High Performance Kelvin Contact for High Volume Production Test

**Benefits:**
- Excellent power delivery and signal integrity on Kelvin contacts cell
- Kelvin measurements at wafer-level test
- Kelvin contact on small targets
- Excellent resistance stability and prolonged usable life
- True Kelvin contact at fine pitches, both in-line and in arrays

**Key Features:**
- Low loop inductance and high bandwidth
- Device pitch down to 200 µm in-line, 300 µm in arrays
- Tip to tip spacing as low as 70 µm
- Variety of contact materials to optimize performance
- Electrically isolated, mechanically independent force and sense paths
cPYTHON™ CONTACTOR OR PROBE HEAD

1 Packages and Applications
- Grid Array packages: BGA, LGA, WLCSP, others – 400 µm pitch and up
- Leaded packages: QFP, SO, others – 200 µm pitch and up
- Leadless packages: QFN, others – 200 µm pitch and up
- Singulated packages, strip test, wafer probe and wafer-level test

2 Environmental
- Temperature Range: -55 °C to +155 °C

3 Reliability*
- 50k cycles for packaged device
- 1M cycle for WLCSP Test
- Probe cleaning 20k to 50k

4 Electrical
- Bandwidth @ -1 dB**
  - PYT020: TBD***
  - PYT030: TBD***
  - PYT040: 34 GHz
  - PYT050: TBD***
- Loop Inductance
  - PYT020: TBD***
  - PYT030: TBD***
  - PYT040: 1.2 nH
  - PYT050: TBD***
- Contact Resistance ****
  - PYT020: TBD***
  - PYT030: TBD***
  - PYT040: 60 mΩ
  - PYT050: 26 mΩ
- Current Carrying Capacity
  - 20º Celsius Temperature Rise
    - PYT020: TBD***
    - PYT030: TBD***
    - PYT040: 2.6 A
    - PYT050: 2.8 A
- Maximum Current @ 2% Duty Cycle
  - PYT020: TBD***
  - PYT030: TBD***
  - PYT040: > 22 A
  - PYT050: > 24 A

5 Mechanical
- Contact Pitches Supported
  - 0.2 mm and up (in-line)
  - 0.3 mm and up (full array)
- Contact Force at Test Height
  - PYT020: 0.06 N (6gf)
  - PYT030: TBD***
  - PYT040: 0.29 N (30 gf)
  - PYT050: 0.27 N (28 gf)
- Test Height
  - PYT020: 3.9 mm
  - PYT030: TBD***
  - PYT040: 5.05 mm
  - PYT050: 5.05 mm
- DUT Side Compliance
  - PYT020: 200 µm
  - PYT030: TBD***
  - PYT040: 300 µm
  - PYT050: 400 µm
- DUT Tip Style
  - Single offset point for flat pads or leads
- DUT Tip Spacing (at nominal probe spacing)
  - PYT020: 50 µm
  - PYT030: TBD***
  - PYT040: > 22 A
  - PYT050: > 24 A
- PCB Tip Style: Radius
  - PYT020: 0.2 mm
  - PYT030: 0.3 mm
  - PYT040: 0.4 mm
  - PYT050: 0.5 mm

6 Materials
- Housing Material
  - Vespel SP-1, Plavis – N, MDS-100 or ceramic
  - Other materials available upon request
- Spring Probe DUT Tip Plating
  - Homogenous alloy
  - N01
  - Gold
  - Stainless steel

7 Configurations / Interface Options
- Automated test
- Handler specific design / configuration
- Optional manual actuator

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

* Cleaning frequency and life specifications are estimates based on customer feedback. Actual values are dependent on the application (DUT materials, handler kit, maintenance, etc.).
** Bandwidth and inductance shown are for a single probe at minimum pitch, GSG configuration in Vespel SP-1.
*** Data will be released at a later date.
**** Typical resistance is measured between Au plated sheets.

All performance figures such as MTBF, MTBA, Uptime, Yield, Jem 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.