Seria 1812

Performance Specification

Model	Vmax	I max	I hold	I trip	Pd	Maximum Time To Trip		Resistance	
			@25℃	@25℃	Max.	Current	Time	Rimin	R1 max
	(Vdc)	(A)	(A)	(A)	(W)	(A)	(Sec)	(ohm)	(ohm)
BpS12-100-30	30.0	100	0.10	0.30	0.8	0.5	1.50	0.750	15.00
BpS12-140-60	33.0	100	0.14	0.34	0.8	1.5	0.15	0.650	6.000
BpS12-200-30	30.0	100	0.20	0.40	0.8	8.0	0.02	0.350	5.000
BpS12-300-30	30.0	100	0.30	0.60	0.8	8.0	0.10	0.250	3.000
BpS12-500-15	15.0	100	0.50	1.00	0.8	8.0	0.15	0.150	1.000
BpS12-750-13	13.2	100	0.75	1.50	0.8	8.0	0.20	0.090	0.450
BpS12-750-16	16.0	100	0.75	1.50	0.8	8.0	0.20	0.090	0.045
BpS12A01.10-08	8.0	100	1.10	2.20	0.8	8.0	0.30	0.050	0.250
BpS12A01.10-16	16.0	100	1.10	2.20	0.8	8.0	0.30	0.050	0.250
BpS12A01.25-16	16.0	100	1.25	2.50	0.8	8.0	0.40	0.050	0.140
BpS12A01.50-08	8.0	100	1.50	3.00	0.8	8.0	0.50	0.040	0.160
BpS12A01.50-12	12.0	100	1.50	3.00	0.8	8.0	0.50	0.040	0.160
BpS12A01.50-16	16.0	100	1.50	3.00	0.8	8.0	0.50	0.040	0.160
BpS12A01.60-08	8.0	100	1.60	2.80	0.8	8.0	1.00	0.030	0.130
BpS12A02.00-08	8.0	100	2.00	4.00	0.8	8.0	2.00	0.020	0.100
BpS12A02.60-08	8.0	100	2.60	5.00	0.8	8.0	2.50	0.015	0.050
BpS12A03.00-08	8.0	100	3.00	5.00	0.8	8.0	4.00	0.012	0.040

Ihoid = Hold Current. Maximum current device will not trip in 25℃ still air.

Itrip = Trip Current. Minimum current at which the device will always trip in 25℃ still air.

Vmax = Maximum operating voltage device can withstand without damage at rated current (Imax).

Imax = 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

Model		Maximum ambient operating temperature				(Tmao) vs.	hold current (Ihold)		
	-40℃	-20℃	0℃	20℃	40℃	50℃	60℃	70℃	85℃
BpS12-100-30	0.16	0.14	0.12	0.11	0.08	0.07	0.06	0.05	0.03
BpS12-140-60	0.23	0.19	0.17	0.14	0.12	0.10	0.09	0.08	0.06
BpS12-200-30	0.29	0.26	0.23	0.20	0.17	0.15	0.14	0.12	0.10
BpS12-300-30	0.44	0.39	0.35	0.30	0.26	0.23	0.21	0.18	0.15
BpS12-500-15	0.59	0.57	0.55	0.50	0.45	0.43	0.35	0.30	0.23
BpS12-750-13	1.10	0.99	0.87	0.75	0.63	0.57	0.49	0.45	0.35
BpS12-750-16	1.09	0.98	0.86	0.75	0.62	0.56	0.48	0.44	0.34
BpS12A01.10-08	1.60	1.45	1.28	1.10	0.92	0.83	0.71	0.66	0.52
BpS12A01.10-16	1.59	1.44	1.27	1.10	0.92	0.82	0.70	0.64	0.50
BpS12A01.25-16	2.00	1.75	1.52	1.25	1.00	0.95	0.90	0.75	0.53
BpS12A01.50-08	2.30	2.05	1.77	1.50	1.23	1.09	0.95	0.82	0.61
BpS12A01.50-12	2.29	2.04	1.76	1.50	1.22	1.08	0.94	0.80	0.59
BpS12A01.50-16	2.28	2.03	1.75	1.50	1.21	1.07	0.93	0.79	0.58
BpS12A01.60-08	2.10	1.96	1.88	1.60	1.26	1.12	0.98	0.84	0.63
BpS12A02.00-08	2.88	2.61	2.25	2.00	1.80	1.66	1.45	1.39	1.19
BpS12A02.60-08	3.90	3.42	2.96	2.60	2.33	2.07	1.94	1.35	1.00
BpS12A03.00-08	4.15	3.76	3.46	3.00	2.55	2.28	2.01	1.61	1.33

