

# Fast recovery diode (Silicon epitaxial planer)

## RF501B2S

### ●Applications

General rectification

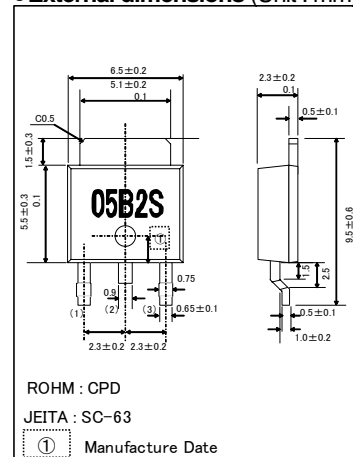
### ●Features

- 1) Power mold type (CPD)
- 2) High reliability
- 3) Low  $V_F$
- 4) Very fast recovery
- 5) Low switching loss

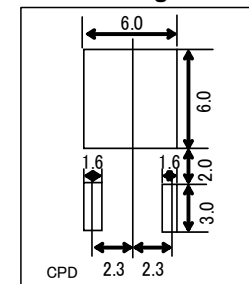
### ●Construction

Silicon epitaxial planer

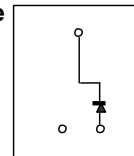
### ●External dimensions (Unit : mm)



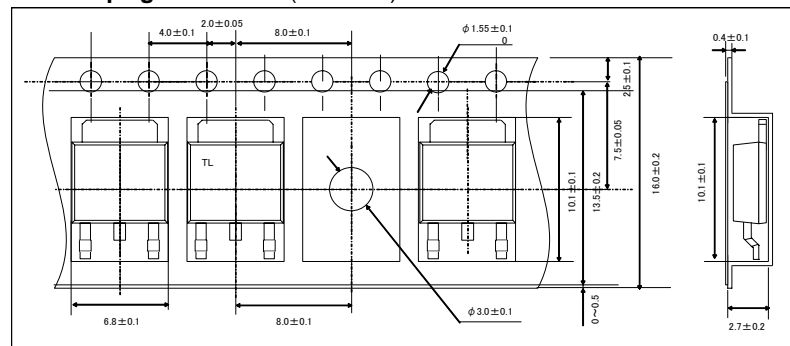
### ●Land size figure



### ●Structure



### ●Taping dimensions (Unit : mm)



### ●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) | $I_o$     | 5           | A    |
| Forward current surge peak (60Hz·1cyc) | $I_{FSM}$ | 40          | A    |
| Junction temperature                   | $T_j$     | 150         | °C   |
| Storage temperature                    | $T_{stg}$ | -55 to +150 | °C   |

