



Elevation Pattern

Scale: Linear

Units: Field, Relative

Systems With Reliability

CLIENT: AAI Warmus

Date: 6/FJ/2020

ANTENNA TYPE: SWEDL120I/14

FREQUENCY: 473 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 12.968/11.129 dBd

Beam Tilt (Deg.) : -0.5

DIRECTIVITY(Horiz): 12.492/10.966 dBd

Null Fill(s)(%) : 10, 7, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
90.0	.101 (-19.951)	52.0	.093 (-20.656)	14.0	.01 (-40.062)
89.0	.116 (-18.684)	51.0	.082 (-21.705)	13.0	.079 (-22.032)
88.0	.132 (-17.579)	50.0	.06 (-24.413)	12.0	.127 (-17.89)
87.0	.148 (-16.602)	49.0	.033 (-29.634)	11.0	.13 (-17.724)
86.0	.163 (-15.73)	48.0	.026 (-31.67)	10.0	.078 (-22.199)
85.0	.179 (-14.95)	47.0	.05 (-26.003)	9.8	.061 (-24.258)
84.0	.194 (-14.251)	46.0	.072 (-22.898)	9.6	.043 (-27.268)
83.0	.208 (-13.631)	45.0	.081 (-21.855)	9.4	.024 (-32.33)
82.0	.222 (-13.087)	44.0	.075 (-22.534)	9.2	.007 (-43.726)
81.0	.234 (-12.622)	43.0	.055 (-25.215)	9.0	.019 (-34.222)
80.0	.244 (-12.242)	42.0	.029 (-30.753)	8.8	.041 (-27.754)
79.0	.253 (-11.952)	41.0	.028 (-31.042)	8.6	.063 (-24.011)
78.0	.258 (-11.764)	40.0	.053 (-25.584)	8.4	.085 (-21.408)
77.0	.26 (-11.69)	39.0	.07 (-23.096)	8.2	.107 (-19.444)
76.0	.259 (-11.747)	38.0	.072 (-22.851)	8.0	.127 (-17.9)
75.0	.252 (-11.958)	37.0	.058 (-24.717)	7.8	.147 (-16.659)
74.0	.241 (-12.349)	36.0	.036 (-28.796)	7.6	.165 (-15.656)
73.0	.225 (-12.961)	35.0	.035 (-29.148)	7.4	.181 (-14.848)
72.0	.203 (-13.847)	34.0	.058 (-24.769)	7.2	.195 (-14.211)
71.0	.176 (-15.089)	33.0	.075 (-22.54)	7.0	.206 (-13.726)
70.0	.144 (-16.817)	32.0	.074 (-22.562)	6.8	.214 (-13.384)
69.0	.109 (-19.264)	31.0	.057 (-24.93)	6.6	.219 (-13.182)
68.0	.072 (-22.905)	30.0	.034 (-29.371)	6.4	.221 (-13.12)
67.0	.037 (-28.597)	29.0	.043 (-27.375)	6.2	.219 (-13.203)
66.0	.029 (-30.742)	28.0	.068 (-23.294)	6.0	.213 (-13.444)
65.0	.055 (-25.116)	27.0	.081 (-21.862)	5.8	.203 (-13.862)
64.0	.084 (-21.531)	26.0	.072 (-22.913)	5.6	.189 (-14.49)
63.0	.106 (-19.5)	25.0	.046 (-26.738)	5.4	.17 (-15.377)
62.0	.119 (-18.497)	24.0	.037 (-28.723)	5.2	.148 (-16.609)
61.0	.121 (-18.326)	23.0	.064 (-23.925)	5.0	.121 (-18.337)
60.0	.113 (-18.973)	22.0	.083 (-21.587)	4.8	.09 (-20.877)
59.0	.094 (-20.576)	21.0	.077 (-22.24)	4.6	.056 (-25.068)
58.0	.067 (-23.515)	20.0	.044 (-27.22)	4.4	.018 (-35.038)
57.0	.038 (-28.517)	19.0	.011 (-38.905)	4.2	.025 (-32.059)
56.0	.027 (-31.241)	18.0	.063 (-24.013)	4.0	.07 (-23.114)
55.0	.05 (-25.994)	17.0	.097 (-20.262)	3.8	.118 (-18.573)
54.0	.075 (-22.552)	16.0	.097 (-20.276)	3.6	.168 (-15.473)
53.0	.09 (-20.924)	15.0	.059 (-24.628)	3.4	.221 (-13.108)

Systems With Reliability

Page 1 of 3

CLIENT: AAI Warmus

Date: 6/FJ/2020

ANTENNA TYPE: SWEDL120I/14

FREQUENCY: 473 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 12.968/11.129 dBd

