

Schottky barrier diode

RSX1001T3

● **Applications**

Switching power supply

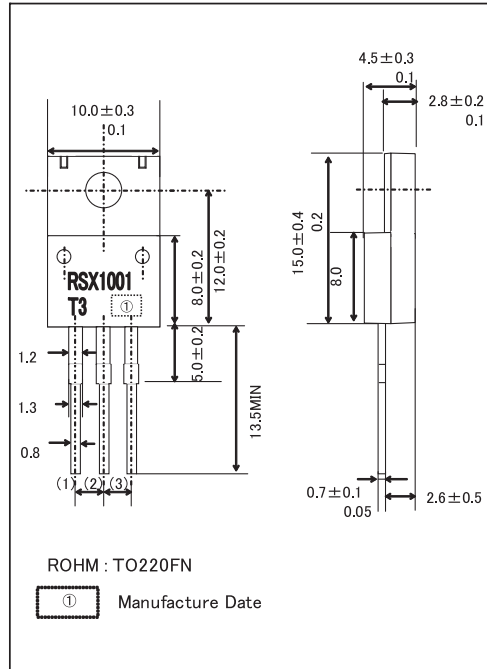
● **Features**

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

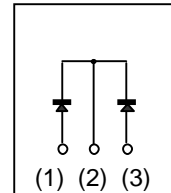
● **Construction**

Silicon epitaxial planar

● **Dimensions (Unit : mm)**



● **Structure**



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

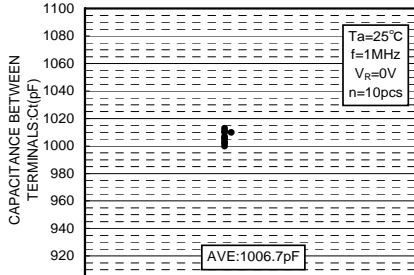
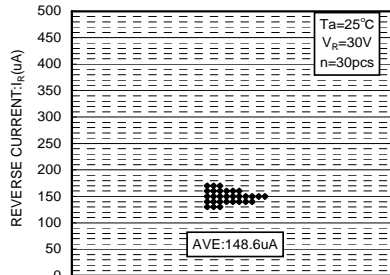
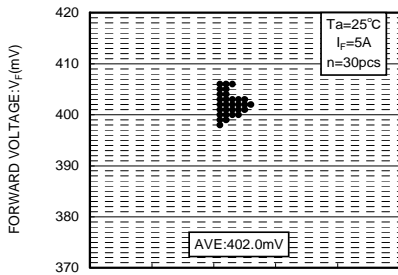
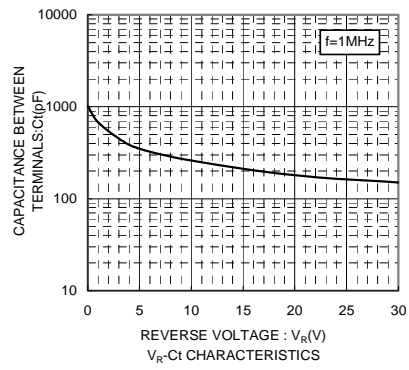
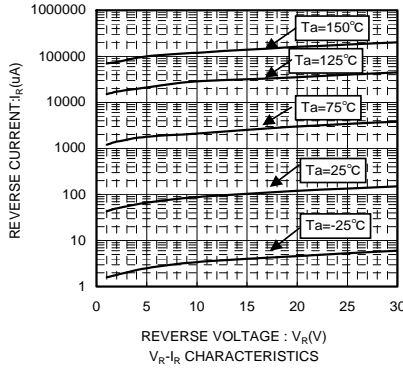
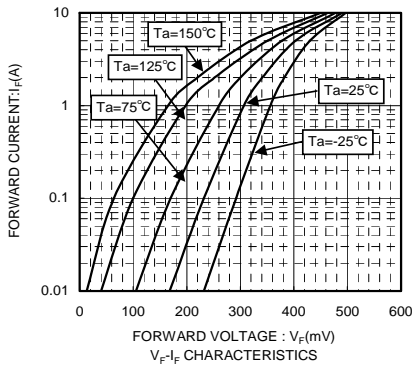
| Parameter | Symbol | Limits | Unit |
|---|-----------|-------------|------|
| Reverse voltage (repetitive peak) | V_{RM} | 30 | V |
| Reverse voltage (DC) | V_R | 30 | V |
| Average rectified forward current (*1) | I_o | 10 | A |
| Forward current surge peak (60Hz / 1cyc) (*1) | I_{FSM} | 150 | A |
| 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 |

