

# Bi-Directional Coupler

# SYBD-16-53HP+

## 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   |
| 2700           | 0.12                                | 18.60            | 18.56   | 20.02               | 20.62   | 24.50               | 25.16 | 27.41 | 27.68 |
| 2750           | 0.12                                | 18.48            | 18.46   | 19.74               | 20.61   | 24.65               | 25.27 | 26.97 | 27.01 |
| 2800           | 0.12                                | 18.38            | 18.36   | 19.75               | 20.54   | 24.46               | 25.13 | 26.55 | 26.68 |
| 2850           | 0.11                                | 18.28            | 18.25   | 19.39               | 20.29   | 24.56               | 25.10 | 26.28 | 26.26 |
| 2900           | 0.12                                | 18.19            | 18.16   | 19.48               | 20.27   | 24.57               | 25.20 | 25.63 | 25.94 |
| 2950           | 0.12                                | 18.10            | 18.07   | 19.21               | 20.06   | 24.67               | 25.15 | 25.44 | 25.47 |
| 3000           | 0.12                                | 17.99            | 17.98   | 19.20               | 20.06   | 24.97               | 25.28 | 24.97 | 25.23 |
| 3100           | 0.12                                | 17.82            | 17.80   | 18.89               | 19.81   | 25.29               | 25.39 | 24.47 | 24.47 |
| 3200           | 0.13                                | 17.63            | 17.63   | 18.62               | 19.48   | 25.93               | 25.53 | 23.94 | 23.79 |
| 3300           | 0.13                                | 17.45            | 17.46   | 18.32               | 19.26   | 26.68               | 26.10 | 23.54 | 23.21 |
| 3400           | 0.15                                | 17.28            | 17.29   | 17.96               | 18.87   | 27.86               | 26.90 | 23.35 | 22.99 |
| 3500           | 0.15                                | 17.11            | 17.13   | 17.67               | 18.68   | 29.47               | 28.10 | 23.49 | 23.13 |
| 3600           | 0.16                                | 16.92            | 17.01   | 17.23               | 18.20   | 31.91               | 30.03 | 23.99 | 23.80 |
| 3650           | 0.16                                | 16.88            | 16.91   | 17.19               | 18.04   | 34.04               | 31.65 | 24.13 | 23.67 |
| 3725           | 0.17                                | 16.77            | 16.80   | 16.95               | 17.89   | 37.00               | 33.71 | 24.91 | 24.46 |
| 3800           | 0.17                                | 16.66            | 16.70   | 16.80               | 17.69   | 41.81               | 36.07 | 25.52 | 25.46 |
| 3900           | 0.17                                | 16.54            | 16.55   | 16.54               | 17.25   | 42.97               | 40.22 | 26.96 | 26.74 |
| 3975           | 0.17                                | 16.46            | 16.47   | 16.38               | 16.97   | 38.99               | 38.80 | 28.58 | 28.15 |
| 4000           | 0.17                                | 16.44            | 16.44   | 16.36               | 16.92   | 37.46               | 38.04 | 28.89 | 28.82 |
| 4100           | 0.18                                | 16.34            | 16.34   | 16.26               | 16.64   | 33.81               | 34.07 | 31.84 | 31.43 |
| 4200           | 0.18                                | 16.26            | 16.24   | 16.21               | 16.62   | 31.72               | 31.57 | 34.93 | 36.47 |
| 4300           | 0.19                                | 16.18            | 16.16   | 16.30               | 16.61   | 30.07               | 29.63 | 39.23 | 47.82 |
| 4400           | 0.19                                | 16.12            | 16.11   | 16.45               | 16.64   | 28.93               | 28.35 | 38.47 | 43.45 |
| 4500           | 0.20                                | 16.07            | 16.05   | 16.62               | 16.76   | 28.61               | 27.86 | 34.67 | 36.13 |
| 4600           | 0.21                                | 16.03            | 16.00   | 16.75               | 16.99   | 28.49               | 27.58 | 31.51 | 32.17 |
| 4700           | 0.22                                | 15.97            | 15.96   | 17.14               | 17.23   | 28.29               | 27.25 | 29.56 | 30.13 |
| 4800           | 0.23                                | 15.93            | 15.91   | 17.49               | 17.53   | 27.69               | 26.78 | 28.61 | 28.44 |
| 4900           | 0.24                                | 15.91            | 15.89   | 17.72               | 17.71   | 27.22               | 26.29 | 27.61 | 27.07 |
| 5000           | 0.24                                | 15.90            | 15.87   | 17.84               | 17.58   | 27.32               | 26.23 | 26.99 | 26.29 |

REV. X1

SYBD-16-53HP+

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Page 1 of 1



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