

# Bi-Directional Coupler

# BDCA1-6-11+

## Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB)		(dB)		(dB)		(dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
300	0.63	0.63	10.43	10.44	18.39	18.57	27.00	26.98	28.08	28.09
400	0.92	0.92	8.58	8.59	19.35	19.67	26.49	26.54	27.80	27.90
500	1.19	1.19	7.37	7.39	20.69	21.30	27.16	27.28	28.98	29.21
550	1.32	1.31	6.94	6.95	21.53	22.37	28.04	28.13	30.18	30.72
575	1.38	1.37	6.75	6.76	22.03	22.98	28.66	28.69	31.02	31.63
580	1.39	1.38	6.71	6.73	22.13	23.10	28.79	28.79	31.20	31.84
590	1.41	1.41	6.64	6.66	22.34	23.37	29.02	29.04	31.65	32.29
600	1.43	1.43	6.58	6.59	22.59	23.61	29.31	29.30	32.15	32.84
610	1.45	1.45	6.52	6.53	22.79	23.89	29.59	29.62	32.70	33.50
620	1.47	1.47	6.46	6.48	22.99	24.22	29.90	29.92	33.19	34.20
650	1.53	1.53	6.30	6.32	23.67	25.18	31.08	31.11	35.13	36.46
675	1.57	1.57	6.19	6.20	24.35	26.09	32.20	32.20	37.57	39.26
700	1.61	1.61	6.09	6.11	25.08	27.11	33.65	33.57	40.78	43.37
725	1.65	1.65	6.01	6.02	25.84	28.20	35.56	35.45	46.31	48.83
750	1.68	1.68	5.94	5.96	26.58	29.55	37.18	37.26	53.38	45.37
775	1.71	1.71	5.89	5.90	27.33	31.02	38.74	39.37	45.08	40.18
800	1.74	1.73	5.85	5.86	27.91	32.33	39.10	40.11	39.74	36.46
850	1.77	1.77	5.81	5.83	28.54	33.02	35.27	36.74	33.06	31.45
875	1.78	1.79	5.81	5.83	28.34	31.91	33.11	34.20	30.89	29.51
900	1.79	1.79	5.83	5.84	27.71	30.29	30.92	31.88	29.23	27.94
950	1.78	1.79	5.90	5.92	25.92	26.84	27.75	28.24	26.32	25.31
975	1.78	1.78	5.95	5.98	24.74	25.23	26.21	26.73	25.11	24.21
1000	1.76	1.78	6.03	6.05	23.58	23.80	25.01	25.45	23.93	23.17
1050	1.74	1.75	6.22	6.24	21.36	21.24	22.71	23.08	21.98	21.32
1075	1.72	1.73	6.34	6.37	20.31	20.11	21.76	22.07	21.03	20.43
1080	1.71	1.72	6.37	6.39	20.10	19.90	21.58	21.86	20.87	20.27
1090	1.70	1.71	6.42	6.45	19.70	19.45	21.21	21.46	20.54	19.94
1100	1.69	1.71	6.48	6.51	19.28	19.02	20.80	21.06	20.20	19.64
1110	1.68	1.69	6.54	6.57	18.87	18.60	20.41	20.68	19.88	19.32
1150	1.64	1.65	6.81	6.85	17.30	17.03	19.12	19.29	18.63	18.10
1175	1.61	1.63	7.01	7.05	16.36	16.06	18.30	18.47	17.91	17.40
1200	1.59	1.60	7.23	7.28	15.44	15.14	17.58	17.75	17.19	16.75
1250	1.53	1.55	7.74	7.80	13.66	13.35	16.21	16.35	15.90	15.52
1300	1.48	1.49	8.36	8.44	11.92	11.61	14.98	15.08	14.78	14.40
1350	1.42	1.45	9.08	9.18	10.20	9.95	13.91	13.98	13.74	13.39
1400	1.39	1.40	9.93	10.06	8.47	8.27	12.97	13.04	12.84	12.54
1450	1.36	1.38	10.93	11.10	6.74	6.59	12.15	12.22	12.08	11.79
1500	1.33	1.35	12.08	12.30	4.93	4.88	11.48	11.52	11.42	11.16
1600	1.31	1.32	14.94	15.31	1.07	1.26	10.53	10.56	10.47	10.31
1700	1.28	1.30	18.76	19.39	3.48	2.94	10.08	10.12	10.08	9.93
1800	1.25	1.26	21.87	22.54	6.71	5.98	10.24	10.26	10.14	10.10
1900	1.21	1.23	18.89	18.95	2.80	2.48	10.96	10.95	10.77	10.77
2000	1.20	1.22	14.69	14.62	2.36	2.85	12.42	12.35	11.96	12.10
2100	1.26	1.28	11.57	11.53	6.78	7.84	14.80	14.59	13.93	14.18
2200	1.39	1.42	9.39	9.37	10.95	12.90	18.78	18.29	16.86	17.37
2300	1.60	1.62	7.94	7.92	15.27	19.35	25.70	24.15	21.06	21.94
2400	1.82	1.82	7.01	7.00	19.87	27.99	35.04	42.40	27.11	27.62
2500	2.02	2.01	6.49	6.46	23.18	24.45	23.72	27.22	30.19	26.42
2600	2.19	2.16	6.26	6.22	22.34	19.01	19.16	21.35	25.04	21.84
2700	2.29	2.23	6.30	6.24	19.58	15.78	16.39	18.32	21.20	19.05
2800	2.36	2.28	6.55	6.44	16.79	13.24	14.34	16.09	18.34	16.67
2900	2.34	2.25	7.04	6.89	14.48	11.26	12.79	14.40	15.97	14.91
3000	2.29	2.19	7.86	7.58	12.54	9.49	11.59	13.03	14.17	13.44

