FLEXIBLE RF CABLE / HIGH POWER CABLE

Cable Name: B52

Part No: VXB520



18 GHz
MAX FREQUENCY

Aluminum Foil
HIGH TENSILE STRENGTH

1000 V.DC
POWER HANDLING

5.20 mm
DURABLE BUILD

General Description: The Vinstronics VXB520 is a high-power, low-loss flexible RF cable designed for robust 18GHz applications. Incorporating a high-temperature aluminum foil interlayer within a 5.20mm blue FEP jacket, it offers outstanding tensile strength and environmental protection. With strict -155dBc PIM control, it is perfect for base station interconnection and high-power broadcasting.

Core Features

- **High Power:** Optimized structural design for intense signal transmission.
- **Aluminum Foil Layer:** Unique interlayer ensures excellent tensile properties.
- **Low PIM:** Outstanding -155dBc performance for clear communication.
- **Ultra-Low Loss:** LD PTFE dielectric for precision signal integrity.
- **Durable Jacket:** 5.20mm FEP jacket for reliable physical protection.

Target Applications

- **Base Stations:** Ideal for internal wireless communication routing.
- **High Power Launch:** Dependable for intense high-power broadcasting.
- **ECM Systems:** Reliable in complex electronic countermeasure setups.
- **RF Testing:** Highly durable for microwave device test assemblies.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated copper	**1.29** [0.051]
2. Dielectric	Low Density PTFE (LD PTFE)	**3.91** [0.154]
3. Inner Shield	Silver-plated copper strip	**4.15** [0.163]
4. Interlayer	High temperature aluminum foil	**4.28** [0.169]
5. Outer Shield	Silver-plated copper wire braiding	**4.85** [0.191]
6. Jacket	FEP / Blue (Customizable)	**5.20** [0.205]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**28 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
Shielding Effectiveness	**>90 dB**
Dielectric Withstanding Voltage	**1000 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**16000**	**18000**
Attenuation (dB/100m)	**27.7**	**39.5**	**48.7**	**69.9**	**81.3**	**91.5**	**102.7**	**117.8**	**125.5**
Average Power (kW)	**0.750**	**0.526**	**0.426**	**0.297**	**0.255**	**0.227**	**0.202**	**0.176**	**0.165**

K1 = 0.856234 **K2** = 0.000591 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**26 mm** [1.024 in]
Dynamic Bending Radius	**52 mm** [2.047 in]
Weight	**0.067 kg/m** [0.0450 lbs/ft]
Temperature Range	**-55 ~ +200 ℃** [-67 ~ +392 ℉]