

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.

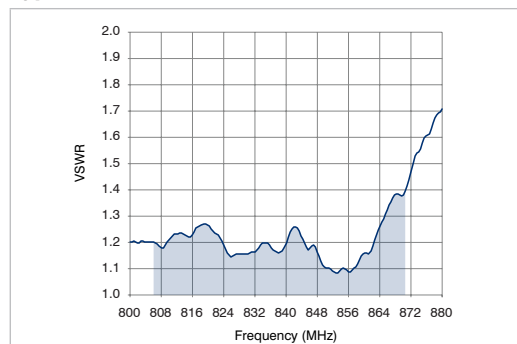
The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With the dipole elements being printed on a single sided PCB the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

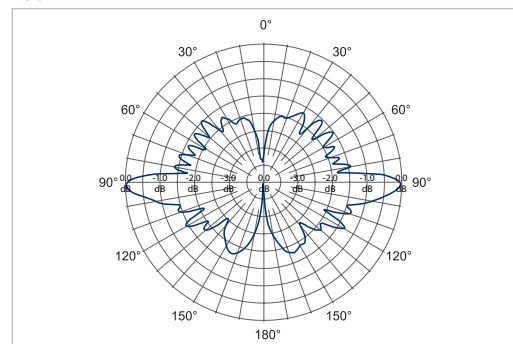
Features:

- 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	COL811-806-P	COL811-824-P	COL811-870-P	COL811-930-P
Nominal Gain <i>dBd (dBi)</i>	7 (9.1)			9 (11.1)			
Frequency <i>MHz</i>	746-806	806-870	850-930	746-806	796-824	806-870	850-930
Tuned Bandwidth <i>MHz</i>	Full band						
VSWR (Return Loss)	<1.5:1 (14dB)						
Nominal Impedance Ω	50						
Vertical Beamwidth $^{\circ}$	13			6.5			
Horizontal Beamwidth $^{\circ}$	Omni +/- 0.5dB						
Input Power <i>W</i>	250						
Peak Instantaneous Power <i>kW</i>	25						
Passive IM 3rd order (2x20W) <i>dBc</i>	-150						

Mechanical Specifications

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

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