

# Coaxial Frequency Mixer

Level 10 (LO Power +10 dBm) 2 to 600 MHz

## ZP-1LH+ ZP-1LH



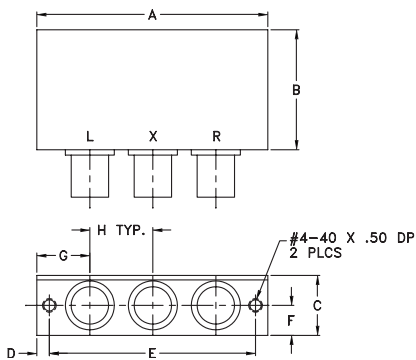
### Maximum Ratings

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.	

### Coaxial Connections

LO	L
RF	R
IF	X

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	wt
2.31	1.20	.60	.125	2.062	.30	.53	.63	grams
58.67	30.48	15.24	3.18	52.37	7.62	13.46	16.00	75.0

### Features

- low conversion loss, 6.0 dB typ.
- high L-R isolation, 50 dB typ., L-I, 50 dB typ.
- rugged shielded case

### Applications

- VHF/UHF
- instrumentation

BNC version shown  
CASE STYLE: GG60

Connectors	Model	Price	Qty.
BNC	ZP-1LH+	\$41.95 ea.	(1-9)
SMA	ZP-1LH-S(+)	\$46.95 ea.	(1-9)

+ 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.

### Electrical Specifications

FREQUENCY (MHz)	CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)			LO-IF ISOLATION (dB)									
	LO/RF	IF	Mid-Band m	Total Range	L		M	U		U							
$f_L$ - $f_U$	$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.					
2-600	DC-600	6.0	0.17	7.0	8.0	70	50	50	30	42	25	65	45	50	30	41	22

1 dB COMP.: +5 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)
2.00	32.00	6.28	67.01	1.47	2.80
4.00	34.00	5.95	65.93	1.27	2.68
5.00	35.00	5.89	65.47	1.23	2.65
10.00	40.00	5.80	63.93	1.14	2.48
20.00	50.00	5.82	61.72	1.12	2.53
50.00	80.00	5.82	56.12	1.11	2.47
59.87	89.87	5.78	54.83	1.11	2.35
100.00	70.00	5.77	51.13	1.12	2.37
117.74	87.74	5.79	50.12	1.15	2.32
175.61	145.61	5.69	47.32	1.18	2.26
200.00	170.00	5.73	46.57	1.21	2.33
233.48	203.48	5.70	45.24	1.25	2.27
291.36	261.36	5.69	43.94	1.27	2.24
300.00	270.00	5.68	43.65	1.31	2.29
349.23	319.23	5.71	42.63	1.35	2.28
407.10	337.10	5.70	41.85	1.40	2.28
464.97	434.97	5.72	40.61	1.45	2.29
522.84	492.84	5.77	39.23	1.49	2.33
580.71	550.71	5.84	38.82	1.51	2.33
600.00	570.00	5.87	38.87	1.53	2.31

