

# Coaxial Frequency Mixer

## ZX05-12MH-S+

Level 13 (LO Power +13 dBm) 10 to 1200 MHz



Generic photo used for illustration purposes only

CASE STYLE: FL905

Connectors	Model
SMA	ZX05-12MH-S+

**+RoHS Compliant**

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

### Maximum Ratings

Operating Temperature	-40°C to 85°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

- rugged construction
- small size
- low conversion loss
- high L-R isolation
- protected by US Patents 6,133,525 and 6,790,049

### Applications

- cellular
- PCS
- instrumentation
- satellite communication

### Electrical Specifications (T<sub>AMB</sub>=25°C)

FREQUENCY (MHz)	CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)
	LO/RF	IF	Mid-Band m	Total Range Max.	L	M	U	L	M	U	L	M	U				
10-1200	DC-1200	$f_L-f_U$	$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
6.3	0.1	8.0	9.3	62	45	45	32	40	26	68	40	42	27	30	20	22	

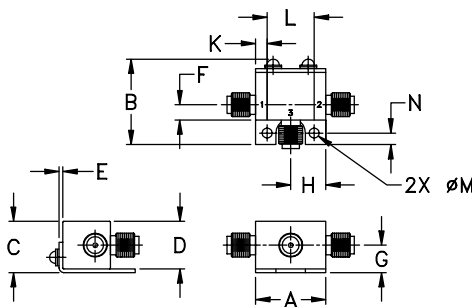
1 dB COMP.: +9 dBm typ.

L = low range [ $f_L$  to  $10 f_L$ ]  
m = mid band [ $2 f_L$  to  $f_U/2$ ]

M = mid range [ $10 f_L$  to  $f_U/2$ ]

U = upper range [ $f_U/2$  to  $f_U$ ]

### Outline Drawing



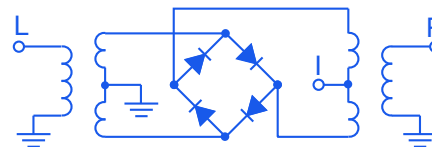
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37
H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	20.0

### 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
10.10	40.10	6.79	77.06	75.81	1.43	1.67
35.10	65.10	6.61	65.97	67.93	1.43	1.60
120.10	90.10	6.55	55.51	58.17	1.42	1.61
176.57	146.57	6.48	52.09	55.53	1.41	1.67
233.04	203.04	6.37	49.87	52.59	1.39	1.63
261.28	231.28	6.32	49.09	51.10	1.37	1.68
317.75	287.75	6.31	47.53	48.02	1.36	1.67
374.22	344.22	6.26	46.54	45.84	1.35	1.73
430.69	400.69	6.23	45.73	43.99	1.33	1.78
487.16	457.16	6.24	44.02	41.31	1.33	1.71
543.63	513.63	6.18	43.51	40.06	1.31	1.76
600.10	570.10	6.23	43.41	39.38	1.28	1.79
661.53	631.53	6.16	44.54	38.57	1.25	1.76
744.39	714.39	6.35	43.91	38.12	1.25	1.78
827.24	797.24	6.52	42.35	36.05	1.23	1.82
910.10	880.10	6.45	40.78	32.90	1.19	1.83
992.96	962.96	6.00	39.70	31.56	1.06	1.92
1075.81	1045.81	5.99	36.90	31.08	1.10	1.98
1158.67	1128.67	6.09	35.90	31.14	1.31	2.07
1200.10	1170.10	6.41	34.83	31.18	1.44	2.08

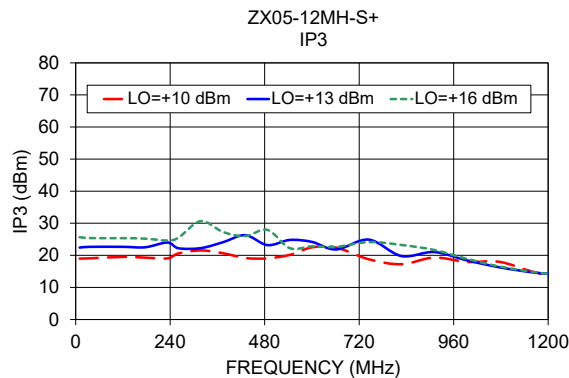
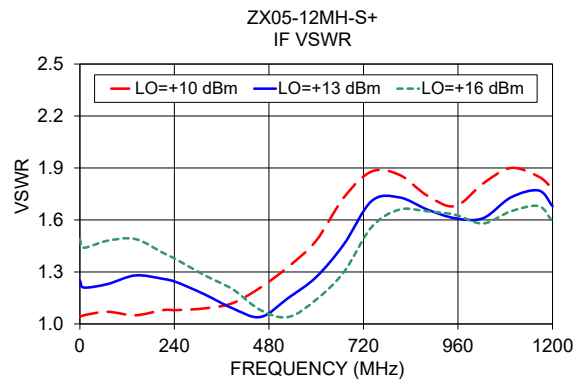
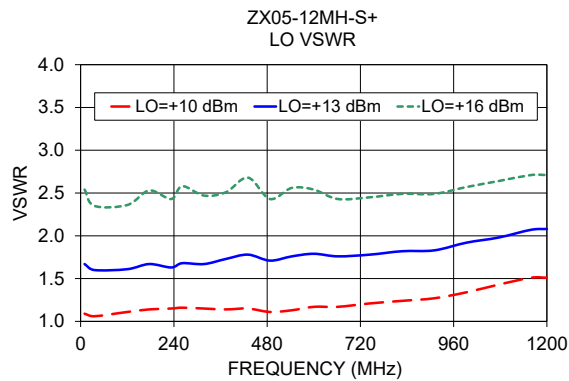
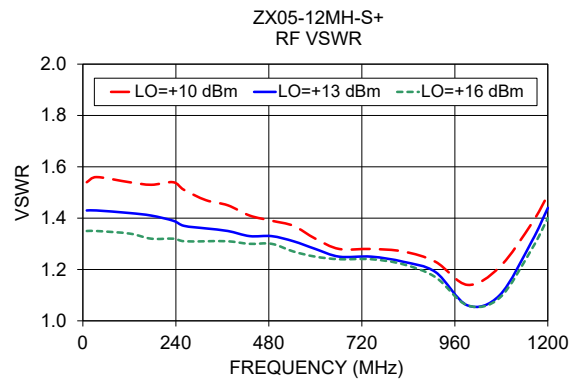
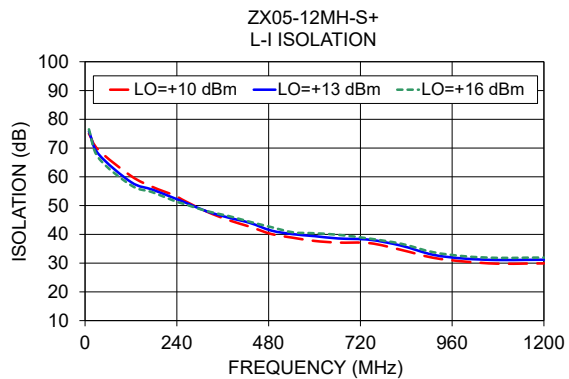
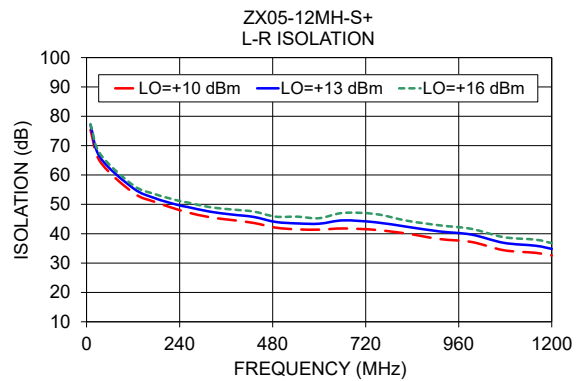
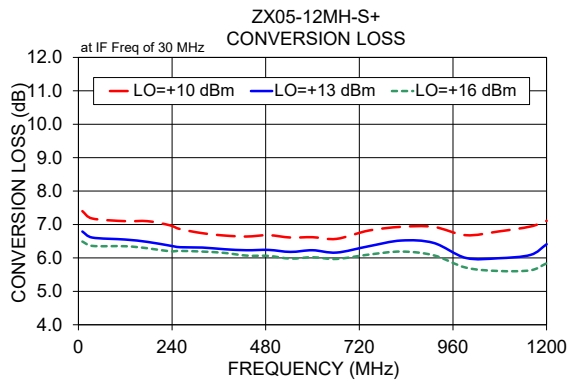
### Electrical Schematic



### 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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