

# SPB-450-L

High Performance Microwave Coax Cable

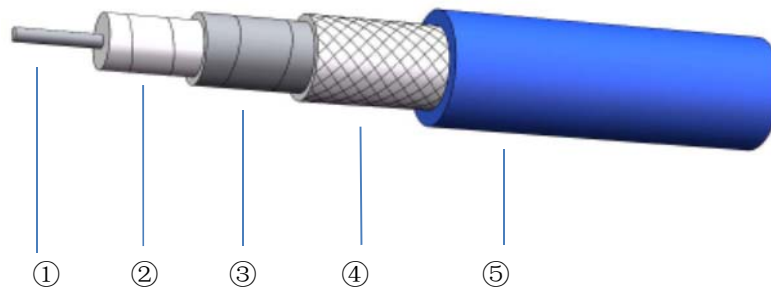
## Product Description

Superlink SPB series coaxial cable is constructed with low density PTFE dielectric and silver plated copper foil and has very low loss. It keeps a high phase stability and amplitude stability while bending. Performance hardly vary in broad frequency range. It can be applied to most of harsh conditions which require strict standard like military radar, electronic warfare and airborne equipment.

## Feature & Benefit

- Excellent Phase Stability
- 85%VP
- Ultra Light Weight

## Product Structure

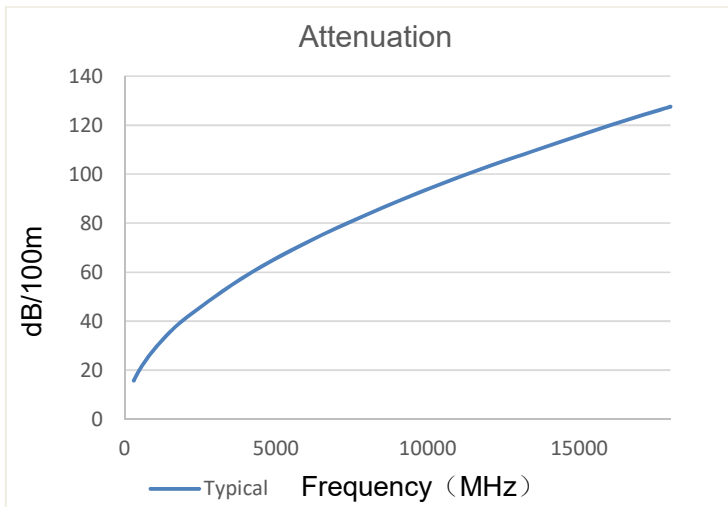


|           | ①Center Conductor | ②Dielectric | ③Outer Conductor | ④Outer shield | ⑤Jacket   |
|-----------|-------------------|-------------|------------------|---------------|-----------|
| Material  | SPCCA             | LD PTFE     | SPC              | SPC           | FEP       |
| Size (mm) | 1.40±0.03         | 3.70±0.06   | 3.90±0.10        | 4.10±0.05     | 4.50±0.15 |

## Specifications

|                              |                  |
|------------------------------|------------------|
| Impedance                    | 50Ω              |
| Operation Frequency          | 18GHz            |
| Velocity of Propagation      | 83%              |
| Shielding Effectiveness      | 90dB             |
| Voltage Withstand            | 1500V,DC         |
| Time Delay                   | 4.02ns/m         |
| Phase Stability(Bending)     | ±1.5° 1.3GHz     |
| Phase Stability(Tem)         | 600PPM (-55~85℃) |
| Amplitude Stability          | ±0.1dB 18GHz     |
| Bend Radius:repeated         | 50mm             |
| Bend Radius:installation     | 20mm             |
| Weight                       | 33g/m            |
| Temp, Operating&Installation | -55~165℃         |
| Temp, Storage                | -65~165℃         |

## Attenuation (Typical@25°C VSWR=1.0)



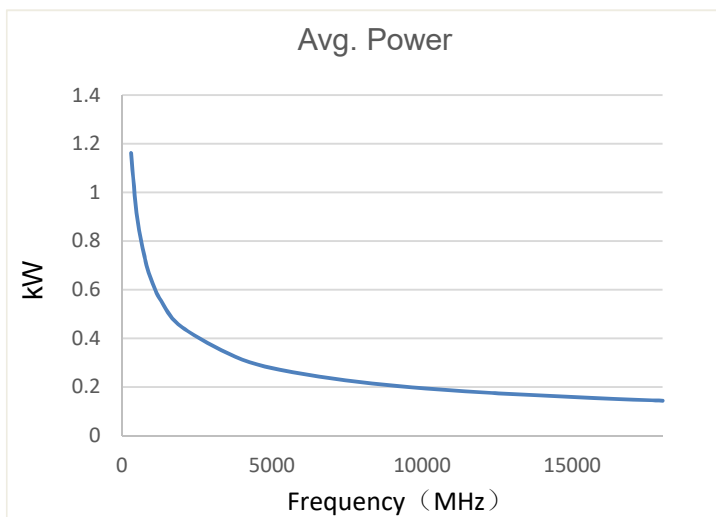
| Frequency(MHz) | Attenuation (dB/100m) |
|----------------|-----------------------|
| 300            | 15.8                  |
| 500            | 20.4                  |
| 800            | 25.8                  |
| 1000           | 28.9                  |
| 1300           | 33.0                  |
| 2000           | 41.1                  |
| 4000           | 58.6                  |
| 6000           | 72.1                  |
| 8000           | 83.6                  |
| 10000          | 93.9                  |
| 12000          | 103.2                 |
| 16000          | 119.9                 |
| 18000          | 127.5                 |

$$K1= 0.904000$$

$$K2= 0.000348$$

$$\text{Attenuation}=K1*\sqrt{F}+K2*F$$

## Power (40°C VSWR=1.0 Sea Level)



| Frequency(MHz) | Avg.Power (kW) |
|----------------|----------------|
| 300            | 1.162          |
| 500            | 0.898          |
| 800            | 0.709          |
| 1000           | 0.633          |
| 1300           | 0.554          |
| 2000           | 0.445          |
| 4000           | 0.313          |
| 6000           | 0.254          |
| 8000           | 0.219          |
| 10000          | 0.195          |
| 12000          | 0.177          |
| 16000          | 0.153          |
| 18000          | 0.144          |

Ver A-1