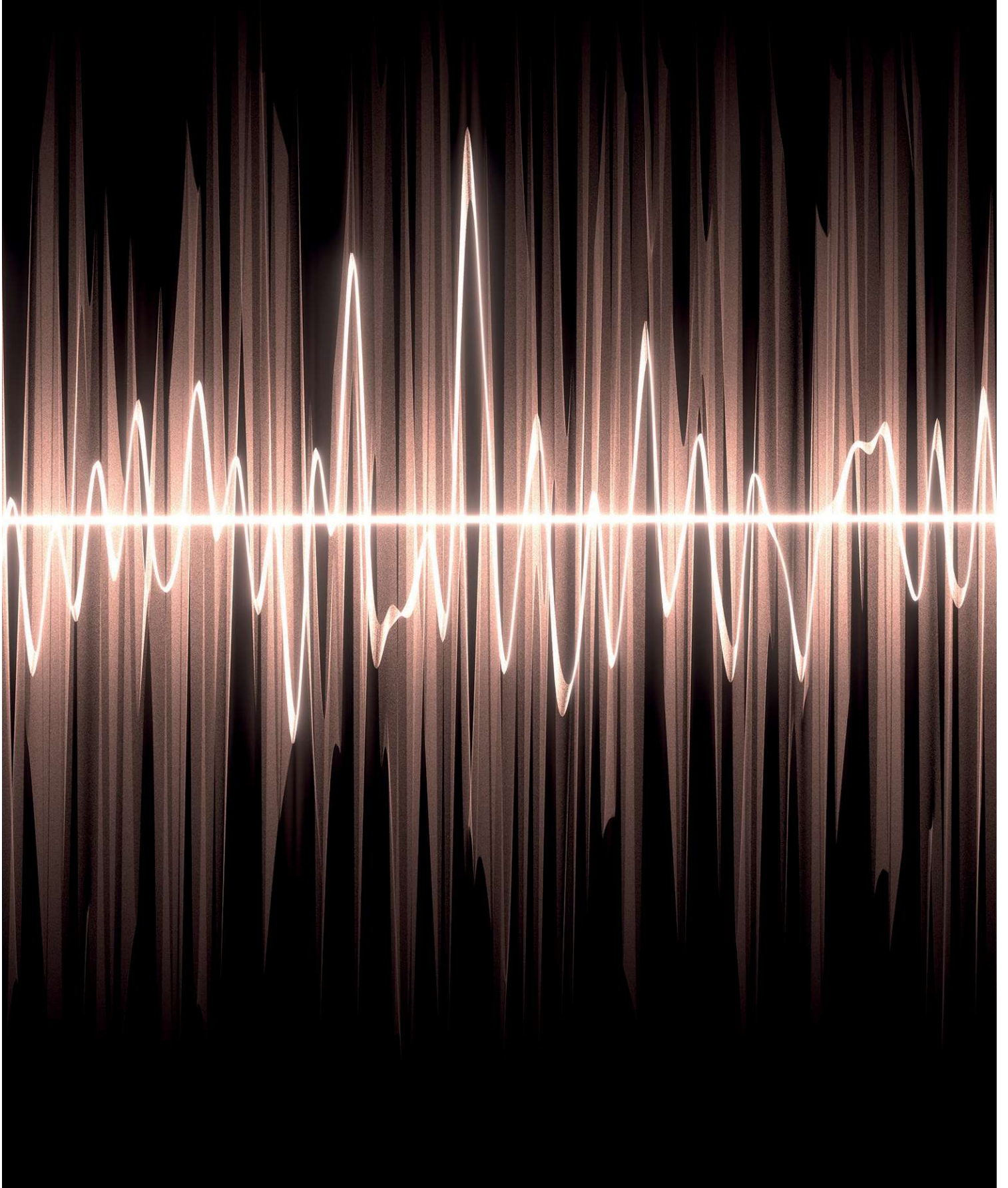


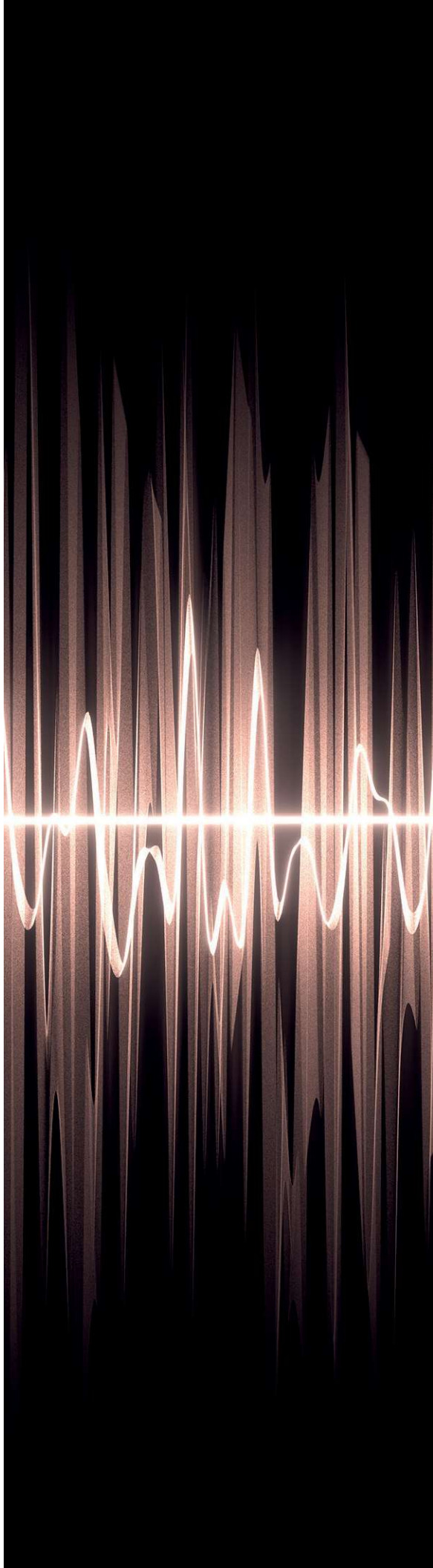
Microwave cable assemblies

Edition 2022



**Create reliability and
high performance**





Your partner for system solutions

HUBER+SUHNER makes a significant contribution to simplifying processes by supplying cables assembled with connector according to customer requirements. The assemblies are manufactured using high-quality cables and connectors, carefully tested according to the relevant standards and delivered with a certificate upon request.

Content

General assembly information	6
Qualified, high performance microwave cable assemblies > SUCOFLEX 100/200/300 /500	10
Qualified, low profile, high performance microwave cable assemblies > Minibend family	87
Microwave test cable assemblies > Sucotest/TL-8A/TL-P	117
Flexible microwave cable assemblies > Boa-flex/Steel-flex/Multiflex/S-Series	131
Formstable and handformable microwave cables assemblies > Sucoform/SPJ/Cobra-flex/Semi-rigid	167
Constant over Temperature (CT line) - Dielectric core technology for best phase stability vs. Temperature	186
Engineering information	191
Selection guide	201

General assembly information

Cables and connectors from the same manufacturer

HUBER+SUHNER develops and manufactures coaxial cables and connectors for most applications and in a multitude of versions. The connector series comprise over 1700 different types which prove their qualities daily worldwide. Demanding customers trust the reliability and quality of HUBER+SUHNER products. These products have been tested to IEC, MIL, CECC and other standards. Our extensive know-how in RF technology enables reliable and competent technical consulting and support. You stand to benefit from a well matched cable and connector range as well as many years vast experience of our engineers.

