

# X3 Frequency Multiplier

## ZX90-3-692+

50Ω Output 5100 to 6900 MHz

### Maximum Ratings

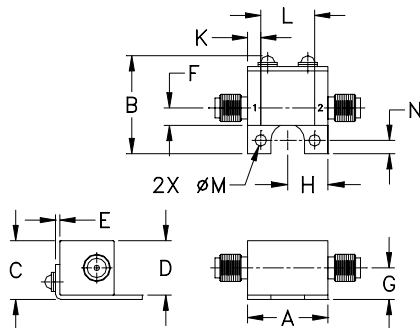
Operating Temperature	-45°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	17 dBm

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, 14.7 dB typ.
- high rejection F2, 40 dBc typ., F4, 40 dBc typ.
- protected by US Patent 6,790,049

### Applications

- synthesizers
- local oscillators
- satellite up and down converters



CASE STYLE: JA1242

Connectors	Model
SMA	ZX90-3-692-S+

+RoHS Compliant

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

### Electrical Specifications

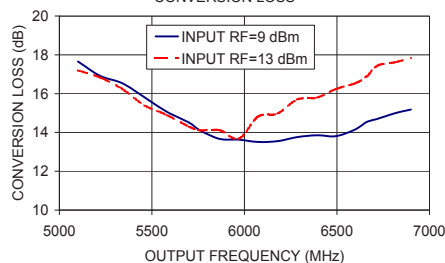
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F3 Output	Min.	Max.	Typ.	Max.	F1		F2		F4	
3	1700-2300	5100-6900	9	13	14.7	20	40	29	40	25	40	25

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

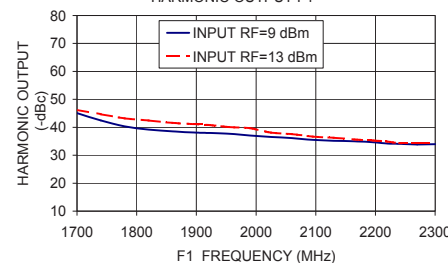
### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 9 dBm				INPUT RF= 13 dBm			
	Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)		
		F1	F2	F4		F1	F2	F4
1700.00	17.66	45.09	38.29	30.95	17.20	46.26	42.35	37.26
1740.00	16.91	42.47	43.03	33.81	16.83	44.67	45.43	41.48
1780.00	16.54	40.32	47.74	35.67	16.25	43.20	48.36	43.12
1820.00	15.81	39.19	52.11	38.92	15.40	42.43	49.87	47.84
1860.00	15.07	38.57	50.31	42.93	14.90	41.61	51.99	47.31
1900.00	14.51	38.08	47.88	45.91	14.30	41.07	49.21	46.19
1920.00	14.11	37.99	47.14	47.16	14.11	40.82	49.27	47.80
1955.00	13.67	37.69	45.51	47.61	14.12	40.07	46.82	51.10
1990.00	13.63	37.07	44.16	48.80	13.68	39.71	42.91	53.60
2025.00	13.51	36.57	42.87	49.78	14.82	38.12	39.54	50.88
2060.00	13.55	36.12	41.51	50.68	14.98	37.56	36.44	47.05
2095.00	13.76	35.51	39.27	49.20	15.70	36.67	33.89	44.01
2130.00	13.85	35.14	37.68	47.32	15.79	36.23	32.14	38.63
2165.00	13.81	34.97	35.97	44.81	16.24	35.63	31.61	37.48
2200.00	14.16	34.62	34.71	42.48	16.54	35.24	31.37	36.94
2220.00	14.54	34.19	33.82	41.01	16.89	34.89	31.43	36.68
2240.00	14.70	34.06	33.21	39.49	17.45	34.34	31.26	35.98
2270.00	14.98	33.87	32.75	38.13	17.61	34.33	31.71	35.46
2300.00	15.18	33.94	32.13	36.76	17.84	34.29	32.61	37.36

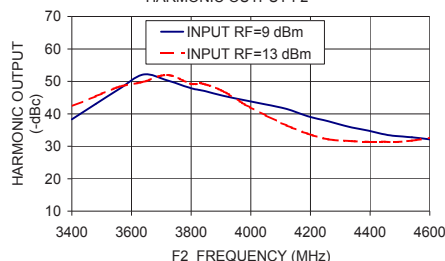
ZX90-3-692+ CONVERSION LOSS



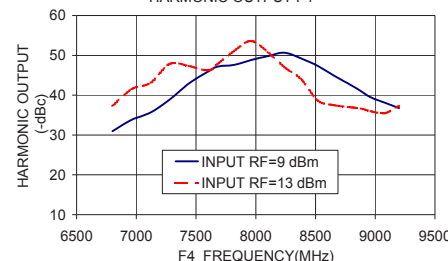
ZX90-3-692+ HARMONIC OUTPUT F1



ZX90-3-692+ HARMONIC OUTPUT F2



ZX90-3-692+ 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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