

Coaxial

# Power Splitter/Combiner

2 Way-0° 50Ω 500 to 2000 MHz

ZAPD-21+



N-Type version shown

CASE STYLE: F53

| Connectors | Model      | Price   | Qty.  |
|------------|------------|---------|-------|
| BNC        | ZAPD-21+   | \$64.95 | (1-9) |
| SMA        | ZAPD-21-S+ | \$69.95 | (1-9) |
| N-TYPE     | ZAPD-21-N+ | \$69.95 | (1-9) |

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify 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) | 10W max.       |
| Internal Dissipation        | 0.125W max.    |

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

## Coaxial Connections

|          |   |
|----------|---|
| SUM PORT | S |
| PORT 1   | 1 |
| PORT 2   | 2 |

## Features

- wideband, 500 to 2000 MHz
- low insertion loss, 0.25 dB typ.
- good isolation, 25 dB typ.
- up to 10W power input as splitter
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1 deg. typ.
- excellent VSWR, 1.20:1 typ.
- rugged shielded case

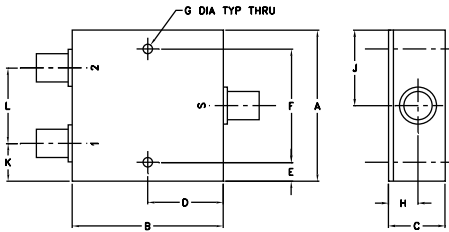
## Applications

- UHF
- GPS
- cellular
- PCS/DCS
- communications systems
- instrumentation

## Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) |     | INSERTION LOSS (dB) ABOVE 3.0 dB |      | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) |
|-------------------|----------------|-----|----------------------------------|------|---------------------------|--------------------------|
|                   | Typ.           | Min | Typ.                             | Max. | Max.                      | Max.                     |
| $f_c - f_u$       |                |     |                                  |      |                           |                          |
| 500-2000          | 25             | 18  | 0.25                             | 1.0  | 3                         | 0.2                      |

## Outline Drawing



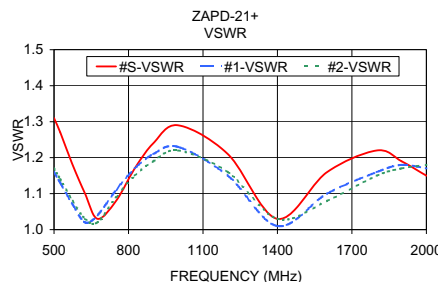
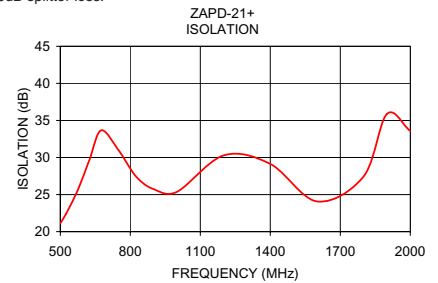
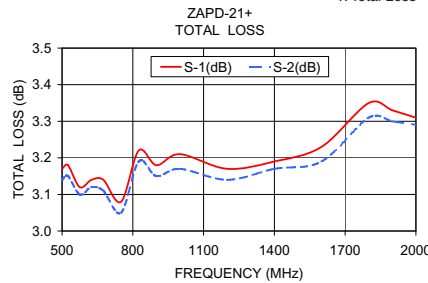
## Outline Dimensions (inch/mm)

|       |       |       |       |       |       |      |
|-------|-------|-------|-------|-------|-------|------|
| A     | B     | C     | D     | E     | F     | G    |
| 2.00  | 2.00  | .75   | 1.00  | .13   | 1.750 | .125 |
| 50.80 | 50.80 | 19.05 | 25.40 | 3.30  | 44.45 | 3.18 |
| H     | J     | K     | L     | wt    |       |      |
| .39   | 1.00  | .50   | 1.00  | grams |       |      |
| 9.91  | 25.40 | 12.70 | 25.40 | 170.0 |       |      |

## 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  |                          |                |                        |        |        |        |
| 500.00          | 3.17                         | 3.14 | 0.03                     | 21.12          | 0.45                   | 1.31   | 1.16   | 1.17   |
| 525.00          | 3.18                         | 3.15 | 0.03                     | 22.44          | 0.48                   | 1.27   | 1.13   | 1.14   |
| 575.00          | 3.12                         | 3.10 | 0.02                     | 25.62          | 0.50                   | 1.18   | 1.07   | 1.08   |
| 625.00          | 3.14                         | 3.12 | 0.02                     | 29.70          | 0.53                   | 1.10   | 1.02   | 1.03   |
| 675.00          | 3.14                         | 3.11 | 0.03                     | 33.67          | 0.60                   | 1.03   | 1.04   | 1.02   |
| 750.00          | 3.08                         | 3.05 | 0.03                     | 30.96          | 0.61                   | 1.08   | 1.11   | 1.09   |
| 825.00          | 3.22                         | 3.19 | 0.03                     | 27.43          | 0.73                   | 1.17   | 1.17   | 1.15   |
| 900.00          | 3.18                         | 3.15 | 0.03                     | 25.73          | 0.77                   | 1.24   | 1.21   | 1.19   |
| 1000.00         | 3.21                         | 3.17 | 0.04                     | 25.37          | 0.68                   | 1.29   | 1.23   | 1.22   |
| 1200.00         | 3.17                         | 3.14 | 0.03                     | 30.28          | 0.92                   | 1.21   | 1.15   | 1.16   |
| 1400.00         | 3.19                         | 3.17 | 0.02                     | 29.13          | 1.15                   | 1.03   | 1.01   | 1.03   |
| 1600.00         | 3.23                         | 3.19 | 0.04                     | 24.08          | 1.27                   | 1.16   | 1.10   | 1.08   |
| 1800.00         | 3.35                         | 3.31 | 0.03                     | 27.44          | 1.41                   | 1.22   | 1.16   | 1.15   |
| 1900.00         | 3.33                         | 3.30 | 0.03                     | 35.87          | 1.42                   | 1.19   | 1.18   | 1.17   |
| 2000.00         | 3.31                         | 3.29 | 0.01                     | 33.59          | 1.48                   | 1.15   | 1.17   | 1.18   |

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



## electrical schematic



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