

SUCOFLEX® 106

The high performance microwave cable assembly working up to 18 GHz

Product description

SUCOFLEX 106 and 106P 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 106P. Most ruggedisations can be used in conjunction with these cables, and also the main connector series.

Product features

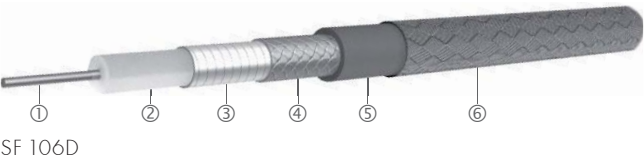
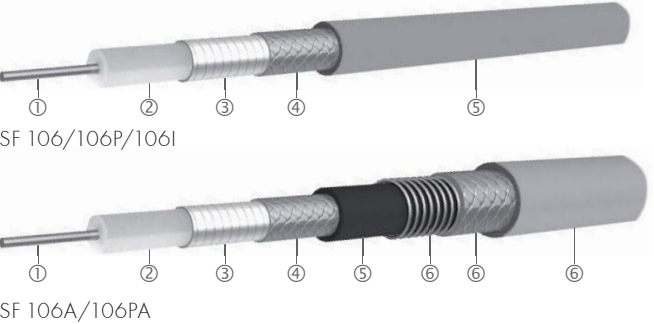
- Impedance 50 Ω
- Applicable up to 18 GHz
- High stability and low loss
- Wide range of connectors
- Further ruggedisations on request



Recommended connectors

SF106 SF106P	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_106_P	CuAg strand	LD-PTFE	CuAg tape/braid	FEP, blue	no	7.9
SUCOFLEX_106_PA	CuAg strand	LD-PTFE	CuAg tape/braid	FEP	stainless steel/ PUR, black	13.2

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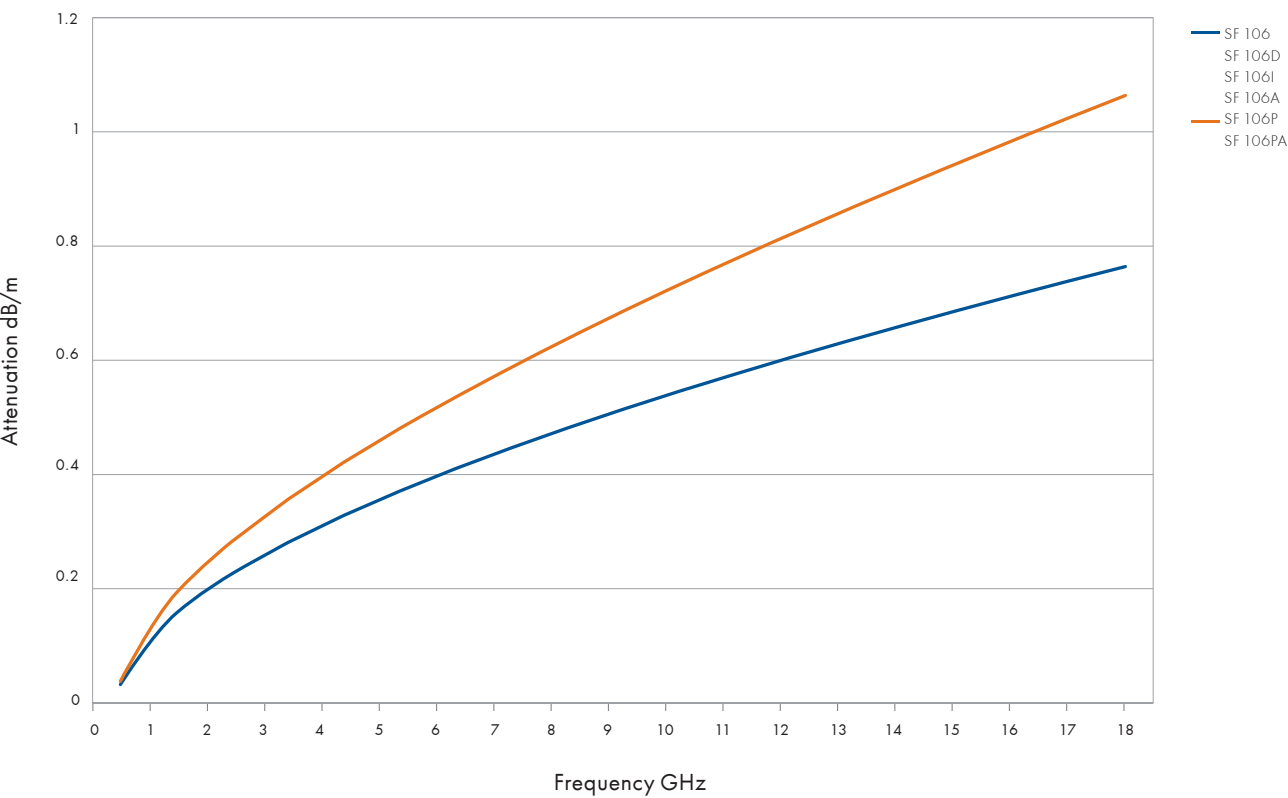
Assembly types

		SUCOFLEX 106	SUCOFLEX 106I	SUCOFLEX 106P	SUCOFLEX 106D	SUCOFLEX 106A	SUCOFLEX 106PA
Construction							
Max. operating frequency	GHz	18	18	18	18	18	18
Application		static	static	dynamic	static	static	dynamic
Velocity of propagation	%	77	77	77	77	77	77
Weight	g/m	142	144	137	175	215	216
Min. bending radius static	mm	24	24	24	26	50	50
Min. bending radius repeated	mm	40	40	40	45	70	70
Temperature range	°C	−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	60	60
Tensile load	N	400	400	400	400	400	400
Inner conductor		solid wire	solid wire	strand	solid wire	solid wire	strand
Dielectric		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
Jacket		FEP	LSFH	FEP	FEP	FEP	FEP
Ruggedisation		no	no	no	aramid yarn braid	stainless steel/PUR	stainless steel/PUR
Outer diameter	mm	7.9	8.2	7.9	8.3	13.2	13.2
Screening effectiveness (up to 18 GHz)	dB	> 90	> 90	> 90	> 90	> 90	> 90
Phase stability vs. flexure (360°, diameter 85 mm)	°el/GHz	< 2.0	< 2.0	< 1.2	< 2.0	< 2.0	< 1.2
Phase stability vs. temperature (−40 to +85 °C)	ppm	< 1500	< 1500	< 1500	< 1500	< 1500	< 1500
Assembly phase matching tolerances	°el/GHz	± 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
Insertion loss stability vs. bending	dB	± 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
Insertion loss stability vs. shaking	dB	± 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

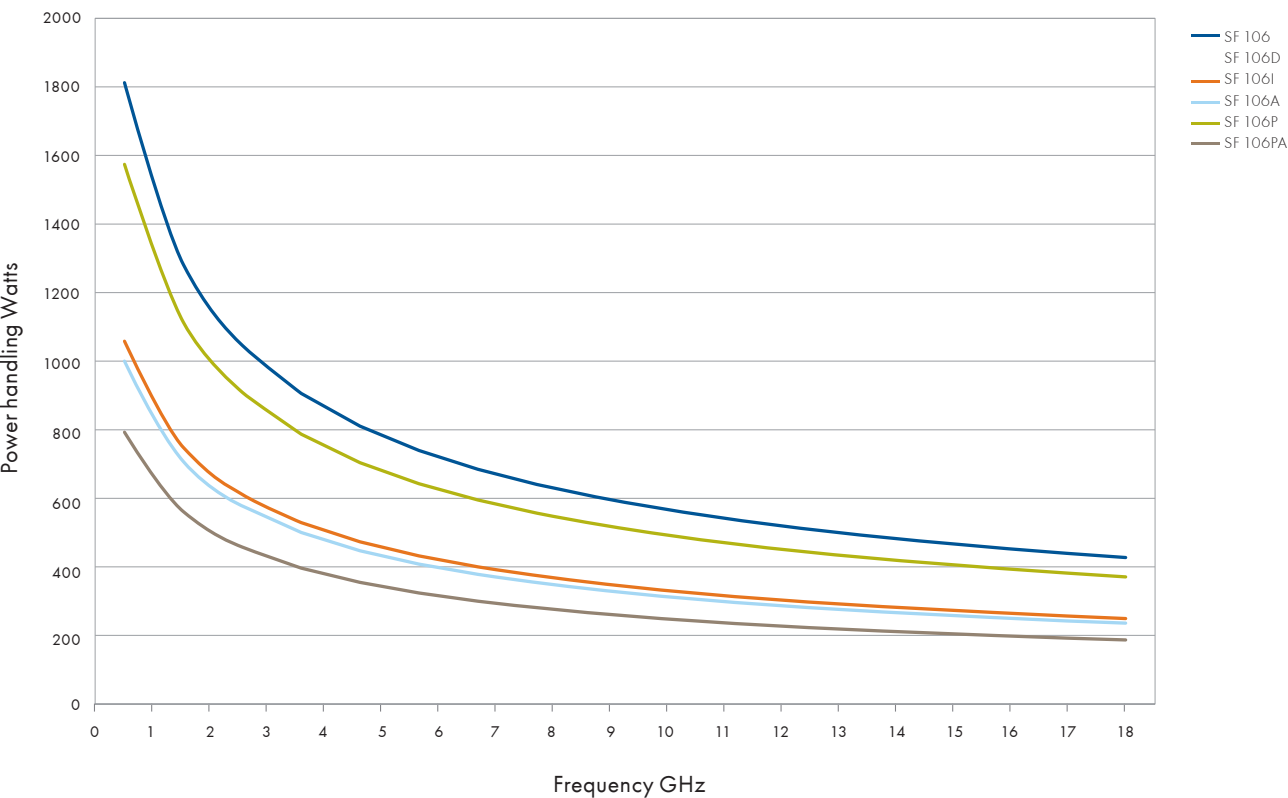
High performance

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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	SF106	SF106A	SF106D	SF106I	SF106P	SF106PA	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 bulkhead cable jack	24_N-651	•	•	•	•			18	1.12	ML 12
	straight panel bulkhead 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 bulkhead 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 bulkhead cable jack	24_TNC-651		•					18	1.16	ML 4
	straight panel bulkhead 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	

High
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