

●Series

Standard Fast Recovery

●Application

General rectification

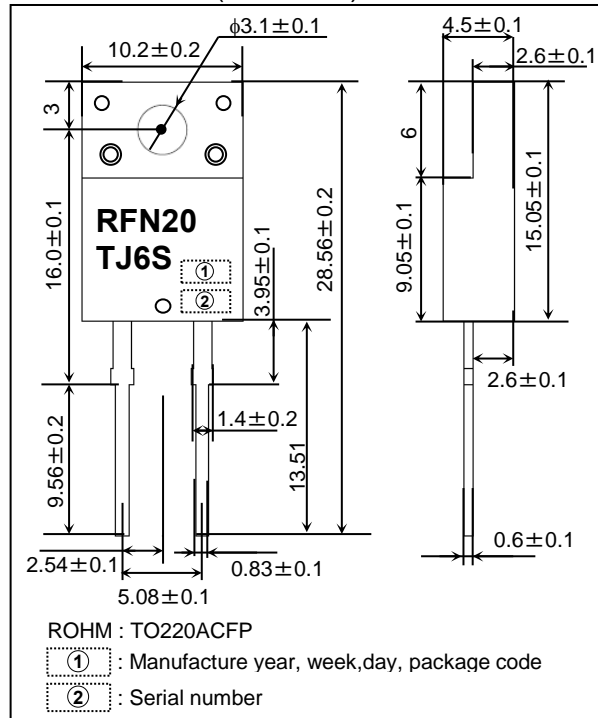
●Features

- 1) Low forward voltage
- 2) Low switching loss
- 3) High current overload capacity

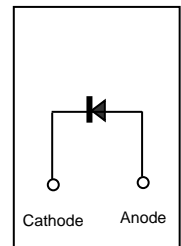
●Construction

Silicon epitaxial planar type

●Dimensions (Unit : mm)



