*Surface Mount*

# Power Splitter/Combiner SXPS-4-13-75+

4 Way-0° 75Ω 5 to 1300 MHz

## The Big Deal

- Wideband, 5 to 1300 MHz
- High isolation, 24 dB
- Low insertion loss, 1.5 dB
- Low unbalance, 0.25 dB, 1.0˚

CASE STYLE: HF1485

## Product Overview

Mini-Circuits' SXPS-4-15-75+ is a 75Ω 4-way 0˚ surface-mount power splitter/combiner covering the 5 to 1300 MHz frequency range, supporting bandwidth requirements for DOCSIS® 3.1 systems and equipment, as well as other broadband applications. This model can handle up to 0.25W RF input power as a splitter, and provides low insertion loss and low phase and amplitude unbalance. It comes housed in a miniature, shielded package (0.44 x 0.74 x 0.19") with wraparound terminations for excellent solderability.

## Key Features

| Feature | Advantages |
|---|---|
| Wideband, 5 to 1300 MHz | Suitable for many broadband applications including DOCSIS® 3.1 systems and equipment, VHF/UHF, CATV, cellular, and more. |
| Low insertion loss, 1.5 dB | The combination of 0.25W power handling and low insertion loss makes it a suitable candidate for distributing signals while maintaining signal power. |
| Good isolation, 24 dB | Minimizes interference between ports |
| Low unbalance:<br>• 0.25 dB amplitude unbalance<br>• 1.0˚ phase unbalance | This model produces nearly equal output signals, making it ideal for use in parallel path /multichannel systems. |
| Good VSWR, 1.2:1 typ. | Provides excellent thru-path transmission with low signal reflection. |

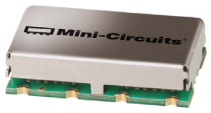
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

*Surface Mount*

# Power Splitter/Combiner

# SXPS-4-13-75+

4 Way-0° 75Ω 5 to 1300 MHz




*Generic photo used for illustration purposes only*

CASE STYLE: HF1485

***+RoHS Compliant***

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

## Maximum Ratings

| | |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 0.25W max. |
| Internal Dissipation | 0.15W max. |

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

## Pin Connections

| | |
|---|---|
| SUM PORT | 6 |
| PORT 1 | 1 |
| PORT 2 | 3 |
| PORT 3 | 5 |
| PORT 4 | 7 |
| GROUND | 2,4,8 |

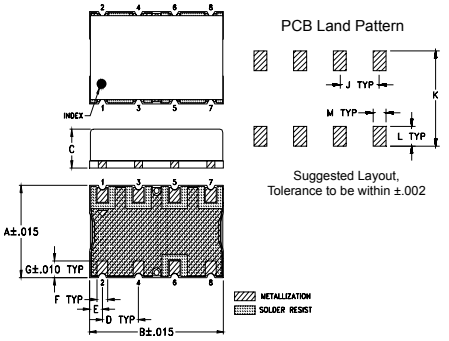
## Features

- high isolation, 24 dB typ.
- excellent input matching, VSWR 1.15 typ.
- very good output matching VSWR, 1.20 typ.
- excellent amplitude unbalance, 0.25 dB typ
- aqueous washable
- shielded case

## Applications

- DOCSIS 3.1 systems
- catv
- VHF/UHF
- communication systems
- instrumentation

## Outline Drawing

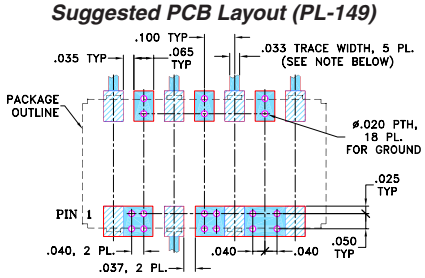



## Outline Dimensions (inch / mm)

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| .440 | .740 | .19 | .200 | .07 | .060 | .080 |
| 11.18 | 18.80 | 4.83 | 5.08 | 1.78 | 1.52 | 2.03 |

| H | J | K | L | M | | wt |
|---|---|---|---|---|---|---|
| - | .200 | .480 | .100 | .065 | | grams |
| - | 5.08 | 12.19 | 2.54 | 1.65 | | 2.50 |

***Demo Board MCL P/N: TB-218***
***Suggested PCB Layout (PL-149)***




NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

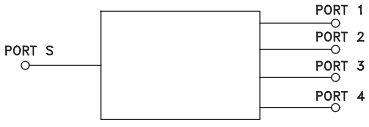
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| **Frequency Range** | | 5 | | 1300 | MHz |
| **Insertion Loss** (above theoretical 6.0 dB) | 5 - 1300 | — | 1.5 | 2.3 | dB |
| | 5 - 1218 | — | 1.2 | 2.1 | |
| **Isolation** | 5 - 1300 | 15 | 22 | — | dB |
| | 50 - 1218 | 18 | 24 | — | |
| **Phase Unbalance** | 5 - 1300 | — | 1.0 | 6.0 | Degree |
| | 5 - 1218 | — | 1.0 | 5.0 | |
| **Amplitude Unbalance** | 5 - 1300 | — | 0.25 | 0.6 | dB |
| | 5 - 1218 | — | 0.15 | 0.5 | |
| **VSWR (Port S)** | 5 - 1300 | — | 1.15 | 1.3 | :1 |
| **VSWR (Port 1-4)** | 5 - 1300 | — | 1.5 | 1.95 | :1 |
| | 50 - 1218 | — | 1.2 | 1.45 | |

