

Super Fast Recovery Diode

RFN20NS4S

● **Serise**

Standard Fast Recovery

● **Applications**

General rectification

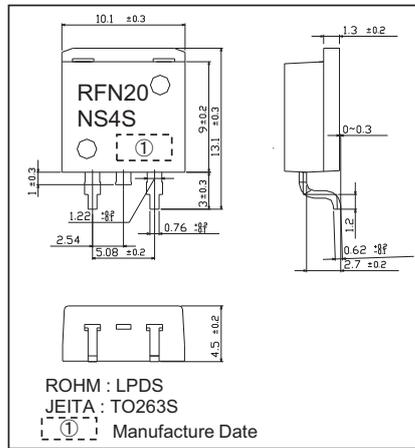
● **Features**

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

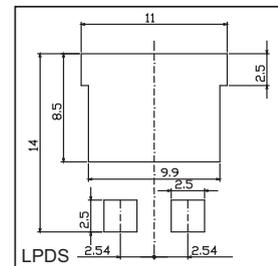
● **Construction**

Silicon epitaxial planer type

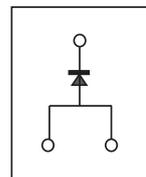
● **Dimensions(Unit : mm)**



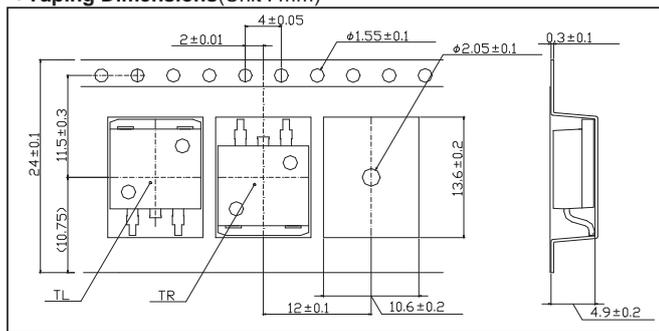
● **Land Size Figure(Unit : mm)**



● **Structure**



● **Taping Dimensions(Unit : mm)**



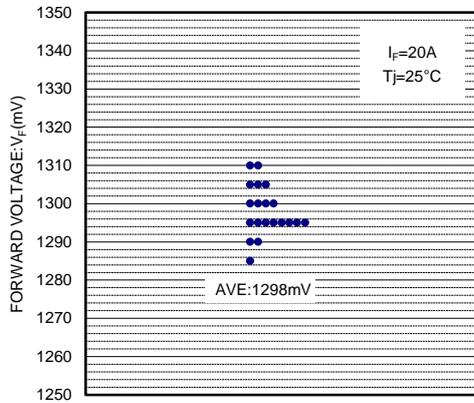
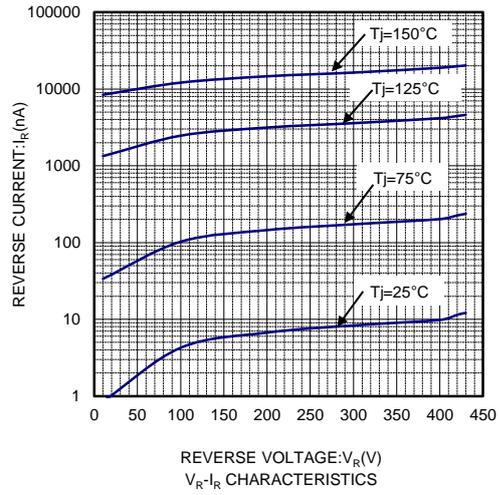
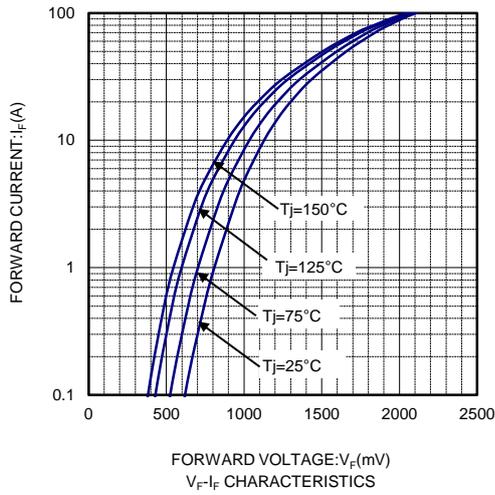
● **Absolute Maximum Ratings(Tc=25°C)**

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty ≤ 0.5	430	V
Reverse voltage	V_R	Direct voltage	430	V
Average rectified forward current	I_o	60Hz half sin wave , Resistive load Tc=30°C	20	A
Forward current surge peak	I_{FSM}	60Hz half sin wave , Non-repetitive at Tj=25°C (*)	100	A
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to + 150	°C

