

## SIDACtor Device



DO-214AA *SIDACtor* solid state protection devices protect telecommunications equipment such as modems, line cards, fax machines, and other CPE.

*SIDACtor* devices are used to enable equipment to meet various regulatory requirements including GR 1089, ITU K.20, K.21 and K.45, IEC 60950, UL 60950, and TIA/EIA-IS-968 (formerly known as FCC Part 68).

### Electrical Parameters

| Part Number * | V <sub>DRM</sub> Volts | V <sub>S</sub> Volts | V <sub>T</sub> Volts | I <sub>DRM</sub> $\mu$ Amps | I <sub>S</sub> mAmps | I <sub>T</sub> Amps | I <sub>H</sub> mAmps | C <sub>O</sub> pF |
|---------------|------------------------|----------------------|----------------------|-----------------------------|----------------------|---------------------|----------------------|-------------------|
| P0080S_       | 6                      | 25                   | 4                    | 5                           | 800                  | 2.2                 | 50                   | 100               |
| P0300S_       | 25                     | 40                   | 4                    | 5                           | 800                  | 2.2                 | 50                   | 110               |
| P0640S_       | 58                     | 77                   | 4                    | 5                           | 800                  | 2.2                 | 150                  | 50                |
| P0720S_       | 65                     | 88                   | 4                    | 5                           | 800                  | 2.2                 | 150                  | 50                |
| P0900S_       | 75                     | 98                   | 4                    | 5                           | 800                  | 2.2                 | 150                  | 50                |
| P1100S_       | 90                     | 130                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 40                |
| P1300S_       | 120                    | 160                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 40                |
| P1500S_       | 140                    | 180                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 40                |
| P1800S_       | 170                    | 220                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 30                |
| P2300S_       | 190                    | 260                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 30                |
| P2600S_       | 220                    | 300                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 30                |
| P3100S_       | 275                    | 350                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 30                |
| P3500S_       | 320                    | 400                  | 4                    | 5                           | 800                  | 2.2                 | 150                  | 30                |

\* For individual "SA", "SB", and "SC" surge ratings, see table below.

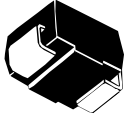
#### General Notes:

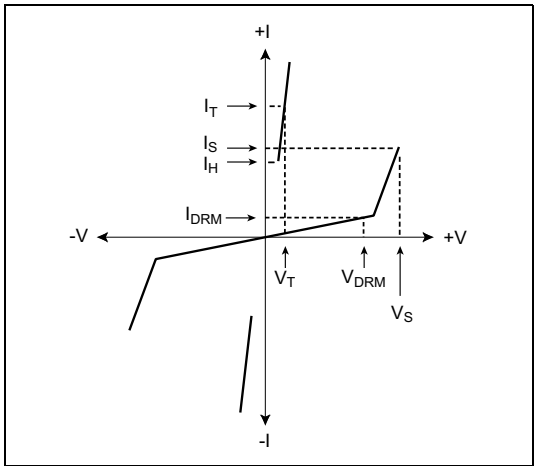
- All measurements are made at an ambient temperature of 25 °C. I<sub>PP</sub> applies to -40 °C through +85 °C temperature range.
- I<sub>PP</sub> is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- V<sub>DRM</sub> is measured at I<sub>DRM</sub>.
- V<sub>S</sub> is measured at 100 V/ $\mu$ s.
- Special voltage (V<sub>S</sub> and V<sub>DRM</sub>) and holding current (I<sub>H</sub>) requirements are available upon request.
- Off-state capacitance is measured at 1 MHz with a 2 V bias and is a typical value for "SA" and "SB" product. "SC" capacitance is approximately 2x the listed value. The off-state capacitance of the P0080SB is equal to the "SC" device.

