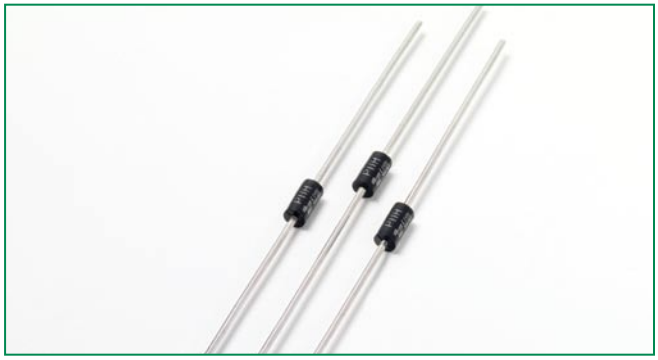
RoHS DO-41 Series SIDACtor® Device



Description

This DO-41 plastic package provides a through-hole version of the SIDACtor® devices. This axial leaded device is ideal for Customer Premises Equipment (CPE) such as telephones, answering machines, modems, and fax interfaces. The DO-41 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.

Agency Approvals

Agency	Agency File Number
®	E133083

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 Type B Surges

Electrical Characteristics

Part Number	Marking	V_{DRM} @I_{DRM}=5µA	V_S @100V/µs	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	Typical
P1100THLRP	P11H	90	130	150	800	1.0	5	60
P1300THLRP	P13H	120	160	150	800	1.0	5	40
P1500THLRP	P15H	140	180	150	800	1.0	5	40
P1800THLRP	P18H	170	220	150	800	1.0	5	40
P2300THLRP	P23H	190	260	150	800	1.0	5	30
P2600THLRP	P26H	220	300	150	800	1.0	5	30
P3100THLRP	P31H	275	350	150	800	1.0	5	30
P3500THLRP	P35H	320	400	150	800	1.0	5	30

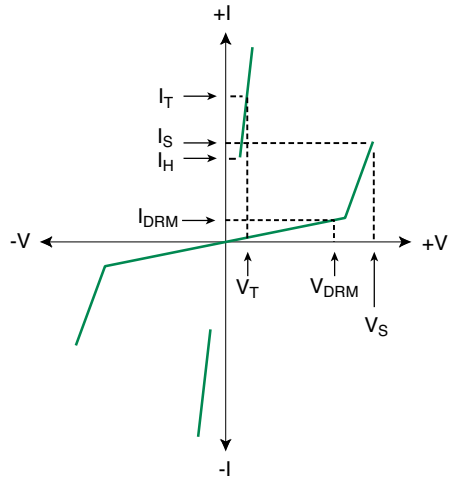
- All measurements are made at an ambient temperature of 25°C.
- Listed SIDACtor devices are bidirectional. All electrical parameters and surge ratings apply to forward and reverse polarities.

Surge Ratings

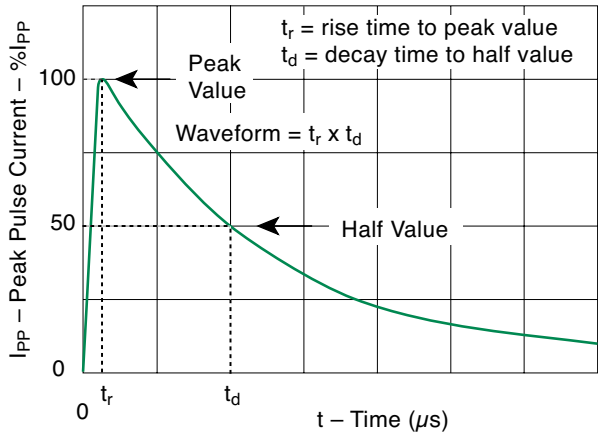
Series	I_{PP}	
	5x320 µs	10x1000 µs
	Amps	Amps
	Min	Min
H	25	35

- 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.

