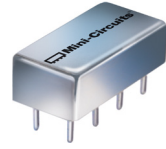


# Frequency Mixer

**SIMA-5H**

Level 17 (LO Power +17 dBm) 2 to 1500 MHz



CASE STYLE: A06

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

## Pin Connections

LO	8
RF	1
IF	3
GROUND	2,5,6,7
CASE GROUND	2,5,6,7
DO NOT USE	4

## Features

- low conversion loss, 6.94 dB typ.
- wideband, 2 to 1500 MHz
- high L-R isolation, 44 dB typ., L-I isolation, 30 dB typ.
- hermetically metal case

## Applications

- cellular/GPS
- satellite communications
- military, hi-rel applications

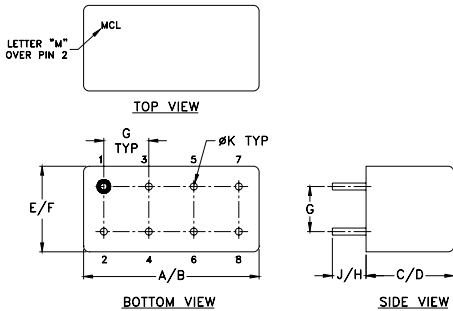
## Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF $f_L$ - $f_U$	IF	Mid-Band m		Total Range Max.	Total Range Max.	L		M		U		L		M		U	
		$\bar{X}$	$\sigma$			Max.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2-1500	DC-1000	6.94	0.07	8.5	8.5	65	35	44	23	40	22	54	25	30	23	25	13

1 dB COMP.: +10 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]  
m = mid band [ $2f_L$  to  $f_U/2$ ]

## Outline Drawing



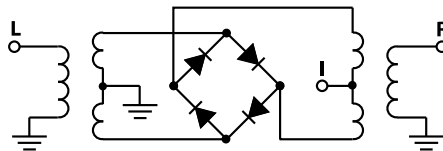
## Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.770	.800	.285	.310	.370	.400	
19.56	20.32	7.24	7.87	9.40	10.16	
G	H	J	K			wt
.200	.20	.14	.031			grams
5.08	5.08	3.56	0.79			5.2

## Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2.00	32.00	7.20	78.18	71.38	1.30	2.25
4.00	34.00	6.92	76.93	70.73	1.22	2.21
5.00	35.00	6.86	75.95	70.75	1.19	2.27
10.00	40.00	6.73	72.17	69.37	1.18	2.21
20.00	50.00	6.72	67.37	67.87	1.17	2.22
50.00	80.00	6.71	59.93	62.42	1.15	2.18
100.00	70.00	6.75	54.27	56.40	1.13	2.17
162.50	132.50	6.81	50.46	52.07	1.08	2.12
200.00	170.00	6.94	48.77	50.41	1.10	2.03
376.50	346.50	7.07	43.97	43.09	1.17	2.09
500.00	470.00	7.32	42.46	39.34	1.28	1.92
590.50	560.50	7.84	41.96	38.16	1.46	1.97
750.00	720.00	7.10	38.19	34.48	1.47	2.05
804.50	774.50	6.83	37.85	33.39	1.59	2.01
1000.00	970.00	6.80	36.59	29.05	1.73	1.91
1018.50	988.50	6.78	36.20	28.58	1.75	1.91
1232.50	1202.50	6.95	33.05	26.99	1.95	1.80
1393.00	1363.00	7.26	31.84	27.40	2.05	1.70
1446.50	1416.50	7.26	31.02	27.35	2.09	1.58
1500.00	1470.00	7.31	30.42	27.05	2.12	1.52

