

# Coaxial Frequency Mixer

## ZX05-12MH+

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



### 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

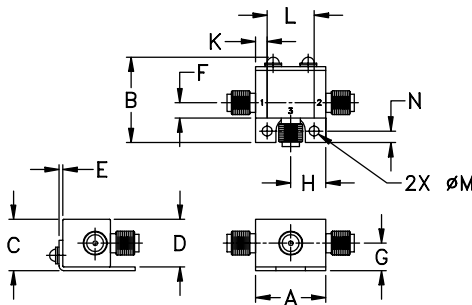
- cellular
- PCS
- instrumentation
- satellite communication

Connectors	Model	Price	Qty.
SMA	ZX05-12MH-S+	\$39.95 ea.	(1-24)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### 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

### 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	L	M	U			
10-1200	DC-1200	f <sub>L</sub> -f <sub>U</sub>	$\bar{X}$	$\sigma$	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.		
10-1200	DC-1200		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<sub>L</sub> to 10 f<sub>L</sub>]

m = mid band [2 f<sub>L</sub> to f<sub>U</sub>/2]

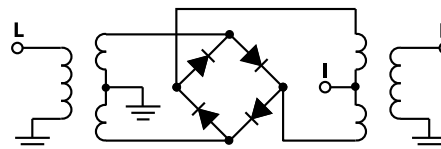
M = mid range [10 f<sub>L</sub> to f<sub>U</sub>/2]

U = upper range [f<sub>U</sub>/2 to f<sub>U</sub>]

### 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



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

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