

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

M/A-COM Products
Released, Rev. V3

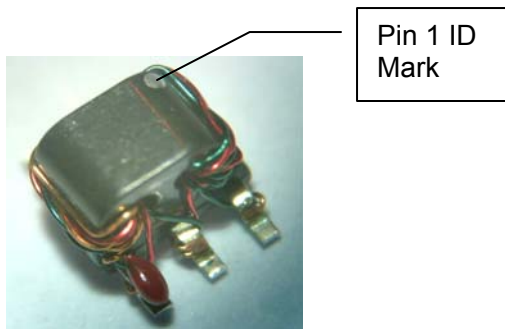
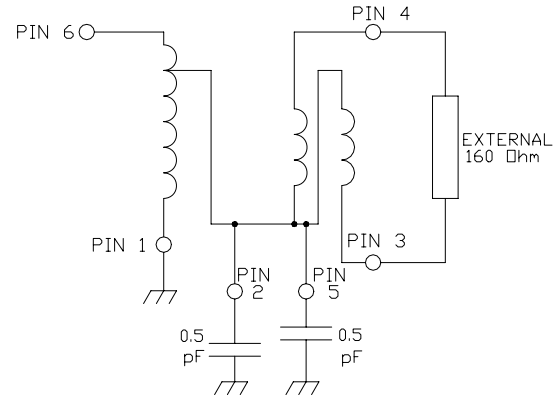
Features

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

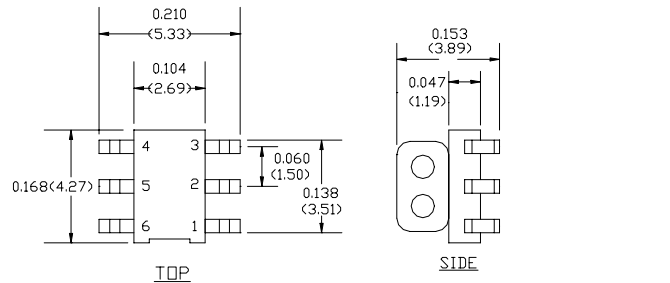
Description

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

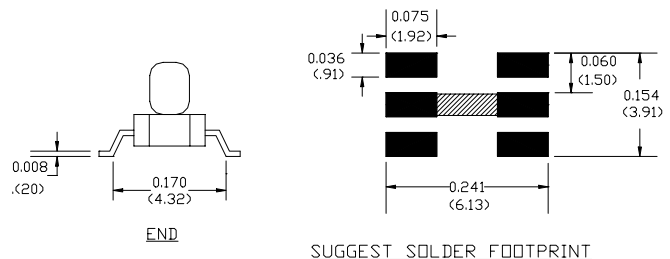


Case style: SM-150



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



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
MAPDCT0010TR	Reel quantity 1000

* 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.

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

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

Visit www.macom.com for additional data sheets and product 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	-	± 0.25	± 0.40
	20 - 100 MHz	dB	-	± 0.15	± 0.25
Phase Unbalance	5 - 20 MHz	°	-	± 2.5	± 6.0
	20 - 100 MHz	°	-	± 0.5	± 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	-

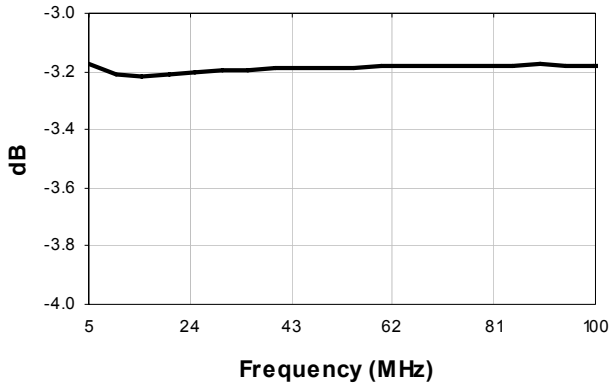
Absolute maximum ratings^{1 2}

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

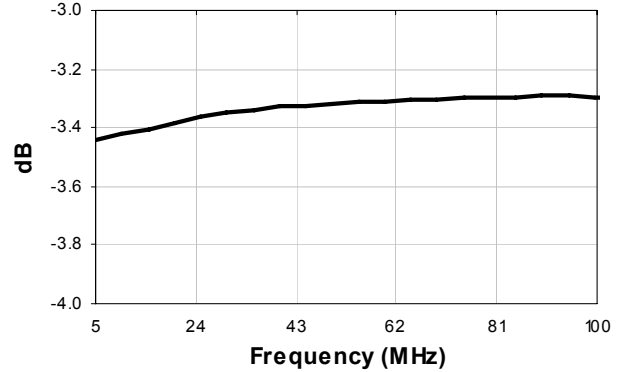
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

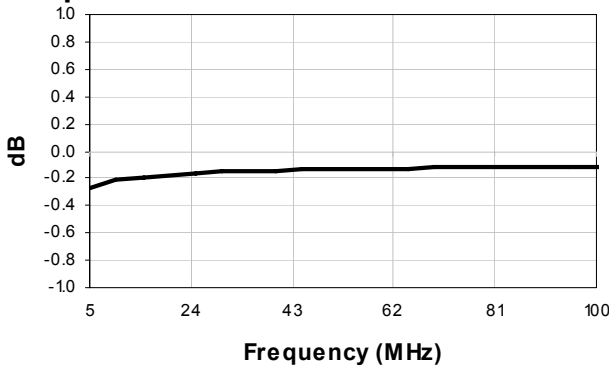
Insertion loss 1: pin 4 to pin 6 (ref value -3dB)



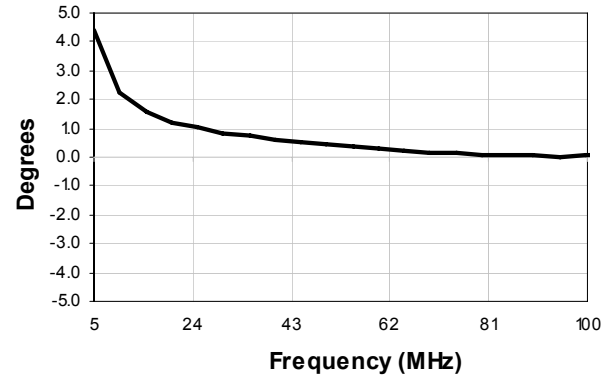
Insertion loss 2: pin 4 to pin 1 (ref value -3dB)



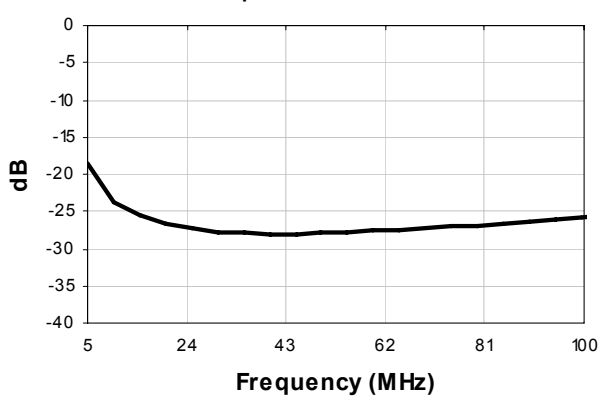
Amplitude balance



Phase balance



Return loss: Input



Isolation

