

## Flexible Ultra Low Loss Coax Cable Assembly

A81/SMA Male /SMA Male/DC-18 GHz

Model: A81-SMAMSMAM-L

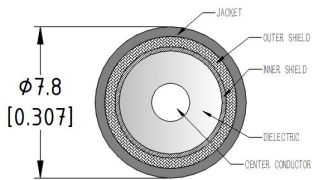
### Features:

- Max Frequency 18 GHz
- VSWR max of 1.30
- Velocity of Propagation of 83%

### 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               |     | 83%        |     |            |
| Shielding Effectiveness               | 90  |            |     | dB         |
| Capacitance                           |     |            | 80  | pF/m       |
| Phase Stability Vs. Flexure@18GHz     |     | $\pm 2$    |     | $^{\circ}$ |
| Amplitude Stability Vs. Flexure@18GHz |     | $\pm 0.03$ |     | dB         |
| Phase Stability Vs. Temperature       |     |            | 550 | PPM        |

### Environmental And Physical Characteristics:

| Description           | Parameter   | Units              |
|-----------------------|-------------|--------------------|
| Cable Diameter        | 7.8         | mm                 |
| Cable Jacket          | FEP         |                    |
| Min. Bending Radius   | 39          | mm                 |
| Typical Flex life     | 50000       |                    |
| Operating Temperature | -55 to +125 | $^{\circ}\text{C}$ |
| Storage Temperature   | -55 to +165 | $^{\circ}\text{C}$ |

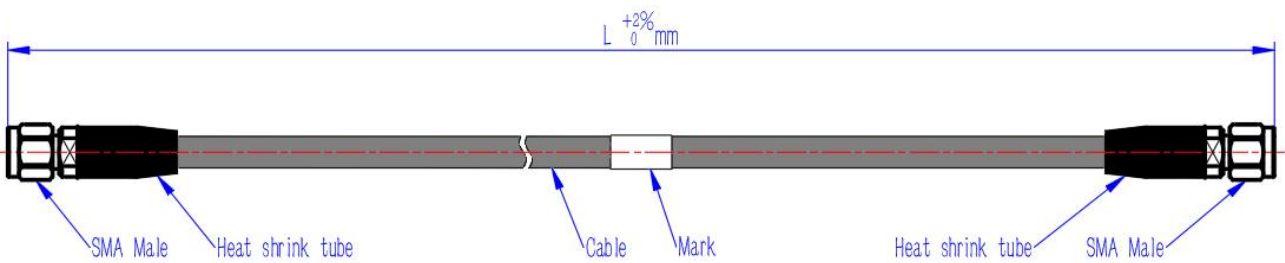
### Cable Performance By Frequency

| Frequency                  | 2 GHz | 4 GHz | 6 GHz | 8 GHz | 12 GHz | 16 GHz | 18 GHz |
|----------------------------|-------|-------|-------|-------|--------|--------|--------|
| Insertion Loss (dB/m Max ) | 0.21  | 0.30  | 0.37  | 0.43  | 0.54   | 0.63   | 0.67   |
| RF Power CW (W Max.)       | 1296  | 905   | 732   | 558   | 506    | 434    | 407    |

### Connectors:

| Description                  | Connector 1                | Connector 2                |
|------------------------------|----------------------------|----------------------------|
| Type                         | SMA Straight Male          | SMA Straight Male          |
| Contact Material And Plating | Brass,Gold                 | Brass,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:

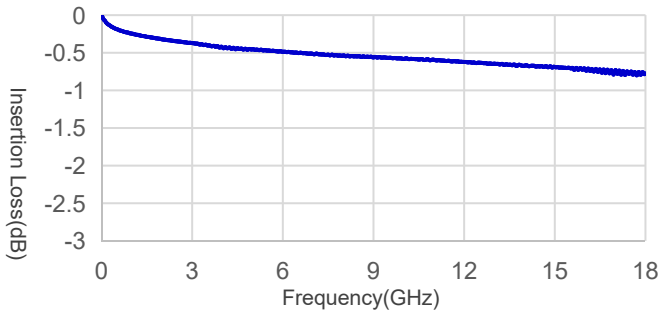
| Base Number  | Lenth | Armour (optional)           | Phase/delay Matched (optional) |
|--------------|-------|-----------------------------|--------------------------------|
| A81-SMAMSMAM | -L    | -A(Black nylon woven armor) |                                |
|              |       | -AP(PUR water proof armor)  | -XXPS( $\leq \pm XX$ PS)       |
|              |       | -AS(Stainless steel armor)  | -XX°( $\pm XX$ °)              |
|              |       | -AT(Transparent armor)      |                                |

## Typical Performance Data:

Model:A81-SMAMSMAM-1m

| Frequency      | 2 GHz |      | 6 GHz |      | 8 GHz |      | 12 GHz |      | 18 GHz |      |
|----------------|-------|------|-------|------|-------|------|--------|------|--------|------|
|                | Typ   | Max  | Typ   | Max  | Typ   | Max  | Typ    | Max  | Typ    | Max  |
| Insertion Loss | 0.28  | 0.35 | 0.50  | 0.62 | 0.58  | 0.72 | 0.71   | 0.89 | 0.88   | 1.10 |
| VSWR           | 1.05  | 1.1  | 1.08  | 1.15 | 1.15  | 1.2  | 1.2    | 1.25 | 1.25   | 1.3  |

A81-SMAMSMAM-1m  
Insertion Loss



A81-SMAMSMAM-1m  
Return Loss

