

# Schottky barrier diode

## RB095T-90

● **Applications**

Switching power supply

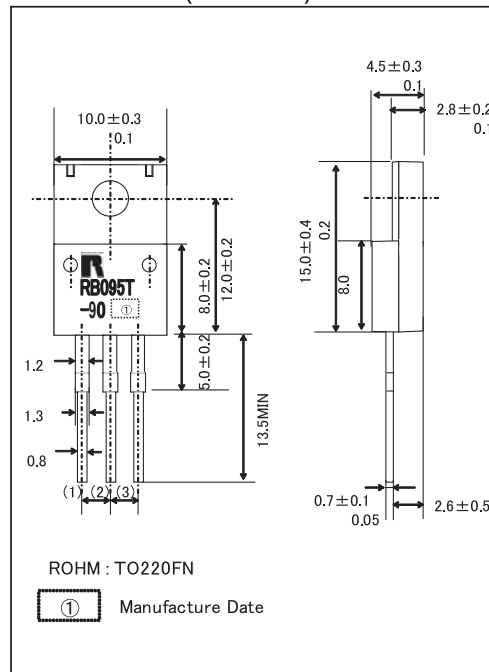
● **Features**

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

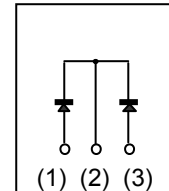
● **Construction**

Silicon epitaxial planar

● **Dimensions (Unit : mm)**



● **Structure**



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

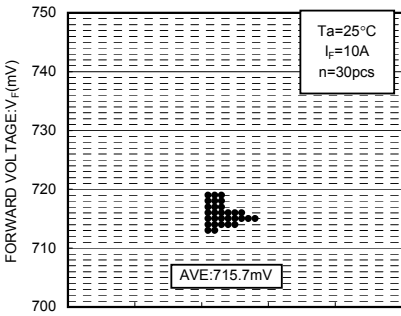
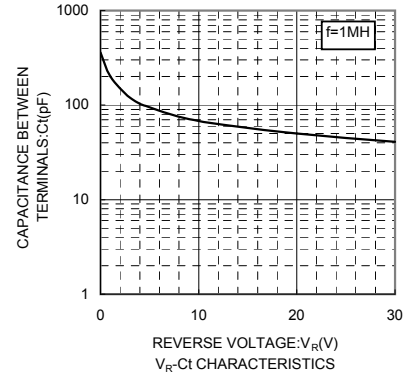
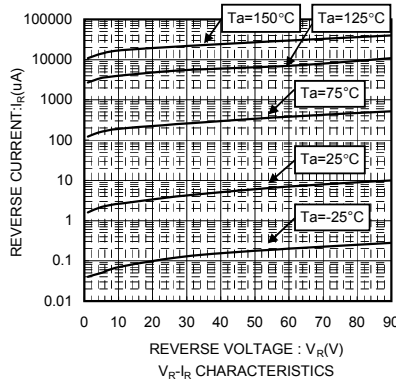
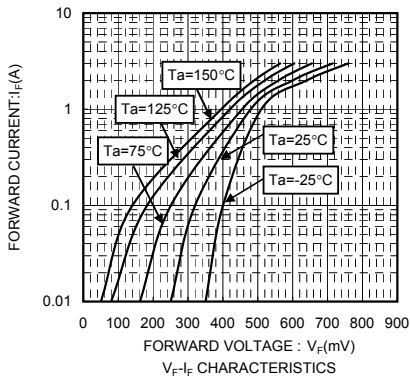
| Parameter                                     | Symbol    | Limits      | Unit |
|-----------------------------------------------|-----------|-------------|------|
| Reverse voltage (repetitive peak)             | $V_{RM}$  | 90          | V    |
| Reverse voltage (DC)                          | $V_R$     | 90          | V    |
| Average rectified forward current (*1)        | $I_o$     | 6           | A    |
| Forward current surge peak (60Hz / 1cyc) (*1) | $I_{FSM}$ | 100         | 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,  $T_c=127^\circ\text{C}$

