

Welcome

欢迎选用科星产品



2007年03月21日

一、公司概况 Company Overview

1. 地理位置 (Kestar Location);
2. 公司发展里程碑 (Company Milestone);
3. 公司基本情况介绍 (Company Key Data);
4. 产品系列和产能 (Products Series & Capacity)

1. 地理位置 (Kestar Location)



科星电子
位于广东省佛山市
平洲工业区

Kestar location

- East of Foshan
- Near to Guangzhou
- 40min to airport
- 2 hrs to Hongkong

公司地处佛山市东部，毗邻广州，距离广州机场大约**40**分钟车程。
坐船或巴士去香港大约**2**个小时。



2. 公司发展里程碑 (Company Milestones)

Kestar is a professional manufacturer of MOV

1984

- Founded in 1984.
The former name is “Foshan Radio Factory 6”.

1999

- A limited share-hold company.
The new name is Kestar electronic(China) Co.,Ltd

2000

- Quality system certification.
2000: ISO9002-1994; 2003: ISO9001-2000

2005

- Move to the new factory building.

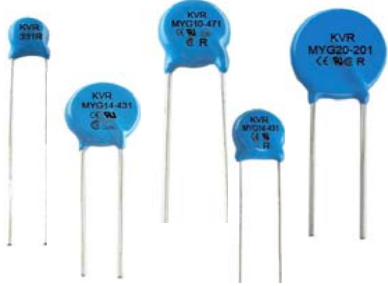
3. 公司基本情况介绍 (Company Key Data)



- **Occupied area : ~35,000sqm.**
- **Employees: ~ 300 people (~50 engineers).**
- **Production Capacity: 400KKpcs/year(MOV)**

4. 产品系列和产能 (Products series & capacity)

MYG系列(Series)



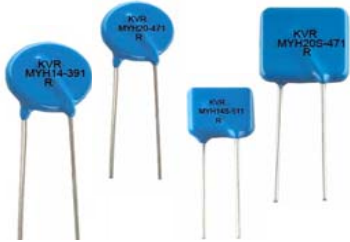
通用型压敏电阻(General Series)

结构特征(Features):
Leaded and coated
引线型, 环氧树脂包封

Capacity

25kkpcs/month

MYH系列(Series)



高能型压敏电阻(High Performance Series)

结构特征(Features):
Leaded and coated
引线型, 环氧树脂包封

5kkpcs/month

MYL系列(Series)



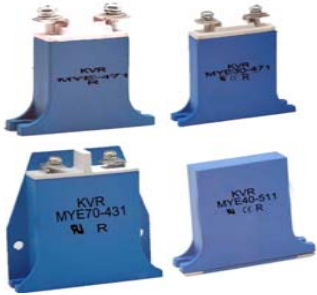
防雷型压敏电阻(Lightning Protection Series)

结构特征(Features):
Leaded or tinned copper plate
引线型, 环氧树脂包封

1kkpcs/month

4. 产品系列和产能 (Products series & capacity)

MYE系列(Series)



MYP系列(Series)



PA系列(Series)



高负荷型压敏电阻(High Duty Series)

结构特征(Features):
Tin-plated copper plate terminals
Potted in plastic housing.
镀锡铜板电极，塑胶壳灌封。

高能型压敏电阻银片 (High Energy Disc Varistor Series)

结构特征(Features):
Metallized varistor disc.
印刷银电极的压敏电阻芯片

紧固安装型压敏电阻 (Reliable Installation Series)

结构特征(Features):
Flat electrode soldered with disc
Potted in bakelite housing.
引线型，环氧树脂包封

Capacity

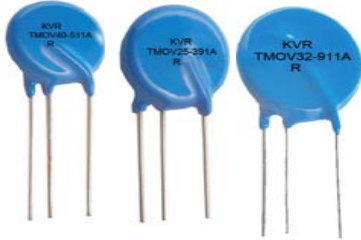
600kpcs/month

2kkpcs/month

1kkpcs/month

4. 产品系列和产能 (Products series & capacity)

