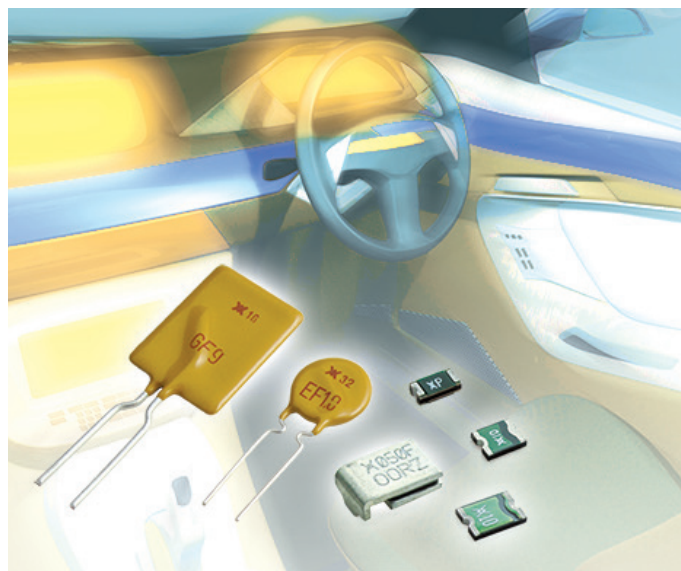


POLYSWITCH RESETTABLE DEVICES

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
AGRF											
16V — Radial-leaded											
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	—
AHRF (High Temperature)											
30V — Radial-leaded											
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
AHRF (High Temperature)											
16V — Radial-leaded											
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						

PolySwitch Resettable Devices

Automotive Devices

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

(Cont'd)

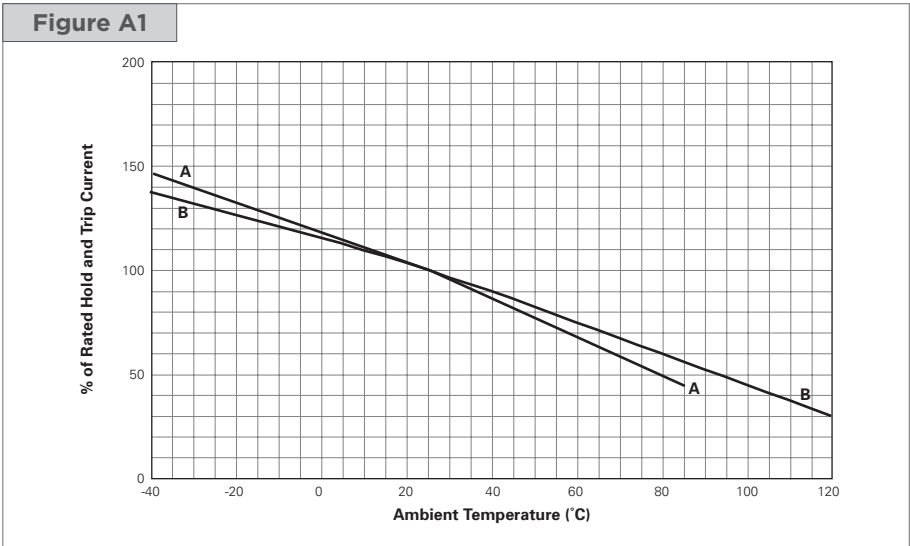
Part Number	Maximum Ambient Temperature										
	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C	125°C
ASMD											
16-60V — Surface-mount											
ASMD030F	0.35	0.31	0.27	0.23	0.22	0.19	0.17	0.15	0.13	0.11	—
ASMD050F	0.59	0.53	0.46	0.39	0.37	0.33	0.29	0.26	0.23	0.18	—
ASMD075F	0.91	0.81	0.71	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	—
femtoASMD											
12-15V — Surface-mount											
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	—
picoASMD											
15V — Surface-mount											
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	—
nanoASMD											
13.2-48V—Surface-mount											
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		

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

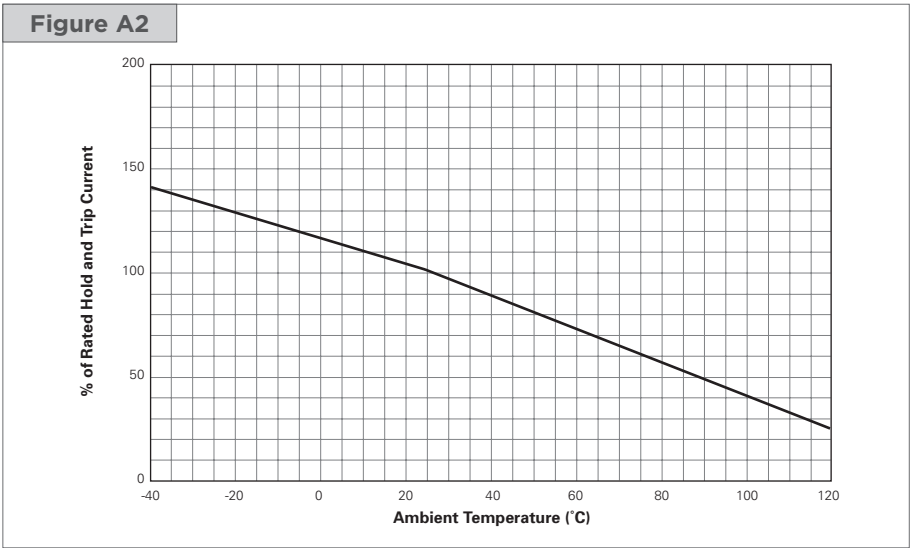
Part Number	Maximum Ambient Temperature										
	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C	125°C
miniASMDC 16-60V — Surface-mount											
miniASMDC150F/16	2.40	2.10	1.80	1.50	1.44	1.25	1.13	1.00	0.88	0.69	—
miniASMDC150F/24	2.10	1.90	1.70	1.50	1.44	1.25	1.13	1.00	0.88	0.69	—
miniASMDC200F/16	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	—
ASMDC 24-60V — Surface-mount											
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	—
nanoASMDC 16V—Surface-mount											
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

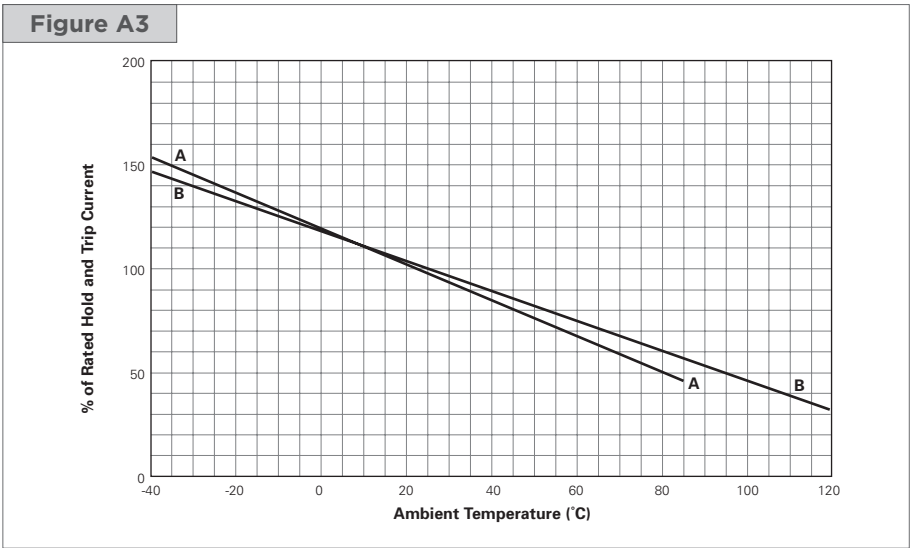
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B = AHRF



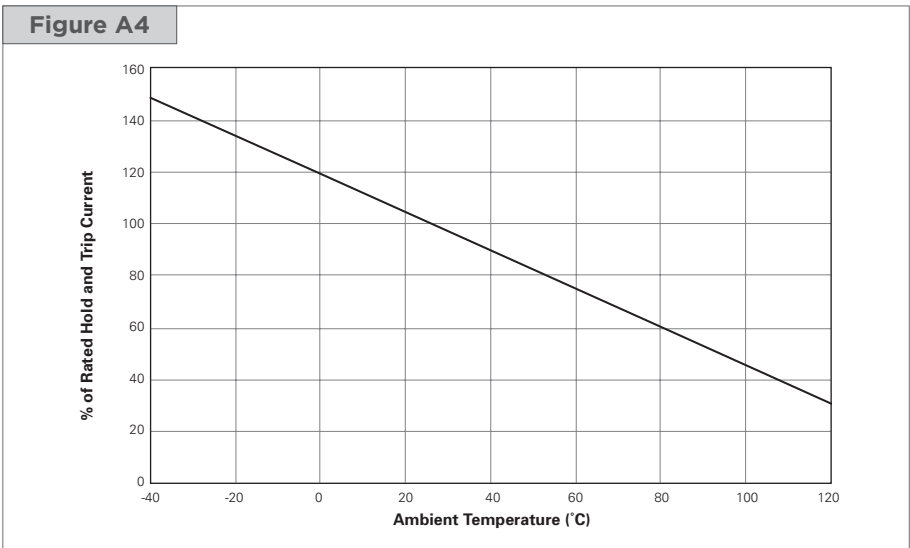
AHEF



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



nanoASMDCH



PolySwitch Resettable Devices

Automotive Devices

Table A3 — Electrical Characteristics

Part Number	$I_H(A)@$ R_{1MAX}	$I_H(A)@$ R_{2MAX}	I_T (A)	V_{MAX} (V_{DC})	I_{MAX} (A)	$P_{D\ TYP}$ (W)	Max. Time-to-trip		R_{MIN} (Ω)	R_{1MAX} (Ω)	R_{2MAX} (Ω)	Figure for Dimensions	
							(A)	(s)					
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				

PolySwitch Resettable Devices

Automotive Devices

Table A3 — Electrical Characteristics

(Cont'd)

Part Number	$I_H(A)@$ R_{1MAX}	$I_H(A)@$ R_{2MAX}	I_T (A)	V_{MAX} (V_{DC})	I_{MAX} (A)	$P_{D\ TYP}$ (W)	Max. Time-to-trip		R_{MIN} (Ω)	R_{1MAX} (Ω)	R_{2MAX} (Ω)	Figure for Dimensions
							(A)	(s)				
ASMD 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 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 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 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 13.2-30V — Surface-mount												

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Table A3 — Electrical Characteristics

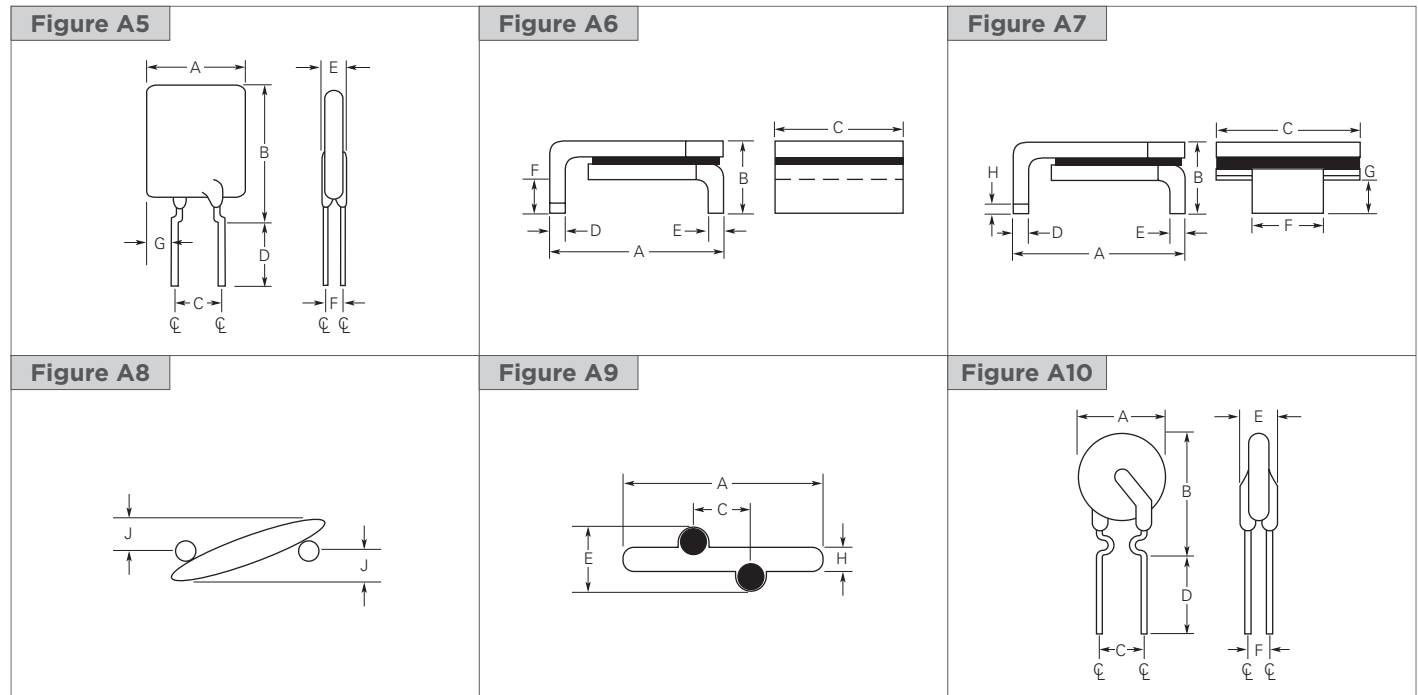
(Cont'd)

Part Number	I_H (A) @	I_H (A) @	I_T (A)	V_{MAX} (V _{DC})	I_{MAX} (A)	$P_{D\ Typ}$ (W)	Max. Time-to-trip		R_{MIN} (Ω)	R_{1MAX} (Ω)	R_{aMAX} (Ω)	Figure for Dimensions
	R_{1MAX}	R_{aMAX}					(A)	(s)				
ASMDC 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 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

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Figures A5-A13 — Dimension Figures

(Cont'd)

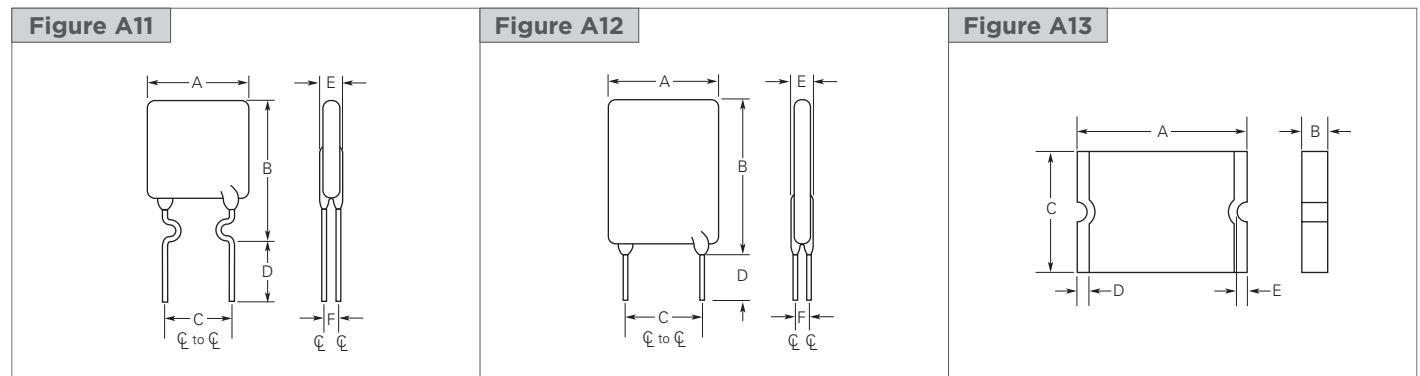


Table A4 — Dimensions in Millimeters and (Inches)

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

PolySwitch Resettable Devices

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Table A4 — Dimensions in Millimeters and (Inches)

(Cont'd)

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	
AHRF (High Temperature) 16V — Radial-leaded																	
AHRF200	—	9.4 (0.37)	—	14.4 (0.57)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A8, A9, A10
AHRF300	—	8.8 (0.35)	—	13.8 (0.55)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF400	—	10.0 (0.39)	—	15.0 (0.59)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF450	—	10.4 (0.41)	—	15.6 (0.61)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	3.94 (0.155)	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF550	—	11.2 (0.44)	—	18.9 (0.74)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF600	—	11.2 (0.44)	—	21.0 (0.73)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	4.49 (0.177)	1.24 (0.049)	1.7 (0.07)	A5, A8, A9
AHRF650	—	12.7 (0.50)	—	22.2 (0.88)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	5.08 (0.200)	1.24 (0.049)	1.8 (0.07)	A5, A8, A9
AHRF700	—	14.0 (0.55)	—	21.9 (0.86)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF750	—	14.0 (0.55)	—	23.5 (0.93)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	5.69 (0.224)	1.24 (0.049)	2.0 (0.08)	A5, A8, A9
AHRF800	—	16.5 (0.65)	—	22.5 (0.88)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF900	—	16.5 (0.65)	—	25.7 (1.01)	4.3 (0.17)	5.8 (0.23)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	—	—	A5, A8, A9
AHRF1000	—	17.5 (0.69)	—	26.5 (1.04)	9.4 (0.37)	10.9 (0.43)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	7.47 (0.294)	1.24 (0.049)	1.5 (0.06)	A5, A8, A9
AHRF1100	—	21.0 (0.83)	—	26.1 (1.03)	9.4 (0.37)	10.9 (0.43)	7.6 (0.30)	—	—	3.0 (0.12)	1.2 (0.05)	—	—	—	1.24 (0.049)	1.6 (0.06)	A5, A8, A9
AHRF1300	—	23.5 (0.925)	—	28.7 (1.13)	9.4 (0.37)	10.9 (0.43)	7.6 (0.30)	—	—	3.5 (0.14)	1.4 (0.06)	—	—	7.82 (0.308)	1.45 (0.057)	1.9 (0.08)	A5, A8, A9
AHRF1400	—	23.5 (0.93)	—	28.7 (1.13)	9.4 (0.37)	10.9 (0.43)	7.6 (0.30)	—	—	3.6 (0.14)	1.4 (0.06)	—	—	—</			

PolySwitch Resettable Devices

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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 (0.186)	5.44 (0.214)	—	1.52 (0.060)	4.22 (0.166)	4.93 (0.194)	0.25 (0.010)	0.36 (0.014)	0.25 (0.010)	0.36 (0.014)	0.30 (0.012)	0.46 (0.018)	—	—	—	—	A6	
AHS120	6.73 (0.265)	7.98 (0.314)	—	3.00 (0.118)	4.8 (0.19)	5.44 (0.214)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	2.16 (0.085)	2.41 (0.095)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
AHS160	8.00 (0.315)	9.40 (0.370)	—	3.00 (0.118)	6.0 (0.24)	6.71 (0.264)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	3.68 (0.145)	3.94 (0.155)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
AHS200	8.00 (0.315)	9.40 (0.370)	—	3.00 (0.118)	6.0 (0.240)	6.71 (0.264)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	3.68 (0.145)	3.94 (0.155)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
AHS300	8.00 (0.315)	9.40 (0.370)	—	3.00 (0.118)	6.0 (0.240)	6.71 (0.264)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	3.68 (0.145)	3.94 (0.155)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
ASMD																		
16-60V — Surface-mount																		
ASMD030F	6.73 (0.265)	7.98 (0.314)	—	3.18 (0.125)	4.8 (0.19)	5.44 (0.214)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	2.16 (0.085)	2.41 (0.095)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
ASMD050F	6.73 (0.265)	7.98 (0.314)	—	3.18 (0.125)	4.8 (0.19)	5.44 (0.214)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	2.16 (0.085)	2.41 (0.095)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
ASMD075F	6.73 (0.265)	7.98 (0.314)	—	3.18 (0.125)	4.8 (0.19)	5.44 (0.214)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	2.16 (0.085)	2.41 (0.095)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
ASMD100F	6.73 (0.265)	7.98 (0.314)	—	3.00 (0.118)	4.8 (0.19)	5.44 (0.214)	0.56 (0.022)	0.71 (0.028)	0.56 (0.022)	0.71 (0.028)	2.16 (0.085)	2.41 (0.095)	0.66 (0.026)	1.37 (0.054)	0.43 (0.017)	—	A7	
ASMD125F	6.73 (0.265)	7.98 (0.314)	—	3.00 (0.118)	4.8 (0.19)	5.44												

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		
nanoASMD												
13.2-48V — Surface-mount												
nanoASMD010F	3.00 (0.118)	3.40 (0.134)	0.62 (0.024)	1.00 (0.039)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD012F	3.00 (0.118)	3.40 (0.134)	0.62 (0.024)	1.00 (0.039)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD016F	3.00 (0.118)	3.40 (0.134)	0.62 (0.024)	1.00 (0.039)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD020F	3.00 (0.118)	3.40 (0.134)	0.58 (0.023)	0.82 (0.032)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD025F	3.00 (0.118)	3.40 (0.134)	0.58 (0.023)	0.82 (0.032)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD035F	3.00 (0.118)	3.40 (0.134)	0.58 (0.023)	0.82 (0.032)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
nanoASMD050F/13.2	3.00 (0.118)	3.40 (0.134)	0.50 (0.019)	0.74 (0.029)	1.37 (0.054)	1.80 (0.071)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
microASMD												
13.2-30V — Surface-mount												
microASMD005F	3.0 (0.118)	3.43 (0.135)	0.50 (0.019)	0.85 (0.034)	2.35 (0.092)	2.80 (0.110)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
microASMD010F	3.0 (0.118)	3.43 (0.135)	0.50 (0.019)	0.85 (0.034)	2.35 (0.092)	2.80 (0.110)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
microASMD050F	3.0 (0.118)	3.43 (0.135)	0.38 (0.015)	0.62 (0.025)	2.35 (0.092)	2.80 (0.110)	0.25 (0.010)	0.75 (0.030)	0.076 (0.003)	—	A13	
miniASMD												
12-60V — Surface-mount												
miniASMD010F	4.37 (0.172)	4.73 (0.186)	0.635 (0.025)	0.89 (0.035)	3.07 (0.121)	3.41 (0.134)	0.25 (0.010)	0.95 (0.040)	0.20 (0.008)	—	A13	
miniASMD014F	4.37 (0.172)	4.73 (0.186)	0.635 (0.025)	0.89 (0.035)	3.07 (0.121)	3.41 (0.134)	0.25 (0.010)	0.95 (0.040)	0.20 (0.008)	—	A13	
miniASMD020F	4.37 (0.172)	4.73 (0.186)	0.635 (0.025)	0.89 (0.035)	3.07 (0.121)	3.41 (0.134)	0.25 (0.010)	0.95 (0.040)	0.20 (0.008)	—	A13	
miniASMD030F	4.37 (0.172)	4.73 (0.186)	0.635 (0.025)	0.89 (0.035)	3.07 (0.121)	3.41 (0.134)	0					

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

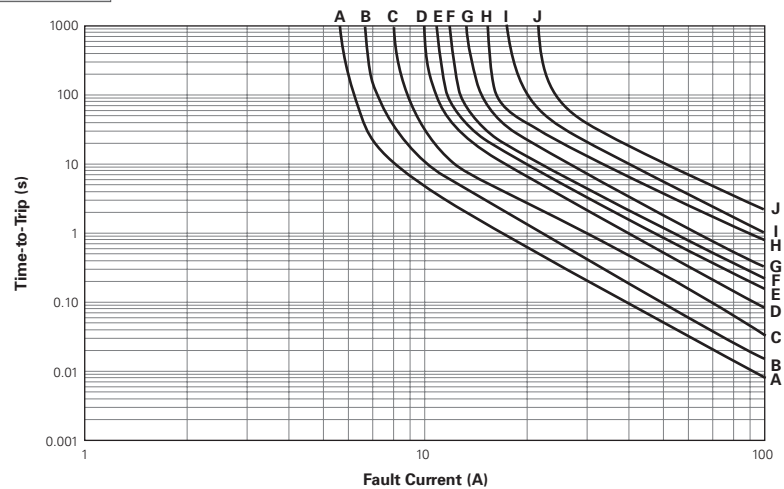
PolySwitch Resettable Devices Automotive Devices

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

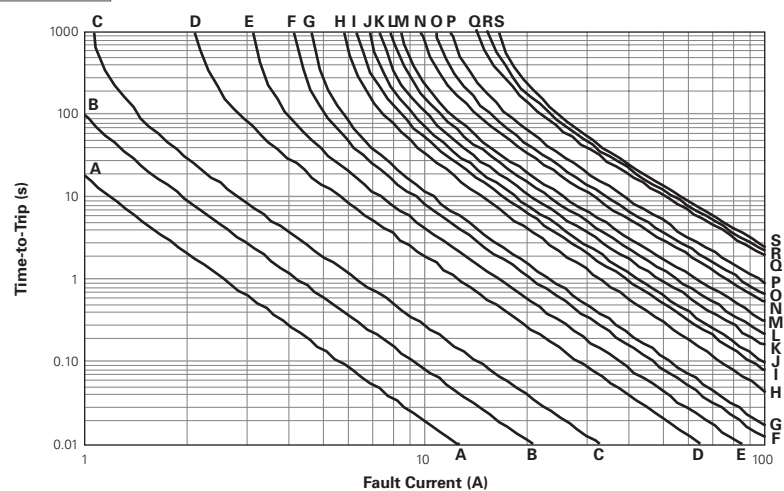
Figure A14



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

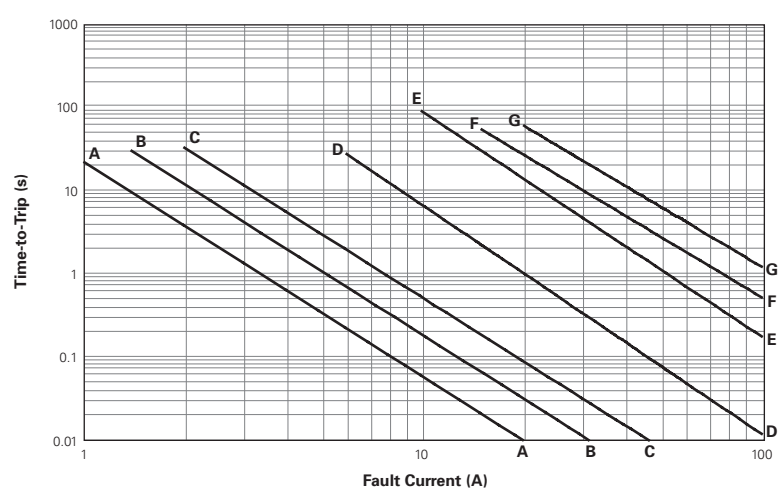
Figure A15



AHEF

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

Figure A16



PolySwitch Resettable Devices

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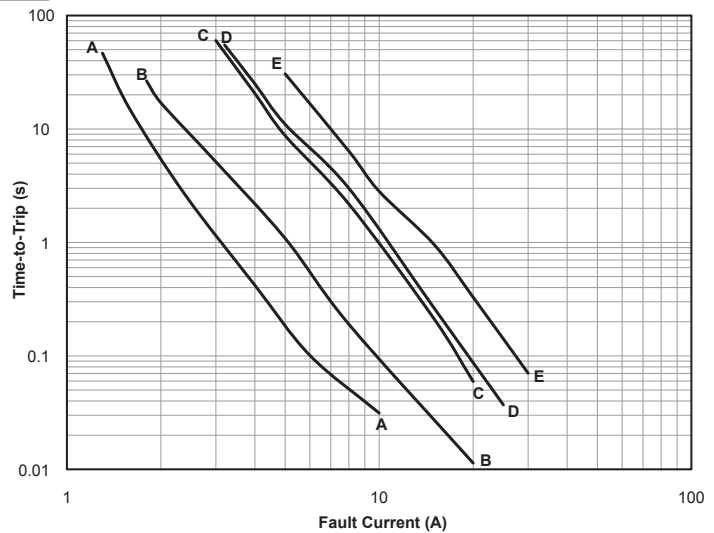
Figures A14-A25 — Typical Time-to-Trip at 25°C

(Cont'd)

AHS

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

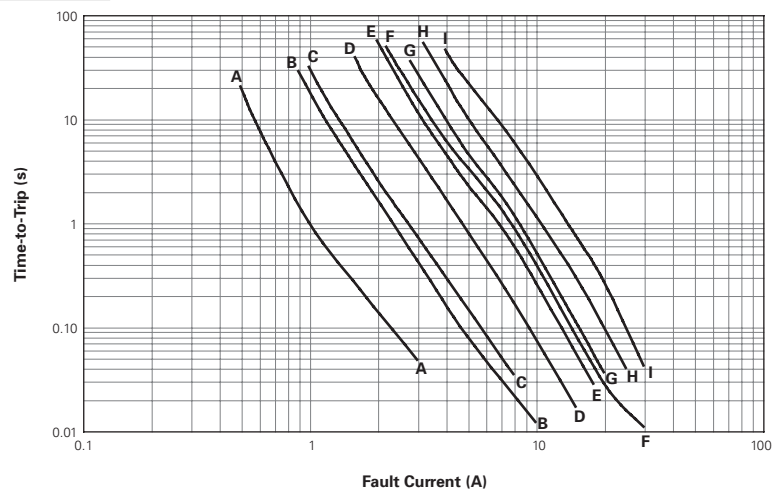
Figure A17



ASMD

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

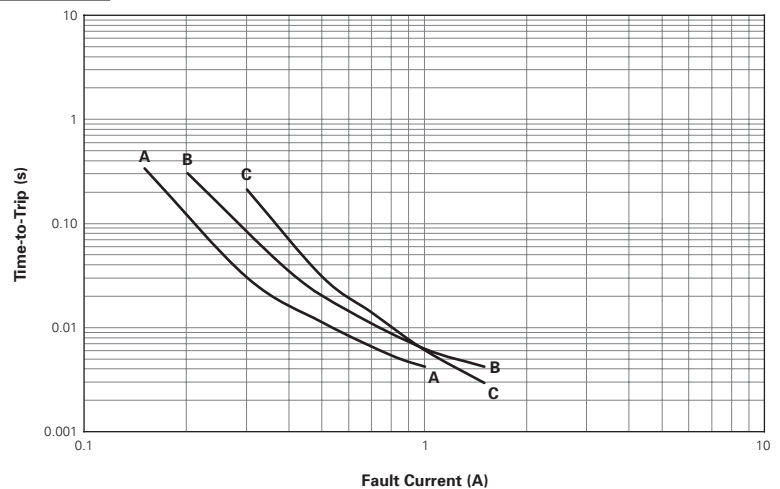
Figure A18



femtoASMDC

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

Figure A19



PolySwitch Resettable Devices

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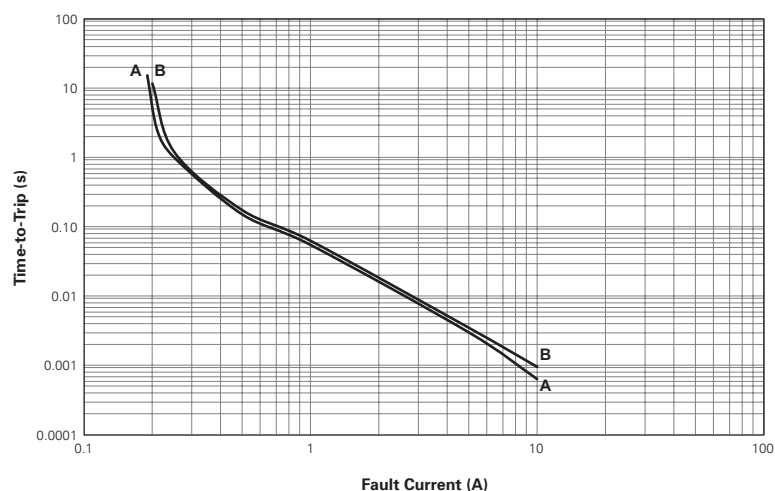
Figures A14-A25 — Typical Time-to-Trip at 25°C

(Cont'd)

picoASMD

- A = picoASMD010S
- B = picoASMD020S

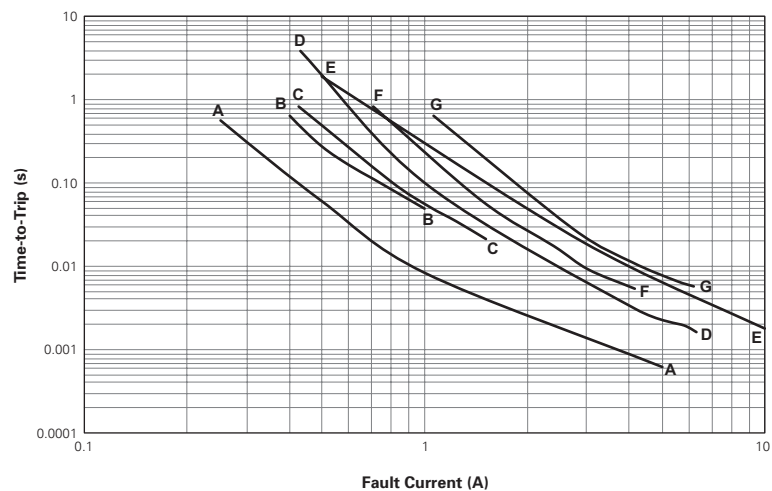
Figure A20



nanoASMD

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

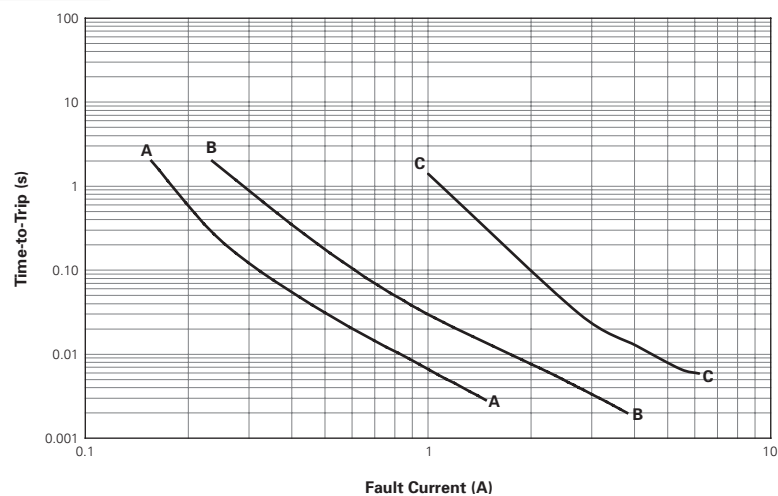
Figure A21



microASMD

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

Figure A22



PolySwitch Resettable Devices

Automotive Devices

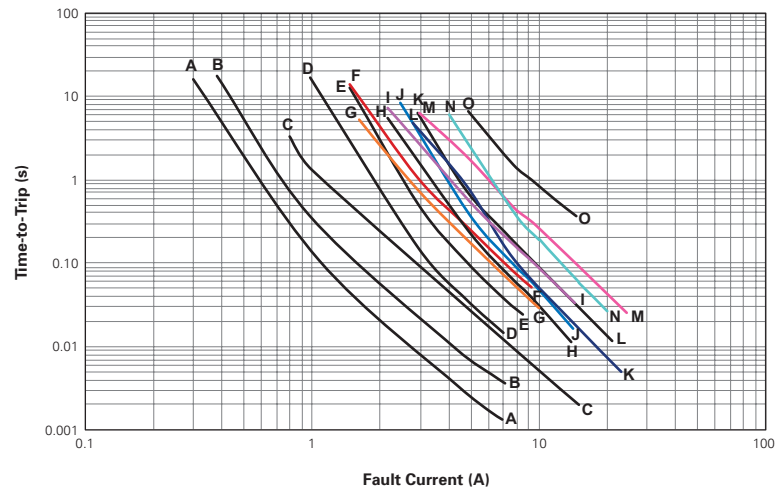
Figures A14-A25 — Typical Time-to-Trip at 25°C

(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

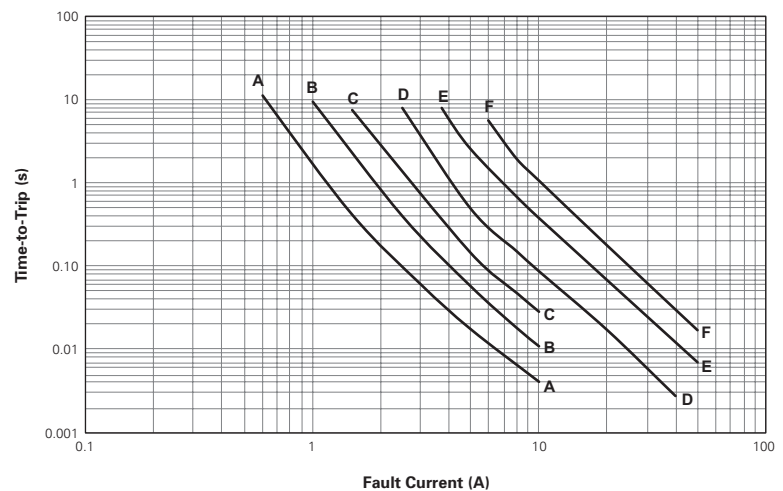
Figure A23



ASMDC

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

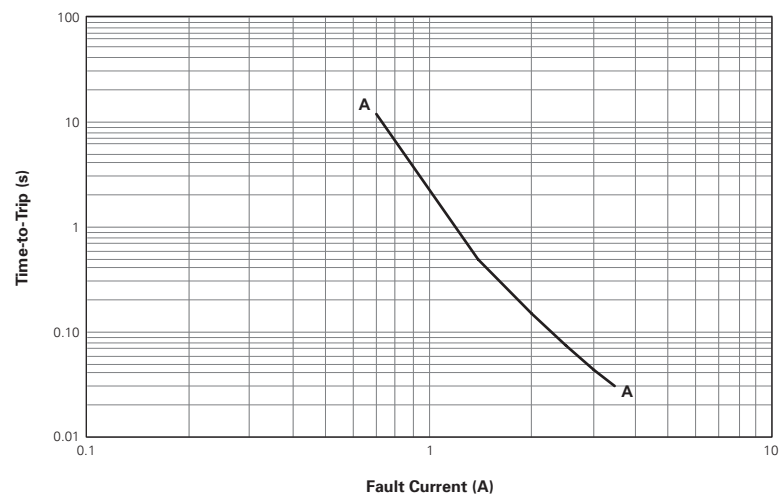
Figure A24



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 ² (20AWG) ø 0.8 mm/0.032in AGRF1200 to AGRF1400 : Tin-plated Copper, 0.82mm ² (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 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 ² (24 AWG), ø 0.51mm/0.020in AHRF300 to AHRF1100 : Tin-plated Copper 0.52mm ² (20 AWG), ø 0.81mm/0.032in AHRF1300 to AHRF1500 : Tin-plated Copper 0.82mm ² (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 ² (24 AWG), ø 0.51mm/0.020in. AHEF300 to AHEF750: Tin-plated Copper 0.52mm ² (20 AWG), ø 0.81mm/0.032in. AHEF1000: Tin-plated Copper 0.82mm ² (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
AGRF						
Radial-leaded						
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	*
AHRF (High Temperature)						
Radial-leaded						
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,			

PolySwitch Resettable Devices

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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
AHRF (High Temperature)						
Radial-leaded						
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	*
AHEF (High Temperature)						
Radial-leaded						
AHEF050	500	—	—	10,000	E0.5	*
AHEF070	500	—				

PolySwitch Resettable Devices

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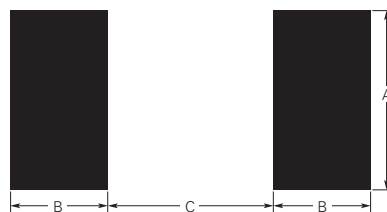
Table A6 — Packaging and Marking Information

(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 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 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 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 ₄	11.0	Minimum
Top Distance between Tape Edges	W ₆	3.0	Maximum
Sprocket Hole Position	W ₅	9.0	-0.5/+0.75
Sprocket Hole Diameter	D ₀	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 ₀	16.0	±0.5
Abscissa to Top (AGRF400 to AGRF600, AHRF050 to AHRF450, AHEF050 to AHEF300)	H ₁	32.2	Maximum
Abscissa to Top (AGRF700 to AGRF1400, AHRF550 to AHRF1500*, AHEF500 to AHEF1000)	H ₁	45.0	Maximum
Overall Width with Lead Protrusion (AGRF400 to AGRF600 & AHRF050 to AHRF450, AHEF050 to AHEF300)	C ₁	43.2	Maximum
Overall Width with Lead Protrusion (AGRF700 to AGRF1400, AHRF550 to AHRF1500, AHEF500 to AHEF1000)	C ₁	55.0	Maximum
Overall Width without Lead Protrusion (AGRF400 to AGRF600, AHRF050 to AHRF450, AHEF050 to AHEF300)	C ₂	42.5	Maximum
Overall Width without Lead Protrusion (AGRF700 to AGRF1400, AHRF550 to AHRF1500, AHEF500 to AHEF1000)	C ₂	54.0	Maximum
Lead Protrusion	L ₁	1.0	Maximum
Protrusion of Cut-out	L	11.0	Maximum
Protrusion Beyond Hold-Down Tape	I ₂	Not specified	—
Sprocket Hole Pitch	P ₀	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 ₁	2.0	Maximum
Overall Tape and Lead Thickness (AGRF1200 to AGRF1400, AHRF1300 to AHRF1500*, AHEF1000)	t ₁	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 ₁	3.81	± 0.7
Ordinate to Adjacent Component Lead (AGRF1200 to AGRF1400, AHRF1000 to AHRF1500, AHEF750 to AHEF1000)	P ₁	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 ₂	56.0	Maximum
Reel Width (AGRF700 to AGRF1400, AHRF550 to AHRF1500*, AHEF500 to AHEF1000)	w ₂	63.5	Maximum
Reel Diameter	a	370.0	Maximum
Space between Flanges* (AHEF050 to AHEF300)	w ₁	48.0	Maximum
Space between Flanges* (AHEF500 to AHEF1000)	w ₁	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

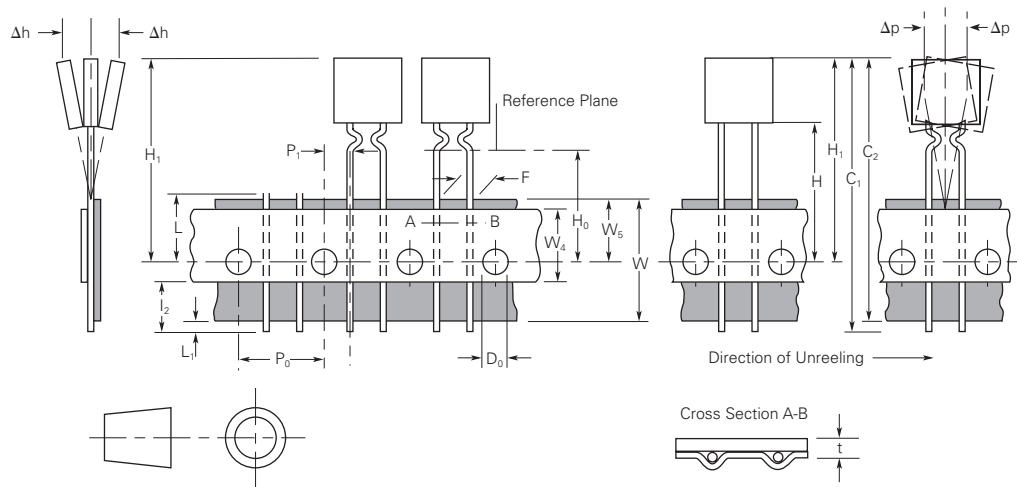
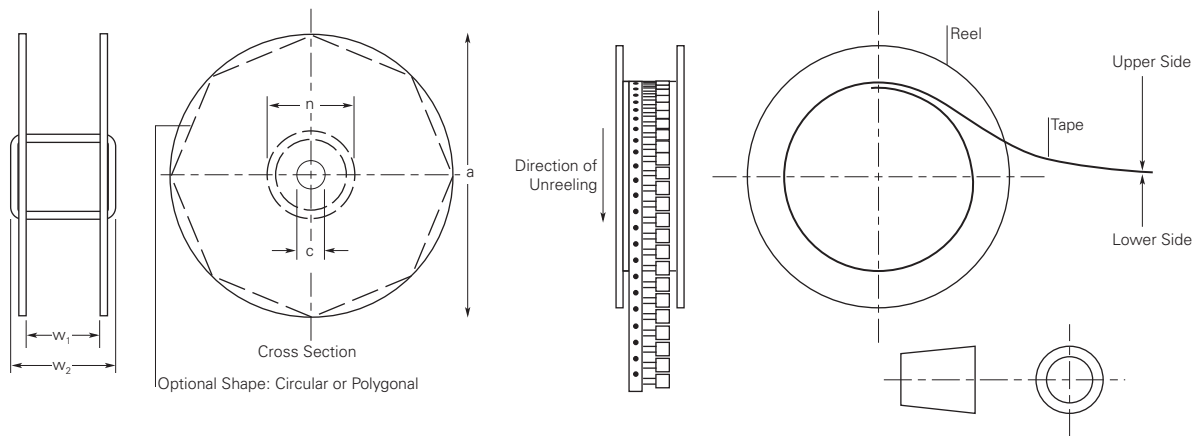


Figure A28 — EIA Referenced Reel Dimensions for AGRF/AHRF/AHEF PolySwitch Automotive Devices



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 EIA 481-1	picoASMDC EIA 481-1	nanoASMDC/ nanoASMDCH EIA 481-1	microASMD EIA 481-1	miniASMDC EIA 481-1	ASMDC EIA 481-1	AHS080-2018 EIA 481-2	AHS120 ASMD030F~ ASMD125F EIA 481-2	AHS160~AHS300 ASMD150F~ ASMD250F 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 ₀	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10
P ₁	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	12.0 ± 0.10
P ₂	2.0 ± 0.05	2.0 ± 0.10	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.10	2.0 ± 0.10	2.0 ± 0.10	2.0 ± 0.10
A ₀	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 ₀	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 ₁ max	4.35	4.35	4.35	4.35	6.15	12.1	12.1	12.1	12.1
D ₀	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 ₁	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10
E ₂ 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 ₁ max	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
K ₀	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)

Description	picoASMDC010S	picoASMDC012S	nanoASMDC010F nanoASMDC012F nanoASMDC016F nanoASMDCH035F	nanoASMDC020F nanoASMDC025F nanoASMDC035F nanoASMDCH050F/13.2
A ₀	1.70 ± 0.1	1.70 ± 0.1	1.95 ± 0.1	1.95 ± 0.1
B ₀	2.45 ± 0.1	2.45 ± 0.1	3.5 ± 0.1	3.50 +0.1/-0.08
K ₀	1.12± 0.1	0.86 ± 0.1	1.27 ± 0.1	0.89 ± 0.1
Description	miniASMDC010F~075F miniASMDC110F/16 miniASMDC125F/16 miniASMDC150F/12 miniASMDC150F/16 miniASMDC200F/16	miniASMDC075F/24 miniASMDC075F/33 miniASMDC110F/24 miniASMDC260F/12 miniASMDC260F/13.2 miniASMDC2		

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)

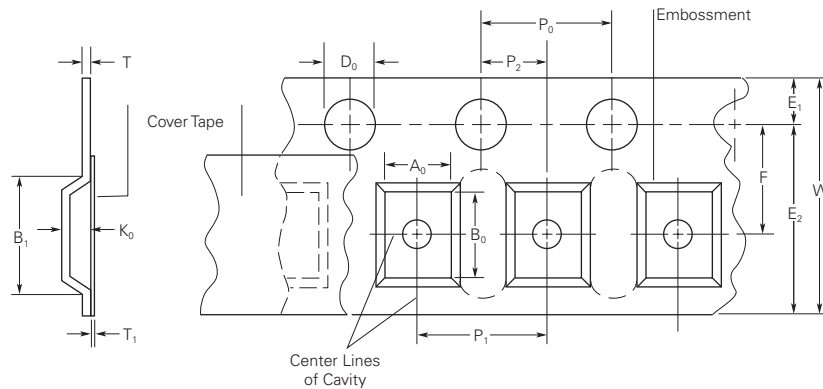
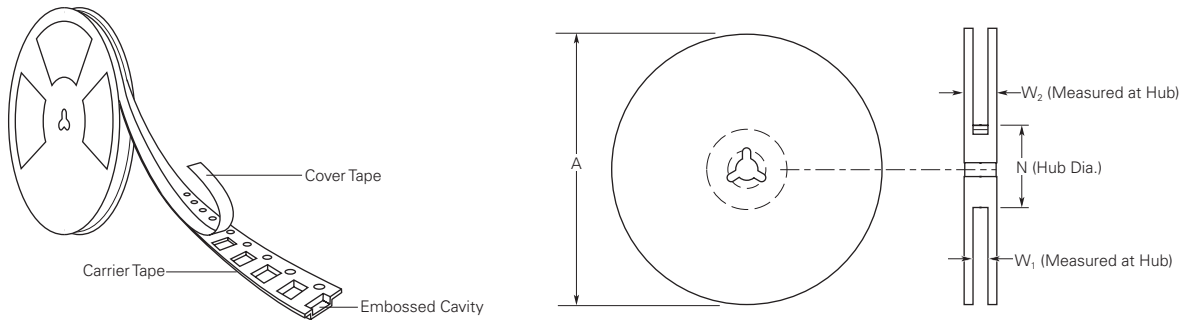


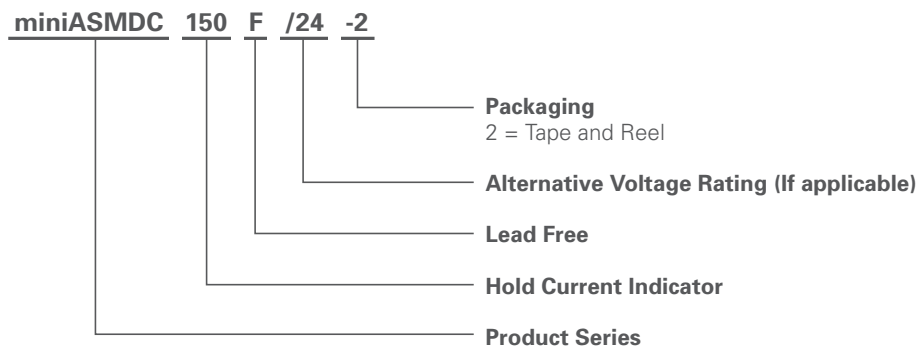
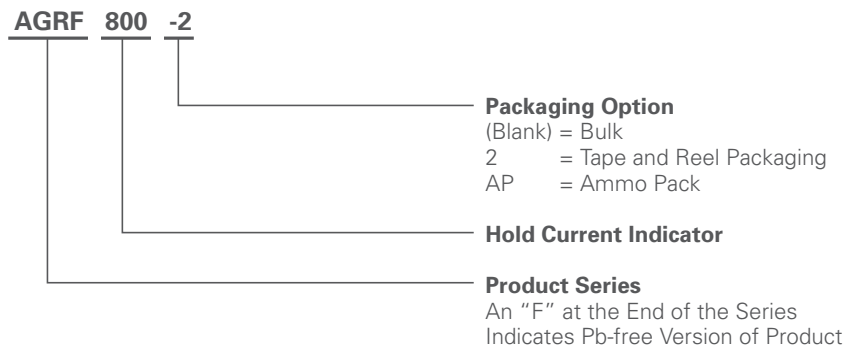
Figure A30 — EIA Referenced Reel Dimensions for AHS/ASMD/femtoASMD/picoASMD/nanoASMD/microASMD/miniASMD/ASMD/nanoASMDCH PolySwitch Automotive Devices



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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