

**E-Series Surface Mount Mixer**  
0.5 – 500 MHz

**EMRS-1**  
**V1**

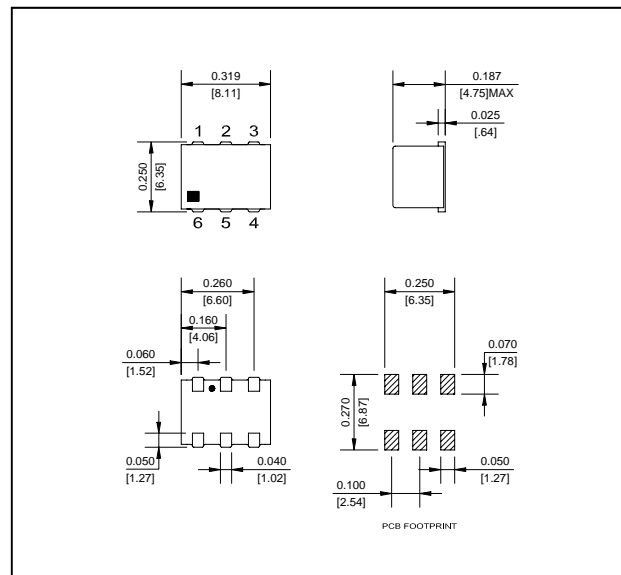
**Features**

- LO Power +7 dBm
- Up to +1 dBm RF
- Low Profile
- Surface Mount
- Tape and reel packaging available

**Description**

M/A-COM's EMRS-1 is a Low Cost, Broadband, high performance Double Balanced Mixer designed for use in high volume wireless applications. The device has been optimised by careful selection of the Schottky Diode and Balun Transformer for excellent performance. EMRS-1 is available in an SM-1 surface mount package and reflows using standard soldering reflow profiles. Parts are packaged in tape & reel.

**SM - 1 Package**



**Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 50\Omega$ <sup>1</sup>, LO = +7 dBm**

Parameter	Test Conditions	Frequency	Units	Min	Typ	Max
RF Frequency	—	0.5 - 500	MHz	—	—	—
LO Frequency	—	0.5 - 500	MHz	—	—	—
IF Frequency	—	DC - 500	MHz	—	—	—
Conversion Loss	—	1 - 250 0.5 - 500	dB dB	—	5.5 6.2	7.0 8.5
Isolation	LO to RF	5 - 250 250 - 500	dB dB	25 20	33 27	— —
Isolation	LO to IF	0.5 - 5 5 - 250 250 - 500	dB dB dB	55 30 24	45 23 19	— — —
Input 1 dB Compression	—	0.5 - 500	dBm	—	—	1

**Ordering Information**

Part Number	Package
EMRS-1TR	Tape and Reel (900 piece Reel)

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### Pin Configuration

Pin No.	Function
1	LO
2	Ground
3	Ground
4	RF
5	IF
6	Ground

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

Parameter	Absolute Maximum
RF Power	50 mW
Peak IF Current	40 mA
Operating Temperature	-55°C to +100°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.