

Bi-Directional Coupler

BDCN-10-25+

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	0.32	0.31	15.61	15.60	12.48	12.43	27.18	27.22	37.52	35.12
550	0.34	0.33	14.87	14.86	12.42	12.58	26.41	26.51	34.48	34.98
600	0.37	0.37	14.20	14.19	12.41	12.55	25.58	25.64	34.56	33.81
700	0.45	0.45	13.07	13.04	12.70	12.73	24.27	24.34	33.21	32.24
800	0.54	0.51	12.14	12.12	12.75	12.76	23.38	23.11	31.75	31.42
900	0.61	0.63	11.36	11.35	12.96	13.05	22.58	22.29	30.19	30.87
1000	0.68	0.68	10.70	10.72	13.14	13.38	21.67	21.40	29.40	30.20
1050	0.73	0.72	10.42	10.40	13.42	13.47	21.40	21.09	28.98	29.74
1100	0.77	0.78	10.18	10.15	13.52	13.65	21.09	20.84	28.73	29.40
1150	0.80	0.80	9.93	9.91	13.77	13.84	20.80	20.48	28.45	29.09
1200	0.85	0.85	9.70	9.70	13.90	13.93	20.67	20.36	28.07	28.60
1250	0.87	0.86	9.51	9.52	14.06	14.25	20.39	20.05	28.11	28.56
1300	0.91	0.90	9.34	9.34	14.33	14.43	20.16	19.93	28.03	28.46
1350	0.95	0.94	9.18	9.17	14.47	14.72	19.98	19.65	27.83	28.33
1400	0.97	0.97	9.04	9.03	14.75	15.03	19.87	19.56	27.80	28.32
1500	1.02	1.02	8.78	8.79	15.22	15.55	19.63	19.33	27.55	28.28
1550	1.04	1.05	8.70	8.69	15.46	15.75	19.50	19.22	27.78	28.16
1600	1.05	1.06	8.62	8.61	15.78	16.07	19.43	19.04	27.53	28.41
1650	1.08	1.08	8.54	8.52	15.93	16.53	19.39	19.00	27.91	28.58
1700	1.09	1.09	8.49	8.50	16.31	16.92	19.38	19.00	28.02	28.61
1750	1.10	1.12	8.44	8.42	16.64	17.30	19.38	18.87	27.71	28.29
1800	1.12	1.12	8.41	8.41	16.84	17.59	19.18	18.85	27.78	28.69
1850	1.12	1.15	8.39	8.39	17.08	18.16	19.20	18.82	27.96	28.93
1900	1.14	1.14	8.38	8.39	17.19	18.52	19.18	18.84	28.50	29.47
2000	1.14	1.15	8.41	8.42	17.91	19.47	19.31	18.79	28.35	29.95
2100	1.14	1.14	8.50	8.50	18.49	20.88	19.23	18.84	28.78	30.66
2150	1.13	1.13	8.55	8.57	18.78	21.24	19.33	18.83	28.80	31.02
2200	1.12	1.13	8.64	8.65	18.95	21.95	19.28	18.86	29.06	30.93
2300	1.11	1.11	8.84	8.86	19.10	23.14	19.28	18.85	29.06	31.40
2350	1.09	1.09	8.99	9.00	19.02	23.77	19.19	18.88	29.20	31.52
2400	1.07	1.07	9.13	9.14	18.95	24.28	19.18	18.92	29.03	31.40
2500	1.04	1.03	9.50	9.49	18.60	23.82	18.97	18.65	28.72	30.78
2550	1.01	1.02	9.72	9.73	18.27	23.24	18.86	18.58	28.62	30.16
2600	0.99	0.97	9.95	9.95	18.03	22.64	18.88	18.52	28.23	29.98
2700	0.95	0.96	10.53	10.51	16.81	20.34	18.37	18.60	27.30	28.85
2800	0.90	0.91	11.25	11.24	15.35	17.54	18.20	18.18	26.67	27.35
2900	0.86	0.87	12.17	12.12	13.27	14.64	17.57	17.75	25.37	25.95
3000	0.84	0.82	13.27	13.20	11.08	11.83	16.94	17.22	24.12	24.41
3100	0.78	0.78	14.72	14.60	8.43	8.92	16.41	16.65	22.53	22.63
3200	0.78	0.78	16.57	16.34	5.48	5.69	15.88	16.01	20.95	21.16
3300	0.78	0.78	19.12	18.64	2.08	1.84	15.12	15.43	19.52	19.65
3400	0.80	0.79	22.73	21.64	1.97	2.89	14.45	14.77	18.21	18.32
3500	0.86	0.82	28.03	24.93	6.23	9.15	13.90	14.06	16.89	16.89
3600	0.91	0.89	28.64	25.44	7.55	10.61	13.35	13.49	15.68	15.81
3700	0.98	0.97	23.24	22.41	5.27	5.97	12.75	12.87	14.68	14.65
3800	1.06	1.07	19.38	19.21	2.74	2.72	12.40	12.29	13.73	13.69
3900	1.19	1.19	16.72	16.75	0.81	0.61	11.92	11.89	13.01	12.93
4000	1.31	1.31	14.65	14.80	0.66	1.05	11.65	11.52	12.37	12.32
4100	1.47	1.48	13.14	13.35	1.64	2.23	11.35	11.16	11.83	11.69
4200	1.60	1.60	11.89	12.10	2.56	3.10	11.16	10.99	11.45	11.31
4300	1.79	1.74	10.91	11.08	3.21	3.73	11.01	10.76	11.11	10.97
4400	1.92	1.91	9.98	10.16	3.91	4.35	11.06	10.68	10.81	10.67
4500	2.09	2.08	9.28	9.43	4.35	4.87	10.89	10.51	10.66	10.57

