

Load Impedance Matching Transformer Network Comparison

ARRL Laboratory Review

SWR	LOAD "Z" in W	BAND	AMERITRON ATR-30		MFJ MFJ-986		PALSTAR AT4K		TEN-TEC 238B		VECTRONICS HFT-1500	
			% POWER LOSS	WT	% POWER LOSS	WT	% POWER LOSS	WT	% POWER LOSS	WT	% POWER LOSS	WT
8.0:1	6.25	160M (1.8MHz)	20	1	47	4	24	2	NO MATCH	5	45	3
		80M (3.5MHz)	12	2	31	4	14	3	<10	1	42	5
		40M (7.2MHz)	<10	1	21	4	10	2	<10	1	16	3
		20M (14.2MHz)	<10	1	16	5	10	2	<10	1	15	3
		10M (29.7MHz)	<10	1	13	3	34	5	28	4	8	2
4.0:1	12.5	160M (1.8MHz)	15	3	33	5	12	2	<10	1	32	4
		80M (3.5MHz)	<10	1	22	3	<10	1	10	2	31	4
		40M (7.2MHz)	<10	1	14	3	<10	1	<10	1	11	2
		20M (14.2MHz)	<10	1	12	2	<10	1	<10	1	<10	1
		10M (29.7MHz)	<10	1	11	2	18	3	22	4	<10	1
2.0:1	25	160M (1.8MHz)	10	2	25	4	<10	1	<10	1	19	3
		80M (3.5MHz)	<10	1	20	3	<10	1	10	2	24	4
		40M (7.2MHz)	<10	1	10	2	<10	1	<10	1	<10	1
		20M (14.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		10M (29.7MHz)	<10	1	10	2	<10	1	17	3	<10	1
1.0:1	50	160M (1.8MHz)	<10	1	22	4	<10	1	<10	1	12	2
		80M (3.5MHz)	<10	1	12	2	<10	1	<10	1	<10	1
		40M (7.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		20M (14.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		10M (29.7MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
2.0:1	100	160M (1.8MHz)	<10	1	15	3	<10	1	<10	1	12	2
		80M (3.5MHz)	<10	1	10	2	<10	1	<10	1	<10	1
		40M (7.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		20M (14.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		10M (29.7MHz)	<10	1	19	3	<10	1	20	4	<10	1
4.0:1	200	160M (1.8MHz)	<10	1	11	2	<10	1	<10	1	<10	1
		80M (3.5MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		40M (7.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		20M (14.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		10M (29.7MHz)	<10	1	<10	1	37	3	20	2	<10	1
8.0:1	400	160M (1.8MHz)	<10	1	10	2	<10	1	<10	1	<10	1
		80M (3.5MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		40M (7.2MHz)	<10	1	<10	1	<10	1	<10	1	<10	1
		20M (14.2MHz)	<10	1	11	3	<10	1	10	2	11	3
		10M (29.7MHz)	<10	1	16	3	<10	1	13	2	16	3
Total Weight (WT) Score (Lowest Score is Best)			1st Place	39	5th Place	82	2nd Place	49	3rd Place	55	4th Place	64

1. Power losses are expressed as a percentage (21% loss of power is 1 dB)

2. The 1.5:1 Standing Wave Ratio Bandwidth (SWR BW) represents the bandwidth over which an SWR of 1.5:1 or less was maintained as a percentage of the measurement frequencies (1.8, 3.5, 7.2, 14.2 and 29.7 MHz).