# MicroCapacitance (MC) SC *SIDACtor* Device

The DO-214AA SC MC *SIDACtor* series is intended for applications sensitive to load values. Typically, high speed connections require a lower capacitance. $C_O$ values for the MicroCapacitance device are 40% lower than a standard SC part.

This MC *SIDACtor* series is used to enable equipment to meet various regulatory requirements including GR 1089, IEC 60950, UL 60950, and TIA-968 (formerly known as FCC Part 68). Contact factory regarding ITU K.20, K.21, and K.45.

**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 |
|---|---|---|---|---|---|---|---|---|
| P0080SC MC | 6 | 25 | 4 | 5 | 800 | 2.2 | 50 | 55 |
| P0300SC MC | 25 | 40 | 4 | 5 | 800 | 2.2 | 50 | 35 |
| P0640SC MC | 58 | 77 | 4 | 5 | 800 | 2.2 | 150 | 60 |
| P0720SC MC | 65 | 88 | 4 | 5 | 800 | 2.2 | 150 | 60 |
| P0900SC MC | 75 | 98 | 4 | 5 | 800 | 2.2 | 150 | 60 |
| P1100SC MC | 90 | 130 | 4 | 5 | 800 | 2.2 | 150 | 50 |
| P1300SC MC | 120 | 160 | 4 | 5 | 800 | 2.2 | 150 | 50 |
| P1500SC MC | 140 | 180 | 4 | 5 | 800 | 2.2 | 150 | 50 |
| P1800SC MC | 170 | 220 | 4 | 5 | 800 | 2.2 | 150 | 40 |
| P2300SC MC | 190 | 260 | 4 | 5 | 800 | 2.2 | 150 | 40 |
| P2600SC MC | 220 | 300 | 4 | 5 | 800 | 2.2 | 150 | 40 |
| P3100SC MC | 275 | 350 | 4 | 5 | 800 | 2.2 | 150 | 40 |
| P3500SC MC | 320 | 400 | 4 | 5 | 800 | 2.2 | 150 | 40 |

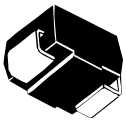
* For surge ratings, see table below.

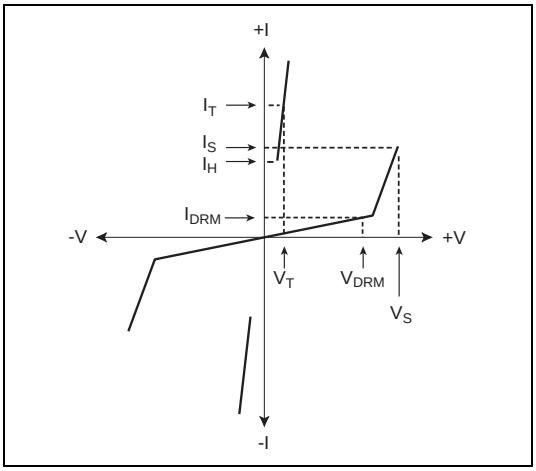
General Notes:
- All measurements are made at an ambient temperature of 25 °C. $I_{PP}$ applies to -40 °C through +85 °C temperature range.
- $I_{PP}$ is a repetitive surge rating and is guaranteed for the life of the product.
- Listed *SIDACtor* devices are bi-directional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- $V_{DRM}$ is measured at $I_{DRM}$.
- $V_S$ is measured at 100 V/µs.
- Special voltage ($V_S$ and $V_{DRM}$) and holding current ($I_H$) requirements are available upon request.
- Off-state capacitance ($C_O$) is measured at 1 MHz with a 2 V bias.

**Surge Ratings**

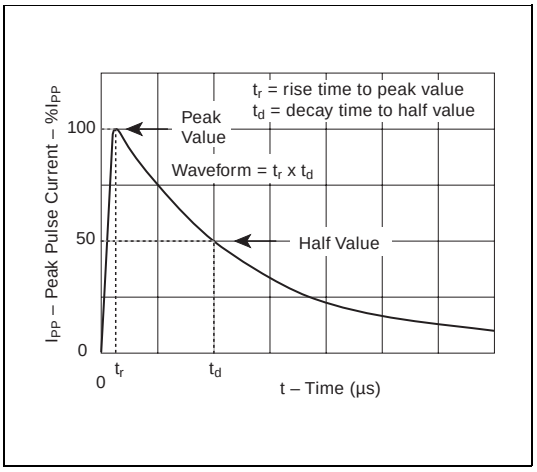
| Series | $I_{PP}$ 2x10 µs Amps | $I_{PP}$ 8x20 µs Amps | $I_{PP}$ 10x160 µs Amps | $I_{PP}$ 10x560 µs Amps | $I_{PP}$ 10x1000 µs Amps | $I_{TSM}$ 60 Hz Amps | di/dt Amps/µs |
|---|---|---|---|---|---|---|---|
| C | 500 | 400 | 200 | 150 | 100 | 30 | 500 |

**Thermal Considerations**

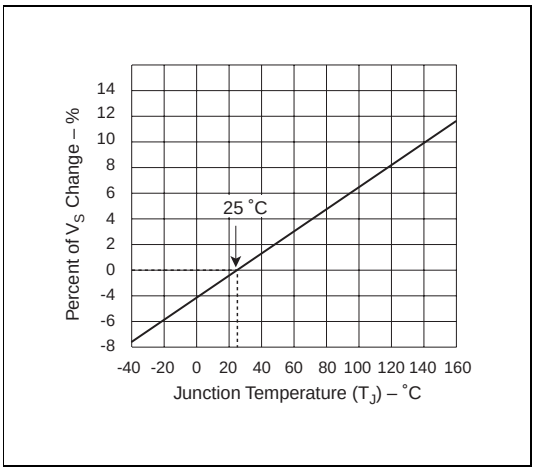
| Package | Symbol | Parameter | Value | Unit |
|---|---|---|---|---|
| DO-214AA  | $T_J$ | Operating Junction Temperature Range | -40 to +150 | °C |
| | $T_S$ | Storage Temperature Range | -65 to +150 | °C |
| | $R_{\theta JA}$ | Thermal Resistance: Junction to Ambient | 90 | °C/W |



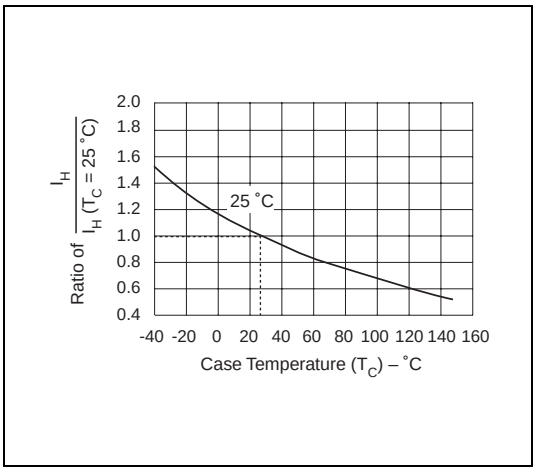

V-I Characteristics




$t_r$ x $t_d$ Pulse Wave-form




Normalized $V_S$ Change versus Junction Temperature




Normalized DC Holding Current versus Case Temperature