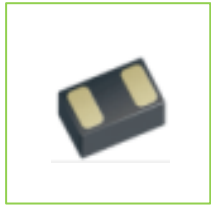




POPPULA

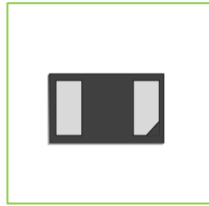
PREMIUM QUALITY Semiconductor



DFN1006



DFN1006-3



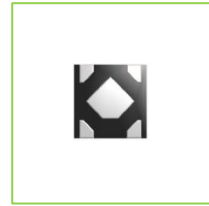
DFN1610



DFN2020



DFN2020-3L



DFN1010



DFN2510



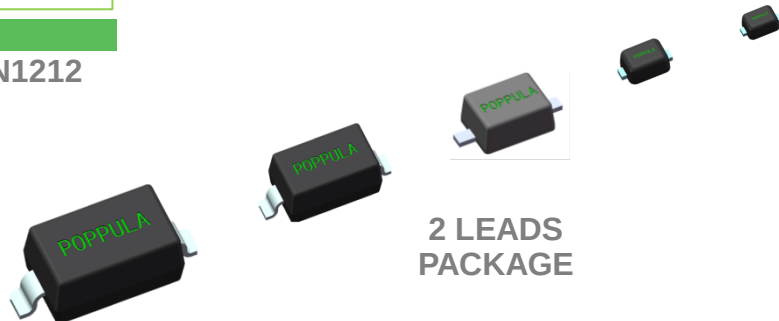
DFN1107-6L



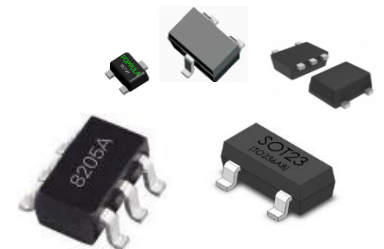
DFN0603-2L



DFN1212



2 LEADS
PACKAGE



MULTI-LEADS
PACKAGE

2023

Content



- 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 70.0 Million
- **SALES** : USD 60 Million (2022)

