

Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = -55°C, In port at pad 1

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY (dB) In - Rev | RETURN LOSS (dB) | | | |
|----------------|---------------------------|----------|-----------|---------------------------------|---------------------|-------|-------|-------|
| | | (dB) | | | In | Out | | |
| | | In Fwd | Rev - Out | | | Rev | Fwd | |
| 10.00 | 0.00 | 54.95 | 55.08 | 18.38 | 35.76 | 35.47 | 34.03 | 31.64 |
| 15.00 | 0.00 | 51.50 | 51.52 | 18.70 | 35.50 | 34.93 | 33.51 | 31.56 |
| 20.00 | 0.00 | 48.97 | 49.04 | 18.39 | 34.84 | 34.41 | 32.87 | 31.33 |
| 25.00 | 0.00 | 47.02 | 47.15 | 18.44 | 34.30 | 33.64 | 32.13 | 31.14 |
| 30.00 | 0.00 | 45.47 | 45.56 | 18.31 | 33.73 | 33.01 | 31.49 | 30.91 |
| 35.00 | 0.00 | 44.15 | 44.23 | 18.43 | 33.21 | 32.37 | 30.94 | 30.59 |
| 40.00 | 0.00 | 42.98 | 43.07 | 18.41 | 32.71 | 31.90 | 30.41 | 30.36 |
| 50.00 | 0.00 | 41.07 | 41.12 | 18.40 | 31.78 | 31.03 | 29.54 | 29.79 |
| 60.00 | 0.00 | 39.47 | 39.55 | 18.32 | 31.07 | 30.46 | 28.91 | 29.23 |
| 70.00 | 0.00 | 38.16 | 38.23 | 18.52 | 30.64 | 30.04 | 28.53 | 28.77 |
| 80.00 | 0.01 | 37.00 | 37.06 | 18.51 | 30.23 | 29.83 | 28.28 | 28.34 |
| 90.00 | 0.01 | 35.98 | 36.04 | 18.63 | 30.04 | 29.72 | 28.12 | 28.05 |
| 100.00 | 0.01 | 35.09 | 35.15 | 18.66 | 29.89 | 29.71 | 28.04 | 27.89 |
| 120.00 | 0.01 | 33.51 | 33.58 | 18.59 | 29.90 | 29.83 | 28.01 | 27.89 |
| 140.00 | 0.01 | 32.19 | 32.25 | 18.58 | 30.01 | 30.20 | 28.05 | 27.94 |
| 160.00 | 0.01 | 31.04 | 31.10 | 18.68 | 30.43 | 31.09 | 28.43 | 28.08 |
| 180.00 | 0.01 | 30.04 | 30.10 | 18.91 | 31.29 | 33.07 | 29.56 | 28.18 |
| 200.00 | 0.02 | 29.15 | 29.20 | 19.01 | 33.25 | 36.60 | 31.41 | 28.69 |
| 250.00 | 0.02 | 27.26 | 27.30 | 18.66 | 44.82 | 39.16 | 37.57 | 34.99 |
| 300.00 | 0.02 | 25.72 | 25.78 | 19.21 | 33.61 | 30.90 | 33.98 | 44.04 |
| 350.00 | 0.03 | 24.45 | 24.50 | 19.19 | 27.45 | 27.04 | 29.97 | 32.43 |
| 400.00 | 0.03 | 23.36 | 23.41 | 19.88 | 26.18 | 25.69 | 28.44 | 27.15 |
| 450.00 | 0.03 | 22.41 | 22.45 | 20.55 | 25.52 | 25.14 | 27.23 | 26.32 |
| 500.00 | 0.03 | 21.57 | 21.61 | 21.39 | 26.93 | 25.85 | 27.56 | 26.63 |
| 550.00 | 0.03 | 20.83 | 20.86 | 22.75 | 28.94 | 27.52 | 28.62 | 26.61 |
| 600.00 | 0.03 | 20.16 | 20.18 | 23.84 | 31.37 | 31.12 | 29.98 | 28.18 |
| 650.00 | 0.03 | 19.56 | 19.57 | 26.56 | 35.82 | 35.40 | 29.06 | 28.79 |
| 700.00 | 0.03 | 18.99 | 19.02 | 29.41 | 40.32 | 36.49 | 27.57 | 28.22 |
| 750.00 | 0.03 | 18.50 | 18.51 | 35.29 | 59.81 | 36.41 | 26.34 | 28.43 |
| 800.00 | 0.04 | 18.05 | 18.05 | 39.68 | 46.91 | 41.63 | 26.80 | 27.48 |
| 850.00 | 0.05 | 17.63 | 17.64 | 30.97 | 37.07 | 40.39 | 28.26 | 26.51 |
| 900.00 | 0.06 | 17.25 | 17.26 | 30.26 | 32.21 | 30.77 | 31.03 | 26.17 |
| 950.00 | 0.08 | 16.93 | 16.93 | 23.15 | 26.56 | 25.90 | 32.80 | 24.65 |
| 1000.00 | 0.08 | 16.61 | 16.61 | 23.05 | 23.49 | 22.67 | 29.06 | 23.76 |
| 1050.00 | 0.11 | 16.35 | 16.36 | 19.39 | 20.67 | 20.65 | 25.88 | 22.67 |
| 1100.00 | 0.11 | 16.08 | 16.07 | 19.59 | 18.96 | 19.17 | 23.81 | 21.48 |
| 1150.00 | 0.13 | 15.85 | 15.87 | 16.53 | 18.12 | 18.32 | 23.03 | 21.10 |
| 1200.00 | 0.12 | 15.60 | 15.61 | 17.86 | 17.92 | 17.92 | 23.49 | 20.63 |
| 1220.00 | 0.14 | 15.57 | 15.57 | 16.94 | 17.93 | 17.80 | 23.61 | 20.42 |
| 1250.00 | 0.13 | 15.43 | 15.44 | 14.86 | 18.05 | 17.74 | 23.97 | 20.43 |
| 1270.00 | 0.11 | 15.30 | 15.29 | 15.18 | 18.28 | 17.84 | 24.44 | 20.69 |
| 1300.00 | 0.12 | 15.22 | 15.21 | 16.85 | 18.48 | 17.92 | 24.87 | 20.94 |
| 1400.00 | 0.11 | 14.94 | 14.88 | 15.70 | 18.84 | 18.55 | 24.51 | 20.63 |
| 1500.00 | 0.09 | 14.72 | 14.60 | 14.65 | 19.16 | 19.42 | 23.79 | 20.36 |
| 1550.00 | 0.04 | 14.61 | 14.45 | 12.53 | 18.98 | 19.75 | 24.19 | 22.02 |
| 1600.00 | 0.04 | 14.56 | 14.36 | 13.41 | 20.12 | 20.86 | 24.45 | 21.20 |
| 1650.00 | 0.01 | 14.50 | 14.25 | 12.10 | 21.26 | 22.54 | 24.41 | 21.78 |
| 1700.00 | 0.01 | 14.47 | 14.21 | 12.26 | 23.14 | 25.69 | 23.70 | 22.69 |
| 1750.00 | 0.04 | 14.45 | 14.15 | 12.08 | 26.37 | 31.55 | 22.85 | 21.97 |
| 1800.00 | 0.05 | 14.42 | 14.13 | 11.64 | 27.12 | 44.79 | 22.00 | 23.34 |
| 1850.00 | 0.07 | 14.47 | 14.16 | 12.24 | 28.70 | 30.27 | 21.61 | 22.80 |
| 1900.00 | 0.07 | 14.41 | 14.18 | 11.37 | 27.30 | 25.63 | 21.21 | 23.09 |
| 1950.00 | 0.08 | 14.54 | 14.28 | 12.98 | 25.44 | 23.56 | 21.51 | 23.76 |
| 2000.00 | 0.08 | 14.49 | 14.36 | 11.62 | 24.65 | 22.88 | 21.72 | 23.21 |

Notes

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- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"). Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = -55°C, In port at pad 2

