

# X2 Frequency Multiplier

50Ω Output 2200 to 3800 MHz

ZX90-2-19+



## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Input Power, 25°C	23 dBm

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

## Coaxial Connections

INPUT	2
OUTPUT	1

## Features

- broadband
- low conversion loss, 10.5 dB typ.
- rugged construction
- protected by US Patent 6,790,049

## Applications

- synthesizers
- local oscillators

CASE STYLE: JA1242

Connectors	Model	Price	Qty.
SMA	ZX90-2-19-S+	\$35.95	(1-9)

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

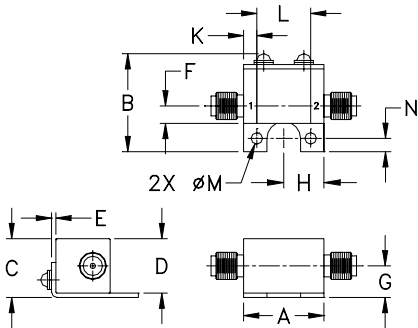
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

## Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1 Input	F2 Output	Min.	Max.	Typ.	Max.	F1		F3		F4	
							Typ.	Min.	Typ.	Min.	Typ.	Min.
2	1100-1900	2200-3800	5	10	10.5	14.5	27	20	30	23	17	11

\* Harmonics of input frequency below the power level of F2

## Outline Drawing



## Outline Dimensions (inch/mm)

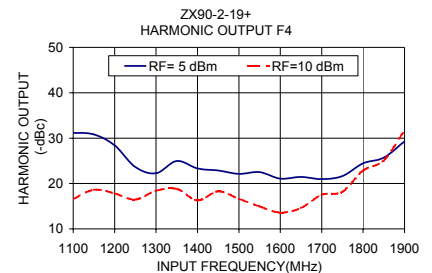
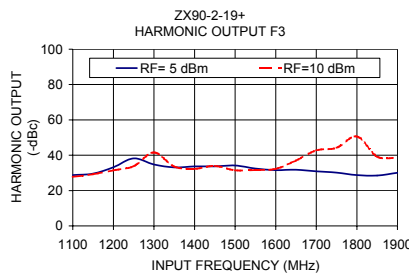
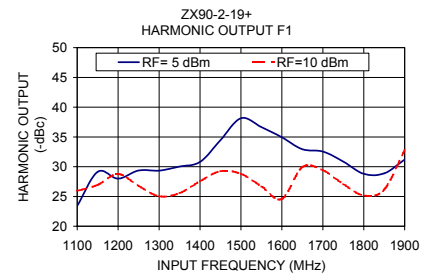
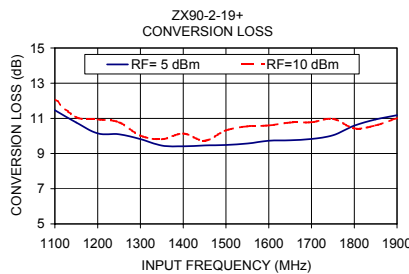
A	B	C	D	E	F	G
.74	.90	.54	.50	.04	.16	.29
18.80	22.86	13.72	12.70	1.02	4.06	7.37

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

## Typical Performance Data

Input Frequency (MHz)	INPUT RF= 5 dBm					INPUT RF= 10 dBm				
	Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)				
		F1	F3	F4		F1	F3	F4		
1100.00	11.46	23.43	28.77	31.18	12.10	25.95	27.81	16.56		
1150.00	10.76	29.15	29.59	30.82	11.06	26.94	29.25	18.64		
1200.00	10.15	28.00	33.16	28.41	10.94	28.77	31.44	17.83		
1250.00	10.10	29.37	38.22	23.66	10.78	26.78	33.74	16.46		
1300.00	9.82	29.33	34.73	22.27	10.02	25.03	41.56	18.39		
1350.00	9.45	30.03	33.13	24.97	9.81	25.56	33.58	18.82		
1400.00	9.41	30.81	33.72	23.31	10.14	27.56	32.27	16.29		
1450.00	9.46	34.44	33.65	22.87	9.73	29.23	33.94	18.28		
1500.00	9.49	38.13	34.21	22.14	10.31	28.80	31.51	16.64		
1550.00	9.57	36.65	32.46	22.53	10.55	26.71	31.65	14.95		
1600.00	9.73	34.93	31.55	21.08	10.60	24.56	32.26	13.62		
1650.00	9.75	32.94	31.83	21.46	10.76	29.92	36.99	14.61		
1700.00	9.83	32.54	30.91	20.96	10.78	29.42	42.75	17.52		
1750.00	10.04	30.85	30.19	21.65	10.97	27.09	44.22	18.17		
1800.00	10.59	28.81	28.76	24.46	10.43	25.15	50.65	22.83		
1850.00	10.94	28.88	28.49	25.71	10.60	26.14	39.20	25.09		
1900.00	11.18	31.20	30.07	29.26	11.01	32.76	38.51	31.67		



**Mini-Circuits®**  
 ISO 9001 ISO 14001 AS 9100 CERTIFIED  
 IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

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