

**STEP**<sup>®</sup>

新 时 达



CNAS-L6430

上海新时达电气股份有限公司

**新时达技术中心实验室**

STEP Technology Center Laboratory

## 介绍 Introduction

上海新时达技术中心实验室是以上海新时达电气股份有限公司为依托而设立，上海新时达电气股份有限公司在设备添置、人员配备上给予了大力支持，实验室作为企业内部组织独立运作，并完全按国际标准ISO/IEC17025建立了完备的实验室质量管理体系和技术管理体系，并已获得CNAS认可，认可证书编号为：CNAS-L6430。

实验室现有科研技术人员20余人，主要技术人员均有5年以上相关行业工作经验，工作场地超过2000平方米，包括电磁屏蔽室、3m法电波暗室、环境实验室、失效分析室等。实验室秉承科学、公正的理念开展电子电气产品的气候环境试验、机械环境试验、电磁兼容性试验、安规试验以及配套的性能测试、试验评价、失效分析等。实验室目前主要服务于新时达集团各子公司、部分合作客户及第三方认证机构。

经过多年的建设和发展现拥有各类仪器设备，包括：冷热冲击试验箱，温湿度试验箱，盐雾试验箱，沙尘试验箱，高加速寿命试验箱，机械振动与冲击试验台，跌落试验台，辐射骚扰测试系统，传导骚扰测试系统，三相谐波测试系统，静电放电抗扰度测试系统，电压波动及闪烁测试系统，射频电磁场辐射抗扰度测试系统，电快速瞬变脉冲群抗扰度测试系统，浪涌（冲击）抗扰度测试系统，射频场感应的传导抗扰度测试系统，工频磁场抗扰度测试系统，电压暂降、短时中断和电压变化测试系统，三相功率分析测试系统等，仪器均为国际知名品牌如R&S EM-TEST等。

STEP technology center Laboratory is established based on Shanghai step electric corporation, Shanghai step electric corporation give sufficient support in equipment purchase, laboratory works independently as the internal organization in the enterprise, and establish the quality management system according to international standard ISO/IEC17025, the laboratory and has been approved by CNAS, certificate number: CNAS-L6430.

The laboratory have technical personnel more than 20 people, most of the technical personnel have more than 5 years working experience in the related vocation, the work area more than 2000 square meters, our laboratory including electromagnetic shielding room, 3M anechoic chamber, environmental laboratory, failure analysis room. All the test according the concept of impartiality, Science, Accuracy, Efficient. We have the test as follows: environmental testing, mechanical environment test, electromagnetic compatibility test, safety test and matching performance test, evaluation, failure analysis, Nowadays the main test requirement is from the step Group.

After years of construction and development now our laboratory has all kinds of equipment, including: thermal shock test chamber, temperature and humidity test chamber, salt fog test chamber, sand and dust test chamber, highly accelerated life test chamber, mechanical vibration and impact test equipment, drop test equipment, radiation disturbance test system, conduction disturbance test system, harmonic, ESD immunity test system, voltage fluctuation and flicker test system, RF electromagnetic field immunity test system, electrical fast transient burst immunity test system, surge immunity test system, RF induction conducted immunity testing system, power frequency magnetic field immunity the test system, voltage dips, short interruptions and voltage change test system, three-phase power analysis system, all the instrument produced by the well-known international company, such as R&S, EM-TEST.,



上海新时达电气股份有限公司新时达技术中心实验室 STEP Technology Center Laboratory

“

**I**mpartiality  
公正

**A**ccuracy

准确

**S**cience  
科学

**E**fficiency

高效

”

冷热冲击试验箱,  
温湿度试验箱,  
盐雾试验箱, 跌落  
试验台  
Thermal Shock,  
Temp/Humidity,  
Salt Fog, Drop

**2010**

EMC 实验室  
EMC Laboratory

**2011**

机械振动与冲击  
试验台 沙尘试验  
箱, 高加速寿命  
试验箱  
Mechanical  
Vibration & Shock,  
Dust, HALT

**2012**

失效分析, 安规  
试验  
Failure Analysis,  
Safety test

**2013**





STEP公司



专家楼



空中花园



专家楼



大厅

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# A 气候环境试验 Climatic Environment Test



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## 冷热冲击试验 Thermal Shock Test

试验目的：让产品处于温度突变的环境之下，发现产品潜在的缺陷和薄弱环节

设备型号：Espec TSA-41L-A

参考标准：GB/T 2423.22, IEC60068-2-14

高温范围：+60℃ ~ +200℃

低温范围：-75℃ ~ 0℃

温度波动偏差：±0.5℃

Test Purpose: Determine if a product contains potential manufacturing and assembly defects such as cracked or weak solder joints.

