

Bi-Directional Coupler

MBDA-30-451HP

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = -55°C

FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	In - Out	Rev - Fwd	In Fwd	Rev - Out	In - Rev	Out - Fwd	In	Out	Rev	Fwd
150	0.08	0.08	34.59	34.60	28.43	27.89	40.84	42.73	43.84	37.98
170	0.09	0.09	33.69	33.70	27.90	27.20	40.11	42.12	46.38	37.15
180	0.09	0.09	33.31	33.32	27.64	27.16	39.91	42.13	47.49	36.73
200	0.10	0.10	32.62	32.62	27.08	26.26	40.52	45.33	46.88	35.99
210	0.10	0.11	32.31	32.32	26.76	25.77	40.80	46.14	45.44	35.42
220	0.11	0.11	32.02	32.04	26.59	25.43	40.74	46.02	43.87	34.97
225	0.10	0.12	31.90	31.90	26.47	25.19	40.83	46.74	43.78	34.75
230	0.11	0.12	31.77	31.77	26.36	25.06	41.17	46.83	43.15	34.74
235	0.11	0.12	31.64	31.64	26.11	25.05	41.43	47.52	43.05	34.66
240	0.11	0.12	31.53	31.53	26.14	24.91	41.22	47.69	43.35	34.63
245	0.11	0.12	31.41	31.42	26.21	24.93	41.40	48.21	43.73	34.61
250	0.11	0.12	31.31	31.31	26.14	24.81	41.46	48.64	44.32	34.73
255	0.12	0.12	31.21	31.22	26.18	24.89	41.28	48.76	44.66	34.86
260	0.12	0.13	31.12	31.13	26.26	24.85	41.30	49.15	45.13	34.96
265	0.12	0.13	31.03	31.03	26.10	24.87	41.18	48.89	45.19	35.13
270	0.12	0.13	30.96	30.96	26.19	24.85	41.03	48.72	45.40	35.18
275	0.12	0.13	30.88	30.87	26.23	24.81	40.95	48.74	45.12	35.26
280	0.12	0.13	30.80	30.81	26.17	24.57	40.98	47.61	45.57	35.29
290	0.12	0.13	30.68	30.68	26.02	24.59	40.52	46.82	44.86	35.47
295	0.12	0.13	30.61	30.62	26.07	24.61	40.02	45.73	44.16	35.61
300	0.13	0.14	30.55	30.56	26.13	24.66	39.53	44.98	43.39	35.55
305	0.13	0.14	30.50	30.51	26.08	24.74	39.14	44.03	42.01	35.50
310	0.13	0.14	30.45	30.47	26.20	24.71	38.57	42.97	41.01	35.38
315	0.14	0.14	30.41	30.42	26.14	24.96	38.26	42.23	39.89	35.28
320	0.14	0.14	30.37	30.38	26.27	24.97	38.09	41.72	39.03	35.19
325	0.14	0.15	30.32	30.34	26.30	25.00	37.92	41.15	38.11	35.10
330	0.14	0.15	30.30	30.31	26.19	25.00	37.78	40.67	37.36	34.99
335	0.14	0.15	30.26	30.28	26.24	25.05	37.18	40.02	36.41	34.75
340	0.14	0.15	30.24	30.25	26.04	25.00	36.75	38.98	35.49	34.37
350	0.15	0.15	30.19	30.21	25.95	25.16	35.49	37.11	33.74	33.24
355	0.15	0.16	30.18	30.20	25.79	25.12	34.72	36.16	32.81	32.62
360	0.15	0.16	30.17	30.19	25.79	25.21	34.04	35.44	32.05	31.97
365	0.15	0.16	30.17	30.18	25.80	25.31	33.44	34.70	31.31	31.36
370	0.15	0.16	30.17	30.19	25.76	25.22	32.92	34.03	30.64	30.84
375	0.15	0.16	30.18	30.19	25.54	25.13	32.43	33.44	30.13	30.28
380	0.15	0.16	30.19	30.20	25.33	25.13	31.89	32.81	29.61	29.69
385	0.15	0.17	30.20	30.22	25.15	25.08	31.35	32.20	29.01	29.27
390	0.16	0.17	30.21	30.24	24.90	24.90	30.85	31.66	28.57	28.75
400	0.16	0.17	30.25	30.28	24.41	24.69	29.82	30.44	27.56	27.76
405	0.16	0.17	30.28	30.30	24.20	24.53	29.28	29.88	27.08	27.31
410	0.16	0.17	30.31	30.33	23.98	24.36	28.80	29.32	26.72	26.88
415	0.17	0.18	30.34	30.36	23.85	24.37	28.43	28.91	26.40	26.52
420	0.17	0.18	30.39	30.41	23.75	24.27	28.06	28.49	26.10	26.24
425	0.17	0.18	30.42	30.44	23.55	24.08	27.70	28.12	25.88	25.98
430	0.17	0.18	30.47	30.49	23.33	23.81	27.44	27.80	25.67	25.72
435	0.18	0.19	30.53	30.55	23.09	23.75	27.12	27.45	25.42	25.49
440	0.18	0.19	30.58	30.60	22.86	23.40	26.85	27.17	25.20	25.22
445	0.18	0.19	30.64	30.66	22.52	23.15	26.53	26.78	24.93	24.95
450	0.18	0.19	30.70	30.72	22.24	22.77	26.09	26.39	24.67	24.67
455	0.18	0.20	30.77	30.79	22.03	22.50	25.69	26.04	24.42	24.38
460	0.19	0.20	30.84	30.86	21.70	22.27	25.36	25.64	24.14	24.11
470	0.19	0.20	31.01	31.03	21.26	21.69	24.74	25.00	23.68	23.58
490	0.20	0.21	31.38	31.41	19.98	20.44	23.70	23.89	22.86	22.67
500	0.20	0.21	31.59	31.62	19.30	19.73	23.20	23.36	22.43	22.21

Notes

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Bi-Directional Coupler

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Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = +25°C

FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	In - Out	Rev - Fwd	In Fwd	Rev - Out	In - Rev	Out - Fwd	In	Out	Rev	Fwd
150	0.08	0.08	34.57	34.55	25.45	25.07	39.99	37.52	36.71	37.46
170	0.09	0.10	33.69	33.68	25.60	25.21	37.92	35.65	36.09	35.44
180	0.09	0.10	33.29	33.28	25.68	25.42	37.27	35.22	36.30	34.84
200	0.10	0.10	32.62	32.60	26.23	25.91	37.73	35.90	36.47	35.17
210	0.10	0.11	32.31	32.29	26.36	26.11	38.13	36.31	36.43	35.45
220	0.11	0.11	32.02	32.02	26.49	26.03	38.16	36.15	36.25	35.78
225	0.11	0.12	31.90	31.88	26.67	26.08	38.52	36.29	36.29	35.76
230	0.11	0.12	31.77	31.75	26.54	26.26	38.67	36.32	36.61	35.96
235	0.11	0.12	31.65	31.63	26.64	26.16	39.03	36.32	36.65	36.13
240	0.11	0.12	31.53	31.51	26.96	26.32	39.17	36.60	37.09	36.43
245	0.11	0.12	31.41	31.40	27.13	26.53	39.80	36.70	37.45	36.78
250	0.11	0.12	31.31	31.30	27.30	26.59	40.26	36.88	37.72	37.21
255	0.12	0.13	31.22	31.21	27.39	26.80	40.92	37.28	38.13	37.53
260	0.12	0.13	31.13	31.11	27.53	26.92	41.34	37.63	38.47	38.04
265	0.12	0.13	31.04	31.03	27.66	27.07	41.76	37.95	38.80	38.33
270	0.12	0.13	30.96	30.95	27.99	27.20	42.27	38.20	38.98	38.68
275	0.12	0.13	30.88	30.88	27.93	27.15	42.74	38.62	39.33	39.14
280	0.12	0.13	30.82	30.80	27.71	27.17	43.26	38.85	39.51	39.51
290	0.13	0.13	30.68	30.67	27.92	27.18	44.63	40.35	40.34	40.80
295	0.13	0.14	30.63	30.61	28.10	27.18	45.14	41.01	40.75	42.05
300	0.13	0.14	30.57	30.56	28.24	27.48	45.46	42.15	41.38	43.49
305	0.13	0.14	30.52	30.52	28.27	27.44	45.45	42.76	41.79	45.22
310	0.13	0.14	30.47	30.46	28.67	27.47	44.70	43.52	42.02	47.17
315	0.14	0.14	30.43	30.42	28.45	27.67	44.25	44.34	42.04	49.57
320	0.14	0.14	30.39	30.38	28.66	27.64	43.99	44.17	42.22	51.68
325	0.14	0.15	30.35	30.34	28.64	27.78	43.24	44.43	42.13	53.95
330	0.14	0.15	30.32	30.31	28.45	27.50	43.07	43.69	42.19	57.38
335	0.14	0.15	30.28	30.28	28.28	27.36	42.13	43.35	41.86	53.88
340	0.14	0.15	30.26	30.25	28.13	27.32	41.31	42.14	41.54	51.33
350	0.14	0.15	30.23	30.21	27.91	27.04	39.40	40.28	40.07	46.27
355	0.14	0.16	30.21	30.20	27.92	26.97	38.11	39.04	39.11	43.63
360	0.15	0.16	30.21	30.19	27.68	26.95	37.19	38.02	38.24	41.77
365	0.15	0.15	30.20	30.19	27.50	26.86	36.45	37.24	37.55	40.46
370	0.15	0.16	30.20	30.20	27.45	26.74	35.70	36.55	36.92	39.25
375	0.15	0.16	30.21	30.21	27.31	26.57	35.04	35.83	36.36	38.02
380	0.15	0.16	30.23	30.22	26.97	26.35	34.28	35.22	35.61	37.21
385	0.15	0.16	30.24	30.23	26.64	25.98	33.72	34.53	34.99	36.29
390	0.15	0.16	30.26	30.25	26.34	25.79	33.05	33.73	34.27	35.47
400	0.15	0.16	30.30	30.29	25.71	25.33	31.63	32.26	32.89	33.66
405	0.16	0.16	30.33	30.33	25.34	24.99	31.00	31.56	32.26	32.83
410	0.16	0.17	30.36	30.36	25.10	24.76	30.47	30.95	31.47	32.05
415	0.16	0.17	30.39	30.39	24.75	24.51	29.96	30.45	30.99	31.41
420	0.16	0.17	30.44	30.43	24.56	24.32	29.60	29.94	30.58	30.96
425	0.16	0.17	30.48	30.47	24.29	24.05	29.21	29.64	30.24	30.40
430	0.17	0.18	30.53	30.53	24.09	23.83	28.91	29.18	29.85	30.02
435	0.17	0.18	30.58	30.57	23.66	23.49	28.64	28.84	29.57	29.57
440	0.17	0.18	30.64	30.63	23.38	23.11	28.27	28.48	29.18	29.13
445	0.17	0.18	30.70	30.69	23.01	22.75	27.90	28.07	28.73	28.77
450	0.18	0.18	30.76	30.75	22.61	22.39	27.55	27.73	28.32	28.31
455	0.18	0.18	30.83	30.82	22.28	22.11	27.10	27.33	27.91	27.99
460	0.18	0.19	30.90	30.90	21.81	21.80	26.75	26.96	27.53	27.55
470	0.18	0.19	31.08	31.06	21.25	21.11	26.06	26.28	26.83	26.82
490	0.19	0.20	31.46	31.46	19.90	19.87	24.92	25.05	25.62	25.55
500	0.19	0.20	31.69	31.68	19.12	19.10	24.30	24.45	25.00	24.93

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Bi-Directional Coupler

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Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = +105°C

FREQ. (MHz)	INSERTION LOSS (dB)		COUPLING (dB)		DIRECTIVITY (dB)		RETURN LOSS (dB)			
	In - Out	Rev - Fwd	In Fwd	Rev - Out	In - Rev	Out - Fwd	In	Out	Rev	Fwd
150	0.09	0.09	34.52	34.53	22.64	22.68	35.94	35.69	31.00	31.26
170	0.10	0.10	33.64	33.65	22.86	23.02	33.17	32.94	29.31	28.92
180	0.10	0.11	33.26	33.27	23.00	23.27	32.15	32.03	28.85	28.20
200	0.11	0.12	32.57	32.59	23.59	24.05	31.35	31.39	28.56	27.86
210	0.11	0.12	32.27	32.29	23.97	24.47	31.06	31.10	28.61	27.95
220	0.12	0.13	31.99	32.01	24.32	24.88	30.78	30.81	28.76	28.09
225	0.12	0.13	31.86	31.88	24.51	25.07	30.74	30.72	28.89	28.23
230	0.12	0.13	31.73	31.75	24.72	25.26	30.69	30.66	29.08	28.42
235	0.12	0.13	31.61	31.63	25.01	25.53	30.73	30.65	29.31	28.68
240	0.12	0.13	31.49	31.51	25.34	25.81	30.83	30.70	29.61	29.01
245	0.12	0.13	31.38	31.40	25.68	26.12	30.99	30.82	29.93	29.33
250	0.13	0.13	31.28	31.30	26.07	26.51	31.21	31.01	30.35	29.76
255	0.13	0.14	31.19	31.20	26.53	26.83	31.47	31.25	30.76	30.22
260	0.13	0.14	31.10	31.11	26.91	27.22	31.73	31.51	31.23	30.73
265	0.13	0.14	31.01	31.03	27.27	27.50	32.03	31.82	31.71	31.20
270	0.13	0.14	30.93	30.95	27.53	27.77	32.32	32.09	32.22	31.71
275	0.13	0.14	30.86	30.87	27.83	27.99	32.65	32.46	32.76	32.34
280	0.13	0.14	30.79	30.80	28.08	28.26	33.05	32.87	33.38	32.98
290	0.14	0.15	30.66	30.67	28.76	28.91	34.08	33.96	34.97	34.53
295	0.14	0.15	30.59	30.61	29.22	29.29	34.74	34.60	35.91	35.54
300	0.14	0.15	30.54	30.56	29.66	29.73	35.54	35.35	37.04	36.60
305	0.14	0.15	30.49	30.51	30.13	30.11	36.46	36.17	38.11	37.86
310	0.14	0.15	30.44	30.46	30.47	30.48	37.35	37.09	39.28	39.11
315	0.15	0.15	30.40	30.42	30.78	30.72	38.30	38.15	40.19	40.47
320	0.15	0.16	30.35	30.38	30.95	30.83	39.24	39.07	40.97	41.69
325	0.15	0.16	30.32	30.34	31.09	30.89	40.30	40.04	41.40	43.12
330	0.15	0.16	30.28	30.31	31.09	30.80	41.13	41.11	41.37	43.91
335	0.15	0.16	30.25	30.28	30.95	30.63	41.92	42.14	40.97	44.06
340	0.15	0.16	30.23	30.25	31.04	30.49	42.52	42.73	40.19	43.44
350	0.15	0.16	30.19	30.22	30.88	30.07	41.49	41.82	38.32	41.14
355	0.15	0.16	30.18	30.20	30.79	29.78	40.31	40.53	37.37	39.86
360	0.16	0.16	30.18	30.20	30.64	29.52	39.02	39.19	36.48	38.76
365	0.16	0.17	30.18	30.20	30.42	29.23	37.73	37.80	35.76	37.70
370	0.16	0.17	30.18	30.20	30.26	28.94	36.58	36.66	35.09	36.75
375	0.16	0.17	30.19	30.21	29.90	28.58	35.56	35.56	34.54	35.93
380	0.16	0.17	30.20	30.22	29.48	28.17	34.51	34.47	33.98	35.20
385	0.16	0.17	30.21	30.24	29.00	27.77	33.54	33.52	33.40	34.42
390	0.16	0.17	30.23	30.25	28.50	27.36	32.62	32.62	32.80	33.69
400	0.17	0.18	30.28	30.30	27.59	26.58	30.78	30.87	31.59	32.35
405	0.17	0.18	30.31	30.33	27.08	26.16	29.90	30.13	31.05	31.69
410	0.17	0.18	30.34	30.37	26.61	25.78	29.16	29.47	30.56	31.04
415	0.18	0.18	30.37	30.40	26.18	25.47	28.53	28.89	30.11	30.53
420	0.18	0.19	30.41	30.44	25.84	25.19	28.00	28.38	29.70	30.08
425	0.18	0.19	30.46	30.49	25.45	24.91	27.57	27.91	29.38	29.64
430	0.18	0.19	30.51	30.54	25.04	24.53	27.20	27.49	29.01	29.25
435	0.19	0.19	30.56	30.59	24.63	24.13	26.81	27.08	28.72	28.89
440	0.19	0.19	30.62	30.65	24.17	23.70	26.44	26.68	28.30	28.45
445	0.19	0.19	30.68	30.71	23.76	23.28	26.05	26.27	27.93	28.05
450	0.19	0.20	30.75	30.78	23.32	22.88	25.66	25.85	27.54	27.61
455	0.19	0.20	30.82	30.85	22.93	22.46	25.27	25.45	27.13	27.20
460	0.20	0.20	30.90	30.93	22.51	22.07	24.92	25.08	26.74	26.80
470	0.20	0.20	31.07	31.10	21.76	21.39	24.30	24.40	26.09	26.04
490	0.21	0.21	31.46	31.49	20.25	19.86	23.21	23.23	24.83	24.70
500	0.21	0.22	31.68	31.72	19.42	19.10	22.67	22.70	24.17	24.05

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