

# X3 Frequency Multiplier

50Ω Output 6000 to 8100 MHz

## Maximum Ratings

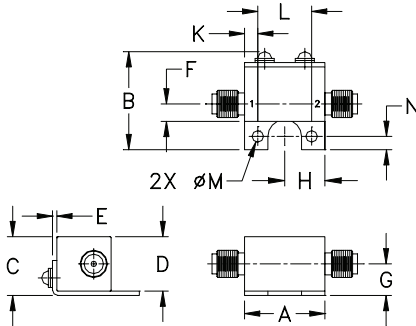
|                       |                |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C  |
| Storage Temperature   | -55°C to 100°C |
| RF Input Power        | 17 dBm         |

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

## Coaxial Connections

|        |   |
|--------|---|
| INPUT  | 1 |
| OUTPUT | 2 |

## Outline Drawing



## Outline Dimensions (inch)

| 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

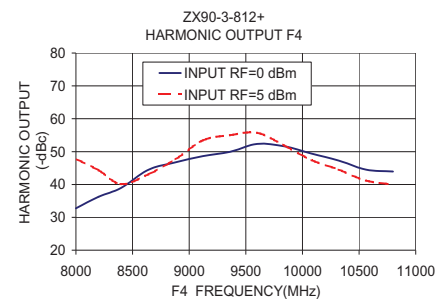
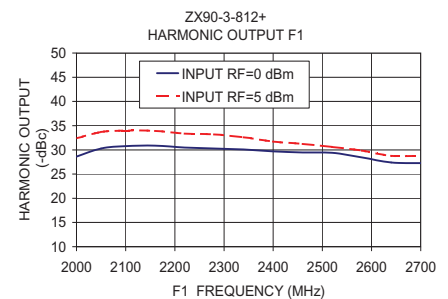
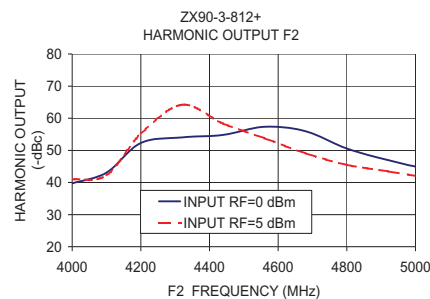
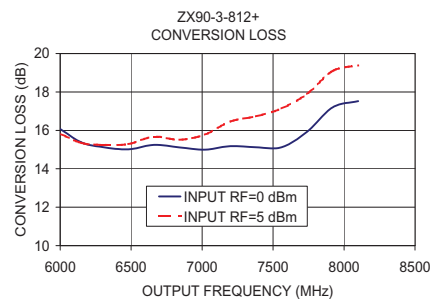
## Electrical Specifications

| MULTIPLICATION FACTOR | FREQUENCY (MHz) |           | INPUT POWER (dBm) |      | CONVERSION LOSS (dB) |      | *HARMONIC OUTPUT (dBc) |         |         |         |         |         |
|-----------------------|-----------------|-----------|-------------------|------|----------------------|------|------------------------|---------|---------|---------|---------|---------|
|                       | F1 Input        | F3 Output | Min.              | Max. | Typ.                 | Max. | F1 Typ.                | F1 Min. | F2 Typ. | F2 Min. | F4 Typ. | F4 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 RF= 0 dBm       |                      |                                 |       |       | INPUT RF= 5 dBm      |                                 |       |       |
|-----------------------|----------------------|---------------------------------|-------|-------|----------------------|---------------------------------|-------|-------|
| Input Frequency (MHz) | 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 |



## Notes

- A. 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.  
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ZX90-3-812+



CASE STYLE: JA1242

| Connectors | Model         | Price   | Qty.  |
|------------|---------------|---------|-------|
| SMA        | ZX90-3-812-S+ | \$51.95 | (1-9) |

**+RoHS Compliant**

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

REV. OR  
M110746  
ZX90-3-812+  
ED-12885A/2  
DY/CP  
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