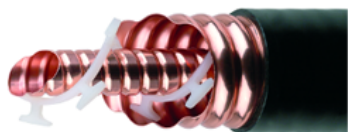


**HCA495-50J****5" HELIFLEX® Air-Dielectric Coaxial Cable**

HELIFLEX® 5" low loss air dielectric cable

**Feature / Benefits**

- **Low Attenuation**  
The low attenuation of HELIFLEX® coaxial cable results in highly efficient signal transfer in your RF system.
- **Complete Shielding**  
The solid outer conductor of HELIFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- **Low VSWR**  
Special low VSWR versions of HELIFLEX® coaxial cables contribute to low system noise.
- **Outstanding Intermodulation Performance**  
HELIFLEX® coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS factory.
- **High Power Rating**  
Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric materials, HELIFLEX® cable provides safe long term operating life at high transmit power levels.
- **Wide Range of Application**  
Typical areas of application are: feedlines for broadcast and terrestrial microwave antennas, wireless cellular, PCS and ESMR base stations, cabling of antenna arrays, and radio equipment interconnects.

**Technical features****APPLICATIONS**

|              |            |            |                 |
|--------------|------------|------------|-----------------|
| Applications | TV & Radio | HF Defense | Cable Solutions |
|--------------|------------|------------|-----------------|

**STRUCTURE**

|                          |                             |
|--------------------------|-----------------------------|
| Cable Type               | Air-Dielectric, Corrugated  |
| Size                     | 5                           |
| Jacket Option            | Black                       |
| Inner Conductor Diameter | 45mm (1.77in)               |
| Inner Conductor Material | Corrugated Copper Tube      |
| Dielectric Diameter      | 98.1mm (3.86in)             |
| Dielectric Material      | Helical Polyethylene Spacer |
| Outer Conductor Diameter | 109.3mm (4.3in)             |
| Outer Conductor Material | Corrugated Copper           |
| Jacket Diameter          | 115.1mm (4.53in)            |
| Jacket Material          | Polyethylene, PE            |

**TESTING AND ENVIRONMENTAL**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| Fire Performance                      | Halogene Free                                               |
| Flame Retardant Jacket Specifications | Meets the requirements according to: IEC60754-1, IEC60754-2 |
| Installation Temperature              | -40°C to 60°C (-40°F to 140°F)                              |
| Storage Temperature                   | -70°C to 85°C (-94°F to 185°F)                              |
| Operation Temperature                 | -50°C to 85°C (-58°F to 185°F)                              |



HCA495-50J

5" HELIFLEX® Air-Dielectric Coaxial Cable

ELECTRICAL SPECIFICATIONS

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Impedance                      | 50 +/- 0.5 Ω                                                    |
| Maximum Frequency              | 1 GHz                                                           |
| Velocity                       | 97 %                                                            |
| Capacitance                    | 68pF/m (20.7pF/ft)                                              |
| Inductance                     | 0.17μH/m (0.052μH/ft)                                           |
| Peak Power Rating              | 1560 kW                                                         |
| RF Peak Voltage                | 12500 Volts                                                     |
| Jacket Spark                   | 8000 Volt RMS                                                   |
| Inner Conductor dc Resistance  | 0.31ohm/1000 m (0.095ohm/1000 ft)                               |
| Outer Conductor dc Resistance  | 0.094ohm/1000 m (0.029ohm/1000 ft)                              |
| Return Loss (VSWR) Performance | Standard                                                        |
| Phase Stabilized               | Phase matched cables and assemblies are available upon request. |

MECHANICAL SPECIFICATIONS

|                                     |                   |
|-------------------------------------|-------------------|
| Cable Weight                        | 4.5kg/m (3lb/ft)  |
| Minimum Bending Radius              | 500mm (20in)      |
| Minimum Bending Radius              | 1200mm (47in)     |
| Bending Moment                      | 335 (247)         |
| Tensile Strength                    | 3000N (674lb)     |
| Recommended / Maximum Clamp Spacing | 1 / 2 (3.3 / 6.6) |



**HCA495-50J**  
5" HELIFLEX® Air-Dielectric Coaxial Cable

ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5            | 0.02        | 0.006        | 1200      |
| 1              | 0.028       | 0.008        | 848       |
| 1.5            | 0.034       | 0.01         | 692       |
| 2              | 0.039       | 0.012        | 599       |
| 10             | 0.088       | 0.027        | 266       |
| 20             | 0.125       | 0.038        | 187       |
| 30             | 0.153       | 0.047        | 153       |
| 50             | 0.199       | 0.061        | 118       |
| 88             | 0.266       | 0.081        | 88.3      |
| 100            | 0.284       | 0.087        | 82.7      |
| 108            | 0.295       | 0.09         | 79.7      |
| 150            | 0.35        | 0.107        | 67.3      |
| 174            | 0.378       | 0.115        | 62.4      |
| 200            | 0.406       | 0.124        | 58.1      |
| 300            | 0.503       | 0.153        | 47.1      |
| 400            | 0.585       | 0.178        | 40.7      |
| 450            | 0.623       | 0.19         | 38.3      |
| 500            | 0.659       | 0.201        | 36.3      |
| 512            | 0.667       | 0.203        | 35.9      |
| 600            | 0.726       | 0.221        | 33.1      |
| 700            | 0.789       | 0.24         | 30.5      |
| 800            | 0.848       | 0.258        | 28.5      |
| 824            | 0.861       | 0.263        | 28.1      |
| 894            | 0.9         | 0.274        | 27        |
| 900            | 0.904       | 0.275        | 26.9      |
| 925            | 0.917       | 0.28         | 26.5      |
| 960            | 0.936       | 0.285        | 26        |
| 1000           | 0.957       | 0.292        | 25.5      |

External Document Links

Notes