

# Super Fast Recovery Diode

## RFN10T2D

● **Applications**

General rectification

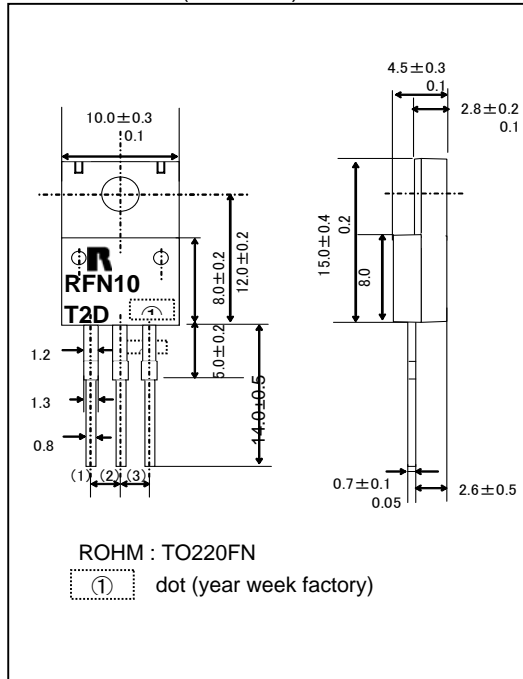
● **Features**

- 1) Cathode common Dual type. (TO-220)
- 2) Low  $V_F$
- 3) Low switching loss

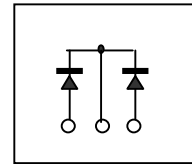
● **Construction**

Silicon epitaxial planer

● **Dimensions (Unit : mm)**



● **Structure**



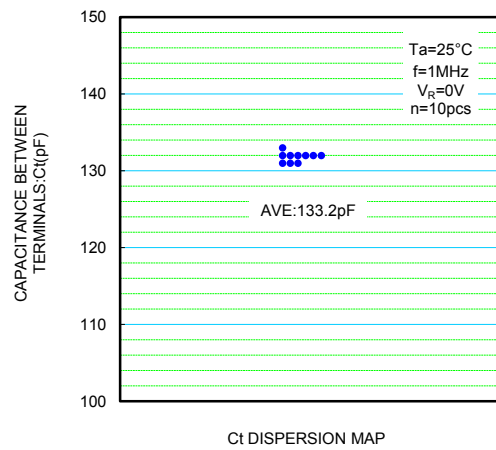
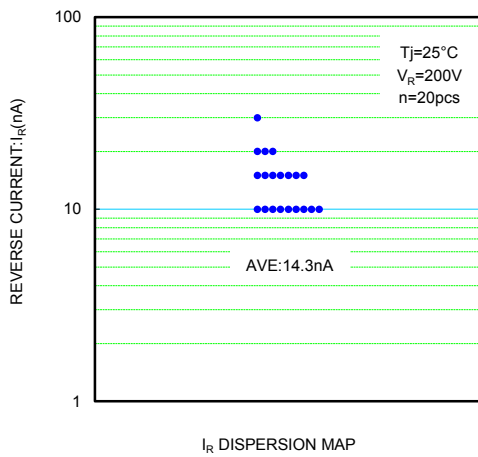
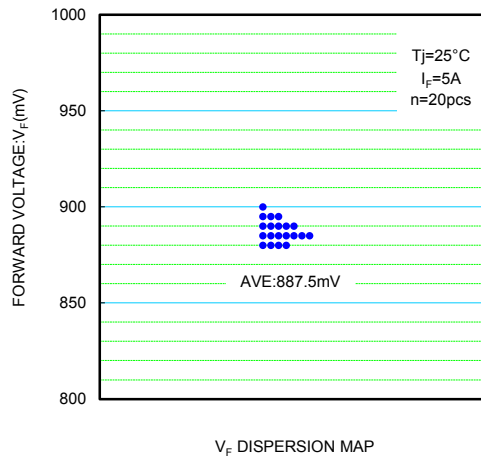
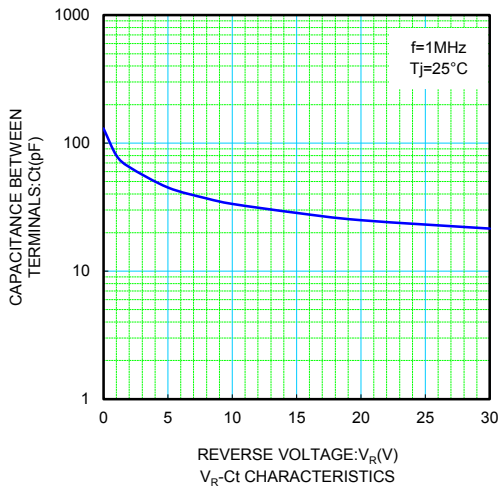
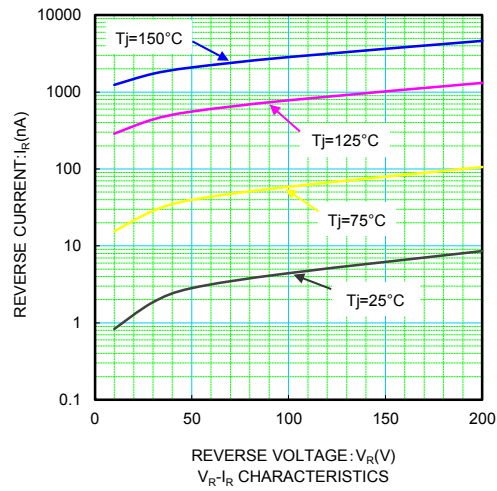
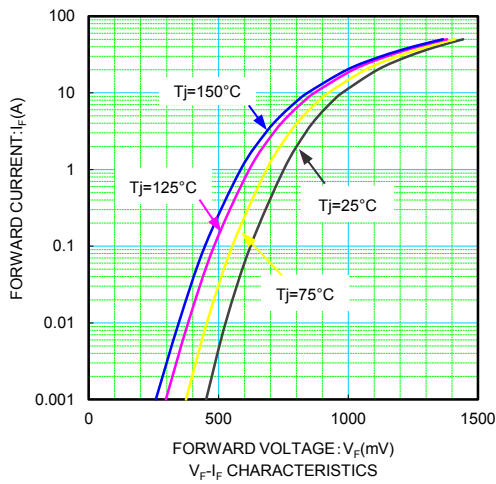
● **Absolute maximum ratings (T<sub>c</sub>=25°C)**

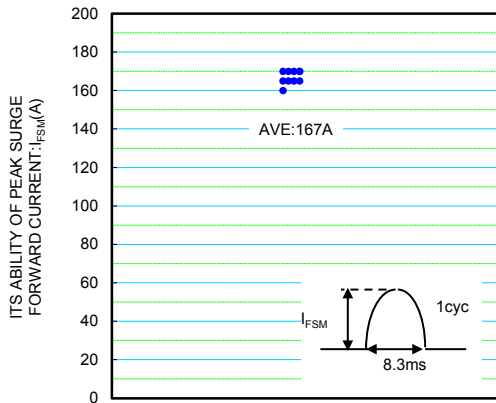
Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq$ 0.5	200	V
Reverse voltage	$V_R$	Direct voltage	200	V
Average rectified forward current	$I_o$	60Hz half sin wave, Resistance load, 1/2 $I_o$ at per diode	$T_c=122^\circ\text{C}$ 10	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave, Non-repetitive one cycle peak value, $T_j=25^\circ\text{C}$	80	A
Junction temperature	$T_j$		150	°C
Storage temperature	$T_{stg}$		-55 to +150	°C

● **Electrical characteristics (T<sub>j</sub>=25°C)**

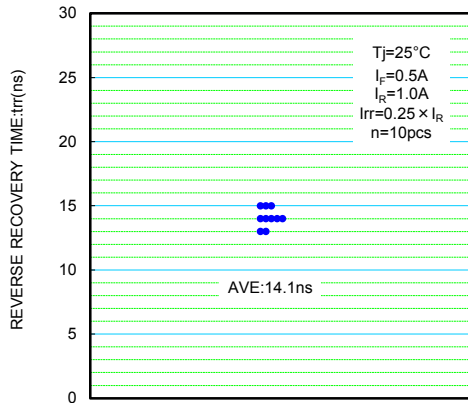
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=5\text{A}$	—	0.90	0.98	V
Reverse current	$I_R$	$V_R=200\text{V}$	—	0.01	10	$\mu\text{A}$
Reverse recovery time	$t_{rr}$	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$	—	15	25	ns
Thermal Resistance	$R_{th(j-c)}$	junction to case	—	—	2.5	°C/W

