

DC Pass, Ultra-Thin

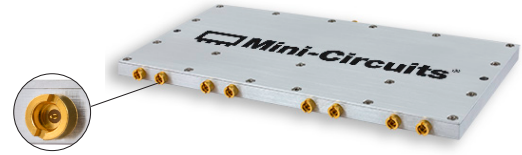
Power Splitter/Combiner

ZN8PD-272SMP+

8 Way-0° 50Ω 690 to 2750 MHz

The Big Deal

- Wideband, 690 to 2750 MHz
- Low insertion loss, 0.8 dB
- High-Power Handling, 10W as a splitter
- Ultra-thin case, 0.3" height (7.92mm)
- SMP snap-on connectors



CASE STYLE: UU2046

Product Overview

Mini-Circuits' ZN8PD-272SMP+ is an 8-way 0° splitter/combiner supporting a wide variety of applications from 690 to 2750 MHz. This model is capable of handling up to 10W RF input power as a splitter and provides low insertion loss, high isolation, low amplitude unbalance, and low phase unbalance. It comes housed in an ultra-thin, aluminum alloy case (6.60 x 3.26 x 0.30") with SMP snap-on connectors, saving space in crowded system layouts.

Key Features

| Feature | Advantages |
|--|---|
| Wideband, 690 to 2750 MHz | ZN8PD-272SMP+ supports bandwidth requirements for a wide variety of applications. |
| Ultra-thin case design, 6.60 x 3.26 x 0.30" | Saves space in crowded system layouts. |
| Blind mate, snap-on SMP connectors | Blind mate SMP connectors enable direct connection to adjacent modules while facilitating thin case height. |
| High power handling: <ul style="list-style-type: none">• 10W as a splitter• 6W as a combiner | Suitable for a variety of system power requirements. |
| Low insertion loss, 0.8 dB | Provides excellent signal power transmission, making this model ideal for signal distribution applications where low loss is a requirement. |
| Low unbalance: <ul style="list-style-type: none">• 0.1 dB amplitude unbalance• 2.0° phase unbalance | Produces nearly equal output signals, ideal for parallel path / multichannel systems. |
| DC Passing, 1400mA (175mA each port) | Supports applications where DC power is needed at later stages in the system. |

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.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Power Splitter/Combiner

ZN8PD-272SMP+

8 Way-0° 50Ω 690 to 2750 MHz

Maximum Ratings

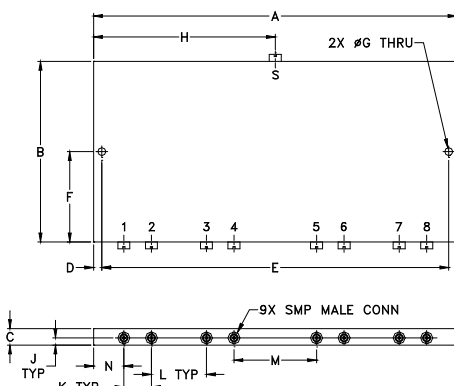
| | |
|-----------------------|-------------------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 1400 mA (175mA for each port) |

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

| | |
|----------------------|-----------------|
| SUM PORT | S |
| PORT 1,2,3,4,5,6,7,8 | 1,2,3,4,5,6,7,8 |

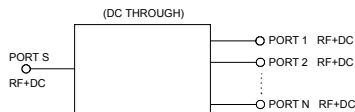
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H |
|--------|--------|-------|-------|--------|--------|-------|-------|
| 6.60 | 3.28 | .30 | .150 | 6.300 | 1.64 | 0.144 | 3.30 |
| 167.64 | 83.312 | 7.62 | 3.81 | 160.02 | 41.656 | 3.66 | 83.82 |
| J | K | L | M | N | P | wt | |
| .13 | .500 | 1.000 | 1.500 | .550 | -- | grams | |
| 3.30 | 12.70 | 25.40 | 38.10 | 13.97 | -- | 190 | |

Electrical Schematic



Features

- Ultra-thin package
- Snap-on blind mate SMP connectors
- Wideband, 690-2750 MHz
- Excellent amplitude unbalance, 0.1 dB typ.
- Excellent phase unbalance, 2 deg. typ.
- Up to 10W power input as splitter
- High Isolation, 23 dB typ.

Applications

- Dense Packaging Environment
- Automated Test Systems
- Cellular/ISM/SMG/GSM
- Satellite Distribution
- GPS/L BAND (MARSAT)
- CATV

Electrical Specifications at 25°C

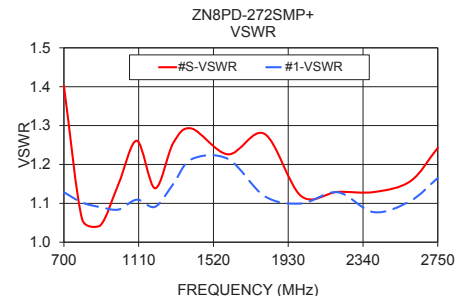
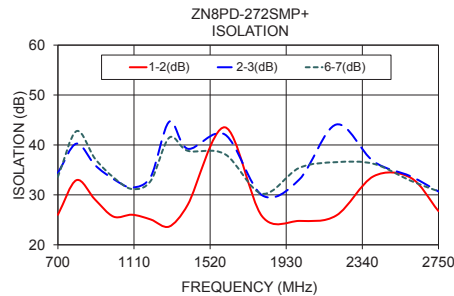
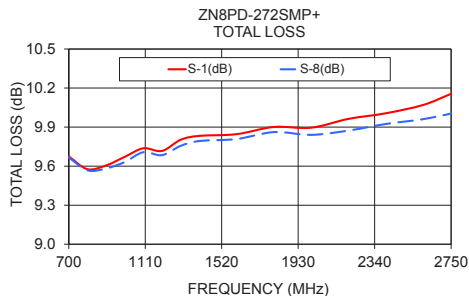
| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------------------|--------------------------|------------|------|------|--------|
| Frequency Range | | 690 | | 2750 | MHz |
| Insertion Loss Above 9.0 dB | 690 - 2750 | — | 0.8 | 1.6 | dB |
| Isolation | 690 - 2750 | 20 | 23 | — | dB |
| Phase Unbalance | 690 - 2750 | — | 2.0 | 8.0 | Degree |
| Amplitude Unbalance | 690 - 2750 | — | 0.1 | 0.4 | dB |
| VSWR (Port S) | 690 - 2750 | — | 1.25 | 1.65 | :1 |
| VSWR (Port 1-8) | 690 - 2750 | — | 1.15 | 1.35 | :1 |
| Power Handling | As Splitter ¹ | 690 - 2750 | — | 10 | Watt |
| | As Combiner ² | 690 - 2750 | — | 6 | |

1. All outputs must terminate 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 6.0 watt power rating divided by number of ports.

Typical Performance Data

| Freq. (MHz) | Total Loss ¹ (dB) | | | | | | Amp. Unb. (dB) | Isolation (dB) | | | | Phase Unb. (deg.) | VSWR S | VSWR 1 | VSWR 8 |
|-------------|------------------------------|-------|-------|-------|------|-------|----------------|----------------|-------|-------|-------|-------------------|--------|--------|--------|
| | S-1 | S-2 | S-3 | S-4 | S-6 | S-8 | | 1-2 | 2-3 | 3-4 | 6-7 | | | | |
| 700 | 9.68 | 9.68 | 9.68 | 9.67 | 9.57 | 9.67 | 0.11 | 26.01 | 34.40 | 26.26 | 33.62 | 0.88 | 1.40 | 1.13 | 1.11 |
| 800 | 9.58 | 9.58 | 9.59 | 9.58 | 9.48 | 9.57 | 0.11 | 32.94 | 40.26 | 33.33 | 42.76 | 1.05 | 1.06 | 1.10 | 1.09 |
| 900 | 9.61 | 9.60 | 9.62 | 9.61 | 9.50 | 9.58 | 0.12 | 29.07 | 35.95 | 29.61 | 37.24 | 1.10 | 1.04 | 1.09 | 1.07 |
| 1000 | 9.67 | 9.67 | 9.69 | 9.67 | 9.55 | 9.63 | 0.15 | 25.63 | 33.16 | 26.23 | 33.48 | 1.33 | 1.15 | 1.08 | 1.06 |
| 1100 | 9.74 | 9.73 | 9.75 | 9.74 | 9.63 | 9.71 | 0.13 | 26.02 | 31.47 | 26.68 | 31.17 | 1.50 | 1.26 | 1.11 | 1.08 |
| 1200 | 9.72 | 9.71 | 9.73 | 9.72 | 9.62 | 9.68 | 0.12 | 25.07 | 33.61 | 25.27 | 32.80 | 1.49 | 1.14 | 1.09 | 1.06 |
| 1300 | 9.80 | 9.80 | 9.81 | 9.80 | 9.69 | 9.76 | 0.13 | 23.65 | 44.65 | 23.80 | 41.46 | 1.62 | 1.26 | 1.15 | 1.10 |
| 1400 | 9.83 | 9.83 | 9.84 | 9.83 | 9.73 | 9.79 | 0.12 | 28.05 | 39.23 | 28.46 | 38.82 | 1.78 | 1.29 | 1.21 | 1.17 |
| 1600 | 9.85 | 9.86 | 9.87 | 9.85 | 9.74 | 9.81 | 0.13 | 43.53 | 42.08 | 47.73 | 38.15 | 1.87 | 1.23 | 1.21 | 1.19 |
| 1800 | 9.90 | 9.93 | 9.95 | 9.91 | 9.80 | 9.86 | 0.15 | 25.70 | 29.92 | 26.24 | 30.23 | 2.10 | 1.28 | 1.12 | 1.14 |
| 2000 | 9.90 | 9.93 | 9.94 | 9.90 | 9.79 | 9.84 | 0.15 | 24.78 | 33.07 | 24.90 | 35.40 | 2.56 | 1.12 | 1.10 | 1.11 |
| 2200 | 9.96 | 9.99 | 9.99 | 9.95 | 9.84 | 9.87 | 0.15 | 25.88 | 44.09 | 26.12 | 36.55 | 2.57 | 1.13 | 1.13 | 1.12 |
| 2400 | 10.01 | 10.03 | 10.05 | 10.00 | 9.89 | 9.92 | 0.16 | 33.71 | 36.71 | 30.81 | 36.22 | 3.01 | 1.13 | 1.08 | 1.08 |
| 2600 | 10.07 | 10.08 | 10.12 | 10.06 | 9.94 | 9.96 | 0.19 | 33.43 | 33.72 | 34.05 | 32.83 | 3.03 | 1.16 | 1.11 | 1.12 |
| 2750 | 10.16 | 10.16 | 10.22 | 10.13 | 9.98 | 10.00 | 0.24 | 26.75 | 30.67 | 27.23 | 30.71 | 3.36 | 1.24 | 1.17 | 1.15 |

1. Total Loss = Insertion Loss + 9dB splitter loss.



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CASE STYLE: UU2046

| | |
|---------------|---------------|
| Connectors | Model |
| SMP (Snap-on) | ZN8PD-272SMP+ |

+RoHS Compliant

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