

Phaseline Series High Performance Phase Stable Test Cable

PL50/2.4mm Male /2.4mm Male/DC-50 GHz

Model: PL50-2.4M2.4M-L

Features:

- Max Frequency 50 GHz
- VSWR max of 1.30
- Velocity of Propagation of 76%



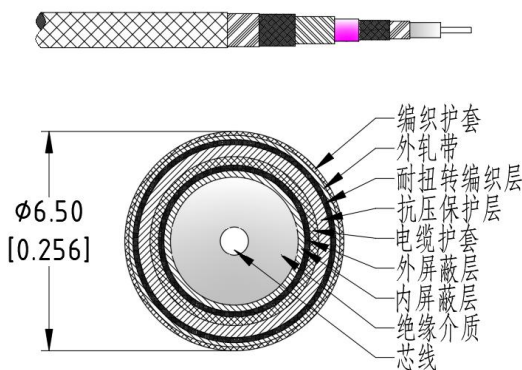
Applications:

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

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|---------------------------------------|-----|-------|------|-------|
| Frequency Range | DC | | 50 | GHz |
| VSWR | | 1.20 | 1.25 | :1 |
| Velocity of propagation | | 76% | | |
| Shielding Effectiveness | 90 | | | dB |
| Capacitance | | | 87 | pF/m |
| Phase Stability Vs. Flexure@50GHz | | ±4 | | ° |
| Amplitude Stability Vs. Flexure@50GHz | | ±0.03 | | dB |

Cable Cross Section:



Environmental And Physical Characteristics:

| Description | Parameter | Units |
|-----------------------|-------------|-------|
| Cable Diameter | 6.5 | mm |
| Cable Jacket | PTFE | |
| Min. Bending Radius | 51 | mm |
| Typical Flex life | 50000 | |
| Operating Temperature | -55 to +150 | °C |
| Storage Temperature | -55 to +165 | °C |

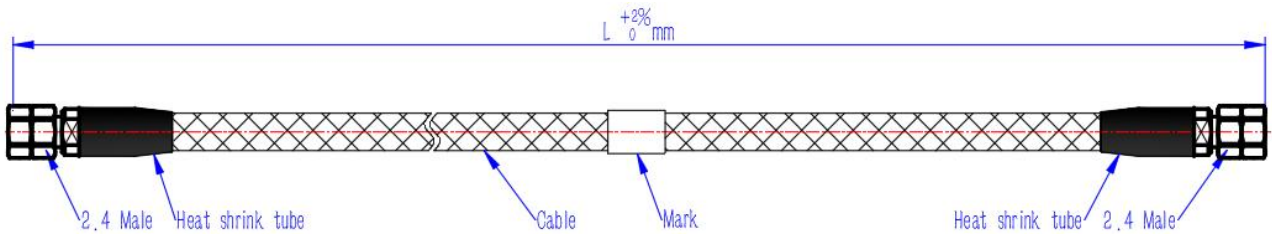
Cable Performance By Frequency

| Frequency | 2 GHz | 4 GHz | 6 GHz | 8 GHz | 12 GHz | 16 GHz | 18 GHz | 26.5 GHz | 40GHz | 50GHz |
|----------------------------|-------|-------|-------|-------|--------|--------|--------|----------|-------|-------|
| Insertion Loss (dB/m Max.) | 0.62 | 0.88 | 1.09 | 1.26 | 1.55 | 1.80 | 1.92 | 2.35 | 2.92 | 3.29 |
| RF Power CW (W Max.) | 230 | 162 | 132 | 114 | 92 | 79 | 75 | 61 | 49 | 44 |

Connectors:

| Description | Connector 1 | Connector 2 |
|------------------------------|----------------------------|----------------------------|
| Type | 2.4mm Straight Male | 2.4mm Straight Male |
| Contact Material And Plating | Beryllium Copper,Gold | Beryllium Copper,Gold |
| Dielectric Type | PEI | PEI |
| 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) |
|---------------|-------|---|--------------------------------|
| PL50-2.4M2.4M | -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: PL50-2.4M2.4M-1m

| Frequency | 2 GHz | | 6 GHz | | 12 GHz | | 18 GHz | | 26.5 GHz | | 40GHz | | 50GHz | |
|----------------|-------|------|-------|------|--------|------|--------|------|----------|------|-------|------|-------|------|
| | Typ | Max | Typ | Max | 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 | 3.23 | 3.55 | 3.64 | 3.99 |
| VSWR | 1.02 | 1.05 | 1.03 | 1.05 | 1.05 | 1.10 | 1.10 | 1.15 | 1.10 | 1.15 | 1.15 | 1.20 | 1.20 | 1.25 |