TMOV系列(Series)



超温保护型压敏电阻 (Thermo Cutoff Series)

结构特征(Features):
Connected with a temp. fuse.
Leaded, coated,
超温脱离, 引线型, 环氧包封。

Capacity

2kkpcs/month

MYN系列(Series)



防暴型压敏电阻(Explosion Proof Series)

结构特征(Features):
Filling with SiO₂, plastic housing.
塑胶壳式结构, 石英砂灌封。

2kkpcs/month

2006年MOV开发新产品(MOV new products developed in 2006)



二、压敏电阻基础和过电压保护原理 (Varistor basics & Principle of overvoltage protection)

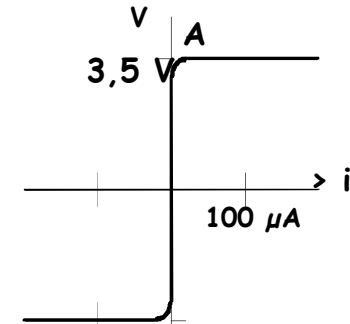
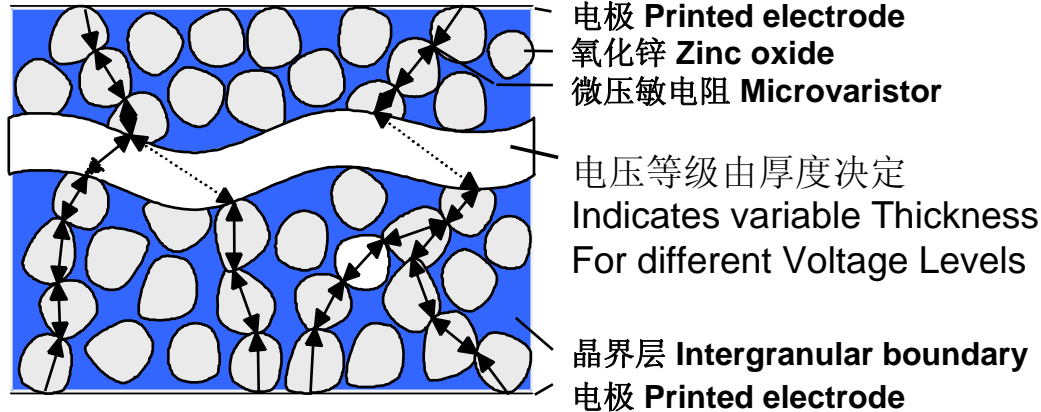
二、压敏电阻基础及过电压保护原理

Varistor basics & principle of overvoltage protection

1. 压敏电阻基础 (Varistor basics);
2. 过电压保护原理 (Principle of overvoltage protection);

1. 压敏电阻基础 (Varistor basics)

压敏电阻的微观结构和工作原理 (Structure and principle of operation)



V / I characteristics of a single „microvaristor“

单个“微压敏电阻”的V/I 特征图

Sintering zinc oxide together with other additives produces a polycrystalline, semiconductive, voltage depending ceramic. This phenomenon is called the **varistor effect**.

