

# Power Splitter/Combiner

## ZX10-4A-14-S+

4 Way-0° 50Ω

1100 to 1450 MHz

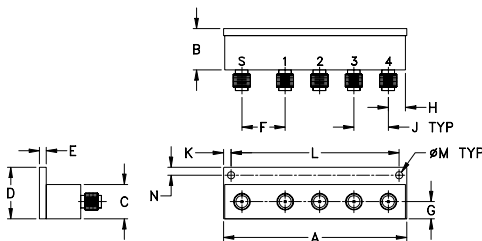
### Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -40°C to 85°C  |
| Storage Temperature                                             | -55°C to 100°C |
| Power Input (as a splitter)                                     | 2.5W max.      |
| Internal Dissipation                                            | 0.125W max.    |
| Permanent damage may occur if any of these limits are exceeded. |                |

### Coaxial Connections

|          |   |
|----------|---|
| SUM PORT | S |
| PORT 1   | 1 |
| PORT 2   | 2 |
| PORT 3   | 3 |
| PORT 4   | 4 |

### Outline Drawing



### Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F     | G    | H    |
|-------|-------|-------|-------|------|-------|------|------|
| 2.67  | .60   | .50   | .75   | .10  | .63   | .25  | .25  |
| 67.82 | 15.24 | 12.70 | 19.05 | 2.54 | 16.00 | 6.35 | 6.35 |
| J     | K     | L     | M     | N    | wt.   |      |      |
| .50   | .11   | 2.445 | .106  | .12  | grams |      |      |
| 12.70 | 2.79  | 62.10 | 2.69  | 3.05 | 65.0  |      |      |

### Features

- low insertion loss, 0.6 dB typ.
- high isolation, 25 dB typ.
- rigid unibody construction
- convenient for panel mount applications
- low cost
- very small size
- protected by US patent 6,790,049

### Applications

- antenna arrays
- signal distribution
- test bench

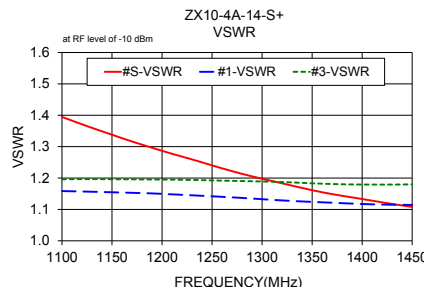
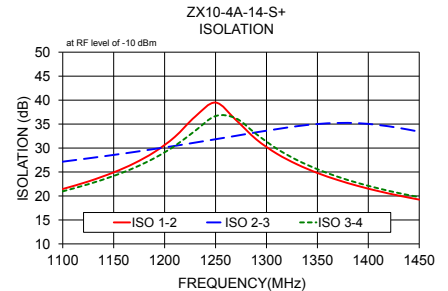
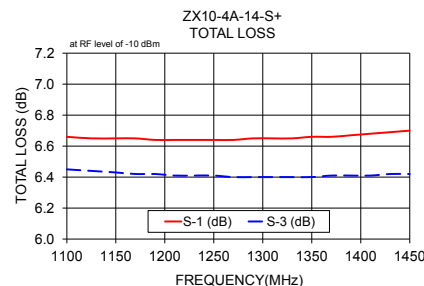
### Electrical Specifications (T<sub>AMB</sub>=25°C)

| FREQ. RANGE (MHz)              | ISOLATION (dB) | INSERTION LOSS (dB) ABOVE 6 dB | PHASE UNBALANCE (Deg.) | AMPLITUDE UNBALANCE (dB) | INPUT VSWR (:1) | OUTPUT VSWR (:1) |
|--------------------------------|----------------|--------------------------------|------------------------|--------------------------|-----------------|------------------|
| f <sub>L</sub> -f <sub>H</sub> | Typ. Min.      | Typ. Max.                      | Max.                   | Max.                     | Typ.            | Typ.             |
| 1100-1450                      | 25 16          | 0.6 1.0                        | 4                      | 0.7                      | 1.25            | 1.2              |

