

# Super Fast Recovery Diode

**RF505TF6S**
**●Series**

Standard Fast Recovery

**●Applications**

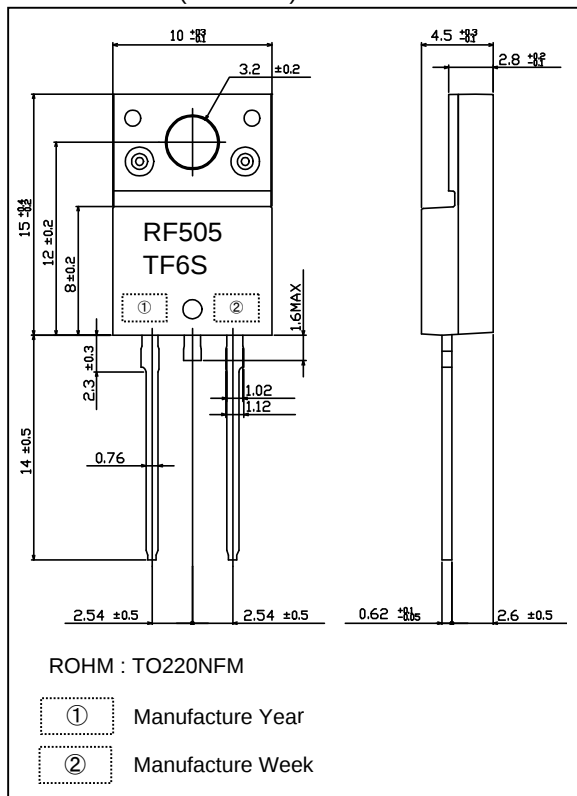
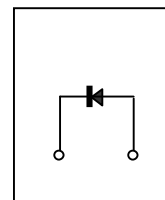
General rectification