Equipment Model Number: Espec TSA-41L-A

Reference Standard: GB/T 2423.22, IEC60068-2-14

High temp. exposure range: +60℃~+200℃

Low temp. exposure range: -65℃~0℃

Temperature fluctuation: ±0.5℃

高温箱	
预热温度极限	+200℃
温升速率	10 min之内从室温上升到+200℃
测试区域承重	30kg
低温箱	
预冷温度极限	-75℃
温降速率	75min之内从室温下降到-75℃
测试区域尺寸	24cm × 46cm × 37cm

Hot Chamber	
Pre-heat upper limit	+200℃
Temp. heat-up time	Ambient temp. to +200℃ within 30 min.
Test area load resistance	30kg
Cold Chamber	
Pre-cool lower limit	-75℃
Temp. pull-down time	Ambient temp. to -75℃ within 30 min.
Inside dimensions (W*H*D)	24cm × 46cm × 37cm



## 温/湿度测试 Temperature / Humidity Test

试验目的：让产品在高温、高湿和低温环境中运行或储存，发现产品的潜在缺陷和薄弱环节

设备型号：Espec PL-4KP

参考标准：GB/T 2423.4, IEC60068-2-03

高温可达到的最大值：100℃

低温可达到的最小值：-40℃

温度变化速度：45分钟之内从-40℃上升到100℃

湿度变化范围：20% RH ~ 98%RH

温湿度波动偏差：±0.3℃，±2.5%RH

测试区域尺寸：100cm×100cm×80cm

Test Purpose: Verify that the product can function during and after exposure to temperature cycling and high humidity.

Equipment Model Number: Espec PL-4KP

Reference Standard: GB/T 2423.4, IEC60068-2-03

High temp. Max. : 100℃

Low temp. Min. : -40℃

Temp. Variation Rate: -40℃ to 100℃ within 45 min.

Humidity. Variation Rate: 20% RH~98%RH

Temp./Humidity fluctuation: ±0.3℃ ±2.5%RH

Inside Dimension: 100cm×100cm×80cm

02

# A 气候环境试验

## Climatic Environment Test



03

### 盐雾测试 Salt Fog Test

试验目的：评估试样的抗盐雾腐蚀的能力，评定保护性涂层的质量以及均匀性

设备型号：SQ-800-ST

参考标准：GB/T 2423.17, IEC60068-2-11

温度：35℃

湿度：95%以上

内部有效尺寸：80 (W) × 60 (D) × 50 (H)cm

Test Purpose: Verify product performance after exposure to salt fog

Equipment Model Number: SQ-800-ST

Reference Standard: GB/T 2423.17, IEC 60068-2-11

Temperature: 35℃

Humidity: ≥95%

Inside Dimension: 80 (W) × 60 (D) × 50 (H)cm





## 沙尘测试 Dust Contamination Test Pohtograph

试验目的：检验待测样品在直接接触沙尘的环境中的工作能力

设备型号：SC-1800F

参考标准：GB/T 2423.37, IEC60068-2-68

试验箱内部尺寸：2m(H) × 1m(L) × 1m(W)

试验用尘类型：滑石粉

尘浓度：2 kg/m<sup>3</sup>

温度：40℃

湿度：<25% RH

气流：向下的垂直气流

气流速度：能够使尘在试验箱内均匀分布

尘的颗粒尺寸：<75μm

Test Purpose: Determine the degree of protection against ingress of fine dust into sample

Equipment Model Number: SC-1800F

Reference Standard: GB/T 2423.37, IEC60068-2-68

Inside Dimension: 2m(H) × 1m(L) × 1m(W)

Dust Type: Talc

Dust Concentration: 2 kg/m<sup>3</sup>

Temperature: 40℃

Humidity: <25% RH

Air Flow: Vertical from top to bottom, should not be laminar

Air Velocity: Generate a homogeneous distribution of the dust in test chamber

Particle Size: <75 μm

04

# B 机械环境试验

## Mechanical Environment Test



### 高加速寿命试验 Highly Accelerated Life Test

试验目的：明确产品的可操作极限，确定产品的设计裕度

设备型号：RSL48-SCI

参考标准：MIL-HDBK-338B

空气循环：大流量风机

制冷方式：液氮辅助制冷

振动控制通道：8个

温度控制通道：8个

输入类型：I.C.P.输入，T型热电偶

高温可达到的最大值：200℃

低温可达到的最小值：-200℃

温湿度波动偏差： $\pm 0.3^{\circ}\text{C} \pm 2.5\% \text{RH}$

测试区域尺寸：122cm × 122cm

振动方向：3个轴向，3个转角

振动频率范围：0至>10000Hz

振动量级：100 Grms

测量精度： $\pm 0.1^{\circ}\text{C}$

最大负载：559kg (1230磅)

Test Purpose: Identify design weaknesses and manufacturing process problems and to increase the margin of strength of the design rather than to predict quantitative life or reliability of the product

Equipment Model Number: RSL48-SCI

Reference Standard: MIL-HDBK-338B

Air Flow: heavy duty high capacity blower

Cooling method: liquid nitrogen injection cooling

Vibration control number of channels: 8

Temperature control number of channels: 8

Input type: I.C.P., Type "T" Thermocouple

High temp. Max.: 200℃

Low temp. Min.: -100℃

Temp./Humidity fluctuation:  $\pm 0.3^{\circ}\text{C} \pm 2.5\% \text{RH}$

Inside Dimension: 122cm × 122cm

Axes excited: 3 linear, 3 rotational

Frequency range: 0 to >10000Hz

Vibration level: 100 Grms

Measuring accuracy:  $\pm 0.1^{\circ}\text{C}$

Maximum product load: 559kg(1230Lbs)



06

## 机械振动/冲击试验

### Mechanical Vibration & Shock Test

试验目的：发现产品在遭遇机械振动和冲击后暴露出的缺陷及其薄弱环节

设备型号：东菱FS-30-370（垂直台面）& LT1010（水平台面）

参考标准：GB/T 2423.10, IEC 60068-2-6  
GB/T 2423.5, IEC 60068-2-27

测试项目：正弦扫频测试  
随机振动测试  
谐振搜索与驻留测试  
冲击测试

额定随机激振力：30kN

冲击激振力：60kN

最大空载加速度：1000m/s<sup>2</sup>

最大速度：2m/s

最大位移p-p：51mm

水平滑台使用频率范围：5~2000Hz

垂直台使用频率范围：5~2800Hz

水平滑台面尺寸：100cm×100cm×4.5cm

垂直台最大负载：500kg

振动控制仪同步输入通道：8个

振动控制仪同步输出通道：2个

Test Purpose: Discover latent defects and device weaknesses which may occur during or after exposure to Vibration and shock

Equipment Model Number: Dong Ling FS-30-370(Vertical table) & LT1010 (horizontal table)

Reference Standard: GB/T 2423.10, IEC 60068-2-6; GB/T 2423.5, IEC 60068-2-27

Test Item: Sine Sweep Test, Random Vibration Test, RSTD Test, Shock Test

Rated random excited force: 30kN

Exciting force of shock: 60kN

Maximum acceleration unloaded: 1000m/s<sup>2</sup>

Maximum speed: 2m/s

Maximum displacement p-p: 51mm

Frequency range in use for Vertical table: 5~2000Hz

Frequency range in use for Vertical table: 5~2800Hz

The size of horizontal table: 100cm×100cm×4.5cm

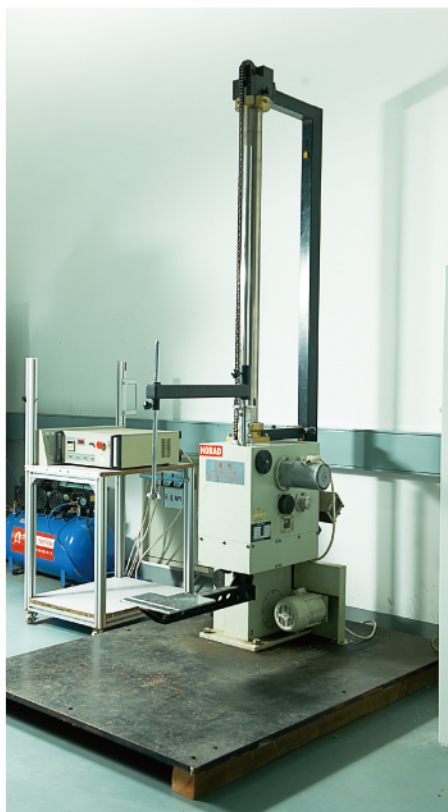
Maximum load in vertical table: 500kg

Synchronous input channel of the vibration control device: 8

Synchronous output channel of the vibration control device: 2

# B 机械环境试验

## ■ Mechanical Environment Test



### 跌落试验 Drop Test

试验目的：评定运输包装件在受到垂直冲击时的耐冲强度及包装对内装物的保护能力

设备型号：PD-315

参考标准：GB/T 2423.7, IEC 60068-2-31  
GB/T 2423.8, IEC 60068-2-32  
GB/T4857.5, ISO-2248

最大载重：100kg(max)

