承认书

SPECIFICATION FOR APPROVAL

客户 Customer	
客户料号 Customer P/N	
安规型号 Safety Model	
品名 Description	**Common Mode Inductor**
产品型号 Product Model	**T7.62X4X3-350uHmin(Z6172-S)**
图纸编号 Drawing No.	**2024112202**
版本 REV	**A1**

出图 DRAWING		
制作 Prepared	**审核 Checked**	**批准 Approved**
夏欢	郭亦雄	陈林
DATE : 2024-12-11		

客户承认 CUSTOMER APPROVE

惠州市长瑞工贸有限公司

（Huizhou Changrui Industry and Trade Co., Ltd.）

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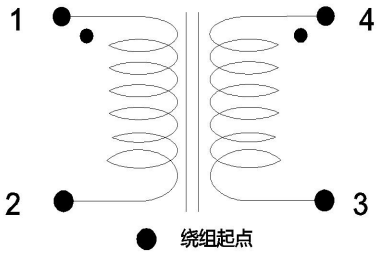
CHANGE LIST 变更履历

DATE 日期	VERSION 版本	CHANGE CONTENT 修订内容	PREPARED 制定	CHECKED 审核
2024/11/22	A0	Initial release	夏欢	陈林
2024/12/11	A1	按客户要求，增加顶部封胶	夏欢	陈林

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1. SCHEMATICS (接线图）：



2. WINDING CONSTRUCTION（绕组结构）：

ORDER	S - F 开始 - 结束	WIRE SIZE 线径	TURNS 圈数	NOTES 说明
N1	1 - 2	UEW-F Φ0.35mm 本色	11.5Ts	并绕
N2	4 - 3	MIW-B Φ0.35mm 本色	11.5Ts	并绕

Note :绕线平整无交叉伤线。

3. ELECTRICAL SPECIFICATION (at 25°C) 电性规格

Test Item 测试项目		SPEC 规格	Test Condition 测试条件	Test Instruments 测试仪器
Inductance 电感 L(1-2) = L(4-3)		350uH min	10kHz, 0.25V,R50Ω	ZX1373X-12A
$\lvert L_{1-2} - L_{4-3} \rvert$ (< 2%)		7uH max	10kHz, 0.25V,R50Ω	ZX1373X-12A
DCR(1-2) = DCR(4-3) 直流阻抗		50mΩ max	25°C	TH2512B
Insulation Resistance 绝缘阻抗 (Coil ~ Core)		100MΩ Min.	DC 500V	ZX9320S-4
HI-POT (Coil ~ Coil) 耐电压测试		1800Vac	3s, 1mA, 50Hz	WB 2670B
Irms 温升电流		1.5A	△T≤40°C	ZX1373X-12A
Z 共模阻抗	Z1	1MHz	500Ω min	4695A
	Zmax	5~12MHz	1400Ω min	4695A
	Z2	150MHz	300Ω min	4695A

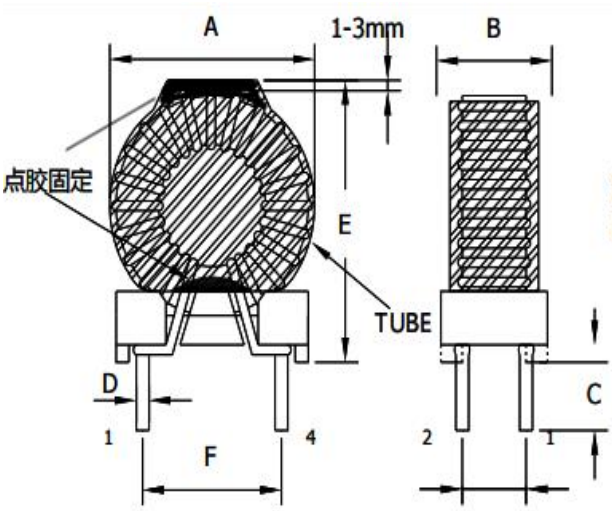
Note: 最高点阻抗位于5~ 12MHz区间，Z≥1400Ω

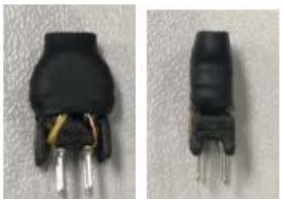
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4. DIMENSIONS 尺寸: (Unit:mm)





SPEC. (mm)	
A	10.2max
B	5.8max
C	2.9±0.3
D	0.5±0.05
E	14.5max
F	3.0±0.3
G	3.0±0.3

Note: 绕线均绕，线包置于底座中间，须点胶固定，成品需含浸，线包外套热缩套管，套管超出顶部线包1-3mm并封胶。

5. DEFINITION OF PRODUCT NAME 产品名称定义:

T	7.62X4X3	350uH	MIN			
A	B	C	D	E	F	G

A.产品类型：环形电感
B.磁芯尺寸规格
C.感量
D.感量公差
E.
F.
G.

6. GENERAL SPECIFICATON :

a. Storage temperature : -25°C ~ 85°C, R.H. : 30% ~ 70%
b. Operating temperature : -40°C ~ +125°C
c. Moisture sensitivity level (MSL) 2 (1 year floor life at <30°C/85% relative humidity)
d. Failures in time(FIT)/Mean time between failures(MTBF) 38 per billiion hours/26,315,789 hours, calculated per Telcordia SR-332

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7. MATERIAL LIST 材料清单:

No.	Item	Material Description 材料描述	Manufacturer 制造商	TEMP 温度	UL File UL档案号	Remark
1	CORE	透明涂装T7.62*4*3 锰锌R12K	SHENZHEN KRY-SCN TECHNOLOGY CO., LTD			V
2	WIRE	UEW-F Φ0.35mm 本色	DONGGUAN YIDA NDUSTRY Co,LTD.	155℃	E344055	
		QA-X/155 Φ0.35mm 本色	HONGQI GROUP JIANGXI COPPER CO.,LTD.	155℃	E355168	
3	Triple Insulated Wire	MIW-B	Huizhou Huaying Electronic Technoiogy CO.，LTD	130℃	E470559	
		TKW-B	Shanghai Xiangxiang Electronics Co., Ltd	130℃	E308908	
4	VARNISH	JX-1150(*)	Yueyang GREEN Technology Co., Ltd.	130℃	E303754	
5	EPOXY	3300A/B-1	DONGGUAN EATTO ELECTRONIC MATERIAL CO.,LTD.	130℃	E218090	
6	BASE	PM9823	Sumitomo bakelite Co., Ltd	150℃	E41429	
7	TUBE	S-901-600	Dongguan Salipt Co.,Ltd	125℃	E209436	
		RSFR-HPF	Shenzhen Woer Heat-Shrinkable Material Co.,Ltd.	125℃	E203950	

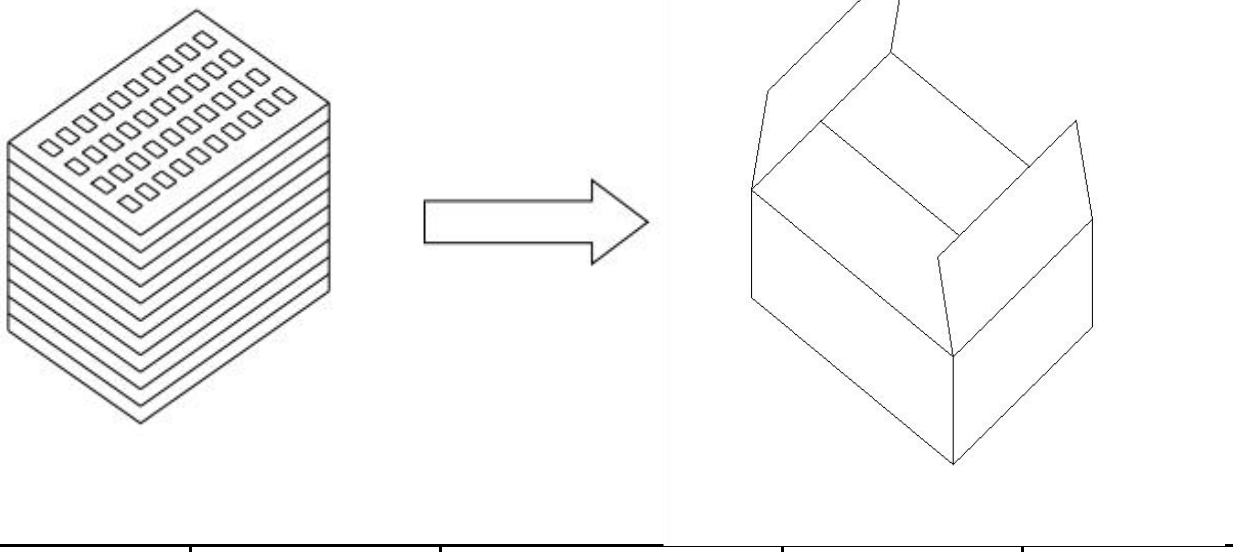
Note : Core source marded "V" means design & verify ok. 磁芯打“V” 表示设计验证Ok.

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8. PACKAGE SPECIFICATION 包装规格:



序号(N0)	包装材料 Packing material	尺寸 Size	材质 Material	数量 Quantity
1	吸塑Plastic uptake	360*180*15mm	PET	110/BOX
2	外箱Master Carton	380*270*165mm	K636K	5060/Carton

Remark : Weight (REF): 0.97g

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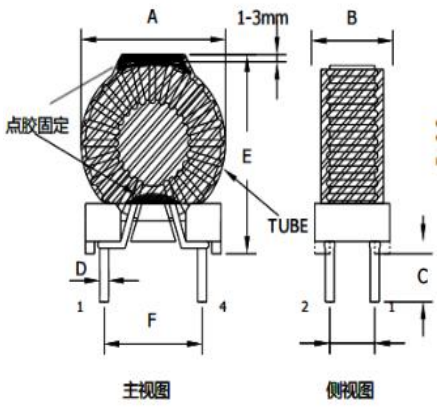
9. TEST DATA FOR PREPRODUCTION SAMPLE 样品测试数据:

Electrical Characteristic 电气特性					Dimensions 尺寸 (mm)							
Item	L1-2,L4-3	DCR 1-2, 4-3	HI-POT	Zmax 1-2，4-3	A	B	C	D	E	F	G	H
STD.	350uH MIN	50mΩ max	1800V AC 1mA/3s	1400Ω min	10.2max	5.8max	2.9±0.3	0.5±0.05	14.5max	3.0±0.3	3.0±0.3	
1	542	27.0	PASS	1680	9.3	5.2	2.8	0.49	11.6	3.1	3.0	
2	556	26.8	PASS	1742	9.3	5.2	2.7	0.50	11.5	3.1	2.9	
3	584	27.1	PASS	1859	9.3	5.2	2.7	0.49	11.8	3	3.0	
4	625	27.5	PASS	1740	9.3	5.1	2.7	0.50	11.6	3	3.1	
5	594	27.1	PASS	1876	9.4	5.3	2.8	0.49	11.8	3.1	3.1	
6	701	27.8	PASS	1924	9.5	5.3	2.8	0.49	11.5	3.1	3.0	
7	596	27.5	PASS	1816	9.5	5.2	2.8	0.49	11.6	3.1	3.0	
8	602	27.3	PASS	1786	9.4	5.2	2.8	0.50	11.8	3	3.0	
9	596	27.2	PASS	1682	9.6	5.2	2.8	0.50	11.7	3.1	3.1	
10	584	27.0	PASS	1910	9.5	5.2	2.8	0.49	11.5	3	3.0	
$\overline{X}$	598	27.23	/	1801.5	9.41	5.21	2.77	0.494	11.64	3.06	3.02	

综合判定

√ OK NG

外观尺寸图

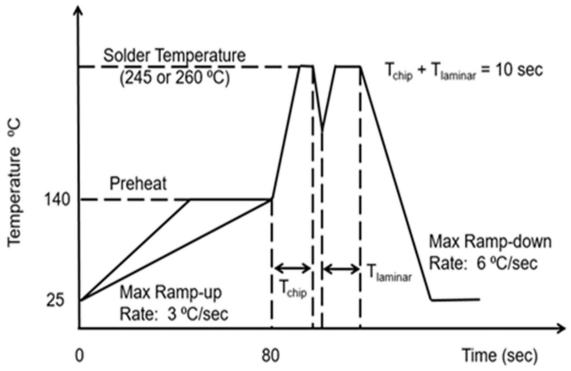


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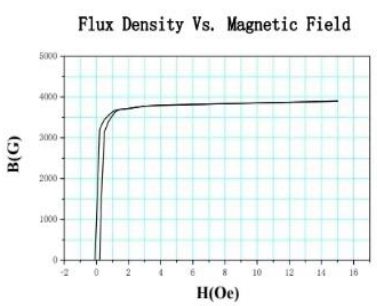
SPECIFICATION FOR APPROVAL

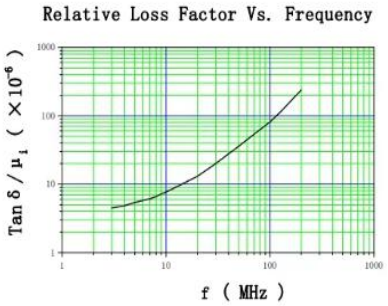
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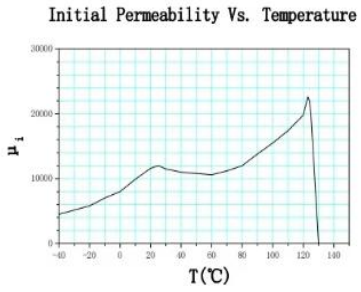
10. SOLDERING CONDITIONS 焊锡条件:

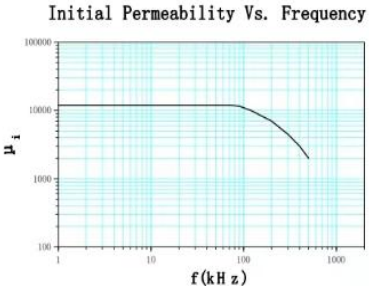
Solding process 焊接工艺	Wave soldering 波峰焊 
Resistnace to soldering heat requirements 耐焊接热要求	Soldering times 焊接次数：≥ 3次 Wave soldering heat resistance requirements波峰焊耐热要求: 1> 器件引脚峰值温度≥265℃，265℃以上时间≥10s 2> 器件本体满足峰值温度Tp≥160℃，Tp-5℃以上时间tp≥30s，且120℃以上时间t≥150s

11. CORE MATERIAL CHARACTERISTIC 磁芯材质特性







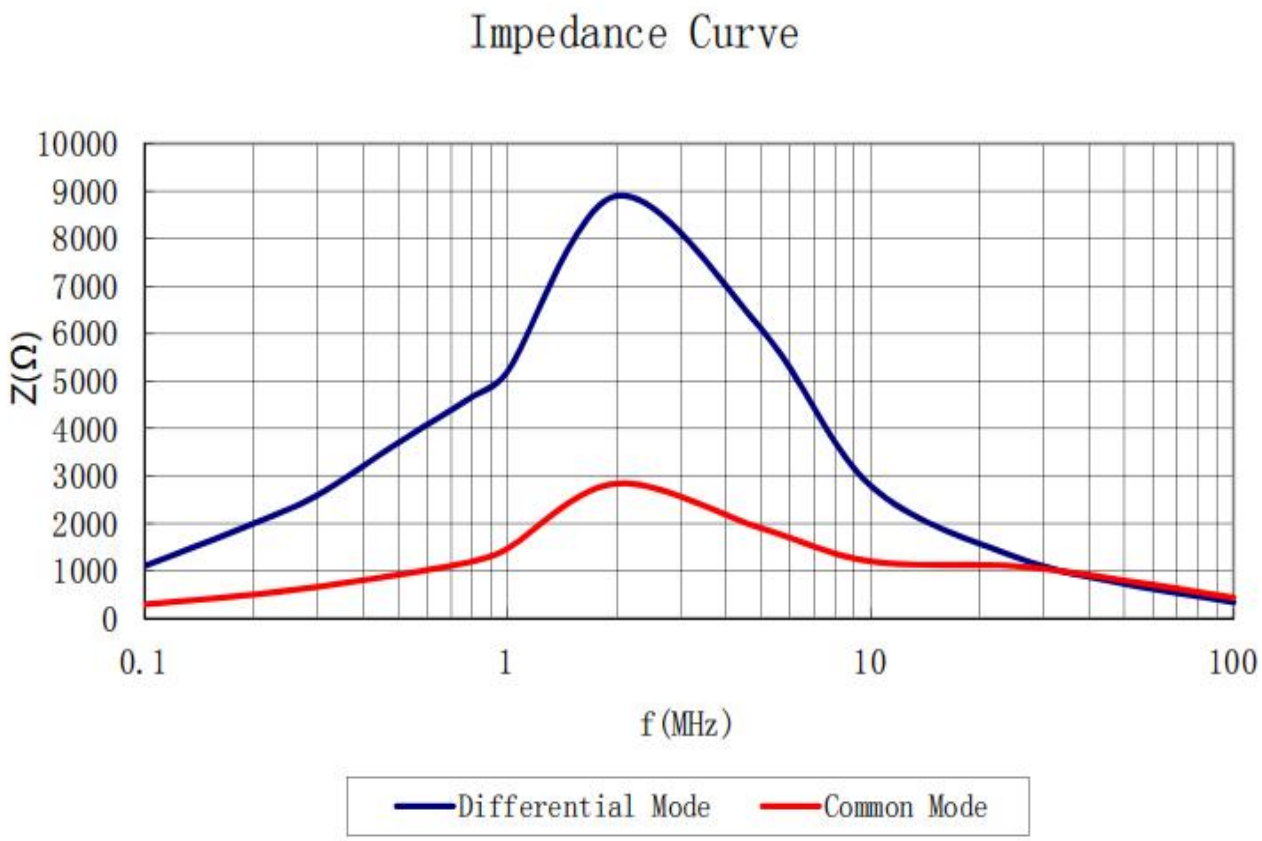


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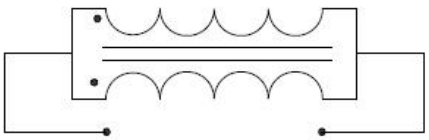
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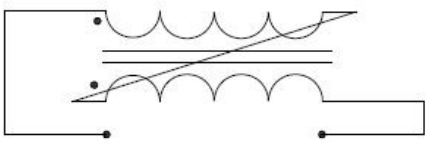
12. IMPEDANCE CURVE 阻抗曲线:



Test Setup：



Common Mode 共模阻抗



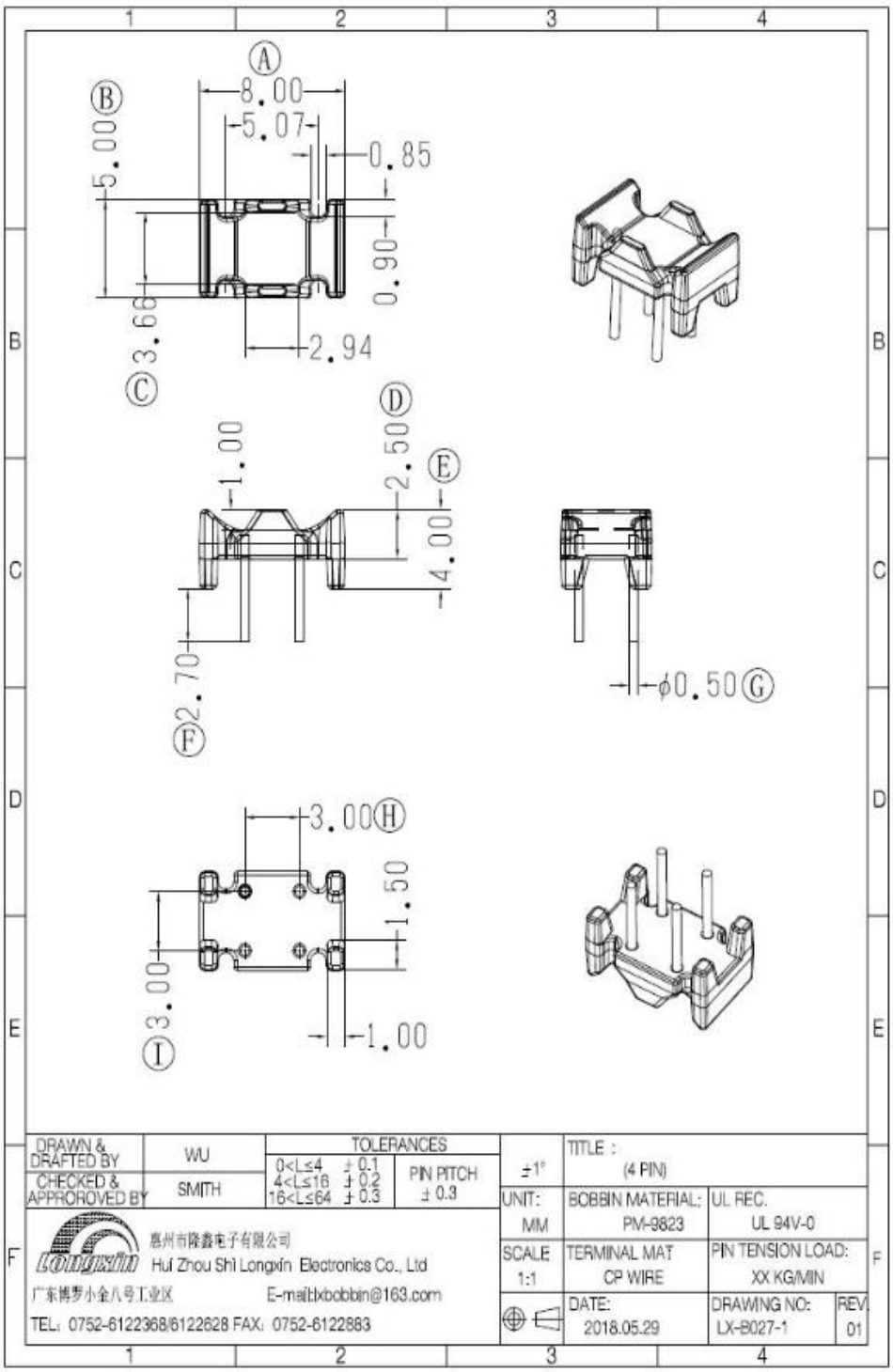
Differential Mode 差模阻抗

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13. BASE DRAWING 底座图纸:



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14. APPEARANCE TEST DATA 外观尺寸测试数据：(单位：mm)

Item	A	B	C	D	E	F	G
STD.	10.2max	5.8max	2.9±0.3	0.5±0.05	14.5max	3.0±0.3	3.0±0.3
1	9.33	5.26	2.94	0.5	11.17	3.1	3.08
2	9.24	5.24	2.96	0.5	11.82	3.01	3.01
3	9.34	5.29	2.93	0.49	12.19	3.1	3.05
4	9.37	5.16	2.99	0.5	11.41	3.15	3.13
5	9.41	5.15	2.84	0.49	12.31	3.02	3.13
6	9.45	5.25	2.83	0.5	10.66	3.12	3.12
7	9.44	5.22	2.87	0.49	11.46	3.15	3.1
8	9.25	5.15	2.81	0.5	10.78	3.12	3.15
9	9.36	5.22	2.96	0.49	11.16	2.99	3.1
10	9.31	5.24	2.86	0.5	11.89	3.01	3.05
11	9.25	5.25	2.87	0.5	11.84	2.99	3.08
12	9.42	5.26	2.93	0.5	10.81	3.06	3.1
13	9.43	5.29	2.81	0.5	12.11	3.06	3.04
14	9.2	5.27	2.99	0.49	12.43	3.08	3
15	9.46	5.15	2.86	0.49	10.61	2.99	3.13
16	9.28	5.18	2.88	0.5	11.76	3.13	3.13
17	9.26	5.24	2.94	0.5	11.32	3.01	2.98
18	9.2	5.3	2.91	0.5	12.23	2.98	3.13
19	9.29	5.21	2.83	0.5	10.77	3.1	3.14
20	9.28	5.3	3	0.5	10.77	2.99	3.07
21	9.26	5.17	2.81	0.5	10.54	2.98	3.01
22	9.44	5.15	2.86	0.49	11.42	3.07	3.1
23	9.32	5.28	2.82	0.49	10.64	2.98	3.05
24	9.43	5.15	2.82	0.5	12.31	3.04	3.14
25	9.23	5.22	2.83	0.5	11.59	3	3.12
26	9.25	5.17	2.94	0.49	12.37	3.06	3.03
27	9.32	5.23	2.85	0.5	11.14	3.13	2.98
28	9.22	5.26	2.8	0.5	11.55	3.03	3.1
29	9.29	5.18	2.92	0.49	11.13	3.06	3.08
30	9.38	5.26	3	0.49	11.62	3.12	2.98
31	9.43	5.23	2.93	0.5	11.99	3.1	3.15
32	9.32	5.24	2.88	0.49	11.14	3.06	3.03
33	9.3	5.15	2.89	0.5	10.83	2.99	3.07
34	9.3	5.26	2.95	0.49	10.68	3.08	3.07
35	9.41	5.21	2.99	0.5	12.49	3.12	3.02
36	9.49	5.17	2.86	0.49	10.88	2.98	3.01
MIN	9.2	5.15	2.8	0.49	10.54	2.98	2.98
MAX	9.49	5.3	3	0.5	12.49	3.15	3.15
$\overline{X}$	9.33	5.22	2.89	0.50	11.44	3.05	3.07

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15.Electrical Characteristic TEST DATA 电气特性测试数据

Item	L	DCR		Z1 1MHz	Zmax 5-12MHz	Z2 150MHz	
STD.	350uH MIN	50mΩ max		500Ωmin	1400Ωmin	300Ωmin	
1	641	27.1		764	1846	480	
2	596	27.1		735	1778	507	
3	553	26.7		739	1844	565	
4	639	26		780	1620	541	
5	616	26.6		621	1779	479	
6	623	27.1		795	1611	468	
7	573	26.6		786	1916	566	
8	646	26		679	1848	588	
9	619	26.9		700	1909	596	
10	556	26.6		616	1935	451	
11	572	26.7		795	1871	518	
12	555	26.8		729	1863	565	
13	641	26.1		631	1835	467	
14	588	26.4		739	1680	579	
15	620	27.1		660	1778	481	
16	560	26.3		802	1851	456	
17	608	26		740	1743	454	
18	541	26.1		688	1913	541	
19	568	26.7		775	1743	488	
20	634	26.2		633	1740	531	
21	563	26.8		787	1943	548	
22	631	27		708	1723	579	
23	603	26.2		630	1769	517	
24	570	26.3		774	1918	582	
25	624	26.9		621	1741	600	
26	625	26.4		635	1791	577	
27	561	26.5		761	1755	571	
28	640	26.1		797	1768	481	
29	580	27.1		617	1693	536	
30	593	26.6		636	1807	518	
31	638	27		674	1653	500	
32	570	27		698	1617	495	
33	555	26		782	1698	555	
34	601	27		781	1652	599	
35	605	26.8		601	1642	582	
36	610	26.2		781	1856	586	
MIN	541	26		601	1611	451	
MAX	646	27.1		802	1943	600	
$\overline{X}$	597.72	26.58		713.61	1781.36	531.86	

PREPARED BY	CHECKED BY	APPROVAL BY
夏欢	郭亦雄	陈林