

**BERYL®**

# 承认书

## APPROVAL SHEET

固态电容器(SOLID CAPACITORS)

No:20150706m

客户

深圳市金鹏辉科技有限公司

**CUSTOMER**

商标

**BRAND:** BERYL

日期

**DATE:** 2015-7-6

描述

**DESCRIPTION:**

**47uF/50V Φ6.3\*11L**

系列

**SERIES:** CN

形状: 导针型

**TYPE:** RADIAL

供应商 <b>VENDOR</b>			客户 <b>CUSTOMER</b>		
Approver 批准	Auditor 审核	Designer 制作	Approver 批准	Auditor 审核	Tester 测试者
陈镇权	伍伟桥	黄汝梅			

承认后, 请签回一份, 在下正式订单前如未签回承认书, 视同默认本公司的相关标准及技术指标。  
ter approved, please sign back 1 Approval Sheet before order. If not, we will treat it as tacitly acknowledged and accepted our relative standard and technical index.



肇庆绿宝石电子科技股份有限公司

Zhao Qing Beryl Electronic Technology Co., Ltd.

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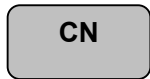
TEL: (0758) 2862871 FAX: (0758) 2862870

E-mail:master@zq-beryl.com http://www.zq-beryl.com

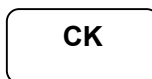
CN Series

NEW

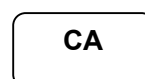
- Low impedance, high ripple current, high voltage
- Load life of 2000 hours at 125°C
- RoHS Compliant



high voltage  
high tem



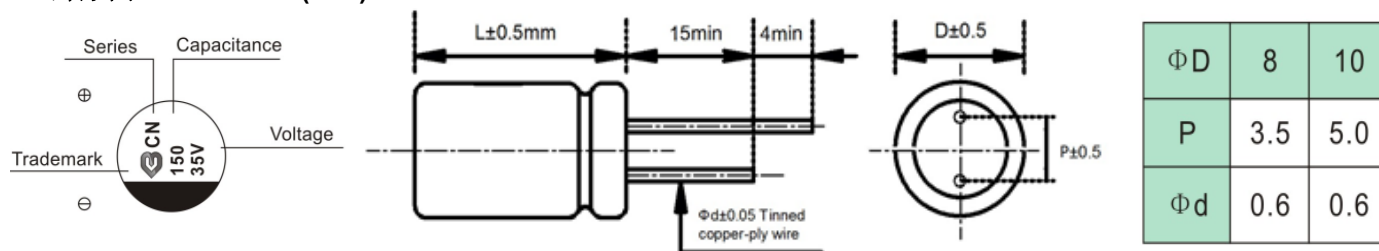
high voltage



规格表 Specifications

项目 Items	特性参数 Characteristics		
使用温度范围 Category Temperature Range	-55 ~ +125°C		
额定工作电压范围 Rated Voltage Range	35 ~ 220 V		
静电容量允许偏差 Capacitance tolerance	±20%(M) (at 20°C,120Hz)		
漏电流 Leakage Current	施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20°C) Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20°C		
损耗角正切值tanδ Dissipation Factor	小于或等于规格 (at 20°C,120Hz) Less than or equal to the specified		
温度特性 Low Temperature Characteristics (Max.Impedance Ratio)	Z(-25°C)/Z(+20°C)	≤ 1.25	(100KHz)
	Z(-55°C)/Z(+20°C)	≤ 1.25	
耐久性 Endurance	125°C施加额定工作电压2000小时, 恢复到20°C后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 2000 hours at 125°C.		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
Damp Heat (Steady State) 耐湿负荷特性	在60°C 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20°C后, 产品性能应满足以下要求 The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 1000 hours at 60°C,90%~ 95% RH.		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
浪涌电压特性 (Surge Voltage)	浪涌电压=额定电压× 1.15(V) Surge Voltage=Rated voltage × 1.15(V) 在105°C环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复后测试, 应满足以下要求 The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds		
	Appearance	No significant damage	
	Capacitance change	≤ ±20% of the initial value	
	D.F.(tanδ)	≤ 150% of the specified value	
	ESR	≤ 150% of the specified value	
Leakage current	≤ The specified value		

外形图 Dimensions (mm)



表中Max和Min均为样品实测数据.Max、Min value in the list is measured value.

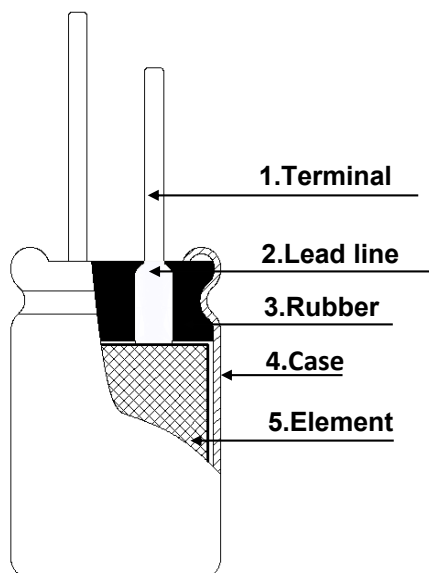
BERYL		金鹏辉	主要技术参数												
部品号码	部品名	额定条件下 工作寿命	CX容量 (uF) at 120Hz 25°C			DF损失(%) at 120Hz 25°C			最大允许纹波 电流(mArms) 温度125°C 频 率100KHz	ESR(mΩ)100KHz 25°C			LC漏电(uA)2分钟测试		
			37.6~56.4			<12				<45			<352.5		
			Max	Min	X	Max	Min	X		Max	Min	X	Max	Min	X
CN050M470LO6.3*11	47uF/50V Φ6.3*11L 蓝色印字	2000H	47.98	47.07	47.53	2.02	1.44	1.73	800.0	39.05	27.43	33.24	1.30	0.50	0.90


备注：由于固态电容设计的特点不同，为不影响电容性能，要注意电容脚距的匹配性，在测试和使用电容引脚不能受到机械外力引起电容脚距发生变化。

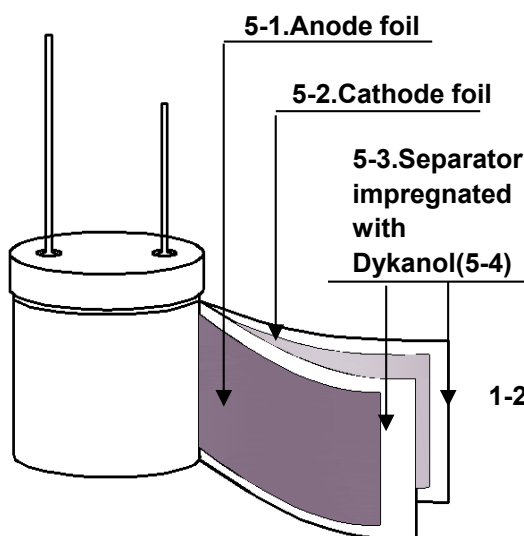
PLANNED BY	CHECKED BY	APPROVED BY	BERYL										SHEET
黄汝梅	伍伟桥	陈镇权											共6页, 第3页

