

产品承认书

PRODUCT APPROVED SHEET

客户名称

CUSTOMER NAME: _____

产品名称

PRODUCT NAME: _____ 功率电感 POWER INDUCTOR

产品型号

PRODUCT MODEL: _____ NLPP

客户料号

CUSTOMER P/N: _____

送样日期

SAMPLE DATE: _____

供 应 商

SUPPLIER: _____ 南京南山半导体有限公司 NSCN SEMICONDUCTOR CO., LTD.

※ 本公司承诺所销售产品的品质与所送样品一致, 并与附件所录参数相符。

We promise our products conform to the sample furnished in quality, and match with the parameters in the attachment.

※ 若对产品的品质有特殊要求, 请与本公司销售工程师联系。

In case of any special requirement on the quality, please feel free to contact our sales engineers.

※ 感谢您给予本公司承认的机会, 烦请将此表寄回本公司便于存档。

Thank you for giving the opportunity for the sample approval, please send this form back to the company for archiving.

公司确认 COMPANY APPROVAL			客户确认 CUSTOMER APPROVAL		
编写 PREPARED	审核 CHECKED	批准 APPROVED	检验 VERIFIED	审核 CHECKED	批准 APPROVED
公司签章 CHOP			公司签章 CHOP		

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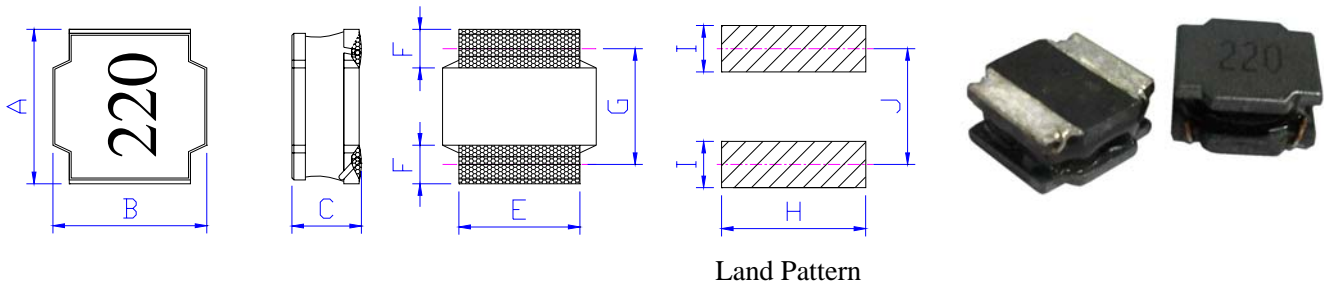
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1 外形尺寸与实物图片 Dimension & Picture:

单位 Unit: mm



系列 Series	A	B	C	E (Typ.)	F (Typ.)	G (Typ.)	H (Typ.)	I (Typ.)	J (Typ.)
NLPP3010	3.0±0.2	3.0±0.2	1.0Max	2.5	0.9	1.9	2.7	0.8	2.2
NLPP3012	3.0±0.2	3.0±0.2	1.2Max	2.5	0.9	1.9	2.7	0.8	2.2
NLPP3015	3.0±0.2	3.0±0.2	1.5Max	2.5	0.9	1.9	2.7	0.8	2.2
NLPP4010	4.0±0.2	4.0±0.2	1.0Max	3.4	1.1	2.5	3.7	1.2	2.8
NLPP4012	4.0±0.2	4.0±0.2	1.2Max	3.4	1.1	2.5	3.7	1.2	2.8
NLPP4018	4.0±0.2	4.0±0.2	1.8Max	3.4	1.1	2.5	3.7	1.2	2.8
NLPP4026	4.0±0.2	4.0±0.2	2.6Max	3.4	1.1	2.5	3.7	1.2	2.8
NLPP4030	4.0±0.2	4.0±0.2	3.0Max	3.4	1.1	2.5	3.7	1.2	2.8
NLPP5045	5.0±0.2	5.0±0.2	4.5Max	4.0	1.2	3.4	4.4	1.6	3.6
NLPP6012	6.0±0.2	6.0±0.2	1.2Max	5.0	1.55	4.0	5.7	1.6	4.7
NLPP6020	6.0±0.2	6.0±0.2	2.0Max	5.0	1.55	4.0	5.7	1.6	4.7
NLPP6028	6.0±0.2	6.0±0.2	2.8Max	5.0	1.55	4.0	5.7	1.6	4.7
NLPP6045	6.0±0.2	6.0±0.2	4.5Max	5.0	1.55	4.0	5.7	1.6	4.7
NLPP8040	8.0±0.2	8.0±0.2	4.0±0.3mm	6.4	1.6	5.6	7.5	1.8	5.6

2 产品品名构成 Product Spec. Model

$\frac{NLP}{①}$ $\frac{P}{②}$ $\frac{8040}{③}$ — $\frac{150}{④}$ $\frac{M}{⑤}$ $\frac{T}{⑥}$

①	②	③	④	⑤	⑥	
产品代号 Product Code	类别代码 ClassCode	规格尺寸 (L×W×T) (mm) Dimensions	感量(μH) Inductance	误差 Tolerance	包装方式 Packaging Style	
功率电感 Power Inductor	P	3015	3.0 × 3.0 × 1.5	150 15 101 100 102 1000	K ±10% M ±20%	T 卷带盘装 Tape&Reel B 散装 Bulk
		4018	4.0 × 4.0 × 1.8			
		6020	6.0 × 6.0 × 2.0			
		6045	6.0 × 6.0 × 4.5			
		8040	8.0 × 8.0 × 4.0			

3 电性能参数表 Electrical Characteristics List

NLPP3010 系列 (NLPP3010 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP3010-1R0NT	1.0 \pm 30%	100	0.5	0.065 \pm 20%	1.40
NLPP3010-1R5NT	1.5 \pm 30%	100	0.5	0.080 \pm 20%	1.30
NLPP3010-2R2MT	2.2 \pm 20%	100	0.5	0.095 \pm 20%	1.10
NLPP3010-3R3MT	3.3 \pm 20%	100	0.5	0.140 \pm 20%	0.94
NLPP3010-4R7MT	4.7 \pm 20%	100	0.5	0.190 \pm 20%	0.78
NLPP3010-6R8MT	6.8 \pm 20%	100	0.5	0.30 \pm 20%	0.63
NLPP3010-100MT	10 \pm 20%	100	0.5	0.45 \pm 20%	0.51
NLPP3010-150MT	15 \pm 20%	100	0.5	0.74 \pm 20%	0.40
NLPP3010-220MT	22 \pm 20%	100	0.5	1.03 \pm 20%	0.35
NLPP3010-330MT	33 \pm 20%	100	0.5	1.55 \pm 20%	0.275
NLPP3010-470MT	47 \pm 20%	100	0.5	2.05 \pm 20%	0.235
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP3012 系列 (NLPP3012 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP3012-1R0NT	1.0 \pm 30%	100	0.5	0.050 \pm 20%	1.50
NLPP3012-1R5NT	1.5 \pm 30%	100	0.5	0.060 \pm 20%	1.36
NLPP3012-2R2MT	2.2 \pm 20%	100	0.5	0.080 \pm 20%	1.10
NLPP3012-3R3MT	3.3 \pm 20%	100	0.5	0.100 \pm 20%	0.91
NLPP3012-4R7MT	4.7 \pm 20%	100	0.5	0.130 \pm 20%	0.77
NLPP3012-6R8MT	6.8 \pm 20%	100	0.5	0.190 \pm 20%	0.67
NLPP3012-100MT	10 \pm 20%	100	0.5	0.290 \pm 20%	0.54
NLPP3012-150MT	15 \pm 20%	100	0.5	0.450 \pm 20%	0.44
NLPP3012-220MT	22 \pm 20%	100	0.5	0.630 \pm 20%	0.375
NLPP3012-330MT	33 \pm 20%	100	0.5	1.030 \pm 20%	0.31
NLPP3012-470MT	47 \pm 20%	100	0.5	1.450 \pm 20%	0.25
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

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3 电性能参数表 Electrical Characteristics List

NLPP3015 系列 (NLPP3015 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μH)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP3015-1R0NT	1.0 \pm 30%	100	0.5	0.030 \pm 20%	2.10
NLPP3015-1R5NT	1.5 \pm 30%	100	0.5	0.040 \pm 20%	1.80
NLPP3015-2R2MT	2.2 \pm 20%	100	0.5	0.060 \pm 20%	1.48
NLPP3015-3R3MT	3.3 \pm 20%	100	0.5	0.080 \pm 20%	1.21
NLPP3015-4R7MT	4.7 \pm 20%	100	0.5	0.12 \pm 20%	1.02
NLPP3015-6R8MT	6.8 \pm 20%	100	0.5	0.16 \pm 20%	0.87
NLPP3015-100MT	10 \pm 20%	100	0.5	0.23 \pm 20%	0.70
NLPP3015-150MT	15 \pm 20%	100	0.5	0.36 \pm 20%	0.56
NLPP3015-220MT	22 \pm 20%	100	0.5	0.52 \pm 20%	0.47
NLPP3015-330MT	33 \pm 20%	100	0.5	0.84 \pm 20%	0.39
NLPP3015-470MT	47 \pm 20%	100	0.5	1.34 \pm 20%	0.32
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP4010系列 (NLPP4010 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP4010-1R0NT	1.0 \pm 30%	100	0.5	0.10 \pm 20%	1.80
NLPP4010-2R2NT	2.2 \pm 30%	100	0.5	0.15 \pm 20%	1.15
NLPP4010-3R3MT	3.3 \pm 20%	100	0.5	0.18 \pm 20%	1.10
NLPP4010-4R7MT	4.7 \pm 20%	100	0.5	0.21 \pm 20%	0.90
NLPP4010-6R8MT	6.8 \pm 20%	100	0.5	0.30 \pm 20%	0.74
NLPP4010-100MT	10 \pm 20%	100	0.5	0.38 \pm 20%	0.56
NLPP4010-150MT	15 \pm 20%	100	0.5	0.51 \pm 20%	0.47
NLPP4010-220MT	22 \pm 20%	100	0.5	0.87 \pm 20%	0.36
NLPP4010-330MT	33 \pm 20%	100	0.5	1.54 \pm 20%	0.28
NLPP4010-470MT	47 \pm 20%	100	0.5	1.81 \pm 20%	0.24
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP4012系列 (NLPP4012 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP4012-1R0NT	1.0 \pm 30%	100	0.5	0.06 \pm 20%	2.50
NLPP4012-2R2MT	2.2 \pm 20%	100	0.5	0.09 \pm 20%	1.65
NLPP4012-3R3MT	3.3 \pm 20%	100	0.5	0.13 \pm 20%	1.20
NLPP4012-4R7MT	4.7 \pm 20%	100	0.5	0.14 \pm 20%	1.05
NLPP4012-6R8MT	6.8 \pm 20%	100	0.5	0.18 \pm 20%	0.90
NLPP4012-100MT	10 \pm 20%	100	0.5	0.24 \pm 20%	0.74
NLPP4012-150MT	15 \pm 20%	100	0.5	0.40 \pm 20%	0.56
NLPP4012-220MT	22 \pm 20%	100	0.5	0.48 \pm 20%	0.51
NLPP4012-330MT	33 \pm 20%	100	0.5	0.81 \pm 20%	0.40
NLPP4012-470MT	47 \pm 20%	100	0.5	1.00 \pm 20%	0.35
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP4018 系列 (NLPP4018 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP4018-1R0NT	1.0 \pm 30%	100	0.5	0.03 \pm 30%	4.00
NLPP4018-1R5NT	1.5 \pm 30%	100	0.5	0.04 \pm 30%	3.00
NLPP4018-2R2NT	2.2 \pm 30%	100	0.5	0.06 \pm 30%	2.70
NLPP4018-3R3NT	3.3 \pm 30%	100	0.5	0.07 \pm 30%	2.00
NLPP4018-4R7NT	4.7 \pm 30%	100	0.5	0.09 \pm 30%	1.70
NLPP4018-6R8MT	6.8 \pm 20%	100	0.5	0.11 \pm 30%	1.45
NLPP4018-100MT	10 \pm 20%	100	0.5	0.18 \pm 30%	1.20
NLPP4018-150MT	15 \pm 20%	100	0.5	0.25 \pm 30%	0.94
NLPP4018-220MT	22 \pm 20%	100	0.5	0.36 \pm 30%	0.80
NLPP4018-330MT	33 \pm 20%	100	0.5	0.53 \pm 30%	0.65
NLPP4018-470MT	47 \pm 20%	100	0.5	0.65 \pm 30%	0.57
NLPP4018-680MT	68 \pm 20%	100	0.5	1.00 \pm 30%	0.47
NLPP4018-101MT	100 \pm 20%	1	0.5	1.50 \pm 30%	0.40
NLPP4018-151MT	150 \pm 20%	1	0.5	2.50 \pm 30%	0.31
NLPP4018-221MT	220 \pm 20%	1	0.5	4.00 \pm 30%	0.27
测试仪器 TEST EQU	HP4263B		HP4338B		CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP4026 系列 (NLPP4026 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP4026-1R2NT	1.2 \pm 30%	100	0.5	0.030 \pm 30%	3.10
NLPP4026-2R3NT	2.3 \pm 30%	100	0.5	0.040 \pm 30%	2.10
NLPP4026-3R5MT	3.5 \pm 20%	100	0.5	0.050 \pm 30%	1.80
NLPP4026-4R7MT	4.7 \pm 20%	100	0.5	0.055 \pm 30%	1.45
NLPP4026-6R6MT	6.6 \pm 20%	100	0.5	0.065 \pm 30%	1.30
NLPP4026-100MT	10 \pm 20%	100	0.5	0.085 \pm 30%	1.00
NLPP4026-150MT	15 \pm 20%	100	0.5	0.110 \pm 30%	0.90
NLPP4026-220MT	22 \pm 20%	100	0.5	0.165 \pm 30%	0.61
NLPP4026-330MT	33 \pm 20%	100	0.5	0.270 \pm 30%	0.54
NLPP4026-470MT	47 \pm 20%	100	0.5	0.300 \pm 30%	0.41
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP4030 系列 (NLPP4030 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP4030-1R0NT	1.0 \pm 30%	100	0.5	0.016 \pm 30%	4.15
NLPP4030-1R5NT	1.5 \pm 30%	100	0.5	0.020 \pm 30%	3.34
NLPP4030-2R2MT	2.2 \pm 20%	100	0.5	0.030 \pm 30%	3.00
NLPP4030-3R3MT	3.3 \pm 20%	100	0.5	0.040 \pm 30%	2.40
NLPP4030-3R9MT	3.9 \pm 20%	100	0.5	0.057 \pm 30%	2.10
NLPP4030-4R7MT	4.7 \pm 20%	100	0.5	0.060 \pm 30%	2.00
NLPP4030-6R8MT	6.8 \pm 20%	100	0.5	0.090 \pm 30%	1.60
NLPP4030-100MT	10 \pm 20%	100	0.5	0.100 \pm 30%	1.50
NLPP4030-150MT	15 \pm 20%	100	0.5	0.190 \pm 30%	1.11
NLPP4030-270MT	27 \pm 20%	100	0.5	0.250 \pm 30%	1.00
NLPP4030-330MT	33 \pm 20%	100	0.5	0.330 \pm 30%	0.84
NLPP4030-470MT	47 \pm 20%	100	0.5	0.445 \pm 30%	0.72
NLPP4030-121MT	120 \pm 20%	100	0.5	1.350 \pm 30%	0.55
测试仪器 TEST EQU	HP4263B		HP4338B		CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃ 的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40 $^{\circ}$ C, whichever is smaller. (Reference ambient temperature 20 $^{\circ}$ C)

3 电性能参数表 Electrical Characteristics List

规格型号 Part No.	电感量和公差 Inductance & Tol. (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 RDC(m Ω)		饱和电流 Isat (A)	温升电流 Irms (A)
				Spec.	Typ.		
NLPP5045-1R0NT	1.0 \pm 30%	100	0.5	12 \pm 30%	12	6.80	5.00
NLPP5045-1R5NT	1.5 \pm 30%	100	0.5	14 \pm 30%	13	6.00	4.50
NLPP5045-2R2NT	2.2 \pm 30%	100	0.5	18 \pm 30%	17	4.80	3.70
NLPP5045-3R3NT	3.3 \pm 30%	100	0.5	24 \pm 30%	24	3.70	3.30
NLPP5045-4R7NT	4.7 \pm 30%	100	0.5	30 \pm 30%	30	3.20	3.00
NLPP5045-5R6MT	5.6 \pm 20%	100	0.5	40 \pm 30%	39	3.00	2.80
NLPP5045-6R8MT	6.8 \pm 20%	100	0.5	45 \pm 30%	42	2.60	2.40
NLPP5045-8R2MT	8.2 \pm 20%	100	0.5	55 \pm 30%	54	2.40	2.20
NLPP5045-100MT	10 \pm 20%	100	0.5	66 \pm 30%	66	2.30	2.10
NLPP5045-150MT	15 \pm 20%	100	0.5	90 \pm 30%	90	1.90	1.80
NLPP5045-220MT	22 \pm 20%	100	0.5	130 \pm 30%	129	1.50	1.40
NLPP5045-330MT	33 \pm 20%	100	0.5	200 \pm 30%	200	1.30	1.20
NLPP5045-390MT	39 \pm 20%	100	0.5	230 \pm 30%	216	1.20	1.10
NLPP5045-470MT	47 \pm 20%	100	0.5	300 \pm 30%	292	1.00	0.90
NLPP5045-560MT	56 \pm 20%	100	0.5	330 \pm 30%	314	0.90	0.80
NLPP5045-680MT	68 \pm 20%	100	0.5	420 \pm 30%	412	0.85	0.75
NLPP5045-820MT	82 \pm 20%	100	0.5	500 \pm 30%	476	0.80	0.70
NLPP5045-101MT	100 \pm 20%	1	0.5	620 \pm 30%	639	0.70	0.60
NLPP5045-151MT	150 \pm 20%	1	0.5	850 \pm 30%	858	0.58	0.50
NLPP5045-221MT	220 \pm 20%	1	0.5	1200 \pm 30%	1225	0.46	0.42
NLPP5045-331MT	330 \pm 20%	1	0.5	1750 \pm 30%	1790	0.40	0.36
NLPP5045-391MT	390 \pm 20%	1	0.5	2500 \pm 30%	2512	0.35	0.32
NLPP5045-471MT	470 \pm 20%	1	0.5	2850 \pm 30%	2860	0.32	0.30
NLPP5045-561MT	560 \pm 20%	1	0.5	3200 \pm 30%	3220	0.30	0.28
NLPP5045-681MT	680 \pm 20%	1	0.5	3750 \pm 30%	3670	0.27	0.25
NLPP5045-821MT	820 \pm 20%	1	0.5	5700 \pm 30%	5660	0.24	0.22
NLPP5045-102MT	1000 \pm 20%	1	0.5	6500 \pm 30%	6450	0.21	0.19
测试仪器 TEST EQU	HP4263B			HP4263B		CH102+1320	

Isat: 指使电感量比初始值下降 30%的电流值,

Irms: 指使电感器表面温度上升 40℃的电流值 (参考周围环境温度 20℃)。

Isat: The DC current is that which cause a 30% inductance reduction from the initial value

Irms: The DC current is inductor surface temperature to rise by 40℃ (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP6012系列 (NLPP6012 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP6012-2R5NT	2.5 \pm 30%	100	0.5	0.090 \pm 20%	2.10
NLPP6012-4R0NT	4.0 \pm 30%	100	0.5	0.105 \pm 20%	1.80
NLPP6012-5R3MT	5.3 \pm 20%	100	0.5	0.110 \pm 20%	1.50
NLPP6012-6R8MT	6.8 \pm 20%	100	0.5	0.165 \pm 20%	1.30
NLPP6012-100MT	10 \pm 20%	100	0.5	0.235 \pm 20%	1.00
NLPP6012-150MT	15 \pm 20%	100	0.5	0.330 \pm 20%	0.80
NLPP6012-220MT	22 \pm 20%	100	0.5	0.530 \pm 20%	0.76
NLPP6012-330MT	33 \pm 20%	100	0.5	0.700 \pm 20%	0.59
NLPP6012-470MT	47 \pm 20%	100	0.5	1.050 \pm 20%	0.52
NLPP6012-680MT	68 \pm 20%	100	0.5	1.350 \pm 20%	0.44
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP6020 系列 (NLPP6020 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP6020-1R0NT	1.0 \pm 30%	100	0.5	0.020 \pm 30%	5.00
NLPP6020-1R5NT	1.5 \pm 30%	100	0.5	0.026 \pm 30%	4.00
NLPP6020-2R2NT	2.2 \pm 30%	100	0.5	0.034 \pm 30%	3.20
NLPP6020-3R3NT	3.3 \pm 30%	100	0.5	0.040 \pm 30%	2.80
NLPP6020-4R7NT	4.7 \pm 30%	100	0.5	0.058 \pm 30%	2.40
NLPP6020-6R8MT	6.8 \pm 20%	100	0.5	0.085 \pm 30%	2.00
NLPP6020-100MT	10 \pm 20%	100	0.5	0.125 \pm 30%	1.70
NLPP6020-150MT	15 \pm 20%	100	0.5	0.180 \pm 30%	1.40
NLPP6020-220MT	22 \pm 20%	100	0.5	0.290 \pm 30%	1.05
NLPP6020-330MT	33 \pm 20%	100	0.5	0.350 \pm 30%	0.90
NLPP6020-470MT	47 \pm 20%	100	0.5	0.520 \pm 30%	0.75
NLPP6020-680MT	68 \pm 20%	100	0.5	0.660 \pm 30%	0.62
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

3 电性能参数表 Electrical Characteristics List

NLPP6028 系列 (NLPP6028 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μH)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP6028-1R2NT	1.2 \pm 30%	100	0.5	0.014 \pm 30%	6.00
NLPP6028-1R5NT	1.5 \pm 30%	100	0.5	0.016 \pm 30%	5.00
NLPP6028-2R2NT	2.2 \pm 30%	100	0.5	0.020 \pm 30%	4.20
NLPP6028-3R0NT	3.0 \pm 30%	100	0.5	0.023 \pm 30%	3.60
NLPP6028-4R7NT	4.7 \pm 30%	100	0.5	0.031 \pm 30%	2.70
NLPP6028-6R8MT	6.8 \pm 20%	100	0.5	0.048 \pm 30%	2.30
NLPP6028-100MT	10 \pm 20%	100	0.5	0.065 \pm 30%	1.90
NLPP6028-150MT	15 \pm 20%	100	0.5	0.095 \pm 30%	1.60
NLPP6028-220MT	22 \pm 20%	100	0.5	0.135 \pm 30%	1.30
NLPP6028-330MT	33 \pm 20%	100	0.5	0.220 \pm 30%	1.10
NLPP6028-470MT	47 \pm 20%	100	0.5	0.300 \pm 30%	0.95
NLPP6028-680MT	68 \pm 20%	100	0.5	0.420 \pm 30%	0.76
NLPP6028-101MT	100 \pm 20%	1	0.5	0.570 \pm 30%	0.62
NLPP6028-121MT	120 \pm 20%	1	0.5	0.650 \pm 30%	0.56
NLPP6028-151MT	150 \pm 20%	1	0.5	0.760 \pm 30%	0.50
NLPP6028-221MT	220 \pm 20%	1	0.5	1.200 \pm 30%	0.45
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40°C 的电流值（参考周围环境温度 20°C）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40°C, whichever is smaller. (Reference ambient temperature 20°C)

3 电性能参数表 Electrical Characteristics List

NLPP6045 系列 (NLPP6045 Series)

规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μH)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP6045-1R0NT	1.0 \pm 30%	100	0.5	0.014 \pm 30%	8.5
NLPP6045-1R3NT	1.3 \pm 30%	100	0.5	0.016 \pm 30%	8.0
NLPP6045-1R8NT	1.8 \pm 30%	100	0.5	0.018 \pm 30%	7.0
NLPP6045-2R3NT	2.3 \pm 30%	100	0.5	0.021 \pm 30%	6.0
NLPP6045-3R0NT	3.0 \pm 30%	100	0.5	0.024 \pm 30%	5.0
NLPP6045-4R5MT	4.5 \pm 20%	100	0.5	0.031 \pm 30%	4.0
NLPP6045-6R3MT	6.3 \pm 20%	100	0.5	0.038 \pm 30%	3.8
NLPP6045-100MT	10 \pm 20%	100	0.5	0.047 \pm 30%	3.0
NLPP6045-150MT	15 \pm 20%	100	0.5	0.077 \pm 30%	2.3
NLPP6045-220MT	22 \pm 20%	100	0.5	0.115 \pm 30%	1.9
NLPP6045-330MT	33 \pm 20%	100	0.5	0.145 \pm 30%	1.5
NLPP6045-470MT	47 \pm 20%	100	0.5	0.220 \pm 30%	1.3
NLPP6045-680MT	68 \pm 20%	100	0.5	0.33 \pm 30%	1.0
NLPP6045-101MT	100 \pm 20%	100	0.5	0.50 \pm 30%	0.8
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

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3 电性能参数表 Electrical Characteristics List

NLPP8040系列 (NLPP8040 Series)


规格型号 Part NO.	电感量和公差 Inductance & Tolerance (μ H)	测试频率 Test Freq. (kHz)	测试电压 Test Vol. (V)	直流电阻 DC Resistance (Ω)	额定电流 Rated DC Current (A)
NLPP8040-0R9NT	0.9 \pm 30%	100	0.5	0.006 \pm 30%	11.0
NLPP8040-1R4NT	1.4 \pm 30%	100	0.5	0.007 \pm 30%	9.0
NLPP8040-2R0NT	2.0 \pm 30%	100	0.5	0.009 \pm 30%	7.4
NLPP8040-3R6NT	3.6 \pm 30%	100	0.5	0.015 \pm 30%	5.3
NLPP8040-4R7NT	4.7 \pm 30%	100	0.5	0.018 \pm 30%	4.7
NLPP8040-6R8NT	6.8 \pm 30%	100	0.5	0.025 \pm 30%	4.0
NLPP8040-100MT	10 \pm 20%	100	0.5	0.034 \pm 30%	3.4
NLPP8040-150MT	15 \pm 20%	100	0.5	0.050 \pm 30%	2.7
NLPP8040-220MT	22 \pm 20%	100	0.5	0.066 \pm 30%	2.2
NLPP8040-330MT	33 \pm 20%	100	0.5	0.10 \pm 30%	1.9
NLPP8040-470MT	47 \pm 20%	100	0.5	0.15 \pm 30%	1.5
NLPP8040-680MT	68 \pm 20%	100	0.5	0.23 \pm 30%	1.2
NLPP8040-101MT	100 \pm 20%	100	0.5	0.29 \pm 30%	1.0
测试仪器 TEST EQU	HP4263B			HP4338B	CH102+1320

额定电流：指使电感量比初始值下降 30%或电感器表面温度上升 40℃的电流值（参考周围环境温度 20℃）。
 The rated DC current is that which cause a 30% inductance reduction from the initial value or inductor surface temperature to rise by 40℃, whichever is smaller. (Reference ambient temperature 20℃)

4 可靠性试验项目 Reliability Testing Items

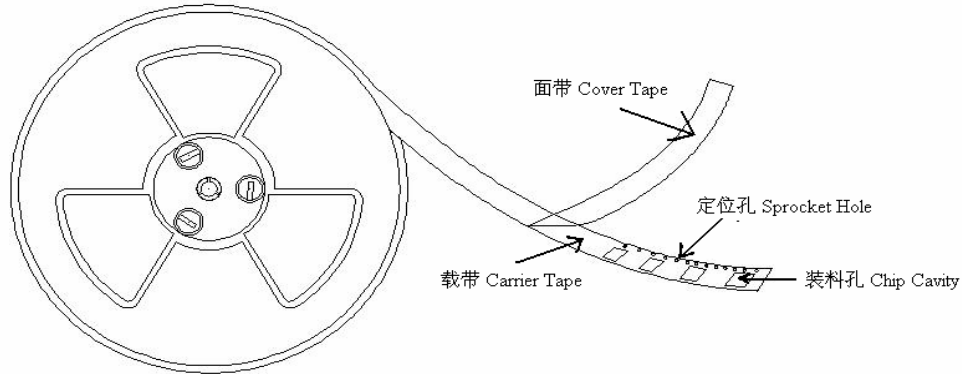
序号 NO.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
1	工作温度范围 Operating Temperature Range	-40℃ ~ +85℃	包括自身发热的上升温度 Including self-heating temperature rise.
2	耐焊接热 Resistance to Soldering Heat	① 外观无可见机械损伤; ② 电感量变化率: ±10%以内。 ① No visible mechanical damage. ② Inductance change: Within ±10%	在 260±5℃ 熔融的焊锡 (96.5Sn/3.0Ag/0.5Cu) 中浸置 10±1 秒钟。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at 260±5℃ for 10±1 seconds.
3	可焊性 Solderability	电极面 90%以上覆盖新的焊料。 90% or more of electrode area shall be coated by new solder.	在 245±5℃ 熔融的焊锡 (96.5Sn/3.0Ag/0.5Cu) 中浸置 5±1 秒钟。 Dip pads in flux and dip in solder pot (96.5Sn/3.0Ag/0.5Cu) at 245±5℃ for 5±1 seconds.
4	绝缘电阻 Insulation Resistance	≥100MΩ	在电感器线圈和磁芯之间施加 100V 直流电压保持 60 秒 100V DC between inductor coil and core for 60 seconds.
5	电极附着力 (拉力测试) Component Adhesion (Push test)	≥2.0kgf	将电感器用 260±5℃, 20±5sec 焊在带有 0.3mm 厚锡膏的基板上, 然后用治具垂直电极面方向加压 2.0kgf, 10sec。 Inductors shall be subjected to 260±5℃ for 20±5sec Soldering in the base whit 0.3mm solder. And then aplomb electrode way plus tax 2.0kgf for ten seconds.
6	过载 Over Loading	1、外观不发生变化; 2、电感量变化率: ±10%以内。 1. There shall be no case deformation or change in appearance. 2. Inductance change: Within ±10%	将规定额定电流 2 倍的直流电流加于电感器, 其电流误差为±2%, 保持 5 分钟。 Apply twice as rated current for five minutes between inductor terminals, direct current error ±2%.

4 可靠性试验项目 Reliability Testing Items

序号 NO.	项目 Items	要求 Requirements	试验方法及备注 Test Methods and Remarks
7	机械冲击 Mechanical Shock	<p style="text-align: center;">0.5m自然下落</p>  <p>电感无出现电极脱落、断线现象。 No evidence of terminal peel off and wire broken.</p>	<p>把电感焊在厚度为 1.0mm 的基板上,并固定在黄铜制 15cm 大,重 1.4Kg 的立方体内,然后从 0.5m 高度往地板自然下落(X,Y,Z 方向各一回)</p> <p>Inductors shall be Soldering on the PCB with 1.0mm thick and fixed them in a 15cm big.,1.4Kg weight cube with brass base, let it nature fallen form 0.5m height (X,Y,Z three axes)</p>
8	温度变化 Temperature Change	<p>1. 外观不发生变化; 2. 电感量变化不超过±10%。</p> <p>1. There shall be no case deformation or change in appearance. 2. Inductance shall not change more than ±10%.</p>	<p>+85℃ 60 分钟 ↔ -40℃ 60 分钟循环 5 次,室温下放置一小时后测试。 +85℃ 60minutes ↔ -40℃ 60minutes 5Cycles, Inductors are to be tested after 1 hour at room temperature.</p>
9	高温 High Temperature	<p>1. 外观不发生变化; 2. 电感量变化不超过±10%。</p> <p>1. There shall be no case deformation or change in appearance. 2. Inductance shall not change more than ±10%.</p>	<p>将电感器放置于温度+85±5℃的环境中存放 96±2 小时,然后在室温下放置 1 小时后进行测试。 Inductors shall be subjected to+85±5℃for 96±2 hours. Inductors are to be tested after one hour at room temperature.</p>
10	低温 Low Temperature	<p>1. 外观不发生变化; 2. 电感量变化不超过±10%。</p> <p>1. There shall be no case deformation or change in appearance. 2. Inductance shall not change more than ±10%.</p>	<p>将电感器放置于温度-40±2℃的环境中存放 96±2 小时,然后在室温下放置 1 小时后进行测试。 Inductors shall be subjected to -40±2℃for 96±2 hours. Inductors are to be tested after one hour at room temperature.</p>
11	恒定湿热 Static Humidity	<p>1. 外观不发生变化; 2. 电感量变化不超过±10%。</p> <p>1. There shall be no case deformation or change in appearance. 2. Inductance shall not change more than ±10%.</p>	<p>将电感器放置在于湿度 90~95%,温度 60±2℃的环境中存放 100 小时,经过 1 小时的风干后进行测试。 Inductors shall be subjected to 90~95% R.H. at 60±2℃ for 100 hours .Inductors are to be tested after having air dried for one hours.</p>
12	寿命 Life	<p>1. 外观不发生变化; 2. 电感量变化不超过±10%。</p> <p>1. There shall be no case deformation or change in appearance. 2. Inductance shall not change more than ±10%.</p>	<p>电感器加额定电流在 85±2℃温度条件下存放 1000 小时。然后在室温下放置 4 小时后进行测试。 Inductors shall be store at 85±2℃ for 1000 hours with rated current applied. Inductors shall be tested after four hours at room temperature.</p>

