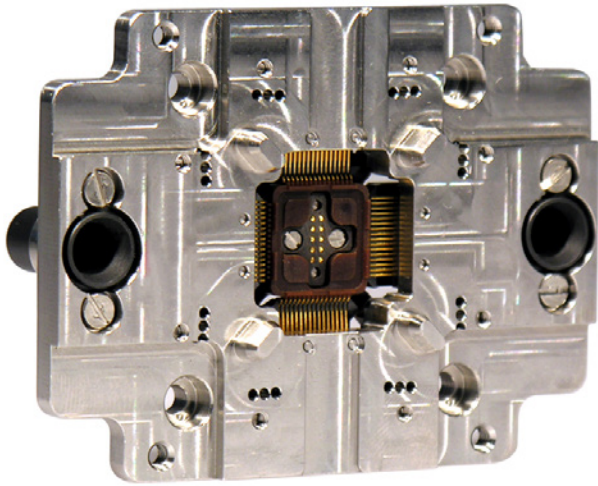


# nanoKelvin Contactor

Cantilever Kelvin Test for High Power Plunge-to-Board Applications



Automotive / Power



Mobility



Precision Analog / Sensors



High End Digital



RF

## Benefits

- Boosted first pass yield
- Enhanced production reliability
- Testing at full specification values
- Improved Overall Equipment Efficiency (OEE)
- Extended maintenance intervals
- Reduced cost of test

## Key Features

- Full Kelvin combined with high power capability
- Small imprint area
- Simple and cost-efficient test boards
- Contact motion decoupled from the test board
- Proven self-cleaning wipe
- Low and stable contact resistance
- High current carrying capability
- Extended temperature range

- Temperature range  $-60^{\circ}\text{C}$  to  $+175^{\circ}\text{C}$
- Typical contact resistance  $40\text{ m}\Omega$

- Durable one piece design
- Contact spring lifespan  $1\text{M} +$  insertions

# nanoKelvin Contactor

## Cantilever Kelvin Test for High Power Plunge-to-Board Applications

### Specifications

#### Packages and Applications

- Packages
  - Leaded and leadless
  - SO, QFN, QFP, SOT
  - Pb-free packages
  - Minimum lead pitch 0.4 mm
- Test Handlers
  - All handler types
  - All established handler brands

#### Environmental

- Temperature Range
  - -60°C to +175°C

#### Reliability

- Contact Spring Lifespan<sup>1</sup>
  - 1 Mio. + insertions

#### Electrical

- Bandwidth
  - 1.5 GHz @ -1 dB (dual, GSG 0.4 mm pitch)
  - 5.2 GHz @ -1 dB (dual, GSG 0.5 mm pitch)
- Loop Inductance
  - 2.5 nH (dual, GSG 0.4 mm pitch)
  - 3.4 nH (dual, GSG 0.5 mm pitch)
- Typical Contact Resistance<sup>2</sup>
  - Hard gold coating: 40 mΩ
  - Dura: 100 mΩ
  - Forta: 40 mΩ
- Current
  - Maximum peak current: 20 A @ 1 % duty cycle<sup>3</sup>
  - Maximum continuous current: 2 A
- Voltage
  - Break down voltage (pin to pin):
  - 1000 V (pitch 1.27 mm)

#### Mechanical

- Contact Spring Type
  - Cantilever / single piece
- Contact Spring Force
  - 0.42 N/pin
- Standard Test Height
  - 3.4 mm

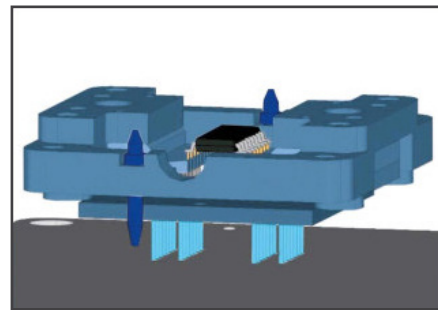
All specifications are subject to change without notification and are for reference only. Use contactor drawing to design interface hardware. For detailed performance specifications, please contact Cohu.

### Materials

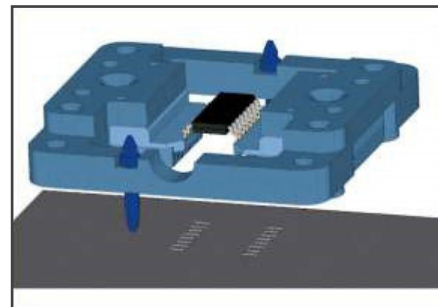
- Contact Spring Material<sup>4</sup>
  - CuBe
- Contact Spring Coating<sup>4</sup>
  - Hard gold coating
  - Dura
  - Forta

### Configurations / Interface Options

- Through hole
  - Thermal insulation available
  - Compatible to established burn-in sockets



- Plunge to Board



### Technical Standards

- Compliant to
  - ISO 9001 : 2000

<sup>1</sup> Electrical resistance increase due to contamination not covered

<sup>2</sup> Typical resistance measured between Au plated sheets

<sup>3</sup> Based on 1 sec cycle time and 20°C temp. rise

<sup>4</sup> Other base materials and coatings on request