# VCO-4046 Data Sheet

## Tuning

| CV (Volts) | Predicted (Hz) | Actual (Hz) | Error in % | Error in Cents |
|---|---|---|---|---|
| 0 | 20 | 19.5 | -2.50% | -42.04 |
| 1 | 40 | 39.75 | -0.63% | -10.51 |
| 2 | 80 | 80 | 0.00% | 0 |
| 3 | 160 | 160 | 0.00% | 0 |
| 4 | 320 | 320 | 0.00% | 0 |
| 5 | 640 | 640 | 0.00% | 0 |
| 6 | 1280 | 1281 | 0.08% | 1.31 |
| 7 | 2560 | 2564 | 0.16% | 2.63 |
| 8 | 5120 | 5122 | 0.04% | 0.66 |
| 9 | 10240 | 10238 | -0.02% | -0.33 |

| | |
|---|---|
| Semitone | 1.06 |
| %Change | 5.95% |
| Cent | 0.06% |

**Note**: Fractional frequencies were estimated by counting, to the nearest quarter.

## Output Waveforms

| | Volts p-p | Condition |
|---|---|---|
| Sine | 9.2 | R16/R17 = 10k |
| | 10.4 | R16/R17 = 11k |
| Triangle | 9.8 | R34 = 120k |
| Sawtooth | 10.6 | |
| Pulse | 9.6 | |
| Rampoid | 9.8 | 0% |
| | 10 | 50% |
| | 10.6 | 100% |

A pip is visually obvious on the triangle wave, but not sonically objectionable. The pip is less pronounced on the sine wave.

All waveforms are well centered.
PWM spans 0% to 100%.
Hard sync performs well. Use a pulse input.

| | |
|---|---|
| Max Ic | 1.059 mA |
| Min Freq | 0.17 Hz |
| Max Freq | 34 kHz (sawtooth) 17 kHz (all other waveforms) |