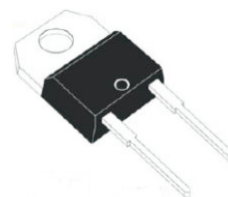


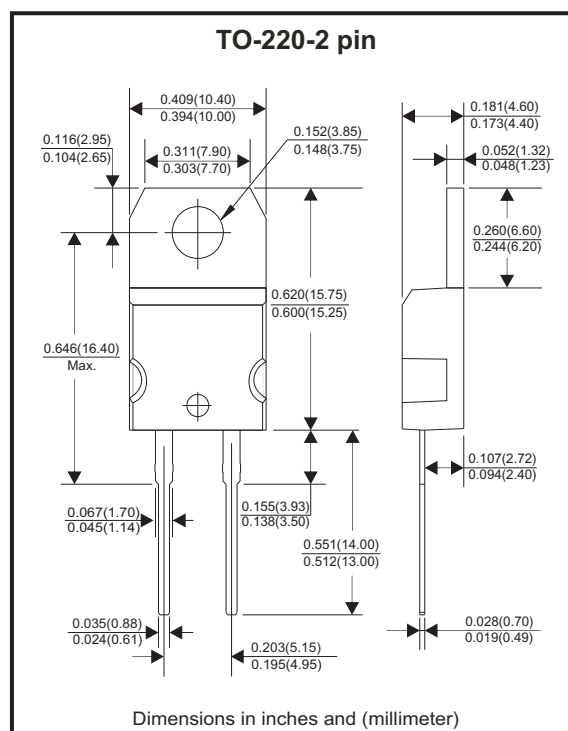
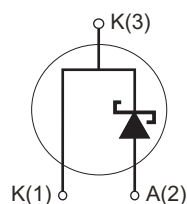
CDBJSC51200-G

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 Ta=25°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
Continuous forward current	$T_C = 25^\circ\text{C}$ $T_C = 135^\circ\text{C}$ $T_C = 150^\circ\text{C}$	I_F	18 8.5 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	$T_C = 25^\circ\text{C}$ $T_C = 110^\circ\text{C}$	P_{TOT}	109.5 47	W
Typical thermal resistance	Junction to case	$R_{\theta JC}$	1.37	$^\circ\text{C/W}$
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.

REV:

Electrical Characteristics (at Ta=25°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	2.5	
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	200	
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	510	pF
	$V_R = 400\text{ V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{ MHz}$		34	44	
	$V_R = 800\text{ V}$, $T_J = 25^\circ\text{C}$, $f = 1\text{ MHz}$		33	40	

Typical Characteristics (CDBJSC51200-G)

Fig.1 - Forward Characteristics

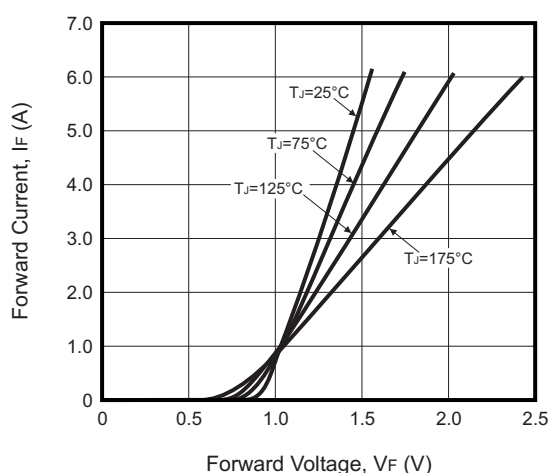


Fig.2 - Reverse Characteristics

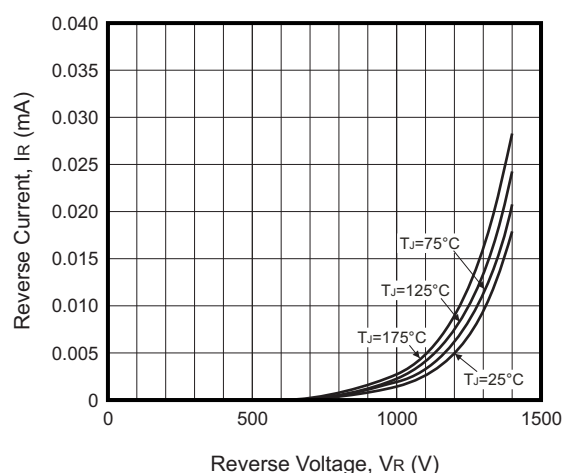


Fig.3 - Current Derating

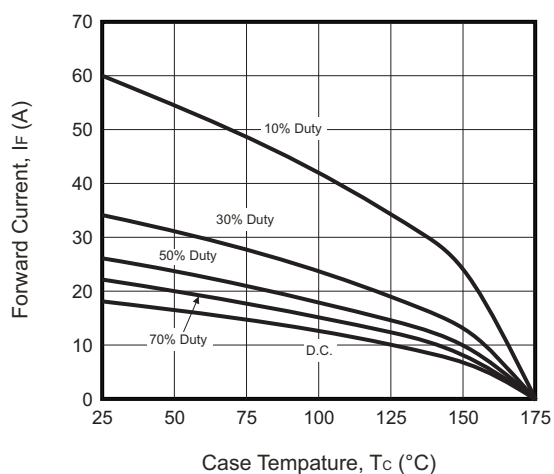
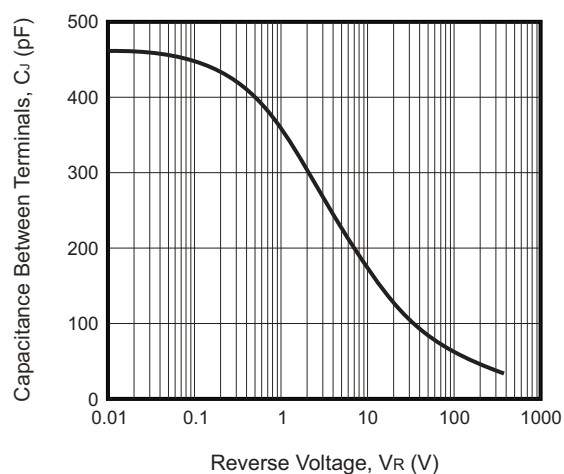


Fig.4 - Capacitance vs. Reverse Voltage



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REV: