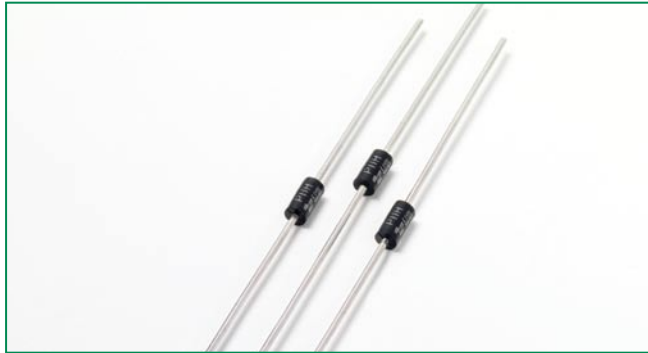


RoHS DO-41 Series SIDACtor® Device




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.

Features

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

Agency Approvals

| Agency | Agency File Number |
|---|--------------------|
|  | E133083 |

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} @ $I_{DRM}=5\mu A$ | 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 |

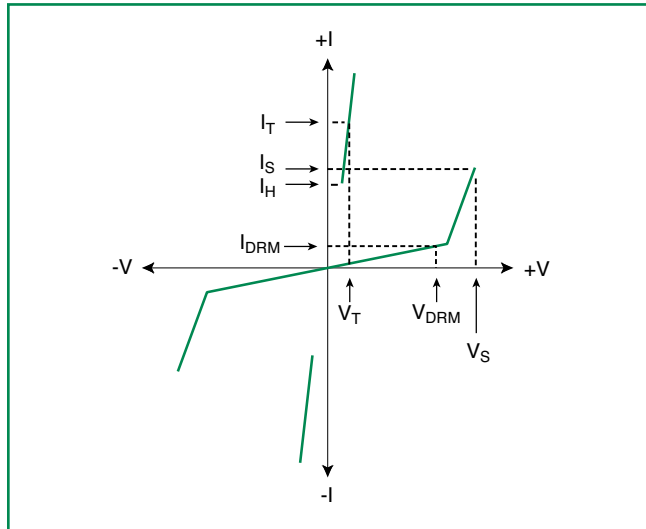
- All measurements are made at an ambient temperature of 25°C.
- Listed SIDACtor devices are bidirectional. All electrical parameters and surge ratings apply to forward and reverse polarities.

Surge Ratings

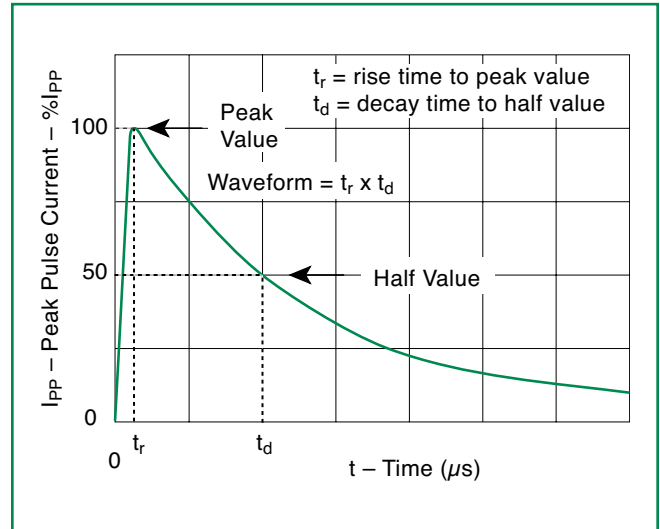
| Series | I_{PP} | |
|--------|---------------|-----------------|
| | 5x320 μ s | 10x1000 μ s |
| | Amps | Amps |
| | Min | Min |
| H | 25 | 35 |

- 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.

