

CDBJFSC10650-G

Reverse Voltage: 650 V

Forward Current: 10 A

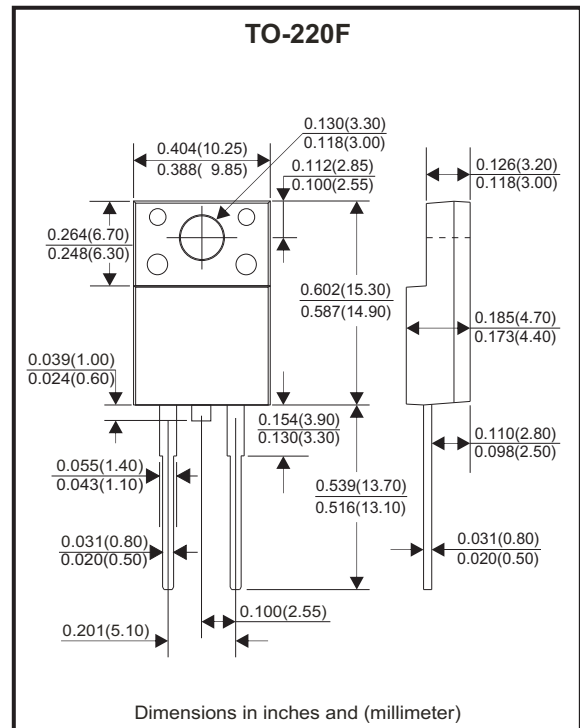
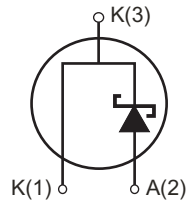
RoHS Device



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 T_A=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 |
| Typical continuous forward current | T _C = 120°C | | 10 | A |
| 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 $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Typ | Max | Unit |
|-------------------------|--|--------|------|-----|---------------|
| Forward voltage | $I_F = 10\text{ A}$, $T_J = 25^\circ\text{C}$ | V_F | 1.48 | 1.7 | V |
| | $I_F = 10\text{ A}$, $T_J = 175^\circ\text{C}$ | | 1.7 | | |
| Reverse current | $V_R = 650\text{ V}$, $T_J = 25^\circ\text{C}$ | I_R | 20 | 100 | μA |
| | $V_R = 650\text{ V}$, $T_J = 175^\circ\text{C}$ | | 30 | | |
| Total capacitive charge | $V_R = 400\text{ V}$, $T_J = 150^\circ\text{C}$ $Q_C = \int_0^{V_R} C(V) dv$ | Q_C | 36 | | nC |
| Total capacitance | $V_R = 0\text{ V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{ MHz}$ | C | 710 | | pF |
| | $V_R = 200\text{ V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{ MHz}$ | | 72 | | |

Typical Characteristics (CDBJFSC10650-G)

Fig.1 - Forward Characteristics

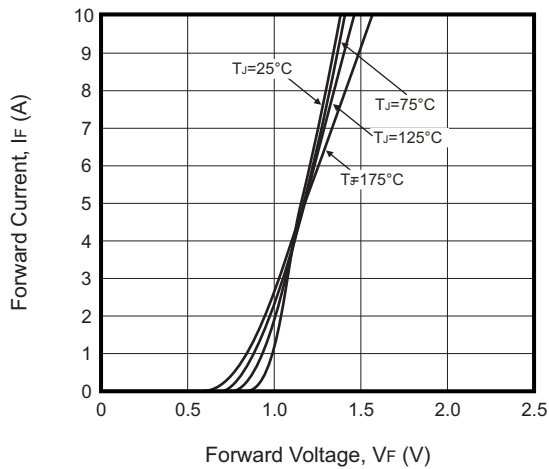


Fig.2 - Reverse Characteristics

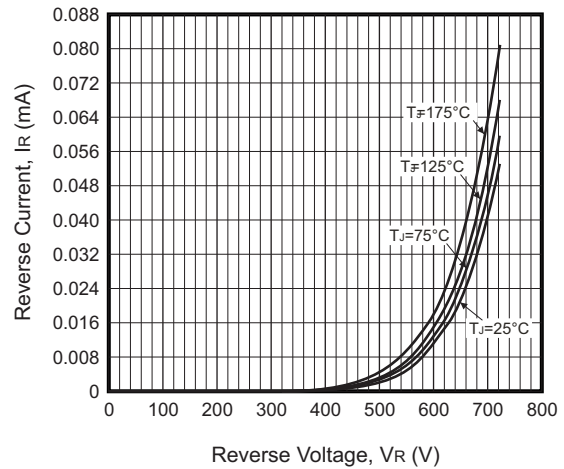


Fig.3 - Current Derating

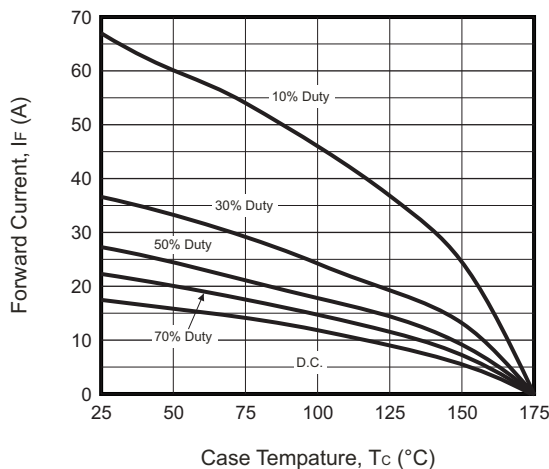
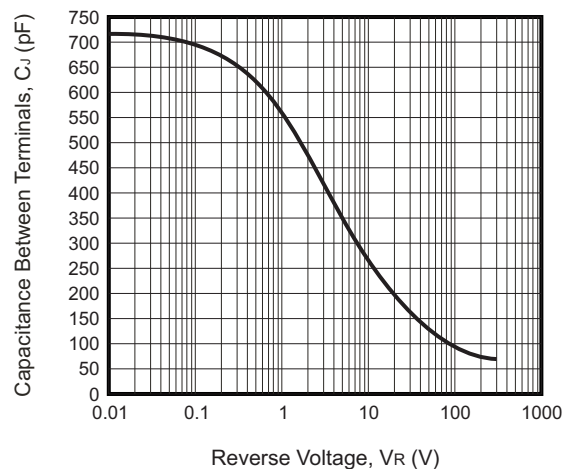
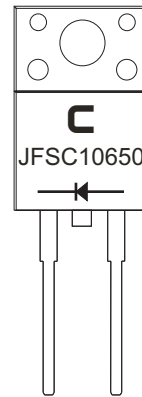


Fig.4 - Capacitance vs. Reverse Voltage



Marking Code

| Part Number | Marking Code |
|---------------|--------------|
| CDBJFC10650-G | JFSC10650 |



Standard Packaging

| Case Type | TUBE PACK | |
|-----------|-----------------|----------------|
| | TUBE (pcs) | BOX (pcs) |
| TO-220F | 50 | 1,000 |