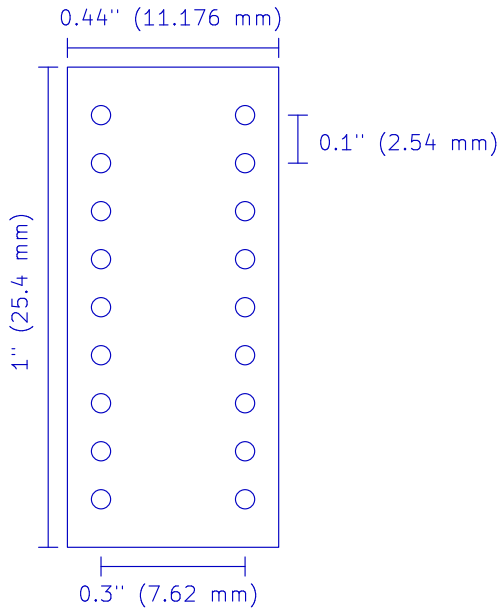


3374 VCO



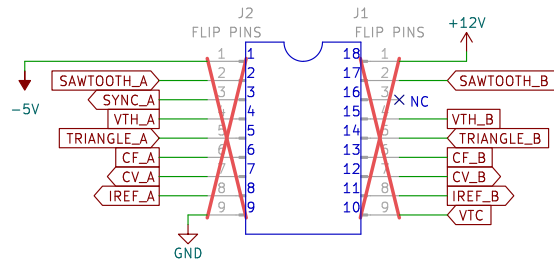
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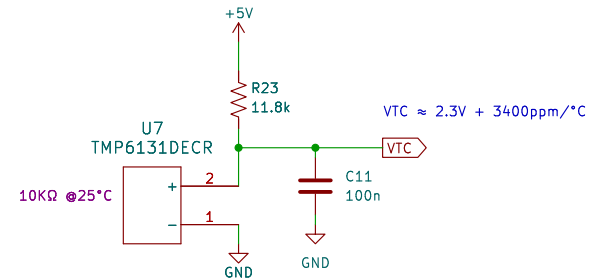
All resistors $\pm 1\%$, 0.05W unless otherwise specified.
All capacitors $\pm 10\%$, 25V unless otherwise specified.

Alan Boguslawski		
Sheet: /		
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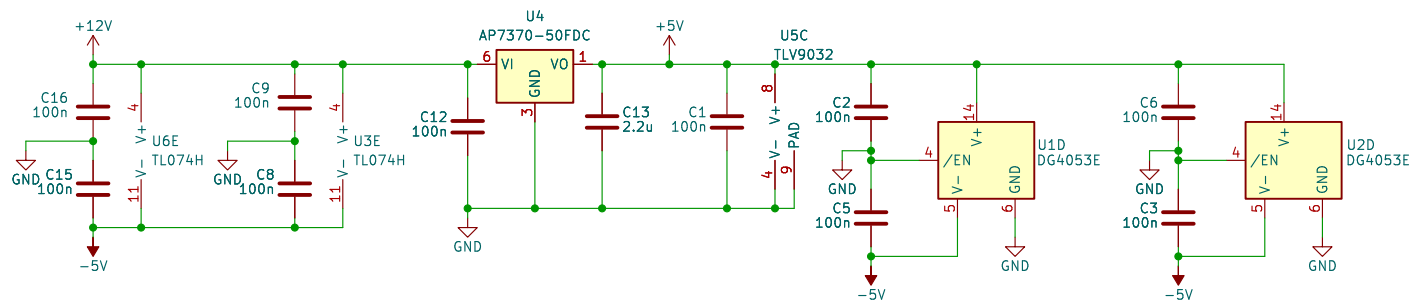
I/O



TEMP COMPENSATION



POWER



Alan Boguslawski

Sheet: /IO-Power-Tempco/
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Title: 3374 VCO

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The schematic diagram for VCO A is a complex electronic circuit. It features a differential pair of DM3904W transistors (Q1A, Q1B) with a current source (Q1C) and a feedback loop. The circuit includes a TL074H op-amp (U3A) and a TLV9032 comparator (U5A). The output of the comparator is connected to the input of the op-amp, forming a feedback loop. The circuit is powered by a +12V supply and a +5V supply. The output of the op-amp is labeled TRIANGLE_A. The output of the comparator is labeled SAWTOOTH_A. The circuit also includes a SYNC_A input and a VTH_A input. The circuit is labeled VCO A.

