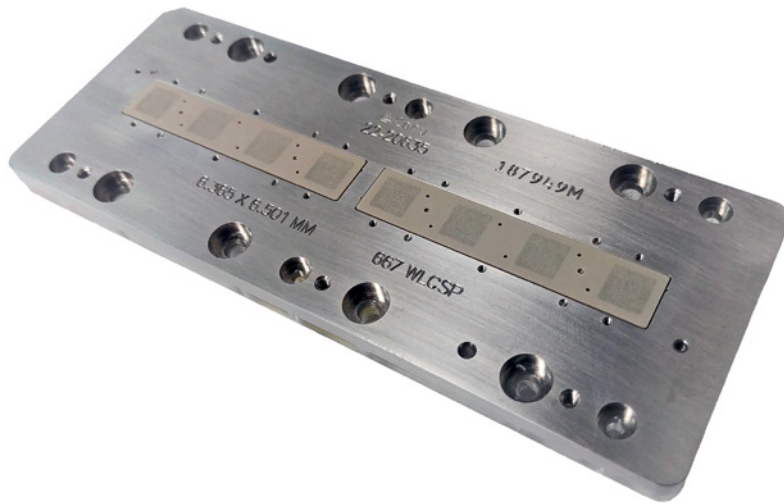


# cViper Probe Head

High Performance Probe Head for High Volume Production Test



Automotive / Power



Mobility



Precision Analog / Sensors



High End Digital



RF

## Benefits

- Allows testing of RF devices at the wafer-level
- Adaptable to wafer-level probing and singulated device testing for debug and characterization
- Long life and extended maintenance intervals
- Engineering analysis of WLCSP devices or KGD
- Consistently high test yields
- Maximum mechanical operating window to overcome z-stack non-coplanarity

## Key Features

- Low loop inductance and high bandwidth
- Device pitches down to 100  $\mu\text{m}$
- Variety of contact and body materials to optimize performance
- Manual actuation of singulated devices
- Low and stable contact resistance
- Individual probe compliance with large mechanical overdrive

- Wafer probe solution down to 100  $\mu\text{m}$  pitch
- Up to 27 GHz @ -1 dB

- Field replaceable individual probes
- Life cycle up to 1M

# cViper Probe Head

## High Performance Probe Head for High Volume Production Test

### Specifications

#### Packages and Applications

- WLCSP
- Singulated devices, wafer probe, or wafer-level test
- Pitches down to 0.1 mm

#### Environmental

- Temperature Range
  - VIP010: -55 °C to +100 °C
  - VIP015: -55 °C to +125 °C
  - VIP020: -55 °C to +155 °C

#### Reliability\*

- 500,000 cycles for packaged device
- 1M cycles for WLCSP Test
- Probe cleaning 20,000 to 50,000

#### Electrical

- Bandwidth @ -1 dB
  - VIP010: TBD\*\*
  - VIP015: up to 44 GHz\*
  - VIP020: 30 GHz
- Loop Inductance
  - VIP010: TBD\*\*
  - VIP015: down to 1.15 nH\*
  - VIP020: 1.27 nH
- Contact Resistance
  - VIP010: 450 mΩ
  - VIP015: 280 mΩ
  - VIP020: 220 mΩ
- ISMI Current Rating
  - VIP010: 0.95 A
  - VIP015: 0.83 A
  - VIP020: 1.26 A

#### Mechanical

##### Contact Pitches Supported

- 0.1 mm and up

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

\*\* Data will be released at a later date.

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.

#### Contact Force at Test Height

- VIP010: 0.04 N (3.9 gf)
- VIP015: 0.06 N (5.9 gf)
- VIP020: 0.05 N (5.5 gf)

#### Test Height

- VIP010: 4.3 mm
- VIP015: 4.3 mm
- VIP020: 3.9 mm

#### DUT Side Compliance

- VIP010: 200 μm
- VIP015: 250 μm
- VIP020: 200 μm

#### DUT Tip Style

- VIP010: B (single point)
- VIP015: L (four-point crown)
- VIP020: L (four-point crown)

#### PCB Tip Style

- VIP010: single point
- VIP015: radius
- VIP020: radius

#### Materials

##### Housing Material

- MDS-100
- Ceramic
- Photoveel®
- Other materials available upon request

##### Spring Probe DUT Tip Plating

- PD alloy

##### Spring Material

- VIP010: proprietary high-temperature alloy
- VIP015: proprietary high-temperature alloy
- VIP020: stainless steel

#### Configurations / Interface Options

- Automated test  
Customer-specific design / configuration
- Optional manual actuator with alignment frame or FAP. Allows post-singulation contact