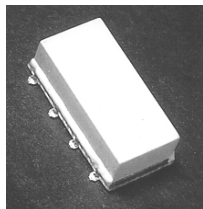




# E-Series I/Q Modulator 851-869 MHz

## Features

- High Carrier Suppression
- High 3I and 5I Suppression

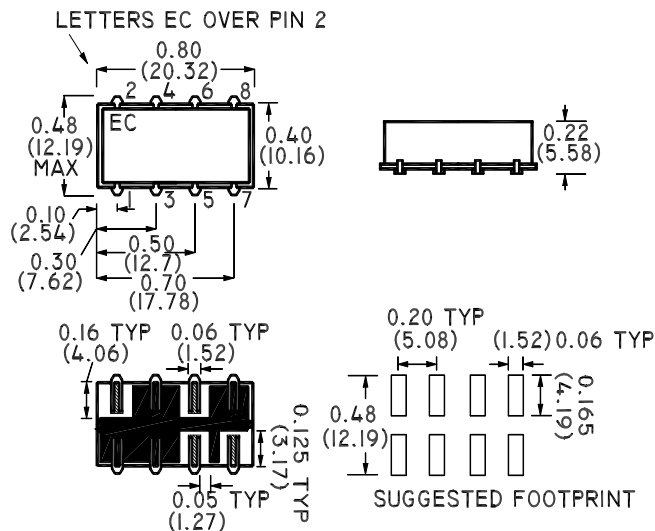


## Description

M/A-COM's MAMDES0001 is a passive surface mount I/Q Modulator. Ideally suited for Direct Modulation in PMR/TETRA applications.

## SM-82 Package

Note: Non Hermetic Package



## Electrical Specifications @25°C

Parameter	Units	Typical	Minimum	Maximum
Frequency Range				
(LO) Carrier	851-869	MHz	—	—
I/Q	DC - 10	MHz	—	—
LO Carrier Suppression *	dBc	40	30	—
SSB Rejection *	dBc	35	30	—
Harmonic Suppression *				
3 x I/Q	dBc	45	35	—
5 x I/Q	dBc	55	45	—
Conversion Loss	dB	6.5	—	9
LO—RF Isolation	dB	45	20	—
(LO) Carrier Power	dBm	+10 ± 1	—	—
I/Q Drive Level	dBm	-10.0	—	—

\* Note: When Q = -90 degrees relative to I: Lower sideband is suppressed. Related to wanted sideband power.

S 1575 A

**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 test data may be available. Commitment to produce in volume is not guaranteed.

• **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](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make

## Operating Characteristics

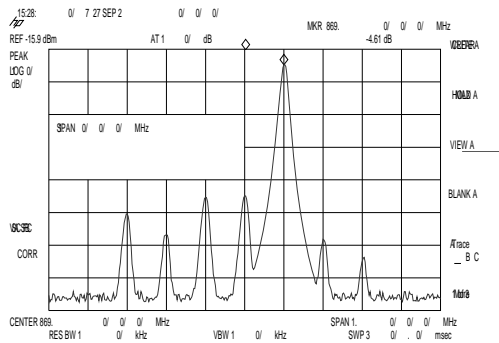
Impedance	50 Ohms Nominal
Parameter	Absolute Maximum
Operating Temperature	-10°C to +70°C
Storage Temperature	-55°C to +100°C
Pin Temperature (10 Sec)	260°C

## Functional Configuration

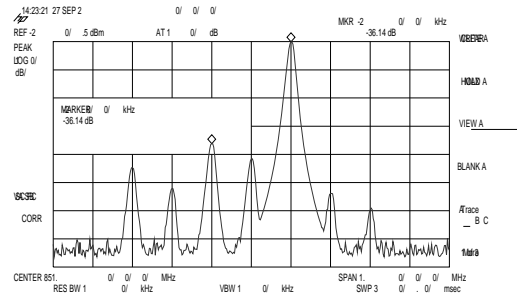
Function	Pin No.
LO	1
RF	8
I	5
Q	6
External 50 Ohms	—
Case Ground	2,3,4,7
Not Connected	—

## Typical Performance @ +25°C

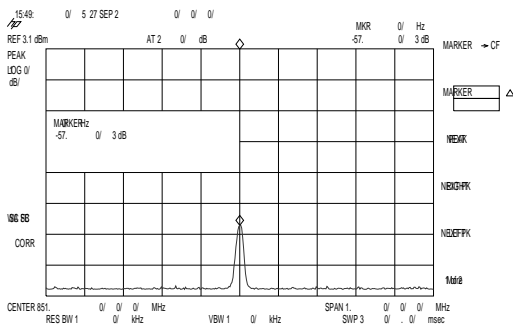
### Conversion Loss



### Suppression



### L-R Isolation



S 1575 A

**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 test data may be available. Commitment to produce in volume is not guaranteed.

• **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](http://www.macomtech.com) for additional data sheets and product information.

M/A-COM Technology Solutions Inc. and its affiliates reserve the right to make