4-Channel, Low Phase Noise, Low Power, Continuous Wave Transmitter

General Description

The CW01 has 6 logic inputs; OE, CLK, $D_{IN}1$, $D_{IN}2$, $D_{IN}3$, and $D_{IN}4$. Every logic input has a 10kΩ pull down resistor.

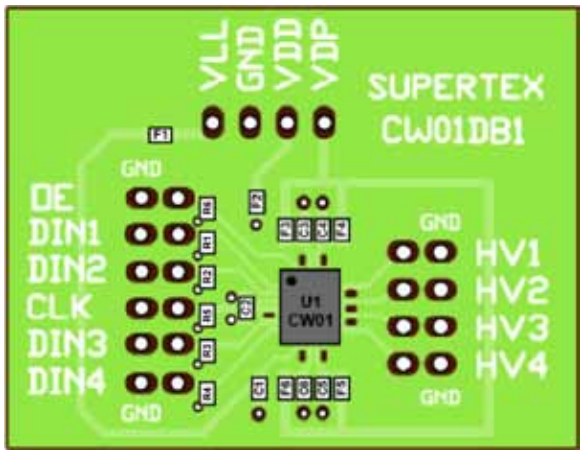
There are 3 power input voltages: V_{LL}, V_{DD} and V_{DX}. V_{LL} is the input logic level, typically 2.5V. V_{DD} is the level translator, typically 5.0V. V_{DX} is the gate drive voltage, and is at the same voltage level as V_{DD}. High peak currents will be drawn from V_{DX} during switching. Each supply has a series ferrite bead and a 0.1µF ceramic chip capacitor to keep the supply clean from high frequency noise.

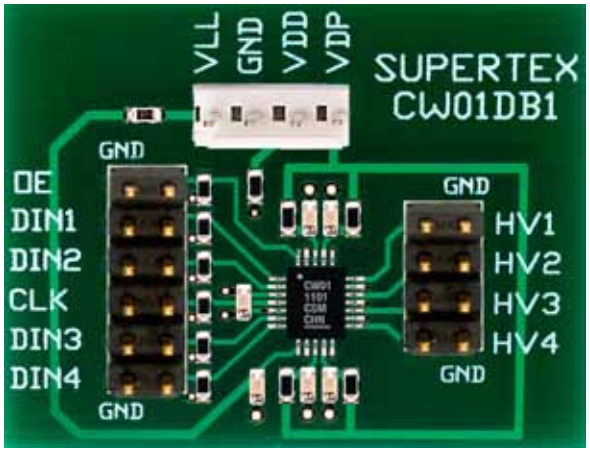
There are 4 outputs: HV1, HV2, HV3 and HV4. These are the connections to the drains of 100V, 7.0Ω, N-channel MOSFETs.

Specifications

Parameter	Value
V_{LL}	0V to +5.5V
V_{DD}	0V to +5.5V
V_{DX}	0V to +5.5V

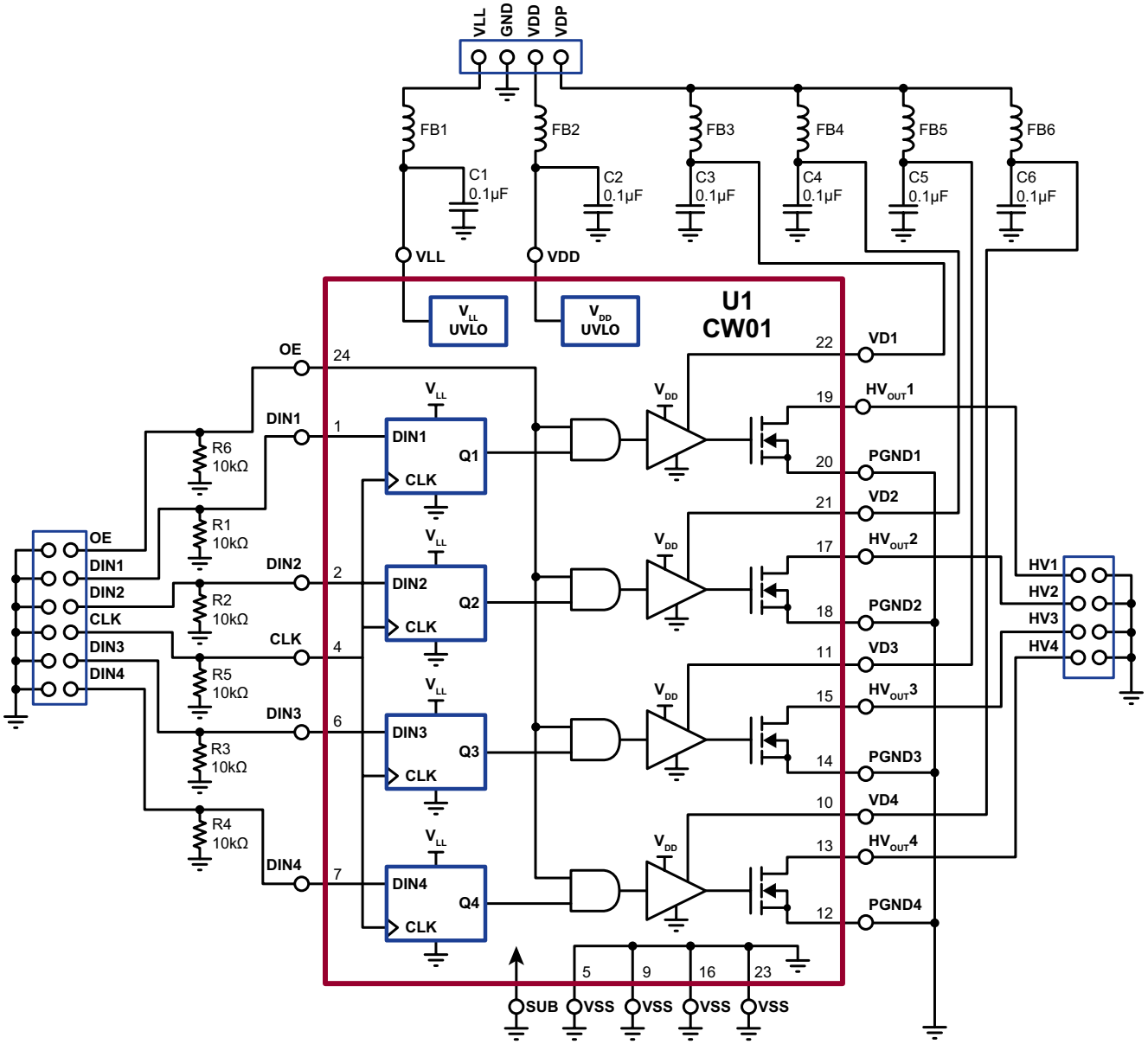
Board Layout





Actual Size: 41.0mm x 31.0mm

CW01 Demoboard Circuit Diagram



Bill Of Materials

Part	Description	Value	Package	Manufacturer	Part Number
R1 to R6	Chip resistor	10kΩ	0603	Any	---
C1 to C6	Chip capacitor	0.1µF	0603	Any	---
FB1 to FB6	Ferrite Bead	220Ω@100MHz, 200mA	0603	Any	---
U1	4-ch, low phase noise, CW transmitter	100V, 7.0Ω	24-Lead QFN	Supertex, inc.	CW01K6-G

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