

## CDBJFSC5650-G

Reverse Voltage: 650 V

Forward Current: 5 A

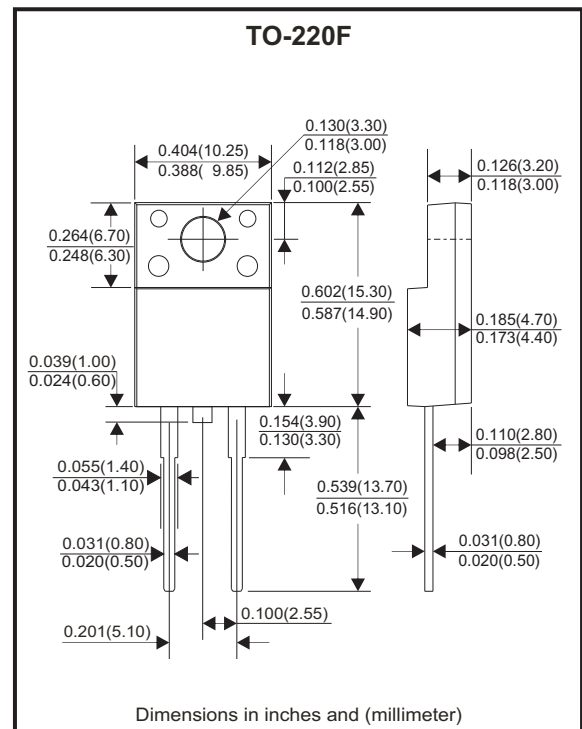
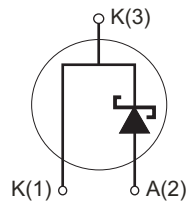
RoHS Device



### Features

- Rated to 650V 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 <sub>RRM</sub>	650	V
Surge peak reverse voltage		V <sub>RSM</sub>	650	V
DC blocking voltage		V <sub>DC</sub>	650	V
Continuous forward current	T <sub>C</sub> = 25°C	I <sub>F</sub>	11.9	A
	T <sub>C</sub> = 135°C		6	
	T <sub>C</sub> = 150°C		5	
Repetitive peak forward surge current	T <sub>C</sub> = 25°C, t <sub>p</sub> = 10ms Half sine wave, D = 0.3	I <sub>FRM</sub>	30	A
Non-repetitive peak forward surge current	T <sub>C</sub> = 25°C, t <sub>p</sub> = 10ms Half sine wave	I <sub>FSM</sub>	60	A
Power dissipation	T <sub>C</sub> = 25°C	P <sub>TOT</sub>	30.9	W
	T <sub>C</sub> = 110°C		13.4	
Typical thermal resistance	Junction to case	R <sub>θJC</sub>	4.85	°C/W
Operating junction temperature range		T <sub>J</sub>	-55 ~ +175	°C
Storage temperature range		T <sub>STG</sub>	-55 ~ +175	°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	1.35	1.7	V
	IF = 5 A , TJ = 175°C		1.55	2.5	
Reverse current	VR = 650V , TJ = 25°C	IR	10	100	μA
	VR = 650V , TJ = 175°C		15	200	
Total capacitive charge	VR = 400V , TJ = 150°C QC = ∫ <sub>0</sub> <sup>VR</sup> C(V) dv	QC	23	-	nC
Total capacitance	VR = 0V , TJ = 25°C , f = 1 MHz	C	424	434	pF
	VR = 200V , TJ = 25°C , f = 1 MHz		44	45	
	VR = 400V , TJ = 25°C , f = 1 MHz		42.5	43	

## Typical Characteristics (CDBJFSC5650-G)

Fig.1 - Forward Characteristics

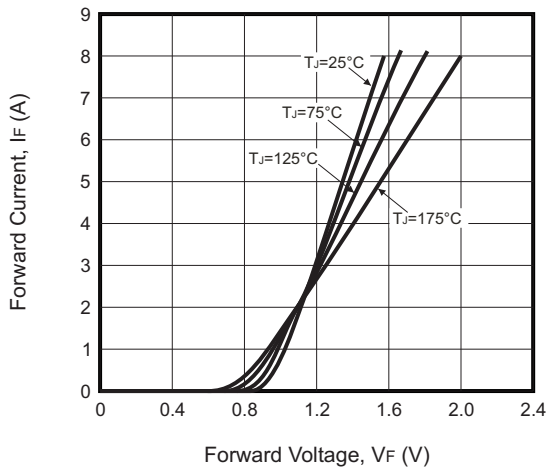


Fig.2 - Reverse Characteristics

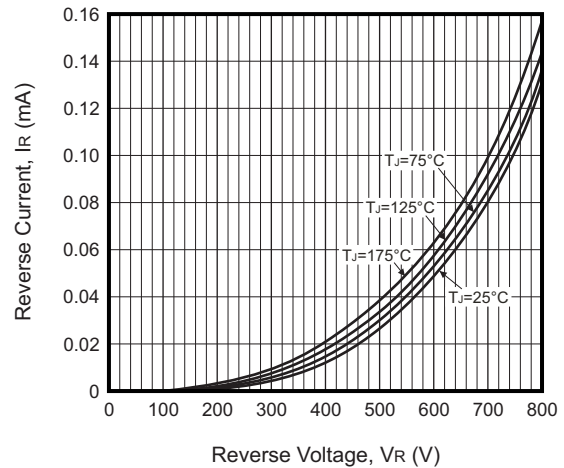


Fig.3 - Current Derating

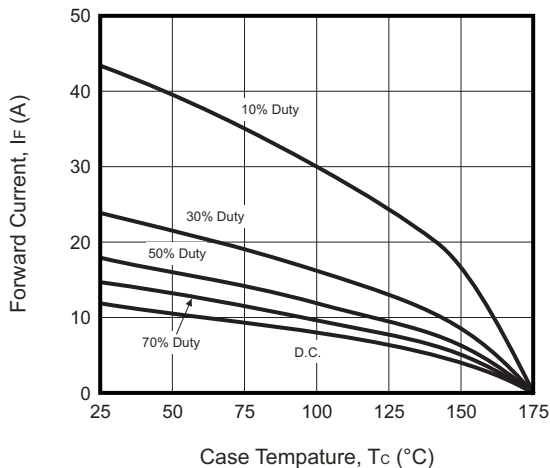
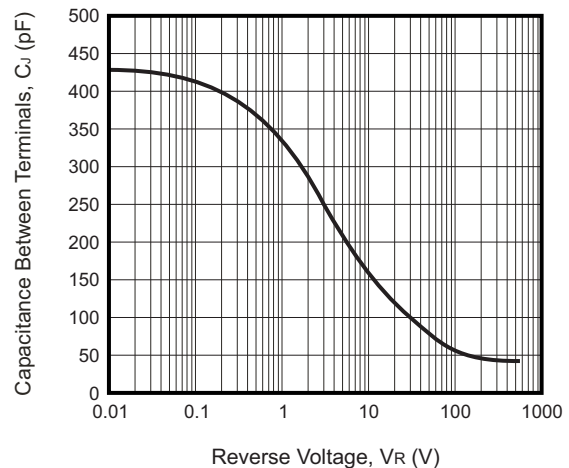


Fig.4 - Capacitance vs. Reverse Voltage



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