FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W60

Part No: VXW600



18 GHz
MAX FREQUENCY

2000 V.DC
EXTREME HIGH VOLTAGE

6.00 mm
RUGGEDIZED OD

< 750 PPM
PHASE STABILITY

General Description: The Vinstronics VXW600 is a premium, ultra-low loss RF cable for demanding microwave environments. Featuring a ruggedized 6.00mm FEP jacket and LD PTFE dielectric, it ensures exceptional signal integrity up to 18GHz. With strict phase stability (<750PPM) and an extreme 2000 V.DC rating, it provides highly reliable interconnects for advanced aerospace and communication systems.

Core Features

- **Phase Stability:** <750PPM @ -55℃ to +85℃.
- **Ultra-Low Loss:** Optimized for precision transmission.
- **Extreme Voltage:** 2000 V.DC rating for intensity requirements.
- **Low PIM:** Outstanding -155dBc performance.
- **Ruggedized Build:** 6.00mm 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 extreme high-voltage applications.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**1.70** [0.067]
2. Dielectric	Low Density PTFE (LD PTFE)	**4.60** [0.181]
3. Inner Shield	Silver-plated copper strip	**4.80** [0.189]
4. Outer Shield	Silver-plated copper wire braiding	**5.30** [0.209]
5. Jacket	FEP / Gray (Customizable)	**6.00** [0.236]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**25 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**83 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**2000 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**16000**	**18000**
Attenuation (dB/100m)	**20.0**	**28.5**	**35.2**	**50.6**	**58.9**	**66.4**	**74.5**	**85.5**	**91.2**
Average Power (kW)	**1.159**	**0.812**	**0.658**	**0.457**	**0.393**	**0.349**	**0.311**	**0.270**	**0.254**

K1 = 0.616197 **K2 =** 0.000475 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**30 mm** [1.181 in]
Dynamic Bending Radius	**60 mm** [2.362 in]
Weight	**0.079 kg/m** [0.0531 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]