

VHF Meander™ Collinear

COL51 Series

130 - 174 MHz

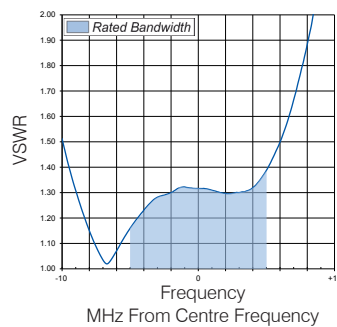


This range of Meander™ collinear antennas have been specifically designed for VHF applications requiring high performance, strong bandwidth and exceptional PIM specifications. The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With each dipole element 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.

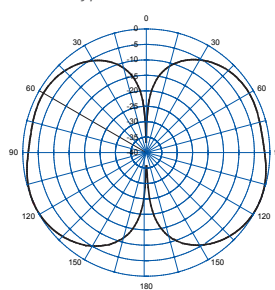
Features:

- Excellent Bandwidth
- Internally DC grounded for lightning protection and reduction of precipitation noise
- Tightly controlled radiation patterns for optimum coverage
- Patented Meander™ PCB design for optimum RF pattern stability
- Full band coverage
- Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum performance
- Peak Instantaneous Power 25kw

Typical VSWR Response (COL51-140)



Typical E Plane



Electrical

Model Number	COL51-140	COL51-150	COL51-160	COL51-166	COL51-174
Nominal Gain dBi (dBd)*	2.1 (0)				
Frequency MHz	130 - 140	140 - 150	150 - 160	156 - 166	162 - 174
Tuned Bandwidth - MHz	Full band				
VSWR (Return Loss)	<1.5:1 (14dB)				
Nominal Impedance Ω	50				
Vertical Beamwidth °	100	106	92	75	82
Horizontal Beamwidth °	Omni +/- 0.5dB				
Input Power W	350				
Passive IM 3rd order (2x20W) dBc	< - 150				
Peak Instantaneous Power kW	25				

* Refer to published antenna patterns files for performance at specific frequencies

Mechanical

Model Number	COL51-140	COL51-150	COL51-160	COL51-166	COL51-174
Construction	Composite fibreglass frame & Aluminium mounting tube				
Length m	2.3	2.1	2.2	2.2	2.1
Radome Diameter mm	76				
Weight kg	11				
Termination	7/16" DIN fixed female (N type optional*)				
Mounting Area mm	750mm x 90mm diam. aluminium				
Suggested Clamps (not included)	2 x UC - 114				
Projected area cm	No ice	1705	1588	1683	1636
	with ice	2082	1937	2056	1999
Lateral (Thrust) @ 160km/h N	202	188	199	194	189
Wind Gust Rating km/h	240				
Torque @ 160km/h Nm	85	67	82	74	68

* Specify N as a suffix for N type connectors eg. COL51-140N, antenna is supplied with 1m N- terminated lead.