UHF Meander™ Collinear Antennas

380-520 MHz

COL41 Series

This range of Meander™ collinear antennas has been specifically designed for wireless applications requiring high performance, broad bandwidth and exceptional PIM and PIP specifications.

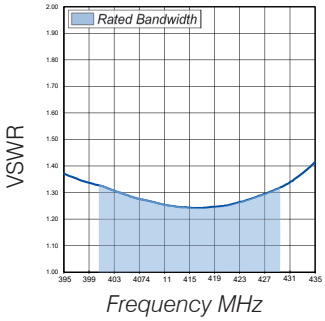
The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With the dipole elements being printed on a single sided PCB the susceptibility to passive intermodulation is practically eliminated.

Placing the elements on a board not only controls PIM but also removes manufacturing variations so that each and every antenna will provide the same pattern, tilt and VSWR characteristics over its operating bandwidth.

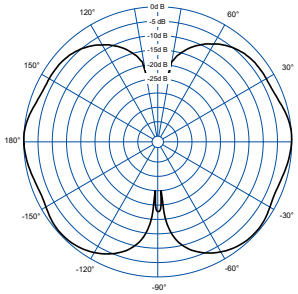
Features:

- **Excellent bandwidth providing full band coverage**
- **Internally DC grounded for lightning protection and the reduction of precipitation noise**
- **Tight controlled radiation patterns for optimum coverage**
- **Patented Meander™ PCB design for optimum RF pattern stability**
- **Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum network performance**
- **Excellent Peak Instantaneous Power(PIP) rating (25kW)**

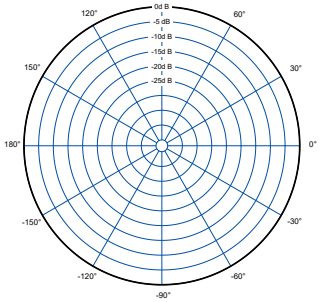
Typical VSWR Response



Typical E Plane



Typical H Plane



Electrical Specifications

Model Number	COL41-400-P	COL41-420-P	COL41-470-P	COL41-490-P	COL41-520-P
Nominal Gain *dBd (dBi)*	2.1 (0)				
Frequency *MHz*	380-400	400-420	450-470	470-490	490-520
Tuned Bandwidth *MHz*	Full Band				
VSWR	<1.5:1				
Nominal Impedance Ω	50				
Vertical Beamwidth °	109	96	71	69	57
Horizontal Beamwidth °	Omni +/- 0.5dB				
Power *W*	250				
Passive IM 3rd order *dBc*	-150				
Peak Instantaneous Power *kW*	25				

Mechanical Specifications

Model Number		COL41-400-P	COL41-420-P	COL41-470-P	COL41-490-P	COL41-520-P
Construction		Ecofilm aluminium mount tube with Sky Blue fibreglass radome				
Length *mm (in)*		1100 (43.3)				
Radome Diameter *mm (in)*		39 (1.5)				
Weight *kg (lb)*		2.2 (4.9)		2.1 (4.6)	2 (4.4)	
Termination		4.3 - 10 Female				
Mounting Area *mm (in)*		500 x 48.5Ø (19.7 x 1.9Ø)				
Projected area *cm² (ft²)*	no ice	437 (0.47)				
	with ice	672 (0.72)				
Lateral (Thrust) @ 160km/h *N (100mph lb)*		80 (18.0)				
Wind Gust Rating km/h *(mph)*		240 (150)				
Torque @ 160km/h Nm *(100mph ft-lb)*		26 (19)				

USA Patent No. 6,909,403, European Patent No. 1411588, Aust Patent No. 2003255049. Chinese Patent No. ZL200310100548.5 and Indian Patent No. 254674.