



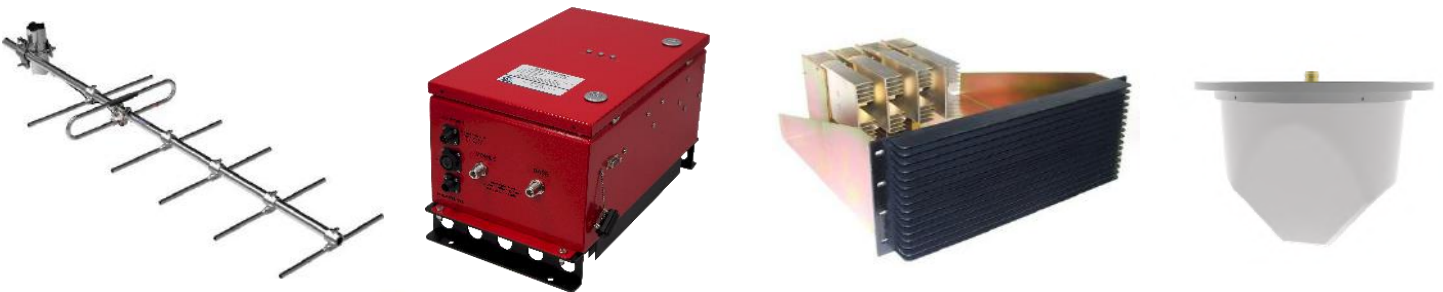
**MISSION-CRITICAL
COMMUNICATIONS**

FOR UTILITY NETWORKS

Antennas, RF Filtering and In-Building Solutions

Designed for superior reliability and performance

Utility providers rely on critical telecommunication systems to ensure the continuous provision of core operational services as well as the safety of their workers. Often operating in remote, hard-to-reach areas and under the most extreme environmental conditions, they must also comply with strict Public Safety regulations in order to provide vital communications for Utility field staff in time of emergency.



 **COMPROD**
Simplifying RF Solutions

Serving the Communication Needs of

Leading Utility Providers Worldwide

Our knowledge of the market, best-in-class technology and service excellence have made us a partner of choice for some of the world's leading Utility providers who have turned to Comprod's products and engineering support for the highest quality in RF components, resulting in minimal maintenance and enhanced performance.

ANTENNAS

- 220 MHz Yagi, offset dipoles, 4-bay exposed dipoles and heavy-duty antennas successfully deployed by the largest electric cooperative in South Carolina.
- Black anodized exposed dipole antennas, designed to provide low VSWR and superior performance in severe weather conditions, rolled out by one of the largest private telecommunications networks in North America, and installed in the world's largest power station: China's Three Gorges Dam.

MOBILE ANTENNAS

- Mounted on Utility vehicles, our mobile antennas feature stainless steel whips, high-impact ABS, and gold-plated, spring-loaded contacts. Built for hard use in rugged terrain, they can withstand varying temperatures, dust, shock and vibration.

FILTERS

- As part of a digital radio modernization project, Comprod provided a filters and antenna solution to the NRTC electrical co-op to support both digital (from dispatch to the transmitter sites) and analog communications (from the transmitter tower to its 150 vehicles).
- Filter application for compact installation of a 4-channel 220 MHz hybrid combiner with receiver multicoupler installed for a leading provider in the East Coast.

IN-BUILDING SYSTEMS

- VHF Bi-Directional Amplifier (BDA) and In-Building solutions, including the F-3749 Tri-Band antennas, Tri-Band couplers and VHF Donor Yagi antennas have been deployed to enhance the security communications within a north-eastern US nuclear power plant.

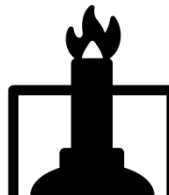
Fun Fact



Did you know?

- Water level monitoring, GOES weather data collection, voice and SCADA applications are all supported using Comprod products.

- Hydro-Quebec is the only electric utility in North America to have a major research center. The company invests approx. \$100 million per year in its innovation projects.



SCADA - SMART GRID - REMOTE MONITORING - FLEET MANAGEMENT - TELEMETRY - MOBILE COMMUNICATIONS

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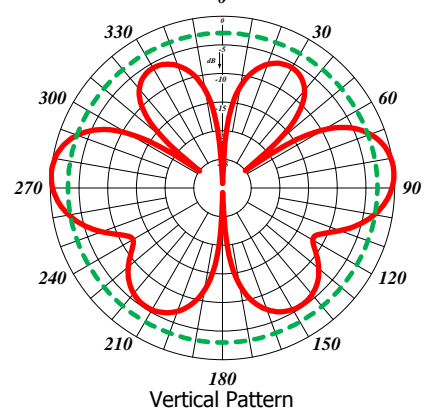
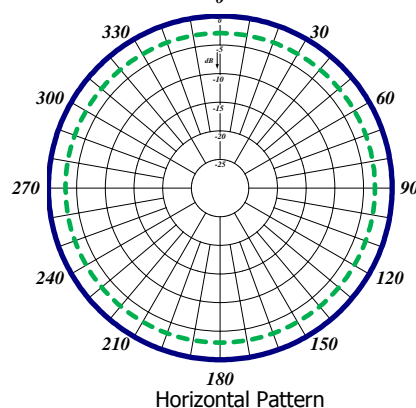
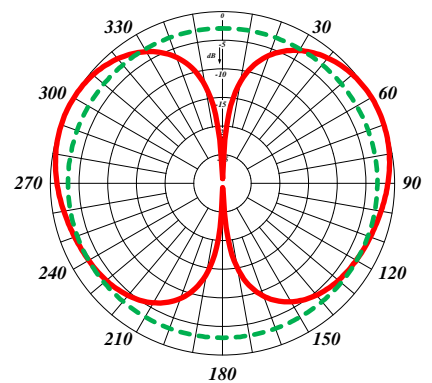
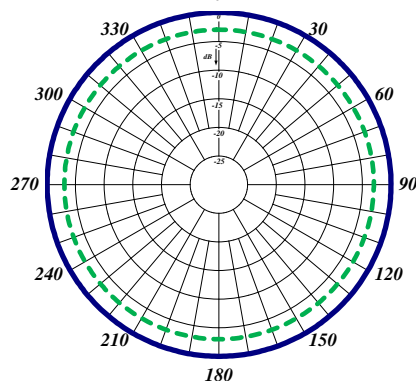
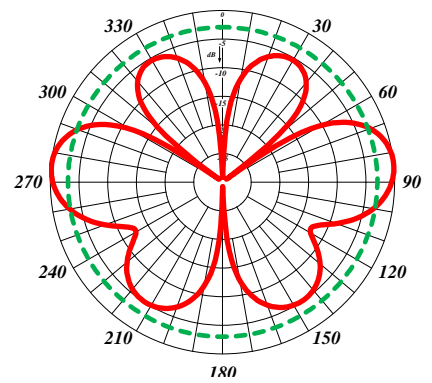
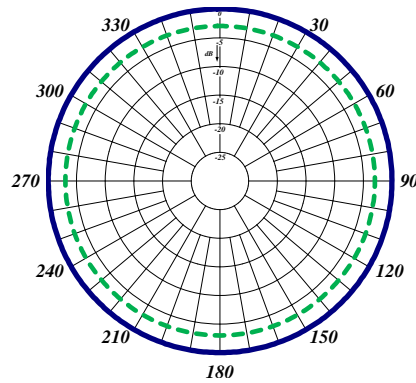
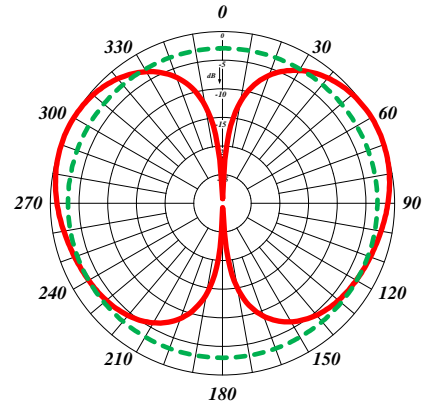
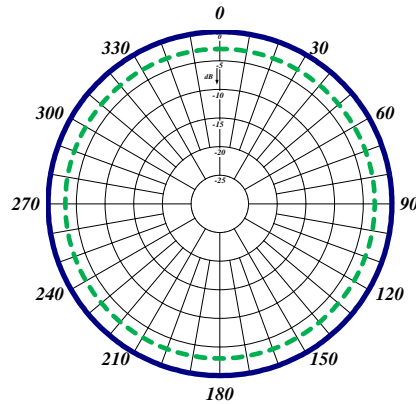
Ground Plane Antenna Series

The Ground Plane Antenna Series are available in VHF and UHF configurations. These omnidirectional antennas are either wide band unity or 2-3 dB gain antennas. They are constructed from high strength, corrosion resistant aluminum alloy and stainless steel. All our antennas can be completely customized to your particular applications.

- Each antenna has a rugged design to withstand the most extreme environmental conditions.
- Wide frequency band applications.
- The mounting hardware supplied will permit 0.75" to 2.38" O.D. pipe installation.
- DC ground for lightning protection.
- Ideal for mounting on buildings.

Electrical Specifications	265-70	266-70	267-70	268-70
Frequency Range, MHz	118-174	118-174	118-137	406-470
Nominal Gain, dBd	Unity	2.0-3.0	Unity	2.0-3.0
Bandwidth 1.5:1 VSWR, MHz (% Ctr. Freq.)	6%	1%	15.6% (2:1)	1%
Tuning	Field Adj.	Field Adj.	Fixed	Field Adj.
Polarization	Vertical	Vertical	Vertical	Vertical
Vertical Beamwidth (Ver. Pol.)	80°	40°	71°	38°
Pattern	Omni	Omni	Omni	Omni
Power Rating, Watts	300	250	250	100
Nominal Impedance, Ohms	50	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male	Type N Male
Mechanical Specifications	265-70	266-70	267-70	268-70
Max. Length, in (mm)	58 (1473)	108 (2743)	67 (1702)	46 (1168)
Width, in (mm)	55 (1397)	46 (1168)	26.5 (673)	20 (508)
Weight, lbs. (kg)	6.8 (3.3)	6.5 (3.0)	6.0 (2.7)	1.5 (0.7)
Rated Wind Velocity, No Ice, mph (km/h)	150 (241)	125 (201)	125 (201)	125 (201)
Rated Wind Velocity, 0.5" (13mm) Ice, mph	140(225)	85 (137)	110 (177)	85 (137)
Lateral Thrust @ 100 mph wind, lbs. (kg)	31.8 (14.4)	40 (18.1)	24 (10.7)	7.3 (3.3)
Bending Moment @top clamp: 100 mph, ft.*lb	41 (5.7)	94 (13)	28 (3.9)	12 (1.6)
Projected Area, ft ² (m ²)	1.2 (0.110)	1.57 (0.146)	0.88 (0.082)	0.27 (0.03)
Mounting Hardware Included	167-85 Clamp	167-85 Clamp	167-85 Clamp	167-85 Clamp





Omnidirectional Antenna

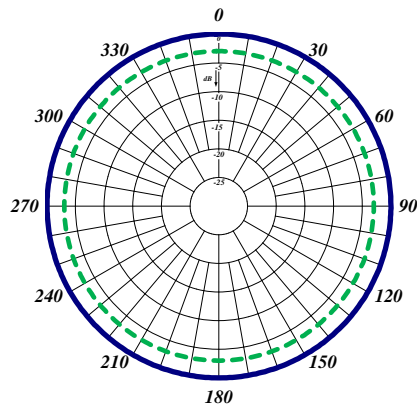
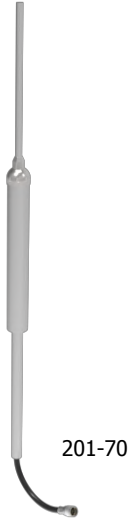
The Omnidirectional Antenna Series are available in VHF, UHF and 700/800/900 MHz configurations. These omnidirectional antennas are wide-band and unity gain. They are constructed from high strength, corrosion resistant aluminum alloy and stainless steel. All our antennas can be completely customized to your particular applications.

- Each antenna has a rugged design to withstand the most extreme environmental conditions.
- The mounting hardware supplied will permit 0.75" to 2.3/8" O.D. pipe installation.
- DC ground for lightning protection.
- Because of the very large bandwidth, these are ideal antennas to stock, whether for emergency use or for resale.

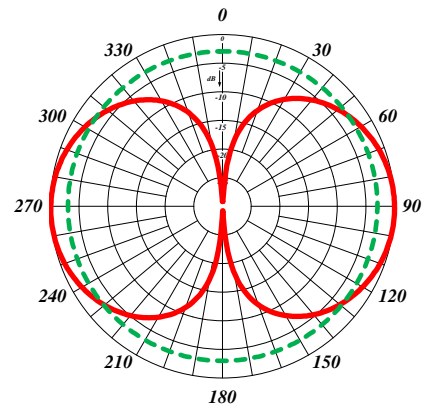
Electrical Specifications	201-70	301-70	401-70
Frequency Range, MHz	25-174 MHz	406-512	746-960
Nominal Gain	Unity	Unity	Unity
Bandwidth 1.5:1 VSWR, MHz	2%	20	10%
Polarization	Vertical	Vertical	Vertical
Vertical Beam width (Ver. Pol.)	78°	75°	75°
Pattern	Omni	Omni	Omni
Power Rating, Watts	500	100	100
Nominal Impedance, Ohms	50	50	50
Lightning Protection	Star Gap	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	201-70	301-70	401-70
Max. Length, in (mm)	229 (5817)	24 (610)	21 (533)
Skirt Diameter, in (mm)	2.625 (67)	N/A	N/A
Whip Diameter, in (mm)	0.75 (19)	N/A	N/A
Weight, lbs. (kg)	17 (7.7)	1.4 (0.7)	1 (0.45)
Rated Wind Velocity, no ice, mph (km/h)	115 (185)	150 (241)	150 (241)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	N/A	100 (161)	100 (161)
Lateral Thrust @ 100 mph, ft.*lb (kg*m)	67 (30.4)	3.9 (1.8)	3.4 (1.6)
Bending Moment @top clamp: 100 mph, ft.*lb (kg*m)	308 (42.6)	1.84 (0.25)	1.87 (0.26)
Projected Area, ft ² (m ²)	2.5 (0.23)	0.15 (0.014)	0.13 (0.019)
Mounting Information Mast O.D. (mm) or Hardware Included	1.7" (42) O.D.	167-85 Clamp Included	167-85 Clamp Included



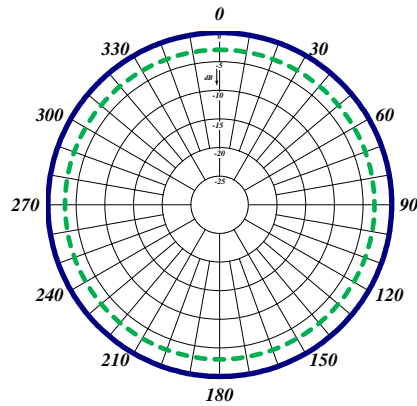
401-70



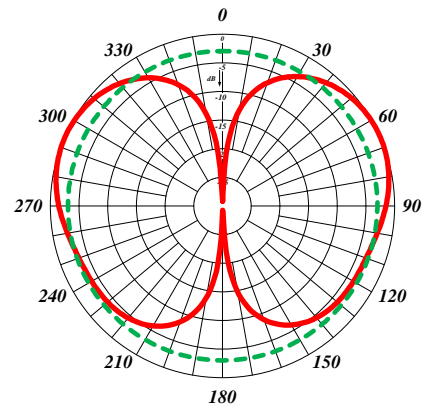
Horizontal Pattern



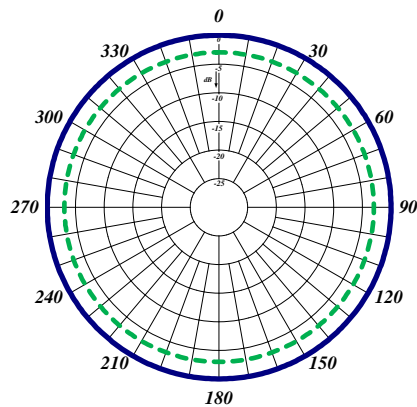
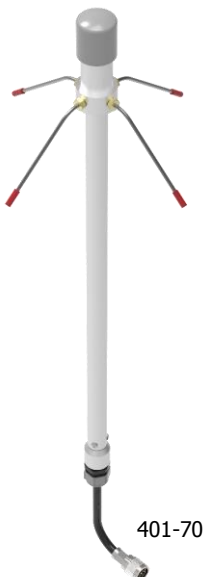
Vertical Pattern



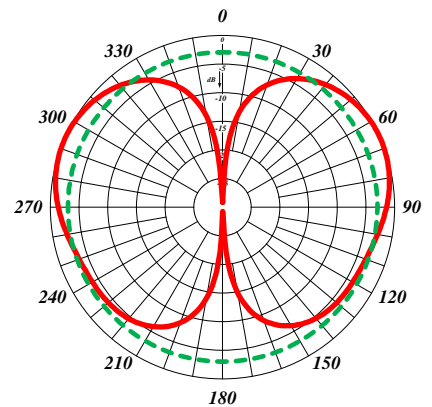
Horizontal Pattern



Vertical Pattern



Horizontal Pattern



Vertical Pattern

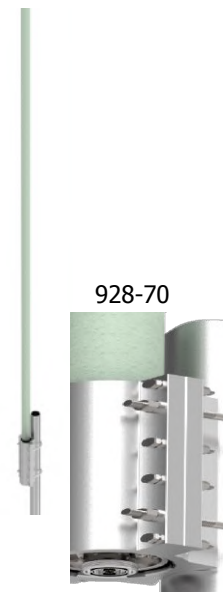
Collinear Omnidirectional Antenna

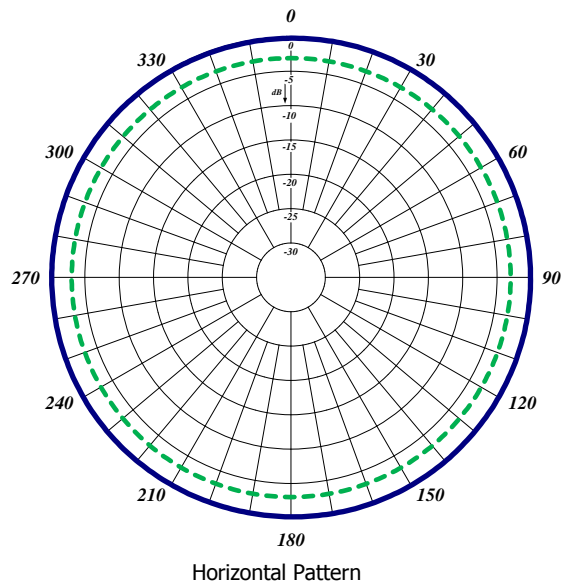
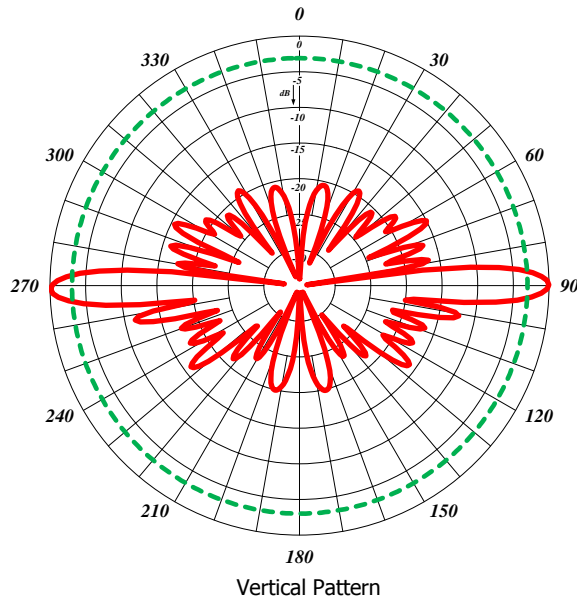
The 928-70 Collinear Omni Antenna is available in three frequency splits: 746-806; 806-869 or 885-960 within the 746 to 960 MHz range.

The antennas have an 8.5 dBd gain, and offer 6 fixed Electrical Downtilt options, based on customer requirements.

The antenna is constructed with a high-quality fiberglass light-grey radome. The aluminum mounting hardware is included with the antenna.

Electrical Specifications	928-70
Frequency Range, MHz	746-806; 806-869; 885-960
Nominal Gain, dBd	8.5
Bandwidth 1.4:1 VSWR, MHz	75
Polarization	Vertical
Horizontal Beamwidth (°)	360
Vertical Beamwidth (°)	6.5
Electrical Downtilt—Fixed (Options) (°)	0, 1, 2, 3, 4, 5, 6
Pattern	Omnidirectional
3rd Order Intermodulation @ 2 X 43 dBm, dBc	< -150
Power Rating, Watts	500
Nominal Impedance, Ohms	50
Lightning Protection	DC Ground
Standard Termination	7/16 DIN-Female
Mechanical Specifications	928-70
Max. Length, in (mm)	130 (3310)
Diameter, in (mm)	2 (52)
Weight, lbs. (kg) - with mounting kit	26 (11.8)
Rated Wind Velocity, mph (km/h)	124 (200)
Radome Material	Fiberglass, light grey, RAL 7035
Radiating Element Material	Brass
Operational Temperature, °C	-55 to 70
Mounting Hardware Included	Pole mount included (U-bolts not included)





870 Series VHF Exposed Dipoles

The 870 Series VHF Exposed Dipoles are available in 1, 2, 4, 8, dipole and dual dipole configurations. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, adjustable or fixed, side mount or top mount, and heavy-duty versions are available.

- Each antenna is offered in a 1/4, 3/8, or 1/2 wave spacing versions.
- The 87XA-70 has external cabling and a field-adjustable pattern.
- The 87XF-70 has internal cabling and fixed dipole-mast spacing.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

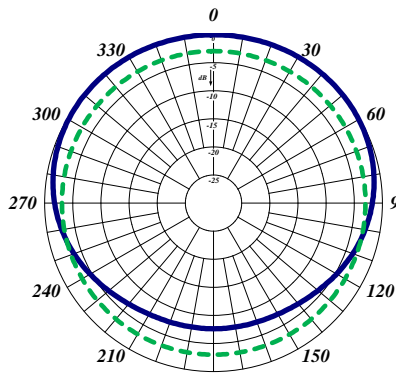
Electrical Specifications	871F-70	872F-70	874F-70
Frequency Range, MHz	138-174	138-174	138-174
Nominal Gain, dBd	2.0-2.5	5.0-5.5	8.0-8.5
Number of Dipoles	1	2	4
Bandwidth 1.5:1 VSWR, MHz	36	36	36
Polarization	Vertical	Vertical	Vertical
Pattern	Offset / bi	Offset / bi	Offset / bi
Power Rating, Watts	200	450	450
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	871F-70	872F-70	874F-70
Length, in. (mm)	78 (1981)	162 (3200)	246 (6248)
Width (1/2 Wave Spacing), in. (mm)	40 (1016)	40 (1016)	40 (1016)
Weight, lbs. (kg)	13 (6)	24 (10.8)	67 (30)
Rated Wind Velocity, No Ice, mph (km/h)	170 (274)	150 (241)	110 (177)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	145 (233)	135 (217)	85 (137)
Lateral Thrust @ 100 mph, wind, lbs. (N)	45 (199)	92 (407)	206 (914)
Bending Moment @ top clamp: 100 mph, ft.*lb (N*m)	18 (24)	205 (278)	1440 (1953)
Projected Area, ft ² (m ²)	1.7 (0.16)	3.5 (0.33)	7.7 (0.72)
Mounting Information Mast O.D., in. (mm)	1.9" (48)	2.4" (61)	2.9" (73)



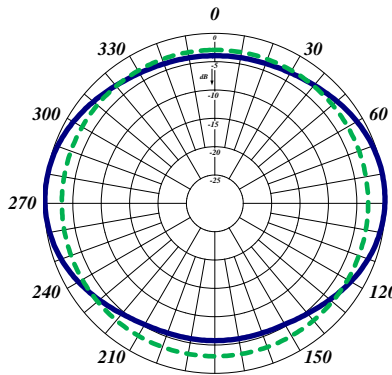
872F-70



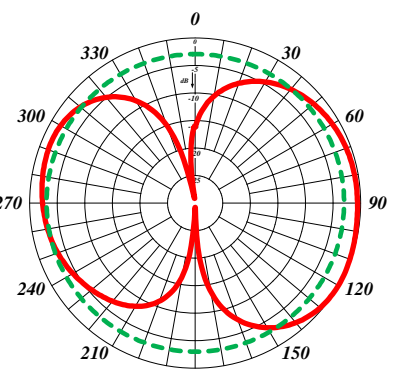
871F-70



Quarter-wave Spacing Horizontal



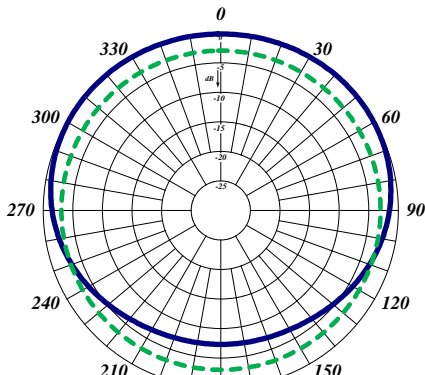
Half-wave Spacing Horizontal



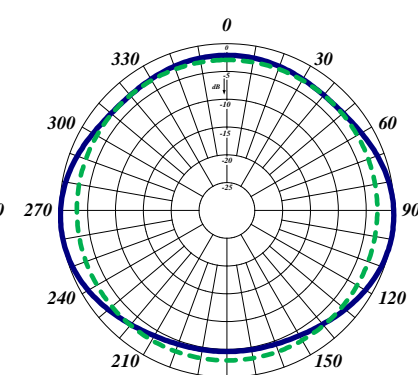
Half-wave Spacing Vertical



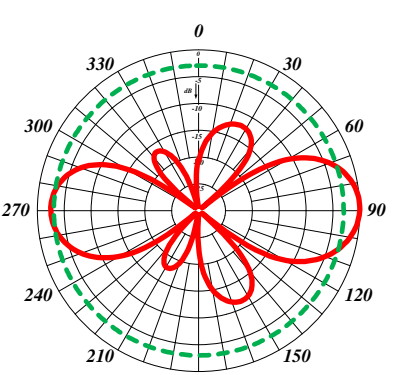
872F-70



Quarter-wave Spacing Horizontal



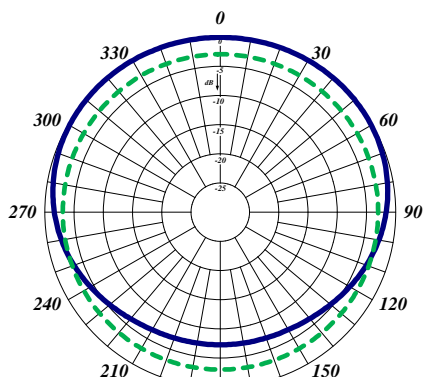
Half-wave Spacing Horizontal



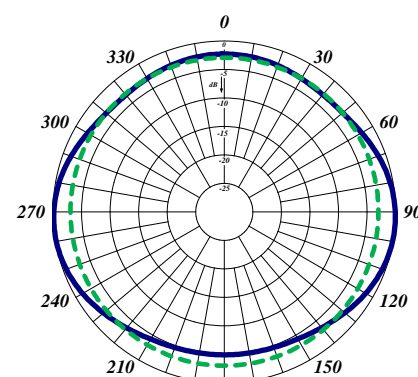
Half-wave Spacing Vertical



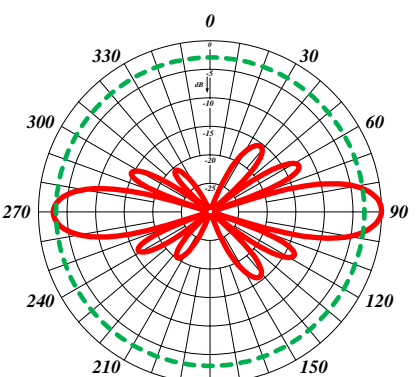
874F-70



Quarter-wave Spacing Horizontal



Half-wave Spacing Horizontal



Half-wave Spacing Vertical

870 Series 220MHz Exposed Dipoles

The 870 Series 220MHz Exposed Dipoles are available in 1, 2, 4, 8 dipole configurations. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, adjustable, or fixed, side mount or top mount, and heavy-duty versions are available.

- Each antenna is offered in a 1/4, 3/8 or 1/2 wave spacing versions.
- The 87XA-70 has external cabling and a field-adjustable pattern.
- The 87XF-70 has internal cabling and fixed dipole-mast spacing.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

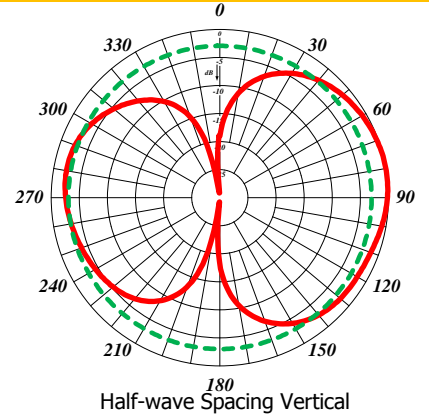
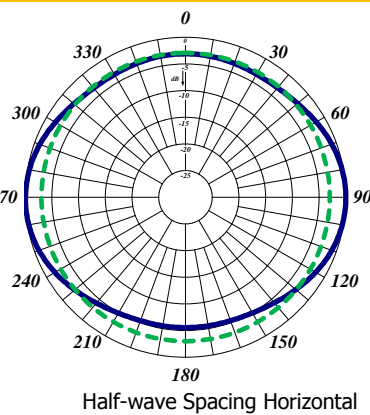
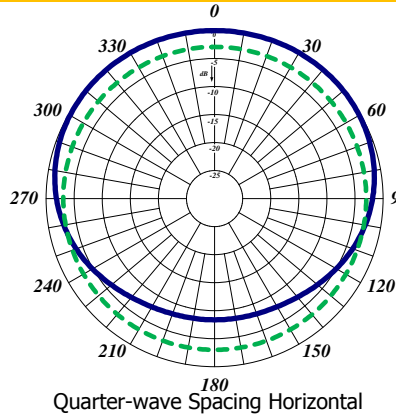
Electrical Specifications	871F-70-2	872F-70-2	874F-70-2
Frequency Range, MHz	215-225	215-225	215-225
Nominal Gain, dBd	2.0-2.5	5.0-5.5	8.0-8.5
Number of Dipoles	1	2	4
Bandwidth 1.5:1 VSWR, MHz	10	10	10
Polarization	Vertical	Vertical	Vertical
Pattern	Offset / bi	Offset / bi	Offset / bi
Power Rating, Watts	200	300	500
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	871F-70-2	872F-70-2	874F-70-2
Length, in. (mm)	66 (1676)	112 (2845)	200 (5080)
Width (1/2 Wave Spacing), in. (mm)	31 (787)	31 (787)	32 (813)
Weight, lbs. (kg)	12.5 (5.7)	21 (9.5)	51 (23)
Rated Wind Velocity, No Ice, mph (km/h)	165 (266)	150 (241)	145 (233)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	140 (225)	130 (209)	105 (177)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	40 (18)	66 (30)	143 (65)
Bending Moment @ top clamp: 100 mph, ft.*lb (kg*m)	58 (8)	150 (21)	610 (84)
Projected Area, ft ² (m ²)	1.5 (0.14)	2.6 (0.24)	5.5 (0.51)
Mounting Information Mast O.D., in. (mm)	1.9 (48)	1.9 (48)	2.4 (60)



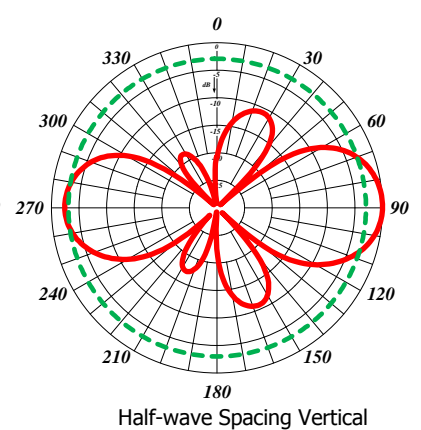
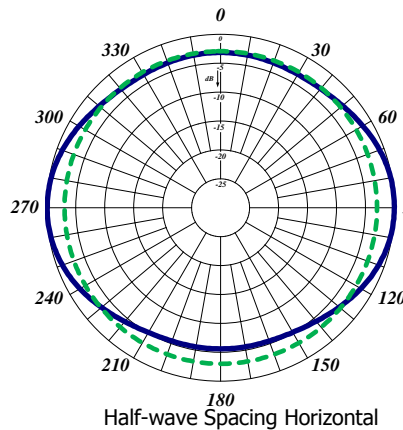
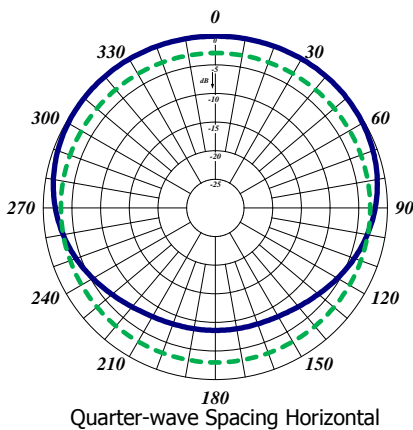
872F-70-2



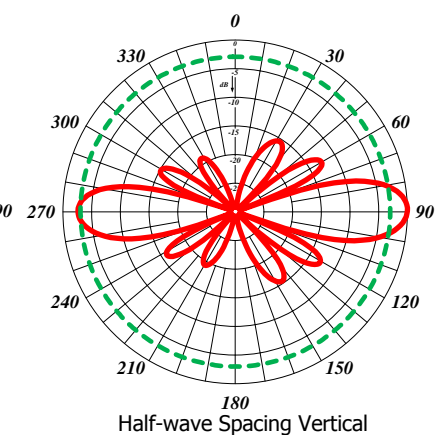
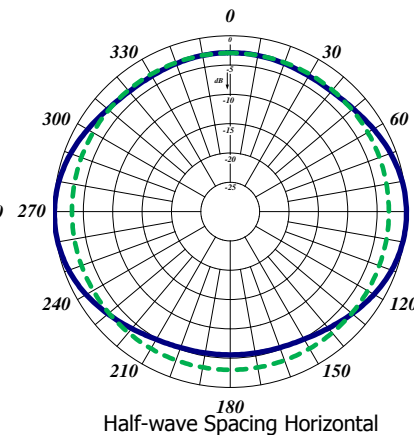
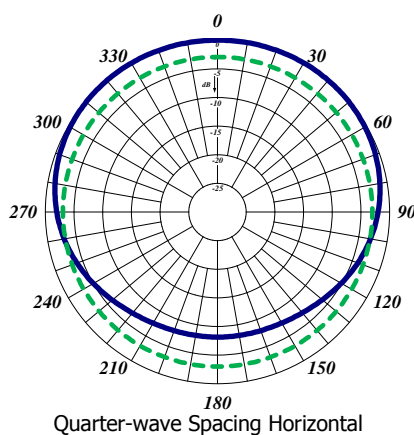
871F-70-2



872F-70-2



874F-70-2



790 Series Enclosed Dipole

The 790 Series Enclosed Dipoles are available in 2, 4 or 8 dipole configurations. All our antennas can be completely customized to your particular applications.

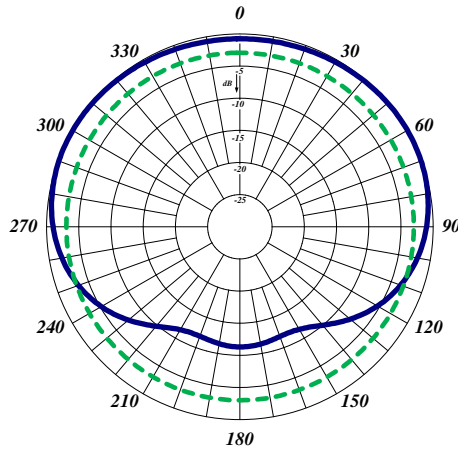
- Each antenna is offered in an offset pattern, 1/4 or 1/2 wave versions.
- Broadband antennas are ideal for trunking or cellular applications.
- Weatherproof radome to ensure continuous service during severe environmental conditions.
- Versions with 3, 6, and 9-degree downtilt are also available.

Electrical Specifications	792-70	794-70	799-70
Frequency Range, MHz	746-960	746-960	746-960
Nominal Gain, dBd	5.0	8.0	10.0
Number of Dipoles	2	4	8
Bandwidth 1.5:1 VSWR, MHz	150	150	150
Polarization	Vertical	Vertical	Vertical
Pattern	Offset	Offset	Offset
Power Rating, Watts	150	300	500
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	792-70	794-70	799-70
Length, in. (mm)	22 (559)	44.5 (1130)	94 (2388)
Width (1/2 Wave Spacing), in. (mm)	2.5 (64)	2.5 (64)	2.5 (64)
Weight, lbs. (kg)	8.8 (4)	14 (6.5)	24 (11)
Rated Wind Velocity, No Ice, mph (km/h)	100 (162)	100 (162)	100 (162)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	85 (137)	85 (137)	85 (137)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	36.4 (16.5)	73 (33)	153 (59)
Projected Area, ft ² (m ²)	1.4 (0.13)	2.7 (0.25)	5.7 (0.53)
Mounting Information	1.5-2.88" O.D.	1.5-2.88" O.D.	1.5-2.88" O.D.

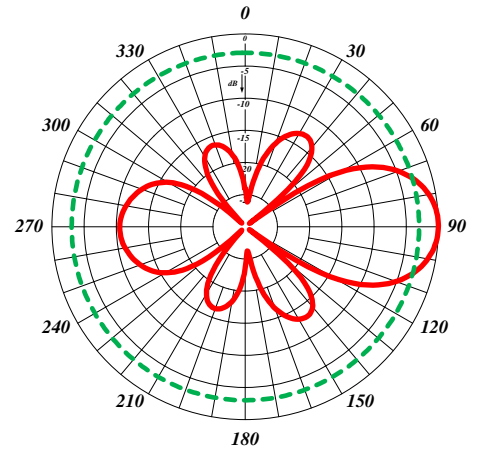




792-70



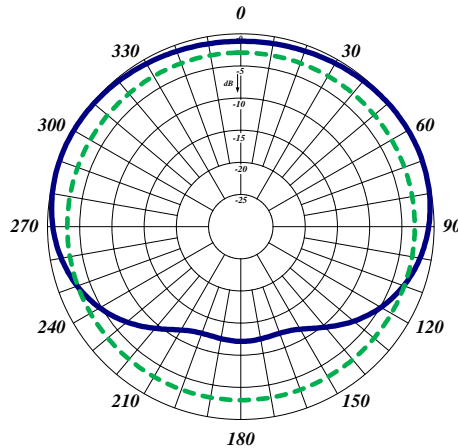
Half-wave Spacing Horizontal



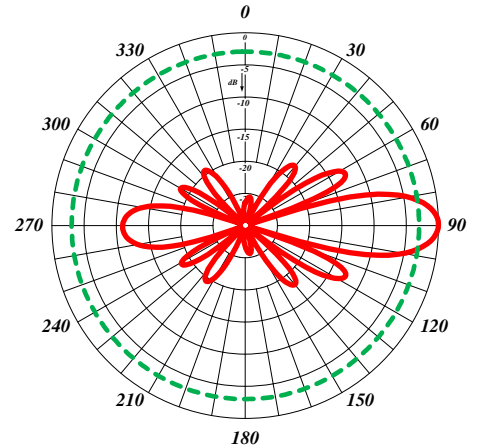
Half-wave Spacing Vertical



794-70



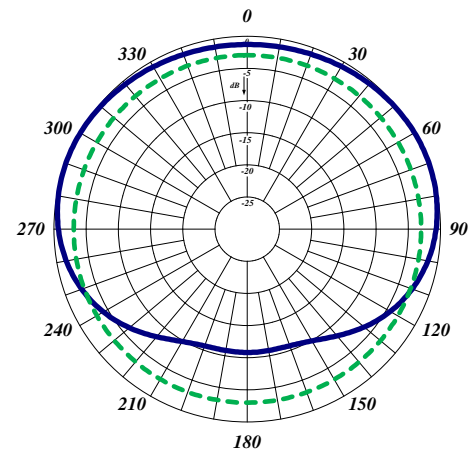
Half-wave Spacing Horizontal



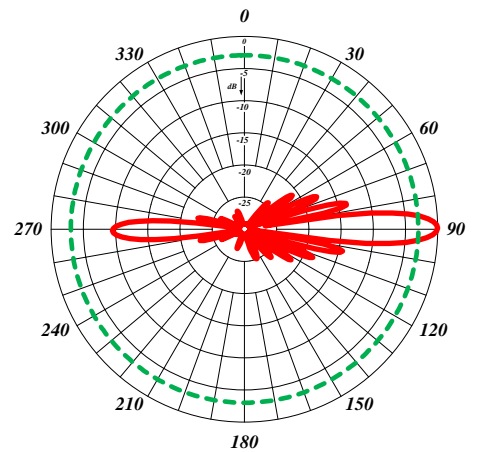
Half-wave Spacing Vertical



799-70



Half-wave Spacing Horizontal



Half-wave Spacing Vertical

790 Series Enclosed Dipoles with Reflector

The 790 Series Enclosed Dipoles with Reflector are available in 2, 4, or 8 dipole configurations. These antennas can be adjusted from 60° to 160°. All our antennas can be completely customized to your particular applications.

- These antennas have 1/4 wave spacing to the reflector.
- Broadband antennas are ideal for trunking or cellular applications.
- Reflector is field adjustable and has 5 positions: 60°, 90°, 105°, 130° and 160°.
- Weatherproof radome to ensure continuous service during severe environmental conditions.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

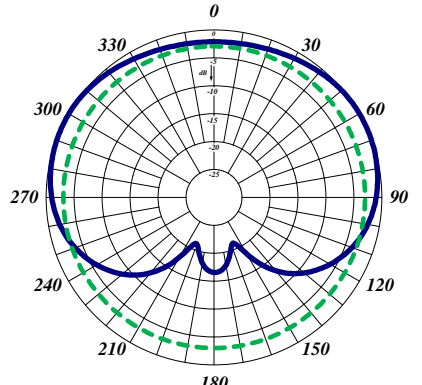
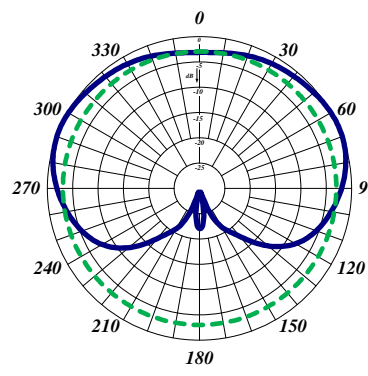
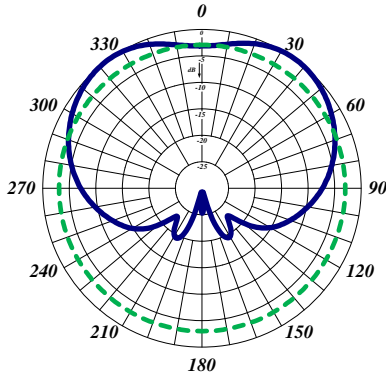
Electrical Specifications	792-70R	794-70R	799-70R
Frequency Range, MHz	746-960	746-960	746-960
Nominal Gain, dBd	Up to 8.0	Up to 13.5	Up to 15.0
Number of Dipoles	2	4	8
Bandwidth 1.5:1 VSWR, MHz	150	150	150
Polarization	Vertical	Vertical	Vertical
Pattern	Directional	Directional	Directional
Power Rating, Watts	150	300	500
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	792-70R	794-70R	799-70R
Length, in (mm)	22 (559)	44.5 (1130)	94.5 (2395)
Width (1/2 Wave Spacing), in (mm)	25 (635)	25 (635)	25 (635)
Weight, lbs. (kg)	16.5 (7.5)	24 (10.9)	42 (19)
Rated Wind Velocity, No Ice, mph (km/h)	100 (162)	100 (162)	100 (162)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	85 (137)	85 (137)	85 (137)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	57(26)	115 (52)	243 (110)
Projected Area, ft ² (m ²)	2.0 (0.19)	4.3 (0.40)	9 (0.84)
Mounting Information	1.5-2.88" O.D.	1.5-2.88" O.D.	1.5-2.88" O.D.



794-70R



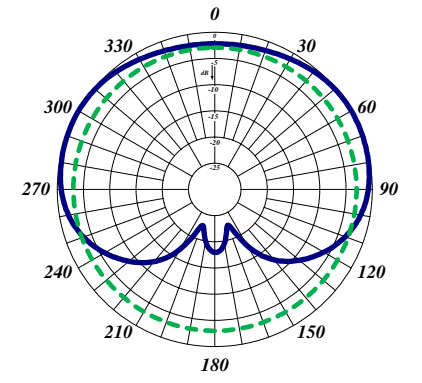
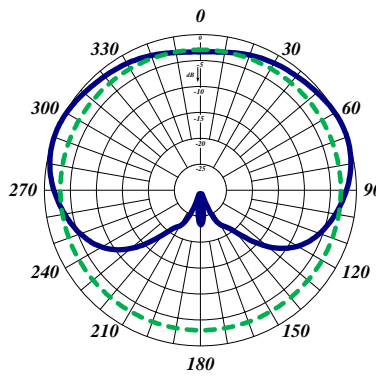
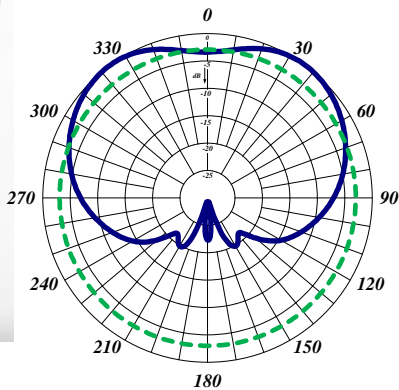
792-70R



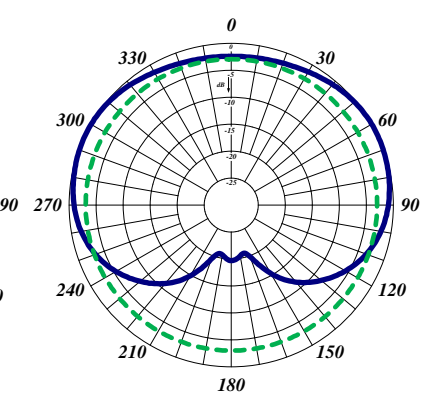
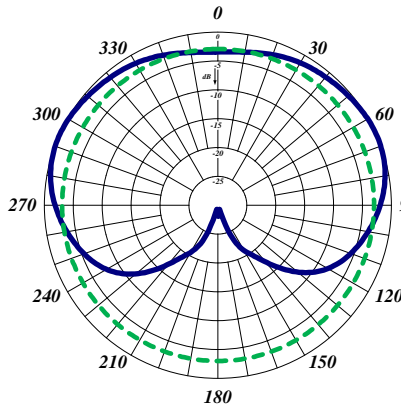
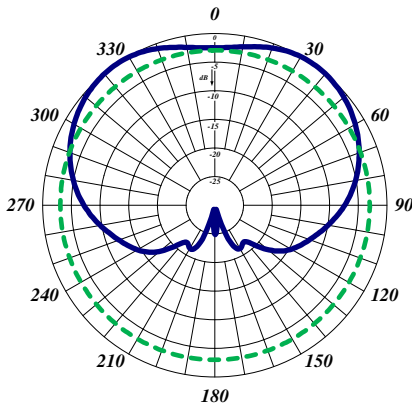
Call for additional patterns



794-70R



799-70R



Radome Yagi Antennas Series

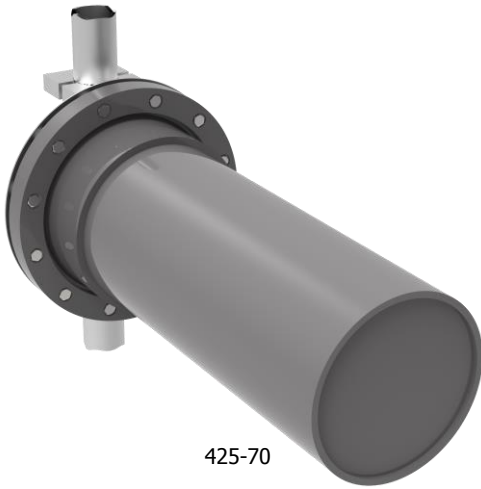
The Radome Yagi Antenna Series are available in UHF and 700/800/900 MHz configurations. The UHF model is offered with a Fiberglass or PVC Radome. The 700/800/900 MHz model is offered in PVC. All our antennas can be completely customized to your particular applications.

- Each antenna has a rugged design to withstand extreme environmental conditions.
- The mounting hardware supplied supports either vertical or horizontal polarization.
- DC ground for lightning protection.
- The PVC enclosure is 1/2 inch thick.
- These are our Heavy-Duty Versions. Please contact our Technical Support team for consultation.

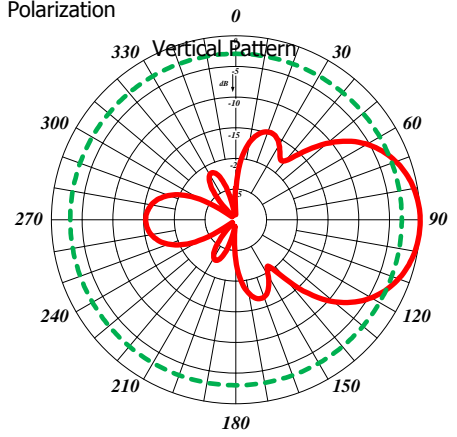
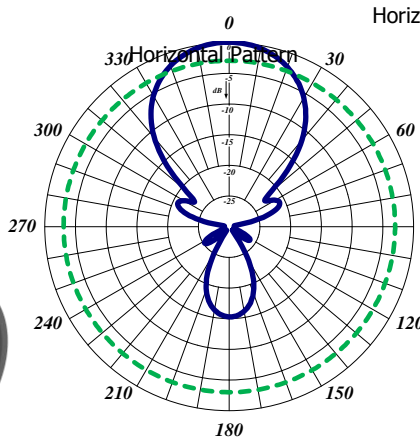
Electrical Specifications	425-70	426-70	490-70R
Frequency Range, MHz	406-512	406-512	746-960
Nominal Gain, dBd	10	10	10
Number of Elements	Loop Yagi	Loop Yagi	7
Bandwidth: 1.5:1 VSWR, MHz	20	20	72
Polarization	Vert./Hor.	Vert./Hor.	Vert./Hor.
Horizontal Beamwidth (Horizontal Pol.)	62°	62°	56°
Vertical Beamwidth (Horizontal Pol.)	48°	48°	42°
Front to Back, dB	20	20	20
Pattern	Directional	Directional	Directional
Power Rating, Watts	250	250	150
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	425-70	426-70	490-70R
Length, in. (mm)	31 (787)	30 (762)	29 (737)
Width (1/2 Wave Spacing), in. (mm)	16 (406)	16 (406)	14 (356)
Weight, lbs. (kg)	44 (20)	19 (8.6)	28 (12)
Radome Material	PVC	Fiberglass	PVC
Rated Wind Velocity, No Ice, mph (km/h)	150 (241)	120 (193)	150 (241)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	105 (169)	110 (177)	115 (185)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	69 (31.3)	61 (27.7)	47.4 (21.5)
Projected Area, ft ² (m ²)	2.6 (0.24)	2.3 (0.21)	1.8 (0.17)
Mounting Hardware Included	173-85 clamp	173-85 clamp	173-85 clamp



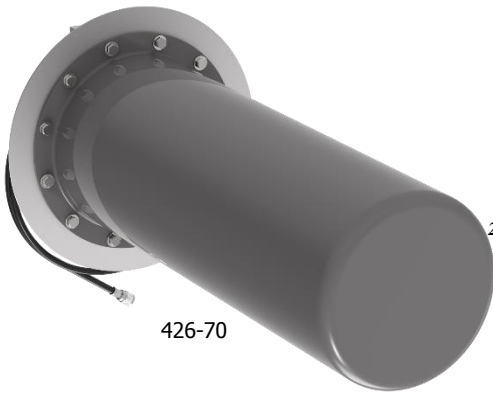
490-70R



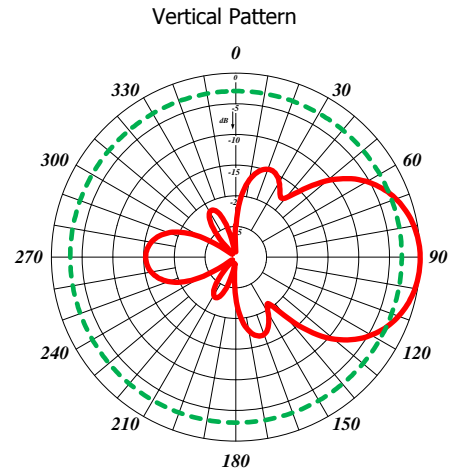
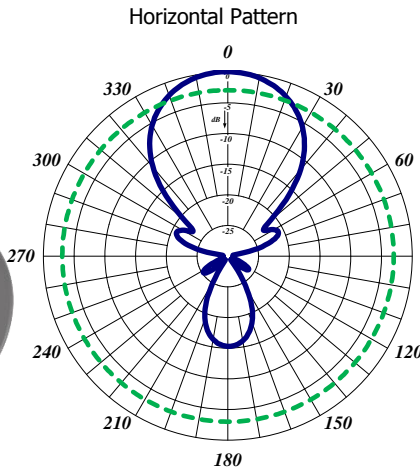
425-70



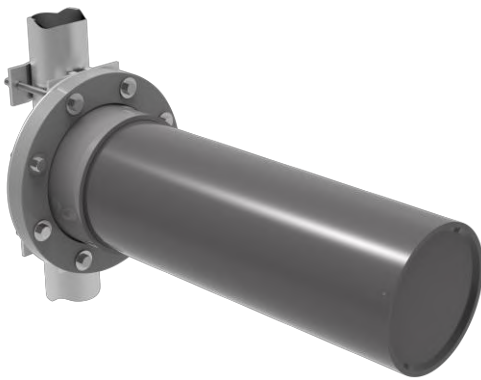
Horizontal Polarization



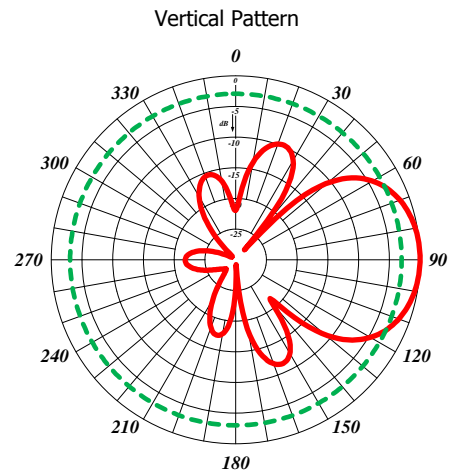
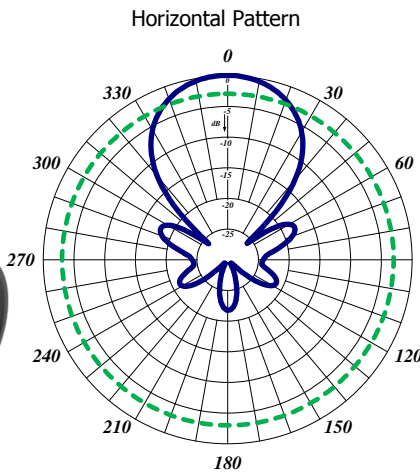
426-70



Horizontal Polarization



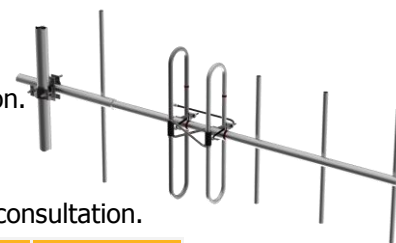
490-70R



290 Series VHF Yagi Antennas

The 290 Series VHF Yagi Antenna are available in 2, 3, and 6 element configurations. All our antennas can be completely customized to your applications. Our antennas can be black anodized, welded, vertically or horizontally polarized, and heavy-duty versions are available.

- Each antenna has a rugged design to withstand harsh environmental conditions.
- The mounting hardware supplied will permit either vertical or horizontal polarization.
- DC ground for lightning protection.
- Optionally have the entire antenna welded for added durability.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

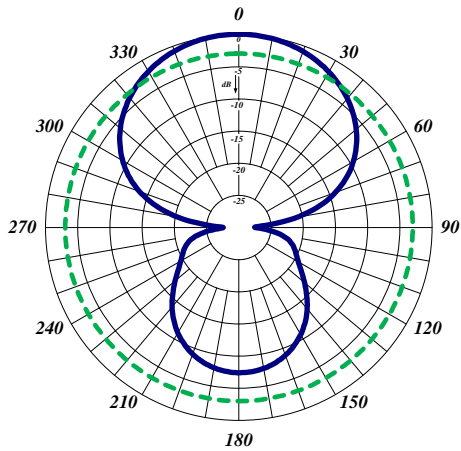


Electrical Specifications	291-70	295-70	290-70	250-70
Frequency Range, MHz	138-174	138-174	138-174	138-174
Nominal Gain, dBd	3.5	6.5	9.5	7
Number of Elements	2	3	6	7
Bandwidth 2.0:1 VSWR, MHz (Ctr. Freq.%)	36	4%	4%	36
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Horizontal Pol.)	140°	90°	62°	80°
Vertical Beamwidth (Horizontal Pol.)	70°	61°	50°	60°
Front to Back, dB	15	12	17	25
Pattern	Directional	Directional	Directional	Directional
Power Rating, Watts	350	350	350	250
Nominal Impedance, Ohms	50	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male	Type N Male
Mechanical Specifications	291-70	295-70	290-70	250-70
Length, in (mm)	50 (1270)	60 (1524)	108 (2743)	104 (2642)
Width (1/2 Wave Spacing), in (mm)	40 (1016)	43 (1092)	42 (1067)	42 (1067)
Weight, lbs. (kg)	4.8 (2.2)	6.5 (2.9)	12.0 (5.4)	12.0 (5.4)
Rated Wind Velocity, No Ice, mph (km/h)	150 (241)	145 (223)	120 (177)	110 (177)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	105 (169)	100 (161)	85 (137)	90 (145)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	29 (13)	39 (18)	65 (29)	95 (43)
Projected Area, ft ² (m ²)	1.1 (0.10)	1.4 (0.13)	2.4 (0.22)	2.6 (0.24)
Mounting Hardware Included	181-85 Clamp	181-85 Clamp	115-85 Clamp	115-85 Clamp



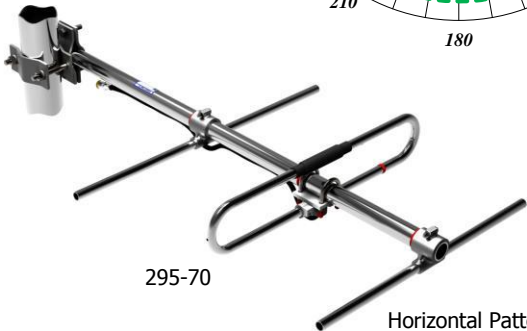
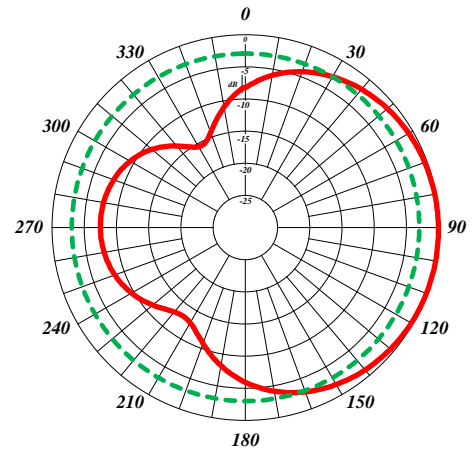
291-70

