



# 顺络电子

## COMPANY PROFILE

深圳顺络电子股份有限公司  
Shenzhen Sunlord Electronics Co., Ltd.

**Sunlord**  
expert in e components

**Sunlord**  
expert in e components

总部: 深圳顺络电子股份有限公司  
Headquarters: Shenzhen Sunlord Electronics Co., Ltd.  
中国深圳市龙华区观光路观澜大富苑顺络工业园  
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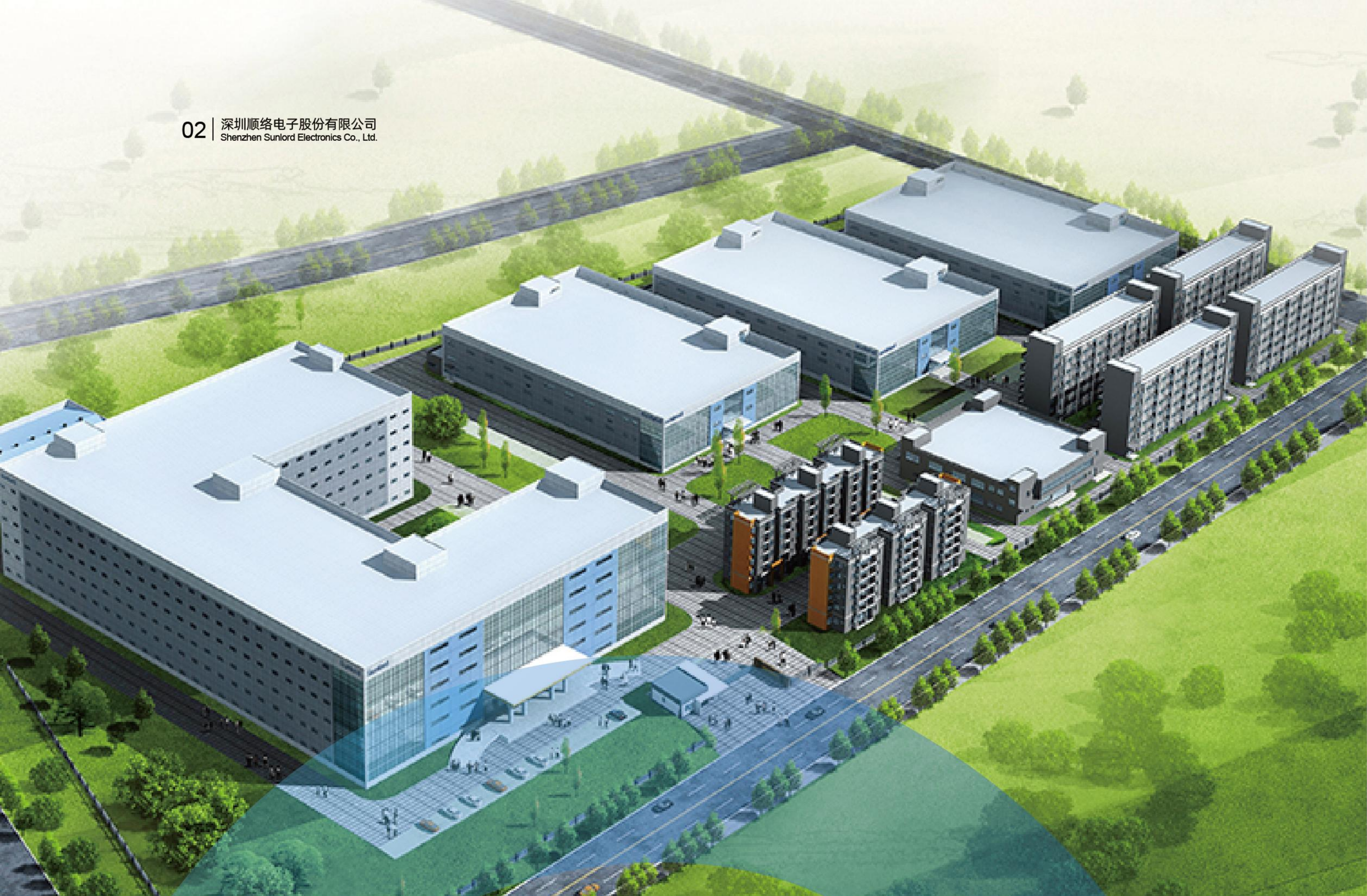
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- e 为客户创造价值，为员工提供机会  
Create value for customers, provide opportunities for employees
- e 为股东增加财富，为社会承担责任  
Increase wealth for shareholders, take responsibility for society

**企业核心理念**  
Core concept on development

**愿景**  
Vision

**企业文化**  
CORPORATE CULTURE

**核心价值观**  
Core Values

**质量方针**  
Quality Policy

- e 诚信、认真、公正、激情、创新、合作  
Honesty, conscientiousness, impartiality, enthusiasm, innovation, cooperation

- e 成为电子元器件领域专家  
Expert in electronic components

- e 遵循标准，科技创新，持续改进  
Compliance with standards, technological innovation, Continual improvement
- e 向全球客户提供优质产品和完善服务  
Provide high-quality products and perfect service to global customers

## BRANCHES AND PRODUCTION BASES OF SUNLORD GROUP 顺络集团分公司和基地



● 贵阳顺络迅达电子有限公司  
Guiyang Sunlord Xunda Electronics Co., Ltd.



● 衢州顺络电路板有限公司  
Quzhou Sunlord Electronics Co., Ltd.



● 东莞信柏结构陶瓷股份有限公司  
Dongguan Surpass Structure Ceramics Co., Ltd.



● 江苏顺络富钧新能源有限公司  
Jiangsu Sunlord Fujun New Energy Co., Ltd.



● 淮安顺络文盛电子有限公司  
Huai'an Sunlord Wensheng Electronics Co., LTD



● 湘潭顺络电子有限公司  
Xiangtan Sunlord Electronics Co., Ltd



● 顺络电子上海松江研发及智能制造基地  
Sunlord Electronics Shanghai Songjiang R&D and Intelligent Manufacturing Base



● 顺络新型电子元件及精密陶瓷项目基地  
(东莞塘厦建设中)  
Sunlord New Electronic Components and Precision Ceramics Project Base (under construction in Tangxia, Dongguan)



● 顺络新型电子元件研发制造基地  
(深圳市龙华建设中)  
Sunlord New Electronic Component R&D and Manufacturing Base (under construction in Longhua, Shenzhen)

## GROUP PROFILE 集团简介

深圳顺络电子股份有限公司成立于 2000 年，于 2007 年上市（股票代码：002138），是一家专注于各类片式电子元器件的研发、生产和销售的高新技术企业。我们的产品涵盖磁性器件、微波器件、敏感与传感器件、精密陶瓷四大产业，被广泛应用于通讯、消费类电子、计算机、汽车电子、新能源、网通和工业电子等领域。

我们秉承“遵循标准、科技创新、持续改进，向全球客户提供优质产品和完善服务”的经营理念。凭借完善的管理体系、雄厚的开发实力、优质的产品质量和完善的服务，顺络已成为众多国内外知名企业的电子元器件供应商。

Shenzhen Sunlord Electronics Co., Ltd. was established in 2000 and listed on the stock market in 2007 (stock code: 002138). It is a high-tech enterprise specializing in R&D, production, and sales of various types of chip electronic components. Our products cover four major industries: magnetic devices, microwave devices, sensitive and sensor devices, and precision ceramics, which are widely used in fields such as communications, consumer electronics, computers, automotive electronics, new energy, network communication, and industrial electronics.

We adhere to the business philosophy of "following standards, technological innovation, continuous improvement, and providing high-quality products and complete services to global customers". With its sound management system, strong development capability, high quality product quality, and comprehensive service, Sunlord has become a supplier of electronic components for many well-known domestic and international enterprises.



# MARKETING NETWORK

## 市场网络



- 1** 深圳顺络电子(总部)  
Shenzhen Sunlord Electronics (Headquarters)
- 2** 贵阳顺络迅达  
Guiyang Sunlord Xunda
- 3** 衢州顺络电路板  
Quzhou Sunlord Circuit Board
- 4** 东莞信柏结构陶瓷  
Dongguan Xinbai Structural Ceramics
- 5** 江苏顺络富钧新能源  
Jiangsu Sunlord Fujun New Energy
- 6** 淮安顺络文盛  
Huai'an Sunlord Wensheng
- 7** 湖南湘潭顺络  
Hu nan Xiangtan Sunlord
- 8** 上海松江研发  
Shanghai Songjiang R&D
- 9** 顺络新型元件及精密陶瓷  
Sunlord New Components and Precision Ceramics
- 10** 顺络新型电子元器件研发制造基地  
Sunlord New Electronic Component Device R&D and Manufacturing Base

### 手机及射频模块 Mobile Phone and



### 消费类电子 Consumer



### 网通及工业 Netcom and Industry



### 汽车电子 Automotive



### 光伏储能 Photovoltaic energy storage





# DEVELOPMENT HISTORY

## 发展历程

**2020-2021**  
 技术发明奖二等奖（光刻电极技术平台）  
 Awarded second prize of technology invention (technology platform for processing electrode with photolithographic process)  
 “国家企业技术中心”认定  
 Qualification of national-recognized enterprise technology center

**2018**  
 通过广东省新型电子元件与新材料工程技术研究中心认定  
 Sunlord new type electronics and new materials engineering research center recognized by Guangdong Province  
 公司中心实验室获中国合格评定国家认可委员会CNAS认证  
 Sunlord in-house central laboratory certified by CNAS (China National Accreditation Service for conformity assessment)  
 通过汽车行业客户Valeo, Aptiv审核  
 Approved as qualified supplier for automotive parts by Valeo and Aptiv

**2013-2015**  
 顺络工业园二期落成  
 Completion of Phase II of Sunlord Industrial Park  
 被认定为广东省知识产权优势企业  
 Identified as enterprise with advantages in IPRs in Guangdong Province  
 贵阳工业园落成、东莞工业园落成  
 Guiyang Industrial Park completed, Dongguan Industrial Park completed

**2007-2008**  
 在深圳证券交易所上市  
 Listed on the Shenzhen Stock Exchange  
 通过 QC080000 认证  
 QC080000 compliant  
 并购南方汇通微电子分公司  
 M&A of Microelectronics Branch of South Huiton Co., Ltd  
 收购深圳南玻电子有限公司  
 Acquisition of Shenzhen Nanbo Electronics Co., Ltd.

**2001-2003**  
 通过 ISO9001、ISO14001 认证  
 Passed certification of ISO9001 and ISO14001  
 通过索尼绿色伙伴认证  
 Certified by Sony Green Partner

2022

**2022**  
 被认定为“博士后创新实践基地”  
 Designated as “Innovative practice base for postdoctoral researcher”  
 深圳市科技进步奖一等奖（黄光技术平台及在新型射频器件中的应用）  
 First prize for Shenzhen Science & Technology Progress Award  
 通过制造业单项冠军示范企业复核  
 Passed the review of demonstration enterprise for champion of single product in manufacturing industry

2020-2021

**2019**  
 2019通过国家绿色工厂认定、通过制造业单项冠军示范企业复核  
 Passed the certification of national level green factory and the review of demonstration enterprise for champion of single product (multilayer inductor) in manufacturing industry  
 2019年（第32届）中国电子元件百强企业第二十七名  
 The 27th of China's top 100 electronic components enterprises in 2019 (the 32nd session)

2019

2018

**2016-2017**  
 荣获工信部评定的中国首批制造业单项冠军示范企业  
 China's first batch of manufacturing industry champion demonstration enterprises awarded by the Ministry of Industry and Information Technology of the People's Republic of China  
 成立汽车电子事业部  
 Established automotive electronics business unit

2016-2017

2013-2015

**2009-2012**  
 通过 TS16949 认证  
 TS16949 compliant  
 通过 EICC、OHSAS18001 认证  
 EICC and OHSAS18001 compliant  
 顺络LTCC工艺技术平台获得第12届信息产业重要技术发明奖  
 Sunlord LTCC technology platform won the 12th important technology invention award of information industry

2009-2012

2007-2008

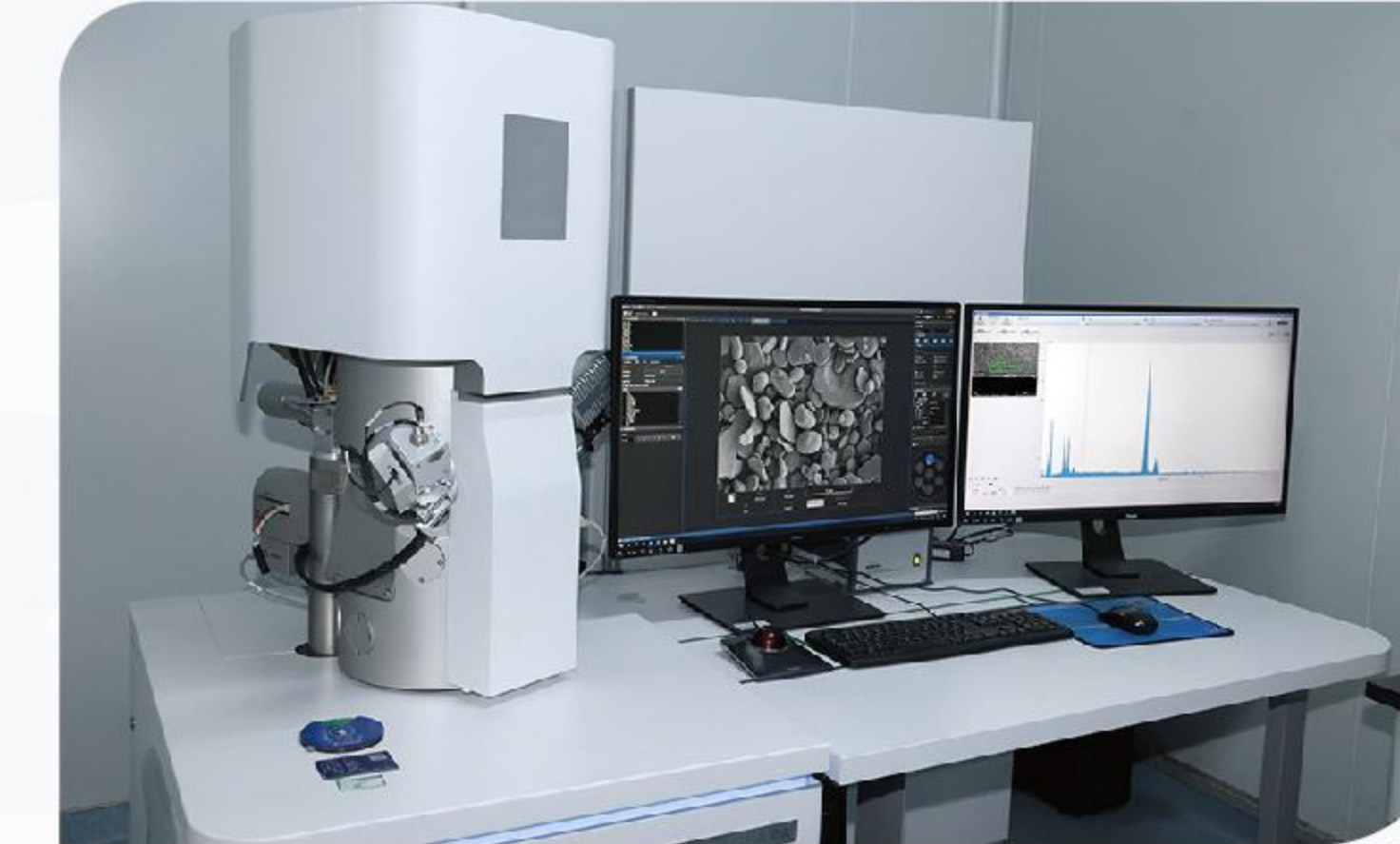
**2004-2006**  
 被评为亚太地区高科技高成长500强企业  
 Awarded Technology Fast 500 Asia Pacific by Deloitte  
 顺络工业园一期落成  
 Completed first stage construction of Sunlord Industrial Park

2004-2006

2001-2003

**2000**  
 公司成立  
 The company was founded in 2000.

2000



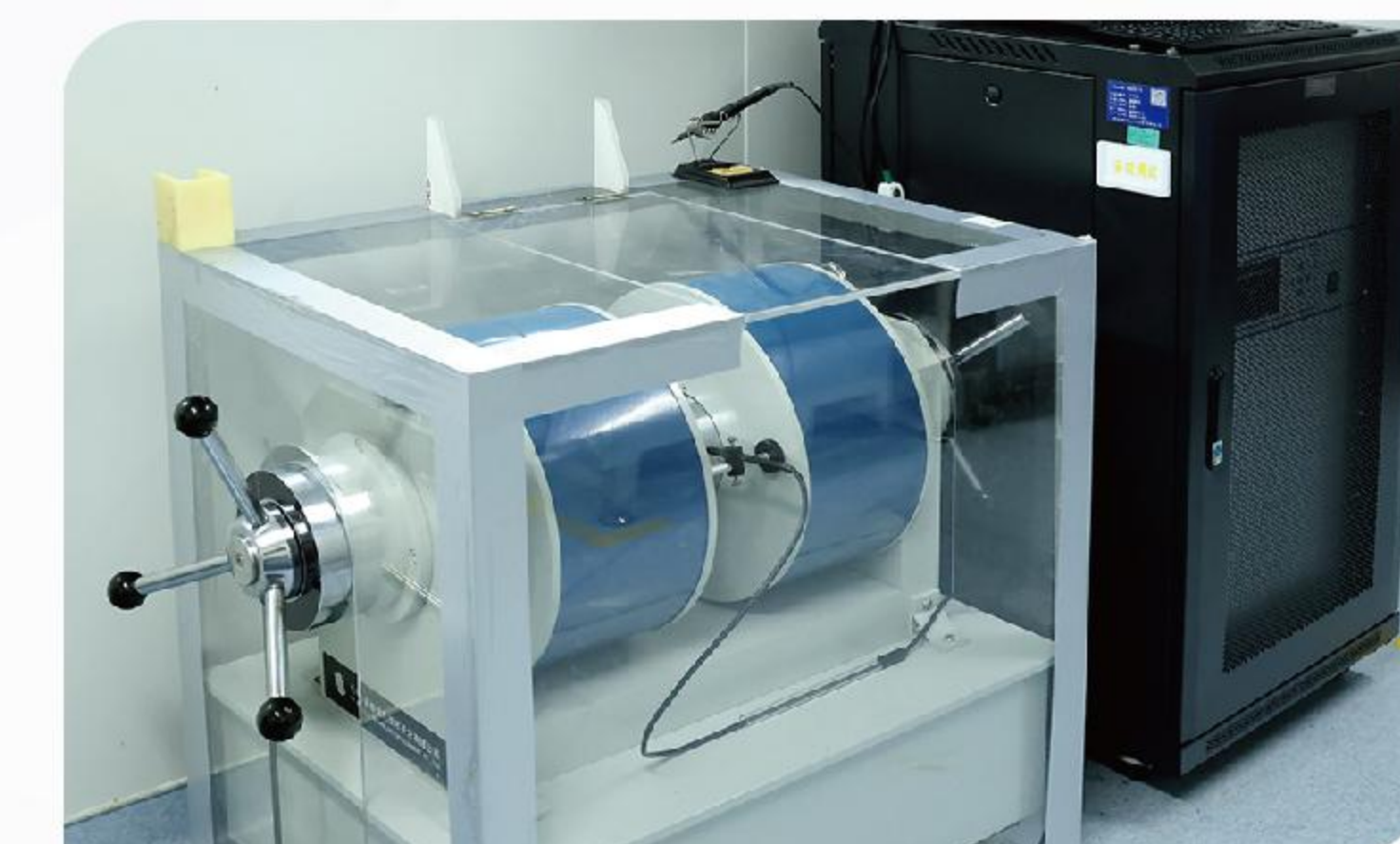
● 场发射扫描电镜  
Field emission scanning electron microscopy



● CT  
CT scanner



● 超声显微镜  
Ultrasonic microscope



● 磁致伸缩测试系统  
Magnetostrictive test system



● 全自动 SMT 线  
Automatic SMT line



● 三综合试验系统  
Integrated temperature/humidity/vibration stress test system



ISO 9001:2015



IATF 16949:2016



ISO 14001:2015



ISO 14001:2015



IECQ QC 080000:2017



ISO50001:2018



# R&D CENTER

## 研发中心

作为一家以科技创新为先导的高新技术企业，从公司创立之初就成立了以新型电子元器件的研究和开发为主要方向的顺络电子研发中心。2008年顺络研发中心被认定为“深圳市新型电功能陶瓷材料与元器件工程技术研究开发中心”；2016年，顺络电子与全球电子测量领导者是德科技合作成立“顺络电子-是德科技电子测量联合实验室”；2017年，中心实验室获得美国UL目击实验室资质；中心实验室建立了符合ISO/IEC 17025:2005的管理体系，在2018年获得中国合格评定国家认可委员会实验室认可证书，可出具具备社会公信力的检测报告。研发中心一方面为企业提供可持续发展产业化的新项目、新产品，另一方面为国内外企业提供专业检测与技术服务。

研发中心汇集了一批有着多年电子元器件研发经验的国内顶尖的专业技术人才，博士-硕士-本科-大专多层次、合理的人才结构，保障了研发队伍的持续稳定和不断创新。中心与国内外高校、研究所开展广泛和深层次的紧密合作，发挥各方优势，引领技术方向，实现技术产业化。中心已申请专利437项，取得国内发明147项，国内实用新型149项，美国发明7项。

作为给公司发展提供强大动力的“发动机”，研发中心持续引进优秀研发人才和先进研发软硬件资源，瞄准有爆发力的市场方向进行产品开发和技术开发，推动公司高速、稳健发展。

As a high-tech and innovation guided company, the R&D center was founded at the very beginning. In 2008 Sunlord R&D center was designated as the Shenzhen new functional electronic ceramic developing center. In 2016, Sunlord and Keysight Technologies, the global leader in electronic measurement, set up "Sunlord - Keysight Technologies Electronic Measurement Joint Laboratory". In 2017, the Center Laboratory was accredited the United States UL Witness Laboratory; Sunlord established the management system conforming to ISO/IEC 17025:2005, and in 2018 the Center Laboratory was accredited by China National Accreditation Board of Conformity Assessment for laboratory accreditation and qualification to issue test reports with social credibility. R&D center provides sustainable industrial development for new projects and products for the company, meanwhile provides professional and technical services for domestic and foreign enterprises as well.

R&D center brings together a group of domestic top professional technicians with years of experience in electronic components development; reasonable personnel structure with multilevel of doctor-master-bachelor-college ensured the stability of R&D team. The R&D center has been conducting extensive and in-depth cooperation with universities and research institutes at home and at abroad. The center has applied for 437 patents, and has acquired 147 domestic inventions and 149 domestic utility models, and 7 United States invention patents.

As an "engine" that provides strong impetus to the development of the company, R&D center continually brings in outstanding personnel and advanced hardware, targeting market directions with explosive potential for product and technology development, and promotes company grows rapidly and robustly.

高低温试验箱

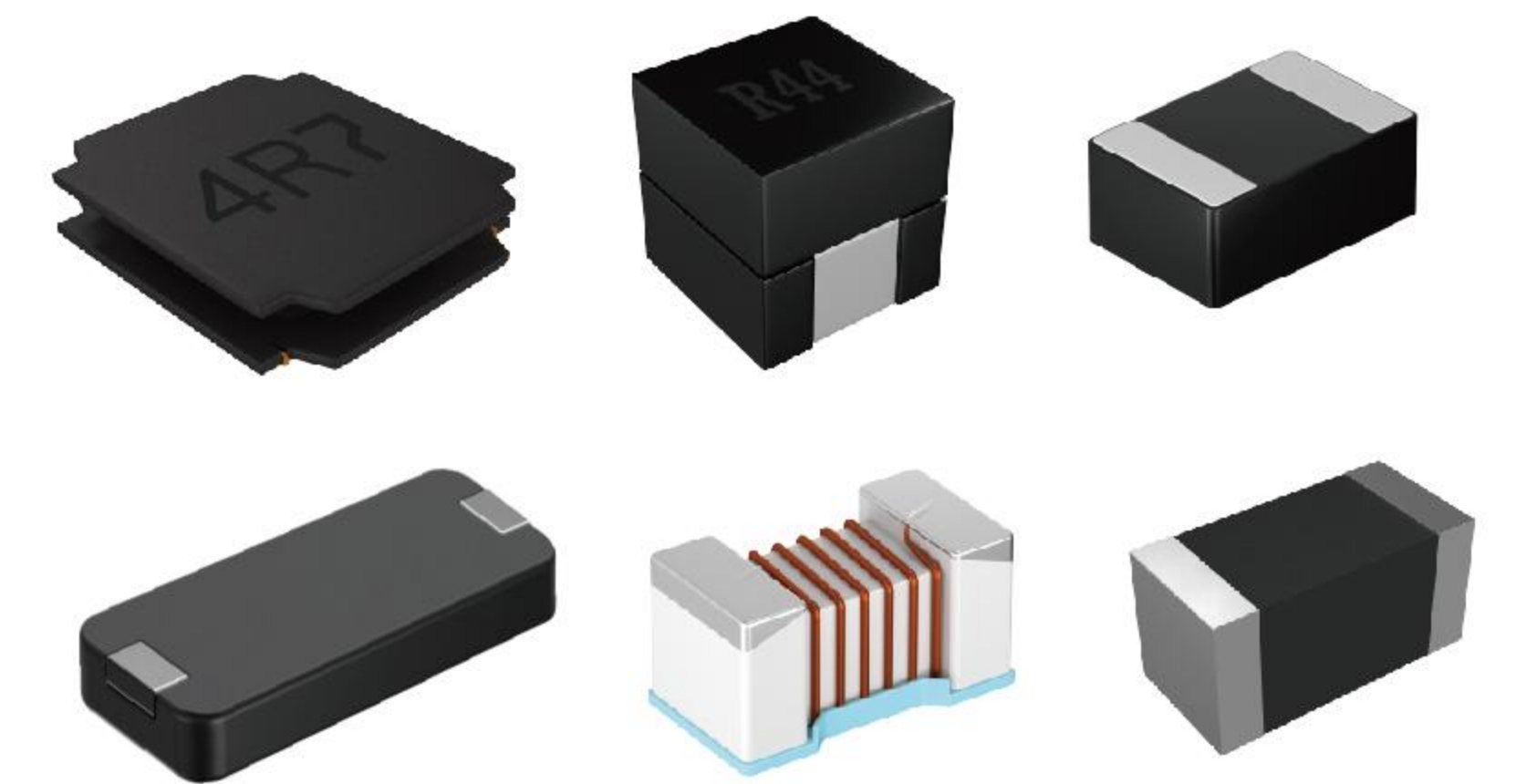
# MAIN PRODUCTS

## 主要产品

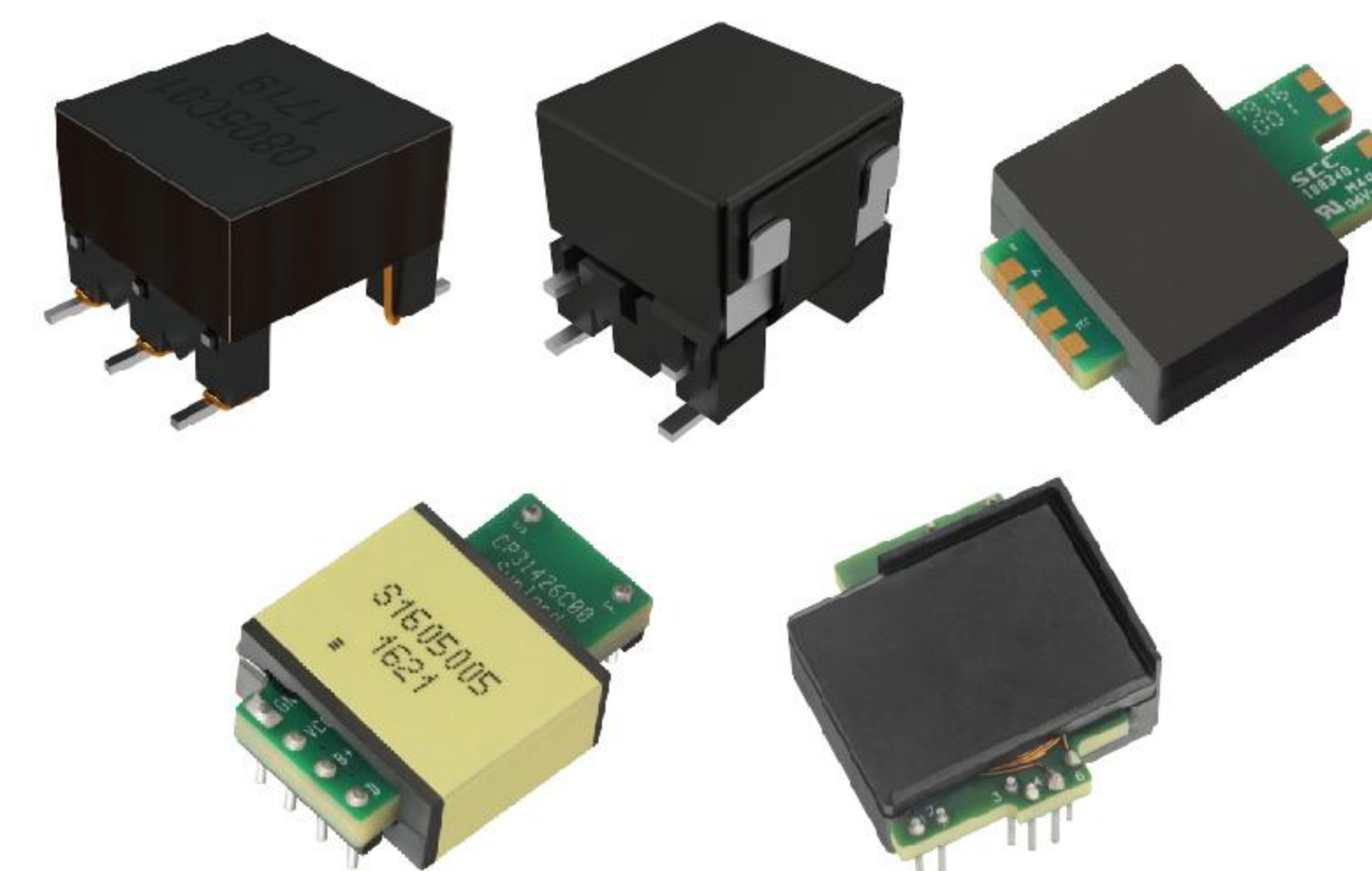
### 线圈/电感 Coils / Inductors

自主研制铁氧体、铁基合金、陶瓷等材料配方，利用叠层、绕线、模压等生产平台，结合薄膜技术、低压成型等工艺技术，我们可以提供不同应用需求的高性能线圈/电感产品。如用于电源线路的功率电感，包括叠层功率电感、绕线功率电感，一体成型功率电感，组装类功率电感和铜磁共烧功率电感；用于一般信号线的普通信号电感，包括叠层铁氧体电感和绕线铁氧体电感；用于高频电路的高频电感，包括叠层高频电感和绕线高频电感。产品尺寸覆盖0.2mm\*0.1mm（英制008004）到12.6mm\*13.45mm全系列尺寸；电感量范围从0.2nH到1mH。

Independently developed material formulations such as ferrites, iron-based composites, ceramics, etc., using production platforms such as multilayering, winding, and molding, and combining thin film technology, low pressure molding and other technologies, we can provide high performance coil/inductor products for different application requirements. Such as power inductors used in power lines, including multilayer power inductors, wire-wound power inductors, molding inductors, assembled power inductors and Co-fired alloy power inductors; General communication inductors used in general signal lines, including multilayer ferrite inductors and wire-wound ferrite inductors; High-frequency inductors used in high-frequency circuits, including multilayer high-frequency inductors and winding high-frequency inductors. The product size covers full range of sizes from 0.2 mm\*0.1 mm(008004 inch) to 12.6 mm\*13.45mm; the inductance ranges from 0.2nH to 1mH.



### 变压器 Transformer



顺络电子变压器产品包括绕线变压器和平面变压器，按照应用分类有LLC变压器，PFC电感，谐振电感，扼流线圈，共模线圈，电流互感器，脉冲变压器等。我们采用全自动化产线生产，产品性能优良，质量稳定，一致性好，并且很好地应对整体性的劳动力短缺问题并满足客户低缺陷需求，被大量应用于网络设备、安防、汽车电子、电源模组等。

Sunlord electronic transformer products include wire-wound transformers and planar transformers, sorting by application, we provide LLC transformer, PFC transformer, resonant transformer, Chock coil, Common mode choker coil, current transformer, pulse transformer etc. By using of fully automatic production lines, our Transformers provide excellent electrical performance, steady quality and good consistency. Meanwhile, it effectively solves labor shortage problem and meet customer's low defective rate requirement; They are widely used in network equipment, security, automotive electronics, and power modules, etc.



## EMC元件 EMC Components

从产品种类上包括磁珠、叠层和绕线共模扼流器，可满足不同应用场景的需求。

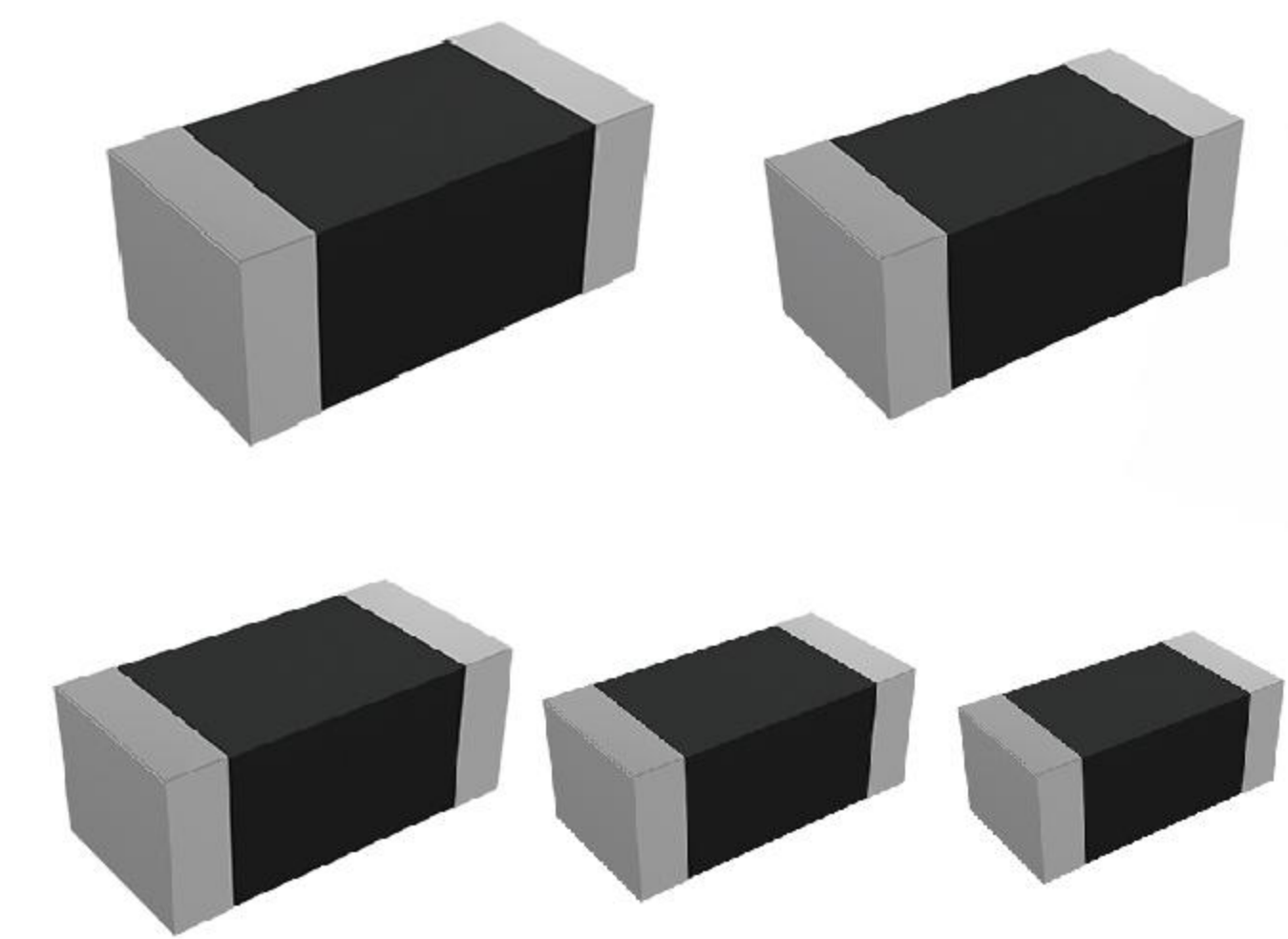
Beads, Multilayer and wire wound common mode chokes for signal lines to meet the needs of different application scenarios.



## 敏感元件 Sensitive Components

顺络的敏感元件包括压敏电阻和 NTC 热敏电阻，压敏电阻采用独特的材料配方以及全新的晶粒半导化技术，提高了通流密度，降低了钳位电压。产品用于接口静电防护、电源线过电压抑制。NTC 热敏电阻方面，基于多年精密陶瓷以及厚膜印刷技术的积累，顺络电子开发出多种高性能、小尺寸 NTC 热敏电阻，广泛应用于手机电池、CPU 等应用场景的温度监控与保护。

Using unique material formula and grain semiconducting technology to promote discharging capability and lower clamping voltage. The product is used for ESD protection of interface and power line overvoltage suppression. For NTC Thermistor, based on years of accumulation of precision ceramics and thick film printing technology, Sunlord has developed a variety of high-performance, small-size NTC thermistors, which are widely used in the temperature monitoring and protection of mobile phone batteries, CPU and other applications.



## 精密陶瓷 Fine Ceramic Products

公司在先进陶瓷领域逾 30 年的精耕细作，已拥有先进完整的粉料制备和制品加工的专业设备，产品包括陶瓷粉体、陶瓷结构件、精密陶瓷结构件、磨介、手机背板、智能穿戴陶瓷壳体、陶瓷餐刀等，产品应用覆盖电子、涂料、石油、化工、机械、医药、食品、半导体等十几个行业。

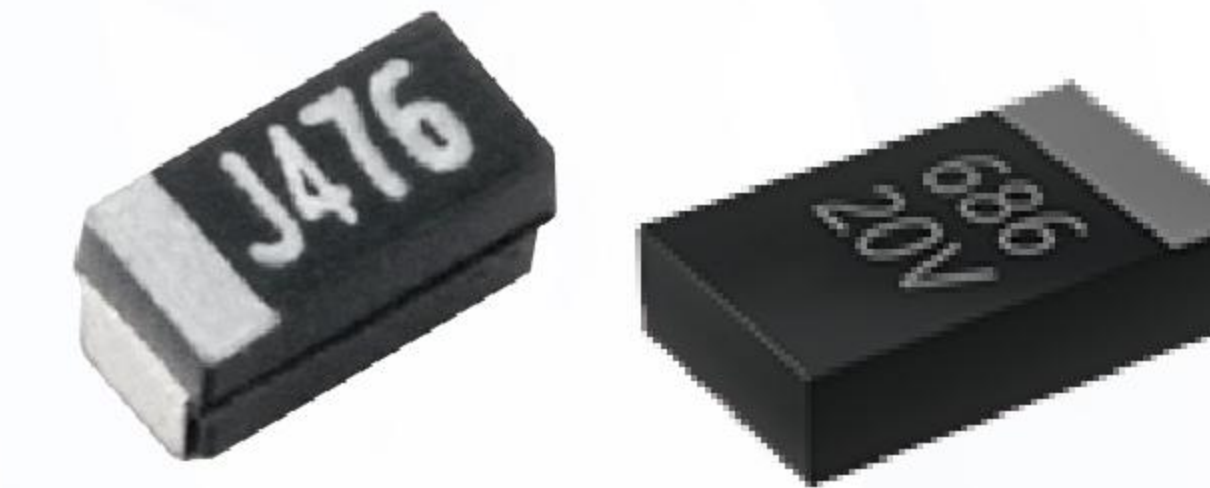
With more than 30 years of intensive cultivation in the field of advanced ceramics, the company has advanced and complete professional equipment for powder preparation and product processing, including ceramic powder, ceramic structural parts, precision ceramic structural parts, grinding media, mobile phone back cover, smart wearable ceramic shell, ceramic table knife, etc. Product applications cover more than ten industries, such as electronics, coatings, petroleum, chemical, machinery, medicine, food, semiconductor and so on.



## 钽电容 Tantalum Capacitors

顺络电子生产一系列高可靠性和低 ESR、且覆盖宽泛电压范围的固体片式钽电容器。按照阴极材料的不同，分为 MnO<sub>2</sub> 钽电容和聚合物钽电容，钽电容尺寸包括 A/B/C/D/E 壳，容量范围 0.1uF~680uF。同时我司开发了全新结构（无引线框）产品 TP/TM 系列，实现产品小型化，薄型化，高可靠性，低 ESR，低漏电流等优点。

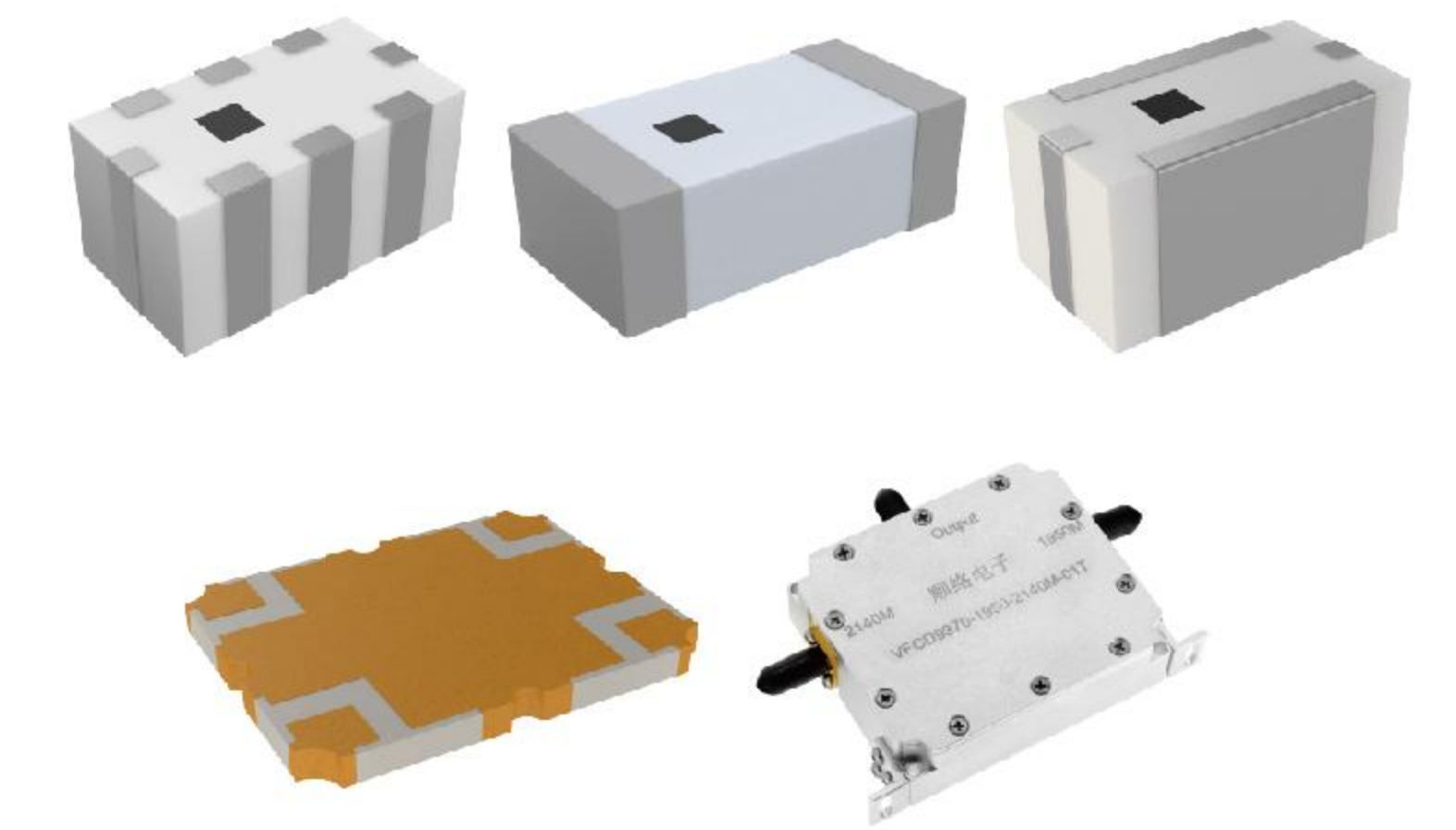
Sunlord Electronics manufactures a family of solid chip tantalum capacitors with high reliability and low ESR over a wide voltage range. Based on different cathodes, there are MnO<sub>2</sub> and Polymer Tantalum capacitors, their sizes include A/B/C/D/E shell, the capacitance ranges of 0.1uF ~ 680uF. Recently, we have developed innovative frameless tantalum capacitor-TP/TM series, it provide excellent characteristics such as small size, Low profile, Low ESR, high reliability and low leakage current etc.



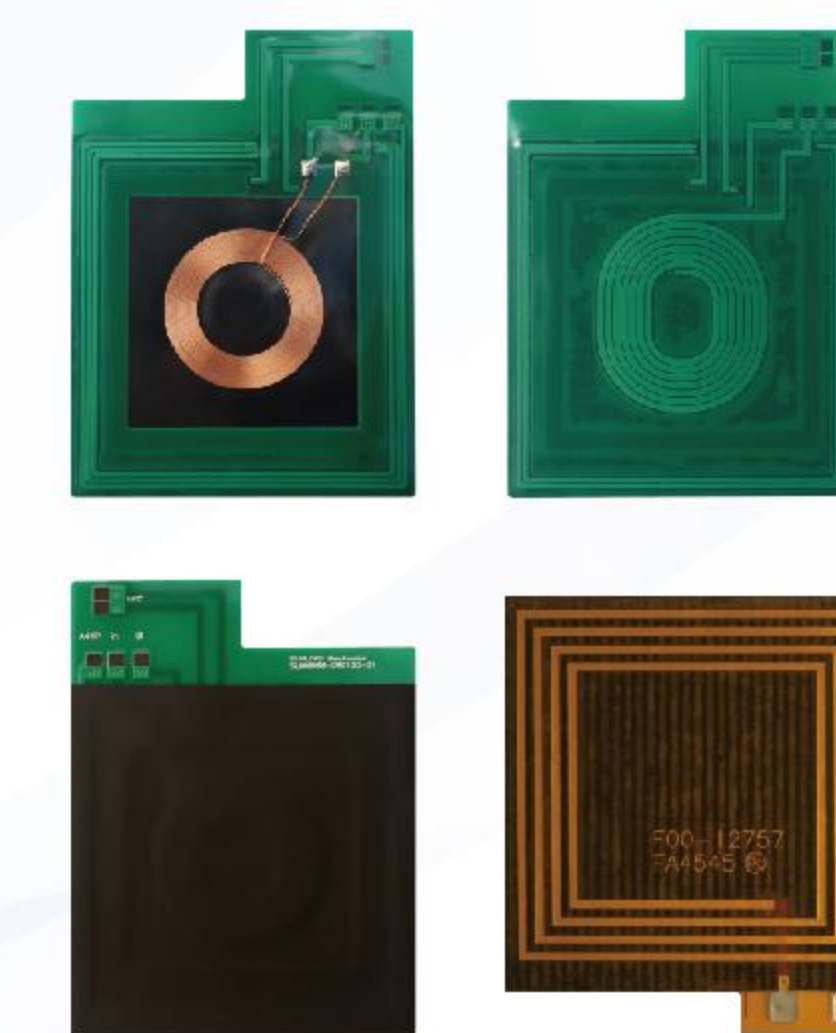
## RF元件 RF Components

顺络电子提供大量用于通信领域的射频器件，这是基于独立的材料研发能力、先进的 LTCC 技术和丰富的射频设计经验而实现的。这些器件包括 Wi-Fi/ 蓝牙天线，LTCC 滤波器，巴伦，双工器，三工器，耦合器、功分器、介质波导滤波器等产品。

Sunlord Electronics provides a large number of RF devices used in the communication field, which is based on unique material development capabilities, advanced LTCC technology and rich RF design experience. These devices include Wi-Fi/Bluetooth antennas, LTCC filters, balun, duplexers, triplexers, couplers, power splitters, ceramic waveguide filters etc.



## 定制化产品 Customized Products



NFC 天线：从原材料到铁氧体片到 NFC 天线的全产业链整合，提供多种技术解决方案，满足客户各种应用场景的定制化需求。

PCB：通孔板和 HDI 板，主要应用模块、手机、消费类电子。设备先进精度高，产品品质优良。在半孔 PCB 板领域，是国内解决方案第一品牌。

NFC Antenna: Integrated whole industry chain from raw materials to ferrite chips, to NFC antennas, provides a variety of technical solutions to meet the customization requirement of various application scenarios.

PCB: Through-hole board and HDI board; mainly applied in modules, mobile phones, consumer electronics. Equipment advanced and highly precise, product quality decent. The best solution provider in China for half-hole PCB board.

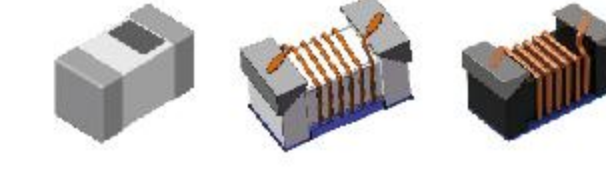


# AUTOMOTIVE ELECTRONICS

## 汽车电子

### Intelligent Drive

High Frequency Inductor



PoC Inductor



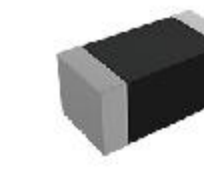
Common Mode Choke



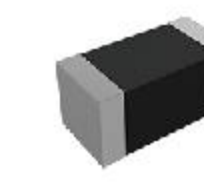
Ultrasonic Sensor Transformer



NTC Thermistor



Ferrite Bead



Power Inductor



### Hybrid System

Common Mode Choke



Power Inductor



Power Line CMC



### LED Light

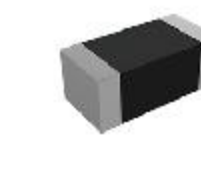
Power Inductor



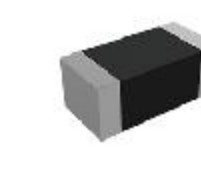
Common Mode Choke



NTC Thermistor



Ferrite Bead

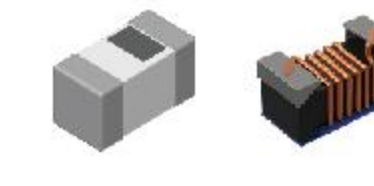


### Intelligent Cockpit

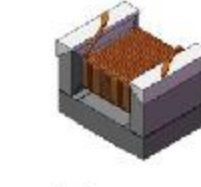
Common Mode Choke



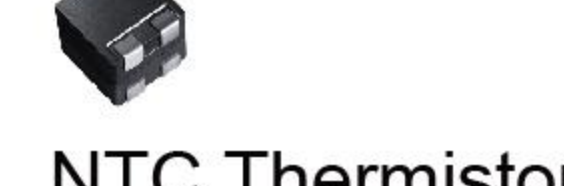
High Frequency Inductor



PoC Inductor



Power Inductor



NTC Thermistor

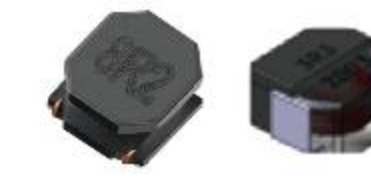


Ferrite Bead



### Thermal Management System

Power Inductor



Common Mode Choke



Multilayer Inductor



Transformer

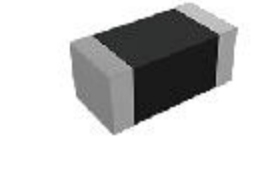


### BMS

Lan Transformer



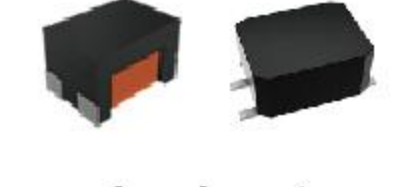
NTC Thermistor



Electronic Transformer



Common Mode Choke



Power Inductor



Ferrite Bead



Transformer for BMS



### DC-DC Converter

Power Inductor



Common Mode Choke



Transformer

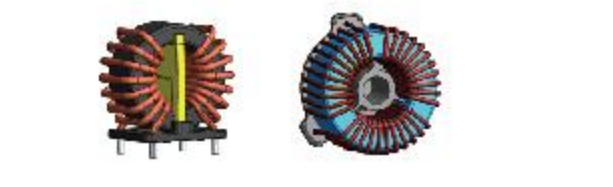


Current Sensor Transformer



### OBC

Common Mode Choke



Power Inductor



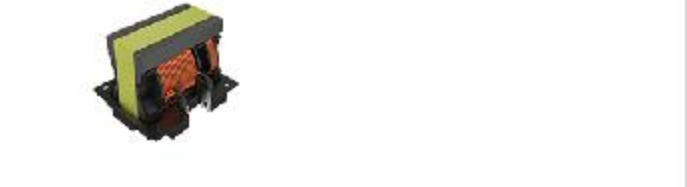
Power Line CMC



Gate Drive Transformer



LLC Transformer



NTC Thermistor



### Motor Driving

Gate Driver Transformer



Power Inductor



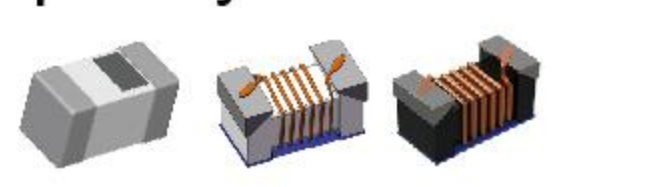
RF Component



Common Mode Choke



High Frequency Inductor



### T-box & V2X

