dB Systems Inc.

2501 S. Antenna Avenue
Hurricane, Utah 84737 USA

SPECIFICATION SHEET

GLIDE SLOPE ANTENNA, DIRECTIONAL
MODEL dBs 300A

dBs PART NUMBER 300300-104, NSN NUMBER 5985-01-621-8393

dBs 300A Competitive Advantages:

- The dBs 300A has 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.
- Phase matched internal tuning
- 100% electrical testing (VSWR, Monitor Coupling)
- RF Testing of all batches
- Uses semi rigid coax that delivers consistent, phase stable RF signal in the world's most severe locations.
- Uses corrosion resistant 316 stainless steel passivated hardware.
- No external VSWR tuning needed

dBs 300A Details:

- This antenna is FAA approved and certified for use in all CAT I/II/III Instrument Landing Systems (ILS).
- When used with the appropriate transmitter system, the dBs 300A antenna transmits specially formed radio frequency (RF) beams in the frequency range of 329 to 335 MHz.
- Aircraft equipped with the proper airborne receiving equipment can follow the glide slope signal, provided by the dBs 300A antenna and can lock on and follow appropriate descent angle safely down to the runway.
- The Glide Slope Antenna consists of three collinear dipoles mounted in front of a high strength 90-degree corner reflector, which form the shaped horizontal and vertical patterns of the antenna.
- The RF input (J1) and the monitor output (J2) connectors are both Type N female receptacles.

The Glide Slope antenna 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.

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

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dBs PART NUMBER 300300-104, NSN NUMBER 5985-01-621-8393

SPECIFICATIONS/CHARACTERISTICS

TYPE: Uni-Directional Corner Reflector

AZIMUTH COVERAGE: 23° Nominal HPBW

FREQUENCY RANGE: 329 - 335 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 ±2° 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: <1.20:1 from 329 - 335 MHz

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

WEIGHT: 40 Lbs

SHIPPING WEIGHT: Crate is 93" L x 38" W x 34" H and weighs 328 lbs. Crate is stackable

RF MONITOR: The monitor coupling between the antenna dipole inputs to the monitor probe output is between 8.5 dB and 10 dB when measured at the center frequency of 332 MHz. The Monitor Coupling value is stable to within ±0.5 dB and ±5° (electrical phase) over environmental conditions

ANTENNA HEATER: Main Power 240 VAC, 60 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

HEATERS: 10-Watt internal heaters on each dipole.

COUPLING: The maximum change in the coupling value at any one frequency in the glide slope operational band does not exceed the noted values below across the environmental temperature range.

Coupling	0 +0.3dB / -0.1dB (excluding ice)
	0 +0.8dB / -0.1dB (with icing effects)
Phasing	0 +/-5.0 degrees

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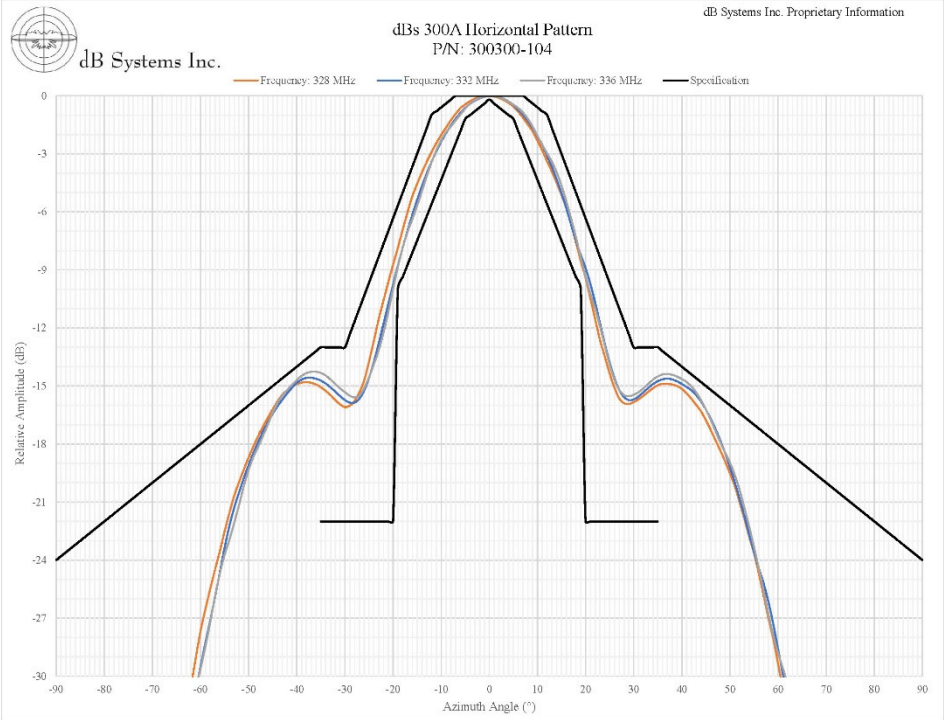
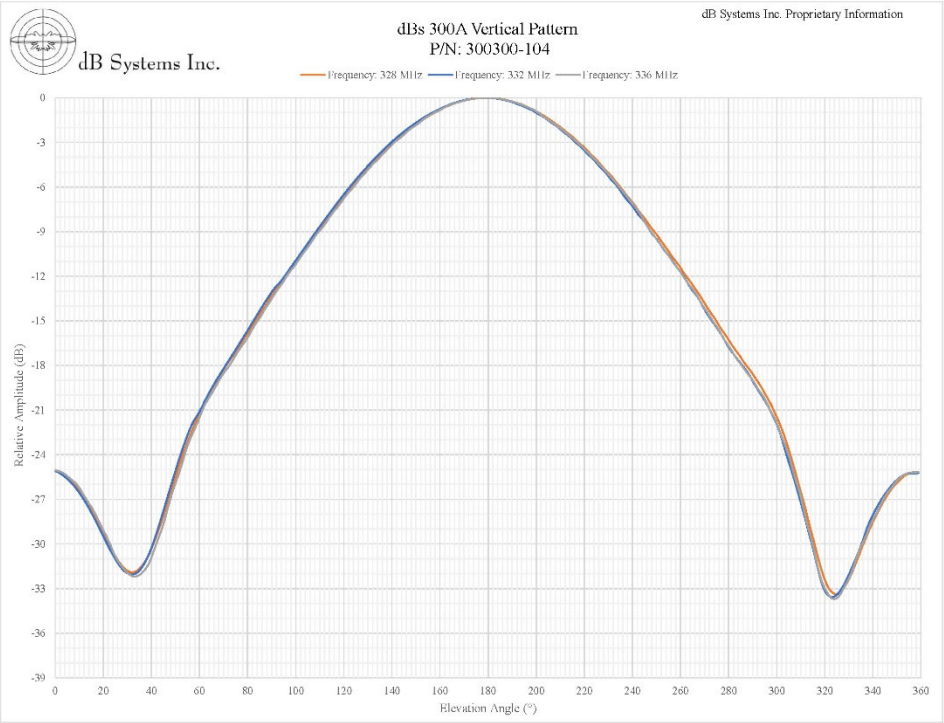
Email: **sales@dbsant.com** | Phone: **(435) 635-3352** | **www.dbsant.com**

dBs 300A Horizontal & Vertical Patterns





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