

SMPC系列功率电感 SMPC Series SMD Power Inductors



特征 Features

- 超薄大电流 Low Profile & High Current
- 温度最高125°C High Temperature, Up to 125°C
- 车载AEC-Q200标准 Compliant with AEC-Q200

应用 Applications

- 辅助驾驶 ADAS
- 车载大灯 LED Head Light
- 车载DC/DC转换 Automotive DC/DC Converters

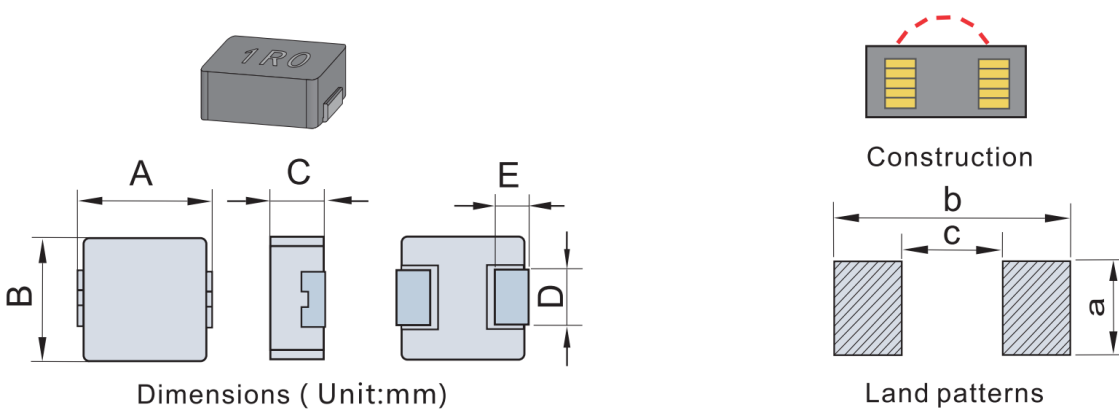


产品规格型号表示方法 How to Order

SMPC0520A - **100** **M** **C**
 (1) (2) (3) (4)

- (1) 系列名称 Series Name
- (2) 电感感值 Inductance(μH)
- (3) 精度误差 Tolerance
- (4) 内部代码 Internal Code

外型尺寸 Dimensions



Type	A	B	C	D	E	a	b	c
SMPC0520A	5.5±0.3	5.2±0.2	1.8±0.3	2.0±0.3	1.1±0.3	2.3 Typ.	6.5 Typ.	2.4 Typ.

性能参数 Electrical Characteristics

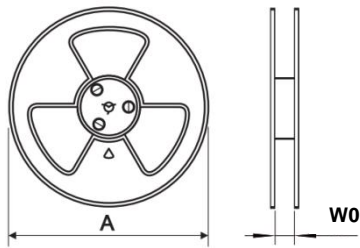
规格型号 Part No.	电感值 Inductance (μH)	直流电阻 R _{DC} (mΩ)		温升电流 I _{rms} (A)	饱和电流 I _{sat} (A)
		Typ.	Max.	Max.	Max.
SMPC0520A-R33MC	0.33±20%	5.8	6.8	15.0	17.1
SMPC0520A-R47MC	0.47±20%	7.5	8.5	10.0	15.5
SMPC0520A-R68MC	0.68±20%	12.0	14.0	8.9	11.2
SMPC0520A-1R0MC	1.0±20%	20.0	25.0	6.0	9.0
SMPC0520A-1R5MC	1.5±20%	26.0	30.0	5.5	8.0
SMPC0520A-2R2MC	2.2±20%	40.0	48.0	5.0	7.0
SMPC0520A-3R3MC	3.3±20%	49.0	58.0	4.5	5.0
SMPC0520A-4R7MC	4.7±20%	66.5	78.0	3.5	4.0
SMPC0520A-6R8MC	6.8±20%	92.5	120.0	2.8	3.4
SMPC0520A-100MC	10.0±20%	147.0	175.0	2.5	3.0
SMPC0520A-150MC	15.0±20%	215.0	250.0	2.0	2.5
SMPC0520A-220MC	22.0±20%	295.0	350.0	1.6	2.0

备注 Remark:

- 所有测试数据均参考18-25°C环境温度
 All test data is referenced to 18-25°C ambient.
- 电感测试条件为用WK3260B或同等设备以100KHz/0.25V测试
 Inductance tested at 100KHz/0.25V with WK3260B LCR Meter or equivalent.
- 饱和电流: 加电流时电感量下降小于或等于30%
 I_{sat}: DC current at which the inductance drops 30% from its value without saturation.
- 温升电流: 加电流时产品温度上升小于等于40°C
 I_{rms}: DC current that causes the temperature rise (ΔT =40°C) from ambient temperature.
- 工作温度 (包括自身发热) : -40°C~+ 125°C
 Operating temperature rang(including coil's self-temperature rise): -40°C~+ 125°C.

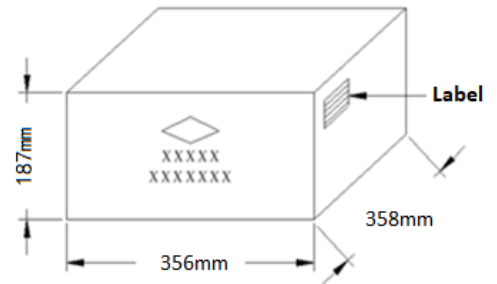
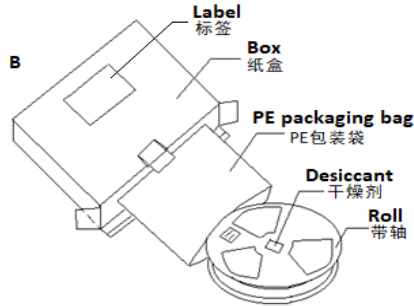
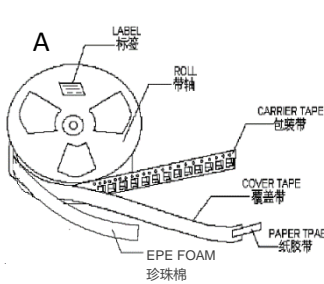
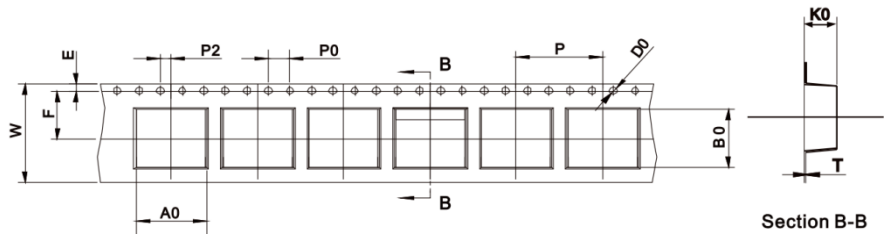
包装材料及规格 Packaging Materials and Specifications

卷轴尺寸图 Reel Size



Reel

包装带尺寸图 Tape Size



Item	A	W0	P	W	D0	A0	B0	K0	T	pcs/Reel
Specification(mm)	330	16.4	8.0	16.0	1.5	5.50	6.20	2.25	0.35	3000

内外箱标识内容 Inside and Outside Box Identification Content

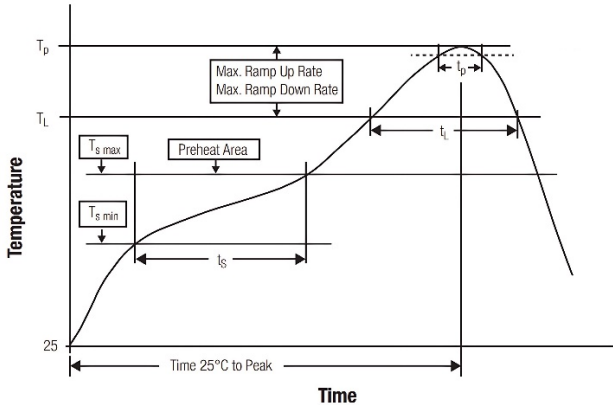
CYGE 创一科技 科技创一 Made in China
<HSF/ROHS>

Customer Name: XXXXXXXX
 P/O: XXXXXXXXXXXXXXXXXXXX
 Customer P/N: XXXXXXXXXXXX
 CYGE P/N: XXXXXXXXXXXX

LOT NO: XXXXXXXXXX DATE: XXXXX QTY: XXXX PCS

匠心致远 追求卓越 感动人心
 Following ingenuity, pursuing excellence, touching hearts

推荐回流焊条件 Recommended Reflow Soldering Conditions



Profile Feature	Lead-Free Assembly
Preheat Temperature Min (T_s min)	150°C
Preheat Temperature Max (T_s max)	200°C
Preheat Time t_s from T_s min to T_s max	60-120 seconds
Average Ramp-Up Rate (T_L to T_p)	3°C /second max.
Liquidous Temperature (T_L)	217°C
Time t_L maintained above T_L (t_L)	60-150 seconds
Peak/Classification Temperature (T_p)	255°C
Time within 5°C of actual peak temperature (t_p)	20-30 second
Ramp-down Rate (T_p to T_L)	6 °C/second max.
Time 25 °C to Peak Temperature	8 minutes max.

储存条件/注意的事项 Storage Conditions/Note Things

- 1、贮存温度、湿度条件 Storage temperature and humidity conditions :
 - 1.1、产品包装与载体: -5°C ~ +40°C, 低于60% RH.
 Product packing with Carrier tape: -5°C ~ +40°C and less than 60% RH.
 - 1.2、单独的产品: -20°C ~ +60°C, 低于60% RH.
 Product alone: -20°C ~ +60°C and less than 60% RH.
- 2、产品在6个月内使用(注意:产品一经拆开包装,须尽快使用).
 Products should be used within 6 months.
 (Note that the product should be used as soon as possible once it is folded) .
- 3、包装材料应保存在空气中不存在氯或硫的地方.
 The packaging material should be kept where no chlorine or sulfur exists in the air.
- 4、不要用手指触摸电极(焊接端子),因为这可能导致焊接能力的下降.
 Do not touch the electrodes (soldering terminals) with fingers as this may lead to deterioration of solderability.
- 5、个别零件强烈建议使用镊子或真空取料机散装搬运,减少磨损和机械冲击.
 The use of tweezers or vacuum pick-ups is strongly recommended for individual components.
 Bulk handling should ensure that abrasion and mechanical shock are minimized.