*Coaxial*

# Power Splitter/Combiner

## ZFSC-16-12+

16 Way-0° 50Ω 0.1 to 200 MHz

*Generic photo used for illustration purposes only*
*BNC version shown*

CASE STYLE: R30

| Connectors | Model |
|---|---|
| **BNC** | ZFSC-16-12+ |
| **SMA** | ZFSC-16-12-S+ |

### 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 | 0.87W max. |

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

### Coaxial Connections

| SUM PORT | S |
|---|---|
| PORT 1,2,3,.....,16 | 1,2,3,.....,16 |

### Features

- low insertion loss, 0.7 dB typ.
- high isolation, 27 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- rugged shielded case

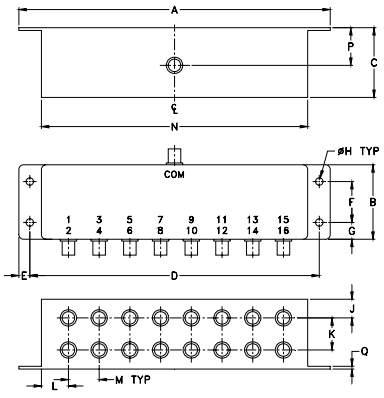
### Applications

- HF/VHF
- communication systems
- instrumentation

***+RoHS Compliant***

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

### Outline Drawing




### Outline Dimensions (inch / mm)

| A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|
| 6.69 | 1.60 | 1.50 | 6.22 | .24 | .88 | .36 | .160 |
| 169.93 | 40.64 | 38.10 | 157.99 | 6.10 | 22.35 | 9.14 | 4.06 |

| J | K | L | M | N | P | Q | wt. |
|---|---|---|---|---|---|---|---|
| .40 | .69 | .55 | .66 | 5.72 | .81 | .06 | grams |
| 10.16 | 17.53 | 13.97 | 16.76 | 145.29 | 20.57 | 1.52 | 320 |

### Electrical Specifications

| FREQ.* RANGE (MHz) | ISOLATION (dB) | | | | | | INSERTION LOSS (dB) ABOVE 12 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. |
| 0.1-200 | 33 | 20 | 27 | 20 | 26 | 20 | 0.6 | 1.5 | 0.7 | 1.0 | 0.9 | 1.5 | 2 | 6 | 9 | 0.4 | 0.2 | 0.4 |

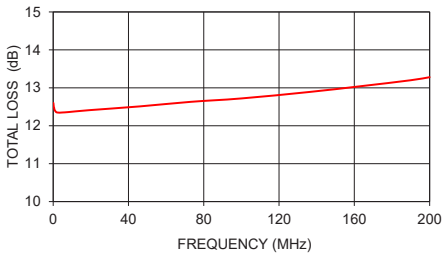
L = low range [$f_L$ to 10 $f_L$] M = mid range [10 $f_L$ to $f_U$/2] U= upper range [$f_U$/2 to $f_U$]
* At low range frequency band($f_L$ to 10 $f_L$), linearly derate maximum input power by 13 dB typ.

### Typical Performance Data

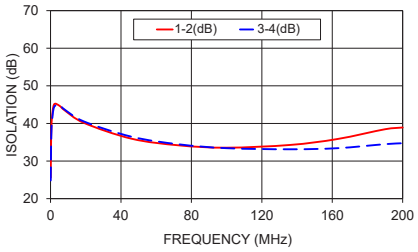
| Freq. (MHz) | Total Loss[1] (dB) | Amplitude Unbalance (dB) | Isolation (dB) | | Phase Unbalance (deg.) | VSWR S | VSWR OUTPUT |
|---|---|---|---|---|---|---|---|
| | S-1 | | 1-2 | 3-4 | | | |
| 0.10 | 12.60 | 0.04 | 25.58 | 24.82 | 0.62 | 1.34 | 1.46 |
| 0.30 | 12.50 | 0.02 | 34.87 | 33.94 | 0.19 | 1.17 | 1.19 |
| 0.50 | 12.47 | 0.02 | 38.86 | 37.80 | 0.17 | 1.13 | 1.14 |
| 0.80 | 12.41 | 0.02 | 41.54 | 40.38 | 0.13 | 1.10 | 1.11 |
| 2.00 | 12.35 | 0.01 | 45.05 | 44.32 | 0.10 | 1.07 | 1.07 |
| 5.00 | 12.35 | 0.01 | 44.72 | 44.92 | 0.09 | 1.07 | 1.06 |
| 8.00 | 12.36 | 0.01 | 43.49 | 43.69 | 0.11 | 1.08 | 1.06 |
| 19.00 | 12.41 | 0.01 | 40.14 | 40.52 | 0.28 | 1.12 | 1.07 |
| 46.00 | 12.51 | 0.01 | 35.94 | 36.47 | 0.56 | 1.15 | 1.06 |
| 73.00 | 12.63 | 0.03 | 34.17 | 34.44 | 0.93 | 1.22 | 1.03 |
| 100.00 | 12.72 | 0.03 | 33.55 | 33.42 | 1.34 | 1.32 | 1.04 |
| 136.00 | 12.89 | 0.05 | 34.28 | 33.13 | 1.93 | 1.39 | 1.09 |
| 163.00 | 13.04 | 0.06 | 35.86 | 33.42 | 2.51 | 1.51 | 1.09 |
| 190.00 | 13.20 | 0.09 | 38.46 | 34.49 | 2.95 | 1.58 | 1.13 |
| 200.00 | 13.28 | 0.11 | 38.92 | 34.74 | 3.23 | 1.61 | 1.14 |

1. Total Loss = Insertion Loss +12dB splitter loss.

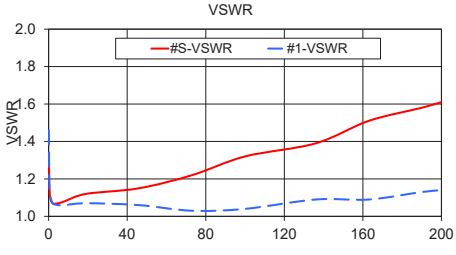
ZFSC-16-12-S+
TOTAL LOSS




ZFSC-16-12-S+
ISOLATION




ZFSC-16-12-S+
VSWR




### 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