

# Super Fast Recovery Diode

## RFUS20TM4S

●Series

Ultra Fast Recovery

●Applications

General rectification

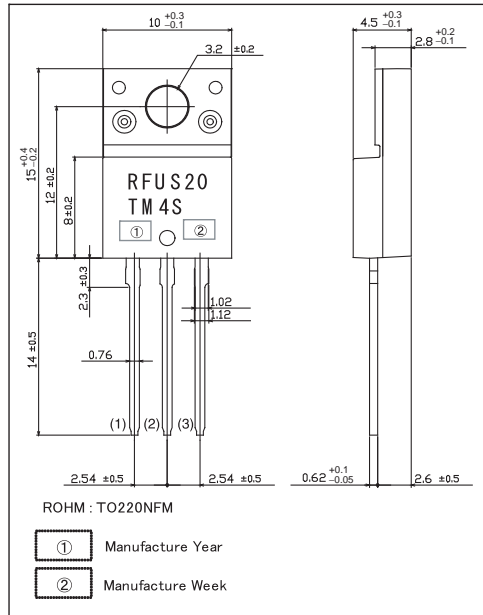
●Features

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

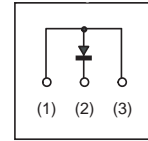
●Construction

Silicon epitaxial planer

●Dimensions (Unit : mm)



●Structure



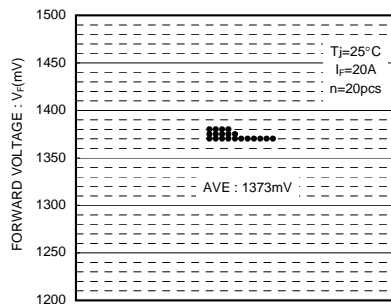
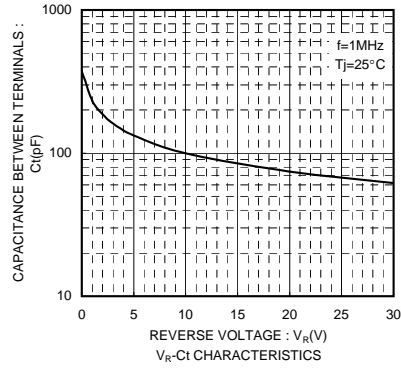
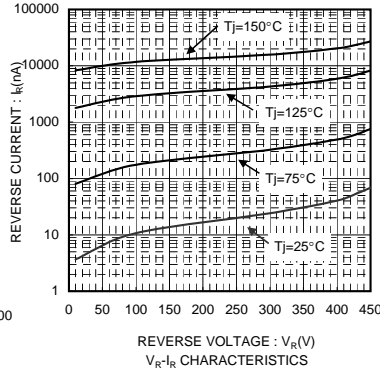
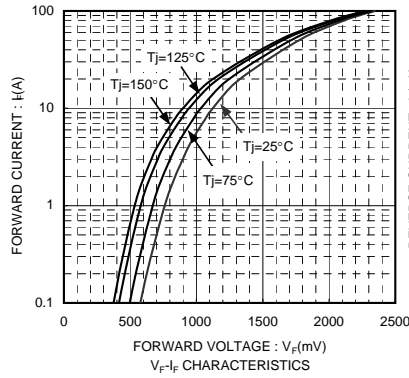
●Absolute maximum ratings (Tc=25°C)

Parameter	Symbol	Conditions	Limits	Unit
Repetitive peak reverse voltage	$V_{RM}$	Duty $\leq$ 0.5	430	V
Reverse voltage	$V_R$	Direct voltage	430	V
Average rectified forward current	$I_o$	60Hz half sin wave, Resistance load, Tc=68°C	20	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		-55to+150	°C

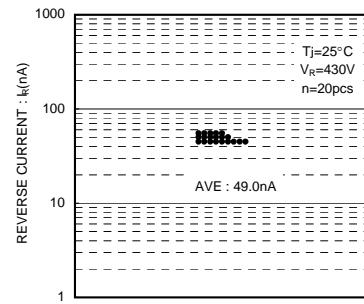
●Electrical characteristics (Tj=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F=20A$	-	1.4	1.6	V
Reverse current	$I_R$	$V_R=430V$	-	0.05	10	$\mu A$
Reverse recovery time	trr	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$	-	24	35	ns
Thermal resistance	Rth(j-c)	junction to case	-	-	2	°C/W

