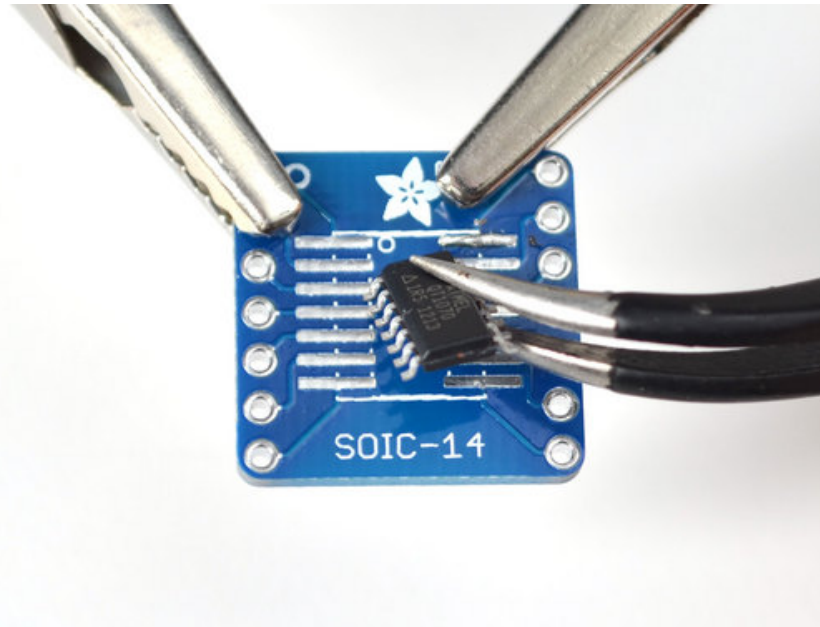


SMT Breadboard Prototyping Using Breakout PCBs

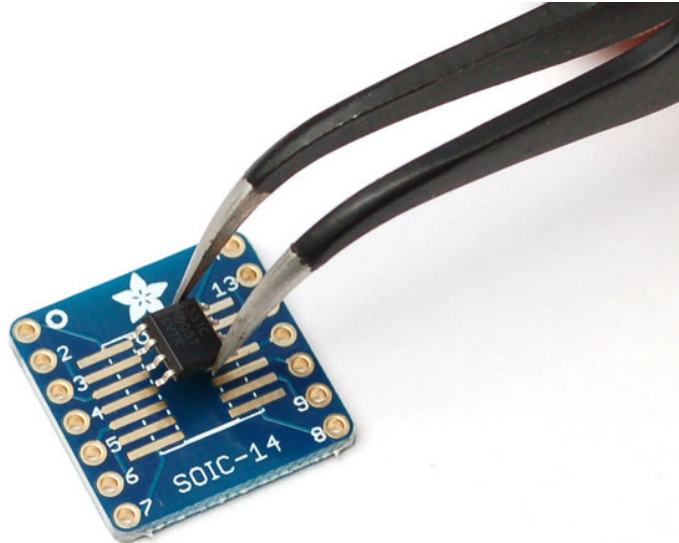
Created by Ladyada



Guide Contents

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Overview



Nothing is as fast and fun as prototyping on a breadboard, but at some point you will find that the chips you want to work with are only available in non-breadboard-friendly SMT/SMD (Surface Mount Technology/Surface Mount Device). Unlike most DIP chips and resistors, SMT parts do not have the leads going through holes in the PCB. Instead, they 'float' on top, with often-rectangular solder pads.

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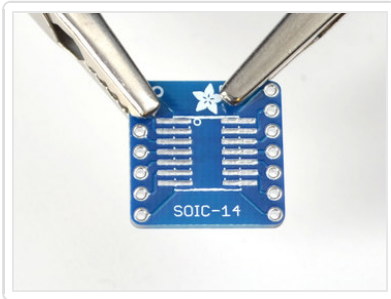


You'll also need a soldering iron with a fine tip. Although a good iron is a little expensive, its the most important tool and we suggest investing in a good one. [Our favorite is the Hakko FX-888D \(http://adafru.it/1204\)](http://adafru.it/1204) with the [fine SMT tip \(http://adafru.it/1249\)](http://adafru.it/1249)

