

## ● 产品特征 Features

符合环保要求  
 RoHS compliant, REACH Compliant, HF  
 扁平线绕线结构, 超低内阻  
 Flat wire structure, ultra-low resistance  
 超大电流承载能力, 优异的热稳定性  
 High current carrying capacity; Excellent thermal stability.  
 高抗震设计, 接受定制  
 Seismic-Resistant Engineering with Bespoke Configurations.

## ● 产品应用 Applications

高电流要求驱动电路滤波  
 Drive circuit filtering of high currents require  
 升压或降压电源电路转换器  
 DC-DC conversion for Buck or Boost Converter



## ● 命名方式 Naming method

GEPC F 149080 SB M T 6R1

### 类型/Type

GEPC 产品系列  
 Product Type

### 铜线形状/Conductor Geometry

F 扁平/Flat

### 封装尺寸/Dimension

100055 请参考系列产品尺寸  
 Refer to the dimensions of the series

### 外观代码/Visual identification

SB 高抗震设计  
 High Shock Resistance Series

### 电感公差/Acceptable tolerance

M ±20% N ±30%

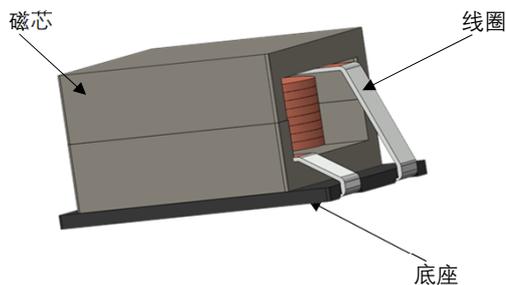
### 包装方式/Packaging Code

T Taping Reel

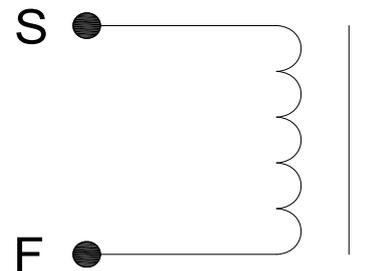
### 标称电感/Nominal inductance value

R80	0.80μH	100	10.0μH
2R2	2.20μH		

## ● 产品结构 Structure

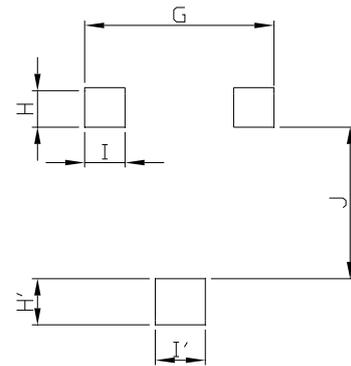
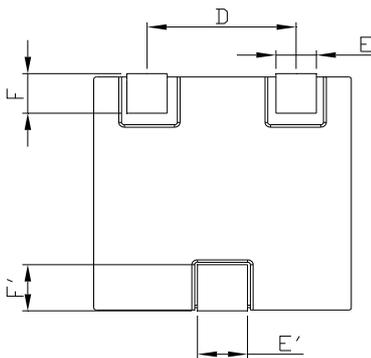
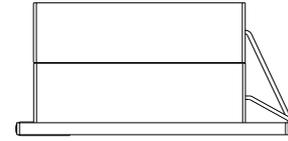
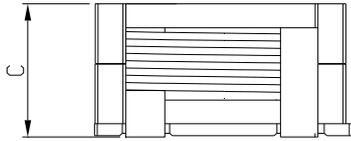
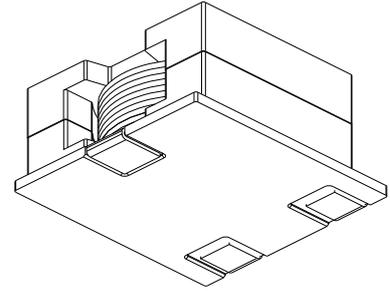
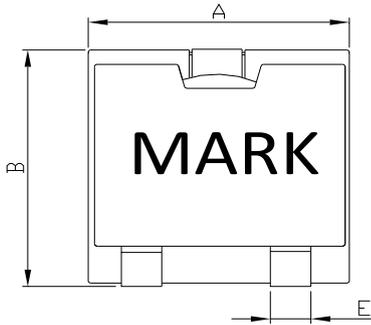


