SEMI-RIGID COAXIAL CABLE / STANDARD

Cable Name: G08E

Part No: VXG08E



40 GHz
MAX FREQUENCY

> 165 dB
RF SHIELDING

0.86 mm
ULTRA-MICRO OD

Solid PTFE
COST-EFFECTIVE

General Description: The Vinstronics VXG08E is a micro-sized, standard semi-rigid cable designed for high-density 40GHz RF modules. Built with a solid PTFE dielectric and a seamless copper tube, it ensures an impenetrable >165dB shielding barrier. It offers a highly economical, permanent shape-retaining interconnect for precision instruments and tight enclosure routing.

Core Features

- **Absolute Shielding:** Seamless copper tube provides >165dB isolation, eliminating cross-talk.
- **Micro OD:** 0.86mm diameter allows for intricate routing in dense modules.
- **Form-Stable:** Retains its complex 3D routed shape permanently after bending.
- **Economy Build:** Solid PTFE dielectric delivers excellent performance-to-price ratio.
- **Zero PIM:** Solid structure ensures impeccable intermodulation performance.

Target Applications

- **Tight Space Connection:** Essential for highly restricted internal routing.
- **RF Module Internal:** Perfect for dense microwave component interconnections.
- **Precision Instruments**: Reliable signal paths within high-end test equipment.
- **High-Frequency Testing:** Ideal for 40GHz module verifications.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.203** [0.008]
2. Dielectric	Solid PTFE	**0.669** [0.026]
3. Outer Shield/Jacket	Seamless Copper Tube	**0.864** [0.034]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**154 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**70 %**
Shielding Effectiveness	**>165 dB**
Dielectric Withstanding Voltage	**100 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**18000**	**26500**	**40000**
Attenuation (dB/100m)	**1.6**	**2.2**	**2.8**	**4.0**	**4.6**	**5.2**	**5.8**	**7.1**	**8.7**	**11.0**
Average Power (kW)	**0.056**	**0.039**	**0.032**	**0.022**	**0.019**	**0.017**	**0.015**	**0.012**	**0.010**	**0.008**

K1 = 0.049002 **K2 =** 0.000029 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**1.6 mm** [0.063 in]
Weight	**0.003 kg/m** [0.0020 lbs/ft]
Temperature Range	**-55 ~ +125 ℃** [-67 ~ +257 ℉]