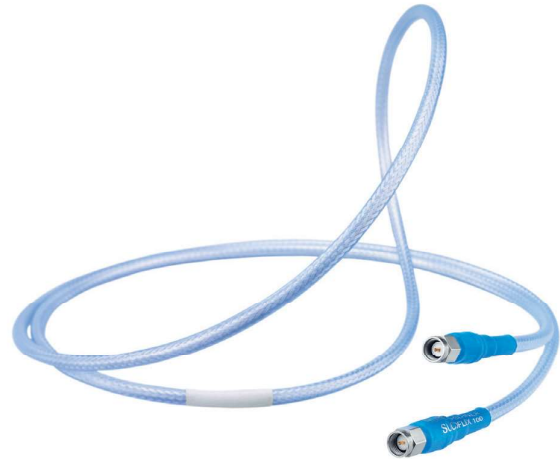
Microwave cable assemblies to your specifications

Make use of the HUBER+SUHNER custom design service. Increase efficiency and productivity in your company by ordering ready-to-use microwave cable assemblies from the specialists. Expert assembly by soldering, clamp or crimp technique and inspection records according to your specifications enable you to order with confidence.

Advantages of microwave cable assemblies

Purchasing of ready-made microwave cable assembly lines provides important benefits:

- Perfect assembly, no rejects
- No need for training assembly personnel
- No capital investment for assembly provisions
- Precisely matched cables and connectors from the same manufacturer
- HUBER+SUHNER guaranties quality



General assembly information

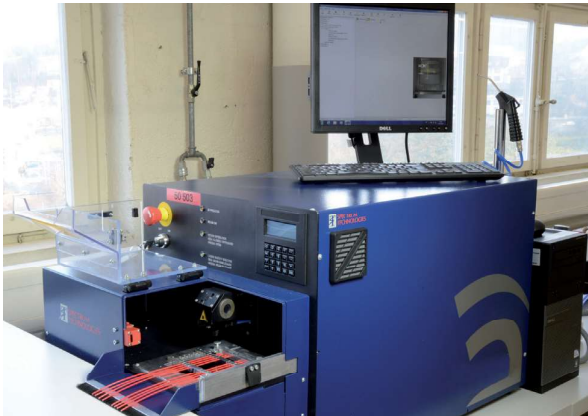
Assembly shop capability



Automatic bending



Automatic stripping



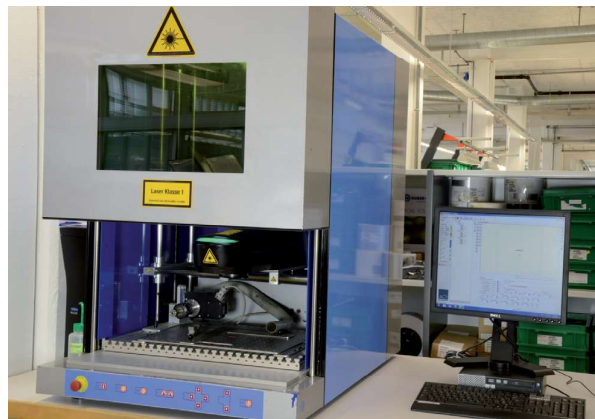
Automatic laser stripping



Temperature controlled soldering



Clean room

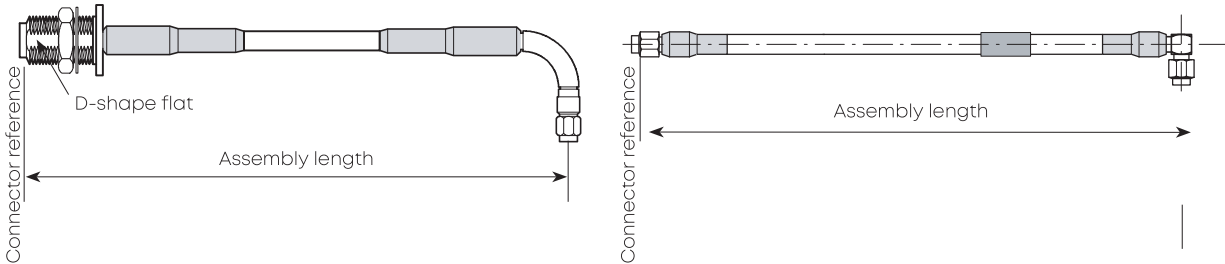


Laser marking

General assembly information

Length definition and assembly design

The assembly lengths are measured using the connector reference plane of straight plug and jack connectors and the pin centerline of right angle connectors.



Standard assembly length tolerances

SUCOFLEX®, Sucotest

≤ 200 mm ± 1.0 mm
> 200 mm ± 0.5 %

Minibend

± 7.1 mm

Multiflex and S-series

≤ 500 mm ± 5.0 mm
≤ 1000 mm ± 7.0 mm
≤ 2000 mm ± 12.0 mm
> 2000 mm ± 0.6 %

Sucoform

≤ 500 mm ± 3.0 mm
≤ 1000 mm ± 5.0 mm
≤ 2000 mm ± 8.0 mm
> 2000 mm ± 0.4 %

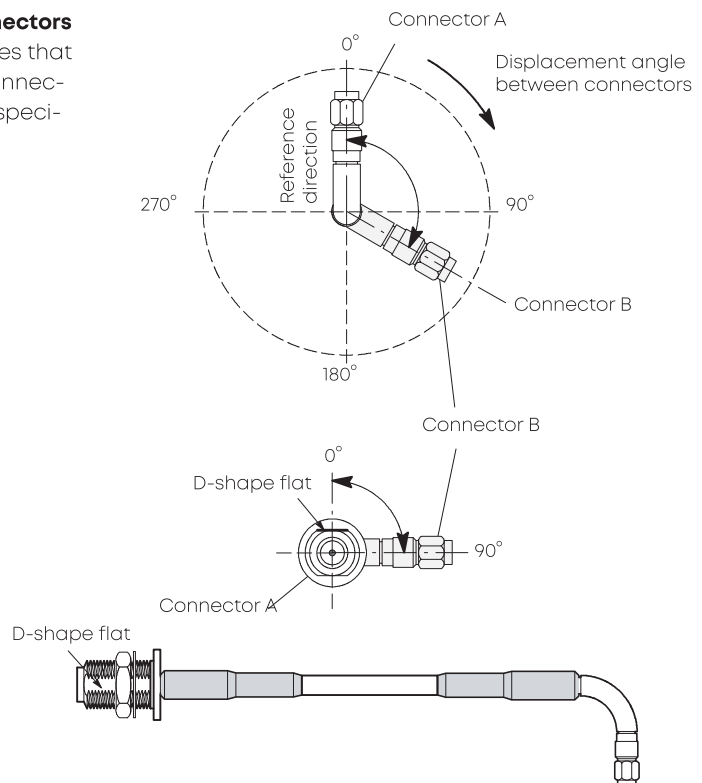
Semi-rigid, Boa-flex, Ever-flex, Steel-flex, Cobra-flex

≤ 500 mm ± 2.0 mm
≤ 1000 mm ± 3.0 mm
≤ 2000 mm ± 5.0 mm
> 2000 mm ± 0.3 %

Tighter assembly tolerances are available on special request. Please ask your local HUBER+SUHNER partner.

