

800 MHz Yagi Antennas

540-1000 MHz

YB800 Series



YB815-81

The YB800 Series are high gain yagi antennas which provide excellent point to point communications in RF control, short or long haul link, point to multipoint and other applications calling for highly directional antennas. YB800 Series antennas exhibit narrow beamwidths and high front to back ratios to help minimise any potential interference to and from other systems.

The feed element of each antenna is of full folded dipole construction, welded to the mounting boom for maximum bandwidth, low intermodulation performance and reliability. The passive elements are through mounted to the circular boom section and welded at each side before plating. The alodine protective finish provides a conductive surface to ensure effective earthing of the antenna when mounting.

The YB800 Series are offered in 3, 6, 9, 15 or 20 element form and are generally held in stock for immediate delivery in the commercial bands.

YB800 Series antennas can be configured in stacks or bays for higher gain applications in either horizontally or vertically polarised systems. Application details on phasing and mounting yagi antennas are included in the technical notes section in the back of this catalogue.

YB800 Series rest at ground potential and provide excellent lightning protection and reduced precipitation static noise. Termination is via an 'N' female coaxial connector fitted to a short 9302 Durathene cable tail. Durathene is a PTFE dielectric and polyethylene jacketed cable providing superior resistance to weathering and abrasion and is less susceptible to bird attack than standard PVC sheathed cables.

- All welded construction for maximum and reliable performance
- Narrow beamwidth & high front to back ratios effective in reducing interference
- Standard units feature alodine finish providing an excellent conductive surface for earthing. Full stainless steel versions also available.
- Can be configured in stacks or bays for higher gain applications using PH and PHE series phasing harnesses



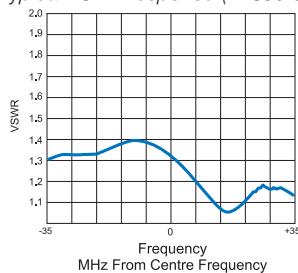
Bracing kit available
Part No. M-4528

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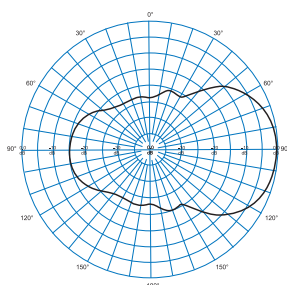
540-1000 MHz

YB800 Series

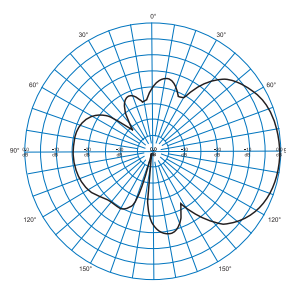
Typical VSWR response (YB806-94)



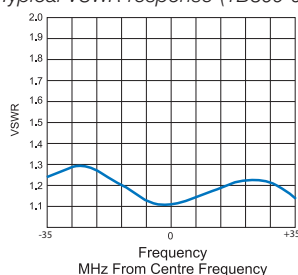
YB806-94 - E Plane



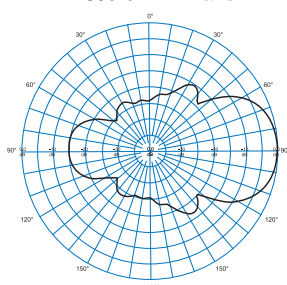
YB806-94 - H Plane



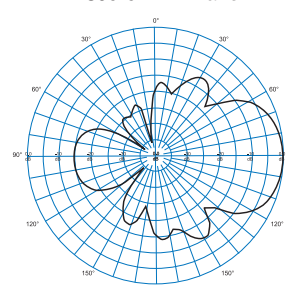
Typical VSWR response (YB809-94)



YB809-94 - E Plane



YB809-94 - H Plane



Electrical

Model Number	YB803-82	YB803-99	YB806-81	YB806-82	YB806-94	YB806-99	YB809-81	YB809-82	YB809-94	YB809-99
Nominal Gain <i>dBi</i> (dBd)	8 (6)		11 (9)				12 (10)			
Frequency <i>MHz</i>	850 - 930	540 - 1000	806 - 896	850 - 930	890 - 960	540 - 1000	806 - 896	850 - 930	890 - 960	540 - 1000
Tuned Bandwidth	Full band	5%	Full band			5%	Full band			5%
VSWR (Return Loss)	<1.5 :1 (14dB)									
Nominal Impedance (Ω)	50									
Vertical Beamwidth	64	65	49				41			
Horizontal Beamwidth	100	103	61				48			
Front / Back Ratio <i>dB</i>	14		22	20	15	17	16	18	15	16
Input Power <i>W</i>	100									
Passive IM 3rd order <i>dBc</i>	-150									

Mechanical

Model Number	YB803-82	YB803-99	YB806-81	YB806-82	YB806-94	YB806-99	YB809-81	YB809-82	YB809-94	YB809-99
Construction	All welded aluminium with alodined finish									
Length <i>m</i>	0.3	0.4	0.6	0.6	0.6	0.8	0.9	0.9	1.0	1.4
Weight <i>kg</i>	0.2	0.4	0.5	0.4	0.4	0.6	0.7	0.6	0.5	0.9
Termination	N female with short 9302 cable tail									
Mounting Area	100mm x 25mm diam. aluminium									
Suggested Clamps	1 x UNV									
Projected Area <i>cm²</i>	No ice	97	167	230	238	213	368	361	343	372
	With ice	281	439	593	600	547	902	878	842	874
Wind Load (Thrust) @ 160km/h <i>N</i>	11	20	27	28	25	44	43	41	44	70
Wind Gust Rating <i>km/h</i>	>240									
Torque @160 km/h <i>Nm</i>	1	1	5	6	4	13	15	13	16	40

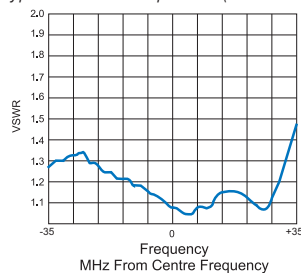
P-39823-3

800 MHz Yagi Antennas

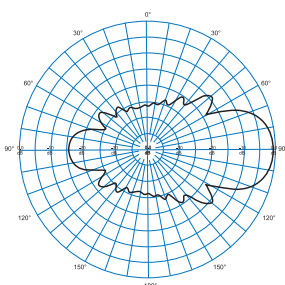
540-1000 MHz

YB800 Series

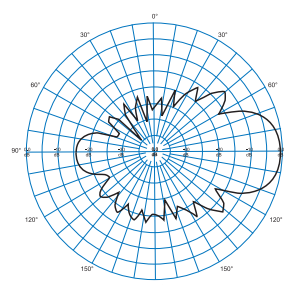
Typical VSWR response (YB815-94)



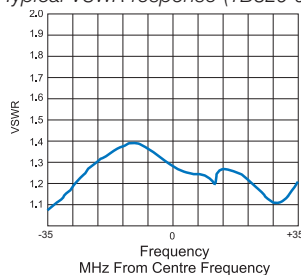
YB815-94 - E Plane



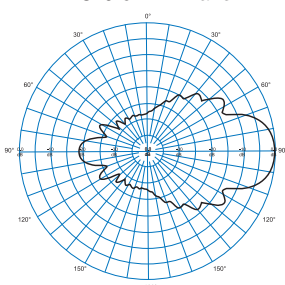
YB815-94 - H Plane



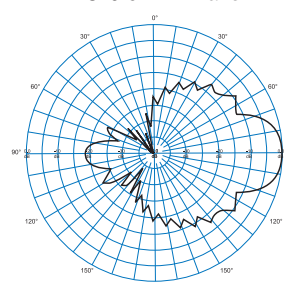
Typical VSWR response (YB820-94)



YB820-94 - E Plane



YB820-94 - H Plane



Electrical

Model Number	YB815-81	YB815-82	YB815-94	YB815-99	YB820-81	YB820-82	YB820-94
Nominal Gain <i>dBi (dBd)</i>	14 (12)				16 (14)		
Frequency <i>MHz</i>	806 - 896	850 - 930	890 - 960	540 - 1000	806 - 896	850 - 930	890 - 960
Tuned Bandwidth	Full band			5.0%	Full band		
VSWR (Return Loss)	<1.5 :1 (14dB)						
Nominal Impedance Ω	50 Ohm						
Vertical Beamwidth	30°				27°		
Horizontal Beamwidth	30°				28°	24°	27°
Front / Back Ratio <i>dB</i>	20	18	17	17	18		
Input Power <i>W</i>	100						
Passive IM 3rd order <i>dBc</i>	-150						

Mechanical

Model Number	YB815-81	YB815-82	YB815-94	YB815-99	YB820-81	YB820-82	YB820-94
Construction	All welded aluminium with alodined finish						
Length <i>m</i>	1.6			2.6	2.4	2.3	2.2
Weight <i>kg</i>	1.0		0.9	1.6	1.35	1.3	1.3
Termination	N female with short 9302 cable tail						
Mounting Area	100mm x 25mm diam. aluminium						
Suggested Clamps	1 x UCR1 + 1 x M-4528 bracing kit						
Projected <i>No ice</i>	636	639	628	1067	909	863	846
Area <i>cm</i> ² <i>With ice</i>	1539	1550	1514	2630	2270	2168	2121
Wind Load (Thrust) @ 160km/h <i>N</i>	75	76	74	126	108	102	100
Wind Gust Rating <i>km/h</i>	240			156	166	186	189
Torque @160 km/h <i>Nm</i>	53	53	52	152	116	104	100



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