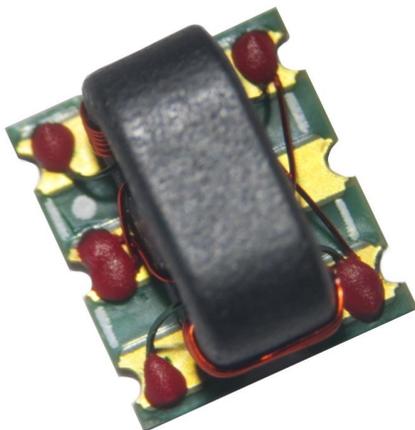


Features

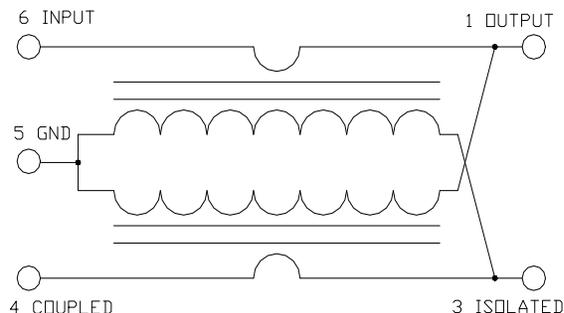
- Surface Mount
- Typical Coupling 17.4dB
- 260°C Reflow compatible
- RoHs Compliant and Pb Free
- Available on Tape and Reel

Description

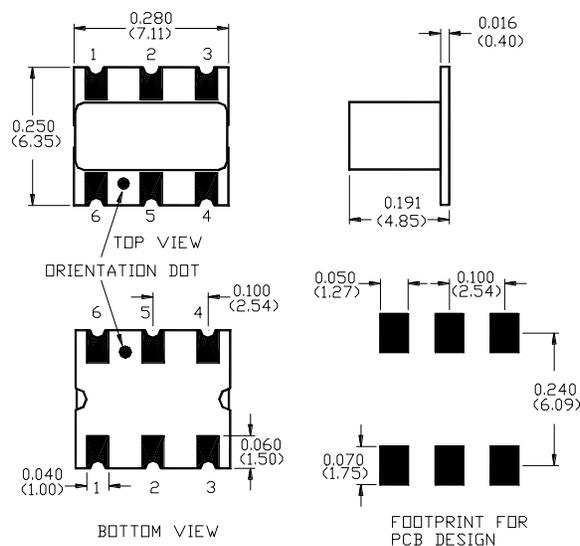
MACPCT0038 is a high performance 75 Ohm Coupler, in a SM-103 low cost, surface mount package. The MACPCT0038 is specifically designed for extremely low intermod distortion in CATV applications.



Functional Schematic



Case Style: SM-103



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

Ordering Information¹

Part Number	Package
MACPCT0038TR	900 piece reel

1. Reference Application Note M513 for reel size information.

17.4dB Coupler 5 - 870MHz

Rev. V1

Electrical Specifications: Z₀ =75, TA = 25°C, Pin = 0dBm

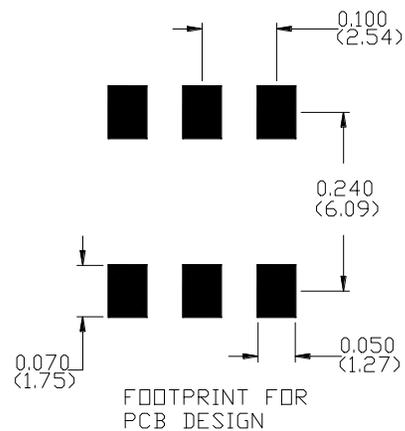
Parameter	Test Conditions	Units	Min	Typ	Max
Coupling (Nominal 17.4dB)	5 - 870MHz	dB	-	17.4	± 0.4
Main Line Loss	5 - 40MHz	dB	-	0.4	0.6
Main Line Loss	40—870MHz	dB	-	0.5	0.8
Isolation	5 - 40 MHz	dB	40	55	-
Isolation	40 - 870MHz	dB	26	40	-
Directivity	5 - 40MHz	dB	20	40	-
Directivity	40—760MHz	dB	10	25	-
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

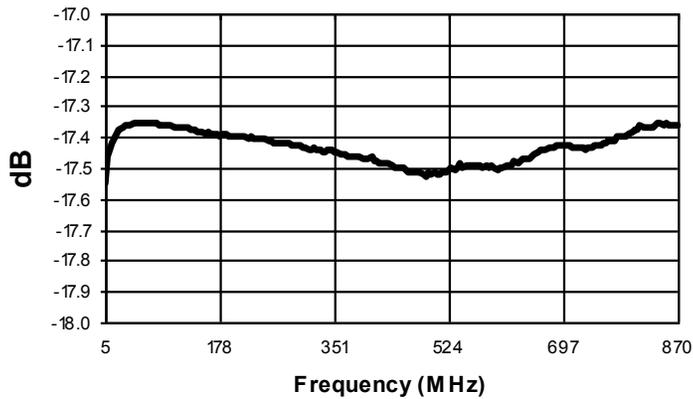
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration

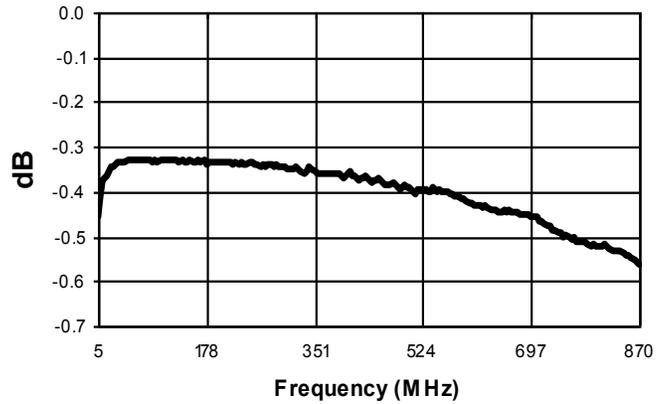


Typical Performance Curves

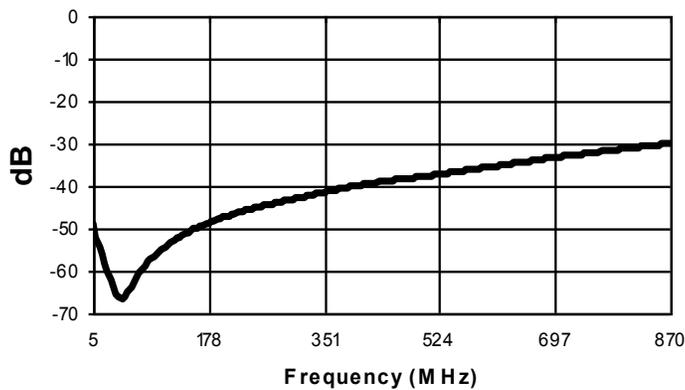
Coupling



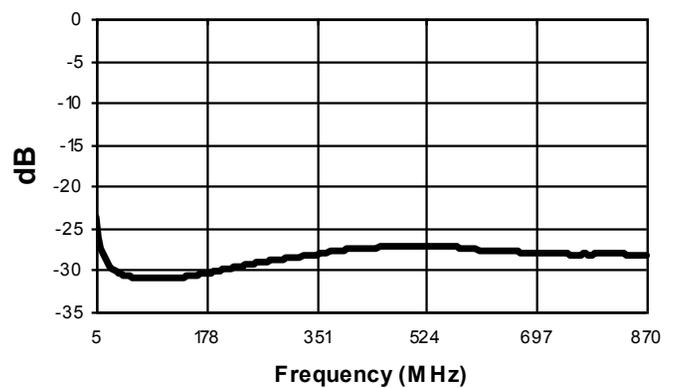
Main Line Loss



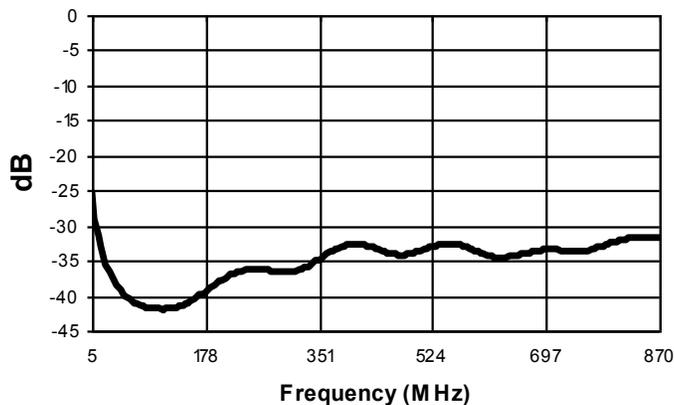
Isolation



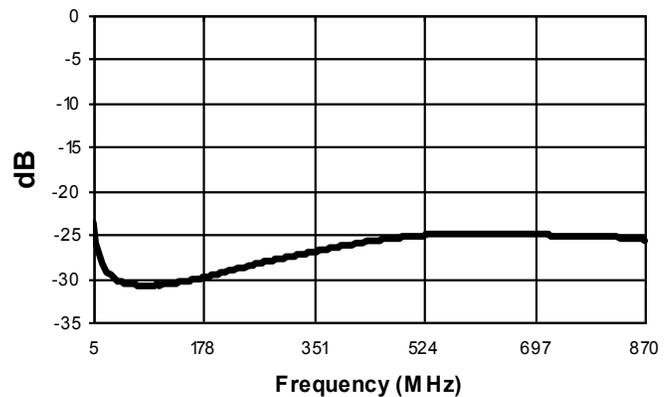
Input Return Loss



Output Return Loss



Coupling Return Loss



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