

Coaxial

Voltage Controlled Oscillator

ZX95-3760+

Linear Tuning 3200 to 3760 MHz

Features

- low phase noise
- low pushing
- low pulling
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- wireless communications
- satellite systems
- SAP/SAB



CASE STYLE: GB956

Connectors Model

SMA ZX95-3760-S+

+RoHS Compliant

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

Electrical Specifications

| MODEL NO. | FREQ. (MHz) | | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies, kHz | | | | TUNING | | | | | NON HARMONIC SPURIOUS (dBc) | | HARMONICS (dBc) | | PULLING pk-pk @12 dB (MHz) | PUSHING (MHz/V) | DC OPERATING POWER | |
|------------|-------------|------|--------------------|---|-----|------|------|--------|-------------------|---------------------|---------------|---------------------------------|-----------------------------|------|-----------------|------|----------------------------|-----------------|--------------------|------|
| | Min. | Max. | | Typ. | 1 | 10 | 100 | 1000 | VOLTAGE RANGE (V) | SENSITIVITY (MHz/V) | PORT CAP (pF) | 3 dB MODULATION BANDWIDTH (MHz) | Typ. | Typ. | Typ. | Typ. | | | Typ. | Typ. |
| ZX95-3760+ | 3200 | 3760 | +8 | -69 | -96 | -118 | -139 | 0.5 | 15 | 56-67 | 15 | 120 | -90 | -28 | -18 | 2.5 | 0.8 | 5 | 48 | |

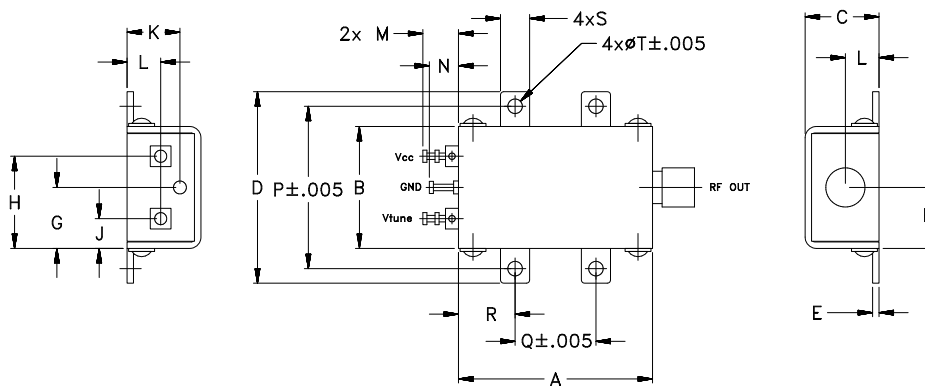
Maximum Ratings

Operating Temperature -55°C to 85°C
 Storage Temperature -55°C to 100°C
 Absolute Max. Supply Voltage (Vcc) 6.5V
 Absolute Max. Tuning Voltage (Vtune) 17.0V
 All specifications 50 ohm system
 Permanent damage may occur if any of these limits are exceeded.



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | wt. |
|-------|-------|-------|-------|------|------|------|-------|------|------|------|------|------|-------|-------|------|------|------|-------|
| 1.20 | .75 | .46 | 1.18 | .04 | .38 | .38 | .57 | .18 | .33 | .21 | .22 | .18 | 1.00 | .50 | .35 | .18 | .106 | grams |
| 30.48 | 19.05 | 11.68 | 29.97 | 1.02 | 9.65 | 9.65 | 14.48 | 4.57 | 8.38 | 5.33 | 5.59 | 4.57 | 25.40 | 12.70 | 8.89 | 4.57 | 2.69 | 35.0 |

Performance Data & Curves*

ZX95-3760+

| V TUNE | TUNE SENS (MHz/V) | FREQUENCY (MHz) | | | POWER OUTPUT (dBm) | | | Icc (mA) | HARMONICS (dBc) | | | FREQ. PUSH (MHz/V) | FREQ. PULL (MHz) | PHASE NOISE (dBc/Hz) at offsets | | | | FREQ OFFSET (KHz) | PHASE NOISE at 3480 MHz (dBc/Hz) |
|--------|-------------------|-----------------|--------|--------|--------------------|-------|-------|----------|-----------------|-------|-------|--------------------|------------------|---------------------------------|-------|--------|--------|-------------------|----------------------------------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C | | F2 | F3 | F4 | | | 1kHz | 10kHz | 100kHz | 1MHz | | |
| 0.00 | 105.96 | 2991.3 | 2969.9 | 2951.3 | 8.57 | 8.54 | 8.21 | 40.67 | -28.5 | -43.4 | -65.6 | 1.03 | 1.38 | -66.3 | -94.9 | -116.4 | -136.3 | 1.0 | -70.12 |
| 0.50 | 90.78 | 3043.5 | 3022.9 | 3007.4 | 8.46 | 8.46 | 8.16 | 40.64 | -28.4 | -42.5 | -67.9 | 0.03 | 3.21 | -68.2 | -95.2 | -116.9 | -137.1 | 2.0 | -78.45 |
| 1.00 | 75.60 | 3085.4 | 3068.3 | 3053.6 | 8.48 | 8.44 | 8.06 | 40.66 | -29.3 | -44.7 | -63.0 | 0.29 | 3.31 | -68.9 | -96.2 | -117.8 | -137.7 | 3.5 | -85.57 |
| 1.50 | 73.20 | 3122.4 | 3106.1 | 3091.8 | 8.35 | 8.33 | 8.00 | 40.66 | -30.8 | -42.8 | -59.2 | 0.38 | 1.86 | -70.3 | -96.8 | -117.8 | -138.1 | 6.0 | -91.33 |
| 2.00 | 66.64 | 3159.2 | 3142.7 | 3127.5 | 8.26 | 8.19 | 7.85 | 40.60 | -28.8 | -42.0 | -58.6 | 0.52 | 4.30 | -69.0 | -95.3 | -117.3 | -137.4 | 8.5 | -94.97 |
| 2.50 | 63.82 | 3192.5 | 3176.0 | 3161.9 | 8.23 | 8.15 | 7.76 | 40.63 | -30.0 | -41.1 | -52.6 | 0.56 | 2.10 | -71.3 | -96.1 | -117.5 | -138.1 | 10.0 | -96.42 |
| 3.00 | 63.14 | 3224.7 | 3207.9 | 3193.8 | 8.22 | 8.10 | 7.67 | 40.63 | -28.9 | -40.5 | -54.1 | 0.66 | 3.49 | -71.2 | -96.4 | -118.0 | -138.3 | 20.8 | -104.07 |
| 4.00 | 59.93 | 3284.8 | 3269.0 | 3255.4 | 8.04 | 8.02 | 7.65 | 40.68 | -28.2 | -42.6 | -55.2 | 0.76 | 3.03 | -71.0 | -97.0 | -118.2 | -138.5 | 35.5 | -109.25 |
| 5.00 | 56.60 | 3343.9 | 3328.4 | 3314.3 | 8.03 | 7.86 | 7.40 | 40.73 | -27.8 | -41.2 | -59.1 | 0.87 | 2.34 | -69.9 | -96.0 | -118.3 | -138.4 | 60.7 | -114.12 |
| 6.00 | 59.22 | 3401.5 | 3385.1 | 3370.9 | 7.68 | 7.66 | 7.40 | 40.72 | -29.1 | -38.5 | -57.1 | 1.02 | 3.32 | -69.7 | -96.0 | -117.7 | -137.6 | 86.7 | -117.31 |
| 7.00 | 56.29 | 3458.4 | 3443.3 | 3429.3 | 7.79 | 7.65 | 7.16 | 40.87 | -29.5 | -39.3 | -63.8 | 0.95 | 3.59 | -69.8 | -96.9 | -118.7 | -138.8 | 100.0 | -118.50 |
| 8.00 | 59.41 | 3517.3 | 3501.4 | 3486.6 | 7.45 | 7.34 | 7.07 | 40.89 | -30.8 | -36.4 | -58.7 | 1.08 | 3.65 | -68.8 | -96.0 | -118.4 | -138.6 | 148.1 | -122.11 |
| 9.00 | 60.89 | 3576.4 | 3560.5 | 3546.2 | 7.53 | 7.54 | 7.12 | 41.01 | -31.4 | -39.8 | -59.2 | 1.07 | 3.37 | -70.0 | -96.6 | -118.5 | -139.3 | 177.0 | -123.62 |
| 10.00 | 63.67 | 3638.4 | 3622.1 | 3607.1 | 7.43 | 7.26 | 6.98 | 41.09 | -31.0 | -46.1 | -60.6 | 0.94 | 2.68 | -69.8 | -95.6 | -117.9 | -138.4 | 211.6 | -125.26 |
| 11.00 | 66.77 | 3703.2 | 3686.3 | 3670.7 | 7.21 | 7.33 | 7.08 | 41.18 | -31.0 | -51.0 | -63.7 | 0.66 | 2.97 | -67.7 | -95.6 | -118.1 | -138.3 | 302.4 | -128.32 |
| 12.00 | 67.01 | 3770.0 | 3753.3 | 3737.5 | 7.42 | 7.22 | 6.76 | 41.32 | -31.0 | -51.2 | -60.2 | 0.05 | 3.19 | -68.8 | -95.7 | -117.7 | -138.2 | 361.5 | -129.78 |
| 13.00 | 65.50 | 3837.9 | 3821.0 | 3804.6 | 6.98 | 6.89 | 6.78 | 41.43 | -31.7 | -51.2 | -51.9 | 1.47 | 2.92 | -69.5 | -94.7 | -116.9 | -137.6 | 507.5 | -132.95 |
| 14.00 | 63.12 | 3903.5 | 3885.8 | 3869.6 | 6.95 | 7.20 | 6.85 | 41.50 | -32.3 | -50.1 | -44.0 | 4.05 | 2.74 | -69.0 | -93.8 | -116.3 | -137.0 | 606.7 | -134.49 |
| 14.50 | 57.80 | 3934.2 | 3917.4 | 3901.1 | 6.88 | 6.89 | 6.80 | 41.58 | -30.8 | -47.1 | -41.7 | 5.26 | 2.42 | -67.5 | -93.4 | -116.5 | -136.8 | 851.6 | -137.47 |
| 15.00 | 54.21 | 3963.1 | 3946.3 | 3930.5 | 7.12 | 6.91 | 6.59 | 41.62 | -29.8 | -42.0 | -50.2 | 6.49 | 3.38 | -69.7 | -93.2 | -116.7 | -136.8 | 1000.0 | -138.58 |

*at 25°C unless mentioned otherwise