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | In - Rev | In | Out | Rev | Fwd |
| | | | | | | | | |
| 10.00 | 0.00 | 55.08 | 54.95 | 18.06 | 35.47 | 35.76 | 31.64 | 34.03 |
| 15.00 | 0.00 | 51.52 | 51.50 | 17.77 | 34.93 | 35.50 | 31.56 | 33.51 |
| 20.00 | 0.00 | 49.04 | 48.97 | 17.67 | 34.41 | 34.84 | 31.33 | 32.87 |
| 25.00 | 0.00 | 47.15 | 47.02 | 17.64 | 33.64 | 34.30 | 31.14 | 32.13 |
| 30.00 | 0.00 | 45.56 | 45.47 | 17.60 | 33.01 | 33.73 | 30.91 | 31.49 |
| 35.00 | 0.00 | 44.23 | 44.15 | 17.60 | 32.37 | 33.21 | 30.59 | 30.94 |
| 40.00 | 0.00 | 43.07 | 42.98 | 17.44 | 31.90 | 32.71 | 30.36 | 30.41 |
| 50.00 | 0.00 | 41.12 | 41.07 | 17.60 | 31.03 | 31.78 | 29.79 | 29.54 |
| 60.00 | 0.00 | 39.55 | 39.47 | 17.71 | 30.46 | 31.07 | 29.23 | 28.91 |
| 70.00 | 0.00 | 38.23 | 38.16 | 17.76 | 30.04 | 30.64 | 28.77 | 28.53 |
| 80.00 | 0.00 | 37.06 | 37.00 | 17.79 | 29.83 | 30.23 | 28.34 | 28.28 |
| 90.00 | 0.00 | 36.04 | 35.98 | 17.84 | 29.72 | 30.04 | 28.05 | 28.12 |
| 100.00 | 0.00 | 35.15 | 35.09 | 17.90 | 29.71 | 29.89 | 27.89 | 28.04 |
| 120.00 | 0.01 | 33.58 | 33.51 | 17.84 | 29.83 | 29.90 | 27.89 | 28.01 |
| 140.00 | 0.01 | 32.25 | 32.19 | 17.69 | 30.20 | 30.01 | 27.94 | 28.05 |
| 160.00 | 0.01 | 31.10 | 31.04 | 17.70 | 31.09 | 30.43 | 28.08 | 28.43 |
| 180.00 | 0.01 | 30.10 | 30.04 | 17.80 | 33.07 | 31.29 | 28.18 | 29.56 |
| 200.00 | 0.01 | 29.20 | 29.15 | 17.84 | 36.60 | 33.25 | 28.69 | 31.41 |
| 250.00 | 0.02 | 27.30 | 27.26 | 17.82 | 39.16 | 44.82 | 34.99 | 37.57 |
| 300.00 | 0.02 | 25.78 | 25.72 | 18.03 | 30.90 | 33.61 | 44.04 | 33.98 |
| 350.00 | 0.03 | 24.50 | 24.45 | 18.05 | 27.04 | 27.45 | 32.43 | 29.97 |
| 400.00 | 0.03 | 23.41 | 23.36 | 18.67 | 25.69 | 26.18 | 27.15 | 28.44 |
| 450.00 | 0.03 | 22.45 | 22.41 | 18.74 | 25.14 | 25.52 | 26.32 | 27.23 |
| 500.00 | 0.03 | 21.61 | 21.57 | 20.00 | 25.85 | 26.93 | 26.63 | 27.56 |
| 550.00 | 0.03 | 20.86 | 20.83 | 20.09 | 27.52 | 28.94 | 26.61 | 28.62 |
| 600.00 | 0.03 | 20.18 | 20.16 | 21.64 | 31.12 | 31.37 | 28.18 | 29.98 |
| 650.00 | 0.03 | 19.57 | 19.56 | 22.36 | 35.40 | 35.82 | 28.79 | 29.06 |
| 700.00 | 0.03 | 19.02 | 18.99 | 24.60 | 36.49 | 40.32 | 28.22 | 27.57 |
| 750.00 | 0.03 | 18.51 | 18.50 | 25.87 | 36.41 | 59.81 | 28.43 | 26.34 |
| 800.00 | 0.04 | 18.05 | 18.05 | 29.48 | 41.63 | 46.91 | 27.48 | 26.80 |
| 850.00 | 0.05 | 17.64 | 17.63 | 29.91 | 40.39 | 37.07 | 26.51 | 28.26 |
| 900.00 | 0.06 | 17.26 | 17.25 | 31.80 | 30.77 | 32.21 | 26.17 | 31.03 |
| 950.00 | 0.07 | 16.93 | 16.93 | 26.00 | 25.90 | 26.56 | 24.65 | 32.80 |
| 1000.00 | 0.08 | 16.61 | 16.61 | 26.13 | 22.67 | 23.49 | 23.76 | 29.06 |
| 1050.00 | 0.11 | 16.36 | 16.35 | 20.87 | 20.65 | 20.67 | 22.67 | 25.88 |
| 1100.00 | 0.10 | 16.07 | 16.08 | 21.90 | 19.17 | 18.96 | 21.48 | 23.81 |
| 1150.00 | 0.12 | 15.87 | 15.85 | 17.93 | 18.32 | 18.12 | 21.10 | 23.03 |
| 1200.00 | 0.11 | 15.61 | 15.60 | 19.46 | 17.92 | 17.92 | 20.63 | 23.49 |
| 1220.00 | 0.13 | 15.57 | 15.57 | 18.58 | 17.80 | 17.93 | 20.42 | 23.61 |
| 1250.00 | 0.11 | 15.44 | 15.43 | 16.40 | 17.74 | 18.05 | 20.43 | 23.97 |
| 1270.00 | 0.10 | 15.29 | 15.30 | 16.44 | 17.84 | 18.28 | 20.69 | 24.44 |
| 1300.00 | 0.12 | 15.21 | 15.22 | 18.10 | 17.92 | 18.48 | 20.94 | 24.87 |
| 1400.00 | 0.12 | 14.88 | 14.94 | 17.44 | 18.55 | 18.84 | 20.63 | 24.51 |
| 1500.00 | 0.10 | 14.60 | 14.72 | 16.84 | 19.42 | 19.16 | 20.36 | 23.79 |
| 1550.00 | 0.04 | 14.45 | 14.61 | 14.86 | 19.75 | 18.98 | 22.02 | 24.19 |
| 1600.00 | 0.07 | 14.36 | 14.56 | 15.87 | 20.86 | 20.12 | 21.20 | 24.45 |
| 1650.00 | 0.00 | 14.25 | 14.50 | 14.99 | 22.54 | 21.26 | 21.78 | 24.41 |
| 1700.00 | 0.01 | 14.21 | 14.47 | 15.01 | 25.69 | 23.14 | 22.69 | 23.70 |
| 1750.00 | 0.04 | 14.15 | 14.45 | 15.05 | 31.55 | 26.37 | 21.97 | 22.85 |
| 1800.00 | 0.04 | 14.13 | 14.42 | 14.63 | 44.79 | 27.12 | 23.34 | 22.00 |
| 1850.00 | 0.07 | 14.16 | 14.47 | 15.48 | 30.27 | 28.70 | 22.80 | 21.61 |
| 1900.00 | 0.07 | 14.18 | 14.41 | 14.22 | 25.63 | 27.30 | 23.09 | 21.21 |
| 1950.00 | 0.07 | 14.28 | 14.54 | 16.20 | 23.56 | 25.44 | 23.76 | 21.51 |
| 2000.00 | 0.07 | 14.36 | 14.49 | 14.05 | 22.88 | 24.65 | 23.21 | 21.72 |

Notes

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = -55°C, In port at pad 3

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) In - Rev | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | | In | Out | Rev | Fwd |
| | | | | | | | | |
| 10.00 | 0.08 | 55.02 | 54.98 | 18.40 | 34.03 | 31.64 | 35.76 | 35.47 |
| 15.00 | 0.08 | 51.56 | 51.45 | 18.81 | 33.51 | 31.56 | 35.50 | 34.93 |
| 20.00 | 0.08 | 49.03 | 49.00 | 18.61 | 32.87 | 31.33 | 34.84 | 34.41 |
| 25.00 | 0.08 | 47.11 | 47.05 | 18.26 | 32.13 | 31.14 | 34.30 | 33.64 |
| 30.00 | 0.08 | 45.55 | 45.47 | 18.13 | 31.49 | 30.91 | 33.73 | 33.01 |
| 35.00 | 0.08 | 44.21 | 44.16 | 18.26 | 30.94 | 30.59 | 33.21 | 32.37 |
| 40.00 | 0.08 | 43.06 | 42.99 | 18.19 | 30.41 | 30.36 | 32.71 | 31.90 |
| 50.00 | 0.08 | 41.14 | 41.06 | 18.30 | 29.54 | 29.79 | 31.78 | 31.03 |
| 60.00 | 0.09 | 39.54 | 39.49 | 18.06 | 28.91 | 29.23 | 31.07 | 30.46 |
| 70.00 | 0.09 | 38.22 | 38.15 | 18.27 | 28.53 | 28.77 | 30.64 | 30.04 |
| 80.00 | 0.09 | 37.07 | 37.00 | 18.33 | 28.28 | 28.34 | 30.23 | 29.83 |
| 90.00 | 0.09 | 36.05 | 35.99 | 18.39 | 28.12 | 28.05 | 30.04 | 29.72 |
| 100.00 | 0.09 | 35.15 | 35.08 | 18.42 | 28.04 | 27.89 | 29.89 | 29.71 |
| 120.00 | 0.09 | 33.57 | 33.52 | 18.39 | 28.01 | 27.89 | 29.90 | 29.83 |
| 140.00 | 0.10 | 32.25 | 32.20 | 18.35 | 28.05 | 27.94 | 30.01 | 30.20 |
| 160.00 | 0.10 | 31.11 | 31.05 | 18.40 | 28.43 | 28.08 | 30.43 | 31.09 |
| 180.00 | 0.10 | 30.10 | 30.05 | 18.60 | 29.56 | 28.18 | 31.29 | 33.07 |
| 200.00 | 0.10 | 29.20 | 29.15 | 18.62 | 31.41 | 28.69 | 33.25 | 36.60 |
| 250.00 | 0.11 | 27.31 | 27.26 | 18.77 | 37.57 | 34.99 | 44.82 | 39.16 |
| 300.00 | 0.11 | 25.78 | 25.72 | 18.98 | 33.98 | 44.04 | 33.61 | 30.90 |
| 350.00 | 0.12 | 24.50 | 24.45 | 19.27 | 29.97 | 32.43 | 27.45 | 27.04 |
| 400.00 | 0.13 | 23.41 | 23.35 | 20.02 | 28.44 | 27.15 | 26.18 | 25.69 |
| 450.00 | 0.13 | 22.45 | 22.41 | 20.44 | 27.23 | 26.32 | 25.52 | 25.14 |
| 500.00 | 0.14 | 21.61 | 21.58 | 21.85 | 27.56 | 26.63 | 26.93 | 25.85 |
| 550.00 | 0.14 | 20.86 | 20.84 | 22.72 | 28.62 | 26.61 | 28.94 | 27.52 |
| 600.00 | 0.14 | 20.18 | 20.16 | 24.64 | 29.98 | 28.18 | 31.37 | 31.12 |
| 650.00 | 0.14 | 19.58 | 19.56 | 27.07 | 29.06 | 28.79 | 35.82 | 35.40 |
| 700.00 | 0.13 | 19.02 | 19.00 | 29.06 | 27.57 | 28.22 | 40.32 | 36.49 |
| 750.00 | 0.14 | 18.51 | 18.50 | 37.12 | 26.34 | 28.43 | 59.81 | 36.41 |
| 800.00 | 0.13 | 18.04 | 18.05 | 42.20 | 26.80 | 27.48 | 46.91 | 41.63 |
| 850.00 | 0.14 | 17.64 | 17.63 | 31.44 | 28.26 | 26.51 | 37.07 | 40.39 |
| 900.00 | 0.14 | 17.26 | 17.25 | 29.49 | 31.03 | 26.17 | 32.21 | 30.77 |
| 950.00 | 0.16 | 16.93 | 16.91 | 23.26 | 32.80 | 24.65 | 26.56 | 25.90 |
| 1000.00 | 0.16 | 16.61 | 16.61 | 23.33 | 29.06 | 23.76 | 23.49 | 22.67 |
| 1050.00 | 0.16 | 16.36 | 16.33 | 18.82 | 25.88 | 22.67 | 20.67 | 20.65 |
| 1100.00 | 0.16 | 16.08 | 16.06 | 19.97 | 23.81 | 21.48 | 18.96 | 19.17 |
| 1150.00 | 0.15 | 15.87 | 15.84 | 16.23 | 23.03 | 21.10 | 18.12 | 18.32 |
| 1200.00 | 0.15 | 15.61 | 15.60 | 17.97 | 23.49 | 20.63 | 17.92 | 17.92 |
| 1220.00 | 0.16 | 15.56 | 15.55 | 17.06 | 23.61 | 20.42 | 17.93 | 17.80 |
| 1250.00 | 0.13 | 15.43 | 15.42 | 15.00 | 23.97 | 20.43 | 18.05 | 17.74 |
| 1270.00 | 0.13 | 15.31 | 15.30 | 15.14 | 24.44 | 20.69 | 18.28 | 17.84 |
| 1300.00 | 0.15 | 15.22 | 15.22 | 16.61 | 24.87 | 20.94 | 18.48 | 17.92 |
| 1400.00 | 0.15 | 14.89 | 14.94 | 15.49 | 24.51 | 20.63 | 18.84 | 18.55 |
| 1500.00 | 0.14 | 14.62 | 14.74 | 14.63 | 23.79 | 20.36 | 19.16 | 19.42 |
| 1550.00 | 0.09 | 14.47 | 14.62 | 12.60 | 24.19 | 22.02 | 18.98 | 19.75 |
| 1600.00 | 0.12 | 14.38 | 14.59 | 13.53 | 24.45 | 21.20 | 20.12 | 20.86 |
| 1650.00 | 0.07 | 14.27 | 14.50 | 12.30 | 24.41 | 21.78 | 21.26 | 22.54 |
| 1700.00 | 0.07 | 14.22 | 14.47 | 12.53 | 23.70 | 22.69 | 23.14 | 25.69 |
| 1750.00 | 0.05 | 14.17 | 14.46 | 12.23 | 22.85 | 21.97 | 26.37 | 31.55 |
| 1800.00 | 0.03 | 14.14 | 14.40 | 11.94 | 22.00 | 23.34 | 27.12 | 44.79 |
| 1850.00 | 0.02 | 14.17 | 14.48 | 12.30 | 21.61 | 22.80 | 28.70 | 30.27 |
| 1900.00 | 0.00 | 14.18 | 14.40 | 11.79 | 21.21 | 23.09 | 27.30 | 25.63 |
| 1950.00 | 0.00 | 14.30 | 14.54 | 12.90 | 21.51 | 23.76 | 25.44 | 23.56 |
| 2000.00 | 0.01 | 14.36 | 14.49 | 11.81 | 21.72 | 23.21 | 24.65 | 22.88 |

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = -55°C, In port at pad 4

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY (dB) In - Rev | RETURN LOSS | | | |
|----------------|---------------------------|----------|-----------|---------------------------------|-------------|-------|-------|-------|
| | | (dB) | | | (dB) | | | |
| | | In Fwd | Rev - Out | | In | Out | Rev | Fwd |
| 10.00 | 0.08 | 54.98 | 55.02 | 18.26 | 31.64 | 34.03 | 35.47 | 35.76 |
| 15.00 | 0.08 | 51.45 | 51.56 | 17.84 | 31.56 | 33.51 | 34.93 | 35.50 |
| 20.00 | 0.08 | 49.00 | 49.03 | 17.81 | 31.33 | 32.87 | 34.41 | 34.84 |
| 25.00 | 0.08 | 47.05 | 47.11 | 17.76 | 31.14 | 32.13 | 33.64 | 34.30 |
| 30.00 | 0.08 | 45.47 | 45.55 | 17.71 | 30.91 | 31.49 | 33.01 | 33.73 |
| 35.00 | 0.08 | 44.16 | 44.21 | 17.66 | 30.59 | 30.94 | 32.37 | 33.21 |
| 40.00 | 0.08 | 42.99 | 43.06 | 17.77 | 30.36 | 30.41 | 31.90 | 32.71 |
| 50.00 | 0.09 | 41.06 | 41.14 | 17.73 | 29.79 | 29.54 | 31.03 | 31.78 |
| 60.00 | 0.09 | 39.49 | 39.54 | 17.76 | 29.23 | 28.91 | 30.46 | 31.07 |
| 70.00 | 0.09 | 38.15 | 38.22 | 17.73 | 28.77 | 28.53 | 30.04 | 30.64 |
| 80.00 | 0.09 | 37.00 | 37.07 | 17.86 | 28.34 | 28.28 | 29.83 | 30.23 |
| 90.00 | 0.09 | 35.99 | 36.05 | 17.94 | 28.05 | 28.12 | 29.72 | 30.04 |
| 100.00 | 0.09 | 35.08 | 35.15 | 17.95 | 27.89 | 28.04 | 29.71 | 29.89 |
| 120.00 | 0.09 | 33.52 | 33.57 | 18.03 | 27.89 | 28.01 | 29.83 | 29.90 |
| 140.00 | 0.10 | 32.20 | 32.25 | 17.86 | 27.94 | 28.05 | 30.20 | 30.01 |
| 160.00 | 0.10 | 31.05 | 31.11 | 17.73 | 28.08 | 28.43 | 31.09 | 30.43 |
| 180.00 | 0.10 | 30.05 | 30.10 | 17.75 | 28.18 | 29.56 | 33.07 | 31.29 |
| 200.00 | 0.10 | 29.15 | 29.20 | 17.91 | 28.69 | 31.41 | 36.60 | 33.25 |
| 250.00 | 0.11 | 27.26 | 27.31 | 18.00 | 34.99 | 37.57 | 39.16 | 44.82 |
| 300.00 | 0.12 | 25.72 | 25.78 | 18.12 | 44.04 | 33.98 | 30.90 | 33.61 |
| 350.00 | 0.12 | 24.45 | 24.50 | 18.23 | 32.43 | 29.97 | 27.04 | 27.45 |
| 400.00 | 0.13 | 23.35 | 23.41 | 18.89 | 27.15 | 28.44 | 25.69 | 26.18 |
| 450.00 | 0.13 | 22.41 | 22.45 | 18.86 | 26.32 | 27.23 | 25.14 | 25.52 |
| 500.00 | 0.14 | 21.58 | 21.61 | 20.05 | 26.63 | 27.56 | 25.85 | 26.93 |
| 550.00 | 0.14 | 20.84 | 20.86 | 20.39 | 26.61 | 28.62 | 27.52 | 28.94 |
| 600.00 | 0.14 | 20.16 | 20.18 | 21.72 | 28.18 | 29.98 | 31.12 | 31.37 |
| 650.00 | 0.14 | 19.56 | 19.58 | 22.43 | 28.79 | 29.06 | 35.40 | 35.82 |
| 700.00 | 0.15 | 19.00 | 19.02 | 25.09 | 28.22 | 27.57 | 36.49 | 40.32 |
| 750.00 | 0.14 | 18.50 | 18.51 | 25.35 | 28.43 | 26.34 | 36.41 | 59.81 |
| 800.00 | 0.15 | 18.05 | 18.04 | 29.37 | 27.48 | 26.80 | 41.63 | 46.91 |
| 850.00 | 0.15 | 17.63 | 17.64 | 30.17 | 26.51 | 28.26 | 40.39 | 37.07 |
| 900.00 | 0.15 | 17.25 | 17.26 | 30.97 | 26.17 | 31.03 | 30.77 | 32.21 |
| 950.00 | 0.15 | 16.91 | 16.93 | 25.35 | 24.65 | 32.80 | 25.90 | 26.56 |
| 1000.00 | 0.15 | 16.61 | 16.61 | 26.43 | 23.76 | 29.06 | 22.67 | 23.49 |
| 1050.00 | 0.16 | 16.33 | 16.36 | 20.76 | 22.67 | 25.88 | 20.65 | 20.67 |
| 1100.00 | 0.16 | 16.06 | 16.08 | 21.63 | 21.48 | 23.81 | 19.17 | 18.96 |
| 1150.00 | 0.16 | 15.84 | 15.87 | 18.12 | 21.10 | 23.03 | 18.32 | 18.12 |
| 1200.00 | 0.15 | 15.60 | 15.61 | 19.14 | 20.63 | 23.49 | 17.92 | 17.92 |
| 1220.00 | 0.17 | 15.55 | 15.56 | 18.67 | 20.42 | 23.61 | 17.80 | 17.93 |
| 1250.00 | 0.16 | 15.42 | 15.43 | 16.47 | 20.43 | 23.97 | 17.74 | 18.05 |
| 1270.00 | 0.14 | 15.30 | 15.31 | 16.48 | 20.69 | 24.44 | 17.84 | 18.28 |
| 1300.00 | 0.15 | 15.22 | 15.22 | 18.27 | 20.94 | 24.87 | 17.92 | 18.48 |
| 1400.00 | 0.14 | 14.94 | 14.89 | 17.73 | 20.63 | 24.51 | 18.55 | 18.84 |
| 1500.00 | 0.13 | 14.74 | 14.62 | 16.57 | 20.36 | 23.79 | 19.42 | 19.16 |
| 1550.00 | 0.10 | 14.62 | 14.47 | 15.07 | 22.02 | 24.19 | 19.75 | 18.98 |
| 1600.00 | 0.11 | 14.59 | 14.38 | 15.50 | 21.20 | 24.45 | 20.86 | 20.12 |
| 1650.00 | 0.07 | 14.50 | 14.27 | 14.77 | 21.78 | 24.41 | 22.54 | 21.26 |
| 1700.00 | 0.07 | 14.47 | 14.22 | 14.98 | 22.69 | 23.70 | 25.69 | 23.14 |
| 1750.00 | 0.04 | 14.46 | 14.17 | 14.65 | 21.97 | 22.85 | 31.55 | 26.37 |
| 1800.00 | 0.03 | 14.40 | 14.14 | 14.52 | 23.34 | 22.00 | 44.79 | 27.12 |
| 1850.00 | 0.01 | 14.48 | 14.17 | 15.09 | 22.80 | 21.61 | 30.27 | 28.70 |
| 1900.00 | 0.00 | 14.40 | 14.18 | 13.80 | 23.09 | 21.21 | 25.63 | 27.30 |
| 1950.00 | 0.01 | 14.54 | 14.30 | 16.28 | 23.76 | 21.51 | 23.56 | 25.44 |
| 2000.00 | 0.01 | 14.49 | 14.36 | 13.77 | 23.21 | 21.72 | 22.88 | 24.65 |

Notes

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 25°C, In port at pad 1

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | In - Rev | In | | | |
| | | | | | Out | Rev | Fwd | Rev |
| 10.00 | 0.00 | 54.97 | 54.98 | 18.29 | 53.64 | 50.09 | 59.77 | 57.62 |
| 15.00 | 0.00 | 51.46 | 51.49 | 17.76 | 50.73 | 48.59 | 56.11 | 54.91 |
| 20.00 | 0.00 | 48.95 | 48.98 | 17.86 | 48.91 | 47.16 | 54.30 | 52.82 |
| 25.00 | 0.00 | 47.07 | 47.04 | 17.84 | 47.34 | 45.50 | 52.03 | 50.73 |
| 30.00 | 0.00 | 45.49 | 45.47 | 18.06 | 45.95 | 44.24 | 50.18 | 48.29 |
| 35.00 | 0.00 | 44.13 | 44.16 | 17.82 | 44.51 | 43.19 | 48.74 | 47.05 |
| 40.00 | 0.00 | 43.02 | 42.98 | 18.05 | 43.82 | 42.42 | 46.67 | 46.03 |
| 50.00 | 0.00 | 41.07 | 41.07 | 17.96 | 41.86 | 40.82 | 44.76 | 44.30 |
| 60.00 | 0.00 | 39.51 | 39.49 | 17.95 | 40.34 | 39.93 | 42.99 | 43.01 |
| 70.00 | 0.01 | 38.16 | 38.16 | 17.95 | 38.85 | 38.95 | 41.19 | 41.59 |
| 80.00 | 0.01 | 37.02 | 36.99 | 17.86 | 37.90 | 38.05 | 39.91 | 40.74 |
| 90.00 | 0.01 | 36.01 | 35.97 | 17.97 | 36.74 | 37.34 | 38.95 | 39.67 |
| 100.00 | 0.01 | 35.10 | 35.07 | 17.88 | 35.55 | 36.60 | 38.10 | 38.92 |
| 120.00 | 0.01 | 33.53 | 33.51 | 17.85 | 34.01 | 35.17 | 36.61 | 37.03 |
| 140.00 | 0.01 | 32.21 | 32.19 | 17.87 | 32.68 | 34.03 | 35.43 | 35.44 |
| 160.00 | 0.01 | 31.06 | 31.03 | 17.97 | 31.72 | 33.27 | 34.27 | 34.22 |
| 180.00 | 0.01 | 30.06 | 30.03 | 18.08 | 30.92 | 32.35 | 33.55 | 33.26 |
| 200.00 | 0.01 | 29.17 | 29.14 | 18.18 | 30.19 | 31.37 | 33.11 | 32.54 |
| 250.00 | 0.02 | 27.27 | 27.25 | 18.13 | 28.43 | 29.40 | 31.42 | 30.78 |
| 300.00 | 0.02 | 25.75 | 25.72 | 18.64 | 27.45 | 28.64 | 29.41 | 29.67 |
| 350.00 | 0.02 | 24.47 | 24.45 | 18.59 | 26.99 | 27.31 | 28.68 | 29.07 |
| 400.00 | 0.03 | 23.38 | 23.35 | 19.12 | 26.48 | 27.59 | 27.97 | 28.87 |
| 450.00 | 0.03 | 22.44 | 22.40 | 19.45 | 26.95 | 27.27 | 28.31 | 28.98 |
| 500.00 | 0.03 | 21.61 | 21.57 | 19.86 | 27.28 | 28.49 | 28.45 | 29.96 |
| 550.00 | 0.03 | 20.88 | 20.83 | 20.52 | 28.54 | 29.74 | 29.37 | 31.41 |
| 600.00 | 0.03 | 20.21 | 20.16 | 21.54 | 29.96 | 31.29 | 31.29 | 33.50 |
| 650.00 | 0.03 | 19.61 | 19.55 | 23.10 | 32.24 | 34.35 | 33.82 | 36.57 |
| 700.00 | 0.03 | 19.05 | 19.01 | 24.83 | 34.54 | 38.90 | 40.54 | 39.43 |
| 750.00 | 0.03 | 18.54 | 18.50 | 28.39 | 35.92 | 43.19 | 42.32 | 39.65 |
| 800.00 | 0.03 | 18.08 | 18.05 | 30.60 | 33.90 | 36.18 | 36.76 | 34.87 |
| 850.00 | 0.04 | 17.67 | 17.64 | 51.67 | 30.40 | 31.72 | 31.26 | 30.45 |
| 900.00 | 0.05 | 17.30 | 17.27 | 51.76 | 27.80 | 28.03 | 28.04 | 27.62 |
| 950.00 | 0.07 | 16.98 | 16.95 | 26.82 | 25.59 | 25.53 | 25.46 | 25.18 |
| 1000.00 | 0.08 | 16.67 | 16.64 | 28.34 | 23.91 | 23.45 | 23.46 | 23.57 |
| 1050.00 | 0.10 | 16.43 | 16.42 | 21.26 | 22.42 | 21.93 | 21.94 | 22.03 |
| 1100.00 | 0.10 | 16.16 | 16.14 | 22.53 | 21.40 | 20.63 | 20.84 | 20.89 |
| 1150.00 | 0.12 | 15.96 | 15.97 | 17.81 | 20.39 | 19.64 | 19.98 | 19.94 |
| 1200.00 | 0.12 | 15.71 | 15.71 | 19.40 | 19.68 | 18.93 | 19.27 | 19.30 |
| 1220.00 | 0.13 | 15.68 | 15.68 | 18.30 | 19.44 | 18.70 | 19.13 | 19.10 |
| 1250.00 | 0.12 | 15.54 | 15.56 | 15.52 | 19.05 | 18.38 | 18.93 | 18.80 |
| 1270.00 | 0.10 | 15.40 | 15.42 | 15.53 | 18.88 | 18.21 | 18.74 | 18.59 |
| 1300.00 | 0.11 | 15.32 | 15.32 | 17.18 | 18.74 | 18.05 | 18.52 | 18.46 |
| 1400.00 | 0.09 | 14.99 | 14.96 | 15.56 | 18.65 | 17.92 | 18.34 | 18.43 |
| 1500.00 | 0.06 | 14.74 | 14.65 | 14.29 | 19.25 | 18.90 | 19.07 | 19.22 |
| 1550.00 | 0.00 | 14.59 | 14.50 | 12.60 | 20.00 | 19.39 | 19.81 | 19.99 |
| 1600.00 | 0.01 | 14.54 | 14.40 | 13.27 | 21.10 | 20.75 | 21.07 | 21.02 |
| 1650.00 | 0.05 | 14.43 | 14.29 | 12.33 | 22.54 | 22.02 | 22.81 | 22.65 |
| 1700.00 | 0.05 | 14.37 | 14.23 | 12.43 | 24.55 | 24.56 | 25.18 | 24.65 |
| 1750.00 | 0.09 | 14.34 | 14.20 | 12.34 | 27.08 | 27.70 | 28.73 | 27.78 |
| 1800.00 | 0.09 | 14.29 | 14.21 | 12.04 | 29.85 | 32.33 | 35.14 | 32.66 |
| 1850.00 | 0.12 | 14.34 | 14.27 | 12.67 | 31.50 | 40.82 | 43.92 | 38.43 |
| 1900.00 | 0.11 | 14.29 | 14.31 | 11.88 | 29.59 | 35.76 | 33.23 | 32.79 |
| 1950.00 | 0.13 | 14.46 | 14.46 | 13.62 | 26.79 | 29.08 | 27.67 | 27.92 |
| 2000.00 | 0.12 | 14.43 | 14.54 | 12.28 | 24.56 | 26.03 | 24.50 | 24.62 |

Notes

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 25°C, In port at pad 2

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) In - Rev | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | | In | Out | | |
| | | | | | | Rev | Fwd | Rev |
| 10.00 | 0.00 | 54.98 | 54.97 | 18.42 | 50.09 | 53.64 | 57.62 | 59.77 |
| 15.00 | 0.00 | 51.49 | 51.46 | 19.01 | 48.59 | 50.73 | 54.91 | 56.11 |
| 20.00 | 0.00 | 48.98 | 48.95 | 18.86 | 47.16 | 48.91 | 52.82 | 54.30 |
| 25.00 | 0.00 | 47.04 | 47.07 | 18.69 | 45.50 | 47.34 | 50.73 | 52.03 |
| 30.00 | 0.00 | 45.47 | 45.49 | 18.47 | 44.24 | 45.95 | 48.29 | 50.18 |
| 35.00 | 0.00 | 44.16 | 44.13 | 18.45 | 43.19 | 44.51 | 47.05 | 48.74 |
| 40.00 | 0.00 | 42.98 | 43.02 | 18.62 | 42.42 | 43.82 | 46.03 | 46.67 |
| 50.00 | 0.00 | 41.07 | 41.07 | 18.34 | 40.82 | 41.86 | 44.30 | 44.76 |
| 60.00 | 0.01 | 39.49 | 39.51 | 18.54 | 39.93 | 40.34 | 43.01 | 42.99 |
| 70.00 | 0.01 | 38.16 | 38.16 | 18.43 | 38.95 | 38.85 | 41.59 | 41.19 |
| 80.00 | 0.01 | 36.99 | 37.02 | 18.49 | 38.05 | 37.90 | 40.74 | 39.91 |
| 90.00 | 0.01 | 35.97 | 36.01 | 18.51 | 37.34 | 36.74 | 39.67 | 38.95 |
| 100.00 | 0.01 | 35.07 | 35.10 | 18.47 | 36.60 | 35.55 | 38.92 | 38.10 |
| 120.00 | 0.01 | 33.51 | 33.53 | 18.39 | 35.17 | 34.01 | 37.03 | 36.61 |
| 140.00 | 0.01 | 32.19 | 32.21 | 18.33 | 34.03 | 32.68 | 35.44 | 35.43 |
| 160.00 | 0.01 | 31.03 | 31.06 | 18.57 | 33.27 | 31.72 | 34.22 | 34.27 |
| 180.00 | 0.01 | 30.03 | 30.06 | 18.80 | 32.35 | 30.92 | 33.26 | 33.55 |
| 200.00 | 0.01 | 29.14 | 29.17 | 18.80 | 31.37 | 30.19 | 32.54 | 33.11 |
| 250.00 | 0.02 | 27.25 | 27.27 | 18.69 | 29.40 | 28.43 | 30.78 | 31.42 |
| 300.00 | 0.02 | 25.72 | 25.75 | 19.32 | 28.64 | 27.45 | 29.67 | 29.41 |
| 350.00 | 0.03 | 24.45 | 24.47 | 19.25 | 27.31 | 26.99 | 29.07 | 28.68 |
| 400.00 | 0.03 | 23.35 | 23.38 | 20.13 | 27.59 | 26.48 | 28.87 | 27.97 |
| 450.00 | 0.03 | 22.40 | 22.44 | 20.31 | 27.27 | 26.95 | 28.98 | 28.31 |
| 500.00 | 0.03 | 21.57 | 21.61 | 21.52 | 28.49 | 27.28 | 29.96 | 28.45 |
| 550.00 | 0.03 | 20.83 | 20.88 | 22.19 | 29.74 | 28.54 | 31.41 | 29.37 |
| 600.00 | 0.03 | 20.16 | 20.21 | 24.18 | 31.29 | 29.96 | 33.50 | 31.29 |
| 650.00 | 0.03 | 19.55 | 19.61 | 25.72 | 34.35 | 32.24 | 36.57 | 33.82 |
| 700.00 | 0.03 | 19.01 | 19.05 | 29.91 | 38.90 | 34.54 | 39.43 | 40.54 |
| 750.00 | 0.03 | 18.50 | 18.54 | 34.52 | 43.19 | 35.92 | 39.65 | 42.32 |
| 800.00 | 0.03 | 18.05 | 18.08 | 46.67 | 36.18 | 33.90 | 34.87 | 36.76 |
| 850.00 | 0.04 | 17.64 | 17.67 | 30.91 | 31.72 | 30.40 | 30.45 | 31.26 |
| 900.00 | 0.04 | 17.27 | 17.30 | 27.09 | 28.03 | 27.80 | 27.62 | 28.04 |
| 950.00 | 0.06 | 16.95 | 16.98 | 22.34 | 25.53 | 25.59 | 25.18 | 25.46 |
| 1000.00 | 0.07 | 16.64 | 16.67 | 21.49 | 23.45 | 23.91 | 23.57 | 23.46 |
| 1050.00 | 0.09 | 16.42 | 16.43 | 18.00 | 21.93 | 22.42 | 22.03 | 21.94 |
| 1100.00 | 0.10 | 16.14 | 16.16 | 18.25 | 20.63 | 21.40 | 20.89 | 20.84 |
| 1150.00 | 0.11 | 15.97 | 15.96 | 15.40 | 19.64 | 20.39 | 19.94 | 19.98 |
| 1200.00 | 0.11 | 15.71 | 15.71 | 16.34 | 18.93 | 19.68 | 19.30 | 19.27 |
| 1220.00 | 0.14 | 15.68 | 15.68 | 15.34 | 18.70 | 19.44 | 19.10 | 19.13 |
| 1250.00 | 0.12 | 15.56 | 15.54 | 13.84 | 18.38 | 19.05 | 18.80 | 18.93 |
| 1270.00 | 0.10 | 15.42 | 15.40 | 14.04 | 18.21 | 18.88 | 18.59 | 18.74 |
| 1300.00 | 0.12 | 15.32 | 15.32 | 14.99 | 18.05 | 18.74 | 18.46 | 18.52 |
| 1400.00 | 0.11 | 14.96 | 14.99 | 14.08 | 17.92 | 18.65 | 18.43 | 18.34 |
| 1500.00 | 0.08 | 14.65 | 14.74 | 13.51 | 18.90 | 19.25 | 19.22 | 19.07 |
| 1550.00 | 0.02 | 14.50 | 14.59 | 12.00 | 19.39 | 20.00 | 19.99 | 19.81 |
| 1600.00 | 0.03 | 14.40 | 14.54 | 12.75 | 20.75 | 21.10 | 21.02 | 21.07 |
| 1650.00 | 0.04 | 14.29 | 14.43 | 11.92 | 22.02 | 22.54 | 22.65 | 22.81 |
| 1700.00 | 0.03 | 14.23 | 14.37 | 11.98 | 24.56 | 24.55 | 24.65 | 25.18 |
| 1750.00 | 0.08 | 14.20 | 14.34 | 11.95 | 27.70 | 27.08 | 27.78 | 28.73 |
| 1800.00 | 0.07 | 14.21 | 14.29 | 11.61 | 32.33 | 29.85 | 32.66 | 35.14 |
| 1850.00 | 0.11 | 14.27 | 14.34 | 12.09 | 40.82 | 31.50 | 38.43 | 43.92 |
| 1900.00 | 0.10 | 14.31 | 14.29 | 11.38 | 35.76 | 29.59 | 32.79 | 33.23 |
| 1950.00 | 0.12 | 14.46 | 14.46 | 12.54 | 29.08 | 26.79 | 27.92 | 27.67 |
| 2000.00 | 0.11 | 14.54 | 14.43 | 11.33 | 26.03 | 24.56 | 24.62 | 24.50 |

