

# Power Splitter/Combiner

## ZBSC-611

6 Way-0° 50Ω 10 to 200 MHz

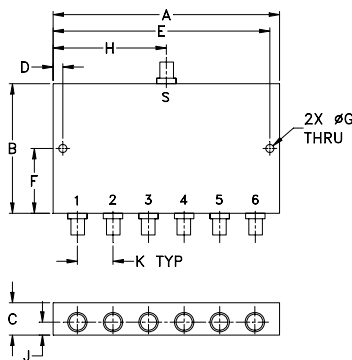
### Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -55°C to 100°C |
| Storage Temperature                                             | -55°C to 100°C |
| Power Input (as a splitter)                                     | 1W max.        |
| Internal Dissipation                                            | 0.5W max.      |
| Permanent damage may occur if any of these limits are exceeded. |                |

### Coaxial Connections

|                  |             |
|------------------|-------------|
| SUM PORT         | S           |
| PORT 1,2,3,4,5,6 | 1,2,3,4,5,6 |

### Outline Drawing



### Outline Dimensions (inch/mm)

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| A     | B     | C     | D     | E     | F     |
| 3.50  | 2.00  | .50   | .150  | 3.350 | 1.00  |
| 88.90 | 50.80 | 12.70 | 3.81  | 85.09 | 25.40 |
| G     | H     | J     | K     | wt    |       |
| .125  | 1.75  | .20   | .55   | grams |       |
| 3.18  | 44.45 | 5.08  | 13.97 | 120   |       |

### Features

- low insertion loss, 0.7 dB typ.
- good isolation, 28 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- good VSWR, 1.2:1 typ.
- rugged shielded case

### Applications

- VHF
- instrumentation
- radio communication

### Electrical Specifications

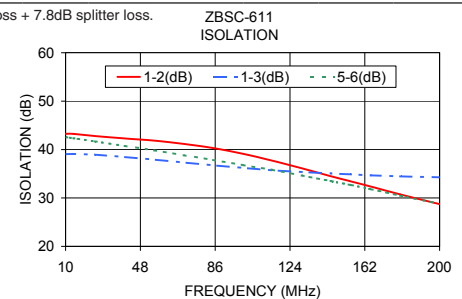
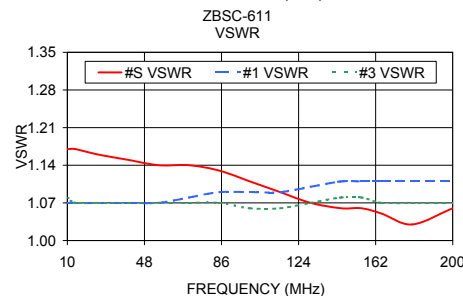
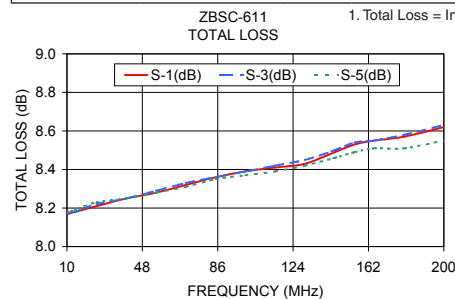
| FREQ. RANGE (MHz) | ISOLATION (dB) |      |      |      |      |      | INSERTION LOSS (dB) ABOVE 7.8 dB |      |      |      |      |      | PHASE UNBALANCE (Degrees) |      |      | AMPLITUDE UNBALANCE (dB) |      |      |
|-------------------|----------------|------|------|------|------|------|----------------------------------|------|------|------|------|------|---------------------------|------|------|--------------------------|------|------|
|                   | 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. |
| 10-200            | 28             | 22   | 26   | 20   | 23   | 20   | 0.5                              | 0.8  | 0.7  | 1.0  | 0.9  | 1.2  | 4                         | 5    | 6    | 0.2                      | 0.3  | 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 Unbal. (deg.) | VSWR S | VSWR 1 | VSWR 3 |
|-----------------|------------------------------|------|------|--------------------------|----------------|-------|-------|---------------------|--------|--------|--------|
|                 | S-1                          | S-2  | S-5  |                          | 1-2            | 1-3   | 5-6   |                     |        |        |        |
| 10.00           | 8.17                         | 8.17 | 8.18 | 0.01                     | 43.26          | 39.05 | 42.55 | 0.15                | 1.17   | 1.07   | 1.08   |
| 14.00           | 8.18                         | 8.18 | 8.19 | 0.02                     | 43.23          | 39.09 | 42.34 | 0.19                | 1.17   | 1.07   | 1.07   |
| 25.00           | 8.21                         | 8.22 | 8.23 | 0.01                     | 42.79          | 38.94 | 41.68 | 0.26                | 1.16   | 1.07   | 1.07   |
| 40.00           | 8.25                         | 8.25 | 8.25 | 0.01                     | 42.29          | 38.45 | 40.76 | 0.37                | 1.15   | 1.07   | 1.07   |
| 55.00           | 8.28                         | 8.29 | 8.28 | 0.02                     | 41.84          | 37.92 | 39.84 | 0.43                | 1.14   | 1.07   | 1.07   |
| 70.00           | 8.32                         | 8.33 | 8.31 | 0.02                     | 41.16          | 37.32 | 38.84 | 0.59                | 1.14   | 1.08   | 1.07   |
| 85.00           | 8.36                         | 8.36 | 8.35 | 0.02                     | 40.31          | 36.75 | 37.86 | 0.90                | 1.13   | 1.09   | 1.07   |
| 100.00          | 8.39                         | 8.39 | 8.37 | 0.02                     | 39.13          | 36.21 | 36.80 | 0.87                | 1.11   | 1.09   | 1.06   |
| 115.00          | 8.41                         | 8.42 | 8.39 | 0.03                     | 37.71          | 35.71 | 35.80 | 1.04                | 1.09   | 1.09   | 1.06   |
| 130.00          | 8.43                         | 8.45 | 8.42 | 0.04                     | 36.13          | 35.35 | 34.65 | 1.15                | 1.07   | 1.10   | 1.07   |
| 145.00          | 8.49                         | 8.50 | 8.46 | 0.05                     | 34.46          | 35.06 | 33.47 | 1.27                | 1.06   | 1.11   | 1.08   |
| 155.00          | 8.53                         | 8.54 | 8.49 | 0.06                     | 33.42          | 34.88 | 32.67 | 1.49                | 1.06   | 1.11   | 1.08   |
| 165.00          | 8.55                         | 8.55 | 8.51 | 0.07                     | 32.35          | 34.67 | 31.81 | 1.50                | 1.05   | 1.11   | 1.07   |
| 180.00          | 8.57                         | 8.58 | 8.51 | 0.07                     | 30.73          | 34.46 | 30.47 | 1.51                | 1.03   | 1.11   | 1.07   |
| 200.00          | 8.62                         | 8.63 | 8.55 | 0.10                     | 28.73          | 34.26 | 28.81 | 1.70                | 1.06   | 1.11   | 1.07   |

1. Total Loss = Insertion Loss + 7.8dB splitter loss.



### electrical schematic



### Notes

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