

Plug-In

# Frequency Mixer

Level 10 (LO Power +10 dBm) 0.15 to 400 MHz

TUF-3LH+



## Maximum Ratings

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

## Pin Connections

LO	4
RF	1
IF	2
GROUND	3
CASE GROUND	3

## Features

- low conversion loss, 4.8 dB typ.
- high isolation, 51 dB typ. L-R, 45 dB typ. L-I
- rugged welded construction

## Applications

- HF/VHF
- defense & federal communications

CASE STYLE: B02  
PRICE: \$11.35 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 $f_L$ - $f_U$	IF	Mid-Band m		Total Range Max.		L		M		U		L		M		U	
		$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.15-400	DC-400	4.8	0.37	7.0	8.0	67	50	51	30	40	25	67	40	45	25	34	20

1 dB COMP.: +5 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]

M = mid range [ $10 f_L$  to  $f_U/2$ ]

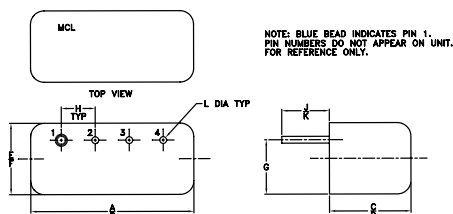
U = upper range [ $f_U/2$  to  $f_U$ ]

m = mid band [ $2f_L$  to  $f_U/2$ ]

## 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 +10dBm	LO +10dBm	LO +10dBm	LO +10dBm	LO +10dBm
0.15	30.15	4.98	69.38	85.98	1.21	2.67
0.30	30.30	4.90	69.38	85.28	1.15	2.64
0.50	30.50	4.83	69.26	86.26	1.10	2.57
1.00	31.00	4.74	69.26	83.06	1.06	2.52
1.50	31.50	4.69	69.08	80.98	1.03	2.36
2.00	32.00	4.66	68.95	78.75	1.02	2.40
5.00	35.00	4.62	68.20	71.20	1.01	2.33
10.00	40.00	4.59	66.47	65.07	1.02	2.31
20.00	50.00	4.68	63.23	59.53	1.02	2.25
50.00	80.00	4.66	56.07	50.61	1.02	2.25
57.27	87.27	4.67	54.97	49.44	1.01	2.29
100.00	70.00	4.67	50.23	45.42	1.01	2.25
114.39	84.39	4.68	48.98	45.06	1.01	2.28
171.51	14.15	4.80	45.17	42.49	1.01	2.33
200.00	170.00	4.81	42.29	40.27	1.01	2.44
228.64	198.64	4.90	41.00	37.35	1.04	2.39
285.76	255.76	5.11	48.00	34.00	1.09	2.41
342.88	312.88	5.17	39.79	33.43	1.20	2.58
385.72	356.72	5.29	34.24	31.62	1.23	2.76
400.00	370.00	5.48	34.34	30.09	1.27	2.78

## 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

## Electrical Schematic

