

UHF Meander™ Collinear Antennas

380-520 MHz
COL45 Series



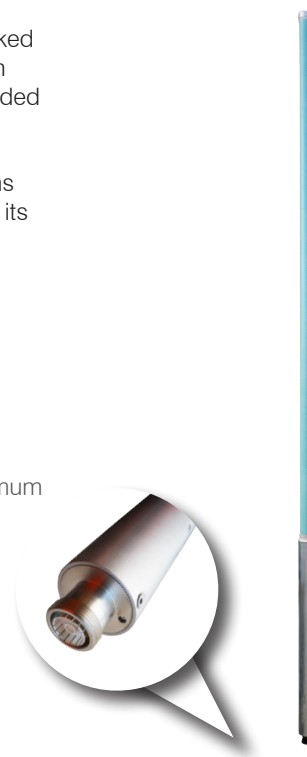
This range of Meander™ collinear antennas has been specifically designed for wireless applications requiring high performance, broad bandwidth and exceptional PIM and PIP specifications.

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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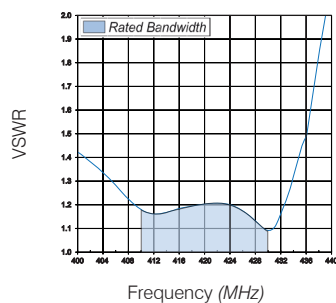
Electrical Specifications

Model Number	COL45-400	COL45-420	COL45-430	COL45-470	COL45-490	COL45-520
Nominal Gain <i>dBi</i> (<i>dBi</i>)	7 (9.1)					
Frequency <i>MHz</i>	380 - 400	400 - 420	410 - 430	450 - 470	470 - 490	490 - 520
Tuned Bandwidth <i>MHz</i>	20	20	20	20	20	30
VSWR	<1.5 :1					
Nominal Impedance Ω	50					
Vertical Beamwidth°	12.5					
Horizontal Beamwidth°	Omni +/- 0.5dB					
Input Power <i>Watts</i>	250					
Passive IM 3rd order (2x20W) <i>dBc</i>	-150					
Peak Instantaneous Power <i>kW</i>	25					

Mechanical Specifications

Model Number		COL45-400	COL45-420	COL45-430	COL45-470	COL45-490	COL45-520
Construction		Composite fibreglass sky blue radome, aluminum mounting tube					
Length <i>in</i>		132	122	119	111	107	103
Radome Diameter <i>in</i>		1.5					
Weight <i>lbs</i>		9			8		
Shipping Weight <i>lbs</i>		25			23		
Shipping Dimensions <i>inches</i>	H	3					
	W	3					
	L	138	128	128	118	114	110
Termination		7/16" DIN fixed female					
Mounting Area <i>in</i>		20" x 2" diam. aluminum					
Suggested Clamps (not included)		UC12					
Projected area <i>ft²</i>	no ice	1.6	1.5	1.5	1.4	1.3	1.3
	with ice	2.7	2.5	2.5	2.2	2.1	2.0
Lateral (Thrust) @ 100mph <i>lbs</i>		40	37	37	34	33	32
Wind Gust Rating <i>mph</i>		>150					
Torque @ 100mph <i>ft-lbs</i>		163	135	130	106	98	88

Typical VSWR Response (COL45-66)



Typical E Plane