Beam Tilt (Deg.) : -.5

DIRECTIVITY(Horiz): 12.492/10.966 dBd

Null Fill(s)(%) : 10, 7, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
3.2	.275 (-11.198)	-4.4	.256 (-11.821)	-12.0	.143 (-16.915)
3.0	.331 (-9.599)	-4.6	.21 (-13.554)	-12.2	.146 (-16.736)
2.8	.388 (-8.233)	-4.8	.169 (-15.454)	-12.4	.147 (-16.672)
2.6	.444 (-7.047)	-5.0	.135 (-17.378)	-12.6	.146 (-16.719)
2.4	.501 (-6.009)	-5.2	.113 (-18.908)	-12.8	.143 (-16.877)
2.2	.556 (-5.093)	-5.4	.107 (-19.423)	-13.0	.139 (-17.146)
2.0	.611 (-4.283)	-5.6	.115 (-18.807)	-13.2	.133 (-17.526)
1.8	.663 (-3.565)	-5.8	.131 (-17.632)	-13.4	.126 (-18.021)
1.6	.714 (-2.93)	-6.0	.151 (-16.404)	-13.6	.117 (-18.634)
1.4	.761 (-2.37)	-6.2	.171 (-15.329)	-13.8	.108 (-19.365)
1.2	.805 (-1.879)	-6.4	.189 (-14.454)	-14.0	.098 (-20.214)
1.0	.846 (-1.452)	-6.6	.205 (-13.772)	-14.2	.087 (-21.171)
.8	.883 (-1.085)	-6.8	.217 (-13.266)	-14.4	.078 (-22.202)
.6	.915 (-0.775)	-7.0	.226 (-12.919)	-14.6	.069 (-23.235)
.4	.942 (-0.519)	-7.2	.231 (-12.714)	-14.8	.062 (-24.135)
.2	.964 (-0.315)	-7.4	.233 (-12.641)	-15.0	.058 (-24.712)
.0	.981 (-0.162)	-7.6	.232 (-12.692)	-15.2	.057 (-24.808)
-.2	.993 (-0.059)	-7.8	.227 (-12.863)	-15.4	.06 (-24.424)
-.4	.999 (-0.005)	-8.0	.22 (-13.15)	-15.6	.065 (-23.719)
-.6	1.00 (0)	-8.2	.21 (-13.554)	-15.8	.072 (-22.882)
-.8	.995 (-0.043)	-8.4	.198 (-14.076)	-16.0	.079 (-22.049)
-1.0	.985 (-0.135)	-8.6	.184 (-14.72)	-16.2	.086 (-21.289)
-1.2	.969 (-0.276)	-8.8	.168 (-15.49)	-16.4	.093 (-20.636)
-1.4	.948 (-0.467)	-9.0	.152 (-16.387)	-16.6	.099 (-20.099)
-1.6	.922 (-0.709)	-9.2	.135 (-17.41)	-16.8	.104 (-19.68)
-1.8	.891 (-1.004)	-9.4	.118 (-18.539)	-17.0	.107 (-19.375)
-2.0	.856 (-1.355)	-9.6	.103 (-19.724)	-17.2	.11 (-19.182)
-2.2	.816 (-1.763)	-9.8	.091 (-20.851)	-17.4	.111 (-19.098)
-2.4	.773 (-2.232)	-10.0	.082 (-21.724)	-17.6	.111 (-19.12)
-2.6	.727 (-2.766)	-10.2	.078 (-22.118)	-17.8	.109 (-19.248)
-2.8	.678 (-3.37)	-10.4	.08 (-21.94)	-18.0	.106 (-19.482)
-3.0	.627 (-4.049)	-10.6	.086 (-21.322)	-18.2	.102 (-19.823)
-3.2	.575 (-4.812)	-10.8	.094 (-20.496)	-18.4	.097 (-20.274)
-3.4	.521 (-5.666)	-11.0	.104 (-19.641)	-18.6	.091 (-20.836)
-3.6	.466 (-6.625)	-11.2	.114 (-18.856)	-18.8	.084 (-21.511)
-3.8	.412 (-7.701)	-11.4	.123 (-18.182)	-19.0	.077 (-22.298)
-4.0	.358 (-8.912)	-11.6	.131 (-17.635)	-19.2	.069 (-23.184)
-4.2	.306 (-10.278)	-11.8	.138 (-17.213)	-19.4	.062 (-24.138)

Systems With Reliability

Page 2 of 3

CLIENT: AI Warmus

Date: 6/FJ/2020

ANTENNA TYPE: SWEDL12OI/14

FREQUENCY: 473 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 12.968/11.129 dBd

Beam Tilt (Deg.) : -5

DIRECTIVITY(Horiz): 12.492/10.966 dBd

Null Fill(s)(%) : 10, 7, 5

Relative Field Tabulation

Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)	Elev. Angle	Rel. Fld(dB)
-19.6	.056 (-25.092)	-27.2	.075 (-22.538)	-54.0	.083 (-21.572)
-19.8	.051 (-25.922)	-27.4	.078 (-22.166)	-55.0	.079 (-22.067)
-20.0	.048 (-26.455)	-27.6	.08 (-21.898)	-56.0	.064 (-23.936)
-20.2	.047 (-26.545)	-27.8	.082 (-21.728)	-57.0	.041 (-27.791)
-20.4	.049 (-26.178)	-28.0	.083 (-21.655)	-58.0	.019 (-34.27)
-20.6	.053 (-25.487)	-28.2	.082 (-21.677)	-59.0	.03 (-30.357)
-20.8	.059 (-24.649)	-28.4	.081 (-21.793)	-60.0	.057 (-24.931)
-21.0	.065 (-23.795)	-28.6	.079 (-22.003)	-61.0	.08 (-21.919)
-21.2	.071 (-22.999)	-28.8	.077 (-22.31)	-62.0	.097 (-20.264)
-21.4	.077 (-22.298)	-29.0	.073 (-22.716)	-63.0	.106 (-19.532)
-21.6	.082 (-21.704)	-29.2	.069 (-23.224)	-64.0	.105 (-19.557)
-21.8	.087 (-21.22)	-29.4	.064 (-23.838)	-65.0	.096 (-20.311)
-22.0	.091 (-20.845)	-29.6	.059 (-24.56)	-66.0	.08 (-21.897)
-22.2	.094 (-20.574)	-29.8	.054 (-25.386)	-67.0	.059 (-24.628)
-22.4	.095 (-20.406)	-30.0	.048 (-26.302)	-68.0	.035 (-29.231)
-22.6	.096 (-20.338)	-31.0	.034 (-29.35)	-69.0	.021 (-33.71)
-22.8	.096 (-20.369)	-32.0	.054 (-25.367)	-70.0	.039 (-28.217)
-23.0	.094 (-20.497)	-33.0	.074 (-22.633)	-71.0	.067 (-23.537)
-23.2	.092 (-20.725)	-34.0	.077 (-22.226)	-72.0	.094 (-20.527)
-23.4	.089 (-21.054)	-35.0	.063 (-23.991)	-73.0	.119 (-18.46)
-23.6	.084 (-21.487)	-36.0	.04 (-27.984)	-74.0	.141 (-16.989)
-23.8	.079 (-22.029)	-37.0	.036 (-28.981)	-75.0	.16 (-15.935)
-24.0	.073 (-22.683)	-38.0	.058 (-24.725)	-76.0	.174 (-15.191)
-24.2	.067 (-23.453)	-39.0	.077 (-22.278)	-77.0	.184 (-14.692)
-24.4	.061 (-24.334)	-40.0	.081 (-21.844)	-78.0	.191 (-14.392)
-24.6	.054 (-25.313)	-41.0	.068 (-23.355)	-79.0	.194 (-14.261)
-24.8	.048 (-26.346)	-42.0	.041 (-27.656)	-80.0	.193 (-14.274)
-25.0	.043 (-27.342)	-43.0	.011 (-39.307)	-81.0	.19 (-14.415)
-25.2	.039 (-28.137)	-44.0	.031 (-30.302)	-82.0	.185 (-14.672)
-25.4	.037 (-28.529)	-45.0	.058 (-24.781)	-83.0	.177 (-15.037)
-25.6	.038 (-28.395)	-46.0	.073 (-22.729)	-84.0	.168 (-15.506)
-25.8	.041 (-27.806)	-47.0	.074 (-22.64)	-85.0	.157 (-16.078)
-26.0	.045 (-26.954)	-48.0	.06 (-24.37)	-86.0	.145 (-16.756)
-26.2	.05 (-26.022)	-49.0	.037 (-28.718)	-87.0	.133 (-17.548)
-26.4	.055 (-25.123)	-50.0	.014 (-37.236)	-88.0	.119 (-18.468)
-26.6	.061 (-24.311)	-51.0	.032 (-29.888)	-89.0	.105 (-19.539)
-26.8	.066 (-23.607)	-52.0	.058 (-24.726)	-90.0	.091 (-20.795)
-27.0	.071 (-23.017)	-53.0	.076 (-22.355)	90.0	.00 (-50)

Systems With Reliability

Page 3 of 3

CLIENT *AI Warmus*

Date: 6/FJ/2020

ANTENNA TYPE: SWEDL12OI/14

FREQUENCY: 473 MHz

PATTERN POL.: Horizontal

DIRECTIVITY(Peak): 12.968/11.129 dBd

Beam Tilt (Deg.) : -.5

DIRECTIVITY(Horiz): 12.492/10.966 dBd

Null Fill(s)(%) : 10, 7, 5