

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

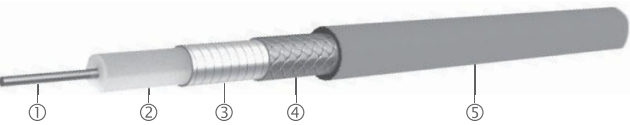
- Impedance 50 Ω
- Applicable up to 26.5 GHz
- High stability and low loss
- Wide range of connectors
- VNA-specific connectors
- Quick lock nuts
- LSFH jacket and further ruggedisations on request



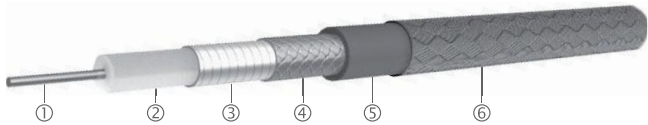
Recommended connectors

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

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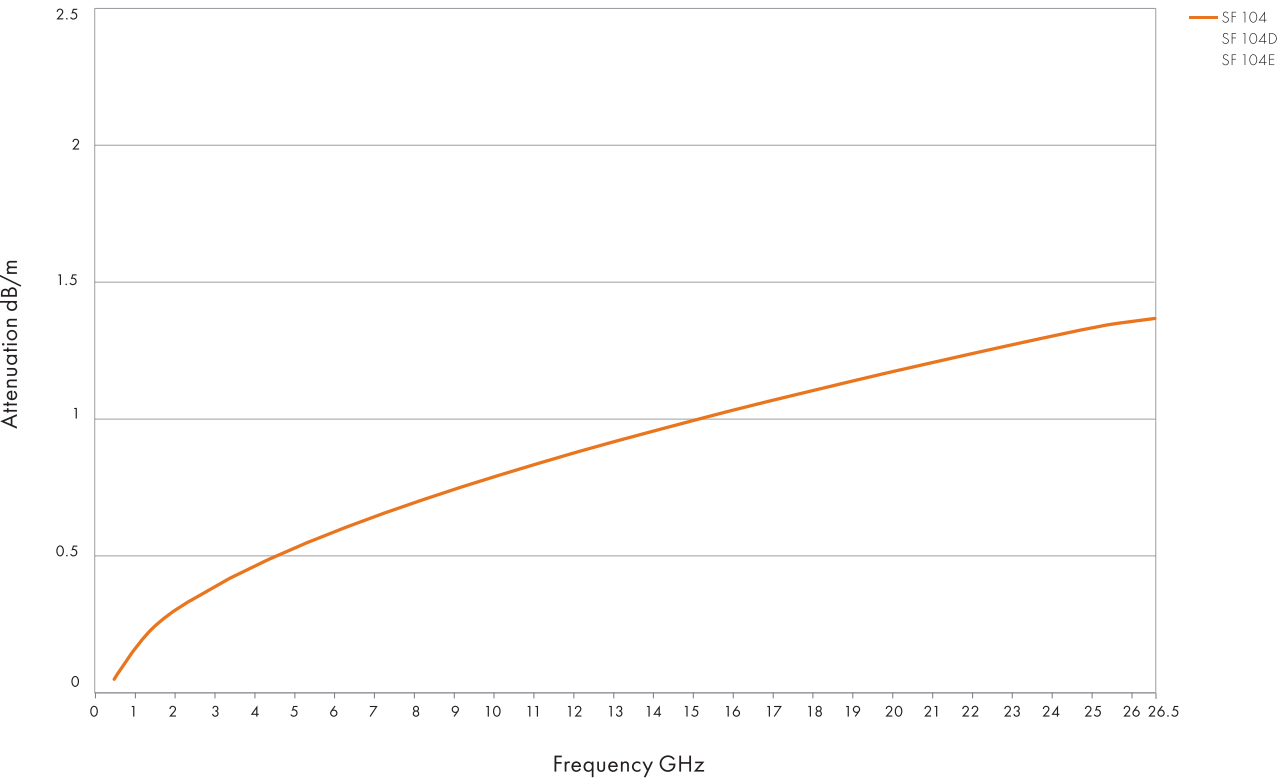
Assembly types

