

Coaxial

# Power Splitter/Combiner

## ZSCJ-2-2+

2 Way-180° 50Ω 0.01 to 20 MHz



CASE STYLE: M22

| Connectors            | Model     |
|-----------------------|-----------|
| BNC                   | ZSCJ-2-2+ |
| BRACKET (OPTION "B")  |           |
| BRACKET (OPTION "BR") |           |

**+RoHS Compliant**

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

### Maximum Ratings

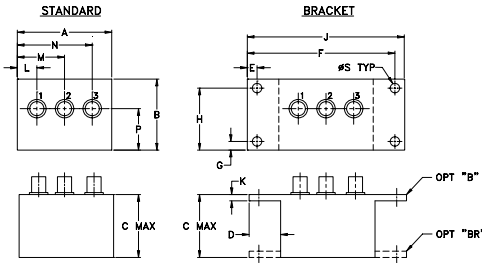
|                             |                |
|-----------------------------|----------------|
| Operating Temperature       | -55°C to 100°C |
| Storage Temperature         | -55°C to 100°C |
| Power Input (as a splitter) | 1W max.        |
| Internal Dissipation        | 0.125W max.    |

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

### Coaxial Connections

|         |   |
|---------|---|
| SUPPORT | 2 |
| PORT 1  | 1 |
| PORT 2  | 3 |

### Outline Drawing



### Outline Dimensions (inch/mm)

|       |       |       |       |       |       |      |       |
|-------|-------|-------|-------|-------|-------|------|-------|
| A     | B     | C     | D     | E     | F     | G    | H     |
| 2.25  | 1.38  | 1.24  | .50   | .150  | 3.100 | .138 | 1.238 |
| 57.15 | 35.05 | 31.50 | 12.70 | 3.81  | 78.74 | 3.51 | 31.45 |
| J     | K     | L     | M     | N     | P     | S    | wt    |
| 3.25  | .10   | .40   | 1.15  | 1.86  | .64   | .150 | grams |
| 82.55 | 2.54  | 10.16 | 29.21 | 47.24 | 16.26 | 3.81 | 74.0  |

### Features

- low insertion loss, 0.2 dB typ.
- high isolation, 30 dB typ.
- rugged shielded case

### Applications

- HF
- radio communication
- instrumentation
- signal processing

### 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    |
|                   | Typ.           | Min | Typ. | Min | Typ. | Min | Typ.                             | Max. | Typ. | Max. | Typ. | Max. | Max.                      | Max. | Max. | Max.                     | Max. | Max. |
| $f_L$ - $f_U$     |                |     |      |     |      |     |                                  |      |      |      |      |      |                           |      |      |                          |      |      |
| 0.01-20           | 35             | 25  | 30   | 25  | 25   | 18  | 0.3                              | 0.8  | 0.2  | 0.5  | 0.3  | 0.6  | 1*                        | 2    | 2.5  | 0.1                      | 0.1  | 0.2  |

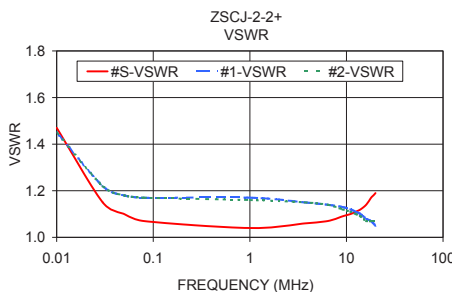
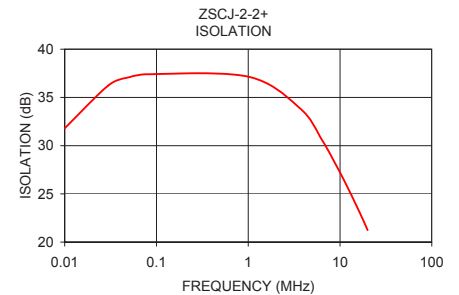
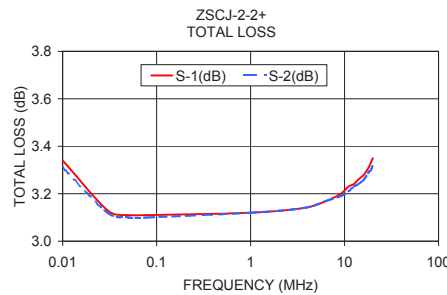
L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

\* Phase unbalance is 3 degrees max from  $f_L$  to  $3f_L$

### 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  |                          |                |                        |        |        |        |
| 0.01            | 3.34                         | 3.31 | 0.03                     | 31.80          | 179.87                 | 1.47   | 1.45   | 1.45   |
| 0.03            | 3.13                         | 3.12 | 0.01                     | 36.25          | 179.89                 | 1.15   | 1.22   | 1.22   |
| 0.05            | 3.11                         | 3.10 | 0.01                     | 37.09          | 179.91                 | 1.1    | 1.18   | 1.18   |
| 0.08            | 3.11                         | 3.10 | 0.00                     | 37.40          | 179.94                 | 1.07   | 1.17   | 1.17   |
| 1.00            | 3.12                         | 3.12 | 0.00                     | 37.15          | 180.08                 | 1.04   | 1.17   | 1.16   |
| 3.70            | 3.14                         | 3.14 | 0.00                     | 33.83          | 180.29                 | 1.06   | 1.15   | 1.15   |
| 6.40            | 3.17                         | 3.17 | 0.00                     | 30.55          | 180.49                 | 1.07   | 1.14   | 1.14   |
| 9.10            | 3.20                         | 3.19 | 0.01                     | 27.96          | 180.69                 | 1.09   | 1.13   | 1.12   |
| 11.00           | 3.23                         | 3.21 | 0.01                     | 26.46          | 180.82                 | 1.10   | 1.12   | 1.11   |
| 12.50           | 3.24                         | 3.23 | 0.01                     | 25.40          | 180.94                 | 1.11   | 1.11   | 1.10   |
| 14.00           | 3.26                         | 3.24 | 0.02                     | 24.44          | 181.05                 | 1.12   | 1.10   | 1.09   |
| 16.00           | 3.28                         | 3.26 | 0.02                     | 23.28          | 181.20                 | 1.14   | 1.08   | 1.07   |
| 18.00           | 3.31                         | 3.29 | 0.02                     | 22.22          | 181.35                 | 1.17   | 1.07   | 1.07   |
| 19.00           | 3.33                         | 3.30 | 0.03                     | 21.72          | 181.42                 | 1.18   | 1.06   | 1.07   |
| 20.00           | 3.35                         | 3.32 | 0.03                     | 21.25          | 181.49                 | 1.19   | 1.05   | 1.07   |

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



### electrical schematic



### Notes

- 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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