

2 Way-0° 50Ω 400 to 900 MHz

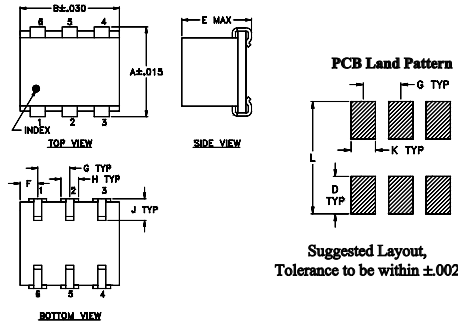
## Maximum Ratings

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Operating Temperature                                           | -40°C to 85°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. |                |

## Pin Connections

|          |     |
|----------|-----|
| SUM PORT | 1   |
| PORT 1   | 3   |
| PORT 2   | 4   |
| GROUND   | 6   |
| NOT USED | 2,5 |

## Outline Drawing

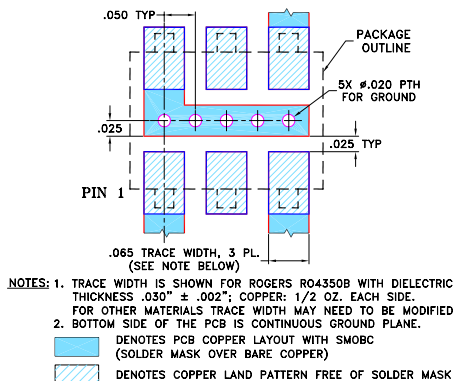


## Outline Dimensions (inch/mm)

| A    | B    | C  | D    | E    | F    | G    |
|------|------|----|------|------|------|------|
| .280 | .310 | -- | .100 | .225 | .055 | .100 |
| 7.11 | 7.87 | -- | 2.54 | 5.72 | 1.40 | 2.54 |

| H    | J    | K    | L    | wt    |
|------|------|------|------|-------|
| .047 | .065 | .065 | .300 | grams |
| 1.19 | 1.65 | 1.65 | 7.62 | 0.45  |

Demo Board MCL P/N: TB-48+  
Suggested PCB Layout (PL-035)

## 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-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

## Features

- low insertion loss, 0.5 dB typ.
- excellent isolation, 24 dB typ.
- excellent VSWR, 1.22:1 typ.
- low amplitude unbalance 0.1 dB typ.
- J-leads for excellent solderability and strain relief

## Applications

- cellular
- UHF receivers/transmitters



Generic photo used for illustration purposes only

CASE STYLE: BH292

## +RoHS Compliant

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

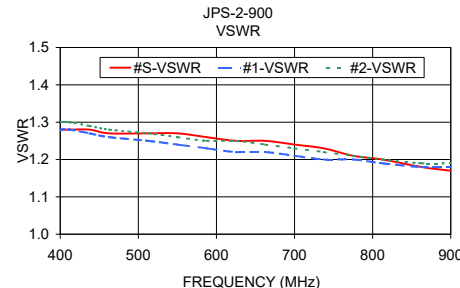
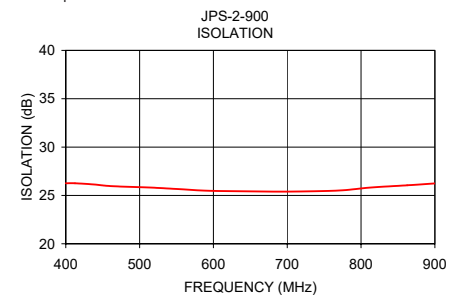
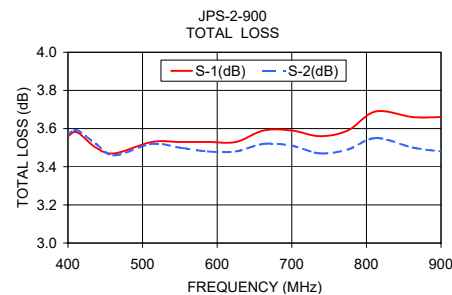
## Electrical Specifications

| FREQ. RANGE (MHz) | ISOLATION (dB) |      | INSERTION LOSS (dB) ABOVE 3.0 dB |      | PHASE UNBALANCE (Degrees) | AMPLITUDE UNBALANCE (dB) |
|-------------------|----------------|------|----------------------------------|------|---------------------------|--------------------------|
| $f_c - f_u$       | Typ.           | Min. | Typ.                             | Max. | Max.                      | Max.                     |
| 400-900           | 24             | 18   | 0.5                              | 1.2  | 3.0                       | 0.4                      |

## 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  |                          |                |                        |        |        |        |
| 400.00          | 3.56                         | 3.57 | 0.01                     | 26.26          | 0.74                   | 1.28   | 1.28   | 1.30   |
| 412.50          | 3.58                         | 3.59 | 0.01                     | 26.26          | 0.69                   | 1.28   | 1.28   | 1.30   |
| 437.50          | 3.50                         | 3.52 | 0.01                     | 26.14          | 0.66                   | 1.28   | 1.27   | 1.29   |
| 462.50          | 3.47                         | 3.46 | 0.01                     | 25.96          | 0.69                   | 1.27   | 1.26   | 1.28   |
| 512.50          | 3.53                         | 3.52 | 0.01                     | 25.82          | 0.77                   | 1.27   | 1.25   | 1.27   |
| 550.00          | 3.53                         | 3.50 | 0.03                     | 25.67          | 0.79                   | 1.27   | 1.24   | 1.26   |
| 587.50          | 3.53                         | 3.48 | 0.05                     | 25.50          | 0.84                   | 1.26   | 1.23   | 1.25   |
| 625.00          | 3.53                         | 3.48 | 0.05                     | 25.44          | 0.88                   | 1.25   | 1.22   | 1.25   |
| 662.50          | 3.59                         | 3.52 | 0.07                     | 25.41          | 1.00                   | 1.25   | 1.22   | 1.24   |
| 700.00          | 3.59                         | 3.51 | 0.09                     | 25.39          | 0.97                   | 1.24   | 1.21   | 1.23   |
| 737.50          | 3.56                         | 3.47 | 0.09                     | 25.43          | 1.04                   | 1.23   | 1.20   | 1.22   |
| 775.00          | 3.59                         | 3.49 | 0.10                     | 25.53          | 1.05                   | 1.21   | 1.20   | 1.21   |
| 812.50          | 3.69                         | 3.55 | 0.13                     | 25.81          | 1.02                   | 1.20   | 1.19   | 1.20   |
| 862.50          | 3.66                         | 3.50 | 0.16                     | 26.05          | 1.00                   | 1.18   | 1.18   | 1.19   |
| 900.00          | 3.66                         | 3.48 | 0.18                     | 26.24          | 1.11                   | 1.17   | 1.18   | 1.19   |

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



## electrical schematic

