

Bi-Directional Coupler

SYBD-30-62HP+

Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB) IN-OUT	(dB) FWD-REV	(dB) IN-FWD	(dB) OUT-REV	(dB) IN-REV	(dB) OUT-FWD	(dB) IN	(dB) OUT	(dB) FWD	(dB) REV
100	0.04	0.04	44.97	44.94	31.58	30.93	46.29	48.25	45.24	45.58
200	0.02	0.01	38.98	38.99	33.72	33.23	43.82	46.42	43.15	44.47
300	0.00	0.00	35.50	35.51	33.36	33.48	44.03	47.99	43.87	46.45
350	0.00	0.01	34.18	34.18	34.21	32.97	44.23	48.60	45.23	48.64
390	0.01	0.02	33.25	33.25	33.12	33.69	43.78	49.23	46.26	49.98
400	0.01	0.02	33.02	33.04	33.60	32.98	43.53	49.06	46.41	50.60
410	0.01	0.00	32.80	32.80	33.03	32.44	43.31	48.45	46.63	50.29
420	0.01	0.00	32.60	32.60	33.02	33.16	42.94	48.02	46.86	51.35
430	0.01	0.00	32.40	32.39	33.15	32.90	42.97	47.70	47.25	51.55
440	0.01	0.00	32.19	32.20	32.36	32.72	42.80	47.11	47.78	51.56
450	0.00	0.01	32.02	31.99	33.27	32.60	42.44	46.36	48.01	52.69
460	0.01	0.00	31.82	31.82	32.53	32.64	42.26	45.99	48.50	52.89
470	0.00	0.01	31.65	31.63	32.60	32.56	41.98	45.49	48.59	52.48
480	0.00	0.02	31.46	31.46	32.16	32.42	41.65	45.12	49.25	51.90
490	0.00	0.01	31.29	31.28	32.14	31.90	41.33	44.56	48.93	51.54
500	0.00	0.01	31.12	31.10	32.27	32.01	41.05	44.27	49.64	51.05
520	0.00	0.02	30.78	30.78	31.69	31.86	40.65	43.86	50.30	51.51
530	0.00	0.02	30.62	30.62	31.69	31.35	40.40	43.26	50.13	51.29
540	0.01	0.01	30.46	30.47	31.30	31.64	39.86	42.39	50.92	50.73
550	0.01	0.02	30.30	30.30	31.27	31.19	39.56	42.03	50.03	50.24
560	0.01	0.02	30.15	30.15	30.93	31.40	39.26	41.52	49.64	50.10
570	0.01	0.02	30.01	30.00	30.80	31.52	39.17	41.08	50.21	49.56
580	0.01	0.02	29.86	29.85	30.86	30.71	38.86	40.63	49.79	48.83
590	0.01	0.02	29.71	29.71	30.40	30.89	38.63	40.28	49.89	48.19
600	0.01	0.03	29.57	29.56	30.37	30.74	38.42	39.87	49.36	47.94
620	0.02	0.03	29.29	29.28	30.49	30.67	37.88	39.22	48.67	46.97
630	0.01	0.03	29.16	29.15	30.47	30.63	37.50	38.88	49.13	46.93
640	0.02	0.03	29.02	29.02	30.28	30.48	37.34	38.60	48.95	46.14
650	0.02	0.03	28.89	28.89	30.15	30.37	37.10	38.44	48.37	45.93
700	0.03	0.04	28.25	28.26	28.87	29.69	36.16	36.82	46.61	44.18
800	0.04	0.05	27.16	27.16	27.96	28.75	34.38	34.62	44.95	41.94
900	0.05	0.06	26.19	26.19	26.73	27.47	33.24	33.47	43.17	41.20
1000	0.06	0.07	25.32	25.32	25.93	26.46	32.28	32.66	42.58	40.79
1100	0.07	0.09	24.58	24.58	24.58	25.05	32.09	32.57	43.75	42.38
1200	0.09	0.10	23.89	23.88	23.99	24.91	32.20	33.07	44.90	44.46
1300	0.09	0.11	23.28	23.27	23.29	24.00	33.92	34.58	47.73	45.80
1400	0.10	0.12	22.72	22.72	22.75	23.25	36.72	37.51	44.16	41.93
1500	0.11	0.13	22.17	22.17	23.05	23.72	42.34	43.08	39.20	37.73
1600	0.13	0.16	21.65	21.64	23.97	24.48	43.63	46.53	35.50	34.51
1700	0.15	0.17	21.33	21.32	22.88	23.16	36.23	37.07	32.14	31.67
1800	0.16	0.18	20.98	20.97	22.79	23.08	31.89	32.47	30.17	29.82
1900	0.18	0.19	20.62	20.62	23.52	23.79	29.06	29.52	28.95	28.78
2000	0.20	0.21	20.35	20.35	23.86	24.07	27.05	27.59	28.23	28.39
2500	0.25	0.26	19.14	19.17	34.22	32.33	28.50	28.70	35.59	37.11
3000	0.31	0.33	18.22	18.28	24.17	24.28	25.61	25.33	25.29	24.98
3500	0.40	0.40	17.67	17.62	17.24	16.86	18.47	18.61	20.84	21.05
4000	0.42	0.43	17.03	16.99	15.58	14.85	21.54	21.62	23.62	23.56
4500	0.46	0.50	16.77	16.75	15.18	14.26	34.41	36.03	27.78	27.38
5000	0.53	0.55	16.67	16.65	15.45	14.86	33.79	31.96	26.69	25.79
5500	0.57	0.61	16.64	16.62	12.94	13.05	29.35	28.41	25.53	26.27
6000	0.63	0.66	16.44	16.49	10.13	10.33	27.73	30.20	31.64	44.74
6500	0.74	0.79	16.13	16.08	8.56	8.09	26.61	28.36	23.67	23.99
7000	1.01	1.07	16.24	15.99	6.65	6.35	16.21	16.65	15.60	15.47

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Bi-Directional Coupler

SYBD-30-62HP+

Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB) IN-OUT	(dB) FWD-REV	(dB) IN-FWD	(dB) OUT-REV	(dB) IN-REV	(dB) OUT-FWD	(dB) IN	(dB) OUT	(dB) FWD	(dB) REV
100	0.05	0.07	44.97	45.02	30.53	29.61	49.07	53.27	40.11	40.10
200	0.03	0.06	39.00	38.97	29.78	30.24	41.87	43.04	39.69	40.34
300	0.02	0.06	35.50	35.49	33.19	31.56	42.18	42.95	40.49	41.73
350	0.02	0.06	34.16	34.15	32.71	32.43	43.97	45.56	40.65	42.41
390	0.02	0.06	33.24	33.22	33.19	32.08	45.83	48.18	42.83	44.27
400	0.02	0.06	33.02	33.02	32.94	32.13	45.97	48.81	42.74	44.35
410	0.04	0.08	32.78	32.77	33.07	32.43	46.22	49.79	42.38	44.12
420	0.04	0.08	32.58	32.58	32.72	32.18	46.25	50.74	42.08	43.95
430	0.04	0.08	32.38	32.37	32.84	32.44	46.73	52.06	42.03	44.10
440	0.04	0.08	32.17	32.18	32.80	32.74	47.18	52.91	42.07	44.30
450	0.03	0.07	32.00	31.99	32.68	32.55	47.28	53.85	42.58	44.90
460	0.04	0.08	31.80	31.80	33.26	32.67	47.34	54.47	43.36	45.62
470	0.03	0.08	31.62	31.61	32.87	32.70	47.79	54.88	43.83	46.61
480	0.04	0.08	31.44	31.44	33.31	32.33	47.68	56.17	45.10	47.59
490	0.03	0.08	31.26	31.25	33.03	32.57	47.45	55.95	45.87	48.71
500	0.03	0.08	31.09	31.08	33.06	32.62	47.49	55.74	46.34	49.16
520	0.03	0.07	30.75	30.75	32.29	32.33	47.66	58.98	47.02	50.43
530	0.03	0.08	30.59	30.59	32.61	32.04	47.32	58.48	46.25	50.62
540	0.03	0.08	30.43	30.43	32.14	32.43	46.83	55.10	45.87	50.95
550	0.03	0.08	30.28	30.27	32.47	32.38	46.16	53.83	46.25	51.99
560	0.03	0.07	30.13	30.12	32.29	32.64	45.49	51.63	46.76	53.39
570	0.03	0.08	29.97	29.97	31.89	32.48	45.35	49.80	47.32	55.77
580	0.03	0.08	29.83	29.83	32.02	32.39	44.65	48.33	48.63	61.15
590	0.03	0.08	29.68	29.68	32.02	32.13	44.16	47.28	49.87	70.81
600	0.02	0.07	29.54	29.53	32.05	32.44	43.61	46.28	51.11	80.75
620	0.02	0.07	29.26	29.25	32.06	31.89	42.36	44.56	53.59	62.57
630	0.02	0.08	29.12	29.12	31.26	31.60	41.62	43.63	53.76	63.13
640	0.02	0.08	28.98	28.98	31.41	31.87	41.20	43.00	54.37	59.69
650	0.02	0.08	28.86	28.85	31.24	31.85	40.76	42.58	54.73	59.18
700	0.02	0.08	28.21	28.21	31.08	31.81	39.14	39.73	60.85	49.61
800	0.00	0.07	27.13	27.12	28.82	29.80	36.79	36.81	52.06	44.18
900	0.00	0.07	26.13	26.11	28.30	29.09	34.52	34.58	47.11	42.71
1000	0.01	0.07	25.27	25.26	26.88	27.63	32.61	32.84	42.84	40.94
1100	0.02	0.07	24.50	24.52	25.28	25.86	31.75	32.15	39.86	42.21
1200	0.03	0.07	23.82	23.81	24.45	24.94	31.59	32.35	40.82	43.75
1300	0.03	0.06	23.19	23.18	23.67	24.01	33.41	33.97	41.30	45.26
1400	0.03	0.06	22.57	22.55	24.01	24.45	35.70	36.19	44.79	49.46
1500	0.04	0.05	22.08	22.07	22.66	23.65	39.41	40.20	42.14	40.06
1600	0.06	0.04	21.60	21.59	23.13	23.57	41.94	43.13	35.25	34.16
1700	0.09	0.03	21.04	20.98	26.36	25.83	38.73	41.96	32.65	32.13
1800	0.08	0.03	20.81	20.79	23.27	23.57	34.61	35.15	31.22	30.77
1900	0.11	0.00	20.70	20.64	21.32	20.83	29.82	30.27	27.86	27.97
2000	0.10	0.03	20.34	20.33	20.92	21.07	26.32	26.69	27.31	27.96
2500	0.14	0.01	18.93	18.96	37.80	35.61	28.64	28.77	37.57	37.77
3000	0.22	0.02	18.06	18.03	24.78	24.44	26.18	25.77	24.71	25.00
3500	0.27	0.05	17.40	17.36	17.18	17.02	18.13	18.19	21.55	21.45
4000	0.27	0.07	16.83	16.72	15.60	15.91	21.42	21.43	22.14	21.96
4500	0.30	0.09	16.51	16.51	15.49	13.89	33.25	34.88	24.01	23.64
5000	0.32	0.08	16.33	16.32	15.34	14.58	32.55	32.48	28.73	27.67
5500	0.41	0.12	16.29	16.09	13.15	13.57	30.86	28.38	24.96	24.40
6000	0.42	0.13	16.03	16.20	10.79	10.89	28.62	30.17	32.39	35.50
6500	0.52	0.22	15.69	15.85	8.32	8.41	27.30	29.10	23.30	23.25
7000	0.78	0.56	15.88	15.50	7.36	7.74	16.72	17.15	14.09	13.84

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Bi-Directional Coupler

SYBD-30-62HP+

Typical Performance Data

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

FREQ. (MHz)	INSERTION LOSS		COUPLING		DIRECTIVITY		RETURN LOSS			
	(dB) IN-OUT	(dB) FWD-REV	(dB) IN-FWD	(dB) OUT-REV	(dB) IN-REV	(dB) OUT-FWD	(dB) IN	(dB) OUT	(dB) FWD	(dB) REV
100	0.03	0.01	44.90	44.90	33.07	33.29	43.88	44.63	47.22	47.81
200	0.00	0.02	38.97	38.95	36.43	35.15	43.83	46.43	43.44	45.64
300	0.02	0.04	35.49	35.48	35.14	34.45	42.48	46.04	42.94	47.94
350	0.02	0.05	34.18	34.17	34.18	33.17	41.62	44.40	44.29	46.38
390	0.03	0.06	33.24	33.24	32.77	32.29	40.48	43.60	44.05	45.91
400	0.03	0.06	33.03	33.02	32.28	32.42	40.22	43.41	44.11	46.44
410	0.01	0.05	32.77	32.78	32.55	32.18	40.04	43.05	44.27	46.77
420	0.01	0.05	32.58	32.58	32.56	32.42	39.78	42.79	44.34	47.57
430	0.01	0.05	32.39	32.38	32.23	32.22	39.71	42.52	44.51	47.34
440	0.01	0.05	32.20	32.19	31.88	32.10	39.49	42.16	44.88	46.99
450	0.02	0.06	32.00	31.99	31.78	32.10	39.29	41.72	44.91	46.85
460	0.01	0.06	31.82	31.82	31.63	31.88	39.20	41.56	44.91	46.37
470	0.02	0.06	31.63	31.64	31.58	31.96	39.01	41.36	44.98	45.68
480	0.02	0.06	31.46	31.45	31.10	31.55	38.78	41.22	44.80	44.96
490	0.02	0.07	31.29	31.28	31.37	31.32	38.58	40.90	44.36	44.48
500	0.02	0.07	31.11	31.11	30.86	31.40	38.36	40.73	44.66	44.21
520	0.02	0.07	30.77	30.78	30.37	31.12	38.15	40.56	44.76	44.79
530	0.03	0.07	30.61	30.61	30.55	30.88	38.02	40.27	45.07	45.15
540	0.03	0.07	30.46	30.46	30.29	30.87	37.64	39.79	45.61	45.26
550	0.03	0.07	30.31	30.30	30.34	30.63	37.43	39.53	45.14	45.08
560	0.03	0.08	30.15	30.15	30.13	30.43	37.22	39.15	44.93	44.99
570	0.03	0.08	30.00	30.00	29.91	30.37	37.14	38.78	45.38	44.56
580	0.03	0.08	29.86	29.86	29.87	30.38	36.91	38.46	45.15	44.05
590	0.03	0.08	29.72	29.72	29.72	30.16	36.78	38.25	45.20	43.72
600	0.04	0.09	29.56	29.56	29.93	30.11	36.65	38.01	44.88	43.52
620	0.04	0.09	29.30	29.29	29.45	29.92	36.19	37.51	44.28	42.85
630	0.04	0.08	29.16	29.15	29.24	29.76	35.91	37.17	44.59	42.83
640	0.04	0.09	29.03	29.02	29.15	29.82	35.75	36.96	44.72	42.57
650	0.04	0.09	28.89	28.89	29.08	29.68	35.59	36.86	44.69	42.76
700	0.05	0.10	28.24	28.25	28.04	29.73	34.79	35.50	44.35	42.07
800	0.07	0.12	27.18	27.18	26.87	27.67	33.79	34.14	44.83	41.33
900	0.08	0.13	26.19	26.19	26.47	27.30	33.26	33.57	46.17	41.91
1000	0.10	0.15	25.35	25.34	25.54	26.39	32.89	33.35	49.11	41.87
1100	0.11	0.17	24.59	24.61	24.48	25.29	33.27	33.88	50.69	43.34
1200	0.12	0.19	23.94	23.91	24.06	24.81	33.82	34.80	45.84	42.56
1300	0.13	0.21	23.29	23.30	23.75	24.54	35.84	36.79	42.49	40.22
1400	0.14	0.22	22.69	22.69	24.42	25.00	38.74	39.81	39.22	37.77
1500	0.16	0.24	22.24	22.24	23.32	23.79	45.81	47.30	35.96	34.82
1600	0.18	0.27	21.73	21.72	24.92	24.69	41.97	44.21	33.69	32.91
1700	0.22	0.30	21.29	21.25	26.21	24.78	35.13	36.70	31.96	31.72
1800	0.22	0.31	21.00	20.99	24.57	24.85	31.56	32.61	30.76	30.26
1900	0.28	0.38	20.81	20.77	22.37	20.83	29.16	30.13	29.52	30.25
2000	0.24	0.33	20.59	20.58	22.09	21.70	27.97	28.43	29.40	29.31
2500	0.31	0.43	19.20	19.15	31.93	32.67	30.79	30.70	44.62	41.26
3000	0.42	0.52	18.32	18.25	25.70	26.88	25.67	25.53	25.77	25.62
3500	0.48	0.63	17.76	17.69	18.12	17.39	19.40	19.67	21.83	22.20
4000	0.54	0.71	17.24	17.11	16.12	15.39	21.56	21.64	24.04	23.94
4500	0.58	0.79	16.96	16.89	14.58	14.16	34.81	33.88	27.27	26.30
5000	0.64	0.87	16.85	16.83	15.01	14.55	32.84	31.50	26.35	25.52
5500	0.73	0.94	16.82	16.79	13.49	13.37	31.47	30.11	26.70	30.28
6000	0.80	1.04	16.58	16.79	10.54	10.68	27.69	29.32	31.34	38.92
6500	0.93	1.20	16.48	16.62	8.40	8.41	28.40	30.14	24.11	25.98
7000	1.21	1.52	16.55	16.21	6.55	6.61	16.38	16.52	16.49	16.49

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