Automotive High Temperature SMD Series

Surface Mount

HF RoHS Pb

Additional Information

Resources | Accessories | Samples

Agency Approvals

Agency	Agency File Number
	E74889
	50517757

Description

This Automotive High Temperature SMD is the first miniature high temperature PPTC series from Littelfuse with AEC-Q200 qualification for automotive applications and it provides surface mount overcurrent protection for applications where space is a prime concern and resettable protection is desired.

Features & Benefits

- Meets applicable automotive industry standards
- Compatible with high volume electronics assembly
- Smaller footprint
- High operating temperature -40°C~125°C
- Resettable solution against overcurrent and short circuit
- AEC-Q200 qualified
- RoHS compliant, halogen-free, and lead-free
- Surface-mount form factor
- Expertise from the world's leading resettable overcurrent protection manufacturer
- Provides wider range of form factors to enhance design flexibility
- Meets ever-increasing demand for compact and space saving designs due to more electronics content in vehicle
- Restores system operation after reset when fault condition is removed, thus provides safety and protection
- Able to meet most stringent requirements for the extreme harsh automotive environment
- Suitable for standard PCB assembly to enable automated mass production

Applications

- Automotive and Industrial Transportation
- Infotainment/Telematics
- Climate Control Systems
- Body Electronics
- Sensor Protection
- ADAS (Advanced Driver Assistance)
- Auto Lighting
- Security and Communication Systems

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Electrical Characteristics

Part Number	Ordering Part Number	Size	I_H (A)	I_T (A)	V_{MAX} (V_{DC})	I_{MAX} (A)	$P_{D\ Typ}$ (W)	Max Time-to-trip (A)	Max Time-to-trip (s)	R_{MIN} (Ω)	R_{1MAX} (Ω)
Automotive SMD Series											
picoASMDCH005F	RF4927-000	0805	0.05	0.18	16	40	0.60	0.50	0.08	3.50	38.00
picoASMDCH010F	RF4778-000	0805	0.10	0.60	16	40	1.00	2.50	1.50	1.00	10.00
picoASMDCH016F	RF5023-000	0805	0.16	0.68	16	40	0.9	8.00	0.10	0.80	6.00
picoASMDCH020F	RF4929-000	0805	0.2	0.7	16	40	0.90	8.00	0.10	0.75	3.40
picoASMDCH035F	RF5024-000	0805	0.35	1.10	16	40	0.9	8.00	0.10	0.30	1.90
picoASMDCH050F	RF5025-000	0805	0.50	1.70	16	40	1.5	8.00	0.10	0.25	1.60
nanoASMDCH005F	RF5030-000	1206	0.05	0.15	30	20	0.80	0.25	20.00	3.500	35
nanoASMDCH010F	RF5029-000	1206	0.10	0.3	30	20	0.80	0.50	5.00	1.000	7.5
nanoASMDCH016F	RF4896-000	1206	0.16	0.80	30	20	0.90	8.00	0.10	0.70	6.00
nanoASMDCH035F	RF4646-000	1206	0.35	0.95	16	50	1.00	3.50	0.20	0.20	1.60
nanoASMDCH035F/30	RF4897-000	1206	0.35	1.75	30	20	1.20	8.00	0.10	0.40	2.20
nanoASMDCH050F/24	RF4914-000	1206	0.50	2.50	24	20	1.70	8.00	0.10	0.20	1.60
nanoASMDCH075F	RF5027-000	1206	0.75	2.25	12	40	0.80	8.00	0.15	0.080	0.46
microASMDCH075F	RF5034-000	1210	0.75	2.25	16	20	1.30	8.00	0.10	0.100	0.68
microASMDCH110F	RF5033-000	1210	1.10	3.3	16	20	1.50	8.00	0.50	0.060	0.5
microASMDCH125F	RF5032-000	1210	1.25	3.75	12	40	1.50	8.00	1.00	0.030	0.3
microASMDCH150F	RF5031-000	1210	1.50	4.5	12	40	1.85	8.00	1.00	0.025	0.25
miniASMDCH050F	RF4983-000	1812	0.50	1.60	30	20	1.20	8.00	0.10	0.20	1.35
Automotive Terminal SMD Series											
AHS080-2018	RF1640-000	2018	0.80	2.00	16	70	1.5	8.00	9.00	0.13	0.55
AHS120	RF2573-000	2920	1.20	2.30	16	50	2.2	8.00	2.00	0.15	0.34
AHS120F/33	RF5105-000	2920	1.20	2.30	33	20	2.20	8.00	2.00	0.15	0.34
AHS160	RF1641-000	3425	1.60	3.20	16	70	2.2	8.00	15.00	0.05	0.15
AHS200	RF0422-000	3425	2.00	4.00	16	70	2.3	8.00	13.40	0.05	0.14
AHS300	RF1644-000	3425	3.00	6.00	16	70	3.0	15.00	8.00	0.02	0.08
AHS300F/24	RF5062-000	3425	3.00	6.00	24	20	3.00	8.00	8.00	0.015	0.10

