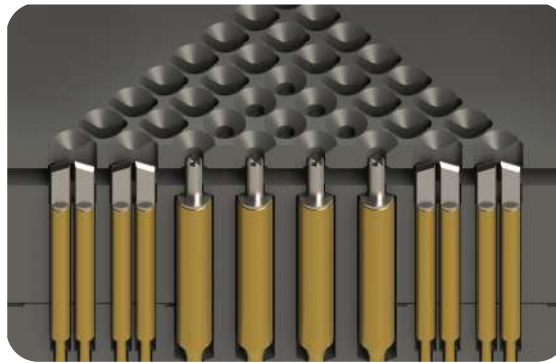


Hydra 322 Contactor/Probe Head

Common Test Height Probe Product Line - for Power and RF



Automotive & Power



High End Digital



Mobility



Precision Analog & Sensors



RF

Benefits

- Lower CoT - common test heights to standardize change kits and hardware
- Interchangeability - RF and power probes within the same contactor housing
- Streamline probe management; fewer part numbers to manage
- Shorter lead times and stock availability
- Optimized for cRES performance

Key Features

- Standard and Kelvin probe options available
- Combine with Cohu cRacer, ICON, or xWave-technology for optimized RF performance
- Three tip styles to select from: point, 4-point crown, and Kelvin
- Maximum compliance for large array packages
- Robust solution for package plating from Matte Tin to NiPd

- 500K cycles for packaged device
- Temperature range -55°C to +200°C

- Pitches down to 0.15 mm
- BGA, QFN, QFP, WLCSP, SO, and more

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Hydra 322 Standard Probes

Electrical Specifications	0.15 mm*	0.30 mm	0.40 mm	0.50 mm	0.80 mm
Insertion Loss (GSG -1 dB)	> 20 GHz	22 GHz	16 GHz	16 GHz	18 GHz*
Return Loss (GSG -10 dB)	> 20 GHz	17 GHz	13 GHz	13.5 GHz	15 GHz*
Self Inductance	0.40 nH	0.46 nH	0.41 nH	0.48 nH	0.40 nH*
Contact Resistance **	150 mΩ	45 mΩ	41 mΩ	30 mΩ	28 mΩ
Continuous Current Carrying Capacity (CCC)	1.0 A	1.9 A	2.5 A	2.7 A	3.3 A*
Maximum CCC @ 1% Duty Cycle	7.5 A	11.5 A	16.8 A	19.3 A	35 A*
Mechanical Specifications					
Force at Test Height	3 g	19 g	27 g	33 g	30 g
Test Height	3.22 mm	3.22 mm	3.22 mm	3.22 mm	3.22 mm
DUT Side Compliance	280 μm	280 μm	280 μm	280 μm	280 μm
Temperature	-55°C to 155°C	-55°C to 155°C	-55°C to 155°C	-55°C to 155°C	-55°C to 155°C
Life Cycle	1M singulated 2M cycles on wafer	1M singulated 2M cycles on wafer	1M singulated 2M cycles on wafer	1M singulated 2M cycles on wafer	1M singulated 2M cycles on wafer

Hydra 322 Kelvin Probes

Electrical Specifications	0.15 mm*	0.30 mm	0.35 mm	0.40 mm
Insertion Loss (GSG -1 dB)	20 GHz	22 GHz	26 GHz	16 GHz
Return Loss (GSG -10 dB)	18 GHz	17 GHz	15 GHz	13 GHz
Self Inductance	0.50 nH	0.46 nH	0.52 nH	0.41 nH
Contact Resistance **	150 mΩ	55 mΩ	44 mΩ	43 mΩ
Continuous Current Carrying Capacity (CCC)	1.0 A	1.5 A	1.9 A	3 A
Maximum CCC @ 1% Duty Cycle	8.6 A	10.1 A	14.6 A	18.8 A
Mechanical Specifications				
Force at Test Height	15 g	16 g	18 g	21 g
Test Height	3.22 mm	3.22 mm	3.22 mm	3.22 mm
DUT Side Compliance	280 μm	280 μm	280 μm	280 μm

Reliability ***

- 500K cycles for packaged device
- 1M cycles for WLCSP test

Packages and Applications

- Grid array packages: BGA, LGA, WLCSP
- Leadless packages: QFN, QFP, SO

DUT Tip Style

- Three tip styles: point, 4-point crown, and Kelvin

* Expected performance per simulation

** Typical resistance measured between Au plated sheets

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

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.

Temperature Range

- -55°C to +155°C for standard
- -55°C to +200°C for Kelvin

Materials

- Housing material: Vespel® SP-1, Plavis® N, MDS-100 or ceramic (others available)
- Spring probe DUT tip plating: homogenous alloy, PD alloy or gold available

Configuration/Interface Option

- Automated test: handler-specific design and, optional manual actuator