

# MAPDCT0010

2 Way 0° Reverse Path Power Divider  
5 to 100 MHz

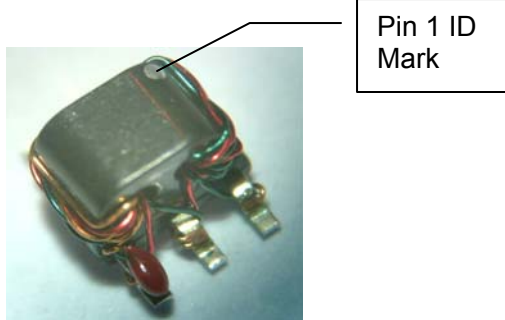
M/A-COM Products  
Released, Rev. V3

## Features

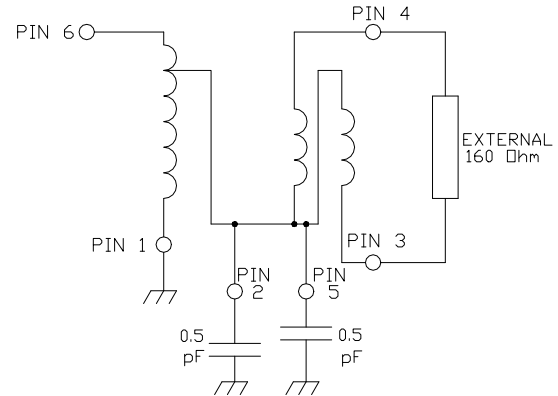
- Surface mount
- 2 Way 0 degree.
- 260°C reflow compatible
- RoHS\* compliant
- Available on tape and reel.

## Description

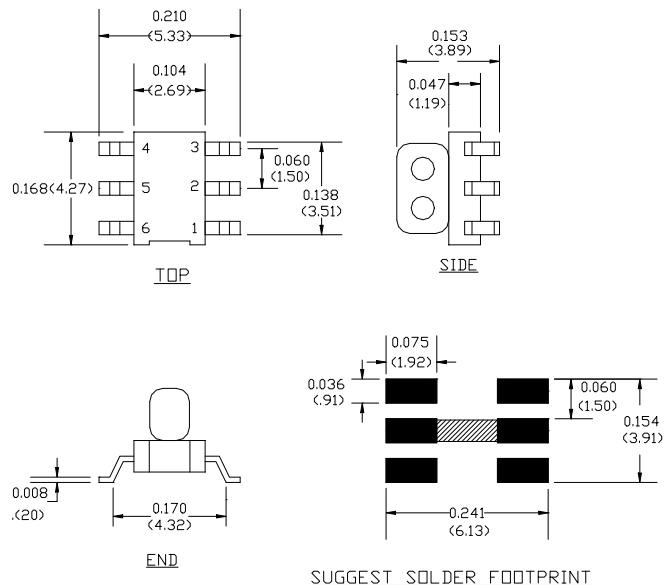
M/A Com's MAPDCT0010 is a 2 way 0 degree reverse path power divider in a low cost, surface mount package. Ideally suited for high volume CATV & VSAT applications. Two 0603 1pF capacitors and one 160Ω resistor are required with this part.



## Schematic with off-chip components



## Case style: SM-150



## Pin configuration

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

## Ordering information

Part number	Description
MAPDCT0010TR	Reel quantity 1000

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:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$**

Parameter	Frequency	Units	Min	Typ	Max
Insertion Loss	5 - 100 MHz	dB	-	0.3	0.6
Amplitude Unbalance	5 - 20 MHz	dB	-	$\pm 0.25$	$\pm 0.40$
	20 - 100 MHz	dB	-	$\pm 0.15$	$\pm 0.25$
Phase Unbalance	5 - 20 MHz	°	-	$\pm 2.5$	$\pm 6.0$
	20 - 100 MHz	°	-	$\pm 0.5$	$\pm 2.0$
Isolation	5 - 100 MHz	dB	28	32	-
Input Return Loss	5 - 20 MHz	dB	16	22	-
	20 - 100 MHz	dB	22	27	-
Output Return Loss 1 (pin6)	5 - 20 MHz	dB	16	22	-
	20 - 100 MHz	dB	25	29	-
Output Return Loss 2 (pin1)	5 - 20 MHz	dB	13	16	-
	20 - 100 MHz	dB	22	27	-

## 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.

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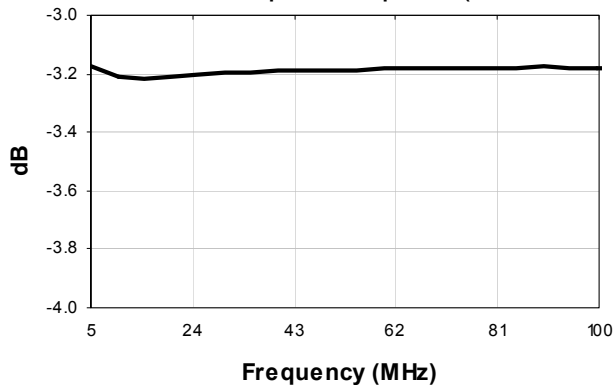
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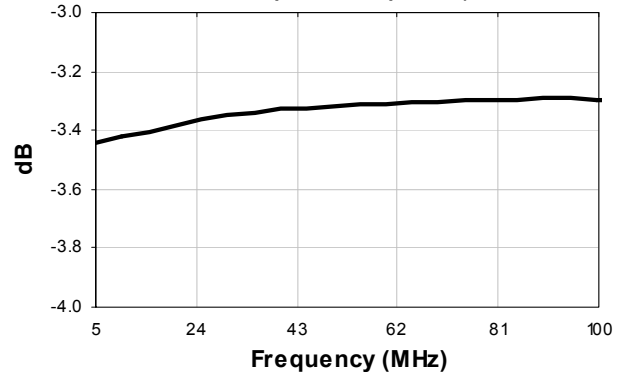
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Typical performance curves:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$

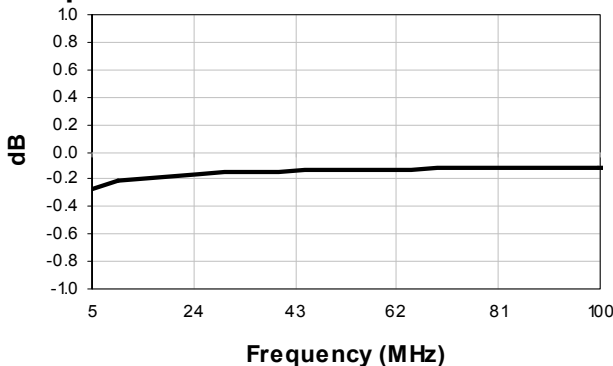
Insertion loss 1: pin 4 to pin 6 (ref value -3dB)



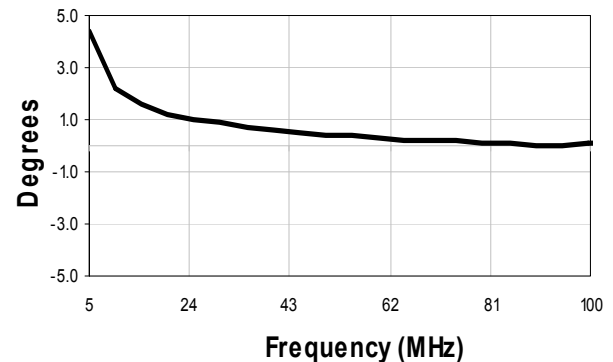
Insertion loss 2: pin 4 to pin 1 (ref value -3dB)



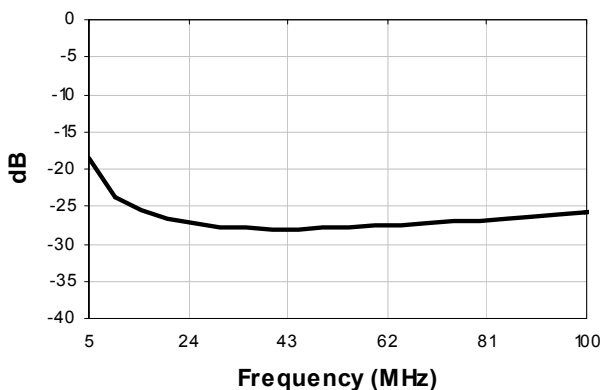
Amplitude balance



Phase balance



Return loss: Input



Isolation

