

# X3 Frequency Multiplier

## ZX90-3-812+

50Ω Output 6000 to 8100 MHz

### Maximum Ratings

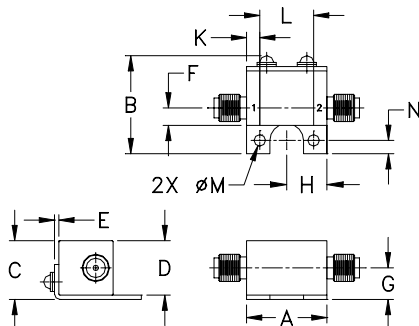
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Input Power	17 dBm

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
- high rejection F1, 30 dBc typ.; F2, 48 dBc typ., F4, 55 dBc typ.
- rugged construction
- protected by US Patent 6,790,049

### Applications

- synthesizers
- local oscillators
- satellite up and down converters



CASE STYLE: JA1242

Connectors	Model
SMA	ZX90-3-812-S+

### +RoHS Compliant

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

### Electrical Specifications

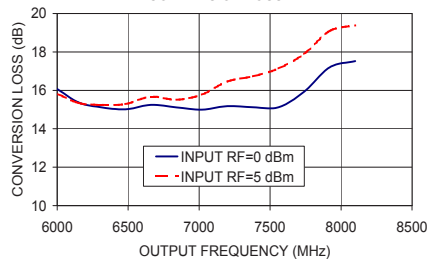
MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F3 Output	Min.	Max.	Typ.	Max.	F1		F2		F4	
							Typ.	Min.	Typ.	Min.	Typ.	Min.
3	2000-2700	6000-8100	0	5	15	22	30	21	48	30	48	27

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

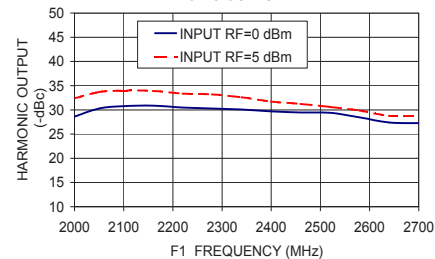
### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 0 dBm					INPUT RF= 5 dBm				
	Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)				Conversion Loss (dB)	Harmonic Output Below F3 (-dBc)			
		F3	F1	F2	F4		F3	F1	F2	F4
2000.00	16.07	28.61	39.71	32.76	15.82	32.38	40.92	47.75		
2050.00	15.37	30.27	43.04	36.29	15.35	33.69	42.23	44.35		
2100.00	15.13	30.77	52.29	38.99	15.25	33.98	55.15	40.09		
2160.00	15.01	30.86	54.04	44.45	15.29	33.91	64.18	43.05		
2220.00	15.25	30.46	54.81	46.76	15.67	33.37	58.33	47.65		
2280.00	15.11	30.28	57.32	48.63	15.51	33.19	53.77	53.41		
2340.00	15.00	30.09	55.94	49.94	15.78	32.61	49.10	55.01		
2400.00	15.18	29.69	50.59	52.35	16.46	31.72	45.50	55.73		
2460.00	15.12	29.47	46.97	51.62	16.73	31.24	43.44	51.87		
2520.00	15.12	29.39	44.21	49.41	17.14	30.59	41.38	47.42		
2580.00	15.93	28.46	43.39	47.25	17.90	29.86	39.40	44.54		
2640.00	17.20	27.38	42.79	44.54	19.09	28.76	37.26	41.18		
2700.00	17.52	27.28	42.93	43.92	19.38	28.74	36.75	39.96		

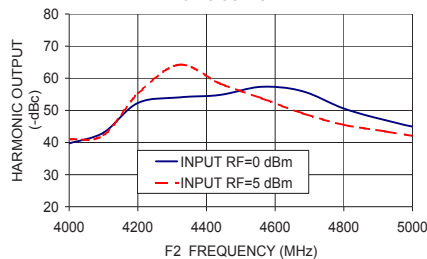
ZX90-3-812+ CONVERSION LOSS



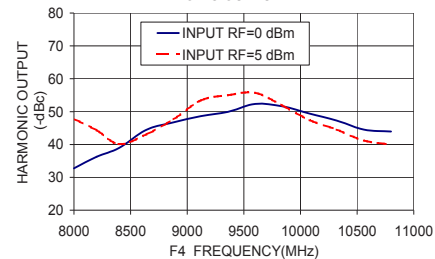
ZX90-3-812+ HARMONIC OUTPUT F1



ZX90-3-812+ HARMONIC OUTPUT F2



ZX90-3-812+ 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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