PRECISION TEST CABLE / STANDARD

Cable Name: T42

Part No: VXT420



40 GHz
MAX FREQUENCY

Low VSWR
SIGNAL INTEGRITY

4.20 mm
DURABLE OD

Bend-Resistant
TEST DURABILITY

General Description: The Vinstronics VXT420 is a highly durable standard precision test cable operating up to 40GHz. Protected by a 4.20mm blue FEP jacket, it offers extremely low VSWR and outstanding resistance to bending and shaking. It is the premier choice for reliable high-frequency module testing and intricate chassis interconnections.

Core Features

- **High Frequency:** Reliable precision transmission up to 40GHz.
- **Low VSWR:** Ensures pristine signal integrity for high-precision testing.
- **Bend-Resistant:** Specialized internal structure handles frequent flexing and shaking.
- **Durable Build:** 4.20mm OD provides excellent physical resilience.
- **Low Loss:** Minimized attenuation across the entire frequency band.

Target Applications

- **Lab Testing:** Perfect for high-frequency RF and microwave 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	**1.02** [0.040]
2. Dielectric	Low Density PTFE (LD PTFE)	**2.80** [0.110]
3. Inner Shield	Silver-plated copper strip	**2.95** [0.116]
4. Interlayer	Low Density PTFE (LD PTFE)	**3.20** [0.126]
5. Outer Shield	Silver-plated copper wire braiding	**3.62** [0.143]
6. Jacket	FEP / Blue (Customizable)	**4.20** [0.165]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**40 GHz**
Cut-off Frequency	**41 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**81 %**
Shielding Effectiveness	**>90 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)	**40.5**	**57.6**	**70.8**	**100.8**	**116.9**	**131.2**	**146.6**	**178.0**	**218.0**	**271.2**
Average Power (kW)	**0.567**	**0.399**	**0.325**	**0.228**	**0.197**	**0.175**	**0.157**	**0.129**	**0.105**	**0.085**

K1 = 1.267795 **K2 =** 0.000440 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**21 mm** [0.827 in]
Dynamic Bending Radius	**42 mm** [1.654 in]
Weight	**0.040 kg/m** [0.0269 lbs/ft]
Temperature Range	**-55 ~ +165 ℃** [-67 ~ +329 ℉]