

# Coaxial Frequency Mixer

## ZFM-1H+

### Level 17 (LO Power +17 dBm) 2 to 500 MHz



SMA version shown  
CASE STYLE: K18

Connectors Model  
BNC ZFM-1H+  
SMA ZFM-1H-S+  
BRACKET (OPTION "B")

**+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	200mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

#### Coaxial Connections

LO	1
RF	2
IF	3

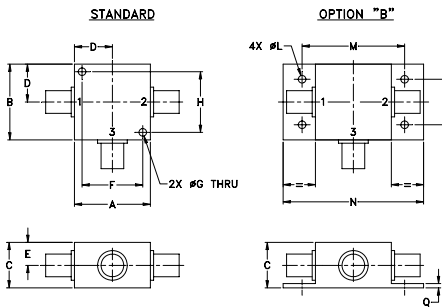
#### Features

- low conversion loss, 6.14 dB typ.
- good L-R isolation, 40 dB typ, L-I, 35 dB typ.
- rugged shielded case

#### Applications

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

#### 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 Range	Max.	L		M		U		L		M		U	
		$\bar{X}$	$\sigma$			Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2-500	DC-500	6.14	0.11	7.5	8.5	50	45	40	30	30	25	45	35	35	25	25	20

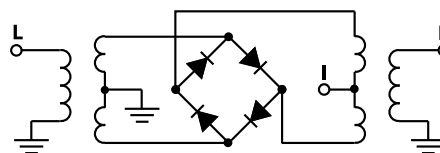
1 dB COMP.: +14 dBm typ.

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)
RF	LO	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm	LO +17dBm
2.00	32.00	6.30	62.98	52.28	1.22	1.67
5.00	35.00	5.95	62.06	52.79	1.10	1.60
10.00	40.00	5.92	60.47	52.35	1.03	1.63
20.00	50.00	5.91	57.14	51.13	1.02	1.61
34.13	64.13	5.81	53.27	49.30	1.04	1.58
50.00	80.00	5.72	50.24	47.27	1.06	1.57
66.26	96.26	5.66	48.03	45.61	1.07	1.55
82.33	122.33	5.71	46.33	44.27	1.08	1.54
100.00	170.00	5.63	44.99	43.26	1.09	1.57
130.52	210.52	5.61	43.18	41.91	1.10	1.55
162.65	252.65	5.61	41.46	40.45	1.10	1.55
200.00	300.00	5.60	40.12	39.22	1.08	1.60
259.04	373.04	5.42	38.10	37.51	1.07	1.67
307.24	458.24	5.62	37.54	36.13	1.06	1.70
355.43	525.43	5.86	37.41	36.94	1.05	1.76
387.56	581.56	5.92	36.35	35.99	1.04	1.82
435.76	653.76	5.81	35.35	35.91	1.05	1.84
467.89	701.89	5.90	36.34	35.81	1.06	1.85
483.95	725.95	6.08	36.44	35.54	1.08	1.87
500.00	750.00	6.27	36.27	35.21	1.09	1.90

#### Electrical Schematic



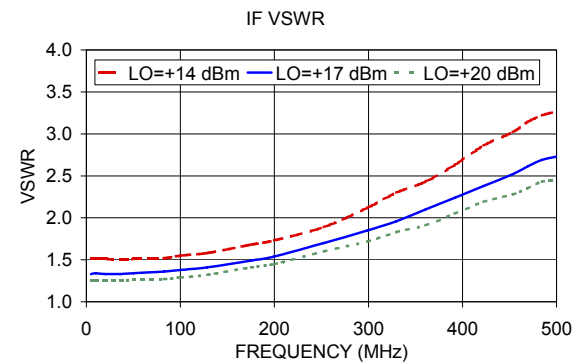
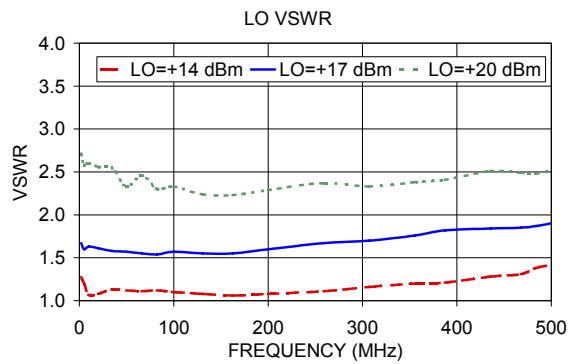
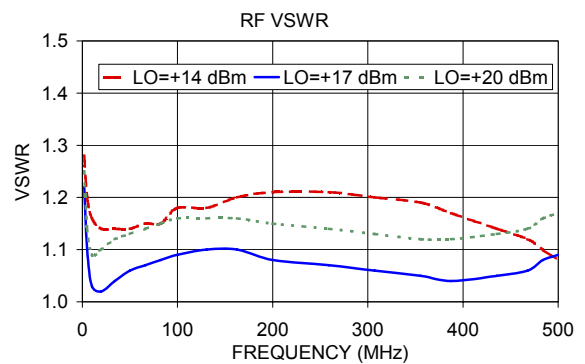
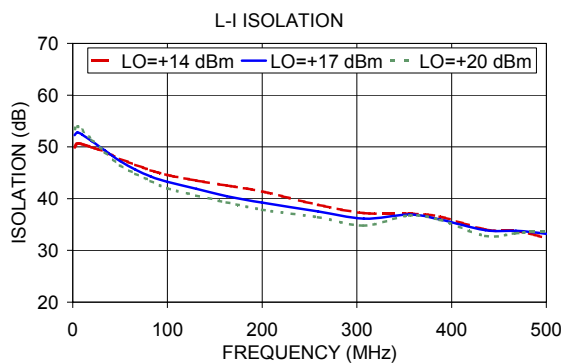
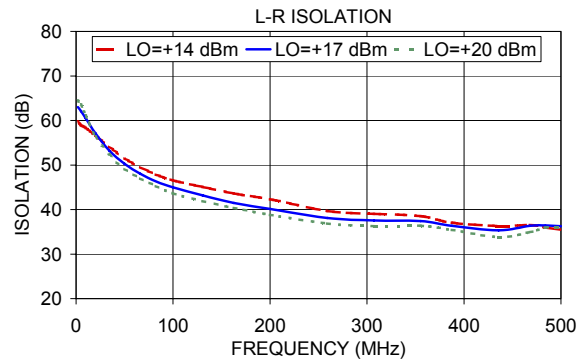
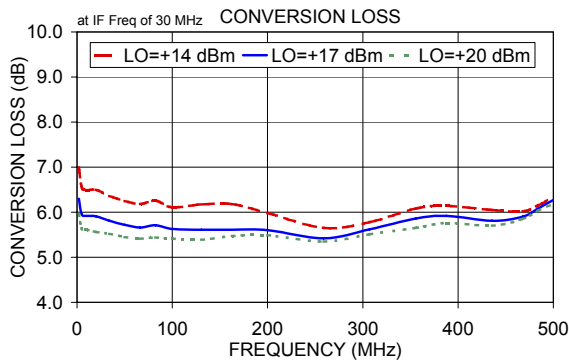
#### Notes

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