FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W75

Part No: VXW750



18 GHz MAX FREQUENCY	**2500 V.DC** EXTREME HIGH VOLTAGE
7.40 mm MAXIMUM ARMOR	**< 750 PPM** PHASE STABILITY

General Description: The Vinstronics VXW750 is a premium, ultra-low loss RF cable for demanding microwave environments. Featuring a maximum armor 7.40mm PFA jacket and LD PTFE dielectric, it ensures exceptional signal integrity up to 18GHz. With strict phase stability (<750PPM) and an extreme 2500 V.DC rating, it provides impenetrable interconnects for advanced aerospace and communication systems.

Core Features

- **Phase Stability:** <750PPM @ -55℃ to +85℃.
- **Ultra-Low Loss:** Optimized for precision transmission.
- **Extreme Voltage:** 2500 V.DC rating for ultimate intensity requirements.
- **Low PIM:** Outstanding -155dBc performance.
- **Maximum Armor:** 7.40mm PFA outer diameter for impenetrable defense.

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 extreme high-voltage applications.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**2.10** [0.083]
2. Dielectric	Low Density PTFE (LD PTFE)	**5.70** [0.224]
3. Inner Shield	Silver-plated copper strip	**5.95** [0.234]
4. Outer Shield	Silver-plated copper wire braiding	**6.60** [0.260]
5. Jacket	PFA / Gray (Customizable)	**7.40** [0.291]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**20 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**	**23.7**	**29.1**	**41.4**	**47.9**	**53.7**	**59.9**	**68.2**	**72.5**
Average Power (kW)	**1.740**	**1.227**	**1.000**	**0.704**	**0.608**	**0.543**	**0.487**	**0.427**	**0.402**

K1 = 0.526279 **K2 =** 0.000104 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**37 mm** [1.457 in]
Dynamic Bending Radius	**74 mm** [2.913 in]
Weight	**0.116 kg/m** [0.0779 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]