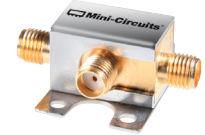


# Coaxial Frequency Mixer

## ZX05-1+

Level 7 (LO Power +7 dBm) 0.5 to 500 MHz



### Maximum Ratings

Operating Temperature	-40°C to 85°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	1
RF	2
IF	3

### Features

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

### Applications

- cellular
- PCS
- instrumentation
- satellite communication

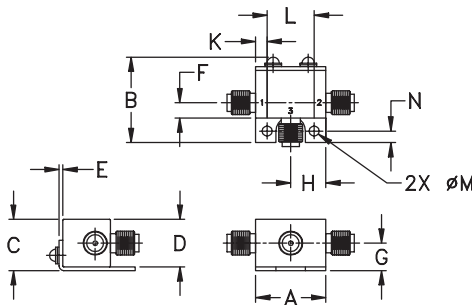
CASE STYLE: FL905

Connectors	Model
SMA	ZX05-1-S+

**+RoHS Compliant**

The +Suffix identifies 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)										
		L	M	U	L	M	U											
LO/RF f <sub>L</sub> -f <sub>U</sub>	Mid-Band m Total Range Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.										
0.5-500	DC-500	5.0	0.1	6.5	7.8	70	50	55	35	45	30	65	45	40	25	30	20	15

1 dB COMP.: +1 dBm typ.

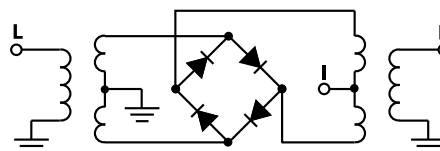
L = low range [f<sub>L</sub> to 10 f<sub>L</sub>]  
m = mid band [2f<sub>L</sub> to f<sub>U</sub>/2]

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 +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.50	30.50	5.43	87.25	65.36	1.40	2.73
10.10	40.10	4.75	78.62	65.76	1.14	2.60
50.10	80.10	4.82	64.80	62.59	1.11	2.60
111.71	81.71	4.83	58.65	49.84	1.08	2.60
125.58	95.58	4.82	58.02	48.48	1.07	2.60
153.33	123.33	4.89	56.73	46.06	1.05	2.64
167.20	137.20	4.95	56.61	45.36	1.04	2.64
208.81	178.81	4.96	52.62	43.32	1.02	2.63
236.55	206.55	5.02	54.29	41.47	1.02	2.72
250.10	220.10	5.04	54.34	40.76	1.02	2.70
278.17	248.17	5.07	54.24	41.16	1.04	2.65
305.91	275.91	5.11	50.00	39.81	1.08	2.76
319.78	289.78	5.18	48.59	38.79	1.09	2.81
347.52	317.52	5.27	45.62	37.96	1.09	2.71
375.26	345.26	5.32	46.14	35.84	1.10	2.63
403.00	373.00	5.34	45.16	33.19	1.12	2.80
430.75	400.75	5.28	44.30	32.33	1.12	2.84
444.62	414.62	5.27	43.71	31.87	1.11	2.78
472.36	442.36	5.34	45.07	29.71	1.15	2.88
500.10	470.10	5.54	45.02	29.13	1.27	3.13

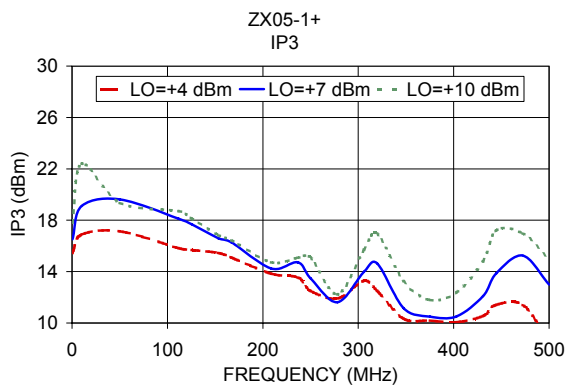
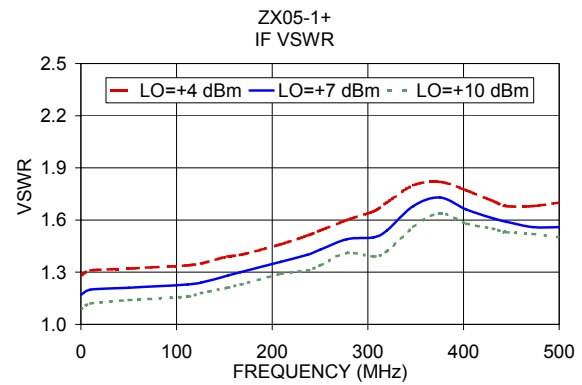
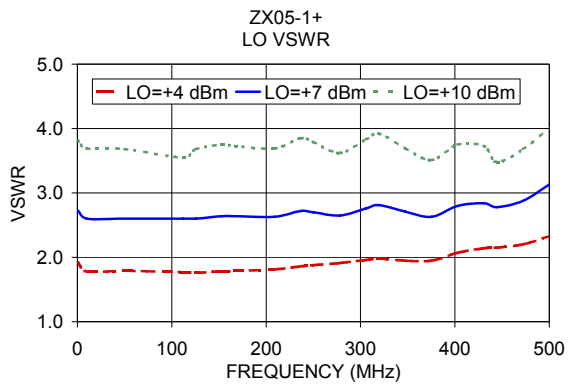
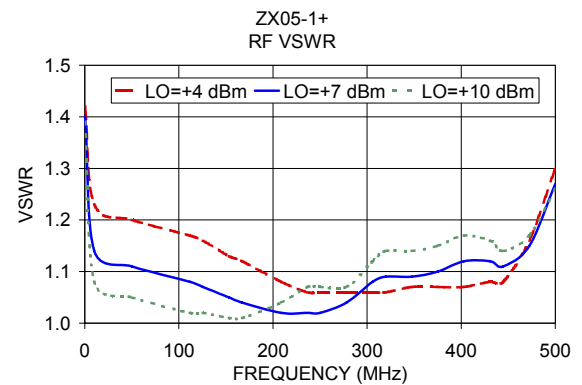
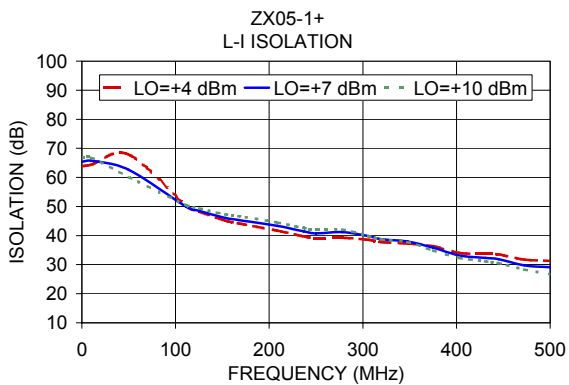
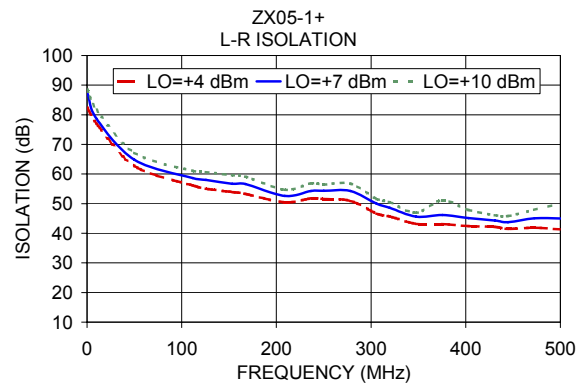
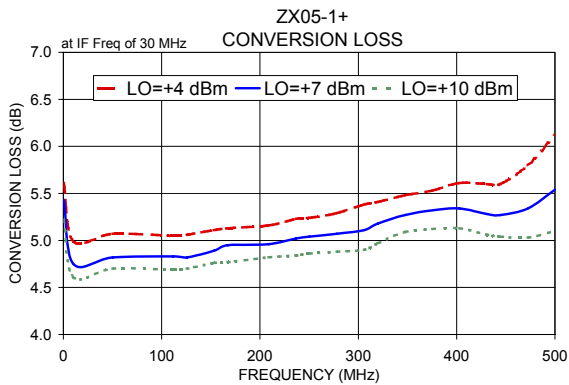
### Electrical Schematic



### 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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