Notes:

I_H : Hold current: maximum current device will pass without interruption in 25°C, unless otherwise specified.

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 at 25°C unless otherwise specified.

* Electrical characteristics determined at 25°C.

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Temperature Rerating

Maximum Ambient Temperature											
Part Number	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C	125°C
Hold Current (A)											
Automotive SMDC Series											
picoASMDCH005F	0.075	0.069	0.060	0.056	0.050	0.048	0.046	0.042	0.040	0.035	0.022
picoASMDCH010F	0.150	0.130	0.115	0.103	0.100	0.090	0.084	0.078	0.072	0.063	0.040
picoASMDCH016F	0.250	0.220	0.200	0.170	0.160	0.150	0.140	0.130	0.110	0.100	0.045
picoASMDCH020F	0.300	0.270	0.240	0.210	0.200	0.180	0.160	0.150	0.130	0.110	0.050
picoASMDCH035F	0.490	0.450	0.400	0.340	0.350	0.310	0.280	0.270	0.230	0.200	0.100
picoASMDCH050F	0.800	0.710	0.640	0.550	0.500	0.480	0.440	0.400	0.360	0.300	0.150
nanoASMDCH005F	0.075	0.068	0.060	0.052	0.050	0.045	0.042	0.038	0.035	0.030	0.015
nanoASMDCH010F	0.150	0.135	0.120	0.104	0.100	0.090	0.082	0.075	0.070	0.060	0.030
nanoASMDCH016F	0.250	0.210	0.190	0.170	0.160	0.140	0.130	0.120	0.110	0.090	0.050
nanoASMDCH035F	0.540	0.480	0.430	0.370	0.350	0.320	0.290	0.260	0.240	0.200	0.100
nanoASMDCH035F/30	0.510	0.460	0.410	0.360	0.350	0.310	0.290	0.260	0.240	0.200	0.100
nanoASMDCH050F/24	0.730	0.660	0.580	0.500	0.500	0.450	0.420	0.390	0.350	0.310	0.170
nanoASMDCH075F	1.10	1.00	0.90	0.79	0.75	0.69	0.64	0.59	0.54	0.46	0.25
microASMDCH075F	1.15	1.05	0.90	0.79	0.75	0.70	0.65	0.60	0.55	0.45	0.25
microASMDCH110F	1.68	1.53	1.30	1.15	1.10	1.02	0.95	0.88	0.82	0.70	0.39
microASMDCH125F	1.90	1.68	1.51	1.32	1.25	1.17	1.09	1.00	0.92	0.79	0.45
microASMDCH150F	2.30	2.10	1.85	1.58	1.50	1.40	1.30	1.20	1.13	0.96	0.53
miniASMDCH050F	0.750	0.680	0.600	0.520	0.500	0.450	0.410	0.400	0.330	0.280	0.120
Automotive Terminal SMD Series											
AHS080-2018	1.200	1.040	0.900	0.800	0.770	0.680	0.620	0.600	0.530	0.460	0.260
AHS120	1.720	1.540	1.360	1.200	1.140	1.010	0.920	0.830	0.740	0.610	0.250
AHS120F/33	1.72	1.54	1.36	1.20	1.14	1.01	0.92	0.83	0.74	0.61	0.25
AHS160	2.150	1.960	1.780	1.600	1.550	1.420	1.330	1.240	1.150	1.010	0.640
AHS200	2.900	2.500	2.200	2.000	1.940	1.800	1.750	1.700	1.400	1.180	0.670
AHS300	4.200	3.800	3.700	3.000	2.920	2.630	2.440	2.100	2.000	1.760	1.000
AHS300F/24	4.20	3.80	3.54	3.12	3.00	2.70	2.48	2.27	2.06	1.74	0.90