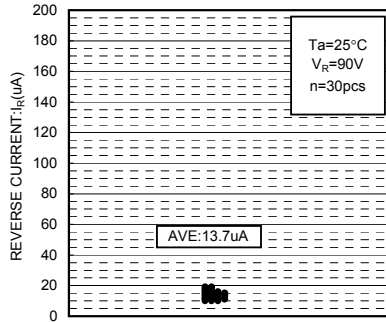
● **Electrical characteristic (Ta=25°C)**

| Parameter         | Symbol        | Min. | Typ. | Max. | Unit          | Conditions       |
|-------------------|---------------|------|------|------|---------------|------------------|
| Forward voltage   | $V_F$         | -    | -    | 0.75 | V             | $I_F=3\text{A}$  |
| Reverse current   | $I_R$         | -    | -    | 150  | $\mu\text{A}$ | $V_R=90\text{V}$ |
| Thermal impedance | $\theta_{jc}$ | -    | -    | 1.75 | °C/W          | junction to case |

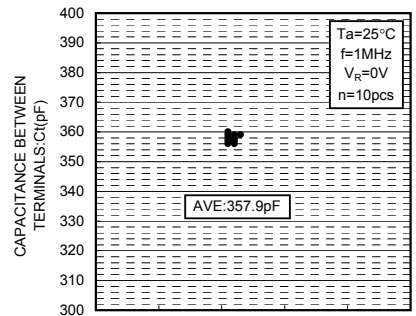
●Electrical characteristic curves



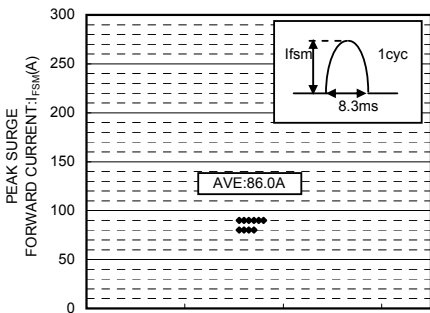
