

**RoHS DO-15 Series (A/B Rated) SIDACtor® Device**

**Description**

This DO-15 plastic package provides a through-hole version of the SIDACtor® device. This axial leaded device is ideal for Customer Premises Equipment (CPE) such as telephones, answering machines, modems, fax interfaces. The DO-15 package series can also be used for overvoltage protection for applications such as T1/E1/J1 trunk cards when the appropriate overcurrent protection is included.


**Features**

- RoHS compliant
- Bidirectional transient voltage protection
- Axial lead through-hole component
- Teccor brand SIDACtor technology

**Protection solution to meet**

- YD/T 950
- YD/T 993
- YD/T 1082
- GR 1089 Intra-building
- IEC 61000-4-5
- ITU K.20/21 Basic Level
- TIA-968-A

**Agency Approvals**

Agency	Agency File Number
	E133083

**Electrical Characteristics**

Part Number "_" = A or B	Marking "_" = A or B	$V_{DRM}$ @ $I_{DRM} = 5\mu A$	$V_S$ @ 100V/ $\mu s$	$I_H$	$I_S$	$I_T$	$V_T$ @ $I_T = 1$ amp	Capacitance @ 1MHz, 2V bias	
		Volts	Volts	mAmps	mAmps	Amps	Volts	pF	
		Min	Max	Min	Max	Max	Max	Min	Max
P1100G_LRP	P11_	90	130	150	800	1.0	5	30	60
P1300G_LRP	P13_	120	160	150	800	1.0	5	25	40
P1500G_LRP	P15_	140	180	150	800	1.0	5	25	40
P1800G_LRP	P18_	170	220	150	800	1.0	5	25	40
P2300G_LRP	P23_	190	260	150	800	1.0	5	25	30
P2600G_LRP	P26_	220	300	150	800	1.0	5	25	30
P3100G_LRP	P31_	275	350	150	800	1.0	5	20	30
P3500G_LRP	P35_	320	400	150	800	1.0	5	20	30

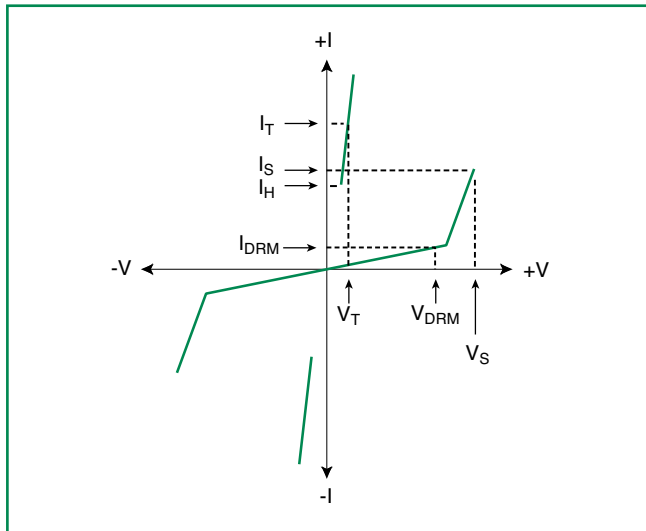
- All measurements are made at an ambient temperature of 25°C.
- Listed SIDACtor devices are bidirectional. All electrical parameters and surge ratings apply to forward and reverse polarities.