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Typical Performance Data

TEST CONDITIONS: INPUT POWER =0 dBm @Temperature = -55°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	0.21	0.20	15.56	15.53	12.58	12.44	27.98	27.93	40.87	37.72
550	0.24	0.24	14.81	14.81	12.50	12.58	27.13	27.23	37.38	38.09
600	0.27	0.27	14.13	14.14	12.44	12.52	26.09	26.15	36.71	36.00
700	0.33	0.33	13.00	12.94	12.63	12.75	24.65	24.73	34.75	33.56
800	0.39	0.41	12.03	12.04	12.67	12.84	23.72	23.42	32.82	32.44
900	0.46	0.49	11.25	11.23	12.95	13.05	22.83	22.50	31.03	31.84
1000	0.54	0.53	10.60	10.59	13.00	13.32	21.86	21.57	29.67	30.57
1050	0.58	0.57	10.30	10.28	13.35	13.39	21.48	21.15	28.89	29.72
1100	0.61	0.62	10.03	10.01	13.43	13.60	21.13	20.85	28.86	29.53
1150	0.64	0.66	9.81	9.78	13.62	13.71	20.68	20.47	28.27	28.72
1200	0.69	0.69	9.55	9.54	13.77	13.75	20.45	20.22	27.64	27.99
1250	0.68	0.70	9.37	9.36	13.91	14.03	20.18	19.91	27.54	27.71
1300	0.72	0.73	9.20	9.19	14.27	14.25	19.91	19.75	27.39	27.31
1350	0.77	0.76	9.03	9.02	14.35	14.61	19.75	19.49	27.49	27.65
1400	0.79	0.78	8.89	8.85	14.63	14.75	19.47	19.25	27.13	27.41
1500	0.83	0.83	8.62	8.61	15.13	15.38	19.19	18.91	26.33	26.82
1550	0.85	0.84	8.53	8.51	15.42	15.76	19.08	18.76	26.85	26.78
1600	0.87	0.87	8.44	8.42	15.76	16.05	19.00	18.64	26.93	27.22
1650	0.88	0.88	8.35	8.32	15.88	16.49	19.03	18.64	26.95	27.31
1700	0.89	0.89	8.31	8.31	16.17	16.71	18.94	18.62	26.96	27.28
1750	0.89	0.90	8.25	8.23	16.63	17.28	18.83	18.44	26.67	27.17
1800	0.90	0.90	8.22	8.20	16.86	17.85	18.91	18.49	26.78	27.88
1850	0.92	0.91	8.19	8.17	17.03	17.99	18.89	18.61	26.40	27.45
1900	0.91	0.91	8.18	8.16	17.40	18.42	18.89	18.65	26.96	27.76
2000	0.92	0.93	8.19	8.18	18.12	19.22	18.52	18.15	26.76	28.10
