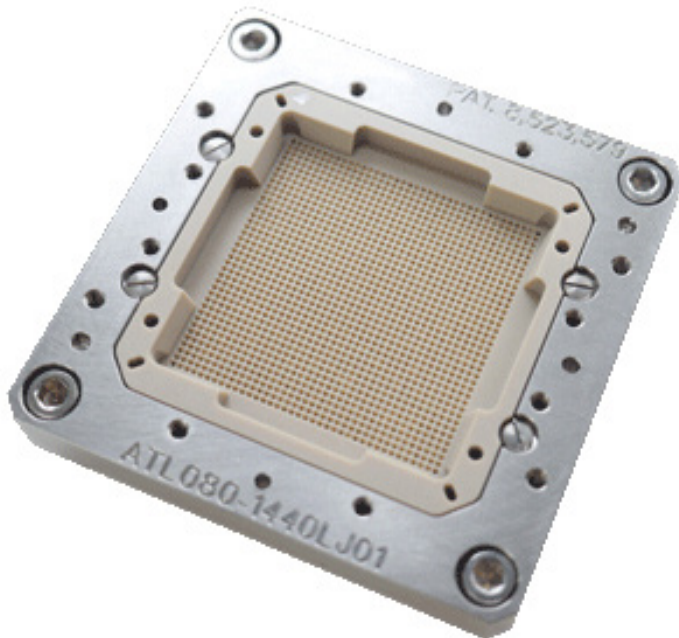


Atlas Contactor/Probe Head

For Large I/O Count Devices and High-End Digital Test



Automotive / Power



Mobility



Precision Analog / Sensors



High End Digital



RF

Benefits

- Long uninterrupted test runs
- Site-to-site consistency on a global scale
- Excellent Rc repeatability over hundreds of thousands of insertions
- Low noise, high-fidelity contacting

Key Features

- High bandwidth
- Short signal path
- Extra tip strength with X-beam design
- Fewer moving parts with optional floating alignment plate
- High frequency >21 GHz @ -1 dB
- Excellent contactor for large array packages
- BGA, LGA, WLCSP
- Highly integrated devices
- Modular multi-site configuration

- Temperature Range: -55°C to +155°C
- Cruciform tip strength stands up to lateral force without bending
- 0.30 mm, 0.40 mm and 0.80 mm versions
- Current carrying capacity up to 2.8 A continuous

Atlas Contactor/Probe Head

For Large I/O Count Devices and High-End Digital Test

Specifications

Packages and Applications

- Grid array packages: BGA, LGA and WLP
- Use with or without floating alignment plate
- Singulated packages, strip test, in-carrier and waferscale parallel test

Environmental

- Temperature Range: -55°C to +155°C

Reliability*

- Typical Probe Life: 500,000 cycles

Electrical

- Bandwidth @ -1 dB
 - ATLo30: 0.3 mm pitch: 24 GHz
 - ATLo40: 0.4 mm pitch: 23 GHz
 - ATLo40: 0.5 mm pitch: 24 GHz
 - ATLo80: 0.8 mm pitch: 22 GHz
- Loop Inductance
 - ATLo30: 0.3 mm pitch: 1.26 nH
 - ATLo40: 0.4 mm pitch: 0.97 nH
 - ATLo40: 0.5 mm pitch: 1.35 nH
 - ATLo80: 0.8 mm pitch: 1.43 nH
- Contact Resistance**
 - ATLo30: 110 mΩ
 - ATLo40: 50 mΩ
 - ATLo80: 40 mΩ
- Current Carrying Capacity
20°C Temperature Rise
 - ATLo30: 1.3 A
 - ATLo40: 1.7 A
 - ATLo80: 2.8 A
- Maximum @ 1% Duty Cycle
 - ATLo30: >7 A
 - ATLo40: >10 A
 - ATLo40: >21 A

Mechanical

- Contact Pitches Supported
 - 0.3 mm – 1.0 mm

- Contact Force at Test Height
 - ATLo30: 13 N (13 qf)
 - ATLo40: 22 N (13 qf)
 - ATLo80: 23 N (13 qf)
- Test Height
 - ATLo30: 3.46 mm
 - ATLo40: 3.54 mm
 - ATLo80: 4.4 mm
- DUT Side Travel
 - ATLo30: 153 μm
 - ATLo40: 480 μm
 - ATLo80: 620 μm
- DUT Tip Style
 - ATLo30: L (four-point crown) 110 μm diameter
 - ATLo40: L 140 μm diameter
 - ATLo80: L 365 μm diameter
- PCB Tip Style
 - Radius

Materials

- Housing Material
 - Vespel® SP-1
 - MDS 100
 - Photoveel ceramic
- Spring Probe Material
 - Hard, proprietary alloy
- Spring Material
 - Stainless steel
- Plating Material
 - Hard gold

Configurations / Interface Options

- Automated Test
 - Handler specific design / configuration
 - Optional manual actuator
 - E-beam probe support
 - WLP probe head configuration

* Actual values are dependent on the application (DUT materials, handler kit, maintenance, etc.)

** Typical resistance measured between Au plated sheets

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.