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ROHM SEMICONDUCTOR

Data Sheet

Super Fast Recovery Diode

RFN10NS3S

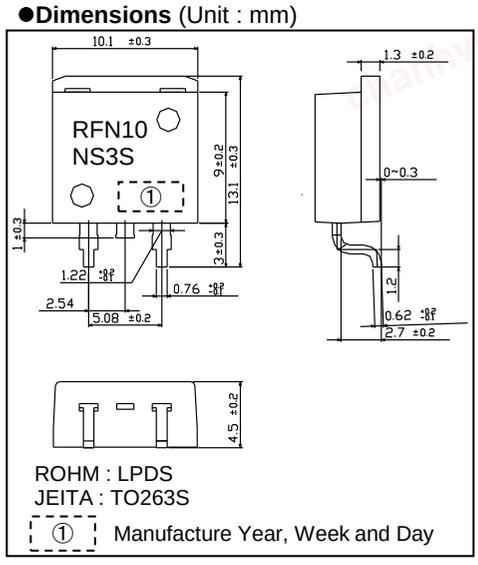
●Series
Standard Fast Recovery

●Applications
General rectification

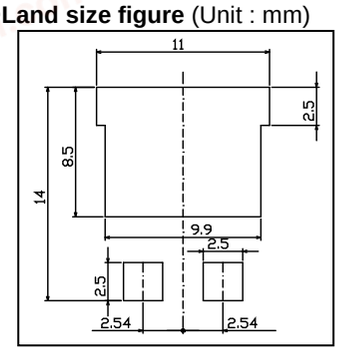
●Features
1)Low switching loss
2)High current overload capacity
3)Cathode common single type

●Construction
Silicon epitaxial planer

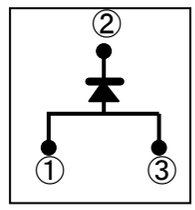
●Dimensions (Unit : mm)



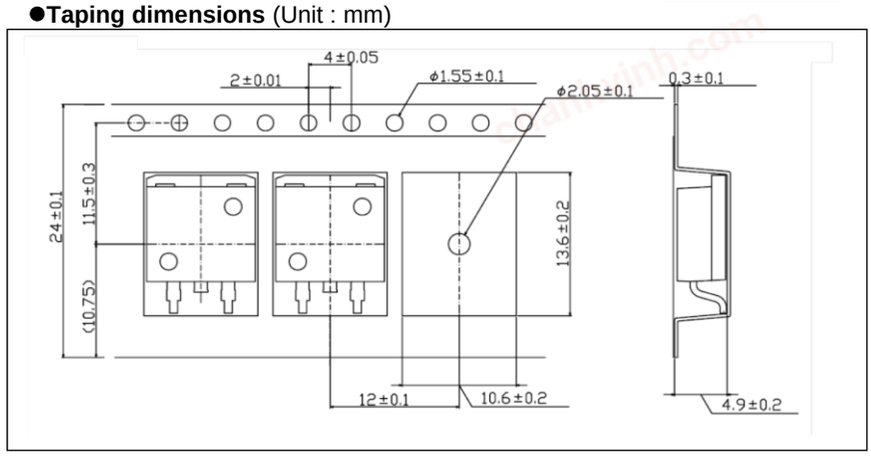
●Land size figure (Unit : mm)



●Structure



●Taping dimensions (Unit : mm)



●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Conditions		Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty≤0.5		350	V
Reverse voltage	V_R	Direct voltage		350	V
Average rectified forward current	Io	60Hz half sin wave resistive load	Tc=88°C	10	A
Forward current surge peak	I_{FSM}	60Hz half sin wave, Non-repetitive one cycle peak value, Tj=25°C (*)		100	A
Junction temperature	Tj			150	°C
Storage temperature	Tstg			−55 to +150	°C

(*) 1-3pin common circuit

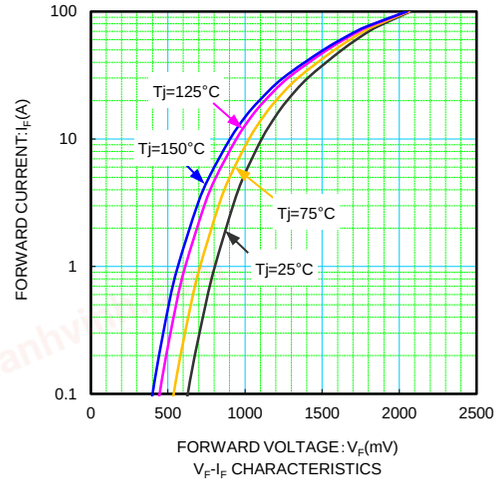
●Electrical characteristics (Tj=25°C)

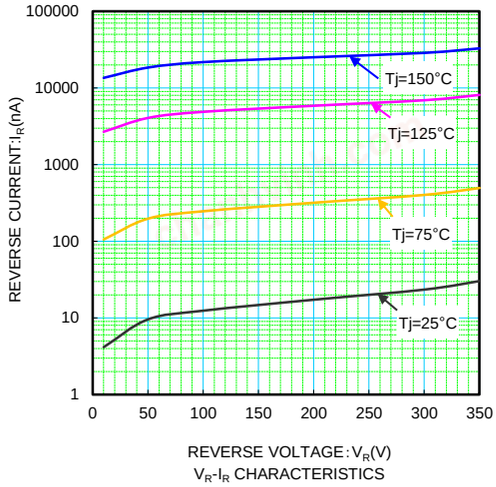
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F=10A	−	1.25	1.5	V
Reverse current	I_R	V_R=350V	−	0.05	10	μA
Reverse recovery time (*)	trr	I_F=0.5A,I_R=1A,Irr=0.25×I_R	−	22	30	ns
Thermal resistance	Rth(j-c)	junction to case	−	−	4.0	°C/W

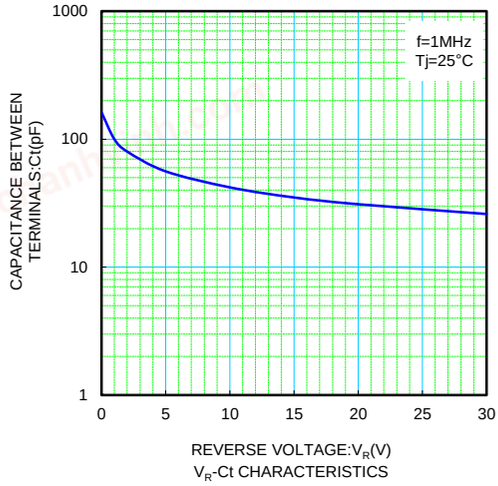
(*) Design assurance without measurement.

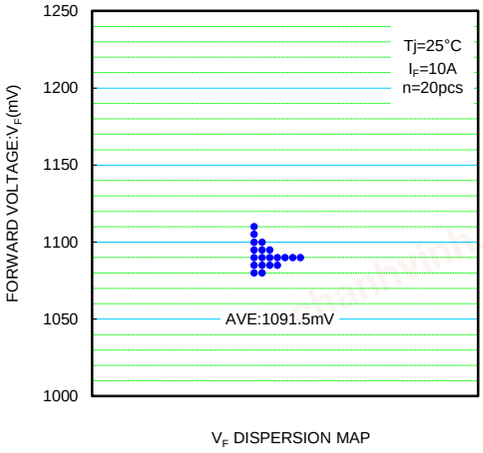
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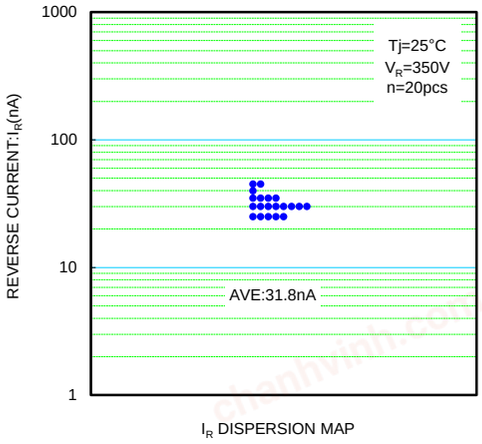
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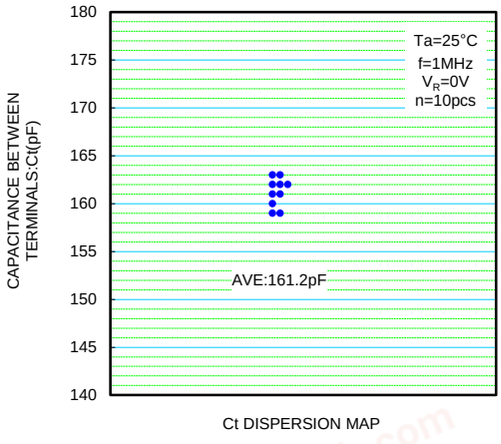






