



FEINMETALL

Contact Technologies



# RADIO FREQUENCY TESTING

Test in any application

> [FEINMETALL.COM](https://www.feinmetall.com)

DIVERSE & INNOVATIVE

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## PASSION FOR FINEST TECHNOLOGY

### Competence

FEINMETALL is your partner for the reliable contacting of electronic components. The wide range of applications for spring contact probes includes board tests with fine centers up to wire harness and connector tests with individual and intelligent solutions.

### Innovative capacity

Since more than 60 years FEINMETALL represents a high level of innovation. Many patent-registered solutions have been milestones in the world of test engineering.

### Broad competence in-house

The development and manufacturing of spring contact probes, special contact solutions and Semiconductor Wafer Test in one company are a wide basis for our competence in precision technology and micro-mechanics. This combination is unique at the market and represents "German Technology" at its best.

### International customer service

We are acting in the international hightech industry and our processes are aligned accordingly. With nine subsidiaries worldwide and a strong network of well trained partners we are always connected to the markets and to our customers, wherever they are. Local stocks and special customs certificates provide a high delivery performance. (e.g. AEO - Authorised Economic Operator).

### Quality

Quality controls all process steps at FEINMETALL. From product development and construction up to manufacturing and delivery all operation steps are perfectly aligned.

FEINMETALL is certified according to DIN ISO 9001. Additionally a wide range of measures like e.g. risk analysis by FMEA during the whole product development process ensure a maximum of technical as well as delivery reliability.

### Environment and health protection

FEINMETALL is committed to the goals of the up-to-date legislation regarding environment as well as health protection and to conformance to all necessary measures. The current statements regarding the various European environment and health regulations are available on our homepage.

### Customer focus

Our engineers and technicians work closely together with our customer and have a deep knowledge of the practical applications. Our know-how is your advantage!

## FM Choice

### What is FM Choice?

FM Choice is our specially curated selection of the most reliable and frequently used probes in the market. Based on our expertise and experience, we have pre-selected the top-performing probes, so you don't have to choose from hundreds of options. With FM Choice, we make your decision easier by offering the most trusted solutions that meet your needs.

One of the greatest advantages of FM Choice is high availability and fast delivery, as we can often ship directly from our stock. This enables us to meet your demands whenever you need them. Plus, FM Choice offers competitive pricing, even for smaller quantities, making it an attractive solution for all kinds of projects.

Our portfolio includes over 700 Contact Probes for pitches between 6 and 374 mil, covering a wide range of applications and ensuring we meet most technical requirements quickly and efficiently.

### Benefits at a glance



Most trusted solutions



Competitive prices



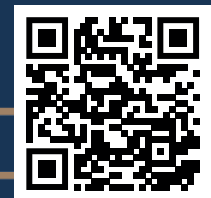
Fast delivery & high availability

### Discover FM Choice products online

With our new Product Finder, we offer you a complete overview of all FM Choice products that you can easily search through. This high-performance tool allows you to search for specific products and compare them based on their technical features.

In addition to the FM Choice products, we invite you to explore the other categories to discover our complete product portfolio. Start your selection now and experience the variety and quality of our products.

> [FEINMETALL.COM/PRODUCT-FINDER](https://www.feinmetall.com/product-finder)



## ELECTRICAL INFORMATION

**Electrical conductivity**

In a contact probe the primary current flow typically leads through the plunger, the barrel and the receptacle. A secondary current flow leads through the plunger, the spring and the barrel. The transition points cause certain transfer resistances that are influenced by the following factors:

- Conductivity of the base material
- Conductivity of the plating material
- Condition of the surface of the probe
- Size of the contact surface
- Contact forces at the transition points

FEINMETALL is taking measures to guarantee a constant low contact resistance during the whole lifetime of the probes. The maximum continuous currents (referred to the FEINMETALL standard high current test) and the typical resistances of each probe are shown in the data sheets. A pulse current can be higher depending on pulse and rest time, cooling and various other influences.

**Max. Operating voltage**

Voltmeters must always be connected in parallel with the electrical device or component on which the voltage is to be measured. This is necessary in order to measure the voltage applied to this component, because for the parallel connection the voltage in both branches is the same.

If the user operates our probes with a higher voltage than defined by DIN VDE 0100, part 410 as low voltage not dangerous to touch, *FEINMETALL does not assume any liability. Furthermore, the user himself is obliged to determine and implement the legally required protective measures for people and equipment.*

**Temperature operating range**

Depending on the electrical load, self-heating occurs as a result of power loss. The permissible environmental temperature decreases accordingly (derating). Exposure to additional loads such as high humidity, rapid and extreme temperature changes (thermal shock) and extreme loads (e.g. far above nominal travel) can lead to a shortened lifetime. For high current applications where temperature can rise up to +200°, our FEINMETALL High current products are designed to withstand this challenge and remain constant performance.

**Electrical protection class**

According to VDE0100 part 410, our probes are only to be operated with low voltage that is not dangerous to touch (25 V rms AC, 60 V DC). These values include all occurring surge voltages, e.g. due to overvoltage, switching peaks, etc.

If the user operates our probes with a higher voltage than defined by DIN VDE 0100, part 410 as low voltage not dangerous to touch, FEINMETALL does not assume any liability. Furthermore, the user himself is obliged to determine and implement the legally required protective measures for people and equipment.

**Dielectric / electric strength of bipolar probes**

The dielectric strength (usually stated in kV/mm) of an insulator is the maximum electric field strength that may prevail in the material (including air) without a voltage breakdown (arc or spark) occurring. The creepage distances must be much longer, especially when exposed to dirt and moisture. The dielectric strength depends on the geometry of the probe, the material (dielectric), the ambient conditions and the degree of contamination. This comes into play in all our products with electrically insulating functions, e.g. switching probes, switching receptacles, combination receptacles, coaxial probes and insulating caps.

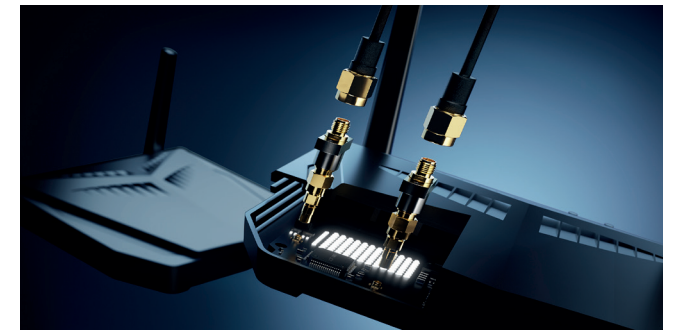
## TOPIC OVERVIEW

**Automotive**

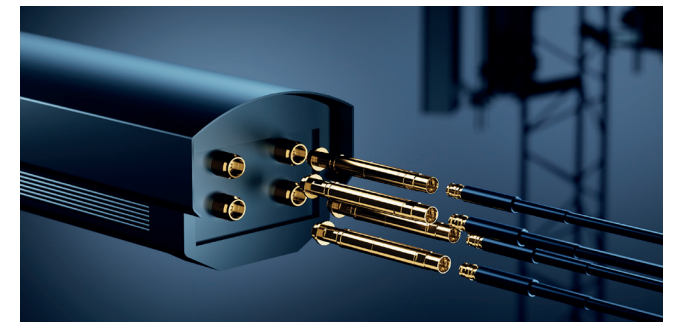
The RF automotive sector is concerned with testing the function of electrical-components in the automotive sector. For this purpose, the automotive-specific connectors are contacted (Fakra, mini-Fakra, HSD, MateNet and H-MTD). Examples of DUTs are ECUs, antennas, cameras.

**Consumer**

We offer RF-Probes for validating all different kinds of electronic devices in the consumer electronic area. This includes test-solutions for micro- and switch-connectors and PCB-Pads.

**Industrial**

The 5G/Industrial-sector is using a huge variety of different coaxial-connectors. Feinmetalls portfolio covers test-solutions for every standard-connector for the highest frequencies.

**Accessoires**

We offer a comprehensive selection of tools and accessories specifically designed for the assembly and maintenance of contact probes and receptacles. These tools and accessories ensure precise installation and guarantee flawless contact functionality.





OVERVIEW OF TIP STYLES

01		02		03		04		05	
Conical 90°		Conical 90° stepped		Conical 60°		Conical 60° stepped		Concave stepped	
06		07		08		09		10	
Serrated stepped		Hexagonal 90° stepped		Hexagonal 60° stepped		6-point crown stepped		Flexible needle	
11		12		14		15		16	
Spherical		Spherical stepped		4-point crown stepped (self-cleaning)		Triangular 45° stepped		Flat	
17		18		19		20		21	
Flat stepped		Conical 30°		Flat stepped with lens		4-point crown stepped (self-cleaning)		4-point crown (self-cleaning)	
22		27		28		29		30	
Special version for contacting into conn.-housings		Conical 120° stepped		4-point crown stepped		4-point crown		Triangular 45°	
31		32		33		34		35	
Flat stepped with drill hole		Rigid needle 10°		Square lance 38°		Rigid needle 15° stepped		3-point crown stepped (self-cleaning)	
36		37		38		39		40	
6-point crown stepped, middle pin longer		4-point crown stepped		Square lance 140°		Conical flat 30°		6-point crown	
41		42		43		44		45	
6-point crown stepped (self-cleaning)		5-point crown stepped		Square lance 90°		Rigid needle with eccentric-cut		Conical 120° with eccentric-cut	

46		47		50		51		52	
W-profile		Square 70°		Concave with drill hole stepped		Concave Head with special type inside		Concave stepped & annular spring inside	
53		54		55		60		61	
Square lance 55°		Square lance stepped		Concave stepped (self-cleaning)		3-point crown stepped		Special Head for VG Connectors (female)	
62		63		64		65		66	
Triangular 30°		8-point crown stepped (self-cleaning)		Mini-serrated stepped		Conical 45°		Serrated stepped (self-cleaning)	
67		68		70		90			
3-point needle stepped		6-point crown stepped, with middle pin		Hexagonal 90° stepped		Rolling ball			
<b>Spade versions</b>									
71		72		80		81		82	
Half Moon		Half Crown		SpadeØ < plungerØ		SpadeØ < plungerØ stepped		SpadeØ = plungerØ	
83		84		85		86		89	
SpadeØ > plungerØ		SpadeØ > plungerØ stepped		Square Spade		Square Spade not centric		Special version of spade tips	
<b>Special versions</b>									
A		IK		11 SP		12 SP		IP	
Silver alloy for high current		Insulating cap		Step Probe		Step Probe with round plate		Insulating pin	
17K		17K		17H		17		17T	
Synthetic head		Synthetic head with slot		Synthetic head with slot and metall ring		Metall head with slot		Metall head insulated with slot	

# OVERVIEW OF RF-CONNECTORS

## Automotive Connectors

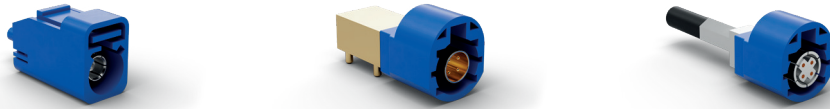
H-MTD-MALE      H-MTD-MALE (4-FOLD)      HFM-MALE      HFM-MALE (4-FOLD)



HFM-FEMALE      MATE-AX-MALE (4-FOLD)      MATE-NET-MALE      FAKRA-MALE



FAKRA-FEMALE      HSD-MALE      HSD-FEMALE



## Communication Connectors

U.FL-MALE      MHF4-MALE      MHF5-MALE      HSC-MALE



SWD-SWITCH      SWF-SWITCH      SWG-SWITCH      SWJ-SWITCH



## Communication Connectors

SWH-SWITCH      JSC-MALE      KSC-MALE      LSC-MALE



## Industrial Connectors

BMA-MALE      BNC-FEMALE      GT16-MALE      MMBX-FEMALE



MMCX-FEMALE      RF-MALE      QMA-FEMALE      R-TNC-FEMALE



FME-MALE      SMA-FEMALE      R-SMA-FEMALE      SMB-MALE



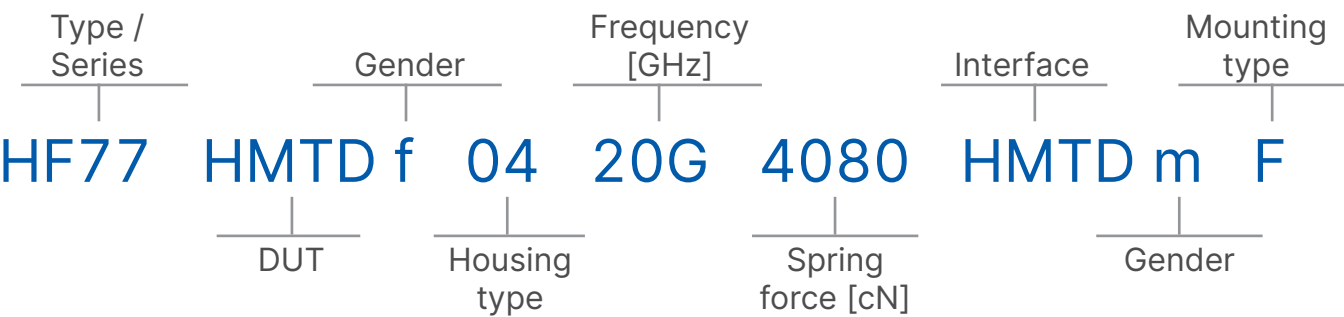
SMB-FEMALE      SMC-MALE      mSMP-MALE / SSMP / GPPO      SMP-MALE



PRODUCT NAME

Number code system for Radio Frequency Probes

In order to improve the clarity of the material code, the self-explanatory it has been partially further developed. The currently valid number code is shown below.



**DUT**  
Connector e.g. H-MTD, FAKRA, HSD...

**Gender**  
m = Plug (Male)  
f = Jack (Female)

**Housing type**  
01 = 1-fold (Single)  
02 = 2-fold (Double)  
04 = 4-fold (Quad)  
06 = 6-fold (Six)

**Frequency**  
20 = 20 GHz

**Spring force**  
4080 = 4080 cN

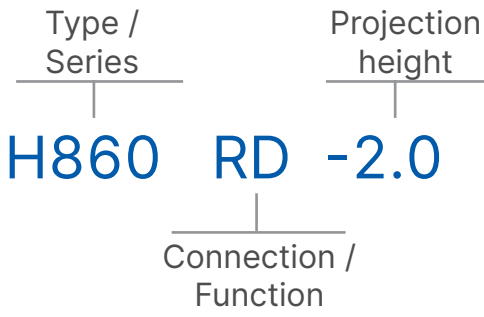
**Interface**  
Connector e.g. H-MTD, MCX, mSMP...  
m = Plug (Male)  
f = Jack (Female)

**Mounting type**  
P = Pluggable  
S = Screwable  
F = Flange

PRODUCT NAME

Number code system for receptacles

In order to improve the clarity of the material designations, the self-explanatory number code has been partially further developed. The currently valid number code is shown below.



Connection / Function

FL = Floating function  
RD = With knurl  
KB = Combi receptacle  
SH = With switch function  
CR = Crimp  
LA = Solder  
WW = Wire wrap  
WR = Round pin  
WL = Wireless

Projection height (optional)

2.0 = 2.0 mm  
7.6 = 7.6 mm  
10.0 = 10.0 mm



AUTOMOTIVE



AUTOMOTIVE - GT13



HF860  
1 GHz | GT13

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	50
Frequency [GHz]	1

Mechanical specifications

	SIGNAL	GROUND	
Preload (cN)	75	90	450
Spring force at nt (cN ±20%)	150	400	800
Nominal travel (mm)	2.0	4.0	4.0
Maximum travel (mm)	3.7	5.0	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

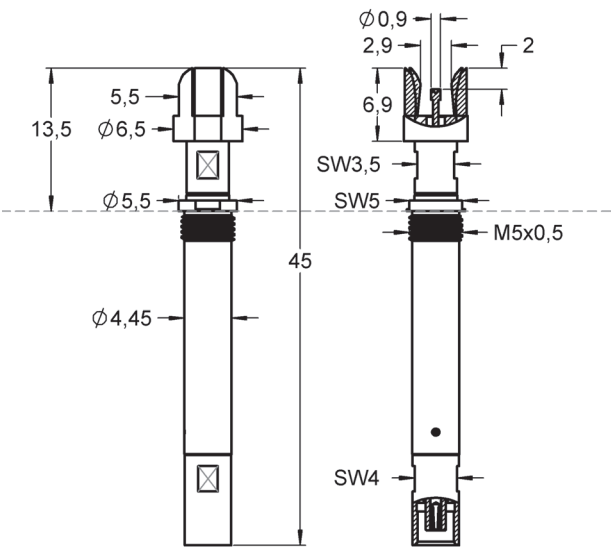
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012577	F08605B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

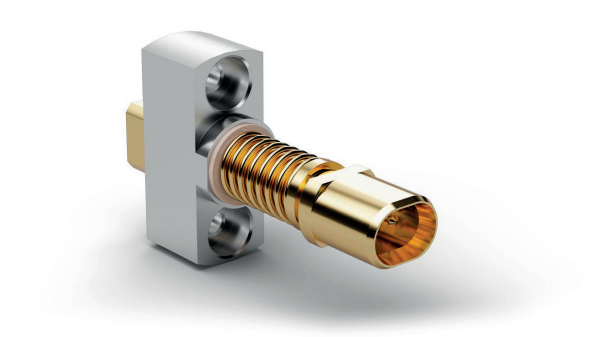
1041700	HF860GT13m011G530MCXfS
1109014	HF860GT13m011G930MCXfS

Series drawing

All measurements are in mm.







HF77  
20 GHz | H-MTD Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	20	

Mechanical specifications

	2x SIGNAL	1x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

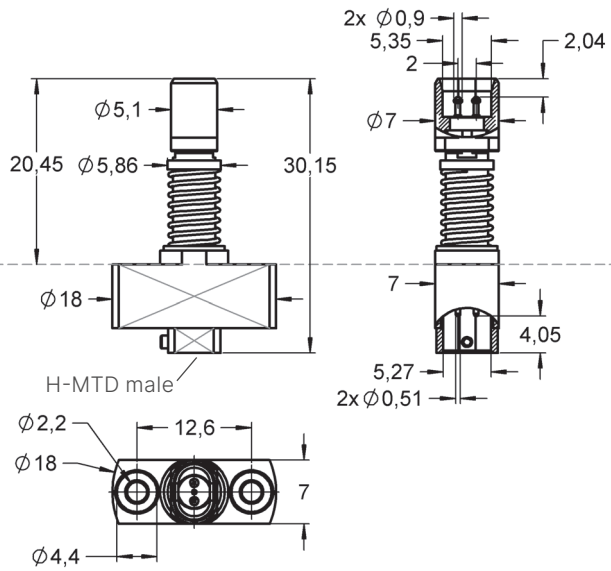
1104597	F07702B090G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

1104600	HF77HMTDf0120G1020HMTDmF
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Series drawing

All measurements are in mm.



HF77  
20 GHz | H-MTD Female 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	20	

Mechanical specifications

	4x SIGNAL	2x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

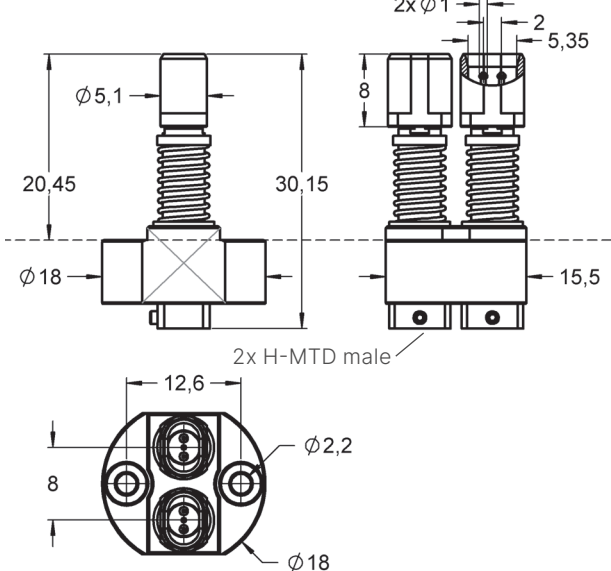
1104597	F07702B090G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

1110046	HF77HMTDf0220G2040HMTDmF
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Series drawing

All measurements are in mm.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	20	

Mechanical specifications

	8x SIGNAL	4x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

1104597	F07702B090G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

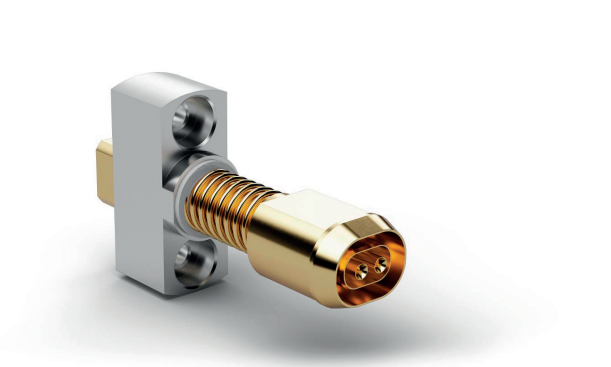
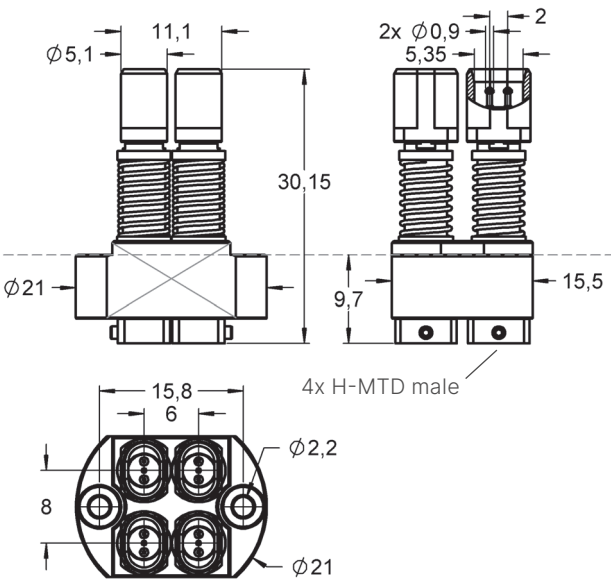
1110047	HF77HMTDf0420G4080HMTDmF
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HF77

20 GHz | H-MTD Female 4-fold

Series drawing

All measurements are in mm.

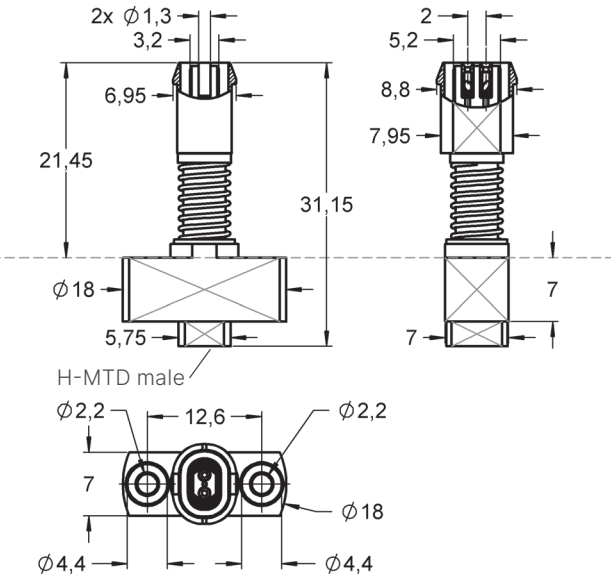


HF77

14 GHz | H-MTD Male 1-fold or GEMnet

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	14	

Mechanical specifications

	2x SIGNAL	1x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	unplated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

1051338	HF77HMTDm0114G1020HMTDmF
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Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	14	

Mechanical specifications

	4x SIGNAL	2x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	unplated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

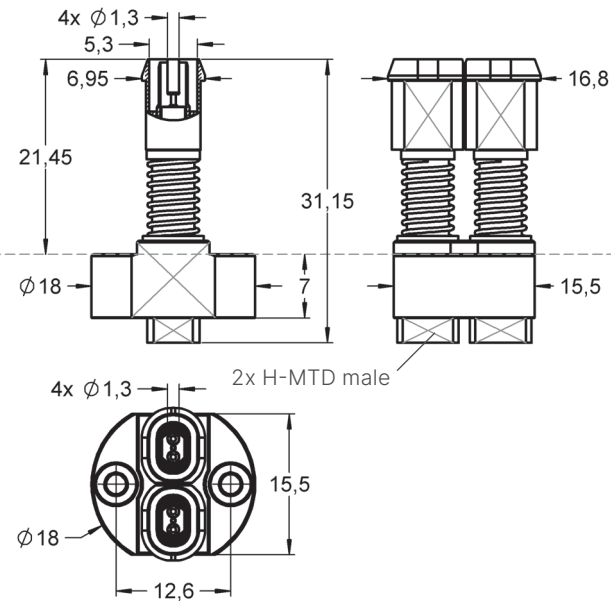
1082740	HF77HMTDm0214G2040HMTDmFV01
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HF77

14 GHz | H-MTD Male 2-fold  
or GEMnet

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	14	

Mechanical specifications

	8x SIGNAL	4x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	unplated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

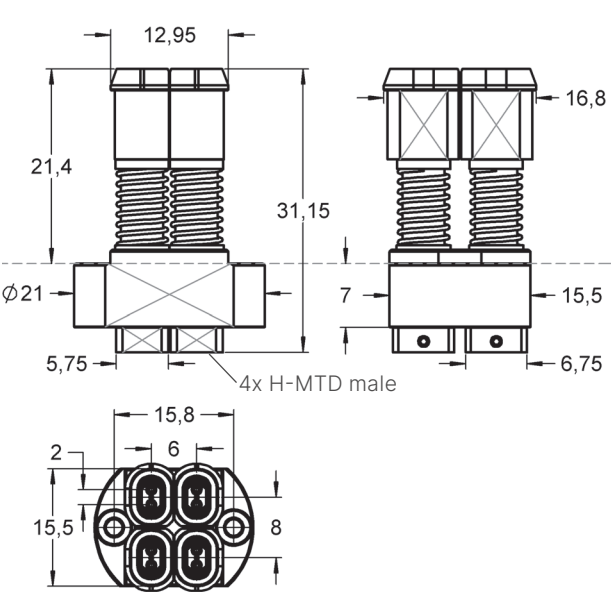
1050859	HF77HMTDm0414G4080HMTDmF
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HF77

14 GHz | H-MTD Male 4-fold  
or GEMnet

Series drawing

All measurements are in mm.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	14	

Mechanical specifications

	12x SIGNAL	6x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	unplated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

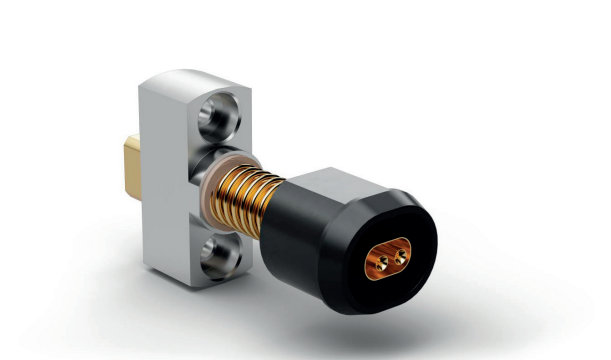
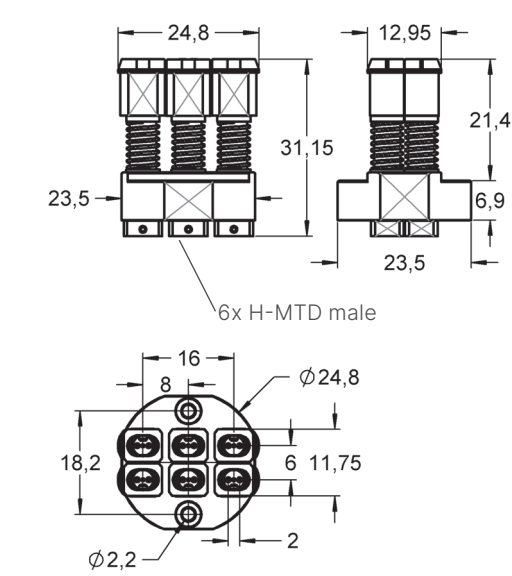
1119247	HF77HMTDm0614G6120HMTDmF
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HF77

14 GHz | H-MTD Male 6-fold  
or GEMnet

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	100	
Frequency [GHz]	14	

Mechanical specifications

	2x SIGNAL	1x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	gold plated
Flange	Brass	nickel plated

Accessories

1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

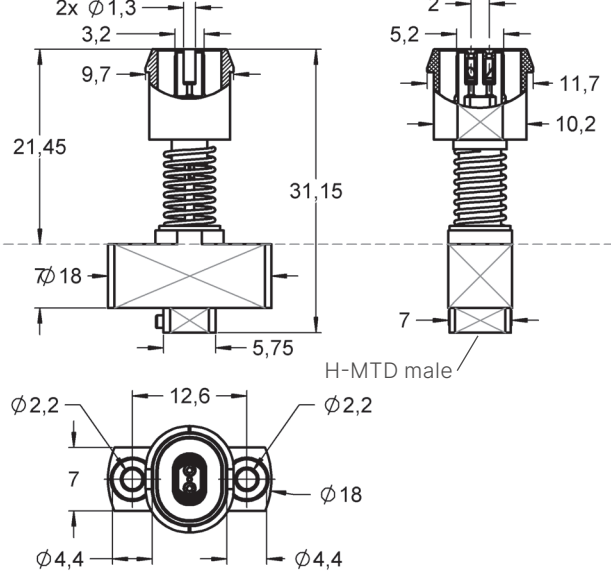
1089316	HF77HMTDm0114G1020HMTDmFWP
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HF77

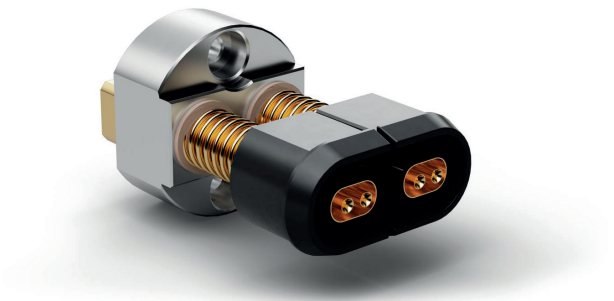
14 GHz | H-MTD 1-fold | Water proof

Series drawing

All measurements are in mm.







