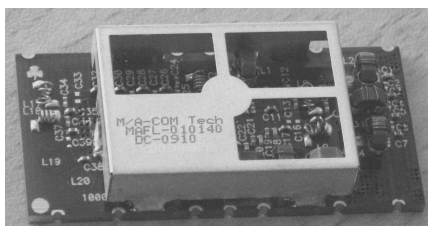


Features

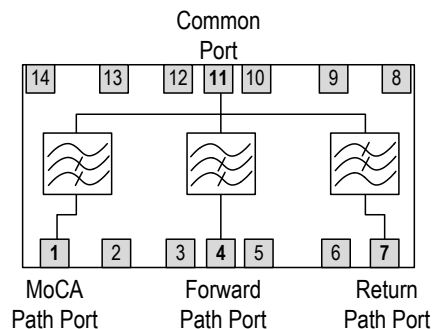
- 75 Ω
- Surface Mount Technology
- RoHS* Compliant & Lead-Free

Description

The MAFL-010140-CT0C60 is a surface mount triplex filter unit designed for MoCA applications.



Functional Schematic



Pin Configuration

Pin #	Function
1	MoCA Path Port
2,3,5,6,8,9,10,12,13,14	Ground
4	Forward Path Port
7	Return Path Port
11	RF Input (Common Port)

Electrical Specifications: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

Parameter	Test Conditions Frequency (MHz)	Units	Min	Typ	Max
Input Port Return Loss	5 - 42	dB	-15	-12	—
	54 - 1002		-12	-10	—
	1125 - 1525		-12	-10	—
Reverse Path Filter	5 - 42	dB	-1.2	—	-1.5
	54 - 64		-62.0	-60.0	—
	64 - 210		-48.0	-45.0	—
	210 - 450		-40.0	-37.5	—
	450 - 1002		-32.0	-28.0	—
Forward Path Filter	5 - 40	dB	-55.0	-50.0	—
	40 - 42		-50.0	-47.5	—
	54 - 88		-1.5	—	-2.0
	88 - 800		-1.0	—	-1.5
	800 - 1002		-2.0	—	-2.5
	1125 - 1200		-40.0	-37.0	—
	1200 - 1400		-28.0	-26.0	—
	1400 - 1500		-37.0	-33.0	—
1500 - 2000	-30.0	-26.0	—		
MoCA Path Filter	5 - 750	dB	-50.0	-45.0	—
	750 - 1002		-42.0	-40.0	—
	1125 - 1525		-2.0	—	-3.0
	2000		-35.0	-30.0	—

¹ * Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Ordering Information

Part Number	Package
MAFL-010140-CT0C60	960 per tray

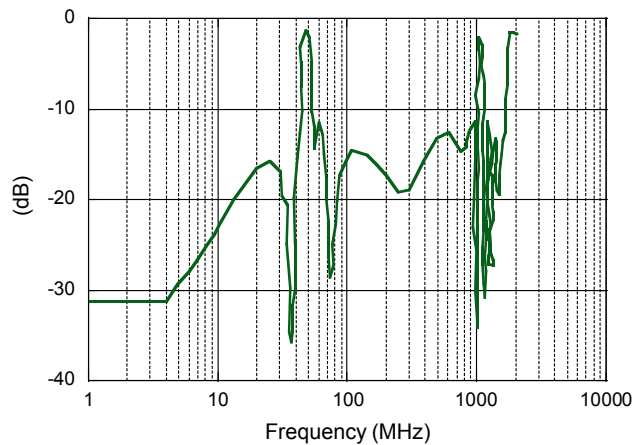
Absolute Maximum Ratings^{1,2}

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

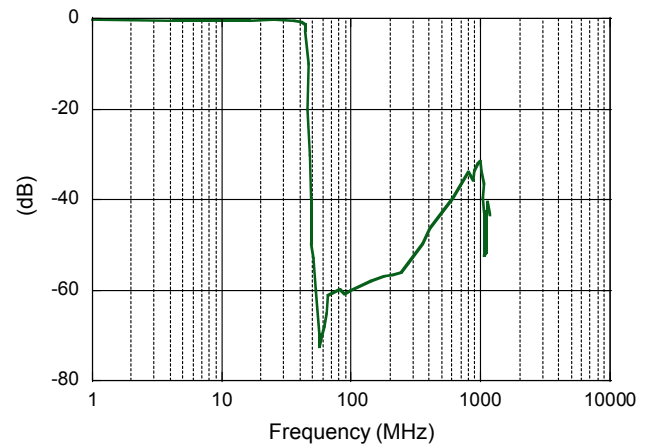
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves

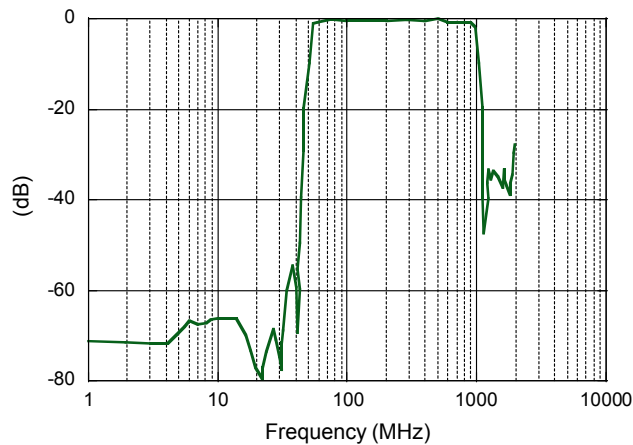
Common Port Return Loss



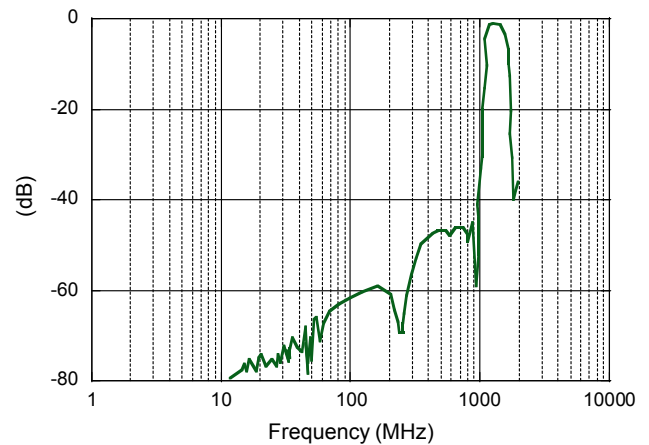
Common to Reverse Path Filter



Common to Forward Path Filter

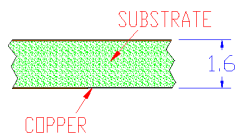


Common to MoCA Path Filter

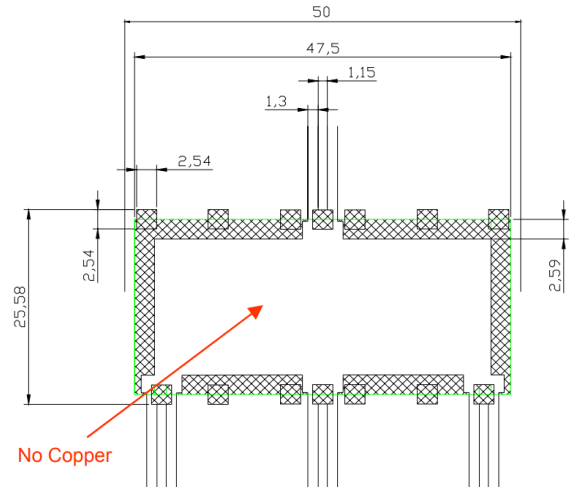


Recommended PCB Configuration

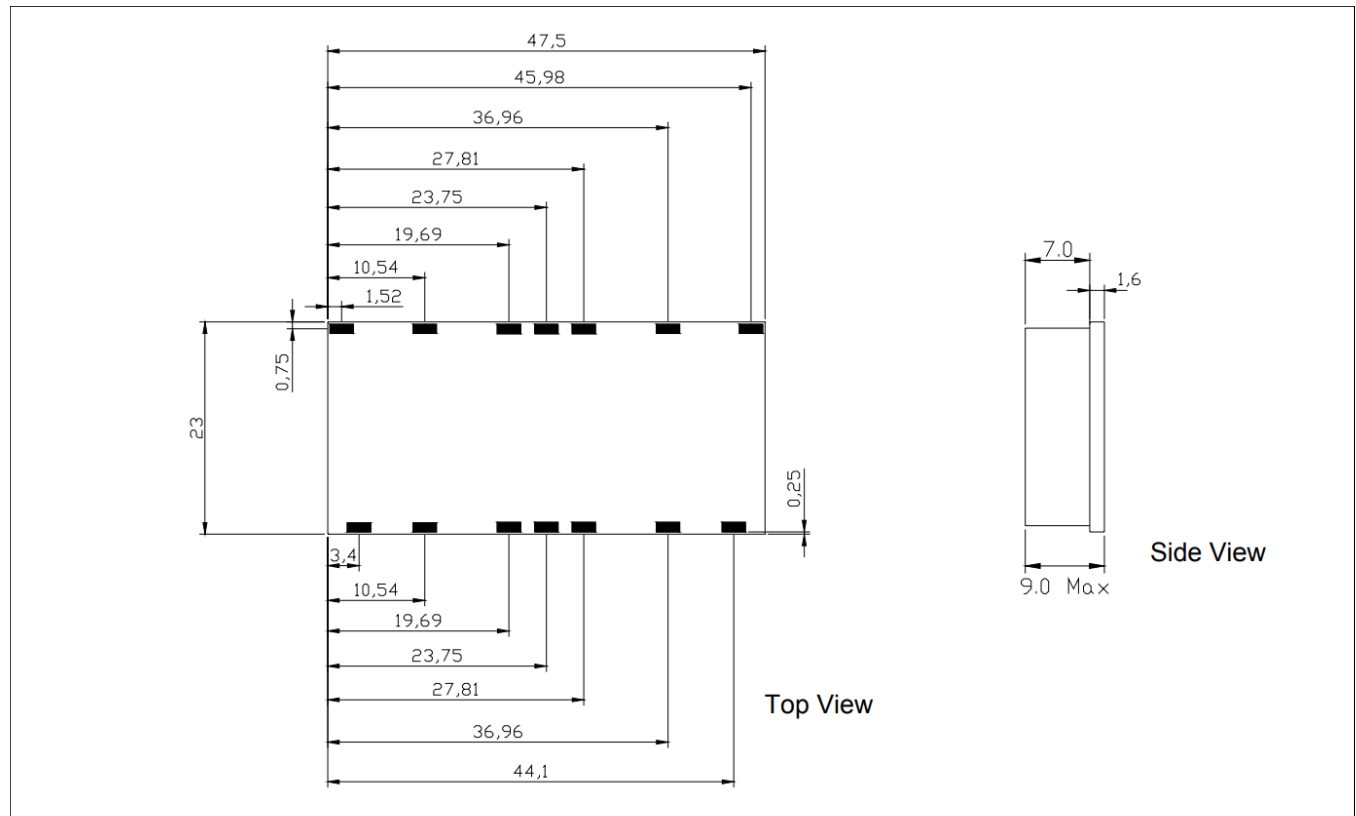
- Track dimension = 1.15 mm
- Gap dimension = 1.3 mm
- It is not recommended to run tracks under the filter unless they are greater than 1.6 mm below the base.
- Ground should be 1.6 mm below the base of the filter.
- Area directly under the filter should be free from copper.
- RF shield should be kept a minimum of 6mm above the filter.
- Recommended stack up as follows:



Dimensions in mm. Tolerance: $.x \pm 0.1$, unless otherwise specified



Component Dimensions (SM-198)



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