

Bi-Directional Coupler

BDCN-7-25+

Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
500	0.39	0.38	13.48	13.49	13.72	13.75	30.86	30.74	36.70	37.14
600	0.46	0.50	12.11	12.08	13.86	13.93	29.20	29.14	35.59	35.76
700	0.58	0.60	10.97	10.99	13.97	14.08	27.77	27.49	34.27	34.45
800	0.72	0.68	10.06	10.06	14.19	14.26	26.20	26.07	32.44	33.66
880	0.81	0.79	9.43	9.43	14.33	14.55	25.45	25.49	32.28	33.10
900	0.80	0.82	9.29	9.32	14.31	14.58	25.24	25.14	31.93	32.56
1000	0.94	0.92	8.68	8.67	14.67	14.74	24.44	24.23	30.99	31.97
1050	0.97	0.99	8.40	8.39	14.81	14.84	23.94	23.89	30.73	31.96
1100	1.05	1.05	8.15	8.14	14.99	15.05	23.71	23.56	30.37	31.45
1150	1.10	1.09	7.91	7.90	15.17	15.09	23.38	23.27	30.09	31.21
1200	1.15	1.15	7.69	7.70	15.35	15.35	23.12	23.01	29.90	31.06
1250	1.20	1.22	7.51	7.49	15.61	15.61	22.92	22.65	30.04	31.03
1300	1.25	1.25	7.33	7.33	15.83	15.79	22.73	22.64	29.93	30.84
1350	1.29	1.30	7.17	7.16	16.16	16.11	22.52	22.24	29.79	30.91
1400	1.34	1.35	7.03	7.00	16.38	16.27	22.25	22.22	29.89	31.20
1450	1.39	1.38	6.89	6.89	16.65	16.61	22.23	22.09	29.96	31.06
1500	1.41	1.42	6.77	6.77	16.98	16.82	22.17	21.96	30.39	31.32
1600	1.50	1.50	6.59	6.55	17.42	17.41	22.07	21.95	30.67	31.84
1650	1.52	1.52	6.50	6.48	17.93	17.77	22.10	21.91	30.82	32.43
1700	1.54	1.57	6.45	6.42	18.08	18.11	22.12	21.81	31.30	32.71
1750	1.57	1.58	6.37	6.36	18.56	18.60	22.24	22.14	31.54	33.09
1800	1.58	1.60	6.34	6.32	18.92	18.75	22.32	22.02	32.07	33.39
1850	1.60	1.61	6.29	6.29	19.26	19.35	22.43	22.20	32.84	34.22
1900	1.62	1.63	6.25	6.24	19.43	19.56	22.56	22.26	33.45	34.88
1950	1.62	1.62	6.25	6.24	19.91	20.14	22.77	22.40	34.29	35.72
2000	1.64	1.64	6.23	6.24	20.23	20.44	23.13	22.57	34.58	37.01
2050	1.64	1.64	6.24	6.24	20.58	21.28	23.30	22.89	36.20	37.45
2100	1.63	1.64	6.26	6.25	21.17	21.69	23.64	23.02	37.50	39.18
2150	1.63	1.64	6.28	6.28	21.20	22.35	23.93	23.36	38.35	40.35
2200	1.62	1.63	6.34	6.32	21.88	23.39	24.32	23.62	38.59	42.19
2300	1.59	1.60	6.45	6.43	22.55	24.76	25.08	24.24	42.26	41.88
2400	1.55	1.55	6.63	6.61	23.47	27.09	26.22	25.25	42.32	39.09
2500	1.49	1.49	6.86	6.85	24.09	29.98	27.08	26.21	43.20	36.49
2600	1.44	1.42	7.15	7.15	24.47	38.17	27.73	27.39	42.56	34.28
2700	1.35	1.34	7.51	7.53	24.45	39.75	27.87	28.22	43.80	33.16
2800	1.27	1.25	7.99	8.00	24.81	32.30	27.46	28.89	41.98	31.42
2900	1.16	1.17	8.59	8.61	24.25	26.44	26.28	29.22	43.09	30.19
3000	1.07	1.06	9.32	9.33	22.55	22.33	25.03	28.49	39.91	28.57
3100	0.97	0.97	10.25	10.27	20.15	19.12	23.84	28.15	36.69	27.71
3200	0.89	0.88	11.43	11.37	17.08	15.65	22.51	26.43	33.52	26.66
3300	0.78	0.82	12.91	12.92	13.44	12.49	21.97	25.28	29.61	25.94
3400	0.74	0.74	14.94	14.92	9.49	8.92	21.14	23.67	26.95	24.42
3500	0.69	0.70	17.78	17.81	4.92	4.68	20.58	22.35	24.31	23.19
3600	0.69	0.70	21.91	22.23	1.20	0.98	19.90	20.86	21.78	21.43
3700	0.71	0.72	27.04	29.96	10.43	7.26	19.43	19.37	19.91	19.69
3800	0.77	0.77	23.59	25.62	7.36	4.88	18.55	18.14	17.82	18.06
3900	0.87	0.88	18.57	19.34	2.17	0.80	17.80	16.92	16.64	16.58
4000	1.01	1.02	15.36	15.79	0.35	1.42	16.73	15.75	15.10	15.32
4100	1.25	1.26	12.87	13.12	2.36	3.35	16.02	15.07	13.95	14.23
4200	1.45	1.45	11.23	11.41	3.26	4.13	14.81	14.07	12.99	13.27
4300	1.67	1.67	9.91	9.98	4.03	4.71	14.18	13.34	12.25	12.57
4400	1.96	2.00	8.82	8.81	4.79	5.30	13.52	12.87	11.64	11.91
4500	2.24	2.27	7.98	7.94	5.14	5.77	13.06	12.34	11.12	11.54

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Bi-Directional Coupler

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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
500	0.28	0.28	13.42	13.44	13.87	13.84	32.15	32.01	39.81	40.96
600	0.35	0.39	12.03	12.01	13.97	13.95	30.07	30.03	37.92	38.38
700	0.47	0.47	10.88	10.91	14.08	14.12	28.46	27.97	35.51	36.06
800	0.57	0.53	9.96	9.97	14.15	14.35	26.76	26.44	33.51	34.84
880	0.66	0.66	9.34	9.32	14.33	14.50	25.92	25.92	33.11	34.06
900	0.66	0.67	9.18	9.20	14.32	14.52	25.67	25.54	32.63	33.50
1000	0.80	0.79	8.54	8.54	14.63	14.74	24.72	24.53	31.10	32.25
1050	0.81	0.84	8.25	8.27	14.71	14.76	24.03	24.03	30.58	31.78
1100	0.89	0.90	8.01	8.00	14.92	14.93	23.68	23.66	30.50	31.32
1150	0.93	0.95	7.76	7.76	15.05	14.91	23.17	23.25	29.85	30.61
1200	0.97	1.01	7.54	7.55	15.27	15.26	22.79	22.95	29.56	30.11
1250	1.02	1.05	7.35	7.34	15.54	15.39	22.59	22.51	29.61	29.58
1300	1.06	1.09	7.17	7.17	15.80	15.56	22.36	22.50	29.40	29.52
1350	1.10	1.12	7.01	7.01	16.12	15.99	22.16	22.07	29.50	29.77
1400	1.16	1.16	6.86	6.84	16.25	15.98	21.59	21.95	29.04	30.17
1450	1.19	1.19	6.71	6.70	16.50	16.33	21.46	21.76	28.75	29.58
1500	1.21	1.23	6.59	6.59	16.82	16.78	21.61	21.49	29.17	29.72
1600	1.28	1.30	6.37	6.38	17.45	17.39	21.55	21.46	30.37	30.26
1650	1.31	1.31	6.30	6.30	17.96	17.75	21.58	21.51	29.94	31.02
1700	1.32	1.35	6.24	6.22	18.05	18.06	21.41	21.41	29.95	31.19
1750	1.35	1.37	6.16	6.16	18.57	18.67	21.57	21.70	29.97	32.40
1800	1.37	1.37	6.11	6.10	18.90	19.06	21.99	21.66	30.36	32.71
1850	1.39	1.38	6.05	6.07	19.29	19.34	21.88	21.97	30.33	32.95
1900	1.38	1.42	6.02	6.02	19.61	19.57	21.89	22.18	30.59	34.45
1950	1.40	1.40	6.01	6.01	19.91	20.09	21.91	21.96	31.41	34.61
2000	1.40	1.41	6.00	6.01	20.41	20.40	21.89	21.79	31.50	36.59
2050	1.39	1.40	6.00	6.00	20.99	21.70	22.82	22.66	33.19	37.49
2100	1.39	1.40	6.01	6.00	21.40	22.24	23.14	22.62	34.73	39.89
2150	1.39	1.39	6.01	6.02	21.42	23.03	23.03	22.30	36.00	40.46
2200	1.37	1.38	6.06	6.05	22.68	24.50	24.06	23.07	40.05	40.11
2300	1.33	1.34	6.15	6.16	22.65	25.94	25.34	24.19	36.39	49.58
2400	1.28	1.29	6.32	6.30	24.46	29.62	26.32	25.08	39.33	37.91
2500	1.22	1.22	6.52	6.53	24.60	32.70	27.34	25.94	42.26	36.81
2600	1.15	1.16	6.79	6.83	24.75	41.49	27.66	27.21	45.41	36.55
2700	1.07	1.06	7.15	7.16	24.62	42.85	28.10	28.41	45.61	34.12
2800	0.97	0.98	7.59	7.63	25.16	31.27	25.86	27.07	40.74	30.95
2900	0.86	0.88	8.16	8.20	24.64	25.94	25.06	28.10	41.83	29.43
3000	0.76	0.76	8.87	8.89	23.10	22.15	24.78	28.56	36.54	26.84
3100	0.65	0.67	9.73	9.78	20.61	19.51	23.36	27.29	36.30	26.17
3200	0.55	0.56	10.86	10.88	17.99	16.22	22.34	26.60	34.06	25.52
3300	0.43	0.47	12.27	12.30	13.92	13.13	22.02	25.83	29.46	25.04
3400	0.38	0.40	14.18	14.21	9.98	9.63	21.04	23.93	28.06	24.52
3500	0.32	0.36	16.84	16.91	5.58	5.58	20.28	22.19	25.16	23.88
3600	0.35	0.36	20.79	20.85	0.09	0.07	19.14	20.72	22.48	21.58
3700	0.34	0.36	26.22	27.92	8.67	6.74	18.88	19.15	20.11	19.48
3800	0.36	0.38	24.56	27.34	9.31	6.22	18.67	18.34	17.69	17.67
3900	0.44	0.46	19.17	20.01	3.12	1.84	18.45	17.45	16.10	15.84
4000	0.56	0.59	15.51	15.91	0.04	0.89	17.39	16.33	14.29	14.40
4100	0.76	0.78	13.04	13.22	2.00	2.64	15.90	14.94	13.33	13.57
4200	0.99	0.98	11.18	11.33	3.11	3.80	14.64	13.74	12.43	12.61
4300	1.17	1.18	9.79	9.90	3.82	4.43	13.96	12.80	11.87	12.03
4400	1.45	1.49	8.57	8.67	4.59	5.24	13.41	12.26	11.30	11.32
4500	1.73	1.78	7.68	7.79	4.85	5.81	12.91	11.79	10.54	10.84

