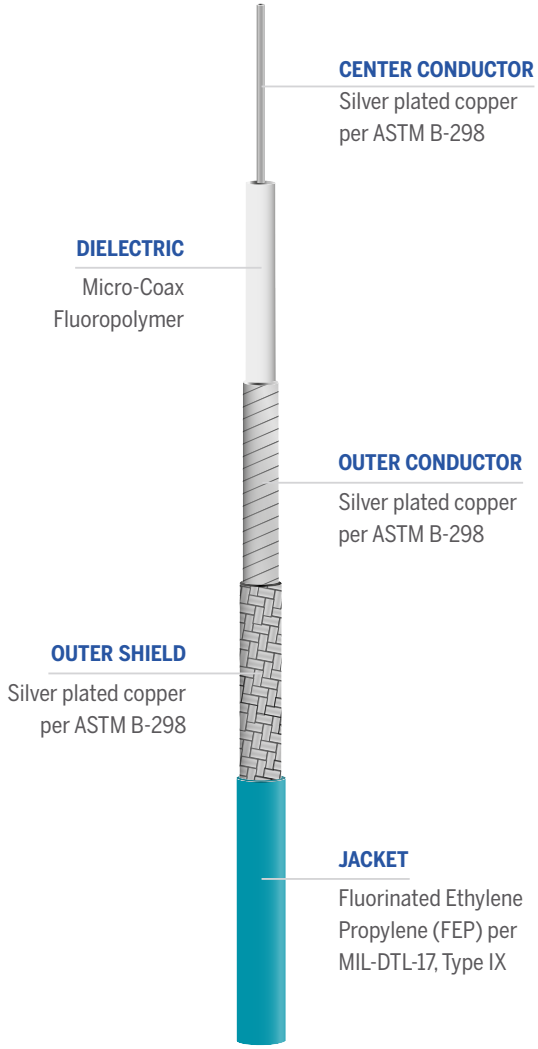
# UFP311A

## UTiFLEX®

UFP311A is the ideal coaxial solution for high-frequency applications in aerospace, defense, and advanced test systems. Its robust construction and reliable electrical performance make it perfect for use in radar systems, electronic warfare platforms, and space-constrained test environments. When design demands consistent performance under pressure, trust UTiFLEX® to deliver.

**Impedance** 50 Ohms | **Operating Temperature** -65°C to +125°C | **RoHS** Compliant

### Details and Materials




### Mechanical/Physical Properties

| | | |
|---|---|---|
| Jacket Diameter | in | 0.311 |
| | mm | 7.90 |
| Weight | grams/ft | ≤ 50.2 |
| | grams/m | ≤ 164.7 |
| Min Static Bend Radius | in | TBD |
| | mm | TBD |
| Dynamic Flex Life[3] | cycles | TBD |
| Center Conductor Strands | | 1 |

### Electrical Properties

| | | |
|---|---|---|
| Velocity of Propagation | (%) | 83 |
| RF Shielding | (dB) at 1 GHz | ≥ 100 |
| Capacitance | pF/ft | 24.54 |
| | pF/m | 80.51 |
| Maximum Frequency | GHz | 18 |
| Corona Extinction Voltage | VRMS @ 60Hz | TBD |
| Dielectric Withstanding Voltage | VRMS @ 60Hz | TBD |
| Insertion Loss Stability | % Change[2] | ≤ 5 |
| K1 | Ft (m) | 4.72 (0.155) |
| K2 | Ft (m) | 0.64 (0.021) |

### Maximum Attenuation[1] and VSWR[4]

(at 20°C and Sea Level)

| Frequency GHz | Attenuation dB/100ft | dB/m | VSWR |
|---|---|---|---|
| 0.5 | 4 | 0.13 | ≤1.20:1 |
| 1 | 6 | 0.20 | ≤1.20:1 |
| 5 | 14 | 0.46 | ≤1.20:1 |
| 10 | 22 | 0.72 | ≤1.20:1 |
| 18 | 32 | 1.05 | ≤1.20:1 |

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AN AMPHENOL COMPANY

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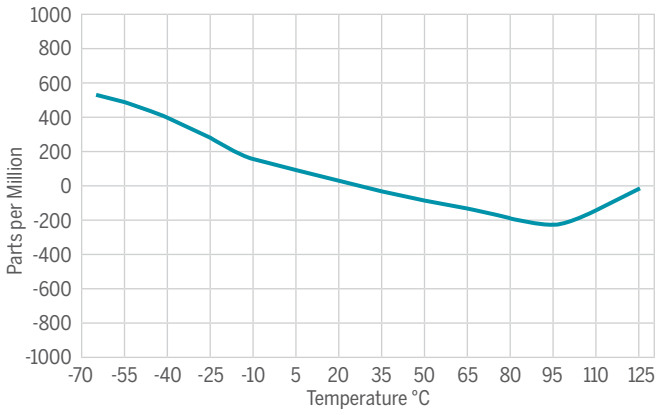
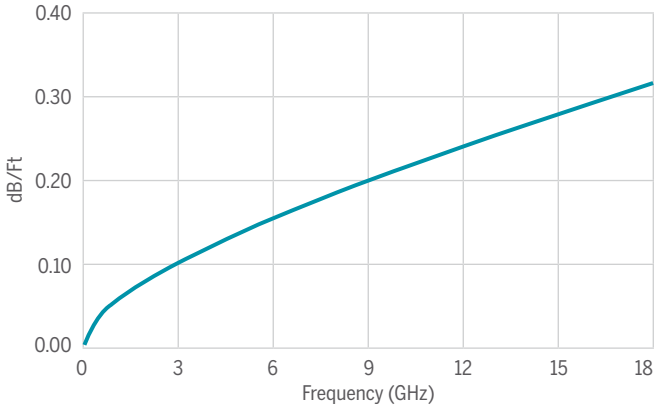
## Environmental Properties

| | |
|---|---|
| Thermal Shock | MIL-STD-202, Method 107, 20 Cycles, -65 to 125 °C (cable and SMA connectors only) |
| Stress Crack Resistance | MIL-DTL-17, Paragraph 4.8.17, except at 125 °C |
| Cold Bend Test | MIL-DTL-17, Paragraph 4.8.19 |

## Typical Phase Change vs. Temperature




## Maximum Insertion Loss




## Notes

1. Maximum Attenuation (db./100Ft) = K1√F + K2F where F is Frequency in GHz.
2. Insertion Loss change, while vibrated at a frequency of 6 Hz and an amplitude of 1 inch.
3. Snake test: A 3-ft sample is fixed on one end. The other end is moved inward along the axis of the sample forcing the cable into a "U" shape. It then returns to straight configuration for one flex cycle.
4. VSWR testing to be performed on 20-foot minimum lengths with gating used to remove connector contributions. Minimum frequency points shall be 1601.

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