

# Super Fast Recovery Diode

## RFN20NS3S

### ●Series

Standard Fast Recovery

### ●Applications

General rectification

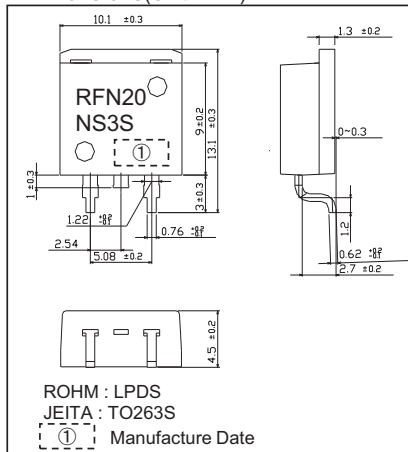
### ●Features

- 1) Low switching loss
- 2) High current overload capacity

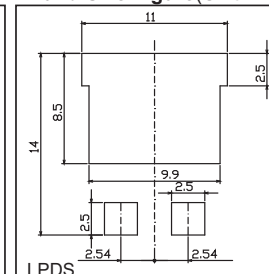
### ●Construction

Silicon epitaxial planer type

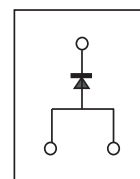
### ●Dimensions(Unit : mm)



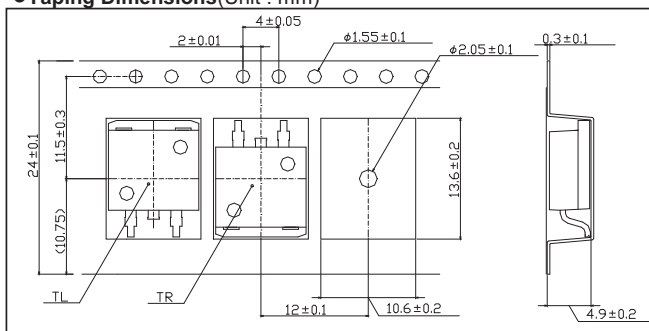
### ●Land Size Figure(Unit : mm)



### ●Structure



### ●Taping Dimensions(Unit : mm)



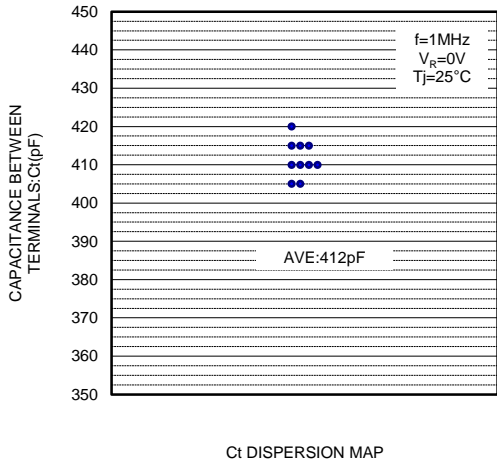
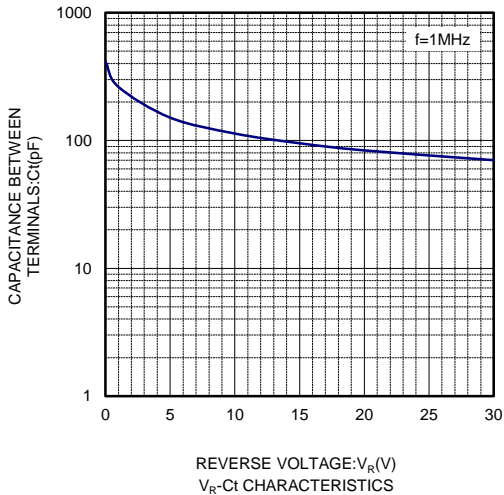
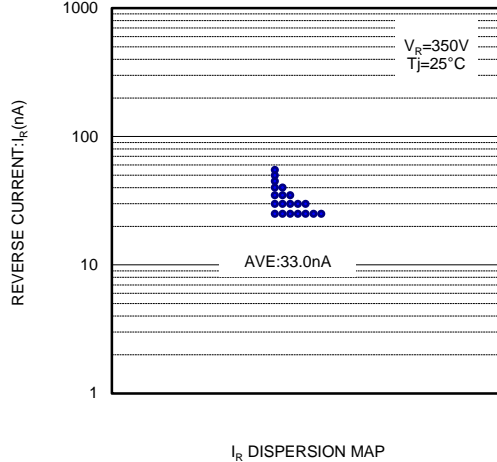
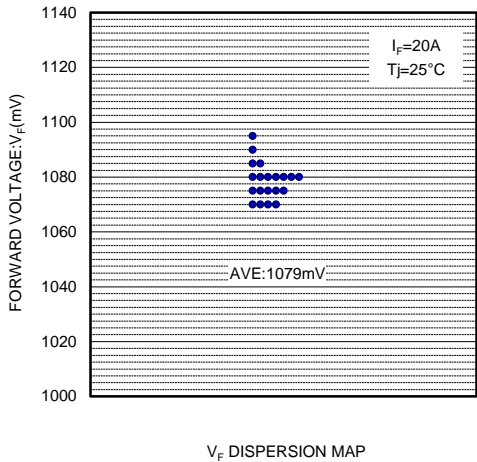
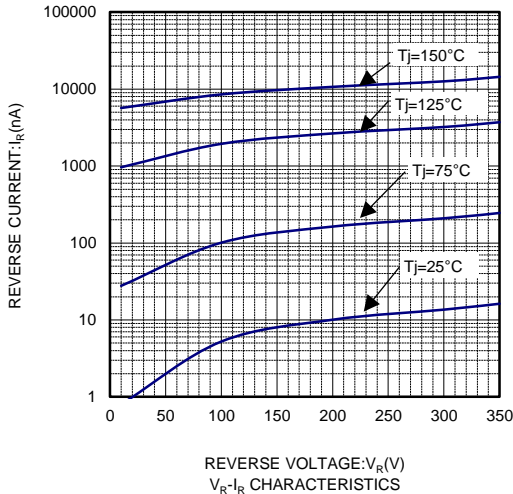
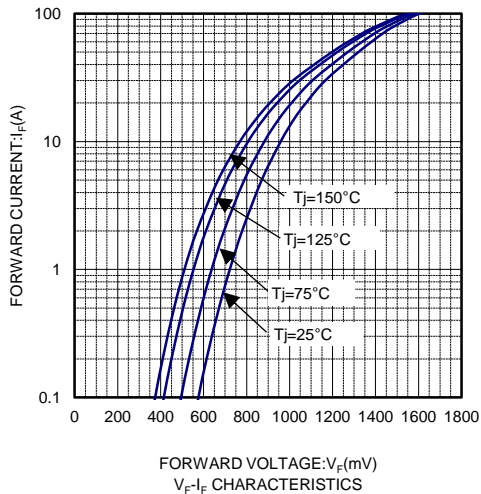
### ●Absolute Maximum Ratings(Tc=25°C)

