

## 2-Way 0° Power Divider 5 - 1000 MHz

Rev. V5

### Features

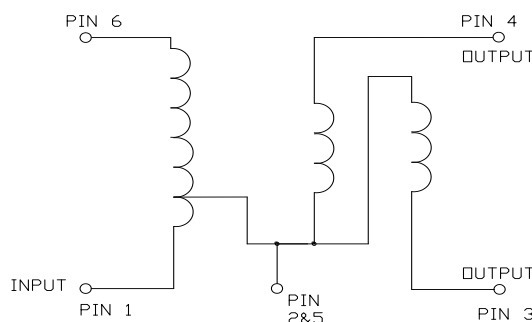
- Surface Mount
- 2-Way 0°
- RoHS Compliant and 260° Reflow Compatible
- Available on tape and reel
- Pb Free

### Description

The MAPD-010038-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-010038-C209C0	2000 piece reel
MAPD-010038-C209TB	customer test board

### Pin Configuration

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

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

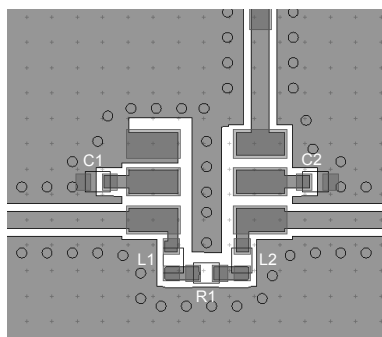
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss (Above 3 dB)	5 - 50 MHz	dB	—	0.53	0.7
	50 - 500 MHz			0.55	0.8
	500 - 1000 MHz			0.65	1.0
Amplitude Balance	5 - 1000 MHz	dB	—	0.3	0.6
Phase Balance	5 - 1000 MHz	deg.	—	0.3	4.0
Input Return Loss	5 - 1000 MHz	dB	20	30	—
Output Return Loss	5 - 50 MHz	dB	17	23	—
	50 - 1000 MHz		20	27	
Isolation (between outputs)	5 - 50 MHz	dB	24	40	—
	50 - 1000 MHz		30	38	

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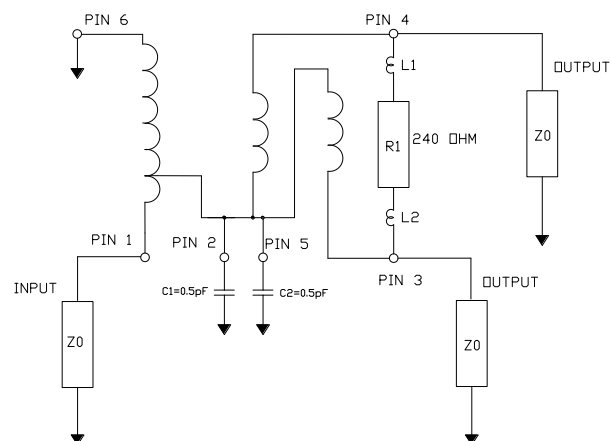
## Recommended Maximum Ratings

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

## Recommended PCB Configuration



## Application Circuit

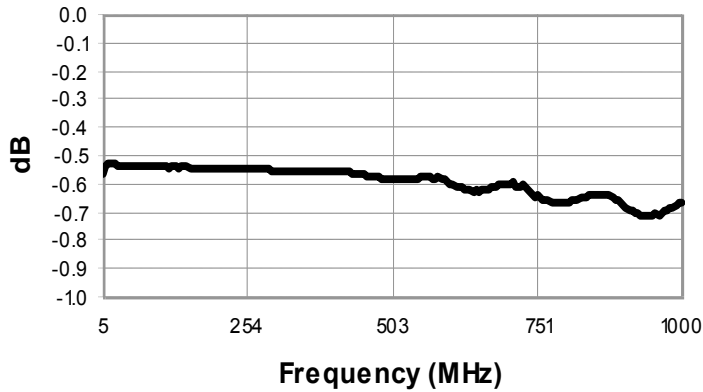


## Parts List

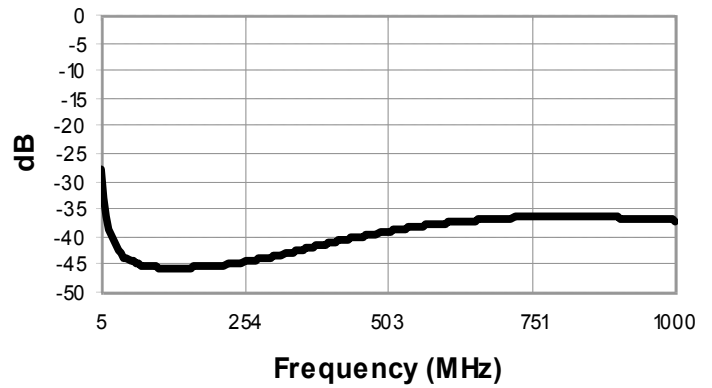
Part	Value	Case Style	Vendor
R1	240 Ω	0402	ROHM
L1, L2	8.2 nH	0402	COILCRAFT
C1, C2	0.5 pF	0402	MURATA

