

## UF Series Ultra-Flexible Cable Assembly

UF1/SMA Male /SMA Female/DC-18 GHz

Model: UF1-SMAMSMAF-L

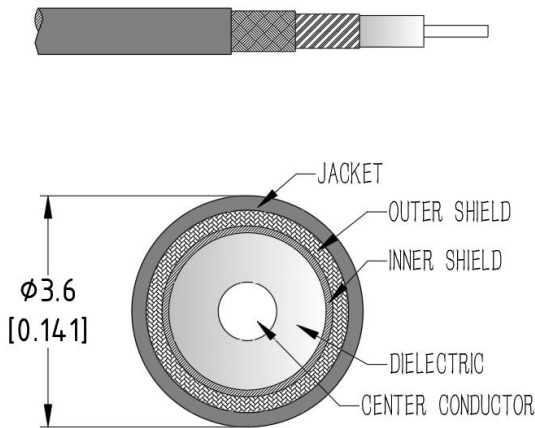
### Features:

- Max Frequency 18 GHz
- VSWR max of 1.30
- Velocity of Propagation of 74%

### Applications:

- Test & Measurement equipment
- Manufacturing lab
- WAN system equipment

### Cable Cross Section:



### Electrical Characteristics:

| Parameter                             | Min | Typ        | Max | Units      |
|---------------------------------------|-----|------------|-----|------------|
| Frequency Range                       | DC  |            | 18  | GHz        |
| VSWR                                  |     | 1.25       | 1.3 | :1         |
| Velocity of propagation               |     | 74%        |     |            |
| Shielding Effectiveness               | 90  |            |     | dB         |
| Capacitance                           |     |            | 81  | pF/m       |
| Phase Stability Vs. Flexure@18GHz     |     | $\pm 3$    |     | $^{\circ}$ |
| Amplitude Stability Vs. Flexure@18GHz |     | $\pm 0.05$ |     | dB         |
| Phase Stability Vs. Temperature       |     | 1000       |     | PPM        |

### Environmental And Physical Characteristics:

| Description           | Parameter  | Units              |
|-----------------------|------------|--------------------|
| Cable Diameter        | 3.6        | mm                 |
| Cable Jacket          | PUR        |                    |
| Min. Bending Radius   | 14         | mm                 |
| Typical Flex life     | 50000      |                    |
| Operating Temperature | -55 to +85 | $^{\circ}\text{C}$ |
| Storage Temperature   | -55 to +85 | $^{\circ}\text{C}$ |

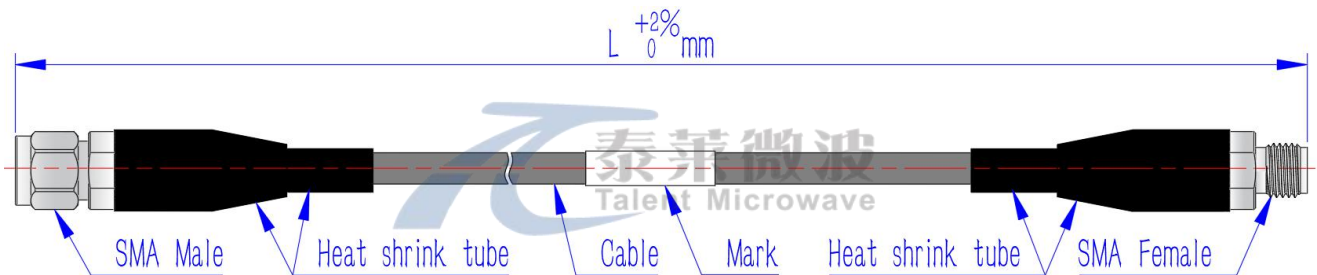
### Cable Performance By Frequency

| Frequency                  | 2 GHz | 4 GHz | 6 GHz | 8 GHz | 10 GHz | 12 GHz | 16 GHz | 18 GHz | 26.5 GHz |
|----------------------------|-------|-------|-------|-------|--------|--------|--------|--------|----------|
| Insertion Loss (dB/m Max.) | 0.74  | 1.07  | 1.33  | 1.56  | 1.76   | 1.95   | 2.29   | 2.45   | 3.05     |
| RF Power CW (W Max.)       | 82    | 57    | 46    | 40    | 35     | 32     | 27     | 25     | 20       |

### Connectors:

| Description                  | Connector 1                | Connector 2                |
|------------------------------|----------------------------|----------------------------|
| Type                         | SMA Straight Male          | SMA Straight Female        |
| Contact Material And Plating | Brass,Gold                 | Beryllium Copper,Gold      |
| Dielectric Type              | PTFE                       | PTFE                       |
| Body Material And Plating    | Passivated Stainless Steel | Passivated Stainless Steel |
| Insertion Loss (dB Max)      | $0.05 * \sqrt{f_{GHz}}$    | $0.05 * \sqrt{f_{GHz}}$    |

### Outline Drawing:



### Ordering Information:

| Base Number | Length (Unit meters) | Phase/delay Matched  |
|-------------|----------------------|--|
| UF1-SMAMSMF | -L                   | LEAVE BLANK (NOT REQUIRED)<br>-XXPS ( $\leq \pm XX$ PS)<br>-XX° ( $\pm XX^\circ$ ) |

### Typical Performance Data:

Model: UF1-SMAMSMF-1m

| Frequency      | 2 GHz |      | 6 GHz |      | 12 GHz |      | 18 GHz |      |
|----------------|-------|------|-------|------|--------|------|--------|------|
|                | Typ   | Max  | Typ   | Max  | Typ    | Max  | Typ    | Max  |
| Insertion Loss | 0.81  | 0.89 | 1.46  | 1.58 | 2.12   | 2.30 | 2.87   | 3.09 |
| VSWR           | 1.08  | 1.15 | 1.15  | 1.20 | 1.20   | 1.25 | 1.25   | 1.30 |