

**SAFETY, PERFORMANCE &  
DEPENDABILITY**

**WHEREVER YOU ARE**

## Antennas, Splitters and Bi-Directional Amplifiers for In-Building Solutions

*Designed for superior reliability and performance*

**FOR ENVIRONMENTS THAT REQUIRE INTERNAL PROPAGATION OF RF  
FOR PUBLIC SAFETY NEEDS**

Our In-Building products have been deployed for Mission-Critical projects including subway transit in-tunnel or underground projects, high-rise In-Building systems, nuclear power plants, correctional facilities, shopping malls, parking garages, casinos and public sports arenas





## COMPROD INC.

**High Quality • Superior Performance • Engineering Design •  
Excellent Technical Support**

### **Trusted by over 1,000 customers worldwide**

As the market leader in the designing and manufacturing of RF Antennas, Filtering Systems and In-Building solutions, we at Comprod put innovation and customer satisfaction at the core of our business strategy. Over the past 40 years, we have set ourselves apart by adapting our offering to our client needs, while anticipating future industry trends and opportunities.

Building on our engineering expertise and experience, we offer a complete range of high-quality, reliable products that are designed for superior performance and operate in the harshest of environments – from the extreme cold of the Arctic to the heat and humidity of the equatorial tropics.

Our knowledge of the market, best-in-class technology and high level of customer service have made us a partner of choice for over 1,000 Public Safety, Utility, Telco, Transportation, Defense and Government Agencies worldwide.

Our Canadian manufacturing facility is certified under ISO 9001:2008 Quality Assurance standards.



**Comprod's Headquarter Facilities, Boucherville, QC, Canada**

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## IN-BUILDING SOLUTIONS

In Building Antennas							
Part #	Frequency Range, MHz	Length in (mm)	Dia. in (mm)	Pattern	Power	Radome	Connector
357-75	136-174	4 x 21 x 3		Omni	150	ABS/Kydex	UHF/BNC/N Female
360-75	406-512	3.25 x 3 x 11		Omni	50	ABS/Kydex	UHF/BNC/N Female
361-75	806-960	3.15 (80)	9.3 (236)	Omni	50	ABS/Kydex	N Female
362-75	806-960	2.0 (51)	4.5 (114)	Omni	100	ABS/Kydex	N Female
F3987	380-470	6.75 (171)	0.5 (12.75)	Omni	150	Aluminum	N Male
F3953	406-512	7.0 (178.5)	0.625 (15.93)	Omni	50	Polycarbonate	N Male
F33005	806-960/1850-1990	2 (51)	4.5 (114)	Omni	50	6200 Kydex	N Female
F33048	740-960	2 (51)	4.5 (114)	Omni	50	6200 Kydex	N Female
F3749	VHF/UHF/806-960	9.78 (249)	7.0 (178.5)	Omni	50	6200 Kydex	N Female
F3741	VHF/UHF/806-960	11.25 (286.88)	0.65 (16.575)	Omni	50	Polycarbonate	N Male
945-70	680-2700	30 x 13 x 3		Directional	150	ABS	DIN 7/16
Bi-Directional Amplifiers							
Pt Number	Frequency Range, MHz	Gain, dB	Noise, dB	Pwr, dBm	Input Voltage	Alarms	Connector
UBDA-138225	138-225 MHz	+80	4 typical	+29	AC:115-220	Power Fail	N Female
UBDA-4551	380-512 MHz	+70	4 typical	+29	AC:115-220	N/A	N Female
BDA 764806	DL:764-776 UL:794-806	+80	2.5 typical	+31.5	AC:115-220 DC:24-27	AGC, S/D, PF	N Female
BDA 806870	DL:851-869 UL:806-824	+80	2.5 typical	+31.5	AC:115-220 DC:24-27	AGC, S/D, PF	N Female
BDA 896941	DL:935-941 UL:896-901	+80	2.5 typical	+31.5	AC:115-220 DC:24-27	AGC, S/D, PF	N Female
Couplers/Splitters							
Model	118-136	VHF	UHF	746-960	Type	Power	Connector
49-FF-YY-XX		•	•	•	Directional Coupler	Up to 25W	N Female
50-FF-YY-XX	<b>220MHz</b>	•	•	•	Directional Coupler	Up to 25W	N Female
XBC-FF-PP	•	•	•	•	Crossband Coupler	RX to 250	N Female
47-XX-0X	•	•	•	•	Power Splitter	RX Only	N Female

## IN-BUILDING SOLUTIONS

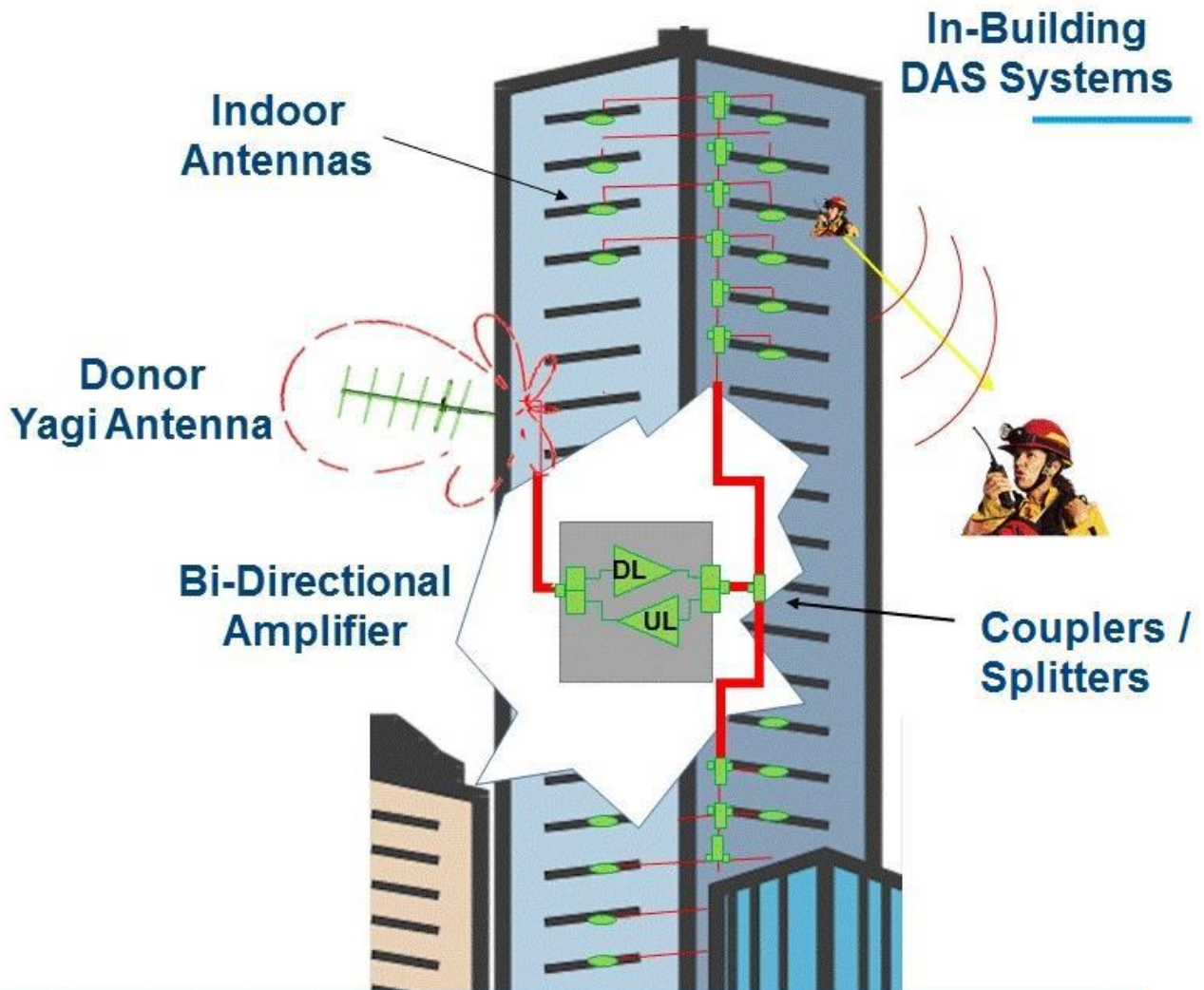
Donor Antennas								
Model	138-174	406-512	746-960	BW 1.5:1	Type	Pattern	Gain dBd	Watts
871A-70-LM	•			36	Exposed Dipole	Offset or Bi	2	200
771-70-LM		•		36	Exposed Dipole	Offset or Bi	2	200
291-70	•			3.75% C F	Yagi	Directional	3.5	350
295-70	•			4% C F	Yagi	Directional	6.5	350
290-70	•			4% C F	Yagi	Directional	9.5	350
250-70	•			36 (2:1)	Yagi	Directional	7	250
F-3872		•		24	Yagi	Directional	3.5	350
433-70		•		24	Yagi	Directional	6.5	350
430-70		•		24	Yagi	Directional	10	350
480-70		406-470		64	Yagi	Directional	10	350
982-70			900-930	30	Yagi	Directional	3.5	200
983-70			•	85	Yagi	Directional	6.5	200
980-70			•	85	Yagi	Directional	10	200
987-70			•	85	Yagi	Directional	12	200
490-70			806-960	85	Yagi	Directional	10	200
470-70	132-174			15% C F	Corner Reflector	Directional	7	250
471-70	132-174			15% C F	Corner Reflector	Directional	10	250
440-70		•		64	Corner Reflector	Directional	9.5	100
442-70		•		64	Corner Reflector	Directional	12	100
365-70		•		20	Parabolic Refl.	Directional	15	100

## IN-BUILDING SOLUTIONS

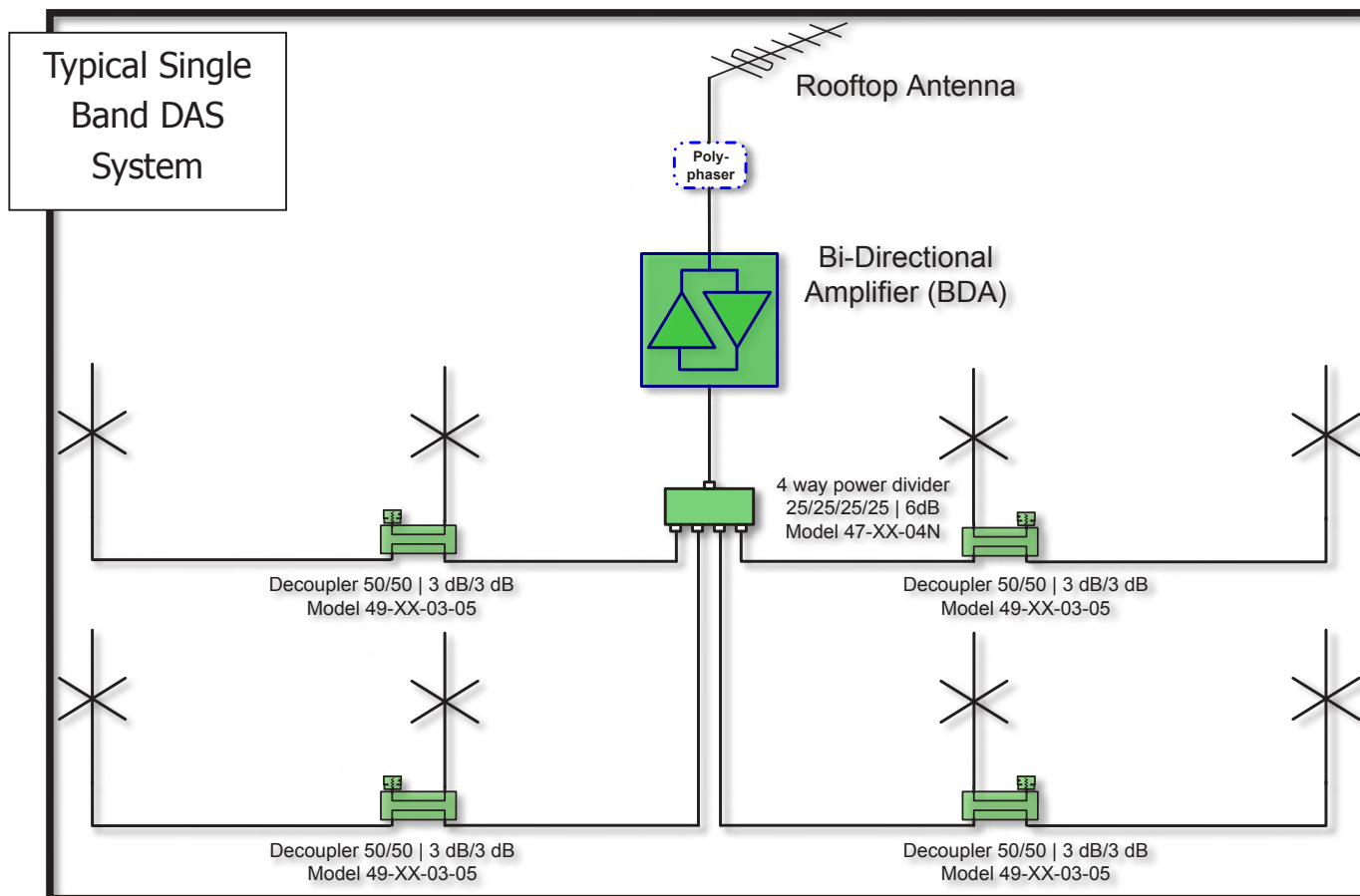
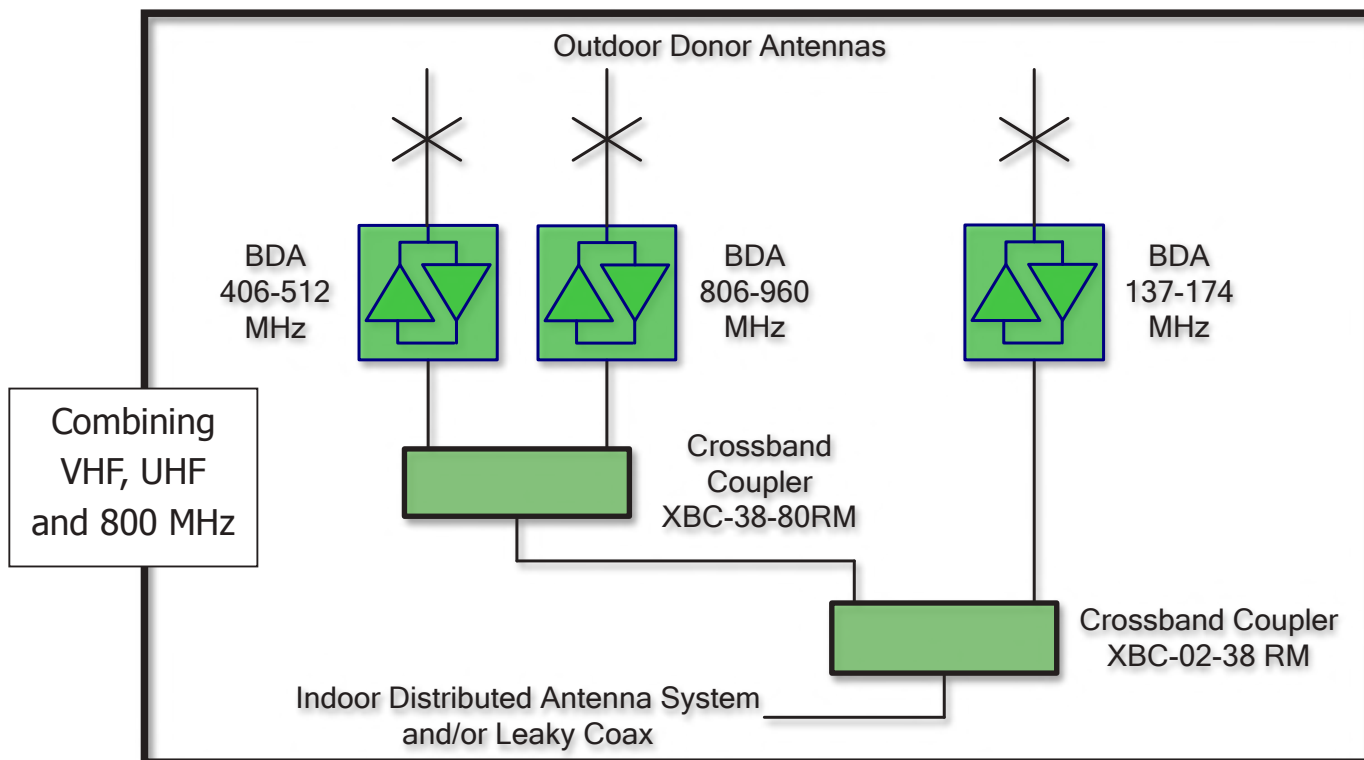
Our In-building antennas are offered for a variety of RF communication projects for environments that require internal propagation of RF for public safety needs. Our products have been deployed for mission critical projects including subway transit in-tunnel or underground projects, high-rise in-building systems, nuclear power plants, correctional facilities, shopping malls, parking garages, casinos and public sports arenas.

Our line of antenna system solutions incorporates single, dual, and tri-band frequency specifications. These antennas are offered in a wide range of enclosures: radomes, low profile, 6200 Kydex fire-retardant material, ABS high-impact, and polycarbonate.

We can complement antenna systems with other RF components from our portfolio to build out the network: splitters, couplers, taps, cables, connectors, signal boosters (Bi-Directional Amplifiers) required for complete RF needs for In-building public safety requirements.

