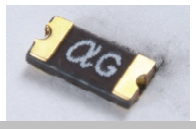


nSMD Series

Features
- Surface Mount Devices
- Lead free device
- Size 3216 mm/1206 mils
- Surface Mount packaging for automated assembly
- Agency recognition: UL

Applications
Almost anywhere there is a low voltage power supply, up to 60V 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,

Sea & Land

Performance Specification

Model	Marking	V_{max} (Vdc)	I_{max} (A)	I_{hold} @25℃ (A)	I_{trip} @25℃ (A)	P_d Max. (W)	Maximum Time To Trip		Resistance	
							Current (A)	Time (Sec)	Ri_{min} (Ω)	R1max (Ω)
nSMD005	αZ	60.0	100	0.05	0.15	0.4	0.3	1.50	3.600	50.000
nSMD010	αN	60.0	100	0.10	0.25	0.4	0.5	1.00	1.600	15.000
nSMD025	αA	16.0	100	0.25	0.50	0.6	8.0	0.08	0.350	2.500
nSMD035	αB	6.0	100	0.35	0.75	0.6	8.0	0.10	0.250	1.300
nSMD050	αF	6.0	100	0.50	1.00	0.6	8.0	0.10	0.150	0.700
nSMD050-13.2V	αF	6.0	100	0.50	1.00	0.6	8.0	0.10	0.150	0.700
nSMD075	αG	6.0	100	0.75	1.50	0.6	8.0	0.20	0.090	0.500
nSMD100	αH	6.0	100	1.00	1.80	0.6	8.0	0.30	0.055	0.270
nSMD150	αI	6.0	100	1.50	3.00	0.8	8.0	1.00	0.040	0.130

I_{hold} = Hold Current. Maximum current device will not trip in 25℃ still air.
I_{trip} = Trip Current. Minimum current at which the device will always trip in 25℃ still air.
V_{max} = Maximum operating voltage device can withstand without damage at rated current (Imax).
I_{max} = Maximum fault current device can withstand without damage at rated voltage (Vmax).
Pd = Maximum power dissipation when device is in the tripped state in 25℃ still air environment at rated voltage.
Rimin/max = Minimum/Maximum device resistance prior to tripping at 25℃.
$R1_{max}$ = 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℃, 1000 hrs.	±5% typical
Humidity aging	+85℃, 85% R.H. , 168 hours	±5% typical
Thermal shock	+85℃ to -40℃, 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 ℃ to 85 ℃	
Maximum surface temperature of the device in the tripped state is 125 ℃		

AGENCY APPROVALS : U.L approved

Pb RoHS

AGENCY FILE NUMBERS : U.L. FILE NO. : E201504

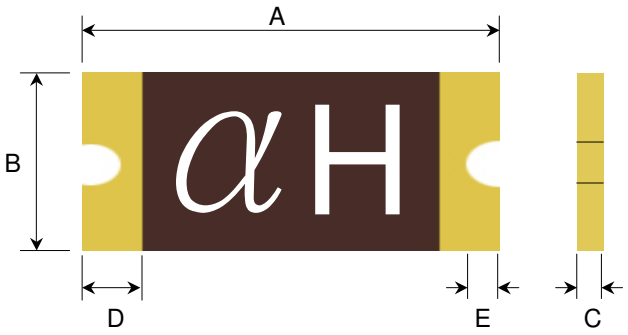
I_{hold} versus temperature

Model	Maximum ambient operating temperature (Tmao) vs. hold current (Ihold)								
	-40℃	-20℃	0℃	25℃	40℃	50℃	60℃	70℃	85℃
nSMD010	0.145	0.33	0.115	0.1	0.085	0.075	0.07	0.06	0.055
nSMD025	0.37	0.33	0.29	0.25	0.22	0.20	0.17	0.15	0.12
nSMD035	0.50	0.45	0.40	0.35	0.30	0.27	0.24	0.21	0.15
nSMD050	0.71	0.64	0.57	0.50	0.42	0.39	0.35	0.31	0.25
nSMD075	1.14	1.01	0.88	0.75	0.65	0.59	0.54	0.49	0.41
nSMD100	1.45	1.31	1.15	1.00	0.84	0.77	0.69	0.61	0.48
nSMD150	2.18	1.94	1.72	1.50	1.28	1.17	1.06	0.96	0.77

