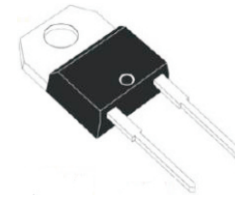


CDBJSC5650-G

Reverse Voltage: 650 V

Forward Current: 5 A

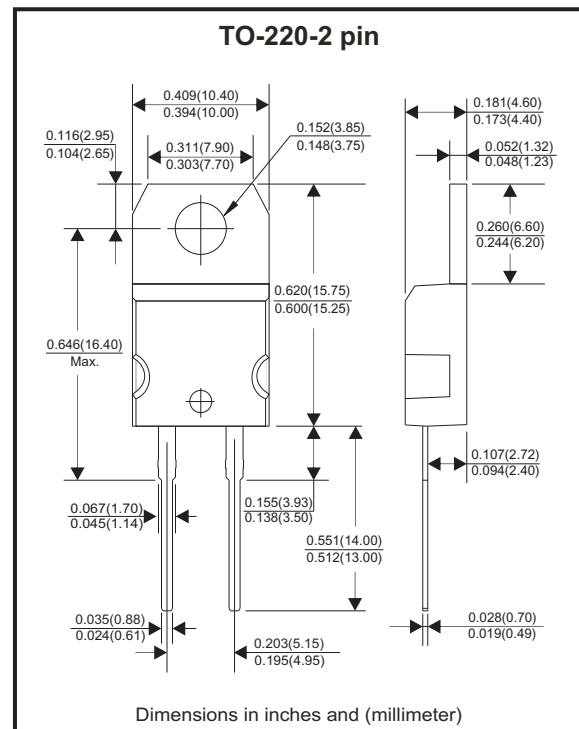
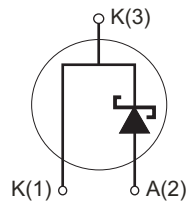
RoHS Device



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_{RRM}	650	V
Surge peak reverse voltage		V_{RSM}	650	V
DC blocking voltage		V_{DC}	650	V
Continuous forward current	$T_C = 25^\circ C$	I_F	21.5	A
	$T_C = 135^\circ C$		10	
	$T_C = 160^\circ C$		5	
Repetitive peak forward surge current	$T_C = 25^\circ C, t_p = 10ms$ Half sine wave, $D = 0.3$	I_{FRM}	30	A
Non-repetitive peak forward surge current	$T_C = 25^\circ C, t_p = 10ms$ Half sine wave	I_{FSM}	60	A
Power dissipation	$T_C = 25^\circ C$	P_{TOT}	85.8	W
	$T_C = 110^\circ C$		37.2	
Typical thermal resistance	Junction to case	$R_{\theta JC}$	1.748	$^\circ C/W$
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	1.35	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 = ∫ ₀ ^{VR} 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 (CDBJSC5650-G)

Fig.1 - Forward Characteristics

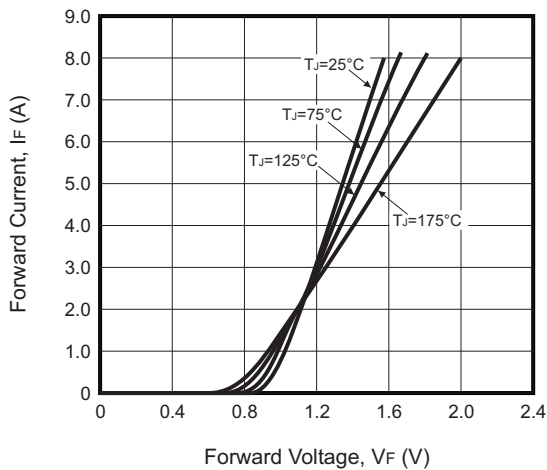


Fig.2 - Reverse Characteristics

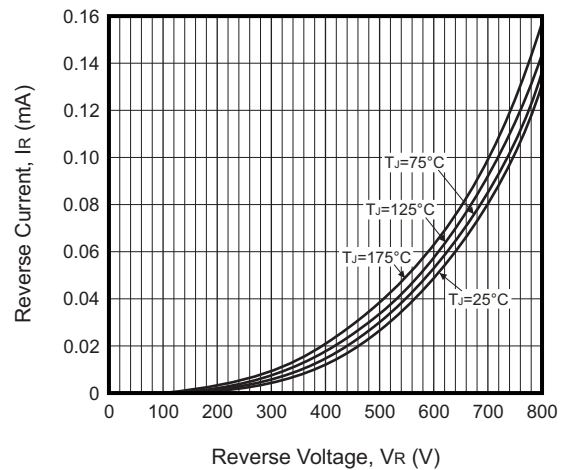


Fig.3 - Current Derating

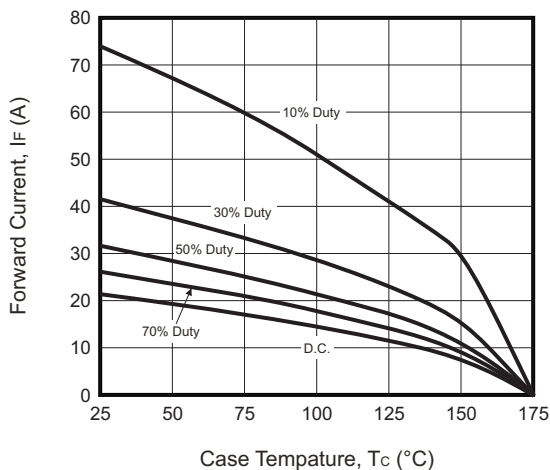
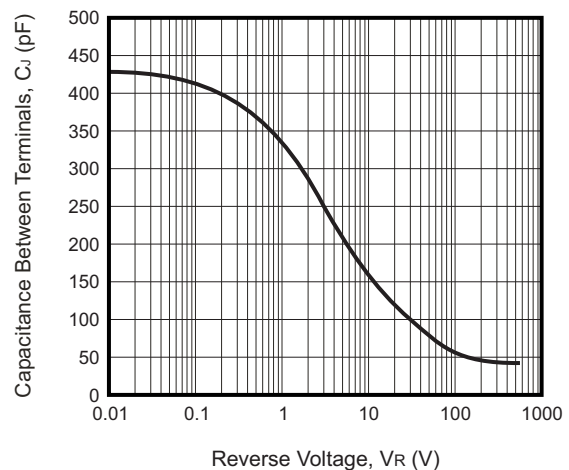


Fig.4 - Capacitance vs. Reverse Voltage



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REV: