

Fast recovery diodes

RF1601T2D

●Applications

General rectification

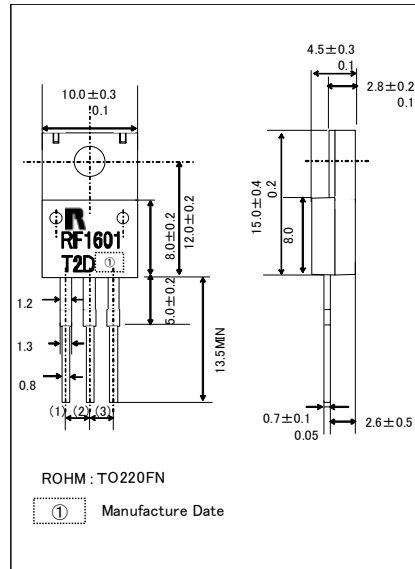
●Features

- 1) Cathode common type.
(TO-220)
- 2) Ultra Low V_F
- 3) Very fast recovery
- 4) Low switching loss

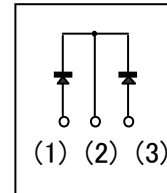
●Construction

Silicon epitaxial planar

●Dimensions (Unit : mm)



●Structure



●Absolute maximum ratings (Ta=25°C)

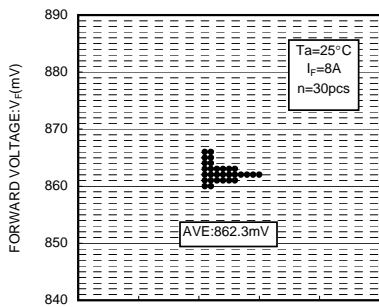
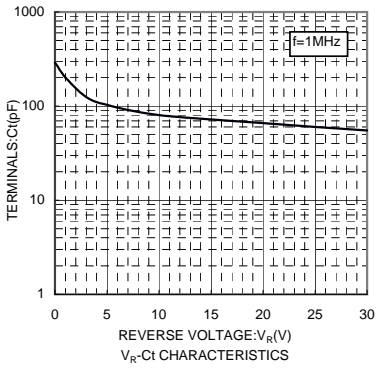
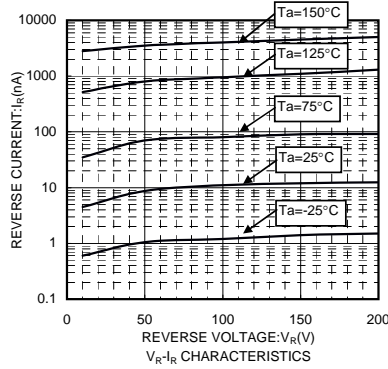
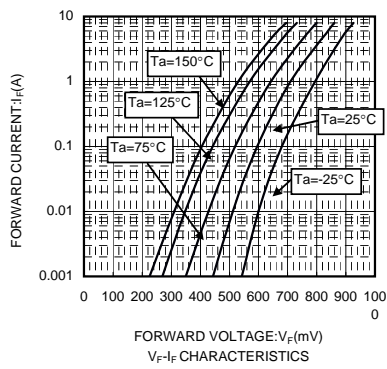
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	200	V
Reverse voltage (DC)	V_R	200	V
Average rectified forward current (*1)	I_o	16	A
Forward current surge peak (60Hz/1cyc)	I_{FSM}	80	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

(*1)Business frequency, Rating of R-load, $T_c=120^\circ\text{C}$. 1/2 I_o per diode

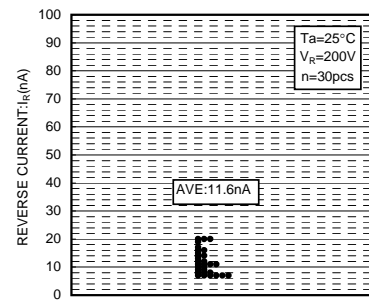
●Electrical characteristic (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	0.93	V	$I_F=8\text{A}$
Reverse current	I_R	-	-	10	μA	$V_R=200\text{V}$
Reverse recovery time	t_{rr}	-	-	30	ns	$I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \cdot I_R$

