

UHF Meander™ Collinear Antennas

350-520 MHz

COL45 Series



This range of Meander™ collinear antennas has been specifically designed for wireless applications requiring long lasting and consistent, high performance, such as telemetry and PTP/PTMP systems.

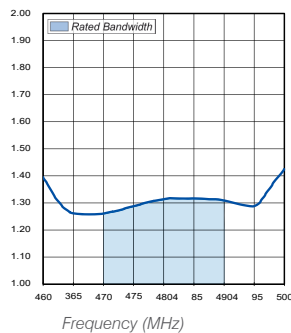
The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With the dipole elements being printed on a single sided PCB the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

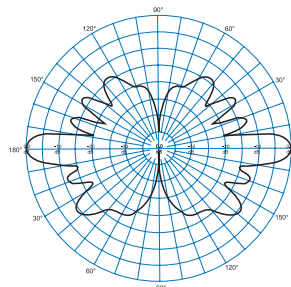
Features:

- 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)

Typical VSWR Response



Typical E Plane



Electrical Specifications

Model Number	COL45-370-P	COL45-400-P	COL45-420-P	COL45-430-P	COL45-470-P	COL45-490-P	COL45-520-P
Nominal Gain dBd (dBi)	7 (9.1)						
Frequency MHz	350-370	380-400	400-420	410-430	450-470	470-490	490-520
Tuned Bandwidth MHz	Full Band						
VSWR	< 1.5:1						
Nominal Impedance Ω	50						
Vertical Beamwidth °	12.5						
Horizontal Beamwidth °	Omni +/- 0.5dB						
Power W	250						
Passive IM 3rd order dBc	-150						
Peak Instantaneous Power kW	25						

Mechanical Specifications

Model Number	COL45-370-P	COL45-400-P	COL45-420-P	COL45-430-P	COL45-470-P	COL45-490-P	COL45-520-P	
Construction	Ecofilm aluminium mount tube with sky blue fibreglass radome							
Length mm (in)	3665 (144)	3360 (132)	3100 (122)	3045 (119)	2810 (111)	2720 (107)	2615 (103)	
Radome Diameter mm (in)	38 (1.5)							
Weight kg (lb)	3.0 (7)				2.5 (6)			
Termination	4.3 - 10 Female							
Mounting Area mm (in)	500 x 48.5Ø (19.7 x 1.9Ø)							
Suggested Clamps	2 x UC1							
Projected area cm ² (ft ²)	no ice	1625 (1.8)	1516 (1.6)	1399 (1.5)	1372 (1.5)	1265 (1.4)	1224 (1.3)	1176 (1.3)
	with ice	2709 (2.9)	2527 (2.7)	2331 (2.5)	2287 (2.5)	2047 (2.2)	1956 (2.1)	1853 (2.0)
Lateral (Thrust) @ 160km/h N (100mph lb)	193 (43)	180 (40)	166 (37)	163 (37)	150 (34)	145 (33)	139 (32)	
Wind Gust Rating km/h (mph)	214 (133)	232 (144)	240 (150)					
Torque @ 160km/h Nm (100mph ft-lb)	260 (192)	221 (163)	183 (135)	174 (130)	143 (106)	132 (98)	119 (88)	
Shipping Weight kg (lb)	5.5 (2.5)		5.0 (2.3)			4.5 (2.0)		
Shipping Dimensions mm (in)	H	70 (2.7)						
	W	70 (2.7)						
	L	3665 (144)	3600 (142)	3300 (130)	3200 (126)	3000 (118)	2900 (114)	2800 (110)

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