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

HOMEPAGE : www.poppula.com

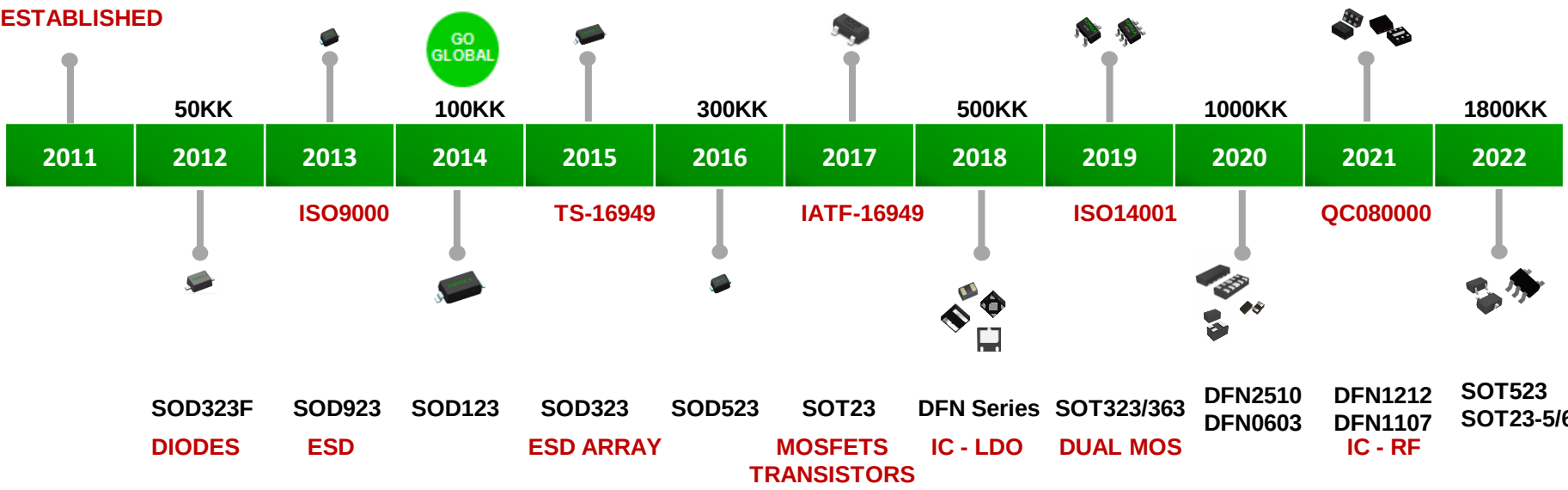
Total Land Area : 120,000 Sq. meter





Floor Area : 24,000 Sq.M

**Max Capacity : 2,500 KK
(Designed)**



Semiconductor Division***Common Goal
Oriented Team*****GOAL****Business
Dev't**

- Sales & Mktg
- OEM Projects

**Purchasing
& IT**

- Purchasing
- IT

Quality

- Quality System
- MQE
- SQE
- FA/Rel
- Calibration
- CQE

**Mftg.
Operation**

- Assembly & Test
- Plating
- Supply Mftg
- Equipment Engg
- Planning

**RD & Ext.
Serv's Engg**

- NPI
- External Services Engg

**Mftg.
Engineering**

- Process Engg
- Product & Test Engg
- Facility Engg



- 产品 Products

Mass Productions (AEC-Q101 Optional)

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 Optional)

PACKAGE

QFN2020-3L



QFN2020-2L



DFN2510



QFN1010



QFN1212



DFN0603



DFN1006



DFN1006-3L



DFN1107



DFN1610



PRODUCT

TVS/ESD

Zener / SKY

Switching

MOS

IC / RF

✓

✓

✓

✓

✓

✓

✓

✓

✓

MSL 1 (Optional)

Halogen Free

RoHS Compliant

✓

✓

✓

✓

✓

✓

✓

✓

✓

Wire Type

Leadframe

Die Bonding

Au, Cu or Pd-Cu

Cu

Epoxy/DAF/WBC

Au, Cu, or Pd-Cu

Cu

Epoxy/DAF/WBC

Au, Cu or Pd-Cu

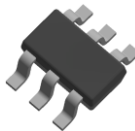
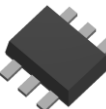
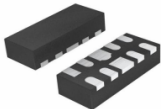
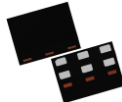
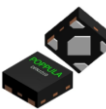
Cu or PPF

Epoxy/DAF/WBC

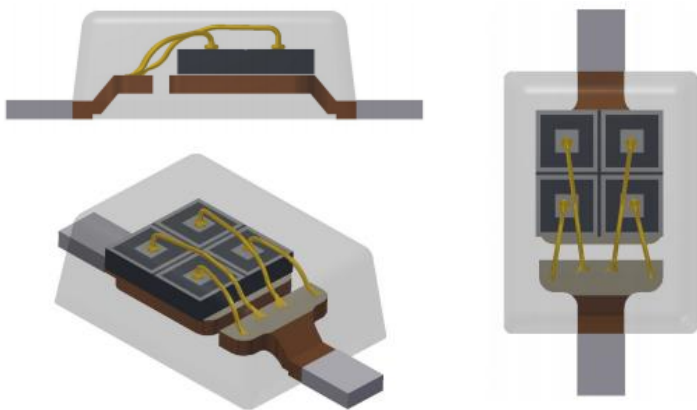


POPPULA
PREMIUM QUALITY Semiconductor

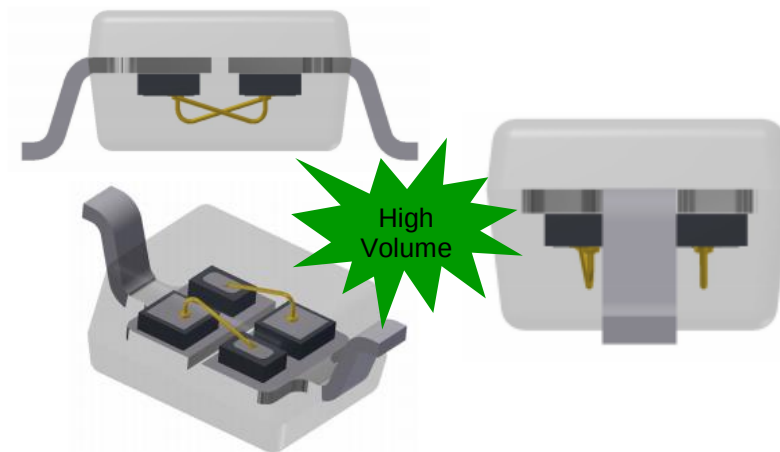
产品尺寸Product Portfolio & Dimensions

SOD123	SOD323	SOD323F	SOD523F	SOD923F
2.7x1.6x1.10	1.7x1.3x0.85	1.7x1.25x0.65	1.2x0.7x0.64	0.8x0.6x0.42
				
SOT23	SOT323	SOT363	SOT523	SOT723
2.9x1.3x1.0	2.1x1.25x0.95	2.1x1.25x0.95	1.6x0.8x0.75	1.2x0.8x0.42
				
SOT23-5	SOT23-6	SOT553	SOT563	
2.9x1.6x1.05	2.9x1.6x1.05	1.6x1.2x0.5	1.6x1.2x0.5	
				
DFN2510-10L	DFN1610	DFN1107	DFN1006-2L	DFN1006-3L
2.5x1x0.48	1.6x1.0x0.48	1.1x0.7x0.48	1x0.6x0.48	1x0.6x0.48
				
DFN2020-2L	DFN2020-3L	DFN1212	DFN1010	DFN0603
2.0x2.0x0.53	2.0x2.0x0.53	1.2x1.2x0.455	1.0x1.0x0.45	0.6x0.3x0.30
				

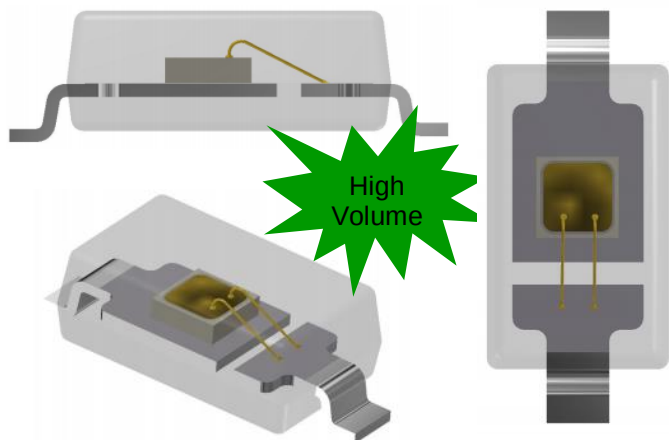
Multi-wires Bonding Diagram



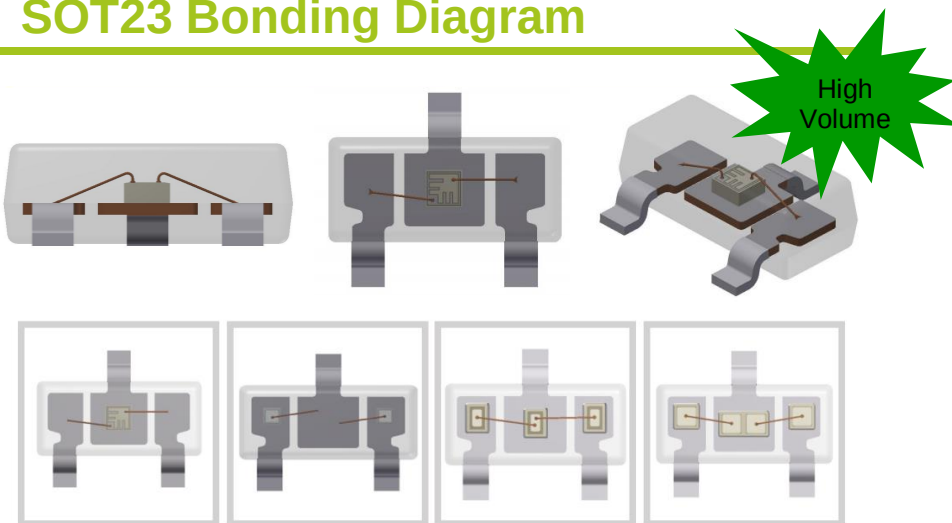
Multi-chips Bonding Diagram



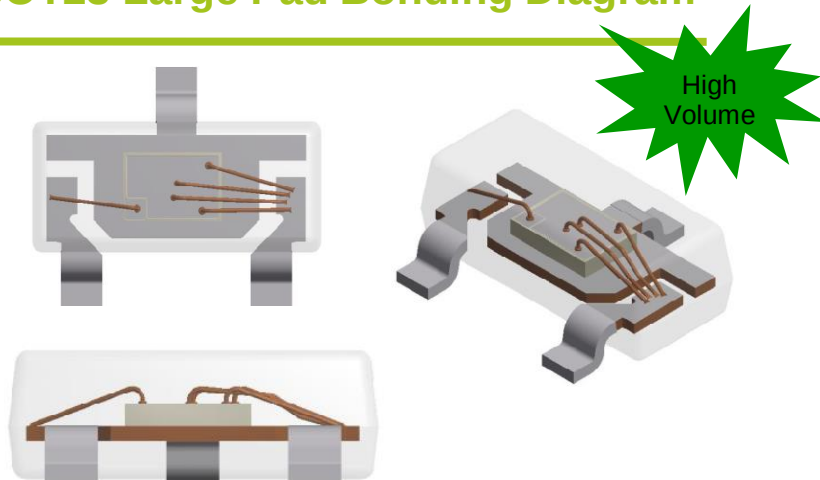
Standard Bonding Diagram



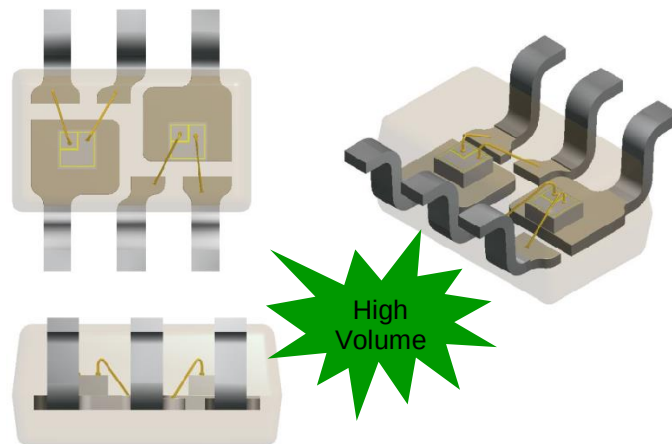
SOT23 Bonding Diagram



SOT23 Large Pad Bonding Diagram



SOT363 Bonding Diagram



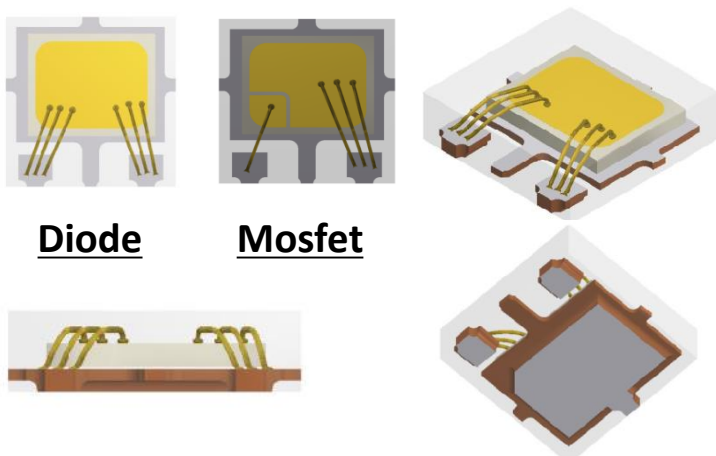
SOT323 Bonding Diagram



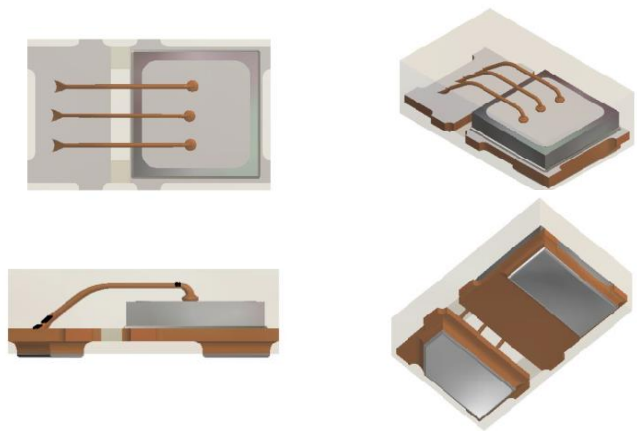
SOT723 Bonding Diagram



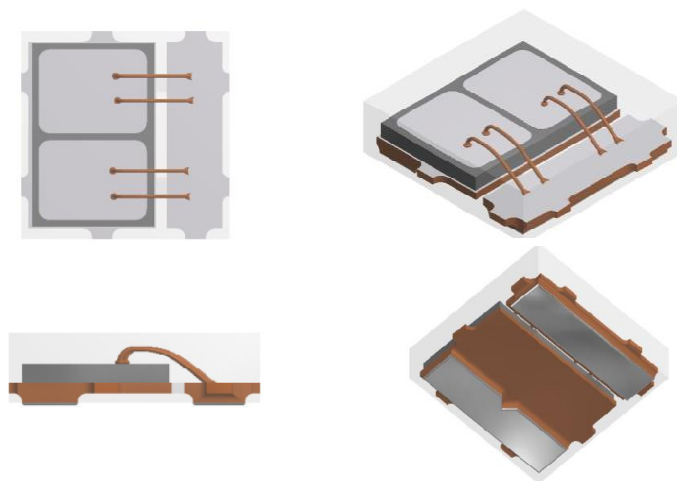
QFN2020-3L Bonding Diagram



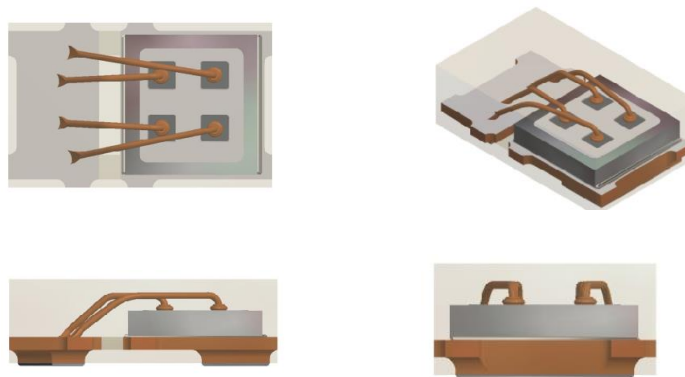
DFN1610 Bonding Diagram



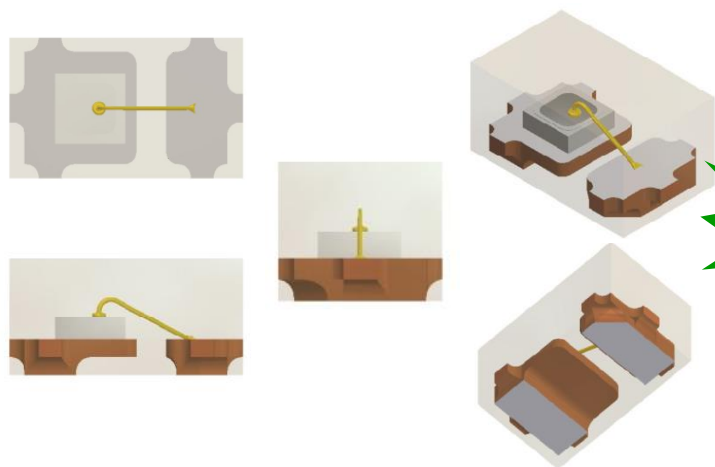
QFN2020-2L Bonding Diagram



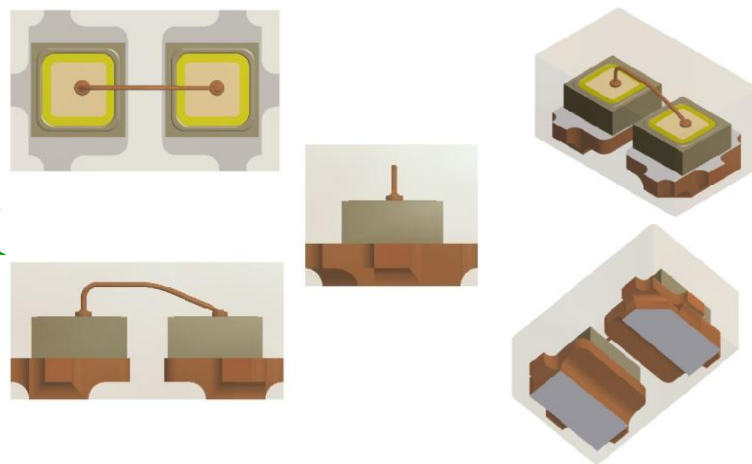
DFN1610 Bonding Diagram



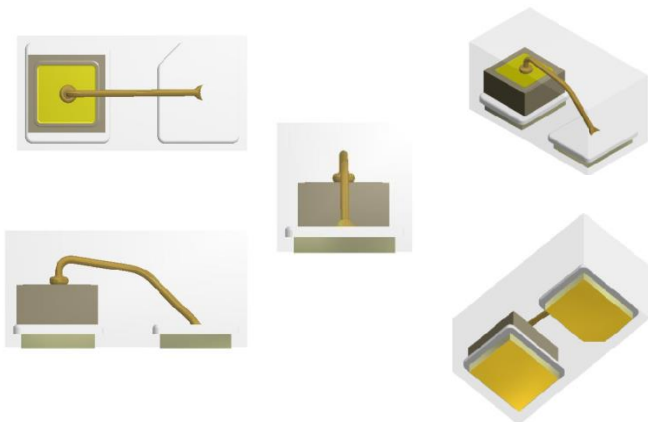
DFN1006-2L Bonding Diagram



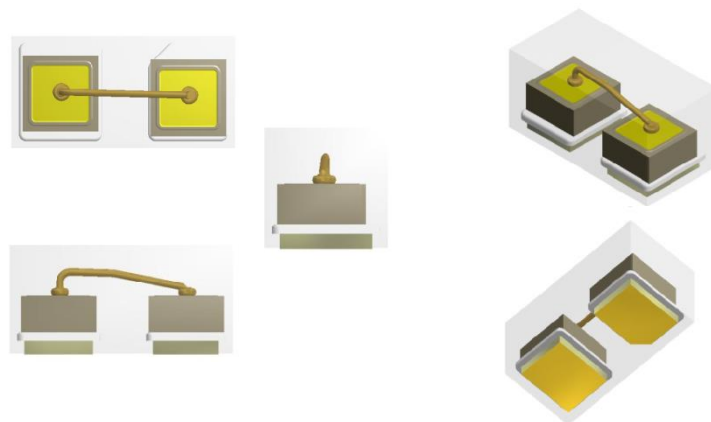
DFN1006-2L Bonding Diagram



DFN0603 Bonding Diagram



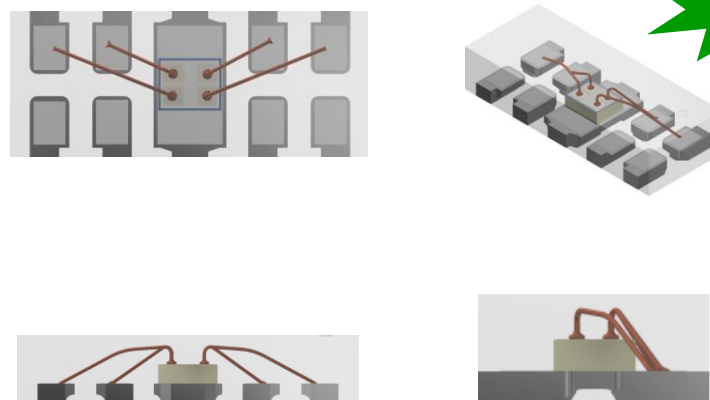
DFN0603 Bonding Diagram



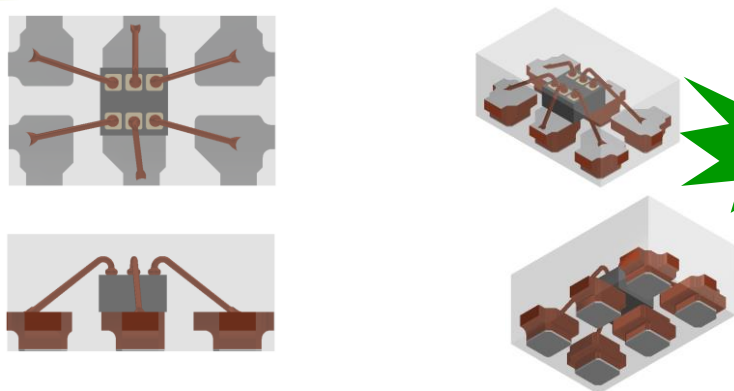
