**FLEXIBLE RF CABLE / LOW LOSS CABLE**

# Cable Name: L52S

Part No: VXL520S



**26.5 GHz**
MAX FREQUENCY

**1000 V.DC**
WITHSTANDING VOLTS

**-155 dBc**
LOW PIM PERFORMANCE

**Green FEP**
COST-EFFECTIVE BUILD

**General Description:** The Vinstronics L52S / VXL520S is a 5.30 mm flexible low-loss RF coaxial cable for microwave interconnects up to 26.5 GHz. The "S" version uses a silver-plated stranded copper center conductor rather than a single solid center conductor, improving cable-assembly routing and installation handling while retaining LD PTFE dielectric, silver-plated dual shielding, green FEP jacket, 1000 V.DC dielectric withstand voltage and -155 dBc low-PIM performance.

## Core Features

- **Silver-plated stranded center**: flexible inner conductor for assembly routing and installation handling.
- **26.5 GHz low-loss transmission**: supports microwave interconnects where controlled loss matters.
- **Low-PIM shielded structure**: silver-plated strip and braid shielding with -155 dBc PIM performance.
- **Green 5.30 mm FEP jacket**: durable outer jacket for clear cable identification in dense systems.

## Target Applications

- **VNA and RF test jumpers**: flexible cable assemblies for lab and production benches.
- **Wireless infrastructure paths**: low-PIM RF routing inside base-station and communication systems.
- **Microwave module interconnects**: compact cable routing inside RF subsystems and enclosures.
- **Defense, avionics and ECM / EW systems**: shielded interconnects for demanding RF environments.

## CONSTRUCTION SPECIFICATION

| Component | Material & Process | Diameter mm [in] |
|---|---|---|
| 1. Inner Conductor | Silver-plated stranded copper | **1.35** [0.053] |
| 2. Dielectric | Low Density PTFE (LD PTFE) | **3.80** [0.150] |
| 3. Inner Shield | Silver-plated copper strip | **4.00** [0.157] |
| 4. Outer Shield | Silver-plated copper wire braiding | **4.55** [0.179] |
| 5. Jacket | FEP / Green (Customizable) | **5.30** [0.209] |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| Operating Frequency | **26.5 GHz** |
| Cut-off Frequency | **28 GHz** |
| Impedance | **50 ± 1 Ω** |
| Velocity of Propagation | **76 %** |
| Shielding Effectiveness | **>90 dB** |
| Dielectric Withstanding Voltage | **1000 V.DC** |

## ATTENUATION AND TRANSMISSION POWER

| **Frequency (MHz)** | **1000** | **2000** | **3000** | **6000** | **8000** | **10000** | **12400** | **18000** | **26500** |
|---|---|---|---|---|---|---|---|---|---|
| Attenuation (dB/100m) | **30.6** | **43.6** | **53.7** | **77.0** | **89.5** | **100.7** | **112.9** | **137.8** | **169.9** |
| Average Power (kW) | **0.749** | **0.525** | **0.426** | **0.297** | **0.256** | **0.227** | **0.203** | **0.166** | **0.135** |

**K1 =** 0.947785 **K2 =** 0.000591 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

| | |
|---|---|
| Static Bending Radius | **26 mm** [1.024 in] |
| Dynamic Bending Radius | **53 mm** [2.087 in] |
| Weight | **0.068 kg/m** [0.0457 lbs/ft] |
| Temperature Range | **-55 ~ +165 ℃** [-67 ~ +329 ℉] |