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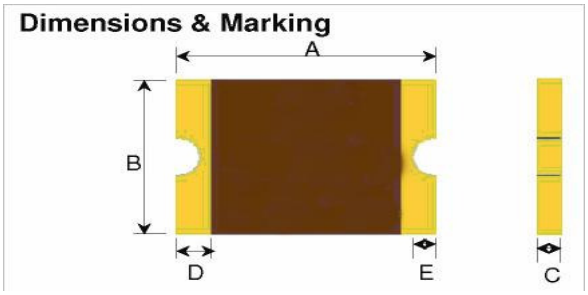
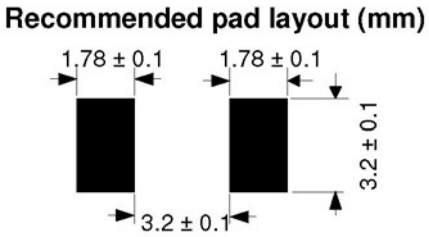
Construction and Dimension (Unit:mm)

Model	A		B		C		D	E
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Min.
BpS12-100-30	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
BpS12-140-60	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
BpS12-200-30	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
BpS12-300-30	4.37	4.73	3.07	3.41	0.50	1.00	0.30	0.25
BpS12-500-15	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
BpS12-750-13	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
BpS12-750-16	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
BpS12A01.10-08	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
BpS12A01.10-16	4.37	4.73	3.07	3.41	0.40	0.90	0.30	0.25
BpS12A01.25-16	4.37	4.73	3.07	3.41	0.30	0.80	0.30	0.25
BpS12A01.50-08	4.37	4.73	3.07	3.41	0.30	0.80	0.30	0.25
BpS12A01.50-12	4.37	4.73	3.07	3.41	0.30	0.80	0.30	0.25
BpS12A01.50-16	4.37	4.73	3.07	3.41	0.30	0.80	0.30	0.25
BpS12A01.60-08	4.37	4.73	3.07	3.41	0.30	0.80	0.30	0.25
BpS12A02.00-08	4.37	4.73	3.07	3.41	0.40	0.80	0.30	0.25
BpS12A02.60-08	4.37	4.73	3.07	3.41	0.50	1.10	0.30	0.25
BpS12A03.00-08	4.37	4.73	3.07	3.41	0.50	1.20	0.30	0.25





Termination pad characteristics

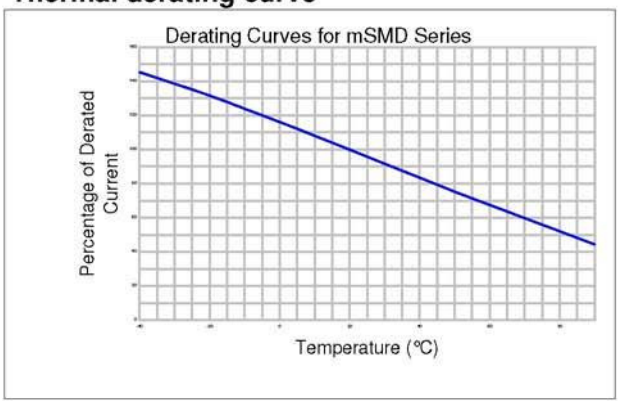
Terminal pad materials : Terminal pad solderability :

