FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W100

Part No: VXW1000



10 GHz	3000 V.DC
MAX FREQUENCY	WITHSTANDING VOLTS
10.00 mm	**< 750 PPM**
MEGA-SIZE PROFILE	PHASE STABILITY

General Description: The Vinstronics VXW1000 is a mega-size, low-loss phase-stable RF cable built for high-power 10GHz applications. Boasting a massive 10.00mm FEP jacket and an extreme 3000 V.DC withstanding voltage, it delivers unmatched power handling and strict phase control (<750PPM) for critical ground-based and naval radar systems.

Core Features

- **Phase Stability:** <750PPM @ -55℃ to +85℃.
- **Extreme Voltage:** 3000 V.DC rating for ultimate power handling.
- **Ultra-Low Loss:** Optimized for precision transmission.
- **Low PIM:** Outstanding -155dBc performance.
- **Mega-Size Profile:** 10.00mm outer diameter for elite durability.

Target Applications

- **Avionics:** Meets stringent stability standards.
- **Phased Array Radar:** Ensures precise phase consistency.
- **Naval & Ground Systems:** Reliable in harsh environments.
- **Extreme Power Routing:** Ideal for high-voltage applications.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**3.00** [0.118]
2. Dielectric	Low Density PTFE (LD PTFE)	**8.24** [0.324]
3. Inner Shield	Silver-plated copper strip	-
4. Outer Shield	Silver-plated copper wire braiding	**9.20** [0.362]
5. Jacket	FEP / Gray (Customizable)	**10.00** [0.394]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**10 GHz**
Cut-off Frequency	**13.5 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**83 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**3000 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**4000**	**5000**	**6000**	**8000**	**10000**
Attenuation (dB/100m)	**10.4**	**15.0**	**18.7**	**21.8**	**24.6**	**27.2**	**31.9**	**36.1**
Average Power (kW)	**2.289**	**1.590**	**1.281**	**1.097**	**0.972**	**0.880**	**0.750**	**0.662**

K1 = 0.316177 **K2 =** 0.000448 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**41 mm** [1.614 in]
Dynamic Bending Radius	**83 mm** [3.268 in]
Weight	**0.206 kg/m** [0.1384 lbs/ft]
Temperature Range	**-55 ~ +105 ℃** [-67 ~ +221 ℉]