

# MAPD-009492-C2W180

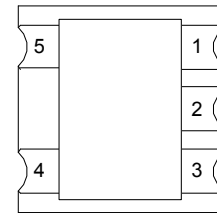
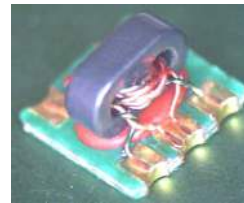


**Power Divider, 2-Way 180° Splitter (also a 1:2 flux coupled balun)**  
**5 - 1200 MHz**

Rev. V4

## Features

- 2-way
- 180° Phase Between Outputs
- Surface Mount Package
- Tape & Reel Packaging
- RoHS\* Compliant & 260°C Reflow Compatible



Top View

## Description

The MAPD-009492-C2W180 is a 2-way 180° power divider in a SM-164 surface mount package.

Ideally suited for high volume broadband CATV applications.

## Pin Configuration

Pin #	Function	Pin #	Function
1,2	Ground	4	Output 2
3	Input	5	Output 1

**Electrical Specifications: Freq. = 5 - 1200 MHz, T<sub>A</sub> = 25°C, Z<sub>0</sub> = 75 Ω, P<sub>IN</sub> = 0 dBm**

Parameter	Frequency Test Conditions (MHz)	Units	Min.	Typ.	Max.
Insertion Loss 1 Pin 5 - 3	5 - 200	dB	—	0.7	1.0
	200 - 870			1.3	2.5
	870 - 1200			2.7	4.5
Insertion Loss 2 Pin 4 - 3	5 - 50	dB	—	0.6	1.2
	50 - 870			0.6	0.9
	870 - 1000			0.0	0.5
	1000 - 1200			-0.3	0.2
Amplitude Balance (Nominal 0 dB)	5 - 500	dB	—	0.2	±1.0
	500 - 870			1.3	±2.5
	870 - 1000			2.4	±3.5
	1000 - 1200			3.4	±5.0
Phase Balance (Nominal 180°)	5 - 200	°	—	0.1	±3
	200 - 870			1.3	±9
	870 - 1000			4.0	±13
	1000 - 1200			11.0	±20
Input Return Loss Pin 3	5 - 870	dB	18	24	—
	870 - 1000		17	22	
	1000 - 1200		12	18	

## Ordering Information

Part Number	Package
MAPD-009492-C2W180	2000 piece reel
MAPD-009492-C2W1TB	customer test board

## Absolute Maximum Ratings<sup>1,2</sup>

Parameter	Absolute Maximum
RF Power	50 mW
Peak IF Current	40 mA
Operating Temperature	-40°C to +105°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. MACOM does not recommend sustained operation near these survivability limits.

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

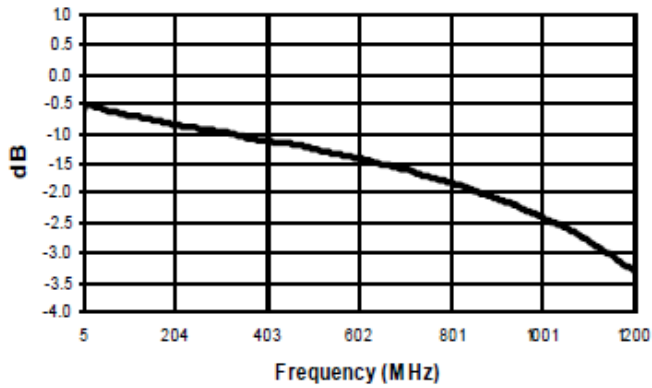
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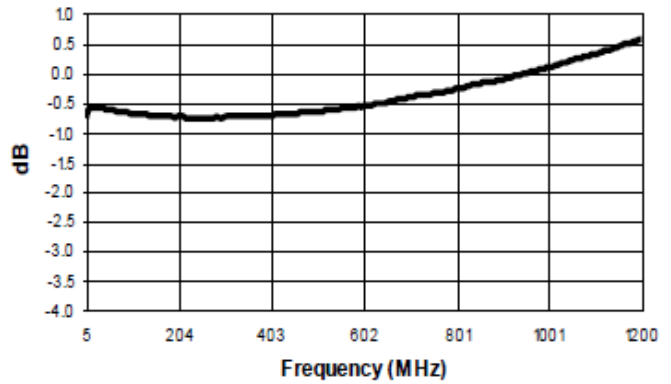
DS-MAPD-009492-C2W180

