Coaxial

Frequency Mixer

ZX05-1+
ZX05-1

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



CASE STYLE: FL905

Connectors	Model	Price	Qty.
SMA	ZX05-1-S(+)	$37.95 ea.	(1-24)

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

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	50mW
IF Current	40mA

Coaxial Connections

LO	1
RF	2
IF	3

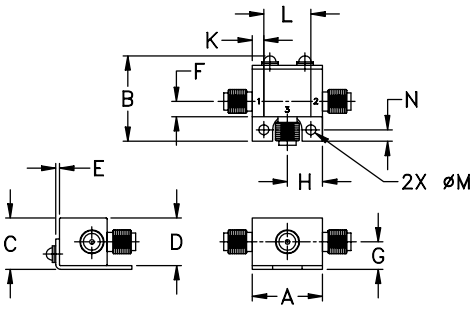
Features

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

Applications

- cellular
- PCS
- instrumentation
- satellite communication

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_{AMB}=25°C)

FREQUENCY (MHz)		CONVERSION LOSS (dB)				LO-RF ISOLATION (dB)						LO-IF ISOLATION (dB)						IP3 at center band (dBm)
		Mid-Band m			Total Range	L		M		U		L		M		U		
LO/RF	IF																	
f_L-f_U		$\bar{X}$	σ	Max.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	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

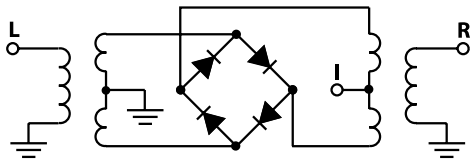
1 dB COMP.: +1 dBm typ.

L = low range [f_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

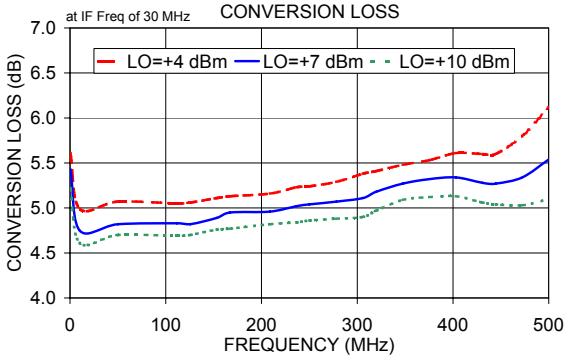
Frequency (MHz)		Conversion Loss (dB)	Isolation L-R (dB)	Isolation L-I (dB)	VSWR RF Port (:1)	VSWR LO Port (:1)
RF	LO	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm	LO +7dBm
0.50	30.50	5.43	87.25	65.36	1.40	2.73
10.10	40.10	4.75	78.62	65.76	1.14	2.60
50.10	80.10	4.82	64.80	62.59	1.11	2.60
111.71	81.71	4.83	58.65	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

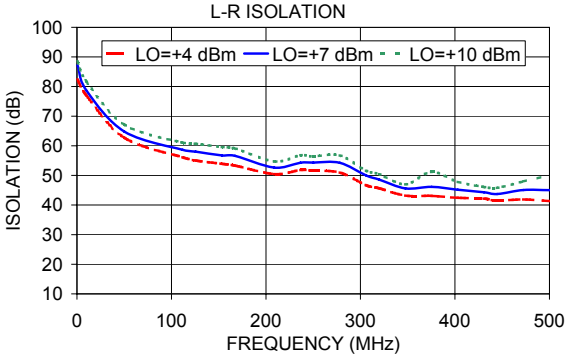


Performance Charts

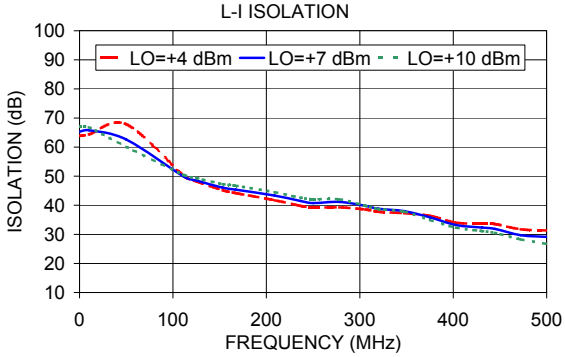
ZX05-1
CONVERSION LOSS
at IF Freq of 30 MHz



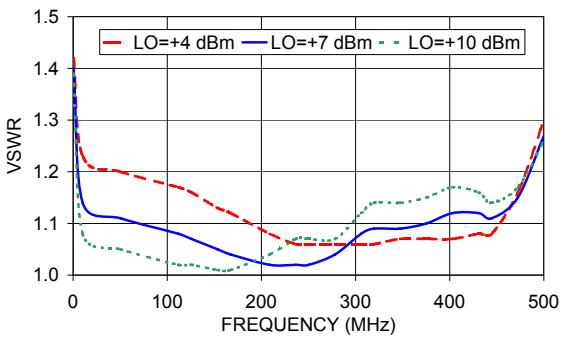
ZX05-1
L-R ISOLATION



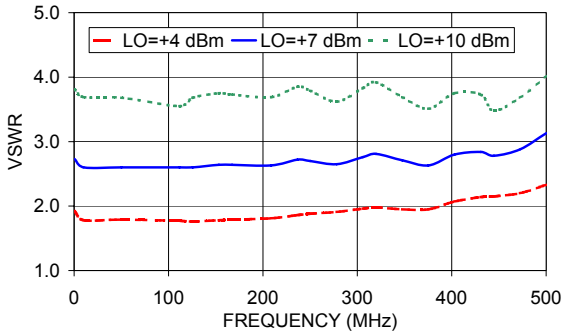
ZX05-1
L-I ISOLATION



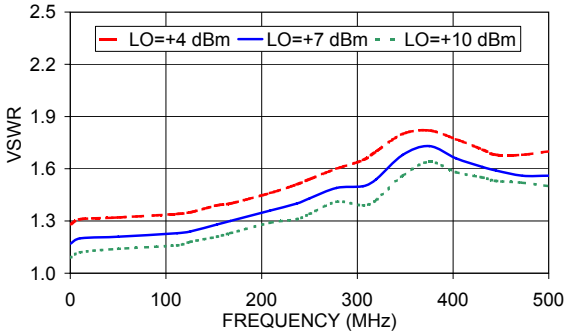
ZX05-1
RF VSWR



ZX05-1
LO VSWR



ZX05-1
IF VSWR



ZX05-1
IP3

