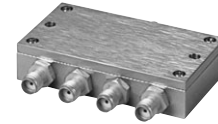


## Non-Catalog Model

# Power Splitter/Combiner

4 Way-0°

ZCSC-4-1W+  
ZCSC-4-1W



### Important Note

This is a non-catalog model and can be manufactured on specific request. Pricing and delivery information can be supplied upon request.

Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE: UU244  
PRICE: Contact Sales Department

+ RoHS compliant in accordance  
with EU Directive (2002/95/EC)

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

### ELECTRICAL SPECIFICATIONS 50Ω @ +25°C

| Parameter                   |            | Min. | Typ. | Max. | Units |
|-----------------------------|------------|------|------|------|-------|
| Frequency                   |            | 10   |      | 650  | MHz   |
| Isolation                   | 10-100MHz  | 25   | 31   |      | dB    |
|                             | 100-325MHz | 20   | 25   |      | dB    |
|                             | 325-650MHz | 18   | 21   |      | dB    |
| Insertion Loss Above 6.0 dB | 10-100MHz  |      | 0.5  | 0.8  | dB    |
|                             | 100-325MHz |      | 0.7  | 1.0  | dB    |
|                             | 325-650MHz |      | 1.1  | 1.5  | dB    |
| Phase Unbalance             | 10-100MHz  |      |      | 3    | deg.  |
|                             | 100-325MHz |      |      | 4    | deg.  |
|                             | 325-650MHz |      |      | 6    | deg.  |
| Amplitude Unbalance         | 10-100MHz  |      |      | 0.2  | dB    |
|                             | 100-325MHz |      |      | 0.3  | dB    |
|                             | 325-650MHz |      |      | 0.6  | dB    |

### MAXIMUM RATINGS

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature   | -55°C to 100°C |

### COAXIAL CONNECTIONS

|          |   |
|----------|---|
| SUM PORT | S |
| PORT 1   | 1 |
| PORT 2   | 2 |
| PORT 3   | 3 |
| PORT 4   | 4 |

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine [www.minicircuits.com](http://www.minicircuits.com) Provides ACTUAL Data Instantly at [www.minicircuits.com](http://www.minicircuits.com)

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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).

For detailed performance specs  
& shopping online see web site

REV. OR  
M114161  
ZCSC-4-1W  
071030

# 4 Way-0° Power Splitter/Combiner

ZCSC-4-1W+

## Typical Performance Data

| FREQ.<br>(MHz) | TOTAL LOSS <sup>1</sup><br>(dB) |      |      |      | AMP.<br>UNBAL.<br>(dB) | ISOLATION<br>(dB) |       |       | FREQ.<br>(MHz) | VSWR<br>(:1) |      |      |      |      |
|----------------|---------------------------------|------|------|------|------------------------|-------------------|-------|-------|----------------|--------------|------|------|------|------|
|                | S-1                             | S-2  | S-3  | S-4  |                        | 1-2               | 2-3   | 3-4   |                | S            | 1    | 2    | 3    | 4    |
| 9.9            | 6.60                            | 6.60 | 6.61 | 6.61 | 0.01                   | 37.20             | 35.88 | 36.34 | 9.9            | 1.13         | 1.23 | 1.23 | 1.23 | 1.23 |
| 13.8           | 6.61                            | 6.61 | 6.62 | 6.61 | 0.01                   | 37.44             | 35.74 | 36.34 | 13.8           | 1.12         | 1.23 | 1.23 | 1.23 | 1.23 |
| 18.8           | 6.61                            | 6.61 | 6.64 | 6.63 | 0.03                   | 37.68             | 35.51 | 36.32 | 18.8           | 1.12         | 1.23 | 1.22 | 1.23 | 1.23 |
| 36.3           | 6.63                            | 6.63 | 6.65 | 6.63 | 0.02                   | 37.13             | 34.74 | 35.47 | 36.3           | 1.11         | 1.22 | 1.22 | 1.23 | 1.23 |
| 50.4           | 6.66                            | 6.65 | 6.66 | 6.66 | 0.01                   | 36.03             | 34.20 | 34.31 | 50.4           | 1.12         | 1.22 | 1.22 | 1.23 | 1.23 |
| 134.9          | 6.77                            | 6.79 | 6.81 | 6.79 | 0.03                   | 29.16             | 31.89 | 27.58 | 134.9          | 1.10         | 1.21 | 1.21 | 1.21 | 1.22 |
| 187.3          | 6.76                            | 6.78 | 6.80 | 6.79 | 0.04                   | 26.58             | 30.55 | 25.01 | 187.3          | 1.08         | 1.20 | 1.19 | 1.19 | 1.20 |
| 260.0          | 6.85                            | 6.88 | 6.94 | 6.90 | 0.08                   | 24.31             | 29.10 | 22.79 | 260.0          | 1.06         | 1.18 | 1.17 | 1.15 | 1.18 |
| 325.5          | 6.88                            | 6.91 | 7.00 | 6.94 | 0.12                   | 22.95             | 28.06 | 21.49 | 325.5          | 1.05         | 1.17 | 1.14 | 1.12 | 1.15 |
| 361.0          | 6.91                            | 6.94 | 7.05 | 6.99 | 0.14                   | 22.43             | 27.59 | 21.03 | 361.0          | 1.04         | 1.16 | 1.13 | 1.10 | 1.14 |
| 527.8          | 6.96                            | 7.04 | 7.25 | 7.13 | 0.29                   | 21.79             | 26.67 | 20.92 | 527.8          | 1.02         | 1.10 | 1.06 | 1.04 | 1.05 |
| 606.0          | 7.05                            | 7.15 | 7.40 | 7.23 | 0.35                   | 22.59             | 27.14 | 22.67 | 606.0          | 1.03         | 1.09 | 1.05 | 1.11 | 1.08 |
| 627.3          | 7.08                            | 7.19 | 7.47 | 7.29 | 0.39                   | 22.95             | 27.40 | 23.55 | 627.3          | 1.04         | 1.09 | 1.05 | 1.14 | 1.11 |
| 649.4          | 7.12                            | 7.22 | 7.50 | 7.31 | 0.38                   | 23.44             | 27.78 | 24.63 | 649.4          | 1.05         | 1.10 | 1.06 | 1.16 | 1.14 |
| 660.7          | 7.11                            | 7.22 | 7.50 | 7.30 | 0.39                   | 23.70             | 27.99 | 25.32 | 660.7          | 1.05         | 1.10 | 1.07 | 1.18 | 1.15 |

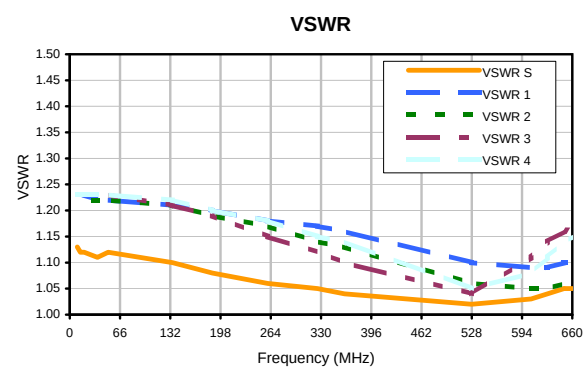
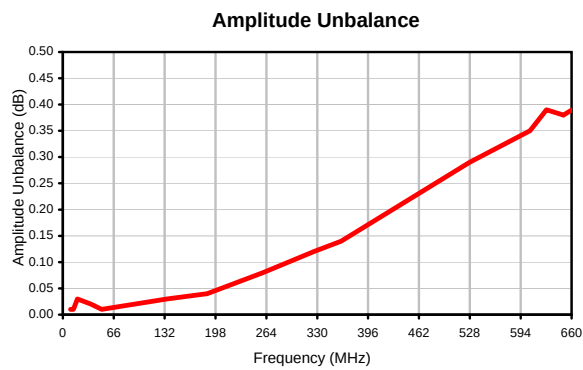
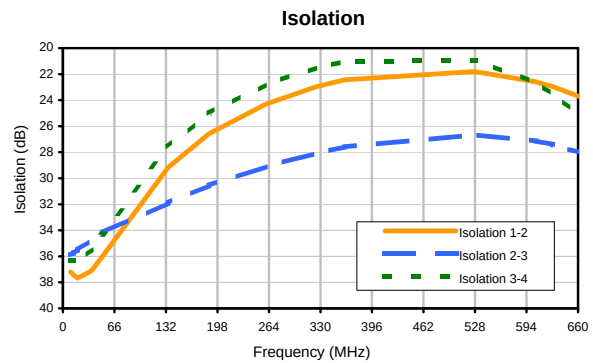
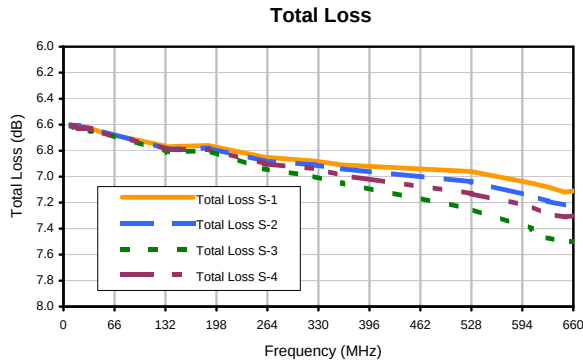
<sup>1</sup> Total Loss = Insertion Loss+ 6dB Splitter Loss

REV. X2  
ZCSC-4-1W+  
100706  
Page 1 of 1

# 4 Way-0° Power Splitter/Combiner

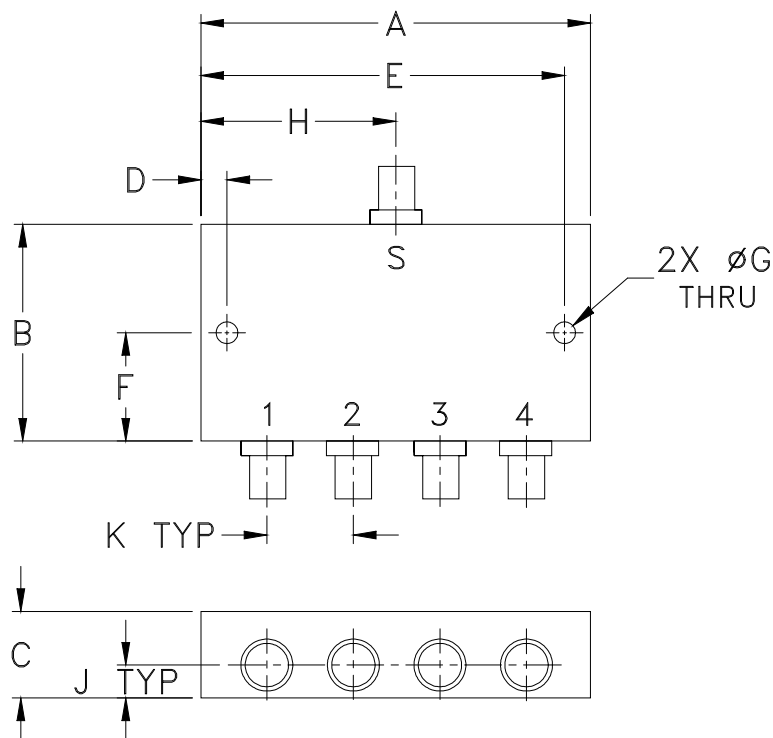
ZCSC-4-1W+

## Typical Performance Curves



## Outline Dimensions

UU244



| CASE# | A               | B               | C              | D              | E                | F              | G              | H               | J             | K              | WT. GRAMS |
|-------|-----------------|-----------------|----------------|----------------|------------------|----------------|----------------|-----------------|---------------|----------------|-----------|
| UU244 | 2.25<br>(57.15) | 1.25<br>(31.75) | .50<br>(12.70) | .150<br>(3.81) | 2.100<br>(53.34) | .62<br>(15.75) | .125<br>(3.18) | 1.12<br>(28.45) | .19<br>(4.83) | .50<br>(12.70) | 70        |

Dimensions are in inches (mm). Tolerances: 2 Pl.  $\pm .03$ ; 3 Pl.  $\pm .015$

### Notes:

- Case material: Aluminum alloy.
- Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Refer to the individual model data sheet for the type of connectors available.



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification              | Test/Inspection Condition                                                              | Reference/Spec                       |
|----------------------------|----------------------------------------------------------------------------------------|--------------------------------------|
| Operating Temperature      | -55° to 100°C<br>Ambient Environment                                                   | Individual Model Data Sheet          |
| Storage Temperature        | -55° to 100° C<br>Ambient Environment                                                  | Individual Model Data Sheet          |
| Barometric Pressure        | 100,000 Feet                                                                           | MIL-STD-202, Method 105, Condition D |
| Humidity                   | 90% RH, 65°C<br>Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103              |
| Thermal Shock              | -65° to 125°C, 5 cycles                                                                | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)    | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock           | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)                          | MIL-STD-202, Method 213, Condition I |