

# MAPDCT0030

2 Way 0° Power Divider  
5 to 1000 MHz

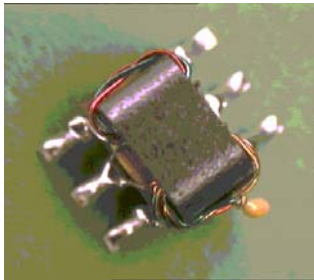
M/A-COM Products  
Released, Rev. V2

## Features

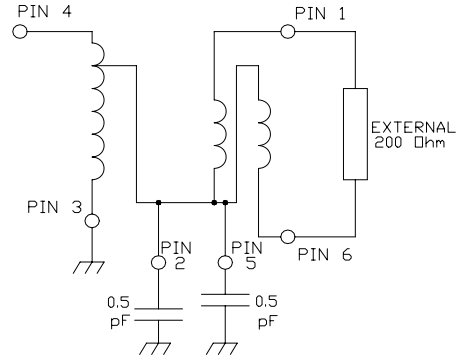
- Surface mount
- 2 Way 0 degree.
- 260°C reflow compatible
- RoHS\* compliant
- Available on tape and reel.

## Description

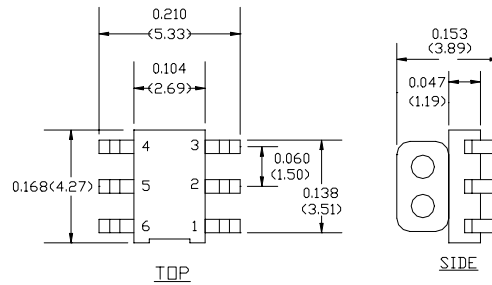
M/A Com's MAPDCT0030 is a 2 way 0 degree RF power divider in a low cost, surface mount package. Ideally suited for high volume CATV & VSAT applications. Two 0603 1pF capacitors and one 200Ω resistor are required with this part.



## Schematic with off-chip components

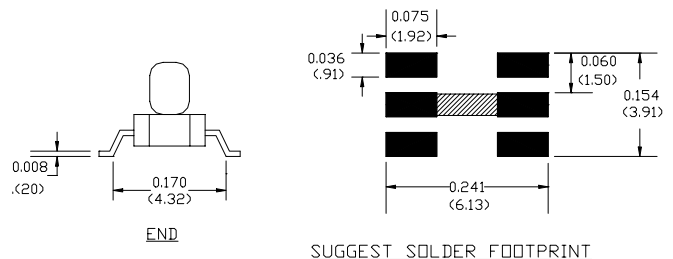


## Case style: SM-150



## Pin configuration

Pin no.	Function
1	Output 1
2	External 1pF Capacitor to ground
3	Ground
4	Input
5	External 1pF Capacitor to ground
6	Output 2



Unless otherwise stated dimensions are in inches [mm]  
Tolerance: .xx ± .02, .xxx ± .010

**Note:** Pin's 2 and 5 need to be connected together on the PCB as shown above.

## Ordering information

Part number	Description
MAPDCT0030TR	Reel quantity 1000
MAPD-007985-CT30TB	Customer Test Board

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

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

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

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

Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss (Above 3dB)	5 - 400 MHz	dB	-	0.3	0.5
	400 - 820 MHz	dB	-	0.5	1.1
	820 - 1000 MHz	dB	-	1.1	2.2
Amplitude Unbalance	5 - 400 MHz	dB	-	0.2	$\pm 0.5$
	400 - 820 MHz	dB	-	0.2	$\pm 0.3$
	820 - 1000 MHz	dB	-	0.4	$\pm 0.9$
Phase Unbalance	5 - 400 MHz	°	-	0.5	$\pm 4$
	400 - 820 MHz	°	-	1.0	$\pm 4$
	820 - 1000 MHz	°	-	1.5	$\pm 6$
Return Loss: Input	5 - 400 MHz	dB	23	35	-
	400 - 820 MHz	dB	16	22	-
	820 - 1000 MHz	dB	17	24	-
Isolation (between outputs)	5 - 400 MHz	dB	18	35	-
	400 - 820 MHz	dB	20	32	-
	820 - 1000 MHz	dB	14	20	-

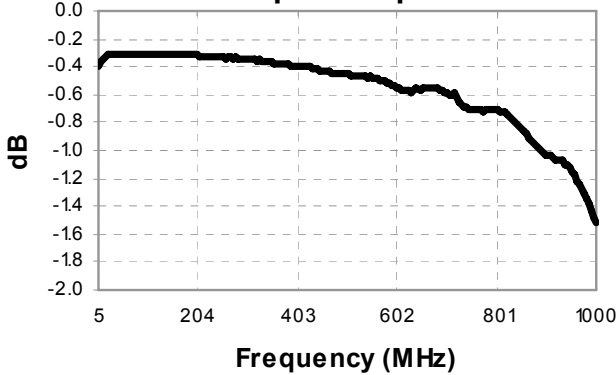
**Absolute maximum ratings<sup>1 2</sup>**

Parameter	Absolute maximum
Max input power	1W
Internal Load Dissipation	0.125W
Operating temperature	-40°C to +80°C
Storage temperature	-40°C to +85°C

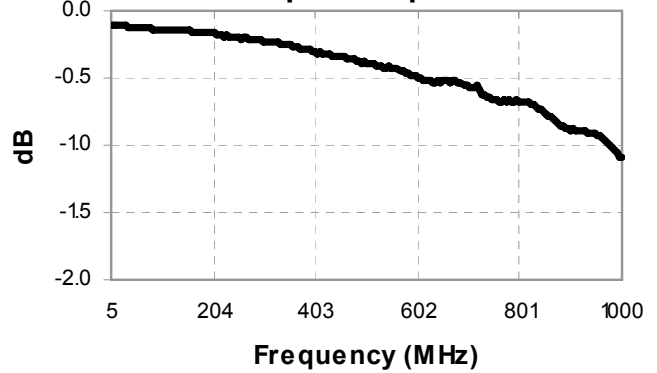
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

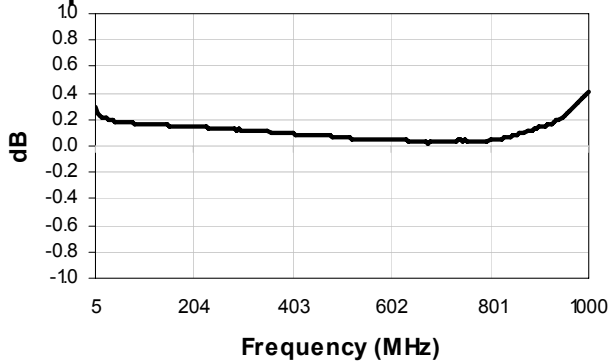
Insertion loss 1: pin 4 to pin 1



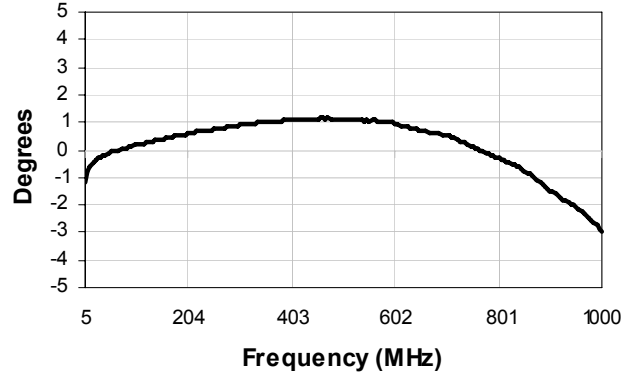
Insertion loss 2: pin 4 to pin 6



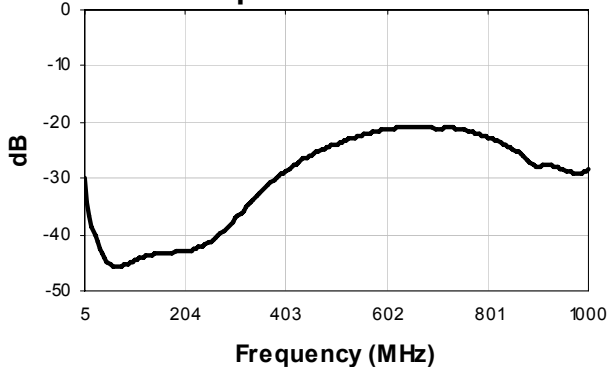
Amplitude balance



Phase balance



Return loss: Input



Isolation

