



ASMD0805 Series

Features

- Surface Mount Devices
- Lead free device
- Surface Mount packaging for automated assembly
- Agency recognition: UL

Applications

- Almost anywhere there is a low voltage power supply, up to 15V and a load to be protected, including:
- Computer mother board, Modem, USB hub
 - PDAs & Charger, Analog & digital line card
 - Digital cameras, Disk drivers, CD-ROMs,

Performance Specification



Model	Marking	V _{max} (Vdc)	I _{max} (A)	I _{hold} @25°C (A)	I _{trip} @25°C (A)	P _d Typ (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	R _{i min} (Ω)	R _{1 max} (Ω)
ASMD010-0805	1	15.0	100	0.10	0.30	0.5	0.5	1.50	1.000	6.000
ASMD020-0805*	2	9.0	100	0.20	0.50	0.5	8.0	0.02	0.650	3.500
ASMD035-0805*	3	6.0	100	0.35	0.75	0.5	8.0	0.10	0.250	1.200
ASMD050-0805*	5	6.0	100	0.50	1.00	0.5	8.0	0.10	0.150	0.850
ASMD075-0805*	7	6.0	40	0.75	1.50	0.6	8.0	0.20	0.090	0.385
ASMD100-0805*	0	6.0	100	1.00	1.95	0.6	8.0	0.30	0.060	0.230
ASMD110-0805*	0	6.0	100	1.10	2.20	0.6	8.0	0.30	0.060	0.210

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_{1 max} = 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

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hrs.	±5% typical
Humidity aging	+85°C, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85°C to -40°C, 20 times	±33% typical
Resistance to solvent	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-202, Method 201	No change
Ambient operating conditions :		- 40 °C to +85 °C
Maximum surface temperature of the device in the tripped state is 125 °C		

AGENCY APPROVALS :



UL approved
The others: UL pending

I_{hold} Versus Temperature

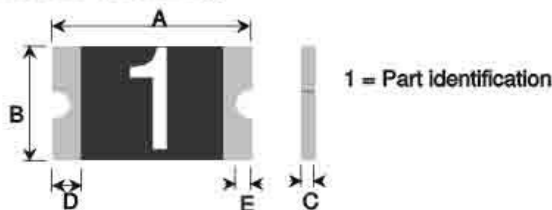
Model	Maximum ambient operating temperature (T _{mao}) vs. hold current (I _{hold})								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
ASMD010-0805	0.14	0.12	0.11	0.1	0.8	0.7	0.6	0.5	0.3
ASMD020-0805	0.28	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
ASMD035-0805	0.47	0.44	0.39	0.35	0.30	0.27	0.24	0.20	0.14
ASMD050-0805	0.68	0.62	0.55	0.50	0.40	0.37	0.33	0.29	0.23
ASMD075-0805	1.00	0.90	0.79	0.75	0.63	0.57	0.53	0.41	0.34
ASMD100-0805	1.35	1.25	1.15	1.00	0.82	0.74	0.65	0.55	0.42
ASMD110-0805	1.45	1.35	1.20	1.10	0.92	0.84	0.75	0.65	0.52

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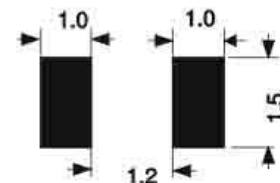
Construction and Dimension (Unit:mm)

Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
ASMD010-0805	2.00	2.20	1.20	1.50	0.50	1.00	0.20	0.10
ASMD020-0805	2.00	2.20	1.20	1.50	0.45	1.00	0.20	0.10
ASMD035-0805	2.00	2.20	1.20	1.50	0.45	1.00	0.20	0.10
ASMD050-0805	2.00	2.20	1.20	1.50	0.30	0.60	0.20	0.10
ASMD075-0805	2.00	2.20	1.20	1.50	0.40	1.25	0.20	0.10
ASMD100-0805	2.00	2.20	1.20	1.50	0.50	1.10	0.20	0.10
ASMD110-0805	2.00	2.20	1.20	1.50	0.50	1.20	0.20	0.10

Dimensions & Marking



Recommended Pad Layout (mm)



Termination pad characteristics

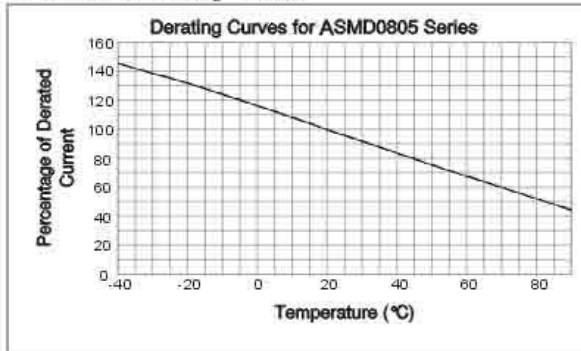
Terminal pad materials : Gold-Plated Nickel-Copper