## Surge Ratings

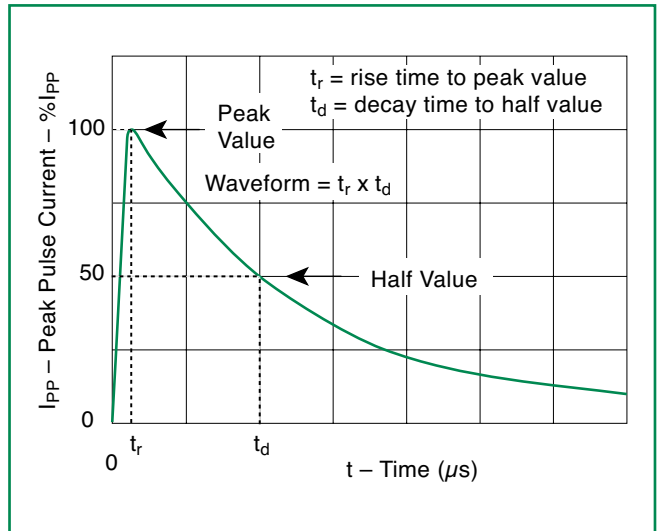
Series	$I_{PP}$	
	10x1000 $\mu$ s	10x560 $\mu$ s
	Amps	Amps
A	45	—
B	80	100

- $I_{PP}$  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.

