

# MAPDCT0002

2 Way 0° Power Divider  
5 to 1000 MHz

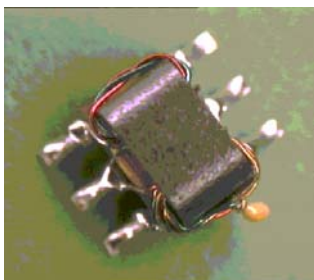
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## Features

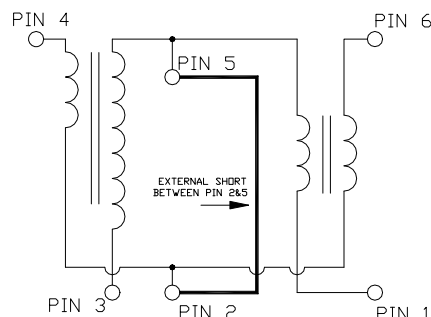
- Surface mount
- 2 Way 0 degree.
- 260°C reflow compatible
- Excellent isolation
- Available on tape and reel.

## Description

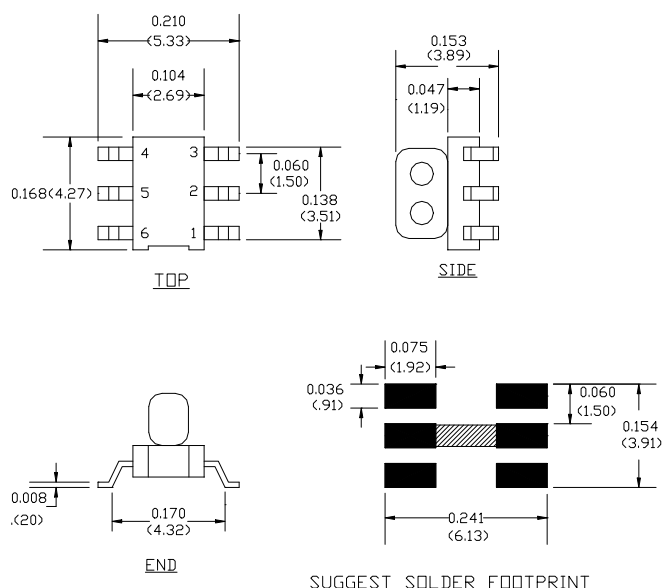
M/A Com's MAPDCT0002 is a 2 way 0 degree RF power divider in a low cost, surface mount package. Ideally suited for high volume CATV & VSAT applications. Two 0603 1pF capacitors and one 200Ω resistor are required with this part.



## Schematic



## 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

## Ordering information

Part number	Description
MAPDCT0002	Reel quantity 2000

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.

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

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

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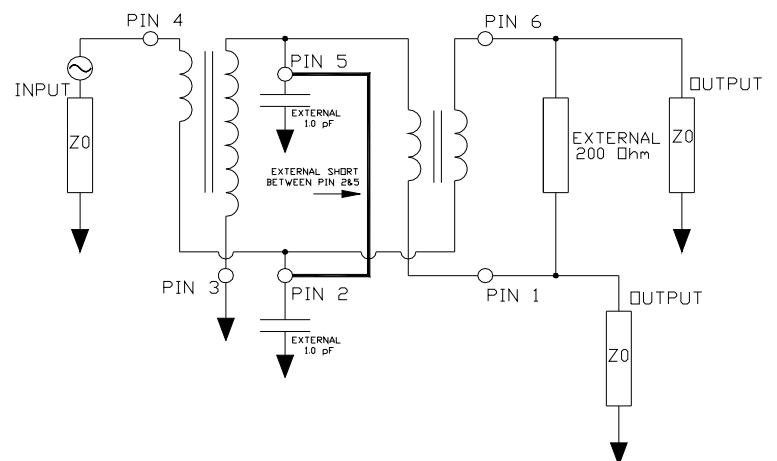
Electrical specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

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	$^\circ$	-	0.5	$\pm 4$
	400 - 820 MHz	$^\circ$	-	1.0	$\pm 4$
	820 - 1000 MHz	$^\circ$	-	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	-

## Recommended Maximum Ratings

Parameter	Value
Input power	1W
Internal Load Dissipation	0.125W
Operating Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$
Storage Temperature	$-40^\circ\text{C}$ to $+85^\circ\text{C}$

