

E-Series I/Q Modulator 150 MHz

MAMO-008774-ES0019
V1

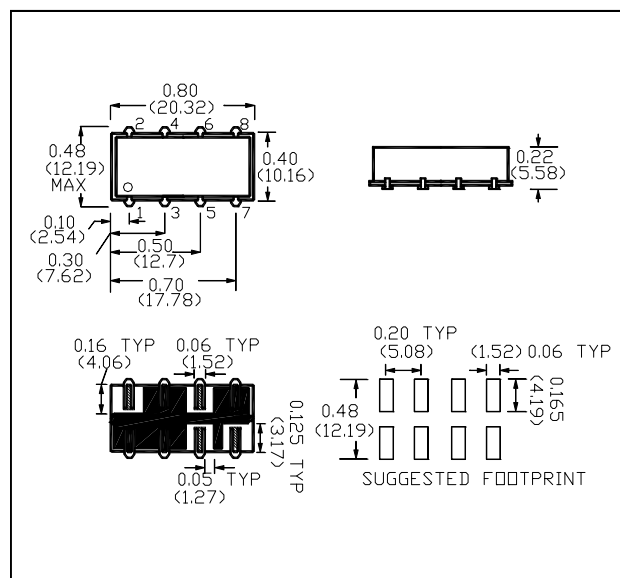
Features

- 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 ^{1,2}

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

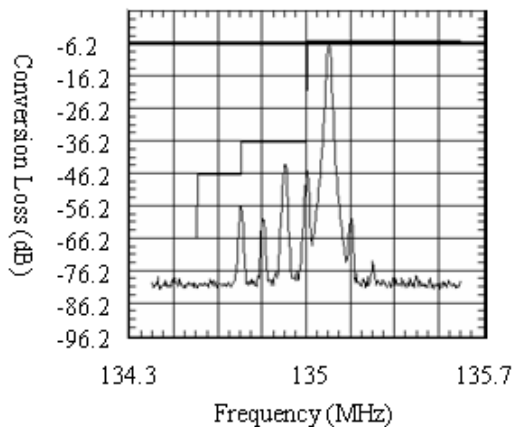
This PRELIMINARY Data Sheet contains information regarding a product M/A-COM has under development. Performance is based on measured results and target specifications. Commitment to produce in volume is not guaranteed.

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

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