RoHS Compliant

E-Series 17.4dB Coupler 5-870MHz

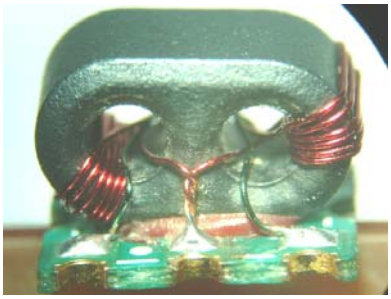
MACPCT0038
V1P

Features

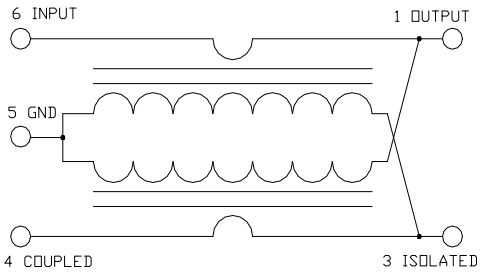
- Surface Mount
- Typical Coupling 17.4dB
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel. Reel quantity 900

Description

M/A-COM's MACPCT0038 is a high performance 75 Ohm Coupler, in a SM-103 low cost, surface mount package. The MACPCT0038 is specifically designed for extremely low intermod distortion in CATV applications.



Schematic



Pin Configuration

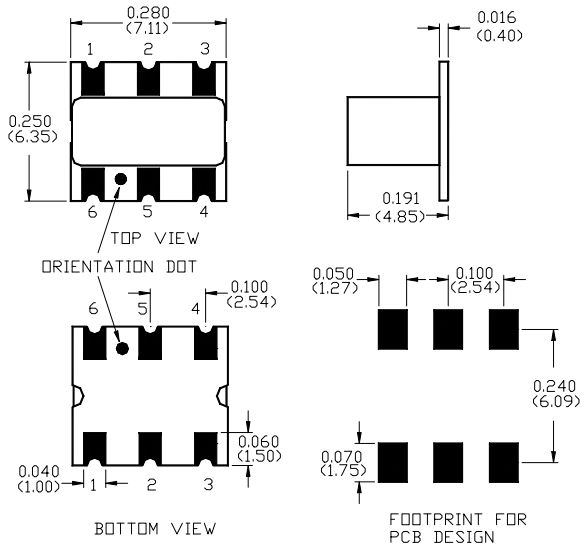
Pin No.	Function
1	Output
2	Ground
3	Isolated (external 75 Ohm load)
4	Coupled
5	Not Connected
6	Input

Ordering Information

Part Number	Package
MACPT0038TR	900 piece reel

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

Case Style: SM-103



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

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

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology 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.

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RoHS Compliant

E-Series 17.4dB Coupler
5-870MHz

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Electrical Specifications: T_A = 25°C, Z_0 = 75Ω [1]

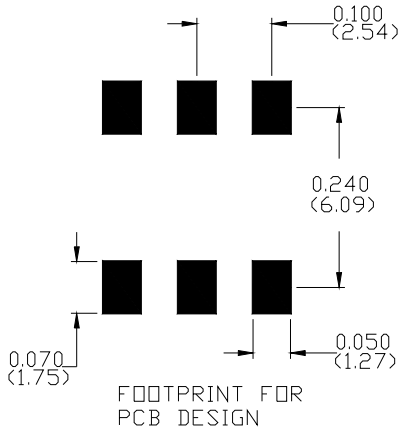
Parameter	Test Conditions	Units	Min	Typ	Max
Coupling (Nominal 17.4dB)	5 - 870MHz	dB	-	17.4	± 0.4
Main Line Loss	5 - 40MHz	dB	-	0.4	0.6
Main Line Loss	40—870MHz	dB	-	0.5	0.8
Isolation	5 - 40 MHz	dB	40	55	-
Isolation	40 - 870MHz	dB	26	40	-
Directivity	5 - 40MHz	dB	20	40	-
Directivity	40—760MHz	dB	10	25	-
Directivity	760 - 870 MHz	dB	9	14	-
Input Return Loss	5 - 40MHz	dB	20	25	-
Input Return Loss	40 - 870MHz	dB	21	27	-
Output Return Loss	5 - 40MHz	dB	20	30	-
Output Return Loss	40 - 870MHz	dB	23	34	-
Coupling Return Loss	5 - 40 MHz	dB	20	25	-
Coupling Return Loss	40 - 870MHz	dB	21	26	-
Isolation Return Loss	5 - 870MHz	dB	19	30	-

Absolute Maximum Ratings [1,2]

Parameter	Absolute Maximum
Max Input Power	250mW
DC current	30mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration



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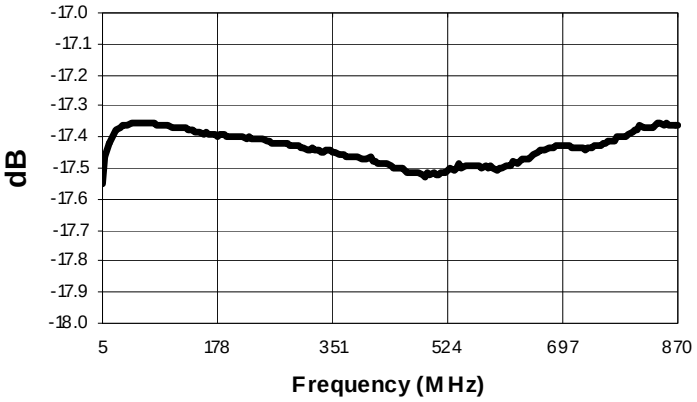
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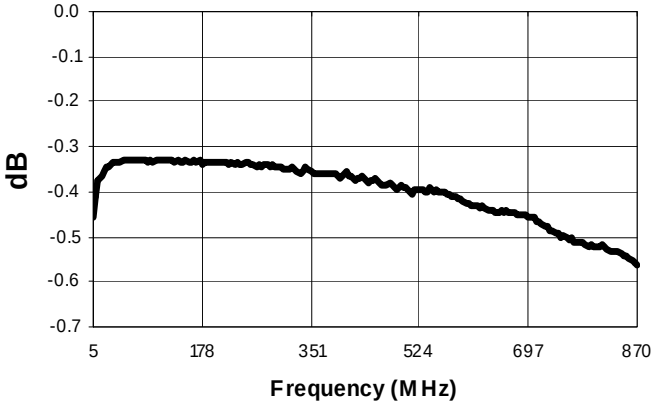
MACPCT0038
V1P

Typical Performance Curves: T_A = 25°C, Z_0 = 75Ω [1]

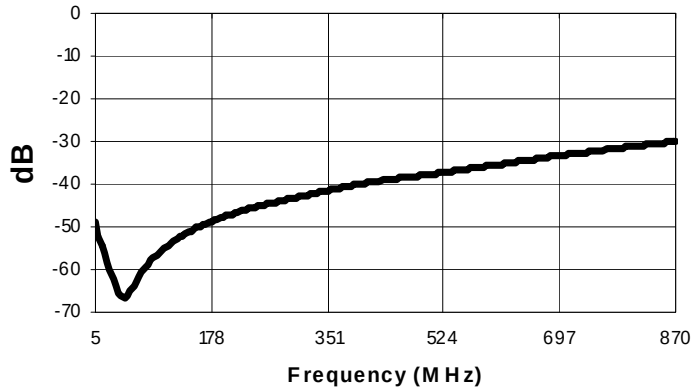
Coupling



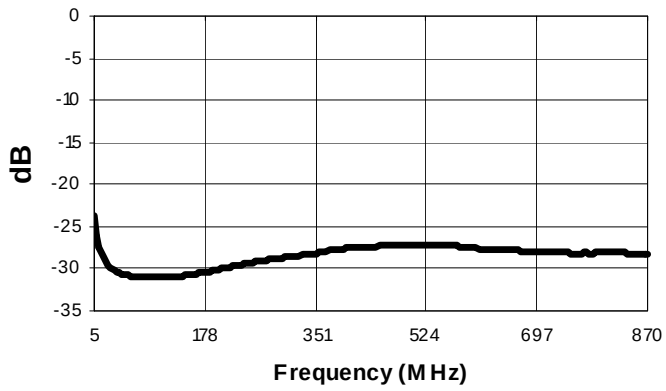
Main Line Loss



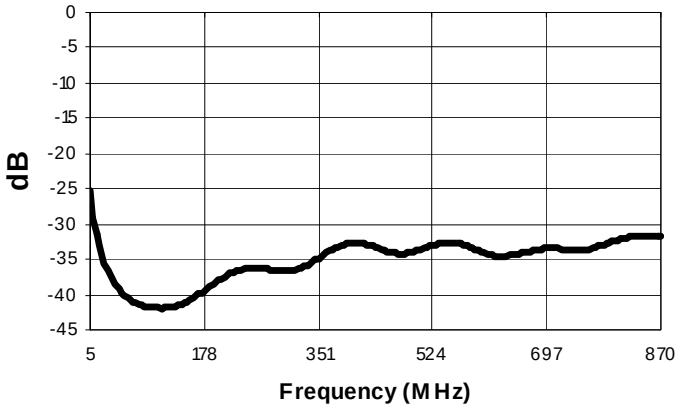
Isolation



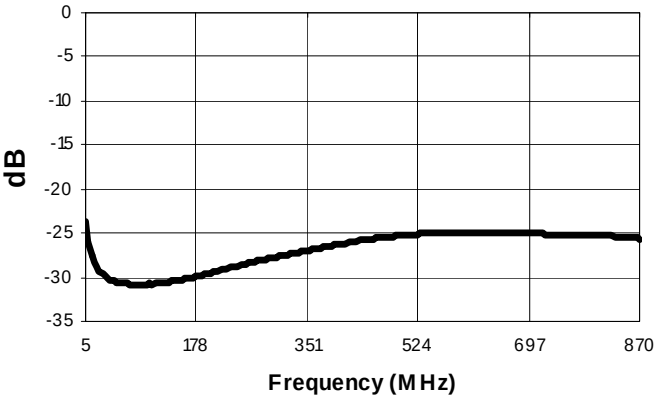
Input Return Loss



Output Return Loss



Coupling Return Loss



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