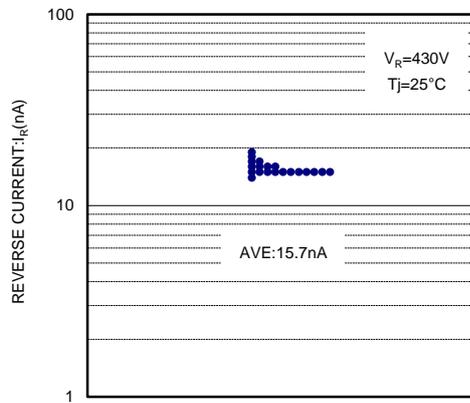
(*) 1-3pin common circuit

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

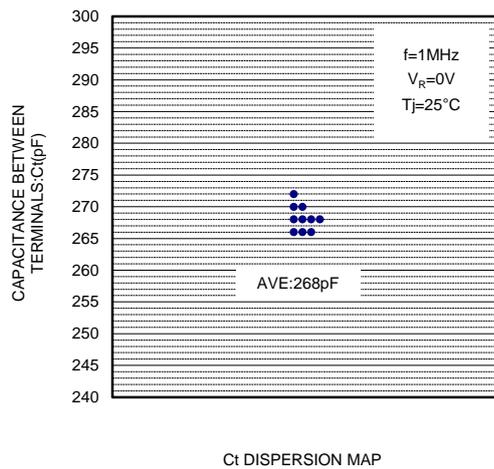
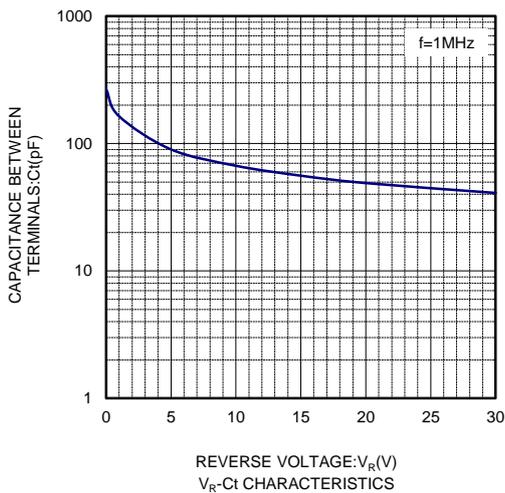
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F=20A$	—	1.3	1.55	V
Reverse current	I_R	$V_R=430V$	—	0.05	10	μA
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	—	22	30	ns
Thermal resistance	Rth(j-c)	Junction to case	—	—	3.0	°C/W



