PRECISION TEST CABLE / STANDARD

Cable Name: T50

Part No: VXT500



26.5 GHz
MAX FREQUENCY

600,000
BENDING CYCLES

5.10 mm
HEAVY-DUTY OD

2000 V.DC
EXTREME VOLTAGE

General Description: The Vinstronics VXT500 is a heavy-duty standard precision test cable designed for long-lasting 26.5GHz laboratory measurements. Featuring an extreme 2000 V.DC rating and engineered to withstand an astounding 600,000 bending cycles, it offers unmatched reliability, low VSWR, and low loss for continuous, high-volume testing environments.

Core Features

- **Extreme Durability:** Proven to withstand 600,000 bending cycles.
- **Extreme Voltage:** 2000 V.DC rating for superior power and safety.
- **Low VSWR:** Ensures pristine signal integrity for high-precision testing.
- **Heavy-Duty Build:** 5.10mm OD provides excellent physical resilience.
- **Low Loss:** Minimized attenuation across the entire frequency band.

Target Applications

- **Lab Testing:** Perfect for continuous high-volume device testing.
- **EMC Lab:** Highly dependable in rigorous electromagnetic environments.
- **System Testing:** Provides flawless interconnects for test benches.
- **Module Interconnection:** Reliable links between internal RF components.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**1.44** [0.057]
2. Dielectric	Low Density PTFE (LD PTFE)	**3.85** [0.152]
3. Inner Shield	Silver-plated copper strip	**4.05** [0.159]
4. Interlayer	Low Density PTFE (LD PTFE)	**4.30** [0.169]
5. Outer Shield	Silver-plated copper wire braiding	**4.65** [0.183]
6. Jacket	FEP / Blue (Customizable)	**5.10** [0.201]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**26.5 GHz**
Cut-off Frequency	**29 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**82 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**2000 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**18000**	**26500**
Attenuation (dB/100m)	**27.1**	**38.9**	**48.1**	**68.6**	**81.3**	**91.9**	**103.5**	**127.4**	**158.8**
Average Power (kW)	**0.821**	**0.573**	**0.463**	**0.320**	**0.274**	**0.242**	**0.215**	**0.175**	**0.140**

K1 = 0.828800 **K2 =** 0.000900 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**25 mm** [0.984 in]
Dynamic Bending Radius	**50 mm** [1.969 in]
Weight	**0.055 kg/m** [0.0370 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]