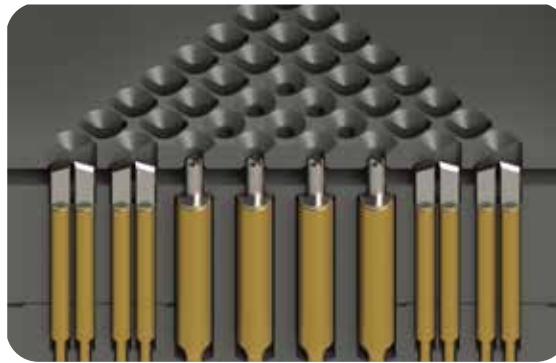


Hydra 322 Contactor/Probe Head

Common Test Height Probe Product Line - for Power and RF



Automotive & Power



High End Digital



Mobility



Precision Analog & Sensors



RF

Benefits

- Shorter lead times and stock availability
- Next generation, optimized design – low, stable cRES, high current, longer life
- Lower CoT - common test heights to allow standardization of change kits and hardware
- Interchangeability - RF and power probes within the same contactor housing

Key Features

- Robust options for package plating from Matte Tin, NiPd, ENIG to SACQ
- Combine with Cohu cRacer, ICON, or xWave-technology for optimized RF performance
- Four tip styles: point, 4-point crown, Kelvin, and Kelvin Super Sharp
- Maximum compliance for large array packages

- 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 ⁽¹⁾	0.20 mm	0.30 mm	0.35 mm	0.40 mm	0.50 mm	0.80 mm
Insertion Loss (GSG -1 dB)	> 20 GHz	> 20 GHz ⁽¹⁾	22 GHz	18 GHz	16 GHz	16 GHz	14 GHz
Return Loss (GSG -10 dB)	> 20 GHz	> 20 GHz ⁽¹⁾	17 GHz	14 GHz	13 GHz	13.5 GHz	11 GHz
Self Inductance	0.40 nH	0.40 nH ⁽¹⁾	0.46 nH	0.39 nH	0.41 nH	0.48 nH	0.45 nH
Contact Resistance ⁽²⁾	150 mΩ	135 mΩ	45 mΩ	44 mΩ	41 mΩ	30 mΩ	28 mΩ
Continuous Current Carrying Capacity (CCC)	1.0 A	1.0 A	1.9 A	2.0 A	2.5 A	2.7 A	3.3 A
Max CCC @ 1% Duty Cycle (20°C T-Rise)	7.5 A	5.75 A	11.5 A	13.8 A	16.8 A	19.3 A	35 A
Mechanical Specifications							
Force at Test Height	3 g	4.4 g	19 g	22 g	27 g	33 g	30 g
Test Height	3.22 mm	3.22 mm	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	280 μm	280 μm

Hydra 322 Kelvin Probes

Electrical Specifications	0.15 mm ⁽¹⁾	0.30 mm	0.35 mm	0.40 mm
Insertion Loss (GSG -1 dB)	20 GHz	22 GHz	18 GHz	16 GHz
Return Loss (GSG -10 dB)	18 GHz	17 GHz	14 GHz	13 GHz
Self Inductance	0.50 nH	0.46 nH	0.39 nH	0.41 nH
Contact Resistance ⁽²⁾	150 mΩ	55 mΩ	44 mΩ	43 mΩ
Continuous Current Carrying Capacity (CCC)	1.0 A	1.5 A	1.9 A	3 A
Max CCC @ 1% Duty Cycle (20°C T-Rise)	8.6 A	10.1 A	14.6 A	18.8 A
Mechanical Specifications				
Force at Test Height	3 g	16 g	18 g	21 g
Test Height	3.22 mm	3.22 mm	3.22 mm	3.22 mm
DUT Tip-to-Tip Compliance	TBD	50 μm	60 μm	70 μm

Reliability ⁽³⁾

- 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

- Tip styles: point, 4-point crown, Kelvin, and Kelvin Super Sharp

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)
- DUT tip materials: 2-2H, NO1, PD Alloy, PICO® or gold available

Configuration/Interface Option

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

⁽¹⁾ Expected performance per simulation

⁽²⁾ Typical resistance measured between Au plated sheets

⁽³⁾ 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.