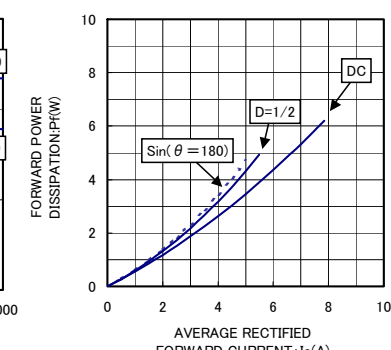
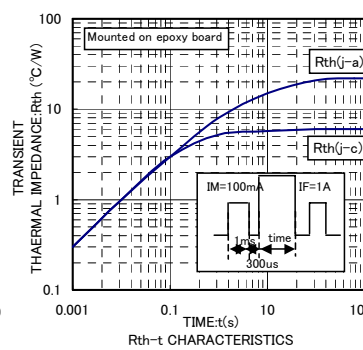
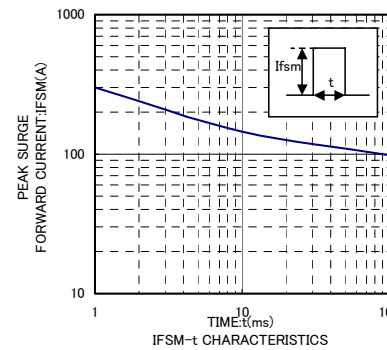
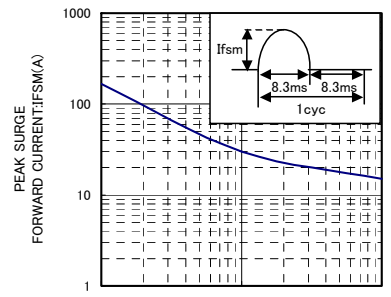
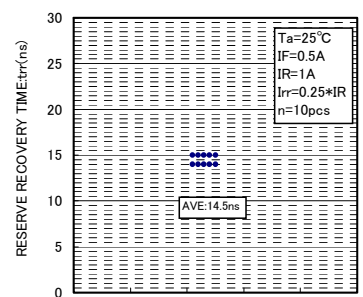
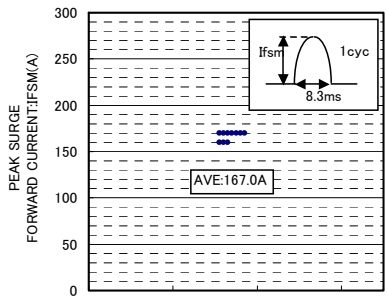
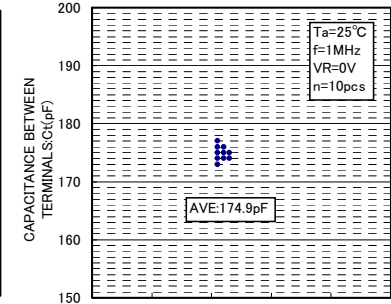
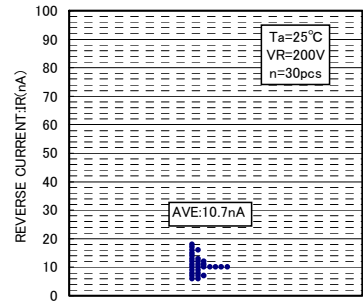
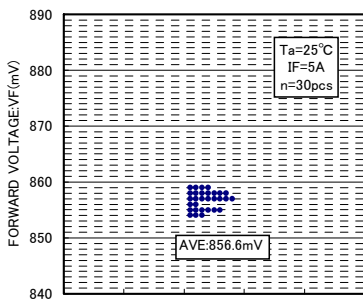
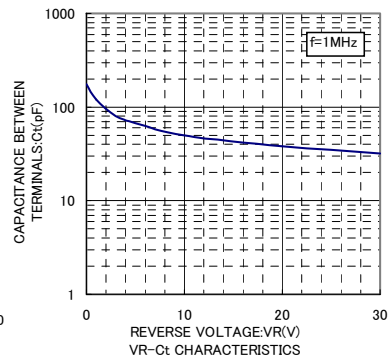
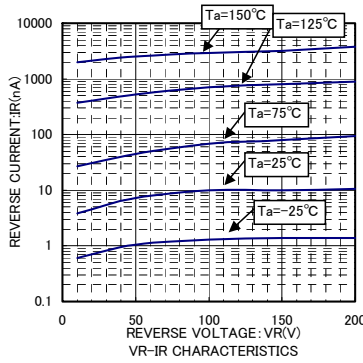
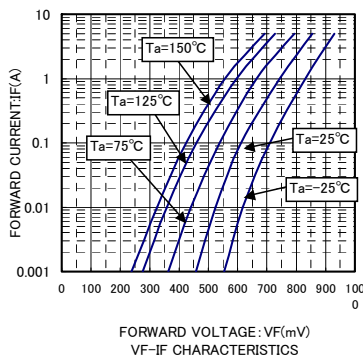
(\*1) Business frequencies, Rating of R-load, 1/2  $I_o$  per diode,  $T_C=180^\circ\text{C}$

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

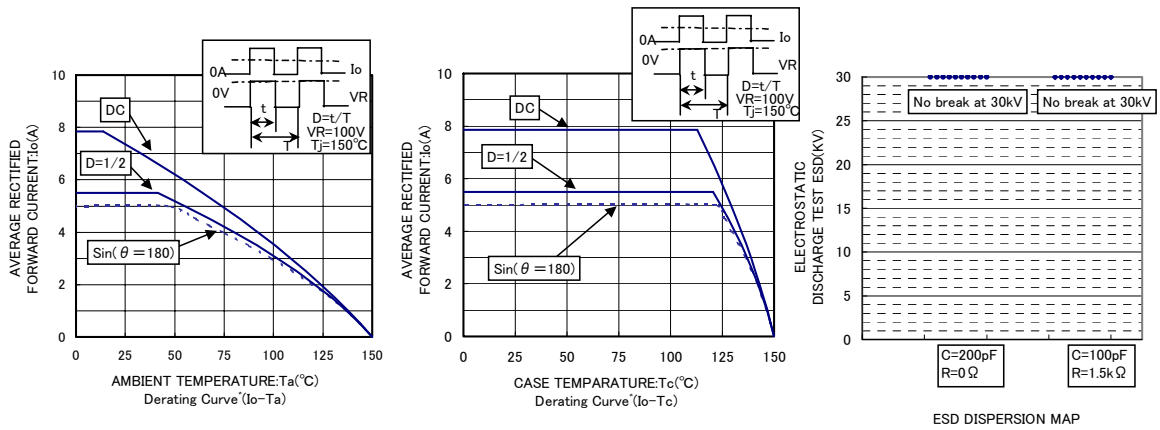
| Parameter             | Symbol   | Min. | Typ.  | Max. | Unit          | Conditions                          |
|-----------------------|----------|------|-------|------|---------------|-------------------------------------|
| Forward voltage       | $V_F$    | -    | 0.86  | 0.92 | V             | $I_F=5A$                            |
| Reverse current       | $I_R$    | -    | 0.015 | 1    | $\mu\text{A}$ | $V_R=200V$                          |
| Reverse recovery time | $t_{rr}$ | -    | 15    | 30   | ns            | $I_F=0.5A, I_R=1A, I_{rr}=0.25*I_R$ |

Diodes

●Electrical characteristic curves



Diodes



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