

# COL85 Series, COL811 Series

## 800 MHz Meander™ Collinear

746-930 MHz



This range of Meander™ collinear antennas have been specifically designed for 800MHz 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	COL85-806	COL85-870	COL85-930	COL811-806	COL811-824	COL811-870	COL811-930
Nominal Gain <i>dBd</i> ( <i>dBi</i> )	7 (9.1)			9 (11.1)			
Frequency <i>MHz</i>	746-806	806-870	850-930	746-806	796-824	806-870	850-930
Tuned Bandwidth <i>MHz</i>	60	64	80	60	28	64	80
VSWR	<1.5 :1						
Nominal Impedance $\Omega$	50						
Vertical Beamwidth°	13			6.5			
Horizontal Beamwidth°	Omni +/- 0.5dB						
Input Power <i>Watts</i>	250						
Passive IM 3rd order ( <i>2x20W</i> ) <i>dBc</i>	-150						
Peak Instantaneous Power <i>kW</i>	25						

Mechanical Specifications								
Model Number	COL85-806	COL85-870	COL85-930	COL811-806	COL811-824	COL811-870	COL811-930	
Construction	Composite fibreglass sky blue radome, aluminium mounting tube							
Length <i>inches</i>	77	73	69	142	139	133	126	
Radome Diameter <i>inches</i>	1.5							
Weight <i>lbs</i>	4.8	4.6	4.5	7.3	7.1	6.9	6.6	
Shipping Weight <i>lbs</i>	9			11				
Shipping Dimensions <i>inches</i>	H	3						
	W	3						
	L	83	79	79	149	144	138	132
Termination	7/16" DIN fixed female							
Mounting Area <i>inches</i>	20" x 2" diam. aluminium							
Suggested Clamps ( <i>not included</i> )	UC12							
Projected Area <i>ft²</i>	No ice	0.9	0.8	0.8	1.8	1.6	1.5	
	With ice	1.4	1.3	1.2	2.9	2.8	2.6	
Lateral (Thrust) @ 100mph <i>lbs</i>	22	21	20	43	42	40	38	
Wind Gust Rating <i>mph</i>	> 150							
Torque @ 100mph <i>ft-lbs</i>	38	32	27	193	186	164	144	

COL811-SERIES ON HOLD  
PENDING MOTOROLA  
ENGINEERING REVIEW

