

规格书

PROUCT APPROVAL SHEET

客户名称: 立创商城

Customer

品 名: 径向引线独石电容器

Product Name Radial Leaded Mlcc

规 格: 102K50V P=5.08 L=10 0603 平肩

Product Spec

料 号: CT4-0603B102K500F3-Y

Spec

版 本 号: V3.1

Version Number

日 期: 2025-06-06

Date



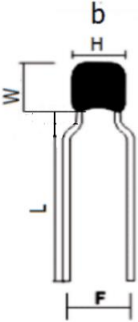
客 户 Customer			制 造 Manufacturer		
确 认 Approval			确 认 Approval		
检验 Inspector	审核 Checker	批准 Approver	拟制 Designer	审核 Checker	批准 Approver
			周潇潇	刘斌	刘大鹏

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
CT4-0603B102K500F3	900~1100pF	≤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				0603	1.60×0.80mm	
C	温度特性 Temperature Characteristic				D	标称容量 Nominal Capacitance C		
	B	X7R	±15%	-55～+125℃		102	1nF	
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	
			盐雾线 Salt spray line					
			镀锡铜包钢线 Tin plated copper clad steel wire		Φ0.50mm±0.05mm		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 (脚距)	L (脚长)	H(宽)	W (高)	T (厚)	
0603		5.08±0.5	10±2	5.0Max	5.5Max	4.0Max	50V

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
				<100pF	1MHZ±10%	1.0V
				≥100pF	100KHZ±10%	
				≥1000pF	1KHZ±10%	
	II 类 Class II	应符合指的误差级别 With in the specified tolerance.		对于 II 类电容器，测试前应先预处理 For class II capacitor, pre treatment should be taken before the test		
				测试频率 Measuring Frequency	测试电压 Measuring voltage	
				<10 μ F 1KHZ ≥10 μ F120Hz	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
				<100pF	1MHZ±10%	1.0V
				≥100pF	100KHZ±10%	
				≥1000pF	1KHZ±10%	
	II 类 Class II	B E/Y(F) (F)	100V<1 μ F DF≤2.5% 50V≥1 μ F , DF≤3.5% 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		
			(C,R≤0.1 μ F≤7.5%) (C,R≥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 ≤15%	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		
	II 类 Class II	C≤25nF IR≥4000MΩ C>25nF R.C÷100sΩF		Du ration:60±5S		

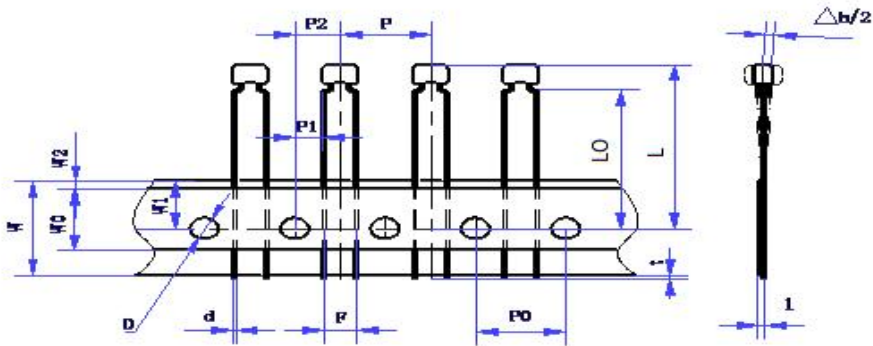
项目 Item	技术要求 Technical Specification	测试方法和备注 Test Method and Remarks
耐电压 Withstand voltage	不应有介质被击穿或损伤 Should not have the breakdown or damage	端之间 Between term in a l s 测试电压 Measuring Voltage: 持续时间: 5±1秒 Duration: 5±1s I类: 300%额定电压 Class I: 300% Rated voltage II类: $U, R \leq 500V$ 额定电压 2.5UR Class II: $U, 2.5 UR$ R rated voltage 500 v or less II类: $U, R > 500V \leq 1000V$ 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 term in a l s 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 Metal 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。 Insert the capacitor body filled with a diameter of 1 mm metal ball in the container, but keep away from the end of 2 mm ontology is not inserted. Test voltage applied between the short circuit loop terminal and a metal ball.
可焊性 Solder ability	上锡率应大于75% The tin rate should be greater than 75%	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: $230 \pm 5^\circ\text{C}$ 的金属焊锡 (Sn) 中 2 ± 0.5 秒, 注意: 电容器本体底面距离锡面约1.5~2mm。 Capacitor lead into the alcohol solution containing 25% rosin, then immersed temperature: $230 \pm 5^\circ\text{C}$ metal solder (Sn) 2 ± 0.5 seconds, note: capacitor body bottom tin surface distance is about 1.5 ~ 2 mm.
耐焊接热 Resistance To Soldering Heat	项目	$\Delta C/C \leq$
	Class I	$\pm 2.5\%$ or $\pm 0.25p$
	B	$\pm 10\%$
	E/Y(F)	$\pm 20\%$
	外观无可见损伤 No visible damage	锡温: $260 \pm 5^\circ\text{C}$ Solder temperature: $260 \pm 5^\circ\text{C}$ 时间: $10 \pm 1s$ Duration: $10 \pm 1s$ 浸入条件: 将电容器插入厚度为1.6mm, 孔径为1.0mm的PC板。 Immersion conditions: insert the capacitor thickness of 1.6 mm, pore size of 1.0 mm PC board. 对于I类介质, 试验后, 应在标准条件下恢复4~24小时才测试。 In class I medium, after the test, should be in the standard recovery under the condition of 4 ~ 24 hours to test. 对于II类介质, 在试验前应首先进行如下预处理: $150 (-10, +0)$, 1小时, 接着在标准条件下恢复48±4小时。 For class II medium, should undertake the following first pre-treatment before test: the 150 (-10 + 0), 1 hour, Then under the condition of standard to restore 48 + 4 hours. 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: for class II medium after test, should be under standard conditions to restore 48 + 4 hours after the test.

若测试结果有争议时, 仲裁试验用标准大气条件为:

温度: $25 \pm 2^\circ\text{C}$, 相对湿度: $\leq 65\%$, 气压: 86~106kPa

If in case of any dispute over the test results, the arbitration in standard atmospheric conditions for test: Temperature: $25 \pm 2^\circ\text{C}$, relative humidity: $\leq 65\%$, atmospheric pressure: 86 ~ 106 kpa

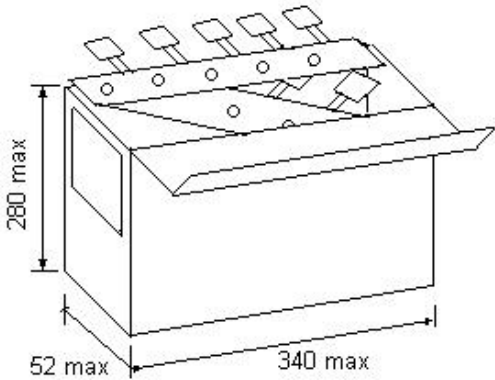
包装形式
Packaging Style



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.

注意Note:
P1=3.85mm for F=5.08mm; P1=5.1mm for F=2.54mm.

盒带包装
Ammo Packaging



卷带包装
Tape and Reel Packaging

