FLEXIBLE RF CABLE / ULTRA-FLEXIBLE CABLE

Cable Name: F50

Part No: VXF500



26.5 GHz
MAX FREQUENCY

1000 V.DC
WITHSTANDING VOLTS

Stranded Core
DYNAMIC FLEXIBILITY

PUR Jacket
HARSH ENV DEFENSE

General Description: The Vinstronics VXF500 is a premium super-flexible RF cable designed for demanding 26.5GHz applications. Utilizing a stranded copper inner conductor and a rugged 5.00mm blue PUR jacket, it balances excellent power handling (1000 V.DC) with extreme physical flexibility. It provides highly reliable performance in harsh outdoor environments and narrow radar installations.

Core Features

- **Super Flexible:** Stranded inner conductor for outstanding dynamic bending.
- **Ultra-Low Loss:** Optimized for precision signal transmission.
- **Harsh Environment Ready:** PUR jacket provides elite wear and weather resistance.
- **High Voltage:** 1000 V.DC rating for intensity requirements.
- **Reliable Shielding:** >90 dB shielding effectiveness for clear signals.

Target Applications

- **Tight Enclosures:** Perfect for narrow and complicated installation spaces.
- **RF Testing:** Highly durable for frequent-bending test cable assemblies.
- **Phased Array Radar:** Ideal for internal array interconnections.
- **Harsh Outdoors:** Dependable routing in extreme wild environments.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated stranded copper	**1.02** [0.040]
2. Dielectric	Low Density PTFE (LD PTFE)	**3.00** [0.118]
3. Inner Shield	Silver-plated copper strip	**3.20** [0.126]
4. Outer Shield	Silver-plated copper wire braiding	**3.78** [0.149]
5. Jacket	PUR / Blue (Customizable)	**5.00** [0.197]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**26.5 GHz**
Cut-off Frequency	**35 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)	**38.5**	**55.9**	**69.8**	**103.2**	**121.9**	**139.0**	**157.9**	**198.0**	**252.1**
Average Power (kW)	**0.149**	**0.103**	**0.082**	**0.056**	**0.047**	**0.041**	**0.036**	**0.029**	**0.023**

K1 = 1.136600 **K2 =** 0.002530 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**25 mm** [0.984 in]
Dynamic Bending Radius	**50 mm** [1.969 in]
Weight	**0.051 kg/m** [0.0343 lbs/ft]
Temperature Range	**-55 ~ +85 ℃** [-67 ~ +185 ℉]