

## CDBJSC101200-G

**Reverse Voltage: 1200 V**

**Forward Current: 10 A**

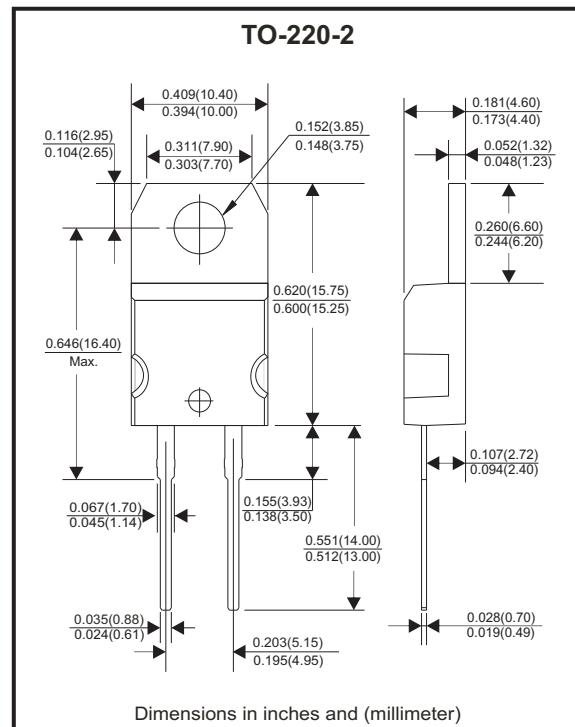
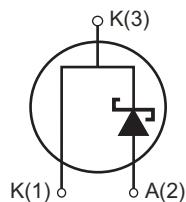
**RoHS Device**



### Features

- Rated to 1200V 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 $T_A=25^\circ\text{C}$ 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	$T_c = 150^\circ\text{C}$	$I_F$	10	A
Repetitive peak forward surge current	$T_c = 25^\circ\text{C}$ , $t_p = 10\text{ms}$ Half sine wave, $D = 0.3$	$I_{FRM}$	50	A
Non-repetitive peak forward surge current	$T_c = 25^\circ\text{C}$ , $t_p = 10\text{ms}$ Half sine wave	$I_{FSM}$	100	A
Power dissipation	$T_c = 25^\circ\text{C}$	$P_{TOT}$	141.5	W
	$T_c = 110^\circ\text{C}$		62	
Typical thermal resistance	Junction to case	$R_{\theta JC}$	1.06	$^\circ\text{C}/\text{W}$
Operating junction temperature range		$T_J$	-55 ~ +175	$^\circ\text{C}$
Storage temperature range		$T_{STG}$	-55 ~ +175	$^\circ\text{C}$

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

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

Parameter	Conditions	Symbol	Typ	Max	Unit
Forward voltage	$I_F = 10 \text{ A}, T_J = 25^\circ\text{C}$	$V_F$	1.63	1.7	V
	$I_F = 10 \text{ A}, T_J = 175^\circ\text{C}$		2.55		
Reverse current	$V_R = 1200\text{V}, T_J = 25^\circ\text{C}$	$I_R$	50	100	$\mu\text{A}$
	$V_R = 1200\text{V}, T_J = 175^\circ\text{C}$		100		
Total capacitive charge	$V_R = 800\text{V}, T_J = 150^\circ\text{C}$ $Q_C = \int_0^{V_R} C(V) dV$	$Q_C$	69		nC
Total capacitance	$V_R = 0\text{V}, T_J = 25^\circ\text{C}, f = 1 \text{ MHz}$	$C$	780		pF

## Typical Characteristics (CDBJSC101200-G)

Fig.1 - Forward Characteristics

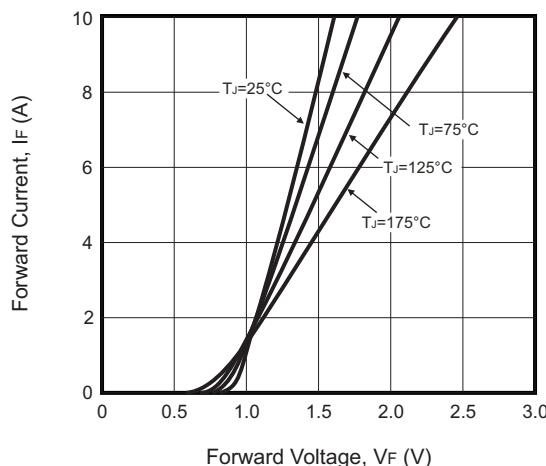


Fig.2 - Reverse Characteristics

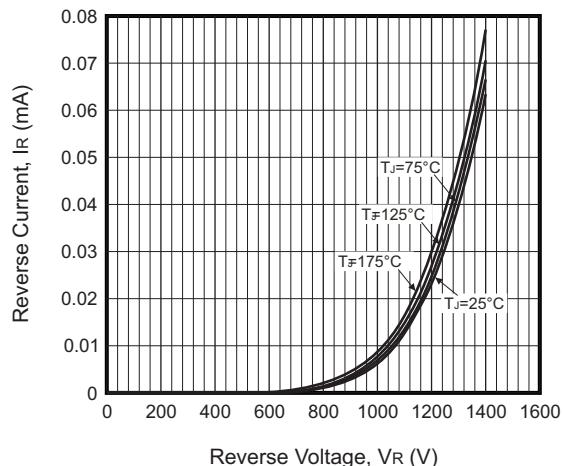


Fig.3 - Current Derating

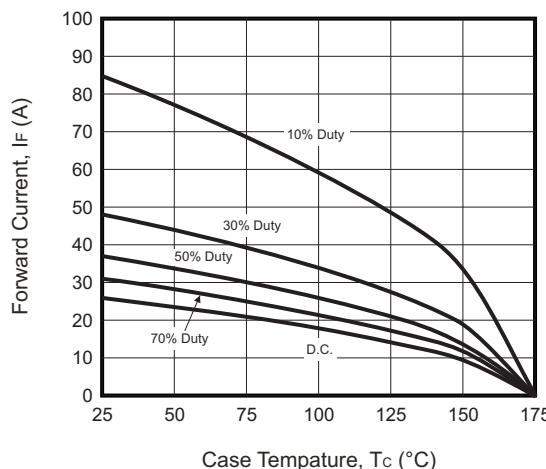
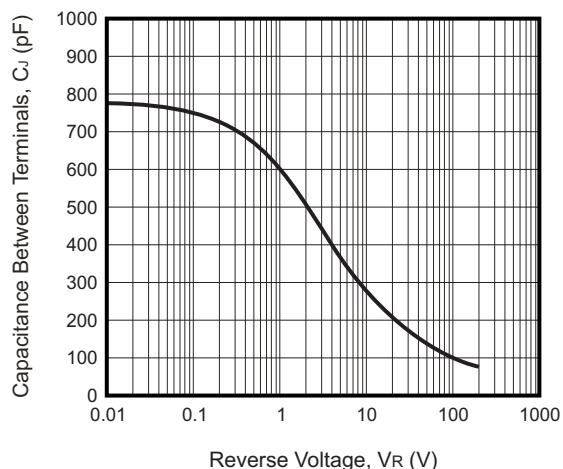
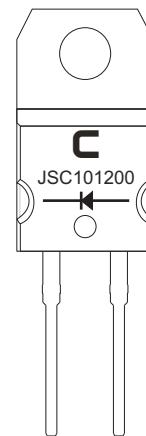


Fig.4 - Capacitance vs. Reverse Voltage



## Marking Code

Part Number	Marking Code
CDBJSC101200-G	JSC101200



## Standard Packaging

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