



LUGUANG ELECTRONIC TECH. CO.,LTD. (LGESEMI)

National Hi-Tech Enterprise and Professional in
Manufacturing , R&D , Marketing for Power Discrete
Semiconductors Since 2002

01

Company Profile



About Us



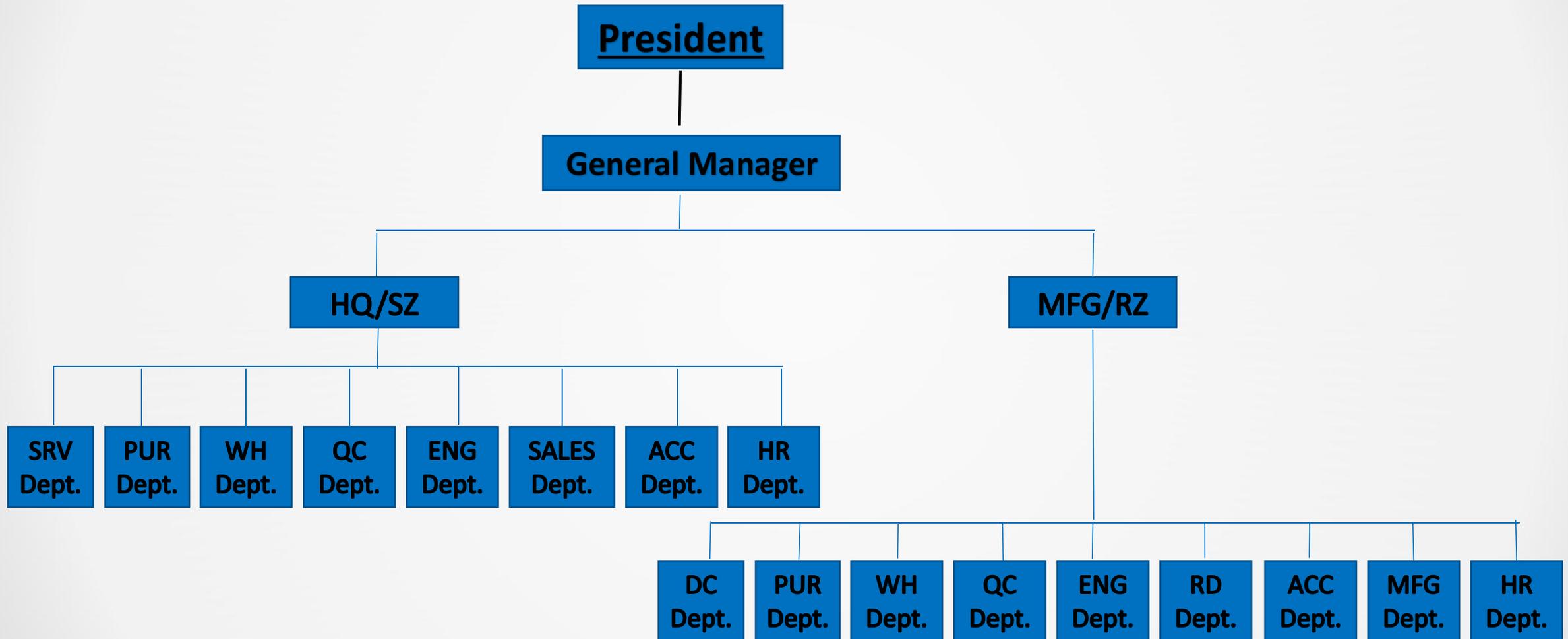
LuGuang Electronic Tech Co.,Ltd (here after called LGESEMI) is One of the Largest Manufacturers for TVS diodes, Zener diodes, Schottky diodes, FRED diodes, Bridge rectifiers, Transistors, Triacs, MOSFETs, IGBT , Thyristor Modules, SiC diodes, SiC MOSFETs etc Power Discrete Semiconductors Since 2002.

LGESEMI always focuses on technology innovation and commitments to the technology development of power semiconductors, owning a number of patents and independent intellectual property rights.

LGESEMI's production facility is certified IATF16949, ISO9001, ISO14001 and ISO45001 etc quality management systems. All our products are fully compliant to the latest RoHS&REACH directive and the major products are UL certified which are widely used in lighting, telecommunications, home appliances, power management, smart metering, IT products, automotive electronics etc New Energy Electronics Industries.

Vision&Mission: To be Worldwide Semiconductor Leading Brand

Organization Chart



Milestones

2002

Establishe

Founded in
September,2002

2003

Brand

Registered LGE
trademark, becoming
well known brand

2005

New Office

Set up head office in
CBD of Futian district

2008

Investing

Bought land and built
facility in Rizhao

2010

Forwarding

Started mass
production

Milestones

2011

Quality Assurance

Awarded ISO9001 and
ISO14001

2012

Honory

Imported the first
full-auto SMD
production line in
China Mainland

2013

Regain Glory Quality Assurance

Sales amount reached
0.1 billion

2015

Awarded IATF16949

2017

Certificate

Awarded National
Hi-tech Enterprise

Milestones

2019

Milestones

Import new bridge
rectifiers production
lines

2020

Certificate

Verified Alibaba Gold Plus
Supplier by SGSReport#
20342545_T

2021-
2023

Milestones

Import new production lines
for TO-220 TO-247 TO-3P/
MUR FRED MOS IGBT SIC etc
power semiconductors

