



POPPULA

PREMIUM QUALITY Semiconductor



DFN1006



DFN1006-3



DFN1610



DFN2020



DFN2020-3L



DFN1010



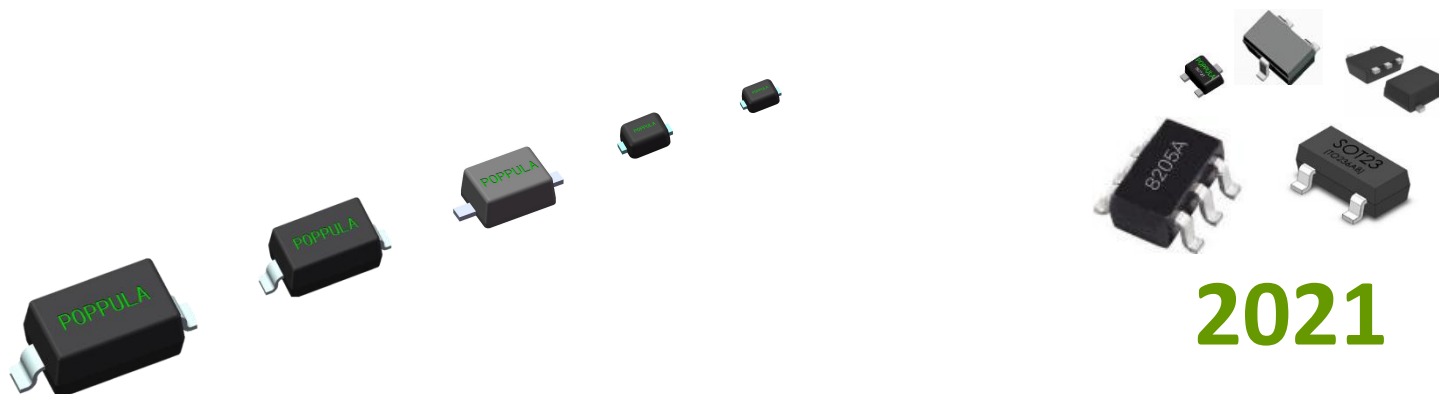
DFN2510



DFN1107-6L



DFN0603-2L



2021

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- 公司简介Company Introduction



- 产品路线图Products & Roadmap



- 产线简介Production Line Introduction



- 质量认证, 信赖性&失效分析
- Quality Certifications, Rel & FA



- 产品应用Target Product Applications



- 公司简介Company Introduction



- **COMPANY** : Jiangsu Poppula Semiconductor Co., Ltd.
- **PRESIDENT** : Jian Jun Zhang
- **ESTABLISHED** : October 2011
- **CAPITAL** : USD 20.0 Million
- **CURRENT ASSETS** : USD 45.0 Million
- **SALES** : USD 450 Million (2020)

- **PRODUCT**
: Semiconductors in **SOD , SOT & DFN** Packages
- **HEAD OFFICE**
: No.399,Mianyang Rd,Xiangcheng,Suzhou Jiangsu Province
- **Manufacturing Site**
: No.36,Huanghe Rd, Economy Development Zone, Suqian, Jiangsu Province

HOME PAGE : www.poppula.com

Total Land Area : 120,000 Sq. meter



Year 2021 Targets 2021年目标

Target Capacity : 2,000kk/month
Target Revenue : RMB40.0M
Planned NPI : DFN2510, DFN0603, DFN1107
SOT563, SOT553, SOT523

