

16 dB Coupler 5 - 1225 MHz

Rev. V1

Features

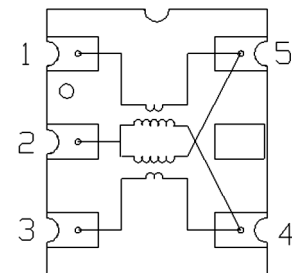
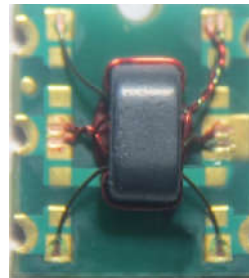
- 16 dB Coupling Ratio
- Surface Mount
- Available on Tape and Reel
- High isolation from 100 - 700 MHz
- Low insertion loss
- Excellent Temperature Stability
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible

Description

The MACP-011056 is a 16 dB coupler in a low cost, surface mount package.

Ideally suited for CATV, Full Duplex and DOCSIS 3.1 applications.

Functional Schematic



Pin Configuration³

Pin #	Function	Pin #	Function
1	Input	4	External 75 Ω
2	Ground	5	Output
3	Coupled		

3. MACOM recommends connecting unused package pins to ground.

Electrical Specifications: Freq. = 5 - 1225 MHz, T_A = 25°C, Z₀ = 75 Ω, P_{IN} = 0 dBm

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Coupling Ratio	-	dB	—	16	—
Coupling (pin 1 - pin 3)	5 - 1225	dB	15.5	16	16.5
Main Line Loss (pin 1 - pin 5)	5 - 700 700 - 1225	dB	—	0.55 0.70	0.65 0.90
Isolation (pin 5 - pin 3)	5 - 100 100 - 700 700 - 1225	dB	37 40 28	40 43 33	—
Input Return Loss (pin 1)	5 - 700 700 - 1225	dB	18 15	23 18	—
Output Return Loss (pin 5)	5 - 700 700 - 1225	dB	19 15	24 18	—
Coupling Return Loss (pin 3)	5 - 700 700 - 1225	dB	14 11	19 13	—

Ordering Information^{1,2}

Part Number	Package
MACP-011056	900 piece reel
MACP-011056-TB	Sample Board

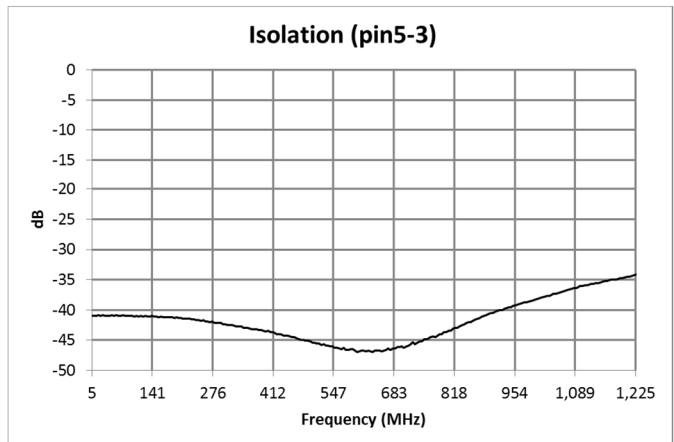
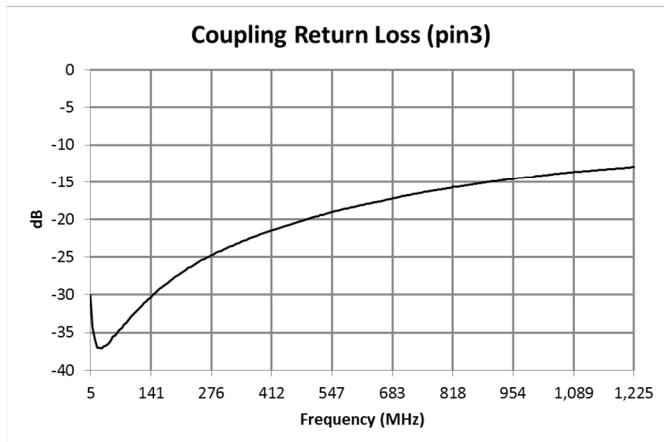
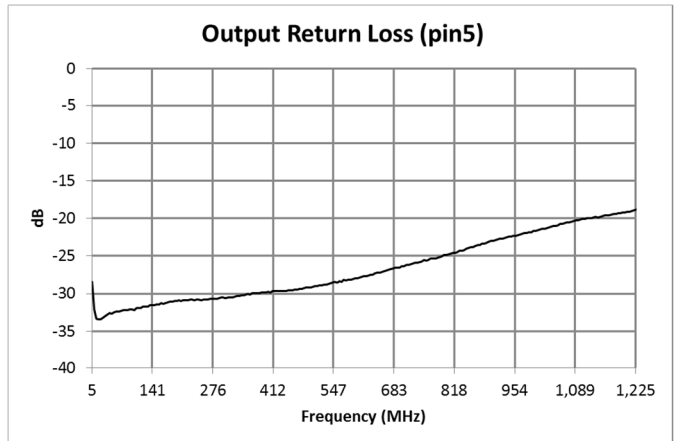
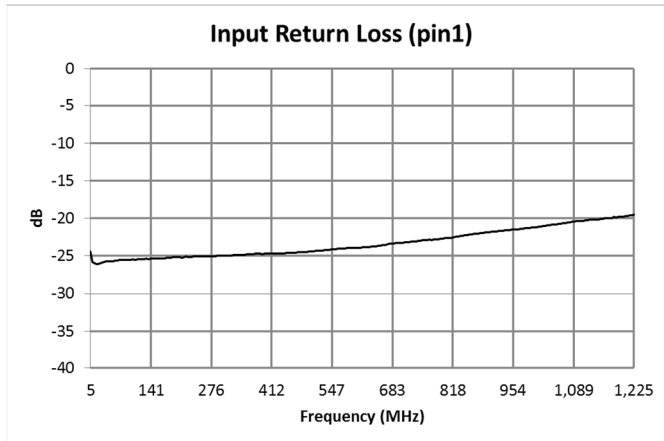
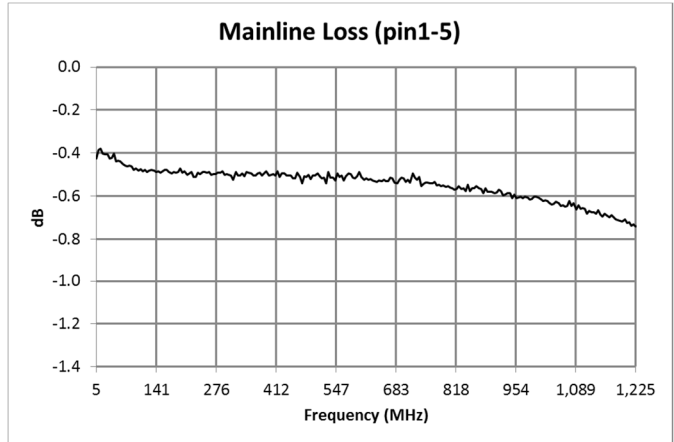
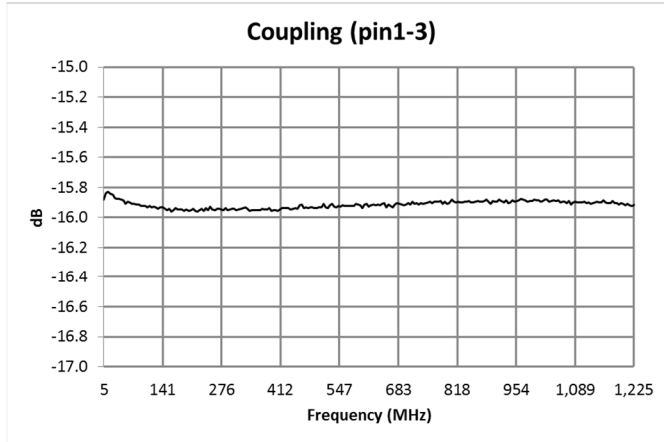
1. Reference Application Note M513 for reel size information.
2. All sample boards include 5 loose parts.

Absolute Maximum Ratings^{4,5}

Parameter	Absolute Maximum
Input Power ⁶	2 W
DC Current	500 mA
Operating Temperature	-40°C to +85°C

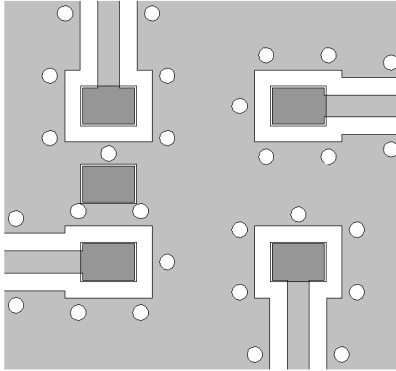
4. Exceeding any one or combination of these limits may cause permanent damage to this device.
5. MACOM does not recommend sustained operation near these survivability limits.
6. Specified at +25°C only.

Typical Performance Curves⁷



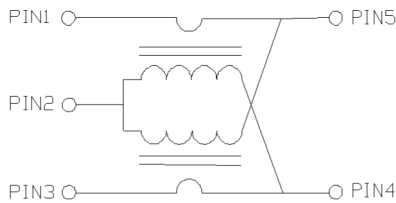
7. Full temperature plots available on request.

PCB Layout⁸

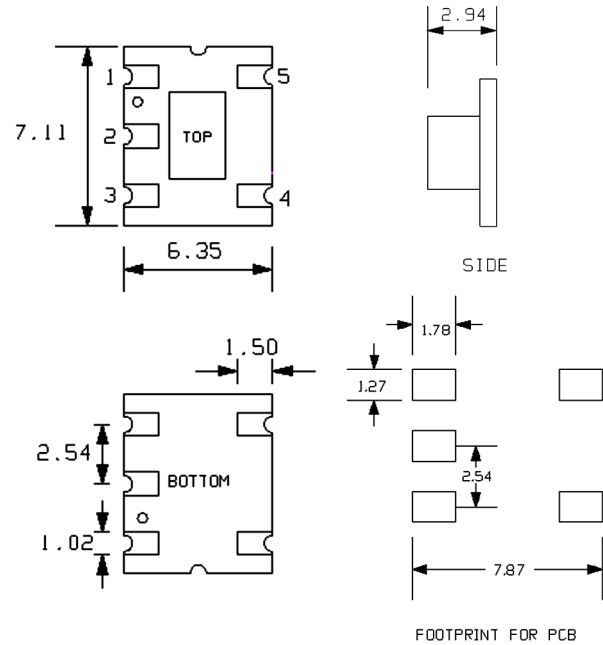


8. Recommended PCB layout shown above uses 1.6 mm FR4, Grounded coplanar wave guide, transmission line width 0.70 mm and gap 0.57 mm.

Application Schematic

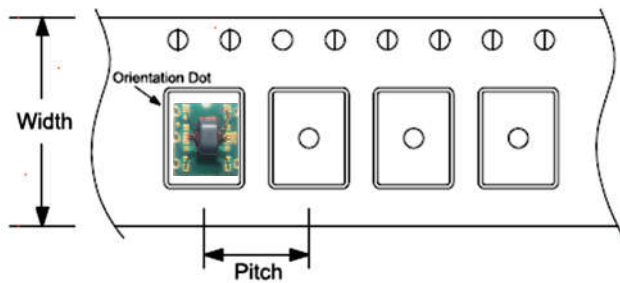


Outline Drawing^{9,10,11,12}



9. Dimensions in mm.
10. Tolerance: ± 0.2 mm unless otherwise noted.
11. Model number and lot code printed on reel.
12. Finish: Electroless Nickel Immersion Gold.

Carrier Tape Orientation



Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	900
Reel Size	mm	330
Tape Width	mm	16.0
Pitch	mm	12.0
Orientation	-	F62
Reference Application Note ANI-019 for orientation		

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.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru