

# Directional Coupler

# TCD-13-4+

## 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	0.67	12.85	20.89	22.16	28.58	23.85
10	0.66	12.85	20.95	22.47	30.10	24.22
20	0.64	12.85	21.07	23.09	33.13	24.95
50	0.66	12.87	21.08	23.36	34.31	25.30
100	0.67	12.90	20.93	23.50	33.60	25.43
150	0.69	12.91	20.68	23.56	32.28	25.41
200	0.70	12.92	20.32	23.56	31.05	25.28
250	0.71	12.92	19.93	23.44	29.95	25.06
300	0.73	12.92	19.46	23.34	28.96	24.79
350	0.74	12.92	18.99	23.24	28.04	24.54
400	0.75	12.91	18.48	23.12	27.20	24.28
450	0.76	12.89	17.98	22.94	26.55	24.01
500	0.78	12.88	17.46	22.76	26.05	23.74
550	0.80	12.86	16.94	22.61	25.51	23.50
600	0.82	12.83	16.39	22.50	25.02	23.27
650	0.84	12.80	15.89	22.30	24.60	23.03
700	0.86	12.77	15.39	22.12	24.29	22.82
750	0.88	12.74	14.89	21.96	23.98	22.66
800	0.91	12.71	14.41	21.88	23.70	22.51
850	0.94	12.67	13.96	21.82	23.41	22.37
900	0.96	12.63	13.52	21.68	23.21	22.27
950	0.99	12.58	13.12	21.60	23.02	22.19
1000	1.03	12.53	12.73	21.55	22.77	22.13
1050	1.06	12.48	12.35	21.55	22.60	22.09
1100	1.09	12.42	12.02	21.57	22.48	22.08
1200	1.17	12.30	11.37	21.60	22.15	22.13
1300	1.26	12.17	10.85	21.84	21.86	22.29
1400	1.36	12.03	10.38	22.09	21.49	22.54
1500	1.48	11.88	10.03	22.45	21.09	22.88
1600	1.61	11.74	9.74	22.92	20.64	23.35
1700	1.77	11.62	9.52	23.52	20.09	23.89
1800	1.95	11.51	9.40	24.05	19.42	24.57
1900	2.14	11.42	9.35	24.64	18.70	25.37
2000	2.36	11.37	9.33	25.00	18.00	26.16
2250	2.98	11.43	9.69	23.70	16.16	27.33
2500	3.63	11.83	10.38	20.52	14.51	26.34
2750	4.20	12.56	11.18	17.88	13.31	24.90
3000	4.70	13.51	11.43	16.21	12.61	23.83
3250	5.11	14.54	11.03	15.33	12.32	21.62
3500	5.47	15.54	10.39	14.92	12.46	18.16
3750	5.87	16.20	10.74	14.39	12.97	14.73
4000	6.33	16.39	11.78	13.43	13.70	11.94
4250	6.93	15.99	12.11	11.89	14.97	9.88
4500	7.78	15.44	11.30	10.25	15.57	8.43
4750	8.81	14.76	9.87	8.83	15.23	7.57
5000	10.05	14.15	9.06	7.77	14.23	7.07
5250	11.56	13.60	9.04	7.15	12.79	6.91
5500	13.10	13.12	9.02	6.81	11.54	7.00
5750	14.61	12.76	9.02	6.99	10.58	7.33
6000	16.01	12.25	9.46	6.94	9.87	7.58
6250	17.21	12.27	9.16	7.35	9.34	7.69
6500	18.15	12.00	8.68	7.29	8.86	7.83
6750	18.78	11.97	7.26	7.33	8.70	7.55
7000	19.00	12.48	5.59	7.21	8.60	7.21

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# Directional Coupler

# TCD-13-4+

## 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	0.85	12.98	20.57	18.70	21.53	20.32
10	0.77	12.91	20.59	20.08	24.23	21.76
20	0.62	12.79	20.63	22.84	29.63	24.64
50	0.56	12.76	20.91	24.64	33.84	26.61
100	0.57	12.78	20.70	24.59	33.93	26.53
150	0.58	12.78	20.48	24.51	33.02	26.48
200	0.59	12.77	20.30	24.43	30.85	26.24
250	0.60	12.76	19.87	24.02	29.51	25.64
300	0.61	12.75	19.54	23.92	28.49	25.31
350	0.62	12.74	19.09	23.58	27.44	24.76
400	0.63	12.73	18.65	23.33	26.61	24.37
450	0.65	12.70	18.20	22.91	25.77	23.88
500	0.66	12.68	17.70	22.60	25.18	23.53
550	0.68	12.66	17.27	22.34	24.52	23.10
600	0.69	12.62	16.78	22.11	23.95	22.74
650	0.71	12.59	16.32	21.74	23.44	22.46
700	0.73	12.56	15.81	21.46	23.09	22.15
750	0.75	12.52	15.37	21.25	22.75	21.91
800	0.77	12.48	14.93	21.00	22.31	21.67
850	0.80	12.43	14.51	20.82	21.95	21.47
900	0.82	12.38	14.09	20.52	21.60	21.26
950	0.85	12.32	13.65	20.34	21.36	21.13
1000	0.88	12.27	13.29	20.32	21.17	20.94
1050	0.91	12.22	12.93	20.23	20.98	20.76
1100	0.94	12.15	12.58	20.19	20.88	20.71
1200	1.01	12.03	11.93	20.11	20.61	20.50
1300	1.10	11.90	11.27	20.06	20.23	20.81
1400	1.20	11.75	10.77	20.13	19.86	20.89
1500	1.31	11.60	10.32	20.08	19.37	21.18
1600	1.44	11.45	9.98	20.91	19.33	21.56
1700	1.60	11.32	9.76	21.11	18.84	21.93
1800	1.78	11.20	9.60	21.64	18.39	22.47
1900	1.98	11.10	9.49	22.03	17.78	22.92
2000	2.20	11.04	9.48	22.64	17.27	23.33
2250	2.87	11.12	9.88	21.79	15.15	24.20
2500	3.56	11.58	10.96	19.57	13.51	23.19
2750	4.14	12.43	12.38	17.09	12.04	22.41
3000	4.55	13.52	12.81	15.76	11.49	22.47
3250	4.85	14.70	11.56	15.20	11.24	23.98
3500	5.11	15.79	10.21	15.16	11.30	20.38
3750	5.39	16.40	10.31	15.08	11.83	15.71
4000	5.75	16.42	11.64	14.03	12.63	12.16
4250	6.23	15.79	12.87	12.54	14.42	9.96
4500	7.04	15.12	12.85	10.39	15.96	8.31
4750	8.00	14.24	11.18	8.81	16.61	7.31
5000	9.19	13.73	9.62	7.58	15.81	6.79
5250	10.51	13.14	9.34	6.97	14.10	6.56
5500	11.98	12.57	9.47	6.49	12.27	6.69
5750	13.64	12.22	9.22	6.64	11.16	6.82
6000	15.28	11.95	8.97	6.65	10.16	7.12
6250	16.41	11.72	9.48	6.93	9.49	7.29
6500	17.14	11.47	8.33	6.86	8.83	7.26
6750	17.71	11.37	6.80	6.88	8.66	7.07
7000	17.80	12.09	5.24	6.60	8.79	6.85

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# Directional Coupler

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## 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	0.82	13.02	21.63	20.81	26.82	22.79
10	0.81	13.02	21.59	20.98	27.50	22.99
20	0.80	13.02	21.50	21.33	28.86	23.39
50	0.81	13.04	21.24	21.35	29.70	23.38
100	0.82	13.07	21.10	21.70	29.35	23.75
150	0.83	13.09	20.81	21.99	28.62	23.95
200	0.85	13.11	20.20	21.96	28.69	23.80
250	0.85	13.12	19.81	22.13	28.44	23.96
300	0.87	13.13	19.28	22.12	27.91	23.79
350	0.88	13.14	18.70	22.07	27.51	23.67
400	0.89	13.15	18.14	22.11	27.00	23.59
450	0.91	13.15	17.58	22.04	26.54	23.41
500	0.93	13.15	16.99	21.99	26.27	23.28
550	0.94	13.16	16.43	21.98	25.90	23.17
600	0.96	13.15	15.85	21.97	25.55	23.06
650	0.98	13.15	15.32	21.86	25.28	22.95
700	1.00	13.14	14.79	21.76	25.04	22.83
750	1.02	13.13	14.28	21.66	24.78	22.75
800	1.05	13.11	13.78	21.67	24.56	22.67
850	1.07	13.08	13.34	21.71	24.36	22.61
900	1.09	13.06	12.92	21.70	24.24	22.58
950	1.13	13.02	12.54	21.72	24.11	22.53
1000	1.16	12.99	12.20	21.78	23.87	22.52
1050	1.19	12.95	11.86	21.81	23.67	22.51
1100	1.22	12.90	11.56	21.82	23.43	22.52
1200	1.30	12.80	10.98	21.77	22.88	22.59
1300	1.38	12.69	10.53	22.02	22.48	22.59
1400	1.48	12.57	10.11	22.08	21.89	22.68
1500	1.59	12.45	9.77	22.29	21.43	22.94
1600	1.71	12.33	9.47	22.58	21.03	23.30
1700	1.85	12.23	9.19	22.96	20.56	23.73
1800	2.00	12.14	9.00	23.16	19.90	24.17
1900	2.17	12.05	8.89	23.42	19.28	24.97
2000	2.35	11.99	8.70	23.39	18.67	25.87
2250	2.85	11.98	8.50	22.58	17.43	27.41
2500	3.41	12.17	8.48	20.42	16.14	26.76
2750	3.99	12.58	8.59	17.86	14.97	23.82
3000	4.57	13.16	8.94	15.96	14.16	21.39
3250	5.14	13.84	9.55	14.71	13.43	19.24
3500	5.70	14.55	10.58	13.86	12.88	17.50
3750	6.25	15.18	12.62	13.49	12.58	15.51
4000	6.81	15.59	15.02	13.08	12.59	13.55
4250	7.48	15.63	15.37	11.93	12.57	11.45
4500	8.21	15.41	12.34	10.81	12.57	9.71
4750	9.02	14.90	9.91	9.58	12.45	8.33
5000	9.91	14.48	7.82	8.48	12.66	7.41
5250	10.87	13.93	6.76	7.71	12.38	6.78
5500	12.03	13.42	6.17	7.16	12.02	6.51
5750	13.36	13.12	5.97	6.92	11.48	6.62
6000	14.61	12.54	6.46	6.86	10.88	6.88
6250	16.21	11.98	7.72	6.90	10.64	7.19
6500	17.77	11.10	8.78	7.37	10.10	7.75
6750	19.70	10.46	11.16	8.39	9.99	8.34
7000	22.04	9.51	15.07	8.79	9.48	8.50

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