

800 MHz Meander™ Collinear Antennas

COL85 Series, COL811 Series

746-960 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.

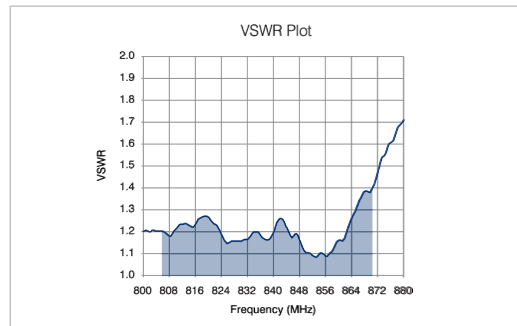
The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With the dipole elements being printed on a single sided PCB the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

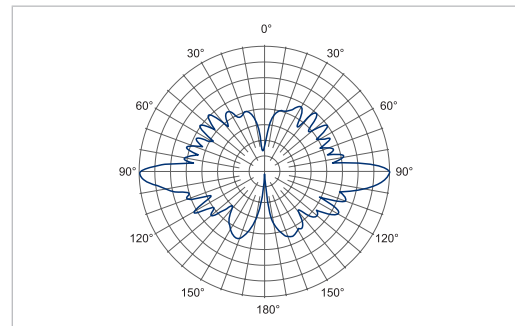
Key Features

- 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



Typical E Plane



Electrical Specifications

Model Number	COL85-806-P	COL85-870-P	COL85-930-P	COL85-960-P	COL811-806-P	COL811-824-P	COL811-870-P	COL811-930-P	COL811-960-P
Nominal Gain dBd (dBi)	7 (9.1)				9 (11.1)				
Frequency MHz	746-806	806-870	850-930	890-960	746-806	796-824	806-870	850-930	890-960
Tuned Bandwidth MHz	Full band								
VSWR	<1.5:1 (14dB)								
Nominal Impedance Ω	50								
Vertical Beamwidth °	13				6.5				
Horizontal Beamwidth °	Omni +/- 0.5dB								
Power W	250								
Passive IM 3rd order (2x20W) dBc	-150								
Peak Instantaneous Power kW	25								

Mechanical Specifications

Model Number		COL85-806-P	COL85-870-P	COL85-930-P	COL85-960-P	COL811-806-P	COL811-824-P	COL811-870-P	COL811-930-P	COL811-960-P
Construction		Ecofilm aluminium mount tube with fibreglass sky blue radome								
Length mm (in)		1963 (77)	1860 (73)	1778 (70)	1705 (67)	3609 (142.1)	3520 (138.6)	3386 (133.3)	3201 (126.0)	3035 (120.0)
Radome Diameter mm (in)		38 (1.5)								
Weight kg (lb)		2.2 (4.8)	2.1 (4.6)	2.0 (4.5)	2.0 (4.5)	3.3 (7.3)	3.2 (7.1)	3.13 (6.9)	3.01 (6.6)	3.0 (6.6)
Termination		4.3-10 Female								
Mounting Area mm (in)		500 x 48.5Ø (19.7 x 1.9Ø) Ecofilm™ plated aluminium								
Suggested Clamps (not included)		2 x UC1								
Projected area cm² (ft²)	no ice	844 (0.9)	785 (0.8)	736 (0.8)	695 (0.75)	1629 (1.8)	1599 (1.7)	1512 (1.6)	1428 (1.5)	1352 (1.46)
	with ice	1281 (1.4)	1207 (1.3)	1144 (1.2)	1091 (1.17)	2715 (2.9)	2666 (2.9)	2526 (2.7)	2385 (2.6)	2254 (2.43)
Lateral (Thrust) @ 160km/h N (100mph lb)		100 (22)	93 (21)	87 (20)	82 (18.5)	193 (43)	190 (43)	179 (40)	169 (38)	160 (36)
Wind Gust Rating km/h (mph)		240 (150)								
Torque @ 160km/h Nm (100mph ft-lb)		52 (38)	43 (32)	36 (27)	34 (25.4)	262 (193)	248 (183)	223 (164)	195 (144)	184 (136)
Shipping Weight Kg (lb)		4.2 (9.2)	4.1 (9.0)	4.0 (8.9)	4.0 (8.9)	5.3 (11.7)	5.2 (11.5)	5.13 (11.3)	5.01 (11.0)	5.0 (11.0)
Shipping Dimensions mm (in)	H	65 (2.6)								
	W	65 (2.6)								
	L	2100 (83)	2000 (79)	2000 (79)	2000 (79)	3780 (149)	3700 (146)	3500 (138)	3354 (132)	3354 (132)

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