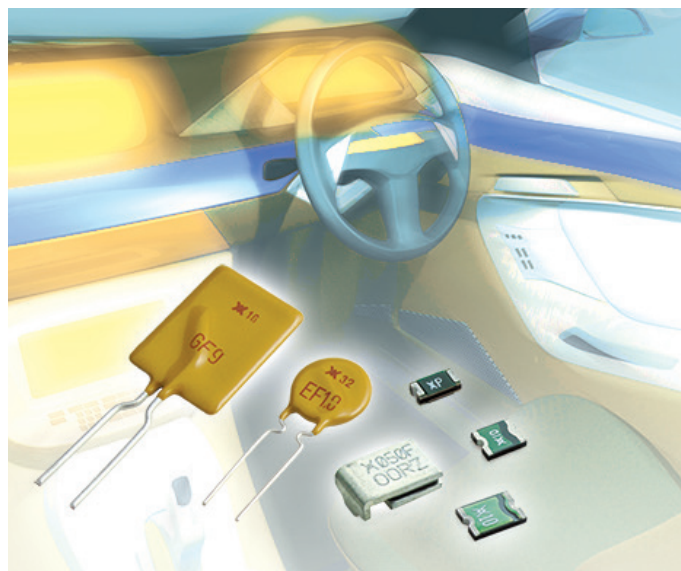


# POLYSWITCH RESETTABLE DEVICES

## Automotive Devices

We have provided PPTC resettable devices for the automotive industry for over 25 years. With the advent of TS16949 and our continued involvement in the automotive industry, Littelfuse PolySwitch team developed automotive-specific versions of PPTC devices (femtoASMDC, picoASMDC, nanoASMDC, microASMD, miniASMDC, ASMDC, nanoASMDCH, AHS, ASMD, AHRF, AHEF and AGRF). These products are qualified and sold under the PS400 specification which is derived from AEC-Q200, the standard for electronic components used in the automotive industry. The key difference between these product families and other protection devices in our circuit protection product portfolio is the qualification process that is followed that includes a series of rigorous tests related to the automotive environment. As a result, they are characterized by specific additional values determined following automotive-related testing.



### BENEFITS

- Expertise from the world's leading resettable overcurrent protection manufacturer
- High-quality products from the world's largest passive component manufacturer
- Worldwide team dedicated to support automotive applications
- Wide range of dedicated automotive surface-mount and radial-leaded resettable overcurrent devices
- High-performance transient voltage protection devices

### FEATURES

- RoHS compliant
- Overcurrent and overvoltage circuit protection devices
- Resettable and single-use overcurrent devices
- Wide range of form factor and termination methods
- Products meet applicable automotive industry standards
- Devices compatible with high-volume electronics assembly

### APPLICATIONS

- Motor and motor circuit protection including power door-locks, mirrors, lumbar pumps, seats, sunroofs and windows
- Electronic Control Unit (ECU) I/O protection
- Heating, Ventilation and Cooling (HVAC) motor and I/O protection
- Telematics, infotainment and navigations systems
- Liquid Crystal Display (LCD) back-light heaters
- Power and cigarette lighter outlets, plugs and adapter/chargers
- Powered networks and buses
- Air-flow detection and overcurrent protection in HVAC and cooling fan systems
- Stall detection in express window and sunroof circuits
- Resettable overcurrent protection for power distribution, electrical centers and junction boxes
- Wire downsizing
- Motor electromagnetic interference (EMI) suppression
- Electrostatic discharge (ESD) damage protection
- Load dump and other transient voltage protection

# PolySwitch Resettable Devices

## Automotive Devices

Table A1 — Product Series - Current Rating, Voltage Rating/Typical Resistance

| Voltage Rating   | AGRF 16V | AHRF 16V | AHRF 30V | AHEF 32V | AHS 16V | ASMD 16V | ASMD 30V | ASMD 33V | ASMD 60V |
|------------------|----------|----------|----------|----------|---------|----------|----------|----------|----------|
| Hold Current (A) |          |          |          |          |         |          |          |          |          |
| 0.30             | —        | —        | —        | —        | —       | —        | —        | —        | 2.90Ω    |
| 0.50             | —        | —        | 0.565Ω   | 0.5650Ω  | —       | —        | —        | —        | 0.90Ω    |
| 0.70             | —        | —        | 0.385Ω   | 0.3850Ω  | —       | —        | —        | —        | —        |
| 0.75             | —        | —        | —        | —        | —       | —        | 0.60Ω    | —        | —        |
| 0.80             | —        | —        | —        | —        | 0.250Ω  | —        | —        | —        | —        |
| 1.00             | —        | —        | 0.225Ω   | 0.2250Ω  | —       | —        | 0.30Ω    | —        | —        |
| 1.20             | —        | —        | —        | —        | 0.245Ω  | —        | —        | —        | —        |
| 1.25             | —        | —        | —        | —        | —       | 0.160Ω   | —        | —        | —        |
| 1.50             | —        | —        | —        | —        | —       | 0.140Ω   | —        | 0.149Ω   | —        |
| 1.60             | —        | —        | —        | —        | 0.100Ω  | —        | —        | —        | —        |
| 1.85             | —        | —        | —        | —        | —       | 0.079Ω   | —        | —        | —        |
| 2.00             | —        | 0.0565Ω  | —        | —        | 0.070Ω  | 0.090Ω   | —        | —        | —        |
| 2.50             | —        | —        | —        | —        | —       | 0.060Ω   | —        | —        | —        |
| 3.00             | —        | 0.0410Ω  | —        | 0.0520Ω  | 0.050Ω  | —        | —        | —        | —        |
| 4.00             | 0.0300Ω  | 0.0305Ω  | —        | —        | —       | —        | —        | —        | —        |
| 4.50             | —        | 0.0290Ω  | —        | —        | —       | —        | —        | —        | —        |
| 5.00             | 0.0192Ω  | —        | —        | 0.0200Ω  | —       | —        | —        | —        | —        |
| 5.50             | —        | 0.0190Ω  | —        | —        | —       | —        | —        | —        | —        |
| 6.00             | 0.0145Ω  | 0.0180Ω  | —        | —        | —       | —        | —        | —        | —        |
| 6.50             | —        | 0.0140Ω  | —        | —        | —       | —        | —        | —        | —        |
| 7.00             | 0.0105Ω  | 0.0126Ω  | —        | —        | —       | —        | —        | —        | —        |
| 7.50             | —        | 0.0120Ω  | —        | 0.0120Ω  | —       | —        | —        | —        | —        |
| 8.00             | 0.0086Ω  | 0.0104Ω  | —        | —        | —       | —        | —        | —        | —        |
| 9.00             | 0.0070Ω  | 0.0100Ω  | —        | —        | —       | —        | —        | —        | —        |
| 10.00            | 0.0056Ω  | 0.0083Ω  | —        | 0.0083Ω  | —       | —        | —        | —        | —        |
| 11.00            | 0.0050Ω  | 0.0069Ω  | —        | —        | —       | —        | —        | —        | —        |
| 12.00            | 0.0046Ω  | —        | —        | —        | —       | —        | —        | —        | —        |
| 13.00            | —        | 0.0055Ω  | —        | —        | —       | —        | —        | —        | —        |
| 14.00            | 0.0040Ω  | 0.0050Ω  | —        | —        | —       | —        | —        | —        | —        |
| 15.00            | —        | 0.0050Ω  | —        | —        | —       | —        | —        | —        | —        |

# PolySwitch Resettable Devices

## Automotive Devices

Table A1 — Product Series - Current Rating, Voltage Rating/Typical Resistance (Cont'd)

| Voltage Rating   | femtoASMDC 15V | femtoASMDC 12V | picoASMDC 15V | nanoASMDC 60V | nanoASMDC 48V | nanoASMDC 24V | nanoASMDC 16V | nanoASMDC 13.2V | microASMD 30V | microASMD 13.2V |
|------------------|----------------|----------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------|-----------------|
| Hold Current (A) |                |                |               |               |               |               |               |                 |               |                 |
| 0.05             | 16.90Ω         | —              | —             | —             | —             | —             | —             | —               | 26.80Ω        | —               |
| 0.08             | —              | 8.40Ω          | —             | —             | —             | —             | —             | —               | —             | —               |
| 0.10             | 8.00Ω          | —              | 6.25Ω         | 8.30Ω         | —             | —             | —             | —               | 8.55Ω         | —               |
| 0.12             | —              | —              | 5.25Ω         | —             | 3.95Ω         | —             | —             | —               | —             | —               |
| 0.16             | —              | —              | —             | —             | 3.05Ω         | —             | —             | —               | —             | —               |
| 0.20             | —              | —              | —             | —             | —             | 1.875Ω        | —             | —               | —             | —               |
| 0.25             | —              | —              | —             | —             | —             | —             | 1.25Ω         | —               | —             | —               |
| 0.35             | —              | —              | —             | —             | —             | —             | 0.90Ω         | —               | —             | —               |
| 0.50             | —              | —              | —             | —             | —             | —             | —             | 0.475Ω          | —             | 0.575Ω          |

| Voltage Rating   | miniASMDC 60V | miniASMDC 33V | miniASMDC 30V | miniASMDC 24V | miniASMDC 16V | miniASMDC 13.2V | miniASMDC 12V | ASMDC 60V | ASMDC 33V | ASMDC 24V | nanoASMDCH 16V |
|------------------|---------------|---------------|---------------|---------------|---------------|-----------------|---------------|-----------|-----------|-----------|----------------|
| Hold Current (A) |               |               |               |               |               |                 |               |           |           |           |                |
| 0.10             | 6.70Ω         | —             | —             | —             | —             | —               | —             | —         | —         | —         | —              |
| 0.14             | 3.75Ω         | —             | —             | —             | —             | —               | —             | —         | —         | —         | —              |
| 0.20             | —             | —             | 1.950Ω        | —             | —             | —               | —             | —         | —         | —         | —              |
| 0.30             | —             | —             | 0.975Ω        | —             | —             | —               | —             | 1.850Ω    | —         | —         | —              |
| 0.35             | —             | —             | —             | —             | —             | —               | —             | —         | —         | —         | 0.90Ω          |
| 0.50             | —             | —             | —             | 0.575Ω        | —             | —               | —             | 0.675Ω    | —         | —         | —              |
| 0.75             | —             | 0.25Ω         | —             | 0.190Ω        | —             | 0.280Ω          | —             | —         | 0.355Ω    | —         | —              |
| 1.10             | —             | —             | —             | 0.120Ω        | 0.1200Ω       | —               | —             | —         | —         | —         | —              |
| 1.25             | —             | —             | —             | —             | 0.0950Ω       | —               | —             | —         | 0.145Ω    | —         | —              |
| 1.50             | —             | —             | —             | 0.080Ω        | 0.0750Ω       | —               | 0.075Ω        | —         | —         | —         | —              |
| 1.85             | —             | —             | —             | —             | —             | —               | —             | —         | 0.100Ω    | —         | —              |
| 2.00             | —             | —             | —             | —             | 0.0525Ω       | —               | —             | —         | —         | —         | —              |
| 2.60             | —             | —             | —             | —             | 0.0325Ω       | 0.0325Ω         | 0.031Ω        | —         | —         | —         | —              |
| 3.00             | —             | —             | —             | —             | —             | —               | —             | —         | —         | 0.0435Ω   | —              |

# PolySwitch Resettable Devices

## Automotive Devices

Table A2 — 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 | 85°C  | 125°C |
| <b>AGRF</b>                    |                             |       |       |      |      |      |       |      |      |       |       |
| <b>16V — Radial-leaded</b>     |                             |       |       |      |      |      |       |      |      |       |       |
| AGRF400                        | 5.9                         | 5.3   | 4.8   | 4.1  | 4.0  | 3.5  | 3.2   | 2.8  | 2.5  | 1.9   | —     |
| AGRF500                        | 7.3                         | 6.6   | 6.0   | 5.2  | 5.0  | 4.4  | 4.0   | 3.6  | 3.1  | 2.4   | —     |
| AGRF600                        | 8.8                         | 8.0   | 7.2   | 6.2  | 6.0  | 5.2  | 4.8   | 4.2  | 3.8  | 2.8   | —     |
| AGRF700                        | 10.3                        | 9.3   | 8.4   | 7.3  | 7.0  | 6.2  | 5.6   | 5.0  | 4.4  | 3.3   | —     |
| AGRF800                        | 11.7                        | 10.7  | 9.6   | 8.3  | 8.0  | 6.9  | 6.4   | 5.6  | 5.1  | 3.7   | —     |
| AGRF900                        | 13.2                        | 11.9  | 10.7  | 9.4  | 9.0  | 7.9  | 7.2   | 6.4  | 5.6  | 4.2   | —     |
| AGRF1000                       | 14.7                        | 13.3  | 12.0  | 10.3 | 10.0 | 8.7  | 8.0   | 7.0  | 6.3  | 4.7   | —     |
| AGRF1100                       | 16.1                        | 14.6  | 13.1  | 11.5 | 11.0 | 9.7  | 8.8   | 7.8  | 6.9  | 5.2   | —     |
| AGRF1200                       | 17.6                        | 16.0  | 14.4  | 12.4 | 12.0 | 10.4 | 9.6   | 8.4  | 7.6  | 5.6   | —     |
| AGRF1400                       | 20.5                        | 18.7  | 16.8  | 14.5 | 14.0 | 12.1 | 11.2  | 9.8  | 8.9  | 6.5   | —     |
| <b>AHRF (High Temperature)</b> |                             |       |       |      |      |      |       |      |      |       |       |
| <b>30V — Radial-leaded</b>     |                             |       |       |      |      |      |       |      |      |       |       |
| AHRF050                        | 0.7                         | 0.6   | 0.6   | 0.5  | 0.5  | 0.4  | 0.4   | 0.4  | 0.3  | 0.3   | 0.1   |
| AHRF070                        | 1.0                         | 0.9   | 0.8   | 0.7  | 0.7  | 0.6  | 0.6   | 0.5  | 0.5  | 0.4   | 0.2   |
| AHRF100                        | 1.4                         | 1.2   | 1.1   | 1.0  | 1.0  | 0.9  | 0.8   | 0.7  | 0.7  | 0.6   | 0.2   |
| <b>AHRF (High Temperature)</b> |                             |       |       |      |      |      |       |      |      |       |       |
| <b>16V — Radial-leaded</b>     |                             |       |       |      |      |      |       |      |      |       |       |
| AHRF200                        | 2.7                         | 2.5   | 2.3   | 2.1  | 2.0  | 1.8  | 1.6   | 1.5  | 1.3  | 1.1   | 0.5   |
| AHRF300                        | 4.1                         | 3.7   | 3.4   | 3.1  | 3.0  | 2.7  | 2.4   | 2.2  | 2.0  | 1.7   | 0.7   |
| AHRF400                        | 5.6                         | 5.1   | 4.7   | 4.2  | 4.0  | 3.6  | 3.3   | 3.0  | 2.7  | 2.3   | 1.0   |
| AHRF450                        | 6.1                         | 5.6   | 5.1   | 4.6  | 4.5  | 4.0  | 3.6   | 3.3  | 3.0  | 2.5   | 1.1   |
| AHRF550                        | 7.5                         | 6.9   | 6.2   | 5.7  | 5.5  | 4.9  | 4.4   | 4.0  | 3.7  | 3.1   | 1.4   |
| AHRF600                        | 8.2                         | 7.5   | 6.8   | 6.2  | 6.0  | 5.3  | 4.9   | 4.4  | 4.0  | 3.3   | 1.5   |
| AHRF650                        | 8.8                         | 8.1   | 7.4   | 6.7  | 6.5  | 5.7  | 5.3   | 4.8  | 4.3  | 3.6   | 1.6   |
| AHRF700                        | 9.5                         | 8.7   | 8.0   | 7.2  | 7.0  | 6.2  | 5.6   | 5.2  | 4.7  | 3.9   | 1.7   |
| AHRF750                        | 10.2                        | 9.4   | 8.6   | 7.7  | 7.5  | 6.6  | 6.1   | 5.6  | 5.0  | 4.1   | 1.9   |
| AHRF800                        | 10.9                        | 10.0  | 9.1   | 8.2  | 8.0  | 7.1  | 6.4   | 5.9  | 5.3  | 4.4   | 2.0   |
| AHRF900                        | 12.2                        | 11.2  | 10.2  | 9.3  | 9.0  | 8.0  | 7.2   | 6.6  | 6.0  | 5.0   | 2.2   |
| AHRF1000                       | 13.6                        | 12.5  | 11.4  | 10.3 | 10.0 | 8.8  | 8.1   | 7.4  | 6.6  | 5.5   | 2.5   |
| AHRF1100                       | 14.9                        | 13.7  | 12.5  | 11.3 | 11.0 | 9.7  | 8.8   | 8.1  | 7.3  | 6.1   | 2.7   |
| AHRF1300                       | 17.7                        | 16.3  | 14.8  | 13.4 | 13.0 | 11.4 | 10.5  | 9.6  | 8.6  | 7.2   | 3.3   |
| AHRF1400                       | 19.0                        | 17.5  | 15.9  | 14.4 | 14.0 | 12.4 | 11.2  | 10.3 | 9.3  | 7.8   | 3.5   |
| AHRF1500                       | 20.4                        | 18.8  | 17.1  | 15.5 | 15.0 | 13.2 | 12.1  | 11.1 | 9.9  | 8.3   | 3.8   |
| <b>AHEF (High Temperature)</b> |                             |       |       |      |      |      |       |      |      |       |       |
| <b>32V — Radial-leaded</b>     |                             |       |       |      |      |      |       |      |      |       |       |
| AHEF050                        | 0.7                         | 0.6   | 0.60  | 0.5  | 0.5  | 0.4  | 0.400 | 0.40 | 0.30 | 0.300 | 0.1   |
| AHEF070                        | 1.0                         | 0.9   | 0.80  | 0.7  | 0.7  | 0.6  | 0.600 | 0.50 | 0.50 | 0.400 | 0.2   |
| AHEF100                        | 1.4                         | 1.2   | 1.10  | 1.0  | 1.0  | 0.9  | 0.800 | 0.70 | 0.70 | 0.600 | 0.2   |
| AHEF300                        | 4.1                         | 3.8   | 3.42  | 3.1  | 3.0  | 2.7  | 2.430 | 2.22 | 1.98 | 1.650 | 0.6   |
| AHEF500                        | 6.8                         | 6.3   | 5.70  | 5.2  | 5.0  | 4.5  | 4.050 | 3.70 | 3.30 | 2.750 | 1.0   |
| AHEF750                        | 10.2                        | 9.4   | 8.55  | 7.7  | 7.5  | 6.7  | 6.075 | 5.55 | 4.95 | 4.125 | 1.5   |
| AHEF1000                       | 13.6                        | 12.5  | 11.40 | 10.3 | 10.0 | 8.9  | 8.100 | 7.40 | 6.60 | 5.500 | 2.0   |
| <b>AHS (High Temperature)</b>  |                             |       |       |      |      |      |       |      |      |       |       |
| <b>16V — Surface-mount</b>     |                             |       |       |      |      |      |       |      |      |       |       |
| AHS080-2018                    | 1.20                        | 1.04  | 0.90  | 0.8  | 0.77 | 0.68 | 0.62  | 0.60 | 0.53 | 0.46  | 0.26  |
| AHS120                         | 1.72                        | 1.54  | 1.36  | 1.2  | 1.14 | 1.01 | 0.92  | 0.83 | 0.74 | 0.61  | 0.25  |
| AHS160                         | 2.15                        | 1.96  | 1.78  | 1.6  | 1.55 | 1.42 | 1.33  | 1.24 | 1.15 | 1.01  | 0.64  |
| AHS200                         | 2.90                        | 2.50  | 2.20  | 2.0  | 1.94 | 1.80 | 1.75  | 1.70 | 1.40 | 1.18  | 0.67  |
| AHS300                         | 4.20                        | 3.80  | 3.70  | 3.0  | 2.92 | 2.63 | 2.44  | 2.10 | 2.00 | 1.76  | 1.00  |

# PolySwitch Resettable Devices

## Automotive Devices

Table A2 — Thermal Derating [Hold Current (A) at Ambient Temperature (°C)]

(Cont'd)

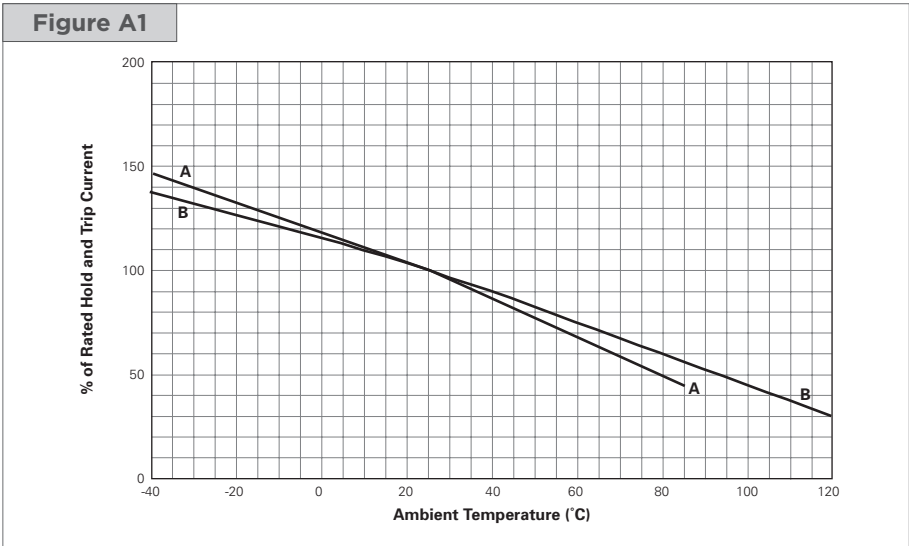
| Part Number                     | Maximum Ambient Temperature |       |      |      |      |      |      |      |      |      |       |
|---------------------------------|-----------------------------|-------|------|------|------|------|------|------|------|------|-------|
|                                 | -40°C                       | -20°C | 0°C  | 20°C | 25°C | 40°C | 50°C | 60°C | 70°C | 85°C | 125°C |
| <b>ASMD</b>                     |                             |       |      |      |      |      |      |      |      |      |       |
| <b>16-60V — Surface-mount</b>   |                             |       |      |      |      |      |      |      |      |      |       |
| ASMD030F                        | 0.35                        | 0.31  | 0.27 | 0.23 | 0.22 | 0.19 | 0.17 | 0.15 | 0.13 | 0.11 | —     |
| ASMD050F                        | 0.59                        | 0.53  | 0.46 | 0.39 | 0.37 | 0.33 | 0.29 | 0.26 | 0.23 | 0.18 | —     |
| ASMD075F                        | 0.91                        | 0.81  | 0.71 | 0.60 | 0.58 | 0.50 | 0.45 | 0.40 | 0.35 | 0.28 | —     |
| ASMD100F                        | 1.37                        | 1.22  | 1.06 | 0.90 | 0.86 | 0.76 | 0.68 | 0.60 | 0.52 | 0.41 | —     |
| ASMD125F                        | 1.58                        | 1.40  | 1.23 | 1.04 | 1.00 | 0.87 | 0.78 | 0.70 | 0.60 | 0.48 | —     |
| ASMD150F                        | 1.93                        | 1.70  | 1.50 | 1.27 | 1.22 | 1.07 | 0.95 | 0.85 | 0.74 | 0.58 | —     |
| ASMD150F/33                     | 1.96                        | 1.73  | 1.50 | 1.26 | 1.20 | 1.03 | 0.91 | 0.80 | 0.68 | 0.51 | —     |
| ASMD185F                        | 2.93                        | 2.58  | 2.30 | 1.93 | 1.85 | 1.62 | 1.44 | 1.30 | 1.12 | 0.88 | —     |
| ASMD200F                        | 2.63                        | 2.34  | 2.04 | 1.73 | 1.66 | 1.45 | 1.30 | 1.16 | 1.00 | 0.80 | —     |
| ASMD250F                        | 3.00                        | 2.66  | 2.32 | 1.97 | 1.89 | 1.65 | 1.48 | 1.32 | 1.14 | 0.91 | —     |
| <b>femtoASMD</b>                |                             |       |      |      |      |      |      |      |      |      |       |
| <b>12-15V — Surface-mount</b>   |                             |       |      |      |      |      |      |      |      |      |       |
| femtoASMD005F                   | 0.08                        | 0.07  | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.02 | —     |
| femtoASMD008F                   | 0.13                        | 0.11  | 0.10 | 0.08 | 0.08 | 0.07 | 0.06 | 0.06 | 0.05 | 0.04 | —     |
| femtoASMD010F/15                | 0.16                        | 0.14  | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.04 | —     |
| <b>picoASMD</b>                 |                             |       |      |      |      |      |      |      |      |      |       |
| <b>15V — Surface-mount</b>      |                             |       |      |      |      |      |      |      |      |      |       |
| picoASMD010S                    | 0.17                        | 0.15  | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | —     |
| picoASMD012S                    | 0.20                        | 0.17  | 0.15 | 0.13 | 0.12 | 0.10 | 0.09 | 0.08 | 0.07 | 0.05 | —     |
| <b>nanoASMD</b>                 |                             |       |      |      |      |      |      |      |      |      |       |
| <b>13.2-48V—Surface-mount</b>   |                             |       |      |      |      |      |      |      |      |      |       |
| nanoASMD010F                    | 0.15                        | 0.14  | 0.12 | 0.10 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.05 | —     |
| nanoASMD012F                    | 0.20                        | 0.17  | 0.15 | 0.13 | 0.12 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | —     |
| nanoASMD016F                    | 0.21                        | 0.20  | 0.18 | 0.16 | 0.16 | 0.14 | 0.13 | 0.12 | 0.11 | 0.09 | —     |
| nanoASMD020F                    | 0.34                        | 0.30  | 0.26 | 0.22 | 0.20 | 0.17 | 0.15 | 0.13 | 0.11 | 0.08 | —     |
| nanoASMD025F                    | 0.38                        | 0.33  | 0.30 | 0.26 | 0.25 | 0.22 | 0.20 | 0.19 | 0.16 | 0.11 | —     |
| nanoASMD035F                    | 0.58                        | 0.51  | 0.44 | 0.38 | 0.35 | 0.31 | 0.28 | 0.24 | 0.21 | 0.16 | —     |
| nanoASMD050F/13.2               | 0.78                        | 0.69  | 0.61 | 0.52 | 0.50 | 0.44 | 0.39 | 0.35 | 0.30 | 0.24 | —     |
| <b>microASMD</b>                |                             |       |      |      |      |      |      |      |      |      |       |
| <b>13.2-30V — Surface-mount</b> |                             |       |      |      |      |      |      |      |      |      |       |
| microASMD005F                   | 0.08                        | 0.07  | 0.06 | 0.05 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.02 | —     |
| microASMD010F                   | 0.15                        | 0.13  | 0.12 | 0.10 | 0.10 | 0.09 | 0.08 | 0.06 | 0.06 | 0.05 | —     |
| microASMD050F                   | 0.76                        | 0.66  | 0.58 | 0.50 | 0.48 | 0.42 | 0.38 | 0.35 | 0.29 | 0.23 | —     |
| <b>miniASMD</b>                 |                             |       |      |      |      |      |      |      |      |      |       |
| <b>16-60V — Surface-mount</b>   |                             |       |      |      |      |      |      |      |      |      |       |
| miniASMD010F                    | 0.17                        | 0.15  | 0.13 | 0.11 | 0.10 | 0.09 | 0.08 | 0.07 | 0.06 | 0.04 | —     |
| miniASMD014F                    | 0.23                        | 0.20  | 0.17 | 0.14 | 0.13 | 0.11 | 0.10 | 0.09 | 0.07 | 0.05 | —     |
| miniASMD020F                    | 0.30                        | 0.27  | 0.23 | 0.20 | 0.19 | 0.17 | 0.15 | 0.13 | 0.12 | 0.09 | —     |
| miniASMD030F                    | 0.49                        | 0.44  | 0.39 | 0.32 | 0.30 | 0.27 | 0.24 | 0.22 | 0.18 | 0.14 | —     |
| miniASMD050F                    | 0.59                        | 0.57  | 0.55 | 0.50 | 0.48 | 0.45 | 0.43 | 0.35 | 0.30 | 0.23 | —     |
| miniASMD075F                    | 1.10                        | 0.99  | 0.87 | 0.75 | 0.72 | 0.63 | 0.57 | 0.49 | 0.45 | 0.35 | —     |
| miniASMD075F/24                 | 1.50                        | 1.25  | 1.00 | 0.75 | 0.73 | 0.65 | 0.60 | 0.55 | 0.50 | 0.43 | —     |
| miniASMD075F/33                 | 1.09                        | 0.98  | 0.87 | 0.77 | 0.75 | 0.66 | 0.61 | 0.55 | 0.50 | 0.41 | —     |
| miniASMD110F/16                 | 1.68                        | 1.49  | 1.30 | 1.10 | 1.05 | 0.92 | 0.83 | 0.75 | 0.64 | 0.50 | —     |
| miniASMD110F/24                 | 2.00                        | 1.70  | 1.40 | 1.10 | 1.06 | 0.95 | 0.88 | 0.80 | 0.73 | 0.61 | —     |
| miniASMD125F/16                 | 2.00                        | 1.69  | 1.47 | 1.25 | 1.17 | 1.03 | 0.92 | 0.90 | 0.69 | 0.53 | —     |
| miniASMD150F/12                 | 2.40                        | 2.10  | 1.80 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.69 | —     |

Table A2 – Thermal Derating [Hold Current (A) at Ambient Temperature (°C)] (Cont'd)

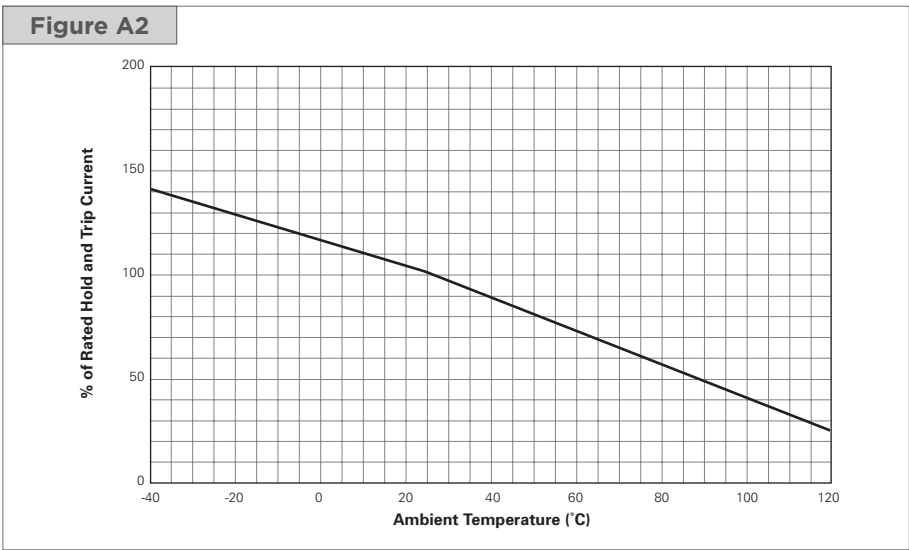
| Part Number                                       | Maximum Ambient Temperature |       |      |      |      |      |      |      |      |      |       |
|---------------------------------------------------|-----------------------------|-------|------|------|------|------|------|------|------|------|-------|
|                                                   | -40°C                       | -20°C | 0°C  | 20°C | 25°C | 40°C | 50°C | 60°C | 70°C | 85°C | 125°C |
| <b>miniASMDC</b><br><b>16-60V — Surface-mount</b> |                             |       |      |      |      |      |      |      |      |      |       |
| miniASMDC150F/16                                  | 2.40                        | 2.10  | 1.80 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.69 | —     |
| miniASMDC150F/24                                  | 2.10                        | 1.90  | 1.70 | 1.50 | 1.44 | 1.25 | 1.13 | 1.00 | 0.88 | 0.69 | —     |
| miniASMDC200F/16                                  | 3.07                        | 2.74  | 2.40 | 2.07 | 2.00 | 1.74 | 1.57 | 1.40 | 1.24 | 0.99 | —     |
| miniASMDC260F/12                                  | 3.40                        | 3.16  | 3.00 | 2.60 | 2.54 | 2.32 | 2.18 | 2.00 | 1.90 | 1.69 | —     |
| miniASMDC260F/13.2                                | 3.40                        | 3.16  | 3.00 | 2.60 | 2.54 | 2.32 | 2.18 | 2.00 | 1.90 | 1.69 | —     |
| miniASMDC260F/16                                  | 3.50                        | 3.20  | 3.00 | 2.60 | 2.53 | 2.30 | 2.15 | 2.00 | 1.85 | 1.63 | —     |
| <b>ASMDC</b><br><b>24-60V — Surface-mount</b>     |                             |       |      |      |      |      |      |      |      |      |       |
| ASMDC030F                                         | 0.49                        | 0.43  | 0.37 | 0.31 | 0.30 | 0.25 | 0.22 | 0.19 | 0.16 | 0.12 | —     |
| ASMDC050F                                         | 0.86                        | 0.75  | 0.65 | 0.54 | 0.50 | 0.43 | 0.37 | 0.32 | 0.26 | 0.18 | —     |
| ASMDC075F                                         | 1.17                        | 1.04  | 0.90 | 0.77 | 0.75 | 0.64 | 0.57 | 0.50 | 0.44 | 0.34 | —     |
| ASMDC125F/33                                      | 2.02                        | 1.78  | 1.55 | 1.31 | 1.25 | 1.08 | 0.96 | 0.84 | 0.72 | 0.54 | —     |
| ASMDC185F/33                                      | 2.83                        | 2.50  | 2.20 | 1.85 | 1.74 | 1.53 | 1.37 | 1.22 | 1.04 | 0.80 | —     |
| ASMDC300F/24                                      | 4.70                        | 4.19  | 3.70 | 3.17 | 3.00 | 2.66 | 2.41 | 2.20 | 1.90 | 1.50 | —     |
| <b>nanoASMDC</b><br><b>16V—Surface-mount</b>      |                             |       |      |      |      |      |      |      |      |      |       |
| nanoASMDCH035F                                    | 0.54                        | 0.48  | 0.43 | 0.37 | 0.35 | 0.32 | 0.29 | 0.26 | 0.24 | 0.20 | 0.10  |

Figures A1-A4 – Thermal Derating Curves

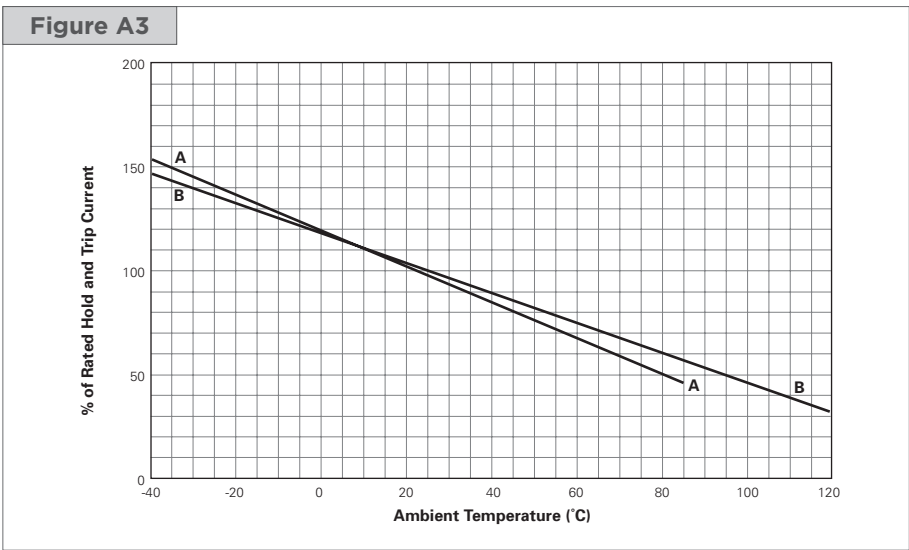
A = AGRF  
B = AHRF



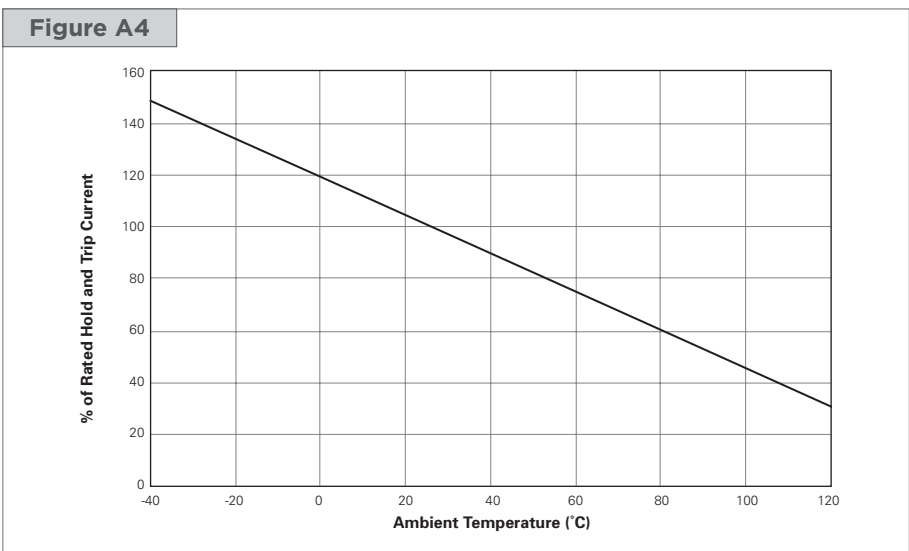
AHEF



- A = ASMD, femtoASMD, picoASMD, nanoASMD, microASMD, miniASMD, ASMD
- B = AHS



nanoASMDCH



# PolySwitch Resettable Devices

## Automotive Devices

Table A3 — Electrical Characteristics

| Part Number             | I <sub>H</sub> (A)@ | I <sub>H</sub> (A)@ | I <sub>T</sub> | V <sub>MAX</sub>   | I <sub>MAX</sub> | P <sub>D Typ</sub> | Max. Time-to-trip |      | R <sub>MIN</sub> | R <sub>1MAX</sub> | R <sub>aMAX</sub> | Figure for Dimensions |
|-------------------------|---------------------|---------------------|----------------|--------------------|------------------|--------------------|-------------------|------|------------------|-------------------|-------------------|-----------------------|
|                         | R <sub>1MAX</sub>   | R <sub>aMAX</sub>   | (A)            | (V <sub>DC</sub> ) | (A)              | (W)                | (A)               | (s)  | (Ω)              | (Ω)               | (Ω)               |                       |
| AGRF                    |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| 16V — Radial-leaded     |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| AGRF400                 | 4.0                 | 3.0                 | 7.6            | 16                 | 100              | 2.5                | 20.0              | 2.0  | 0.0186           | 0.0610            | 0.0850            | A5, A8, A9            |
| AGRF500                 | 5.0                 | 4.3                 | 9.4            | 16                 | 100              | 2.7                | 25.0              | 2.5  | 0.0140           | 0.0340            | 0.0480            | A5, A8, A9            |
| AGRF600                 | 6.0                 | 5.3                 | 10.7           | 16                 | 100              | 2.8                | 30.0              | 3.5  | 0.0095           | 0.0280            | 0.0320            | A5, A8, A9            |
| AGRF700                 | 7.0                 | 6.5                 | 13.2           | 16                 | 100              | 3.0                | 35.0              | 4.0  | 0.0066           | 0.0200            | 0.0220            | A5, A8, A9            |
| AGRF800                 | 8.0                 | 7.6                 | 15.0           | 16                 | 100              | 3.2                | 40.0              | 5.5  | 0.0049           | 0.0175            | 0.0181            | A5, A8, A9            |
| AGRF900                 | 9.0                 | 8.6                 | 16.5           | 16                 | 100              | 3.4                | 45.0              | 6.0  | 0.0041           | 0.0135            | 0.0140            | A5, A8, A9            |
| AGRF1000                | 10.0                | 9.6                 | 18.5           | 16                 | 100              | 3.6                | 50.0              | 7.0  | 0.0034           | 0.0102            | 0.0106            | A5, A8, A9            |
| AGRF1100                | 11.0                | 10.5                | 20.3           | 16                 | 100              | 3.7                | 55.0              | 7.5  | 0.0033           | 0.0089            | 0.0093            | A5, A8, A9            |
| AGRF1200                | 12.0                | 11.5                | 22.1           | 16                 | 100              | 4.2                | 60.0              | 8.0  | 0.0030           | 0.0086            | 0.0091            | A5, A8, A9            |
| AGRF1400                | 14.0                | 13.0                | 27.3           | 16                 | 100              | 4.6                | 70.0              | 9.0  | 0.0022           | 0.0064            | 0.0067            | A5, A8, A9            |
| AHRF (High Temperature) |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| 30V — Radial-leaded     |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| AHRF050                 | 0.5                 | 0.5                 | 1.0            | 30                 | 40               | 0.9                | 2.5               | 3.0  | 0.3500           | 1.100             | 1.100             | A8, A9, A10           |
| AHRF070                 | 0.7                 | 0.7                 | 1.4            | 30                 | 40               | 1.4                | 3.5               | 3.2  | 0.2300           | 0.800             | 0.800             | A8, A9, A11           |
| AHRF100                 | 1.0                 | 1.0                 | 1.9            | 30                 | 40               | 1.4                | 5.0               | 6.2  | 0.1500           | 0.430             | 0.430             | A8, A9, A10           |
| AHRF (High Temperature) |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| 16V — Radial-leaded     |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| AHRF200                 | 2.0                 | 2.0                 | 3.8            | 16                 | 100              | 1.4                | 10.0              | 4.8  | 0.0390           | 0.1100            | 0.1100            | A8, A9, A10           |
| AHRF300                 | 3.0                 | 3.0                 | 6.5            | 16                 | 100              | 3.0                | 15.0              | 5.0  | 0.0290           | 0.0790            | 0.0790            | A5, A8, A9            |
| AHRF400                 | 4.0                 | 4.0                 | 7.4            | 16                 | 100              | 3.3                | 20.0              | 5.0  | 0.0210           | 0.0600            | 0.0600            | A5, A8, A9            |
| AHRF450                 | 4.5                 | 4.5                 | 8.7            | 16                 | 100              | 3.6                | 22.5              | 4.0  | 0.0170           | 0.0540            | 0.0540            | A5, A8, A9            |
| AHRF550                 | 5.5                 | 5.5                 | 10.0           | 16                 | 100              | 3.5                | 27.5              | 6.0  | 0.0130           | 0.0370            | 0.0370            | A5, A8, A9            |
| AHRF600                 | 6.0                 | 6.0                 | 12.0           | 16                 | 100              | 4.1                | 30.0              | 6.5  | 0.0100           | 0.0320            | 0.0320            | A5, A8, A9            |
| AHRF650                 | 6.5                 | 6.5                 | 13.7           | 16                 | 100              | 4.3                | 32.5              | 7.0  | 0.0090           | 0.0260            | 0.0260            | A5, A8, A9            |
| AHRF700                 | 7.0                 | 7.0                 | 13.1           | 16                 | 100              | 4.0                | 35.0              | 7.0  | 0.0087           | 0.0250            | 0.0250            | A5, A8, A9            |
| AHRF750                 | 7.5                 | 7.5                 | 14.8           | 16                 | 100              | 4.5                | 37.5              | 8.0  | 0.0074           | 0.0220            | 0.0220            | A5, A8, A9            |
| AHRF800                 | 8.0                 | 8.0                 | 15.0           | 16                 | 100              | 4.2                | 40.0              | 8.0  | 0.0072           | 0.0200            | 0.0200            | A5, A8, A9            |
| AHRF900                 | 9.0                 | 9.0                 | 18.5           | 16                 | 100              | 5.0                | 45.0              | 11.5 | 0.0061           | 0.0170            | 0.0170            | A5, A8, A9            |
| AHRF1000                | 10.0                | 10.0                | 20.5           | 16                 | 100              | 5.3                | 50.0              | 10.5 | 0.0051           | 0.0150            | 0.0150            | A5, A8, A9            |
| AHRF1100                | 11.0                | 11.0                | 21.2           | 16                 | 100              | 5.5                | 55.0              | 11.0 | 0.0048           | 0.0130            | 0.0130            | A5, A8, A9            |
| AHRF1300                | 13.0                | 13.0                | 27.0           | 16                 | 100              | 6.9                | 65.0              | 15.0 | 0.0034           | 0.0100            | 0.0100            | A5, A8, A9            |
| AHRF1400                | 14.0                | 14.0                | 28.3           | 16                 | 100              | 6.9                | 70.0              | 15.5 | 0.0029           | 0.0090            | 0.0090            | A5, A8, A9            |
| AHRF1500                | 15.0                | 15.0                | 33.0           | 16                 | 100              | 7.0                | 75.0              | 20.0 | 0.0027           | 0.0092            | 0.0092            | A5, A8, A9            |
| AHEF (High Temperature) |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| 32V — Radial-leaded     |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| AHEF050                 | 0.5                 | 0.5                 | 1.0            | 32                 | 100              | 0.9                | 2.5               | 3.0  | 0.3500           | 1.100             | 1.100             | A8, A9, A10           |
| AHEF070                 | 0.7                 | 0.7                 | 1.4            | 32                 | 100              | 1.4                | 3.5               | 3.2  | 0.2300           | 0.800             | 0.800             | A8, A9, A11           |
| AHEF100                 | 1.0                 | 1.0                 | 1.9            | 32                 | 100              | 1.4                | 5.0               | 6.2  | 0.1500           | 0.430             | 0.430             | A8, A9, A10           |
| AHEF300                 | 3.0                 | 3.0                 | 6.0            | 32                 | 100              | 3.2                | 15.0              | 5.0  | 0.0350           | 0.110             | 0.110             | A8, A9, A12           |
| AHEF500                 | 5.0                 | 5.0                 | 10.0           | 32                 | 100              | 5.3                | 25.0              | 9.0  | 0.0150           | 0.040             | 0.040             | A8, A9, A12           |
| AHEF750                 | 7.5                 | 7.5                 | 15.0           | 32                 | 100              | 6.5                | 37.5              | 13.0 | 0.0074           | 0.023             | 0.023             | A8, A9, A12           |
| AHEF1000                | 10.0                | 10.0                | 20.0           | 32                 | 100              | 7.0                | 50.0              | 15.0 | 0.0060           | 0.016             | 0.016             | A8, A9, A12           |
| AHS (High Temperature)  |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| 16V — Surface-mount     |                     |                     |                |                    |                  |                    |                   |      |                  |                   |                   |                       |
| AHS080-2018             | 0.80                | 0.80                | 2.00           | 16                 | 70               | 1.5                | 8.0               | 9.0  | 0.130            | 0.550             | 0.550             | A6                    |
| AHS120                  | 1.20                | 1.20                | 2.30           | 16                 | 50               | 2.2                | 8.0               | 2.0  | 0.150            | 0.340             | 0.340             | A7                    |
| AHS160                  | 1.60                | 1.60                | 3.20           | 16                 | 70               | 2.2                | 8.0               | 15.0 | 0.050            | 0.150             | 0.150             | A7                    |
| AHS200                  | 2.00                | 2.00                | 4.00           | 16                 | 70               | 2.3                | 8.0               | 13.4 | 0.050            | 0.140             | 0.140             | A7                    |
| AHS300                  | 3.00                | 3.00                | 6.00           | 16                 | 70               | 3.0                | 15.0              | 8.0  | 0.024            | 0.083             | 0.083             | A7                    |

# PolySwitch Resettable Devices

## Automotive Devices

Table A3 — Electrical Characteristics

(Cont'd)

| Part<br>Number                        | I <sub>H</sub> (A)@<br>R <sub>1MAX</sub> | I <sub>H</sub> (A)@<br>R <sub>2MAX</sub> | I <sub>T</sub><br>(A) | V <sub>MAX</sub><br>(V <sub>DC</sub> ) | I <sub>MAX</sub><br>(A) | P <sub>D Typ</sub><br>(W) | Max. Time-to-trip |      | R <sub>MIN</sub><br>(Ω) | R <sub>1MAX</sub><br>(Ω) | R <sub>2MAX</sub><br>(Ω) | Figure for<br>Dimensions |
|---------------------------------------|------------------------------------------|------------------------------------------|-----------------------|----------------------------------------|-------------------------|---------------------------|-------------------|------|-------------------------|--------------------------|--------------------------|--------------------------|
|                                       |                                          |                                          |                       |                                        |                         |                           | (A)               | (s)  |                         |                          |                          |                          |
| ASMD<br>16-60V — Surface-mount        |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| ASMD030F                              | 0.23                                     | 0.23                                     | 0.59                  | 60                                     | 10                      | 1.1                       | 1.15              | 12.0 | 0.980                   | 4.800                    | 4.800                    | A7                       |
| ASMD050F                              | 0.37                                     | 0.37                                     | 0.98                  | 60                                     | 10                      | 1.7                       | 1.95              | 20.0 | 0.290                   | 1.400                    | 1.400                    | A7                       |
| ASMD075F                              | 0.60                                     | 0.60                                     | 1.48                  | 30                                     | 40                      | 1.1                       | 3.00              | 20.0 | 0.290                   | 1.000                    | 1.000                    | A7                       |
| ASMD100F                              | 0.90                                     | 0.90                                     | 2.16                  | 30                                     | 40                      | 1.1                       | 4.50              | 20.0 | 0.098                   | 0.480                    | 0.480                    | A7                       |
| ASMD125F                              | 1.04                                     | 1.04                                     | 2.46                  | 16                                     | 40                      | 1.1                       | 5.20              | 20.0 | 0.057                   | 0.250                    | 0.250                    | A7                       |
| ASMD150F                              | 1.27                                     | 1.27                                     | 2.95                  | 16                                     | 40                      | 1.2                       | 6.35              | 25.0 | 0.049                   | 0.250                    | 0.250                    | A7                       |
| ASMD150F/33                           | 1.20                                     | 1.20                                     | 2.88                  | 33                                     | 40                      | 1.9                       | 6.00              | 14.0 | 0.068                   | 0.230                    | 0.230                    | A7                       |
| ASMD185F                              | 1.85                                     | 1.85                                     | 3.70                  | 16                                     | 40                      | 1.5                       | 9.25              | 11.3 | 0.032                   | 0.126                    | 0.126                    | A7                       |
| ASMD200F                              | 1.73                                     | 1.73                                     | 3.93                  | 16                                     | 40                      | 1.2                       | 8.65              | 30.0 | 0.050                   | 0.120                    | 0.120                    | A7                       |
| ASMD250F                              | 1.97                                     | 1.97                                     | 5.00                  | 16                                     | 40                      | 1.2                       | 9.85              | 30.0 | 0.035                   | 0.085                    | 0.085                    | A7                       |
| femtoASMD<br>12-15V — Surface-mount   |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| femtoASMD005F                         | 0.05                                     | 0.05                                     | 0.15                  | 15                                     | 10                      | 0.50                      | 0.50              | 0.10 | 3.80                    | 30.00                    | 30.00                    | A13                      |
| femtoASMD008F                         | 0.08                                     | 0.08                                     | 0.20                  | 12                                     | 10                      | 0.50                      | 0.60              | 0.10 | 2.80                    | 14.00                    | 14.00                    | A13                      |
| femtoASMD010F/15                      | 0.10                                     | 0.10                                     | 0.30                  | 15                                     | 10                      | 0.50                      | 0.70              | 0.10 | 2.00                    | 14.00                    | 14.00                    | A13                      |
| picoASMD<br>15V — Surface-mount       |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| picoASMD010S                          | 0.10                                     | 0.10                                     | 0.30                  | 15                                     | 20                      | 0.50                      | 0.50              | 0.60 | 1.50                    | 11.00                    | 11.00                    | A13                      |
| picoASMD012S                          | 0.12                                     | 0.12                                     | 0.30                  | 15                                     | 20                      | 0.50                      | 1.00              | 0.10 | 1.50                    | 9.00                     | 9.00                     | A13                      |
| nanoASMD<br>13.2-48V — Surface-mount  |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| nanoASMD010F                          | 0.10                                     | 0.10                                     | 0.25                  | 60                                     | 10                      | 0.80                      | 0.50              | 1.00 | 1.60                    | 15.00                    | 15.00                    | A13                      |
| nanoASMD012F                          | 0.12                                     | 0.12                                     | 0.39                  | 48                                     | 10                      | 0.50                      | 1.00              | 0.20 | 1.40                    | 6.50                     | 6.50                     | A13                      |
| nanoASMD016F                          | 0.16                                     | 0.16                                     | 0.45                  | 48                                     | 10                      | 0.50                      | 1.00              | 0.30 | 1.10                    | 5.00                     | 5.00                     | A13                      |
| nanoASMD020F                          | 0.20                                     | 0.20                                     | 0.42                  | 24                                     | 100                     | 0.60                      | 8.00              | 0.10 | 0.65                    | 3.10                     | 3.10                     | A13                      |
| nanoASMD025F                          | 0.25                                     | 0.25                                     | 0.58                  | 16                                     | 100                     | 0.60                      | 8.00              | 0.01 | 0.40                    | 2.10                     | 2.10                     | A13                      |
| nanoASMD035F                          | 0.35                                     | 0.75                                     | 0.75                  | 16                                     | 20                      | 0.60                      | 3.50              | 0.10 | 0.45                    | 1.35                     | 1.35                     | A13                      |
| nanoASMD050F/13.2                     | 0.50                                     | 0.50                                     | 1.10                  | 13.2                                   | 70                      | 0.80                      | 8.00              | 0.10 | 0.20                    | 0.75                     | 0.75                     | A13                      |
| microASMD<br>13.2-30V — Surface-mount |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| microASMD005F                         | 0.05                                     | 0.05                                     | 0.15                  | 30                                     | 10                      | 1.00                      | 0.25              | 1.50 | 3.60                    | 50.00                    | 50.00                    | A13                      |
| microASMD010F                         | 0.10                                     | 0.10                                     | 0.25                  | 30                                     | 10                      | 0.80                      | 0.50              | 1.00 | 2.10                    | 15.00                    | 15.00                    | A13                      |
| microASMD050F                         | 0.50                                     | 0.50                                     | 1.00                  | 13.2                                   | 40                      | 0.80                      | 8.00              | 0.05 | 0.25                    | 0.90                     | 0.90                     | A13                      |
| miniASMD<br>12-60V — Surface-mount    |                                          |                                          |                       |                                        |                         |                           |                   |      |                         |                          |                          |                          |
| miniASMD010F                          | 0.10                                     | 0.10                                     | 0.30                  | 60                                     | 40                      | 0.75                      | 0.50              | 5.00 | 0.70                    | 12.70                    | 12.70                    | A13                      |
| miniASMD014F                          | 0.14                                     | 0.14                                     | 0.28                  | 60                                     | 10                      | 0.75                      | 8.00              | 0.01 | 1.50                    | 6.00                     | 6.00                     | A13                      |
| miniASMD020F                          | 0.20                                     | 0.20                                     | 0.40                  | 30                                     | 10                      | 0.80                      | 8.00              | 0.02 | 0.60                    | 3.30                     | 3.30                     | A13                      |
| miniASMD030F                          | 0.30                                     | 0.30                                     | 0.60                  | 30                                     | 40                      | 0.80                      | 8.00              | 0.10 | 0.20                    | 1.75                     | 1.75                     | A13                      |
| miniASMD050F                          | 0.50                                     | 0.50                                     | 1.00                  | 24                                     | 100                     | 0.80                      | 8.00              | 0.15 | 0.15                    | 1.00                     | 1.00                     | A13                      |
| miniASMD075F                          | 0.75                                     | 0.75                                     | 1.50                  | 13.2                                   | 100                     | 1.00                      | 8.00              | 0.20 | 0.11                    | 0.45                     | 0.45                     | A13                      |
| miniASMD075F/24                       | 0.75                                     | 0.75                                     | 1.50                  | 24                                     | 40                      | 0.80                      | 8.00              | 0.30 | 0.09                    | 0.29                     | 0.29                     | A13                      |
| miniASMD075F/33                       | 0.75                                     | 0.75                                     | 1.60                  | 33                                     | 100                     | 1.00                      | 8.00              | 1.00 | 0.11                    | 0.39                     | 0.39                     | A13                      |
| miniASMD0110F/16                      | 1.10                                     | 1.10                                     | 2.20                  | 16                                     | 100                     | 0.80                      | 8.00              | 0.30 | 0.06                    | 0.18                     | 0.18                     | A13                      |
| miniASMD0110F/24                      | 1.10                                     | 1.10                                     | 2.20                  | 24                                     | 20                      | 0.80                      | 8.00              | 0.50 | 0.06                    | 0.18                     | 0.18                     | A13                      |
| miniASMD0125F/16                      | 1.25                                     | 1.25                                     | 2.50                  | 16                                     | 100                     | 0.80                      | 8.00              | 0.40 | 0.05                    | 0.14                     | 0.14                     | A13                      |
| miniASMD0150F/12                      | 1.50                                     | 1.50                                     | 2.80                  | 12                                     | 100                     | 0.80                      | 8.00              | 0.50 | 0.04                    | 0.11                     | 0.11                     | A13                      |
| miniASMD0150F/16                      | 1.50                                     | 1.50                                     | 2.80                  | 16                                     | 100                     | 0.80                      | 8.00              | 0.50 | 0.04                    | 0.11                     | 0.11                     | A13                      |
| miniASMD0150F/24                      | 1.50                                     | 1.50                                     | 3.00                  | 24                                     | 20                      | 1.00                      | 8.00              | 1.50 | 0.04                    | 0.12                     | 0.12                     | A13                      |
| miniASMD0200F/16                      | 2.00                                     | 2.00                                     | 4.00                  | 16                                     | 40                      | 1.20                      | 8.00              | 5.00 | 0.02                    | 0.085                    | 0.085                    | A13                      |
| miniASMD0260F/12                      | 2.60                                     | 2.60                                     | 5.00                  | 12                                     | 100                     | 1.00                      | 8.00              | 5.00 | 0.015                   | 0.047                    | 0.047                    | A13                      |
| miniASMD0260F/13.2                    | 2.60                                     | 2.60                                     | 5.00                  | 13.2                                   | 100                     | 1.20                      | 8.00              | 5.00 | 0.015                   | 0.05                     | 0.05                     | A13                      |
| miniASMD0260F/16                      | 2.60                                     | 2.60                                     | 5.00                  | 16                                     | 100                     | 1.20                      | 8.00              | 5.00 | 0.015                   | 0.05                     | 0.05                     | A13                      |

# PolySwitch Resettable Devices

## Automotive Devices

Table A3 — Electrical Characteristics

(Cont'd)

| Part Number                       | I <sub>H</sub> (A)@ | I <sub>H</sub> (A)@ | I <sub>T</sub><br>(A) | V <sub>MAX</sub><br>(V <sub>DC</sub> ) | I <sub>MAX</sub><br>(A) | P <sub>D</sub> Typ<br>(W) | Max. Time-to-trip |      | R <sub>MIN</sub><br>(Ω) | R <sub>1MAX</sub><br>(Ω) | R <sub>aMAX</sub><br>(Ω) | Figure for Dimensions |
|-----------------------------------|---------------------|---------------------|-----------------------|----------------------------------------|-------------------------|---------------------------|-------------------|------|-------------------------|--------------------------|--------------------------|-----------------------|
|                                   | R <sub>1MAX</sub>   | R <sub>aMAX</sub>   |                       | (A)                                    | (s)                     |                           |                   |      |                         |                          |                          |                       |
| ASMDC<br>24-60V — Surface-mount   |                     |                     |                       |                                        |                         |                           |                   |      |                         |                          |                          |                       |
| ASMDC030F                         | 0.30                | 0.30                | 0.60                  | 60                                     | 10                      | 1.50                      | 1.50              | 3.00 | 0.30                    | 3.40                     | 3.40                     | A13                   |
| ASMDC050F                         | 0.50                | 0.50                | 1.00                  | 60                                     | 10                      | 1.50                      | 2.50              | 4.00 | 0.15                    | 1.20                     | 1.20                     | A13                   |
| ASMDC075F                         | 0.75                | 0.75                | 1.50                  | 33                                     | 40                      | 1.50                      | 8.00              | 0.30 | 0.10                    | 0.61                     | 0.61                     | A13                   |
| ASMDC125F/33                      | 1.25                | 1.25                | 2.50                  | 33                                     | 40                      | 1.50                      | 8.00              | 2.00 | 0.04                    | 0.25                     | 0.25                     | A13                   |
| ASMDC185F/33                      | 1.85                | 1.85                | 3.70                  | 33                                     | 40                      | 1.70                      | 8.00              | 2.50 | 0.05                    | 0.15                     | 0.15                     | A13                   |
| ASMDC300F/24                      | 3.00                | 3.00                | 6.00                  | 24                                     | 40                      | 1.70                      | 8.00              | 5.00 | 0.015                   | 0.072                    | 0.072                    | A13                   |
| nanoASMDCH<br>16V — Surface-mount |                     |                     |                       |                                        |                         |                           |                   |      |                         |                          |                          |                       |
| nanoASMDCH035F                    | 0.35                | 0.35                | 0.95                  | 16                                     | 50                      | 1.00                      | 3.50              | 0.20 | 0.20                    | 1.60                     | 1.60                     | A13                   |

### Notes:

$I_H$  : Hold current: maximum current device will pass without interruption in 25°C, unless otherwise specified (20°C for ASMD).

$I_T$  : Trip current: minimum current that will switch the device from low-resistance to high-resistance in 25°C still air, unless otherwise specified.

$V_{MAX}$  : Maximum voltage device can withstand without damage at rated current.

$I_{MAX}$  : Maximum fault current device can withstand without damage at rated voltage.

$P_D$  : Power dissipated from device when in the tripped state in 25°C still air, unless otherwise specified.

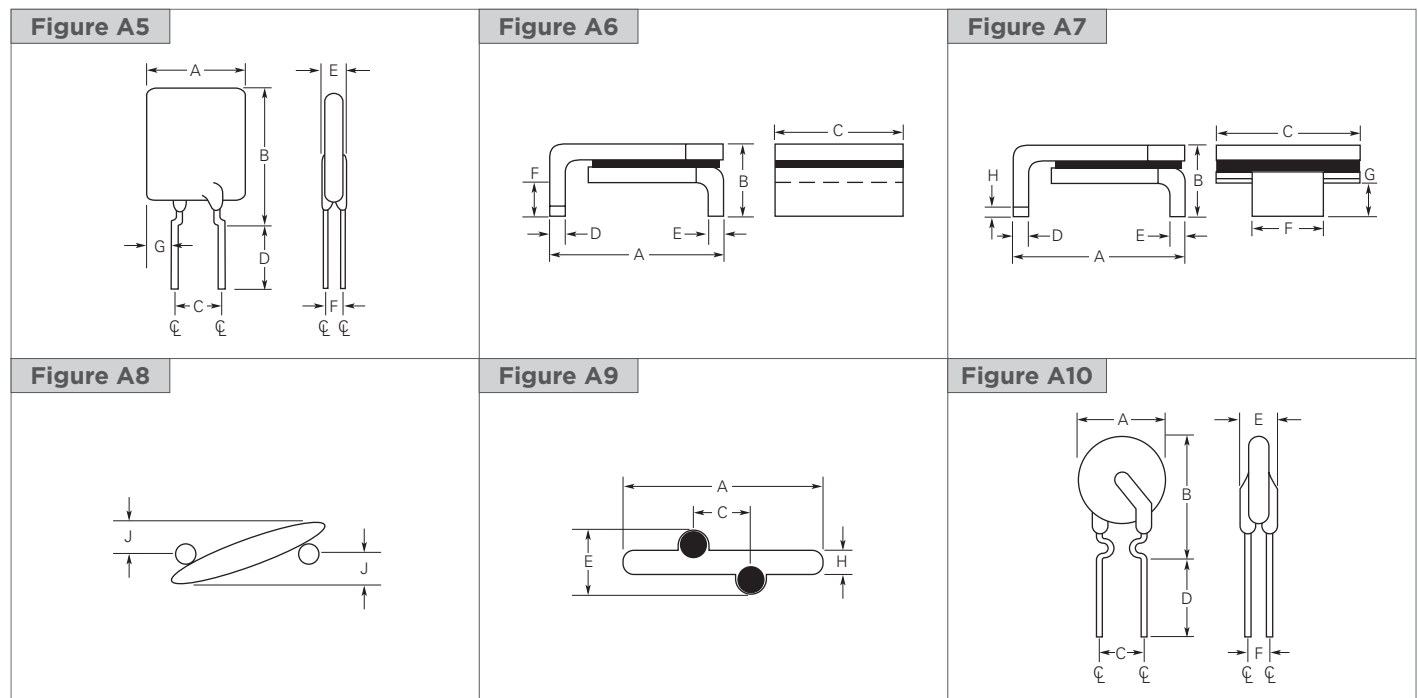
$R_{MIN}$  : Minimum resistance of device as supplied at 25°C, unless otherwise specified.

$R_{1MAX}$  : Maximum resistance of device when measured one hour post reflow (surface-mount device) or one hour post trip (radial-leaded device) at 25°C unless otherwise specified.

$R_{aMAX}$  : Maximum functional resistance of device after being subjected to the stresses described in PS400 at 25°C, unless otherwise specified.

$R_{aMIN}$  : Minimum functional resistance of device after being subjected to the stresses described in PS400 at 25°C, unless otherwise specified.

Figures A5-A13 — Dimension Figures



# PolySwitch Resettable Devices

## Automotive Devices

### Figures A5-A13 — Dimension Figures

(Cont'd)

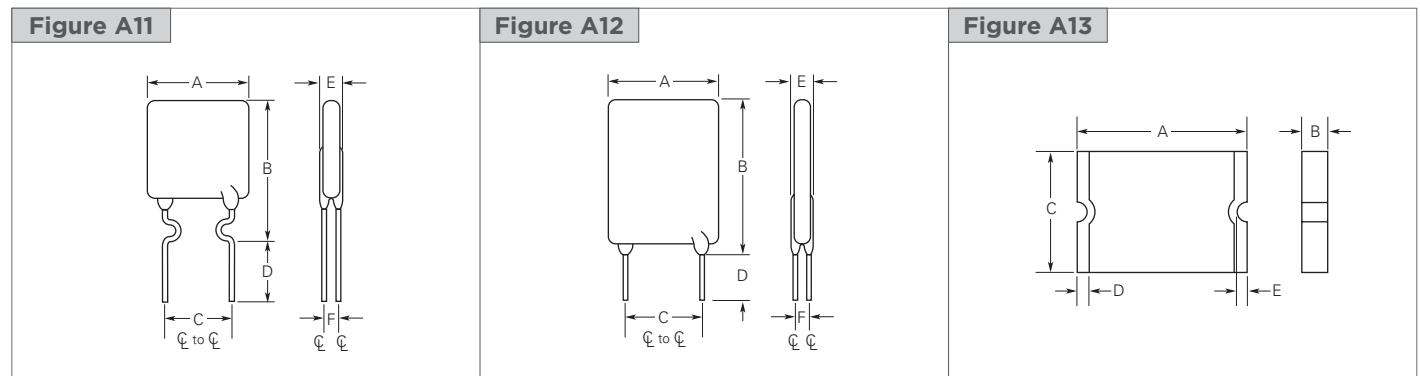


Table A4 — Dimensions in Millimeters and (Inches)

| Part Number                                    | A   |                  | B   |                | C             |                | D             |     | E   |               | F             |     | G   |                 | H               | J             | Figure         |
|------------------------------------------------|-----|------------------|-----|----------------|---------------|----------------|---------------|-----|-----|---------------|---------------|-----|-----|-----------------|-----------------|---------------|----------------|
|                                                | Min | Max              | Min | Max            | Min           | Max            | Min           | Max | Min | Max           | Min           | Max | Min | Max             | Typ             | Max           |                |
| AGRF<br>16V — Radial-leaded                    |     |                  |     |                |               |                |               |     |     |               |               |     |     |                 |                 |               |                |
| AGRF400                                        | —   | 8.9<br>(0.350)   | —   | 14.1<br>(0.56) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.15) | —   | —   | 3.10<br>(0.120) | 1.24<br>(0.049) | 1.4<br>(0.06) | A5, A8,<br>A9  |
| AGRF500                                        | —   | 10.4<br>(0.410)  | —   | 15.6<br>(0.61) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 3.94<br>(0.155) | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AGRF600                                        | —   | 10.7<br>(0.420)  | —   | 18.4<br>(0.73) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 4.07<br>(0.160) | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AGRF700                                        | —   | 11.2<br>(0.440)  | —   | 21.0<br>(0.73) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 4.49<br>(0.177) | 1.24<br>(0.049) | 1.7<br>(0.07) | A5, A8,<br>A9  |
| AGRF800                                        | —   | 12.7<br>(0.500)  | —   | 22.2<br>(0.88) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 5.08<br>(0.200) | 1.24<br>(0.049) | 1.8<br>(0.07) | A5, A8,<br>A9  |
| AGRF900                                        | —   | 14.0<br>(0.550)  | —   | 23.0<br>(0.91) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 5.69<br>(0.224) | 1.24<br>(0.049) | 2.0<br>(0.08) | A5, A8,<br>A9  |
| AGRF1000                                       | —   | 16.51<br>(0.650) | —   | 25.7<br>(1.01) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 6.96<br>(0.274) | 1.24<br>(0.049) | 2.0<br>(0.08) | A5, A8,<br>A9  |
| AGRF1100                                       | —   | 17.5<br>(0.690)  | —   | 26.5<br>(1.04) | 4.3<br>(0.17) | 5.8<br>(0.20)  | 7.6<br>(0.3)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 7.47<br>(0.294) | 1.24<br>(0.049) | 2.4<br>(0.09) | A5, A8,<br>A9  |
| AGRF1200                                       | —   | 17.5<br>(0.690)  | —   | 28.8<br>(1.14) | 9.4<br>(0.37) | 10.9<br>(0.43) | 7.6<br>(0.3)  | —   | —   | 3.5<br>(0.14) | 1.4<br>(0.06) | —   | —   | 4.83<br>(0.190) | 1.45<br>(0.057) | 1.5<br>(0.06) | A5, A8,<br>A9  |
| AGRF1400                                       | —   | 23.5<br>(0.925)  | —   | 28.7<br>(1.13) | 9.4<br>(0.37) | 10.9<br>(0.43) | 7.6<br>(0.3)  | —   | —   | 3.5<br>(0.14) | 1.4<br>(0.06) | —   | —   | 7.82<br>(0.308) | 1.45<br>(0.057) | 1.9<br>(0.07) | A5, A8,<br>A9  |
| AHRF (High Temperature)<br>30V — Radial-leaded |     |                  |     |                |               |                |               |     |     |               |               |     |     |                 |                 |               |                |
| AHRF050                                        | —   | 7.4<br>(0.29)    | —   | 12.7<br>(0.50) | 4.3<br>(0.17) | 5.8<br>(0.23)  | 7.6<br>(0.30) | —   | —   | 3.3<br>(0.13) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A8, A9,<br>A10 |
| AHRF070                                        | —   | 6.9<br>(0.27)    | —   | 10.8<br>(0.43) | 4.3<br>(0.17) | 5.8<br>(0.23)  | 7.6<br>(0.30) | —   | —   | 3.3<br>(0.13) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A8, A9,<br>A11 |
| AHRF100                                        | —   | 9.7<br>(0.38)    | —   | 13.6<br>(0.54) | 4.3<br>(0.17) | 5.8<br>(0.23)  | 7.6<br>(0.30) | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A8, A9,<br>A10 |

# PolySwitch Resettable Devices

## Automotive Devices

Table A4 — Dimensions in Millimeters and (Inches)

(Cont'd)

| Part<br>Number                                 | A   |                 | B   |                | C              |                | D              |     | E   |               | F             |     | G   |                 | H               | J             | Figure         |
|------------------------------------------------|-----|-----------------|-----|----------------|----------------|----------------|----------------|-----|-----|---------------|---------------|-----|-----|-----------------|-----------------|---------------|----------------|
|                                                | Min | Max             | Min | Max            | Min            | Max            | Min            | Max | Min | Max           | Min           | Max | Min | Max             | Typ             | Max           |                |
| AHRF (High Temperature)<br>16V — Radial-leaded |     |                 |     |                |                |                |                |     |     |               |               |     |     |                 |                 |               |                |
| AHRF200                                        | —   | 9.4<br>(0.37)   | —   | 14.4<br>(0.57) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A8, A9,<br>A10 |
| AHRF300                                        | —   | 8.8<br>(0.35)   | —   | 13.8<br>(0.55) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF400                                        | —   | 10.0<br>(0.39)  | —   | 15.0<br>(0.59) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF450                                        | —   | 10.4<br>(0.41)  | —   | 15.6<br>(0.61) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 3.94<br>(0.155) | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF550                                        | —   | 11.2<br>(0.44)  | —   | 18.9<br>(0.74) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF600                                        | —   | 11.2<br>(0.44)  | —   | 21.0<br>(0.73) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 4.49<br>(0.177) | 1.24<br>(0.049) | 1.7<br>(0.07) | A5, A8,<br>A9  |
| AHRF650                                        | —   | 12.7<br>(0.50)  | —   | 22.2<br>(0.88) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 5.08<br>(0.200) | 1.24<br>(0.049) | 1.8<br>(0.07) | A5, A8,<br>A9  |
| AHRF700                                        | —   | 14.0<br>(0.55)  | —   | 21.9<br>(0.86) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF750                                        | —   | 14.0<br>(0.55)  | —   | 23.5<br>(0.93) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 5.69<br>(0.224) | 1.24<br>(0.049) | 2.0<br>(0.08) | A5, A8,<br>A9  |
| AHRF800                                        | —   | 16.5<br>(0.65)  | —   | 22.5<br>(0.88) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF900                                        | —   | 16.5<br>(0.65)  | —   | 25.7<br>(1.01) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | —               | —             | A5, A8,<br>A9  |
| AHRF1000                                       | —   | 17.5<br>(0.69)  | —   | 26.5<br>(1.04) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | 7.47<br>(0.294) | 1.24<br>(0.049) | 1.5<br>(0.06) | A5, A8,<br>A9  |
| AHRF1100                                       | —   | 21.0<br>(0.83)  | —   | 26.1<br>(1.03) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | 1.2<br>(0.05) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF1300                                       | —   | 23.5<br>(0.925) | —   | 28.7<br>(1.13) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.5<br>(0.14) | 1.4<br>(0.06) | —   | —   | 7.82<br>(0.308) | 1.45<br>(0.057) | 1.9<br>(0.08) | A5, A8,<br>A9  |
| AHRF1400                                       | —   | 23.5<br>(0.93)  | —   | 28.7<br>(1.13) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.6<br>(0.14) | 1.4<br>(0.06) | —   | —   | —               | 1.24<br>(0.049) | 1.6<br>(0.06) | A5, A8,<br>A9  |
| AHRF1500                                       | —   | 23.5<br>(0.93)  | —   | 28.7<br>(1.13) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.5<br>(0.14) | 1.4<br>(0.06) | —   | —   | 7.82<br>(0.308) | —               | —             | A5, A8,<br>A9  |
| AHEF (High Temperature)<br>32V — Radial-leaded |     |                 |     |                |                |                |                |     |     |               |               |     |     |                 |                 |               |                |
| AHEF050                                        | —   | 7.4<br>(0.29)   | —   | 12.7<br>(0.50) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.3<br>(0.13) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A10 |
| AHEF070                                        | —   | 6.9<br>(0.27)   | —   | 10.8<br>(0.43) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A11 |
| AHEF100                                        | —   | 9.7<br>(0.38)   | —   | 13.6<br>(0.54) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 7.6<br>(0.30)  | —   | —   | 3.0<br>(0.12) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A10 |
| AHEF300                                        | —   | 10.2<br>(0.40)  | —   | 15.5<br>(0.61) | 4.32<br>(0.17) | 5.84<br>(0.23) | 7.6<br>(0.30)  | —   | —   | 3.8<br>(0.15) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A12 |
| AHEF500                                        | —   | 14.0<br>(0.55)  | —   | 24.1<br>(0.95) | 4.3<br>(0.17)  | 5.8<br>(0.23)  | 11.5<br>(0.45) | —   | —   | 3.8<br>(0.15) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A12 |
| AHEF750                                        | —   | 21.1<br>(0.83)  | —   | 24.9<br>(0.98) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 3.8<br>(0.15) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A12 |
| AHEF1000                                       | —   | 23.5<br>(0.93)  | —   | 27.9<br>(1.10) | 9.4<br>(0.37)  | 10.9<br>(0.43) | 7.6<br>(0.30)  | —   | —   | 4.0<br>(0.16) | —             | —   | —   | —               | —               | —             | A8, A9,<br>A12 |

# PolySwitch Resettable Devices

## Automotive Devices

Table A4 — Dimensions in Millimeters and (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             | Max |        |
| AHS (High Temperature) |                 |                 |     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |     |        |
| 16V — Surface-mount    |                 |                 |     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |     |        |
| AHS080-2018            | 4.72<br>(0.186) | 5.44<br>(0.214) | —   | 1.52<br>(0.060) | 4.22<br>(0.166) | 4.93<br>(0.194) | 0.25<br>(0.010) | 0.36<br>(0.014) | 0.25<br>(0.010) | 0.36<br>(0.014) | 0.30<br>(0.012) | 0.46<br>(0.018) | —               | —               | —               | —   | A6     |
| AHS120                 | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.00<br>(0.118) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| AHS160                 | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| AHS200                 | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.240)  | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| AHS300                 | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.240)  | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD                   |                 |                 |     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |     |        |
| 16-60V — Surface-mount |                 |                 |     |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |     |        |
| ASMD030F               | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.18<br>(0.125) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD050F               | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.18<br>(0.125) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD075F               | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.18<br>(0.125) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD100F               | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.00<br>(0.118) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD125F               | 6.73<br>(0.265) | 7.98<br>(0.314) | —   | 3.00<br>(0.118) | 4.8<br>(0.19)   | 5.44<br>(0.214) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 2.16<br>(0.085) | 2.41<br>(0.095) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD150F               | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD150F/33            | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD185F               | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD200F               | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |
| ASMD250F               | 8.00<br>(0.315) | 9.40<br>(0.370) | —   | 3.00<br>(0.118) | 6.0<br>(0.24)   | 6.71<br>(0.264) | 0.56<br>(0.022) | 0.71<br>(0.028) | 0.56<br>(0.022) | 0.71<br>(0.028) | 3.68<br>(0.145) | 3.94<br>(0.155) | 0.66<br>(0.026) | 1.37<br>(0.054) | 0.43<br>(0.017) | —   | A7     |

| Part Number            | A               |                 | B               |                 | C               |                 | D               |                 | E                |     | Figure |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|--------|
|                        | Min             | Max             | Min             | Max             | Min             | Max             | Min             | Max             | Min              | Max |        |
| femtoASMDC             |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| 12-15V — Surface-mount |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| femtoASMDC005F         | 1.40<br>(0.055) | 1.80<br>(0.071) | 0.45<br>(0.017) | 0.85<br>(0.033) | 0.60<br>(0.023) | 1.00<br>(0.039) | 0.10<br>(0.004) | 0.50<br>(0.020) | 0.075<br>(0.003) | —   | A13    |
| femtoASMDC008F         | 1.40<br>(0.055) | 1.80<br>(0.071) | 0.45<br>(0.017) | 0.85<br>(0.033) | 0.60<br>(0.023) | 1.00<br>(0.039) | 0.10<br>(0.004) | 0.50<br>(0.020) | 0.075<br>(0.003) | —   | A13    |
| femtoASMDC010F/15      | 1.40<br>(0.055) | 1.80<br>(0.071) | 0.45<br>(0.017) | 0.85<br>(0.033) | 0.60<br>(0.023) | 1.00<br>(0.039) | 0.10<br>(0.004) | 0.50<br>(0.020) | 0.075<br>(0.003) | —   | A13    |
| picoASMD               |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| 15V — Surface-mount    |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| picoASMDC010S          | 2.00<br>(0.079) | 2.20<br>(0.087) | 0.60<br>(0.023) | 1.00<br>(0.040) | 1.30<br>(0.051) | 1.50<br>(0.059) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| picoASMDC012S          | 2.00<br>(0.079) | 2.20<br>(0.087) | 0.44<br>(0.017) | 0.68<br>(0.027) | 1.30<br>(0.051) | 1.50<br>(0.059) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |

# PolySwitch Resettable Devices

## Automotive Devices

Table A4 — Dimensions in Millimeters and (Inches)

(Cont'd)

| Part Number                           | A               |                 | B                |                 | C               |                 | D               |                 | E                |     | Figure |
|---------------------------------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|--------|
|                                       | Min             | Max             | Min              | Max             | Min             | Max             | Min             | Max             | Min              | Max |        |
| nanoASMDC<br>13.2-48V — Surface-mount |                 |                 |                  |                 |                 |                 |                 |                 |                  |     |        |
| nanoASMDC010F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.62<br>(0.024)  | 1.00<br>(0.039) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC012F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.62<br>(0.024)  | 1.00<br>(0.039) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC016F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.62<br>(0.024)  | 1.00<br>(0.039) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC020F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.58<br>(0.023)  | 0.82<br>(0.032) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC025F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.58<br>(0.023)  | 0.82<br>(0.032) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC035F                         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.58<br>(0.023)  | 0.82<br>(0.032) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| nanoASMDC050F/13.2                    | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.50<br>(0.019)  | 0.74<br>(0.029) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| microASMD<br>13.2-30V — Surface-mount |                 |                 |                  |                 |                 |                 |                 |                 |                  |     |        |
| microASMD005F                         | 3.0<br>(0.118)  | 3.43<br>(0.135) | 0.50<br>(0.019)  | 0.85<br>(0.034) | 2.35<br>(0.092) | 2.80<br>(0.110) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| microASMD010F                         | 3.0<br>(0.118)  | 3.43<br>(0.135) | 0.50<br>(0.019)  | 0.85<br>(0.034) | 2.35<br>(0.092) | 2.80<br>(0.110) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| microASMD050F                         | 3.0<br>(0.118)  | 3.43<br>(0.135) | 0.38<br>(0.015)  | 0.62<br>(0.025) | 2.35<br>(0.092) | 2.80<br>(0.110) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |
| miniASMDC<br>12-60V — Surface-mount   |                 |                 |                  |                 |                 |                 |                 |                 |                  |     |        |
| miniASMDC010F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.635<br>(0.025) | 0.89<br>(0.035) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC014F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.635<br>(0.025) | 0.89<br>(0.035) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC020F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.635<br>(0.025) | 0.89<br>(0.035) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC030F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.635<br>(0.025) | 0.89<br>(0.035) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC050F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.38<br>(0.015)  | 0.62<br>(0.025) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC075F                         | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.38<br>(0.015)  | 0.62<br>(0.025) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC075F/24                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.81<br>(0.032)  | 1.46<br>(0.057) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC075F/33                      | 4.37<br>0.172   | 4.73<br>(0.190) | 0.94<br>(0.037)  | 1.46<br>(0.057) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC110F/16                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.28<br>(0.011)  | 0.48<br>(0.019) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC110F/24                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.81<br>(0.032)  | 1.46<br>(0.057) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC125F/16                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.28<br>(0.011)  | 0.48<br>(0.019) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC150F/12                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.28<br>(0.011)  | 0.48<br>(0.019) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC150F/16                      | 4.37<br>(0.172) | 4.83<br>(0.190) | 0.28<br>(0.011)  | 0.48<br>(0.019) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |

# PolySwitch Resettable Devices

## Automotive Devices

Table A4 — Dimensions in Millimeters and (Inches)

(Cont'd)

| Part Number            | A               |                 | B               |                 | C               |                 | D               |                 | E                |     | Figure |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----|--------|
|                        | Min             | Max             | Min             | Max             | Min             | Max             | Min             | Max             | Min              | Max |        |
| miniASMDC              |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| 12-60V — Surface-mount |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| miniASMDC150F/24       | 4.37<br>(0.172) | 4.83<br>(0.190) | 1.00<br>(0.040) | 1.94<br>(0.077) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC200F/16       | 4.37<br>(0.172) | 4.73<br>(0.186) | 0.51<br>(0.020) | 1.22<br>(0.048) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC260F/12       | 4.37<br>(0.172) | 4.83<br>(0.190) | 1.02<br>(0.042) | 1.52<br>(0.060) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC260F/13.2     | 4.37<br>(0.172) | 4.83<br>(0.190) | 1.02<br>(0.042) | 1.52<br>(0.060) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| miniASMDC260F/16       | 4.37<br>(0.172) | 4.83<br>(0.190) | 1.02<br>(0.042) | 1.52<br>(0.060) | 3.07<br>(0.121) | 3.41<br>(0.134) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC                  |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| 24-60V — Surface-mount |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| ASMDC030F              | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.63<br>(0.025) | 0.90<br>(0.035) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC050F              | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.63<br>(0.025) | 0.90<br>(0.035) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC075F              | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.63<br>(0.025) | 0.90<br>(0.035) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC125F/33           | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.45<br>(0.018) | 0.71<br>(0.028) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC185F/33           | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.90<br>(0.035) | 1.20<br>(0.047) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| ASMDC300F/24           | 7.30<br>(0.287) | 7.70<br>(0.303) | 0.80<br>(0.031) | 1.10<br>(0.043) | 4.90<br>(0.193) | 5.30<br>(0.209) | 0.25<br>(0.010) | 0.95<br>(0.040) | 0.20<br>(0.008)  | —   | A13    |
| nanoASMDCH             |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| 16V — Surface-mount    |                 |                 |                 |                 |                 |                 |                 |                 |                  |     |        |
| nanoASMDCH035F         | 3.00<br>(0.118) | 3.40<br>(0.134) | 0.91<br>(0.036) | 1.14<br>(0.045) | 1.37<br>(0.054) | 1.80<br>(0.071) | 0.25<br>(0.010) | 0.75<br>(0.030) | 0.076<br>(0.003) | —   | A13    |

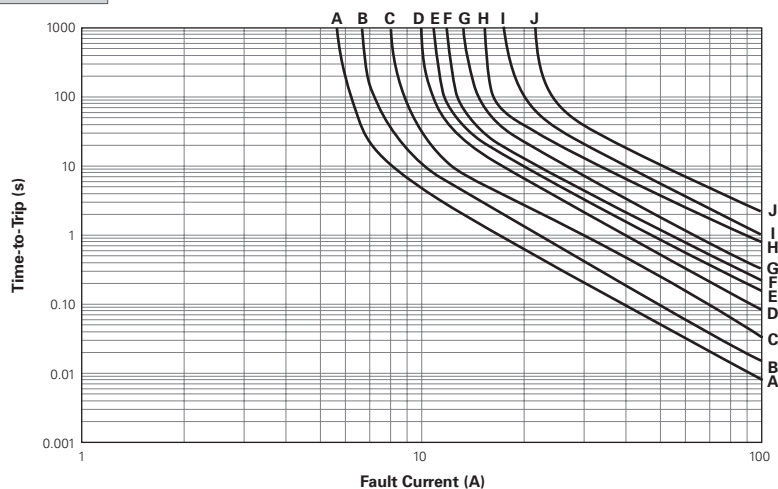
## PolySwitch Resettable Devices Automotive Devices

### Figures A14-A25 — Typical Time-to-Trip at 25°C

#### AGRF

A = AGRF400  
B = AGRF500  
C = AGRF600  
D = AGRF700  
E = AGRF800  
F = AGRF900  
G = AGRF1000  
H = AGRF1100  
I = AGRF1200  
J = AGRF1400

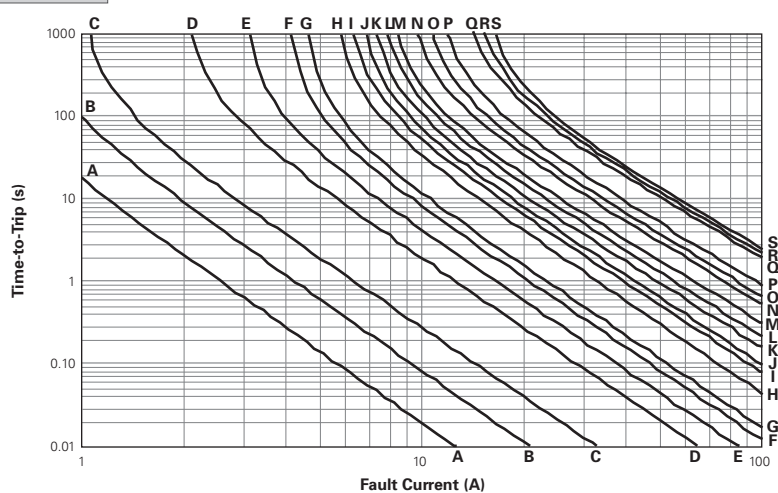
**Figure A14**



#### AHRF

A = AHRF050  
B = AHRF070  
C = AHRF100  
D = AHRF200  
E = AHRF300  
F = AHRF400  
G = AHRF450  
H = AHRF550  
I = AHRF600  
J = AHRF650  
K = AHRF700  
L = AHRF750  
M = AHRF800  
N = AHRF900  
O = AHRF1000  
P = AHRF1100  
Q = AHRF1300  
R = AHRF1400  
S = AHRF1500

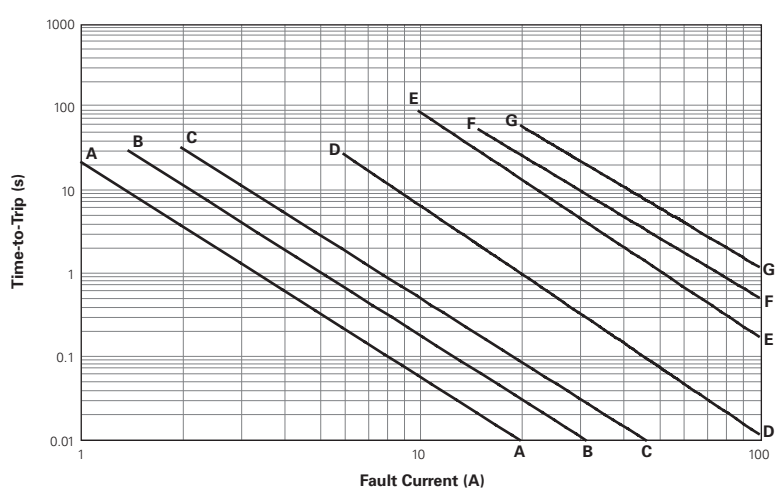
**Figure A15**



#### AHEF

A = AHEF050  
B = AHEF070  
C = AHEF100  
D = AHEF300  
E = AHEF500  
F = AHEF750  
G = AHEF1000

**Figure A16**



# PolySwitch Resettable Devices

## Automotive Devices

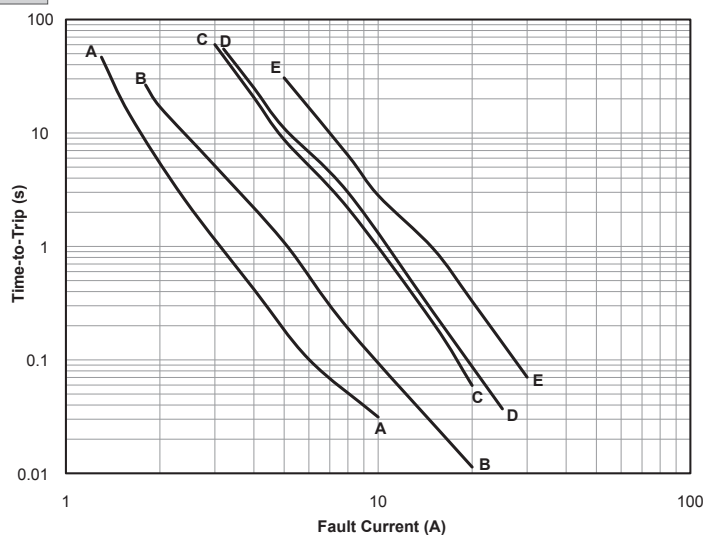
### Figures A14-A25 — Typical Time-to-Trip at 25°C

(Cont'd)

#### AHS

- A = AHS080-2018
- B = AHS120
- C = AHS160
- D = AHS200
- E = AHS300

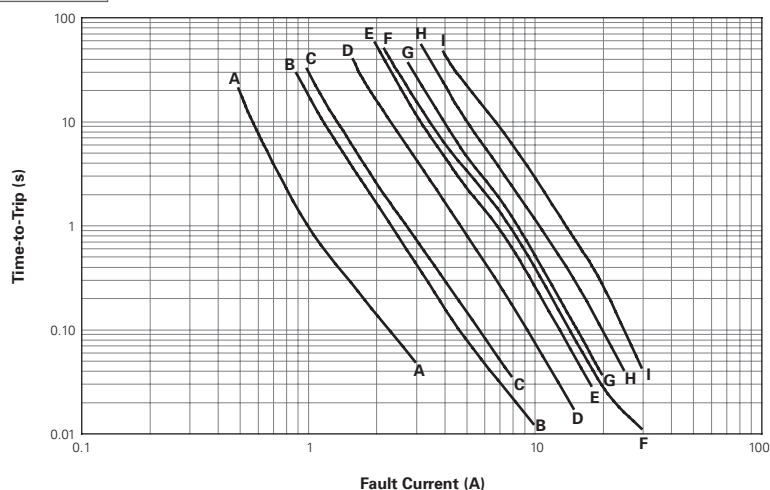
**Figure A17**



#### ASMD

- A = ASMD030F
- B = ASMD050F
- C = ASMD075F
- D = ASMD100F
- E = ASMD125F
- F = ASMD150F, ASMD150F/33
- G = ASMD185F
- H = ASMD200F
- I = ASMD250F

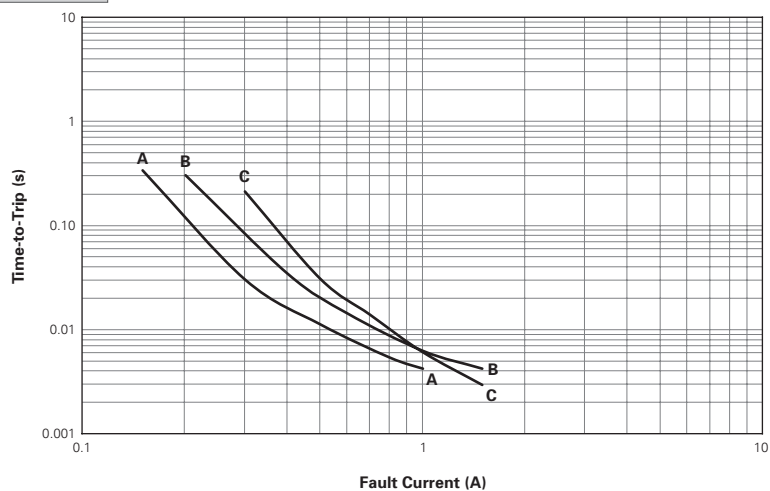
**Figure A18**



#### femtoASMDC

- A = femtoASMDC005F
- B = femtoASMDC008F
- C = femtoASMDC010F/15

**Figure A19**



# PolySwitch Resettable Devices

## Automotive Devices

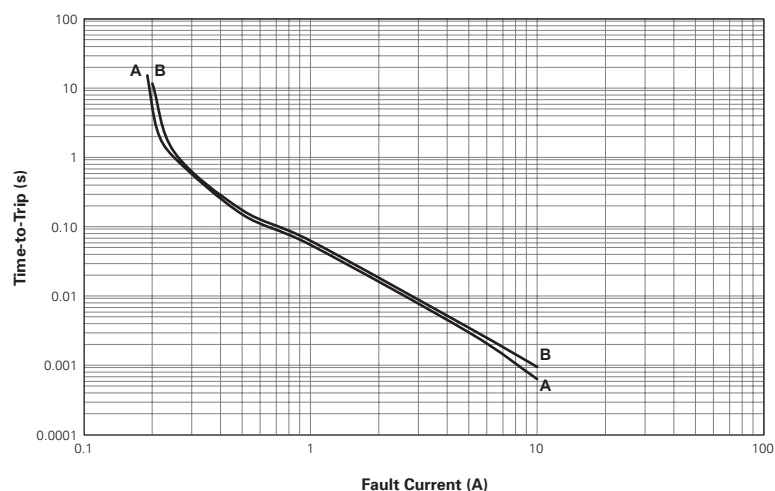
### Figures A14-A25 — Typical Time-to-Trip at 25°C

(Cont'd)

#### picoASMD

- A = picoASMD010S
- B = picoASMD020S

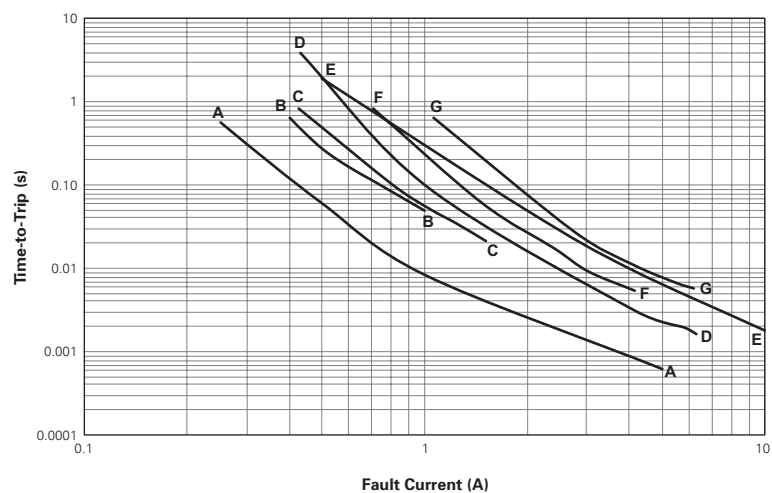
**Figure A20**



#### nanoASMD

- A = nanoASMD010F
- B = nanoASMD012F
- C = nanoASMD016F
- D = nanoASMD020F
- E = nanoASMD025F
- F = nanoASMD035F
- G = nanoASMD050F/13.2

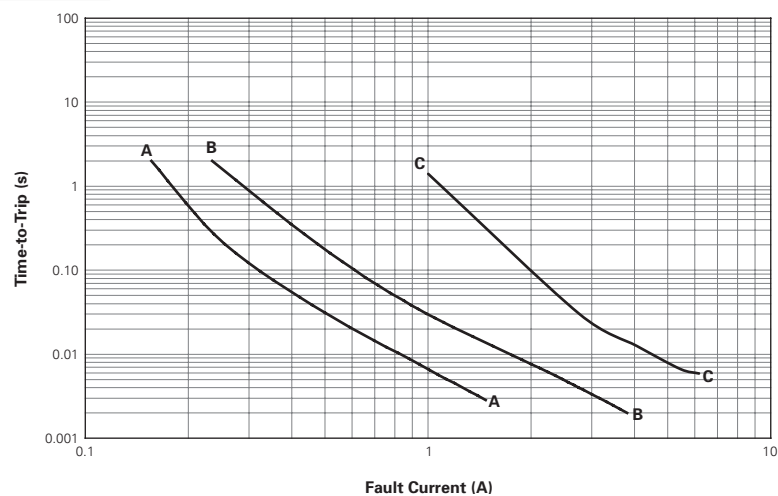
**Figure A21**



#### microASMD

- A = microASMD005F
- B = microASMD010F
- C = microASMD050F

**Figure A22**



# PolySwitch Resettable Devices

## Automotive Devices

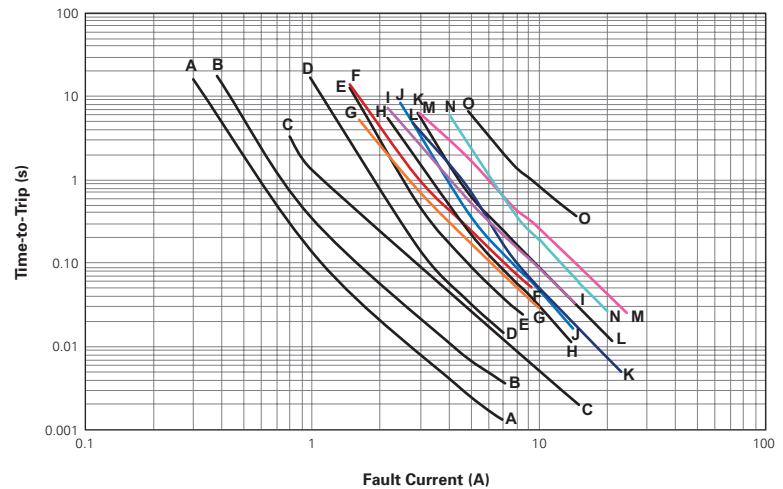
### Figures A14-A25 — Typical Time-to-Trip at 25°C

(Cont'd)

#### miniASMDC

- A = miniASMDC010F, miniASMDC014F
- B = miniASMDC020F
- C = miniASMDC030F
- D = miniASMDC050F
- E = miniASMDC075F
- F = miniASMDC075F/24
- G = miniASMDC075F/33
- H = miniASMDC110F/16
- I = miniASMDC110F/24
- J = miniASMDC125F/16
- K = miniASMDC150F/12
- L = miniASMDC150F/16
- M = miniASMDC150F/24
- N = miniASMDC200F/16
- O = miniASMDC260F/12, miniASMDC260F/13.2, miniASMDC260F/16

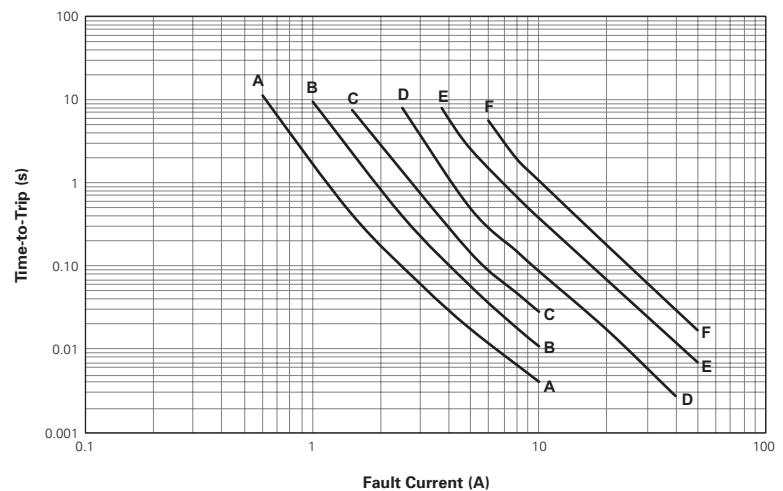
**Figure A23**



#### ASMDC

- A = ASMDC030F
- B = ASMDC050F
- C = ASMDC075F
- D = ASMDC125F/33
- E = ASMDC185F/33
- F = ASMDC300F/24

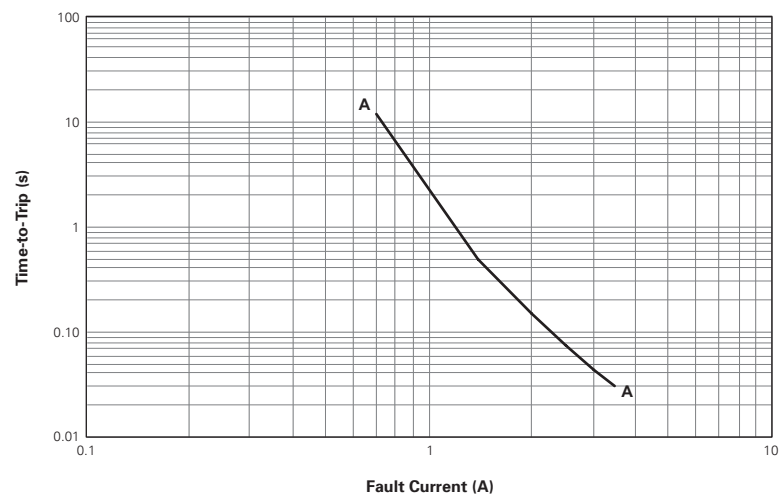
**Figure A24**



#### nanoASMDCH

- A = nanoASMDCH035F

**Figure A25**



## PolySwitch Resettable Devices

### Automotive Devices

Table A5 — Physical Characteristics and Environmental Specifications

| AGRF                      |                                                                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Characteristics  |                                                                                                                                                                                                    |
| Lead Material             | AGRF400 to AGRF1100 : Tin-plated Copper, 0.52mm <sup>2</sup> (20AWG) ø 0.8 mm/0.032in<br>AGRF1200 to AGRF1400 : Tin-plated Copper, 0.82mm <sup>2</sup> (18AWG) ø 1.0mm/0.040in                     |
| Soldering Characteristics | Solderability per ANSI/J-STD-002 Category 3                                                                                                                                                        |
| Solder Heat Withstand     | AGRF400 : per IEC68-2-20 Test Tb, Method 1A, Condition A: Can Withstand 5 s at 260°C ± 5°C<br>AGRF500-AGRF1400 : per IEC68-2-20 Test Tb, Method 1A, Condition B: Can Withstand 10 s at 260°C ± 5°C |
| Insulating Material       | Cured, Flame-retardant Epoxy Polymer; Meets UL 94V-0                                                                                                                                               |
| Operation Temperature     | -40°C~85°C                                                                                                                                                                                         |

**Note:** See PS400 for other physical characteristics.  
Devices are not intended to be placed through a reflow process.

| Environmental Specifications |                          |                   |
|------------------------------|--------------------------|-------------------|
| Test                         | Conditions               | Resistance Change |
| Passive Aging                | 70°C, 1000 hrs           | ±5%               |
|                              | 85°C, 1000 hrs           | ±5%               |
| Humidity Aging               | 85°C, 85% RH, 1000 hrs   | ±5%               |
| Thermal Shock                | 85°C, -40°C (10 Times)   | ±5%               |
| Solvent Resistance           | MIL-STD-202, Method 215F | No Change         |

**Note:** See PS400 for other environmental specifications.

| AHRF                      |                                                                                                                                                                                                                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Characteristics  |                                                                                                                                                                                                                                                                                       |
| Lead material             | AHRF050 to AHRF200 : Tin-plated Copper-clad Steel, 0.205mm <sup>2</sup> (24 AWG), ø 0.51mm/0.020in<br>AHRF300 to AHRF1100 : Tin-plated Copper 0.52mm <sup>2</sup> (20 AWG), ø 0.81mm/0.032in<br>AHRF1300 to AHRF1500 : Tin-plated Copper 0.82mm <sup>2</sup> (18 AWG), ø 1.0mm/0.04in |
| Soldering Characteristics | Solderability per ANSI/J-STD 002 Category 3                                                                                                                                                                                                                                           |
| Solder Heat Withstand     | Per IEC 68-2-20, Test Tb, Method 1A, Condition B; Can Withstand 10 s at 260°C ± 5°C                                                                                                                                                                                                   |
| Insulating Material       | Cured, Flame-retardant Epoxy Polymer; Meets UL 94V-0 Requirements                                                                                                                                                                                                                     |
| Operation Temperature     | -40°C~125°C                                                                                                                                                                                                                                                                           |

**Note:** See PS400 for other physical characteristics.  
Devices are not intended to be placed through a reflow process.

| Environmental Specifications |                          |                   |
|------------------------------|--------------------------|-------------------|
| Test                         | Conditions               | Resistance Change |
| Passive Aging                | 70°C, 1000 hrs           | ±5%               |
|                              | 85°C, 1000 hrs           | ±5%               |
| Humidity Aging               | 85°C, 85% RH, 1000 hrs   | ±5%               |
| Thermal Shock                | 125°C, -40°C (10 Times)  | ±5%               |
| Solvent Resistance           | MIL-STD-202, Method 215F | No Change         |

**Note:** See PS400 for other environmental specifications.

## PolySwitch Resettable Devices

### Automotive Devices

Table A5 — Physical Characteristics and Environmental Specifications

(Cont'd)

| AHEF                      |                                                                                                                                                                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Characteristics  |                                                                                                                                                                                                                                                                         |
| Lead Material             | AHEF050 to AHEF100: Tin-plated Copper-clad Steel, 0.205mm <sup>2</sup> (24 AWG), ø 0.51mm/0.020in.<br>AHEF300 to AHEF750: Tin-plated Copper 0.52mm <sup>2</sup> (20 AWG), ø 0.81mm/0.032in.<br>AHEF1000: Tin-plated Copper 0.82mm <sup>2</sup> (18 AWG), ø 1.0mm/0.04in |
| Soldering Characteristics | Solderability per ANSI/J-STD 002 Category 3                                                                                                                                                                                                                             |
| Solder Heat Withstand     | Per IEC 68-2-20, Test Tb, Method 1A, Condition B; Can Withstand 10 s at 260°C ± 5°C                                                                                                                                                                                     |
| Insulating Material       | Cured, Flame-retardant Epoxy Polymer; Meets UL 94V-0 Requirements                                                                                                                                                                                                       |
| Operation Temperature     | -40°C~125°C                                                                                                                                                                                                                                                             |

**Note:** See PS400 for other physical characteristics.  
Devices are not intended to be placed through a reflow process.

| Environmental Specifications |                          |                   |
|------------------------------|--------------------------|-------------------|
| Test                         | Conditions               | Resistance Change |
| Passive Aging                | 70°C, 1000 hrs           | ±5%               |
|                              | 85°C, 1000 hrs           | ±5%               |
| Humidity Aging               | 85°C, 85% RH, 1000 hrs   | ±5%               |
| Thermal Shock                | 125°C, -40°C (10 Times)  | ±5%               |
| Solvent Resistance           | MIL-STD-202, Method 215F | No Change         |

**Note:** See PS400 for other environmental specifications.

| AHS                       |                                                    |
|---------------------------|----------------------------------------------------|
| Physical Characteristics  |                                                    |
| Lead Material             | Tin-plated Brass to MIL-T-10727B                   |
| Soldering Characteristics | Solderability per ANSI-J-STD-002 Category 1        |
| Solder Heat Withstand     | Per IEC-STD 68-2-20, Test Tb, Section 5, Method 1A |
| Flammability              | Per IEC 695-2-2 Needle Flame Test for 20 s         |
| Operation Temperature     | -40°C~125°C                                        |

**Note:** See PS400 for other physical characteristics.

| Environmental Specifications |                         |                   |
|------------------------------|-------------------------|-------------------|
| Test                         | Conditions              | Resistance Change |
| Passive Aging                | 70°C, 1000 hrs          | ±3% Typical       |
|                              | 85°C, 1000 hrs          | ±5% Typical       |
| Humidity Aging               | 85°C, 85% RH, 1000 hrs  | ±1.2% Typical     |
| Thermal Shock                | 125°C, -40°C (20 Times) | -33% Typical      |
| Solvent Resistance           | Freon                   | No Change         |
|                              | Trichloroethane         | No Change         |
|                              | Hydrocarbons            | No Change         |

**Note:** See PS400 for other environmental specifications.

## PolySwitch Resettable Devices

### Automotive Devices

Table A5 — Physical Characteristics and Environmental Specifications

(Cont'd)

| ASMD                           |                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------|
| Physical Characteristics       |                                                                                                 |
| Terminal Pad Material          | 98%+ Tin-plated Brass                                                                           |
| Soldering Characteristics      | Solderability per ANSI-J-STD-002 Category 1                                                     |
| 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 s                                                      |
| Recommended Storage Conditions | 40°C max, 70% RH max; Devices May Not Meet Specified Ratings if Storage Conditions are Exceeded |
| Operation Temperature          | -40°C~85°C                                                                                      |

**Note:** See PS400 for other environmental specifications.

| Environmental Specifications |                         |                   |
|------------------------------|-------------------------|-------------------|
| Test                         | Conditions              | Resistance Change |
| Passive Aging                | 60°C, 1000 hrs          | ±3% Typical       |
|                              | 85°C, 1000 hrs          | ±5% Typical       |
| Humidity Aging               | 85°C, 85% RH, 100 hrs   | ±1.2% Typical     |
| Thermal Shock                | 85°C, -40°C (20 Times)  | -33% Typical      |
|                              | 125°C, -55°C (10 Times) | -33% Typical      |
| Solvent Resistance           | Freon                   | No Change         |
|                              | Trichloroethane         | No Change         |
|                              | Hydrocarbons            | No Change         |

**Note:** See PS400 for other environmental specifications.

| femtoASMD/picoASMD/nanoASMD/microASMD/miniASMD/ASMD |                                                                                                 |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Physical Characteristics                            |                                                                                                 |
| Terminal Pad Material                               | 100% Matte Tin with Nickel Underplate                                                           |
| Soldering Characteristics                           | Solderability per ANSI-J-STD-002 Category 3                                                     |
| 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 s                                                      |
| Recommended Storage Conditions                      | 40°C max, 70% RH max; Devices May Not Meet Specified Ratings if Storage Conditions are Exceeded |
| Operation Temperature                               | -40°C~85°C                                                                                      |

**Note:** See PS400 for other physical characteristics.

| Environmental Specifications |                         |                   |
|------------------------------|-------------------------|-------------------|
| Test                         | Conditions              | Resistance Change |
| Passive Aging                | 60°C, 1000 hrs          | ±3% Typical       |
|                              | 85°C, 1000 hrs          | ±5% Typical       |
| Humidity Aging               | 85°C, 85% RH, 100 hrs   | ±1.2% Typical     |
| Thermal Shock                | 85°C, -40°C (20 Times)  | -33% Typical      |
|                              | 125°C, -55°C (10 Times) | -33% Typical      |
| Solvent Resistance           | Freon                   | No Change         |
|                              | Trichloroethane         | No Change         |
|                              | Hydrocarbons            | No Change         |

**Note:** See PS400 for other environmental specifications.

## PolySwitch Resettable Devices

### Automotive Devices

Table A5 — Physical Characteristics and Environmental Specifications

(Cont'd)

nanoASMDCH

Physical Characteristics

|                                |                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------|
| Terminal Pad Material          | 100% matte tin with nickel underplate                                                           |
| Soldering Characteristics      | Solderability per ANSI-J-STD-002 Category 3                                                     |
| 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 s                                                      |
| Recommended Storage Conditions | 40°C max, 70% RH max; Devices May Not Meet Specified Ratings if Storage Conditions are Exceeded |
| Operation Temperature          | -40°C~125°C                                                                                     |

Note:

 See PS400 for other environmental specifications.

Environmental Specifications

| Test               | Conditions              | Resistance Change |
|--------------------|-------------------------|-------------------|
| Passive Aging      | 60°C, 1000 hrs          | ±3% Typical       |
|                    | 85°C, 1000 hrs          | ±5% Typical       |
| Humidity Aging     | 85°C, 85% RH, 100 hrs   | ±1.2% Typical     |
| Thermal Shock      | 125°C, -40°C (10 Times) | -33% Typical      |
| Solvent Resistance | Freon                   | No Change         |
|                    | Trichloroethane         | No Change         |
|                    | Hydrocarbons            | No Change         |

**Note:** See PS400 for other environmental specifications.

# PolySwitch Resettable Devices

## Automotive Devices

Table A6 — Packaging and Marking Information

| Part Number                    | Bag Quantity | Tape and Reel Quantity | Ammo Pack Quantity | Standard Package Quantity | Part Marking | Agency Recognition |
|--------------------------------|--------------|------------------------|--------------------|---------------------------|--------------|--------------------|
| <b>AGRF</b>                    |              |                        |                    |                           |              |                    |
| <b>Radial-leaded</b>           |              |                        |                    |                           |              |                    |
| AGRF400                        | 500          | —                      | —                  | 10,000                    | G4           | *                  |
| AGRF400-2                      | —            | 2,500                  | —                  | 12,500                    | G4           | *                  |
| AGRF400-AP                     | —            | —                      | 2,000              | 10,000                    | G4           | *                  |
| AGRF500                        | 500          | —                      | —                  | 10,000                    | G5           | *                  |
| AGRF500-2                      | —            | 2,000                  | —                  | 10,000                    | G5           | *                  |
| AGRF500-AP                     | —            | —                      | 2,000              | 10,000                    | G5           | *                  |
| AGRF600                        | 500          | —                      | —                  | 10,000                    | G6           | *                  |
| AGRF600-2                      | —            | 2,000                  | —                  | 10,000                    | G6           | *                  |
| AGRF600-AP                     | —            | —                      | 2,000              | 10,000                    | G6           | *                  |
| AGRF700                        | 500          | —                      | —                  | 10,000                    | G7           | *                  |
| AGRF700-2                      | —            | 1,500                  | —                  | 7,500                     | G7           | *                  |
| AGRF700-AP                     | —            | —                      | 1,500              | 7,500                     | G7           | *                  |
| AGRF800                        | 500          | —                      | —                  | 10,000                    | G8           | *                  |
| AGRF800-2                      | —            | 1,500                  | —                  | 7,500                     | G8           | *                  |
| AGRF800-AP                     | —            | —                      | 1,500              | 7,500                     | G8           | *                  |
| AGRF900                        | 500          | —                      | —                  | 10,000                    | G9           | *                  |
| AGRF900-2                      | —            | 1,000                  | —                  | 5,000                     | G9           | *                  |
| AGRF900-AP                     | —            | —                      | 1,000              | 5,000                     | G9           | *                  |
| AGRF1000                       | 250          | —                      | —                  | 5,000                     | G10          | *                  |
| AGRF1000-2                     | —            | 1,000                  | —                  | 5,000                     | G10          | *                  |
| AGRF1000-AP                    | —            | —                      | 1,000              | 5,000                     | G10          | *                  |
| AGRF1100                       | 250          | —                      | —                  | 5,000                     | G11          | *                  |
| AGRF1100-2                     | —            | 1,000                  | —                  | 5,000                     | G11          | *                  |
| AGRF1100-AP                    | —            | —                      | 1,000              | 5,000                     | G11          | *                  |
| AGRF1200                       | 250          | —                      | —                  | 5,000                     | G12          | *                  |
| AGRF1200-2                     | —            | 1,000                  | —                  | 5,000                     | G12          | *                  |
| AGRF1200-AP                    | —            | —                      | 1,000              | 5,000                     | G12          | *                  |
| AGRF1400                       | 250          | —                      | —                  | 5,000                     | G14          | *                  |
| AGRF1400-2                     | —            | 1,000                  | —                  | 5,000                     | G14          | *                  |
| AGRF1400-AP                    | —            | —                      | 1,000              | 5,000                     | G14          | *                  |
| <b>AHRF (High Temperature)</b> |              |                        |                    |                           |              |                    |
| <b>Radial-leaded</b>           |              |                        |                    |                           |              |                    |
| AHRF050                        | 500          | —                      | —                  | 10,000                    | H0.5         | *                  |
| AHRF050-2                      | —            | 2,500                  | —                  | 12,500                    | H0.5         | *                  |
| AHRF050-AP                     | —            | —                      | 2,500              | 12,500                    | H0.5         | *                  |
| AHRF070                        | 500          | —                      | —                  | 10,000                    | H0.7         | *                  |
| AHRF070-2                      | —            | 2,500                  | —                  | 12,500                    | H0.7         | *                  |
| AHRF070-AP                     | —            | —                      | 2,500              | 12,500                    | H0.7         | *                  |
| AHRF100                        | 500          | —                      | —                  | 10,000                    | H1           | *                  |
| AHRF100-2                      | —            | 2,500                  | —                  | 12,500                    | H1           | *                  |
| AHRF100-AP                     | —            | —                      | 2,500              | 12,500                    | H1           | *                  |
| AHRF200                        | 500          | —                      | —                  | 10,000                    | H2           | *                  |
| AHRF200-2                      | —            | 2,500                  | —                  | 12,500                    | H2           | *                  |
| AHRF200-AP                     | —            | —                      | 2,500              | 12,500                    | H2           | *                  |
| AHRF300                        | 500          | —                      | —                  | 10,000                    | H3           | *                  |
| AHRF300-2                      | —            | 2,000                  | —                  | 10,000                    | H3           | *                  |
| AHRF300-AP                     | —            | —                      | 2,000              | 10,000                    | H3           | *                  |
| AHRF400                        | 500          | —                      | —                  | 10,000                    | H4           | *                  |
| AHRF400-2                      | —            | 1,500                  | —                  | 7,500                     | H4           | *                  |
| AHRF400-AP                     | —            | —                      | 1,500              | 7,500                     | H4           | *                  |

\* These devices are intended for use in automotive applications.

For commercial alternatives to these products please refer to radial-leaded devices or surface-mount devices product brochures.

# PolySwitch Resettable Devices

## Automotive Devices

Table A6 — Packaging and Marking Information

(Cont'd)

| Part Number                    | Bag Quantity | Tape and Reel Quantity | Ammo Pack Quantity | Standard Package Quantity | Part Marking | Agency Recognition |
|--------------------------------|--------------|------------------------|--------------------|---------------------------|--------------|--------------------|
| <b>AHRF (High Temperature)</b> |              |                        |                    |                           |              |                    |
| <b>Radial-leaded</b>           |              |                        |                    |                           |              |                    |
| AHRF450                        | 500          | —                      | —                  | 10,000                    | H4.5         | *                  |
| AHRF450-2                      | —            | 1,500                  | —                  | 7,500                     | H4.5         | *                  |
| AHRF450-AP                     | —            | —                      | 1,500              | 7,500                     | H4.5         | *                  |
| AHRF550                        | 500          | —                      | —                  | 10,000                    | H5.5         | *                  |
| AHRF550-2                      | —            | 2,000                  | —                  | 10,000                    | H5.5         | *                  |
| AHRF550-AP                     | —            | —                      | 2,000              | 10,000                    | H5.5         | *                  |
| AHRF600                        | 500          | —                      | —                  | 10,000                    | H6           | *                  |
| AHRF600-2                      | —            | 2,000                  | —                  | 10,000                    | H6           | *                  |
| AHRF600-AP                     | —            | —                      | 2,000              | 10,000                    | H6           | *                  |
| AHRF650                        | 500          | —                      | —                  | 10,000                    | H6.5         | *                  |
| AHRF650-2                      | —            | 1,500                  | —                  | 7,500                     | H6.5         | *                  |
| AHRF650-AP                     | —            | —                      | 1,500              | 7,500                     | H6.5         | *                  |
| AHRF700                        | 500          | —                      | —                  | 10,000                    | H7           | *                  |
| AHRF700-2                      | —            | 1,500                  | —                  | 7,500                     | H7           | *                  |
| AHRF700-AP                     | —            | —                      | 1,500              | 7,500                     | H7           | *                  |
| AHRF750                        | 500          | —                      | —                  | 10,000                    | H7.5         | *                  |
| AHRF750-2                      | —            | 1,000                  | —                  | 5,000                     | H7.5         | *                  |
| AHRF750-AP                     | —            | —                      | 1,000              | 5,000                     | H7.5         | *                  |
| AHRF800                        | 500          | —                      | —                  | 10,000                    | H8           | *                  |
| AHRF800-2                      | —            | 1,000                  | —                  | 5,000                     | H8           | *                  |
| AHRF800-AP                     | —            | —                      | 1,000              | 5,000                     | H8           | *                  |
| AHRF900                        | 250          | —                      | —                  | 5,000                     | H9           | *                  |
| AHRF900-2                      | —            | 1,000                  | —                  | 5,000                     | H9           | *                  |
| AHRF900-AP                     | —            | —                      | 1,000              | 5,000                     | H9           | *                  |
| AHRF1000                       | 250          | —                      | —                  | 5,000                     | H10          | *                  |
| AHRF1000-2                     | —            | 1,000                  | —                  | 5,000                     | H10          | *                  |
| AHRF1000-AP                    | —            | —                      | 1,000              | 5,000                     | H10          | *                  |
| AHRF1100                       | 250          | —                      | —                  | 5,000                     | H11          | *                  |
| AHRF1100-2                     | —            | 1,000                  | —                  | 5,000                     | H11          | *                  |
| AHRF1100-AP                    | —            | —                      | 1,000              | 5,000                     | H11          | *                  |
| AHRF1300                       | 250          | —                      | —                  | 5,000                     | H13          | *                  |
| AHRF1300-2                     | —            | 1,000                  | —                  | 5,000                     | H13          | *                  |
| AHRF1300-AP                    | —            | —                      | 1,000              | 5,000                     | H13          | *                  |
| AHRF1400                       | 250          | —                      | —                  | 5,000                     | H14          | *                  |
| AHRF1400-2                     | —            | 1,000                  | —                  | 5,000                     | H14          | *                  |
| AHRF1400-AP                    | —            | —                      | 1,000              | 5,000                     | H14          | *                  |
| AHRF1500                       | 250          | —                      | —                  | 5,000                     | H15          | *                  |
| AHRF1500-2                     | —            | 1,000                  | —                  | 5,000                     | H15          | *                  |
| AHRF1500-AP                    | —            | —                      | 1,000              | 5,000                     | H15          | *                  |
| <b>AHEF (High Temperature)</b> |              |                        |                    |                           |              |                    |
| <b>Radial-leaded</b>           |              |                        |                    |                           |              |                    |
| AHEF050                        | 500          | —                      | —                  | 10,000                    | E0.5         | *                  |
| AHEF070                        | 500          | —                      | —                  | 10,000                    | E0.7         | *                  |
| AHEF100                        | 500          | —                      | —                  | 10,000                    | E1           | *                  |
| AHEF300                        | 500          | —                      | —                  | 10,000                    | E3           | *                  |
| AHEF500                        | 250          | —                      | —                  | 5,000                     | E5           | *                  |
| AHEF750                        | 250          | —                      | —                  | 5,000                     | E7.5         | *                  |
| AHEF1000                       | 250          | —                      | —                  | 5,000                     | E10          | *                  |

\* These devices are intended for use in automotive applications.

For commercial alternatives to these products please refer to the radial-leaded devices or surface-mount devices product brochures.

# PolySwitch Resettable Devices

## Automotive Devices

Table A6 — Packaging and Marking Information

(Cont'd)

| Part Number            | Tape and Reel Quantity | Standard Package Quantity | Part Marking | Recommended Pad Layouts [mm(in)] See Figure A26] |                   |                   | Agency Recognition |
|------------------------|------------------------|---------------------------|--------------|--------------------------------------------------|-------------------|-------------------|--------------------|
|                        |                        |                           |              | Dimension A (Min*/Nom)                           | Dimension B (Nom) | Dimension C (Nom) |                    |
| AHS (High Temperature) |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| AHS080-2018            | 4,000                  | 20,000                    | H08          | 4.6 (0.18)                                       | 1.5 (0.06)        | 3.4 (0.134)       | *                  |
| AHS120                 | 2,000                  | 10,000                    | H12          | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| AHS160                 | 1,500                  | 7,500                     | 160          | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| AHS200                 | 1,500                  | 7,500                     | H200         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| AHS300                 | 1,500                  | 7,500                     | H300         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| ASMD                   |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| ASMD030F               | 2,000                  | 10,000                    | 030F         | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| ASMD050F               | 2,000                  | 10,000                    | 050F         | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| ASMD075F               | 2,000                  | 10,000                    | 075F         | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| ASMD100F               | 2,000                  | 10,000                    | 100F         | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| ASMD125F               | 2,000                  | 10,000                    | 125F         | 3.1 (0.12)                                       | 2.3 (0.09)        | 5.1 (0.201)       | *                  |
| ASMD150F               | 1,500                  | 7,500                     | 150F         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| ASMD150F/33            | 1,500                  | 7,500                     | 153F         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| ASMD185F               | 1,500                  | 7,500                     | 185A         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| ASMD200F               | 1,500                  | 7,500                     | 200F         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| ASMD250F               | 1,500                  | 7,500                     | 250F         | 4.6 (0.18)                                       | 2.3 (0.09)        | 6.1 (0.240)       | *                  |
| femtoASMDC             |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| femtoASMDC005F         | 4,000                  | 20,000                    | A            | 0.80 (0.032)                                     | 0.60 (0.024)      | 0.80 (0.032)      | *                  |
| femtoASMDC008F         | 4,000                  | 20,000                    | T            | 0.80 (0.032)                                     | 0.60 (0.024)      | 0.80 (0.032)      | *                  |
| femtoASMDC010F/15      | 4,000                  | 20,000                    | B            | 0.80 (0.032)                                     | 0.60 (0.024)      | 0.80 (0.032)      | *                  |
| picoASMDC              |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| picoASMDC010S          | 3,000                  | 15,000                    | C            | 1.50 (0.060)                                     | 1.00 (0.039)      | 1.20 (0.047)      | *                  |
| picoASMDC012S          | 4,000                  | 20,000                    | F            | 1.50 (0.060)                                     | 1.00 (0.039)      | 1.20 (0.047)      | *                  |
| nanoASMDC              |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| nanoASMDC010F          | 3,000                  | 15,000                    | A            | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC012F          | 3,000                  | 15,000                    | P            | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC016F          | 3,000                  | 15,000                    | N            | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC020F          | 3,000                  | 15,000                    | 02           | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC025F          | 3,000                  | 15,000                    | C            | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC035F          | 3,000                  | 15,000                    | 03           | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| nanoASMDC050F/13.2     | 3,000                  | 15,000                    | M            | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| microASMD              |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| microASMD005F          | 4,000                  | 20,000                    | 05           | 2.50 (0.098)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| microASMD010F          | 4,000                  | 20,000                    | 10           | 2.50 (0.098)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| microASMD050F          | 4,000                  | 20,000                    | 50           | 2.50 (0.098)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |
| miniASMDC              |                        |                           |              |                                                  |                   |                   |                    |
| Surface-mount          |                        |                           |              |                                                  |                   |                   |                    |
| miniASMDC010F          | 2,000                  | 10,000                    | 10           | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC014F          | 2,000                  | 10,000                    | 14           | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC020F          | 2,000                  | 10,000                    | 2            | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC030F          | 2,000                  | 10,000                    | 3            | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC050F          | 2,000                  | 10,000                    | 5            | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC075F          | 2,000                  | 10,000                    | 7            | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |

\* These devices are intended for use in automotive applications.  
For commercial alternatives to these products please refer to the radial-leaded devices or surface-mount devices product brochures.

# PolySwitch Resettable Devices

## Automotive Devices

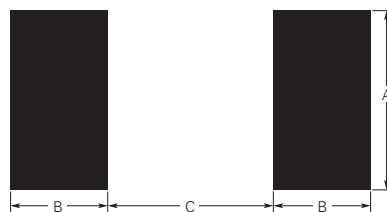
Table A6 — Packaging and Marking Information

(Cont'd)

| Part Number                 | Tape and Reel Quantity | Standard Package Quantity | Part Marking | Recommended Pad Layouts [mm(in)] See Figure A26] |                   |                   | Agency Recognition |
|-----------------------------|------------------------|---------------------------|--------------|--------------------------------------------------|-------------------|-------------------|--------------------|
|                             |                        |                           |              | Dimension A (Min*/Nom)                           | Dimension B (Nom) | Dimension C (Nom) |                    |
| miniASMDC<br>Surface-mount  |                        |                           |              |                                                  |                   |                   |                    |
| miniASMDC075F/24            | 1,500                  | 7,500                     | 075F 24V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC075F/33            | 1,500                  | 7,500                     | 075F 33V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC110F/16            | 2,000                  | 10,000                    | 110F 16V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC110F/24            | 1,500                  | 7,500                     | 110F 24V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC125F/16            | 2,000                  | 10,000                    | 125F 16V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC150F/12            | 2,000                  | 10,000                    | 150F 12V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC150F/16            | 2,000                  | 10,000                    | 150 16V      | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC150F/24            | 1,000                  | 5,000                     | 150F 24V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC200F/16            | 2,000                  | 10,000                    | 200F 16V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC260F/12            | 1,500                  | 7,500                     | 260F 12V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC260F/13.2          | 1,500                  | 7,500                     | 260F 13V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| miniASMDC260F/16            | 1,500                  | 7,500                     | 260F 16V     | 3.15 (0.124)                                     | 1.68 (0.066)      | 3.10 (0.122)      | *                  |
| ASMDC<br>Surface-mount      |                        |                           |              |                                                  |                   |                   |                    |
| ASMDC030F                   | 4,000                  | 20,000                    | 030F         | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| ASMDC050F                   | 4,000                  | 20,000                    | 050F         | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| ASMDC075F                   | 4,000                  | 20,000                    | 075F         | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| ASMDC125F/33                | 4,000                  | 20,000                    | 125F         | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| ASMDC185F/33                | 4,000                  | 20,000                    | 185F 33V     | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| ASMDC300F/24                | 4,000                  | 20,000                    | 300F 24V     | 5.30 (0.209)                                     | 2.00 (0.079)      | 4.60 (0.18)       | *                  |
| nanoASMDCH<br>Surface-mount |                        |                           |              |                                                  |                   |                   |                    |
| nanoASMDCH035F              | 3,000                  | 15,000                    | H35          | 1.60 (0.063)                                     | 1.00 (0.039)      | 2.00 (0.079)      | *                  |

\* These devices are intended for use in automotive applications.  
For commercial alternatives to these products please refer to the radial-leaded devices or surface-mount devices product brochures.

