

**E-Series I/Q Modulator**  
851 — 869 MHz

**MAMDES0001**  
V1

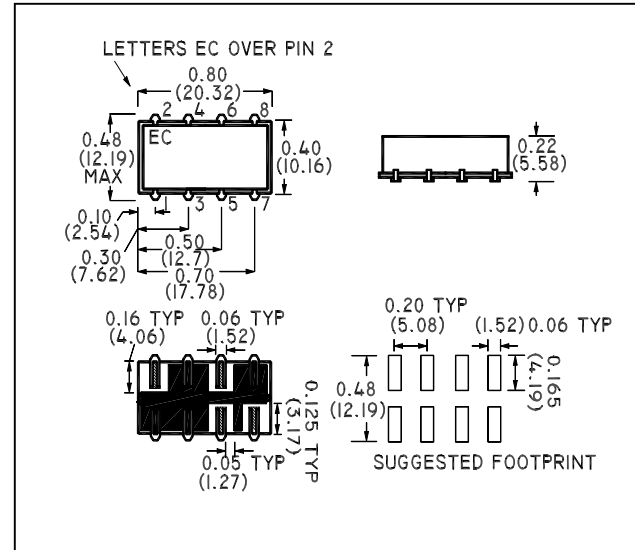
**Features**

- High Carrier Suppression
- High 3 I and 5 I Suppression
- LO Power + 10 dBm Typical
- Surface Mount
- Tape and reel packaging available

**Description**

M/A-COM's MAMDES0001 is a passive, high performance surface mount Modulator. It is ideally suited for Direct Modulation in PMR/TETRA applications. Parts are packaged in tape & reel.

**SM - 82 Package**



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

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
LO Frequency	—	851 - 869	MHz	—	—	—
I/Q Frequency	—	DC - 10	MHz	—	—	—
LO Carrier Suppression	When Q = +90 degrees relative to I; Lower sideband is suppressed. Related to wanted sideband power.	851 - 869	dBc	30	40	—
SSB Rejection		851 - 869	dBc	30	35	—
Harmonic Suppression 3 x I/Q		851 - 869	dBc	35	45	—
Harmonic Suppression 5 x I/Q		851 - 869	dBc	45	55	—
Conversion Loss	—	851 - 869	dB	—	6.5	9
LO to RF Isolation	—	851 - 869	dB	20	45	—
(LO) Carrier Power	—	851 - 869	dBm	—	+10 ± 1	—
I/Q Drive Level	—	851 - 869	dBm	—	-10	—

**Ordering Information**

Part Number	Package
MAMDES0001	Tape and Reel (300 piece Reel)

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**Absolute Maximum Ratings <sup>1</sup>**

Parameter	Absolute Maximum
Impedance	50 Ohms Nominal
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C
Pin Temperature (10 seconds)	260°C

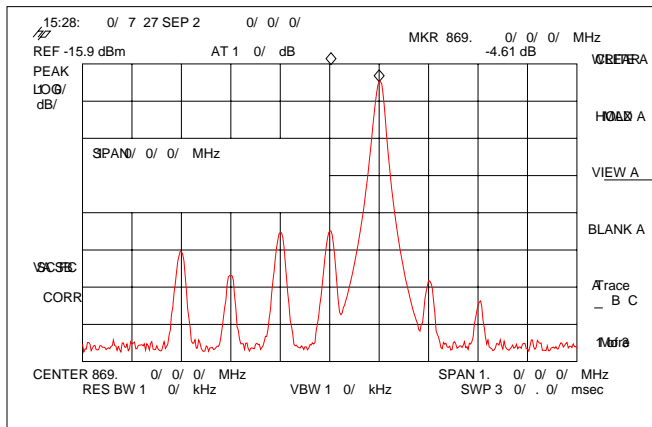
1. Operation of this device above any one of these parameters may cause permanent damage.

**Pin Configuration**

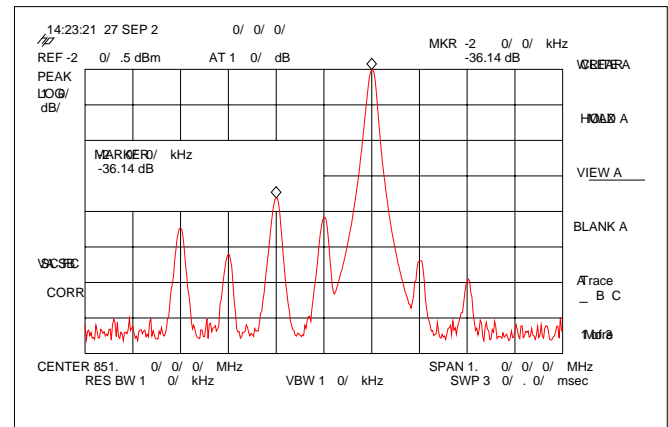
Pin No.	Function
1	LO
2	Case Ground
3	Case Ground
4	Case Ground
5	I
6	Q
7	Case Ground
8	RF

**Typical Performance**

**Conversion Loss**



**Suppression**



**Lo to RF Isolation**

