

4 Way 0° Power Divider 5 – 1000 MHz

Rev. V2

Features

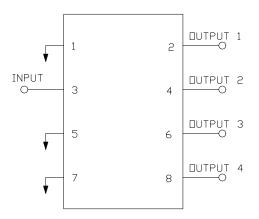
- 4 Way 0 degree
- Surface mount
- 260° reflow compatible
- RoHS compliant
- · Available on tape and reel

Description

MACOM's MAPDCT0028 is a 4 way high performance 0 degree RF power divider, in a low cost surface package. Ideally suited for CATV and Broadband applications.



Functional Schematic



Ordering Information

Part Number	Package
MAPDCT0028	Tape & Reel

Pin Configuration

Pin No.	Function
1	Ground
2	Output 1
3	Input
4	Output 2
5	Ground
6	Output 3
7	Ground
8	Output4

^{*} Restrictions on Hazardous Substances, European Union Directive



4 Way 0° Power Divider 5 – 1000 MHz

Rev. V2

Electrical Specifications: $T_A = 25$ °C, $Z_0 = 75 \Omega$, $P_{in} = 0$ dBm

Parameter	Test Conditions	Units	Min.	Тур.	Max.
Frequency Range		MHz	5		1000
Impedance		Ω		75	
Insertion Loss	5 - 80 MHz 80 - 870 MHz 870 - 1000 MHz	dB dB dB	- - -	0.6 0.7 1.1	0.7 1.2 1.4
Amplitude Balance	5 - 80 MHz 80 - 1000 MHz	dB dB	-	0.0 0.3	0.1 0.5
Phase Balance	5 - 80 MHz 80 - 500 MHz 500 - 870 MHz 870 - 1000 MHz	0 0 0	- - - -	0.1 0.5 1.0 1.0	1.0 3.0 6.0 8.0
Input Return Loss	5 - 80 MHz 80 - 870 MHz 870 - 1000 MHz	dB dB dB	21 17 15	25 21 17	- - -
Output Return Loss	5 - 10 MHz 10 - 1000 MHz	dB dB	13 16	18 19	
Isolation (between all outputs)	5 - 800 MHz 800 - 1000 MHz	dB dB	20 18	40 21	
Isolation (between outputs 1&2 & 3&4)	5 - 10 MHz	dB	17	25	-

Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	W		1
DC Current	mA		240
Operating Temperature Range	°C	-40	+85

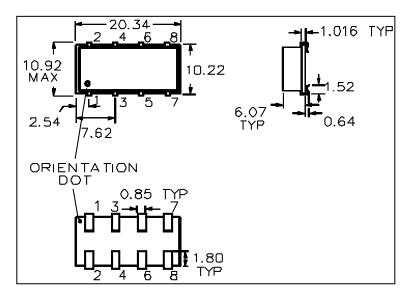
Full temperature plots available on request



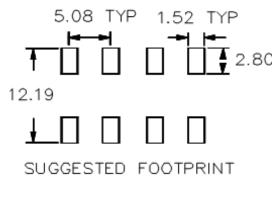
4 Way 0° Power Divider 5 – 1000 MHz

Rev. V2

Outline Drawing



PCB Layout



- 1. Dimensions in mm.
- 2. Tolerance: ±0.2mm unless otherwise noted.
- 3. Model number and lot code are printed on the reel.
- Lead plating: Tin.

Tape & Reel Information

Parameter	Units	Value	
Qty per reel	-	300	
Reel Size	mm	330	
Tape Width	mm	32	
Pitch	mm	24.0	
Ao	mm	20.9	
Во	mm	11.4	
Ko	mm	6.8	
Orientation	-	F11	
Reference Application Note ANI-019 for orientation			



4 Way 0° Power Divider 5 - 1000 MHz

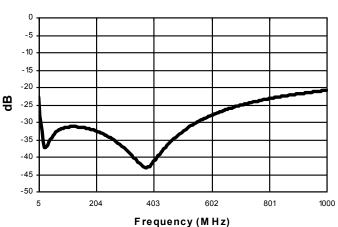
Insertion Loss

Rev. V2

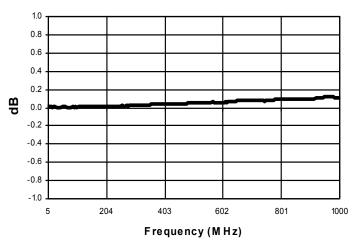
Typical Performance Curves

-0.2 -0.4 -0.6 -0.8 - 1.0 -1.2 -1.4 -1.6 -1.8 Frequency (MHz)

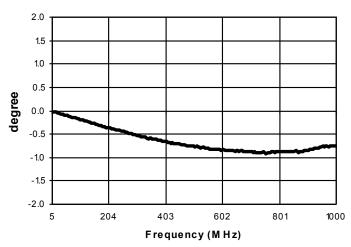
Isolation



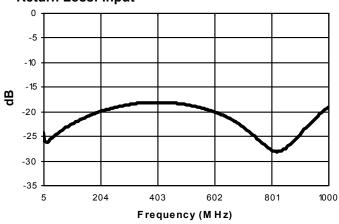
Amplitude Balance



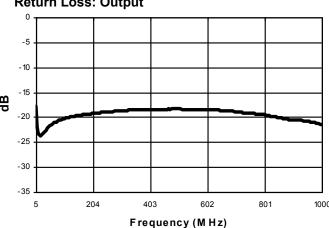
Phase Balance



Return Loss: Input



Return Loss: Output



M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macomtech.com for additional data sheets and product information.



4 Way 0° Power Divider 5 – 1000 MHz

Rev. V2

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.