

UHF Offset Dipole Arrays

400-520 MHz
Offset Dipole Arrays



Offset arrays are directional antennas for use when a base station is at one end of the coverage area. These new arrays feature improved gains, low noise performance and enhanced null fill coverage in an array with typical cardioid coverage characteristics.

The OA Series have slightly more than 170° horizontal beamwidth, thus everything in front of the antenna is given coverage. This eliminates the possibility of fading at the extremities of the target coverage area. The level of radiation at the rear of the antenna is approximately unity gain.

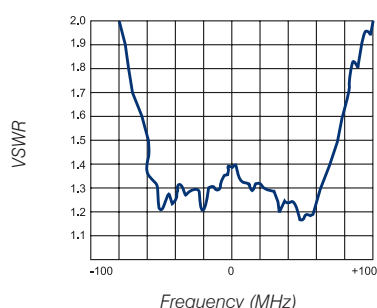
These antennas are also offered with -3° or -5° of beamtilt, and all include extensive side lobe suppression, null fill and a power input level of 500 Watts continuous.

Key Features:

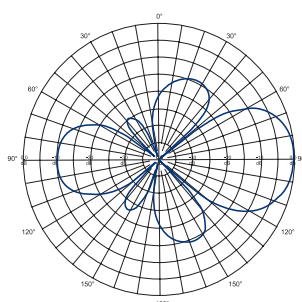
- Operate over entire 400-520 MHz bands
- Inverted mounting version available
- Hermetically sealed internal phasing harness
- Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum performance
- DC grounding on all elements for the ultimate in lightning protection and dissipation of static noise



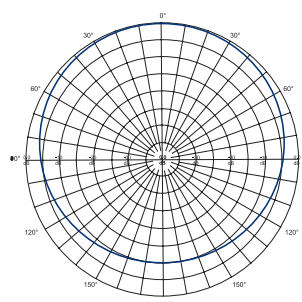
Typical VSWR Response (OA20-67)



OA20-67 - E Plane



OA20-67 - H Plane



Electrical Specifications

| Model Number | OA20-67-P | OA21-67-P | OA2020-67-P | OA2121-67-P | OA4040-67-P |
|--------------------------|---------------|-----------|-------------|-------------|----------------|
| Nominal Gain dBi (dBd) | 7 (5) | | 2 x 7 (5) | | 2 x 10 (7) |
| Frequency MHz | 400 - 520 | | | | |
| Tuned Bandwidth MHz | Entire band | | | | |
| VSWR (Return Loss) | <1.5:1 (14dB) | | | | |
| Nominal Impedance Ω | 50 | | | | |
| Downtilt | Not offered | | | | 0° Std -3°, 5° |
| Vertical Beamwidth° | 36 | | | | 17 |
| Horizontal Beamwidth° | 180 | | | | 178 |
| Input Power W | 500 | | | | |
| Passive IM 3rd order dBc | -150 | -140 | -150 | | -140 |

Mechanical Specifications

| Model Number | OA20-67-P | OA21-67-P | OA2020-67-P | OA2121-67-P | OA4040-67-P | |
|---|--|----------------------------|--|----------------------------|--|------------|
| Construction | All welded aluminium with alodined finish. | All welded Stainless Steel | All welded aluminium with alodined finish. | All welded Stainless Steel | All welded aluminium with alodined finish. | |
| Length mm (in) | 2020 (79.5) | | 3000 (118.1) | | 5700 (224.4) | |
| Weight kg (lb) | 4 (8.8) | 6.5 (14.3) | | 10.5 (23.1) | 17.5 (38.6) | |
| Termination | 4.3-10 female with 0.5m RG142 cable tail. | | | | | |
| Mounting Area mm (in) | 500 x Ø48 (20 x Ø1.9) | 500 x Ø42 (20 x Ø1.7) | 500 x Ø48 (20 x Ø1.9) | 500 x Ø42 (20 x Ø1.7) | 500 x Ø63 (20 x Ø2.5) | |
| Suggested Clamps | 2 x UC1 | | | | | |
| Projected Area cm ² (ft ²) | No ice | 1646 (1.8) | 1505 (1.6) | 2688 (2.9) | 2485 (2.7) | 4732 (5.1) |
| | With ice | 2565 (2.8) | 2466 (2.7) | 4602 (4.9) | 4392 (4.7) | 7333 (7.9) |
| Wind Load (Thrust) @ 160km/h N (100mph lbs) | 195 (44) | 178 (40) | 319 (72) | 294 (66) | 561 (126) | |
| Wind Gust Rating km/h (mph) | > 240 (150) | | | | 194 (121) | |
| Torque @160 km/h Nm (100mph ft-lb) | 99 (73) | 91 (67) | 319 (235) | 294 (217) | 1110 (819) | |

(1) Factory pre-set downtilt may be specified on OA40 series antennas using model no. trailer - T3, -T5