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

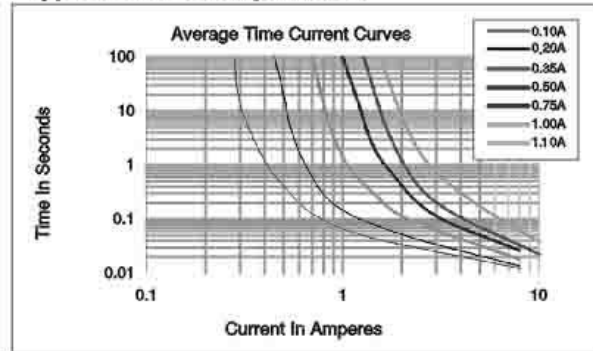
Rework

Use standard industry practices, the removal device must be replaced with a fresh one.

Thermal Derating Curve



Typical Time-To-Trip At 25 °C

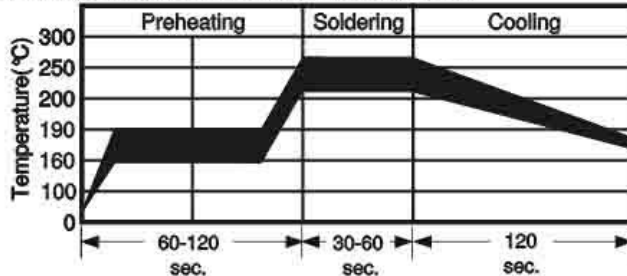


⚠ WARNING:

- Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- Use PPTC with a large inductance in circuit will generate a circuit voltage ($L \cdot di/dt$) above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.
- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices. PPTC SMD can be cleaned by standard methods.
- Requests that customers comply with our recommended solder pad layouts and recommended reflow profile. Improper board layouts or reflow profile could negatively impact solderability performance of our devices.

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Recommended Solder Reflow Conditions

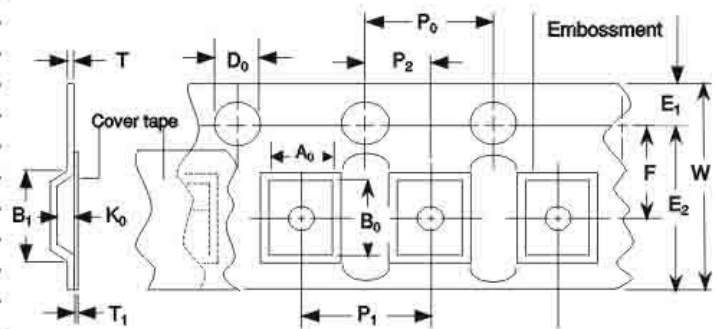


- Recommended reflow methods : IR, vapor phase oven, hot air oven.
 - Devices are not designed to be wave soldered to the bottom side of the board.
 - Recommended maximum paste thickness is 0.25 mm (0.010 inch).
 - Devices can be cleaned using standard method and solvents.
- Note : If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

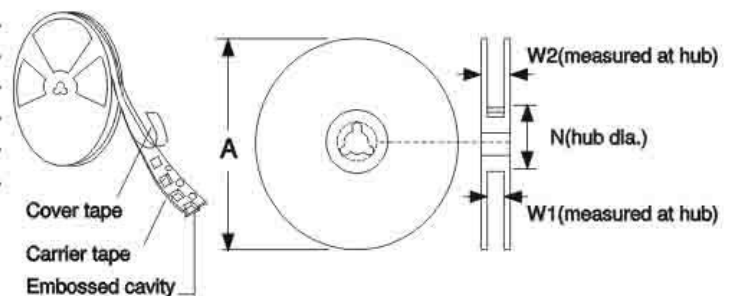
Tape And Reel Specifications (mm)

Governing Specifications	EIA 481-1
W	8.0 ± 0.3
P ₀	4.0 ± 0.10
P ₁	4.0 ± 0.10
P ₂	2.0 ± 0.05
A ₀	1.45 ± 0.10
B ₀	2.30 ± 0.10
B _{1max.}	4.35
D ₀	1.55 + 0.1, -0
F	3.5 ± 0.05
E ₁	1.75 ± 0.10
E _{2min.}	6.25
T	0.25
T _{1max.}	0.1
K ₀	0.74 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W ₁	9.0 ± 0.5
W ₂	12.0 ± 0.05

EIA Tape Component Dimensions



EIA Reel Dimensions



Storage And Handling

- Storage conditions : 40 °C max, 70% R.H.
- Devices may not meet specified performance if storage conditions are exceeded.

Order Information

ASMD0805	010	Tape & Reel Quantity	
Product name	Hold	100,110	4,000 pcs/reel
Size 2012 mm / 0805 mils	Current	The others	5,000 pcs/reel
SMD : surface mount device	0.10A		

Packaging

Tape & reel packaging per EIA481-1