

# Coaxial Frequency Mixer

## ZFM-4H+ ZFM-4H

Level 17 (LO Power +17 dBm) 5 to 1200 MHz



SMA version shown  
CASE STYLE: K18

### 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.	

### Coaxial Connections

LO	1
RF	2
IF	3

### Features

- low conversion loss, 4.97 dB typ.
- good L-R isolation, 35 dB typ, L-I, 35 dB typ.
- wideband, 5 to 1200 MHz
- rugged shielded case

### Applications

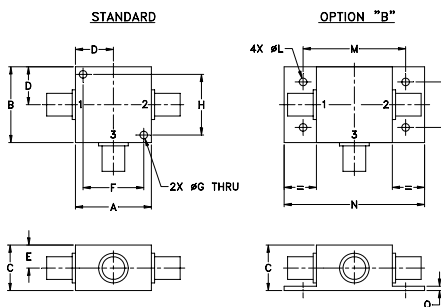
- VHF/UHF
- cellular
- instrumentation
- GPS
- federal & defense communications

Connectors	Model	Price	Qty.
BNC	ZFM-4H(+)	\$73.95 ea.	(1-9)
SMA	ZFM-4H-S+	\$78.95 ea.	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

### Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)									
		Mid-Band m		Total Range Max.		L	M	U	L	M	U						
LO/RF $f_L-f_U$	IF $\bar{X}$ $\sigma$ Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.				
5-1200	DC-1200	6.59	0.03	8.0	9.0	50	40	35	25	30	20	50	40	35	20	30	20

1 dB COMP.: +14 dBm typ.

For phase detection: DC output has positive with in-phase LO and RF signals

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

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

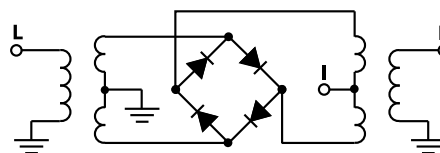
M = mid range [ $10 f_U$  to  $f_U/2$ ]

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)
10.1	40.1	7.31	68.49	65.02	1.44
30.1	60.1	7.41	62.74	61.70	1.48
70.1	100.1	7.27	58.08	57.43	1.53
130.1	160.1	7.26	54.30	54.15	1.46
210.1	240.1	7.09	50.37	51.33	1.49
270.1	300.1	6.90	48.42	49.71	1.51
330.1	360.1	6.95	46.73	48.36	1.48
390.1	420.1	6.72	45.73	46.94	1.45
470.1	500.1	6.58	44.28	44.09	1.41
570.1	600.1	6.71	43.16	42.65	1.41
650.1	680.1	6.76	42.76	41.88	1.38
710.1	740.1	6.88	42.70	41.40	1.34
770.1	800.1	6.86	42.34	40.92	1.32
830.1	860.1	7.03	41.64	40.87	1.33
890.1	920.1	7.28	40.53	40.72	1.34
950.1	980.1	7.44	39.87	40.58	1.40
1010.1	1040.1	7.57	39.31	41.31	1.44
1090.1	1120.1	7.55	38.73	41.13	1.47
1170.1	1200.1	7.88	37.96	41.66	1.57
1210.1	1240.1	8.21	37.28	41.74	1.65

### Electrical Schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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-Circuits' applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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## Performance Charts