		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

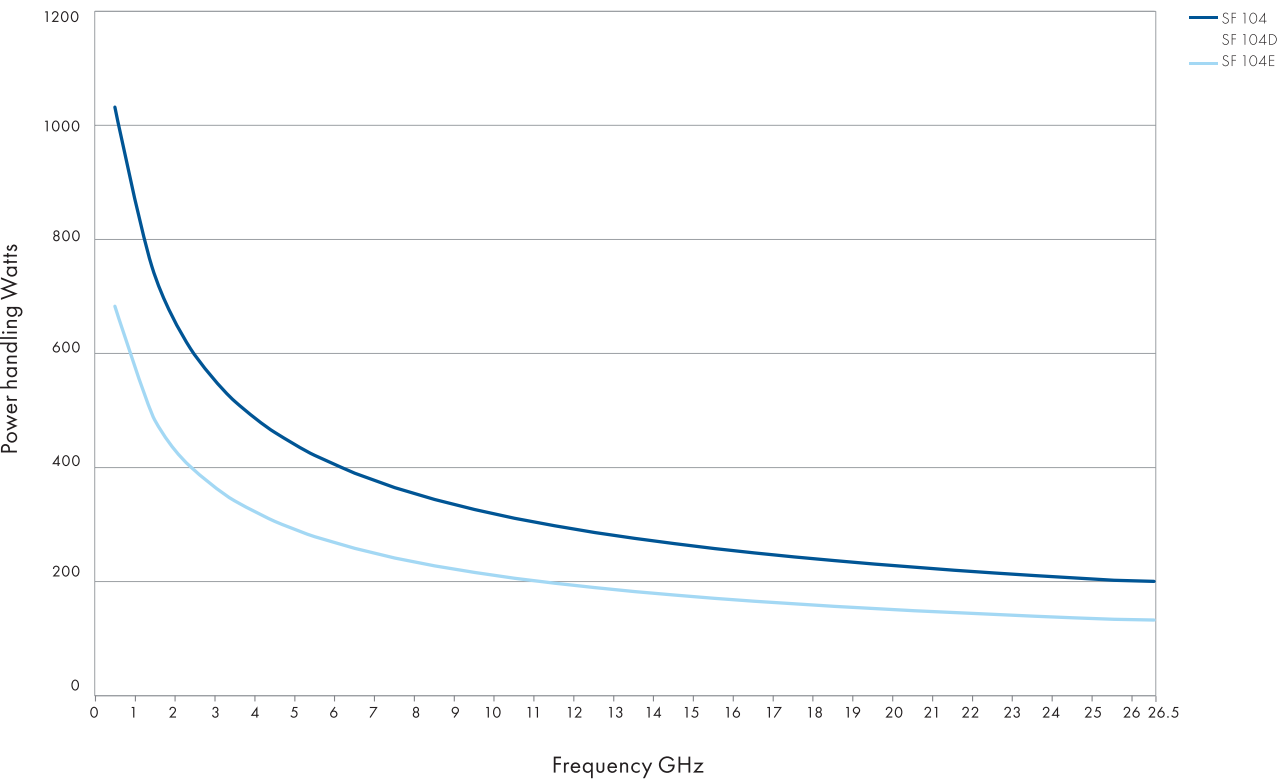
High
performance

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



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



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Available connectors

Connector	Series, pattern	HUBER+SUHNER connector type	SF104 SF104E	SF104D	Operating frequency GHz	VSWR per connector	Remarks
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	
PC 7	straight cable plug	11_PC7-41	•	•	18	1.1	
QMA	straight cable plug	11_QMA-W401	•		6	1.07	
QN	straight cable plug	11_QN-403	•		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
7/16	straight cable plug	11_716-401	•	•	7.5	1.12	
	straight cable jack	21_716-401	•	•	7.5	1.12	

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Stock assemblies

Item no.	Type	Length	Frequency	Max. insertion loss at 25 °C	Max. VSWR	RoHS compliant
		mm	GHz	dB		

SUCOFLEX_104

84017153	SF104/Nm/Nm/500 mm	500	18	0.82	1.35	yes
84016754	SF104/SMAm/SMAm/500 mm	500	18	0.82	1.25	yes
84017154	SF104/PC35m/PC35m/500 mm	500	26.5	1.01	1.35	yes
84017155	SF104/SMAm/Nm/1000 mm	1000	18	1.43	1.30	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
84017067	SF104/Nm/Nm/1500 mm	1500	18	2.03	1.35	yes
84016756	SF104/SMAm/SMAm/1500 mm	1500	18	2.03	1.25	yes
84017159	SF104/SMAm/Nm/2000 mm	2000	18	2.64	1.30	yes
84017160	SF104/Nm/Nm/2000 mm	2000	18	2.64	1.35	yes
84016757	SF104/SMAm/SMAm/2000 mm	2000	18	2.64	1.25	yes