

# Power Splitter/Combiner

## ZX10-4-24-S+

4 Way-0° 50Ω

1675 to 2350 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.*     |
| Power Input (as a combiner) | 0.125W max.    |

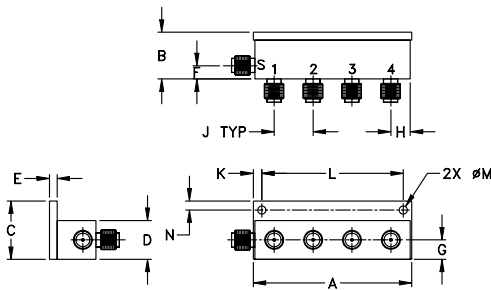
\*maximum VSWR at output 1.2:1

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     |
| 2.04  | .60   | .75   | .50   | .10  | .17  | .25  | .25   |
| 51.82 | 15.24 | 19.05 | 12.70 | 2.54 | 4.32 | 6.35 | 6.35  |
| J     | K     | L     | M     | N    |      |      | wt    |
| .50   | .11   | 1.820 | .106  | .12  |      |      | grams |
| 12.70 | 2.79  | 46.23 | 2.69  | 3.05 |      |      | 60.0  |

### Features

- low insertion loss, 0.9 dB typ.
- high isolation, 20 dB typ.
- rigid unibody construction
- gold plated connectors; nickel plated body
- low cost
- small size
- protected by US patent 6,790,049

### Applications

- PCS/DCS
- antenna arrays
- signal distribution
- test bench

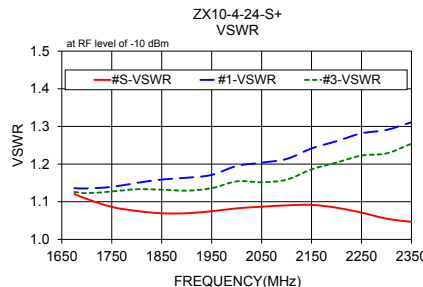
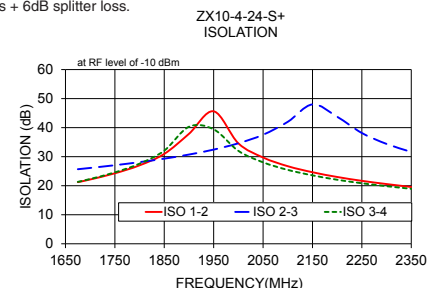
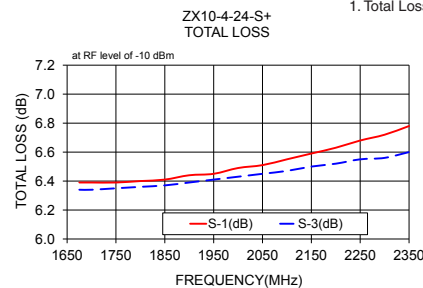
### Electrical Specifications (T<sub>AMB</sub>=25°C)

| 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>U</sub> | Typ. Min.      | Typ. Max.                      | Max.                   | Max.                     | Typ.            | Typ.             |
| 1675-2350                      | 20 17          | 0.9 1.1                        | 5.0                    | 0.7                      | 1.18            | 1.3              |
| 1775-2200                      | 25 20          | 0.9 1.1                        | 5.0                    | 0.7                      | 1.18            | 1.3              |

### 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   |                     |        |        |        |        |        |
| 1675.00     | 6.39                         | 6.69 | 6.34 | 6.28 | 0.41             | 21.22          | 25.68 | 21.32 | 0.58                | 1.12   | 1.14   | 1.19   | 1.13   | 1.18   |
| 1700.00     | 6.39                         | 6.70 | 6.34 | 6.28 | 0.42             | 22.15          | 26.12 | 22.32 | 0.45                | 1.11   | 1.14   | 1.19   | 1.12   | 1.18   |
| 1750.00     | 6.39                         | 6.71 | 6.35 | 6.28 | 0.44             | 24.28          | 27.06 | 24.59 | 0.43                | 1.09   | 1.14   | 1.20   | 1.13   | 1.18   |
| 1800.00     | 6.40                         | 6.73 | 6.36 | 6.28 | 0.45             | 27.02          | 28.12 | 27.60 | 0.39                | 1.08   | 1.15   | 1.20   | 1.13   | 1.18   |
| 1850.00     | 6.41                         | 6.74 | 6.37 | 6.27 | 0.47             | 30.96          | 29.32 | 32.08 | 0.63                | 1.07   | 1.16   | 1.20   | 1.13   | 1.18   |
| 1900.00     | 6.44                         | 6.75 | 6.39 | 6.28 | 0.47             | 37.87          | 30.73 | 40.30 | 0.89                | 1.07   | 1.16   | 1.21   | 1.13   | 1.19   |
| 1950.00     | 6.45                         | 6.76 | 6.41 | 6.27 | 0.48             | 45.62          | 32.44 | 39.41 | 1.17                | 1.07   | 1.17   | 1.22   | 1.14   | 1.20   |
| 2000.00     | 6.49                         | 6.76 | 6.43 | 6.28 | 0.49             | 34.59          | 34.61 | 32.00 | 1.51                | 1.08   | 1.19   | 1.23   | 1.15   | 1.21   |
| 2050.00     | 6.51                         | 6.77 | 6.45 | 6.28 | 0.49             | 29.72          | 37.55 | 28.05 | 1.82                | 1.09   | 1.20   | 1.24   | 1.15   | 1.22   |
| 2100.00     | 6.55                         | 6.77 | 6.47 | 6.29 | 0.48             | 26.72          | 42.00 | 25.45 | 1.97                | 1.09   | 1.21   | 1.25   | 1.16   | 1.23   |
| 2150.00     | 6.59                         | 6.76 | 6.50 | 6.29 | 0.47             | 24.64          | 48.00 | 23.57 | 2.21                | 1.09   | 1.24   | 1.26   | 1.19   | 1.24   |
| 2200.00     | 6.63                         | 6.76 | 6.52 | 6.29 | 0.46             | 23.01          | 43.74 | 22.06 | 2.45                | 1.08   | 1.26   | 1.28   | 1.20   | 1.26   |
| 2250.00     | 6.68                         | 6.74 | 6.55 | 6.30 | 0.44             | 21.68          | 38.14 | 20.85 | 2.76                | 1.07   | 1.28   | 1.28   | 1.22   | 1.27   |
| 2300.00     | 6.72                         | 6.73 | 6.56 | 6.30 | 0.43             | 20.57          | 34.39 | 19.84 | 2.93                | 1.05   | 1.29   | 1.30   | 1.23   | 1.29   |
| 2350.00     | 6.78                         | 6.72 | 6.60 | 6.30 | 0.48             | 19.56          | 31.63 | 18.93 | 2.96                | 1.05   | 1.31   | 1.31   | 1.25   | 1.30   |

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



### electrical schematic



#### 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.  
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