2023

Quality Assurance

Awarded ISO45001

02

Quality Assurance



Quality Management System Certificates



Quality is Our Culture

National Hi-Tech Enterprise
 IATF16949
 ISO9001
 ISO14001
 ISO45001
 UL

Compliant to ROHS, REACH, HF



日照鲁光电子科技有限公司

专精特新中小企业

山东省工业和信息化厅
 有效期: 2023年5月9日 - 2026年12月31日

日照市中小企业

一企一技术研发中心

日照市民营经济发展局
 日照市中小企业局
 二零二零年十月

日照市工程实验室

日照市发展和改革委员会
 二〇一二年四月



Quality Management System



Systematic management Traceability management

The multi-stage production management mode is adopted for each batch of products, each process in the product production process has detailed information records, product orders to production and processing and then to sales and shipping documents are related to each other, and the corresponding material models, batches and operators of the products can be jointly checked through different documents, so as to achieve the traceability of the products; At the same time, the abnormal yield of each product can also be found in time, so that timely measures can be taken to improve product quality.

The screenshot displays the '多阶投产' (Multi-stage Production) interface. It features a process flow diagram with three stages: 1. 选择投产单据 (Select Production Order), 2. 确定投产数据 (Confirm Production Data), and 3. 投产结果查询 (Check Production Results). Below the flow are buttons for '选择销售订单', '选择预测单', and '投产方式' (set to '全阶投产').

The interface also shows a '生产加工单' (Production Order) form with fields for '单据日期' (2024-03-30), '单据编号' (MO-2024-03-0384), '业务类型' (Normal), '生产车间' (Production Dept), '预开工日' (2024-03-30), '预完工日' (2024-03-30), '完工日期' (2024-03-30), '客户订单号', and '委外供应商'.

Two data tables are visible:

序号	*产品编码	*产品名称	规格型号	材料需求...	BOM版...	工艺路线	批号	预入仓库	*生产单位	*数量
1	CS.03.47.3060.11801	MUR3060PT-测试后产品	MUR3060...	<input type="checkbox"/>	单阶	成型+...	G119-DLHFD1811804	测试仓库	K	0.018

序号	*材料编码	批号	*材料名称	预出仓库	制料行...	定额需用数量	需用数量	损耗数量	计划数量	备注	累计
1	BM.03.47.3060.11801	G119-DLHFD1811804	MUR3060PT-白毛管	测试仓库	<input checked="" type="checkbox"/>	1	0.018		0.018		

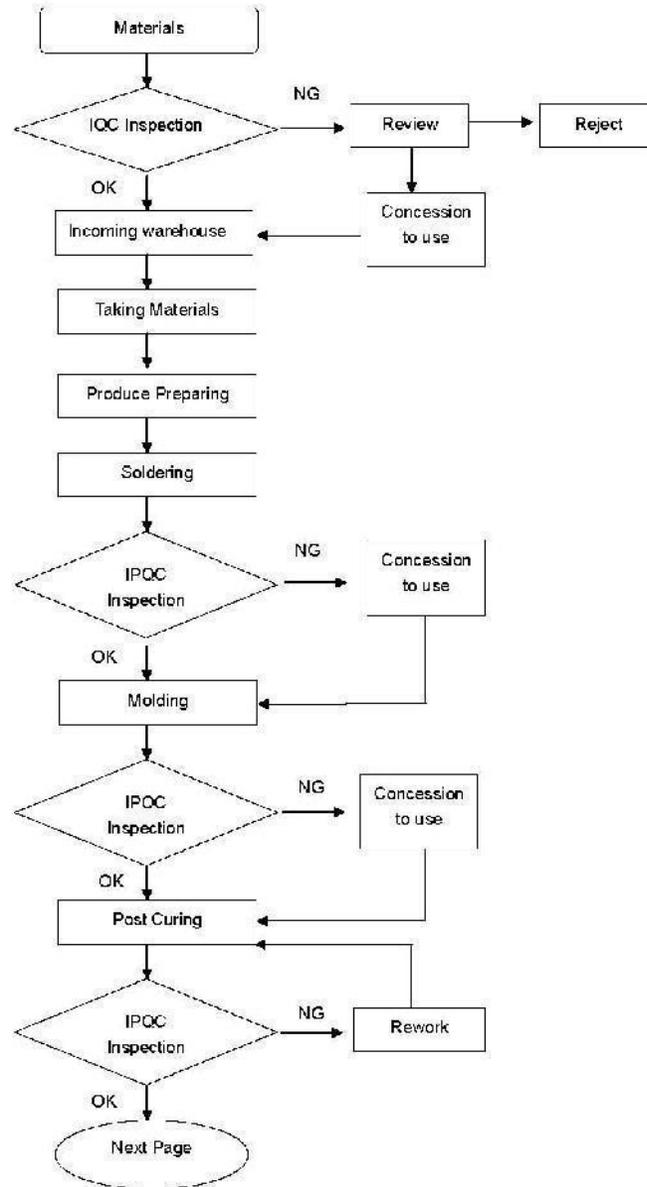
The bottom table shows a detailed production record:

序号	*加工单日期	*加工单号	*产品编码	*产品名称	机台号	工艺路线	印...	印字	产品批号	*工序名称	工人名称	投料数	下传数	行
1	2024-03-30	MO-2...	CS.03.47.3060.11801	MUR3060PT-测...		成型+...			G119-DLHFD181...	成型	王季风	0.018	0.018	
2	2024-03-30	MO-2...	CS.03.47.3060.11801	MUR3060PT-测...		成型+...			G119-DLHFD181...	测试	王季风	0.018	0.018	

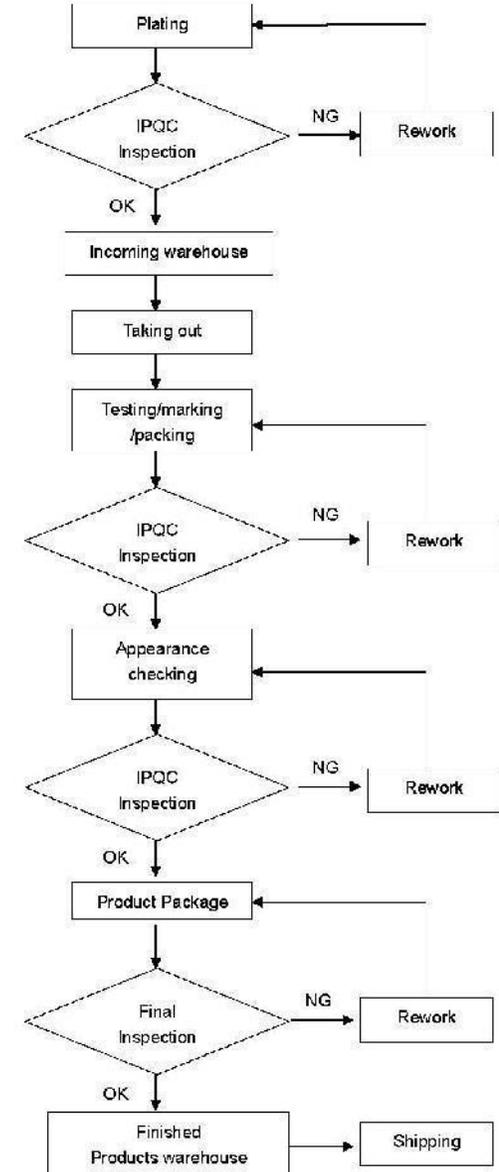


Quality Control

Quality Control System Flow Chart



Quality Control System Flow Chart



High Reliability Test Process

Environmental testing

- Moisture resistance
- Pressure cooker
- Thermal shock
- Temperature cycling
- Soldering heat



Durability Testing

- Solder ability
- Lead pull
- Lead fatigue
- Operating life
- High temperature reverse bias
- Intermittent operating life
- Forward surge current
- High temperature storage life
- Low temperature storage life



AECQ101 TEST TABLE

AEC-Q101-REV-C (June 29, 2005)

User P/N:		DIP Series & SMD Series	QA Engineer:	Enhua Shao		
User Spec. #:		N/A	Supplier manufacture site:	Shandong		
Supplier:		LGE(Shenzhen Luguang Electronic Tech. Co.,Ltd.)				
Family Type:		DIODES/TRANSISTOR				
Supplier internal P/N:		DIP Series & SMD Series				
Item	Test Item 目	測試項 Test Conditions 試條件	測 Test Standard 依據	測試 S.S. 抽樣數	ACC/REJ (允收標準)	Judge Method 判斷標準
1	Pre- and Post-Stress Electrical Test 预/后应力电气测试	Electrical characterization @25°C 25°C条件下电性测试	AEC-Q101-C	ALL	0/1	元器件不具備電氣特性或降至規格以外，或衰減40%以上，或IR增大10倍以上(試驗前IR<0.1uA除外)。
2	External Visual外观检验	Body、Terminals Check本体引线检验	AEC-Q101-C	ALL	0/1	-
3	Parametric Verification 产品电性验证	Individual AEC user specification按产品使用者承认之规格进行	AEC-Q101-C	ALL	0/1	-
4	H.T.R.B.高温反偏	80% Rated VR (T=150°C) /168hrs	AEC-Q101-C JESD22- A108	22	0/1	同上
5	Temp. Cycling高低温循环试验	-55°C/15Min, 150°C/15Min./ 100 cycles	AEC-Q101-C JESD22-A104	22	0/1	同上
6	Autoclave (A.C)高压蒸煮	Ta=121±2°C 15Psig(1.057kgf/cm2)	MIL-STD-750 Method 102	22	0/1	同上
7	ESD	HBM:8KV (C=100pf R=1500Ω)/10 Times	AEC-Q101-C	10	0/1	同上
8	D.P.A破坏性物理分析	Random sample of devices have successfully completed TC test. 器件温度循环测试完成后，任意抽样进行	AEC-Q101-C	1	0/1	-
9	Physical Dimension 产品尺寸	For user request按产品使用者的规格进行	JESD22-B100	10	0/1	-
10	Solder Heat耐焊接热	260±5°C /10 sec.	AEC-Q101-C JESD22- B106	22	0/1	同上
11	Thermal shock热冲击	0°C/5MIN, 100°C / 5MIN, 100cycles 0°C/5分钟, 1000°C/5分钟, 100周期	AEC-Q101-C JESD22-A106	22	0/1	同上
12	Solderability test可焊性测试	245±5°C / 5 secs	JESD22-B102& AEC-Q101 Table2B	10	0/1	同上

Prepared By: Yujun Hou

Approved by: Jacky Zhu



AECQ101 Qualification Testing Standard

03

Product Catalogue



Your Complete Source for:

*Transient Voltage Suppressor Diodes ,
Super Fast Recovery Rectifiers ,
Schottky Barrier Rectifiers , Zener Diodes,
Bridge Rectifiers ,
Transistors , Voltage Regulators , MosFet*



LGSEMI



MANUFACTURING

***More than 10 basic diffusion types;
More than 55 different product lines (package outlines);
More than 9.000 different part numbers (including special types);
More than 3000.000.000 parts shipped worldwide yearly;
EMPLOYEES : 200 across China Mainland;
ANNUAL PRODUCTION CAPACITY: 3.5 billions pcs***



**OEM Services
Offered**

LGE Products Roadmap

LGESEMI



AK/SM8S Auto-TVS diodes
DO-218AB SOD-123FL SMA SMB



Power Semiconductors/
MUR FRED MOS
IGBT SIC
TO-220 TO-247 TO-3P

SMD Diode
SOD-123FL/SMA/SMB/SMC



Bridge Rectifiers
D3K/KBPC/ KBU/GBU/SGBJ



Small package MOSFET Transistors
SOT-23/ SOT-323/SOT-89
TO-252/TO-126

Frequency control components ;
Axial Diode
DO-41 /DO-15/ DO-27/R-6



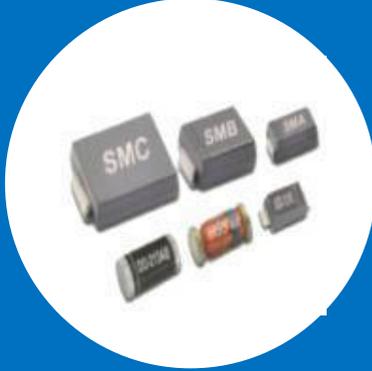
Main products

TVS/ESD Diodes, Zener Diodes, Schottky Diodes, Fast Rectifiers, Small signal ;

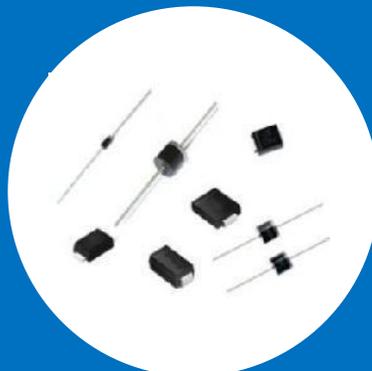
Packages: SOD-882,DFN1006,SOD-523,SOT-23,SOD-323, SOD-123, SMA , SMB, SMC, SMAF, SMBF, DO-41, DO-15, DO-27, R-6



TVS/ESD
Diodes



Zener Diodes



Rectifiers

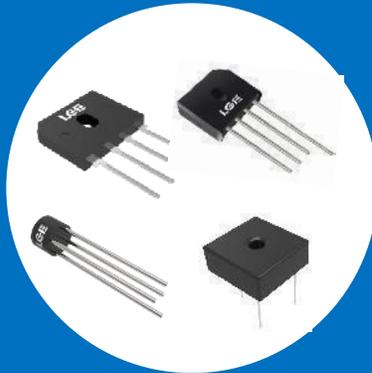


Small signal

Main products

Bridge rectifiers, Schottky bridge rectifiers, Low Vf bridge rectifiers

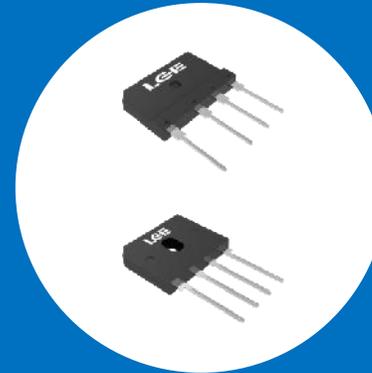
Packages: MBS, MBF, ABS, DB-S, WOM, KBP, KBL, KBU, GBP, GBU, GBJ, KBPC/W, SKBPC/W, SGBJ;



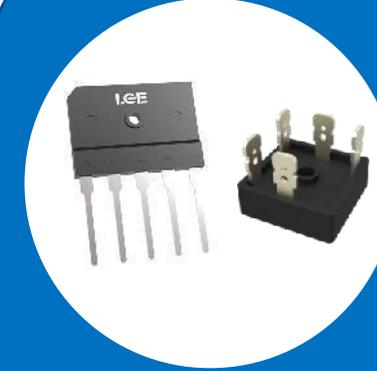
Bridge rectifiers



Schottky bridges



Low VF bridges

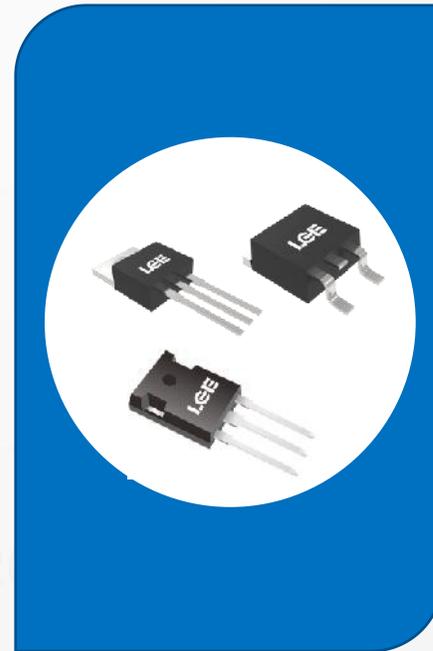
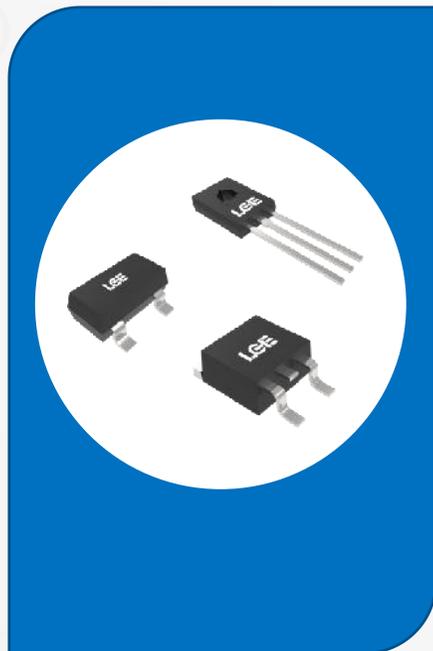
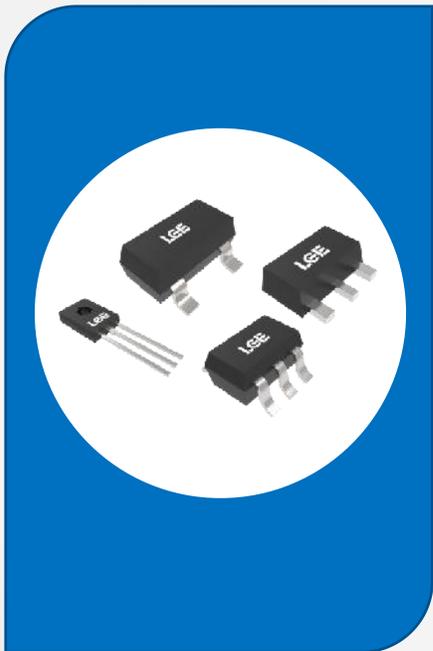


Three phases

Main products

Transistors, MOSFET, TRIAC, Voltage Regulator, IGBT, SBD, FRED, Thyristor, Modules, SiC Diodes, SiC MOSFET, etc Power Semiconductor

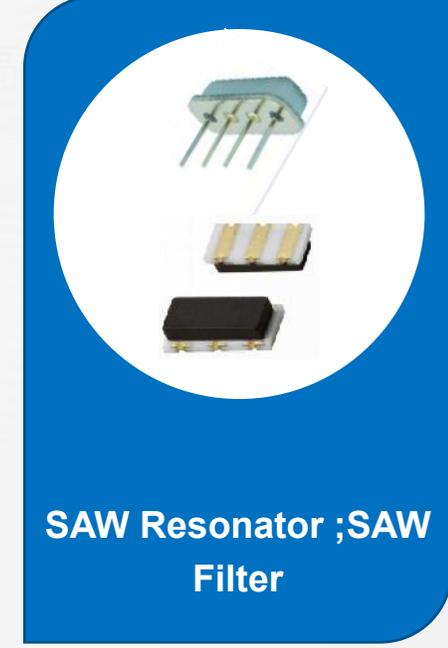
Packages: SOT-23, SOT-223, SOT-323, SOT-89, TO-92, TO-126, TO-252, TO-263, TO-220, TO-247, TO-3P



Other products

Frequency control components: Crystal units ;SAW resonator,Saw Filter

Packages:DT-26/38 ;HC-49S/49SMD/49U; SMD3215/2016/2550/3225/5032/7050; 433.92MHZ





New Added lines in the catalog

PACKAGE	PART NUMBER SERIES
SMAF	S1AAF-S1YAF;S2AAF-S2YAF
SMAF	RS1/2AAF-RS1/2MAF
SMAF	US1/2AAF-US1/2MAF; BYG20D-KAF;
SMAF	ES1/2AAF-JAF;
SOD-123FL--R-6	Low VF Schottky diodes
SMAF SMBF	S5817AF--SS120BF
SMAF SMBF	SS2/3/4/52A/BF-SS2/3/4/520A/BF
TO-277	5A-20A Low VF sky diodes
SMA	TPSMA12A-85CA
SMA	SMA6J5.0A-P6SMA220CA

PACKAGE	PART NUMBER SERIES
SMB	TPSMB13A-TPSMBJ78CA
SMB	SMBJ10J5.0A-1.0SMB75CA
SMC	TPSMC12A-TPSMCJ78CA
SMC	2.0SMCJ5.0A-58CA
SMC	TPSMDJ10-43A
AK1-15	AK1-76C-AK15-76C
DO-218AB	SM8S10-SM8S43A
SOD-123FL	DZL4728-4764
SOD-923-SOT-23	ESD Protection Diodes
MT-SGBJ-SKBPC	3-Phase Bridge diodes

More information, please contact us or check on our website datasheets

SiC Schottky Diodes

IF (A)	VRRM (V)	Package
4A	650V 1200V	TO-220-2L TO-220F-2L
5A	1200V	TO-220-2L
6A	650V 1200V	TO-220-2L TO-220F-2L DFN5×6 DFN8×8
8A	650V 1200V	TO-220-2L TO-220F-2L D2PAK
10A	650V 1200V	TO-220-2L TO-220F-2L D2PAK DPAK
12A	650V 1200V	TO-220-2L TO-220F-2L D2PAK PQFN88
15A	1200V	TO-220-2L TO-247-2L TO-247-3L
16A	650V 1200V	TO-220-2L TO-247-3L
20A	650V 1200V	TO-220-2L TO-220F-2L D2PAK TO-247-2L TO-247-3L
30A	650V 1200V	D2PAK TO-247-3L
40A	650V 1200V	TO-247-3L



More information, please contact us or check on our website datasheets

SiC MOSFET

ID (A)	RDS(on)(mΩ)	VDS (V)	Package
19A	160mΩ	1200V	TO-247-3L
20A	160mΩ	1200V	TO-247-4L
21A	160mΩ	1200V	TO-247-3L
32A	80mΩ	1200V	TO-263-7
40A	80mΩ	1200V	TO-247-3L
42A	80mΩ	1200V	TO-247-4L
55A	40mΩ	1200V	TO-247-4L
58A	50mΩ	1200V	TO-247-3L
62A	35mΩ	1200V	TO-247-4L
72A	40mΩ	650V	TO-247-3L TO-247-4L
75A	30mΩ	650V	TO-247-4L
91A	30mΩ	650V	TO-247-3L
95A	28mΩ	650V	TO-247-4L
100A	20mΩ	650V	TO-247-4L



More information, please contact us
or check on our website datasheets



New Added lines in the catalog

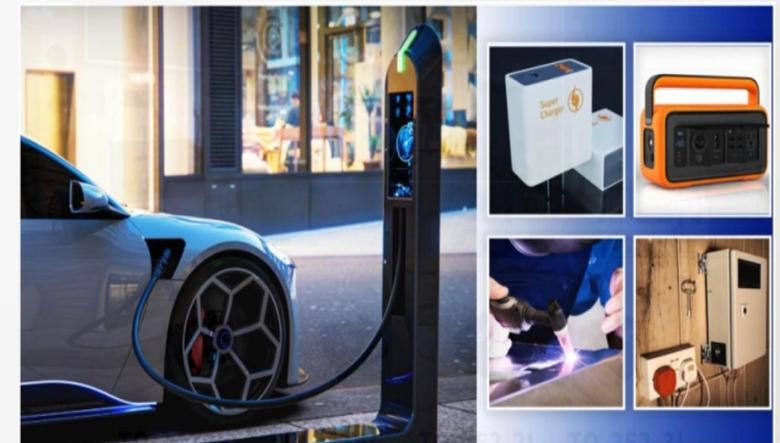
IGBT

Insulated Gate Bipolar Transistors

VCE(V)	600		650		1200					1600	1700
IC@100°C(A)	15	60	60	40	15	25	40	50	75	30	



This series of products are mainly used in new energy vehicles, rail transit, power grids and home appliances, inverters, servo motors, inverter welding machines, UPS power supplies, etc. In addition, IGBTs are also used in wind turbines, solar panels, high-speed trains, etc. Overall, IGBTs play a central role in applications that require efficient and reliable power conversion and control.





New Added lines in the catalog

FRED Fast Recovery Epitaxy Diodes

Voltage: 200(V)、300(V)、400(V)、600(V)、800(V)、1000(V)、1200(V)

IF: 5(A)、6(A)、8(A)、10(A)、12(A)、15(A)、16(A)、20(A)、30(A)、40(A)、50(A)、50(A)、70(A)、75(A)、80(A)



Fast recovery diode (FRED) is a kind of semiconductor diode with good switching characteristics and ultra-short reverse recovery time, which is commonly used as a freewheeling, absorption, clamping, isolation, output and input rectifier for the switching device of the high-frequency inverter, so that the function of the switching device can be fully exerted. Ultrafast recovery diodes are indispensable for the development of high-frequency (above 20kHz) and solid-state high-frequency equipment. This series of products are mainly used in high-frequency inverter welding machines, high-frequency switching electroplating power supplies, high-frequency high-efficiency switching power supplies, high-frequency fast charging power supplies, high-frequency conversion devices and power factor correction devices.



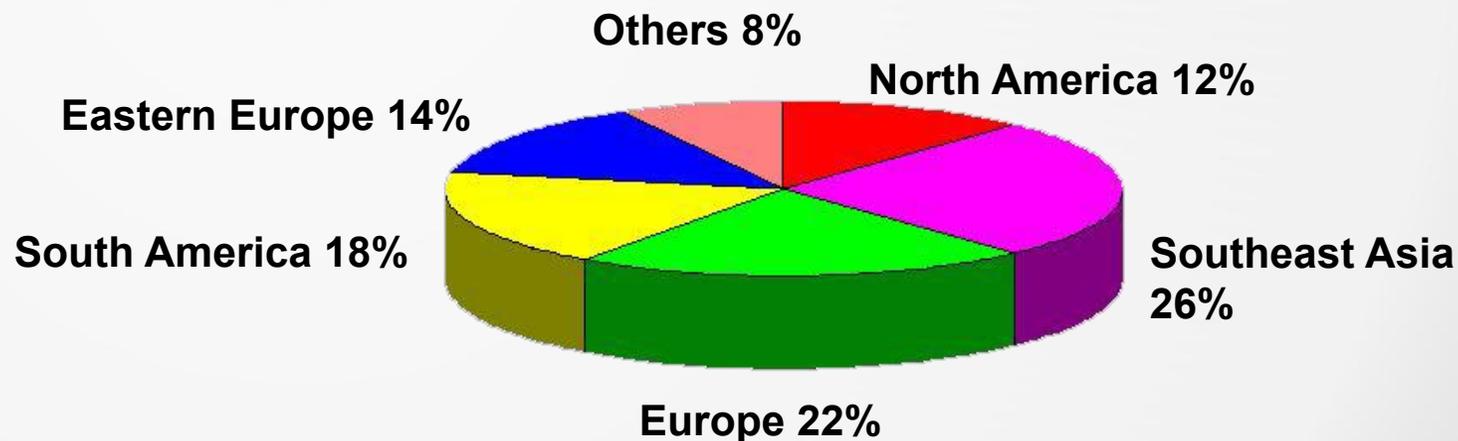
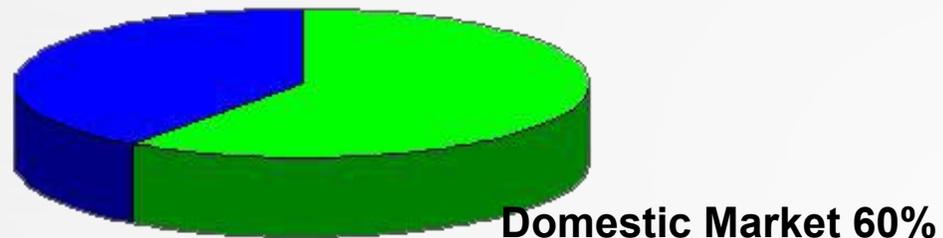
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Partners&Market Shares

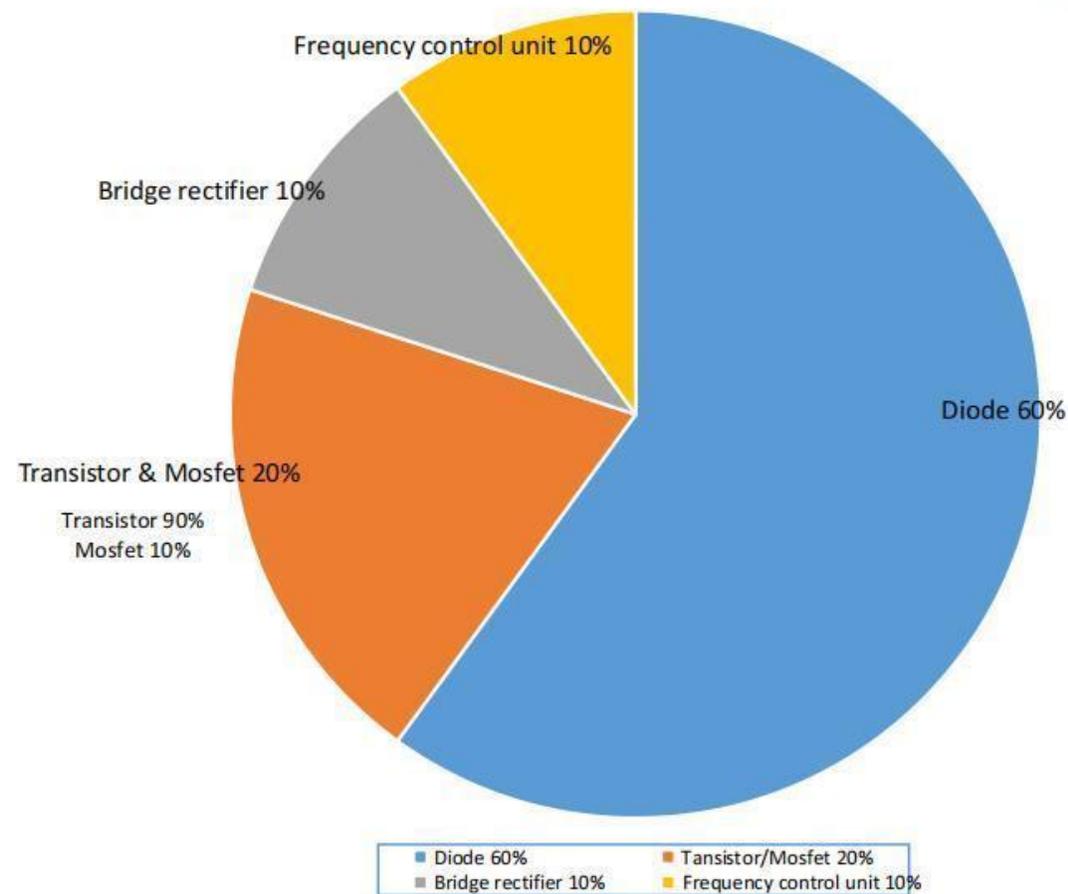
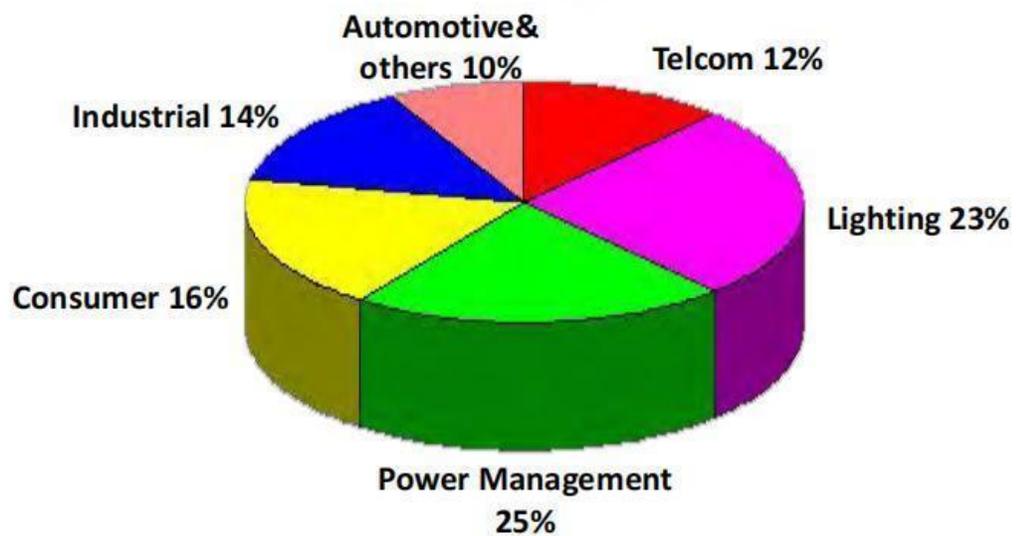


