

Bi-Directional Coupler

SYBD-16-272HP+

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
100	0.15	0.15	42.59	42.58	32.55	32.78	46.29	47.82	45.83	45.71
200	0.12	0.12	36.62	36.60	32.06	31.73	44.54	45.32	44.62	44.45
300	0.10	0.11	33.12	33.11	31.11	31.45	45.61	45.11	45.99	46.62
400	0.09	0.09	30.65	30.65	30.72	30.80	45.21	44.24	47.27	49.00
500	0.08	0.08	28.75	28.74	30.43	30.64	41.89	41.14	44.06	44.35
600	0.06	0.06	27.19	27.19	30.53	30.26	38.32	37.80	39.77	39.63
700	0.05	0.05	25.90	25.89	29.97	29.92	35.61	35.21	36.23	36.12
800	0.03	0.03	24.78	24.78	29.35	29.64	33.30	33.12	33.59	33.23
900	0.02	0.02	23.81	23.80	29.01	29.49	31.73	31.64	31.61	31.35
1000	0.00	0.00	22.93	22.93	28.28	28.82	30.28	30.42	30.00	29.86
1100	0.01	0.01	22.17	22.15	28.23	28.62	29.36	29.58	29.12	29.04
1200	0.04	0.03	21.45	21.42	26.87	27.60	28.63	29.00	28.62	28.48
1300	0.04	0.05	20.84	20.84	26.34	26.99	28.57	28.91	28.50	28.53
1400	0.05	0.06	20.25	20.24	27.14	27.81	28.80	29.08	28.82	28.99
1500	0.08	0.07	19.76	19.76	26.16	27.39	29.62	29.89	29.69	29.92
1600	0.09	0.09	19.29	19.28	25.97	27.07	30.87	30.97	31.21	31.66
1700	0.10	0.10	18.84	18.83	26.23	27.56	32.53	32.65	33.72	34.35
1750	0.11	0.11	18.62	18.61	27.08	28.52	33.64	33.59	35.28	36.62
1800	0.11	0.11	18.40	18.39	27.05	28.67	35.06	34.66	37.50	39.55
1850	0.12	0.12	18.18	18.18	27.53	29.45	36.43	35.83	39.48	42.41
1900	0.13	0.13	18.03	18.03	27.10	28.92	38.74	37.84	41.37	48.85
1950	0.13	0.14	17.85	17.86	27.72	29.18	41.04	39.16	42.21	61.50
2000	0.13	0.12	17.64	17.65	28.28	30.38	44.28	40.72	40.09	47.37
2050	0.14	0.13	17.49	17.50	28.47	30.05	48.50	43.01	38.76	42.99
2100	0.14	0.15	17.38	17.40	27.73	28.82	52.46	44.69	36.78	40.50
2150	0.15	0.15	17.24	17.26	27.67	29.43	48.08	43.22	35.28	38.12
2200	0.15	0.16	17.06	17.08	29.12	31.34	44.93	41.98	34.62	37.37
2250	0.16	0.16	16.93	16.95	29.10	31.27	42.60	41.16	33.83	36.38
2300	0.16	0.17	16.78	16.80	30.26	32.94	42.73	40.75	33.48	35.72
2350	0.15	0.15	16.61	16.62	31.61	35.96	42.51	40.75	33.46	35.47
2400	0.16	0.17	16.53	16.49	30.95	34.87	42.46	41.51	33.91	35.26
2500	0.18	0.18	16.26	16.26	32.27	39.90	41.38	41.67	35.70	36.87
2600	0.20	0.19	16.01	16.02	31.70	40.37	40.35	44.73	38.81	37.45
2700	0.22	0.21	15.88	15.92	28.74	34.76	39.18	47.17	45.15	37.59
2800	0.23	0.22	15.66	15.67	29.12	33.78	36.91	41.76	37.27	33.65
2900	0.24	0.24	15.44	15.51	28.18	31.64	34.35	36.40	32.29	30.62
3000	0.26	0.26	15.26	15.27	27.07	29.34	31.12	32.47	28.67	27.43
3100	0.27	0.27	15.08	15.11	25.13	27.77	29.15	30.06	26.14	25.67
3200	0.29	0.30	14.90	14.91	24.00	25.15	27.25	27.89	24.33	23.90
3300	0.30	0.31	14.77	14.76	22.19	24.17	25.78	26.55	22.96	22.86
3400	0.32	0.33	14.59	14.59	21.51	23.07	24.96	25.53	22.12	22.11
3500	0.34	0.35	14.47	14.45	20.50	21.74	24.20	24.77	21.67	21.94
3600	0.36	0.36	14.35	14.28	19.61	20.66	24.22	24.41	21.69	21.95
3700	0.36	0.37	14.20	14.16	18.87	20.43	24.10	24.50	21.99	22.54
3800	0.37	0.38	14.07	14.02	18.37	19.79	24.52	25.04	22.59	23.19
3900	0.39	0.40	13.95	13.90	17.79	19.25	25.22	25.75	23.22	24.49
4000	0.41	0.41	13.84	13.77	17.28	18.81	26.49	27.08	24.39	25.62
4500	0.48	0.49	13.40	13.34	15.99	17.96	31.97	33.00	26.62	28.17
5000	0.58	0.58	13.31	13.31	15.09	18.01	20.73	20.97	21.47	22.27
5500	0.68	0.63	13.37	13.35	14.51	19.08	18.37	18.19	19.50	20.27
6000	0.72	0.70	13.46	13.48	13.53	18.62	17.69	17.29	17.45	18.09
6500	0.88	0.89	13.78	13.69	11.53	14.79	15.29	15.04	14.61	15.35
7000	1.27	1.23	14.69	14.40	9.64	12.01	11.63	11.38	11.33	11.81