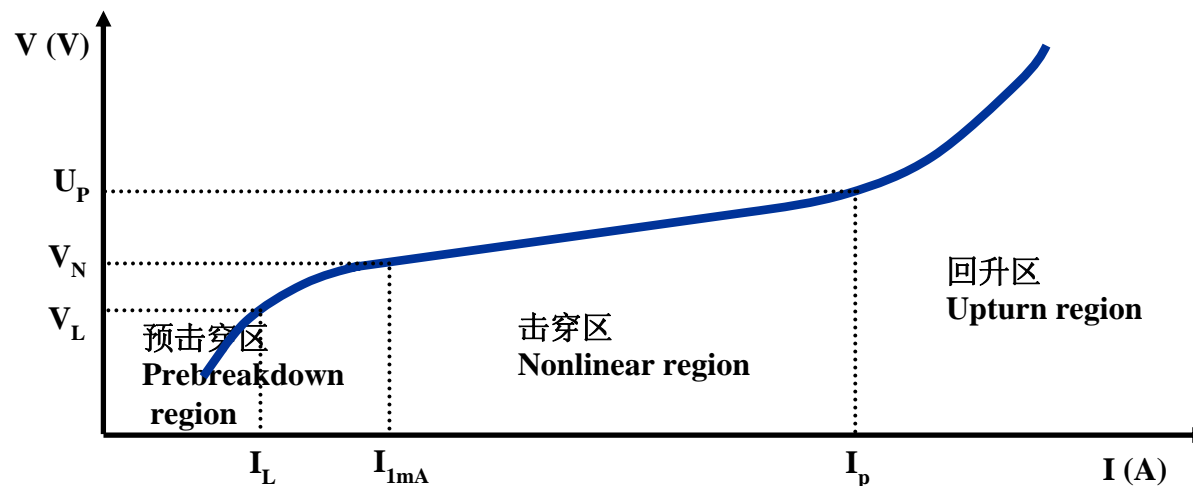
ZnO与其他添加剂经高温烧结形成一种多晶半导体陶瓷，该陶瓷的电阻随电压的不同而变化，这种现象被称作电压敏效应。

1. 压敏电阻基础 (Varistor basics)

The electrical behavior of the metal oxide varistor results from the number of microvaristors connected in series or in parallel.

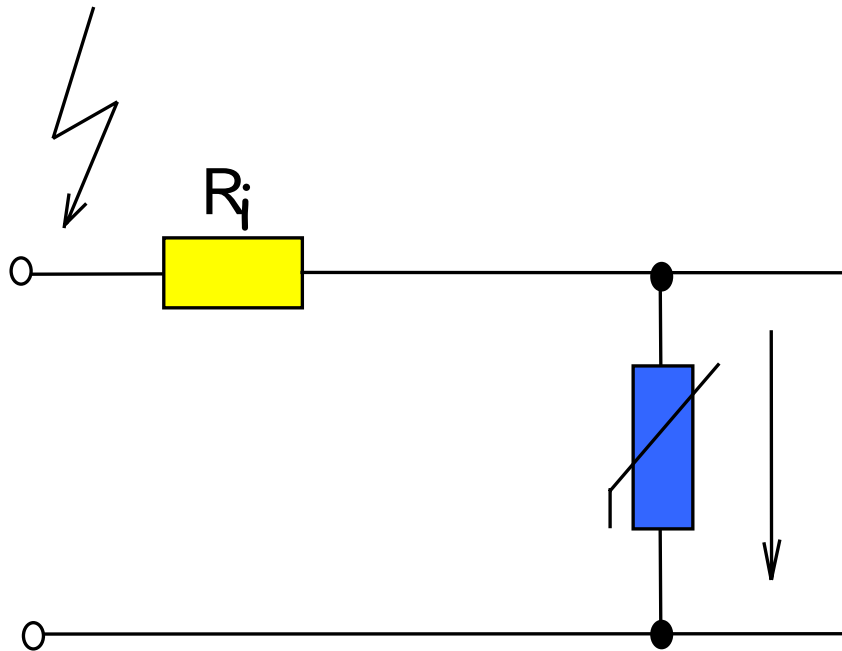
This implies that the elec. properties are controlled by dimensions:

- Twice the cerami thickness produces twice the protection level;
- Twice the area produces twice the current handing capability;
- Twice the volume produces almost twice the energy absorption capability.



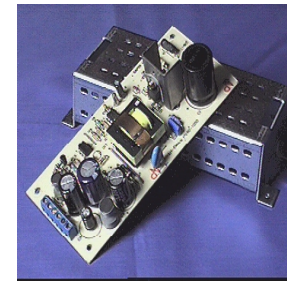
V/I characteristic of a metal oxide varistor

2. 过电压保护原理 (Principle of overvoltage protection)



保护单元

Unit to be protected



- 压敏电阻是一个过压保护元件
- **The varistor is an over-voltage protection component**

3. 压敏电阻应用 (Varistor application)

消费电子产品 (Consumer electronics)

洗衣机
Washing Machines



D05 – D20
275V / 300V



3. 压敏电阻应用 (Varistor application)

消费电子产品 (Consumer electronics)

Set Top Boxes 机顶盒



TV, Monitor 电视机、显示器



3. 压敏电阻应用 (Varistor application)

汽车电子 (Automotive electronics)

Alarm 报警器



Door Lock 门锁



Dashboard 仪表盘



Air Condi, 空调



Power Window
电动窗



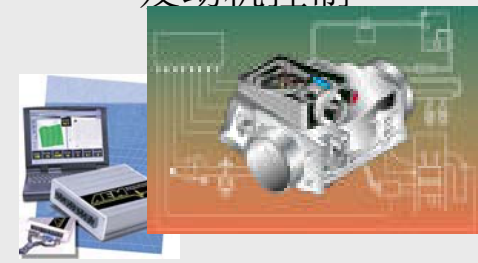
Power Mirror 电动镜



ABS 防滑煞车系统

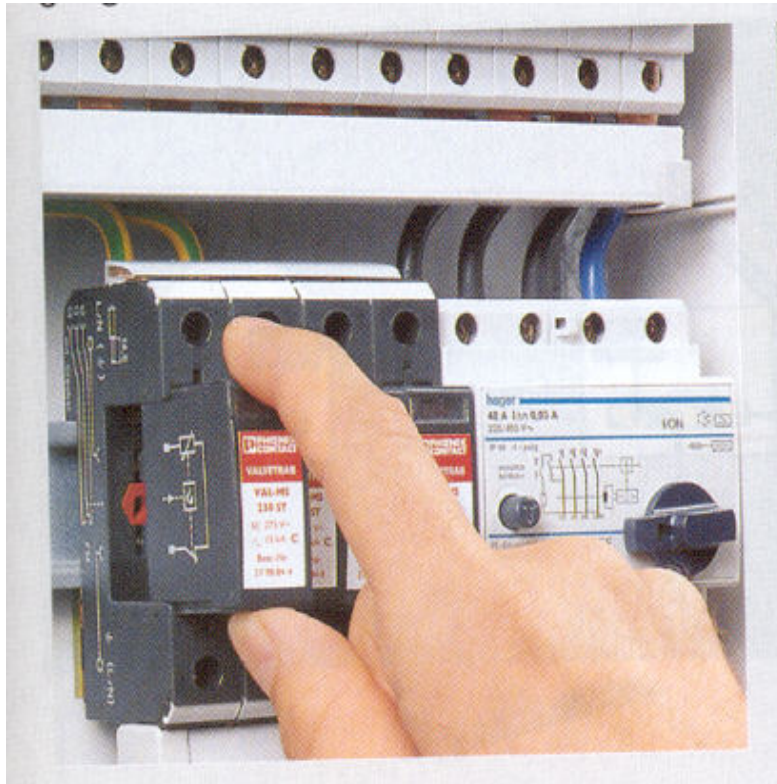


Engine Management
发动机控制

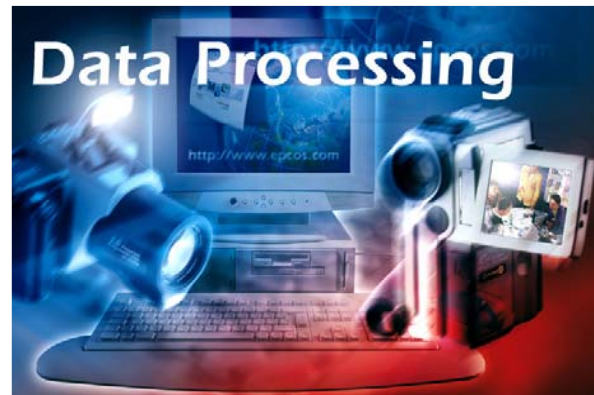


3. 压敏电阻应用 (Varistor application)

for Subdistribution Panel
应用于分配板



3. 压敏电阻应用 (Varistor application)



有用电的地方，就有用压敏电阻！

Where is electricity, where is the varistor!

三、工艺流程和品质保障 (Process flow and quality assurance)

1. 工艺流程

Process flow

1. 工艺流程 (Process flow)

1. 制粉(Granule production)



2. 压片(Pressing)



3. 排胶(De-binder)



4. 烧结 (Sintering)



5. 印银(Screen printing)



6. 烘银(Drying)



1. 工艺流程 (Process flow)

7. 烧渗(Burn-in)



8. 测试(Pretest)



9. 打线(Wire-forming)



10. 插片(Disc inserting)



11. 焊接(Soldering)

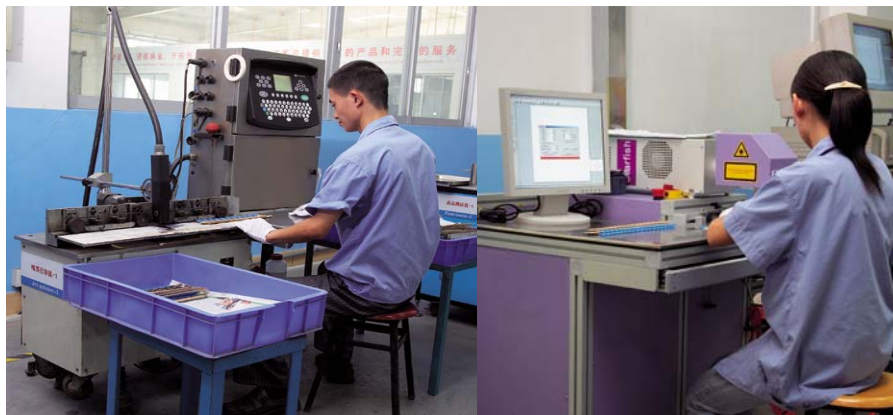


12. 包封(Coating)



1. 工艺流程 (Process flow)

13. 印字(Marking)



14. 测试(Final test)



15. 包装(Packing)

16. 产品放行(Product release)

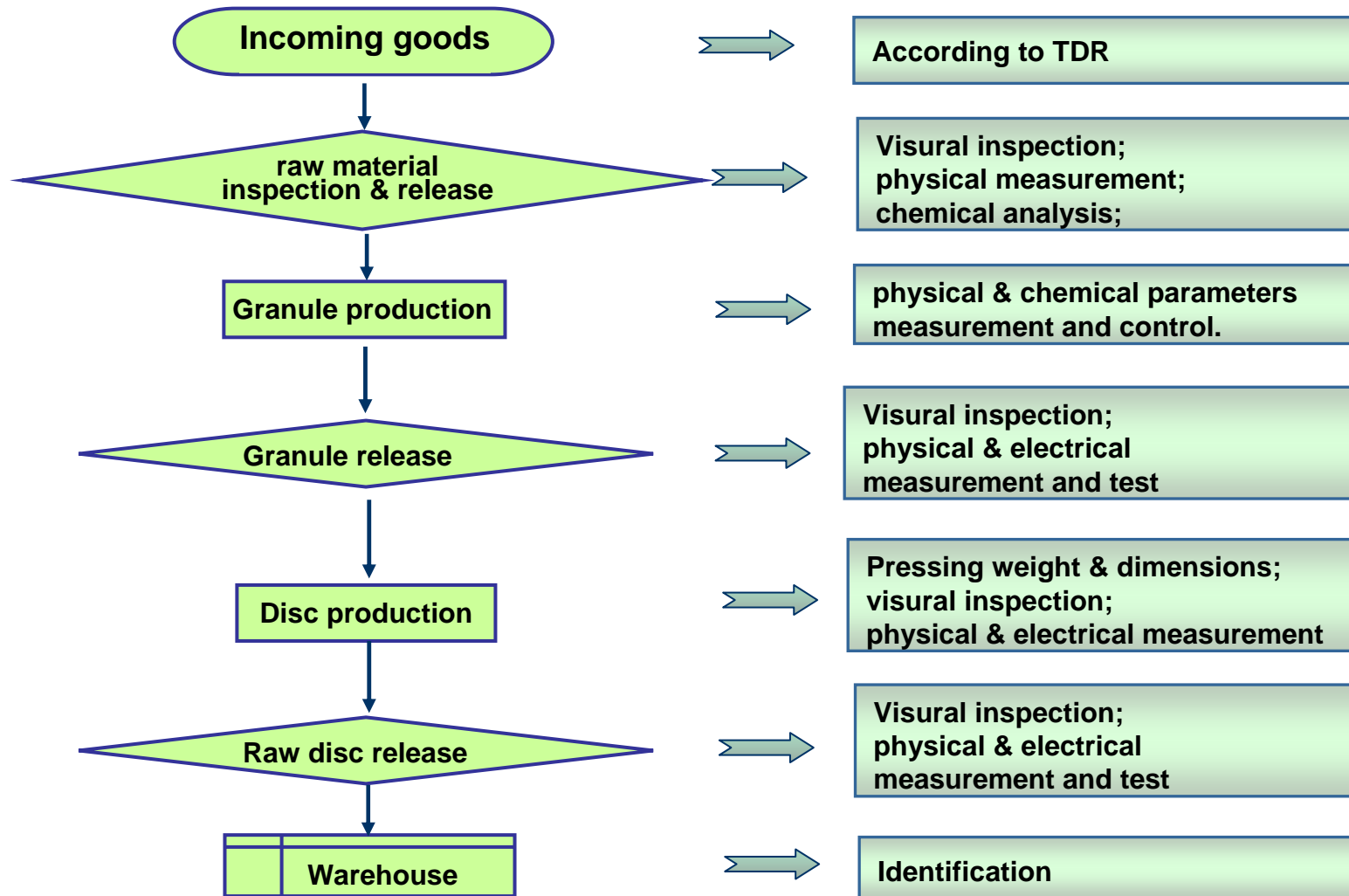
17. 入库(Warehouse)



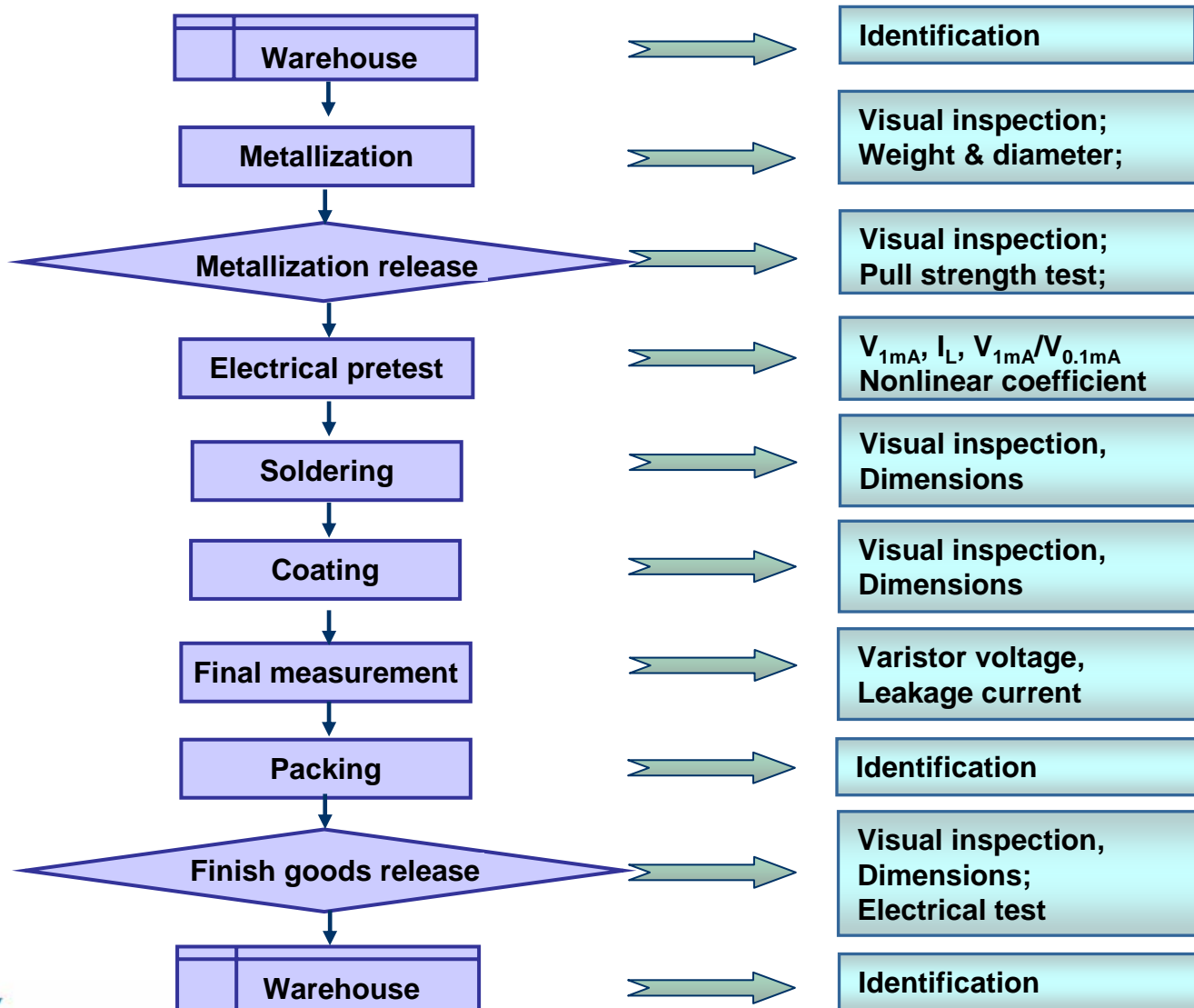
2.品质保障

Quality assurance

2. 品质保障 (Quality assurance)



2. 品质保障 (Quality assurance)



2. 品质保障 (Quality assurance)

**In order to guarantee the outgoing products are eligible, reliable and safety ,
3 laboratories are established as below:**

- **Chemical Analysis Laboratory;**
- **Production Release Laboratory;**
- **Reliability Test Laboratory**

2. 品质保障 (Quality assurance)

Chemical Analysis Laboratory;

- Analysis for physical and chemical characteristics of raw materials is conducted strictly for each delivery. Ensure that, to every incoming goods, the Technical Deliver Requirement (TDR) is achieved.
- Chemical analysis is performed in granule production, ensure that the process is stable and under control.
- ROHS monitoring in incoming, manufacturing and outgoing, ensure that the limiting conditions of EU directives on hazardous material are complied strictly.
- 对原材料进行严格的理化分析，确保其符合本公司技术要求。
- 对陶瓷粉料生产过程进行化学分析和监控，确保粉料生产的工艺稳定性与再现性。
- **EU ROHS** 指令中有害物质的测试，确认本公司提供的产品符合欧盟指令

2. 品质保障 (Quality assurance)

Chemical Analysis Laboratory



2. 品质保障 (Quality assurance)

Production Release Laboratory

- After each manufacturing step, the specific tests are carried out to decide whether the product will be released to go for next step or deliver to the final customer.
- The specific tests are conducted according to the international or national standards as well as customer's requirements.
- 在每一个制造阶段后，产品都将在放行实验室进行产品规格的符合性测试，以决定是否允许发送客户或流入下一阶段生产。
- 符合性测试依据客户的要求和相关国家、国际标准。

2. 品质保障 (Quality assurance)

Production Release Laboratory



2. 品质保障 (Quality assurance)

Reliability Test Laboratory



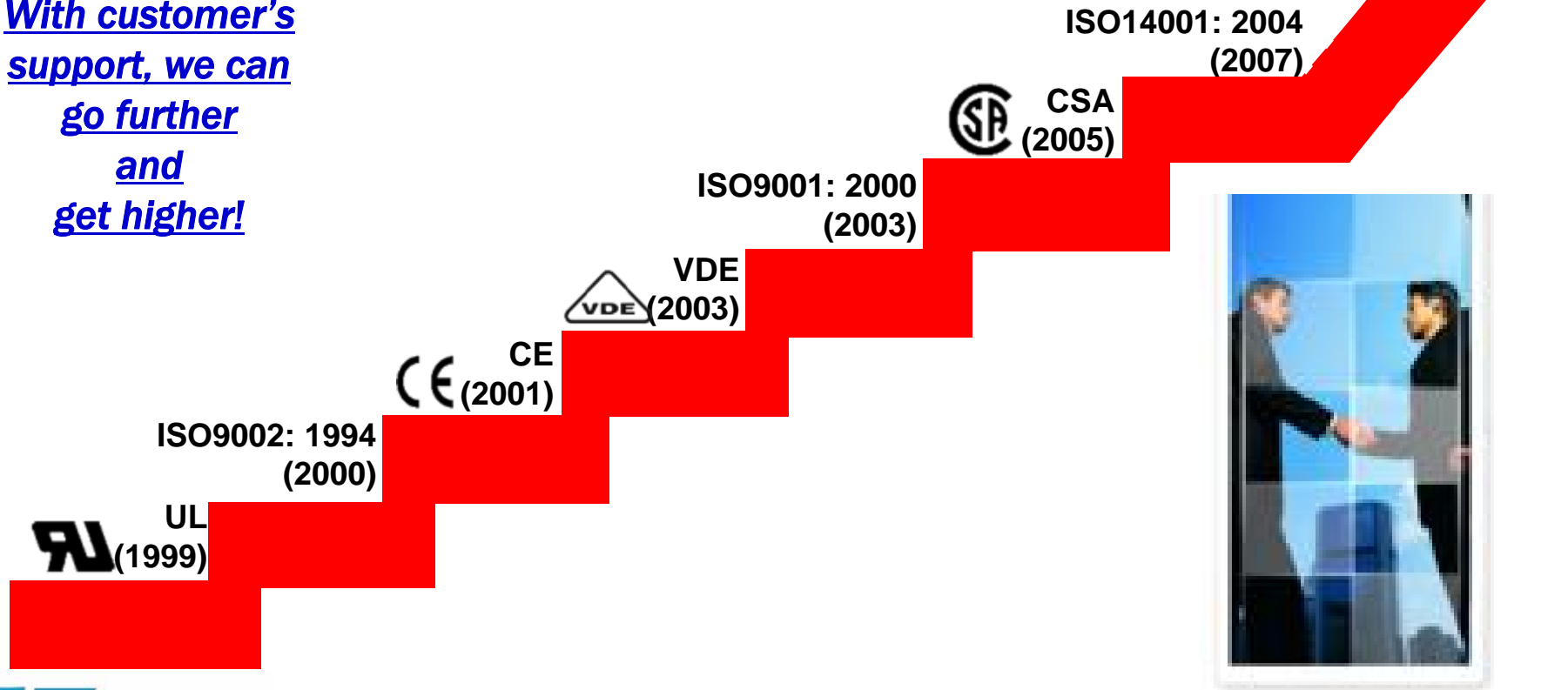
- Reliability and safety assessment is conducted to delivery products according to the standards, to ensure that safety is always guaranteed.
- Assess the reliability before the new products and technique is released to mass production.
- 依据标准对产品进行可靠性测试。确保科星产品的可靠性、安全性满足客户需求。
- 对公司开发的新产品、新工艺技术进行可靠性评估。

2. 品质保障 (Quality assurance)



With customer's support, we can go further and get higher!

Next Goal
CQC & K-Mark in 2007



Thank You !