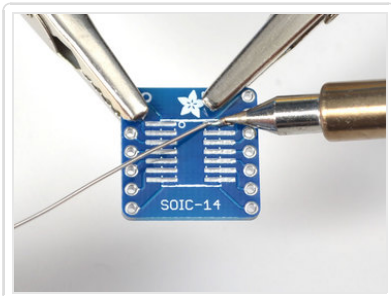


Soldering an SOIC

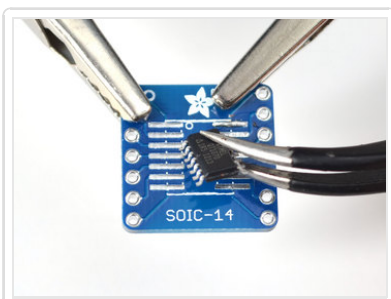
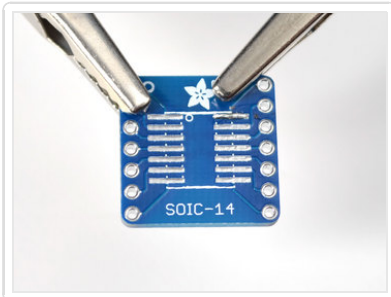
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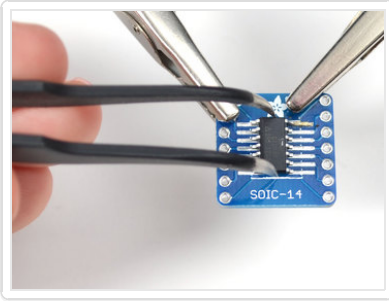
Begin by placing the breakout adapter into your vise/third hand to keep it steady.



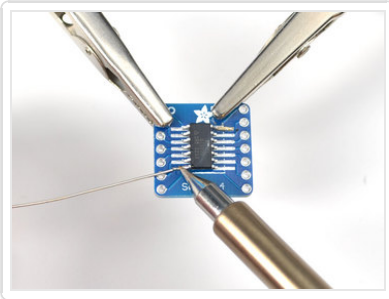
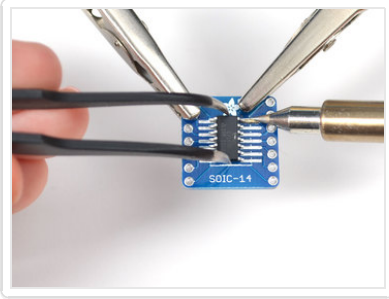
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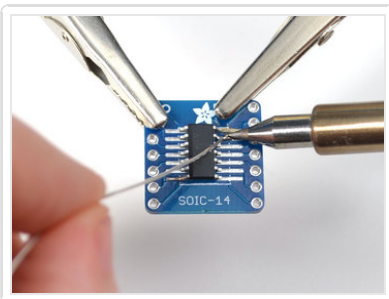
Next you need to place the part onto the pads, and you'll want to get the orientation right. You can look for a dot (indicating pin #1). In some cases, look for a flattened corner (on the left side here) which indicates which side is on the left



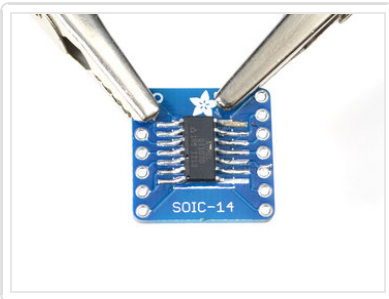
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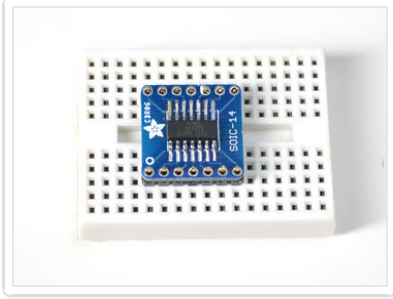
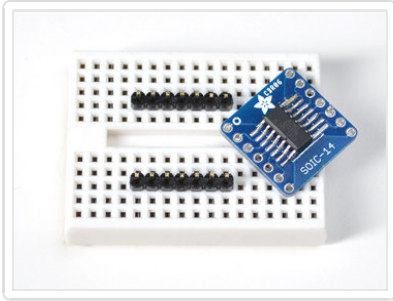


Now you can 'fix' the chip in place by soldering in the opposite corner. The one pin you soldered will keep the chip in place mostly, so you just have to solder the other pin a little to make the setup secure



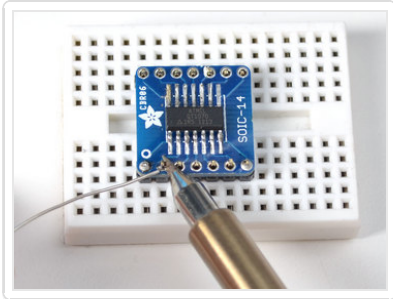
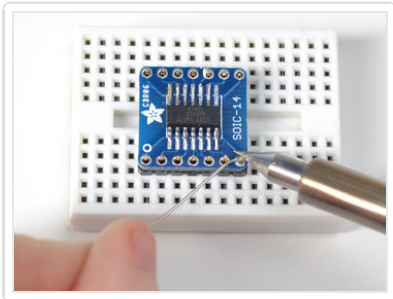
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The hard part's done! Now we can solder on regular 0.1" spaced male header. We like the break-away kind so its easy to get just the right amount. (You can get some at the adafruit shop if you don't have any!) (<http://adafru.it/392>)

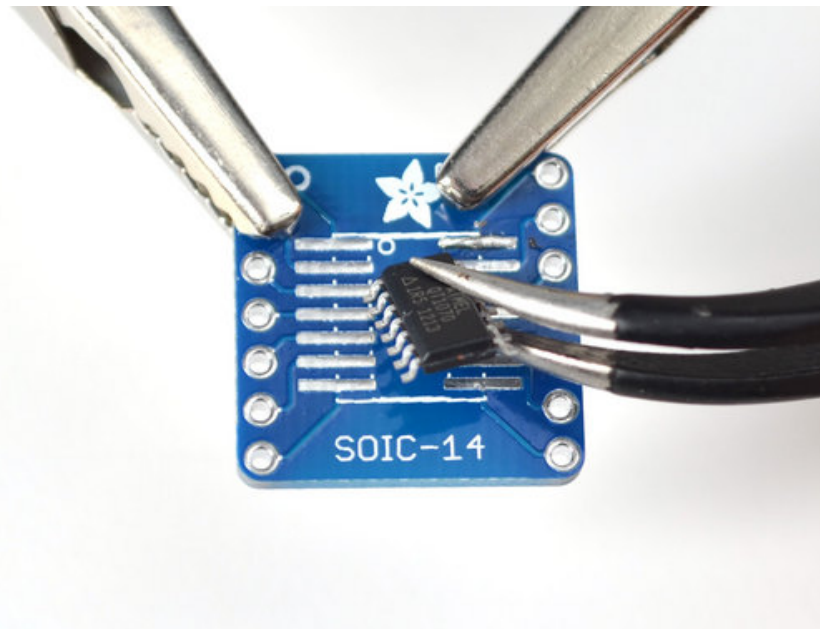
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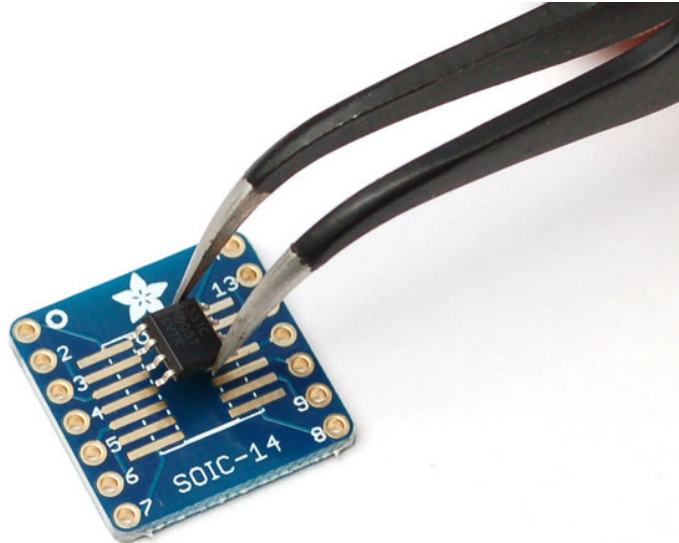
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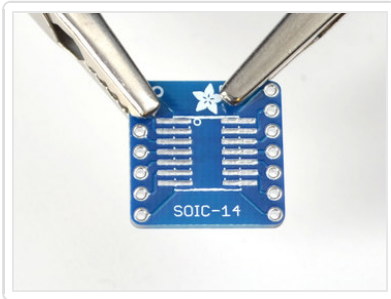


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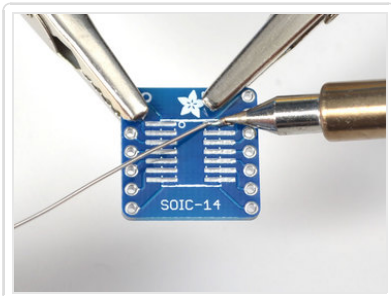


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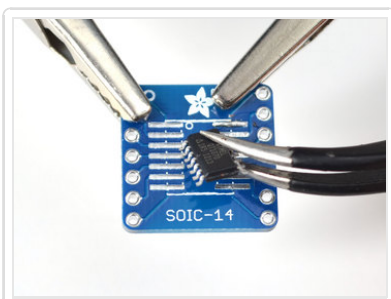
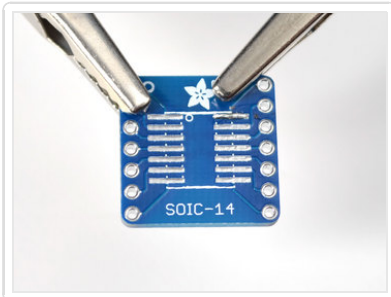
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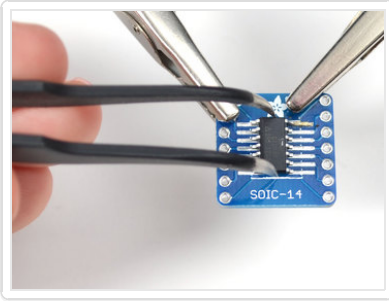
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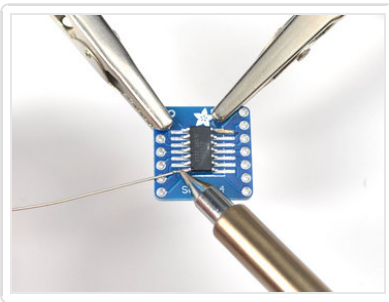
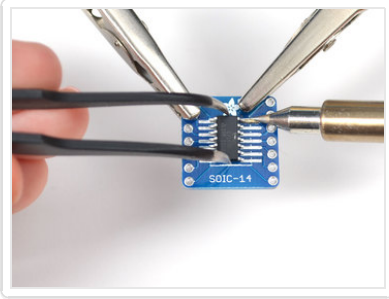
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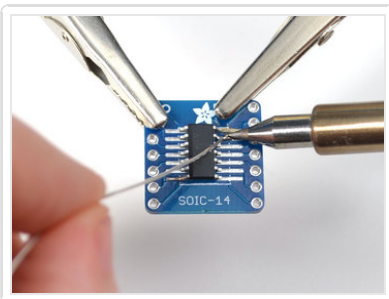
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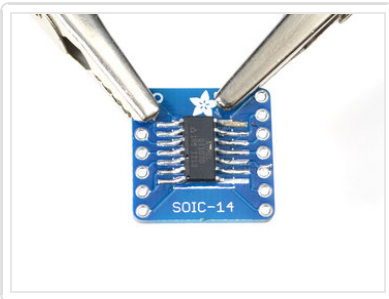
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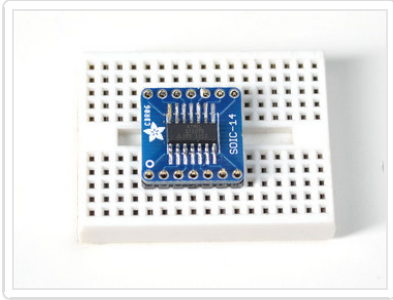
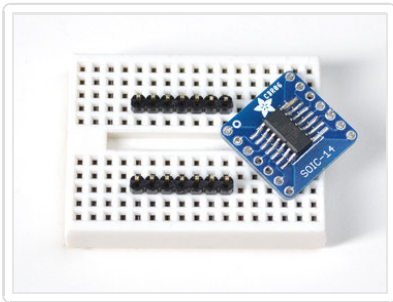


