

SPECIFICATION SHEET

GLIDE SLOPE ANTENNA, DIRECTIONAL MODEL dBs 300A Marine Option

dBs PART NUMBER 300300-120



The dBs 300A is a premium performance Glide Slope (Path) antenna built by dB Systems Inc., a worldwide leader in aircraft navigation antennas. Engineered and built on the legacy of all dBs products, this antenna delivers consistent, phase stable RF signal in the world's most severe locations, such as Cold Bay, Alaska. FAA approved, and certified for use in all Instrument Landing Systems (ILS), each antenna is phase matched and tested to meet the current FAA standards for low ceiling and limited visibility landings. It is the only glide slope antenna with a removable dipole channel assembly. This feature minimizes the need for adjustment following antenna replacement, as the corner reflector assembly can remain in place on the tower while the channel assembly is removed and replaced. When used with the appropriate transmitter system, the dBs 300A antenna transmits specially formed radio frequency (RF) beams in the frequency range of 328 to 336 MHz. Aircraft equipped with the proper airborne receiving equipment can follow the glide slope signal, provided by the dBs 300A, and can lock on and follow appropriate descent angle safely down to the runway.

The glide slope antenna assembly consists of three collinear dipoles mounted in front of a 90-degree corner reflector, which form the shaped horizontal and vertical patterns of the antenna.

The assembly includes a temperature stabilized RF Distribution System, individual antenna element integral monitors, and a monitor combining device which provides a single monitor output. The entire RF Distribution System, as well as the integral monitor, are constructed using phase stable, semi-rigid coaxial cable which provides less sensitivity to environmental changes.

The RF transmission assembly is completely sealed and weatherproofed to protect in harsh environments such as salt water, extreme humidity, wind, sand, snow, and ice. Includes 316 Stainless Steel hardware for additional corrosion protection. An optional sealant can be added to the hardware to further prevent corrosion. An enhanced primer and topcoat are used for additional paint durability resulting in a state-of-the-art, highly durable, marine option Glide Slope antenna.

The RF input (J1) and the monitor output (J2) connectors are both Type N female receptacles.

Glide Slope Support Bracket (P/N 300500-100)

Optional Position Adjusting Mounting Bracket: Allows ~18 inches of continuous adjustment of the antenna's physical position in the vertical and horizontal axis.

GLIDE SLOPE ANTENNA, DIRECTIONAL

Model dBs 300A Marine Option
dBs PART NUMBER 300300-120

SPECIFICATIONS/CHARACTERISTICS

TYPE: Uni-Directional Corner Reflector

AZIMUTH COVERAGE: 23° Nominal HPBW

FREQUENCY RANGE: 328 - 336 MHz (no adjustments or tuning required)

ARRAY: 3 collinear dipoles

COAXIAL CABLE: Semi-Rigid, Low Loss, Phase Stable

POLARIZATION: Horizontally polarized - vertical component >25 dB below horizontal component

GAIN, MAIN BEAM: >10 dB/iso

VERTICAL COVERAGE: 80° Nominal HPBW. Front to Back ratio > 16 dB.

MAIN BEAM LOCATION: Within $\pm 2^\circ$ of mechanical axis. Electrical center is normal to and centered within the reflector face.

POWER HANDLING CAPABILITY: <50 Watts CW

IMPEDANCE: 50 Ω nominal

VSWR: <1.25:1 from 328 - 336 MHz

SIZE: 30" H x 87.5" L x 15" W

WEIGHT: 38 Lbs.

SHIPPING WEIGHT: Crate is 93" L x 38" W x 23" H and weighs 235 lbs. Crate is stackable.

RF MONITOR: Monitor coupling factor is 10 db \pm 1 dB below input signal level. Monitor is stable to within ± 0.5 dB and $\pm 5^\circ$ (electrical phase) over environmental conditions.

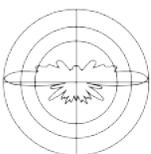
ANTENNA HEATER: Main Power 240 VAC, 240 Watts. Heaters always wired to ON. External thermostat control required.

INTERFACE CONNECTORS:
Main RF Input: Type N Female
RF Monitor Output: Type N Female
Antenna Heater AC Input: MS-3102-22-9P

ENVIRONMENTAL: FAA-G-2100F
Environmental III (4 in./hr. rain, sleet, and snow)

MOUNTING: 4 ea. 7/16 dia. through holes for 3/8 dia. bolts. Interface bolt pattern horizontal separation is 21.5"; vertical separation is 19.75".

SUPPORT BRACKET, GLIDE SLOPE:
Optional Position Adjusting Mounting Bracket, P/N 300500-100. Allows ± 18 " continuous adjustment of antenna physical position in vertical and horizontal axis.



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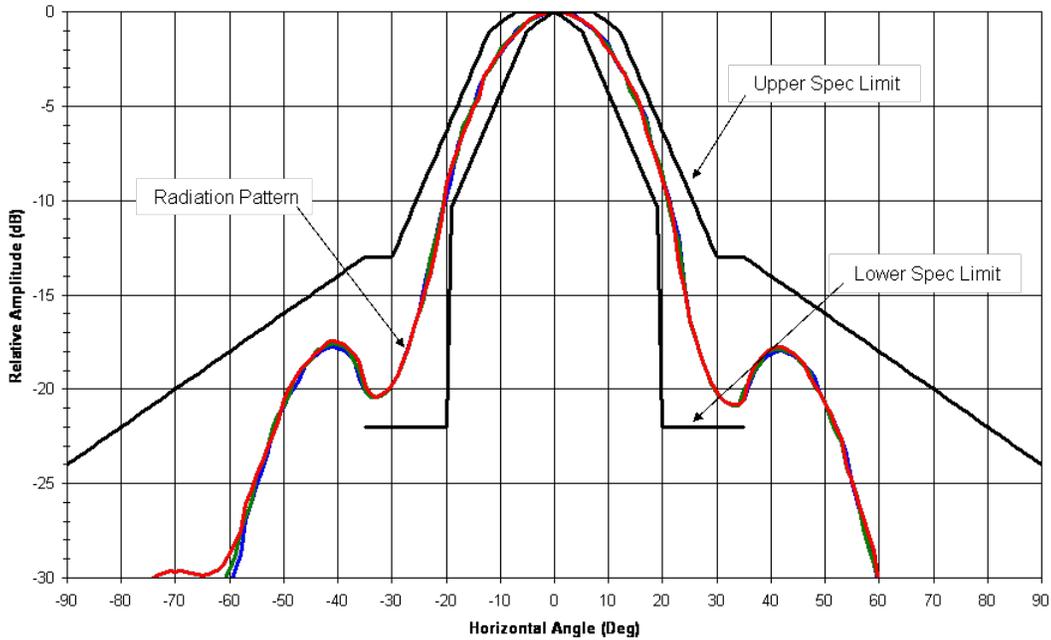
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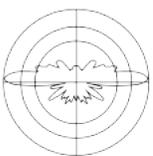
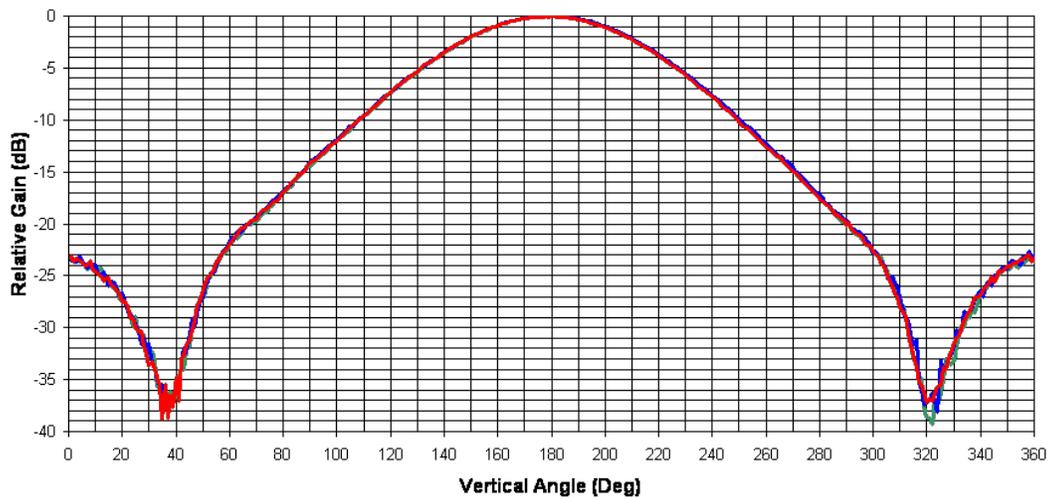
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dBs 300A Horizontal & Vertical Patterns

dBs 300 Glide Slope Antenna Horizontal Pattern - Typical 328 MHz, 332 MHz and 336 MHz



dBs 300 Glide Slope Antenna Vertical Pattern
Typical 328 MHz, 332 MHz and 336 MHz



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