

Coaxial

# Power Splitter/Combiner

ZMSC-2-1+

2 Way-0° 50Ω 0.1 to 400 MHz

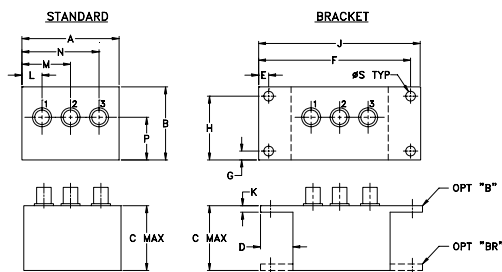
## Maximum Ratings

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

## Coaxial Connections

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

## Outline Drawing



## Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F     | G    | H     |
|-------|-------|-------|-------|------|-------|------|-------|
| 1.50  | 1.13  | 1.00  | .50   | .155 | 2.345 | .138 | .987  |
| 38.10 | 28.70 | 25.40 | 12.70 | 3.94 | 59.56 | 3.51 | 25.07 |

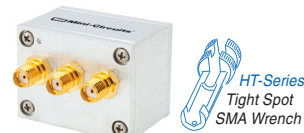
| J     | K    | L    | M     | N     | P     | S    | wt    |
|-------|------|------|-------|-------|-------|------|-------|
| 2.50  | .10  | .31  | .75   | 1.19  | .66   | .150 | grams |
| 63.50 | 2.54 | 7.87 | 19.05 | 30.23 | 16.76 | 3.81 | 40.0  |

## Features

- wideband, 0.1 to 400 MHz
- low insertion loss, 0.4 dB typ.
- good isolation, 25 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 0.2 deg. typ.
- rugged shielded case

## Applications

- VHF/UHF
- federal & defense communications
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: M21

Connectors Model

SMA ZMSC-2-1+

BRACKET (OPTION "B")

BRACKET (OPTION "BR")

+RoHS Compliant

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

## Electrical Specifications

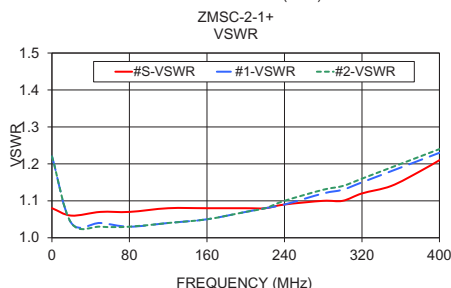
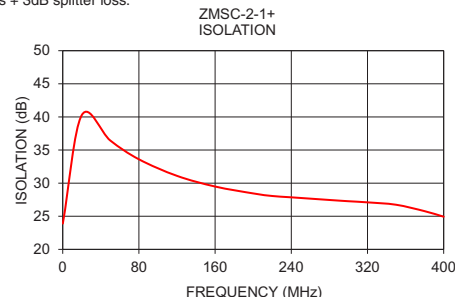
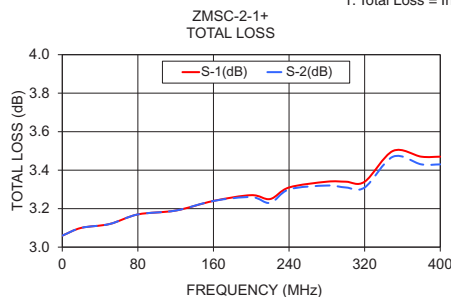
| FREQ.*<br>RANGE<br>(MHz) | ISOLATION<br>(dB) |     |      |     |      |     | INSERTION LOSS (dB)<br>ABOVE 3.0 dB |      |      |      |      |      | PHASE<br>UNBALANCE<br>(Degrees) |      |      | AMPLITUDE<br>UNBALANCE<br>(dB) |      |      |
|--------------------------|-------------------|-----|------|-----|------|-----|-------------------------------------|------|------|------|------|------|---------------------------------|------|------|--------------------------------|------|------|
|                          | 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. |
| 0.1-400                  | 20                | 15  | 25   | 20  | 25   | 20  | 0.2                                 | 0.5  | 0.4  | 0.75 | 0.6  | 1.0  | 2                               | 3    | 4    | 0.15                           | 0.20 | 0.30 |

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

| Frequency<br>(MHz) | Total Loss <sup>1</sup><br>(dB) |      | Amplitude<br>Unbalance<br>(dB) | Isolation<br>(dB) | Phase<br>Unbalance<br>(deg.) | VSWR<br>S | VSWR<br>1 | VSWR<br>2 |
|--------------------|---------------------------------|------|--------------------------------|-------------------|------------------------------|-----------|-----------|-----------|
|                    | S-1                             | S-2  |                                |                   |                              |           |           |           |
| 0.10               | 3.06                            | 3.06 | 0.00                           | 23.90             | 0.00                         | 1.08      | 1.22      | 1.22      |
| 20.00              | 3.10                            | 3.10 | 0.00                           | 40.27             | 0.01                         | 1.06      | 1.04      | 1.04      |
| 50.00              | 3.12                            | 3.12 | 0.00                           | 36.43             | 0.06                         | 1.07      | 1.04      | 1.03      |
| 80.00              | 3.17                            | 3.17 | 0.00                           | 33.60             | 0.07                         | 1.07      | 1.03      | 1.03      |
| 120.00             | 3.19                            | 3.19 | 0.00                           | 31.10             | 0.09                         | 1.08      | 1.04      | 1.04      |
| 160.00             | 3.24                            | 3.24 | 0.01                           | 29.49             | 0.10                         | 1.08      | 1.05      | 1.05      |
| 200.00             | 3.27                            | 3.26 | 0.01                           | 28.45             | 0.11                         | 1.08      | 1.07      | 1.07      |
| 220.00             | 3.25                            | 3.23 | 0.02                           | 28.06             | 0.16                         | 1.08      | 1.08      | 1.08      |
| 240.00             | 3.31                            | 3.30 | 0.01                           | 27.86             | 0.12                         | 1.09      | 1.09      | 1.10      |
| 280.00             | 3.34                            | 3.32 | 0.02                           | 27.46             | 0.14                         | 1.10      | 1.12      | 1.13      |
| 300.00             | 3.34                            | 3.31 | 0.03                           | 27.27             | 0.14                         | 1.10      | 1.13      | 1.14      |
| 320.00             | 3.34                            | 3.31 | 0.03                           | 27.10             | 0.18                         | 1.12      | 1.15      | 1.16      |
| 350.00             | 3.50                            | 3.47 | 0.03                           | 26.74             | 0.17                         | 1.14      | 1.18      | 1.19      |
| 380.00             | 3.47                            | 3.43 | 0.04                           | 25.77             | 0.10                         | 1.18      | 1.21      | 1.22      |
| 400.00             | 3.47                            | 3.43 | 0.04                           | 24.93             | 0.12                         | 1.21      | 1.23      | 1.24      |

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.

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