

Coaxial

Voltage Controlled Oscillator

ZX95-1700A+

Wide Band 950 to 1620 MHz

Features

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



CASE STYLE: GB956

Applications

- r & d
- lab
- instrumentation
- wireless communications
- broadband wireless access

| Connectors | Model | Price | Qty. |
|------------|---------------|--------------|-------|
| SMA | ZX95-1700A-S+ | \$ 49.95 ea. | (1-9) |

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

Electrical Specifications

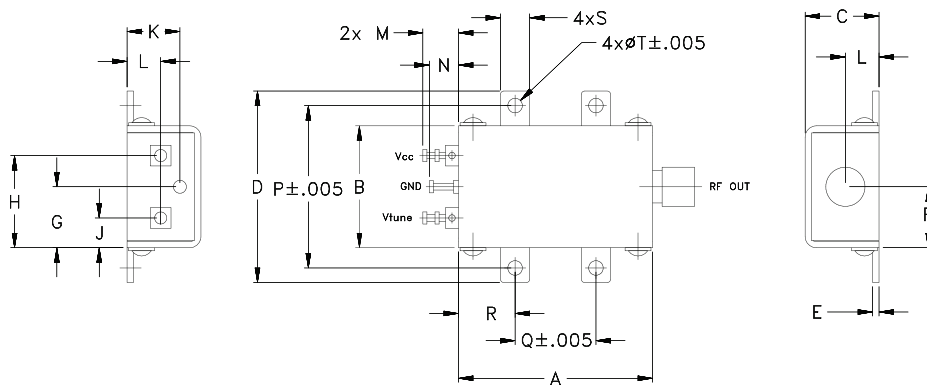
| MODEL NO. | FREQ. (MHz) | | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies, kHz | | | | TUNING | | | | | NON HARMONIC SPURIOUS (dBc) | HARMONICS (dBc) | | | PULLING pk-pk @ 12 dB (MHz) | PUSHING (MHz/V) | DC OPERATING POWER | |
|-------------|-------------|------|--------------------|---|------|------|------|--------|-------------------|---------------------|---------------|---------------------------------|-----------------------------|-----------------|------|------|-----------------------------|-----------------|--------------------|------|
| | Min. | Max. | | Typ. | 1 | 10 | 100 | 1000 | VOLTAGE RANGE (V) | SENSITIVITY (MHz/V) | PORT CAP (pF) | 3 dB MODULATION BANDWIDTH (MHz) | | Typ. | Typ. | Max. | | | Typ. | Typ. |
| ZX95-1700A+ | 950 | 1620 | +6 | -72 | -100 | -123 | -144 | 0.5 | 10 | 70-110 | 50 | 60 | -90 | -20 | -11 | 0.2 | 0.5 | 10 | 30 | |

Maximum Ratings

| | |
|--------------------------------------|----------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc) | 12V |
| Absolute Max. Tuning Voltage (Vtune) | 12V |
| All specifications | 50 ohm system |

