



深圳市佑驰电子有限公司

Specification for Approval

产品名称: 大电流塑封片式电感

规格型号: HC322522- SERIES

产品编号:

日 期: 2026-06-24

- 1、本承诺书的内容更改需经过双方确认，任一方单独的修改均视为无效。
- 2、本承诺书在送达客户后，请给予承认并即签回，如无签回下订单的，我司有权以此承认书标准生产，并表示购买方默认许可。

核准	审核	制作
	Aaron	Ada

■ 特性 Features

- 本产品电极引脚表面采用无铅镀层。
Lead-free materials is used for the plating on the terminals.
- 产品使用的金属引脚电极，具有可靠的连接性能。
The product uses metal terminals, which realize excellent connection reliability.
- 具有很高的抗热抗湿性、抗机械振动和挤压，适用于表面贴装。
High resistance to heat, humidity, mechanical shocks and presser. Accurate dimensions for automatically surface mounted.
- 对于无铅化回流焊接条件，具有高度的耐热性。
The product has good heat durability that withstands lead-free compatible reflow soldering conditions.

■ 用途 Application

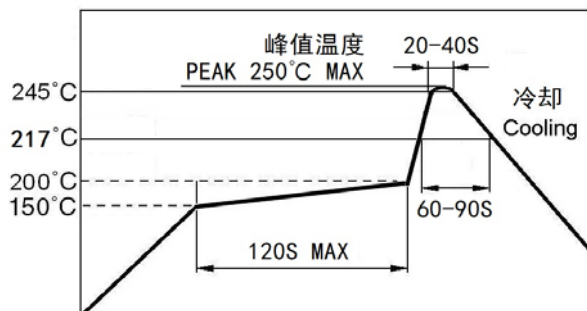
- 可用于计算机、电源、通讯设备、仪器仪表、电视音响等领域的电子电路中。
EM series high reliable wire wound chip inductors for communication, equipment, instrument, video & audio have been developen in response to the trend toward higher density mounting of parts in electric circuits.

■ 使用温度 Operating temperature

温度范围 Range $-40 \sim +125^{\circ}\text{C}$ [包括自身温度上升]

■ 推荐的回流焊接条件

Recommended soldering conditions reflow soldering



■ 产品的型号及尺寸

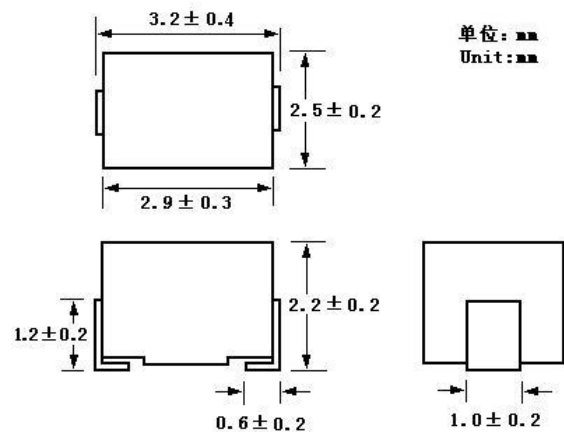
Type Designation & Outer dimensions

(1) 产品系列型号 Type Designation

HC 322522 - 1R0 M
(1) (2) (3) (4)

(2) 外形尺寸 Outer dimensions L×W×T

322522 (1210) 公制 3.2×2.5×2.2mm
英制 0.125×0.100 inch



(3) 电感值 Inductance value

1R0	1μH
220	22μH

(4) 电感允差 Inductance tolerance

J	±5%
K	±10%
M	±20%

■ 单重与包装类型及数量 Piece weight and Packing style and Quantity

单重 Piece weight	49 mg/支 mg/piece
盘式编带 Reel Taping	2000 支/盘 pieces/reel

■ 锡膏与清洗 Soldering paste and Cleaning

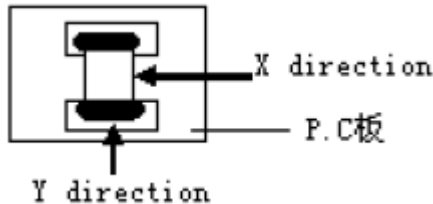
- 推荐使用松香锡膏。 Recommended soldering paste is blended with colophony.
- 清洗条件: 选择环保的清洗剂, 应避免使用强酸和强碱, 时间不超过2分钟。
Cleaning: Avoid strong acid and alkali, 2 minutes Max.

