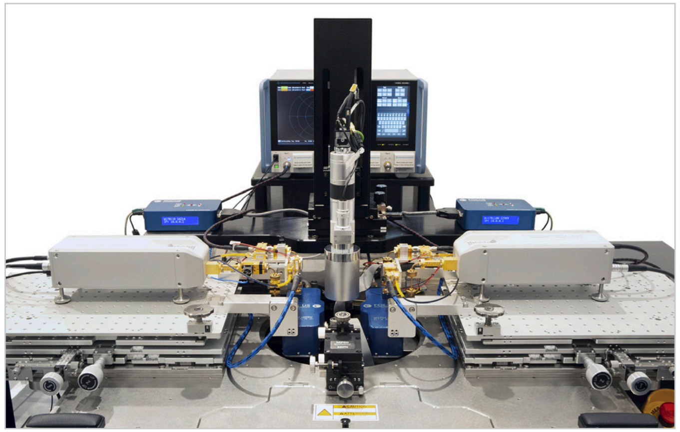
ROHDE & SCHWARZ

Make ideas real

ON-WAFER TESTING

Partner solutions – probe stations



Turnkey solution for on-wafer RF testing

RF probe stations are designed for precise and efficient testing of semiconductor devices at the wafer and die level, enabling reliable and secure high frequency measurements. These systems automate the positioning and contact of RF probes, ensuring repeatable and accurate measurements. Compared to mechanical probe stations, automated versions significantly reduce the time and labor required for testing large numbers of devices.

Key specifications		
Application	Characterize active and passive components at both the wafer and die levels	
On-wafer system calibration	Supported by MPI QAlibria	Supported by FormFactor WinCal
Supported vector network analyzers	R&S®ZNA, R&S®ZNB, R&S®ZNB3000	
Maximum frequency support	R&S®ZNA	R&S®ZNB
With converters (only R&S®ZNA)	Up to 1.1 THz	Up to 43 GHz

Our solution partners

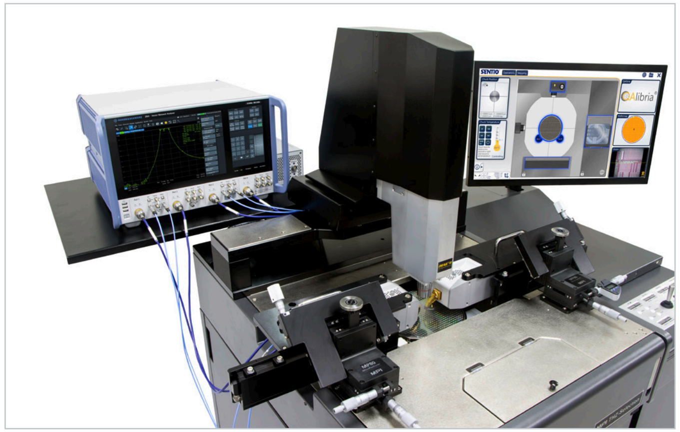
- MPI Corporation
- FormFactor

Your benefit	Features
Proven solution	▶ Both partners integrate Rohde & Schwarz vector network analyzers and frequency converters – tested and proven solutions that offer reliable and precise on-wafer measurements – into their setups with a probe station and supporting calibration software ▶ Solutions can be extended to include tuners to cover load pull applications
One-stop contact	▶ Rohde & Schwarz enhances the customer experience by providing application know-how for various solutions, streamlining the process of finding and implementing the right products or services ▶ Combining the variety of Rohde & Schwarz products with services from multiple probe station partners allows different needs and preferences to be catered to
Vector network analyzer and probe stations expertise	▶ We and our partners can support you and provide demonstrations and guidance for your on-wafer RF measurements ▶ Access to customer support, training and resources from both Rohde & Schwarz and probe station partner companies

For options, prices and more information, visit
www.rohde-schwarz.com

MPI solution

MPI Corporation provides advanced probe stations, RF probes and measurement accessories for accurate and efficient on-wafer testing of semiconductor devices. The company covers applications in RF and in the microwave and millimeterwave frequencies.



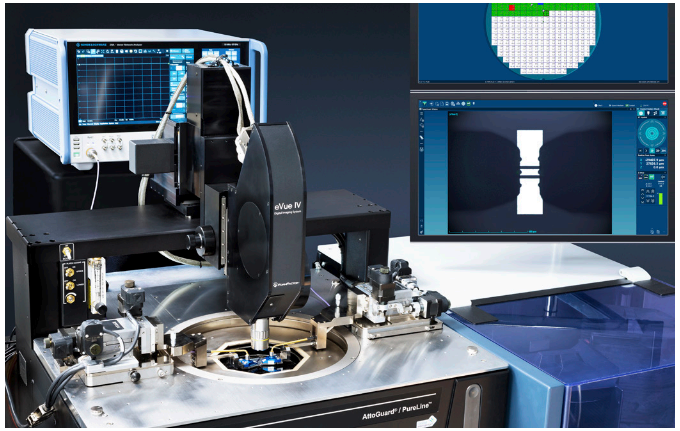
Summary

The R&S®ZNA vector network analyzer is a key instrument for RF measurements. It can perform standard S-parameter characterization and specialized measurements for power amplifiers and mixers, including gain compression, intermodulation and group delay. It operates at frequencies up to 110 GHz with up to 4 ports, and can be extended to 1.1 THz using R&S®ZCxxx millimeterwave converters.

The R&S®ZNA provides full control over these frequency converters for both manual and automated operations. When used on probe stations from MPI or FormFactor, the application range is extended to on-wafer testing.

FormFactor solution

FormFactor offers a comprehensive range of probe stations, RF probes and analytical tools designed for precise on-wafer testing of semiconductor devices. The company supports applications in RF and the microwave and millimeterwave frequencies.



Useful marketing collateral

On-wafer qualification of RF components
https://scdn.rohde-schwarz.com/ur/pws/dl_downloads/dl_application/pdfs/On-wafer-qualification-of-RF-components_ac_en_5216-2460-92_v0100.pdf

On-wafer characterization at sub-THz frequencies
https://scdn.rohde-schwarz.com/ur/pws/dl_downloads/pdm/cl_brochures_and_datasheets/application_card/3608_9624_92/On-wafer-characterization-sub-THz_ac_en_3608-9624-92_v0200.pdf

Differential RF on-wafer measurements up to 110 GHz on MPI probe stations
https://scdn.rohde-schwarz.com/ur/pws/dl_downloads/pdm/cl_brochures_and_datasheets/application_card/3610_1304_92/Differential-RF-on-wafer-measurements_ac_en_3610-1304-92_v0100.pdf

Three-port on-wafer mixer measurements up to the THz range on MPI probe stations
https://scdn.rohde-schwarz.com/ur/pws/dl_downloads/pdm/cl_brochures_and_datasheets/application_card/3610_1310_92/Three-port-on-wafer-mixer-measurements_ac_en_3610-1310-92_v0100.pdf

R&S®ZNA models

Description	Type
Vector network analyzer, 2 or 4 ports, 26.5 GHz, 3.5 mm connectors	R&S®ZNA26
Vector network analyzer, 2 or 4 ports, 43.5 GHz, 2.92 mm or 2.4 mm connectors	R&S®ZNA43
Vector network analyzer, 2 or 4 ports, 50 GHz, 2.4 mm connectors	R&S®ZNA50
Vector network analyzer, 2 or 4 ports, 67 GHz, 1.85 mm connectors	R&S®ZNA67
Vector network analyzer system, 2 or 4 test ports, 110 GHz, complete system based on R&S®ZNA67, 2-port or 4-port model, standard or high power	R&S®ZNA67EXT

R&S®ZNB/R&S®ZNB3000 models

Description	Type
Vector network analyzer, 2 or 4 ports, 4.5 GHz, N connectors	R&S®ZNB3004
Upgrade R&S®ZNB3004 to 9 GHz, 2 or 4 ports, N connectors	R&S®ZNB3-B082/084
Vector network analyzer, 2 or 4 ports, 20 GHz, 3.5 mm connectors	R&S®ZNB3020
Upgrade R&S®ZNB3020 to 26.5 GHz, 2 or 4 ports, 3.5 mm connectors	R&S®ZNB3-B262/264
Vector network analyzer, 2 or 4 ports, 43.5 GHz, 2.92 mm or 2.4 mm connectors	R&S®ZNB43

Your local Rohde & Schwarz expert will help find the best solution for you. Contact your local Rohde & Schwarz sales office for more information.

www.rohde-schwarz.com | www.rohde-schwarz.com/support | www.training.rohde-schwarz.com

On-wafer testing
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Data without tolerance limits is not binding | Subject to change