

AZIMUTH PATTERN Horizontal Polarization

Proposal No.

Date

18-Sep-18

Call Letters

WLNS

Channel

14

Frequency

473 MHz

Antenna Type

TUE-O5SP-12/60H-1-M-B

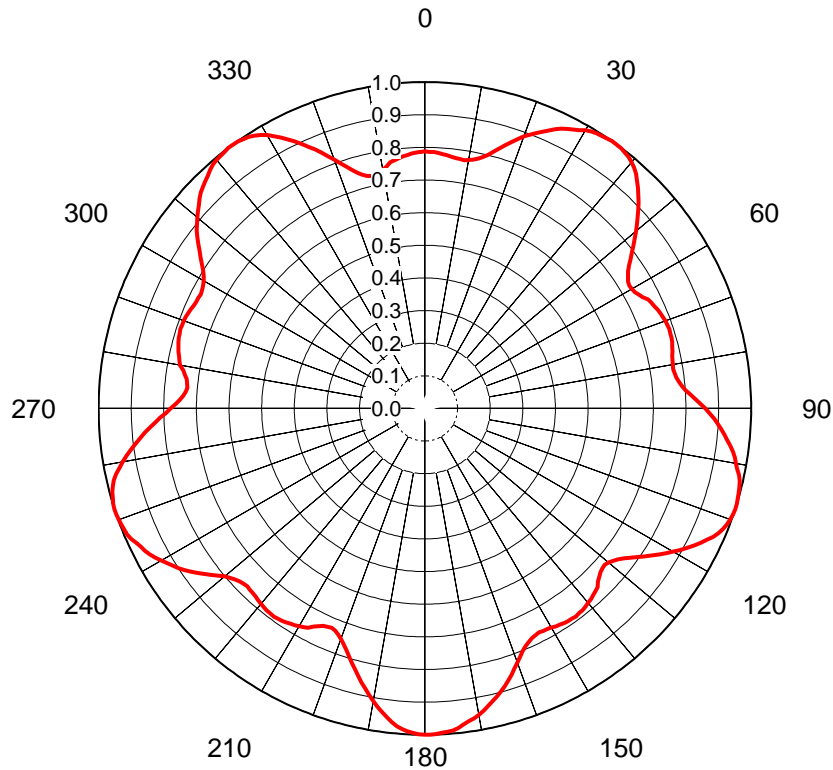
Gain

1.36 (1.32dB)

Calculated

Circularity

+/- 2.0 dB



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.788	36	1.000	72	0.788	108	1.000	144	0.788	180	1.000	216	0.788	252	1.000	288	0.788	324	1.000
1	0.787	37	0.999	73	0.787	109	0.999	145	0.787	181	0.999	217	0.787	253	0.999	289	0.787	325	0.999
2	0.786	38	0.995	74	0.786	110	0.995	146	0.786	182	0.995	218	0.786	254	0.995	290	0.786	326	0.995
3	0.785	39	0.992	75	0.785	111	0.992	147	0.785	183	0.992	219	0.785	255	0.992	291	0.785	327	0.992
4	0.781	40	0.986	76	0.781	112	0.986	148	0.781	184	0.986	220	0.781	256	0.986	292	0.781	328	0.986
5	0.779	41	0.978	77	0.779	113	0.978	149	0.779	185	0.978	221	0.779	257	0.978	293	0.779	329	0.978
6	0.775	42	0.967	78	0.775	114	0.967	150	0.775	186	0.967	222	0.775	258	0.967	294	0.775	330	0.967
7	0.773	43	0.954	79	0.773	115	0.954	151	0.773	187	0.954	223	0.773	259	0.954	295	0.773	331	0.954
8	0.772	44	0.940	80	0.772	116	0.940	152	0.772	188	0.940	224	0.772	260	0.940	296	0.772	332	0.940
9	0.770	45	0.925	81	0.770	117	0.925	153	0.770	189	0.925	225	0.770	261	0.925	297	0.770	333	0.925
10	0.774	46	0.911	82	0.774	118	0.911	154	0.774	190	0.911	226	0.774	262	0.911	298	0.774	334	0.911
11	0.777	47	0.894	83	0.777	119	0.894	155	0.777	191	0.894	227	0.777	263	0.894	299	0.777	335	0.894
12	0.783	48	0.878	84	0.783	120	0.878	156	0.783	192	0.878	228	0.783	264	0.878	300	0.783	336	0.878
13	0.791	49	0.862	85	0.791	121	0.862	157	0.791	193	0.862	229	0.791	265	0.862	301	0.791	337	0.862
14	0.801	50	0.845	86	0.801	122	0.845	158	0.801	194	0.845	230	0.801	266	0.845	302	0.801	338	0.845
15	0.815	51	0.828	87	0.815	123	0.828	159	0.815	195	0.828	231	0.815	267	0.828	303	0.815	339	0.828
16	0.829	52	0.812	88	0.829	124	0.812	160	0.829	196	0.812	232	0.829	268	0.812	304	0.829	340	0.812
17	0.843	53	0.794	89	0.843	125	0.794	161	0.843	197	0.794	233	0.843	269	0.794	305	0.843	341	0.794
18	0.859	54	0.779	90	0.859	126	0.779	162	0.859	198	0.779	234	0.859	270	0.779	306	0.859	342	0.779
19	0.873	55	0.764	91	0.873	127	0.764	163	0.873	199	0.764	235	0.873	271	0.764	307	0.873	343	0.764
20	0.887	56	0.752	92	0.887	128	0.752	164	0.887	200	0.752	236	0.887	272	0.752	308	0.887	344	0.752
21	0.899	57	0.742	93	0.899	129	0.742	165	0.899	201	0.742	237	0.899	273	0.742	309	0.899	345	0.742
22	0.911	58	0.734	94	0.911	130	0.734	166	0.911	202	0.734	238	0.911	274	0.734	310	0.911	346	0.734
23	0.922	59	0.731	95	0.922	131	0.731	167	0.922	203	0.731	239	0.922	275	0.731	311	0.922	347	0.731
24	0.932	60	0.732	96	0.932	132	0.732	168	0.932	204	0.732	240	0.932	276	0.732	312	0.932	348	0.732
25	0.944	61	0.736	97	0.944	133	0.736	169	0.944	205	0.736	241	0.944	277	0.736	313	0.944	349	0.736
26	0.954	62	0.743	98	0.954	134	0.743	170	0.954	206	0.743	242	0.954	278	0.743	314	0.954	350	0.743
27	0.962	63	0.750	99	0.962	135	0.750	171	0.962	207	0.750	243	0.962	279	0.750	315	0.962	351	0.750
28	0.968	64	0.762	100	0.968	136	0.762	172	0.968	208	0.762	244	0.968	280	0.762	316	0.968	352	0.762
29	0.975	65	0.766	101	0.975	137	0.766	173	0.975	209	0.766	245	0.975	281	0.766	317	0.975	353	0.766
30	0.984	66	0.770	102	0.984	138	0.770	174	0.984	210	0.770	246	0.984	282	0.770	318	0.984	354	0.770
31	0.990	67	0.775	103	0.990	139	0.775	175	0.990	211	0.775	247	0.990	283	0.775	319	0.990	355	0.775
32	0.994	68	0.778	104	0.994	140	0.778	176	0.994	212	0.778	248	0.994	284	0.778	320	0.994	356	0.778
33	0.996	69	0.782	105	0.996	141	0.782	177	0.996	213	0.782	249	0.996	285	0.782	321	0.996	357	0.782
34	0.998	70	0.784	106	0.998	142	0.784	178	0.998	214	0.784	250	0.998	286	0.784	322	0.998	358	0.784
35	1.000	71	0.786	107	1.000	143	0.786	179	1.000	215	0.786	251	1.000	287	0.786	323	1.000	359	0.786

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ELEVATION PATTERN

Proposal No.

Date **18-Sep-18**

Call Letters **WLNS**

Channel **14**

Frequency **473 MHz**

Antenna Type **TUE-O5SP-12/60H-1-M-B**

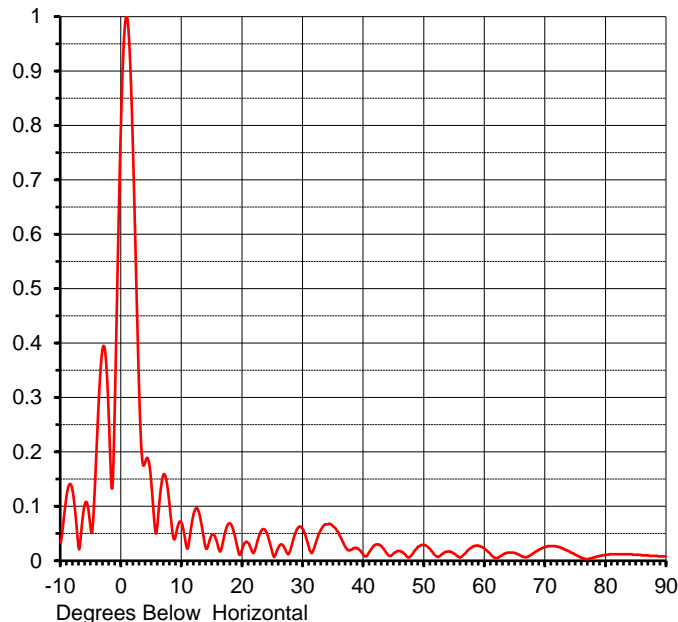
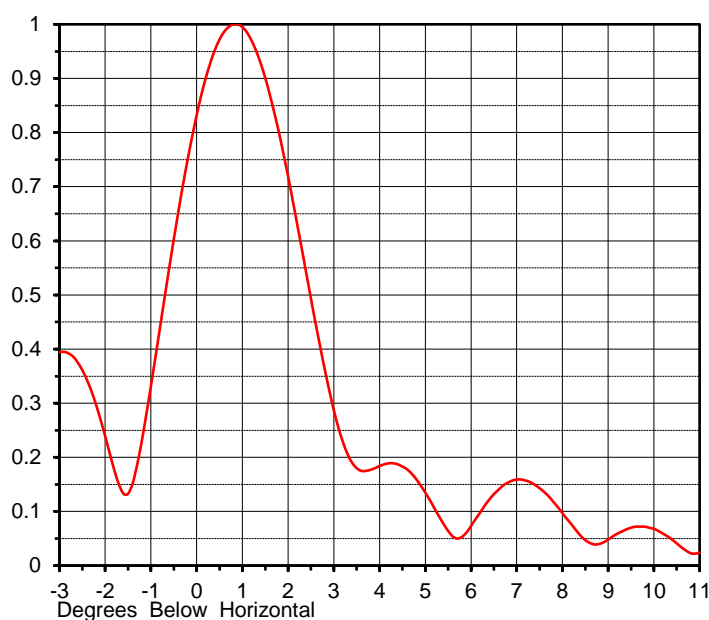
RMS Directivity at Main Lobe **22.0 (13.42 dB)**

RMS Directivity at Horizontal **15.2 (11.82 dB)**

Calculated

Beam Tilt **0.80 deg**

Pattern Number **12U220080**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.034	10.0	0.068	30.0	0.057	50.0	0.029	70.0	0.025
-9.0	0.123	11.0	0.024	31.0	0.023	51.0	0.021	71.0	0.027
-8.0	0.125	12.0	0.089	32.0	0.030	52.0	0.008	72.0	0.026
-7.0	0.021	13.0	0.080	33.0	0.058	53.0	0.013	73.0	0.022
-6.0	0.105	14.0	0.022	34.0	0.067	54.0	0.017	74.0	0.017
-5.0	0.054	15.0	0.048	35.0	0.063	55.0	0.013	75.0	0.011
-4.0	0.231	16.0	0.024	36.0	0.047	56.0	0.007	76.0	0.005
-3.0	0.394	17.0	0.047	37.0	0.025	57.0	0.017	77.0	0.003
-2.0	0.239	18.0	0.068	38.0	0.021	58.0	0.026	78.0	0.006
-1.0	0.332	19.0	0.032	39.0	0.023	59.0	0.027	79.0	0.009
0.0	0.832	20.0	0.024	40.0	0.010	60.0	0.022	80.0	0.011
1.0	0.995	21.0	0.032	41.0	0.017	61.0	0.011	81.0	0.012
2.0	0.719	22.0	0.018	42.0	0.030	62.0	0.005	82.0	0.012
3.0	0.287	23.0	0.053	43.0	0.026	63.0	0.011	83.0	0.012
4.0	0.184	24.0	0.051	44.0	0.011	64.0	0.015	84.0	0.012
5.0	0.135	25.0	0.012	45.0	0.014	65.0	0.014	85.0	0.011
6.0	0.073	26.0	0.026	46.0	0.018	66.0	0.009	86.0	0.010
7.0	0.159	27.0	0.022	47.0	0.009	67.0	0.007	87.0	0.010
8.0	0.097	28.0	0.024	48.0	0.012	68.0	0.014	88.0	0.009
9.0	0.048	29.0	0.058	49.0	0.026	69.0	0.021	89.0	0.008
								90.0	0.008

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Summary

Proposal No.	
Date	18-Sep-18
Call Letters	WLNS
Channel	14
Frequency	473 MHz
Antenna Type	TUE-O5SP-12/60H-1-M-B

Antenna

	Hpol	
ERP:	1,000 kW	(30.00 dBk)
RMS Gain*	21.98	(13.42 dB)

Antenna Input Power	45.5 kW	(16.58 dBk)
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Transmission Line

Type:	Rigid Digitline	Attenuation:	(0.95 dB)
Size:	7-3/16"	Efficiency:	80.4%
Impedance:	75 Ohm		
Length:	1050 ft	320.0 m	

Transmitter Output

56.6 kW	(17.53 dBk)
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Transmitter filter losses not included

* Directivity and Gain are with respect to half wave dipole. The gain includes feed system losses

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