BA Series

VHF OMNIDIRECTIONAL DIPOLE ARRAYS

136-174 MHz

These high performance VHF dipole omnidirectional arrays are for use in highly populated radio sites requiring long haul omnidirectional coverage. The arrays feature high gain, low noise performance and enhanced null fill coverage with omnidirectional coverage characteristics.

These antennas offer industry leading PIM ratings, essential for the latest digital radio systems. With all welded construction and superior internal harness construction, these antennas provide not only excellent pattern characteristics but also defined, high levels of intermodulation and noise suppression. The entire array rests at ground potential and offers the ultimate in lightning resistant antennas.

Each of the dipoles are fed via an internal phasing harness with stable, PTFE based double-shielded coaxial cable with PE jacket for optimum weatherproofing. These omnidirectional arrays incorporate extensive side lobe suppression and null fill, and the binary phasing arrangement ensures consistent omnidirectional coverage and vertical pattern control.

These arrays provide unparalleled bandwidth, covering the entire 136-174 MHz band with a VSWR of better than 1.5:1. Available in 3dBd, dual 3dBd and 6dBd gain configurations and power rated to 750 watts. The antennas are suitable for high power paging sites or high density, multichannel installations requiring maximum performance and service life.

- High gain omnidirectional patterns
- Full band 136 – 174 MHz operation without tuning or adjustment
- BA4040-41-DIN dual 3 dBd version offers typical 25dB isolation between antennas
- **Industry leading PIM ratings providing low PIM and low noise characteristics for optimum performance**

RFI
2023 Case Parkway North
Twinsburg, OH 44087
Phone: 330 486 0706
Fax: 330 486 0705

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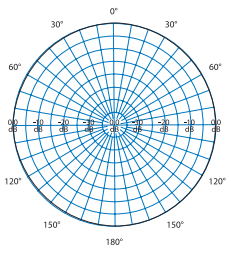
Electrical Specifications

Model Number	BA40-41-DIN	BA4040-41-DIN	BA80-41-DIN
Nominal Gain *dBd*	3	2 x 3	6
Frequency *MHz*	136 - 174		
Tuned Bandwidth *MHz*	Entire band		
VSWR	>1.5 :1 (14 dB)		
Nominal Impedance Ω	50		
Downtilt	Not offered	Not offered	0° Std, -3°. See note (2)
Vertical Beamwidth°	35	2 x 35	18
Horizontal Beamwidth°	Omni +/- 0.5dB		
Input Power *Watts*	750		
Passive IM 3rd order (2x20W) *dBc*	-150	-140	-140

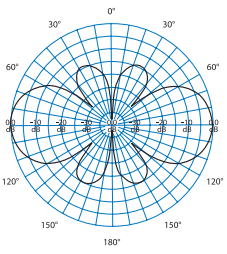
Mechanical Specifications

Model Number		BA40-41-DIN	BA4040-41-DIN	BA80-41-DIN
Construction & Configuration		4 dipoles (2 bays) Turnstile stacked Single section support	2 x 4 dipoles (2 bays) Turnstile stacked Dual section support	8 dipoles (4 bays) Turnstile stacked Dual section support
Length *inches*		138	248	248
Weight lbs		32	68	68
Shipping Weight *lbs*		192	288	288
Shipping Dimensions *inches*	H	26	26	26
	W	26	32	32
	L	146	146	146
Termination		7/16 DIN female with 20" 9142 cable tail		
Mounting Area *inches*		20" x 2.5" diam. aluminum	20" x 3.0" diam. aluminum	20" x 3.0" diam. aluminum
Suggested Clamps (not included)		UC12	UC1142	UC1142
Projected area *ft²*	No ice	4.5	8.9	8.9
	with ice	7.7	14.3	14.3
Lateral (Thrust) @ 100mph *lbs*		111	221	221
Wind Gust Rating *mph*	No ice	149	114	114
	with ice	115	89	89
Torque @ 100mph *ft-lbs*		455	1921	1921

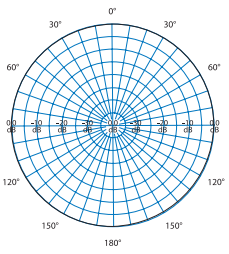
BA40-41-DIN - H Plane



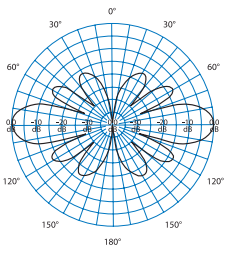
BA40-41-DIN - E Plane



BA80-41-DIN - H Plane



BA80-41-DIN - E Plane



(1) Single section arrays are rated to -150dBc PIM rating. Dual section arrays are rated at -140dBc.

(2) Factory pre-set downtilt of 3° may be specified on BA80-41-DIN antennas by adding -T3 to the part number ordered e.g. BA80-41-DIN-T3

RoHS Compliant

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