

Super Fast Recovery Diode

RFUS20TM4S

●Series

Ultra Fast Recovery

●Applications

General rectification

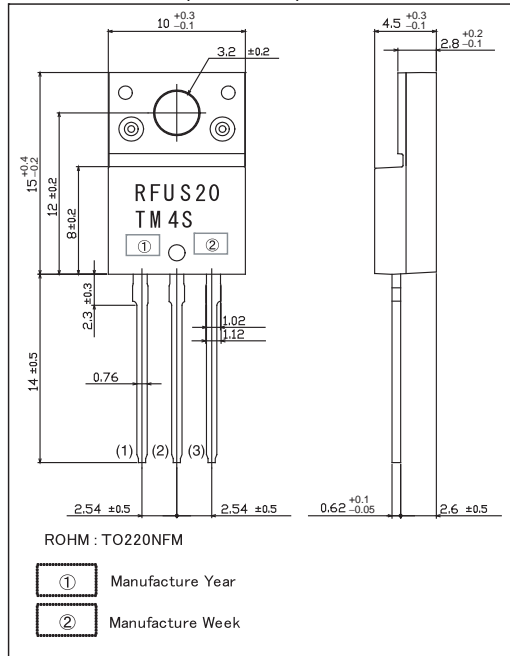
●Features

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

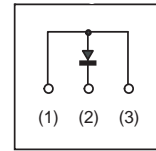
●Construction

Silicon epitaxial planar

●Dimensions (Unit : mm)



●Structure



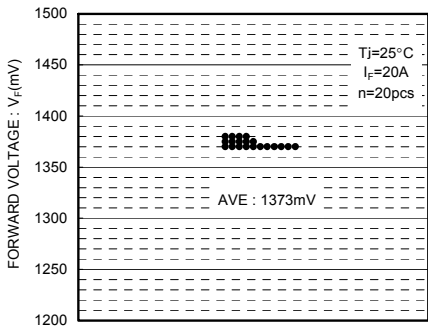
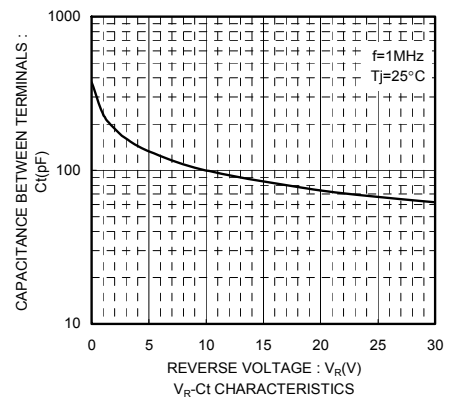
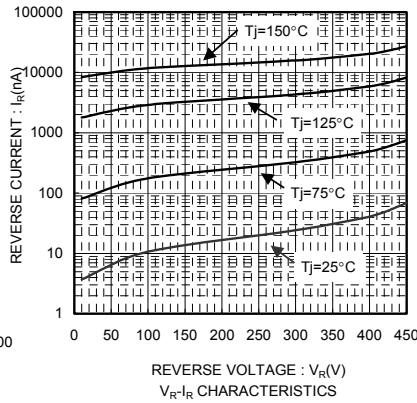
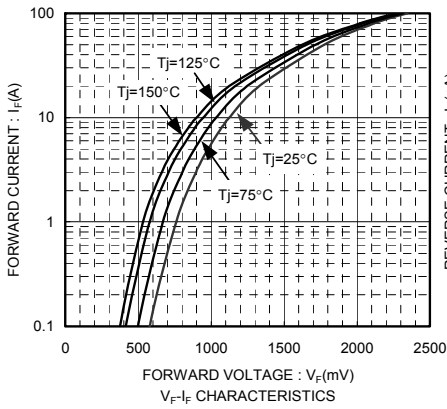
●Absolute maximum ratings (Tc=25°C)

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		-55 to +150	°C

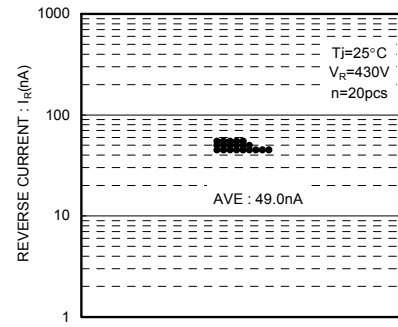
●Electrical characteristics (Tj=25°C)

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	μA
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

