

DC Pass

Power Splitter/Combiner

ZN2PD-K44+

2 Way-0° 50Ω 10 to 40 GHz

The Big Deal

- Ultra-wideband, 10 to 40 GHz
- Low insertion loss, 0.8 dB
- High Isolation, 20 dB
- 10W power handling
- Low amplitude unbalance, 0.2 dB



CASE STYLE: UU2234

Product Overview

Mini-Circuits' ZN2PD-K44+ is an ultra-wideband coaxial 2-way 0° splitter/combiner providing coverage from 10 to 40 GHz, supporting a wide range of applications including 5G, Ku-Band, K-Band, and Ka-Band SatCom, microwave point-to-point backhaul, instrumentation and many more. This model provides 10W power handling as a splitter and very low insertion loss across the entire operating frequency range, minimizing power dissipation and delivering excellent signal power transmission from input to output. The ZN2PD-K44+ comes housed in a rugged aluminum alloy case measuring 1.0 x 1.0 x 0.37" with 2.92mm connectors.

Key Features

| Feature | Advantages |
|---|---|
| Ultra-wideband, 10 to 40 GHz | Extremely wide frequency range supports many broadband applications in a single model. |
| Low insertion loss, 0.8 dB | The combination of 10W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power. |
| High isolation, 20 dB | Minimizes interference between ports. |
| High power handling: <ul style="list-style-type: none">• 10W as a splitter• 0.5W as a combiner | The ZN2PD-K44+ is suitable for systems with a wide range of power requirements. |
| Low amplitude unbalance, 0.2 dB | Produces nearly equal output signals, ideal for parallel path and multichannel systems. |
| DC Passing, 600mA (300mA each port) | Supports applications where DC power is needed through the RF line. |

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

ZN2PD-K44+

2 Way-0° 50Ω 10 to 40 GHz

Maximum Ratings

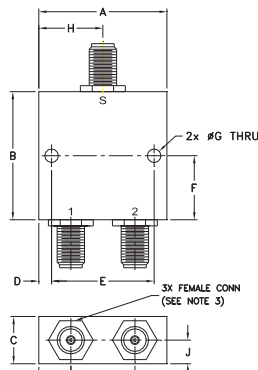
| | |
|------------------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter)* | 10W max. |
| Internal Dissipation | 0.5W max. |

DC Current 600 mA (300mA for each port)
 Permanent damage may occur if any of these limits are exceeded.
 *Assume output match of 2.0:1 or better.

Coaxial Connections

| | |
|----------|---|
| SUM PORT | S |
| PORT 1 | 1 |
| PORT 2 | 2 |

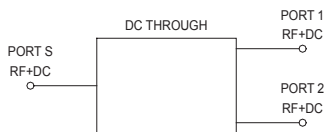
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | |
|-------|-------|-------|------|-------|-------|-------|
| A | B | C | D | E | F | G |
| 1.00 | 1.00 | .370 | .101 | .800 | .500 | .106 |
| 25.40 | 25.40 | 9.40 | 2.57 | 20.32 | 12.70 | 2.69 |
| H | J | K | L | N | | wt |
| .500 | .185 | .500 | .375 | .25 | | grams |
| 12.70 | 4.70 | 12.70 | 9.53 | 6.35 | | 55 |

Electrical Schematic



Features

- wideband, 10 to 40 GHz
- excellent amplitude unbalance, 0.2 dB typ.
- excellent insertion loss 0.8dB typ.
- up to 10W power input as splitter

Applications

- WIMAX
- instruments
- satellite distribution
- WLAN
- LTE
- radar



Generic photo used for illustration purposes only

CASE STYLE: UU2234

| | |
|------------|------------|
| Connectors | Model |
| 2.92mm Fem | ZN2PD-K44+ |

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

Electrical Specifications at 25°C

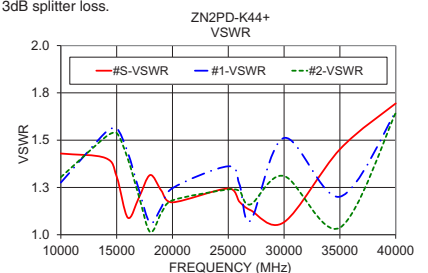
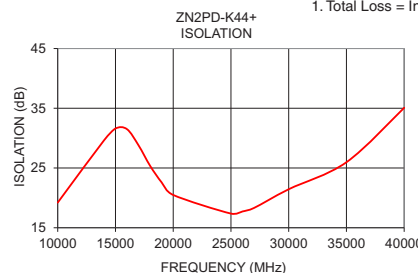
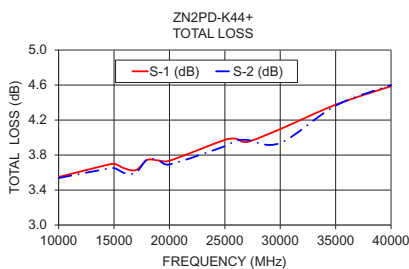
| Parameter | Frequency (GHz) | Min. | Typ. | Max. | Unit |
|------------------------------|-----------------|------|------|------|--------|
| Frequency Range | | 10 | | 40 | GHz |
| Insertion Loss Above 3.0 dB | 10 - 18 | — | 0.6 | 1.2 | dB |
| | 18 - 26.5 | — | 0.9 | 1.8 | |
| | 26.5 - 40 | — | 1.0 | 2.0 | |
| Isolation | 10 - 40 | 15 | 20 | | dB |
| Phase Unbalance | 10 - 18 | — | 5.0 | 7.0 | Degree |
| | 18 - 26.5 | — | 7.0 | 9.0 | |
| | 26.5 - 40 | — | 8.0 | 10.0 | |
| Amplitude Unbalance | 10 - 18 | — | 0.1 | 0.3 | dB |
| | 18 - 26.5 | — | 0.15 | 0.4 | |
| | 26.5 - 40 | — | 0.3 | 0.6 | |
| VSWR (Port S) ¹ | 10 - 18 | — | 1.4 | 1.8 | :1 |
| | 18 - 26.5 | — | 1.35 | 1.8 | |
| | 26.5 - 40 | — | 1.5 | 1.8 | |
| VSWR (Port 1-2) ¹ | 10 - 18 | — | 1.5 | 1.8 | :1 |
| | 18 - 26.5 | — | 1.4 | 1.8 | |
| | 26.5 - 40 | — | 1.5 | 1.8 | |

1. Above 37 GHz, VSWR increases to 2.0:1

Typical Performance Data

| Frequency (MHz) | Total Loss ¹ (dB) | | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|------------------------------|------|--------------------------|----------------|------------------------|--------|--------|--------|
| | S-1 | S-2 | | | | | | |
| 10000 | 3.55 | 3.54 | 0.01 | 19.21 | 0.00 | 1.43 | 1.28 | 1.30 |
| 14000 | 3.68 | 3.63 | 0.04 | 29.61 | 0.16 | 1.41 | 1.54 | 1.52 |
| 15000 | 3.70 | 3.65 | 0.05 | 31.61 | 0.09 | 1.31 | 1.56 | 1.54 |
| 16000 | 3.64 | 3.59 | 0.05 | 31.50 | 0.06 | 1.09 | 1.44 | 1.40 |
| 17000 | 3.63 | 3.60 | 0.03 | 28.79 | 0.20 | 1.20 | 1.24 | 1.20 |
| 18000 | 3.74 | 3.75 | 0.01 | 25.37 | 0.08 | 1.32 | 1.06 | 1.01 |
| 19000 | 3.74 | 3.74 | 0.00 | 22.59 | 0.21 | 1.23 | 1.14 | 1.11 |
| 20000 | 3.73 | 3.69 | 0.04 | 20.49 | 0.28 | 1.17 | 1.25 | 1.18 |
| 25000 | 3.97 | 3.90 | 0.07 | 17.37 | 0.35 | 1.24 | 1.36 | 1.24 |
| 26000 | 3.99 | 3.97 | 0.02 | 17.73 | 0.48 | 1.17 | 1.27 | 1.23 |
| 27000 | 3.95 | 3.97 | 0.02 | 18.32 | 0.13 | 1.13 | 1.08 | 1.16 |
| 30000 | 4.10 | 3.94 | 0.16 | 21.45 | 0.17 | 1.07 | 1.51 | 1.31 |
| 35000 | 4.38 | 4.36 | 0.01 | 25.97 | 0.13 | 1.45 | 1.20 | 1.04 |
| 40000 | 4.59 | 4.60 | 0.01 | 35.08 | 1.31 | 1.69 | 1.65 | 1.64 |

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



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