## ● 电气原理 Schematic diagram



●外观尺寸Mechanical Dimensions

(Units:mm)



项目Item 产品系列Part No.	A	B	C	D	E	E'	F	F'	G	H	H'	I	I'	J
GEPCF100055SB	10.4Max	10.6Max	5.5Max	5.5±0.5	2.5Ref	1.5Ref	2.0Ref	2.0Ref	8.2Ref	2.30Typ.	2.30Typ.	2.80Typ.	1.80Typ.	5.8Ref
GEPCF130055SB	13.1Max	13.5Max	5.8Max	7.0±0.5	2.5Ref	2.5Ref	2.0Ref	2.0Ref	9.8Ref	2.30Typ.	2.30Typ.	2.80Typ.	2.80Typ.	8.0Ref
GEPCF130090SB	13.1Max	13.5Max	9.0Max	7.0±0.5	2.5Ref	2.5Ref	2.0Ref	2.0Ref	9.8Ref	2.30Typ.	2.30Typ.	2.80Typ.	2.80Typ.	8.0Ref
GEPCF149080SB	14.9Max	15.4Max	8.2Max	9.0±0.5	2.8Ref	2.5Ref	1.8Ref	1.8Ref	13.0Ref	2.10Typ.	2.10Typ.	3.10Typ.	2.80Typ.	10.0Ref
GEPCF149120SB	14.9Max	15.4Max	12.2Max	9.0±0.5	2.8Ref	2.5Ref	1.8Ref	1.8Ref	13.0Ref	2.10Typ.	2.10Typ.	3.10Typ.	2.80Typ.	10.0Ref
GEPCF170xxxSB	17.3Max	18.8Max	see table	10.9±0.5	2.6±0.3	3.0±0.3	3.0±0.5	3.0±0.5	15.0Ref	4.00Typ.	4.00Typ.	3.10Typ.	3.50Typ.	10.9Ref
GEPCF200xxxSB	19.9Max	18.5Max	see table	13.1±0.5	2.5±0.3	3.0±0.3	3.0±0.5	3.0±0.5	17.0Ref	4.00Typ.	4.00Typ.	3.10Typ.	3.50Typ.	10.7Ref

## ● 产品特性Electrical Specifications

### 说明Illustrate

1.所有参数均在25±3°C条件下测得，电感值测试频率100KHz/0.1V

All of the electrical spescifications are test at 25°C, inductance test at 100KHz/0.1V.

2.温升电流是指在25°C环境下，导致器件表面温度上升约50°C时加载的直流电流值

Irms is the current that caused a approximate 50°C temperature rise from 25°C ambient.

3. 饱和电流是指导致初始电感量下降约30%时的直流电流值

Isat is the DC current at which inductance drop approximately 30% from its value without current.

4. 在最严苛条件下，器件温度（含自身温升）不应超过+125°C。电路设计、元件布局、PCB走线尺寸和厚度、空气流动以及其他散热措施都会影响部件温度，应在最终应用中验证部件温度。

The part temperature(ambient + temp.rise) should not exceed 125°C under worst case operating conditions. Circuit design,component placement,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature.Part temperature should be verified in the end application.

5.由于产品改进，产品规格可能会不定期更改，恕不另行通知。

Due to product improvement, the specifications may be changed discontinuously without advance notice.

### GEPCF100055SB SERIES

规格型号 Part Number	初始电感 L(μH)	DCR(mΩ)		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF100055SBMTR80	0.80±20%	4.55	5.00	16.3	25.6	/
GEPCF100055SBMT1R0	1.00±20%	4.55	5.00	16.3	17.5	/
GEPCF100055SBMT1R3	1.30±20%	4.55	5.00	16.3	17.2	/
GEPCF100055SBMT1R5	1.50±20%	4.55	5.00	16.3	14.5	/
GEPCF100055SBMT2R2	2.20±20%	4.55	5.00	16.3	10.0	/
GEPCF100055SBMT1R8	1.80±20%	6.36	7.00	15.0	14.3	/
GEPCF100055SBMT3R2	3.20±20%	6.36	7.00	15.0	8.50	/
GEPCF100055SBMT2R5	2.50±20%	7.73	8.50	12.0	12.1	/
GEPCF100055SBMT4R3	4.30±20%	7.73	8.50	12.0	7.00	/
GEPCF100055SBMT2R0	2.00±20%	9.09	10.0	11.5	16.2	/
GEPCF100055SBMT4R0	4.00±20%	9.09	10.0	11.5	8.80	/
GEPCF100055SBMT5R7	5.70±20%	9.09	10.0	11.5	6.00	/

### GEPCF130055SB SERIES

规格型号 Part Number	初始电感 L(μH)	DCR(mΩ)		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF130055SBMTR33	0.33±20%	0.91	1.00	18.0	43.0	/
GEPCF130055SBMTR65	0.65±20%	2.27	2.50	16.0	28.0	/
GEPCF130055SBMT1R0	1.00±20%	2.73	3.00	13.0	33.5	/
GEPCF130055SBMT1R8	1.80±20%	2.73	3.00	13.0	20.0	/
GEPCF130055SBMT2R7	2.70±20%	2.73	3.00	13.0	14.0	/
GEPCF130055SBMT3R3	3.30±20%	5.91	6.50	9.40	14.0	/
GEPCF130055SBMT4R0	4.00±20%	5.91	6.50	9.40	13.0	/
GEPCF130055SBMT4R7	4.70±20%	5.91	6.50	9.40	12.0	/
GEPCF130055SBMT6R0	6.00±20%	5.91	6.50	9.40	9.50	/
GEPCF130055SBMT8R0	8.00±20%	10.0	11.0	7.60	9.00	/
GEPCF130055SBMT100	10.0±20%	10.0	11.0	7.20	7.50	/

### GEPCF130090SB SERIES

规格型号 Part Number	初始电感 L(μH)	DCR(mΩ)		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF130090SBMT100	10.0±20%	13.6	15.0	9.20	13.2	/
GEPCF130090SBMT150	15.0±20%	13.6	15.0	9.20	8.60	/
GEPCF130090SBMT220	22.0±20%	21.0	23.1	7.70	7.36	/
GEPCF130090SBMT330	33.0±20%	21.0	23.1	7.70	4.76	/
GEPCF130090SBMT470	47.0±20%	21.0	23.1	7.70	3.20	/

**GEPCF149080SB SERIES**

规格型号 Part Number	初始电感 L( $\mu$ H)	DCR(m $\Omega$ )		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF149080SBNTR40	0.40 $\pm$ 20%	1.09	1.20	23.0	66.0	/
GEPCF149080SBMTR90	0.90 $\pm$ 20%	1.36	1.50	21.5	45.0	/
GEPCF149080SBMT1R5	1.50 $\pm$ 20%	1.82	2.00	20.0	34.0	/
GEPCF149080SBMT2R4	2.40 $\pm$ 20%	2.91	3.20	17.5	28.0	/
GEPCF149080SBMT3R4	3.40 $\pm$ 20%	4.55	5.00	16.0	23.0	/
GEPCF149080SBMT4R7	4.70 $\pm$ 20%	5.45	6.00	12.5	19.0	/
GEPCF149080SBMT6R1	6.10 $\pm$ 20%	7.09	7.80	11.0	18.5	/
GEPCF149080SBMT7R7	7.70 $\pm$ 20%	9.00	9.90	10.0	15.5	/
GEPCF149080SBMT9R5	9.50 $\pm$ 20%	12.1	13.3	8.50	14.0	/
GEPCF149080SBMT100	10.0 $\pm$ 20%	9.00	9.90	10.0	11.5	/
GEPCF149080SBMT120	12.0 $\pm$ 20%	12.1	13.3	8.50	10.0	/
GEPCF149080SBMT470	47.0 $\pm$ 20%	24.5	27.0	2.50	3.00	/