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Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	IN-OUT	FWD-REV	IN-FWD	OUT-REV	IN-REV	OUT-FWD	IN	OUT	FWD	REV
500	0.43	0.44	13.49	13.50	13.63	13.76	29.71	29.66	34.38	34.49
600	0.54	0.56	12.11	12.09	13.90	13.98	28.39	28.37	33.92	34.08
700	0.65	0.67	11.01	11.02	13.96	14.11	27.25	26.95	32.89	32.98
800	0.78	0.76	10.11	10.10	14.16	14.35	25.91	25.65	31.36	32.61
880	0.87	0.88	9.51	9.48	14.37	14.58	25.20	25.33	31.40	32.65
900	0.88	0.90	9.35	9.37	14.38	14.64	25.06	25.02	31.31	32.27
1000	1.02	1.03	8.74	8.72	14.75	14.88	24.40	24.12	30.88	32.25
1050	1.06	1.09	8.46	8.45	14.89	15.06	24.09	23.92	31.01	32.49
1100	1.13	1.14	8.21	8.22	15.12	15.24	23.87	23.57	30.88	32.54
1150	1.18	1.20	7.97	7.97	15.30	15.33	23.62	23.39	30.84	32.39
1200	1.25	1.26	7.76	7.76	15.54	15.61	23.45	23.26	30.83	32.35
1250	1.31	1.32	7.59	7.57	15.74	15.80	23.23	22.81	31.23	32.77
1300	1.35	1.36	7.41	7.42	15.97	16.02	23.17	22.88	31.39	32.89
1350	1.39	1.41	7.25	7.24	16.36	16.39	23.09	22.59	31.43	32.78
1400	1.45	1.45	7.10	7.10	16.46	16.45	22.83	22.59	31.68	33.20
1450	1.49	1.50	6.97	6.97	16.77	16.74	22.86	22.54	31.74	32.79
1500	1.53	1.54	6.87	6.85	17.05	16.94	22.77	22.46	32.24	33.05
1600	1.61	1.61	6.67	6.65	17.44	17.42	22.77	22.43	32.55	33.35
1650	1.63	1.64	6.58	6.59	17.92	17.82	22.71	22.31	32.83	33.57
1700	1.67	1.69	6.54	6.52	18.03	18.10	22.92	22.27	33.15	33.64
1750	1.69	1.71	6.47	6.48	18.44	18.43	22.99	22.65	33.61	33.58
1800	1.72	1.73	6.44	6.44	18.85	18.45	22.99	22.46	34.53	33.30
1850	1.73	1.75	6.40	6.41	19.20	18.99	23.02	22.50	35.85	33.21
1900	1.76	1.77	6.38	6.37	19.35	19.16	23.29	22.65	36.73	33.36
1950	1.77	1.78	6.38	6.37	19.64	19.68	23.41	22.88	37.62	34.10
2000	1.78	1.79	6.36	6.38	19.89	19.85	23.84	23.12	36.48	34.51
2050	1.78	1.79	6.38	6.37	20.02	20.31	23.90	23.34	38.19	34.43
2100	1.78	1.79	6.40	6.41	20.67	20.69	24.11	23.39	38.98	35.89
2150	1.78	1.78	6.44	6.41	20.82	21.08	24.46	23.73	39.83	37.26
2200	1.78	1.78	6.50	6.48	21.12	21.90	24.70	24.00	37.84	39.55
2300	1.74	1.75	6.61	6.61	21.65	22.85	25.02	24.41	43.73	39.93
2400	1.71	1.72	6.81	6.80	22.23	24.64	26.11	25.15	42.93	41.93
2500	1.65	1.66	7.07	7.05	22.85	26.74	27.04	26.11	43.97	41.71
2600	1.60	1.60	7.37	7.37	23.00	31.08	27.49	27.24	45.91	37.75
2700	1.53	1.53	7.78	7.76	23.16	33.02	27.47	27.40	44.90	36.14
2800	1.45	1.44	8.25	8.27	23.16	32.22	27.87	28.46	38.93	33.08
2900	1.35	1.36	8.87	8.89	22.43	26.47	26.61	28.32	37.64	30.99
3000	1.26	1.27	9.63	9.63	21.05	22.12	25.19	27.83	33.48	29.04
3100	1.17	1.18	10.60	10.61	18.54	18.61	24.06	27.17	31.21	27.47
3200	1.09	1.10	11.81	11.78	15.91	14.99	22.74	25.45	29.03	26.16
3300	1.00	1.03	13.39	13.35	12.64	11.69	21.97	24.45	27.08	25.06
3400	0.98	0.99	15.51	15.44	8.65	8.12	20.95	22.67	25.15	23.53
3500	0.93	0.94	18.42	18.45	4.09	3.85	20.56	21.78	22.99	22.37
3600	0.92	0.96	22.69	23.09	2.13	1.79	19.92	20.45	21.20	21.05
3700	0.96	0.97	27.13	30.56	10.90	7.19	19.55	19.31	19.78	19.77
3800	1.03	1.06	23.05	24.67	6.31	4.13	18.49	18.16	18.14	18.55
3900	1.15	1.17	18.36	19.05	1.78	0.33	17.64	16.84	17.22	17.30
4000	1.29	1.33	15.13	15.58	0.80	2.06	16.73	15.85	16.05	16.38
4100	1.53	1.54	12.93	13.18	2.31	3.40	16.13	15.12	14.56	14.91
4200	1.73	1.75	11.22	11.37	3.46	4.40	15.44	14.48	13.84	14.21
4300	1.97	1.99	9.92	9.99	4.16	5.02	14.82	13.85	12.89	13.33
4400	2.29	2.33	8.94	8.87	4.84	5.36	14.03	13.44	12.26	12.63
4500	2.57	2.64	8.09	8.01	5.25	5.87	13.60	12.86	11.78	12.26

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