\* per diode

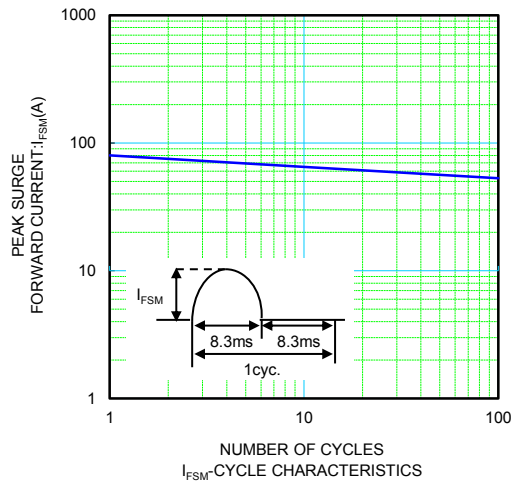




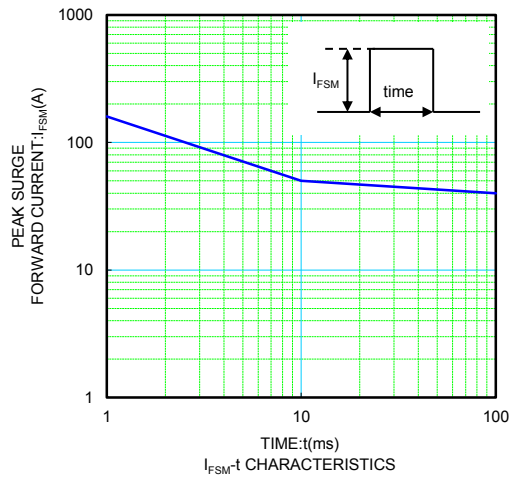
$I_{FSM}$  DISPERSION MAP



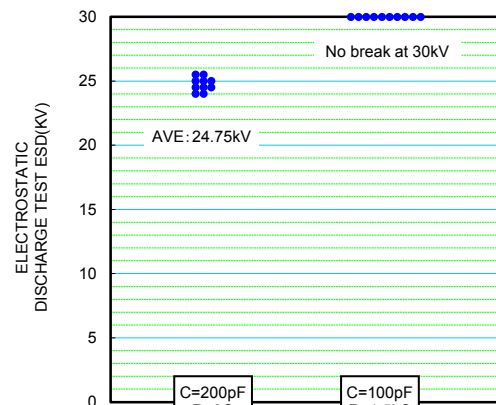
trr DISPERSION MAP



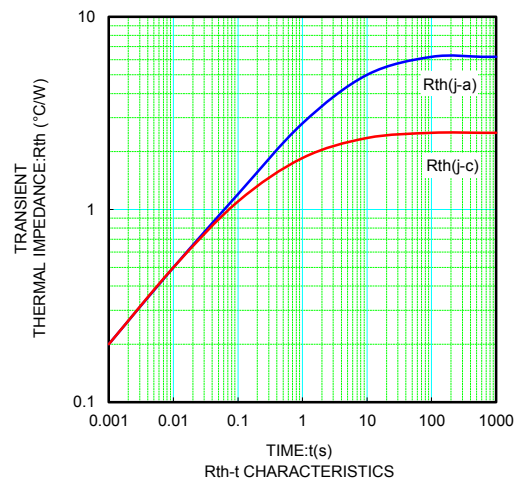
$I_{FSM}$  CYCLE CHARACTERISTICS



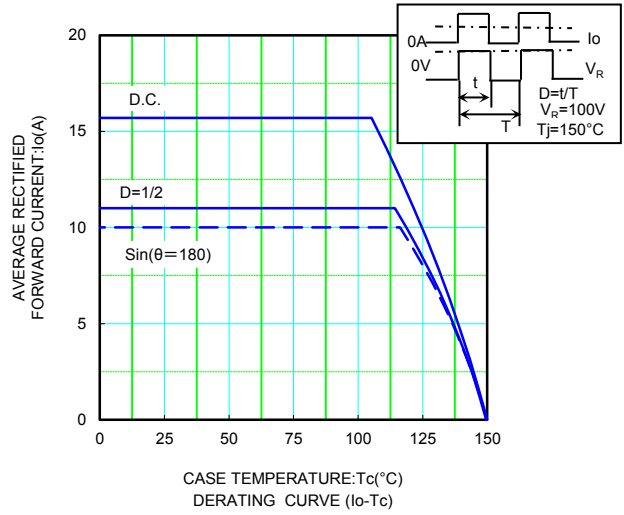
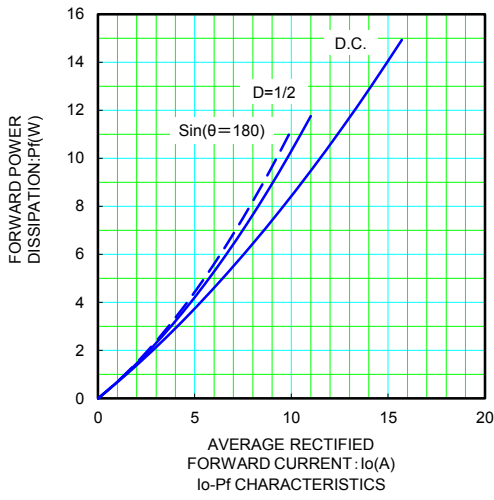
$I_{FSM}$ -t CHARACTERISTICS



ESD DISPERSION MAP



$R_{th}$ -t CHARACTERISTICS



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