

**Advanced test solutions for next
generation semiconductors**

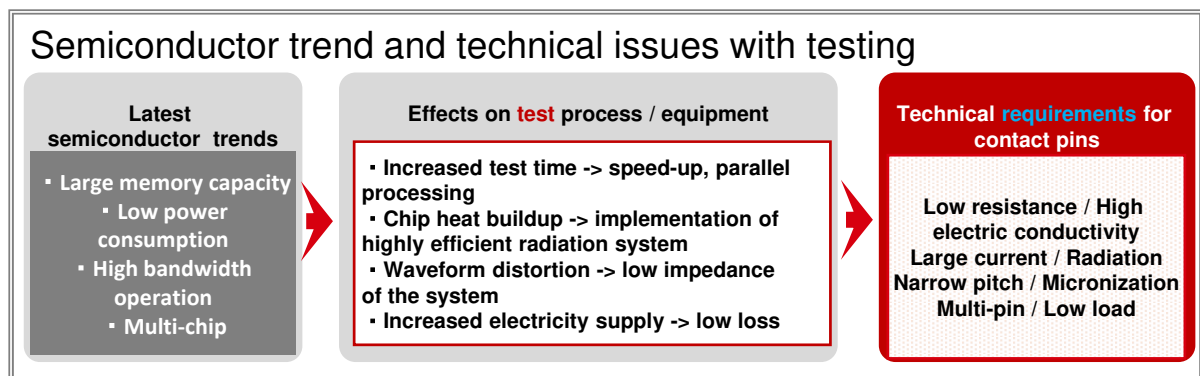
Union Contact™



Union Contact™ and Union Alloy™ – Advanced semiconductor test solutions

The high functionality of semiconductors and many requirements of test processes

Whether it's the start of 5G services, the full-scale spread of IoT and AI, or the progress of self-driving, so many aspects of our world are being controlled by semiconductors. All the while, with further integration semiconductors are required to have many requirements of in their test processes and handle narrow pitches.



Contact pin needs for highly conductive and low resistant high frequencies

Union Contact™

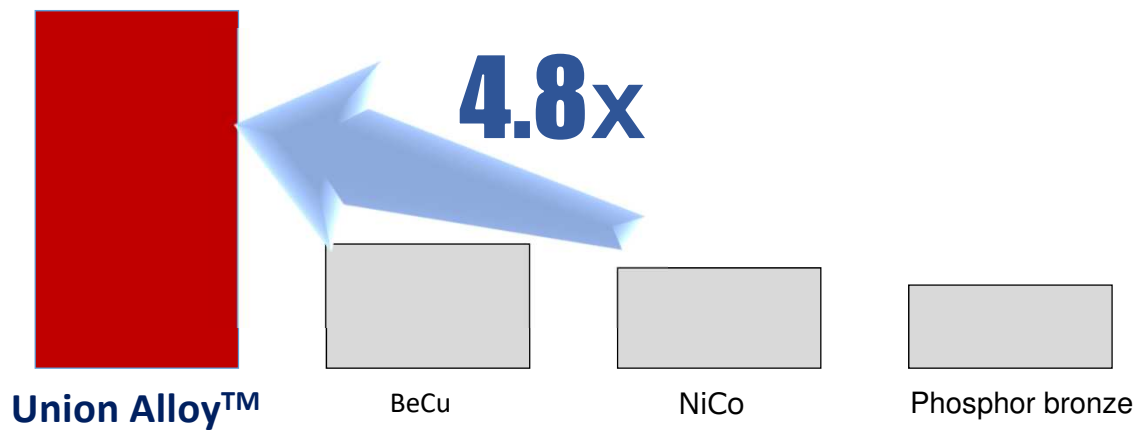
At UPT Group, we have developed an original contact pin Union Contact™ for tests that suit the advancing test needs of semiconductors. Its vertical probe pins consisting of a one-piece structure differ from the traditional pogo pins which consist of multiple parts, and have a structure of one conductive line without an inner point of contact.



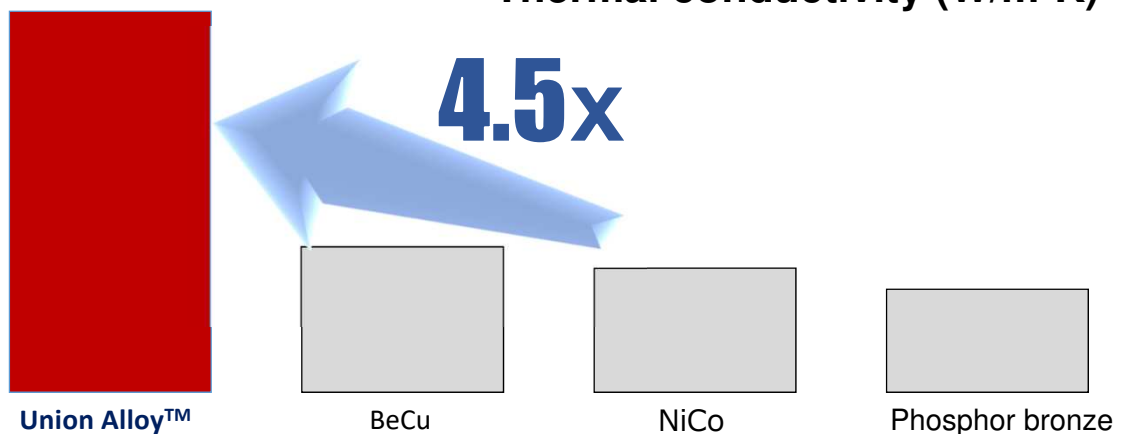
- ✓ **Superior conductivity, low resistance and low load**
- ✓ **Handles narrow pitch**
- ✓ **Can do semi-custom-made designs by semiconductor test professionals to match with the client's specifications**
- ✓ **Custom material: Union Alloy™**
Featuring strength as well as conductivity close to native copper
- ✓ **Fine-processing technology recognized as the best in the world**

The Superiority of Union Alloy™

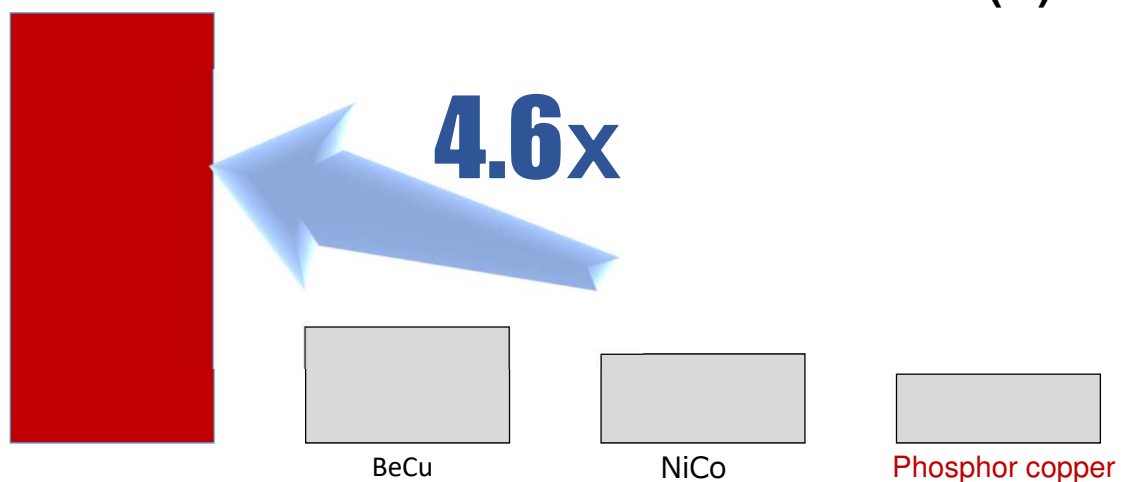
Superior electric conductivity (% IACS)



Superior thermal conductivity and heat radiation effect Thermal conductivity (W/m·K)

