

TFD Analysis

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EZNEC Model

30' x 8", 11'0" height, 800 Ω terminator resistor, 16:1 transformer
Wires along N-S line

$$Loss_{dB} = 10 \log \left[1 - \left(\frac{SWR - 1}{SWR + 1} \right)^2 \right]$$

Freq (MHz)	N-S HPBW (deg)	E-W HPBW (deg)	SWR (50 Ω)	Zenith Directivity Gain (dBi)	Mismatch Loss (dB)	Net Gain (dB)
15	63	115	1.35	-1.29	-0.10	-1.39
16	63	118	1.49	-0.31	-0.17	-0.48
17	62	119	1.64	0.45	-0.26	0.19
18	62	121	1.78	1.00	-0.36	0.64
19	61	123	1.91	1.40	-0.45	0.95
20	61	125	1.99	1.61	-0.50	1.11
21	60	128	2.09	1.80	-0.58	1.22
22	60	130	2.13	1.86	-0.61	1.25
23	59	132	2.15	1.85	-0.62	1.23
24	59	133	2.13	1.77	-0.61	1.16
25	58	135	2.12	1.69	-0.60	1.09
26	57	137	2.09	1.55	-0.58	0.97
27	57	138	2.04	1.39	-0.54	0.85
28	56	139	1.99	1.20	-0.50	0.70
29	55	140	1.93	0.99	-0.46	0.53
30	54	142	1.87	0.76	-0.42	0.34
31	53	143	1.81	0.50	-0.38	0.12
32	52	144	1.75	0.21	-0.34	-0.13
33	51	145	1.69	-0.10	-0.30	-0.40
34	50	145	1.63	-0.43	-0.26	-0.69
35	49	146	1.57	-0.80	-0.22	-1.02