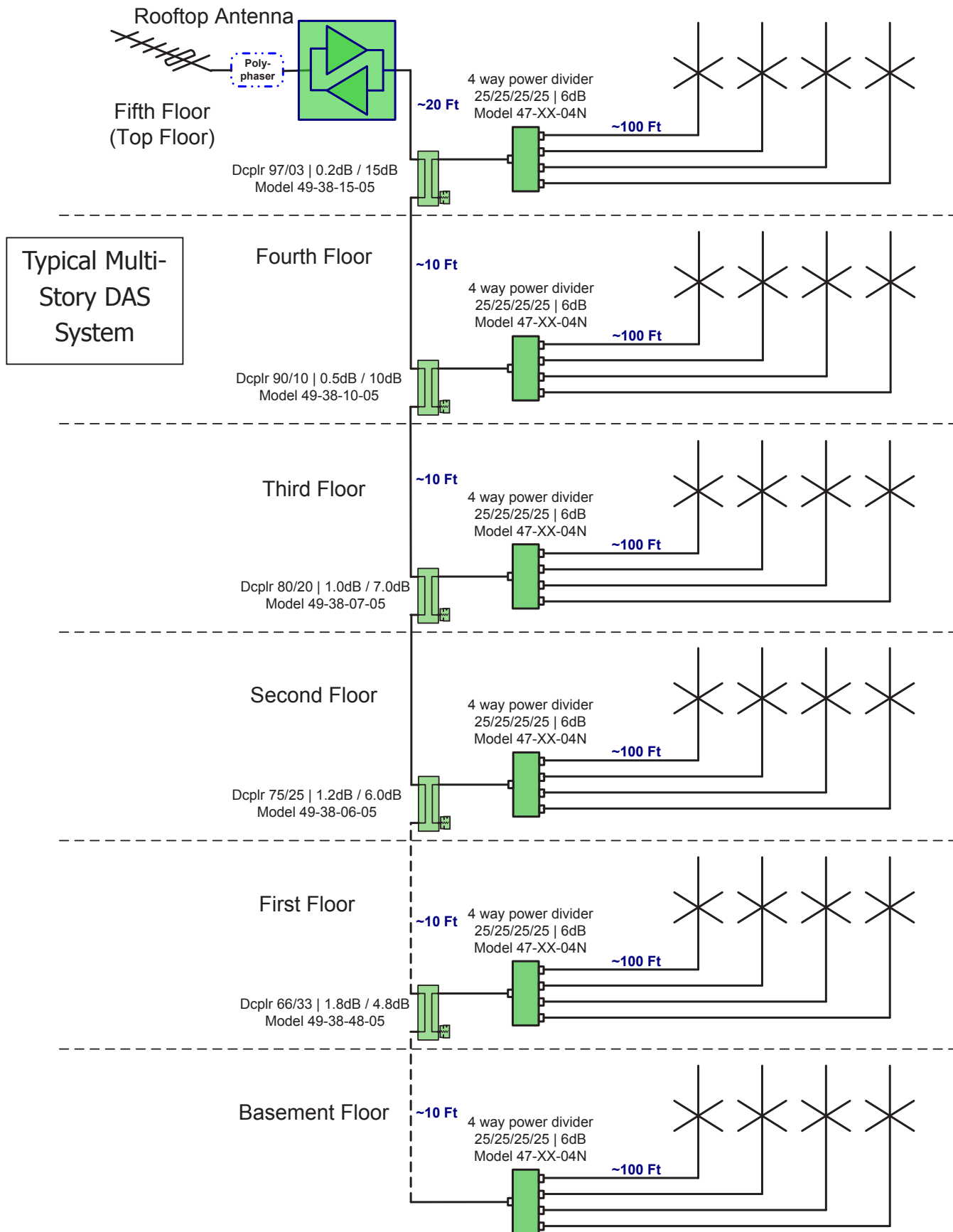


# IN-BUILDING SOLUTIONS





# IN-BUILDING SOLUTIONS



Typical Multi-Story DAS System

## ULTRA-WIDEBAND IN-BUILDING ANTENNA

**130-1000 MHz**

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

**Our latest innovation, the UWB-1301000-NF** has been designed for mounting on a ceiling or gyprock wall without the need of a ground plane. This in-building antenna is entirely flat and gets integrated into the ceiling almost invisibly. The antenna's main application includes: usage for Distributed Antenna Systems (DAS) for Public Safety or LTE communication in multiple stories of a building.

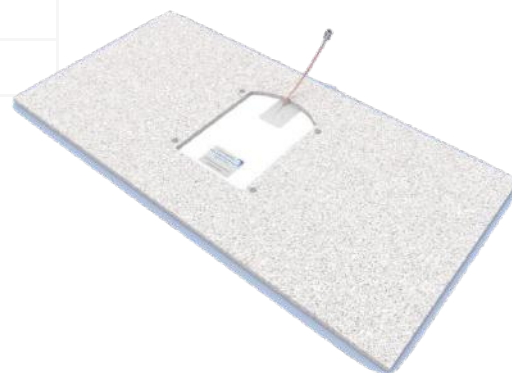
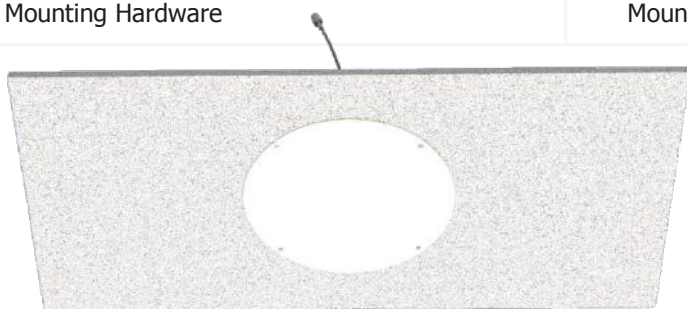
Under request, this antenna can be provided with extra protection to meet the recommended fire safety practices of both the Federal Transit Administration (FTA) and the Federal Rail Administration (FRA) for smoke emission and flammability as tested under ASTM E-662 and ASTM E-162. A layer of Kydex 6200 of 0.3" thickness can be added to be meet these criterium. Please consult our Technical Support team for more information.

Patent pending.

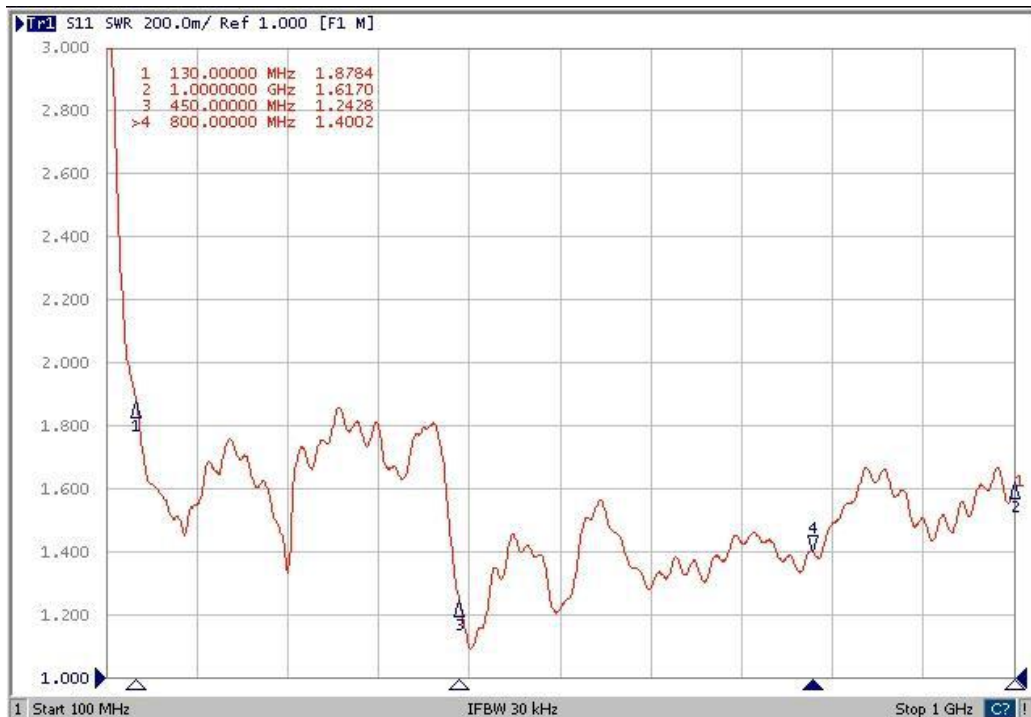
**An ultra-wideband antenna from 380-3000MHz is also available.**



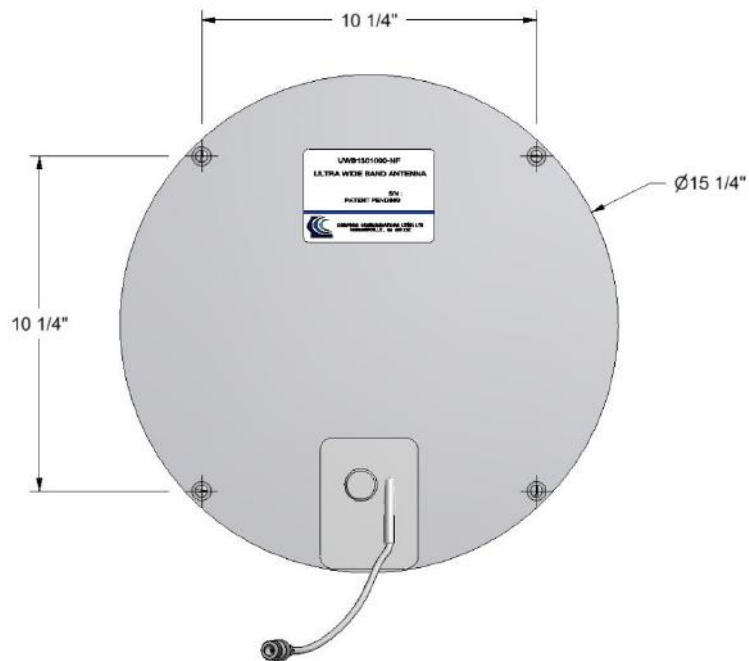
Electrical Specifications	UWB-1301000-NF
Frequency Range, MHz	130-1000
Nominal Gain	Unity
VSWR (regardless of the positioning of cable)	1.8:1 Typical (2.0:1 Maximum)
Bandwidth: 1.8:1 VSWR, MHz	870
Pattern	Omnidirectional
Power Handling, Watts	5
Nominal Impedance, Ohms	50
Color	White
Standard Termination	N Female
Mechanical Specifications	UWB-1301000-NF
Diameter, in (mm)	15.25 (387.35)
Thickness, in (mm)	0.07 (1.8)
Weight, lbs (kg)	N/A
Mounting Hardware	Mounting bolts provided



**ULTRA-WIDEBAND IN-BUILDING ANTENNA** **130-1000 MHz**



VSWR Curve (regardless of positioning of cable)



Mounting Instructions

**27-13-0X-NF**

The Wide-band design series 27-13-0X-NF covers the range of 130-1000 MHz

- Available in 2 way, 3-way or 4-way configuration.
- 300 Watt power Handling
- Airline design to achieve minimum insertion loss
- Low PIM Available
- Suitable for outdoor and indoor applications
- RoHS 2.0 compliant



Model	No of Splits	Insertion Loss (dB)	Input Return Loss (dB)
27-13-02-NF	2	3.1 ± 0.15	>18 (16@130-140MHz)
27-13-03-NF	3	4.8 ±0.3	>18
27-13-04-NF	4	6.15±0.3	>18

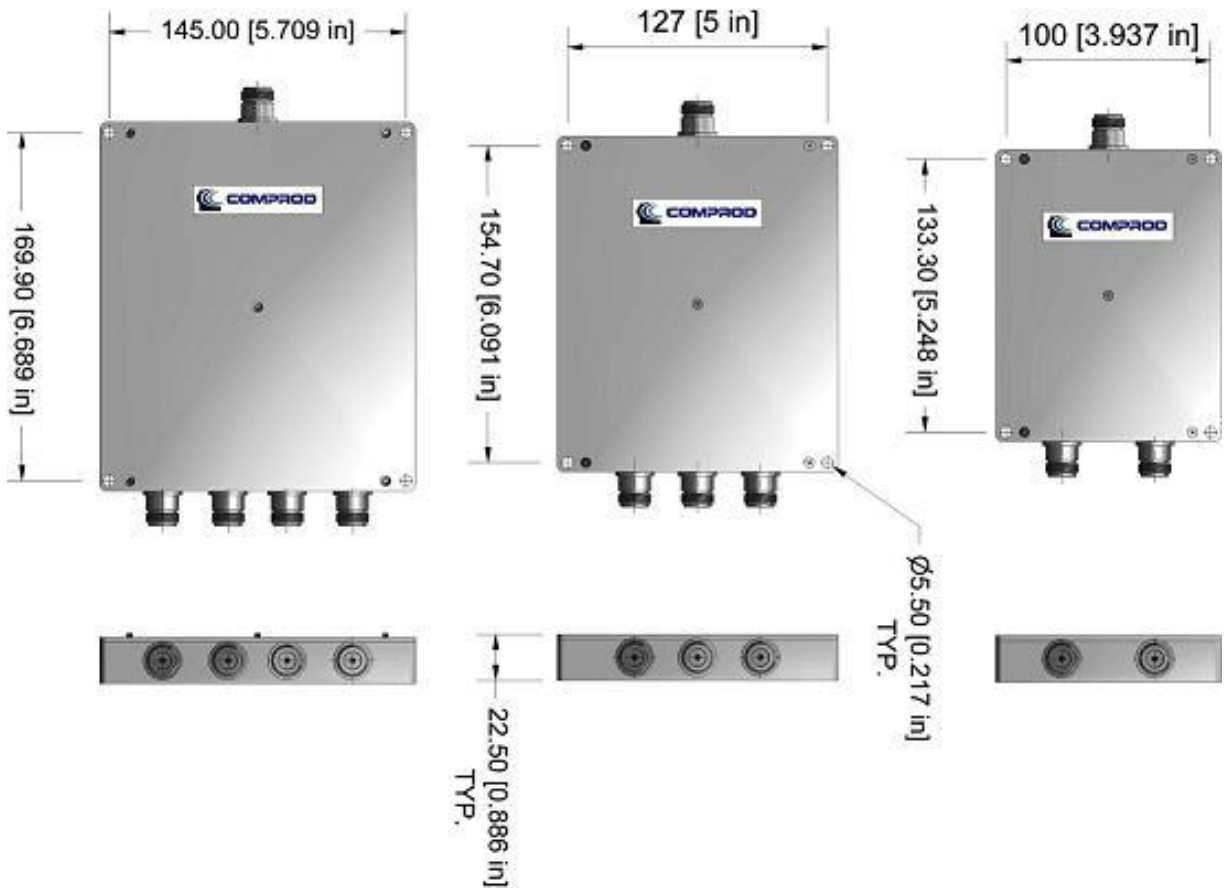
Electrical Specifications	
Frequency Range, MHz	130-1000 MHz
Impedance	50 Ω
Power Rating	300 avg., 1 Kw PK.
Power Rating, Watts	300
Connector	N(f)
Environmental Specifications	
Temperature Range, °C	-35 to +75
Power handling @room temperature, sea level	300 W max. Avg; 1000 W max. peak
Lightning Test	± 5 kA 8/20 us
30 day salt fog testing	GR-487- CORE
Dust & Immersion Testing	IP67
Relative Humidity	5% - 95%
MTBF	>1,000,000 hours
EMC	ETS 300 342-3
RoHS	RoHS 2.0 compliant

**UWB PUBLIC SAFETY SPLITTER** **130-1000 MHz**

**27-13-0X-NF**

**Mechanical Specifications**

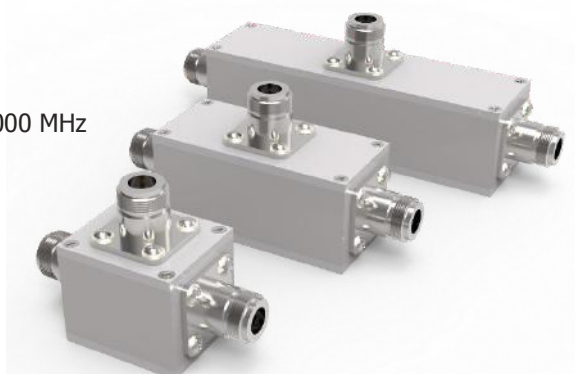
Dimensions (H x W x D), in. (mm)	See outline drawings
Surface Treatment	Passivated Aluminum
Protection ground	M6 Screw
Connectors	N Female



**26-13-0X-NF**

The Wide-band design series 26-13-0X-NF covers the range of 130-1000 MHz

- 300 Watt power Handling
- Airline design to achieve minimum insertion loss
- Low PIM Available
- Suitable for outdoor and indoor applications
- RoHS 2.0 compliant



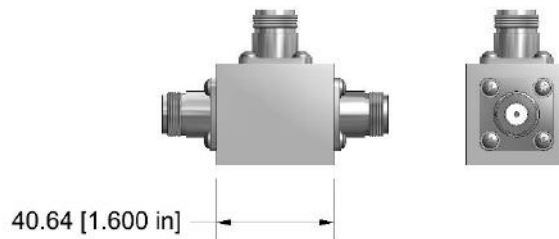
Model	Coupling (dB)		Main Line Insertion Loss (dB)	Unit Length L. (in)
	130-300 MHz	300-1000 MHz		
26-13-05-NF	6.5 ± 0.5	5 ± 0.8	1.65	5
26-13-06-NF	7.2 ± 0.8	6 ± 0.8	1.25	5
26-13-07-NF	8.0 ± 0.8	7 ± 0.6	0.97	5
26-13-10-NF	11 ± 1.0	10 ± 0.5	0.45	3
26-13-15-NF	15 ± 1.0	15 ± 1.0	0.14	3
26-13-20-NF	20 ± 1.0	20 ± 1.0	0.04	1.6
26-13-30-NF	30 ± 1.0	30 ± 1.0	0.004	1.6

Electrical Specifications	
Frequency Range, MHz	130-1000 MHz
Input RL	>20 dB typ., 17 dB min
Impedance	50 Ω
Power Rating	300 avg., 1 Kw PK.
Connector	N(f) Triplate
Environmental Specifications	
Temperature Range, °C	-35 to +75
Power handling @room temperature, sea level	300 W max. Avg; 1000 W max. peak
Lightning Test	± 5 kA 8/20 us
30 day salt fog testing	GR-487- CORE

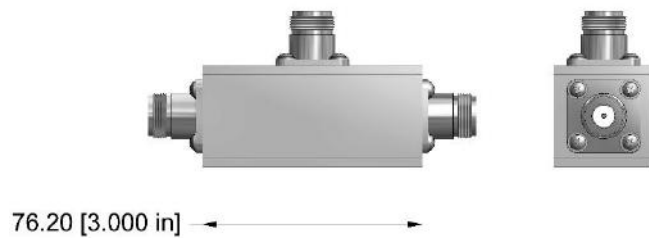
**UWB PUBLIC SAFETY TAPPER** **130-1000 MHz**

Dust & Immersion Testing	IP67
Relative Humidity	5% - 95%
MTBF	>1,000,000 hours
EMC	ETS 300 342-3
RoHS	RoHS 2.0 compliant
<b>Mechanical Specifications</b>	
Dimensions (H x W x D), in. (mm)	See outline drawings
Surface Treatment	Passivated Aluminum
Protection ground	M6 Screw
Connectors	N Female

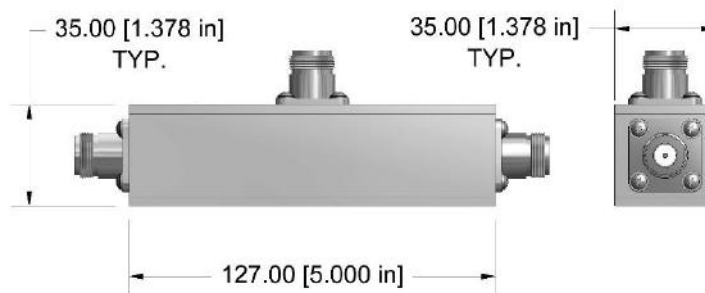
26-13-20-NF  
26-13-30-NF



26-13-10-NF  
26-13-15-NF



26-13-05-NF  
26-13-06-NF  
26-13-07-NF



## SINGLE-BAND IN-BUILDING ANTENNAS

148-960 MHz

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.

We offer a 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.

Our antennas have been installed worldwide and provide RF coverage inside nuclear power plants, correctional institutions, tunnels, high-rise buildings, subways, shopping malls, parking garages, power plants, high-security office networks and mine shafts.

**Note:** add the material and connector type to the part number when ordering:

- ABS is for outdoor use and is grey in color (Default)
- KYDEX is for indoor use and is white in color



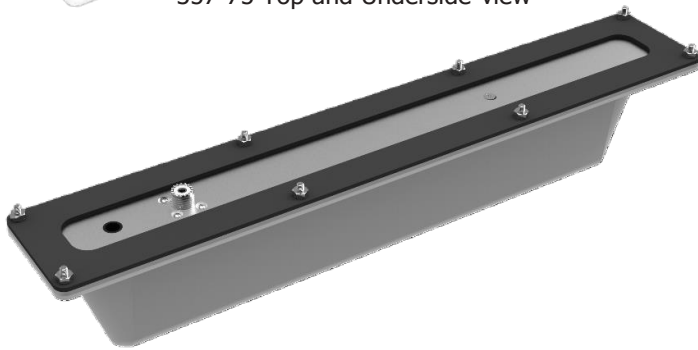
Electrical Specifications	357-75	360-75	361-75	362-75
Frequency Range, MHz	148-174	406-512	806-960	806-960
Nominal Gain	Unity	Unity	Unity	Unity
Bandwidth 1.5:1 VSWR, MHz	3	20	140	66
Bandwidth: 2.0:1 VSWR, MHz	4	40	140	100
Polarization	Vertical	Vertical	Vertical	Vertical
Pattern	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Power Rating, Watts	150	50	50	100
Nominal Impedance, Ohms	50	50	50	50
Radome	ABS / 6200 Kydex	ABS / 6200 Kydex	ABS / 6200 Kydex	ABS / 6200 Kydex
Color	Grey / White	Grey / White	Grey / White	Grey / White
Standard Termination	UHF / BNC / N Female	UHF / BNC / N Female	N Female	N Female
Mechanical Specifications	357-75	360-75	361-75	362-75
Width, in (mm)	4.0 (102)	3.0 (76)	3.15 (80)	2.0 (51)
Length, in (mm)	21.0 (533)	11.0 (279)	N/A	N/A
Height, in (mm)	3.0 (76)	3.25 (83)	N/A	N/A
Diameter, in (mm)	N/A	N/A	9.3 (236)	4.5 (114)
Weight, lbs (kg)	2.1 (0.945)	1.0 (0.45)	2.5 (1.15)	0.375 (0.169)
Required Minimum Ground Plane Size, in (mm)	36 x 48 (914 x 1219)	20 x 16 (508 x 406)	14 x 14 (355 x 355)	10 x 10 (254 x 254)
Mounting hardware	Not Included	Not Included	Not Included	Not Included



SINGLE-BAND IN-BUILDING ANTENNAS 148-960 MHz



357-75 Top and Underside-view



360-75



361-75



362-75 Top and Underside View



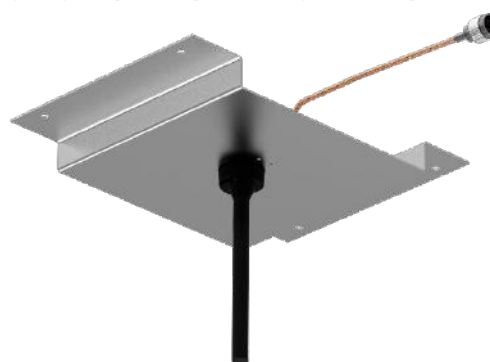
Our In-building antennas are designed to provide excellent coverage solutions for external Public Safety Radio Frequencies to propagate within buildings, tunnels or public use environments.

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.

Our antennas have been installed worldwide and provide RF coverage inside nuclear power plants, correctional institutions, tunnels, high-rise buildings, subways, shopping malls, parking garages, power plants, high-security office networks and mine shafts.

Electrical Specifications	F-3987	F-3953
Frequency Range, MHz	380-470 / 450-512	380-470 / 450-512
Nominal Gain	Unity	Unity
Bandwidth: 2.0:1 VSWR, MHz	64	64
Polarization	Vertical	Vertical
Pattern	Omnidirectional	Omnidirectional
Power Rating, Watts	150	50
Nominal Impedance, Ohms	50	50
Radome	Aluminium Painted	Aluminium Painted
Color	Black / White	Black / White
Standard Termination	N Male	NMO
Mechanical Specifications	F-3987	F-3953
Max. Length, in (mm)	6.75 (171)	7.0 (178.5)
Diameter, in (mm)	0.5 (12.75)	0.625 (15.93)
Weight, lbs (kg)	N/A	N/A
Required Minimum Ground Plane Size, in (mm)	8 x 8 (203 x 203)	8 x 8 (203 x 203)
Mounting hardware	Ground Plane Included	Ground Plane Not Included



F-3987



F-3953

## MULTI-BAND IN-BUILDING ANTENNAS

**760-1990 MHz**

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 antennas are installed on ceilings to provide RF coverage inside nuclear power plants, correctional institutions, tunnels, high-rise buildings, subways, shopping malls, parking garages, power plants, high-security office networks and mine shafts.

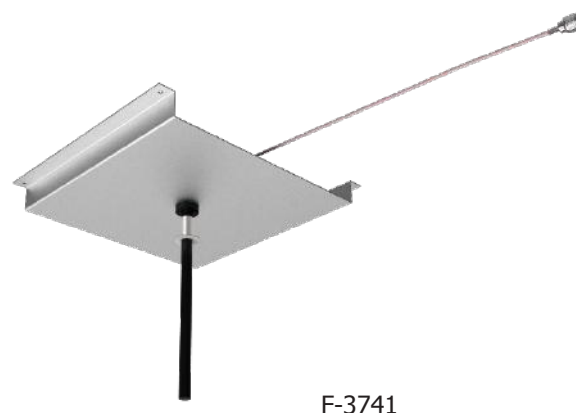
Electrical Specifications	F-33005	F-33048	F-33048-A
Frequency Range, MHz	806-960 / 1850-1990	760-960	760-960
Nominal Gain	Unity	Unity	Unity
Bandwidth: 1.5:1 VSWR, MHz			
138-174	N/A	N/A	N/A
406-512	N/A	N/A	N/A
760-960	N/A	200	200
806-960	72 (specify frequencies)	N/A	N/A
1800-1990	140	N/A	N/A
Polarization	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
Standard Termination	N Female	N Female installed at the base	32" Jumper - N Female
Mechanical Specifications	F-33005	F-33048	F-33048-A
Max. Length, in (mm)	2 (51)		2 (51)
Diameter, in (mm)	4.5 (114)		4.5 (114)
Weight, lbs (kg)	0.375 (0.169)		0.375 (0.169)
Required Minimum Ground Plane Size, in (mm)	8 x 8 (203 x 203)		8 x 8 (203 x 203)
Mounting hardware	Not Included		Not 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-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

## TRI-BAND IN-BUILDING ANTENNAS VHF / UHF / 760-960 MHz

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

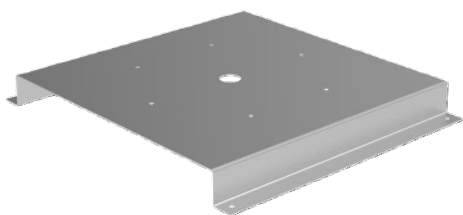
Electrical Specifications	F-3749	F-3749A	F-3749-B
Frequency Range, MHz	VHF / UHF / 760-960	VHF / UHF / 760-960	VHF / UHF / 760-960
Nominal Gain	Unity	Unity	Unity
Bandwidth: 2.0:1 VSWR, MHz			
138-174	8	8	8
406-512	64	64	64
764-890	126	126	126
806-960	154	154	154
1800-1990	N/A	N/A	N/A
2400-3000	N/A	N/A	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)	9.78 (249)
Diameter, in (mm)	7.0 (178.5)	7.0 (178.5)	7.0 (178.5)
Weight, lbs (kg)	4 (1.8)	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)	14 x 14 (357 x 357)
Mounting hardware	Not Included (see next page)	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.

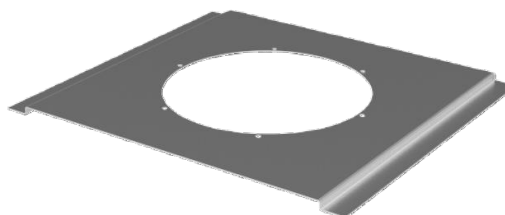
F-3749-B Top and Underside View



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

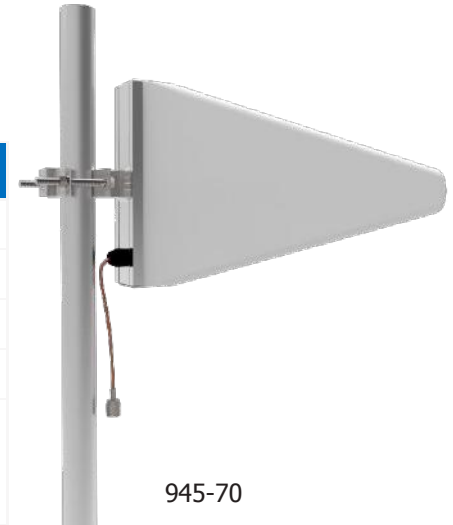
**945-70**

This antenna is a broadband antenna that can be used for public safety as well as in cellular bands. It makes an ideal solution for a **donor antenna for a DAS system**. Our In-building system antennas are designed to provide excellent coverage solutions for external Public Safety Radio Frequencies to propagate within buildings, tunnels or public use environments.

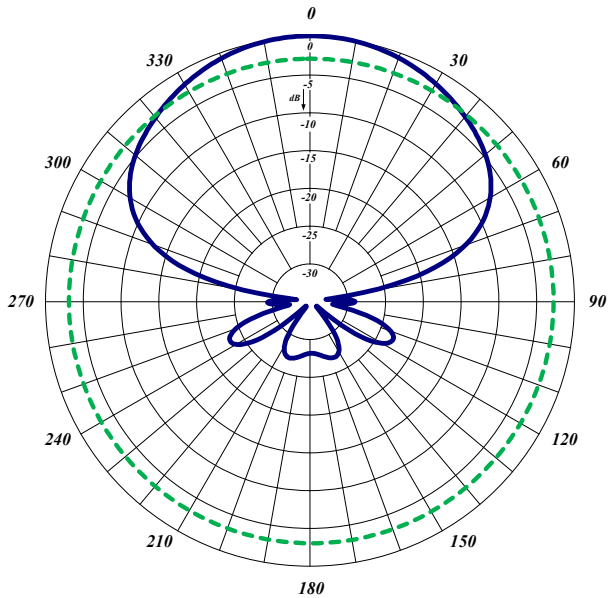
Features:

- Rugged design to withstand the most extreme environmental conditions.
- Extra wide bandwidth for use in multiple bands.

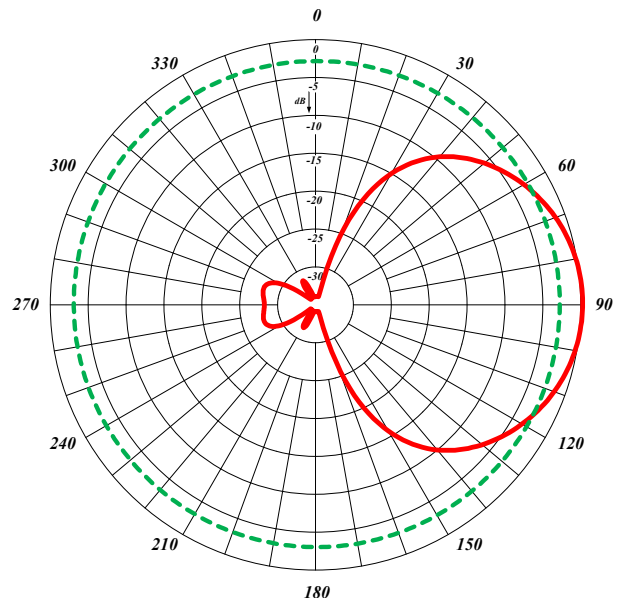
Specifications	945-70
Frequency Band:	580-2700 MHz
Gain:	8-9 dBd
Impedance:	50 Ohm
Intermodulation IM3 2 carrier, 20 W each:	-150 dBc
Power:	300 Watts at lowest frequency, 150 Watts at highest frequency
Front to back Ratio:	25 dB
Half power Horizontal Beamwidth (V Pol):	60 (high frequency) degrees -65 (low frequency) degrees
Half power Vertical Beamwidth (V Pol):	45 (high frequency) degrees -50 (low frequency) degrees
Connector:	DIN 7/16. N type also available (PIM not guaranteed with N type connector)
Max wind Velocity:	240 Km/h (150 mph)
Dimensions:	30" x 13" x 3"



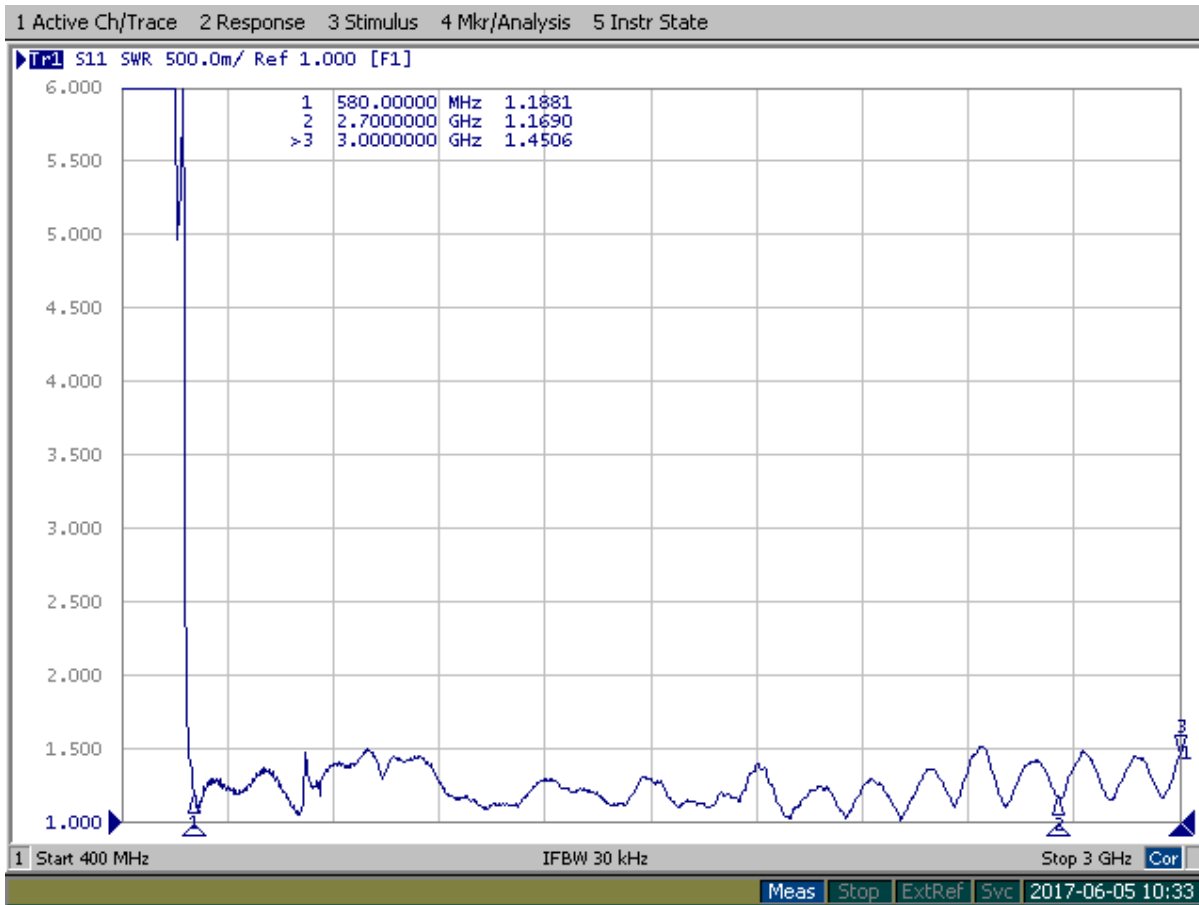
945-70



Horizontal Pattern 580-1690 Vertical Polarization



Vertical Pattern 580-1690 Vertical Polarization





### BDA-40-SERIES (VHF and UHF)

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 VHF and UHF 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

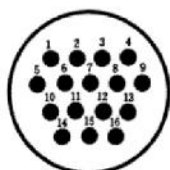


Electrical Specifications	BDA 138174	BDA 380512
Frequency Range, MHz	138-174	380-512
Passband Ripple, dB	+/- 1.5	+/- 1.5
Automatic Gain Control (AGC), dB	30	30
Maximum Gain, dB	+80	+80
Input Manual Attenuation, dB	30 in 2 dB Steps	30 in 2 dB Steps
Output Manual Attenuation, dB	15 in 1 dB Steps	15 in 1 dB Steps
Noise Figure, dB	2	2
Output Power, dBm	30	31.5
VSWR	1.5:1	1.5:1
IP3, dBm (2 tones; 32 dBm each)	50	50
1dB Compression, dBm	39 dBm minimum	39 dBm minimum
Input Voltage, Volts	AC: 115-220 DC: 48	AC: 115-220 DC: 48
Power Consumption, W	35W when connected to 48V DC (max. 700 mA) 40W when connected to 120V AC (max. 3100 mA)	
Temperature Range, °C	-30 to +60	-30 to +60
Connectors	N Female	N Female
Alarms	AGC, S/D, Power	AGC, S/D, Power
Mechanical Specifications	BDA 138174	BDA 380512
Enclosure	NEMA 4 Painted Steel	NEMA 4 Painted Steel
Dimensions, in. H, W, D	Depends on filtering	24 x 13.5 x 20

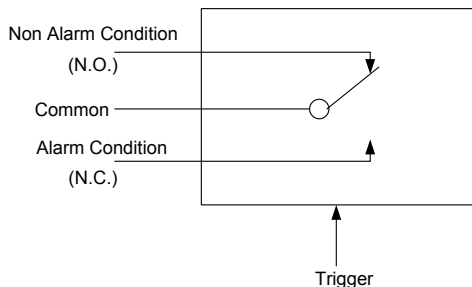
\* See next page (p.2) for certification numbers

Certification Numbers	BDA 138174	BDA 380512
FCC ID	WDM-BDA138174	WDM-BDA380512
IC	7755A-BDA138174	7755A-BDA380512

**Dry Contact Alarms:**



UL or DL



UL Dry Contact Alarm connection		DL Dry Contact Alarm connection	
Pin	Description	Pin	Description
1	NC DC Relay	1	NC DC Relay
2	COM DC Relay	2	COM DC Relay
3	NO DC Relay	3	NO DC Relay
4	NC Oscillation	4	NC Oscillation
5	COM Oscillation	5	COM Oscillation
6	NO Oscillation	6	NO Oscillation
7	NC RF System Failure Relay	7	NC RF System Failure Relay
8	COM RF System Failure Relay	8	COM RF System Failure Relay
9	NO RF System Failure Relay	9	NO RF System Failure Relay
10	NC AC Relay	10	NC AC Relay
11	COM AC Relay	11	COM AC Relay
12	NO AC Relay	12	NO AC Relay
13		13	
14	NC VSWR Donor Antenna Relay	14	NC VSWR Donor Antenna Relay
15	COM VSWR Donor Antenna Relay	15	COM VSWR Donor Antenna Relay
16	NO VSWR Donor Antenna Relay	16	NO VSWR Donor Antenna Relay

Monitoring and Control via Built-in via RS-232 Connector (USB Optional)

Monitor	Alarm	Control
<ul style="list-style-type: none"> <li>- TX/RX System Gain</li> <li>- TX/RX Attenuation</li> <li>- TX Input Power</li> <li>- TX/RX Output Power</li> <li>- DC Voltage/Current</li> <li>- System Temperature</li> </ul>	<ul style="list-style-type: none"> <li>- TX Input Over Power</li> <li>- TX/RX Output Over Power</li> <li>- AGC Range Alarm</li> <li>- TX/RX Shutdown</li> <li>- PSU Alarm</li> <li>- Over Temperature</li> <li>- VSWR</li> <li>- Oscillation</li> </ul>	<ul style="list-style-type: none"> <li>- HPA On/Off</li> <li>- Gain</li> <li>- AGC On/Off</li> <li>- Shutdown On/Off</li> <li>- MCU Reset</li> <li>- Alarm Limit</li> </ul>

The screenshot displays the UDA RF GUI V1.0 interface. On the left, there is a navigation menu with options: COM25 (selected), Connect, MENU, Status & Control (highlighted), Download, Alarm History, Maintenance, and EXIT. The main window is titled 'Monitoring' and contains several sections:

- Classification Table:**

Classification	#1	#2
UDA ON/OFF	ON	ON
Input Power(dBm)	-55.0	-55.0
Output Power(dBm)	5.0	5.0
Gain(dB)	60.0	60.0
- AGC/ASD Settings:**
  - AGC(User) Atten1(dB): 0.0
  - AGC(User) Atten2(dB): 0.0
  - AGC Level(dBm): 0
  - AGC Window(dB): 0
  - ASD Level(dBm): 0
  - ASD Time(min) / Count: 0 / 0
  - OSC Time(min) / Count: 0 / 0
  - VSWR Limit(dBm) / Count(Sec): 0 / 0
- Enable/Disable Settings:**
  - AGC Enable: OFF
  - OSC Enable: OFF
  - ASD Enable: OFF
  - HPA OFF Case: DC Fail
  - HPA Enable: OFF
  - Over TEMP Enable: OFF
  - Over TEMP Level(°C): 0
- Alarm Status:**
  - Input Power #1: ON
  - Output Power #1: OFF
  - AGC Range #1: ON
  - ShutDown #1: ON
  - VSWR #1: ON
  - OSC #1: ON
  - Input Power #2: ON
  - Output Power #2: OFF
  - AGC Range #2: ON
  - ShutDown #2: ON
  - VSWR #2: ON
  - OSC #2: ON
  - PSU Fail: OFF
  - Over Temp: OFF
  - Door: OFF
- System Information:**
  - DC Voltage(V): 0.00
  - Current #1(A): 0.00
  - Current #2(A): 0.00
- Info Section:**
  - Maker: COMPROD, Model: UDA RF, Hw Ver: 1.0, Sw Ver: 1.0
  - Temp: 26 °C, Time: 2017.09.04, 10:51:34
  - Buttons: TX (checked), RX (unchecked), REFRESH (unchecked)
  - Buttons: Environment, Repeater Reset, CONTROL

Visual Alarms and Remote Failure Monitoring with Graphical User Interface

**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

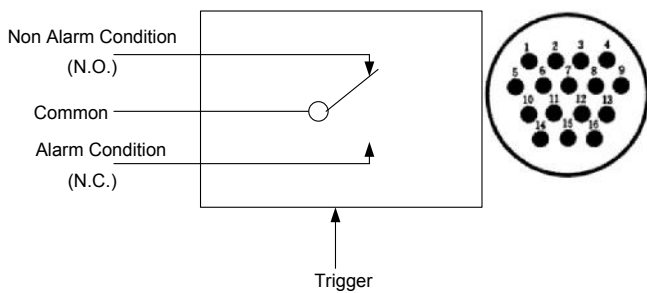
**BI-DIRECTIONAL AMPLIFIER (BDA) 764-941 MHz**

Certification Numbers	BDA 764806	BDA 806870	BDA 896941
FCC ID	WDM-BDA764806	WDM-BDA806870	WDM-BDA896941
IC	7755A-BDA764806	7755A-BDA806870	7755A-BDA896941

**Four Dry Contact Alarms:**

Donor Antenna Alarm	AC Current Alarm	DC Current Alarm	RF System Alarm
<ul style="list-style-type: none"> <li>- Antenna disconnected</li> <li>- Antenna open circuit</li> </ul>	<ul style="list-style-type: none"> <li>- AC Power failure (Can run on DC source)</li> </ul>	<ul style="list-style-type: none"> <li>- DC Power failure</li> </ul>	<ul style="list-style-type: none"> <li>- Shutdown of RF System:                             <ul style="list-style-type: none"> <li>- Overheating</li> <li>- Power over limit</li> <li>- VGA malfunction</li> <li>- Other failures</li> </ul> </li> </ul>

Relay Shown in Non-Alarm Condition.  
A kit of the connector with labeled wires are supplied with the unit.



Pin	Description	Pin	Description
1	NC DC Relay	9	NO RF System Failure Relay
2	COM DC Relay	10	NC AC Relay
3	NO DC Relay	11	COM AC Relay
4		12	NO AC Relay
5		13	
6		14	NC Antenna Relay
7	NC RF System Failure Relay	15	COM Antenna Relay
8	COM RF System Failure Relay	16	NO Antenna Relay

**Monitoring and Control via Built-in via RS-232 Connector (USB Optional)**

Monitor	Alarm	Control
<ul style="list-style-type: none"> <li>- TX/RX System Gain</li> <li>- TX/RX Attenuation</li> <li>- TX Input Power</li> <li>- TX/RX Output Power</li> <li>- DC Voltage/Current</li> <li>- System Temperature</li> </ul>	<ul style="list-style-type: none"> <li>- TX Input Over Power</li> <li>- TX/RX Output Over Power</li> <li>- AGC Range Alarm</li> <li>- TX/RX Shutdown</li> <li>- PSU Alarm</li> <li>- Over Temperature</li> </ul>	<ul style="list-style-type: none"> <li>- HPA On/Off</li> <li>- Gain</li> <li>- AGC On/Off</li> <li>- Shutdown On/Off</li> <li>- MCU Reset</li> <li>- Alarm Limit</li> </ul>

The screenshot displays the RF BDA GUI V1.8[20180122] interface. On the left, there is a sidebar with a 'COM5' dropdown, a 'Connect' button, a 'MENU' section with 'Status & Control' and 'Download' buttons, 'Alarm History', 'Maintenance', and an 'EXIT' button. The main area is titled 'Monitoring' and is divided into several sections:

- Classification Table:**

Classification	DL	UL
Input Power(dBm)	-52.6	The lowest input level can be detected is -80dBm
Output Power(dBm)	30.8	-10.1
Gain(dB)	83.5	83.5
- Environment:** A button to view environmental settings.
- AGC/ASD Settings:**

Parameter	DL	UL
AGC(User) Atten(dB)	<input type="checkbox"/> 0.0	<input type="checkbox"/> 0.0
AGC Level(dBm)	<input type="checkbox"/> 30	<input type="checkbox"/> 30
AGC Window(dB)	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Balance Enable/Offset(dB)	ON	0
ASD Level(dBm)	<input type="checkbox"/> 33	<input type="checkbox"/> 33
ASD Time(min)/Count(dB)	<input type="checkbox"/> 1	<input type="checkbox"/> 1
- System Status:**

AGC Enable	ON	ON
ASD Enable	ON	ON
HPA OFF Case		
HPA Enable	ON	ON
Over TEMP Enable	ON	
Over TEMP Level(?)	<input type="checkbox"/> 50	
- Alarm Section:**
  - DL Over Input
  - DL Over Power
  - DL AGC Range
  - DL ShutDown
  - UL Over Power
  - UL AGC Range
  - UL ShutDown
  - PSU Fail
  - Over Temp
  - Donor Antenna
- System Metrics:**
  - DC Voltage(V): 28.51
  - Current(A): 0.84
- Info Section:**
  - Maker: COMPROD, Model: BDA RF 1Watt, Hw Ver: 1.0, Sw Ver: 1.9
  - Temp: 24, Time: 2008.01.00, 00:05:12
- Control Section:**
  - TX  RX  REFRESH
  - Repeater Reset CONTROL

Visual Alarms and Remote Failure Monitoring with Graphical User Interface

### BATTERY BACKUP SYSTEM

#### P600-1-24-20

We can supply a Battery backup system that is compatible with our VHF/UHF/700/800 and 900 MHz BDA's and any other 24V BDA on the market. This Battery backup is part of a complete solution for NFPA compliance.

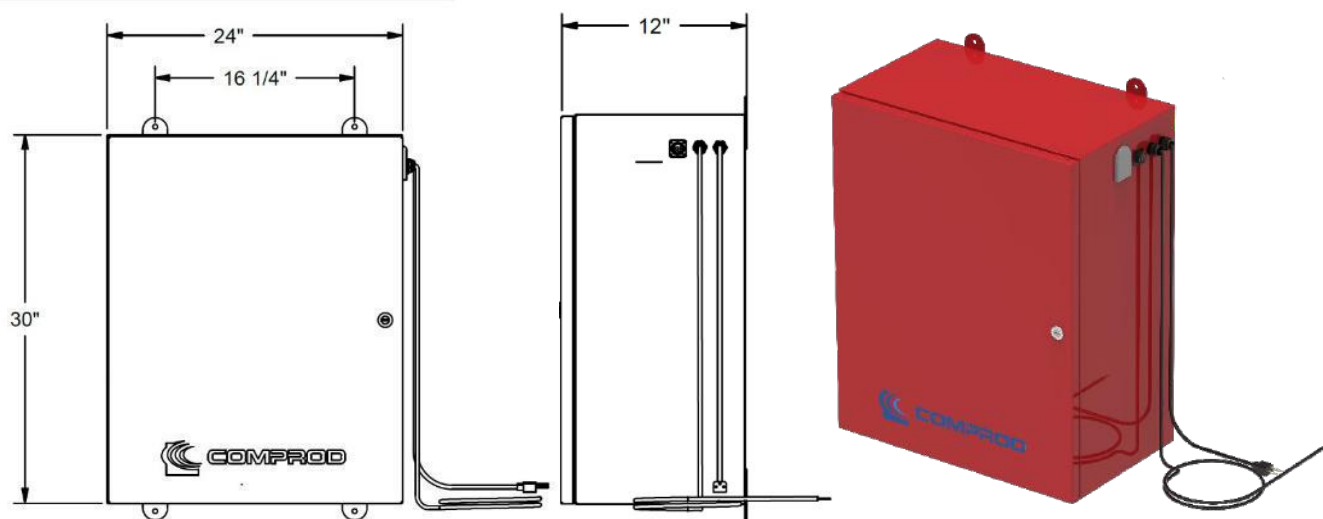
Features:

- Battery and charger/rectifier, up to 24-hour backup time.
- Universal input: 100-250V 1phase-60Hz
- Input protection: AC breaker (1 pole)
- 24V and 48V DC available
- Load protection: DC breaker (2 poles)
- Dry Contact Alarms for the following conditions:
  - High or Low DC volts
  - AC Power or Rectifier failure

Battery temperature compensation: to extend the battery life it reduces the charging voltage when temperature exceeds 25° C and increases it when the temperature is lower than 25° C.

Battery Type: VRLA type battery to provide 7.6Amps up to 24-hour backup time and down to 21Vdc end voltage at 25° C.

Cabinet Type: NEMA 4 wall mount: 30" H x 24" W x 12" D with Hydrogen venting in red fire alarm color.



Disclaimer: Actual backup time depends on the actual connected load, battery temperature and aging.

**49-FF-YY-XX Series**

We offer a full line of Hybrid and Directional Couplers. The full range of decoupling values allows balanced power division and distribution. These couplers are bidirectional and are well suited for two-way communications systems. A full line of Tri-Band models is available for distribution of VHF, UHF and 800 MHz via a single transmission line. Standard finish is gold Alodine.

- Low Insertion Loss
- High Isolation between ports
- Excellent VSWR
- Tri-Band and other models are available and customizable.

Please contact our Technical Support team for consultation at [sales@comprodcom.com](mailto:sales@comprodcom.com)



Model with 5-Watt Load	Frequency Range	Decoupling (dB)	Insertion Loss (dB)	Power Split Ratio (%)
49-13-03-05	138-174MHz	-3.0, ±0.7	-3.0, ±0.3	50 / 50
49-13-48-05	138-174MHz	-4.8, ±0.7	-1.8, ±0.3	67 / 33
49-13-06-05	138-174MHz	-6.0, ±1.0	-1.2, ±0.2	75 / 25
49-13-07-05	138-174MHz	-7.0, ±1.0	-1.0, ±0.2	80 / 20
49-13-10-05	138-174MHz	-10.0, ±1.0	-0.5, ±0.2	90 / 10
49-13-20-05	138-174MHz	-20.0, ±1.0	-0.3 max.	99 / 1
49-38-03-05	380-512MHz	-3.0, ±0.7	-3.0, ±0.3	50 / 50
49-38-48-05	380-512MHz	-4.8, ±0.7	-1.8, ±0.3	67 / 33
49-38-06-05	380-512MHz	-6.0, ±1.0	-1.2, ±0.2	75 / 25
49-38-07-05	380-512MHz	-7.0, ±1.0	-1.0, ±0.2	80 / 20
49-38-10-05	380-512MHz	-10.0, ±1.0	-0.5, ±0.2	90 / 10
49-38-15-05	380-512MHz	-15.0	-0.2 max.	97 / 3
49-38-20-05	380-512MHz	-20.0	-0.2 max.	99 / 1
49-38-30-05	380-512MHz	-30.0	-0.2 max.	99.9 / 0.1
49-74-03-05	760-960MHz	-3.0, ±0.7	-3.0, ±0.3	50 / 50
49-74-48-05	760-960MHz	-4.8, ±0.7	-1.8, ±0.3	67 / 33
49-74-06-05	760-960MHz	-6.0, ±1.0	-1.2, ±0.2	75 / 25
49-74-07-05	760-960MHz	-7.0, ±1.0	-1.0, ±0.2	80 / 20
49-74-10-05	760-960MHz	-10.0, ±1.0	-0.5, ±0.2	90 / 10
49-74-15-05	760-960MHz	-15.0	-0.2 max.	97 / 3
49-74-20-05	760-960MHz	-20.0	-0.2 max.	99 / 1
49-74-30-05	760-960MHz	-30.0	-0.2 max.	99.9 / 0.1



**50-FF-YY-XX Series**

We offer a full line of compact couplers covering the frequency ranges from 138-174, 215-300, 350-520 or 740-960 MHz. The full range of coupling values provides balanced power division and distribution. The 50-FF series uses a multilayer bonded PCB design resulting in a high performance compact design.

- Low insertion Loss,
- Excellent return Loss.
- Compact dimensions: 5.0x3.70x1.5 in.
- 3, 4.8, 6, 7, 10, 15, 20, 30 dB values.
- A high power of up to 200 Watts is also available.
- Integrated Mounting Bracket.



With Integrated 5-Watt Load	Frequency Range	Coupling Nom. (dB)	ThruLine Loss (dB)	Power Split Ratio (%)
50-13-03-05	138-174MHz	-3.0	-3.0 ±0.3	50 / 50
50-13-48-05	138-174MHz	-4.8	-1.8 ±0.2	67 / 33
50-13-06-05	138-174MHz	-6.0	-1.2 ±0.2	75 / 25
50-13-07-05	138-174MHz	-7.0	-1.0 ±0.2	80 / 20
50-13-10-05	138-174MHz	-10.0	-0.5 ±0.2	90 / 10
50-13-15-05	138-174MHz	-15.0	-0.14 ±0.2	97 / 3
50-13-20-05	138-174MHz	-20.0	-0.04 ±0.2	99 / 1
50-13-30-05	138-174MHz	-30.0	-0.04 ±0.2	99.9 / 0.1
50-21-03-05	215-300MHz	-3.0	-3.0 ±0.3	50 / 50
50-21-48-05	215-300MHz	-4.8	-1.8 ±0.2	67 / 33
50-21-06-05	215-300MHz	-6.0	-1.2 ±0.2	75 / 25
50-21-07-05	215-300MHz	-7.0	-1.0 ±0.2	80 / 20
50-21-10-05	215-300MHz	-10.0	-0.5 ±0.2	90 / 10
50-21-15-05	215-300MHz	-15.0	-0.14 ±0.2	97 / 3
50-21-20-05	215-300MHz	-20.0	-0.04 ±0.2	99 / 1
50-21-30-05	215-300MHz	-30.0	-0.04 ±0.2	99.9 / 0.1

**50-FF-YY-XX Series**

We offer a full line of compact couplers covering the frequency ranges from 138-174, 215-300, 350-520 or 740-960 MHz. The full range of coupling values provides balanced power division and distribution. The 50-FF series uses a multilayer bonded PCB design resulting in a high performance compact design.

- Low insertion Loss,
- Excellent return Loss.
- Compact dimensions: 3.0x3.0x1.5 in.
- 3, 4.8, 6, 7, 10, 15, 20, 30 dB values.
- A high power of up to 200 Watts is also available.
- Integrated Mounting Bracket.



With Integrated 5-Watt Load	Frequency Range	Coupling Nom. (dB)	ThruLine Loss (dB)	Power Split Ratio (%)
50-35-03-05	350-520MHz	-3.0	-3.0 ±0.3	50 / 50
50-35-48-05	350-520MHz	-4.8	-1.8 ±0.2	67 / 33
50-35-06-05	350-520MHz	-6.0	-1.2 ±0.2	75 / 25
50-35-07-05	350-520MHz	-7.0	-1.0 ±0.2	80 / 20
50-35-10-05	350-520MHz	-10.0	-0.5 ±0.2	90 / 10
50-35-15-05	350-520MHz	-15.0	-0.14 ±0.2	97 / 3
50-35-20-05	350-520MHz	-20.0	-0.04 ±0.2	99 / 1
50-35-30-05	350-520MHz	-30.0	-0.04 ±0.2	99.9 / 0.1
50-74-03-05	740-960MHz	-3.0	-3.0 ±0.3	50 / 50
50-74-48-05	740-960MHz	-4.8	-1.8 ±0.2	67 / 33
50-74-06-05	740-960MHz	-6.0	-1.2 ±0.2	75 / 25
50-74-07-05	740-960MHz	-7.0	-1.0 ±0.2	80 / 20
50-74-10-05	740-960MHz	-10.0	-0.5 ±0.2	90 / 10
50-74-15-05	740-960MHz	-15.0	-0.14 ±0.2	97 / 3
50-74-20-05	740-960MHz	-20.0	-0.04 ±0.2	99 / 1
50-74-30-05	740-960MHz	-30.0	-0.04 ±0.2	99.9 / 0.1

**TAPPERS** **350-2700 MHz**

**26-35-YY-NF Series**

We offer a full line of tappers covering the frequency ranges from 350-2700 MHz.

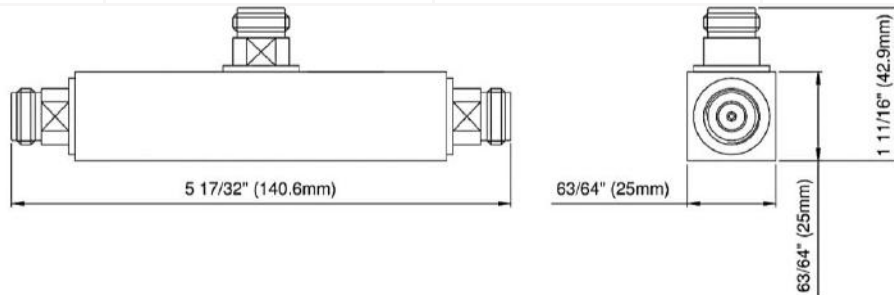
- Low insertion loss. Lower PIM versions available with DIN 7/16 Connector
- Compact dimensions: 5.5 x 1.0 x 1.7 in.
- 5, 6, 10, 15, 20, 30 dB values
- Average power of 200 Watts and with supplied mounting bracket

Electrical Specifications	26-35-YY-NF
Frequency Range, MHz	350-2700
Insertion Loss, dB	< 0.1
VSWR	1.2:1
Power Rating, Watts	200
PIM, dBc	150 (2 x 20W carriers)
Nominal Impedance – In/Out, Ohms	50
Environmental Specifications	26-35-YY-NF
Temperature Range, °C	-35 to +75
Mechanical Specifications	26-35-YY-NF
Dimensions (H x W x D), in. (mm)	1.7 x 5.5 x 1.0 (42.9 x 140.6 x 25)
Connectors	N Female
Mounting Information	Mounting bracket supplied



Mounting Bracket

Model	Frequency Range	Split Ratio (dB)	Power Ratio (%)
26-35-05-NF	350-2700 MHz	5.0	70 / 30
26-35-06-NF	350-2700 MHz	6.0	75 / 25
26-35-10-NF	350-2700 MHz	10.0	90 / 10
26-35-15-NF	350-2700 MHz	15.0	97 / 3
26-35-20-NF	350-2700 MHz	20.0	99 / 1
26-35-30-NF	350-2700 MHz	30.0	99.9 / 0.1



TAPPERS

698-2700 MHz

**26-69-YY-NF Series**

We offer a full line of tappers covering the frequency ranges from 698-2700 MHz.

- Low insertion loss. Low PIM versions available with DIN 7/16 Connector
- Compact dimensions: 8.2 x 1.0 x 2.5 in. with 5, 6, 10, 15 dB values
- Average power of 200 Watts and with supplied mounting bracket

Electrical Specifications	26-69-YY-NF
Frequency Range, MHz	698-2700
Insertion Loss, dB	< 0.1
VSWR	1.2:1
Power Rating, Watts	200
PIM, dBc	150 (2 x 20W Carriers)
Nominal Impedance – In/Out, Ohms	50

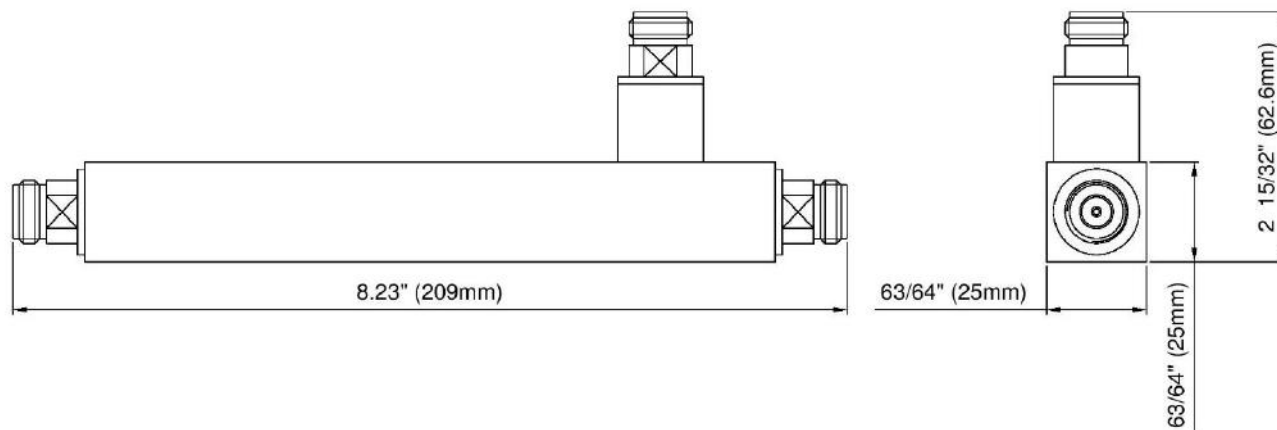
Environmental Specifications	26-69-YY-NF
Temperature Range, °C	-35 to +75

Mechanical Specifications	26-69-YY-NF
Dimensions (H x W x D), in. (mm)	2.5 x 8.23 x 1.0 (62.6 x 209 x 25)
Connectors	N Female
Mounting Information	Mounting bracket supplied

Model	Frequency Range	Split Ratio (dB)	Power Ratio (%)
26-69-05-NF	698-2700 MHz	5.0	70 / 30
26-69-06-NF	698-2700 MHz	6.0	75 / 25
26-69-10-NF	698-2700 MHz	10.0	90 / 10
26-69-15-NF	698-2700 MHz	15.0	97 / 3



Mounting Bracket



**TAPPERS** **698-2700 MHz**

**26-69-YY-NF Series**

We offer a full line of tappers covering the frequency ranges from 698-2700 MHz.

- Low insertion loss. Low PIM versions available with DIN 7/16 Connector
- Compact dimensions: 3.7 x 1.0 x 2.5 in. with 20, 30 dB values
- Average power of 200 Watts and with supplied mounting bracket

Electrical Specifications	26-69-YY-NF
Frequency Range, MHz	698-2700
Insertion Loss, dB	< 0.1
VSWR	1.2:1
Power Rating, Watts	200
PIM, dBc	150 (2 x 20W Carriers)
Nominal Impedance – In/Out, Ohms	50

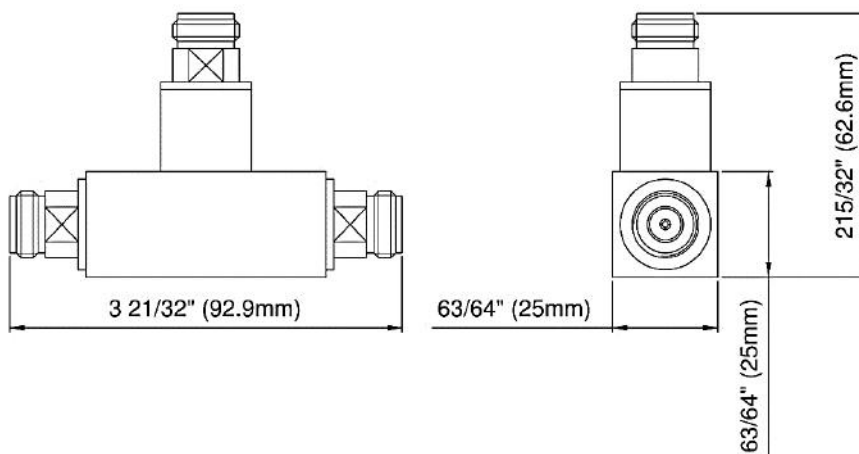
Environmental Specifications	26-69-YY-NF
Temperature Range, °C	-35 to +75

Mechanical Specifications	26-69-YY-NF
Dimensions (H x W x D), in. (mm)	2.5 x 3.66 x 1.0 (62.6 x 92.9 x 25)
Connectors	N Female
Mounting Information	Mounting bracket supplied

Model	Frequency Range	Split Ratio (dB)	Power Ratio (%)
26-69-20-NF	698-2700 MHz	20.0	99 / 1
26-69-30-NF	698-2700 MHz	30.0	99.9 / 0.1



Mounting Bracket



2-WAY POWER SPLITTERS

350-2700 MHz

27-35-02-NF

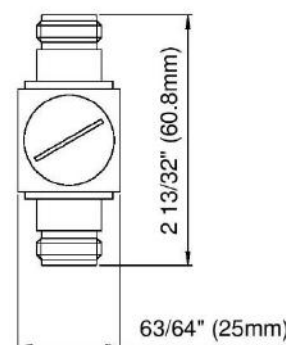
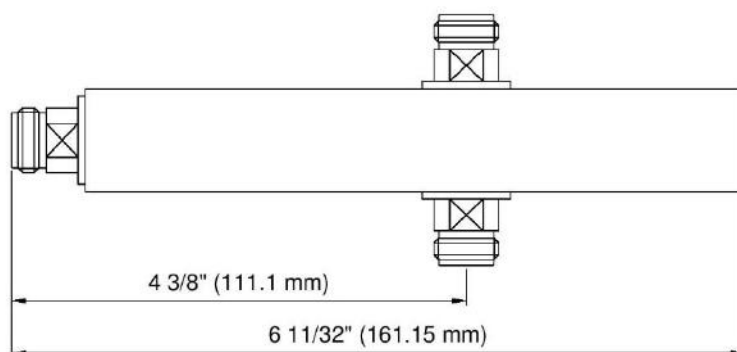
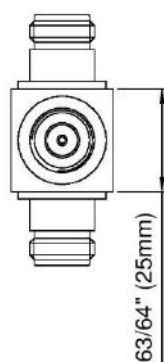
We offer a full line of splitters covering the frequency range of 350-2700 MHz. Available in a 2-way or 3-way configuration.

- Low insertion loss. Low PIM versions available with DIN 7/16 Connector
- Compact dimensions: 6.3 x 1.0 x 2.4 in.
- 3 dB values
- Average power of 300 Watts and with supplied mounting bracket

Electrical Specifications		27-35-02-NF	
Frequency Range, MHz		350-2700	
Insertion Loss, dB		< 0.1	
VSWR		1.2:1	
Power Rating, Watts		300	
PIM, dBc		150 (2 x 20W carriers)	
Nominal Impedance – In/Out, Ohms		50	
Environmental Specifications		27-35-02-NF	
Temperature Range, °C		-35 to +75	
Mechanical Specifications		27-35-02-NF	
Dimensions (H x W x D), in. (mm)		2.4 x 6.3 x 1.0 (60.8 x 161.15 x 25)	
Connectors		N Female	
Mounting Information		Mounting bracket supplied	
Model	Frequency Range	Split Ratio (dB)	Power Ratio (%)
27-35-02-NF	350-2700 MHz	3.0	50



Mounting Bracket



3-WAY POWER SPLITTERS

350-2700 MHz

27-35-03-NF

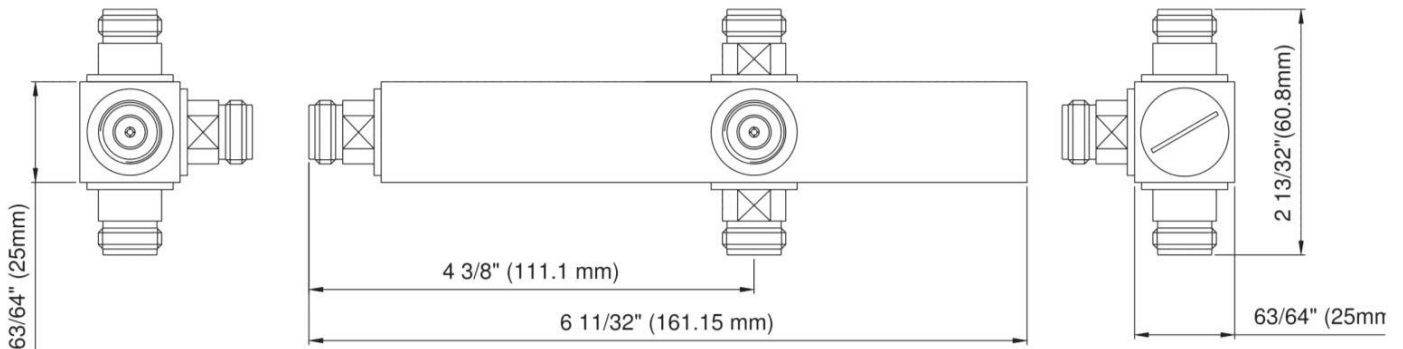
We offer a full line of splitters covering the frequency range of 350-2700 MHz. Available in a 2-way or 3-way configuration.

- Low insertion loss. Low PIM versions available with DIN 7/16 Connector
- Compact dimensions: 6.3 x 1.0 x 2.4 in.
- 5 dB values
- Average power of 300 Watts and with supplied mounting bracket

Electrical Specifications		27-35-03-NF	
Frequency Range, MHz		350-2700	
Insertion Loss, dB		< 0.1	
VSWR		1.2:1	
Power Rating, Watts		300	
PIM, dBc		150 (2 x 20W carriers)	
Nominal Impedance – In/Out, Ohms		50	
Environmental Specifications		27-35-03-NF	
Temperature Range, °C		-35 to +75	
Mechanical Specifications		27-35-03-NF	
Dimensions (H x W x D), in. (mm)		2.4 x 6.3 x 1.0 (60.8 x 161.15 x 25)	
Connectors		N Female	
Mounting Information		Mounting bracket supplied	
Model	Frequency Range	Split Ratio (dB)	Power Ratio (%)
27-35-03-NF	350-2700 MHz	5.0	33



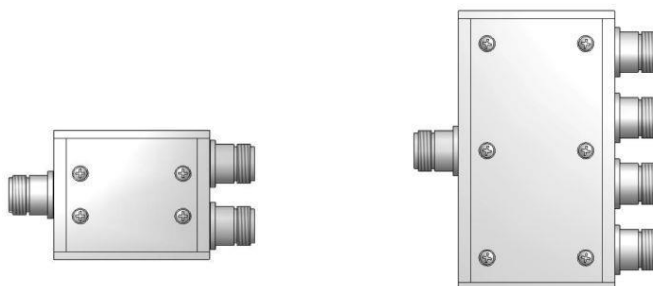
Mounting Bracket



**POWER SPLITTERS**

**25-2700 MHz**

We offer a full line of Power Splitters. The 47-02-XXN and 47-70-XXN series is a hybrid design which provides 20 dB or more of port to port isolation. They are typically used on receiver multicoupler applications. They provide low loss above the splitting loss and cover a very wide frequency range. N connectors are standard but other connectors are available. Standard finish is gold Alodine.

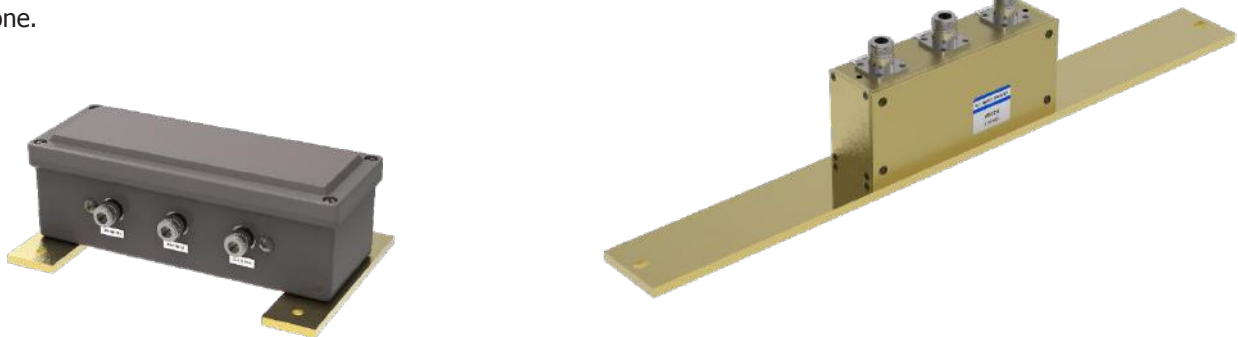


Electrical Specifications	47-02-02N	47-02-04N	47-70-02N	47-70-04N	47-70-08N
Frequency Range, MHz	25-512	25-512	698-2700	698-2700	350-1000
Impedance, Ohms	50	50	50	50	50
Number of Outputs	2	4	2	4	8
Split Loss, dB	3	6	3	6	9
Insertion Loss, dB	.3	.5	.3	.3	1.0
VSWR (All Ports)	< 1.2:1	< 1.2:1	< 1.25:1	< 1.25:1	< 1.4:1
Port to Port Isolation	20	20	20	20	20
Power Rating Watts	RX Only	RX Only	RX Only	RX Only	RX Only
Split Ratio	50%	25%	50%	25%	12.5%
Connectors (All Ports)	N-Female	N-Female	N-Female	N-Female	N-Female
Mechanical Specifications	47-02-02N	47-02-04N	47-70-02N	47-70-04N	47-70-08N
Length, in (mm)	3.5 (89)	3.5 (89)	3.5 (89)	3.5 (89)	3.5 (89)
Height, in (mm)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)
Width, in (mm)	2.25 (57)	4.25 (114)	2.25 (57)	4.5 (114)	8.05 (204)
Weight, lbs (Kg)	.5 (230)	.96 (435)	.4 (185)	.96 (435)	2.6 (1150)
Mounting	Tray/Deck	Tray/Deck	Tray/Deck	Tray/Deck	Tray/Deck



**X-BAND COUPLER** **25-960 MHz**

Our **Cross-Band Couplers** are designed for easy installation, reducing coaxial runs, and for in-building applications with multi-band antennas. They allow multiple bands to share the same transmission lines. They are available in VHF, UHF and 800/900MHz bands. They can be tower mounted (TM), rack mounted (RM), tray-mounted (TRM) or stand alone.



Electrical Specifications		XBC-02-38	XBC-02-38R	XBC-38-80	XBC-38-80R	XBC-38-80RX
Frequency Range, MHz	1st	25-175	25-175	380-512	380-512	380-512
	2nd	380-960	380-960	806-960	806-960	806-960
Typical Loss, dB	1st	0.35	0.35	0.20	0.35	0.30
	2nd	0.50	0.50	0.20	0.50	0.50
Isolation, dB		40	40	40	40	40
Power Rating, Watts	1st	250	RX Only	250	RX Only	250
	2nd	250	RX Only	250	RX Only	RX Only
Connectors	N Female					
VSWR	1.25:1					
Temperature °C		-40 to +60	-40 to +60	-40 to +60	-40 to +60	-40 to +60
Mechanical		XBC-02-38	XBC-02-38R	XBC-38-80	XBC-38-80R	XBC-38-80RX
Dimensions	DEPENDS on Mounting Configuration					
Rack Mount	DEPENDS on Mounting Configuration					
Tower Mount	DEPENDS on Mounting Configuration					

**870 LM and 770 LM Series VHF and UHF Exposed Dipoles**

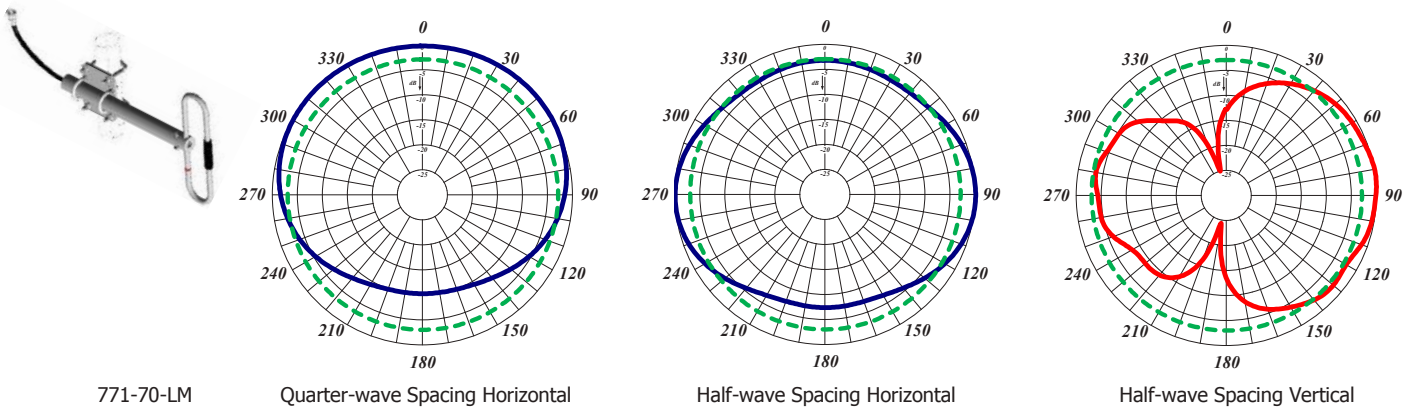
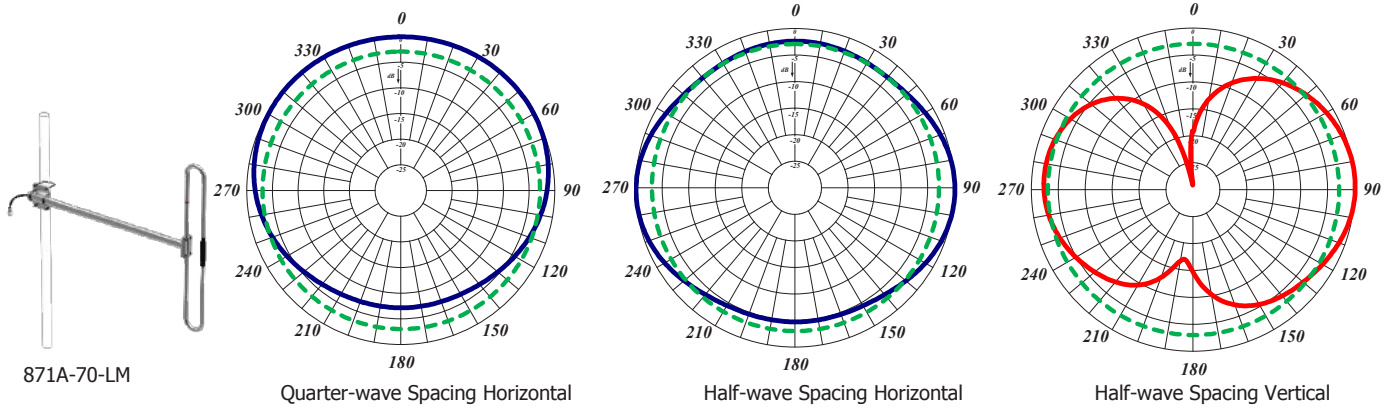
The 870 LM and 770 LM Series are available in 1, 2, 4, 8, dipole configurations. The LM stands for “Less Mast”. The product includes the dipole, boom and clamps to mount the dipoles but no mast is supplied. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, adjustable-only, 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 870 LM and 770 LM series have an external cabling and a field adjustable pattern
- Please contact our Technical Support team for consultation.

Electrical Specifications	871A-70-LM	771-70-LM
Frequency Range, MHz	138-174	406-512
Nominal Gain, dBd	2.0-2.5	2.0-2.5
Number of Dipoles	1	1
Bandwidth 1.5:1 VSWR, MHz	36	106
Polarization	Vertical	Vertical
Pattern	Offset / bi	Offset / bi
Power Rating, Watts	200	75
Nominal Impedance, Ohms	50	50
Lightning Protection	DC Ground	DC Ground
Standard Termination	Type N Male	Type N Male
Mechanical Specifications	871A-70-LM	771-70-LM
Length, in (mm)	Mast Not Included	Mast Not Included
Width (1/2 Wave Spacing), in (mm)	40 (1016)	18 (457)
Weight, lbs. (kg)	4.5 (2.0)	3 (1.4)
Rated Wind Velocity, No Ice, mph (km/h)	150 (241)	200 (322)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	135 (217)	170 (274)
Lateral Thrust @ 100 mph, wind, lbf (N)	20 (89)	7 (30)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	0.92 (0.08)	0.4 (0.04)
Mounting Hardware Included	181-85 Clamp	181-85 Clamp



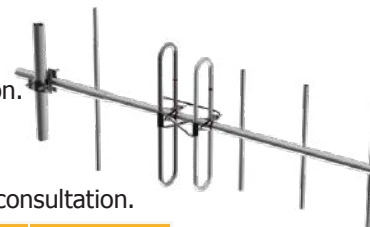
871A-70-LM



**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.

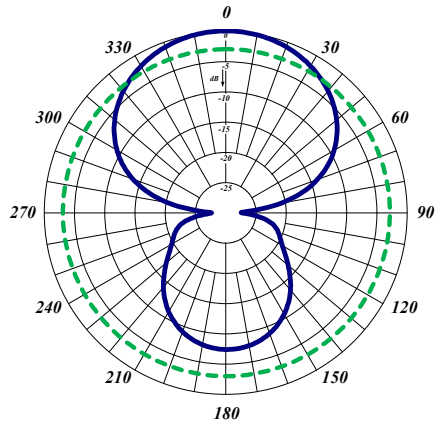


Electrical Specifications	291-70	295-70	290-70	250-70
Frequency Range, MHz	138-174	138-174	138-174	138-174
Nominal Gain, dBd	3.5	6.5	9.5	7
Number of Elements	2	3	6	6
Bandwidth 2.0:1 VSWR, MHz (Ctr. Freq.%)	36	4%	4%	36
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal 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 <sup>2</sup> (m <sup>2</sup> )	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



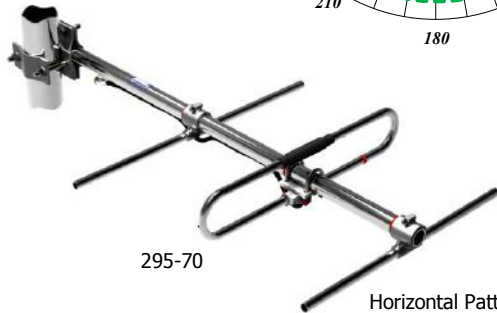
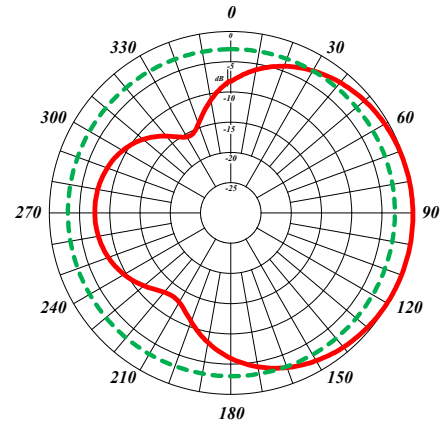
291-70

Horizontal Pattern



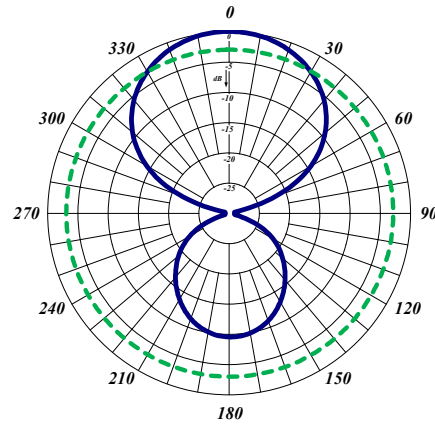
Horizontal Polarization

Vertical Pattern

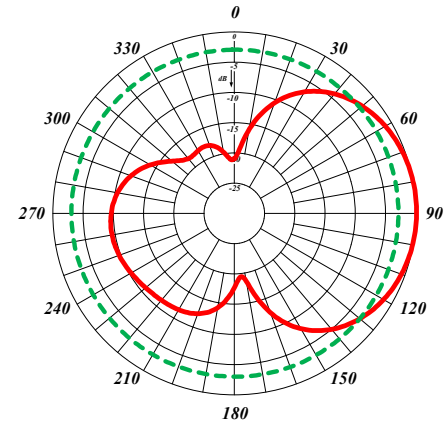


295-70

Horizontal Pattern



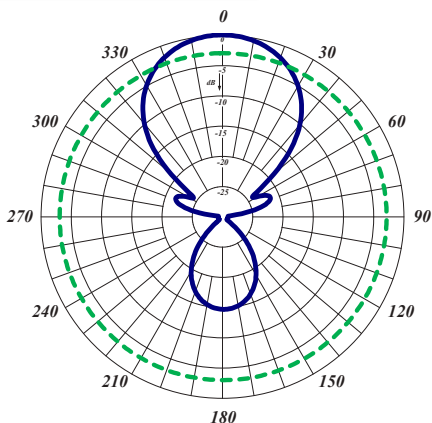
Vertical Pattern



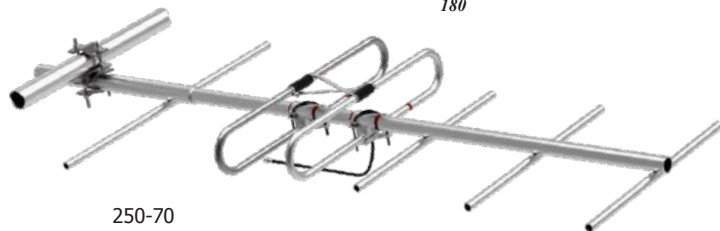
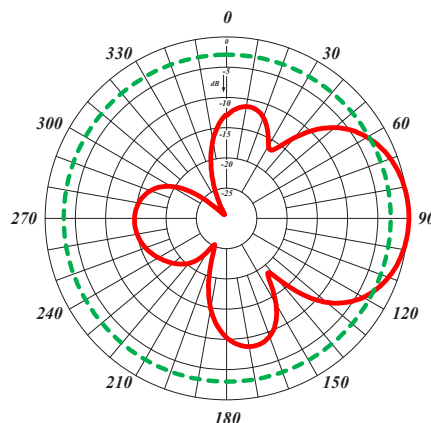


Horizontal Polarization

Horizontal Pattern

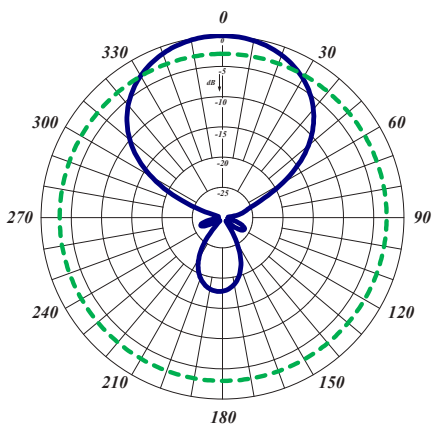


Vertical Pattern

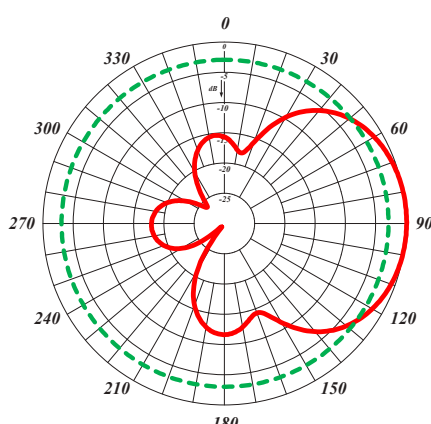


250-70

Horizontal Pattern



Vertical Pattern



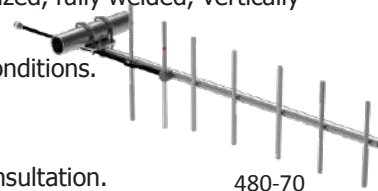
**UHF YAGI ANTENNA**

**406-512 MHz**

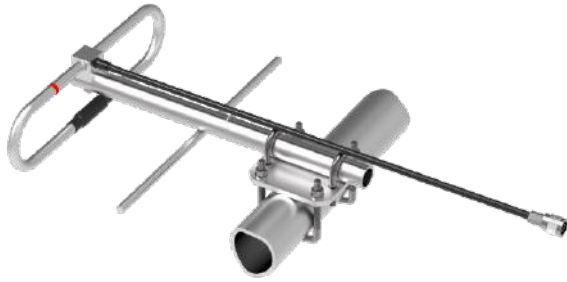
**UHF Yagi Antennas Series**

The UHF Yagi Antenna Series is available in 2, 3, 7 elements and our 70 MHz wideband configurations. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, fully welded, vertically or horizontally polarized, and heavy-duty versions are available.

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

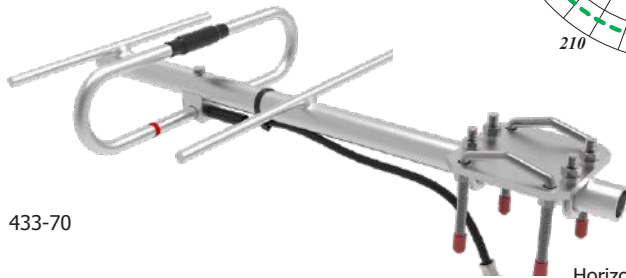
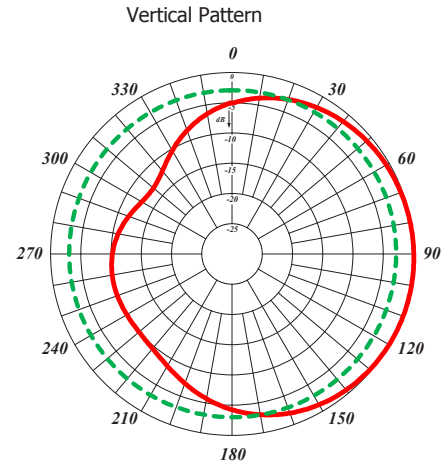
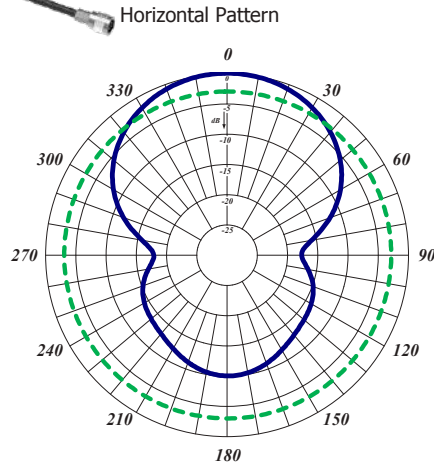


Electrical Specifications	F-3872	433-70	430-70	480-70
Frequency Range, MHz	406-512	406-512	406-512	406-470
Nominal Gain, dBd	3.5	6.5	10.0	10.0
Number of Elements	2	3	7	7
Bandwidth 1.5:1 VSWR, MHz (Center Freq.%)	24	24	24	64
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Vert. Pol.)	138°	83°	62°	62°
Vertical Beamwidth (Vert. Pol.)	72°	59°	48°	50°
Front to Back, dB	10	12	20	17
Pattern	Directional	Directional	Directional	Directional
Power Rating, Watts	350	350	350	350
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	F-3872	433-70	430-70	480-70
Length, in (mm)	28 (711)	23 (584)	45 (1143)	45 (1143)
Width (1/2 Wave Spacing), in (mm)	14.5 (368)	14 (355)	14.5 (368)	14.4 (366)
Weight, lbs. (kg)	2.8 (1.3)	2.9 (1.3)	3.9 (1.8)	3.9 (1.8)
Rated Wind Velocity, No Ice, mph (km/h)	160 (257)	160 (257)	150 (241)	150 (241)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	120 (193)	120 (193)	110 (177)	110 (177)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	9 (4.1)	8.7 (4.0)	16 (7.3)	15 (6.8)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	0.34 (0.03)	0.32 (0.03)	0.61 (0.06)	0.55 (0.05)
Mounting Hardware Included	127-85 Clamp	127-85 Clamp	127-85 Clamp	127-85 Clamp

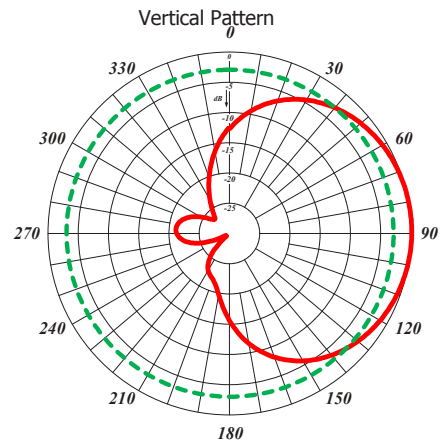
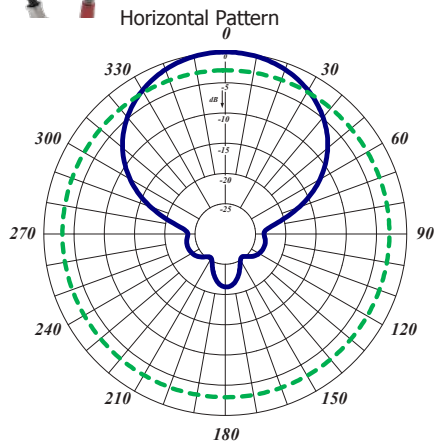


F-3872

Horizontal Polarization



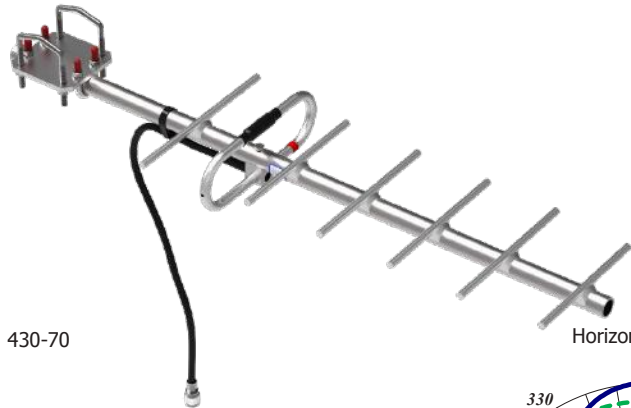
433-70





UHF YAGI ANTENNA

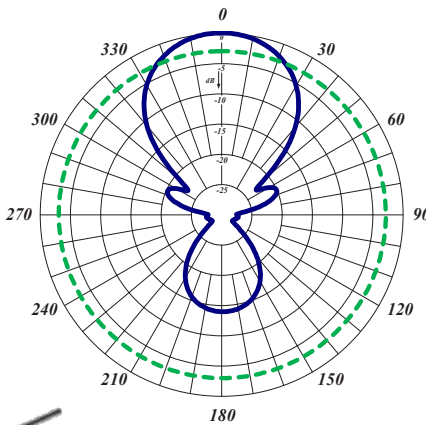
406-512 MHz



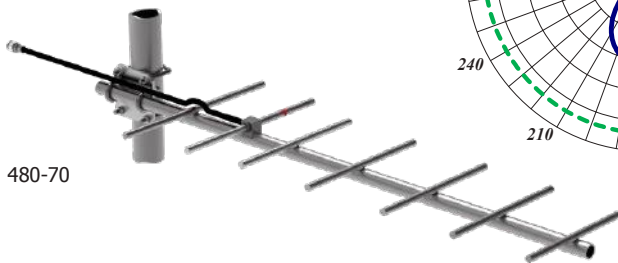
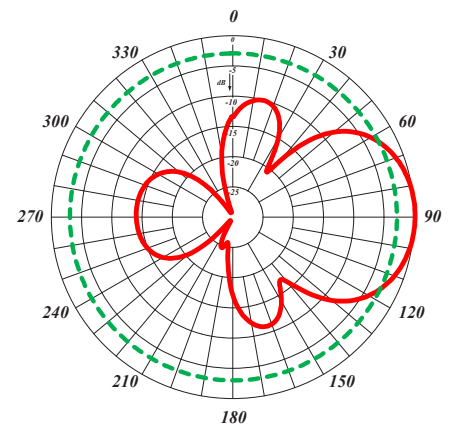
430-70

Horizontal Polarization

Horizontal Pattern

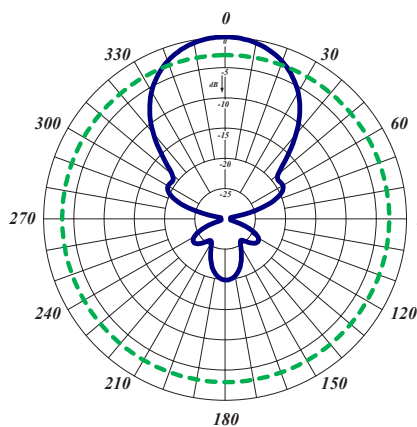


Vertical Pattern

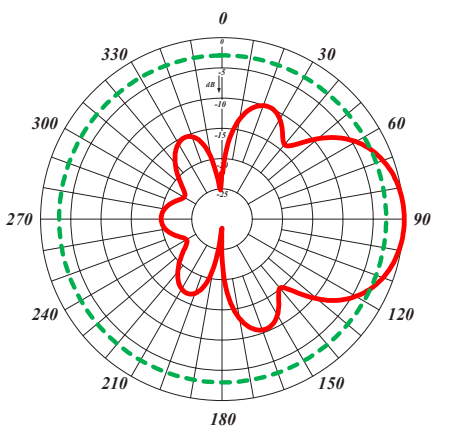


480-70

Horizontal Pattern



Vertical Pattern



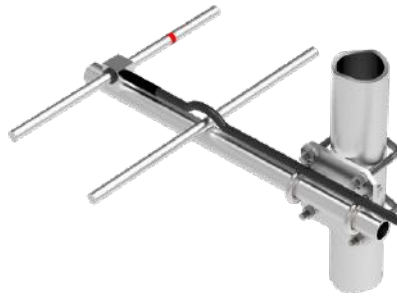
**980 Yagi Antennas Series**

The 980 Yagi Antenna Series are available in 2, 3, 7, 12 element configurations. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, vertically or horizontally polarized.

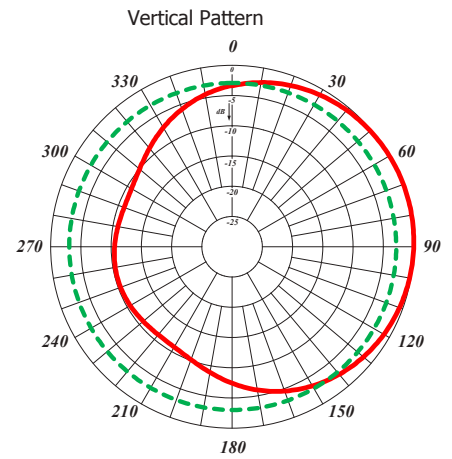
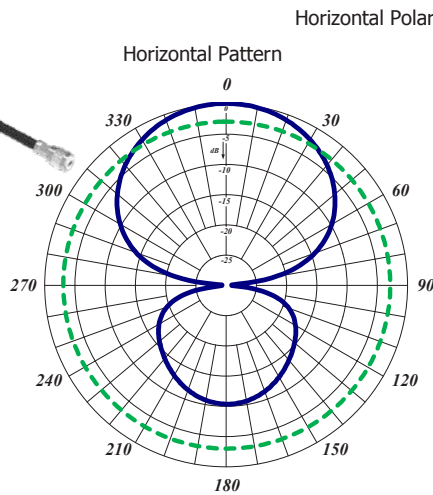
- Each antenna has a rugged design to withstand harsh environmental conditions.
- The mounting hardware supplied will permit either vertical or horizontal polarization.
- All 980 Series Yagi antennas are fully welded.
- Heavy-duty versions are available. Please contact our Technical Support team for consultation.



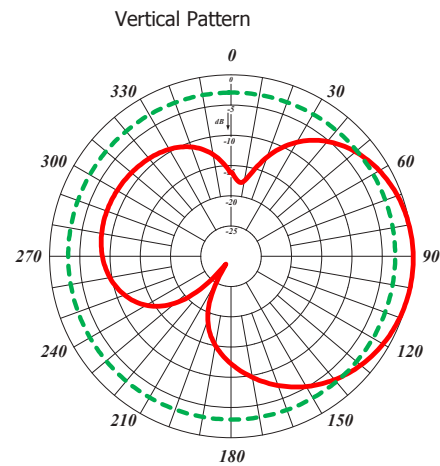
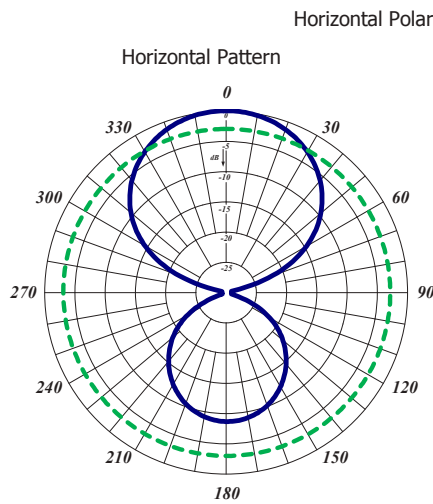
Electrical Specifications	982-70	983-70	980-70	987-70
Frequency Range, MHz	900-930	746-960	746-960	746-960
Nominal Gain, dBd	3.5	6.5	10.0	12.0
Number of Elements	2	3	7	12
Bandwidth 1.5:1 VSWR, MHz (Ctr. Freq.%)	30	85	85	85
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Horizontal Pol.)	128°	99°	56°	41°
Vertical Beamwidth (Horizontal Pol.)	66°	60°	42°	38°
Front to Back, dB	9	16	20	20
Pattern	Directional	Directional	Directional	Directional
Power Rating, Watts	200	200	200	200
Nominal Impedance, Ohms	50	50	50	50
Standard Termination	Type N Male	Type N Male	Type N Male	Type N Male
Mechanical Specifications	982-70	983-70	980-70	987-70
Length, in (mm)	11 (280)	13 (330)	27 (686)	41 (1041)
Width (1/2 Wave Spacing), in (mm)	6.5 (165)	8 (203)	8 (203)	8 (203)
Weight, lbs. (kg)	1.7 (0.76)	1.8 (0.82)	2.5 (1.1)	3 (1.4)
Rated Wind Velocity, No Ice, mph (km/h)	160 (257)	160 (257)	150 (241)	140 (225)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	120 (193)	120 (193)	110 (177)	100 (161)
Lateral Thrust @ 100 mph, wind, lbs.(kg)	2.6 (1.2)	2.8 (1.3)	7 (3.2)	11 (5.0)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	0.10	0.13	0.26	0.41
Mounting Hardware Included	127-85 Clamp	127-85 Clamp	127-85 Clamp	127-85 Clamp

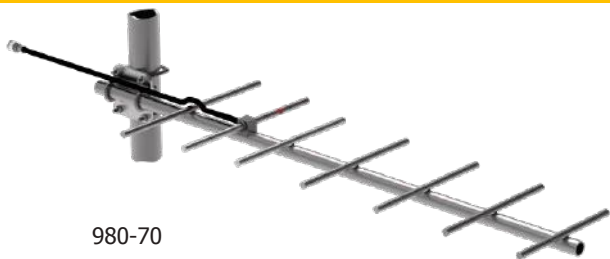


982-70



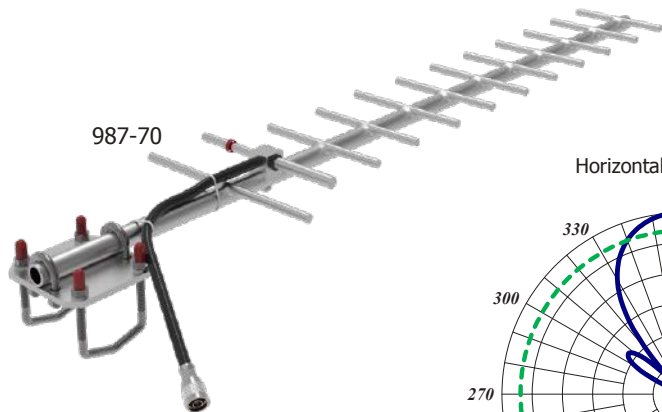
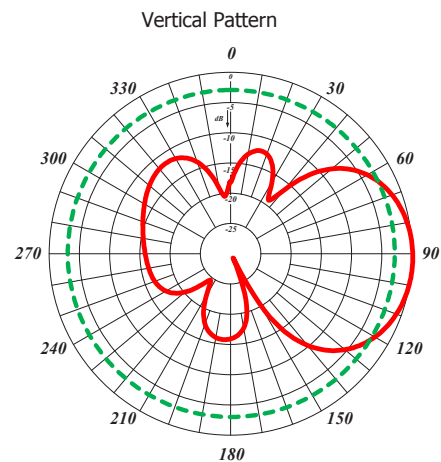
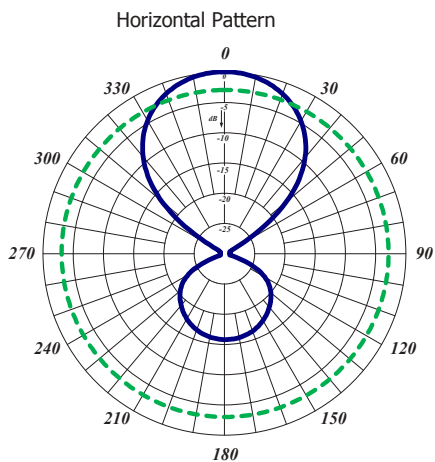
983-70





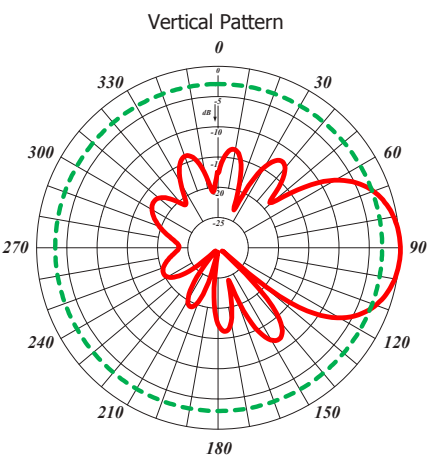
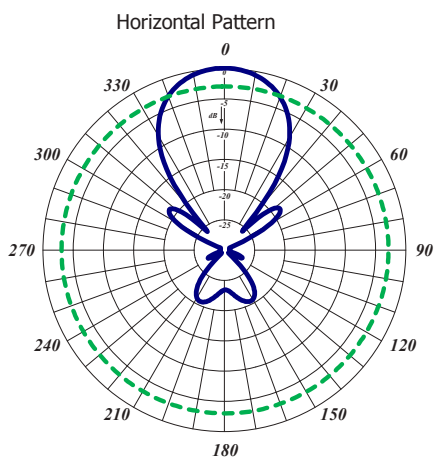
980-70

Horizontal Polarization



987-70

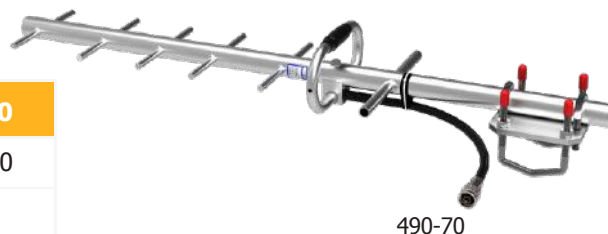
Horizontal Polarization



**490 Heavy-duty Yagi Antennas Series**

The 490 Heavy-duty Yagi Series is an extremely rugged, 7 elements configuration antenna. All our antennas can be completely customized to your particular applications. Our antennas can be black anodized, vertically or horizontally polarized.

- Each antenna has an extremely rugged design to withstand harsh environmental conditions.
- The mounting hardware supplied will permit either vertical or horizontal polarization.
- The 490 Series Yagi antennas are fully welded.
- DC ground for lightning protection.



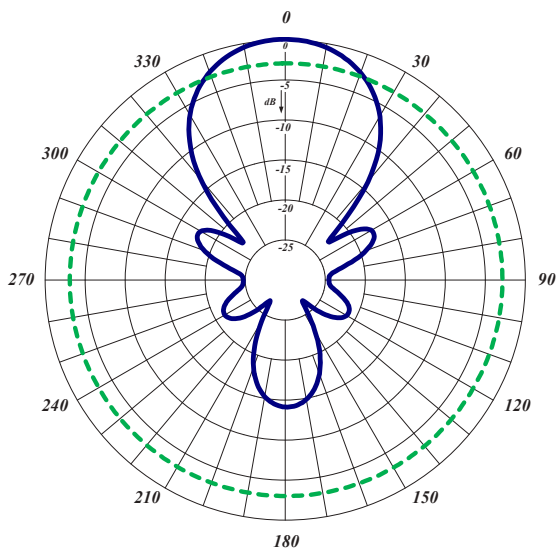
Electrical Specifications	490-70
Frequency Range, MHz	806-960
Nominal Gain, dBd	10.0
Number of Elements	7
Bandwidth: 1.5:1 VSWR, MHz	85
Polarization	Vert. or Horiz.
Horizontal Beamwidth (Horizontal Pol.)	56°
Vertical Beamwidth (Horizontal Pol.)	42°
Front to Back, dB	20
Pattern	Directional
Power Rating, Watts	200
Nominal Impedance, Ohms	50
Standard Termination	Type N Male
Mechanical Specifications	490-70
Length, in (mm)	27 (686)
Width (1/2 Wave Spacing), in (mm)	8 (203)
Weight, lbs. (kg)	2.5 (1.1)
Rated Wind Velocity, No Ice, mph (km/h)	150 (241)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	150 (241)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	38 (17)
Bending Moment @ top clamp: 100 mph, ft.*lb (kg*m)	13 (1.8)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	0.4 (0.04)
Mounting Hardware Included	127-85



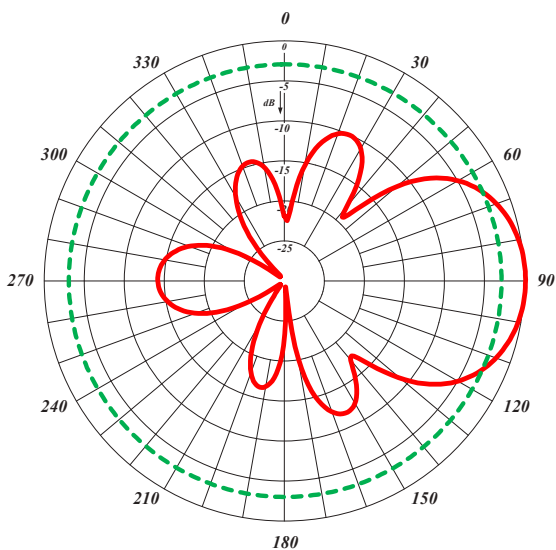
490-70

Horizontal Polarization

Horizontal Pattern



Vertical Pattern



**VHF 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 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 mounting hardware supplied 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	470-70-HD	471-70	471-70-HD
Frequency Range, MHz	138-174	138-174	138-174	138-174
Nominal Gain, dBd	7.0	7.0	10.0	10.0
Bandwidth: 1.5:1 VSWR, MHz	36	36	36	36
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Vert. Pol.)	67°	67°	50°	50°
Vertical Beamwidth (Vert. Pol.)	75°	75°	66°	66°
Front to Back, dB	30	30	30	30
Pattern	Directional	Directional	Directional	Directional
Power Rating, Watts	250	250	250	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	470-70	470-70-HD	471-70	471-70-HD
Length, in (mm)	48 (1219)	48 (1219)	72 (1829)	72 (1829)
Width, in (mm)	75 (1905)	75 (1905)	120 (3048)	120 (3048)
Weight, lbs. (kg)	39 (17.7)	57 (25.8)	66 (30)	72 (32.7)
Rated Wind Velocity, No Ice, mph (km/h)	100 (61)	140 (225)	100 (61)	140 (225)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	85 (137)	100 (161)	85 (137)	100 (161)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	144 (65)	236 (107)	320 (145)	398 (181)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	5.3 (0.5)	8.8 (0.82)	11.9 (1.10)	14.8 (1.38)
Mounting Hardware Included	173-85 Clamp	173-85 Clamp	173-85 Clamp	173-85 Clamp

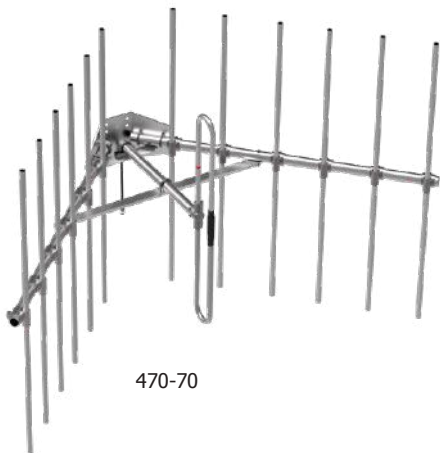


470-70-HD

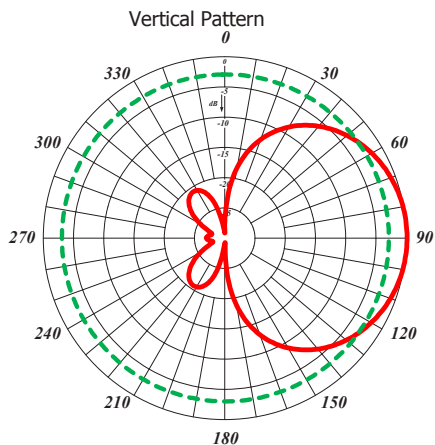
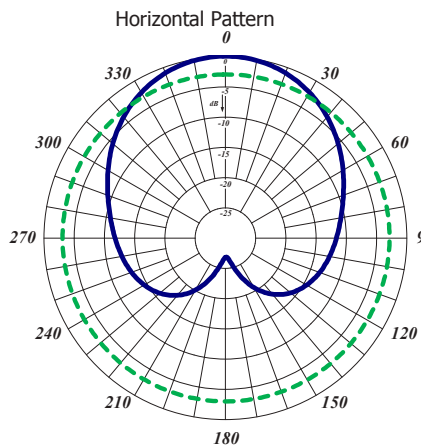
VHF CORNER REFLECTOR

132-174 MHz

Vertical Polarization



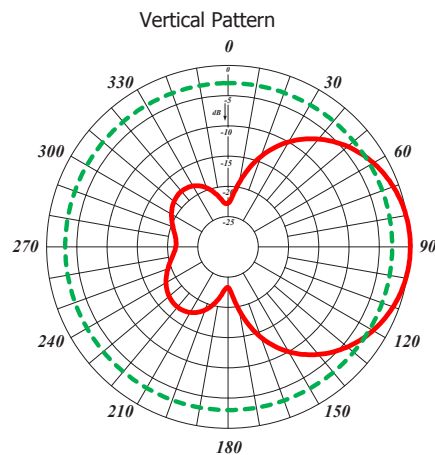
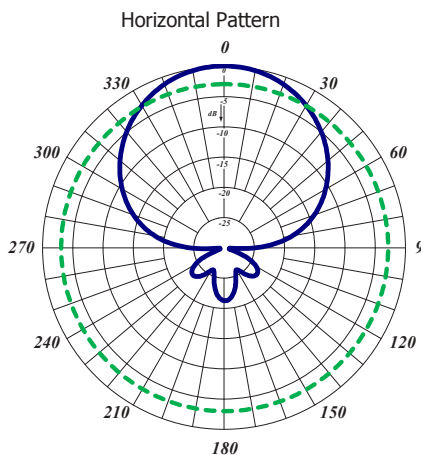
470-70



Vertical Polarization

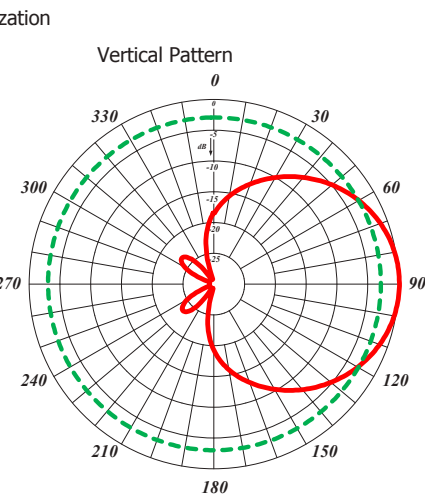
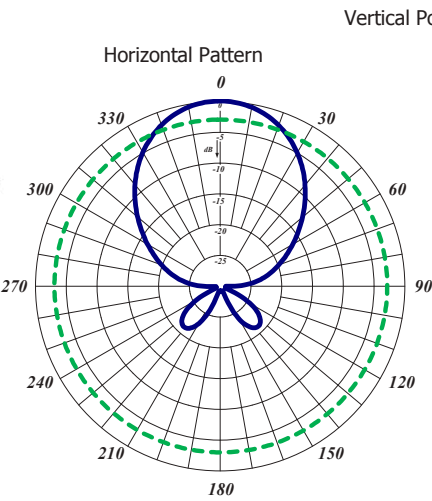
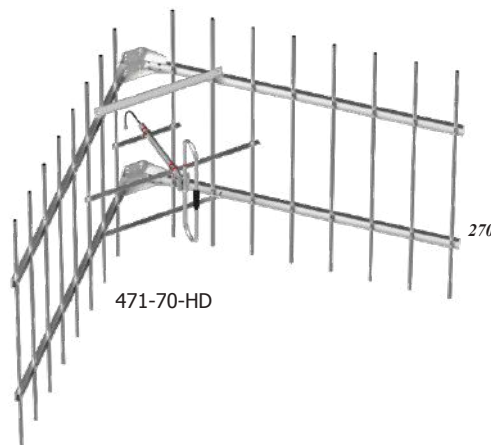
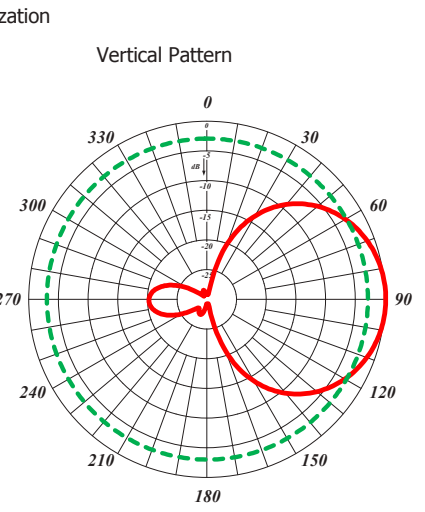
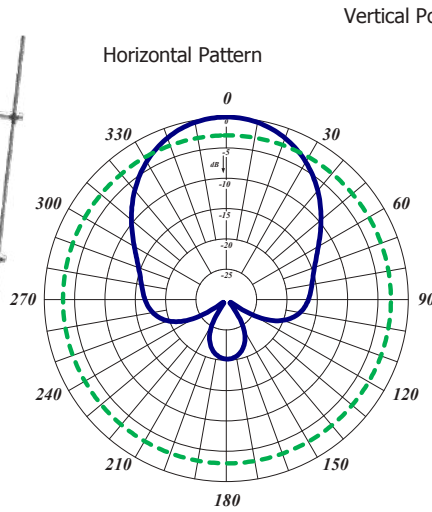
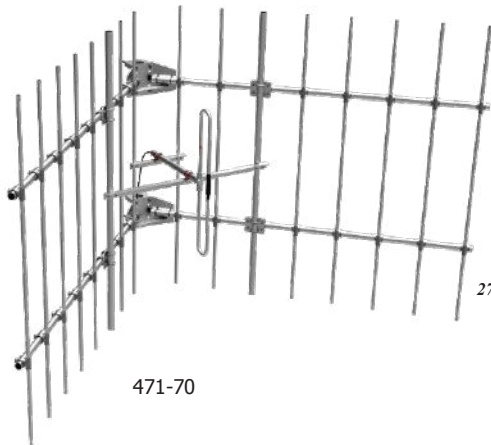


470-70-HD





VHF CORNER REFLECTOR 132-174 MHz

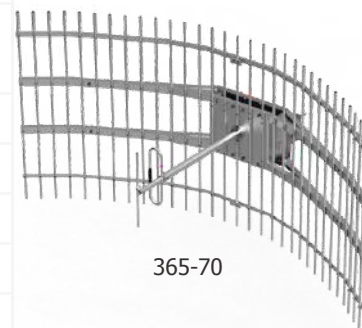


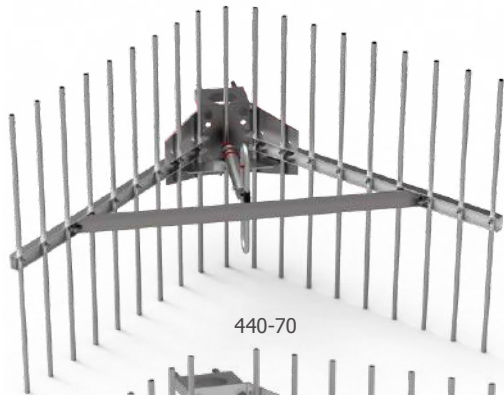
**UHF Corner Reflector Antenna Series**

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.
- The 365-70 is a highly directive parabolic antenna consisting of a back-firing dipole reflector assembly for increased gain and directivity.
- These antennas have ultra-low VSWR ratings, and will not exceed 2.0:1 VSWR ratio with 0.5" of radial ice.
- 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.

Electrical Specifications	440-70	440-70-HD	442-70	365-70
Frequency Range, MHz	406-512	406-512	406-512	406-470
Nominal Gain, dBd	9.5	9.5	12.0	15.0
Bandwidth: 1.5:1 VSWR, MHz	64	64	64	20
Polarization	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.	Vert. or Horiz.
Horizontal Beamwidth (Vert. Pol.)	60°	60°	40°	32°
Vertical Beamwidth (Vert. Pol.)	45°	45°	34°	18°
Front to Back, dB	25	25	25	24
Pattern	Directional	Directional	Directional	Directional
Power Rating, Watts	100	100	100	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	440-70	440-70-HD	442-70	365-70
Length, in (mm)	30 (762)	30 (762)	48 (1219)	82 (2083)
Width, in (mm)	50 (1905)	50 (1905)	50 (1905)	41 (1041)
Weight, lbs. (kg)	22 (10)	36 (16)	42 (19.1)	25 (11.3)
Rated Wind Velocity, No Ice, mph (km/h)	125 (201)	135 (217)	125 (201)	100 (161)
Rated Wind Velocity, 0.5" (13mm) ice, mph (km/h)	85 (137)	95 (153)	85 (137)	85 (137)
Lateral Thrust @ 100 mph, wind, lbs. (kg)	97 (44)	210 (934)	185 (84)	233 (109)
Projected Area, ft <sup>2</sup> (m <sup>2</sup> )	3.6 (0.34)	3.6 (0.34)	6.9 (0.64)	8.7 (0.8)
Mounting Hardware Included	172-85 Clamp	172-85 Clamp	172-85 Clamp	172-85 Clamp

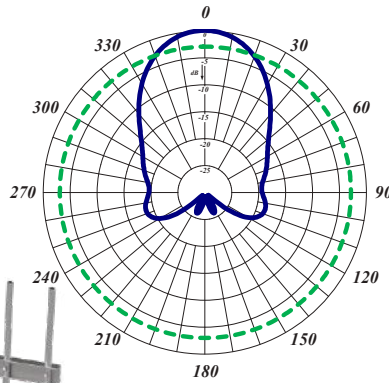




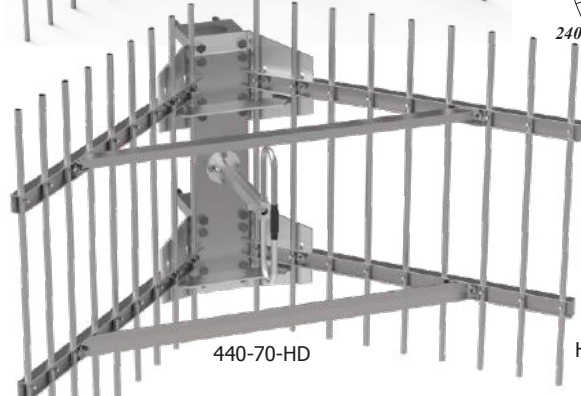
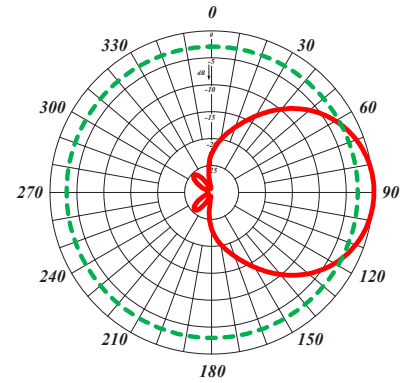
440-70

Vertical Polarization

Horizontal Pattern



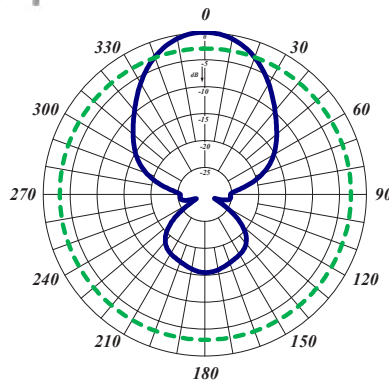
Vertical Pattern



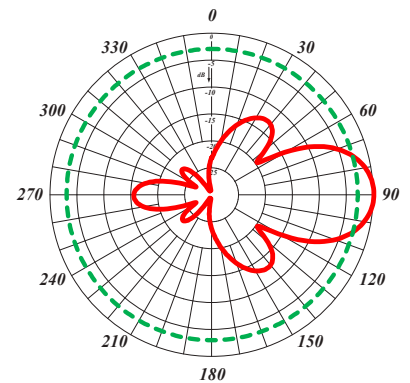
440-70-HD

Vertical Polarization

Horizontal Pattern



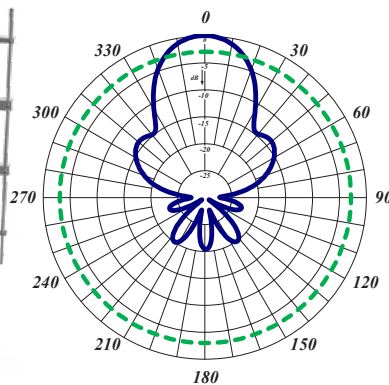
Vertical Pattern



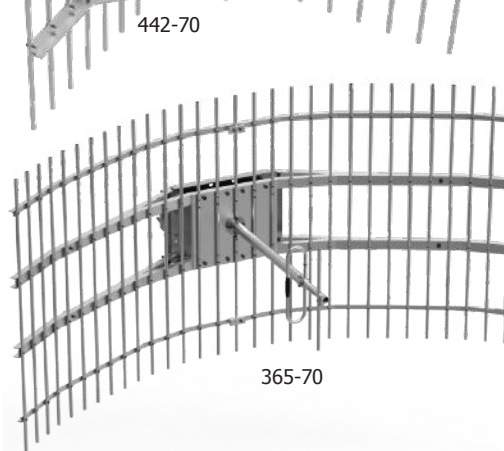
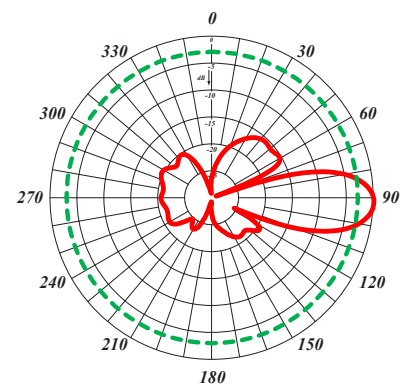
442-70

Horizontal Polarization

Horizontal Pattern



Vertical Pattern



365-70



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