

Super Fast Recovery Diode

RFN1L7S

●Series

Standard Fast Recovery

●Applications

General rectification

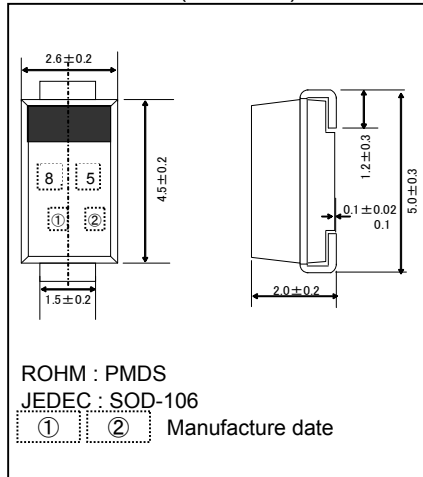
●Features

- 1) Small power mold type. (PMDS)
- 2) Low switching loss
- 3) Low forward voltage

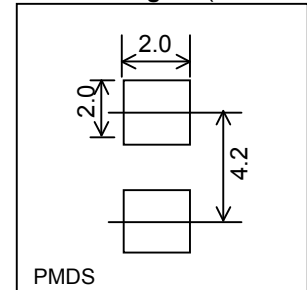
●Construction

Silicon epitaxial planer

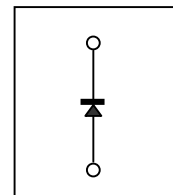
●Dimensions (Unit : mm)



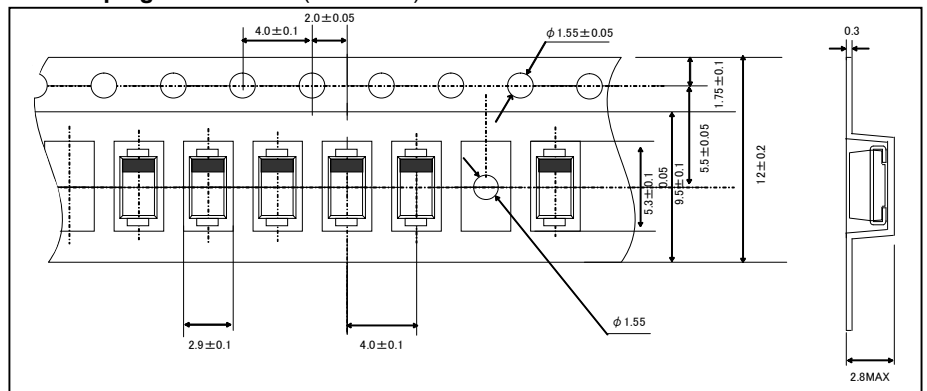
●Land size figure (Unit : mm)



●Structure



●Taping dimensions (Unit : mm)

