

## T10A *SIDACtor*® Device



The bi-directional T10A devices are a through-hole technology *SIDACtor* protector. It is intended for cost-sensitive telecommunication applications. This T10 *SIDACtor* series enables equipment to comply with various regulatory requirements including GR 1089, ITU K.20, K.21, and K.45, IEC 60950, UL 60950, and TIA-968-A (formerly known as FCC Part 68).

SIDACtor Devices

### Electrical Parameters

| Part Number * | V <sub>DRM</sub> @ 5 $\mu$ A Volts | V <sub>S</sub> Volts | V <sub>T</sub> Volts | I <sub>S</sub> mAmps | I <sub>H</sub> mAmps | pF TYP |
|---------------|------------------------------------|----------------------|----------------------|----------------------|----------------------|--------|
| T10A060B      | 58                                 | 80                   | 4                    | 800                  | 120                  | 50     |
| T10A060E      | 58                                 | 80                   | 4                    | 800                  | 180                  | 50     |
| T10A062       | 60                                 | 82                   | 4                    | 800                  | 150                  | 50     |
| T10A068       | 65                                 | 90                   | 4                    | 800                  | 150                  | 50     |
| T10A080B      | 75                                 | 120                  | 4                    | 800                  | 120                  | 43     |
| T10A080E      | 75                                 | 120                  | 4                    | 800                  | 180                  | 43     |
| T10A100       | 100                                | 133                  | 4                    | 800                  | 150                  | 43     |
| T10A110B      | 110                                | 135                  | 4                    | 800                  | 120                  | 38     |
| T10A110E      | 110                                | 135                  | 4                    | 800                  | 180                  | 38     |
| T10A120       | 120                                | 160                  | 4                    | 800                  | 150                  | 38     |
| T10A130       | 130                                | 173                  | 4                    | 800                  | 150                  | 38     |
| T10A140B      | 140                                | 170                  | 4                    | 800                  | 120                  | 34     |
| T10A140E      | 140                                | 170                  | 4                    | 800                  | 180                  | 34     |
| T10A180       | 180                                | 240                  | 4                    | 800                  | 150                  | 34     |
| T10A180B      | 175                                | 210                  | 4                    | 800                  | 120                  | 32     |
| T10A180E      | 175                                | 210                  | 4                    | 800                  | 180                  | 32     |
| T10A200       | 200                                | 267                  | 4                    | 800                  | 150                  | 30     |
| T10A220       | 220                                | 293                  | 4                    | 800                  | 150                  | 30     |
| T10A220B      | 215                                | 265                  | 4                    | 800                  | 120                  | 30     |
| T10A220E      | 215                                | 265                  | 4                    | 800                  | 180                  | 30     |
| T10A240       | 240                                | 320                  | 4                    | 800                  | 150                  | 30     |
| T10A270       | 270                                | 360                  | 4                    | 800                  | 150                  | 30     |
| T10A270B      | 270                                | 360                  | 4                    | 800                  | 120                  | 30     |
| T10A270E      | 270                                | 360                  | 4                    | 800                  | 180                  | 30     |

\* For 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 0.5 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.

### Surge Ratings in Amps

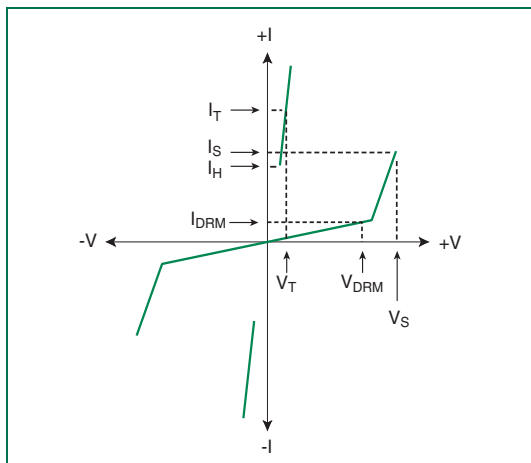
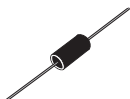
| Series | I <sub>PP</sub>     |                      |                         | I <sub>TSM</sub><br>50 / 60 Hz<br>Amps | di/dt<br>Amps/ $\mu$ s |
|--------|---------------------|----------------------|-------------------------|----------------------------------------|------------------------|
|        | 8x20 *<br>1.2x50 ** | 5x310 *<br>10x700 ** | 10x1000 *<br>10x1000 ** |                                        |                        |
|        | Amps                | Amps                 | Amps                    |                                        |                        |
| A      | 100                 | 37.5                 | 50                      | 30                                     | 100                    |