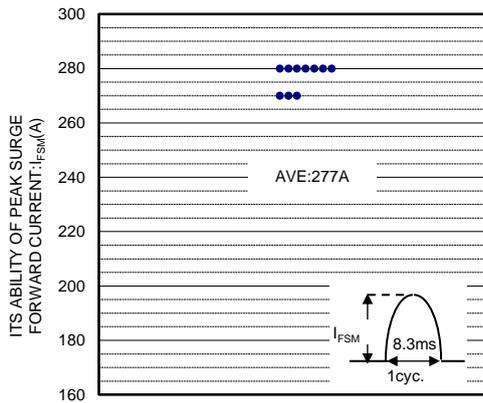
V_F DISPERSION MAP



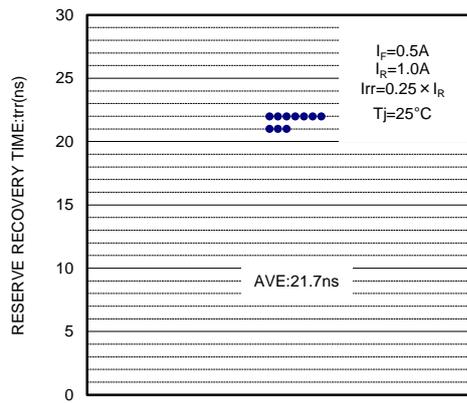
I_R DISPERSION MAP



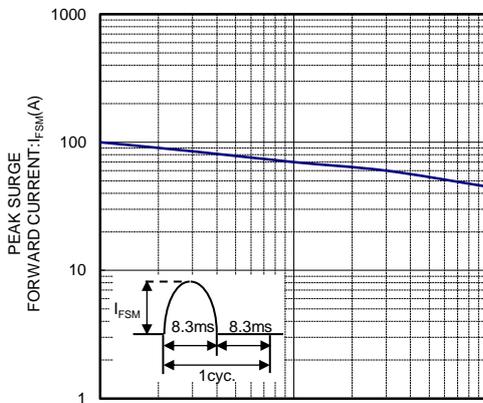
C_t DISPERSION MAP



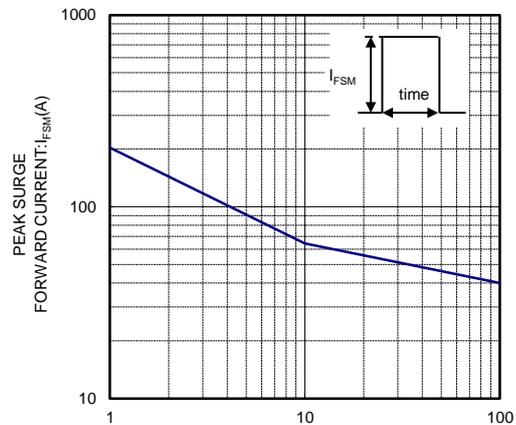
I_{FSM} DISPERSION MAP



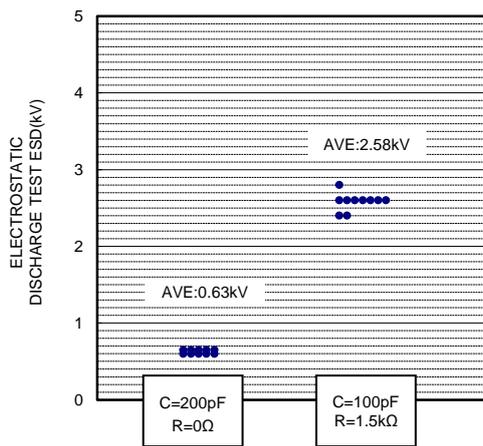
t_{rr} DISPERSION MAP



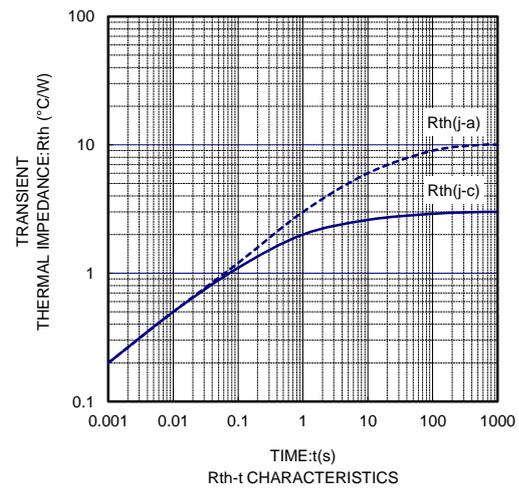
NUMBER OF CYCLES
 I_{FSM} -CYCLE CHARACTERISTICS



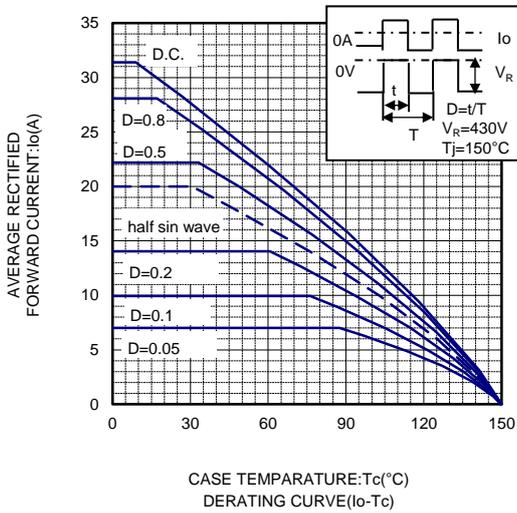
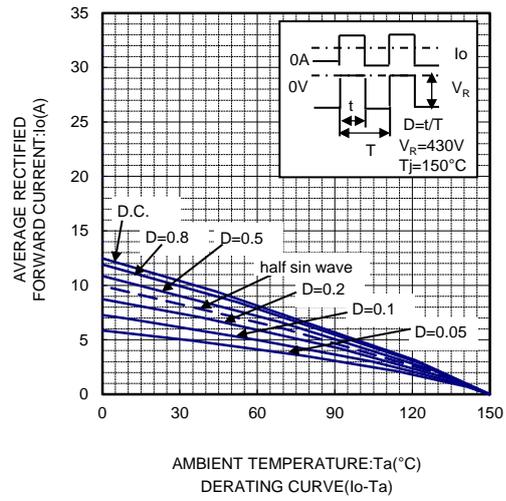
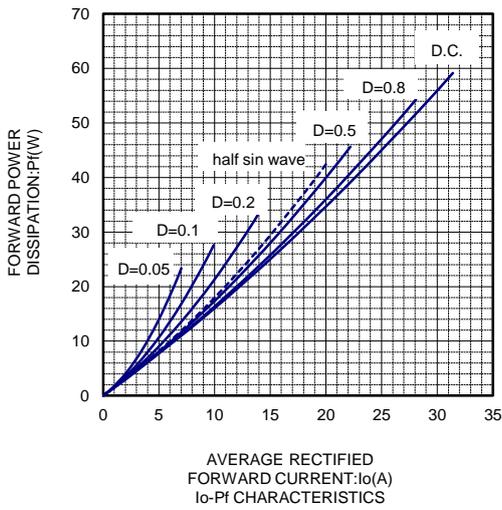
TIME:t(ms)
 I_{FSM} -t CHARACTERISTICS



ESD DISPERSION MAP



TIME:t(s)
 R_{th} -t CHARACTERISTICS



Notes

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