●Structure



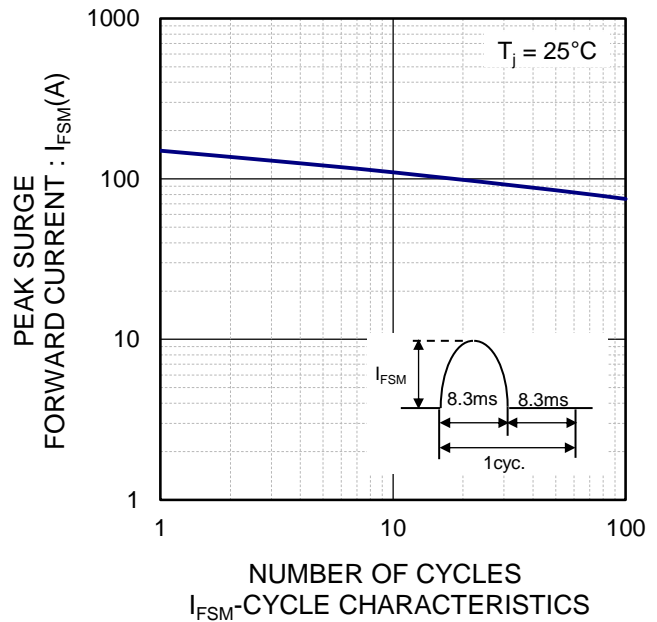
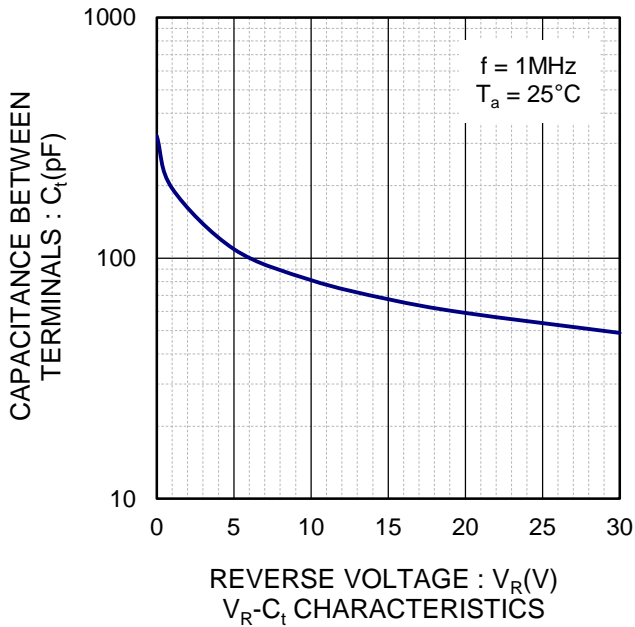
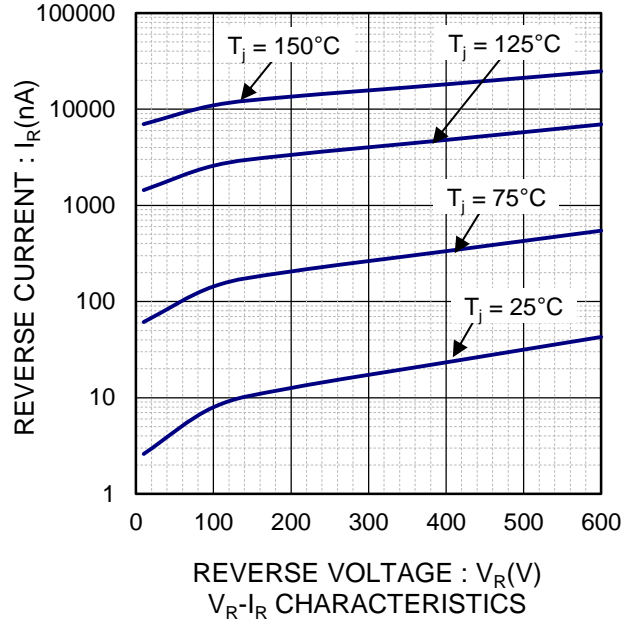
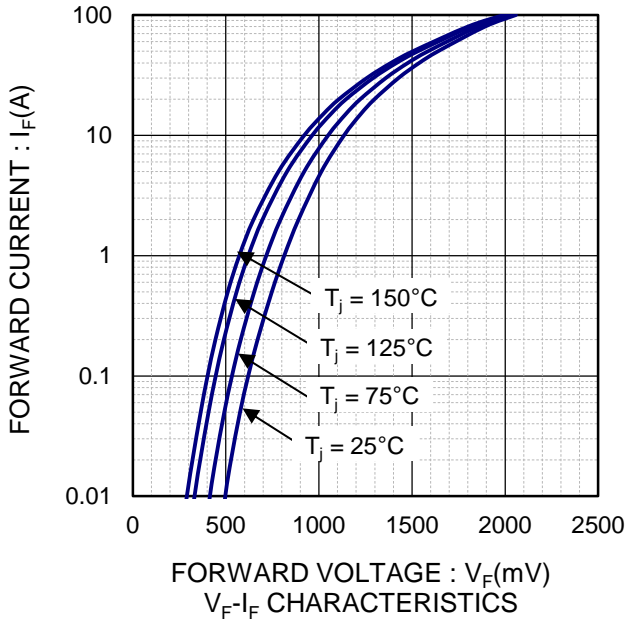
●Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Limits | Unit |
|--------------------------------------|-----------|-------------------------------------------------------------------------|-------------|------------------|
| Repetitive peak reverse voltage | V_{RM} | Duty ≤ 0.5 | 600 | V |
| Reverse voltage | V_R | Direct reverse voltage | 600 | V |
| Average current | I_o | 60Hz half sin wave , resistive load $T_c=50^\circ\text{C}$ | 20 | A |
| Non-repetitive forward surge current | I_{FSM} | 60Hz half sin wave, one cycle, non-repetitive at $T_j=25^\circ\text{C}$ | 150 | A |
| Operating junction temperature | T_j | - | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |

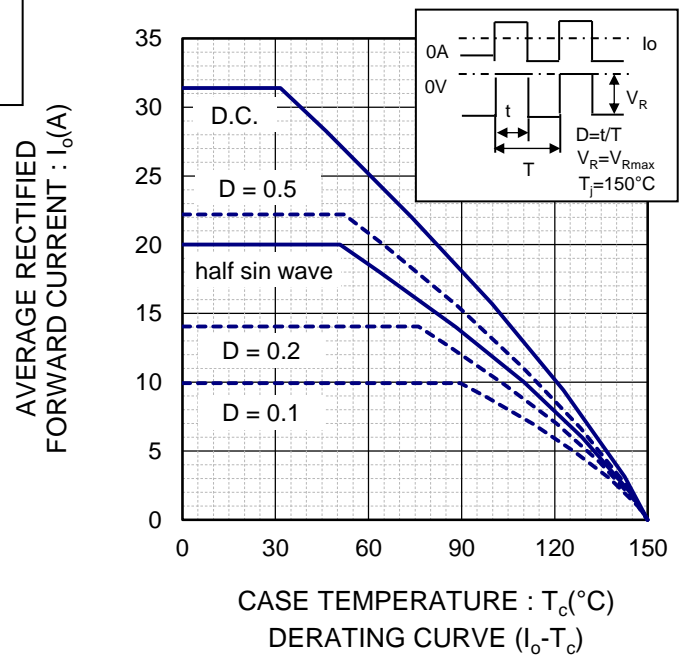
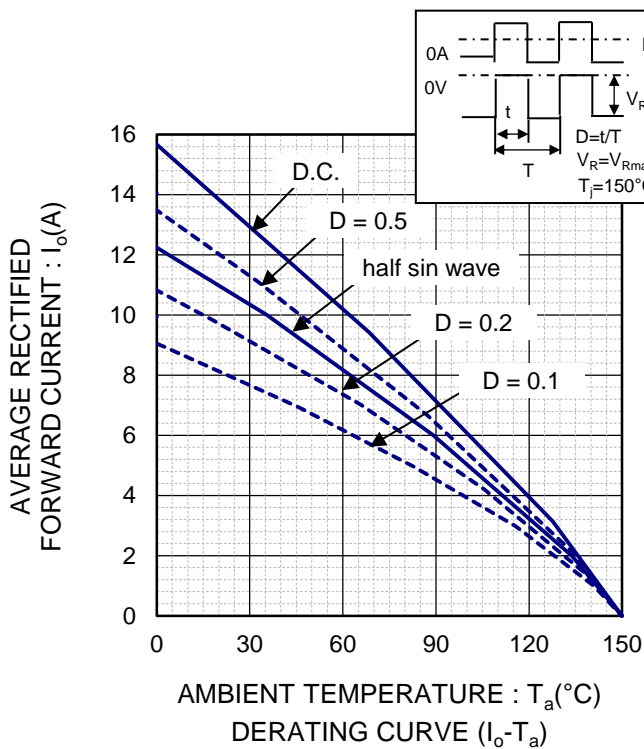
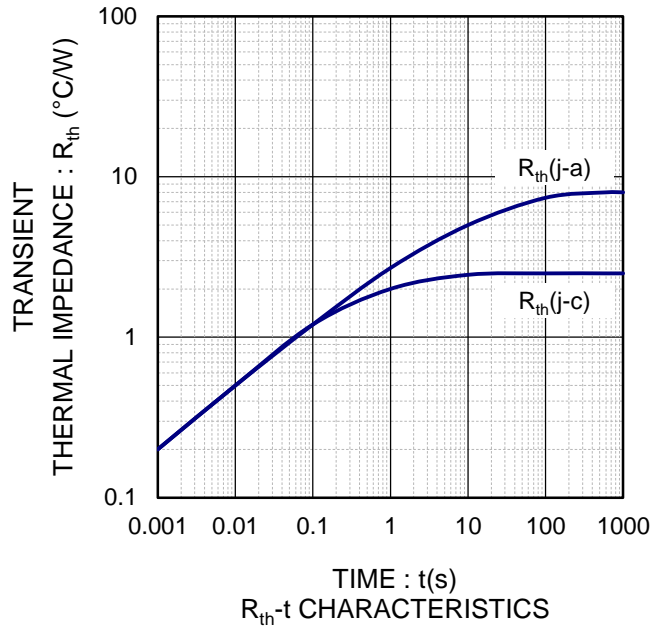
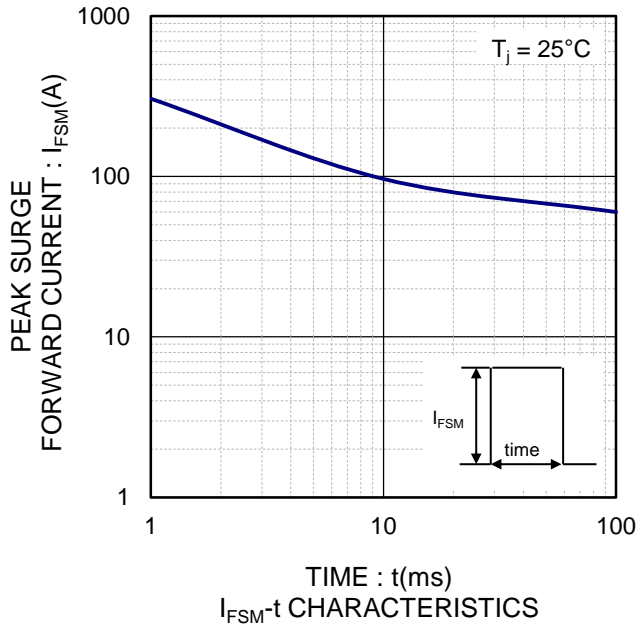
●Electrical Characteristics ($T_j = 25^\circ\text{C}$)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit | |
|--------------------------|---------------|---------------------------------------------------------------------|-------------------------|------|------|---------------------------|---------------|
| | | | | | | | |
| Forward voltage | V_F | $I_F=20\text{A}$ | $T_j=25^\circ\text{C}$ | 1.0 | 1.25 | 1.55 | V |
| | | | $T_j=125^\circ\text{C}$ | - | 1.1 | - | V |
| Reverse current | I_R | $V_R=600\text{V}$ | $T_j=25^\circ\text{C}$ | - | 0.1 | 10 | μA |
| | | | $T_j=125^\circ\text{C}$ | - | 7 | 200 | μA |
| Reverse recovery time | trr | $I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25 \times I_R$ | - | 40 | 60 | ns | |
| | | $I_F=20\text{A}, V_R=400\text{V}, dI_F/dt=-100\text{A}/\mu\text{s}$ | - | 85 | 140 | ns | |
| Forward recovery time | tfr | $I_F=20\text{A}, dI_F/dt=100\text{A}/\mu\text{s}$ | - | 300 | - | ns | |
| Forward recovery voltage | V_{FP} | $V_{FR}=1.1 \times V_{Fmax}$ | - | 3.2 | - | V | |
| Thermal resistance | $R_{th(j-a)}$ | Junction to ambient | - | - | 7.5 | $^\circ\text{C}/\text{W}$ | |
| | $R_{th(j-c)}$ | Junction to case | - | - | 2.5 | $^\circ\text{C}/\text{W}$ | |

