

# UHF Meander™ Collinear Antennas

## COL410 Series

380-520 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.

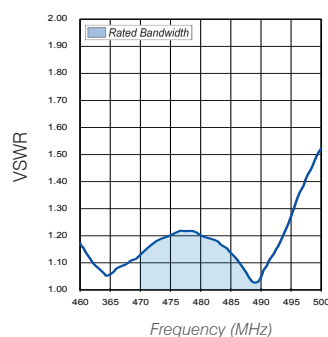
### Features:

- Excellent bandwidth providing full band coverage
- Internally DC grounded for lightning protection and the reduction of precipitation noise
- 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)



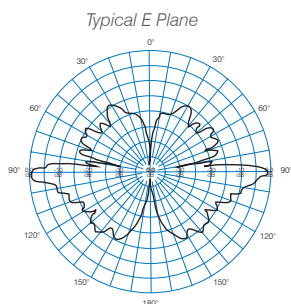
### Electrical

Typical VSWR Response



Model Number	COL410-400	COL410-420	COL410-430	COL410-470	COL410-490	COL410-520
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 (Return Loss)	<1.5:1 (14dB)					
Nominal Impedance $\Omega$	50					
Vertical Beamwidth°	7.2					
Horizontal Beamwidth°	Omni +/- 0.5dB					
Input Power W	250					
Peak Instantaneous Power kW	25					
Passive IM 3rd order (2x20W) - dBc	-150					

### Mechanical



Model Number	COL410-400	COL410-420	COL410-430	COL410-470	COL410-490	COL410-520
Construction	sky blue fibreglass radome					
Length m	6210	5900	5820	5390	5200	4940
Radome Diameter mm	65					
Weight kg	11.5	11	11	10.5	10	10
Termination	7/16" DIN female					
Mounting Area mm	650mm x $\phi$ 76.2mm Ecofilm™ plated aluminium					
Suggested Clamps	2 x UC1					
Projected area cm <sup>2</sup>	no ice	4765	4570	4474	4144	3969
	with ice	6620	6350	6216	5759	5519
Lateral Thrust @ 160km/h N	565	542	530	491	470	447
Wind Gust Rating km/h	240					
Torque @ 160km/h Nm	1447	1320	1252	1063	965	862
Shipping Weight Kg	25.5	25	24	23	22	21.5
Shipping Dimensions mm	H	115				
	W	115				
	L	6400	6200	6000	5600	5400

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