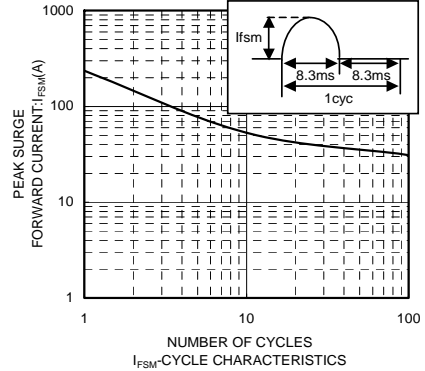
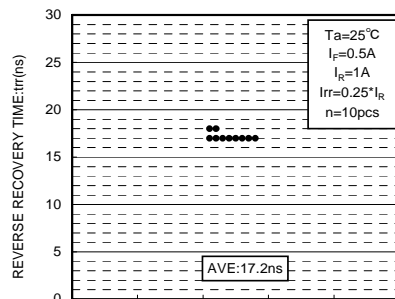
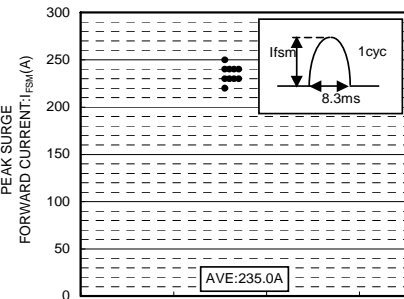
●Electrical characteristic curves



V_F DISPERSION MAP

I_R DISPERSION MAP

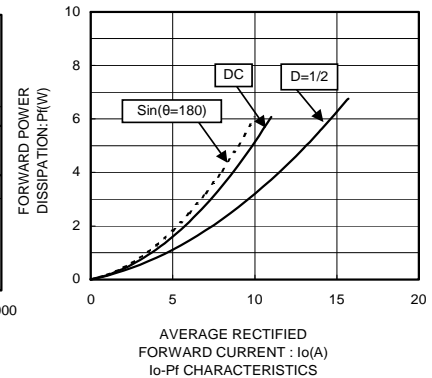
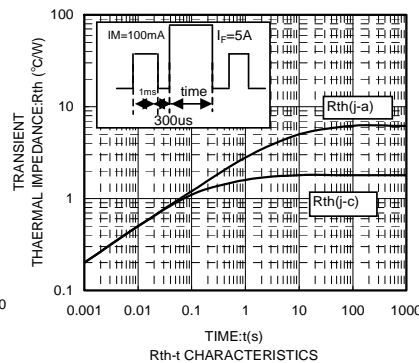
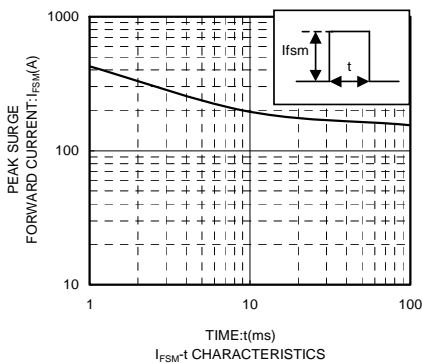
C_t DISPERSION MAP



I_{FSM} DISPERSION MAP

t_{rr} DISPERSION MAP

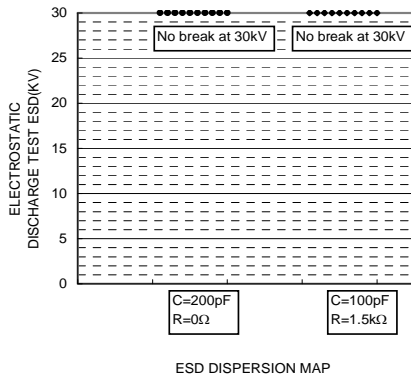
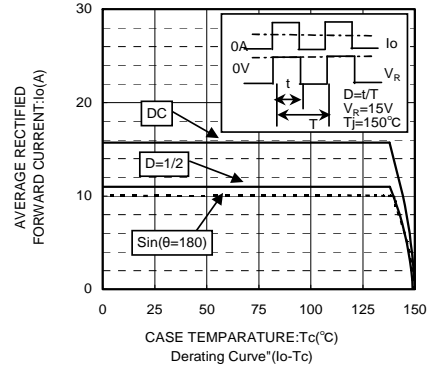
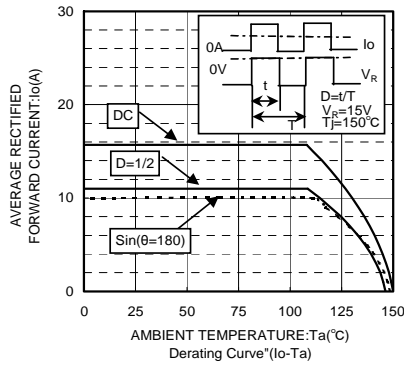
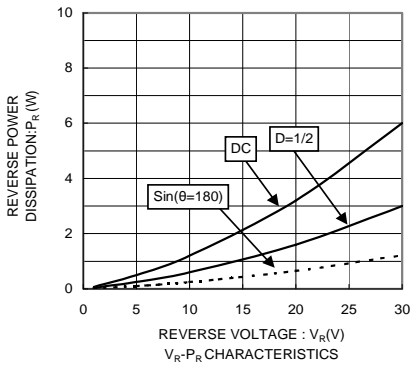
I_{FSM} -CYCLE CHARACTERISTICS



I_{FSM} - t CHARACTERISTICS

R_{th} - t CHARACTERISTICS

I_o - P CHARACTERISTICS



Notes

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