

## Features

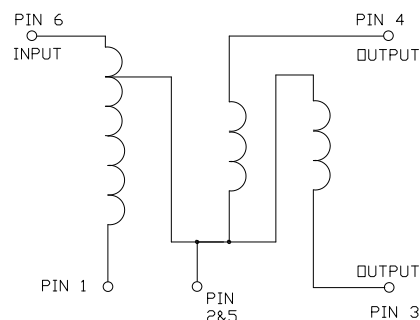
- Surface Mount
- 2-Way 0°
- RoHS Compliant and 260° Reflow Compatible
- Available on tape and reel
- Pb Free

## Description

The MAPD-009918-C209C0 is a 2-way 0 degree RF power divider in a low cost surface mount package. Ideally suited for CATV/VSAT applications.



## Functional Schematic



## Ordering Information

| Part Number        | Package             |
|--------------------|---------------------|
| MAPD-009918-C209C0 | 2000 piece reel     |
| MAPD-009918-C209TB | customer test board |

## Pin Configuration

| Pin No. | Function                  |
|---------|---------------------------|
| 1       | Ground                    |
| 2, 5    | External 0.5 pF Capacitor |
| 3       | Output Port 2             |
| 4       | Output Port 1             |
| 6       | Input                     |

## Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$ , $P_{in} = 0 \text{ dBm}$

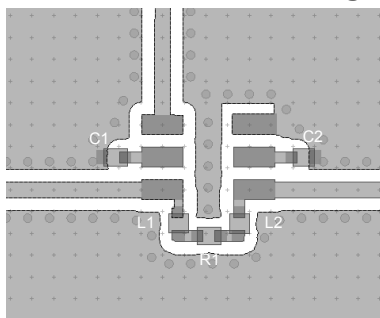
| Parameter                   | Test Conditions | Units | Min. | Typ. | Max. |
|-----------------------------|-----------------|-------|------|------|------|
| Insertion Loss (Above 3 dB) | 5 - 50 MHz      | dB    | —    | 0.53 | 0.7  |
|                             | 50 - 500 MHz    |       |      | 0.57 | 0.8  |
|                             | 500 - 1000 MHz  |       |      | 0.72 | 1.0  |
| Amplitude Balance           | 5 - 1000 MHz    | dB    | —    | 0.3  | 0.6  |
| Phase Balance               | 5 - 1000 MHz    | deg.  | —    | 0.9  | 4.0  |
| Input Return Loss           | 5 - 1000 MHz    | dB    | 20   | 29   | —    |
| Output Return Loss          | 5 - 50 MHz      | dB    | 18   | 23   | —    |
|                             | 50 - 1000 MHz   |       | 20   | 29   |      |
| Isolation (between outputs) | 5 - 50 MHz      | dB    | 26   | 40   | —    |
|                             | 50 - 1000 MHz   |       | 30   | 38   |      |

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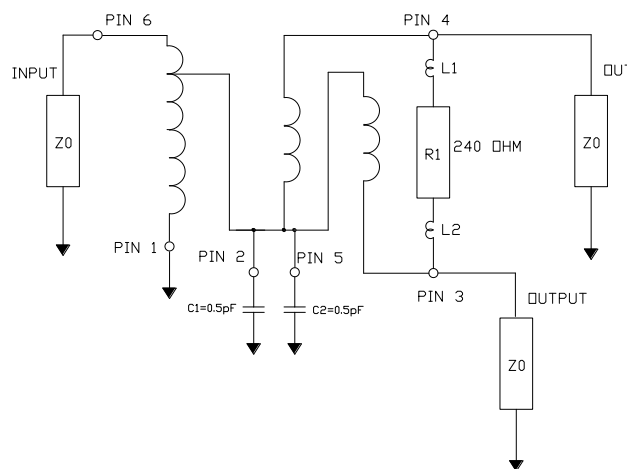
## Recommended Maximum Ratings

| Parameter                 | Absolute Maximum |
|---------------------------|------------------|
| Input Power               | 1 W              |
| Internal Load Dissipation | 125 mW           |
| Operating Temperature     | -40°C to +85°C   |