## Electrical Schematic

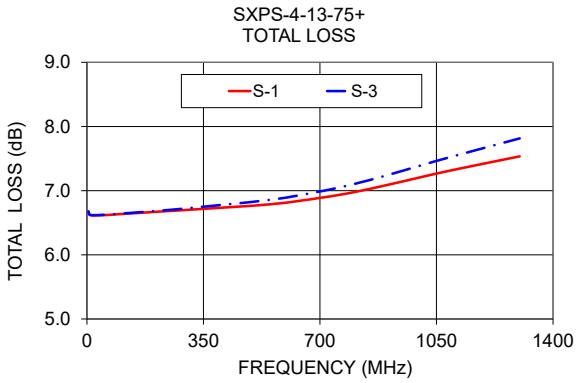


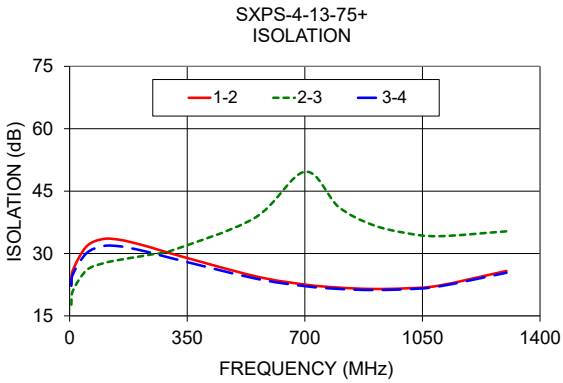

Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

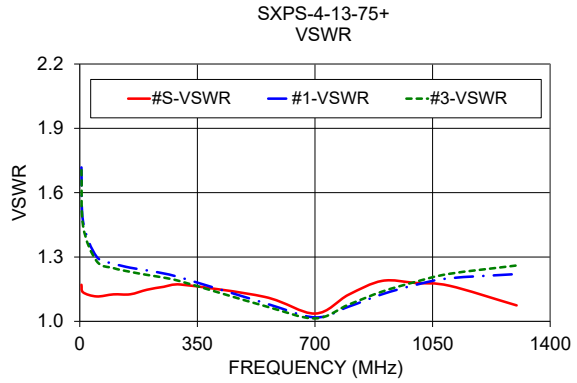
## Typical Performance Data

| Freq. (MHz) | Total Loss[1] (dB) | | | | Amp. Unbal. (dB) | Isolation (dB) | | | Phase Unbal. (deg.) | VSWR S | VSWR 1 | VSWR 2 | VSWR 3 | VSWR 4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S-1 | S-2 | S-3 | S-4 | | 1-2 | 2-3 | 3-4 | | | | | | |
| 5.0 | 6.67 | 6.68 | 6.68 | 6.68 | 0.01 | 22.52 | 17.71 | 22.23 | 0.01 | 1.17 | 1.72 | 1.72 | 1.71 | 1.70 |
| 10.0 | 6.62 | 6.62 | 6.62 | 6.63 | 0.01 | 26.03 | 21.09 | 25.07 | 0.03 | 1.13 | 1.46 | 1.46 | 1.44 | 1.44 |
| 50.0 | 6.62 | 6.63 | 6.62 | 6.63 | 0.01 | 31.68 | 25.95 | 30.06 | 0.04 | 1.12 | 1.30 | 1.30 | 1.28 | 1.28 |
| 100.0 | 6.63 | 6.65 | 6.64 | 6.65 | 0.01 | 33.49 | 27.65 | 31.79 | 0.09 | 1.13 | 1.27 | 1.27 | 1.25 | 1.25 |
| 150.0 | 6.65 | 6.66 | 6.66 | 6.67 | 0.02 | 33.28 | 28.50 | 31.72 | 0.14 | 1.13 | 1.25 | 1.25 | 1.23 | 1.23 |
| 200.0 | 6.67 | 6.68 | 6.68 | 6.68 | 0.01 | 32.37 | 29.18 | 30.98 | 0.20 | 1.15 | 1.24 | 1.24 | 1.22 | 1.22 |
| 250.0 | 6.68 | 6.70 | 6.70 | 6.70 | 0.02 | 31.27 | 29.86 | 30.02 | 0.25 | 1.16 | 1.22 | 1.22 | 1.20 | 1.20 |
| 300.0 | 6.70 | 6.72 | 6.72 | 6.72 | 0.03 | 30.05 | 30.62 | 28.94 | 0.31 | 1.17 | 1.20 | 1.20 | 1.19 | 1.19 |
| 550.0 | 6.79 | 6.82 | 6.86 | 6.83 | 0.07 | 24.58 | 38.52 | 24.03 | 0.56 | 1.11 | 1.09 | 1.09 | 1.07 | 1.08 |
| 700.0 | 6.89 | 6.93 | 6.99 | 6.93 | 0.10 | 22.54 | 49.66 | 22.16 | 0.73 | 1.04 | 1.02 | 1.00 | 1.01 | 1.01 |
| 800.0 | 6.97 | 7.03 | 7.10 | 7.02 | 0.13 | 21.81 | 41.23 | 21.49 | 0.78 | 1.12 | 1.07 | 1.06 | 1.08 | 1.05 |
| 900.0 | 7.09 | 7.15 | 7.24 | 7.13 | 0.15 | 21.48 | 36.92 | 21.22 | 0.84 | 1.19 | 1.13 | 1.12 | 1.14 | 1.10 |
| 1000.0 | 7.21 | 7.29 | 7.39 | 7.25 | 0.18 | 21.63 | 34.94 | 21.41 | 0.93 | 1.18 | 1.17 | 1.17 | 1.18 | 1.14 |
| 1100.0 | 7.32 | 7.41 | 7.54 | 7.37 | 0.21 | 22.29 | 34.17 | 22.10 | 1.00 | 1.17 | 1.20 | 1.22 | 1.22 | 1.19 |
| 1300.0 | 7.53 | 7.66 | 7.81 | 7.58 | 0.28 | 25.81 | 35.33 | 25.37 | 1.28 | 1.07 | 1.22 | 1.25 | 1.26 | 1.21 |

1. Total Loss = Insertion Loss + 6 dB splitter theoretical loss.




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-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

# 4 Way-0° Power Splitter/Combiner SXPS-4-13-75+

## *Typical Performance Data*

| FREQ. (MHz) | TOTAL LOSS[1] (dB) | | | | AMP. UNBAL. (dB) | ISOLATION (dB) | | | PHASE UNBAL. (deg.) |
|---|---|---|---|---|---|---|---|---|---|
| | S-1 | S-2 | S-3 | S-4 | | 1-2 | 2-3 | 3-4 | |
| 5 | 6.67 | 6.68 | 6.68 | 6.68 | 0.01 | 22.52 | 17.71 | 22.23 | 0.01 |
| 7 | 6.64 | 6.64 | 6.65 | 6.65 | 0.01 | 24.67 | 19.66 | 24.00 | 0.01 |
| 10 | 6.62 | 6.62 | 6.62 | 6.63 | 0.01 | 26.03 | 21.09 | 25.07 | 0.03 |
| 30 | 6.61 | 6.62 | 6.62 | 6.63 | 0.01 | 29.77 | 24.50 | 28.33 | 0.02 |
| 50 | 6.62 | 6.63 | 6.62 | 6.63 | 0.01 | 31.68 | 25.95 | 30.06 | 0.04 |
| 80 | 6.63 | 6.64 | 6.63 | 6.64 | 0.01 | 33.10 | 27.16 | 31.39 | 0.07 |
| 100 | 6.63 | 6.65 | 6.64 | 6.65 | 0.01 | 33.49 | 27.65 | 31.79 | 0.09 |
| 150 | 6.65 | 6.66 | 6.66 | 6.67 | 0.02 | 33.28 | 28.50 | 31.72 | 0.14 |
| 200 | 6.67 | 6.68 | 6.68 | 6.68 | 0.01 | 32.37 | 29.18 | 30.98 | 0.20 |
| 250 | 6.68 | 6.70 | 6.70 | 6.70 | 0.02 | 31.27 | 29.86 | 30.02 | 0.25 |
| 300 | 6.70 | 6.72 | 6.72 | 6.72 | 0.03 | 30.05 | 30.62 | 28.94 | 0.31 |
| 350 | 6.71 | 6.73 | 6.75 | 6.74 | 0.03 | 28.80 | 31.58 | 27.84 | 0.36 |
| 400 | 6.73 | 6.75 | 6.77 | 6.76 | 0.04 | 27.60 | 32.73 | 26.78 | 0.40 |
| 450 | 6.75 | 6.77 | 6.80 | 6.77 | 0.05 | 26.51 | 34.20 | 25.79 | 0.45 |
| 500 | 6.77 | 6.80 | 6.82 | 6.80 | 0.06 | 25.52 | 36.00 | 24.88 | 0.53 |
| 550 | 6.79 | 6.82 | 6.86 | 6.83 | 0.07 | 24.58 | 38.52 | 24.03 | 0.56 |
| 600 | 6.82 | 6.85 | 6.90 | 6.86 | 0.08 | 23.80 | 41.95 | 23.32 | 0.60 |
| 650 | 6.85 | 6.88 | 6.94 | 6.89 | 0.09 | 23.09 | 47.19 | 22.66 | 0.68 |
| 700 | 6.89 | 6.93 | 6.99 | 6.93 | 0.10 | 22.54 | 49.66 | 22.16 | 0.73 |
| 750 | 6.93 | 6.98 | 7.04 | 6.97 | 0.11 | 22.12 | 45.15 | 21.77 | 0.76 |
| 800 | 6.97 | 7.03 | 7.10 | 7.02 | 0.13 | 21.81 | 41.23 | 21.49 | 0.78 |
| 850 | 7.03 | 7.09 | 7.17 | 7.08 | 0.14 | 21.59 | 38.73 | 21.31 | 0.80 |
| 870 | 7.05 | 7.12 | 7.19 | 7.10 | 0.14 | 21.53 | 37.94 | 21.26 | 0.85 |
| 900 | 7.09 | 7.15 | 7.24 | 7.13 | 0.15 | 21.48 | 36.92 | 21.22 | 0.84 |
| 950 | 7.14 | 7.22 | 7.31 | 7.19 | 0.17 | 21.51 | 35.75 | 21.27 | 0.90 |
| 1000 | 7.21 | 7.29 | 7.39 | 7.25 | 0.18 | 21.63 | 34.94 | 21.41 | 0.93 |
| 1100 | 7.32 | 7.41 | 7.54 | 7.37 | 0.21 | 22.29 | 34.17 | 22.10 | 1.00 |
| 1200 | 7.43 | 7.53 | 7.67 | 7.47 | 0.24 | 23.63 | 34.49 | 23.39 | 1.14 |
| 1300 | 7.53 | 7.66 | 7.81 | 7.58 | 0.28 | 25.81 | 35.33 | 25.37 | 1.28 |

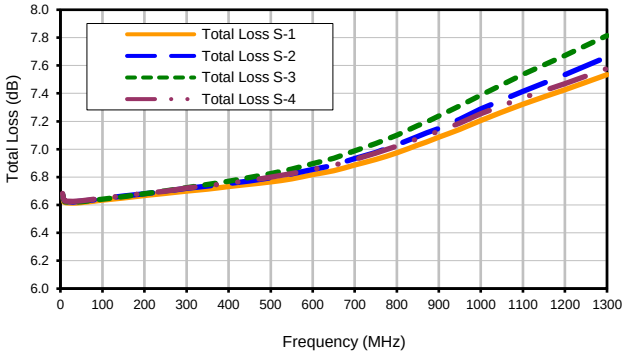
| FREQ. (MHz) | VSWR (:1) | | | | |
|---|---|---|---|---|---|
| | S | 1 | 2 | 3 | 4 |
| 5 | 1.17 | 1.72 | 1.72 | 1.71 | 1.70 |
| 7 | 1.15 | 1.56 | 1.56 | 1.54 | 1.54 |
| 10 | 1.13 | 1.46 | 1.46 | 1.44 | 1.44 |
| 30 | 1.12 | 1.33 | 1.33 | 1.31 | 1.31 |
| 50 | 1.12 | 1.30 | 1.30 | 1.28 | 1.28 |
| 80 | 1.12 | 1.28 | 1.28 | 1.26 | 1.26 |
| 100 | 1.13 | 1.27 | 1.27 | 1.25 | 1.25 |
| 150 | 1.13 | 1.25 | 1.25 | 1.23 | 1.23 |
| 200 | 1.15 | 1.24 | 1.24 | 1.22 | 1.22 |
| 250 | 1.16 | 1.22 | 1.22 | 1.20 | 1.20 |
| 300 | 1.17 | 1.20 | 1.20 | 1.19 | 1.19 |
| 350 | 1.18 | 1.18 | 1.18 | 1.17 | 1.17 |
| 400 | 1.17 | 1.16 | 1.16 | 1.15 | 1.15 |
| 450 | 1.17 | 1.14 | 1.14 | 1.12 | 1.13 |
| 500 | 1.15 | 1.11 | 1.11 | 1.10 | 1.11 |
| 550 | 1.11 | 1.09 | 1.09 | 1.07 | 1.08 |
| 600 | 1.08 | 1.06 | 1.06 | 1.04 | 1.06 |
| 650 | 1.07 | 1.03 | 1.03 | 1.02 | 1.04 |
| 700 | 1.04 | 1.02 | 1.00 | 1.01 | 1.01 |
| 750 | 1.06 | 1.04 | 1.03 | 1.04 | 1.02 |
| 800 | 1.12 | 1.07 | 1.06 | 1.08 | 1.05 |
| 850 | 1.15 | 1.10 | 1.09 | 1.11 | 1.07 |
| 870 | 1.16 | 1.11 | 1.10 | 1.12 | 1.08 |
| 900 | 1.19 | 1.13 | 1.12 | 1.14 | 1.10 |
| 950 | 1.21 | 1.15 | 1.15 | 1.16 | 1.12 |
| 1000 | 1.18 | 1.17 | 1.17 | 1.18 | 1.14 |
| 1100 | 1.17 | 1.20 | 1.22 | 1.22 | 1.19 |
| 1200 | 1.12 | 1.22 | 1.24 | 1.25 | 1.21 |
| 1300 | 1.07 | 1.22 | 1.25 | 1.26 | 1.21 |

1. Total Loss = Insertion Loss + 6 dB splitter theoretical loss

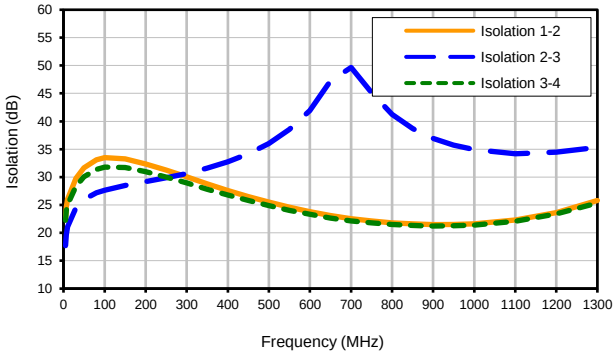
# 4 Way-0° Power Splitter/Combiner SXPS-4-13-75+

## *Typical Performance Curves*

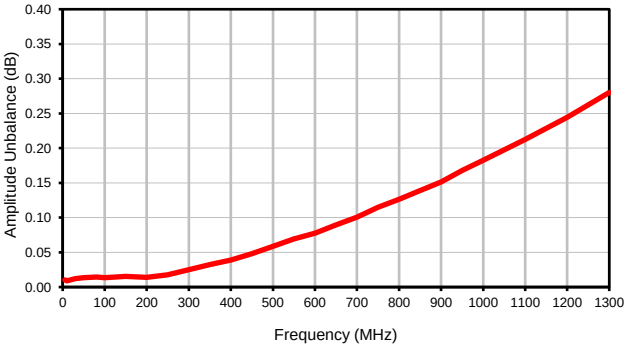
**Total Loss**



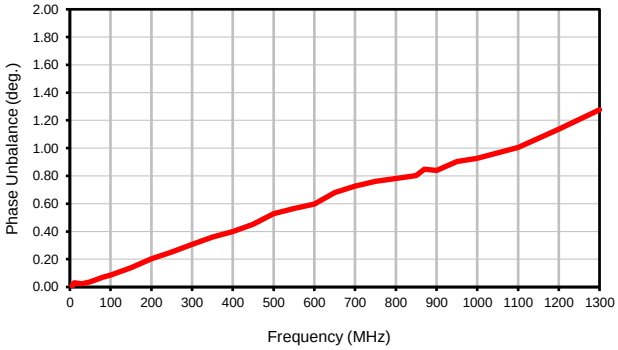

**Isolation**



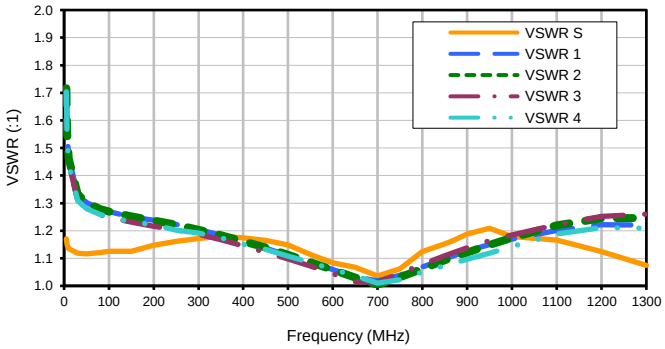

**Amplitude Unbalance**




**Phase Unbalance**



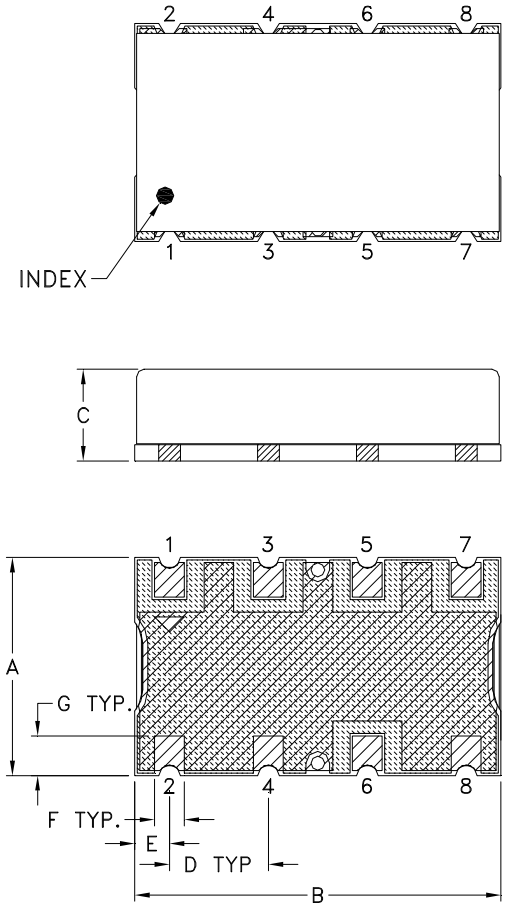

**VSWR**



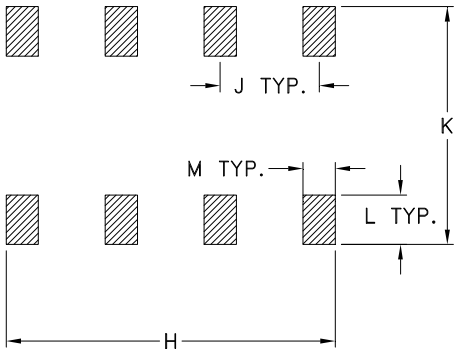
# Case Style HF

**HF1485**

## Outline Dimensions




### PCB Land Pattern




Suggested Layout,
Tolerance to be within ±.002

METALLIZATION

SOLDER RESIST

| CASE # | A | B | C | D | E | F | G | H | J | K | L | M | WT. GRAMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HF1485 | .44 (11.18) | .74 (18.80) | .19 (4.83) | .200 (5.08) | .07 (1.78) | .060 (1.52) | .080 (2.03) | .665 (16.89) | .200 (5.08) | .480 (12.19) | .100 (2.54) | .065 (1.65) | 2.5 |

**Dimensions are in inches (mm). Tolerances: 2 Pl. ±.015"; 3 Pl. ±.01"**

### Notes:

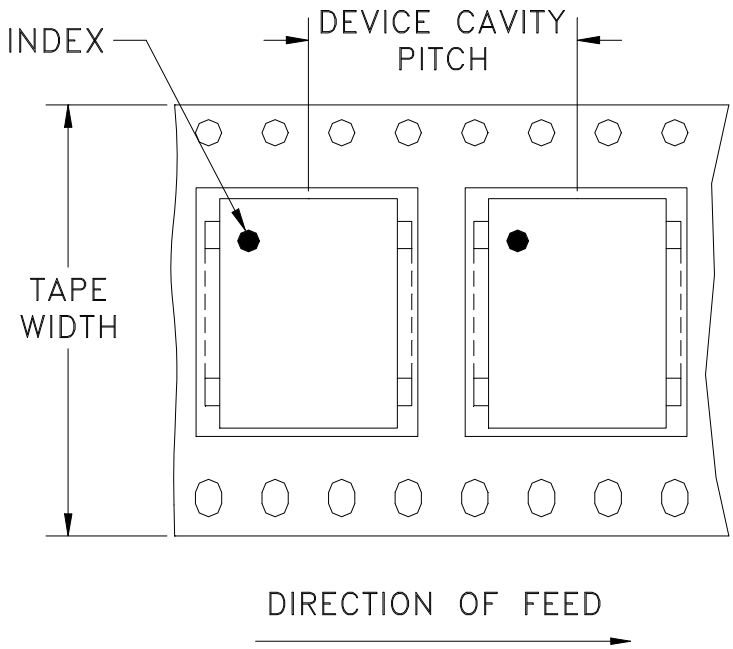
1. Case material: Nickel-Silver alloy.
2. Base: Printed wiring laminate.
3. Termination finish:
   For RoHS Case Styles: 2-5 µ inch (.05-.13 microns) Gold over 120-240 µ inch (3.05-6.10 microns) Nickel plate.
   For RoHS-5 Case Styles: Tin-Lead plate.



This document and its contents are the property of Mini-Circuits.

# Tape & Reel Packaging TR-F5

DEVICE ORIENTATION IN T&R




| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel |
|---|---|---|---|
| 32 | 16 | 13 | 500 |

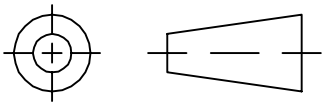
Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
Mini-Circuits ISO 9001 & ISO 14001 Certified


This document and its contents are the property of Mini-Circuits.

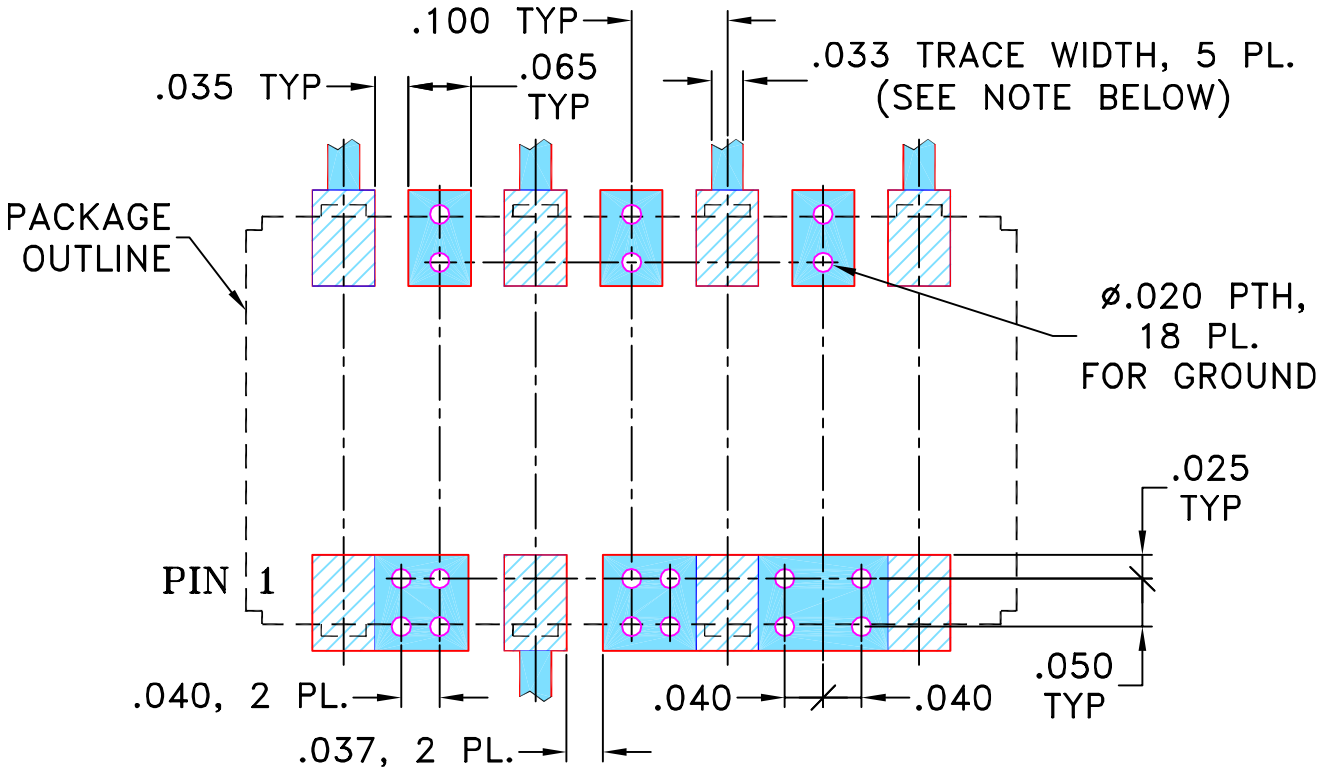
THIRD ANGLE PROJECTION



REVISIONS

| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
|---|---|---|---|---|---|
| OR | M90087 | NEW RELEASE | 12/18/03 | AV | HY |
| A | M102713 | ADDED "...WITH SMOBC" | 01/12/06 | GF | IL |
| | | | | | |
| | | | | | |

# SUGGESTED MOUNTING CONFIGURATION FOR BJ360 CASE STYLE, "kb" PIN CONNECTION




NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

| UNLESS OTHERWISE SPECIFIED | | INITIALS | DATE |
|---|---|---|---|
| DIMENSIONS ARE IN INCHES | DRAWN | AV | 12/11/03 |
| TOLERANCES ON: | CHECKED | IL | 12/18/03 |
| 2 PL DECIMALS ± | APPROVED | HY | 12/18/03 |
| 3 PL DECIMALS ± .005 | | | |
| ANGLES ± | | | |
| FRACTIONS ± | | | |

Mini-Circuits®

THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI-CIRCUITS. EXCEPT FOR USE EXPRESSLY GRANTED, IN WRITING, TO ITS VENDORS, VENDEE AND THE UNITED STATES GOVERNMENT, MINI-CIRCUITS RESERVES ALL PROPRIETARY DESIGN, USE , MANUFACTURING AND REPRODUCTION RIGHTS THERETO. THESE CONTENTS SHALL NOT BE USED, DUPLICATED OR DISCLOSED TO ANY OUTSIDE PARTY, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION OF MINI-CIRCUITS.

ASHEETA1.DWG REV:A DATE:01/12/95

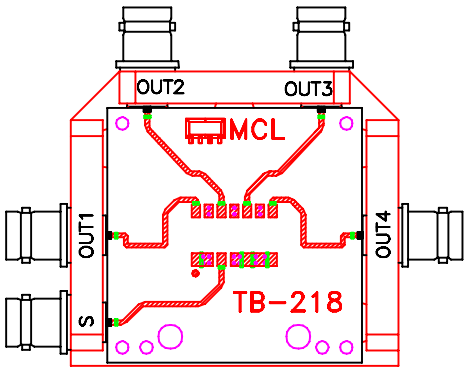
Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

PL, kb, 75, BJ360, JS4PS, TB-218

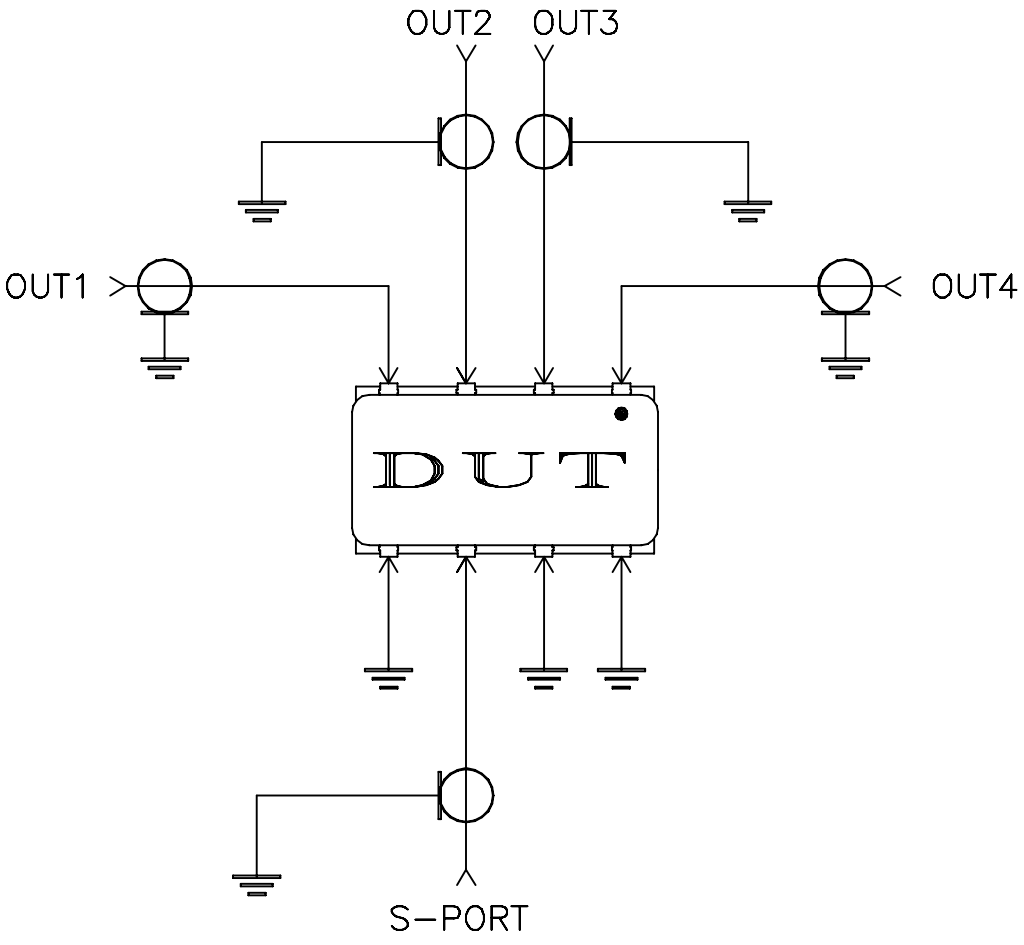
| SIZE | CODE IDENT | DRAWING NO: | REV: |
|---|---|---|---|
| A | 15542 | 98-PL-149 | A |

| FILE: | SCALE: | SHEET: |
|---|---|---|
| 98PL149 | 5:1 | 1 OF 1 |

# Evaluation Board and Circuit




TB-218




Schematic Diagram

## Notes:

1. BNC Female connectors.
2. PCB Material: Rogers RO4350 or equivalent, Dielectric Constant=3.5, Thickness=.030 inch.

Mini-Circuits®


THIS DOCUMENT AND ITS CONTENTS ARE THE PROPERTY OF MINI-CIRCUITS.

Mini-Circuits

# Environmental Specifications ENV02T1

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---|---|---|
| Operating Temperature | -40° to 85°C<br>Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C<br>Ambient Environment | Individual Model Data Sheet |
| Humidity | 90 to 95% RH, 240 hours, 50°C | MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours |
| Thermal Shock | -55° to 100°C, 100 cycles | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Solder Reflow Heat | Sn-Pb Eutetic Process: 225°C peak<br>Pb-Free Process 245° - 250°C peak | J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1 |
| Solderability | 10X Magnification | J-STD-002, 95% Coverage |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36) | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock | 50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes | MIL-STD-202, Method 213, Condition A |
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C;<br>distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215 |


This document and its contents are the property of Mini-Circuits.