Method of Sealing 1.5mm×1.5mm Standard CMOS Chip Bonding Wires

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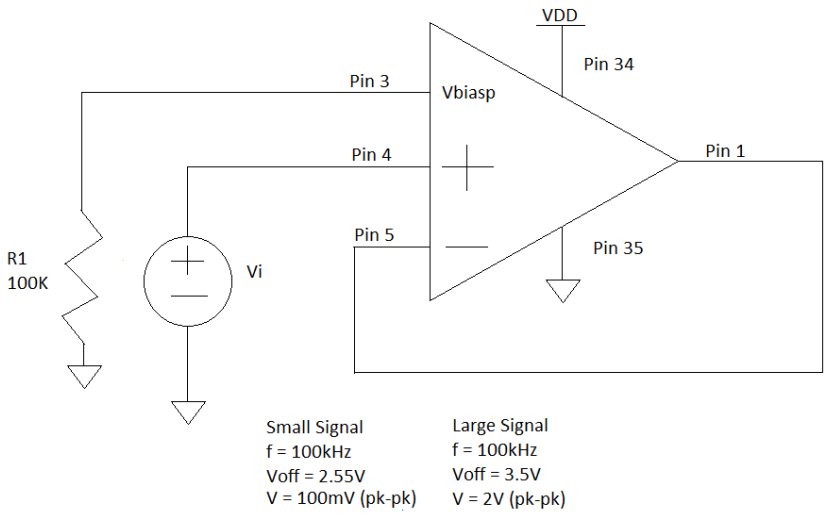
Resin used:

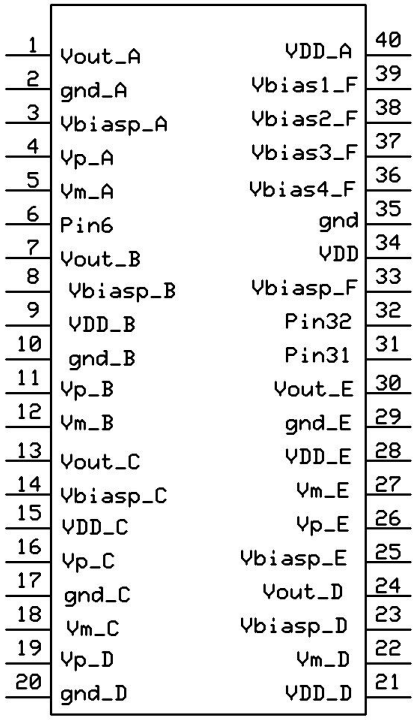
RTV112-White (2.8 fl oz)

Chip tested:

(MOSIS V35G-AC) Homemade Transimpedance Amplifier

Test Circuit:



