

**C**omprised of two antennas mounted on a common mast, the DB314 is a high gain, heavy duty, lightweight antenna for 150-160 and 450-470 MHz. It mounts to the top or the side of a tower and can be phased to provide an omni or elliptical pattern.

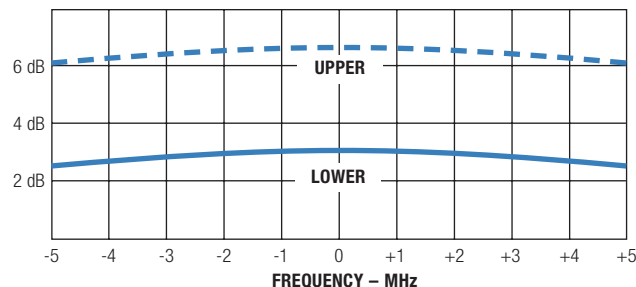
The top section of the DB314, with four dual dipole elements, provides 6.6 dBd gain and 20 MHz bandwidth for 450-470 MHz frequencies.

The bottom antenna has two dual dipole elements and provides 3.2 dBd gain and 10 MHz bandwidth at 150-160 MHz.

## Radiation Patterns

- **Omni-directional and Elliptical Coverage** — Both upper and lower sections of the antenna can be used for omni-directional and elliptical coverage. When the elements are mounted in line, collinearly, an elliptical pattern is produced. When the elements are rotated 90 degrees from each other, an omni pattern results.
- **The Patterns are Changed Significantly** when the antenna is side mounted, as shown in the pattern diagrams.
- **Fed and Terminated Separately** — Both upper and lower antenna sections are fed and terminated separately at the mounting end of the mast.
- **Moisture Resistant** — Water resistant VAPOR-BLOC® cable is used in the phasing harnesses.
- **For Ease in Handling**, the mast is shipped in two sections. It can be assembled with ordinary hand tools, and alignment is not a factor since the antenna sections operate independently.

Antenna Gain vs Frequency



### ORDERING INFORMATION

Please specify model and exact frequency or range. Order the DB314 for omni pattern, DE314L for elliptical. DB365-OS Mounting Clamps are included to fit round tower members to 2.25" (57.2 mm) OD, angle members up to 2.5" (63.5 mm). Other size clamps are available on special order. Order DB5001 Side Mount Kit for side mounting.

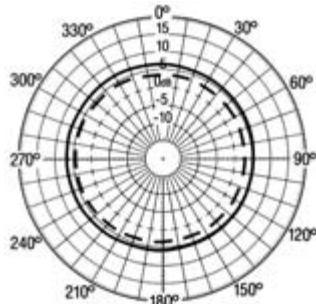
# VHF & UHF Dual Band Antenna, Exposed Dipole

150 - 160 MHz & 450 - 470 MHz / 3.2 or 6.6 dBd Gain



DB314

30-512 MHz

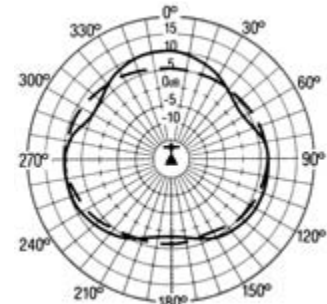


● Azimuth radiation pattern of DB314 antenna

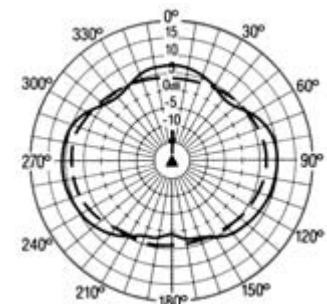
(—) upper section and  
(---) lower section.

## SIDE MOUNTING

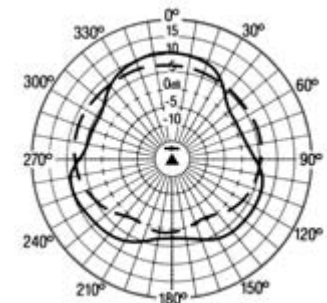
Typical pattern shapes of the antenna side mounted on a tower with an 18" to 24" (457.2 to 609.6 mm) face. Upper section (—), Lower section (---)



● DB314 (omni) mounted on side of tower



● DB314L elements pointed toward tower



● DB314L elements broadside to tower

## ELECTRICAL DATA

<b>Frequency Ranges</b> – MHz	
Upper Section	450-470
Lower Section	150-160
<b>Bandwidth</b> – MHz	
Upper Section	20
Lower Section	10
<b>VSWR</b>	
	1.5 to 1
<b>Nominal Impedance</b> – ohms	
	50
<b>Gain</b> – dBd	
	See curves
<b>Maximum Power Input</b> – Watts	
Upper Section	250
Lower Section	500
<b>Vertical Beamwidth</b>	
Upper Section	14°
Lower Section	32°
<b>Lightning Protection</b>	
	Direct ground
<b>Standard Termination</b> (both sections)	
	Captive Type N-Male attached to flexible lead.

## MECHANICAL DATA

<b>Mast – Upper</b> (aluminum) – in. (mm)	1.75 (44.45) OD with 0.0625 to 0.125 (0.159 to 3.18) wall
<b>Mast – Lower</b> (aluminum) – in. (mm)	2 (50.8) OD with 0.125 to 0.25 (3.18 to 6.35) wall
<b>Radiating Elements – Upper</b> (aluminum) – in. (mm)	0.375 (9.53) OD with 0.058 (1.47) wall
<b>Radiating Elements – Lower</b> (aluminum) – in. (mm)	0.5 (12.7) OD with 0.058 (1.47) wall
<b>Maximum Exposed Area</b> (flat plate equivalent) – ft <sup>2</sup> (m <sup>2</sup> )	3.3 (0.307)
<b>Lateral Thrust at 100 mph</b> (161 km/hr) – lbs (kg)	132 (59.87)
<b>Bending Moment at Top Clamp at 100 mph</b> (161 km/hr) – ft. lbs (kg)	
	938 (129.82)
<b>Wind Rating:</b> *	
Survival without ice – mph (km/hr)	107 (172)
Survival with 0.5" (12.7 mm) Radial Ice – mph (km/hr)	75 (121)
<b>Overall Length</b> – in. (mm)	217 (5,512)
<b>Shipping Length</b> – in. (mm)	119 (3,023)
<b>Net Weight</b> – lbs. (kg)	37 (16.78)
<b>Shipping Weight</b> (w/clamps) – lbs. (kg)	54 (24.49)
<b>Mounting Clamps</b> (Galvanized steel)	DB365-OS

\* Top mounted antenna. Wind rating is greatly increased when antenna is side mounted with appropriate side mount kit.