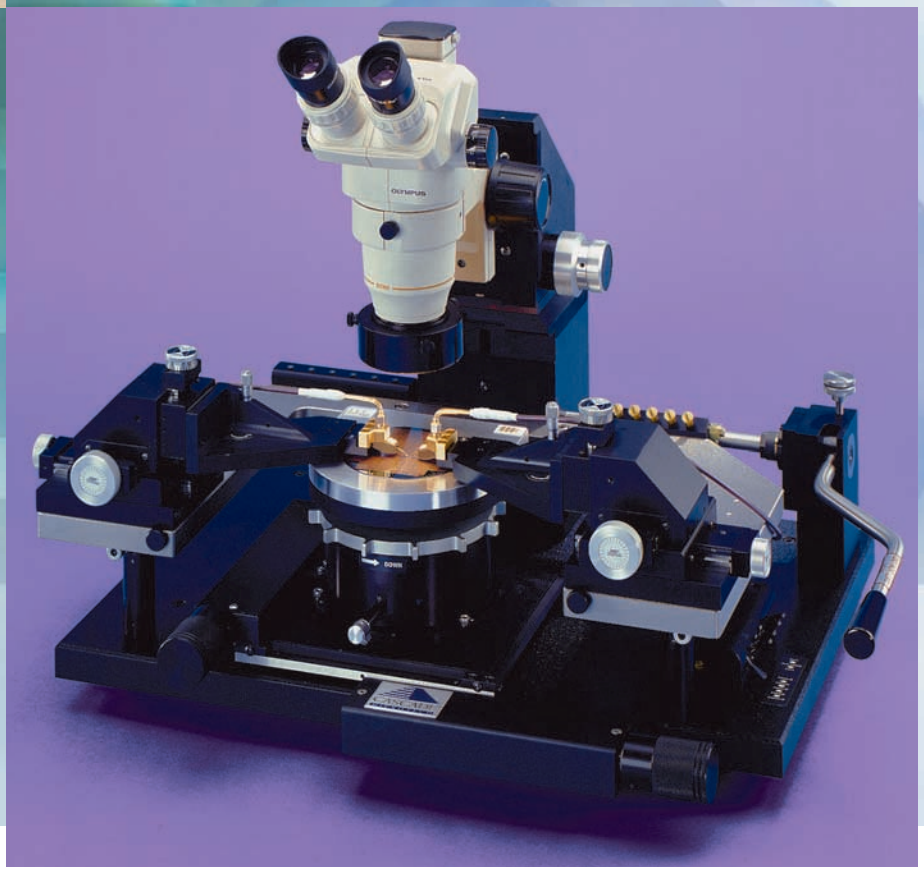




State-of-the-art microwave probing made easy

The RF-1 Microwave Probe Station provides the ideal general purpose benchtop solution, in a compact, low-cost design. The RF-1 combines precision movement and stability with high value microwave probing features, and accommodates the full range of Cascade's microwave probing tools.

CASCADE® MICROTECH

Innovating Test Technologies

Features

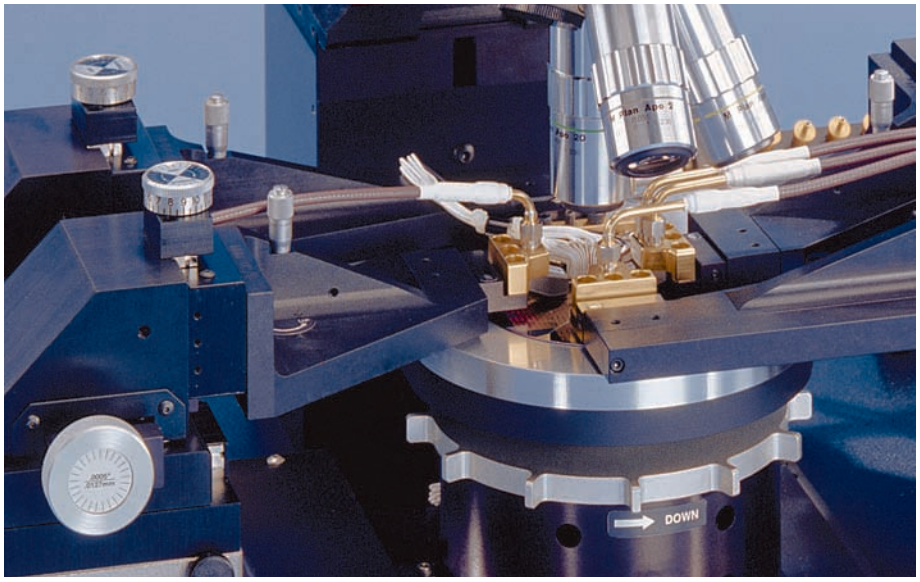
- Compact benchtop design
- Precision 150mm (6") x-y stage
- 1 in. adjustable z-chuck height
- 150 mm (6 in.) microwave chuck
- Patented auxiliary chucks for calibration substrates
- Switch-selectable vacuum zones
- 1 in. coaxial x-y microscope transport with safety lock
- Tilt-back high power microscope option with compound lift
- High rigidity microwave platen, with precision linear lift
- Accommodates up to 4 microwave positioners
- Microwave thermal chuck option (includes auxiliary chucks)

Benefits

- Low-cost microwave solution
- Quickly calibrate and measure using the microwave chuck - holds Impedance Standard Substrates (ISS), contact substrate and wafer simultaneously
- Fast, precise, movement between test sites with orthogonal x-y stage translation and linear z-lift
- Accurate over-temperature microwave measurements with the patented auxiliary chucks for calibration substrates
- No vacuum rings - prevents breakage of thin substrates and ensures no resonant structures below 325 GHz
- Probe shards and entire wafers on the same chuck surface
- Microscope can be locked in the tilt-up position to safely change probes or microscope objectives
- Low-profile design for operator comfort

Applications

- Accurate S-parameter device measurements
- Package and interconnect probing
- Hybrid probing, thermal analysis
- Electro-optic device probing
- Design engineering
- Production test, reliability testing
- Incoming inspection



The RF-1 easily configures to a 4-port microwave setup with high power microscope. Note the unique microwave chuck that holds an ISS contact substrate and test wafer simultaneously.

Specifications

X-Y stage

Travel: 152 x 152 mm (6 in. x 6 in.)
Type: Ball bearings, V-ways
Drives: Precision barrel-driven lead screw
Resolution: 5 mm (0.2 in.) per turn

Microwave Wafer Chuck

Size: 152 mm (6 in.) semi-square with 2 integrated auxiliary chucks
Material: nickel plated aluminum
Flatness: 10 µm (0.39 mils) across total surface
Isolation: >100 MΩ
Breakdown bias voltage: >500 V
Theta motion: 90° with lock
Z motion: Precision 25.4mm (1 in.) linear

Platen Lift

Type: lever-actuated linear motion
Distance: 25.4 mm (1 in.) total. 5.1 mm (0.2 in.) independent of optics with tilt-back option

Facility Requirements

Chuck vacuum: 400 mm (15 in.) Hg. min.

Dimensions

Station: 46 cm (18 in.) D x 61 cm (24 in.) W
Height to eyepieces: 48 cm (19 in.)
Net weight: 68 kg (152 lb.)
Crate: 99.6 cm W x 76.2 cm D x 85.09 cm H (39 x 30 x 33.5 in.)

Accessories

Refer to the *Summit Configuration Guide* for compatible accessories

Ordering Information

RF-1 Microwave probe station. . *RF-1*
Thermal chuck kit. *111-720*
Tilt back high-power microscope lift kit. *111-722*
Low power microscope mount kit *111-716*
Microwave positioners . . . *MH5/XX*

CASCADE® MICROTECH

Innovating Test Technologies for better measurements faster

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