FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W80

Part No: VXW800



18 GHz
MAX FREQUENCY

2500 V.DC
WITHSTANDING VOLTS

7.90 mm
RUGGEDIZED PROFILE

< 750 PPM
PHASE STABILITY

General Description: The Vinstronics VXW800 is an ultra-low loss, 18GHz phase-stable RF cable designed for extreme environments. With a robust 7.90mm FEP jacket and an elite 2500 V.DC power rating, it ensures exceptional signal integrity and phase stability (<750PPM) for demanding military and phased array radar applications.

Core Features

- **Phase Stability:** <750PPM @ -55°C to +85°C.
- **Ultra-Low Loss:** Optimized for precision transmission.
- **High Voltage:** 2500 V.DC rating for intensity requirements.
- **Low PIM:** Outstanding -155dBc performance.
- **Rugged Build:** 7.90mm outer diameter for enhanced protection.

Target Applications

- **Avionics:** Meets stringent stability standards.
- **Phased Array Radar:** Ensures precise phase consistency.
- **ECM Systems:** Reliable in harsh environments.
- **High-Power Interconnects:** Ideal for strict loss applications.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**2.30** [0.091]
2. Dielectric	Low Density PTFE (LD PTFE)	**6.20** [0.244]
3. Inner Shield	Silver-plated copper strip	**6.44** [0.254]
4. Outer Shield	Silver-plated copper wire braiding	**7.05/7.20** [0.278/0.283]
5. Jacket	FEP / Gray (Customizable)	**7.90** [0.311]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**18 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**83 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**2500 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**16000**	**18000**
Attenuation (dB/100m)	**14.7**	**21.0**	**26.0**	**37.3**	**43.4**	**48.8**	**54.8**	**62.8**	**67.0**
Average Power (kW)	**1.812**	**1.270**	**1.030**	**0.717**	**0.616**	**0.547**	**0.488**	**0.425**	**0.399**

K1 = 0.456300 **K2** = 0.000320 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**39 mm** [1.535 in]
Dynamic Bending Radius	**79 mm** [3.110 in]
Weight	**0.13 kg/m** [0.0874 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]