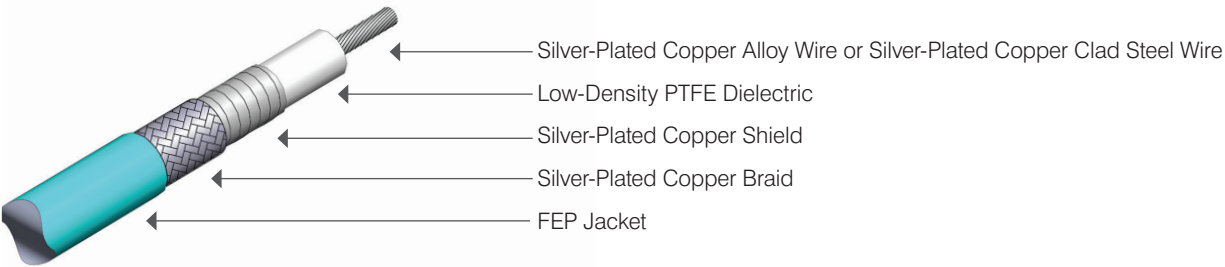


UTiFLEX® Ultra-Low-Loss Cable Assemblies

UTiFLEX® Ultra-Low-Loss Cable Assemblies are optimized to provide the lowest insertion loss available in a flexible cable construction up to 18, 26.5, and 40 GHz. The cables utilize an ultra-low-density PTFE dielectric that lowers weight and insertion loss, improves electrical stability, and provides greater resilience and flexibility when compared to standard microwave cables.

| Mechanical Characteristics                    | UFB088D                       | UFB142C          | UFB142A          | UFC185A          | UFB197C          | UFB205A          | UFB293C          | UFB311A          |
|-----------------------------------------------|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Outer Diameter in (mm)                        | 0.088 (2.235)                 | 0.142 (3.61)     | 0.142 (3.61)     | 0.185 (4.699)    | 0.197 (5.00)     | 0.205 (5.21)     | 0.293 (7.44)     | 0.311 (7.90)     |
| Center Conductor Type                         | Solid                         | Stranded         | Solid            | Solid            | Stranded         | Solid            | Stranded         | Solid            |
| Max. Weight g/ft (g/m)                        | 4.2 (13.78)                   | 9.9 (32.5)       | 10.1 (33.1)      | 17.6 (57.74)     | 19.8 (65.0)      | 20.0 (65.6)      | 42 (137.8)       | 44.5 (146.0)     |
| Min. Bend Radius in (mm)                      | 0.25 (6.35)                   | 0.38 (9.65)      | 0.38 (9.65)      | 0.375 (9.525)    | 0.50 (12.70)     | 0.50 (12.70)     | 0.75 (19.05)     | 1.25 (31.75)     |
| Cable Flex Life                               | 25,000 *                      | 75,000 *         | 75,000 *         | 10,000 *         | 150,000 *        | 25,000 *         | 50,000 *         | 15,000 *         |
| Electrical Characteristics                    | UFB088D                       | UFB142C          | UFB142A          | UFC185A          | UFB197C          | UFB205A          | UFB293C          | UFB311A          |
| Impedance                                     | 50 Ω                          | 50 Ω             | 50 Ω             | 50 Ω             | 50 Ω             | 50 Ω             | 50 Ω             | 50 Ω             |
| Frequency Range                               | DC to 18 GHz                  | DC to 40 GHz     | DC to 40 GHz     | DC to 32 GHz     | DC to 26.5 GHz   | DC to 26.5 GHz   | DC to 18 GHz     | DC to 18 GHz     |
| Velocity of Propagation                       | 80%                           | 83%              | 83%              | 83%              | 81%              | 83.5%            | 81.5%            | 84%              |
| Capacitance pF/ft (pF/m)                      | 25.6 (84)                     | 24.5 (80.4)      | 25.1 (82.4)      | 25.3 (83.0)      | 24.8 (81.4)      | 24.8 (81.4)      | 24.5 (80.4)      | 24.2 (79.4)      |
| Shielding Effectiveness                       | @ 1 GHz > 100 dB              | > 100 dB         | > 100 dB         | > 100 dB         | > 100 dB         | > 100 dB         | > 100 dB         | > 100 dB         |
| Max. Insertion Loss db/ft (dB/M)              | @ 1 GHz                       | 0.20 (0.66)      | 0.11 (0.36)      | 0.10 (0.33)      | 0.08 (0.26)      | 0.09 (0.28)      | 0.07 (0.23)      | 0.06 (0.20)      |
|                                               | @ 10 GHz                      | 0.66 (2.17)      | 0.36 (1.18)      | 0.33 (1.08)      | 0.27 (0.89)      | 0.28 (0.93)      | 0.23 (0.75)      | 0.18 (0.59)      |
|                                               | @ 18 GHz                      | 0.89 (2.92)      | 0.49 (1.61)      | 0.44 (1.44)      | 0.36 (1.18)      | 0.38 (1.26)      | 0.32 (1.05)      | 0.25 (0.82)      |
|                                               | @ 26.5 GHz                    | -                | 0.59 (1.94)      | 0.54 (1.77)      | 0.44 (1.44)      | 0.47 (1.55)      | 0.39 (1.28)      | -                |
|                                               | @ 32 GHz                      | -                | 0.66 (2.16)      | 0.60 (1.97)      | 0.49 (1.61)      | -                | -                | -                |
| Phase Stability vs. Flexure                   | @ 40 GHz                      | -                | 0.74 (2.43)      | 0.68 (2.23)      | -                | -                | -                | -                |
|                                               | @ 10 GHz                      | 2° †             | 3° †             | 2° †             | 3° †             | 2° †             | 4° †             | 2° †             |
| Phase Stability vs. Temp.                     | @ 18 GHz                      | 3° †             | 5° †             | 5° †             | 6° †             | 3° †             | 7° †             | 3° †             |
|                                               | @ 18 GHz                      | 3° †             | 5° †             | 5° †             | 6° †             | 3° †             | 7° †             | 1° †             |
| Power Handling                                | See figure on next page       |                  |                  |                  |                  |                  |                  |                  |
| VSWR                                          | See connector selection guide |                  |                  |                  |                  |                  |                  |                  |
| Environmental Characteristics                 | UFB088D                       | UFB142C          | UFB142A          | UFC185A          | UFB197C          | UFB205A          | UFB293C          | UFB311A          |
| Temperature Range                             | -65 °C to 165 °C              | -65 °C to 165 °C | -65 °C to 165 °C | -65 °C to 165 °C | -65 °C to 165 °C | -65 °C to 165 °C | -65 °C to 165 °C | -65 °C to 165 °C |
| See Page 22 for applicable environmental test |                               |                  |                  |                  |                  |                  |                  |                  |

\* Cable shall withstand specified number of unrestrained flexures (snake test)  
† Cable wrapped once around a 3 in diameter mandrel



We are constantly improving products. Please contact us for the latest detailed specification sheet for any individual cable.

Performance

