

Coaxial

Voltage Controlled Oscillator

ZX95-1240+

Linear Tuning 1160 to 1240 MHz

Features

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



CASE STYLE: GB956

Applications

- r & d
- lab
- instrumentation
- wireless communications
- radio link

| Connectors | Model | Price | Qty. |
|------------|--------------|--------------|-------|
| SMA | ZX95-1240-S+ | \$ 40.95 ea. | (1-9) |

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

Electrical Specifications

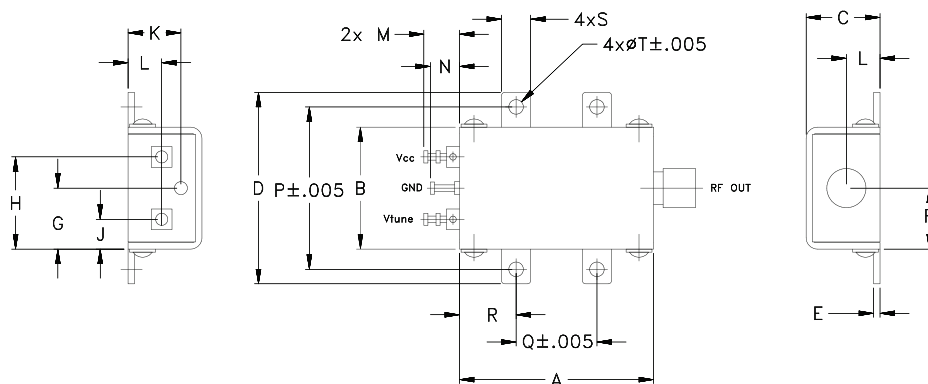
| MODEL NO. | FREQ. (MHz) | | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies, kHz | | | | TUNING | | | | | NON HARMONIC SPURIOUS (dBc) | HARMONICS (dBc) | | PULLING pk-pk @ 12 dBr (MHz) | PUSHING (MHz/V) | DC OPERATING POWER | |
|------------|-------------|------|--------------------|---|------|------|------|--------|-------------------|---------------------|---------------|---------------------------------|-----------------------------|-----------------|------|------------------------------|-----------------|--------------------|------|
| | 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. |
| ZX95-1240+ | 1160 | 1240 | +5.4 | -89 | -114 | -135 | -155 | 0.5 | 12 | 12 | 37 | 60 | -90 | -29 | -19 | 0.7 | 0.05 | 5 | 35 |

Maximum Ratings

| | |
|--------------------------------------|----------------|
| Operating Temperature | -55°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| Absolute Max. Supply Voltage (Vcc) | 7V |
| Absolute Max. Tuning Voltage (Vtune) | 14V |
| 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

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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.

