The Proof Is In The Critical Area Computations

Computed ILS Glide Slope Critical Area for an Airbus A380 Parallel to the Runway Using the Watts Model GP7 Beam Steered Directional Antenna in M-Array Configuration, also referred to as Capture Effect (CE). This Figure Shows the Addition Critical Area Reduction Achieved by Mechanically Rotating the Already Canted Beam by an Additional 6.0 Degrees Toward the Runway.

The Dashed Line on the Plot Represents a Taxiway Offset Distance Where the Tower to Wingtip Separation is Only 5 Meters (16.4 Feet). The Black Triangular Shape Represents the Location of the Glide Slope Tower.
Antenna Type: Directional Beam-Steered Image Glide Slope Antenna

Nomenclature: Model GP7

Color: International Orange and White

Coating: Icephobic

Frequency Range: 329.0 to 335 MHz

Polarization: Horizontal

Radome Type: Full Cover-Fiberglass

Reflector Type: 90 Degree Trough and Corner

Maximum Power: 50w CW

Input: Type N Female Connector

Pattern Type: Asymmetric

Gain: > 14 dBd

Beam Displacement: > 6 Degrees Nominal * See Note

-3 dB Beamwidth: 23 Degrees Nominal

Sidelobe Suppression: 25 dB Nominal

Front-to-Back Ratio: >21 dB Nominal

Input Impedance: 50 Ohms Nominal

VSWR: < 1.25 to 1

Distribution Loss: < 1 dB

Distribution Isolation: > 22 dB Between Ports

Monitor Impedance: 50 Ohms Nominal

Monitor Output: Type N Female Connector

Monitor Coupling: > 20 dB Nominal

Temp Range: -55 to +75 Degrees C

Lateral Thrust: 1450 N at 160 km/h

Max. Wind Velocity: 200 km/h (incl. 1/2" radial ice)

Length: 3.33 Meters (131.25 Inches)

Height: 79 CM (31 Inches)

Weight: 42.18 KG Approximate (93 lbs)

Heaters: Not Needed

NOTE: Up To An Additional 6 Degree Physical Beam Displacement In Either Direction With Shim Kit

Dipole System: Aluminum.

Material: Reflector: Aluminum w/ Icephobic Coating (orange).

Radome: Fiberglass (white).

All Screws and Nuts: Stainless Steel.

Scope of Supply: Antennas w/ Mounting Hardware, Shim Kit and Instruction Manual.

Mounting Hardware: B-Line 304 Stainless Steel Mounting Struts and Components.

Lightning Protection: Antenna is DC Grounded Including Inner Conductors.