

Frequency Mixer

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

TUF-3+



CASE STYLE: B02

PRICE: \$10.10 ea. QTY (10)

+RoHS Compliant

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

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, 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

Electrical Specifications

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 @ CENTER BAND (dBm)
LO/RF	IF	Mid-Band m			Total Range Max.	L		M		U		L		M		U		
		$\overline{X}$	σ	Max.		Typ.	Min.	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.

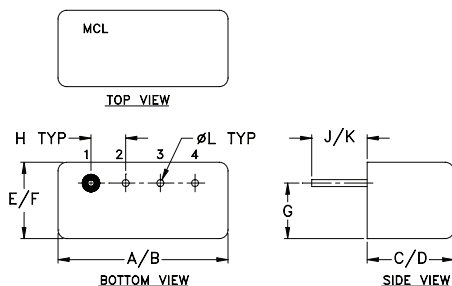
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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

Typical Performance Data

Frequency (MHz)		Conversion Loss (dB)	VSWR RF Port (:1)	Frequency (MHz)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO Port (:1)
RF	LO			LO			
		LO +7dBm	LO +7dBm		LO +7dBm	LO +7dBm	LO +7dBm
0.15	30.15	5.37	1.57	10.00	68.68	61.84	2.59
0.23	30.23	5.27	1.41	20.00	65.36	56.87	2.60
0.30	30.30	5.21	1.33	30.00	63.22	54.20	2.59
0.50	30.50	5.16	1.25	40.00	61.75	52.09	2.58
1.00	31.00	5.08	1.21	76.00	57.56	47.59	2.54
2.80	32.80	4.91	1.21	94.00	56.48	45.97	2.50
6.40	36.40	4.91	1.21	112.00	54.90	44.70	2.50
10.00	40.00	4.73	1.21	149.00	52.63	42.36	2.57
28.00	58.00	4.71	1.21	168.00	54.13	42.02	2.55
64.00	94.00	4.75	1.17	206.00	49.62	38.81	2.62
100.00	130.00	4.83	1.14	225.00	48.10	38.56	2.66
138.00	168.00	4.85	1.13	244.00	48.03	37.82	2.68
157.00	187.00	4.88	1.10	282.00	53.65	37.79	2.67
195.00	225.00	4.92	1.08	301.00	55.10	38.07	2.76
233.00	263.00	4.97	1.10	320.00	54.03	37.59	2.82
252.00	282.00	5.10	1.12	340.00	52.86	36.62	2.76
271.00	301.00	5.17	1.14	360.00	51.53	35.44	2.69
290.00	320.00	5.15	1.17	390.00	47.44	33.11	2.86
370.00	340.00	5.38	1.10	410.00	45.39	32.24	3.05
400.00	370.00	5.41	1.05	430.00	44.42	32.17	3.06

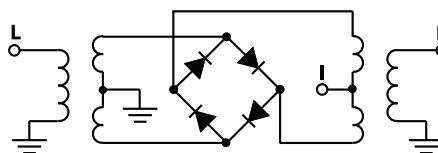
Outline Drawing



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



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IF/RF MICROWAVE COMPONENTS

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