Tin-Plated Nickle-Copper or Gold-Plated Nickle-Copper **Rework**

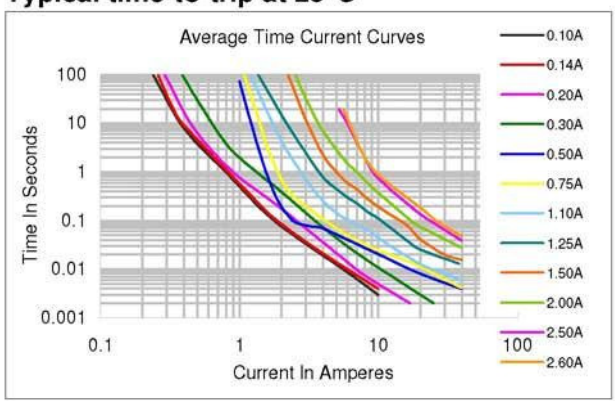
Meets EIA specification RS186-9E and ANSI/J-STD-002 Category 3.

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 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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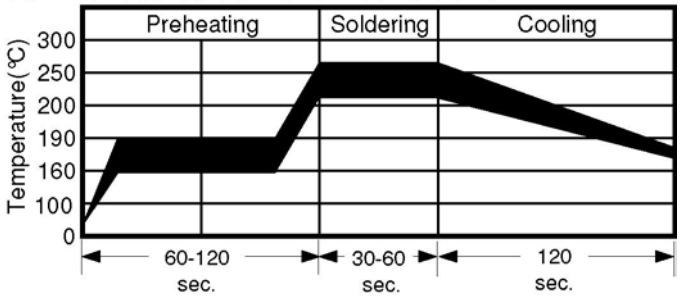
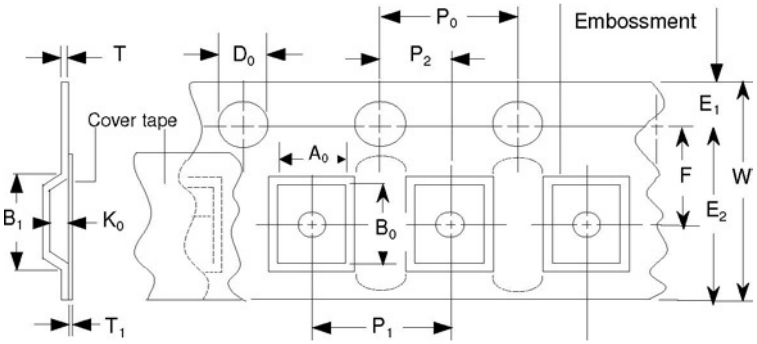
Recommended solder reflow conditions



- 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.

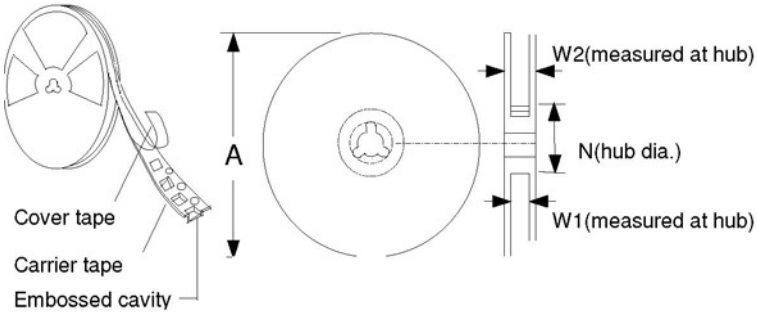
EIA Tape Component Dimentions



Tape and reel specifications (mm)

	miniSMD
Governing Specifications	**EIA 481-1**
W	12 ± 0.3
P0	4.0 ± 0.10
P1	8.0 ± 0.10
P2	2.0 ± 0.05
A0	3.5 ± 0.23
B0	5.1 ± 0.15
B_1max.	5.9
D0	1.5 + 0.1, -0
F	5.5 ± 0.05
E1	1.75 ± 0.10
E_2min.	10.25
Tmax.	0.6
T_1max.	0.1
K0	0.9 ± 0.15
Leader min.	390
Trailer min.	160
Reel Dimensions	
A max.	178
N min.	60
W_1	12.4 + 2.0, -0.0
W_2max.	18.4

EIA Reel Dimentions



Storage and handling

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