

# X2 Frequency Multiplier

50Ω Output 3400 to 7200 MHz

## ZX90-2-36-S+



Generic photo used for illustration purposes only

CASE STYLE: JA1242

Connectors Model  
SMA ZX90-2-36-S+

**+RoHS Compliant**

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

### 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, 11 dB typ.
- rugged construction
- protected by US Patent 6,790,049

### Applications

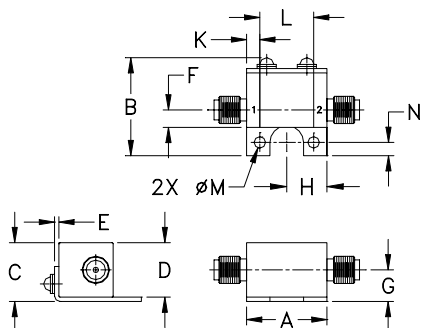
- synthesizers
- local oscillators

### Electrical Specifications

MULTIPLICATION FACTOR	FREQUENCY (MHz)		INPUT POWER (dBm)		CONVERSION LOSS (dB)		*HARMONIC OUTPUT (dBc)					
	F1	F2					F1		F3		F4	
	Input	Output	Min.	Max.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.
2	1700-3600	3400-7200	8	13	11	15	18	11	32	22	17	10
	2100-2700	4200-5400	8	13	10	14	23	14	35	22	17	10

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

### Outline Drawing



### Outline Dimensions (inch)

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

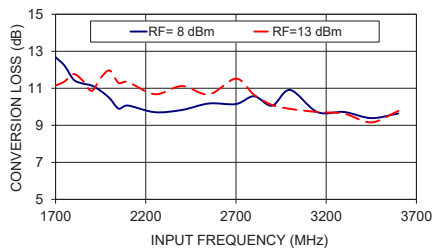
  

H	J	K	L	M	N	wt
.37	--	.122	.496	.106	.122	grams
9.40	--	3.10	12.60	2.69	3.10	19.0

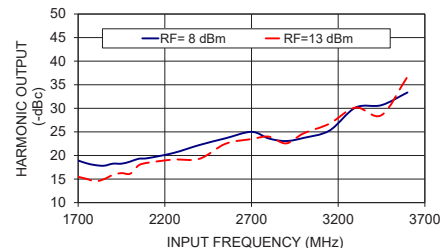
### Typical Performance Data

Input Frequency (MHz)	INPUT RF= 8 dBm					INPUT RF= 13 dBm				
	Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)			Conversion Loss (dB)	Harmonic Output Below F2 (-dBc)				
		F1	F3	F4		F1	F3	F4		
1700.00	12.68	18.93	35.89	18.96	11.15	15.47	26.66	24.11		
1750.00	12.22	18.33	35.27	18.16	11.37	15.03	26.94	16.00		
1800.00	11.47	17.95	45.16	18.70	11.77	14.50	33.64	13.06		
1850.00	11.26	17.83	33.29	18.35	11.42	14.99	38.73	13.03		
1900.00	11.15	18.26	29.79	17.36	10.86	15.86	36.04	18.11		
1950.00	10.86	18.26	35.39	16.48	11.56	16.26	45.42	16.46		
2000.00	10.46	18.70	38.44	17.89	11.96	16.13	42.66	13.95		
2050.00	9.90	19.31	39.98	18.47	11.28	17.93	34.78	16.77		
2100.00	10.07	19.42	42.00	18.43	11.35	18.45	35.13	18.82		
2250.00	9.71	20.53	36.43	19.74	10.68	19.13	33.84	20.75		
2400.00	9.83	22.22	40.20	18.46	11.12	19.30	30.47	14.87		
2550.00	10.18	23.64	34.87	17.62	10.67	22.48	34.32	16.03		
2700.00	10.15	25.01	32.22	18.45	11.52	23.48	44.56	14.58		
2800.00	10.57	23.60	27.52	16.04	10.65	23.99	33.19	16.01		
2900.00	10.06	23.06	31.99	16.59	10.10	22.56	55.64	15.38		
3000.00	10.91	23.72	27.97	20.74	9.89	24.68	37.24	23.88		
3150.00	9.72	25.28	30.62	24.35	9.72	26.74	43.78	26.57		
3300.00	9.72	30.15	34.56	28.81	9.63	30.16	34.29	30.43		
3450.00	9.39	30.67	35.55	25.72	9.16	28.55	34.48	30.97		
3600.00	9.64	33.36	40.47	24.29	9.78	36.72	37.99	28.94		

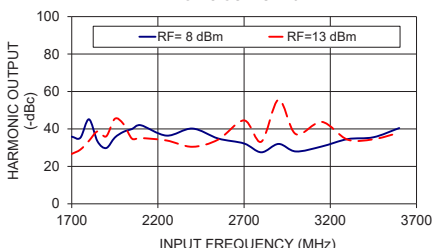
ZX90-2-36-S+  
CONVERSION LOSS



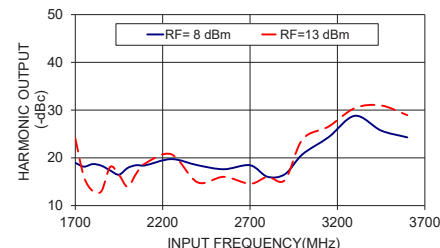
ZX90-2-36-S+  
HARMONIC OUTPUT F1



ZX90-2-36-S+  
HARMONIC OUTPUT F3



ZX90-2-36-S+  
HARMONIC OUTPUT F4



### Notes

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