Horizontal Pattern



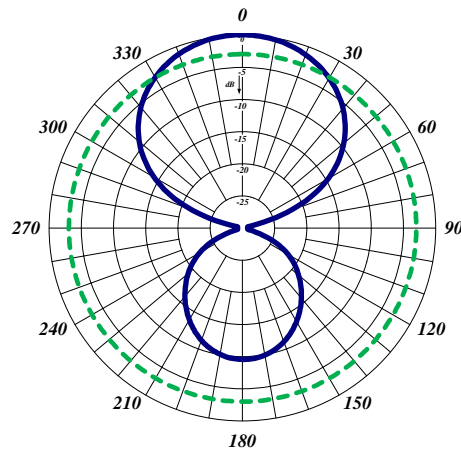
Horizontal Polarization

Vertical Pattern

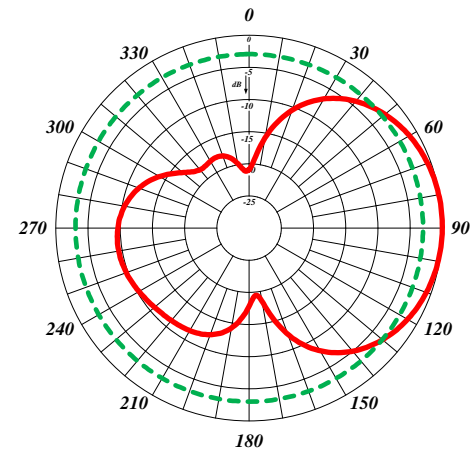


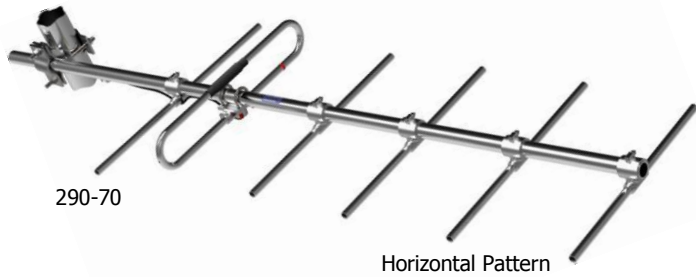
295-70

Horizontal Pattern



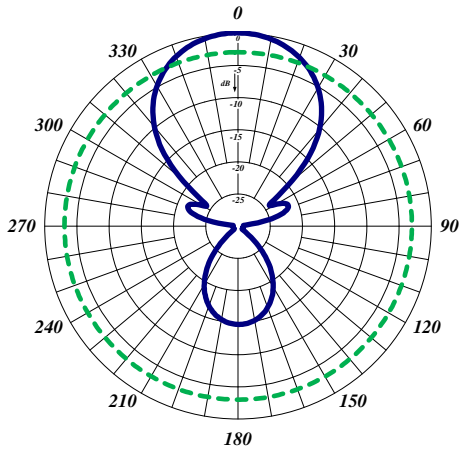
Vertical Pattern



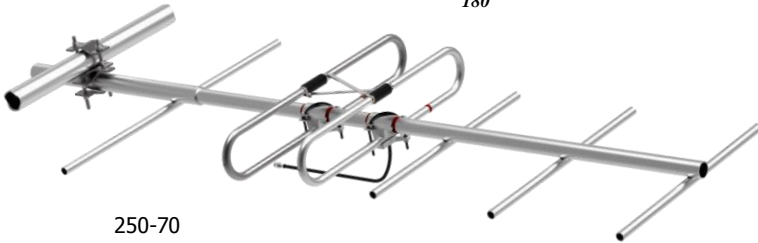
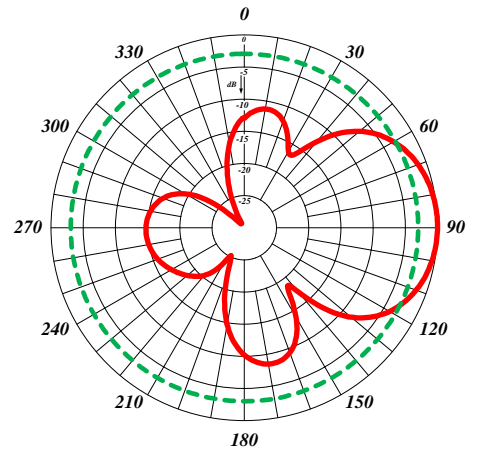


Horizontal Polarization

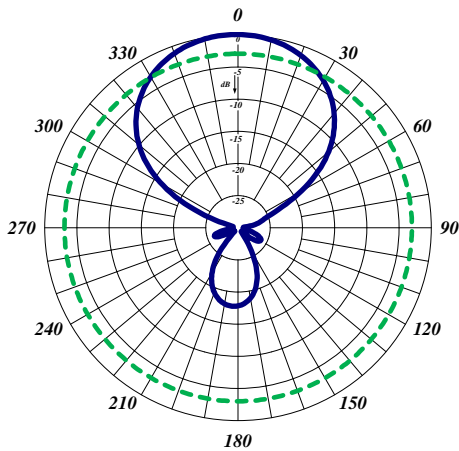
Horizontal Pattern



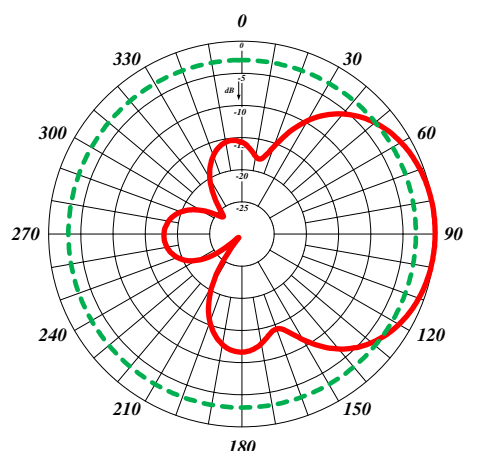
Vertical Pattern



Horizontal Pattern



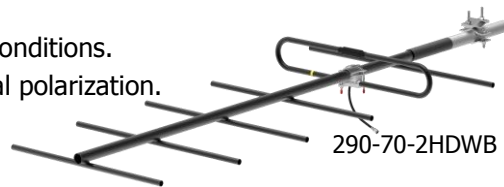
Vertical Pattern



290 Series 220MHz Yagi Antennas

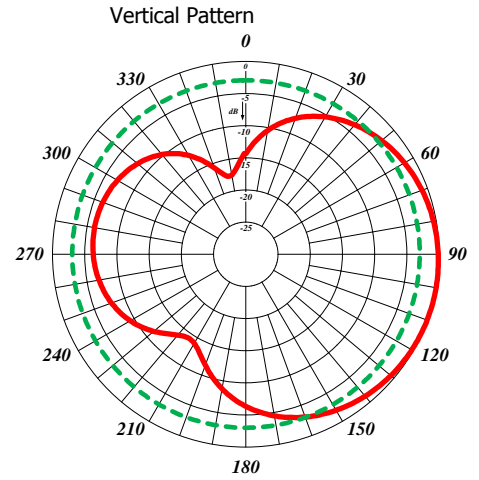
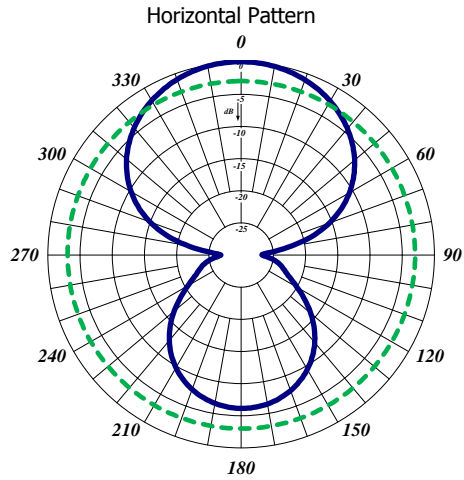
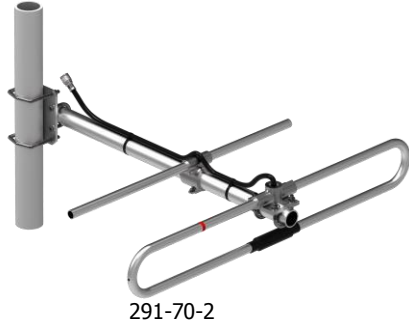
The 290 Series 220MHz Yagi Antennas are available in 2, 3, and 6 element configurations. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, welded, vertically or horizontally polarized, and heavy-duty versions are available.

- Each antenna has a rugged design to withstand harsh environmental conditions.
- The mounting hardware supplied will permit either vertical or horizontal polarization.
- DC ground for lightning protection.
- Option to have the entire antenna welded for added durability.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

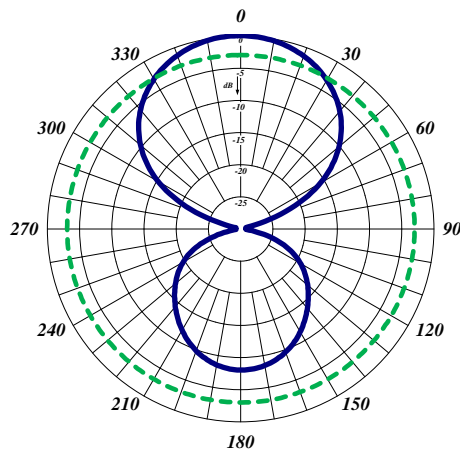


Electrical Specifications	291-70-2	295-70-2	290-70-2
Frequency Range, MHz	215-225	215-225	215-225
Nominal Gain, dBd	3.5	6.5	9.5
Number of Elements	2	3	6
Bandwidth 1.5:1 VSWR, MHz (Center Freq.%)	10	10	10
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Horizontal Pol.)	140°	90°	62°
Vertical Beamwidth (Horizontal Pol.)	70°	36°	50°
Front to Back, dB	15	12	17
Pattern	Directional	Directional	Directional
Power Rating, Watts	350	350	350
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	291-70-2	295-70-2	290-70-2
Length, in. (mm)	32 (813)	48 (1219)	84 (2134)
Width (1/2 Wave Spacing), in. (mm)	29 (737)	28 (711)	27 (686)
Weight, lbs. (kg)	3.7 (1.7)	4.8 (2.2)	9.0 (4.1)
Rated Wind Velocity, No Ice, mph (km/h)	165 (266)	155 (249)	145 (233)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	145 (233)	130 (209)	100 (161)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	19.4 (8.8)	27 (12)	47 (21.3)
Torsional Moment @ 100 mph, ft.*lb (kg*m)	25 (3.5)	52 (7.2)	138 (19)
Projected Area, ft ² (m ²)	0.7 (0.07)	1.0 (0.09)	1.75 (0.16)
Mounting Hardware Included	181-85 Clamp	181-85 Clamp	115R-85 Clamp

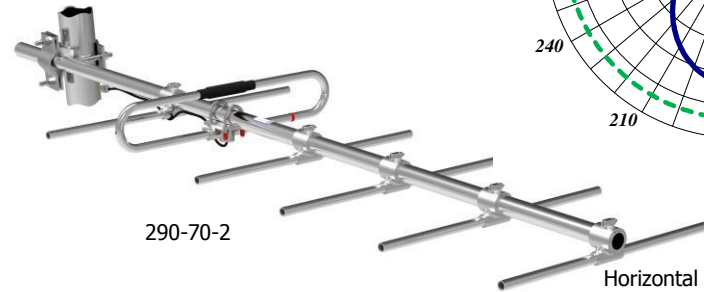
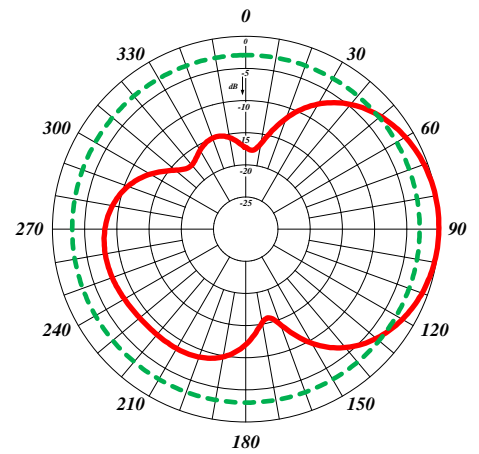
Horizontal Polarization



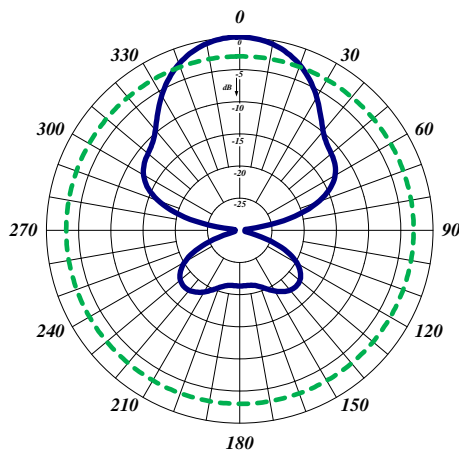
Horizontal Pattern



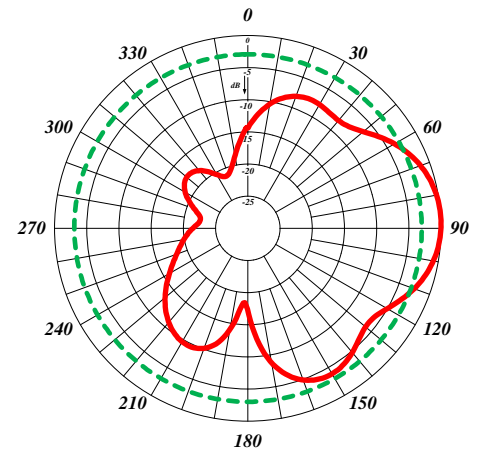
Vertical Pattern



Horizontal Pattern



Vertical Pattern



220MHz Corner Reflector Antenna Series

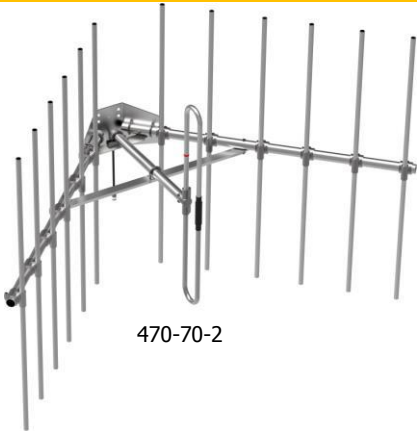
The Corner Reflector Antennas are available in VHF, UHF, 700/800/900 MHz configurations. These antennas have a very high front-to-back ratio. They are broadband and are ideal for point-to-point applications. Performance is constant throughout the band.

- Each antenna has a rugged design to withstand harsh environmental conditions.
- Single or Dual Dipole mounted in the front of a 90° reflector, providing good directivity.
- These antennas have ultra-low VSWR ratings, and will not exceed 2.0:1 VSWR ratio with 0.5" of radial ice.
- The supplied mounting hardware allows either vertical or horizontal polarization. DC ground for lightning protection. Heavy-duty versions are available. Please contact our Technical Support team for consultation.

Electrical Specifications	470-70-2	470-70-2HD	471-70-2
Frequency Range, MHz	215-225	215-225	215-225
Nominal Gain, dBd	7.0	7.0	10.0
Bandwidth: 1.5:1 VSWR, MHz	10	10	10
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Vert. Pol.)	67°	67°	50°
Vertical Beamwidth (Vert. Pol.)	75°	75°	66°
Front to Back, dB	30	30	30
Pattern	Directional	Directional	Directional
Power Rating, Watts	250	250	250
Nominal Impedance, Ohms	50	50	50
Lightning Protection	DC Ground	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male	Type N Male
Mechanical Specifications	470-70-2	470-70-2HD	471-70-2
Length, in. (mm)	48 (1219)	48 (1219)	72 (1829)
Width, in. (mm)	75 (1905)	75 (1905)	120 (3048)
Weight, lbs. (kg)	39 (17.7)	57 (25.8)	55 (30)
Rated Wind Velocity, No Ice, mph (km/h)	100 (161)	140 (225)	100 (161)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	85 (137)	100 (161)	85 (137)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	144 (65)	236 (107)	320 (145)
Projected Area, ft ² (m ²)	5.3 (0.5)	8.8 (0.82)	11.9 (1.10)
Mounting Hardware Included	172-85 Clamp	172-85 Clamp	172-85 Clamp



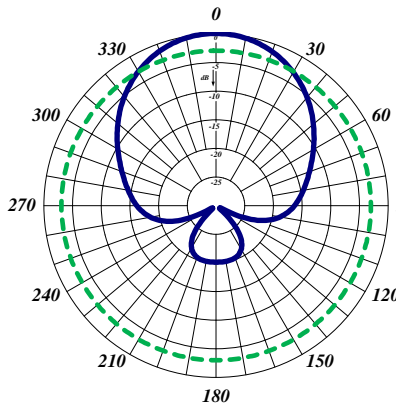
470-70-2HD



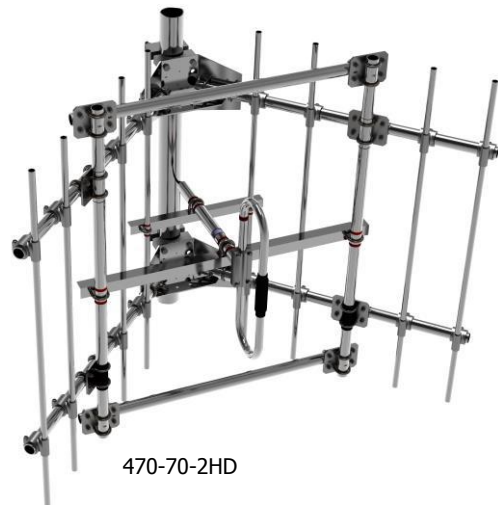
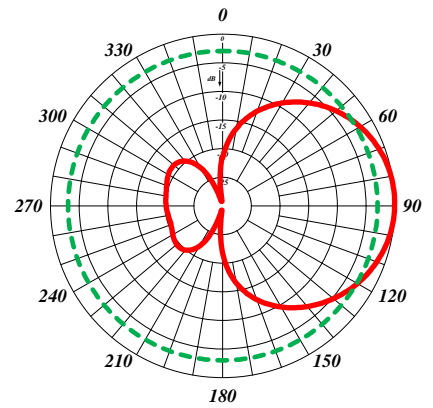
470-70-2

Vertical Polarization

Horizontal Pattern



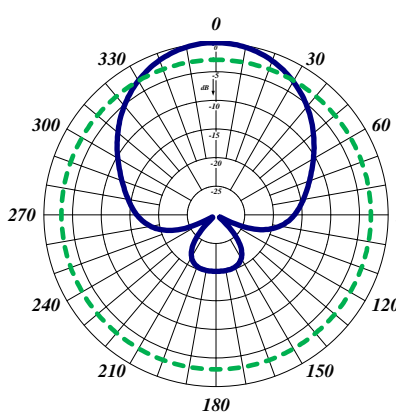
Vertical Pattern



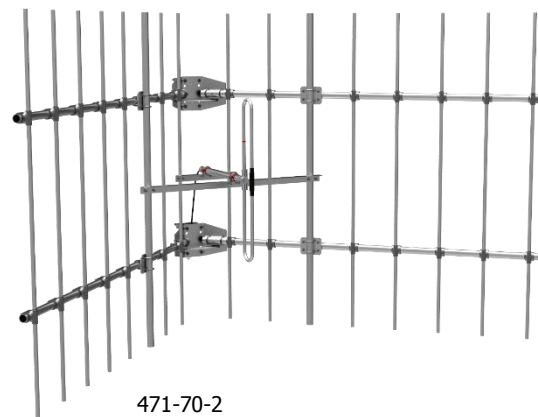
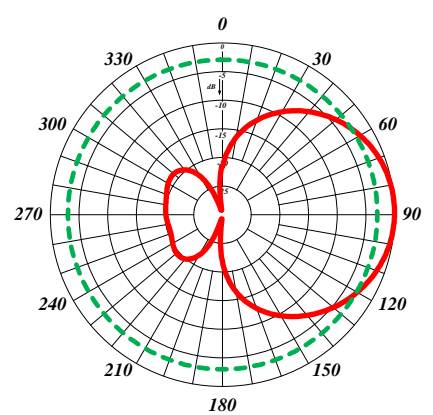
470-70-2HD

Vertical Polarization

Horizontal Pattern



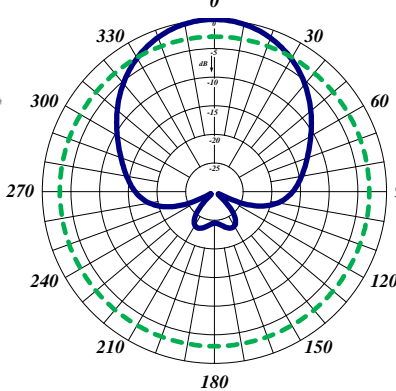
Vertical Pattern



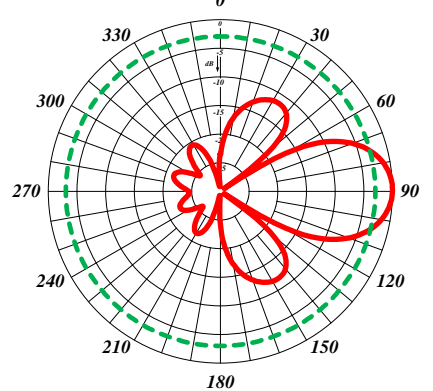
471-70-2

Vertical Polarization

Horizontal Pattern



Vertical Pattern

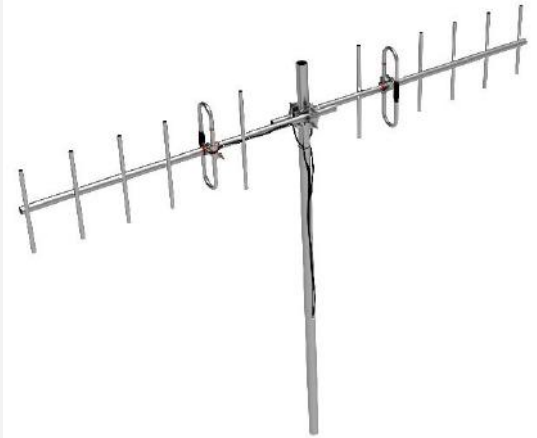


F-33324 Back to Back Dual Yagi Antenna Array

The F-33324 is a dual Yagi array mounted in a back-to-back configuration. The antennas are welded and are supplied with a phasing harness. All our antennas can be completely customized to your particular applications. Our antennas can be vertically or horizontally polarized and heavy-duty versions are available.

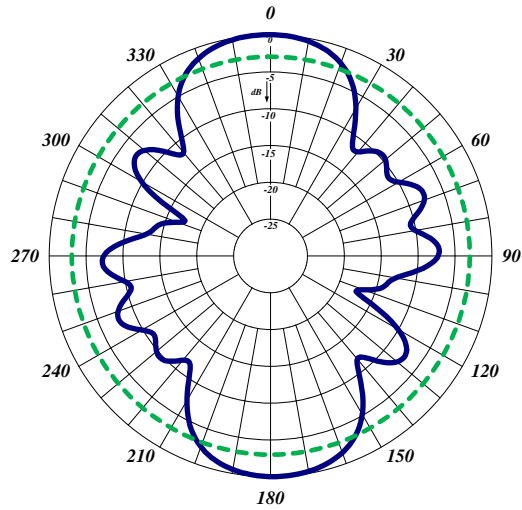
- Each antenna has a rugged design to withstand harsh environmental conditions.
- The mounting hardware supplied will permit either vertical or horizontal polarization.
- DC ground for lightning protection.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.

Electrical Specifications	F-33324
Frequency Range, MHz	215-225
Nominal Gain, dBd	6.6
Bandwidth 1.5:1 VSWR, MHz (Center Freq.%)	10
Polarization	Vert. or Horiz.
Horizontal Beamwidth (Vert. Pol.)	47°
Vertical Beamwidth (Vert. Pol.)	43°
Front to Back, dB	N/A
Pattern	Directional
Power Rating, Watts	350
Nominal Impedance, Ohms	50
Lightning Protection	DC Ground
Standard Termination	Type N Male
Mechanical Specifications	F-33324
Length, in. (mm)	161 (4089)
Width, in. (mm)	27 (686)
Weight, lbs. (kg)	28 (12.7)
Rated Wind Velocity, No Ice, mph (km/h)	145 (233)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	100 (161)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	94 (418)
Projected Area, ft ² (m ²)	4.0 (0.37)
Mounting Hardware Included	115R-85 Clamp

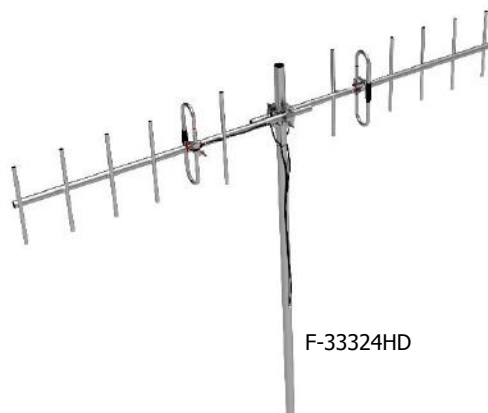
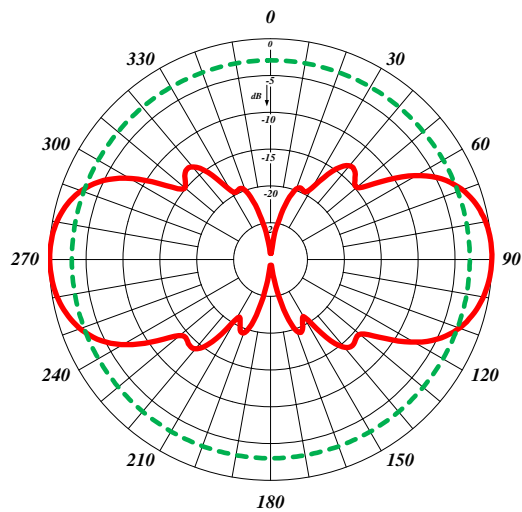


F-33324HD

Horizontal Pattern



Vertical Pattern



F-33324HD

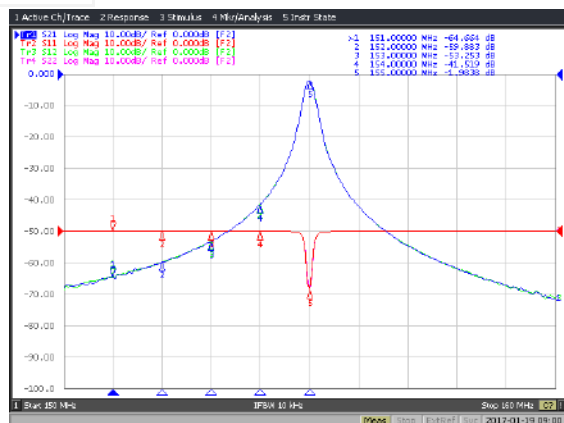
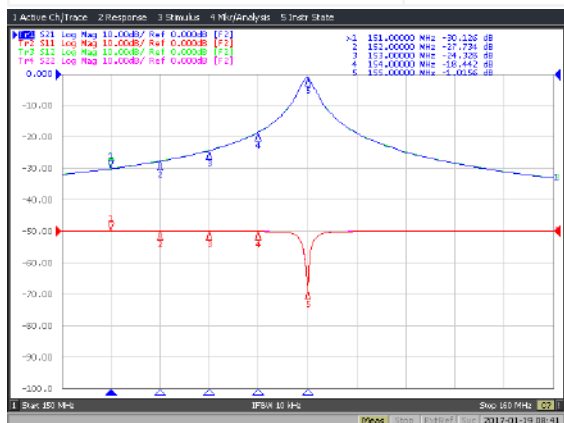
60-13-XP Series

Our Bandpass VHF Multicoupler filters are designed for minimizing interference from adjacent channels and outside systems. They are available in single, dual, triple or additional units. Selectivity can be determined by the insertion loss of the cavity or by adding cavity units as required. Each cavity is temperature compensated for operation between -40°C to +60°C. Each cavity has a gold Alodine finish, silver-plated loops, and silver-plated tuning rods. Every cavity is equipped with both coarse and fine-tuning rods for quick and easy field or lab re-tuning.

- Temperature Compensation
 - Ensures Frequency Stability
- High Attenuation
 - Minimizes desense and interference from adjacent systems
- Adjustable Loops
 - Each cavity has a calibration index to reference insertion loss



Electrical Specifications	60-13-71	60-13-72	60-13-73
Frequency Range, MHz	138-174	138-174	138-174
Frequency Spacing Min. MHz	0.8	0.8	0.8
Cavity Diameter, in	6.625	6.625	6.625
Continuous Power Input, Watts	90-400	90-400	90-400
Connectors	N Female	N Female	N Female
Insertion Loss, dB	0.6-1.5	1.2-3.2	1.8-5.0
Channel Isolation, dB	See Typical Curves		
VSWR	1.5:1	1.5:1	1.5:1
Temperature °C	-40 to +60	-40 to +60	-40 to +60
Mechanical Specifications	60-13-71	60-13-72	60-13-73
Maximum length, in (H x W x D)	34 x 19 x 7	34 x 19 x 16.5	34 x 19 x 16.5
Weight, lbs (kg)	30 (13.6)	36.3 (16.5)	44 (20)



66-FF-74 and 66-FF-76

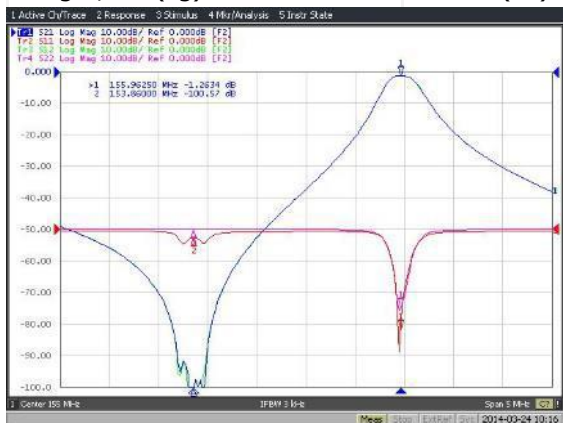
Our Pseudo Bandpass Duplexer filters are designed for quick and easy installations. These filters are designed for the combination of two frequencies requiring extra isolation or can be used as efficient pre-selectors. They are available in either 4 or 6 cavity configurations if higher levels of isolation are required. Selectivity can be determined by the field adjustable capacitors. Each cavity is temperature compensated for operation between -40°C to +60°C. Each cavity has a gold Alodine finish, silver-plated loops, and silver-plated tuning rods. Every cavity is equipped with both coarse and fine-tuning rods for quick and easy field or lab re-tuning.

- Temperature Compensation
 - Ensures Frequency Stability
- High Attenuation
 - Minimizes desense and interference from adjacent systems
- Adjustable Loops
 - Each cavity has a calibration index to reference insertion loss

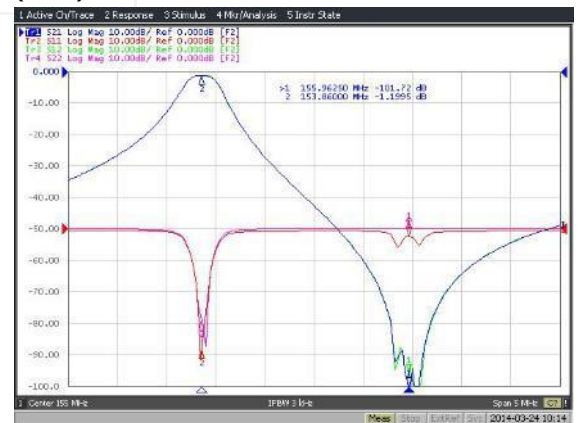


Electrical Specifications	66-13-74	66-13-76	66-40-74
Frequency Range, MHz	138-174	138-174	406-512
Frequency Spacing Min. MHz	0.5	0.3	1.5
Cavity Diameter, in	6.625	6.625	6.625
Continuous Power Input, Watts	400	400	350
Connectors	N Female	N Female	N Female
Insertion Loss, dB	1.5	2.2	1.5
Channel Isolation, dB	85	95	90
VSWR	1.22:1	1.22:1	1.22:1
Temperature °C	-40 to +60	-40 to +60	-40 to +60

Mechanical Specifications	66-13-74	66-13-76	66-40-74
Maximum length, in (H x W x D)	34 x 19 x 16.5	34 x 19 x 33	18.5 x 19 x 16.5
Weight, lbs (kg)	44 (20)	90 (40)	32 (15.2)



66-13-74



66-FF-2P Series 2" Cavity Duplexers

Our 2" base station duplexers are ideal for compact high isolation installations. These filters are designed for the combination of two frequencies that require extra isolation or they can be used as efficient preselectors. Available in either 4 or 6 cavity configurations if higher levels of isolation are required. Selectivity can be determined by the field adjustable capacitors. Each cavity is temperature compensated for operation between -40°C to +60 °C. Each cavity has a gold Alodine finish, silver-plated loops, and silver-plated tuning rods.

- Temperature Compensation
 - Ensures Frequency Stability
- High Attenuation
 - Minimizes desense and interference from adjacent systems



Electrical Specifications	66-13-24	66-14-24	66-13-26	66-14-26
Frequency Range, MHz	132-150	144-174	132-150	144-174
Frequency Spacing Min.	4.5	4.5	3.0	3.0
Cavity Number	4	4	6	6
Cavity Diameter, in	2.0	2.0	2.0	2.0
Continuous Power Inputs, Watts	100	100	100	100
Connectors (Equipment/Antenna)	BNC/N	BNC/N	BNC/N	BNC/N
Insertion Loss, dB (maximum)	1.5	1.5	1.5	1.5
Channel Isolation, dB	70	70	80/90	80/90
VSWR	1.3:1		1.3:1	
Temperature °C	-40 to +60	-40 to +60	-40 to +60	-40 to +60
Mechanical Specifications	66-13-24	66-14-24	66-13-26	66-14-26
Maximum length, in (H x W x D)	5.25 x 19 x 7.25		5.25 x 19 x 7.25	
Mounting	19" Rack Mount			

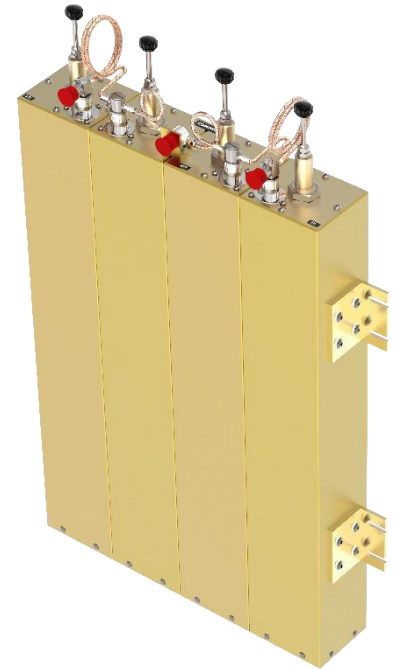
These duplexers are available in other frequencies and configurations. Please call our technical support for additional models.



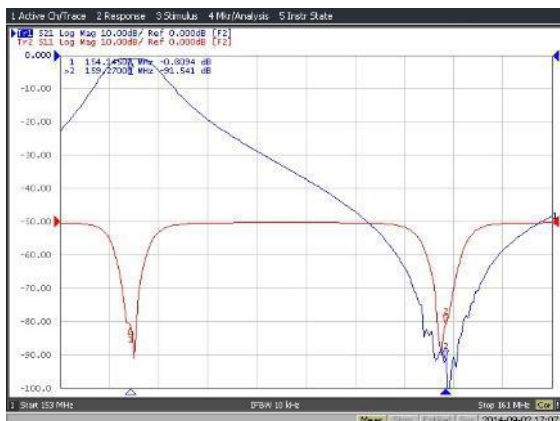
66-FF-44 Series (4) 4" Cavity Duplexers

These 4" base station duplexers are ideal for high power, close frequency separation installations. These filters are designed for combining two frequencies or they can be used as efficient pre-selectors. If higher levels of isolation are required, please consider using 6 cavity configurations. Selectivity can be determined by the field adjustable capacitors. Each cavity is temperature compensated for operation between -40°C to +60°C. Each cavity has a gold Alodine finish, silver-plated loops, and silver-plated tuning rods.

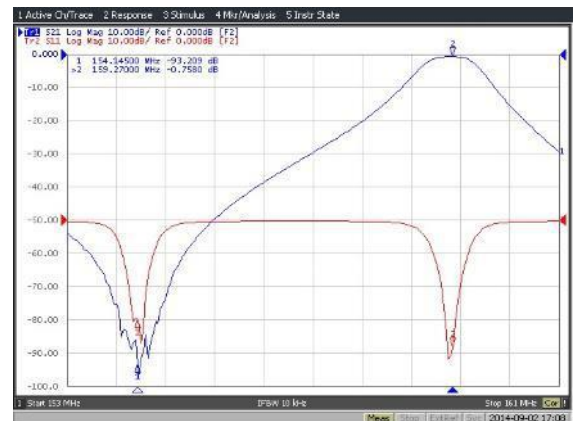
- Temperature Compensation
 - Ensures Frequency Stability
- High Attenuation
 - Minimizes desense and interference from adjacent systems



Electrical Specifications	66-13-44	66-40-44	66-80-44
Frequency Range, MHz	138-174	406-512	746-960
Frequency Spacing Min. MHz	0.5	0.3	1.5
Cavities, Diameter, in	(4) - 4" Square	(4) - 4" Square	(4) - 4" Square
Continuous Power Input, Watts	350	350	350
Connectors	N Female	N Female	N Female
Insertion Loss, dB (maximum)	1.5	0.8	0.8
Channel Isolation, dB	70	75	90
VSWR	1.2:1	1.2:1	1.2:1
Temperature °C	-40 to +60	-40 to +60	-40 to +60
Mechanical Specifications	66-13-44	66-40-44	66-80-44
Maximum length, in (H x W x D)	31 x 19 x 4	4 x 19 x 15	4 x 19 x 12
Weight, lbs (kg)	30 (13.6)	18 (8.2)	16 (7.3)
Mounting	19" Rack Mount		



66-13-44



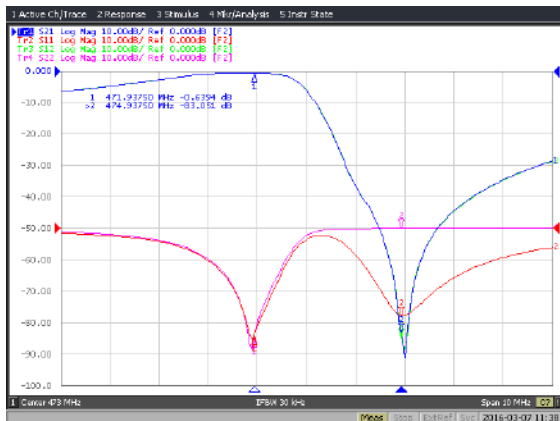
66-FF-46 Series (6) 4" Cavity Duplexers

These 6-cavity 4" base station duplexers are ideal for high power close frequency separation installations. These filters are designed for the combination of 2 frequencies that require extra isolation or they can be used as an efficient pre-selector. If higher levels of isolation are required, please consider using the 8-cavity configuration. Selectivity can be determined by the field adjustable loops. Each cavity is temperature compensated for operation between -40°C to +60°C. Each cavity has a gold Alodine finish, silver-plated loops, and silver-plated tuning rods.

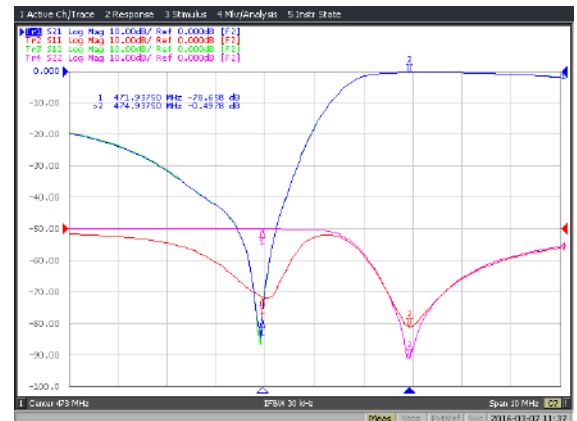
- Temperature Compensation
 - Ensures Frequency Stability
- High Attenuation
 - Minimizes desense and interference from adjacent systems



Electrical Specifications	66-13-46	66-40-46	66-80-46
Frequency Range, MHz	138-174	406-512	746-960
Frequency Spacing Min. MHz	0.5	3.0	3.6
Cavities, Diameter, in	(6) - 4" Square	(6) - 4" Square	(6) - 4" Square
Continuous Power Input, Watts	350	350	350
Connectors	N Female	N Female	N Female
Insertion Loss, dB (maximum)	2.1	1.2	1.2
Channel Isolation, dB	85	100	85
VSWR	1.2:1	1.2:1	1.2:1
Temperature °C	-40 to +60	-40 to +60	-40 to +60
Mechanical Specifications	66-13-46	66-40-46	66-80-46
Maximum length, in (H x W x D)	31 x 19 x 8	8 x 19 x 15	8 x 19 x 12
Weight, lbs (kg)	45 (20.25)	27 (12.15)	24 (10.8)
Mounting	19" Rack Mount		



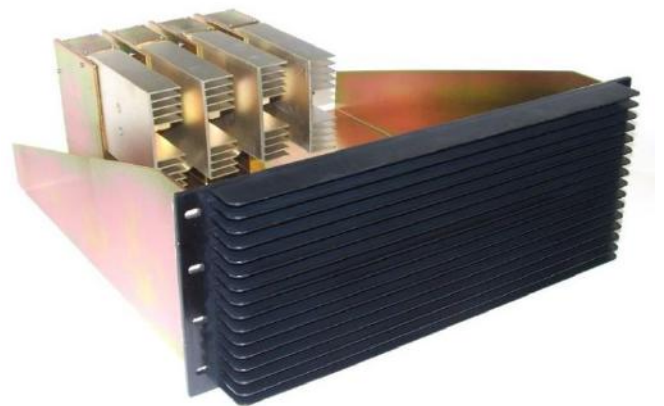
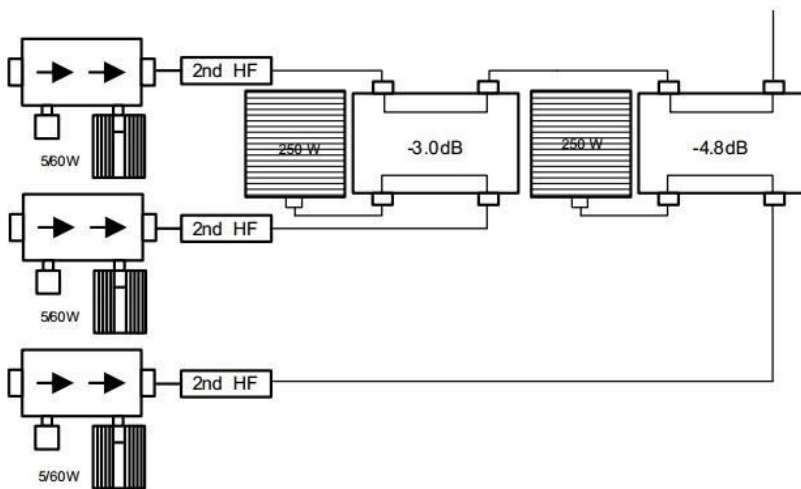
66-40-46



Custom Hybrid Combiners

Our Hybrid Transmit Combiners are designed for compact, close frequency installations. Our HTC's are perfect for very closely spaced frequency transmitters. These devices are ideal for use when our X-Pass technology does not provide adequate performance and isolation for very close Tx-Tx spacing. Hybrid Combiners are also ideal for intermodulation panels, providing extra protection with their second harmonic filters, or when physical space is at a premium or is constrained, and for providing extra isolation between two very close transmitters.

- We can arrange or design our combiners to meet your custom needs.
- High Isolation
 - Minimizes intermodulation products
- Low Loss
 - Maximizes system performance
- Continuous Power
 - Physical size and materials used
 - Maximizes the performance across the operating band



Star Junction Ceramic Combiner

Our Ceramic Combiner uses dielectric resonator technology to offer higher performance than standard RF cavities in a much smaller package. It combines 8 channels in only 8.5" of standard 19" rack space. The resonator allows combining of transmitters at a frequency spacing as close as 150 kHz. Lower insertion loss per channel is another result of the sharper filtering performance. Expandable in individual channel increments. Available in Star or X-Pass (expandable) configuration.

