

Electronics Variable Resistors (Trimmers)

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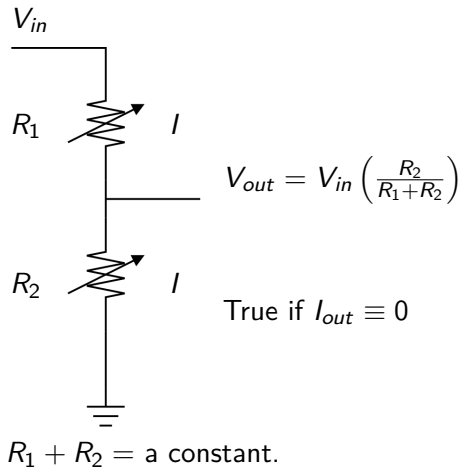
Variable resistors

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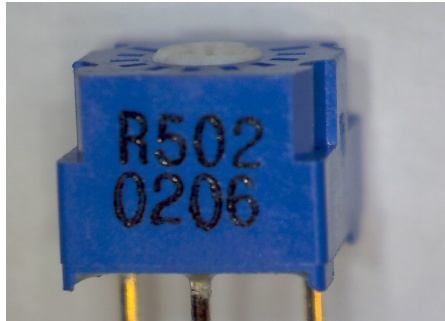
Often it is useful to have *variable* resistors in a circuit.
These are sometimes called **potentiometers** or **trimmers**.







Here is a trimmer.



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The potentiometer has three pins.

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The resistance between the two end pins will be constant.

The potentiometer has three pins.

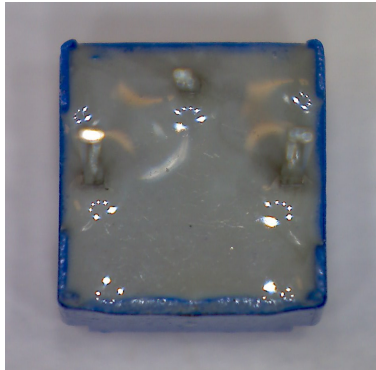
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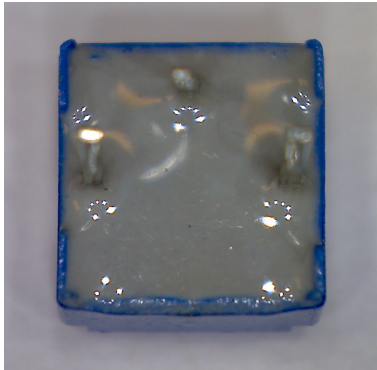
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A small screwdriver can be used to move the wiper from one end to the other, or anywhere in between.

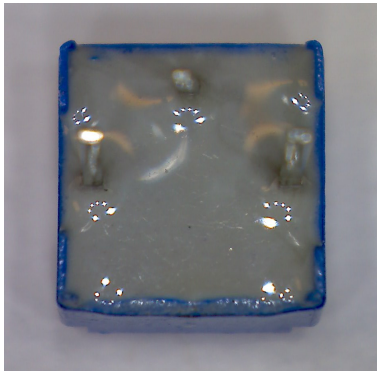
The resistance between the two end pins will be constant.

If you want a resistance which varies, just use the wiper and one end pin.

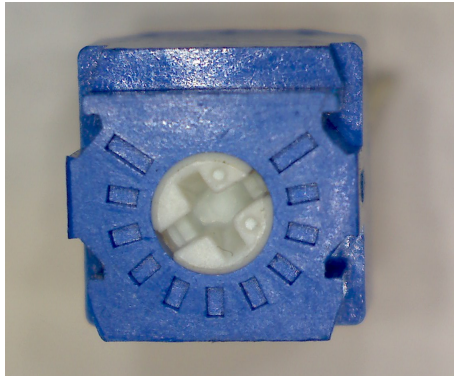


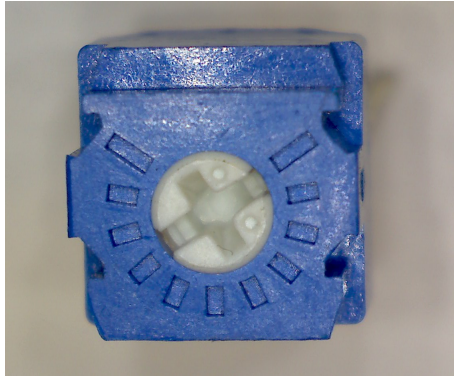


Here's a different view.

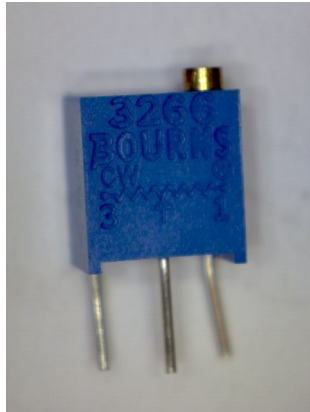


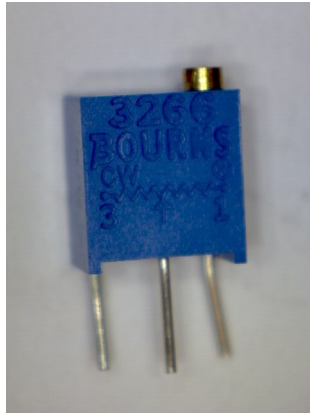
Here's a different view. The wiper is in the middle.



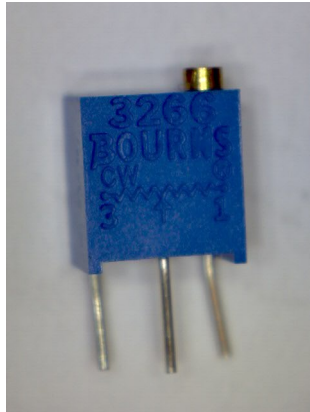


From the top, this one has 10 dashes to represent intervals of roughly $R/10$.





This is a slightly different style.



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Usage as voltage dividers

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Usage as voltage dividers

The potentiometer can be used for a variable voltage divider. Connect the two ends of your supply to the two end pins. Measure the output voltage on the wiper. Adjusting the wiper will change the output voltage from one end of the supply to the other, or to anywhere in between.

Usage as adjustable resistors

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The potentiometer can be used for an adjustable resistor.

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Usage as adjustable resistors

The potentiometer can be used for an adjustable resistor. Connect the wiper and one end pin. Leave the other end unconnected.

Adjusting the wiper will change the resistance between the two pins from zero to the stated resistance.