

# Frequency Mixer

Level 13 (LO Power +13 dBm) 2 to 600 MHz

TUF-1MH+



## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

## Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

## Features

- low conversion loss, 6.3 dB typ.
- high isolation, 50 dB typ. L-R, 48 dB typ. L-I
- rugged welded construction

## Applications

- VHF/UHF
- defense & federal communications

CASE STYLE: B02  
PRICE: \$10.50 ea. QTY (1-9)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

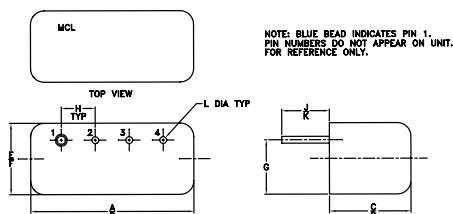
## Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)					
LO/RF	IF	Mid-Band m		Total Range Max.		L	M	U	L	M	U	L	M	U	L	M	U
$f_L-f_U$		$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2-600	DC-600	6.3	0.12	7.0	8.0	68	50	50	30	43	25	65	45	48	30	37	22

1 dB COMP.: +9 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
.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)
RF	LO	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
2.00	32.00	6.55	61.53	62.13	1.24	1.92
5.00	35.00	6.06	60.97	60.92	1.12	1.78
10.00	40.00	5.98	60.65	60.61	1.06	1.84
20.00	50.00	6.00	60.05	59.98	1.03	1.82
34.13	64.13	5.97	58.47	59.11	1.02	1.80
50.00	80.00	5.96	56.47	57.96	1.02	1.78
98.39	68.39	5.88	52.10	54.24	1.02	1.78
100.00	70.00	5.89	52.04	54.11	1.01	1.75
130.52	100.52	5.90	49.90	52.13	1.01	1.73
162.65	132.65	5.95	47.90	50.16	1.01	1.68
200.00	170.00	6.00	45.86	48.87	1.01	1.67
259.04	229.04	5.85	43.28	46.20	1.01	1.71
291.17	261.17	5.87	42.16	44.62	1.01	1.65
323.30	293.30	6.02	41.14	43.00	1.02	1.71
355.43	325.43	6.19	40.26	41.67	1.02	1.69
387.56	357.56	6.19	39.90	41.00	1.03	1.70
419.69	389.69	6.32	39.24	40.20	1.04	1.71
451.82	421.82	6.22	38.55	38.94	1.05	1.72
483.95	453.95	6.16	38.04	37.91	1.06	1.72
500.00	470.00	6.17	37.96	37.30	1.06	1.74

## Electrical Schematic