## Recommended PCB Configuration



## Application Circuit

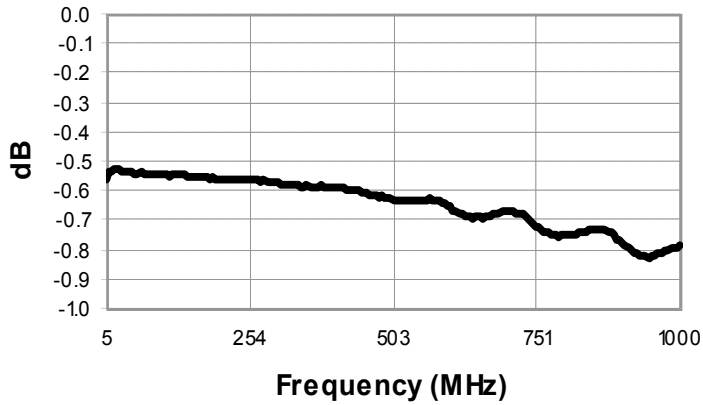


## Parts List

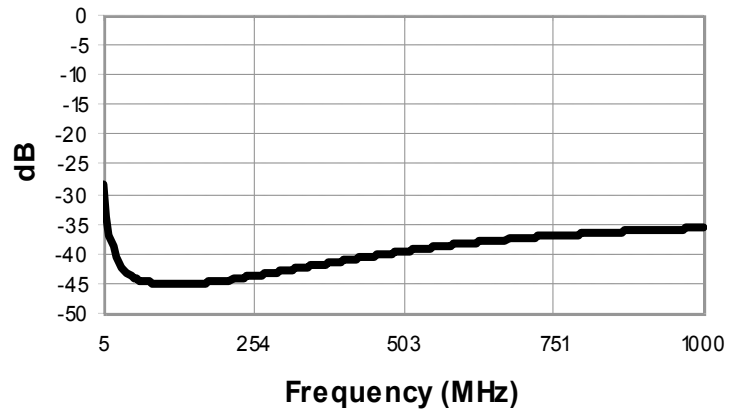
| Part   | Value  | Case Style | Vendor    |
|--------|--------|------------|-----------|
| R1     | 240 Ω  | 0402       | ROHM      |
| L1, L2 | 8.2 nH | 0402       | COILCRAFT |
| C1, C2 | 0.5 pF | 0402       | MURATA    |

## Typical Performance Curves

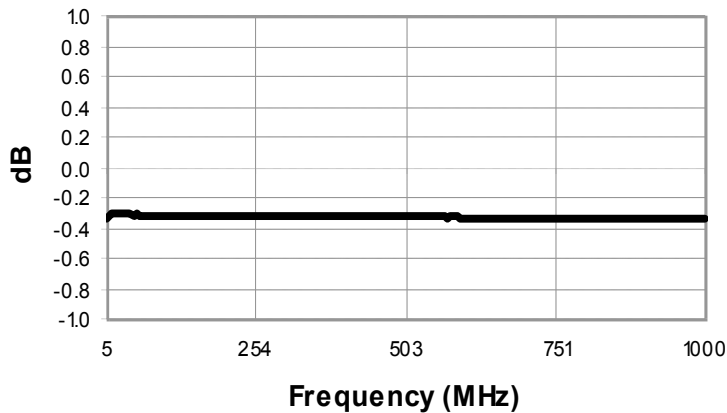
**Insertion Loss:**



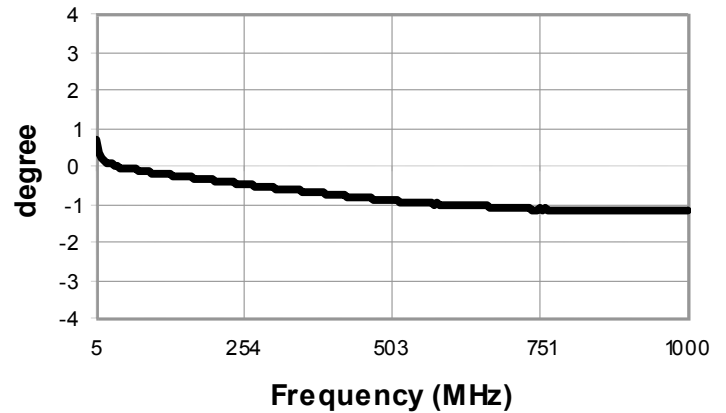
**Isolation:**



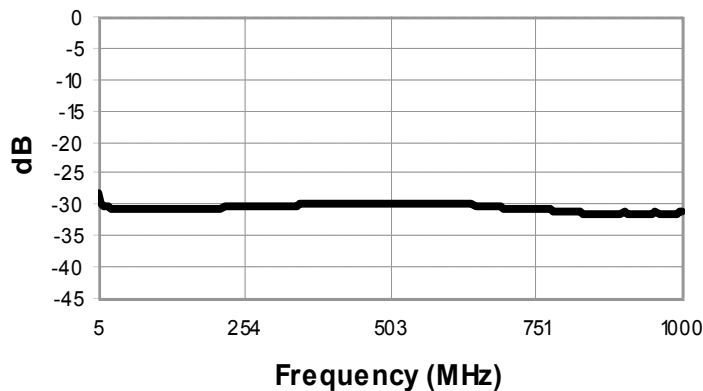
**Amplitude Balance:**



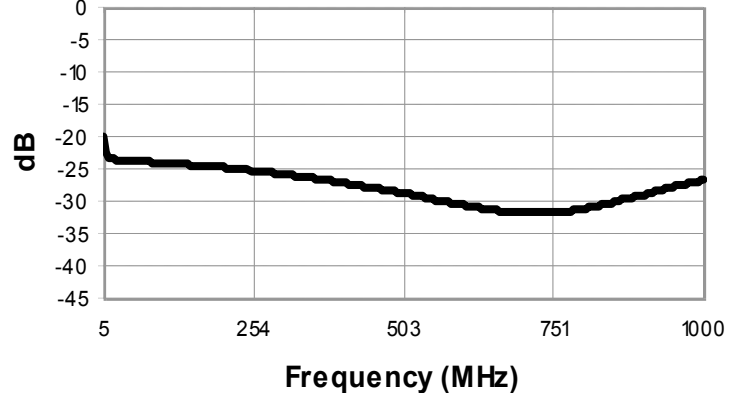
**Phase Balance:**



**Return Loss: Input**



**Return Loss: Output**

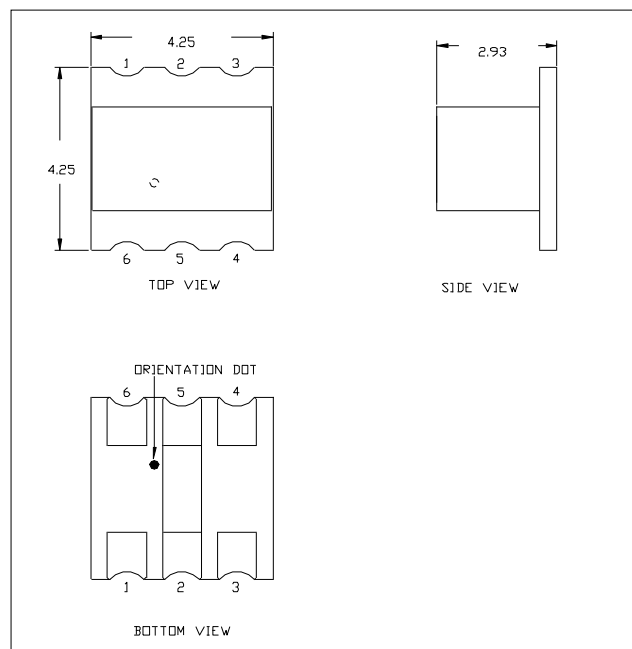


3 Full temperature plots available on request

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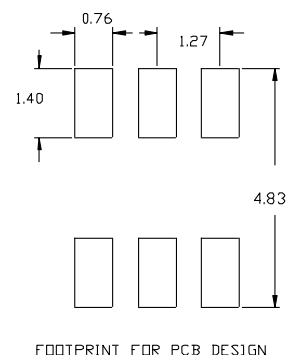
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## Outline Drawing<sup>1,2,3,4</sup>



1. Dimensions in mm.
2. Tolerance:  $\pm 0.2$  mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Lead plating: ENIG.

## PCB Layout



## 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    | 4.55  |
| Bo   | mm    | 4.75  |
| Ko   | mm    | 3.10  |
| Orientation  | -     | F31   |
| Reference Application Note ANI-019 for orientation |       |       |

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