



Band IV/V (UHF) Antenna 470-700 MHz

Product Description

The SBB-EP series of antennas are slot broadband-elliptical polarized with dual inputs on each slot; low wind load antennas designed as interim, permanent reserve or main antenna. The SBB-EP is ideally suited to the broadcaster who requires a high performance antenna with frequency agility to allow for both current and future channel operation. Used by a single broadcaster, or multiple broadcasters as a shared antenna, SBB antennas provide unprecedented broadband performance. SBB-EP antennas are available 8, 16 and 24 slots high and with Cardioid 'C160', Cardioid 'C170' or Skull 'S180' patterns.

Features

- Full broadband performance 470-700MHz for future and current channel allocations.
- Corrosion resistant construction with cylindrical fibreglass radome.
- Extremely low wind loading.
- High power rating.
- Supplied with brackets for side mounting.
- Broadband constant power ratio between horizontal and vertical polarizations.
- Power ratio (typical) 30% V / 100% H



SBB_EP Series - 8 bay shown

Specifications

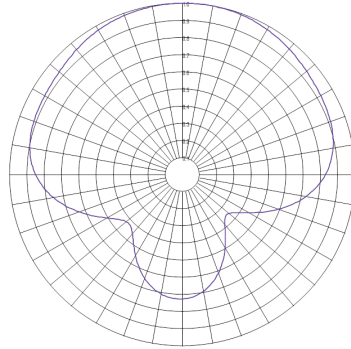
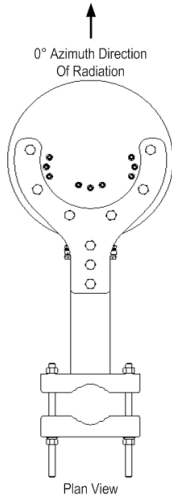
Model	SBB-8	SBB-16	SBB-24
Frequency Range (MHz)	470-700	470-700	470-700
Number of slots	8	16	24
C160 Pattern			
HRP directivity Hpol (dBd)			2.04
Peak gain Hpol (dBd) (times) ^{Note 4}	11.4 (13.90)	14.7 (29.76)	16.3 (43.11)
VRP directivity (dBd)	9.4	12.7	14.3
Peak gain Vpol (dBd) (times) ^{Note 4}	6.0 (3.96)	9.3 (8.54)	10.9 (12.20)
C170 Pattern			
HRP directivity Hpol (dBd)			2.3
Peak gain Hpol (dBd) (times) ^{Note 4}	11.6 (14.51)	14.9 (31.10)	16.5 (44.51)
VRP directivity (dBd)	9.3	12.6	14.2
Peak gain Vpol (dBd) (times) ^{Note 4}	6.2 (4.15)	9.5 (8.96)	11.1 (13.11)
S180 Pattern			
HRP directivity Hpol (dBd)			2.55
Peak gain Hpol (dBd) (times) ^{Note 4}	11.8 (15.12)	15.1 (32.50)	16.6 (45.12)
VRP directivity (dBd)	9.25	12.55	14.05
Peak gain Vpol (dBd) (times) ^{Note 4}	6.4 (4.33)	9.7 (9.39)	11.2 (13.41)
Beam Tilt (degrees)	1.5	1.25	1.0
VSWR	< 1.15:1 (1.1 on channel)		
Impedance (Ohms)	50		
Input power Max. (kW)	20	40	60 (100)
Input Connectors (in)	3-1/8 EIA	6-1/8 EIA	6-1/8 EIA (8-3/16 EIA)
Mounting	Side, suits pole size 90-150NB (31/2" - 6"NB)		
Diameter (mm) (in)	381 (15)		
Antenna height (m) (ft)	5.3 (17' 5")	10.8 (35' 5")	13.1 (43')
Weight (kg) (lb)	190 (409)	470 (1036)	820 (1808)
Effective Area CaAc (m ²) (ft ²) ^{Note 1}	1.0 (10.8)	2.0 (21.5)	3.0 (32.3)
Polarization	Elliptical (Right Hand)		
Color	White radome, other on request		
Pressurization - Operational, kPa (psi)	10-25 (1.4-3.6)		
Pressurization - Test, kPa (psi)	100 (15)		

- Note 1: Effective Area (CaAa) for single 8 bay antenna is 1.0 m sq (10.8 sq ft). Antenna mounting pole and interface steelwork to tower is not included in calculations.
- Note 2: Design Parameters in accordance with TIA-222-G are:
 160 kmh (100 mph) Basic Wind Speed with no ice
 Structure Class II Topographic category 1, Exposure category C
- Note 3: Moment of arm from mounting pole to centre of antenna is 0.65 m (2.1ft).
- Note 4: Gain at 585 MHz (sum of HRP and VRP directivities).
- Note 5: Power rating depends upon number of antenna slots.

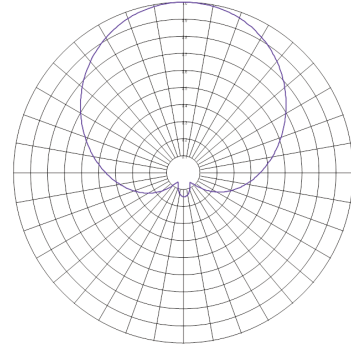
All information contained in the present brochure is subject to confirmation at time of ordering

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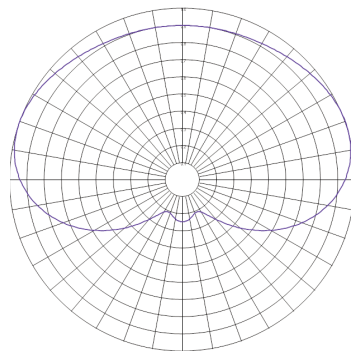
Patterns



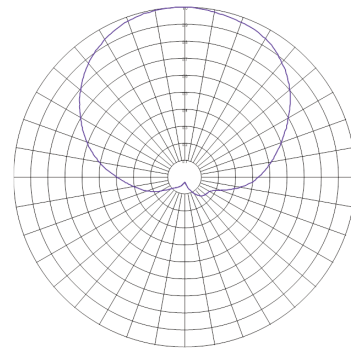
Horizontal Radiation Pattern Cardioid C160 (H.Pol)



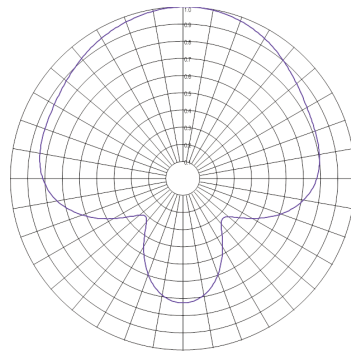
Horizontal Radiation Pattern Cardioid C160 (V.Pol)



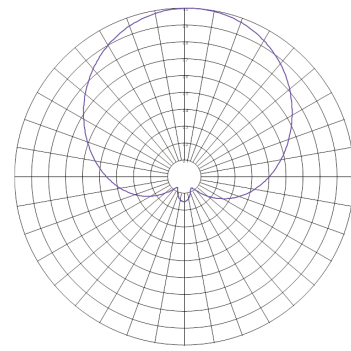
Horizontal Radiation Pattern Cardioid C170 (H.Pol)



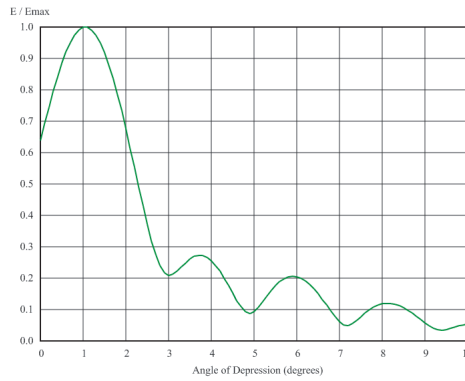
Horizontal Radiation Pattern Cardioid C180 (V.Pol)



Horizontal Radiation Pattern Skull S180 (H.Pol)



Horizontal Radiation Pattern Skull S180 (V.Pol)



Elevation Radiation Pattern typical 24 slots

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