

# Super Fast Recovery Diode

## RFUS20NS6S

●Series

Ultra Fast Recovery

●Applications

General rectification

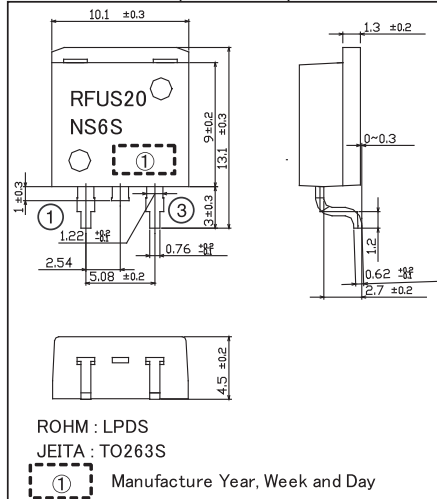
●Features

- 1) Ultra low switching loss
- 2) High current overload capacity
- 3) Cathode common single type

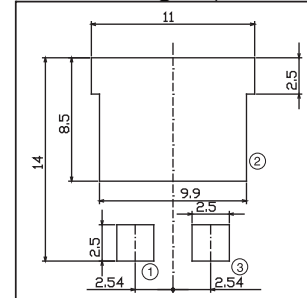
●Construction

Silicon epitaxial planer

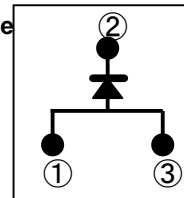
●Dimensions(Unit : mm)



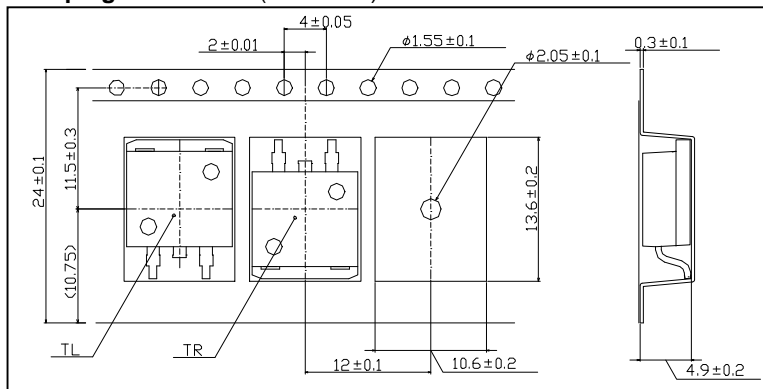
●Land size figure(Unit : mm)



●Structure



●Taping dimensions(Unit : mm)



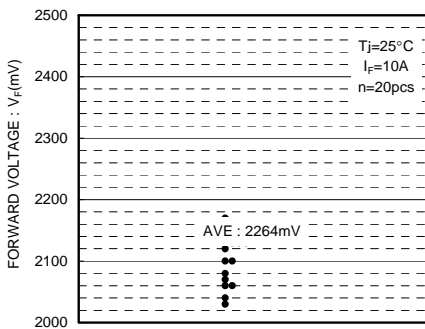
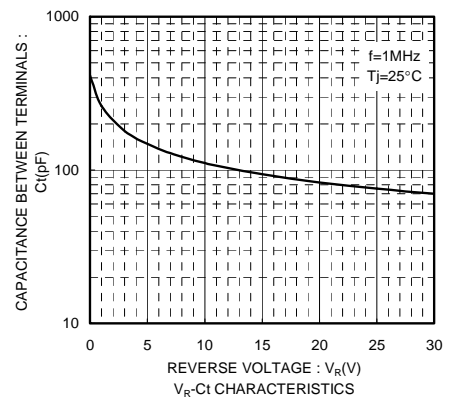
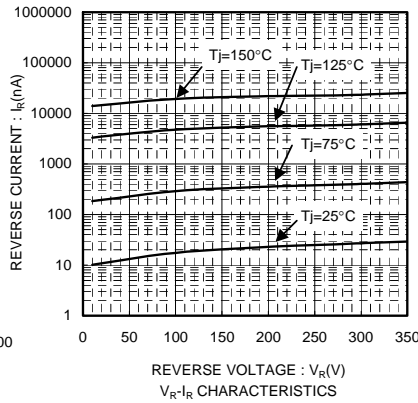
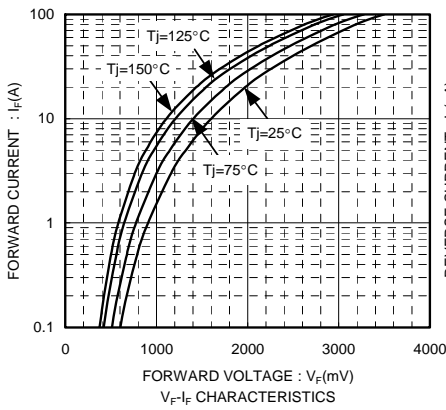
●Absolute maximum ratings(Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq$ 0.5	600	V
Reverse voltage	$V_R$	Direct voltage	600	V
Average rectified forward current	$I_o$	60Hz half sin wave resistive load , 1/2 $I_o$ per diode $T_c=36^\circ\text{C}$	20	A
Forward current surge peak	$I_{FSM}$	60Hz half sin wave, Non-repetitive one cycle peak value, $T_j=25^\circ\text{C}$	100	A
Junction temperature	$T_j$		150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

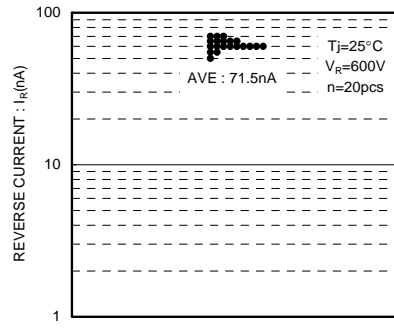
●Electrical characteristics(Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=20\text{A}$	-	2.4	2.8	V
Reverse current	$I_R$	$V_R=600\text{V}$	-	0.05	10	$\mu\text{A}$
Reverse recovery time	$t_{rr}$	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$	-	23	35	ns
Thermal resistance	$R_{th(j-c)}$	junction to case	-	-	2	$^\circ\text{C/W}$

