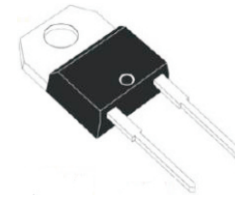


CDBJSC51200-G

Reverse Voltage: 1200 V

Forward Current: 5 A

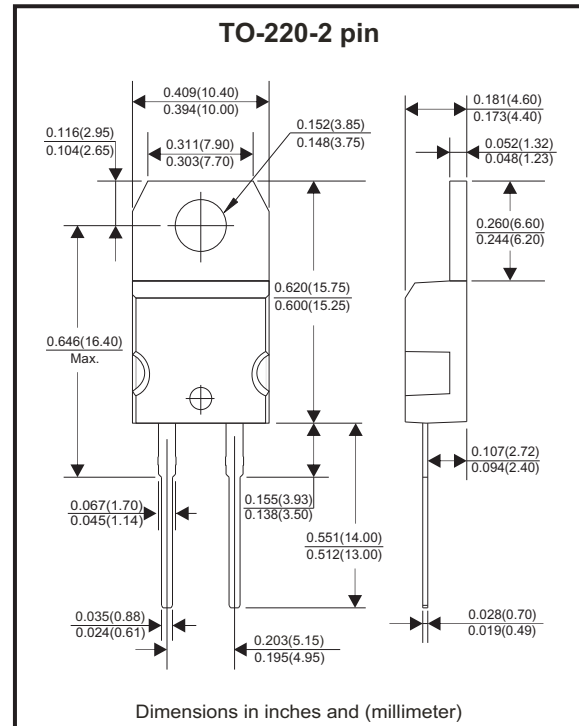
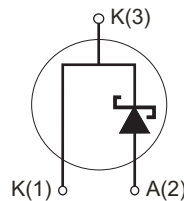
RoHS Device



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	$T_C = 25^\circ C$	I_F	18	A
	$T_C = 135^\circ C$		8.5	
	$T_C = 150^\circ C$		5	
Repetitive peak forward surge current	$T_C = 25^\circ C, t_p = 10ms$ Half sine wave, $D = 0.3$	I_{FRM}	25	A
Non-repetitive peak forward surge current	$T_C = 25^\circ C, t_p = 10ms$ Half sine wave	I_{FSM}	35	A
Power dissipation	$T_C = 25^\circ C$	P_{TOT}	109.5	W
	$T_C = 110^\circ C$		47	
Typical thermal resistance	Junction to case	$R_{\theta JC}$	1.37	$^\circ C/W$
Operating junction temperature range		T_J	-55 ~ +175	$^\circ C$
Storage temperature range		T_{STG}	-55 ~ +175	$^\circ C$

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	IF = 5 A, TJ = 25°C	VF	1.45	1.7	V
	IF = 5 A, TJ = 175°C		2.05	2.5	
Reverse current	VR = 1200V, TJ = 25°C	IR	20	100	μA
	VR = 1200V, TJ = 175°C		50	200	
Total capacitive charge	VR = 800V, TJ = 150°C QC = ∫ ₀ ^{VR} C(V) dv	QC	36	-	nC
Total capacitance	VR = 0V, TJ = 25°C, f = 1 MHz	C	475	510	pF
	VR = 400V, TJ = 25°C, f = 1 MHz		34	44	
	VR = 800V, TJ = 25°C, f = 1 MHz		33	40	

Typical Characteristics (CDBJSC51200-G)

Fig.1 - Forward Characteristics

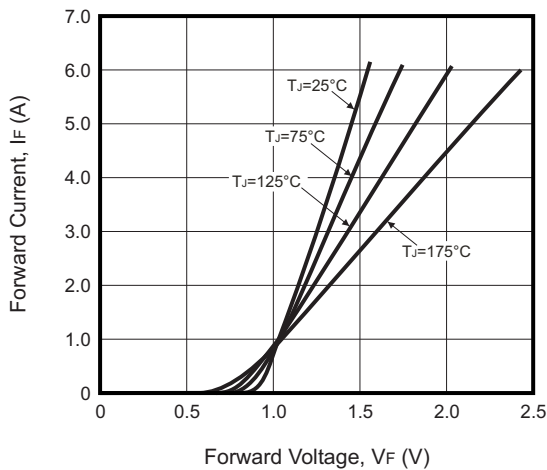


Fig.2 - Reverse Characteristics

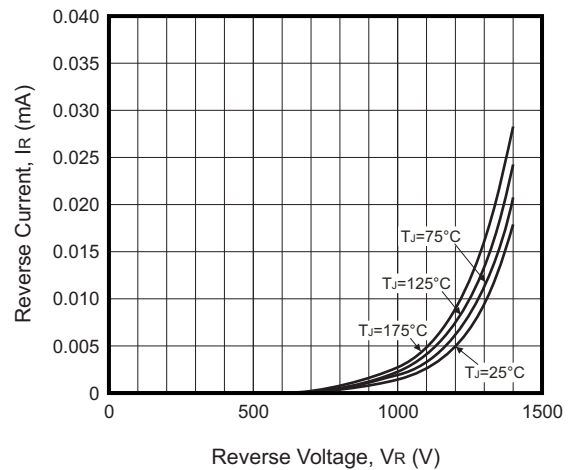


Fig.3 - Current Derating

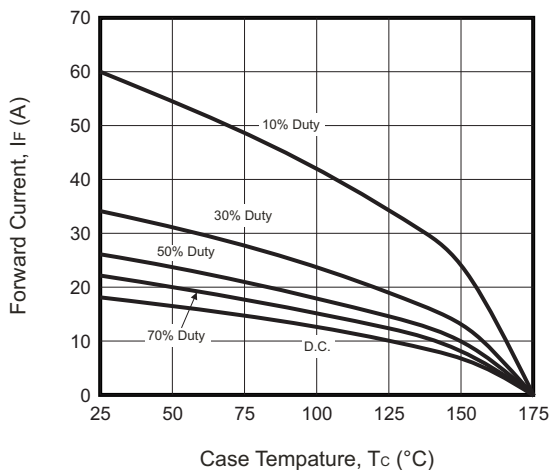
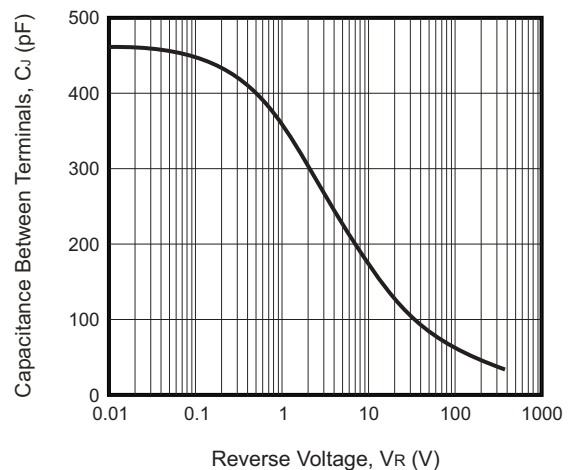


Fig.4 - Capacitance vs. Reverse Voltage



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REV: