FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W76D

Part No: VXW760D



18 GHz
MAX FREQUENCY

2500 V.DC
WITHSTANDING VOLTS

Stranded Core
ENHANCED FLEXIBILITY

< 750 PPM
PHASE STABILITY

General Description: The Vinstronics VXW760D is a high-performance 18GHz phase-stable RF cable featuring a unique silver-plated stranded copper inner conductor. This stranded core provides enhanced mechanical flexibility and fatigue resistance while maintaining a 2500 V.DC rating and strict phase stability (<750PPM), making it ideal for dynamic routing in advanced defense systems.

Core Features

- **Phase Stability:** <750PPM @ -55°C to +85°C.
- **Ultra-Low Loss:** Optimized for precision transmission.
- **Stranded Conductor:** Ensures superior dynamic flexibility.
- **High Voltage:** 2500 V.DC rating for extreme intensity requirements.
- **Low PIM:** Outstanding -155dBc performance.

Target Applications

- **Avionics:** Meets stringent weight & stability standards.
- **Phased Array Radar:** Ensures precise phase consistency.
- **ECM Systems:** Reliable in harsh environments.
- **Dynamic Interconnects:** Ideal for systems requiring frequent movement.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated stranded copper wire	**2.39** [0.094]
2. Dielectric	Low Density PTFE (LD PTFE)	**6.25** [0.246]
3. Inner Shield	Silver-plated copper strip	**6.49** [0.256]
4. Outer Shield	Silver-plated copper wire braiding	**7.06** [0.278]
5. Jacket	FEP / Gray (Customizable)	**7.65** [0.301]

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)	**16.7**	**23.8**	**29.3**	**42.1**	**48.9**	**55.0**	**61.7**	**70.7**	**75.3**
Average Power (kW)	**1.604**	**1.125**	**0.913**	**0.637**	**0.548**	**0.487**	**0.435**	**0.379**	**0.356**

K1 = 0.518300 **K2 =** 0.000320 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**38 mm** [1.496 in]
Dynamic Bending Radius	**76 mm** [2.992 in]
Weight	**0.12 kg/m** [0.0806 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]