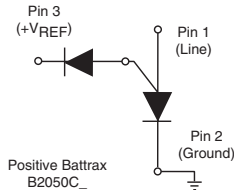
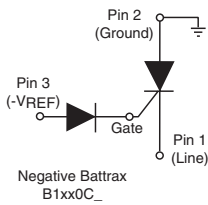


# Battrax® SLIC Protector



The *Battrax* SLIC protector is offered in a negative *Battrax* version and a positive *Battrax* version. 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  $|+V_{REF}| + |1.2 V|$ .

## 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
B1100C_L	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	100
B1160C_L	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	160
B1200C_L	$ -V_{REF}  +  -1.2 V $	$ -V_{REF}  +  -10 V $	4	5	100	2.2	200

Part Number *	$V_{DRM}$ Volts	$V_S$ Volts	$V_T$ Volts	$I_{DRM}$ $\mu$ Amps	$I_{GT}$ mAmps	$I_T$ Amps	$I_H$ mAmps
B2050C_L	$ +V_{REF}  +  1.2 V $	$ +V_{REF}  +  10 V $	4	5	50	2.2	5

\* "L" in part number indicates RoHS compliance. For non-RoHS compliant device, delete "L" from part number.  
For individual "CA" and "CC" surge ratings, see table below.

### General Notes:

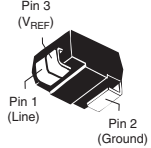
- All measurements are made at an ambient temperature of 25 °C.  $I_{PP}$  applies to -40 °C through +85 °C temperature range.
- $I_{PP}$  is a repetitive surge rating and is guaranteed for the life of the product.
- $I_{PP}$  ratings assume  $V_{REF} = \pm 48 V$ .
- $V_{DRM}$  is measured at  $I_{DRM}$ .
- $V_S$  is measured at 100 V/ $\mu$ s.
- 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 in Amps

Series	$I_{PP}$									$I_{TSM}$ 50 / 60 Hz	di/dt
	0.2x310 *	2x10 *	8x20 *	10x160 *	10x560 *	5x320 *	10x360 *	10x1000 *	5x310 *		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps		
A	20	150	150	90	50	75	75	45	75	20	500
C	50	500	400	200	150	200	175	100	200	50	500

\* Current waveform in  $\mu$ s  
\*\* Voltage waveform in  $\mu$ s

**Thermal Considerations**

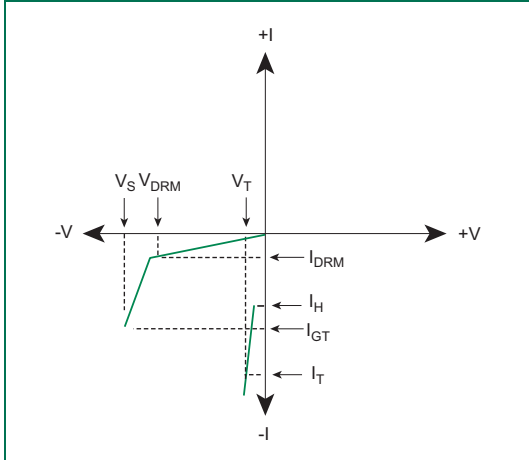
Package	Symbol	Parameter	Value	Unit
Modified DO-214AA 	$T_J$	Operating Junction Temperature Range	-40 to +150	°C
	$T_S$	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	85	°C/W

**Capacitance Values**

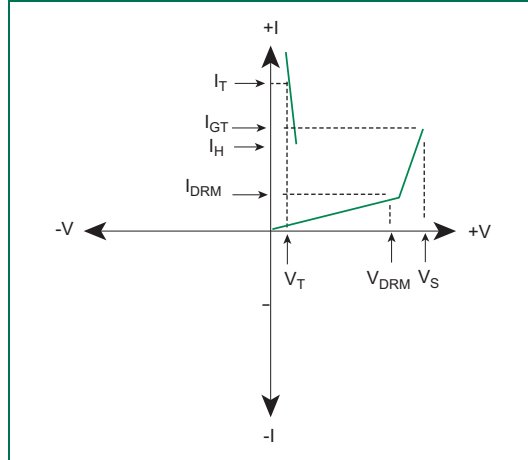
Part Number	pF	
	MIN	MAX
<b>B1100CAL</b>	50	200
<b>B1100CCL</b>	50	200
<b>B1160CAL</b>	50	200
<b>B1160CCL</b>	50	200
<b>B1200CAL</b>	50	200
<b>B1200CCL</b>	50	200
<b>B2050CAL</b>	50	200
<b>B2050CCL</b>	50	200

Note: Off-state capacitance ( $C_O$ ) is measured at 1 MHz with a 2 V bias.

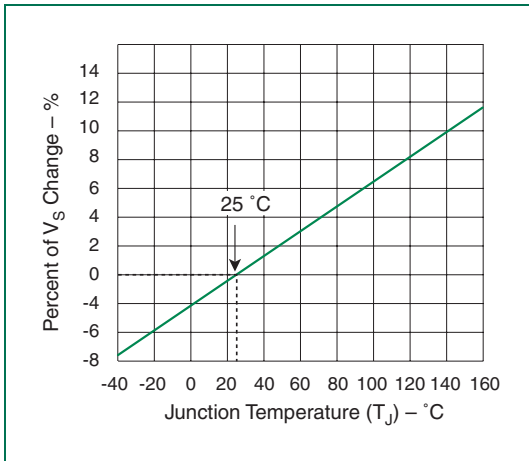
SIDACTor Devices



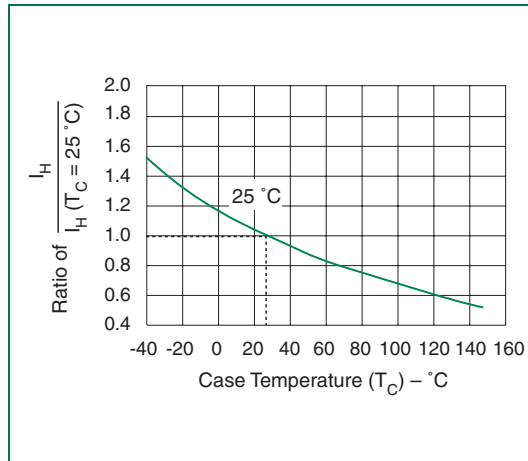
V-I Characteristics for Negative Battrax



V-I Characteristics for Positive Battrax



Normalized  $V_S$  Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature