



RFS Technologies
an Amphenol Company

HCA AIR DIELECTRIC CABLES SELECTION GUIDE

Edition 1 | 04.2024



RFS TECHNOLOGIES, INC. TRANSMISSION LINE SOLUTIONS



RFS TECHNOLOGIES, INC.

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AIR DIELECTRIC CABLE MODELS AND SPECIFICATIONS

INDOOR MODELS ARE AVAILABLE UPON REQUEST

Model Number	HCA78-50JM	HCA158-50JM	HCA300-50JM	HCA400-50JM	HCA495-50J	HCA550-50J	HCA618-50J
Applications	Microwave & Wireless communication, TV & Radio broadcast, HF Defense & Radar			TV & Radio broadcast, HF Defense & Radar			
Construction and Dimensions							
Nominal Size, inch	7/8	1-5/8	3	4	5	5-1/2	6-1/8
Jacket Color	Black						
Jacket Material	PE (Polyethylene), Medium Density				PE (Polyethylene), Low Density		
Diameter Over Jacket, in (mm)	1.103 (28)	1.984 (50.4)	2.992 (76)	3.56 (90.5)	4.53 (115.1)	5.79 (147.1)	6.65 (169)
Cable Volume, ft ³ /Kft (L/Km)	3.66 (340)	15.06 (1400)	32.28 (3000)	53.84 (5000)	89.34 (8300)	150.69 (14000)	204.57 (19000)
Cable Weight, Lb/ft (kg/m)	0.46(0.68)	0.89 (1.33)	1.41 (2.1)	2.1 (3.12)	3 (4.5)	5 (7.5)	6.7 (10)
Electrical Specifications							
Impedance, ohm	50 +/-0.5						
Maximum Frequency, GHz	3	3	1.63	1.66	1	0.86	0.86
Return Loss (VSWR) Performance	Typical 20.8dB (1.2 VSWR) or better within the operation bands of most global frequency ranges. Premium also available. Contact factory for options in your specific frequency band.						
Velocity, %	93	95	96	96	97	96	97
Attenuation, dB	See datasheet of each cable model						
Peak Power Rating, KW	73	270	640	940	1560	2250	2890
RF Peak Voltage, V	2700	5200	8000	9700	12500	15000	17000
Jacket Spark, V RMS	8000						
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.						
Mechanical Specifications							
Minimum Bending Radius, Single, in (mm)	4 (100)	7 (180)	11 (270)	15 (380)	20 (500)	31 (800)	39 (1000)
Minimum Bending Radius, Repeated, in (mm)	10 (250)	22 (550)	30 (760)	35 (890)	47 (1200)	59 (1500)	59 (1500)
Bending Moment, Lb-ft (Nm)	20 (27)	31 (42)	107 (145)	159 (215)	247 (335)	428 (580)	738 (1000)
Tensile Strength, Lb (N)	360 (1600)	337 (1500)	405 (1800)	405 (1800)	674 (3000)	900 (4000)	1349 (6000)
Recommended / Maximum Clamp Spacing, ft (m)	1.8 / 3.0 (0.5 / 0.9)	2.75 / 4.0 (0.8 / 1.2)	2.75 / 4.0 (0.8 / 1.2)	2.75 / 4.0 (0.8 / 1.2)	3.3 / 6.6 (1.0 / 2.0)	3.3 / 6.6 (1.0 / 2.0)	3.3 / 6.6 (1.0 / 2.0)
Environmental Specifications							
Fire Performance	Halogen Free						
Installation Temperature, °F (°C)	-40 to +140 (-40 to +60)						
Storage Temperature, °F (°C)	-94 to +185 (-70 to +85)						
Operation Temperature, °F (°C)	-58 to +185 (-50 to +85)						



FOR DECADES

HCA AIR DIELECTRIC CABLE SETTING THE STANDARD

EFFORTLESS INSTALLATION

The ability to ship HCA as long, continuous lengths simplifies the deployment process significantly. It is straightforward for field technicians to install, and the design eliminates the potential weaknesses associated with cable joints.

STREAMLINED LOGISTICS

The adaptability of HCA allows for the cable to be coiled onto drums, streamlining transportation. This not only reduces shipping costs but also diminishes the environmental footprint of logistics.

DURABILITY FOR OUTDOOR USE

Crafted for external use, HCA is built to endure harsh weather conditions. It promises enduring performance and reliability when deployed in outdoor environments, maintaining its quality for many years.

COMPREHENSIVE CABLE SOLUTION

RFS Technologies provides air cables for both outdoor and indoor applications, and a full suite of necessary accessories along with the cables, including clamps, grounding kits, and connectors. These accessories are designed to safeguard against performance dips during installation and maintain consistent operational integrity throughout the cable's lifespan.



HCA Air Dielectric Cables

HCA cables are air-core coaxial cables featuring an inner conductor stabilized by dielectric spacers. Produced at our Connecticut, USA facility for more than half a century, these cables have been extensively employed in broadcast, telecom, microwave, and radar systems that demand high-power, low-loss transmission solutions. We manufacture cable diameters ranging from 7/8" to 4" domestically, while larger sizes up to 6" can be specially ordered and are dispatched from partner's factory in Germany.

COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 78 Series: 7/8" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA78-50JM	7/8in Low Loss Air Dielectric Cable, 50 ohm, Standard PE Jacket	PE (Polyethylene), Medium Density	Black
HCA78-50JMF	7/8in Low Loss Air Dielectric Cable, 50 ohm, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black
HCA78-50JPL	7/8in Low Loss Air Dielectric Cable, 50 ohm, Plenum Rated Blue Jacket	PVDF (Polyvinylidene Fluoride)	Blue
HCA78-50JPLB	7/8in Low Loss Air Dielectric Cable, 50 ohm, Plenum Rated Black Jacket	UVR PVC (UltraViolet Resistant PolyVinylChloride)	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	7/8
Diameter Over Jacket	in (mm)	1.103 (28)
Cable Volume	ft ³ /100ft (L/100m)	0.336 (34)
Cable Weight	Lb/ft (kg/m)	0.46 (0.68)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	4 (100)
Minimum Bending Radius, Repeated Bend	in (mm)	10 (250)
Bending Moment	Lb-ft (Nm)	20 (27)
Tensile Strength	Lb (N)	360 (1600)
Recommended / Maximum Clamp Spacing	ft (m)	1.8 / 3 (0.5 / 0.9)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	3
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	93
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	73
RF Peak Voltage	V	2700
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		JM	JMF	JPL	JPLB
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-40 to +185 (-40 to +85)	-76 to +185 (-60 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)
Fire Performance		Halogen free	Fire Retardant, LSOH	Fire Retardant & Plenum Rated	
Fire Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996)as well as IEC 60332-1	Meets/Exceeds Steiner Tunnel Test Method UL 910, NEC 820-53 (a) CATVP, NFPA-262	



COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 158 Series: 1-5/8" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA158-50JM	1-5/8in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Medium Density	Black
HCA158-50JMF	1-5/8in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black
HCA158-50JPL	1-5/8in Low Loss Air Dielectric Cable, Plenum Rated Blue Jacket	PVDF (Polyvinylidene Fluoride)	Blue
HCA158-50JPLB	1-5/8in Low Loss Air Dielectric Cable, Plenum Rated Black Jacket	UVR PVC (UltraViolet Resistant PolyVinylChloride)	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	1-5/8
Diameter Over Jacket	in (mm)	1.984 (50.4)
Cable Volume	ft ³ /100ft (L/100m)	1.51 (140)
Cable Weight	Lb/ft (kg/m)	0.89 (1.33)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	7 (180)
Minimum Bending Radius, Repeated Bend	in (mm)	22 (550)
Bending Moment	Lb-ft (Nm)	31 (42)
Tensile Strength	Lb (N)	337 (1500)
Recommended / Maximum Clamp Spacing	ft (m)	2.75 / 4 (0.8 / 1.2)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	3
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	95
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	270
RF Peak Voltage	V	5200
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		JM	JMF	JPL	JPLB
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-40 to +185 (-40 to +85)	-76 to +185 (-60 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)
Fire Performance		Halogen free	Fire Retardant, LSOH	Fire Retardant & Plenum Rated	
Fire Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996)as well as IEC 60332-1	Meets/Exceeds Steiner Tunnel Test Method UL 910, NEC 820-53 (a) CATVP, NFPA-262	

COAXIAL CABLE HCA AIR DIELECTRIC

HCA 300 Series: 3" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA300-50JM	3in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Medium Density	Black
HCA300-50JMF	3in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black
HCA300-50JPLB	3in Low Loss Air Dielectric Cable, Plenum Rated Black Jacket	UVR PVC (UltraViolet Resistant PolyVinylChloride)	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	3
Diameter Over Jacket	in (mm)	2.992 (76)
Cable Volume	ft ³ /100ft (L/100m)	3.23 (300)
Cable Weight	Lb/ft (kg/m)	1.41 (2.1)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	11 (270)
Minimum Bending Radius, Repeated Bend	in (mm)	30 (760)
Bending Moment	Lb-ft (Nm)	107 (145)
Tensile Strength	Lb (N)	405 (1800)
Recommended / Maximum Clamp Spacing	ft (m)	2.75 / 4 (0.8 / 1.2)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	1.63
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	640
RF Peak Voltage	V	8000
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		JM	JMF	JPLB
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-76 to +185 (-60 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)
Fire Performance		Halogen free	Fire Retardant, LSOH	Fire Retardant & Plenum Rated
Fire Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1	Meets/Exceeds Steiner Tunnel Test Method UL 910, NEC 820-53 (a) CATVP, NFPA-262



COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 400 Series: 4" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA400-50JM	4in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Medium Density	Black
HCA400-50JMF	4in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black
HCA400-50JPLB	4in Low Loss Air Dielectric Cable, Plenum Rated Black Jacket	UVR PVC (UltraViolet Resistant PolyVinylChloride)	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	4
Diameter Over Jacket	in (mm)	3.56 (90.5)
Cable Volume	ft ³ /100ft (L/100m)	5.38 (500)
Cable Weight	Lb/ft (kg/m)	2.1 (3.1)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	15 (380)
Minimum Bending Radius, Repeated Bend	in (mm)	35 (890)
Bending Moment	Lb-ft (Nm)	159 (215)
Tensile Strength	Lb (N)	405 (1800)
Recommended / Maximum Clamp Spacing	ft (m)	2.75 / 4 (0.8 / 1.2)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	1
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	940
RF Peak Voltage	V	9700
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		JM	JMF	JPLB
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)	-76 to +185 (-60 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)	-40 to +185 (-40 to +85)
Fire Performance		Halogen free	Fire Retardant, LSOH	Fire Retardant & Plenum Rated
Fire Retardant Jacket Specifications		Meets the requirements according to: IEC60754-1, IEC60754-2	Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1	Meets/Exceeds Steiner Tunnel Test Method UL 910, NEC 820-53 (a) CATVP, NFPA-262

COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 495 Series: 5" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA495-50J	5in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Low Density	Black
HCA495-50JFN	5in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	5
Diameter Over Jacket	in (mm)	4.53 (115.1)
Cable Volume	ft ³ /100ft (L/100m)	8.94 (830)
Cable Weight	Lb/ft (kg/m)	3 (4.5)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	20 (500)
Minimum Bending Radius, Repeated Bend	in (mm)	47 (1200)
Bending Moment	Lb-ft (Nm)	247 (335)
Tensile Strength	Lb (N)	674 (3000)
Recommended / Maximum Clamp Spacing	ft (m)	3.3 / 6.6 (1.0 / 2.0)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	1
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	97
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	1560
RF Peak Voltage	V	12500
Jacket Spark	V RMS	8000

Phase stabilized and phase matched cables and assemblies are available upon request.

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		J	JFN
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)
Fire Performance		Halogen free	Fire Retardant, LS0H

Fire Retardant Jacket Specifications

Meets the requirements according to:
IEC60754-1, IEC60754-2

Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1



COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 550 Series: 5-1/2" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA550-50J	5-1/2in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Low Density	Black
HCA550-50JFN	5-1/2in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	5.5
Diameter Over Jacket	in (mm)	5.79 (147.1)
Cable Volume	ft ³ /100ft (L/100m)	15.1 (1400)
Cable Weight	Lb/ft (kg/m)	5 (7.5)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	31 (800)
Minimum Bending Radius, Repeated Bend	in (mm)	59 (1500)
Bending Moment	Lb-ft (Nm)	428 (580)
Tensile Strength	Lb (N)	900 (4000)
Recommended / Maximum Clamp Spacing	ft (m)	3.3 / 6.6 (1.0 / 2.0)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	0.86
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	96
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	2250
RF Peak Voltage	V	15000
Jacket Spark	V RMS	8000
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.	

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		J	JFN
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)
Fire Performance		Halogen free	Fire Retardant, LS0H

Fire Retardant Jacket Specifications

Meets the requirements according to: IEC60754-1, IEC60754-2

Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1

COAXIAL CABLE

HCA AIR DIELECTRIC

HCA 618 Series: 6-1/8" Air Dielectric Cable



Ordering Information

MODEL NUMBER	DESCRIPTION	JACKET MATERIAL	COLOR
HCA618-50J	6-1/8in Low Loss Air Dielectric Cable, Standard PE Jacket	PE (Polyethylene), Low Density	Black
HCA618-50JFN	6-1/8in Low Loss Air Dielectric Cable, Fire Retardant & Halogen Free Jacket	PE, Metalhydroxite Filling	Black

Product Specifications

GENERAL SPECIFICATIONS		
Norminal Size	in	6-1/8
Diameter Over Jacket	in (mm)	6.65 (169)
Cable Volume	ft ³ /100ft (L/100m)	20.46 (1900)
Cable Weight	Lb/ft (kg/m)	6.7 (10)

MECHANICAL SPECIFICATIONS		
Minimum Bending Radius, Single Bend	in (mm)	39 (1000)
Minimum Bending Radius, Repeated Bend	in (mm)	59 (1500)
Bending Moment	Lb-ft (Nm)	738 (1000)
Tensile Strength	Lb (N)	1349 (6000)
Recommended / Maximum Clamp Spacing	ft (m)	3.3 / 6.6 (1.0 / 2.0)

ELECTRICAL SPECIFICATIONS		
Impedance	ohm	50 +/- 0.5
Maximum Frequency	GHz	0.86
Min. Return Loss (Max VSWR)	dB (VSWR)	20.8 (1.2) typical *
Velocity	%	97
Attenuation	dB	See cable's model datasheet
Peak Power Rating	KW	2890
RF Peak Voltage	V	17000
Jacket Spark	V RMS	8000

Phase stabilized and phase matched cables and assemblies are available upon request.

* Premium return loss cable available. Contact Sales for options in your specific frequency band.

Temperature Specifications

		J	JFN
Installation	°F (°C)	-40 to +140 (-40 to +60)	-13 to +140 (-25 to +60)
Storage	°F (°C)	-94 to +185 (-70 to +85)	-94 to +185 (-70 to +85)
Operation	°F (°C)	-58 to +185 (-50 to +85)	-58 to +185 (-50 to +85)
Fire Performance		Halogen free	Fire Retardant, LS0H

Fire Retardant Jacket Specifications

Meets the requirements according to:
IEC60754-1, IEC60754-2

Meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996) as well as IEC 60332-1



RELATED PRODUCTS FOR HCA AIR DIELECTRIC CABLES

The complete range of essentials accessories

7/8" AIR DIELECTRIC CABLE

Model Number	Description
NM-HCA78-020	Connector for HCA78 Cables, N Male (Plast sealing)
NF-HCA78-020	Connector for HCA78 Cables, N Female (Plast sealing)
716M-HCA78-020	Connector for HCA78 Cables, 7-16 Male (Plast sealing)
716F-HCA78-020	Connector for HCA78 Cables, 7-16 Female (Plast sealing)
78EIA-HCA78-019KT	Connector for HCA78 Cables, 7/8 EIA with Coupling Element and Hardware Kit (O-Ring sealing)
158EIA-HCA78-020	Connector for HCA78 Cables, 1-5/8 EIA (Plast sealing)
78EIA-CE-002	Coupling Element for 7/8 EIA Connectors
158EIA-CE-002	Coupling Element for 1 5/8 EIA Connectors
WF-78-A	Wall Feed Through for Cable HCA78/LCF78 Single Entry Kit (with Feed Through Plate)
GKFORM60-78	Grounding kit for HCA78 Cables
CLAMP-105	Butterfly Hanger for HCA/LCF78, E/EP105, Kit of 10
SNAP-ST-78	Stackable Snap-In Hanger for HCA/LCF78 Cables, Kit of 10
SNAP-78	Snap-in Hanger for HCA/LCF78 Cables, Kit of 10
HOIST1-78L	Hoisting grip, open, LCF/UCF/HCA78, E100, E105, EO19

1-5/8" AIR DIELECTRIC CABLE

Model Number	Description
716F-HCA158-001	Connector for HCA158 Cables, 7-16 Female (Plast sealing)
716M-HCA158-001	Connector for HCA158 Cables, 7-16 Male (Plast sealing)
78EIA-HCA158-001	Connector for HCA158 Cables, 7/8 EIA (Plast sealing)
158EIA-HCA158-019KT	Connector for HCA158 Cables, 1-5/8 EIA with Coupling Element and Hardware Kit (O-Ring sealing)
78EIA-CE-002	Coupling Element for 7/8 EIA Connectors
158EIA-CE-002	Coupling Element for 1 5/8 EIA Connectors
WF-158-A	Wall Feed Through for Cable HCA158/LCF158 Single Entry Kit (with Feed Through Plate)
GKFORM60-158	Grounding Kit for HCA158 Cables
CLAMP-158	Butterfly hanger for HCA/LCF-158 Cables, Kit of 10
SNAP-ST-158	Stackable Snap-in Hanger for HCA/LCF158 Cables, Kit of 10
SNAP-158	Snap-in Hanger for HCA/LCF158 Cables, Kit of 10
HOIST1-158L	Hoisting grip, open, LCF/HCA158, E58, E60, E65, EO11
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)
FDIE-B158	Flaring die of HCA158 for the Basic Tool

3" AIR DIELECTRIC CABLE

Model Number	Description
318EIA-HCA300-019KT	Connector for HCA318 Cables, 3-1/8 EIA with Coupling Element and Hardware Kit (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
WF-300	Single Entry Wall Feed Through Kit for HCA300 Cables (without the Plate)
GKFORM60-300	Grounding Kit for HCA300 Cables
CLAMP-300	Butterfly Hanger for HCA300 Cables, kit of 10
ANGLE-CLPI	Angle Adapter for Butterfly Hangers, kit of 10
HOIST1-300L	Hoisting Grip for HCA300, HCA400, E38
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)
FDIE-B300	Flaring Die of HCA300 for the Basic Tool

4" AIR DIELECTRIC CABLE

Model Number	Description
318EIA-HCA400-019KT	Connector for HCA400 Cables, 3-1/8 EIA with Coupling Element and Hardware Kit (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
WF-400	Single Entry Wall Feed Through for HCA400 Cables (without plate)
GKFORM60-400	Grounding Kit for HCA400 Cables
CLAMP-400	Butterfly Hanger for HCA400 Cables, kit of 10
ANGLE-CLPI	Angle Adaptor for Butterfly Hangers, kit of 10
HOIST1-300L	Hoisting Grip for HCA300, HCA400, E38
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)
FDIE-E400	Flaring Die of HCA400 for the Basic Tool
FTOOL-B118400	Basic Tool for HCA 118-50 to 400-50 (need FDIE-B***)

RELATED PRODUCTS FOR HCA AIR DIELECTRIC CABLES

The complete range of essentials accessories

5" AIR DIELECTRIC CABLE

Model Number	Description
318EIA-HCA495-001	Connector for HCA495 Cables, 3 1/8 EIA (Plast2000 sealing)
412IEC-HCA495-019	Connector for HCA495 Cables, 4 1/2 IEC / EIA (O-Ring sealing)
318EIA-CE-002	Coupling Element for 3 1/8 EIA Connectors
412EIA-CE-002	Coupling Element for 4 1/2 EIA Connectors
WF-495	Wall Feed Through for HCA495 Cables Single Entry Kit (without Feed Through Plate)
EAR-495	Grounding Kit for HCA495 Cables
HCH-495-1L4	Hanger for HCA495 Cables Angle Iron 40 mm (1.575in)
HCH-495-1R	Hanger for HCA495 Cables Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-495-1C	Hanger for HCA495 Cables Anchor Bar 18 - 22 mm (0.7 - 0.9in)
CLAMP-495-S	Hanger for HCA495 Cables Standard
ANGLE-CLPM10	Angle Adapter for HCA495 Cables Standard Hanger
HOIST2-L11	Hoisting Grip open for HCA495, E20
FTOOL-E400618	Basic Tool for HCA 400 to 618-50 (need FDIE-E***)
FDIE-E495	Flaring Die of HCA495 for the Basic Tool

6-1/8" AIR DIELECTRIC CABLE

Model Number	Description
618EIA-HCA618-019	Connector for HCA618 Cables, 6 1/8 EIA (O-Ring sealing)
618EIA-CE-002	Coupling Element for 6 1/8 EIA Connectors
WF-618	Wall Feed Through for HCA618 Cables Single Entry Kit (without Feed Through Plate)
EAR-618	Grounding Kit for HCA618 Cables
HCH-618-1L4	Hanger for HCA618 Cables Angle Iron 40 mm (1.575in)
HCH-618-1R	Hanger for HCA618 Cables Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-618-1C	Hanger for HCA618 Cables Anchor Bar 18 - 22 mm (0.7 - 0.9in)
HOIST2-L13	Hoisting Grip open for HCA618
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)

5-1/2" AIR DIELECTRIC CABLE

Model Number	Description
412IEC-HCA550-019	Connector for HCA550 Cables, 4 1/2 IEC / EIA (O-Ring sealing)
618EIA-HCA550-019	Connector for HCA550 Cables, 6 1/8 EIA (O-Ring sealing)
412EIA-CE-002	Coupling Element for 4 1/2 EIA Connectors
618EIA-CE-002	Coupling Element for 6 1/8 EIA Connectors
WF-550	Wall Feed Through for HCA550 Cables Single Entry Kit (without Feed Through Plate)
EAR-550	Grounding Kit for HCA550 Cables
HCH-550-1L4	Hanger for HCA550 Cables Angle Iron 40 mm (1.575in)
HCH-550-1R	Hanger for HCA550 Cable Flat Iron 6 - 12 mm (0.24 - 0.47in)
HCH-550-1C	Hanger for HCA550 Cables Anchor Bar 18 - 22 mm (0.7 - 0.9in)
HOIST2-L12	Hoisting Grip open for HCA550 Cables
FTOOL-E400618	Basic Tool for HCA 400-50 to 618-50 (need FDIE-E***)
FDIE-E550	Flaring Die of HCA500 for the Basic Tool



CONNECTORS

HCA AIR DIELECTRIC CABLE ACCESSORY

RFS Technologies offers a wide range of connectors for HCA air cables to provide connections to systems with various interface types.

The most popular interface in the industry today is EIA flanges. Most of our EIA connectors use O-ring sealing to make installation faster and easier. Connector kits, which include the coupling element and bolt kit with the connector, are the best choice for applications where two flanges are joined. Connector re-install kits consist of proper sealing components and help reuse the connectors.

Small connectors with N, 7/16" and some EIA interfaces use traditional plast seals that have been proven for decades.



HCA CONNECTOR ORDERING INFORMATION



NF-HCA78-020
N Female Connector for 7/8" Coaxial Cable, RAPID FIT™ Sealing compound



716M-HCA158-001
7/16" DIN male connector for 1 5/8" Coaxial Cable



618EIA-HCA618-019
6-1/8" EIA Connector for 6-1/8" Coaxial Cable, Gas stop / Gas pass, O-Ring Sealing



NM-HCA78-020
N Male Connector for 7/8" Coaxial Cable, RAPID FIT™ Sealing compound

Cable Series	Interface	Product	Model Number	SEALING METHOD	
				O-ring	Plast
HCA78	7/8" EIA	connector	78EIA-HCA78-019	X	
	7/8" EIA	connector kit	78EIA-HCA78-019KT	X	
	7/8" EIA	conn. re-install kit	78EIA-HCA78-019RK	X	
	1-5/8" EIA	connector	158EIA-HCA78-020		X
	N Male	connector	NM-HCA78-020		X
	N Female	connector	NF-HCA78-020		X
	7/16" Male	connector	716M-HCA78-020		X
HCA158	7/16" Female	connector	716F-HCA78-020		X
	7/8" EIA	connector	78EIA-HCA158-001		X
	1-5/8" EIA	connector	158EIA-HCA158-019	X	
	1-5/8" EIA	connector kit	158EIA-HCA158-019KT	X	
	1-5/8" EIA	conn. re-install kit	158EIA-HCA158-019RK	X	
	7/16" Male	connector	716M-HCA158-001		X
	7/16" Female	connector	716F-HCA158-001		X
HCA300	3-1/8" EIA	connector	318EIA-HCA300-019	X	
	3-1/8" EIA	connector kit	318EIA-HCA300-019KT	X	
	3-1/8" EIA	conn. re-install kit	318EIA-HCA300-019RK	X	
HCA400	3-1/8" EIA	connector	318EIA-HCA400-019	X	
	3-1/8" EIA	connector kit	318EIA-HCA400-019KT	X	
	3-1/8" EIA	conn. re-install kit	318EIA-HCA400-019RK	X	
HCA495	3-1/8" EIA	connector	318EIA-HCA495-001		X
	4-1/2" EIA	connector	412IEC-HCA495-019	X	
HCA550	4-1/2" EIA	connector	412IEC-HCA550-019	X	
	6-1/8" EIA	connector	618EIA-HCA550-019	X	
HCA618	6-1/8" EIA	connector	618EIA-HCA618-019	X	

SEALING COMPOUND ORDERING INFORMATION

Cable Series	Connector	Sealing Volume (CM ³)	COMPOUND MODEL (20 CM ³)	COMPOUND MODEL (70 CM ³)	COMPOUND INJECTION TOOL
			P2000-001	P2000-002	P2000-003
HCA78	158EIA-HCA78-020	5	1		
	NM-HCA78-020	5	1		
	NF-HCA78-020	5	1		
	716M-HCA78-020	5	1		
	716F-HCA78-020	5	1		
HCA158	78EIA-HCA158-001	20	1		
	716M-HCA158-001	20	1		
	716F-HCA158-001	20	1		
HCA495	318EIA-HCA495-001	120		2	1

AUTOMATIC DEHYDRATOR HCA AIR DIELECTRIC CABLES ACCESSORY



DEHYDRATOR ORDERING INFORMATION

Series Name	Applications	Model Name	Description
BD210WLP [1]	Telecom/Radar Waveguides and Antennas	BD210WLP	110-125VAC 50/60HZ DEHYDRATOR, 0.3-7.5 PSIG
		BD210WLP-V	110-125VAC 50/60HZ VERTICAL WALL MOUNTED DEHYDRATOR, 0.3-7.5 PSIG
BD550W [1]	Telecom/Radar Waveguides and Antennas & Broadcasting Air Cables and Antennas	BD550W	110-125VAC 50/60HZ DEHYDRATOR, 2-15 PSIG
		BD550WLP	110-125VAC 50/60HZ LOW PRESSURE DEHYDRATOR, 0.3-7.5 PSIG
BD1500W [1]	Telecom/Radar Waveguides and Antennas & Broadcasting Air Cables and Antennas	BD1500W	110-125VAC 50/60HZ DEHYDRATOR, 2-15 PSIG
		BD1500WLP	110-125VAC 50/60HZ LOW PRESSURE DEHYDRATOR, 0.3 7.5 PSIG
BD4200W [1]	Broadcasting Site with Long and Multiple Air Cables and Antennas	BD4200W	110-125VAC 50/60HZ DEHYDRATOR, 5-20 PSIG
		BD4200WLP	110-125VAC 50/60HZ LOW PRESSURE DEHYDRATOR, 0.3-10 PSIG
BD8400W	Broadcasting Site with Long and Multiple Air Cables and Antennas	BD8402W	208-253VAC 50/60HZ DEHYDRATOR, 0-15 PSIG

Note: 1. 220VAC Power supply models are available upon demand.

DEHYDRATOR ACCESSORIES ORDERING INFORMATION

Model Name	Air Line Kit				Installation Kit		Maintenance Kit		
	1 Line Kit	2 Line Kit	4 Line Kit	8 Line Kit	Rack Mount	Wall Mount	6 Month [3]	1 year [3] / 8K Hour [4]	16K Hour [4]
BD210WLP [1]	GLK-1	MLK-2 + PWM2G [2]	MLK-4 + PWM4G [2]	MLK-8 + PWM8G [2]	Included, P017703 for 2nd pair of ears	P017460	N/A, Only Inspect and Test	P017612	Use 8K Hour Kit
BD550W [1]					N/A, only wall mountable	Vertical kit included			
BD1500W [1]					P011674	P011773	P018301	P013479	
BD4200W [1]					N/A, Cabinet Type Unit	N/A, Cabinet Type Unit	P018302	P012252	
BD8400W							P012314	P011471	

Note:

- 220VAC Power supply models are available upon demand.
- Manifold units with check valves are available, but not recommended for pressurizing antennas with dual feedlines.
- 6 Month or 1 Year maintenance kits are installed when the units operate for every 6 or 12 months.
- 8,000- or 16,000-hour maintenance kits are installed when the units show a TTL TIME alarm. For details and more accessories, refer to datasheet.

AUTOMATIC DEHYDRATOR HCA AIR DIELECTRIC CABLES ACCESSORY

GENERAL SPECIFICATIONS						
PARAMETER	UNIT	BD210WLP	BD550W	BD1500W	BD4200W	BD8402W
Max System Volume at Sea Level	FT3 (L)	70 (1993)	192 (5455)	525 (14863)	1469 (41615)	2938 (83230)
Max Output Capacity	SCFM (L/h)	0.14 (236)	0.38 (649)	1.04 (1770)	2.92 (4955)	5.83 (9911)
Field Adjustable Output Pressure	PSIG (KPa)	0.3-7.5 (2.1-51.7)	2-15 (13.8-103.4)	2-15 (13.8-103.4)	5-20 (35-138)	0-15 (0-103.4)
Output Air Relative Humidity		< 2% RH				
Dehydrating Method		Heatless Dessicant				
Number of Outlet		1				
Output Fitting		3/8" push-to-lock quick fitting			1/2" NPT Female	
Noise Level at 10ft (3m)	dB(A)	<48	48	63	78,8	
Standard Alarms and Log		Low Pressure, High Pressure, High Humidity, Excess Run-time, High Internal Temperature; Total Hour and Event Log, Maintenance Reminder				
Network Management		via Web Browser or SNMP through RJ-45 Ethernet Connection				
ELECTRICAL SPECIFICATIONS						
Operating Voltage	V	110 to 125 VAC, 50 /60 Hz (220V and DC model available)				220 to 230VAC, 50 / 60 Hz
Operating Current	A	1	7	7	8.6	15
MECHANICAL SPECIFICATIONS						
Dimensions DxWxH	in (cm)	19.39 x 16.13 x 6.75 (49.27 x 40.97 x 17.15)	12 x 17.25 x 27 (30.5 x 43.8 x 68.6)	12 x 17.25 x 27 (30.5 x 43.8 x 68.6)	21 x 25.5 x 49 (53.3 x 64.1 x 124.5)	21 x 25.25 x 49 (53.3 x 64.1 x 124.5)
Weight	Lbs (kg)	42 (19)	74 (33.6)	80 (36.3)	222 (100)	265 (120)
Mount Options		Desktop & Rack Mount, Wall Mount By Optional Kit	Desktop & Free Standing, Wall & Rack Mount By Optional Kit		Free Standing	
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature	°F (°C)	40° - 85°F (5° - 30°C) Ambient *Unit will go into SHUTDOWN Mode if Cabinet Temperature exceeds 120°F (49°C)				
RECOMMENDED MAXIMUM LINE LENGTH						
CABLE MODEL	UNIT	BD210WLP	BD550W	BD1500W	BD4200W	BD8402W
HCA78, 7/8" Air Cables	ft (m)	15,000 (4,600)	41,000 (12,800)	114,000 (34,900)	318,000 (97,000)	639,000 (195,000)
HCA158, 1-5/8" Air Cables	ft (m)	3,600 (1,100)	10,000 (3,100)	27,000 (8,400)	77,000 (23,700)	155,000 (47,500)
HCA300, 3" Air Cables	ft (m)	1,600 (500)	4,500 (1,400)	12,000 (3,900)	36,000 (11,000)	72,000 (22,100)
HCA400, 4" Air Cables	ft (m)	1,000 (310)	2,800 (870)	7,000 (2,370)	21,000 (6,600)	43,000 (13,300)
HCA495, 5" Air Cables	ft (m)	620 (190)	1,700 (520)	4,600 (1,430)	13,100 (4,000)	26,000 (8,000)
HCA550, 5-1/2" Air Cables	ft (m)	360 (110)	1,000 (310)	2,700 (840)	7,500 (2,300)	15,000 (4,700)
HCA618, 6-1/8" Air Cables	ft (m)	260 (80)	720 (220)	2,000 (620)	5,500 (1,700)	11,000 (3,500)
EP60, 6GHz Elliptical Waveguide	ft (m)	3,600 (1,100)	9,800 (3,000)	27,000 (8,300)	76,000 (23,300)	153,000 (46,700)
EP65, 6/7GHz Elliptical Waveguide	ft (m)	5,200 (1,600)	14,700 (4,500)	40,000 (12,300)	112,000 (34,400)	225,000 (68,900)
EP78, 7/8GHz Elliptical Waveguide	ft (m)	5,500 (1,700)	15,700 (4,800)	43,000 (13,200)	121,000 (37,000)	243,000 (74,100)
EP105, 10/11GHz Elliptical Waveguide	ft (m)	9,800 (3,000)	27,500 (8,400)	75,000 (22,900)	210,000 (64,200)	421,000 (128,500)



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