

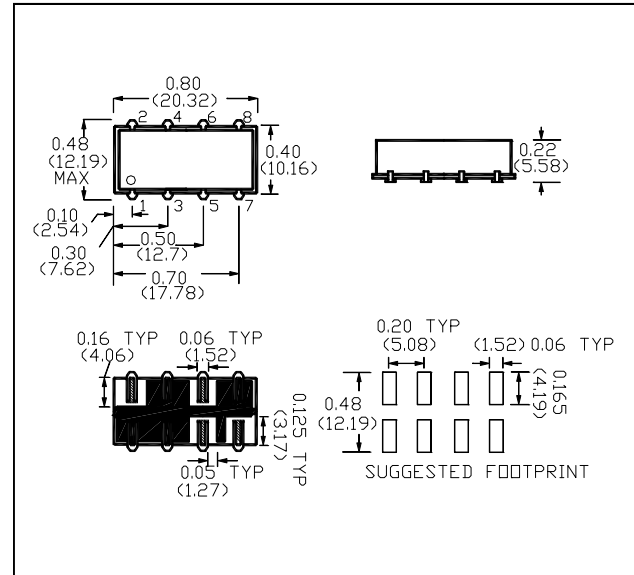
## Features

- Hi Carrier Suppression.
- Hi 3I and 5I Suppression
- +10 dBm Typical LO Drive
- Surface Mount
- Tape and reel packaging available
- 260°C Reflow Compatible
- RoHS\* compliant version of the MAMDES0019

## Description

M/A-COM's MAMO-008774-ES0019 is a RoHS Compliant passive, high performance surface mount Modulator. It is ideally suited for Direct Modulation in GSM, DCS1800, WCDMA and PCS Cellular Base Stations. The MAMO-008774-ES0019 is available in a SM-28 surface mount package and is designed to be utilized in both RoHS and standard reflow profiles. Parts are packaged in tape & reel.

## SM - 28 Package



## Ordering Information

| Part Number        | Package                        |
|--------------------|--------------------------------|
| MAMO-008774-ES0019 | Tape and Reel (300 piece Reel) |

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

| Parameter             | Absolute Maximum |
|-----------------------|------------------|
| Impedance             | 50 Ohms nominal  |
| Operating Temperature | -40°C to +85°C   |
| Storage Temperature   | -40°C to +85°C   |

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

## Pin Configuration

| Pin No. | Function    |
|---------|-------------|
| 1       | LO          |
| 2       | Case Ground |
| 3       | Case Ground |
| 4       | Case Ground |
| 5       | Q           |
| 6       | I           |
| 7       | Case Ground |
| 8       | RF          |

**This PRELIMINARY Data Sheet contains information regarding a product M/A-COM has under development. Performance is based on measured results and target specifications. Commitment to produce in volume is not guaranteed.**

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

1

**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.

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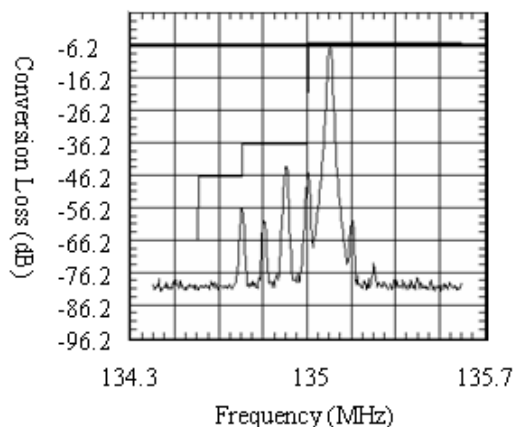
Visit [www.macomtech.com](http://www.macomtech.com) for additional data sheets and product information.

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**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$ , LO = +10 dBm**

| Parameter                    | Test Conditions   | Frequency | Units | Min | Typ     | Max |
|------------------------------|---|-----------|-------|-----|---------|-----|
| LO Frequency                 | —   | 150       | MHz   | —   | —       | —   |
| I/Q Frequency                | —   | DC - 5    | MHz   | —   | —       | —   |
| LO Carrier Suppression       | When Q = +90 degrees relative to I; Lower sideband is suppressed. Related to wanted sideband power. | 150       | dBc   | 30  | 40      | —   |
| SSB Rejection                |   | 150       | dBc   | 30  | 40      | —   |
| Harmonic Suppression 3 x I/Q |   | 150       | dBc   | 45  | 55      | —   |
| Harmonic Suppression 5 x I/Q |   | 150       | dBc   | 45  | 50      | —   |
| Conversion Loss              | —   | 150       | dB    | —   | 6.0     | 7.0 |
| (LO) Carrier Power           | —   | 150       | dBm   | —   | +10 ± 1 | —   |
| I/Q Drive Level              | —   | DC - 5    | dBm   | —   | -10     | —   |
| LO-RF Isolation              |   | 150       | dBm   | 50  | 60      |     |
| LO - I/Q Isolation           |   | 150       | dBm   | 30  | 40      |     |

**Conversion Loss**



| Summary Results  |        |
|------------------|--------|
| Result           | Pass   |
| Freq (MHz)       | 135    |
| C.L. (dB)        | -6.20  |
| Carrier (dBC)    | -39.02 |
| Sideband (dBC)   | -37.19 |
| Other (dBC)      | -49.73 |
| Q DC Offset (mV) | 0.00   |
| I DC Offset (mV) | 0.00   |