2000KK

1000KK

800KK

365KK

105KK

45KK

Established

2011

2012-2013

2014-2015

2016-2017

2018-2019

2020

2021

SOD323F SOD923
ESD

SOD123

WILLSEMI
SAMSUNG
SAMSUNG
CYGWAYEN

SOD523 SOT23

SOD323

GOOD-ARK
M.C.C.
Micro Commercial Components

PROTEK
DEVICES

Littelfuse
Expertise Applied | Answers Delivered

ens

Multi-chips/wires

DFN Series

SOT323

PANJIT
SEMI
CONDUCTOR

MI

ys

+

Quanta

KOSTAL
Automobil Elektrik

DFN2510

DFN0603-2L

DFN1006-3L

Skyworth
创维

TAIWAN
SEMICONDUCTOR

HY

DFN1107-6L

SOT523

SOT553

SOT563

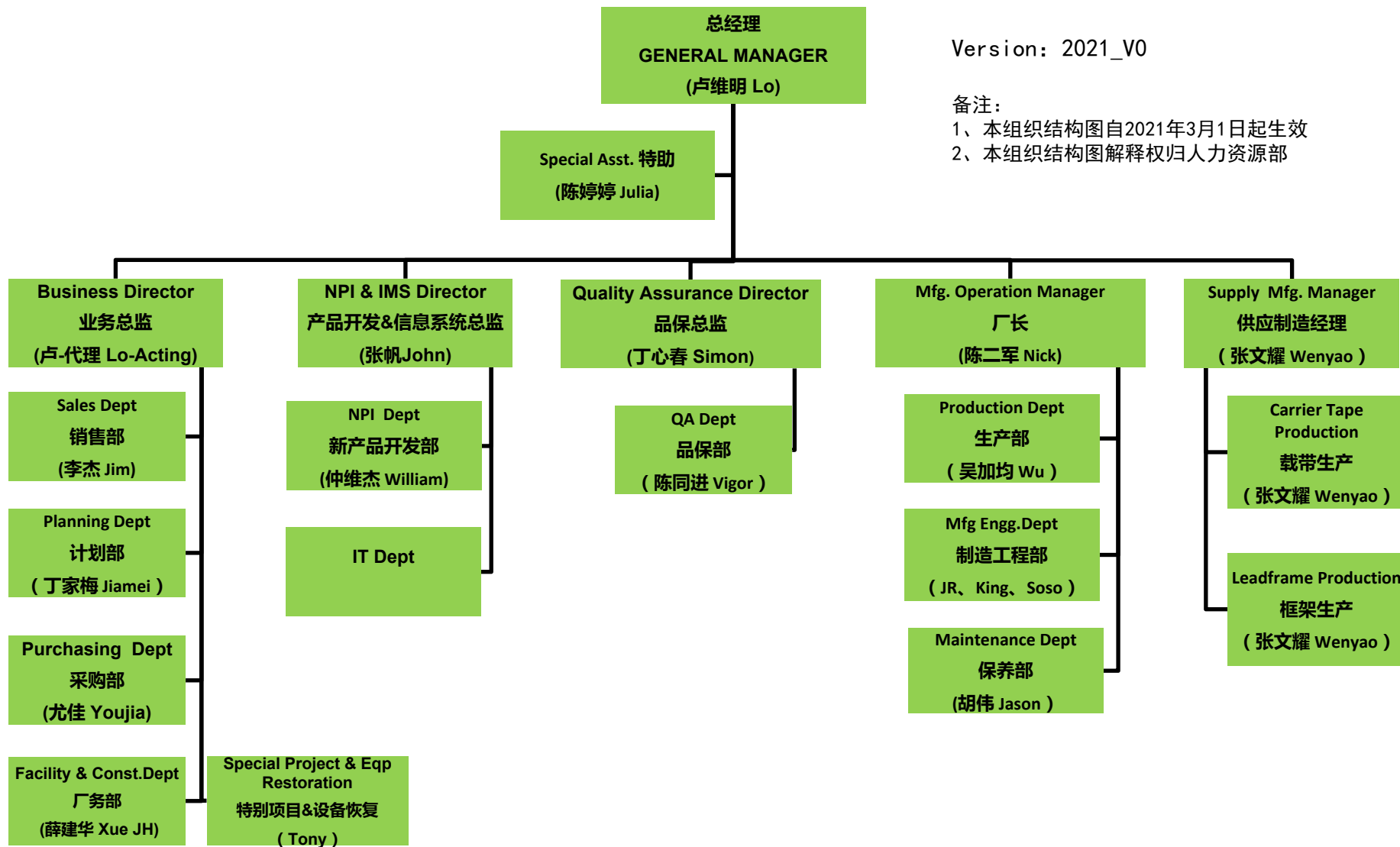
长晶科技
CHANGJING ELEC. TECH

KEC

Version: 2021_V0

备注:

- 1、本组织结构图自2021年3月1日起生效
- 2、本组织结构图解释权归人力资源部





- 产品路线图Products & Roadmap

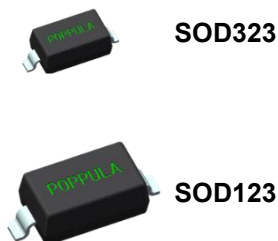
Mass Productions (AEC-Q101)

PACKAGE

Flat Leads



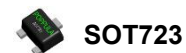
Gull Wing



**Multi-Leads
Gull Wing**



**Multi-Leads
Flat**



PRODUCT	TVS/ESD	√	√	√	√
	Zener / SKY	√	√	√	√
	Switching	√	√	√	√
	MOSFET			√	√
MSL 1 (Optional)		√	√	√	√
Halogen Free		√	√	√	√
RoHS Compliant		√	√	√	√
Wire Type		Au,Cu or Pd-Cu	Au,Cu or Pd-Cu	Au,Cu or Pd-Cu	Au,Cu or Pd-Cu
Leadframe		Cu	A42 or Cu	Cu	Cu
Die Bonding		Eutectic/Epoxy	Eutectic/Epoxy	Eutectic/Epoxy	Eutectic/Epoxy

Mass Productions (AEC-Q101)

PACKAGE

QFN2020



QFN2020-3L



QFN2020-2L

QFN1010



DFN1610

DFN1006



DFN1006



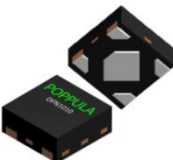
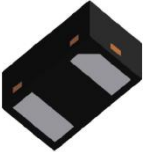
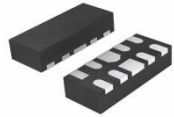
DFN1610

PRODUCT	TVS/ESD	√		√
	Zener / SKY	√		√
	Switching	√		√
	MOS	√		
	IC		√	
MSL 1 (Optional)		√	√	√
Halogen Free		√	√	√
RoHS Compliant		√	√	√
Wire Type		Au, Cu or Pd-Cu	Au, Cu, or Pd-Cu	Au, Cu or Pd-Cu
Leadframe		Cu	Cu	Cu or PPF
Die Bonding		Eutectic/Epoxy	Eutectic/Epoxy	Eutectic/Epoxy

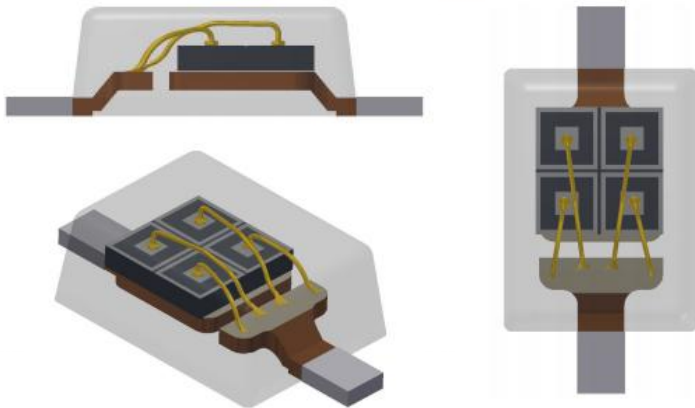


POPPULA
PREMIUM QUALITY Semiconductor

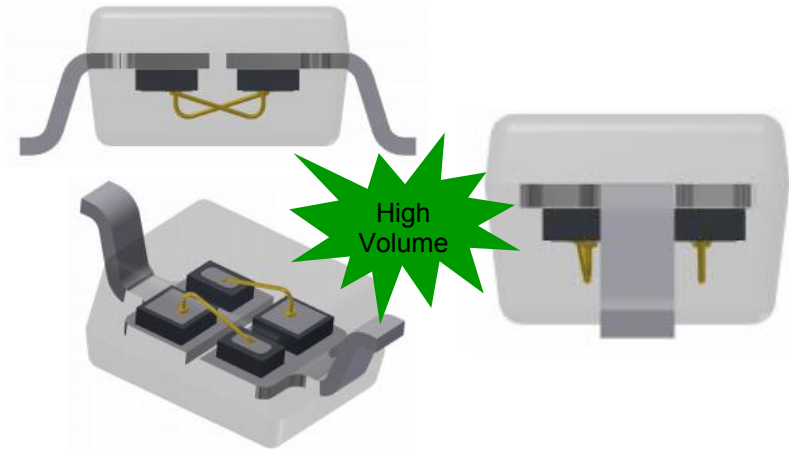
产品尺寸Product Portfolio & Dimensions

SOD123	SOD323	SOD323F	SOD523F
3.7x1.6x1.15	2.6x1.3x1.0	2.5x1.25x0.65	1.6x0.8x0.64
			
SOD923F	SOT23	SOT323	SOT363
1.0x0.6x0.42	2.9x2.4x1.0	2.1x2.3x1.0	2.1x2.3x1.0
			
SOT723	DFN1010	DFN2020-3L	DFN2020-2L
1.2x1.2x0.47	1.0x1.0x0.5	2.0x2.0x0.55	2.0x2.0x0.55
			
DFN1610	DFN1006-2L	DFN1006-3L	DFN2510-10L
1.6x1.0x0.5	1x0.6x0.45	1x0.6x0.45	2.5x1x0.5
			

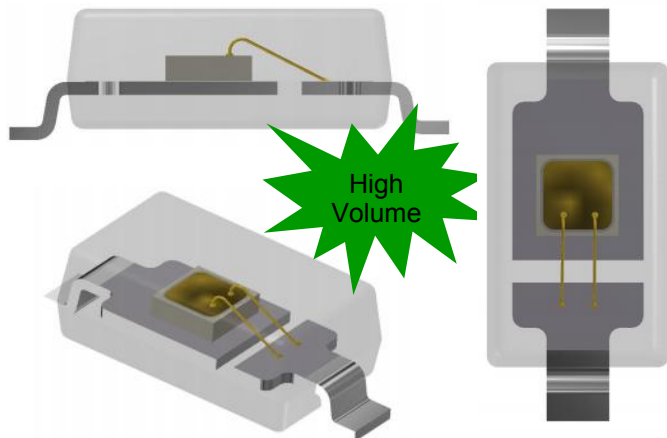
Multi-wires Bonding Diagram



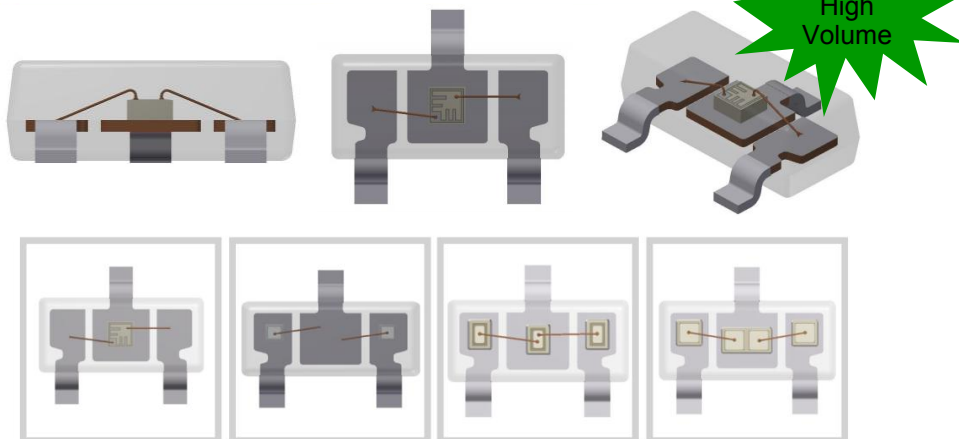
Multi-chips Bonding Diagram



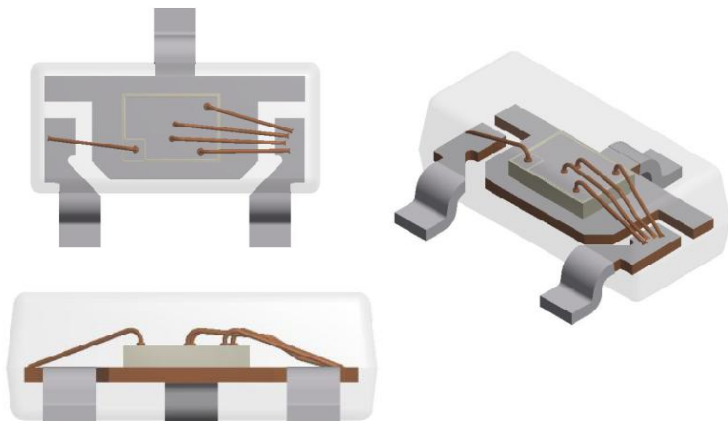
Standard Bonding Diagram



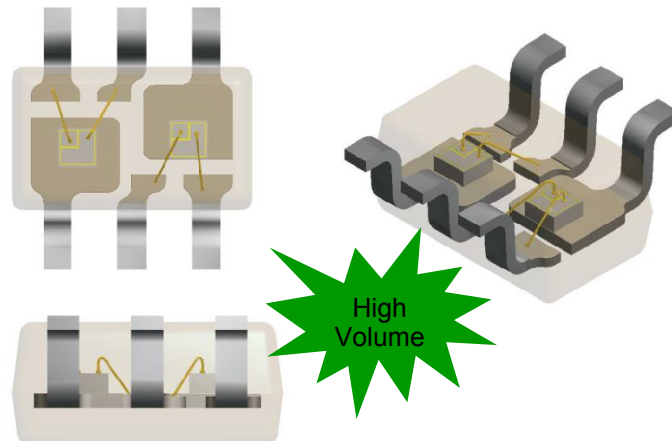
SOT23 Bonding Diagram



SOT23 Large Pad Bonding Diagram



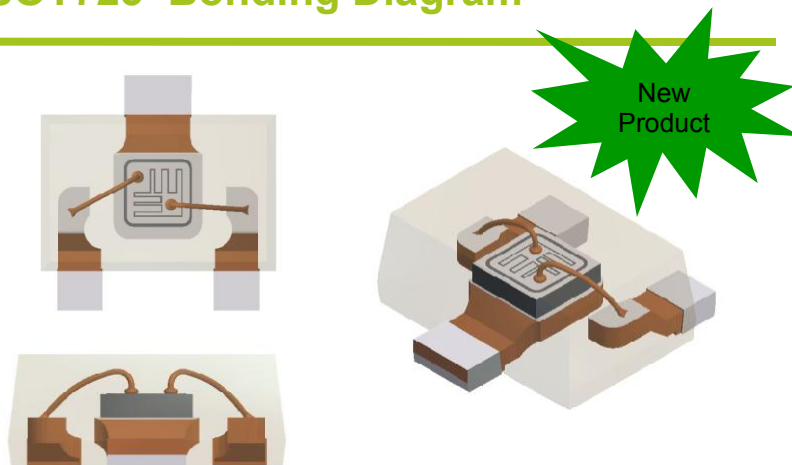
SOT363 Bonding Diagram



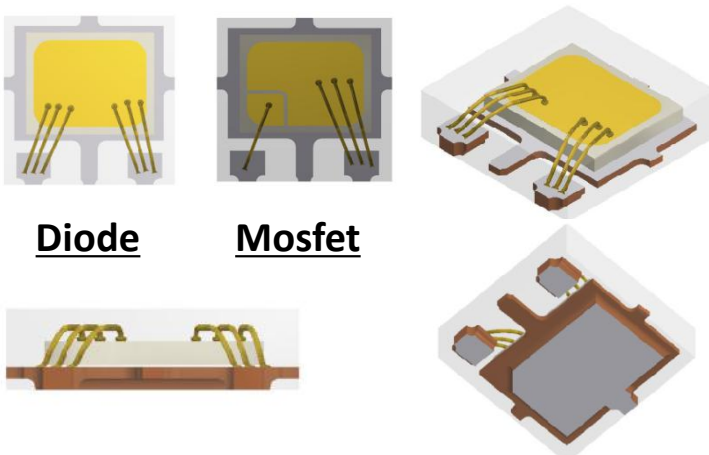
SOT323 Bonding Diagram



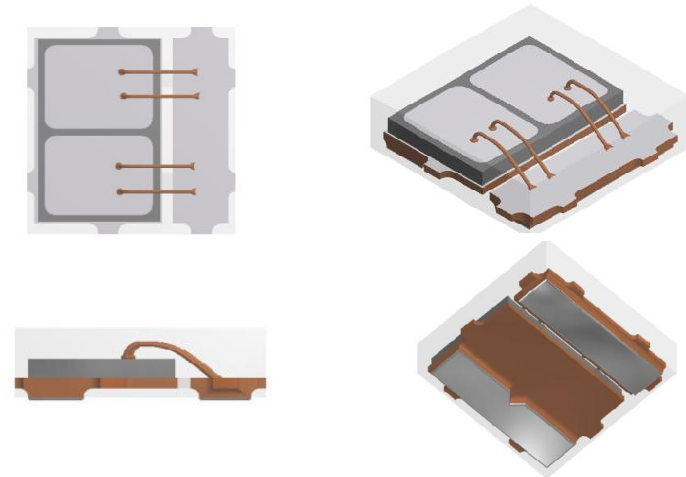
SOT723 Bonding Diagram



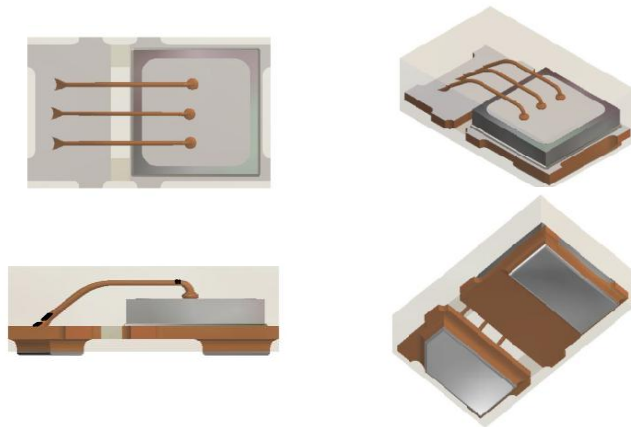
QFN2020-3L Bonding Diagram



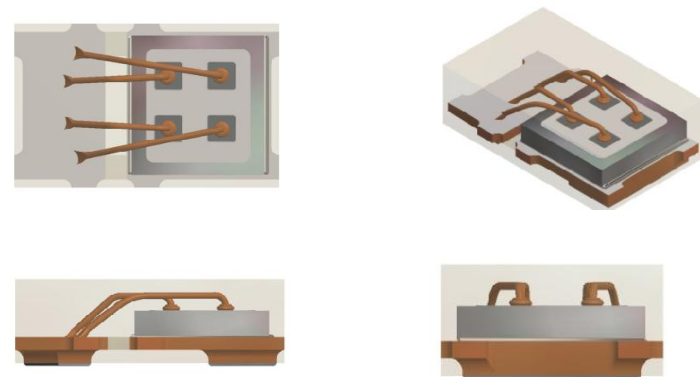
QFN2020-2L Bonding Diagram



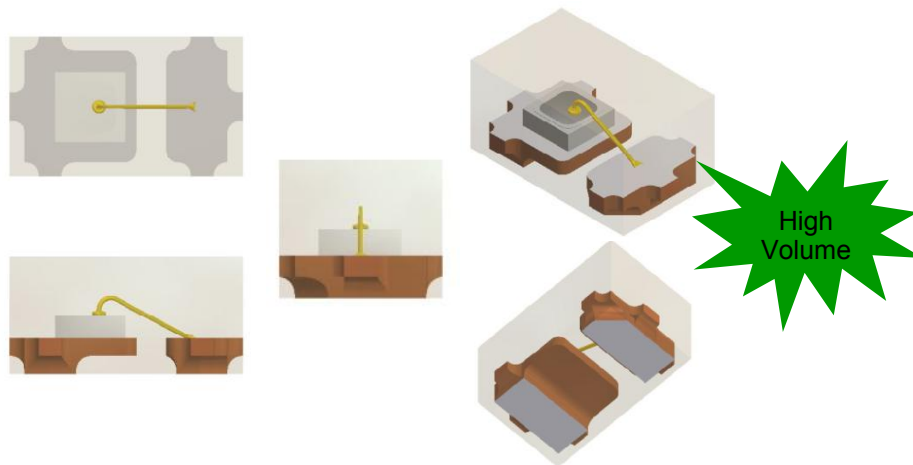
DFN1610 Bonding Diagram



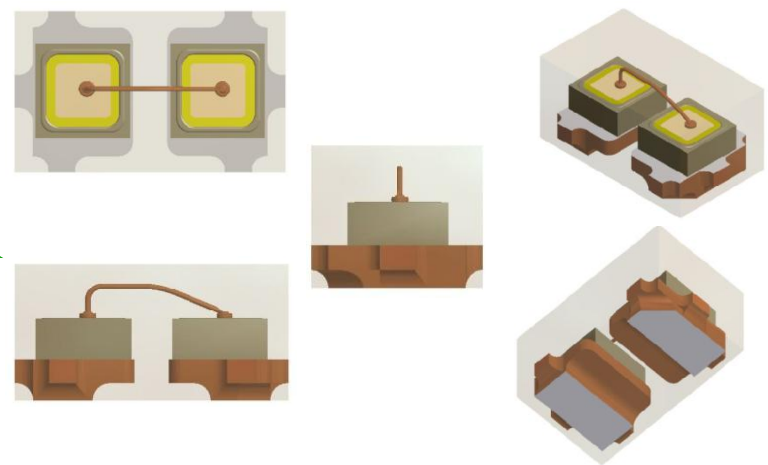
DFN1610 Bonding Diagram



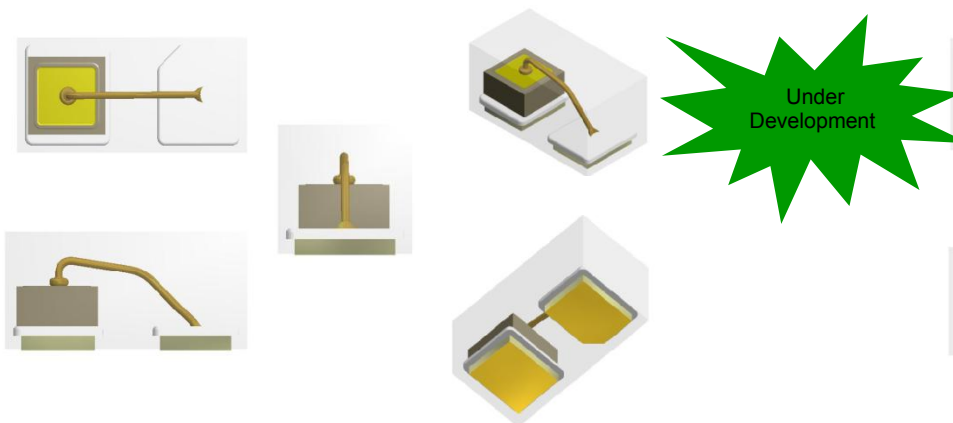
DFN1006-2L Bonding Diagram



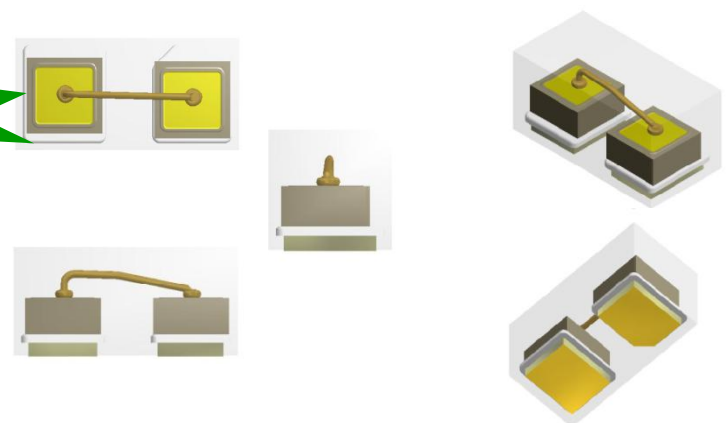
DFN1006-2L Bonding Diagram



DFN0603 Bonding Diagram

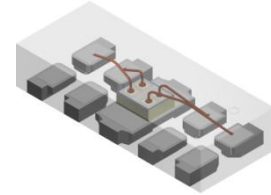
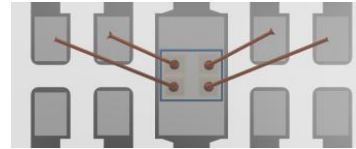
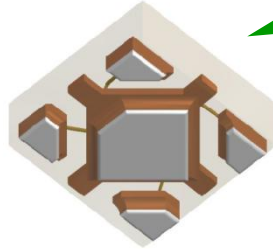
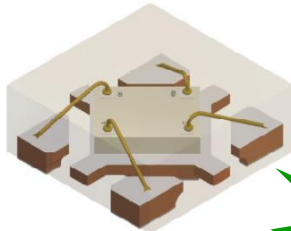
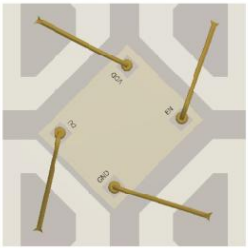