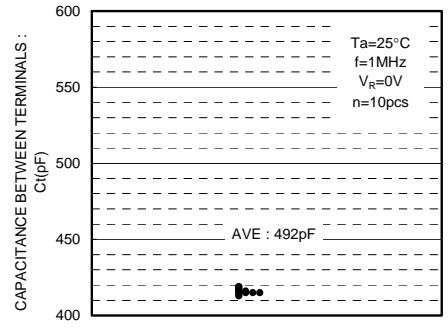
●Electrical characteristic curves



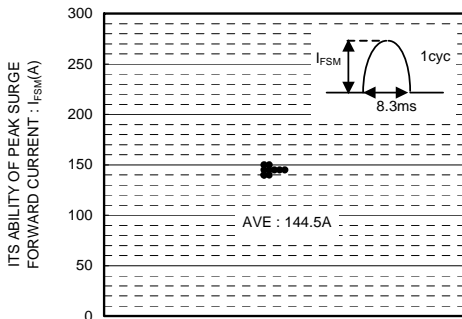
$V_F$  DISPERSION MAP



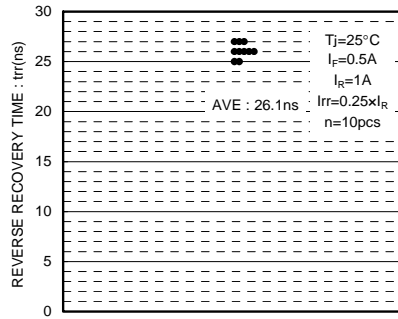
$I_R$  DISPERSION MAP



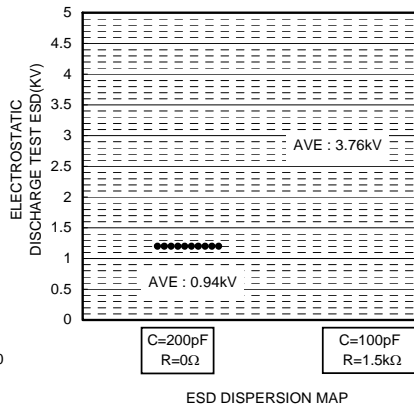
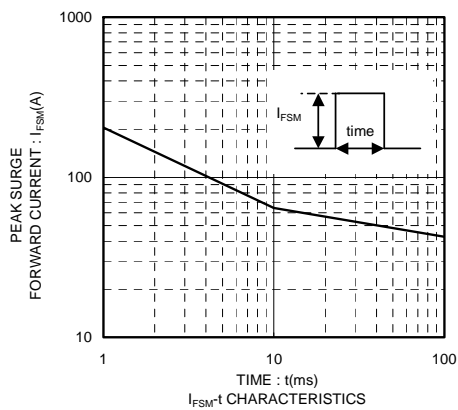
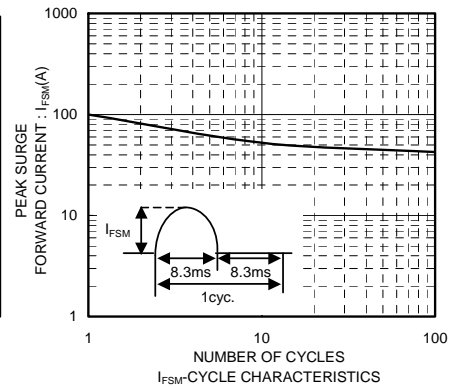
$C_t$  DISPERSION MAP



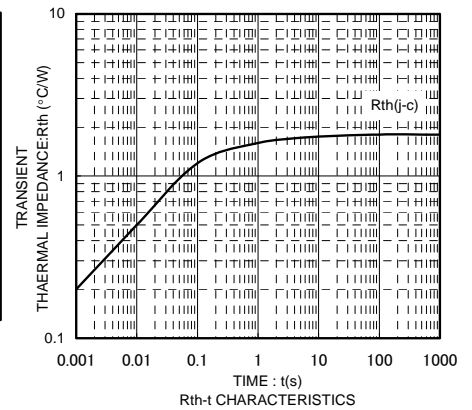
$I_{FSM}$  DISREION MAP

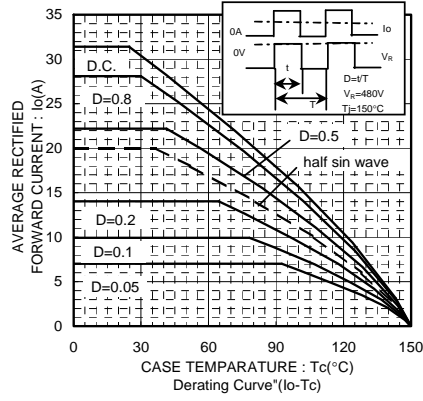
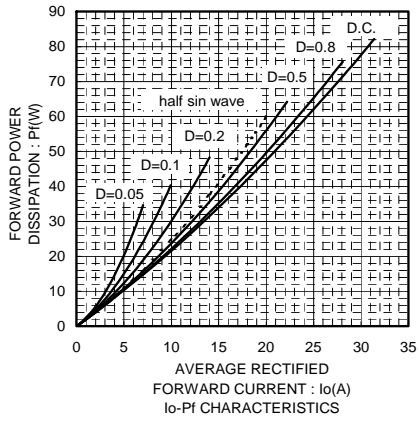


$t_{rr}$  DISPERSION MAP



ESD DISPERSION MAP





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