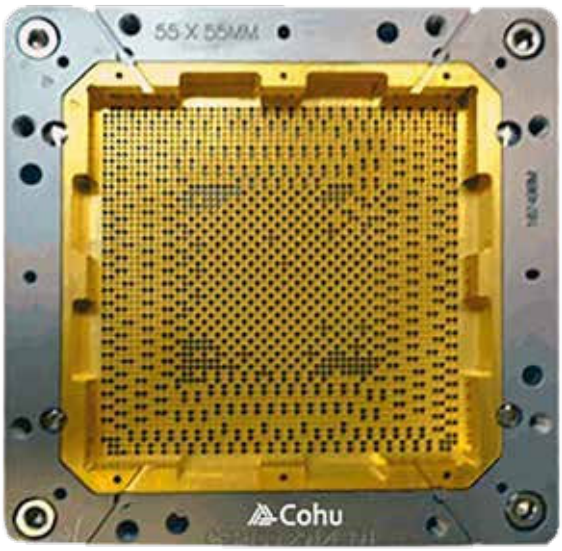
ICON Coaxial Contactor

Production Solution for Testing RF and High End Digital Applications



Automotive / Power

Mobility

Precision Analog / Sensors

High End Digital

RF

Benefits

- Long life and lower cost of test
- Consistent electrical performance
- Suitable for BGA / LGA pitches down to 0.4 mm
- Suitable for GPU, SerDes, DDR, PAM4, HDMI, PCIE, SAW, 5G mmWave, UWB and Satellite applications

Key Features

- High isolation full ground shielding from board to DUT
- Exceptional DC and RF performance
- High frequency
- Excellent thermal management

- **Temperature Range: -55˚C to +155˚C**
- **Matched impedance provides the highest bandwidth - less loss through the system**
- **Metal body reduces cross talk**
- **Impedance is not affected by proximity of device grounds**

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Specifications

Packages and Applications

- Packages
  - BGA, LGA
  - Singulated devices, strip test, or wafer test
  - 0.4 mm, 0.5 mm, 0.8 mm or 1.0 mm pitch

Environmental

- Temperature Range: -55˚C to +155˚C

Reliability*

- Typical Probe Life: 1M cycles

Electrical

- Bandwidth @ -1 dB Insertion Loss GSG
  - 0.4 mm pitch: 60 GHz
  - 0.5 mm pitch: 60 GHz
  - 0.8 mm pitch: 52 GHz
  - 1.0 mm pitch: 38 GHz
- Bandwidth @ -1 dB Return Loss GSG
  - 0.4 mm pitch: 65 GHz
  - 0.5 mm pitch: 63 GHz
  - 0.8 mm pitch: 51 GHz
  - 1.0 mm pitch: 35 GHz
- Isolation
  - 60 dB typical
- Contact Resistance**
  - < 125 mΩ
- Standard Impedance
  - 50 Ω
- Custom Impedances
  - 25 Ω, 30 Ω, 35 Ω, 42 Ω
  - Other custom impedances available
- Custom Differential Impedances
  - 50 Ω, 85 Ω
- Maximum Current @ 1% Duty Cycle
  - Varies by pitch: refer to Hydra probe specifications for more details

* Cleaning frequency and life specifications are estimates based on customer feedback. Actual values are dependent on the application (DUT materials, handler kit, maintenance, etc.)

** Typical resistance measured between Au plated sheets

Mechanical

- Some mechanical parameters vary by pitch; refer to Hydra probe specifications for more details:
  - 0.4 mm pitch: HYD020
  - 0.5 mm pitch: HYD025
  - 0.8 mm pitch: HYD040
  - 1.0 mm pitch: HYD050
- Contact Length at Test Height
  - 3.22 mm typical
- DUT Side Compliance
  - >250 µm typical
- DUT Tip Style
  - L (Four-point crown) or B (pointed)
- PCB Tip Style
  - Full radius typical

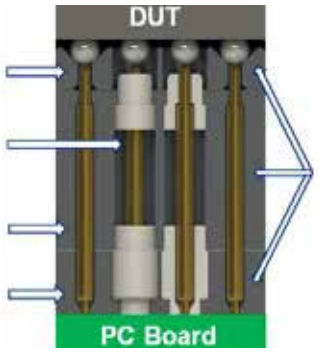
Materials

- Housing Material
  - Aluminum

Configurations / Interface Options

- Automated Test
  - Handler specific design / configuration
  - Singulated package
  - Optional manual actuator
  - Probe head for WLCSP

- Aluminum floating alignment plate provides excellent alignment and ground for complete isolation up to the DUT
- Air dielectric on signal probes provides less loss
- Aluminum body provides exceptional thermal properties and rigidity along with great signal isolation
- Aluminum retainer plate holds the probes in the body and provides complete isolation to the test interface board



- All aluminum, full-length signal shielding
- Isolation from the DUT to Test System
- Aluminum body has the stiffness to avoid bowing in when used with large parts

All specifications are subject to change without notification and are for reference only. Use contactor drawing to design interface hardware. For detailed performance specifications, please contact Cohu.

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