

Low Cost SMT High Pass Filter 800 – 3000 MHz

Rev. V3

Features

- Small Size and Low Profile
- Superior Repeatability
- Typical Insertion Loss 0.5 dB
- Typical Rejection 20 dB
- 2 Watt Power Handling
- Lead-Free SO-8 Package
- 100% Matte Tin Plating over Copper
- Halogen-Free "Green" Mold Compound
- 260°C Reflow Compatible
- RoHS* Compliant Version of FL05-0001-G

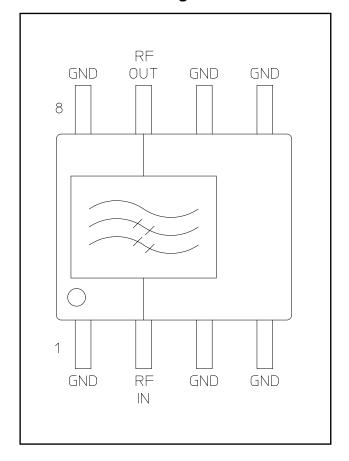
Description

M/A-COM's MAFLCC0004 is an IC-based monolithic high pass filter in a low cost SOIC-8 plastic package. This filter is ideally suited for applications where small size, low cost, and low loss are required.

Typical applications include base station switching networks and portable phones where size and PCB real estate are at a premium. Available in tape and reel

The MAFLCC0004 is fabricated using a passiveintegrated circuit process. The process features fullchip passivation for increased performance and reliability.

Functional Block Diagram



Ordering Information

Commitment to produce in volume is not g

Part Number	Package	
MAFLCC0004	Bulk Packaging	
MAFLCC0004-TR	1000 piece reel	
MAFLCC0004-TB	Sample Test Board	

Note: Reference Application Note M513 for reel size information.

Pin Configuration

Pin No.	Function	Pin No.	Function
1	GND	5	GND
2	RF IN	6	GND
3	GND	7	RF OUT
4	GND	8	GND

^{*} Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or restrate and/or protocology.

[•] North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

India Tel: +91.80.4155721
 China Tel: +86.21.2407.1588
 Visit www.macomtech.com for additional data sheets and product information.



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Electrical Specifications: $T_A = 25$ °C, $Z_0 = 50\Omega$

Parameter	Units	Min	Тур	Max
Insertion Loss: 800 – 850 MHz 850 – 3000 MHz	dB dB		 0.5	1.2 1.0
VSWR: 800 – 3000 MHz	_	_	1.5:1	1.8:1
Rejection: DC-400 MHz	dB	15	20	_

Absolute Maximum Ratings ^{1,2}

Parameter	Absolute Maximum
Input Power	2 W CW
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

- 1. Exceeding any one or combination of these limits may cause permanent damage to this device.
- M/A-COM does not recommend sustained operation near these survivability limits.

Handling Procedures

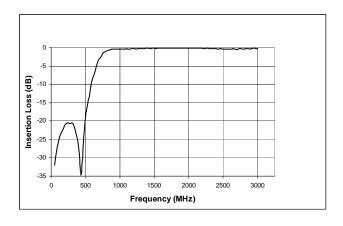
Please observe the following precautions to avoid damage:

Static Sensitivity

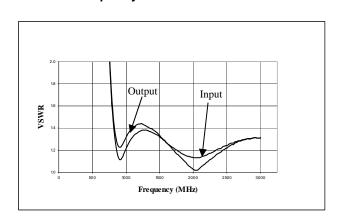
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

Typical Performance Curves @ 25°C

Insertion Loss vs. Frequency



VSWR vs. Frequency



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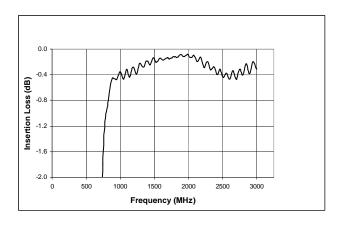


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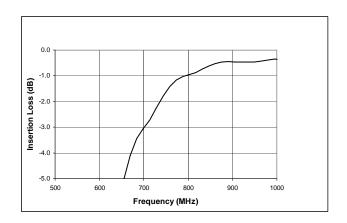
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Typical Performance Curves @ 25°C

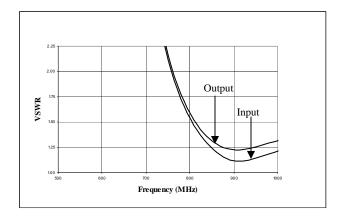
Passband Insertion Loss vs. Frequency



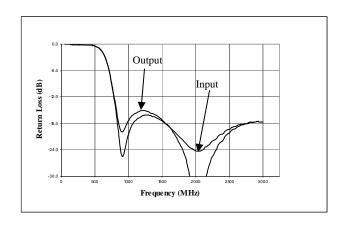
Insertion Loss at Edge of Passband vs. Frequency



VSWR at Edge of Passband vs. Frequency



Return Loss at Edge of Passband vs. Frequency



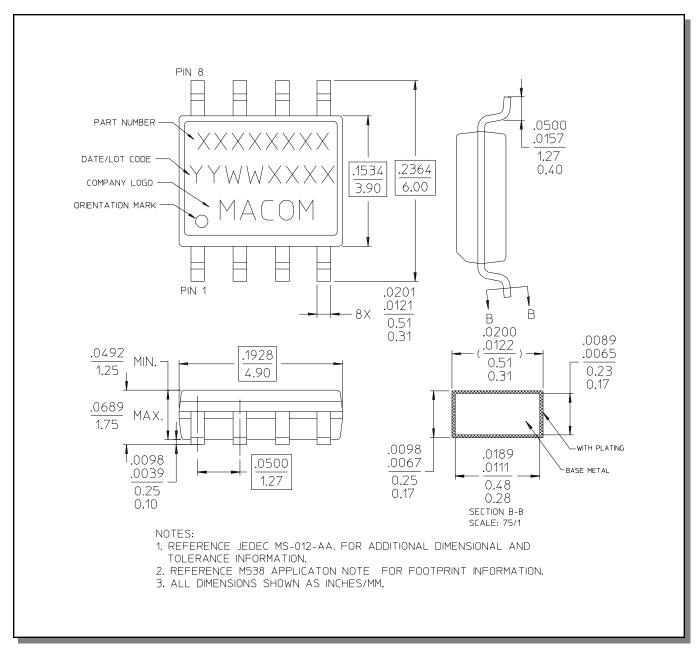
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Lead-Free, SOIC-8[†]



Reference Application Note M538 for lead-free solder reflow recommendations.

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