

Super Fast Recovery Diode

RFN10TB4S

●Serise

Standard Fast Recovery

●Applications

General rectification

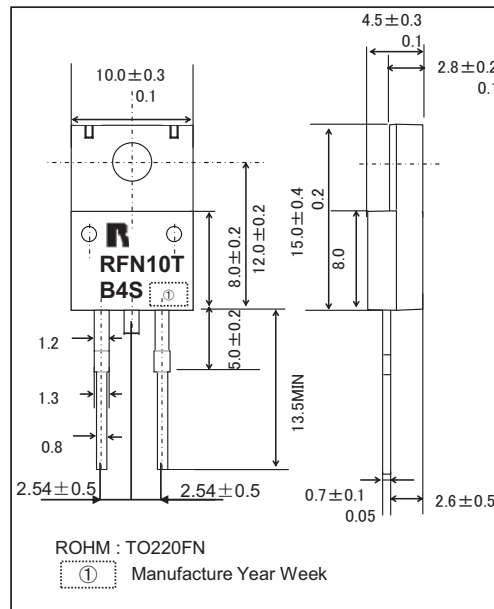
●Features

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

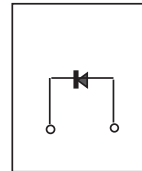
●Construction

Silicon epitaxial planer type

●Dimensions(Unit : mm)



●Structure

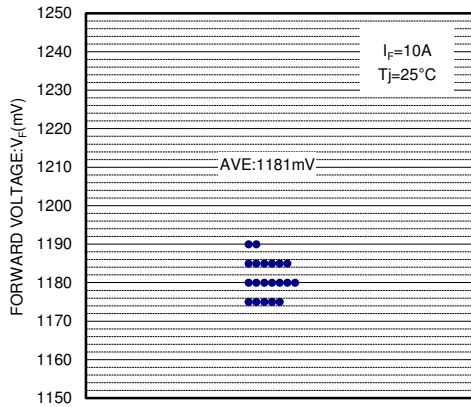
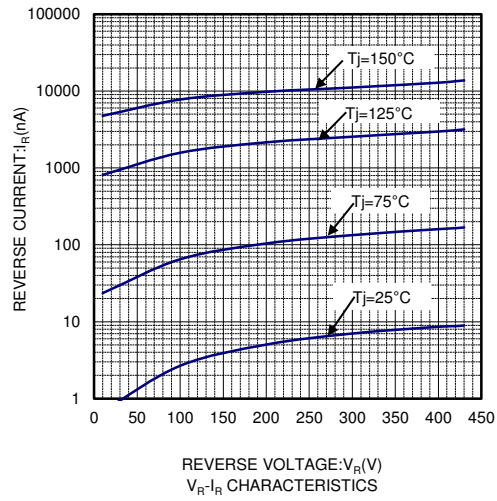
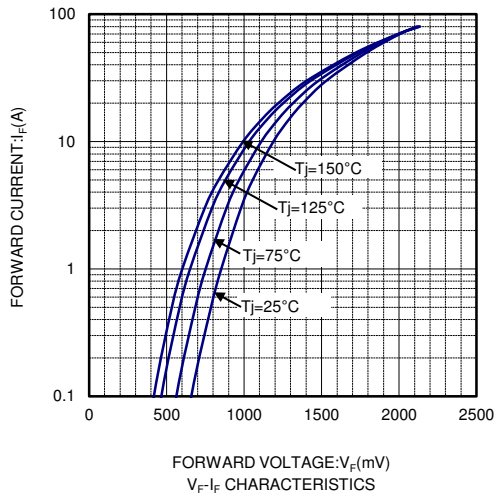


●Absolute Maximum Ratings(TI=25°C)

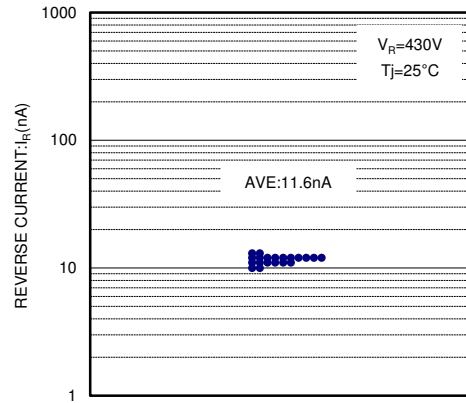
Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	V_{RM}	Duty ≤ 0.5	430	V
Reverse voltage	V_R	Direct voltage	430	V
Average rectified forward current	I_o	60Hz Half sin wave , Resistive load $T_c=93^\circ\text{C}$	10	A
Forward current surge peak	I_{FSM}	60Hz Half sin wave , Non-repetitive at $T_j=25^\circ\text{C}$	80	A
Junction temperature	T_j		150	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

●Electrical Characteristics($T_j=25^\circ\text{C}$)

