

Super Fast Recovery Diode

RFUS20NS6S

●Series

Ultra Fast Recovery

●Applications

General rectification

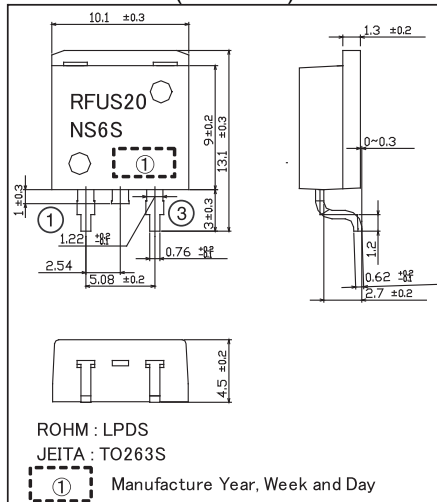
●Features

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

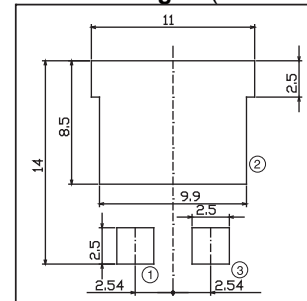
●Construction

Silicon epitaxial planer

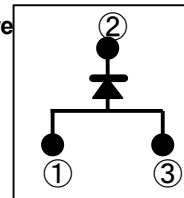
●Dimensions(Unit : mm)



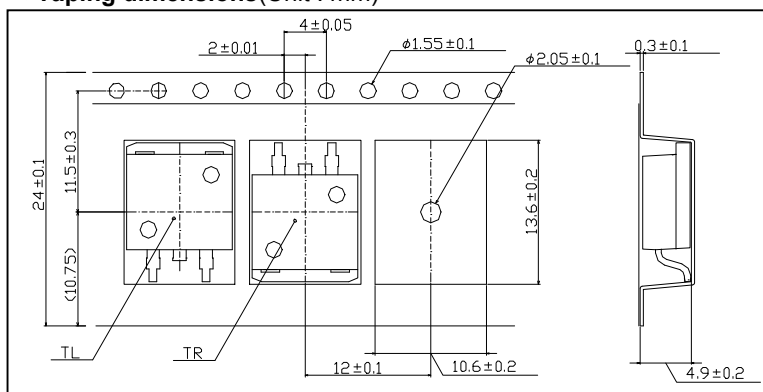
●Land size figure(Unit : mm)



●Structure



●Taping dimensions(Unit : mm)



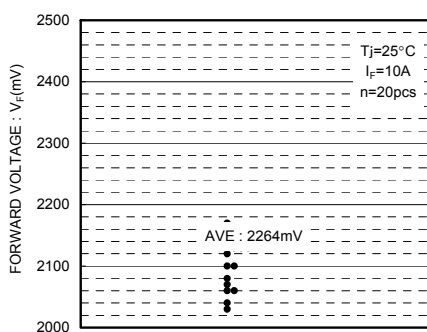
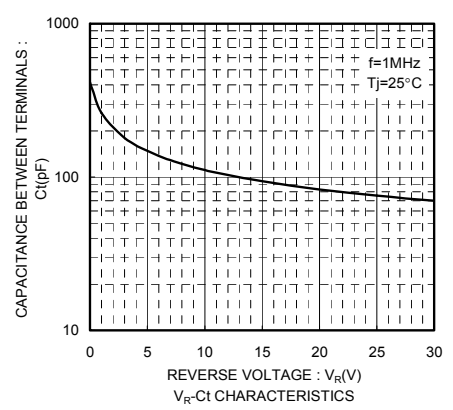
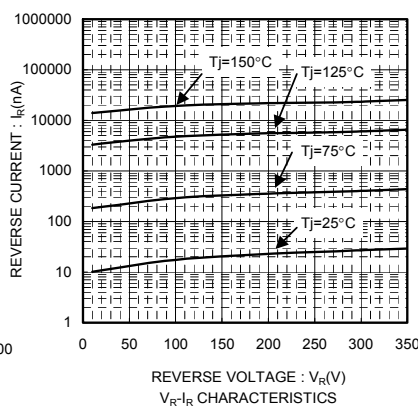
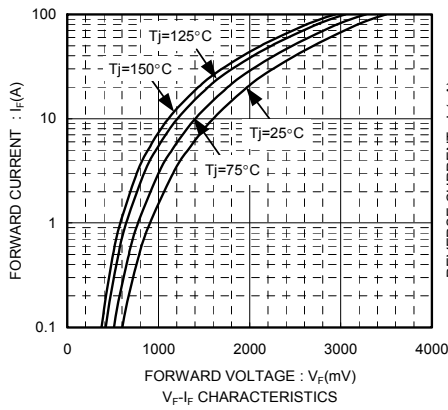
●Absolute maximum ratings (Tc=25°C)

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	°C
Storage temperature	T_{stg}		-55 to +150	°C

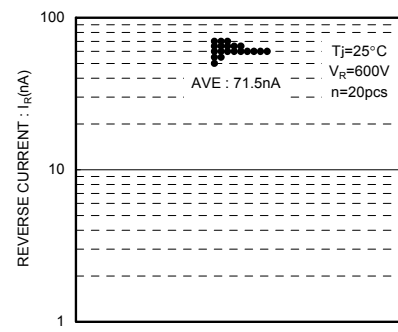
●Electrical characteristics (Tj=25°C)

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	μA
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	°C/W

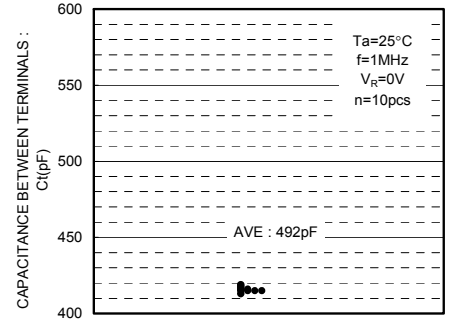
●Electrical characteristic curves



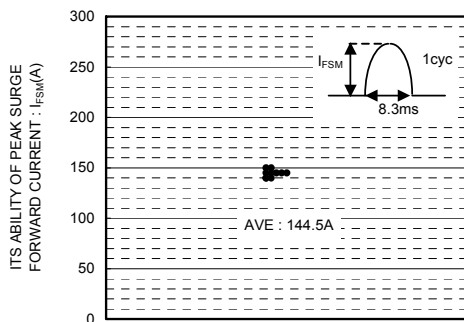
V_f DISPERSION MAP



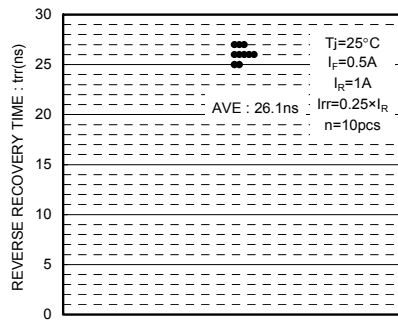
I_r DISPERSION MAP



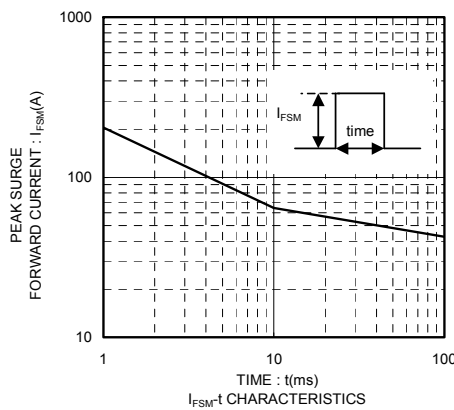
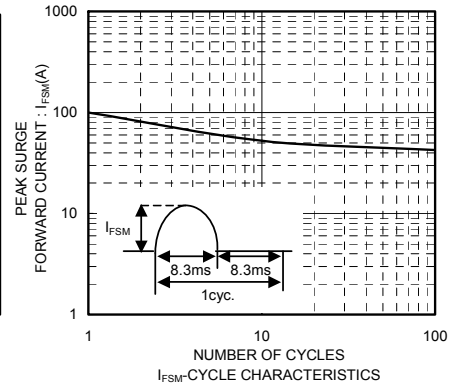
C_t DISPERSION MAP



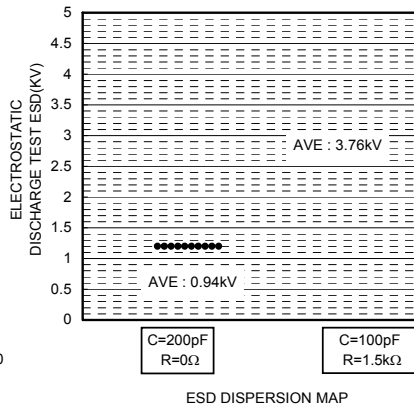
I_{FSM} DISRESION MAP



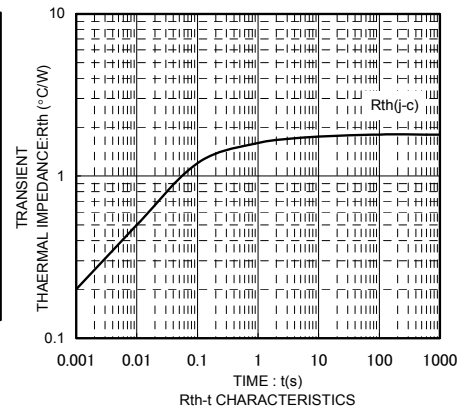
t_{rr} DISPERSION MAP



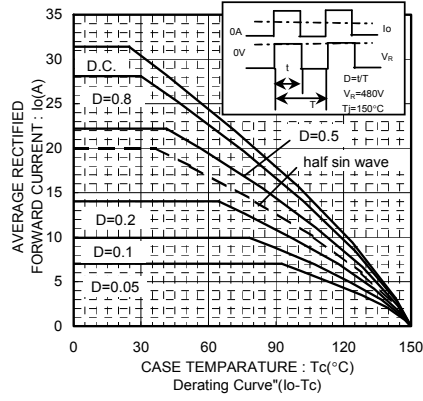
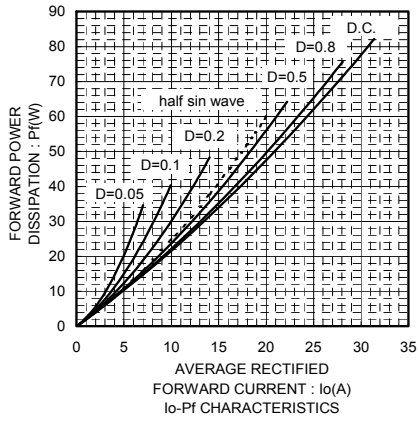
I_{FSM} - t CHARACTERISTICS



ESD DISPERSION MAP



R_{th} - t CHARACTERISTICS



Notes

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