

Coaxial

# Power Splitter/Combiner

4 Way-0° 50Ω 500 to 5000 MHz

ZN4PD1-50

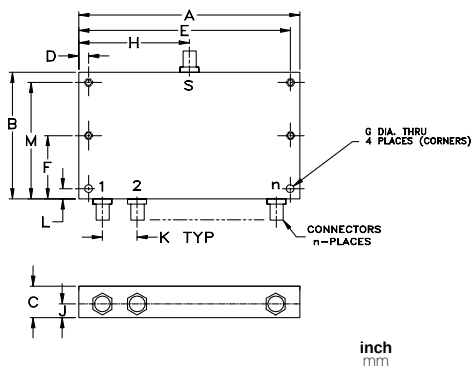
## Maximum Ratings

|                             |                |
|-----------------------------|----------------|
| Operating Temperature       | -55°C to 100°C |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 10W max.       |
| Internal Dissipation        | 0.75W max.     |

## Coaxial Connections

|          |   |
|----------|---|
| SUM PORT | 3 |
| PORT 1   | 1 |
| PORT 2   | 2 |
| PORT 3   | 4 |
| PORT 4   | 5 |

## Outline Drawing



## Outline Dimensions ( )

|       |        |       |       |       |        |       |
|-------|--------|-------|-------|-------|--------|-------|
| A     | B      | C     | D     | E     | F      |       |
| 3.50  | 4.50   | .65   | .125  | 3.375 | --     |       |
| 88.90 | 114.30 | 16.51 | 3.18  | 85.73 | --     |       |
| G     | H      | J     | K     | L     | M      | wt    |
| .125  | --     | .33   | .50   | .400  | 4.100  | grams |
| 3.18  | --     | 8.38  | 12.70 | 10.16 | 104.14 | 288   |

## Features

- wideband, 500 to 5000 MHz
- high isolation, 23 dB typ.
- good input matching VSWR, 1.3:1 typ.
- up to 10W power inputs as splitter

## Applications

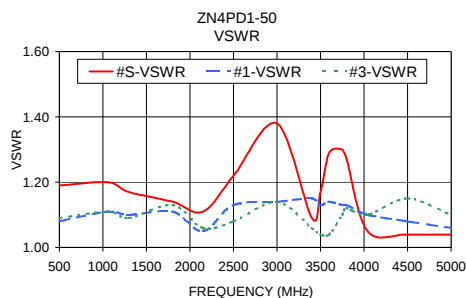
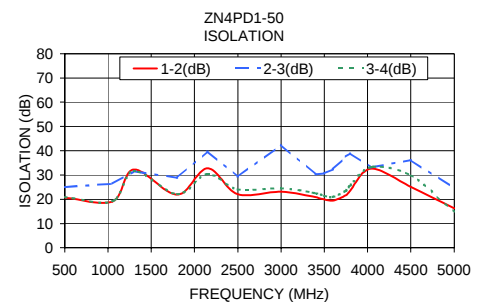
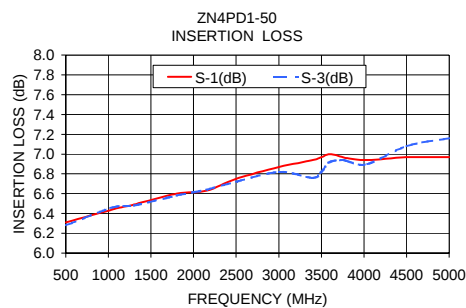
- UHF TV
- cellular/ISM/GSM
- satellite distribution
- GPS/L-BAND (MARSAT)
- PCS/DCS/UMTS
- ISM
- MMDS
- SATCOM

## Splitter Electrical Specifications

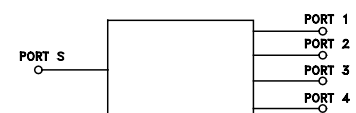
| FREQ. RANGE (MHz) | ISOLATION (dB) |      | INSERTION LOSS (dB) ABOVE 6 dB |      | PHASE UNBALANCE (Degrees) Max. | AMPLITUDE UNBALANCE (dB) Max. | VSWR (:1) |     |      |      |
|-------------------|----------------|------|--------------------------------|------|--------------------------------|-------------------------------|-----------|-----|------|------|
|                   | Typ.           | Min. | Typ.                           | Max. |                                |                               | S         | OUT | Typ. | Max. |
| 500-5000          | 23             | 13   | 0.9                            | 1.8  | 8                              | 0.6                           | 1.3       | —   | 1.1  | —    |
| 500-1600          | 23             | 15   | 0.7                            | 1.4  | 4                              | 0.6                           | 1.3       | —   | 1.1  | —    |
| 1600-2700         | 23             | 17   | 0.8                            | 1.4  | 7                              | 0.6                           | 1.3       | —   | 1.1  | —    |
| 2700-3600         | 22             | 16   | 1.1                            | 1.7  | 7                              | 0.6                           | 1.3       | —   | 1.1  | —    |
| 3700-4800         | 22             | 14   | 1.2                            | 1.7  | 8                              | 0.6                           | 1.3       | —   | 1.1  | —    |

