

Model 6020 Vertically-Polarized FM Antenna

(USA domestic)

Vertical polarization

5 kW power rating per bay

Radomes & de-icers not required

Shively standard features:

- Low weight and windload
- Rugged corrosion-resistant mounts
- Easy to install - minimum maintenance
- Non-pressurized (it is recommended that multi-bay systems be pressurized)
- Pattern studies and directional patterns available

Performance specifications:

Polarization: Vertical only.

Frequency range: 87.5-108 MHz

Impedance: 50 Ω

VSWR: Better than 1.3 : 1 over the FM band

Dimensions (per bay): 56 in x 41.6 in x 5.5 in

Materials: External parts: durable stainless

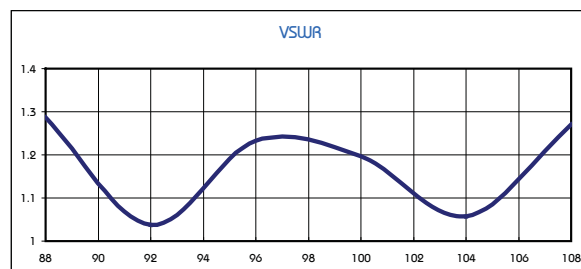
Input Connection: One bay: female 1-5/8" EIA.

Electrical specifications:

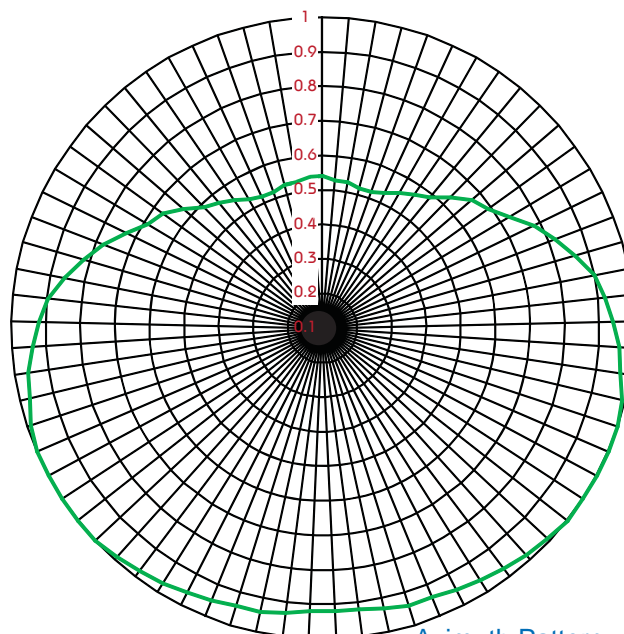
No. of bays	Gain		Power rating (kW)
	Power	dB	
1	0.92	-0.36	5
2	2.02	3.05	10
3	3.17	5.01	14
4	4.31	6.35	14
6	6.57	8.17	14

NOTES

- Arrays are provided with a 1-5/8" input power divider as standard. For higher power inputs, or custom configurations including beam tilt/null-filling, please contact the factory.
- Gain and patterns depend on mounting geometry.
- Gain figures are derived from the computed vertical pattern directivity and include the losses in the antenna feed system.



VSWR vs. frequency



Azimuth Pattern

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Tower space & weight:

No. of bays	Antenna radiation aperture	Recommended length of outriggered pole	Total clear tower space Recommended	Weight			
				Without radomes or ice	With 1/2" radial ice	With 1" radial ice	With 1-1/2" radial ice
1	4 ft	10 ft	20 ft	28 lb	41 lb	59 lb	81 lb
2	13 ft	19 ft	30 ft	111 lb	159 lb	230 lb	322 lb
3	22 ft	28 ft	38 ft	149 lb	232 lb	355 lb	519 lb
4	31 ft	37 ft	47 ft	182 lb	326 lb	536 lb	812 lb
6	49 ft	54 ft	64 ft	248 lb	467 lb	790 lb	1215 lb

NOTES

- Mounts are designed to fit 1-1/2" to 3-1/2" diameter pole.

Windload:

No. of Bays	Without ice		With 1/2" radial ice		With 1" radial ice		With 1-1/2" radial ice	
	EPA _N (ft ²)	EPA _T (ft ²)	EPA _N (ft ²)	EPA _T (ft ²)	EPA _N (ft ²)	EPA _T (ft ²)	EPA _N (ft ²)	EPA _T (ft ²)
1	1.7	0.7	2.4	1.0	2.9	1.2	3.4	1.5
2	6.0	4.0	9.2	6.4	12.0	8.6	14.1	10.4
3	10.2	7.1	16.2	12.0	21.8	16.7	27.1	21.5
4	17.6	13.5	26.9	21.3	35.5	28.6	43.5	35.9
6	27.0	20.9	42.1	33.7	56.7	46.4	70.5	59.2

NOTES

- Effective projected area (EPA) is calculated in accordance with TIA-222-G.
- Ask for technical assistance at Shively if you are planning to mount antennas on AM towers or install them at altitudes over 3,000 ft above mean sea level.