

Coaxial

# Power Splitter/Combiner

2 Way-180° 50Ω 1 to 500 MHz

ZFSCJ-2-1+  
ZFSCJ-2-1



BNC version shown  
CASE STYLE: K18

## Maximum Ratings

|                             |                |
|-----------------------------|----------------|
| Operating Temperature       | -55°C to 100°C |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 1W max.        |
| Internal Dissipation        | 0.125W max.    |

Permanent damage may occur if any of these limits are exceeded.

## Coaxial Connections

|             |   |
|-------------|---|
| SUM PORT(S) | 3 |
| PORT 1      | 1 |
| PORT 2      | 2 |

## Features

- wideband, 1 to 500 MHz
- high isolation, 30 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1 deg. typ.
- rugged shielded case

## Applications

- VHF/UHF
- signal processing

| Connectors | Model                | Price   | Qty.  |
|------------|----------------------|---------|-------|
| BNC        | ZFSCJ-2-1            | \$59.95 | (1-9) |
| SMA        | ZFSCJ-2-1-S(+)       | \$64.95 | (1-9) |
| N-TYPE     | ZFSCJ-2-1-N          | \$64.95 | (1-9) |
|            | BRACKET (OPTION "B") | \$5.00  | (1+)  |

+RoHS Compliant

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

## Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) |     |      |     |      |     | INSERTION LOSS (dB) ABOVE 3.0 dB |      |      |      |      |      | PHASE UNBALANCE (Degrees) |      |      | AMPLITUDE UNBALANCE (dB) |      |      |
|-------------------|----------------|-----|------|-----|------|-----|----------------------------------|------|------|------|------|------|---------------------------|------|------|--------------------------|------|------|
|                   | L              |     | M    |     | U    |     | L                                |      | M    |      | U    |      | L                         | M    | U    | L                        | M    | U    |
| $f_L$ - $f_U$     | Typ.           | Min | Typ. | Min | Typ. | Min | Typ.                             | Max. | Typ. | Max. | Typ. | Max. | Max.                      | Max. | Max. | Max.                     | Max. | Max. |
| 1-500             | 30             | 20  | 33   | 25  | 30   | 18  | 1.0                              | 1.5  | 1.0  | 1.5  | 1.0  | 1.5  | 2                         | 4    | 7    | 0.5                      | 0.2  | 0.5  |

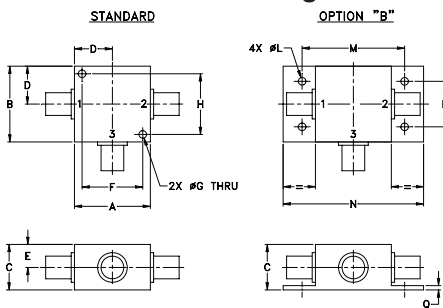
L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

## 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  |                          |                |                        |        |        |        |
| 1.00            | 3.97                         | 3.95 | 0.02                     | 30.26          | 179.94                 | 1.27   | 1.34   | 1.34   |
| 20.96           | 3.65                         | 3.65 | 0.00                     | 37.10          | 180.23                 | 1.03   | 1.18   | 1.18   |
| 40.92           | 3.70                         | 3.70 | 0.00                     | 40.24          | 180.39                 | 1.03   | 1.17   | 1.18   |
| 80.84           | 3.77                         | 3.76 | 0.00                     | 32.16          | 181.09                 | 1.09   | 1.17   | 1.18   |
| 120.76          | 3.76                         | 3.78 | 0.02                     | 29.60          | 181.43                 | 1.06   | 1.18   | 1.20   |
| 160.68          | 3.77                         | 3.80 | 0.03                     | 29.99          | 181.76                 | 1.04   | 1.16   | 1.18   |
| 200.60          | 3.82                         | 3.84 | 0.02                     | 27.58          | 181.71                 | 1.06   | 1.14   | 1.17   |
| 240.52          | 3.94                         | 3.94 | 0.01                     | 26.07          | 181.79                 | 1.15   | 1.13   | 1.17   |
| 280.44          | 3.93                         | 3.95 | 0.02                     | 25.65          | 181.93                 | 1.17   | 1.11   | 1.16   |
| 320.36          | 3.89                         | 3.94 | 0.05                     | 24.22          | 181.89                 | 1.11   | 1.13   | 1.14   |
| 360.28          | 3.94                         | 3.99 | 0.05                     | 23.37          | 181.49                 | 1.11   | 1.15   | 1.14   |
| 400.20          | 4.09                         | 4.11 | 0.03                     | 22.87          | 180.85                 | 1.21   | 1.19   | 1.13   |
| 440.12          | 4.13                         | 4.13 | 0.00                     | 22.19          | 180.17                 | 1.24   | 1.24   | 1.12   |
| 480.04          | 4.14                         | 4.13 | 0.01                     | 22.33          | 179.57                 | 1.19   | 1.28   | 1.12   |
| 500.00          | 4.19                         | 4.17 | 0.03                     | 22.51          | 179.34                 | 1.19   | 1.31   | 1.11   |

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

## Outline Drawing



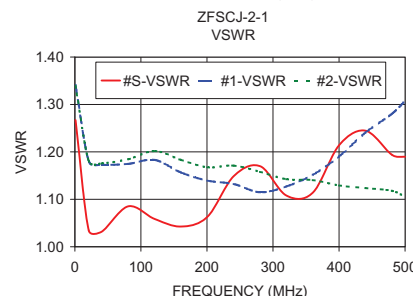
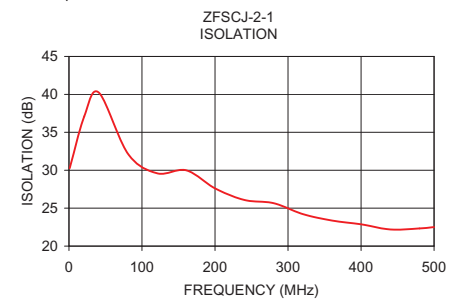
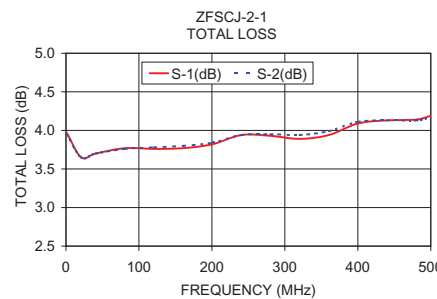
## Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F     | G    | H     |
|-------|-------|-------|-------|------|-------|------|-------|
| 1.25  | 1.25  | .75   | .63   | .38  | 1.00  | .125 | 1.000 |
| 31.75 | 31.75 | 19.05 | 16.00 | 9.65 | 25.40 | 3.18 | 25.40 |

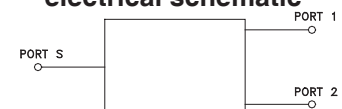
  

| J  | K  | L    | M     | N     | P     | Q    | wt    |
|----|----|------|-------|-------|-------|------|-------|
| -- | -- | .125 | 1.688 | 2.18  | .75   | .07  | grams |
| -- | -- | 3.18 | 42.88 | 55.37 | 19.05 | 1.78 | 70.0  |

For bracket version, Option B dimension "C" changes from 0.75 to 0.94 inch when connectors are Type N.



## electrical schematic



For detailed performance specs & shopping online see web site

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

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