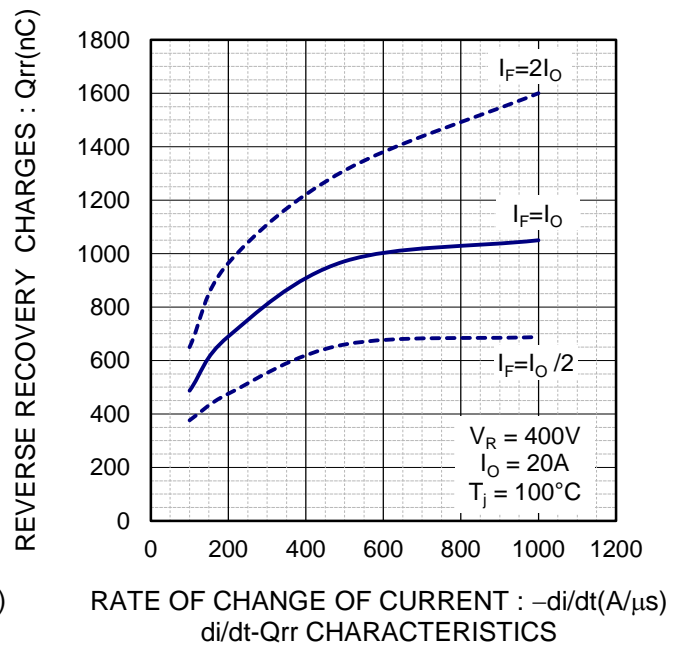
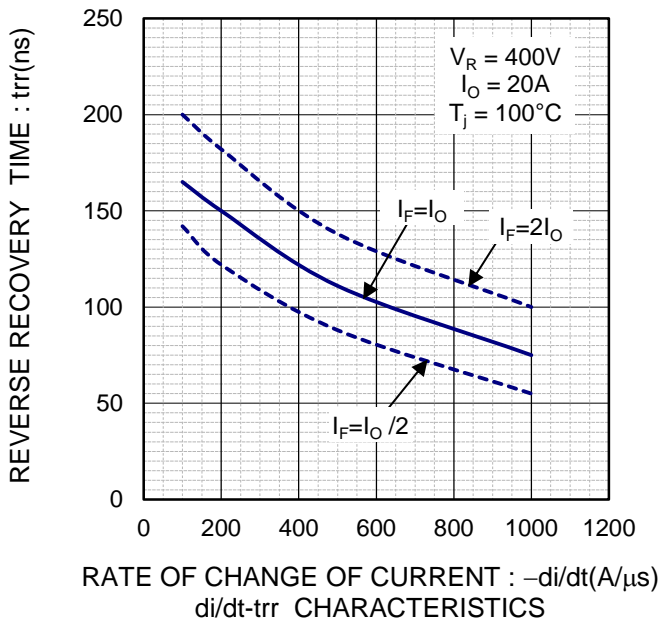
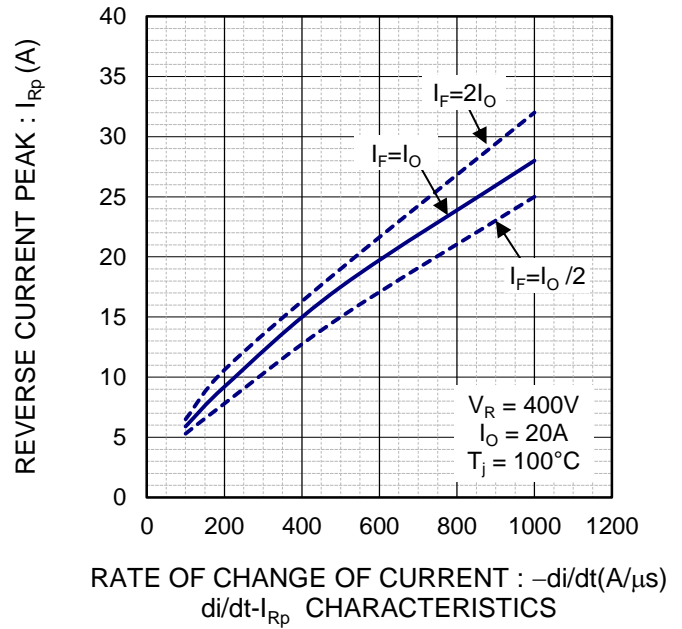
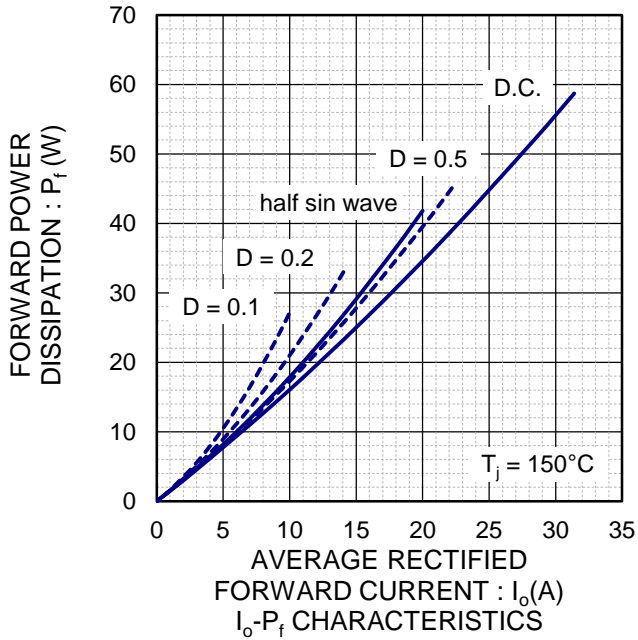
●Electrical Characteristic Curves



