



*Broadband Antenna
Products*



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Broadband Antenna Products

Andrew Broadband Communications Antennas (BCA) deliver high performance and offer field proven reliability. They are the innovative and cost effective solution for customers of tomorrow's global broadband point-to-multipoint networks. BCA series antennas are optimized for hub site applications, for frequencies from 10 to 40 GHz.

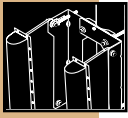
Backed by a tradition of customer service, performance, and reliability, BCA series antennas offer a wide range of solutions that address the needs of many Broadband Wireless Access (BWA) technologies and services.

Flexibility. The BCA series antennas are offered in a wide range of patterns, sector sizes, frequency bands, mounting configurations, and gains. Andrew gives you the flexibility to select the antenna that provides the optimal performance for your system.

Performance. BCA series antennas combine the excellent pattern performance, null fill, gain, and VSWR performance that you need to maximize your coverage and revenues.

Reliability. Why gamble on your antenna selection? Andrew antennas are backed by a reputation for quality developed over more than 60 years in the wireless communications industry.

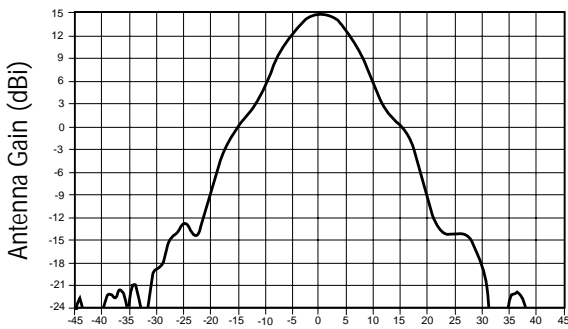
Customization. BCA series antennas can be tailored to meet your specific system requirements. Contact Andrew for details.



BCA Compact Sector Antennas

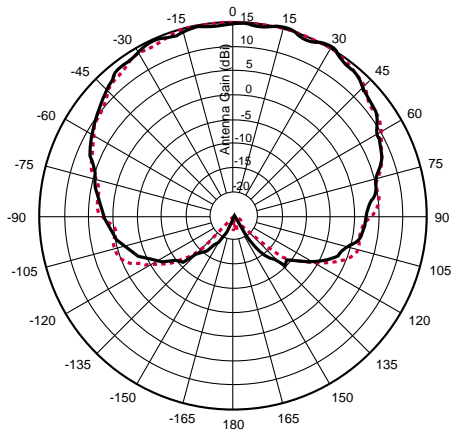


Elevation Pattern



Elevation Angle (degrees below horizontal)

Azimuth Pattern



Horizontal and Vertical Polarization

Compact sector antennas provide a solution for customers who need to integrate to an existing radio or who desire a low cost solution without sacrificing performance.

Product Features

- Compact size
- 15 dBi gain
- Excellent broadband pattern performance
- Low VSWR across frequency band
- Excellent intermodulation (IM) performance
- Easily integrated to existing radio platforms
- ETSI Class 1 compliant

Electrical Specifications

Polarization (specify at time of order)	Horizontal or Vertical
Polarization discrimination, dB	>24
Input power rating, watts	50
VSWR max. (R.L., dB)	1.5 (14)
Input connector	Waveguide cover flange See Antenna Gain table.

Mechanical Specifications

Survival wind velocity, mph (km/h)	125 (200)
Operating temperature °F (°C)	-40 to +140 (-40 to +60)
Size, approx. H x W x D, in (mm)	4.8 x 3.5 x 9.5 (122 x 89 x 241)
Color	Gray per PMS420
Weight, lb (kg)	1.1 (0.51)

Antenna Gain

Antenna Type Number	Frequency Band, GHz	Sector Size Degrees (HPBW)	Gain, dBi, Nominal	Waveguide Type
BCAC090-285(*)	26.35 - 31.3	90	15	WR28
BCAC090-250(*)	24.25 - 26.5	90	15	WR42

* Specify H for horizontal polarization or V for vertical polarization



High gain sector antennas provide superior pattern and gain performance in an efficient size and weight. Available azimuth sizes include 45°, 60°, 90°, and 180° in either horizontal or vertical polarization.

Product Features

- High gain performance - 21 dBi @ 90°
- Extensive null fill for uniform coverage
- Equivalent pattern performance in both horizontal and vertical polarizations
- Broadband performance 26.35 - 31.3 GHz
- Low VSWR across frequency band
- Excellent intermodulation (IM) performance
- Side-entry waveguide for easy integration
- Optional mount available with elevation vernier for downtilt adjustment of up to ±5°



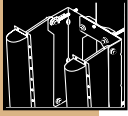
Broadband Antenna Products

Electrical Specifications

Polarization (specify at time of order)	Horizontal or Vertical
Polarization discrimination, dB	>24
Input power rating, watts	50
VSWR max. (R.L., dB)	1.5 (14)
Input connector	Waveguide cover flange See Antenna Gain table.

Mechanical Specifications

Survival wind velocity, mph (km/h)	125 (200)
Operating temperature °F (°C)	-40 to +140 (-40 to +60)
Size, approx. H x W x D, in (mm)	See outline drawings
Color	Gray per PMS420
Weight, lb (kg)	7.4 (3.4)

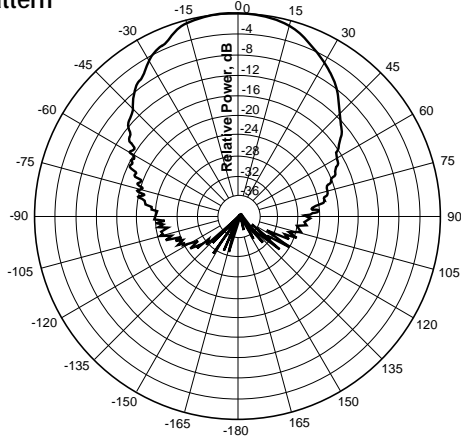


BCA High Gain Sector Antenna

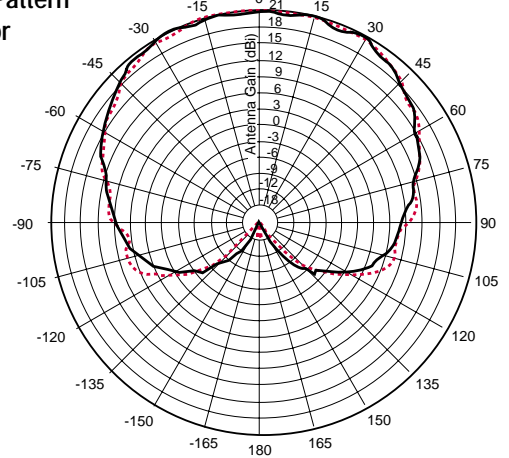
Typical Patterns

Broadband Antenna Products

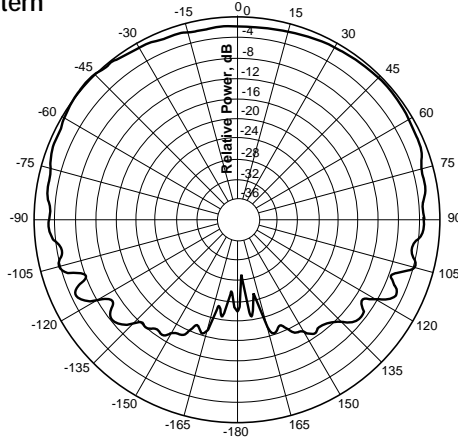
**Azimuth Pattern
45° Sector**



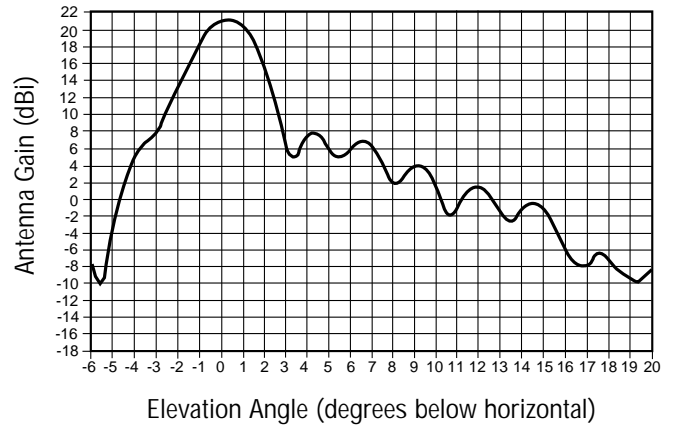
**Azimuth Pattern
90° Sector**



**Azimuth Pattern
180° Sector**



Elevation Pattern



Antenna Gain

Antenna Type Number	Frequency Band, GHz	Sector Size Degrees (HPBW)	Gain, dBi, Nominal	Waveguide Type
BCAH045-285(*)-(**)	26.35 - 31.3	45	23.8	WR28
BCAH060-285(*)-(**)	27.5 - 30.0	60	22.5	WR28
BCAH090-285(*)-(**)	26.35 - 31.3	90	21	WR28
BCAH180-275(*)-(**)	26.35 - 28.5	180	18	WR28
BCAH180-300(*)-(**)	28.25 - 31.3	180	18	WR28
BCAH090-250(*)-(**)	24.25 - 26.5	90	20.5	WR42

