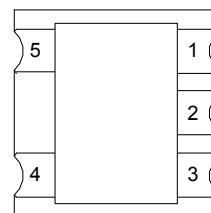
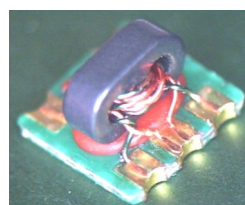


## Power Divider, 2-Way 180° Splitter (also a 1:2 flux coupled balun) 5 - 1200 MHz

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, $T_A = 25^\circ\text{C}$ , $Z_0 = 75\ \Omega$ , $P_{IN} = 0\ \text{dBm}$

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

### 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.

### Ordering Information

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

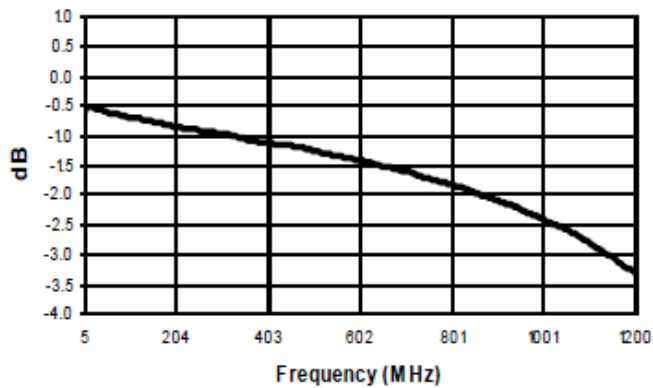
\* Restrictions on Hazardous Substances,  
European Union Directive 2011/65/EU.

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

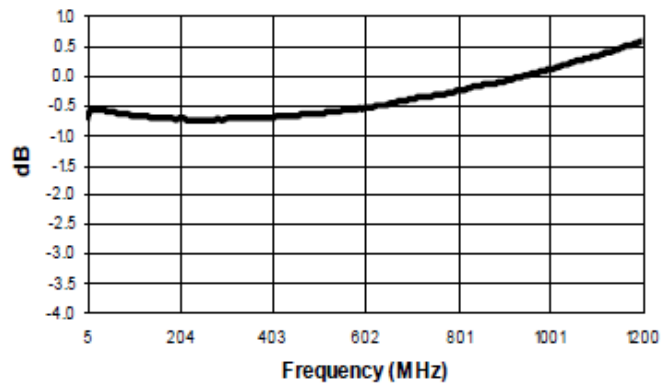
Rev. V4

### Typical Performance Curves

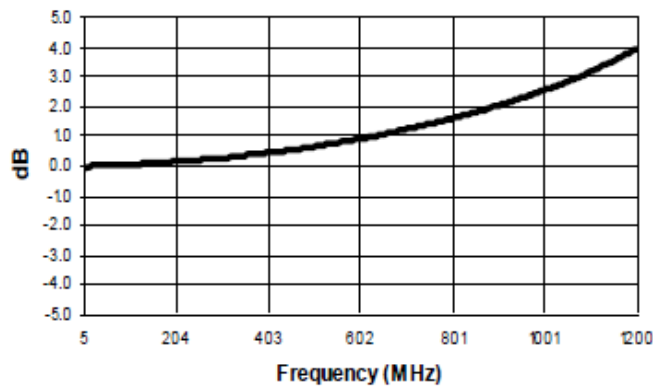
*Insertion Loss Port 1 (pin 5 - 3)*



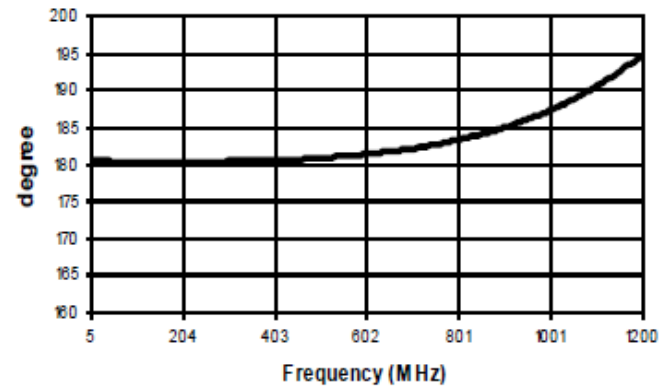
*Insertion Loss Port 2 (pin 4 - 3)*



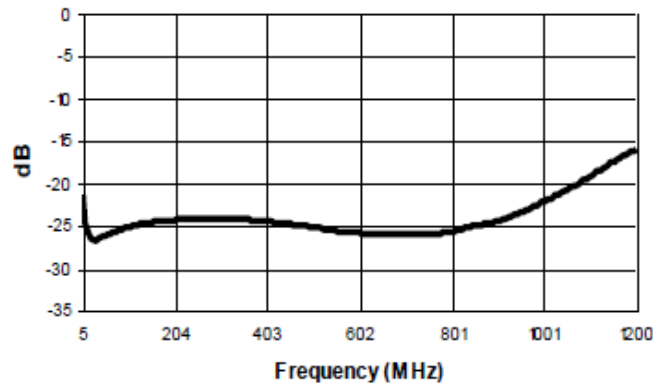
*Amplitude Balance*



*Phase Balance*



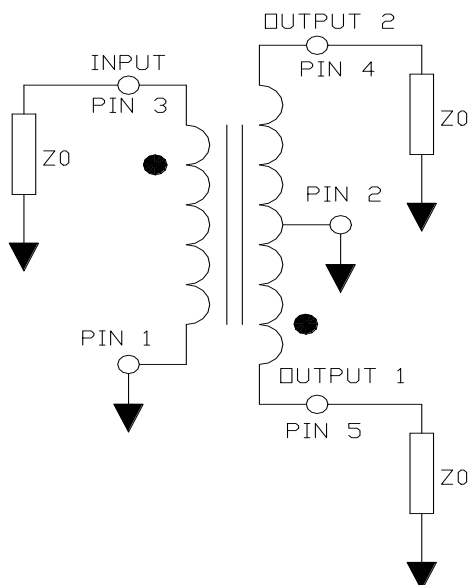
*Input Return Loss (pin 3)*



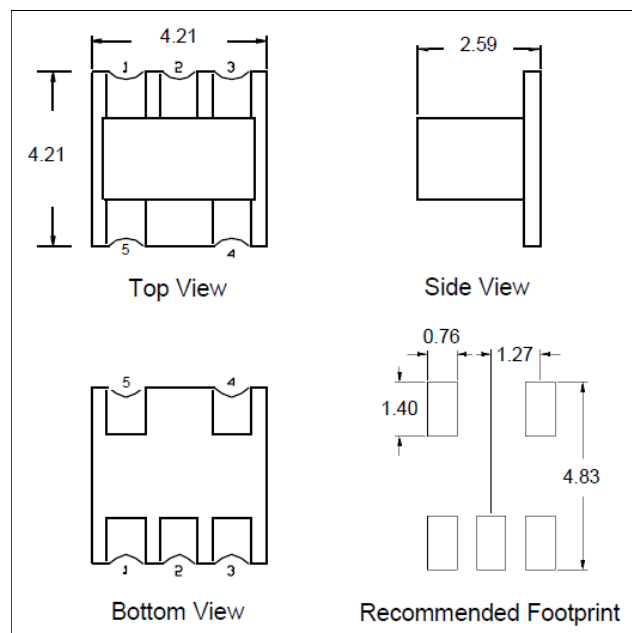
## Power Divider, 2-Way 180° Splitter (also a 1:2 flux coupled balun) 5 - 1200 MHz

Rev. V4

### 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  $\mu$ m gold over 3 to 6  $\mu$ 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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