

**CCP Contact Probes**

**Testing Solution**



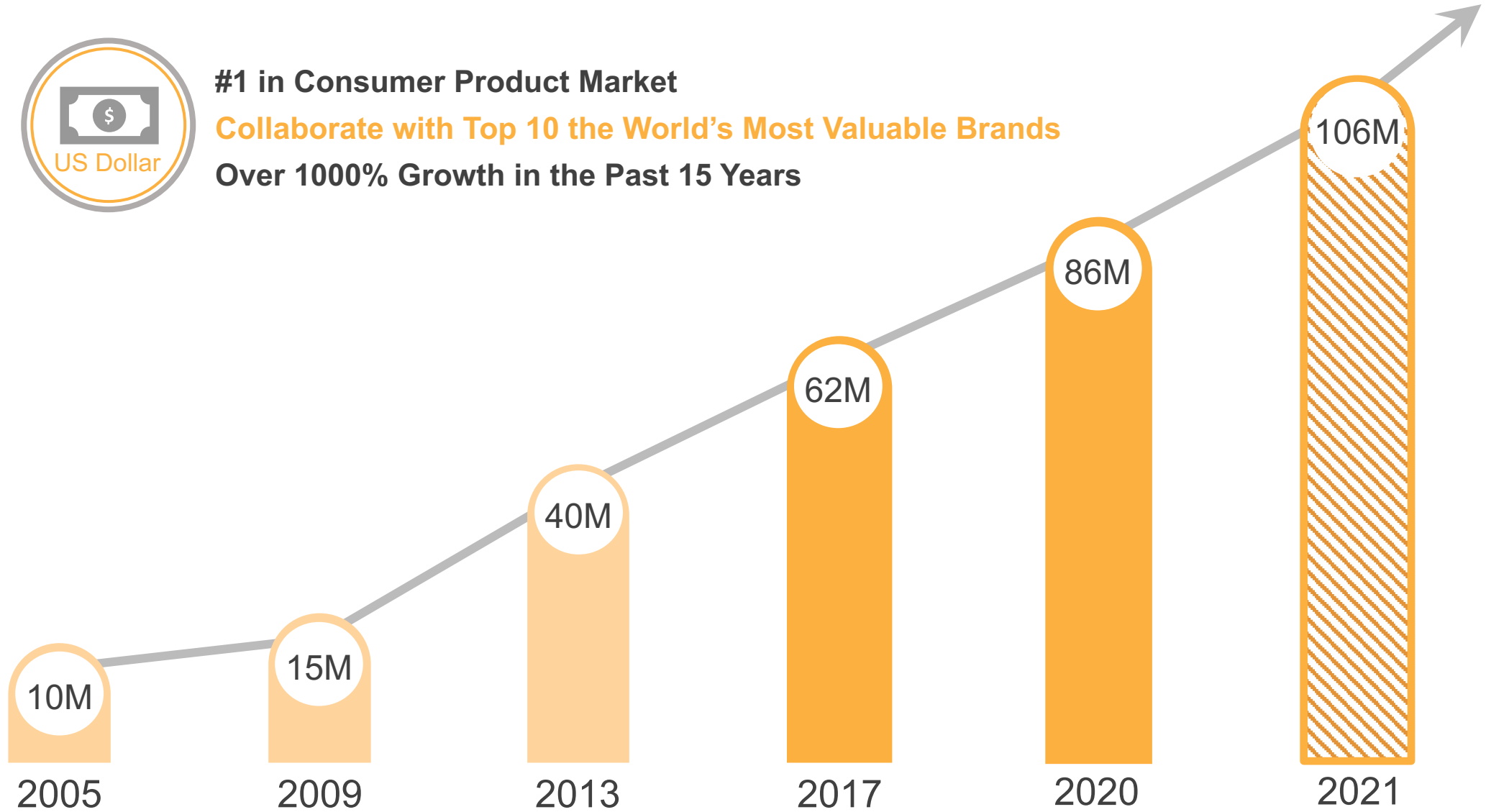
# CCP Contact Probes - Growth



**#1 in Consumer Product Market**

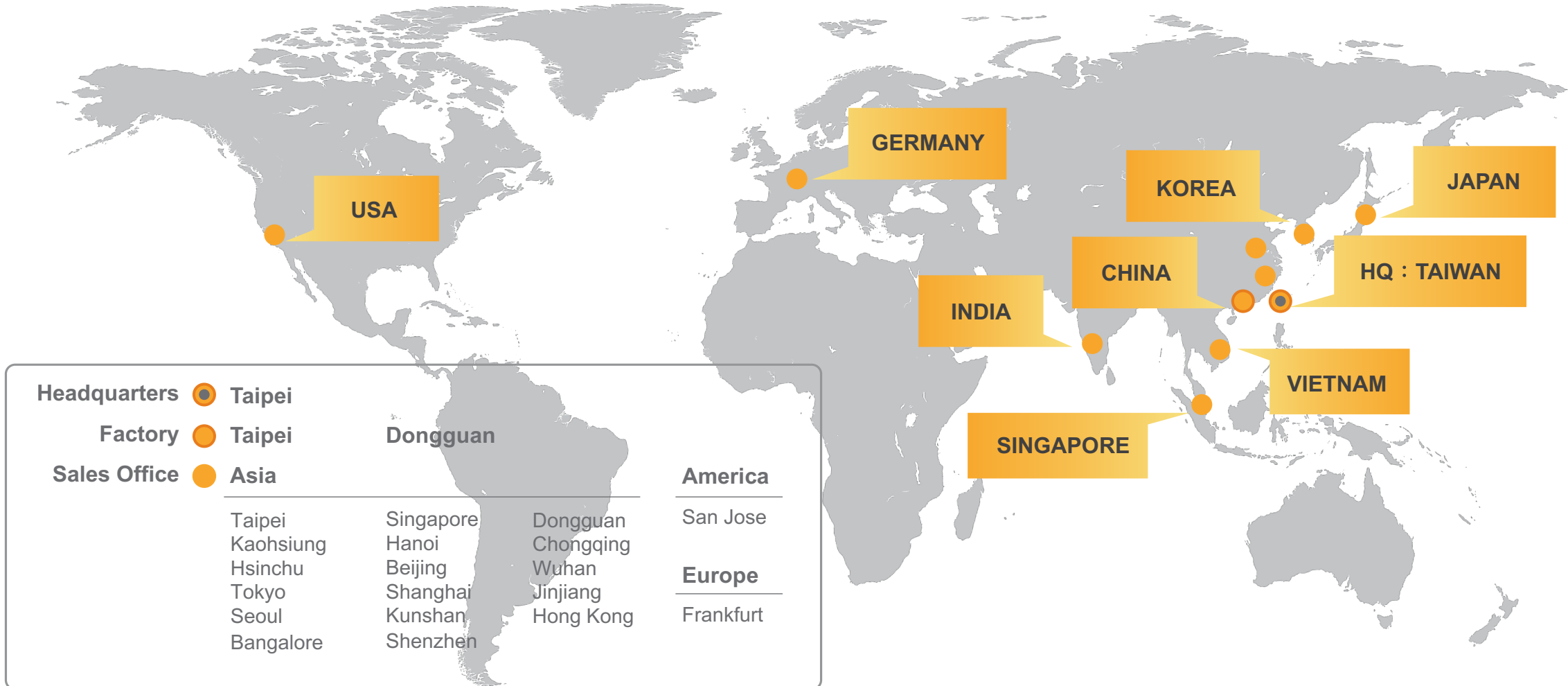
**Collaborate with Top 10 the World's Most Valuable Brands**

**Over 1000% Growth in the Past 15 Years**





# CCP Contact Probes - Worldwide



Google

amazon

ADVANTEST

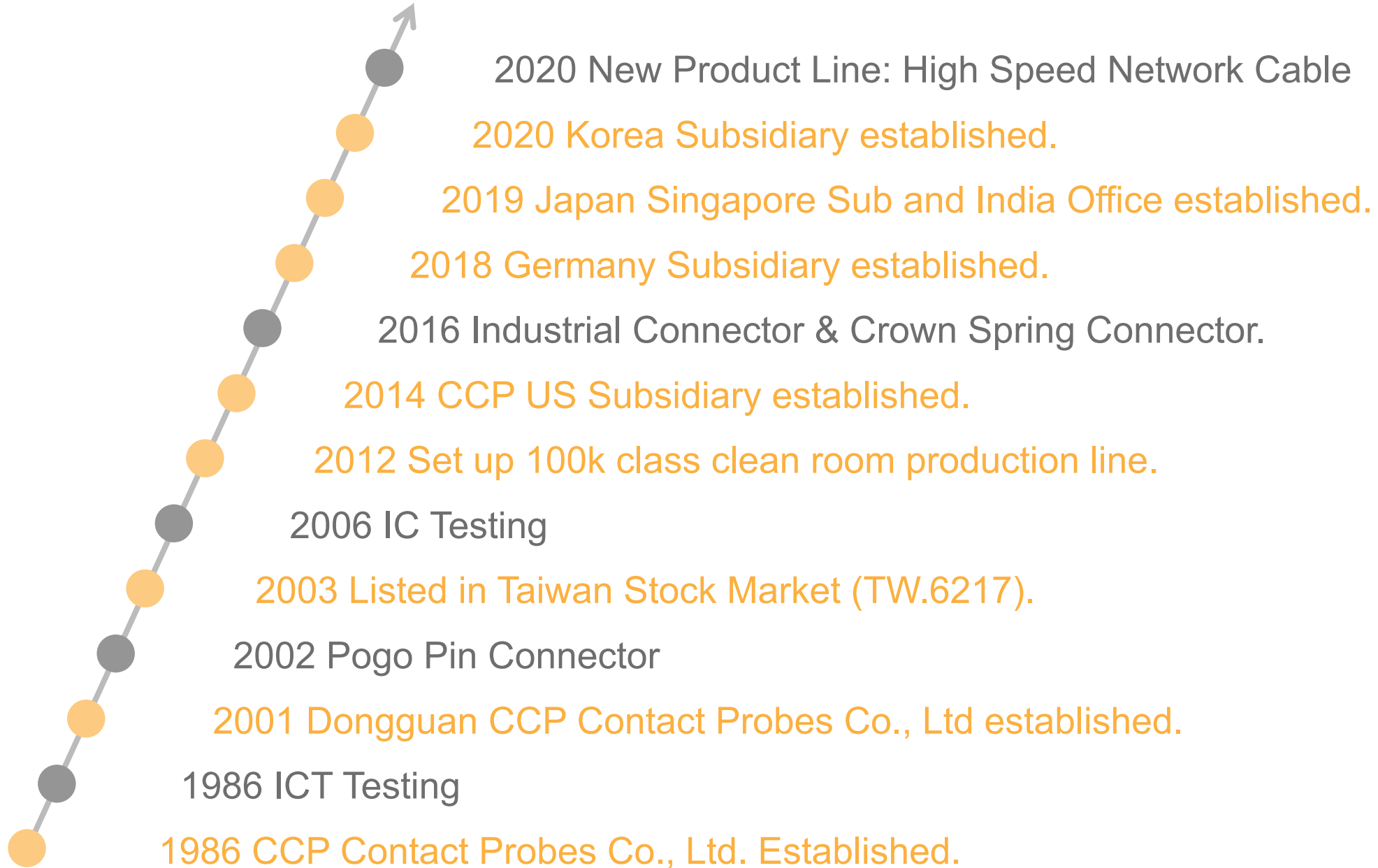
flex



FOXCONN

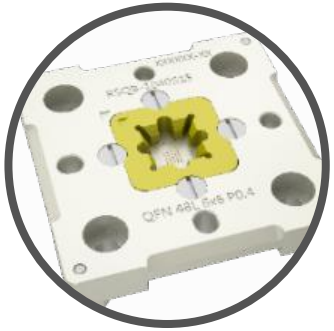


# CCP Contact Probes - History





# CCP Contact Probes - Product Portfolio



## Testing Solution

**Fine Pitch**

IC Testing Probe  
PCB Testing Probe  
Testing Socket



## Pogo Pin Connector

**1A~13A**

Pogo Pin Conn.  
Waterproof Conn.  
Magnetic Conn.



## High Current Connector

**13A~250A**

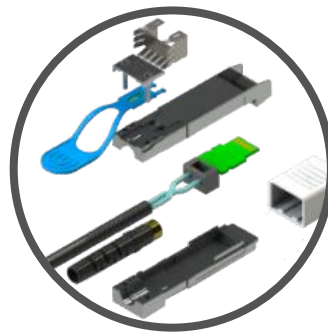
Electronic Vehicle  
High Current Conn.



## Medical Connector

**Environmental Sensitivity**

Circular Conn.  
Endoscope Conn.



## High Speed Cable

**25Gbps~100Gbps**

Server  
Switch  
Telecom



## Industrial Solution

**Extreme Environment**

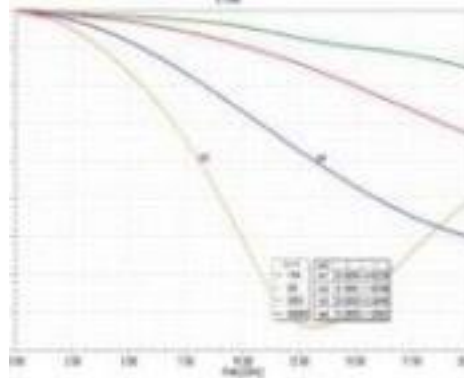
Aerospace  
Military  
Transportation





# Core Advantages

## High Frequency Simulation



HFSS

## Material Development

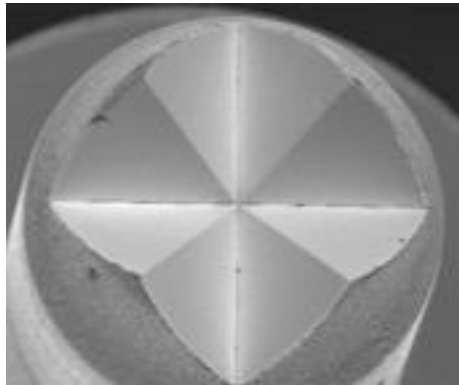


Plating Lab

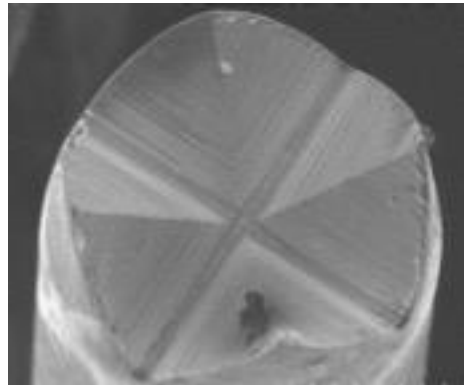


Self-owned Plating Factory

## Mirror Process

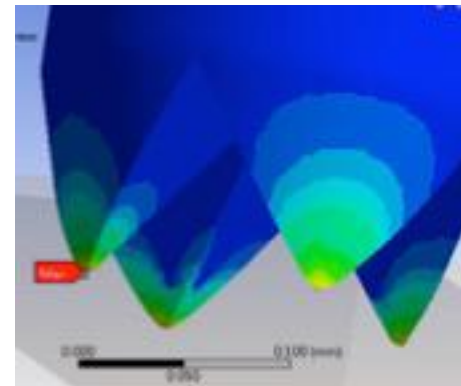


CCP's Product



Other Provider

## Finite Element Analysis



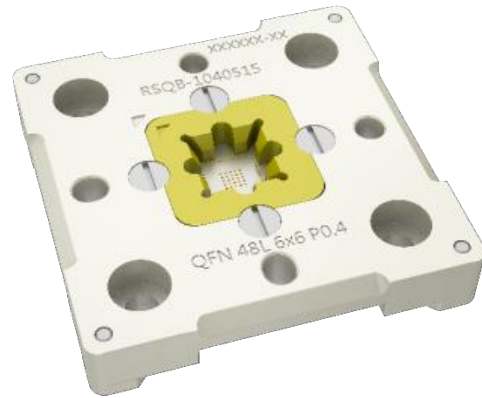
ANSYS



# Testing Solution Product Line



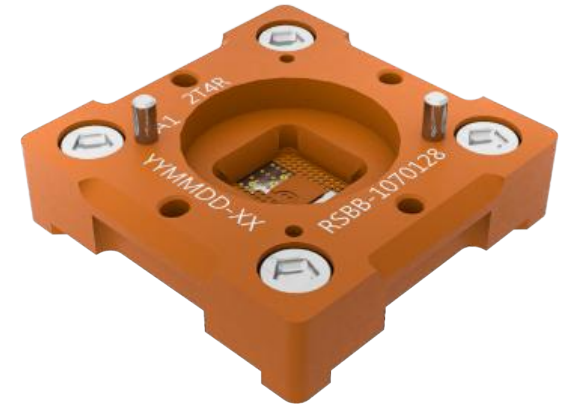
## IC Package Test



## Burn-In Test



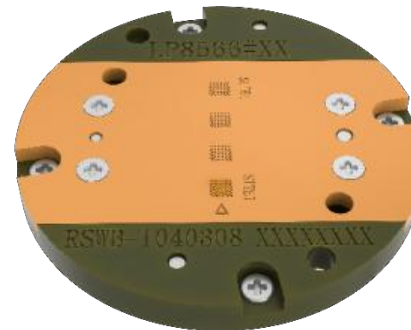
## High Frequency Test



## Memory Test



## WLCSP Test



## Battery Test





# Testing Solution - IC Test Probe

General Final Test



Burn-In Test



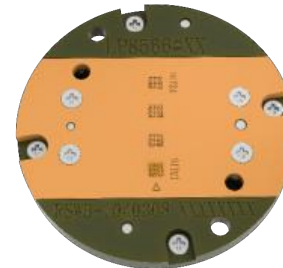
Memory Test



High Frequency Test



Wafer Level Test



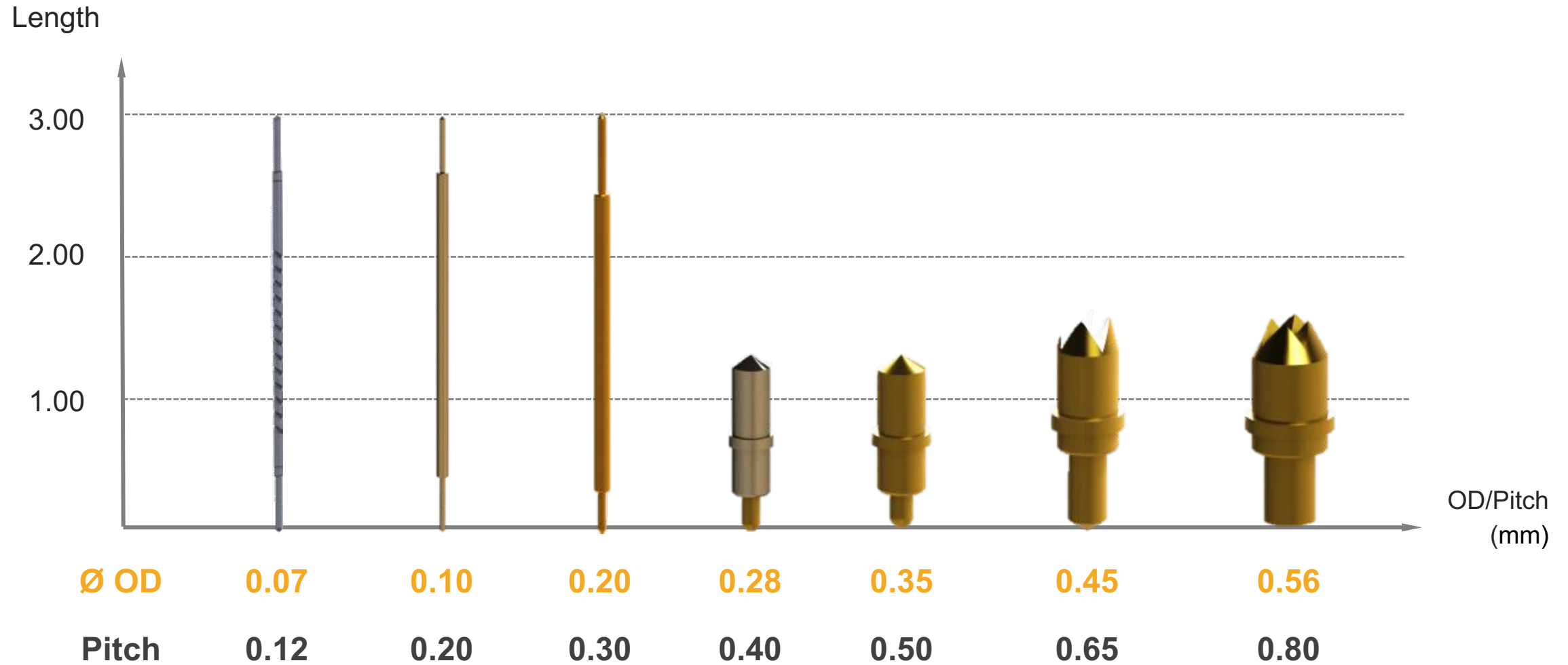