跌落高度范围：300~1500mm

高度显示精度：≤设定值的2%

测试空间：1000×800×1000mm

Test Purpose: the simulation, primarily in equipment-type specimens, the effects of knocks and jolts which may be received during rough handling of equipment on a work bench or table or in operational use

Equipment Model Number: PD-315

Reference Standard: GB/T 2423.7, IEC 60068-2-31  
GB/T 2423.8, IEC 60068-2-32  
GB/T4857.5, ISO-2248

Max. Load: 100kg(max)

Drop Height: 300~1500mm

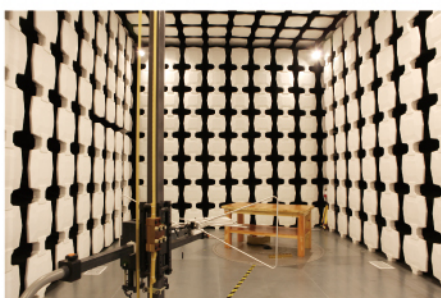
Height Accuracy: ≤2% setup

Dimension: 1000×800×1000mm

07

# C 电磁兼容试验

## EMC Test



暗室内部  
Inside of the Anechoic Chamber



测试设备  
Test Equipment

08

### 辐射骚扰试验 Radiated Emission Test

试验目的：本试验是为了测量样品在空间中的无线电骚扰电平，以保证对其他设备产生最小干扰的电磁发射水平

测量设备：EMI接收机 - ESCI7  
接收天线 - VULB 9163

参考标准：EN 55022/GB 9254

测量频段：30MHz~3GHz

转台尺寸：直径2m，最大承重2000kg

供电能力：最大3相400V，200A

测试距离：3m

Test Purpose: Measure the radio disturbance level in the space, to ensure minimizing electromagnetic emission interference to other equipment

Test Equipment: EMI Test Receiver - ESCI7  
Antenna - VULB 9163

Reference Standard: EN 55022/GB 9254

Frequency: 30MHz~3GHz

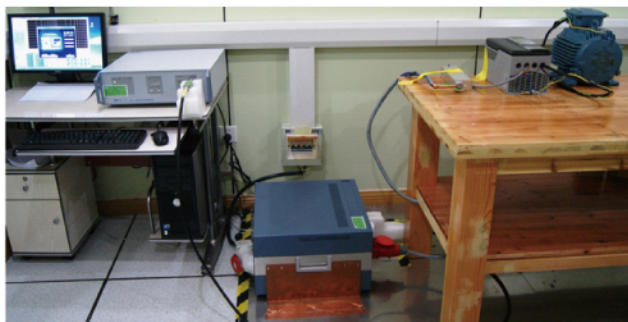
Dimension: Diameter - 2m, Max. Load - 2000kg

Power Supply: Max. 3\*400V, 200A

Test Distance: 3m

# C 电磁兼容试验

## ■ EMC Test



09

### 传导骚扰试验 Conducted Emission Test

试验目的：本试验是为了测量样品在传输线上的无线电骚扰电平，以保证对其他设备产生最小干扰的电磁发射水平

参考标准：EN 55022/GB 9254

供电能力：最大3相690V, 200A

测量频段：0.09MHz~30MHz

测量设备：

名称	型号	名称	型号
EMI接收机	ER55CR	人工电源网络	ESH2-Z5
EMI接收机	ESCI7	人工电源网络	ENV4200

Test Purpose: Measure the conducted disturbance level in the port of the sample, to ensure minimizing electromagnetic emission interference to other equipment

Reference Standard: EN 55022/GB 9254

Power Supply: Max. 3\*400V, 200A

Frequency: 9kHz~30MHz

Test Equipment:

Name	M/N	Name	M/N
EMI Test Receiver	ER55CR	Artificial Mains Network	ESH2-Z5
EMI Test Receiver	ESCI7	Artificial Mains Network	ENV4200

# 10/11/12/13/14/15



## 谐波电流发射试验 Harmonic Current Emission Test

试验目的：本试验是为了测量样品对接入电网的谐波电流发射水平

参考标准：GB 17625.1, IEC 61000-3-2

测量设备：

名称	型号	名称	型号
三相谐波电源	NETWAVE 20	谐波闪烁分析仪	DPA 503N
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW		

Test Purpose: Measure the harmonic Current Emission of equipment in public low-voltage supply system

Reference Standard: GB 17625.1, IEC 61000-3-2

Test Equipment:

Name	M/N	Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20	Harmonic and Flicker Analyzer	DPA 503N
Power Supply	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW		

