FLEXIBLE RF CABLE / LOW LOSS CABLE

Cable Name: L23

Part No: VXL230



40 GHz
MAX FREQUENCY

400 V.DC
WITHSTANDING VOLTS

-155 dBc
LOW PIM PERFORMANCE

2.33 mm
ULTRA-COMPACT BUILD

General Description: The Vinstronics VXL230 is a highly cost-effective, ultra-low loss RF cable designed for high-density microwave applications. Featuring a compact 2.33mm blue FEP jacket and LD PTFE dielectric, it delivers reliable signal transmission up to 40GHz. With excellent -155dBc PIM performance, it is ideal for precision RF device testing and internal interconnections.

Core Features

- **Ultra-Low Loss:** Optimized for efficient signal transmission.
- **Low PIM:** Outstanding -155dBc performance for clear signals.
- **Cost-Effective:** High performance-to-price ratio.
- **High Power:** Excellent power handling capabilities.
- **Ultra-Compact:** 2.33mm outer diameter for tight routing spaces.

Target Applications

- **Base Stations:** Ideal for internal wireless communication routing.
- **RF Testing:** Reliable for microwave device testing environments.
- **Avionics:** Meets strict environmental stability standards.
- **ECM Systems:** Dependable in electronic countermeasure setups.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.51** [0.020]
2. Dielectric	Low Density PTFE (LD PTFE)	**1.52** [0.060]
3. Inner Shield	Silver-plated copper strip	**1.70** [0.067]
4. Outer Shield	Silver-plated copper wire braiding	**2.04** [0.080]
5. Jacket	FEP / Blue (Customizable)	**2.33** [0.092]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**71 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**400 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**18000**	**26500**	**40000**
Attenuation (dB/100m)	**70.1**	**99.8**	**122.9**	**176.0**	**204.5**	**229.9**	**257.6**	**314.1**	**386.8**	**484.3**
Average Power (kW)	**0.097**	**0.068**	**0.055**	**0.039**	**0.033**	**0.030**	**0.026**	**0.022**	**0.018**	**0.014**

K1 = 2.177342 **K2 =** 0.001221 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**11 mm** [0.433 in]
Dynamic Bending Radius	**23 mm** [0.906 in]
Weight	**0.016 kg/m** [0.0108 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]