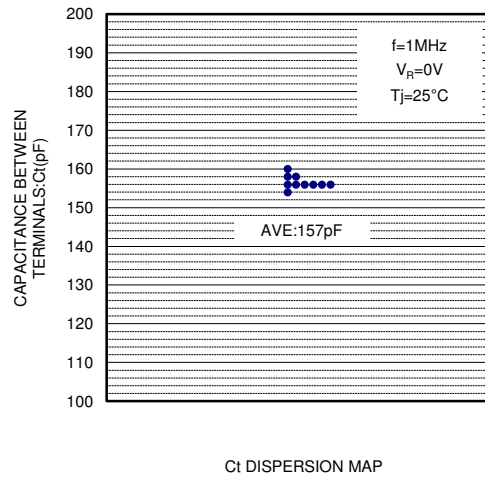
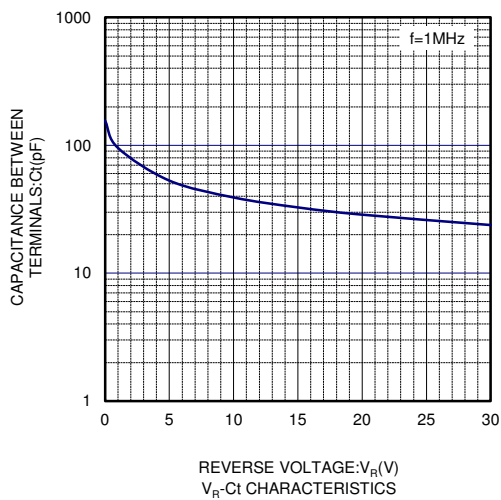
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F=10\text{A}$	—	1.2	1.55	V
Reverse current	I_R	$V_R=430\text{V}$	—	0.05	10	μA
Reverse recovery time	t_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$	—	18	30	ns
Thermal resistance	$R_{th(j-c)}$	Junction to case	—	—	3.0	$^\circ\text{C/W}$