### Electrical Schematic



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

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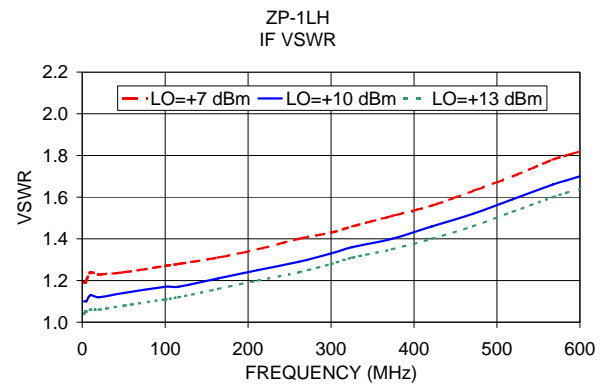
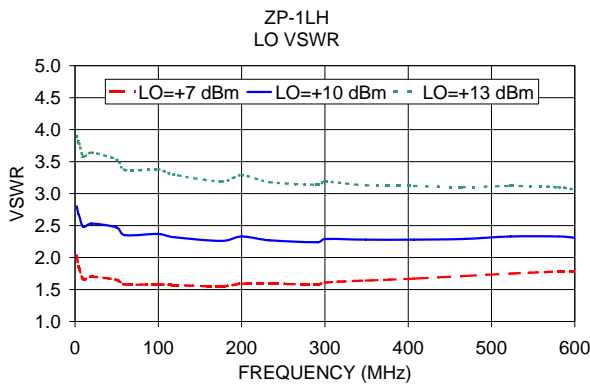
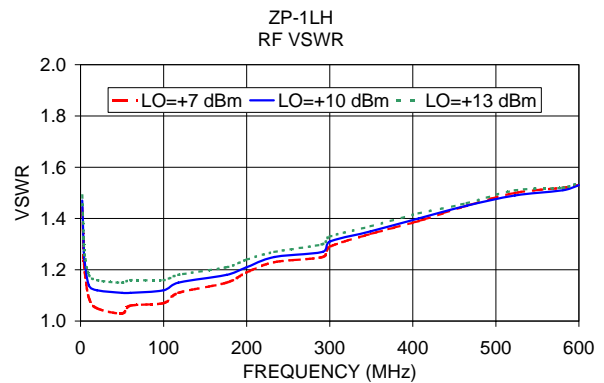
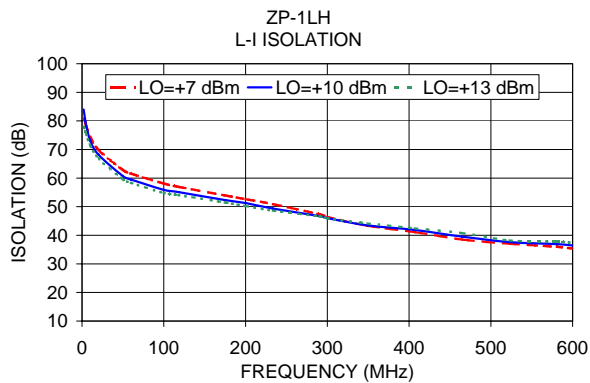
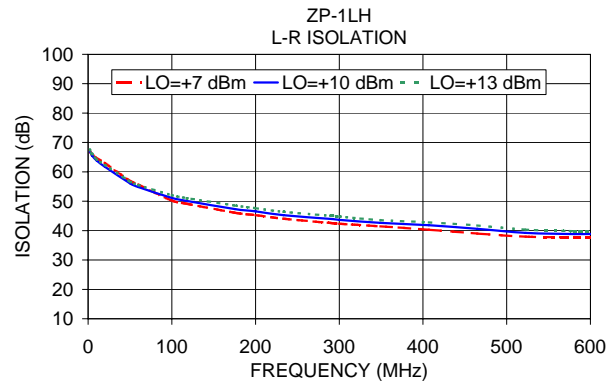
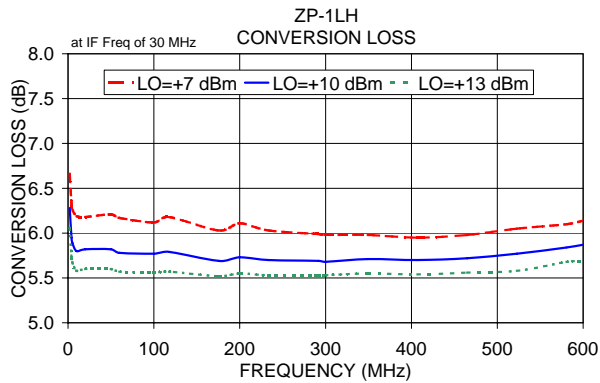
For detailed performance specs & shopping online see web site

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# Performance Charts

# ZP-1LH+ ZP-1LH



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IF/RF MICROWAVE COMPONENTS

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