

Plug-In Frequency Mixer

TAK-3H+

Level 17 (LO Power +17 dBm) 0.05 to 300 MHz

Maximum Ratings

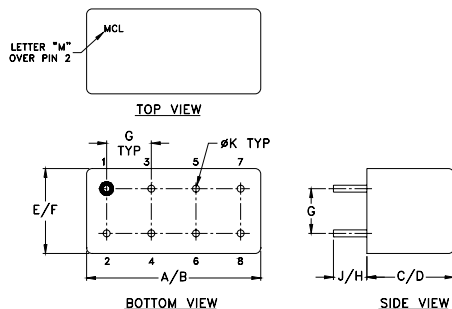
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

LO	8
RF	1
IF	3,4 [^]
GROUND	2,5,6,7
CASE GROUND	2

[^] pins must be connected together externally

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.770	.800	.240	.250	.370	.400	
19.56	20.32	6.10	6.35	9.40	10.16	
G	H	J	K			wt
.200	.20	.14	.031			grams
5.08	5.08	3.56	0.79			3.7

Features

- low conversion loss, 4.82 dB typ.
- high isolation, 40 dB typ. L-R, 35 dB typ. L-I
- rugged welded construction
- hermetically sealed

Applications

- VHF
- FM radio
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: A05

+RoHS Compliant

The +Suffix identifies 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)									
		L	M	U	L	M	U							
LO/RF $f_L - f_U$	Mid-Band m \bar{X} σ Max.	Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
0.05-300	DC-300	4.82 0.09 7.0 8.5	55	45	40	30	30	25	50	40	35	25	25	20

1 dB COMP.: +14 dBm typ.

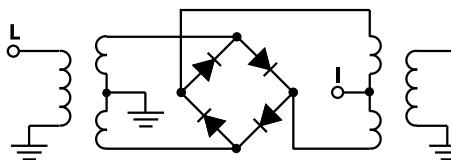
L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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)
0.05	30.05	5.81	65.01	59.81	1.63
1.00	31.00	4.70	61.51	56.17	1.52
2.00	32.00	4.63	62.05	56.05	1.39
10.00	40.00	4.79	64.41	56.12	1.53
20.00	50.00	5.00	57.00	52.66	1.46
29.94	59.94	4.75	51.03	48.60	1.60
49.23	79.23	4.69	47.42	46.33	1.56
68.52	98.52	4.67	42.12	42.25	1.53
87.81	57.81	4.57	38.18	38.54	1.51
100.00	70.00	4.50	36.56	37.81	1.46
136.03	106.03	4.45	35.70	36.26	1.40
155.32	125.32	4.61	33.06	33.98	1.31
174.61	144.61	4.84	32.15	32.92	1.28
193.90	163.90	4.96	31.48	32.48	1.22
213.19	183.19	4.98	29.23	30.80	1.17
232.48	202.48	5.17	27.78	29.94	1.11
242.13	212.13	5.27	28.94	32.37	1.05
261.42	231.42	5.60	31.41	33.19	1.03
280.71	250.71	6.03	34.81	33.60	1.02
300.00	270.00	6.64	36.67	31.62	1.02

Electrical Schematic



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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.

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