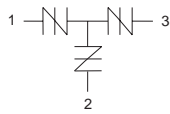


Balanced Three-chip MicroCapacitance (MC) SIDACtor Device



The balanced three-chip TO-220 MC SIDACtor solid state device protects telecommunication equipment in high-speed applications that are sensitive to load values and that require a lower capacitance. C_O values for the MC are 40% lower than a standard AC part.

This MC SIDACtor series is 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-968-A (formerly known as FCC Part 68) without the need of series resistors.

Electrical Parameters

| Part Number * | V _{DRM} Volts | V _S Volts | V _{DRM} Volts | V _S Volts | V _T Volts | I _{DRM} μ Amps | I _S mAmps | I _T Amps | I _H mAmps | C _O pF |
|---------------|------------------------|----------------------|------------------------|----------------------|----------------------|-----------------------------|----------------------|---------------------|----------------------|-------------------|
| | Pins 1-2, 2-3 | | Pins 1-3 | | | | | | | |
| P1553AC MC | 130 | 180 | 130 | 180 | 8 | 5 | 800 | 2.2 | 150 | 40 |
| P1803AC MC | 150 | 210 | 150 | 210 | 8 | 5 | 800 | 2.2 | 150 | 40 |
| P2103AC MC | 170 | 250 | 170 | 250 | 8 | 5 | 800 | 2.2 | 150 | 40 |
| P2353AC MC | 200 | 270 | 200 | 270 | 8 | 5 | 800 | 2.2 | 150 | 40 |
| P2703AC MC | 230 | 300 | 230 | 300 | 8 | 5 | 800 | 2.2 | 150 | 30 |
| P3203AC MC | 270 | 350 | 270 | 350 | 8 | 5 | 800 | 2.2 | 150 | 30 |
| P3403AC MC | 300 | 400 | 300 | 400 | 8 | 5 | 800 | 2.2 | 150 | 30 |
| P5103AC MC | 420 | 600 | 420 | 600 | 8 | 5 | 800 | 2.2 | 150 | 30 |

* For surge ratings, see table below.

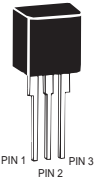
General Notes:

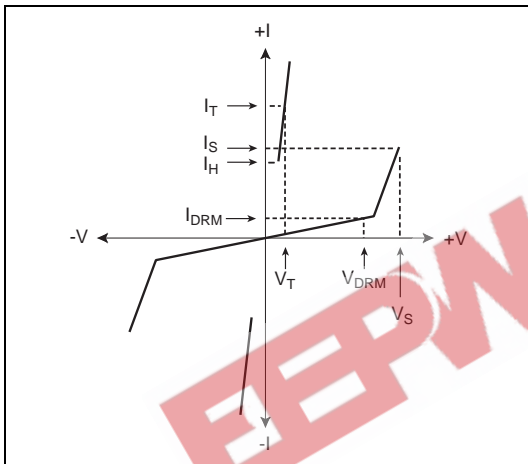
- All measurements are made at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C temperature range.
- I_{PP} is a repetitive surge rating and is guaranteed for the life of the product.
- Listed SIDACtor devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- V_{DRM} is measured at I_{DRM}.
- V_S is measured at 100 V/ μ s.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.
- Off-state capacitance (C_O) is measured between Pins 1-2 and 3-2 at 1 MHz with a 2 V bias.
- Device is designed to meet balance requirements of GTS 8700 and GR 974.

Surge Ratings

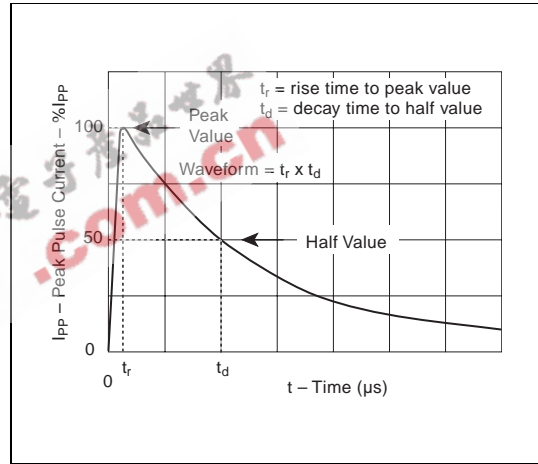
| Series | I _{PP} 2x10 μ s Amps | I _{PP} 8x20 μ s Amps | I _{PP} 10x160 μ s Amps | I _{PP} 10x560 μ s Amps | I _{PP} 10x1000 μ s Amps | I _{TSM} 60 Hz Amps | di/dt Amps/ μ s |
|--------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|-----------------------------|---------------------|
| C | 500 | 400 | 200 | 150 | 100 | 50 | 500 |

Thermal Considerations

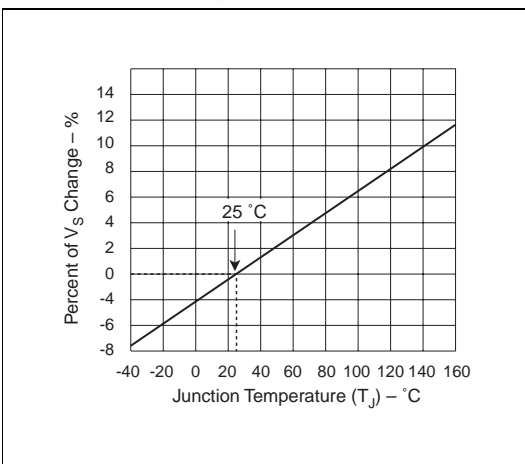
| Package | Symbol | Parameter | Value | Unit |
|--|-----------------|---|-------------|------|
| Modified TO-220  | T_J | Operating Junction Temperature Range | -40 to +150 | °C |
| | T_S | Storage Temperature Range | -65 to +150 | °C |
| | $R_{\theta JA}$ | Thermal Resistance: Junction to Ambient | 50 | °C/W |



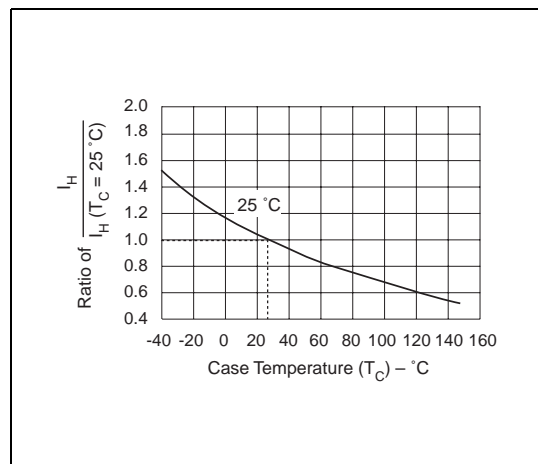
V-I Characteristics



$t_r \times t_d$ Pulse Wave-form



Normalized V_S Change versus Junction Temperature



Normalized DC Holding Current versus Case Temperature

Data Sheets