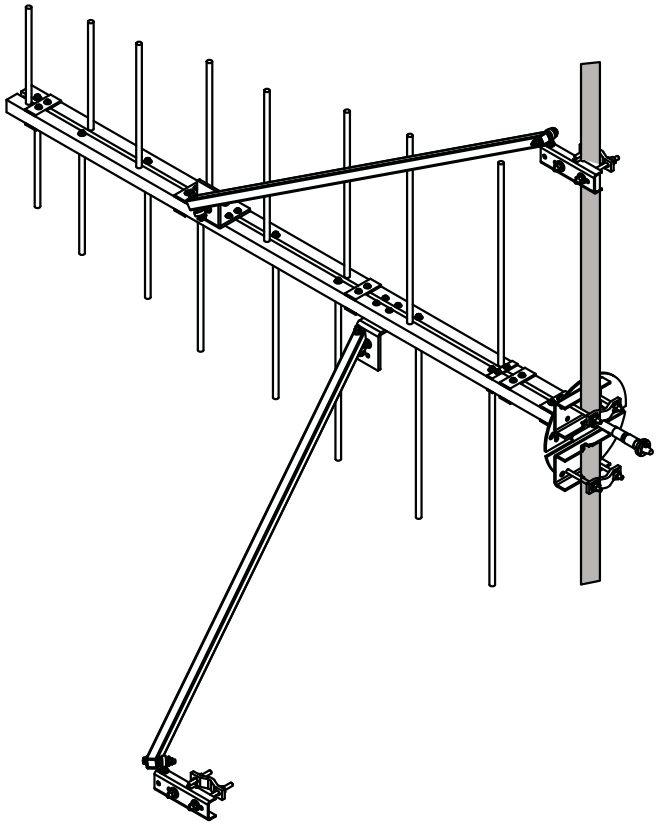
Shively Labs®

Model 6025 Log Periodic Antenna

Features:

- Vertical, horizontal or slant polarization options
- 5 kw power rating per antenna element
- Non-pressurized
- Directional pattern studies available
- Packaged partially disassembled for ease of shipping.

Specifications:



Frequency range:	88 - 108 MHz
Elevation gain: (single bay)	1.15 (0.606 dB) in vertical or horizontal position 0.55 (-2.59 dB) in slant configuration (45° angle)
Power gain:	H & V: 5.07 (7.05 dB) Slant: 2.53 (4.03 dB)

NOTE:
Gains are calculated for 98.1 MHz. Actual gains may differ. Directional patterns and/or multi-element arrays will have specific gains.

Impedance:	50 Ω
VSWR:	< 1.28:1
Polarization:	Vertical, horizontal, or slant (45°) polarization or custom H/V ratios.
Maximum input power:	5 kW per element, rated at power divider handling for multiple levels.
Input connector:	7/8" EIA for single element, 1-5/8" or 3-1/8" EIA on power divider for multiple element arrays.
Standard mounting:	Designed to attach to a customer-supplied 1-1/4" pipe (1.5" OD) - 3" pipe (3.50" OD) or similar tower leg. Standard mount has positioning built in for vertical, horizontal and slant (45°) mounting. Includes downward support tension device for added support over the length of antenna. Also includes anti-rotation arm kit to attach to tower.
Custom mounts	Option for up to 5-1/4" leg diameter available at additional cost - contact factory.

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A Division of Howell Laboratories, Inc., P. O. Box 389, Bridgton, Maine 04009 USA www.shively.com
(207) 647-3327 1-888-SHIVELY Fax: (207)647-8273 sales@shively.com
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Options:

Mounts: Parallel boom kits for directional arrays are available for requirements in need of two antennas side by side to create a narrow pattern.

Power dividers: As required: 2 way, 3 way, 4 way are standard assemblies. Feed cables will be 7/8" foam line with 7/8" EIA connectors.

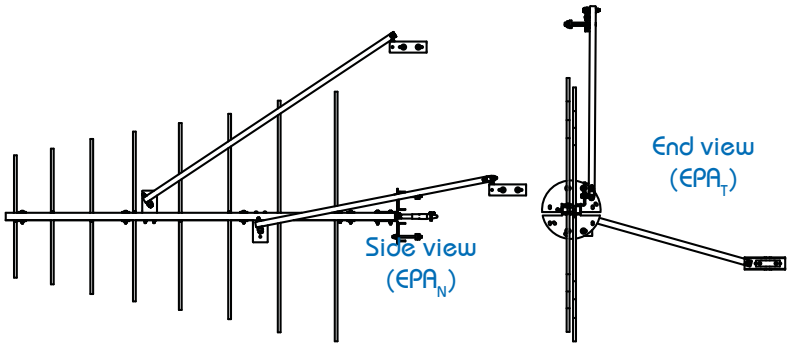
Input		Output
7/8 EIA	to	7/8 EIA
1-5/8 EIA	to	7/8 EIA
3-1/8 EIA	to	7/8 EIA

Windload, weight, dimensions

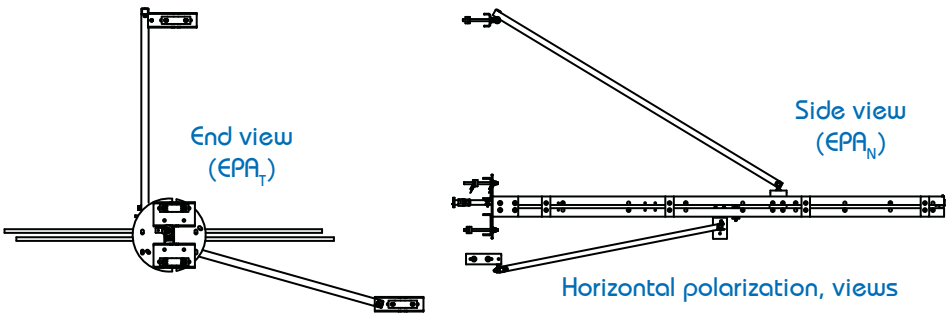
		1 element
Windload without ice, Rev G Vertical elements	EPA_N	5.52 ft^2 (0.51 m^2)
	EPA_T	2.63 ft^2 (0.24 m^2)
Windload without ice, Rev G Horizontal elements	EPA_N	5.95 ft^2 (0.55 m^2)
	EPA_T	2.69 ft^2 (0.25 m^2)
Weight without ice		80 lb (36.3 kg)
Shipping weight, standard kit		110 lb (50 kg)
Radiation Aperture (vertical)		26 ft (4.9 m)
Physical space used		6 ft (1.9 m)
Recommended pipe length		8 ft (3.64 m)

NOTES

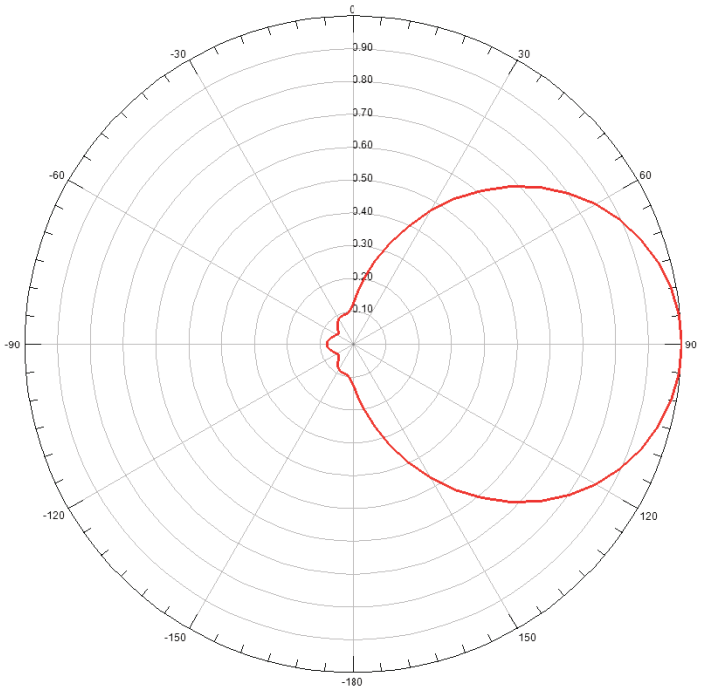
- Standard mounts are designed to fit customer-supplied 1-1/4" pipe (1.5" OD) - 3" pipe (3.50" OD) pole or tower leg.
- Windloads and weights are estimated.
- Elements can be stacked or arrayed for omni or directional patterns.
- Effective projected area (EPA) is calculated in accordance with TIA-222-G.
- 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.
- System designed for maximum of 2" factored radial ice (tiz) at height using TIA-222-G specifications.



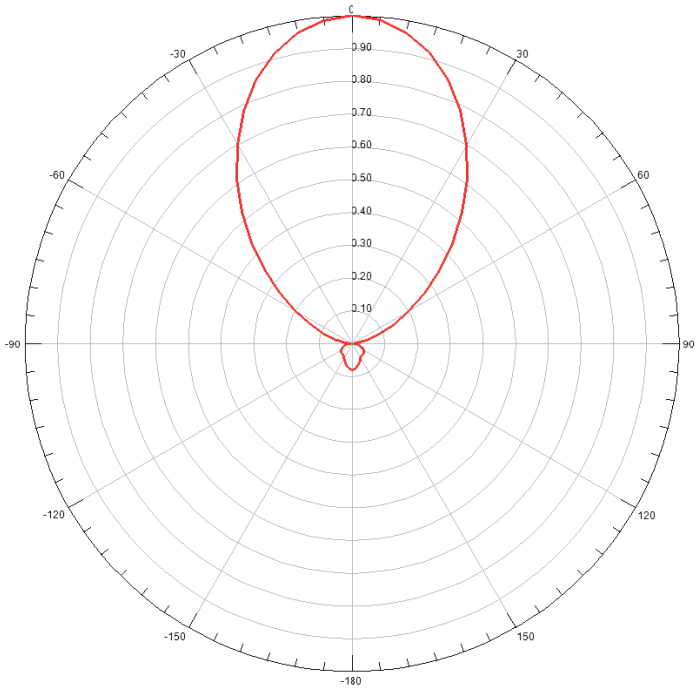
Vertical polarization, views



Horizontal polarization, views



H-plane
Vertical azimuth pattern



E-plane
Horizontal azimuth pattern

Elevation patterns

Antenna: Model 6025-1-H Horizontally-polarized single-bay at frequency: 98.1 MHz

Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field
-90°	0.096	-44°	0.714	0°	1.000	46°	0.689
-89	0.106	-43	0.727	1	0.999	47	0.676
-88	0.116	-42	0.739	2	0.999	48	0.662
-87	0.126	-41	0.751	3	0.998	49	0.649
-86	0.136	-40	0.764	4	0.997	50	0.635
-85	0.146	-39	0.775	5	0.996	51	0.621
-84	0.158	-38	0.786	6	0.994	52	0.606
-83	0.169	-37	0.797	7	0.992	53	0.592
-82	0.181	-36	0.808	8	0.990	54	0.578
-81	0.193	-35	0.819	9	0.988	55	0.563
-80	0.204	-34	0.829	10	0.985	56	0.548
-79	0.217	-33	0.839	11	0.982	57	0.534
-78	0.230	-32	0.848	12	0.978	58	0.519
-77	0.244	-31	0.858	13	0.974	59	0.504
-76	0.257	-30	0.868	14	0.971	60	0.489
-75	0.270	-29	0.876	15	0.967	61	0.474
-74	0.284	-28	0.884	16	0.962	62	0.459
-73	0.298	-27	0.892	17	0.957	63	0.444
-72	0.312	-26	0.900	18	0.952	64	0.429
-71	0.326	-25	0.908	19	0.947	65	0.414
-70	0.340	-24	0.915	20	0.942	66	0.399
-69	0.355	-23	0.922	21	0.935	67	0.384
-68	0.369	-22	0.928	22	0.928	68	0.370
-67	0.384	-21	0.935	23	0.922	69	0.355
-66	0.399	-20	0.942	24	0.915	70	0.340
-65	0.413	-19	0.947	25	0.908	71	0.326
-64	0.428	-18	0.952	26	0.900	72	0.312
-63	0.443	-17	0.957	27	0.892	73	0.298
-62	0.458	-16	0.962	28	0.884	74	0.284
-61	0.473	-15	0.967	29	0.876	75	0.270
-60	0.488	-14	0.971	30	0.868	76	0.257
-59	0.503	-13	0.975	31	0.858	77	0.244
-58	0.518	-12	0.978	32	0.848	78	0.231
-57	0.533	-11	0.982	33	0.839	79	0.218
-56	0.548	-10	0.986	34	0.829	80	0.205
-55	0.563	-9	0.988	35	0.820	81	0.193
-54	0.577	-8	0.990	36	0.809	82	0.182
-53	0.591	-7	0.992	37	0.797	83	0.170
-52	0.606	-6	0.994	38	0.786	84	0.159
-51	0.620	-5	0.996	39	0.775	85	0.147
-50	0.634	-4	0.997	40	0.764	86	0.137
-49	0.648	-3	0.998	41	0.752	87	0.127
-48	0.661	-2	0.999	42	0.740	88	0.117
-47	0.675	-1	0.999	43	0.727	89	0.107
-46	0.688	0	1.000	44	0.715	90	0.097
-45	0.702			45	0.703		

Antenna: Model 6025-1-V Vertically-polarized single-bay at frequency: 98.1 MHz

Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field
-90°	0.007	-44°	0.474	0°	1.000	46°	0.424
-89	0.009	-43	0.492	1	0.998	47	0.406
-88	0.011	-42	0.510	2	0.996	48	0.389
-87	0.013	-41	0.527	3	0.994	49	0.372
-86	0.015	-40	0.545	4	0.993	50	0.354
-85	0.017	-39	0.563	5	0.991	51	0.338
-84	0.021	-38	0.581	6	0.985	52	0.322
-83	0.024	-37	0.598	7	0.980	53	0.306
-82	0.028	-36	0.616	8	0.975	54	0.289
-81	0.032	-35	0.634	9	0.969	55	0.273
-80	0.036	-34	0.651	10	0.964	56	0.259
-79	0.042	-33	0.668	11	0.955	57	0.244
-78	0.047	-32	0.685	12	0.947	58	0.230
-77	0.053	-31	0.702	13	0.938	59	0.216
-76	0.059	-30	0.719	14	0.929	60	0.201
-75	0.065	-29	0.734	15	0.921	61	0.189
-74	0.073	-28	0.750	16	0.909	62	0.177
-73	0.081	-27	0.766	17	0.897	63	0.164
-72	0.089	-26	0.781	18	0.885	64	0.152
-71	0.097	-25	0.797	19	0.874	65	0.140
-70	0.105	-24	0.811	20	0.862	66	0.130
-69	0.115	-23	0.825	21	0.848	67	0.120
-68	0.125	-22	0.838	22	0.834	68	0.110
-67	0.135	-21	0.852	23	0.820	69	0.100
-66	0.145	-20	0.866	24	0.805	70	0.090
-65	0.156	-19	0.877	25	0.791	71	0.082
-64	0.168	-18	0.889	26	0.775	72	0.074
-63	0.181	-17	0.900	27	0.759	73	0.067
-62	0.193	-16	0.911	28	0.743	74	0.059
-61	0.205	-15	0.923	29	0.726	75	0.051
-60	0.218	-14	0.931	30	0.710	76	0.046
-59	0.232	-13	0.940	31	0.693	77	0.041
-58	0.247	-12	0.948	32	0.675	78	0.035
-57	0.261	-11	0.957	33	0.658	79	0.030
-56	0.276	-10	0.965	34	0.640	80	0.024
-55	0.290	-9	0.970	35	0.623	81	0.021
-54	0.306	-8	0.976	36	0.605	82	0.018
-53	0.322	-7	0.981	37	0.586	83	0.015
-52	0.338	-6	0.986	38	0.568	84	0.012
-51	0.354	-5	0.991	39	0.550	85	0.008
-50	0.370	-4	0.993	40	0.532	86	0.008
-49	0.388	-3	0.995	41	0.514	87	0.008
-48	0.405	-2	0.997	42	0.496	88	0.007
-47	0.422	-1	0.998	43	0.478	89	0.007
-46	0.439	0	1.000	44	0.459	90	0.007
-45	0.456			45	0.441		

Antenna: Model 6025-45 45°-polarized single-bay at frequency: 98.1 MHz

Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field	Angle of depression	Relative field
-90°	0.102	-44°	0.664	0°	1.000	46°	0.637
-89	0.110	-43	0.678	1	1.000	47	0.623
-88	0.118	-42	0.691	2	0.999	48	0.609
-87	0.127	-41	0.704	3	0.998	49	0.595
-86	0.135	-40	0.717	4	0.997	50	0.581
-85	0.144	-39	0.729	5	0.995	51	0.567
-84	0.153	-38	0.742	6	0.994	52	0.553
-83	0.163	-37	0.754	7	0.991	53	0.539
-82	0.172	-36	0.766	8	0.988	54	0.525
-81	0.183	-35	0.778	9	0.985	55	0.511
-80	0.193	-34	0.789	10	0.981	56	0.496
-79	0.203	-33	0.801	11	0.977	57	0.482
-78	0.214	-32	0.812	12	0.973	58	0.468
-77	0.225	-31	0.822	13	0.968	59	0.454
-76	0.236	-30	0.833	14	0.963	60	0.440
-75	0.248	-29	0.843	15	0.958	61	0.426
-74	0.260	-28	0.854	16	0.952	62	0.412
-73	0.272	-27	0.863	17	0.946	63	0.399
-72	0.284	-26	0.873	18	0.939	64	0.385
-71	0.296	-25	0.882	19	0.932	65	0.372
-70	0.309	-24	0.891	20	0.925	66	0.358
-69	0.321	-23	0.899	21	0.917	67	0.345
-68	0.334	-22	0.908	22	0.910	68	0.332
-67	0.347	-21	0.915	23	0.901	69	0.319
-66	0.361	-20	0.923	24	0.893	70	0.306
-65	0.374	-19	0.930	25	0.884	71	0.294
-64	0.387	-18	0.937	26	0.874	72	0.281
-63	0.401	-17	0.944	27	0.865	73	0.269
-62	0.415	-16	0.950	28	0.855	74	0.257
-61	0.428	-15	0.956	29	0.845	75	0.245
-60	0.442	-14	0.961	30	0.834	76	0.234
-59	0.456	-13	0.966	31	0.824	77	0.222
-58	0.470	-12	0.971	32	0.813	78	0.211
-57	0.484	-11	0.976	33	0.801	79	0.200
-56	0.498	-10	0.980	34	0.790	80	0.190
-55	0.512	-9	0.984	35	0.778	81	0.180
-54	0.526	-8	0.987	36	0.766	82	0.169
-53	0.541	-7	0.990	37	0.754	83	0.160
-52	0.555	-6	0.993	38	0.742	84	0.150
-51	0.569	-5	0.995	39	0.729	85	0.141
-50	0.583	-4	0.997	40	0.716	86	0.132
-49	0.596	-3	0.998	41	0.703	87	0.123
-48	0.610	-2	0.999	42	0.690	88	0.115
-47	0.624	-1	1.000	43	0.677	89	0.107
-46	0.638	0	1.000	44	0.664	90	0.099
-45	0.651			45	0.650		