## Typical Performance Data

| Freq. (MHz) | Insertion Loss (dB) |      |      |      | Amp. Unbal. (dB) | Isolation (dB) |       |       | Phase Unbal. (deg.) | VSWR |      |      |      |      |
|-------------|---------------------|------|------|------|------------------|----------------|-------|-------|---------------------|------|------|------|------|------|
|             | S-1                 | S-2  | S-3  | S-4  |                  | 1-2            | 2-3   | 3-4   |                     | S    | 1    | 2    | 3    | 4    |
| 500.00      | 6.31                | 6.30 | 6.28 | 6.33 | 0.06             | 20.68          | 24.99 | 20.89 | 0.41                | 1.19 | 1.08 | 1.09 | 1.09 | 1.10 |
| 1050.00     | 6.44                | 6.43 | 6.46 | 6.48 | 0.04             | 19.02          | 26.37 | 19.14 | 0.70                | 1.20 | 1.11 | 1.10 | 1.11 | 1.11 |
| 1300.00     | 6.49                | 6.47 | 6.48 | 6.51 | 0.04             | 32.24          | 31.55 | 31.63 | 1.01                | 1.17 | 1.10 | 1.10 | 1.09 | 1.09 |
| 1800.00     | 6.60                | 6.59 | 6.58 | 6.59 | 0.03             | 21.89          | 28.82 | 22.10 | 1.27                | 1.14 | 1.11 | 1.12 | 1.13 | 1.15 |
| 2150.00     | 6.63                | 6.61 | 6.64 | 6.66 | 0.05             | 32.72          | 39.78 | 30.39 | 1.79                | 1.11 | 1.05 | 1.07 | 1.06 | 1.09 |
| 2500.00     | 6.75                | 6.74 | 6.72 | 6.74 | 0.03             | 22.09          | 29.19 | 24.06 | 2.22                | 1.22 | 1.13 | 1.10 | 1.08 | 1.08 |
| 3000.00     | 6.87                | 6.81 | 6.82 | 6.85 | 0.05             | 23.11          | 42.46 | 24.50 | 2.47                | 1.38 | 1.14 | 1.15 | 1.14 | 1.17 |
| 3400.00     | 6.94                | 6.90 | 6.76 | 6.78 | 0.17             | 20.82          | 30.27 | 22.52 | 2.56                | 1.09 | 1.15 | 1.09 | 1.06 | 1.06 |
| 3500.00     | 6.97                | 6.93 | 6.82 | 6.80 | 0.17             | 19.92          | 30.62 | 21.35 | 2.40                | 1.17 | 1.13 | 1.08 | 1.04 | 1.04 |
| 3600.00     | 7.00                | 6.97 | 6.92 | 6.90 | 0.10             | 19.48          | 32.35 | 20.92 | 2.21                | 1.29 | 1.14 | 1.10 | 1.04 | 1.06 |
| 3750.00     | 6.97                | 6.93 | 6.94 | 6.94 | 0.04             | 21.61          | 37.56 | 23.50 | 2.20                | 1.30 | 1.13 | 1.14 | 1.10 | 1.12 |
| 3800.00     | 6.96                | 6.93 | 6.93 | 6.94 | 0.03             | 23.52          | 39.01 | 25.65 | 2.41                | 1.27 | 1.13 | 1.15 | 1.12 | 1.14 |
| 4040.00     | 6.94                | 6.88 | 6.90 | 6.91 | 0.06             | 32.59          | 33.08 | 33.25 | 2.88                | 1.05 | 1.10 | 1.08 | 1.10 | 1.10 |
| 4500.00     | 6.97                | 6.96 | 7.08 | 7.03 | 0.13             | 25.09          | 36.21 | 29.86 | 1.97                | 1.04 | 1.08 | 1.09 | 1.15 | 1.13 |
| 5000.00     | 6.97                | 6.93 | 7.16 | 7.09 | 0.23             | 16.20          | 24.51 | 14.85 | 2.63                | 1.04 | 1.06 | 1.11 | 1.10 | 1.11 |



## electrical schematic



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