

Technical Document  
WEBNET Cat 6 4pair U/UTP  
External Grade PE Black

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Part Number: 120451F-PE-BLK-01  
Description: WEBNET Cat 6 U/UTP 4pair External  
Grade PE Black



**Product Construction**

Conductor Material : Bare Copper, Solid  
Insulation Material : High Density Polyethylene (HDPE)  
Number of Pairs : 4  
Pair Colours : Blue, Blue/White; Orange, Orange/White,  
Green, Green/White; Brown, Brown/White  
Sheath Material : Polyethylene (PE)  
Sheath Colour : Black

**Mechanical Characteristics**

Overall Diameter : 6.2mm ± 0.30mm  
Temperature Range : Fixed -20°C to +60°C      Flexing 0°C to +50°C  
Bend Radius : Fixed 4 x Overall Diameter      Flexing 8 x Overall Diameter  
Weight : 40 kg/km

**Electrical Characteristics**

Max. Conductor DC Resistance : ≤ 9.5 Ω/km @ 20°C  
Max. Resistance Unbalanced : < 2.5%  
Max. Insulation Resistance : > 5000 MΩ x m  
Mutual Capacitance : < 5.6 nF/100m  
Capacitance Unbalanced : 1600 pF/km  
Impedance @ 100 MHz : 100 Ω ± 5  
Velocity of Propagation : 65 %  
Delay Skew : < 45 ns / 100m  
Dielectric Strength - DC : 1kV for 1minute



| Frequency (MHz) | Attenuation (dB/100m) | NEXT (dB) | PS - NEXT (dB) | ACRF (dB) | PS-ACRF (dB) | Return Loss (dB) |
|-----------------|-----------------------|-----------|----------------|-----------|--------------|------------------|
| 1               | ≤ 2.0                 | ≥ 74.3    | ≥ 72.3         | ≥ 67.8    | ≥ 64.8       | 20.0             |
| 4               | ≤ 3.8                 | ≥ 65.3    | ≥ 63.3         | ≥ 55.8    | ≥ 52.8       | 23.0             |
| 8               | ≤ 5.3                 | ≥ 60.8    | ≥ 58.8         | ≥ 49.7    | ≥ 46.7       | 24.5             |
| 10              | ≤ 6.0                 | ≥ 59.3    | ≥ 57.3         | ≥ 47.8    | ≥ 44.8       | 25.0             |
| 16              | ≤ 7.6                 | ≥ 56.2    | ≥ 54.2         | ≥ 43.7    | ≥ 40.7       | 25.0             |
| 20              | ≤ 8.5                 | ≥ 54.8    | ≥ 52.8         | ≥ 41.8    | ≥ 38.8       | 25.0             |
| 25              | ≤ 9.5                 | ≥ 53.3    | ≥ 51.3         | ≥ 39.8    | ≥ 36.8       | 24.3             |
| 31.25           | ≤ 10.7                | ≥ 51.9    | ≥ 49.9         | ≥ 37.9    | ≥ 34.9       | 23.6             |
| 62.5            | ≤ 15.4                | ≥ 47.4    | ≥ 45.4         | ≥ 31.9    | ≥ 28.9       | 21.5             |
| 100             | ≤ 19.8                | ≥ 44.3    | ≥ 42.3         | ≥ 27.8    | ≥ 24.8       | 20.1             |
| 200             | ≤ 29.0                | ≥ 39.8    | ≥ 37.8         | ≥ 21.8    | ≥ 18.8       | 18.0             |
| 250             | ≤ 32.8                | ≥ 38.3    | ≥ 36.3         | ≥ 19.8    | ≥ 16.8       | 17.3             |

Performance @ 20°

**Certifications & Standards**

Certification : HDBaseT  
RoHS 3 Compliant : Yes  
REACH Compliant : Yes  
Manufactured in Accordance to : TIA/EIA 568-C.2, IEC 11801 Class E, EN 50288-6-1, ISO/IEC 61156-5, EN 50173-1  
UKCA CPR Classification : Fca BS EN 50575:2014+A1:2016

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