Component List:

- Q1A, Q1B: DM3904W
- Q1C: TLV9032
- Q2A, Q2B: DM3904W
- Q3A, Q3B: DM3906W
- Q4A, Q4B: DM3904W
- Q5A, Q5B: DM3906W
- Q11A: DM3904W
- Q11B: DM3904W
- Q1A: MUN5314DW1
- Q1B: MUN5314DW1
- U1A, U1B: DG4053E
- U3A: TL074H
- U5A: TLV9032
- U3B: TL074H
- U3D: TL074H

Resistor Values:

- R1: 432k
- R2: 10k
- R3: 365
- R4: 10k
- R5: 10k
- R6: 10k
- R7: 10k
- R8: 4.99k
- R9: 4.99k
- R10: 10k
- R11: 10k
- R12: 10k
- R13: 3.32k
- R14: 4.99k
- R15: 10k
- R16: 4.99k
- R17: 10k
- R18: 4.99k
- R19: 4.99k
- R20: 432k
- R21: 10k
- R22: 10k
- R23: 4.99k
- R24: 4.99k
- R25: 4.99k
- R26: 4.99k
- R27: 4.99k
- R28: 4.99k
- R29: 4.99k
- R30: 4.99k
- R31: 4.99k
- R32: 4.99k
- R33: 4.99k
- R34: 4.99k
- R35: 4.99k
- R36: 4.99k
- R37: 4.99k
- R38: 4.99k
- R39: 4.99k
- R40: 4.99k
- R41: 4.99k
- R42: 4.99k
- R43: 4.99k
- R44: 4.99k
- R45: 4.99k
- R46: 4.99k
- R47: 4.99k
- R48: 4.99k
- R49: 4.99k
- R50: 4.99k
- R51: 4.99k
- R52: 4.99k
- R53: 4.99k
- R54: 4.99k
- R55: 4.99k
- R56: 4.99k
- R57: 4.99k
- R58: 4.99k
- R59: 4.99k
- R60: 4.99k
- R61: 4.99k
- R62: 4.99k
- R63: 4.99k
- R64: 4.99k
- R65: 4.99k
- R66: 4.99k
- R67: 4.99k
- R68: 4.99k
- R69: 4.99k
- R70: 4.99k
- R71: 4.99k
- R72: 4.99k
- R73: 4.99k
- R74: 4.99k
- R75: 4.99k
- R76: 4.99k
- R77: 4.99k
- R78: 4.99k
- R79: 4.99k
- R80: 4.99k
- R81: 4.99k
- R82: 4.99k
- R83: 4.99k
- R84: 4.99k
- R85: 4.99k
- R86: 4.99k
- R87: 4.99k
- R88: 4.99k
- R89: 4.99k
- R90: 4.99k
- R91: 4.99k
- R92: 4.99k
- R93: 4.99k
- R94: 4.99k
- R95: 4.99k
- R96: 4.99k
- R97: 4.99k
- R98: 4.99k
- R99: 4.99k
- R100: 4.99k

Capacitor Values:

- C1: 680p
- C2: 680p
- C3: 680p
- C4: 680p
- C5: 680p
- C6: 680p
- C7: 680p
- C8: 680p
- C9: 680p
- C10: 680p
- C11: 680p
- C12: 680p
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- C81: 680p
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- C85: 680p
- C86: 680p
- C87: 680p
- C88: 680p
- C89: 680p
- C90: 680p
- C91: 680p
- C92: 680p
- C93: 680p
- C94: 680p
- C95: 680p
- C96: 680p
- C97: 680p
- C98: 680p
- C99: 680p
- C100: 680p

Other Components:

- U1A, U1B: DG4053E
- U3A: TL074H
- U3B: TL074H
- U3D: TL074H
- U5A: TLV9032

Labels:

- CV_A
- CF_A
- CF_A = EXTERNAL 1000pF CAPACITOR to GND
- SHIFTED_TRIA
- SQUARE_A
- TRIANGLE_A
- SAWTOOTH_A
- SYNC_A
- VTH_A
- VTH_A = 4V NOMINAL
- CROSSOVER COMPENSATION

Metadata:

- Sheet: /VCO A/
- File: VCO_A.kicad_sch
- Title: 3374 VCO
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VCO B

Sheet: /VCO B/
File: VCO_B.kicad_sch

Title: 3374 VCO

Size: A4	Date: 2024-12-12	Rev: 1
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