

VHF / UHF Multiple Dipole (Muldipol) Antennas

2000 Series

The 2000 Series MULDIPOL™ Multiple Dipole Collinear Array concept has been specifically developed for ground-air-ground, air traffic control and associated vehicular and land based communications applications. This omni directional concept employs a unique method of shielding the feed cables to improve radiation pattern characteristics. The MULDIPOL™ also has a high degree of isolation between discrete elements within a closely spaced array. The result is a small, rugged, easy to install antenna. The lightweight and compact design minimizes space and lends itself to tactical transportable use in the most hostile environments. A minimum of 30 dB isolation is realized between any two antenna elements in every MULDIPOL™ model. The low profile silhouette of this antenna plus the resulting decrease in the number of antennas required at any tower site also gives a much improved radiation pattern coverage.

The process employed in Racal Antennas multiple dipole antennas incorporates a patented MULDIPOL™ concept. The utilization of this technique results in a unit which has excellent “broadband” half-wave dipole characteristics over the entire operating frequencies. The desired “figure eight” radiation pattern is generally constant throughout the band. Through “broadband” suppression of extraneous currents upon the transmission line, the undesirable “Clover Leaf” pattern is avoided. By design, the outer conductors of both halves of each dipole are at the same DC ground potential. A ground is provided at the base of each antenna for supplemental grounding capability.

Some models are available with a split or folding option to halve the stowed length for ease of transportation.



Split Option



Folding Option

General Electrical Specification

(see table overleaf for individual model specification)

VSWR	2:1 maximum
Input Impedance	50Ω
Power Handling	100W carrier modulated 95% AM
Polarisation	Vertical
Isolation	30dB min (25dB min for D2260)
Environmental Specification	Altitude, rain, vibration, shock, salt, fog, sand and dust to MIL-STD-810. Temperature, barometric pressure and humidity to MIL-STD-210.

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Type Muldipol

Model	VHF (MHz)			UHF (MHz)			Gain	No. of Outputs	HPBW (Deg)	Length (mm)	Weight (Kg)	Mount	Split Option	Folding Option
	116-150	118-136	150-174	225-400	400-470	400-500								
D2118	X			XX			1.0	3	75	2902	5.67	1	Y	N
D2212	XX						1.0	2	75	3867	5.67	1	Y	N
D2212A			XX				1.0	2	75	3867	5.67	1	Y	N
D2213	X			X			1.0	2	75	2140	4.54	1	Y	N
D2214				XX			1.0	2	75	2140	4.54	1	Y	N
D2216	X						1.0	1	75	1384	2.49	2	N	N
D2217				X			1.0	1	75	819	1.81	2	N	N
D2218	XX			X			1.0	3	75	4273	7.48	1	N	Y
D2218A	XX			X			1.0	3	75	4273	7.48	1	Y	N
D2219				XXX			1.0	3	75	2901	5.90	1	N	Y
D2221				XXXX			1.0	4	75	4273	7.83	1	Y	N
D2236					XXXX		6.0	1	22	2135	8.20	1	N	N
D2260		XXX					1.0	3	75	4991	11.34	1	Y	N
D2260A			XXX				1.0	3	75	4909	11.34	1	Y	N
D2261A		XX					4.0	1	40	3568	8.62	1	Y	Y
D2261A1*		XX					4.0	1	40	3568	8.62	3	N	Y
D2262				XX			4.0	1	40	1727	5.90	2	N	Y
D2262A*				XX			4.0	1	40	1727	5.90	3	N	Y
D2263				XXXX			5.0	1	20	3406	9.07	1	Y	N
D2272*		XX					1.0	2	75	3867	7.95	3	N	Y
D2272A		XX					1.0	2	75	3867	7.71	2	N	N
D2273*		X		X			1.0	2	75	2140	5.08	3	N	Y
D2274*				XX			1.0	2	75	2140	4.95	3	N	Y
D2274A				XX			1.0	2	75	2140	4.58	2	N	Y
D2276*		X					1.0	1	75	1384	2.36	3	N	N
D2277*				X			1.0	1	75	8191	1.77	3	N	N
D2288						XXXX	1.0	4	75	2898	5.90	1	Y	N
D2295	X			XX			1.0	3	75	3175	10.43	1	Y	N
D2296	XX			X			1.0	3	75	4546	12.70	1	N	N

'X' indicate the number and frequency of antennas per assembly

(1) = 3 inch Tube (7.62 cm) Also available for 2.5 inch (6.35 cm) IPS Pipe
 (2) = 1.5 to 3 inch Tube (3.81 to 7.62 cm)
 (3) = 1.25 or 2.5 inch IPS Pipe (3.175 or 6.35 cm)

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