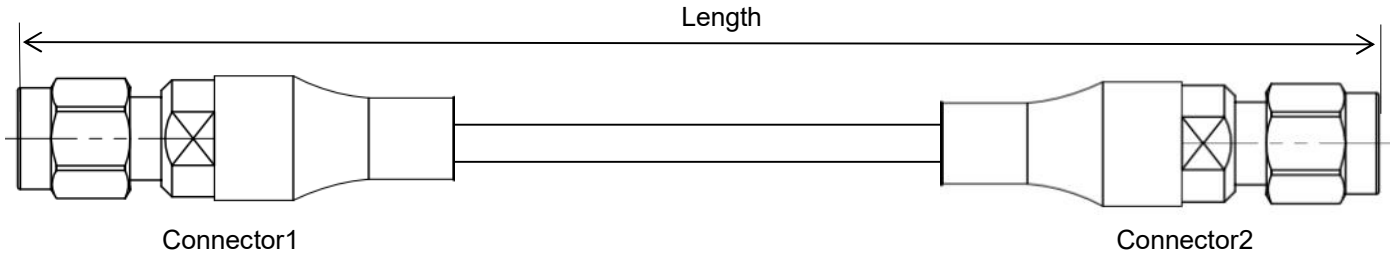


Precision Phase Stable Test Cable Assembly, Using PL520P

DC-26.5 GHz, SMA Male to SMA Male

PL520P-SMAMSMAM-L(L:Length)

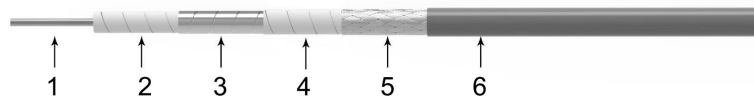


- Length can be in meter or in inch etc, e.g, PL520P-SMAMSMAM-1M. Standard length tolerance: $\pm 1.5\%$. Custom lengths and other connector types available.
- Length is measured from one connector end to the other connector end as shown above. For RA connectors, use the pin center-line.

Configuration

| | | | |
|--------------------|----------------------------|--------------------|----------------------------|
| Connector 1 | SMA male | Connector 2 | SMA male |
| Body | Passivated stainless steel | Body | Passivated stainless steel |
| Center Contact | Gold plated brass | Center Contact | Gold plated brass |
| Cable Type | PL520P | | |

Cable and Armor Construction



| No. | Construction | Size (mm) | Materials |
|-----|------------------|-----------|---------------------------------|
| 1 | Center Conductor | 1.45 | Solid silver-plated copper |
| 2 | Dielectric | 4.00 | Low density PTFE |
| 3 | Outer Conductor | 4.20 | Silver-plated copper tape wrap |
| 4 | Interlayer | 4.45 | Low density PTFE |
| 5 | Outer Shield | 4.90 | Silver-plated copper wire braid |
| 6 | Inner Jacket | 5.40 | FEP |



Electrical

| | |
|--------------------------------|----------------------|
| Frequency | DC-26.5 GHz |
| Impedance | 50 Ω |
| VSWR Max | 1.3 |
| IL Max(1 meter assembly) | 1.7dB |
| *Mechanical Phase Stability | $< \pm 5^\circ$ |
| Amplitude Stability vs Shaking | $< \pm 0.1\text{dB}$ |

Mechanical & Environmental

| | |
|------------------------------|-----------|
| Min. Bending Radius Static | 26mm |
| Min. Bending Radius Repeated | 52mm |
| Velocity of Propagation | 82% |
| Temperature(Operation) | -50~85 °C |
| Temperature(Storage) | -60~85 °C |

* Wrap the cable 360 degree around a mandrel whose diameter is ten times of the cable jacket size.

Bulk Cable Attenuation(Typical@25°C) & Power(VSWR=1.0; 40°C; Sea level)

| | | | | | | | | | | | | |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Frequency MHz | 300 | 1000 | 2000 | 4000 | 6000 | 8000 | 10000 | 12000 | 14000 | 18000 | 20000 | 26500 |
| dB/100 Meter | 12.5 | 23.0 | 32.7 | 46.6 | 57.4 | 66.6 | 74.8 | 82.3 | 89.3 | 101.9 | 107.8 | 125.2 |
| Avg.Power kW | 1.608 | 0.875 | 0.615 | 0.431 | 0.350 | 0.302 | 0.268 | 0.244 | 0.225 | 0.197 | 0.186 | 0.160 |

$$\text{Attenuation at any frequency} = [0.715686 \times \text{SQRT}(\text{FMHz})] + [0.000328 \times \text{FMHz}]$$

- Notes:**
- 1) The above attenuation refers to typical loss of cable only, max loss is 1.1 times of typical loss. Insertion loss per connector is estimated as 0.03dB x SQRT Freq(GHz).
 - 2) Power handling values are calculated based on cable properties. Power handling will vary based on connector type and actual VSWR of the cable assembly.

Typical Test Data (PL520P-SMAMSMAM-1M)