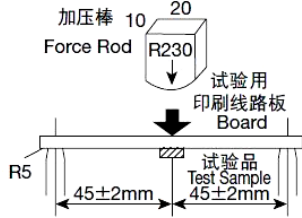
■ 电气特性 Electrical characteristics

电感值 Inductance (μ H)	电感允差 Inductance tolerance	Q 值 min.	测试频率 Test frequency L,Q (MHz)	自谐频率 Self-resonant frequency (MHz)min.	直流电阻 DC resistance (Ω) max.	额定电流 Rated current. (mA)max.	产品规格型号 Part No.
1	$\pm 20\%$	10	7.96	100	0.156	770	HC322522-1R0M
1.5	$\pm 20\%$	10	7.96	80	0.195	580	HC322522-1R5M
2.2	$\pm 20\%$	10	7.96	65	0.260	480	HC322522-2R2M
3.3	$\pm 20\%$	10	7.96	55	0.325	400	HC322522-3R3M
4.7	$\pm 20\%$	10	7.96	45	0.520	320	HC322522-4R7M
6.8	$\pm 20\%$	10	7.96	35	0.650	280	HC322522-6R8M
8.2	$\pm 20\%$	10	7.96	31	0.878	250	HC322522-8R2M
10	$\pm 10\%$	15	2.52	28	1.105	220	HC322522-100K
15	$\pm 10\%$	15	2.52	25	1.69	180	HC322522-150K
22	$\pm 10\%$	15	2.52	20	2.60	145	HC322522-220K
33	$\pm 10\%$	15	2.52	15	3.64	115	HC322522-330K
39	$\pm 10\%$	15	2.52	14	4.50	110	HC322522-390K
47	$\pm 10\%$	15	2.52	13	5.46	105	HC322522-470K
56	$\pm 10\%$	15	2.52	11	7.05	95	HC322522-560K
68	$\pm 10\%$	15	2.52	10	8.45	85	HC322522-680K
82	$\pm 10\%$	15	2.52	9	8.71	80	HC322522-820K
100	$\pm 10\%$	15	0.796	8	9.14	75	HC322522-101K

- 额定电流: 是指施加此电流使电感值变化率比初值低10%或因自身发热而温度上升20℃时两者中的较小者。
Rated current: Value obtained when current flows and the temperature has risen to 20℃ or when DC current flows and the initial value of inductance has fallen by 10%, whichever is smaller
- L, Q 测试设备: HP4285A +16034E, 或 同等设备。 Test equipment L, Q: HP4285A +16034E, or equivalent.
- 自谐频率: HP8753C 网络分析仪。 SRF: HP8753C NETWORK ANALYZER, or equivalent.
- 直流电阻: AX-111A 数字毫欧表, 或同等设备。 DC resistance: AX-111A DIGITAL MILLIOHM METER, or equivalent.

