



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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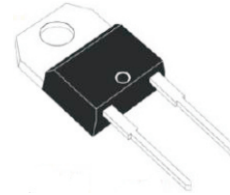


## CDBJSC3650-G

Reverse Voltage: 650 V

Forward Current: 3 A

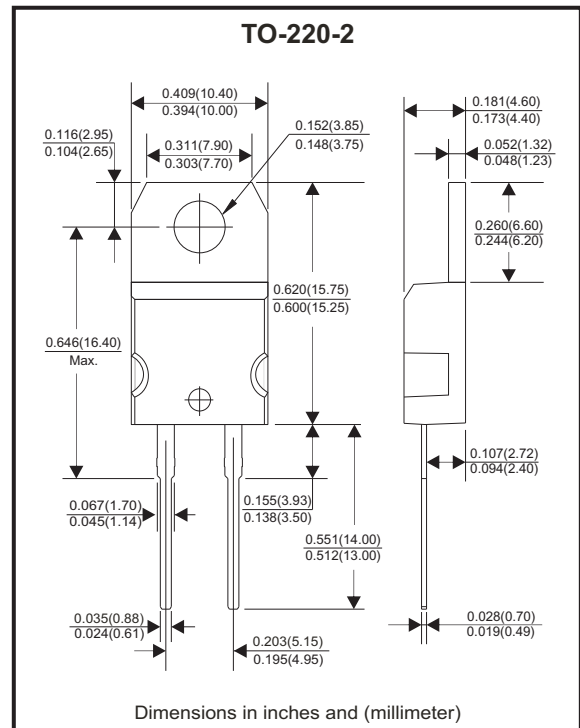
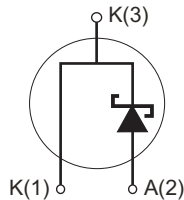
RoHS Device



### Features

- Rated to 650V at 3 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
Typical Continuous forward current	T <sub>c</sub> = 150°C	I <sub>F</sub>	3	A
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>	15	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>	30	A
Power dissipation	T <sub>c</sub> = 25°C	P <sub>TOT</sub>	53.2	W
	T <sub>c</sub> = 110°C		23	
Typical thermal resistance	Junction to case	R <sub>θJC</sub>	2.82	°C/W
Operating junction temperature range		T <sub>J</sub>	-55 ~ +175	°C
Storage temperature range		T <sub>STG</sub>	-55 ~ +175	°C

## Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Typ	Max	Unit
Forward voltage	$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	$V_F$	1.41	1.7	V
	$I_F = 3\text{ A}, T_J = 175^\circ\text{C}$		1.8		
Reverse current	$V_R = 650\text{ V}, T_J = 25^\circ\text{C}$	$I_R$	10	100	$\mu\text{A}$
	$V_R = 650\text{ V}, T_J = 175^\circ\text{C}$		20		
Total capacitive charge	$V_R = 400\text{ V}, T_J = 150^\circ\text{C}$ $Q_C = \int_0^{V_R} C(V) dv$	$Q_C$	11		nC
Total capacitance	$V_R = 0\text{ V}, T_J = 25^\circ\text{C}, f = 1\text{ MHz}$	C	190		pF
	$V_R = 200\text{ V}, T_J = 25^\circ\text{C}, f = 1\text{ MHz}$		23		

## Typical Characteristics (CDBJSC3650-G)

Fig.1 - Forward Characteristics

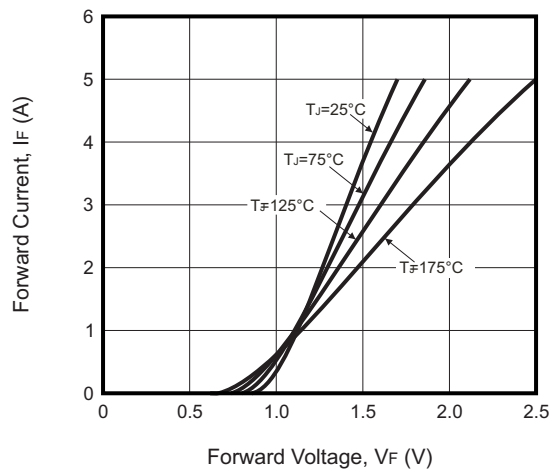


Fig.2 - Reverse Characteristics

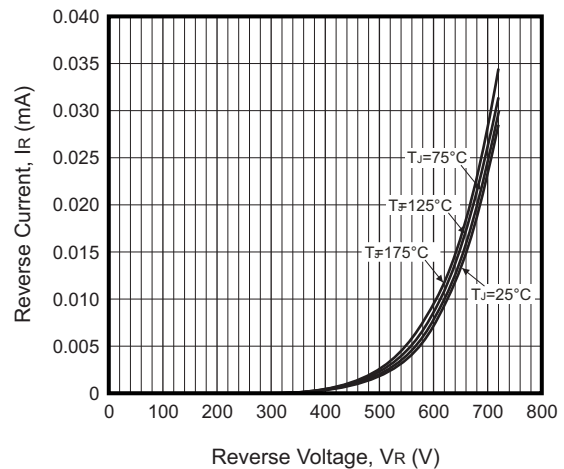


Fig.3 - Current Derating

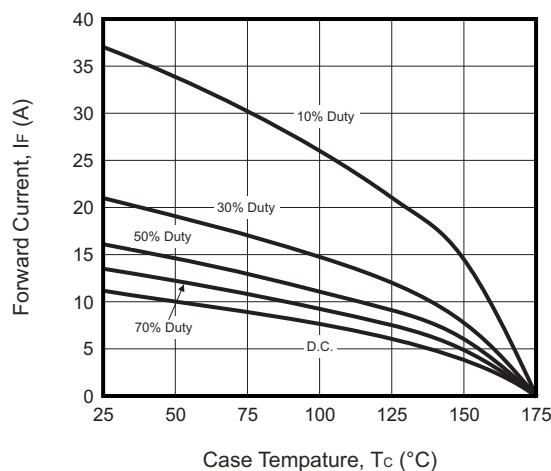
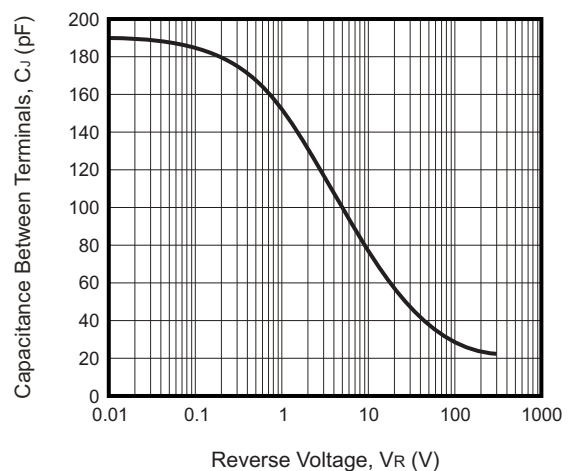
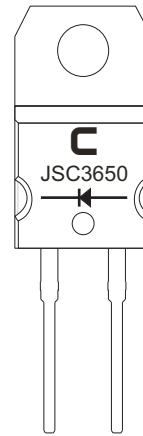


Fig.4 - Capacitance vs. Reverse Voltage



## Marking Code

Part Number	Marking Code
CDBJSC3650-G	JSC3650



## Standard Packaging

Case Type	TUBE PACK	
	TUBE ( pcs )	BOX ( pcs )
TO-220-2	50	1,000