## Typical Performance Curves

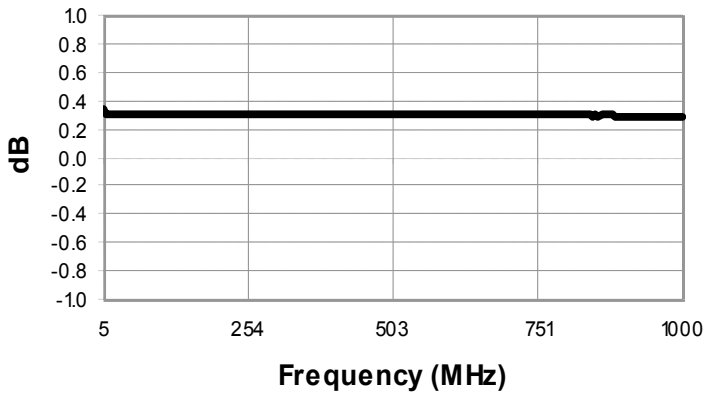
### Insertion Loss:



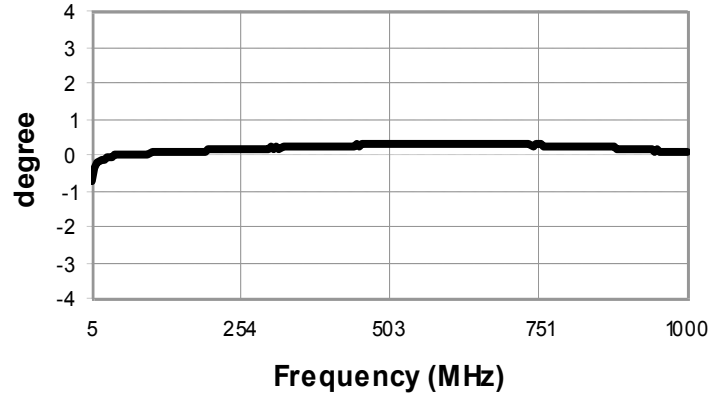
### Isolation:



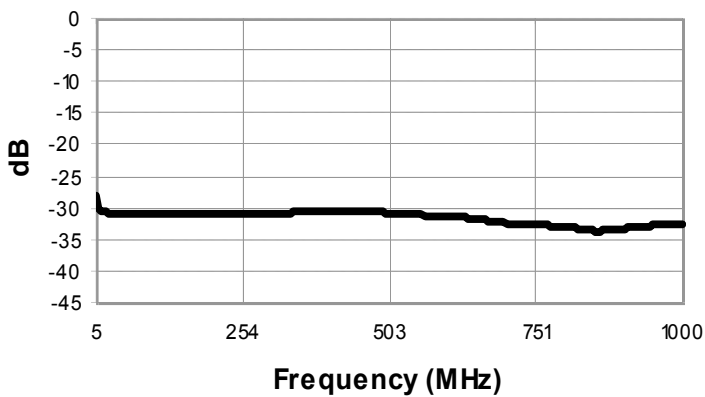
### Amplitude Balance:



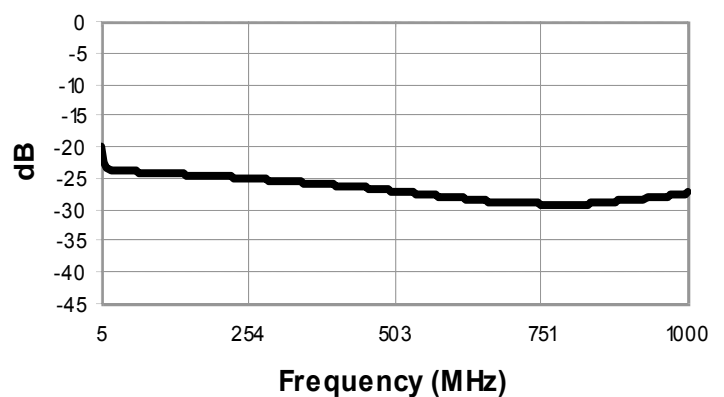
### Phase Balance:



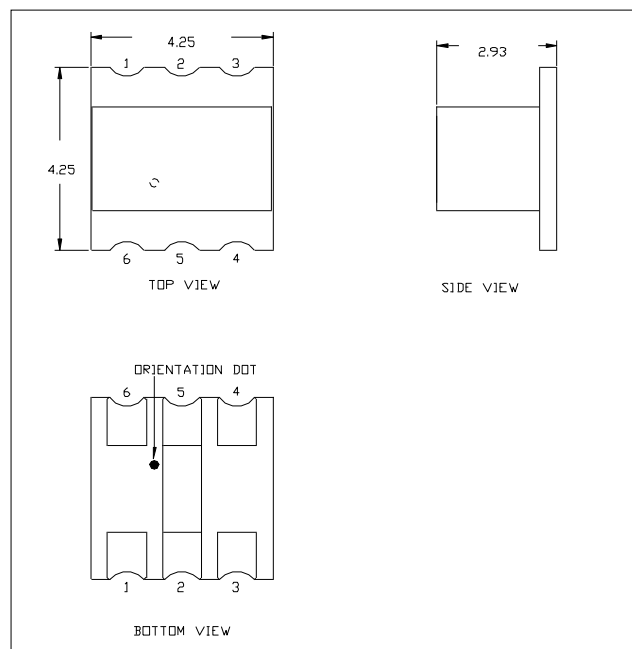
### Return Loss: Input



### Return Loss: Output

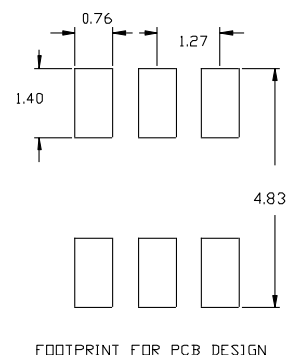


## Outline Drawing<sup>1,2,3,4</sup>



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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