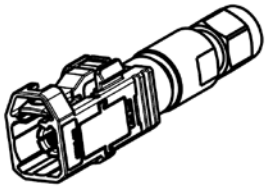
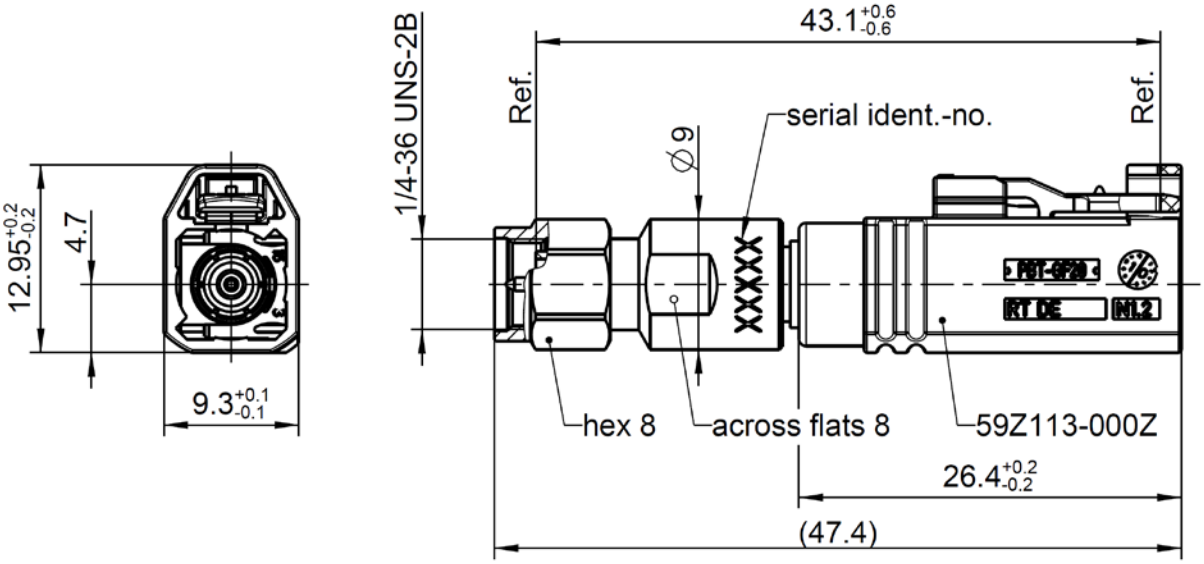
Technical Data Sheet	Rosenberger
Calibration Adaptor RPC-3.50 Plug – SMB Fakra Jack	**03S159-K20S3**





All dimensions are in mm; tolerances according to ISO 2768 m-H

Interface

RPC-3.50 side	
According to	IEC 60169-23
Mechanically compatible with	RPC-2.92 and SMA
SMB Fakra side	
According to	DIN 72594-1

Documents

Application note	AN001 “Calibration Services”

Material and plating

Connector parts	**Material**	**Plating**
Center conductor	CuBe	Gold, min. 1.27 µm, over nickel
Outer conductor RPC-3.50	Stainless steel	Passivated
Outer conductor SMB Fakra	Brass	AuroDur®, gold plated
Dielectric RPC-3.50	PS	
Dielectric SMB Fakra	PTFE	
Coupling nut RPC-3.50	Stainless steel	Passivated
Locking ring SMB Fakra	CuBe	
Housing SMB Fakra	PBT-GF20	
Secondary Lock SMB Fakra	PBT-GF10	

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Calibration Adaptor
RPC-3.50 Plug – SMB Fakra Jack

03S159-K20S3

Electrical data

Frequency	DC to 6 GHz
Return loss	≥ 35 dB, DC to 1 GHz ≥ 26 dB, 1 GHz to 3 GHz ≥ 21 dB, 3 GHz to 6 GHz

Mechanical data

	RPC-3.50	SMB Fakra
Mating cycles	≥ 500	≥ 500 (SMB Fakra Interface) ≥ 25 (SMB Fakra housing)
Maximum torque	1.70 Nm	
Recommended torque	0.90 Nm	
Engagement force		≤ 25 N
Disengagement force		≥ 2 N
Gauge	0.00 mm to 0.08 mm	

General standard definition

For proper operation the vector network analyzer (VNA) needs a model describing the electrical behaviour of this calibration standard. The different models, units, and terms used will depend on the VNA type and they will have to be entered into the VNA. All values are based on typical geometry and plating.

Offset Z_o / Impedance / Z_o	50 Ω
Offset Delay	157.3250 ps
Length (electrical) / Offset Length	47.16 mm
Offset Loss	2.07 GΩ/s
Loss	0.0283 dB/$\sqrt{\text{GHz}}$

Environmental data

Operating temperature range[1]	+20 °C to +26 °C
Rated temperature range of use[2]	0 °C to +50 °C
Storage temperature range	- 40 °C to +85 °C
RoHS	compliant

[1] *Temperature range over which these specification are valid.*
[2] *This range is underneath and above the operating temperature range, within the calibration adaptor is fully functional and could be used without damage.*

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