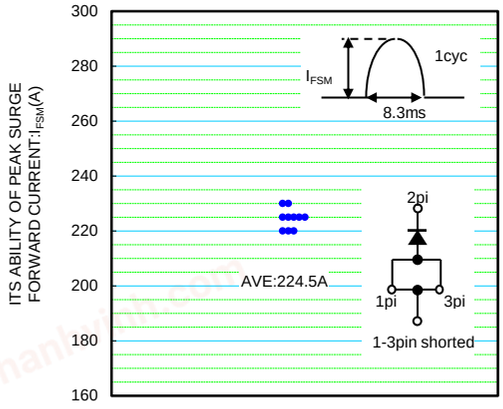




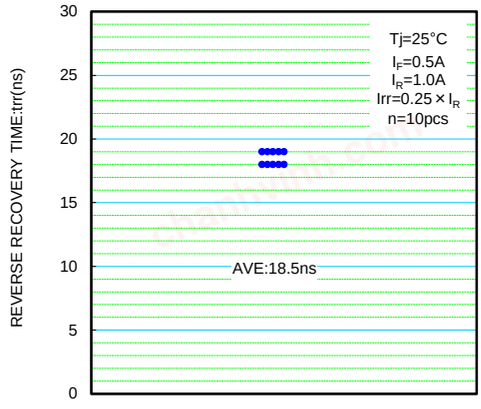


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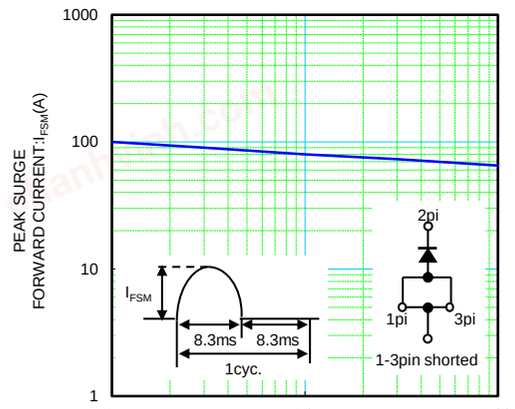
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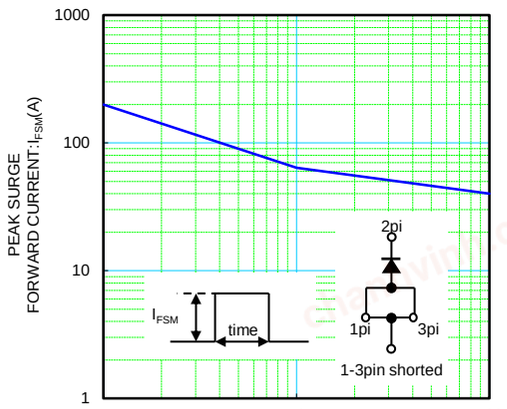
I_{FSM} DISPERSION MAP