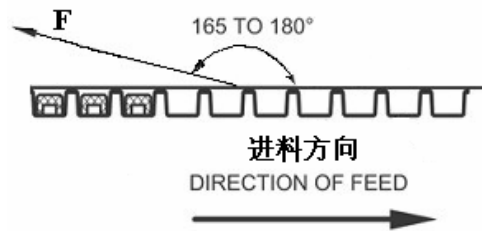
5 产品包装 Packaging

1) 卷盘包装示意图 Reel packing diagram



2) 剥离力要求 Peeling required

- ①F 力大小: 20 ~ 100g; ②面带剥离速度: 300mm/min \pm 10%; ③面带剥离角度: 165° ~ 180°。
①F force: 20 ~ 100g; ②Peeling speed: 300mm/min \pm 10%; ③Peeling angle: 165° ~ 180°.



3) 包装数量 Packing quantity

规格型号 Part NO.	卷盘 REEL (PCS)	纸盒 BOX (PCS)	中号纸箱 Medium Carton (PCS) (Size: 35.8*35.8*20cm)	大号纸箱 Large Carton (PCS) (Size: 35.8*35.8*29.5cm)
NLPP3010	4000	20000	40000	60000
NLPP3012	4000	20000	40000	60000
NLPP3015	4000	20000	40000	60000
NLPP4010	3000	15000	30000	45000
NLPP4012	3000	15000	30000	45000
NLPP4018	3000	15000	30000	45000
NLPP4026	2000	10000	20000	30000
NLPP5045	2000	8000	16000	24000
NLPP6012	1500	6000	12000	18000
NLPP6020	1500	6000	12000	18000
NLPP6028	1500	6000	12000	18000
NLPP6045	1000	4000	8000	12000
NLPP8040	750	2250	4500	6750

6 推荐焊接条件 Recommend Soldering Conditions

本产品建议使用回流焊接法。

Applicable soldering process to the products is reflow soldering.

1) 焊接材料 Soldering Materials

(1) 焊料: Sn-3.0Ag-0.5Cu

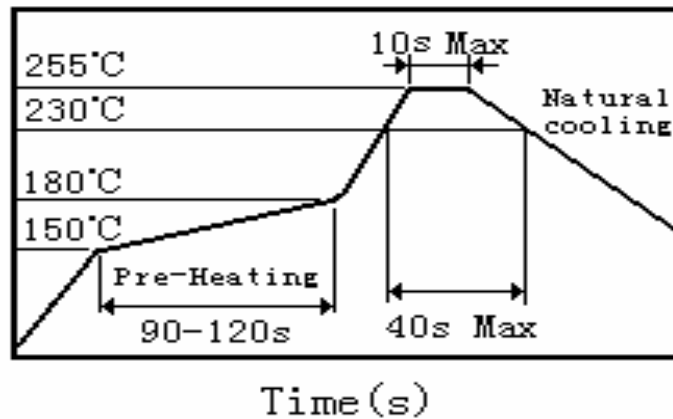
(2) 助焊剂: 使用松香基助焊剂, 禁止使用卤化物含量超过 0.2wt% 的强酸性助焊剂和水溶性助焊剂。

(1) Solder: Sn-3.0Ag-0.5Cu

(2) Flux: Use rosin-based flux, but not strongly acidic flux (with chlorine exceeding 0.2 wt%).
Do not use water-soluble flux.

2) 焊接曲线 Soldering Profile

(1) 回流焊接曲线 Reflow Soldering Profile



(2) 烙铁焊接 Soldering Iron

使用烙铁进行返修时要求在 150°C 下预热至少 1 分钟, 不能直接用焊头接触磁体, 返修焊接条件如下:

① 烙铁头温度: 350°C; ② 烙铁输出功率: ≤30W; ③ 烙铁头直径: ≤1.0mm; ④ 焊接时间: <3 秒

Reworking with Soldering Iron must preheating at 150°C for 1 minute is required, and do not directly touch the core with the tip of the soldering iron. The reworking soldering conditions are as follows:

- ① Temperature of soldering iron tip: 350°C;
- ② Soldering iron power output: 30W max.
- ③ Diameter of soldering iron end: 1.0mm max.
- ④ Soldering time: within 3 sec.



