

# Super Fast Recovery Diode

RFN20TF6S

●Serise

Standard Fast Recovery

●Applications

General rectification

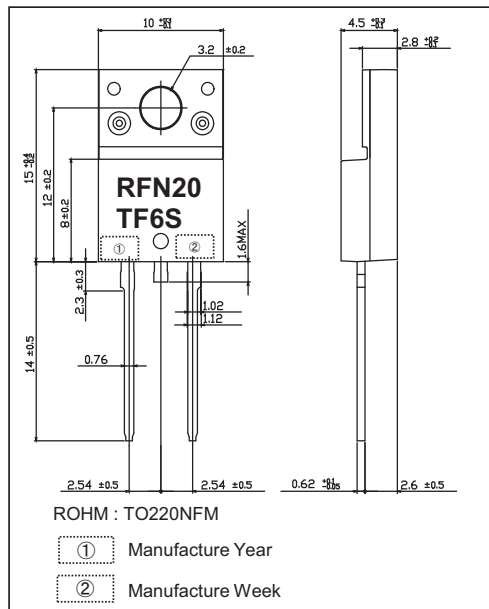
●Features

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

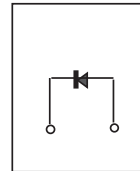
●Construction

Silicon epitaxial planer type

●Dimensions(Unit : mm)



●Structure

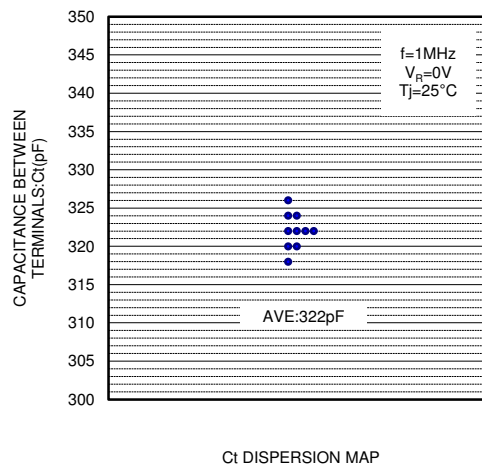
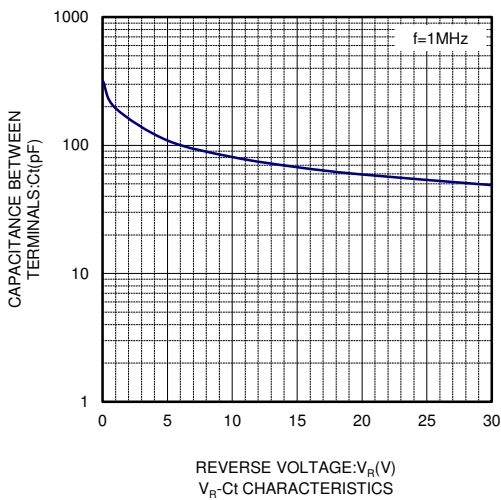
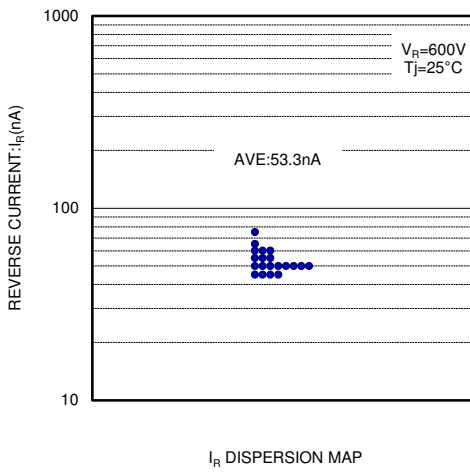
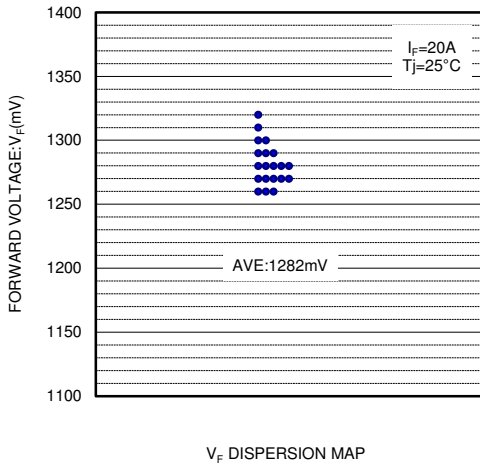
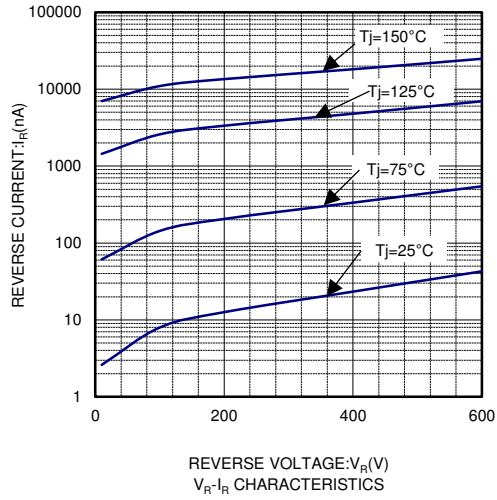
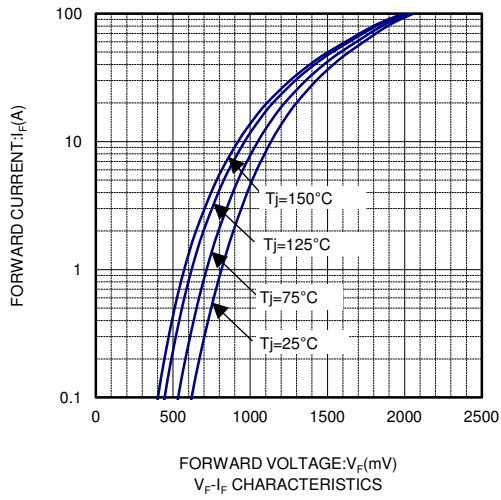


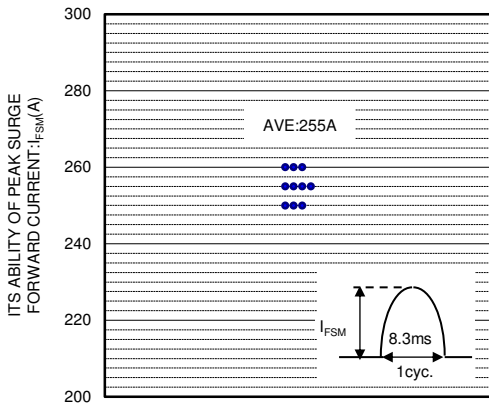
●Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit	
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq 0.5$	600	V	
Reverse voltage	$V_R$	Direct voltage	600	V	
Average rectified forward current	$I_o$	60Hz half sin wave , Resistive load	$T_c=51^\circ\text{C}$	20	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave , Non-repetitive at $T_j=25^\circ\text{C}$	100	A	
Junction temperature	$T_j$		150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$	

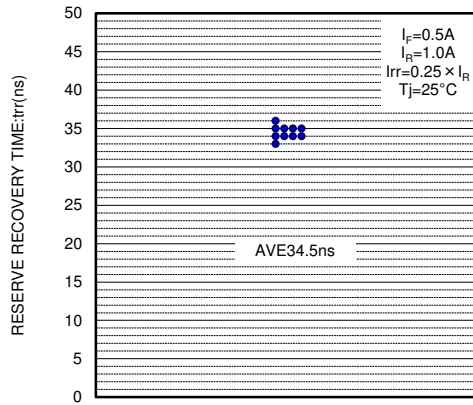
●Electrical Characteristics(Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=20\text{A}$	—	1.25	1.55	V
Reverse current	$I_R$	$V_R=600\text{V}$	—	0.05	10	$\mu\text{A}$
Reverse recovery time	$t_{rr}$	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$	—	40	60	ns
Thermal resistance	$R_{th(j-c)}$	Junction to case	—	—	2.5	$^\circ\text{C/W}$

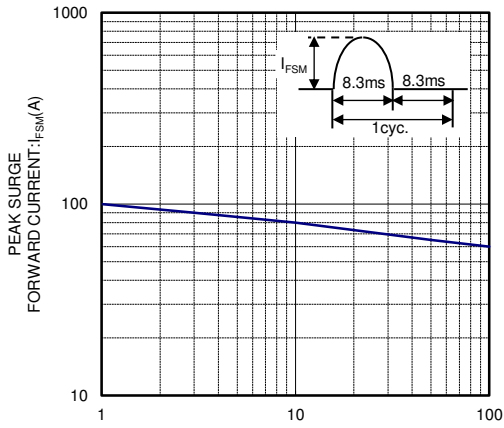




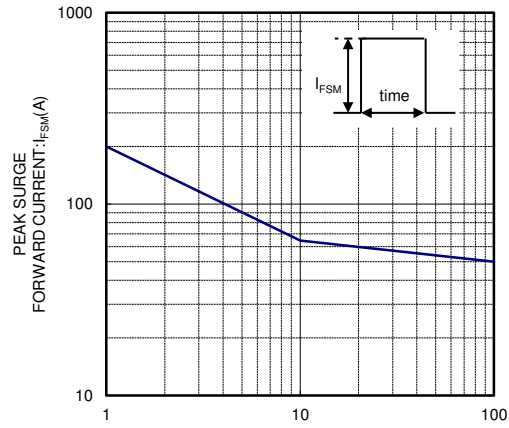
$I_{FSM}$  DISPERSION MAP



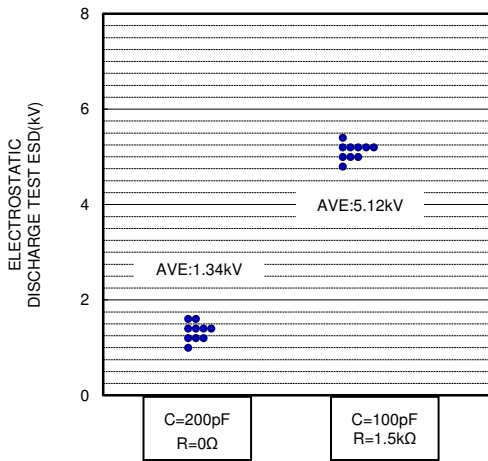
$t_{rr}$  DISPERSION MAP



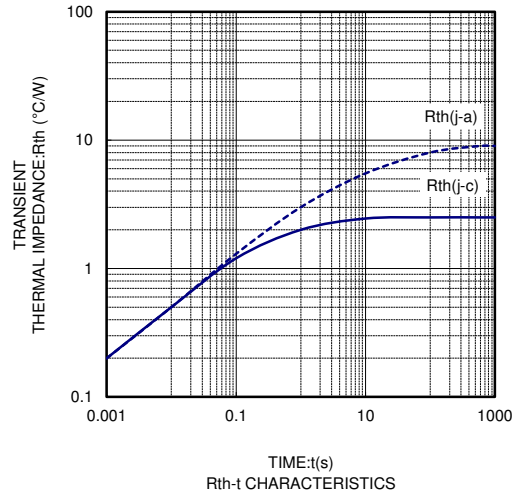
$I_{FSM}$  CYCLE CHARACTERISTICS

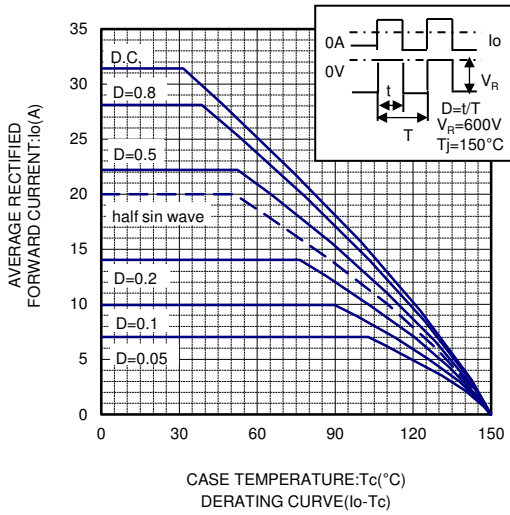
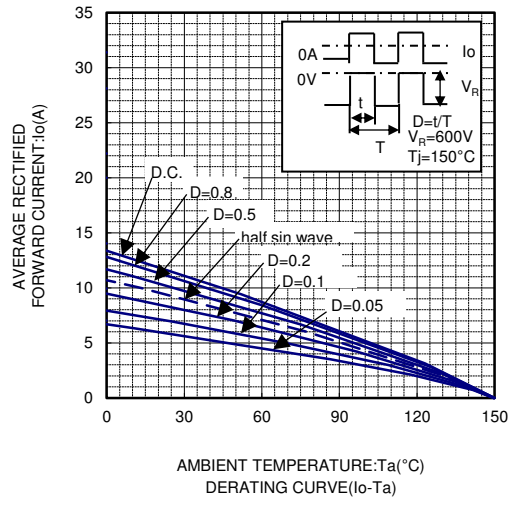
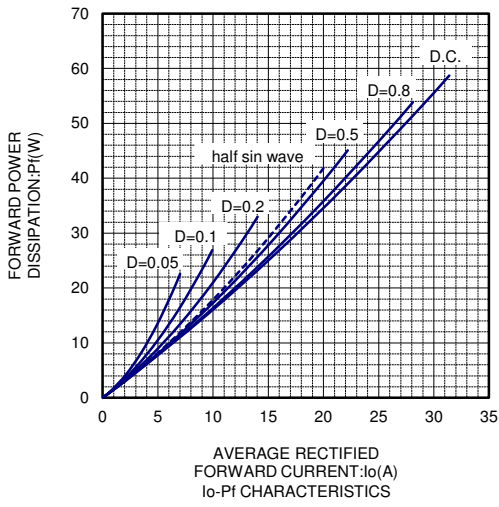


$I_{FSM}$ - $t$  CHARACTERISTICS



ESD DISPERSION MAP





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