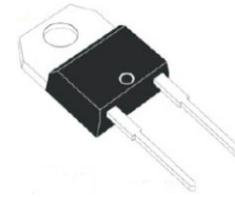


CDBJSC101700-G

Reverse Voltage: 1700 V

Forward Current: 10 A

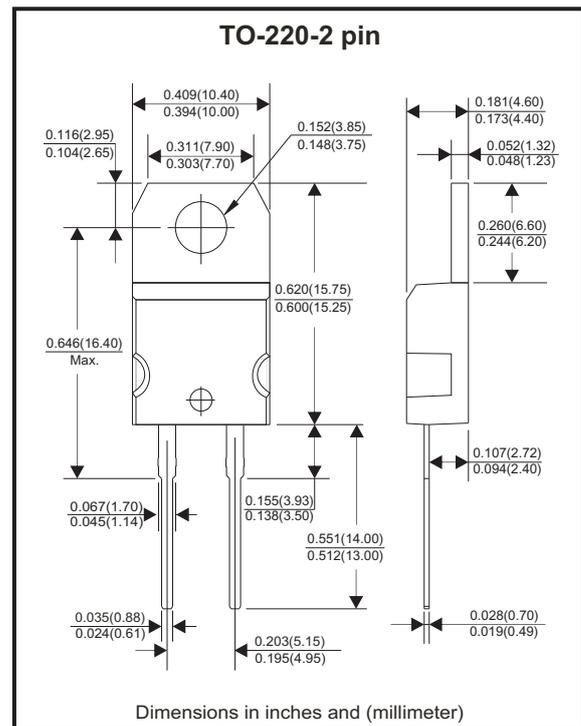
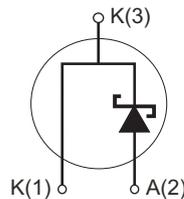
RoHS Device



Features

- Rated to 1700V 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} | 1700 | V |
| Surge peak reverse voltage | | V_{RSM} | 1700 | V |
| DC blocking voltage | | V_{DC} | 1700 | V |
| Continuous forward current | $T_C = 25^\circ C$ | I_F | 35 | A |
| | $T_C = 135^\circ C$ | | 17 | |
| | $T_C = 155^\circ C$ | | 10 | |
| Repetitive peak forward surge current | $T_C = 25^\circ C$, $t_p = 10ms$ Half sine wave, $D = 0.3$ | I_{FRM} | 50 | A |
| Non-repetitive peak forward surge current | $T_C = 25^\circ C$, $t_p = 10ms$ Half sine wave | I_{FSM} | 90 | A |
| Power dissipation | $T_C = 25^\circ C$ | P_{TOT} | 192 | W |
| | $T_C = 110^\circ C$ | | 82 | |
| Typical thermal resistance | Junction to case | $R_{\theta JC}$ | 0.78 | $^\circ C/W$ |
| Operating junction temperature range | | T_J | -55 ~ +175 | $^\circ C$ |
| Storage temperature range | | T_{STG} | -55 ~ +175 | $^\circ C$ |

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

| Parameter | Conditions | Symbol | Typ | Max | Unit |
|-------------------------|--|--------|------|------|------|
| Forward voltage | IF = 10 A , TJ = 25°C | VF | 1.4 | 1.7 | V |
| | IF = 10 A , TJ = 175°C | | 2.1 | 3 | |
| Reverse current | VR = 1700V , TJ = 25°C | IR | 30 | 100 | μA |
| | VR = 1700V , TJ = 175°C | | 50 | 200 | |
| Total capacitive charge | VR = 1200V , TJ = 150°C Qc = ∫ ₀ ^{VR} C(V) dv | Qc | 122 | - | nC |
| Total capacitance | VR = 0V , TJ = 25°C , f = 1 MHz | C | 1400 | 1600 | pF |
| | VR = 400V , TJ = 25°C , f = 1 MHz | | 90 | 120 | |
| | VR = 800V , TJ = 25°C , f = 1 MHz | | 66 | 80 | |

