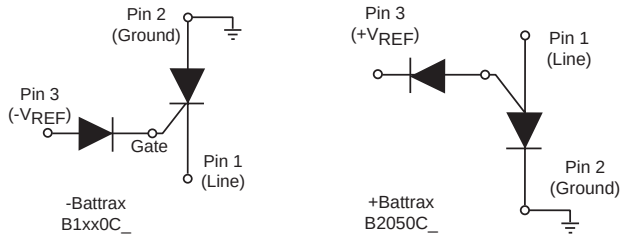
Battrax SLIC Protector

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} µAmps	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:

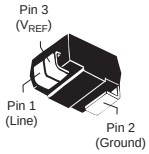
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- I_{PP} ratings assume V_{REF} = ±48 V.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured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

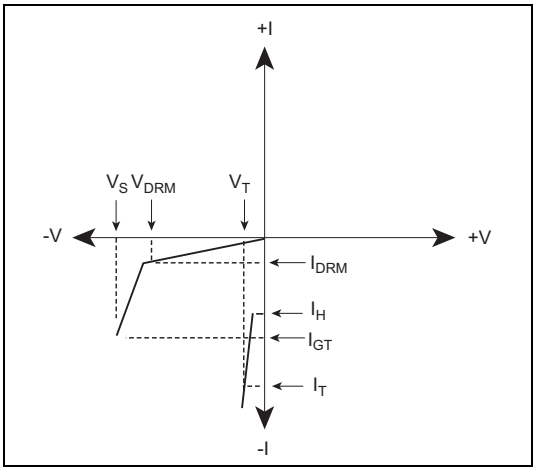
Surge Ratings

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

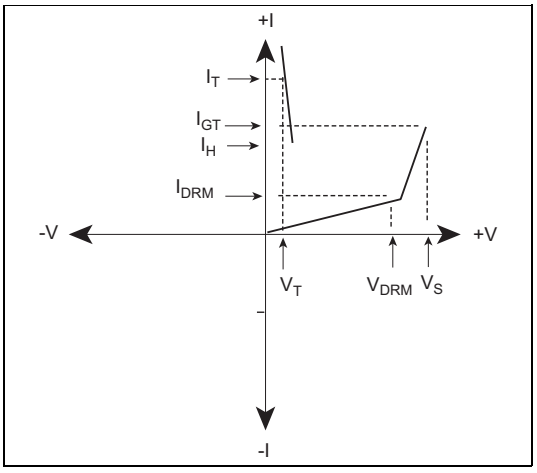
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Thermal Considerations

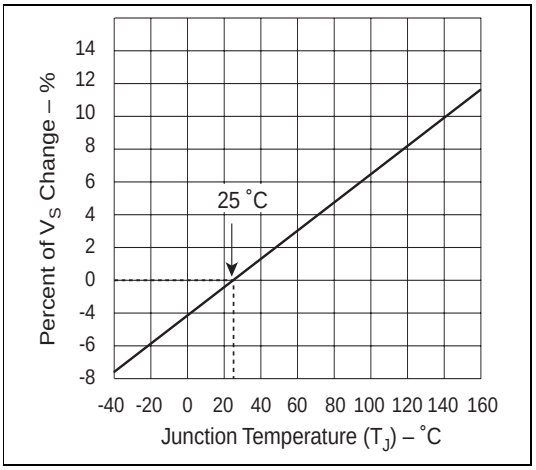
Package	Symbol	Parameter	Value	Unit
Modified DO-214AA 	T_J	Operating Junction Temperature Range	-40 to +150	°C
	T_S	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	85	°C/W



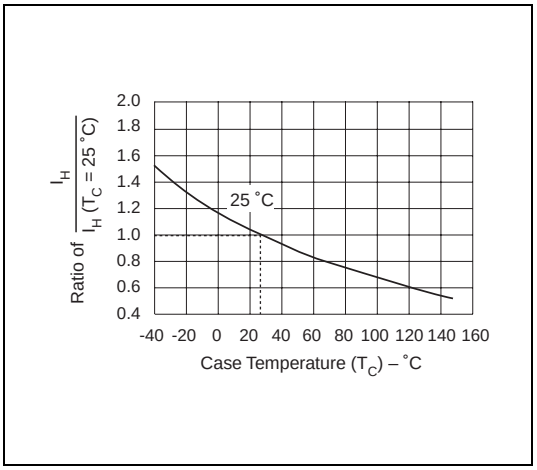
V-I Characteristics for Negative Battrax



V-I Characteristics for Positive Battrax



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature