

DC Pass, High Power

# Power Splitter/Combiner ZC2PD-5R263-S+

2 Way-0° 50Ω 500 to 26500 MHz

## The Big Deal

- Super wideband, 0.5 to 26.5 GHz
- Low insertion loss, 1.2 dB typ.
- High Isolation, 35 dB typ.
- 20W power handling
- Low amplitude unbalance, 0.05 dB typ.



CASE STYLE: UU2624-1

## Product Overview

Mini-Circuits' ZC2PD-5R263-S+ is a super wideband 2-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 ZC2PD-5R263-S+ comes housed in a case measuring 5.88 x 1.04 x 0.5" with super SMA connectors.

## Key Features

| Feature                                                                                                                        | Advantages                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ultra-wideband, 0.5 to 26.5 GHz                                                                                                | Extremely wide frequency range supports many broadband applications in a single model.                                                                                                |
| Low insertion loss, 1.2 dB typ. at 13 GHz                                                                                      | 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, 35 dB typ. at 13 GHz                                                                                           | Minimizes interference between ports.                                                                                                                                                 |
| High power handling: <ul style="list-style-type: none"><li>• 20W as a splitter at 25°C</li><li>• 0.67W as a combiner</li></ul> | The ZC2PD-5R263-S+ is suitable for systems with a wide range of power requirements.                                                                                                   |
| Low amplitude unbalance, 0.05 dB at 13 GHz                                                                                     | 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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## Maximum Ratings

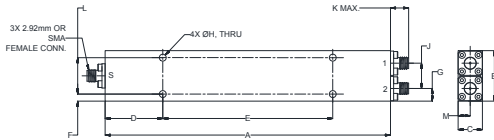
|                             |                |
|-----------------------------|----------------|
| Operating Temperature       | -55°C to 100°C |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 20W* max.      |
| Internal Dissipation        | 0.67W max.     |
| DC Current                  | 530 mA         |

Permanent damage may occur if any of these limits are exceeded.  
\* Derate linearly to 14W at 100°C

## Coaxial Connections

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

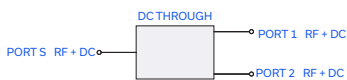
## Outline Drawing



## Outline Dimensions (inch/mm)

| A      | B     | C     | D     | E     | F     | G    |
|--------|-------|-------|-------|-------|-------|------|
| 5.88   | 1.04  | .50   | 1.187 | 3.500 | .145  | .26  |
| 149.35 | 26.42 | 12.70 | 30.15 | 88.90 | 3.68  | 6.60 |
| H      | J     | K     | L     | M     | wt    |      |
| .142   | .52   | .43   | .750  | .25   | grams | 150  |
| 3.61   | 13.21 | 10.92 | 19.05 | 6.35  |       |      |

## Electrical Schematic



## Features

- Super wideband, 500 - 26500 MHz
- Low insertion loss, 1.2 dB typ.
- Low amplitude unbalance, 0.05 dB typ.
- Excellent VSWR, 1.12:1 typ.
- High isolation, 35 dB typ.

## Applications

- Fixed satellite
- Radio location
- Mobile



Generic photo used for illustration purposes only

CASE STYLE: UU2624-1

| Connectors | Model          |
|------------|----------------|
| SMA-Fem    | ZC2PD-5R263-S+ |

