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## A Guideline to Reliably Minimize Noise Embedding in PLL Power Source

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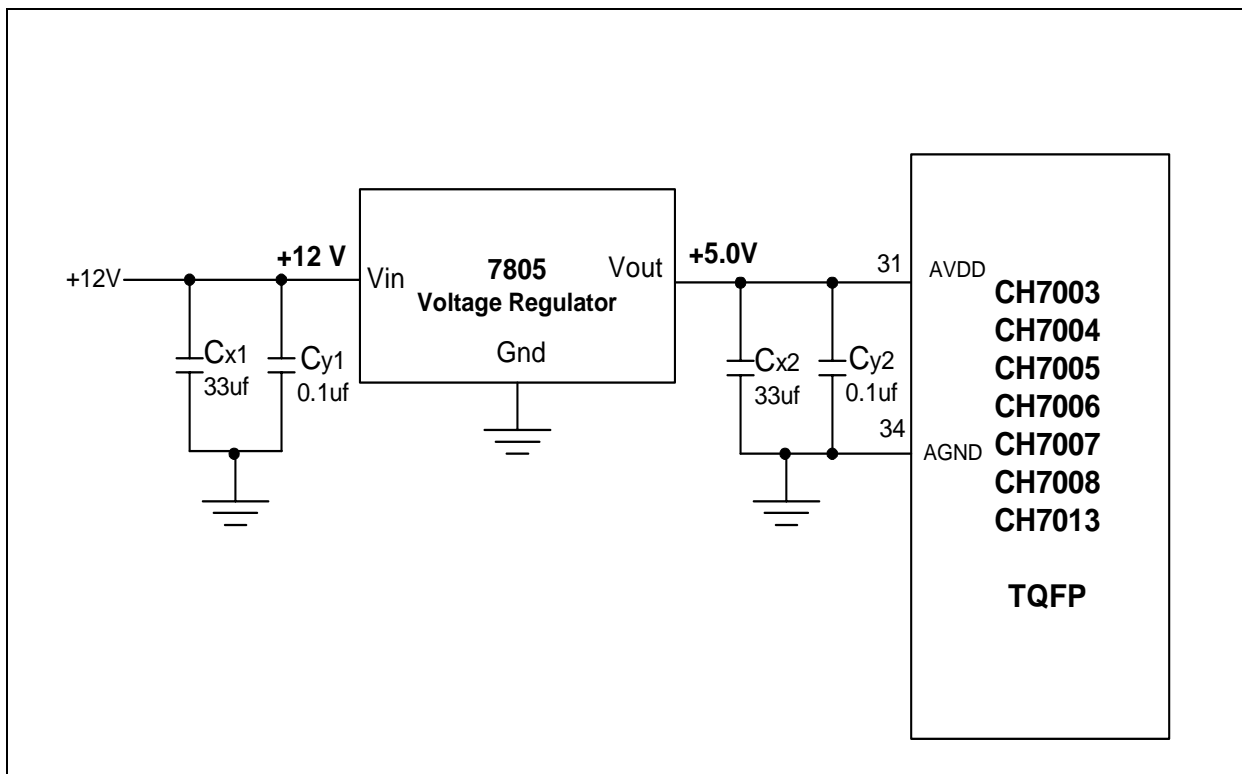
### Description of Problem

A noisy DC power supply to AVDD (power source for PLL circuit) of CH70XX chip may generate visual noise in TV out display.

### Solution to the Problem

A method of RC filtering has been prescribed in TB29, however, if the power source for PLL circuit is very noisy or badly unregulated, it may not be able to function impressively. In this technical bulletin, we suggest that a DC voltage regulator be added for the DC power source used to power the CH70XX's PLL circuit. This method have shown rather reliable results in filtering out the DC power noise, which causes noisy video output display. A low power voltage regulator such as uA7805 or equivalent can be used to regulate +12V. input voltage to generate +5.0V output, which goes to Pin 31 (AVDD) of CH70XX chip to power the PLL circuit.

### Schematics



**Schematic of Adding A Voltage Regulator to AVDD to Minimize the Noise in PLL Power Source**