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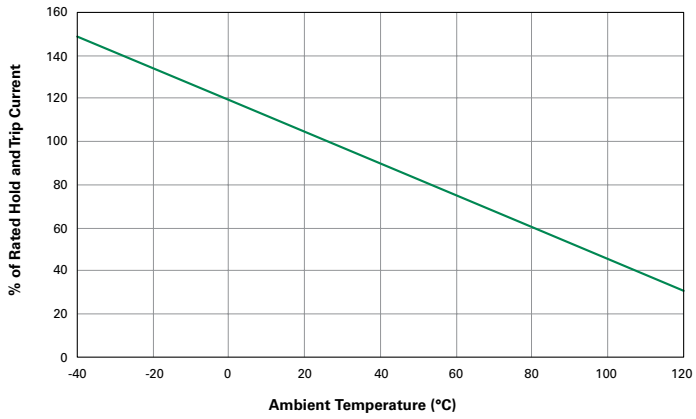
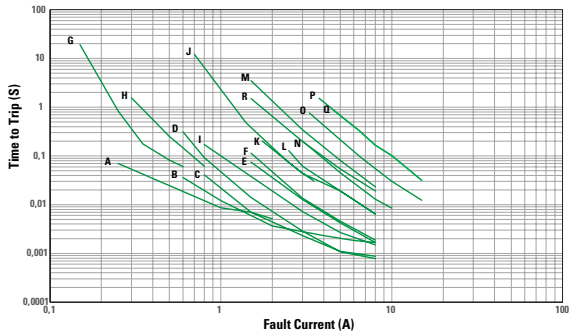
Temperature Rerating Curve



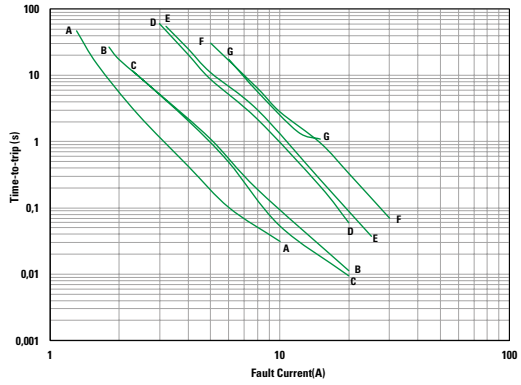
Typical Time-to-Trip Curves at 25°C

Automotive SMDC Series



A =picoASMDCH005F
B =picoASMDCH010F
C =picoASMDCH016F
D =picoASMDCH020F
E =picoASMDCH035F
F =picoASMDCH050F
G =nanoASMDCH005F
H =nanoASMDCH010F
I =nanoASMDCH016F
J =nanoASMDCH035F
K =nanoASMDCH035F/30
L =nanoASMDCH050F/24
M =nanoASMDCH075F
N =microASMDCH075F
O =microASMDCH110F
P =microASMDCH125F
Q =microASMDCH150F
R =miniASMDCH050F

Automotive Terminal SMD Series



A =AHS080-2018
B =AHS120
C =AHS120F/33
D =AHS160
E =AHS 200
F =AHS300
G =AHS300F/24

Note: The average time current curves and Temperature Rerating curve performance is affected by a number or variables, and these curves provided as guidance only. Customer must verify the performance in their application.

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Physical Specifications

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 seconds
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 physical specifications.

Environmental Specifications

Test	Conditions	Resistance Change
Passive Aging	60°C, 1000 hrs, 85°C, 1000 hrs	±3% Typical, ±5% Typical
Humidity Aging	85°C, 85% R.H., 100 hrs	±1.2% Typical
Thermal Shock	125°C, -40°C 10 times	-33% Typical
Solvent Resistance	Freon Trichloroethane Hydrocarbons	No change No change No change

Note: See PS400 for other environmental specifications.

Moisture Resistance Level	Level 2a, J-STD-020
Storage Conditions	40°C max, 70% RH max; devices should remain in original sealed bags prior to use. Devices may not meet specified values if these storage conditions are exceeded.

