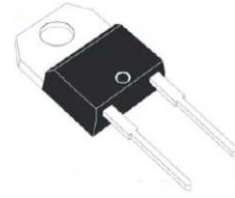


CDBJSC51200-G

Reverse Voltage: 1200 V

Forward Current: 5 A

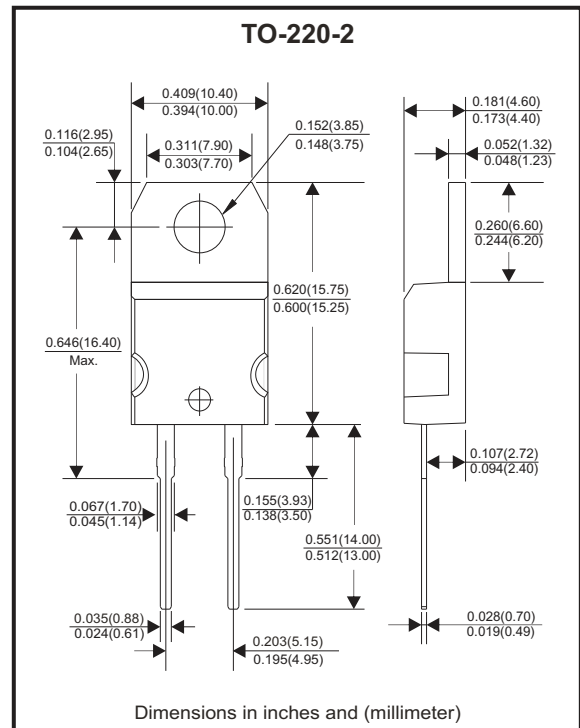
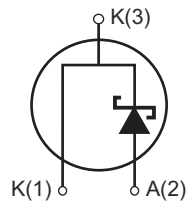
RoHS Device



Features

- Rated to 1200V at 5 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 $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Value | Unit |
|---|---|-----------------|------------|---------------------------|
| Repetitive peak reverse voltage | | V_{RRM} | 1200 | V |
| Surge peak reverse voltage | | V_{RSM} | 1200 | V |
| DC blocking voltage | | V_{DC} | 1200 | V |
| Typical continuous forward current | $T_c = 150^\circ\text{C}$ | I_F | 5 | A |
| Repetitive peak forward surge current | $T_c = 25^\circ\text{C}$, $t_p = 10\text{ms}$ Half sine wave, $D = 0.3$ | I_{FRM} | 25 | A |
| Non-repetitive peak forward surge current | $T_c = 25^\circ\text{C}$, $t_p = 10\text{ms}$ Half sine wave | I_{FSM} | 35 | A |
| Power dissipation | $T_c = 25^\circ\text{C}$ | P_{TOT} | 109.5 | W |
| | $T_c = 110^\circ\text{C}$ | | 47 | |
| Typical thermal resistance | Junction to case | $R_{\theta JC}$ | 1.37 | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range | | T_J | -55 ~ +175 | $^\circ\text{C}$ |
| Storage temperature range | | T_{STG} | -55 ~ +175 | $^\circ\text{C}$ |

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Conditions | Symbol | Typ | Max | Unit |
|-------------------------|---|--------|------|-----|---------------|
| Forward voltage | $I_F = 5\text{ A}, T_J = 25^\circ\text{C}$ | V_F | 1.45 | 1.7 | V |
| | $I_F = 5\text{ A}, T_J = 175^\circ\text{C}$ | | 2.05 | | |
| Reverse current | $V_R = 1200\text{ V}, T_J = 25^\circ\text{C}$ | I_R | 20 | 100 | μA |
| | $V_R = 1200\text{ V}, T_J = 175^\circ\text{C}$ | | 50 | | |
| Total capacitive charge | $V_R = 800\text{ V}, T_J = 150^\circ\text{C}$ $Q_C = \int_0^{V_R} C(V) dv$ | Q_C | 36 | | nC |
| Total capacitance | $V_R = 0\text{ V}, T_J = 25^\circ\text{C}, f = 1\text{ MHz}$ | C | 475 | | pF |
| | $V_R = 400\text{ V}, T_J = 25^\circ\text{C}, f = 1\text{ MHz}$ | | 34 | | |

Typical Characteristics (CDBJSC51200-G)

