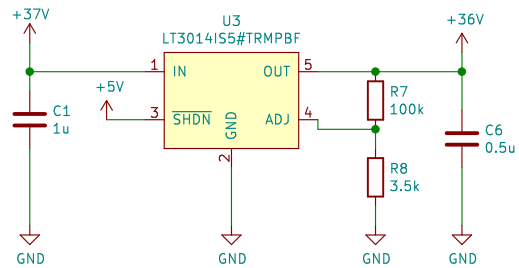
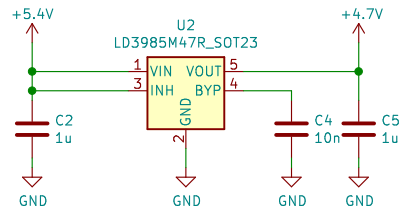


#### LDOs for noise reduction



Sheet: /Power Supplies/  
File: power\_supplies.sch

#### Title:

Size: A4

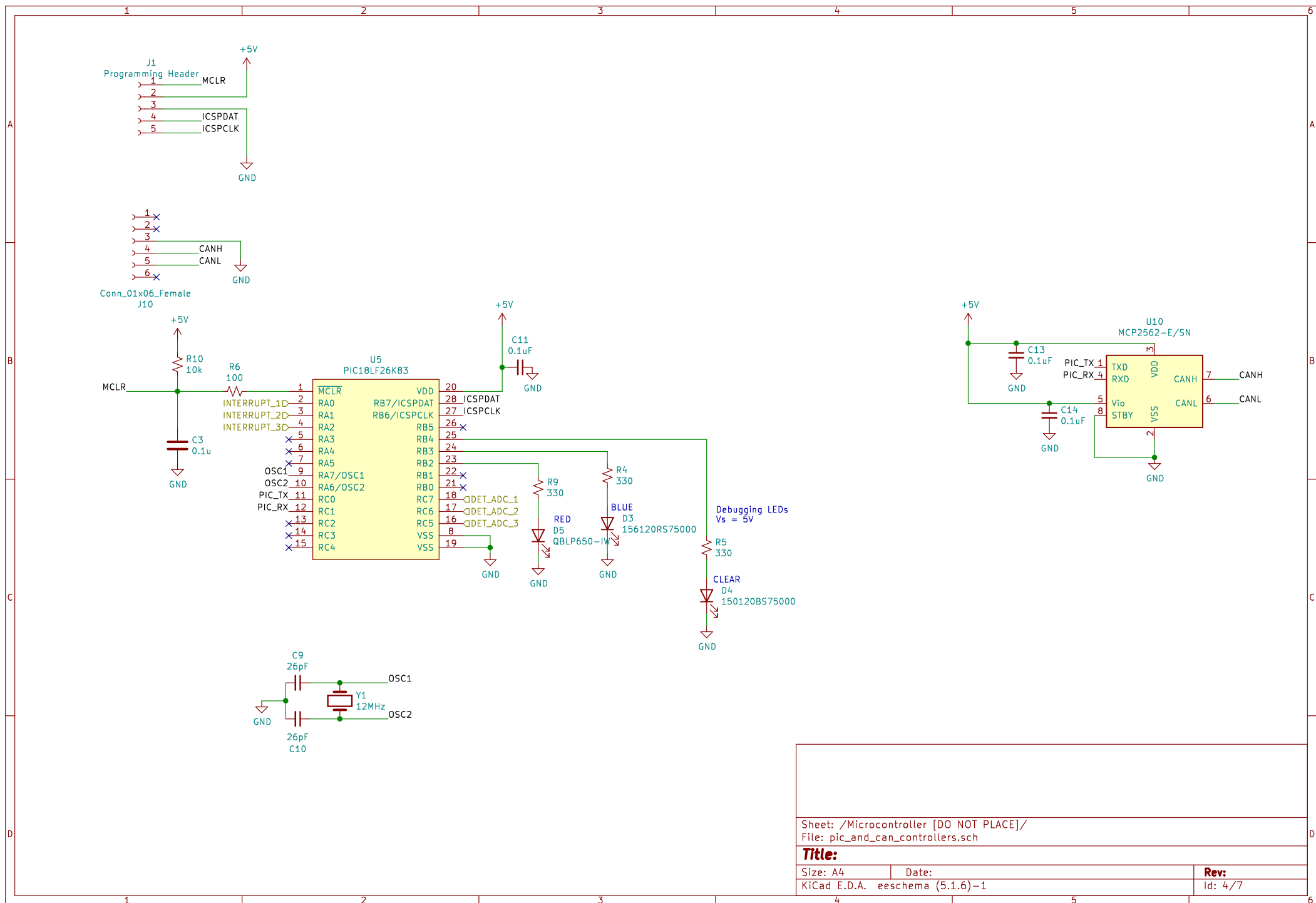
Date:

KiCad E.D.A. eeschema (5.1.6) - 1

Rev:

Id: 2/7





Sheet: /Microcontroller [DO NOT PLACE]/  
File: pic\_and\_can\_controllers.sch

**Title:**

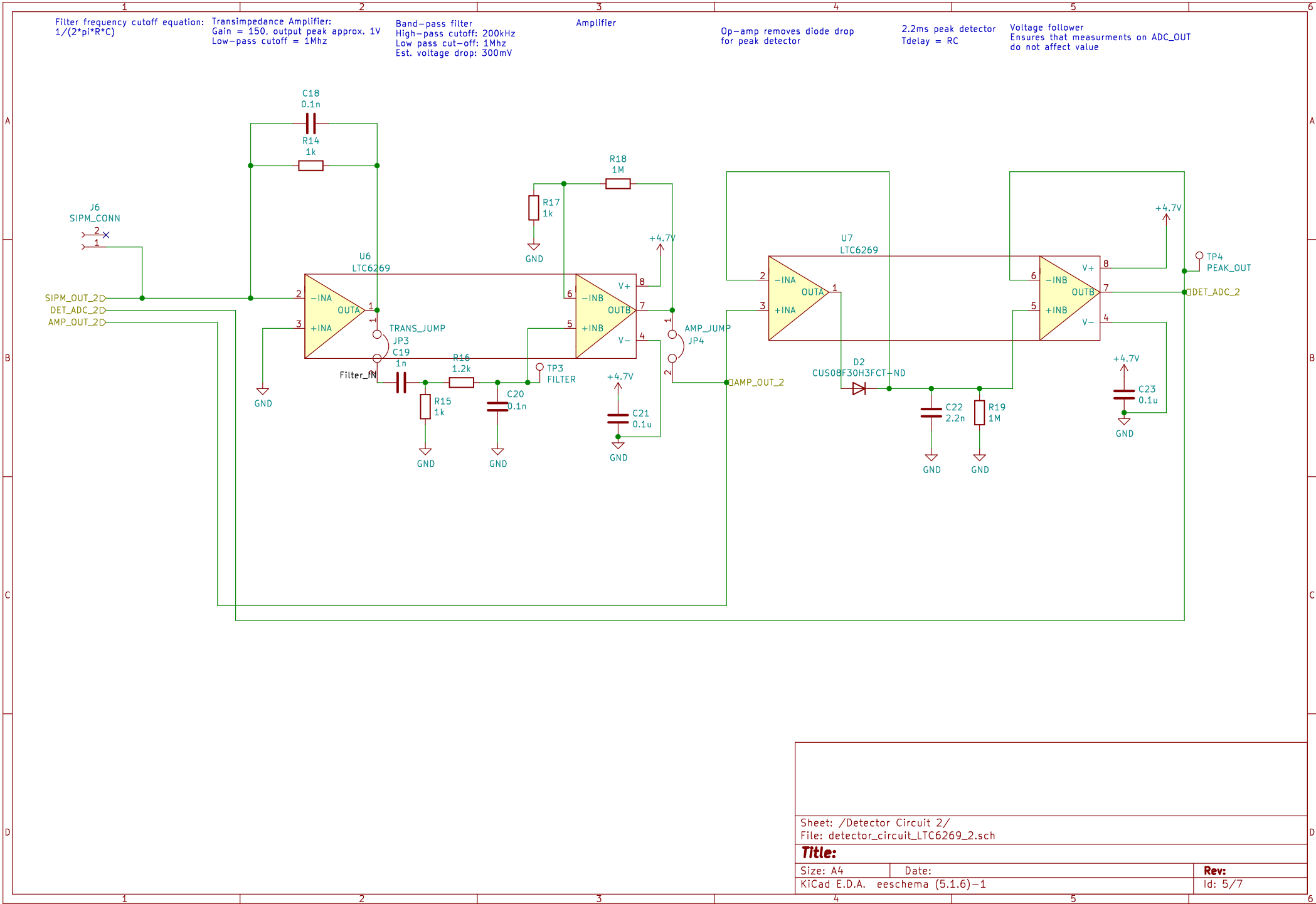
Size: A4

Date:

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**Rev:**

Id: 4/7



Filter frequency cutoff equation:  
 $1/(2 \cdot \pi \cdot R \cdot C)$

Transimpedance Amplifier:  
 Gain = 150, output peak approx. 1V  
 Low-pass cutoff = 1Mhz

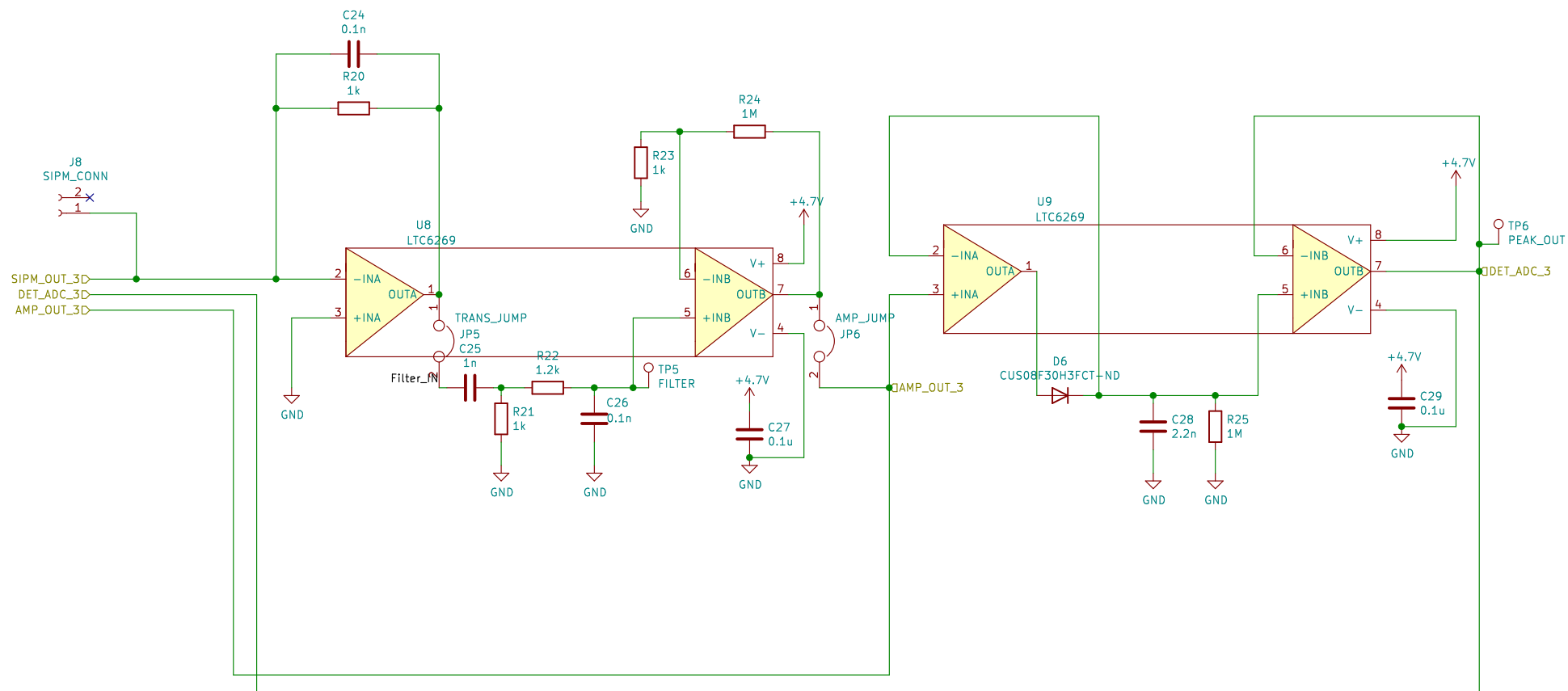
Band-pass filter  
 High-pass cutoff: 200kHz  
 Low pass cut-off: 1Mhz  
 Est. voltage drop: 300mV

Amplifier

Op-amp removes diode drop  
 for peak detector

2.2ms peak detector  
 $T_{delay} = RC$

Voltage follower  
 Ensures that measurements on ADC\_OUT  
 do not affect value



Sheet: /Detector Circuit 3/  
 File: detector\_circuit\_LTC6269\_3.sch

**Title:**

Size: A4

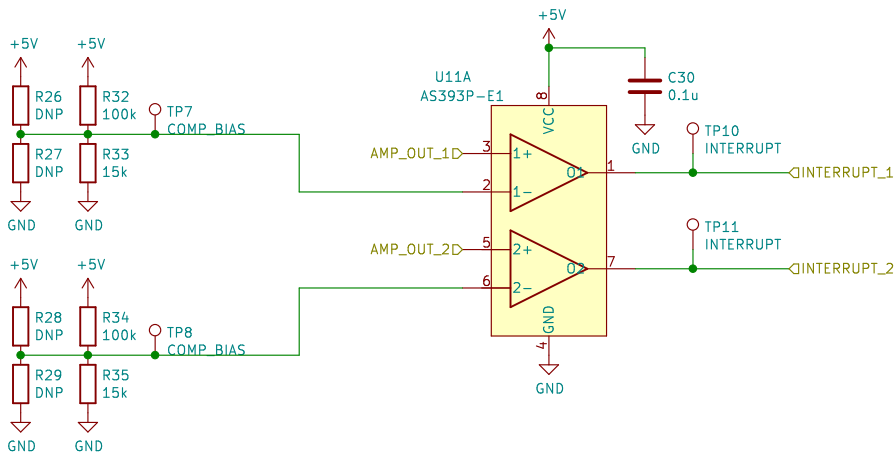
Date:

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**Rev:**

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Comparator triggers interrupt, which informs PIC to measure analog signal



Sheet: /Comparator Circuits/  
File: comparator\_circuits.sch

**Title:**

Size: A4

Date:

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**Rev:**

Id: 7/7