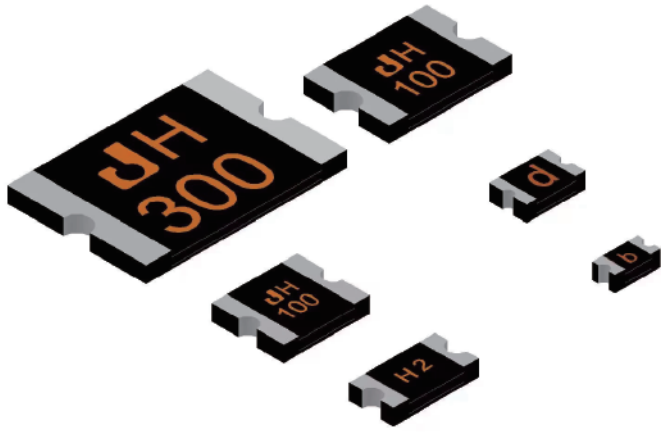


为您的产品保驾护航

PRODUCT DATASHEET

PTC Devices · Surface Mount

High Temperature Series Surface Mount PTC Devices



Description

The high-temperature series resistant type that provides surface mounted resettable over current protection.

This series offers complete portfolio in terms of holding current and working voltage, and is suitable for wide range of applications.



Features

- High operating temperature -40°C~125°C
- Compact design saves board space
- RoHS compliant, halogen-free and lead-free
- Resettable solution against overcurrent and short circuit
- Fast response to fault current
- Symmetrical design

Applications

- Automotive and Industrial Transport
- Frequency Converter
- Sensor Protection
- Infotainment/Telematics
- Outdoor Electronic Equipment
- Climate Control Systems
- Security and Communication Systems

