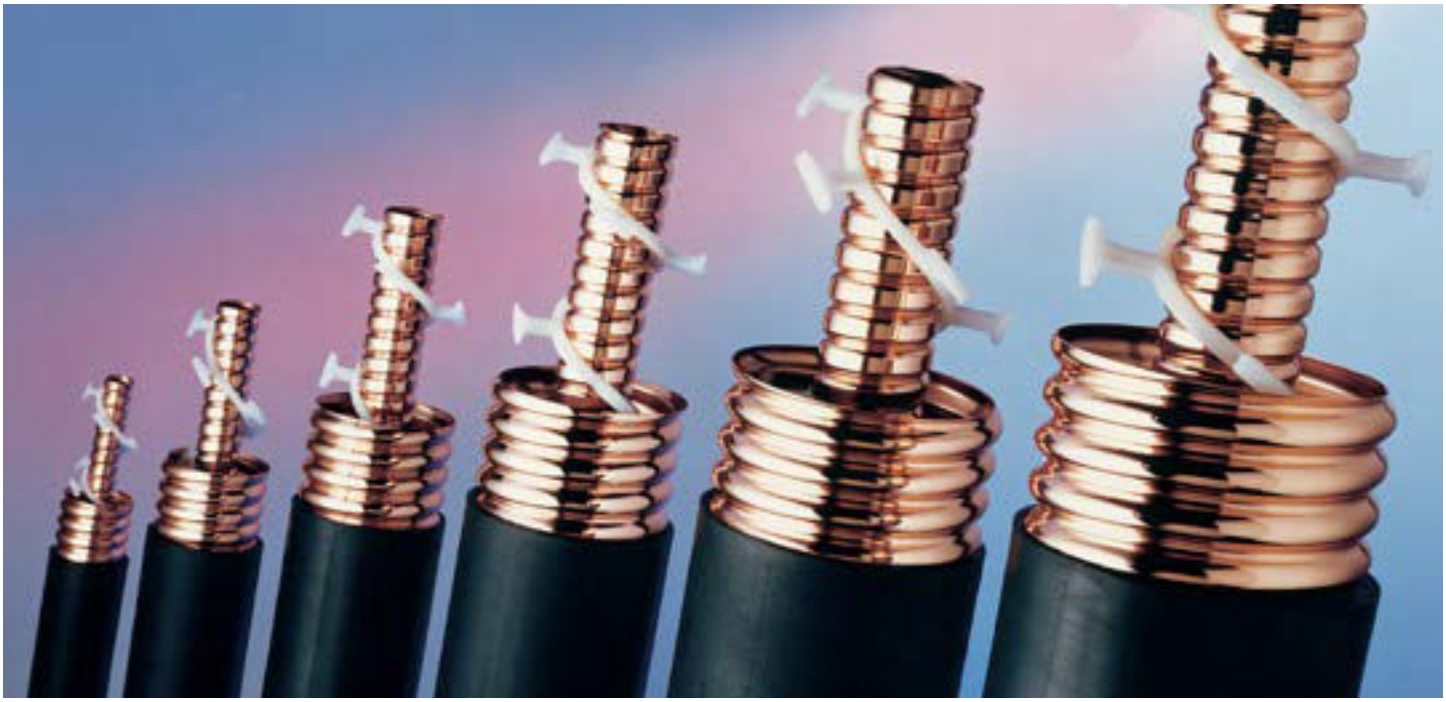
RFS Technologies
an Amphenol Company

Air-Dielectric Coaxial Cables

Feeder Cables for Broadcast, Radar, and other High Power Transmission Systems Applications

WIRELESS | MOBILE RADIO | MICROWAVE | IN-TUNNEL | IN-BUILDING | TV & RADIO | HF & DEFENSE



The **Air-Dielectric Cables** are made from premium materials and offer low attenuation and high-power rating to ensure superior performance of your transmission system or network.

With exceptional heat transfer properties and temperature stabilized dielectric materials, the **RFS Technologies, Inc. Air-Dielectric Cables** allow network designers in broadcasting, radar, microwave, wireless communication and other RF segments to maximize their systems with less interference and better signal propagation.

Features	Benefits
Low attenuation, low VSWR and high power rating	Support TV, FM, Radar and other high-power RF transmissions
Excellent bending characteristics and low weight	Facilitate an easy and quick installation than rigid lines
A complete cable family from size 7/8” to 6-1/8”	Fit to different applications in different scenarios
Plenum rated cables available from 7/8” to 4” models	Support both indoor and outdoor applications
With Full range of accessories and dehydrators	Get a complete solution from one shop
7/8” to 4” models are made in USA	Help the quick roll-out of the systems and networks
Cable termination and assembly, phase stabilization and phase matching services available upon request	Reduce on-site workloads, meets stringent system and network requirements

Air-Dielectric Cable Models and Specifications

(Models for outdoor applications. 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, ft3/ 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)						