

MACPES0045 **V2**

Features

- Surface Mount
- 2 Way 0 degree
- Available on tape & reel
- **Excellent** isolation

Description

M/A-COM's MACPES0045 is 2 way 0 degree power divider in a low cost, surface mount package. Ideally suited for high volume CATV & VSAT applications. Two 0603 1pf capacitors and one 160 Ohm resistor are required with this part.



Pin Configuration

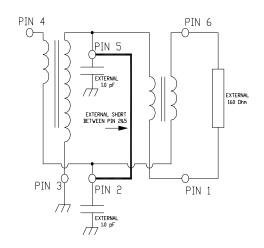
Pin No.	Function		
1	Output 1		
3	Ground		
4	Input		
2&5	2 x External shunt 1pf Cap, short pin 2 & 5 together.		
6	Output 2		

Ordering Information

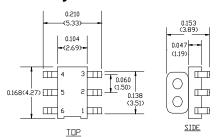
Part Number	Package		
MACPES0045	2000 piece reel		

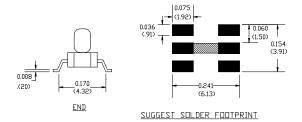
Note: Reference Application Note M513 for reel size information.

Schematic



Case Style: SM-150





Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

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• North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

• China Tel: +86.21.2407.1588

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Electrical Specifications: $T_A = 25$ °C, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min	Тур	Max
Insertion Loss (Above 3dB)	40 - 700 MHz 700 - 850 MHz 850 - 870 MHz 870 - 1000 MHz	dB dB dB dB	- - - -	0.3 0.5 0.9 1.0	0.8 1.0 1.2 1.4
Isolation	40 - 1000 MHz	dB	18	25	-
Amplitude Unbalance	40 - 1000 MHz	dB	-	0.2	0.5
Phase Unbalance	40 - 1000 MHz	0	-	0.50	5 ⁰
Input Return Loss	40 - 700 MHz 700 - 1000 MHz	dB dB	-	25 18	15 12
Output Return Loss 1	40 - 440 MHz 440 - 700 MHz 700 - 1000 MHz	dB dB dB	- - -	20 16 13	15 12 10
Output Return Loss 2	40 - 440 MHz 440 - 700 MHz 700 - 1000 MHz	dB dB dB	- - -	16 18 14	13 15 11

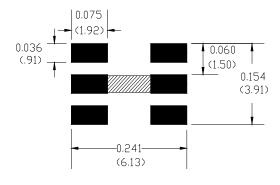
Note: Specification subject to change without notice

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum		
RF Power	1 Watt		
Internal Load Dissipation	0.125 Watt		
Storage Temperature	-40°C to +85°C		
Operating Temperature	-40°C to +80°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.

Recommended PCB Configuration



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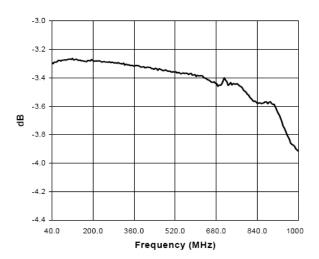
MACPES0045 **V2**

Typical Performance Curves @ $T_A = 25$ °C, $Z_0 = 75\Omega$

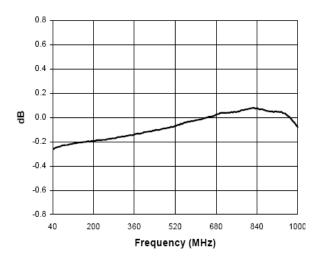
Insertion Loss Port 1

-3.2 -4.0 -4.2 520 680 40 200 360 840 1000 Frequency (MHz)

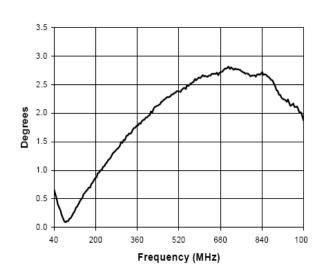
Insertion Loss Port 2



Amplitude Unbalance



Phase Unbalance



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³



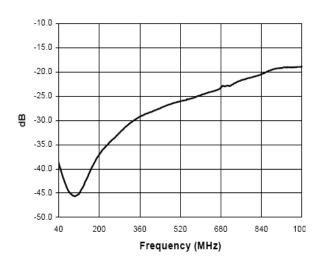
MACPES0045 **V2**

Typical Performance Curves @ $T_A = 25$ °C, $Z_0 = 75\Omega$

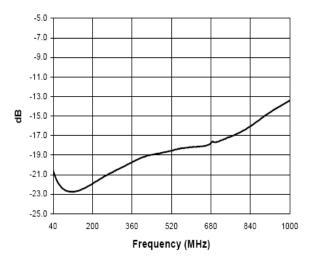
Isolation

-10.0 -12.0 -14.0 -16.0 -18.0 **-20.0** -22.0 -24.0 -26.0 -28.0 -30.0 200 520 840 1000 Frequency (MHz)

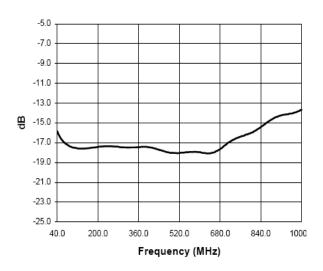
Input Return Loss



Output Return Loss 1



Output Return Loss 2



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