

VHF Meander™ Collinear Antennas

COL53 Series, COL54 Series

130-174 MHz, 145-174 MHz



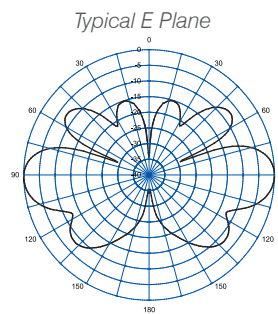
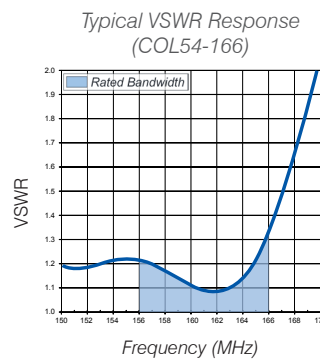
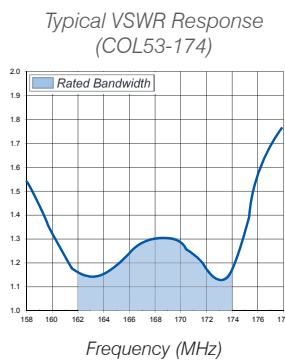
This range of Meander™ collinear antennas has been specifically designed for wireless applications requiring high performance, broad bandwidth and exceptional PIM and PIP specifications.

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
- 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)
- Also available with N connector(see note)



Electrical

Model Number	COL53-140	COL53-150	COL53-160	COL53-166	COL53-174	COL54-155	COL54-160	COL54-166	COL54-174
Nominal Gain <i>dBd</i> (dBi)	4 (6.1)					6 (8.1)			
Frequency <i>MHz</i>	130 - 140	140 - 150	150 - 160	156 - 166	162 - 174	145 - 155	150 - 160	156 - 166	162 - 174
Tuned Bandwidth - MHz	Full band								
VSWR (Return Loss)	<1.5:1 (14dB)								
Nominal Impedance Ω	50								
Vertical Beamwidth °	23.4					17			
Horizontal Beamwidth °	Omni +/- 0.5dB								
Input Power <i>W</i>	400								
Passive IM 3rd order (2x20W) <i>dBc</i>	-150								
Peak Instantaneous Power <i>kW</i>	25								

Mechanical

Model Number	COL53-140	COL53-150	COL53-160	COL53-166	COL53-174	COL54-155	COL54-160	COL54-166	COL54-174
Construction	Composite fiberglass sky blue radome, aluminum mounting tube								
Length m	5.5	5.2	5.0	4.6	4.8	6.5	6.5	6.5	6.0
Radome Diameter mm	76								
Weight kg	19	18	18	17	17	23	21	20	19
Termination	7/16" DIN fixed female								
Mounting Area mm	750mm x 90mm diam. Aluminium								
Suggested Clamps (not included)	3 x UC - 114								
Projected area cm ²	No ice	4870	4600	4460	4073	4218	5906	5810	5640
	with ice	6150	5810	5634	5060	5315	7468	7350	7130
Lateral (Thrust) @ 160km/h N	577	545	529	483	500	700	689	669	642
Wind Gust Rating km/h	240					217	240		
Torque @ 160km/h Nm	1174	1029	957	771	839	2067	1757	1643	1498

* Specify N as a suffix for N type connectors eg. COL53-140N, antenna is supplied with 1m N- terminated lead.

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

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