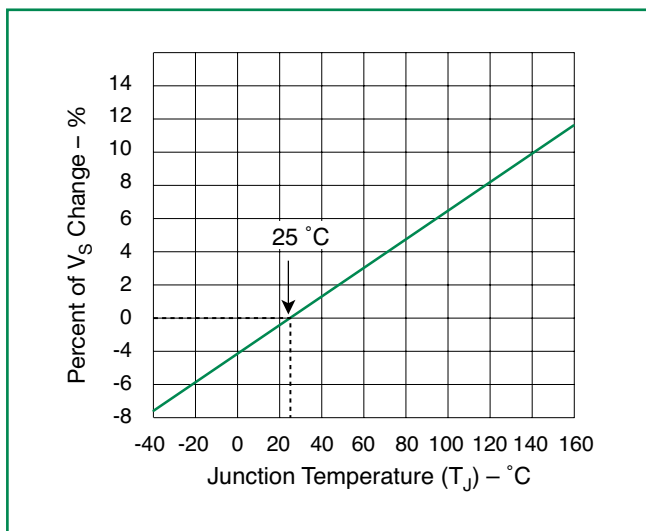
## V-I Characteristics



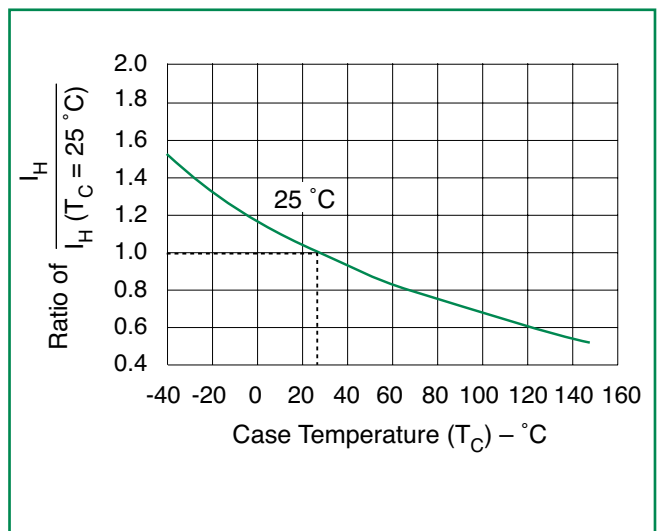
## $t_r \times t_d$ Pulse Waveform



## Normalized $V_S$ Change Versus Junction Temperature

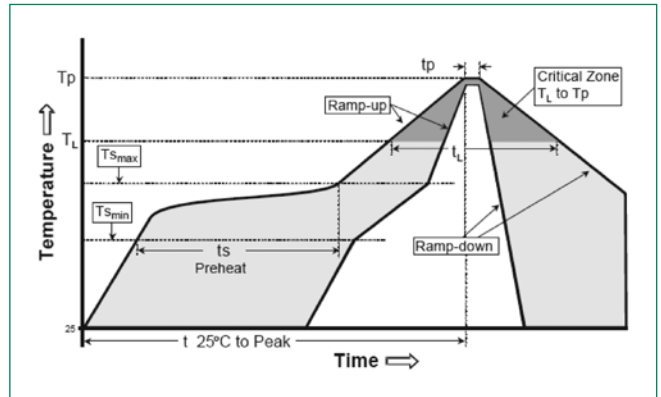


## Normalized DC Holding Current Versus Case Temperature



## Soldering Parameters

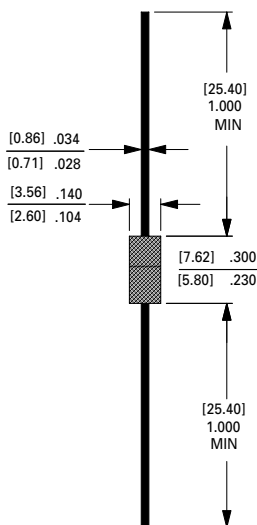
Reflow Condition	Pb – Free assembly	
Pre Heat	- Temperature Min ( $T_{s(min)}$ )	150°C
	- Temperature Max ( $T_{s(max)}$ )	190°C
	- Time (min to max) ( $t_s$ )	60 – 150 seconds
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)	5°C/second max	
$T_{s(max)}$ to $T_L$ - Ramp-up Rate	5°C/second max	
Reflow	- Temperature ( $T_L$ ) (Liquidus)	220°C
	- Time (min to max) ( $t_s$ )	>60 – <150 seconds
Peak Temperature ( $T_p$ )	250 <sup>+0/-5</sup> °C	
Time within 5°C of actual peak Temperature ( $t_p$ )	20 – 40 seconds	
Ramp-down Rate	5°C/second max	
Time 25°C to peak Temperature ( $T_p$ )	8 minutes max.	
Do not exceed	280°C	



## Physical Specifications

Terminal Material	Matte Tin-plated Axial leads
Lead Solderability	MIL-STD-750, Method 2026

## Dimensions



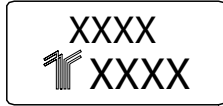
Dimensions in inches and (millimeters)

DO-15 SERIES

## Environmental Specifications

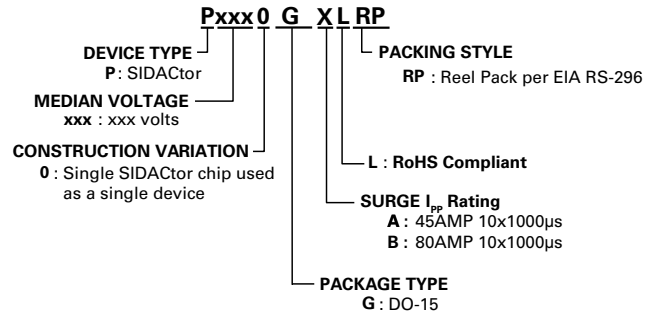
Operating/Storage Temperature	-40° C to ~ +150°C
Passive Aging	125° C, 1000 hours Meet Spec
Humidity Aging	+85°C, 85% R.H. 1000 hours Meet Spec
Thermal Shock	MIL-STD-202 Method 107G +85°C/-40°C 100 times Meet Spec
Solvent Resistance	MIL-STD-202, Method 215 No Change
Vibration	MIL-STD-883C, Method 2007.1, Condition A No Change

### Part Marking System



First Line: Product Name (see marking column in table on page 1)  
 Second Line: Lot number

### Part Numbering System



### Packaging

Package Type	Description	Packing Quantity	Added Suffix	Industry Standard
DO-15	Axial	5000	RP	EIA RS-296

### Tape and Reel Specification

Symbol	Description	Inches	MM
A	Component Spacing (lead to lead)	0.200 ± 0.020"	5.08 ± 0.508
B	Tape Spacing	2.062 ± 0.059"	52.37 ± 1.498
C	Tape Width	0.250"	6.35
D	Max. Off Alignment	0.048"	1.219
E	Reel Dimension	13"	330.2
F	Max Hub Recess	3"	76.19
G	Max. Abor Hole	0.68"	17.27
H	Reel Dimension	2.75"	69.85