BUSINESS SHARES

Overseas Market 40%



SEGMENTS



05

Milestones

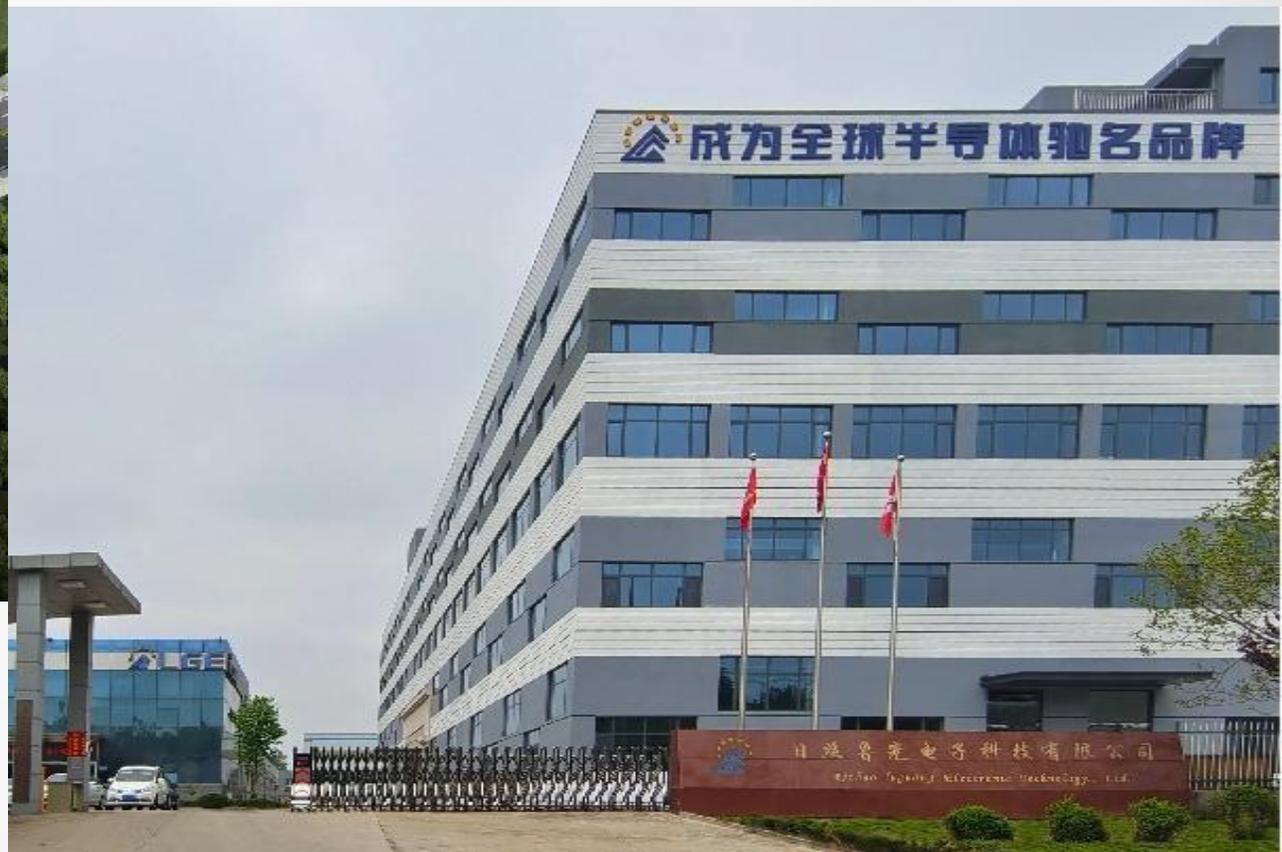


New Facility Overlook

鲁光电子科技有限公司厂区鸟瞰图方案二



- ① Set up new facility to produce TO-220, TO-3P, TO-247, TO-220AB / MOS, SKY, MUR, FRED, IGBT, SIC etc Power Semiconductors from 2021
- ② Set up Dr. Workstation & Academician workstation





CONTACT US TODAY, THANKS !

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