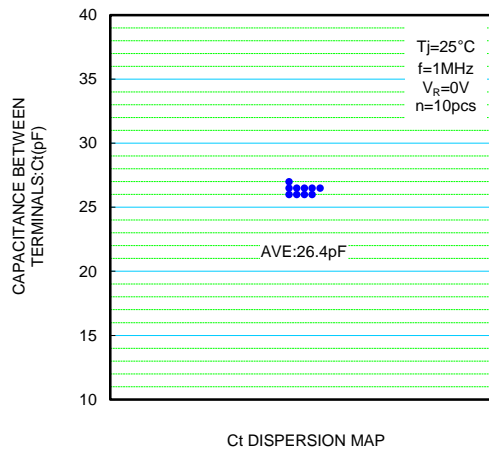
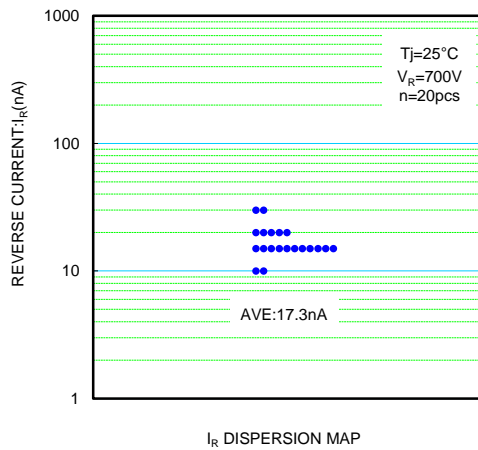
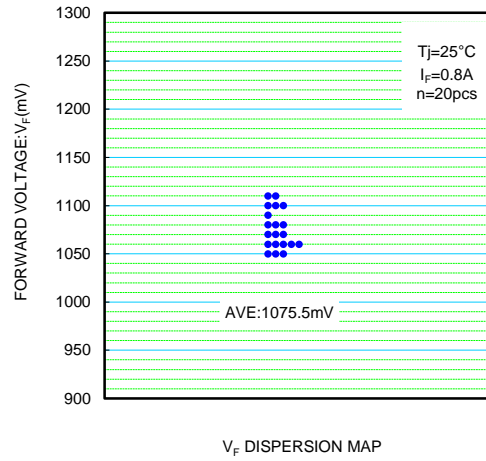
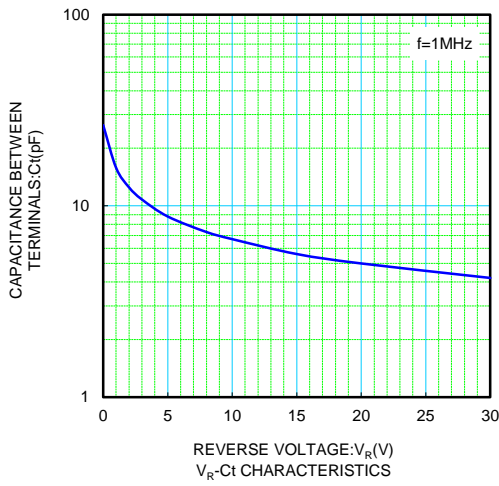
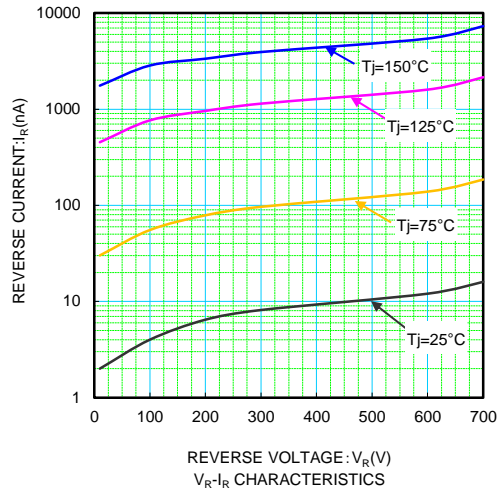
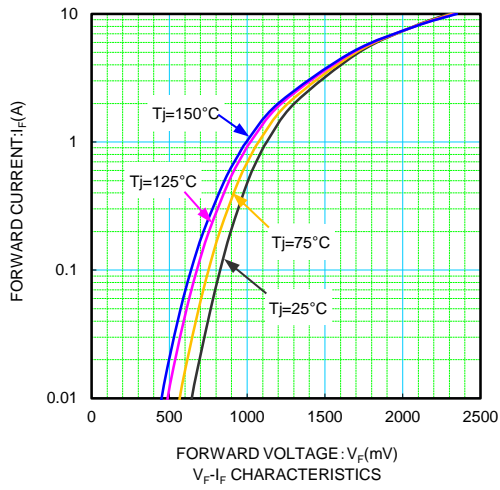


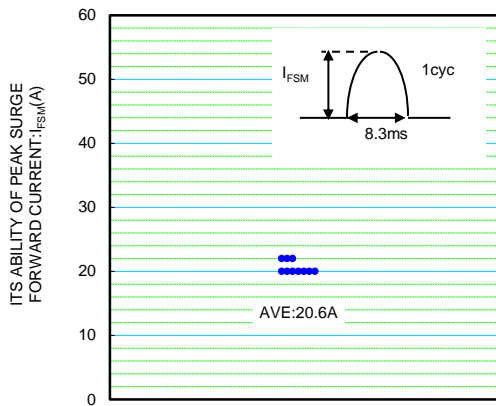
●Absolute maximum ratings (Tl=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	$D \leq 0.5$	700	V
Reverse voltage	V_R	Direct voltage	700	V
Average rectified forward current	I_o	Glass epoxy substrate mounted R-road, 60Hz half sin wave $T_l = 115^\circ\text{C}$	0.8	A
Forward current surge peak	I_{FSM}	60Hz half sin wave, Non-repetitive one cycle peak value, $T_j = 25^\circ\text{C}$	15	A
Junction temperature	T_j		150	°C
Storage temperature	T_{stg}		-55 to +150	°C