HF77  
14 GHz | H-MTD Male 2-fold  
| Water proof

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1.0
Current CIRCULAR [A]	1.2
Impedance [Ohm]	100
Frequency [GHz]	14

Mechanical specifications

	4x SIGNAL	2x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	unplated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

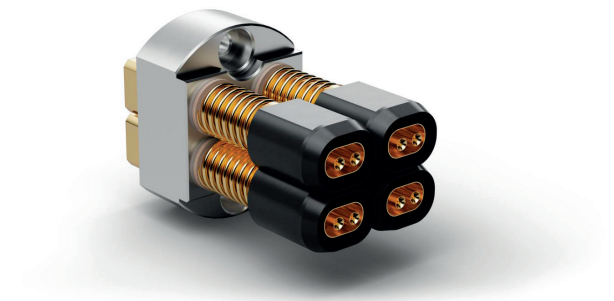
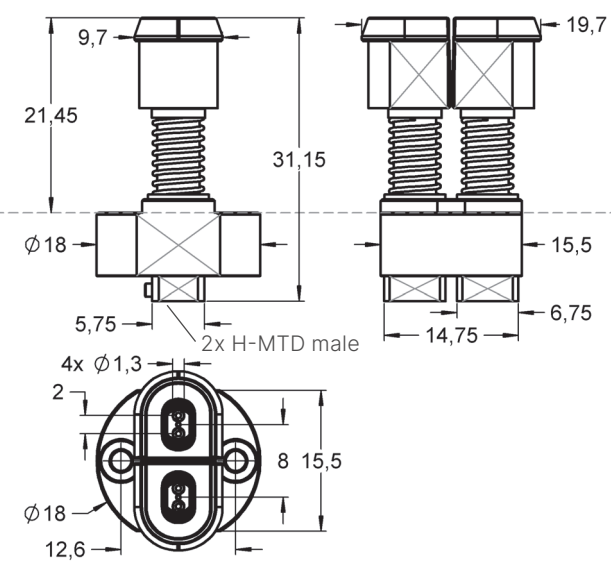
1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

1089789	HF77HMTDm0214G2040HMTDmFWP
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Series drawing

All measurements are in mm.



HF77  
14 GHz | H-MTD Male 4-fold  
| Water proof

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1.0
Current CIRCULAR [A]	1.0
Impedance [Ohm]	100
Frequency [GHz]	14

Mechanical specifications

	8x SIGNAL	4x GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	gold plated
Flange	Brass	nickel plated

Accessories

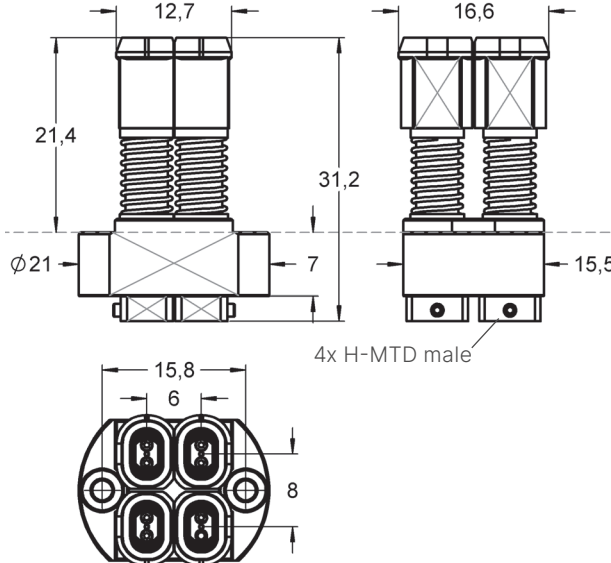
1053952	F07751B130G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD male	see page 135

Order code Product name

1089897	HF77HMTDm0414G4080HMTDmFWP
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Series drawing

All measurements are in mm.





HF77  
12 GHz | HFM Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1.0
Current CIRCULAR [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

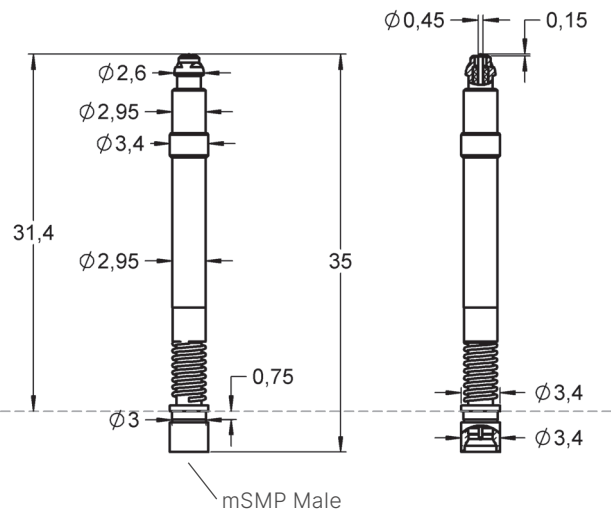
Interface	mSMP Male	see page 135
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Order code    Product name

1051683    HF77HFMf0112G540MSMPmP

Series drawing

All measurements are in mm.



HF77  
12 GHz | HFM Female 1-fold

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1.0
Current CIRCULAR [A]	1.0
Impedance [Ohm]	50
Frequency [GHz]	12

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

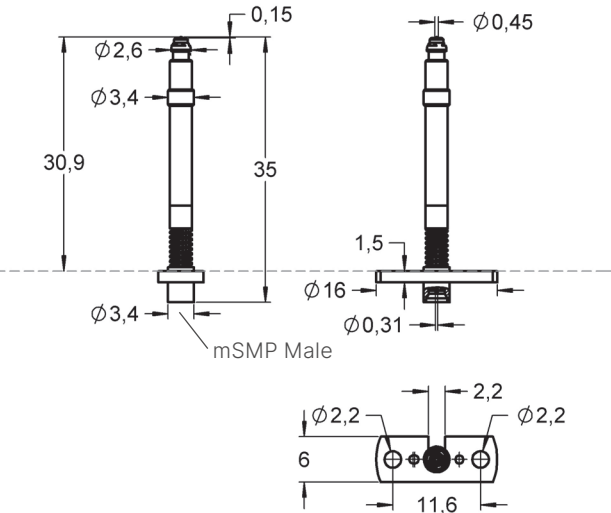
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code    Product name

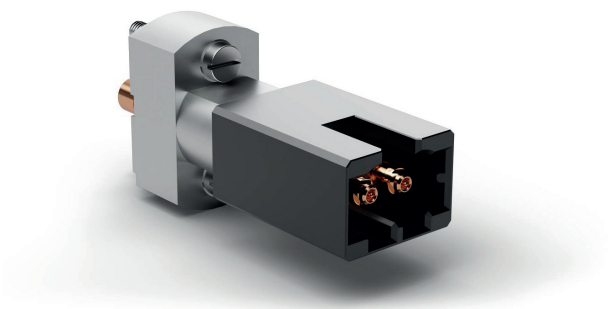
1051503    HF77HFMf0112G540MSMPmF

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMf0112G540MSMPmP (1051683).



HF77  
12 GHz | HFM Female 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

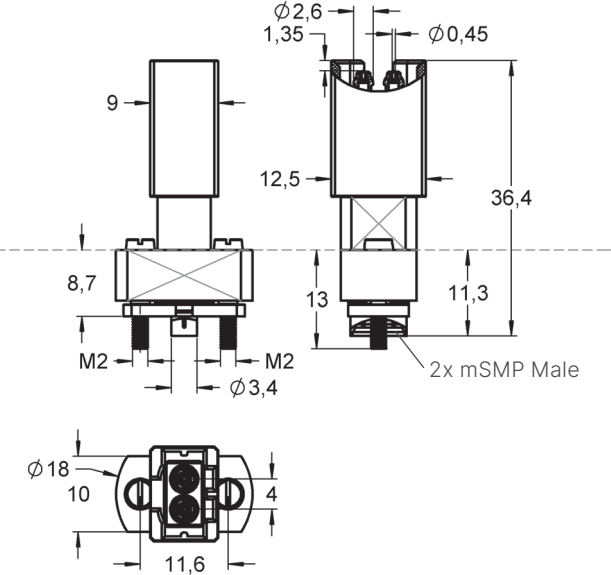
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

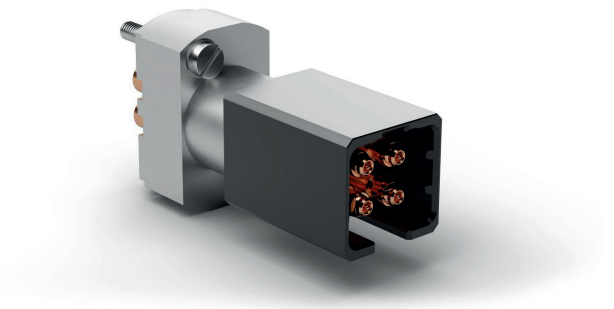
1114067	HF77HFMf0212G1080MSMPmF
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Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMf0112G540MSMPmP (1051683).



HF77  
12 GHz | HFM Female 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1.0	
Current CIRCULAR [A]	1.0	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	4x SIGNAL	4x GROUND
Preload (cN)	95	130
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	3.0
Maximum travel (mm)	1.8	3.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

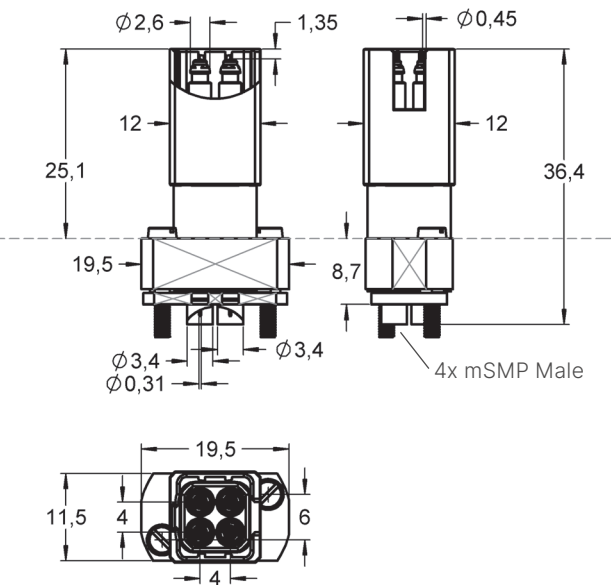
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

1050858	HF77HFMf0412G2160MSMPmF
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Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMf0112G540MSMPmP (1051683).



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	mSMP Male	see page 135
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Order code Product name

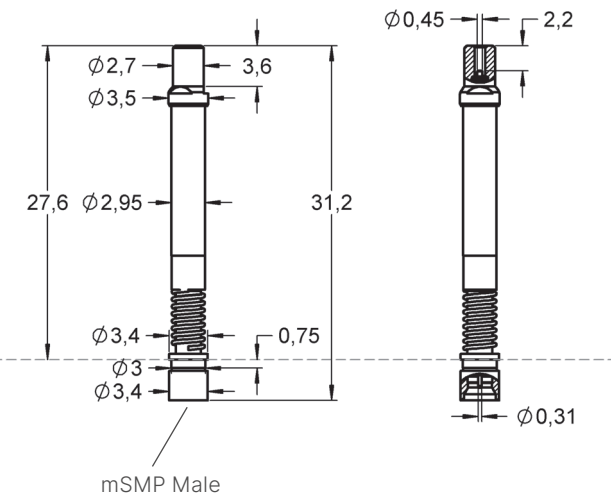
1034900	HF77HFMm0112G540MSMPmP
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HF77

12 GHz | HFM Male 1-fold

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

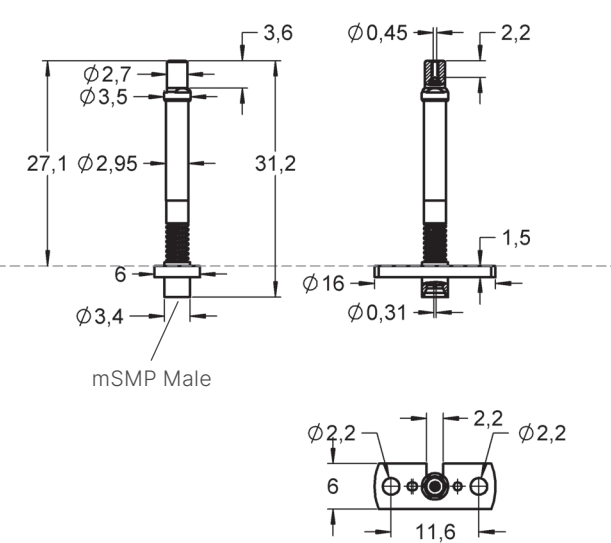
1036171	HF77HFMm0112G540MSMPmFV01
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HF77

12 GHz | HFM Male 1-fold

Series drawing

All measurements are in mm.



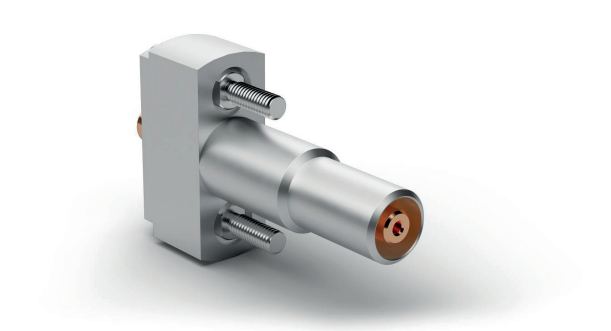
For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMm0112G540MSMPmP (1034900).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

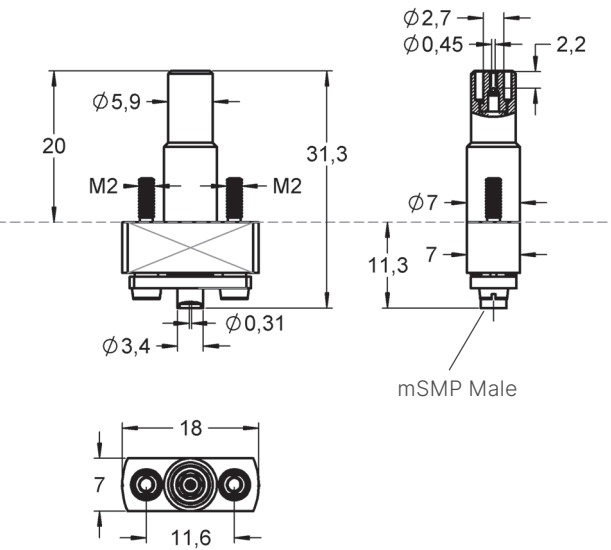
Order code Product name

1105444	HF77HFMm0112G540MSMPmFV02
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HF77  
12 GHz | HFM Male 1-fold

Series drawing

All measurements are in mm.

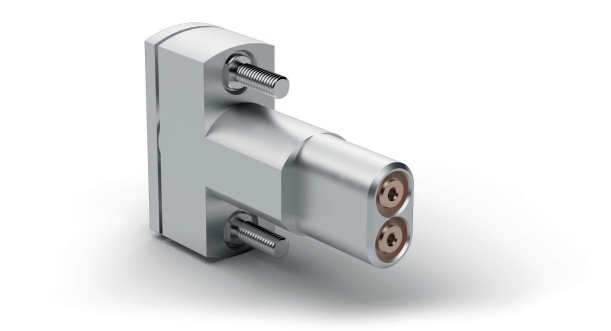


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMm0112G540MSMPmP (1034900).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

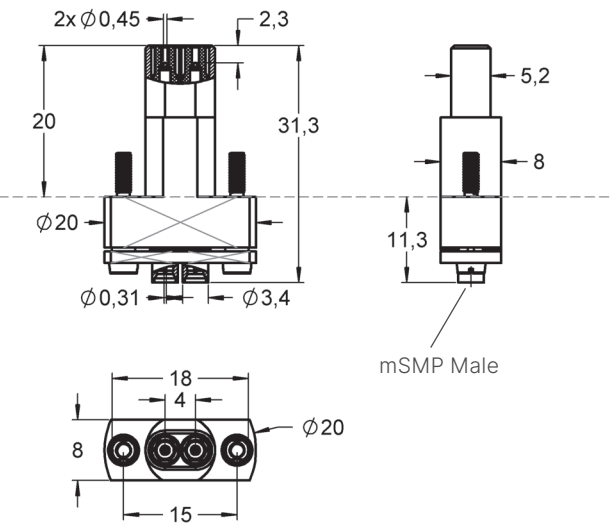
This table shows the reference values in the middle and at the end of the recommended frequency.



HF77  
12 GHz | HFM Male 2-fold

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMm0112G540MSMPmP (1034900).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

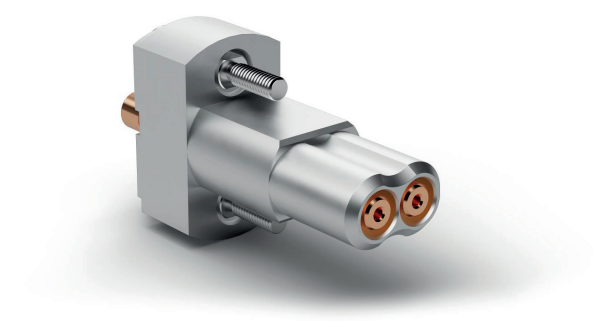
Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

1120793	HF77HFMm0212G1080MSMPmFV01
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HF77  
12 GHz | HFM Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

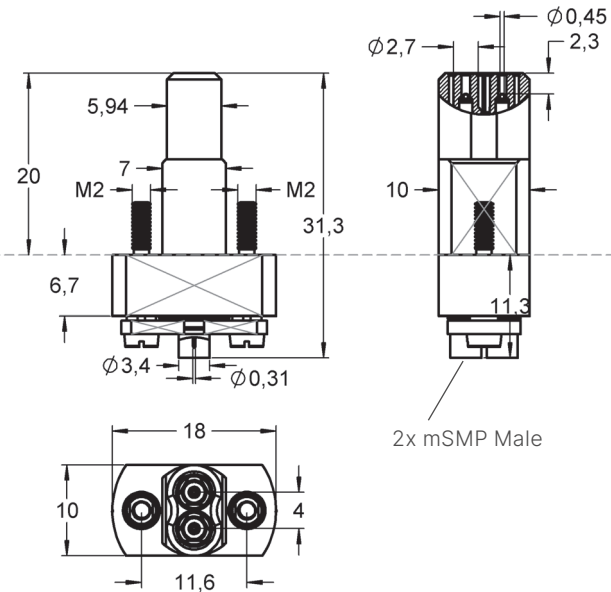
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

1057696	HF77HFMm0212G1080MSMPmFV02
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Series drawing

All measurements are in mm.

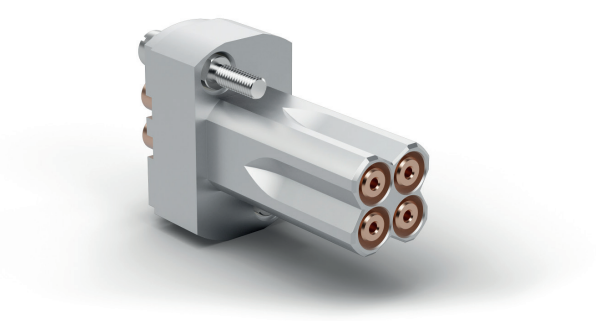


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMm0112G540MSMPmP (1034900).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF77  
12 GHz | HFM Male 4-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	4x SIGNAL	4x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

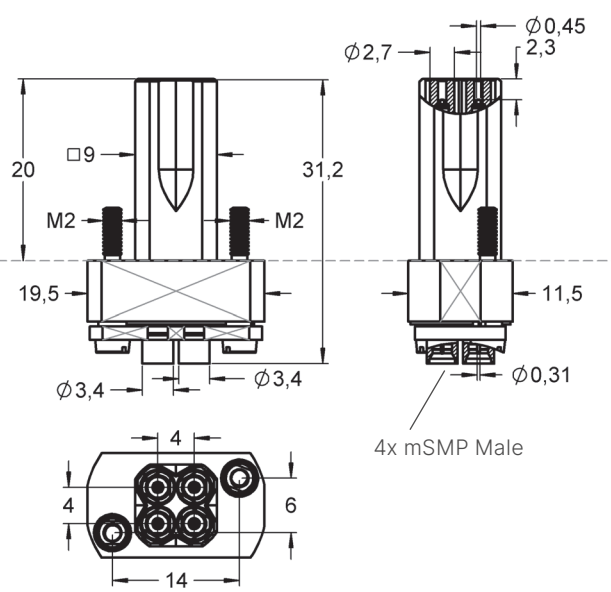
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

1034901	HF77HFMm0412G2160MSMPmF
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Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77HFMm0112G540MSMPmP (1034900).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.37 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	40 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	mSMP Male	see page 135
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Order code    Product name

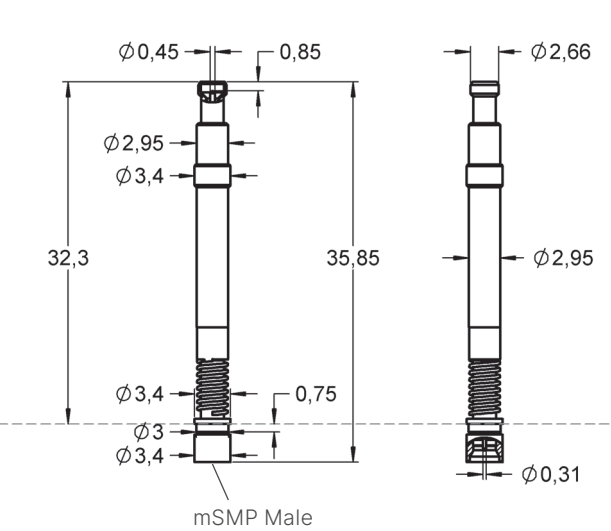
1056232    HF77MATEAXf0112G540MSMPmP

HF77

12 GHz | MateAX Female 1-fold

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code    Product name

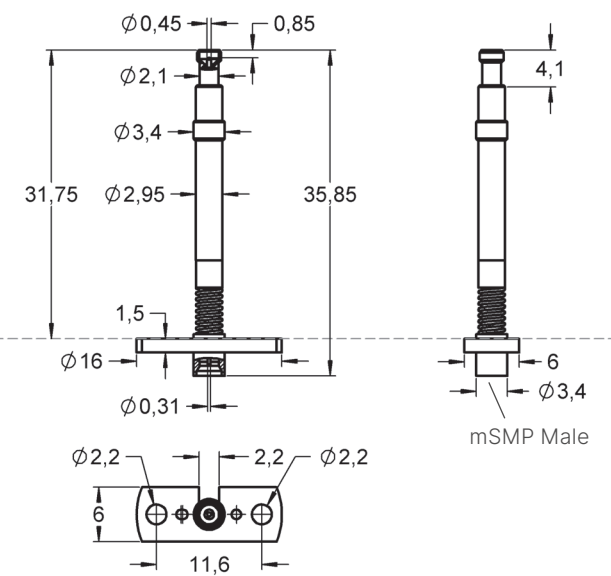
1142274    HF77MATEAXf0112G540MSMPmF

HF77

12 GHz | MateAX Female 1-fold

Series drawing

All measurements are in mm.

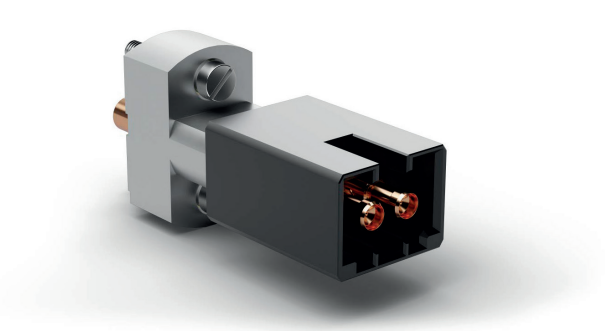


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXf0112G540MSMPmP (1056232).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

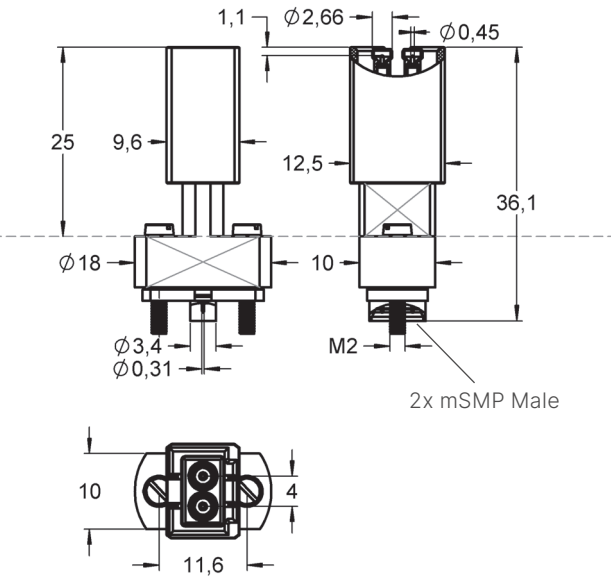
1112868	HF77MATEAXf0212G1080MSMPmF	
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HF77

12 GHz | MateAX Female 2-fold

Series drawing

All measurements are in mm.

