

SUCOFLEX® 101

Variations

SUCOFLEX_101 and 101_P(E) for applications up to 50 GHz (K and lower L band). SUCOFLEX_101 as standard cable in fixed installations, for internal cabling of equipment and similar uses; SUCOFLEX_101_PE with PUR jacket in applications in which the cable is continuously moved, that is, where maximum flexibility is demanded. Additionally protected by an A ruggedisation, the SUCOFLEX_101_PE becomes a flexible measurement and test cable up to 50 GHz! Suitable connectors for most applications include PC2.4 or SK. A direct connection for test and measurement cables to Agilent Technologies analysers is also available.

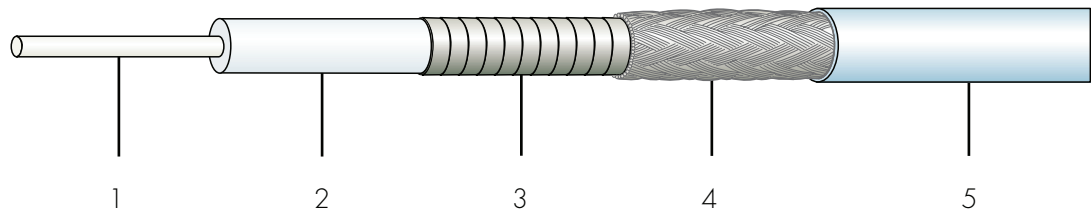
Mechanical and general data

HUBER+SUHNER cable type	Cable	Rugge- disation	Temperature		Weight kg/100m	Outer diame- ter (mm)	Bending radii	
			min. (°C)	max. (°C)			static (mm)	dyn. (mm)
SUCOFLEX_101	101	-	-55	+125	3.6	3.65	11	20
SUCOFLEX_101_E	101_E	-	-40	+85	3.3	3.65	11	20
SUCOFLEX_101_EA	101_E	A	-40	+85	11.4	7.70	20	40
SUCOFLEX_101_P	101_P	-	-55	+125	3.3	3.65	11	20
SUCOFLEX_101_PE	101_PE	-	-40	+85	3.0	3.65	11	20
SUCOFLEX_101_PEA	101_PE	A	-40	+85	11.1	7.70	20	40

Further information about ruggedisation see pages 126 ff.

SUCOFLEX_101

Cable design



	Description	Diameter
1. Centre conductor	Solid silver-plated copper wire	
2. Dielectric	Low density PTFE	
3. 1st outer conductor	Silver-plated copper tape, wrapped	
4. 2nd outer conductor	Silver-plated copper braid	
5. Jacket	Fluoroethylenepropylene, blue	3.65 mm

Electrical cable data

Impedance	50 Ohm			
Operating frequency	50 GHz			
Capacitance	87 pF/m			
Velocity of propagation	77 %			
Time delay	4.3 ns/m			
Nom. attenuation*	coefficient a	0.4255	coefficient b	0.0100
Max. attenuation*	coefficient a	0.4680	coefficient b	0.0110
Max. operating voltage	1.2 kVrms			
Min. screening effectiveness up to 18 GHz	90 dB			

*Attenuation calculation $\alpha_{25} = a \cdot \sqrt{f} \text{ (GHz)} + b \cdot f \text{ (GHz)} \text{ (dB/m)}$

General cable data

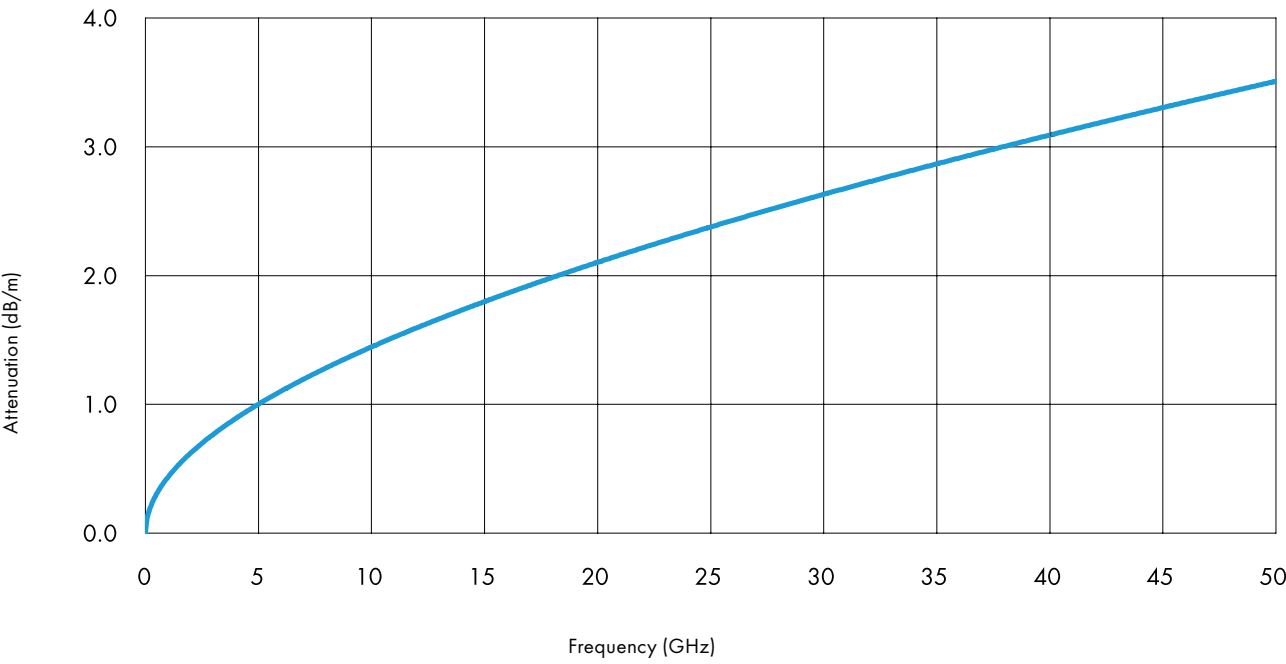
Temperature range	-55...+125 °C
Weight	3.6 kg/100m
Min. bending radius static	11 mm
Min. bending radius dynamic	20 mm

Suitable connectors

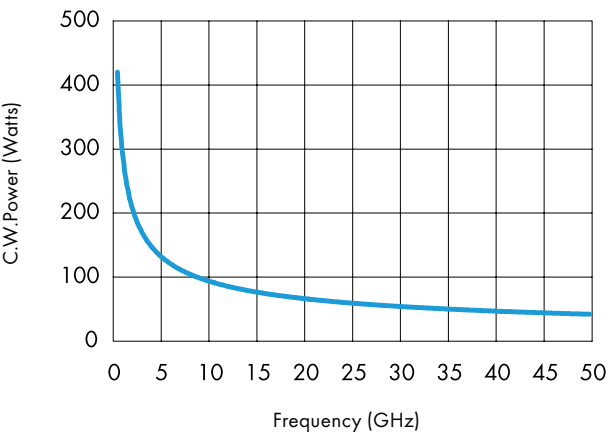
Please refer to page 98

SUCOFLEX_101

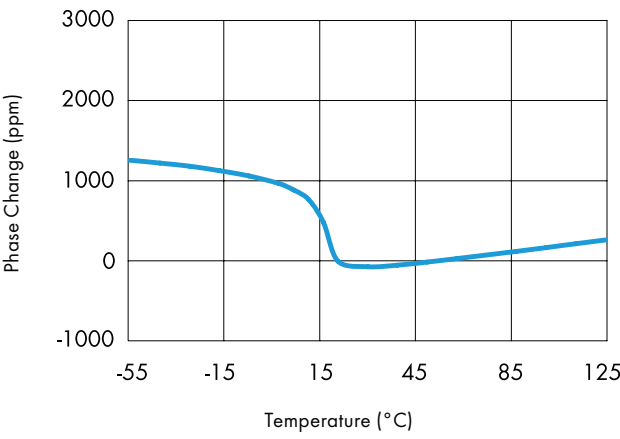
Cable attenuation
Nominal values @ +25 °C ambient temperature



Power handling
Maximum values @ +40 °C ambient temperature and sea level

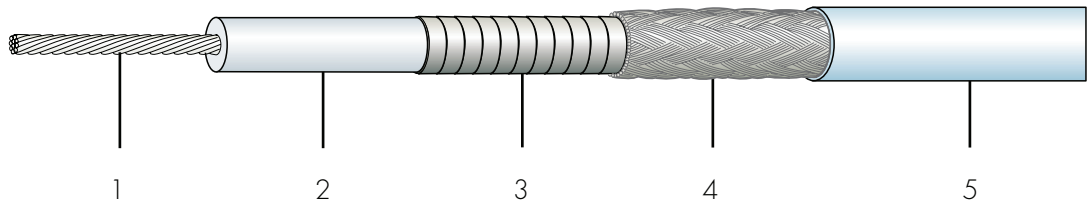


Phase change vs. temperature



SUCOFLEX_101_P

Cable design



	Description	Diameter
1. Centre conductor	Stranded silver-plated copper wire	
2. Dielectric	Low density PTFE	
3. 1st outer conductor	Silver-plated copper tape, wrapped	
4. 2nd outer conductor	Silver-plated copper braid	
5. Jacket	Fluoroethylenepropylene, blue	3.65 mm

Electrical cable data

Impedance	50 Ohm			
Operating frequency	50 GHz			
Capacitance	87 pF/m			
Velocity of propagation	77 %			
Time delay	4.3 ns/m			
Nom. attenuation*	coefficient a	0.5758	coefficient b	0.0285
Max. attenuation*	coefficient a	0.6334	coefficient b	0.0313
Max operating voltage	1.2 kVrms			
Min. screening effectiveness up to 18 GHz	90 dB			

*Attenuation calculation $\alpha_{25} = a \cdot \sqrt{f} \text{ (GHz)} + b \cdot f \text{ (GHz)} \text{ (dB/m)}$

General cable data

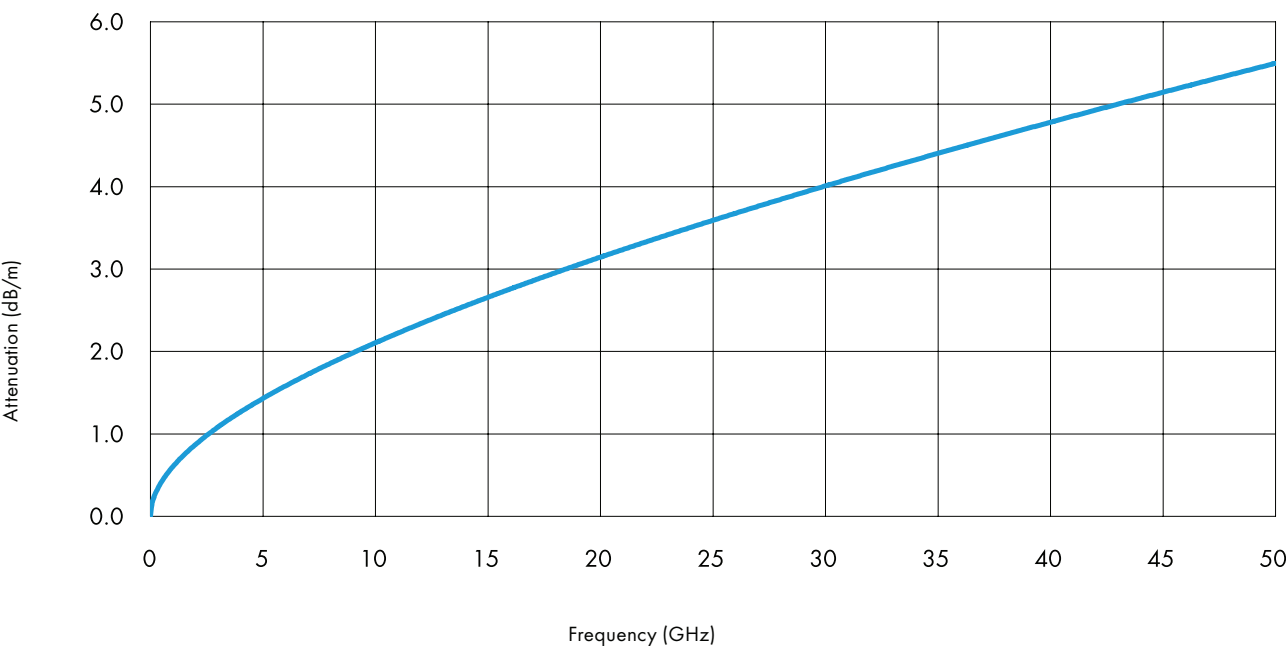
Temperature range	-55...+125 °C
Weight	3.3 kg/100m
Min. bending radius static	11 mm
Min. bending radius dynamic	20 mm

Suitable connectors

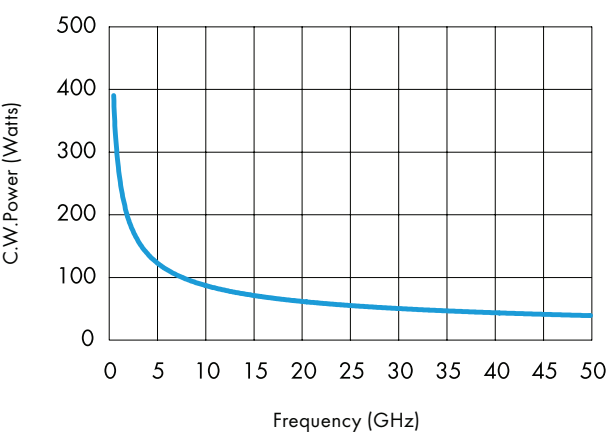
Please refer to page 98

SUCOFLEX_101_P

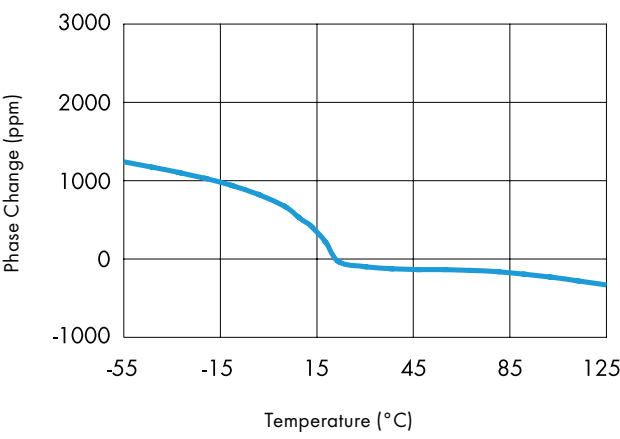
Cable attenuation
Nominal values @ +25 °C ambient temperature