Dimensions

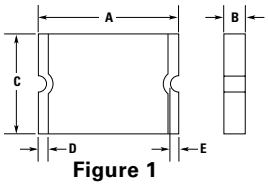

Figure 1

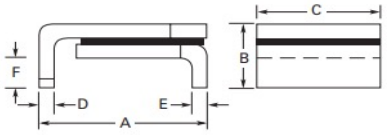

Figure 2

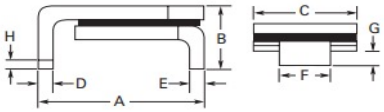

Figure 3

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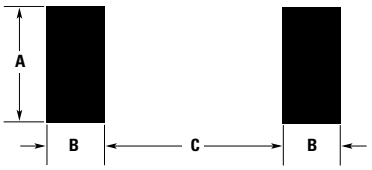
Automotive High Temperature SMD Series
Surface Mount

Dimensions

Part Number	Dimensions in Millimeters (Inches)																Figure
	A		B		C		D		E		F		G		H		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
Automotive SMDC Series																	
picoASMDCH005F	2.00	2.20	0.40	0.80	1.30	1.50	0.25	0.75	0.08	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.016)	(0.031)	(0.051)	(0.059)	(0.010)	(0.030)	(0.03)								
picoASMDCH010F	2.00	2.20	0.40	0.80	1.30	1.50	0.25	0.75	0.076	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.016)	(0.310)	(0.051)	(0.059)	(0.010)	(0.030)	(0.003)								
picoASMDCH016F	2.00	2.20	0.40	0.80	1.30	1.50	0.25	0.75	0.08	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.016)	(0.031)	(0.051)	(0.059)	(0.010)	(0.030)	(0.03)								
picoASMDCH020F	2	2.2	0.4	0.8	1.3	1.5	0.25	0.75	0.08	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.016)	(0.031)	(0.051)	(0.059)	(0.010)	(0.030)	(0.03)								
picoASMDCH035F	2.00	2.20	0.60	1.20	1.30	1.50	0.25	0.75	0.08	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.024)	(0.047)	(0.051)	(0.059)	(0.010)	(0.030)	(0.03)								
picoASMDCH050F	2.00	2.20	0.60	1.20	1.30	1.50	0.25	0.75	0.08	-	-	-	-	-	-	-	1
	(0.079)	(0.087)	(0.024)	(0.047)	(0.051)	(0.059)	(0.010)	(0.030)	(0.03)								
nanoASMDCH005F	3.000	3.400	0.6	0.850	1.370	1.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.134	0.024	0.033	0.054	0.071	0.010	0.030	0.003								
nanoASMDCH010F	3.000	3.400	0.6	0.850	1.370	1.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.134	0.024	0.033	0.054	0,071	0.010	0.030	0.003								
nanoASMDCH016F	3.00	3.40	0.61	0.89	1.37	1.80	0.25	0.75	0.076	-	-	-	-	-	-	-	1
	(0.118)	(0.134)	(0.024)	(0.035)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)								
nanoASMDCH035F	3.00	3.40	0.91	1.14	1.37	1.80	0.25	0.75	0.076	-	-	-	-	-	-	-	1
	(0.118)	(0.134)	(0.036)	(0.045)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)								
nanoASMDCH035F/30	3.00	3.40	1.16	1.46	1.37	1.80	0.25	0.75	0.076	-	-	-	-	-	-	-	1
	(0.118)	(0.134)	(0.046)	(0.057)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)								
nanoASMDCH050F/24	3.00	3.40	1.16	1.46	1.37	1.80	0.25	0.75	0.076	-	-	-	-	-	-	-	1
