

# Directional Coupler

# TCD-20-4

## Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = +25°C

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING LOSS (dB)	DIRECTIVITY (dB)	RETURN LOSS (dB)		
				IN	OUT	CPL
5	0.32	20.07	22.79	28.19	30.76	26.86
10	0.31	20.06	22.87	29.19	32.43	27.71
20	0.31	20.06	22.93	30.04	33.66	28.32
25	0.31	20.06	22.90	30.16	33.77	28.34
30	0.32	20.06	22.89	30.23	33.82	28.35
40	0.32	20.07	22.90	30.33	33.82	28.36
45	0.32	20.08	22.91	30.38	33.85	28.38
50	0.33	20.08	22.94	30.42	33.90	28.39
100	0.34	20.10	23.35	30.68	33.75	28.52
125	0.35	20.11	23.64	30.74	33.67	28.51
150	0.35	20.11	24.07	30.77	33.41	28.44
200	0.37	20.11	25.17	30.79	32.94	28.26
225	0.38	20.11	25.91	30.73	32.61	28.13
250	0.38	20.10	26.77	30.79	32.33	27.99
275	0.39	20.09	27.79	30.69	32.01	27.81
300	0.40	20.09	29.06	30.72	31.80	27.64
325	0.41	20.08	30.60	30.60	31.63	27.47
350	0.42	20.07	32.39	30.56	31.41	27.34
375	0.43	20.06	34.72	30.45	31.20	27.15
400	0.44	20.04	37.33	30.39	30.92	27.00
425	0.45	20.03	38.85	30.36	30.67	26.82
450	0.46	20.01	37.38	30.34	30.51	26.64
475	0.47	20.00	34.32	30.44	30.22	26.48
500	0.48	19.98	31.83	30.44	30.08	26.32
550	0.50	19.94	27.72	30.23	29.69	26.01
600	0.53	19.91	24.71	30.17	29.44	25.73
650	0.56	19.87	22.33	30.24	28.90	25.47
700	0.58	19.84	20.37	30.40	28.57	25.27
750	0.61	19.81	18.75	30.39	28.34	25.09
800	0.64	19.77	17.29	30.52	28.15	24.95
850	0.67	19.73	16.07	30.53	27.85	24.86
900	0.70	19.69	15.02	30.72	27.58	24.78
950	0.73	19.64	14.06	30.88	27.42	24.71
1000	0.75	19.60	13.18	30.92	27.21	24.66
1100	0.81	19.50	11.68	31.38	26.76	24.60
1200	0.88	19.40	10.44	31.88	26.46	24.61
1300	0.93	19.26	9.42	32.73	26.05	24.67
1400	1.00	19.15	8.53	33.91	25.56	24.81
1500	1.08	19.01	7.77	35.17	24.97	25.06
1600	1.15	18.88	7.02	37.53	24.39	25.39
1700	1.22	18.74	6.44	40.47	23.89	25.61
1800	1.31	18.59	5.87	44.81	23.32	26.06
1900	1.40	18.43	5.48	49.66	22.75	26.43
2000	1.50	18.29	5.05	44.76	22.18	26.86
2100	1.62	18.14	4.78	38.92	21.60	27.09
2200	1.74	18.01	4.47	34.44	20.99	27.40
2300	1.87	17.94	3.97	31.24	20.03	27.60
2400	2.03	17.83	3.81	28.36	19.44	27.66
2500	2.21	17.76	3.51	26.17	18.44	26.68
2600	2.41	17.64	3.34	23.86	17.48	25.19
2700	2.64	17.61	3.18	21.91	16.46	23.37
2800	2.91	17.57	3.10	20.00	15.30	21.56
2900	3.26	17.54	3.19	18.26	14.28	19.81
3000	3.64	17.50	3.13	16.51	12.96	17.87

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# Directional Coupler

# TCD-20-4

## Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = -40°C

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING LOSS (dB)	DIRECTIVITY (dB)	RETURN LOSS (dB)		
				IN	OUT	CPL
5	0.40	20.14	21.22	24.37	25.70	22.95
10	0.32	19.98	23.64	27.22	29.14	25.75
20	0.26	19.87	25.40	30.48	33.00	28.79
25	0.26	19.87	25.34	31.16	33.65	29.34
30	0.26	19.86	25.24	31.70	34.09	29.79
40	0.26	19.87	25.02	32.49	34.49	30.41
45	0.26	19.87	24.96	32.79	34.61	30.64
50	0.26	19.87	24.95	33.02	34.70	30.82
100	0.26	19.88	25.46	32.12	35.35	30.29
125	0.26	19.88	25.88	31.57	35.70	29.93
150	0.27	19.88	26.10	31.75	35.33	30.11
200	0.28	19.87	26.73	31.67	32.95	29.95
225	0.28	19.87	27.48	31.09	32.12	29.38
250	0.29	19.86	28.24	30.95	31.78	28.95
275	0.30	19.85	28.92	30.94	31.56	28.70
300	0.30	19.84	29.58	31.01	31.26	28.42
325	0.31	19.84	30.51	30.68	30.89	28.02
350	0.32	19.82	31.41	30.35	30.52	27.68
375	0.32	19.81	32.16	30.06	30.29	27.41
400	0.33	19.80	32.36	29.87	29.96	27.20
425	0.34	19.79	32.41	29.66	29.53	26.89
450	0.34	19.78	31.95	29.35	29.19	26.52
475	0.35	19.76	31.03	29.15	28.74	26.24
500	0.36	19.75	29.68	29.08	28.58	26.03
550	0.38	19.72	27.21	28.62	28.11	25.56
600	0.40	19.69	24.88	28.29	27.83	24.99
650	0.42	19.66	22.89	28.22	27.42	24.67
700	0.45	19.63	21.17	28.01	26.99	24.30
750	0.47	19.60	19.72	27.84	26.74	24.03
800	0.50	19.56	18.39	27.56	26.57	23.75
850	0.52	19.52	17.20	27.24	26.27	23.52
900	0.55	19.48	16.14	27.13	25.93	23.53
950	0.57	19.44	15.16	27.04	25.66	23.29
1000	0.61	19.40	14.27	26.83	25.54	23.06
1100	0.67	19.32	12.65	26.52	24.92	22.78
1200	0.74	19.24	11.34	26.26	24.98	23.11
1300	0.81	19.14	10.17	26.24	24.78	22.50
1400	0.90	19.08	9.11	26.76	24.43	22.81
1500	0.99	19.00	8.23	26.77	24.17	22.53
1600	1.07	18.93	7.29	28.07	23.71	22.69
1700	1.17	18.88	6.57	28.07	23.51	22.99
1800	1.28	18.82	5.89	28.60	23.22	23.32
1900	1.39	18.76	5.32	28.98	22.73	22.85
2000	1.51	18.71	4.78	28.65	22.71	24.28
2100	1.66	18.67	4.29	28.95	21.88	23.60
2200	1.81	18.63	3.91	30.82	21.23	24.58
2300	1.96	18.67	3.27	29.78	20.55	25.01
2400	2.14	18.61	2.99	28.32	20.13	26.55
2500	2.33	18.64	2.57	28.01	19.17	27.82
2600	2.54	18.53	2.38	27.42	18.27	29.72
2700	2.77	18.49	2.17	25.92	17.22	28.49
2800	3.03	18.36	2.08	24.06	16.26	26.30
2900	3.35	18.12	2.15	22.41	15.49	24.39
3000	3.69	17.85	2.14	20.44	14.12	20.60

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# Directional Coupler

# TCD-20-4

## Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = +85°C

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING LOSS (dB)	DIRECTIVITY (dB)	RETURN LOSS (dB)		
				IN	OUT	CPL
5	0.40	20.30	20.93	26.75	29.14	25.53
10	0.40	20.28	21.13	27.32	30.06	26.00
20	0.40	20.28	21.32	27.72	30.73	26.26
25	0.41	20.29	21.37	27.73	30.84	26.21
30	0.41	20.29	21.41	27.71	30.92	26.15
40	0.42	20.30	21.51	27.64	31.04	26.04
45	0.42	20.31	21.57	27.63	31.13	26.00
50	0.43	20.31	21.63	27.61	31.22	25.96
100	0.44	20.34	22.09	28.29	31.06	26.33
125	0.45	20.35	22.41	28.75	30.81	26.62
150	0.45	20.35	22.97	28.91	30.73	26.66
200	0.47	20.36	24.56	28.89	31.43	26.48
225	0.48	20.36	25.43	29.08	31.65	26.56
250	0.48	20.36	26.39	29.42	31.72	26.65
275	0.50	20.35	27.60	29.53	31.64	26.65
300	0.50	20.35	29.23	29.62	31.70	26.57
325	0.52	20.35	31.27	29.55	31.85	26.47
350	0.52	20.34	34.06	29.63	31.97	26.46
375	0.53	20.34	38.21	29.74	32.04	26.41
400	0.54	20.33	44.21	29.85	31.95	26.39
425	0.56	20.33	41.07	29.99	31.82	26.31
450	0.57	20.32	35.50	30.10	31.89	26.21
475	0.58	20.32	31.50	30.30	31.72	26.14
500	0.59	20.31	28.89	30.53	31.83	26.06
550	0.62	20.30	24.96	30.71	31.79	25.96
600	0.65	20.29	22.15	31.00	31.85	25.90
650	0.67	20.28	19.97	31.50	31.49	25.87
700	0.70	20.26	18.17	32.07	31.21	25.79
750	0.73	20.25	16.68	32.46	30.97	25.70
800	0.75	20.23	15.39	33.27	30.76	25.74
850	0.77	20.20	14.31	33.87	30.39	25.80
900	0.79	20.16	13.38	34.74	30.10	25.84
950	0.82	20.12	12.55	35.45	29.93	25.91
1000	0.84	20.07	11.79	35.95	29.65	25.98
1100	0.90	19.96	10.51	36.89	29.10	26.02
1200	0.95	19.83	9.44	38.58	28.41	26.07
1300	1.00	19.67	8.57	41.55	27.72	26.44
1400	1.06	19.51	7.84	45.71	27.14	26.62
1500	1.13	19.33	7.24	47.46	26.62	27.20
1600	1.19	19.16	6.60	50.02	26.15	27.64
1700	1.25	18.97	6.12	48.93	25.67	28.07
1800	1.33	18.78	5.61	42.64	25.05	29.03
1900	1.41	18.57	5.31	38.61	24.47	29.66
2000	1.50	18.41	4.92	34.45	23.75	29.87
2100	1.61	18.21	4.75	33.26	23.19	31.31
2200	1.72	18.05	4.43	30.50	22.75	31.14
2300	1.84	17.95	3.98	28.28	21.57	30.98
2400	1.98	17.82	3.82	26.13	20.78	29.65
2500	2.14	17.73	3.56	24.29	19.59	27.85
2600	2.33	17.60	3.42	22.35	18.58	25.72
2700	2.54	17.56	3.21	20.67	17.36	23.83
2800	2.79	17.52	3.12	18.92	16.07	21.66
2900	3.09	17.56	3.14	17.39	14.87	19.98
3000	3.45	17.57	3.05	15.76	13.49	18.45

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