

X2 Frequency Multiplier

50Ω Output 7000 to 10000 MHz

ZX90-2-50-S+



Generic photo used for illustration purposes only

CASE STYLE: JA1242

Connectors Model
SMA ZX90-2-50-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, 12.5 dB typ.
- rugged construction
- protected by US Patent 6,790,049

Applications

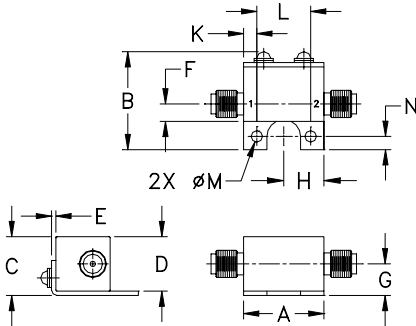
- synthesizers
- local oscillators

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 | 3500-5000 | 7000-10000 | 7 | 12 | 12.5 | 17 | 15 | 7 | 28 | 17 | 30 | 17 |
| | 3800-4500 | 7600-9000 | 7 | 12 | 11.3 | 15.5 | 20 | 10 | 30 | 20 | 30 | 17 |

* Harmonics of input frequency below the power level of F2

Outline Drawing



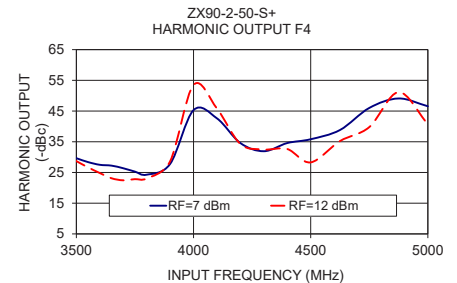
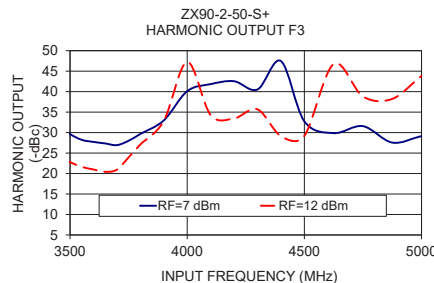
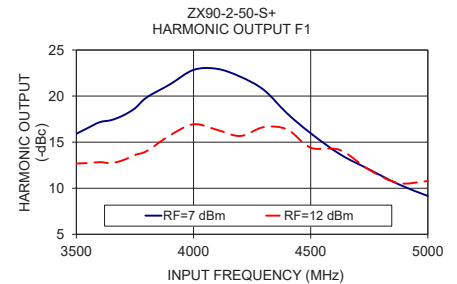
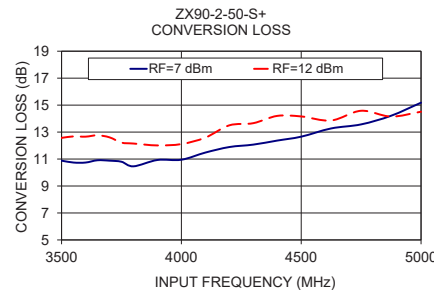
Outline Dimensions (inch)

| 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= 7 dBm | | | | INPUT RF= 12 dBm | | | |
|-----------------------|----------------------|---------------------------------|-------|-------|----------------------|---------------------------------|-------|-------|
| | Conversion Loss (dB) | Harmonic Output Below F2 (-dBc) | | | Conversion Loss (dB) | Harmonic Output Below F2 (-dBc) | | |
| | | F1 | F3 | F4 | | F1 | F3 | F4 |
| 3500.00 | 10.88 | 15.91 | 29.63 | 29.65 | 12.57 | 12.68 | 22.80 | 28.70 |
| 3550.00 | 10.74 | 16.55 | 28.23 | 28.38 | 12.68 | 12.73 | 21.63 | 26.66 |
| 3600.00 | 10.74 | 17.17 | 27.72 | 27.50 | 12.66 | 12.83 | 21.00 | 24.82 |
| 3650.00 | 10.91 | 17.40 | 27.35 | 27.23 | 12.76 | 12.73 | 20.42 | 23.12 |
| 3700.00 | 10.88 | 17.90 | 26.94 | 26.38 | 12.61 | 13.05 | 20.94 | 22.45 |
| 3750.00 | 10.80 | 18.67 | 28.00 | 25.28 | 12.22 | 13.61 | 23.93 | 22.83 |
| 3800.00 | 10.46 | 19.85 | 29.66 | 24.28 | 12.15 | 14.03 | 27.08 | 23.05 |
| 3900.00 | 10.93 | 21.28 | 32.96 | 27.76 | 12.01 | 15.74 | 32.82 | 28.60 |
| 4000.00 | 10.95 | 22.84 | 40.10 | 45.29 | 12.11 | 16.94 | 47.23 | 53.48 |
| 4100.00 | 11.48 | 22.96 | 41.83 | 42.62 | 12.59 | 16.34 | 34.29 | 45.83 |
| 4200.00 | 11.89 | 22.10 | 42.54 | 34.58 | 13.50 | 15.67 | 33.45 | 34.29 |
| 4300.00 | 12.07 | 20.67 | 40.52 | 31.92 | 13.66 | 16.63 | 35.68 | 32.49 |
| 4400.00 | 12.37 | 18.11 | 47.47 | 34.58 | 14.20 | 16.38 | 29.12 | 32.64 |
| 4500.00 | 12.66 | 15.97 | 32.75 | 35.82 | 14.16 | 14.40 | 29.17 | 28.29 |
| 4625.00 | 13.27 | 13.69 | 29.87 | 38.82 | 13.86 | 14.15 | 46.73 | 35.22 |
| 4750.00 | 13.57 | 12.04 | 31.57 | 46.00 | 14.58 | 12.00 | 38.82 | 39.76 |
| 4875.00 | 14.21 | 10.43 | 27.56 | 49.09 | 14.15 | 10.56 | 38.22 | 51.13 |
| 5000.00 | 15.18 | 9.16 | 29.15 | 46.56 | 14.51 | 10.78 | 43.85 | 40.76 |



Notes

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