■ 性能 Performance

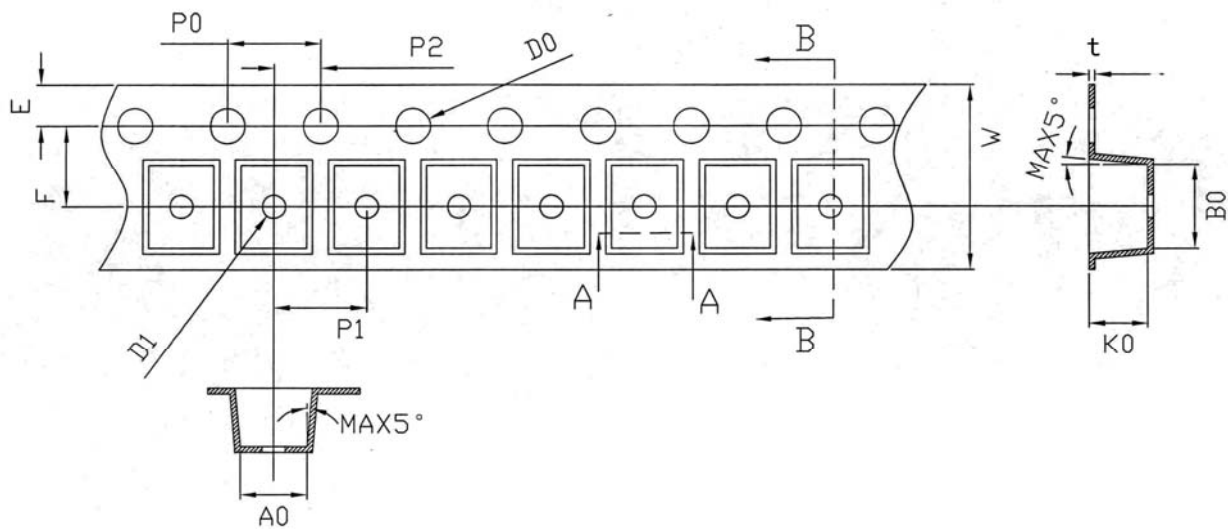
项目 Requirements	试验条件 Test method	性能要求 Characteristics																		
高温试验 High TEMP life test	温度: $125\pm 3^{\circ}\text{C}$; 放置时间: $1000\pm 6\text{Hrs}$; TEMP. $125\pm 3^{\circ}\text{C}$, Load $1000\pm 6\text{Hrs}$.	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.																		
低温试验 Low TEMP life test	温度: $-40\pm 2^{\circ}\text{C}$; 放置时间: $1000\pm 6\text{Hrs}$; TEMP. $-40\pm 2^{\circ}\text{C}$, Load $1000\pm 6\text{Hrs}$	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.																		
高湿试验 Damp heat	温度: $40\pm 2^{\circ}\text{C}$, 相对湿度 $90\sim 95\%\text{RH}$; 放置时间: $1000\pm 6\text{Hrs}$; TEMP. $40\pm 2^{\circ}\text{C}$, Humidity. $90 \sim 95\%\text{RH}$, Load $1000\pm 6\text{Hrs}$	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.																		
热冲击试验 Thermal shock	将试验品焊接到印刷线路板上,按下表所示循环步骤, 10个循环 <table border="1"> <thead> <tr> <th colspan="3">1个循环条件Conditions of 1 cycle</th> </tr> <tr> <th>步骤 Step</th><th>温度 ($^{\circ}\text{C}$) TEMP</th><th>时间 (min) Duration</th></tr> </thead> <tbody> <tr> <td>1</td><td>-40 ± 3</td><td>30 ± 3</td></tr> <tr> <td>2</td><td>常温 Room TEMP</td><td>3以下 Within 3</td></tr> <tr> <td>3</td><td>$+125\pm 2$</td><td>30 ± 3</td></tr> <tr> <td>4</td><td>常温 Room TEMP</td><td>3以下 Within 3</td></tr> </tbody> </table>	1个循环条件Conditions of 1 cycle			步骤 Step	温度 ($^{\circ}\text{C}$) TEMP	时间 (min) Duration	1	-40 ± 3	30 ± 3	2	常温 Room TEMP	3以下 Within 3	3	$+125\pm 2$	30 ± 3	4	常温 Room TEMP	3以下 Within 3	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.
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3	$+125\pm 2$	30 ± 3																		
4	常温 Room TEMP	3以下 Within 3																		
端子强度试验 Adhesion of terminal electrode	试验品焊接到试验用印刷线路板上, 施加力 $9.8\text{N}(1\text{kg})$, 施加时间 $10\pm 2\text{sec}$, 方向: X、Y The test samples shall be soldered to the test board by the reflow. 	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.																		
耐振性 Resistance to vibration	将产品焊接到印刷线路板上,按下示条件进行测试: 振动频率范围: $10\sim 55\text{Hz}$; 振幅: 1.5mm (但加速度不能超过 196m/s^2); 1个循环: 1分钟 ($10\rightarrow 55\rightarrow 10\text{Hz}$); 时间: X、Y、Z方向各2小时 The test samples shall be soldered to the test board by the reflow. Then it shall be submitted to below conditions. Frequency Range: $10\sim 55\text{Hz}$; Total Amplitude : 1.5mm (May not exceed acceleration 196m/s^2); Sweeping Method: $10\rightarrow 55\rightarrow 10\text{Hz}$ for 1min Time: For 2 hours on each X, Y, and Z axis.	外观无显著异常; 电感值变化率: $\pm 10\%$ 以内; Inductance change : Within $\pm 10\%$; No significant abnormality in appearance.																		

抗弯强度试验 Resistance to flexure of substrate	将试验品焊接到试验用印刷线路板上，如图所示在印刷线路板上按箭头方向施加荷重，使其弯曲 2mm 为止。 The test samples shall be soldered to the test board by the reflow. Then apply a force in the direction shown below, flexure: 2mm. 	外观无显著异常，无破损； 电感值变化率：±10%以内； Inductance change : Within ±10%; No significant abnormality in appearance, No damage.
可焊性试验 Solderability	焊锡温度：250±5℃ 浸渍时间：5±0.5ses 浸渍深度：安装端子面浸入。 Solder Temperature:250±5℃ Time: 5±0.5ses All sides of mounting terminal shall be immersed.	端电极新锡覆盖面达95%以上 At least 95% of surface of terminal electrode is covered by new solder.
耐焊接热试验 Resistance to soldering heat	方法1：将端子在250±5℃的焊液中浸入10±1秒后常温放置2小时以上 Method 1: Immerse in the solder of 250±5℃ for 10±1sec, load in room Temperature 2 hours. 方法2：峰值温度 250℃保持 20-40 秒回流焊接两遍试验，放置 30 分钟后检测（Per MIL-STD-202F） Method 2: The test sample shall be exposed to reflow with peak temperature at 250℃ for 20 to 40 seconds, 2 times. Load in room Temperature 30 min. (Per MIL-STD-202F)	外观无显著异常； 电感值变化率：±10%以内； Inductance change : Within ±10%; No significant abnormality in appearance.
温度特性 Temperature characteristic	在-40℃～+125℃环境温度范围内测试，并以20℃时的值为基准计算得出。 步骤1～5中最大电感值偏差变化率： 步骤1的温度：20℃ 步骤2的温度：最低使用温度 步骤3的温度：20℃（基准温度） 步骤4的温度：最高使用温度 步骤5的温度：20℃ Measurement of inductance shall be taken at temperature range within -40℃～+125℃. With reference to inductance value at +20℃., change rate shall be calculated. Change of maximum inductance deviation in step 1 to 5: Temperature at step 1: 20℃ Temperature at step 2: Minimum operating temperature Temperature at step 3: 20℃ (Standard temperature) Temperature at step 4 :Maximum operating temperature Temperature at step 5 :20℃	外观无显著异常； 电感值变化率：±20%以内； Inductance change : Within ±20%; No significant abnormality in appearance.
跌落试验 Dropping	包装 OK 的产品，1m 高/木质地板或水泥地板，三次。 Packing ok product, Dropping 1m over the ground of concrete or cement, 3 times.	外观无显著异常，无破损； 电感值变化率：±10%以内； Inductance change : Within ±10%; No significant abnormality in appearance, No damage.

* 测定条件：如无特别指定时，其温度为 20±15℃，湿度为 65±20%。如在判定上如出现疑问时，可变更为 20±2℃，湿度为 65±5%。
如无特别指定时，试验后在常温、常湿中放置 1 小时以上，2 小时内测定。

