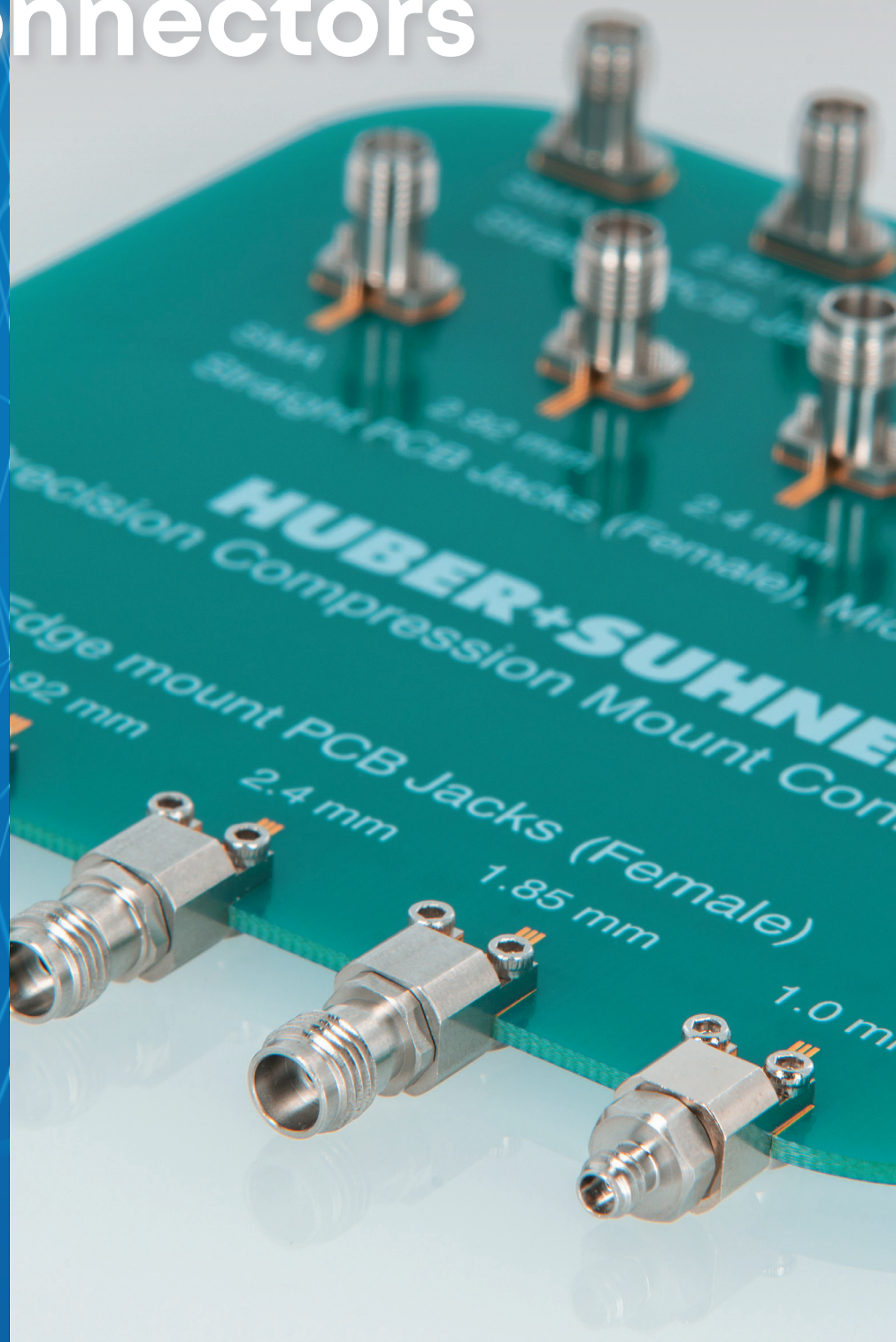


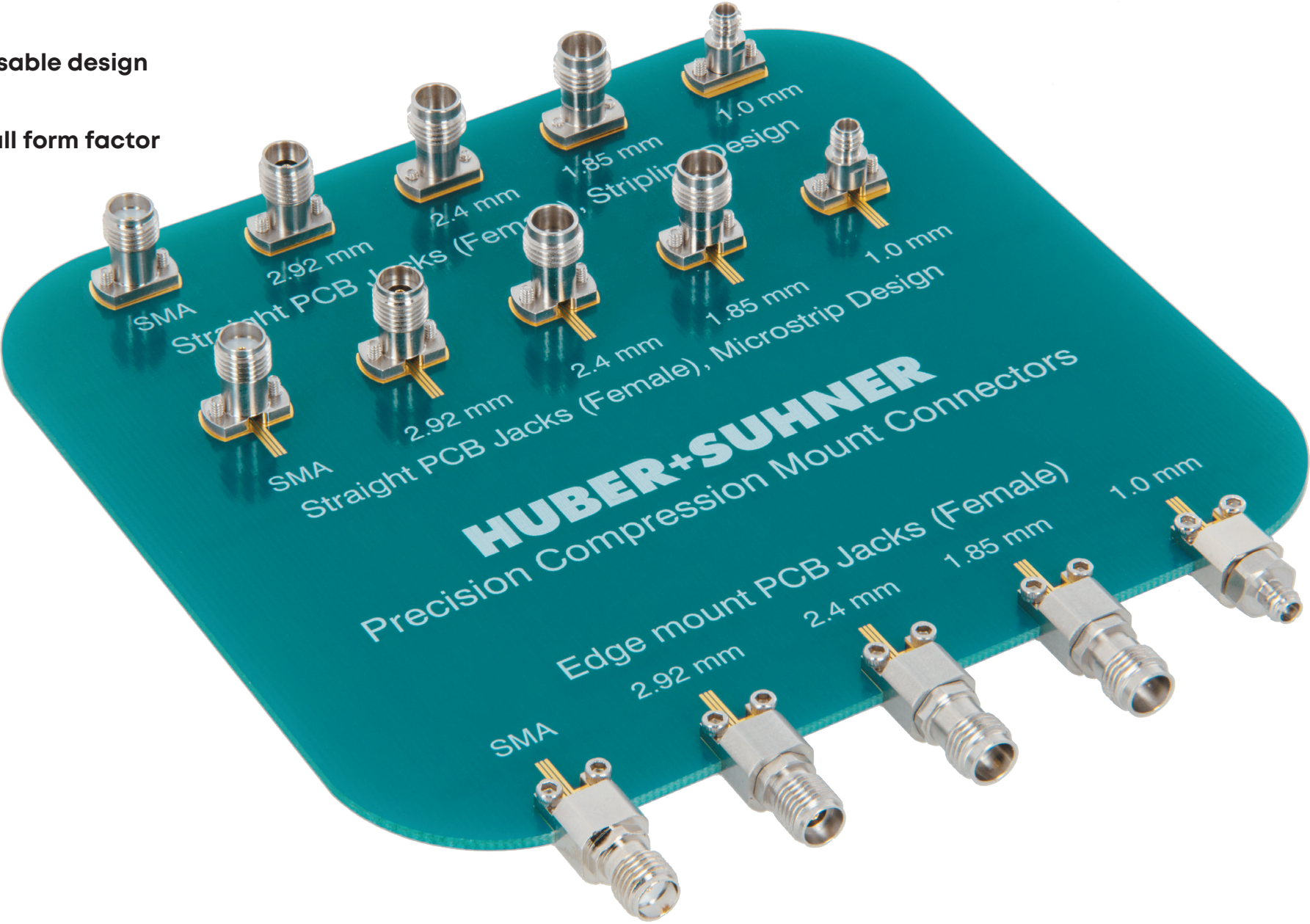
Precision compression mount PCB connectors

Edition 2024



Precision compression mount PCB connectors for reliable and efficient signal performance

-  Fast and easy installation
-  Precision testing up to 110 GHz
-  Reusable design
-  Small form factor



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Innovation partner for high-speed testing solutions

HUBER+SUHNER offers a broad range of high-end RF test components and assemblies, developed and optimized for high-speed digital testing. Our connectivity portfolio can be distinguished by highest density, lowest loss and optimal performance coaxial-to-PCB transitions and cabling solutions. Additionally, we provide technical support, along with libraries of 3D files, electrical modelling data and customized footprints tailored to meet individual requirements.

The precision compression mount PCB connector portfolio features a durable, rugged design providing a fast and easy installation in applications covering frequencies from DC up to 110 GHz.

Applications

- Test and characterization boards
- High-speed digital evaluation and reference boards
- Internal connectivity in systems

Portfolio overview

Straight PCB jacks (female), microstrip design

SMA, SK (2.92 mm), PC 2.4 (2.4 mm), PC 1.85 (1.85 mm) and PC 1.0 (1.0 mm) type of connectors



Straight PCB jacks (female), stripline design

SMA, SK (2.92 mm), PC 2.4 (2.4 mm), PC 1.85 (1.85 mm) and PC 1.0 (1.0 mm) type of connectors



Edge mount PCB jacks (female)

SMA, SK (2.92 mm), PC 2.4 (2.4 mm), PC 1.85 (1.85 mm) and PC 1.0 (1.0 mm) type of connectors



Straight PCB jacks (female)

General technical data

Electrical data (typical)	Testing condition	Performance
Impedance		50 Ω
Interface standard		SMA: MIL-STD-348B SK (2.92 mm): MIL-STD-348B PC 2.4 (2.4 mm): MIL-STD-348B PC 1.85 (1.85 mm): IEEE 287 PC 1.0 (1.0 mm): IEEE 287
Interface frequency max.		SMA: 26.5 GHz SK (2.92 mm): 40 GHz PC 2.4 (2.4 mm): 50 GHz PC 1.85 (1.85 mm): 67 GHz PC 1.0 (1.0 mm): 110 GHz
Return loss	Gated measurement: cable connector / PCB transition (HUBER+SUHNER evaluation boards)	SMA: ≥ 20 dB up to 26.5 GHz SK (2.92 mm): ≥ 20 dB up to 40 GHz PC 2.4 (2.4 mm): ≥ 20 dB up to 50 GHz PC 1.85 (1.85 mm): ≥ 17 dB up to 67 GHz PC 1.0 (1.0 mm): ≥ 15 dB up to 110 GHz

Mechanical data (typical)	Testing condition	Performance
Number of matings		≥ 500

Environmental data (typical)	Testing condition	Performance
Temperature range		-40 °C ... 165 °C / -40 °F ... 329 °F
2011/65/EC (RoHS)		Compliant
2006/1907/EC (REACH)		Compliant

Material data cable connector	Material	Surface plating
Centre contact	Copper beryllium alloy	Gold plating
Outer contact	Stainless steel	Passivated
Body	Stainless steel	Passivated
Isolator	Ultem 1000	N/A
Other parts / nuts / screws	Stainless steel	Passivated

SMA – Straight PCB jacks (female)

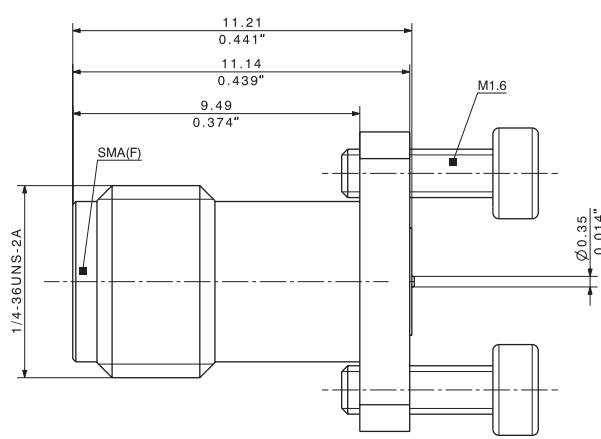
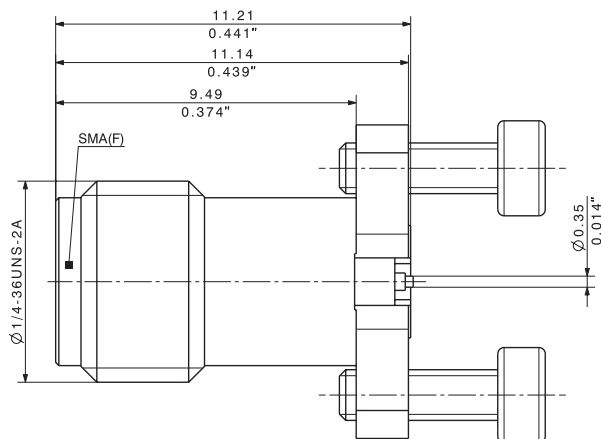
- Microstrip version
- Stripline version



Fig. 1



Fig. 2



Ordering information

Figure	Type	Item number	Packaging	Note
1	82_SMA-S50-0-200/199_NE	85221619	Single	Microstrip version
2	82_SMA-S50-0-201/199_NE	85221620	Single	Stripline version

SK (2.92 mm) – Straight PCB jacks (female)

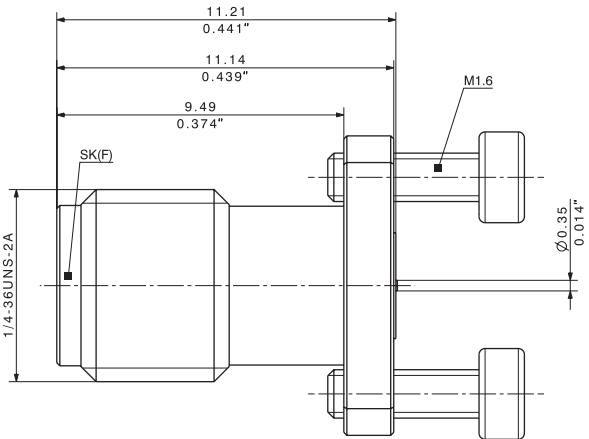
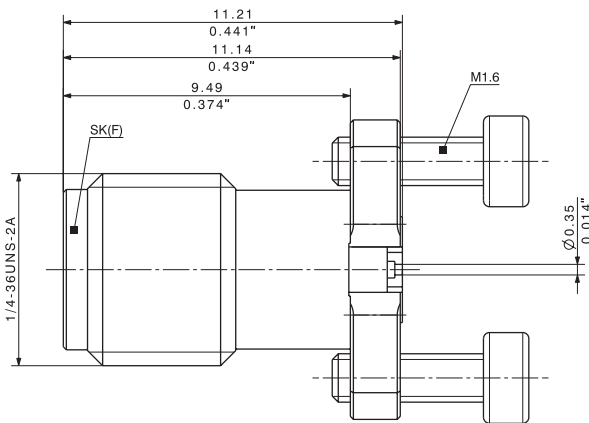
- Microstrip version
- Stripline version



Fig. 1



Fig. 2



Ordering information

Figure	Type	Item number	Packaging	Note
1	82_SK-S50-0-200/199_NE	85221621	Single	Microstrip version
2	82_SK-S50-0-201/199_NE	85221622	Single	Stripline version

PC 2.4 (2.4 mm) – Straight PCB jacks (female)

