PRECISION TEST CABLE / ECONOMY

Cable Name: J40

Part No: VXJ400



40 GHz
MAX FREQUENCY

± 0.3°/GHz
LINEAR PHASE

PUR Jacket
WEAR RESISTANT

Economy
ATE OPTIMIZED

General Description: The Vinstronics VXJ400 is an economy-type precision test cable engineered specifically for automated test equipment (ATE) and massive production lines. Operating up to 40GHz, it features a highly wear-resistant blue PUR jacket to withstand continuous physical abuse. Its unique linear mechanical phase stability (±0.3°/GHz) provides highly cost-effective and rapid software compensation for high-volume testing.

Core Features

- **Massive Production Ready:** Built to survive the relentless demands of assembly lines.
- **Linear Phase Stability:** ±0.3°/GHz enables easy algorithmic error correction.
- **Wear Resistant:** Rugged PUR jacket protects against abrasions, tears, and oil.
- **High Flex Life:** Excellent dynamic bending capabilities for frequent ATE operations.
- **Ultra-Low Loss:** Precision signal transmission up to 40GHz.

Target Applications

- **Massive Production Line:** The ultimate workhorse for high-volume factory testing.
- **Test Systems & Platforms:** Reliable interconnects for automated test equipment.
- **System Connection:** Dependable routing for complex test benches.
- **High-Frequency Testing:** Economical verification for 40GHz microwave components.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.83** [0.033]
2. Dielectric	Low Density PTFE (LD PTFE)	**2.42** [0.095]
3. Inner Shield	Silver-plated copper strip	**2.55** [0.100]
4. Interlayer	PFA	**2.85** [0.112]
5. Outer Shield	Silver-plated copper wire braiding	**3.42** [0.135]
6. Jacket	PUR / Blue (Customizable)	**3.95** [0.156]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**46 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**83 %**
Shielding Effectiveness	**>90 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)	**37.9**	**54.0**	**66.5**	**95.2**	**110.7**	**124.5**	**139.6**	**170.3**	**209.9**	**263.1**
Average Power (kW)	**0.173**	**0.121**	**0.099**	**0.069**	**0.059**	**0.053**	**0.047**	**0.038**	**0.031**	**0.025**

K1 = 1.175410 **K2 =** 0.000700 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**20 mm** [0.787 in]
Dynamic Bending Radius	**40 mm** [1.575 in]
Weight	**0.037 kg/m** [0.0249 lbs/ft]
Temperature Range	**-55 ~ +85 ℃** [-67 ~ +185 ℉]
Mechanical Stationary Phase	**± 0.3 °/GHz**