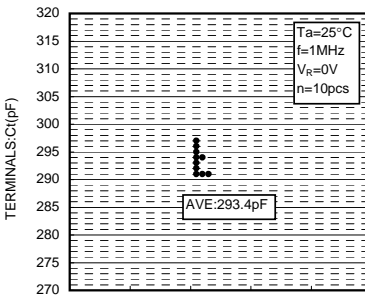
●Electrical characteristics curves



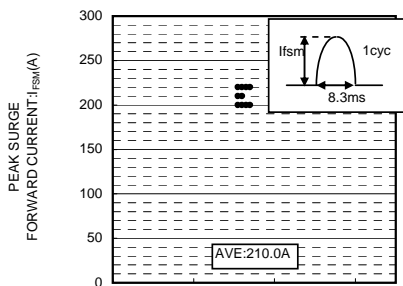
V_F DISPERSION MAP



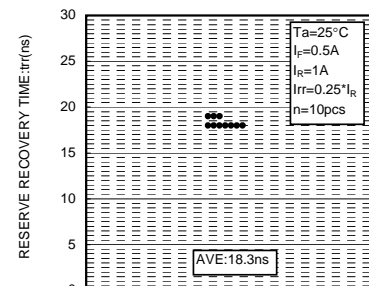
I_R DISPERSION MAP



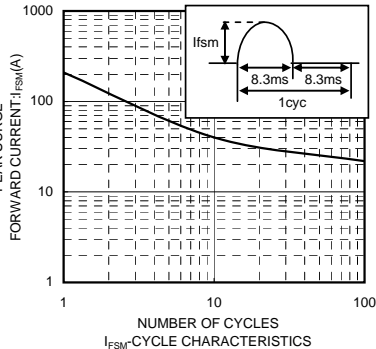
C_t DISPERSION MAP



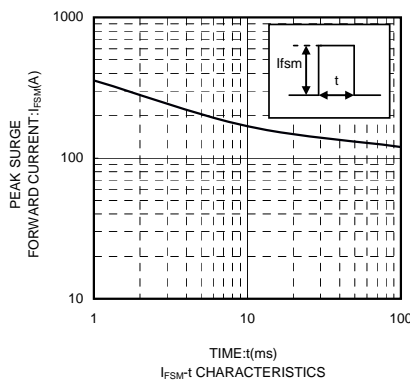
I_{FSM} DISPERSION MAP



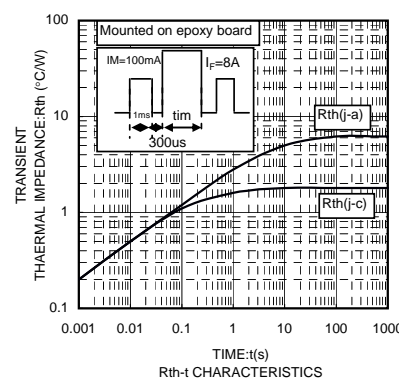
t_{tr} DISPERSION MAP



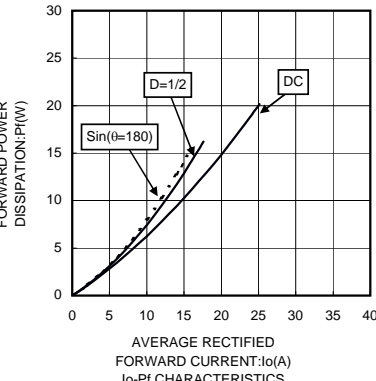
I_{FSM} CYCLE CHARACTERISTICS



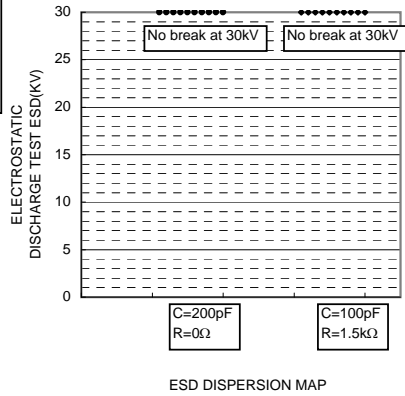
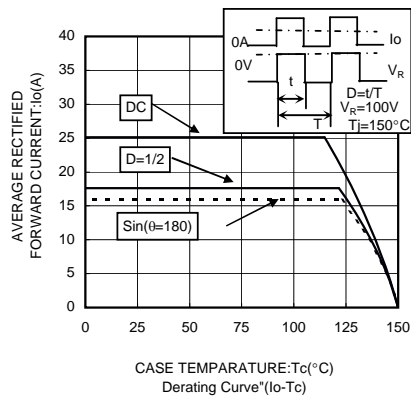
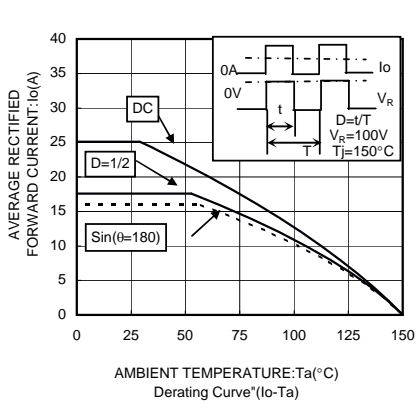
I_{FSM} - t CHARACTERISTICS



R_{th} - t CHARACTERISTICS



AVERAGE RECTIFIED FORWARD CURRENT: I_o (A)
 I_o - P_f CHARACTERISTICS



Notes

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