FLEXIBLE RF CABLE / LOW LOSS CABLE/ ECONOMY

Cable Name: E52F

Part No: VXE520F



18 GHz
MAX FREQUENCY

Stranded Core
DYNAMIC FLEXIBILITY

PUR Jacket
WEAR RESISTANT

Economy
INNER CONNECTIVITY

General Description: The Vinstronics VXE520F is a highly flexible, ruggedized economy cable for 18GHz applications. It replaces the solid core with a stranded copper inner conductor for superior dynamic bending and utilizes an ultra-durable PUR jacket. Combined with an economical aluminum foil shield, it is the ultimate resilient routing solution for high-stress base station environments.

Core Features

- **Dynamic Flexibility:** Stranded inner conductor ensures outstanding bending capabilities.
- **Wear Resistant:** Blue PUR jacket protects against continuous abrasions and harsh handling.
- **Economy Build:** Aluminum foil shielding delivers maximum cost-effectiveness.
- **High Voltage Handling:** 1500 V.DC rating provides reliable power capacity.
- **Reliable Shielding:** >70 dB shielding efficiency for internal environments.

Target Applications

- **Base Stations:** The optimal economical choice for dynamic base station connections.
- **Inner Connectivity:** Reliable routing inside complex telecom cabinets.
- **Harsh Handling:** Ideal for installations requiring frequent flexing and physical protection.
- **General RF Routing:** Ideal for applications without strict PIM constraints.

CONSTRUCTION SPECIFICATION

Component	Material & Process	Diameter mm [in]
1. Inner Conductor	Silver-plated stranded copper wire	**1.45** [0.057]
2. Dielectric	Low Density PTFE (LD PTFE)	**4.10** [0.161]
3. Inner Shield	Aluminum Foil	**4.20** [0.165]
4. Outer Shield	Silver-plated copper wire braiding	**4.65** [0.183]
5. Jacket	PUR / Blue (Customizable)	**5.20** [0.205]

ELECTRICAL CHARACTERISTICS

Operating Frequency	**18 GHz**
Cut-off Frequency	**25 GHz**
Impedance	**50 ± 1 Ω**
Velocity of Propagation	**76 %**
Shielding Effectiveness	**>70 dB**
Dielectric Withstanding Voltage	**1500 V.DC**

ATTENUATION AND TRANSMISSION POWER

Frequency (MHz)	**1000**	**2000**	**3000**	**6000**	**8000**	**10000**	**12400**	**16000**	**18000**
Attenuation (dB/100m)	**32.9**	**47.1**	**58.3**	**84.4**	**98.6**	**111.4**	**125.4**	**144.6**	**154.4**
Average Power (kW)	**0.536**	**0.374**	**0.302**	**0.209**	**0.179**	**0.158**	**0.141**	**0.122**	**0.114**

K1 = 1.005200 **K2 =** 0.001088 **Formula:** Attenuation = K1 × √F(MHz) + K2 × F(MHz)

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Static Bending Radius	**25 mm** [0.984 in]
Dynamic Bending Radius	**51 mm** [2.008 in]
Weight	**0.054 kg/m** [0.0363 lbs/ft]
Temperature Range	**-55 ~ +85 ℃** [-67 ~ +185 ℉]