**●Features**

- 1)Low switching loss
- 2)High current overload capacity

**●Construction**

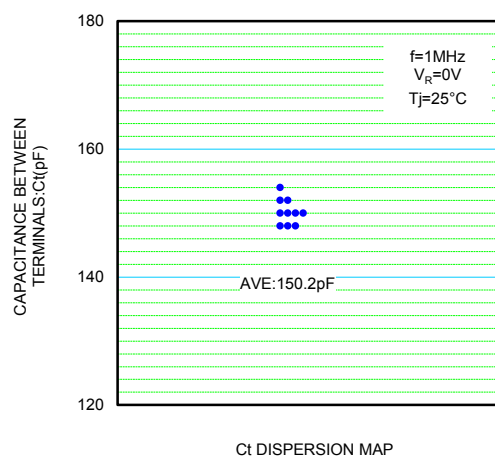
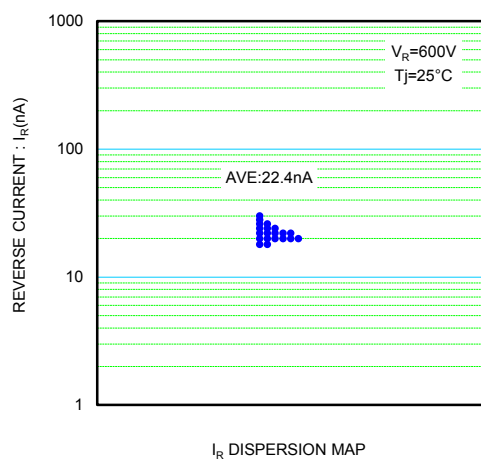
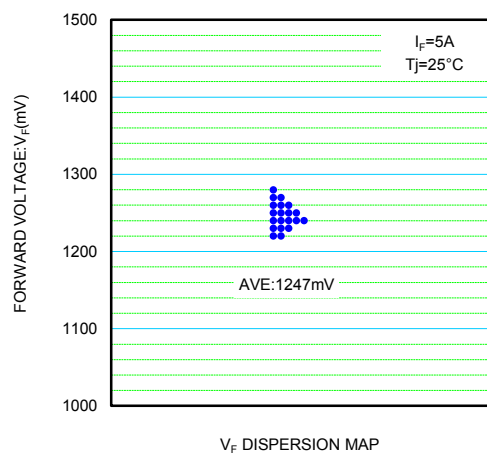
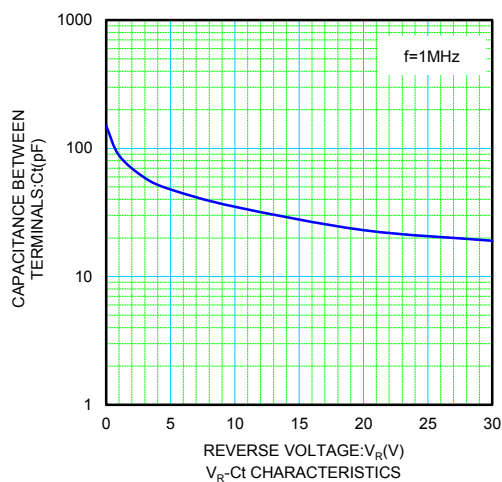
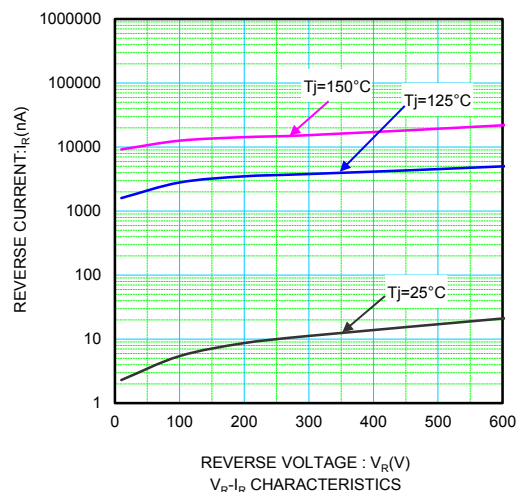
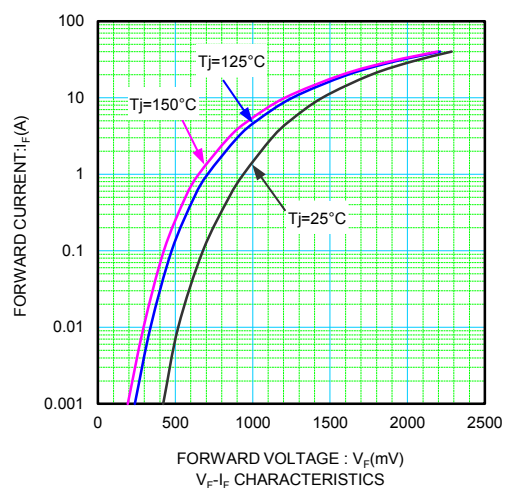
Silicon epitaxial planer

