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Schottky barrier diode

RSX1001T3

● **Applications**

Switching power supply

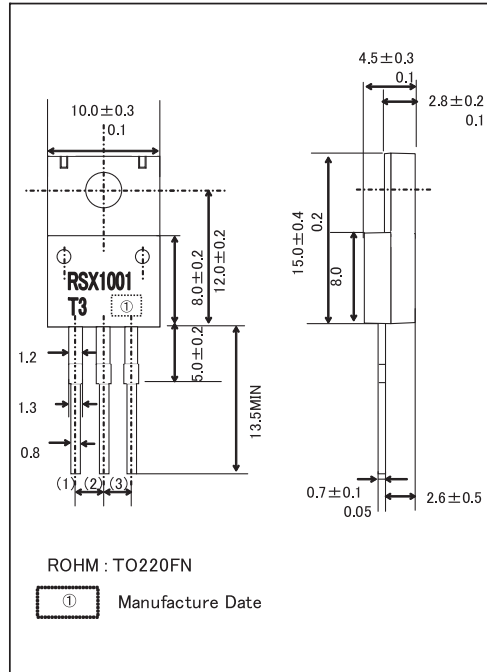
● **Features**

- 1) Cathode common type. (TO-220)
- 2) Low I_R
- 3) High reliability

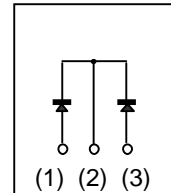
● **Construction**

Silicon epitaxial planer

● **Dimensions (Unit : mm)**



● **Structure**



● **Absolute maximum ratings (Ta=25°C)**

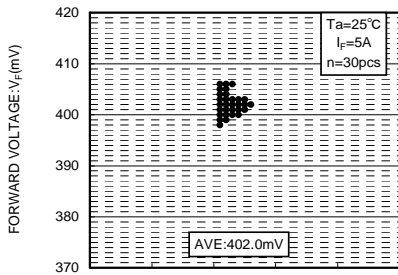
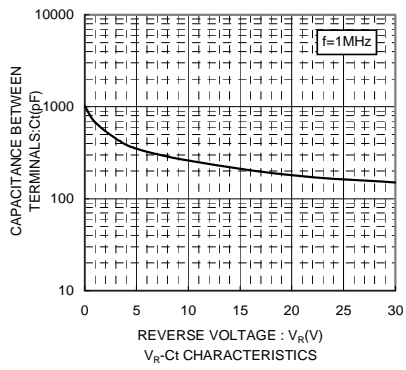
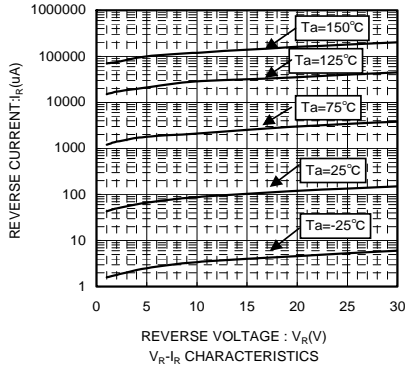
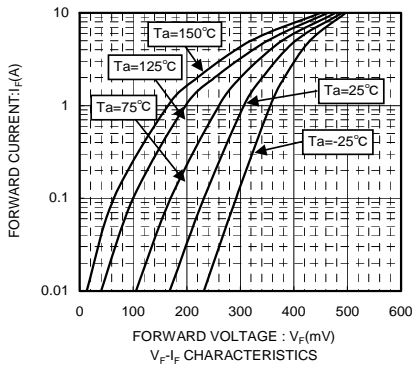
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	30	V
Reverse voltage (DC)	V_R	30	V
Average rectified forward current (*1)	I_o	10	A
Forward current surge peak (60Hz / 1cyc) (*1)	I_{FSM}	150	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-40 to +150	°C

(*1)Business frequencies, Rating of R-load, 1/2 I_o per diode, $T_c=132^\circ\text{C}$

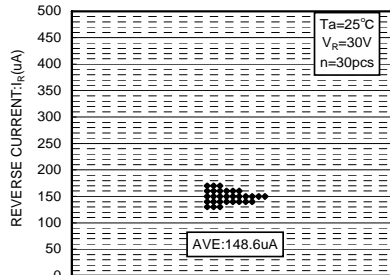
● **Electrical characteristic (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	0.45	V	$I_F=5\text{A}$
Reverse current	I_R	-	-	500	μA	$V_R=30\text{V}$
Reverse recovery time	θ_{jc}	-	-	2.5	°C/W	junction to case

