

## SF526V/35VF/35F/38in Microwave Cable Assembly

### Description

SUCOFLEX 526V microwave cable assemblies set a new measurement standard for vector network analyzers (VNAs) through 26.5 GHz.

- Extremely flexible and ease of handling
- Best-in-class phase and amplitude stability with flexure, movement, temperature and tensile stress
- Robust and precise center positioning of 3.5mm center conductors
- Accurate and repeatable measurements
- Increased test efficiency and measurement saving costs due to reduced calibration intervals



### Product Configuration

|                    |                                      |
|--------------------|--------------------------------------|
| Description        | SF526V/35VF/35F/38in                 |
| Item no            | 85081172                             |
| Cable type         | SUCOFLEX 526V                        |
| Length of assembly | 38" (965 mm)                         |
| Connector A        | 35VF (3.5 mm ruggedized PORT female) |
| Connector B        | 35F (3.5 mm DUT female)              |

### Technical Data

#### Mechanical Data

|                        |                |
|------------------------|----------------|
| Nominal outer diameter | 13.0 mm        |
| Min. bending radius    | 50 mm          |
| Crush resistance       | 80 kN/m        |
| Nominal weight         | 345 g          |
| Flex life              | 100'000 cycles |

#### Environmental Data

|                       |   |
|-----------------------|---|
| Operating temperature | Laboratory conditions, analyzer specific (+15°C to +30°C) |
| RoHS, REACH           | Compliant   |

#### Electrical Data

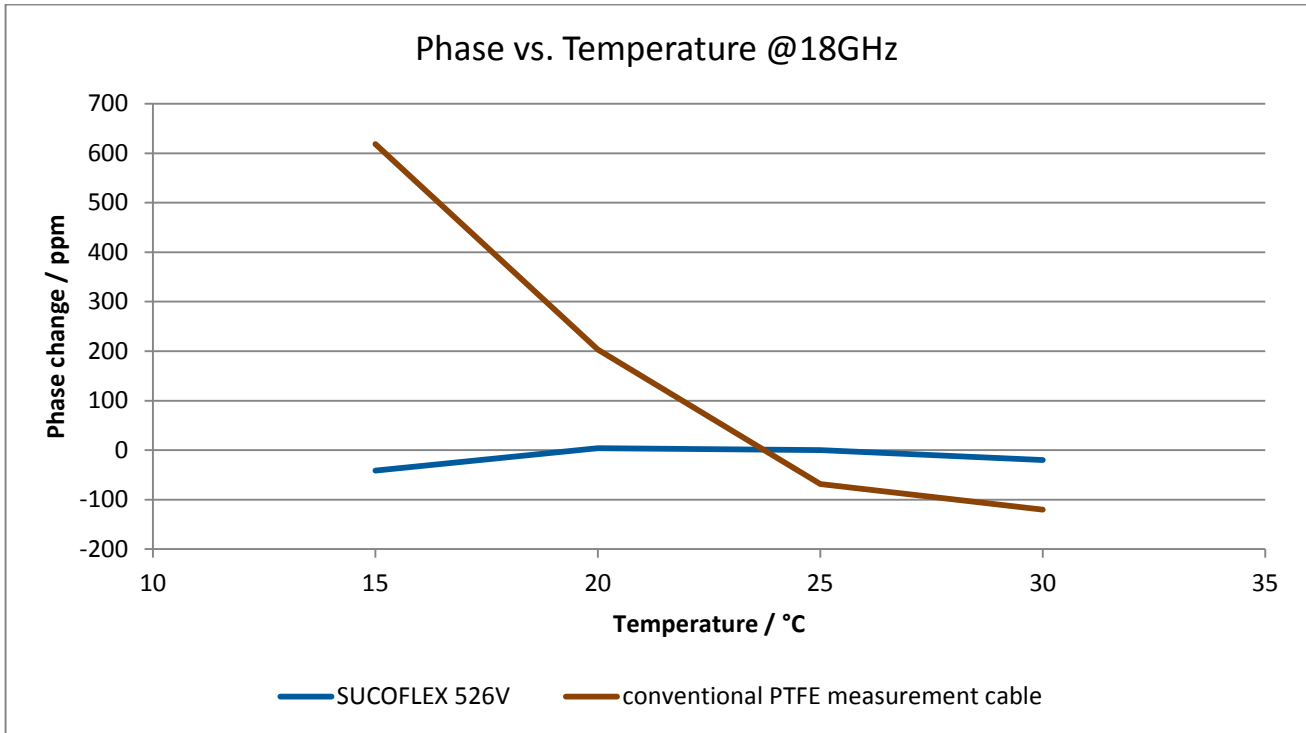
|                                      |                 |                             |
|--------------------------------------|-----------------|-----------------------------|
| Impedance                            | 50 Ω            |                             |
| Operating frequency                  | up to 26.5 GHz  |                             |
| Velocity of propagation              | 80 %            |                             |
| Time delay                           | 4.17 ns / m     |                             |
| Return loss                          | min. 20 dB      | up to 26.5 GHz              |
| Return loss stability                | > 40 dB         | up to 26.5 GHz              |
| Insertion loss (assembly)            | max. 3.6 dB     | 26.5 GHz, 25°C              |
| Screening effectiveness              | > 90 dB         | up to 26.5 GHz              |
| Amplitude stability vs. movement (*) | max. 0.05 dB    | up to 26.5 GHz              |
| Amplitude stability vs. flexure (**) | max. 0.08 dB    | up to 26.5 GHz              |
| Phase stability vs. flexure (**)     | max. 7.4°       | up to 26.5 GHz              |
| Phase stability vs. tensile stress   | max. 0.1° / GHz | 100 N, up to 26.5 GHz       |
| Phase stability vs. temperature      | max. 50 ppm     | 15°C to 30°C, up to 26.5GHz |

(\*) Stability test vs. movement 30s, displacement: 100 mm

(\*\*) Stability test vs. flexure 180°, diameter 115 mm

## SF526V/35VF/35F/38inch Microwave Cable Assembly

### Phase vs. temperature performance



### 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) |
| 38 (965)                  | 18               | 1.4                                  | 17.3                                  |
| 38 (965)                  | 26.5             | 2.0                                  | 25.4                                  |

\*Other frequencies on request

### Connector configuration

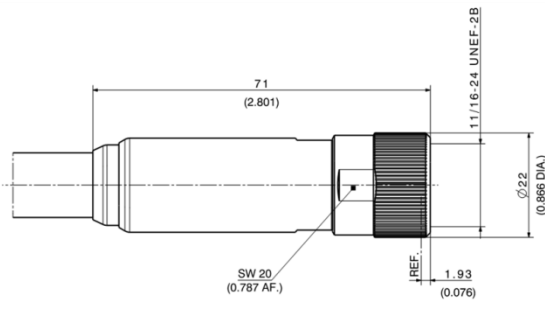


Figure 1: 35 VF (3.5 mm ruggedized PORT female)

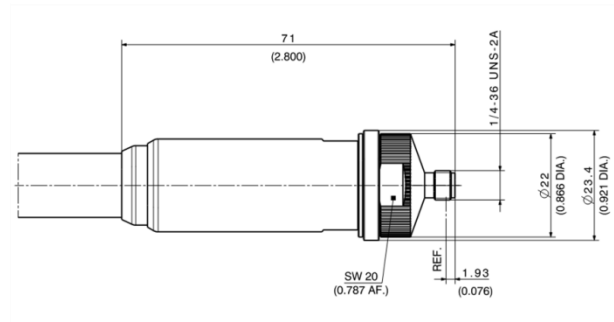


Figure 2: 35 F (3.5 mm DUT female)