## Typical Performance Curves

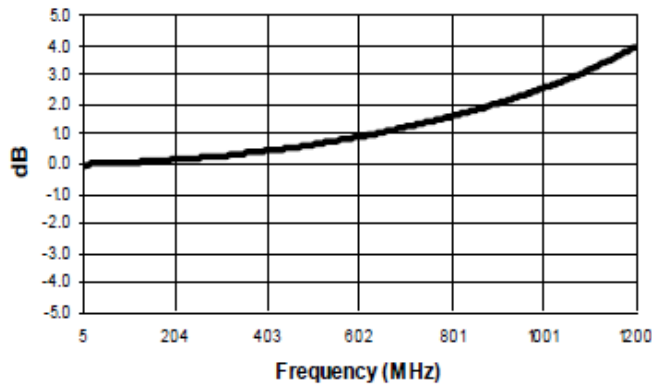
*Insertion Loss Port 1 (pin 5 - 3)*



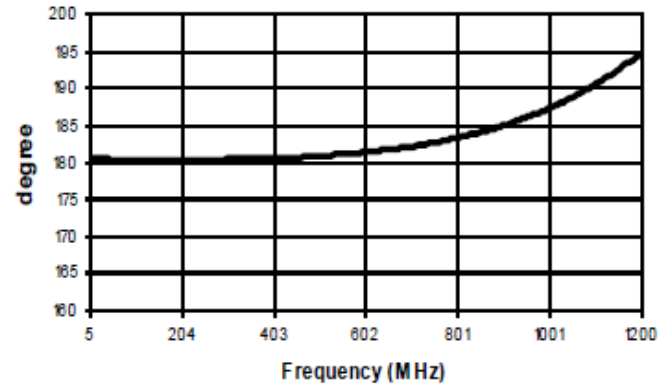
*Insertion Loss Port 2 (pin 4 - 3)*



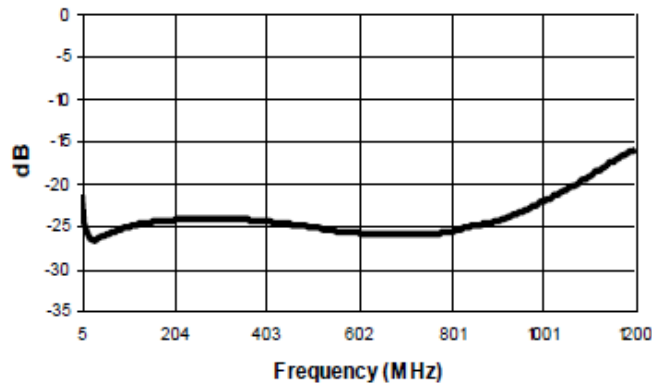
*Amplitude Balance*



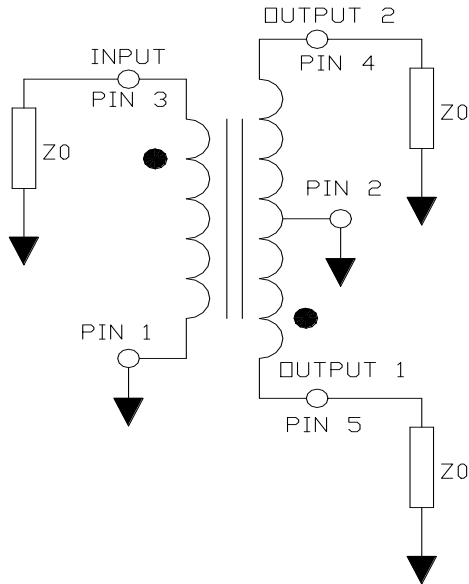
*Phase Balance*



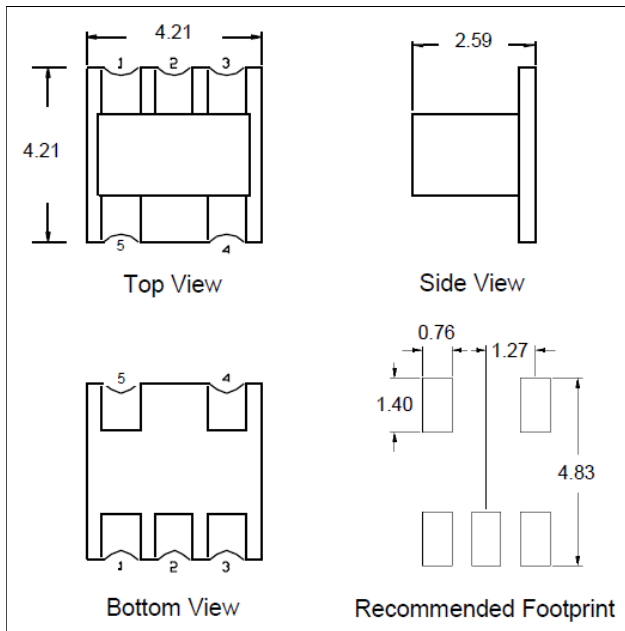
*Input Return Loss (pin 3)*



## Schematic



## Outline (SM-164)



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu\text{m}$  gold over 3 to 6  $\mu\text{m}$  nickel

## Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	2000
Reel Size	mm	330
Tape Width	mm	12.00
Pitch	mm	8.00
Ao	mm	4.5
Bo	mm	4.5
Ko	mm	2.73
Orientation	-	F5
Reference Application Note ANI-019 for orientation		

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