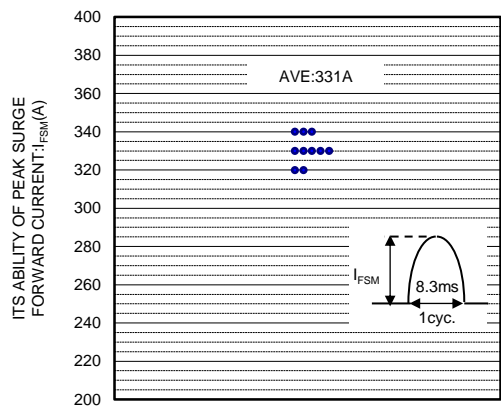
Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq 0.5$	350	V
Reverse voltage	$V_R$	Direct voltage	350	V
Average rectified forward current	$I_o$	60Hz half sin wave , Resistive load Tc=71°C	20	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave , Non-repetitive at Tj=25°C (*1)	100	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to +150	°C

(\*1) 1-3pin common circuit

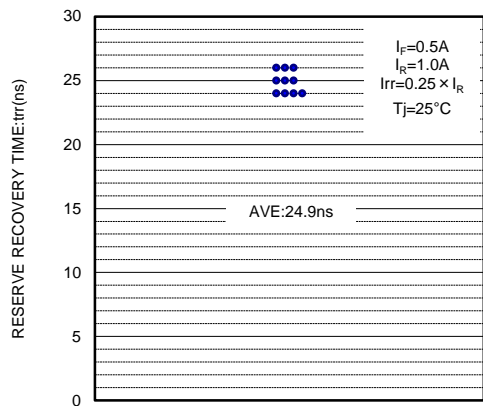
### ●Electrical Characteristics(Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=20A$	—	1.1	1.35	V
Reverse current	$I_R$	$V_R=350V$	—	0.05	10	μA
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	—	25	35	ns
Thermal resistance	Rth(j-c)	Junction to case	—	—	2.5	°C/W

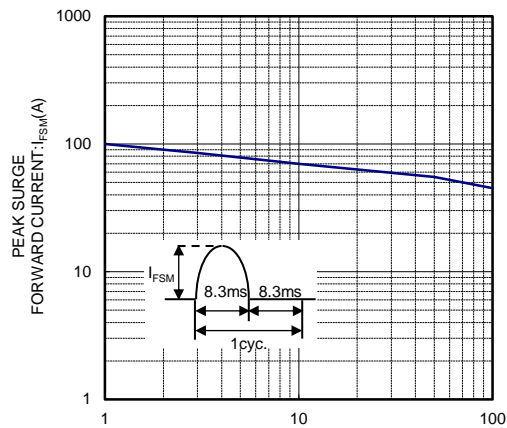




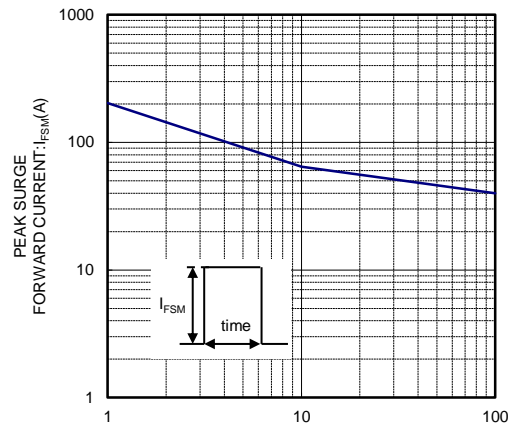
$I_{FSM}$  DISPERSION MAP



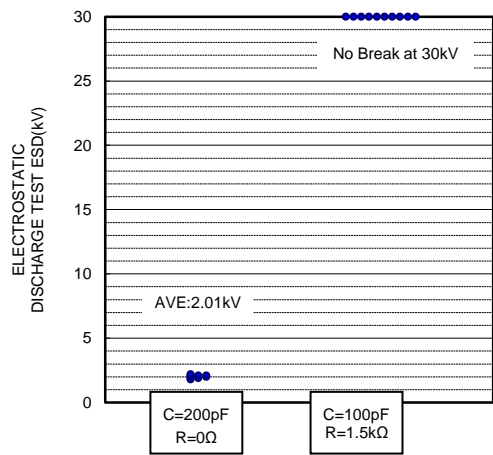
$t_{rr}$  DISPERSION MAP



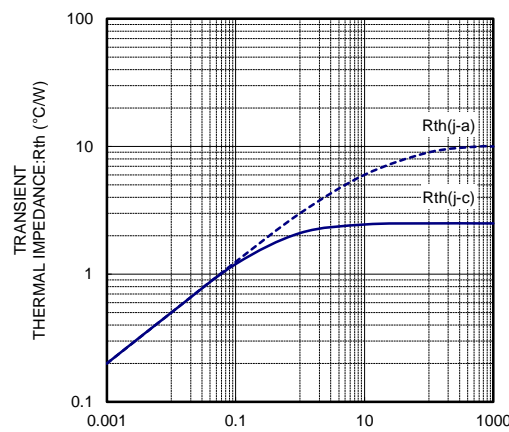
$I_{FSM}$  CYCLE CHARACTERISTICS



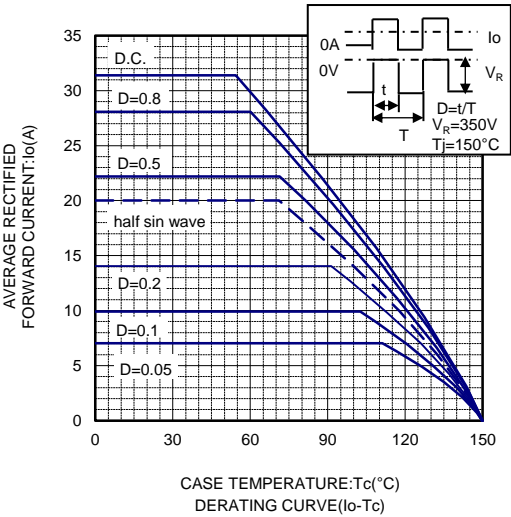
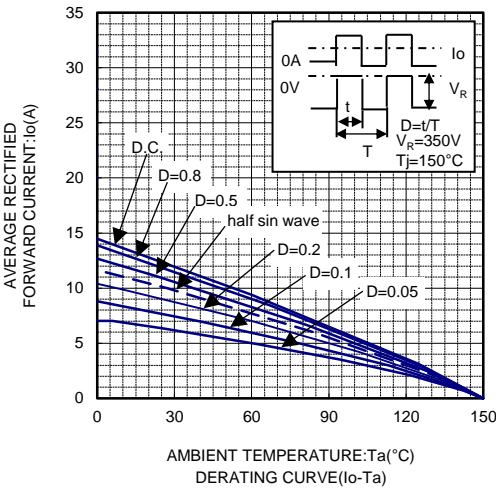
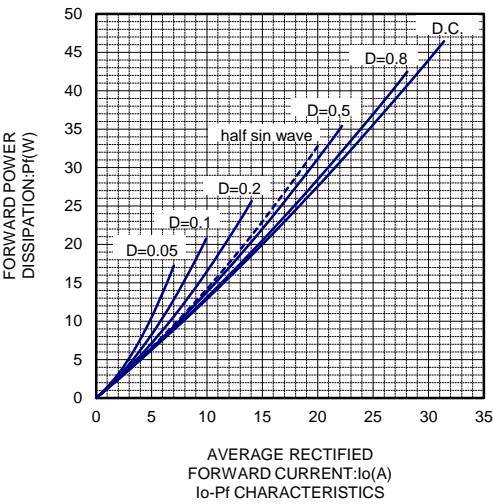
$I_{FSM}$ - $t$  CHARACTERISTICS



ESD DISPERSION MAP



$R_{th}$ - $t$  CHARACTERISTICS



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