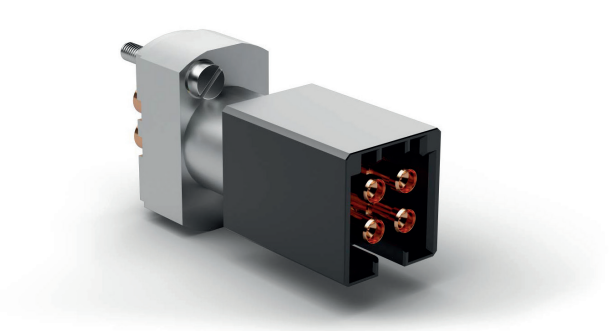


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXf0112G540MSMPmP (1056232).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	4x SIGNAL	4x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

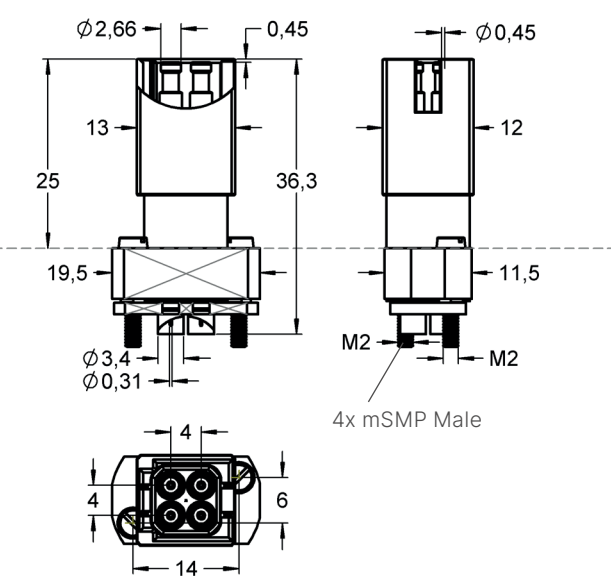
1051198	HF77MATEAXf0412G2160MSMPmF	
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HF77

12 GHz | MateAX Female 4-fold

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXf0112G540MSMPmP (1056232).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	mSMP Male	see page 135
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Order code Product name

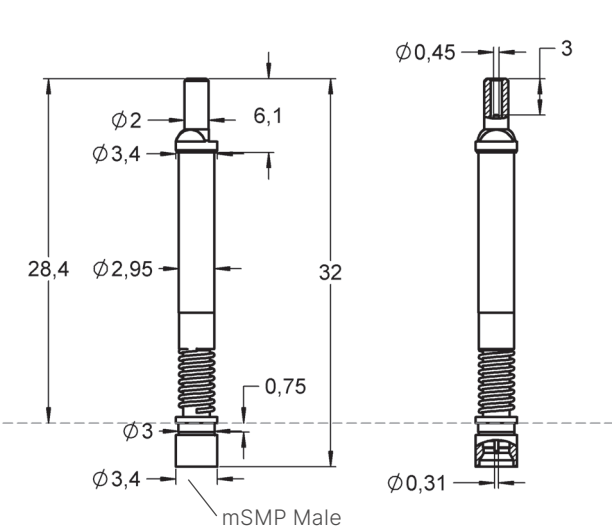
1035527	HF77MATEAXm0112G540MSMPmP
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HF77

12 GHz | MateAX Male 1-fold

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

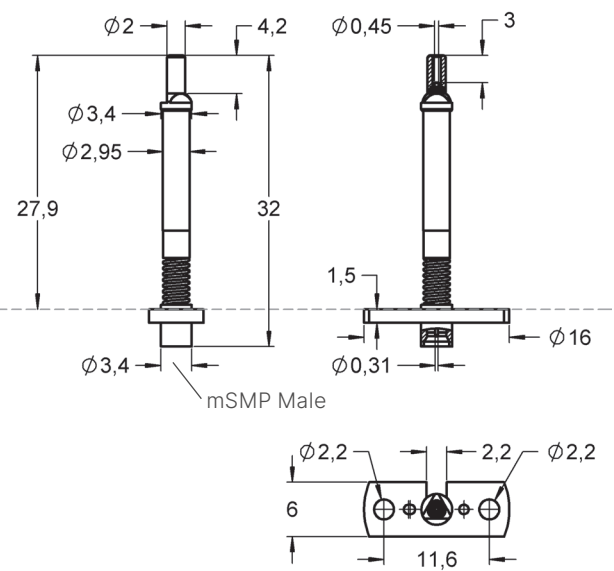
1036172	HF77MATEAXm0112G540MSMPmFV01
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HF77

12 GHz | MateAX Male 1-fold

Series drawing

All measurements are in mm.

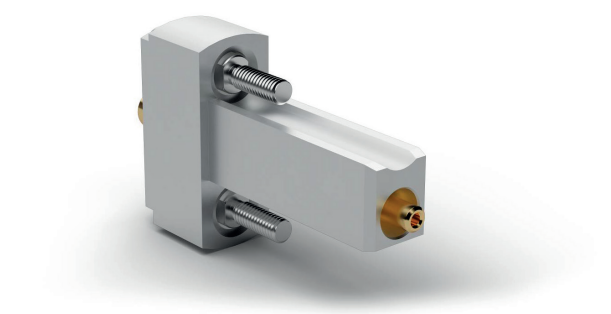


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXm0112G540MSMPmP (1035527).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

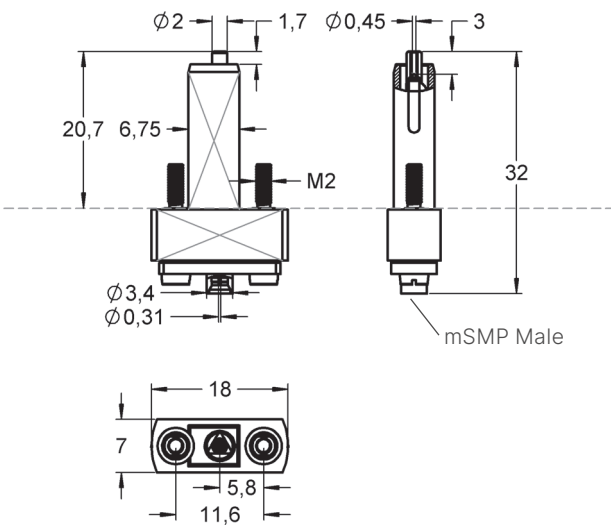
1116970	HF77MATEAXm0112G540MSMPmFV02
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HF77

12 GHz | MateAX Male 1-fold

Series drawing

All measurements are in mm.

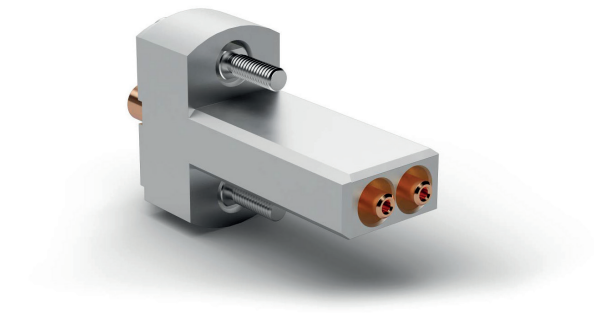


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXm0112G540MSMPmP (1035527).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

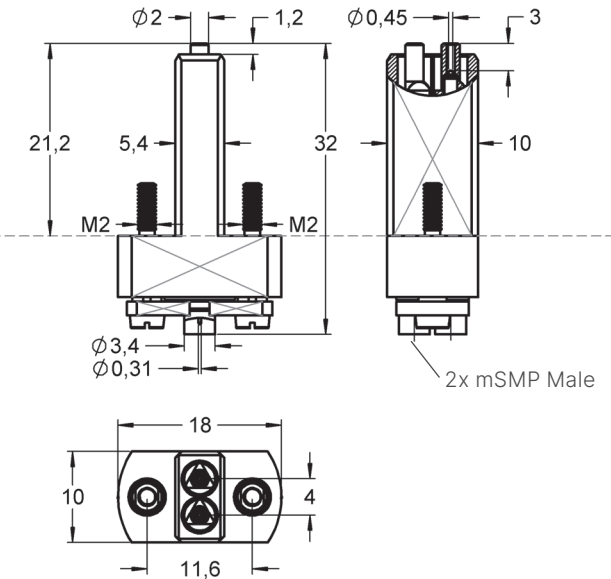
1142276	HF77MATEAXm0212G1080MSMPmF
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HF77

12 GHz | MateAX Male 2-fold

Series drawing

All measurements are in mm.

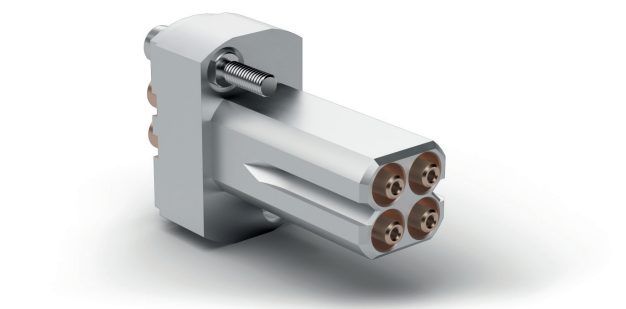


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXm0112G540MSMPmP (1035527).

Radio Frequency performance

Typical insertion loss	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical return loss	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	0.1
Current CIRCULAR [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	12

## Mechanical specifications

	4X SIGNAL	4X GROUND
Preload (cN)	95	230
Spring force at nt (cN $\pm 20\%$ )	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

## Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code	Product name
1	Product 1
2	Product 2
3	Product 3
4	Product 4
5	Product 5
6	Product 6
7	Product 7
8	Product 8
9	Product 9
10	Product 10
11	Product 11
12	Product 12
13	Product 13
14	Product 14
15	Product 15
16	Product 16
17	Product 17
18	Product 18
19	Product 19
20	Product 20
21	Product 21
22	Product 22
23	Product 23
24	Product 24
25	Product 25
26	Product 26
27	Product 27
28	Product 28
29	Product 29
30	Product 30
31	Product 31
32	Product 32
33	Product 33
34	Product 34
35	Product 35
36	Product 36
37	Product 37
38	Product 38
39	Product 39
40	Product 40
41	Product 41
42	Product 42
43	Product 43
44	Product 44
45	Product 45
46	Product 46
47	Product 47
48	Product 48
49	Product 49
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54	Product 54
55	Product 55
56	Product 56
57	Product 57
58	Product 58
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61	Product 61
62	Product 62
63	Product 63
64	Product 64
65	Product 65
66	Product 66
67	Product 67
68	Product 68
69	Product 69
70	Product 70
71	Product 71
72	Product 72
73	Product 73
74	Product 74
75	Product 75
76	Product 76
77	Product 77
78	Product 78
79	Product 79
80	Product 80
81	Product 81
82	Product 82
83	Product 83
84	Product 84
85	Product 85
86	Product 86
87	Product 87
88	Product 88
89	Product 89
90	Product 90
91	Product 91
92	Product 92
93	Product 93
94	Product 94
95	Product 95
96	Product 96
97	Product 97
98	Product 98
99	Product 99
100	Product 100

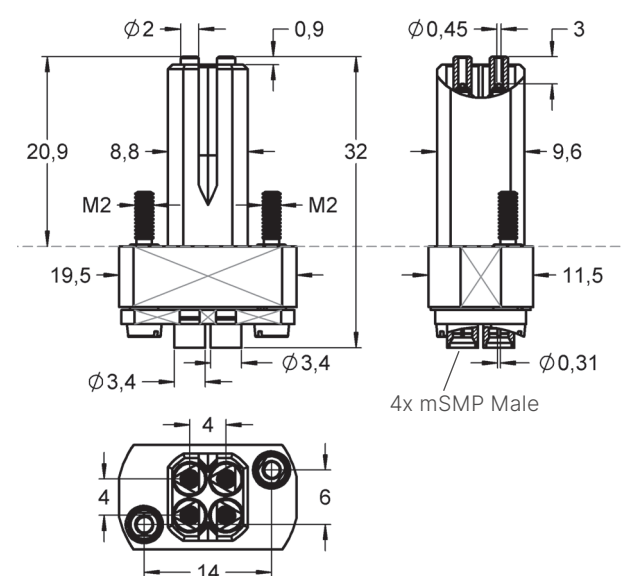
1035528 HF77MATEAXm0412G2160MSMPmF

## HF77

12 GHz | MateAX Male 4-fold

## Series drawing

All measurements are in mm.

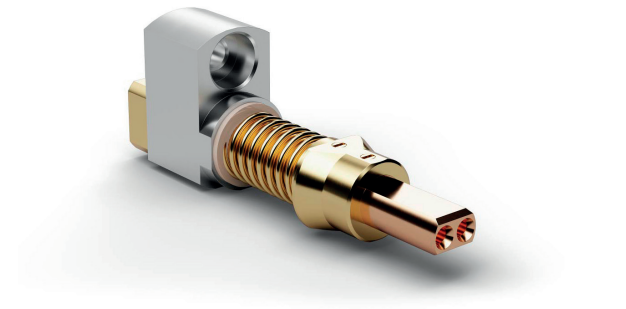


For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77MATEAXm0112G540MSMPmP (1035527).

### Radio Frequency performance

Typical <b>insertion loss</b>	DC up to 6 GHz	6 GHz up to 12 GHz
Maximum	0.15 dB	0.38 dB
Typical <b>return loss</b>	DC up to 6 GHz	6 GHz up to 12 GHz
Minimum	35 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

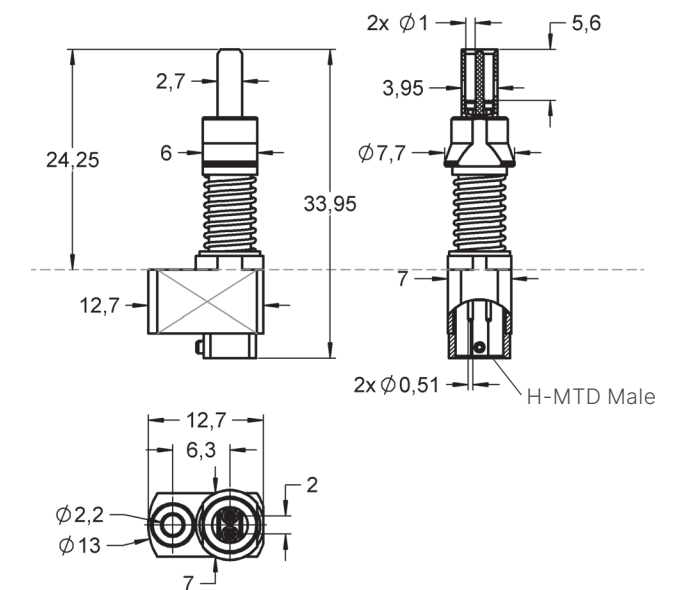


## HF77

1 GHz | MateNet Male

## Series drawing

All measurements are in mm.



## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1
Current CIRCULAR [A]	1
Impedance [Ohm]	100
Frequency [GHz]	1

## Mechanical specifications

	2X SIGNAL	2X GROUND
Preload (cN)	130	470
Spring force at nt (cN ±20%)	195	630
Nominal travel (mm)	0.9	2.5
Maximum travel (mm)	1.2	3.5

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

## Accessories

1097776	F07706B100G195	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	H-MTD Male	see page 135

[illegible]

1097821      HF77MATENETm011G1020HMTDmFV01



HF77  
12 GHz | SMK miniFakra Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	nickel plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

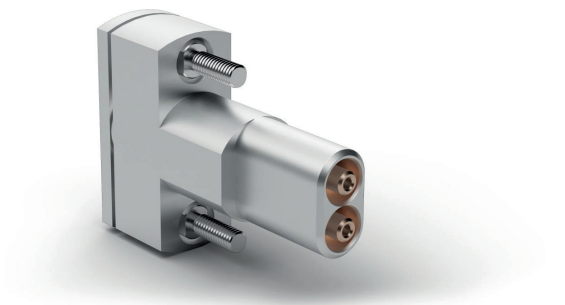
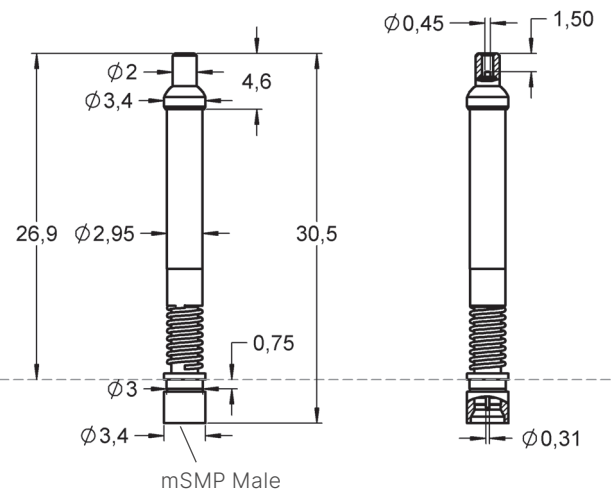
Interface	mSMP Male	see page 135
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Order code    Product name

1134945	HF77SMKMINIFAKRAM0112G540MSMPmP
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Series drawing

All measurements are in mm.



HF77  
12 GHz | SMK miniFakra Male 2-fold

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	2x SIGNAL	2x GROUND
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.4
Maximum travel (mm)	1.8	2.2

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	nickel plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

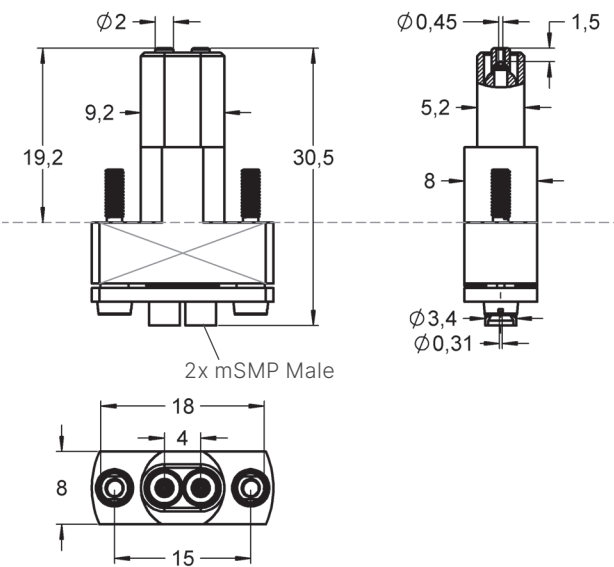
1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code    Product name

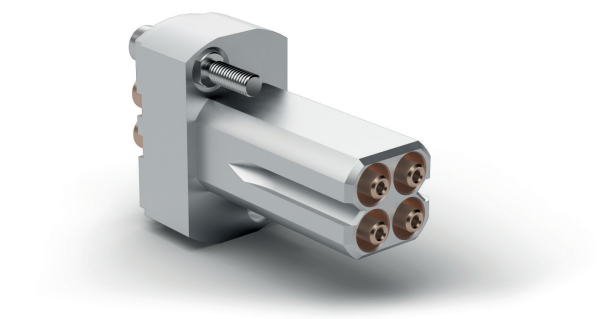
1139613	HF77SMKMINIFAKRAM0212G1080MSMPmF
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Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77SMKMINIFAKRAM0112G540MSMPmP (1134945).



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	4x SIGNAL	4x GROUND
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.4
Maximum travel (mm)	1.8	2.2

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	nickel plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

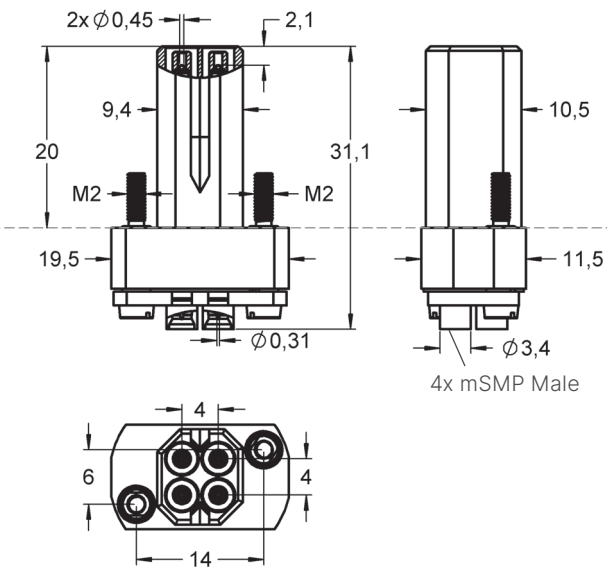
1134946	HF77SMKMINIFAKRAM0412G2160MSMPmF
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HF77

12 GHz | SMK mini Fakra Male 4-fold

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77SMKMINIFAKRAM0112G540MSMPmP (1134945).

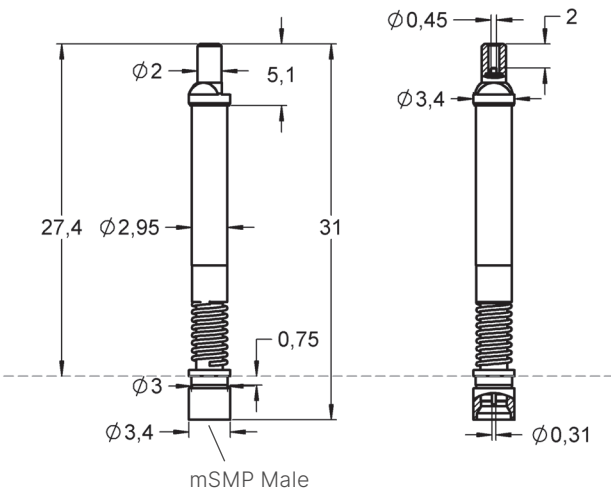


HF77

12 GHz | KET miniFakra Male 1-fold

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

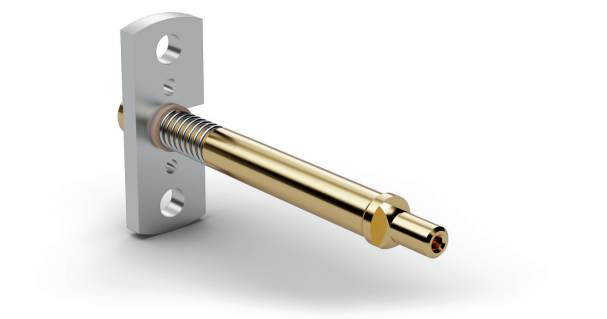
Accessories

Interface	mSMP Male	see page 135
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Order code Product name

1109576	HF77KETMINIFAKRAM0112G540MSMPmP
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Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

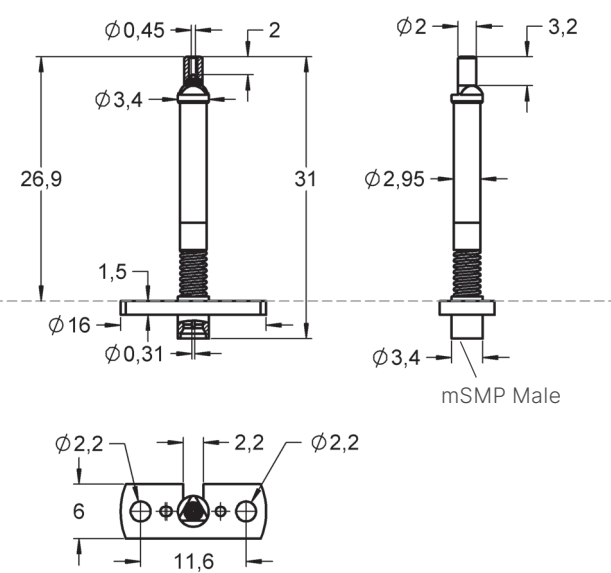
1141543	HF77KETMINIFAKRAM0112G540MSMPmF
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HF77

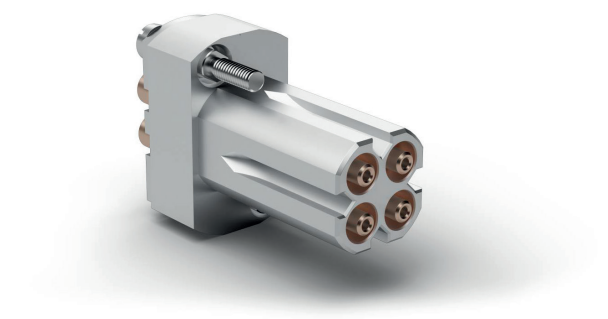
12 GHz | KET miniFakra Male 1-fold

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77KETMINIFAKRAM0112G540MSMPmP (1109576).



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	4x SIGNAL	4x GROUND
Preload (cN)	95	230
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	1.8	2.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1031897	FZWZ-001	Assembly tool
Interface	mSMP Male	see page 135

Order code Product name

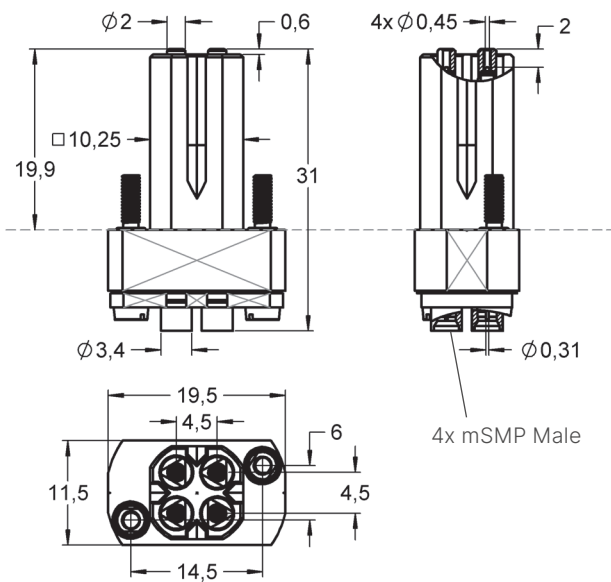
1109577	HF77KETMINIFAKRAM0412G1080MSMPmF
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HF77

12 GHz | KET miniFakra Male 4-fold

Series drawing

All measurements are in mm.



For sustainability reasons, the worn contact probe can be removed from the flange and replaced with the spare probe HF77KETMINIFAKRAM0112G540MSMPmP (1109576).



HF830  
6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	140	400
Nominal travel (mm)	2.5	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

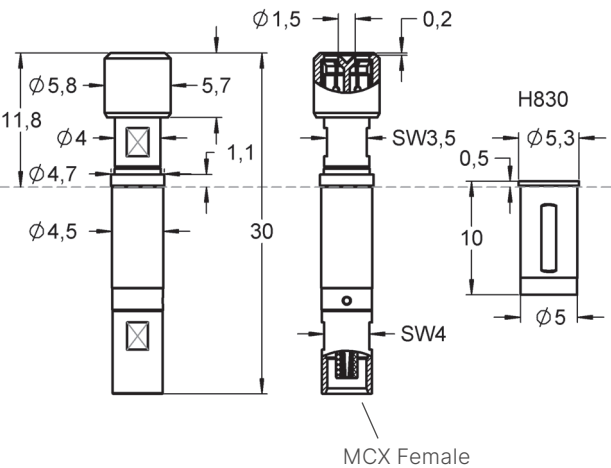
1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1050705	HF830FAKRAm016G540MCxmP
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Series drawing

All measurements are in mm.