Agency Approvals

Regulation	Standard
 RoHS	2002/95/EC
 Halogen Free	EN14582

Performance Specification

Model	Marking	I _{hold} @25°C (A)	I _{trip} @25°C (A)	V _{max} (V dc)	I _{max} (A)	P _d Typ. (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1max} (Ω)
ASMD0603H010	b	0.10	0.50	24.0	40.0	0.50	2.5	1.50	0.90	8.50
ASMD0603H016	d	0.16	0.48	24.0	40.0	0.50	8.0	0.10	0.60	6.00
ASMD0603H020	f	0.20	0.60	16.0	40.0	0.60	8.0	0.50	0.35	4.50
ASMD0603H035	h	0.35	1.05	16.0	40.0	0.60	8.0	0.50	0.30	4.00
ASMD0805H010	<u>1</u>	0.10	0.50	24.0	40.0	0.90	2.5	1.50	0.80	6.50
ASMD0805H020	<u>2</u>	0.20	0.60	24.0	40.0	0.90	8.0	0.10	0.45	5.00
ASMD0805H035	<u>3</u>	0.35	1.05	16.0	40.0	0.90	8.0	0.10	0.30	1.90
ASMD0805H050	<u>5</u>	0.50	1.50	16.0	40.0	0.90	8.0	0.10	0.25	1.60
ASMD0805H075	<u>7</u>	0.75	2.25	16.0	40.0	0.90	8.0	1.00	0.13	1.20
ASMD1206H016	HC	0.16	0.80	30.0	20.0	1.00	8.0	0.10	0.40	6.00
ASMD1206H020	H2	0.20	1.00	30.0	20.0	1.00	8.0	0.10	0.35	5.00
ASMD1206H035	H3	0.35	1.05	24.0	40.0	1.00	8.0	0.10	0.20	1.60
ASMD1206H050	H5	0.50	1.50	16.0	40.0	1.00	8.0	0.10	0.14	1.20
ASMD1206H050-24V	H5	0.50	1.50	24.0	40.0	1.20	8.0	0.10	0.14	1.20
ASMD1206H075	H7	0.75	2.25	16.0	40.0	1.00	8.0	5.00	0.08	0.70
ASMD1206H075-24V	H7	0.75	2.25	24.0	40.0	1.20	8.0	0.50	0.08	0.70
ASMD1206H110	H11	1.10	3.30	16.0	40.0	1.00	8.0	5.00	0.06	0.45
ASMD1206H125	H12	1.25	3.75	16.0	40.0	1.00	8.0	5.00	0.05	0.35
ASMD1210H110	JH11	1.10	3.30	16.0	40.0	1.50	8.0	5.00	0.06	0.50
ASMD1210H125	JH12	1.25	3.75	16.0	40.0	1.50	8.0	4.00	0.03	0.30
ASMD1210H150	JH15	1.50	4.50	16.0	40.0	1.50	8.0	5.00	0.025	0.25
ASMD1210H175	JH17	1.75	5.25	16.0	40.0	1.50	8.0	5.00	0.020	0.20
ASMD1812H050	JH/050	0.50	1.50	30.0	40.0	1.20	8.0	0.10	0.120	1.20
ASMD1812H075	JH/075	0.75	2.25	30.0	40.0	1.50	8.0	5.00	0.090	0.75
ASMD1812H110	JH/110	1.10	3.30	24.0	40.0	1.50	8.0	5.00	0.038	0.35
ASMD1812H125	JH/125	1.25	3.75	24.0	40.0	1.50	8.0	5.00	0.030	0.30
ASMD1812H150	JH/150	1.50	4.50	24.0	40.0	1.50	8.0	5.00	0.022	0.20
ASMD1812H150-33V	JH/150	1.50	4.50	33.0	40.0	1.50	8.0	5.00	0.022	0.20
ASMD1812H175	JH/175	1.75	5.25	24.0	40.0	1.50	8.0	5.00	0.018	0.17
ASMD1812H200	JH/200	2.00	6.00	24.0	40.0	1.50	10.0	5.00	0.015	0.12
ASMD1812H200-30V	JH/200	2.00	6.00	30.0	40.0	1.50	8.0	5.00	0.015	0.12
ASMD1812H250	JH/250	2.50	7.50	24.0	40.0	1.50	12.5	5.00	0.013	0.09
ASMD2920H260	JH260	2.60	7.80	24.0	40.0	3.00	13.0	5.00	0.007	0.065
ASMD2920H300	JH/300	3.00	9.00	24.0	40.0	3.00	15.0	5.00	0.006	0.065
ASMD2920H330	JH330	3.30	9.90	24.0	40.0	3.00	16.5	5.00	0.005	0.045
ASMD2920H350	JH/350	3.50	10.50	24.0	40.0	3.00	17.0	5.00	0.005	0.040
ASMD2920H400	JH/400	4.00	12.00	24.0	40.0	3.00	20.0	5.00	0.004	0.035

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

V_{max} = Maximum operating voltage device can withstand without damage at rated current (I_{max}).

I_{max} = Maximum fault current device can withstand without damage at rated voltage (V_{max}).

P_d = Power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

$R_{i\ min/max}$ = Minimum/Maximum device resistance prior to tripping at 25°C.

R_{1max} = Maximum device resistance is measured one hour post reflow.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