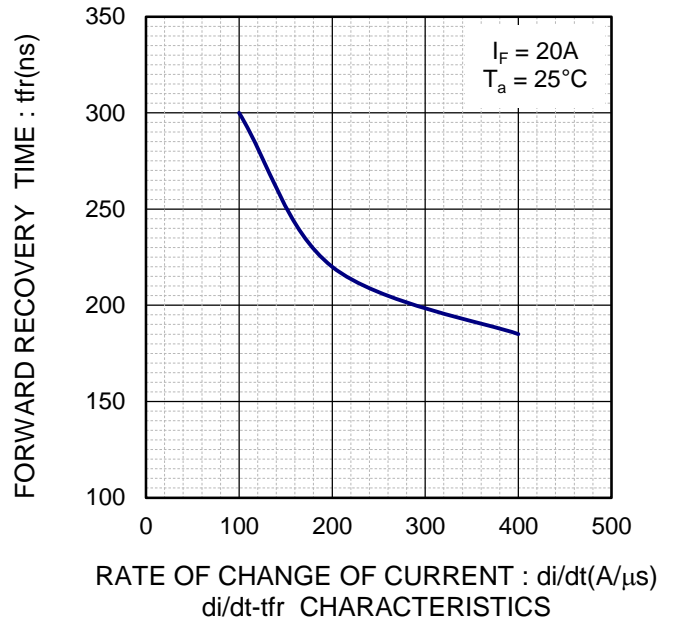
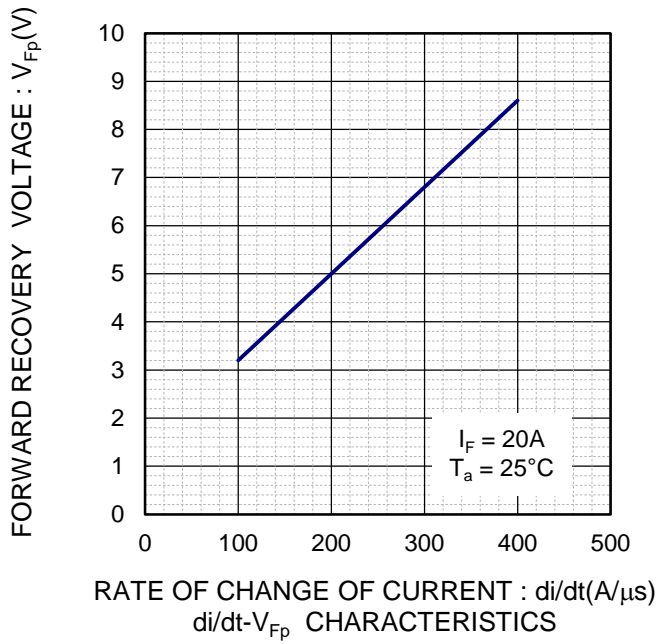
●Electrical characteristic curves



●Electrical characteristic curves



●Electrical characteristic curves



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