# Fast recovery diode RF2001T2D

### Applications

General rectification

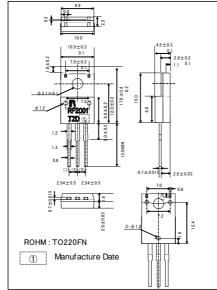
#### ● Features

- 1) Cathode common type. (TO-220)
- 2) Ultra Low VF
- 3) Very fast recovery
- 4) Low switching loss

#### Construction

Silicon epitaxial planar

## ●External dimensions (Unit : mm)



#### ●Structure



### ● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	$V_{RM}$	200	V
Reverse voltage (DC)	$V_R$	200	V
Average rectified forward current (*1)	lo	20	Α
Forward current surge peak (60Hz-1cyc)	I <sub>FSM</sub>	100	Α
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

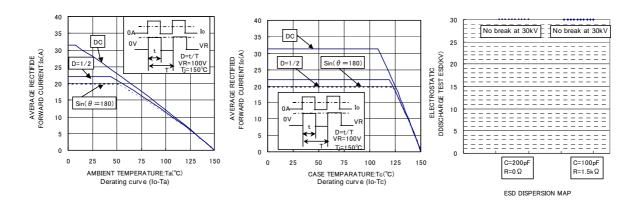
<sup>(\*1)</sup> Per chip : lo/2

#### ●Electrical characteristic (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	$V_F$	-	-	0.93	V	I <sub>F</sub> =10A
Reverse current	I <sub>R</sub>	-	-	10	μA	V <sub>R</sub> =200V
Reverse recovery time	trr	-	-	30	ns	IF=0.5A,IR=1A,Irr=0.25*IR

#### Electrical characteristic curves Ta=150°C 10000 1000 Ta=125°C 1000 FORWARD CURRENT:IF(A) CAPACITANCE BETWEEN TERMINAL S:Ct(pF) 100 10 0.01 0.1 500 600 700 800 900 1000 10 20 REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS 0 100 150 200 REVERSE VOLTAGE: VR(V) FORWARD VOLTAGE: VF(mV) VR-IR CHARACTERISTICS VF-IF CHARACTERISTICS 100 Ta=25°C IF=10A 390 f=1MHz 880 FORWARD VOLTAGE:VF(mV) REVERSE CURRENT:IR(nA) n=30pcs CAPACITANCE BETWEEN TERMINALS:Ct(pF) 350 350 70 60 50 860 340 AVE:10.1nA 850 20 AVE:867.0mV 330 10 320 840 0 VF DISPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP 300 Ta=25°C IF=0.5A TIME: tm(ns) 250 PEAK SURGE FORWARD GURRENT:FSM(A) IR=1A PEAK SURGE FORWARD CURRENT:IFSM(A) 1cyc RESERVE RECOVERY 100 10 50 AVE:237.0A AVE:20.2ns 0 100 trr DISPERSION MAP IFSM DISRESION MAP NUMBER OF CYCLES 40 100 IF=10A 35 TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) 30 PEAK SURGE FORWARD CURRENT:IFSM(A) DC 10 FORWARD POWER DISSIPATION: Pf(W) 20 100 $Sin(\theta = 180)$ 15 10 1 1 111111 10 0.1 $^{0.1}$ TIME:t(s) 10 TIME:t(ms) 0.001 AVERAGE RECTIFIED IFSM-t CHARACTERISTICS Rth-t CHARACTERISTICS FORWARD CURRENT: Io(A)

Io-Pf CHARACTERISTICS



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