

# MAPD-011003

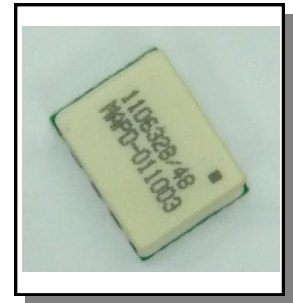


**3 Way 0° Power Divider**  
30 - 1200 MHz

Rev. V3

## Features

- Surface Mount
- 3 way 0 degree
- 260°C Reflow Compatible
- RoHS\* Compliant, lead free
- Available on Tape and Reel.



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

| Parameter   | Conditions      | Units | Min  | Typ | Max  |
|---|-----------------|-------|------|-----|------|
| Insertion Loss 1*<br>(pin8-pin1)<br>Ref value -4.77 | 30 - 46 MHz     | dB    | -    | 0.4 | 0.8  |
|   | 46 - 870 MHz    | dB    | -    | 0.8 | 1.5  |
|   | 870 - 1002 MHz  | dB    | -    | 1.2 | 1.8  |
|   | 1002 - 1200 MHz | dB    | -    | 1.7 | -    |
| Insertion Loss 2*<br>(pin8-pin4)<br>Ref value -4.77 | 30 - 46 MHz     | dB    | -    | 0.4 | 0.8  |
|   | 46 - 870 MHz    | dB    | -    | 0.6 | 1.3  |
|   | 870 - 1002 MHz  | dB    | -    | 0.8 | 1.5  |
|   | 1002 - 1200 MHz | dB    | -    | 1.3 | -    |
| Insertion Loss 3*<br>(pin8-pin5)<br>Ref value -4.77 | 30 - 46 MHz     | dB    | -    | 0.4 | 0.8  |
|   | 46 - 870 MHz    | dB    | -    | 0.8 | 1.8  |
|   | 870 - 1002 MHz  | dB    | -    | 1.2 | 2.2  |
|   | 1002 - 1200 MHz | dB    | -    | 1.8 | -    |
| Input Return Loss *<br>(pin8)                       | 30 - 46 MHz     | dB    | 28   | 35  | -    |
|   | 46 - 405 MHz    | dB    | 20   | 26  | -    |
|   | 405 - 1002 MHz  | dB    | 17.5 | 25  | -    |
|   | 1002 - 1200 MHz | dB    | -    | 17  | -    |
| Output Return Loss<br>1 & 2*<br>(pin1&4)            | 30 - 46 MHz     | dB    | 17   | 21  | -    |
|   | 46 - 1002 MHz   | dB    | 20   | 32  | -    |
|   | 1002 - 1200 MHz | dB    | -    | 24  | -    |
| Output Return Loss 3<br>(pin5) *                    | 30 - 46 MHz     | dB    | 17   | 21  | -    |
|   | 46 - 740 MHz    | dB    | 20   | 23  | -    |
|   | 740 - 1002 MHz  | dB    | 17   | 22  | -    |
|   | 1002 - 1200 MHz | dB    | -    | 21  | -    |
| Isolation   | 30 - 46 MHz     | dB    | 20   | 27  | -    |
|   | 46 - 870 MHz    | dB    | 20   | 25  | -    |
|   | 870 - 1002 MHz  | dB    | 18   | 35  | -    |
|   | 1002 - 1200 MHz | dB    | -    | 22  | -    |
| Amplitude Balance                                   | 30 - 46 MHz     | dB    | -    | 0.0 | ±0.2 |
|   | 46 - 500 MHz    | dB    | -    | 0.1 | ±0.5 |
|   | 500 - 1002 MHz  | dB    | -    | 0.4 | ±1.0 |
|   | 1002 - 1200 MHz | dB    | -    | 0.5 | -    |
| Phase Balance                                       | 30 - 50 MHz     | °     | -    | 0.4 | ±1.0 |
|   | 50 - 500 MHz    | °     | -    | 1.0 | ±4.0 |
|   | 500 - 1002 MHz  | °     | -    | 2.7 | ±6.0 |
|   | 1002 - 1200 MHz | °     | -    | 2.8 | -    |

\* Parameters screened in manufacturing

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**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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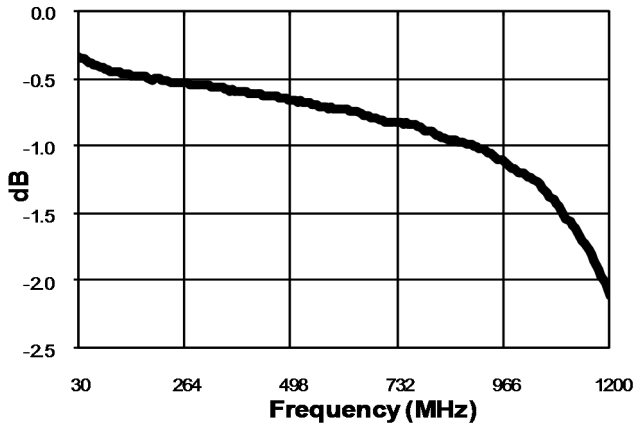


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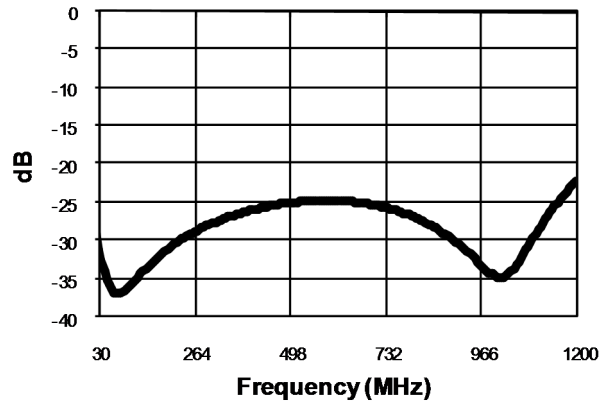
Rev. V3

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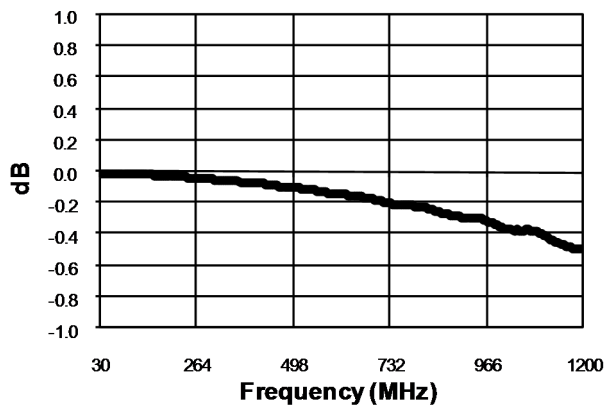
Insertion Loss



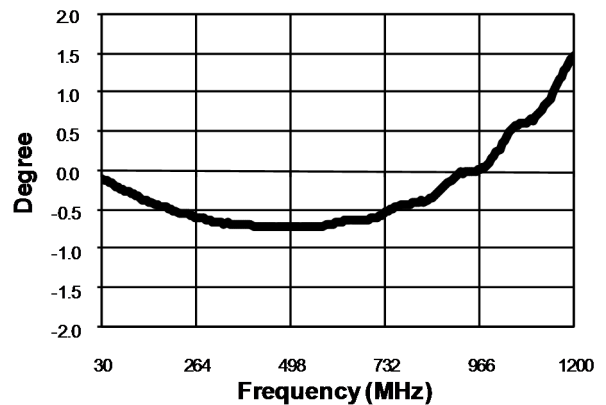
Isolation



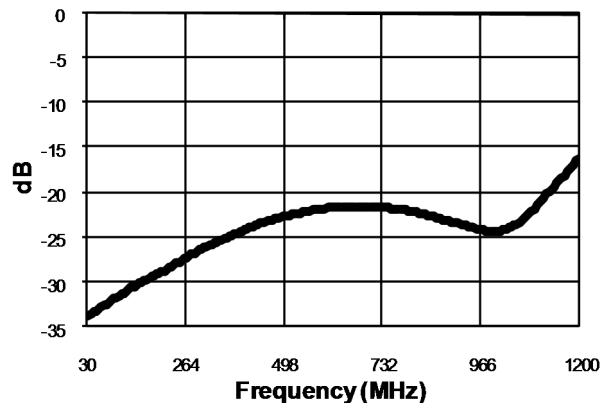
Amplitude Balance



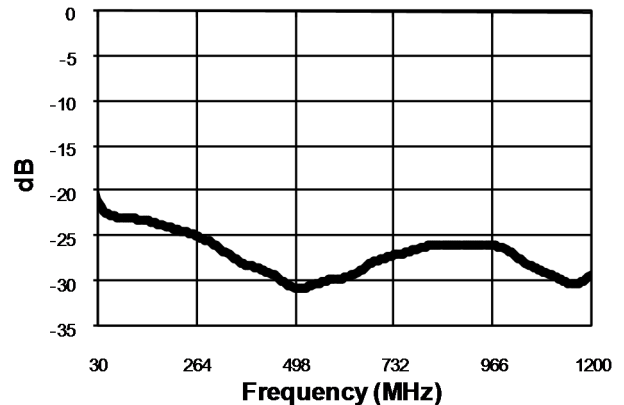
Phase Balance



Return Loss: Input



Return Loss: Output



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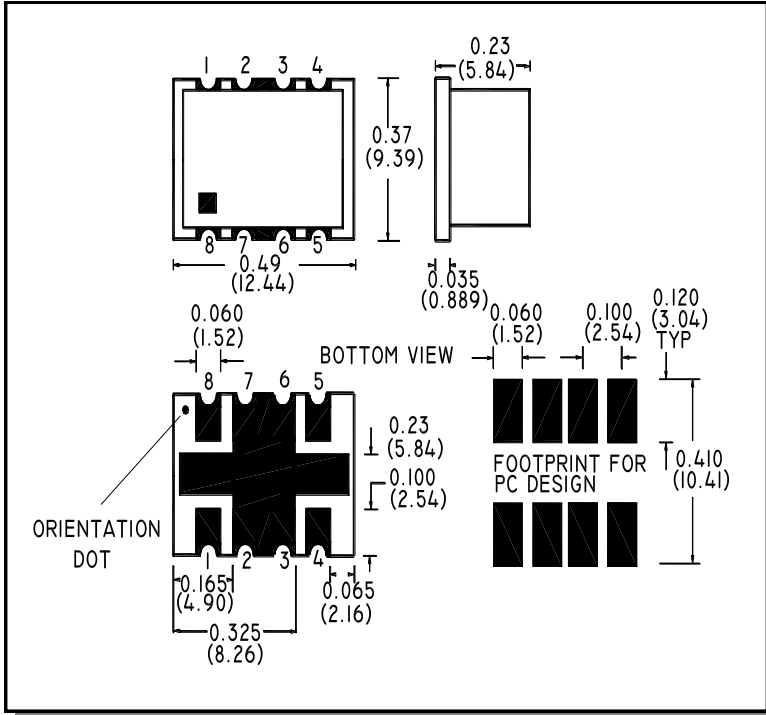
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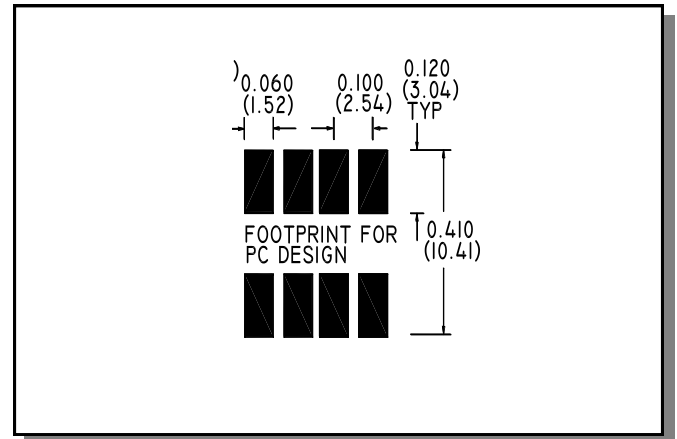
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## Outline Drawing

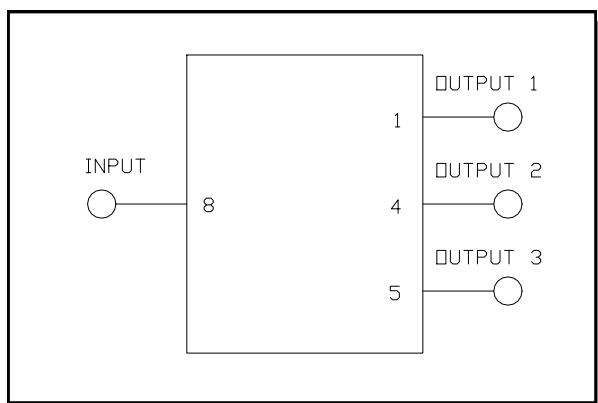


## Recommended Footprint



Dimensions in mm Tolerance: .xx ± .1, .xxx ± .010, unless otherwise stated

## Schematic



## Pin Configuration

| Pin No. | Function |
|---------|----------|
| 1       | Output 1 |
| 2,3,6,7 | Ground   |
| 4       | Output 2 |
| 5       | Output 3 |
| 8       | Input    |

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## Tape & Reel Information

| Item   | Dimension        |
|--|------------------|
| Ao   | 10.26mm +/-0.1mm |
| Bo   | 13.46mm +/-0.1mm |
| Ko   | 6.10mm +/-0.1mm  |
| W  | 24.00mm +/-0.3mm |
| P1   | 16.00mm +/-0.1mm |
| Orientation  | F47              |
| Reference Application Note ANI-019 for Orientation |                  |

## Ordering Information

| Part Number    | Description               |
|----------------|---------------------------|
| MAPD-011003    | Tape & Reel               |
| MAPD-011003-TB | Customer Evaluation Board |

## Recommended Maximum Ratings

| Parameter                   | Units | Min | Max   |
|-----------------------------|-------|-----|-------|
| RF Power                    | W     |     | 250mW |
| DC Current                  | A     |     | 30mA  |
| Operating Temperature Range | °C    | -40 | +85   |