# The structure chart of solid electrolytic capacitors 固态电容器结构图

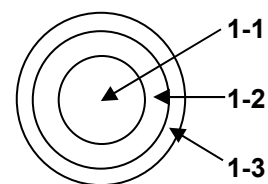
**Capacitor**  
电容器



**Stretch Out View of Element**  
素子展开图



**Cross Section of Terminal**  
CP 线横向剖面图



1-1. Fe  
铁芯

1-2. Copper plate ( $\geq 10\mu\text{m}$ )  
镀铜层

1-3. Tin Plate ( $\geq 8\mu\text{m}$ )  
镀锡层

Item	Component 组成材料	Materials 材质	Vendor 供应商
1	Terminal CP线	Tinned copper-ply wire 镀铜镀锡铁线	Japan-Funded Enterprises
2	Lead line 引出线	Aluminum, 99.95% or 99.97% 纯度为99.95%或99.97%的金属铝片	Nan Ming(Quan Yong)
3	Rubber 胶盖	RE IIR rubber RE IIR 橡胶	Lian Hua Xin
4	Case 铝壳	Aluminum, 99.8% 纯度为99.8%的金属铝	An Qi Li
5-1	Anode Foil 阳极箔	Formed aluminum, 99.99% or 99.98% 纯度99.99%或99.98%的化成铝箔	China-Japan Joint Venture
5-2	Cathode Foil 阴极箔	Etched aluminum, 99.7% or 99.4% 纯度99.7%或99.4%的腐蚀铝箔	ELE-CON
5-3	Separator 电解纸	Manila, pulp, kraft, etc. 马尼拉纸、纸浆、牛皮纸等	KAN、NKK
5-4	Dykanol 介质材料	Poly3,4-Ethylene Dioxy Thiophene 聚3, 4-乙烯基二氧噻吩	BERYL

TITLE/DESCRIPTION

SOLID CAPACITORS

固态电容器

BERYL

SHEET

共6页,  
第4页

● Don't change written contents and append it.

● 记载内容不变更与添加

- 1.此部品不使用含有RoHS的指定物质.
- 2.对于RoHS物质使用的有无在承认书上要明确规定.
- 3.为部品易区分处理. 对塑料材料要标识材料记  
所谓标识记号详细请参照RoHS[塑料制部品的材料标识规定]  
但, 标识困难时除外.

「困难例」

- . 无记入标识记号的场所.
- . 因要记入标识可能会造成机能损坏.
- . 因生产方法标识困难.

4.成型用树脂, 油墨, 涂料, 覆盖电线要从绿色环保伙伴认定厂商购买.

- 1.This part should not contain any substances which are specified in RoHS
- 2.Clarity by delivery specifications about the existence of use of the substance which are specified in RoHS
- 3.In order to make sorting of plastic waste easy, material symbols is marked on the plastic part  
For details on marking symbols, refer to RoHSMarking of plastic parts and packaging material.

Marking may be omitted in the following cases:

- . Not enough space to apply the marking
- . Marking would interfere with performance or functional
- . Marking technically not feasible due to the specific production method

4.Purchase ink, paint,wire rods. And molding resins only from the business partners that approves as RoHS

TITLE/DESCRIPTION	BERYL	SHEET
SOLID CAPACITORS ----- 固态电容器		共6页, 第5页

## 5. Marking

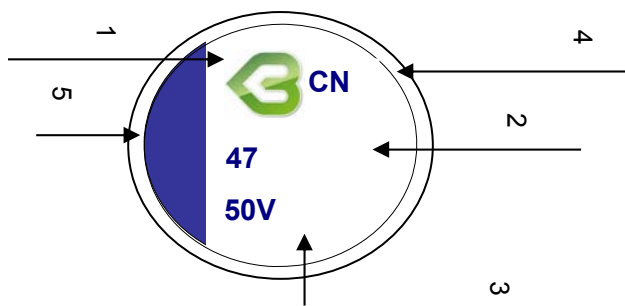
The following items shall be marked indelibly and legibly on specimen or each unit pack.

1. Manufacturer's name (abbreviated manufacturer's name permitted) or trademark.
2. Capacitance
3. Work voltage
4. Series
5. Negative polarity

## 5. 标示

每个部品的表面或最小包装单位依下记事项不易消失的方法来标示。

1. 制造者名(料号)或商标
2. 静电容量
3. 额定电压
4. 系列
5. 负极性



注: 1. 本承认书中所有数据如有异议, 以中文为准。

2. 在使用电解电容器时, 请参考承认书内的使用标准, 由于客户使用超出承认书相关参数和范围, 如额定电压、额定纹波电流、温度等, 不在我司质量保证范围内。

3. 由于电路设计不当或缺陷造成的电解电容器损坏, 不在我司质量保证范围内。

4. 由于固态电容设计的特点不同, 为不影响电容性能, 要注意电容脚距的匹配性, 在测试和使用时电容引脚不能受到机械外力引起电容脚距发生变化。

TITLE/DESCRIPTION

SOLID CAPACITORS

固态电容器

BERYL

SHEET

共6页,  
第6页