# C 电磁兼容试验

## EMC Test

### 电压波动及闪烁试验

#### Voltage Changes, Voltage Fluctuations and Flicker Test

试验目的：本试验是为了测量样品对供电系统产生的电压波动和闪烁，并评定测试结果是否符合标准的限制要求

参考标准：GB 17625.2, IEC 61000-3-3

测量设备：

名称	型号	名称	型号
三相谐波电源	NETWAVE 20	谐波闪烁分析仪	DPA 503N
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW		

Test Purpose: Measure the Voltage Fluctuation and Flicker in public low-voltage supply system, and Assess equipment whether meet the standard requirements

Reference Standard: GB 17625.2, IEC 61000-3-3

Test Equipment:

Name	M/N	Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20	Harmonic and Flicker Analyzer	DPA 503N
EMI Test Receiver	3x (0~32) A, 3x (30V~400V), 50/60Hz; 0W~4kW		



## 谐波及谐间波抗扰度试验

### Harmonics and interharmonics including mains signaling at A.C power port, low frequency immunity test

试验目的：本试验是为了测量样品对供电系统产生的电压波动和闪烁，并评定测试结果是否符合标准的限制要求

参考标准：GB 17625.2, IEC 61000-3-3

测量设备：

名称	型号
三相谐波电源	NETWAVE 20
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

Test Purpose: Evaluate the performance of the sample when subjected to Harmonics and interharmonics immunity test

Reference Standard: GB/T 17626.13, IEC 61000-4-13

Test Equipment

Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20
Power Supply	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

## 电压波动抗扰度试验

### Voltage fluctuation immunity test

试验目的：用以评估电气和电子设备在遭受正和负的低幅值电压波动时的抗扰性能

参考标准：GB/T 17626.14, IEC 61000-4-14

测量设备：

名称	型号
三相谐波电源	NETWAVE 20
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

Test Purpose: Evaluate the performance of the sample when subjected to Voltage fluctuation immunity test

Reference Standard: GB/T 17626.14, IEC 61000-4-14

Test Equipment

Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20
Power Supply	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

# C 电磁兼容试验

## EMC Test

### 工频频率变化抗扰度试验

**Evaluate the performance of the sample when subjected to Variation of power frequency immunity test**

试验目的：用以评估电气和电子设备在遭受工频频率变化时的抗扰性能

参考标准：GB/T 17626.28, IEC 61000-4-28

测量设备：

名称	型号
三相谐波电源	NETWAVE 20
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

Test Purpose: Evaluate the performance of the sample when subjected to Variation of power frequency immunity test

Reference Standard: GB/T 17626.28, IEC 61000-4-28

Test Equipment:

Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20
Power Supply	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

### 三相不平衡抗扰度试验

**Unbalance immunity test**

试验目的：为电子电气设备在受到不平衡的供电电压时的抗扰度评价建立一个参考

参考标准：GB/T 17626.27, IEC 61000-4-27

测量设备：

名称	型号
三相谐波电源	NETWAVE 20
供电能力	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW

Test Purpose: Evaluate the performance of the sample when subjected to Unbalance immunity test

Reference Standard: GB/T 17626.27, IEC 61000-4-27

Test Equipment:

Name	M/N
3 Phase Harmonic Power Source	NETWAVE 20
Power Supply	3x (0~32) A, 3x (30V~400V), 0/60Hz; 0W~4kW



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## 静电放电抗扰度试验 Electrostatic Discharge Immunity Test

试验目的：本试验是为了评估样品在遭受静电放电时的性能

参考标准：GB 17626.2, IEC 61000-4-2

供电能力：最大3相690V, 200A

测量设备名称：静电枪

空气放电：0.5~16.5kV

接触放电：0.5~8kV

型号：DITO

Test Purpose: Evaluate the performance of the sample when subjected to electrostatic discharges

Reference Standard: GB 17626.2, IEC 61000-4-2

Power Supply: Max.3\*690V, 200A

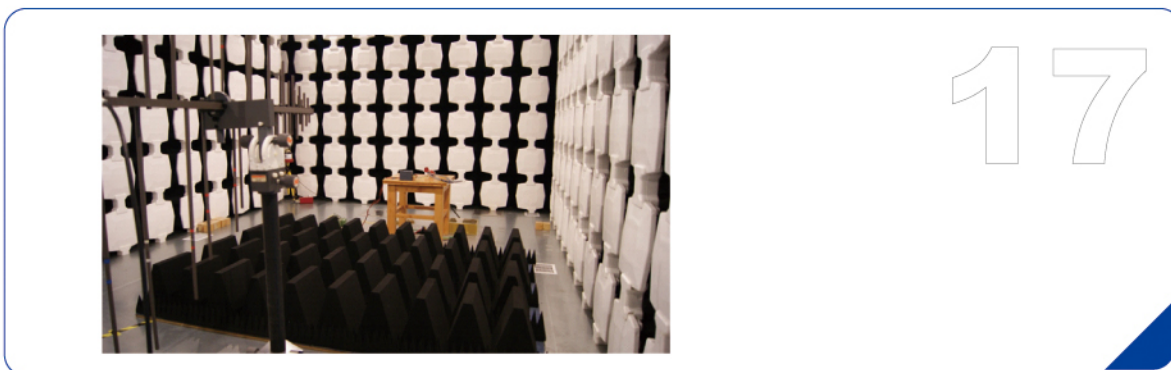
Test Equipment: Electrostatic Discharger

Air Discharge 0.5~16.5kV: Contact Discharge 0.5~10kV

M/N: DITO

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## EMC Test



### 射频电磁场辐射抗扰度试验

#### Radiated, Ratio-Frequency, Electromagnetic Field Immunity Test

试验目的：本试验是为了评估样品受到射频电磁场辐射时的性能

参考标准：GB 17626.3, IEC 61000-4-3

供电能力：最大3相400V, 200A

测量频段：80MHz~1000MHz

测量设备：

名称	型号	名称	型号
信号源	SMA100A	功率放大器	CBA 1G-250
功率计	NRVD	定向耦合器	DC6180M1
功率计探头	URV5-Z2	场强探头	FL7006
发射天线	ATL80M1G	最大试验场强	18V/m(不调制)

Test Purpose: Evaluate the performance of equipment when subjected to Radiated, Ratio-Frequency, Electromagnetic Field

Reference Standard: GB 17626.3, IEC 61000-4-3

Power Supply: Max. 3\*400V, 200A

Frequency: 80MHz~1000MHz

Test Equipment:

Name	M/N	Name	M/N
Signal Generator	SMA100A	Power Amplifier	CBA 1G-250
Power Meter	NRVD	Directional Coupler	DC6180M1
Power Sensor	URV5-Z2	Field Probe	FL7006
Antenna	ATL80M1G	Max. Electromagnetic Field	18V/m



## 电快速瞬变脉冲群抗扰度试验 Electrical Fast Transient/Burst Immunity (EFT/B)Test

试验目的：本试验是为了评估样品的所有端口在受到电快速瞬变脉冲群干扰时的性能

参考标准：GB/T 17626.4, IEC 61000-4-4

供电能力：最大3相400V, 100A

试验等级：500V~7000V

脉冲频率：0.1 kHz~1MHz

脉冲发生器：5/50ns

测量设备：

名称	型号	名称	型号
EFT波形发生器	EFT 500N8	7kV三相耦合去耦网络	CNE 503S14
容性耦合钳	HFK		

Test Purpose: Assess the performance of the equipment when subjected to EFT/B on all ports

Reference Standard: GB/T 17626.4, IEC 61000-4-4

Power Supply: Max. 3\*400V, 100A

Test Level: 500V~7000V

Pulse Frequency: 0.1 kHz~1MHz

Pulse Generator: 5/50ns

Test Equipment:

Name	M/N	Name	M/N
EFT Generator	EFT 500N8	7kV Coupling and Decoupling Network	CNE 503S14
Capacitive Coupling Clamp	HFK		

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# C 电磁兼容试验

## EMC Test



### 浪涌（冲击）抗扰度试验

#### Surge Immunity Test

试验目的：本试验是为了评估样品受到浪涌（冲击）时的性能

参考标准：GB/T 17626.5, IEC 61000-4-5

供电能力：最大3相400V, 100A

试验等级：500V~7000V

脉冲发生器：1.2/50 $\mu$ s, 10/700 $\mu$ s

测量设备：

名称	型号
组合浪涌发生器	VCS500 N10T
10kv三相耦合去耦网络	CNV 503 S12
4线通讯线耦合去耦网络	CNV 508 S19
8线通讯线耦合去耦网络	CNV 504 N2

