

Fast recovery diode

RF2001T4S

●Applications

General rectification

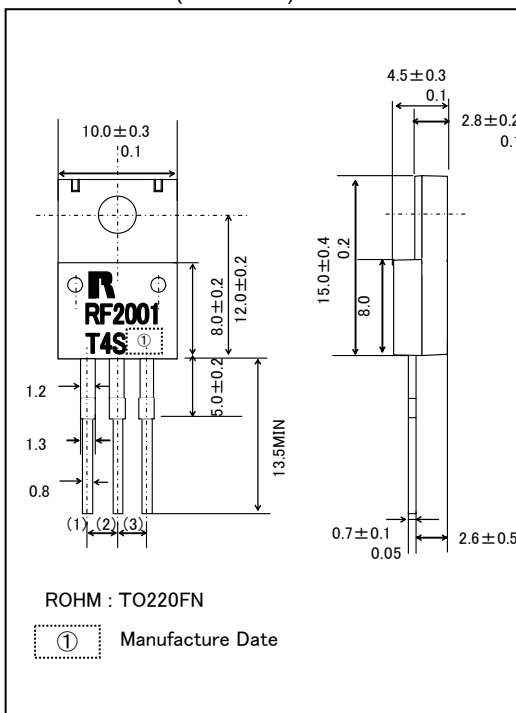
●Features

- 1) High reliability.(TO-220)
- 2) Low noise.
- 3) Very fast switching .

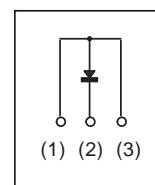
●Construction

Silicon epitaxial planar

●Dimensions (Unit : mm)



●Structure



●Absolute maximum ratings (Ta=25°C)

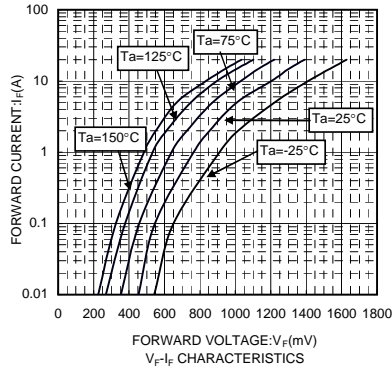
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	430	V
Reverse voltage (DC)	V_R	400	V
Average rectified forward current (*1)	I_o	20	A
Forward current surge peak (60Hz/1cyc)(*1)	I_{FSM}	100	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

(*1)Business frequency, Rating of R-load, $T_c=94^{\circ}C_{MAX}$.

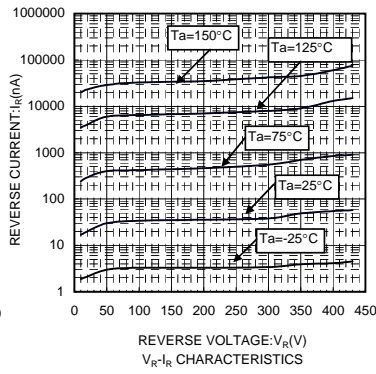
●Electrical characteristic (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	1.6	V	$I_F=20A$
Reverse current	I_R	-	-	10	μA	$V_R=400V$
Reverse recovery time	t_{rr}	-	-	30	ns	$I_F=0.5A, I_R=1A, I_{rr}=0.25 \cdot I_R$