Typical Characteristics (CDBJSC101700-G)

Fig.1 - Forward Characteristics

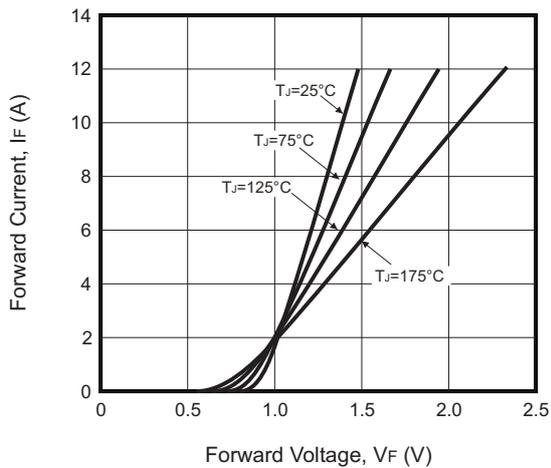


Fig.2 - Reverse Characteristics

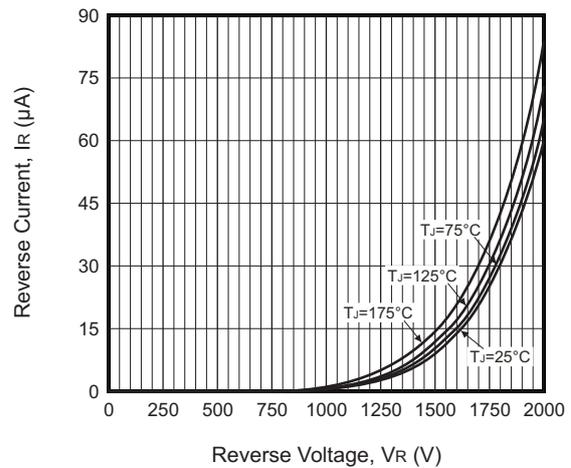


Fig.3 - Current Derating

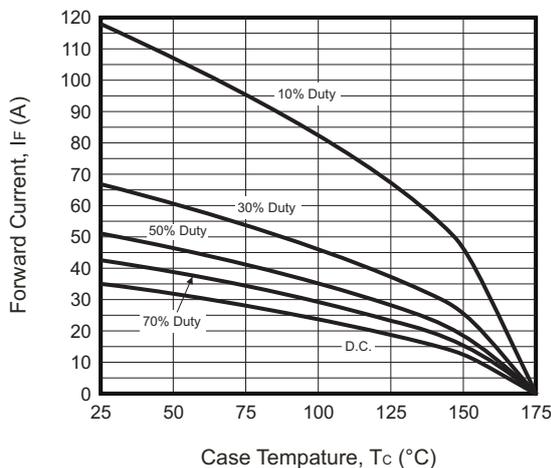
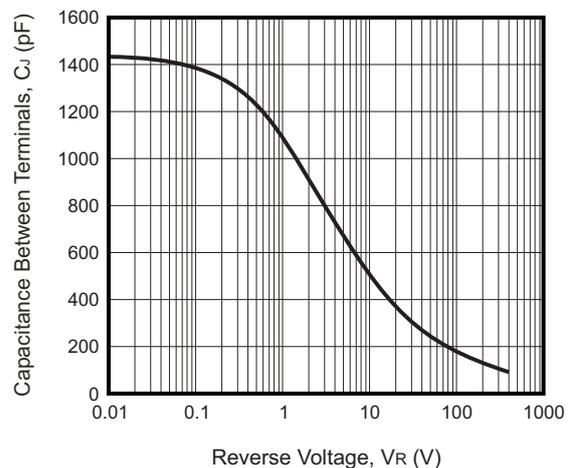


Fig.4 - Capacitance vs. Reverse Voltage



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

REV: