

UHF Meander™ Collinear Antennas

380-520 MHz

COL410 Series



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

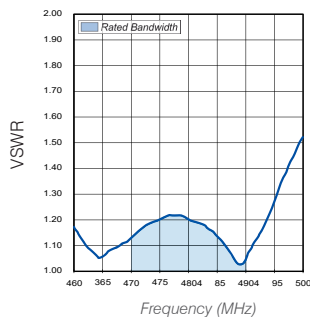
The patented Meander™ collinear element design allows multiple half wave elements to be stacked without the variations in cable lengths and mechanical joints which have typified the construction techniques in high gain collinear antennas. With the dipole elements being printed on a single sided PCB the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

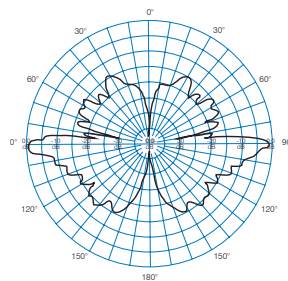
Features:

- Excellent bandwidth providing full band coverage
- Internally DC grounded for lightning protection and the reduction of precipitation noise
- Tight controlled radiation patterns for optimum coverage
- 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	COL410-400-P	COL410-420-P	COL410-430-P	COL410-470-P	COL410-490-P	COL410-520-P
Nominal Gain dBd (dBi)	9 (11.1)					
Frequency MHz	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 °	7.2					
Horizontal Beamwidth °	Omni +/- 0.5dB					
Power W	250					
Passive IM 3rd order dBc	-150					
Peak Instantaneous Power kW	25					

Mechanical Specifications

Model Number	COL410-400-P	COL410-420-P	COL410-430-P	COL410-470-P	COL410-490-P	COL410-520-P	
Construction	Ecofilm aluminium mount tube with sky blue fibreglass radome						
Length mm (in)	6210 (245)	5900 (234)	5820 (229)	5390 (212)	5200 (206)	4940 (195)	
Radome Diameter mm (in)	65 (2.6)						
Weight kg (lb)	11.5 (26)	11 (25)	11 (25)	10.5 (23)	10 (22)	10 (22)	
Termination	4.3 - 10 Female						
Mounting Area mm (in)	650 x 76.2Ø (30 x 3Ø)						
Suggested Clamps	2 x UC114						
Projected area cm² (ft²)	no ice	4765 (5.2)	4570 (5.0)	4474 (4.8)	4144 (4.5)	3969 (4.3)	3774 (4.1)
	with ice	6620 (7.2)	6350 (6.9)	6216 (6.7)	5759 (6.2)	5519 (6.0)	5245 (5.7)
Lateral (Thrust) @ 160km/h N (100mph lb)	565 (127)	542 (122)	530 (119)	491 (111)	470 (106)	447 (101)	
Wind Gust Rating km/h (mph)	240 (150)						
Torque @ 160km/h Nm (100mph ft-lb)	1447 (1068)	1320 (974)	1252 (923)	1063 (784)	965 (712)	862 (636)	
Shipping Weight kg (lb)	25.5 (56)	25 (55)	24 (53)	23 (51)	22 (49)	21.5 (47)	
Shipping Dimensions mm (in)	H	115 (4.5)					
	W	115 (4.5)					
	L	6400 (252)	6200 (244)	6000 (236)	5600 (221)	5400 (213)	5200 (205)

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