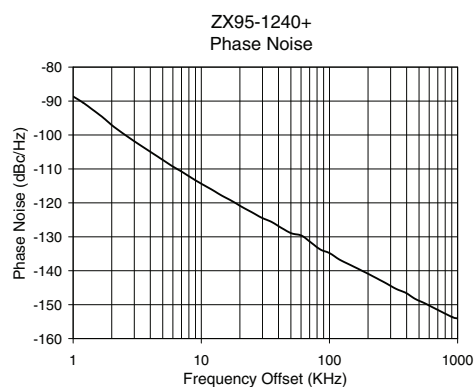
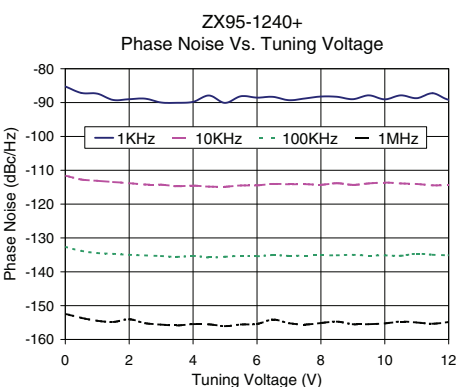
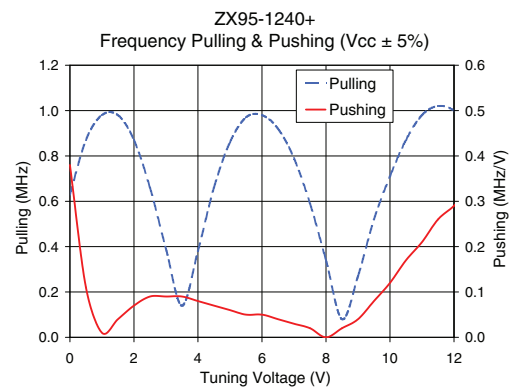
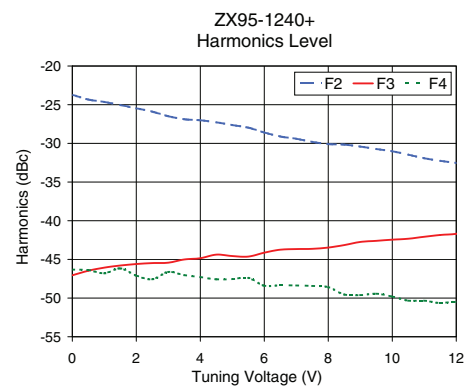
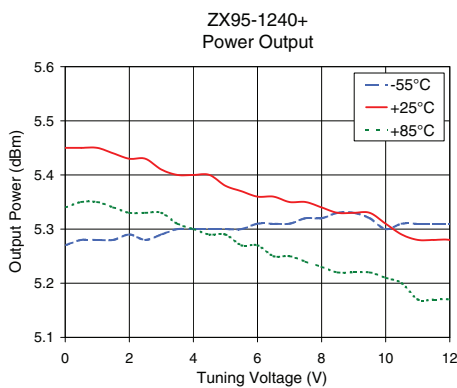
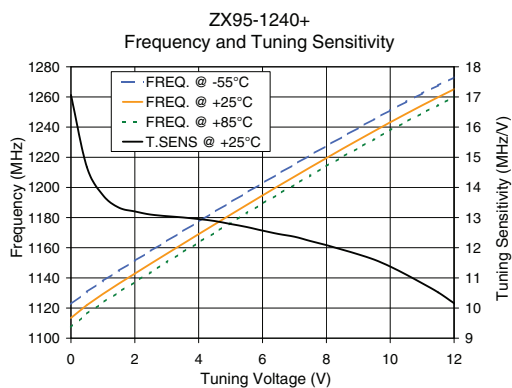
REV. OR
M121573
EDR-9493F2
ZX95-1240+
RAV
120902
Page 1 of 2

