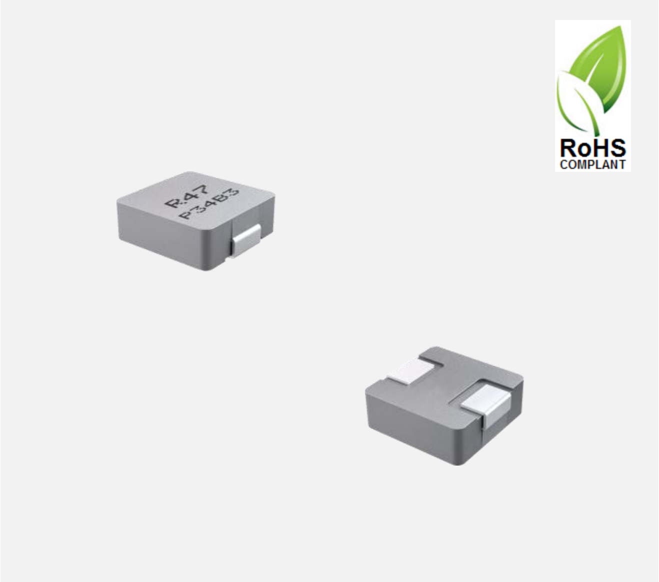
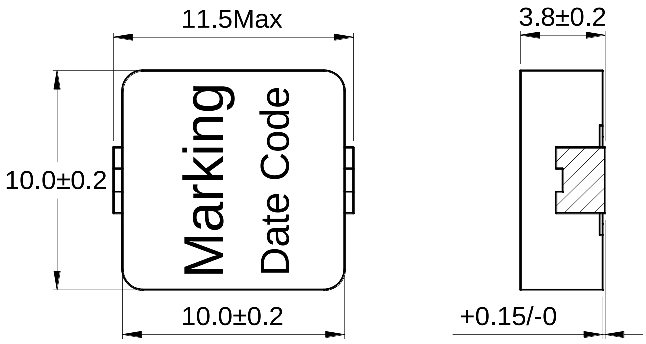
Molding Power Choke
- CSAB1040A Series



Outline:
产品概要

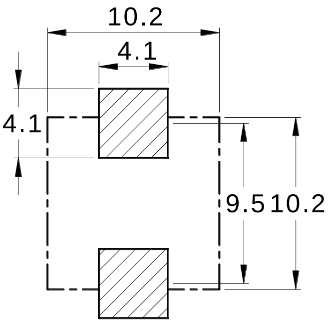
- Magnetic shielded structure: excellent resistance to electro magnetic interference(EMI).
  磁屏蔽结构：抗电磁干扰(EMI)性能强。
- A composite structure, ultra low buzz noise.
  一体成型结构，超低蜂鸣噪音。
- Low loss, high efficiency, wide application frequency.
  低损耗，高效率，应用频率宽。
- Lightweight design, save space, suitable for high density SMT.
  轻薄型设计，节省空间，适合高密度贴装。
- Die-casting by low loss alloy powder: low impedance, small parasitic capacitance.
  低损耗合金粉末压铸：低阻抗，寄生电容小。
- Operating temperature : -40℃ ～ +125℃ (Including coil’s temperature rise)
  工作温度：-40℃ ～ +125℃ (包含线圈发热)