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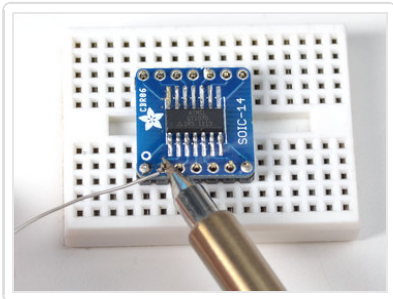
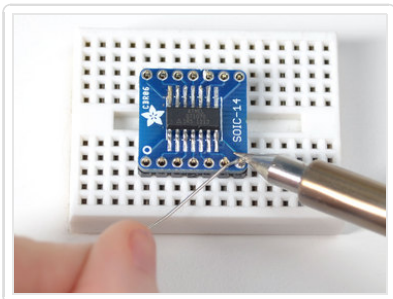
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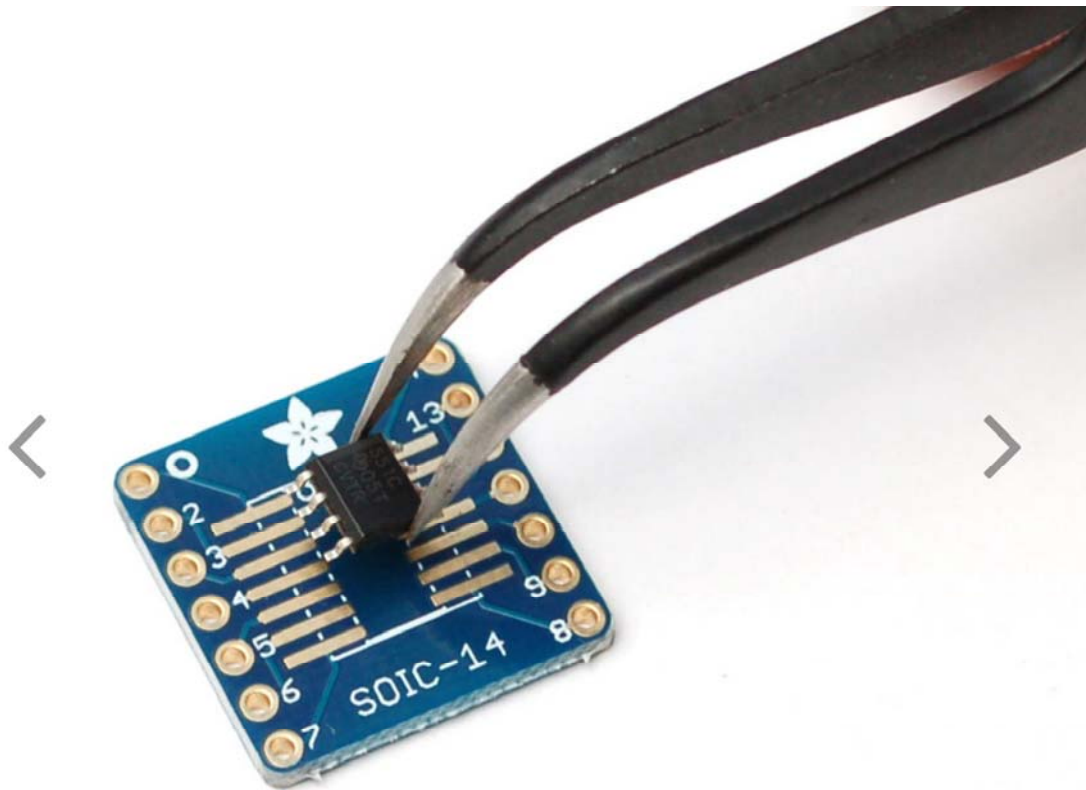
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SMT Breakout PCB for SOIC-14 or TSSOP-14 – 6 Pack!