+RoHS Compliant

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

## Electrical Specifications at 25°C

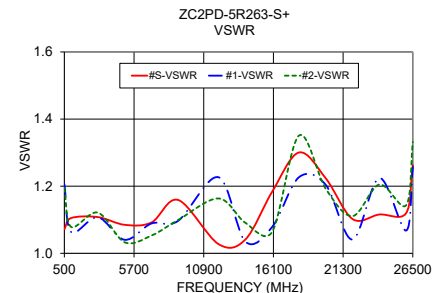
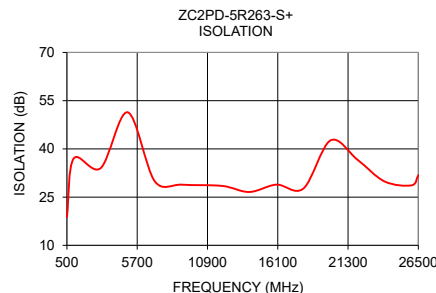
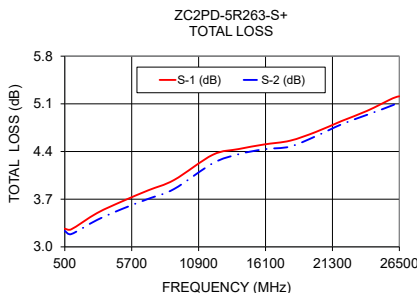
| Parameter                            | Frequency (MHz)                             | Min.           | Typ.                 | Max.              | Unit   |
|--------------------------------------|---------------------------------------------|----------------|----------------------|-------------------|--------|
| Frequency Range                      |                                             | 500            |                      | 26500             | MHz    |
| Insertion Loss Above 3.0 dB          | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | —<br>—<br>—    | 0.5<br>1.2<br>1.8    | 1.2<br>1.9<br>2.4 | dB     |
| Isolation                            | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | 17<br>18<br>18 | 34<br>35<br>35       | —<br>—<br>—       | dB     |
| Phase Unbalance (±) <sup>1</sup>     | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | —<br>—<br>—    | 0.20<br>0.61<br>1.16 | 2.0<br>3.0<br>4.0 | Degree |
| Amplitude Unbalance (±) <sup>1</sup> | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | —<br>—<br>—    | 0.03<br>0.05<br>0.10 | 0.3<br>0.3<br>0.4 | dB     |
| VSWR (Port S)                        | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | —<br>—<br>—    | 1.08<br>1.14<br>1.16 | 1.6<br>1.5<br>1.6 | :1     |
| VSWR (Port 1-2)                      | 500 - 8000<br>8000 - 18000<br>18000 - 26500 | —<br>—<br>—    | 1.08<br>1.13<br>1.19 | 1.4<br>1.5<br>1.6 | :1     |

1. With reference to average.

## Typical Performance Data

| Frequency (MHz) | Total Loss <sup>1</sup> (dB) | Amplitude Unbalance (dB) | Isolation (dB) | Phase Unbalance (deg.) | VSWR S | VSWR 1 | VSWR 2 |
|-----------------|------------------------------|--------------------------|----------------|------------------------|--------|--------|--------|
|                 | S-1                          | S-2                      |                |                        |        |        |        |
| 500             | 3.27                         | 3.23                     | 0.03           | 18.80                  | 0.08   | 1.07   | 1.21   |
| 1000            | 3.26                         | 3.19                     | 0.07           | 36.99                  | 0.17   | 1.11   | 1.06   |
| 3000            | 3.50                         | 3.39                     | 0.10           | 34.02                  | 0.10   | 1.11   | 1.11   |
| 5000            | 3.67                         | 3.56                     | 0.11           | 51.38                  | 0.04   | 1.08   | 1.04   |
| 7000            | 3.83                         | 3.71                     | 0.13           | 29.92                  | 0.05   | 1.09   | 1.09   |
| 9000            | 3.98                         | 3.85                     | 0.13           | 28.87                  | 0.19   | 1.16   | 1.10   |
| 12000           | 4.35                         | 4.23                     | 0.12           | 28.48                  | 0.25   | 1.03   | 1.23   |
| 14000           | 4.44                         | 4.36                     | 0.08           | 26.60                  | 0.48   | 1.04   | 1.04   |
| 16000           | 4.50                         | 4.43                     | 0.07           | 28.88                  | 0.13   | 1.18   | 1.08   |
| 18000           | 4.56                         | 4.47                     | 0.09           | 27.68                  | 0.23   | 1.30   | 1.23   |
| 20000           | 4.69                         | 4.62                     | 0.06           | 42.63                  | 0.06   | 1.22   | 1.20   |
| 22000           | 4.85                         | 4.80                     | 0.05           | 36.62                  | 0.02   | 1.10   | 1.04   |
| 24000           | 5.00                         | 4.94                     | 0.06           | 29.88                  | 0.18   | 1.12   | 1.22   |
| 26000           | 5.18                         | 5.08                     | 0.10           | 28.67                  | 0.04   | 1.12   | 1.07   |
| 26500           | 5.21                         | 5.14                     | 0.07           | 31.84                  | 0.12   | 1.26   | 1.26   |

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



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