1 Appearance and dimensions (mm)
外形尺寸

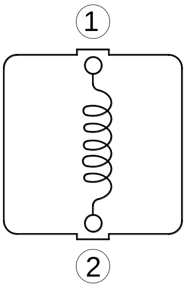


2 Marking
印字标识

3 Reference land pattern (mm)
参考基板尺寸



4 Schematic
原理图



5 Electrical characteristics
电气特性

Part No. 型 号	Inductance (μH) 电感值 ※1	D.C.R. (mΩ) 直流电阻		Saturation current (A) 饱和电流 ※2	Temperature rise current (A) 温升电流 ※3
	±20%	Typical	Max	Typical	Typical
CSAB1040A-R15M	0.15	0.39	0.65	75.0	55.0
CSAB1040A-R22M	0.22	0.67	1.00	48.0	42.0
CSAB1040A-R36M	0.36	1.20	1.50	46.0	31.0
CSAB1040A-R47M	0.47	1.20	1.60	42.0	31.0
CSAB1040A-R56M	0.56	1.70	2.00	33.0	26.5
CSAB1040A-R68M	0.68	1.90	2.40	33.0	25.0
CSAB1040A-1R0M	1.00	2.50	3.30	28.0	21.5
CSAB1040A-1R2M	1.20	3.40	3.90	28.0	18.5
CSAB1040A-1R5M	1.50	3.60	4.20	26.0	18.0
CSAB1040A-2R2M	2.20	6.70	8.00	25.0	13.2
CSAB1040A-3R3M	3.30	10.3	11.8	16.0	10.7
CSAB1040A-4R7M	4.70	12.0	20.0	15.0	9.90
CSAB1040A-5R6M	5.60	17.9	23.0	14.0	8.10
CSAB1040A-6R8M	6.80	20.0	23.5	12.0	7.70
CSAB1040A-8R2M	8.20	22.2	27.0	9.50	7.30
CSAB1040A-100M	10.0	24.7	30.0	9.30	6.90
CSAB1040A-150M	15.0	35.4	45.0	7.00	5.80
CSAB1040A-220M	22.0	54.0	66.0	6.00	4.70
CSAB1040A-330M	33.0	86.0	92.0	5.00	3.70
CSAB1040A-470M	47.0	126	145	4.50	3.10
CSAB1040A-680M	68.0	176	195	3.80	2.60
CSAB1040A-820M	82.0	254	305	3.00	2.20

■ All data is tested based on 25℃ ambient temperature.
所有数据基于环境温度 25℃条件下测试。

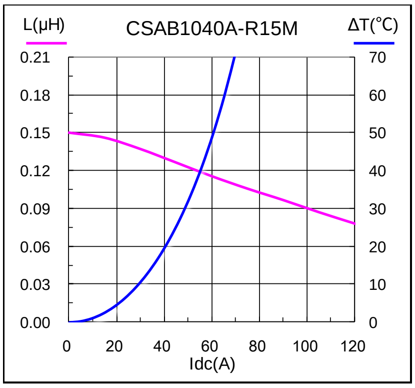
※1 Inductance measure condition at 100kHz, 1V.
电感测试条件为 100kHz, 1V。

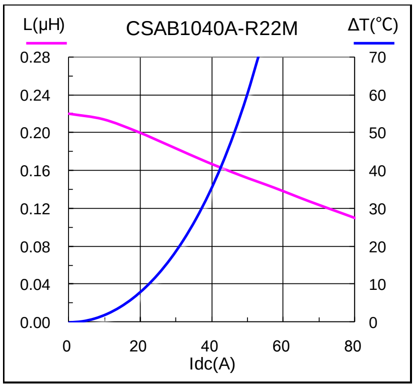
※2 Saturation current：the actual value of DC current when the inductance decrease 30% of its initial value.
饱和电流：电感值下降其初始值的 30%时所加载的实际直流电流值。

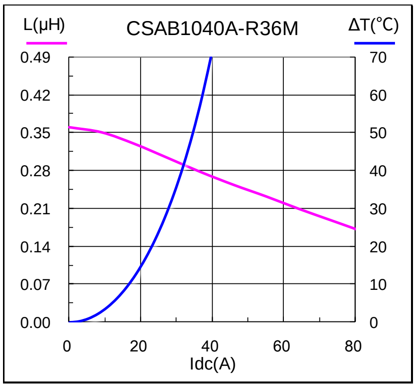
※3 Temperature rise current：the actual value of DC current when the temperature rise is ΔT40℃(Ta=25℃).
温升电流：使产品温度上升到 ΔT40℃时所加载的实际直流电流值(Ta=25℃)。

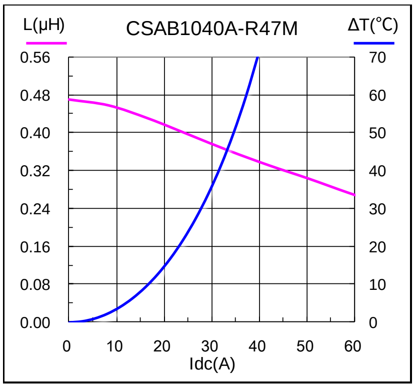
※ Special remind：Circuit design, component placement, PWB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.
特别提醒：线路设计，组件布局，印刷线路板(PWB)尺寸及厚度，散热系统等均会影响产品温度。
请务必在最终应用时，验证产品发热状况。