**GEPCF149120SB SERIES**

规格型号 Part Number	初始电感 L( $\mu$ H)	DCR(m $\Omega$ )		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF149120SBMT4R7	4.70 $\pm$ 20%	4.09	4.50	13.0	18.4	/
GEPCF149120SBMT6R1	6.10 $\pm$ 20%	4.91	5.40	12.5	16.4	/
GEPCF149120SBMT7R7	7.70 $\pm$ 20%	6.91	7.60	10.3	14.8	/
GEPCF149120SBMT100	10.0 $\pm$ 20%	7.64	8.40	9.60	13.1	/
GEPCF149120SBMT120	12.0 $\pm$ 20%	8.91	9.80	9.00	11.8	/
GEPCF149120SBMT140	14.0 $\pm$ 20%	10.3	11.3	8.30	10.9	/
GEPCF149120SBMT220	22.0 $\pm$ 20%	10.3	11.3	8.30	6.40	/
GEPCF149120SBMT150	15.0 $\pm$ 20%	10.4	11.4	8.00	9.50	/
GEPCF149120SBMT220	22.0 $\pm$ 20%	12.0	13.2	7.00	8.00	/
GEPCF149120SBMT330	33.0 $\pm$ 20%	18.5	20.4	6.00	6.50	/
GEPCF149120SBMT470	47.0 $\pm$ 20%	27.3	30.0	3.50	5.00	/

**GEPCF170xxxSB SERIES**

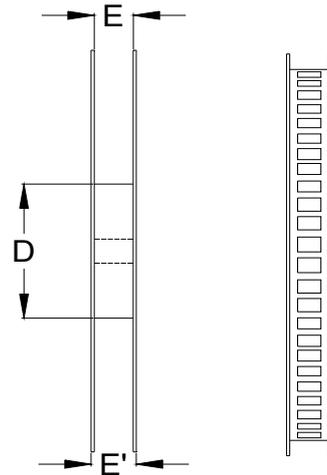
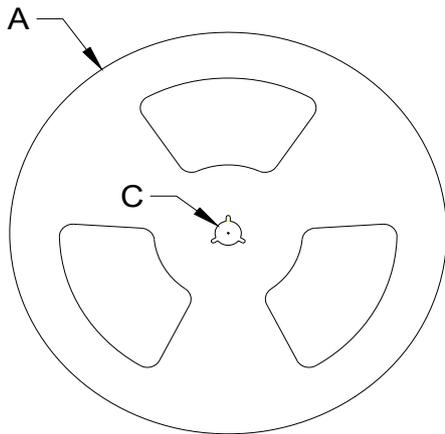
规格型号 Part Number	初始电感 L( $\mu$ H)	DCR(m $\Omega$ )		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF170080SBMT1R0	1.00 $\pm$ 20%	1.05	1.15	36.0	34.0	8.00
GEPCF170085SBMT1R5	1.50 $\pm$ 20%	1.45	1.60	30.0	37.0	8.70
GEPCF170095SBMT2R2	2.20 $\pm$ 20%	1.91	2.10	26.8	34.0	9.60
GEPCF170100SBMT3R3	3.30 $\pm$ 20%	2.36	2.60	25.0	28.0	10.3
GEPCF170100SBMT4R7	4.70 $\pm$ 20%	2.36	2.60	25.0	18.6	10.3
GEPCF170085SBMT6R8	6.80 $\pm$ 20%	6.18	6.80	14.4	15.5	8.70
GEPCF170085SBMT100	10.0 $\pm$ 20%	7.18	7.90	13.0	12.2	8.70
GEPCF170095SBMT150	15.0 $\pm$ 20%	10.1	11.1	11.7	12.6	9.60
GEPCF170100SBMT200	20.0 $\pm$ 20%	12.0	13.3	10.0	11.3	10.3
GEPCF170110SBMT300	30.0 $\pm$ 20%	15.0	16.5	8.50	9.20	11.3