Angular displacement and D-shape flat of connectors

With HUBER+SUHNER microwave cable assemblies that have right angle or right angle and bulkhead connectors the relative angular displacement must be specified as shown in the following sketches.



General assembly information

Care and handling instructions

HUBER+SUHNER microwave cable assemblies of all types offer a long service life providing they are treated with the appropriate care and attention. Microwave cable assemblies are high precision system components and require proper handling in order to ensure that measured performance values are maintained.

To achieve the maximum installed performance the following guidelines should be followed:

1. Assemblies should remain in their original packaging for delivery and storage. Storage temperature should be between -50 and $+80$ °C and the relative humidity should not exceed 85 %.
2. Carefully unpack assemblies before installation. Avoid kinking cables when straightening from a coil or reel.
3. Ensure that the surroundings are clean and free of dust, dirt and any other particles that could enter un-sealed connector interfaces.
4. Use protective caps to prevent contamination whenever connectors are unmated.
5. Where interfaces are contaminated, particles can be removed with dry, oil-free compressed air. Please use eye-protection. Interfaces can be cleaned with dry cotton swabs. Do not use hard handtools or solvents. Do not blow into interfaces or use normal compressed-air.
6. Choose the installation routing using the largest bend radii possible. Small bend radii may affect electrical performance. Exceeding the specified limits during the installation process could cause a permanent degradation.
7. Avoid twisting microwave cable assemblies. Torsion of this type of assembly can alter the relative diameters of cable layers and affects the electrical characteristics. Exceeding the limit of 10° per metre during installation process could cause a permanent degradation.
8. Assemblies should be fixed in place without excess pressure. The use of cable ties should be avoided where possible, as they can easily exert more force than this. If cable ties must be used then they should be as wide as possible and still allow movement of the cable. Avoid placing fixings at regular intervals.
9. Examine interfaces for damage and/or contamination before mating.
10. Discharge connectors before mating or ensure that they are connected to a suitable ground.
11. When mating connectors with a screwed interface always hold the connector bodies and turn only the coupling nut. This avoids twisting the cable and ensures minimum wear on the connector pins.
12. Do not exceed the specified torque.

Qualified, high performance microwave cable assemblies



The flexible SUCOFLEX® series microwave cable assemblies offer superior electrical and mechanical performance for static and dynamic applications. This series is a high-end product designed to provide optimal performance up to 50 GHz, where stringent electrical requirements, in particular electrical stability and low loss, are important. Ideally suited for test and measurement applications and defense systems. Additional lightweight high end versions are designed to meet the stringent needs of space flights systems (i. e. satellites) and aerospace systems (aircrafts, helicopters, missiles), which are subject to extremely severe operating conditions. SUCOFLEX is only available as assembly.

SUCOFLEX®

- Introduction
- Advantages
- Overview
- Qualifications



SUCOFLEX 100

The low loss, high performance microwave cable assembly

- For static and dynamic applications up to 50 GHz
- Excellent return loss
- A balanced range of connectors is available, including types which feature NWA-specific interfaces, and can be provided with various ruggedisations to protect the assembly against different environmental influences
- Stock assemblies available



SUCOFLEX 200

The loss revolution for dynamic applications

- For static and dynamic applications up to 40 GHz
- Ultra low loss
- Outstanding phase stability vs. temperature
- Excellent return loss
- Stock assemblies available



SUCOFLEX 300

The light weight, low loss microwave cable assemblies

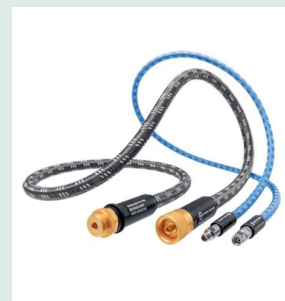
- SUCOFLEX 300 series offers a consistently outstanding mechanical and electrical performance, stability and reliability up to 40 GHz
- Weight reduction of up to 40 % compared to our conventional products
- Assemblies produced in a clean environment room



SUCOFLEX 500

When it comes to test and measurement, SUCOFLEX 500 assemblies guarantee the highest level of satisfaction

- Torque, crush and kink resistant
- Precise and repeatable measurements
- Long service life
- Reduce total cost of test with durable, reliable performance
- Increased test and measurement efficiency saving costs due to reduced calibration intervals



Introduction SUCOFLEX®

What are SUCOFLEX assemblies?

The assembly lengths are measured using the connector reference plane of straight plug and jack connectors and the pin centerline of right angle connectors.

SUCOFLEX

are flexible microwave cable assemblies offering better transmission characteristics than semi-rigid cables.

SUCOFLEX

comprises an entire system of optimally matched components such as:

- Microwave cables
- Connectors
- Ruggedisations
- Marking sleeves
- ...



SUCOFLEX

is manufactured by highly qualified HUBER+SUHNER employees and tested against strict quality standards under controlled conditions. This results in microwave cable assemblies meeting all of your needs for top quality and high precision reproducibility.

SUCOFLEX

is always supplied as a complete, tested microwave cable assembly with defined and guaranteed radio frequency and mechanical values.

SUCOFLEX

is defined in the following way:

One standard assembly consists of the following items if no additional specifications are provided:

- Microwave cable specified
- Connectors specified
- Marking sleeve with serial number
- RF test protocol showing insertion and return losses

SUCOFLEX

provides an optimum solution to your microwave transmission problems.

SUCOFLEX

cables, connectors and assemblies are entirely developed, manufactured, tested and supplied by HUBER+SUHNER, your partners for flexible microwave cable assemblies.

SUCOFLEX

is a registered trade mark for microwave cable assemblies from HUBER+SUHNER AG.

Advantages of SUCOFLEX®

Test+Measurement



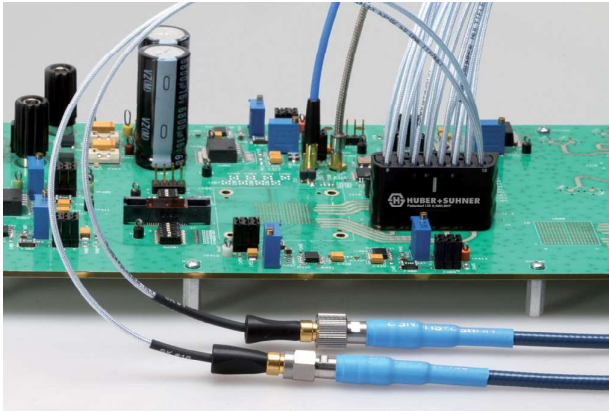
Wide range of connectors and ruggedisation

PC 2.4, PC 3.5, SK, SMA, BMA, QMA, QN, BNC, TNC, N, PC7 and various ruggedisations

Electrical stability

Thanks to their special design, types like SUCOFLEX 550, SUCOFLEX 102, SUCOFLEX 126, SUCOFLEX 526V and SUCOFLEX 526S are particularly phase stable when subjected to flexure.