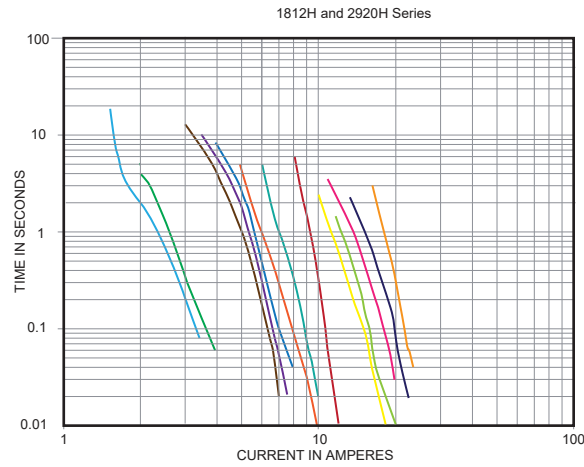
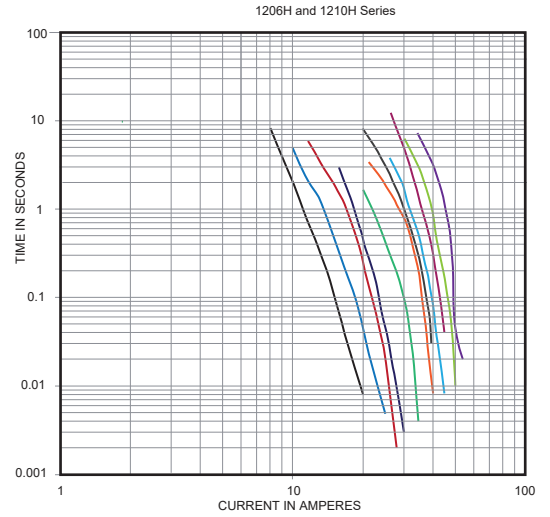
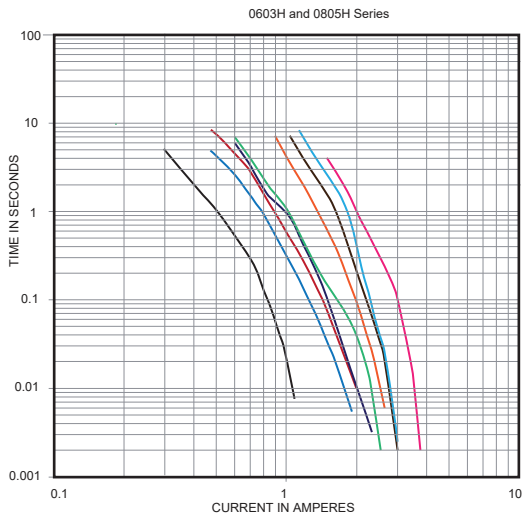
Environmental Specifications

Item	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	$R \leq R_{1max}$
Humidity aging	+85°C, 85% R.H. , 1000 hours	$R \leq R_{1max}$
Thermal shock	MIL-STD-202, Method 107; +125 °C to -40 °C, 10 times	$R \leq R_{1max}$
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883, Method 2007, Condition A	No change
Moisture Sensivity Level	Level 1, J-STD-020	
Storage Conditions	+40 °C Max. 70% RH Max. Packed in original packaging	
Operating Temperature : - 40 °C to +125 °C		

Test Procedures And Requirements

Test	Conditions	Resistance change
PassR0 min	Resistance measurement at 25 °C	$R_{0min} \leq R \leq R_{1max}$
R1 max	Resistance measurement one hour after post trip	$R_{0min} \leq R \leq R_{1max}$
I-hold	Hold rated current 1800 s without trip, @ 25 °C	No trip
I-trip	Device must trip within 900 s under rated current, @25 °C	Trip
Max. time to trip	At specified current, 25 °C	$T \leq \text{max. time to trip (s)}$
Trip Cycle Life	V_{max} , I_{max} , 100 cycles	No arcing or burning
Trip Endurance	V_{max} , I_{max} 24 hours	No arcing or burning
Solderability	ANSI/J-STD-002	95 % min. coverage