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

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 |



For detailed performance specs & shopping online see web site

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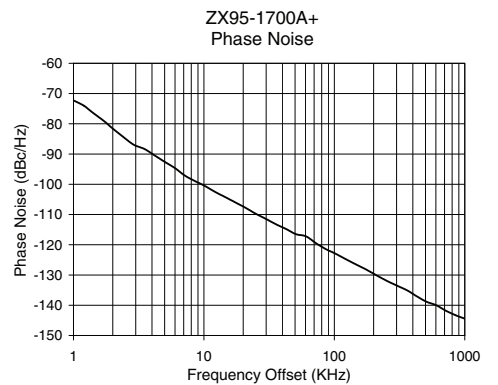
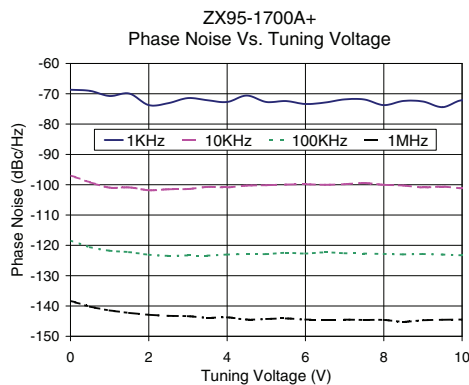
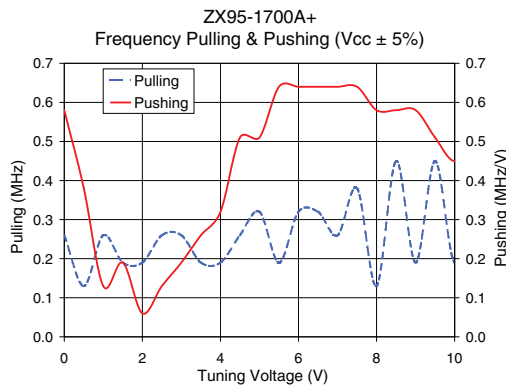
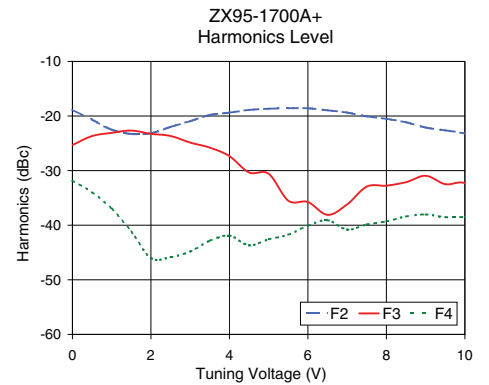
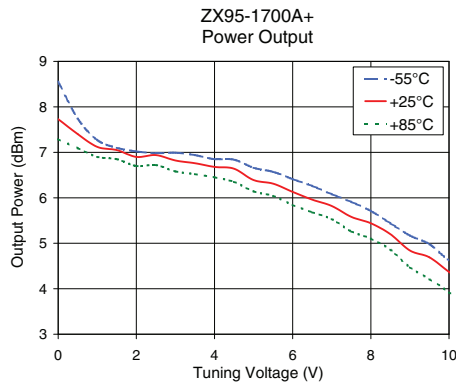
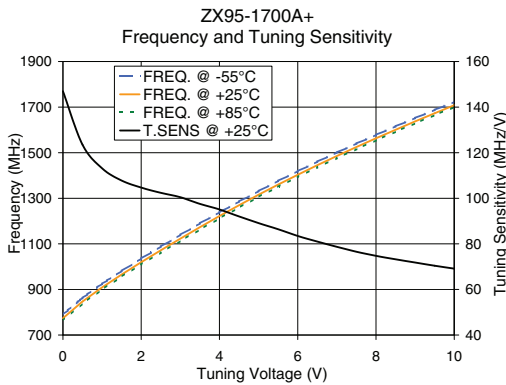
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp.

Performance Data & Curves*

ZX95-1700A+

| 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 1285 MHz (dBc/Hz) |
|--------|-------------------|-----------------|--------|--------|--------------------|-------|-------|----------|-----------------|-------|-------|--------------------|------------------|---------------------------------|--------|--------|--------|-------------------|----------------------------------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C | | F2 | F3 | F4 | | | 1kHz | 10kHz | 100kHz | 1MHz | | |
| 0.00 | 146.94 | 790.1 | 773.7 | 763.1 | 8.55 | 7.73 | 7.29 | 24.52 | -18.9 | -25.3 | -31.9 | 0.58 | 0.26 | -68.7 | -96.9 | -118.4 | -138.3 | 1.0 | -72.26 |
| 0.50 | 123.52 | 862.6 | 847.2 | 838.0 | 7.74 | 7.40 | 7.09 | 24.60 | -20.7 | -23.7 | -34.0 | 0.38 | 0.13 | -69.0 | -99.2 | -120.6 | -140.2 | 2.0 | -81.59 |
| 1.00 | 113.15 | 924.4 | 908.9 | 899.8 | 7.27 | 7.12 | 6.90 | 24.66 | -22.5 | -23.1 | -37.0 | 0.13 | 0.26 | -70.7 | -101.0 | -121.8 | -141.5 | 3.5 | -88.34 |
| 1.50 | 107.78 | 981.2 | 965.5 | 956.2 | 7.10 | 7.05 | 6.85 | 24.71 | -23.3 | -22.7 | -41.2 | 0.19 | 0.19 | -69.9 | -100.9 | -122.2 | -142.3 | 6.0 | -94.66 |
| 2.00 | 104.70 | 1035.6 | 1019.4 | 1009.7 | 7.02 | 6.90 | 6.70 | 24.75 | -23.2 | -23.3 | -46.0 | 0.06 | 0.19 | -73.8 | -101.8 | -123.1 | -142.9 | 8.5 | -98.89 |
| 2.50 | 102.40 | 1088.4 | 1071.7 | 1061.8 | 6.98 | 6.94 | 6.72 | 24.78 | -22.0 | -23.7 | -45.9 | 0.13 | 0.26 | -73.1 | -101.5 | -123.5 | -143.3 | 10.0 | -100.38 |
| 3.00 | 100.48 | 1139.7 | 1122.9 | 1112.8 | 6.99 | 6.82 | 6.58 | 24.80 | -21.0 | -24.9 | -44.8 | 0.19 | 0.26 | -71.4 | -101.4 | -123.3 | -143.4 | 20.8 | -107.76 |
| 3.50 | 97.54 | 1189.8 | 1173.2 | 1162.9 | 6.94 | 6.76 | 6.52 | 24.80 | -19.8 | -25.8 | -42.9 | 0.26 | 0.19 | -72.1 | -100.7 | -123.4 | -143.9 | 35.5 | -113.18 |
| 4.00 | 95.10 | 1238.6 | 1222.0 | 1211.7 | 6.85 | 6.68 | 6.45 | 24.80 | -19.4 | -27.3 | -41.9 | 0.32 | 0.19 | -72.7 | -100.9 | -123.0 | -143.8 | 60.7 | -117.24 |
| 5.00 | 89.09 | 1331.6 | 1315.5 | 1305.5 | 6.66 | 6.39 | 6.14 | 24.76 | -18.7 | -30.6 | -42.6 | 0.51 | 0.32 | -72.7 | -100.2 | -122.9 | -144.3 | 86.7 | -121.51 |
| 5.50 | 86.40 | 1376.1 | 1360.1 | 1350.2 | 6.57 | 6.31 | 6.04 | 24.72 | -18.6 | -35.5 | -41.7 | 0.64 | 0.19 | -72.4 | -99.9 | -122.4 | -144.1 | 100.0 | -122.75 |
| 6.00 | 83.46 | 1418.9 | 1403.3 | 1393.5 | 6.41 | 6.13 | 5.84 | 24.69 | -18.6 | -35.8 | -40.1 | 0.64 | 0.32 | -73.4 | -99.9 | -122.7 | -144.5 | 148.1 | -126.60 |
| 6.50 | 81.02 | 1460.5 | 1445.0 | 1435.5 | 6.26 | 5.96 | 5.68 | 24.65 | -19.0 | -38.1 | -39.1 | 0.64 | 0.32 | -72.9 | -100.0 | -122.3 | -144.5 | 177.0 | -128.29 |
| 7.00 | 78.72 | 1500.8 | 1485.5 | 1476.2 | 6.08 | 5.82 | 5.53 | 24.61 | -19.4 | -36.2 | -40.8 | 0.64 | 0.26 | -71.9 | -99.8 | -122.6 | -144.5 | 211.6 | -130.16 |
| 7.50 | 76.54 | 1540.0 | 1524.9 | 1515.6 | 5.91 | 5.58 | 5.26 | 24.56 | -20.1 | -32.9 | -39.9 | 0.64 | 0.38 | -71.9 | -99.5 | -122.7 | -144.6 | 302.4 | -133.53 |
| 8.00 | 74.75 | 1578.2 | 1563.1 | 1554.2 | 5.71 | 5.44 | 5.10 | 24.52 | -20.5 | -32.8 | -39.3 | 0.58 | 0.13 | -73.7 | -100.0 | -122.8 | -144.6 | 361.5 | -135.08 |
| 8.50 | 73.22 | 1615.4 | 1600.5 | 1591.7 | 5.44 | 5.20 | 4.86 | 24.48 | -21.2 | -32.1 | -38.4 | 0.58 | 0.45 | -72.4 | -100.3 | -123.0 | -145.2 | 507.5 | -138.83 |
| 9.00 | 71.81 | 1652.0 | 1637.1 | 1628.5 | 5.17 | 4.84 | 4.47 | 24.44 | -22.1 | -31.0 | -38.0 | 0.58 | 0.19 | -72.5 | -100.9 | -122.9 | -144.7 | 606.7 | -140.03 |
| 9.50 | 70.40 | 1687.7 | 1673.0 | 1664.7 | 4.98 | 4.69 | 4.21 | 24.40 | -22.6 | -32.5 | -38.5 | 0.51 | 0.45 | -74.4 | -100.6 | -123.0 | -144.5 | 851.6 | -143.31 |
| 10.00 | 69.12 | 1722.7 | 1708.2 | 1700.1 | 4.63 | 4.37 | 3.92 | 24.37 | -23.2 | -32.3 | -38.5 | 0.45 | 0.19 | -72.1 | -101.2 | -123.3 | -144.5 | 1000.0 | -144.42 |

*at 25°C unless mentioned otherwise



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