

SUCOFLEX 500

Twist and bend it as you wish



When it comes to test and measurement, SUCOFLEX® 526V and SUCOFLEX® 526S assemblies guarantee the highest level of satisfaction. Thanks to their unique cable and connector design, they deliver best-in-class phase and amplitude stability with flexure, movement, temperature and tensile stress in combination with outstanding return and insertion loss up to 26.5 GHz.

Sucoflex 526 product comparison



	Sucoflex_526V	Sucoflex_526S
Applications	Vector network analysers (VNAs) Critical laboratory conditions	Bench top testing, RF production testing, Automated test equipment
Features and benefits	Best-in-class phase and amplitude stability with flexure, movement, temperature and tensile stress Excellent return loss Extremely flexible and ease of handling Torque, crush and kink resistance Robust and precise center positioning of 3.5 mm center conductors Precise and repeatable measurements Long service life Reduce total cost of test with durable, reliable performance Increased test efficiency and measurement saving costs due to reduced calibration intervals	Excellent return- and insertion loss Phase and amplitude stability with flexure and movement Abrasion, moisture and dust resistance 7.7 mm 25.4 mm PC 3.5, SMA, N 26 kN/m 100.000 2.0 Mio. for slight movements laboratory conditions, analyser specific (+15 to +30 °C) Compliant up to 26.5 GHz 80 % typ. 25 dB min. 20 dB max. 2.5 / 3.6 / 4.4 dB > 90 dB max. 0.05 dB max. 0.08 dB max. 3.9 / 7.4 / 10° 100 N up to 26.5 GHz typ. 50 ppm +1.5 °C to +30 °C, 26.5 GHz No Yes Yes
Diameter	13 mm	7.7 mm
Min. bending radius	50 mm	25.4 mm
Available connectors	PC 3.5	PC 3.5, SMA, N
Crush resistance	80 kN/m	26 kN/m
Typ. flexcycles	100.000	100.000
Operating temperature	2.0 Mio. for slight movements laboratory conditions, analyser specific (+15 to +30 °C)	-55 to +125 °C
RoHS, REACH	Compliant	Compliant
Operating frequency	up to 26.5 GHz	up to 26.5 GHz
Velocity of propagation	80 %	77 %
Return loss	typ. 25 dB min. 20 dB max. 2.5 / 3.6 / 4.4 dB	typ. 25.0 dB min. 19 dB typ. 1.63 dB/m incl. connectors max 1.77 dB/m incl. connectors
Screening effectiveness	> 90 dB	> 90 dB
Amplitude stab. vs. movement	max. 0.05 dB	max. ± 0.05 dB
Amplitude stab. vs. flexure	max. 0.08 dB	max. ± 0.05 dB
Phase stability vs. flexure (25 / 38 / 48 in)	max. 3.9 / 7.4 / 10°	typ. ± 3.0°
Phase stab. vs. tensile stress	max. 0.1°/GHz 100 N up to 26.5 GHz	N/A
Phase stab. vs. temperature	typ. 50 ppm +1.5 °C to +30 °C, 26.5 GHz	typ. 1500 ppm -55 °C to + 125 °C Yes, upon request
Phase matched assemblies available	No	Yes, upon request
New optimised PC3.5 interface supports S-parameter measurements with the highest accuracy	Yes	Yes
Stock assemblies available	Yes	Yes

SUCOFLEX® 526V



The only VNA microwave cable worldwide with a typical 50 ppm phase variation vs. temperature between +15 and +30 °C only. No "PTFE phase knee" at +19 °C as on conventional VNA test cable assemblies which cause phase variations and unstable measurements in critical laboratory conditions.

Available connectors

Product configuration	85069744	85081169	85070046	85081172	85070047	85081177
Cable type	SUCOFLEX 526V					
Length	25' (635 mm)	25' (635 mm)	38' (965 mm)	38' (965 mm)	48' (1219 mm)	48' (1219 mm)
Connector A	3.5 mm ruggedised PORT female					
Connector B	3.5 mm ruggedised DUT male (35VM)	3.5 mm DUT female (35F)	3.5 mm ruggedised DUT male (35VM)	3.5 mm DUT female (35F)	3.5 mm ruggedised DUT male (35VM)	3.5 mm DUT female (35F)
Mechanical data						
Diameter	13 mm					
Min. bending	50 mm					
Crush resistance	80 kN/m					
Flex life	100.000 cycles					
Environmental data						
Operating temperature	laboratory conditions, analyser specific (+15 to +30 °C)					
RoHS, REACH	compliant					
Electrical data						
Impedance	50 Ω					
Operating frequency	up to 26.5 GHz					
Velocity of propagation	80 %					
Time delay	4.15 ns/m					
Return loss	min. 20 dB					
Insertion loss	max. 2.5 dB		max. 3.6 dB			max. 4.4 dB
Screening effectiveness	> 90 dB					
Amplitude stability vs. movement	max. 0.05 dB					
Amplitude stability vs. flexure	max. 0.08 dB					
Phase stability vs. flexure	max. 3.9°					
Phase stability vs. tensile stress	max. 0.1°/GHz [100N]					
Phase stability vs. temperature	typ. 50 ppm (+1.5 to +30 °C)					

Ordering information

Item no.	Description
85069744	SF526V/35VF/35VM/25in
85081169	SF526V/35VF/35F/25in
85070046	SF526V/35VF/35VM/38in
85081172	SF526V/35VF/35F/38in
85070047	SF526V/35VF/35VM/48in
85081177	SF526V/35VF/35F/48in

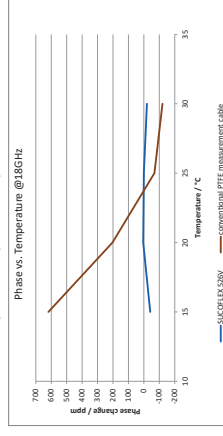
SUCOFLEX® 526V

Phase shift vs. temperature (+15°C to +30°C)

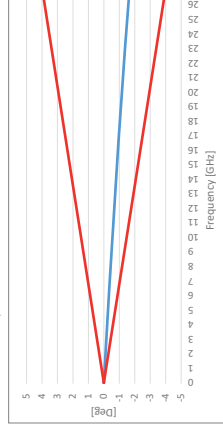
SUCOFLEX 526V		Conventional VNA test lead	
Assembly length [in (mm)]	Frequency (GHz) *	Phase shift /° (for 50 ppm, 80% VOP)	Phase shift /° (for 700 ppm, 84% VOP)
25 [635]	18	0.9	11.4
25 [635]	26.5	1.3	16.7

* Other frequencies on request

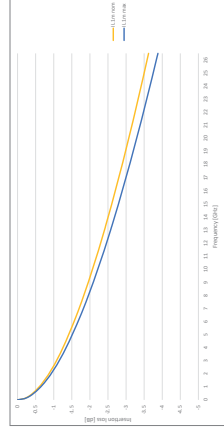
Phase stability vs. temperature performance



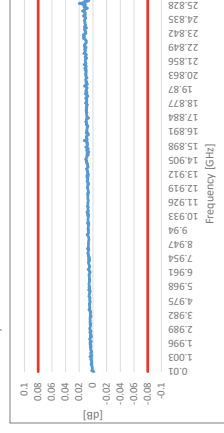
Phase stability vs. flexure



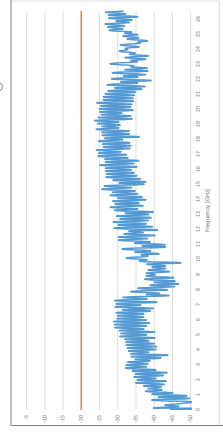
Insertion Loss



Loss stability vs. flexure

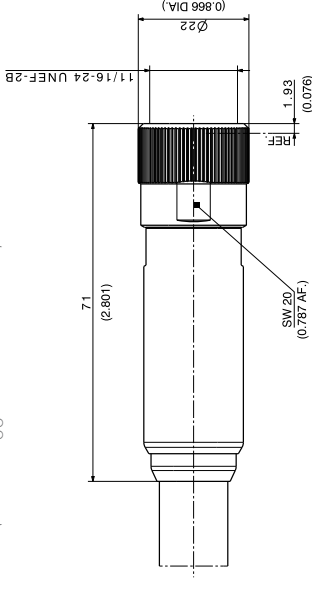


Return Loss SUCOFLEX 526V with two straight PC3.5 connectors

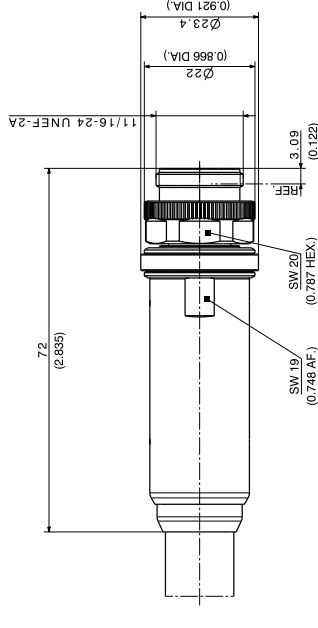


Connector configuration

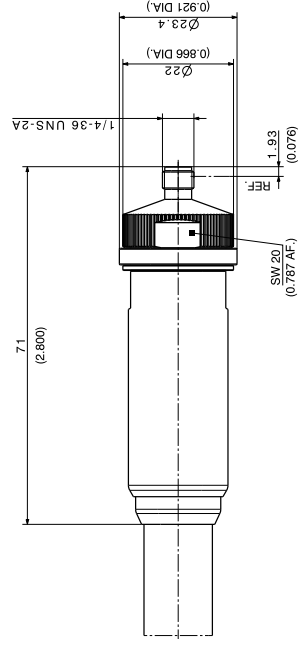
3.5 VF (3.5 mm ruggedized PORT female)



3.5 VM (3.5 mm ruggedized DUT male)



3.5F (3.5mm DUT female)



SUCOFLEX® 526S



The SUCOFLEX 526S is the top performance cable assembly for various applications in test laboratories. When it comes to test and measurement, SUCOFLEX 526S assemblies guarantee the highest level of satisfaction. Thanks to their unique cable and connector design, they deliver best-in-class phase and amplitude stability with flexure in combination with outstanding return and insertion loss up to 26.5 GHz.

Cable Construction



Mechanical data	
Diameter	7.7 mm
Min. bending	25.4 mm
Crush resistance	26 kN/m
Flex life	100 000 cycles
Environmental data	
Operating temperature	-55 to +125 °C
RoHS, REACH	compliant
Electrical data	
Impedance	50 Ω
Operating frequency	up to 26.5 GHz
Velocity of propagation	77 %
Time delay	4.15 ns/m
Return loss	min. 19 dB
Insertion loss	typ. 1.63 dB/m incl. connectors, max 1.77 dB/m incl. connectors
Screening effectiveness	> 90 dB
Amplitude stability vs. movement	max. ± 0.05 dB
Amplitude stability vs. flexure	max. ± 0.05 dB
Phase stability vs. flexure	typ. ± 3°
Phase stability vs. temperature	typically 1500 ppm [-55 to +125 °C]

Ordering information

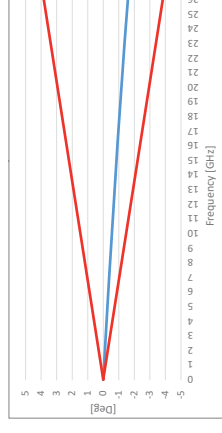
Item no.	Stock assembly type
85090623	SF526S/1PC35/1PC35/500mm
85088164	SF526S/1PC35/1PC35/36inch
85090624	SF526S/1PC35/1PC35/1000mm
85090625	SF526S/1PC35/1PC35/2000mm
85090626	SF526S/1PC35/1PC35/3000mm
85090629	SF526S/1PC35/2IP35/36inch
85091104	SF526S/1PC35/2IP35/48inch
85089172	SF526S/1IN/1000mm
85089173	SF526S/1ISMA/1000mm

SUCOFLEX® 526S

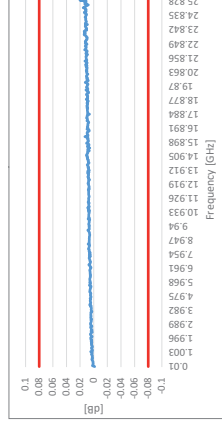
Available connectors

Connector	Series, pattern	HUBER+SUHNER connector type	Operating frequency (GHz)
PC3.5	Straight cable plug	1I_PC3.5	26.5
	Straight cable jack	2I_PC3.5	
N	Straight cable plug	1I_N	18
	Straight cable jack	2I_N	
SMA	Straight cable plug	1I_SMA	18

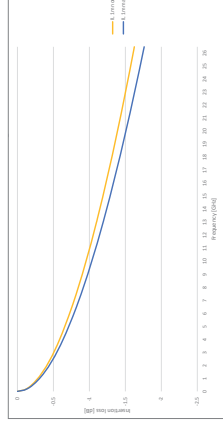
Phase vs. stability vs flexure



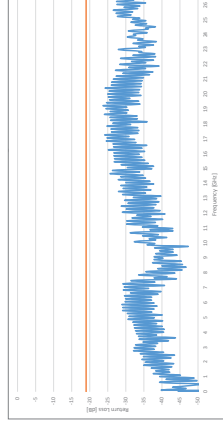
Loss stability vs. flexure



Insertion Loss

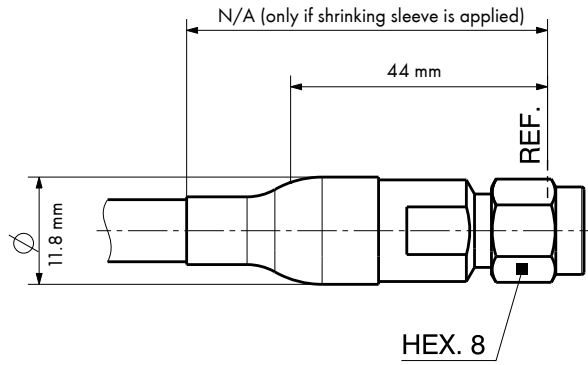


Return Loss SUCCOFLEX 526S with two straight PC3.5 connectors

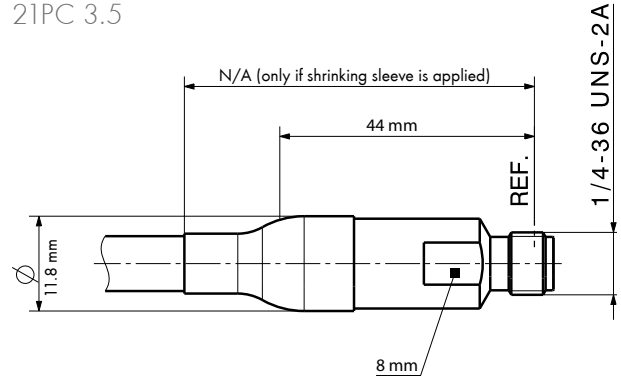


Connector configuration

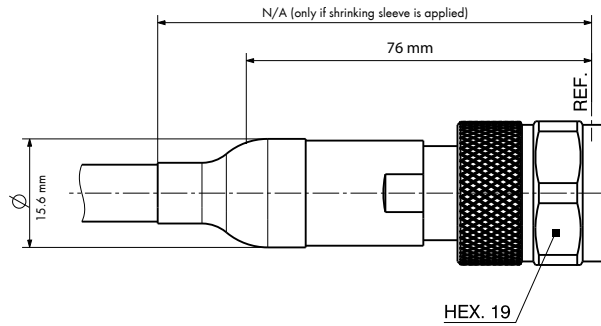
11PC 3.5



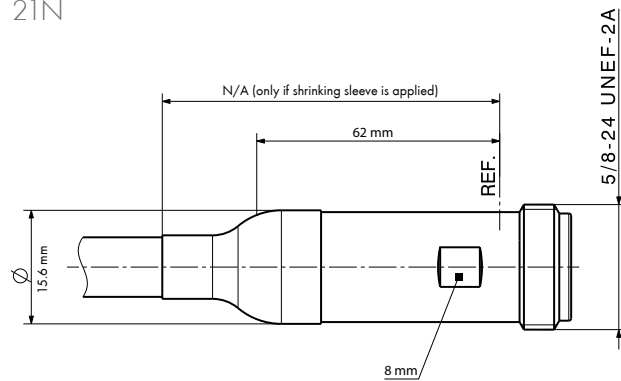
21PC 3.5



11N



21N



11SMA