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Bi-Directional Coupler

SYBD-16-272HP+

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
100	0.16	0.18	42.62	42.63	36.66	35.10	48.30	52.04	41.07	40.34
200	0.14	0.17	36.64	36.62	34.97	36.22	43.19	44.15	41.89	41.18
300	0.13	0.17	33.12	33.13	33.06	33.69	43.17	43.18	43.09	43.58
400	0.12	0.16	30.65	30.65	32.15	31.79	49.99	46.28	46.14	47.36
500	0.11	0.16	28.72	28.72	31.48	31.61	50.03	46.21	50.48	53.57
600	0.10	0.16	27.16	27.16	31.15	31.06	42.91	42.42	42.87	42.41
700	0.09	0.15	25.87	25.86	30.51	30.45	37.83	37.71	39.59	38.76
800	0.08	0.14	24.73	24.74	30.61	30.06	34.43	34.47	35.86	34.84
900	0.06	0.14	23.75	23.75	29.26	29.56	32.38	32.41	31.87	31.66
1000	0.05	0.13	22.85	22.86	28.57	28.63	30.50	30.68	30.02	29.75
1100	0.04	0.12	22.10	22.09	28.19	28.37	29.26	29.47	28.63	28.59
1200	0.02	0.11	21.36	21.36	27.98	27.65	28.30	28.63	28.27	28.18
1300	0.02	0.11	20.75	20.76	27.70	27.60	28.04	28.26	28.31	28.40
1400	0.01	0.11	20.16	20.15	27.16	27.68	28.32	28.45	27.42	27.90
1500	0.01	0.10	19.69	19.69	26.27	27.14	29.47	29.63	28.95	29.30
1600	0.02	0.09	19.19	19.18	26.02	27.24	30.30	30.39	29.69	30.25
1700	0.03	0.08	18.74	18.73	25.67	27.11	31.21	31.29	32.44	33.09
1750	0.03	0.09	18.53	18.54	26.27	28.17	31.57	31.42	35.52	37.02
1800	0.03	0.09	18.25	18.25	27.99	29.10	32.73	32.54	37.17	39.36
1850	0.04	0.08	18.03	18.03	28.00	29.65	34.03	33.68	40.02	43.55
1900	0.05	0.06	17.91	17.90	27.25	27.03	37.24	37.21	46.46	79.33
1950	0.04	0.08	17.74	17.75	27.64	28.47	39.39	38.99	40.47	48.40
2000	0.04	0.08	17.50	17.51	28.54	30.16	41.36	39.47	37.39	41.26
2050	0.05	0.07	17.37	17.36	28.66	30.18	45.09	41.52	37.78	39.77
2100	0.04	0.07	17.29	17.31	27.26	27.98	48.06	41.21	34.51	39.84
2150	0.06	0.08	17.15	17.21	26.64	28.18	50.90	41.62	33.90	36.89
2200	0.05	0.07	16.90	16.91	30.56	33.01	48.13	39.03	35.96	37.83
2250	0.07	0.08	16.81	16.82	29.92	30.59	44.68	38.70	35.58	36.35
2300	0.06	0.06	16.77	16.76	26.56	28.64	40.31	37.40	35.95	39.74
2350	0.06	0.07	16.48	16.51	27.88	35.73	40.03	37.97	31.56	36.47
2400	0.07	0.08	16.41	16.40	28.02	32.43	38.09	36.85	31.90	35.19
2500	0.08	0.06	16.10	16.09	33.06	39.04	36.69	36.63	31.96	34.29
2600	0.09	0.06	15.88	15.90	36.51	48.42	39.92	39.13	43.59	46.47
2700	0.12	0.03	15.82	15.83	24.52	29.67	38.44	43.32	34.60	32.28
2800	0.13	0.03	15.48	15.57	30.24	34.84	37.47	43.01	38.83	33.16
2900	0.12	0.04	15.30	15.37	26.93	32.77	37.57	39.12	30.06	29.31
3000	0.13	0.01	15.02	15.08	28.42	29.32	32.33	33.10	30.27	28.21
3100	0.14	0.02	14.94	14.91	24.48	27.30	29.47	30.90	25.94	25.58
3200	0.17	0.00	14.71	14.74	23.93	25.29	27.73	28.23	24.96	24.43
3300	0.19	0.00	14.49	14.54	25.23	24.56	25.49	26.41	26.20	25.39
3400	0.18	0.02	14.39	14.38	22.70	23.04	24.11	24.50	23.83	23.42
3500	0.21	0.03	14.28	14.27	20.33	21.10	23.43	23.81	22.41	22.67
3600	0.23	0.03	14.15	14.08	20.83	21.06	23.81	23.92	23.31	23.39
3700	0.22	0.02	13.95	13.94	19.73	21.60	24.40	24.55	22.82	23.17
3800	0.23	0.04	13.88	13.80	19.14	20.59	24.76	25.23	22.24	22.66
3900	0.24	0.05	13.74	13.74	18.53	19.93	25.19	25.56	22.00	23.09
4000	0.28	0.06	13.68	13.58	17.60	19.28	25.83	26.25	22.79	23.42
4500	0.34	0.10	13.16	13.11	15.17	17.41	31.70	32.66	25.96	30.10
5000	0.43	0.20	12.96	13.05	14.43	17.57	21.05	21.21	19.32	20.02
5500	0.48	0.20	13.07	13.14	14.53	17.57	18.58	18.18	18.56	19.50
6000	0.53	0.21	13.16	13.13	13.94	19.26	17.36	16.96	18.39	19.67
6500	0.68	0.37	13.31	13.26	10.97	14.55	15.04	14.86	13.68	14.68
7000	1.05	0.84	14.48	14.03	9.71	11.34	11.51	11.26	9.40	9.92

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Bi-Directional Coupler

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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
100	0.13	0.12	42.59	42.57	31.88	33.09	43.31	43.92	46.17	48.91
200	0.10	0.09	36.60	36.61	30.71	30.32	44.10	44.71	44.29	45.62
300	0.08	0.07	33.14	33.14	30.81	31.01	42.71	42.40	44.01	47.41
400	0.07	0.05	30.66	30.67	30.89	30.95	40.41	40.34	42.66	44.44
500	0.04	0.02	28.77	28.76	30.50	30.91	38.52	38.47	40.10	40.56
600	0.03	0.01	27.22	27.22	30.85	30.70	36.42	36.39	37.60	37.77
700	0.01	0.02	25.93	25.94	30.96	30.93	34.61	34.60	35.65	35.59
800	0.01	0.04	24.81	24.81	30.40	30.73	33.35	33.39	33.61	33.38
900	0.03	0.06	23.83	23.84	30.16	30.76	32.48	32.54	32.33	32.16
1000	0.04	0.08	22.95	22.95	29.52	30.19	31.37	31.65	31.27	31.06
1100	0.06	0.10	22.18	22.19	29.51	30.03	30.77	31.08	30.57	30.47
1200	0.09	0.12	21.49	21.46	28.55	28.97	30.37	30.76	30.45	30.22
1300	0.10	0.14	20.87	20.89	28.71	29.24	30.59	31.00	30.05	30.12
1400	0.11	0.16	20.31	20.31	29.04	29.70	30.77	30.96	30.71	30.78
1500	0.13	0.18	19.81	19.81	28.52	29.97	31.88	32.04	31.35	31.60
1600	0.15	0.20	19.35	19.35	27.87	28.70	32.80	32.72	32.16	32.76
1700	0.16	0.24	18.91	18.91	27.04	27.49	34.32	34.27	34.82	34.74
1750	0.17	0.23	18.67	18.68	29.11	30.76	34.79	34.61	35.02	36.12
1800	0.17	0.23	18.45	18.45	28.77	30.86	35.32	34.86	36.31	37.92
1850	0.19	0.25	18.26	18.26	29.11	30.39	35.92	35.42	39.14	40.23
1900	0.19	0.27	18.04	18.07	29.52	30.48	36.36	36.24	39.37	39.15
1950	0.21	0.27	17.90	17.89	27.46	29.09	38.07	37.03	40.87	44.62
2000	0.21	0.27	17.75	17.75	26.27	28.12	38.50	37.74	42.65	50.99
2050	0.21	0.27	17.60	17.60	26.91	29.01	40.67	38.84	41.41	47.62
2100	0.22	0.29	17.47	17.45	28.28	28.80	42.97	40.43	42.07	51.46
2150	0.22	0.30	17.27	17.28	29.72	30.92	47.09	42.76	44.75	56.77
2200	0.23	0.30	17.16	17.17	27.36	30.84	47.64	41.52	38.99	42.98
2250	0.24	0.29	17.08	17.09	26.61	29.15	51.84	43.05	36.73	40.65
2300	0.26	0.32	16.98	16.97	25.98	28.28	56.66	44.33	37.79	39.40
2350	0.24	0.31	16.80	16.82	26.94	30.38	46.33	40.93	37.02	38.77
2400	0.25	0.33	16.65	16.63	28.24	31.26	44.35	41.68	37.75	38.21
2500	0.28	0.34	16.45	16.46	27.85	29.63	41.39	40.24	38.82	39.36
2600	0.28	0.36	16.17	16.18	28.90	34.43	41.69	42.37	44.89	38.61
2700	0.31	0.40	16.03	16.00	27.52	30.91	38.99	43.81	49.60	36.88
2800	0.35	0.44	15.80	15.90	26.11	32.10	33.85	38.97	38.03	33.68
2900	0.34	0.42	15.54	15.62	26.41	34.80	32.60	34.72	33.13	31.93
3000	0.35	0.46	15.36	15.43	25.27	29.75	31.17	32.04	28.59	27.61
3100	0.36	0.47	15.23	15.22	25.80	28.99	30.97	31.23	27.15	27.11
3200	0.40	0.50	15.05	15.10	23.77	26.78	29.24	29.45	24.62	24.66
3300	0.41	0.54	14.88	14.87	22.43	26.06	28.34	28.85	22.41	23.01
3400	0.43	0.56	14.72	14.72	22.19	24.63	28.21	28.26	22.24	22.69
3500	0.45	0.58	14.66	14.60	20.57	22.48	27.46	27.80	21.68	22.39
3600	0.47	0.59	14.55	14.43	19.63	21.23	26.69	26.76	21.10	22.02
3700	0.48	0.62	14.33	14.33	19.78	20.89	25.79	26.46	22.24	23.39
3800	0.50	0.63	14.25	14.15	19.01	19.92	25.69	26.47	22.40	23.68
3900	0.51	0.65	14.12	14.07	18.10	19.09	26.16	26.78	23.80	25.62
4000	0.53	0.66	14.01	13.94	17.44	18.82	27.32	28.27	25.64	27.11
4500	0.61	0.79	13.60	13.49	16.34	18.10	41.08	40.69	26.75	26.33
5000	0.76	0.88	13.48	13.46	14.97	17.75	20.86	21.36	23.31	23.88
5500	0.86	0.98	13.54	13.63	13.81	18.77	17.70	17.71	19.74	21.00
6000	0.90	1.11	13.80	13.77	13.13	18.60	17.48	17.08	16.31	16.83
6500	1.09	1.31	14.13	13.96	11.82	14.78	16.11	15.17	15.02	15.42
7000	1.49	1.60	14.93	14.69	9.97	11.59	11.86	11.72	13.07	13.46

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