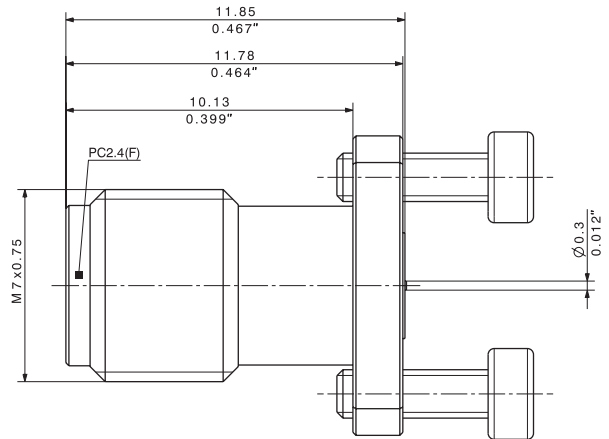
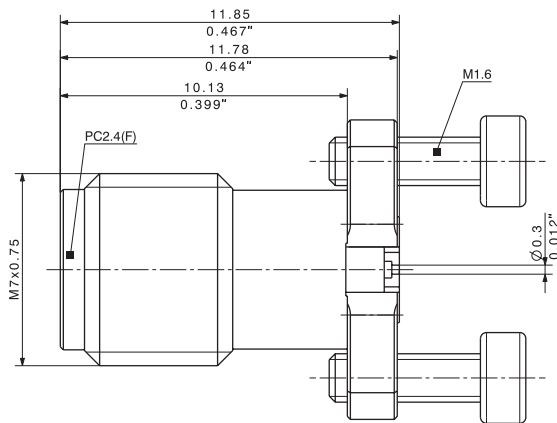
- Microstrip version
- Stripline version



Fig. 1



Fig. 2



Ordering information

Figure	Type	Item number	Packaging	Note
1	82_PC24-S50-0-200/199_NE	85221623	Single	Microstrip version
2	82_PC24-S50-0-201/199_NE	85221624	Single	Stripline version

PC 1.85 (1.85 mm) – Straight PCB jacks (female)

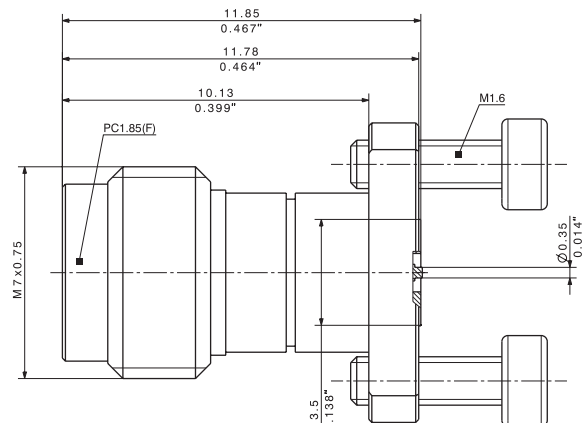
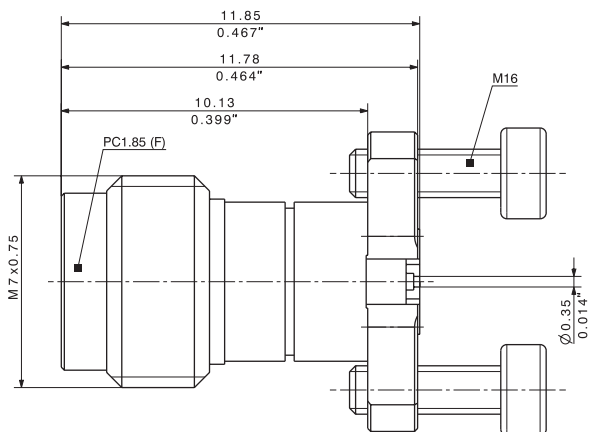
- Microstrip version
- Stripline version



Fig. 1



Fig. 2



Ordering information

Figure	Type	Item number	Packaging	Note
1	82_PC185-S50-0-200/199_NE	85221625	Single	Microstrip version
2	82_PC185-S50-0-201/199_NE	85221626	Single	Stripline version

PC 1.0 (1.0 mm) – Straight PCB jack (female)

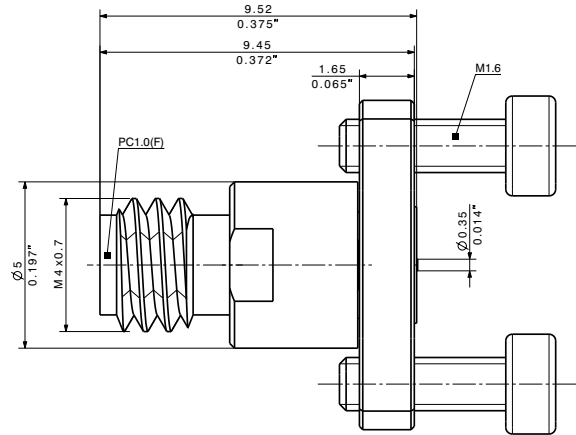
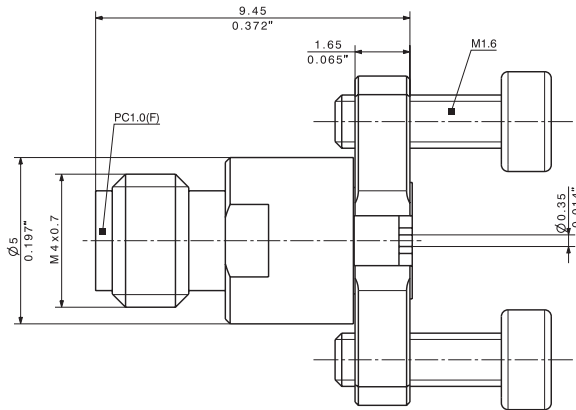
- Microstrip version
- Stripline version



Fig. 1



Fig. 2



Ordering information

Figure	Type	Item number	Packaging	Note
1	82_PC1-S50-0-200/199_NE	85221628	Single	Microstrip version
2	82_PC1-S50-0-201/199_NE	85246077	Single	Stripline version

Edge mount PCB jacks (female)

General technical data

Electrical data (typical)	Testing condition	Performance
Impedance		50 Ω
Interface standard		SMA: MIL-STD-348B SK (2.92 mm): MIL-STD-348B PC 2.4 (2.4 mm): MIL-STD-348B PC 1.85 (1.85 mm): IEEE 287 PC 1.0 (1.0 mm): IEEE 287
Interface frequency max.		SMA: 26.5 GHz SK (2.92 mm): 40 GHz PC 2.4 (2.4 mm): 50 GHz PC 1.85 (1.85 mm): 67 GHz PC 1.0 (1.0 mm): 110 GHz
Return loss	Gated measurement: cable connector / PCB transition (HUBER+SUHNER evaluation boards)	SMA: ≥ 17 dB up to 26.5 GHz SK (2.92 mm): ≥ 17 dB up to 40 GHz PC 2.4 (2.4 mm): ≥ 17 dB up to 50 GHz PC 1.85 (1.85 mm): ≥ 15 dB up to 67 GHz PC 1.0 (1.0 mm): ≥ 10 dB up to 110 GHz

Mechanical data (typical)	Testing condition	Performance
Number of matings		≥ 500

Environmental data (typical)	Testing condition	Performance
Temperature range		-40 °C ... 165 °C / -40 °F ... 329 °F
2011/65/EC (RoHS)		Compliant
2006/1907/EC (REACH)		Compliant

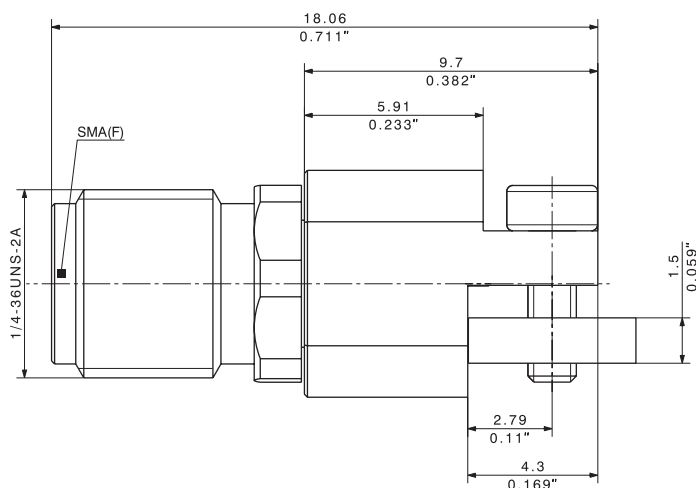
Material data cable connector	Material	Surface plating
Centre contact	Copper beryllium alloy	Gold plating
Outer contact	Stainless steel	Passivated
Body	Stainless steel	Passivated
Isolator	Ultem 1000	N/A
Other parts / nuts / screws	Stainless steel	Passivated

SMA – Edge mount PCB jack (female)

- Microstrip version



Fig. 1



Ordering information

Figure	Type	Item number	Packaging	Note
1	92_SMA-S50-0-200/122_NE	85221629	Single	Microstrip version

SK (2.92 mm) – Edge mount PCB jack (female)

- Microstrip version

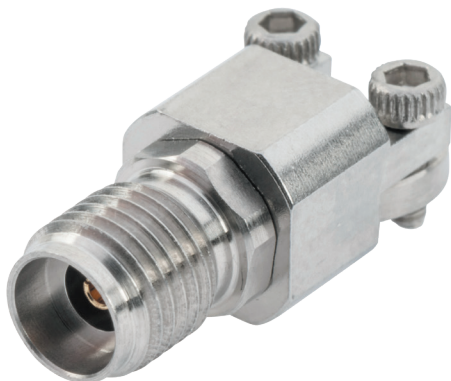
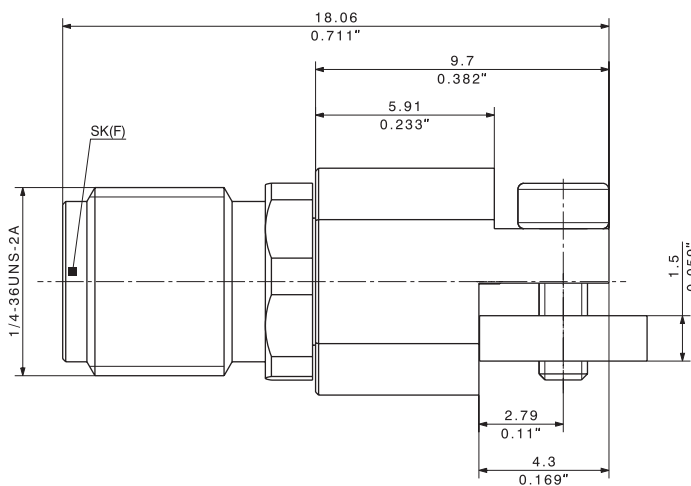


Fig. 1



Ordering information

Figure	Type	Item number	Packaging	Note
1	92_SK-S50-0-200/199_NE	85221630	Single	Microstrip version

PC 2.4 (2.4 mm) – Edge mount PCB jack (female)

- Microstrip version

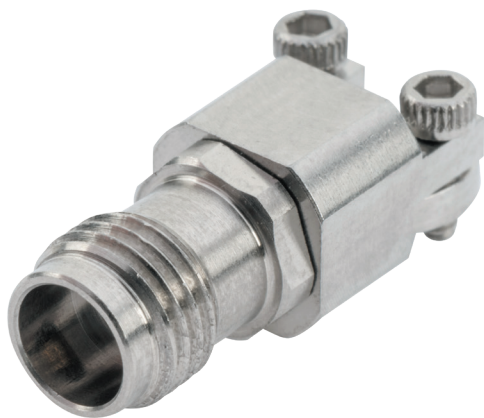
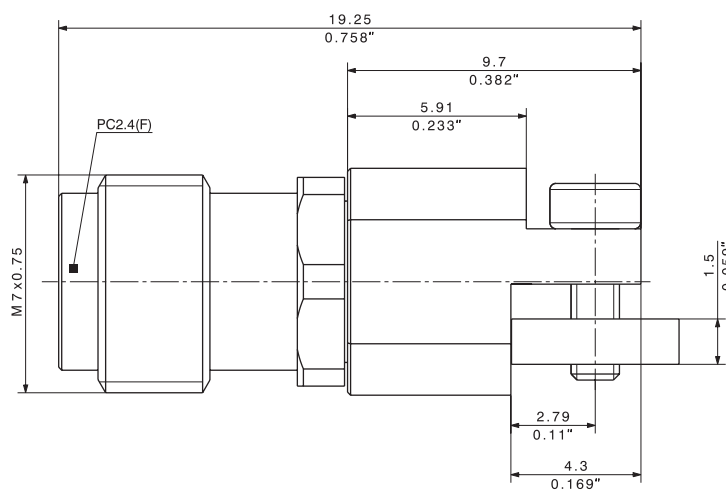


Fig. 1



Ordering information

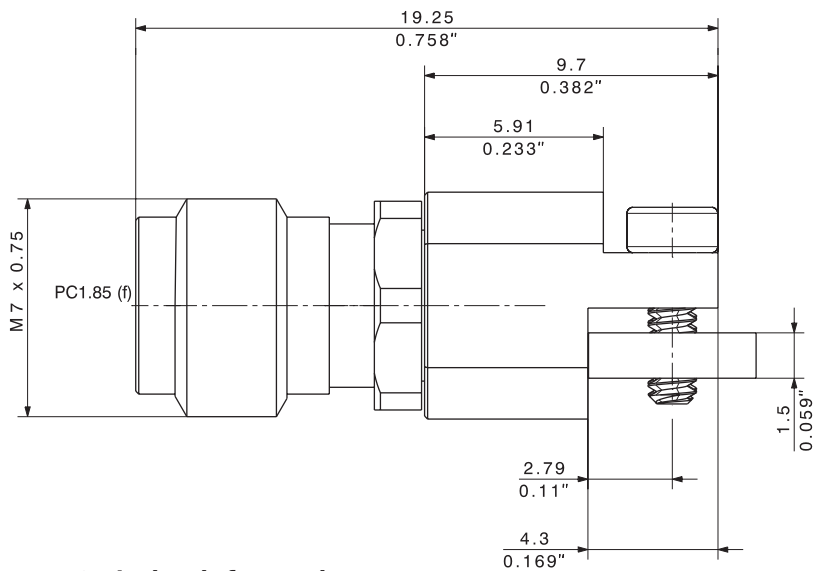
Figure	Type	Item number	Packaging	Note
1	92_PC24-S50-0-200/199_NE	85221631	Single	Microstrip version

PC 1.85 (1.85 mm) – Edge mount PCB jack (female)

- Microstrip version



Fig. 1



Ordering information

Figure	Type	Item number	Packaging	Note
1	92_PC185-S50-0-200/199_NE	85221632	Single	Microstrip version

PC 1.0 (1.0 mm) – Edge mount PCB jack (female)

- Microstrip version

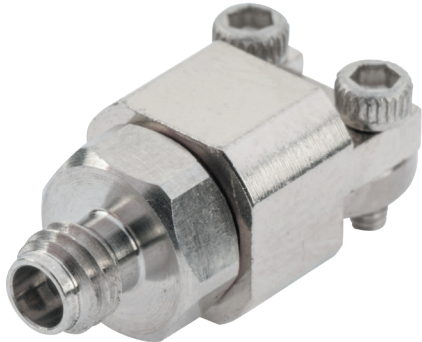
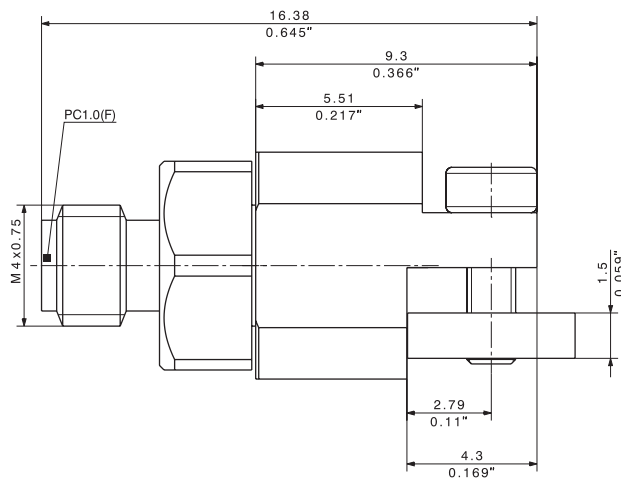


Fig. 1



Ordering information

Figure	Type	Item number	Packaging	Note
1	92_PC1-S50-0-200/199_NE	85221633	Single	Microstrip version

Accessories

Stiffener block for straight PCB jacks (female)

- Avoids bending of PCB

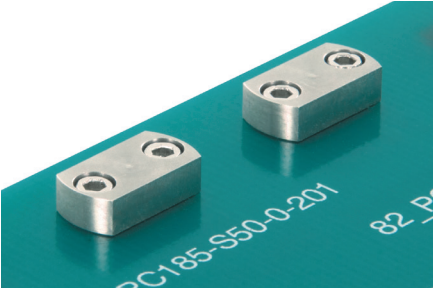
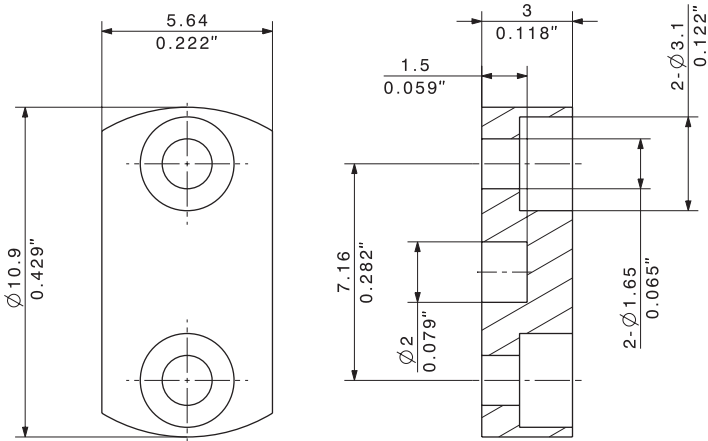
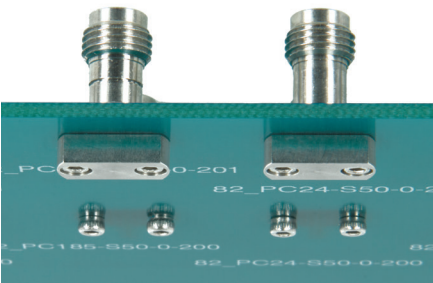


Fig. 1



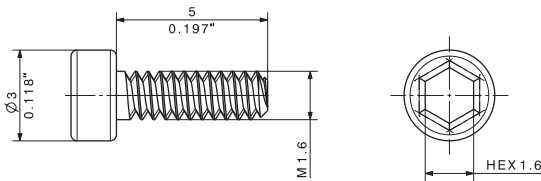
Ordering information

Figure	Type	Item number	Packaging	Note
1	73_Z-0-0-1089	85221634	10 pcs/bag	Fits all connector series

Allen screws



Fig. 1



Ordering information

Figure	Type	Item number	Packaging	Note
1	73_Z-0-0-1097	85221635	20 pcs/bag	Fits all connector series

Comprehensive design data

3D electromagnetic simulation solutions for all your design needs – for current and future PCB designs

HUBER+SUHNER offers a specialized design service to create tailored and optimized PCB footprints. Leveraging advanced 3D electromagnetic field simulation, we guarantee that HUBER+SUHNER's board connectors deliver top-notch performance. Our design-in service is customized to address the unique requirements of each project, ensuring a seamless integration of our board connectors into your PCB designs. The deliverables include DXF files, Gerber files, simulated S2P files (Touchstone format), and a comprehensive report (DOC file format).

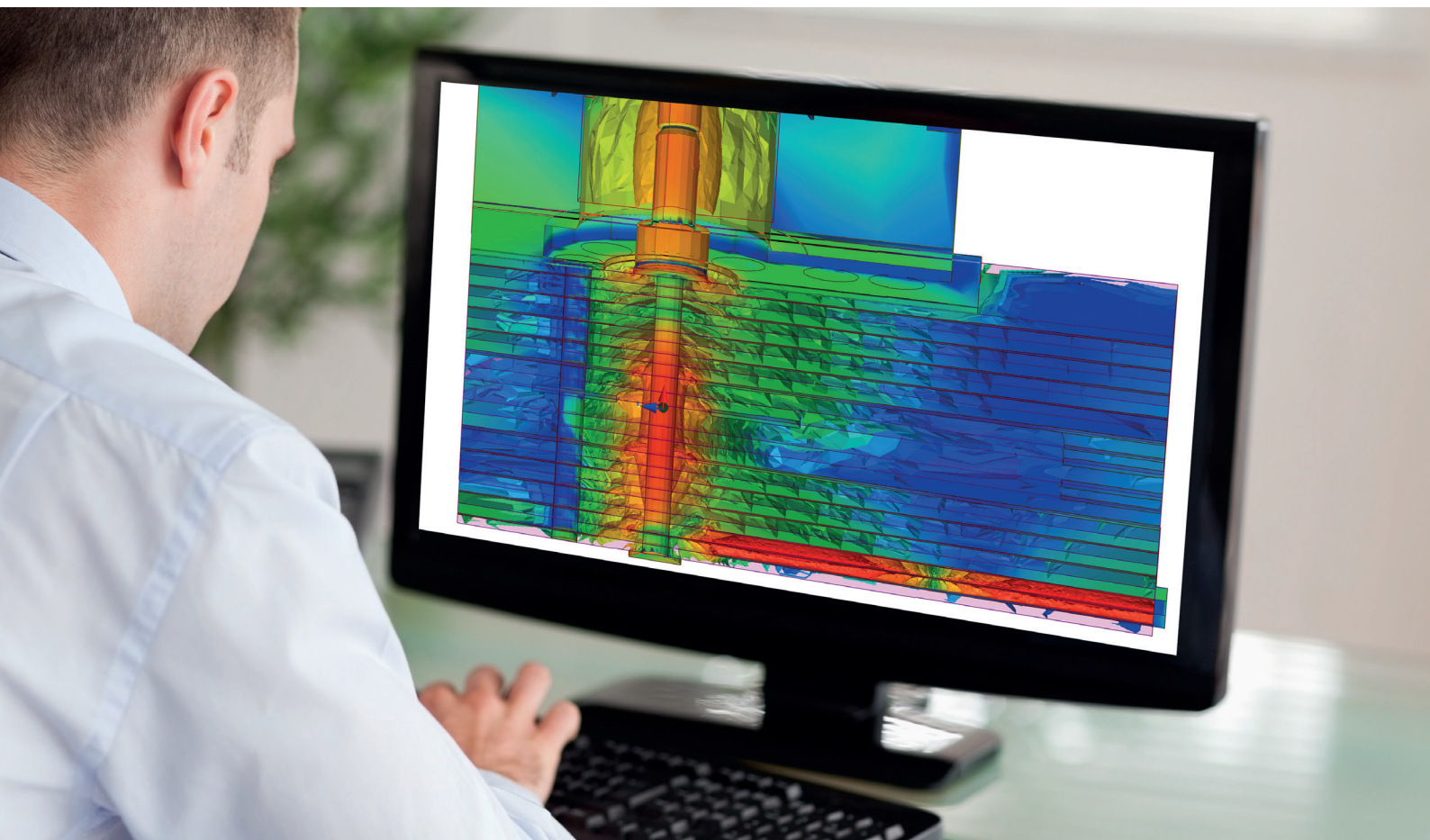


3D simulation models

In collaboration with ANSYS Inc., HUBER+SUHNER provides secure HFSS 3D component models for the single and multicoax PCB socket/connector range. These 3D models are specifically designed for compatibility with ANSYS HFSS 18 and newer versions. Specialized HFSS connector models or part numbers are available on request.

S-parameter files

The availability of measured S-parameter files for HUBER+SUHNER components upon request allows to incorporate these components into electrical simulations.



Online support tools

HUBER+SUHNER offers a set of online tools which assists you in finding the right product, calculating the electrical performance of specific cable assembly configurations, and inquiring about the desired products once defined.



Product catalog

The e-catalog is primarily designed to help you search for and select standard HUBER+SUHNER products. Structured according to the three technologies of Fiber Optics, Radio Frequency and Low Frequency, the e-catalog provides an overview of cables, connectors, adapters, antennas, fiber management systems, accessories and many more components. Filters specific to each product group allow you to narrow the product list by specific properties, such as operating temperature, impedance, cable diameter or number of single cores.



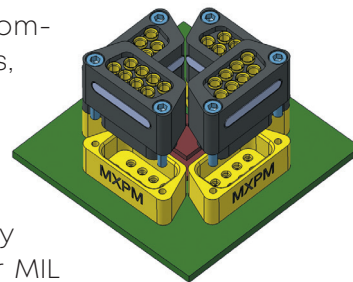
RF assembly configurator

Standard RF and Microwave Assembly Configurator for requesting a quotation. Provides an overview of possible standard HUBER+SUHNER RF assembly variants and product information about the available components, which include coaxial cables, connectors and labelling sleeves.

Additional services

Customized connector solutions

Certain applications require specialized solutions beyond our comprehensive range of connectors and adaptors. To address this, we provide custom-engineered solutions by leveraging design techniques and advanced development tools. These powerful tools enable us to swiftly demonstrate the feasibility of our products, including rapid prototyping, within tight timeframes. Moreover, our in-house type testing capabilities allow us to thoroughly verify the design through rigorous verification tests, following either MIL standards or your specific requirements.



For further documentation, please go to
www.hubersuhner.com/en/newsroom/blog-and-literature/literature

Test+Measurement General catalogue



RF Coaxial connectors General catalogue



RF Board Connector: The key to maximize your performance

application note

RF Board Connector: Footprint Optimization for optimal Return Loss Performance

Introduction

The continuous demand for higher data rate is pushing the frequency boundary and performance level of Radio-Frequency (RF) components used in a test setup. For design validation testing (DVT), test components including RF test assemblies and RF board connectors, must be "electrically transparent" to ensure a reliable characterization of the device under test (DUT). While low frequency / low data rate applications can forgive the use of a generic footprint for RF board connectors, today's bandwidth to support data rate of 56Gbps and beyond requires an optimized footprint designed and matched to a specific board layout to ensure best performance in the desired frequency range. Design cycles are getting shorter to respond to the faster pace of innovation of the markets (semiconductor, 5G, automotive...). It is a trending to create a symbol in the design library with a default layout. However, consequences on performance can be significant often requiring a new design loop which is time consuming and expensive.

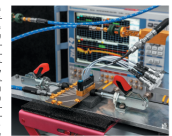


Fig.1 Example of a test setup for Design Validation Testing (DVT) with network analyzer and/or scope

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HUBER+SUHRNER is certified to ISO 9001, ISO 14001, ISO 45001, EN/AS 9100, IATF 16949 and ISO/TS 22163-IRIS.

Waiver

The facts and figures provided herein are for information only and do not represent any warranty of any kind.