

## Engineering Development Model

# Power Splitter/Combiner

# CRPS-ED3034A/2

## 2 Way-0°

### Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : 99-01-806

| ELECTRICAL SPECIFICATIONS 75Ω @ +25°C |               |      |      |      |       |
|---------------------------------------|---------------|------|------|------|-------|
| Parameter                             |               | Min. | Typ. | Max. | Units |
| Frequency                             |               | 0.1  |      | 262  | MHz   |
| Isolation                             | 0.1 - 1 MHz   |      | 31   |      | dB    |
|                                       | 1 - 131 MHz   |      | 34   |      | dB    |
|                                       | 131 - 262 MHz |      | 25   |      | dB    |
| Insertion Loss Above 3.0 dB           | 0.1 - 1 MHz   |      | 0.24 |      | dB    |
|                                       | 1 - 131 MHz   |      | 0.17 |      | dB    |
|                                       | 131 - 262 MHz |      | 0.40 |      | dB    |
| Phase Unbalance                       | 0.1 - 1 MHz   |      | 0.02 |      | deg.  |
|                                       | 1 - 131 MHz   |      | 0.08 |      | deg.  |
|                                       | 131 - 262 MHz |      | 0.25 |      | deg.  |
| Amplitude Unbalance                   | 0.1 - 1 MHz   |      | 0.01 |      | dB    |
|                                       | 1 - 131 MHz   |      | 0.01 |      | dB    |
|                                       | 131 - 262 MHz |      | 0.02 |      | dB    |
| VSWR                                  | SUM Port      |      | 1.16 |      | (:1)  |
|                                       | OUT Ports     |      | 1.14 |      | (:1)  |

| MAXIMUM RATINGS       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |

| PIN CONNECTIONS |     |
|-----------------|-----|
| SUM PORT        | 6   |
| PORT 1          | 4   |
| PORT 2          | 3   |
| GND EXT         | 1   |
| NOT USED        | 2,5 |

### Functional Diagram



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## Typical Performance Data

| FREQUENCY<br>(MHz) | TOTAL LOSS <sup>1</sup><br>(dB) |      | AMPLITUDE<br>UNBALANCE<br>(dB) | ISOLATION<br>(dB) | PHASE<br>UNBALANCE<br>(deg.) | FREQUENCY<br>(MHz) | VSWR<br>(:1) |      |      |
|--------------------|---------------------------------|------|--------------------------------|-------------------|------------------------------|--------------------|--------------|------|------|
|                    | S-1                             | S-2  |                                |                   |                              |                    | S            | 1    | 2    |
| 0.04               | 3.83                            | 3.84 | 0.00                           | 24.23             | 0.01                         | 0.04               | 2.11         | 1.97 | 1.97 |
| 0.05               | 3.61                            | 3.61 | 0.00                           | 25.74             | 0.05                         | 0.05               | 1.87         | 1.77 | 1.77 |
| 0.06               | 3.46                            | 3.46 | 0.00                           | 27.01             | 0.02                         | 0.06               | 1.71         | 1.64 | 1.64 |
| 0.07               | 3.37                            | 3.37 | 0.00                           | 28.14             | 0.00                         | 0.07               | 1.60         | 1.54 | 1.54 |
| 0.08               | 3.32                            | 3.31 | 0.01                           | 29.21             | 0.04                         | 0.08               | 1.52         | 1.48 | 1.48 |
| 0.09               | 3.27                            | 3.27 | 0.00                           | 30.16             | 0.02                         | 0.09               | 1.46         | 1.42 | 1.42 |
| 0.10               | 3.24                            | 3.24 | 0.00                           | 31.00             | 0.02                         | 0.10               | 1.41         | 1.38 | 1.38 |
| 5.00               | 3.13                            | 3.12 | 0.01                           | 35.63             | 0.00                         | 5.00               | 1.06         | 1.05 | 1.05 |
| 10.00              | 3.13                            | 3.12 | 0.01                           | 36.09             | 0.08                         | 10.00              | 1.07         | 1.05 | 1.05 |
| 14.00              | 3.13                            | 3.13 | 0.00                           | 36.23             | 0.08                         | 14.00              | 1.07         | 1.05 | 1.05 |
| 18.00              | 3.13                            | 3.12 | 0.01                           | 36.30             | 0.02                         | 18.00              | 1.07         | 1.05 | 1.05 |
| 22.00              | 3.13                            | 3.13 | 0.00                           | 36.22             | 0.03                         | 22.00              | 1.07         | 1.05 | 1.06 |
| 26.00              | 3.14                            | 3.13 | 0.00                           | 36.17             | 0.06                         | 26.00              | 1.07         | 1.06 | 1.06 |
| 30.00              | 3.15                            | 3.14 | 0.01                           | 35.88             | 0.02                         | 30.00              | 1.08         | 1.06 | 1.06 |
| 34.00              | 3.14                            | 3.14 | 0.00                           | 35.70             | 0.07                         | 34.00              | 1.08         | 1.07 | 1.07 |
| 38.00              | 3.15                            | 3.15 | 0.00                           | 35.55             | 0.05                         | 38.00              | 1.08         | 1.07 | 1.07 |
| 42.00              | 3.16                            | 3.15 | 0.00                           | 35.24             | 0.06                         | 42.00              | 1.09         | 1.07 | 1.08 |
| 46.00              | 3.16                            | 3.16 | 0.00                           | 35.04             | 0.02                         | 46.00              | 1.09         | 1.08 | 1.08 |
| 50.00              | 3.17                            | 3.15 | 0.01                           | 34.81             | 0.07                         | 50.00              | 1.10         | 1.08 | 1.08 |
| 52.00              | 3.17                            | 3.17 | 0.00                           | 34.72             | 0.05                         | 52.00              | 1.10         | 1.09 | 1.09 |
| 54.00              | 3.16                            | 3.16 | 0.00                           | 34.50             | 0.07                         | 54.00              | 1.10         | 1.09 | 1.09 |
| 56.00              | 3.17                            | 3.17 | 0.00                           | 34.43             | 0.13                         | 56.00              | 1.11         | 1.09 | 1.09 |
| 58.00              | 3.18                            | 3.17 | 0.01                           | 34.31             | 0.11                         | 58.00              | 1.11         | 1.09 | 1.09 |
| 60.00              | 3.18                            | 3.17 | 0.01                           | 34.15             | 0.09                         | 60.00              | 1.11         | 1.10 | 1.10 |
| 75.00              | 3.20                            | 3.20 | 0.00                           | 33.00             | 0.12                         | 75.00              | 1.13         | 1.12 | 1.12 |
| 90.00              | 3.21                            | 3.21 | 0.00                           | 31.99             | 0.10                         | 90.00              | 1.15         | 1.13 | 1.14 |
| 105.00             | 3.22                            | 3.22 | 0.00                           | 30.96             | 0.14                         | 105.00             | 1.17         | 1.15 | 1.15 |
| 120.00             | 3.24                            | 3.25 | 0.01                           | 30.01             | 0.17                         | 120.00             | 1.18         | 1.17 | 1.17 |
| 135.00             | 3.26                            | 3.27 | 0.01                           | 29.08             | 0.18                         | 135.00             | 1.20         | 1.20 | 1.20 |
| 150.00             | 3.29                            | 3.30 | 0.01                           | 28.10             | 0.21                         | 150.00             | 1.23         | 1.22 | 1.22 |
| 178.00             | 3.33                            | 3.34 | 0.01                           | 26.40             | 0.24                         | 178.00             | 1.28         | 1.26 | 1.27 |
| 206.00             | 3.38                            | 3.40 | 0.02                           | 24.71             | 0.22                         | 206.00             | 1.32         | 1.30 | 1.31 |
| 234.00             | 3.44                            | 3.47 | 0.03                           | 23.10             | 0.28                         | 234.00             | 1.37         | 1.35 | 1.36 |
| 262.00             | 3.51                            | 3.55 | 0.04                           | 21.54             | 0.22                         | 262.00             | 1.44         | 1.41 | 1.41 |
| 290.00             | 3.59                            | 3.64 | 0.05                           | 20.02             | 0.22                         | 290.00             | 1.54         | 1.46 | 1.46 |
| 318.00             | 3.68                            | 3.74 | 0.06                           | 18.53             | 0.19                         | 318.00             | 1.62         | 1.51 | 1.51 |
| 346.00             | 3.81                            | 3.88 | 0.07                           | 17.11             | 0.14                         | 346.00             | 1.68         | 1.56 | 1.56 |
| 374.00             | 3.95                            | 4.02 | 0.07                           | 15.73             | 0.13                         | 374.00             | 1.78         | 1.61 | 1.61 |
| 402.00             | 4.10                            | 4.20 | 0.10                           | 14.41             | 0.03                         | 402.00             | 1.93         | 1.65 | 1.65 |
| 430.00             | 4.32                            | 4.42 | 0.10                           | 13.18             | 0.05                         | 430.00             | 2.07         | 1.68 | 1.69 |

<sup>1</sup>Total Loss = Insertion Loss + 3dB Splitter Loss



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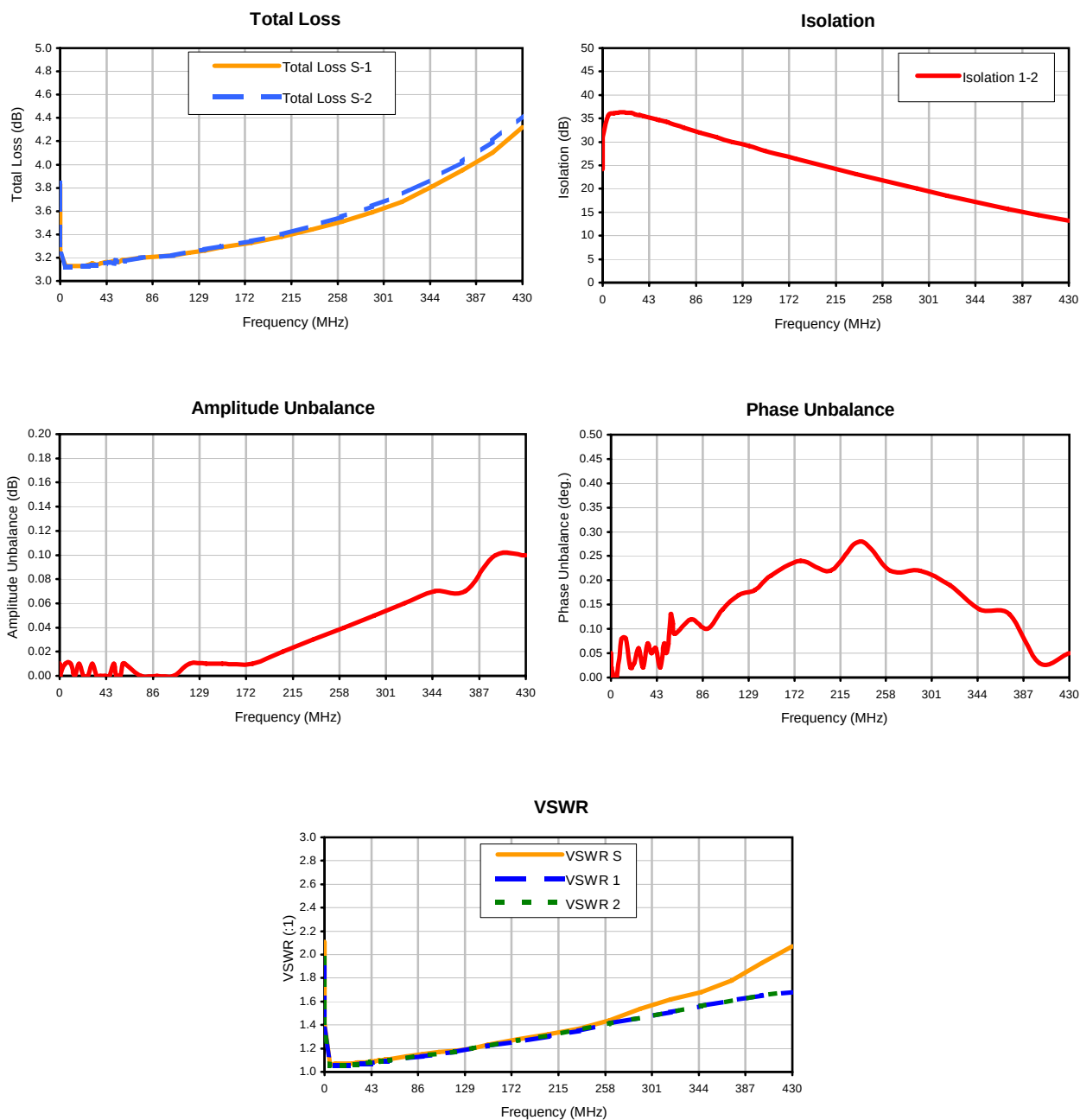
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## Typical Performance Curves



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