QFN1010-4L Bonding Diagram



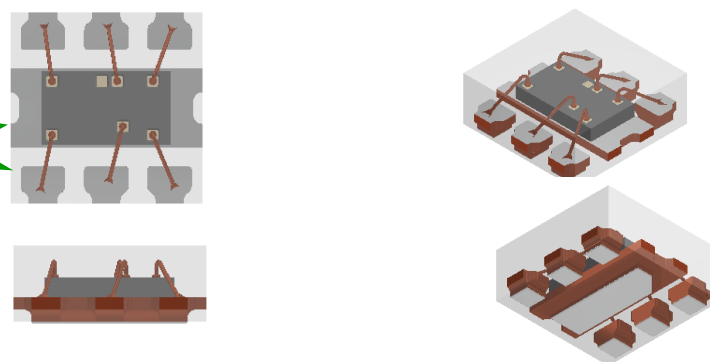
DFN2510-10L Bonding Diagram

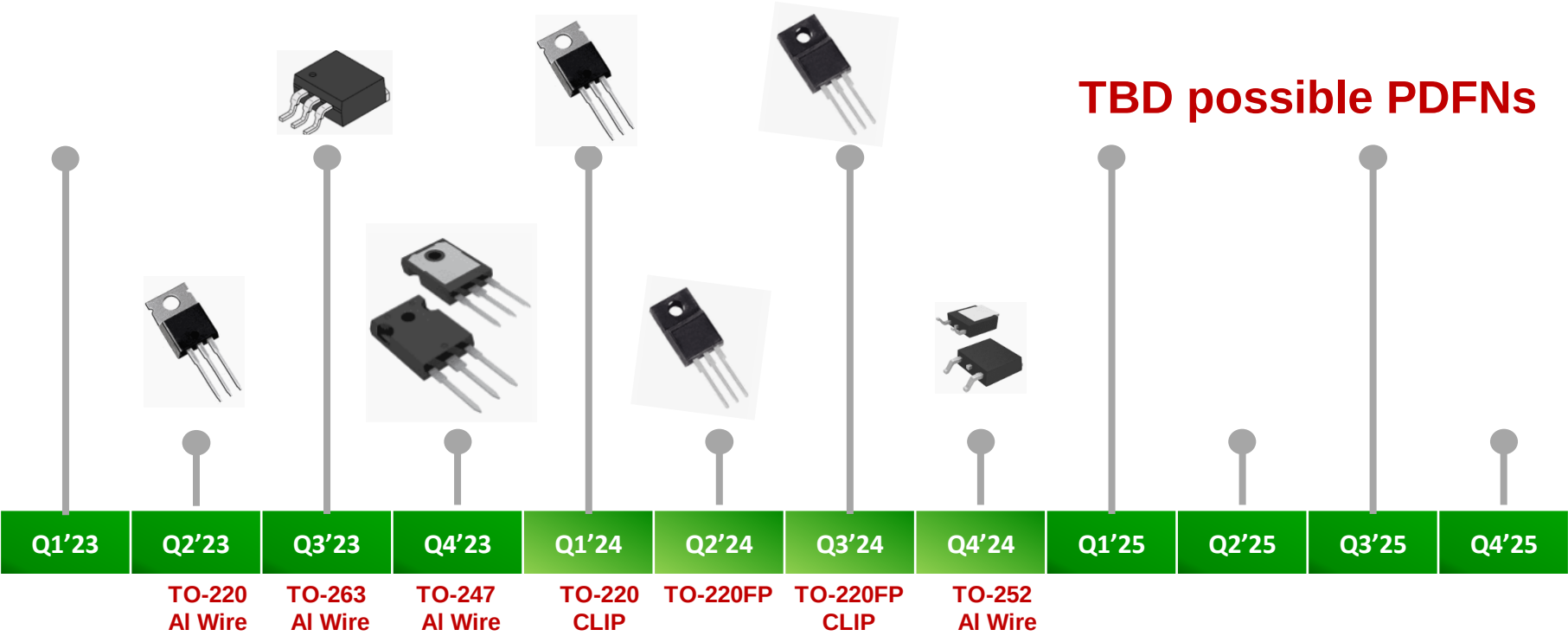


DFN1107-6L Bonding Diagram



DFN1212-2L Bonding Diagram







- **产线简介** Production Line Introduction

Wafer Saw



Die Attach



Wire Bonding



Molding



TMTT



Trim & Form



Plating



Laser Deflash (SOD923)





