

## CATV Diplex Filter 5 - 36 MHz / 48 - 1000 MHz

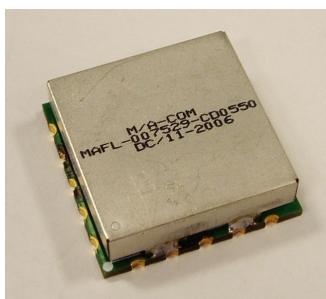
Rev. V2

### Features

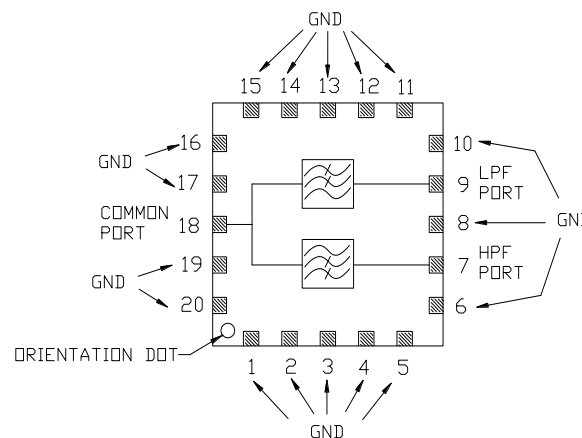
- 75  $\Omega$
- SMT unit
- Excellent Temperature Stability
- Excellent Repeatability
- RoHS Compliant and Lead free
- Available on Tape and Reel
- Technology used in this product is patent pending

### Description

MAFL-007529-CD0550 is a low cost, surface mount diplex filter unit designed for CATV applications.



### Functional Schematic



### Pin Configuration

Pin Number	Function
1-6, 8, 10-17, 19, 20	Ground
7	High Pass Port
9	Low Pass Port
18	Common Port

### Ordering Information

Part Number	Package
MAFL-007529-CD0550	50 Piece Reel

### Electrical Specifications: Freq. = 5 - 36 MHz / 48 - 1000 MHz, $T_A = 25^\circ\text{C}$ , $Z_0 = 75 \Omega$

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	5 - 36 MHz	dB	—	0.5	1.2
	48 - 1000 MHz			0.5	1.1
Insertion Loss Flatness	5 - 36 MHz	dB	—	—	0.5
Crossover Isolation	37 - 47 MHz	dB	30	35	—
Stopband Rejection	5 - 36 MHz	dB	50	55	—
	48 - 860 MHz		50	55	
	860 - 1000 MHz		45	50	
Input Return Loss	5 - 36 MHz	dB	18	21	—
	48 - 400 MHz		18	21	
	400 - 870 MHz		17	19	
	870 - 1000 MHz		15	17	
Group Delay	32.5 - 36.0 MHz	ns	—	15	20
	48.0 - 51.5 MHz			23	25

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Rev. V2

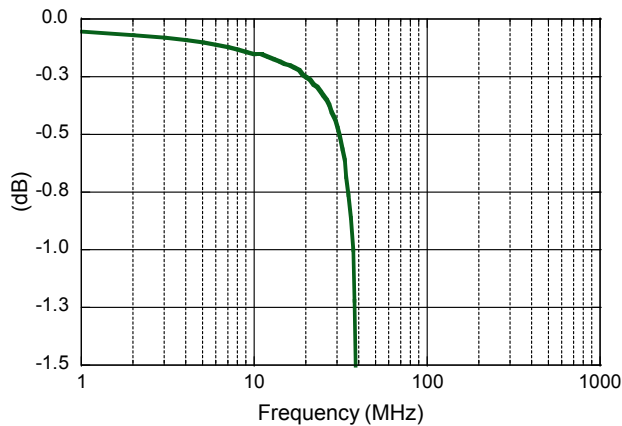
### Absolute Maximum Ratings<sup>1,2</sup>

Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C

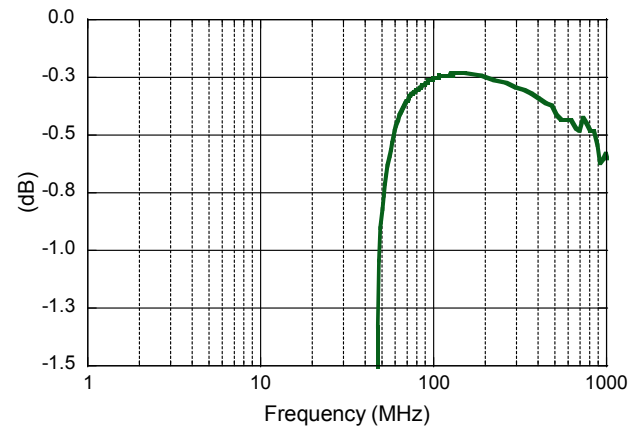
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

### Typical Performance Curves

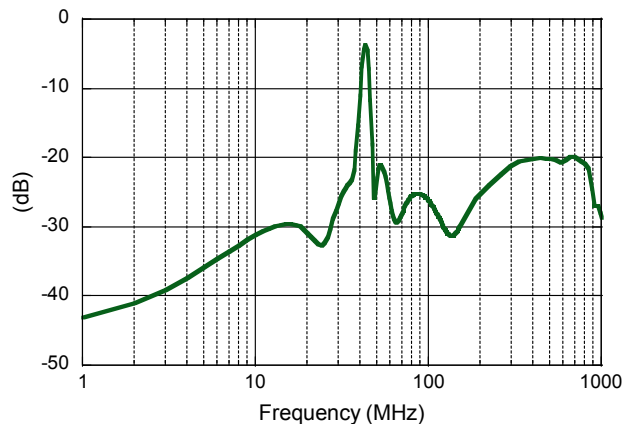
#### Low Pass Filter Insertion Loss



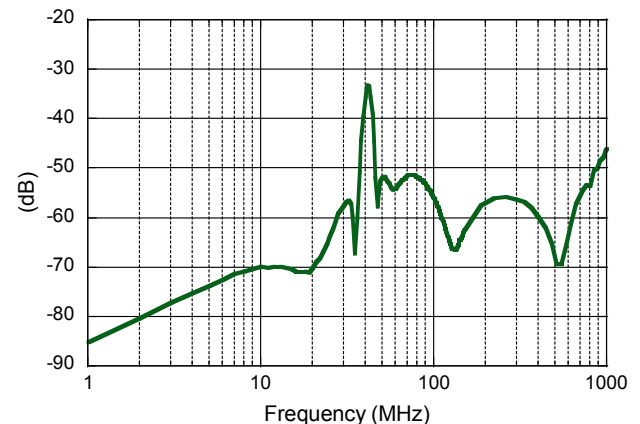
#### High Pass Filter Insertion Loss



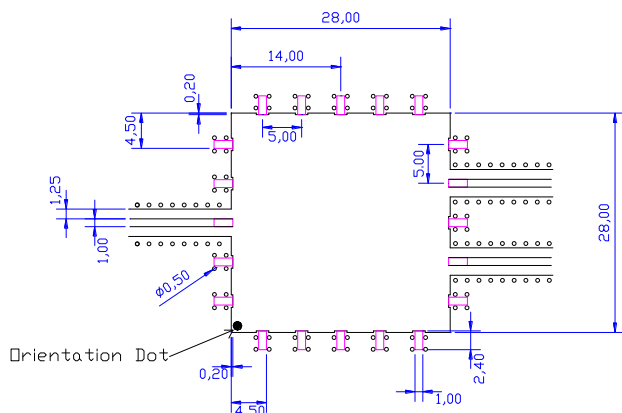
#### Input Return Loss



#### Isolation

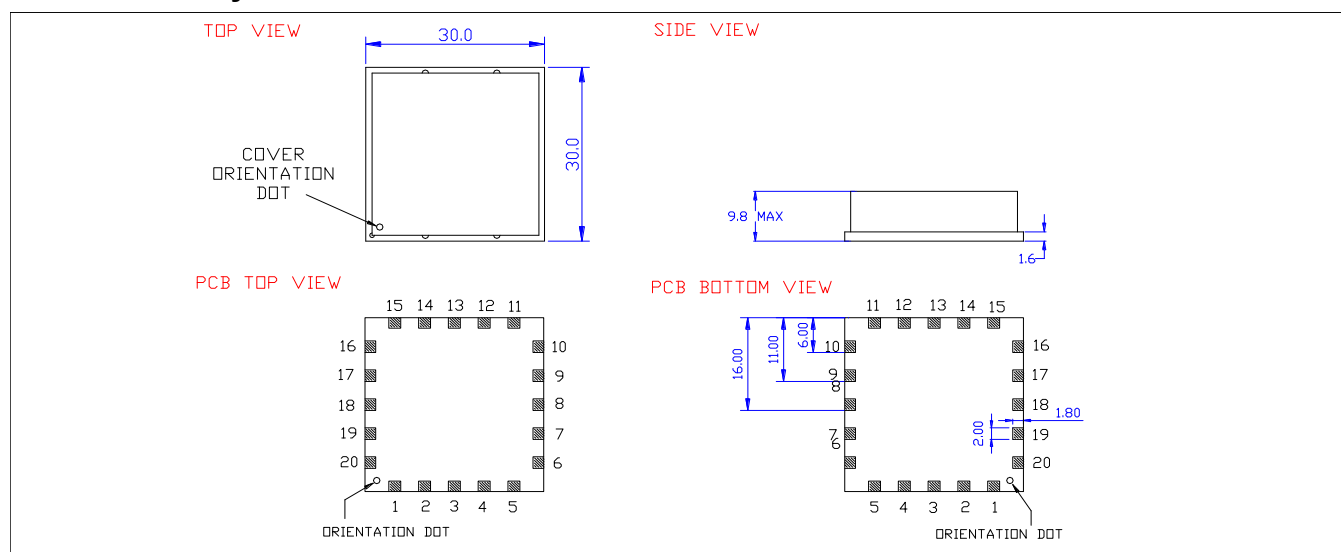


## Recommended PCB Configuration



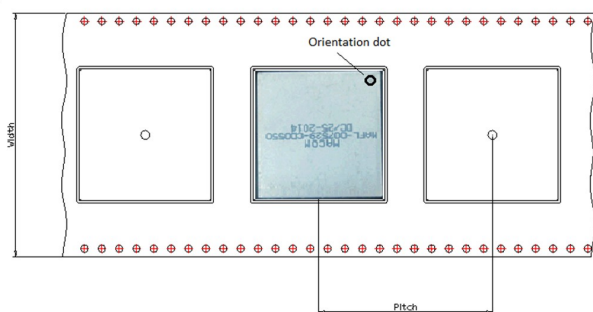
Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

## SM-85 Case Style



Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

## Carrier Tape Orientation



## Tape & Reel Information

Parameter	Units	Value
Qty per reel	pcs	50
Reel size	mm	330
Tape Width	mm	56
Pitch	mm	40
Orientation	-	F20
Reference Application Note ANI-019 for orientation		

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