Construction and Dimension (Unit:mm)

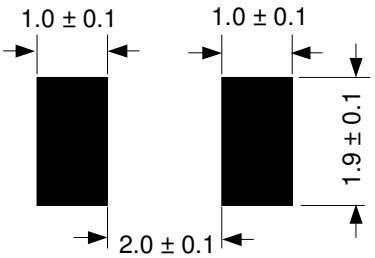
Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
nSMD005	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10
nSMD010	3.00	3.50	1.50	1.80	0.60	1.10	0.15	0.10
nSMD025	3.00	3.50	1.50	1.80	0.27	0.65	0.15	0.10
nSMD035	3.00	3.50	1.50	1.80	0.27	0.65	0.15	0.10
nSMD050	3.00	3.50	1.50	1.80	0.27	0.65	0.15	0.10
nSMD075	3.00	3.50	1.50	1.80	0.27	0.65	0.15	0.10
nSMD100	3.00	3.50	1.50	1.80	0.50	1.25	0.15	0.10
nSMD150	3.00	3.50	1.50	1.80	0.75	1.80	0.15	0.10

Dimensions & Marking



α = Trademark
H = Part identification

Recommended pad layout (mm)



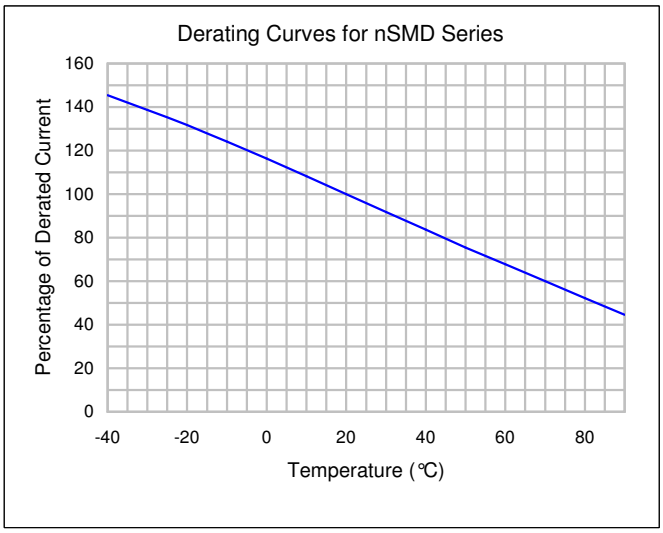
Termination pad characteristics

Terminal pad materials： Tin-Plated Nickle-Copper or Gold-Plated Nickle-Copper

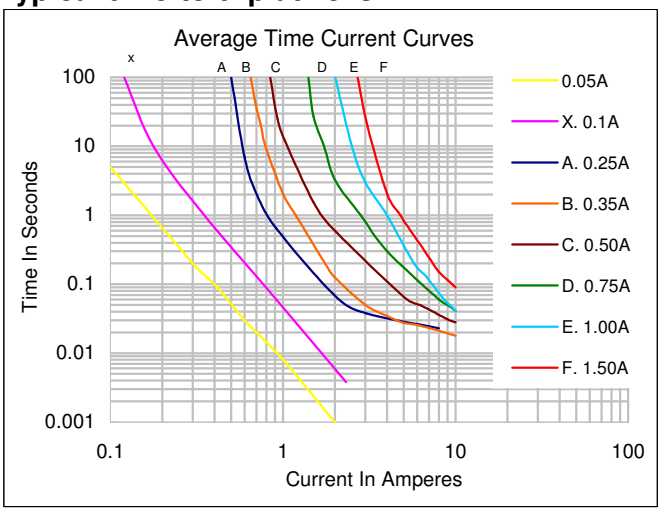
Terminal pad solderability： Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

