

东莞市科雅电子科技有限公司

规格书

PROUCT APPROVAL SHEET

客户名称:

Customer

立创商城

品 名:

径向引线独石电容器

Product Name

Radial Leaded Mlcc

规 格:

CT4 - CT40805B103K500F3 103K50V P5

Product Spec

版 本 号:

V3.1

Version Number

日 期:

2025/03/22

Date

客 户 Customer			制 造 Manufacturer		
确 认 Approval			确 认 Approval		
检验 Inspector	审核 Checker	批准 Approver	拟制 Designer	审核 Checker	批准 Approver
			周潇潇	文海峰	刘大鹏

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客户名称 Customer	立创商城	客户编号 Customer number		日期 Date	2025/03/22
规格型号 Product Name	CT40805B103K500F3		生产编号 Lot No		

电性参数 Electrical parameters

规格型号 Product Name	容量范围 Capacitance	损耗 DF	绝缘电阻 IR	耐压范围 Breakdown Voltage	判定 Result
CT40805B103K500F3	9~11nF	≤3.5%	≥1×10 ¹⁰ Ω	50V×2.5 倍	OK

订货代码 Ordering Code

A	产品类别 Product Type				B	本体外形尺寸规格（长×宽） Nominal Body Size（Length×Width±0.05）		
	CT4	CT4 II 类径向引线独石电容器 CT4 Class II radial lead monolithic capacitors				0805	2.00×1.25mm	
C	温度特性 Temperature Characteristic				D	标称容量 Nominal Capacitance C		
	B	X7R	±15%	-55~+125℃		103	10nF	
E	容量偏差 Tolerance				F	额定电压 Rated Voltage		
	K	±10%				500	50V	
G	包装方式 Packaging Style				H	脚距（单位：mm） Lead Space（Unit: mm）		
	Blank	散包装 1000PCS/包 Bulk 1000PCS/BAG				F3	5.08mm	
I	引线材质 Wire material		规 格 Specifications		线 径 Wire diameter		导电率 Line conductivity	
			镀锡铜包钢线 Tin plated copper clad steel wire		Φ0.45~0.5mm		16.6~18%	
			镀锡铜线 Tin plated copper wire					

尺寸、工作电压及容量关系表 Size Code and Voltage VS Capacitance

尺寸规格 Size Code	外形 Shape	尺寸（单位：mm） Dimensions（Unit：mm）					工作电压 Voltage
		F±0.5 （脚距）	L±2 （脚长）	H(宽) MAX	W（高） MAX	T（厚） MAX	
0805		5.08	21mm	5.0	5.0	4.0	≤50V

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通用型引线MLCC可靠性及测试方法

Reliability and Test Method for General Leaded MLCC

项目 Item	技术要求 Technical Specification			测试方法和备注 Test methods and remarks.				
容量 Capacitance (C)	I 类 Class I	应符合指的误差级别 With in the specified tolerance.		标称容量 Capacitance	测试频率 Measuring Frequency	测试电压 Measuring Voltage		
				<1000pF	1MHZ±10%	1.0V		
				≥1000pF	1KHZ±10%			
	II 类 Class II	应符合指的误差级别 Wit h i n the specified tolerance.		对于 II 类电容器，测试前应先预处理 For class II capacitor, pr e treatment should be taken before the test				
				测试频率 Measuring Frequency	测试电压 Measuring voltage			
				< 10 μ F 1KHZ ± 10% ≥10 μ F120Hz±10%	B: 1.0V	E/Y(F) <1uF/0.5V ≥1uF/1.0V		
损耗角正切 Dissipation Factor (DF)	I 类 Class I	C, R≥50pF DF≤0.15% C, R<50pF DF≤1.5【(150/C, R)+7】×10 ⁻⁴		标称容量 Capacitance	测试频率 Measuring Frequency	测试电压 Measuring Voltage		
				≤1000pF	1MHZ±10%	1.0V		
				>1000pF	1KHZ±10%			
	II 类 Class II	B 100V<1 μ F DF≤3.5% 50V≥1 μ F , DF≤5.5% 25V≥10 μ F , DF≤7.5% 16V≥10 μ F , DF≤10% 10V≥10 μ F , DF≤15%		<10uF 测试频率:1KHZ±10%; 测试电压: 1.0V ≥10uF 测试频率:120Hz±10%;测试电压: 1.0V Measuring Frequency Measuring voltage				
				E/ Y (F)	≤7.5%(C,R≤0.1 μ F ≤ 10.0% ≥10 μ F , DF≤15%		测试频率 Measuring Frequency 测试电压: 0.5V Measuring voltage	
					(≥1 μ F C, R≥0.1 μ F) ≤15%(C,R≥1 μ F) 0402≥0.1 μ F		测试频率 Measuring Frequency 测试电压: 1.0V Measuring voltage	
绝缘电阻 Insulation Resistance	I 类 Class I	C≤10nF IR≥10000MΩ		测试电压:额定电压 Measuring voltage: Rated voltage 测试时间: 60±5 秒 Du ration:60±5S				

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	II 类 Class II	$C \leq 25\text{nF}$ $IR \geq 4000\text{M}\Omega$ $C > 25\text{nF}$ $R \cdot C \div 100\text{S}\omega\text{f}$	
项目 Item	技术要求 Technical Specification		测试方法和备注 Test Method and Remarks
耐电压 Withstandi-ng Voltage	不应有介质 被击穿或损伤 No breakdown or damage.		端之间 B e t w e e n term in a l s 测试电压 Measuring Voltage: 持续时间: 5±1 秒 Duration: 5±1s I 类: 300%额定电压 Class I:300% Rated voltage II 类: U,R≤500V 额定电压 2.5UR Class II: U, 2.5 UR R rated voltage 500 v or less II 类: U,R>500V≤1000V 额定电压 1.5UR Class II: U R > 1.5 UR 500 v rated voltage 1000 v or less II 类: U,R>1000V 额定电压 1.2UR Class II: U R > 1.2 UR rated voltage 1000 v I 类充/放电电流不应超过 50mA I kind of charge/discharge current should not exceed 50 ma II 类小尺寸芯片充/放电电流不应超过 30mA Class II small size chips charge/discharge current should not exceed 30 ma II 类充/放电电流不应超过 50mA Class II charge/discharge current should not exceed 50 ma
			端子与外装间 Between terminals and body: 施加电压: 2.5U _R 持续时间: 1~5s Voltage: 2.5 times rated voltage Duration: 1~5s 金属制小球法 Small metallic ball method 将电容器本体插入盛满直径为 1mm 的金属小球的容器中, 但保留距端头处 2mm 的本体不插入。试验电压施加在短路回路端子和金属小球之间。 Small metallic balls with 1mm diameters shall be put in a vessel and the test capacitor shall be submerged except 2mm from the top of its component body and the terminals. The test voltage shall be applied between the short-circuited terminals and the metallic balls.
可焊性 Solder ability	上锡率应大于 95% Lead wire shall be at least 75% covered with a new solder coating.		将电容器引线浸入含有 25%松香的酒精溶液中, 然后浸入温度为: 230±5℃的金属焊锡(63Sn/37Pb)中 2±0.5 秒, 注意: 电容器本体底面距离锡面约 1.5~2mm, The terminal of capacitor is dipping into a 25% rosin solution of ethanol and then into molten solder(63Sn/37Pb) of 230±5℃ for 2±0.5s. In both cases the depth of dipping is up to about 1.5~2mm from the terminal body.
耐焊接热 Resistance to Soldering Heat	项目 Item	$\Delta C/C \leq$	锡温: 260 ±5℃ 时间: 10 ±1s Solder temperature: 260 ±5℃ Duration: 10 ±1s
	Class I	$\pm 2.5\%$ or $\pm 0.25\text{pF}$	浸入条件: 将电容器插入厚度为 1.6mm, 孔径为 1.0mm 的 PC 板。 Immersed conditions: Inserted into the PC board (with t=1.6mm, hole=1.0mm diameter) 对于 I 类介质, 试验后, 应在标准条件下恢复 4~24 小时后才测试。 Recovery: For class I, 4 to 24 hours of recovery under the standard condition after test.
	B	$\pm 10\%$	对于 II 类介质, 在试验前应先进行如下预处理: 150(-10,+0)℃, 1 小时, 接着在标准条件下恢复 48 ±4 小时。
	E / Y(F)	$\pm 20\%$	

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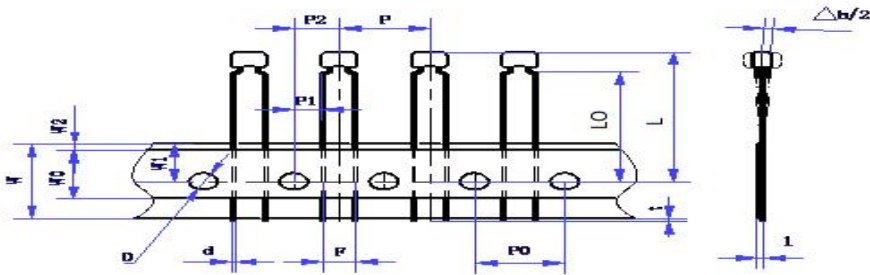
	外观无可见损伤 No significant abnormality in appearance.	Preconditioning (Class II) : 1 hour of preconditioning at 150(-10,+0) °C, followed by 48 ±4 hours of recovery under the standard condition. 恢复: 对于 II 类介质试验后, 应在标准条件下恢复 48 ±4 小时后才测试。 Recovery (Class II) : 48 ±4 hours of recovery under the standard condition after test.
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若测试结果有争议时, 仲裁试验用标准大气条件为:

温度: 25±2℃, 相对湿度: ≤65%, 气压: 86~106kPa

If in case of any dispute over the test results, the arbitration in standard atmospheric conditions for
test: Temperature: 25 + 2 °C, relative humidity: ≤ 65%, atmospheric pressure: 86 ~ 106 k pa

包装形式 编带 和散装 1000个 /包
Packaging Style



代号 Code	P	P0	P1	P2	d	Δh	W	W0	W1	W2	L	LO	D	t
尺寸 Dim.	12.7	12.7	3.85 5.1	6.35	0.5	0	18.5	8	9	1.5	26	15~20	4.0	0.7
误差 Tol.	±0.2	±0.2	0.7	±1.3	±0.1	±2	±1	±2	±0.5	±1.5	Max.	±0.5	±0.2	Max.

盒带包装

注意Note:

卷带包装

Tape and Reel Packaging

P1=3.85mm for F=5.08mm; P1=5.1mm for F=2.54mm.