- 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**

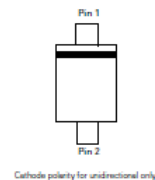
TVS Diode Arrays (SPA® Diodes) Lightning Surge Protection- AQ4023 Series				
AQ4023 Series 1.3pF, 12A Discrete TVS Diode				



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 ($t_r=8/20\mu s$) 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.

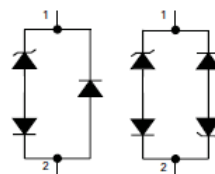
Pinout



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 ($t_r=8/20\mu s$)
- Low capacitance of 1.3pF ($@ V_r=0V$)
- 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

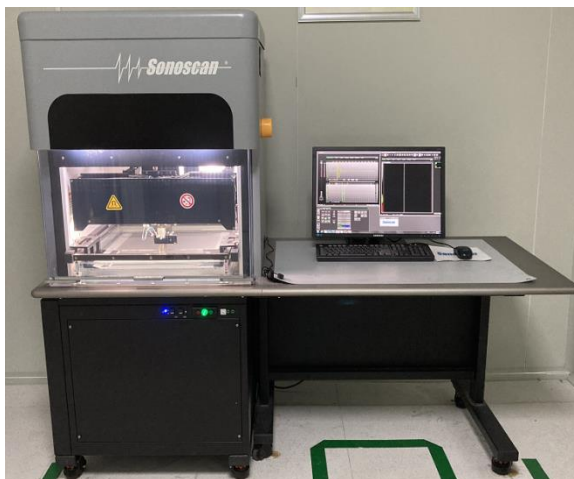
Test Items	Definition	
SSOP	Steady State Operational	MIL-STD-750-1 M10 38 Condition B
ACLV	Autoclave	JESD22 A-102
HTSL	High Temperature Storage	EIAJ ED-4701
RSH	Resistance to Solder Heat	JESD22 B-106
TMCL	Temperature Cycling (Air to Air)	JESD22 A-104
H3TRB	High Humidity High Temperature Reverse Bias	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



eSATA



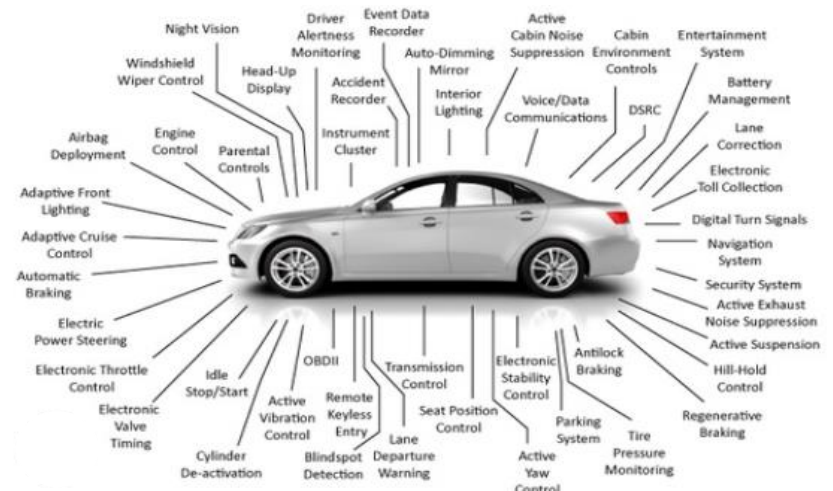
HDMI



COMPUTERS



TABLETS



Automotive Electronics

And More : Data Servers, Games consoles, Set top box, External HDD, PCs, Chargers, LED Lightings



POPPULA

Sincerely Thank You!!!