

1:3 Transformer 5 - 1200 MHz

V2

Features

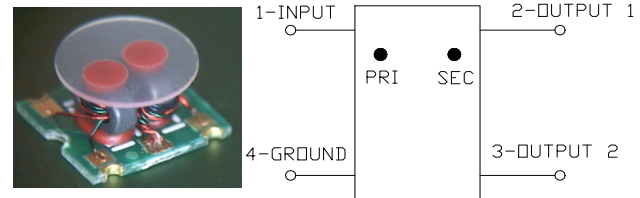
- Surface Mount
- 1:3 Impedance
- Available on Tape and Reel
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Excellent Temperature Stability
- Can be used on 50 Ω & 75 Ω Systems

Description

The MABA-010441-CT38A0 is a 1:3 transformer assembled in a surface mount package.

Ideally suited for CATV Broadband.

Functional Schematic



Pin Configuration

| Pin No. | Function |
|---------|--------------------------|
| 1 | Primary Dot (input) |
| 2 | Secondary Dot (output 1) |
| 3 | Secondary (output 2) |
| 4 | Primary (ground) |

Electrical Specifications: Freq. = 5 - 1200 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{in} = 0 dBm

| Parameter | Conditions | Units | Min. | Typ. | Max. |
|-------------------------------------|-----------------|---------|------|------|-------|
| Impedance Ratio | — | — | — | 1:3 | — |
| Insertion Loss 1 (Pin 1 - Pin 2) | 5 - 50 MHz | dB | — | 0.75 | 1.20 |
| | 50 - 1000 MHz | | | 1.10 | 1.90 |
| | 1000 - 1200 MHz | | | 1.75 | 2.25 |
| Insertion Loss 2 (Pin 1 - Pin 3) | 5 - 50 MHz | dB | — | 0.70 | 1.30 |
| | 50 - 1000 MHz | | | 1.10 | 2.20 |
| | 1000 - 1200 MHz | | | 1.75 | 2.50 |
| Amplitude Unbalance | 5 - 50 MHz | dB | — | 0.02 | ±0.70 |
| | 50 - 1000 MHz | | | 0.05 | ±0.70 |
| | 1000 - 1200 MHz | | | 0.15 | ±0.80 |
| Phase Balance | 5 - 50 MHz | degrees | — | 0.6 | ±5 |
| | 50 - 1200 MHz | | | 6.6 | ±10 |
| Input Return Loss | 5 - 50 MHz | dB | 19 | 21 | — |
| | 50 - 1000 MHz | | 15 | 21 | |
| | 1000 - 1200 MHz | | 15 | 24 | |

Ordering Information¹

| Part Number | Description |
|-----------------------|----------------|
| MABA-010441-CT38A0 | 900 piece reel |
| MABA-010441-CT38A0-TB | sample board |

1. All sample boards include 5 loose parts.

Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|------------------|
| Input Power | 250 mW |
| DC Current | 200 mA |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -55°C to +125°C |

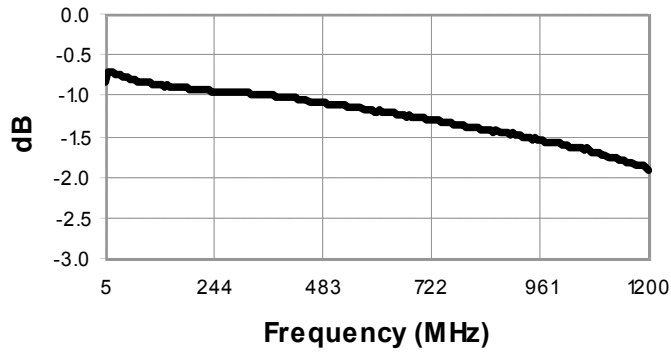
MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

1:3 Transformer 5 - 1200 MHz

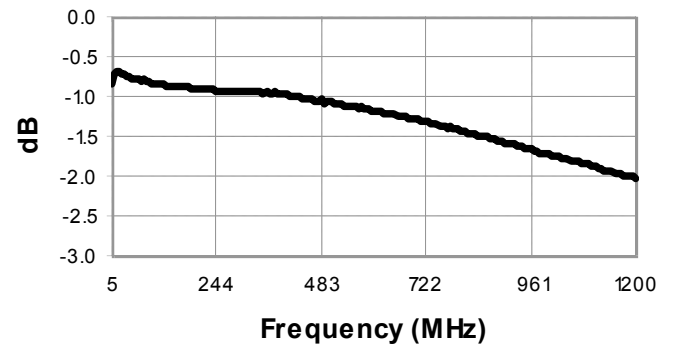
V2

Typical Performance Curves: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$, $P_{IN} = 0 \text{ dBm}$

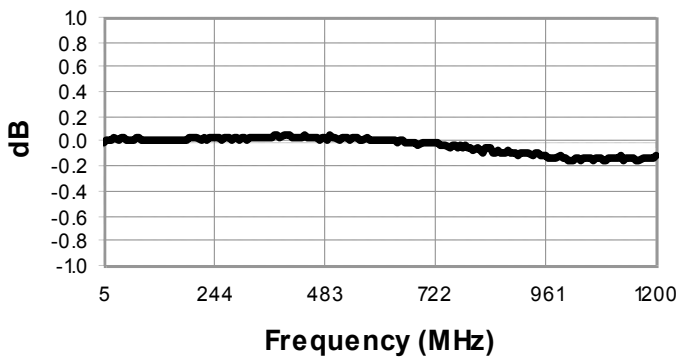
Insertion Loss: Pin1—Pin2



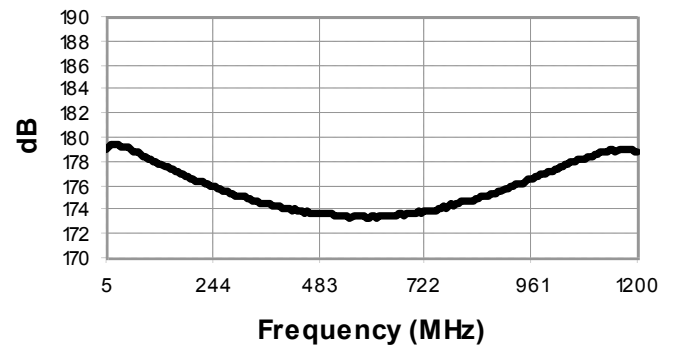
Insertion Loss: Pin1—Pin3



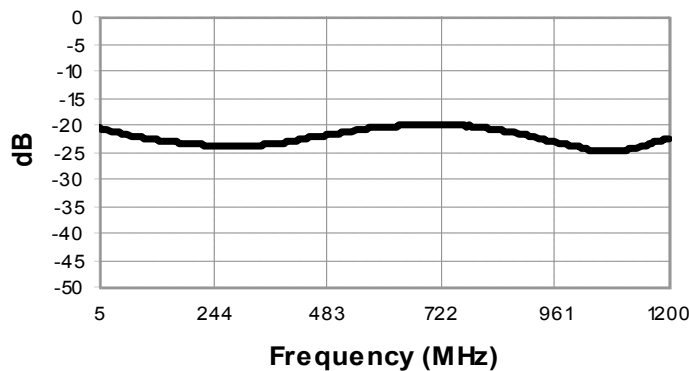
Amplitude Balance



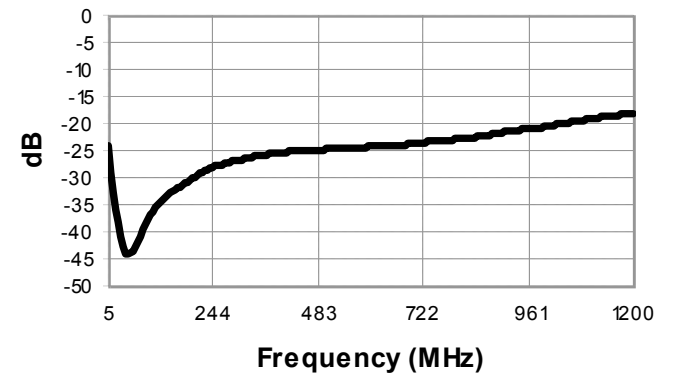
Phase Balance



Return Loss: Input



Return Loss: Output



2 Full temperature plots available on request

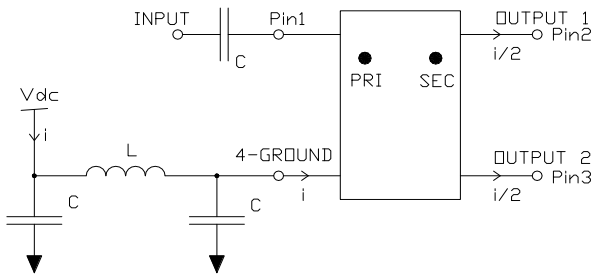
MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
<https://www.macom.com/support>

1:3 Transformer 5 - 1200 MHz

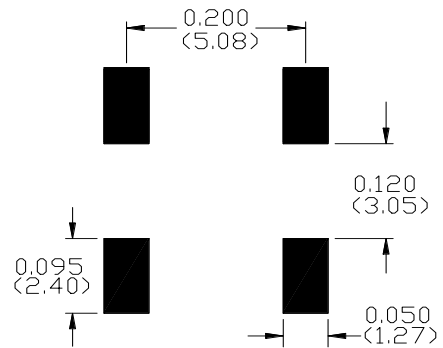
V2

Recommended DC Bias Circuit

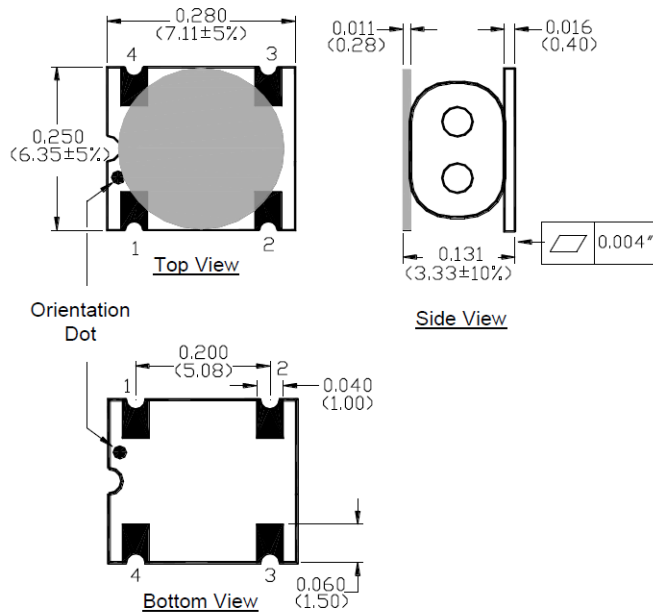


| Cap/Ind | 5 - 50 MHz | 50 - 1200 MHz |
|---------|------------|---------------|
| C | 100 nF | 10 nF |
| L | 10 μ H | 1 μ H |

Recommended Board Layout



Outline Drawing



Tape & Reel Information

| Parameter | Units | Value |
|----------------|-------|-------|
| Qty per reel | - | 900 |
| Reel size | mm | 330 |
| Tape width | mm | 16.00 |
| Pitch | mm | 12.00 |
| A ₀ | mm | 6.70 |
| B ₀ | mm | 7.50 |
| K ₀ | mm | 3.60 |
| Orientation | - | F27 |

Dimensions in mm.
Tolerance: ± 0.2 mm unless otherwise noted.
Model number and lot code are printed on the reel.
Finish: ENIG

MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9