

Dual-Directional Coupler

DDCH-50-13+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+5 dBm @Temperature = -55°C

FREQ. (MHz)	INSERTION LOSS (dB) In - Out	COUPLING (dB)		DIRECTIVITY (dB) In - Rev	RETURN LOSS (dB)			
		In - Fwd	Out - Rev		In	Out	Rev	Fwd
10	0.03	55.04	55.09	21.88	47.21	47.88	10.90	11.07
20	0.03	50.95	51.02	21.96	42.92	42.69	7.13	7.28
30	0.03	49.81	49.87	22.08	40.59	39.68	6.33	6.45
50	0.03	49.74	49.80	22.38	37.90	37.11	7.11	7.21
75	0.03	49.90	49.96	22.86	38.07	37.82	8.65	8.77
100	0.04	49.76	49.85	23.00	40.88	39.12	9.84	10.05
125	0.04	49.56	49.65	23.54	42.64	41.91	10.73	11.00
150	0.04	49.30	49.48	27.12	48.09	49.50	11.41	11.68
175	0.05	49.50	49.58	24.07	42.55	48.14	11.98	12.18
200	0.06	49.61	49.68	23.88	40.80	45.23	12.38	12.51
225	0.06	49.75	49.76	23.34	42.29	49.15	12.59	12.71
250	0.06	49.84	49.83	23.48	47.02	53.73	12.73	12.82
275	0.07	49.89	49.88	23.14	52.12	53.11	12.90	12.95
300	0.08	49.98	49.90	22.68	58.49	47.46	13.01	13.04
325	0.08	49.98	49.88	22.87	47.74	41.16	13.02	13.08
350	0.08	49.96	49.84	22.76	40.13	37.01	12.99	13.04
375	0.09	49.91	49.76	22.91	36.94	34.93	13.03	13.05
400	0.10	49.92	49.71	22.35	35.99	33.77	13.08	13.07
425	0.11	49.75	49.62	23.41	35.30	32.57	13.08	13.12
450	0.11	49.77	49.53	24.22	34.04	31.78	13.04	13.14
475	0.12	49.69	49.42	23.59	33.71	31.74	13.06	13.18
500	0.13	49.61	49.34	23.58	34.06	32.12	13.12	13.23
520	0.13	49.56	49.27	23.52	34.08	32.02	13.14	13.24
550	0.14	49.51	49.19	22.61	32.80	31.29	13.09	13.17
575	0.14	49.35	49.02	23.85	31.92	30.89	13.09	13.10
600	0.16	49.21	48.85	28.70	31.56	30.89	13.14	13.10
625	0.16	49.39	48.98	26.15	31.72	30.78	13.19	13.12
650	0.17	49.31	48.89	25.53	31.55	30.59	13.19	13.11
675	0.17	49.25	48.82	25.38	31.54	30.71	13.21	13.10
700	0.18	49.20	48.76	25.82	32.03	31.22	13.29	13.12
725	0.19	49.02	48.72	25.82	33.20	32.13	13.37	13.17
750	0.19	49.57	48.70	33.25	34.06	32.78	13.39	13.20
775	0.20	49.48	48.76	29.28	34.52	33.21	13.40	13.19
800	0.21	49.50	48.83	29.37	34.68	33.55	13.44	13.22
825	0.21	49.55	48.87	28.78	35.00	34.15	13.47	13.26
850	0.22	49.58	48.88	30.70	34.61	34.42	13.45	13.31
875	0.22	49.76	48.98	29.24	33.88	34.68	13.42	13.31
900	0.23	49.80	49.07	29.28	33.24	34.76	13.41	13.32
925	0.24	49.90	49.17	28.27	32.84	34.65	13.40	13.33
950	0.24	49.99	49.25	28.45	32.66	34.33	13.36	13.31
975	0.25	50.10	49.36	28.27	32.74	34.28	13.29	13.23
1000	0.26	50.23	49.66	29.70	32.82	33.81	13.27	13.17
1025	0.27	50.42	50.16	26.83	32.68	33.18	13.24	13.12
1050	0.27	50.49	50.35	26.59	32.88	32.67	13.17	13.08
1100	0.28	50.72	50.25	26.33	33.40	32.30	13.02	12.94
1150	0.29	50.59	50.36	25.09	33.59	32.37	12.86	12.78
1200	0.31	50.67	50.20	18.82	34.71	33.35	12.61	12.57
1250	0.32	49.59	49.32	17.76	36.20	33.82	12.39	12.37
1300	0.33	48.49	48.49	17.65	39.76	34.47	12.11	12.08
1350	0.35	47.22	47.53	16.17	45.71	35.20	11.84	11.84
1400	0.36	45.66	46.29	15.85	52.77	37.20	11.52	11.49
1450	0.37	44.61	44.97	16.89	45.53	38.51	11.26	11.25
1500	0.37	43.39	43.80	16.96	41.70	37.29	10.92	10.90
1550	0.38	42.39	43.04	17.69	37.75	35.32	10.60	10.64

Notes

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- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Dual-Directional Coupler

DDCH-50-13+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+5 dBm @Temperature = +25°C

FREQ. (MHz)	INSERTION LOSS (dB) In - Out	COUPLING (dB)		DIRECTIVITY (dB) In - Rev	RETURN LOSS (dB)			
		In - Fwd	Out - Rev		In	Out	Rev	Fwd
10	0.04	55.17	55.24	22.41	57.04	57.88	10.95	11.09
20	0.03	51.02	51.07	22.27	59.74	54.06	7.22	7.37
30	0.03	49.83	49.90	22.06	56.02	50.30	6.40	6.55
50	0.02	49.70	49.75	22.21	50.13	46.80	7.17	7.33
75	0.03	49.86	49.91	22.37	45.44	44.69	8.70	8.87
100	0.03	49.74	49.81	22.16	42.98	41.38	9.85	10.02
125	0.03	49.57	49.62	22.42	39.36	39.23	10.68	10.82
150	0.03	49.47	49.49	23.27	40.29	38.89	11.26	11.37
175	0.04	49.53	49.57	22.73	37.59	36.36	11.69	11.79
200	0.05	49.62	49.64	22.91	36.09	35.50	12.00	12.09
225	0.05	49.72	49.74	23.02	35.07	34.69	12.23	12.33
250	0.05	49.80	49.82	23.55	34.51	33.73	12.41	12.51
275	0.06	49.91	49.83	23.44	33.75	32.98	12.57	12.66
300	0.07	49.96	49.80	23.32	33.10	32.50	12.68	12.77
325	0.07	49.94	49.83	23.97	32.73	32.25	12.77	12.87
350	0.08	49.92	49.77	23.85	32.51	32.10	12.86	12.94
375	0.08	49.87	49.70	23.84	32.31	31.82	12.94	13.01
400	0.09	49.81	49.63	23.77	32.00	31.63	13.00	13.07
425	0.10	49.74	49.53	23.93	31.92	31.40	13.05	13.11
450	0.10	49.72	49.37	24.57	31.92	31.33	13.08	13.14
475	0.11	49.62	49.33	24.29	32.00	31.41	13.12	13.17
500	0.12	49.54	49.25	24.46	32.04	31.61	13.14	13.18
520	0.13	49.48	49.16	24.40	32.14	31.69	13.17	13.19
550	0.13	49.38	49.03	24.14	32.20	31.84	13.21	13.22
575	0.14	49.31	48.88	24.37	32.46	32.09	13.24	13.25
600	0.15	49.20	48.83	24.47	32.51	32.29	13.25	13.27
625	0.16	49.19	48.97	26.39	32.63	32.29	13.25	13.27
650	0.16	49.23	48.88	25.30	32.79	32.31	13.26	13.26
675	0.17	49.16	48.78	24.61	33.15	32.49	13.28	13.27
700	0.18	49.11	48.71	24.57	33.19	32.72	13.28	13.27
725	0.19	49.07	48.62	24.72	33.43	32.90	13.27	13.27
750	0.19	48.95	48.74	25.08	33.39	32.98	13.26	13.26
775	0.20	49.36	48.84	34.18	33.66	33.14	13.25	13.24
800	0.21	49.36	48.85	27.37	33.78	33.17	13.25	13.23
825	0.21	49.31	48.88	26.44	33.87	33.18	13.24	13.22
850	0.22	49.41	48.92	27.84	33.61	32.95	13.22	13.21
875	0.22	49.91	48.91	30.30	33.96	33.09	13.18	13.18
900	0.23	49.93	49.02	28.39	33.96	33.21	13.16	13.15
925	0.24	49.98	49.30	28.01	34.03	33.10	13.12	13.12
950	0.24	50.04	49.43	28.30	33.85	32.77	13.09	13.10
975	0.25	50.14	49.52	29.06	34.10	32.88	13.05	13.05
1000	0.26	50.38	49.68	30.00	34.23	33.03	13.02	13.01
1025	0.27	50.53	49.75	27.10	34.19	33.03	12.97	12.95
1050	0.27	50.56	50.06	25.61	34.22	32.96	12.92	12.89
1100	0.29	50.66	50.17	24.07	34.76	32.90	12.77	12.76
1150	0.30	50.49	50.21	22.23	34.87	33.20	12.63	12.62
1200	0.31	50.34	50.28	21.95	36.23	33.60	12.49	12.45
1250	0.33	49.40	49.41	18.89	36.41	33.85	12.29	12.27
1300	0.34	48.38	48.48	19.87	37.82	34.19	12.08	12.07
1350	0.36	47.83	47.62	22.59	37.49	34.44	11.83	11.85
1400	0.36	45.89	46.16	17.56	36.77	34.07	11.61	11.58
1450	0.38	44.85	44.89	19.07	35.15	33.81	11.31	11.32
1500	0.39	43.54	43.98	16.28	33.46	32.81	10.99	11.03
1550	0.39	42.40	42.47	16.07	31.93	31.93	10.97	10.73

Notes

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Dual-Directional Coupler

DDCH-50-13+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+5 dBm @Temperature = +105°C

FREQ. (MHz)	INSERTION LOSS (dB) In - Out	COUPLING (dB)		DIRECTIVITY (dB) In - Rev	RETURN LOSS (dB)			
		In - Fwd	Out - Rev		In	Out	Rev	Fwd
10	0.04	55.31	55.34	22.18	55.98	56.54	10.97	11.09
20	0.04	51.08	51.14	22.25	52.59	50.90	7.29	7.43
30	0.03	49.86	49.91	22.15	48.81	49.39	6.46	6.62
50	0.03	49.67	49.73	22.09	46.64	49.79	7.23	7.45
75	0.03	49.83	49.90	22.13	45.06	49.95	8.79	9.02
100	0.04	49.73	49.79	21.95	43.43	50.33	9.95	10.10
125	0.04	49.56	49.61	21.87	38.86	41.39	10.73	10.75
150	0.04	49.49	49.54	22.04	37.70	37.26	11.25	11.15
175	0.04	49.55	49.57	22.03	34.04	33.44	11.63	11.47
200	0.05	49.65	49.65	21.99	31.82	31.41	11.88	11.75
225	0.06	49.76	49.73	22.10	30.44	29.91	12.06	12.00
250	0.06	49.83	49.81	22.45	29.55	28.89	12.20	12.22
275	0.07	49.88	49.80	23.10	29.04	28.41	12.34	12.43
300	0.08	49.95	49.84	22.71	28.82	28.28	12.45	12.62
325	0.08	49.92	49.85	23.20	28.82	28.29	12.55	12.79
350	0.08	49.90	49.75	23.51	28.80	28.38	12.64	12.90
375	0.09	49.87	49.73	23.69	28.76	28.47	12.75	12.97
400	0.10	49.87	49.70	23.22	28.77	28.48	12.82	13.01
425	0.10	49.69	49.55	24.94	28.79	28.42	12.89	13.03
450	0.11	49.68	49.44	26.58	28.75	28.38	12.96	13.04
475	0.11	49.58	49.33	25.65	28.90	28.55	13.05	13.05
500	0.12	49.51	49.23	25.71	29.18	28.89	13.12	13.07
520	0.13	49.46	49.17	25.14	29.46	29.09	13.16	13.10
550	0.14	49.36	49.02	25.58	29.88	29.41	13.19	13.15
575	0.14	49.14	48.93	27.10	30.40	29.95	13.24	13.21
600	0.15	49.30	48.97	27.42	31.07	30.59	13.28	13.28
625	0.16	49.20	48.86	26.05	31.81	30.93	13.31	13.33
650	0.16	49.12	48.79	26.04	32.23	31.15	13.32	13.37
675	0.17	49.04	48.75	25.93	32.54	31.53	13.33	13.38
700	0.18	48.95	48.71	27.75	32.80	31.96	13.34	13.38
725	0.19	49.41	48.70	30.66	33.32	32.29	13.36	13.37
750	0.19	49.40	48.68	28.06	33.42	32.50	13.36	13.37
775	0.20	49.33	48.70	28.32	33.65	32.70	13.34	13.35
800	0.21	49.33	48.72	28.02	33.62	32.82	13.32	13.33
825	0.22	49.40	48.77	28.69	34.00	33.01	13.29	13.30
850	0.22	49.49	48.80	29.18	34.14	32.97	13.28	13.28
875	0.23	49.61	48.86	27.77	34.67	33.31	13.26	13.26
900	0.24	49.69	48.96	27.92	34.78	33.73	13.24	13.26
925	0.24	49.79	49.08	27.16	34.71	33.89	13.20	13.24
950	0.25	49.95	49.19	27.40	34.51	33.78	13.17	13.22
975	0.25	50.04	49.28	26.32	34.62	33.87	13.13	13.18
1000	0.26	50.16	49.51	25.41	34.34	34.00	13.11	13.15
1025	0.27	50.27	49.70	25.02	33.72	33.94	13.05	13.10
1050	0.27	50.30	49.90	24.41	33.69	33.72	13.00	13.04
1100	0.29	50.39	49.98	23.10	34.01	33.10	12.92	12.90
1150	0.30	50.07	50.45	20.97	33.83	32.62	12.79	12.76
1200	0.32	50.97	51.24	22.40	34.86	32.56	12.62	12.61
1250	0.33	50.09	49.80	14.70	34.52	32.33	12.43	12.43
1300	0.34	48.37	48.43	14.62	35.19	32.57	12.21	12.21
1350	0.36	47.02	47.20	15.32	35.06	33.16	11.97	11.99
1400	0.37	45.67	45.97	15.48	35.69	33.61	11.68	11.69
1450	0.38	44.54	44.82	16.22	34.95	33.89	11.38	11.41
1500	0.39	43.39	43.72	16.70	34.19	33.26	11.07	11.09
1550	0.40	42.36	42.29	16.26	32.87	32.31	10.99	10.80

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