

COL45 Series

UHF Meander™ Collinear

380-520 MHz



This range of Meander™ collinear antennas have been specifically designed for UHF applications requiring high performance, strong bandwidth and exceptional PIM 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 each dipole element 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 it's operating bandwidth. Consistency is guaranteed and a cost effective, reliable, high performance, low PIM antenna results.

The radome and mounting tube support this high performance antenna in a truly rugged package. Everything about these Meander™ collinears reflects the new demand for unquestioned performance electrically and physically in the most demanding public safety and industrial applications, where nothing can be left to chance.

The antenna has set frequency bands with the common bands generally available in stock.

- Strong Bandwidth
- Internally DC grounded for lightning protection and reduction of precipitation noise
- Tightly controlled radiation patterns for optimum coverage
- Patented PCB design for optimum RF pattern stability
- Full band coverage
- **Industry leading PIM ratings (-150dBc) providing low IM and low noise characteristics for optimum performance.**



USA Patent: 6,909,403

European Patent: 1411588

Australian Patent: 2003255049

China Patent: ZL200310100548.5

India Patent: 254674



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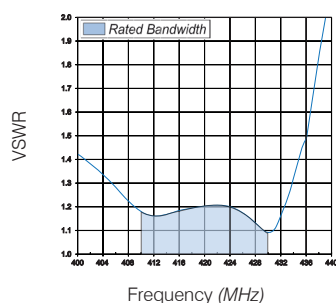
Electrical Specifications

Model Number	COL 45-58	COL45-65	COL45-66	COL45-70	COL45-71	COL45-72
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	30	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		COL 45-58	COL45-65	COL45-66	COL45-70	COL45-71	COL45-72
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