Performance Data & Curves*

ZX95-1240+

| 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 1200 MHz (dBc/Hz) |
|--------|-------------------|-----------------|--------|--------|--------------------|-------|-------|----------|-----------------|-------|-------|--------------------|------------------|---------------------------------|--------|--------|--------|-------------------|----------------------------------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C | | F2 | F3 | F4 | | | 1kHz | 10kHz | 100kHz | 1MHz | | |
| 0.00 | 17.07 | 1122.6 | 1113.4 | 1107.2 | 5.27 | 5.45 | 5.34 | 23.01 | -23.7 | -47.1 | -46.3 | 0.38 | 0.63 | -85.2 | -111.6 | -132.6 | -152.4 | 1.0 | -88.65 |
| 0.50 | 14.67 | 1130.7 | 1122.0 | 1116.2 | 5.28 | 5.45 | 5.35 | 23.02 | -24.3 | -46.5 | -46.4 | 0.11 | 0.87 | -87.2 | -112.7 | -133.8 | -153.6 | 2.0 | -97.08 |
| 1.00 | 13.75 | 1137.9 | 1129.3 | 1123.6 | 5.28 | 5.45 | 5.35 | 23.03 | -24.7 | -46.1 | -46.8 | 0.01 | 0.98 | -87.4 | -113.1 | -134.5 | -154.5 | 3.5 | -103.51 |
| 2.00 | 13.20 | 1151.3 | 1142.9 | 1137.3 | 5.29 | 5.43 | 5.33 | 23.08 | -25.5 | -45.6 | -47.1 | 0.07 | 0.87 | -89.0 | -113.8 | -135.0 | -154.0 | 6.0 | -109.29 |
| 3.00 | 13.05 | 1164.4 | 1156.0 | 1150.5 | 5.29 | 5.41 | 5.33 | 23.13 | -26.5 | -45.4 | -46.6 | 0.09 | 0.39 | -90.0 | -114.3 | -135.3 | -155.6 | 8.5 | -112.78 |
| 3.50 | 13.01 | 1170.9 | 1162.5 | 1157.0 | 5.30 | 5.40 | 5.31 | 23.16 | -26.9 | -45.0 | -47.0 | 0.09 | 0.14 | -90.1 | -114.7 | -135.6 | -155.9 | 10.0 | -114.35 |
| 4.00 | 12.95 | 1177.3 | 1169.0 | 1163.5 | 5.30 | 5.40 | 5.30 | 23.19 | -27.0 | -44.9 | -47.3 | 0.08 | 0.38 | -89.8 | -114.5 | -135.3 | -155.5 | 20.8 | -121.22 |
| 4.50 | 12.89 | 1183.8 | 1175.5 | 1170.0 | 5.30 | 5.40 | 5.29 | 23.23 | -27.3 | -44.4 | -47.6 | 0.07 | 0.66 | -87.9 | -114.8 | -135.8 | -155.5 | 35.5 | -125.66 |
| 5.00 | 12.79 | 1190.2 | 1181.9 | 1176.5 | 5.30 | 5.38 | 5.29 | 23.27 | -27.6 | -44.6 | -47.6 | 0.06 | 0.86 | -90.1 | -114.9 | -135.6 | -156.1 | 60.7 | -129.66 |
| 5.50 | 12.69 | 1196.6 | 1188.3 | 1182.9 | 5.30 | 5.37 | 5.27 | 23.31 | -28.0 | -44.6 | -47.4 | 0.05 | 0.97 | -88.1 | -114.5 | -135.3 | -155.6 | 85.2 | -133.79 |
| 6.00 | 12.57 | 1202.9 | 1194.7 | 1189.3 | 5.31 | 5.36 | 5.27 | 23.35 | -28.6 | -44.1 | -48.4 | 0.05 | 0.98 | -88.5 | -114.5 | -135.4 | -155.4 | 100.0 | -134.80 |
| 6.50 | 12.46 | 1209.1 | 1201.0 | 1195.6 | 5.31 | 5.36 | 5.25 | 23.39 | -29.1 | -43.7 | -48.4 | 0.04 | 0.92 | -88.3 | -114.0 | -135.1 | -154.1 | 142.9 | -138.15 |
| 7.00 | 12.36 | 1215.3 | 1207.2 | 1201.8 | 5.31 | 5.35 | 5.25 | 23.43 | -29.4 | -43.7 | -48.4 | 0.03 | 0.79 | -89.3 | -114.1 | -135.3 | -155.2 | 167.8 | -139.45 |
| 8.00 | 12.09 | 1227.5 | 1219.5 | 1214.1 | 5.32 | 5.34 | 5.23 | 23.51 | -30.1 | -43.5 | -48.6 | 0.00 | 0.34 | -88.2 | -114.3 | -135.2 | -155.2 | 200.6 | -140.91 |
| 8.50 | 11.94 | 1233.6 | 1225.5 | 1220.2 | 5.33 | 5.33 | 5.22 | 23.54 | -30.2 | -43.2 | -49.5 | 0.02 | 0.08 | -88.3 | -113.8 | -135.1 | -154.7 | 281.6 | -143.87 |
| 9.00 | 11.78 | 1239.5 | 1231.5 | 1226.2 | 5.33 | 5.33 | 5.22 | 23.58 | -30.4 | -42.7 | -49.6 | 0.04 | 0.27 | -89.0 | -114.3 | -135.0 | -155.5 | 330.7 | -145.35 |
| 9.50 | 11.60 | 1245.4 | 1237.4 | 1232.1 | 5.32 | 5.33 | 5.22 | 23.63 | -30.7 | -42.6 | -49.4 | 0.08 | 0.52 | -87.9 | -113.9 | -135.2 | -155.5 | 464.2 | -148.26 |
| 10.00 | 11.38 | 1251.2 | 1243.2 | 1237.9 | 5.30 | 5.31 | 5.21 | 23.68 | -31.0 | -42.5 | -49.8 | 0.12 | 0.71 | -89.1 | -113.6 | -135.2 | -155.3 | 554.9 | -149.59 |
| 11.00 | 10.82 | 1262.3 | 1254.4 | 1249.2 | 5.31 | 5.28 | 5.17 | 23.77 | -31.9 | -42.1 | -50.3 | 0.21 | 0.98 | -88.7 | -114.1 | -134.7 | -155.0 | 914.6 | -153.72 |
| 12.00 | 10.16 | 1273.0 | 1265.1 | 1259.8 | 5.31 | 5.28 | 5.17 | 23.86 | -32.5 | -41.7 | -50.5 | 0.29 | 1.00 | -89.1 | -114.4 | -135.1 | -154.9 | 1000.0 | -154.06 |

*at 25°C unless mentioned otherwise



For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine [minicircuits.com](http://www.minicircuits.com) Provides ACTUAL Data Instantly at [minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS

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.