

VHF Meander Collinear Antenna

130-174MHz
COL51 Series

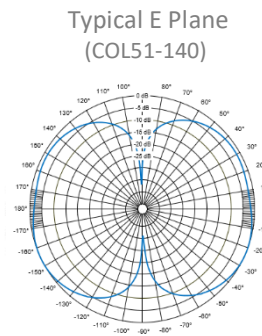
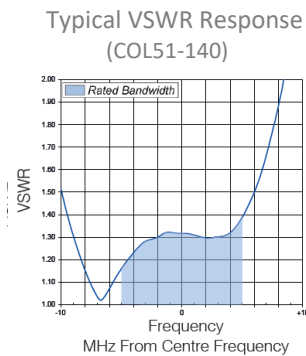


Meander™ collinear antennas has been specifically designed for wireless applications requiring high performance, broad bandwidth and exceptional PIM and PIP specifications.

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 reduction of precipitation noise
- Low -150dBc PIM performance and excellent 25kW PIP rating
- Patented Meander PCB design for optimum RF stability and repeatability



Electrical Specifications

Model Number	COL51-140-P	COL51-150-P	COL51-160-P	COL51-166-P	COL51-174-P
Nominal Gain <i>dBd</i> (<i>dBi</i>)	Unity (2.1) nom.				
Frequency <i>MHz</i>	130 – 140	140 – 150	150 – 160	156 – 166	162 – 174
Tuned Bandwidth	Full band				
VSWR	<1.5:1 (14dB)				
Nominal Impedance Ω	50				
E Plane Beamwidth $^\circ$	100	106	92	75	82
H Plane Beamwidth $^\circ$	Omni \pm 0.5dB				
Input Power <i>W</i>	400				
Peak Instantaneous Power <i>kW</i>	25				
Passive IM (2 x 43dBm) <i>dBc</i>	-150				

Mechanical Specifications

Model Number	COL51-140-P	COL51-150-P	COL51-160-P	COL51-166-P	COL51-174-P	
Construction	Ecofilm Aluminium mount tube with sky blue fibreglass radome					
Length <i>mm</i> (<i>in</i>)	2245 (88.4)	2110 (83.1)	2220 (87.4)	2165 (85.2)	2120 (83.5)	
Weight <i>kg</i> (<i>lb</i>)	11 (24)					
Termination	4.3-10 type Female					
Mount Area <i>mm</i> (<i>in</i>)	750 x \varnothing 90 (29.5 x \varnothing 3.5)					
Suggested Clamps	3 x UC114					
Projected Area	No Ice	1705 (1.8)	1588 (1.7)	1683 (1.8)	1636 (1.8)	1597 (1.7)
	Ice	2082 (2.2)	1937 (2.1)	2056 (2.2)	1999 (2.1)	1949 (2.1)
Lateral Thrust @ 160km/h <i>N</i> (<i>100mph lb</i>)	202 (46)	188 (42)	199 (45)	194 (44)	189 (43)	
Torque @ 160km/h <i>Nm</i> (<i>100mph ft-lb</i>)	85 (63)	67 (49)	82 (60)	74 (55)	68 (50)	
Wind Gust Rating <i>km/h</i> (<i>mph</i>)	240 (150)					
Shipping Weight <i>kg</i> (<i>lb</i>)	15 (33)					
Shipping dimensions L x dia <i>mm</i> (<i>in</i>)	2500 x \varnothing 100 (X \varnothing 4)	2300 x \varnothing 100 (91 X \varnothing 4)	2400 x \varnothing 100 (205 X \varnothing 4)	2400 x \varnothing 100 (X \varnothing 4)	2300 x \varnothing 100 (91 X \varnothing 4)	