**GEPCF200xxxSB SERIES**

规格型号 Part Number	初始电感 L( $\mu$ H)	DCR(m $\Omega$ )		温升电流 Irms(A)	饱和电流 Isat(A)	table
		典型值Typ.	最大值Max.			
GEPCF200080SBMT1R0	1.00 $\pm$ 20%	0.99	1.09	36.3	46.6	8.00
GEPCF200090SBMT1R5	1.50 $\pm$ 20%	1.41	1.55	30.2	48.1	9.00
GEPCF200095SBMT2R2	2.20 $\pm$ 20%	1.88	2.07	27.2	43.6	9.60
GEPCF200100SBMT3R3	3.30 $\pm$ 20%	2.35	2.59	25.1	35.1	10.6
GEPCF200100SBMT4R7	4.70 $\pm$ 20%	2.35	2.59	25.1	25.5	10.6
GEPCF200080SBMT6R8	6.80 $\pm$ 20%	7.95	8.74	12.7	21.3	8.00
GEPCF200080SBMT100	10.0 $\pm$ 20%	9.20	10.1	11.7	15.8	8.00
GEPCF200090SBMT150	15.0 $\pm$ 20%	11.5	12.7	10.7	14.7	9.00
GEPCF200090SBMT200	20.0 $\pm$ 20%	14.1	15.5	9.50	13.5	9.60
GEPCF200100SBMT300	30.0 $\pm$ 20%	17.8	19.6	8.60	11.5	10.6

## ● 包装规范 Package Specification

### 卷盘 Reel



项目 Item	A	C	D	E	E'
产品系列 Part No.	(mm)	(mm)	(mm)	(mm)	(mm)
GEPCF100055SB	330	13.0	100	24.5	29.0
GEPCF130055SB	330	13.0	100	24.5	29.0
GEPCF130090SB	330	13.0	100	24.5	29.0
GEPCF149080SB	330	13.0	100	24.5	29.0
GEPCF149120SB	330	13.0	100	24.5	29.0
GEPCF170xxxSB	330	13.0	100	32.5	36.5
GEPCF200xxxSB	330	13.0	100	32.9	36.9