Figure A26 — Recommended Pad Layout



## PolySwitch Resettable Devices

### Automotive Devices

**Table A7 — Tape and Reel Specifications for AGRF/AHRF/AHEF Automotive Devices**

AGRF, AHRF and AHEF devices are available in tape and reel packaging per EIA468-B/IEC286-2 and EIA 481-2 standards. See Figures A27 and A28 for details

| Description                                                                                           | EIA Mark       | Dimension (mm) | Tolerance  |
|-------------------------------------------------------------------------------------------------------|----------------|----------------|------------|
| Carrier Tape Width                                                                                    | W              | 18.0           | -0.5/+1.0  |
| Hold Down Tape Width                                                                                  | W <sub>4</sub> | 11.0           | Minimum    |
| Top Distance between Tape Edges                                                                       | W <sub>6</sub> | 3.0            | Maximum    |
| Sprocket Hole Position                                                                                | W <sub>5</sub> | 9.0            | -0.5/+0.75 |
| Sprocket Hole Diameter                                                                                | D <sub>0</sub> | 4.0            | ±0.2       |
| Abscissa to Plane (Straight Lead) (AHEF300 to AHEF1000)                                               | H              | 20.3           | ±0.5       |
| Abscissa to Plane (Kinked Lead) (AGRF400 to AGRF1400, AHRF050 to AHRF1500, AHEF050 to AHEF100)        | H <sub>0</sub> | 16.0           | ±0.5       |
| Abscissa to Top (AGRF400 to AGRF600, AHRF050 to AHRF450, AHEF050 to AHEF300)                          | H <sub>1</sub> | 32.2           | Maximum    |
| Abscissa to Top (AGRF700 to AGRF1400, AHRF550 to AHRF1500*, AHEF500 to AHEF1000)                      | H <sub>1</sub> | 45.0           | Maximum    |
| Overall Width with Lead Protrusion (AGRF400 to AGRF600 & AHRF050 to AHRF450, AHEF050 to AHEF300)      | C <sub>1</sub> | 43.2           | Maximum    |
| Overall Width with Lead Protrusion (AGRF700 to AGRF1400, AHRF550 to AHRF1500, AHEF500 to AHEF1000)    | C <sub>1</sub> | 55.0           | Maximum    |
| Overall Width without Lead Protrusion (AGRF400 to AGRF600, AHRF050 to AHRF450, AHEF050 to AHEF300)    | C <sub>2</sub> | 42.5           | Maximum    |
| Overall Width without Lead Protrusion (AGRF700 to AGRF1400, AHRF550 to AHRF1500, AHEF500 to AHEF1000) | C <sub>2</sub> | 54.0           | Maximum    |
| Lead Protrusion                                                                                       | L <sub>1</sub> | 1.0            | Maximum    |
| Protrusion of Cut-out                                                                                 | L              | 11.0           | Maximum    |
| Protrusion Beyond Hold-Down Tape                                                                      | I <sub>2</sub> | Not specified  | —          |
| Sprocket Hole Pitch                                                                                   | P <sub>0</sub> | 12.7           | ± 0.3      |
| Device Pitch (AGRF400 to AGRF700, AHRF050 to AHRF600, AHEF050 to AHEF300)                             | —              | 12.7           | ± 0.3      |
| Device Pitch (AGRF800 to AGRF1400, AHRF650 to AHRF1500, AHEF500 to AHEF1000)                          | —              | 25.4           | ± 0.6      |
| Pitch Tolerance                                                                                       | —              | 20 consec.     | ± 0.1      |
| Tape Thickness                                                                                        | t              | 0.9            | Maximum    |
| Overall Tape and Lead Thickness (AGRF400 to AGRF1100, AHRF050 to AHRF1100*, AHEF050 to AHEF750)       | t <sub>1</sub> | 2.0            | Maximum    |
| Overall Tape and Lead Thickness (AGRF1200 to AGRF1400, AHRF1300 to AHRF1500*, AHEF1000)               | t <sub>1</sub> | 2.3            | Maximum    |
| Splice Sprocket Hole Alignment                                                                        | —              | 0              | ± 0.3      |
| Body Lateral Deviation                                                                                | Dh             | 0              | ± 1.0      |
| Body Tape Plane Deviation                                                                             | Dp             | 0              | ± 1.3      |
| Ordinate to Adjacent Component Lead (AGRF400 to AGRF1100, AHRF050 to AHRF900, AHEF050 to AHEF500)     | P <sub>1</sub> | 3.81           | ± 0.7      |
| Ordinate to Adjacent Component Lead (AGRF1200 to AGRF1400, AHRF1000 to AHRF1500, AHEF750 to AHEF1000) | P <sub>1</sub> | 7.62           | ± 0.7      |
| Lead Spacing (AGRF400 to AGRF1100, AHRF050 to AHRF900*, AHEF050 to AHEF500)                           | F              | 5.05           | ± 0.75     |
| Lead Spacing (AGRF1200 to AGRF1400, AHRF1000 to AHRF1500*, AHEF750 to AHEF1000)                       | F              | 10.15          | ± 0.75     |
| Reel Width (AGRF400 to AGRF600 & AHRF050 to AHRF450, AHEF050 to AHEF300)                              | w <sub>2</sub> | 56.0           | Maximum    |
| Reel Width (AGRF700 to AGRF1400, AHRF550 to AHRF1500*, AHEF500 to AHEF1000)                           | w <sub>2</sub> | 63.5           | Maximum    |
| Reel Diameter                                                                                         | a              | 370.0          | Maximum    |
| Space between Flanges* (AHEF050 to AHEF300)                                                           | w <sub>1</sub> | 48.0           | Maximum    |
| Space between Flanges* (AHEF500 to AHEF1000)                                                          | w <sub>1</sub> | 55.0           | Maximum    |
| Arbor Hold Diameter                                                                                   | c              | 26.0           | ±12.0      |
| Core Diameter*                                                                                        | n              | 91.0           | Maximum    |
| Box                                                                                                   | —              | 64/372/362     | Maximum    |
| Consecutive Missing Places                                                                            | —              | None           | —          |
| Empty Places per Reel                                                                                 | —              | 0.1 %          | Maximum    |

\* Differs from EIA specification.

## PolySwitch Resettable Devices

### Automotive Devices

Figure A27 — EIA Referenced Taped Component Dimensions for AGRF/AHRF/AHEF PolySwitch Automotive Devices

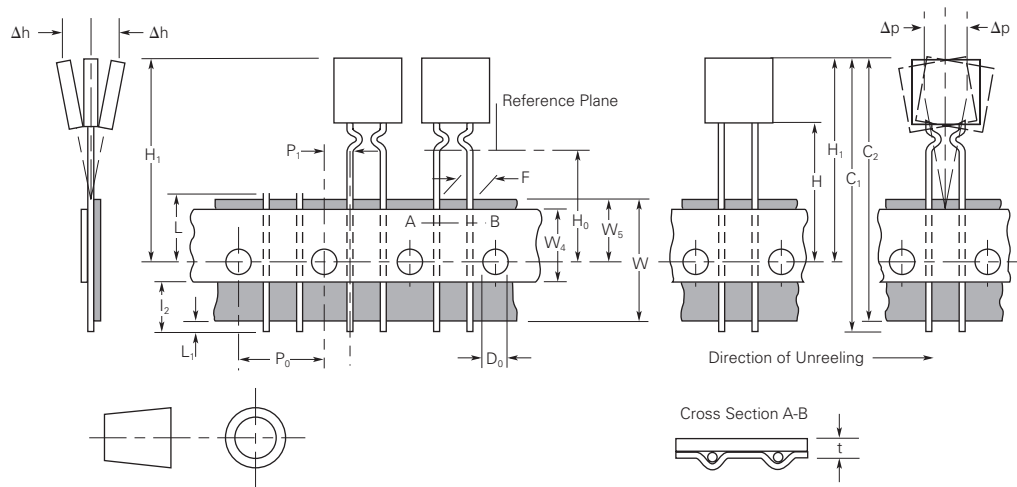
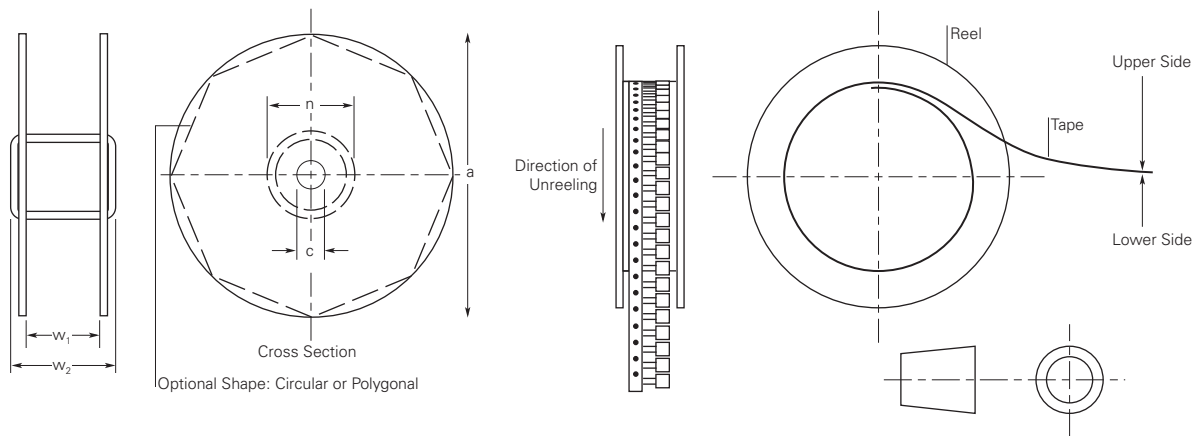


Figure A28 — EIA Referenced Reel Dimensions for AGRF/AHRF/AHEF PolySwitch Automotive Devices



## PolySwitch Resettable Devices

### Automotive Devices

**Table A8 — Tape and Reel Specifications for AHS/ASMD/femtoASMDC/picoASMDC/nanoASMDC/microASMD/miniASMDC/ASMDC/nanoASMDCH PolySwitch Automotive Devices (in Millimeters)**

| Description        | femtoASMDC<br>EIA 481-1 | picoASMDC<br>EIA 481-1 | nanoASMDC/<br>nanoASMDCH<br>EIA 481-1 | microASMD<br>EIA 481-1 | miniASMDC<br>EIA 481-1 | ASMDC<br>EIA 481-1 | AHS080-2018<br>EIA 481-2 | AHS120<br>ASMD030F~<br>ASMD125F<br>EIA 481-2 | AHS160~AHS300<br>ASMD150F~<br>ASMD250F<br>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                                         |
| P <sub>0</sub>     | 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 <sub>1</sub>     | 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                                   | 12.0 ± 0.10                                         |
| P <sub>2</sub>     | 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                                          |
| A <sub>0</sub>     | 0.95 ± 0.05             | 1.70 ± 0.1             | 1.95 ± 0.10                           | 2.9 ± 0.10             | Table A9               | Table A9           | 5.11 ± 0.15              | 5.6 ± 0.23                                   | 6.9 ± 0.23                                          |
| B <sub>0</sub>     | 1.85 ± 0.05             | 2.45 ± 0.1             | Table A9                              | 3.50 ± 0.10            | Table A9               | Table A9           | 5.6 ± 0.23               | 8.1 ± 0.15                                   | 9.6 ± 0.15                                          |
| B <sub>1</sub> max | 4.35                    | 4.35                   | 4.35                                  | 4.35                   | 6.15                   | 12.1               | 12.1                     | 12.1                                         | 12.1                                                |
| D <sub>0</sub>     | 1.55 ± .05              | 1.55 ± .05             | 1.55 ± .05                            | 1.55 ± .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 ± 0.05            | 7.50 ± 0.10        | 7.50 ± 0.10              | 7.50 ± 0.10                                  | 7.50 ± 0.10                                         |
| E <sub>1</sub>     | 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 <sub>2</sub> min | 6.25                    | 6.25                   | 6.25                                  | 6.25                   | 10.25                  | 14.25              | 14.25                    | 14.25                                        | 14.25                                               |
| T max              | 0.3                     | 0.3                    | 0.3                                   | 0.3                    | 0.35                   | 0.35               | 0.4                      | 0.4                                          | 0.4                                                 |
| T <sub>1</sub> max | 0.1                     | 0.1                    | 0.1                                   | 0.1                    | 0.1                    | 0.1                | 0.1                      | 0.1                                          | 0.1                                                 |
| K <sub>0</sub>     | 0.90 ± 0.1              | Table A9               | Table A9                              | 0.9 ± 0.1              | Table A9               | Table A9           | 1.8 ± 0.15               | 3.2 ± 0.15                                   | 3.4 ± 0.15                                          |

**Table A9 — Tape and Reel Specifications for picoASMDC/nanoASMDC/miniASMDC/ASMDC/nanoASMDCH PolySwitch Automotive Devices (in Millimeters)**

|                |                                                                                                                        |                                                                                                                        | nanoASMDC010F<br>nanoASMDC012F<br>nanoASMDC016F<br>nanoASMDCH035F | nanoASMDC020F<br>nanoASMDC025F<br>nanoASMDC035F<br>nanoASMDC050F/13.2 |                              |
|----------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------|
| Description    | picoASMDC010S                                                                                                          | picoASMDC012S                                                                                                          |                                                                   |                                                                       |                              |
| A <sub>0</sub> | 1.70 ± 0.1                                                                                                             | 1.70 ± 0.1                                                                                                             | 1.95 ± 0.1                                                        | 1.95 ± 0.1                                                            |                              |
| B <sub>0</sub> | 2.45 ± 0.1                                                                                                             | 2.45 ± 0.1                                                                                                             | 3.5 ± 0.1                                                         | 3.50 +0.1/-0.08                                                       |                              |
| K <sub>0</sub> | 1.12± 0.1                                                                                                              | 0.86 ± 0.1                                                                                                             | 1.27 ± 0.1                                                        | 0.89 ± 0.1                                                            |                              |
|                | miniASMDC010F~075F<br>miniASMDC110F/16<br>miniASMDC125F/16<br>miniASMDC150F/12<br>miniASMDC150F/16<br>miniASMDC200F/16 | miniASMDC075F/24<br>miniASMDC075F/33<br>miniASMDC110F/24<br>miniASMDC260F/12<br>miniASMDC260F/13.2<br>miniASMDC260F/16 |                                                                   | ASMDC030F<br>ASMDC050F<br>ASMDC075F<br>ASMDC125F/33                   | ASMDC185F/33<br>ASMDC300F/24 |
| Description    |                                                                                                                        |                                                                                                                        | miniASMDC150F/24                                                  |                                                                       |                              |
| A <sub>0</sub> | 3.5 ± 0.1                                                                                                              | 3.7 ± 0.1                                                                                                              | 3.7 ± 0.1                                                         | 5.5 ± 0.1                                                             | 5.35 ± 0.1                   |
| B <sub>0</sub> | 4.95 ± 0.1                                                                                                             | 4.9 ± 0.1                                                                                                              | 4.9 ± 0.1                                                         | 7.9 ± 0.1                                                             | 7.85 ± 0.1                   |
| K <sub>0</sub> | 0.9 ± 0.1                                                                                                              | 1.4 ± 0.1                                                                                                              | 1.78 ± 0.1                                                        | 0.9 ± 0.1                                                             | 1.45 ± 0.1                   |

**Table A10 — Reel Dimensions for AHS/ASMD/femtoASMDC/picoASMDC/nanoASMDC/microASMD/miniASMDC/ASMDC/nanoASMDCH PolySwitch Automotive Devices (in Millimeters)**

| Description        | femtoASMDC, picoASMDC<br>nanoASMDC, microASMD<br>nanoASMDCH | miniASMDC        | ASMDC<br>AHS<br>ASMD |
|--------------------|-------------------------------------------------------------|------------------|----------------------|
| A max              | 185                                                         | 185              | 330                  |
| N min              | 50                                                          | 50               | 50                   |
| W <sub>1</sub>     | 8.4 + 1.5/- .00                                             | 12.4 + 2.0/- .00 | 16.4 + 2.0/- .00     |
| W <sub>2</sub> max | 14.4                                                        | 18.4             | 22.4                 |

## PolySwitch Resettable Devices

### Automotive Devices

Figure A29 — EIA Referenced Taped Component Dimensions for AHS/ASMD/femtoASMD/picoASMD/nanoASMD/microASMD/miniASMD/ASMD/nanoASMDCH PolySwitch Automotive Devices (in Millimeters)

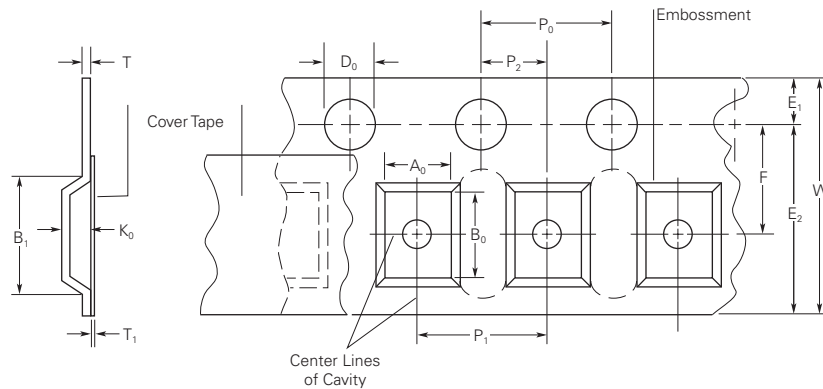
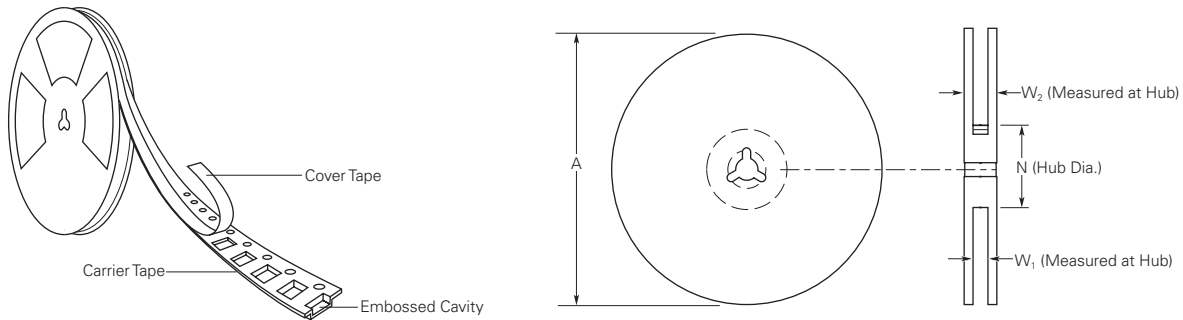


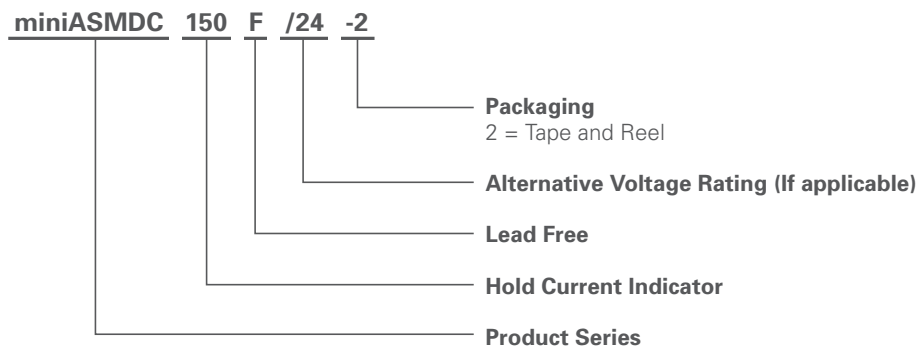
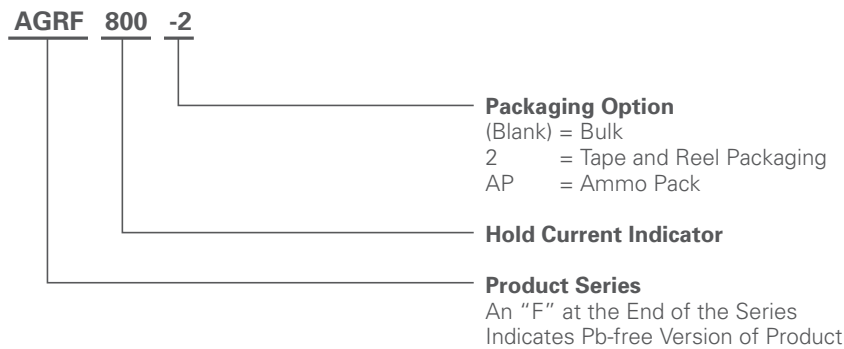
Figure A30 — EIA Referenced Reel Dimensions for AHS/ASMD/femtoASMD/picoASMD/nanoASMD/microASMD/miniASMD/ASMD/nanoASMDCH PolySwitch Automotive Devices



# PolySwitch Resettable Devices

## Automotive Devices

### 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.

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