Power handling
Maximum values @ +40 °C ambient temperature and sea level

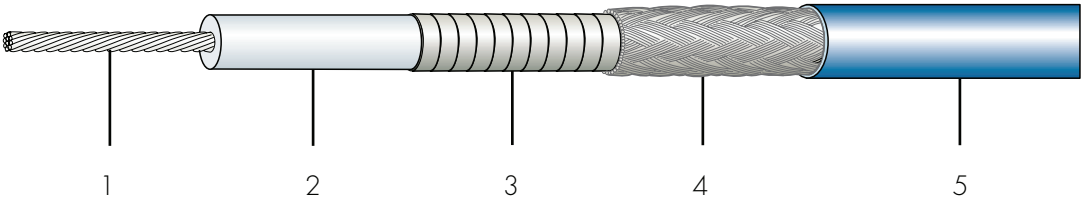


Phase change vs. temperature



SUCOFLEX_101_PE

Cable design



	Description	Diameter
1. Centre conductor	Stranded silver-plated copper wire	
2. Dielectric	Low density PTFE	
3. 1st outer conductor	Silver-plated copper tape, wrapped	
4. 2nd outer conductor	Silver-plated copper braid	
5. Jacket	Polyurethane, blue	3.65 mm

Electrical cable data

Impedance	50 Ohm
Operating frequency	50 GHz
Capacitance	87 pF/m
Velocity of propagation	77 %
Time delay	4.3 ns/m
Nom. attenuation*	coefficient a 0.5758 coefficient b 0.0285
Max. attenuation*	coefficient a 0.6334 coefficient b 0.0313
Max operating voltage	1.2 kVrms
Min. screening effectiveness up to 18 GHz	90 dB

*Attenuation calculation $\alpha_{25} = a \cdot \sqrt{f} \text{ (GHz)} + b \cdot f \text{ (GHz)} \text{ (dB/m)}$

General cable data

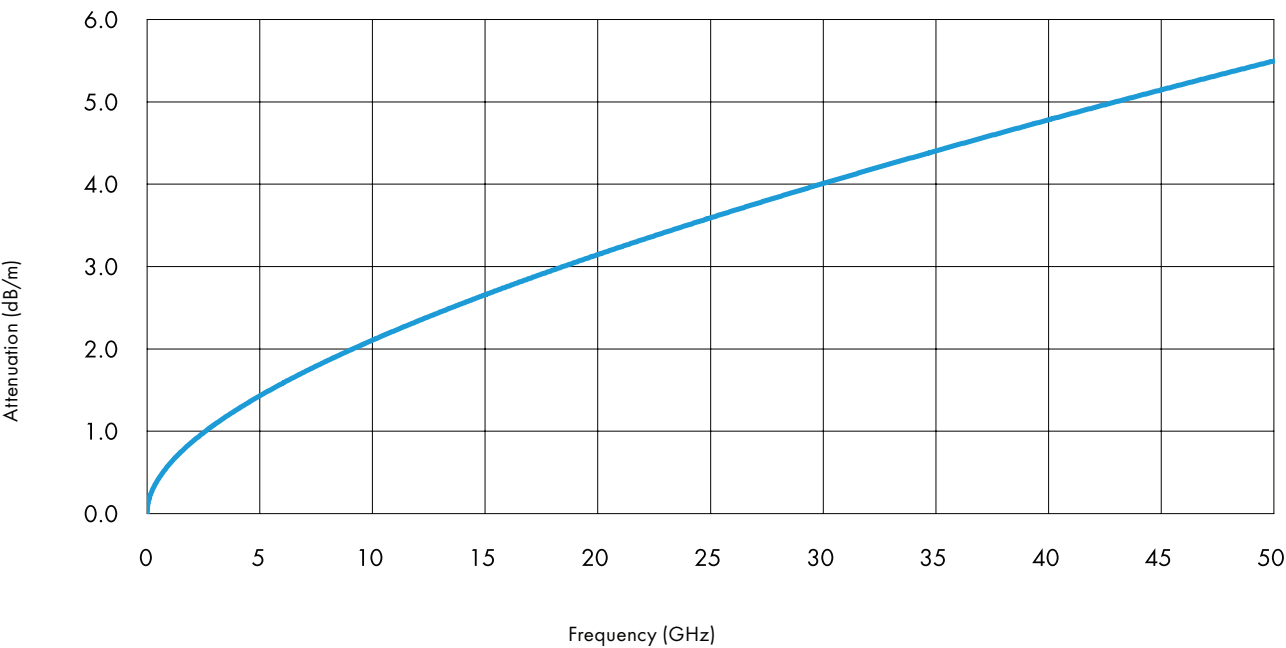
Temperature range	-40...+85 °C
Weight	3.0 kg/100m
Min. bending radius static	11 mm
Min. bending radius dynamic	20 mm

Suitable connectors

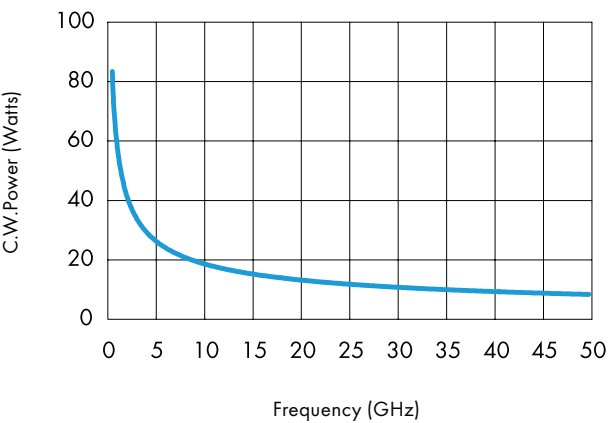
Please refer to page 98

SUCOFLEX_101_PE

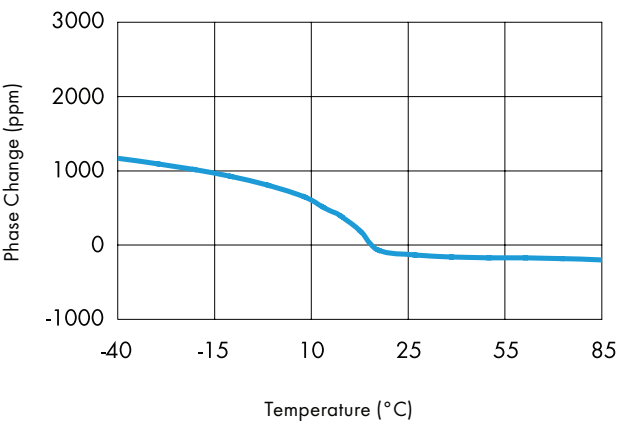
Cable attenuation
Nominal values @ +25 °C ambient temperature



Power handling
Maximum values @ +40 °C ambient temperature and sea level



Phase change vs. temperature



SUCOFLEX® 101

Suitable connectors

HUBER+SUHNER connector type	SF 101(E)	SF 101EA	SF 101P(E)	SF 101PEA	Remarks	Weight (g)	Operating frequency (GHz)	VSWR ¹⁾	Fig.
11_DV-112				•	HP2.4	39.0	50.0	1.20	105
11_SK-110				•		16.0	40.0	1.20	110
21_SK-110				•		15.0	40.0	1.20	112
11_PC2.4-104	•					5.5	50.0	1.20	150
11_PC2.4-109		•				15.0	50.0	1.20	150
11_PC2.4-110				•		15.0	50.0	1.20	150
21_PC2.4-104	•					4.7	50.0	1.20	151
21_PC2.4-109		•				15.0	50.0	1.20	151
21_PC2.4-110				•		15.0	50.0	1.20	151
24_PC2.4-102	•				ML 38	4.1	50.0	1.20	152
11_SMA-153			•			5.7	18.0 26.5	1.12 1.20	170

Connector patterns

11 Straight cable plug

16 Right angle cable plug

21 Straight cable jack

24 Straight panel bulkhead cable jack

25 Straight panel cable jack, flange mount

1): VSWR per connector

ML xx: Mounting hole size refer to section "connector drawings", page 161

HP2.4: 2.4 mm connector for Agilent Technologies equipment

Note: For dimensioned sketches of connectors, please refer to pages 136 ff.

Other connector types are available on request. Please contact your local HUBER+SUHNER partner.