➢ Features

- Size 0.04*0.02 inch /1.0*0.5 mm
- RoHS compliant, lead-free and halogen-free
- Fast response to fault current
- Super low resistance
- Low profile
- Compatible with high temperature solders

➢ Applications

- Computer, Mobile phones, Multimedia
- Automotive, Industrial controls, Telephony and broadband
- Game machines, Portable electronics, Battery

➢ Electrical Characteristics（25°C）

Part Number	I_{hold}	I_{trip}	V_{max}	I_{max}	$P_{d\ typ}$	Time to trip		R_{min}	$R1_{max}$
	(A)	(A)	(V_{dc})	(A)	(W)	(A)	(Sec)	(Ω)	(Ω)
BSMD0402L-004	0.04	0.16	12.0	40	0.5	0.25	1.50	3.000	30.00
BSMD0402L-005	0.05	0.20	9.0	40	0.5	0.25	1.50	1.500	20.00
BSMD0402L-010C	0.10	0.30	6.0	40	0.5	0.50	1.00	0.150	2.800
BSMD0402L-010	0.10	0.30	6.0	40	0.5	0.50	1.00	0.150	2.000
BSMD0402L-020	0.20	0.50	6.0	40	0.5	1.00	1.00	0.100	1.250
BSMD0402L-035	0.35	0.70	6.0	40	0.5	8.00	0.10	0.050	0.700
BSMD0402L-050	0.50	1.00	6.0	40	0.5	8.00	0.10	0.040	0.400
BSMD0402L-075	0.75	1.50	6.0	40	0.5	8.00	0.10	0.030	0.300

➢ Vocabulary

I_{hold} = Hold current: maximum current device will pass without tripping in 25℃ still air.
I_{trip} = Trip current: minimum current at which the device will trip in 25℃ still air.
V_{max} = Maximum 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}).
$P_{d\ typ.}$ = Typical power dissipated from device when in the tripped state at 25℃ still air.
R_{min} = Minimum resistance of device in initial (un-soldered) state.
R_{1max} = Maximum resistance of device at 25℃ measured one hour after tripping or reflow soldering of 260℃ for 20 sec.

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

➢ Warning

- Users shall independently assess the suitability of these devices for each of their applications.
- Operation of these devices beyond the stated maximum ratings could result in damage to the devices and lead to electrical arcing and/or fire.
- These devices are intended to protect against the effects of temporary over-current or over-temperature conditions and are not intended to perform as protective devices where such conditions are expected to be repetitive or prolonged in duration.
- Exposure to silicon-based oils, solvents, electrolytes, acids, and similar materials can adversely affect the prolonged of these PPTC devices.
- These devices undergo thermal expansion under fault conditions, and thus shall be provided with adequate space and be protected against mechanical stresses.
- Circuits with inductance may generate a voltage (L di/dt) above the rated voltage of the PPTC device.

