Technical
Data Sheet

# HLF 600 Coaxial Cable

**P/N: AT1ATR600-1S**

The **HLF600 cable** is a **professional-grade, low-loss 50-ohm coaxial cable** engineered for **high-power, long-distance RF transmissions**. Featuring a large-diameter solid copper-clad aluminum (CCA) center conductor and a **robust dual-shielding** system—consisting of a bonded aluminum foil and a dense tinned copper braid—it delivers **exceptional EMI immunity** and **signal efficiency**. Its specialized foam dielectric minimizes attenuation, allowing it to compete with rigid hardline cables while maintaining greater ease of installation. It is the premier choice for **massive antenna arrays, long tower-top runs, and high-capacity 5G macro sites** where minimizing signal loss is essential to maintain link budget performance.

## Construction Specifications

| Description | Material & Plating | Diameter (mm) |
|---|---|---|
| Centre Conductor | Solid Copper Clad Aluminum Wire | 4.47 |
| Dielectric | Solid Polyethylene | 11.56 |
| 1st Outer Conductor | Sealed APA Tape | 11.76 |
| 2nd Outer Conductor | Tinned Copper Braid | 12.47 |
| Jacket | Black PE | 14.99 |

## Electrical Specifications

| Parameter | Value | Unit |
|---|---|---|
| Frequency Range | DC - 8 | GHz |
| Impedance | 50 | Ω |
| Propagation Velocity | 86 | % |
| Capacitance | 76.6 | pF/m |
| Screening Effectiveness | ≥90 | dB |
| Insulation Resistance | 5000 | MΩ-Km |
| Inner Conductor Resistance | 3 | Ω/km |
| Outer Conductor Resistance | 4 | Ω/km |
| Voltage Withstanding | 4000 | V DC |
| Peak Power Rating | 40 | KW |

Ground floor, Plot No -20, (KH No-160/1,street No-3/2, samta Vihar, Mukandpur Extn., North West Delhi, Delhi-110042
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| Mechanical Specifications | | |
|---|---|---|
| **Parameter** | **Value** | **Unit** |
| Weight | 250 | Kg/km |
| Single Bending Radius | ≥ 40 | mm |
| Repeated Bending Radius | ≥ 120 | mm |

| Environmental Specifications | | |
|---|---|---|
| **Parameter** | **Value** | **Unit** |
| Operation Temperature | -35 ~ 75 | °C |
| Installation Temperature | -20 ~ 60 | °C |

| Attenuation and Power Rating vs Frequency | | | |
|---|---|---|---|
| **Frequency** | **Attenuation (dB/100ft)** | **Attenuation (dB/100m)** | **Avg. Power Rating (kW)** |
| **30 MHz** | 0.43 | 1.4 | 5.51 |
| **50 MHz** | 0.55 | 1.8 | 4.24 |
| **150 MHz** | 0.98 | 3.2 | 2.41 |
| **220 MHz** | 1.19 | 3.9 | 1.97 |
| **450 MHz** | 1.71 | 5.6 | 1.35 |
| **900 MHz** | 2.50 | 8.2 | 0.93 |
| **1500 MHz** | 3.32 | 10.9 | 0.70 |
| **1800 MHz** | 3.69 | 12.1 | 0.63 |
| **2000 MHz** | 3.90 | 12.8 | 0.59 |
| **2500 MHz** | 4.42 | 14.5 | 0.52 |
| **5800 MHz** | 7.25 | 23.8 | 0.32 |

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