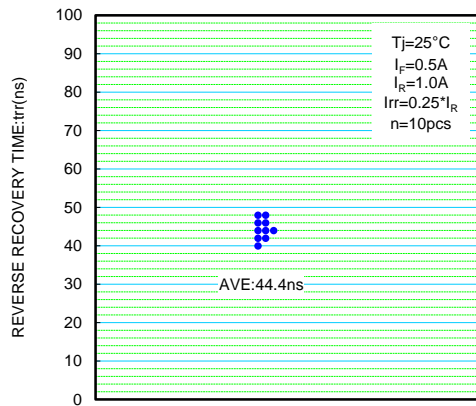
●Electrical characteristics (Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F = 0.8\text{A}$	—	1.15	1.5	V
Reverse current	I_R	$V_R = 700\text{V}$	—	0.01	1	μA
Reverse recovery time	t_{rr}	$I_F = 0.5\text{A}, I_R = 1\text{A}, I_{rr} = 0.25 \times I_R$	—	45	80	ns
Thermal resistance	$R_{th(j-l)}$	junction to lead	—	—	23	°C/W

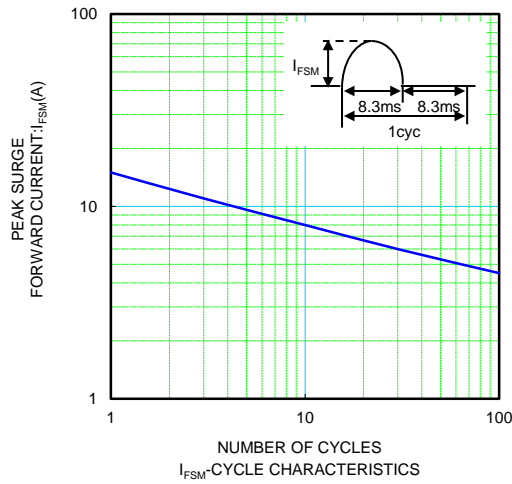




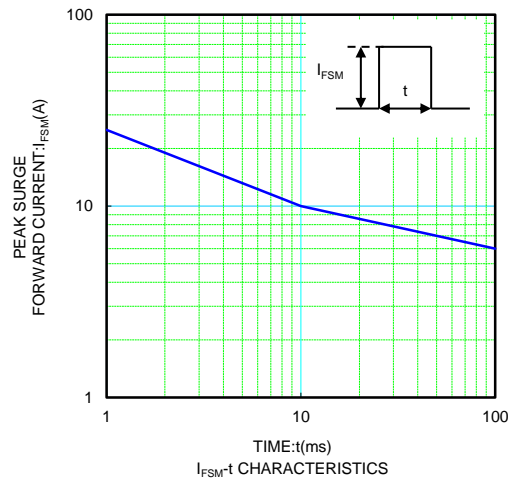
