

CDBJFSC10650-G

Reverse Voltage: 650 V

Forward Current: 10 A

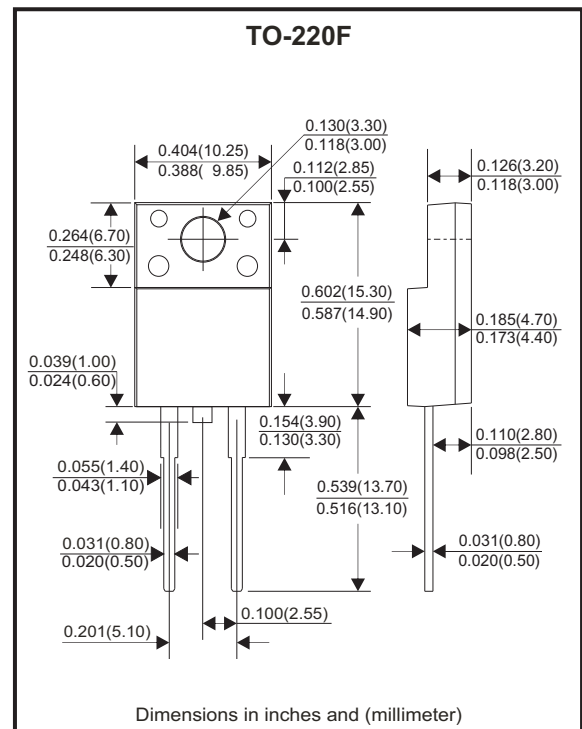
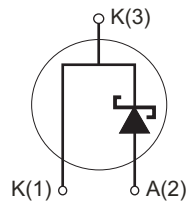
RoHS Device



Features

- Rated to 650V at 10 Amps
- Short recovery time.
- High speed switching possible.
- High frequency operation.
- High temperature operation.
- Temperature independent switching behaviour.
- Positive temperature coefficient on VF.

Circuit diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Value | Unit |
|---|---|------------------|------------|------|
| Repetitive peak reverse voltage | | V _{RRM} | 650 | V |
| Surge peak reverse voltage | | V _{RSM} | 650 | V |
| DC blocking voltage | | V _{DC} | 650 | V |
| Continuous forward current | T _C = 25°C | I _F | 17.8 | A |
| | T _C = 100°C | | 12 | |
| | T _C = 120°C | | 10 | |
| Repetitive peak forward surge current | T _C = 25°C, t _p = 10ms Half sine wave, D = 0.3 | I _{FRM} | 50 | A |
| Non-repetitive peak forward surge current | T _C = 25°C, t _p = 10ms Half sine wave | I _{FSM} | 100 | A |
| Power dissipation | T _C = 25°C | P _{TOT} | 39.4 | W |
| | T _C = 110°C | | 17.1 | |
| Typical thermal resistance | Junction to case | R _{θJC} | 3.81 | °C/W |
| Operating junction temperature range | | T _J | -55 ~ +175 | °C |
| Storage temperature range | | T _{STG} | -55 ~ +175 | °C |

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Typ | Max | Unit |
|-------------------------|---|--------|------|-----|------|
| Forward voltage | IF = 10 A , TJ = 25°C | VF | 1.48 | 1.7 | V |
| | IF = 10 A , TJ = 175°C | | 1.7 | 2.5 | |
| Reverse current | VR = 650V , TJ = 25°C | IR | 20 | 100 | μA |
| | VR = 650V , TJ = 175°C | | 30 | 200 | |
| Total capacitive charge | VR = 400V , TJ = 150°C QC = ∫ ₀ ^{VR} C(V) dv | QC | 36 | - | nC |
| Total capacitance | VR = 0V , TJ = 25°C , f = 1 MHz | C | 690 | 730 | pF |
| | VR = 200V , TJ = 25°C , f = 1 MHz | | 72 | 75 | |
| | VR = 400V , TJ = 25°C , f = 1 MHz | | 71 | 74 | |

