

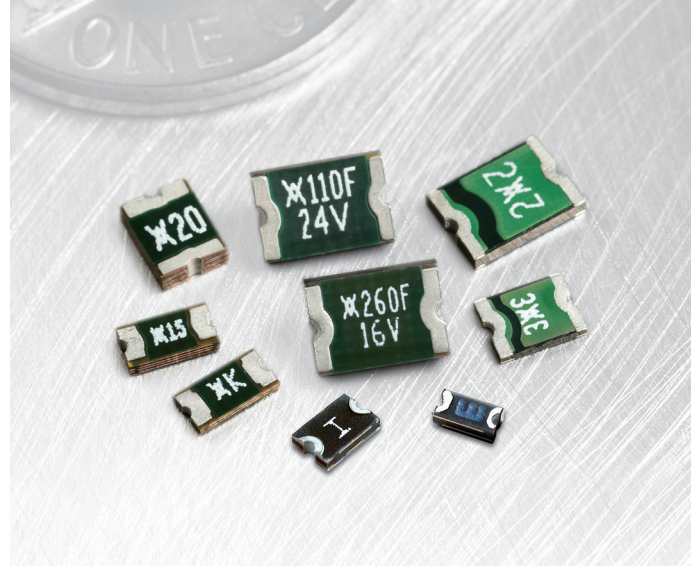
POLYSWITCH RESETTABLE DEVICES

Surface-Mount Devices

PolySwitch surface-mount devices are an effective circuit protection method for computer, consumer, multimedia, portable and automotive electronics applications.

In an effort to reduce the size and cost of surface-mount devices, Littelfuse PolySwitch team introduced the miniSMD product series in 1995. Subsequently, we developed the microSMD, nanoSMD, picoSMD and femtoSMD family of products. The femtoSMD series reduced the device size to a 1608mm (0603 mils) footprint, which is one-twelfth the size of the popular miniSMD series.

Recent additions to the PolySwitch surface-mount series include 1.1A picoSMD 1210mm (0805 mils) and 0.35A femtoSMD 1608mm (0603 mils) devices.



BENEFITS

- Smaller size helps save board space and cost
- Many product choices optimizes design flexibility
- Compatible with high-volume electronics assembly
- Assists in meeting regulatory requirements
- Higher voltage ratings allow use in new applications

FEATURES

- RoHS compliant
- Halogen free
(refers to: Br \geq 900ppm, Cl \geq 900ppm, Br+Cl \geq 1500ppm)
- Broadest range of resettable devices available in the industry
- Current ratings from 0.05 to 3.1A
- Voltage ratings from 6V computer and electronic applications to 60V telecom applications
- Agency recognition: UL, CSA, TÜV
- Small footprint
- Fast time-to-trip
- Low resistance

APPLICATIONS

- Computer
- Portable electronics
- Multimedia
- Game machines
- Telephony and broadband
- Mobile phones
- Automotive
- Industrial controls
- Battery

PolySwitch Resettable Devices

Surface-Mount Devices

Application Selection Table

- The table below lists PolySwitch surface-mount devices recommended for use in typical applications
- Specifications for the suggested PolySwitch surface-mount device part numbers can be found in this table
- Once a part has been selected, the user should evaluate and test each product for the intended application

| | | | PolySwitch Resettable Devices - Key Selection Criteria | | |
|-----------------------------|----------------------|-------------------------|--|-------------------|--|
| Protection Application | Additional Comments | Overcurrent Overvoltage | Small Size | Low Resistance | Fast Time-to-trip (Temperature Protection) |
| AC Adapter Input Power | Use w/ Zener & Triac | | SMD250F | SMD250F | SMD200F |
| Battery Pack Protection | | | nanoSMDC150F | miniSMDC260F | miniSMDE200F/16 |
| Charger Protection | | | nanoSMDC050F | miniSMDC110F/16 | nanoSMDC075F |
| CPU/IC Protection | | | nanoSMDC110F | nanoSMDC150F | nanoSMDC075F |
| Data Acquisition/Sensor | | | microSMD005F | — | microSMD005F |
| DC Input/Output Power | ≤6V | | nanoSMDC075F | nanoSMDC150F | nanoSMDC050F/13.2 |
| | ≤12V | | miniSMDC075F | miniSMDC110F/16 | miniSMDC075F |
| DDC | | | nanoSMDC075F | nanoSMDC110F | nanoSMDC050F/13.2 |
| Device Bay System | DB12, DB20 | | miniSMDC200F | miniSMDC260F | miniSMDC200F |
| | DB32 | | miniSMDC260F | SMD300F | miniSMDC200F |
| Ethernet/LAN | | | nanoSMDC050F/13.2 | miniSMDC110F/16 | nanoSMDC075F |
| Fan | | | microSMD035F | microSMD050F | microSMD035F |
| HDMI | | | picoSMDC035S | picoSMDC035S | picoSMDC035S |
| IEEE 802.3af | VoIP | | decaSMDC050F/60 | decaSMDC050F/60 | decaSMDC050F/60 |
| IEEE-1394 | Power Provider | | SMD100F/33 | SMD185F | SMD100F/33 |
| | Alt. Power Provider | | SMD185F | SMD185F | SMD150F/33 |
| | Self-Powered | | SMD185F | SMD185F | SMD150F/33 |
| LCD Inverter | | | nanoSMDC050F/13.2 | miniSMDC110F/16 | nanoSMDC075F |
| LCD Screen Power | | | nanoSMDC050F/13.2 | nanoSMDC050F/13.2 | microSMD035F |
| LNB (Low Noise Block) | | | SMD075F | SMD075F | SMD050F |
| Motor | ≤6V | | nanoSMDC110F | nanoSMDC150F | microSMD075F |
| | ≤13.2V | | miniSMDC075F | miniSMDC110F/16 | miniSMDC075F |
| PS/2 Mouse/Keyboard | | | nanoSMDC075F | nanoSMDC110F | nanoSMDC050F/13.2 |
| Signal - Data Communication | ≤6V | | nanoSMDC075F | nanoSMDC075F | nanoSMDC075F |
| | ≤13.2V | | miniSMDC050F | miniSMDC075F | miniSMDC020F |
| | ≤30V | | SMD030F-2018 | SMD075F | SMD050F |
| SCSI | | | nanoSMDC110F | nanoSMDC150F | nanoSMDC075F |
| SIM/Smart Card Reader | | | femtoSMDC010F | femtoSMDC010F | femtoSMDC005F |
| Telecom - Modem | Digital Line | OC | miniSMDC014F | miniSMDC014F | miniSMDC014F |
| Telecom - PBX | Subscriber | OC | miniSMDC014F | miniSMDC014F | miniSMDC014F |
| Temperature Sensor | CPU | | nanoSMDC050F/13.2 | nanoSMDC075F | nanoSMDC050F/13.2 |
| USB | Individual Port | | nanoSMDC075F | nanoSMDC110F | nanoSMDC050F/13.2 |
| | 2 Port Ganged | | nanoSMDC150F | miniSMDC150F | miniSMDC125F |
| | 3 Port Ganged | | miniSMDC200F | miniSMDC200F | miniSMDC200F |

Note: This list is not exhaustive. Littelfuse welcomes our customers' input for additional application ideas for PolySwitch resettable devices.

PolySwitch Resettable Devices

Surface-Mount Devices

Table S1 — Product Series: Size, Current Rating, Voltage Rating/Maximum Resistance

| | femtoSMD | picoSMD | nanoSMD | microSMD | miniSMD | midSMD |
|-------------------------|---------------------------|---------------------------|----------------------------|----------------------------|-----------------------------|--------------------------|
| Size mm | 1608 | 2012 | 3216 | 3225 | 4532 | 5050 |
| (mils) | (0603) | (0805) | (1206) | (1210) | (1812) | (2018) |
| Hold Current (A) | | | | | | |
| 0.050 | 15V _{DC} /30.00Ω | — | — | 30V _{DC} /50Ω | — | — |
| 0.080 | 12V _{DC} /14.00Ω | — | — | — | — | — |
| 0.100 | 12V _{DC} /8.00Ω | 15V _{DC} /11.00Ω | 60V _{DC} /15.00Ω | 30V _{DC} /15Ω | 60V _{DC} /12.70Ω | — |
| | — | — | — | — | — | — |
| 0.120 | 9V _{DC} /5.80Ω | 15V _{DC} /9.00Ω | 48V _{DC} /6.50Ω | — | — | — |
| 0.140 | — | — | — | — | 60V _{DC} /6.00Ω | — |
| 0.160 | 9V _{DC} /4.20Ω | — | 48V _{DC} /5.00Ω | — | — | — |
| 0.200 | 9V _{DC} /3.00Ω | 9V _{DC} /3.20Ω | 24V _{DC} /3.10Ω | — | 30V _{DC} /3.30Ω | — |
| 0.250 | — | — | 16V _{DC} /2.10Ω | — | — | — |
| 0.300 | — | — | — | — | 30V _{DC} /1.75Ω | 60V _{DC} /2.30Ω |
| 0.350 | 6V _{DC} /1.00Ω | 6V _{DC} /1.40Ω | 16V _{DC} /1.35Ω | 6V _{DC} /1.30Ω | — | — |
| 0.500 | — | 6V _{DC} /0.80Ω | 13.2V _{DC} /0.75Ω | 13.2V _{DC} /0.90Ω | 24V _{DC} /1.00Ω | — |
| 0.750 | — | 6V _{DC} /0.35Ω* | 6V _{DC} /0.30Ω | 6V _{DC} /0.40Ω | 13.2V _{DC} /0.45Ω | — |
| | — | — | — | — | 24V _{DC} /0.29Ω | — |
| | — | — | — | — | 33V _{DC} /0.39Ω | — |
| 1.000 | — | — | — | — | — | 15V _{DC} /0.40Ω |
| | — | — | — | — | — | — |
| 1.100 | — | 6V _{DC} /0.17Ω* | 6V _{DC} /0.20Ω | 6V _{DC} /0.21Ω | 8V _{DC} /0.21Ω | — |
| | — | — | — | — | 16V _{DC} /0.18Ω | — |
| | — | — | — | — | 24V _{DC} /0.18Ω | — |
| 1.200 | — | — | — | — | — | — |
| 1.250 | — | — | — | — | 6V _{DC} /0.14Ω | — |
| | — | — | — | — | 16V _{DC} /0.14Ω | — |
| 1.500 | — | — | 6V _{DC} /0.11Ω | 6V _{DC} /0.11Ω | 6V _{DC} /0.11Ω | 15V _{DC} /0.18Ω |
| | — | — | — | — | 12V _{DC} /0.11Ω | — |
| | — | — | — | — | 16V _{DC} /0.11Ω | — |
| | — | — | — | — | 24V _{DC} /0.12Ω | — |
| 1.600 | — | — | — | — | 9V _{DC} /0.10Ω | — |
| 1.750 | — | — | — | 6V _{DC} /0.08Ω | — | — |
| 1.850 | — | — | — | — | — | — |
| 2.000 | — | — | 6V _{DC} /0.072Ω | 6V _{DC} /0.06Ω | 8V _{DC} /0.07Ω | 6V _{DC} /0.10Ω |
| | — | — | — | — | 16V _{DC} /0.085Ω | — |
| 2.500 | — | — | — | — | — | — |
| 2.600 | — | — | — | — | 6V _{DC} /0.043Ω | — |
| | — | — | — | — | 12V _{DC} /0.047Ω | — |
| | — | — | — | — | 13.2V _{DC} /0.050Ω | — |
| | — | — | — | — | 16V _{DC} /0.050Ω | — |
| 3.000 | — | — | — | — | 6V _{DC} /0.036Ω | — |
| | — | — | — | — | — | — |
| 3.100 | — | — | — | — | — | — |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S1 — Product Series: Size, Current Rating, Voltage Rating/Maximum Resistance
(Cont'd)

| | SMDC | SMD | SMD2 | decaSMD | High Temperature SMD |
|-------------------------|---------------------------|---------------------------|---------------------------|--------------------------|--------------------------|
| Size mm | 7555 | 7555 | 8763 | 5050 | 3216 & 3225 |
| (mils) | (2920) | (2920) | (3425) | (2018) | (1206) & (1210) |
| Hold Current (A) | | | | | |
| 0.050 | — | — | — | — | — |
| 0.080 | — | — | — | — | — |
| 0.100 | — | — | — | — | 30V _{DC} /10.0Ω |
| | — | — | — | — | 30V _{DC} /11.0Ω |
| 0.120 | — | — | — | — | — |
| 0.140 | — | — | — | — | — |
| 0.160 | — | — | — | — | — |
| 0.200 | — | — | — | — | — |
| 0.250 | — | — | — | — | — |
| 0.300 | — | 60V _{DC} /4.80Ω | — | — | — |
| 0.350 | — | — | — | — | — |
| 0.500 | — | 60V _{DC} /1.40Ω | — | 60V _{DC} /1.10Ω | 6V _{DC} /0.90Ω |
| 0.750 | — | 30V _{DC} /1.00Ω | — | — | 6V _{DC} /0.36Ω |
| | — | 60V _{DC} /1.00Ω | — | — | — |
| | — | — | — | — | — |
| 1.000 | — | 30V _{DC} /0.48Ω | — | — | — |
| | — | 33V _{DC} /0.41Ω | — | — | — |
| 1.100 | — | — | — | — | — |
| | — | — | — | — | — |
| | — | — | — | — | — |
| 1.200 | — | 16V _{DC} /0.34Ω | — | — | — |
| 1.250 | 33V _{DC} /0.25Ω | 15V _{DC} /0.25Ω | — | — | — |
| | — | — | — | — | — |
| 1.500 | — | 33V _{DC} /0.23Ω | 15V _{DC} /0.25Ω | — | — |
| | — | — | 33V _{DC} /0.23Ω | — | — |
| | — | — | — | — | — |
| | — | — | — | — | — |
| 1.600 | — | — | 16V _{DC} /0.15Ω | — | — |
| 1.750 | — | — | — | — | — |
| 1.850 | 33V _{DC} /0.15Ω | — | 33V _{DC} /0.165Ω | — | — |
| 2.000 | — | 24V _{DC} /0.125Ω | 15V _{DC} /0.125Ω | — | — |
| | — | — | — | — | — |
| 2.500 | — | 15V _{DC} /0.085Ω | 15V _{DC} /0.85Ω | — | — |
| 2.600 | — | 6V _{DC} /0.075Ω | — | — | — |
| | — | — | — | — | — |
| | — | — | — | — | — |
| | — | — | — | — | — |
| 3.000 | 24V _{DC} /0.072Ω | 6V _{DC} /0.048Ω | — | — | — |
| | — | 15V _{DC} /0.05Ω | — | — | — |
| 3.100 | 18V _{DC} /0.036Ω | — | — | — | — |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S2 – Thermal Derating [Hold Current (A) at Ambient Temperature (°C)]

| Part Number | Maximum Ambient Temperature | | | | | | | | | | | |
|---|-----------------------------|-------|------|------|------|------|------|------|------|------|------|-------|
| | -40°C | -20°C | 0°C | 20°C | 25°C | 40°C | 50°C | 60°C | 70°C | 80°C | 85°C | 125°C |
| femtoSMDC Series Size 1608mm/0603mils | | | | | | | | | | | | |
| femtoSMDC005F | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 | — |
| femtoSMDC008F | 0.13 | 0.11 | 0.10 | 0.08 | 0.08 | 0.07 | 0.06 | 0.06 | 0.05 | 0.04 | 0.04 | — |
| femtoSMDC010F | 0.16 | 0.14 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 | — |
| femtoSMDC012F | 0.18 | 0.16 | 0.14 | 0.12 | 0.12 | 0.11 | 0.10 | 0.08 | 0.08 | 0.07 | 0.06 | — |
| femtoSMDC016F | 0.25 | 0.22 | 0.18 | 0.17 | 0.16 | 0.14 | 0.12 | 0.11 | 0.10 | 0.08 | 0.07 | — |
| femtoSMDC020F | 0.30 | 0.27 | 0.24 | 0.20 | 0.20 | 0.17 | 0.16 | 0.14 | 0.12 | 0.11 | 0.10 | — |
| femtoSMDC035F | 0.53 | 0.47 | 0.41 | 0.36 | 0.35 | 0.30 | 0.27 | 0.25 | 0.22 | 0.19 | 0.17 | — |
| picoSMDC Series Size 2012mm/0805mils | | | | | | | | | | | | |
| picoSMDC010S | 0.17 | 0.15 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | — |
| picoSMDC012S | 0.20 | 0.17 | 0.15 | 0.13 | 0.12 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | — |
| picoSMDC020S | 0.30 | 0.27 | 0.24 | 0.21 | 0.20 | 0.18 | 0.16 | 0.15 | 0.13 | 0.12 | 0.11 | — |
| picoSMDC035S | 0.55 | 0.49 | 0.44 | 0.37 | 0.35 | 0.31 | 0.28 | 0.26 | 0.23 | 0.20 | 0.18 | — |
| picoSMDC050S | 0.70 | 0.62 | 0.55 | 0.55 | 0.50 | 0.43 | 0.38 | 0.33 | 0.30 | 0.28 | 0.26 | — |
| picoSMDC075S | 1.13 | 1.01 | 0.90 | 0.78 | 0.75 | 0.67 | 0.61 | 0.55 | 0.49 | 0.43 | 0.40 | — |
| picoSMDC110S | 1.64 | 1.47 | 1.30 | 1.14 | 1.10 | 0.97 | 0.89 | 0.80 | 0.72 | 0.64 | 0.59 | — |
| nanoSMDC Series Size 3216mm/1206mils | | | | | | | | | | | | |
| NEW nanoSMDC010F | 0.15 | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | — |
| nanoSMDC012F | 0.20 | 0.17 | 0.15 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | — |
| nanoSMDC016F | 0.21 | 0.20 | 0.18 | 0.16 | 0.16 | 0.14 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | — |
| nanoSMDC020F | 0.34 | 0.30 | 0.26 | 0.22 | 0.20 | 0.17 | 0.15 | 0.13 | 0.11 | 0.09 | 0.08 | — |
| nanoSMDC025F | 0.38 | 0.33 | 0.30 | 0.26 | 0.25 | 0.22 | 0.20 | 0.19 | 0.16 | 0.13 | 0.11 | — |
| nanoSMDC035F | 0.58 | 0.51 | 0.44 | 0.38 | 0.35 | 0.31 | 0.28 | 0.24 | 0.21 | 0.18 | 0.16 | — |
| nanoSMDC050F/13.2 | 0.78 | 0.69 | 0.61 | 0.52 | 0.50 | 0.44 | 0.39 | 0.35 | 0.30 | 0.25 | 0.24 | — |
| nanoSMDC075F | 1.15 | 1.04 | 0.92 | 0.78 | 0.75 | 0.69 | 0.63 | 0.58 | 0.51 | 0.46 | 0.43 | — |
| nanoSMDC110F | 1.64 | 1.46 | 1.30 | 1.10 | 1.06 | 0.92 | 0.83 | 0.80 | 0.65 | 0.56 | 0.52 | — |
| nanoSMDC150F | 2.20 | 1.99 | 1.77 | 1.55 | 1.50 | 1.34 | 1.23 | 1.10 | 1.01 | 0.90 | 0.84 | — |
| nanoSMDC200F | 2.92 | 2.64 | 2.35 | 2.07 | 2.00 | 1.79 | 1.64 | 1.50 | 1.36 | 1.22 | 1.15 | — |
| microSMD Series Size 3225mm/1210mils | | | | | | | | | | | | |
| microSMD005F | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.02 | 0.02 | — |
| microSMD010F | 0.15 | 0.13 | 0.12 | 0.10 | 0.10 | 0.09 | 0.08 | 0.06 | 0.06 | 0.05 | 0.05 | — |
| microSMD035F | 0.51 | 0.46 | 0.40 | 0.35 | 0.34 | 0.30 | 0.27 | 0.24 | 0.22 | 0.19 | 0.18 | — |
| microSMD050F | 0.76 | 0.66 | 0.58 | 0.50 | 0.48 | 0.42 | 0.38 | 0.35 | 0.29 | 0.25 | 0.23 | — |
| microSMD075F | 1.10 | 0.97 | 0.86 | 0.75 | 0.72 | 0.64 | 0.58 | 0.55 | 0.47 | 0.42 | 0.39 | — |
| microSMD110F | 1.60 | 1.42 | 1.26 | 1.10 | 1.06 | 0.94 | 0.86 | 0.80 | 0.70 | 0.62 | 0.58 | — |
| microSMD150F | 2.30 | 2.02 | 1.76 | 1.50 | 1.43 | 1.24 | 1.11 | 1.00 | 0.85 | 0.72 | 0.65 | — |
| microSMD175F | 2.80 | 2.45 | 2.10 | 1.75 | 1.70 | 1.55 | 1.45 | 1.35 | 1.25 | 1.15 | 1.10 | — |
| microSMD200F | 2.60 | 2.44 | 2.35 | 2.00 | 1.96 | 1.78 | 1.67 | 1.50 | 1.45 | 1.15 | 1.10 | — |
| miniSMDC Series Size 4532mm/1812mils | | | | | | | | | | | | |
| miniSMDC010F | 0.17 | 0.15 | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 | — |
| miniSMDC014F | 0.23 | 0.20 | 0.17 | 0.14 | 0.13 | 0.11 | 0.10 | 0.09 | 0.07 | 0.06 | 0.05 | — |
| miniSMDC020F | 0.30 | 0.27 | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.13 | 0.12 | 0.10 | 0.09 | — |
| miniSMDC030F | 0.49 | 0.44 | 0.39 | 0.32 | 0.30 | 0.27 | 0.24 | 0.22 | 0.18 | 0.16 | 0.14 | — |
| miniSMDC050F | 0.59 | 0.57 | 0.55 | 0.50 | 0.48 | 0.45 | 0.43 | 0.35 | 0.30 | 0.25 | 0.23 | — |
| miniSMDC075F | 1.10 | 0.99 | 0.87 | 0.75 | 0.72 | 0.63 | 0.57 | 0.49 | 0.45 | 0.39 | 0.35 | — |
| miniSMDC075F/24 | 1.50 | 1.25 | 1.00 | 0.75 | 0.73 | 0.65 | 0.60 | 0.55 | 0.50 | 0.45 | 0.43 | — |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S2 – Thermal Derating [Hold Current (A) at Ambient Temperature (°C)] (Cont'd)

| Part Number | Maximum Ambient Temperature | | | | | | | | | | | |
|-----------------------------|-----------------------------|-------|------|------|------|------|------|------|------|------|------|-------|
| | -40°C | -20°C | 0°C | 20°C | 25°C | 40°C | 50°C | 60°C | 70°C | 80°C | 85°C | 125°C |
| miniSMDC Series | | | | | | | | | | | | |
| Size 4532mm/1812mils | | | | | | | | | | | | |
| miniSMDC075F/33 | 1.09 | 0.98 | 0.87 | 0.77 | 0.75 | 0.66 | 0.61 | 0.55 | 0.50 | 0.45 | 0.42 | — |
| miniSMDC100F | 1.60 | 1.45 | 1.28 | 1.10 | 1.07 | 0.92 | 0.83 | 0.71 | 0.66 | 0.57 | 0.52 | — |
| miniSMDC110F | 1.60 | 1.45 | 1.28 | 1.10 | 1.07 | 0.92 | 0.83 | 0.71 | 0.66 | 0.57 | 0.52 | — |
| miniSMDC110F/16 | 1.68 | 1.49 | 1.30 | 1.10 | 1.05 | 0.92 | 0.83 | 0.75 | 0.64 | 0.55 | 0.50 | — |
| miniSMDC110F/24 | 2.00 | 1.70 | 1.40 | 1.10 | 1.06 | 0.95 | 0.88 | 0.80 | 0.73 | 0.65 | 0.61 | — |
| miniSMDC125F | 2.00 | 1.69 | 1.47 | 1.25 | 1.17 | 1.03 | 0.92 | 0.90 | 0.69 | 0.58 | 0.53 | — |
| miniSMDC125F/16 | 2.00 | 1.69 | 1.47 | 1.25 | 1.17 | 1.03 | 0.92 | 0.90 | 0.69 | 0.58 | 0.53 | — |
| miniSMDC150F | 2.30 | 2.05 | 1.77 | 1.50 | 1.44 | 1.23 | 1.09 | 0.95 | 0.82 | 0.68 | 0.61 | — |
| miniSMDC150F/12 | 2.40 | 2.10 | 1.80 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.75 | 0.69 | — |
| miniSMDC150F/16 | 2.40 | 2.10 | 1.80 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.75 | 0.69 | — |
| miniSMDC150F/24 | 2.10 | 1.90 | 1.70 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.75 | 0.69 | — |
| miniSMDC160F | 2.50 | 2.19 | 1.89 | 1.60 | 1.53 | 1.31 | 1.16 | 1.10 | 0.95 | 0.79 | 0.71 | — |
| miniSMDC200F | 2.60 | 2.44 | 2.22 | 2.00 | 1.96 | 1.78 | 1.67 | 1.50 | 1.45 | 1.34 | 1.29 | — |
| miniSMDC200F/16 | 3.07 | 2.74 | 2.40 | 2.07 | 2.00 | 1.74 | 1.57 | 1.40 | 1.24 | 1.07 | 0.99 | — |
| miniSMDC260F | 3.40 | 3.16 | 2.80 | 2.60 | 2.54 | 2.32 | 2.18 | 2.00 | 1.90 | 1.76 | 1.69 | — |
| miniSMDC260F/12 | 3.40 | 3.16 | 3.00 | 2.60 | 2.54 | 2.32 | 2.18 | 2.00 | 1.90 | 1.76 | 1.69 | — |
| miniSMDC260F/13.2 | 3.40 | 3.16 | 3.00 | 2.60 | 2.54 | 2.32 | 2.18 | 2.00 | 1.90 | 1.76 | 1.69 | — |
| miniSMDC260F/16 | 3.50 | 3.20 | 3.00 | 2.60 | 2.53 | 2.30 | 2.15 | 2.00 | 1.85 | 1.70 | 1.63 | — |
| miniSMDC300F | 4.13 | 3.75 | 3.33 | 3.02 | 3.00 | 2.70 | 2.54 | 2.35 | 2.22 | 2.06 | 1.98 | — |
| midSMD Series | | | | | | | | | | | | |
| Size 5050mm/2018mils | | | | | | | | | | | | |
| SMD030F-2018 | 0.48 | 0.42 | 0.35 | 0.30 | 0.28 | 0.24 | 0.21 | 0.17 | 0.15 | 0.12 | 0.10 | — |
| decaSMDC050F/60 | 1.00 | 0.85 | 0.70 | 0.55 | 0.53 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.23 | — |
| SMD100F-2018 | 1.59 | 1.43 | 1.20 | 1.10 | 1.03 | 0.94 | 0.85 | 0.72 | 0.69 | 0.61 | 0.57 | — |
| SMD150F-2018 | 2.21 | 1.97 | 1.70 | 1.50 | 1.43 | 1.26 | 1.15 | 1.00 | 0.91 | 0.79 | 0.73 | — |
| SMD200F-2018 | 2.81 | 2.54 | 2.27 | 2.00 | 1.93 | 1.73 | 1.59 | 1.46 | 1.32 | 1.19 | 1.12 | — |
| SMDC Series | | | | | | | | | | | | |
| Size 7555mm/2920mils | | | | | | | | | | | | |
| NEW SMDC125F/33 | 2.02 | 1.78 | 1.55 | 1.31 | 1.25 | 1.08 | 0.96 | 0.84 | 0.72 | 0.60 | 0.54 | — |
| NEW SMDC185F/33 | 2.83 | 2.50 | 2.20 | 1.85 | 1.74 | 1.53 | 1.37 | 1.22 | 1.04 | 0.88 | 0.80 | — |
| NEW SMDC300F/24 | 4.70 | 4.19 | 3.70 | 3.17 | 3.00 | 2.66 | 2.41 | 2.20 | 1.90 | 1.65 | 1.50 | — |
| NEW SMDC310F/18 | 4.50 | 4.06 | 3.78 | 3.19 | 3.10 | 2.75 | 2.54 | 2.32 | 2.10 | 1.88 | 1.76 | — |
| SMD Series | | | | | | | | | | | | |
| Size 7555mm/2920mils | | | | | | | | | | | | |
| SMD030F | 0.44 | 0.39 | 0.32 | 0.30 | 0.28 | 0.26 | 0.23 | 0.19 | 0.18 | 0.17 | 0.15 | — |
| SMD050F | 0.73 | 0.65 | 0.55 | 0.50 | 0.47 | 0.43 | 0.39 | 0.33 | 0.31 | 0.28 | 0.26 | — |
| SMD075F | 1.11 | 0.99 | 0.84 | 0.75 | 0.71 | 0.63 | 0.57 | 0.49 | 0.45 | 0.39 | 0.36 | — |
| SMD075F/60 | 1.11 | 0.99 | 0.84 | 0.75 | 0.71 | 0.63 | 0.57 | 0.49 | 0.45 | 0.39 | 0.36 | — |
| SMD100F | 1.59 | 1.43 | 1.20 | 1.10 | 1.03 | 0.94 | 0.85 | 0.72 | 0.69 | 0.61 | 0.57 | — |
| SMD100F/33 | 1.48 | 1.35 | 1.20 | 1.10 | 1.06 | 0.98 | 0.91 | 0.83 | 0.79 | 0.73 | 0.69 | — |
| SMDH120 | 2.34 | 1.96 | 1.58 | 1.20 | 1.15 | 1.02 | 0.92 | 0.83 | 0.74 | 0.65 | 0.60 | 0.26 |
| SMD125F | 1.89 | 1.68 | 1.50 | 1.25 | 1.21 | 1.04 | 0.93 | 0.85 | 0.71 | 0.61 | 0.55 | — |
| SMD150F/33-2920 | 2.27 | 2.01 | 1.76 | 1.50 | 1.44 | 1.25 | 1.12 | 0.99 | 0.86 | 0.74 | 0.67 | — |
| SMD200F/24-2920 | 2.90 | 2.60 | 2.30 | 2.00 | 1.93 | 1.70 | 1.55 | 1.40 | 1.25 | 1.10 | 1.03 | — |
| SMD250F/15-2920 | 3.65 | 3.25 | 2.80 | 2.50 | 2.33 | 2.02 | 1.82 | 1.60 | 1.41 | 1.20 | 1.11 | — |
| SMD260F | 3.82 | 3.41 | 2.90 | 2.60 | 2.45 | 2.19 | 1.99 | 1.70 | 1.58 | 1.38 | 1.28 | — |
| SMD300F | 4.13 | 3.75 | 3.30 | 3.00 | 2.87 | 2.62 | 2.43 | 2.25 | 2.00 | 1.87 | 1.78 | — |
| SMD300F/15 | 4.20 | 3.80 | 3.30 | 3.00 | 2.90 | 2.62 | 2.43 | 2.25 | 2.00 | 1.87 | 1.78 | — |

PolySwitch Resettable Devices

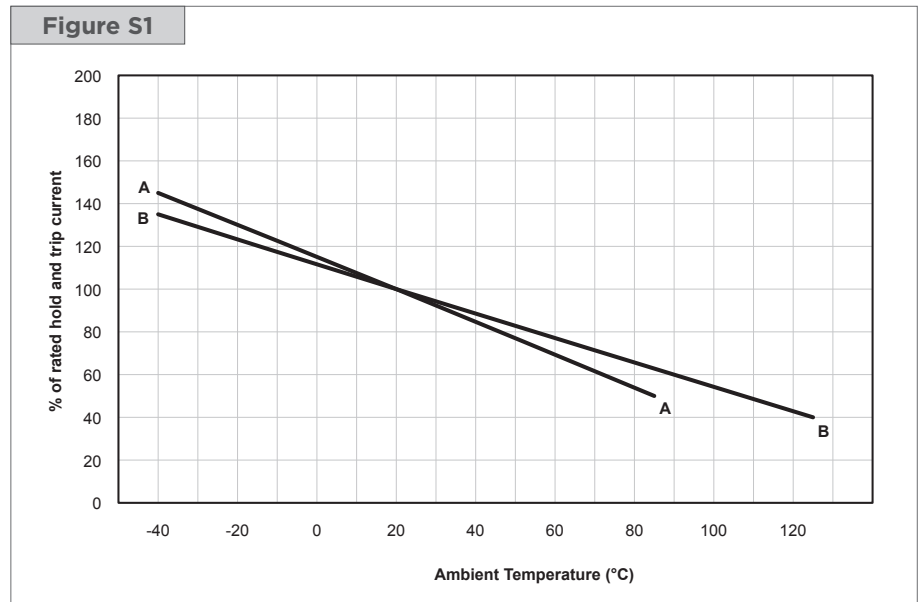
Surface-Mount Devices

Table S2 – Thermal Derating [Hold Current (A) at Ambient Temperature (°C)] (Cont'd)

| Part Number | Maximum Ambient Temperature | | | | | | | | | | | | |
|---|-----------------------------|-------|------|------|------|------|------|------|------|------|------|-------|------|
| | -40°C | -20°C | 0°C | 20°C | 25°C | 40°C | 50°C | 60°C | 70°C | 80°C | 85°C | 125°C | |
| SMD2 Series | | | | | | | | | | | | | |
| Size 8763mm/3425mils | | | | | | | | | | | | | |
| SMD150F | 2.30 | 2.04 | 1.80 | 1.50 | 1.45 | 1.23 | 1.10 | 0.99 | 0.83 | 0.70 | 0.63 | — | |
| SMD150F/33 | 2.30 | 2.04 | 1.80 | 1.50 | 1.45 | 1.23 | 1.10 | 0.99 | 0.83 | 0.70 | 0.63 | — | |
| SMDH160 | 2.14 | 1.96 | 1.78 | 1.60 | 1.56 | 1.42 | 1.33 | 1.24 | 1.15 | 1.06 | 1.02 | 0.44 | |
| SMD185F | 2.54 | 2.29 | 2.20 | 1.85 | 1.80 | 1.55 | 1.43 | 1.31 | 1.19 | 1.06 | 1.00 | — | |
| SMD200F | 3.01 | 2.67 | 2.30 | 2.00 | 1.90 | 1.66 | 1.50 | 1.30 | 1.16 | 0.99 | 0.91 | — | |
| SMD250F | 3.72 | 3.31 | 2.80 | 2.50 | 2.35 | 2.09 | 1.89 | 1.60 | 1.48 | 1.28 | 1.18 | — | |
| High Temperature SMD Series | | | | | | | | | | | | | |
| Size 3216mm/1206mils & 3225mm/1210mils | | | | | | | | | | | | | |
| NEW | nanoSMDCH010F | 0.18 | 0.16 | 0.15 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.07 | 0.06 | 0.06 | 0.03 |
| NEW | nanoSMDH075F | 1.07 | 0.98 | 0.90 | 0.78 | 0.75 | 0.70 | 0.66 | 0.61 | 0.56 | 0.52 | 0.50 | 0.30 |
| NEW | microSMDCH010F | 0.18 | 0.16 | 0.15 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | 0.05 | 0.02 |
| NEW | microSMDCH050F | 0.85 | 0.78 | 0.75 | 0.54 | 0.50 | 0.48 | 0.45 | 0.42 | 0.38 | 0.35 | 0.35 | 0.18 |

Figure S1 – Thermal Derating Curve

- A = femtoSMD / picoSMD / nanoSMD / microSMD / miniSMD decaSMD / SMDC and SMD**
- B = SMDH120 / SMDH160 and High Temperature SMD**



PolySwitch Resettable Devices

Surface-Mount Devices

Table S3 – Electrical Characteristics for Surface-Mount Devices at Room Temperature

| Part Number | I _H (A) | I _T (A) | V _{MAX} (V _{DC}) | I _{MAX} (A) | P _{D MAX} (W) | Max Time-to-Trip | | R _{MIN} (Ω) | R _{TMAX} (Ω) | Figure for Dimensions |
|-----------------------------|-----------------------|-----------------------|--|-------------------------|---------------------------|------------------|-------|-------------------------|--------------------------|-----------------------|
| | | | | | | (A) | (S) | | | |
| femtoSMDC Series | | | | | | | | | | |
| Size 1608mm/0603mils | | | | | | | | | | |
| femtoSMDC005F | 0.05 | 0.15 | 15 | 40 | 0.50 | 0.50 | 0.10 | 3.80 | 30.00 | S2 |
| femtoSMDC008F | 0.08 | 0.20 | 12 | 40 | 0.50 | 0.60 | 0.10 | 2.80 | 14.00 | S2 |
| femtoSMDC010F | 0.10 | 0.25 | 12 | 40 | 0.50 | 0.70 | 0.10 | 1.70 | 8.00 | S2 |
| femtoSMDC012F | 0.12 | 0.30 | 9 | 40 | 0.50 | 0.80 | 0.10 | 1.10 | 5.80 | S2 |
| femtoSMDC016F | 0.16 | 0.40 | 9 | 40 | 0.50 | 1.00 | 0.10 | 1.00 | 4.20 | S2 |
| femtoSMDC020F | 0.20 | 0.45 | 9 | 40 | 0.50 | 2.00 | 0.10 | 0.70 | 3.00 | S2 |
| femtoSMDC035F | 0.35 | 0.70 | 6 | 40 | 0.50 | 3.50 | 0.10 | 0.28 | 1.00 | S2 |
| picoSMDC Series | | | | | | | | | | |
| Size 2012mm/0805mils | | | | | | | | | | |
| picoSMDC010S | 0.10 | 0.30 | 15 | 100 | 0.50 | 0.50 | 0.60 | 1.50 | 11.00 | S2 |
| picoSMDC012S | 0.12 | 0.30 | 15 | 100 | 0.50 | 1.00 | 0.10 | 1.50 | 9.00 | S2 |
| picoSMDC020S | 0.20 | 0.47 | 9 | 100 | 0.50 | 2.00 | 0.10 | 0.75 | 3.20 | S2 |
| picoSMDC035S | 0.35 | 0.75 | 6 | 100 | 0.50 | 1.75 | 0.20 | 0.35 | 1.40 | S2 |
| picoSMDC050S | 0.50 | 1.00 | 6 | 100 | 0.50 | 8.00 | 0.10 | 0.15 | 0.80 | S2 |
| picoSMDC075S | 0.75 | 1.50 | 6 | 40 | 0.70 | 8.00 | 0.20 | 0.10 | 0.35 | S2 |
| picoSMDC110S | 1.10 | 2.20 | 6 | 40 | 0.80 | 8.00 | 0.20 | 0.05 | 0.17 | S2 |
| nanoSMDC Series | | | | | | | | | | |
| Size 3216mm/1206mils | | | | | | | | | | |
| NEW nanoSMDC010F | 0.10 | 0.25 | 60 | 10 | 0.80 | 0.50 | 1.00 | 1.60 | 15.00 | S2 |
| nanoSMDC012F | 0.12 | 0.39 | 48 | 10 | 0.50 | 1.00 | 0.20 | 1.40 | 6.50 | S2 |
| nanoSMDC016F | 0.16 | 0.45 | 48 | 10 | 0.50 | 1.00 | 0.30 | 1.10 | 5.00 | S2 |
| nanoSMDC020F | 0.20 | 0.42 | 24 | 100 | 0.60 | 8.00 | 0.10 | 0.65 | 3.10 | S2 |
| nanoSMDC025F | 0.25 | 0.58 | 16 | 100 | 0.60 | 8.00 | 0.10 | 0.40 | 2.10 | S2 |
| nanoSMDC035F | 0.35 | 0.75 | 16 | 20 | 0.60 | 3.50 | 0.10 | 0.45 | 1.35 | S2 |
| nanoSMDC050F/13.2 | 0.50 | 1.10 | 13.2 | 100 | 0.80 | 8.00 | 0.10 | 0.20 | 0.75 | S2 |
| nanoSMDC075F | 0.75 | 1.50 | 6 | 100 | 0.80 | 8.00 | 0.10 | 0.09 | 0.30 | S2 |
| nanoSMDC110F | 1.10 | 2.20 | 6 | 100 | 0.80 | 8.00 | 0.10 | 0.07 | 0.20 | S2 |
| nanoSMDC150F | 1.50 | 3.00 | 6 | 100 | 0.80 | 8.00 | 0.30 | 0.04 | 0.11 | S2 |
| nanoSMDC200F | 2.00 | 4.00 | 6 | 100 | 1.00 | 8.00 | 1.50 | 0.02 | 0.072 | S2 |
| microSMD Series | | | | | | | | | | |
| Size 3225mm/1210mils | | | | | | | | | | |
| microSMD005F | 0.05 | 0.15 | 30 | 10 | 1.00 | 0.25 | 1.50 | 3.60 | 50.00 | S2 |
| microSMD010F | 0.10 | 0.25 | 30 | 10 | 0.80 | 0.50 | 1.00 | 2.10 | 15.00 | S2 |
| microSMD035F | 0.35 | 0.75 | 6 | 40 | 0.80 | 8.00 | 0.20 | 0.32 | 1.30 | S2 |
| microSMD050F | 0.50 | 1.00 | 13.2 | 40 | 0.80 | 8.00 | 0.05 | 0.25 | 0.90 | S2 |
| microSMD075F | 0.75 | 1.50 | 6 | 40 | 0.80 | 8.00 | 0.10 | 0.11 | 0.40 | S2 |
| microSMD110F | 1.10 | 2.20 | 6 | 40 | 0.80 | 8.00 | 0.20 | 0.07 | 0.21 | S2 |
| microSMD150F | 1.50 | 3.00 | 6 | 40 | 0.80 | 8.00 | 1.00 | 0.04 | 0.11 | S2 |
| microSMD175F | 1.75 | 3.50 | 6 | 40 | 0.80 | 8.00 | 0.80 | 0.025 | 0.08 | S2 |
| microSMD200F | 2.00 | 4.00 | 6 | 100 | 0.80 | 8.00 | 2.50 | 0.020 | 0.06 | S2 |
| miniSMDC Series | | | | | | | | | | |
| Size 4532mm/1812mils | | | | | | | | | | |
| miniSMDC010F | 0.10 | 0.30 | 60 | 40 | 0.75 | 0.50 | 5.00 | 0.70 | 12.70 | S2 |
| miniSMDC014F | 0.14 | 0.28 | 60 | 10 | 0.75 | 8.00 | 0.008 | 1.50 | 6.00 | S2 |
| miniSMDC020F | 0.20 | 0.40 | 30 | 10 | 0.80 | 8.00 | 0.02 | 0.60 | 3.30 | S2 |
| miniSMDC030F | 0.30 | 0.60 | 30 | 40 | 0.80 | 8.00 | 0.10 | 0.20 | 1.75 | S2 |
| miniSMDC050F | 0.50 | 1.00 | 24 | 100 | 0.80 | 8.00 | 0.15 | 0.15 | 1.00 | S2 |
| miniSMDC075F | 0.75 | 1.50 | 13.2 | 100 | 1.00 | 8.00 | 0.20 | 0.11 | 0.45 | S2 |
| miniSMDC075F/24 | 0.75 | 1.50 | 24 | 40 | 0.80 | 8.00 | 0.30 | 0.09 | 0.29 | S2 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S3 – Electrical Characteristics for Surface-Mount Devices
at Room Temperature

(Cont'd)

| Part Number | I _H (A) | I _T (A) | V _{MAX} (V _{DC}) | I _{MAX} (A) | P _{D MAX} (W) | Max Time-to-Trip | | R _{MIN} (Ω) | R _{TMAX} (Ω) | Figure for Dimensions |
|--|-----------------------|-----------------------|--|-------------------------|---------------------------|------------------|-------|-------------------------|--------------------------|-----------------------|
| | | | | | | (A) | (S) | | | |
| miniSMDC Series Size 4532mm/1812mils | | | | | | | | | | |
| miniSMDC075F/33 | 0.75 | 1.60 | 33 | 100 | 1.00 | 8.00 | 1.00 | 0.11 | 0.39 | S2 |
| miniSMDC100F | 1.10 | 2.20 | 8 | 100 | 1.20 | 8.00 | 0.30 | 0.04 | 0.21 | S2 |
| miniSMDC110F | 1.10 | 2.20 | 8 | 100 | 1.20 | 8.00 | 0.30 | 0.04 | 0.21 | S2 |
| miniSMDC110F/16 | 1.10 | 2.20 | 16 | 100 | 0.80 | 8.00 | 0.30 | 0.06 | 0.18 | S2 |
| miniSMDC110F/24 | 1.10 | 2.20 | 24 | 20 | 0.80 | 8.00 | 0.50 | 0.06 | 0.18 | S2 |
| miniSMDC125F | 1.25 | 2.50 | 6 | 100 | 0.80 | 8.00 | 0.40 | 0.05 | 0.14 | S2 |
| miniSMDC125F/16 | 1.25 | 2.50 | 16 | 100 | 0.80 | 8.00 | 0.40 | 0.05 | 0.14 | S2 |
| miniSMDC150F | 1.50 | 3.00 | 6 | 100 | 0.80 | 8.00 | 0.50 | 0.04 | 0.11 | S2 |
| miniSMDC150F/12 | 1.50 | 2.80 | 12 | 100 | 0.80 | 8.00 | 0.50 | 0.04 | 0.11 | S2 |
| miniSMDC150F/16 | 1.50 | 2.80 | 16 | 100 | 0.80 | 8.00 | 0.50 | 0.04 | 0.11 | S2 |
| miniSMDC150F/24 | 1.50 | 3.00 | 24 | 20 | 1.00 | 8.00 | 1.50 | 0.04 | 0.12 | S2 |
| miniSMDC160F | 1.60 | 3.20 | 9 | 100 | 0.80 | 8.00 | 1.00 | 0.03 | 0.10 | S2 |
| miniSMDC200F | 2.00 | 4.00 | 8 | 100 | 1.00 | 8.00 | 5.00 | 0.020 | 0.070 | S2 |
| miniSMDC200F/16 | 2.00 | 4.00 | 16 | 40 | 1.20 | 8.00 | 5.00 | 0.020 | 0.085 | S2 |
| miniSMDC260F | 2.60 | 5.00 | 6 | 100 | 1.00 | 8.00 | 5.00 | 0.015 | 0.043 | S2 |
| miniSMDC260F/12 | 2.60 | 5.00 | 12 | 100 | 1.00 | 8.00 | 5.00 | 0.015 | 0.047 | S2 |
| miniSMDC260F/13.2 | 2.60 | 5.00 | 13.2 | 100 | 1.20 | 8.00 | 5.00 | 0.015 | 0.050 | S2 |
| miniSMDC260F/16 | 2.60 | 5.00 | 16 | 100 | 1.20 | 8.00 | 5.00 | 0.015 | 0.050 | S2 |
| miniSMDC300F | 3.00 | 6.00 | 6 | 100 | 1.00 | 8.00 | 5.00 | 0.011 | 0.036 | S2 |
| midSMD Series Size 5050mm/2018mils | | | | | | | | | | |
| SMD030F-2018 | 0.30 | 0.80 | 60 | 20 | 1.50 | 1.50 | 1.50 | 0.500 | 2.30 | S3 |
| decaSMDC050F/60 | 0.55 | 1.10 | 60 | 10 | 1.00 | 8.00 | 0.10 | 0.200 | 1.10 | S2 |
| SMD100F-2018 | 1.10 | 2.20 | 15 | 40 | 1.40 | 8.00 | 0.50 | 0.100 | 0.40 | S3 |
| SMD150F-2018 | 1.50 | 3.00 | 15 | 40 | 1.80 | 8.00 | 1.00 | 0.070 | 0.18 | S3 |
| SMD200F-2018 | 2.00 | 4.20 | 6 | 40 | 1.50 | 8.00 | 3.00 | 0.048 | 0.10 | S3 |
| SMDC Series Size 7555mm/2920mils | | | | | | | | | | |
| NEW SMDC125F/33 | 1.25 | 2.50 | 33 | 40 | 1.50 | 8.00 | 2.00 | 0.040 | 0.250 | S2 |
| NEW SMDC185F/33 | 1.85 | 3.70 | 33 | 40 | 1.70 | 8.00 | 2.50 | 0.050 | 0.150 | S2 |
| NEW SMDC300F/24 | 3.00 | 6.00 | 24 | 40 | 1.70 | 8.00 | 5.00 | 0.015 | 0.072 | S2 |
| NEW SMDC310F/18 | 3.10 | 6.00 | 18 | 50 | 1.50 | 8.00 | 25.00 | 0.013 | 0.036 | S2 |
| SMD Series Size 7555mm/2920mils | | | | | | | | | | |
| SMD030F | 0.30 | 0.60 | 60 | 10 | 1.70 | 1.50 | 3.00 | 1.200 | 4.800 | S4 |
| SMD050F | 0.50 | 1.00 | 60 | 10 | 1.70 | 2.50 | 4.00 | 0.350 | 1.400 | S4 |
| SMD075F | 0.75 | 1.50 | 30 | 40 | 1.70 | 8.00 | 0.30 | 0.350 | 1.000 | S4 |
| SMD075F/60 | 0.75 | 1.50 | 60 | 10 | 1.70 | 8.00 | 0.30 | 0.350 | 1.000 | S4 |
| SMD100F | 1.10 | 2.20 | 30 | 40 | 1.70 | 8.00 | 0.50 | 0.120 | 0.480 | S4 |
| SMD100F/33 | 1.10 | 2.20 | 33 | 40 | 1.70 | 8.00 | 0.50 | 0.120 | 0.410 | S4 |
| SMDH120 | 1.20 | 2.30 | 16 | 50 | 2.00 | 8.00 | 2.00 | 0.150 | 0.340 | S4 |
| SMD125F | 1.25 | 2.50 | 15 | 40 | 1.70 | 8.00 | 2.00 | 0.070 | 0.250 | S4 |
| SMD150F/33-2920 | 1.50 | 3.00 | 33 | 40 | 1.50 | 8.00 | 5.00 | 0.080 | 0.230 | S4 |
| SMD200F/24-2920 | 2.00 | 4.00 | 24 | 40 | 1.50 | 8.00 | 5.00 | 0.050 | 0.125 | S4 |
| SMD250F/15-2920 | 2.50 | 5.00 | 15 | 40 | 1.50 | 8.00 | 10.00 | 0.035 | 0.085 | S4 |
| SMD260F | 2.60 | 5.20 | 6 | 40 | 1.70 | 8.00 | 20.00 | 0.025 | 0.075 | S4 |
| SMD300F | 3.00 | 6.00 | 6 | 40 | 1.50 | 8.00 | 35.00 | 0.015 | 0.048 | S4 |
| SMD300F/15 | 3.00 | 6.00 | 15 | 40 | 1.50 | 8.00 | 35.00 | 0.015 | 0.050 | S4 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S3 – Electrical Characteristics for Surface-Mount Devices at Room Temperature

(Cont'd)

| Part Number | I _H (A) | I _T (A) | V _{MAX} (V _{DC}) | I _{MAX} (A) | P _{D MAX} (W) | Max Time-to-Trip | | R _{MIN} (Ω) | R _{1MAX} (Ω) | Figure for Dimensions |
|--|-----------------------|-----------------------|--|-------------------------|---------------------------|------------------|-------|-------------------------|--------------------------|-----------------------|
| | | | | | | (A) | (S) | | | |
| SMD2 Devices Size 8763mm/3425mils | | | | | | | | | | |
| SMD150F | 1.50 | 3.00 | 15 | 40 | 1.90 | 8.00 | 5.00 | 0.060 | 0.250 | S4 |
| SMD150F/33 | 1.50 | 3.00 | 33 | 40 | 1.90 | 8.00 | 5.00 | 0.080 | 0.230 | S4 |
| SMDH160 | 1.60 | 3.20 | 16 | 70 | 2.20 | 8.00 | 15.00 | 0.050 | 0.150 | S4 |
| SMD185F | 1.85 | 3.60 | 33 | 40 | 1.50 | 8.00 | 5.00 | 0.065 | 0.165 | S4 |
| SMD200F | 2.00 | 4.00 | 15 | 40 | 1.90 | 8.00 | 12.00 | 0.050 | 0.125 | S4 |
| SMD250F | 2.50 | 5.00 | 15 | 40 | 1.90 | 8.00 | 25.00 | 0.035 | 0.085 | S4 |
| High Temperature SMD Series Size 3216mm/1206mils & 3225mm/1210mils | | | | | | | | | | |
| NEW nanoSMDCH010F | 0.10 | 0.35 | 30 | 10 | 0.80 | 1.00 | 0.10 | 1.10 | 10.00 | S2 |
| NEW nanoSMDH075F | 0.75 | 2.00 | 6 | 10 | 1.10 | 8.00 | 0.10 | 0.10 | 0.36 | S5 |
| NEW microSMDCH010F | 0.10 | 0.35 | 30 | 10 | 0.90 | 1.00 | 0.10 | 1.20 | 11.00 | S2 |
| NEW microSMDCH050F | 0.50 | 1.50 | 6 | 10 | 1.10 | 8.00 | 0.05 | 0.19 | 0.90 | S2 |

Figures S2-S5 – Dimension Figures

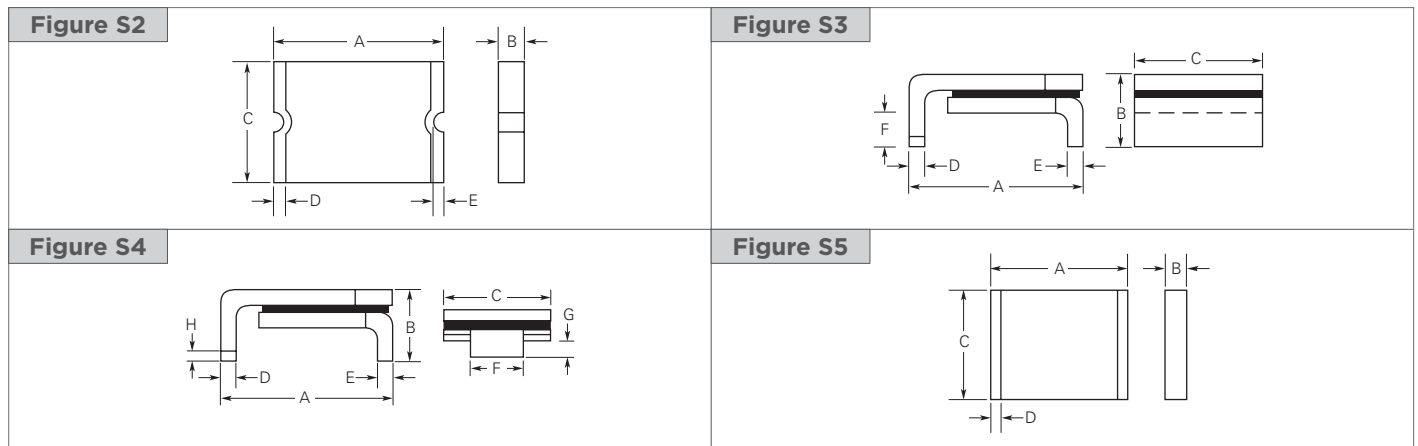


Table S4 – Dimensions in Millimeters (Inches)

| Part Number | A | | B | | C | | D | | E | | F | | G | | H | Figure |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|-----|-----|-----|-----|-----|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | |
| femtoSMDC Series Size 1608mm/0603mils | | | | | | | | | | | | | | | | |
| femtoSMDC005F | 1.40 (0.055) | 1.80 (0.071) | 0.45 (0.017) | 0.85 (0.033) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| femtoSMDC008F | 1.40 (0.055) | 1.80 (0.071) | 0.45 (0.017) | 0.85 (0.033) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| femtoSMDC010F | 1.40 (0.055) | 1.80 (0.071) | 0.45 (0.017) | 0.85 (0.033) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| femtoSMDC012F | 1.40 (0.055) | 1.80 (0.071) | 0.35 (0.013) | 0.75 (0.030) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S4 – Dimensions in Millimeters (Inches)

(Cont'd)

| Part Number | A | | B | | C | | D | | E | | F | | G | | H | Figure |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|-----|-----|-----|-----|-----|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | |
| femtoSMDC Series | | | | | | | | | | | | | | | | |
| Size 1608mm/0603mils | | | | | | | | | | | | | | | | |
| femtoSMDC016F | 1.40 (0.055) | 1.80 (0.071) | 0.35 (0.013) | 0.75 (0.030) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| femtoSMDC020F | 1.40 (0.055) | 1.80 (0.071) | 0.35 (0.013) | 0.75 (0.030) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| femtoSMDC035F | 1.40 (0.055) | 1.80 (0.071) | 0.55 (0.021) | 0.95 (0.037) | 0.60 (0.023) | 1.00 (0.039) | 0.10 (0.004) | 0.50 (0.020) | 0.075 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC Series | | | | | | | | | | | | | | | | |
| Size 2012mm/0805mils | | | | | | | | | | | | | | | | |
| picoSMDC010S | 2.00 (0.079) | 2.20 (0.087) | 0.60 (0.023) | 1.00 (0.040) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC012S | 2.00 (0.079) | 2.20 (0.087) | 0.44 (0.017) | 0.68 (0.027) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC020S | 2.00 (0.079) | 2.20 (0.087) | 0.44 (0.017) | 0.68 (0.027) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC035S | 2.00 (0.079) | 2.20 (0.087) | 0.44 (0.017) | 0.68 (0.027) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC050S | 2.00 (0.079) | 2.20 (0.087) | 0.63 (0.025) | 0.93 (0.036) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC075S | 2.00 (0.079) | 2.20 (0.087) | 0.63 (0.025) | 0.93 (0.036) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| picoSMDC110S | 2.00 (0.079) | 2.20 (0.087) | 0.80 (0.031) | 1.20 (0.047) | 1.30 (0.051) | 1.50 (0.059) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC Series | | | | | | | | | | | | | | | | |
| Size 3216mm/1206mils | | | | | | | | | | | | | | | | |
| NEW nanoSMDC010F | 3.00 (0.118) | 3.40 (0.134) | 0.62 (0.024) | 1.00 (0.039) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC012F | 3.00 (0.118) | 3.40 (0.134) | 0.62 (0.024) | 1.00 (0.039) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC016F | 3.00 (0.118) | 3.40 (0.134) | 0.62 (0.024) | 1.00 (0.039) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC020F | 3.00 (0.118) | 3.40 (0.134) | 0.58 (0.023) | 0.82 (0.032) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC025F | 3.00 (0.118) | 3.40 (0.134) | 0.58 (0.023) | 0.82 (0.032) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC035F | 3.00 (0.118) | 3.40 (0.134) | 0.58 (0.023) | 0.82 (0.032) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC050F/13.2 | 3.00 (0.118) | 3.40 (0.134) | 0.50 (0.019) | 0.74 (0.029) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC075F | 3.00 (0.118) | 3.40 (0.134) | 0.44 (0.017) | 0.68 (0.027) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC110F | 3.00 (0.118) | 3.40 (0.134) | 0.28 (0.011) | 0.67 (0.026) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC150F | 3.00 (0.118) | 3.40 (0.134) | 0.55 (0.022) | 0.89 (0.035) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| nanoSMDC200F | 3.00 (0.118) | 3.40 (0.134) | 0.83 (0.033) | 1.10 (0.043) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S4 – Dimensions in Millimeters (Inches)

(Cont'd)

| Part Number | A | | B | | C | | D | | E | | F | | G | | H | Figure |
|-----------------------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|-----|-----|-----|-----|-----|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | |
| microSMD Series | | | | | | | | | | | | | | | | |
| Size 3225mm/1210mils | | | | | | | | | | | | | | | | |
| microSMD005F | 3.0 (0.118) | 3.43 (0.135) | 0.50 (0.019) | 0.85 (0.034) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD010F | 3.0 (0.118) | 3.43 (0.135) | 0.50 (0.019) | 0.85 (0.034) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD035F | 3.0 (0.118) | 3.43 (0.135) | 0.38 (0.015) | 0.62 (0.025) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD050F | 3.0 (0.118) | 3.43 (0.135) | 0.38 (0.015) | 0.62 (0.025) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD075F | 3.0 (0.118) | 3.43 (0.135) | 0.38 (0.015) | 0.62 (0.025) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD110F | 3.0 (0.118) | 3.43 (0.135) | 0.28 (0.011) | 0.48 (0.019) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD150F | 3.0 (0.118) | 3.43 (0.135) | 0.51 (0.020) | 1.22 (0.048) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD175F | 3.0 (0.118) | 3.43 (0.135) | 0.40 (0.016) | 0.76 (0.030) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| microSMD200F | 3.0 (0.118) | 3.43 (0.135) | 0.79 (0.031) | 1.17 (0.046) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | — | S2 |
| miniSMDC Series | | | | | | | | | | | | | | | | |
| Size 4532mm/1812mils | | | | | | | | | | | | | | | | |
| miniSMDC010F | 4.37 (0.172) | 4.73 (0.186) | 0.635 (0.025) | 0.89 (0.035) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC014F | 4.37 (0.172) | 4.73 (0.186) | 0.635 (0.025) | 0.89 (0.035) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC020F | 4.37 (0.172) | 4.73 (0.186) | 0.635 (0.025) | 0.89 (0.035) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC030F | 4.37 (0.172) | 4.73 (0.186) | 0.635 (0.025) | 0.89 (0.035) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC050F | 4.37 (0.172) | 4.73 (0.186) | 0.38 (0.015) | 0.62 (0.025) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC075F | 4.37 (0.172) | 4.73 (0.186) | 0.38 (0.015) | 0.62 (0.025) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC075F/24 | 4.37 (0.172) | 4.83 (0.190) | 0.81 (0.032) | 1.46 (0.057) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC075F/33 | 4.37 (0.172) | 4.83 (0.190) | 0.94 (0.037) | 1.46 (0.057) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC100F | 4.37 (0.172) | 4.73 (0.186) | 0.38 (0.015) | 0.62 (0.025) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC110F | 4.37 (0.172) | 4.73 (0.186) | 0.38 (0.015) | 0.62 (0.025) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC110F/16 | 4.37 (0.172) | 4.83 (0.190) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC110F/24 | 4.37 (0.172) | 4.83 (0.190) | 0.81 (0.032) | 1.46 (0.057) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC125F | 4.37 (0.172) | 4.73 (0.186) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC125F/16 | 4.37 (0.172) | 4.83 (0.190) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S4 – Dimensions in Millimeters (Inches)

(Cont'd)

| Part Number | A | | B | | C | | D | | E | | F | | G | | H | Figure |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----|-----|-----|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | |
| miniSMDC Series | | | | | | | | | | | | | | | | |
| Size 4532mm/1812mils | | | | | | | | | | | | | | | | |
| miniSMDC150F | 4.37 (0.172) | 4.73 (0.186) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC150F/12 | 4.37 (0.172) | 4.83 (0.190) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC150F/16 | 4.37 (0.172) | 4.83 (0.190) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC150F/24 | 4.37 (0.172) | 4.83 (0.190) | 1.00 (0.040) | 1.94 (0.077) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC160F | 4.37 (0.172) | 4.73 (0.186) | 0.28 (0.011) | 0.48 (0.019) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC200F | 4.37 (0.172) | 4.73 (0.186) | 0.51 (0.020) | 1.22 (0.048) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC200F/16 | 4.37 (0.172) | 4.73 (0.186) | 0.51 (0.020) | 1.22 (0.048) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC260F | 4.37 (0.172) | 4.73 (0.186) | 0.48 (0.019) | 0.78 (0.031) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC260F/12 | 4.37 (0.172) | 4.83 (0.190) | 1.02 (0.042) | 1.52 (0.060) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC260F/13.2 | 4.37 (0.172) | 4.83 (0.190) | 1.02 (0.042) | 1.52 (0.060) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC260F/16 | 4.37 (0.172) | 4.83 (0.190) | 1.02 (0.042) | 1.52 (0.060) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| miniSMDC300F | 4.37 (0.172) | 4.73 (0.186) | 0.45 (0.018) | 0.76 (0.030) | 3.07 (0.121) | 3.41 (0.134) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| midSMD Series | | | | | | | | | | | | | | | | |
| Size 5050mm/2018mils | | | | | | | | | | | | | | | | |
| SMD030F-2018 | 4.72 (0.186) | 5.44 (0.214) | — | 1.78 (0.070) | 4.22 (0.166) | 4.93 (0.194) | 0.25 (0.010) | 0.36 (0.014) | 0.25 (0.010) | 0.36 (0.014) | 0.30 (0.012) | 0.46 (0.018) | — | — | — | S3 |
| decaSMDC050F/60 | 4.70 (0.185) | 5.31 (0.209) | 0.63 (0.025) | 0.89 (0.035) | 4.19 (0.165) | 4.81 (0.189) | 0.25 (0.010) | 0.95 (0.040) | 0.25 (0.010) | — | — | — | — | — | — | S2 |
| SMD100F-2018 | 4.72 (0.186) | 5.44 (0.214) | — | 1.52 (0.060) | 4.22 (0.166) | 4.93 (0.194) | 0.25 (0.010) | 0.36 (0.014) | 0.25 (0.010) | 0.36 (0.014) | 0.30 (0.012) | 0.46 (0.018) | — | — | — | S3 |
| SMD150F-2018 | 4.72 (0.186) | 5.44 (0.214) | — | 1.52 (0.060) | 4.22 (0.166) | 4.93 (0.194) | 0.25 (0.010) | 0.36 (0.014) | 0.25 (0.010) | 0.36 (0.014) | 0.30 (0.012) | 0.46 (0.018) | — | — | — | S3 |
| SMD200F-2018 | 4.72 (0.186) | 5.44 (0.214) | — | 1.52 (0.060) | 4.22 (0.166) | 4.93 (0.194) | 0.25 (0.010) | 0.36 (0.014) | 0.25 (0.010) | 0.36 (0.014) | 0.30 (0.012) | 0.46 (0.018) | — | — | — | S3 |
| SMDC Series | | | | | | | | | | | | | | | | |
| Size 7555mm/2920mils | | | | | | | | | | | | | | | | |
| NEW SMDC125F/33 | 7.30 (0.287) | 7.70 (0.303) | 0.45 (0.018) | 0.71 (0.028) | 4.90 (0.193) | 5.30 (0.209) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| NEW SMDC185F/33 | 7.30 (0.287) | 7.70 (0.303) | 0.90 (0.035) | 1.20 (0.047) | 4.90 (0.193) | 5.30 (0.209) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| NEW SMDC300F/24 | 7.30 (0.287) | 7.70 (0.303) | 0.80 (0.031) | 1.10 (0.043) | 4.90 (0.193) | 5.30 (0.209) | 0.25 (0.010) | 0.95 (0.040) | 0.20 (0.008) | — | — | — | — | — | — | S2 |
| NEW SMDC310F/18 | 7.30 (0.287) | 7.70 (0.303) | 1.10 (0.043) | 1.70 (0.067) | 4.90 (0.193) | 5.30 (0.209) | 0.95 (0.037) | 1.45 (0.057) | 0.35 (0.014) | — | — | — | — | — | — | S2 |

PolySwitch Resettable Devices

Surface-Mount Devices

Table S4 – Dimensions in Millimeters (Inches)

(Cont'd)

| Part Number | A | | B | | C | | D | | E | | F | | G | | H | Figure |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | |
| SMD Series | | | | | | | | | | | | | | | | |
| Size 7555mm/2920mils | | | | | | | | | | | | | | | | |
| SMD030F | 6.73 (0.265) | 7.98 (0.314) | — | 3.18 (0.125) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD050F | 6.73 (0.265) | 7.98 (0.314) | — | 3.18 (0.125) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD075F | 6.73 (0.265) | 7.98 (0.314) | — | 3.18 (0.125) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD075F/60 | 6.73 (0.265) | 7.98 (0.314) | — | 3.18 (0.125) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD100F | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD100F/33 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMDH120 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD125F | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD150F/33-2920 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD200F/24-2920 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD250F/15-2920 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD260F | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD300F | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD300F/15 | 6.73 (0.265) | 7.98 (0.314) | — | 3.00 (0.118) | 4.80 (0.19) | 5.44 (0.214) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 2.16 (0.085) | 2.41 (0.095) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD2 Devices | | | | | | | | | | | | | | | | |
| Size 8763mm/3425mils | | | | | | | | | | | | | | | | |
| SMD150F | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD150F/33 | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMDH160 | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD185F | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD200F | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| SMD250F | 8.00 (0.315) | 9.40 (0.370) | — | 3.00 (0.118) | 6.00 (0.236) | 6.71 (0.264) | 0.56 (0.022) | 0.71 (0.028) | 0.56 (0.022) | 0.71 (0.028) | 3.68 (0.145) | 3.94 (0.155) | 0.66 (0.026) | 1.37 (0.054) | 0.43 (0.017) | S4 |
| High Temperature SMD Series | | | | | | | | | | | | | | | | |
| Size 3216mm/1206mils & 3225mm/1210mils | | | | | | | | | | | | | | | | |
| NEW | nanoSMDCH010F | 3.00 (0.118) | 3.40 (0.134) | 0.30 (0.012) | 0.70 (0.028) | 1.37 (0.054) | 1.80 (0.071) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | S2 |
| NEW | nanoSMDH075F | 3.00 (0.118) | 3.40 (0.134) | 0.60 (0.023) | 1.00 (0.039) | 1.40 (0.055) | 1.80 (0.071) | 0.20 (0.008) | 0.80 (0.032) | — | — | — | — | — | — | S5 |
| NEW | microSMDCH010F | 3.00 (0.118) | 3.43 (0.135) | 0.57 (0.022) | 0.97 (0.038) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | S2 |
| NEW | microSMDCH050F | 3.00 (0.118) | 3.43 (0.135) | 0.24 (0.009) | 0.64 (0.025) | 2.35 (0.092) | 2.80 (0.110) | 0.25 (0.010) | 0.75 (0.030) | 0.076 (0.003) | — | — | — | — | — | S2 |

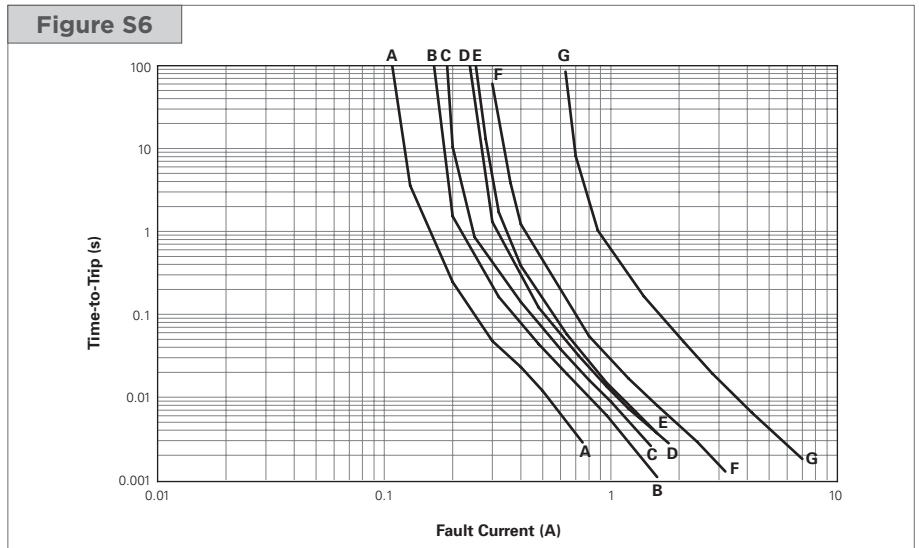
PolySwitch Resettable Devices

Surface-Mount Devices

Figures S6-S15 – Typical Time-to-Trip Curves at 20°C

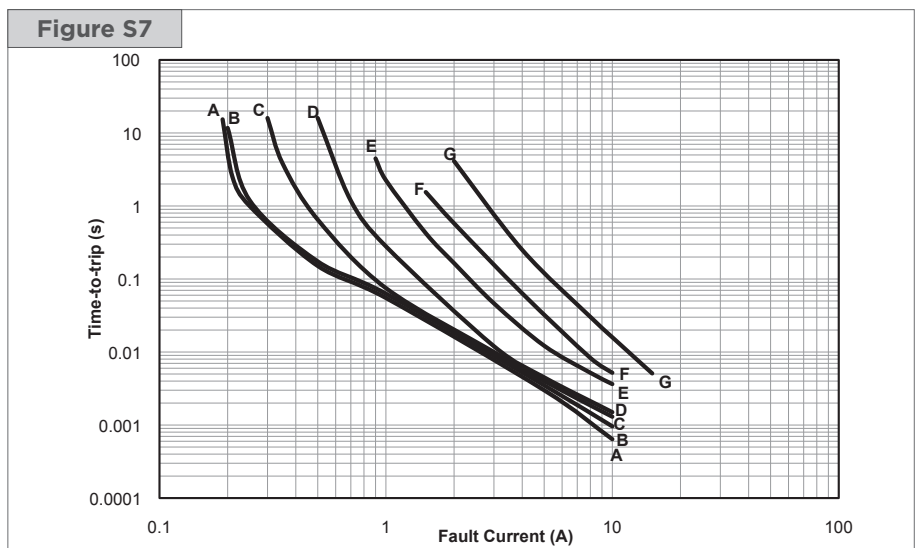
femtoSMDCxxxF

- A = femtoSMDC005F
- B = femtoSMDC008F
- C = femtoSMDC010F
- D = femtoSMDC012F
- E = femtoSMDC016F
- F = femtoSMDC020F
- G = femtoSMDC035F



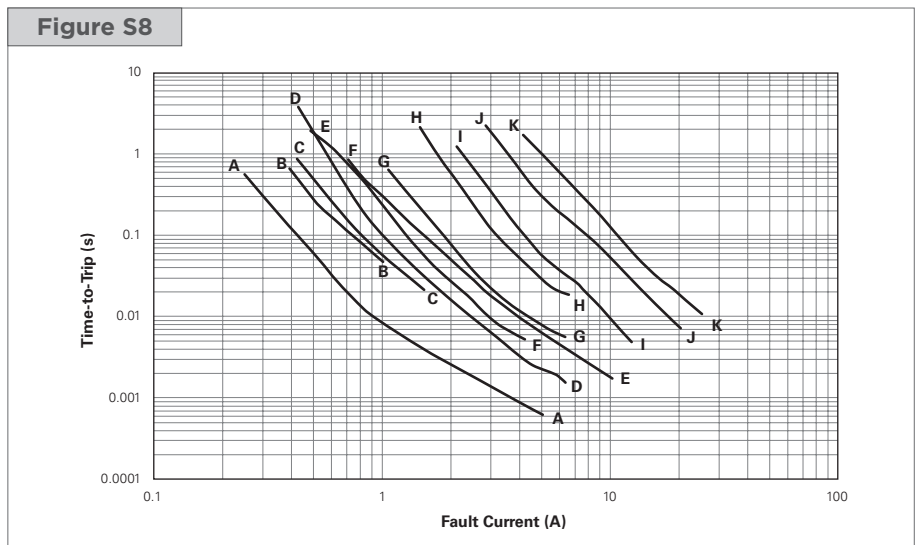
picoSMDCxxxS

- A = picoSMDC010S
- B = picoSMDC012S
- C = picoSMDC020S
- D = picoSMDC035S
- E = picoSMDC050S
- F = picoSMDC075S
- G = picoSMDC110S



nanoSMDCxxxF

- A = nanoSMDC010F
- B = nanoSMDC012F
- C = nanoSMDC016F
- D = nanoSMDC020F
- E = nanoSMDC025F
- F = nanoSMDC035F
- G = nanoSMDC050F/13.2
- H = nanoSMDC075F
- I = nanoSMDC110F
- J = nanoSMDC150F
- K = nanoSMDC200F



PolySwitch Resettable Devices

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Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

microSMDxxxF

- A = microSMD005F
- B = microSMD010F
- C = microSMD035F
- D = microSMD050F
- E = microSMD075F
- F = microSMD110F
- G = microSMD150F
- H = microSMD175F
- I = microSMD200F

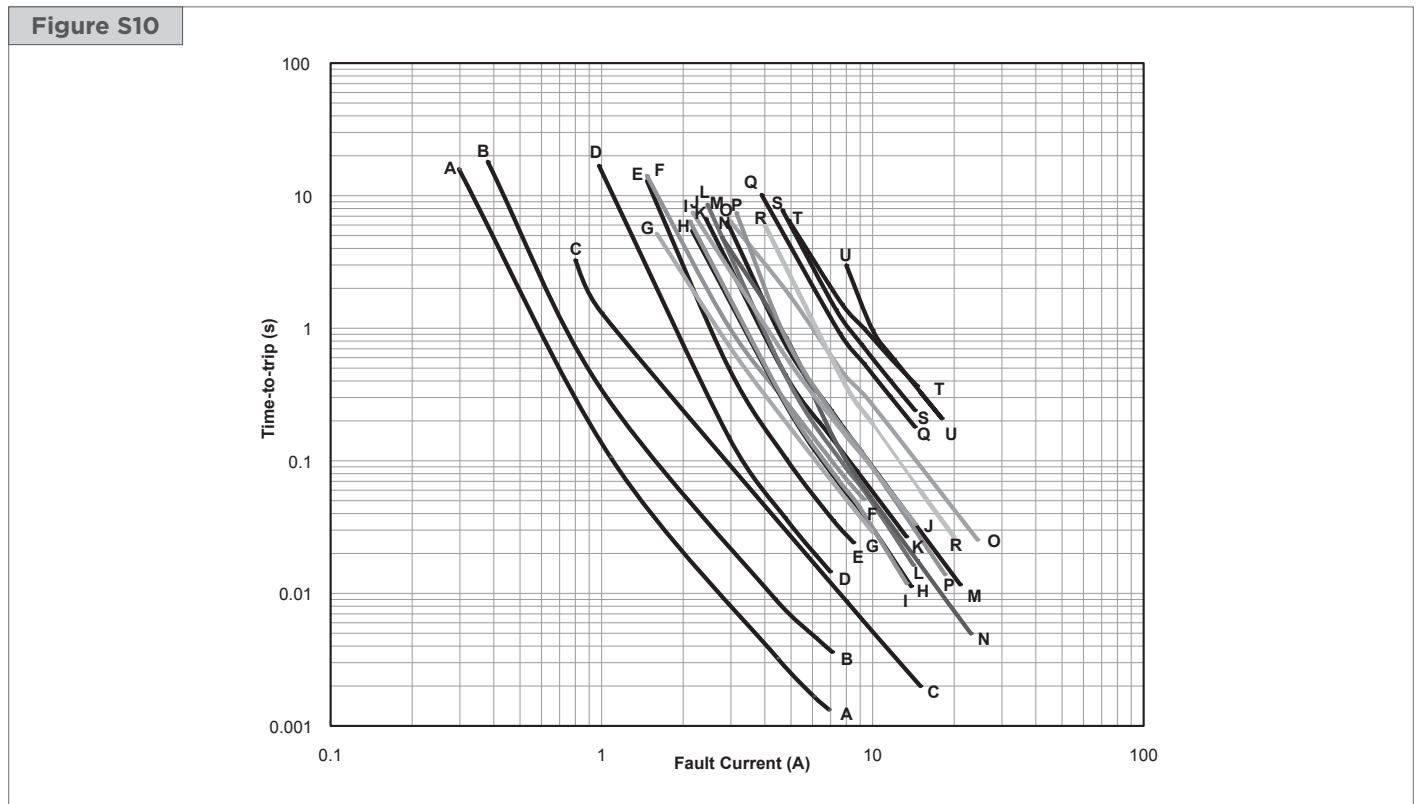


miniSMDCxxxF

- A = miniSMDC010F, miniSMDC014F
- B = miniSMDC020F
- C = miniSMDC030F
- D = miniSMDC050F
- E = miniSMDC075F
- F = miniSMDC075F/24

- G = miniSMDC075F/33
- H = miniSMDC100F, miniSMDC110F
- I = miniSMDC110F/16
- J = miniSMDC110F/24
- K = miniSMDC125F
- L = miniSMDC125F/16
- M = miniSMDC150F, miniSMDC150F/12
- N = miniSMDC150F/16

- O = miniSMDC150F/24
- P = miniSMDC160F
- Q = miniSMDC200F
- R = miniSMDC200F/16
- S = miniSMDC260F
- T = miniSMDC260F/12, miniSMDC260F/13.2, miniSMDC260F/16
- U = miniSMDC300F



PolySwitch Resettable Devices

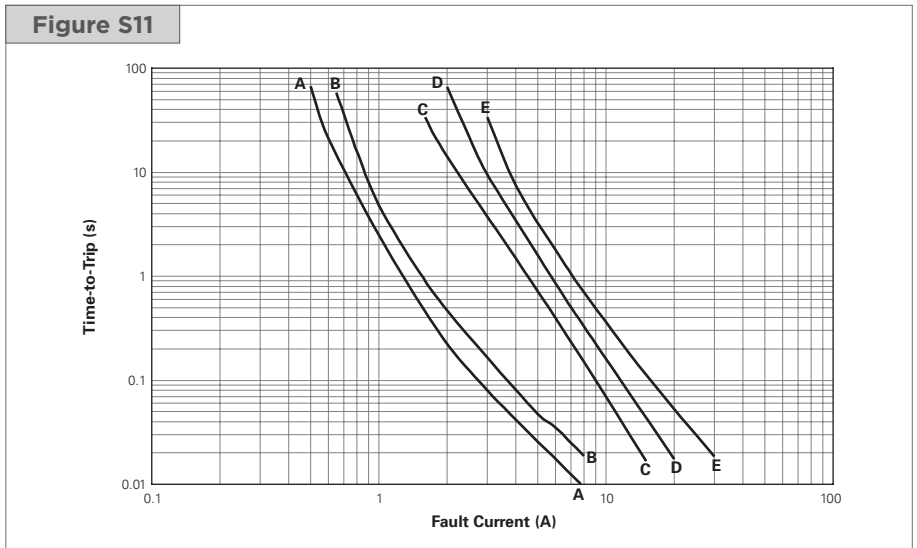
Surface-Mount Devices

Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

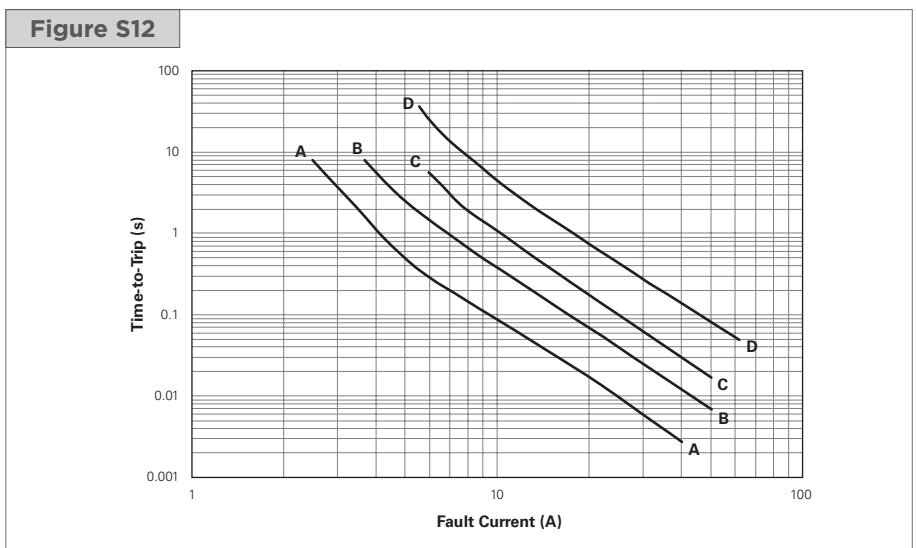
midSMD

- A = SMD030F-2018
- B = decaSMDC050F/60
- C = SMD100F-2018
- D = SMD150F-2018
- E = SMD200F-2018



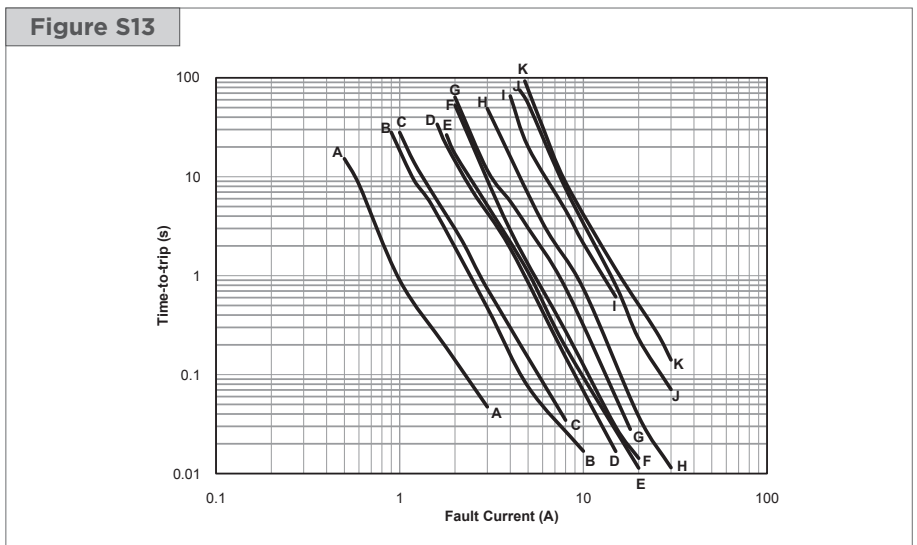
SMDCxxxF

- A = SMDC125F/33
- B = SMDC185F/33
- C = SMDC300F/24
- D = SMDC310F/18



SMDxxxF

- A = SMD030F
- B = SMD050F
- C = SMD075F, SMD075F/60
- D = SMD100F, SMD100F/33
- E = SMDH120
- F = SMD150F/33-2920
- G = SMD125F
- H = SMD200F/24-2920
- I = SMD250F/15-2920
- J = SMD260F
- K = SMD300F, SMD300F/15



PolySwitch Resettable Devices

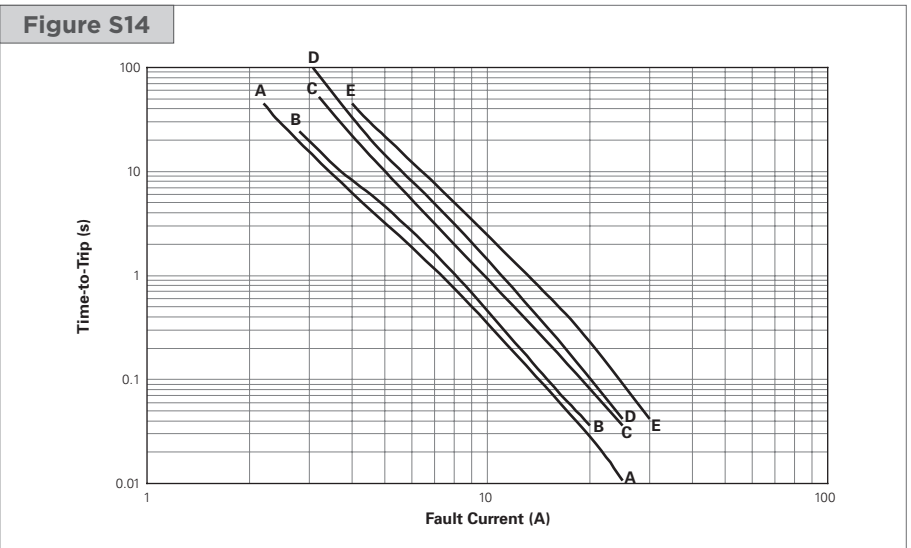
Surface-Mount Devices

Figures S6-S15 — Typical Time-to-Trip Curves at 20°C

(Cont'd)

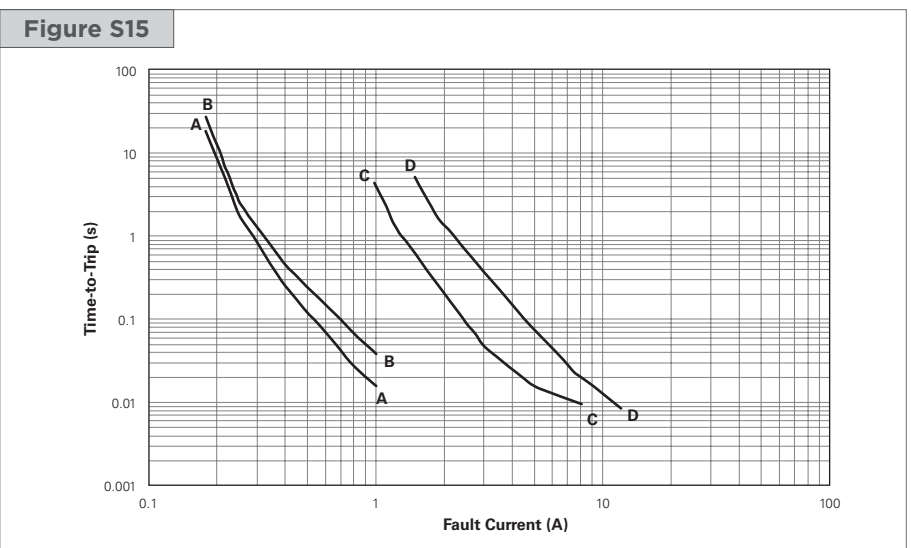
SMD2xxxF

- A = SMD150F, SMD150F/33
- B = SMDH160
- C = SMD185F
- D = SMD200F
- E = SMD250F



High Temperature SMD

- A = nanoSMDCH010F
- B = microSMDCH010F
- C = microSMDCH050F
- D = nanoSMDH075F



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Table S5 — Physical Characteristics and Environmental Specifications

Operating temperature range -40°C to 85°C, -40°C to 125°C for SMDH120, SMDH160 and High Temperature SMD

| Physical Characteristics | | | |
|--------------------------------|---|-------------------------|-------------------|
| Terminal Pad Material | 100% Matte Tin with Nickel Underplate | | |
| Soldering Characteristics | ANSI/J-STD-002 Category 3 for femtoSMD, picoSMD, nanoSMD, microSMD, miniSMD and SMDC Series ANSI/J-STD-002 Category 1 for SMD Series | | |
| Solder Heat Withstand | per IEC-STD 68-2-20, Test Tb, Section 5, Method 1A | | |
| Flammability Resistance | per IEC 695-2-2 Needle Flame Test for 20 seconds | | |
| Recommended Storage Conditions | 40°C max, 70% R.H. max; Devices May Not Meet Specified Ratings if Storage Conditions Are Exceeded | | |
| Environmental Specifications | | | |
| Test | Test Method | Conditions | Resistance Change |
| Storage Life | PS300, Section 5.3.2 | 60°C, 1000 hrs | ±3% typ |
| | | 85°C, 1000 hrs | ±5% typ |
| Humidity Aging | PS300, Section 5.3.1 | 85°C, 85% RH, 100 hrs | ±1.2% typ |
| Thermal Shock | MIL-STD-202, Method 107G | 85°C, -40°C (20 Times) | -33% typ |
| | | 125°C, -55°C (10 Times) | -33% typ |
| Vibration | MIL-STD-883C | per MIL-STD-883C | No Change |
| Solvent Resistance | PS300, Section 5.2.2 | Freon | No Change |
| | | Trichloroethane | No Change |
| | | Hydrocarbons | No Change |

Table S6 — Packaging and Marking Information

| Part Number | Tape and Reel Quantity | Standard Package | Part Marking | Recommended Pad Layout Figures [mm (in)] | | | Agency Recognition |
|---|------------------------|------------------|--------------|--|-------------------|-------------------|--------------------|
| | | | | Dimension A (Nom) | Dimension B (Nom) | Dimension C (Nom) | |
| femtoSMDC Series Size 1608mm/0603mils | | | | | | | |
| femtoSMDC005F | 4,000 | 20,000 | A | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA |
| femtoSMDC008F | 4,000 | 20,000 | T | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA |
| femtoSMDC010F | 4,000 | 20,000 | B | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA, TÜV |
| femtoSMDC012F | 5,000 | 25,000 | C | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA |
| femtoSMDC016F | 5,000 | 25,000 | E | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA |
| femtoSMDC020F | 5,000 | 25,000 | F | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA, TÜV |
| femtoSMDC035F | 4,000 | 20,000 | K | 0.80 (0.032) | 0.60 (0.024) | 0.80 (0.032) | UL, CSA |
| picoSMDC Series Size 2012mm/0805mils | | | | | | | |
| picoSMDC010S | 3,000 | 15,000 | C | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC012S | 4,000 | 20,000 | F | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC020S | 4,000 | 20,000 | H | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC035S | 4,000 | 20,000 | I | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC050S | 3,000 | 15,000 | K | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC075S | 3,000 | 15,000 | M | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, CSA, TÜV |
| picoSMDC110S | 3,000 | 15,000 | S | 1.50 (0.060) | 1.00 (0.039) | 1.20 (0.047) | UL, TÜV |
| nanoSMDC Series Size 3216mm/1206mils | | | | | | | |
| NEW nanoSMDC010F | 3,000 | 15,000 | A | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, TÜV |
| nanoSMDC012F | 3,000 | 15,000 | P | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC016F | 3,000 | 15,000 | N | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |

PolySwitch Resettable Devices

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Table S6 – Packaging and Marking Information

(Cont'd)

| Part Number | Tape and Reel Quantity | Standard Package | Part Marking | Recommended Pad Layout Figures [mm (in)] | | | Agency Recognition |
|-----------------------------|------------------------|------------------|--------------|--|-------------------|-------------------|--------------------|
| | | | | Dimension A (Nom) | Dimension B (Nom) | Dimension C (Nom) | |
| nanoSMDC Series | | | | | | | |
| Size 3216mm/1206mils | | | | | | | |
| nanoSMDC020F | 3,000 | 15,000 | 02 | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC025F | 3,000 | 15,000 | C | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC035F | 3,000 | 15,000 | 03 | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC050F/13.2 | 3,000 | 15,000 | M | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC075F | 3,000 | 15,000 | L | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC110F | 3,000 | 15,000 | K | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC150F | 3,000 | 15,000 | 15 | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| nanoSMDC200F | 3,000 | 15,000 | T | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD Series | | | | | | | |
| Size 3225mm/1210mils | | | | | | | |
| microSMD005F | 4,000 | 20,000 | 05 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD010F | 4,000 | 20,000 | 10 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD035F | 4,000 | 20,000 | 3 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD050F | 4,000 | 20,000 | 50 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD075F | 4,000 | 20,000 | 75 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD110F | 4,000 | 20,000 | 11 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD150F | 4,000 | 20,000 | 15 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD175F | 4,000 | 20,000 | 17 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| microSMD200F | 3,000 | 15,000 | 20 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | UL, CSA, TÜV |
| miniSMDC Series | | | | | | | |
| Size 4532mm/1812mils | | | | | | | |
| miniSMDC010F | 2,000 | 10,000 | 10 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC014F | 2,000 | 10,000 | 14 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC020F | 2,000 | 10,000 | 2 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC030F | 2,000 | 10,000 | 3 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC050F | 2,000 | 10,000 | 5 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC075F | 2,000 | 10,000 | 7 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC075F/24 | 1,500 | 7,500 | 075F 24V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC075F/33 | 1,500 | 7,500 | 075F 33V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC100F | 2,000 | 10,000 | 1 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC110F | 2,000 | 10,000 | 1 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC110F/16 | 2,000 | 10,000 | 110F 16V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC110F/24 | 1,500 | 7,500 | 110F 24V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC125F | 2,000 | 10,000 | 12 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC125F/16 | 2,000 | 10,000 | 125F 16V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC150F | 2,000 | 10,000 | 15 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC150F/12 | 2,000 | 10,000 | 150F 12V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC150F/16 | 2,000 | 10,000 | 150 16V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC150F/24 | 1,000 | 5,000 | 150F 24V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC160F | 2,000 | 10,000 | 16 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC200F | 2,000 | 10,000 | 20 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC200F/16 | 2,000 | 10,000 | 200F 16V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, TÜV |
| miniSMDC260F | 2,000 | 10,000 | 260F | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC260F/12 | 1,500 | 7,500 | 260F 12V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC260F/13.2 | 1,500 | 7,500 | 260F 13V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC260F/16 | 1,500 | 7,500 | 260F 16V | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |
| miniSMDC300F | 2,000 | 10,000 | 30 | 3.15 (0.124) | 1.68 (0.066) | 3.10 (0.122) | UL, CSA, TÜV |

PolySwitch Resettable Devices

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Table S6 — Packaging and Marking Information

(Cont'd)

| Part Number | Tape and Reel Quantity | Standard Package | Part Marking | Recommended Pad Layout Figures [mm (in)] | | | Agency Recognition |
|---|------------------------|------------------|--------------|--|-------------------|-------------------|--------------------|
| | | | | Dimension A (Nom) | Dimension B (Nom) | Dimension C (Nom) | |
| midSMD Series | | | | | | | |
| Size 5050mm/2018mils | | | | | | | |
| SMD030F-2018 | 4,000 | 20,000 | A03F | 4.60 (0.18) | 1.50 (0.059) | 3.40 (0.134) | UL, CSA, TÜV |
| decaSMDC050F/60 | 1,000 | 5,000 | 050F 60V | 4.32 (0.17) | 1.40 (0.055) | 3.61 (0.142) | UL, CSA, TÜV |
| SMD100F-2018 | 4,000 | 20,000 | A10F | 4.60 (0.18) | 1.50 (0.059) | 3.40 (0.134) | UL, CSA, TÜV |
| SMD150F-2018 | 4,000 | 20,000 | A15F | 4.60 (0.18) | 1.50 (0.059) | 3.40 (0.134) | UL, CSA, TÜV |
| SMD200F-2018 | 4,000 | 20,000 | A20F | 4.60 (0.18) | 1.50 (0.059) | 3.40 (0.134) | UL, CSA, TÜV |
| SMDC Series | | | | | | | |
| Size 7555mm/2920mils | | | | | | | |
| NEW SMDC125F/33 | 4,000 | 20,000 | 125F | 5.30 (0.209) | 2.00 (0.079) | 4.60 (0.18) | UL |
| NEW SMDC185F/33 | 4,000 | 20,000 | 185F 33V | 5.30 (0.209) | 2.00 (0.079) | 4.60 (0.18) | UL, CSA, TÜV |
| NEW SMDC300F/24 | 4,000 | 20,000 | 300F 24V | 5.30 (0.209) | 2.00 (0.079) | 4.60 (0.18) | UL, CSA, TÜV |
| NEW SMDC310F/18 | 3,000 | 15,000 | 310F 18V | 5.30 (0.209) | 2.00 (0.079) | 4.60 (0.18) | UL, CSA, TÜV |
| SMD Series | | | | | | | |
| Size 7555mm/2920mils | | | | | | | |
| SMD030F | 2,000 | 10,000 | 030F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD050F | 2,000 | 10,000 | 050F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD075F | 2,000 | 10,000 | 075F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD075F/60 | 2,000 | 10,000 | 756F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD100F | 2,000 | 10,000 | 100F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD100F/33 | 2,000 | 10,000 | 103F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMDH120 | 2,000 | 10,000 | H12 | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD125F | 2,000 | 10,000 | 125F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD150F/33-2920 | 2,000 | 10,000 | S15F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD200F/24-2920 | 2,000 | 10,000 | S20F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD250F/15-2920 | 2,000 | 10,000 | S25F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD260F | 2,000 | 10,000 | 260F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD300F | 2,000 | 10,000 | 300F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD300F/15 | 2,000 | 10,000 | 315F | 3.10 (0.12) | 2.30 (0.09) | 5.10 (0.201) | UL, CSA, TÜV |
| SMD2 Devices | | | | | | | |
| Size 8763mm/3425mils | | | | | | | |
| SMD150F | 1,500 | 7,500 | 150F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| SMD150F/33 | 1,500 | 7,500 | 153F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| SMDH160 | 1,500 | 7,500 | 160F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| SMD185F | 1,500 | 7,500 | 185F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| SMD200F | 1,500 | 7,500 | 200F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| SMD250F | 1,500 | 7,500 | 250F | 4.60 (0.18) | 2.30 (0.09) | 6.10 (0.240) | UL, CSA, TÜV |
| High Temperature SMD Series | | | | | | | |
| Size 3216mm/1206mils & 3225mm/1210mils | | | | | | | |
| NEW nanoSMDCH010F | 4,000 | 20,000 | H01 | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | — |
| NEW nanoSMDH075F | 3,000 | 15,000 | H75 | 1.60 (0.063) | 1.00 (0.039) | 2.00 (0.079) | — |
| NEW microSMDCH010F | 3,000 | 15,000 | H01 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | — |
| NEW microSMDCH050F | 4,000 | 20,000 | H05 | 2.50 (0.098) | 1.00 (0.039) | 2.00 (0.079) | — |

PolySwitch Resettable Devices

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Figure S16 – Recommended Pad Layout



Agency Recognition

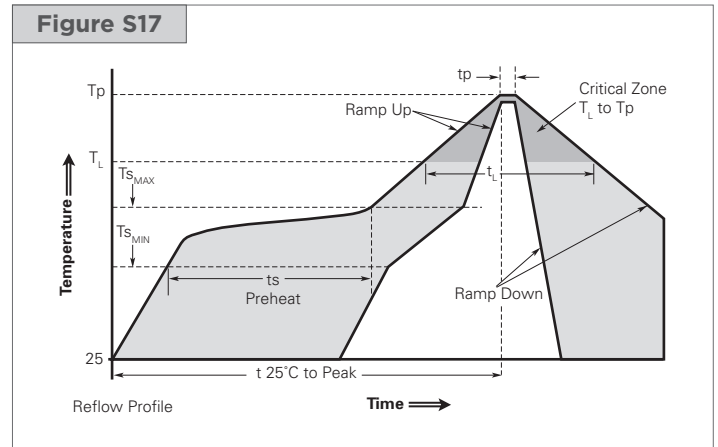
| | |
|-----|--|
| UL | File # E74889 for all Surface-mount Devices |
| CSA | File # CA78165 for all Surface-mount Devices |
| TÜV | Certificate Number Available Upon Request (Certified to IEC 60730-1) |

Solder Reflow and Rework Recommendation

Classification Reflow Profiles

| Profile Feature | Pb-Free Assembly |
|--|------------------|
| Average Ramp-up Rate ($T_{s_{MAX}}$ to T_p) | 3°C/s max |
| Preheat | |
| • Temperature min ($T_{s_{MIN}}$) | 150°C |
| • Temperature max ($T_{s_{MAX}}$) | 200°C |
| • Time ($t_{s_{MIN}}$ to $t_{s_{MAX}}$) | 60-120s |
| Time Maintained Above: | |
| • Temperature (T_L) | 217°C |
| • Time (t_L) | 60-150s |
| Peak/Classification Temperature (T_p) | 260°C |
| Time within 5°C of Actual Peak Temperature | |
| Time (t_p) | 30s max |
| Ramp-down Rate | 3°C/s max |
| Time 25°C to Peak Temperature | 8 mins max |

Note: All temperatures refer to topside of the package, measured on the package body surface.



Solder Reflow

- Recommended reflow methods:
 - IR
 - Hot air
 - Nitrogen
- Recommended maximum paste thickness: 0.25mm (0.010in)
- Devices can be cleaned using standard methods and aqueous solvents.
- Experience has shown the optimum conditions for forming acceptable solder fillets occur when a reasonable amount of solder paste is placed underneath each device's termination. As such, we request that customers comply with our recommended solder pad layouts.
- Customer should validate that the solder paste amount and reflow recommendations meet its application.
- We request that customer board layouts refrain from placing raised features (e.g. vias, nomenclature, traces, etc.) underneath PolySwitch devices. It is possible that raised features could negatively impact solderability performance of our devices.

Rework

- femtoSMD, picoSMD, nanoSMD, microSMD, miniSMD and SMDC series: standard industry practices. (Please also avoid direct contact to the device.)
- SMD series: Rework should be confined to removal of the installed product and replacement with a fresh device.

PolySwitch Resettable Devices

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Table S7 – Tape and Reel Specifications (Millimeters)

| Description | nanoSMDC | | microSMD | | miniSMDC | | midSMD | | SMD | |
|--------------------|------------------------|-----------------------|---|--|------------------------------|------------------------------|------------------|------------------|------------------|------------------|
| | femtoSMDC EIA 481-1 | picoSMDC EIA 481-1 | nanoSMDC and nanoSMDC010F and nanoSMDC010F EIA 481-1 | microSMDC and microSMDC010F EIA 481-1 | decaSMDC050F/60 EIA 481-1 | decaSMDC050F/60 EIA 481-2 | SMD EIA 481-1 | SMD EIA 481-2 | SMD EIA 481-1 | SMD EIA 481-2 |
| W | 8.0 ± 0.30 | 8.0 ± 0.30 | 8.0 ± 0.30 | 8.0 ± 0.30 | 12.0 ± 0.30 | 16.0 ± 0.30 | 16.0 ± 0.30 | 16.0 ± 0.30 | 16.0 ± 0.30 | 16.0 ± 0.30 |
| P ₀ | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 |
| P ₁ | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 4.0 ± 0.10 | 8.0 ± 0.10 | 8.0 ± 0.10 | 8.0 ± 0.10 | 8.0 ± 0.10 | 8.0 ± 0.10 | 12.0 ± 0.10 |
| P ₂ | 2.0 ± 0.05 | 2.0 ± 0.10 | 2.0 ± 0.05 | 2.0 ± 0.05 | 2.0 ± 0.05 | 2.0 ± 0.10 | 2.0 ± 0.10 | 2.0 ± 0.10 | 2.0 ± 0.10 | 2.0 ± 0.10 |
| A ₀ | 0.95 ± 0.05 | 1.70 ± 0.10 | 1.95 ± 0.10 | 2.9 ± 0.10 | Table S8 | 5.11 ± 0.15 | Table S8 | 5.6 ± 0.23 | 6.9 ± 0.23 | 6.9 ± 0.23 |
| B ₀ | 1.85 ± 0.05 | 2.45 ± 0.10 | Table S8 | Table S8 | Table S8 | 5.6 ± 0.23 | Table S8 | 8.1 ± 0.15 | 9.6 ± 0.15 | 9.6 ± 0.15 |
| B ₁ max | 4.35 | 4.35 | 4.35 | 4.35 | 6.15 | 6.4 | 12.1 | 12.1 | 12.1 | 12.1 |
| D ₀ | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.55 ± 0.05 | 1.5 ± 0.10/-00 | 1.5 ± 0.10/-00 | 1.5 ± 0.10/-00 | 1.5 ± 0.10/-00 | 1.5 ± 0.10/-00 |
| F | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 3.50 ± 0.05 | 5.50 ± 0.10 | 7.50 ± 0.10 | 7.50 ± 0.10 | 7.50 ± 0.10 | 7.50 ± 0.10 | 7.50 ± 0.10 |
| E ₁ | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 | 1.75 ± 0.10 |
| E ₂ min | 6.25 | 6.25 | 6.25 | 6.25 | 10.25 | 14.25 | 14.25 | 14.25 | 14.25 | 14.25 |
| T max | 0.3 | 0.3 | 0.3 | 0.3 | 0.35 | 0.4 | 0.35 | 0.4 | 0.4 | 0.4 |
| T ₁ max | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| K ₀ | Table S8 | Table S8 | Table S8 | Table S8 | Table S8 | 1.8 ± 0.15 | Table S8 | 3.2 ± 0.15 | 3.4 ± 0.15 | 3.4 ± 0.15 |

Table S8 – Tape and Reel Specifications (Millimeters)

| Description | femtoSMDC | | picoSMDC | | picoSMDC | | nanoSMDC | | microSMDC | |
|----------------|--|--|--|--|-----------------|--|--|--|---|---|
| | femtoSMDC005F femtoSMDC008F femtoSMDC010F femtoSMDC035F | femtoSMDC012F femtoSMDC016F femtoSMDC020F | picoSMDC012S picoSMDC020S picoSMDC035S | picoSMDC010S picoSMDC050S picoSMDC075S | picoSMDC110S | nanoSMDC010F and All nanoSMDC series except nanoSMDC010F nanoSMDC012F nanoSMDC016F nanoSMDC200F | nanoSMDC010F and All nanoSMDC series except nanoSMDC010F nanoSMDC012F nanoSMDC016F nanoSMDC200F | nanoSMDC010F and All nanoSMDC series except nanoSMDC010F nanoSMDC012F nanoSMDC016F nanoSMDC200F | microSMDC050F and All microSMDC series except microSMDC200F | microSMDC050F and All microSMDC series except microSMDC200F |
| A ₀ | 0.95 ± 0.05 | 0.95 ± 0.05 | 1.70 ± 0.1 | 1.70 ± 0.1 | 1.70 ± 0.1 | 1.95 ± 0.1 | 1.95 ± 0.1 | 1.95 ± 0.1 | 2.9 ± 0.1 | 2.9 ± 0.1 |
| B ₀ | 1.85 ± 0.05 | 1.85 ± 0.05 | 2.45 ± 0.1 | 2.45 ± 0.1 | 2.45 ± 0.1 | 3.50 ± 0.1/-0.08 | 3.5 ± 0.1 | 3.5 ± 0.1 | 3.5 ± 0.1 | 3.5 ± 0.1 |
| K ₀ | 0.90 ± 0.1 | 0.55 ± 0.05 | 0.86 ± 0.1 | 1.12 ± 0.1 | 1.35 ± 0.1 | 0.89 ± 0.1 | 1.27 ± 0.1 | 1.27 ± 0.1 | 0.9 ± 0.1 | 0.9 ± 0.1 |
| Description | microSMDC | | miniSMDC | | decaSMDC | | SMDC | | SMD | |
| | microSMDC010F microSMDC200F | miniSMDC010F miniSMDC014F~075F miniSMDC100F~110F/16 miniSMDC125F~150F/16 miniSMDC160F~260F miniSMDC300F | miniSMDC075F/24 miniSMDC075F/33 miniSMDC110F/24 miniSMDC260F/12 miniSMDC260F/13.2 miniSMDC260F/16 | miniSMDC150F/24 | decaSMDC050F/60 | SMDC125F/33 | SMDC185F/33 SMDC300F/24 | SMDC185F/33 SMDC300F/24 | SMDC310F/18 | SMDC310F/18 |
| A ₀ | 2.9 ± 0.1 | 3.5 ± 0.1 | 3.7 ± 0.1 | 3.7 ± 0.1 | 5.0 ± 0.1 | 5.5 ± 0.1 | 5.35 ± 0.1 | 5.35 ± 0.1 | 5.5 ± 0.1 | 5.5 ± 0.1 |
| B ₀ | 3.55 ± 0.1 | 4.95 ± 0.1 | 4.9 ± 0.1 | 4.9 ± 0.1 | 5.4 ± 0.1 | 7.9 ± 0.1 | 7.85 ± 0.1 | 7.85 ± 0.1 | 8.0 ± 0.1 | 8.0 ± 0.1 |
| K ₀ | 1.27 ± 0.1 | 0.9 ± 0.1 | 1.4 ± 0.1 | 1.78 ± 0.1 | 1.7 ± 0.1 | 0.9 ± 0.1 | 1.45 ± 0.1 | 1.45 ± 0.1 | 2.0 ± 0.1 | 2.0 ± 0.1 |

Table S9 – Reel Dimensions (Millimeters)

| Description | femto/pico/nano/microSMD/ High Temperature SMD | miniSMDC | midSMD | SMD/SMDC | SMD2 |
|--------------------|---|----------------|----------------|----------------|----------------|
| A max | 185 | 185 | 330 | 330 | 330 |
| N min | 50 | 50 | 50 | 50 | 50 |
| W ₁ | 8.4 + 1.5/-00 | 12.4 + 2.0/-00 | 16.4 + 2.0/-00 | 16.4 + 2.0/-00 | 16.4 + 2.0/-00 |
| W ₂ max | 14.4 | 18.4 | 22.4 | 22.4 | 22.4 |

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Figure S18 – EIA Referenced Taped Component Dimensions

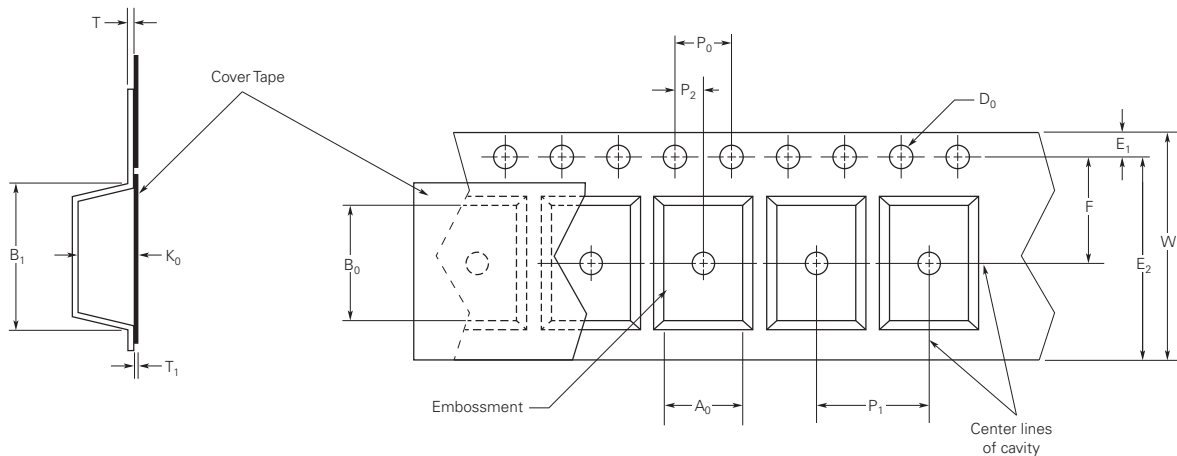
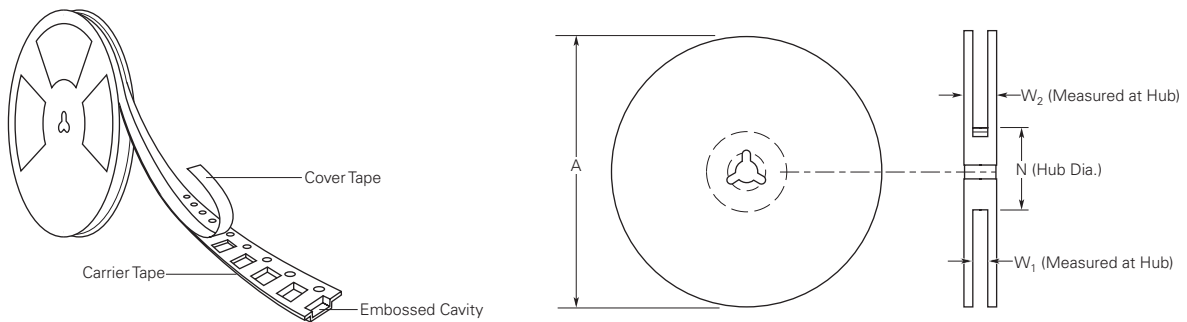
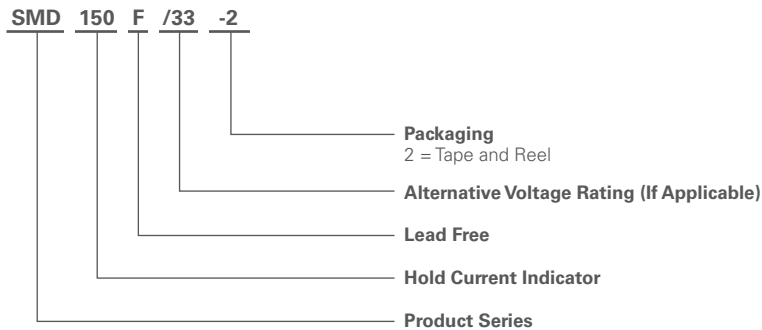


Figure S19 – EIA Referenced Reel Dimensions



Part Numbering System



Warning :

- Users should independently evaluate the suitability of and test each product selected for their own application.
- Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- These devices are intended for protection against damage caused by occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Contamination of the PPTC material with certain silicone-based oils or some aggressive solvents can adversely impact the performance of the devices.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- PPTC devices are not recommended for installation in applications where the device is constrained such that its PTC properties are inhibited, for example in rigid potting materials or in rigid housings, which lack adequate clearance to accommodate device expansion.
- Operation in circuits with a large inductance can generate a circuit voltage (Ldi/dt) above the rated voltage of the device.

PolySwitch Resettable Devices

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Notice:

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