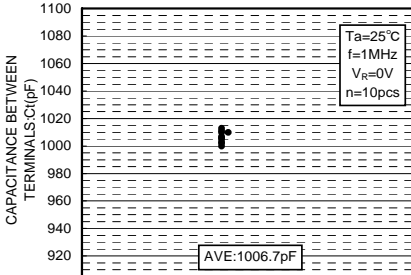
●Electrical characteristic curves



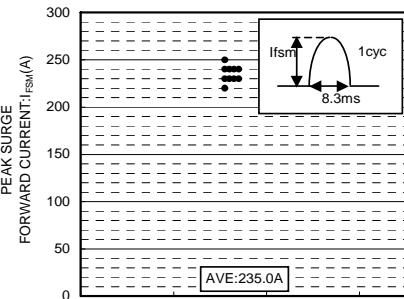
V_F DISPERSION MAP



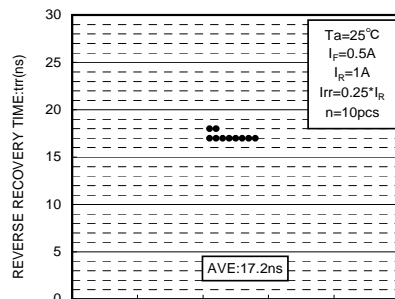
I_R DISPERSION MAP



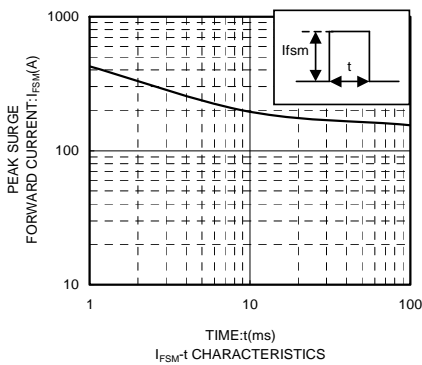
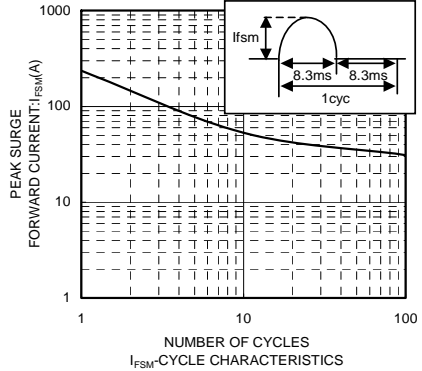
C_t DISPERSION MAP



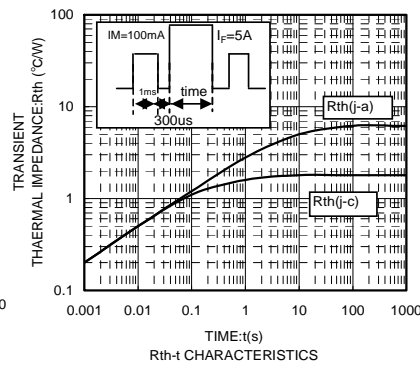
I_{FSM} DISPERSION MAP



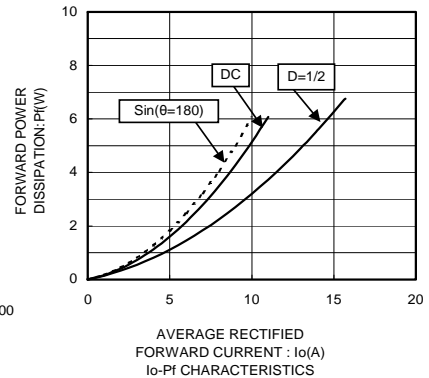
t_{rr} DISPERSION MAP



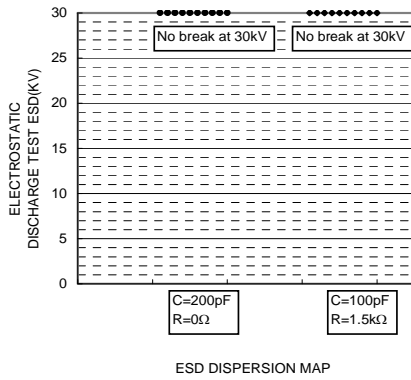
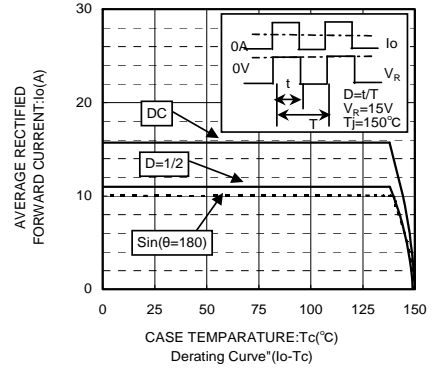
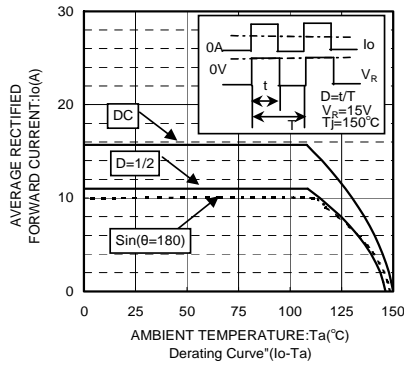
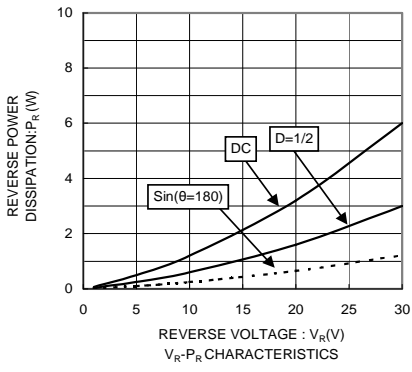
I_{FSM} - t CHARACTERISTICS



R_{th} - t CHARACTERISTICS



I_o - P_f CHARACTERISTICS



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