### 载带 Carrier tape

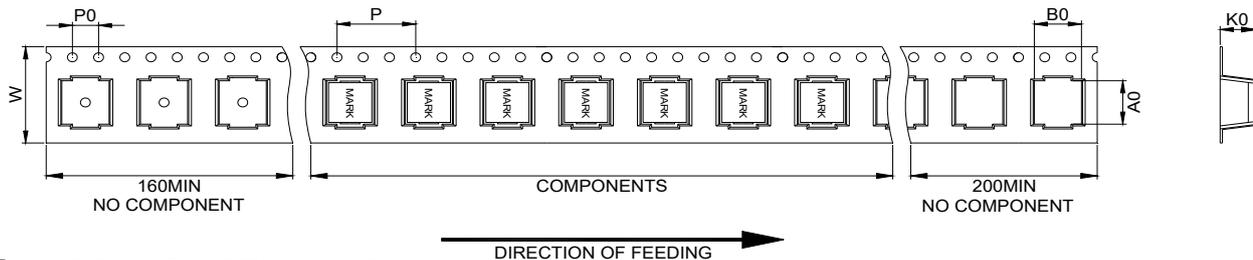


图1: GEPCF100055SG~GEPCF149120SB

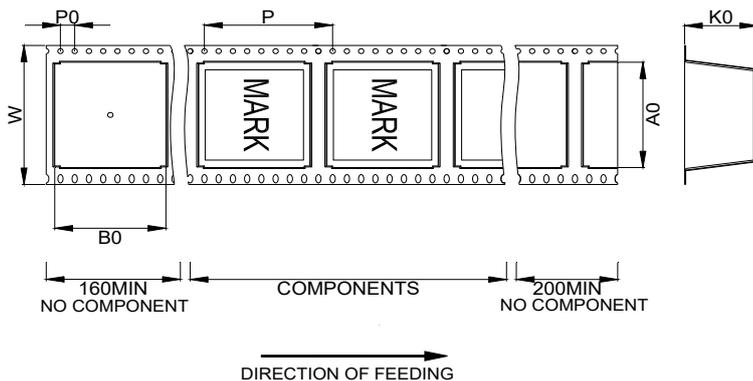


图2: GEPCF170xxxSB~GEPCF200xxxSB

项目 Item	A0	B0	K0	P0	P	W	QTY.
产品系列 Part No.	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(PCS/REEL)
GEPCF100055SB	11.0	10.8	5.60	4.00	16.0	24.0	700 Ref.
GEPCF130055SB	13.8	13.5	5.80	4.00	16.0	24.0	500 Ref.
GEPCF130090SB	13.8	13.5	9.20	4.00	20.0	24.0	300 Ref.
GEPCF149080SB	15.4	15.6	8.20	4.00	20.0	24.0	350 Ref.
GEPCF149120SB	15.4	15.6	12.2	4.00	20.0	24.0	250 Ref.
GEPCF170xxxSB	19.0	17.5	10.5	4.00	28.0	32.0	200 Ref.
GEPCF200xxxSB	19.0	17.5	10.5	4.00	28.0	32.0	200 Ref.

## ● 可靠性测试要求 Reliability test requirements

序号 No.	试验项目 Test Item	参考标准 Reference Standard	试验方法 Test Method	测试数量 Quantity
1	试验前后电气特性测试 Measure electrical characteristics before and after test	产品规格书 Specification	参照产品规格书 Refer to the specification	所有认证的产品 All of certified products
2	外观尺寸 External dimension	/	参照产品规格书 Refer to the specification	10Pcs
3	预处理 Pretreatment	/	3次模拟回流焊, 外观和电气性能符合规格书要求。 After 3 times reflow, external and electrical characteristics also meet to the specification	30Pcs
4	印字检查 Check the printing	/	3M 胶纸进行粘附试验, 粘 5 次后再进行检查, 无外观不良, 产品印字无掉缺、清晰可读 Use 3M adhesive paper adhesion test, stick 5 times and then check, no bad appearance, product printing without missing, clear and readable	10Pcs
5	寿命试验 Operating life test	MIL-STD-202G method 108	85°C 环境下, 加载额定电流, 持续 1000 小时, 产品外观、电性符合规格要求 At 85°C, the rated current is loaded for 1000 hours, the appearance and electrical characteristics meet the specifications	30Pcs
6	恒定湿热试验 Humidity Bias	MIL-STD-202G method 103	温度: 85°C/湿度: 85% RH, 持续 1000 小时, 累计腐蚀面积小于 10%, 产品外观、电性符合规格要求 85°C & 85% RH, lasting 1000 hours, cumulative corrosion area is less than 10%, the appearance and electrical characteristics meet the specifications	30Pcs
7	冷热冲击试验 Temperature shock	MIL-STD-202G method 107	低温: -40°C/高温: 125°C, 停留时间: 15 分钟, 转换时间: 10 秒钟, 冲击次数: 100 次, 产品外观、电性符合规格要求 -40°C & 125°C, residence time: 15 minutes, conversion time: 10 seconds, impact times: 100 times, product appearance, electrical characteristics meet to the specifications	30Pcs
8	高温存储 High temperature storage	MIL-STD-202G method 108	125°C 或 产品最高工作温度, 1000 小时, 产品外观、电性符合规格要求 At 125°C or the maximum working temperature of the product, 1000 hours, the appearance and electrical characteristics meet the specifications	30Pcs
9	低温储存 Low temperature storage	IEC68-2-1	-40°C 或 产品最低工作温度, 1000 小时, 产品外观、电性符合规格要求 At -40°C or the minimum working temperature of the product, 1000 hours, the appearance and electrical characteristics meet the specifications	30Pcs
10	振动试验 Vibration	MIL-STD-202, method 204	加速度: 10 G, 频率: 10 ~ 55 ~ 10 Hz, X、Y、Z 三个方向振动, 每个方向 12 次, 每个方向振动时间: 20 分钟, 产品外观、电性符合规格要求 Acceleration: 10 G, frequency: 10 ~ 55 ~ 10 Hz, X, Y, Z three directions vibration, each direction 12 times, each direction vibration time: 20 minutes, the product appearance, electrical requirements meet the specifications	10Pcs
11	可焊性试验 Solderability	J-STD-002	蒸汽老化试验 8 小时, 助焊剂活性: 0 级, 温度: 245°C ± 5°C, 50 倍放大镜下观察, 上锡面积大于等于 95% Steam aging test for 8 hours, flux activity: 0, temperature: 245°C ± 5°C, observation under 50 times magnifying glass, tin area greater than or equal to 95%	10Pcs

## ● 可靠性测试要求 Reliability test requirements

序号 No.	试验项目 Test Item	参考标准 Reference Standard	试验方法 Test Method	测试数量 Quantity
12	端子强度试验 Terminal strength	EIA-945	1.大于 0805 封装尺寸 (20.32mm*12.7mm) , 1.0kgf/60±5s Larger than 0805 package size (20.32mm*12.7mm), 1.0kgf/60±5s 2.小于 0805 封装尺寸 (20.32mm*12.7mm) , 0.5kgf/60±5s Less than 0805 package size (20.32mm*12.7mm), 0.5kgf/60±5s	10Pcs
13	盐雾试验 Salt spray test	EIA-364-26B ITEM B GB/T6461-2002	盐雾浓度: 5%±1%, 试验温度: 35°C±2°C, PH 值: 6.5~7.2, 时间:24、48 小时各 1 组, 产品取出后, 在温水洗去盐渍, 常温下自然风干 1 小时, 再进行检查: 24 小时后, 按GB/T6461-2002 标准 A~B 级外观允收; 48 小时后, 按GB/T6461-2002 标准 A~E 级外观允收 Salt spray concentration: 5%±1%, test temperature: 35°C±2°C, PH: 6.5~7.2, time :24/48 hours each group, after taking out the product, wash the salt in warm water, natural air dry for 1 hour at normal temperature, and then check: After 24 hours, according to GB/T6461-2002 standard A ~ B appearance acceptable; After 48 hours, according to GB/T6461-2002 standard A to E appearance acceptable	10Pcs
14	包装跌落试验 Package drop test	ISTA 2A	试验条件: 1~9kg→76cm 9~18kg→61cm 18~27kg→46cm 27~45kg→30cm 试验方法: 外观、电性合格的一整箱产品按要求包装好, 根据重量相对应的高度按一角三棱六面自由落地的方式跌落 10 次。 试验要求: 包装有无破损; 产品外观、电性符合规格要求 Test method: A whole box of products with qualified appearance and electrical properties should be packed according to the requirements and dropped 10 times according to the height corresponding to the weight by the way of free fall on one corner, three edges and six sides. Test requirements: whether the packaging is damaged; The appearance and electrical properties of the product meet the specifications	1Carton