

可靠性测试报告

Reliability Test Report

TCTR

NTC贴片热敏电阻

NTC Chip Thermistor



丰全球电子产业羽翼
解客户设计制造难题

Better Solution for
Sustainable High End Manufacturing

可靠性检测报告

Reliability Test Report

测试型号

Tested Parts

TCTR0402H10K0G3435T
TCTR0402H100KG4100T
TCTR0603H10K0G3435T
TCTR0603H100KG4100T
TCTR0603H100KG4390T
TCTR0805H10K0G3435T
TCTR0805H100KG3900T

报告编号

Report Number

RESI202311221

生产日期

Date of Manufacture

2023.3

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测试项目概览

Test Overview

1、检验环境/Test Environment

环境温度/Ambient Temperature: 15°C ~ 25°C

相对湿度/Relative Humidity: 40 % RH ~ 65 % RH

气压/Atmospheric Pressure: 标准大气压/Standard Atmospheric Pressure

2、检验项目/Test Items

高温存储测试记录/High Temperature Storage Test Record

低温存储测试记录/Low Temperature Storage Test Record

温度循环测试记录/Temperature Cycling Test Record

高温高湿测试记录/Bias Humidity Test Record

耐焊接热测试记录/Resistance to Soldering Heat Test Record

可焊性测试记录/Solderability Test Record

散热系数测试记录/Dissipation Factor Test Record

热时间常数测试记录/Thermal Time Constant Test Record

基板弯曲测试记录/Substrate Bending Test Record

振动测试记录/Vibration Test Record

硫化氢气体腐蚀测试记录/Hydrogen Sulphide Test Record

测试项目概览

Test Overview

3、检验依据/Test References

IEC-60115-1 电子设备用固定电阻器

IEC-60539-1 直热式负温度系数热敏电阻器

MIL-STD-202 Electronic & Electrical Component Testing Standards

4、检验结论/Test Result

合格/Qualified

高温存储测试记录

High Temperature Storage Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

MIL-STD-202G Method 108A

3、测试设备/Test Equipment

高温存储试验箱/High Temperature Storage Test Chamber
精密电阻测试仪/Precision Ohmmeter

4、测试日期/Test Date

2023.3.20-2023.4.28

5、试验要求/Test Requirements

- 5.1. 试验温度: 150°C;
- 5.2. 实验时间: 1000h;
- 5.3. 试验电压: 无负载;

- 5.1. Test Temperature: 150°C;
- 5.2. Duration: 1000h;
- 5.3. Test Voltage: No load.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

$\Delta B = \pm 2\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	$\Delta B/B$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.15%	0.01%	Pass
	Max	0.16%	0.03%	Pass
	Min	0.14%	0.00%	Pass
TCTR0402H100KG4100T	Ave	0.29%	0.00%	Pass
	Max	0.32%	0.03%	Pass
	Min	0.25%	-0.05%	Pass
TCTR0603H10K0G3435T	Ave	0.19%	-0.02%	Pass
	Max	0.20%	-0.01%	Pass
	Min	0.17%	-0.03%	Pass
TCTR0603H100KG4100T	Ave	0.25%	-0.02%	Pass
	Max	0.29%	0.01%	Pass
	Min	0.21%	-0.04%	Pass
TCTR0603H100KG4390T	Ave	0.09%	0.00%	Pass
	Max	0.13%	0.01%	Pass
	Min	-0.26%	-0.03%	Pass
TCTR0805H10K0G3435T	Ave	0.19%	0.01%	Pass
	Max	0.24%	0.03%	Pass
	Min	0.15%	0.00%	Pass
TCTR0805H100KG3900T	Ave	0.21%	-0.09%	Pass
	Max	0.25%	-0.05%	Pass
	Min	0.17%	-0.13%	Pass

低温存储测试记录

Low Temperature Storage Test Record

1、样品信息/Sample

物料编号

样品数量

Part Number

Sampling Size

TCTR0402H10K0G3435T

20

TCTR0402H100KG4100T

20

TCTR0603H10K0G3435T

20

TCTR0603H100KG4100T

20

TCTR0603H100KG4390T

20

TCTR0805H10K0G3435T

20

TCTR0805H100KG3900T

20

2、试验标准/Test Standards

IEC 60115- 1 4.25

3、测试设备/Test Equipment

恒温恒湿箱/Constant Temperature & Humidity Chamber

精密电阻测试仪/Precision Ohmmeter

4、测试日期/Test Date

2023.4.29-2023.6.9

5、试验要求/Test Requirements

5.1. 温度: -40℃;

5.2. 试验电压: 无负载;

5.3. 实验时间: 1000h;

5.1. Test Temperature: -40℃;

5.2. Duration: 1000h;

5.3. Test Voltage: No load.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

$\Delta B = \pm 2\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	$\Delta B/B$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.07%	0.04%	Pass
	Max	0.08%	0.06%	Pass
	Min	0.05%	0.01%	Pass
TCTR0402H100KG4100T	Ave	0.05%	0.01%	Pass
	Max	0.08%	0.03%	Pass
	Min	0.02%	-0.01%	Pass
TCTR0603H10K0G3435T	Ave	0.08%	0.02%	Pass
	Max	0.10%	0.03%	Pass
	Min	0.06%	0.02%	Pass
TCTR0603H100KG4100T	Ave	0.09%	0.00%	Pass
	Max	0.11%	0.02%	Pass
	Min	0.07%	-0.01%	Pass
TCTR0603H100KG4390T	Ave	0.11%	0.01%	Pass
	Max	0.12%	0.02%	Pass
	Min	0.10%	-0.01%	Pass
TCTR0805H10K0G3435T	Ave	0.06%	0.01%	Pass
	Max	0.10%	0.02%	Pass
	Min	0.04%	0.00%	Pass
TCTR0805H100KG3900T	Ave	0.10%	-0.02%	Pass
	Max	0.11%	-0.01%	Pass
	Min	0.09%	-0.04%	Pass

温度循环测试记录

Temperature Cycling Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

IEC 60115- 1 4.19

3、测试设备/Test Equipment

高低温冲击箱/Thermal Shock Chamber
精密电阻测试仪/Precision Ohmmeter

4、测试日期/Test Date

2023.6.12-2023.6.16

5、试验要求/Test Requirements

5.1. Ts(min): - 40°C;

5.2. Ts(max): + 150°C;

5.3. 时间: 各 30 分钟;

5.4. 循环次数: 100 次;

5.1. Ts(min): - 40°C;

5.2. Ts(max): + 150°C;

5.3. Duration: 30 minutes each;

5.4. Cycle: 100 cycles.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

$\Delta B = \pm 2\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	$\Delta B/B$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.04%	-0.01%	Pass
	Max	0.07%	0.00%	Pass
	Min	0.03%	-0.03%	Pass
TCTR0402H100KG4100T	Ave	0.12%	0.01%	Pass
	Max	0.14%	0.03%	Pass
	Min	0.10%	-0.02%	Pass
TCTR0603H10K0G3435T	Ave	0.01%	-0.03%	Pass
	Max	0.05%	0.00%	Pass
	Min	-0.01%	-0.07%	Pass
TCTR0603H100KG4100T	Ave	0.07%	-0.01%	Pass
	Max	0.09%	0.00%	Pass
	Min	0.06%	-0.03%	Pass
TCTR0603H100KG4390T	Ave	0.00%	-0.03%	Pass
	Max	0.18%	0.01%	Pass
	Min	-0.03%	-0.06%	Pass
TCTR0805H10K0G3435T	Ave	0.00%	0.00%	Pass
	Max	0.02%	0.01%	Pass
	Min	-0.01%	-0.02%	Pass
TCTR0805H100KG3900T	Ave	0.03%	-0.06%	Pass
	Max	0.06%	-0.04%	Pass
	Min	0.02%	-0.09%	Pass

高温高湿测试记录

Bias Humidity Test Record

1、样品信息/Sample

物料编号

样品数量

Part Number

Sampling Size

TCTR0402H10K0G3435T

20

TCTR0402H100KG4100T

20

TCTR0603H10K0G3435T

20

TCTR0603H100KG4100T

20

TCTR0603H100KG4390T

20

TCTR0805H10K0G3435T

20

TCTR0805H100KG3900T

20

2、试验标准/Test Standards

IEC 60115- 1 4.24

3、测试设备/Test Equipment

可编程恒温恒湿箱/Programmable Constant Temperature & Humidity
Chamber

可编程直流电源/Programmable DC Power Supply

精密电阻测试仪/Precision Ohmmeter

4、测试日期/Test Date

2023.6.19-2023.8.4

5、试验要求/Test Requirements

- 5.1. 试验温度: 85 °C;
- 5.2. 试验湿度: 85% RH;
- 5.3. 试验功率: 5mW.
- 5.4. 试验时间: 1000 小时. 1.5h on , 0.5h off.

- 5.1. Temperature: 85 °C;
- 5.2. Humidity: 85% RH;
- 5.3. Test Power: 5mW.
- 5.4. Duration: 1000 h. 1.5h on , 0.5h off

6、测试合格标准/Test Qualified Standards

- $\Delta R = \pm 3\%$
- $\Delta B = \pm 2\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	$\Delta B/B$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.02%	-0.03%	Pass
	Max	0.05%	0.09%	Pass
	Min	-0.18%	-0.07%	Pass
TCTR0402H100KG4100T	Ave	0.07%	0.01%	Pass
	Max	0.09%	0.10%	Pass
	Min	0.04%	-0.08%	Pass
TCTR0603H10K0G3435T	Ave	0.02%	0.04%	Pass
	Max	0.04%	0.07%	Pass
	Min	0.01%	0.02%	Pass
TCTR0603H100KG4100T	Ave	0.07%	-0.05%	Pass
	Max	0.11%	0.06%	Pass
	Min	0.03%	-0.11%	Pass
TCTR0603H100KG4390T	Ave	0.09%	0.07%	Pass
	Max	0.12%	0.09%	Pass
	Min	0.04%	0.05%	Pass
TCTR0805H10K0G3435T	Ave	0.03%	0.02%	Pass
	Max	0.05%	0.07%	Pass
	Min	0.00%	-0.06%	Pass
TCTR0805H100KG3900T	Ave	0.11%	0.06%	Pass
	Max	0.14%	0.09%	Pass
	Min	0.09%	0.00%	Pass

耐焊接热测试记录

Resistance to Soldering Heat Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

IEC 60115- 1 4.18

3、测试设备/Test Equipment

工业高清数码电子显微镜/Industrial HD Electron Microscope
精密电阻测试仪/Precision Ohmmeter
锡炉/Solder Pot

4、测试日期/Test Date

2023.8.7

5、试验要求/Test Requirements

5.1. 焊锡温度: 260 °C;

5.2. 浸锡时间: 10 s;

5.1. Tin Bath Temperature: 260 °C;

5.2. Bath Duration: 10 s.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.05%	Pass
	Max	0.10%	Pass
	Min	0.02%	Pass
TCTR0402H100KG4100T	Ave	0.06%	Pass
	Max	0.09%	Pass
	Min	0.00%	Pass
TCTR0603H10K0G3435T	Ave	0.05%	Pass
	Max	0.07%	Pass
	Min	0.04%	Pass
TCTR0603H100KG4100T	Ave	0.06%	Pass
	Max	0.08%	Pass
	Min	0.05%	Pass
TCTR0603H100KG4390T	Ave	0.02%	Pass
	Max	0.07%	Pass
	Min	-0.04%	Pass
TCTR0805H10K0G3435T	Ave	0.01%	Pass
	Max	0.03%	Pass
	Min	-0.01%	Pass
TCTR0805H100KG3900T	Ave	0.02%	Pass
	Max	0.08%	Pass
	Min	-0.01%	Pass

试验前后外观无明显变化, 符合要求
 No obvious change in appearance before and after the test. Qualified

可焊性测试记录

Solderability Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

IEC 60115 - 1 4.17

3、测试设备/Test Equipment

显微镜/Microscope
蒸汽老化试验箱/Steam Aging Test Chamber
小型回流焊炉/Reflow Welder

4、测试日期/Test Date

2023.8.7

5、试验要求/Test Requirements

245℃锡槽，保持3秒；将样品在 50x 显微镜下进行外观检查。每个单独的端子的关键区域，至少 95%以上面积被焊锡连续铺展；

245℃ Tin Bath for 3s; Visual inspection for the samples under 50x microscope. At least 95% critical area of each terminal should be covered by soldering tin.

6、测试合格标准/Test Qualified Standards

每个单独的端子的关键区域，至少 95%以上面积被焊锡连续铺展；

Over 95% critical area of each terminal are covered by soldering tin evenly.

7、测试数据及结果/Test Data & Results

系列号 Model	均匀上锡面积 Tinned Coverage	测试结果 Test Result
TCTR0402H10K0G3435T	≥95%	Pass
TCTR0402H100KG4100T	≥95%	Pass
TCTR0603H10K0G3435T	≥95%	Pass
TCTR0603H100KG4100T	≥95%	Pass
TCTR0603H100KG4390T	≥95%	Pass
TCTR0805H10K0G3435T	≥95%	Pass
TCTR0805H100KG3900T	≥95%	Pass

散热系数测试记录

Dissipation Factor Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	10
TCTR0402H100KG4100T	10
TCTR0603H10K0G3435T	10
TCTR0603H100KG4100T	10
TCTR0603H100KG4390T	10
TCTR0805H10K0G3435T	10
TCTR0805H100KG3900T	10

2、试验标准/Test Standards

IEC 60539-1 5.11

3、测试设备/Test Equipment

可编程直流电源/Programmable DC Power Supply
精密电阻测试仪/Precision Ohmmeter
精密温度计/Precision Thermometer

4、测试日期/Test Date

2023.8.9

5、试验要求/Test Requirements

试验温度：25 °C作为参考温度

Temperature: 25°C as reference temperature.