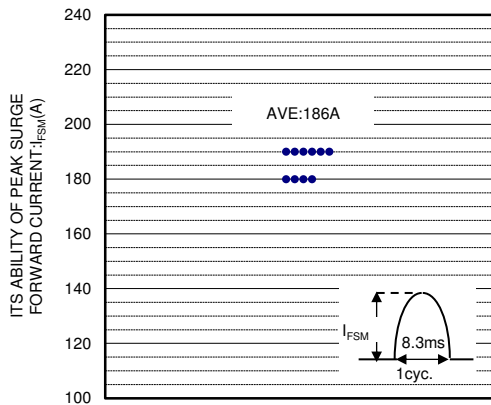
V_F DISPERSION MAP



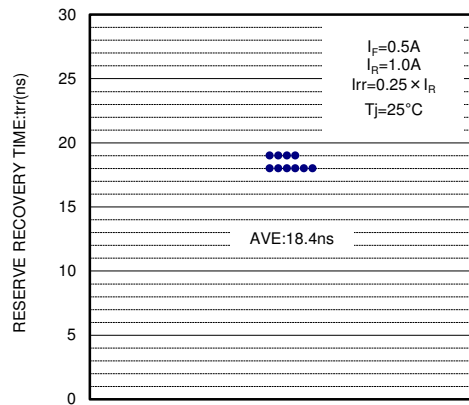
I_R DISPERSION MAP



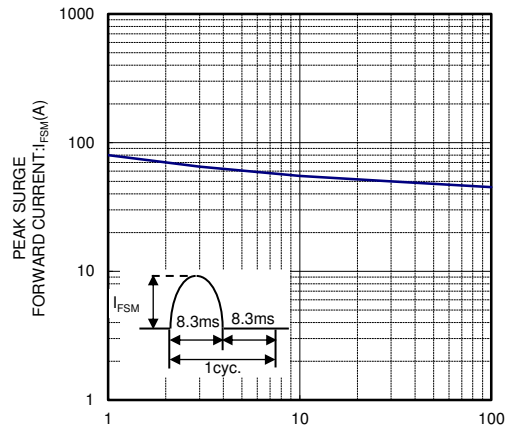
C_t DISPERSION MAP



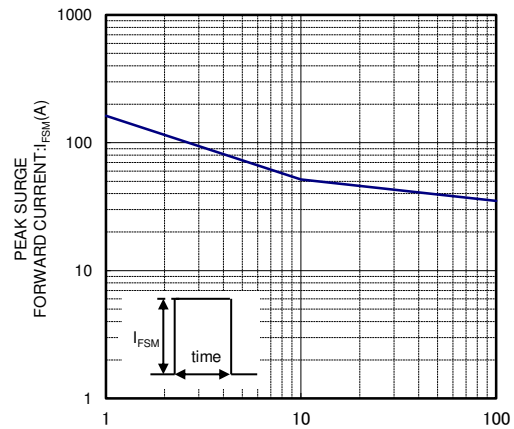
I_{FSM} DISPERSION MAP



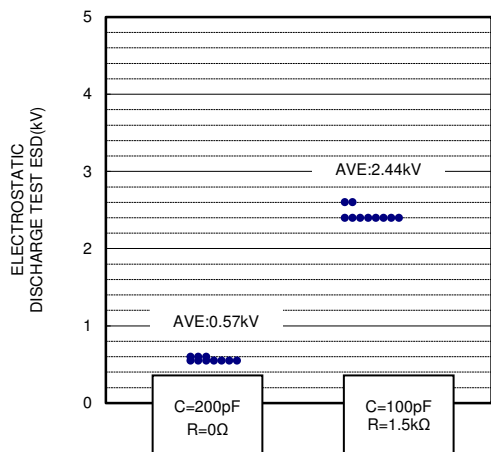
t_{rr} DISPERSION MAP



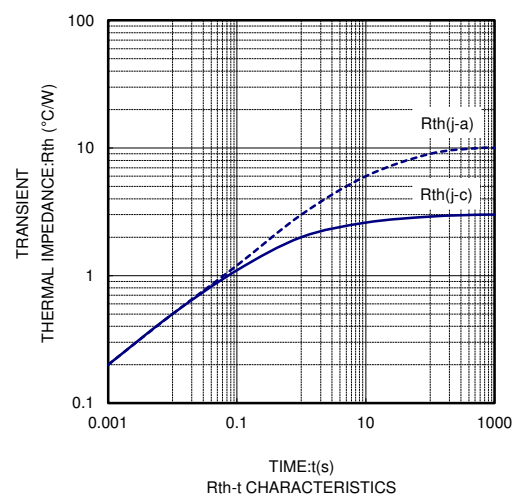
I_{FSM} -CYCLE CHARACTERISTICS



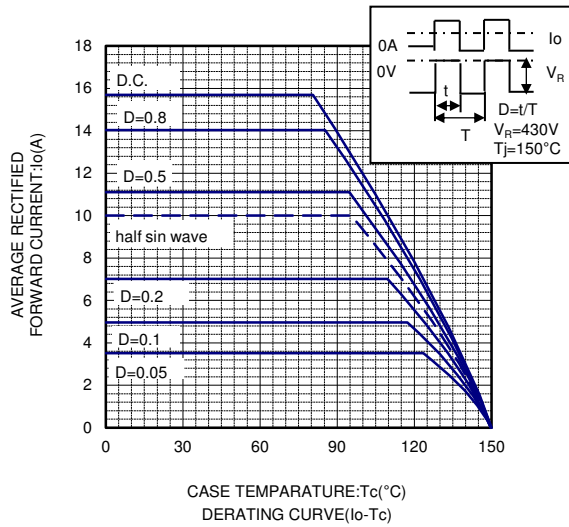
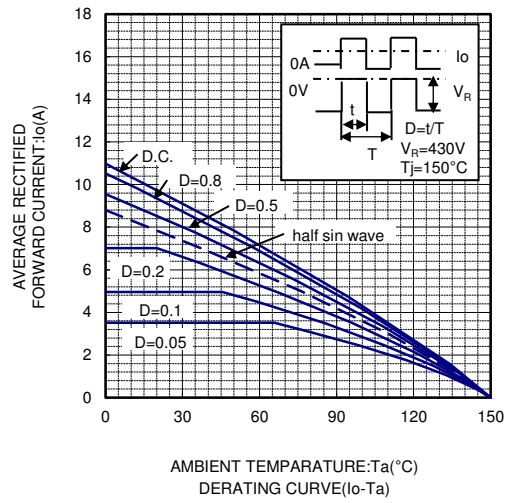
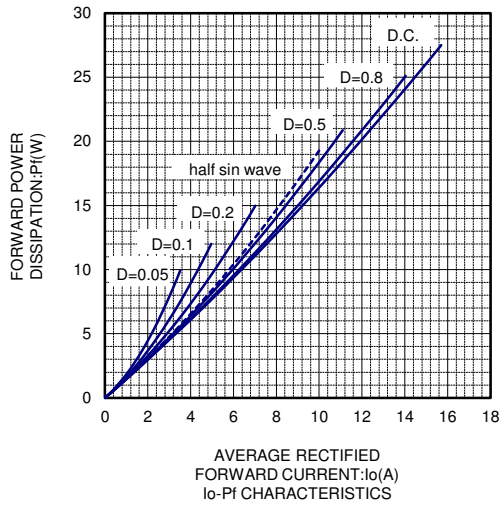
I_{FSM} - t CHARACTERISTICS



ESD DISPERSION MAP



R_{th} - t CHARACTERISTICS



Notes

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