

# Power Splitter/Combiner

**ZN4PD-272-S+**

4 Way-0° 50Ω 500 to 2700 MHz

## Maximum Ratings

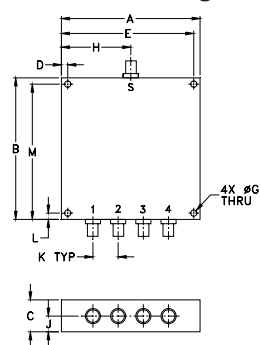
|                             |                             |
|-----------------------------|-----------------------------|
| Operating Temperature       | -55°C to 100°C              |
| Storage Temperature         | -55°C to 100°C              |
| Power Input (as a splitter) | 10W max.                    |
| Internal Dissipation        | 2.0W max.                   |
| DC Current                  | 1.0 A (250mA for each port) |

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 |

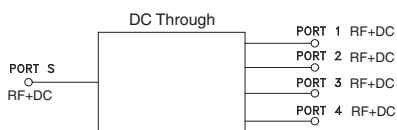
## Outline Drawing



## Outline Dimensions (inch/mm)

|       |       |       |      |       |       |      |
|-------|-------|-------|------|-------|-------|------|
| A     | B     | C     | D    | E     | F     | G    |
| 2.75  | 2.80  | .63   | .125 | 2.625 | —     | .125 |
| 69.85 | 71.12 | 16.00 | 3.18 | 66.68 | —     | 3.18 |
| H     | J     | K     | L    | M     | wt    |      |
| 1.38  | .31   | .500  | .125 | 2.675 | grams |      |
| 35.05 | 7.87  | 12.70 | 3.18 | 67.95 | 140   |      |

## Electrical Schematic



## Features

- wideband, 500 to 2700 MHz
- rugged, shielded case
- power input up to 10W
- excellent amplitude unbalance, 0.2 dB typ.
- high isolation, 19 dB typ.
- low insertion loss, 0.9 dB typ.

## Applications

- UHF
- cellular, GPS, PCS
- receivers/transmitters
- instrumentation
- CATV



Generic photo used for illustration purposes only

CASE STYLE: UU182

| Connectors | Model        |
|------------|--------------|
| SMA        | ZN4PD-272-S+ |

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

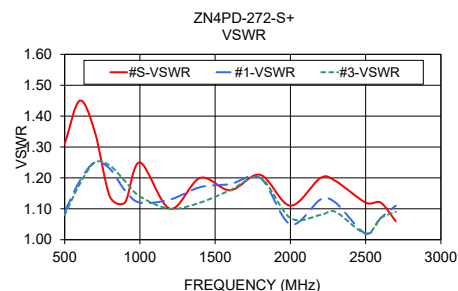
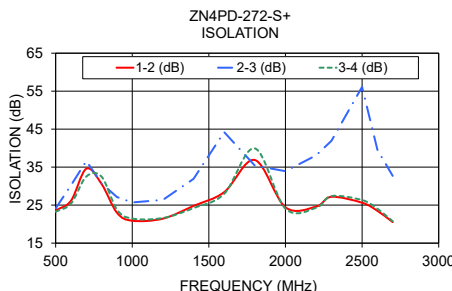
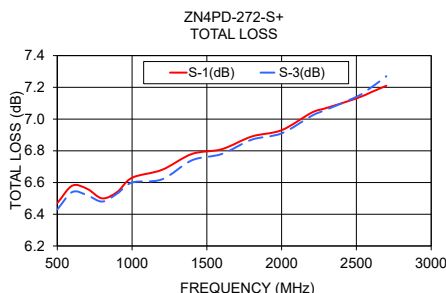
## Electrical Specifications at 25°C

| Parameter  | Frequency (MHz) | Min. | Typ. | Max. | Unit   |
|--|-----------------|------|------|------|--------|
| <b>Frequency Range</b>                           |                 | 500  | —    | 2700 | MHz    |
| <b>Insertion Loss (above theoretical 6.0 dB)</b> | 500-1500        | —    | 0.9  | 1.3  | dB     |
|  | 1500-2700       | —    | 1.2  | 1.6  |        |
| <b>Isolation</b>                                 | 500-1500        | 15   | 25   | —    | dB     |
|  | 1500-2700       | 15   | 22   | —    |        |
| <b>Phase Unbalance</b>                           | 500-1500        | —    | 1.7  | 3    | Degree |
|  | 1500-2700       | —    | 3.1  | 6    |        |
| <b>Amplitude Unbalance</b>                       | 500-1500        | —    | 0.2  | 0.8  | dB     |
|  | 1500-2700       | —    | 0.4  | 0.8  |        |
| <b>VSWR (Port S)</b>                             | 500-1500        | —    | 1.2  | 1.65 | dB     |
|  | 1500-2700       | —    | 1.4  | 1.7  |        |
| <b>VSWR Output (Port 1-4)</b>                    | 500-1500        | —    | 1.2  | 1.6  | dB     |
|  | 1500-2700       | —    | 1.2  | 1.5  |        |

## Typical Performance Data

| Freq. (MHz) | Total Loss <sup>1</sup> (dB) |      |      |      | Amp. Unbal. (dB) | Isolation (dB) |       |       | VSWR S | VSWR 1 | VSWR 2 | VSWR 3 | VSWR 4 |
|-------------|------------------------------|------|------|------|------------------|----------------|-------|-------|--------|--------|--------|--------|--------|
|             | S-1                          | S-2  | S-3  | S-4  |                  | 1-2            | 2-3   | 3-4   |        |        |        |        |        |
| 500.00      | 6.47                         | 6.39 | 6.43 | 6.43 | 0.08             | 23.59          | 24.14 | 23.26 | 1.31   | 1.09   | 1.06   | 1.08   | 1.08   |
| 600.00      | 6.58                         | 6.50 | 6.54 | 6.54 | 0.08             | 26.15          | 30.21 | 25.40 | 1.45   | 1.19   | 1.16   | 1.18   | 1.19   |
| 700.00      | 6.56                         | 6.48 | 6.52 | 6.52 | 0.08             | 34.58          | 36.61 | 32.52 | 1.35   | 1.25   | 1.23   | 1.25   | 1.25   |
| 800.00      | 6.50                         | 6.43 | 6.48 | 6.47 | 0.07             | 30.54          | 30.71 | 32.46 | 1.14   | 1.23   | 1.21   | 1.24   | 1.24   |
| 900.00      | 6.54                         | 6.48 | 6.53 | 6.51 | 0.06             | 23.01          | 27.13 | 23.83 | 1.12   | 1.16   | 1.16   | 1.19   | 1.18   |
| 1000.00     | 6.63                         | 6.57 | 6.60 | 6.58 | 0.06             | 20.89          | 25.69 | 21.46 | 1.25   | 1.12   | 1.12   | 1.14   | 1.13   |
| 1200.00     | 6.68                         | 6.62 | 6.62 | 6.59 | 0.09             | 21.44          | 26.38 | 21.61 | 1.10   | 1.13   | 1.12   | 1.10   | 1.11   |
| 1400.00     | 6.78                         | 6.73 | 6.74 | 6.70 | 0.08             | 24.79          | 31.90 | 24.22 | 1.20   | 1.17   | 1.15   | 1.12   | 1.15   |
| 1600.00     | 6.81                         | 6.75 | 6.78 | 6.73 | 0.08             | 28.41          | 44.23 | 27.98 | 1.16   | 1.18   | 1.17   | 1.16   | 1.17   |
| 1800.00     | 6.89                         | 6.84 | 6.87 | 6.82 | 0.07             | 36.87          | 35.40 | 39.93 | 1.21   | 1.20   | 1.20   | 1.20   | 1.20   |
| 2000.00     | 6.93                         | 6.89 | 6.91 | 6.86 | 0.08             | 24.42          | 33.93 | 24.06 | 1.11   | 1.05   | 1.07   | 1.07   | 1.07   |
| 2200.00     | 7.04                         | 7.01 | 7.02 | 6.95 | 0.10             | 24.61          | 38.10 | 24.29 | 1.20   | 1.13   | 1.09   | 1.08   | 1.08   |
| 2300.00     | 7.07                         | 7.04 | 7.06 | 6.97 | 0.10             | 27.19          | 41.93 | 27.38 | 1.19   | 1.12   | 1.10   | 1.09   | 1.10   |
| 2500.00     | 7.13                         | 7.11 | 7.14 | 7.02 | 0.12             | 25.63          | 56.12 | 26.33 | 1.12   | 1.02   | 1.03   | 1.02   | 1.06   |
| 2600.00     | 7.17                         | 7.16 | 7.20 | 7.06 | 0.14             | 23.50          | 39.56 | 24.05 | 1.12   | 1.07   | 1.03   | 1.07   | 1.06   |
| 2700.00     | 7.21                         | 7.21 | 7.27 | 7.10 | 0.17             | 20.53          | 32.69 | 20.76 | 1.06   | 1.11   | 1.05   | 1.09   | 1.07   |
| 2700.00     | 7.21                         | 7.21 | 7.27 | 7.10 | 0.17             | 20.53          | 32.69 | 20.76 | 1.06   | 1.11   | 1.05   | 1.09   | 1.07   |

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



### 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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