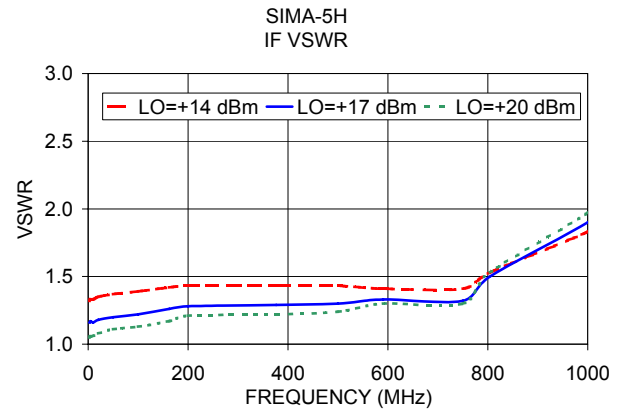
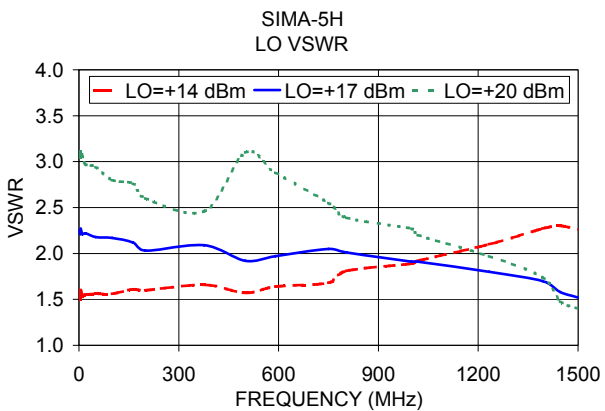
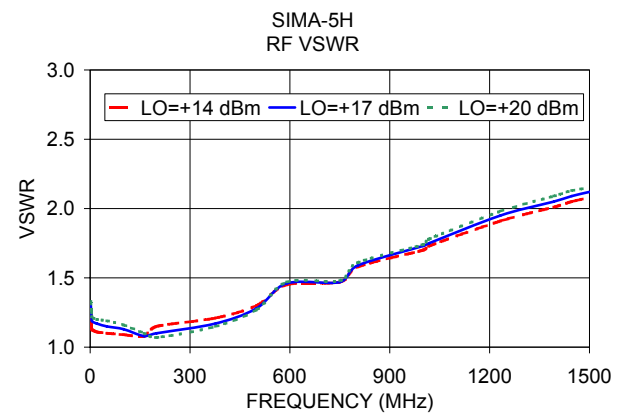
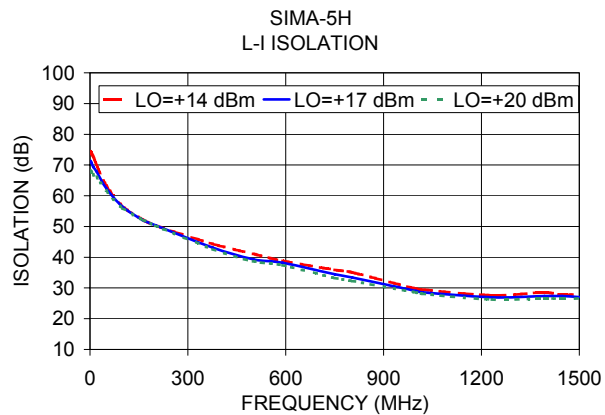
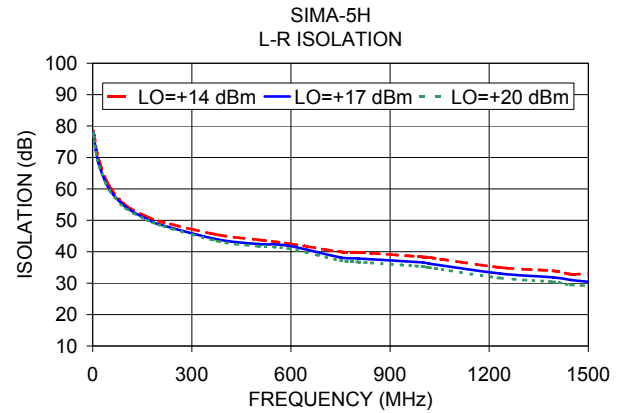
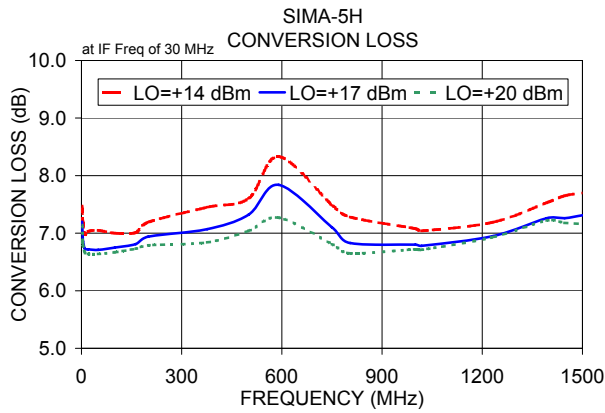
## Electrical Schematic



## Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)





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