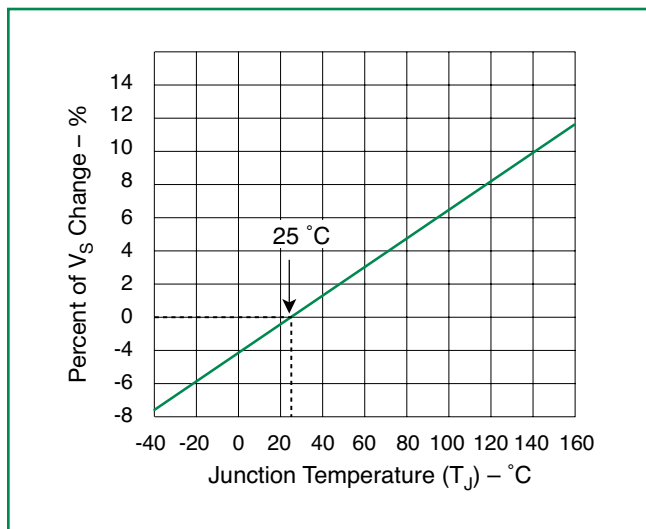
V-I Characteristics



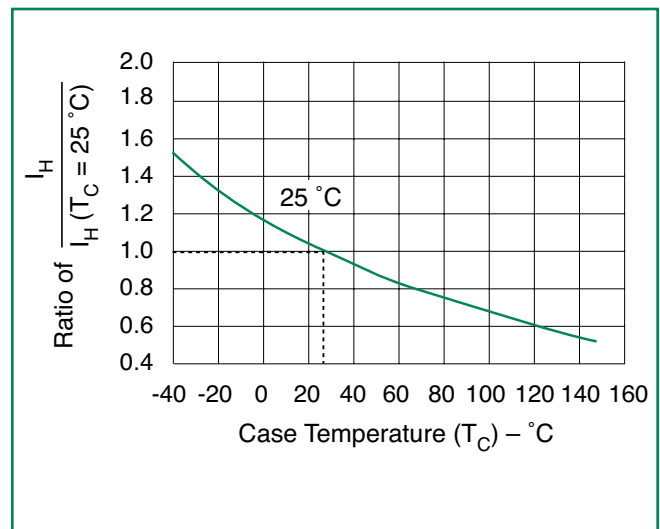
$t_r \times t_d$ Pulse Waveform



Normalized V_S Change Versus Junction Temperature

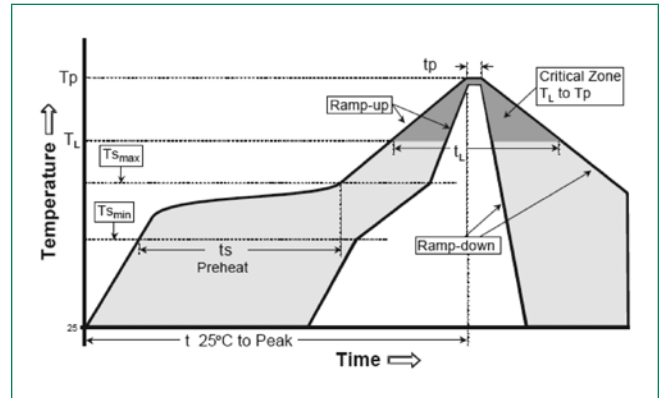


Normalized DC Holding Current Versus Case Temperature



Soldering Parameters

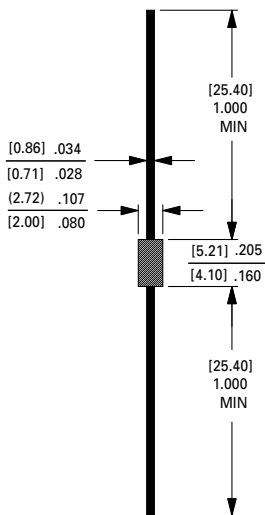
| | | |
|--|------------------------------------|--------------------|
| Reflow Condition | Pb – Free assembly | |
| Pre Heat | - Temperature Min ($T_{s(min)}$) | 150°C |
| | - Temperature Max ($T_{s(max)}$) | 190°C |
| | - Time (min to max) (t_s) | 50 – 150 seconds |
| Average ramp up rate (Liquidus 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 |

Dimensions



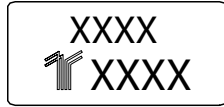
Dimensions in inches and (millimeters)

DO-41 SERIES

Environmental Specifications

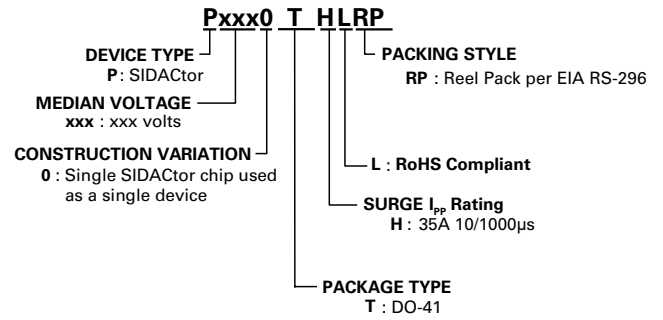
| | |
|-------------------------------|---|
| Operating/Storage Temperature | -40° C to ~ +150°C |
| Passive Aging | 125° C, 1000 hours Meet Spec |
| Humidity Aging | +85°C, 85% R.H. 1000 hours Meet Spec |
| Thermal Shock | MIL-STD-202 Method 107G +85°C/-40°C 100 times Meet Spec |
| Solvent Resistance | 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-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 |