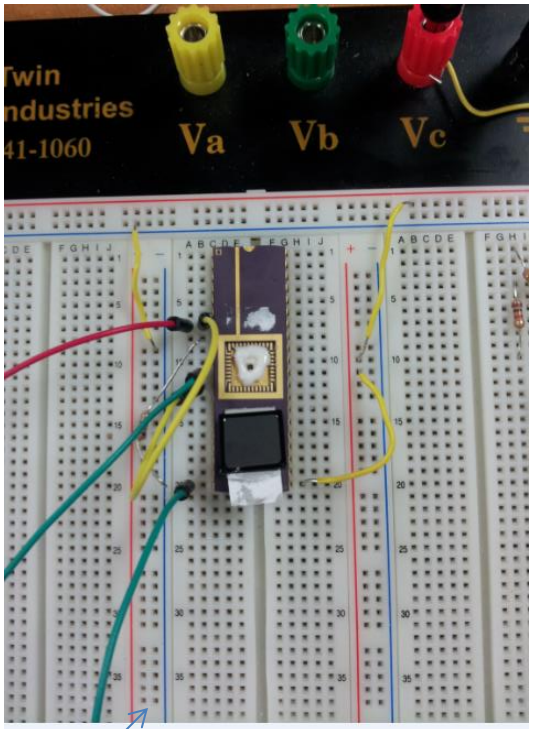


Tools used for sealing

1. Stranded wire:

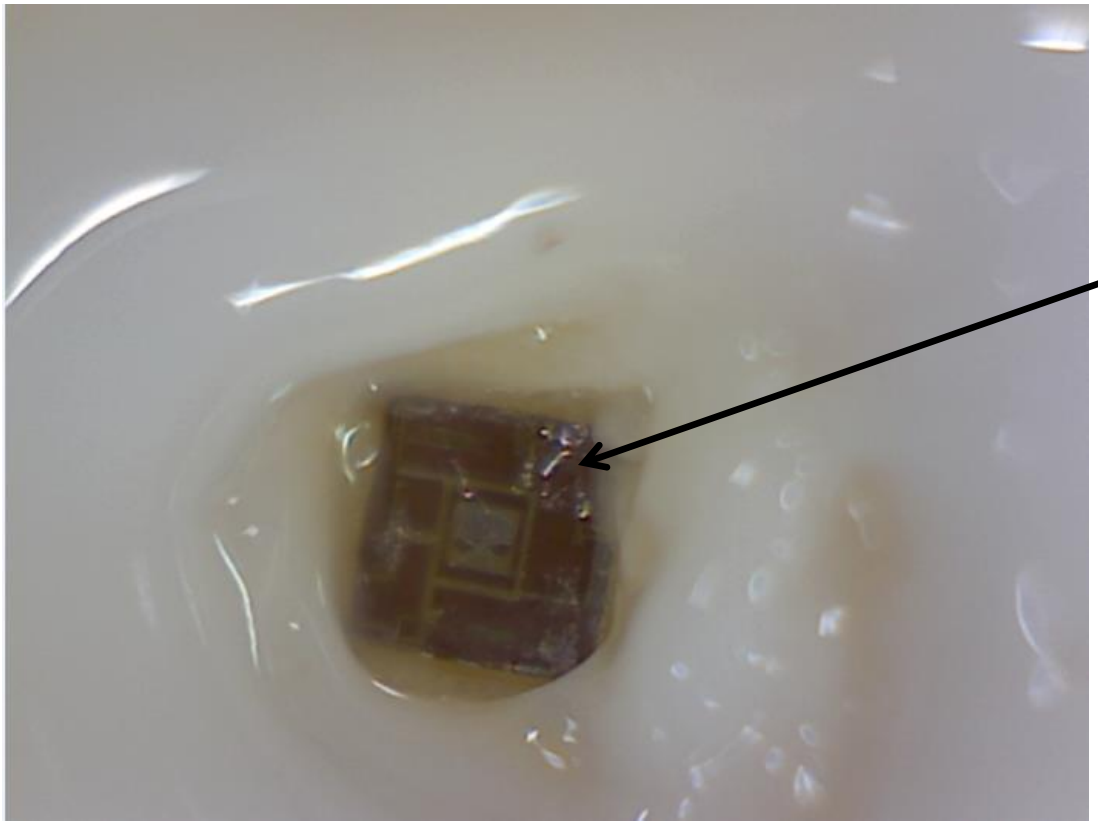
Using one branch of the stranded wires to daub the resin to the bottom of the bonding wires.

2. Celestron 10X-150X Microscope, PC and Breadboard



Bread Board is used to fix and test the chip

Sealing Result

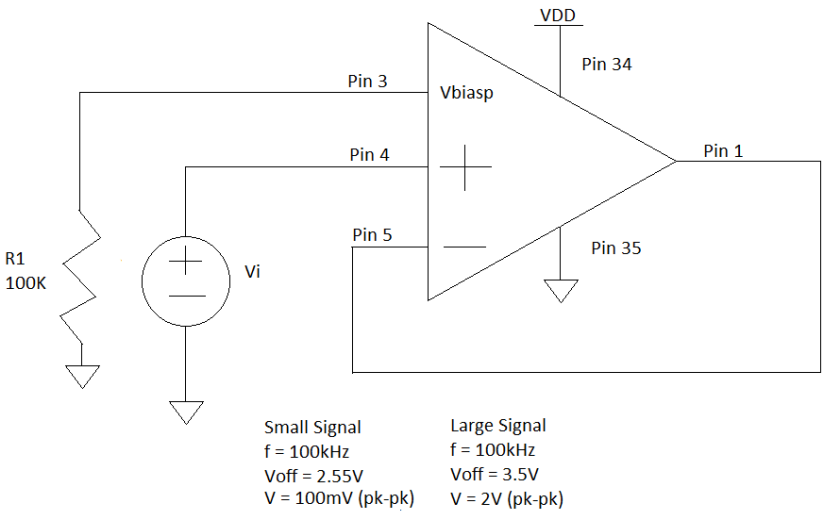


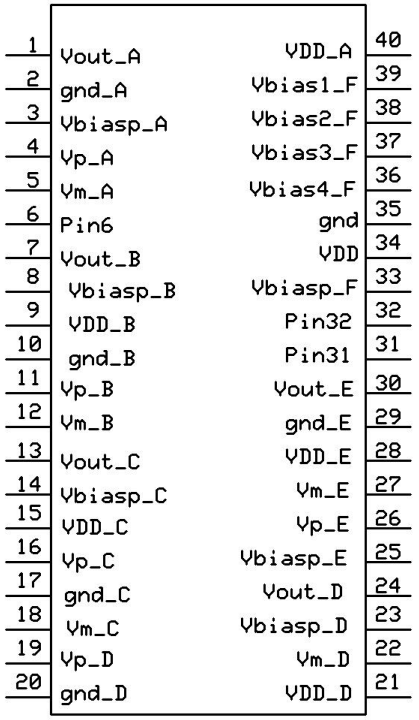
Don’t worry about the remaining resin at the right up side of the chip, it can be totally avoided.

The opening is for microfluidic experiments. Water (transparent) is already filled the opening in this figure.

Chip Testing Results

Amplifiers A-E are tested with the following circuit. Since this experiment is just testing the effect of sealing, the amplifier performance are not tested in detail.

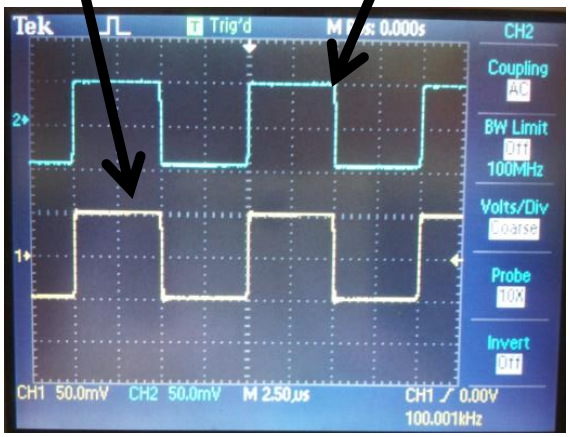




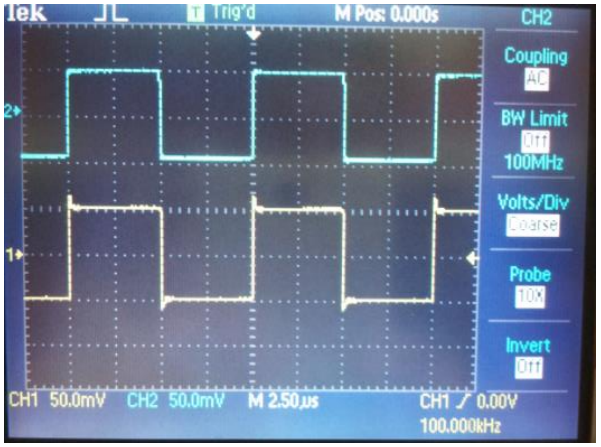
Chip Testing Results

Output

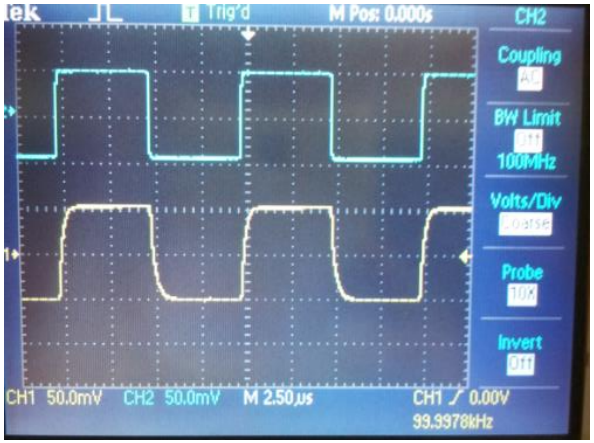
Input



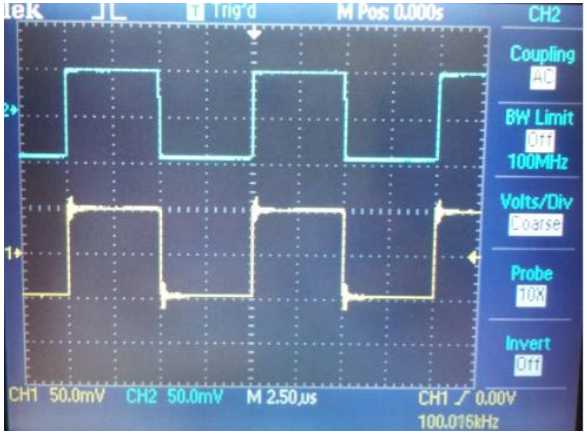
Amplifier A



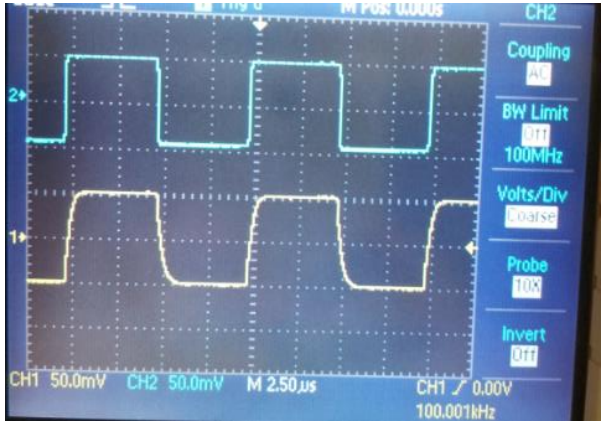
Amplifier B



Amplifier C



Amplifier D



Amplifier E

Notice:
Channel 2 is input signal, Channel 1 is output signal