Rework

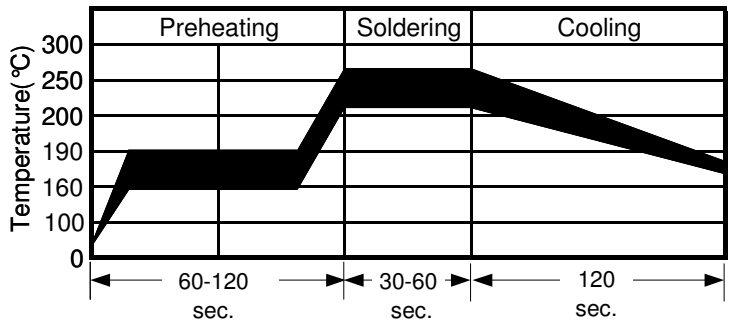
Use standard industry practices, the removal device must be replaced with a fresh one.



Typical time-to-trip at 25℃



Recommended solder reflow conditions



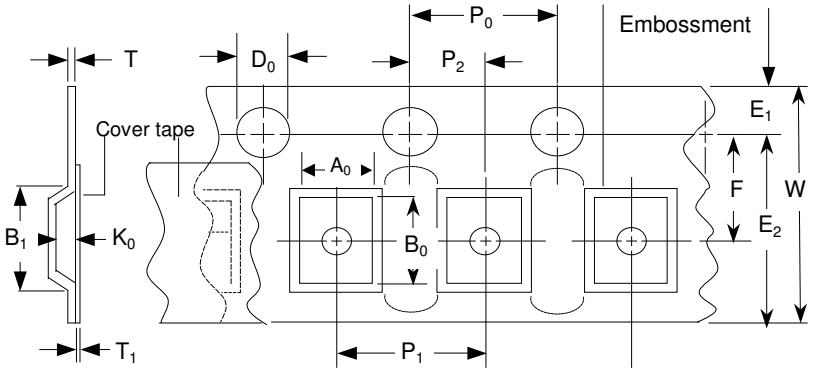
- Recommended reflow methods ： IR, vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Recommended maximum paste thickness is 0.25 mm (0.010 inch).
- Devices can be cleaned using standard method and solvents.

Note ： If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

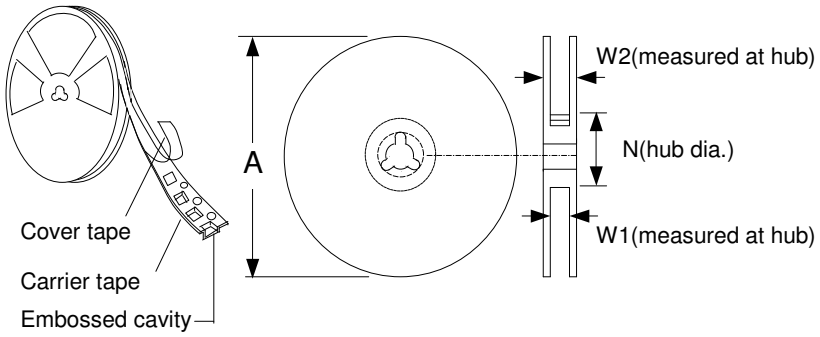
Tape and reel specifications (mm)

Governing Specifications	EIA 481-1
W	8.15 ± 0.3
P_0	4.0 ± 0.10
P_1	4.0 ± 0.10
P_2	2.0 ± 0.05
A_0	1.95 ± 0.10
B_0	3.45 ± 0.10
B_1max.	4.35
D_0	1.5 + 0.1, -0
F	3.5 ± 0.05
E_1	1.75 ± 0.10
E_2min.	6.25
Tmax.	0.6
T_1max.	0.1
K_0	1.04 ± 0.1
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W_1	9 ± 0.5
W2	12.6 ± 0.5

EIA Tape Component Dimentions



EIA Reel Dimentions



Storage and handling

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

Order information

Packaging

nSMD	075	Tape & Reel Quantity
Product name	Hold	5,000 pcs/reel
mini size 3216 mm / 1206 mils	Current	
SMD：surface mount device	0.75A	

Tape & reel packaging per EIA481-1