

## SMC 系列共模线圈

### SMC Series Common Mode Chokes

#### 特征 Features

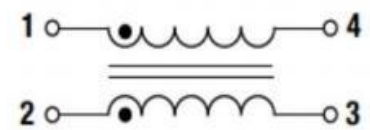
超薄小型化	Low Profile & Small Size
温度最高150°C	High Temperature, Up to 150°C
车载AEC-Q200标准	Compliant with AEC-Q200

#### 应用 Applications

车载通信总线	LIN/CAN/FlexRay BUS
车联网智能终端	T-BOX
共模信号滤波	Common Mode Filtering



#### 电路接线图 Circuit

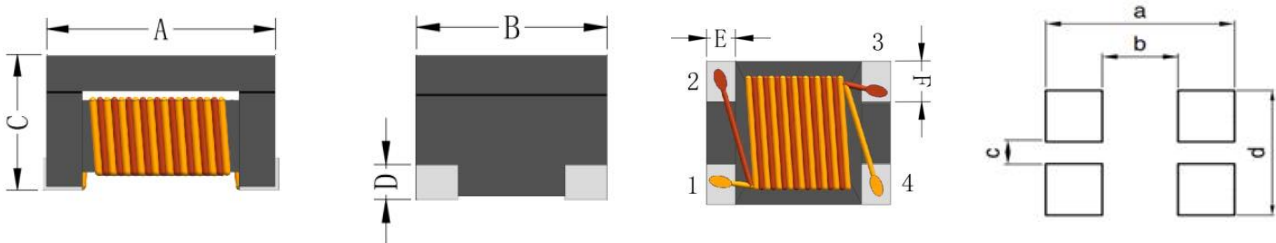


#### 产品规格型号表示方法 How to Order

SMC 1812 B - 101 Y C  
① ② ③ ④ ⑤ ⑥

①	②		③		④	⑤	⑥	
产品代号 Product Code	规格尺寸(L×W×T) Dimensions(mm)		型号规格 Type Code		电感值 Inductance	误差 Tolerance	应用领域 Application	
SMC 系列 SMC Series	1812	4.5×3.2×2.6	B	For CAN/CAN-FD	1R0=1.0μH 100=10μH 101=100μH 102=1000μH	K=10% M=20% P=25% N=30% Y=其他误差	C	车载品 For Automotive.
			E	For Ethernet			T	车载特制品 For Special.

#### 外型尺寸 Dimensions(Unit:mm)



Type Name	A	B	C	D	E	F	a	b	c	d
SMC1812	4.5±0.2	3.2±0.2	2.6±0.2	0.8 Typ.	0.7 Typ.	1.1 Typ.	5.9 Typ.	3.0 Typ.	1.6 Typ.	3.4 Typ.

## 性能参数 Electrical Characteristics

### SMC1812B Series

Part No.	Common Mode Impedance @10MHz (Ω)		Inductance @100KHz,0.1V (uH)	DCR (Ω) Max.	I <sub>dc</sub> (mA) Max.	V <sub>DC</sub> (V)	IR (MΩ) Min.	Withstanding Voltage (Vdc)
	300	600						
SMC1812B-110YC	300	600	11 -30%/+50%	0.5	360	50	10	125
SMC1812B-220YC	500	1200	22 -30%/+50%	0.8	310	50	10	125
SMC1812B-510YC	1000	2800	51 -30%/+50%	1.0	230	50	10	125
SMC1812B-101YC	2000	5800	100 -30%/+50%	2.0	200	50	10	125

### SMC1812E Series

Part No.	Inductance @100KHz,0.1V (uH)	DCR (Ω) Max.	I <sub>dc</sub> (mA) Max.	V <sub>DC</sub> (V)	IR (MΩ) Min.	Withstanding Voltage (Vdc)
SMC1812E-201YC	200 -25%/+50%	4.5	110	20	10	50

### 备注 Remark

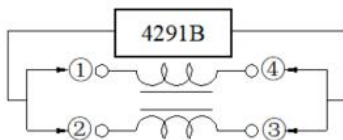
Temperature : 20±2℃

Humidity : 60 to 75% (RH)

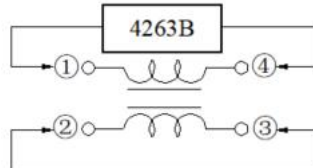
Atmospheric Pressure : 86 to 106 kPa

## 测试设备 Test Equipment

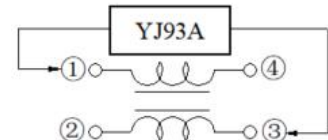
共模阻抗  
Common Mode Impedance



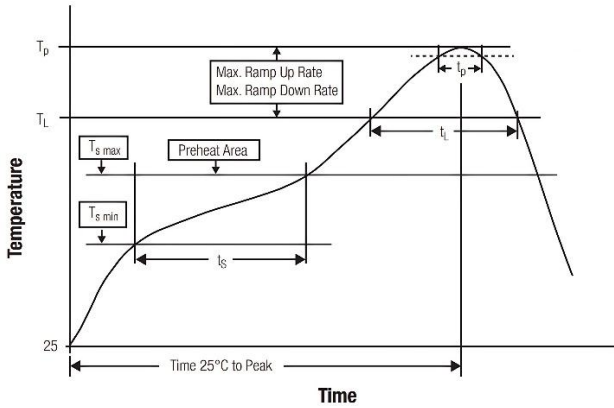
直流电阻  
DC Resistance



绝缘电阻  
Insulation Resistance

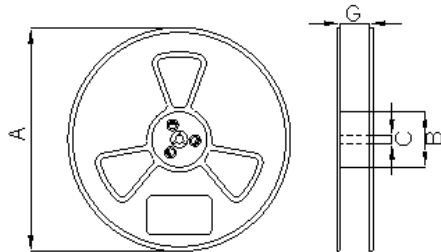


**推荐回流焊条件 Recommended Reflow Soldering Conditions**



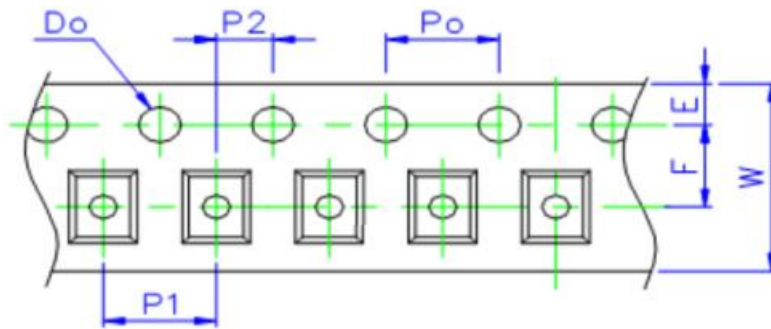
Profile Feature	Lead-Free Assembly
Preheat Temperature Min ( $T_s$ min)	150°C
Preheat Temperature Max ( $T_s$ max)	200°C
Preheat Time $t_s$ from $T_s$ min to $T_s$ max	60-120 seconds
Average Ramp-Up Rate ( $T_L$ to $T_P$ )	3°C /second max.
Liquidous Temperature ( $T_L$ )	217°C
Time $t_L$ maintained above $T_L$ ( $t_L$ )	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.

**包装材料及规格 Packaging Materials and Specifications (mm)**



A	330
B	100
C	13.0
G	13.0

**包装方式及数量 The Packing Method and Quantity (mm)**



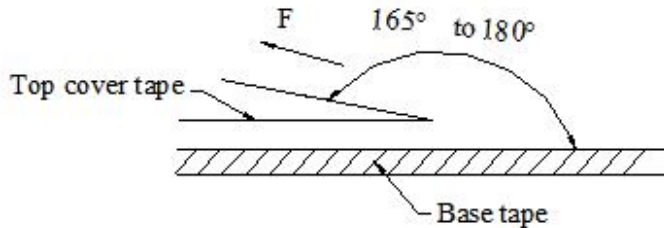
W	E	F	P1	P2	P0	D0
12.0±0.3	1.75±0.1	5.5±0.05	8.0±0.1	2.0±0.1	4.0±0.1	1.5+0.1/-0.0

包装数量 Packaging Quantities: 1500pcs/Reel

## 剥离强度 Peeling Strength

在箭头方向上撕下10克到100克(0.1N到1.0N)的力,剥离速度300mm/MIN以上.

The force tearing off cover 10 to 100 grams (0.1N to 1.0N) in the arrow direction under the following conditions,  
The stripping speed is above 300mm/minute.



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

**CYGE** 创一科技 科技创一  
CYGE TECHNOLOGY TECHNOLOGY FIRST Made in China

Customer Name: <HSF/RoHS>

P/O: 5

Customer P/N:

CYGE P/N:

LOT NO: DATE: QTY:

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

## 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℃~ +40℃, 低于60% RH.  
Product packing with Carrier tape: -5℃~+40℃ and less than 60% RH.
  - 1.2. 单独的产品: -20℃~ +60℃, 低于60% RH.  
Product alone: -20℃~+60℃ 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 solder ability.
5. 个别零件强烈建议使用镊子或真空取料机散装搬运应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.