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 25°C, In port at pad 3

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY (dB) In - Rev | RETURN LOSS (dB) | | | |
|----------------|---------------------------|----------|-----------|---------------------------------|---------------------|-------|-------|-------|
| | | (dB) | | | In | Out | Rev | Fwd |
| | | In Fwd | Rev - Out | | | | | |
| 10.00 | 0.01 | 54.85 | 55.03 | 18.76 | 59.77 | 57.62 | 53.64 | 50.09 |
| 15.00 | 0.01 | 51.48 | 51.48 | 19.22 | 56.11 | 54.91 | 50.73 | 48.59 |
| 20.00 | 0.01 | 48.94 | 49.00 | 18.49 | 54.30 | 52.82 | 48.91 | 47.16 |
| 25.00 | 0.01 | 47.06 | 47.07 | 18.75 | 52.03 | 50.73 | 47.34 | 45.50 |
| 30.00 | 0.01 | 45.47 | 45.49 | 18.57 | 50.18 | 48.29 | 45.95 | 44.24 |
| 35.00 | 0.01 | 44.14 | 44.14 | 18.60 | 48.74 | 47.05 | 44.51 | 43.19 |
| 40.00 | 0.01 | 42.97 | 42.99 | 18.67 | 46.67 | 46.03 | 43.82 | 42.42 |
| 50.00 | 0.01 | 41.06 | 41.06 | 18.63 | 44.76 | 44.30 | 41.86 | 40.82 |
| 60.00 | 0.01 | 39.47 | 39.49 | 18.59 | 42.99 | 43.01 | 40.34 | 39.93 |
| 70.00 | 0.01 | 38.14 | 38.16 | 18.60 | 41.19 | 41.59 | 38.85 | 38.95 |
| 80.00 | 0.01 | 37.00 | 37.01 | 18.73 | 39.91 | 40.74 | 37.90 | 38.05 |
| 90.00 | 0.01 | 35.98 | 36.00 | 18.60 | 38.95 | 39.67 | 36.74 | 37.34 |
| 100.00 | 0.00 | 35.07 | 35.07 | 18.69 | 38.10 | 38.92 | 35.55 | 36.60 |
| 120.00 | 0.00 | 33.50 | 33.52 | 18.63 | 36.61 | 37.03 | 34.01 | 35.17 |
| 140.00 | 0.00 | 32.18 | 32.20 | 18.64 | 35.43 | 35.44 | 32.68 | 34.03 |
| 160.00 | 0.00 | 31.03 | 31.05 | 18.78 | 34.27 | 34.22 | 31.72 | 33.27 |
| 180.00 | 0.00 | 30.04 | 30.05 | 18.90 | 33.55 | 33.26 | 30.92 | 32.35 |
| 200.00 | 0.00 | 29.14 | 29.16 | 18.95 | 33.11 | 32.54 | 30.19 | 31.37 |
| 250.00 | 0.01 | 27.25 | 27.27 | 19.07 | 31.42 | 30.78 | 28.43 | 29.40 |
| 300.00 | 0.02 | 25.72 | 25.74 | 19.33 | 29.41 | 29.67 | 27.45 | 28.64 |
| 350.00 | 0.02 | 24.45 | 24.47 | 19.40 | 28.68 | 29.07 | 26.99 | 27.31 |
| 400.00 | 0.03 | 23.35 | 23.39 | 20.01 | 27.97 | 28.87 | 26.48 | 27.59 |
| 450.00 | 0.04 | 22.41 | 22.44 | 20.11 | 28.31 | 28.98 | 26.95 | 27.27 |
| 500.00 | 0.05 | 21.57 | 21.62 | 20.98 | 28.45 | 29.96 | 27.28 | 28.49 |
| 550.00 | 0.06 | 20.83 | 20.88 | 21.37 | 29.37 | 31.41 | 28.54 | 29.74 |
| 600.00 | 0.06 | 20.16 | 20.21 | 22.58 | 31.29 | 33.50 | 29.96 | 31.29 |
| 650.00 | 0.06 | 19.56 | 19.61 | 24.95 | 33.82 | 36.57 | 32.24 | 34.35 |
| 700.00 | 0.06 | 19.00 | 19.05 | 26.39 | 40.54 | 39.43 | 34.54 | 38.90 |
| 750.00 | 0.05 | 18.51 | 18.54 | 32.60 | 42.32 | 39.65 | 35.92 | 43.19 |
| 800.00 | 0.05 | 18.05 | 18.08 | 36.79 | 36.76 | 34.87 | 33.90 | 36.18 |
| 850.00 | 0.06 | 17.64 | 17.67 | 35.06 | 31.26 | 30.45 | 30.40 | 31.72 |
| 900.00 | 0.07 | 17.27 | 17.29 | 32.67 | 28.04 | 27.62 | 27.80 | 28.03 |
| 950.00 | 0.08 | 16.96 | 16.97 | 24.27 | 25.46 | 25.18 | 25.59 | 25.53 |
| 1000.00 | 0.09 | 16.65 | 16.66 | 25.07 | 23.46 | 23.57 | 23.91 | 23.45 |
| 1050.00 | 0.10 | 16.40 | 16.42 | 19.30 | 21.94 | 22.03 | 22.42 | 21.93 |
| 1100.00 | 0.11 | 16.14 | 16.15 | 20.90 | 20.84 | 20.89 | 21.40 | 20.63 |
| 1150.00 | 0.10 | 15.95 | 15.96 | 16.47 | 19.98 | 19.94 | 20.39 | 19.64 |
| 1200.00 | 0.11 | 15.70 | 15.71 | 17.93 | 19.27 | 19.30 | 19.68 | 18.93 |
| 1220.00 | 0.12 | 15.65 | 15.68 | 16.95 | 19.13 | 19.10 | 19.44 | 18.70 |
| 1250.00 | 0.09 | 15.53 | 15.55 | 14.80 | 18.93 | 18.80 | 19.05 | 18.38 |
| 1270.00 | 0.08 | 15.40 | 15.42 | 14.75 | 18.74 | 18.59 | 18.88 | 18.21 |
| 1300.00 | 0.11 | 15.31 | 15.34 | 16.02 | 18.52 | 18.46 | 18.74 | 18.05 |
| 1400.00 | 0.10 | 14.96 | 15.03 | 14.64 | 18.34 | 18.43 | 18.65 | 17.92 |
| 1500.00 | 0.08 | 14.67 | 14.78 | 13.67 | 19.07 | 19.22 | 19.25 | 18.90 |
| 1550.00 | 0.01 | 14.51 | 14.64 | 11.99 | 19.81 | 19.99 | 20.00 | 19.39 |
| 1600.00 | 0.04 | 14.42 | 14.57 | 12.73 | 21.07 | 21.02 | 21.10 | 20.75 |
| 1650.00 | 0.02 | 14.30 | 14.47 | 11.93 | 22.81 | 22.65 | 22.54 | 22.02 |
| 1700.00 | 0.02 | 14.25 | 14.41 | 11.94 | 25.18 | 24.65 | 24.55 | 24.56 |
| 1750.00 | 0.07 | 14.21 | 14.37 | 11.98 | 28.73 | 27.78 | 27.08 | 27.70 |
| 1800.00 | 0.06 | 14.21 | 14.32 | 11.63 | 35.14 | 32.66 | 29.85 | 32.33 |
| 1850.00 | 0.10 | 14.26 | 14.37 | 12.31 | 43.92 | 38.43 | 31.50 | 40.82 |
| 1900.00 | 0.09 | 14.30 | 14.32 | 11.50 | 33.23 | 32.79 | 29.59 | 35.76 |
| 1950.00 | 0.11 | 14.44 | 14.48 | 12.91 | 27.67 | 27.92 | 26.79 | 29.08 |
| 2000.00 | 0.07 | 14.54 | 14.46 | 11.78 | 24.50 | 24.62 | 24.56 | 26.03 |

Notes

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 25°C, In port at pad 4

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY | RETURN LOSS | | | |
|----------------|---------------------------|----------|-----------|-------------|-------------|-------|-------|-------|
| | | (dB) | | (dB) | (dB) | | | |
| | | In Fwd | Rev - Out | In - Rev | In | Out | Rev | Fwd |
| 10.00 | 0.01 | 55.03 | 54.85 | 18.36 | 57.62 | 59.77 | 50.09 | 53.64 |
| 15.00 | 0.01 | 51.48 | 51.48 | 18.68 | 54.91 | 56.11 | 48.59 | 50.73 |
| 20.00 | 0.01 | 49.00 | 48.94 | 18.74 | 52.82 | 54.30 | 47.16 | 48.91 |
| 25.00 | 0.01 | 47.07 | 47.06 | 18.53 | 50.73 | 52.03 | 45.50 | 47.34 |
| 30.00 | 0.01 | 45.49 | 45.47 | 18.46 | 48.29 | 50.18 | 44.24 | 45.95 |
| 35.00 | 0.01 | 44.14 | 44.14 | 18.41 | 47.05 | 48.74 | 43.19 | 44.51 |
| 40.00 | 0.01 | 42.99 | 42.97 | 18.22 | 46.03 | 46.67 | 42.42 | 43.82 |
| 50.00 | 0.01 | 41.06 | 41.06 | 18.50 | 44.30 | 44.76 | 40.82 | 41.86 |
| 60.00 | 0.01 | 39.49 | 39.47 | 18.38 | 43.01 | 42.99 | 39.93 | 40.34 |
| 70.00 | 0.01 | 38.16 | 38.14 | 18.43 | 41.59 | 41.19 | 38.95 | 38.85 |
| 80.00 | 0.01 | 37.01 | 37.00 | 18.36 | 40.74 | 39.91 | 38.05 | 37.90 |
| 90.00 | 0.00 | 36.00 | 35.98 | 18.44 | 39.67 | 38.95 | 37.34 | 36.74 |
| 100.00 | 0.00 | 35.07 | 35.07 | 18.40 | 38.92 | 38.10 | 36.60 | 35.55 |
| 120.00 | 0.00 | 33.52 | 33.50 | 18.30 | 37.03 | 36.61 | 35.17 | 34.01 |
| 140.00 | 0.00 | 32.20 | 32.18 | 18.40 | 35.44 | 35.43 | 34.03 | 32.68 |
| 160.00 | 0.00 | 31.05 | 31.03 | 18.55 | 34.22 | 34.27 | 33.27 | 31.72 |
| 180.00 | 0.00 | 30.05 | 30.04 | 18.69 | 33.26 | 33.55 | 32.35 | 30.92 |
| 200.00 | 0.01 | 29.16 | 29.14 | 18.82 | 32.54 | 33.11 | 31.37 | 30.19 |
| 250.00 | 0.01 | 27.27 | 27.25 | 18.71 | 30.78 | 31.42 | 29.40 | 28.43 |
| 300.00 | 0.02 | 25.74 | 25.72 | 19.43 | 29.67 | 29.41 | 28.64 | 27.45 |
| 350.00 | 0.02 | 24.47 | 24.45 | 19.31 | 29.07 | 28.68 | 27.31 | 26.99 |
| 400.00 | 0.03 | 23.39 | 23.35 | 20.33 | 28.87 | 27.97 | 27.59 | 26.48 |
| 450.00 | 0.04 | 22.44 | 22.41 | 20.54 | 28.98 | 28.31 | 27.27 | 26.95 |
| 500.00 | 0.05 | 21.62 | 21.57 | 21.61 | 29.96 | 28.45 | 28.49 | 27.28 |
| 550.00 | 0.06 | 20.88 | 20.83 | 22.39 | 31.41 | 29.37 | 29.74 | 28.54 |
| 600.00 | 0.07 | 20.21 | 20.16 | 24.43 | 33.50 | 31.29 | 31.29 | 29.96 |
| 650.00 | 0.06 | 19.61 | 19.56 | 25.78 | 36.57 | 33.82 | 34.35 | 32.24 |
| 700.00 | 0.06 | 19.05 | 19.00 | 31.38 | 39.43 | 40.54 | 38.90 | 34.54 |
| 750.00 | 0.06 | 18.54 | 18.51 | 36.04 | 39.65 | 42.32 | 43.19 | 35.92 |
| 800.00 | 0.05 | 18.08 | 18.05 | 44.71 | 34.87 | 36.76 | 36.18 | 33.90 |
| 850.00 | 0.06 | 17.67 | 17.64 | 30.19 | 30.45 | 31.26 | 31.72 | 30.40 |
| 900.00 | 0.06 | 17.29 | 17.27 | 27.33 | 27.62 | 28.04 | 28.03 | 27.80 |
| 950.00 | 0.08 | 16.97 | 16.96 | 21.94 | 25.18 | 25.46 | 25.53 | 25.59 |
| 1000.00 | 0.08 | 16.66 | 16.65 | 21.33 | 23.57 | 23.46 | 23.45 | 23.91 |
| 1050.00 | 0.11 | 16.42 | 16.40 | 17.97 | 22.03 | 21.94 | 21.93 | 22.42 |
| 1100.00 | 0.11 | 16.15 | 16.14 | 18.09 | 20.89 | 20.84 | 20.63 | 21.40 |
| 1150.00 | 0.13 | 15.96 | 15.95 | 15.44 | 19.94 | 19.98 | 19.64 | 20.39 |
| 1200.00 | 0.12 | 15.71 | 15.70 | 16.15 | 19.30 | 19.27 | 18.93 | 19.68 |
| 1220.00 | 0.14 | 15.68 | 15.65 | 15.43 | 19.10 | 19.13 | 18.70 | 19.44 |
| 1250.00 | 0.13 | 15.55 | 15.53 | 13.82 | 18.80 | 18.93 | 18.38 | 19.05 |
| 1270.00 | 0.11 | 15.42 | 15.40 | 13.91 | 18.59 | 18.74 | 18.21 | 18.88 |
| 1300.00 | 0.12 | 15.34 | 15.31 | 15.04 | 18.46 | 18.52 | 18.05 | 18.74 |
| 1400.00 | 0.10 | 15.03 | 14.96 | 14.12 | 18.43 | 18.34 | 17.92 | 18.65 |
| 1500.00 | 0.07 | 14.78 | 14.67 | 13.37 | 19.22 | 19.07 | 18.90 | 19.25 |
| 1550.00 | 0.01 | 14.64 | 14.51 | 12.03 | 19.99 | 19.81 | 19.39 | 20.00 |
| 1600.00 | 0.02 | 14.57 | 14.42 | 12.65 | 21.02 | 21.07 | 20.75 | 21.10 |
| 1650.00 | 0.03 | 14.47 | 14.30 | 11.79 | 22.65 | 22.81 | 22.02 | 22.54 |
| 1700.00 | 0.04 | 14.41 | 14.25 | 11.91 | 24.65 | 25.18 | 24.56 | 24.55 |
| 1750.00 | 0.07 | 14.37 | 14.21 | 11.76 | 27.78 | 28.73 | 27.70 | 27.08 |
| 1800.00 | 0.07 | 14.32 | 14.21 | 11.59 | 32.66 | 35.14 | 32.33 | 29.85 |
| 1850.00 | 0.10 | 14.37 | 14.26 | 11.98 | 38.43 | 43.92 | 40.82 | 31.50 |
| 1900.00 | 0.10 | 14.32 | 14.30 | 11.33 | 32.79 | 33.23 | 35.76 | 29.59 |
| 1950.00 | 0.11 | 14.48 | 14.44 | 12.63 | 27.92 | 27.67 | 29.08 | 26.79 |
| 2000.00 | 0.08 | 14.46 | 14.54 | 11.35 | 24.62 | 24.50 | 26.03 | 24.56 |

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 105°C, In port at pad 1

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY (dB) In - Rev | RETURN LOSS | | | |
|----------------|---------------------------|----------|-----------|---------------------------------|-------------|-------|-------|-------|
| | | (dB) | | | (dB) | | | |
| | | In Fwd | Rev - Out | | In | Out | Rev | Fwd |
| 10.00 | 0.01 | 54.92 | 54.94 | 19.75 | 35.71 | 35.66 | 41.05 | 37.00 |
| 15.00 | 0.01 | 51.42 | 51.45 | 19.30 | 35.68 | 35.65 | 40.91 | 36.99 |
| 20.00 | 0.01 | 48.95 | 49.00 | 19.46 | 35.69 | 35.69 | 40.75 | 36.97 |
| 25.00 | 0.01 | 47.03 | 47.01 | 19.38 | 35.66 | 35.56 | 40.52 | 36.85 |
| 30.00 | 0.01 | 45.44 | 45.46 | 19.43 | 35.56 | 35.60 | 40.13 | 36.72 |
| 35.00 | 0.01 | 44.13 | 44.15 | 19.34 | 35.36 | 35.25 | 39.53 | 36.58 |
| 40.00 | 0.01 | 42.97 | 42.98 | 19.15 | 35.18 | 35.00 | 38.87 | 36.39 |
| 50.00 | 0.01 | 41.03 | 41.05 | 19.08 | 34.64 | 33.98 | 37.33 | 35.78 |
| 60.00 | 0.01 | 39.47 | 39.47 | 18.99 | 33.96 | 32.81 | 35.61 | 35.15 |
| 70.00 | 0.01 | 38.13 | 38.14 | 19.12 | 33.13 | 31.55 | 34.23 | 34.45 |
| 80.00 | 0.01 | 36.99 | 36.99 | 19.00 | 32.27 | 30.39 | 32.94 | 33.79 |
| 90.00 | 0.02 | 35.96 | 35.96 | 18.89 | 31.38 | 29.26 | 31.81 | 32.89 |
| 100.00 | 0.02 | 35.06 | 35.07 | 18.85 | 30.47 | 28.25 | 31.02 | 31.94 |
| 120.00 | 0.02 | 33.49 | 33.50 | 18.68 | 28.70 | 26.78 | 29.52 | 29.93 |
| 140.00 | 0.02 | 32.17 | 32.17 | 18.77 | 27.31 | 25.79 | 28.66 | 28.27 |
| 160.00 | 0.02 | 31.02 | 31.04 | 18.86 | 26.20 | 25.10 | 27.92 | 26.94 |
| 180.00 | 0.02 | 30.02 | 30.03 | 18.89 | 25.18 | 24.30 | 27.01 | 25.91 |
| 200.00 | 0.02 | 29.12 | 29.13 | 19.00 | 24.09 | 23.27 | 25.82 | 25.11 |
| 250.00 | 0.03 | 27.24 | 27.25 | 18.94 | 22.03 | 21.56 | 23.93 | 23.24 |
| 300.00 | 0.03 | 25.71 | 25.72 | 19.66 | 21.87 | 21.90 | 24.76 | 22.35 |
| 350.00 | 0.04 | 24.44 | 24.45 | 19.64 | 21.90 | 22.14 | 25.14 | 22.65 |
| 400.00 | 0.04 | 23.35 | 23.36 | 20.29 | 23.04 | 24.07 | 28.42 | 23.22 |
| 450.00 | 0.05 | 22.40 | 22.41 | 20.57 | 24.27 | 26.14 | 32.59 | 23.77 |
| 500.00 | 0.05 | 21.56 | 21.57 | 21.07 | 26.78 | 29.79 | 42.67 | 25.90 |
| 550.00 | 0.05 | 20.82 | 20.83 | 21.62 | 29.01 | 35.35 | 40.02 | 26.68 |
| 600.00 | 0.05 | 20.16 | 20.17 | 22.79 | 33.69 | 42.13 | 33.61 | 28.56 |
| 650.00 | 0.05 | 19.56 | 19.57 | 24.12 | 37.29 | 42.83 | 30.09 | 31.08 |
| 700.00 | 0.05 | 19.02 | 19.02 | 26.23 | 35.48 | 37.29 | 28.28 | 31.45 |
| 750.00 | 0.05 | 18.52 | 18.52 | 30.48 | 35.35 | 34.07 | 27.50 | 33.47 |
| 800.00 | 0.06 | 18.07 | 18.07 | 33.96 | 32.18 | 32.04 | 26.31 | 34.22 |
| 850.00 | 0.06 | 17.66 | 17.67 | 38.88 | 32.78 | 30.82 | 26.76 | 35.04 |
| 900.00 | 0.07 | 17.29 | 17.29 | 37.77 | 29.95 | 29.20 | 26.65 | 36.35 |
| 950.00 | 0.09 | 16.97 | 16.97 | 25.09 | 29.61 | 28.27 | 28.64 | 34.37 |
| 1000.00 | 0.09 | 16.66 | 16.65 | 25.91 | 26.31 | 25.78 | 30.72 | 33.31 |
| 1050.00 | 0.12 | 16.41 | 16.41 | 19.98 | 24.80 | 23.84 | 32.41 | 31.11 |
| 1100.00 | 0.12 | 16.14 | 16.14 | 20.93 | 22.04 | 21.52 | 29.31 | 28.07 |
| 1150.00 | 0.16 | 15.94 | 15.95 | 16.80 | 20.80 | 20.01 | 26.29 | 25.82 |
| 1200.00 | 0.16 | 15.71 | 15.71 | 18.13 | 18.85 | 18.48 | 23.93 | 23.95 |
| 1250.00 | 0.18 | 15.55 | 15.56 | 14.76 | 18.61 | 17.61 | 21.90 | 22.29 |
| 1300.00 | 0.16 | 15.34 | 15.33 | 16.17 | 18.27 | 16.98 | 20.76 | 21.56 |
| 1350.00 | 0.17 | 15.20 | 15.20 | 13.49 | 17.77 | 16.81 | 19.85 | 20.43 |
| 1400.00 | 0.15 | 15.05 | 15.00 | 14.52 | 17.22 | 17.02 | 19.95 | 20.33 |
| 1450.00 | 0.13 | 14.91 | 14.87 | 12.46 | 16.86 | 17.39 | 20.08 | 20.10 |
| 1500.00 | 0.12 | 14.83 | 14.72 | 13.37 | 17.81 | 18.43 | 21.15 | 20.15 |
| 1550.00 | 0.06 | 14.70 | 14.57 | 11.84 | 19.11 | 19.33 | 22.16 | 20.97 |
| 1600.00 | 0.06 | 14.66 | 14.47 | 12.40 | 20.26 | 21.15 | 23.49 | 20.97 |
| 1650.00 | 0.01 | 14.58 | 14.36 | 11.38 | 22.18 | 22.44 | 23.79 | 21.94 |
| 1700.00 | 0.00 | 14.56 | 14.31 | 11.65 | 24.27 | 24.83 | 23.60 | 22.84 |
| 1750.00 | 0.03 | 14.53 | 14.26 | 11.36 | 26.86 | 26.24 | 23.12 | 22.76 |
| 1800.00 | 0.03 | 14.51 | 14.25 | 11.36 | 32.06 | 29.80 | 22.54 | 24.42 |
| 1850.00 | 0.05 | 14.56 | 14.29 | 11.58 | 31.20 | 31.37 | 22.93 | 23.69 |
| 1900.00 | 0.05 | 14.51 | 14.31 | 11.22 | 31.51 | 33.73 | 22.94 | 24.42 |
| 1950.00 | 0.05 | 14.67 | 14.46 | 12.56 | 26.85 | 30.61 | 23.54 | 24.43 |
| 2000.00 | 0.04 | 14.61 | 14.52 | 11.59 | 24.81 | 27.24 | 24.63 | 23.66 |

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 105°C, In port at pad 2

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING | | DIRECTIVITY (dB) In - Rev | RETURN LOSS | | | |
|----------------|---------------------------|----------|-----------|---------------------------------|-------------|-------|-------|-------|
| | | (dB) | | | (dB) | | | |
| | | In Fwd | Rev - Out | | In | Out | Rev | Fwd |
| 10.00 | 0.00 | 54.94 | 54.92 | 19.17 | 35.66 | 35.71 | 37.00 | 41.05 |
| 15.00 | 0.00 | 51.45 | 51.42 | 19.57 | 35.65 | 35.68 | 36.99 | 40.91 |
| 20.00 | 0.00 | 49.00 | 48.95 | 19.09 | 35.69 | 35.69 | 36.97 | 40.75 |
| 25.00 | 0.01 | 47.01 | 47.03 | 19.13 | 35.56 | 35.66 | 36.85 | 40.52 |
| 30.00 | 0.01 | 45.46 | 45.44 | 19.00 | 35.60 | 35.56 | 36.72 | 40.13 |
| 35.00 | 0.01 | 44.15 | 44.13 | 18.97 | 35.25 | 35.36 | 36.58 | 39.53 |
| 40.00 | 0.01 | 42.98 | 42.97 | 18.94 | 35.00 | 35.18 | 36.39 | 38.87 |
| 50.00 | 0.01 | 41.05 | 41.03 | 18.91 | 33.98 | 34.64 | 35.78 | 37.33 |
| 60.00 | 0.01 | 39.47 | 39.47 | 19.04 | 32.81 | 33.96 | 35.15 | 35.61 |
| 70.00 | 0.01 | 38.14 | 38.13 | 18.82 | 31.55 | 33.13 | 34.45 | 34.23 |
| 80.00 | 0.01 | 36.99 | 36.99 | 18.87 | 30.39 | 32.27 | 33.79 | 32.94 |
| 90.00 | 0.01 | 35.96 | 35.96 | 18.86 | 29.26 | 31.38 | 32.89 | 31.81 |
| 100.00 | 0.01 | 35.07 | 35.06 | 18.81 | 28.25 | 30.47 | 31.94 | 31.02 |
| 120.00 | 0.01 | 33.50 | 33.49 | 18.52 | 26.78 | 28.70 | 29.93 | 29.52 |
| 140.00 | 0.02 | 32.17 | 32.17 | 18.35 | 25.79 | 27.31 | 28.27 | 28.66 |
| 160.00 | 0.02 | 31.04 | 31.02 | 18.42 | 25.10 | 26.20 | 26.94 | 27.92 |
| 180.00 | 0.02 | 30.03 | 30.02 | 18.51 | 24.30 | 25.18 | 25.91 | 27.01 |
| 200.00 | 0.02 | 29.13 | 29.12 | 18.52 | 23.27 | 24.09 | 25.11 | 25.82 |
| 250.00 | 0.02 | 27.25 | 27.24 | 18.56 | 21.56 | 22.03 | 23.24 | 23.93 |
| 300.00 | 0.03 | 25.72 | 25.71 | 19.01 | 21.90 | 21.87 | 22.35 | 24.76 |
| 350.00 | 0.03 | 24.45 | 24.44 | 18.97 | 22.14 | 21.90 | 22.65 | 25.14 |
| 400.00 | 0.04 | 23.36 | 23.35 | 19.67 | 24.07 | 23.04 | 23.22 | 28.42 |
| 450.00 | 0.04 | 22.41 | 22.40 | 19.39 | 26.14 | 24.27 | 23.77 | 32.59 |
| 500.00 | 0.04 | 21.57 | 21.56 | 20.24 | 29.79 | 26.78 | 25.90 | 42.67 |
| 550.00 | 0.05 | 20.83 | 20.82 | 20.18 | 35.35 | 29.01 | 26.68 | 40.02 |
| 600.00 | 0.05 | 20.17 | 20.16 | 21.34 | 42.13 | 33.69 | 28.56 | 33.61 |
| 650.00 | 0.05 | 19.57 | 19.56 | 21.85 | 42.83 | 37.29 | 31.08 | 30.09 |
| 700.00 | 0.05 | 19.02 | 19.02 | 23.78 | 37.29 | 35.48 | 31.45 | 28.28 |
| 750.00 | 0.05 | 18.52 | 18.52 | 24.95 | 34.07 | 35.35 | 33.47 | 27.50 |
| 800.00 | 0.05 | 18.07 | 18.07 | 28.38 | 32.04 | 32.18 | 34.22 | 26.31 |
| 850.00 | 0.06 | 17.67 | 17.66 | 29.57 | 30.82 | 32.78 | 35.04 | 26.76 |
| 900.00 | 0.06 | 17.29 | 17.29 | 32.20 | 29.20 | 29.95 | 36.35 | 26.65 |
| 950.00 | 0.08 | 16.97 | 16.97 | 27.20 | 28.27 | 29.61 | 34.37 | 28.64 |
| 1000.00 | 0.09 | 16.65 | 16.66 | 27.40 | 25.78 | 26.31 | 33.31 | 30.72 |
| 1050.00 | 0.12 | 16.41 | 16.41 | 21.43 | 23.84 | 24.80 | 31.11 | 32.41 |
| 1100.00 | 0.12 | 16.14 | 16.14 | 22.67 | 21.52 | 22.04 | 28.07 | 29.31 |
| 1150.00 | 0.15 | 15.95 | 15.94 | 18.15 | 20.01 | 20.80 | 25.82 | 26.29 |
| 1200.00 | 0.15 | 15.71 | 15.71 | 19.63 | 18.48 | 18.85 | 23.95 | 23.93 |
| 1250.00 | 0.17 | 15.56 | 15.55 | 16.23 | 17.61 | 18.27 | 22.29 | 21.90 |
| 1300.00 | 0.17 | 15.33 | 15.34 | 17.64 | 16.98 | 17.22 | 21.56 | 20.76 |
| 1350.00 | 0.16 | 15.20 | 15.20 | 14.98 | 16.81 | 17.28 | 20.43 | 19.85 |
| 1400.00 | 0.16 | 15.00 | 15.05 | 16.56 | 17.02 | 16.86 | 20.33 | 19.95 |
| 1450.00 | 0.12 | 14.87 | 14.91 | 14.15 | 17.39 | 17.53 | 20.10 | 20.08 |
| 1500.00 | 0.13 | 14.72 | 14.83 | 15.74 | 18.43 | 17.81 | 20.15 | 21.15 |
| 1550.00 | 0.06 | 14.57 | 14.70 | 13.90 | 19.33 | 19.11 | 20.97 | 22.16 |
| 1600.00 | 0.08 | 14.47 | 14.66 | 14.81 | 21.15 | 20.26 | 20.97 | 23.49 |
| 1650.00 | 0.01 | 14.36 | 14.58 | 13.94 | 22.44 | 22.18 | 21.94 | 23.79 |
| 1700.00 | 0.01 | 14.31 | 14.56 | 14.09 | 24.83 | 24.27 | 22.84 | 23.60 |
| 1750.00 | 0.03 | 14.26 | 14.53 | 14.04 | 26.24 | 26.86 | 22.76 | 23.12 |
| 1800.00 | 0.03 | 14.25 | 14.51 | 13.68 | 29.80 | 32.06 | 24.42 | 22.54 |
| 1850.00 | 0.05 | 14.29 | 14.56 | 14.42 | 31.37 | 31.20 | 23.69 | 22.93 |
| 1900.00 | 0.04 | 14.31 | 14.51 | 13.40 | 33.73 | 31.51 | 24.42 | 22.94 |
| 1950.00 | 0.04 | 14.46 | 14.67 | 15.01 | 30.61 | 26.85 | 24.43 | 23.54 |
| 2000.00 | 0.03 | 14.52 | 14.61 | 13.37 | 27.24 | 24.81 | 23.66 | 24.63 |

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Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 105°C, In port at pad 3

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) In - Rev | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | | In | Out | | |
| | | | | | | Rev | Fwd | Rev |
| 10.00 | 0.02 | 55.02 | 54.91 | 20.04 | 41.05 | 37.00 | 35.71 | 35.66 |
| 15.00 | 0.02 | 51.41 | 51.47 | 20.04 | 40.91 | 36.99 | 35.68 | 35.65 |
| 20.00 | 0.02 | 49.01 | 48.96 | 19.43 | 40.75 | 36.97 | 35.69 | 35.69 |
| 25.00 | 0.02 | 47.03 | 47.01 | 19.28 | 40.52 | 36.85 | 35.66 | 35.56 |
| 30.00 | 0.02 | 45.45 | 45.42 | 19.20 | 40.13 | 36.72 | 35.56 | 35.60 |
| 35.00 | 0.02 | 44.14 | 44.10 | 19.22 | 39.53 | 36.58 | 35.36 | 35.25 |
| 40.00 | 0.02 | 42.99 | 42.96 | 19.28 | 38.87 | 36.39 | 35.18 | 35.00 |
| 50.00 | 0.02 | 41.04 | 41.04 | 19.19 | 37.33 | 35.78 | 34.64 | 33.98 |
| 60.00 | 0.02 | 39.47 | 39.46 | 19.08 | 35.61 | 35.15 | 33.96 | 32.81 |
| 70.00 | 0.02 | 38.16 | 38.12 | 18.96 | 34.23 | 34.45 | 33.13 | 31.55 |
| 80.00 | 0.02 | 37.00 | 36.98 | 18.99 | 32.94 | 33.79 | 32.27 | 30.39 |
| 90.00 | 0.02 | 35.98 | 35.97 | 18.91 | 31.81 | 32.89 | 31.38 | 29.26 |
| 100.00 | 0.03 | 35.08 | 35.06 | 18.90 | 31.02 | 31.94 | 30.47 | 28.25 |
| 120.00 | 0.03 | 33.50 | 33.49 | 18.76 | 29.52 | 29.93 | 28.70 | 26.78 |
| 140.00 | 0.03 | 32.18 | 32.16 | 18.77 | 28.66 | 28.27 | 27.31 | 25.79 |
| 160.00 | 0.03 | 31.04 | 31.02 | 18.93 | 27.92 | 26.94 | 26.20 | 25.10 |
| 180.00 | 0.03 | 30.04 | 30.02 | 19.11 | 27.01 | 25.91 | 25.18 | 24.30 |
| 200.00 | 0.04 | 29.14 | 29.12 | 19.08 | 25.82 | 25.11 | 24.09 | 23.27 |
| 250.00 | 0.04 | 27.26 | 27.24 | 19.15 | 23.93 | 23.24 | 22.03 | 21.56 |
| 300.00 | 0.05 | 25.73 | 25.71 | 19.68 | 24.76 | 22.35 | 21.87 | 21.90 |
| 350.00 | 0.05 | 24.45 | 24.43 | 19.72 | 25.14 | 22.65 | 21.90 | 22.14 |
| 400.00 | 0.05 | 23.37 | 23.34 | 20.36 | 28.42 | 23.22 | 23.04 | 24.07 |
| 450.00 | 0.05 | 22.42 | 22.39 | 20.48 | 32.59 | 23.77 | 24.27 | 26.14 |
| 500.00 | 0.06 | 21.58 | 21.56 | 21.32 | 42.67 | 25.90 | 26.78 | 29.79 |
| 550.00 | 0.06 | 20.84 | 20.82 | 21.89 | 40.02 | 26.68 | 29.01 | 35.35 |
| 600.00 | 0.06 | 20.18 | 20.16 | 22.83 | 33.61 | 28.56 | 33.69 | 42.13 |
| 650.00 | 0.06 | 19.58 | 19.56 | 24.42 | 30.09 | 31.08 | 37.29 | 42.83 |
| 700.00 | 0.06 | 19.02 | 19.02 | 25.72 | 28.28 | 31.45 | 35.48 | 37.29 |
| 750.00 | 0.06 | 18.53 | 18.52 | 29.74 | 27.50 | 33.47 | 35.35 | 34.07 |
| 800.00 | 0.06 | 18.07 | 18.07 | 32.75 | 26.31 | 34.22 | 32.18 | 32.04 |
| 850.00 | 0.07 | 17.68 | 17.66 | 42.11 | 26.76 | 35.04 | 32.78 | 30.82 |
| 900.00 | 0.07 | 17.30 | 17.29 | 36.43 | 26.65 | 36.35 | 29.95 | 29.20 |
| 950.00 | 0.09 | 16.97 | 16.96 | 25.68 | 28.64 | 34.37 | 29.61 | 28.27 |
| 1000.00 | 0.09 | 16.66 | 16.66 | 26.09 | 30.72 | 33.31 | 26.31 | 25.78 |
| 1050.00 | 0.11 | 16.41 | 16.40 | 20.07 | 32.41 | 31.11 | 24.80 | 23.84 |
| 1100.00 | 0.11 | 16.15 | 16.14 | 21.35 | 29.31 | 28.07 | 22.04 | 21.52 |
| 1150.00 | 0.11 | 15.95 | 15.93 | 16.90 | 26.29 | 25.82 | 20.80 | 20.01 |
| 1200.00 | 0.11 | 15.72 | 15.71 | 18.27 | 23.93 | 23.95 | 18.85 | 18.48 |
| 1250.00 | 0.10 | 15.55 | 15.54 | 14.93 | 21.90 | 22.29 | 18.27 | 17.61 |
| 1300.00 | 0.12 | 15.34 | 15.36 | 16.07 | 20.76 | 21.56 | 17.22 | 16.98 |
| 1350.00 | 0.09 | 15.19 | 15.21 | 13.45 | 19.85 | 20.43 | 17.28 | 16.81 |
| 1400.00 | 0.12 | 15.01 | 15.06 | 14.56 | 19.95 | 20.33 | 16.86 | 17.02 |
| 1450.00 | 0.08 | 14.86 | 14.93 | 12.43 | 20.08 | 20.10 | 17.53 | 17.39 |
| 1500.00 | 0.12 | 14.73 | 14.84 | 13.64 | 21.15 | 20.15 | 17.81 | 18.43 |
| 1550.00 | 0.06 | 14.58 | 14.73 | 11.91 | 22.16 | 20.97 | 19.11 | 19.33 |
| 1600.00 | 0.09 | 14.47 | 14.67 | 12.75 | 23.49 | 20.97 | 20.26 | 21.15 |
| 1650.00 | 0.04 | 14.37 | 14.59 | 11.73 | 23.79 | 21.94 | 22.18 | 22.44 |
| 1700.00 | 0.04 | 14.32 | 14.56 | 11.93 | 23.60 | 22.84 | 24.27 | 24.83 |
| 1750.00 | 0.02 | 14.27 | 14.53 | 11.78 | 23.12 | 22.76 | 26.86 | 26.24 |
| 1800.00 | 0.01 | 14.25 | 14.51 | 11.54 | 22.54 | 24.42 | 32.06 | 29.80 |
| 1850.00 | 0.00 | 14.31 | 14.56 | 11.90 | 22.93 | 23.69 | 31.20 | 31.37 |
| 1900.00 | 0.02 | 14.32 | 14.52 | 11.39 | 22.94 | 24.42 | 31.51 | 33.73 |
| 1950.00 | 0.02 | 14.48 | 14.67 | 12.65 | 23.54 | 24.43 | 26.85 | 30.61 |
| 2000.00 | 0.01 | 14.53 | 14.63 | 11.71 | 24.63 | 23.66 | 24.81 | 27.24 |

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"). Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Bi-Directional Coupler

BDCH46-122-75+

Typical Performance Data

TEST CONDITIONS: INPUT POWER =+10 dBm @Temperature = 105°C, In port at pad 4

| FREQ. (MHz) | INSERTION LOSS (dB) | COUPLING (dB) | | DIRECTIVITY (dB) | RETURN LOSS (dB) | | | |
|----------------|---------------------------|------------------|-----------|---------------------|---------------------|-------|-------|-------|
| | | In Fwd | Rev - Out | In - Rev | In | | | |
| | | | | | Out | Rev | Fwd | |
| 10.00 | 0.01 | 54.91 | 55.02 | 19.64 | 37.00 | 41.05 | 35.66 | 35.71 |
| 15.00 | 0.01 | 51.47 | 51.41 | 19.02 | 36.99 | 40.91 | 35.65 | 35.68 |
| 20.00 | 0.01 | 48.96 | 49.01 | 18.96 | 36.97 | 40.75 | 35.69 | 35.69 |
| 25.00 | 0.01 | 47.01 | 47.03 | 18.75 | 36.85 | 40.52 | 35.56 | 35.66 |
| 30.00 | 0.01 | 45.42 | 45.45 | 19.11 | 36.72 | 40.13 | 35.60 | 35.56 |
| 35.00 | 0.01 | 44.10 | 44.14 | 18.98 | 36.58 | 39.53 | 35.25 | 35.36 |
| 40.00 | 0.01 | 42.96 | 42.99 | 19.10 | 36.39 | 38.87 | 35.00 | 35.18 |
| 50.00 | 0.01 | 41.04 | 41.04 | 18.78 | 35.78 | 37.33 | 33.98 | 34.64 |
| 60.00 | 0.02 | 39.46 | 39.47 | 18.73 | 35.15 | 35.61 | 32.81 | 33.96 |
| 70.00 | 0.02 | 38.12 | 38.16 | 18.76 | 34.45 | 34.23 | 31.55 | 33.13 |
| 80.00 | 0.02 | 36.98 | 37.00 | 18.76 | 33.79 | 32.94 | 30.39 | 32.27 |
| 90.00 | 0.02 | 35.97 | 35.98 | 18.67 | 32.89 | 31.81 | 29.26 | 31.38 |
| 100.00 | 0.02 | 35.06 | 35.08 | 18.65 | 31.94 | 31.02 | 28.25 | 30.47 |
| 120.00 | 0.02 | 33.49 | 33.50 | 18.55 | 29.93 | 29.52 | 26.78 | 28.70 |
| 140.00 | 0.02 | 32.16 | 32.18 | 18.46 | 28.27 | 28.66 | 25.79 | 27.31 |
| 160.00 | 0.02 | 31.02 | 31.04 | 18.49 | 26.94 | 27.92 | 25.10 | 26.20 |
| 180.00 | 0.03 | 30.02 | 30.04 | 18.51 | 25.91 | 27.01 | 24.30 | 25.18 |
| 200.00 | 0.03 | 29.12 | 29.14 | 18.67 | 25.11 | 25.82 | 23.27 | 24.09 |
| 250.00 | 0.03 | 27.24 | 27.26 | 18.69 | 23.24 | 23.93 | 21.56 | 22.03 |
| 300.00 | 0.04 | 25.71 | 25.73 | 19.04 | 22.35 | 24.76 | 21.90 | 21.87 |
| 350.00 | 0.04 | 24.43 | 24.45 | 19.03 | 22.65 | 25.14 | 22.14 | 21.90 |
| 400.00 | 0.04 | 23.34 | 23.37 | 19.79 | 23.22 | 28.42 | 24.07 | 23.04 |
| 450.00 | 0.05 | 22.39 | 22.42 | 19.56 | 23.77 | 32.59 | 26.14 | 24.27 |
| 500.00 | 0.05 | 21.56 | 21.58 | 20.34 | 25.90 | 42.67 | 29.79 | 26.78 |
| 550.00 | 0.06 | 20.82 | 20.84 | 20.31 | 26.68 | 40.02 | 35.35 | 29.01 |
| 600.00 | 0.06 | 20.16 | 20.18 | 21.34 | 28.56 | 33.61 | 42.13 | 33.69 |
| 650.00 | 0.06 | 19.56 | 19.58 | 21.84 | 31.08 | 30.09 | 42.83 | 37.29 |
| 700.00 | 0.06 | 19.02 | 19.02 | 23.72 | 31.45 | 28.28 | 37.29 | 35.48 |
| 750.00 | 0.07 | 18.52 | 18.53 | 24.56 | 33.47 | 27.50 | 34.07 | 35.35 |
| 800.00 | 0.07 | 18.07 | 18.07 | 27.76 | 34.22 | 26.31 | 32.04 | 32.18 |
| 850.00 | 0.07 | 17.66 | 17.68 | 29.75 | 35.04 | 26.76 | 30.82 | 32.78 |
| 900.00 | 0.08 | 17.29 | 17.30 | 32.62 | 36.35 | 26.65 | 29.20 | 29.95 |
| 950.00 | 0.08 | 16.96 | 16.97 | 27.23 | 34.37 | 28.64 | 28.27 | 29.61 |
| 1000.00 | 0.08 | 16.66 | 16.66 | 27.97 | 33.31 | 30.72 | 25.78 | 26.31 |
| 1050.00 | 0.10 | 16.40 | 16.41 | 21.87 | 31.11 | 32.41 | 23.84 | 24.80 |
| 1100.00 | 0.10 | 16.14 | 16.15 | 22.64 | 28.07 | 29.31 | 21.52 | 22.04 |
| 1150.00 | 0.11 | 15.93 | 15.95 | 18.54 | 25.82 | 26.29 | 20.01 | 20.80 |
| 1200.00 | 0.11 | 15.71 | 15.72 | 19.65 | 23.95 | 23.93 | 18.48 | 18.85 |
| 1250.00 | 0.12 | 15.54 | 15.55 | 16.37 | 22.29 | 21.90 | 17.61 | 18.27 |
| 1300.00 | 0.12 | 15.36 | 15.34 | 17.96 | 21.56 | 20.76 | 16.98 | 17.22 |
| 1350.00 | 0.12 | 15.21 | 15.19 | 14.85 | 20.43 | 19.85 | 16.81 | 17.28 |
| 1400.00 | 0.12 | 15.06 | 15.01 | 16.73 | 20.33 | 19.95 | 17.02 | 16.86 |
| 1450.00 | 0.10 | 14.93 | 14.86 | 14.14 | 20.10 | 20.08 | 17.39 | 17.53 |
| 1500.00 | 0.10 | 14.84 | 14.73 | 15.58 | 20.15 | 21.15 | 18.43 | 17.81 |
| 1550.00 | 0.07 | 14.73 | 14.58 | 13.89 | 20.97 | 22.16 | 19.33 | 19.11 |
| 1600.00 | 0.07 | 14.67 | 14.47 | 14.51 | 20.97 | 23.49 | 21.15 | 20.26 |
| 1650.00 | 0.04 | 14.59 | 14.37 | 13.76 | 21.94 | 23.79 | 22.44 | 22.18 |
| 1700.00 | 0.03 | 14.56 | 14.32 | 13.87 | 22.84 | 23.60 | 24.83 | 24.27 |
| 1750.00 | 0.01 | 14.53 | 14.27 | 13.71 | 22.76 | 23.12 | 26.24 | 26.86 |
| 1800.00 | 0.00 | 14.51 | 14.25 | 13.54 | 24.42 | 22.54 | 29.80 | 32.06 |
| 1850.00 | 0.02 | 14.56 | 14.31 | 14.10 | 23.69 | 22.93 | 31.37 | 31.20 |
| 1900.00 | 0.03 | 14.52 | 14.32 | 13.10 | 24.42 | 22.94 | 33.73 | 31.51 |
| 1950.00 | 0.03 | 14.67 | 14.48 | 15.06 | 24.43 | 23.54 | 30.61 | 26.85 |
| 2000.00 | 0.02 | 14.63 | 14.53 | 13.14 | 23.66 | 24.63 | 27.24 | 24.81 |

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