PRODUCT ID: 1210

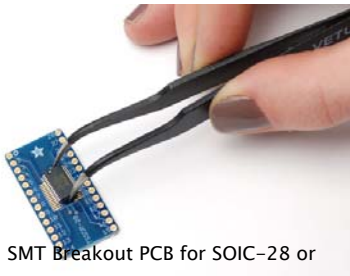


DESCRIPTION

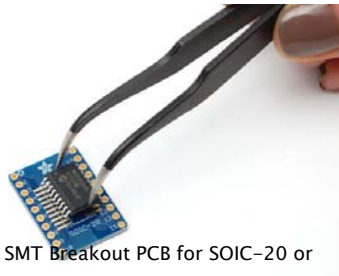
Beguiled by a fancy new chip that is only available in a SOIC or (T)SSOP pinout? This breakout PCB set will make your life much much easier and get you prototyping faster than ever. One side has a 14-TSSOP pin out with traces going to two rows of 0.1" spaced holes, the other has 14-SOIC. Solder your chip to either side and you're ready to rock on any solderless breadboard.

Each item comes with six PCBs, each PCB is identical and can support either a SOIC (narrow, medium or wide variety) or TSSOP. Standard thickness PCBs, with 0.6" spacing between the two rows. You can of course use a smaller chip but the pin numbering wont be right so use care.

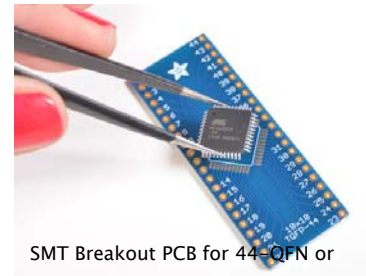
MAY WE ALSO SUGGEST...



SMT Breakout PCB for SOIC-28 or
(/products/1208)



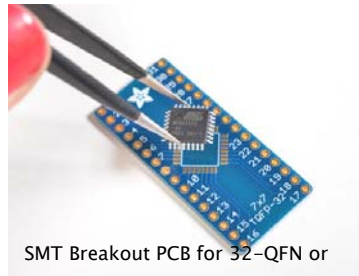
SMT Breakout PCB for SOIC-20 or
(/products/1206)



SMT Breakout PCB for 44-QFN or
(/products/1162)



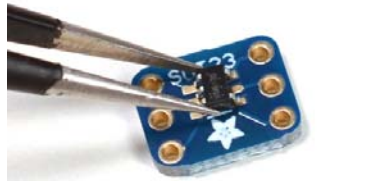
SMT Breakout PCB for SOIC-16 or
(/products/1207)



SMT Breakout PCB for 32-QFN or
(/products/1163)



SMT Breakout PCB for SOIC-12 or
(/products/1211)



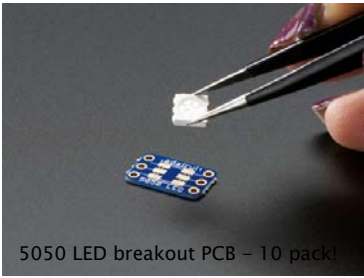
SMT Breakout PCB Set For SOT-23,
(/products/1230)



SMT Test Socket - SOIC-28 Wide
(/products/1281)



SMT Test Socket - SOIC-16 Narrow
(/products/1283)



5050 LED breakout PCB – 10 pack!
(/products/1762)



SMT Breakout PCB for SOIC-8,
(/products/1212)



SMT Test Socket – TSSOP-28
(/products/1280)

+



(<https://verify.authorize.net/anetseal/?pid=1de2c247-f7e6-492b-99d8-fb648be79ff1&rurl=http%3A//www.adafruit.com/product/1210>)
Online Payments
(<http://www.authorize.net/>)

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