PRECISION TEST CABLE / ECONOMY

Cable Name: J50

Part No: VXJ500



26.5 GHz
MAX FREQUENCY

± 0.3°/GHz
LINEAR PHASE

Clear FEP
DISTINCTIVE JACKET

Economy
ATE OPTIMIZED

General Description: The Vinstronics VXJ500 is a distinctive, economy-type precision test cable engineered for 26.5GHz automated production lines. Featuring a unique transparent FEP jacket and a low-density PTFE dielectric, it ensures rapid algorithmic compensation with its ±0.3°/GHz linear mechanical phase stability. It is an exceptionally reliable and budget-friendly workhorse for massive test platforms.

Core Features

- **Economy Build:** Outstanding performance-to-price ratio for massive testing.
- **Linear Phase:** ±0.3°/GHz enables rapid algorithmic error correction.
- **Distinctive Design:** Clear FEP jacket allows easy visual inspection and routing.
- **High Flex Life:** Excellent dynamic bending capabilities for frequent ATE operations.
- **Low Loss:** Precision signal transmission up to 26.5GHz.

Target Applications

- **Mass Production Lines:** The ultimate economical workhorse for high-volume testing.
- **Test Systems & Platforms:** Reliable interconnects for automated test equipment.
- **System Connection:** Dependable routing for complex test benches.
- **High-Frequency Testing:** Economical verification for 26.5GHz microwave components.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**0.91** [0.036]
2. Dielectric	Low Density PTFE (LD PTFE)	**2.70** [0.106]
3. Inner Shield	Silver-plated copper strip	**2.85** [0.112]
4. Interlayer	PTFE	**3.15** [0.124]
5. Outer Shield	Silver-plated copper wire braiding	**3.60** [0.142]
6. Jacket	FEP / Transparent	**4.95** [0.195]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**26.5 GHz**
Cut-off Frequency	**43 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
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**
Attenuation (dB/100m)	**39.4**	**56.0**	**68.9**	**98.2**	**113.9**	**127.9**	**143.0**	**173.7**	**212.9**
Average Power (kW)	**0.505**	**0.355**	**0.289**	**0.203**	**0.175**	**0.156**	**0.139**	**0.115**	**0.094**

K1 = 1.232579 **K2 =** 0.000462 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**30 mm** [1.181 in]
Dynamic Bending Radius	**50 mm** [1.969 in]
Weight	**0.052 kg/m** [0.0349 lbs/ft]
Temperature Range	**-55 ~ +125 ℃** [-67 ~ +257 ℉]
Mechanical Stationary Phase	**± 0.3 °/GHz**