

DC Pass, High Power

Power Splitter/Combiner ZC4PD-02263-S+

4 Way-0° 50Ω 2000 to 26500 MHz

The Big Deal

- Super wideband, 2 to 26.5 GHz
- Low insertion loss, 1.5 dB typ.
- High Isolation, 31 dB typ.
- 20W power handling
- Low amplitude unbalance, 0.07 dB typ.



CASE STYLE: UU2625

Product Overview

Mini-Circuits' ZC4PD-02263-S+ is a super wideband 4-way 0° splitter/combiner providing coverage from 2 to 26.5 GHz, supporting a wide range of applications including 5G, Ku-Band, 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 ZC4PD-02263-S+ comes housed in a case measuring 2.03 x 3.12 x 0.5" with super SMA connectors.

Key Features

| Feature | Advantages |
|---|---|
| Ultra-wideband, 2 to 26.5 GHz | Extremely wide frequency range supports many broadband applications in a single model. |
| Low insertion loss, 1.5 dB typ. | The combination of 20W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power. |
| High isolation, 31 dB typ. | Minimizes interference between ports. |
| High power handling: <ul style="list-style-type: none">• 20W as a splitter at 25°C• 1.2W as a combiner | The ZC4PD-02263-S+ is suitable for systems with a wide range of power requirements. |
| Low amplitude unbalance, 0.07 dB | Produces nearly equal output signals, ideal for parallel path and multichannel systems. |
| DC Passing, 530mA | 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



DC Pass, High Power Power Splitter/Combiner

ZC4PD-02263-S+

4 Way-0° 50Ω 2000 to 26500 MHz

Maximum Ratings

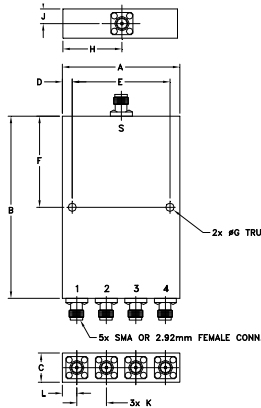
| | |
|-----------------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 20W* max. |
| Internal Dissipation | 1.2W max. |

DC Pass 530mA
Permanent damage may occur if any of these limits are exceeded.
*Derates linearly to 14W at 100°C

Coaxial Connections

| | |
|----------|---|
| Sum Port | S |
| Port 1 | 1 |
| Port 2 | 2 |
| Port 3 | 3 |
| Port 4 | 4 |

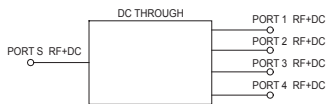
Outline Drawing



Outline Dimensions (inch/mm)

| | | | | | | |
|-------|-------|-------|------|-------|-------|------|
| A | B | C | D | E | F | G |
| 2.03 | 3.12 | .50 | .17 | 1.690 | 1.56 | .142 |
| 51.56 | 79.25 | 12.70 | 4.32 | 42.93 | 39.62 | 3.61 |
| H | J | K | L | | | |
| 1.02 | .25 | .512 | .25 | | | |
| 25.91 | 6.35 | 13.00 | 6.35 | | | |
| | | | | wt | | |
| | | | | grams | | |
| | | | | 160 | | |

Electrical Schematic



Features

- Super wideband, 2000 to 26500 MHz
- Low insertion loss, 1.5 dB typ.
- Low amplitude unbalance, 0.07 dB typ.
- Excellent VSWR, 1.11:1 typ.
- High isolation, 31 dB typ.

Applications

- 5G
- Fixed satellite
- Space research
- Mobile



Generic photo used for illustration purposes only

CASE STYLE: UU2625

| | |
|------------|----------------|
| Connectors | Model |
| SMA-Fem | ZC4PD-02263-S+ |

+RoHS Compliant

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

Electrical Specifications at 25°C

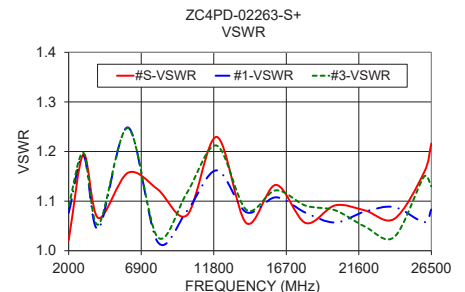
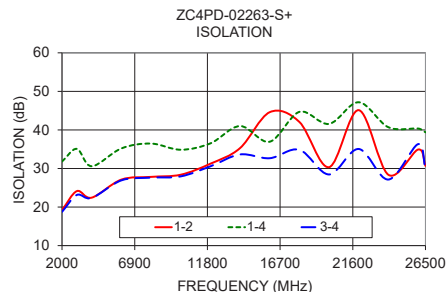
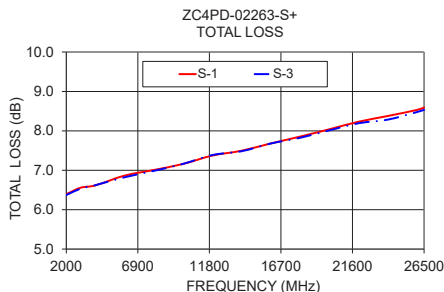
| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------------------|-----------------|------|------|-------|--------|
| Frequency Range | 2000 - 8000 | 2000 | — | 26500 | MHz |
| Insertion Loss Above 6.0 dB | 2000 - 8000 | — | 0.7 | 1.3 | |
| | 8000 - 18000 | — | 1.5 | 2.2 | dB |
| | 18000 - 26500 | — | 2.2 | 2.7 | |
| Isolation | 2000 - 8000 | 17 | 27 | — | dB |
| | 8000 - 18000 | 18 | 31 | — | |
| | 18000 - 26500 | 18 | 34 | — | |
| Phase Unbalance (±)¹ | 2000 - 8000 | — | 0.6 | 3.0 | Degree |
| | 8000 - 18000 | — | 1.5 | 4.0 | |
| | 18000 - 26500 | — | 2.5 | 5.0 | |
| Amplitude Unbalance (±)¹ | 2000 - 8000 | — | 0.04 | 0.2 | dB |
| | 8000 - 18000 | — | 0.07 | 0.3 | |
| | 18000 - 26500 | — | 0.10 | 0.4 | |
| VSWR (Port S) | 2000 - 8000 | — | 1.11 | 1.4 | |
| | 8000 - 18000 | — | 1.11 | 1.5 | :1 |
| | 18000 - 26500 | — | 1.10 | 1.6 | |
| VSWR (Port 1-4) | 2000 - 8000 | — | 1.11 | 1.4 | |
| | 8000 - 18000 | — | 1.10 | 1.5 | :1 |
| | 18000 - 26500 | — | 1.10 | 1.5 | |

1. With reference to average.

Typical Performance Data

| Freq. (MHz) | Total Loss² (dB) | | | | Amp. Unb. (dB) | Isolation (dB) | | | Phase Unb. (deg.) | VSWR S | VSWR 1 | VSWR 2 | VSWR 3 | VSWR 4 |
|-------------|------------------|------|------|------|----------------|----------------|-------|-------|-------------------|--------|--------|--------|--------|--------|
| | S-1 | S-2 | S-3 | S-4 | | 1-2 | 1-4 | 3-4 | | | | | | |
| 2000 | 6.39 | 6.38 | 6.37 | 6.40 | 0.03 | 19.23 | 31.81 | 18.76 | 0.26 | 1.02 | 1.08 | 1.08 | 1.09 | 1.10 |
| 3000 | 6.56 | 6.53 | 6.53 | 6.57 | 0.04 | 24.14 | 35.09 | 23.14 | 0.33 | 1.19 | 1.19 | 1.19 | 1.20 | 1.21 |
| 4000 | 6.62 | 6.59 | 6.62 | 6.64 | 0.04 | 22.44 | 30.59 | 22.36 | 0.35 | 1.07 | 1.04 | 1.04 | 1.05 | 1.07 |
| 6000 | 6.86 | 6.82 | 6.82 | 6.85 | 0.04 | 27.12 | 35.21 | 26.92 | 0.39 | 1.16 | 1.25 | 1.24 | 1.25 | 1.23 |
| 8000 | 7.01 | 6.97 | 6.98 | 7.03 | 0.06 | 27.83 | 36.47 | 27.63 | 0.58 | 1.12 | 1.02 | 1.03 | 1.03 | 1.06 |
| 10000 | 7.16 | 7.13 | 7.16 | 7.19 | 0.06 | 28.39 | 34.87 | 27.96 | 0.68 | 1.07 | 1.08 | 1.11 | 1.12 | 1.12 |
| 12000 | 7.37 | 7.35 | 7.39 | 7.40 | 0.05 | 31.24 | 36.51 | 30.57 | 0.84 | 1.23 | 1.16 | 1.19 | 1.21 | 1.20 |
| 14000 | 7.50 | 7.46 | 7.48 | 7.50 | 0.04 | 35.29 | 41.01 | 33.65 | 0.99 | 1.06 | 1.08 | 1.09 | 1.08 | 1.09 |
| 16000 | 7.68 | 7.62 | 7.68 | 7.69 | 0.07 | 44.61 | 36.95 | 32.67 | 1.13 | 1.13 | 1.11 | 1.11 | 1.12 | 1.10 |
| 18000 | 7.85 | 7.79 | 7.82 | 7.84 | 0.06 | 42.07 | 44.69 | 34.86 | 1.31 | 1.06 | 1.08 | 1.05 | 1.09 | 1.07 |
| 20000 | 8.04 | 7.98 | 8.01 | 8.02 | 0.06 | 30.35 | 41.56 | 28.46 | 1.35 | 1.09 | 1.06 | 1.02 | 1.08 | 1.06 |
| 22000 | 8.23 | 8.16 | 8.19 | 8.22 | 0.07 | 45.13 | 47.18 | 35.06 | 1.45 | 1.08 | 1.08 | 1.08 | 1.05 | 1.06 |
| 24000 | 8.38 | 8.30 | 8.28 | 8.31 | 0.09 | 28.37 | 40.70 | 27.14 | 1.55 | 1.06 | 1.09 | 1.08 | 1.03 | 1.05 |
| 26000 | 8.53 | 8.46 | 8.48 | 8.51 | 0.07 | 34.92 | 40.37 | 36.32 | 1.68 | 1.16 | 1.06 | 1.11 | 1.15 | 1.16 |
| 26500 | 8.59 | 8.53 | 8.53 | 8.56 | 0.06 | 30.69 | 39.39 | 29.76 | 1.79 | 1.22 | 1.08 | 1.14 | 1.13 | 1.13 |

2. Total Loss = Insertion Loss + 6dB splitter theoretical loss.



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Page 2 of 2