FLEXIBLE RF CABLE / HIGH POWER CABLE

Cable Name: B46

Part No: VXB460



18 GHz
MAX FREQUENCY

Aluminum Foil
HIGH TENSILE STRENGTH

1000 V.DC
POWER HANDLING

4.60 mm
COMPACT BUILD

General Description: The Vinstronics VXB460 is a cost-effective, high-power flexible RF cable engineered for demanding 18GHz transmissions. Featuring a unique high-temperature aluminum foil interlayer, it provides exceptional tensile strength and superior >90dB shielding. With excellent -155dBc PIM performance, it is the ideal compact interconnect for high-power base stations and electronic countermeasure systems.

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.
- **Cost-Effective:** High performance-to-price ratio for general deployment.

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	**1.02** [0.040]
2. Dielectric	Low Density PTFE (LD PTFE)	**3.07** [0.121]
3. Inner Shield	Silver-plated copper strip	**3.27** [0.129]
4. Interlayer	High temperature aluminum foil	**3.43** [0.135]
5. Outer Shield	Silver-plated copper wire braiding	**3.94** [0.155]
6. Jacket	FEP / Blue (Customizable)	**4.60** [0.181]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**35 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)	**35.4**	**50.4**	**62.0**	**88.8**	**103.2**	**116.0**	**129.9**	**148.7**	**158.3**
Average Power (kW)	**0.569**	**0.400**	**0.324**	**0.227**	**0.195**	**0.174**	**0.155**	**0.135**	**0.127**

K1 = 1.099485 **K2 =** 0.000602 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**23 mm** [0.906 in]
Dynamic Bending Radius	**46 mm** [1.811 in]
Weight	**0.053 kg/m** [0.0356 lbs/ft]
Temperature Range	**-55 ~ +200 ℃** [-67 ~ +392 ℉]