



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!



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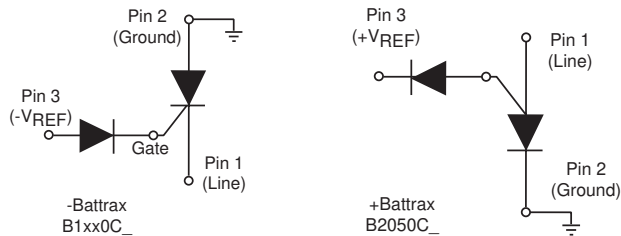
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## Battrax SLIC Protector

This solid state protection device can be referenced to either a positive or negative voltage source. The B1xx0C\_ is for a  $-V_{REF}$  and the B2050C\_ is for a  $+V_{REF}$ . Designed using an SCR and a gate diode, the B1xx0C\_ Battrax begins to conduct at  $|-V_{REF}| + |-1.2 V|$  while the B2050C\_ Battrax begins to conduct at  $|+V_{REF}| + |1.2 V|$ .

For a diagram of a Battrax application, see Figure 3.38.



### Electrical Parameters

Part Number *	$V_{DRM}$ Volts	$V_S$ Volts	$V_T$ Volts	$I_{DRM}$ $\mu$ Amps	$I_{GT}$ mAmps	$I_T$ Amps	$I_H$ mAmps	$C_O$ pF
B1100C_	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	100	50
B1160C_	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	160	50
B1200C_	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	200	50
B2050C_	$ +V_{REF}  +  1.2 V $	$ +V_{REF}  +  10 V $	4	5	50	2.2	50	50

\* For individual "CA" and "CC" surge ratings, see table below.

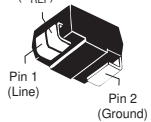
#### General Notes:

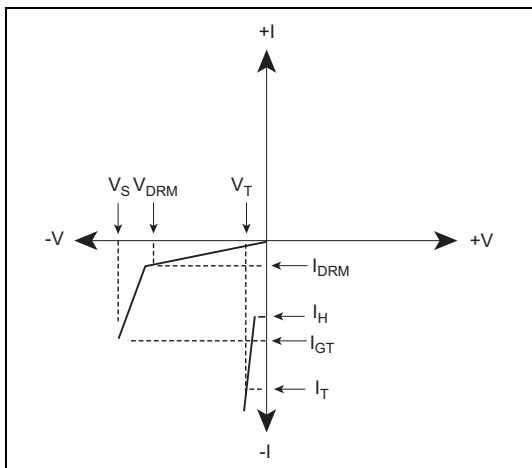
- All measurements are made at an ambient temperature of 25 °C.  $I_{PP}$  applies to -40 °C through +85 °C temperature range.
- $I_{PP}$  is a repetitive surge rating and is guaranteed for the life of the product.
- $I_{PP}$  ratings assume  $V_{REF} = \pm 48 V$ .
- $V_{DRM}$  is measured at  $I_{DRM}$ .
- $V_S$  is measured at 100 V/ $\mu$ s.
- Off-state capacitance ( $C_O$ ) is measured at 1 MHz with a 2 V bias and is a typical value. "CC" product is approximately 2x the listed value.
- Positive Battrax information is preliminary data.
- $V_{REF}$  maximum value for the negative Battrax is -200 V.
- $V_{REF}$  maximum value for the positive Battrax is 110 V.

### Surge Ratings

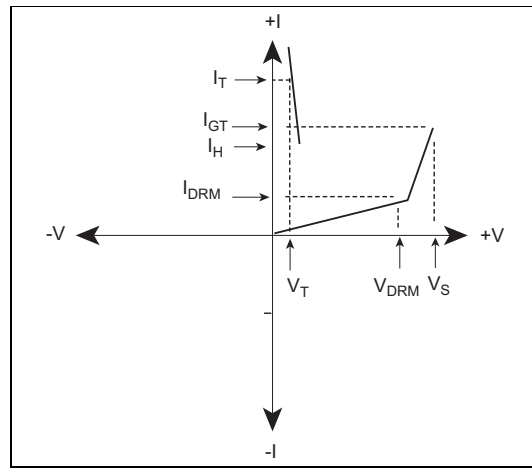
Series	$I_{PP}$ 2x10 $\mu$ s Amps	$I_{PP}$ 8x20 $\mu$ s Amps	$I_{PP}$ 10x160 $\mu$ s Amps	$I_{PP}$ 10x560 $\mu$ s Amps	$I_{PP}$ 10x1000 $\mu$ s Amps	$I_{TSM}$ 60 Hz Amps	$di/dt$ Amps/ $\mu$ s
A	150	150	90	60	50	20	500
C	500	400	200	150	100	50	500

Thermal Considerations

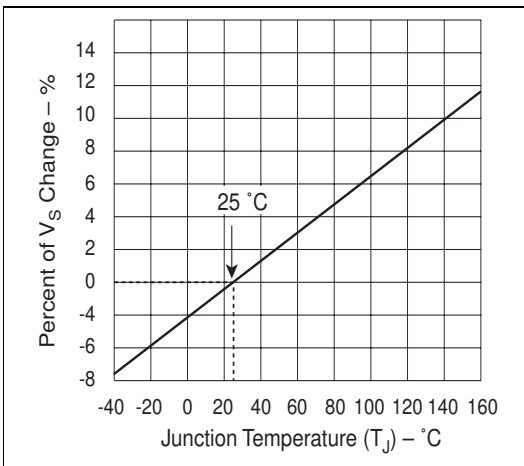
Package	Symbol	Parameter	Value	Unit
Modified DO-214AA 	$T_J$	Operating Junction Temperature Range	-40 to +150	$^{\circ}\text{C}$
	$T_S$	Storage Temperature Range	-65 to +150	$^{\circ}\text{C}$
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	85	$^{\circ}\text{C/W}$



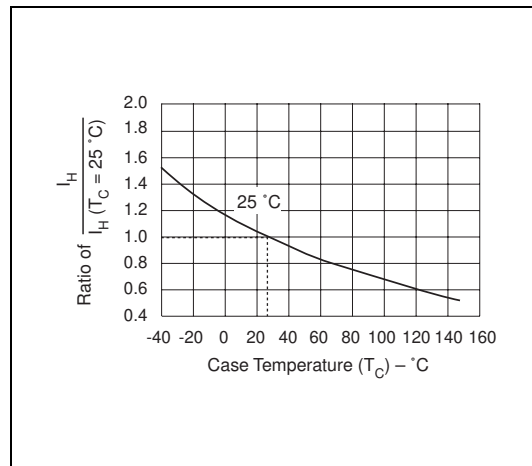
V-I Characteristics for Negative Battrax



V-I Characteristics for Positive Battrax



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

Data Sheets