	(0.118)	(0.134)	(0.046)	(0.057)	(0.054)	(0.071)	(0.010)	(0.030)	(0.003)								
nanoASMDCH075F	3.000	3.400	0.75	1.000	1.370	1.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.134	0.030	0.039	0.054	0.071	0.010	0.030	0.003								
microASMDCH075F	3.000	3.430	0.4	0.600	2.350	2.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.135	0.016	0.024	0.093	0.110	0.010	0.030	0.003								
microASMDCH110F	3.000	3.430	0.75	1.050	2.350	2.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.135	0.030	0.041	0.093	0.110	0.010	0.030	0.003								
microASMDCH125F	3.000	3.430	1.1	1.400	2.350	2.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.135	0.043	0.055	0.093	0.110	0.010	0.030	0.003								
microASMDCH150F	3.000	3.430	1.1	1.400	2.350	2.800	0.250	0.750	0.076	-	-	-	-	-	-	-	1
	0.118	0.135	0.043	0.055	0.093	0.110	0.010	0.030	0.003								
miniASMDCH050F	4.37	4.83	0.5	0.82	3.07	3.41	0.25	0.95	0.2	-	-	-	-	-	-	-	1
	(0.172)	(0.190)	(0.023)	(0.032)	(0.121)	(0.134)	(0.010)	(0.040)	(0.008)								
Automotive Terminal SMD Series																	
AHS080-2018	4,72	5,44	-	1,52	4,22	4,93	0,25	0,36	0,25	0,36	0,30	0,46	-	-	-	-	2
	(0,186)	(0,214)		(0,060)	(0,166)	(0,194)	(0,010)	(0,014)	(0,010)	(0,014)	(0,012)	(0,018)					
AHS120	6,73	7,98	-	3,00	4,80	5,44	0,56	0,71	0,56	0,71	2,16	2,41	0,66	1,37	0,43	-	3
	(0,265)	(0,314)		(0,118)	(0,190)	(0,214)	(0,022)	(0,028)	(0,022)	(0,028)	(0,085)	(0,095)	(0,026)	(0,054)	(0,017)		
AHS120F/33	6,73	7,98	-	3,00	4,80	5,44	0,56	0,71	0,56	0,71	2,16	2,41	0,66	1,37	0,43	-	3
	(0,265)	(0,314)		(0,118)	(0,190)	(0,214)	(0,022)	(0,028)	(0,022)	(0,028)	(0,085)	(0,095)	(0,026)	(0,054)	(0,017)		
AHS160	8,00	9,40	-	3,00	6,00	6,71	0,56	0,71	0,56	0,71	3,68	3,94	0,66	1,37	0,43	-	3
	(0,315)	(0,370)		(0,118)	(0,240)	(0,264)	(0,022)	(0,028)	(0,022)	(0,028)	(0,145)	(0,155)	(0,026)	(0,054)	(0,017)		
AHS200	8,00	9,40	-	3,00	6,00	6,71	0,56	0,71	0,56	0,71	3,68	3,94	0,66	1,37	0,43	-	3
	(0,315)	(0,370)		(0,118)	(0,240)	(0,264)	(0,022)	(0,028)	(0,022)	(0,028)	(0,145)	(0,155)	(0,026)	(0,054)	(0,017)		
AHS300	8,00	9,40	-	3,00	6,00	6,71	0,56	0,71	0,56	0,71	3,68	3,94	0,66	1,37	0,43	-	3
	(0,315)	(0,370)		(0,118)	(0,240)	(0,264)	(0,022)	(0,028)	(0,022)	(0,028)	(0,145)	(0,155)	(0,026)	(0,054)	(0,017)		
AHS300F/24	8,00	9,40	-	3,00	6,00	6,71	0,56	0,71	0,56	0,71	3,68	3,94	0,66	1,37	0,43	-	3
	(0,315)	(0,370)		(0,118)	(0,240)	(0,264)	(0,022)	(0,028)	(0,022)	(0,028)	(0,145)	(0,155)	(0,026)	(0,054)	(0,017)		

Automotive High Temperature SMD Series
Surface Mount

Recommended Pad Layout



Packaging and Marking Information

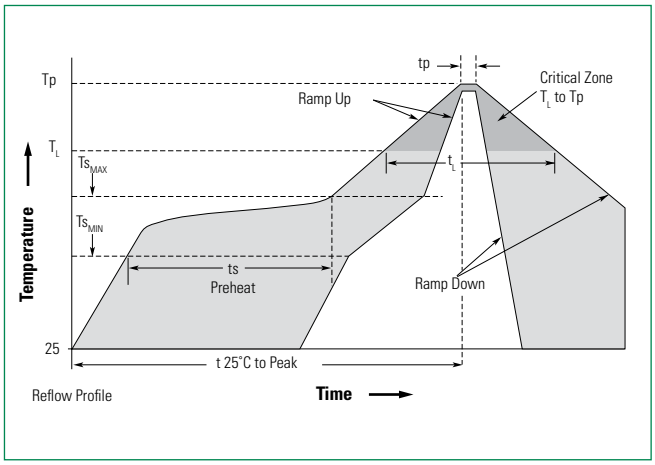
Part Number	Tape and Reel Quantity	Standard Package	Part Marking	Recommended Pad Layout Figures [mm (in)]			Agency Recognition
				Dimension A (Nom)	Dimension B (Nom)	Dimension C (Nom)	
Automotive SMDC Series							
picoASMDCH005F	4000	20000	A	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
picoASMDCH010F	4000	20000	L	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
picoASMDCH016F	4000	20000	T	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
picoASMDCH020F	4000	20000	Y	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
picoASMDCH035F	3000	15000	B	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
picoASMDCH050F	3000	15000	P	1.50 (0.060)	1.00 (0.039)	1.20 (0.047)	-
nanoASMDCH005F	3000	15000	H05	1.6(0.063)	1(0.039)	2(0.079)	-
nanoASMDCH010F	3000	15000	H10	1.6(0.063)	1(0.039)	2(0.079)	-
nanoASMDCH016F	3000	15000	H16	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	-
nanoASMDCH035F	3000	15000	H35	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	-
nanoASMDCH035F/30	3000	15000	V	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	-
nanoASMDCH050F/24	3000	15000	H50	1.60 (0.063)	1.00 (0.039)	2.00 (0.079)	-
nanoASMDCH075F	3000	15000	H75	1.6(0.063)	1(0.039)	2(0.079)	-
microASMDCH075F	4000	20000	H075	2.5(0.098)	1(0.039)	2(0.079)	-
microASMDCH110F	3000	15000	H11	2.5(0.098)	1(0.039)	2(0.079)	-
microASMDCH125F	3000	15000	H12	2.5(0.098)	1(0.039)	2(0.079)	-
microASMDCH150F	3000	15000	H15	2.5(0.098)	1(0.039)	2(0.079)	-
miniASMDCH050F	2000	10000	H050F	3.15 (0.124)	1.68 (0.066)	3.10 (0.122)	-
Automotive Terminal SMD Series							
AHS080-2018	4000	20000	H08	4.6 (0.18)	1.5 (0.06)	3.4 (0.134)	UL, TUV
AHS120	2000	10000	H12	3.1 (0.12)	2.3 (0.09)	5.1 (0.201)	UL, TUV
AHS120F/33	2000	10000	H120 33	3.1 (0.12)	2.3 (0.09)	5.1 (0.201)	-
AHS160	1500	7500	160	4.6 (0.18)	2.3 (0.09)	6.1 (0.240)	UL, TUV
AHS200	1500	7500	H200	4.6 (0.18)	2.3 (0.09)	6.1 (0.240)	UL, TUV
AHS300	1500	7500	H300	4.6 (0.18)	2.3 (0.09)	6.1 (0.240)	UL, TUV
AHS300F/24	1500	7500	H324	4.6 (0.18)	2.3 (0.09)	6.1 (0.240)	-

Automotive High Temperature SMD Series
Surface Mount

Solder Reflow Recommendations

Profile Feature	Pb-Free Assembly
Average ramp up rate (Ts_{MAX} to Tp)	3°C/s max
Preheat	
• **Temperature min (Ts_{MIN})**	150°C
• **Temperature max (Ts_{MAX})**	200°C
• **Time (ts_{MIN} to ts_{MAX})**	60-120 s
Time maintained above:	
• **Temperature (T_L)**	217°C
• **Time (t_L)**	60-150 s
Peak/Classification temperature (Tp)	260°C
Time within 5°C of actual peak temperature	
Time (tp)	30 s max
Ramp down rate	3°C/s max
Time 25°C to peak temperature	8 min max

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



Solder Reflow

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

Rework

- Standard industry practices. (Please also avoid direct contact to the device.)

Part Number System

picoASMDCH 010 F -2

- **-2** — **Packaging**: 2 = Tape and Reel
- **F** — **Lead Free**
- **010** — **Hold Current Indicator**
- **picoASMDCH** — **ASMDCH:** Automotive SMDC Series; **AHS:** Automotive Terminal SMD Series