### Surge Ratings

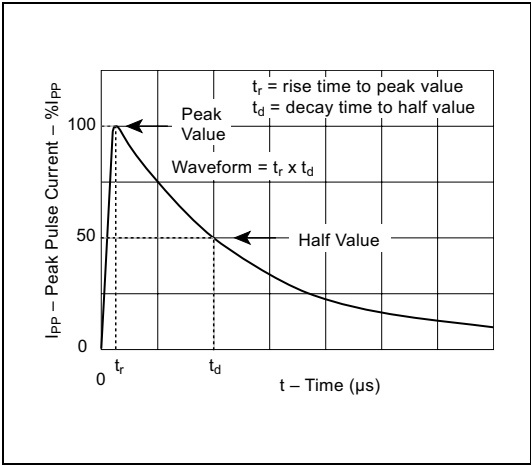
| Series | I <sub>PP</sub> 2x10 $\mu$ s Amps | I <sub>PP</sub> 8x20 $\mu$ s Amps | I <sub>PP</sub> 10x160 $\mu$ s Amps | I <sub>PP</sub> 10x560 $\mu$ s Amps | I <sub>PP</sub> 10x1000 $\mu$ s Amps | I <sub>TSM</sub> 60 Hz Amps | di/dt Amps/ $\mu$ s |
|--------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|-----------------------------|---------------------|
| A      | 150                               | 150                               | 90                                  | 50                                  | 45                                   | 20                          | 500                 |
| B      | 250                               | 250                               | 150                                 | 100                                 | 80                                   | 30                          | 500                 |
| C      | 500                               | 400                               | 200                                 | 150                                 | 100                                  | 50                          | 500                 |

Thermal Considerations

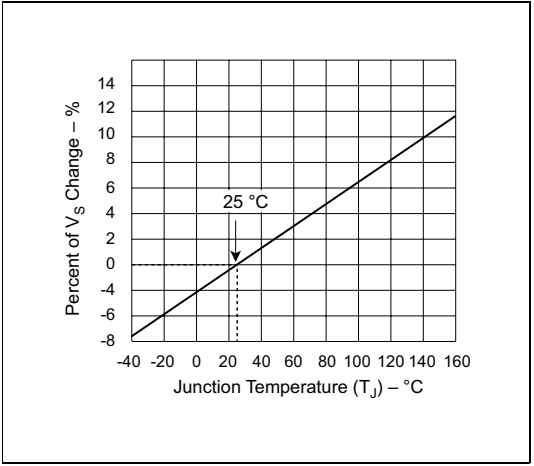
| Package                                                                           | Symbol          | Parameter                               | Value       | Unit |
|-----------------------------------------------------------------------------------|-----------------|-----------------------------------------|-------------|------|
|  | $T_J$           | Operating Junction Temperature Range    | -40 to +150 | °C   |
|                                                                                   | $T_S$           | Storage Temperature Range               | -65 to +150 | °C   |
|                                                                                   | $R_{\theta JA}$ | Thermal Resistance: Junction to Ambient | 90          | °C/W |



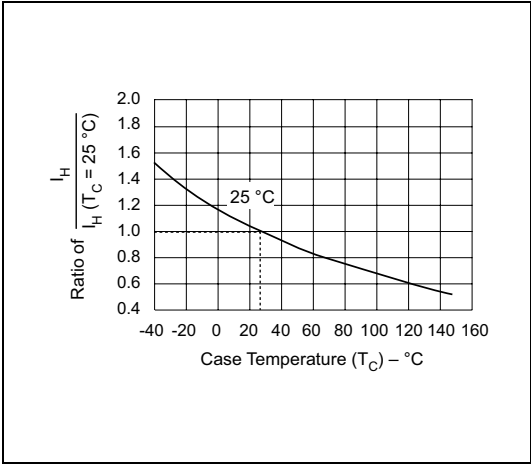
V-I Characteristics



t<sub>r</sub> x t<sub>d</sub> Pulse Wave-form



Normalized V<sub>S</sub> Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

Data Sheets