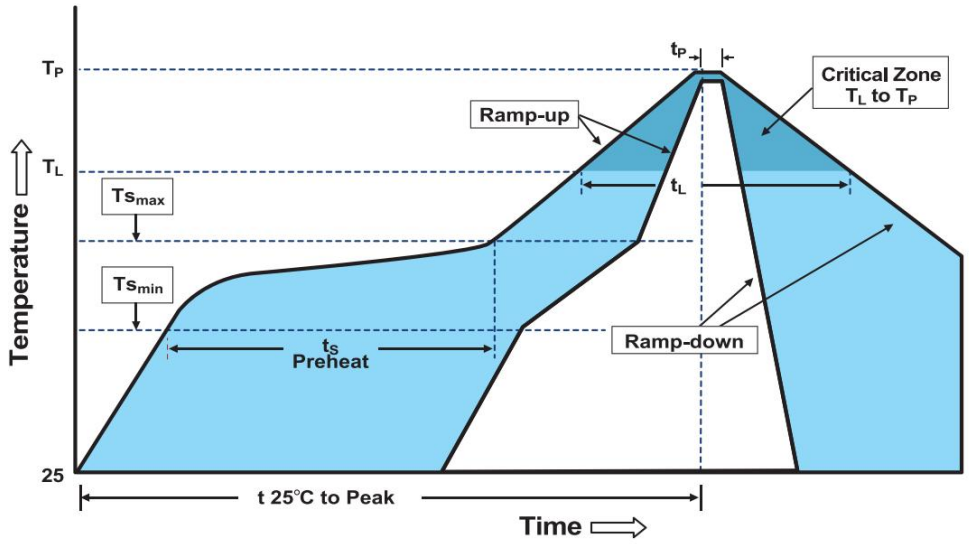
➢ Thermal Derating Chart

Part Number	Ambient operating temperature hold current(I_{hold})								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
BSMD0402L-004	0.056	0.05	0.045	0.04	0.034	0.026	0.02	0.016	0.013
BSMD0402L-005	0.073	0.065	0.058	0.05	0.044	0.04	0.037	0.033	0.028
BSMD0402L-010C	0.14	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.05
BSMD0402L-010	0.14	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.05
BSMD0402L-020	0.29	0.26	0.23	0.20	0.18	0.16	0.15	0.13	0.09
BSMD0402L-035	0.50	0.45	0.40	0.35	0.31	0.28	0.26	0.22	0.16
BSMD0402L-050	0.71	0.64	0.57	0.50	0.44	0.40	0.37	0.31	0.23
BSMD0402L-075	1.05	0.95	0.85	0.75	0.65	0.60	0.55	0.45	0.30

➢ Environmental Specifications

Test	Conditions	Resistance change
Passive aging	+85°C, 1000 hours	±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		

➢ Soldering Parameters



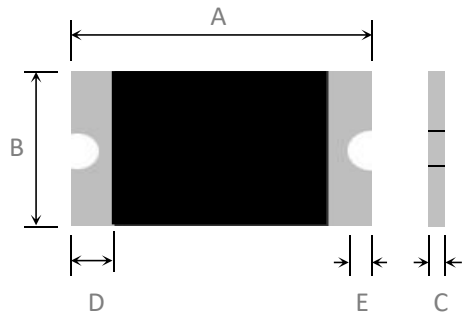
Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate(Ts_{max} to T_p)	3°C/second max
Preheat -Temperature Min(Ts_{min}) -Temperature Max(Ts_{max}) -Time(Ts_{min} to Ts_{max})	 150°C 200°C 60~180 seconds
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~150 seconds
Peak Temperature(T_p)	260°C
Ramp-Down Rate	6°C/second max
Time 25°C to Peak Temperature	8 minutes max
Storage Condition	0°C~30°C,30%-60%RH

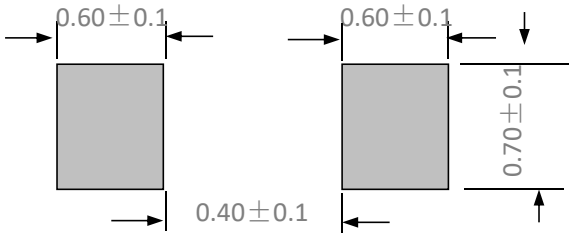
- Recommended reflow methods: IR, vapor phase oven, hot air oven, N_2 environment for lead-free.
- Recommended maximum paste thickness is 0.25mm.
- Devices can be cleaned using standard industry methods and solvents.

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.