High speed digital testing



High speed digital chip verification

Lowest loss, best signal integrity, dense and space saving PCB connectivity, proven and tested solutions and components

High speed digital hardware and system verification

Multicoax PCB edge/panel mount solutions, customized solutions for Multicoax interconnectivity between systems and modules

Automated test equipment

Customized Multicoax interfaces at up to 50 GHz, Snap-on interfaces up to 67 GHz, cabling solutions optimized for highest data rates and frequencies.

Space



Perfect assembly technology

Assembly production for space applications in in-house clean room.

High reliability

Comprehensive series of MIL tests for verification of the out-standing specifications.

Minimised outer diameters

Space saving wirings with the loss optimised SUCOFLEX 301 space and SUCOFLEX 340

Advantages of SUCOFLEX®

Defense



Wide temperature range

-55 to +165 °C for most cable types
-55 to +125 °C for most connector types

Mechanical protection

A wide range of ruggedisations are available for most SUCOFLEX cable types.

Rugged connectors

Insulators and inner conductors fully captivated, patented connector assembly techniques.

High packing density

Easy connection and disconnection of up to 8 assemblies with multiport connectors according to MIL-C-38999.

Naval



Chemical stability

Thanks to excellent materials (FEP) and inert surfaces.

High power performance

SUCOFLEX 106 with more than 400 W at 18 GHz CW power capability.

Halogen free

LSFH jackets for SUCOFLEX assemblies are available.

Airborne



Vibration stability

SUCOFLEX assemblies withstand vibrations involving accelerations up to 100 g without deterioration of their performance.

Low weight

Unit construction system use of aluminium core conductors for an optimised assembly design with SUCOFLEX 300.

Wide frequency range

SUCOFLEX from DC up to 50 GHz

Minimised losses and excellent stability vs. temperature

1.0 dB/m at 18 GHz for SUCOFLEX 229 < 500 to 800 ppm (-40 to +85 °C)

Overview SUCOFLEX®

Cross reference within product range

Outer diameter mm	Cable attenuation at 18 GHz dB/m	Interfaces Cables	BNC	QMA	QN	7/16	BMA	TNC	N	PC7	SMA	PC3.5	SK	PC2.4
3.50	2.0	SUCOFLEX 301									18			
3.65	2.0	SUCOFLEX 101									26.5		40	50
3.65	3.0	SUCOFLEX 550											40	50
4.00	1.7	SUCOFLEX 102					18	18	18		26.5		40	46
4.14	1.6	SUCOFLEX 240									26.5		40	
4.14	1.6	SUCOFLEX 340									26.5		40	
4.60	1.3	SUCOFLEX 103	4				18	18	18		18	26.5		
5.08	1.0	SUCOFLEX 229						18	18		26.5		29	
5.08	1.0	SUCOFLEX 329						18	18		26.5		29	
5.40	1.2	SUCOFLEX 304						18			18			
5.50	1.1	SUCOFLEX 104		6	6	7.5	18	18	18	18	18	26.5		
5.50	1.1	SUCOFLEX 126	4			7.5	18	18	18	18	18	26.5		
7.70	1.1	SUCOFLEX 526S							18		18	26.5		
7.90	0.8	SUCOFLEX 106			6	7.5		18	18	18	18			
7.90	0.8	SUCOFLEX 118						18	18		18			
9.00	0.34 (5.5)	SUCOFLEX 307						5.5						
13.0	2.7	SUCOFLEX 526V										26.5		

 Frequency

Summary of SUCOFLEX® qualifications

The entire SUCOFLEX family is certified to the following standards through testing, analysis or similarity.

Temperature, altitude and humidity

MIL-STD-810, method 518.1, procedure I

Thermal shock

MIL-STD-202, method 106, condition B1, 25 cycles, temperature: -54 to 125 °C

Mechanical shock

MIL-STD-810, method 516.3, procedure I (half-sine), 20 g, 6 to 9 ms, 45 Hz cross over frequency

MIL-STD-810, method 516, procedure I (saw-tooth), 40 g saw-tooth pulse of 11 ms duration 3 shocks in each of the six directions

Vibration

MIL-STD-810, method 519.3, procedure I, figure 514.3-1, (gunfire), 26.5 min. with specified vibration profile

MIL-STD-810, method 514.3, procedure I (random), functional: 0.2 g²/Hz, endurance: 0.83 g²/Hz

MIL-STD-202; method 204, condition G (sinusoidal), acceleration: 30 g, frequency range: 10 to 2000 Hz, duration: 4 hours in each of three axes

Acceleration

MIL-STD-810, method 513.3, procedure II, 27 g, 5 min.

MIL-STD-810, method 513.3, procedure I, 50 g, 5 min.

Chemical resistance

British standard 3G100, part 2, section 3, class A

Moisture resistance

MIL-STD-202, method 106, 10 day exposure

Salt fog

MIL-STD-810, method 509.2, 48 hours exposure to a 5 % solution

Fungus

MIL-STD-810, method 508.3

Sand and dust

Def. stand. 07-55, part 2, section 4, issue 1, +35 °C, 3 hours

Solar radiation

MIL-STD-810, method 505, procedure II

Overview SUCOFLEX® 100

The high performance microwave cable assembly

Product description

SUCOFLEX 100 series flexible microwave cable assemblies offer superior electrical and mechanical performance for static and dynamic applications.

This series is a high-end product designed to provide optimal performance up to 50 GHz, where stringent electrical requirements – in particular stability and low loss – are important. Their mechanical and climate resistance properties surpass those of standard flexible cables. This cable type is ideally suited to test and measurement applications (as test leads) and used in aerospace and defence systems.



Product features

- The cable maintains stable electrical characteristics when exposed to bending and temperature, enabling reliable test results
- A balanced range of connectors is available, including types which feature NWA-specific interfaces
- Can be provided with various ruggedisations to protect the assembly against different environmental influences
- Available as assembly only

Recommended connectors

SFI01 / SF550	SMA, SK, PC2.4
SFI02	SMA, BMA, N, TNC, PC3.5, SK, PC2.4
SFI03	BNC, SMA, BMA, N, TNC, PC7, PC3.5
SFI26 SFI04	BNC, 7/16, SMA, BMA, QMA, TNC, N, QN, PC7, PC3.5
SFI06 SFI18	7/16, SMA, N, QN, TNC
	Other connectors available on request

Technical data

HUBER+SUHNER cable type	Operating frequency	Temperature range		Outer diameter	Nominal atten. 18 GHz, 25 °C	Bending radii		Weight	More information see page
	GHz	mini- mum °C	maxi- mum °C	mm	dB/m	static mm	dyn. mm	g/m	
SUCOFLEX_101	50	–55	+125	3.7	2.0	11	20	36	16
SUCOFLEX_550	50	–55	+125	3.7	3.0	11	20	33	16
SUCOFLEX_550E	50	–40	+85	3.7	3.0	11	20	30	16
SUCOFLEX_102	46	–55	+125	4.0	1.7	12	20	40	20
SUCOFLEX_102_I	46	–40	+85	4.0	1.7	12	20	36	on request
SUCOFLEX_103	33	–55	+125	4.6	1.3	13	22	53	24
SUCOFLEX_103_I	33	–40	+85	4.8	1.3	13	20	53	on request
SUCOFLEX_104	26.5	–55	+125	5.5	1.1	16	25	84	28
SUCOFLEX_104_I	26.5	–40	+85	6.6	1.1	16	25	82	on request
SUCOFLEX_126	26.5	–55	+125	5.5	1.1	16	25	84	34
SUCOFLEX_126_E	26.5	–40	+85	5.5	1.1	16	25	83	34
SUCOFLEX_106	18	–55	+125	7.9	0.8	24	40	145	38
SUCOFLEX_118	18	–55	+125	7.9	0.8	24	40	145	38
SUCOFLEX_106_I	18	–40	+85	8.2	0.8	24	40	146	38
SUCOFLEX_118_I	18	–40	+85	8.2	0.8	24	40	146	38

SUCOFLEX® 104

The high performance microwave cable assembly working up to 26.5 GHz

Product description

SUCOFLEX 104 cables that can be universally assembled with the widest range of connector types, are available with most ruggedisations.

Product features

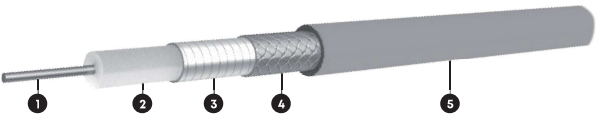
- Impedance 50 Ω
- Applicable up to 26.5 GHz
- High stability and low loss
- Wide range of connectors
- VNA-specific connectors
- Quick lock nuts
- LSFH jacket and further ruggedisations on request



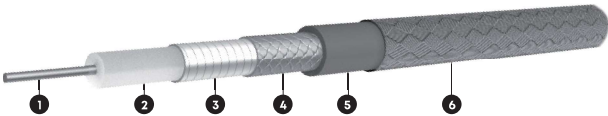
Recommended connectors

SF104	SMA, BMA, QMA, BNC, TNC, N, QN, 7/16, PC3.5
	Other connectors available on request

Construction



SF 104/104E



SF 104D

Cable	Inner conductor ①	Dielectric ②	Outer conductor ③ ④	Jacket ⑤	Ruggedisation ⑥	Outer diameter
						mm
SUCOFLEX_104	CuAg wire	LD-PTFE	CuAg tape/braid	FEP, blue	no	5.5
SUCOFLEX_104_E	CuAg wire	LD-PTFE	CuAg tape/braid	PUR, blue	no	5.5
SUCOFLEX_104_D	CuAg wire	LD-PTFE	CuAg tape/braid	FEP	aramid yarn braid, blue	6.1

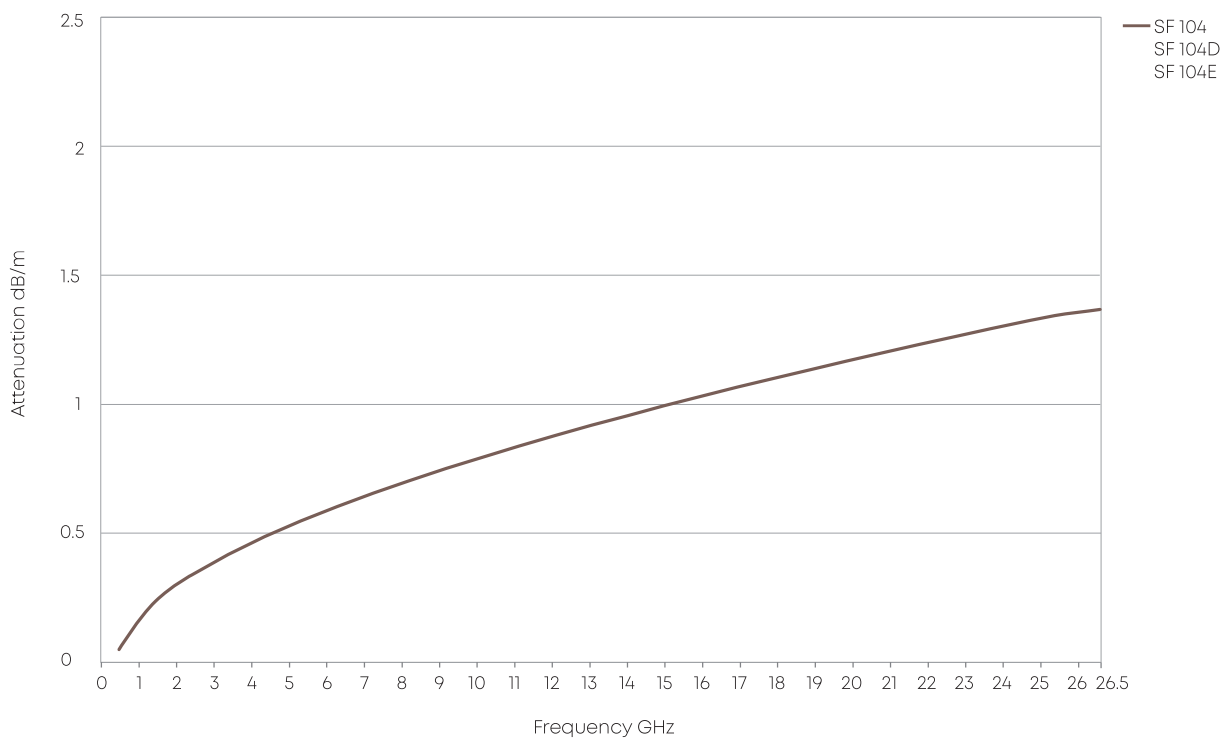
SUCOFLEX® 104

Assembly types

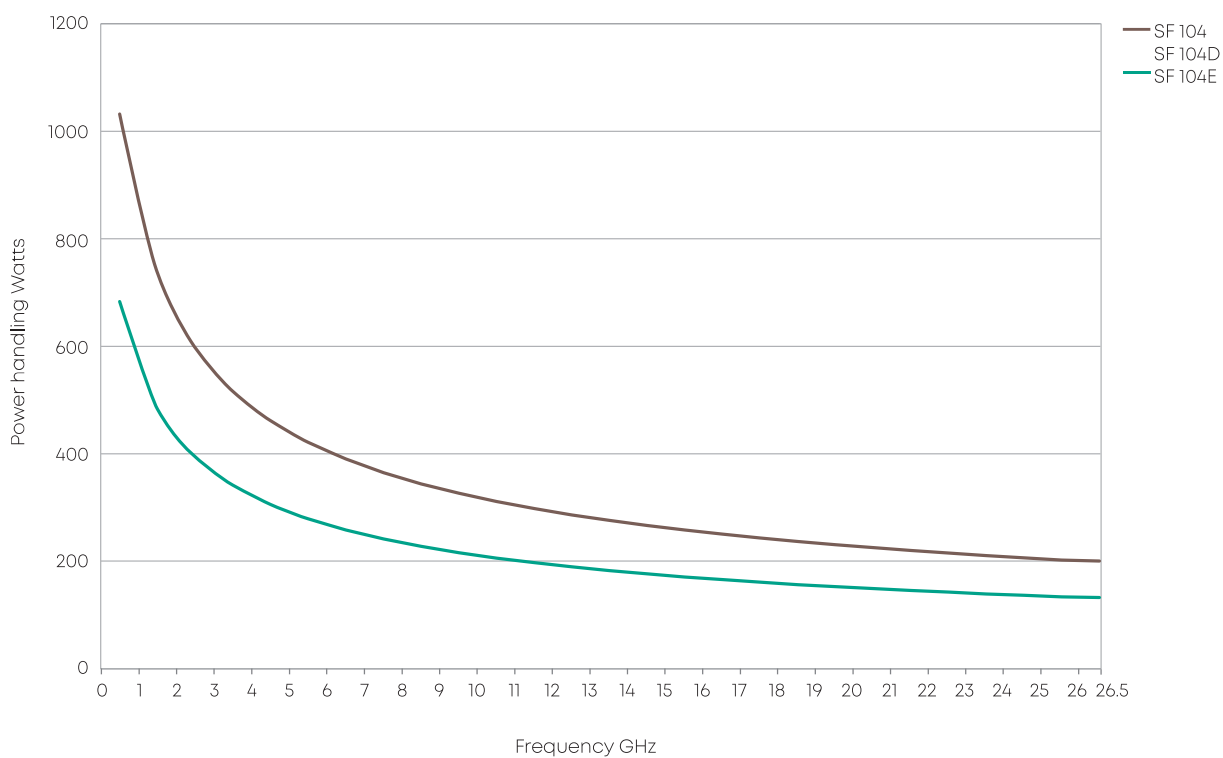
		SUCOFLEX 104	SUCOFLEX 104E	SUCOFLEX 104D
Construction				
Max. operating frequency	GHz	26.5	26.5	26.5
Application		static	static	static
Velocity of propagation	%	77	77	77
Weight	g/m	73	65	96
Min. bending radius static	mm	16	16	20
Min. bending radius repeated	mm	25	25	30
Temperature range	°C	−55 to +125	−40 to +85	−55 to +125
Crush resistance	kN/m	8	8	8
Tensile load	N	250	250	250
Inner conductor		solid wire	solid wire	solid wire
Dielectric		LD-PTFE	LD-PTFE	LD-PTFE
Outer conductor		tape/braid	tape/braid	tape/braid
Jacket		FEP	PUR	FEP
Ruggedisation		no	no	aramid yarn braid
Outer diameter	mm	5.5	5.5	6.1
Screening effectiveness (up to 18 GHz)	dB	> 90	> 90	> 90
Phase stability vs. flexure (360°, diameter 55 mm)	°el/GHz	< 1.7	< 1.7	< 1.7
Phase stability vs. temperature (−40 to +85 °C)	ppm	< 1500	< 1500	< 1500
Assembly phase matching tolerances	°el/GHz	± 0.5	± 0.5	± 0.5
Cable attenuation at 25 °C	dB/m	see graph	see graph	see graph
Insertion loss stability vs. bending	dB	± 0.2	± 0.2	± 0.2
Insertion loss stability vs. temperature	%/°C	< 0.2	< 0.2	< 0.2
Insertion loss stability vs. shaking	dB	± 0.1	± 0.1	± 0.1
Power handling	watt	see graph	see graph	see graph

SUCOFLEX® 104

Attenuation (nominal values at +25 °C ambient temperature)



Power handling (maximum values at 25 °C ambient temperature and sea level)



SUCOFLEX® 104

Available connectors

Connector	Series, pattern	HUBER+SUHNER connector type	SF104 SF104E	SF104D	Operating frequency	VSWR per connector	Remarks
					GHz		
BNC	straight cable plug	11_BNC-451	•	•	4	1.14	
N	straight cable plug	11_N-47	•	•	15 18	1.12 1.16	
	straight cable plug	11_N-451	•	•	18	1.12	
	straight cable plug	11_N-454	•	•	15 18	1.12 1.16	hexagonal nut with safety holes
	straight cable plug	11_N-456	•	•	18	1.12	hexagonal nut with safety holes
	right angle cable plug	16_N-44	•	•	12.4 18	1.14 1.18	
	straight cable jack	21_N-47	•	•	11 15	1.12 1.16	
	straight cable jack	21_N-451	•	•	18	1.12	
	straight panel bulkhead cable jack	24_N-47	•	•	11 15	1.12 1.16	ML 12
	straight panel bulkhead cable jack	24_N-451	•	•	18	1.12	ML 12
PC 3.5	straight cable plug	11_PC3.5-42	•	•	18 26.5	1.12 1.16	
	straight cable jack	21_PC3.5-42	•	•	18 26.5	1.12 1.16	
QMA	straight cable plug	11_QMA-W401	•		6	1.07	
SMA	straight cable plug	11_SMA-451	•	•	18	1.12	
	straight cable plug	11_SMA-456	•	•	18	1.12	hexagonal nut with safety holes
	straight cable plug	11_SMA-468	•	•	18	1.12	QL nut
	right angle cable plug	16_SMA-451	•	•	18	1.12	
	straight cable jack	21_SMA-451	•	•	18	1.12	
	straight panel bulkhead cable jack	24_SMA-451	•	•	18	1.12	ML 35
TNC	straight cable plug	11_TNC-418	•	•	12.4 18	1.14 1.18	QL nut
	straight cable plug	11_TNC-457	•	•	18	1.12	
	right angle cable plug	16_TNC-454	•	•	18	1.14	
	straight panel bulkhead cable jack	24_TNC-457	•	•	18	1.12	ML 4

SUCOFLEX® 104

Stock assemblies

Item no.	Type	Length	Frequency	Max. insertion loss at 25 °C	Max. VSWR	RoHS compliant
		mm	GHz	dB		
SUCOFLEX_104						
84016754	SF104/SMAm/SMAm/500 mm	500	18	0.82	1.25	yes
84017157	SF104/Nm/Nm/1000 mm	1000	18	1.43	1.35	yes
84016755	SF104/SMAm/SMAm/1000 mm	1000	18	1.43	1.25	yes
84017158	SF104/PC35m/PC35m/1000 mm	1000	26.5	1.77	1.35	yes
84016756	SF104/SMAm/SMAm/1500 mm	1500	18	2.03	1.25	yes
84016757	SF104/SMAm/SMAm/2000 mm	2000	18	2.64	1.25	yes

SUCOFLEX® 106 / 118

The high performance microwave cable assembly working up to 18 GHz

Product description

SUCOFLEX 106 and 118 are used in applications where special consideration must be given to low attenuation or high power handling capacity. Wherever phase stability is additionally demanded, the suitable type is the SUCOFLEX 118.

