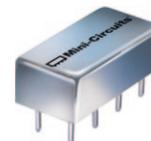


Plug-In

# Frequency Mixer

Level 7 (LO Power +7 dBm) 0.01 to 250 MHz

TAK-5+



CASE STYLE: A04  
PRICE: \$26.20 ea. QTY (1-9)

## 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	8
RF	1
IF	3,4^
GROUND	2,5,6,7
CASE GROUND	2

^ pins must be connected together externally

## Features

- low conversion loss, 4.65 dB typ.
- high isolation, 50 dB typ. L-R, 45 dB typ. L-I
- rugged welded construction
- hermetically sealed

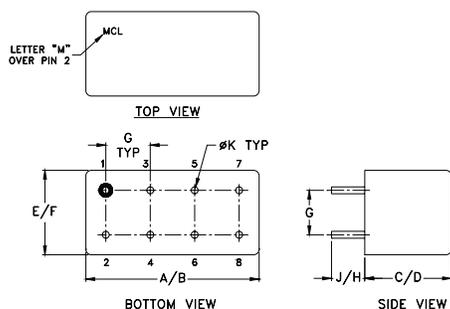
## Applications

- VHF
- FM radio
- instrumentation

### +RoHS Compliant

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

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F
.770	.800	.200	.210	.370	.400
19.56	20.32	5.08	5.33	9.40	10.16
G	H	J	K	wt	
.200	.20	.14	.031	grams	
5.08	5.08	3.56	0.79	3.7	

## Electrical Specifications

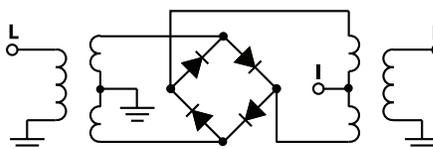
FREQUENCY (MHz)	CONVERSION LOSS* (dB)			LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)		
	LO/RF	IF	Mid-Band m	L	M	U	L	M	U
0.01-250	DC-250		$\bar{X}$ $\sigma$ Max.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.
			8.5	60 50	50 35	40 35	55 45	45 30	35 25

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  $f_U$ ]  
 \* Conversion loss, 9.5 dB max. from 0.01 to 0.015 MHz 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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.01	30.01	7.11	58.08	53.36	1.07	2.97
0.20	30.20	4.71	59.34	52.17	1.07	2.78
1.00	31.00	4.56	59.46	51.84	1.07	2.59
5.00	35.00	4.60	59.26	51.76	1.07	2.67
19.24	49.24	4.71	56.47	52.25	1.05	2.72
28.86	58.86	4.65	54.43	52.12	1.04	2.71
48.09	78.09	4.63	50.19	50.36	1.03	2.56
67.32	97.32	4.60	47.74	48.07	1.04	2.55
86.55	56.55	4.59	44.68	45.40	1.06	2.50
100.00	70.00	4.63	43.92	43.20	1.07	2.51
115.39	85.39	4.75	43.05	42.22	1.09	2.56
134.62	104.62	4.85	38.26	40.16	1.15	2.60
144.24	114.24	5.02	37.90	39.27	1.21	2.62
163.47	133.47	5.14	38.05	37.81	1.27	2.64
182.70	152.70	5.30	38.71	34.70	1.29	2.67
200.00	170.00	5.38	39.71	33.53	1.30	2.72
221.16	191.16	5.36	40.42	32.38	1.29	2.78
230.77	200.77	5.32	40.93	31.70	1.27	2.90
240.39	210.39	5.38	40.98	31.63	1.22	3.00
250.00	220.00	5.61	40.47	31.55	1.20	3.02

## Electrical Schematic



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

For detailed performance specs & shopping online see web site

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-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