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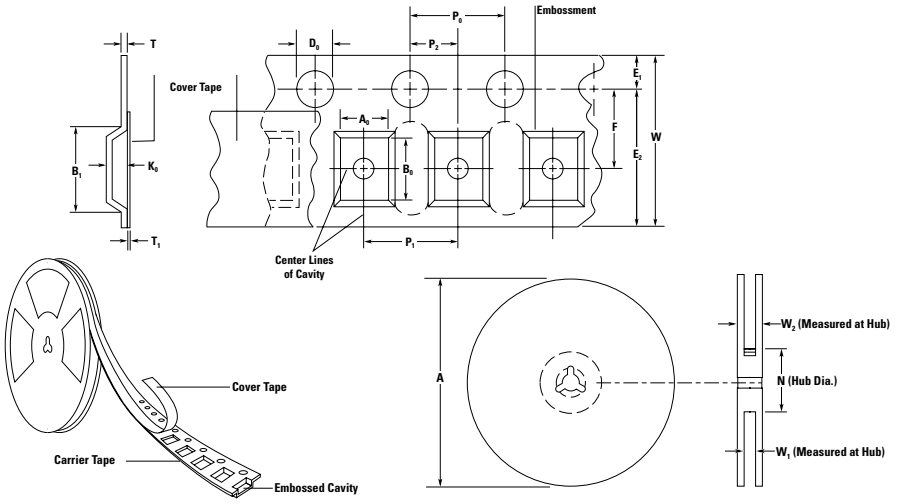
Automotive High Temperature SMD Series
Surface Mount

Tape and Reel Diagrams



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.

Tape and Reel Specifications

Description	Automotive SMDC Series								Automotive Terminal SMD Series		
	picoASMDCH016F picoASMDCH005F picoASMDCH010F picoASMDCH020F picoASMDCH035F picoASMDCH050F	nanoASM-DCH005F nanoASM-DCH010F	nano-ASMD-CH016F nano-ASMD-CH035F	nanoASMD-CH035F/30 nanoASMD-CH050F/24	nano-ASMD-CH075F	micro-ASMD-CH075F	microASM-DCH110F microASM-DCH125F microASM-DCH150F	miniASM-DCH050F	AHS080-2018	AHS120 AHS120F/33	AHS160 AHS200 AHS300 AHS300F/24
W	8.0 ± 0.30	8.0 ± 0.30	8.0 ± 0.30	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
P_0	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10	4.0 ± 0.10
P_1	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	8.0 ± 0.10	8.0 ± 0.10	8.0 ± 0.10	12.0 ± 0.10
P_2	2.0 ± 0.10	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.05	2.0 ± 0.10	2.0 ± 0.10	2.0 ± 0.10
A_0	1.70 ± 0.1	1.95 ± 0.1	1.95 ± 0.1	1.95 ± 0.1	1.95 ± 0.1	2.9 ± 0.1	2.9 ± 0.1	3.5 ± 0.1	5.11 ± 0.15	5.6 ± 0.23	6.9 ± 0.23
B_0	2.45 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	4.95 ± 0.1	5.6 ± 0.23	8.1 ± 0.15	9.6 ± 0.15
B_1 max	4.35	4,35	4.35	4.35	4,35	4,35	4,35	6.15	12,1	12,1	12,1
D_0	1.55 ± .05	1.55 + 0.05	1.55 ± .05	1.55 ± .05	1.55 + 0.05	1.55 + 0.05	1.55 + 0.05	1.5 + 0.10/ -.00	1.5 + 0.10/ -.00	1.5 + 0.10/ -.00	1.5 + 0.10/ -.00
F	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05	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
E_1	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10
E_2 min	6.25	6,25	6.25	6.25	6,25	6,25	6,25	10.25	14,25	14,25	14,25
T max	0.3	0,3	0.6	0.6	0,3	0,3	0,3	0.35	0,4	0,4	0,4
T_1 max	0.1	0,1	0.1	0.1	0,1	0,1	0,1	0.1	0,1	0,1	0,1
K_0	0.86 ± 0.1	1.27 ± 0.1	1.27 ± 0.1	1.50 ± 0.1	0.89 ± 0.1	0.9 ± 0.1	1.27 ± 0.1	0.9 ± 0.1	1.8 ± 0.15	3.2 ± 0.15	3.4 ± 0.15
A max	185	185	185	185	185	185	185	185	330	330	330
N min	50	50	50	50	50	50	50	50	50	50	50
W_1	8.4 + 1.5/-.00	8.4 + 1.5/-.00	8.4 + 1.5/-.00	8.4 + 1.5/-.00	8.4 + 1.5/-.00	8.4 + 1.5/-.00	8.4 + 1.5/-.00	12.4 + 2.0/-.00	16.4 + 2.0/-.00	16.4 + 2.0/-.00	16.4 + 2.0/-.00
W_2 max	14.4	14.4	14.4	14.4	14.4	14.4	14.4	18.4	22.4	22.4	22.4

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