Most ruggedisations can be used in conjunction with these cables, and also the main connector series.



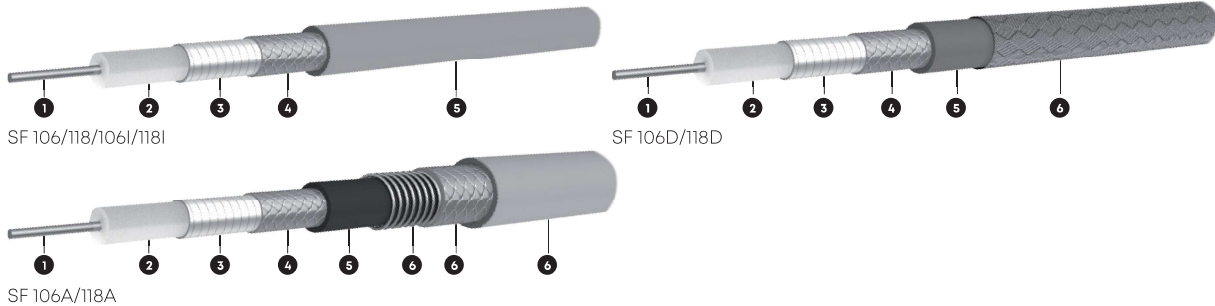
Product features

- Impedance 50 Ω
- Applicable up to 18 GHz
- High stability and low loss
- Wide range of connectors
- Further ruggedisations on request

Recommended connectors

SF106 SF118	SMA, TNC, N, QN, 7/16
	Other connectors available on request

Construction



Cable	Inner conductor ①	Dielectric ②	Outer conductor ③ ④	Jacket ⑤	Ruggedisation ⑥	Outer diameter
						mm
SUCOFLEX_106	CuAg wire	LD-PTFE	CuAg tape/braid	FEP, blue	no	7.9
SUCOFLEX_106_D	CuAg wire	LD-PTFE	CuAg tape/braid	FEP	aramid yarn braid, blue	8.3
SUCOFLEX_106_I	CuAg wire	LD-PTFE	CuAg tape/braid	LSFH, black	no	8.2
SUCOFLEX_106_A	CuAg wire	LD-PTFE	CuAg tape/braid	FEP	stainless steel/ PUR, black	13.2
SUCOFLEX_118	CuAg strand low loss	LD-PTFE	CuAg tape/braid	FEP, blue	no	7.9
SUCOFLEX_118_A	CuAg strand low loss	LD-PTFE	CuAg tape/braid	FEP	stainless steel/ PUR, black	13.2
SUCOFLEX_118_D	CuAg strand low loss	LD-PTFE	CuAg tape/braid	FEP	aramid yarn braid, black	8.3
SUCOFLEX_118_I	CuAg strand low loss	LD-PTFE	CuAg tape/braid	LSFH, black	no	8.2

