

# Coaxial Frequency Mixer

## ZEM-4300MH+

Level 13 (LO Power +13 dBm) 300 to 4300 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	2
RF	1
IF	3

### Features

- low conversion loss, 6.42 dB typ.
- broadband, 300 to 4300 MHz
- IF response to DC

### Applications

- UHF/VHF
- MMDS
- ISM/GPS
- instrumentation



CASE STYLE: V37

Connectors	Model
SMA	ZEM-4300MH+

**+RoHS Compliant**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Electrical Specifications

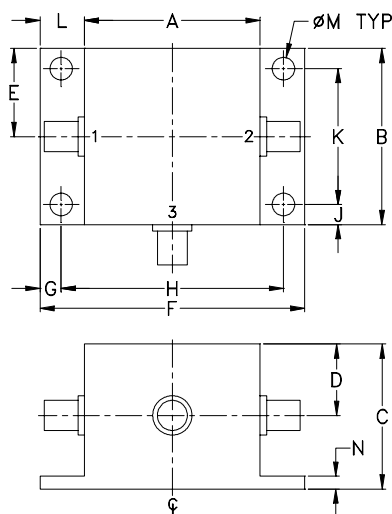
FREQUENCY (MHz)	CONVERSION LOSS (dB)	LO-RF ISOLATION (dB)				LO-IF ISOLATION (dB)						
		Mid-Band		Total Range Max.		L		U				
LO/RF $f_L$ - $f_U$	IF $\bar{X}$ $\sigma$	$\bar{X}$	$\sigma$	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
300-4300	DC-1000	6.42	0.15	8.5	40	20	40	20	14	7	12	7

1 dB COMP.: +9 dBm typ.

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

U = upper range [ $10 f_U$  to  $f_U$ ]

### Outline Drawing



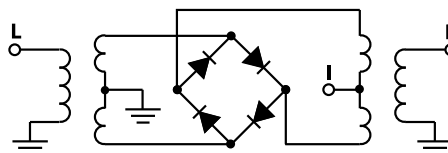
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.83	.83	.75	.37	.42	1.25	.10
21.08	21.08	19.05	9.40	10.67	31.75	2.54
H	J	K	L	M	N	wt
1.050	.10	.640	.21	.106	.06	grams
26.67	2.54	16.26	5.33	2.69	1.52	22.0

### 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 +13dBm	LO +13dBm	LO +13dBm	LO +13dBm	LO +13dBm
300.00	500.00	7.02	42.09	9.54	2.21	5.54
500.00	700.00	6.66	33.47	9.04	3.20	5.20
575.86	775.86	6.30	35.56	9.47	3.19	5.14
600.00	800.00	6.62	35.00	9.79	2.55	6.32
989.66	789.66	6.61	36.09	17.49	1.64	4.48
1000.00	800.00	6.53	36.06	17.37	2.66	3.06
1403.45	1203.45	6.30	32.65	14.72	5.34	2.48
1679.31	1479.31	5.89	39.70	19.11	4.31	4.59
2000.00	1800.00	6.16	34.09	23.50	2.63	2.77
2093.10	1893.10	6.43	33.26	23.82	2.48	1.88
2231.03	2031.04	6.54	32.41	25.64	2.42	1.88
2368.97	2168.97	6.30	31.34	28.66	2.35	1.89
2506.90	2306.90	6.24	29.89	27.33	2.26	1.90
2920.69	2720.69	6.23	27.73	17.77	2.30	2.41
3000.00	2800.00	6.20	26.08	16.39	2.29	2.23
3334.48	3134.48	6.22	27.73	15.67	2.29	3.01
3610.34	3410.35	6.38	30.12	13.56	1.82	2.73
4000.00	3800.00	6.47	33.12	10.27	2.35	1.84
4162.07	3962.07	6.54	35.73	10.47	2.27	2.41
4300.00	4100.00	6.83	39.65	11.87	2.30	3.08