6、测试合格标准/Test Qualified Standards

$\leq 1.5\text{mW}/^{\circ}\text{C}$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	δ	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.62mW/°C	Pass
	Max	0.65mW/°C	Pass
	Min	0.61mW/°C	Pass
TCTR0402H100KG4100T	Ave	0.68mW/°C	Pass
	Max	0.75mW/°C	Pass
	Min	0.61mW/°C	Pass
TCTR0603H10K0G3435T	Ave	0.76mW/°C	Pass
	Max	0.79mW/°C	Pass
	Min	0.72mW/°C	Pass
TCTR0603H100KG4100T	Ave	0.79mW/°C	Pass
	Max	0.81mW/°C	Pass
	Min	0.75mW/°C	Pass
TCTR0603H100KG4390T	Ave	0.82mW/°C	Pass
	Max	0.88mW/°C	Pass
	Min	0.76mW/°C	Pass
TCTR0805H10K0G3435T	Ave	0.88mW/°C	Pass
	Max	0.95mW/°C	Pass
	Min	0.84mW/°C	Pass
TCTR0805H100KG3900T	Ave	0.85mW/°C	Pass
	Max	0.90mW/°C	Pass
	Min	0.81mW/°C	Pass

热时间常数测试记录

Thermal Time Constant Test Record

1、样品信息/Sample

物料编号

样品数量

Part Number

Sampling Size

TCTR0402H10K0G3435T

10

TCTR0402H100KG4100T

10

TCTR0603H10K0G3435T

10

TCTR0603H100KG4100T

10

TCTR0603H100KG4390T

10

TCTR0805H10K0G3435T

10

TCTR0805H100KG3900T

10

2、试验标准/Test Standards

IEC 60539-1 5.12

3、测试设备/Test Equipment

精密温度计/Precision Thermometer

4、测试日期/Test Date

2023.8.9

5、试验要求/Test Requirements

环境温度85℃→25℃，测量电阻变化了两个特定温度之差的63.2%所用时间

Ambient temperature changes from 85℃ to 25℃.

Measure the taken time of the resistance changes by 63.2% of the difference between two specific temperatures

6、测试合格标准/Test Qualified Standards

≤5sec

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	τ	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.77sec	Pass
	Max	0.93sec	Pass
	Min	0.65sec	Pass
TCTR0402H100KG4100T	Ave	0.83sec	Pass
	Max	1.09sec	Pass
	Min	0.65sec	Pass
TCTR0603H10K0G3435T	Ave	1.83sec	Pass
	Max	2.00sec	Pass
	Min	1.57sec	Pass
TCTR0603H100KG4100T	Ave	1.73sec	Pass
	Max	1.92sec	Pass
	Min	1.63sec	Pass
TCTR0603H100KG4390T	Ave	1.76sec	Pass
	Max	1.98sec	Pass
	Min	1.62sec	Pass
TCTR0805H10K0G3435T	Ave	3.43sec	Pass
	Max	3.97sec	Pass
	Min	3.16sec	Pass
TCTR0805H100KG3900T	Ave	3.56sec	Pass
	Max	3.80sec	Pass
	Min	3.06sec	Pass

基板弯曲测试记录

Substrate Bending Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

IEC 60115- 1 4.33

3、测试设备/Test Equipment

弯曲试验机/Bending Tester
精密电阻测试仪/Precision Ohmmeter

4、测试日期/Test Date

2023.8.11

5、试验要求/Test Requirements

5.1. PCB 板弯曲中心点下沉位移量: $d = 5\text{mm}$

(注: d 也可作为产品规格指定的其它数值);

5.2. PCB 板弯曲状态保持时间: 10 s;

5.1. The bending of middle of PCB: $d = 5\text{mm}$ (Note: d could be other specified values from the product specifications);

5.2. Bending Duration: 10 s.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.05%	Pass
	Max	0.27%	Pass
	Min	-0.29%	Pass
TCTR0402H100KG4100T	Ave	0.11%	Pass
	Max	0.26%	Pass
	Min	0.00%	Pass
TCTR0603H10K0G3435T	Ave	0.01%	Pass
	Max	0.04%	Pass
	Min	-0.06%	Pass
TCTR0603H100KG4100T	Ave	0.01%	Pass
	Max	0.08%	Pass
	Min	-0.05%	Pass
TCTR0603H100KG4390T	Ave	0.00%	Pass
	Max	0.04%	Pass
	Min	-0.10%	Pass
TCTR0805H10K0G3435T	Ave	-0.06%	Pass
	Max	0.00%	Pass
	Min	-0.11%	Pass
TCTR0805H100KG3900T	Ave	0.07%	Pass
	Max	0.11%	Pass
	Min	0.02%	Pass

试验前后外观无明显变化, 符合要求

No obvious change in appearance before and after the test. Qualified

振动测试记录

Vibration Test Record

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0402H10K0G3435T	20
TCTR0402H100KG4100T	20
TCTR0603H10K0G3435T	20
TCTR0603H100KG4100T	20
TCTR0603H100KG4390T	20
TCTR0805H10K0G3435T	20
TCTR0805H100KG3900T	20

2、试验标准/Test Standards

IEC 60115- 1 4.22

3、测试设备/Test Equipment

精密电阻测试仪/Precision Ohmmeter
振动试验台/Vibration Test Shakers

4、测试日期/Test Date

2023.8.11

5、试验要求/Test Requirements

- 5.1. 频率范围: 10Hz~55Hz;
- 5.2. 振动方向: X、Y、Z 三个方向, 振幅幅度, 峰-峰=1.5mm;
- 5.3. 循环: 一个循环, X、Y、Z每个方向各两个小时

- 5.1. Frequency: 10Hz~55Hz;
- 5.2. Orientation: X, Y, Z three orientations.
Amplitude peak-to-peak=1.5mm;
- 5.3. Cycle: One cycle, 2 hours in each direction of X, Y and Z.

6、测试合格标准/Test Qualified Standards

$\Delta R = \pm 3\%$

7、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	测试结果 Test Result
TCTR0402H10K0G3435T	Ave	0.04%	Pass
	Max	0.05%	Pass
	Min	0.02%	Pass
TCTR0402H100KG4100T	Ave	0.02%	Pass
	Max	0.04%	Pass
	Min	0.00%	Pass
TCTR0603H10K0G3435T	Ave	0.06%	Pass
	Max	0.09%	Pass
	Min	0.04%	Pass
TCTR0603H100KG4100T	Ave	0.08%	Pass
	Max	0.15%	Pass
	Min	-0.01%	Pass
TCTR0603H100KG4390T	Ave	0.02%	Pass
	Max	0.08%	Pass
	Min	-0.27%	Pass
TCTR0805H10K0G3435T	Ave	0.04%	Pass
	Max	0.06%	Pass
	Min	0.01%	Pass
TCTR0805H100KG3900T	Ave	0.00%	Pass
	Max	0.01%	Pass
	Min	-0.02%	Pass

硫化氢气体腐蚀测试报告

Hydrogen Sulphide Test Report

1、样品信息/Sample

物料编号 Part Number	样品数量 Sampling Size
TCTR0805H10K0G3435T	10
TCTR0603H10K0G3435T	10
TCTR0402H10K0G3435T	10

2、试验要求/Test Requirements

H₂S=3ppm、40℃、90%RH、96h

3、测试日期/Test Date

2023.09.24

4、测试合格标准/Test Qualified Standards

$\Delta R \leq \pm 3\%$

$\Delta B \leq \pm 2\%$

5、测试数据及结果/Test Data & Results

系列号 Model	参数 Spec.	$\Delta R/R$	$\Delta B/B$	测试结果 Test Result
TCTR0805H10K0G3435T	Ave	-0.01%	0.00%	Pass
	Max	0.02%	0.06%	Pass
	Min	-0.03%	-0.04%	Pass
	σ	0.02%	0.03%	Pass
TCTR0603H10K0G3435T	Ave	0.01%	-0.05%	Pass
	Max	0.05%	-0.03%	Pass
	Min	0.00%	-0.09%	Pass
	σ	0.02%	0.02%	Pass
TCTR0402H10K0G3435T	Ave	0.01%	-0.14%	Pass
	Max	0.05%	-0.04%	Pass
	Min	-0.02%	-0.27%	Pass
	σ	0.02%	0.08%	Pass

试验前后外观无明显变化，符合要求
No obvious change in appearance before and after the test. Qualified



微信公众号
WeChat official account



企业微信
Enterprise WeChat



微信小程序
WeChat mini program