

# SUCOFLEX® 126

The low loss, phase stable assembly up to 26.5 GHz

Edition 2016



## Advantages of SUCOFLEX 126 versus SUCOFLEX 104 P

- 30 % lower loss
- 20 % higher power
- Improved return loss
- Same phase/loss stability
- Same flexibility
- Same connectors
- Same price

# SUCOFLEX® 126

The high performance microwave cable assembly working up to 26.5 GHz

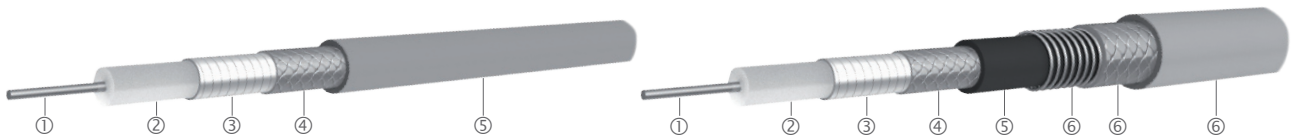
## Product features

- Optimised inner conductor construction
- Extremely precise measurements with highest phase stability combined with low loss and excellent return loss up to 26.5 GHz
- Excellent reliability with A-ruggedisation, that withstand flexure and crushing
- Reduced downtime because of increased intervals between calibrations
- Comprehensive connector portfolio
- Available from stock

## Recommended connectors

SF126	BNC, DV, N, PC3.5; PC7, SMA, TNC, 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_126	CuAg strand	LD-PTFE	CuAg tape/braid	FEP, blue	no	5.5
SUCOFLEX_126_E	CuAg strand	LD-PTFE	CuAg tape/braid	PUR, blue	no	5.5
SUCOFLEX_126_EA	CuAg strand	LD-PTFE	CuAg tape/braid	PUR	stainless steel/PUR, blue	10.3

## Available connectors

Connector	Series, pattern	HUBER+SUHNER connector type	SF126	SF126E	SF126EA	Operating frequency (GHz)	VSWR per connector	Remarks
BNC	Straight cable plug	11_BNC-452	•	•	•	4.0	1.14	
DV	Straight cable plug	11_DV-41	•	•	•	26.5	1.16	3.5 mm connector for Agilent Technologies instrument
N	Straight cable plug	11_N-47	•	•	•	15.0	1.12	
	Straight cable plug	11_N-452	•	•	•	18.0	1.12	
	Straight cable plug	11_N-454	•	•	•	15.0	1.12	Hexagonal nut w. safety holes
	Right angle cable plug	16_N-457	•	•	•	12.4	1.14	
	Straight cable jack	21_N-452	•	•	•	18	1.12	
PC 3.5	Straight panel bulkhead cable jack	24_N-452	•	•	•	18 26.5	1.12 1.16	Mounting hole size 12
	Straight cable jack	21_PC3.5-43	•	•	•	18 26.5	1.12 1.16	
PC 7	Straight cable plug	11_PC7-42	•	•	•	18	1.10	
SMA	Straight cable plug	11_SMA-451	•	•	•	18	1.12	
	Straight cable plug	11_SMA-452	•	•	•	18	1.16	Phase matching connector
	Straight cable plug	11_SMA-456	•	•	•	18	1.12	Hexagonal nut w. safety holes
	Straight cable plug	11_SMA-468	•	•	•	18	1.12	Quick lock nut
	Right angle cable plug	16_SMA-452	•	•	•	18	1.12	
	Straight cable jack	21_SMA-451	•	•	•	18	1.12	
	Straight panel bulkhead cable jack	24_SMA-451	•	•	•	18	1.12	Mounting hole size 35
TNC	Straight cable plug	11_TNC-456	•	•	•	18	1.12	
	Straight panel bulkhead cable jack	24_TNC-456	•	•	•	18	1.12	Mounting hole size 4
7/16	Straight cable plug	11_716-402	•	•	•	7.5	1.12	
	Straight cable jack	21_716-402	•	•	•	7.5	1.12	

# SUCOFLEX® 126

## Assembly types

		SUCOFLEX 126	SUCOFLEX 126E	SUCOFLEX 126EA
Max. operating frequency	GHz	26.5	26.5	26.5
Application		dynamic	dynamic	dynamic
Velocity of propagation	%	77	77	77
Weight	g/m	70	66	171
Min. bending radius static	mm	16	16	30
Min. bending radius repeated	mm	25	25	50
Temperature range	°C	-55 to +125	-40 to +85	-40 to +85
Crush resistance	kN/m	8	8	80
Tensile load	N	250	250	500
Inner conductor		stranded	stranded	stranded
Dielectric		LD-PTFE	LD-PTFE	LD-PTFE
Outer conductor		tape/braid	tape/braid	tape/braid
Jacket		FEP	PUR	PUR
Ruggedisation		no	no	stainless steel/PUR
Outer diameter	mm	5.5	5.5	10.3
Screening effectiveness (up to 18 GHz)	dB	> 90	> 90	> 90
Phase stability vs. flexure (360°, diameter 55 mm)	°el/GHz	< 0.9	< 0.9	< 0.9
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

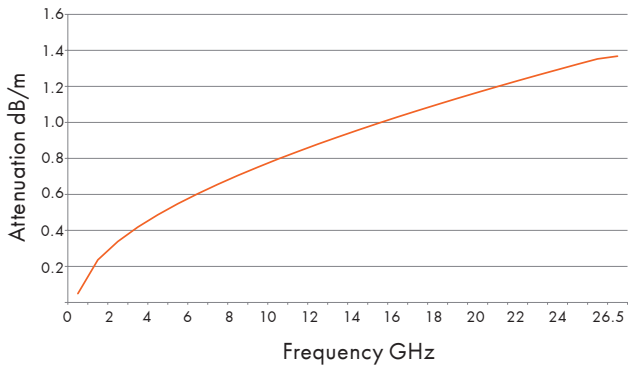
## Stock assemblies

Item no.	Type	Length	Frequency	Max. insertion loss at 25 °C	Max. VSWR	RoHS compliant
		mm	GHz	dB		
<b>SUCOFLEX_126_E</b>						
85072824	SF126E/SMA <sub>m</sub> /SMA <sub>m</sub> /500mm	500	18.0	0.82	1.25	yes
85072825	SF126E/SMA <sub>m</sub> /SMA <sub>m</sub> /1000mm	1000	18.0	1.43	1.25	yes
85072826	SF126E/PC35 <sub>m</sub> /PC35 <sub>m</sub> /1000mm	1000	26.5	1.77	1.35	yes
<b>SUCOFLEX_126_EA (armoured)</b>						
85072828	SF126EA/N <sub>m</sub> /N <sub>m</sub> /1000mm	1000	18.0	1.43	1.25	yes
85072827	SF126EA/SMA <sub>m</sub> /SMA <sub>m</sub> /1000mm	1000	18.0	1.43	1.25	yes
85072829	SF126EA/N <sub>m</sub> /N <sub>f</sub> /1500mm	1500	18.0	2.03	1.25	yes
85072830	SF126EA/N <sub>m</sub> /N <sub>m</sub> /1500mm	1500	18.0	2.03	1.25	yes

# SUCOFLEX® 126

## Attenuation

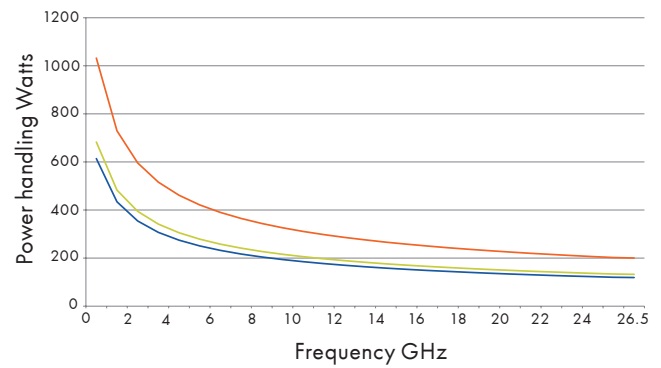
(nominal values at +25 °C ambient temperature)



— SF 126 / SF 126 E / SF 126 EA

## Power handling

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



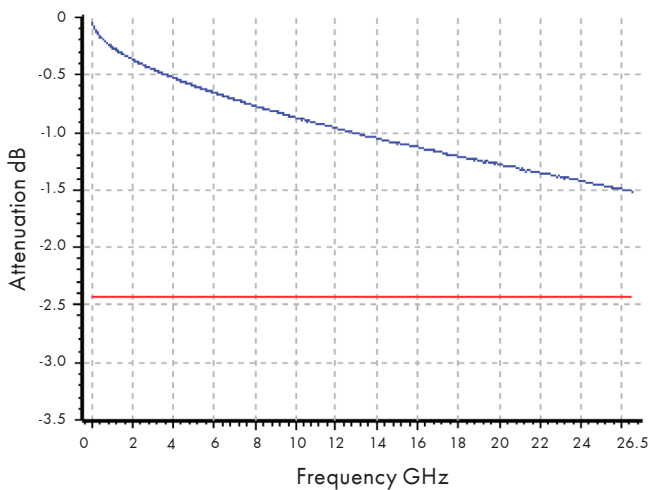
— SF 126  
— SF 126 E  
— SF 126 EA

## Example

Test report SUCOFLEX126/PC35m/PC35m/1000mm

## Attenuation

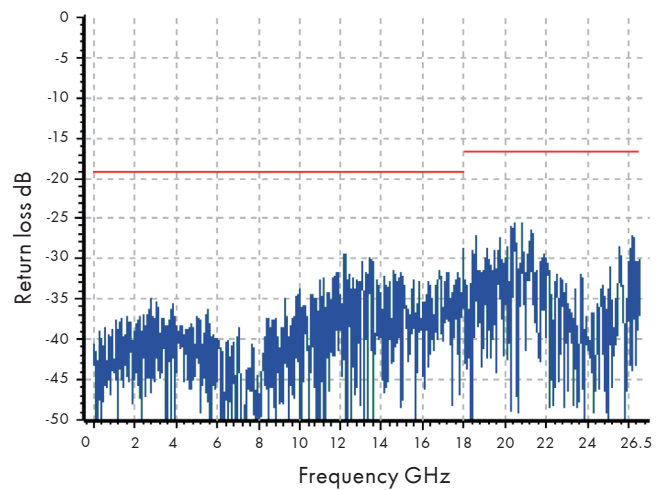
(nominal values at +25 °C ambient temperature)



— SF 10.4 P Specification  
— SF 126 E Test result

## Return loss

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



— SF 10.4 P Specification  
— SF 126 E Test result

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