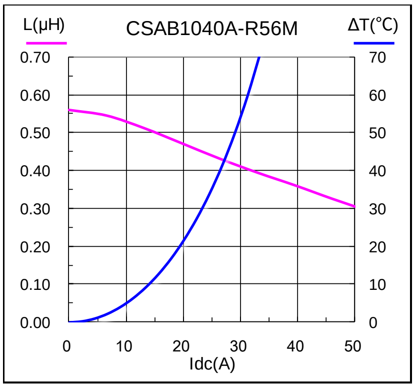
6 Saturation current VS temperature rise current curve
饱和电流 VS 温升电流曲线

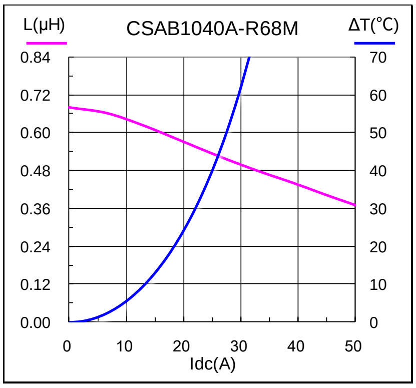


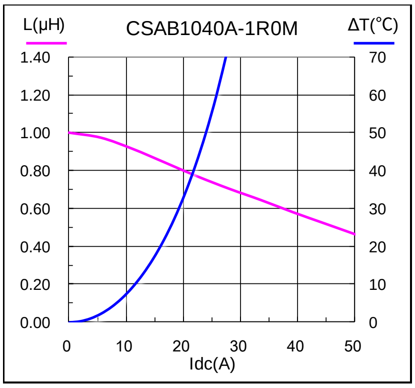


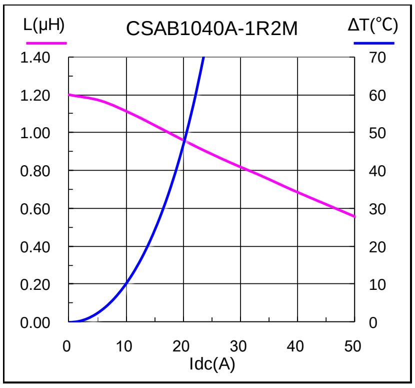


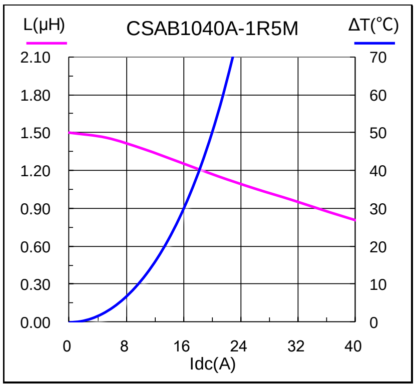


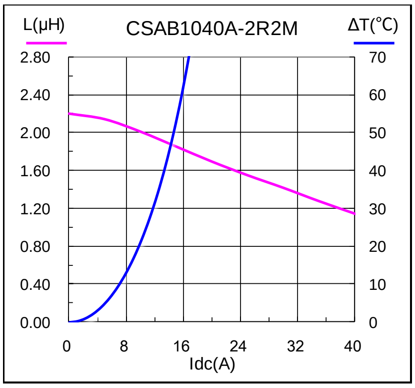


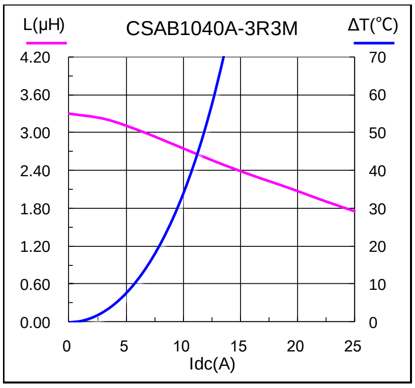


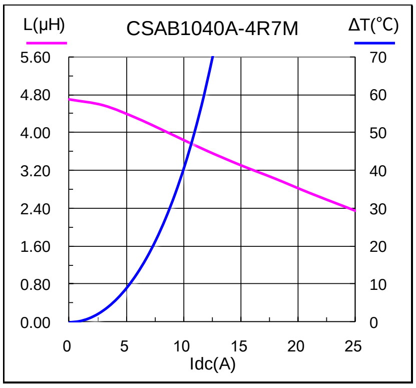


