

Bi-Directional Coupler

SYBD-25-82HP+

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	0.01	0.02	33.10	33.08	32.52	31.92	43.22	42.43	46.58	46.99
400	0.00	0.01	30.63	30.61	31.32	31.76	39.84	39.28	50.58	46.93
500	0.02	0.01	28.71	28.71	30.73	31.59	36.44	36.24	51.32	44.17
550	0.03	0.01	27.90	27.90	30.82	31.16	34.98	34.76	49.44	42.86
590	0.03	0.02	27.30	27.30	30.52	31.33	33.80	33.82	46.79	41.74
600	0.03	0.02	27.16	27.16	30.29	31.24	33.54	33.58	46.60	41.20
610	0.03	0.02	27.03	27.02	30.25	31.13	33.30	33.37	45.98	41.01
620	0.02	0.00	26.87	26.87	30.39	31.35	33.06	33.14	45.92	40.81
630	0.02	0.00	26.74	26.73	30.21	31.02	32.84	32.89	45.26	40.56
640	0.02	0.00	26.60	26.60	30.28	30.94	32.67	32.61	44.86	40.24
650	0.02	0.00	26.47	26.46	29.99	31.08	32.35	32.44	44.66	40.03
660	0.02	0.00	26.34	26.33	30.12	31.06	32.22	32.31	44.19	39.84
670	0.03	0.01	26.21	26.21	29.85	30.99	31.94	31.99	43.45	39.57
680	0.03	0.01	26.09	26.09	29.84	30.89	31.69	31.82	43.29	39.24
690	0.02	0.01	25.97	25.96	29.97	30.68	31.48	31.60	42.71	38.93
700	0.03	0.01	25.85	25.84	29.80	30.93	31.23	31.42	42.69	38.74
710	0.03	0.01	25.72	25.72	29.55	30.64	30.98	31.26	42.31	38.73
720	0.03	0.01	25.60	25.61	30.00	30.51	30.89	31.08	41.76	38.44
730	0.03	0.01	25.50	25.49	29.75	30.58	30.66	30.89	41.35	38.30
740	0.04	0.02	25.37	25.38	29.52	30.47	30.44	30.69	41.25	38.23
750	0.04	0.02	25.27	25.26	29.83	30.34	30.26	30.51	40.63	37.93
760	0.04	0.01	25.15	25.15	29.54	30.68	30.02	30.27	40.68	37.62
770	0.04	0.02	25.05	25.03	29.50	30.15	29.95	30.11	40.36	37.51
780	0.04	0.02	24.94	24.92	29.40	30.10	29.78	29.91	40.39	37.43
790	0.04	0.02	24.82	24.82	29.08	29.96	29.57	29.81	40.17	37.17
800	0.05	0.02	24.72	24.73	28.69	29.72	29.43	29.67	39.84	37.10
810	0.05	0.02	24.63	24.63	28.97	29.79	29.25	29.56	39.61	36.89
820	0.05	0.03	24.53	24.52	29.13	30.31	29.15	29.47	39.33	36.77
830	0.05	0.02	24.43	24.43	29.14	29.82	29.02	29.32	39.04	36.87
840	0.05	0.03	24.34	24.33	29.10	29.98	28.89	29.17	38.73	36.65
850	0.05	0.03	24.23	24.23	29.33	30.17	28.75	29.04	38.66	36.58
900	0.06	0.04	23.76	23.76	29.11	30.01	28.15	28.37	37.66	36.03
950	0.07	0.04	23.30	23.30	28.71	29.49	27.54	27.77	36.71	35.39
1000	0.08	0.05	22.87	22.87	28.43	29.24	27.12	27.16	36.03	35.24
1100	0.09	0.07	22.11	22.10	27.89	28.60	26.38	26.45	35.15	35.24
1200	0.11	0.08	21.40	21.38	26.99	27.90	26.07	25.93	34.69	35.42
1300	0.13	0.10	20.80	20.80	26.12	27.08	26.10	26.06	34.94	36.61
1400	0.13	0.11	20.25	20.24	25.80	26.95	26.44	26.40	35.92	38.64
1500	0.15	0.13	19.68	19.68	26.14	27.43	27.22	27.28	37.50	42.14
1600	0.16	0.14	19.18	19.18	26.30	27.88	28.35	28.40	40.87	50.45
1700	0.17	0.15	18.73	18.72	26.21	27.84	30.20	29.85	47.45	52.54
1800	0.19	0.18	18.30	18.31	26.64	28.48	32.69	31.98	49.55	42.55
1900	0.21	0.19	17.96	17.95	26.35	28.00	36.82	34.68	41.52	38.43
2000	0.23	0.21	17.64	17.64	26.06	27.80	42.68	36.78	37.12	36.19
2500	0.31	0.29	16.21	16.24	30.70	32.44	37.11	35.37	36.82	41.51
3000	0.38	0.36	15.21	15.23	26.70	26.90	31.63	33.80	31.40	30.41
3500	0.46	0.44	14.36	14.37	21.26	21.48	27.69	27.77	26.22	26.33
4000	0.53	0.51	13.68	13.73	17.85	18.37	40.67	32.09	35.26	33.93
4500	0.65	0.59	13.30	13.32	17.00	17.60	21.09	20.87	28.73	29.29
5000	0.81	0.69	13.28	13.32	16.28	16.47	16.27	16.48	23.40	25.68
5500	0.93	0.72	13.36	13.45	15.64	15.65	14.36	14.59	22.20	22.23
5750	0.97	0.76	13.37	13.49	14.95	15.14	13.76	13.85	21.33	20.69
6000	1.01	0.80	13.51	13.65	14.15	14.74	13.28	13.17	19.78	19.14

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Bi-Directional Coupler

SYBD-25-82HP+

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	0.04	0.08	33.13	33.11	36.28	37.41	45.77	44.92	42.39	43.74
400	0.03	0.08	30.65	30.61	35.00	35.98	45.08	43.87	44.32	46.18
500	0.02	0.08	28.72	28.71	33.43	34.15	41.25	40.83	50.50	49.72
550	0.01	0.08	27.90	27.90	33.02	33.94	38.82	38.43	52.28	51.00
590	0.01	0.08	27.30	27.30	32.78	33.49	36.80	36.75	63.75	48.37
600	0.01	0.08	27.16	27.16	32.49	33.27	36.36	36.41	60.32	46.83
610	0.01	0.08	27.02	27.01	32.40	33.36	35.95	36.05	58.95	46.12
620	0.03	0.10	26.86	26.85	32.09	33.22	35.52	35.62	59.77	45.70
630	0.03	0.09	26.73	26.72	32.20	33.36	35.20	35.22	58.56	45.61
640	0.03	0.10	26.59	26.59	32.06	33.32	34.94	34.82	59.49	45.69
650	0.02	0.10	26.46	26.46	32.10	33.50	34.54	34.61	62.57	46.09
660	0.02	0.10	26.33	26.32	32.33	33.41	34.41	34.47	61.52	46.28
670	0.02	0.09	26.20	26.20	31.71	33.06	34.01	34.03	57.02	45.79
680	0.02	0.09	26.08	26.07	31.58	32.93	33.66	33.80	55.21	44.77
690	0.02	0.09	25.95	25.94	31.46	32.71	33.37	33.48	52.26	43.80
700	0.02	0.09	25.83	25.82	31.50	32.81	33.09	33.25	51.41	43.12
710	0.02	0.10	25.72	25.70	31.33	32.77	32.79	33.06	49.47	42.80
720	0.01	0.10	25.59	25.58	31.23	32.41	32.69	32.87	47.68	41.95
730	0.02	0.09	25.47	25.47	31.11	32.04	32.39	32.64	46.21	41.34
740	0.01	0.10	25.36	25.36	31.16	31.98	32.12	32.37	45.63	40.94
750	0.01	0.09	25.25	25.24	31.09	31.81	31.85	32.10	44.55	40.34
760	0.01	0.10	25.14	25.12	30.54	31.54	31.58	31.80	44.78	40.01
770	0.01	0.09	25.04	25.02	30.93	32.27	31.49	31.63	44.43	40.06
780	0.01	0.10	24.93	24.92	30.93	32.08	31.27	31.37	44.71	40.06
790	0.01	0.10	24.82	24.81	30.72	32.16	30.99	31.24	44.26	39.54
800	0.01	0.09	24.71	24.70	31.01	32.05	30.78	31.04	43.49	39.24
810	0.00	0.10	24.61	24.59	30.67	31.77	30.51	30.80	42.79	38.74
820	0.00	0.10	24.50	24.48	30.08	31.62	30.35	30.67	42.08	38.45
830	0.00	0.10	24.40	24.39	30.45	31.25	30.15	30.46	41.49	38.44
840	0.01	0.09	24.30	24.30	30.72	31.42	29.95	30.26	40.97	38.21
850	0.00	0.09	24.20	24.19	30.49	31.32	29.74	30.05	40.80	38.09
900	0.01	0.09	23.72	23.70	30.39	31.21	28.90	29.11	39.32	37.30
950	0.01	0.09	23.26	23.25	29.59	30.29	28.09	28.32	36.98	35.62
1000	0.02	0.08	22.84	22.82	29.15	29.68	27.49	27.50	36.13	35.56
1100	0.03	0.08	22.06	22.04	28.22	28.76	26.23	26.32	34.09	34.81
1200	0.05	0.08	21.37	21.36	26.94	27.93	25.88	25.77	33.38	34.35
1300	0.05	0.07	20.74	20.72	26.24	27.34	25.95	25.91	32.67	34.17
1400	0.06	0.06	20.14	20.13	25.99	27.36	26.07	25.98	33.19	35.10
1500	0.07	0.06	19.58	19.57	26.10	28.12	26.77	26.77	35.98	38.93
1600	0.08	0.05	19.04	19.03	26.75	28.78	27.44	27.50	39.81	45.76
1700	0.10	0.04	18.65	18.62	25.12	26.31	29.17	28.90	49.63	52.53
1800	0.10	0.04	18.12	18.12	27.73	29.35	30.76	30.24	51.55	45.06
1900	0.12	0.01	17.74	17.68	27.24	28.45	35.47	34.12	42.69	40.43
2000	0.13	0.02	17.57	17.55	24.48	25.42	61.51	38.37	35.47	36.03
2500	0.18	0.02	16.11	16.10	31.84	34.28	36.44	33.13	37.71	40.00
3000	0.24	0.06	15.06	15.08	26.74	25.82	32.85	34.74	29.68	29.89
3500	0.31	0.09	14.15	14.15	20.69	21.16	26.85	26.94	28.15	28.18
4000	0.36	0.12	13.46	13.46	17.84	19.56	39.94	31.93	32.12	32.78
4500	0.46	0.18	12.99	13.01	17.63	18.11	21.12	20.93	32.37	30.16
5000	0.58	0.25	12.93	12.93	15.74	16.49	16.40	16.56	21.92	23.30
5500	0.69	0.24	13.03	13.11	15.14	14.90	13.99	14.15	20.69	21.19
5750	0.75	0.28	13.05	13.26	14.14	14.81	13.44	13.66	20.14	20.68
6000	0.78	0.27	13.14	13.24	14.00	15.17	13.01	12.82	19.50	19.25

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Bi-Directional Coupler

SYBD-25-82HP+

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
300	0.01	0.01	33.11	33.10	32.10	32.50	40.25	39.59	46.94	46.03
400	0.02	0.03	30.65	30.63	31.61	31.98	37.48	36.93	48.66	42.92
500	0.04	0.05	28.75	28.75	30.69	31.70	35.04	34.77	44.84	39.99
550	0.05	0.06	27.95	27.93	30.70	31.61	33.92	33.67	43.96	39.45
590	0.06	0.07	27.35	27.34	30.62	31.42	33.01	32.89	42.43	38.74
600	0.06	0.07	27.21	27.20	30.47	31.10	32.80	32.77	42.21	38.30
610	0.07	0.07	27.06	27.05	30.26	31.12	32.62	32.60	41.53	38.01
620	0.04	0.05	26.92	26.90	30.15	31.19	32.38	32.39	41.20	37.66
630	0.05	0.06	26.78	26.76	29.99	31.22	32.20	32.14	40.62	37.39
640	0.05	0.06	26.64	26.63	30.05	31.24	32.07	31.91	40.36	37.21
650	0.05	0.05	26.51	26.50	29.96	31.42	31.84	31.83	40.35	37.20
660	0.05	0.06	26.38	26.37	30.13	31.50	31.81	31.81	40.15	37.15
670	0.06	0.06	26.25	26.24	30.22	30.88	31.57	31.55	39.58	36.93
680	0.06	0.06	26.13	26.12	29.68	30.95	31.34	31.40	39.43	36.62
690	0.06	0.07	26.01	25.99	29.79	30.62	31.15	31.20	39.00	36.37
700	0.06	0.07	25.89	25.88	29.80	30.95	30.97	31.05	39.03	36.29
710	0.06	0.07	25.77	25.76	29.92	31.10	30.78	30.98	38.75	36.35
720	0.07	0.07	25.65	25.64	29.87	30.84	30.74	30.87	38.49	36.16
730	0.07	0.07	25.53	25.52	29.67	30.69	30.57	30.77	38.04	35.97
740	0.07	0.07	25.42	25.41	29.56	30.23	30.40	30.59	37.82	35.78
750	0.07	0.08	25.31	25.28	29.56	30.37	30.22	30.41	37.28	35.41
760	0.08	0.08	25.21	25.19	28.86	30.01	30.08	30.26	37.30	35.20
770	0.08	0.09	25.10	25.09	29.54	30.11	30.04	30.17	37.17	35.22
780	0.07	0.08	25.00	24.98	29.35	30.72	29.94	30.03	37.22	35.22
790	0.07	0.09	24.89	24.87	29.50	30.76	29.78	30.00	37.04	34.97
800	0.08	0.09	24.78	24.77	29.27	30.73	29.67	29.91	36.76	34.84
810	0.08	0.08	24.68	24.66	29.13	30.63	29.50	29.76	36.55	34.61
820	0.08	0.09	24.58	24.54	29.04	30.65	29.41	29.70	36.31	34.51
830	0.09	0.09	24.47	24.47	28.99	30.19	29.34	29.62	36.21	34.69
840	0.08	0.09	24.38	24.36	29.39	30.27	29.24	29.54	36.05	34.59
850	0.09	0.09	24.27	24.25	29.29	30.45	29.14	29.45	36.07	34.59
900	0.09	0.10	23.80	23.79	29.13	30.34	28.72	28.96	35.53	34.28
950	0.11	0.12	23.36	23.33	28.90	29.76	28.27	28.54	34.97	33.77
1000	0.11	0.13	22.93	22.91	28.69	29.82	28.05	28.11	34.78	33.92
1100	0.14	0.14	22.15	22.12	28.59	29.15	27.59	27.68	34.39	34.22
1200	0.15	0.16	21.49	21.46	27.33	28.28	27.53	27.35	34.80	35.23
1300	0.17	0.18	20.87	20.84	26.76	28.20	27.44	27.46	35.49	36.76
1400	0.18	0.20	20.27	20.25	26.94	28.16	27.59	27.61	37.06	39.66
1500	0.20	0.21	19.73	19.71	27.59	28.82	28.47	28.51	39.30	45.30
1600	0.21	0.24	19.18	19.16	28.68	29.61	29.29	29.33	43.38	61.56
1700	0.23	0.26	18.89	18.86	25.50	26.11	31.77	31.41	48.94	43.21
1800	0.25	0.28	18.31	18.28	29.85	31.10	32.69	32.01	44.43	40.03
1900	0.29	0.33	17.91	17.87	29.34	28.22	34.27	33.84	40.26	38.90
2000	0.30	0.33	17.76	17.73	26.72	26.97	36.87	35.35	35.38	34.32
2500	0.38	0.43	16.37	16.35	28.88	28.59	41.17	38.78	36.57	43.39
3000	0.46	0.54	15.36	15.36	24.76	27.35	34.02	35.90	29.98	29.35
3500	0.55	0.64	14.52	14.50	21.19	21.86	31.25	30.31	26.30	26.72
4000	0.64	0.74	13.87	13.89	18.47	18.03	39.91	32.26	36.57	30.53
4500	0.77	0.86	13.47	13.49	17.56	17.23	21.82	21.93	26.01	28.02
5000	0.97	0.96	13.46	13.45	16.70	16.55	15.82	16.13	27.63	29.23
5500	1.10	1.05	13.65	13.73	14.25	15.30	14.03	14.26	22.72	22.70
5750	1.13	1.13	13.69	13.85	13.51	15.36	13.72	13.81	19.29	18.87
6000	1.15	1.20	13.77	13.90	13.61	14.91	13.74	13.62	16.87	16.59

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