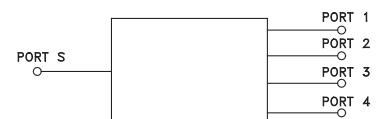
### Typical Performance Data

| Freq. (MHz) | Total Loss <sup>1</sup> (dB) |      |      |      | Amp. Unbal. (dB) | Isolation (dB) |       |       | Phase Unbal. (deg.) | VSWR S | VSWR 1 | VSWR 2 | VSWR 3 | VSWR 4 |
|-------------|------------------------------|------|------|------|------------------|----------------|-------|-------|---------------------|--------|--------|--------|--------|--------|
|             | S-1                          | S-2  | S-3  | S-4  |                  | 1-2            | 2-3   | 3-4   |                     |        |        |        |        |        |
| 1100.00     | 6.66                         | 6.67 | 6.45 | 6.43 | 0.24             | 21.46          | 27.16 | 20.97 | 1.75                | 1.39   | 1.16   | 1.19   | 1.20   | 1.24   |
| 1125.00     | 6.65                         | 6.67 | 6.44 | 6.41 | 0.26             | 23.02          | 27.85 | 22.45 | 1.88                | 1.37   | 1.16   | 1.19   | 1.20   | 1.24   |
| 1150.00     | 6.65                         | 6.67 | 6.43 | 6.40 | 0.28             | 24.93          | 28.57 | 24.19 | 2.02                | 1.34   | 1.15   | 1.19   | 1.20   | 1.24   |
| 1190.00     | 6.64                         | 6.68 | 6.42 | 6.37 | 0.31             | 29.17          | 29.81 | 27.90 | 2.19                | 1.30   | 1.15   | 1.19   | 1.20   | 1.24   |
| 1230.00     | 6.64                         | 6.69 | 6.41 | 6.35 | 0.34             | 36.56          | 31.14 | 33.61 | 2.39                | 1.26   | 1.15   | 1.19   | 1.19   | 1.23   |
| 1250.00     | 6.64                         | 6.70 | 6.41 | 6.34 | 0.36             | 39.49          | 31.84 | 36.67 | 2.47                | 1.24   | 1.14   | 1.19   | 1.19   | 1.23   |
| 1270.00     | 6.64                         | 6.70 | 6.40 | 6.33 | 0.37             | 35.85          | 32.55 | 36.20 | 2.55                | 1.22   | 1.14   | 1.18   | 1.19   | 1.23   |
| 1290.00     | 6.65                         | 6.71 | 6.40 | 6.32 | 0.39             | 31.81          | 33.28 | 32.91 | 2.64                | 1.21   | 1.13   | 1.18   | 1.19   | 1.23   |
| 1310.00     | 6.65                         | 6.71 | 6.40 | 6.31 | 0.40             | 28.84          | 33.94 | 29.88 | 2.73                | 1.19   | 1.13   | 1.18   | 1.19   | 1.23   |
| 1330.00     | 6.65                         | 6.72 | 6.40 | 6.31 | 0.41             | 26.60          | 34.56 | 27.49 | 2.81                | 1.18   | 1.13   | 1.18   | 1.19   | 1.22   |
| 1350.00     | 6.66                         | 6.73 | 6.40 | 6.30 | 0.43             | 24.80          | 35.01 | 25.59 | 2.86                | 1.16   | 1.12   | 1.17   | 1.18   | 1.22   |
| 1370.00     | 6.66                         | 6.74 | 6.41 | 6.30 | 0.44             | 23.33          | 35.23 | 24.01 | 2.95                | 1.15   | 1.12   | 1.16   | 1.18   | 1.22   |
| 1390.00     | 6.67                         | 6.75 | 6.41 | 6.29 | 0.46             | 22.08          | 35.18 | 22.70 | 3.02                | 1.14   | 1.12   | 1.16   | 1.18   | 1.22   |
| 1430.00     | 6.69                         | 6.77 | 6.42 | 6.28 | 0.49             | 20.07          | 34.20 | 20.60 | 3.12                | 1.12   | 1.12   | 1.17   | 1.18   | 1.22   |
| 1450.00     | 6.70                         | 6.78 | 6.42 | 6.28 | 0.50             | 19.24          | 33.41 | 19.75 | 3.17                | 1.11   | 1.11   | 1.16   | 1.18   | 1.22   |

1. Total Loss = Insertion Loss + 6dB splitter loss.



### electrical schematic



### Notes

- 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.
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