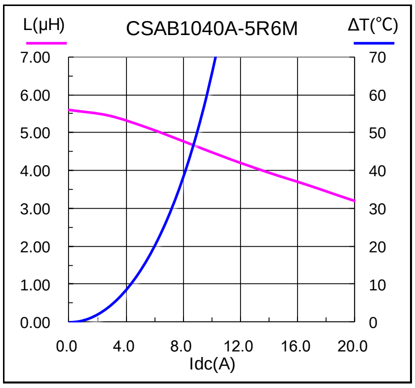


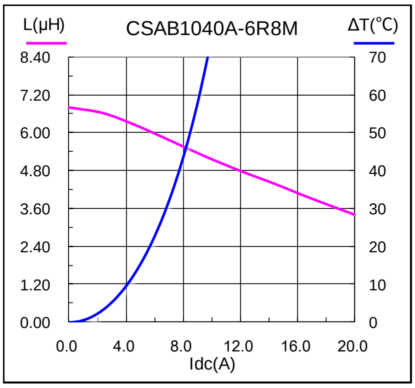


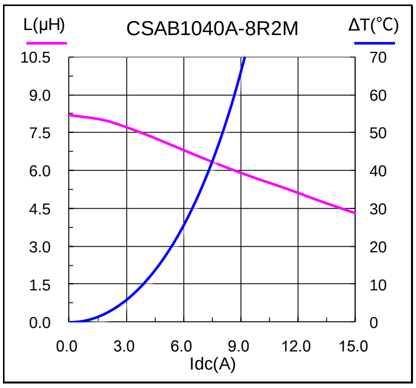


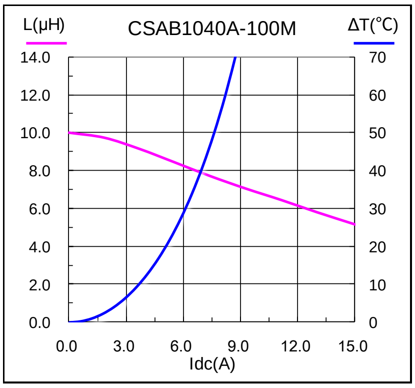


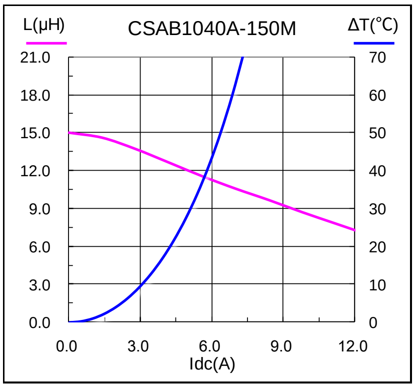


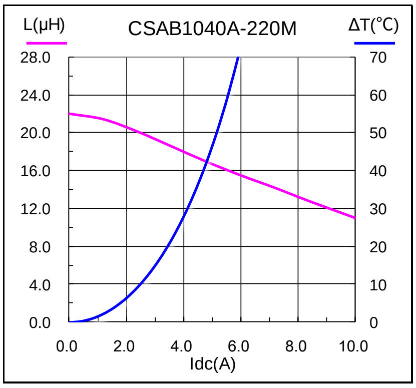

L(μH)
CSAB1040A-5R6M
ΔT(℃)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
70
60
50
40
30
20
10
0
0.0
4.0
8.0
12.0
16.0
20.0
Idc(A)

