

## Phaseline Series High Performance Phase Stable Test Cable

PL40/SMA Male /SMA Female/DC-26.5 GHz

Model: PL40-SMAMSMAF-L

### Features:

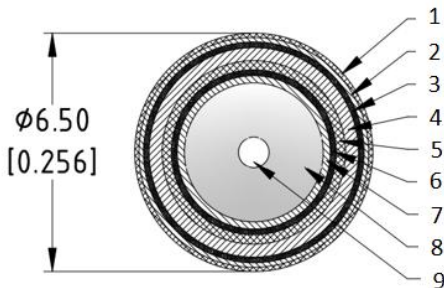
- Max Frequency 26.5 GHz
- VSWR max of 1.30
- Velocity of Propagation of 76%



### Applications:

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

### Cable Cross Section:



- 1—编织护套 PTFE Braiding Jacket
- 2—外扎带 Outer tie
- 3—耐扭转编织层 Torsion-resistant braid
- 4—抗压保护层 Compression protective layer
- 5—电缆护套 Cable Jacket
- 6—外屏蔽层 Outer Shield
- 7—内屏蔽层 Inner Shield
- 8—绝缘介质 Insulator PTFE
- 9—芯线 Inner conductor

### Electrical Characteristics:

| Parameter                               | Min | Typ   | Max  | Units |
|-----------------------------------------|-----|-------|------|-------|
| Frequency Range                         | DC  |       | 26.5 | GHz   |
| VSWR                                    |     | 1.20  | 1.30 | :1    |
| Velocity of propagation                 |     | 76%   |      |       |
| Shielding Effectiveness                 | 90  |       |      | dB    |
| Capacitance                             |     |       | 87   | pF/m  |
| Phase Stability Vs. Flexure@26.5GHz     |     | ±3    |      | °     |
| Amplitude Stability Vs. Flexure@26.5GHz |     | ±0.03 |      | dB    |

### Envrionmental And Physical Characteristics:

| Description           | Parameter   | Units |
|-----------------------|-------------|-------|
| Cable Diameter        | 6           | mm    |
| Cable Jacket          | PTFE        |       |
| Min. Bending Radius   | 65          | mm    |
| Typical Flex life     | 50000       |       |
| Operating Temperature | -55 to +150 | °C    |
| Storage Temperature   | -55 to +165 | °C    |

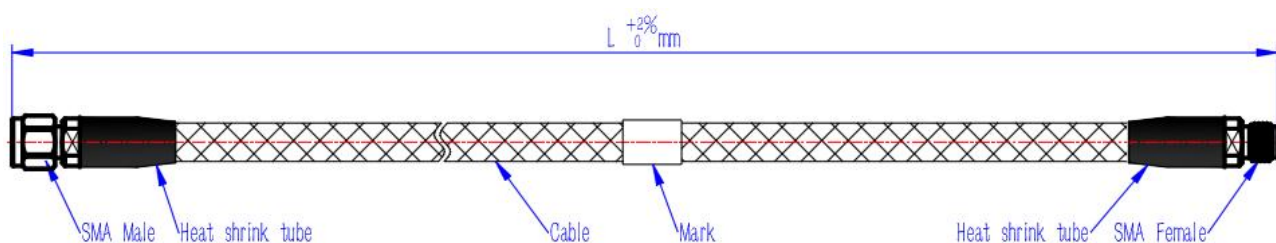
### Cable Performance By Frequency

| Frequency                  | 2 GHz | 4 GHz | 6 GHz | 8 GHz | 12 GHz | 16 GHz | 18 GHz | 26.5 GHz |
|----------------------------|-------|-------|-------|-------|--------|--------|--------|----------|
| Insertion Loss (dB/m Max ) | 0.62  | 0.88  | 1.09  | 1.26  | 1.35   | 1.80   | 1.92   | 2.35     |
| RF Power CW (W Max.)       | 230   | 162   | 132   | 114   | 110    | 79     | 75     | 61       |

## 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)      | $0.05 \cdot \sqrt{f_{\text{GHz}}}$ | $0.05 \cdot \sqrt{f_{\text{GHz}}}$ |

## Outline Drawing:



## Ordering Information:

| Base Number   | Lenth | Armour                     | Phase/delay Matched (optional)                     |
|---------------|-------|----------------------------|----------------------------------------------------|
| PL40-SMAMSMAF | -L    | Purple black braided armor | -XXPS( $\leq \pm XX$ PS)<br>-XX°( $\pm XX^\circ$ ) |

## Typical Performance Data:

Model: PL40-SMAMSMAF-1m

| Frequency      | 2 GHz |      | 6 GHz |      | 12 GHz |      | 18 GHz |      | 26.5 GHz |      |
|----------------|-------|------|-------|------|--------|------|--------|------|----------|------|
|                | Typ   | Max  | Typ   | Max  | Typ    | Max  | Typ    | Max  | Typ      | Max  |
| Insertion Loss | 0.69  | 0.76 | 1.21  | 1.33 | 1.73   | 1.90 | 2.13   | 2.24 | 2.61     | 2.86 |
| VSWR           | 1.02  | 1.10 | 1.03  | 1.20 | 1.05   | 1.20 | 1.10   | 1.25 | 1.10     | 1.30 |