\* Current waveform in  $\mu$ s

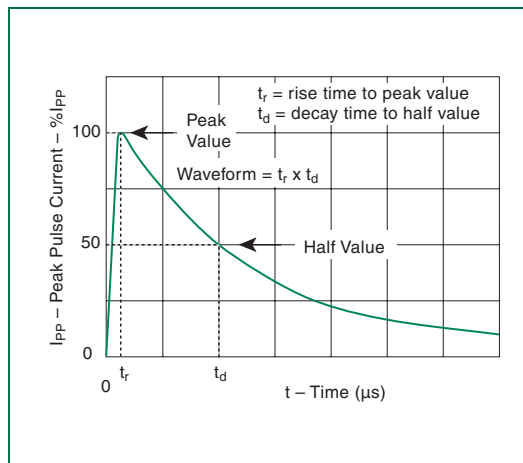
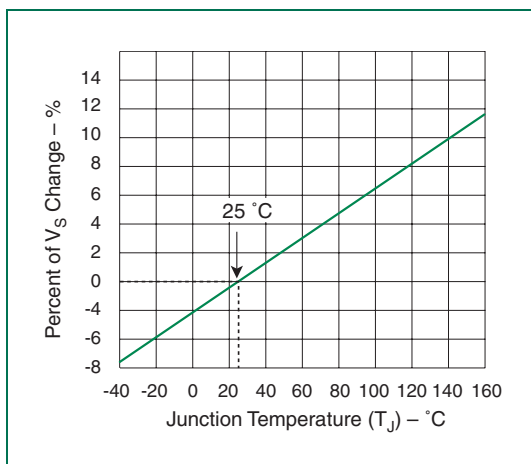
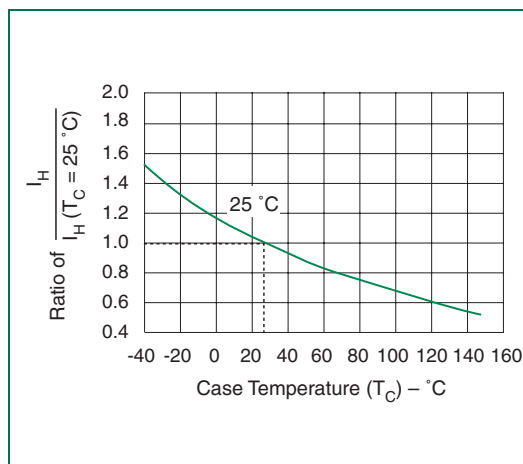
\*\* Voltage waveform in  $\mu$ s

### Thermal Considerations

| Package | Symbol          | Parameter                               | Value       | Unit |
|---------|-----------------|-----------------------------------------|-------------|------|
| DO-15   | $T_J$           | Operating Junction Temperature Range    | 150         | °C   |
|         | $T_S$           | Storage Temperature Range               | -40 to +150 | °C   |
|         | $R_{\theta JA}$ | Thermal Resistance: Junction to Ambient | 60          | °C/W |



V-I Characteristics


 $t_r \times t_d$  Pulse Waveform

Normalized  $V_S$  Change versus Junction Temperature


Normalized DC Holding Current versus Case Temperature