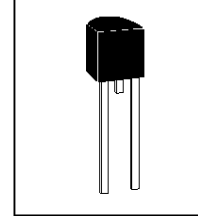


TO-92 SIDACtor

The TO-92 SIDACtor is a solid state protection device designed for telecommunications applications such as modems, line cards, fax machines, etc.

The SIDACtor is used to help equipment meet various regulatory requirements including: GR 1089, ITU K.20 & K.21, IEC 950, UL 1459 & 1950 and FCC Part 68.



Electrical Parameters

| Part Number* | V _{DRM} Volts | V _S Volts | V _T Volts | I _{DRM} μAmps | I _S mAmps | I _T Amps | I _H mAmps | C _O pF |
|--------------|---------------------------|-------------------------|-------------------------|---------------------------|-------------------------|------------------------|-------------------------|----------------------|
| P0080E_ | 6 | 25 | 5 | 5 | 800 | 1 | 50 | 100 |
| P0300E_ | 25 | 40 | 5 | 5 | 800 | 1 | 50 | 110 |
| P0640E_ | 58 | 77 | 5 | 5 | 800 | 1 | 150 | 50 |
| P0720E_ | 65 | 88 | 5 | 5 | 800 | 1 | 150 | 50 |
| P0900E_ | 75 | 98 | 5 | 5 | 800 | 1 | 150 | 50 |
| P1100E_ | 90 | 130 | 5 | 5 | 800 | 1 | 150 | 40 |
| P1300E_ | 120 | 160 | 5 | 5 | 800 | 1 | 150 | 40 |
| P1500E_ | 140 | 180 | 5 | 5 | 800 | 1 | 150 | 40 |
| P1800E_ | 160 | 220 | 5 | 5 | 800 | 1 | 150 | 30 |
| P2300E_ | 190 | 260 | 5 | 5 | 800 | 1 | 150 | 30 |
| P2600E_ | 220 | 300 | 5 | 5 | 800 | 1 | 150 | 30 |
| P3100E_ | 275 | 350 | 5 | 5 | 800 | 1 | 150 | 30 |
| P3500E_ | 320 | 400 | 5 | 5 | 800 | 1 | 150 | 30 |

* For individual "EA", "EB" and "EC" surge ratings, see table below. (P0080EB is not available.)

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.
- Listed SIDACtors are bi-directional. All electrical parameters & surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100V/μs.
- Special voltage (V_S & V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance is measured at 1MHz with a 2 volt bias and is a typical value for "EA" and "EB" product. "EC" capacitance is approximately 2x the listed value.

Surge Ratings

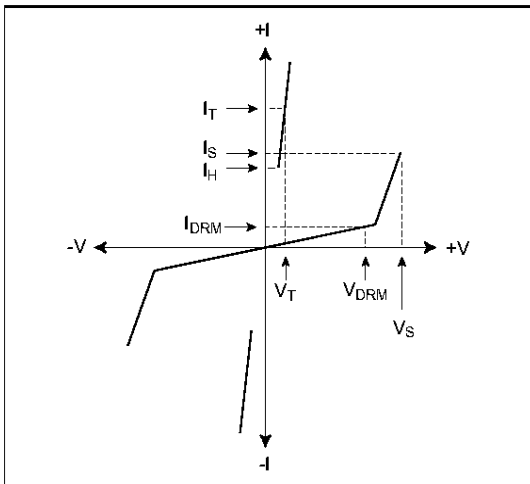
| Series | I _{PP} 2x10μs Amps | I _{PP} 8x20μs Amps | I _{PP} 10x160μs Amps | I _{PP} 10x560μs Amps | I _{PP} 10x1000μs Amps | I _{TSM} 60Hz Amps | dI/dt Amps/μs |
|--------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|----------------------------------|------------------|
| A | | 150 | 100 | 50 | | 20 | 500 |
| B | | 250 | 150 | 100 | | 30 | 500 |
| C | 500 | 400 | 200 | | 100 | 60 | 500 |

Thermal Considerations

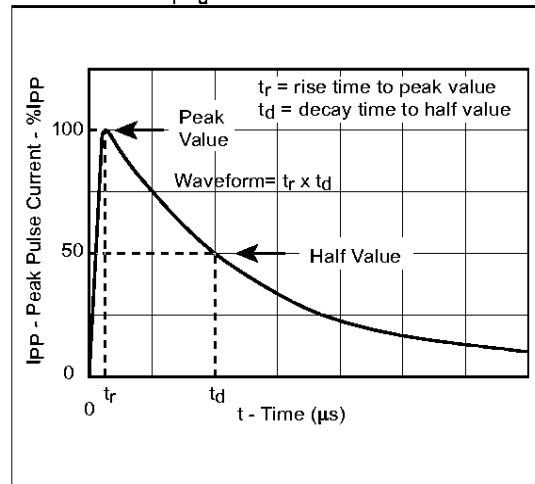
| Package | Symbol | Parameter | Value | Unit |
|---------|-----------------|---|-------------|------|
| TO-92 | T_j | Junction Temperature Range | -40 to +150 | °C |
| | T_s | Storage Temperature Range | -65 to +150 | °C |
| | T_c | Maximum Case Temperature | +110 | °C |
| | $R_{\theta jc}$ | Thermal Resistance: junction to case | +28 | °C/W |
| | $R_{\theta ja}$ | Thermal Resistance: junction to ambient | +90 | °C/W |

Data Sheets

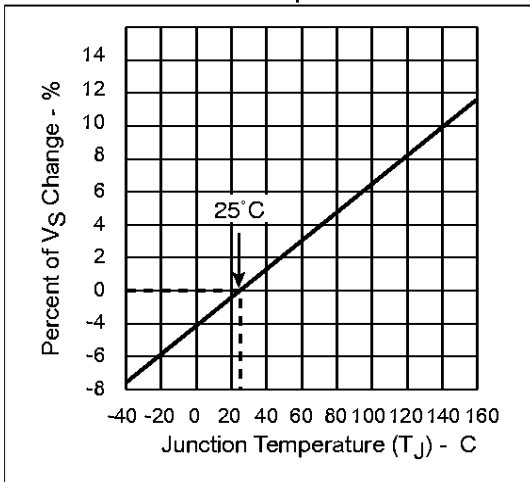
V-I Characteristics



t_r, t_d Pulse Wave-form



Normalized V_S Change vs. Junction Temperature



Normalized DC Holding Current vs. Case Temperature