Average Time-Current Curve

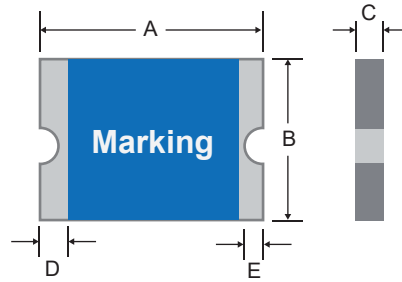


Thermal Derating Chart

Model	Maximum ambient operating temperature (T_{mao}) vs. hold current (I_{hold})									
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C	125°C
ASMD0603H010	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.07	0.06	0.03
ASMD0603H016	0.23	0.21	0.19	0.16	0.14	0.13	0.12	0.11	0.09	0.04
ASMD0603H020	0.29	0.26	0.23	0.20	0.18	0.16	0.15	0.13	0.11	0.05
ASMD0603H035	0.51	0.46	0.41	0.35	0.31	0.28	0.26	0.23	0.20	0.09
ASMD0805H010	0.15	0.13	0.12	0.10	0.09	0.08	0.07	0.07	0.06	0.03
ASMD0805H020	0.29	0.26	0.23	0.20	0.18	0.16	0.15	0.13	0.11	0.05
ASMD0805H035	0.51	0.46	0.41	0.35	0.31	0.28	0.26	0.23	0.20	0.09
ASMD0805H050	0.73	0.65	0.58	0.50	0.44	0.41	0.37	0.33	0.28	0.13
ASMD0805H075	1.09	0.98	0.87	0.75	0.66	0.61	0.56	0.50	0.42	0.20
ASMD1206H016	0.23	0.21	0.19	0.16	0.14	0.13	0.12	0.11	0.09	0.04
ASMD1206H020	0.29	0.26	0.23	0.20	0.18	0.16	0.15	0.13	0.11	0.05
ASMD1206H035	0.51	0.46	0.41	0.35	0.31	0.28	0.26	0.23	0.20	0.09
ASMD1206H050	0.73	0.65	0.58	0.50	0.44	0.41	0.37	0.34	0.28	0.14
ASMD1206H050-24V	0.73	0.65	0.58	0.50	0.44	0.41	0.37	0.34	0.28	0.14
ASMD1206H075	1.09	0.98	0.87	0.75	0.66	0.61	0.56	0.50	0.42	0.20
ASMD1206H075-24V	1.09	0.98	0.87	0.75	0.66	0.61	0.56	0.50	0.42	0.20
ASMD1206H110	1.60	1.44	1.28	1.10	0.97	0.89	0.82	0.74	0.62	0.30
ASMD1206H125	1.81	1.64	1.45	1.25	1.10	1.01	0.93	0.74	0.70	0.34
ASMD1210H110	1.60	1.44	1.16	1.10	0.97	0.89	0.82	0.74	0.62	0.30
ASMD1210H125	1.81	1.64	1.45	1.25	1.10	1.01	0.93	0.84	0.70	0.34
ASMD1210H150	2.18	1.96	1.74	1.50	1.32	1.22	1.11	1.00	0.84	0.40
ASMD1210H175	2.54	2.29	2.03	1.75	1.54	1.42	1.30	1.17	0.98	0.47
ASMD1812H050	0.73	0.65	0.58	0.50	0.44	0.41	0.37	0.33	0.28	0.13
ASMD1812H075	1.09	0.98	0.87	0.75	0.66	0.61	0.56	0.50	0.42	0.20
ASMD1812H110	1.60	1.44	1.28	1.10	0.97	0.89	0.82	0.74	0.62	0.30
ASMD1812H125	1.81	1.64	1.45	1.25	1.10	1.01	0.93	0.84	0.70	0.34
ASMD1812H150	2.18	1.96	1.74	1.50	1.32	1.22	1.11	1.00	0.84	0.40
ASMD1812H150-33V	2.18	1.96	1.74	1.50	1.32	1.22	1.11	1.00	0.84	0.40
ASMD1812H175	2.54	2.29	2.03	1.75	1.54	1.42	1.30	1.17	0.98	0.47
ASMD1812H200	2.90	2.62	2.32	2.00	1.76	1.62	1.49	1.34	1.12	0.54
ASMD1812H200-30V	2.90	2.62	2.32	2.00	1.76	1.62	1.49	1.34	1.12	0.54
ASMD1812H250	3.63	3.27	2.90	2.50	2.20	2.03	1.86	1.67	1.40	0.67
ASMD2920H260	3.77	3.40	3.02	2.60	2.29	2.11	1.93	1.74	1.46	0.70
ASMD2920H300	4.35	3.93	3.48	3.00	2.64	2.43	2.23	2.01	1.68	0.81
ASMD2920H330	4.79	4.32	3.83	3.30	2.90	2.68	1.45	2.21	1.85	0.89
ASMD2920H350	5.08	4.58	4.06	3.50	3.08	2.84	2.60	2.34	1.96	0.94
ASMD2920H400	5.81	5.23	4.64	4.00	3.52	3.25	2.97	2.67	2.24	1.07

Physical Dimensions(mm.)

Model	A		B		C		D		E	Packaging (Pcs/Reel)
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
ASMD0603H010	1.45	1.85	0.65	1.05	0.40	0.80	0.15	0.50	0.05	4000
ASMD0603H016	1.45	1.85	0.65	1.05	0.40	0.80	0.15	0.50	0.05	4000
ASMD0603H020	1.45	1.85	0.65	1.05	0.40	0.80	0.15	0.50	0.05	4000
ASMD0603H035	1.45	1.85	0.65	1.05	0.40	0.80	0.15	0.50	0.05	4000
ASMD0805H010	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.55	0.10	5000
ASMD0805H020	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.55	0.10	5000
ASMD0805H035	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.55	0.10	5000
ASMD0805H050	2.00	2.30	1.20	1.50	0.40	0.90	0.20	0.55	0.10	5000
ASMD0805H075	2.00	2.30	1.20	1.50	0.65	1.15	0.20	0.55	0.10	4000
ASMD1206H016	3.00	3.40	1.40	1.80	0.35	0.85	0.25	0.75	0.10	5000
ASMD1206H020	3.00	3.40	1.40	1.80	0.35	0.85	0.25	0.75	0.10	5000
ASMD1206H035	3.00	3.40	1.40	1.80	0.35	0.85	0.25	0.75	0.10	5000
ASMD1206H050	3.00	3.40	1.40	1.80	0.35	0.85	0.25	0.75	0.10	5000
ASMD1206H050-24V	3.00	3.40	1.40	1.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1206H075	3.00	3.40	1.40	1.80	0.35	0.85	0.25	0.75	0.10	5000
ASMD1206H075-24V	3.00	3.40	1.40	1.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1206H110	3.00	3.40	1.40	1.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1206H125	3.00	3.40	1.40	1.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1210H110	3.00	3.43	2.35	2.80	0.35	0.85	0.25	0.75	0.10	4000
ASMD1210H125	3.00	3.43	2.35	2.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1210H150	3.00	3.43	2.35	2.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1210H175	3.00	3.43	2.35	2.80	0.65	1.15	0.25	0.75	0.10	3500
ASMD1812H050	4.37	4.73	3.07	3.41	0.35	0.85	0.30	1.20	0.20	2000
ASMD1812H075	4.37	4.73	3.07	3.41	0.35	0.85	0.30	1.20	0.20	2000
ASMD1812H110	4.37	4.73	3.07	3.41	0.65	1.15	0.30	1.20	0.20	1500
ASMD1812H125	4.37	4.73	3.07	3.41	0.65	1.15	0.30	1.20	0.20	1500
ASMD1812H150	4.37	4.73	3.07	3.41	0.65	1.15	0.30	1.20	0.20	1500
ASMD1812H150-33V	4.37	4.73	3.07	3.41	1.00	1.50	0.30	1.20	0.20	1000
ASMD1812H175	4.37	4.73	3.07	3.41	0.65	1.15	0.30	1.20	0.20	1500
ASMD1812H200	4.37	4.73	3.07	3.41	1.00	1.50	0.30	1.20	0.20	1000
ASMD1812H200-30V	4.37	4.73	3.07	3.41	1.00	1.50	0.30	1.20	0.20	1000
ASMD1812H250	4.37	4.73	3.07	3.41	1.00	1.50	0.30	1.20	0.20	1000
ASMD2920H260	6.73	7.98	4.80	5.44	0.60	1.00	0.30	2.50	0.25	1500
ASMD2920H300	6.73	7.98	4.80	5.44	0.60	1.00	0.30	2.50	0.25	1500
ASMD2920H330	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	1500
ASMD2920H350	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	1500
ASMD2920H400	6.73	7.98	4.80	5.44	1.00	1.50	0.30	2.50	0.25	1500

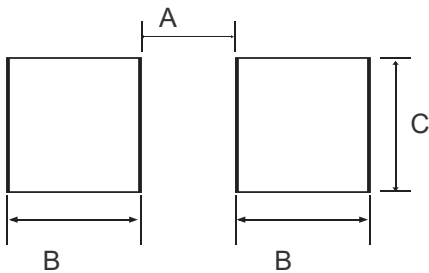


Termination Pad Characteristics

Terminal pad materials: Tin-plated Nickel-Copper(Solder Material:Matte Tin (Sn))

Terminal pad solder ability: Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

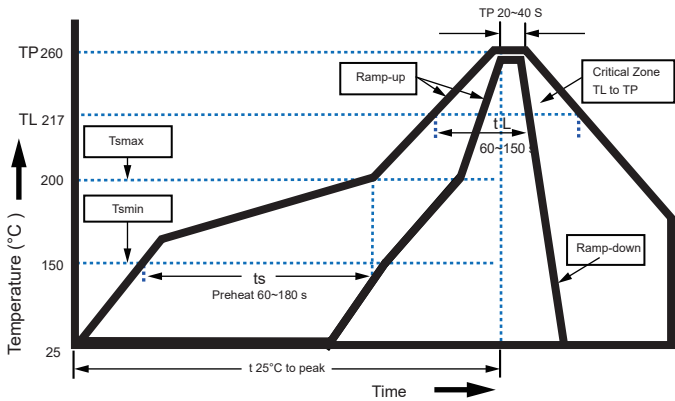
Recommended Pad Layout



Pad Dimensions(mm)			
Series	A	B	C
0603	0.80	1.00	1.00
0805	1.20	1.00	1.50
1206	2.00	1.00	1.80
1210	2.00	1.00	2.80
1812	2.70	1.50	3.20
2920	4.60	2.00	5.30

Part Number

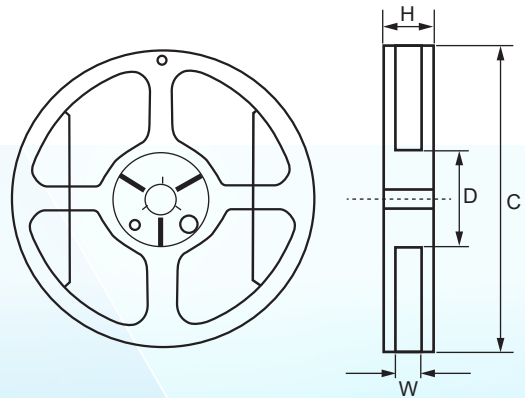
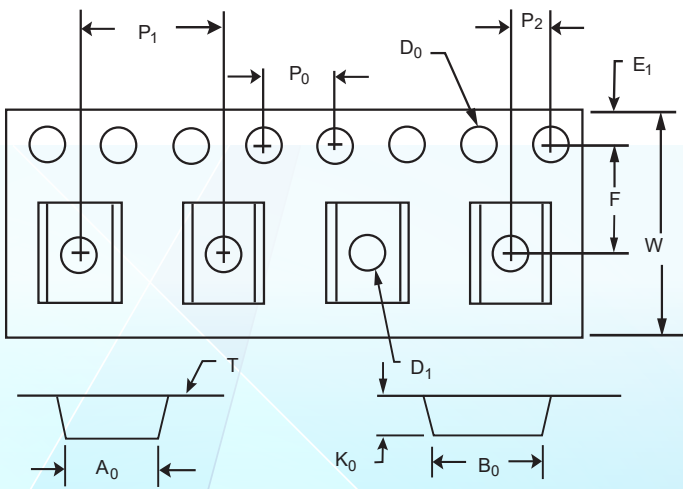
Soldering Parameters



- Recommended reflow methods: IR, vapor phase oven, hot air oven, N2 environment for lead-free.
- Recommended maximum paste thickness is 0.25mm. Devices can be cleaned using standard industry methods and solvents.
- Note 1: All temperature refer to topside of the package, measured on the package body surface.
- Note 2: If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Ts max to Tp)	3°C/second mac.
Preheat	
-Temperature Min(Ts min)	150°C
-Temperature Max(Ts max)	200°C
-Time(Ts min to Ts max)	60~180 seconds
Time maintained above:	
-Temperature(TL)	217°C
-Time(tL)	60~150 seconds
Peak Temperature(Tp)	260°C
Ramp-Down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max
Time within 5°C of actual peak Temperature (tp)	20~40 seconds

Tape And Reel Specifications (mm)

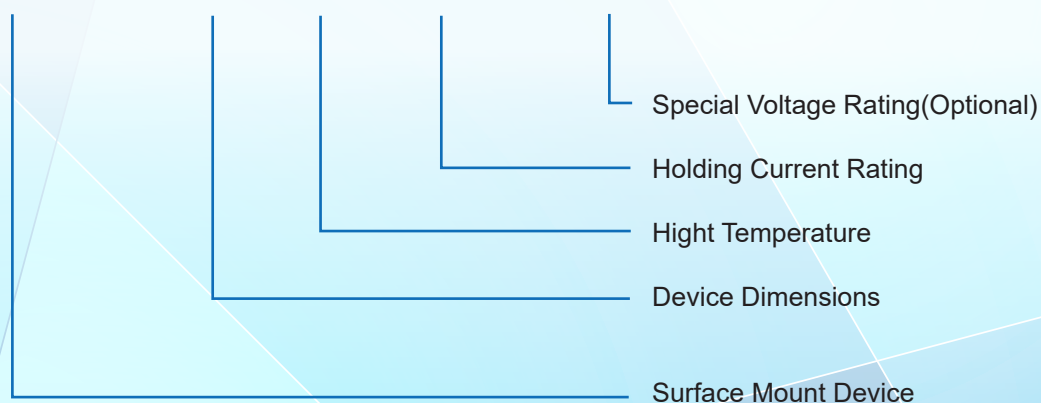


TAPE SPECIFICATIONS: EIA 481-1(mm)						
Item	0603 Series	0805 Series	1206 Series	1210 Series	1812 Series	2920 Series
W	8.00 ± 0.30	8.00 ± 0.10	8.10 ± 0.10	8.10 ± 0.10	12.0 ± 0.10	16.0 ± 0.30
F	3.50 ± 0.10	3.50 ± 0.05	3.50 ± 0.05	3.50 ± 0.05	5.50 ± 0.05	7.50 ± 0.10
E1	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10
D0	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05	1.55 ± 0.05
D1	0.50±0.10	1.00 Min	1.00 Min	1.00 Min	1.5 Min	1.5 Min
P0	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10
P1	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10
P2	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05	2.00 ± 0.05
A0	1.10 ± 0.10	1.70 ± 0.10	2.00 ± 0.10	3.00 ± 0.10	3.58 ± 0.10	5.74 ± 0.10
B0	1.90 ± 0.10	2.45 ± 0.10	3.50 ± 0.10	3.50 ± 0.10	4.93 ± 0.10	8.02 ± 0.10
T	0.20 ± 0.10	0.20 ± 0.05	0.25 ± 0.05	0.25 ± 0.05	0.25 ± 0.05	0.30 ± 0.10
K0	0.85 ± 0.10	0.8/0.95± 0.10	0.85/1.05± 0.10	0.85/1.22± 0.10	0.87/1.3/1.7± 0.10	1.3± 0.10
Leader	390 mm	390 mm	390 mm	390 mm	390 mm	390 mm
Trailer	160 mm	160 mm	160 mm	160 mm	160 mm	160 mm

REEL DIMENSIONS: EIA-481-1(mm)						
Item	0603 Series	0805 Series	1206 Series	1210 Series	1812 Series	2920 Series
C	φ 178 ±1.0	φ 178 ±1.0	φ 178 ±1.0	φ 178 ±1.0	φ 178 ±1.0	φ 178 ±3.0
D	φ 60.2 ± 0.5	φ 60.2 ± 0.5	φ 60.2 ± 0.5	φ 60.2 ± 0.5	φ 60.2 ± 0.5	φ 60.2 ± 0.5
W	9.0 ± 1.5	9.0 ± 1.5	9.0 ± 1.5	9.0 ± 1.5	13.2 ± 1.5	17.0 ± 0.2
H	11.0 ± 0.5	11.0 ± 0.5	11.0 ± 0.5	11.0 ± 0.5	16.0 ± 0.5	19.5 ± 1.0

Part Number System

ASMD XXXX H □□□ - □□



Application Notice

1. Operation of these PPTC devices beyond the stated maximum ratings could result in damage to the devices and lead to electrical arcing and/or fire. PPTC 器件在超过规定的最大值额定值运行可能会导致器件损坏以及导致电弧和/或火灾。

2. These PPTC devices are intended to protect against the effects of temporary over-current or over-temperature conditions and shall not be taken for use as switch, Multiple times tripping shall lower the PPTC hold current.

PPTC 的作用是防止临时的过流或过温造成的不良影响，不能当作开关使用，重复多次的保护会降低 PPTC 的维持电流。

3. Exposure to lubricants, silicon-based oils, solvents, gels, electrolytes, acids, and other related or similar materials may adversely affect the performance of PPTC devices.

PPTC 接触润滑剂、硅基油、溶剂、凝胶、电解质、酸和其他相关或类似材料可能会对 PPTC 器件的性能有不利影响。

4. Circuits with inductance may generate a voltage above the rated voltage of the PPTC device and should be thoroughly evaluated within the user's application during the PPTC selection and qualification process.

带有电感的电路可能产生高于 PPTC 额定电压的电压，因此客户在选型和认定过程中应进行彻底的评估。

5. Please do not smash, clamp, pull, dent or twist by tool during assembling process, as they may result in the PPTC damage. 在装配过程中，避免有砸、挤、拉、扭等方式外力作用于 PPTC 本体上，因为它们可能导致 PPTC 损坏。

6. The above parameters are concluded from one time of reflow soldering processing the PPTC. If there is any further heat generated process like injection or dispensing at the customer's premise, the aforementioned parameters will decrease at certain degree. Therefore the verification test to be conducted is necessary .

规格书所规定的电阻以及电气特性，均是基于在指经过一次回流焊之后的测试。如果客户有二次回流焊或者注塑点胶等其他热工序，会对上述参数有一定程度的衰减。所以需要验证其适用性。

7. When mounting or using PPTC, all injection molding materials, curing adhesives, UV glue, silica gel and cleaning agents or solvents must be tested in terms of application parameters e.g. temperature, time, and etc to ensure the consistency between the product and the processing before use.

PPTC 贴装或应用过程中，所使用到的各类注塑料、单组份、双组份固化胶粘剂、硅胶、清洁剂、溶剂等，需要对注塑料胶料等材料的应用参数（如温度、时间等）进行验证，以确保产品及工艺的匹配性，确认不会影响 PPTC 性能之后方可使用。

8. The PPTC is thermal sensitive device. It is recommended not to design any heat source devices around it to reduce the outside heat source impact.

PPTC 为热敏元件，对环境温度比较敏感，建议在 PPTC 周围不要设计热源元件，尽量减少外部热源的影响。

9. SMD PPTC is designed for SMT processing which applies reflow soldering. Please refer to the DTE recommended curve for reference. If the reflow soldering temperature exceeds the recommended value, the PPTC might be damaged.

Hand welding PPTC is prohibited, if there is soldering iron welding process, it is suggested that the welding position should be more than 1.5mm away from PPTC, the welding tool temperature should be lower than 350°C, and the contact time between soldering iron and solder joint should not exceed 3sec..

PPTC 贴片产品是为 SMT 工艺设计的封装形式，焊接工艺为回流焊。焊接工艺可参考敦特推荐的回流焊曲线。

如果回流焊温度超过推荐的值，PPTC 将有可能受到损伤。禁止使用手工焊接 PPTC，如有烙铁焊接工艺，建议焊接位置距离 PPTC 1.5mm 以上，焊接工具温度低于 350°C，焊接铁头与焊点的接触时间不超过 3sec。

10. In charging terminal application, PP type material is recommended to use as inner membrane and TPE and PVC type material is inhibited. PPTC 在充电线端应用中，建议使用 PP 类材料做内膜，禁止使用 TPE 类与 PVC 类等材料做内膜。