2100	0.90	0.91	8.24	8.24	18.78	21.14	18.89	18.49	28.04	29.44
2150	0.90	0.89	8.31	8.30	18.87	21.56	18.70	18.16	28.23	30.16
2200	0.88	0.87	8.38	8.38	19.29	22.64	19.01	18.45	28.53	30.11
2300	0.85	0.84	8.57	8.57	19.42	23.93	19.34	18.76	28.34	30.26
2350	0.83	0.83	8.70	8.70	19.19	24.58	19.17	18.70	28.13	30.03
2400	0.81	0.81	8.84	8.83	19.55	25.28	19.15	18.79	29.37	31.53
2500	0.76	0.76	9.18	9.16	19.13	24.84	19.02	18.59	29.05	31.61
2550	0.74	0.73	9.37	9.37	18.77	24.21	18.86	18.50	28.81	30.72
2600	0.72	0.68	9.61	9.59	18.46	23.23	18.82	18.40	27.75	29.69
2700	0.66	0.67	10.16	10.13	17.12	20.84	18.37	18.58	26.42	28.08
2800	0.63	0.61	10.86	10.82	15.74	17.69	17.58	17.55	26.86	27.80
2900	0.55	0.56	11.72	11.67	13.76	14.87	17.21	17.39	25.83	26.34
3000	0.53	0.53	12.77	12.72	11.48	12.11	16.58	16.89	24.90	24.80
3100	0.48	0.48	14.15	14.07	8.88	9.35	15.81	16.03	23.78	23.66
3200	0.44	0.48	15.93	15.79	6.00	6.21	15.38	15.53	21.84	21.90
3300	0.47	0.44	18.36	17.97	2.61	2.39	14.59	14.93	19.48	19.73
3400	0.46	0.46	21.87	20.89	1.42	2.20	13.96	14.37	18.33	18.49
3500	0.50	0.47	27.28	24.32	5.78	8.65	13.30	13.58	16.82	16.85
3600	0.54	0.52	29.33	25.51	7.83	11.52	12.83	13.11	15.50	15.46
3700	0.62	0.62	23.78	22.79	5.94	6.87	12.36	12.56	14.36	14.21
3800	0.67	0.69	19.60	19.57	3.43	3.35	12.29	12.23	13.27	13.14
3900	0.76	0.76	16.74	16.77	1.11	0.97	12.00	12.04	12.48	12.33
4000	0.89	0.88	14.63	14.71	0.41	0.70	11.75	11.59	11.63	11.56
4100	1.02	1.03	13.00	13.13	1.70	2.04	11.22	11.06	11.28	11.16
4200	1.17	1.16	11.78	11.96	2.38	2.82	10.83	10.60	10.74	10.58
4300	1.34	1.31	10.76	10.95	3.04	3.52	10.65	10.22	10.65	10.52
4400	1.45	1.46	9.77	10.03	3.68	4.11	10.70	10.00	10.34	10.08
4500	1.65	1.64	9.00	9.21	4.28	4.96	10.57	9.95	9.95	9.94

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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	0.36	0.38	15.62	15.60	12.39	12.35	26.48	26.56	35.02	33.14
550	0.40	0.40	14.89	14.86	12.40	12.49	25.84	26.03	32.93	33.35
600	0.45	0.45	14.21	14.24	12.25	12.49	25.09	25.10	32.89	32.34
700	0.53	0.52	13.14	13.08	12.53	12.72	23.90	23.98	31.99	31.05
800	0.62	0.60	12.17	12.16	12.73	12.72	23.09	22.84	30.78	30.25
900	0.70	0.71	11.42	11.40	13.03	13.05	22.32	22.08	29.65	30.12
1000	0.79	0.77	10.77	10.78	13.13	13.38	21.46	21.25	29.03	29.70
1050	0.83	0.82	10.51	10.49	13.45	13.46	21.28	20.95	28.78	29.54
1100	0.87	0.87	10.24	10.22	13.57	13.70	21.00	20.67	28.85	29.51
1150	0.91	0.91	10.02	9.99	13.80	13.87	20.70	20.38	28.75	29.50
1200	0.95	0.94	9.79	9.78	14.01	13.94	20.60	20.32	28.63	29.15
1250	0.98	1.00	9.61	9.58	14.17	14.26	20.36	19.97	28.86	29.50
1300	1.02	1.01	9.43	9.43	14.43	14.52	20.19	19.92	29.02	29.56
1350	1.06	1.06	9.28	9.27	14.53	14.77	20.10	19.71	28.83	29.47
1400	1.09	1.08	9.16	9.11	14.85	15.14	19.99	19.58	29.00	29.57
1500	1.15	1.14	8.89	8.89	15.29	15.53	19.79	19.46	28.96	29.95
1550	1.17	1.17	8.80	8.80	15.48	15.86	19.61	19.35	29.19	29.87
1600	1.20	1.19	8.73	8.72	15.66	16.04	19.66	19.23	28.77	30.17
1650	1.21	1.21	8.65	8.66	15.78	16.49	19.59	19.11	29.13	30.29
1700	1.23	1.25	8.61	8.61	16.17	16.85	19.56	19.14	29.28	30.40
1750	1.24	1.25	8.56	8.55	16.50	17.15	19.58	19.02	28.97	30.09
1800	1.27	1.26	8.56	8.55	16.67	17.43	19.29	18.90	28.82	30.08
1850	1.27	1.28	8.54	8.53	16.93	17.95	19.33	18.93	29.31	30.56
1900	1.29	1.30	8.54	8.54	17.06	18.22	19.37	18.93	29.76	30.97
2000	1.30	1.31	8.56	8.58	17.69	19.08	19.51	18.99	29.41	31.47
2100	1.30	1.31	8.68	8.67	18.12	20.15	19.30	18.90	29.32	31.34
2150	1.30	1.29	8.74	8.76	18.40	20.44	19.47	18.96	29.02	31.35
2200	1.29	1.28	8.82	8.84	18.48	21.05	19.30	18.98	29.23	31.12
2300	1.29	1.28	9.06	9.06	18.51	22.02	19.12	18.83	28.43	30.58
2350	1.27	1.27	9.21	9.21	18.51	22.55	19.02	18.83	28.94	30.83
2400	1.26	1.25	9.37	9.36	18.32	22.88	19.06	18.88	27.98	29.78
2500	1.23	1.22	9.75	9.75	17.89	22.38	18.87	18.69	27.19	28.46
2550	1.20	1.20	9.98	9.97	17.61	21.91	18.73	18.57	26.92	27.78
2600	1.19	1.17	10.22	10.23	17.29	21.50	18.85	18.67	26.70	27.78
2700	1.16	1.15	10.84	10.82	16.09	19.19	18.18	18.52	25.76	26.79
2800	1.12	1.10	11.59	11.55	14.76	16.69	18.38	18.37	25.12	25.43
2900	1.07	1.08	12.52	12.46	12.59	13.97	17.69	17.88	23.77	24.28
3000	1.04	1.04	13.68	13.57	10.54	11.19	17.10	17.42	22.68	22.88
3100	1.01	1.01	15.16	15.00	7.87	8.29	16.61	16.88	21.32	21.33
3200	0.99	1.02	17.08	16.78	4.95	5.02	16.14	16.25	20.12	20.30
3300	1.02	1.01	19.71	19.09	1.63	1.21	15.50	15.74	19.27	19.29
3400	1.05	1.03	23.45	22.11	2.43	3.63	14.73	14.97	18.28	18.23
3500	1.08	1.05	28.76	25.68	6.80	9.73	14.43	14.40	17.25	17.25
3600	1.15	1.14	28.26	25.56	7.54	10.05	13.87	13.77	16.18	16.39
3700	1.26	1.27	22.73	22.10	4.82	5.30	13.11	13.09	15.23	15.35
3800	1.34	1.37	19.09	18.99	2.30	2.16	12.68	12.51	14.48	14.49
3900	1.47	1.47	16.56	16.66	0.58	0.23	12.06	11.92	13.73	13.72
4000	1.65	1.62	14.51	14.70	0.97	1.52	11.73	11.60	13.30	13.18
4100	1.81	1.83	13.05	13.28	1.94	2.54	11.51	11.34	12.59	12.40
4200	1.93	1.92	11.87	12.10	2.78	3.38	11.39	11.21	12.27	12.03
4300	2.12	2.08	10.90	11.04	3.45	4.03	11.28	11.13	11.75	11.59
4400	2.27	2.28	10.12	10.22	4.00	4.33	11.16	11.04	11.33	11.22
4500	2.45	2.45	9.49	9.58	4.29	4.72	11.10	10.87	11.05	10.96

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