

TFD Analysis

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EZNEC Model

30' x 8", 9'2" 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	111	1.32	-2.18	-0.08	-2.26
16	62	112	1.45	-1.12	-0.15	-1.27
17	61	113	1.60	-0.26	-0.24	-0.50
18	60	115	1.73	0.39	-0.32	0.07
19	60	116	1.86	0.89	-0.41	0.48
20	59	118	1.97	1.24	-0.49	0.75
21	58	119	2.05	1.49	-0.55	0.94
22	57	121	2.10	1.65	-0.58	1.07
23	56	123	2.12	1.76	-0.60	1.16
24	55	125	2.13	1.81	-0.61	1.20
25	55	127	2.11	1.83	-0.59	1.24
26	54	127	2.08	1.81	-0.57	1.24
27	53	130	2.04	1.78	-0.54	1.24
28	52	132	2.00	1.74	-0.51	1.23
29	50	133	1.94	1.67	-0.47	1.20
30	49	135	1.89	1.60	-0.43	1.17
31	48	136	1.83	1.51	-0.39	1.12
32	47	137	1.77	1.41	-0.35	1.06
33	45	138	1.71	1.32	-0.31	1.01
34	44	139	1.65	1.20	-0.27	0.93
35	43	140	1.60	1.07	-0.24	0.83

