

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

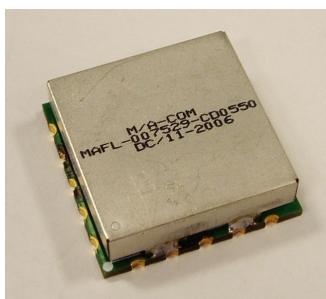
Rev. V2

Features

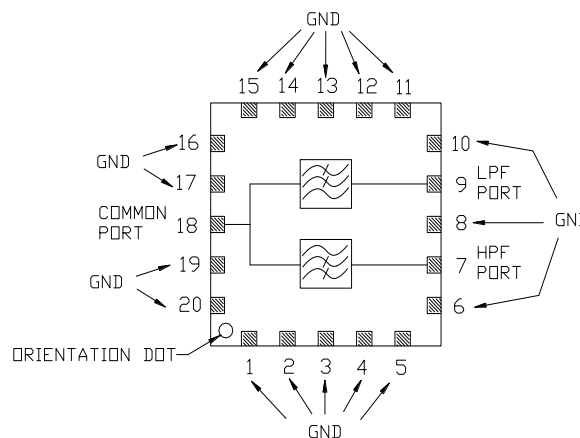
- 75 Ω
- SMT unit
- Excellent Temperature Stability
- Excellent Repeatability
- RoHS Compliant and Lead free
- Available on Tape and Reel
- Technology used in this product is patent pending

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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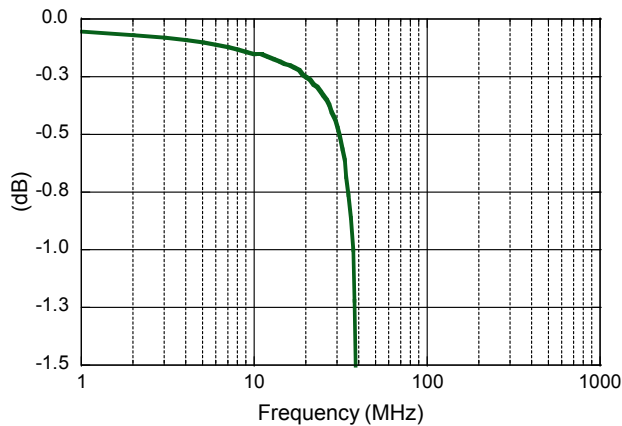
Absolute Maximum Ratings^{1,2}

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

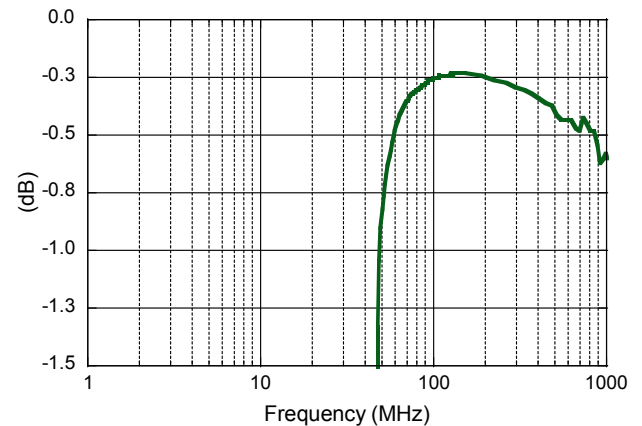
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves

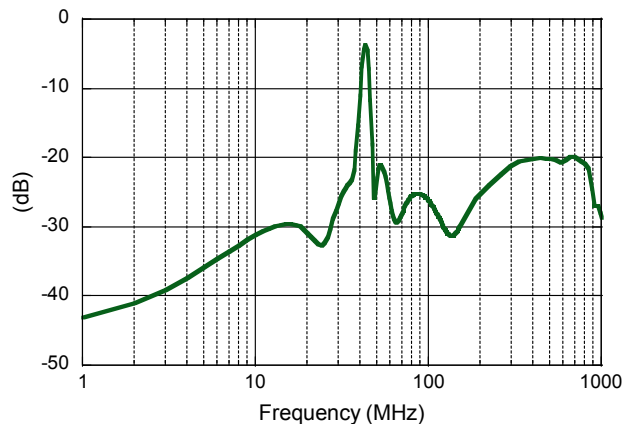
Low Pass Filter Insertion Loss



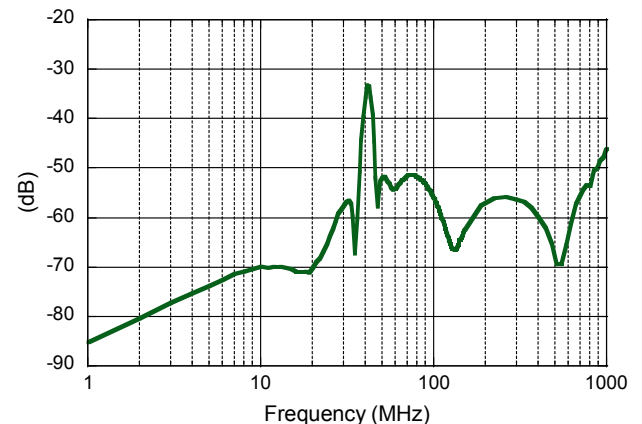
High Pass Filter Insertion Loss



Input Return Loss



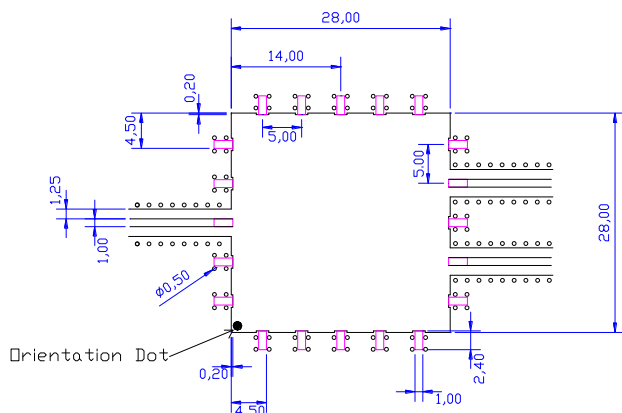
Isolation



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

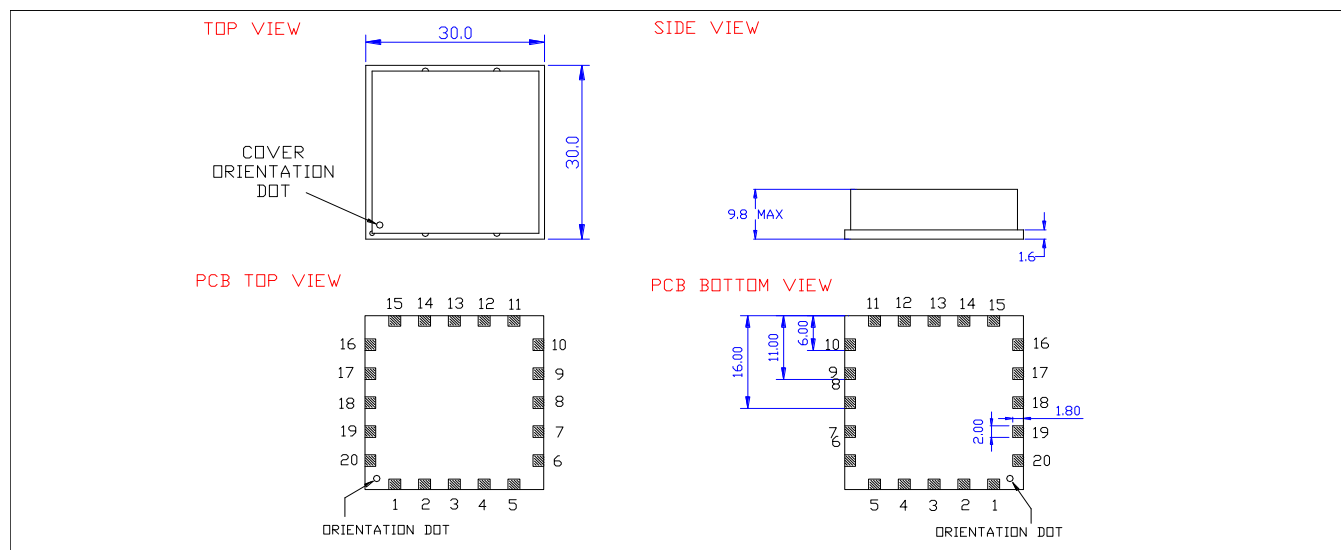
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Recommended PCB Configuration



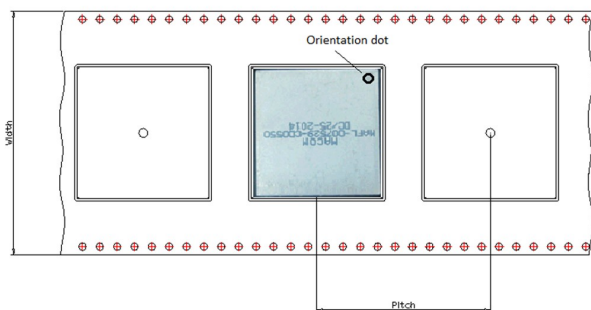
Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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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