

DC Pass, High Power

Power Splitter/Combiner ZC2PD-V18443+

2 Way-0

50Ω 18000 to 44000 MHz

The Big Deal

- Ultra wideband, 18 to 44 GHz
- Low insertion loss, 0.7 dB typ.
- High Isolation, 29 dB typ.
- 20W power handling
- Low amplitude unbalance, 0.04 dB typ.



CASE STYLE: UU2624-6

Product Overview

Mini-Circuits' ZC2PD-V18443+ is an ultra wideband 2-way 0° splitter/combiner providing coverage from 18 to 44 GHz, supporting a wide range of applications including 5G, Ku, Ka, V and K-Band, instrumentation and many more. This model provides 20W 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 ZC2PD-V18443+ comes housed in a case measuring 1.06 x 0.85 x 0.5".

Key Features

| Feature | Advantages |
|---|---|
| Ultra-wideband, 18 to 44 GHz | Extremely wide frequency range supports many broadband applications in a single model. Ideal for use in wideband instrumentation |
| Low insertion loss, 0.7 dB typ. at 26.5 GHz | The combination of 12W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power. |
| High isolation, 33 dB typ. at 26.5 GHz | Minimizes interference between ports. |
| High power handling: • 20W as a splitter at 25°C | The ZC2PD-V18443+ is suitable for systems with a wide range of power requirements. |
| Low amplitude unbalance, 0.04 dB at 26.5 GHz | Produces nearly equal output signals, ideal for parallel path and multichannel systems. |
| DC Passing, 384mA | Supports applications where DC power is needed to pass 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



DC Pass, High Power Power Splitter/Combiner

ZC2PD-V18443+

2 Way-0° 50Ω 18000 to 44000 MHz

Maximum Ratings

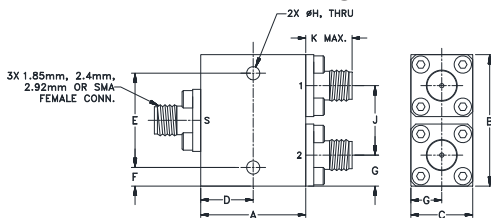
| | |
|-----------------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 20W* max. |
| Internal Dissipation | 0.3W max. |
| DC Current | 384mA |

Permanent damage may occur if any of these limits are exceeded.
* Derate linearly to 7.7W at 100°C

Coaxial Connections

| | |
|----------|---|
| Sum Port | S |
| Port 1 | 1 |
| Port 2 | 2 |

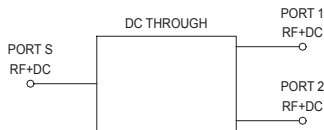
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|-------|-------|-------|-------|-------|------|------|
| .85 | 1.06 | .50 | .425 | .760 | .150 | .25 |
| 21.59 | 26.92 | 12.70 | 10.80 | 19.30 | 3.81 | 6.35 |
| H | J | K | wt | | | |
| .106 | .56 | .43 | grams | | | |
| 2.7 | 14.22 | 11 | 45 | | | |

Electrical Schematic



Features

- Ultra wideband, 18000 - 44000 MHz
- Low insertion loss, 0.7 dB typ.
- Low amplitude unbalance, 0.04 dB typ.
- Excellent VSWR, 1.18:1 typ.
- High isolation, 29 dB typ.

Applications

- 5G
- Fixed satellite
- Space research
- Mobile



Generic photo used for illustration purposes only

CASE STYLE: UU2624-6

| Connectors | Model |
|------------|---------------|
| 2.4mm-Fem | ZC2PD-V18443+ |

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

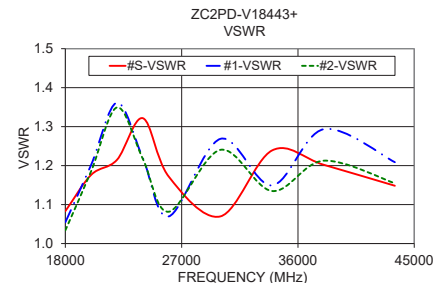
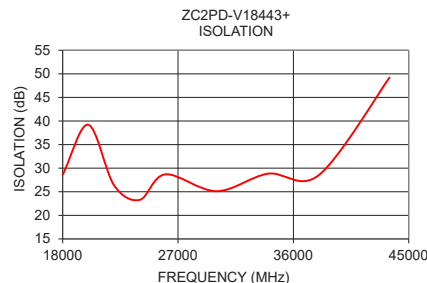
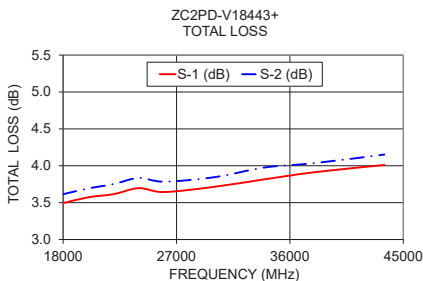
Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|------------------------------------|-----------------|-------|------|-------|--------|
| Frequency Range | | 18000 | | 44000 | MHz |
| Insertion Loss Above 3.0 dB | 18000-26500 | | 0.7 | 1.2 | dB |
| | 26500-44000 | | 0.9 | 1.6 | |
| Isolation | 18000-26500 | 18 | 29 | | dB |
| | 26500-44000 | 18 | 29 | | |
| Phase Unbalance | 18000-26500 | | 0.9 | 4.0 | Degree |
| | 26500-44000 | | 1.5 | 5.0 | |
| Amplitude Unbalance | 18000-26500 | | 0.04 | 0.3 | dB |
| | 26500-44000 | | 0.05 | 0.4 | |
| VSWR (Port S) | 18000-26500 | | 1.18 | 1.6 | :1 |
| | 26500-44000 | | 1.18 | 1.7 | |
| VSWR (Port 1-2) | 18000-26500 | | 1.18 | 1.6 | :1 |
| | 26500-44000 | | 1.18 | 1.7 | |

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 | | | | | | |
| 18000 | 3.49 | 3.61 | 0.12 | 28.61 | 0.15 | 1.08 | 1.05 | 1.03 |
| 20000 | 3.57 | 3.69 | 0.12 | 39.20 | 0.17 | 1.18 | 1.20 | 1.19 |
| 22000 | 3.61 | 3.75 | 0.14 | 26.40 | 0.11 | 1.21 | 1.36 | 1.35 |
| 24000 | 3.70 | 3.83 | 0.14 | 23.27 | 0.21 | 1.32 | 1.22 | 1.22 |
| 26000 | 3.64 | 3.78 | 0.14 | 28.69 | 0.22 | 1.17 | 1.07 | 1.08 |
| 30000 | 3.71 | 3.84 | 0.13 | 25.11 | 0.18 | 1.07 | 1.27 | 1.24 |
| 34000 | 3.82 | 3.98 | 0.16 | 28.83 | 0.06 | 1.24 | 1.15 | 1.13 |
| 38000 | 3.91 | 4.04 | 0.12 | 28.56 | 0.03 | 1.20 | 1.29 | 1.21 |
| 44000 | 4.01 | 4.15 | 0.14 | 49.21 | 0.19 | 1.15 | 1.21 | 1.15 |

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



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www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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