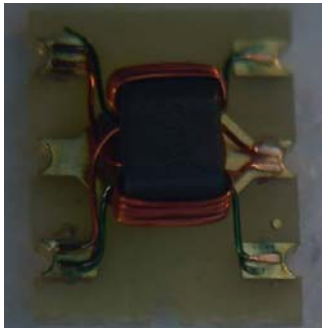


Features

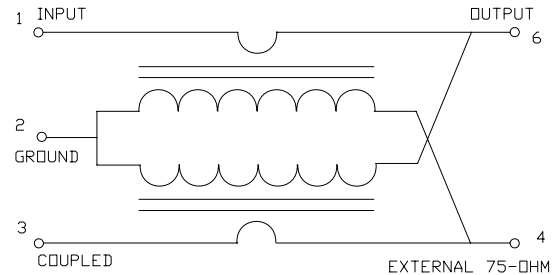
- Surface Mount
- Coupling 16dB typical
- 260°C Reflow Compatible
- RoHS Compliant, Lead free
- RoHS version of EMDC-16-11-75
- Available on Tape and Reel.

Description

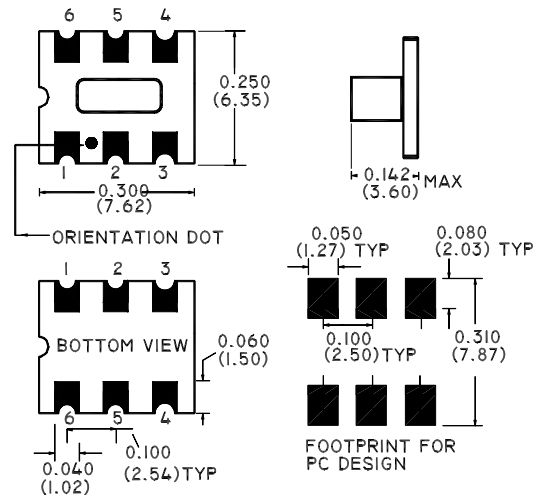
M/A-COM's MACP-009821-CG0650 is a high performance 75 Ohm Coupler, in a SM-101 low cost, surface mount package. The MACP-009821-CG0650 is designed for use in high volume CATV applications. Typical applications include Set-top Boxes, Network Interface Units, Broadband Amplifiers and Headend equipment.



Schematic



Case style: SM-101



Pin configuration

Pin No.	Function
1	Input
2	Ground
3	Coupled
4	Isolated, external 75 Ohms
5	Not Connected
6	Output

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010, unless otherwise stated

Ordering information

Part number	Description
MACP-009821-CG0650	900 piece reel
MACP-009821-CG06TB	Customer Test Board

Note: Reference Application Note **M513** for reel size information.

* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

ADVANCED: Data Sheets contain information regarding a product MA-COM Technical Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product MA-COM Technical Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product information.

MA-COM Technical Solutions and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.

Electrical Specifications: $T_A = 25^\circ\text{C}$, 0dBm , $Z_0 = 75\Omega$, $P_{in} = 0\text{dBm}$

Parameter	Frequency	Units	Min	Typ	Max
Mainline Loss	5 - 862 MHz	dB	-	1.05	1.25
Coupling	5 - 44 MHz	dB	-	16	± 0.5
	45 MHz	dB	-	16	± 0.2
	862 MHz	dB	-	15.6	± 0.3
Coupling Flatness	5 - 862 MHz	dB	-	-	± 0.3
Isolation	5 - 862 MHz	dB	29	33	-
Input Return Loss	5 - 862 MHz	dB	18	25	-
Output Return Loss	5 - 862 MHz	dB	18	25	-
Coupled Return Loss	5 - 862 MHz	dB	18	25	-

Recommended Maximum Ratings^{1,2}

Parameter	Value
RF power	250mW
DC current	30mA
Operating Temperature	-40°C to $+85^\circ\text{C}$
Storage Temperature	-40°C to $+85^\circ\text{C}$

MACP-009821-CG0650

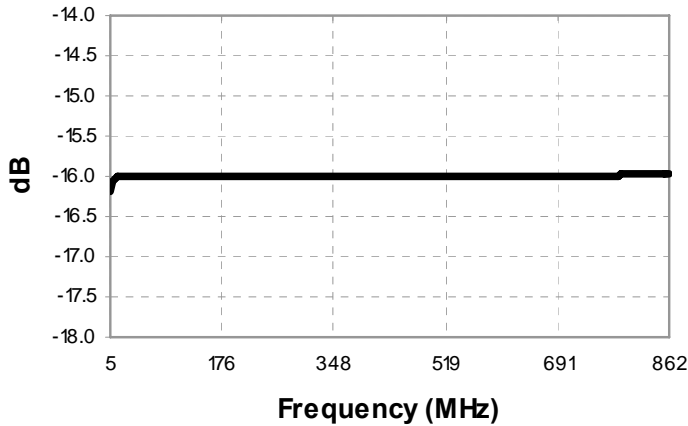


16dB 75Ohm Coupler
5 to 862MHz

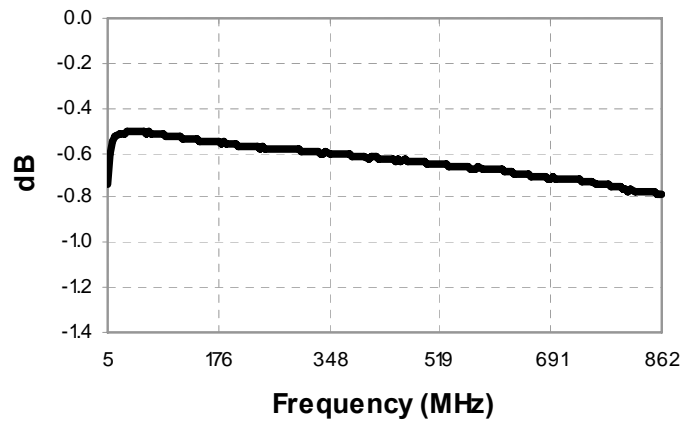
M/A-COM Products
Rev. V1

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

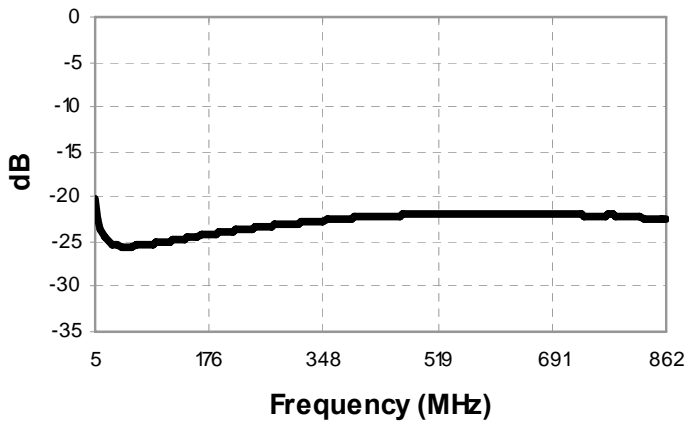
Coupling



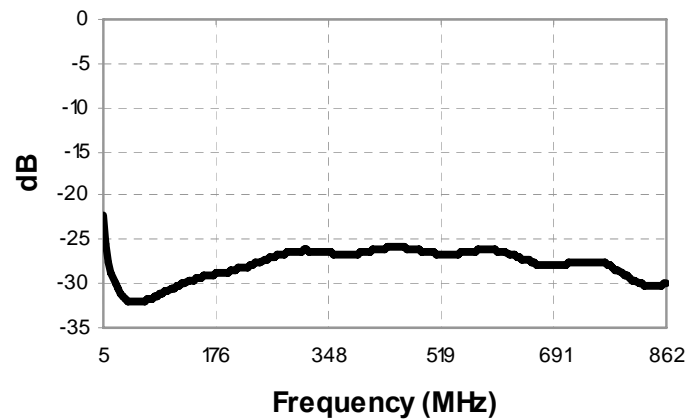
Main Line Loss



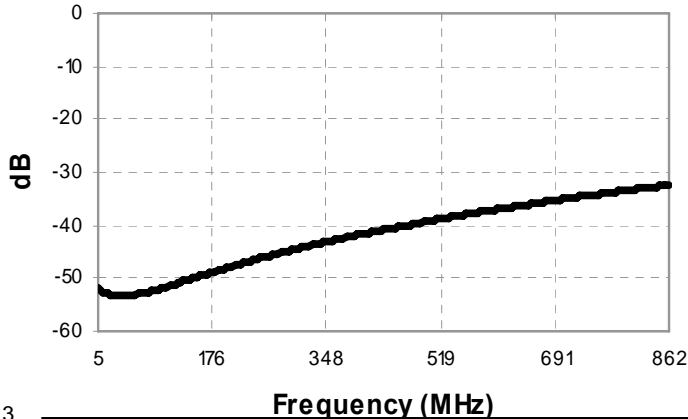
Return Loss: Input



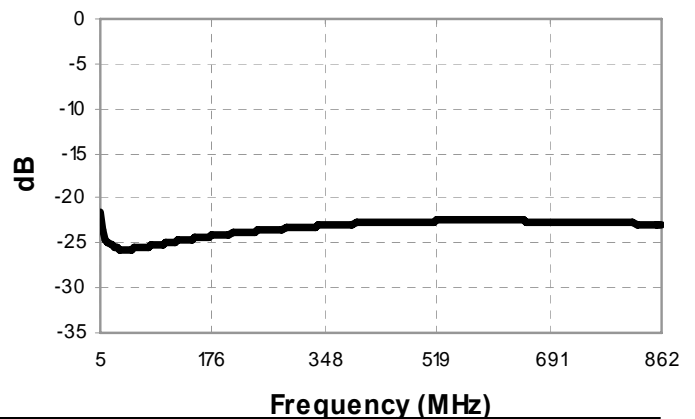
Return Loss: Output



Isolation



Return Loss: Coupled



3

ADVANCED: Data Sheets contain information regarding a product MA-COM Technical Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product MA-COM Technical Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

• **North America** Tel: 800.366.2266 / Fax: 978.366.2266

• **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300

• **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product information.

MA-COM Technical Solutions and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.