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 $10k\Omega$ pull down resistor.

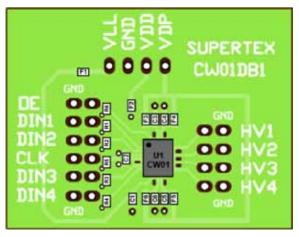
There are 3 power input voltages: V_{LL} , V_{DD} and V_{DX} , V_{LL} is the input logic level, typically 2.5V. V_{DD} is the level translator, typically 5.0V. V_{DX} is the gate drive voltage, and is at the same voltage level as V_{DD} . High peak currents will be drawn from V_{DX} during switching.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

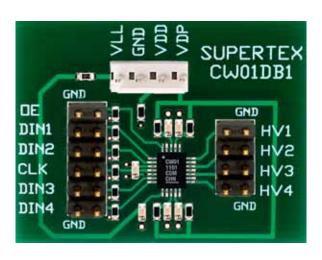
There are 4 outputs: HV1, HV2, HV3 and HV4. These are the connections to the drains of 100V, 7.0 Ω , N-channel MOSFETs.

Specifications

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

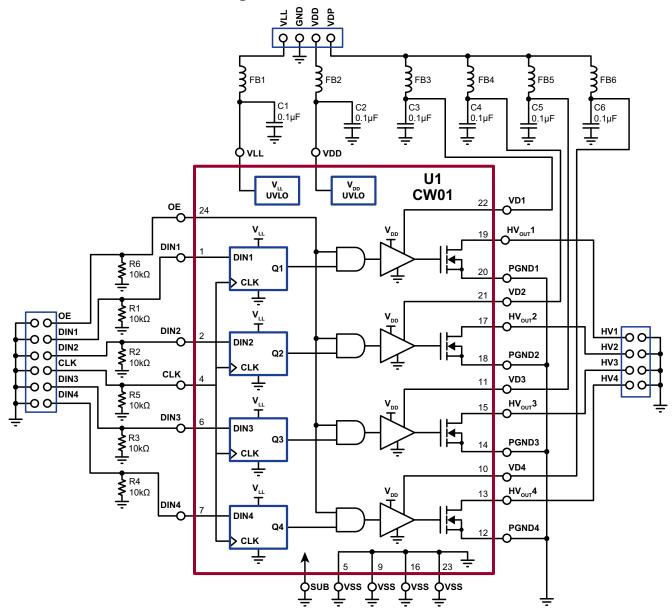
Board Layout





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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