HF860  
6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	150	320
Nominal travel (mm)	2.7	3.0
Maximum travel (mm)	3.7	3.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

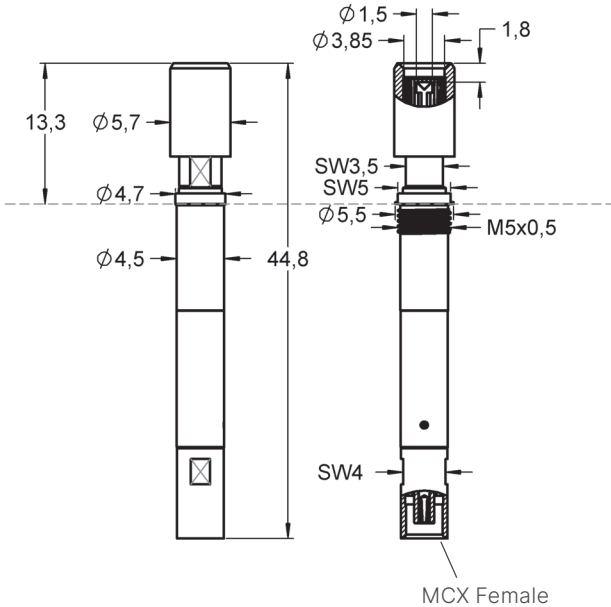
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1038817	HF860FAKRAm016G470MCxfS
1020923	HF860FAKRAm016G470MCxfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.60 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°		
Current INTERNAL [A]	3		
Current CIRCULAR [A]	10		
Impedance [Ohm]	50		
Frequency [GHz]	6		

Mechanical specifications

	SIGNAL	GROUND	
Preload (cN)	75	90	450
Spring force at nt (cN ±20%)	150	400	800
Nominal travel (mm)	2.0	4.0	4.0
Maximum travel (mm)	3.7	5.0	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

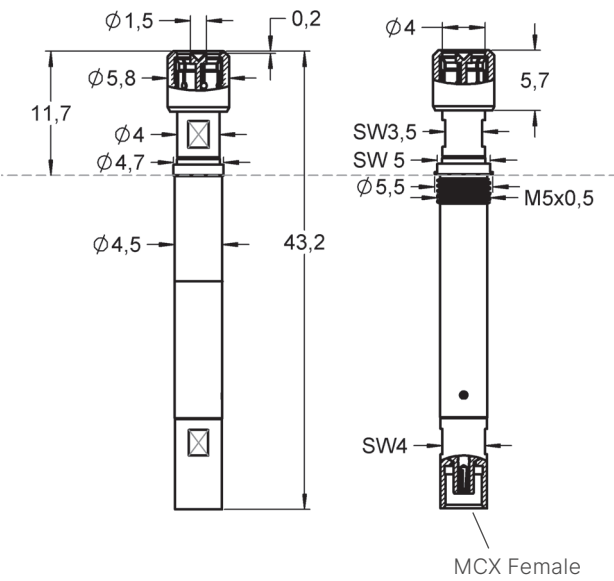
1038942	HF860FAKRAm016G550MCXfS
1033408	HF860FAKRAm016G550MCXfP
1035672	HF860FAKRAm016G950MCXfS
1033407	HF860FAKRAm016G950MCXfPV01

HF860

6 GHz | FAKRA Male

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.18 dB	0.60 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°		
Current INTERNAL [A]	3		
Current CIRCULAR [A]	10		
Impedance [Ohm]	50		
Frequency [GHz]	6		

Mechanical specifications

	SIGNAL	GROUND	
Preload (cN)	75	90	450
Spring force at nt (cN ±20%)	150	400	800
Nominal travel (mm)	2.0	4.0	4.0
Maximum travel (mm)	3.7	5.0	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1103186	F08655B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

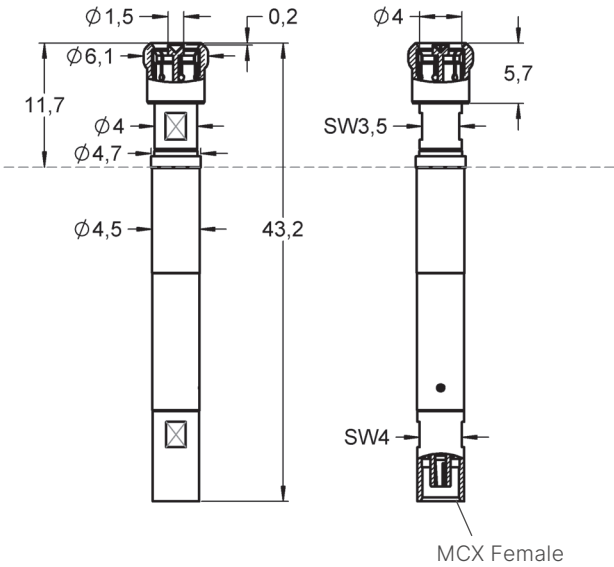
1054896	HF860FAKRAm016G950MCXfPV02
1142361	HF860FAKRAm016G950MCXfPV03

HF860

6 GHz | FAKRA Male

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.18 dB	0.60 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	450
Spring force at nt (cN ±20%)	150	800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

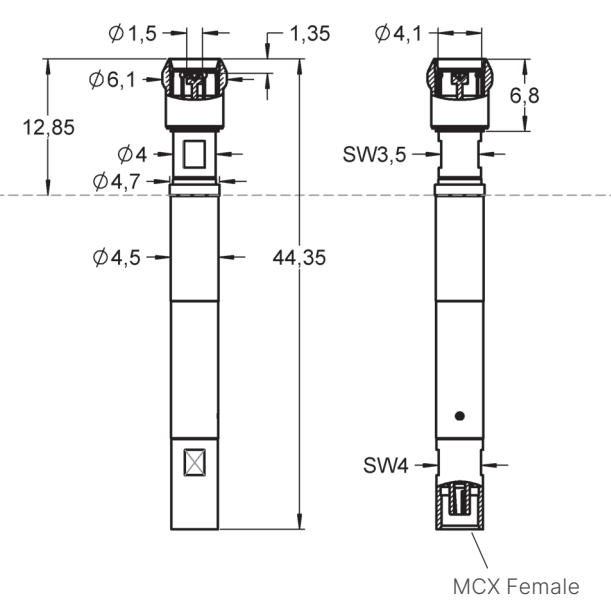
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1103186	F08655B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1110093	HF860FAKRAm016G930MCXfP
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Series drawing

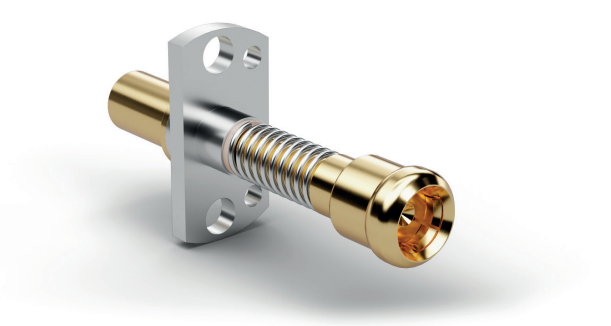
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.18 dB 0.60 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	20 dB 14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | FAKRA Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	110	500
Spring force at nt (cN ±20%)	150	665
Nominal travel (mm)	1.0	2.0
Maximum travel (mm)	1.3	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

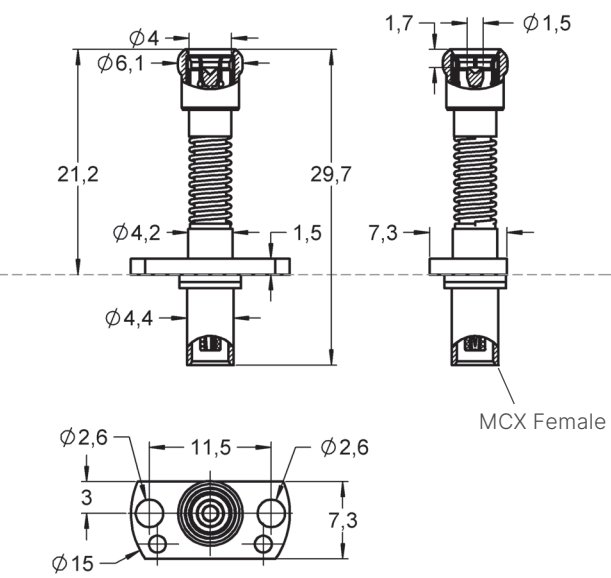
1037622	F08305B150G150	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1037623	HF66FAKRAm016G775MCXfF
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Series drawing

All measurements are in mm.

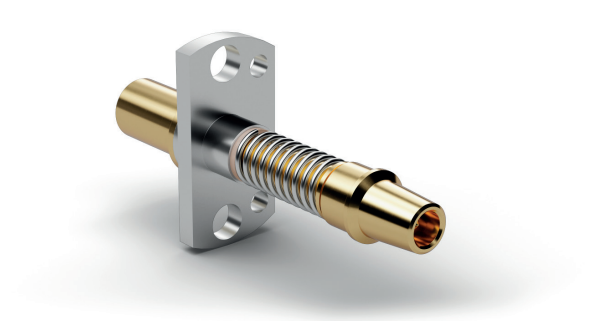


Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.40 dB 0.60 dB
Typical return loss	DC up to 10 GHz	3 GHz up to 20 GHz
	Minimum	17 dB 12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

1012578	F08605B150G130	Inner pin
1035932	FZWZ-004	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

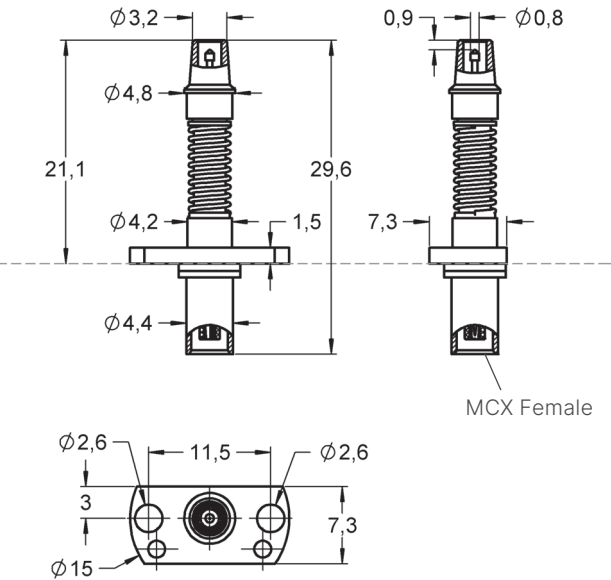
1142304	HF86FAKRAf016G775MCXmF
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HF86

6 GHz | FAKRA Female

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

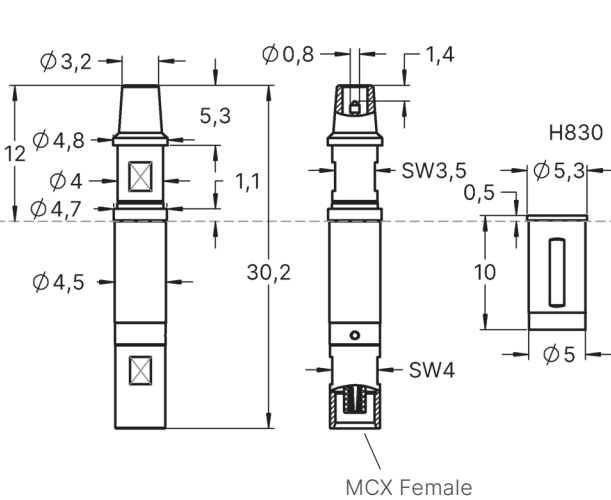


HF830

6 GHz | FAKRA Female

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	90	400
Nominal travel (mm)	1.0	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1051175	F08302B080G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1051176	HF830FAKRAf016G490MCXfP
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Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	100	450
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1029637	F08602B-080G130L350	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

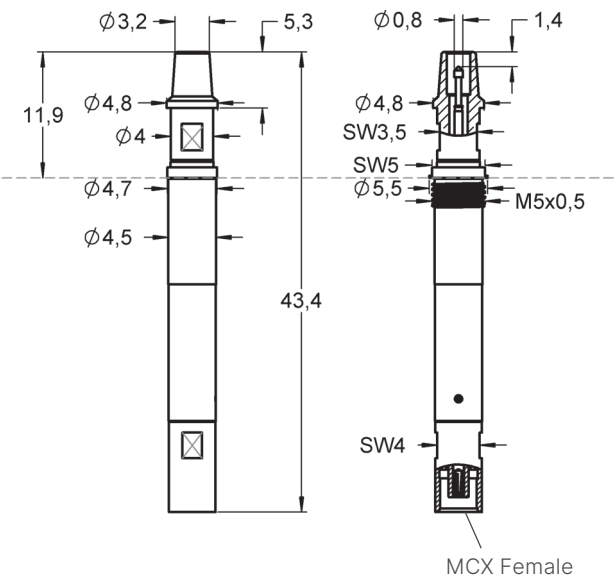
1037081	HF860FAKRAF016G930MCXfSV01	
1029428	HF860FAKRAF016G930MCXfP	

HF860

6 GHz | FAKRA Female

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.10 dB 0.15 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	30 dB 20 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	450
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 136

Order code Product name

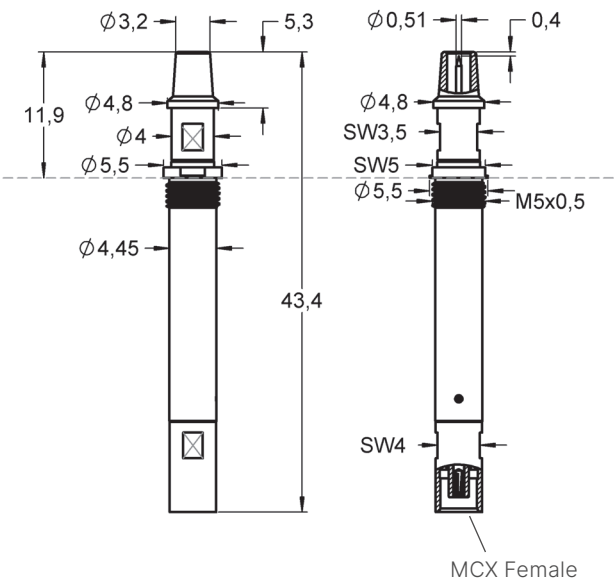
1139669	HF860FAKRAF016G930MCXfSV02	
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HF860

6 GHz | FAKRA Female

Series drawing

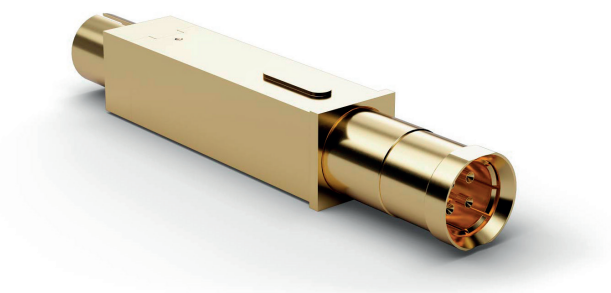
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.10 dB 0.15 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	30 dB 20 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	1	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1012728	F08614S090L130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code Product name

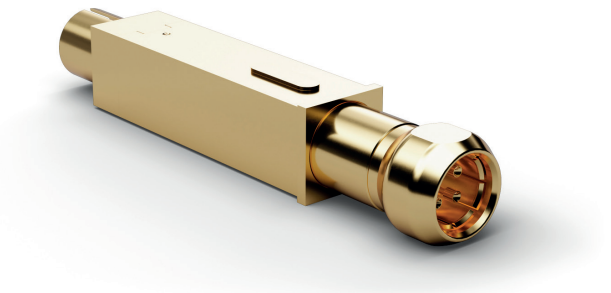
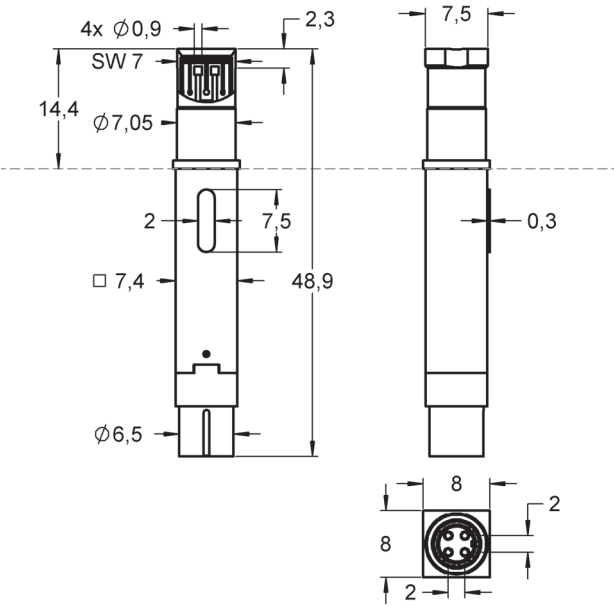
1012608	HF819HSDm011G1270H819AEPP
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HF819

1 GHz | HSD Male

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	1	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1012577	F08605B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code Product name

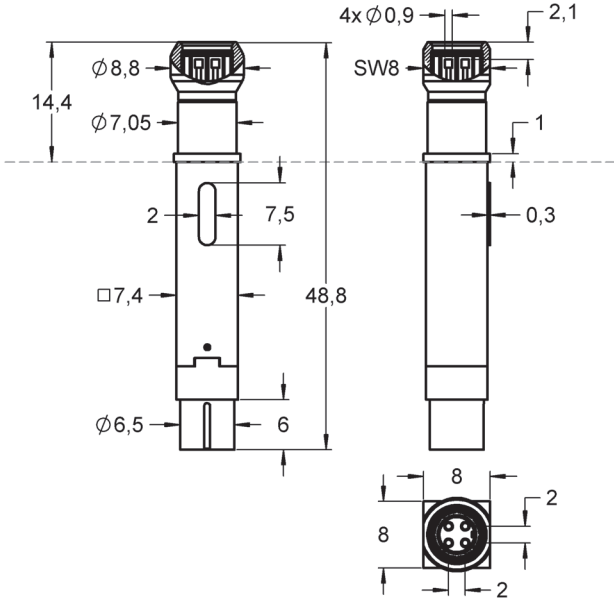
1145252	HF819HSDm011G1270H819AESP
1145253	HF819HSDm011G2020H819AESP

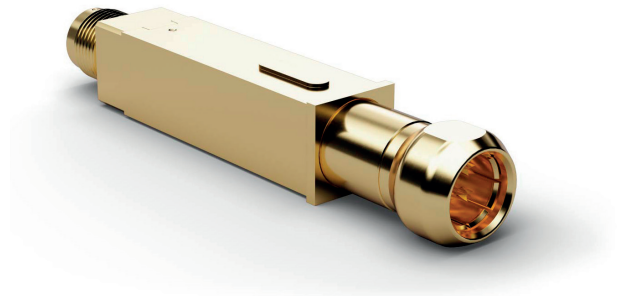
HF819

1 GHz | HSD Male

Series drawing

All measurements are in mm.





## HF819

2 GHz | HSD Male

## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	100
Frequency [GHz]	2

## Mechanical specifications

	4X SIGNAL	1X GROUND
Preload (cN)	75	900
Spring force at nt (cN $\pm 20\%$ )	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

## Accessories

1092029	KT819K01	Carrier
1012728	F08614S090L130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

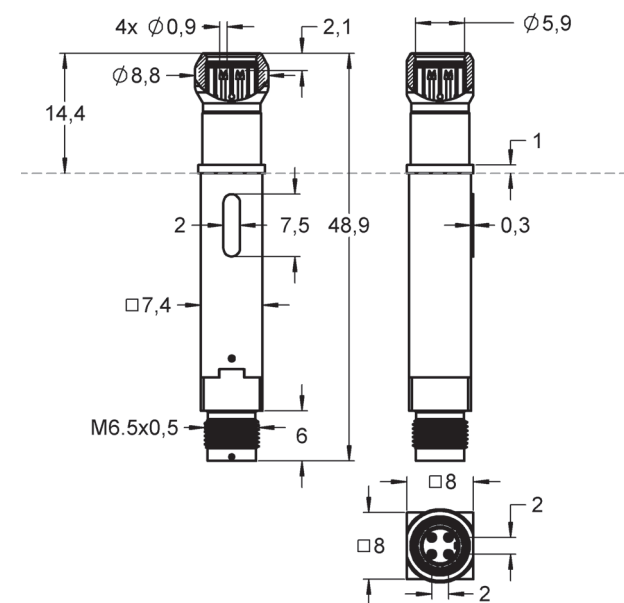
Connecting elements for HF819 see page 132+133.

Order code	Product name
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100	100

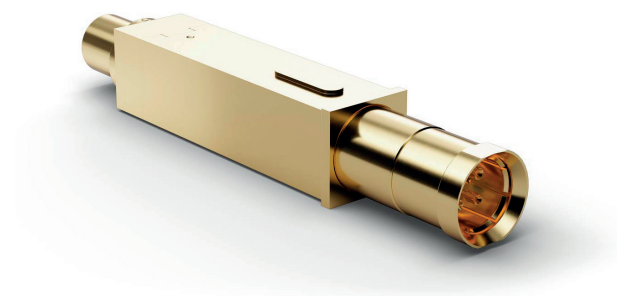
1088117	HF819HSDm012G2020H819AESP
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## Series drawing

All measurements are in mm.



## AUTOMOTIVE - HSD



## HF819

3 GHz | HSD Male

## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	100
Frequency [GHz]	3

## Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	2.7	6.0

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

## Accessories

1092029	KT819K01	Carrier
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

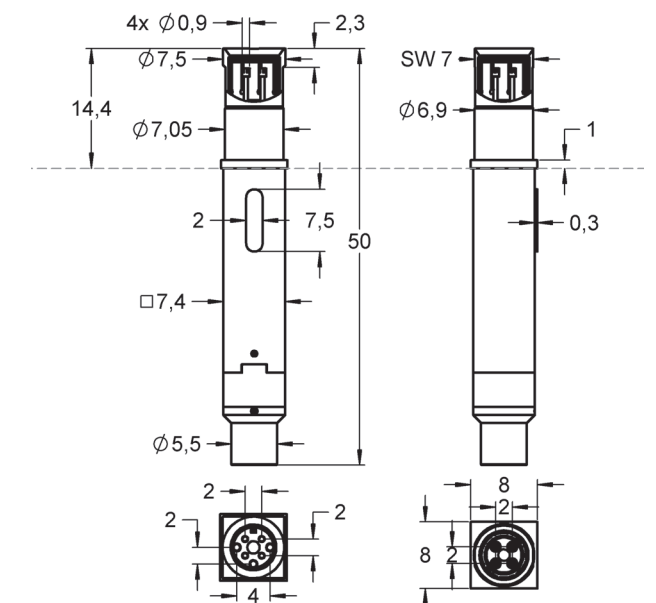
Connecting elements for HF819 see page 132+133.

[illegible]

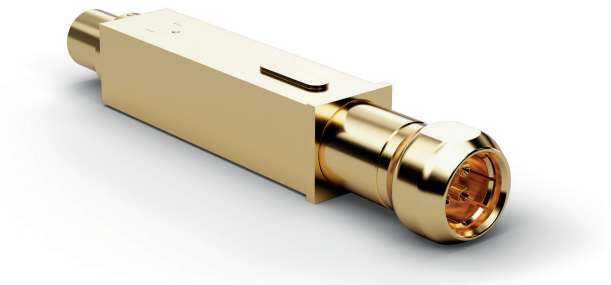
1023277	HF819HSDm013G2020HSDmPV01
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## Series drawing

All measurements are in mm.







HF819  
3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	3	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.1	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

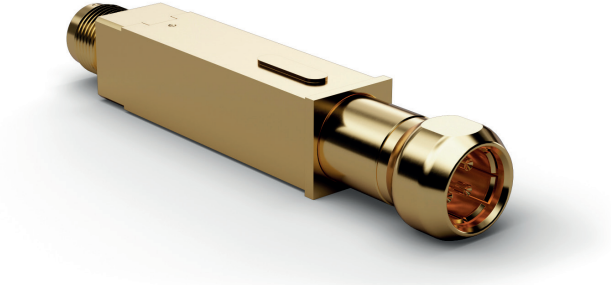
Accessories

1092029	KT819K01	Carrier
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code    Product name

1034670	HF819HSDm013G2020HSDmPV02
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HF819  
3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	3	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	300
Spring force at nt (cN ±20%)	130	750
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.1	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

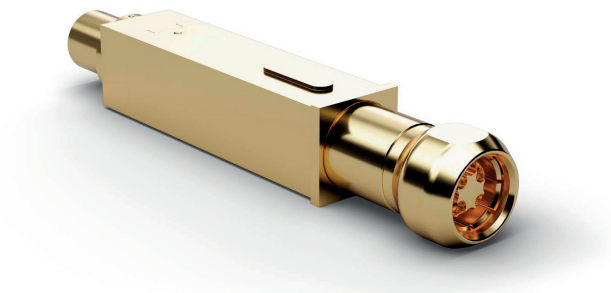
Accessories

1092029	KT819K01	Carrier
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code    Product name

1090175	HF819HSDm013G1270H819AESP
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HF819  
3 GHz | HSD Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	3	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1022361	F08655B090G130	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

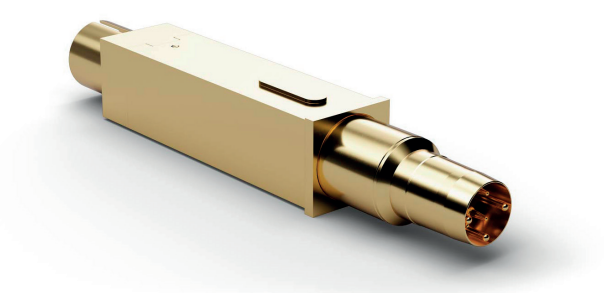
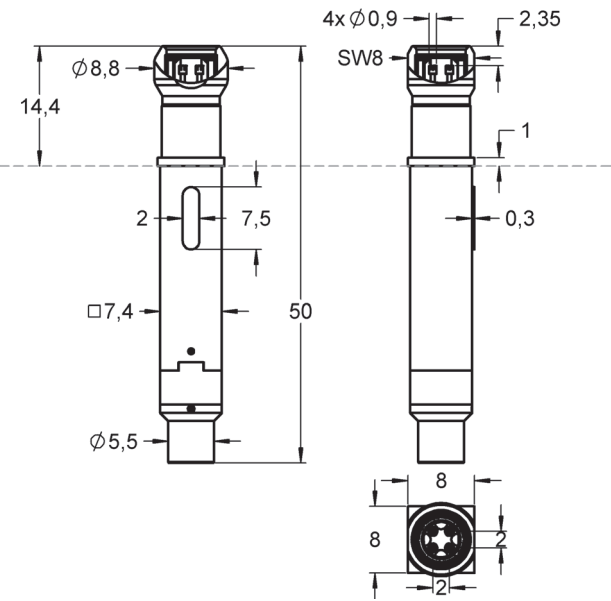
Connecting elements for HF819 see page 132+133.

Order code    Product name

1142275	HF819HSDm013G2020HSDmP
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Series drawing

All measurements are in mm.



HF819  
1 GHz | HSD Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	100	
Frequency [GHz]	1	

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1029008	F08612B-060150090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

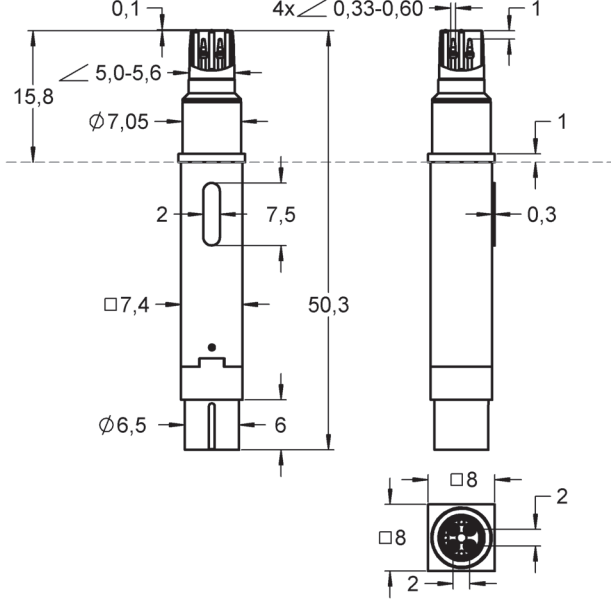
Connecting elements for HF819 see page 132+133.

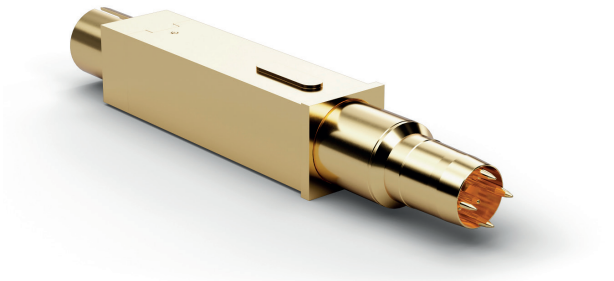
Order code    Product name

1033153	HF819HSDf011G2020H819AEPP
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Series drawing

All measurements are in mm.





Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	105	1500
Nominal travel (mm)	1.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1039263	F08612B-060210090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code Product name

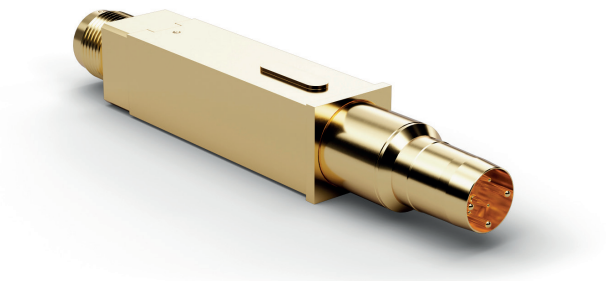
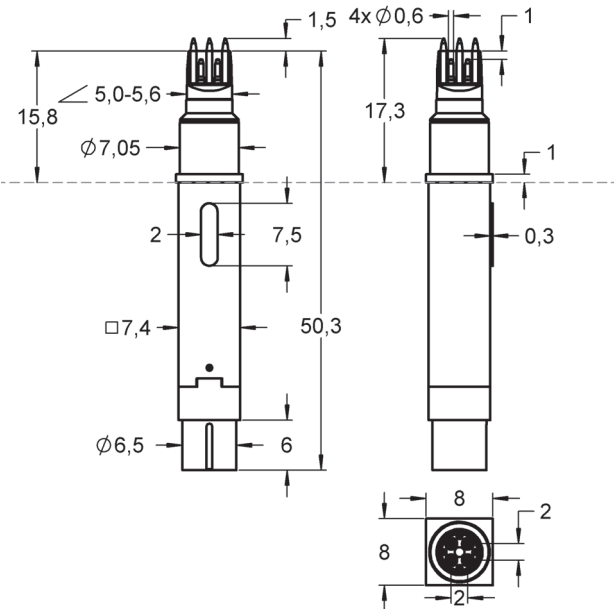
1039269	HF819HSDf011G1920H819AEPP
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HF819

1 GHz | HSD Female

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	100
Frequency [GHz]	1

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	75	900
Spring force at nt (cN ±20%)	130	1500
Nominal travel (mm)	2.0	5.0
Maximum travel (mm)	3.7	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1092029	KT819K01	Carrier
1029008	F08612B-060150090G130L384	Inner pin
1035933	FZWZ-005	Assembly tool
1092029	KT819	Locating bracket

Connecting elements for HF819 see page 132+133.

Order code Product name

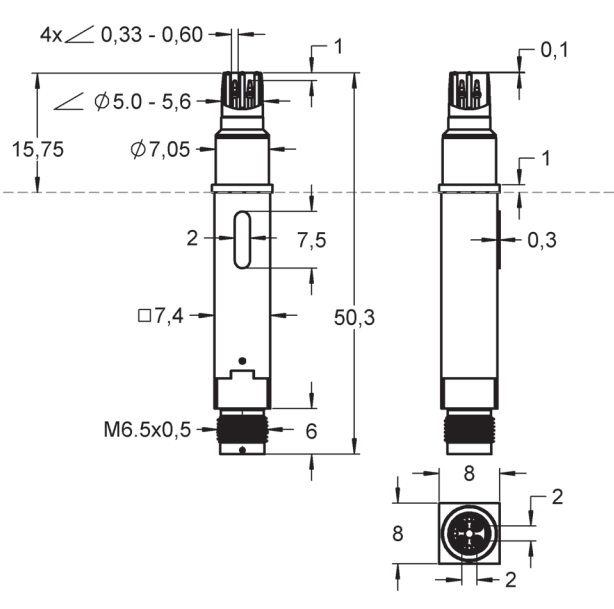
1039288	HF819HSDf011G2020H819AESP
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HF819

1 GHz | HSD Female

Series drawing

All measurements are in mm.





Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	1
Current CIRCULAR [A]	5
Impedance [Ohm]	100
Frequency [GHz]	3

Mechanical specifications

	4x SIGNAL	1x GROUND
Preload (cN)	50	900
Spring force at nt (cN ±20%)	120	1380
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.0	6.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

1043433	F82955B090G120	Inner pin
1035933	FZWZ-005	Assembly tool

Connecting elements for HF829 see page 132+133.

Order code    Product name

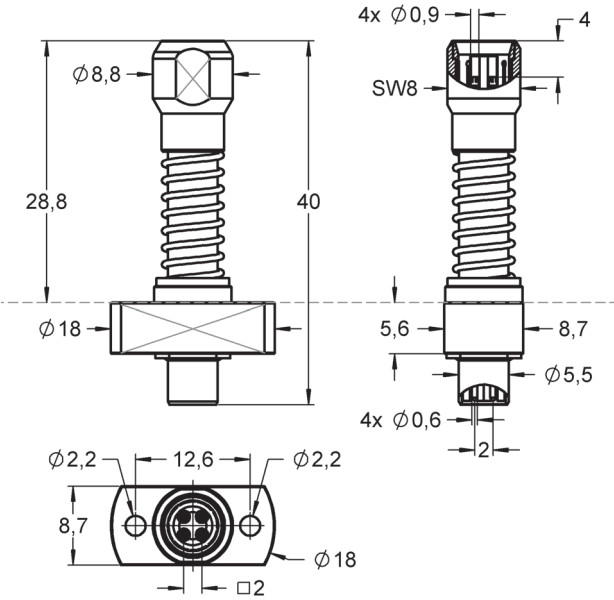
1044571	HF829HSDm013G1860HSDmF
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HF829

3 GHz | HSD Male

Series drawing

All measurements are in mm.



COMMUNICATION







HF830

8 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	8	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	100	400
Nominal travel (mm)	1.3	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

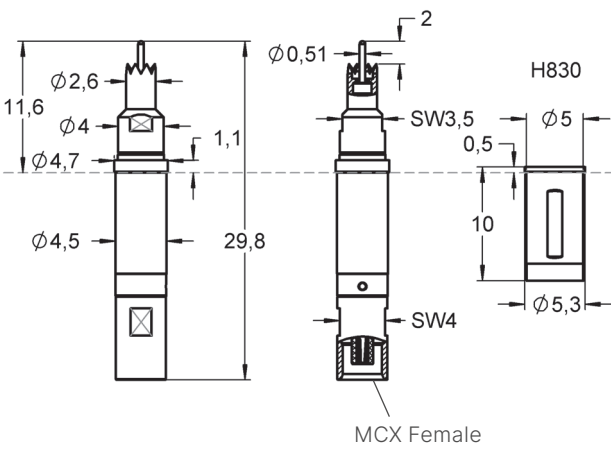
1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1090027	HF830PCBCC018G500MCXfP
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Series drawing

All measurements are in mm.



HF860

4 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

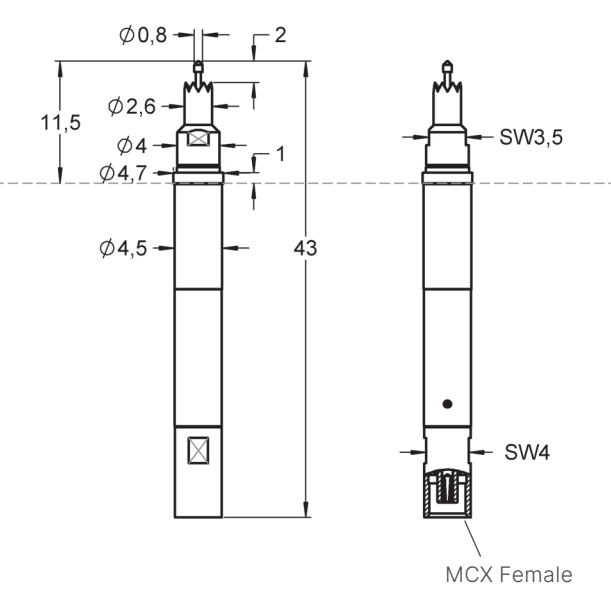
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1101325	HF860PCBCC014G530MCXfPV01
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Series drawing

All measurements are in mm.



Radio Frequency perfomance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.30 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	23 dB	26 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860

4 GHz | PCB coax closed

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

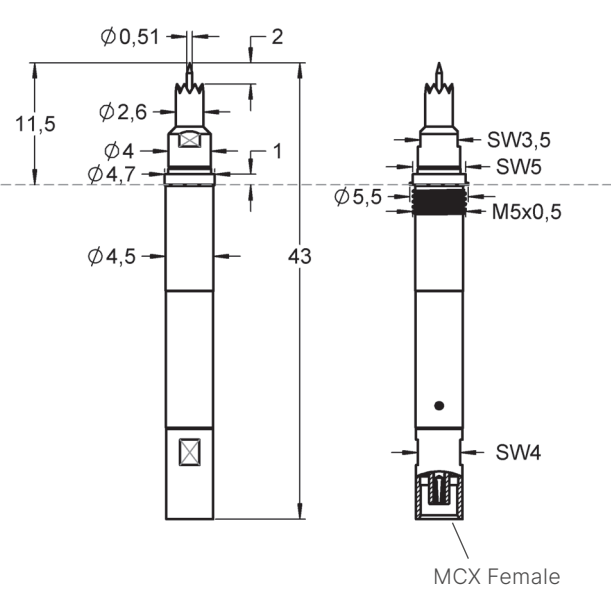
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1032689	HF860PCBCC014G530MCXmPV02
1038337	HF860PCBCC014G530MCXmS

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.10 dB 0.30 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	26 dB 23 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860

6 GHz | PCB Coax open

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

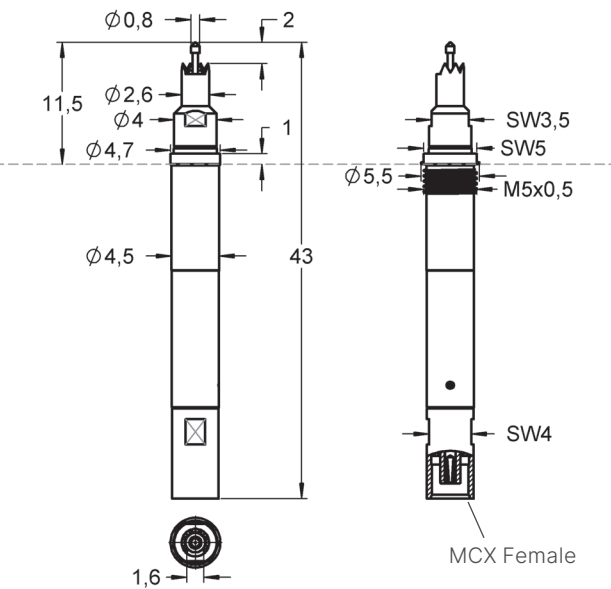
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1038951	HF860PCBCO016G530MCXfSV01
1021450	HF860PCBCO016G530MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.25 dB 0.70 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	20 dB 16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | PCB Coax open

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90 / 450
Spring force at nt (cN ±20%)	130	400 / 800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

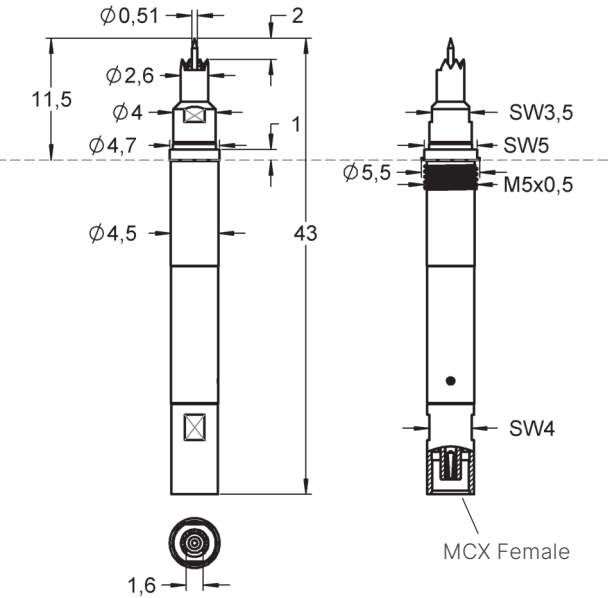
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 136

Order code Product name

1038941	HF860PCBCO016G530MCXfSV02
1023017	HF860PCBCO016G530MCXfPV02
1038921	HF860PCBCO016G930MCXfS
1031632	HF860PCBCO016G930MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.70 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
4 GHz | PCB Coax kidney shaped

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

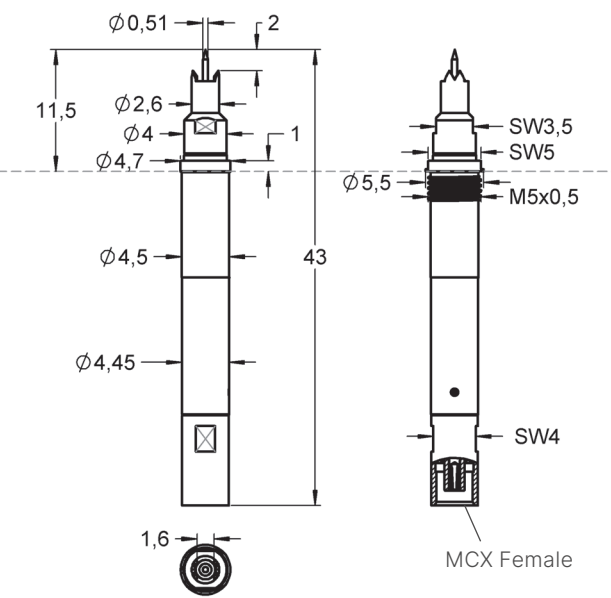
1017393	FEWZ-822E0	Insertion tool receptacle
1023016	F08618B051G130	Inner pin
Interface	MCX Female	see page 136

Order code Product name

1038920	HF860PCBCK014G530MCXfS
1032697	HF860PCBCK014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.34 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	27 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
4 GHz | PCB PAD GGSGG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	5
Impedance [Ohm]	50
Frequency [GHz]	4

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	GROUND BODY
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	silver plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

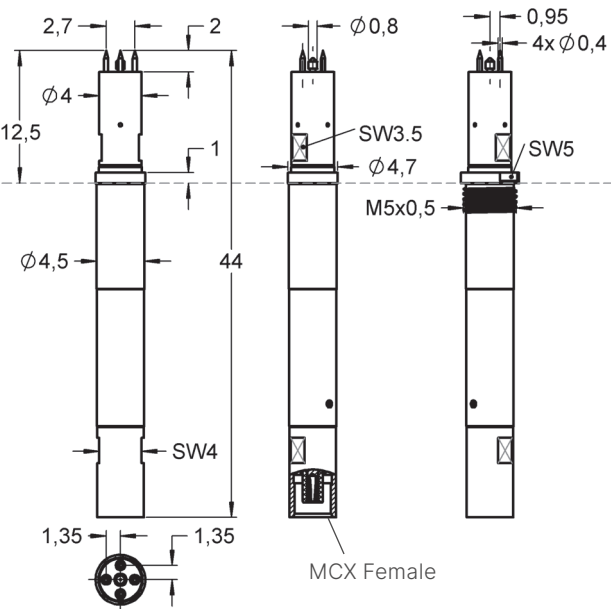
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1039131	HF860PCBGSGG014G960MCXfS
1033127	HF860PCBGSGG014G960MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	28 dB	17 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	GROUND BODY
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	silver plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

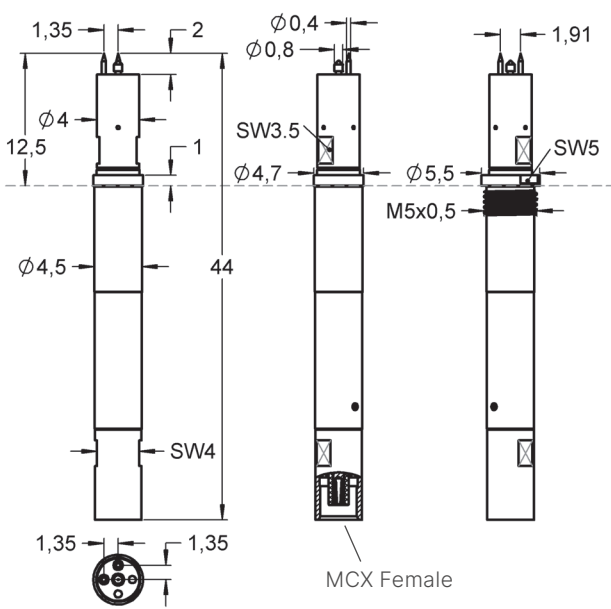
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1038964	HF860PCBGSG016G960MCXfS
1021449	HF860PCBGSG016G960MCXfPV01

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





HF860  
6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	GROUND BODY
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

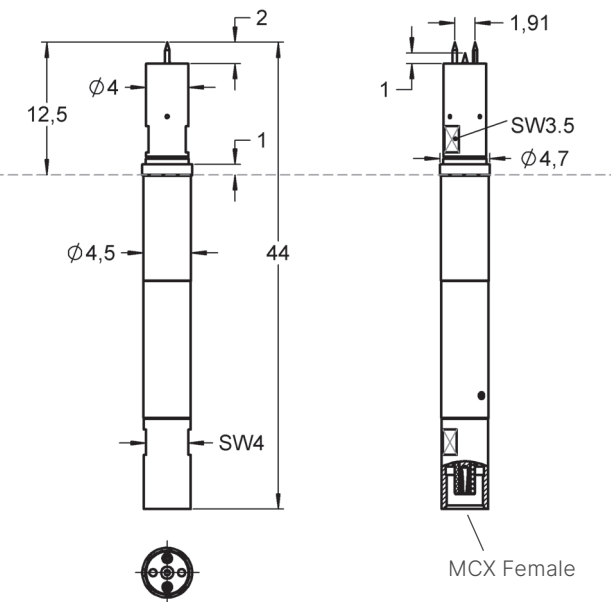
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1043726	HF860PCBGSG016G960MCXFPV02
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | PCB PAD SG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	GROUND BODY
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	800
Nominal travel (mm)	1.0	-	4.0
Maximum travel (mm)	1.5	-	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	silver plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

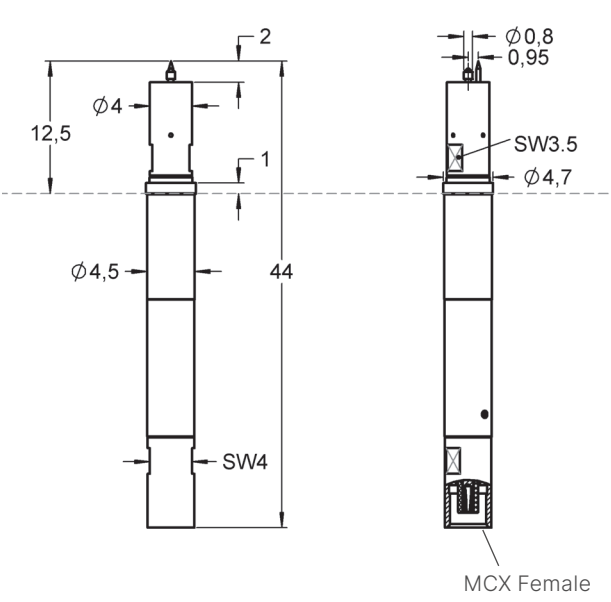
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1052669	HF860PCBGSG016G880MCXFP
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.25 dB	0.40 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	24 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | PCB PAD SG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	GROUND BODY
Preload (cN)	40	-	450
Spring force at nt (cN ±20%)	80	-	750
Nominal travel (mm)	1.0	-	3.0
Maximum travel (mm)	1.5	-	4.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1118503	HF860PCBGSG016G830MCXFS
1021014	HF860PCBGSG016G830MCXFP



HF05  
6 GHz | PCB PAD GSG

Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	0.1
Current CIRCULAR [A]	0.5
Impedance [Ohm]	50
Frequency [GHz]	6

Mechanical specifications

	GROUND PINS	SIGNAL (RIGID)	BODY
Preload (cN)	65	-	240
Spring force at nt (cN ±20%)	80	-	270
Nominal travel (mm)	0.3	-	0.5
Maximum travel (mm)	0.6	-	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring GROUND PIN	Spring steel	silver plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

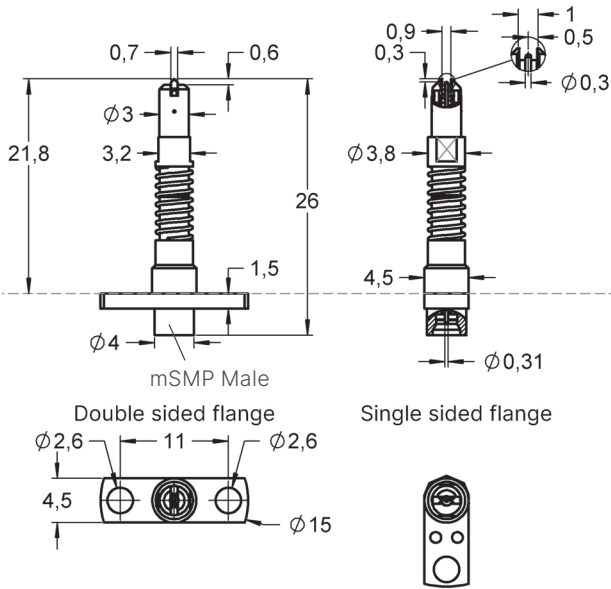
Interface	mSMP Male	see page 135
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Order code Product name

1024471	HF05PCBGSG016G430MSMPmFV01 (Double sided flange)
1024472	HF05PCBGSG016G430MSMPmFV02 (Single sided flange)

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.6 dB	1.0 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	14 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



## HF860

4 GHz | DIN 1.0 / 2.3

## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	50
Frequency [GHz]	4

## Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN $\pm 20\%$ )	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

## Accessories

Receptacles H860 see page 132.

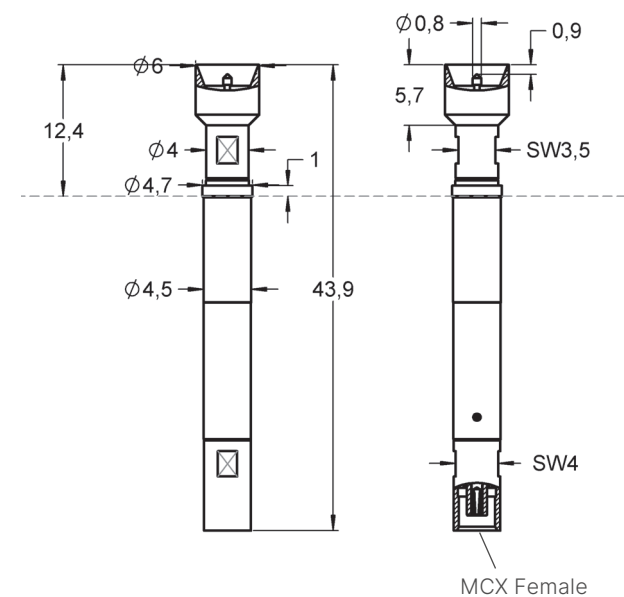
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code	Product name
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86	...
87	...
88	...
89	...
90	...
91	...
92	...
93	...
94	...
95	...
96	...
97	...
98	...
99	...
100	...

1032825	HF860DIN 1,0/2,3014G530MCXfP
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## Series drawing

All measurements are in mm.



## Radio Frequency performance

Typical <b>insertion loss</b>	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.15 dB	0.39 dB
Typical <b>return loss</b>	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17.5 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

## COMMUNICATION - U.FL



## HF860

5 GHz | U.FL Male

## Electrical specifications

Temperature [°C]	-45°...+100°
Current INTERNAL [A]	3
Current CIRCULAR [A]	10
Impedance [Ohm]	50
Frequency [GHz]	5

## Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN $\pm$ 20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

## Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

## Accessories

Receptacles H860 see page 132.

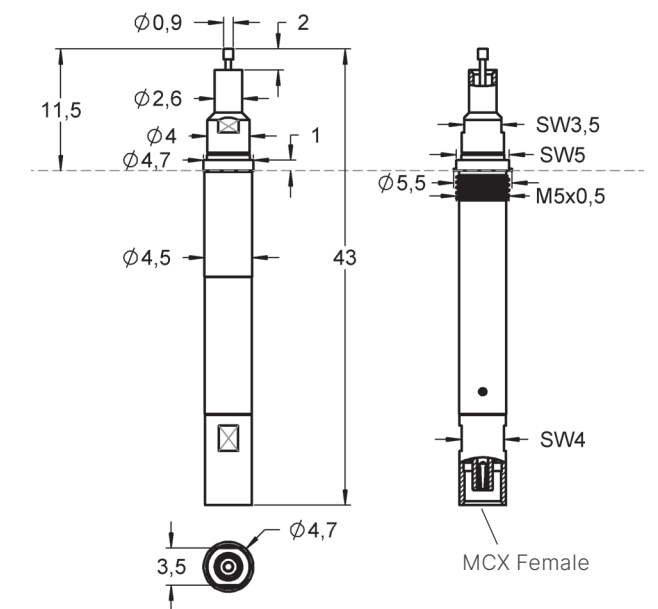
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code	Product name
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1038302	HF860UFLm015G530MCXfS
1012584	HF860UFLm015G530MCXfP

## Series drawing

All measurements are in mm.



### Radio Frequency performance

Typical <b>insertion loss</b>	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.28 dB	0.5 dB
Typical <b>return loss</b>	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | U.FL Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

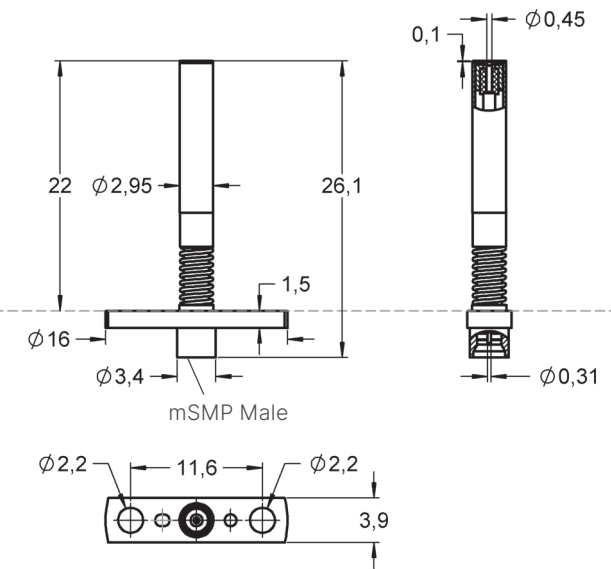
Interface	mSMP Male	see page 135
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Order code    Product name

1024470    HF66MHF/UFL016G540MSMPmF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
8 GHz | U.FL Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1	
Current CIRCULAR [A]	5	
Impedance [Ohm]	50	
Frequency [GHz]	8	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	300
Spring force at nt (cN ±20%)	120	540
Nominal travel (mm)	0.5	1.0
Maximum travel (mm)	0.9	1.7

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

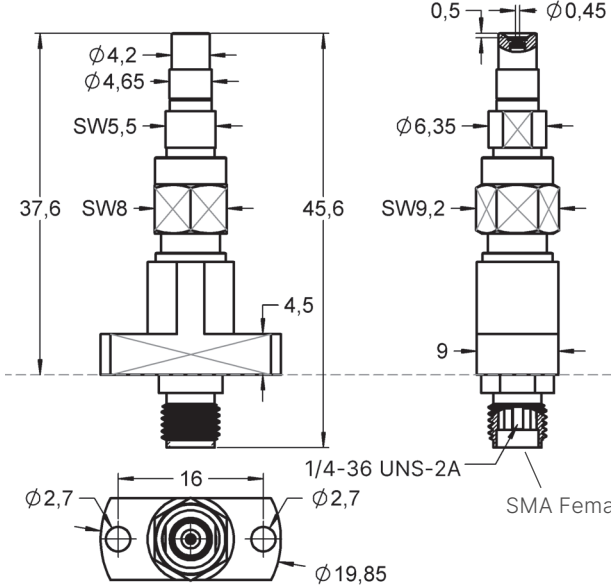
1036871	KKHF66-0043	Changeable head
Interface	SMA Female	see page 135+136

Order code    Product name

1036633    HF66UFL018G620SMAfF

Series drawing

All measurements are in mm.







HF66  
6 GHz | MHF4 / HSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1	
Current CIRCULAR [A]	5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

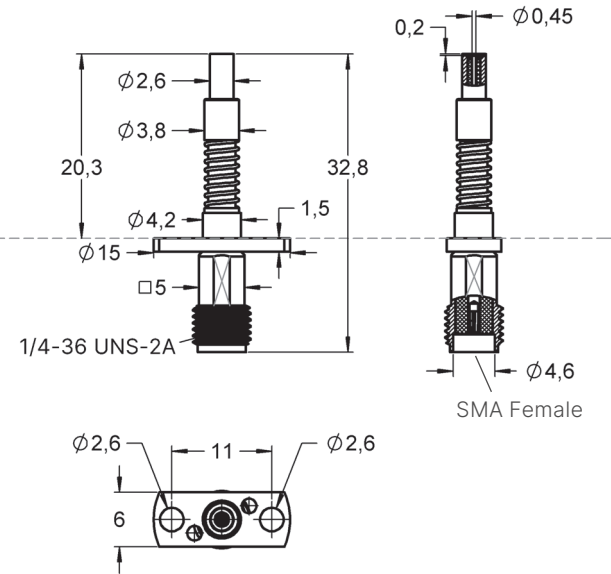
Interface	SMA Female	see page 135+136
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Order code    Product name

1024464    HF66HSC016G480SMAfF

Series drawing

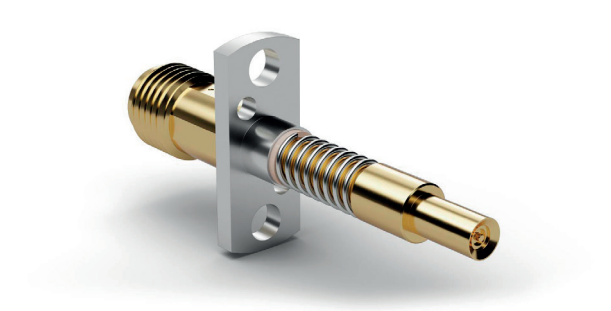
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | HSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	1	
Current CIRCULAR [A]	5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

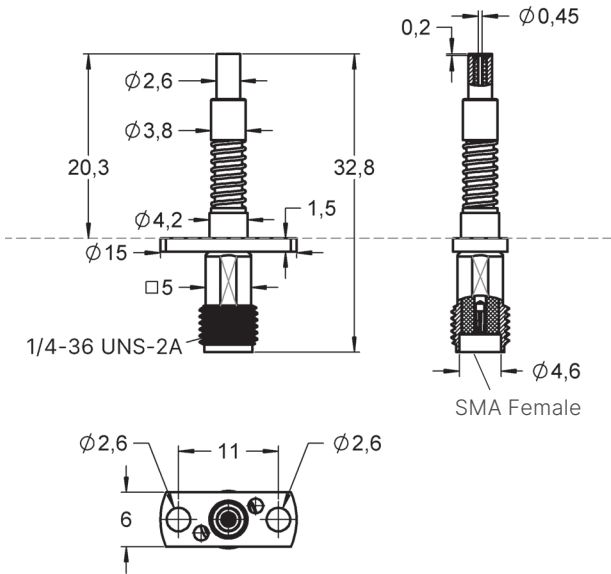
Interface	SMA Female	see page 135+136
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Order code    Product name

1024464    HF66HSC016G480SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	120	240
Spring force at nt (cN ±20%)	210	450
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	4.5

Materials and plating

Contact SIGNAL	Brass	gold plated
Contact GROUND	Brass	gold plated
Barrel	BeCu	gold plated
Spring SIGNAL	Spring steel	silver plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	SMA Female	see page 135+136
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Order code    Product name

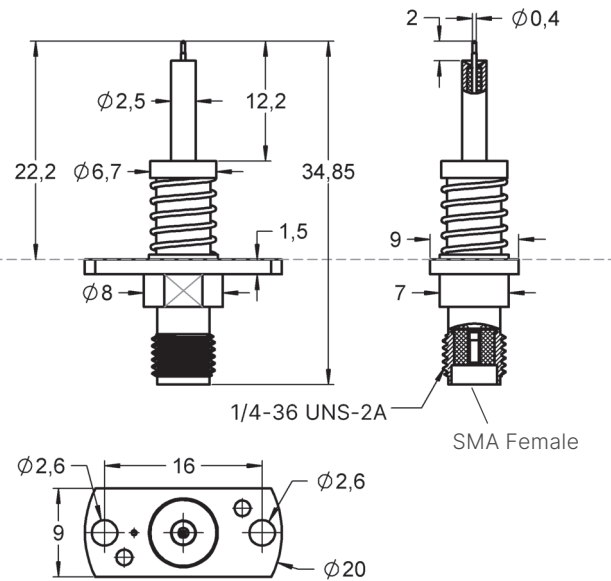
1024469    HF66SWD/F/G016G660SMAfF

HF66

6 GHz | SWD / SWF / SWG

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	21 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	110	120
Spring force at nt (cN ±20%)	180	240
Nominal travel (mm)	0.8	2.2
Maximum travel (mm)	3.3	4.0

Materials and plating

Contact SIGNAL	Brass	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	nickel plated

Accessories

Interface	SMA Female	see page 135+136
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Order code    Product name

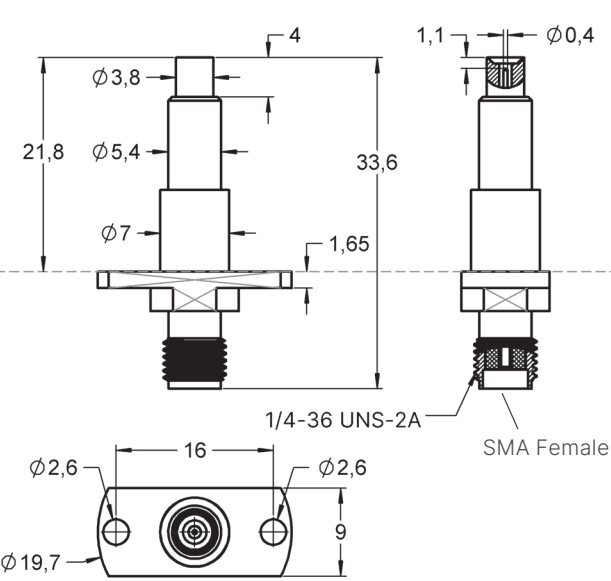
1029250    HF66SWF016G420SMAfF

HF66

6 GHz | SWF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.7 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	12 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | SWG

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	140
Spring force at nt (cN ±20%)	120	220
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	1.5	1.8

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

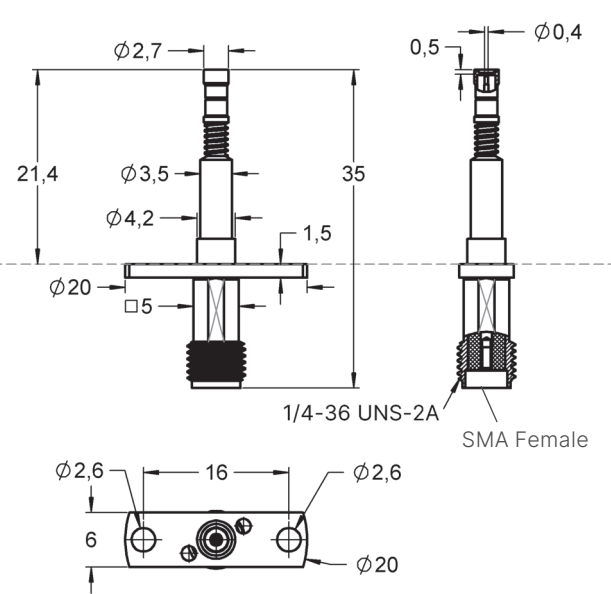
Interface	SMA Female	see page 135+136
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Order code    Product name

1024463    HF66SWG016G340SMAfF

Series drawing

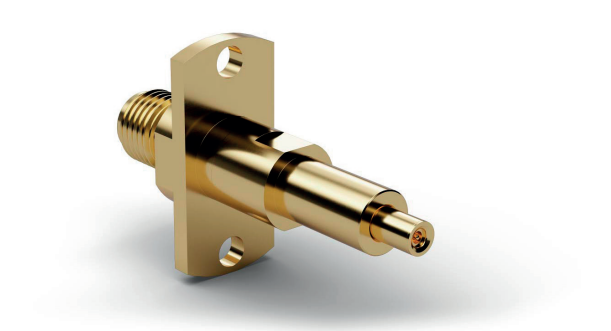
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.6 dB    0.8 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	18 dB    14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | SWG

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	100	220
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	0.3	0.8
Maximum travel (mm)	1.1	1.5

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	BeCu	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Spring steel	gold plated
Flange	Brass	gold plated

Accessories

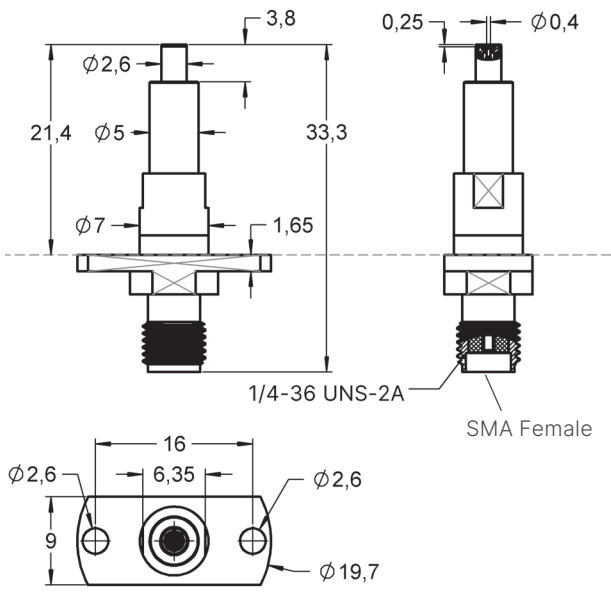
Interface	SMA Female	see page 135+136
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Order code    Product name

1105636    HF66SWG016G520SMAfF

Series drawing

All measurements are in mm.





Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	150
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.2
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	mSMP Male	see page 135
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Order code    Product name

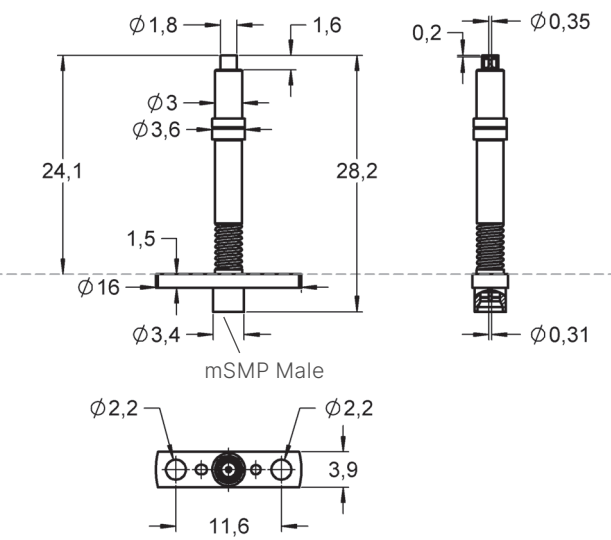
1024455    HF66SWJ016G540MSMPmF

HF66

6 GHz | SWJ

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.4 dB    0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	22 dB    16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6.5	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	190
Spring force at nt (cN ±20%)	120	500
Nominal travel (mm)	0.5	3.2
Maximum travel (mm)	0.8	3.9

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

Interface	SMA Female	see page 135+136
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Order code    Product name

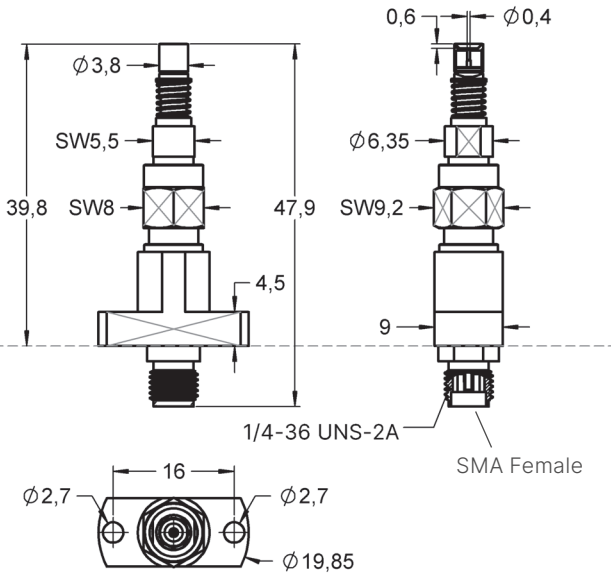
1042572    HF66SWJ016.5G620SMAfF

HF66

6.5 GHz | SWJ

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.4 dB    0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	22 dB    16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





HF66  
6.5 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

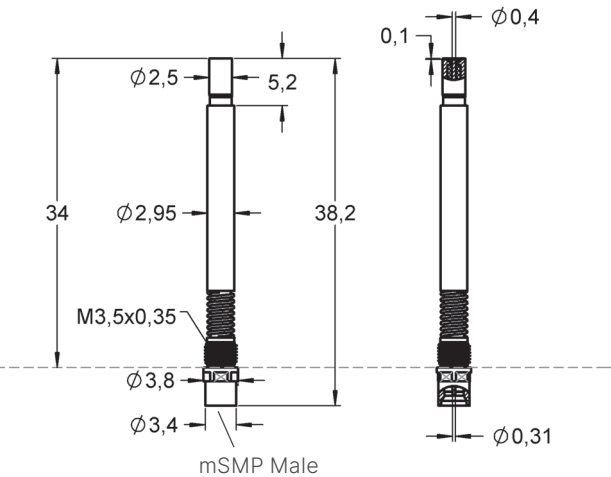
Interface	mSMP Male	see page 135
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Order code   Product name

1024458	HF66JSC016G640MSMPmS
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.7 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	190
Spring force at nt (cN ±20%)	120	500
Nominal travel (mm)	0.5	3.2
Maximum travel (mm)	0.8	3.9

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

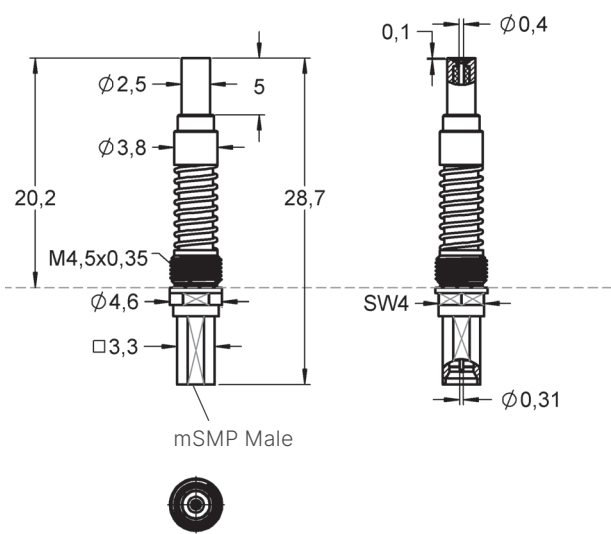
Interface	mSMP Male	see page 135
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Order code   Product name

1024466	HF66JSC016G480MSMPmS
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Series drawing

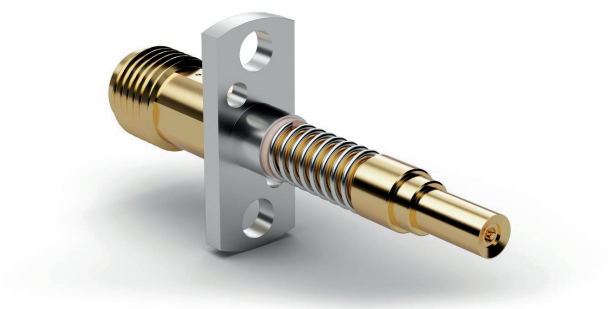
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | JSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

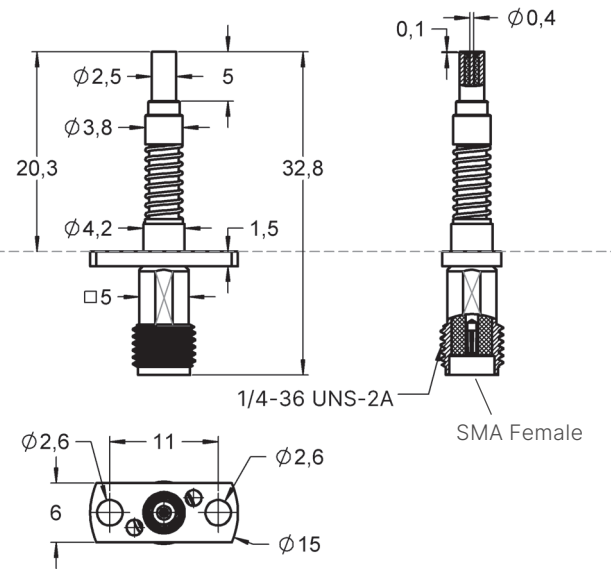
Interface	SMA Female	see page 135+136
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Order code   Product name

1024468	HF66JSC016G480SMAfF
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | SWH

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated

Accessories

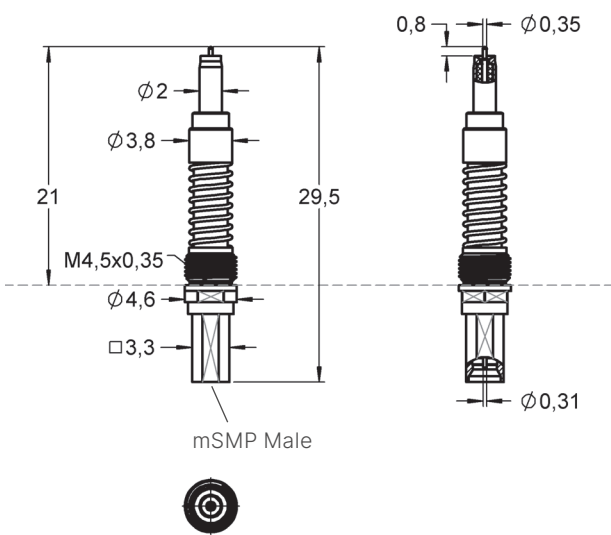
Interface	mSMP Male	see page 135
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Order code   Product name

1024465	HF66SWH016G480MSMPmS
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.7 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | KSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	150
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	2.7

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

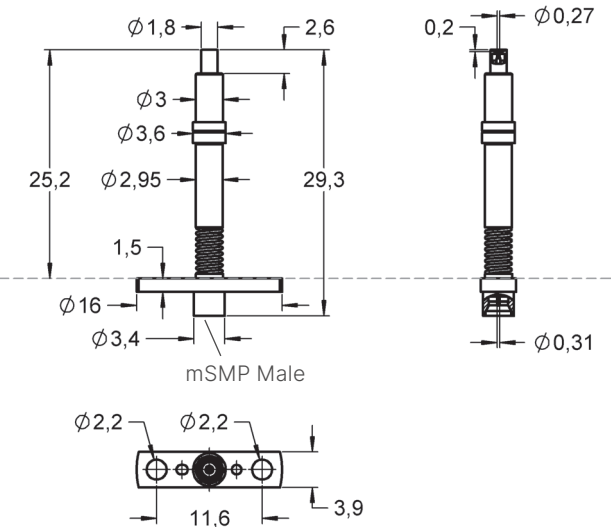
Interface	mSMP Male	see page 135
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Order code    Product name

1024461    HF66KSC016G540MSMPmF

Series drawing

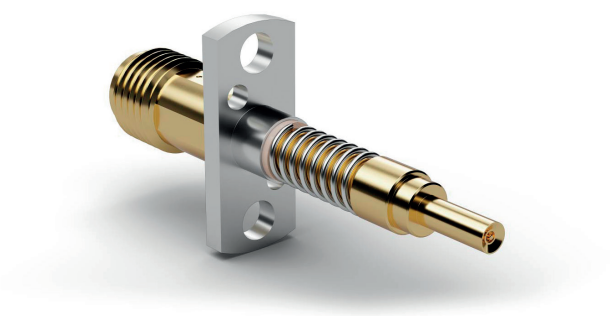
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | KSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

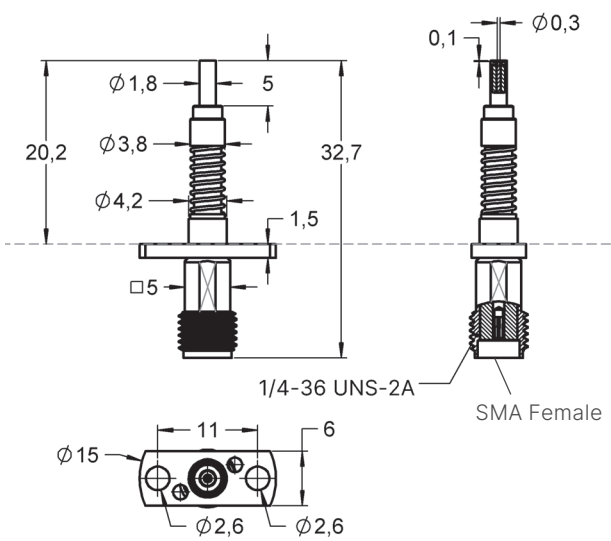
Interface	SMA Female	see page 135+136
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Order code    Product name

1024459    HF66KSC016G480SMAfF

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	15 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | LSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	280
Spring force at nt (cN ±20%)	120	420
Nominal travel (mm)	0.5	1.5
Maximum travel (mm)	0.8	2.2

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

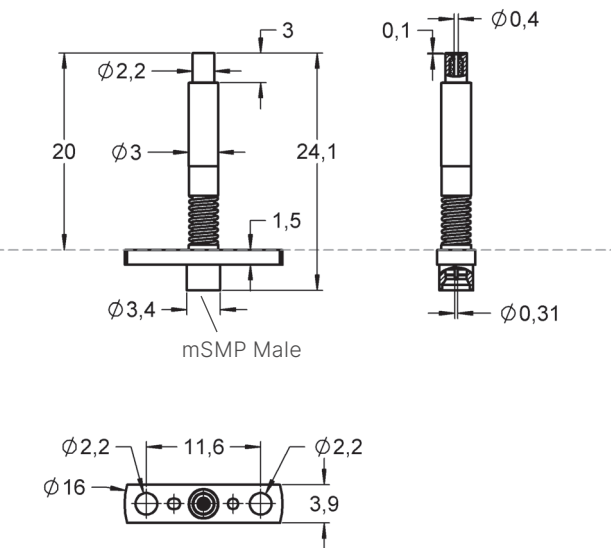
Interface	mSMP Male	see page 135
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Order code    Product name

1024460    HF66LSC016G540MSMPmF

Series drawing

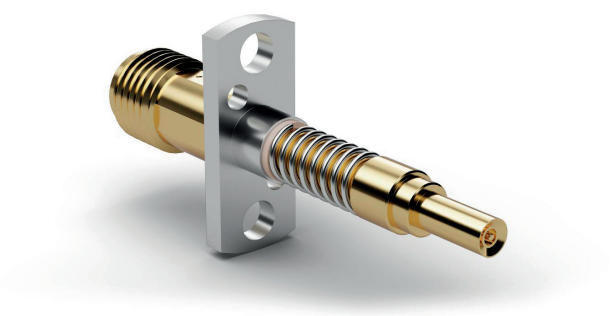
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.5 dB	0.8 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	20 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF66  
6 GHz | LSC

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

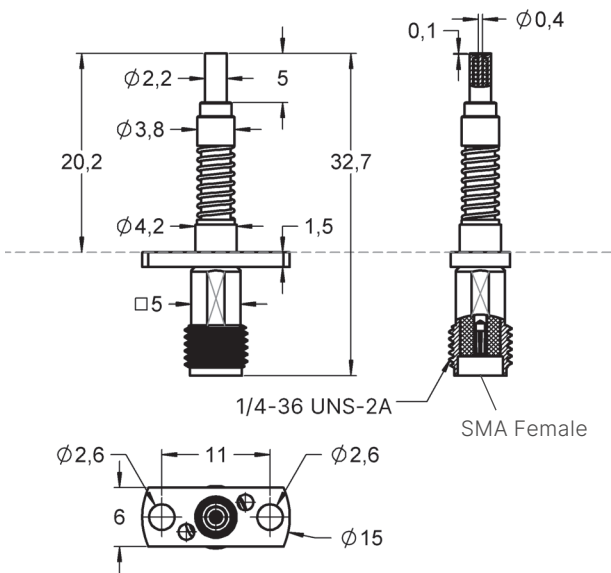
Interface	SMA Female	see page 135+136
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Order code    Product name

1024467    HF66LSC016G480SMAfF

Series drawing

All measurements are in mm.



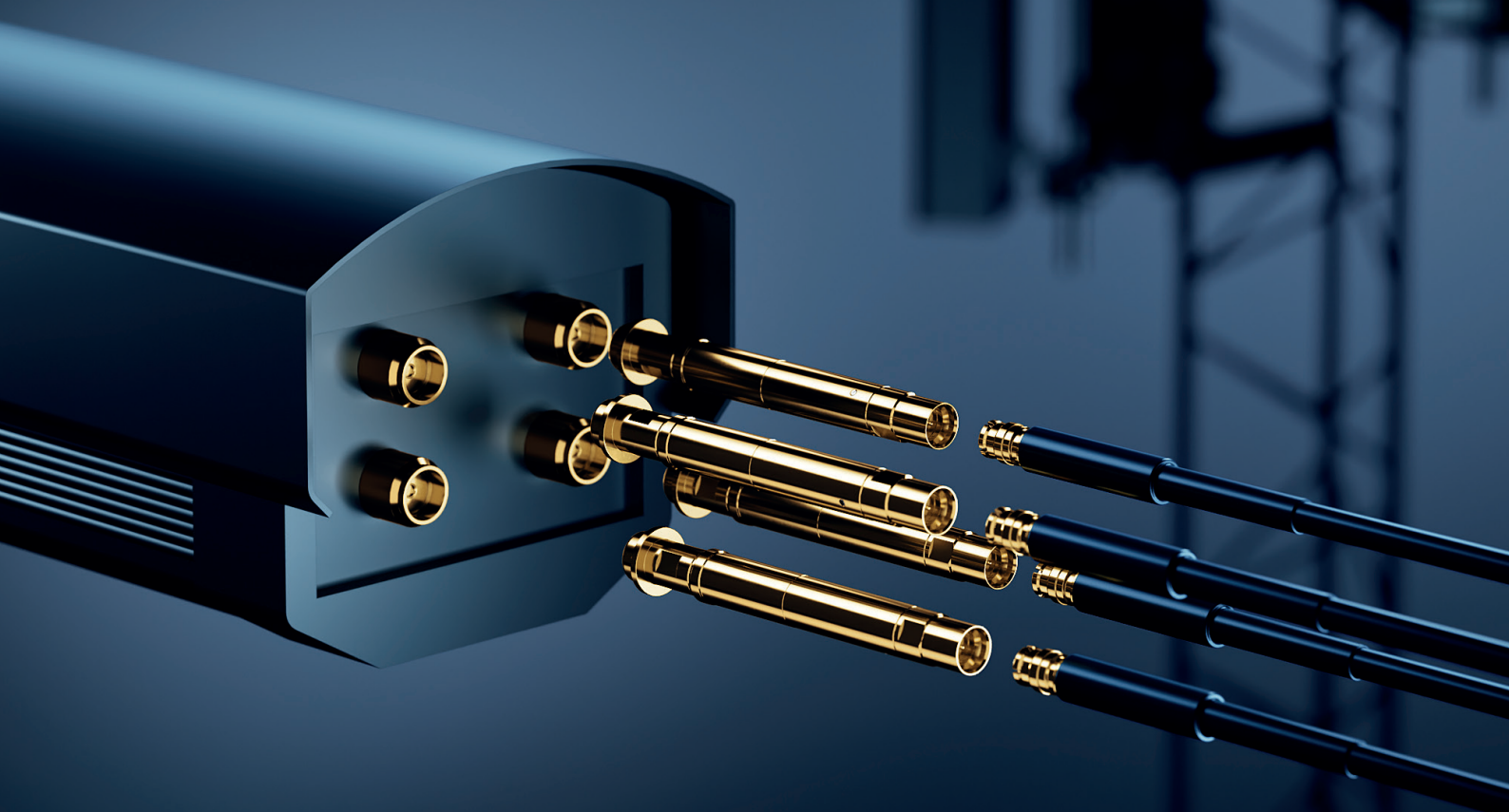
Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.4 dB	0.6 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



INDUSTRIAL



INDUSTRIAL - BMA



HF860  
4 GHz | BMA Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

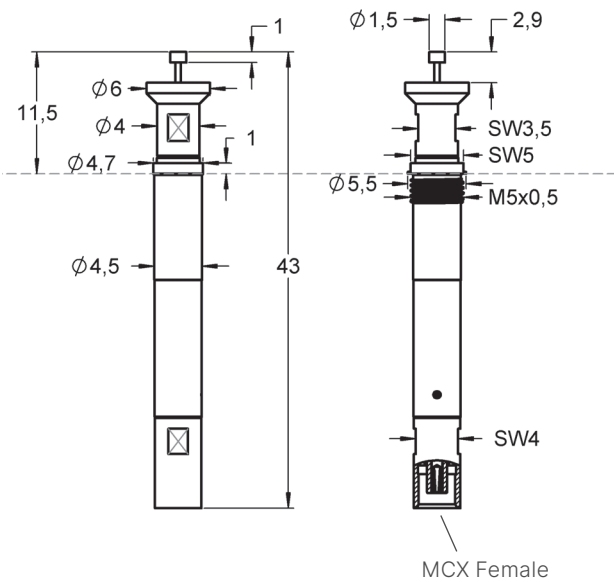
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1039103	HF860BMAm014G530MCXfS
1023932	HF860BMAm014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.50 dB	0.70 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	19 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	150	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

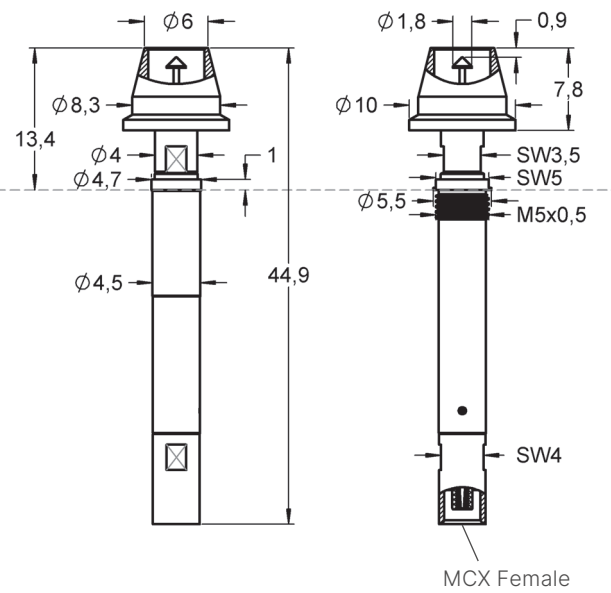
1039082	HF860BNCf014G550MCXfS
1032634	HF860BNCf014G550MCXfP

HF860

4 GHz | BNC Female

Series drawing

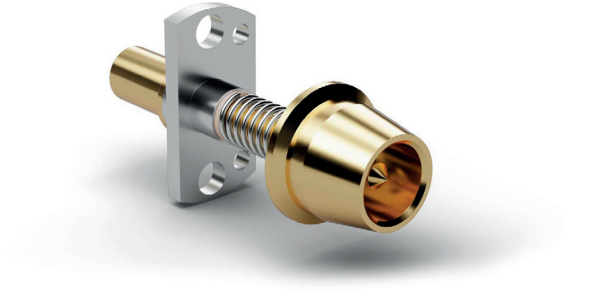
All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0,10 dB	0.20 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 28 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.

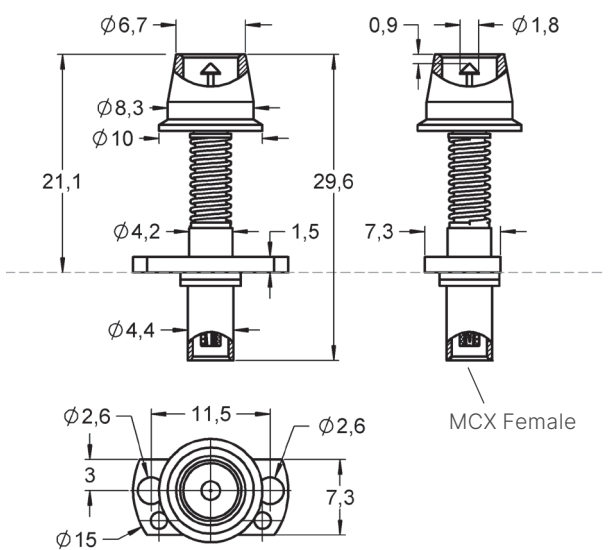


HF86

6 GHz | BNC Female

Series drawing

All measurements are in mm.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

1106277	F08302B180G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1106447	HF86BNCf016G775MCXfF
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HF860  
4 GHz | GT16 Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

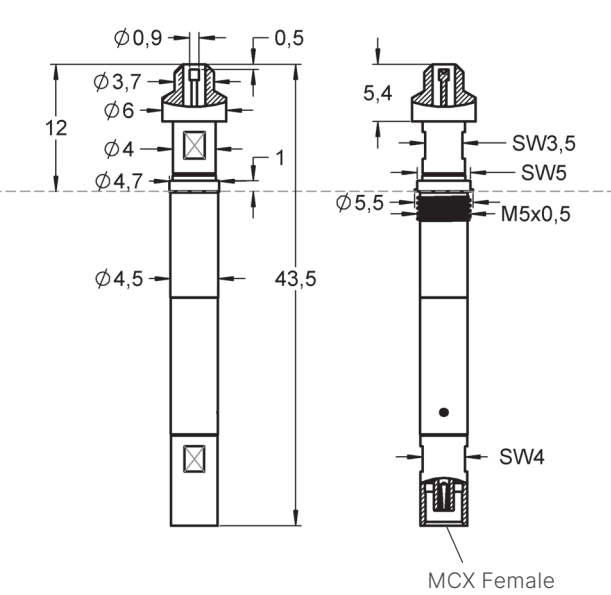
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code   Product name

1032960	HF860GT16m014G530MCXfP
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.14 dB      0.42 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	19 dB      12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
4 GHz | MMBX Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

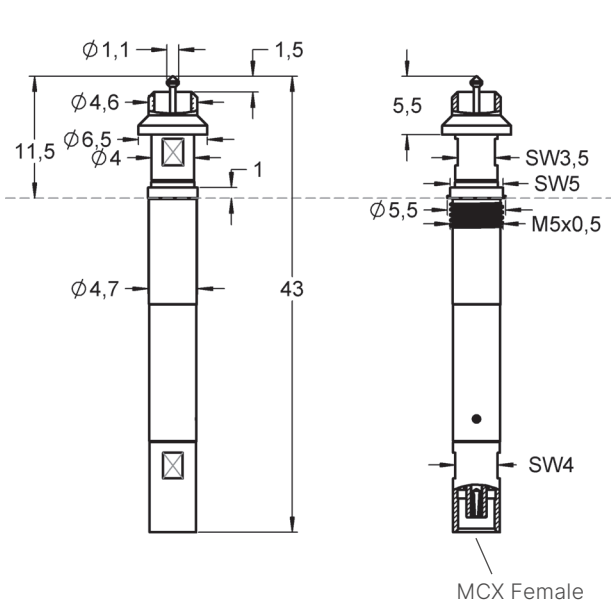
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032963	F08602B110G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code   Product name

1039120	HF860MMBXf014G530MCXfS
1032966	HF860MMBXf014G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum	0.20 dB      0.52 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum	16 dB      10.5 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





HF890  
12 GHz | MMBX Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	450
Spring force at nt (cN ±20%)	110	800
Nominal travel (mm)	1.2	4.0
Maximum travel (mm)	1.9	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

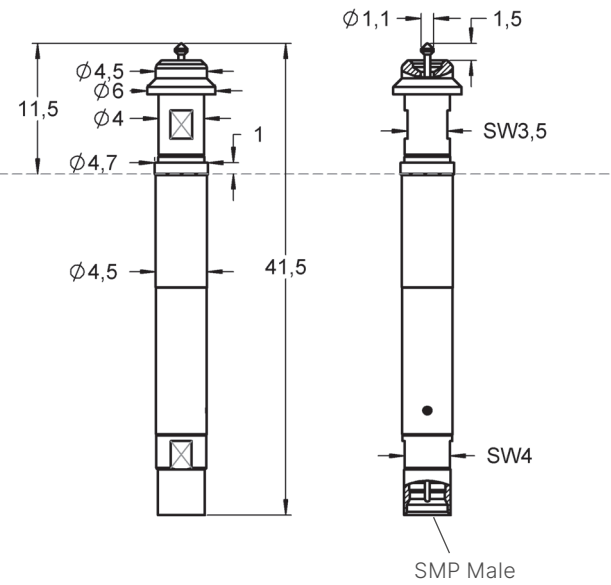
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032963	F08602B110G130	Inner pin
Interface	SMP Male	see page 136

Order code Product name

1042148	HF890MMBXf/SMAf0112G910SMPmP
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Series drawing

All measurements are in mm.



HF860  
6 GHz | MMCX Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	1.2	4.0
Maximum travel (mm)	1.9	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

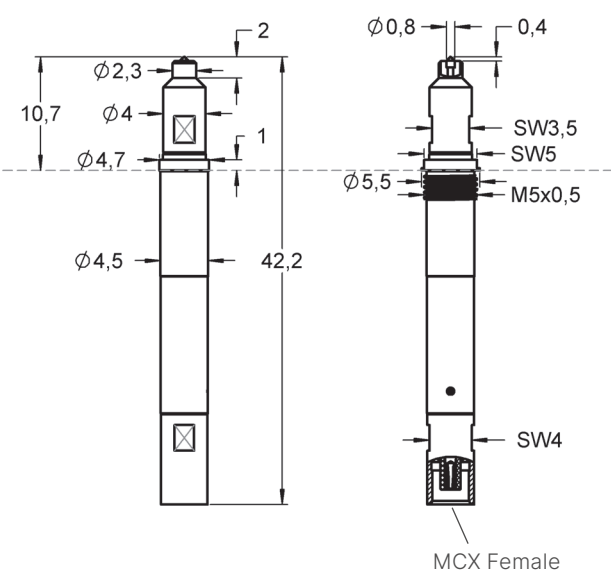
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1039074	HF860MMCXf016G530MCXfS
1032011	HF860MMCXf016G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency perfomance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	30 dB	18 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





HF860  
2 GHz | RF Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	2	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	115	400
Spring force at nt (cN ±20%)	190	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

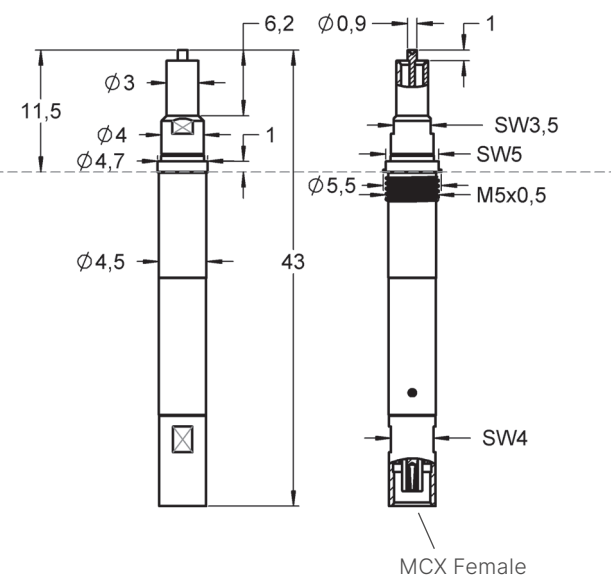
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032932	F08605B150G190	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1012588	HF860RFm016G530MCXmP	
1039104	HF860RFm016G530MCXmS	

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.38 dB	0.65 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 15 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | QMA Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	400
Spring force at nt (cN ±20%)	130	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	2.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

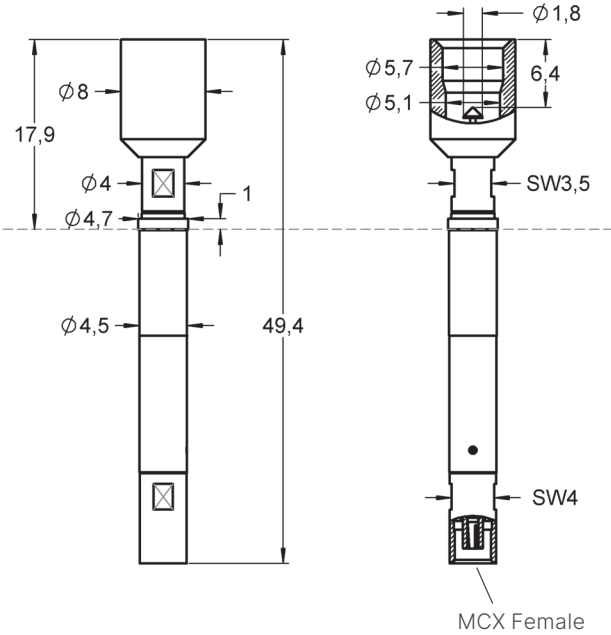
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	MCX Female	see page 136

Order code Product name

1032350	HF860QMAf016G730MCXfP	
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.08 dB	0.22 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 26 dB	17 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
2 GHz | R-NTC Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	2	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	320
Nominal travel (mm)	2.0	3.0
Maximum travel (mm)	3.7	4.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Stainless steel	unplated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

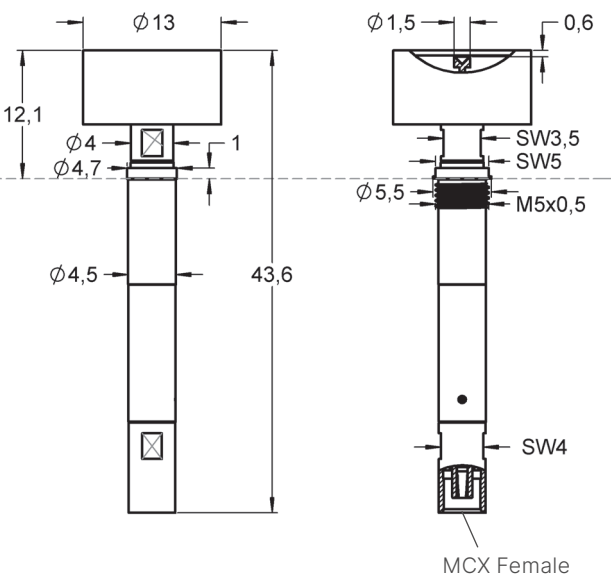
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

1039072	HF860RTNCf012G450MCXfS	
1036849	HF860RTNCf012G450MCXfP	

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.12 dB	0.32 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 18 dB	13 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | N-Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	300
Nominal travel (mm)	2.0	2.7
Maximum travel (mm)	2.7	3.3

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

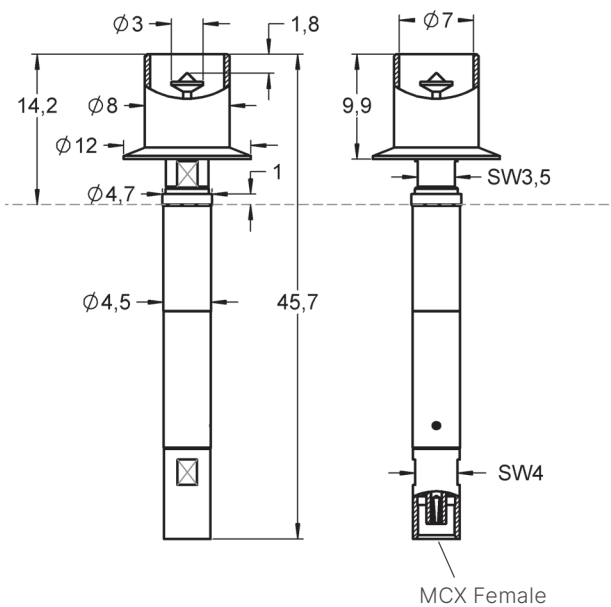
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1034753	F08602B-080G130L360	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

1033766	HF860Nf016G430MCXfP	
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Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.10 dB	0.16 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 26 dB	25 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	2	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	115	400
Spring force at nt (cN ±20%)	190	600
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1032932	F08605B150G190	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

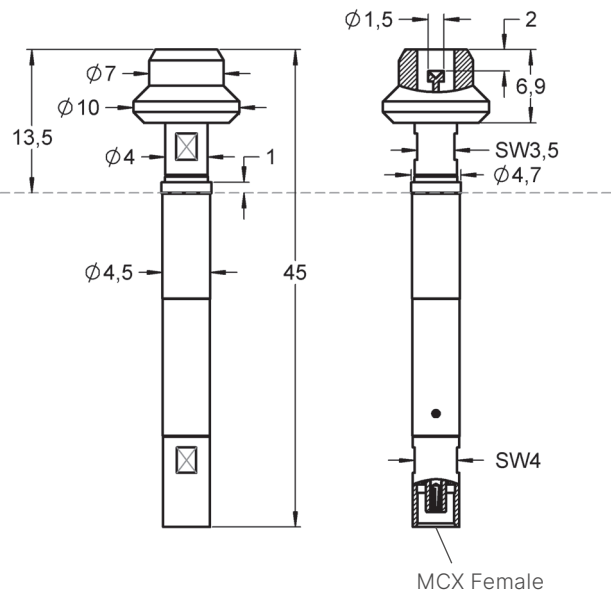
1032933	HF860FME	m012G790MCXfP
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HF860

2 GHz | FME Male

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.18 dB	0.40 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	17 dB	12 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	4	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	100	400
Nominal travel (mm)	1.7	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

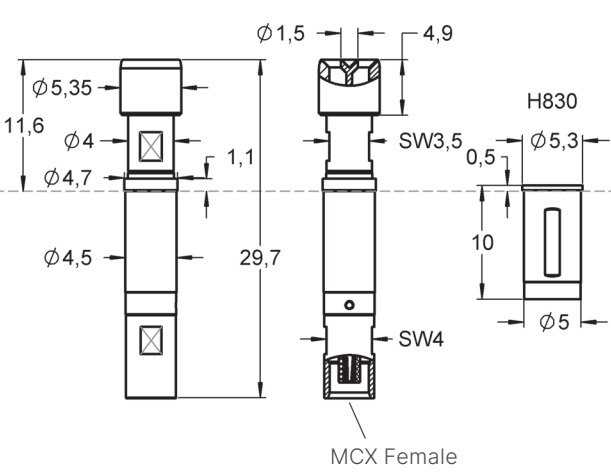
1133673	HF830SMA	m014G500MCXfP
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HF830

4 GHz | SMA Male

Series drawing

All measurements are in mm.





HF860  
8 GHz | SMA Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	8	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75 / 115	90 / 450
Spring force at nt (cN ±20%)	130 / 190	400 / 800
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

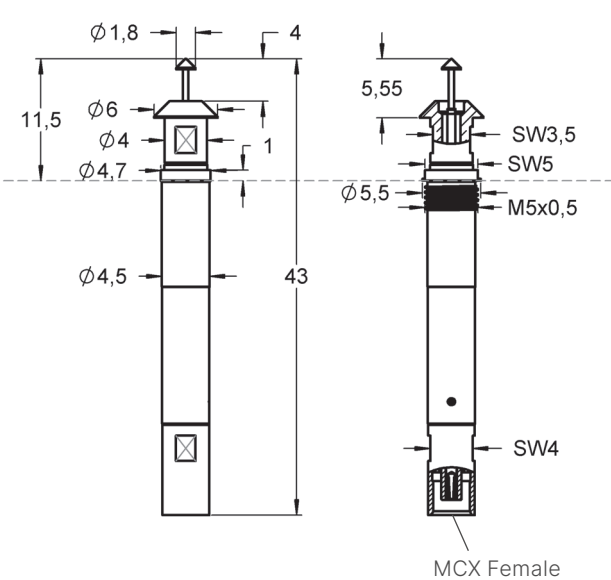
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012575	F08602B180G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1038913	HF860SMAf018G530MCXfS
1012583	HF860SMAf018G530MCXfP
1038922	HF860SMAf018G990MCXfS
1033156	HF860SMAf018G990MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.1 dB	0.2 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	22 dB	16 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | R-SMA Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75 / 115	90
Spring force at nt (cN ±20%)	130 / 190	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

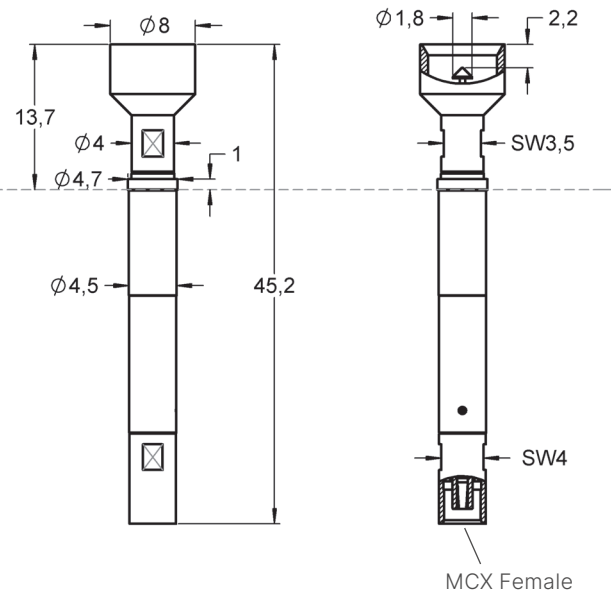
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1133017	HF860RSMAf016G590MCXfP
1032627	HF860RSMAf016G530MCXfP
1039071	HF860RSMAf016G530MCXfS

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.20 dB	0.30 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	25 dB	26 dB

This table shows the reference values in the middle and at the end of the recommended frequency.





HF830  
5 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	5	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

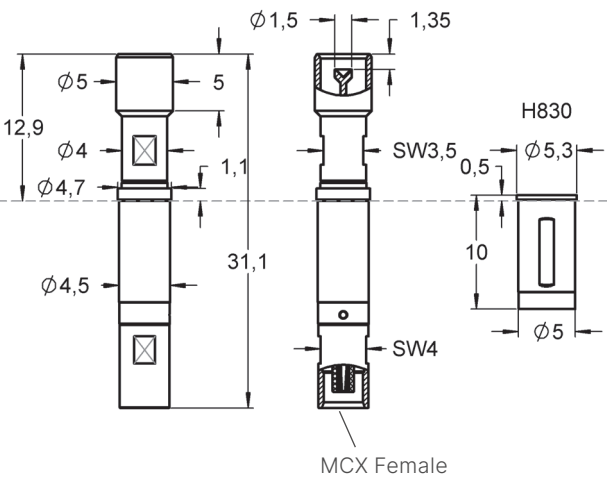
1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

1043724	HF830SMBm015G520MCXfP
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Series drawing

All measurements are in mm.



HF860  
5 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	5	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

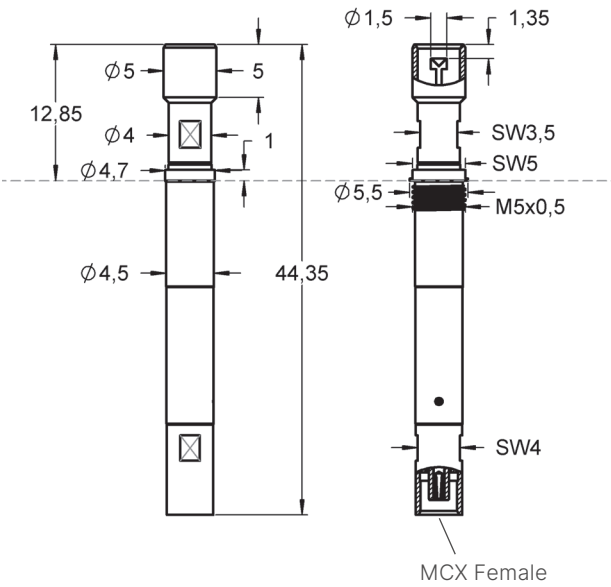
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code    Product name

1039105	HF860SMBm015G530MCXfS
1012586	HF860SMBm015G530MCXfP

Series drawing

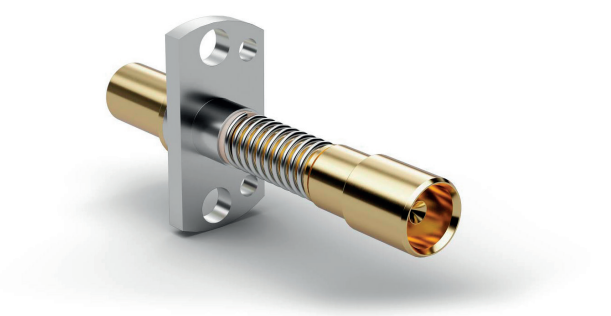
All measurements are in mm.



Radio Frequency perfomance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.10 dB	0.35 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	15 dB	10 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF86  
6 GHz | SMB Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	500
Spring force at nt (cN ±20%)	110	665
Nominal travel (mm)	1.5	2.0
Maximum travel (mm)	2.9	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

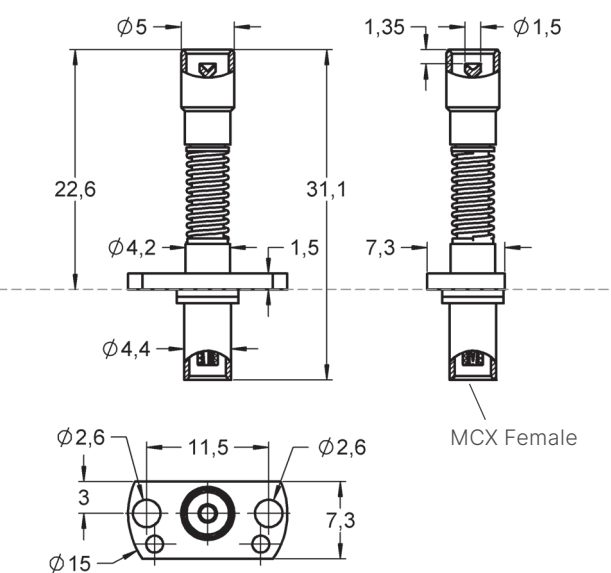
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1106446	HF86SMBm016G775MCXfF
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Series drawing

All measurements are in mm.



HF860  
6 GHz | SMB Female

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

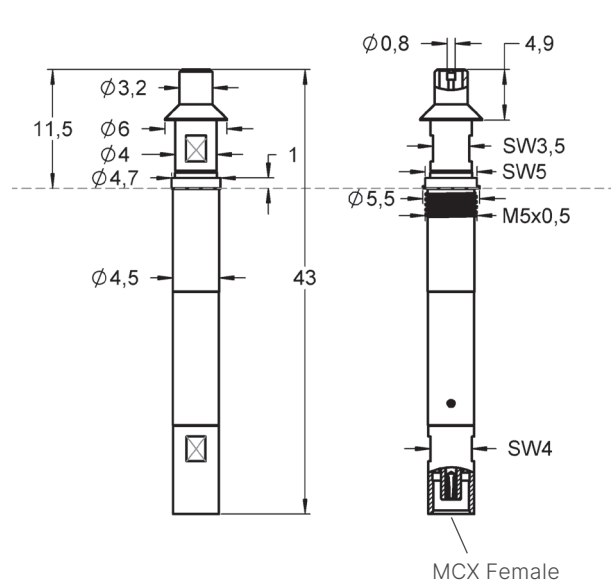
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1038930	HF860SMBf016G530MCXfS
1012587	HF860SMBf018G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency perfomance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
Maximum	0.70 dB	0.70 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
Minimum	18 dB	14 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF830  
5 GHz | SMC Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	5	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	50	100
Spring force at nt (cN ±20%)	120	400
Nominal travel (mm)	2.0	2.0
Maximum travel (mm)	3.0	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

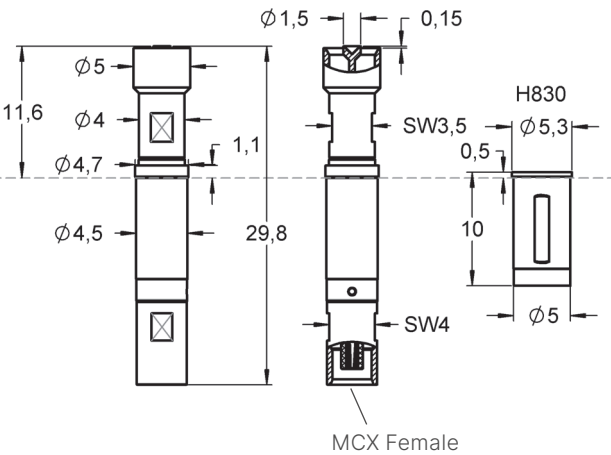
1042164	H830	Receptacle
1017393	FEWZ-822E0	Insertion tool receptacle
1043444	F08305B150G120	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1043723	HF830SMCm015G520MCXfP
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Series drawing

All measurements are in mm.



HF860  
5 GHz | SMC Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	5	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	2.0	4.0
Maximum travel (mm)	3.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

Receptacles H860 see page 132.

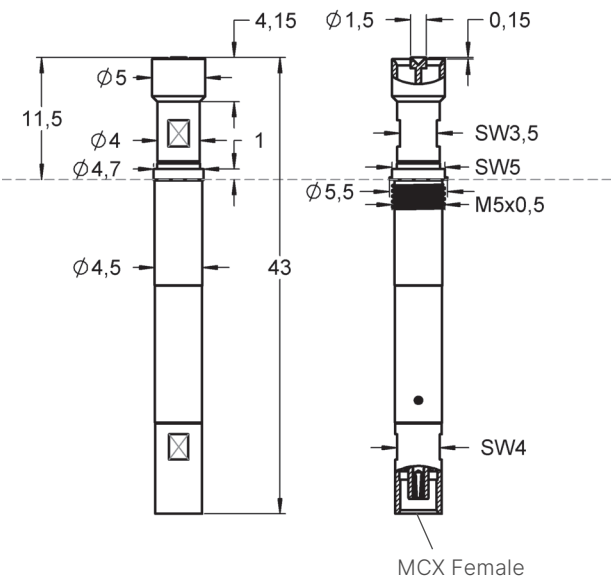
1017393	FEWZ-822E0	Insertion tool receptacle
1012578	F08605B150G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1039106	HF860SMCm015G530MCXfS
1012585	HF860SMCm015G530MCXfP

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Maximum 0.42 dB	0.62 dB
Typical return loss	DC up to 3 GHz	3 GHz up to 6 GHz
	Minimum 23 dB	19 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF860  
6 GHz | mSMP Male / SSMP / GPPO

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	6	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	400
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

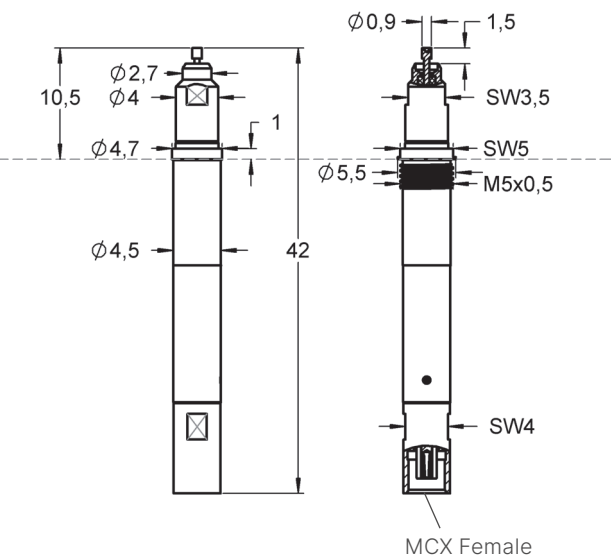
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
1012603	F08602B080G130	Inner pin
1035933	FZWZ-005	Assembly tool
Interface	MCX Female	see page 136

Order code Product name

1039073	HF860MSMPm016G530MCXfS	
1032010	HF860MSMPm016G530MCXfP	

Series drawing

All measurements are in mm.



Radio Frequency performance

Typical insertion loss	DC	3 GHz
	up to 3 GHz	up to 6 GHz
Maximum	0.08 dB	0.20 dB
Typical return loss	DC	3 GHz
	up to 3 GHz	up to 6 GHz
Minimum	30 dB	18 dB

This table shows the reference values in the middle and at the end of the recommended frequency.



HF890  
12 GHz | mSMP Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	100	90
Spring force at nt (cN ±20%)	130	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.7	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

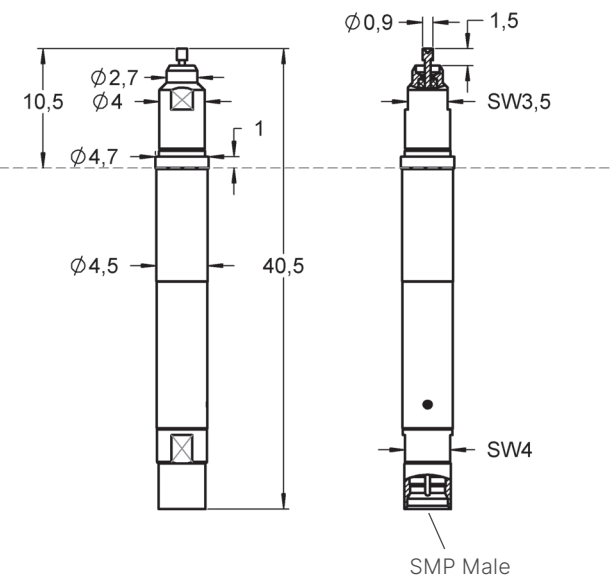
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	SMP Male	

Order code Product name

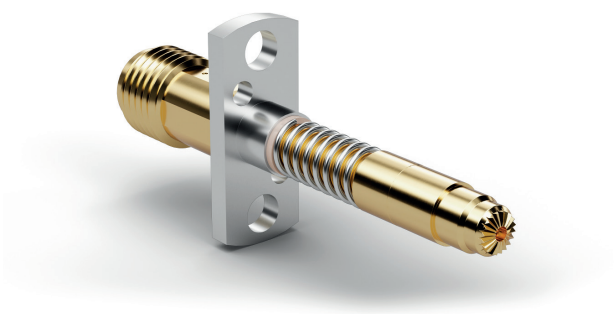
1051266	HF890MSMPm0112G930SMPmP	
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Series drawing

All measurements are in mm.







HF66  
18 GHz | SMP Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	0.1	
Current CIRCULAR [A]	0.5	
Impedance [Ohm]	50	
Frequency [GHz]	18	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	95	240
Spring force at nt (cN ±20%)	120	360
Nominal travel (mm)	0.5	2.0
Maximum travel (mm)	0.8	3.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	Brass	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Flange	Brass	nickel plated

Accessories

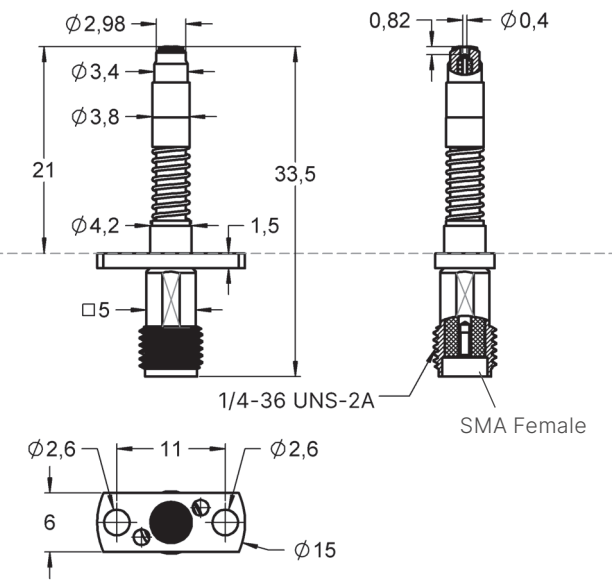
Interface	SMA Female	see page 135+136
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Order code Product name

1039136	HF66SMPm0118G480SMAfF
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Series drawing

All measurements are in mm.



HF890  
12 GHz | MSMP Male

Electrical specifications

Temperature [°C]	-45°...+100°	
Current INTERNAL [A]	3	
Current CIRCULAR [A]	10	
Impedance [Ohm]	50	
Frequency [GHz]	12	

Mechanical specifications

	SIGNAL	GROUND
Preload (cN)	75	450
Spring force at nt (cN ±20%)	100	800
Nominal travel (mm)	1.0	4.0
Maximum travel (mm)	1.5	5.0

Materials and plating

Contact SIGNAL	BeCu	gold plated
Contact GROUND	BeCu	gold plated
Barrel	Brass	gold plated
Spring SIGNAL	Spring steel	gold plated
Spring GROUND	Stainless steel	unplated
Receptacle	Brass	gold plated

Accessories

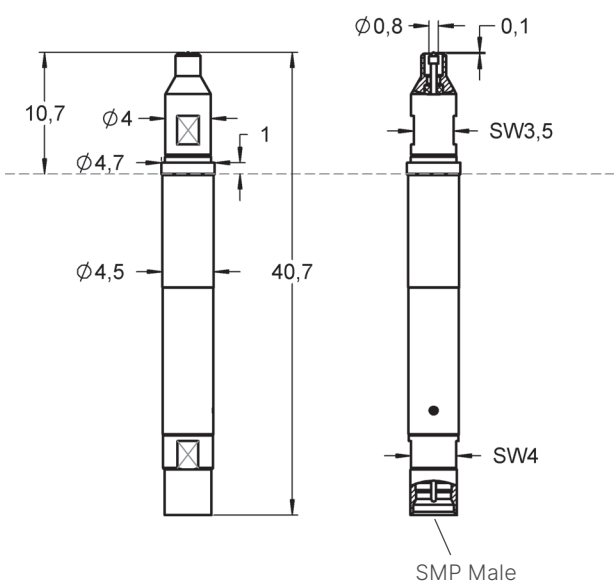
Receptacles H860 see page 132.		
1017393	FEWZ-822E0	Insertion tool receptacle
Interface	SMP Male	

Order code Product name

1042145	HF890MSMPm0112G900SMPmP
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Series drawing

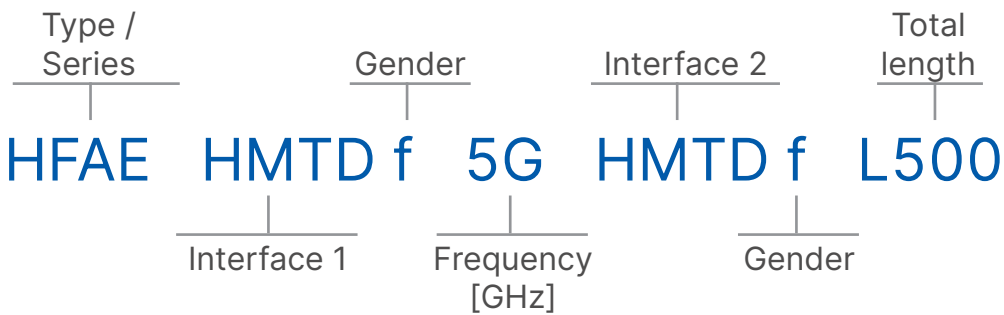
All measurements are in mm.



ORDER CODE

Number code system for connecting cables

In order to improve the clarity of the material code, the self-explanatory it has been partially further developed. The currently valid number code is shown below.



Interface 1/2

Connector e.g. H-MTD, MCX, mSMP...

Gender

m = Plug (Male)  
f = Jack (Female)

Frequency

20 = 20 GHz

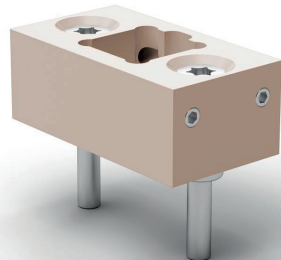
Length

L500 = Cable length 500 mm

1013562 - H819AEPLAL020 (Plugged version)



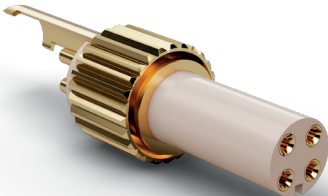
1092029 - KT819



1013563 - H819AEPHSDmL023 (Plugged version)



1034922 - H819AESLAL027 (Threaded version)



CONNECTION CABLES

1012656 - HFAEHSDf3GHSDfL500



HSD Female



HSD Female

1032462 - HFAEMSMPf6GSMAmL300



Mini SMP Female



SMA Male (angled)

1057640 - HFAEMSMPf12GSMAmL500



Mini SMP Female



SMA Male

1044573 - HFAEHMTDf5GHMTDfL500



HMTD Female with housing



HMTD Female without housing

1051281 - HFAEHMTDf5GHMTDfL1000



HMTD Female with housing



HMTD Female without housing

CONNECTION CABLES

1012574 - HFAEMCXfLAL700

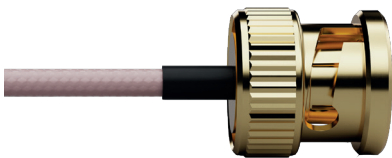


MCX Female

1022553 - HFAEMCXf3GBNCmL700



MCX Female



BNC Male

1022552 - HFAEMCXf3GSMAmL700



MCX Female



SMA Male

1012580 - HFAEMCXf10GSMAmL700



MCX Female



SMA Male

1033199 - HFAEMCXf6GSMAmL1500



MCX Female



SMA Male

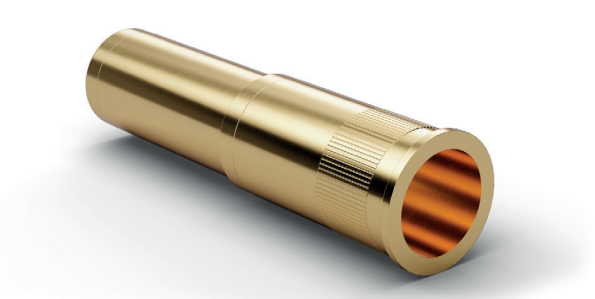
1033562 - HFAEMCXangledm6GSMAmL800



MCX Female (angled)



SMA Male



H860  
Receptacles

Materials and plating

Receptacle	Brass	gold plated
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Accessories

1017393	FEWZ-822E0	Insertion tool receptacle
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Drill size recommendation (mm)

H860	4.99 - 5.00
H860RD	5.51 - 5.53
H860FL	7.99 - 8.01

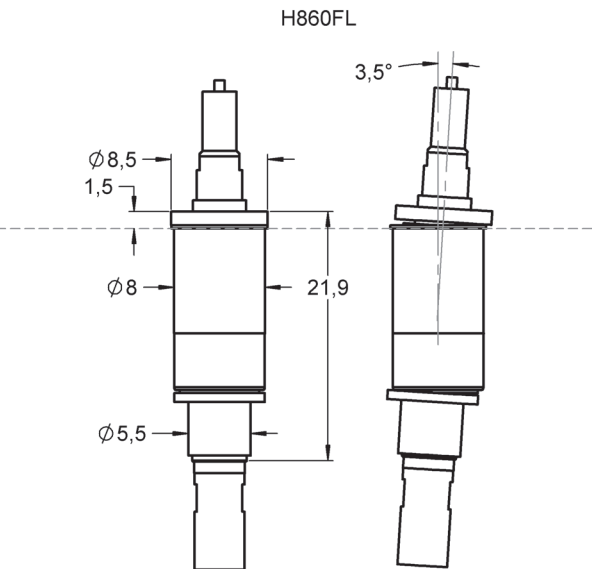
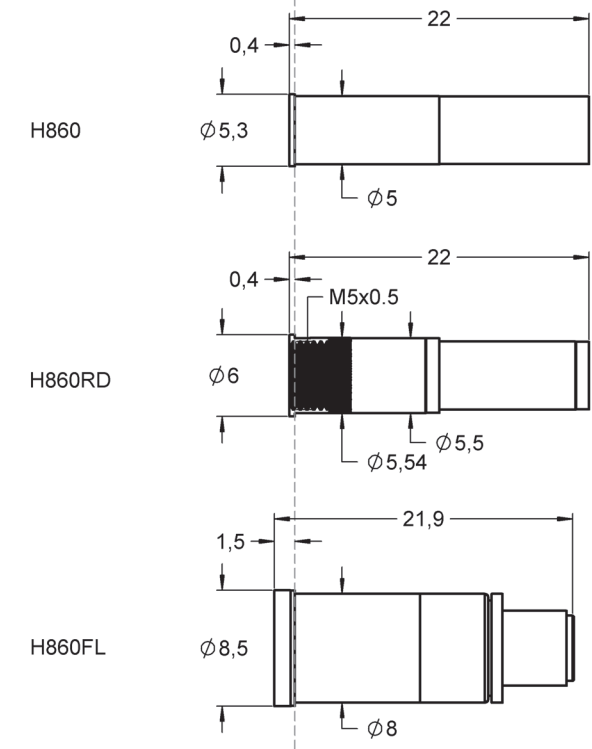
Order code	Product name	Version
1012573	H860	-
1037072	H860RD	RD
1020933	H860FL	FL

Mounting options

The receptacle H860FL allows a flexible (floating) mounting of the high frequency probe HF860. It permits a wobbling by 360 degrees in case of a small offset to the DUT. Such a possible offset is compensated without damaging the DUT. In released mode the HF probe is returned to its zero point position.

Series drawing

All measurements are in mm.



TOOLS

FWZ860HF50

The FWZ860HF50 is used to screw the probes HF860...M into the screwable receptacle H860RD.



FEWZ-822E0

The FEWZ-822E0 is used to insert the receptacles H860... into the mounting plate.



FDWZ-050

The FDWZ-050 is used to insert the signal pin of the HF860 and HF819 if it is possible to replace the signal pin without damaging it.



FZWZ-001

With the release tool FUWZ-001 the pin can be released from the flange. The Mini SMP cable connection can also be easily removed without pulling on the cable.



FZWZ-004 / FZWZ-005 / FZWZ-006

With the removal tool, the signal pin of the HF860 or HF819 can be disconnected and replaced.  
FZWZ-004 - Ø0,50 - 0,95mm  
FZWZ-005 - Ø0,95 - 1,55mm  
FZWZ-006 - Ø1,55 - 1,85mm



F829

Up to 3 A | Exchange probe



Electrical specifications

Current [A]	3
R TYP [mOhm]	<25

Mechanical specifications


Temperature [°C]	-45°...+100°
Preload [cN]	50
Spring force [cN] at nt ±20%	100
Nominal travel [mm]	2.0
Maximum travel [mm]	3.0

Materials and plating

Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035932	FZWZ-004	Assembly tool
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Order code	Product name	Tip Style	Tip Ø [mm]	Material/Plating	Force [cN]	Thread [M]	Version	FM Choice
1043433	F82955B090G120	55 	0.90	B / G	120	-	-	-







F077  
Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R <sub>TYP</sub> [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	130
Spring force [cN] at nt ±20%	195
Nominal travel [mm]	0.9
Maximum travel [mm]	1.2

Materials and plating

Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Order code	Product name	Tip Style	Tip Ø [mm]	Material/Plating	Force [cN]	Thread [M]	Version	FM Choice
1104597	F07702B090G195	02 	0.90	B / G	195	-	-	-
1097776	F07706B100G195	06 	1.00	B / G	195	-	-	-
1053952	F07751B130G195	51 	1.30	B / G	195	-	-	-
1116981	F07751B130G195H	51 	1.30	B / G	195	-	H	-



F083  
Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R <sub>TYP</sub> [mOhm]	<25

Mechanical specifications

Temperature [°C]	-45°...+100°
Preload [cN]	50
Spring force [cN] at nt ±20%	120
Nominal travel [mm]	2.0
Maximum travel [mm]	2.9

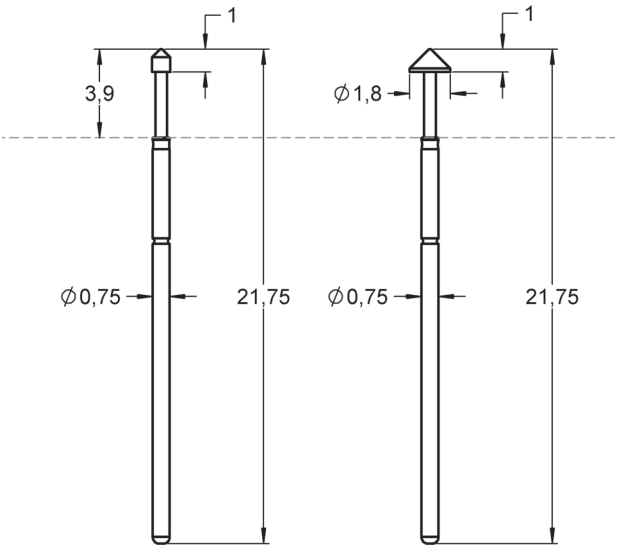
Materials and plating

Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe

Order code	Product name	Tip Style	Tip Ø [mm]	Material/Plating	Force [cN]	Thread [M]	Version	FM Choice
1051175	F08302B080G120	02 	0.80	B / G	120	-	-	-
1106277	F08302B180G120	02 	1.20	B / G	120	-	-	-
1043444	F08305B150G120	05 	1.50	B / G	120	-	-	-
1129244	F08318B051G120	18 	0.51	B / G	120	-	-	-





F086  
Up to 3 A | Exchange probe

Electrical specifications

Current [A]	3
R <sub>TYP</sub> [mOhm]	<25

Mechanical specifications

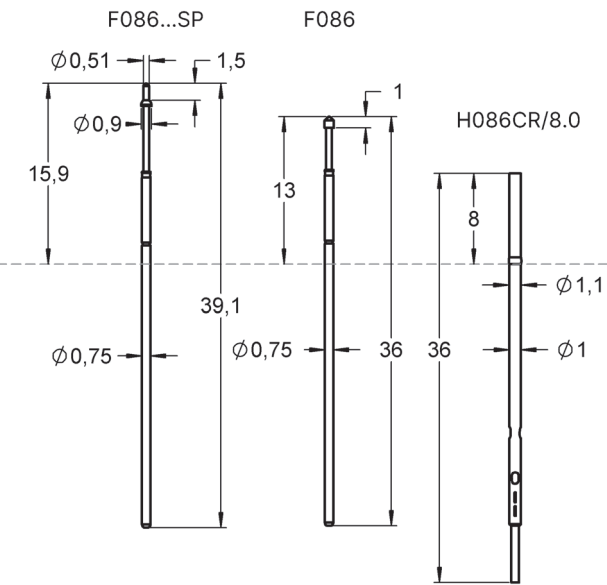
Temperature [°C]	-45°...+100°
Preload [cN]	130
Spring force [cN] at nt ±20%	195
Nominal travel [mm]	0.9
Maximum travel [mm]	1.2

Materials and plating

Plunger	BeCu	gold plated
Barrel	Bronze	gold plated
Spring	Spring steel	gold plated

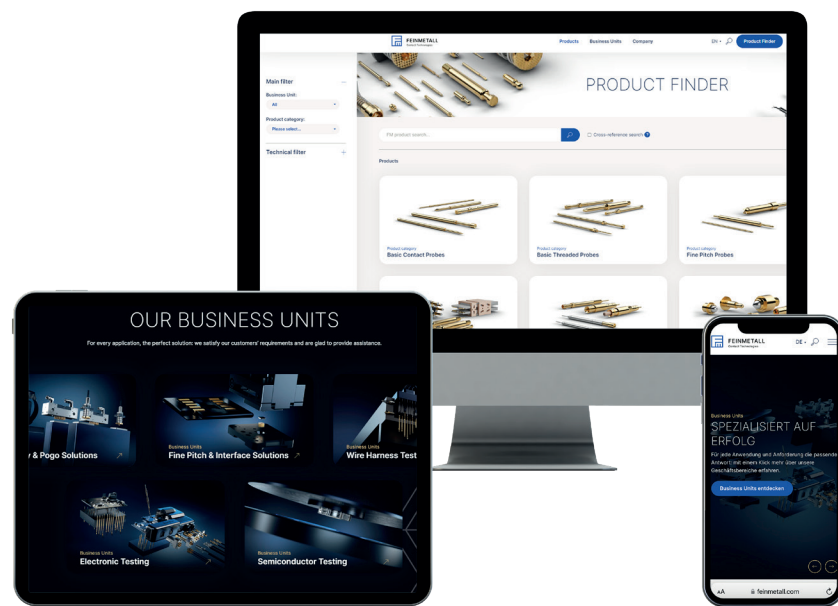
Accessories

1035933	FZWZ-005	Assembly tool
1003576	FDWZ-050	Insertion tool probe



Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version
1012578	F08605B150G130	05	1.50	B / G	130	-	-
1012605	F08611B051G130	11	0.51	B / G	130	-	-
1107629	F08611B051G130L341	11	0.51	B / G	130	-	-
1013855	F08612B051150090G130L391	12	0.51	B / G	130	-	-
1029008	F08612B060150090G130L384	12	0.60	B / G	130	-	-
1039263	F08612B060210090G130L384	12	0.60	B / G	130	-	-
1012728	F08614B090G130	14	0.90	B / G	130	-	-
1137488	F08618B048G130	18	0.48	B / G	130	-	-
1023016	F08618B051G130	18	0.51	B / G	130	-	-
1022361	F08655B090G130	55	0.90	B / G	130	-	-
1023251	F08655B120G130	55	1.20	B / G	130	-	-
1103186	F08655B150G130	55	1.50	B / G	130	-	-

Order code	Product name	Tip Style	Tip Ø [mm]	Material/ Plating	Force [cN]	Thread [M]	Version
1022549	F08602B060150090G130L391	02	0.60	B / G	130	-	L391
1012603	F08602B080G130	02	0.80	B / G	130	-	-
1029637	F08602B080G130L350	02	0.80	B / G	130	-	L350
1034753	F08602B080G130L360	02	0.80	B / G	130	-	L360
1032963	F08602B110G130	02	1.10	B / G	130	-	-
1012575	F08602B180G130	02	1.80	B / G	130	-	-
1033155	F08602B180G190	02	1.80	B / G	190	-	-
1012577	F08605B090G130	05	0.90	B / G	130	-	-



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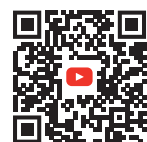
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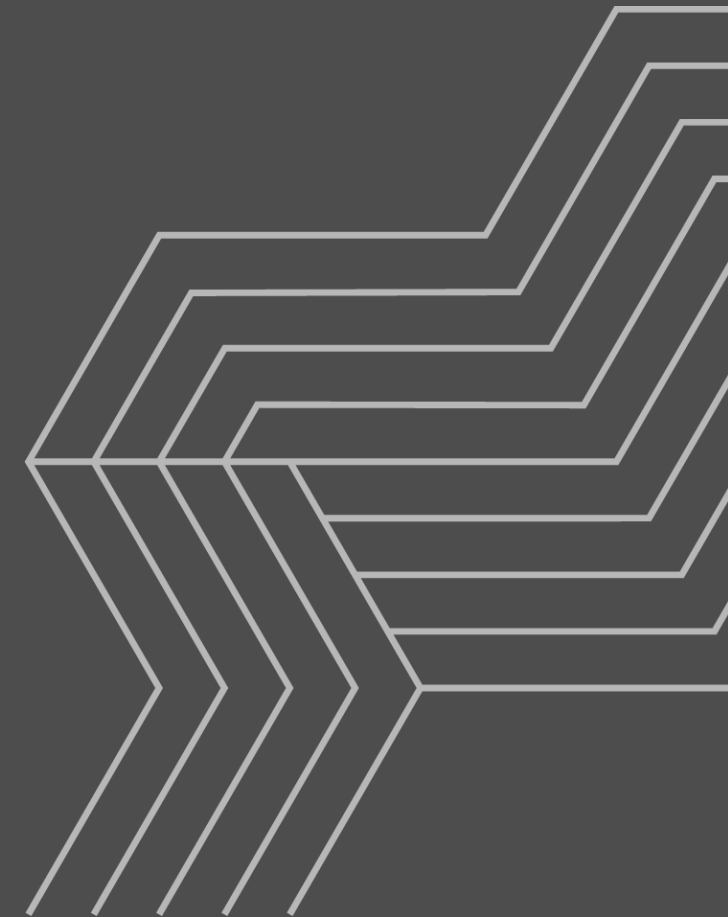
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