

Coaxial

Voltage Controlled Oscillator

ZX95-4795+

5V Tuning for PLL IC's 4670 to 4850 MHz

Features

- Linear tuning characteristics
- Low phase noise
- Low pulling
- Low pushing
- Protected by US patent 6,790,049



CASE STYLE: GB956

Applications

- R&D
- LAB
- Instrumentation
- Wireless communications
- Wire-line broadband access cable system

| Connectors | Model | Price | Qty. |
|------------|--------------|--------------|-------|
| SMA | ZX95-4795-S+ | \$ 44.95 ea. | (1-9) |

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

Electrical Specifications

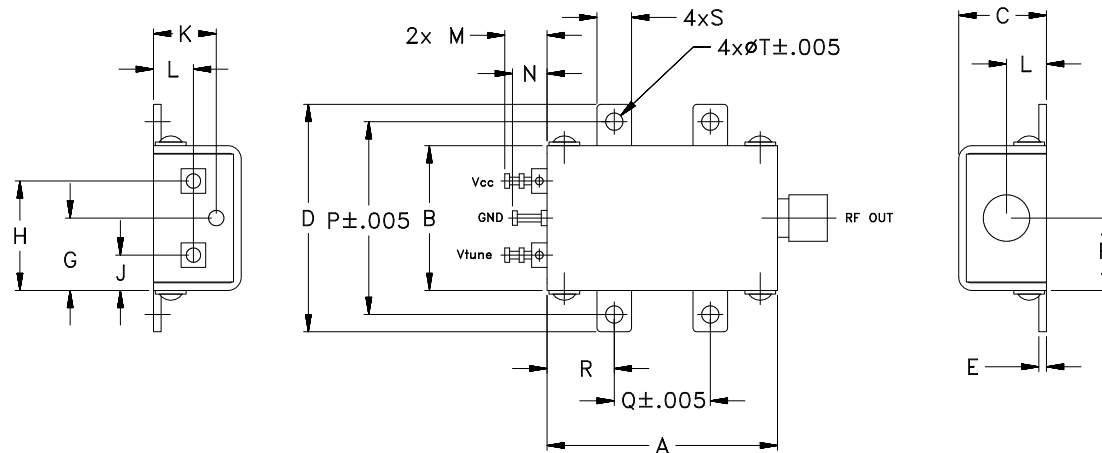
| MODEL NO. | FREQ. (MHz) | | POWER OUTPUT (dBm) | PHASE NOISE dBc/Hz SSB at offset frequencies, kHz | | | | TUNING | | | | | NON HARMONIC SPURIOUS (dBc) | HARMONICS (dBc) | | PULLING pk-pk @ 12 dB (MHz) | PUSHING (MHz/V) | DC OPERATING POWER | | | | |
|------------|-------------|------|--------------------|---|-----|------|------|--------|-------------------|----------------------|---------------|---------------------------------|-----------------------------|-----------------|------|-----------------------------|-----------------|--------------------|------|------|-------------|--------------|
| | Min. | Max. | | Typ. | 1 | 10 | 100 | 1000 | VOLTAGE RANGE (V) | SENSI-TIVITY (MHz/V) | PORT CAP (pF) | 3 dB MODULATION BANDWIDTH (MHz) | | Typ. | Typ. | | | Max. | Typ. | Typ. | Vcc (volts) | Current (mA) |
| | | | | | | | | | | | | | | | | | | | | | | |
| ZX95-4795+ | 4670 | 4850 | +0.2 | -68 | -93 | -114 | -135 | 0.5 | 4.5 | 80 - 96 | 7.5 | 280 | -90 | -30 | -20 | 1.2 | 4.3 | 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) | 7V |
| 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 | .45 | .57 | .18 | .33 | .21 | .22 | .18 | 1.00 | .50 | .35 | .18 | .106 | GRAM |
| 30.48 | 19.05 | 11.68 | 29.97 | 1.02 | 9.65 | 11.43 | 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
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RAV
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Performance Data & Curves*

ZX95-4795+

| 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 4760 MHz (dBc/Hz) |
|--------|-------------------|-----------------|--------|--------|--------------------|-------|-------|----------|-----------------|-------|-------|--------------------|------------------|---------------------------------|-------|--------|--------|-------------------|----------------------------------|
| | | -55°C | +25°C | +85°C | -55°C | +25°C | +85°C | | F2 | F3 | F4 | | | 1kHz | 10kHz | 100kHz | 1MHz | | |
| 0.00 | 100.43 | 4569.3 | 4537.7 | 4513.6 | -0.60 | -0.84 | -1.88 | 26.35 | -35.1 | -46.1 | -53.4 | 3.69 | 1.62 | -71.0 | -94.5 | -115.4 | -135.7 | 1.0 | -68.26 |
| 0.25 | 87.51 | 4591.9 | 4562.8 | 4539.4 | -0.46 | -0.75 | -1.73 | 26.39 | -34.7 | -49.5 | -52.0 | 3.55 | 0.31 | -71.2 | -94.3 | -115.3 | -135.1 | 2.0 | -77.19 |
| 0.50 | 87.63 | 4614.3 | 4584.7 | 4563.8 | -0.32 | -0.63 | -1.56 | 26.42 | -33.5 | -49.6 | -51.1 | 3.59 | 1.33 | -72.8 | -94.6 | -115.2 | -135.4 | 3.5 | -83.63 |
| 0.75 | 84.08 | 4636.0 | 4606.6 | 4585.5 | -0.27 | -0.39 | -1.42 | 26.43 | -32.9 | -51.0 | -53.5 | 3.70 | 1.84 | -72.3 | -94.6 | -115.7 | -135.5 | 6.0 | -89.29 |
| 1.00 | 81.94 | 4656.4 | 4627.6 | 4605.5 | -0.36 | -0.37 | -1.30 | 26.44 | -34.7 | -55.0 | -52.9 | 3.96 | 1.40 | -71.0 | -94.0 | -115.0 | -134.8 | 8.5 | -91.59 |
| 1.25 | 80.89 | 4677.0 | 4648.1 | 4626.8 | -0.11 | -0.37 | -1.16 | 26.47 | -32.7 | -56.2 | -54.9 | 3.59 | 0.27 | -71.7 | -94.6 | -115.8 | -135.8 | 10.0 | -93.00 |
| 1.50 | 81.92 | 4697.3 | 4668.3 | 4647.2 | 0.06 | -0.29 | -1.07 | 26.47 | -34.1 | -58.1 | -59.0 | 4.17 | 0.93 | -66.7 | -93.3 | -114.8 | -135.0 | 20.8 | -100.84 |
| 1.75 | 81.87 | 4717.5 | 4688.8 | 4667.5 | 0.09 | -0.09 | -1.02 | 26.50 | -32.4 | -69.4 | -54.3 | 4.00 | 1.81 | -70.9 | -95.0 | -115.0 | -135.1 | 35.5 | -105.87 |
| 2.00 | 83.16 | 4738.4 | 4709.3 | 4687.5 | 0.03 | 0.00 | -0.90 | 26.52 | -32.5 | -55.4 | -54.4 | 3.85 | 1.70 | -69.8 | -94.6 | -115.4 | -135.8 | 60.7 | -110.09 |
| 2.25 | 85.31 | 4759.6 | 4730.1 | 4708.4 | 0.05 | -0.02 | -0.71 | 26.52 | -33.3 | -52.1 | -64.6 | 4.24 | 0.64 | -68.3 | -94.6 | -114.9 | -135.0 | 85.2 | -113.60 |
| 2.50 | 89.22 | 4781.3 | 4751.4 | 4729.2 | 0.15 | 0.03 | -0.64 | 26.53 | -33.3 | -51.0 | -59.4 | 4.33 | 0.71 | -69.3 | -93.0 | -114.5 | -134.9 | 100.0 | -114.99 |
| 2.75 | 88.27 | 4803.2 | 4773.7 | 4750.9 | 0.38 | 0.06 | -0.67 | 26.55 | -32.3 | -52.0 | -66.3 | 4.01 | 1.62 | -69.6 | -93.6 | -115.4 | -135.7 | 142.9 | -118.11 |
| 3.00 | 90.45 | 4825.8 | 4795.8 | 4773.1 | 0.36 | 0.24 | -0.58 | 26.56 | -32.1 | -50.6 | -69.9 | 4.45 | 1.61 | -69.2 | -92.0 | -114.7 | -134.6 | 200.6 | -121.05 |
| 3.25 | 91.22 | 4848.3 | 4818.4 | 4795.4 | 0.25 | 0.38 | -0.45 | 26.57 | -31.8 | -51.6 | -69.3 | 4.13 | 0.53 | -67.5 | -94.2 | -115.0 | -134.9 | 281.6 | -123.86 |
| 3.50 | 95.66 | 4872.6 | 4841.2 | 4818.4 | 0.32 | 0.30 | -0.24 | 26.57 | -30.1 | -54.7 | -66.5 | 3.73 | 0.71 | -68.8 | -94.0 | -115.3 | -135.4 | 330.7 | -125.26 |
| 3.75 | 93.76 | 4896.0 | 4865.1 | 4841.6 | 0.37 | 0.27 | -0.23 | 26.56 | -30.9 | -52.2 | -56.7 | 3.48 | 1.35 | -66.9 | -92.8 | -115.1 | -134.6 | 464.2 | -128.42 |
| 4.00 | 86.35 | 4918.2 | 4888.5 | 4864.2 | 0.46 | 0.29 | -0.40 | 26.58 | -32.2 | -54.6 | -65.7 | 3.20 | 1.18 | -68.4 | -93.3 | -114.1 | -134.4 | 554.9 | -129.96 |
| 4.25 | 86.15 | 4941.1 | 4910.1 | 4887.3 | 0.42 | 0.40 | -0.34 | 26.58 | -30.5 | -56.5 | -52.1 | 2.18 | 0.38 | -68.0 | -94.5 | -115.0 | -135.0 | 914.6 | -134.24 |
| 4.50 | 83.02 | 4963.0 | 4931.7 | 4909.1 | 0.26 | 0.35 | -0.23 | 26.55 | -32.4 | -57.3 | -43.0 | 1.65 | 0.46 | -67.0 | -93.3 | -114.1 | -134.2 | 1000.0 | -134.97 |

*at 25°C unless mentioned otherwise

