

Antenna Authority, Inc.

DF Antennas Our Specialty!

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SPECIFICATIONS

Product Code --- CBS-24R or CBS-24L Cavity Backed Spiral



Cavity Backed Spiral Antenna

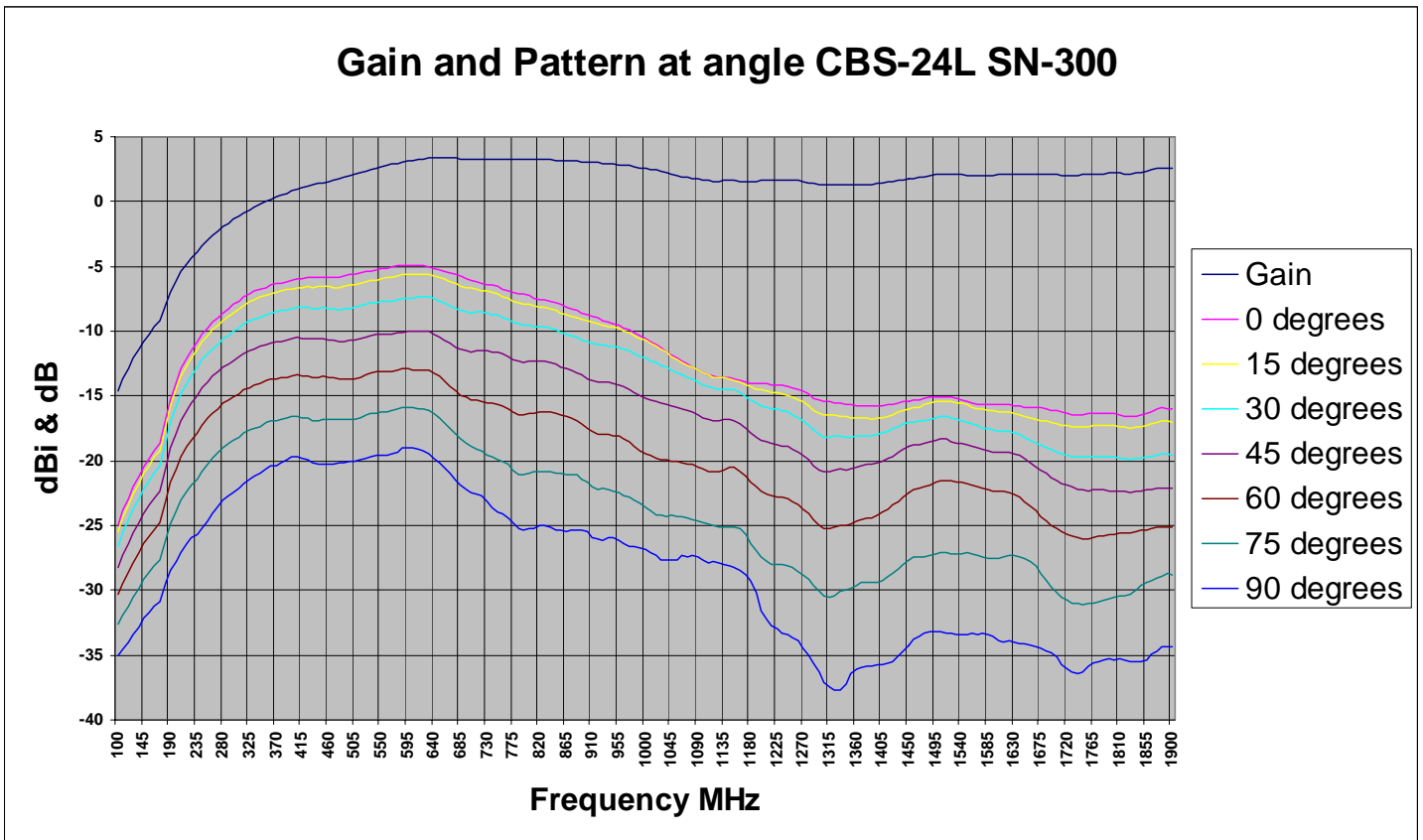
This self-complementary Archimedean spiral antenna is a frequency independent antenna - a lightweight medium-gain array designed to receive a circularly polarized wave. Archimedes spirals typically cover a 10 to 1 frequency range while maintaining essentially constant impedance over the band. The antennas have been designed for broad-beam, broadband applications and provide a compact, lightweight configuration that can be easily flush mounted. They are widely used in systems whose primary functions are surveillance, direction finding and telemetry. These antennas are mounted in a square structure and made on FR4 .063" fiberglass with a flat front face that can be easily mounted in the side of a vehicle. They are terminated and loaded with absorbing foam. The low end frequency is a function of the size and depth of the cavity, while the upper frequency is limited by the detail of the center structure. They have greater than a 10 dB F/B ratio before mounting into a vehicle.

Electrical Specifications

Frequency Coverage: 100 MHz – 1.9 GHz --- Gain -15 to +4 dBi
Frequency Coverage: 350 MHz – 1.9 GHz ----- Gain 0 to +4 dBi

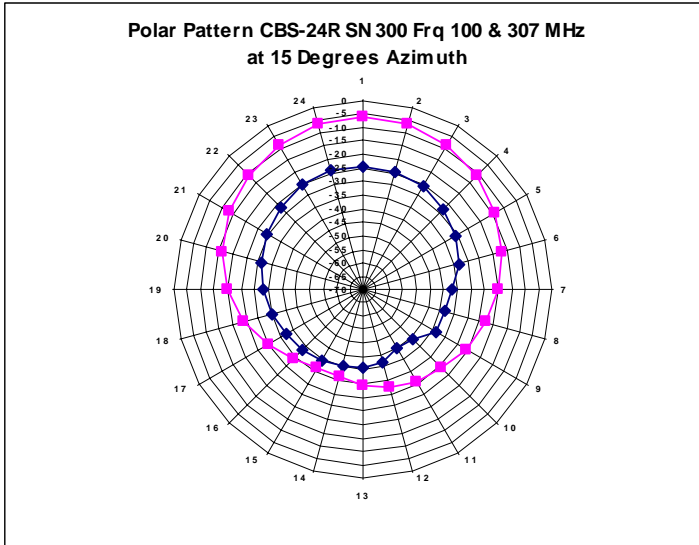
Azimuths Coverage: 60° to 90° beam width typical for 3 DB down
Squint: less than 8 degrees
S11 return Loss: Greater than 10 dB
Polarization: CBS-24-R Right Hand Circular
Polarization: CBS-24-L Left Hand Circular
Impedance: 50 ohms nominal
Connectors: BNC

Gain and Pattern Plots

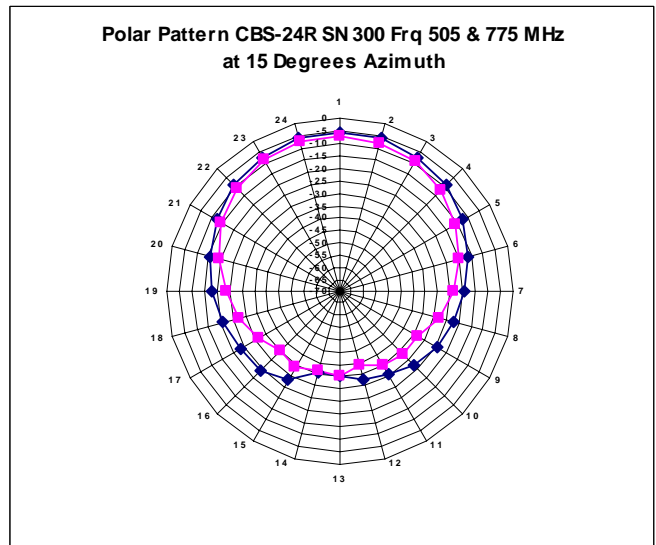


Polar Gain Plots 8 Frequencies at 15 degrees azimuth

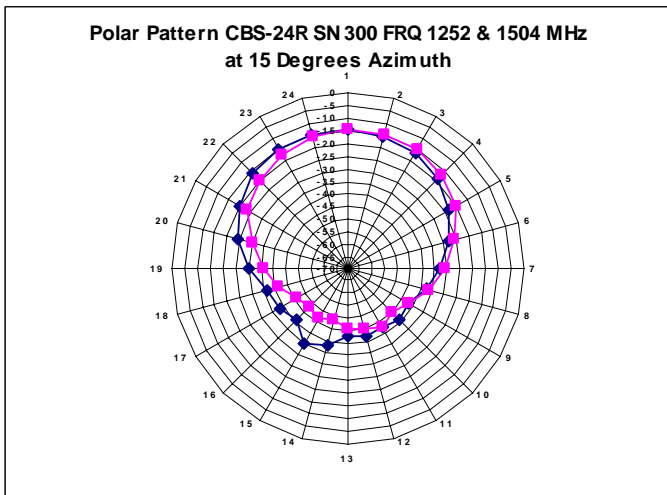
100 and 307 MHz



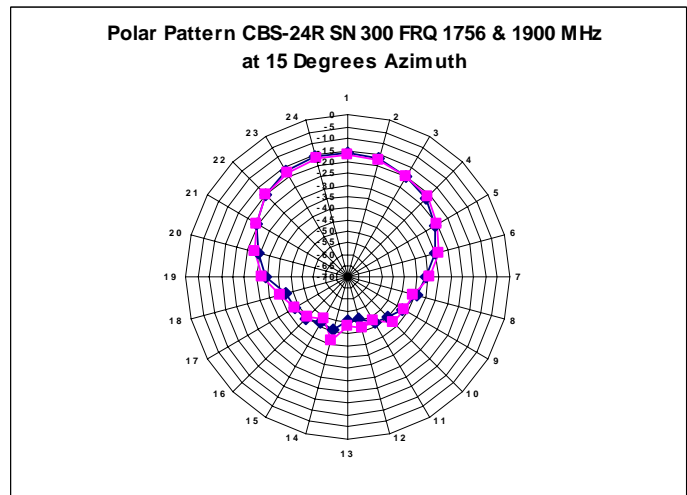
505 & 775 MHz



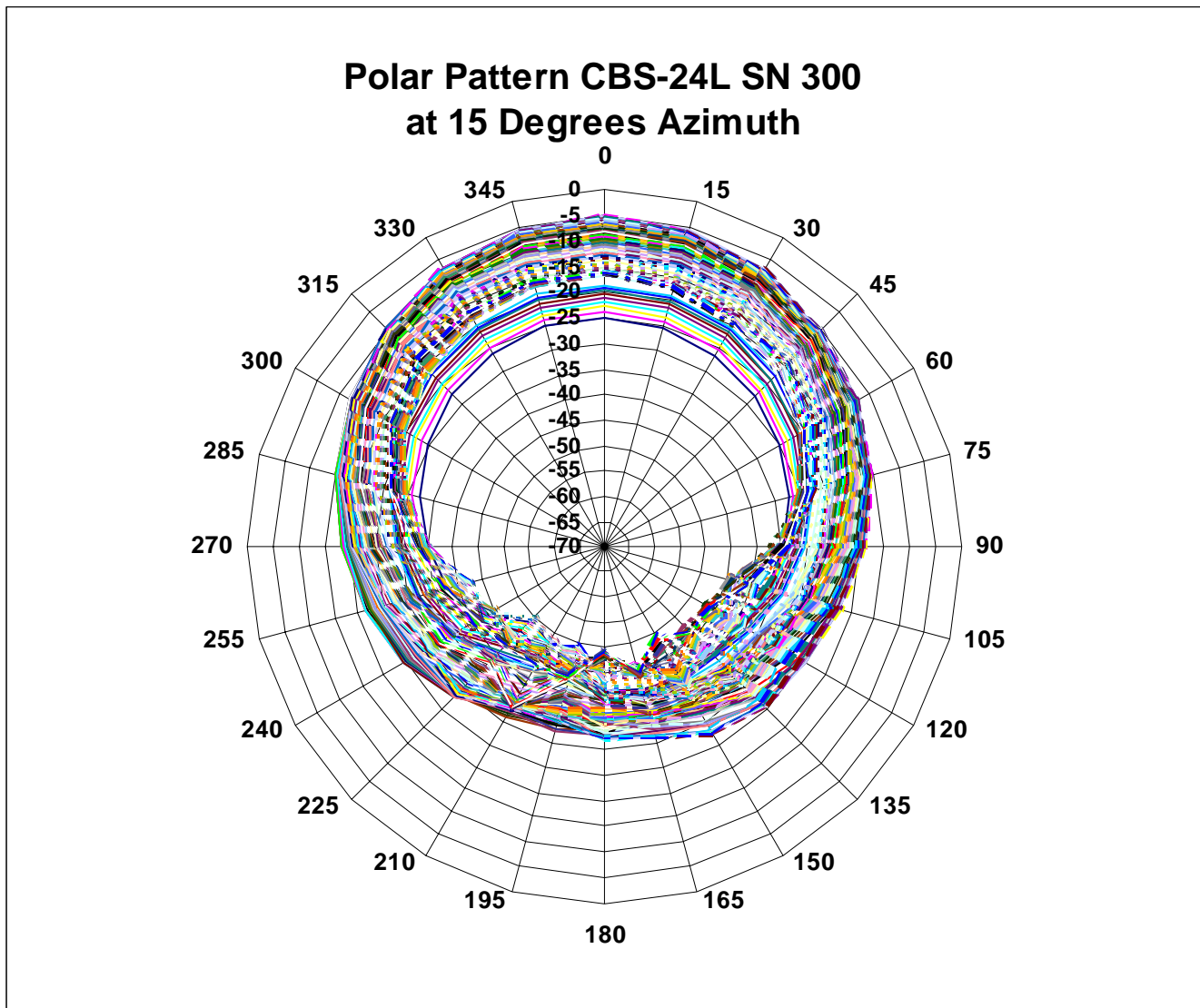
1252 & 1504 MHz



1756 & 1900 MHz



Polar Gain Plots all Frequencies at 15 degree azimuth



Mechanical Specifications

Dimensions: Width: 24" - Height : 24" - Thick: 5.25"
Weight: 15 Lbs
Environments: Operating: -20°C to +60°C Storage: -40°C to +70°C Humidity:95%
Material: Aluminum, FR-4, Foam
Rugged construction, Compact light weight, Works in harsh conditions

Specifications subject to change without notice
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