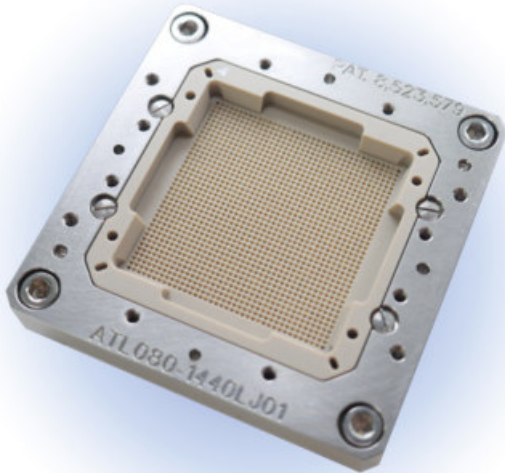


ATLAS CONTACTOR



Optimal Performance for Large I/O Count Devices and High End Digital Test



RF



High End Digital



Automotive / Power



Precision Analog /
Sensors



Mobility

Benefits:

- Long uninterrupted test runs
- Site-to-site consistency on a global scale
- Excellent R_c 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

ATLAS CONTACTOR

1. Packages and Application

1.1 Packages

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

2. Environmental

2.1 Temperature Range

- -55 °C +155 °C

3. Reliability*

3.1 Typical Probe Life

- 500 k cycles

4. Electrical

4.1 Bandwidth

- ATLo30 @ 0.3 mm pitch: 24 GHz @ -1 dB
- ATLo40 @ 0.4 mm pitch: 23 GHz @ -1 dB
- ATLo40 @ 0.5 mm pitch: 23 GHz @ -1 dB
- ATLo80 @ 0.8 mm pitch: 22 GHz @ -1 dB

4.2 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

4.3 Typical Contact Resistance**

- ATLo30: 110 mOhm
- ATLo40: 50 mOhm
- ATLo80: 40 mOhm

4.4 Current Carrying Capacity

- 20° Celsius Temperature Rise
ATLo30: 1.3 A continuous
ATLo40: 1.6 A continuous
ATLo80: 2.8 A continuous
- Maximum @ 1 % duty cycle
ATLo30: 7.1 A continuous
ATLo40: 10.4 A continuous
ATLo40: 21.5 A continuous

*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

Specifications are subject to change without notification and are for reference only. Use contactor drawing to design interface hardware.

5. Mechanical

5.1 Contact Pitches Supported

- 0.3 mm – 1.0 mm

5.2 Contact Force at Test Height

- ATLo30: 13 g (0.13 N)
- ATLo40: 22 g (0.22 N)
- ATLo80: 23 g (0.23 N)

5.3 Test Height

- ATLo30: 3.46 mm (0.136 in)
- ATLo40: 3.54 mm (0.43 in)
- ATLo80: 4.4 mm (0.173 in)

5.4 Pin Travel at Test Height

- ATLo30: 310 µm (0.012 in)
- ATLo40: 600 µm (0.02 in)
- ATLo80: 750 µm (0.03 in)

5.5 DUT Tip Style

- ATLo30: Four Point Crown 0.105mm tip-to-tip
- ATLo40: Four Point Crown 0.140mm tip-to-tip
- ATLo80: Four Point Crown 0.365mm tip-to-tip

5.6 PCB Tip Style

- ATLo30: 0.10 mm radius (0.004 in)
- ATLo40: 0.16 mm radius (0.006 in)
- ATLo80: 0.50 mm radius (0.019 in)

6. Materials

6.1 Housing Material

- Vespel
- MDS 100
- Photoveel Ceramic

6.2 Spring Probe Material

- Hard, proprietary material

6.3 Spring Material

- Stainless steel

6.4 Plating Material

- Hard gold

7. Configurations / Interface Options

7.1 Automated Test

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

All performance figures such as MTBF, MTBA, Uptime, Yield, Jam Rate, Life Span, Cleaning Cycles etc. can vary with specific package type, test program and / or specific application environment. They assume that only original Cohu spare and consumable parts are used, recommended maintenance intervals and procedures are respected, operators/maintenance technicians have successfully participated in formal equipment training by Cohu to the appropriate level, and only Cohu approved software is used on the systems. Cohu assumes no warranty or liability if any of these requirements is not met. All listed data are for information only. For binding specification please contact your sales person.