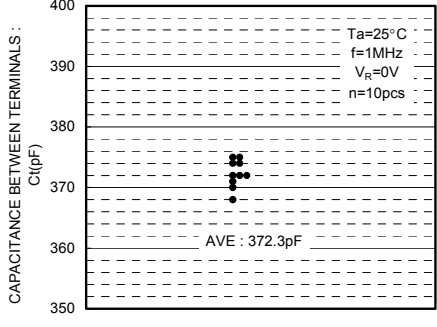
●Electrical characteristic curves



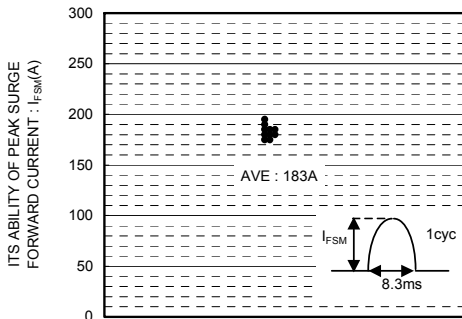
V_F DISPERSION MAP



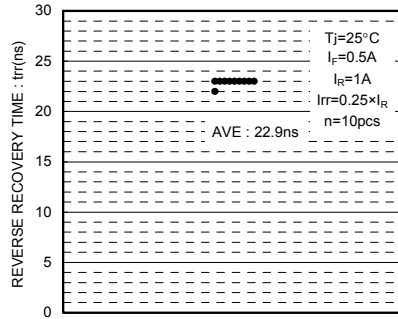
I_R DISPERSION MAP



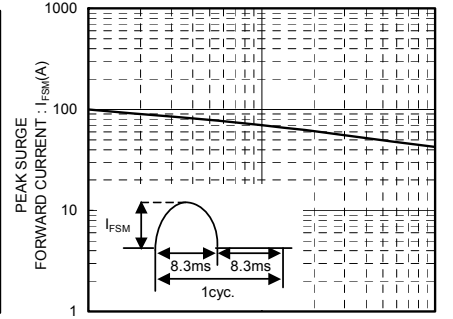
C_t DISPERSION MAP



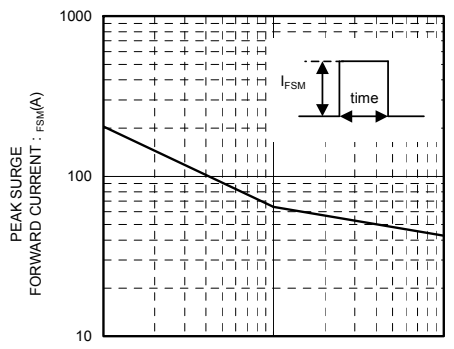
I_{FSM} DISRESION MAP



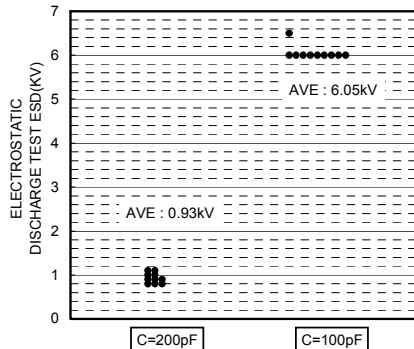
t_{tr} DISPERSION MAP



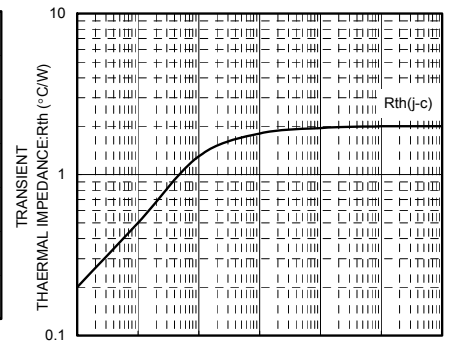
I_{FSM} CYCLE CHARACTERISTICS



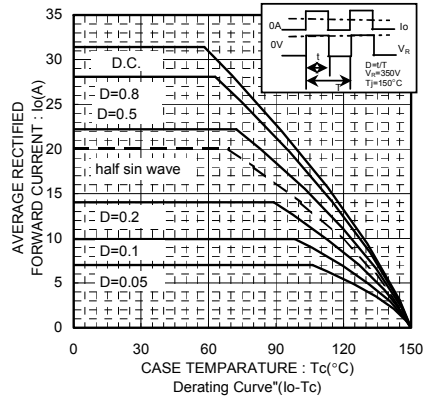
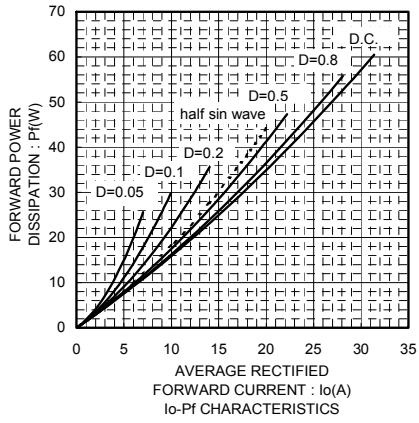
I_{FSM} - t CHARACTERISTICS



ESD DISPERSION MAP



R_{th} - t CHARACTERISTICS



Notes

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