FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W36

Part No: VXW360



40 GHz	**Superior**
MAX FREQUENCY	POWER HANDLING
+165 ℃	**< 750 PPM**
EXTREME TEMP RATING	PHASE STABILITY

General Description: The Vinstronics VXW360 is a premium, ultra-low loss, phase-stable RF coaxial cable engineered for demanding microwave environments. Featuring silver-plated copper conductors and LD PTFE dielectric, it delivers exceptional signal integrity up to 40GHz. With strict phase stability (<750PPM) and superior power handling capabilities up to +165℃, it is the ideal interconnect solution for advanced aerospace and communication systems.

Core Features

- **Phase Stability:** <750PPM @ -55℃ ~ +85℃ for high signal fidelity.
- **Ultra-Low Loss:** Optimized for precision, long-distance signal transmission.
- **Low PIM:** Outstanding -155dBc performance for minimal interference.
- **High Power:** Robust 3.60mm architecture for high-intensity requirements.
- **Extreme Temp:** Operates reliably in harsh environments up to +165℃.

Target Applications

- **Avionics:** Meets stringent weight and environmental stability standards.
- **Phased Array Radar:** Ensures the precise phase consistency crucial for tracking.
- **ECM Systems:** Reliable performance in harsh electromagnetic environments.
- **High-Frequency Interconnects:** Ideal for any strict loss and phase applications.

CONSTRUCTION SPECIFICATION

Item	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.91** [0.036]
2. Dielectric	Low Density PTFE (LD PTFE)	**2.50** [0.098]
3. Inner Shield	Silver-plated copper strip	**2.66** [0.105]
4. Outer Shield	Silver-plated copper wire braiding	**3.11** [0.122]
5. Jacket	PFA / Gray (Customizable)	**3.60** [0.142]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**46 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**82 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**500 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**18000**	**26500**	**40000**
Attenuation (dB/100m)	**37.5**	**53.4**	**65.6**	**93.8**	**108.9**	**122.3**	**136.9**	**166.7**	**204.8**	**255.7**
Average Power (kW)	**0.509**	**0.358**	**0.291**	**0.203**	**0.175**	**0.156**	**0.139**	**0.115**	**0.093**	**0.075**

K1 = 1.168470 **K2 =** 0.000550 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**18 mm** [0.709 in]
Dynamic Bending Radius	**36 mm** [1.417 in]
Weight	**0.033 kg/m** [0.022 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]