



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L10466

## 校准证书

CALIBRATION CERTIFICATE



证书编号

Certificate No.

ZD202403110088

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委托方

Client

广东铨电测控技术有限公司

委托方地址

Address

佛山市南海区桂城街道石龙北路105号联东智造园5座10楼

仪器名称

Description

绝缘电阻表

型号规格

Model/Type

ETCR3460B

制造厂

Manufacturer

广东铨电测控技术有限公司

出厂编号

Serial No.

3461240046

管理编号

Asset No.

/

样品接收日期

Date of Receipt

2024-03-11

校准日期

Date of Calibration

2024-03-11

批准人 :

Approved Signatory

苏瑶云

审核 :

Inspected by

巢弘

校准 :

Tested by

张辉

校准专用章  
(stamp)



地址 : 广东省深圳市宝安区福永街道白石厦社区东区新开发区4栋203

Add : Room 203, Building 4, New Development Area, East Zone, Baishixia Community, Fuyong Sub-District, Bao'an District, Shenzhen, Guangdong, China

电话 (Tel) : 0755-29888158

邮政编码 (Post Code) : 518103

传真 (Fax) : 0755-29796107



## 校准说明

### DIRECTIONS OF CALIBRATION

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- 1.本实验室出具的数据均可溯源至国家计量基准。  
( All data issued by ZD Test are traced to National Primary Standards.)
- 2.本结果仅对当次被测样品有效, 如有疑问请在15个工作日反馈。  
( The results is ONLY valid for the tested sample,please feedback to us within 15 working days if you have any question.)
- 3.本证书编号具有唯一性, 若替换证书, 自发出后原证书即可作废。  
( Each certificate has a unique number.If replaced the certificate,the original certificate will be invalid once the new certificate number is issued.)
- 4.证书中如有最大允许误差、判定结果, 仅供参考, 其中“P”代表“Pass”, “F”代表“Fail”。  
( In the datasheet,MPE & determination is only for reference,"P"represents"Pass"and"F"represents"Fail".)
- 5.本次校准的技术依据及获认可的能力范围, 超出范围的内容未被认可。  
( Reference documents and Accredited Scopes for Calibration,Beyond the Scope has not been accredited.):

参照JJG 622-1997《绝缘电阻表(兆欧表)检定规程》《Verification Regulation of Megohm meter》

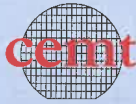
#### 6.本次校准使用的主要测量标准 ( Main Standards of Measurement Used in the Calibration.):

名称/型号 Description/Model	编号 Serial No.	证书号 Certificate No.	有效期至 Due Date	技术特征 Technique Character
耐电压测试仪校验仪	ZD-C101	JL2302706104	2024-07-27	电流/电压: $\pm(0.4\% \times \text{读数} + 0.1\% \times \text{量程})$ ; 纹波/失真: $\pm 1.0\%$ (绝对误差); 电压计时: $\pm(0.5\% + 2\text{个字})$ ; 失真: $U_{rel} = 1.4\%, k=2$
可调式高阻箱	ZD-D 031	JL2380865031	2024-07-24	Urel=0.06%

#### 7.校准地点、环境条件 ( Place and environmental conditions of the calibration)

地点 Place	委托方现场	温度 Temperature	22 °C	相对湿度 Relative Humidity	57 %
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- 8.建议复校时间间隔: 12 个月, 送检单位可根据实际情况自主决定。  
Suggested calibration interval is 12 month or it can be altered depending on the actual usage of the user.



## 校准结果

### Result of Calibration

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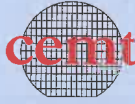
#### 1、外观以及一般性检查: 正常

In view of External and Generality check : Normal

#### 2、电阻测量的校准:

Calibration of Resistance Measurement:

测量电压 Test Voltage	标准值 Reference	示值 Indication	误差 Error	允许误差 MPE	结论 Conclusion
(V)	(kΩ)	(kΩ)	(kΩ)	(kΩ)	
500	1000	999	-1	± 50	P
	(MΩ)	(MΩ)	(MΩ)	(MΩ)	
	10	9.89	-0.11	± 0.50	P
	100	98.2	-1.8	± 5.0	P
	(GΩ)	(GΩ)	(GΩ)	(GΩ)	
	1	0.98	-0.02	± 0.05	P
	10	9.97	-0.03	± 2.00	P
(V)	(MΩ)	(MΩ)	(MΩ)	(MΩ)	
1000	5	5.03	0.03	± 0.25	P
	10	10.09	0.09	± 0.50	P
	50	50.16	0.16	± 2.50	P
	100	102.1	2.1	± 5.0	P
	500	501.0	1.0	± 25.0	P
	(GΩ)	(GΩ)	(GΩ)	(GΩ)	
	1	1.02	0.02	± 0.05	P
	5	5.04	0.04	± 0.25	P
	10	10.16	0.16	± 0.50	P
	50	50.27	0.27	± 2.50	P
2500	10	10.13	0.13	± 0.50	P
	100	100.5	0.5	± 5.0	P
	(GΩ)	(GΩ)	(GΩ)	(GΩ)	
	1	1.02	0.02	± 0.05	P
	10	10.19	0.19	± 0.50	P
	100	102.4	2.4	± 20.0	P
(V)	(MΩ)	(MΩ)	(MΩ)	(kΩ)	(Pass/Fail)
5000	100	101.8	1.8	± 5.0	P
	(GΩ)	(GΩ)	(GΩ)	(GΩ)	
	1	1.01	0.01	± 0.05	P
	10	10.03	0.03	± 2.00	P
	100	101.5	1.5	± 20.0	P



# 校准结果

## Result of Calibration

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### 3、测量电压的校准:

#### Calibration of Voltage

标称值 Nominal (V)	实测值 Measured (V)	误差 Error (V)	允许误差 MPE (V)	结论 Conclusion (Pass/Fail)
500	512	-12	± 50	P
1000	1029	-29	± 100	P
2500	2537	-37	± 250	P
5000	5055	-55	± 500	P

注:测量不确定说明:

Notes: Uncertainty in the Measurement

(依据JJF1059.1-2012测量不确定度评定与表示)

(According to JJF1059.1-2012 Evaluation and Expression of Uncertainty in Measurement)

1. 绝缘电阻测量结果相对扩展不确定度:  $U_{rel}=6.0%$ ,  $k=2$

Related Expanded Uncertainty of Insulation Resistance Measurement Results

2. 开路测量电压测量结果的相对扩展不确定度:  $U_{rel}=1.3%$ ,  $k=2$

Related Expanded Uncertainty of Open Circuit Voltage Output Measurement Results

3. 结论判断依据: 仪器说明书技术要求

Basis for the conclusion: Technical Specification of the Instrument

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