

# 2018 Serie

## Performance Specification

Model	V <sub>max</sub> (V)	I <sub>max</sub> (A)	I <sub>hold</sub> @25°C (A)	I <sub>trip</sub> @25°C (A)	P <sub>d</sub> Typ. (W)	Maximum Time To Trip		Resistance		
						Current (A)	Time (Sec)	R <sub>i_min</sub> (Ω)	R <sub>i_typ</sub> (Ω)	R <sub>1_max</sub> (Ω)
BpS18-300-60	60	100	0.30	0.60	0.9	1.5	3.00	0.500	1.200	2.300
BpS18-500-60	60	100	0.55	1.20	1.0	2.5	3.00	0.200	0.600	1.000
BpS18A01.10-15	15	100	1.10	2.20	1.1	8.0	0.40	0.060	0.110	0.360
BpS18A01.10-33	8	40	1.60	2.80	0.8	8.0	1.00	0.040	-	0.099
BpS18A01.50-15	15	100	1.50	3.00	1.1	8.0	0.80	0.050	0.060	0.170
BpS18A02.00-10	10	100	2.00	4.00	1.1	8.0	2.40	0.030	0.045	0.100

I<sub>hold</sub> = Hold Current. Maximum current device will not trip in 25°C still air.

I<sub>trip</sub> = Trip Current. Minimum current at which the device will always trip in 25°C still air.

V<sub>max</sub> = Maximum operating voltage device can withstand without damage at rated current (I<sub>max</sub>).

I<sub>max</sub> = Maximum fault current device can withstand without damage at rated voltage (V<sub>max</sub>).

P<sub>d</sub> = Maximum power dissipation when device is in the tripped state in 25°C still air environment at rated voltage.

R<sub>i\_min/max</sub> = Minimum/Maximum device resistance prior to tripping at 25°C.

R<sub>1\_max</sub> = 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 pending.

## I<sub>hold</sub> versus temperature

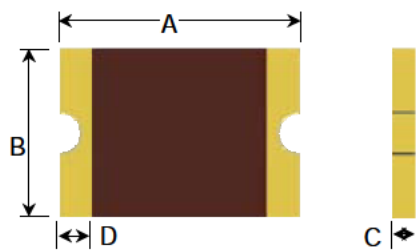
Model	Maximum ambient operating temperature (T <sub>mao</sub> ) vs. hold current (I <sub>hold</sub> )								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
BpS18-300-60	0.48	0.42	0.35	0.30	0.24	0.21	0.17	0.15	0.10
BpS18-500-60	0.87	0.77	0.67	0.55	0.46	0.41	0.36	0.31	0.23
BpS18A01.10-15	1.71	1.52	1.32	1.10	0.94	0.84	0.74	0.64	0.50
BpS18A01.50-15	2.38	2.10	1.82	1.50	1.27	1.13	0.99	0.85	0.64
BpS18A02.00-10	2.95	2.65	2.35	2.00	1.74	1.59	1.44	1.29	1.06

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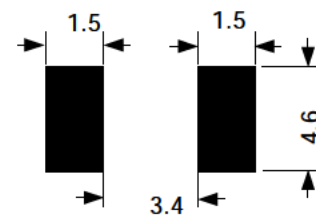
## Construction and Dimension (Unit:mm)

Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
BpS18-300-60	4.72	5.44	4.22	4.93	0.60	1.10	0.30
BpS18-500-60	4.72	5.44	4.22	4.93	0.60	1.10	0.30
BpS18A01.10-15	4.72	5.44	4.22	4.93	0.45	0.80	0.30
BpS18A01.10-33	4.72	5.44	4.22	4.93	0.45	0.80	0.30
BpS18A01.50-15	4.72	5.44	4.22	4.93	0.45	0.80	0.30
BpS18A02.00-10	4.72	5.44	4.22	4.93	0.45	0.80	0.30

## Dimensions & Marking



## Recommended pad layout (mm)



## Termination pad characteristics

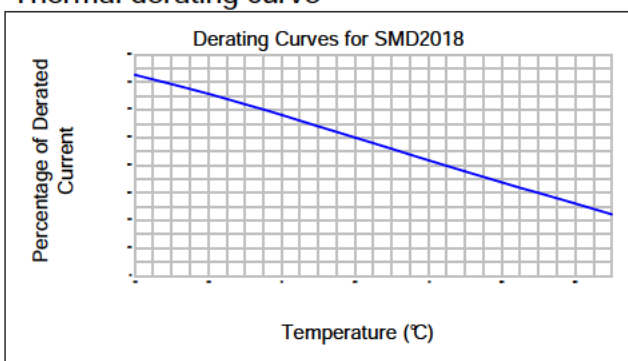
Terminal pad materials : Tin-Plated Nickle-Copper or Gold-Plated Nickle-Copper

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

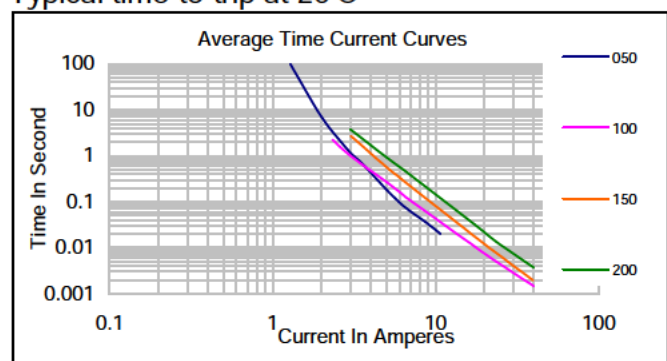
## Rework

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

## 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.