I_{FSM} DISPERSION MAP



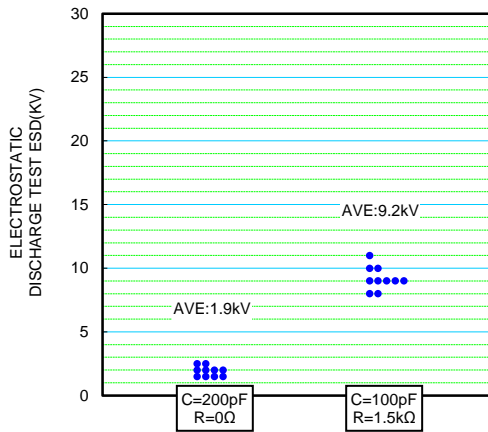
trr DISPERSION MAP



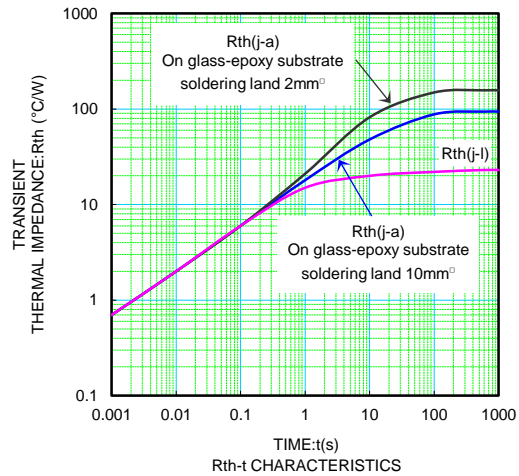
I_{FSM} -CYCLE CHARACTERISTICS



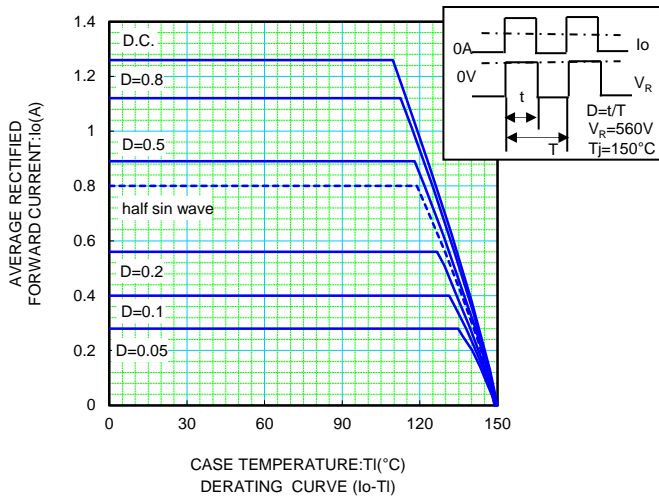
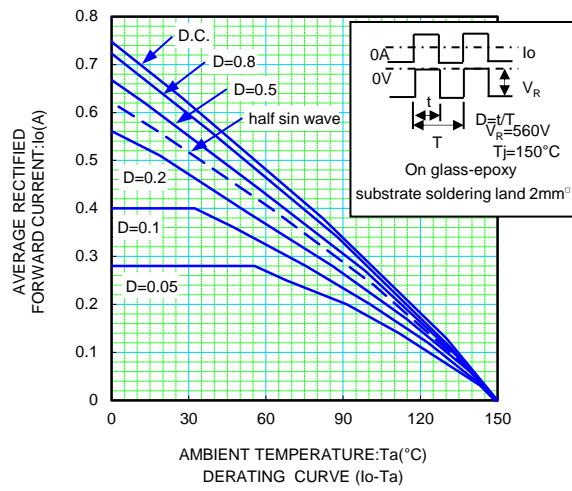
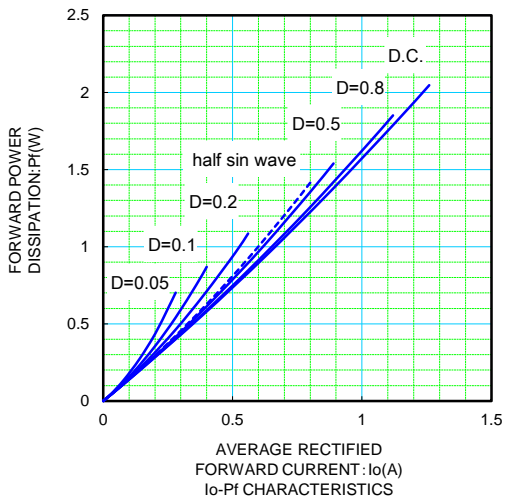
$I_{FSM} \cdot t$ CHARACTERISTICS



ESD DISPERSION MAP



$R_{th} \cdot t$ CHARACTERISTICS



Notes

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