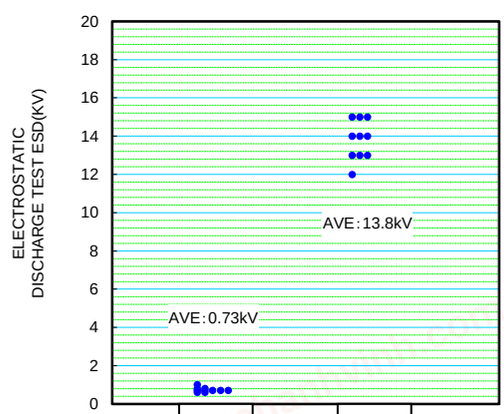
trr DISPERSION MAP



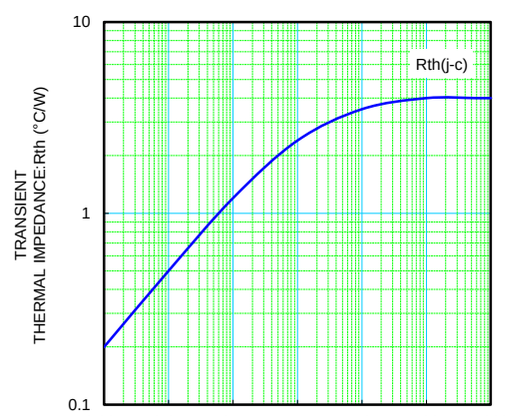
I_{FSM}-CYCLE CHARACTERISTICS



I_{FSM}-t CHARACTERISTICS



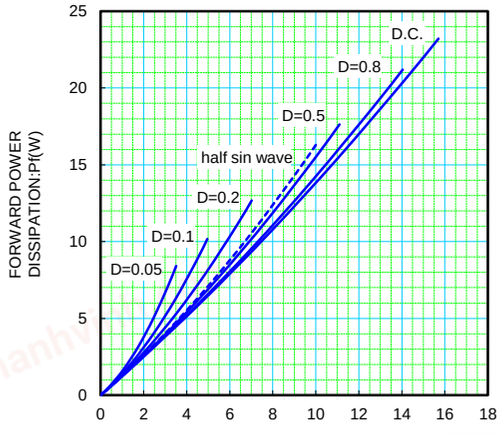
ESD DISPERSION MAP



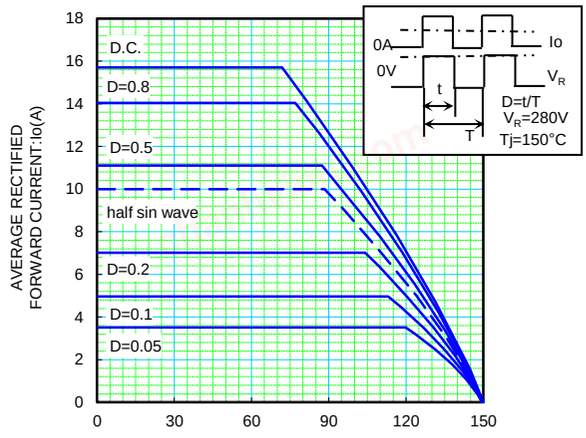
Rth-t CHARACTERISTICS

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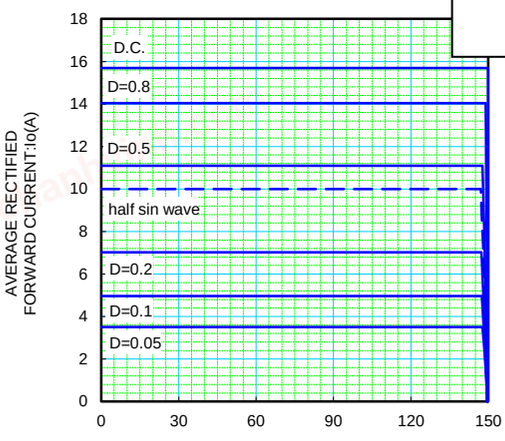
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Io-Pf CHARACTERISTICS



DERATING CURVE (Io-Tc)



DERATING CURVE (Io-Tl)

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