

VHF Offset Dipole Arrays

136 - 174 MHz

These high performance VHF dipole offset arrays are ideal for use when a cardioid pattern is required. The arrays feature high gain, low noise performance and enhanced null fill coverage with typical cardioid coverage characteristics.

These antennas offer industry leading PIM ratings, essential for the latest digital radio systems. All welded alodined aluminum construction and new fabrication techniques in both the harness and dipole sections have proven to minimize intermodulation and noise generated within the antennas. The entire array rests at ground potential and offers the ultimate in lightning resistant antennas.

OA series arrays have an almost full 180° horizontal beamwidth. This eliminates the possibility of fading at the extremities of the target coverage area. Antenna gain is approximately unity at the rear of the antenna.

As would be expected from a cardioid array, the vertical beamwidth is slightly greater than its BA (omnidirectional) or EA (elliptical) pattern counterparts.

OA series arrays feature the same solid construction as the BA and EA Series. The folded dipoles utilize an internal phasing harness in stable, PTFE based double-shielded coaxial cable with PE jacket for optimum weatherproofing. The offset arrays incorporate extensive side lobe suppression, null fill, and power input levels of 750 watts continuous.

- High gain offset (cardioid) pattern. 5dBd or 9dBd versions available
- Operate over entire 136-174 MHz VHF band without tuning or adjustment
- 3° downtilt option available on OA40-41
- OA40-41-DIN may be ordered as 2 x 5dBd arrays on one boom assembly. Specify model OA2020-41-DIN. Typical space isolation between the two arrays is 25dB.
- **Industry leading PIM ratings providing low IM and low noise characteristics for optimum performance**



OA20-41-DIN

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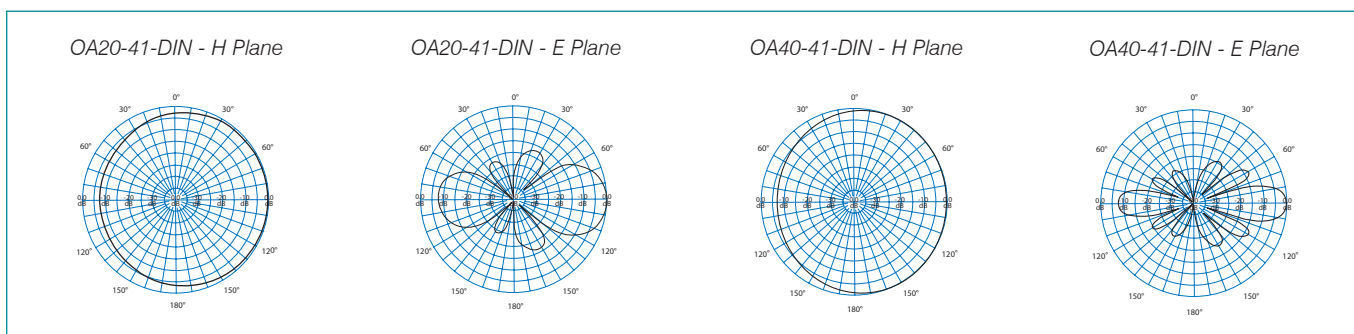
136 - 174 MHz

Electrical Specifications

Model Number	OA20-41-DIN	OA40-41-DIN
Nominal Gain <i>dBd</i>	5	9
Frequency <i>MHz</i>	136 - 174	
Tuned Bandwidth	Entire band	
VSWR (Return Loss)	<1.5 :1 (14dB)	
Nominal Impedance Ω	50	
Downtilt	Not offered	0° Std, -3°. See note (2)
Vertical Beamwidth	35°	17°
Horizontal Beamwidth	178°	176°
Input Power (<i>Watts</i>)	750	
Passive IM 3rd order (<i>2x20W</i>) <i>dBc</i>	-150	-140

Mechanical Specifications

Model Number	OA20-41-DIN	OA40-41-DIN
Construction & Configuration	2 dipoles (2 bays) Single sided Single section support	4 dipoles (4 bays) Single sided Dual section support
Length <i>inches</i>	138	248
Weight <i>lbs</i>	28	64
Shipping Weight <i>lbs</i>	188	282
Shipping Dimensions <i>inches</i>	H	21
	W	8
	L	146
Termination	7/16" DIN female with 20" 9142 cable tail	
Mounting Area	20" x 2.5" diam. aluminum	
Suggested Clamps (not included)	UC12	UC13
Projected Area <i>ft²</i>	No ice	4.0
	With ice	6.7
Lateral Thrust @ 100mph <i>lbs</i>	99	197
Wind Gust Rating <i>mph</i>	No ice	149
	With ice	117
Torque @100mph <i>ft-lbs</i>	406	1713



(1) Single section arrays are rated to -150dBc PIM rating. Dual section (OA40-41-DIN) arrays are rated at -140dBc.
 (2) Factory pre-set downtilt of 3° may be specified on OA40-41-DIN antennas by adding -T3 to the part number ordered e.g. OA40-41-DIN-T3



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