SEMI-RIGID COAXIAL CABLE / **LOW LOSS**

Cable Name: G22

Part No: VXG22



40 GHz
MAX FREQUENCY

76%
HIGH VELOCITY

250 ℃
EXTREME TEMP RATING

Low Loss
OPTIMIZED PTFE

General Description: The Vinstronics VXG22 is a premium low-loss semi-rigid cable designed for demanding 40GHz internal routing. Utilizing an optimized PTFE dielectric, it boosts the velocity of propagation to 76%, significantly reducing attenuation. With an extreme +250℃ temperature rating and absolute >165dB shielding, it is the ultimate form-stable solution for high-end avionic and precision instrument modules.

Core Features

- **Low Loss Transmission:** Optimized dielectric achieves a highly efficient 76% velocity.
- **Extreme Temperature:** Survives ultra-harsh environments up to 250℃.
- **Absolute Shielding:** Seamless copper tube provides >165dB isolation.
- **Zero PIM:** Solid structure ensures impeccable intermodulation performance.
- **Form-Stable:** Retains its complex 3D routed shape permanently after bending.

Target Applications

- **Avionics:** Meets extreme temperature and stability standards.
- **RF Module Internal:** Perfect for high-performance microwave component interconnections.
- **Precision Instruments:** Reliable signal paths within high-end test equipment.
- **Harsh Environments:** Ideal for aerospace and defense internal chassis links.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.560** [0.022]
2. Dielectric	PTFE (Optimized)	**1.680** [0.066]
3. Outer Shield/Jacket	Seamless Copper Tube	**2.180** [0.086]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**64 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
Shielding Effectiveness	**>165 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)	**58.3**	**82.8**	**101.7**	**144.9**	**168.0**	**188.4**	**210.6**	**255.5**	**312.8**	**388.7**
Average Power (kW)	**0.259**	**0.182**	**0.148**	**0.104**	**0.090**	**0.080**	**0.072**	**0.059**	**0.048**	**0.039**

K1 = 1.825328 **K2 =** 0.000590 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**7.0 mm** [0.276 in]
Weight	**0.021 kg/m** [0.0141 lbs/ft]
Temperature Range	**-55 ~ +250 ℃** [-67 ~ +482 ℉]