

PRESS RELEASE

Rosenberger presents new RPC-0.80 precision series for measurements up to 145 GHz

New interface for high-precision RF measurement technology, terahertz communication, cryogenic and quantum technology, as well as radar and satellite systems

Fridolfing, October 1, 2025 – Rosenberger Hochfrequenztechnik GmbH & Co. KG presents the new RPC-0.80 series, an innovative interface for specified transmissions up to 145 GHz. The precision coaxial connector enables high-precision measurements and low-loss connections in the sub-THz range and is particularly suitable for applications in which conventional interfaces such as 1.00 mm or 1.85 mm reach their physical limits. It is based on the international standards IEC 61169-64 and IEEE Std 287, which define the mechanical and electrical interfaces as well as the requirements for precision coaxial connectors for high-frequency and microwave measurements.

The growing demand for broadband high-frequency solutions in areas such as sub-THz and terahertz communication, radar and satellite systems, scientific spectroscopy and material characterization requires precise, impedance-controlled connector systems. The RPC-0.80 meets these requirements, offering high signal integrity and stable frequency transmission characteristics.

Stable electrical properties

The RPC-0.80 is based on an air dielectric coaxial structure with a characteristic impedance of 50 ohms, and has the following characteristics:

- Very low mode dispersion
- Minimal reflection factor
- Precise mechanical tolerances and tight manufacturing limits

These features ensure high repeatability, even with frequent plugging and unplugging, and guarantee stable signal integrity across the entire frequency range.

Precise measurement results

With excellent return loss values (S_{11}/S_{22}) across the entire frequency range, and low insertion loss (S_{21}/S_{12}) within the 145 GHz application range, the RPC-0.80 is ideal for use in areas requiring high-precision RF measurement technology.

- Cryogenic and quantum technology
- High-precision RF measurement technology
- On-wafer probing
- Radar and satellite systems
- Modular test systems

An important step towards terahertz

The introduction of the RPC-0.80 connector represents a significant step forward in the miniaturization and enhancement of RF interface performance. Closing the gap between established series such as 1.00 mm (110 GHz) and future terahertz systems, it enables defined mode freedom up to 145 GHz.

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Complete solution portfolio

The new RPC-0.80 is a valuable addition to Rosenberger's extensive range of products, which includes PCB and cable connectors, test PCBs, standard and custom cable assemblies, adapters (in-series and inter-series), waveguide-to-coaxial adapters, and a wide range of specialized tools. Rosenberger thus provides users with comprehensive expertise in solutions, from development and measurement technology to reliable system integration.

For more information, please visit:

<https://www.rosenberger.com/de/produkt/rpc-080/>

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	RPC-0.80 product portfolio
	Title RPC-0.80 Precision Connectors
	RPC-0.80 applications chip testing

About Rosenberger

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Rosenberger is a globally renowned manufacturer of electronic components and systems, recognized for cutting-edge technologies, engineering excellence, and uncompromising quality. Headquartered in Germany, the

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Rosenberger Group operates worldwide with numerous sales and production locations, offering a broad range of standardized and customized connectivity solutions in RF, high-voltage, and fiber optic technologies.

Rosenberger ensures the reliable transmission of signals, data, and power in the most demanding application areas. Leading high-tech companies across sectors such as mobile communications and telecommunications, industrial measurement technology, automotive electronics, medical and industrial electronics, data centers, and aerospace rely on Rosenberger products for their precision and outstanding reliability.

The company's CNC machining division produces precision parts for various industries, including the automotive and commercial vehicle sectors, shipbuilding, and classic mechanical and plant engineering.

Since its founding in 1958, Rosenberger has been family-owned and currently employs around 15,000 people worldwide. The company's employees are known for their dedication, innovative spirit, and commitment to quality, all firmly rooted in the values of a traditional family business.

For more information, please visit: www.rosenberger.com

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