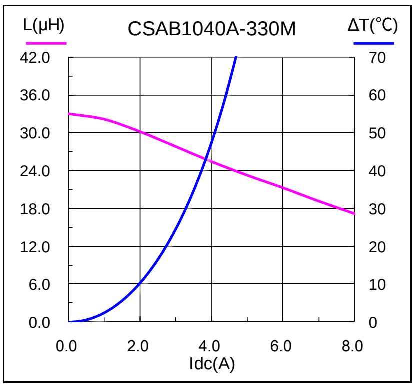

L(μH)
CSAB1040A-6R8M
ΔT(℃)
8.40
7.20
6.00
4.80
3.60
2.40
1.20
0.00
70
60
50
40
30
20
10
0
0.0
4.0
8.0
12.0
16.0
20.0
Idc(A)

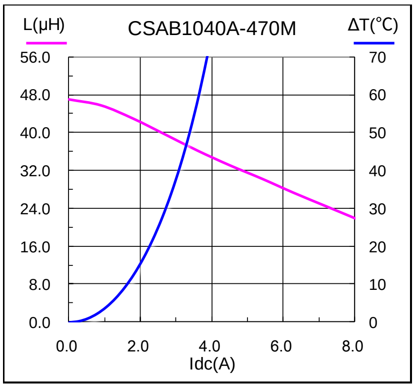

L(μH)
CSAB1040A-8R2M
ΔT(℃)
10.5
9.0
7.5
6.0
4.5
3.0
1.5
0.0
70
60
50
40
30
20
10
0
0.0
3.0
6.0
9.0
12.0
15.0
Idc(A)

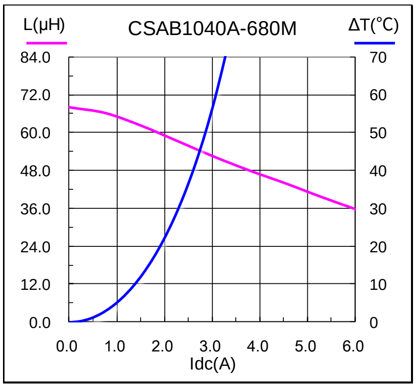

L(μH)
CSAB1040A-100M
ΔT(℃)
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
70
60
50
40
30
20
10
0
0.0
3.0
6.0
9.0
12.0
15.0
Idc(A)

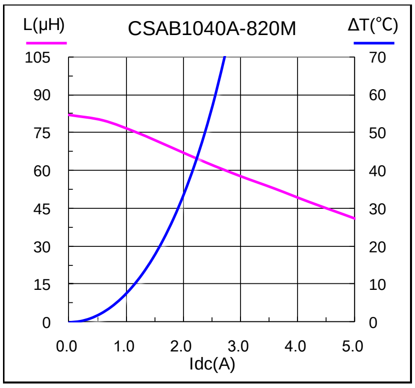

L(μH)
CSAB1040A-150M
ΔT(℃)
21.0
18.0
15.0
12.0
9.0
6.0
3.0
0.0
70
60
50
40
30
20
10
0
0.0
3.0
6.0
9.0
12.0
Idc(A)


L(μH)
CSAB1040A-220M
ΔT(℃)
28.0
24.0
20.0
16.0
12.0
8.0
4.0
0.0
70
60
50
40
30
20
10
0
0.0
2.0
4.0
6.0
8.0
10.0
Idc(A)


L(μH)
CSAB1040A-330M
ΔT(℃)
42.0
36.0
30.0
24.0
18.0
12.0
6.0
0.0
70
60
50
40
30
20
10
0
0.0
2.0
4.0
6.0
8.0
Idc(A)

