

UHF Offset Dipole Arrays – OA Series

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.

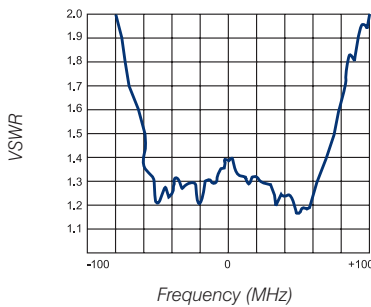
These antennas are also offered with -3° or -5° of beamtilt, and all include extensive side lobe suppression, null fill and a power input level of 500 Watts continuous.

Features:

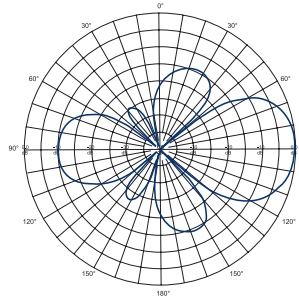
- Frequency range: 400–520 MHz
- Directional cardioid coverage (~170–180°)
- 500 W continuous input power
- Passive Intermodulation (PIM): ≤ -150 dBc
- Factory preset electrical downtilt options
- DC grounded for lightning protection



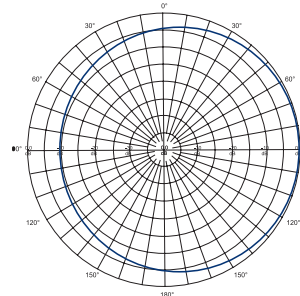
Typical VSWR Response (OA20-67-P)



OA40-67-P - E Plane



OA40-67-P - H Plane



Electrical Specifications

Model Number	OA40-67- P	OA41-67- P	OA4040-67- P	OA80-67- P
Nominal Gain <i>dBi</i> (<i>dBd</i>)	11 (9)	11 (9)	2 x 11 (9)	13 (11)
Frequency <i>MHz</i>	400–520			
Tuned Bandwidth <i>MHz</i>	Entire band			
VSWR	<1.5:1			
Nominal Impedance Ω	50			
Downtilt	Not offered		0° std, -3°, -5°	
Vertical Beamwidth°	17		7	
Horizontal Beamwidth°	178		176	
Input Power <i>W</i>	500			
PIM 3rd order <i>dBc</i>	-150	-140	-140	-140

Mechanical Specifications

Model Number	OA40-67- P	OA41-67- P	OA4040-67- P	OA80-67- P	
Construction	All welded aluminium construction with alodined finish	Stainless Steel	All welded aluminium construction with alodined finish	All welded aluminium construction with alodined finish	
Length <i>mm</i> (<i>in</i>)	3000 (118.1)		5700 (224.4)	5700 (224.4)	
Weight <i>kg</i> (<i>lb</i>)	6.5 (14.3)	10.5 (23.1)	18 (39.7)		
Termination	4.3-10 Female, 0.5 m tail				
Mounting Area <i>mm</i> (<i>in</i>)	500 x Ø48 (19.7 x 1.9)	500 x Ø42 (19.7 x 1.65)	500 x Ø63.5 (19.7 x 2.5)	500 x Ø63.5 (19.7 x 2.5)	
Suggested Clamps	2 x UC1				
Projected Area <i>cm²</i> (<i>ft²</i>)	No Ice	2688 (2.89)	2485 (2.67)	5162 (5.56)	5162 (5.56)
	With Ice	4602 (4.95)	4392 (4.73)	8124 (8.74)	8124 (8.74)
Wind Load @160 <i>km/h N</i> (<i>lb.f</i>)	319 (72)	294 (66)	612 (137)	612 (137)	
Wind Gust Rating <i>km/h</i> (<i>mph</i>)	>240 (>150)				
Torque @160 <i>km/h Nm</i> (<i>ft-lb</i>)	319 (235)	294 (217)	2263 (1668)	2263 (1668)	

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