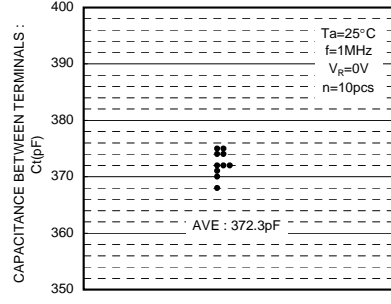
●Electrical characteristic curves



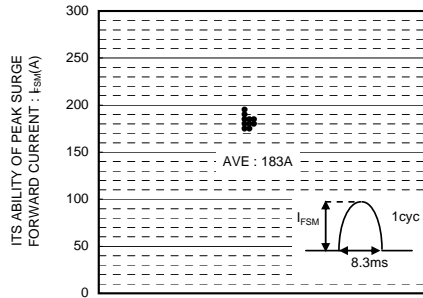
V<sub>F</sub> DISPERSION MAP



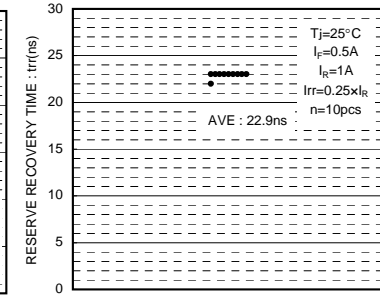
I<sub>R</sub> DISPERSION MAP



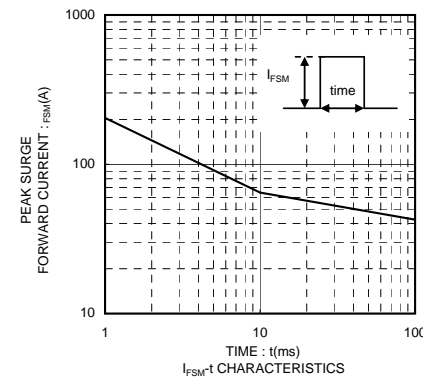
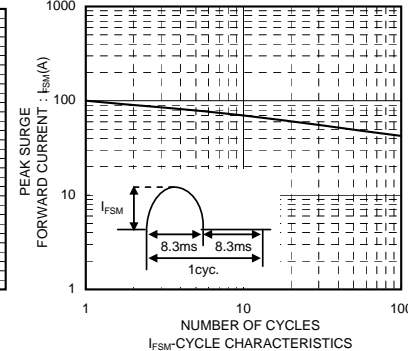
C<sub>t</sub> DISPERSION MAP



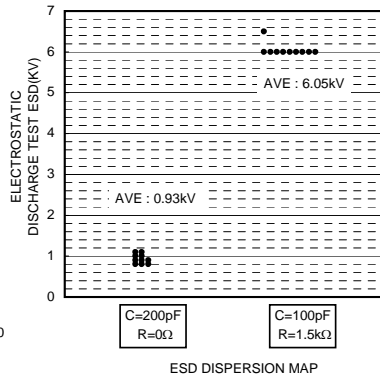
I<sub>FSM</sub> DISPERSION MAP



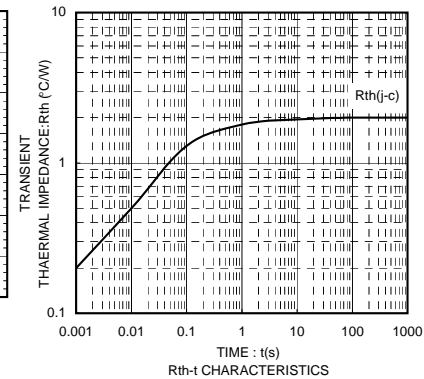
t<sub>rr</sub> DISPERSION MAP

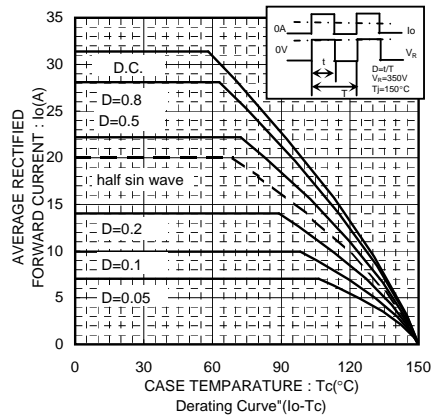
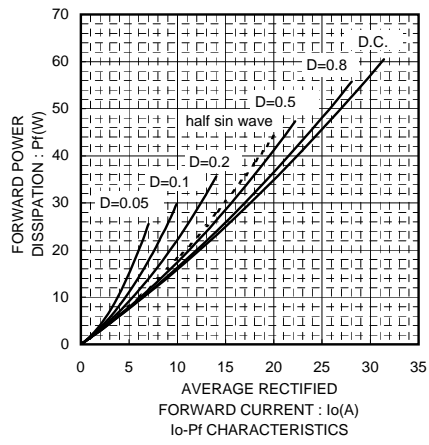


I<sub>FSM</sub>-t CHARACTERISTICS



ESD DISPERSION MAP





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