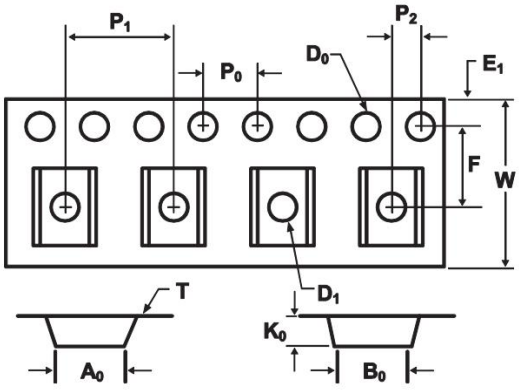
➢ Physical Dimensions & Recommended Pad Layout (mm)





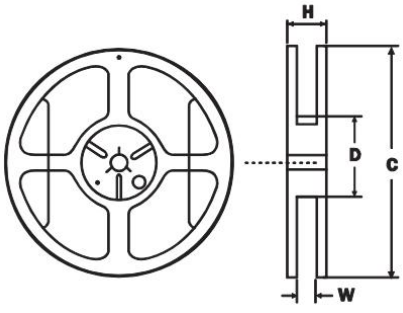
Part Number	Quantity	A		B		C		D	E
		Min	Max	Min	Max	Min	Max	Min	Max
BSMD0402L-004	10000	0.85	1.15	0.35	0.65	0.20	0.80	0.80	0.40
BSMD0402L-005	10000	0.85	1.15	0.35	0.65	0.20	0.80	0.80	0.40
BSMD0402L-010C	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40
BSMD0402L-010	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40
BSMD0402L-020	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40
BSMD0402L-035	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40
BSMD0402L-050	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40
BSMD0402L-075	10000	0.85	1.15	0.35	0.65	0.20	1.00	0.10	0.40

➢ Tape And Reel Specifications (mm)



Governing Specifications	BSMD0402L-004 ~ BSMD0402L-050	BSMD0402L-075
W	8.0 ± 0.3	8.0 ± 0.3
F	3.5 ± 0.05	3.5 ± 0.05
E_1	1.75 ± 0.1	1.75 ± 0.1
D_0	1.55 ± 0.05	1.55 ± 0.05
D_1	1.0 ± 0.1	1.0 ± 0.1
P_0	4.0 ± 0.1	4.0 ± 0.1
P_1	4.0 ± 0.1	4.0 ± 0.1
P_2	2.0 ± 0.05	2.0 ± 0.05
A_0	0.69 ± 0.03	0.69 ± 0.03
B_0	1.23 ± 0.03	1.28 ± 0.03
T	0.2 ± 0.1	0.2 ± 0.1
K_0	0.60 ± 0.03	0.60 ± 0.05
$Leader_{min}$	390	390
$Trailer_{min}$	160	160

Reel Dimensions	
C	φ178 ± 1.0
D	φ60.2 ± 0.5
H	11.0 ± 0.5
W	9.0 ± 1.5



➢ Contact information

SHENZHEN BHFUSE INDUSTRIAL CO., LTD
TEL: 0755-85259917
E-MAIL: sales@bhfuse.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Resettable Fuses - PPTC ***category:***

Click to view products by BHFUSE ***manufacturer:***

Other Similar products are found below :

RF0077-000 RF0627-000 RF3301-000 RF3382-000 RF3394-000 RF3399-000 SMD125-2 RF1973-000 RF2531-000 RF2873-000 RF3060-000 RF3311-000 TR600-150Q-B-0.5-0.130 RXE090 5E4795/04-1502 TRF250-080T-B-1.0-0.125 SMD100-2 NIS5431MT1TXG SMD250-2 RS30-090 RS30-600 RS30-800 RS30-900 RS60RB-160 RS60SB-250 SB250-145 K30U400 0ZCH0110AF2E BK60-110-DI-E0.6 BK250-120-SZ-E0.6 BK60-010-DI-E0.5 BK250-040-DY-E0.6 RF2631-000 NIS4461MT3TXG NIS5420MT2TXG NIS5420MT3TXG NIS6420MT1TWG RF5032-000 RF5051-000 RF5105-000 RF5062-000 RF5055-000 RF5052-000 2920L075/72MR BSMD0603-025-24V BSMD0402L-005 BSMD0603-010-9V BSMD1812-020-60V BSMD2920-400-30V BSMD0603-010-12V