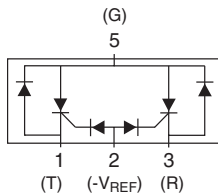


# Batrax<sup>®</sup> Single Port Negative SLIC Protector



This programmable *Batrax* device is referenced to a negative voltage source. This dual-chip package includes internal diodes for transient protection from positive surge events.

For a diagram of a *Batrax* application, see Figure 6.47 in Section 6, "Reference Designs" of this *Telecom Design Guide*.

SIDACtor Devices

## Electrical Parameters

Part Number *	V <sub>DRM</sub> Volts	V <sub>S</sub> Volts	V <sub>T</sub> Volts	V <sub>F</sub> Volts	I <sub>DRM</sub> μAmps	I <sub>GT</sub> mAmps	I <sub>T</sub> Amps	I <sub>H</sub> mAmps
<b>B1101U_L</b>	-V <sub>REF</sub>   +   -1.2V	-V <sub>REF</sub>   +   -10V	4	5	5	100	2.2	100
<b>B1161U_L</b>	-V <sub>REF</sub>   +   -1.2V	-V <sub>REF</sub>   +   -10V	4	5	5	100	2.2	160
<b>B1201U_L</b>	-V <sub>REF</sub>   +   -1.2V	-V <sub>REF</sub>   +   -10V	4	5	5	100	2.2	200

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

### General Notes:

- All measurements are made at an ambient temperature of 25 °C. I<sub>PP</sub> applies to -40 °C through +85 °C temperature range.
- I<sub>PP</sub> is a repetitive surge rating and is guaranteed for the life of the product.
- I<sub>PP</sub> ratings assume a V<sub>REF</sub> = -48 V.
- V<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> is measured at 100 V/μs.
- V<sub>REF</sub> maximum value for the B1101, B1161, and/or B1201 is -200 V.

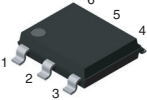
## Surge Ratings in Amps

Series	I <sub>PP</sub>									I <sub>TSM</sub> 50 / 60 Hz	di/dt
	0.2x310 *	2x10 *	8x20 *	10x160 *	10x560 *	5x320 *	10x360 *	10x1000 *	5x310 *		
	0.5x700 **	2x10 **	1.2x50 **	10x160 **	10x560 **	9x720 **	10x360 **	10x1000 **	10x700 **		
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps/μs
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 μs

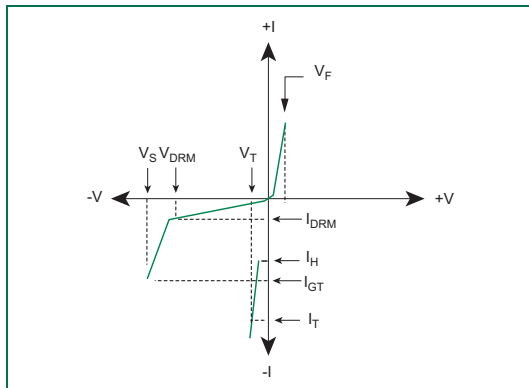
\*\* Voltage waveform in μs

**Thermal Considerations**

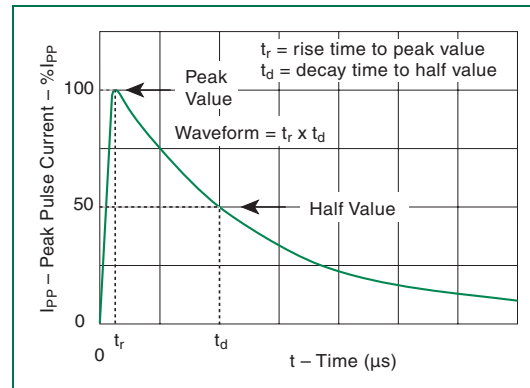
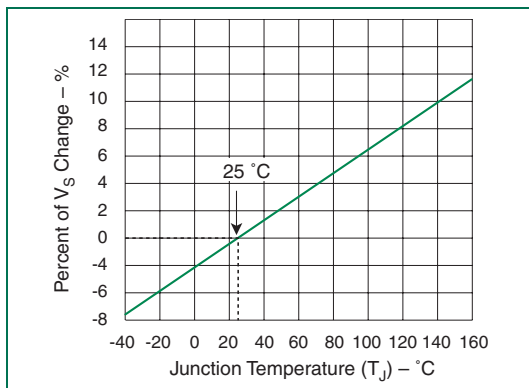
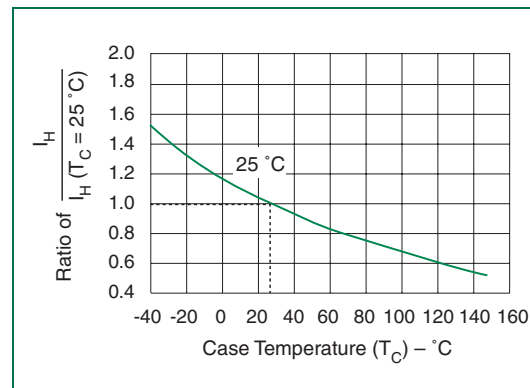
Package	Symbol	Parameter	Value	Unit
Modified MS-013 	$T_J$	Operating Junction Temperature Range	-40 to +125	°C
	$T_S$	Storage Temperature Range	-65 to +150	°C
	$R_{\theta JA}$	Thermal Resistance: Junction to Ambient	60	°C/W

**Capacitance Values**

Part Number	pF	
	MIN	MAX
B1101UAL	50	200
B1101UCL	50	200
B1161UAL	50	200
B1161UCL	50	200
B1201UAL	50	200
B1201UCL	50	200

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


V-I Characteristics


 $t_r \times t_d$  Pulse Waveform

 Normalized  $V_S$  Change versus Junction Temperature


Normalized DC Holding Current versus Case Temperature