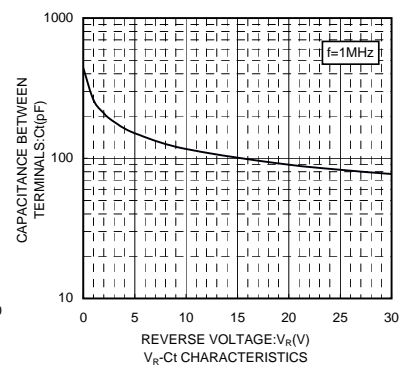
●Electrical characteristics curves



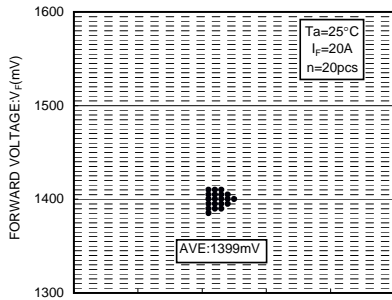
V_F - I_r CHARACTERISTICS



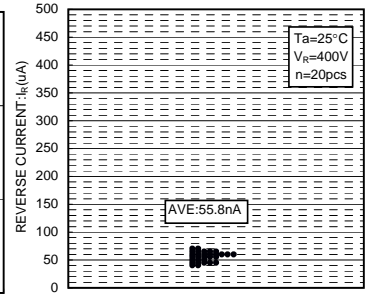
V_R - I_R CHARACTERISTICS



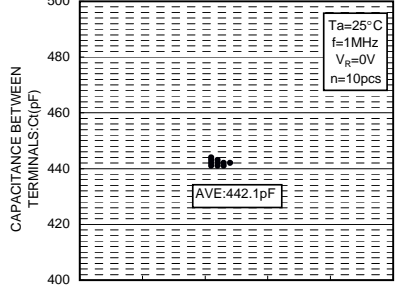
V_R - C_t CHARACTERISTICS



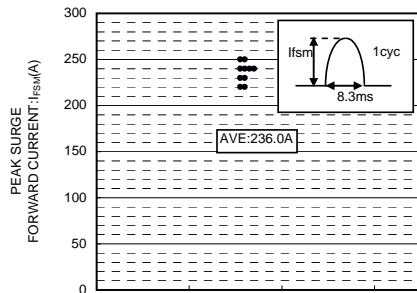
V_F DISPERSION MAP



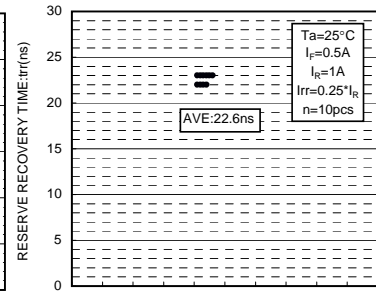
I_R DISPERSION MAP



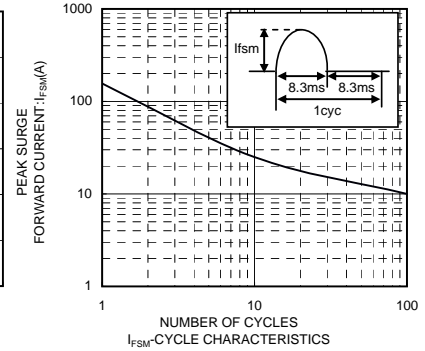
C_t DISPERSION MAP



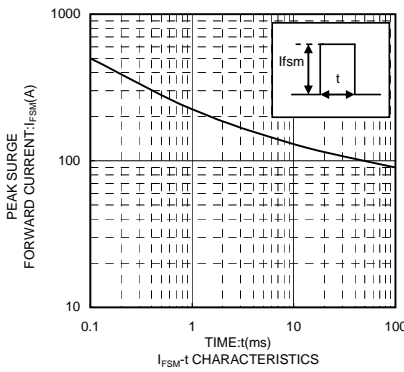
I_{FSM} DISPERSION MAP



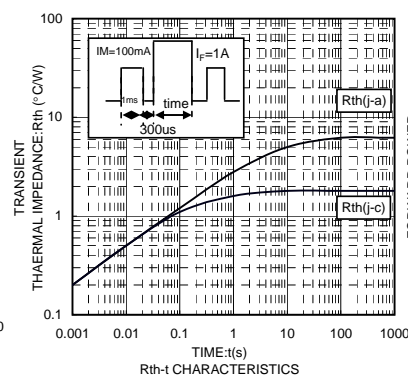
t_{rr} DISPERSION MAP



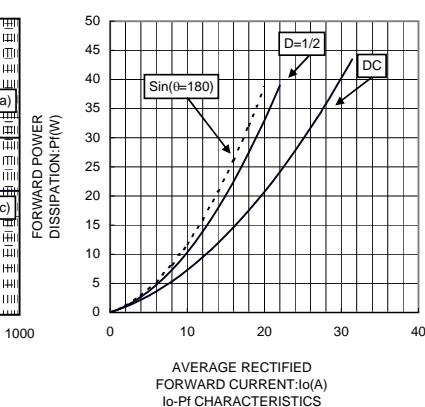
I_{FSM} -CYCLE CHARACTERISTICS



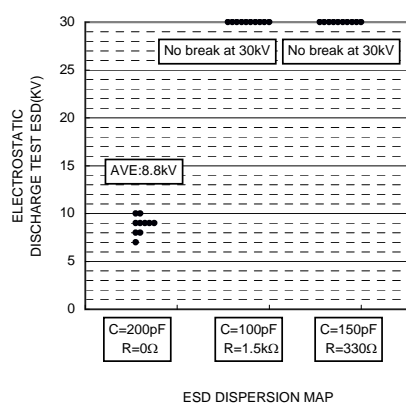
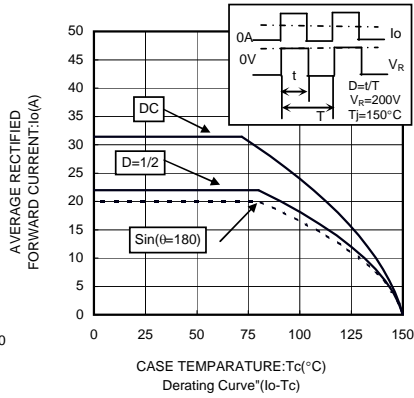
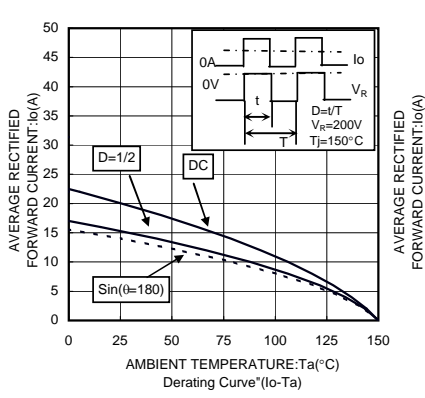
I_{FSM} - t CHARACTERISTICS



R_{th} - t CHARACTERISTICS



AVERAGE RECTIFIED FORWARD CURRENT: $I_o(A)$
 I_o - P_F CHARACTERISTICS



Notes

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