

# Coaxial Frequency Mixer

## ZP-1MH+

Level 13 (LO Power +13 dBm) 2 to 600 MHz



### Maximum Ratings

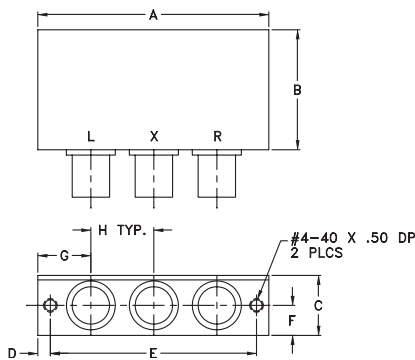
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power	200mW
IF Current	40mA

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

### 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, 6.3 dB typ.
- high L-R isolation, 50 dB typ., L-I, 48 dB typ.
- rugged shielded case

### Applications

- VHF/UHF
- instrumentation

BNC version shown

CASE STYLE: GG60

Connectors	Model
BNC	ZP-1MH+
SMA	ZP-1MH-S+

### +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)					
LO/RF	IF	Mid-Band		Total Range Max.	Max.	L		M		U		L		M		U	
$f_L$ - $f_U$	$\bar{X}$	$\sigma$	Typ.			Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
2-600	DC-600	6.3	0.12	7.0	8.0	68	50	50	30	43	25	65	45	48	30	37	22

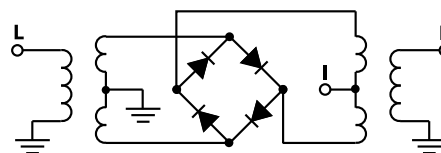
1 dB COMP.: +9 dBm typ.

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)	VSWR RF Port (:1)	Frequency (MHz)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR LO Port (:1)
RF	LO	LO +13dBm	LO +13dBm	LO	LO +13dBm	LO +13dBm	LO +13dBm
2.00	32.00	6.69	1.71	2.30	72.70	67.41	2.47
4.00	34.00	6.16	1.37	5.30	70.19	66.64	2.38
10.00	40.00	5.88	1.15	10.30	66.20	64.23	2.34
16.00	46.00	5.86	1.10	15.30	63.06	61.97	2.28
33.00	63.00	5.84	1.05	20.30	60.88	60.01	2.30
50.00	80.00	5.81	1.03	30.30	58.09	57.73	2.22
101.00	131.00	5.84	1.03	40.10	56.62	56.49	2.23
171.00	201.00	5.97	1.07	80.00	50.45	50.68	2.16
211.00	241.00	6.00	1.09	114.00	48.55	49.14	2.21
271.00	301.00	5.99	1.12	161.00	46.23	47.36	2.14
311.00	341.00	6.02	1.14	201.00	44.75	46.87	2.19
331.00	361.00	6.00	1.16	241.00	43.64	46.01	2.11
355.00	385.00	6.01	1.17	301.00	41.84	43.65	2.18
398.00	428.00	6.00	1.18	346.00	40.23	41.40	2.19
441.00	471.00	6.08	1.19	406.50	39.17	39.27	2.18
484.00	514.00	6.16	1.22	449.50	38.01	37.50	2.14
505.50	535.50	6.14	1.23	471.00	37.37	36.34	2.18
548.50	578.50	6.19	1.26	514.00	36.67	36.01	2.20
570.00	600.00	6.16	1.27	557.00	36.02	35.09	2.25
600.00	630.00	6.30	1.30	600.00	35.65	33.93	2.18

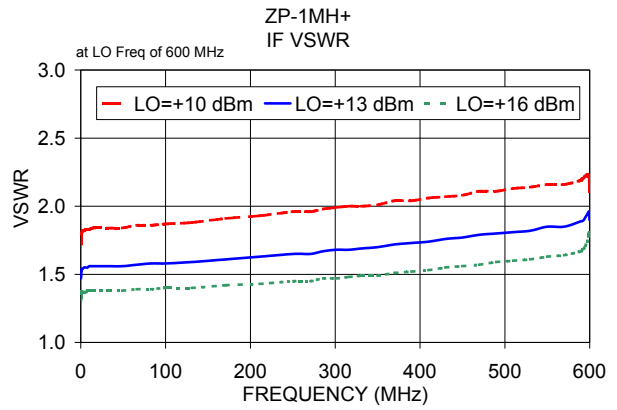
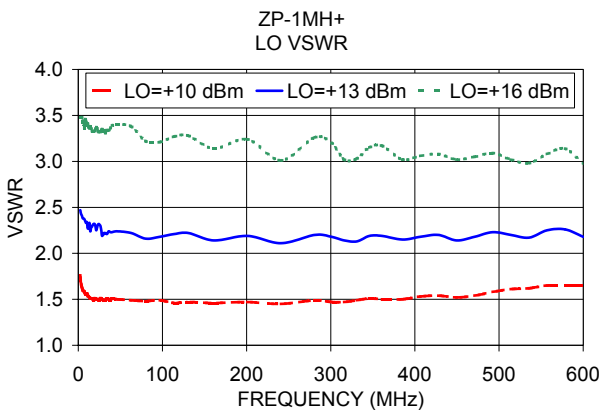
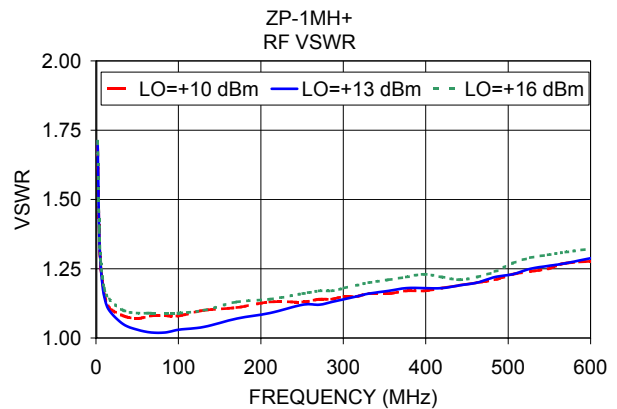
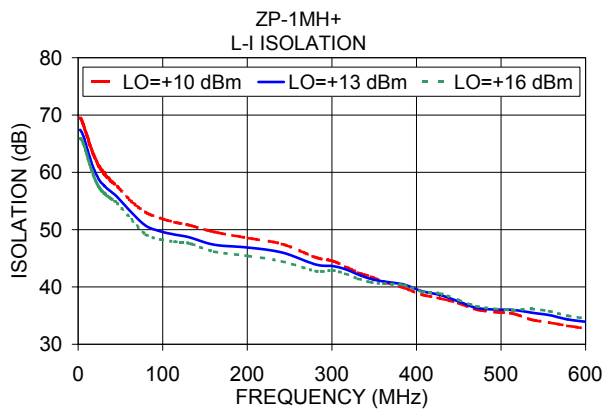
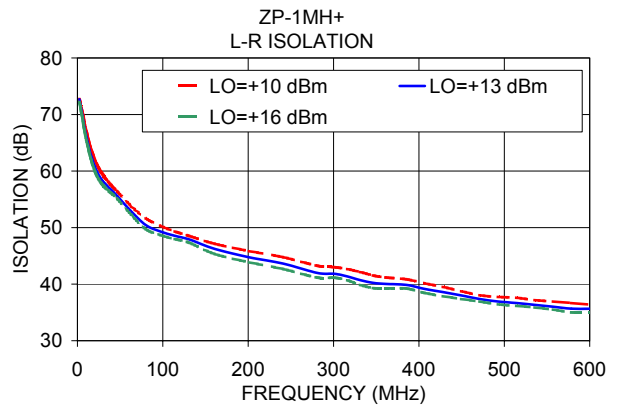
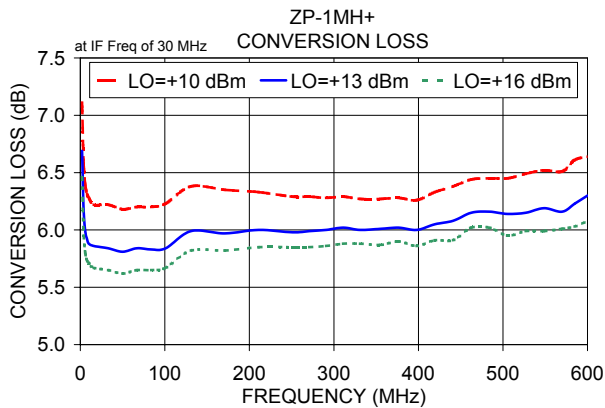
### Electrical Schematic



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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