Test Purpose: Evaluate the performance of equipment when subjected to Surges

Reference Standard: GB/T 17626.5, IEC 61000-4-5

Power Supply: Max. 3\*400V, 100A

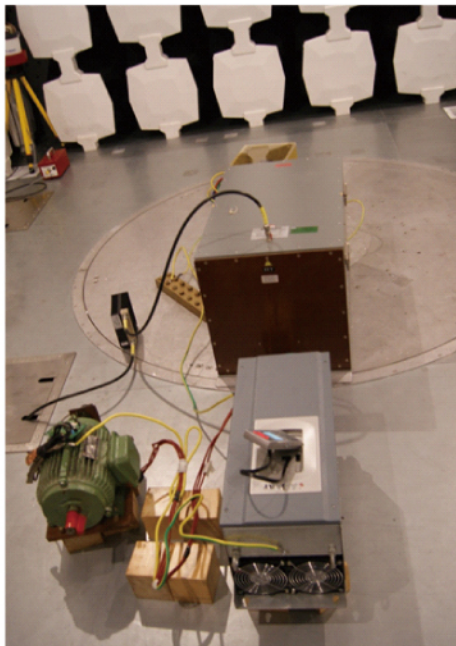
Test Level: 500V~7000V

Pulse: 1.2/50 $\mu$ s, 10/700 $\mu$ s

Test Equipment:

Name	M/N
Surge Generator	VCS500 N10T
10kv Coupling/ Decoupling Network	CNV 503 S12
Coupling/Decoupling Network for 4 Signal lines	CNV 508 S19
Coupling/Decoupling Network for 8 Communication lines	CNV 504 N2

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## 射频场感应的传导抗扰度试验 The Test For Immunity to Conducted Disturbances, Induced by RF Fields

试验目的：本试验是为了评估样品受到由射频场感应的传导骚扰时的性能

参考标准：GB 17626.6, IEC 61000-4-6

供电能力：最大3相400V, 200A

测量频段：150kHz~230MHz, 最大电压18V(不调制)

测量设备：

名称	型号
信号源	SMA100A
2线CDN	FCC-801-M2-50A
3线CDN	FCC-801-M3-50A
4线CDN	FCC-801-M4-200A
电流监视钳	F-52
功率计	NRVD
功率计探头	URV5-Z2
功率放大器	CBA 250-080
定向耦合器	DC2600M2
大电流注入探头	F-120-9A

Test Purpose: Evaluate the performance of Equipment when subjected to conducted Disturbances induced by RF fields

Reference Standard: GB 17626.6, IEC 61000-4-6

Power Supply: Max. 3\*400V, 200A

Frequency: 150kHz~80MHz, Max. Voltage 10V

Test Equipment:

Name	M/N
Signal Generator	SMA100A
2 Lines CDN	FCC-801-M2-50A
3 Lines CDN	FCC-801-M3-50A
4 Lines CDN	FCC-801-M4-200A
RF Current Probe	F-52
Power Meter	NRVD
Power Sensor	URV5-Z2
Power Amplifier	CBA 250-080
Directional Coupler	DC2600M2
Bulk Current Injection Probe	F-120-9A

# C 电磁兼容试验

## EMC Test



### 工频磁场抗扰度试验

#### Power Frequency Magnetic Field Immunity Test

试验目的：本试验是为了评估样品处于工频（连续和短时）磁场中的性能

参考标准：GB/T 17626.8, IEC 61000-4-8

供电能力：最大3相400V, 100A

试验等级：1A/m~100A/m

最大持续磁场强度：100A/m

最大短时磁场强度：1000A/m

测量设备：

名称	型号
电源故障模拟器	UCS 500 N5-PFS
电流互感线圈(0-30)	MC2630
磁场线圈	MS100N
自动调压器	MV2616
电流互感线圈(50-250)	MC26100
线圈尺寸	1m*1m

Test Purpose: Evaluate the performance of the equipment when subjected to power frequency magnetic field(continuous and short duration)

Reference Standard: GB/T 17626.8, IEC 61000-4-8

Power Supply: Max. 3\*400V, 100A

Test Level: 1A/m~100A/m

Max. Magnetic Field(Continuous): 100A/m

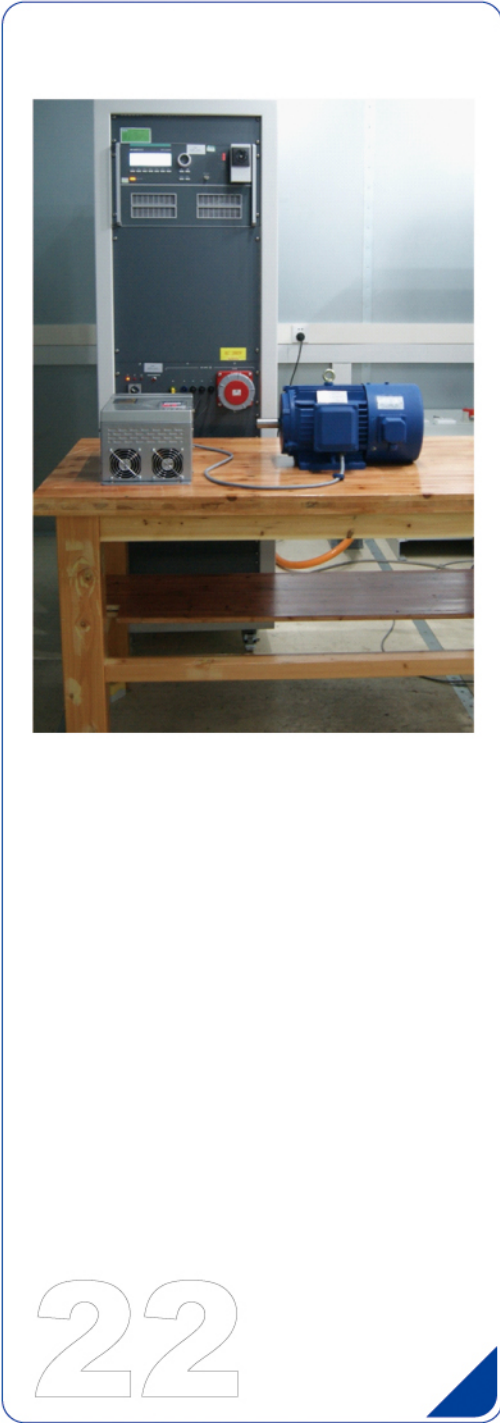
Max. Magnetic Field(Short Duration): 1000A/m

Test Equipment:

Name	M/N
Power Fail Simulator	UCS 500 N5-PFS
Current Transformer(0~30A)	MC2630
Magnetic Field Antenna	MS100N
Motor Variac	MV2616
Current Transformer(50-250)	MC26100
Antenna Dimension	1m*1m

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## 电压跌落、暂降及短时中断试验 Voltage Dips, Short Interruptions and Voltage Variations Immunity Test

试验目的：本试验是为了评估样品受到电压暂降、短时中断和电压变化的抗扰度时的性能

参考标准：GB 17626.11, IEC 61000-4-11

供电能力：最大3相400V, 100A

试验等级：0%~100%电压跌落

测量设备名称：电源故障模拟器

型号：PFS 503 N100

Test Purpose: Evaluate the performance of the equipment when subjected voltage dips, short interruptions and voltage variations

Reference Standard: GB 17626.11, IEC 61000-4-11

Power Supply: Max. 3\*400V, 100A

Test Level: 0%~100% Voltage dips

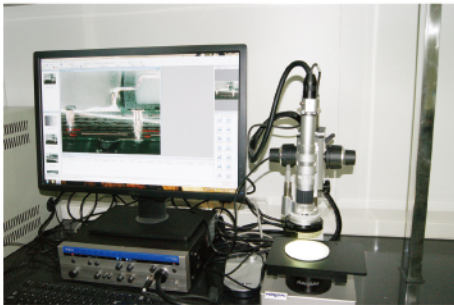
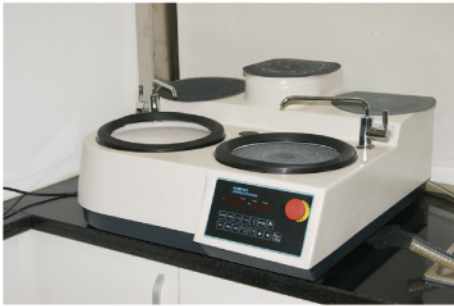
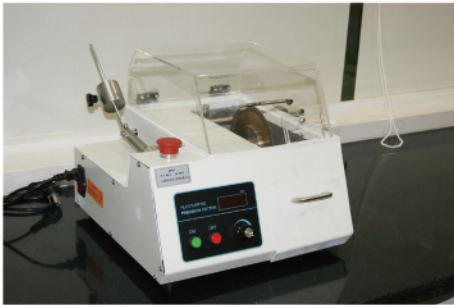
Test Equipment: Power Fail Simulator

M/N: PFS 503 N100

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# D 失效分析试验

## Failure Analysis Test



试验目的：评价PCB板在经受冷热冲击、机械振动后的物理性能是否正常

显微镜放大倍数：低倍镜放大700倍，高倍镜放大3500倍

试验设备：

名称	型号
电子显微镜	MX-5040R
切割机	HLCUT-WP150
打磨机	HLMP-H2
光固化机	HEAREUS

Purpose: Evaluation PCB subjected to thermal shock, mechanical vibration test whether the physical properties of normal

Testing capabilities: Microscope Magnification 700/3500

Test Equipment:

Name	M/N
Electron Microscopy	MX-5040R
Cutting Machine	HLCUT-WP150
Grinding Machine	HLMP-H2
Lighting Curing Machine	HEAREUS

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