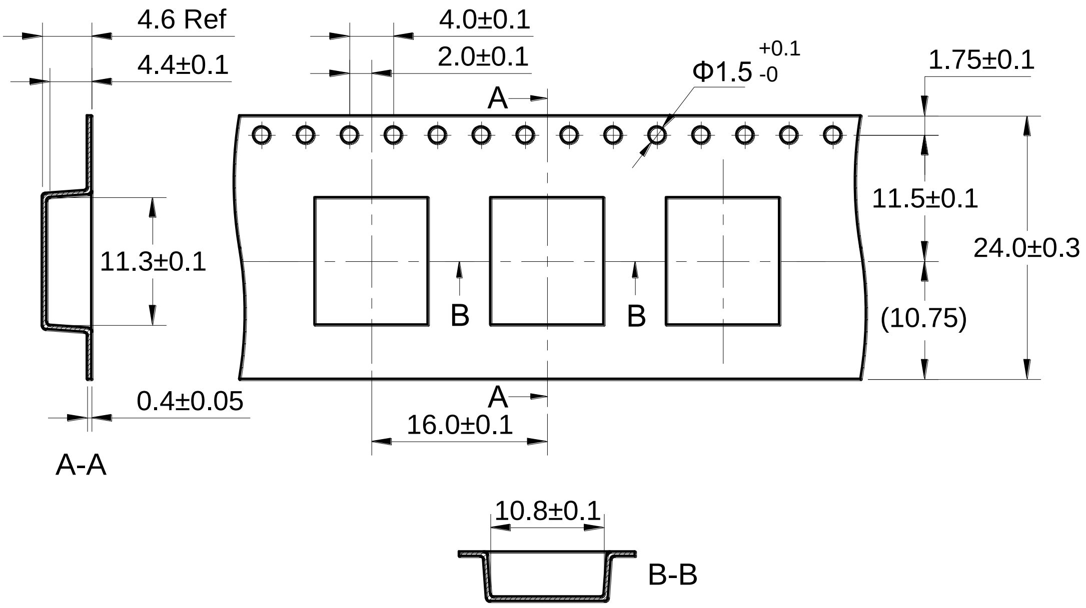

L(μH)
CSAB1040A-470M
ΔT(℃)
56.0
48.0
40.0
32.0
24.0
16.0
8.0
0.0
70
60
50
40
30
20
10
0
0.0
2.0
4.0
6.0
8.0
Idc(A)


L(μH)
CSAB1040A-680M
ΔT(℃)
84.0
72.0
60.0
48.0
36.0
24.0
12.0
0.0
70
60
50
40
30
20
10
0
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Idc(A)


L(μH)
CSAB1040A-820M
ΔT(℃)
105
90
75
60
45
30
15
0
70
60
50
40
30
20
10
0
0.0
1.0
2.0
3.0
4.0
5.0
Idc(A)

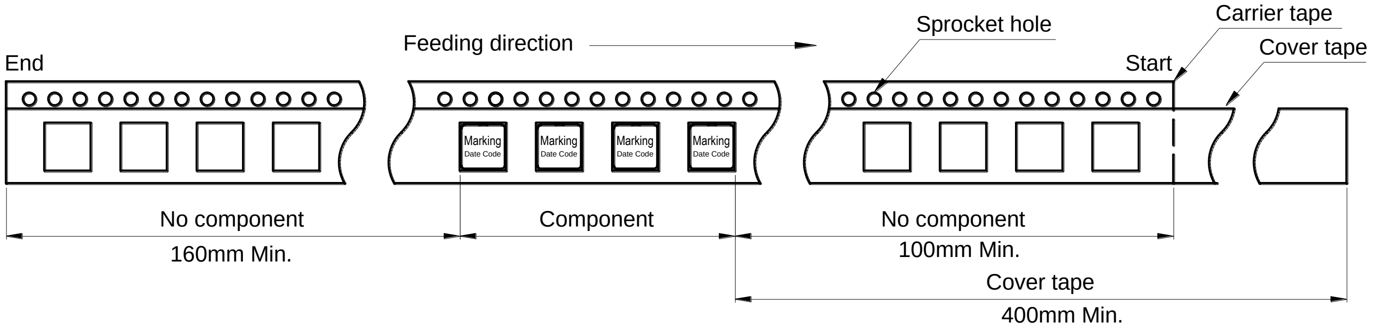
7 Packing specification
包装规格

7.1 Carrier tape dimensions (mm)
载带尺寸



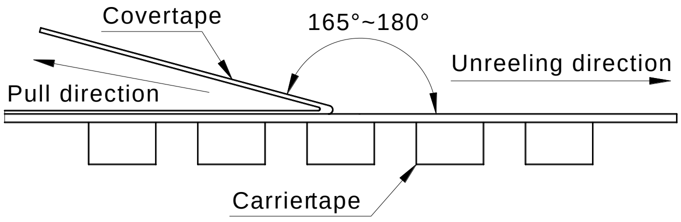
※ Packing is referred to the international standard IEC 60286-3.
包装参照国际标准 IEC 60286-3。