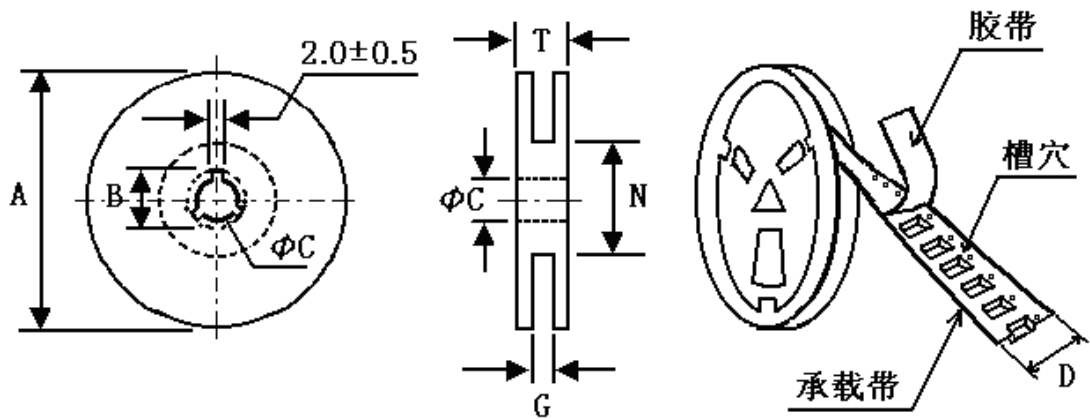
■ 包装方式 Packaging
卷盘包装

- (1)前带空 100 格（400mm），延长加 100mm 美纹胶带；后带空 50 格（200mm）。
(2)包装带尺寸图：mm



E	F	P2	D0	D1	P0	W	P1	A0	B0	K0	t
1.75	3.50	2.0	1.5	1.0	4.0	8.0	4.0	2.88	3.65	2.50	0.26

(3)卷轮尺寸图：mm



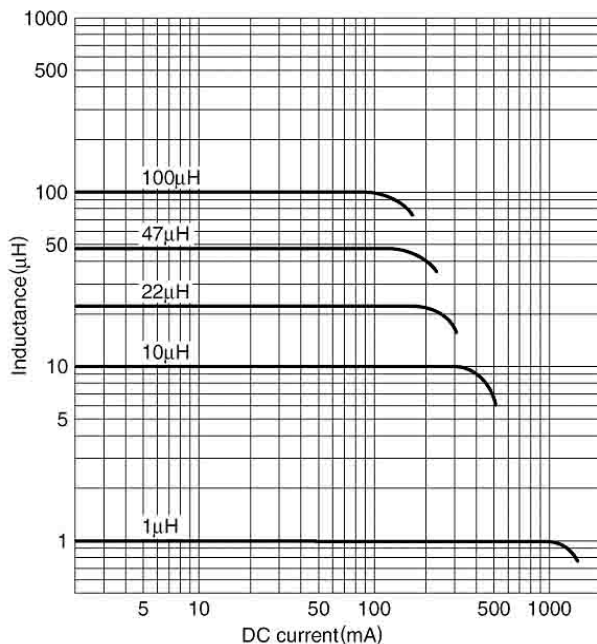
A	B	C	D	G	N	T
178	21	13	8	10 Max	50 Min	14.4 Max

3.包装数量及尺寸 Packing Quantity and dimensions:

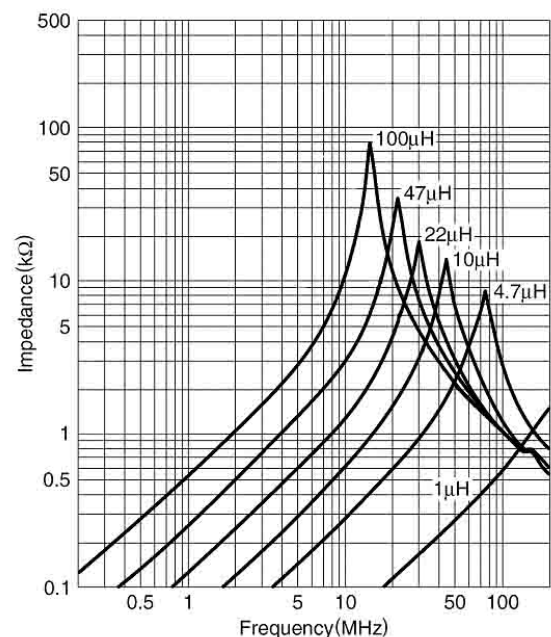
盘包装 Reel	内盒 Inner Box (mm)	外箱 Outer Box (mm)
2000 支/盘 pieces/Reel	12000 支/盒 pieces/Inner Box	120000/240000 支/箱 pieces/Outer Box
7"	185×185×70	380×205×380/380×380×380

■ 特性图 Characteristics

直流叠加特性图



阻抗频率特性图



■ 储存 Storage

储存温度 storage temperature: $-10\sim 40^{\circ}\text{C}$

相对湿度 humidity: 0-80%

最佳保存期 Optimal storage period: 6 个月内 within 6 months

注 Note:

1. 为保证端子电极的可焊性, 请保证产品的包装处于良好状态, 并将本产品贮存于温度 $-10\sim 40^{\circ}\text{C}$ 之间且湿度为 80% 以下的环境中 (推荐环境温度为 30°C 以下)。注意, 即使处于良好的保存环境下, 可焊性也会随时间改变。因此, 请于本公司发货后 6 个月内使用。同时, 如果贮存时间超过 6 个月, 请首先确认其可焊性后再行安装使用。

1. To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.

• Recommended conditions

Ambient temperature : $-10\sim 40^{\circ}\text{C}$

Humidity : Below 80% RH

The ambient temperature must be kept below 30°C . Even under ideal storage conditions, solderability of products electrodes may decrease as time passes.

For this reason, product should be used within 6 months from the time of delivery.

In case of storage over 6 months, solderability shall be checked before actual usage.

2. 保存于高温环境下的产品, 会加速产生因电极端子发生氧化作用而导致可焊性下降。

2. Under a high temperature and humidity environment, problems such as reduced solderability caused by oxidation of terminal electrodes and deterioration of taping/packaging materials may take place.

3. 存储环境不应有酸性或碱性或其他化学腐蚀气体, 且不允许阳光直射。

3. Keep the product away from all acidity or alkalescence or other corrosive gases, and do not allow direct sunlight.