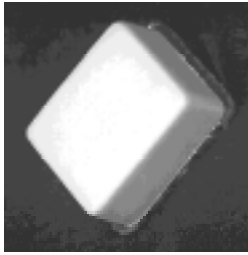


E-Series Surface Mount Mixer

810-1000 MHz

EFM-900



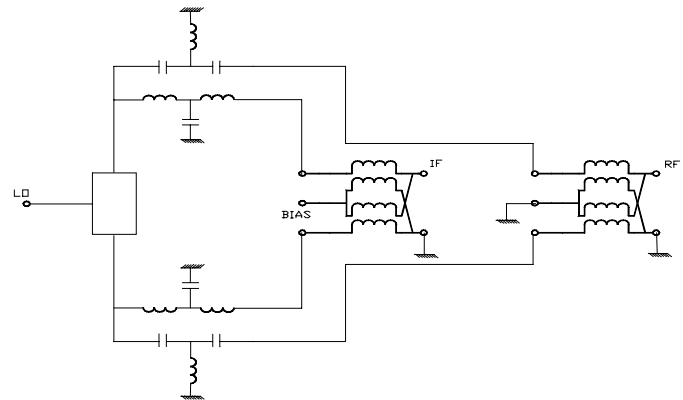
Features

- LO Power +13 dBm
- +22dB compression Point
- Surface Mount
- +30dBm IIP3 Up-Converting
- +32dBm IIP3 Down-Converting
- Up and Down Converting

Description

M/A Com's EFM-900 uses a novel, patent pending very high linearity at low LO drive levels. Typical is +32dBm with an LO drive level of just +13dB combines PHEMT devices and carefully matched surface mount package which can be used for both up and down converting. It is ideally suited for wireless

Functional Schematic



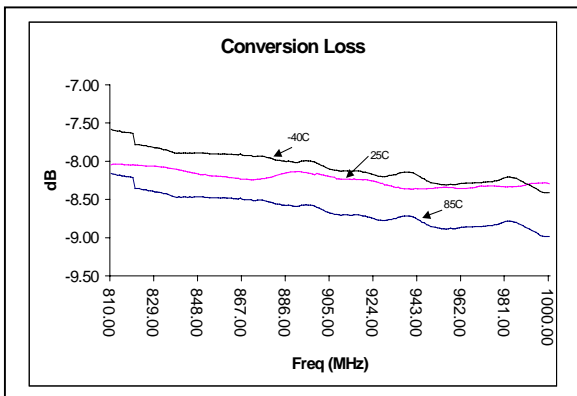
Electrical Specifications

	Test Conditions	Units	Min.	Typ.	Max.
Frequency Range	RF 810 - 1000 LO 700 - 1000 IF 10-100 DC bias +6V ±0.3V	MHz MHz MHz	— — —	— — —	— — —
Conversion Loss	810-1000 MHz	dB	—	8.5	9.5
L-R Isolation	700-1000 MHz	dB	18.0	22.0	—
L- I Isolation	700-1000 MHz	dB	25.0	33.0	—
R-I Isolation	810-1000 MHz	dB	30.0	37.0	—
LO VSWR	700-1000 MHz	—	—	1.8	—
RF VSWR	810-1000 MHz	—	—	3.5	—
IF VSWR	100-500 MHz	—	—	1.4	—
Input IIP3	Up Converting	dBm	30.0	32.0	—
Input IIP3	Down Converting	dBm	28.0	32.0	—
Input 1dB Compression	—	dBm	—	+22.0	—

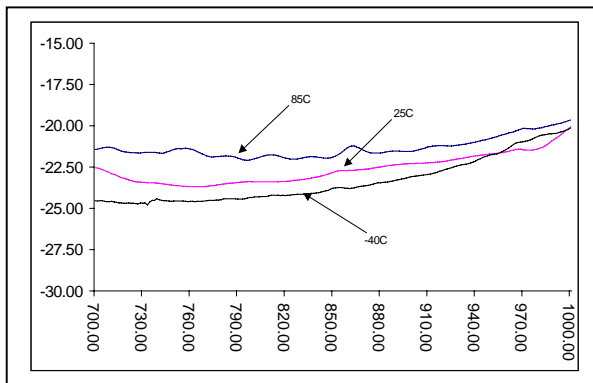
Note: Specifications subject to change without notice.

Typical Performance over Operating Temperatures

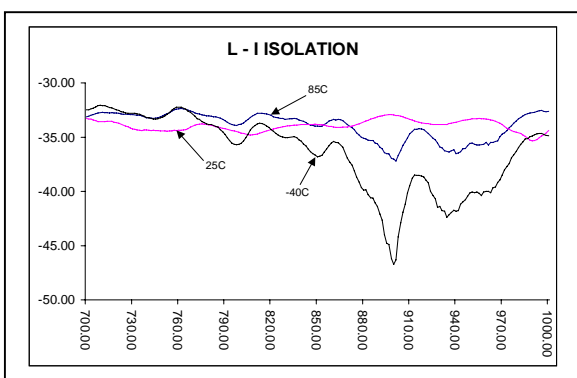
Conversion Loss



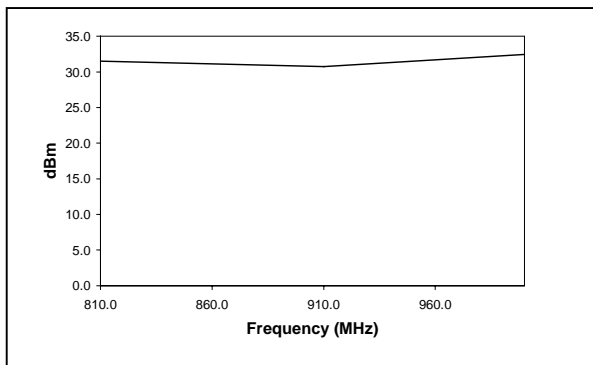
L - R Isolation



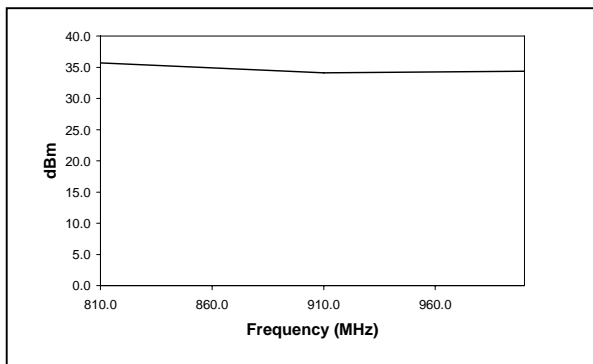
L- I Isolation



IIP3 Up- Converting



IIP3 Down- Converting



Specifications subject to change without notice.

- North America: Tel. (800) 366-2266, Fax (800) 618-8883
- Asia/Pacific: Tel.+81-44-844-8296, Fax +81-44-844-8298
- Europe: Tel. +44 (1344) 869 595, Fax+44 (1344) 300 020

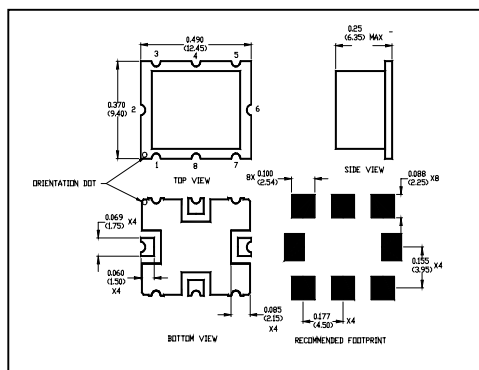
Visit www.macom.com for additional data sheets and product information.

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Power	200 mW
Peak IF Current	40 mA
Storage Temperature	-40 ° C to +85 ° C
Operating Temperature	-40 ° C to +85 ° C
ESD Rating	Zero

Functional Configuration

Function	Pin No.
LO	2
RF	6
IF	4
Ground	1,3,5,7
Bias	8
Unconnected	-



SM-108 Package

Note: Non Hermetic Package

V1.01

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Spurious Table: 810MHz

(In dBc below IF, assuming down conversion)

		n _{f_{LO}} - m _{f_{RF}}					
		0	X	27	32	32	45
		1	25	0	53	43	59
RF		2	77	77	54	77	77
(n)		3	77	77	77	77	77
		4	77	77	77	77	77
		0	1	2	3	4	

LO (m)

RF = 810 MHz, -5dBm
 LO = 800 MHz, +13dBm
 IF = 10 MHz

Spurious Table: 810MHz

(In dBc below IF, assuming down conversion)

		n _{f_{LO}} - m _{f_{RF}}					
		0	X	29	32	30	37
		1	25	0	35	48	48
RF		2	77	77	58	73	77
(n)		3	77	77	77	77	77
		4	77	77	77	77	77
		0	1	2	3	4	

LO (m)

RF = 810 MHz, 0dBm
 LO = 710 MHz, +13dBm
 IF = 100 MHz

Spurious Table: 1000MHz

(In dBc below IF, assuming down conversion)

		n _{f_{LO}} - m _{f_{RF}}					
		0	X	19	23	26	34
		1	29	0	48	43	52
RF		2	77	77	53	77	77
(n)		3	77	77	77	70	77
		4	77	77	77	77	77
		0	1	2	3	4	

LO (m)

RF = 1000 MHz, 0dBm
 LO = 990 MHz, +13dBm
 IF = 10 MHz

Spurious Table: 1000MHz

(In dBc below IF, assuming down conversion)

		n _{f_{LO}} - m _{f_{RF}}					
		0	X	20	25	27	33
		1	28	0	45	43	53
RF		2	77	77	52	77	77
(n)		3	77	77	77	77	77
		4	77	77	77	77	77
		0	1	2	3	4	

LO (m)

RF = 1000 MHz, 0dBm
 LO = 900 MHz, +13dBm
 IF = 100 MHz

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