

# UHF Meander™ Collinear Antennas

380-520 MHz  
COL43 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
- Tightly 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)

*USA Patent: 6,909,403*

*European Patent: 1411588*

*Australian Patent: 2003255049*

*China Patent: ZL200310100548.5*

*India Patent: 254674*



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## 380-520 MHz

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#### Electrical Specifications

Model Number	COL43-400	COL43-420	COL43-430	COL43-470	COL43-490	COL43-520
Nominal Gain dBi (dBi)	5 (7.1)					
Frequency MHz	380-400	400-420	410-430	450-470	470-490	490-520
Tuned Bandwidth MHz	Full Band					
VSWR	< 1.5 :1 (14dB)					
Nominal Impedance $\Omega$	50					
Vertical Beamwidth	21					
Horizontal Beamwidth°	Omni +/- 0.5dB					
Input Power Watts	250					
Passive IM 3rd order (2x20W) dBc	-150					

#### Mechanical Specifications

Model Number	COL43-400	COL43-420	COL43-430	COL43-470	COL43-490	COL43-520
Construction & Configuration	Sky blue fibreglass radome					
Length inches	85.4	80.1	77.6	73.2	70.6	68.3
Radome Diameter inches	1.5					
Weight lbs	6.4	6.4	5.9	6.0	6.0	5.7
Shipping Weight lbs	11					
Shipping Dimensions inches	H	2.6	2.6	2.8	2.6	2.6
	W	2.6	2.6	2.8	2.6	2.6
	L	94.5	86.6	86.6	78.7	74.8
Termination	Integrated 7/16" DIN					
Mounting Area inches	20"x2" diameter Ecofilm™ plated aluminium					
Suggested Clamps (not included)	UC12					
Projected area ft²	No ice	1.05	0.98	0.9	0.87	0.83
	with ice	1.57	1.45	1.3	1.31	1.26
Lateral (Thrust) @ 100mph lbs	26.1	24.5	22	21.6	20.5	19.6
Wind Gust Rating mph	149					
Torque @ 100mph ft-lbs	74	46	54	50	45	41