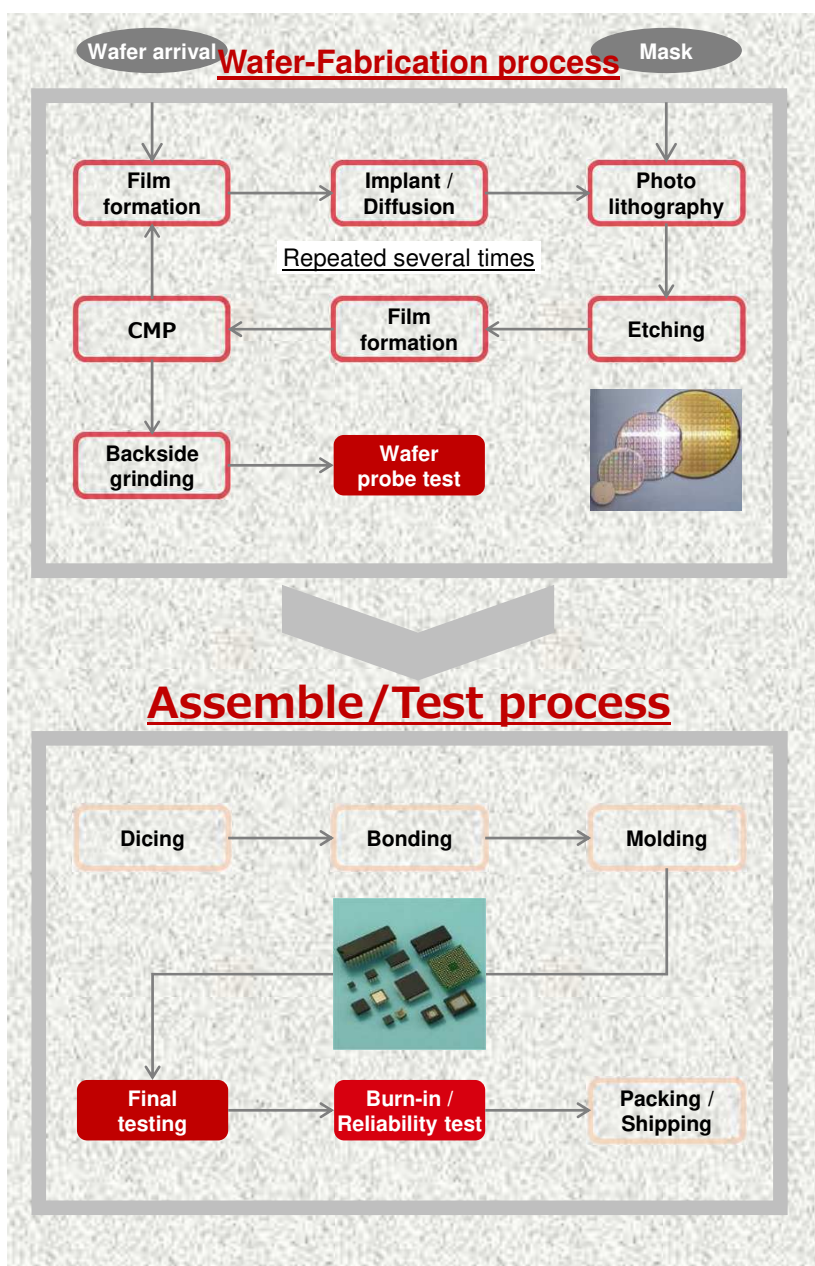


Superior allowable current Allowable current (A)



Union Contact™ and the Ninja series

- Union Contact™ can be used from the Wafer-Fabrication process to the Assembly /Test-process of semiconductors. For Wafer-Fabrication process, it can also be assembled into a module for easy use with test equipment before being delivered. For Assembly /Test-process, we offer a semi-custom-made type that can match with the client's usage environment. Please feel free to inquire with us.



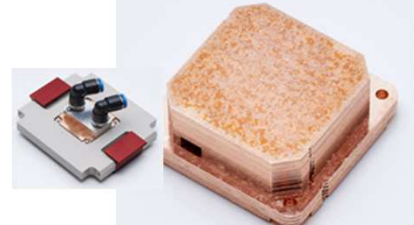
Wafer probe test process

- - - Union Block™/
- - - Union Contact™/
- - - Interposer



For final testing

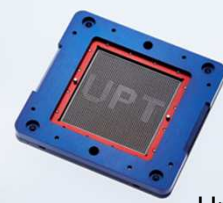
- - - Union Socket Ninja™



Union Cooling Tech™
Test socket with water cooling function



Union Socket Ninja™
Semi-custom-made test socket



Union Guide Plate™
Insulating metal plate

Union Contact™ in electric tests

Through the excellence and design expertise of UPT Group's fine processing, Union Contact™ is able to be semi-custom-made in accordance with customers requirements for size, pitch, stroke and ampacity. As a first step, feel free to inquire with us.

Examples of use cases

- Semiconductor wafer tests
- IC and package tests
- Circuit board tests
- Interposers

- Camera modules
- LGA Package connectors
- Semiconductor and reliability tests
- Non-magnetism for magnetic sensors
- Jigs for high frequencies



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