

Plug-In

Frequency Mixer

Level 7 (LO Power + 7 dBm) 0.15 to 400 MHz

TUF-3+



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, 4.7 dB typ.
- high isolation, 46 dB typ. L-R, 47 dB typ. L-I
- rugged welded construction

Applications

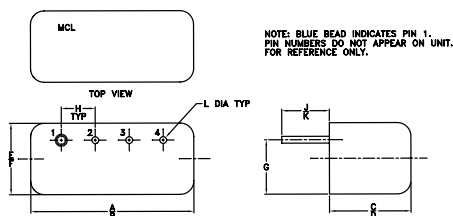
- HF/VHF
- defense & federal communications

CASE STYLE: B02
PRICE: \$9.30 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.

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 Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 @ CENTER BAND (dBm)
LO/RF f_L - f_U	IF	Mid-Band m			Total Range Max.	L		M		U		L		M		U		
		$\bar{X}$	σ	Max.		Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.			
0.15-400	DC-400	4.7	0.02	7.0	8.0	60	50	46	30	35	25	60	40	47	25	35	20	11

1 dB COMP.: +1 dBm typ.

For phase detection, DC positive polarity with in-phase RF & LO.

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

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

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

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

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.15	30.15	5.60	77.37	63.67	1.21	2.60
0.20	30.20	5.52	77.64	63.64	1.09	2.50
0.30	30.30	5.47	77.00	63.40	1.07	2.32
0.50	30.50	5.41	76.78	63.48	1.08	2.26
1.00	31.00	5.31	76.45	63.55	1.08	2.24
1.50	31.50	5.25	75.88	63.58	1.09	2.22
2.00	32.00	5.22	75.76	63.46	1.09	2.21
5.00	35.00	5.19	74.18	63.18	1.08	2.19
10.00	40.00	5.21	72.35	61.65	1.08	2.17
20.00	50.00	5.19	68.26	60.76	1.07	2.18
50.00	80.00	5.19	60.65	54.03	1.07	2.18
77.04	107.04	5.20	56.86	50.29	1.07	2.19
100.00	70.00	5.26	54.74	48.45	1.06	2.20
153.94	123.94	5.27	50.70	45.02	1.09	2.26
200.00	170.00	5.33	45.62	43.77	1.09	2.33
230.83	200.83	5.38	46.53	41.53	1.14	2.35
300.00	270.00	5.57	49.67	37.33	1.19	2.39
369.24	339.24	5.94	48.35	36.42	1.25	2.41
384.62	354.62	5.93	48.35	33.54	1.31	2.45
400.00	370.00	5.93	56.18	32.89	1.32	2.49

Electrical Schematic