DFN0603 Bonding Diagram



QFN1010-4L Bonding Diagram

DFN2510-10L Bonding Diagram





- 产线简介Production Line Introduction

Wafer Saw - Disco



Die Attach - ASM



WB - ASM & KnS



Automold - TOWA



TMTT- TESEC & ASM



Auto Trim - ASM



Plating line - Allmerit



Laser Deflash-Delphi



- 质量认证, 信赖性&失效分析
- Quality Certifications, Rel & FA

CERTIFIED

**IATF16949
ISO9001**



- MSL 1 (Optional)
- HF
- ROHS Compliant
- AEC-Q101 Compliant
- **AUTOMOTIVE GRADE**

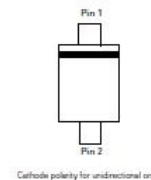
TVS Diode Arrays (SPA® Diodes) Lightning Surge Protection- AQ4023 Series				
AQ4023 Series 1.3pF, 12A Discrete TVS Diode				



Description

The AQ4023 Series integrates low capacitance steering diodes with one or two avalanche breakdown diodes for unidirectional or bidirectional protection, respectively, to protect against ESD and lightning induced surge events. These components can safely absorb up to 12A per IEC 61000-4-5 2nd edition ($t_p=8/20\mu s$) without performance degradation and a minimum $\pm 30kV$ ESD per IEC 61000-4-2 International Standard. The low loading capacitance and high surge capability make it ideal for protecting telecommunication ports such as xDSL and other high voltage, high speed legacy interfaces.

