**FLEXIBLE RF CABLE / LOW LOSS CABLE**

# Cable Name: L53S

Part No: VXL530S



**26.5 GHz**
MAX FREQUENCY

**Standard**
SILVER-PLATED CENTER

**-155 dBc**
LOW PIM PERFORMANCE

**5.30 mm**
FLEXIBLE FEP BUILD

**General Description:** General Description: Vinstronics L53S / VXL530S is a 5.30 mm flexible low-loss RF coaxial cable using a silver-plated stranded copper inner conductor, LD PTFE dielectric, dual silver-plated shielding and a blue FEP jacket. In this series, “S” refers to the stranded silver-plated center conductor structure, not an economy grade. Compared with solid-center conductor cables, the stranded center conductor improves routing flexibility and handling stability while the silver-plated surface supports efficient microwave current flow up to 26.5 GHz.

## Core Features

- **Silver-plated stranded center**: flexible inner conductor for cable assembly routing and installation handling.
- **26.5 GHz RF capability**: suitable for microwave interconnects requiring stable transmission up to 26.5 GHz.
- **Low-loss 5.30 mm build**: balances insertion loss, flexibility and system-level routing density.
- **Dual-shielded low-PIM structure**: silver-plated strip and braid shielding with -155 dBc PIM performance.

## Target Applications

- **VNA and RF test jumpers**: flexible cable assemblies for lab and production benches.
- **Microwave module interconnects**: compact routing inside RF subsystems and enclosures.
- **Base-station RF paths**: low-PIM transmission for wireless infrastructure assemblies.
- **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 | **1.44** [0.057] |
| 2. Dielectric | Low Density PTFE (LD PTFE) | **4.10** [0.161] |
| 3. Inner Shield | Silver-plated copper strip | **4.30** [0.169] |
| 4. Outer Shield | Silver-plated copper wire braiding | **4.85** [0.191] |
| 5. Jacket | FEP / Blue (Customizable) | **5.30** [0.209] |

## ELECTRICAL CHARACTERISTICS

| | |
|---|---|
| Operating Frequency | **26.5 GHz** |
| Cut-off Frequency | **26.5 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** |
|---|---|---|---|---|---|---|---|---|
| Attenuation (dB/100m) | **30.4** | **43.5** | **53.8** | **77.6** | **90.6** | **102.2** | **115.0** | **141.3** |
| Average Power (kW) | **0.821** | **0.573** | **0.464** | **0.321** | **0.275** | **0.244** | **0.217** | **0.177** |

**K1 =** 0.932400 **K2 =** 0.000900 **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 | **0.075 kg/m** [0.0504 lbs/ft] |
| Temperature Range | **-55 ~ +165 ℃** [-67 ~ +329 ℉] |