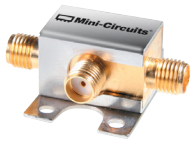
Coaxial

Frequency Mixer

ZX05-11X-S+

Level 7 (LO Power +7 dBm) 10 to 2000 MHz



CASE STYLE: FL905

Connectors	Model
SMA	ZX05-11X-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	50mW
IF Current	40mA

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

LO	1
RF	2
IF	3

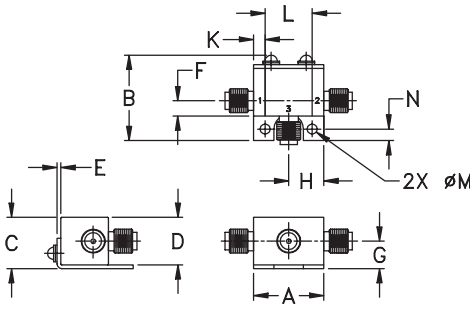
Features

- rugged construction
- small size
- low conversion loss
- high L-R isolation
- protected by US Patents 6,133,525 and 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		$\overline{X}$	σ	Max.	Max.*	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
10-2000	5-1000	7.1	0.1	8.2	9.8	62	45	36	20	27	18	60	45	37	20	38	20	9

1 dB COMP.: +1 dBm typ.

* Conversion Loss 10.4 dB Max. at LO/RF 1900-2000 MHz

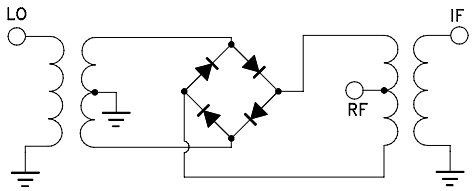
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U = upper range [f_U/2 to f_U]

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
10.10	40.10	6.84	74.97	78.47	1.03	2.59
50.10	80.10	6.84	61.40	64.93	1.03	2.58
100.10	130.10	6.91	55.74	58.48	1.04	2.52
206.16	236.16	6.98	51.92	52.08	1.12	2.54
318.28	288.28	7.08	48.10	48.28	1.20	2.58
430.40	400.40	7.13	44.07	45.47	1.38	2.53
542.52	512.52	7.20	40.20	43.42	1.60	2.54
654.65	624.65	7.32	38.92	41.99	1.84	2.66
766.77	736.77	7.40	35.90	39.98	2.01	2.62
878.89	848.89	7.26	35.13	37.69	1.99	2.63
1000.10	970.10	7.11	33.55	36.59	1.90	2.90
1103.13	1073.13	7.02	30.72	35.49	1.80	2.94
1215.25	1185.25	7.15	29.08	34.26	1.81	2.84
1327.37	1297.37	7.25	29.09	33.25	1.67	2.90
1439.49	1409.49	7.22	31.00	33.11	1.43	2.90
1551.62	1521.62	7.31	33.01	33.10	1.21	2.64
1663.74	1633.74	7.52	30.60	34.88	1.05	2.63
1775.86	1745.86	7.90	27.23	36.31	1.12	2.57
1887.98	1857.98	8.28	25.73	34.43	1.37	2.53
2000.10	1970.10	8.81	26.34	34.73	1.68	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.

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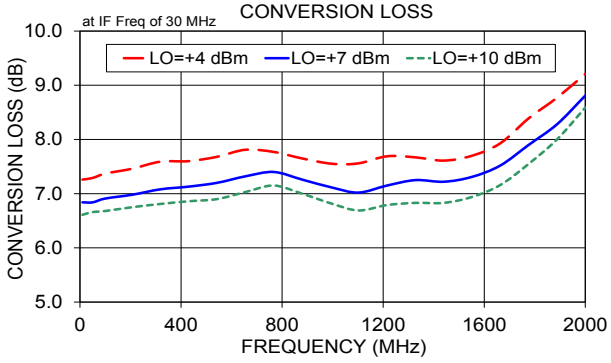
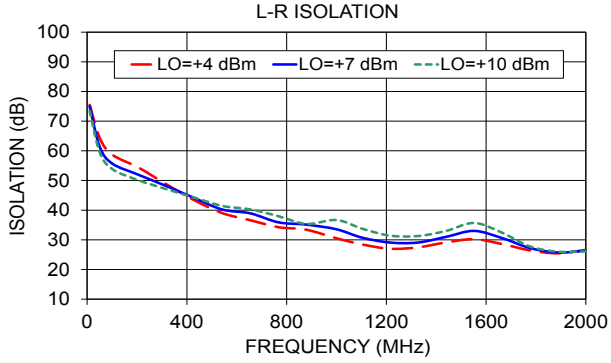
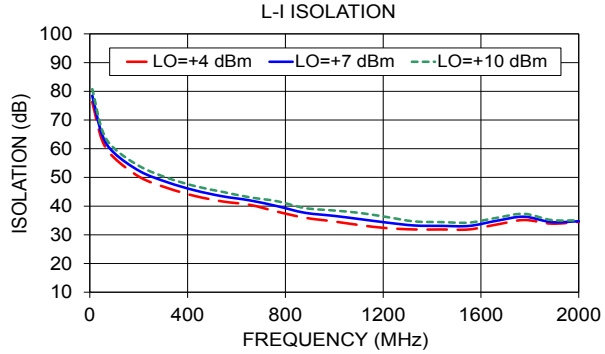
ZX05-11X-S+
CONVERSION LOSS
at IF Freq of 30 MHz



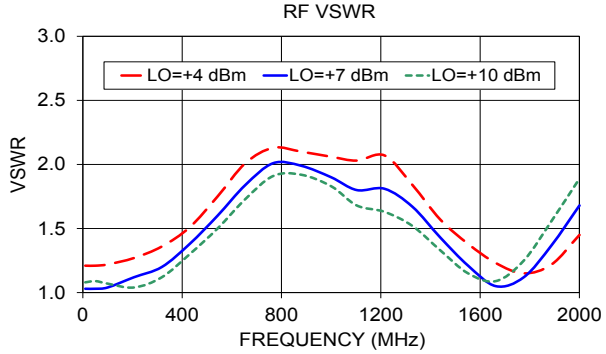
ZX05-11X-S+
L-R ISOLATION



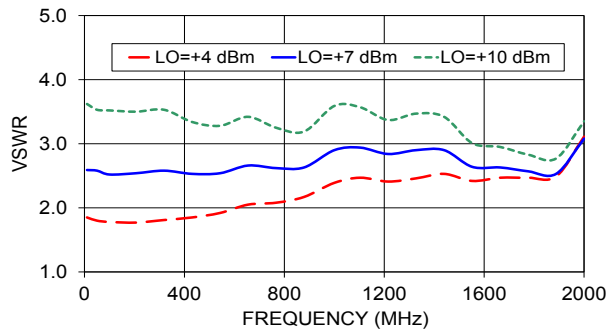
ZX05-11X-S+
L-I ISOLATION



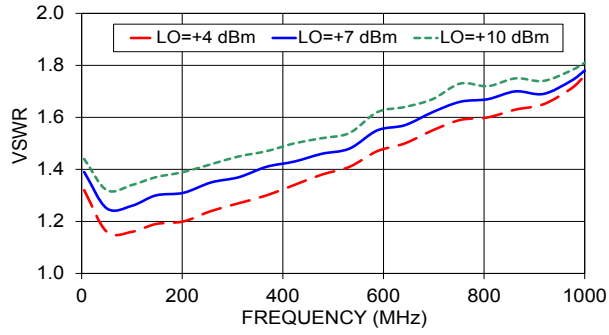
ZX05-11X-S+
RF VSWR



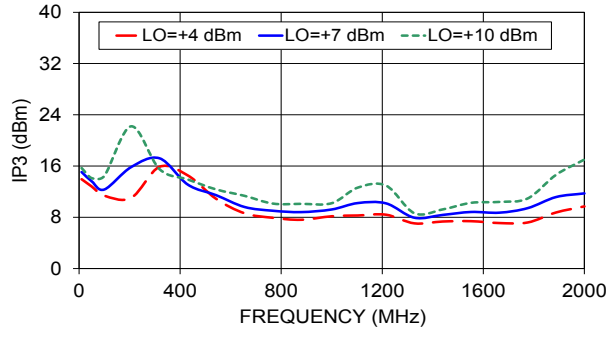
ZX05-11X-S+
LO VSWR



ZX05-11X-S+
IF VSWR



ZX05-11X-S+
IP3



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