

# Coaxial Frequency Mixer

Level 7 (LO Power +7 dBm) 0.04 to 400 MHz

**ZFM-3+  
ZFM-3**



SMA version shown

CASE STYLE: K18

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	50mW
IF Current	40mA

## Coaxial Connections

LO	1
RF	2
IF	3

## Features

- low conversion loss, 4.78 dB typ.
- high L-R isolation, 50 dB typ, L-I, 45 dB typ.
- rugged shielded case

## Applications

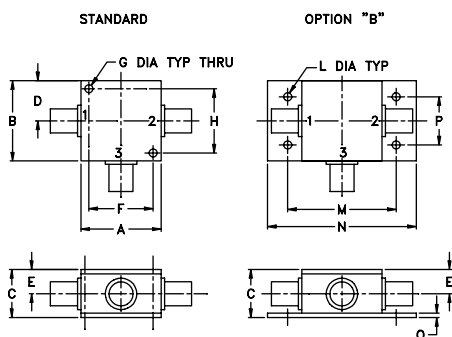
- VHF
- FM radio
- defense & federal communications
- instrumentation

Connectors	Model	Price	Qty.
BNC	ZFM-3 (+)	\$61.95 ea.	(1-9)
SMA	ZFM-3-S (+)	\$66.95 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)					
LO/RF	IF	Mid-Band		Total		L		M		U		L		M		U	
$f_L$ - $f_U$		$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
0.04-400	DC-400	4.78	0.03	7.0	8.0	60	50	50	35	35	25	55	40	45	30	35	25

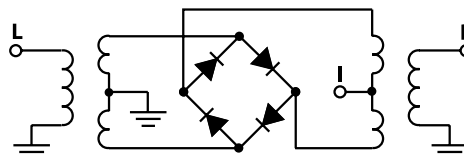
1 dB COMP.: +1 dBm typ.

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  $f_U$ ]  
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
0.04	30.04	6.15	>67.00	>67.00	1.24	2.69
0.05	30.05	5.52	>67.00	>67.00	1.25	2.55
0.07	30.07	5.12	>67.00	>67.00	1.25	2.67
0.10	30.10	4.92	>67.00	>67.00	1.24	2.63
0.50	30.50	4.77	>67.00	>67.00	1.23	2.55
1.00	31.00	4.76	>67.00	63.53	1.23	2.45
5.00	35.00	4.75	>67.00	60.91	1.21	2.48
10.00	40.00	4.75	>67.00	60.97	1.21	2.42
20.00	50.00	4.74	>67.00	58.52	1.19	2.42
60.87	90.87	4.73	50.40	49.37	1.18	2.36
100.00	70.00	4.63	44.80	44.05	1.16	2.38
162.61	132.61	4.79	39.22	39.87	1.15	2.46
200.00	170.00	4.95	37.18	37.86	1.13	2.40
230.44	200.44	4.89	35.78	37.67	1.13	2.42
281.31	251.31	5.05	33.68	35.71	1.13	2.41
315.23	285.23	5.25	34.22	33.98	1.14	2.56
349.14	319.14	5.32	35.64	34.07	1.14	2.63
366.10	336.10	5.37	35.56	34.58	1.14	2.68
383.05	353.05	5.44	35.25	34.26	1.15	2.69
400.00	370.00	5.56	34.72	32.46	1.15	2.76

## Electrical Schematic



# Performance Charts

# ZFM-3+ ZFM-3