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7 清洗 Cleaning

对本产品进行清洗操作前，需确认以下条件：

(1)清洗温度：≤60℃（酒精清洗剂≤40℃）

(2)超声波清洗

输出：≤20 W/L 持续时间：≤5 分钟 频率：28 ~ 40kHz

▲清洗时要避免 PCB 板和安装产品的共振。

The following conditions should be observed when cleaning the products:

(1)Cleaning Temperature: 60℃ max. (40℃ max. for alcohol cleaning agents)

(2)Ultrasonic

Output: 20 W/L max.

Duration: 5 min max.

Frequency: 28 to 40kHz

▲Care should be taken not to cause resonance of the PCB and mounted products.

8 存储要求 Storage Requirements

1) 存储期限 Storage Period

为保证端子电极的焊接特性和包装材料处于良好状态，请于本公司发货后 6 个月内使用本产品。同时，由于端子电极的焊接特性会随时间发生变化，如果贮存时间超过 6 个月，请首先确认其焊接特性后再安装使用。

To maintain the solderability of terminal electrodes and to keep the packing material in good condition, product should be used within 6 months from the time of delivery. And the solderability of products electrodes may decrease as time passes, so in case of storage over 6 months, solderability shall be checked before actual usage.

2) 存储条件 Storage Conditions

(1) 存放货物的仓库应满足以下条件：

温度：-10 ~ +40℃ 相对湿度：30~70%RH

(2) 不要使产品遭受温度和湿度的快速变化。

(3) 不要将产品存放在化学环境中，如硫酸气体或碱性气体中，否则会降低电极端子的焊接特性和使电感器腐蚀。

(4) 不要以散包装的形式存放产品以防止电感器间的相互碰撞造成磁芯破裂或断线。

(5) 为了避免受潮气、灰尘等物质的影响，产品应保管于货架上。

(6) 产品应避免热冲击、振动以及直接光照等等。

(1) Store products in a warehouse in compliance with the following condition:

Temperature: -10 to +40℃ Humidity: 30~70%RH

(2) Do not subject products to rapid changes in temperature and humidity.

(3) Do not store the products in chemical atmosphere such as one containing sulfurous acid gas or alkaline gas, that will causes poor solderability and corrosion of inductors.

(4) Do not store products in bulk packaging to prevent collision among inductors which causes core chipping and wire breakage.

(5) Store products on pallets to protect from humidity, dust, etc.

(6) Avoid heat shock, vibration, direct sunlight, etc.

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9 环保信息 Environmental Protection Information

RoHS 指令

本公司产品符合 RoHS 指令。

Response to RoHS directive

Our products are RoHS compliance.

10 注意事项 Notes

- 1) 本公司产品适用于 AV 设备、OA 设备、家电、信息服务等一般电子设备中。
 - 2) 当本公司的产品使用在一般电子设备以外的领域时，对于此所引发的设备失效我司将不承担任何法律责任。
 - 3) 本承认书只保证我司产品作为一个单体时的质量情况，当我司产品被安装到贵司产品上时，请贵司对使用在贵司电路上的产品情况进行了有效评价和确认。
 - 4) 不要对产品施加过大的振动或机械冲击；
 - 5) 为防止断线，请不要使用锋利的物体接触线圈，如镊子；
 - 6) 在产品贴装时不要使用过大的压力，避免磁芯断裂。
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- 1) Our products are designed and promoted for use in general electronic devices such as audio-equipment, office automation equipment, home electric appliance and information service.
 - 2) In case of using the product for the purpose other than general electronics devices, we shall not be held liable for any dysfunctions in or damage to the equipment with which the product is used.
 - 3) Our specification limits the quality of the component as a single unit. Please ensure the component is thoroughly evaluated in your application circuit.
 - 4) Do not apply excessive vibration or mechanical shock to products.
 - 5) Do not touch wire with sharp objects such as tweezers to prevent wire breakage.
 - 6) Do not apply excessive stress to products mounted on boards to prevent core breakage.

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11 样品信息反馈单 Sample's feedback list

尊敬的客户：

感谢您对本公司的信任及支持，在我们合作的过程中，我们将尽最大努力满足您的各种需求，为您提供最满意的服务。

如果你在对我们的产品（样品）进行承认的过程中出现任何问题，请将问题反馈给我们，我们将对您提出的问题进行认真分析并在最短的时间内给您满意的答复及解决方案，在此过程中您只需填写这张信息反馈单并传真（邮寄）给我们即可。

预祝我们合作愉快！

Dear Customer:

Thank you for your trust and support, we will do our best to meet your needs and to provide you with the most satisfactory service in our cooperation.

If you have any problem in the process of using our products, please feel free to contact us, we would earnestly analyze the question which you asked for, and reply to you as soon as possible. You only need fill in this form and fax or mail it to us.

Wishes cooperate happily!

产品（样品）使用情况描述 Problem Description

规格型号 Part NO.	
产品批号 LOT NO.	
送样日期 Sample Date	
出现问题 Problem description	
您的分析（原因） Your analysis (for the reason)	
备注 Note	

您的联系方式（便于我们的交流）Your Contact

您的姓名 Your Name		公司名称 Company	
职务 Business		地址 Address	
电话 Tel.		邮编 Post	
传真 Fax		E-mail	

联系我们 Contact Us

联系人 Linkman		电话	
传真		地址 Address	
E-mail		邮编	
备注 Note	为了我们更好的合作，请您及时填写并回传。Please fill in the form and feedback to us in time, thanks!		

注：本规格书仅供参考，内容若有更改，恕不另行通知，以最新版本为准！

Note: This specification is for reference only. Contents are subject to change without notice, the latest version prevails