

## CDBJSC101700-G

Reverse Voltage: 1700 V

Forward Current: 10 A

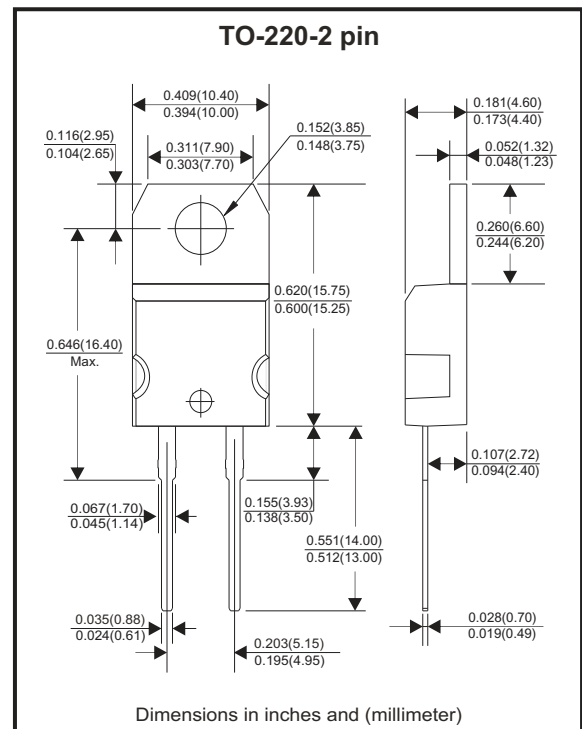
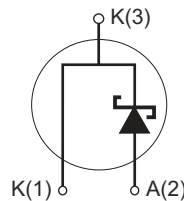
RoHS Device



### 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	$^\circ C$

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 = 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 = ∫ <sub>0</sub> <sup>VR</sup> 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

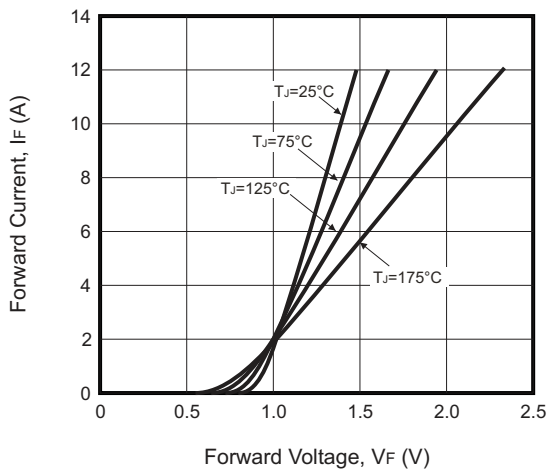


Fig.2 - Reverse Characteristics

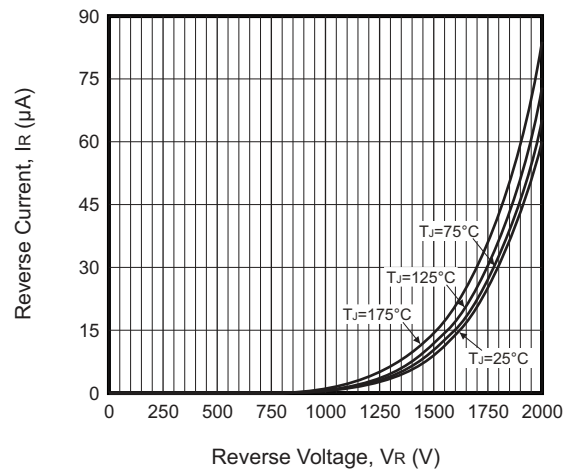


Fig.3 - Current Derating

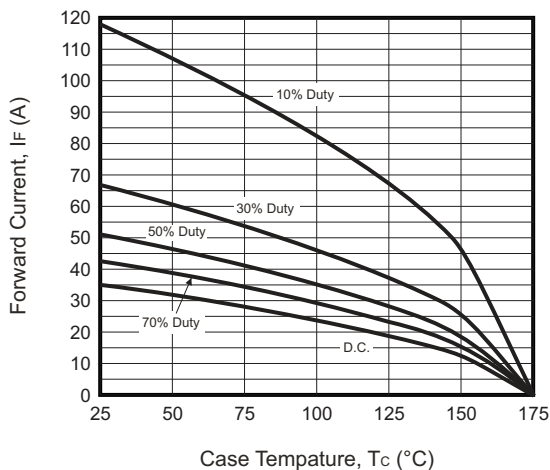
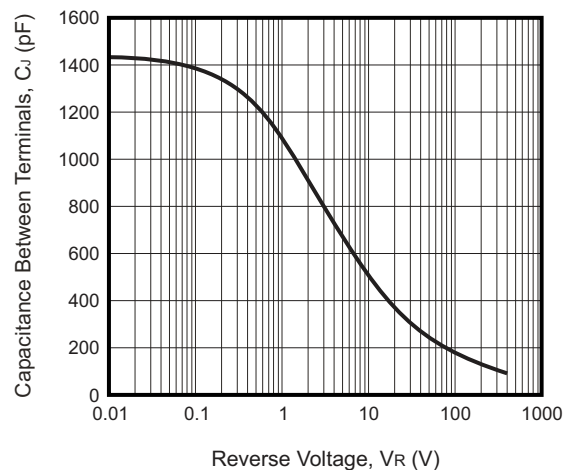


Fig.4 - Capacitance vs. Reverse Voltage



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