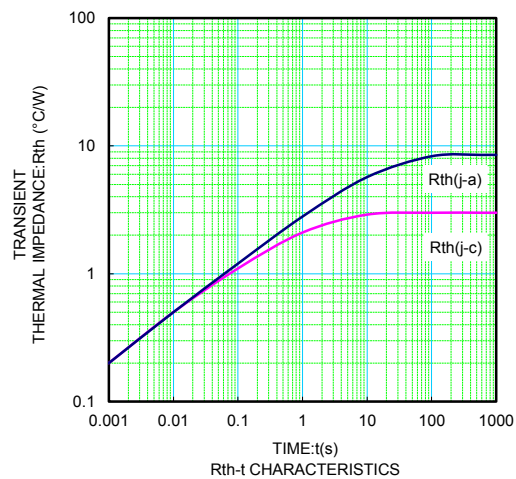
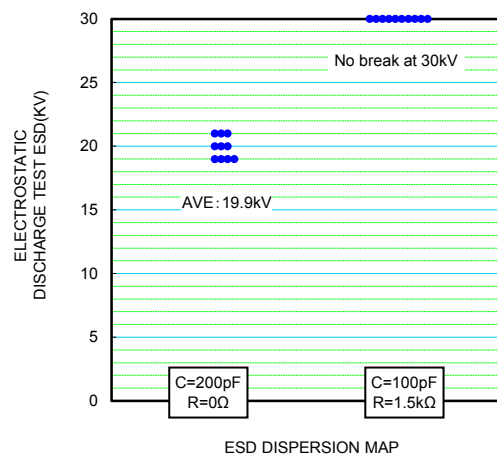
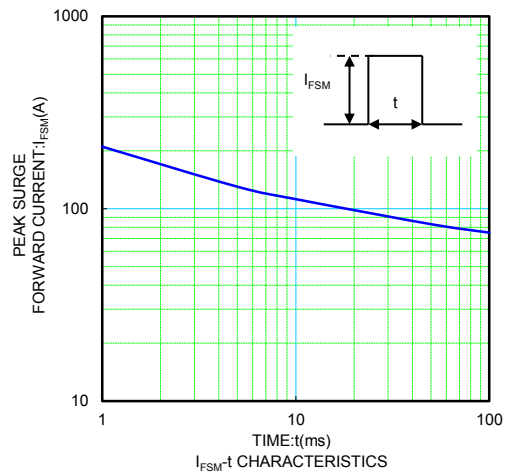
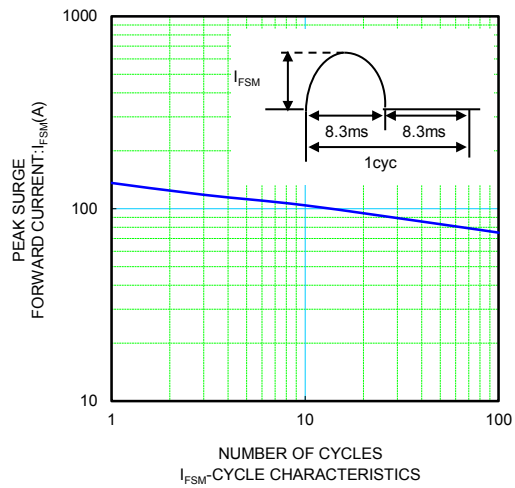
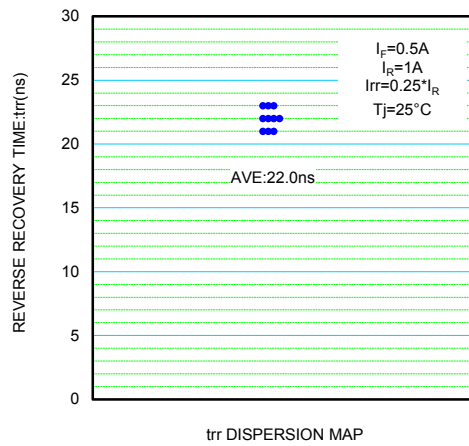
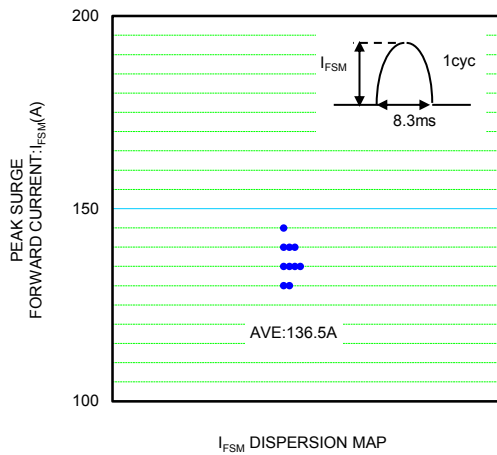
**●Dimensions (Unit : mm)**

**●Structure**

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

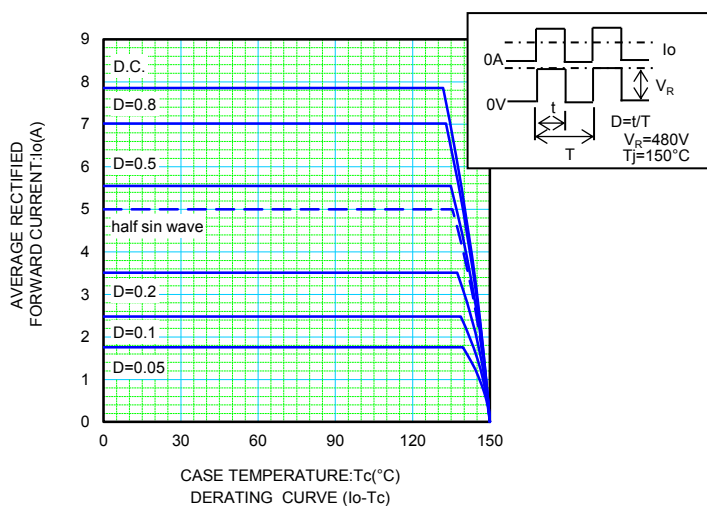
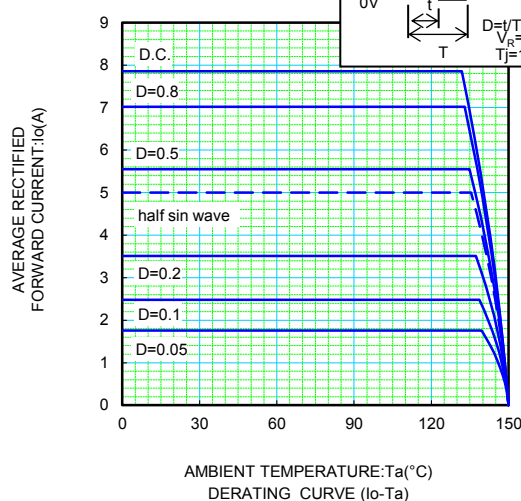
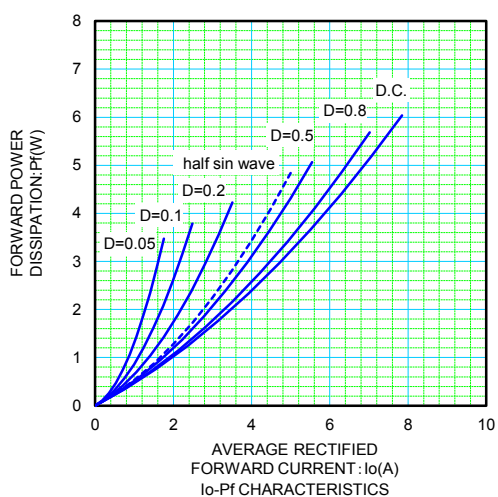
| Parameter                         | Symbol    | Conditions                                                       | Limits      | Unit |
|-----------------------------------|-----------|------------------------------------------------------------------|-------------|------|
| Repetitive peak reverse voltage   | $V_{RM}$  | Duty $\leq$ 0.5                                                  | 600         | V    |
| Reverse voltage                   | $V_R$     | Direct voltage                                                   | 600         | V    |
| Average rectified forward current | $I_O$     | 60Hz half sin wave, Resistance load, Tc=125°C                    | 5           | A    |
| Forward current surge peak        | $I_{FSM}$ | 60Hz half sin wave, Non-repetitive one cycle peak value, Tj=25°C | 80          | A    |
| Junction temperature              | Tj        |                                                                  | 150         | °C   |
| Storage temperature               | Tstg      |                                                                  | -55 to +150 | °C   |

**●Electrical characteristics (Tj=25°C)**

| Parameter             | Symbol   | Conditions                                 | Min. | Typ. | Max. | Unit    |
|-----------------------|----------|--------------------------------------------|------|------|------|---------|
| Forward voltage       | $V_F$    | $I_F=5A$                                   | —    | 1.3  | 1.7  | V       |
| Reverse current       | $I_R$    | $V_R=600V$                                 | —    | 0.03 | 10   | $\mu A$ |
| Reverse recovery time | trr      | $I_F=0.5A, I_R=1A, I_{rr}=0.25 \times I_R$ | —    | 22   | 30   | ns      |
| Thermal resistance    | Rth(j-c) | junction to case                           | —    | —    | 3    | °C/W    |







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