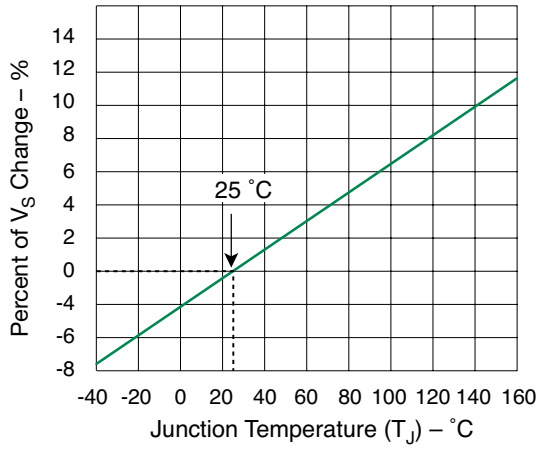
V-I Characteristics



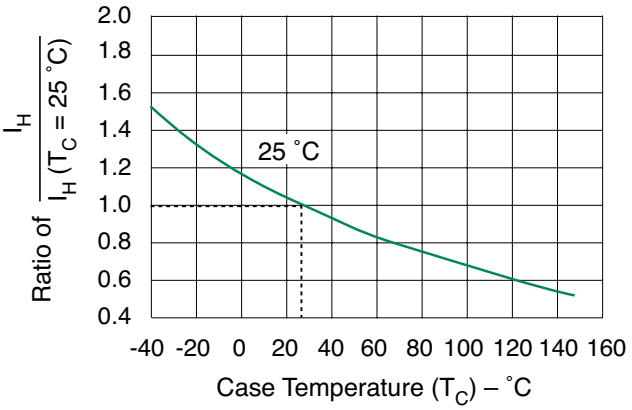
t_r x t_d Pulse Waveform



Normalized V_S Change Versus Junction Temperature

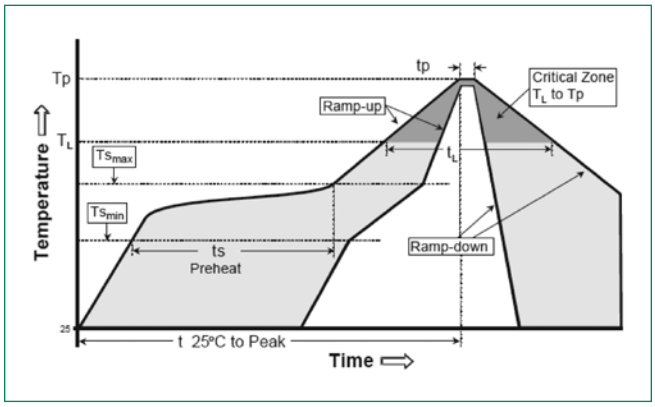


Normalized DC Holding Current Versus Case Temperature



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)	50 – 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)		$250^{+0/-5}$ °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



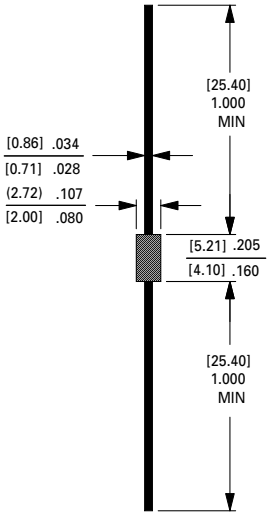
Physical Specifications

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

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

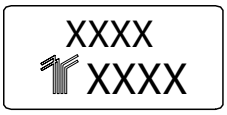
Dimensions



Dimensions in inches and (millimeters)

DO-41 SERIES

Part Marking System



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

Second Line: Lot number

Part Numbering System

Pxxx0 T HLRP

DEVICE TYPE
P: SIDACtor

MEDIAN VOLTAGE
xxx : xxx volts

CONSTRUCTION VARIATION
0 : Single SIDACtor chip used as a single device

PACKAGE TYPE
T : DO-41

SURGE I_{PP} Rating
H : 35A 10/1000µs

L : **RoHS Compliant**

PACKING STYLE
RP : Reel Pack per EIA RS-296

Packaging

Package Type	Description	Packing Quantity	Added Suffix	Industry Standard
DO-41	Axial	5000	RP	EIA RS-296

Tape and Reel Specification

Symbol	Case Type	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