

## Broadband In-Building Antenna [380-520, 617-960 & 1695-6000 MHz]

# PEAR™ S5491i

### Description:

- Ceiling mount omni directional antenna for in-building applications such as DAS.
- The antenna is vertically polarized and operates at 380-6000 MHz supporting also public safety frequencies (TETRA).



380-520, 617-960, 1695-6000 MHz Omni SISO Antenna

### Electrical Specifications

Frequency Band [MHz]	380-520	617-698	698-790	790-960	1695-2200	2300-2700	2700-6000
<b>Input Connector Type</b>	1x N-Type (F) or 1x 4.3-10 DIN (F) with cable (12", 30 cm)						
<b>VSWR/Return Loss</b>	3:1/6.0	2.1:1/9.0	2:1/9.5	2:1/9.5	1.8:1/10.9	1.8:1/10.9	2.2:1/8.5
<b>VSWR* / Return Loss* (dB)</b> <small>with 60x60cm ext. baseplate</small>	1.7:1/11.8	1.5:1/14.0	1.5:1/14.0	2.0:1/9.5	1.9:1/10.1	2.0:1/9.5	2.2:1/8.5
<b>Impedance</b>	50 Ω						
<b>Polarization</b>	Vertical						
<b>Horizontal Beamwidth</b>	Omni (360°)						
<b>Gain (dBi)</b>	0.6 - 1.9	1.5 - 2.2	2.1 - 3.0	2.7 - 3.7	5.6 - 7.7	6.4 - 7.1	5.1 - 9.0
<b>Gain* (dBi)</b> <small>with 60x60cm ext. baseplate</small>	3.1 - 4.6	4.1 - 4.5	3.7 - 4.4	3.1 - 4.1	5.0 - 7.7	7.0 - 8.7	6.1 - 9.2
<b>Max Power / Port (Watt)</b>	50 Watts at ambient temperature 77°F (25°C)						
<b>PIM @ 2x43 dBm (dBc)</b>	-153 dBc for 4.3-10 DIN -150 dBc for N-Type						

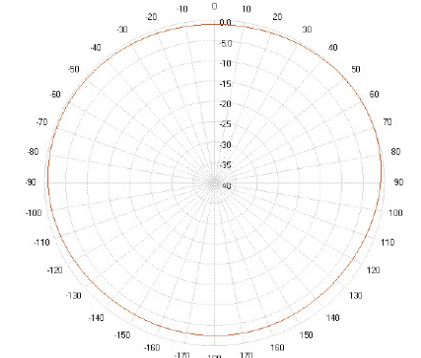
\* An External Base Plate (Part#27-272-09) is highly recommended to be used with the antenna for better gain and VSWR/RL for the public safety band.

### Mechanical Specifications

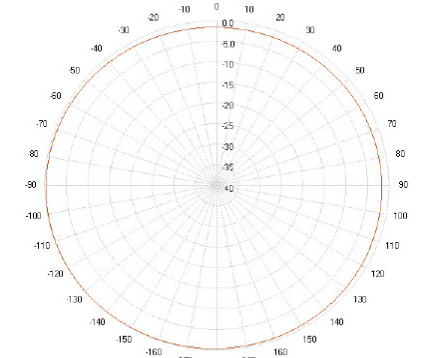
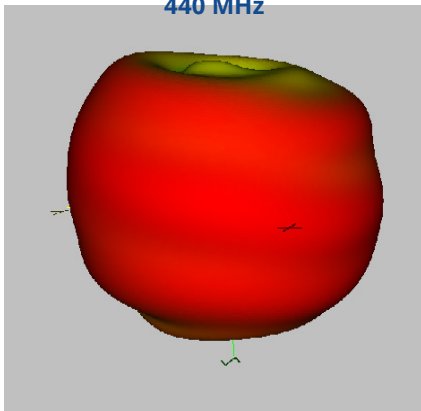
<b>Operating Temperature</b>	-40° to 158°F (-40° to +70°C)
<b>Environment Rating</b>	Indoor
<b>Antenna Weight</b>	1.65 lbs (750g)
<b>Antenna Dimensions (Diameter / Height)</b>	13.2" / 4.88" (335 / 124mm)
<b>Radome Material</b>	PC/ABS (halogen free)
<b>Radome Color</b>	RAL 9016 (white)*
<b>Flammability rating</b>	UL 94-V0
<b>RoHS</b>	Compliant

\* Radome can be painted with recommended paint "Krylon fusion for plastic"

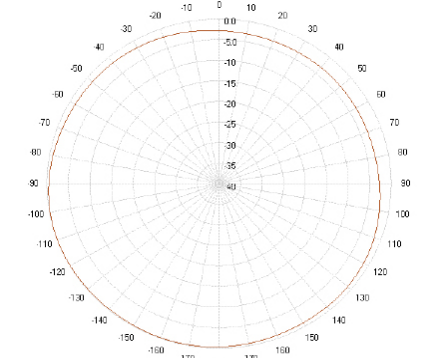
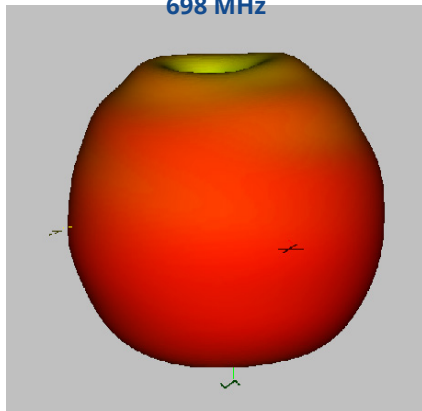
## 2D and 3D Antenna Patterns



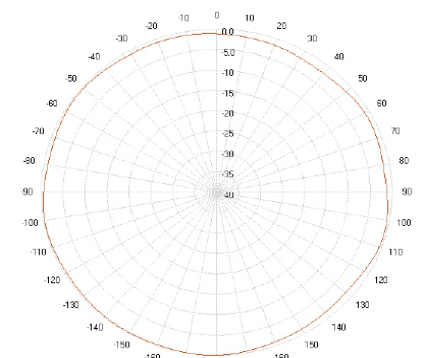
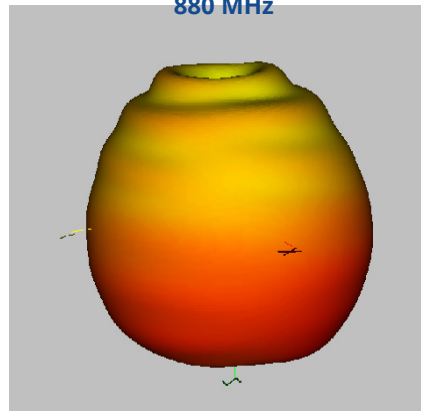
440 MHz



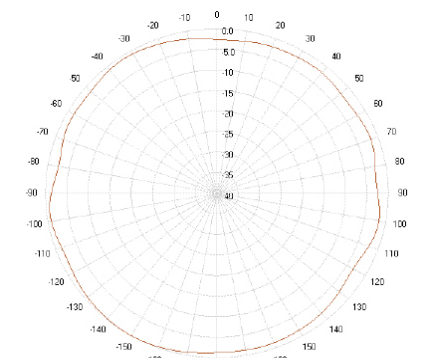
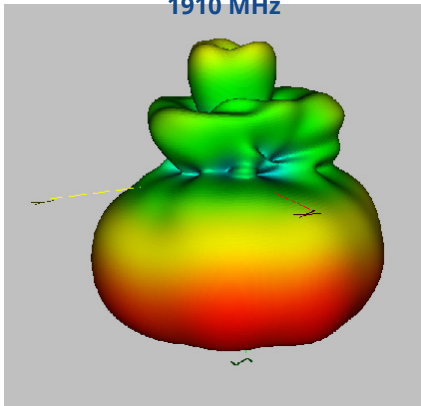
698 MHz



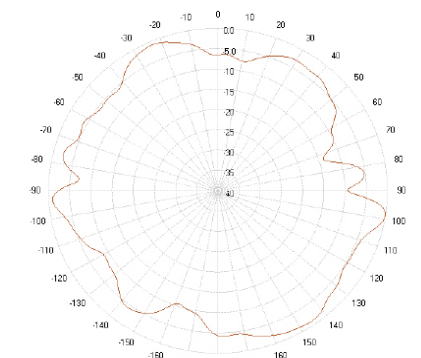
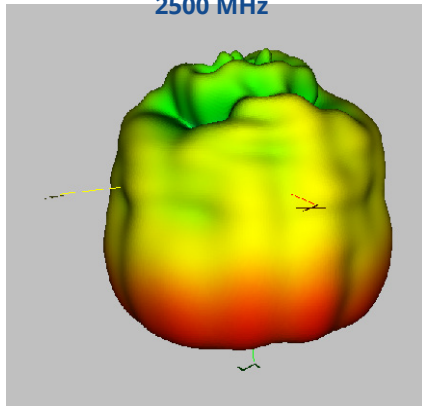
880 MHz



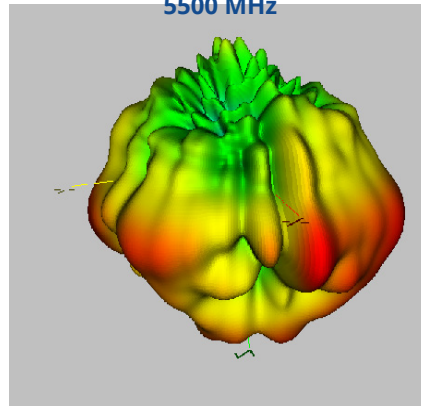
1910 MHz



2500 MHz



5500 MHz



### 3D Patterns Note:

3D images above denote X & Y Axes in horizontal plane, while Z-axis is in vertical plane towards floor/user as would be typical of most DAS ceiling mounted omnidirectional antenna installations.

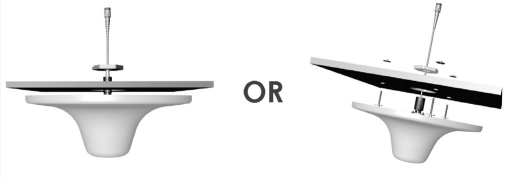
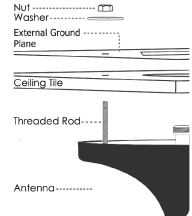


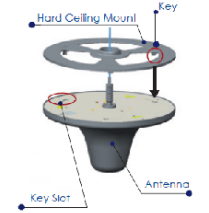
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## Part Numbers and Ordering Options

Description:	Part Number:
Antenna with 1x N-Type (F) Connectors - Below Ceiling	02121304-05491U
Antenna with 1x 4.3-10 DIN (F) Connectors - Below Ceiling	02130304-05491U

## Mounting Bracket(s) and Accessories

<p><b>Below Ceiling Mounting kit (Included)</b></p> <p>Fasteners for below suspended ceiling mounting included with antenna. Maximum ceiling thickness 1.18”(30mm). Drill a hole with a 1.18”(30mm) diameter into suspended ceiling and secure the antenna with supplied plastic nut.</p> <p>Optionally the antenna can be installed below a suspended ceiling by using the provided M4 Threaded rod (x3) and M4 nuts.</p>	
<p><b>External Ground Plane (Included)</b></p> <p>The optional external ground plane can be placed above the suspended ceiling to improve gain and VSWR performance of the antenna.</p>	 <p>27-272-09</p>
<p><b>Through Ceiling Mounting Bracket (Optional)</b></p> <p>Through ceiling mounting conceals the antenna with only the nose protruding through the ceiling. The base plate is hidden above the false ceiling which results in a 40% reduction of the visible antenna footprint.</p>	 <p>62-17-09</p>
<p><b>Above Ceiling Mounting Bracket (Optional)</b></p> <p>The antenna can be installed above a suspended ceiling by using the optional above ceiling mounting bracket.</p>	 <p>62-40-09</p>
<p><b>Hard Ceiling Installation (Optional)</b></p> <p>The hard ceiling mounting kit can be used to mount the antenna to drywall and concrete ceilings</p>	 <p>62-54-09</p>

### Mating Connector Torque:

- N-Type: 26.6 in-lb (3 Nm)
- 4.3-10: 44.3 in-lb (5 Nm)