



DB413-B

ORDERING INFORMATION

DB365-OS Clamps are included. Order DB5012 Side Mount Kit if needed. Additional sized clamps can be special ordered. Order jumper cable separately.

The DB413-B uses an 8-stack collinear array of folded dipole elements to provide 12 dBd gain and constant performance over a broad offset horizontal pattern. Mounts to the top or side of a tower or structure.

- **Extremely Rugged** — Resists winds to 122 mph (196 km/hr).
- **Broad Response** — With 14 to 24 MHz bandwidth, this antenna gives optimum performance in single or multi-frequency systems.
- **Moisture Resistant** — VAPOR-BLOC® cable harness provides weather protection and assures inphase signal distribution to all elements.
- **Key Applications** — Ideal for mobile systems requiring additional gain over a sector or along a coast or area with geographical boundaries.
- **Sturdy Construction** — Mast and elements are made of high strength aluminum alloys.
- **Lightning Resistant** — Radiators operate at DC ground, and the aluminum mast, with its pointed top, provides a low resistance discharge path to the tower or ground system.
- **Two-Piece Mast** — For ease of shipment and handling, the mast is made in two sections. A unique center splice assures proper alignment.

ELECTRICAL DATA

Frequency Ranges – MHz	450-470
Bandwidth	Same as above
VSWR	1.5 to 1 or less
Nominal Impedance – Ohms	50
Gain (over half-wave dipole) – dBd	12
Rated power input – Watts	250
Vertical Beamwidth (half-power points)	7°
Decoupling between Antennas (dual) – dB	35
Lightning protection	Direct ground
Standard Termination	Captive Type N-Male attached to end of a flexible lead.

MECHANICAL DATA

Mast Upper (aluminum) – in. (mm)	1.75 (44.45) OD with 0.125 (3.175) wall
Mast Lower (aluminum) – in. (mm)	2 (50.8) OD with 0.125 (3.175) to 0.75 (19.05) wall
Radiating Elements (aluminum) – in. (mm)	0.375 (9.525) OD with 0.058 (1.473) wall
Maximum Exposed Area (flat plate equivalent) – ft ² (m ²)	2.55 (.237)
Wind Rating:*	
Survival w/o Ice – mph (km/hr)	100 (161)
Survival with 0.5" (12.7 mm) Radial Ice – mph (km/hr)	90 (145)
Lateral Thrust at 100 mph (161 km/hr) – lbf (N)	102 (453.7)
Bending Moment at Top Clamp at 100 mph (161 km/hr) – ft. lbs. (kg m)	615 (85.116)
Overall Length (450-470 MHz) – ft. (m)	18.33 (5.59)
Net Weight (w/clamps) – lbs. (kg)	32 (14.51)
Shipping Weight (w/clamps) – lbs. (kg)	60 (27.22)
Mounting Clamps (Galv. steel)	DB365-OS

* Antenna mounted at top of tower. Rating is substantially increased when antenna is side mounted with appropriate mounting kit. Calculation of wind survivability does not include damage due to flying debris.

Exposed Dipole Quasi-Omni Antenna

406 - 512 MHz / 12 dBd Gain



DB413-B

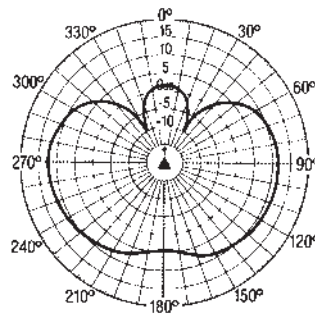
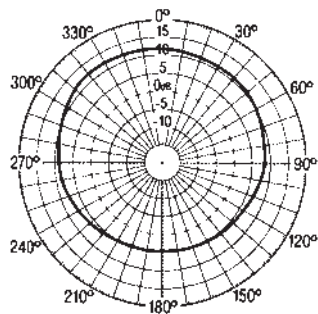
30-512 MHz

SIDE MOUNTING

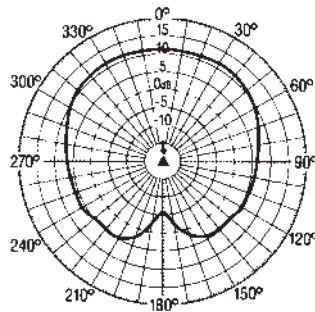
Typical pattern shape of the antenna side mounted on a tower with an 18" (457.2 mm) face. The patterns for 12" (304.8 mm) and 24" (609.6 mm) towers will be similar.

Top Mounting

Horizontal Radiation Pattern of DB413-B



● DB413-B elements pointed toward tower



● DB413-B elements pointed away from tower