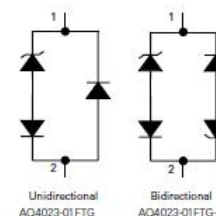
Pinout



Features

- ESD, IEC 61000-4-2, $\pm 30kV$ contact, $\pm 30kV$ air
- EFT, IEC 61000-4-4, 40A (5/50ns)
- Lightning, IEC 61000-4-5 2nd edition, 12A ($t_p=8/20\mu s$)
- Low capacitance of 1.3pF ($@ V_{bi}=0V$)
- Low leakage current
- Unidirectional and bidirectional configuration
- Small SOD323 package fits 0805 footprints
- AEC-Q101 qualified
- Moisture Sensitivity Level (MSL -1)
- Halogen free, lead free and RoHS compliant

Functional Block Diagram



Applications

- xDSL Interfaces
- RS-232
- RS-485
- Power Ports
- Security Equipment
- Instrumentation
- Medical Equipment
- Computers and Peripherals
- CAN Bus protection
- Automotive applications



HAST PC-304R8D



HTRB、HTGB

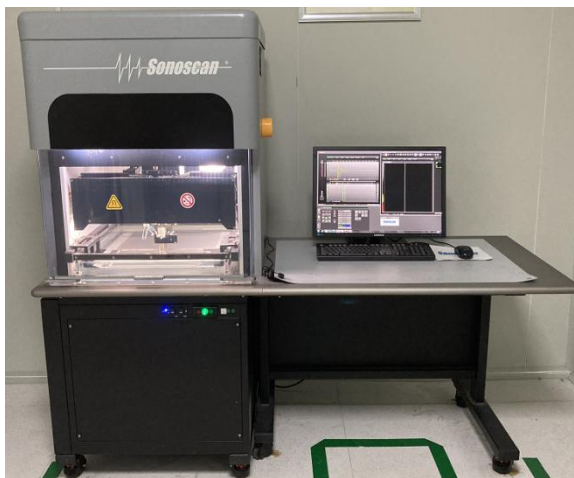
Test Items	Definition	
SSOP	Steady State Operational	MIL-STD-750-1 M10 38 Condition B
ACLV	Autoclave	JESD22 A-102
HTSL	High Temperature Storage	EIAJ ED-4701
RSH	Resistance to Solder Heat	JESD22 B-106
TMCL	Temperature Cycling (Air to Air)	JESD22 A-104
H3TRB	High Humidity High Temperature Reverse Bias	JESD22 A-101
HTRB	High Temperature Reverse Bias	JESD22 A-108
HTHH	High Temperature and High Humidity Storage	EIAJ ED-4701
HAST	Highly Accelerated Stress Test	JESD22 A-110
IOL	Intermittent Operation Life	MIL-STD-750 Method 1037
ESD	ESD Characterization	AEC Q-101-001,002 and 005
SAT	Ultrasonic Scanning Sonoscan D9600	MSL 1 and MSL3 test



X-Ray



Simulator test system



**CSAT
(Sonoscan)**

Definition

X-Ray

Decapsulation

Polishing

Reflow

Stereo Microscope (up to 800x)

Curve Tracer

ESD Simulator

Trr Tester

Precision Measuring Equipment

Wire Pull, Die & Ball Shear

XRF

EDX

CSAT (Sonoscan)

Hot Vf Characterization

Voltage Clamp Characterization (8/20u)

Ifsm Characterization (8.3mS)



- 终端产品应用Target Product Applications



USB



HDMI



USB3.0



eSATA



Smart TV.



AUTOMOTIVE ELECTRONICS



TABLET



DATA LINES



COMPUTER



DIGITAL CAMERA



CELLULAR PHONES

And More : Games consoles, Set top box, External HDD, Ultra-thin Notebook, Chargers, LED Lightings



POPPULA

Sincerely Thank You!!!