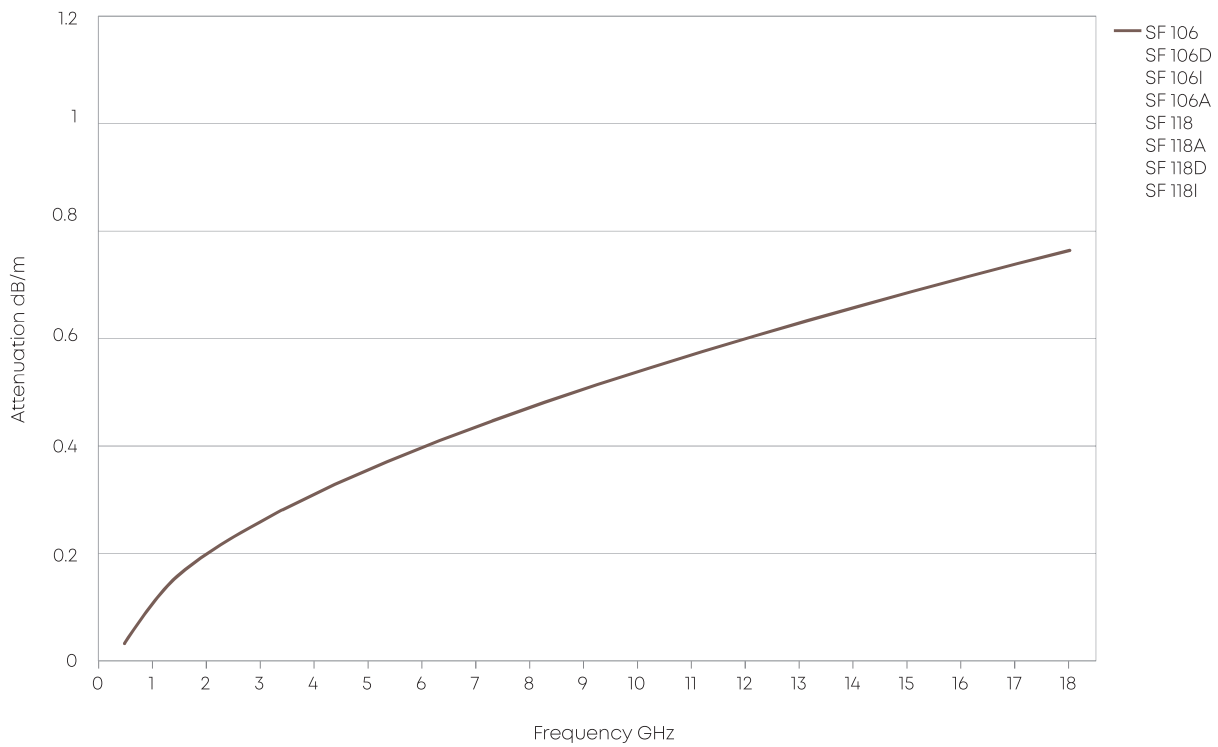
SUCOFLEX® 106 / 118

Assembly types

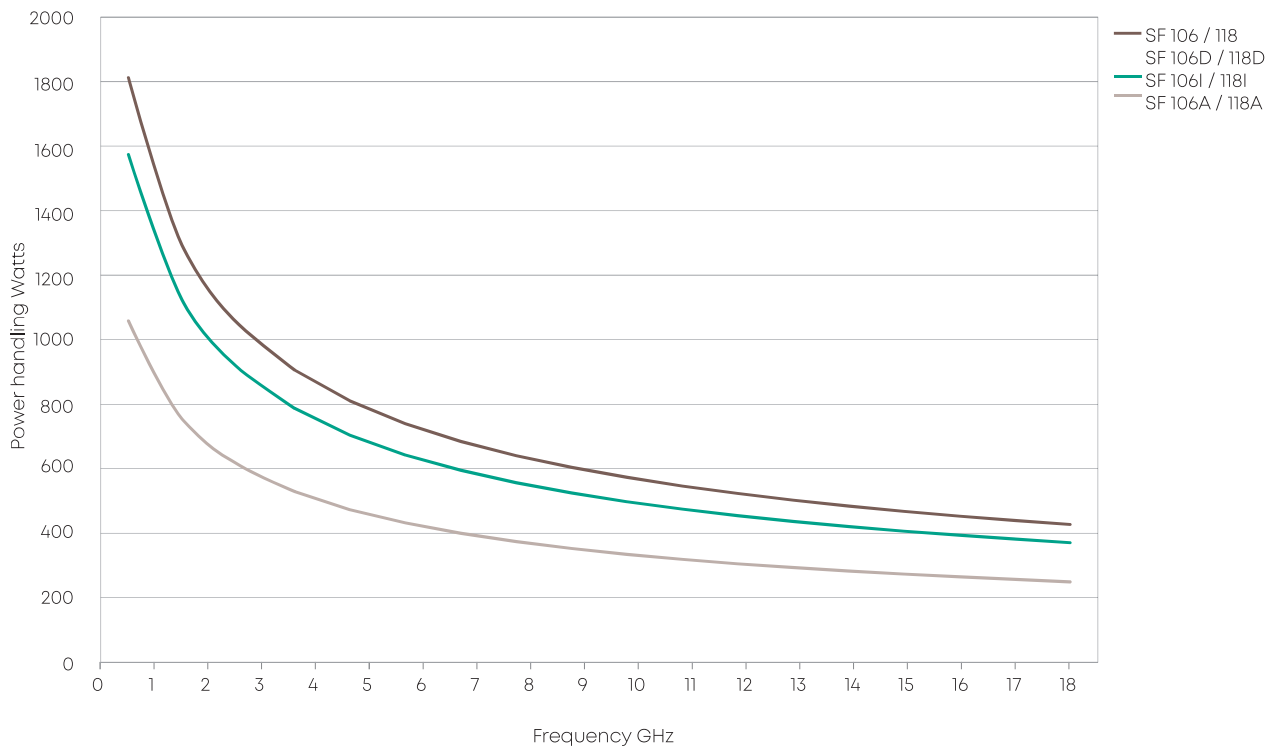
		SUCOFLEX 106	SUCOFLEX 106I	SUCOFLEX 118	SUCOFLEX 118I	SUCOFLEX 106D	SUCOFLEX 118D	SUCOFLEX 106A	SUCOFLEX 118A
Construction									
Max. operating frequency	GHz	18	18	18	18	18	18	18	18
Application		static	static	dynamic	dynamic	static	dynamic	static	dynamic
Velocity of propagation	%	77	77	77	77	77	77	77	77
Weight	g/m	145	146	145	146	157	157	224	224
Min. bending radius static	mm	24	24	24	24	26	26	50	50
Min. bending radius repeated	mm	40	40	40	40	45	45	70	70
Temperature range	°C	-55 to +125	-40 to +85	-55 to +125	-40 to +85	-55 to +125	-55 to +125	-40 to +85	-40 to +85
Crush resistance	kN/m	12	12	12	12	12	12	60	60
Tensile load	N	400	400	400	400	400	400	400	400
Inner conductor		solid wire	solid wire	strand - low loss	strand - low loss	solid wire	strand - low loss	solid wire	strand - low loss
Dielectric		LD-PTFE	LD-PTFE	LD-PTFE	LD-PTFE	LD-PTFE	LD-PTFE	LD-PTFE	LD-PTFE
Outer conductor		tape/ braid	tape/ braid	tape/ braid	tape/ braid	tape/ braid	tape/ braid	tape/ braid	tape/ braid
Jacket		FEP	LSFH	FEP	LSFH	FEP	FEP	FEP	FEP
Ruggedisation		no	no	no	no	aramid yarn braid	aramid yarn braid	stainless steel/PUR	stainless steel/PUR
Outer diameter	mm	7.9	8.2	7.9	8.2	8.3	8.3	13.2	13.2
Screening effectiveness (up to 18 GHz)	dB	> 90	> 90	> 90	> 90	> 90	> 90	> 90	> 90
Phase stability vs. flexure (360°, diameter 85 mm)	°el/ GHz	< 2.0	< 2.0	< 1.2	< 1.2	< 2.0	< 1.2	< 2.0	< 1.2
Phase stability vs. temperature (-40 to +85 °C)	ppm	< 1500	< 1500	< 1500	< 1500	< 1500	< 1500	< 1500	< 1500
Assembly phase matching tolerances	°el/ GHz	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
Cable attenuation at 25 °C	dB/m	see graph	see graph	see graph	see graph	see graph	see graph	see graph	see graph
Insertion loss stability vs. bending	dB	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2
Insertion loss stability vs. temperature	%/°C	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Insertion loss stability vs. shaking	dB	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1
Power handling	watt	see graph	see graph	see graph	see graph	see graph	see graph	see graph	see graph

SUCOFLEX® 106 / 118

Attenuation (nominal values at +25 °C ambient temperature)



Power handling (maximum values at 25 °C ambient temperature and sea level)



SUCOFLEX® 106 / 118

Available connectors

Connector	Series, pattern	HUBER+SUHNER connector type	SF106	SF106A	SF106D	SF106I	SF118	SF118A	SF118D	SF118I	Operating frequency	VSWR per connector	Remarks
											GHz		
N	straight cable plug	11_N-651	•	•	•	•					18	1.12	
	straight cable plug	11_N-656					•	•	•	•	18	1.12	
	right angle cable plug	16_N-651	•		•	•					11 18	1.12 1.22	
	right angle cable plug	16_N-653		•							11 18	1.12 1.22	
	right angle cable plug	16_N-656					•		•	•	11 18	1.12 1.22	MIL
	straight panel bulk-head cable jack	24_N-651	•	•	•	•					18	1.12	ML 12
	straight panel bulk-head cable jack	24_N-652					•		•	•	18	1.12	ML 12
QN	straight cable plug	11_QN-601	•			•					6	1.07	
SMA	straight cable plug	11_SMA-652	•	•	•	•					18	1.12	
	straight cable plug	11_SMA-656					•	•	•	•	18	1.12	
	right angle cable plug	16_SMA-652	•		•	•					18	1.22	
	straight cable jack	21_SMA-651	•	•	•						18	1.12	
	straight cable jack	21_SMA-652					•	•	•	•	18	1.12	
	straight panel bulk-head cable jack	24_SMA-651	•			•	•		•	•	18	1.12	ML 35
TNC	straight cable plug	11_TNC-651		•							18	1.16	
	straight cable plug	11_TNC-653	•		•	•					18	1.12	
	straight cable plug	11_TNC-654					•		•	•	18	1.12	
	right angle cable plug	16_TNC-651	•		•	•					18	1.22	
	right angle cable plug	16_TNC-653		•							18	1.22	
	right angle cable plug	16_TNC-655					•		•	•	18	1.22	
	straight cable jack	21_TNC-651	•		•	•					18	1.12	
	straight panel bulk-head cable jack	24_TNC-651		•							18	1.16	ML 4
	straight panel bulk-head cable jack	24_TNC-653	•		•	•					18	1.12	ML 4
7/16	straight cable plug	11_716-61	•	•	•	•					7.5	1.12	
	straight cable jack	21_716-61	•	•	•	•					7.5	1.12	