

# X3 Frequency Multiplier

50Ω Output 900 to 1200 MHz

## ZX90-3-122+



CASE STYLE: JA1242

Connectors Model  
SMA ZX90-3-122-S+

**+RoHS Compliant**

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

### Maximum Ratings

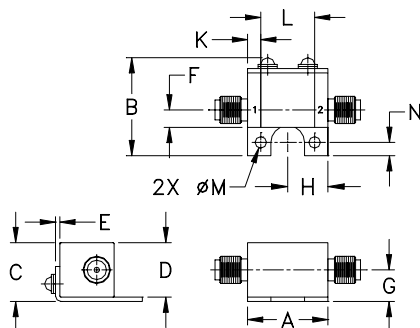
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	17 dBm

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

### Coaxial Connections

INPUT	1
OUTPUT	2

### 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	19.0

### Features

- broadband
- low conversion loss, 16 dB typ.
- high rejection F2, and F4, 60 dBc typ.
- rugged construction
- protected by US Patent 6,790,049

### Applications

- synthesizers
- local oscillators
- satellite up and down converters

### Electrical Specifications

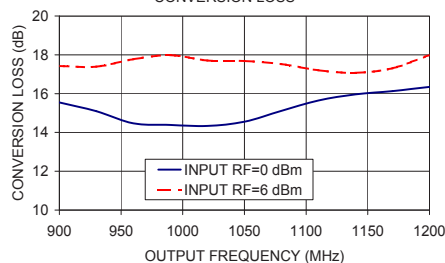
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F3 Output	Min.	Max.	Typ.	Max.	F1		F2		F4	
	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.
3	300-400	900-1200	0	6	16	20	48	30	60	40	70	40

\* Harmonics of input frequency below the power level of F3

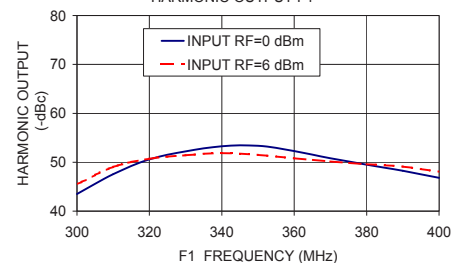
### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 0 dBm				INPUT RF= 6 dBm			
	Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)		
		F3	F1	F2		F4	F3	F1
300.00	15.55	43.51	79.89	80.52	17.42	45.52	81.95	72.85
310.00	15.10	47.58	75.44	79.10	17.39	49.03	77.10	71.02
320.00	14.47	50.59	70.39	74.60	17.77	50.71	71.34	71.10
330.00	14.39	52.21	65.30	73.18	17.98	51.42	65.77	72.36
340.00	14.34	53.26	64.86	75.14	17.71	51.87	66.11	74.56
350.00	14.55	53.38	66.15	78.09	17.68	51.50	68.14	75.95
360.00	15.11	52.27	66.02	84.26	17.52	50.82	68.51	82.88
370.00	15.65	50.80	64.82	95.71	17.21	50.16	67.63	92.89
380.00	15.96	49.50	64.04	101.73	17.07	49.60	66.84	102.37
390.00	16.13	48.27	63.93	100.52	17.31	49.10	66.70	101.15
400.00	16.35	46.82	64.25	100.80	17.99	48.05	67.56	96.71

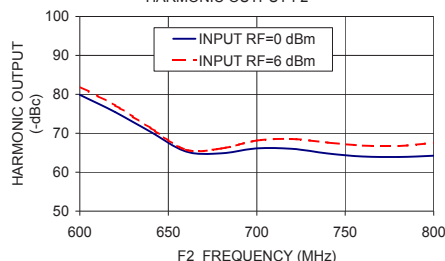
ZX90-3-122+ CONVERSION LOSS



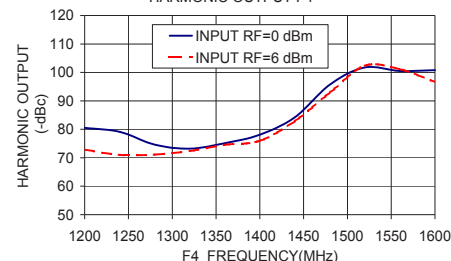
ZX90-3-122+ HARMONIC OUTPUT F1



ZX90-3-122+ HARMONIC OUTPUT F2



ZX90-3-122+ HARMONIC OUTPUT F4



### 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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