$V_F$  DISPERSION MAP



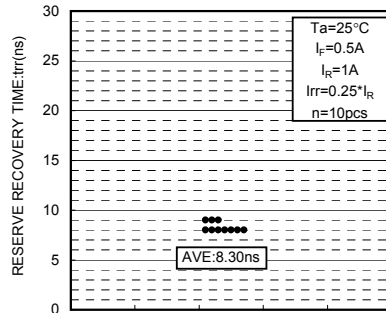
$I_R$  DISPERSION MAP



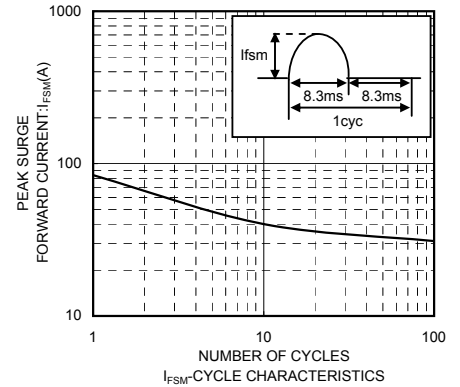
$C_t$  DISPERSION MAP



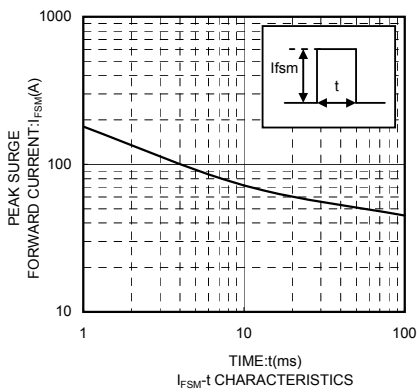
$I_{FSM}$  DISPERSION MAP



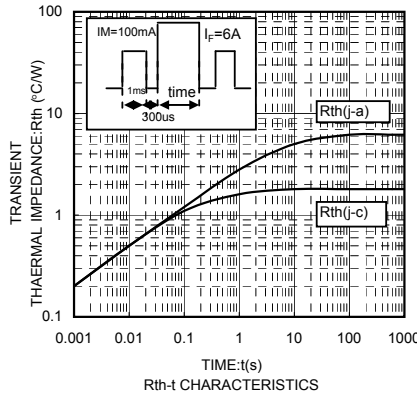
$t_{rr}$  DISPERSION MAP



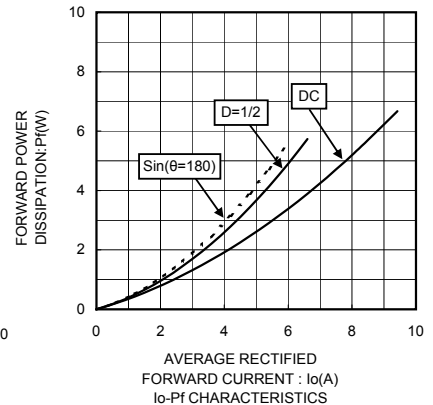
$I_{FSM}$  CYCLE CHARACTERISTICS



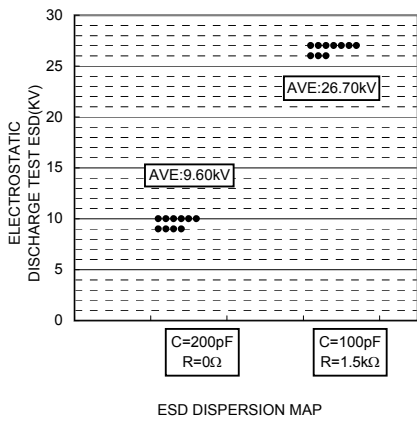
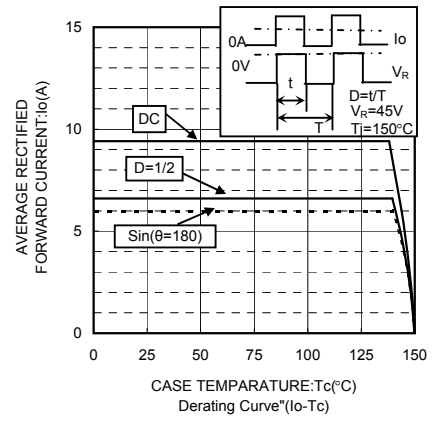
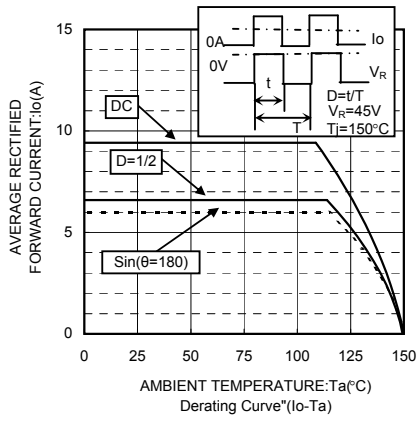
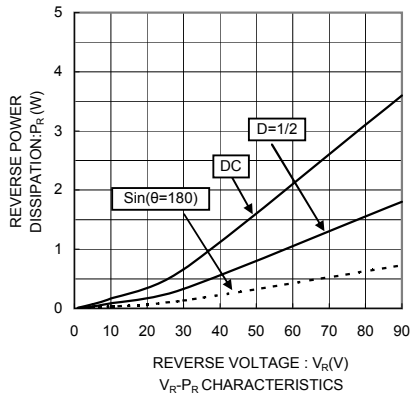
$I_{FSM}$ - $t$  CHARACTERISTICS



$R_{th}$ - $t$  CHARACTERISTICS



$I_o$ - $P_F$  CHARACTERISTICS



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