* Specify H for horizontal polarization or V for vertical polarization

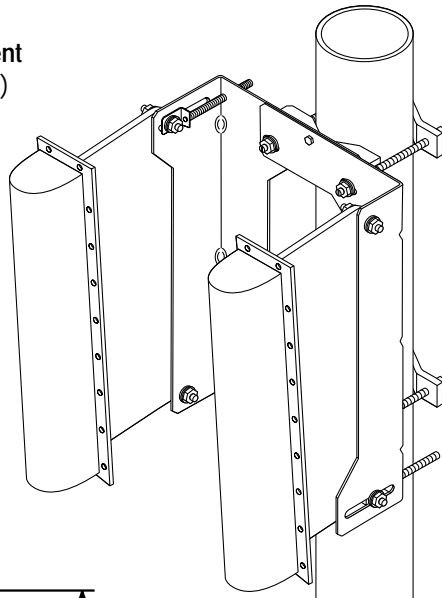
** Specify Ø - for no mount. S - for single antenna mount (shown in picture on page 705) D - for dual antenna mount

BCA High Gain Sector Antenna

Mount and Outline Dimensions



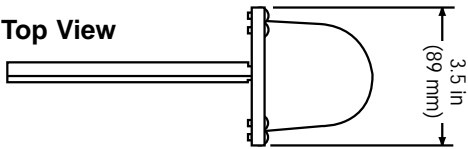
Typical Mounting Arrangement
(Dual Antenna Configuration)



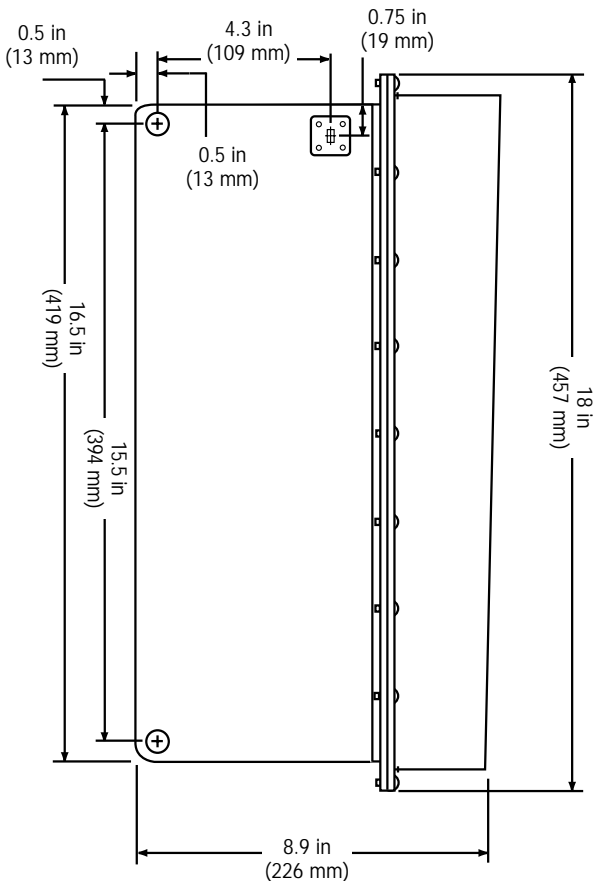
Antenna mounts to support pipe sizes from 2.375" (60 mm) to 4.5" (114 mm) diameter.

45° and 90° Sector Antennas

Top View

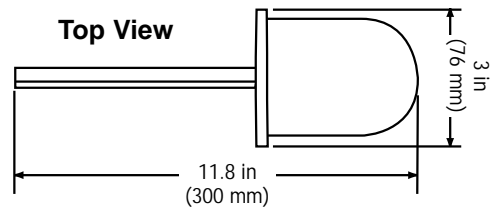


Side View

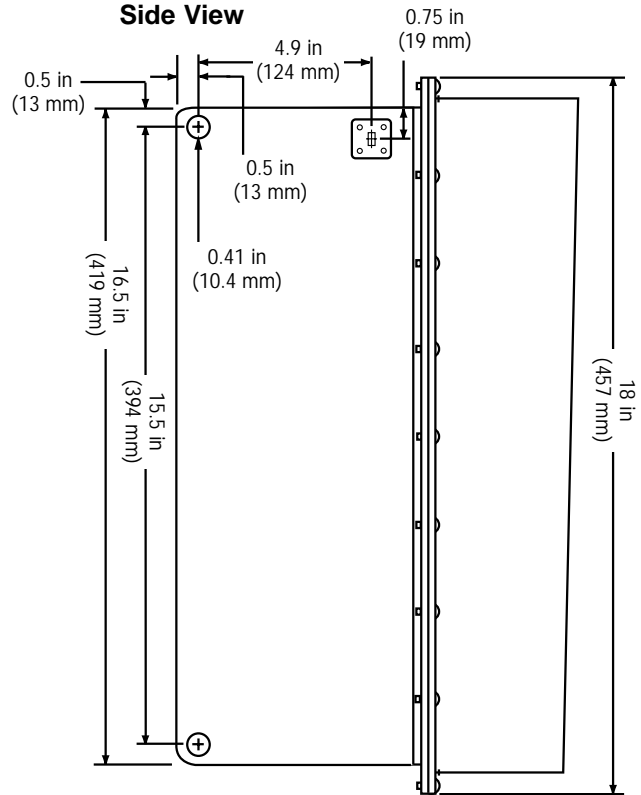


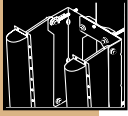
180° Sector Antenna

Top View



Side View





BCA Ultra-High Gain Sector Antennas



Ultra-high gain sector antennas provide unmatched gain performance and superior pattern control in an efficient size and weight. Available azimuth sizes include 45°, 60°, 90°, and 180° in either horizontal or vertical polarization.

Product Features

- *Ultra-high gain performance - 24 dBi @ 90°*
- *Extensive null fill for uniform coverage*
- *Equivalent pattern performance in both horizontal and vertical polarizations*
- *Broadband performance, 26.35 - 31.3 GHz*
- *Low VSWR across frequency band*
- *Excellent intermodulation (IM) performance*
- *Side entry waveguide for easy integration*
- *Optional mount available with elevation vernier for downtilt adjustment of up to ±5°*

Electrical Specifications

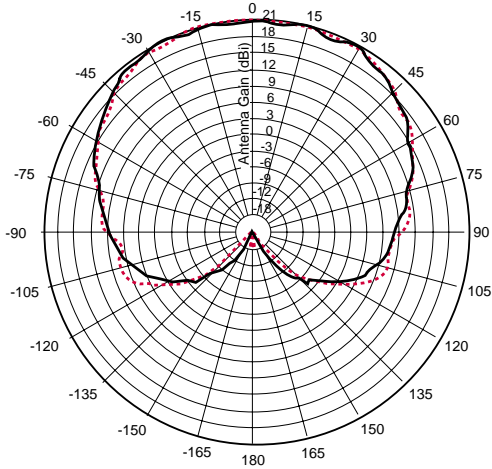
Polarization (specify at time of order)	Horizontal or Vertical
Polarization discrimination, dB	>24
Input power rating, watts	50
VSWR max. (R.L., dB)	1.5 (14)
Input Connector	Waveguide cover flange See Antenna Gain table.

Mechanical Specifications

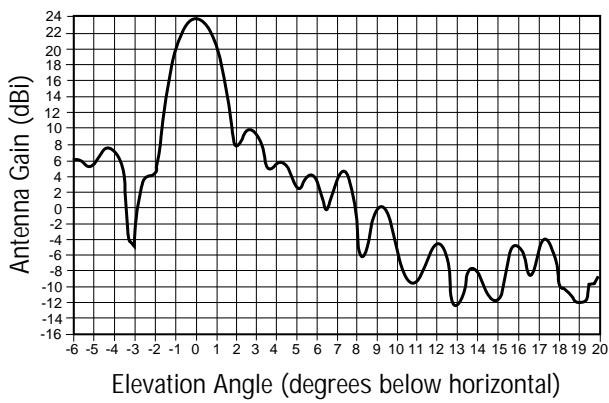
Survival wind velocity, mph (km/h)	125 (200)
Operating temperature °F (°C)	-40 to +140 (-40 to +60)
Size, approx. H x W x D, in (mm)	See outline drawing
Color	Gray per PMS420
Weight, lb (kg)	18.4 (8.4)



Azimuth Pattern

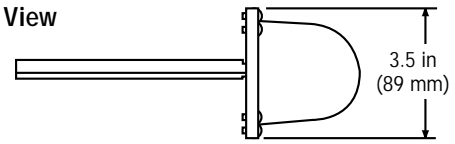


Elevation Pattern

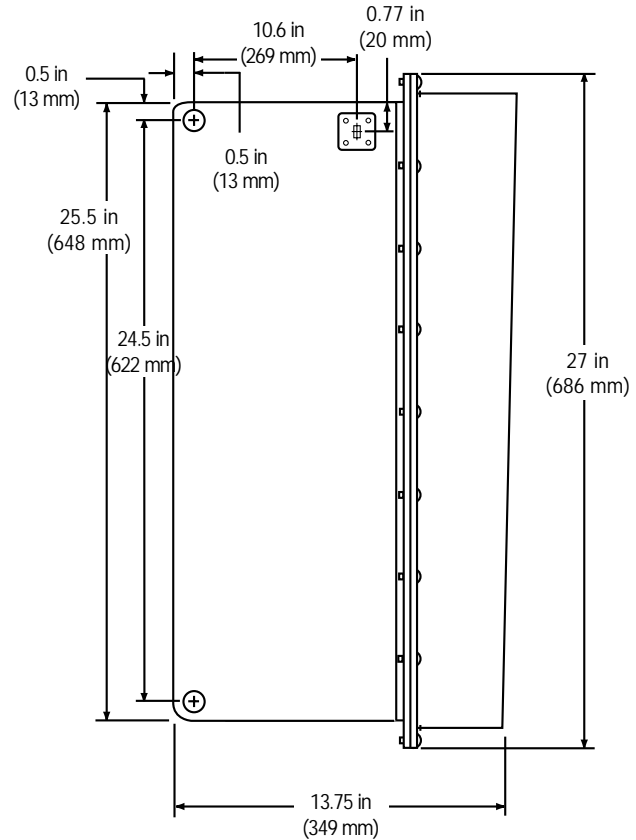


Mechanical layout

Top View



Side View

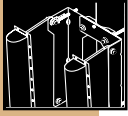


Antenna Gain

Antenna Type Number	Frequency Band, GHz	Sector Size Degrees (HPBW)	Gain, dBi, Nominal	Waveguide Type
BCAX045-285(*) - (**)	26.35 - 31.3	45	26.8	WR28
BCAX090-285(*) - (**)	26.35 - 31.3	90	24	WR28
BCAX090-250(*) - (**)	24.25 - 26.5	90	24	WR42

* Specify H for horizontal polarization or V for vertical polarization

** Specify Ø - for no mount. S - for single antenna mount



BCA Mark II High Gain Sector Antennas



Introducing the newest member of the Andrew BCA series family, the Mark II high gain sector antennas. These antennas incorporate new technology that significantly improves pattern performance over previous designs. They are available in a 90° sector size for 28 and 38 GHz applications. Other sector sizes are available on request.

Product Features

- High gain performance - 21 dBi @ 90°
- Improved null fill for optimized coverage
- Improved azimuth patterns for higher sector-to-sector and transmit/receive isolation
- Equivalent pattern performance in both horizontal and vertical polarizations
- Broadband performance, 27.35 - 28.5 GHz or 37 - 40 GHz
- Low VSWR across frequency band
- Excellent intermodulation (IM) performance
- Side entry waveguide for easy integration
- Optional mount available with elevation vernier for downtilt adjustment of up to ±5°

Electrical Specifications

Polarization (specify at time of order)	Horizontal or Vertical
Polarization discrimination, dB	>30
Input power rating, watts	50
VSWR max. (R.L., dB)	1.5 (14)
Input connector	WR28 cover flange

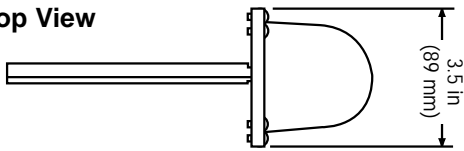
Mechanical Specifications

Survival wind velocity, mph (km/h)	125 (200)
Operating temperature °F (°C)	-40 to +140 (-40 to +60)
Size, approx. H x W x D, in (mm)	See outline drawing
Color	Gray per PMS420
Weight, lb (kg)	7.4 (3.4)

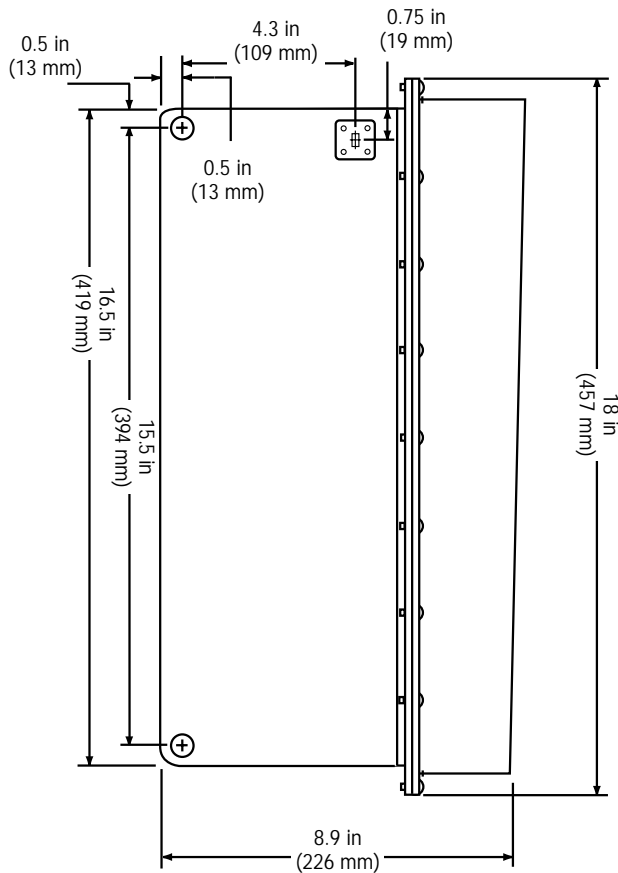


45° and 90° Sector Antennas

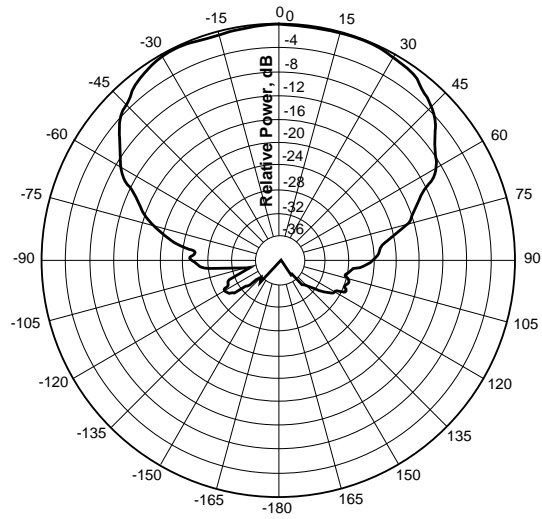
Top View



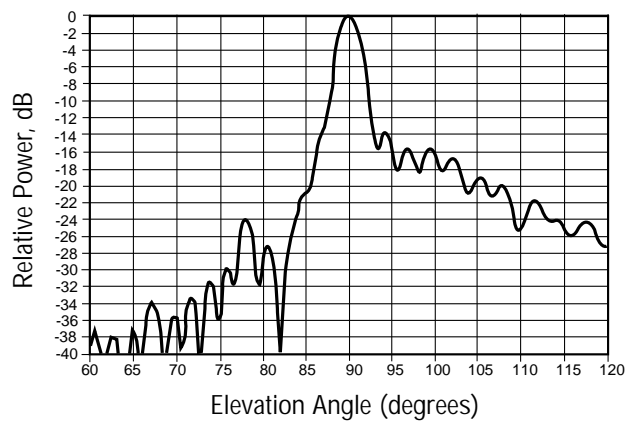
Side View



Azimuth Pattern (90° Sector)



Elevation Pattern (90° Sector)



Antenna Gain

Antenna Type Number	Frequency Band, GHz	Sector Size Degrees (HPBW)	Gain, dBi, Nominal	Waveguide Type
BCAH090A-285(*)-(**)	27.25 - 28.5	90	21	WR28
BCAH090A-385(*)-(**)	37.0 - 40.0	90	24	WR28

* Specify H for horizontal polarization or V for vertical polarization

** Specify Ø - for no mount. S - for single mount. D - for dual mount.