

Coaxial

# Power Splitter/Combiner

ZFSC-2-6-75

2 Way-0° 75Ω 0.004 to 60 MHz

## Maximum Ratings

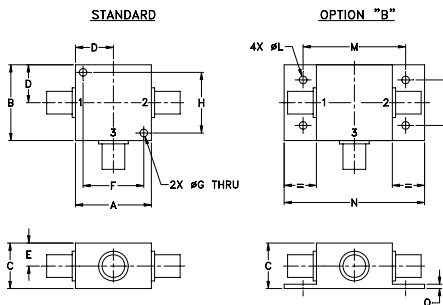
|                             |                |
|-----------------------------|----------------|
| Operating Temperature       | -55°C to 100°C |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 1W max.*       |
| Internal Dissipation        | 0.125W max.    |

\* At low range frequency band ( $f_L$  to  $10 f_L$ ), linearly derate maximum input power by 13 dB typ.  
Permanent damage may occur if any of these limits are exceeded.

## Coaxial Connections

|          |   |
|----------|---|
| SUM PORT | 3 |
| PORT 1   | 1 |
| PORT 2   | 2 |

## 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  |

## Features

- low insertion loss, 0.4 dB typ.
- high isolation, 35 dB typ.
- rugged shielded case

## Applications

- HF/VHF
- amateur radio
- instrumentation



BNC version shown

CASE STYLE: K18

Connectors Model

BNC ZFSC-2-6-75

BRACKET (OPTION "B")

## Electrical Specifications

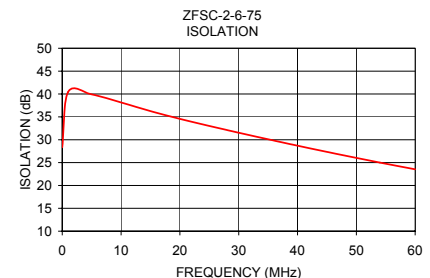
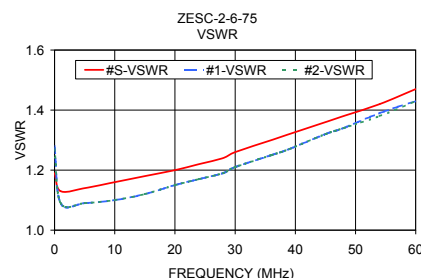
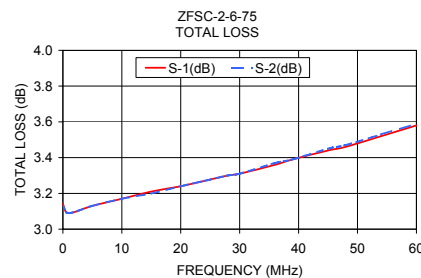
| FREQ. RANGE (MHz) | ISOLATION (dB) |           |           | INSERTION LOSS (dB) ABOVE 3.0 dB |           |           | PHASE UNBALANCE (Degrees) |      |      | AMPLITUDE UNBALANCE (dB) |      |      |
|-------------------|----------------|-----------|-----------|----------------------------------|-----------|-----------|---------------------------|------|------|--------------------------|------|------|
|                   | 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. |
| 0.004-60          | 30             | 20        | 35        | 20                               | 25        | 20        | 0.5                       | 0.8  | 0.4  | 0.8                      | 0.7  | 1.0  |

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  |                          |                |                        |        |        |        |
| 0.004           | 3.14                         | 3.13 | 0.01                     | 28.34          | 0.09                   | 1.19   | 1.28   | 1.27   |
| 1.000           | 3.09                         | 3.09 | 0.00                     | 40.45          | 0.00                   | 1.13   | 1.09   | 1.09   |
| 5.000           | 3.13                         | 3.13 | 0.00                     | 39.93          | 0.02                   | 1.14   | 1.09   | 1.09   |
| 10.000          | 3.17                         | 3.17 | 0.00                     | 38.14          | 0.04                   | 1.16   | 1.10   | 1.10   |
| 15.000          | 3.21                         | 3.20 | 0.00                     | 36.25          | 0.05                   | 1.18   | 1.12   | 1.12   |
| 20.000          | 3.24                         | 3.24 | 0.00                     | 34.56          | 0.05                   | 1.20   | 1.15   | 1.15   |
| 24.000          | 3.27                         | 3.27 | 0.00                     | 33.32          | 0.05                   | 1.22   | 1.17   | 1.17   |
| 28.000          | 3.30                         | 3.30 | 0.00                     | 32.12          | 0.06                   | 1.24   | 1.19   | 1.19   |
| 30.000          | 3.31                         | 3.31 | 0.00                     | 31.53          | 0.05                   | 1.26   | 1.21   | 1.21   |
| 36.000          | 3.36                         | 3.37 | 0.00                     | 29.82          | 0.06                   | 1.30   | 1.25   | 1.25   |
| 39.000          | 3.39                         | 3.39 | 0.00                     | 28.97          | 0.06                   | 1.32   | 1.27   | 1.27   |
| 45.000          | 3.44                         | 3.45 | 0.01                     | 27.34          | 0.07                   | 1.36   | 1.32   | 1.32   |
| 48.000          | 3.46                         | 3.47 | 0.01                     | 26.55          | 0.07                   | 1.38   | 1.34   | 1.34   |
| 54.000          | 3.52                         | 3.53 | 0.01                     | 25.01          | 0.08                   | 1.42   | 1.39   | 1.38   |
| 60.000          | 3.58                         | 3.59 | 0.02                     | 23.54          | 0.09                   | 1.47   | 1.43   | 1.43   |

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



## electrical schematic



## 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)



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

REV. B  
M151107  
ZFSC-2-6-75  
HY/TD/CP/AM  
151021