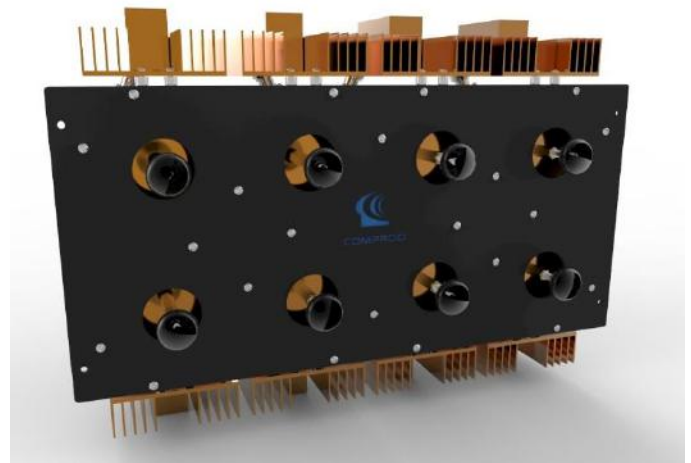
- Available for the 764-776, 851-869 and 935-941 MHz bands
- Designed for tight channel spacing
- Lowest insertion loss, high isolation for maximum coverage and reduced interference
- Star Configuration
- Compact, robust design for rapid installations, increased mobility and ease of maintenance

Electrical Specifications

Frequency Range, MHz	764-776, 851-869 & 935-941
Frequency Spacing, Min.	150 kHz
Temperature Range, °C	-35 to +60
TX to TX Isolation at Minimum Frequency Spacing of 150 kHz	65 dB min (double junction isolator)
ANT to TX Isolation	60 dB min (double junction isolator)
Insertion Loss	1.8 dB – 4 Ch. at 500 kHz 2.5 dB – 16 Ch. at 500 kHz 3.8 dB – 24 Ch. at 500 kHz
Power Input / Channel (Watts)	125
Transmitter Input VSWR (max)	1.25:1

Mechanical Specifications

Dimensions (HWD), in (mm)	14 x 8.5 x 19 (356 x 216 x 483)
Weight, lb (kg)	8-Channel system 62.17 (28.2)



X-Pass Ceramic Combiner

Our Ceramic Combiner uses dielectric resonator technology to offer higher performance than standard RF cavities in a much smaller package. It combines 4 channels in only 7.75" of standard 19" rack space. The resonator allows combining of transmitters at a frequency spacing as close as 150 kHz. Lower insertion loss per channel is another result of the sharper filtering performance.

Expandable in individual channel increments. Available in Star or X-Pass (expandable) configuration.

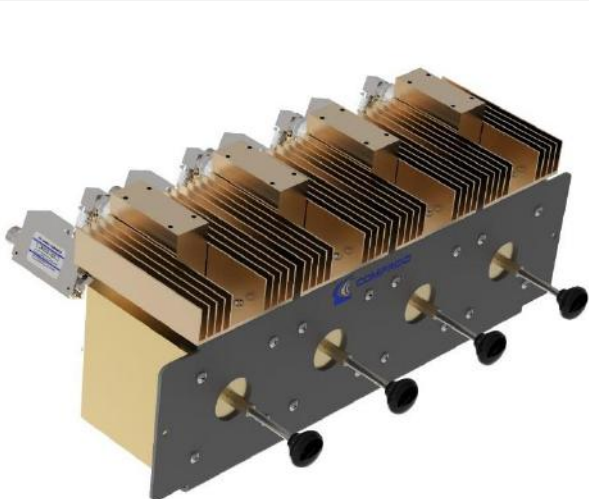
- Available for the 764-776, 851-869 and 935-941 MHz bands
- Designed for tight channel spacing
- Lowest insertion loss, high isolation for maximum coverage and reduced interference
- Easy field expandability with X-Pass technology - one channel at a time
- Compact, robust design for rapid installations, increased mobility and ease of maintenance

Electrical Specifications

Frequency Range, MHz	764-776, 851-869 & 935-941
Frequency Spacing, Min.	150 kHz
Temperature Range, °C	-35 to +60
TX to TX Isolation at Minimum Frequency Spacing of 150 kHz	65 dB min (double junction isolator)
ANT to TX Isolation	60 dB min (double junction isolator)
Insertion Loss	1.8 dB – 4 Ch. at 500 kHz 2.5 dB – 16 Ch. at 500 kHz 3.8 dB – 24 Ch. at 500 kHz
Power Input / Channel (Watts)	125
Transmitter Input VSWR (max)	1.25:1

Mechanical Specifications

Dimensions (HWD), in (mm)	7.75 x 19 x 14 (197 x 483 x 356)
Weight, lb (kg)	4-Channel system 32 (15)



BDA-138225-SERIES

Our BDA138225 is an unidirectional Class B signal booster. It covers both the 138-174 MHz and 216-225 MHz bands. The amplifier can be used with input / output filters as an Unidirectional Amplifier or it can be combined with input and output duplexers to create a FCC and IC Certified Bi-Directional Amplifier.

Note: The BDA138225 must have adequate input and output filtering to prevent undesired interference. Our Technical Solutions Specialists can provide guidance on the required filtering solution for a complete BDA system design.

Electrical Specifications	Canada	USA
Certification	IC: 7755A-UDA138225	FCC: WDM-BDA138225
Frequency Range, MHz	138-225	150-225
Automatic Level Control (ALC), dB	35	35
Amplifier Maximum Gain, dB	+80 Typical	+80 Typical
System Nominal Gain at -45 dBm input power	+75	+75
Input Manual Attenuator Range, dB	0 to 30 in 2 dB steps	0 to 30 in 2 dB steps
Output Level Manual Adjustment range, dB	0 to 15 in 1 dB steps	0 to 15 in 1 dB steps
3rd Order Output Intercept Point, dBm	+48 Typical	+48 Typical
Noise Figure, Typical (without filters), dB	4	4
Limited Output Composite Power, dBm	+31	+31
Nominal Impedance, Ohms	50	50
Input / Output Connectors	N Female	N Female
AC Power Source Input, Volts	100 to 260 50/60Hz	100 to 260 50/60Hz
Optional DC Power Source Voltages, Volts	+24 or +48	+24 or +48
Optional dry contact alarms	Power Failure	Power Failure
Mechanical Specifications (Typical)		
Dimensions, in (H x W x D)	24 x 20 x 13.5	
Temperature Range, °F (°C)	-4 to 131 (-20 to +55)	
Weight, lbs (Kg)	100 (45)	



UBDA-3845/4551-SERIES

Our BDA system is designed for high standards with government and industrial clients in mind. The solution can be customized for unique client requirements.

Reliable RF coverage for public safety and utility clients in 380-512 MHz offered for applications including hotel parking garages, underground mining facilities, shopping malls, hospitals, government buildings, subway stations and tunnels. Available in rack mount, NEMA stainless steel or painted steel NEMA enclosures. Compliant to Govt. standards: FCC WDM-UBDA 4551; IC 7755A-UBDA4551. Our Technical Solutions Specialists can provide guidance on the required filtering solution for a complete BDA system design.

Electrical Specifications	
Frequency Range, MHz	380-512
Passbands	2 (4 passband version available)
Guard Band, MHz	2-3
Window Bandwidth, MHz (configured by channel filters)	2-3
Automatic Level Control (ALC), dB	Yes (30 dB)
Maximum Gain, dB	+70 dB Typical
Output Level / Input Attenuator Range, dB	0 to 15 in 1 dB steps / 0 to 30 in 2 dB steps
3rd Order Output Intercept Point, dBm	+48 Typical
Output 1 dB Compression Point, dBm	+38 Typical
Noise Figure, Typical (with filters), dB	5.5
Uplink Max Output (Composite), dBm	+29
Downlink Max Output (Composite), dBm	+29
Nominal Impedance, Ohms	50
VSWR	1.5:1
AC Power Input, Volts	117 to 260
Temperature Range, °F (°C)	-4 to 131 (-20 to +55)
Input / Output Connectors	N Female



Mechanical Specifications	
Enclosure	NEMA 4 Painted Steel
Dimensions, in H, W, D	24 x 16 x 11.5 (Large Enclosure); 14 x 8 x 7 (Attached Small Enclosure)
Weight, lbs (Kg) (Approximate)	100 (45)

BDA-40-SERIES

Designed and engineered to meet the fire protection codes (NFPA and IFC standards), our Bi-Directional Amplifier (BDA) features advanced Alarm, Monitoring & Control capabilities ensuring continuous availability of mission-critical services. Certified: FCC and IC.

- Available in 700, 800 and 900 MHz Public Safety bands
- Ideal for indoor applications in commercial and government buildings, parking garages, mining facilities, subway stations and tunnels
- Rack mounted or in NEMA 4/4x waterproof, stainless steel enclosures
- Low noise figure, wide dynamic range
- Visual alarms and remote failure monitoring with Graphical User Interface



Electrical Specifications	BDA 764806	BDA 806870	BDA 896941
Frequency Range, MHz	DL: 764-776 UL: 794-806	DL: 851-869 UL: 806-824	DL: 935-941 UL: 896-901
Passband Ripple, dB	+/- 1.5	+/- 1.5	+/- 1.5
Automatic Gain Control (AGC), dB	30	30	30
Maximum Gain, dB	+80	+80	+80
Manual Gain Control (MGC), dB	0-31 in 1 dB Steps	0-31 in 1 dB Steps	0-31 in 1 dB Steps
Noise Figure, dB	2.5 Typical	2.5 Typical	2.5 Typical
Delay, Max., µs	1	1	1
Max. Output Power, dBm	DL: +31.5 UL: +31.5	DL: +31.5 UL: +31.5	DL: +31.5 UL: +31.5
VSWR	1.5:1	1.5:1	1.5:1
Input Voltage, Volts	AC: 115-220 DC: 24-27	AC: 115-220 DC: 24-27	AC: 115-220 DC: 24-27
Temperature Range, °C	-30 to +60	-30 to +60	-30 to +60
Humidity, %	95	95	95
Connectors	N Female	N Female	N Female
LNA bypass Function Implementation, dBm	-20 @ Input Power	-20 @ Input Power	-20 @ Input Power
Alarms	AGC, S/D, Power	AGC, S/D, Power	AGC, S/D, Power
Mechanical Specifications	BDA 764806	BDA 806870	BDA 896941
Enclosure	NEMA 4 Painted Steel	NEMA 4 Painted Steel	NEMA 4 Painted Steel
Dimensions, in. H, W, D	17.5 x 11 x 9	17.5 x 11 x 9	17.5 x 11 x 9
Weight, lbs	33.5	33.5	33.5

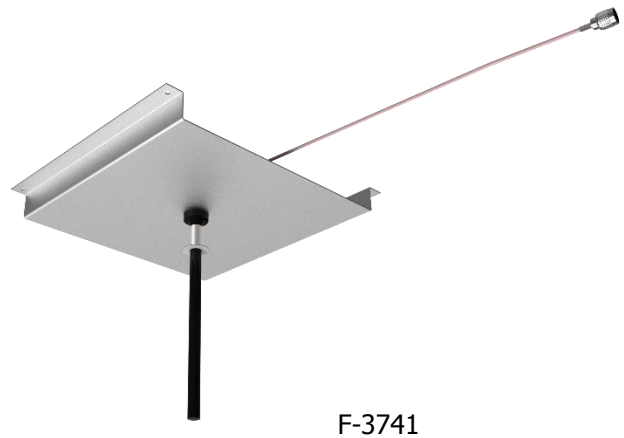
* See next page (p.219) for certification numbers

Our In-building antennas are designed to provide excellent coverage solutions for external Public Safety Radio Frequencies to propagate within buildings, tunnels or public use environments.

Our antennas can cover single or multiple frequency bands. We offer a wide variety of antennas with Fire Retardant 6200 Kydex radomes. These materials are designed for In-building applications and inside public transport vehicles such as underground trains, vans, buses and trains. They meet the recommended fire safety practices of both the Federal Transit Administration (FTA) and the Federal Rail Administration (FRA) for smoke emission and flammability as tested under ASTM E-662 and ASTM E-162.

The F-3741 has been designed for mounting with a ground plane on a concrete surface. This is a requirement for meeting full bandwidth specifications. Polycarbonate tubing is used for the radome on the F-3741. It's a flame resistant and self-extinguishing material.

Electrical Specifications	F-3741
Frequency Range, MHz	VHF / UHF / 760-960
Nominal Gain	Unity
Bandwidth: 2.0:1 VSWR, MHz	
138-174	8
406-512	64
764-890	126
806-960	154
1800-1990	N/A
2400-3000	N/A
Polarization	Vertical
Pattern	Omnidirectional
Power Rating, Watts	50
Nominal Impedance, Ohms	50
Radome	Polycarbonate
Standard Termination	N Male
Mechanical Specifications	F-3741
Length, in (mm)	11.25 (286.88)
Diameter, in (mm)	0.65 (16.575)
Weight, lbs (kg)	N/A
Mounting hardware	Included



Our In-building antennas are designed to provide excellent coverage solutions for external Public Safety Radio Frequencies to propagate within buildings, tunnels or public use environments.

Our antennas can cover single or multiple frequency bands. We offer a wide variety of antennas with Fire Retardant 6200 Kydex radomes. These materials are designed for In-building applications and inside public transport vehicles such as underground trains, vans, buses and trains. They meet the recommended fire safety practices of both the Federal Transit Administration (FTA) and the Federal Rail Administration (FRA) for smoke emission and flammability as tested under ASTM E-662 and ASTM E-162.

The F-3749/A/B antennas are available in custom colors for orders of 150 or more.



F-3749-B

Electrical Specifications	F-3749	F-3749A	F-3749-B
Frequency Range, MHz	VHF / UHF/ 760-960	VHF / UHF/ 760-960	VHF / UHF/ 760-960
Nominal Gain	Unity	Unity	Unity
Bandwidth: 2.0:1 VSWR, MHz			
138-174	8	8	8
406-512	64	64	64
764-890	126	126	126
806-960	154	154	154
1800-1990	N/A	N/A	N/A
2400-3000	N/A	N/A	N/A
Polarization	Vertical	Vertical	Vertical
Pattern	Omnidirectional	Omnidirectional	Omnidirectional
Power Rating, Watts	50	50	50
Nominal Impedance, Ohms	50	50	50
Radome	6200 Kydex	6200 Kydex	6200 Kydex
Mean Time Between Failure,	87,000	87,000	87,000
Color	White	White	White
Standard Termination	N Female	2' jumper to N Male	N Female
Mechanical Specifications	F-3749	F-3749A	F-3749-B
Max. Length, in (mm)	9.78 (249)	9.78 (249)	
Diameter, in (mm)	7.0 (178.5)	7.0 (178.5)	
Weight, lbs (kg)	4 (1.8)	4 (1.8)	
Required Minimum Ground Plane Size, in (mm)	14 x 14 (357 x 357)	14 x 14 (357 x 357)	
Mounting hardware	Not Included (see next page)	Not Included (see next page)	

Our In-building antennas require a ground plane to work properly. The minimum ground plane size is specified for each antenna. Failure to provide the ground plane may result in poor propagation and/or poor frequency coverage.

F-3749 Top and Underside View



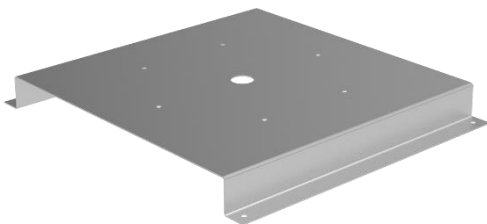
F-3749A Top and Underside View



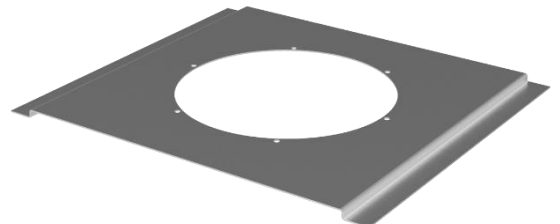
F-3749-B Top and Underside View



Specifications	F-33034	F-33220	F-33135	F-33203	F-33159	F-33105
Fits Antennas	F-3749/A/B	F-3749/B	F-3749/A/B	F-3749/A/B	F-3749/A/B	F-3749/A/B
Ground Plane in	14x14	14x14	24x48	24x24	12x26	14x14
Included with Antenna	No	No	No	No	No	No
Length, in	~16	~16	24	24	12	14
Width, in	14	14	48	24	26	14x5.625



F-33034 Mounting Bracket



F-33220 Mounting Bracket



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