Typical Characteristics (CDBJFSC10650-G)

Fig.1 - Forward Characteristics

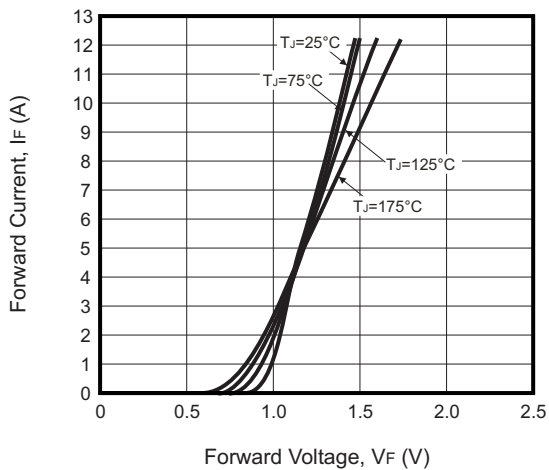


Fig.2 - Reverse Characteristics

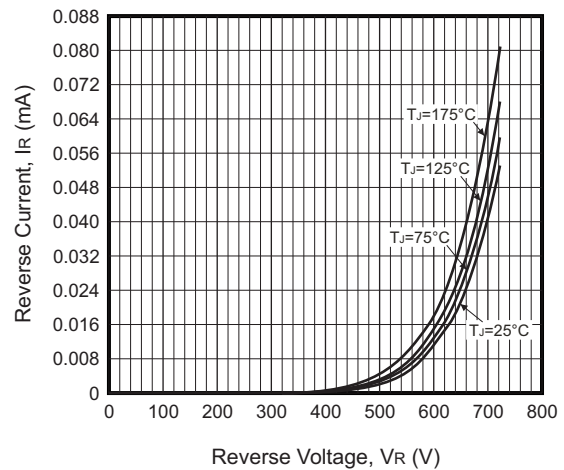


Fig.3 - Current Derating

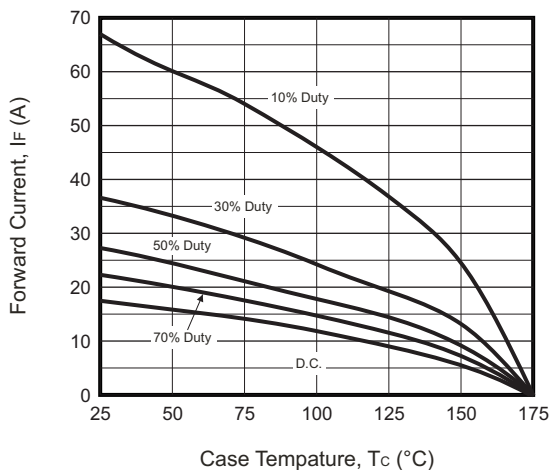
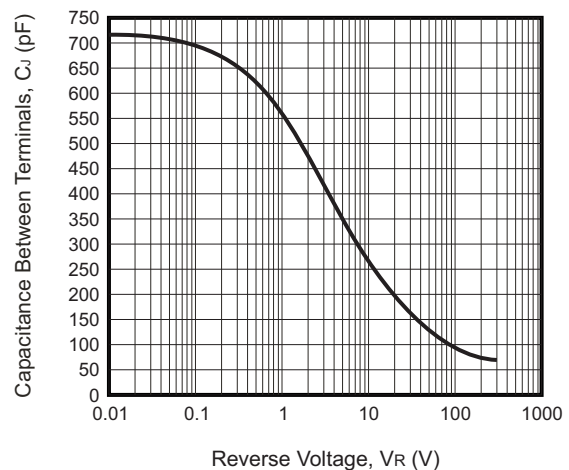


Fig.4 - Capacitance vs. Reverse Voltage



Company reserves the right to improve product design , functions and reliability without notice.

REV: