



DC PASS, HIGH POWER

Power Splitter/Combiner **ZN2PD-4R753+**

Mini-Circuits

2 Way-0° 50Ω Up to 30W 450 to 7500 MHz SMA Female

THE BIG DEAL

- Power handling up to 30W
- Wide frequency band, 450 to 7500 MHz
- Low insertion loss, 0.6 dB typ.
- Low amplitude unbalance 0.02 dB typ.
- Low phase unbalance 0.3° typ.
- High isolation, up to 28 dB typ.

APPLICATIONS

- LTE & 5G MIMO Infrastructure
- Broadband Telecom
- Satellite Communications
- Test and Measurement Equipment
- Radar, EW, and ECM Defense Systems



Generic photo used for illustration purposes only

| | |
|-------------------|--------------|
| Model No. | ZN2PD-4R753+ |
| Case Style | UU2624-7 |
| Connectors | SMA Female |

+RoHS Compliant

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

PRODUCT OVERVIEW

Mini-Circuits' ZN2PD-4R753+ is a 2-way 0° power splitter/combiner providing 30W power handling as a splitter (1W as a combiner) and low insertion loss across the 450 to 7500 MHz frequency range. It has an outstanding combination of high power handling and low loss, minimizing power dissipation and providing excellent signal fidelity from input to output. The ZN2PD-4R753+ comes housed in a rugged aluminum alloy case measuring 3.25" x 1.46" x 0.55" with a common SMA-Female port on one side and two SMA-Female ports on opposite side of the case.

KEY FEATURES

| Feature | Advantages |
|---|---|
| Wideband, 450 to 7500 MHz | This model supports bandwidth requirements for a wide variety of applications. |
| High power handling: • 30W as a splitter | The ZN2PD-4R753+ is suitable for a wide range of power requirements. |
| Low insertion loss, 0.6 dB typ. at 4000 MHz | The combination of 30W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power. |
| Low unbalance: • 0.02 dB amplitude unbalance at 4000 MHz • 0.3° phase unbalance at 4000 MHz | Produces nearly equal output signals, ideal for parallel path and multichannel systems. |
| DC Passing, 0.77A (385mA each port) max. as a splitter | Supports applications where DC power is needed through the RF line. |





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ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Units |
|-------------------------------|--------------------------|----------|------|------|--------|
| Frequency Range | | 450 | | 7500 | MHz |
| Insertion Loss (above 3.0 dB) | 450-4000 | – | 0.4 | 1.3 | dB |
| | 4000-7500 | – | 0.8 | 1.3 | |
| Isolation | 450-550 | 15 | 21.2 | – | dB |
| | 550-7500 | 18 | 28.0 | – | |
| Phase Unbalance (±) | 450-7500 | – | 0.3 | 6 | Degree |
| Amplitude Unbalance (±) | 450-7500 | – | 0.02 | 0.4 | dB |
| VSWR (Port S) | 450-4000 | – | 1.11 | 1.80 | :1 |
| | 4000-7500 | – | 1.13 | 1.80 | |
| VSWR (Port 1-2) | 450-4000 | – | 1.07 | 1.60 | :1 |
| | 4000-7500 | – | 1.20 | 1.60 | |
| Power Handling | As Splitter ¹ | 450-7500 | – | 30 | W |
| | As Combiner ² | 450-7500 | – | 1 | |

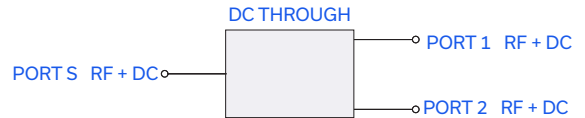
1. All outputs must terminate to 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 0.5 watt

MAXIMUM RATINGS

| | |
|-----------------------|---------------------------------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 0.77A (385mA each) port as a splitter |

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

ELECTRICAL SCHEMATIC





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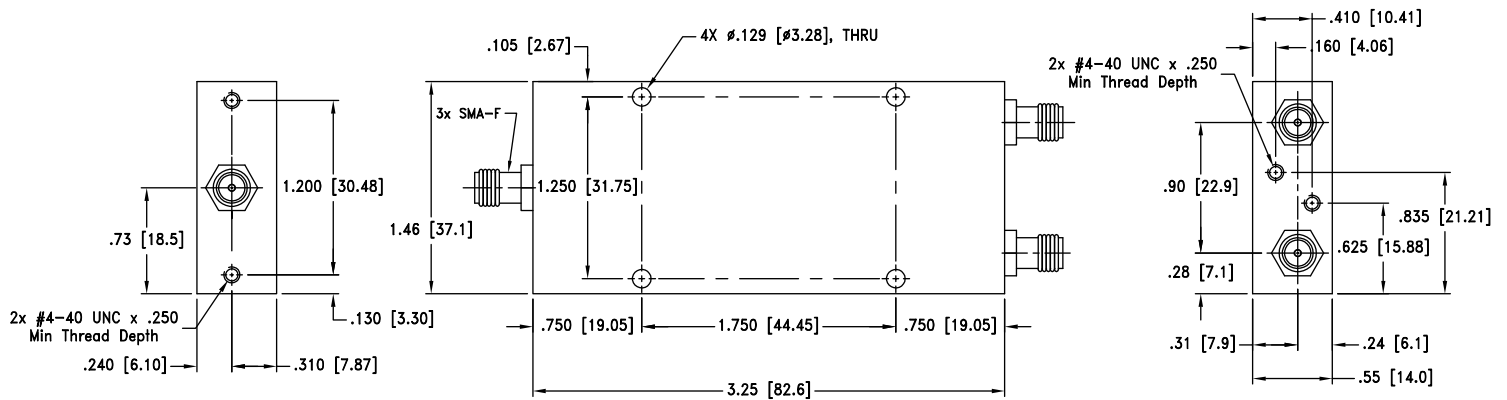
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COAXIAL CONNECTIONS

| Port | Marking |
|-------------|---------|
| Common Port | S |
| Port 1 | 1 |
| Port 2 | 2 |

OUTLINE DRAWING



Weight: 85 grams.

Dimensions are in inches (mm). Tolerances: 2 Pl.±.03[.76] ; 3 Pl. ±.015[.38]





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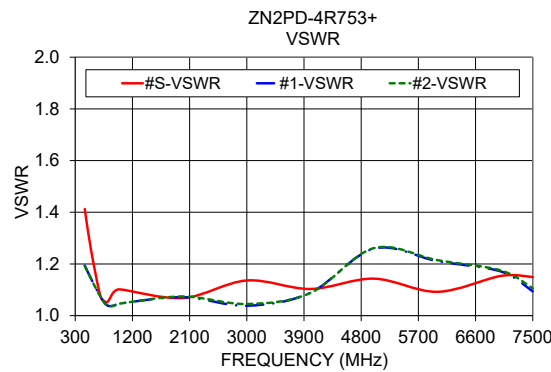
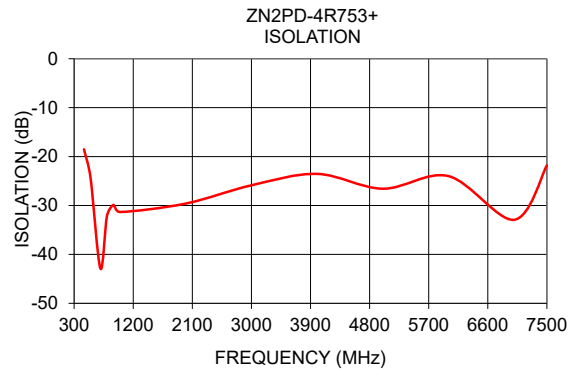
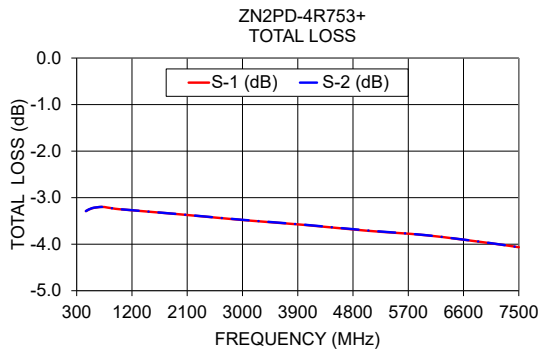
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TYPICAL PERFORMANCE DATA

| Freq. (MHz) | Total Loss ¹ (dB) | | Amp Unbal. (dB) | Isolation (dB) | Phase Unbal. (deg.) | VSWR | | |
|-------------|------------------------------|-----|-----------------|----------------|---------------------|------|------|------|
| | S-1 | S-2 | | | | S | 1 | 2 |
| 450 | 3.3 | 3.3 | 0.01 | 18.5 | 0.04 | 1.41 | 1.19 | 1.19 |
| 550 | 3.2 | 3.2 | 0.01 | 24.3 | 0.04 | 1.25 | 1.14 | 1.14 |
| 700 | 3.2 | 3.2 | 0.01 | 42.9 | 0.05 | 1.07 | 1.07 | 1.07 |
| 800 | 3.2 | 3.2 | 0.01 | 32.2 | 0.06 | 1.05 | 1.04 | 1.04 |
| 900 | 3.2 | 3.2 | 0.01 | 29.9 | 0.07 | 1.09 | 1.04 | 1.04 |
| 1000 | 3.2 | 3.2 | 0.01 | 31.3 | 0.08 | 1.10 | 1.05 | 1.05 |
| 2000 | 3.4 | 3.4 | 0.01 | 29.6 | 0.13 | 1.07 | 1.07 | 1.07 |
| 3000 | 3.5 | 3.5 | 0.01 | 25.9 | 0.21 | 1.14 | 1.04 | 1.05 |
| 4000 | 3.6 | 3.6 | 0.02 | 23.5 | 0.28 | 1.10 | 1.09 | 1.09 |
| 5000 | 3.7 | 3.7 | 0.03 | 26.6 | 0.34 | 1.14 | 1.26 | 1.26 |
| 6000 | 3.8 | 3.8 | 0.03 | 24.0 | 0.40 | 1.09 | 1.21 | 1.21 |
| 7000 | 4.0 | 4.0 | 0.03 | 32.9 | 0.48 | 1.15 | 1.17 | 1.17 |
| 7500 | 4.1 | 4.1 | 0.03 | 21.8 | 0.53 | 1.15 | 1.09 | 1.11 |

1. Total Loss = Insertion Loss + 3dB splitter loss.



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/terms/viewterm.html