Fig.1 - Forward Characteristics

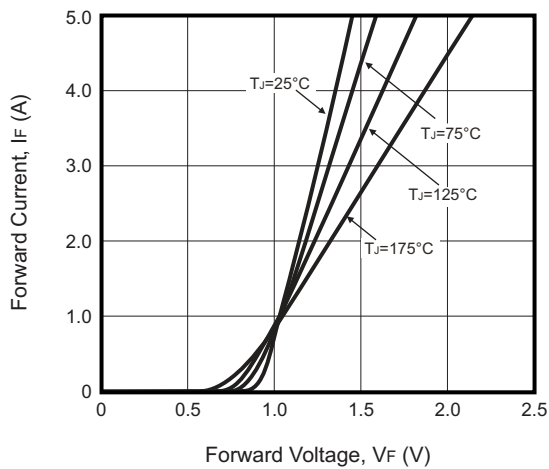


Fig.2 - Reverse Characteristics

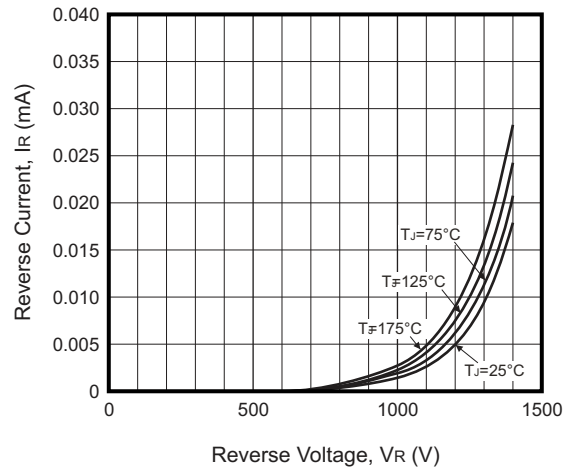


Fig.3 - Current Derating

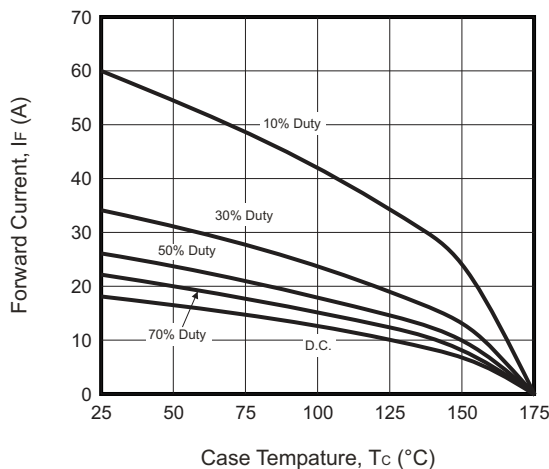
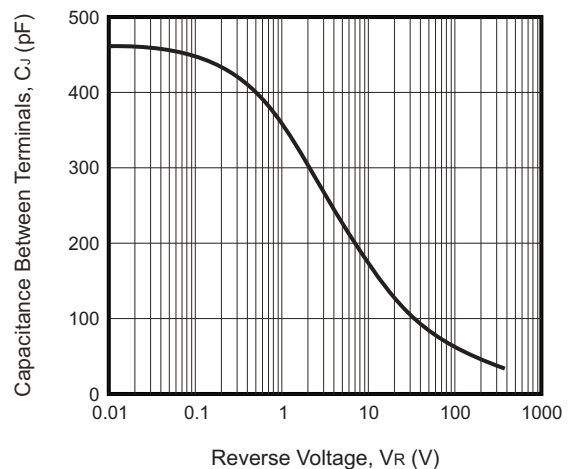
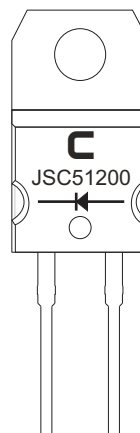


Fig.4 - Capacitance vs. Reverse Voltage



Marking Code

| Part Number | Marking Code |
|---------------|--------------|
| CDBJSC51200-G | JSC51200 |



Standard Packaging

| Case Type | TUBE PACK | |
|-----------|-----------------|----------------|
| | TUBE (pcs) | BOX (pcs) |
| TO-220-2 | 50 | 1,000 |