7.2 Tape direction
捆包方向

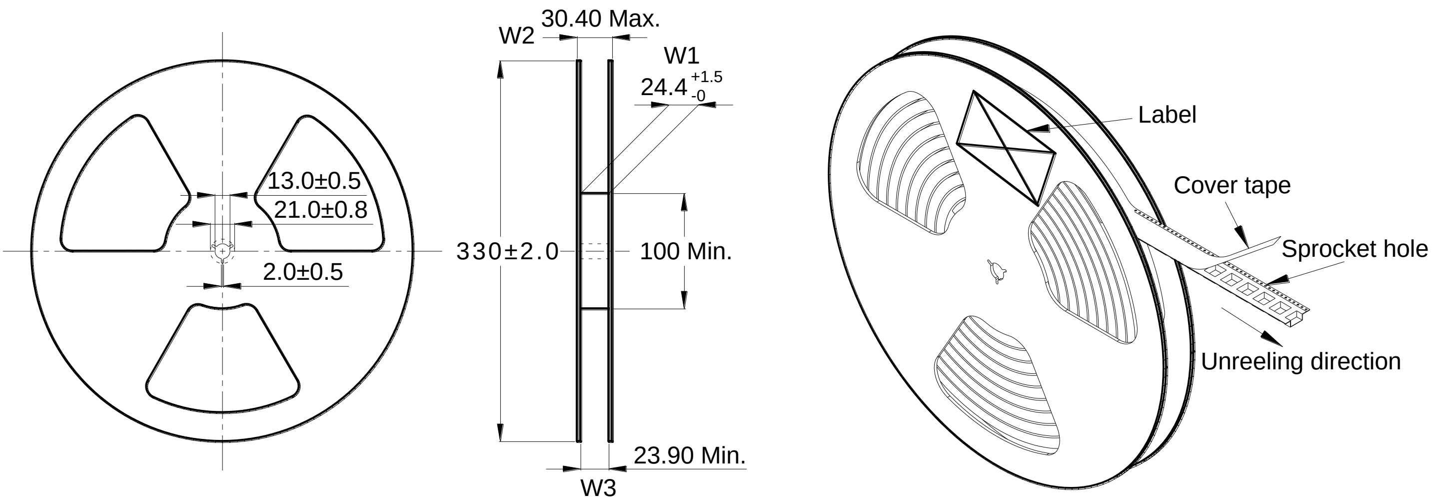


7.3 Cover tape peel off condition
盖带剥离条件

- ■ Cover tape peel force shall be 0.1 to 1.3N.
  盖带剥离力度为 0.1～1.3N。
- ■ Reference peel speed 300±10mm/min.
  参考剥离速度 300±10mm/分钟。



7.4 Reel dimensions (mm)
卷盘尺寸



7.5 Carton dimensions and packing quantity
包装箱尺寸和包装数量

■ Inner Carton：340×340×95mm
内包装盒

■ Out Carton ：355×355×385mm
外包装箱

Product Series 产品系列	Quantity / Reel 数量 / 卷	Inner Carton Quantity 内盒 包装数量	Out Carton Quantity 外箱 包装总数量
CSAB1040A	800pcs	(800×2) = 1600pcs	(1600×3) = 4800pcs

7.6 Label making
标签标识

The following items will be marked on the reel of product label and shipping label.
以下项目将明确标识于产品卷盘标签以及运输标签上。

