FLEXIBLE RF CABLE / ULTRA-FLEXIBLE CABLE

Cable Name: F80

Part No: VXF800



18 GHz
MAX FREQUENCY

1700 V.DC
WITHSTANDING VOLTS

8.00 mm
RUGGEDIZED OD

Stranded Core
DYNAMIC FLEXIBILITY

General Description: The Vinstronics VXF800 is a ruggedized, super-flexible low-loss cable built for extreme 18GHz environments. Despite its large 8.00mm blue PUR jacket and high 1700 V.DC rating, its stranded copper core guarantees exceptional flexibility. It is the premier solution for heavy-duty outdoor radar systems and dynamic testing applications requiring maximum durability.

Core Features

- **Super Flexible:** Stranded inner conductor ensures flexibility despite large OD.
- **Extreme Voltage:** 1700 V.DC rating for ultimate power handling.
- **Harsh Environment Ready:** Blue PUR jacket provides elite wear and weather resistance.
- **Ruggedized Build:** 8.00mm outer diameter for robust physical protection.
- **Ultra-Low Loss:** Optimized for precision long-distance transmission.

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	**1.88** [0.074]
2. Dielectric	Low Density PTFE (LD PTFE)	**5.50** [0.217]
3. Inner Shield	Silver-plated copper strip	**5.74** [0.226]
4. Outer Shield	Silver-plated copper wire braiding	**6.31** [0.248]
5. Jacket	PUR / Blue (Customizable)	**8.00** [0.315]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**20 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**1700 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**18000**
Attenuation (dB/100m)	**18.2**	**26.7**	**33.8**	**50.9**	**60.7**	**69.8**	**80.0**	**101.9**
Average Power (kW)	**0.327**	**0.222**	**0.176**	**0.117**	**0.098**	**0.085**	**0.074**	**0.058**

K1 = 0.517315 **K2 =** 0.001806 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**40 mm** [1.575 in]
Dynamic Bending Radius	**80 mm** [3.150 in]
Weight	**0.116 kg/m** [0.0779 lbs/ft]
Temperature Range	**-55 ~ +85 ℃** [-67 ~ +185 ℉]