

# Bi-Directional Coupler

## JC-ED12981/1

### Typical Performance Data

| FREQ.<br>(MHz) | INSERTION<br>LOSS<br>(dB)<br>IN-OUT | COUPLING<br>(dB) |         | DIRECTIVITY<br>(dB) |         | RETURN LOSS<br>(dB) |       |       |       |
|----------------|-------------------------------------|------------------|---------|---------------------|---------|---------------------|-------|-------|-------|
|                |                                     | IN-FWD           | OUT-REV | IN-REV              | OUT-FWD | IN                  | OUT   | FWD   | REV   |
| 1.0            | 1.66                                | 7.37             | 8.68    | 11.29               | 14.00   | 12.61               | 11.19 | 9.18  | 8.78  |
| 3.0            | 1.62                                | 7.49             | 8.39    | 12.39               | 20.60   | 17.07               | 19.59 | 13.19 | 16.89 |
| 5.0            | 1.57                                | 7.47             | 8.25    | 12.59               | 22.59   | 17.95               | 21.86 | 14.00 | 19.63 |
| 7.0            | 1.53                                | 7.44             | 8.15    | 12.71               | 23.78   | 18.46               | 22.71 | 14.46 | 21.29 |
| 9.0            | 1.50                                | 7.42             | 8.08    | 12.81               | 24.67   | 18.80               | 22.99 | 14.79 | 22.51 |
| 10.0           | 1.49                                | 7.41             | 8.05    | 12.84               | 25.07   | 18.91               | 23.04 | 14.94 | 23.02 |
| 15.0           | 1.44                                | 7.38             | 7.94    | 12.99               | 26.54   | 19.44               | 23.01 | 15.44 | 25.02 |
| 20.0           | 1.41                                | 7.37             | 7.87    | 13.05               | 27.58   | 19.81               | 22.78 | 15.74 | 26.37 |
| 25.0           | 1.39                                | 7.36             | 7.83    | 13.10               | 28.34   | 20.03               | 22.59 | 15.96 | 27.32 |
| 30.0           | 1.38                                | 7.35             | 7.80    | 13.14               | 28.91   | 20.14               | 22.46 | 16.11 | 27.93 |
| 50.0           | 1.37                                | 7.35             | 7.75    | 13.21               | 30.02   | 20.43               | 21.89 | 16.52 | 28.80 |
| 100.0          | 1.38                                | 7.37             | 7.72    | 13.20               | 28.78   | 20.16               | 20.90 | 16.80 | 28.56 |
| 150.0          | 1.41                                | 7.40             | 7.72    | 13.13               | 26.89   | 19.46               | 19.97 | 16.88 | 27.43 |
| 200.0          | 1.45                                | 7.43             | 7.72    | 13.05               | 24.65   | 18.47               | 19.06 | 16.82 | 26.32 |
| 250.0          | 1.49                                | 7.45             | 7.72    | 12.91               | 22.81   | 17.49               | 18.20 | 16.60 | 25.22 |
| 300.0          | 1.53                                | 7.47             | 7.73    | 12.74               | 21.21   | 16.56               | 17.36 | 16.50 | 24.17 |
| 350.0          | 1.58                                | 7.50             | 7.73    | 12.60               | 19.70   | 15.73               | 16.66 | 16.20 | 23.48 |
| 400.0          | 1.63                                | 7.52             | 7.74    | 12.40               | 18.44   | 15.00               | 15.97 | 16.08 | 22.46 |
| 450.0          | 1.69                                | 7.54             | 7.76    | 12.14               | 17.20   | 14.35               | 15.45 | 15.78 | 22.03 |
| 500.0          | 1.77                                | 7.53             | 7.80    | 11.79               | 16.17   | 13.74               | 14.86 | 15.56 | 21.07 |
| 550.0          | 1.82                                | 7.56             | 7.75    | 11.65               | 15.33   | 13.23               | 14.31 | 15.36 | 20.53 |
| 600.0          | 1.89                                | 7.57             | 7.75    | 11.46               | 14.63   | 12.80               | 13.84 | 15.17 | 19.75 |
| 650.0          | 1.97                                | 7.59             | 7.75    | 11.18               | 13.88   | 12.39               | 13.44 | 15.07 | 19.45 |
| 700.0          | 2.04                                | 7.60             | 7.76    | 10.93               | 13.18   | 12.05               | 13.05 | 14.80 | 18.79 |
| 750.0          | 2.13                                | 7.61             | 7.76    | 10.66               | 12.64   | 11.76               | 12.71 | 14.83 | 18.45 |
| 800.0          | 2.21                                | 7.63             | 7.77    | 10.37               | 11.99   | 11.46               | 12.37 | 14.53 | 17.92 |
| 850.0          | 2.31                                | 7.63             | 7.76    | 10.09               | 11.57   | 11.24               | 12.06 | 14.58 | 17.46 |
| 900.0          | 2.40                                | 7.66             | 7.76    | 9.82                | 11.00   | 11.04               | 11.83 | 14.37 | 17.18 |
| 950.0          | 2.50                                | 7.67             | 7.76    | 9.53                | 10.63   | 10.84               | 11.54 | 14.39 | 16.63 |
| 1000.0         | 2.60                                | 7.70             | 7.75    | 9.29                | 10.11   | 10.68               | 11.36 | 14.27 | 16.52 |
| 1100.0         | 2.83                                | 7.75             | 7.71    | 8.79                | 9.31    | 10.37               | 11.01 | 14.24 | 15.96 |
| 1200.0         | 3.09                                | 7.82             | 7.62    | 8.39                | 8.58    | 10.15               | 10.84 | 14.14 | 15.48 |
| 1300.0         | 3.39                                | 7.91             | 7.47    | 8.13                | 7.88    | 9.89                | 10.81 | 14.03 | 15.16 |
| 1400.0         | 3.74                                | 8.04             | 7.24    | 8.07                | 7.25    | 9.61                | 10.99 | 13.76 | 14.96 |
| 1500.0         | 4.16                                | 8.22             | 6.93    | 8.24                | 6.72    | 9.26                | 11.40 | 13.37 | 15.00 |
| 1600.0         | 4.64                                | 8.46             | 6.59    | 8.66                | 6.30    | 8.83                | 12.10 | 12.81 | 15.19 |
| 1700.0         | 5.23                                | 8.76             | 6.24    | 9.21                | 6.03    | 8.28                | 13.14 | 12.21 | 15.69 |
| 1800.0         | 5.90                                | 9.12             | 5.91    | 10.03               | 6.05    | 7.75                | 14.60 | 11.62 | 16.17 |
| 1900.0         | 6.66                                | 9.50             | 5.62    | 11.01               | 6.34    | 7.26                | 16.69 | 11.23 | 16.81 |
| 2000.0         | 7.55                                | 9.94             | 5.43    | 12.16               | 6.95    | 6.90                | 19.78 | 11.06 | 17.38 |