

SPECIFICATION SHEET

GLIDE SLOPE ANTENNA, DIRECTIONAL

Model: dBs 300A Dipole Channel Assembly

dBs Part Number: 300065-104, NSN Number 5985-01-631-9390



When installed in a corner reflector, the dipole channel assembly makes a complete Glide Slope antenna. Each antenna is phase matched and tested to meet the current FAA standards for low ceiling and limited visibility landings.

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 and can lock on and follow the appropriate descent angle safely down to the runway.

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.

dBs 300A Dipole Channel Assembly 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 Dipole Channel Assembly 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 300A Dipole Channel Assembly consists of three collinear dipoles that can be 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.

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SPECIFICATIONS/CHARACTERISTICS

TYPE: For use in a 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, when installed in corner reflector

VERTICAL COVERAGE: When installed in a corner reflector 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 channel assembly

POWER HANDLING CAPABILITY: <50 Watts CW

IMPEDANCE: 50 Ω nominal

VSWR: <1.20:1 from 329 - 335 MHz

SIZE: 4" H x 70" L x 14" W

WEIGHT: 18 lb

SHIPPING WEIGHT: Box is 74" L x 10" W x 23" H and weighs 30 lbs. Box 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 $\pm 5^\circ$ (electrical phase) over environmental conditions

MONITOR COUPLING STABILITY: 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 (excluding ice):	0 +0.3 dB / -0.1 dB
Coupling (with ice):	0 +0.8 dB / -0.1 dB
Phasing:	0 +/-5.0 degrees

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: 8 ea. 10-32 x 5/8 bolts, and flat washers included with dipole channel assembly

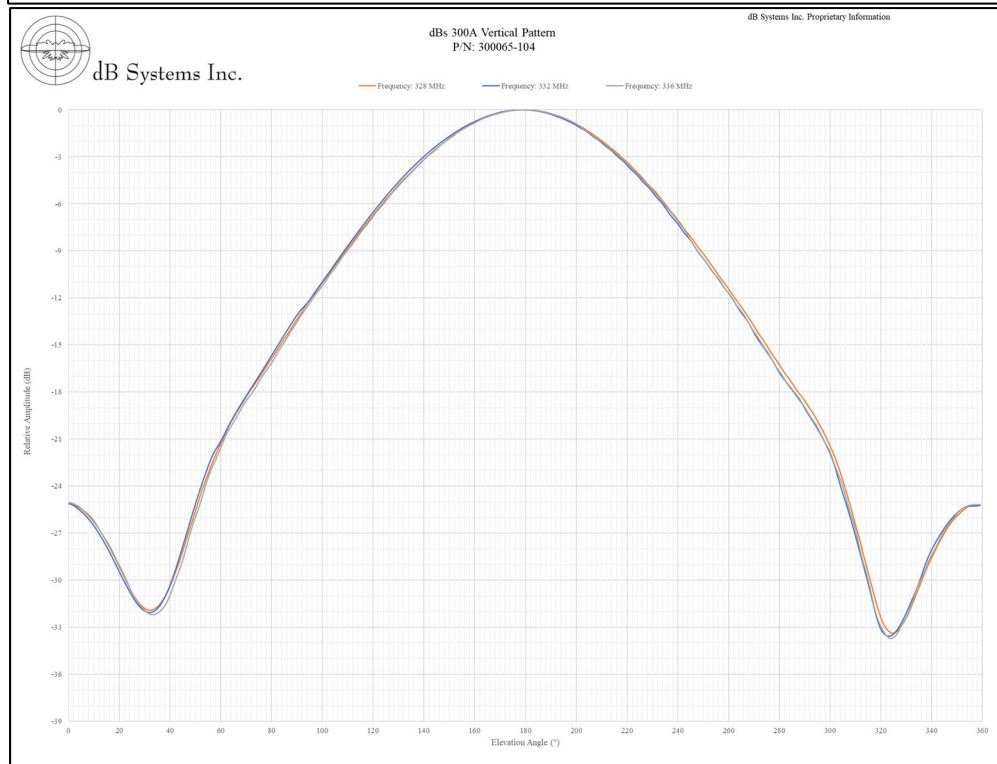
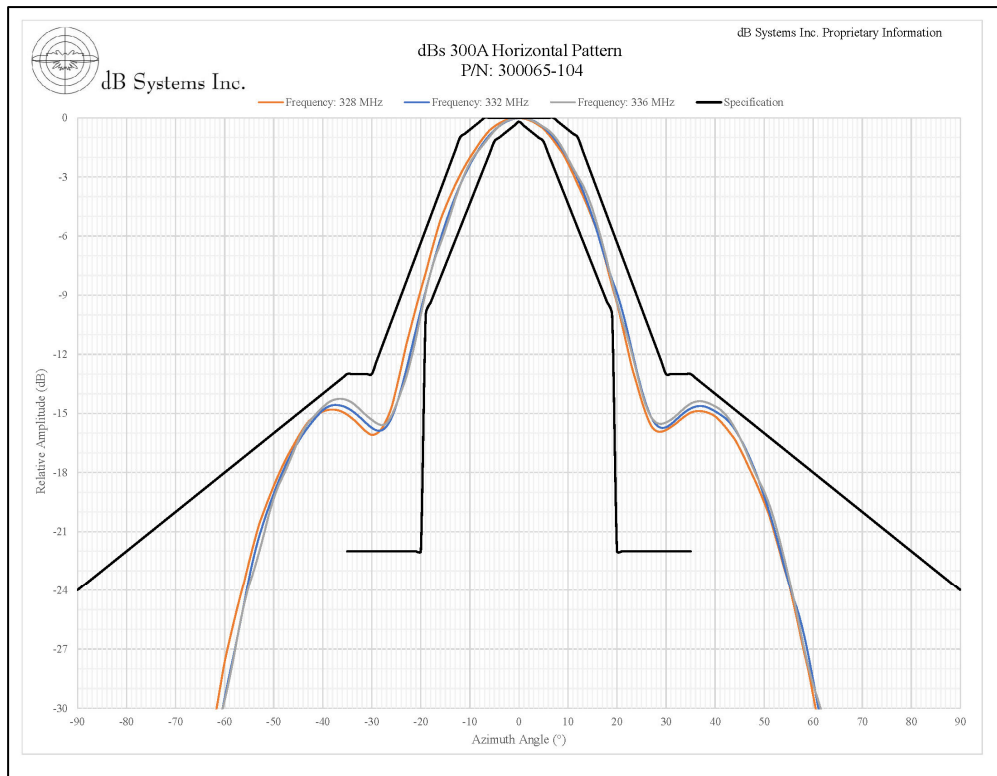
HEATERS: 10-Watt internal heaters on each dipole.



dB Systems Inc.

2501 S. Antenna Avenue
Hurricane, Utah 84737 USA

dBs 300A Dipole Channel Assembly Horizontal & Vertical Patterns



dB Systems Inc.

2501 S. Antenna Avenue
Hurricane, Utah 84737 USA

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

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