Fine Pitch Test





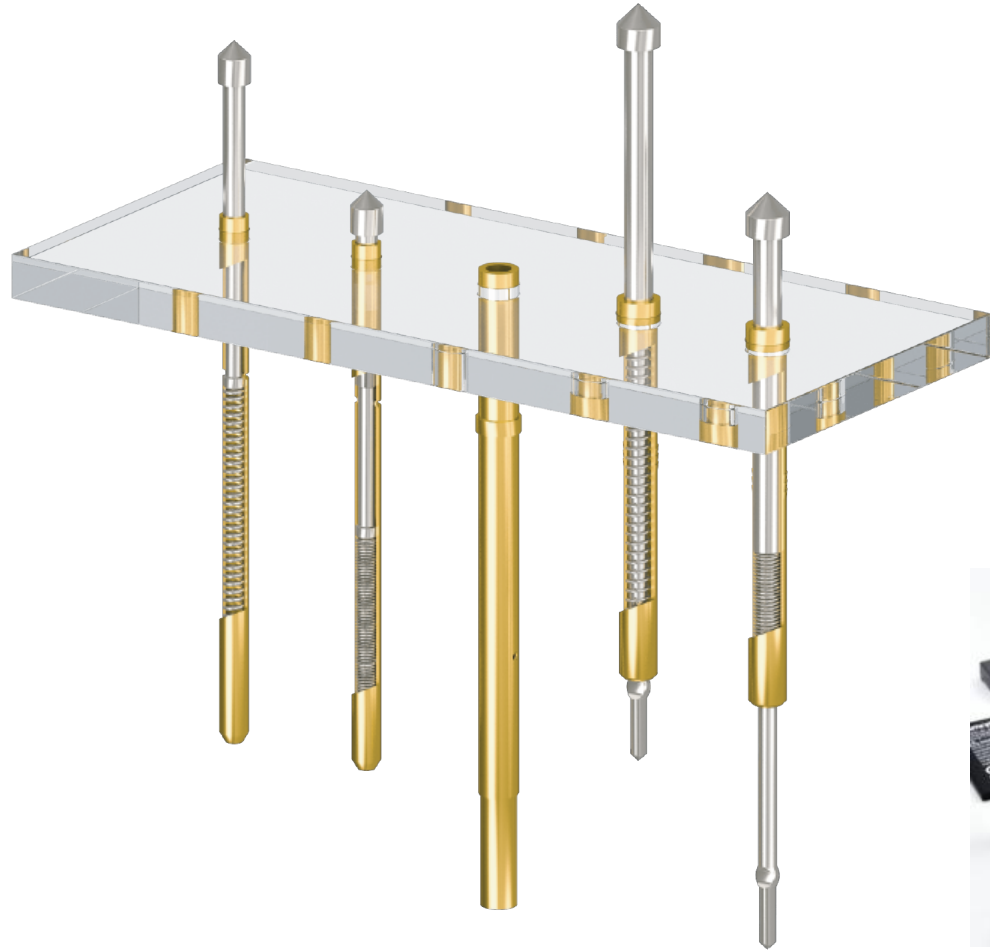


# Testing Solution - Testing Probe

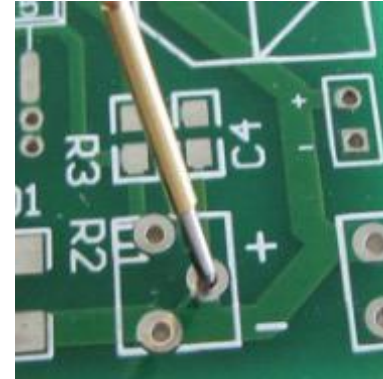




# Testing Solution - ICT Test Probe



PCB



FPC



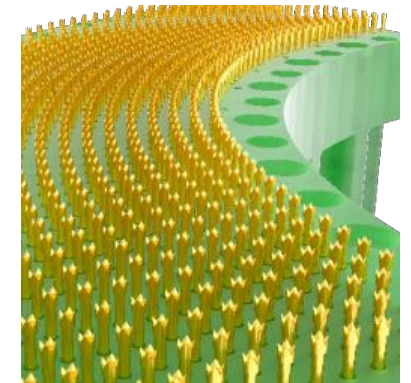
Battery



LED



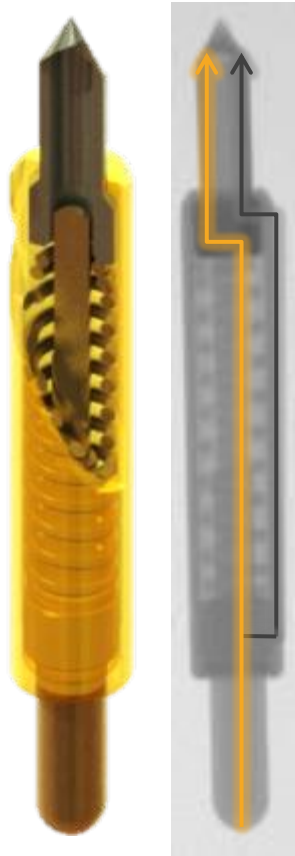
Pogo Tower



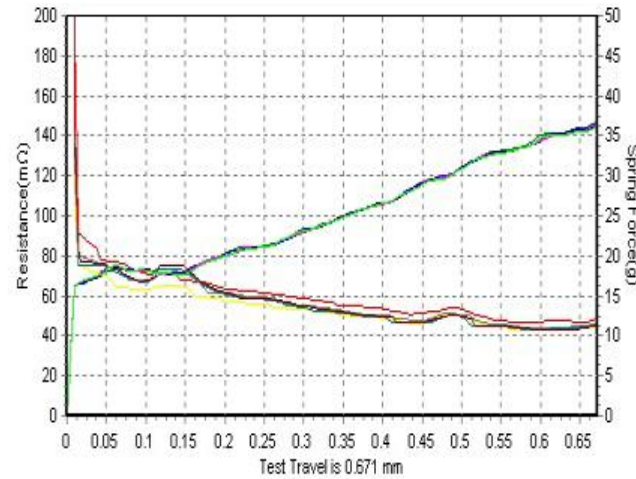


# Testing Solution - High Current Probe

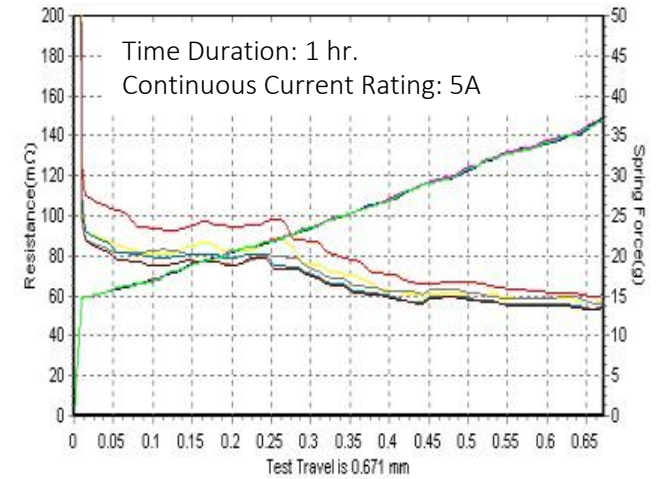
Patent No. **M453149**



## Normal Testing



## High Current Testing



CCP Concentric Pin	
Stroke	0.60mm
Contact force	30 g (Adjustable)
Durability	Contacts : >30k
Pitch	0.650mm
DC resistance	< 60mΩ
Current Rating	5A



Temperature Record



# Testing Solution - High Frequency Probes



Ø 0.65mm



Ø 0.54mm



Ø 0.43mm



Ø 0.33mm

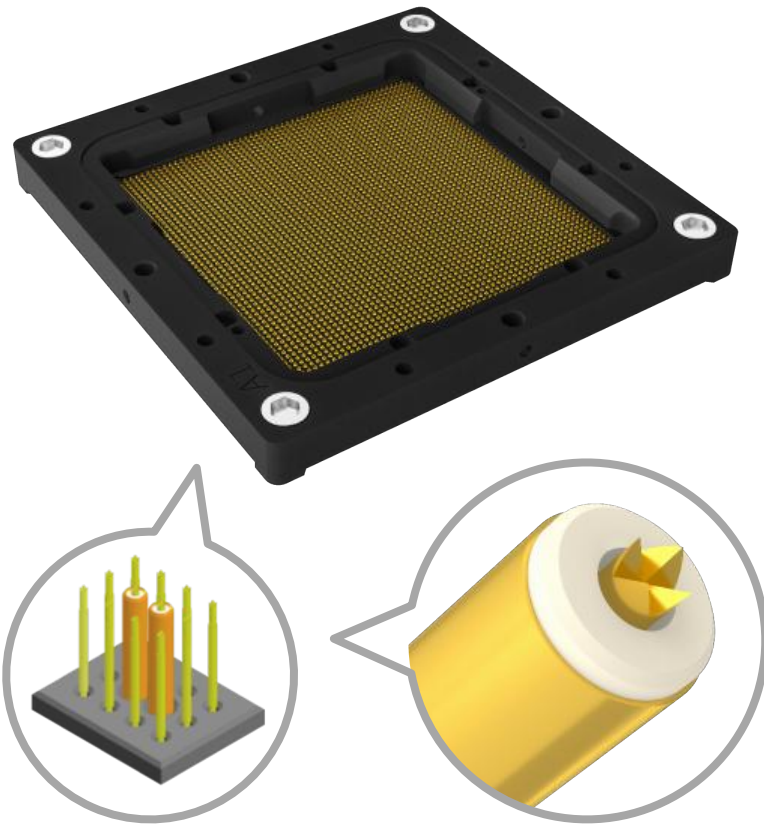
Spring Force	30g ± 20% @ 0.40mm	30g ± 20% @ 0.4mm	12~19g ± 20% @ 0.18mm	15g ± 20% @ 0.18mm
Insertion Loss	-1dB>20GHz	-1dB>20GHz	-1dB>20GHz	-1dB>20GHz
Pitch	>0.80mm	0.65mm	0.50mm	0.40mm



# Testing Solution - High Frequency Socket

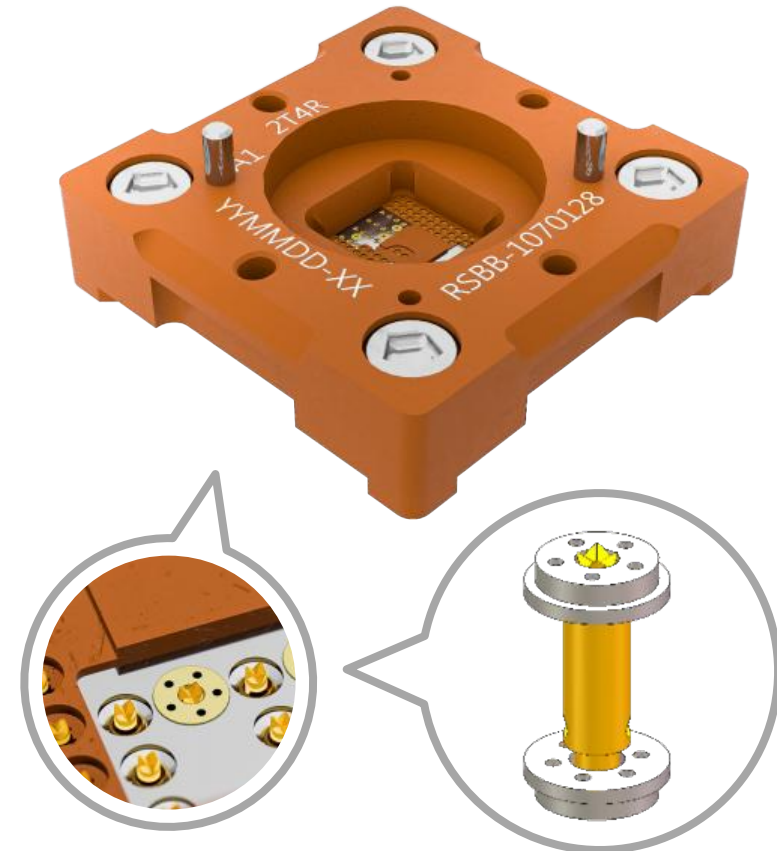
## 5G IC

Coaxial Probe Socket



## ADAS

Hybrid Coaxial Socket

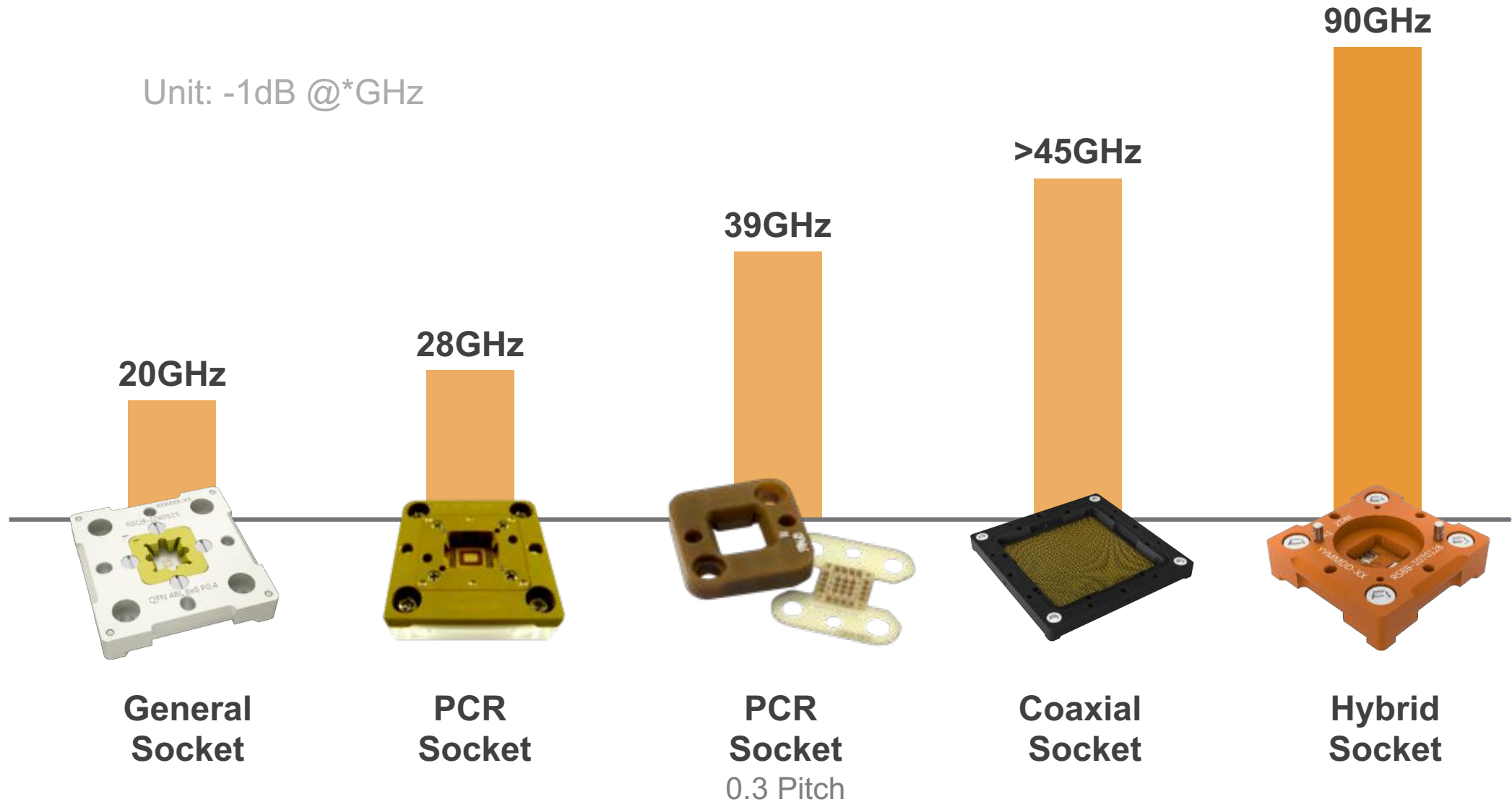






# Testing Solution - High Frequency Socket

Unit: -1dB @\*GHz



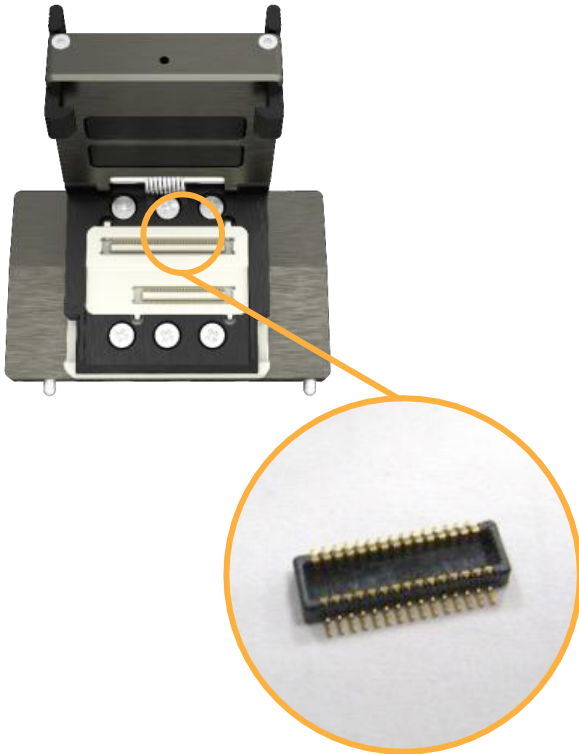


# Testing Solution - Fine Pitch Test Fixture

## Dual-Side Pogo Socket

Min Pitch: 0.2

Mechanical Life: 200k

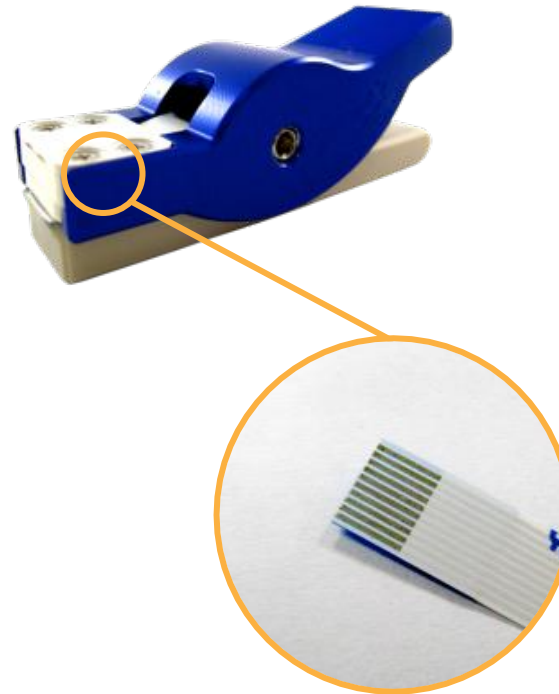


Device Under Test  
Fine Pitch Connector

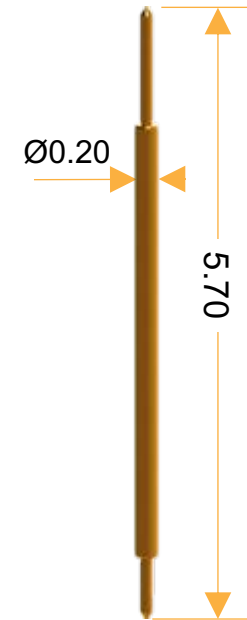
## Clip Pogo Socket

Min Pitch: 0.2

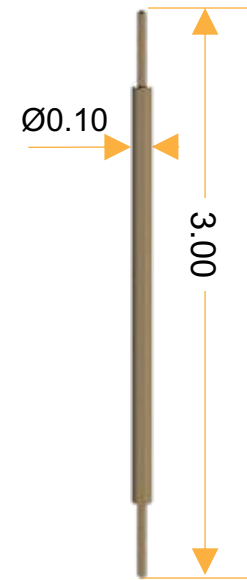
Mechanical Life: 200k



Device Under Test  
FPC / FFC Gold Finger



Pitch  
0.30mm



Pitch  
0.20mm

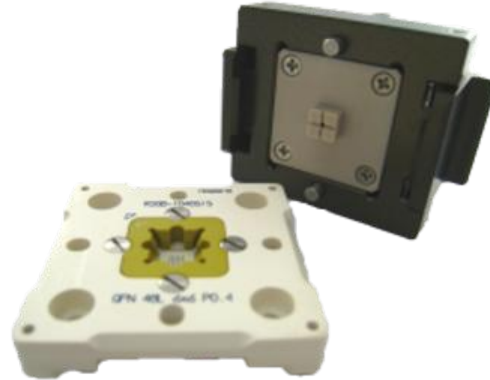


# Testing Solution - IC Final Test Socket

BGA

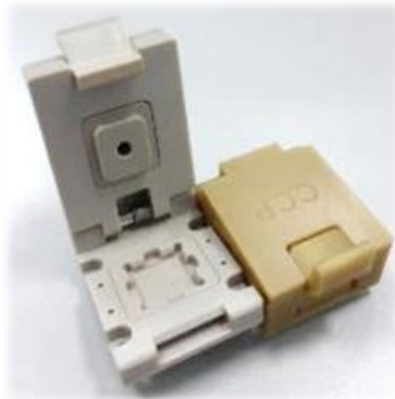


QFN



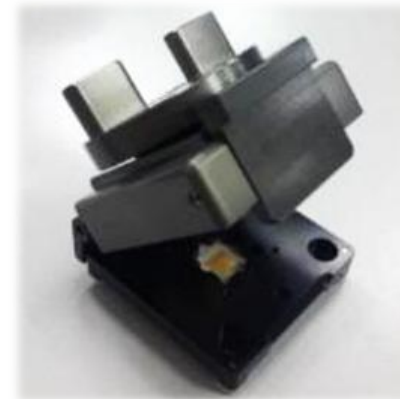
Memory Test

DDR 1~4  
eMCP  
Flash



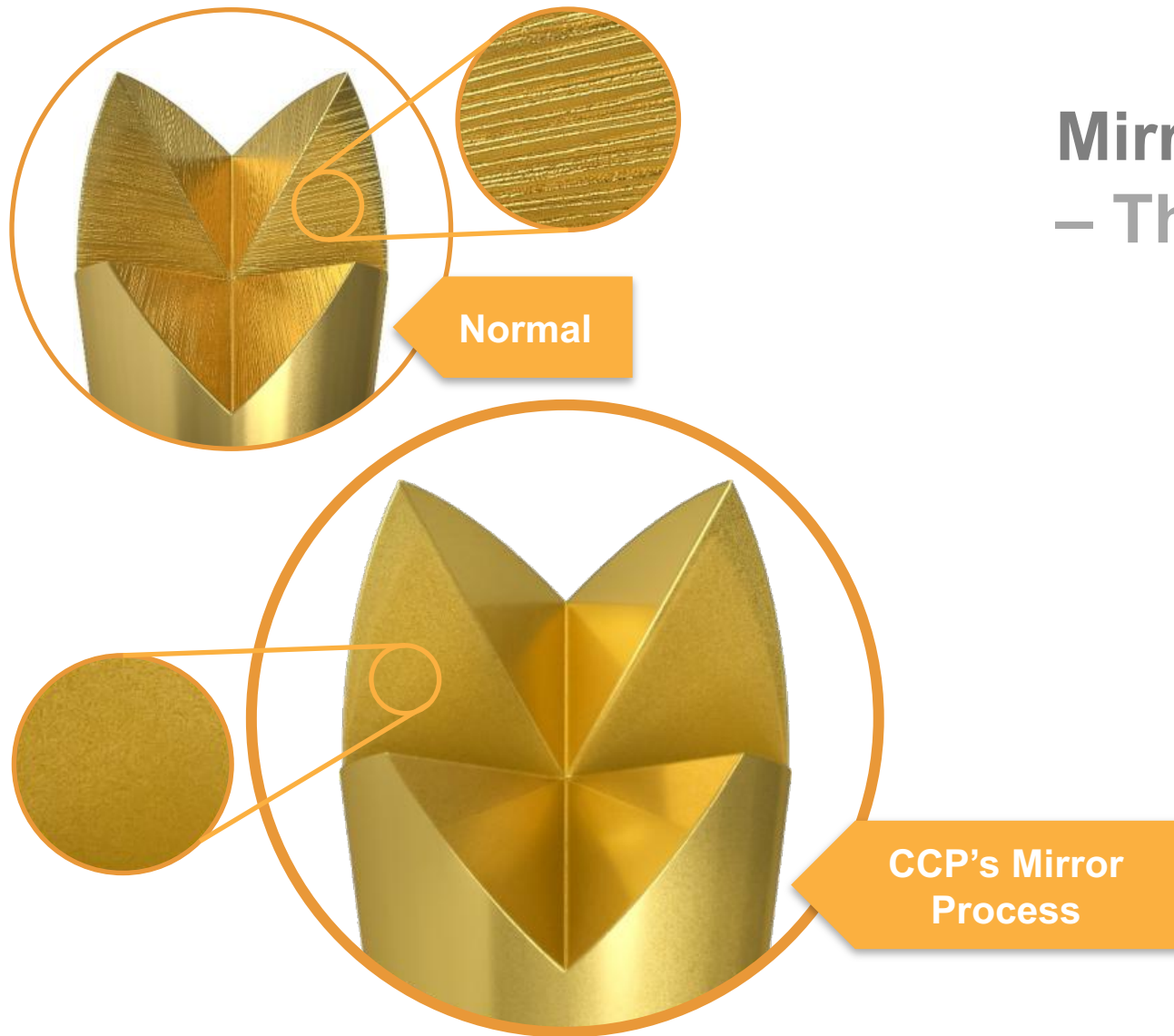
Clamping Lid

QFN QFP  
<200 pins



Knob Lid

All Kind  
>200 pins

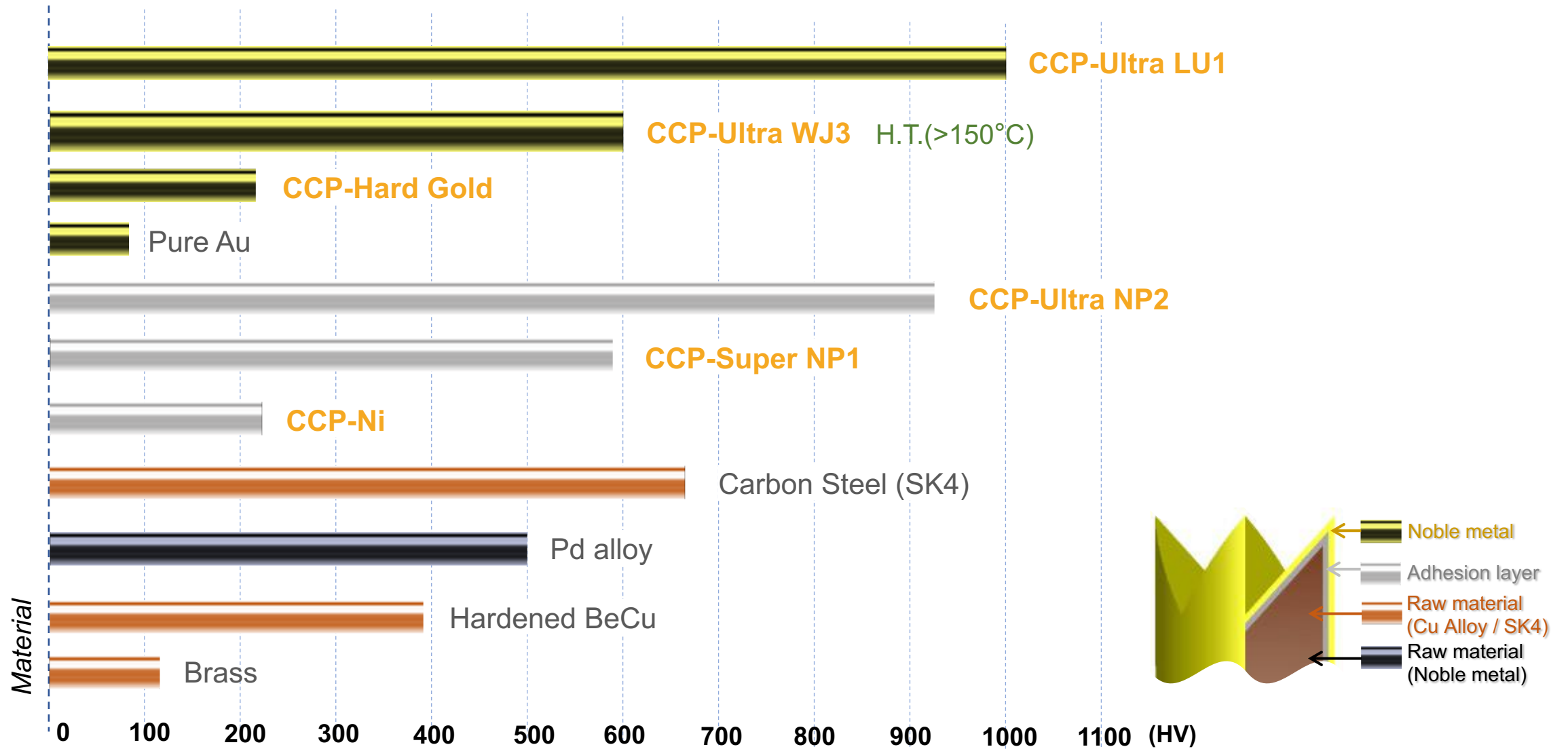


## Mirror Process – The Best Probe Protector

- The Mirror Process make the surface as smooth as mirror so that solder splashes won't attach on the probe tip. This, in turn, decreases your probe cleaning frequency, as well as machine down time significantly.
- Pin durability increase 1.3~1.5 times as compared to normal process.



# Testing Solution - Material Development







# Testing Solution - Integrated Manufacturing



Automatic CNC lath



CNC spring coiling machine



Surface treatment production line



Semi-automatic assembly machine



Automatic assembly machine



Automatic probe **full inspection**





# Testing Capability - Test Equipment

## Turning Parts Surface Inspection



### Optical Profiler

Surface Roughness Inspection

## Plating Layer Inspection



### Nanoindenter

- Hardness measurement
- Adhesion Test



### FE-SEM and EDS

- Surface profile observation
- Material analysis



# Testing Capability - Test Equipment

## Electrical Performance



Network Analyzer



VNA (Vector Network Analyzer)



High Current Power Supply & Electronic Load



Contact Resistance Tester



RCA Tape Abrasion Tester

## Mechanical Performance



Safety Comprehensive Analyzer



Mechanical Vibration/Shock

## Environmental Testing



Oven



Waterproof test machine



Flush test chamber



Automatic Insertion Force Tester



Durability Cycling Machine



Thermal shock test machine



Salt spray test machine



Temperature & humidity test machine

## Other



Hot-Air Reflow machine



3D laser scanning microscope



X-ray



Electrochemical workstation



Terminal cross section analyzer



# Create Value for Customers



## OUR VALUE

Solution Service  
Engineering Service  
Design for Manufacturing  
Customization  
Flexible Production.  
Local and Instant Support



## Quality System

### **ISO 9001:2015**

Quality Management Systems

### **IATF 16949:2016**

Automotive Quality Management System

### **ISO 14001 : 2015**

Environment Management Systems

### **QC 080000**

Hazardous Substance Process Management

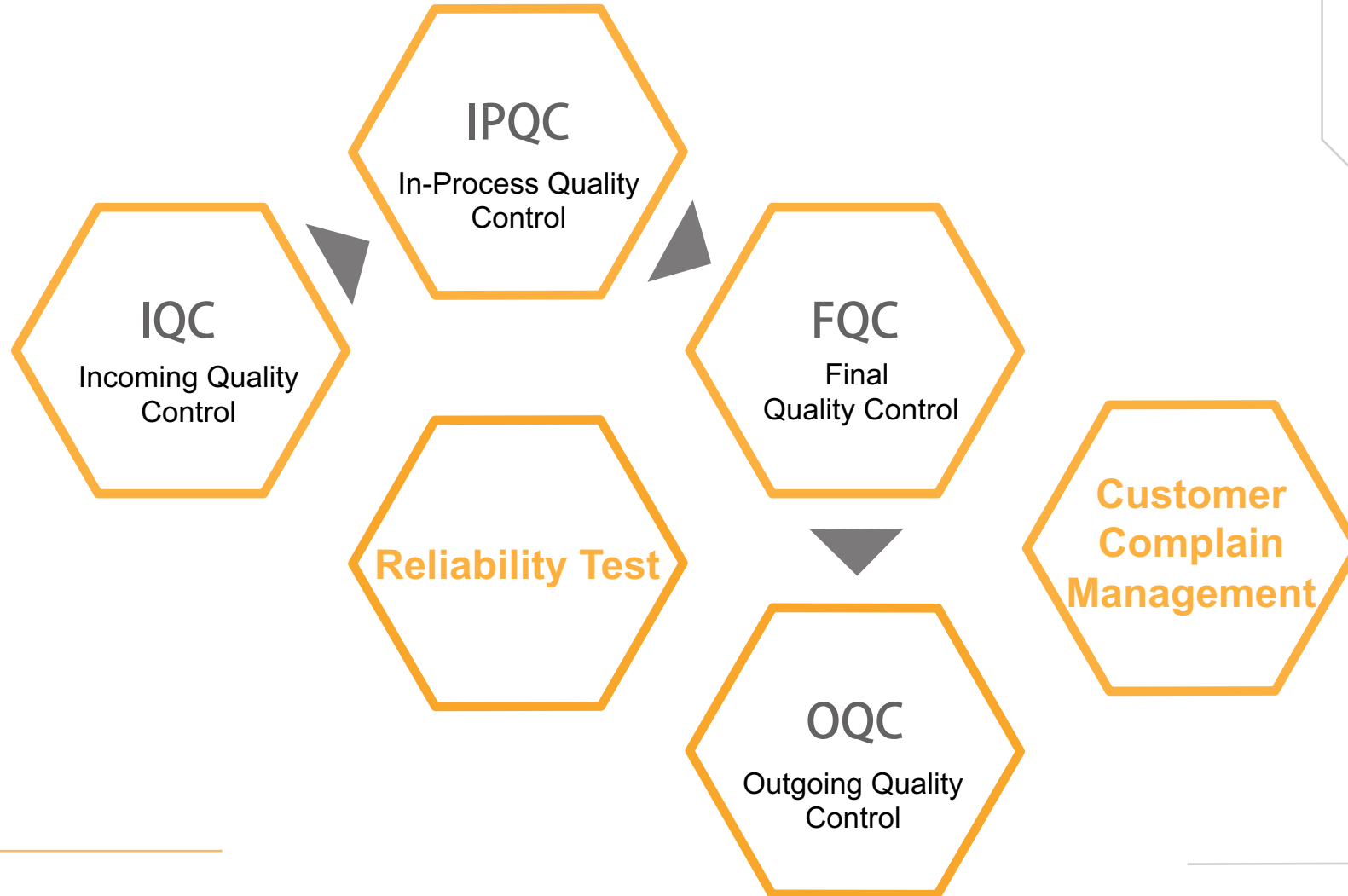
### **ISO 13485:2016**

Medical Devices Quality Management Systems





# Quality Assurance





# Verification Ability

## Testing Items

### Environmental

Waterproof

Humidity Test

Salt Spray

Thermal Impact

Resist. to Solder Heat

Vibration

### Electrical

Contact Resistance

Insulation

HIPOT

Rated Current

### Mechanical

Retention Force

Life Cycle

Vibration

Mechanical Shock

### Other

Drop

Soldering Side Force

Solderability

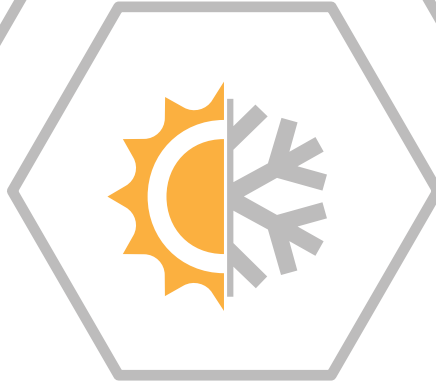


# Testing Equipment

Rated Current  
Max Rating :  
1000Amp



Waterproof  
Test Level : IPX7 Up



Thermal Impact  
Range : -60~120°C  
Resolution : 0.01°C



Vibration  
Frequency : 3500Hz Max.  
Acceleration : 50G Max.



# Certificate

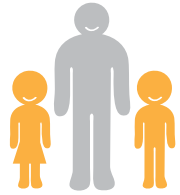


- ISO 9001
- ISO 13485
- ISO 14001
- ISO 14064
- IATF 16949
- IECQ QC080000





# Social Responsibility



Summer camp for employees' children

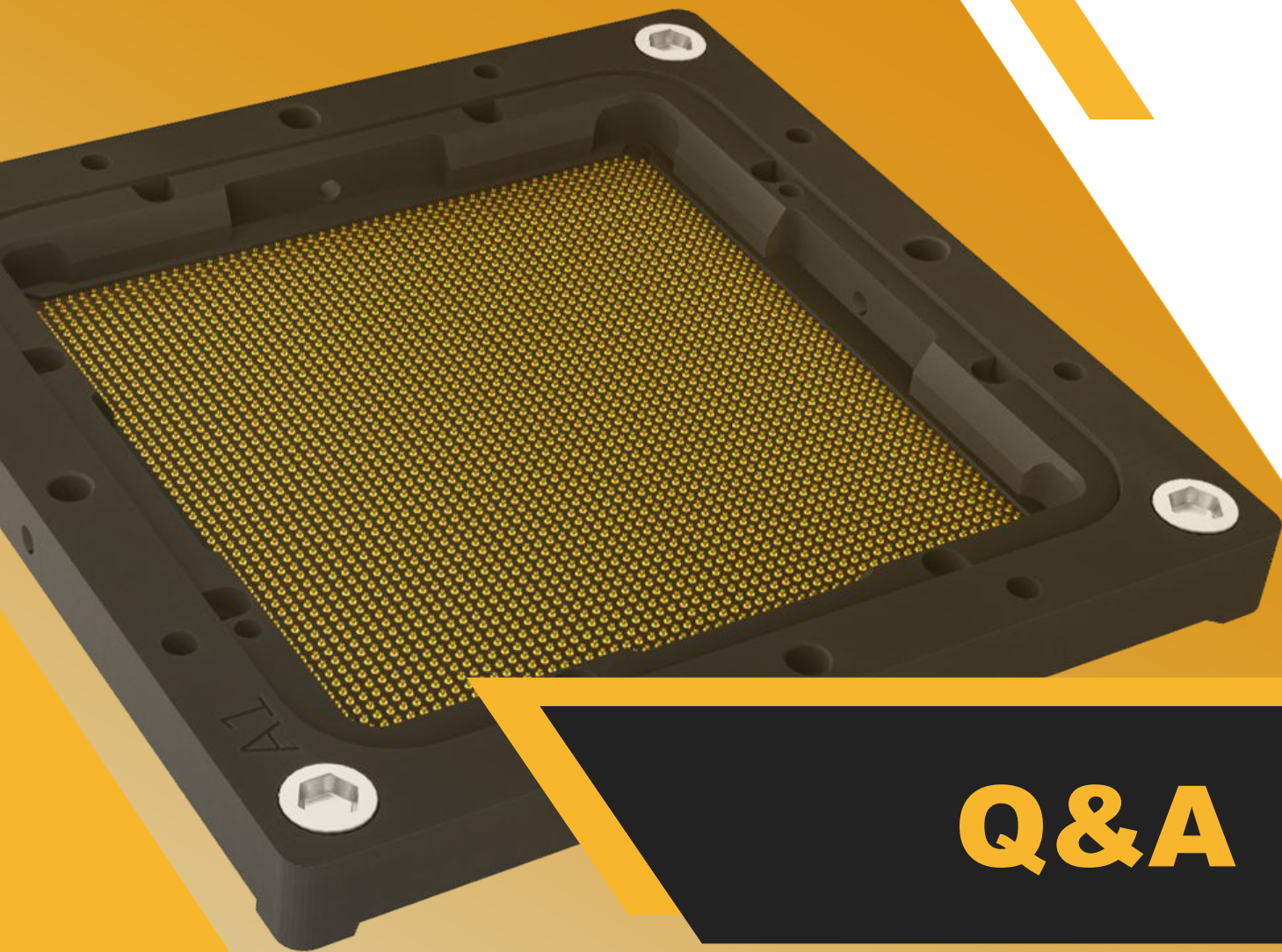


Home visit to employees around the world



CCP offers tuition scholarship for employees' children





# CCP Contact Probes

**Q&A**

info@pccp.com.tw  
www.ccpcontactprobes.com