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# Bi-Directional Coupler

# BDCA1-6-11+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = -55°C

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB)		(dB)		(dB)		(dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
300	0.57	0.57	10.43	10.42	18.99	19.18	28.28	28.19	29.52	29.47
400	0.84	0.84	8.56	8.54	19.89	20.23	27.65	27.62	29.17	29.31
500	1.11	1.11	7.34	7.31	21.02	21.77	27.93	27.86	29.89	30.31
550	1.23	1.22	6.89	6.86	21.98	22.86	28.95	28.87	30.99	31.87
575	1.29	1.28	6.70	6.67	22.48	23.49	29.68	29.52	31.82	32.62
580	1.30	1.29	6.67	6.64	22.59	23.61	29.81	29.62	32.02	32.82
590	1.32	1.31	6.60	6.57	22.79	23.88	30.06	29.85	32.49	33.30
600	1.34	1.34	6.53	6.50	23.04	24.10	30.37	30.09	32.99	33.90
610	1.36	1.36	6.47	6.44	23.23	24.37	30.65	30.41	33.53	34.68
620	1.38	1.38	6.41	6.38	23.42	24.73	30.97	30.69	33.99	35.42
650	1.43	1.43	6.25	6.22	24.08	25.83	32.26	31.82	36.15	38.13
675	1.48	1.48	6.13	6.10	24.68	26.73	33.44	32.68	38.89	42.64
700	1.51	1.51	6.03	6.00	25.27	27.68	34.90	33.63	41.65	49.74
725	1.55	1.55	5.94	5.91	25.90	28.71	36.92	34.95	44.42	57.67
750	1.58	1.58	5.87	5.84	26.53	29.87	38.94	36.22	45.20	44.68
775	1.61	1.61	5.81	5.78	27.22	31.30	41.35	37.80	41.88	39.93
800	1.63	1.63	5.77	5.73	27.81	32.32	42.20	38.36	38.84	36.28
850	1.66	1.66	5.72	5.68	28.54	32.37	36.45	36.02	33.44	31.96
875	1.67	1.67	5.72	5.68	28.30	31.21	33.81	33.64	31.39	30.00
900	1.67	1.68	5.72	5.68	27.63	29.90	31.41	31.44	29.79	28.48
950	1.67	1.68	5.78	5.75	25.94	26.81	28.33	28.24	26.84	25.76
975	1.66	1.67	5.84	5.80	24.88	25.38	26.83	26.93	25.59	24.67
1000	1.65	1.66	5.90	5.86	23.82	23.92	25.66	25.81	24.31	23.50
1050	1.62	1.63	6.08	6.04	21.75	21.32	23.32	23.57	22.21	21.44
1075	1.59	1.61	6.19	6.16	20.70	20.16	22.32	22.51	21.24	20.51
1080	1.59	1.61	6.22	6.18	20.49	19.95	22.12	22.29	21.08	20.35
1090	1.58	1.59	6.27	6.23	20.08	19.54	21.73	21.85	20.77	20.03
1100	1.57	1.59	6.32	6.29	19.64	19.14	21.30	21.41	20.44	19.76
1110	1.56	1.58	6.38	6.35	19.21	18.73	20.90	21.01	20.12	19.49
1150	1.52	1.53	6.64	6.61	17.62	17.23	19.61	19.65	18.85	18.25
1175	1.48	1.51	6.83	6.80	16.71	16.27	18.81	18.88	18.08	17.52
1200	1.45	1.48	7.04	7.02	15.81	15.32	18.07	18.18	17.32	16.83
1250	1.39	1.42	7.53	7.51	14.07	13.52	16.62	16.72	16.05	15.58
1300	1.33	1.36	8.12	8.12	12.36	11.81	15.28	15.32	14.98	14.46
1350	1.28	1.30	8.81	8.84	10.56	10.18	14.07	14.02	13.96	13.50
1400	1.23	1.25	9.63	9.69	8.81	8.56	13.15	13.09	13.06	12.71
1450	1.19	1.21	10.61	10.67	7.15	6.92	12.30	12.30	12.24	11.92
1500	1.18	1.18	11.75	11.85	5.32	5.19	11.48	11.41	11.50	11.17
1600	1.13	1.15	14.48	14.77	1.48	1.62	10.53	10.46	10.53	10.28
1700	1.11	1.11	18.30	18.80	2.99	2.64	9.99	9.94	10.08	9.84
1800	1.06	1.09	21.94	22.60	6.89	6.23	10.12	10.06	9.94	9.84
1900	1.03	1.04	19.48	19.53	3.53	3.30	10.68	10.56	10.50	10.36
2000	0.99	1.02	15.08	14.91	1.81	2.15	12.07	11.90	11.70	11.78
2100	1.03	1.07	11.81	11.66	6.42	7.31	14.32	13.99	13.48	13.64
2200	1.16	1.18	9.49	9.34	10.61	12.53	18.07	17.38	16.38	16.96
2300	1.36	1.38	7.97	7.83	15.24	18.96	24.78	23.25	19.97	20.86
2400	1.57	1.57	6.96	6.83	19.92	27.41	37.46	39.97	25.70	26.82
2500	1.78	1.76	6.39	6.24	21.82	24.08	23.76	26.51	29.57	26.90
2600	1.94	1.91	6.11	5.96	22.45	19.45	19.56	21.56	25.95	22.78
2700	2.03	1.98	6.08	5.91	20.41	15.87	16.89	19.12	22.19	19.52
2800	2.10	2.03	6.31	6.09	17.38	13.37	14.64	16.32	18.82	16.70
2900	2.09	2.00	6.72	6.46	14.82	11.59	12.98	14.32	16.46	15.30
3000	2.03	1.94	7.45	7.07	13.13	9.80	11.82	13.18	14.40	13.52

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# Bi-Directional Coupler

# BDCA1-6-11+

## Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = +100°C

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB)		(dB)		(dB)		(dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
300	0.69	0.69	10.42	10.45	17.91	18.04	26.00	25.99	26.90	26.97
400	0.98	0.98	8.59	8.62	18.91	19.14	25.58	25.62	26.73	26.80
500	1.26	1.26	7.39	7.43	20.31	20.80	26.30	26.45	28.01	28.20
550	1.39	1.38	6.96	7.00	21.23	21.89	27.30	27.48	29.26	29.73
575	1.45	1.44	6.78	6.81	21.72	22.54	27.93	28.10	30.16	30.51
580	1.46	1.45	6.74	6.78	21.83	22.68	28.05	28.20	30.37	30.72
590	1.48	1.47	6.67	6.71	22.04	22.96	28.28	28.42	30.89	31.22
600	1.50	1.49	6.61	6.65	22.28	23.19	28.55	28.66	31.41	31.87
610	1.52	1.52	6.55	6.59	22.49	23.44	28.82	28.99	31.93	32.60
620	1.54	1.54	6.50	6.53	22.69	23.74	29.11	29.30	32.37	33.27
650	1.60	1.60	6.34	6.38	23.43	24.77	30.32	30.59	34.29	35.00
675	1.64	1.65	6.24	6.28	24.18	25.61	31.51	31.89	36.64	37.63
700	1.68	1.68	6.14	6.18	24.94	26.62	32.92	33.57	39.49	40.67
725	1.72	1.72	6.06	6.10	25.70	27.87	34.65	35.56	45.46	43.88
750	1.75	1.76	5.99	6.04	26.45	29.15	35.96	37.60	62.78	43.94
775	1.79	1.79	5.95	5.99	27.25	30.84	37.12	40.49	46.47	40.16
800	1.81	1.81	5.91	5.95	27.88	32.34	37.46	41.87	39.50	35.99
850	1.84	1.85	5.88	5.93	28.58	33.56	34.23	37.23	32.75	31.27
875	1.85	1.86	5.89	5.93	28.33	32.17	32.30	34.26	30.46	29.06
900	1.86	1.87	5.90	5.95	27.62	30.51	30.19	31.65	28.85	27.54
950	1.86	1.87	5.99	6.04	25.65	26.61	27.14	27.92	25.84	24.79
975	1.85	1.87	6.05	6.11	24.45	25.04	25.66	26.39	24.68	23.83
1000	1.84	1.86	6.13	6.19	23.25	23.52	24.51	25.12	23.49	22.80
1050	1.82	1.83	6.34	6.40	20.96	21.00	22.22	22.65	21.61	21.06
1075	1.80	1.81	6.47	6.53	19.89	19.82	21.28	21.63	20.68	20.14
1080	1.79	1.81	6.49	6.56	19.68	19.61	21.10	21.43	20.53	19.97
1090	1.79	1.80	6.55	6.62	19.28	19.18	20.74	21.03	20.23	19.65
1100	1.78	1.79	6.61	6.68	18.86	18.77	20.35	20.63	19.92	19.39
1110	1.77	1.78	6.67	6.75	18.45	18.36	19.97	20.26	19.61	19.11
1150	1.73	1.74	6.96	7.04	16.89	16.76	18.72	18.92	18.38	17.89
1175	1.70	1.72	7.17	7.25	15.95	15.82	17.92	18.10	17.69	17.24
1200	1.67	1.70	7.40	7.49	15.02	14.87	17.23	17.41	16.95	16.59
1250	1.62	1.64	7.93	8.03	13.26	13.07	15.95	16.12	15.71	15.38
1300	1.57	1.59	8.57	8.69	11.54	11.34	14.81	14.94	14.63	14.27
1350	1.52	1.55	9.32	9.46	9.85	9.66	13.81	13.92	13.63	13.30
1400	1.49	1.51	10.19	10.37	8.12	7.99	12.91	13.02	12.76	12.52
1450	1.46	1.48	11.22	11.44	6.36	6.32	12.12	12.22	12.06	11.82
1500	1.44	1.46	12.40	12.68	4.55	4.58	11.53	11.62	11.44	11.19
1600	1.42	1.44	15.36	15.79	0.63	0.90	10.62	10.69	10.50	10.41
1700	1.40	1.42	19.20	19.91	3.94	3.29	10.22	10.29	10.24	10.13
1800	1.37	1.39	21.69	22.33	6.41	5.70	10.50	10.59	10.42	10.45
1900	1.34	1.37	18.24	18.31	2.06	1.69	11.30	11.34	11.11	11.14
2000	1.36	1.39	14.25	14.24	2.86	3.47	12.82	12.81	12.30	12.53
2100	1.44	1.47	11.33	11.34	7.09	8.30	15.13	15.00	14.29	14.56
2200	1.58	1.62	9.28	9.32	11.11	13.13	19.18	18.77	17.16	17.81
2300	1.80	1.82	7.91	7.96	15.19	19.37	26.06	24.49	21.44	22.24
2400	2.01	2.03	7.04	7.09	19.40	27.32	35.81	40.29	27.53	28.45
2500	2.20	2.20	6.57	6.60	24.10	25.37	24.48	28.37	30.94	26.77
2600	2.37	2.35	6.37	6.41	22.67	19.46	19.11	21.19	25.17	21.86
2700	2.47	2.43	6.48	6.49	19.46	15.95	16.39	18.31	21.19	19.31
2800	2.52	2.45	6.78	6.74	16.91	13.37	14.37	16.20	18.41	16.73
2900	2.51	2.44	7.34	7.25	14.45	11.25	12.72	14.42	15.85	14.92
3000	2.50	2.41	8.25	8.04	12.26	9.27	11.44	12.87	14.03	13.36

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