FLEXIBLE RF CABLE / PHASE STABLE CABLE

Cable Name: W15

Part No: VXW150



110 GHz	**Ultra-Low**
MAX FREQUENCY	ATTENUATION
1.50 mm	**< 1000 PPM**
ULTRA-THIN PROFILE	PHASE STABILITY

General Description: The Vinstronics VXW150 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 110GHz. With strict phase stability (<1000PPM) and robust power handling, it is the ideal interconnect solution for advanced aerospace and communication systems.

Core Features

- **Phase Stability:** <1000PPM @ -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 architecture for high-intensity requirements.
- **Lightweight:** Highly flexible 1.50mm structure for complex routing.

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	**0.30** [0.012]
2. Dielectric	Low Density PTFE (LD PTFE)	**0.88** [0.035]
3. Inner Shield	Silver-plated copper strip	**1.00** [0.039]
4. Outer Shield	Silver-plated copper wire braiding	**1.23** [0.048]
5. Jacket	PFA / Gray (Customizable)	**1.50** [0.059]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**110 GHz**
Cut-off Frequency	**128 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**80 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**400 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**3000**	**6000**	**10000**	**18000**	**26500**	**40000**
Attenuation (dB/m)	**113.7**	**198.5**	**282.9**	**368.0**	**499.3**	**611.5**	**760.4**
Average Power (kW)	**0.097**	**0.056**	**0.039**	**0.030**	**0.022**	**0.018**	**0.015**

K1 = 3.557846 **K2** = 0.001221 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**8 mm** [0.315 in]
Dynamic Bending Radius	**15 mm** [0.591 in]
Weight	**0.0054 kg/m** [0.0036 lbs/ft]
Temperature Range	**-55 ~ +125 ℃** [-67 ~ +257 ℉]