## Application Circuit

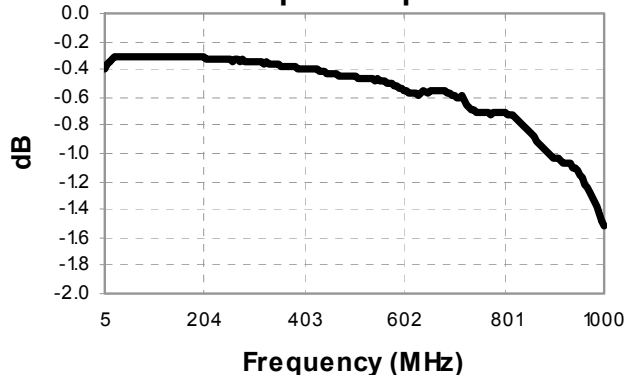


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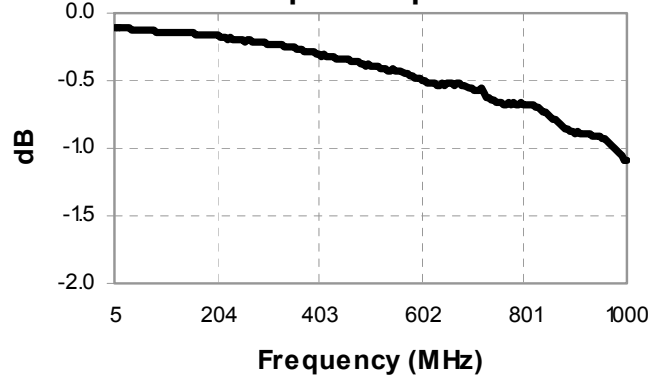
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Typical performance curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$ ,  $P_{in} = 0\text{dBm}$

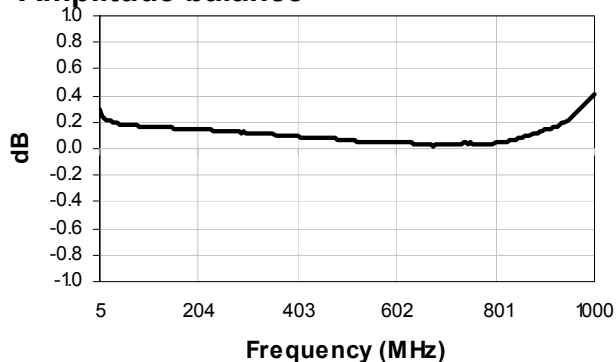
Insertion loss 1: pin 4 to pin 1



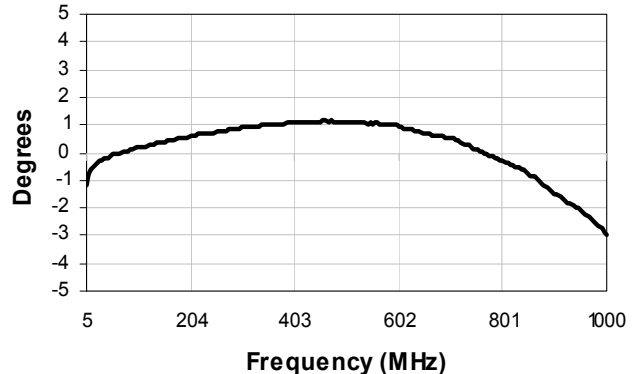
Insertion loss 2: pin 4 to pin 6



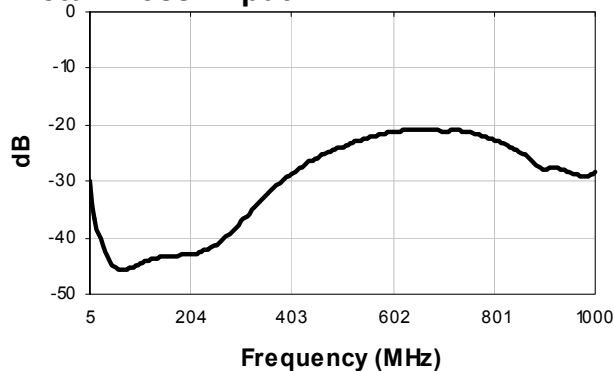
Amplitude balance



Phase balance



Return loss: Input



Isolation