Production Label
产品标签

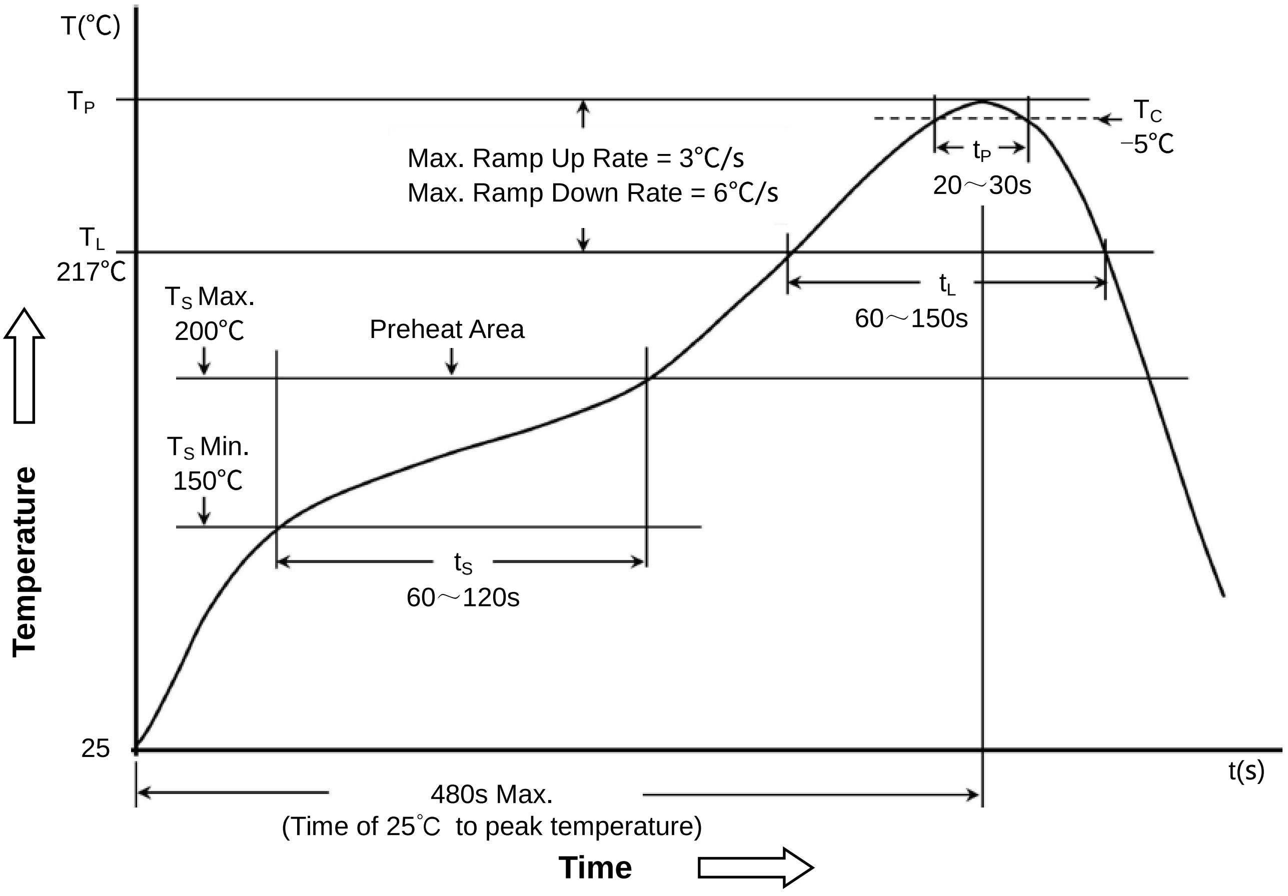
■ Part No.
产品型号
■ Electrical Information
产品电性信息
■ Quantity
数　量
■ Packing No.
包装流水号

Shipping Label
运输标签

■ Customer Name
客户名称
■ Customer Part No.
客户型号
■ Supplier Part No.
供应商型号
■ Supplier Name
供应商名称
■ Country of origin
产品产地

8 Soldering specification
焊接规格

8.1 Reflow profile for SMT components
SMT 回流焊温度曲线



8.2 Classification of peak package body temperature (T$_P$)
封装体峰值温度(T$_P$)分类

	Package Thickness 封装厚度	Package Volume 封装体积		
		<350 mm^3	350～2000 mm^3	>2000 mm^3
PB-Free Assembly 无铅装配	<1.6mm	260℃	260℃	260℃
	1.6～2.5mm	260℃	250℃	245℃
	≥2.5mm	250℃	245℃	245℃

※ Reflow is referred to standard IPC/JEDEC J-STD-020D.
回流焊参照标准 IPC/JEDEC J-STD-020D。