MAFLCC0006

M/A-COM Technology Solutions

Low Cost SMT Low Pass Filter
DC – 1000 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 FL07-0001-G

Description

M/A-COM's MAFLCC0006 is an IC-based monolithic low 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 MAFLCC0006 is fabricated using a passive-integrated circuit process. The process features full-chip passivation for increased performance and reliability.

Functional Block Diagram
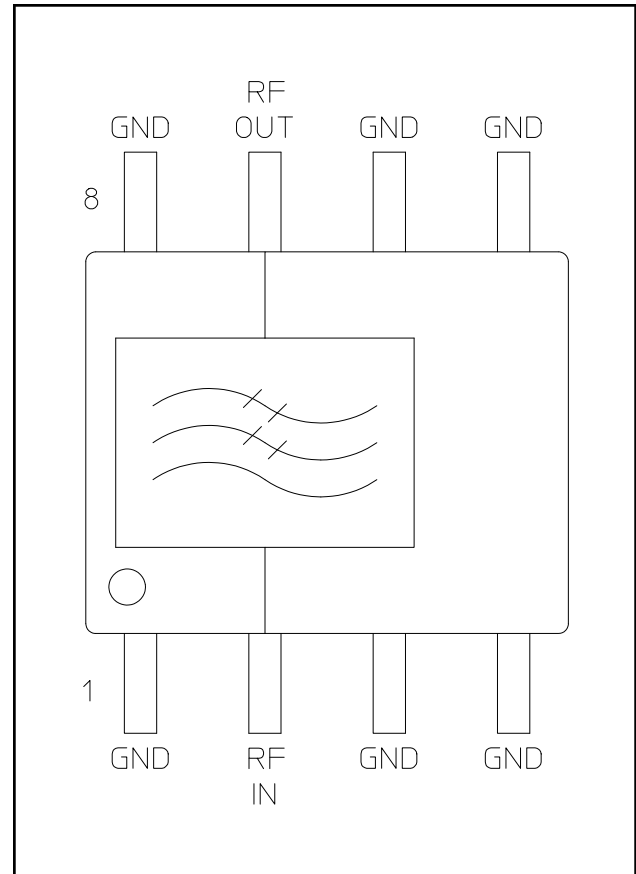
1. All unused pins must be RF and DC grounded.
2. Pins 1 and 4 are thermal ground contacts.

Ordering Information

Part Number	Package
MAFLCC0006	Bulk Packaging
MAFLCC0006-TR	1000 piece reel
MAFLCC0006-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.

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

Parameter	Units	Min	Typ	Max
Insertion Loss: DC – 1000 MHz	dB	—	0.5	1.0
VSWR: DC – 1000 MHz	—	—	1.3:1	1.6:1
Rejection: 1800 – 3500 MHz 2000 – 3000 MHz	dB dB	15 20	20 27	— —

Absolute Maximum Ratings [3,4]

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

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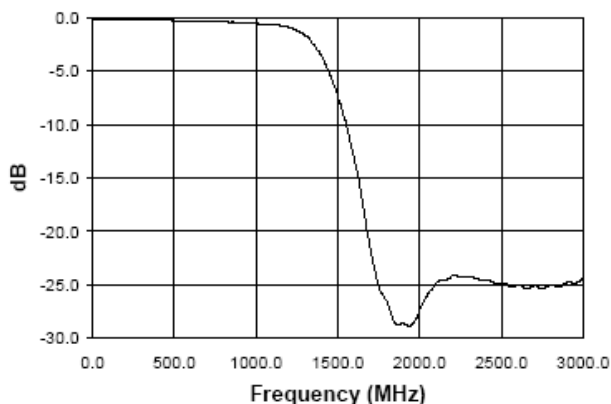
Handling Procedures

Please observe the following precautions to avoid damage:
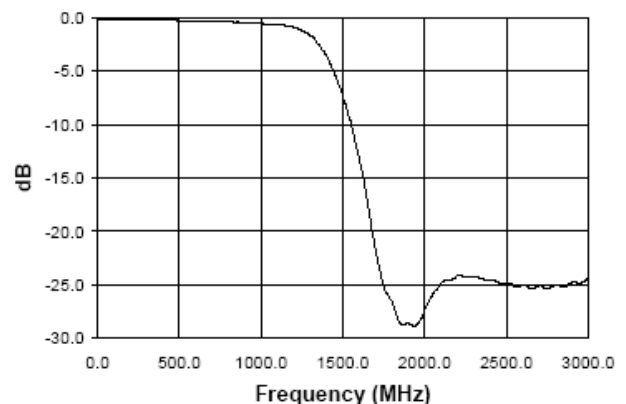
Static Sensitivity

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
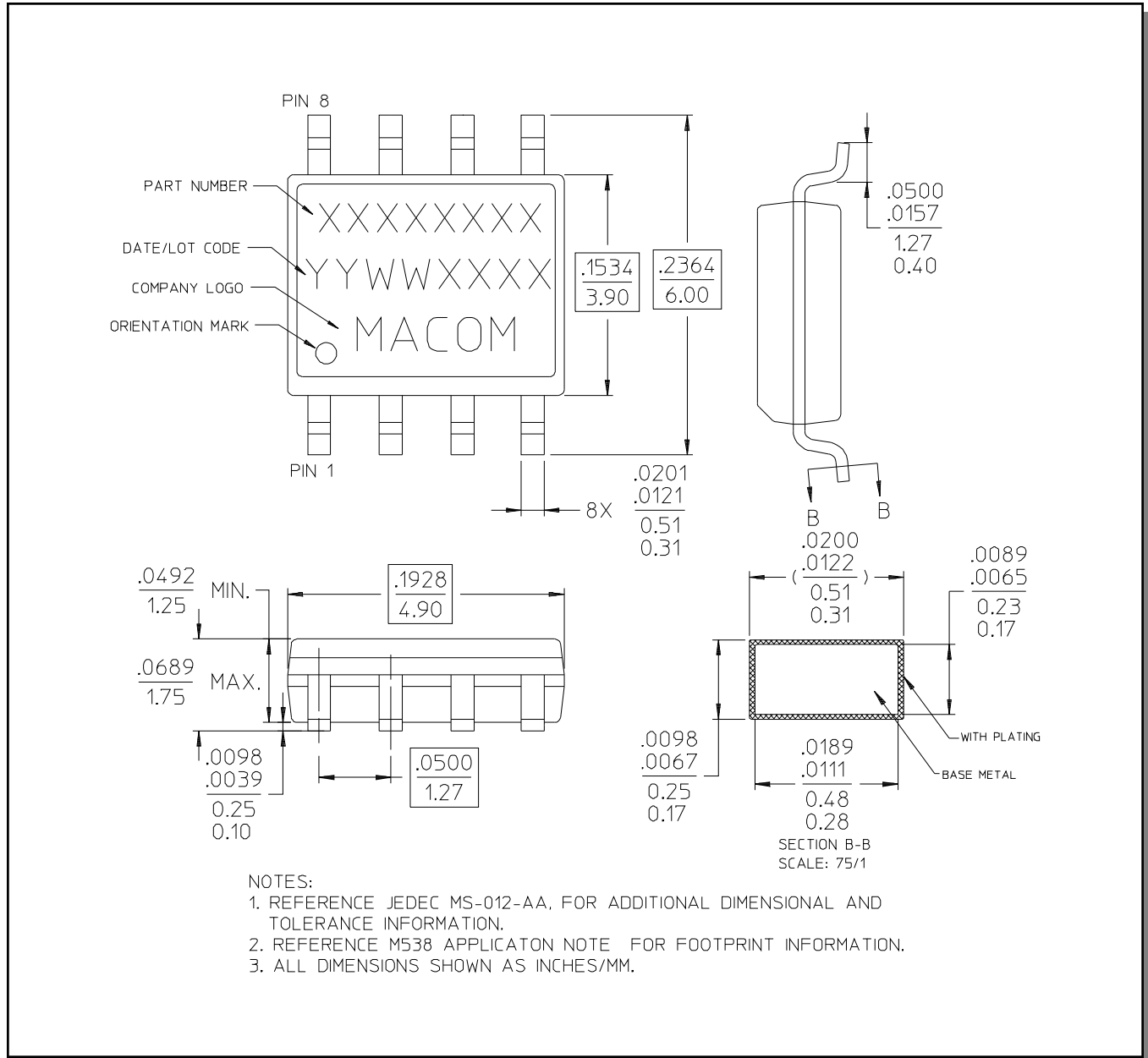
Insertion Loss vs. Frequency

VSWR vs. Frequency

Lead-Free, **SOIC-8†**

NOTES:
1. REFERENCE JEDEC MS-012-AA, FOR ADDITIONAL DIMENSIONAL AND TOLERANCE INFORMATION.
2. REFERENCE M538 APPLICATON NOTE FOR FOOTPRINT INFORMATION.
3. ALL DIMENSIONS SHOWN AS INCHES/MM.

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