

Plug-In

# Frequency Mixer

Level 7 (LO Power +7 dBm) 2 to 600 MHz

TUF-1+



CASE STYLE: B02  
PRICE: \$8.20 ea. QTY (10)

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

## Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

## Features

- low conversion loss, 5.85 dB typ.
- excellent isolation, 42 dB typ. L-R, 47 dB typ. L-I
- rugged welded construction

## Applications

- VHF/UHF
- defense & federal communications

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

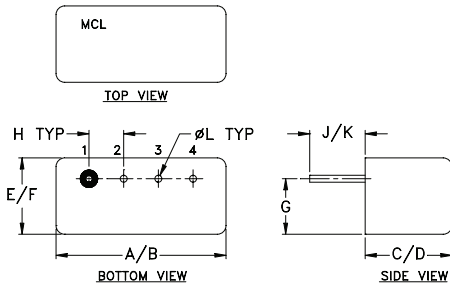
## Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)			IP3 at center band (dBm)
		L	M	U	L	M	U	
2-600	5.85	60	42	37	60	47	36	16

1 dB COMP.: +1 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 [ $2 f_L$  to  $f_U/2$ ]

## Outline Drawing



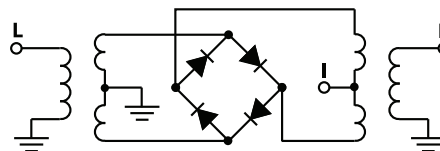
## Outline Dimensions (inch/mm)

A	B	C	D	E	F
.480	.500	.240	.255	.210	.230
12.19	12.70	6.10	6.48	5.33	5.84
G	H	J	K	L	wt
.16	.100	.14	.20	.020	grams
4.06	2.54	3.56	5.08	0.51	1.9

## Typical Performance Data

Frequency (MHz)	Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
2.00	32.00	6.81	81.85	1.56	2.71
4.00	34.00	6.40	76.35	1.31	2.64
5.00	35.00	6.34	74.35	1.25	2.62
10.00	40.00	6.25	69.58	1.15	2.47
20.00	50.00	6.21	64.25	1.11	2.51
50.00	80.00	6.13	57.73	1.10	2.46
81.73	51.73	6.16	53.89	1.13	2.41
100.00	70.00	6.18	52.31	1.14	2.37
161.47	131.47	6.08	49.28	1.20	2.31
200.00	170.00	6.03	47.46	1.27	2.29
241.20	211.20	6.04	46.41	1.33	2.26
281.07	251.07	6.04	45.16	1.38	2.28
300.00	270.00	6.09	44.55	1.42	2.30
320.93	290.93	6.08	44.04	1.50	2.31
400.00	370.67	5.99	42.93	1.58	2.32
480.40	450.40	6.06	40.46	1.66	2.33
500.00	470.00	6.11	40.16	1.71	2.33
560.13	530.13	6.15	39.99	1.77	2.35
580.07	550.07	6.19	40.02	1.86	2.36
600.00	570.00	6.26	39.76	1.88	2.38

## Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine [www.minicircuits.com](http://www.minicircuits.com) Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

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**Notes:** 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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