



**WATTS ANTENNA COMPANY**



*For A Proven Better Image!*

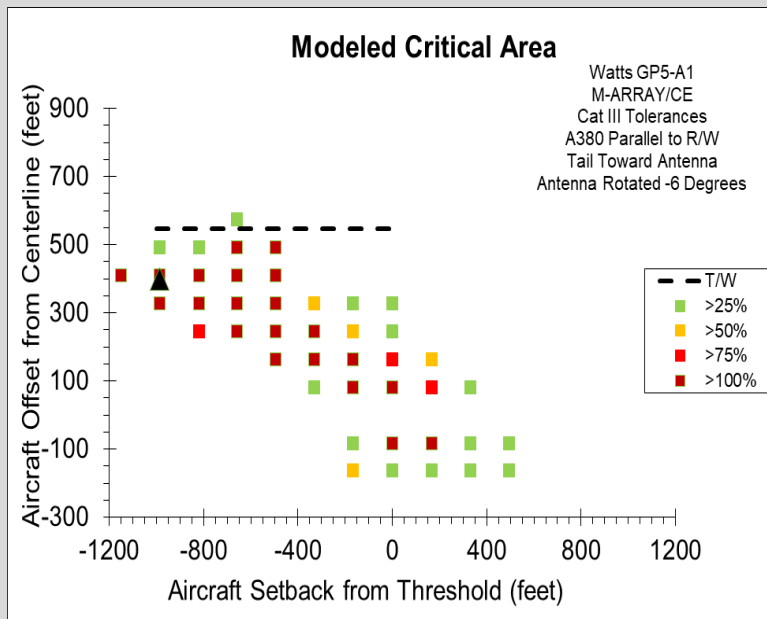
**MODEL GP5-A1**  
**DIRECTIONAL IMAGE GLIDE PATH ANTENNA**  
**CATEGORY I/II/III INSTRUMENT LANDING SYSTEM**  
**(FOR SMALLER CRITICAL AND SENSITIVE AREAS)**



**The Proof Is In The  
 Critical Area  
 Computations**

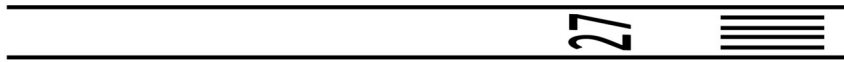
Computed ILS Glide Slope Critical Area for an Airbus A380 Parallel to the Runway Using the Watts Model GP5-A1 Beam Steered Directional Antenna in M-Array Configuration, also referred to as Capture Effect (CE). This Figure Shows the Addition Critical Area Reduction Achieved by Mechanically Rotating the 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.*



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# WATTS ANTENNA COMPANY



---(-----|-----) → *... World Leader In Advanced ILS Antennas*

<b>Antenna Type:</b>	Directional Beam-Steered Image Glide Slope Antenna
<b>Nomenclature:</b>	<b>Model GP5-A1</b>
<b>Color:</b>	International Orange and White
<b>Coating:</b>	Icephobic
<b>Frequency Range:</b>	329.0 to 335 MHz
<b>Polarization:</b>	Horizontal
<b>Radome Type:</b>	Full Cover-Fiberglass
<b>Reflector Type:</b>	90 Degree Trough and Corner
<b>Maximum Power:</b>	50w CW
<b>Input:</b>	Type N Female Connector
<b>Pattern Type:</b>	Asymmetric
<b>Gain:</b>	> 13 dBd
<b>Beam Displacement:</b>	> 6 Degrees Nominal * See Note
<b>-3 dB Beamwidth:</b>	23 Degrees Nominal
<b>Sidelobe Suppression:</b>	25 dB Nominal
<b>Front-to-Back Ratio:</b>	>21 dB Nominal
<b>Input Impedance:</b>	50 Ohms Nominal
<b>VSWR:</b>	< 1.25 to 1
<b>Distribution Loss:</b>	< 1 dB
<b>Distribution Isolation:</b>	> 22 dB Between Ports
<b>Monitor Impedance:</b>	50 Ohms Nominal
<b>Monitor Output:</b>	Type N Female Connector
<b>Monitor Coupling:</b>	> 20 dB Nominal
<b>Temp Range:</b>	-55 to +75 Degrees C
<b>Lateral Thrust:</b>	1450 N at 160 km/h
<b>Max. Wind Velocity:</b>	200 km/h (incl. 1/2" radial ice)
<b>Length:</b>	2.69 Meters (106 Inches)
<b>Height:</b>	79 CM (31 Inches)
<b>Weight:</b>	34.02 KG Approximate (75 lbs)
<b>Heaters:</b>	Not Needed
<b>NOTE:</b>	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 & Instruction Manual.

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

**Lightning Protection:** Antenna is DC Grounded Including Inner Conductors.