratings of single diode (Q_1 or Q_2 or Q_3 or Q_4). 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 (Q_1, Q_2, Q_3, Q_4 COMMON, Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	I_F = 1mA	—	0.61	—	V
	$V_{F(2)}$	I_F = 10mA	—	0.74	—	
	$V_{F(3)}$	I_F = 100mA	—	0.92	1.20	
Reverse Current	$I_{R(1)}$	V_R = 30V	—	—	0.1	μA
	$I_{R(2)}$	V_R = 80V	—	—	0.5	
Total Capacitance	C_T	V_R = 0, f = 1MHz	—	2.2	4.0	pF
Reverse Recovery Time	t_{rr}	I_F = 10mA (Fig.1)	—	1.6	4.0	ns

PIN ASSIGNMENT (TOP VIEW)



MARKING

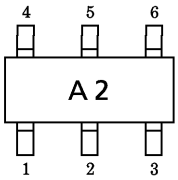


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Fig.1 REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT