## MAFLCC0005



Low Cost SMT High Pass Filter 1700 – 3000 MHz

Rev. V2

#### **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 FL05-0002-G

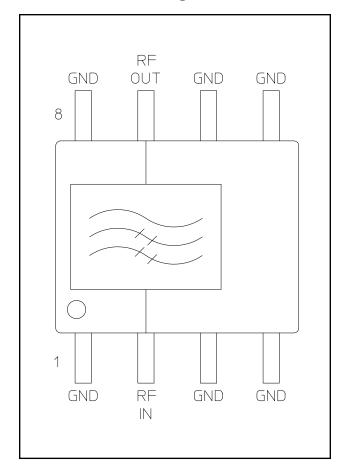
#### **Description**

M/A-COM's MAFLCC0005 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 MAFLCC0005 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           |  |
|---------------|-------------------|--|
| MAFLCC0005    | Bulk Packaging    |  |
| MAFLCC0005-TR | 1000 piece reel   |  |
| MAFLCC0005-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      |

<sup>\*</sup> 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 on the target may be available.

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 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: 1700 – 3000 MHz | dB    | _   | 0.5   | 1.0   |
| VSWR: 1700 – 3000 MHz           | _     | _   | 1.5:1 | 1.8:1 |
| Rejection: DC – 1000 MHz        | dB    | 15  | 20    | _     |

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

| 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**

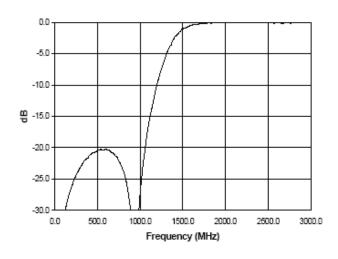
Please observe the following precautions to avoid damage:

#### **Static Sensitivity**

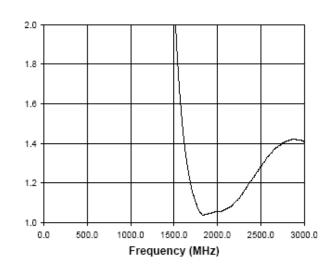
GMIC Circuits are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

## Typical Performance Curves @ 25°C

#### Insertion Loss vs. Frequency



#### VSWR vs. Frequency



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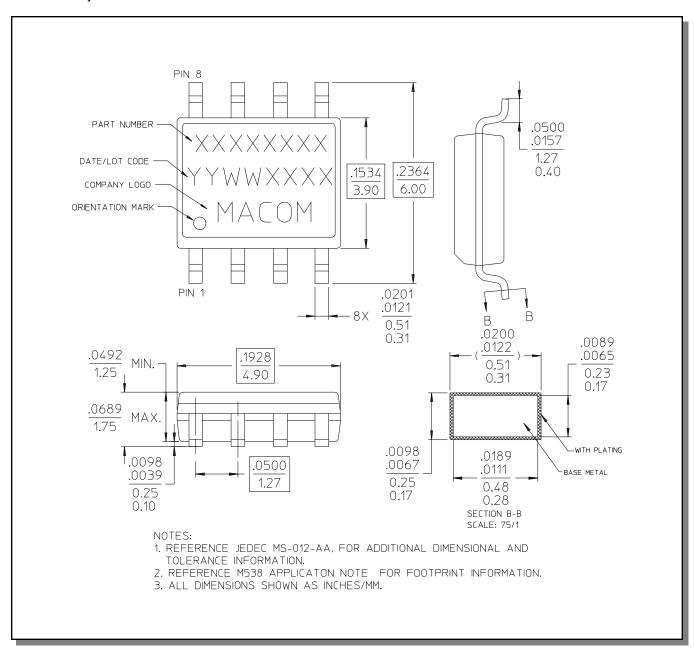
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### Lead-Free, SOIC-8<sup>†</sup>



<sup>&</sup>lt;sup>†</sup> Reference Application Note M538 for lead-free solder reflow recommendations.

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