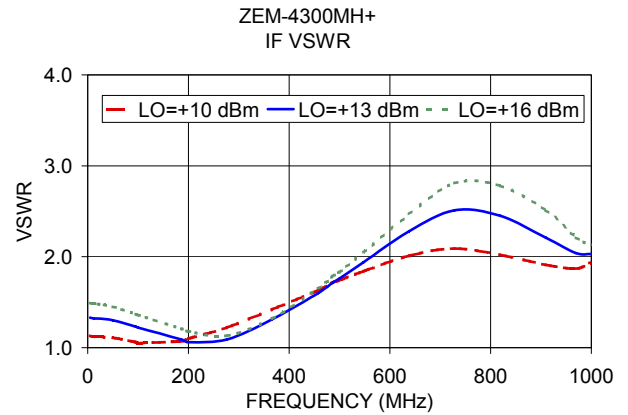
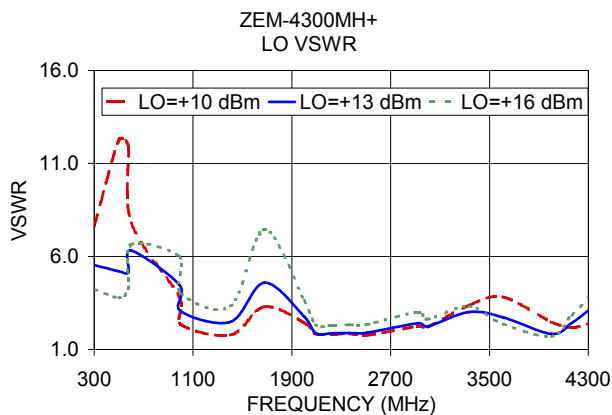
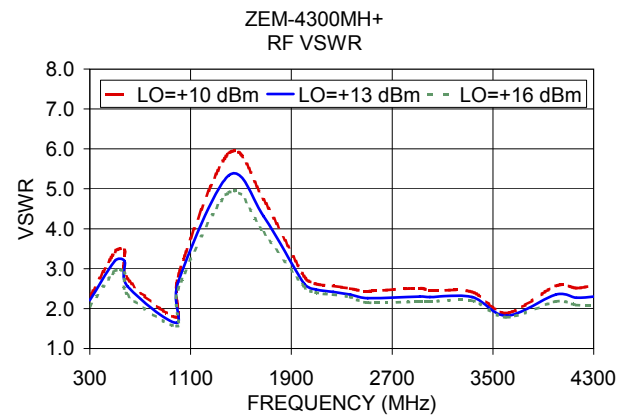
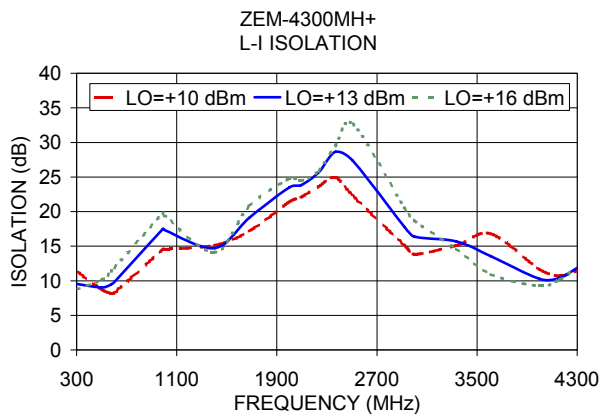
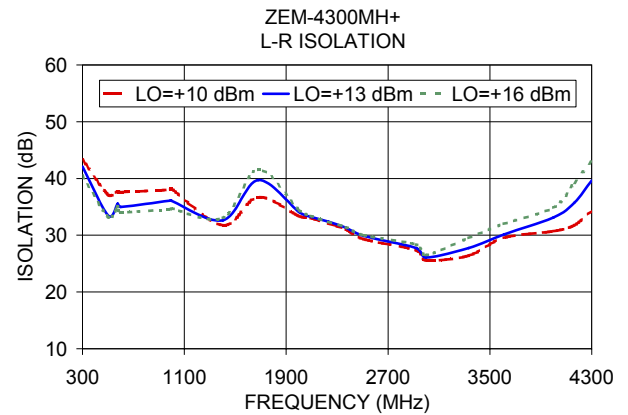
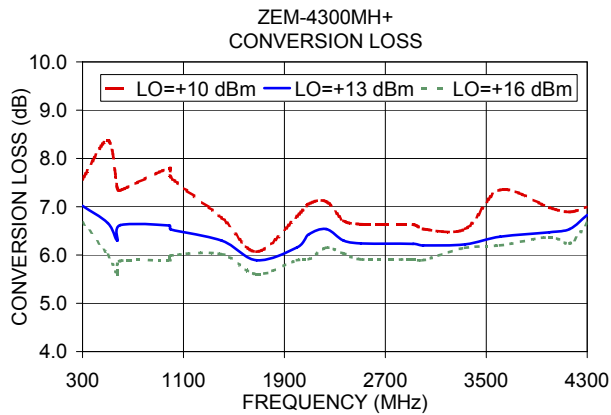
### Electrical Schematic



### Notes

- A. 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.  
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
 C. The parts covered by this specification document 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)





**Notes**

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document 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)

