

**SOT143**

**SOT323**

**603**

**805**

**805**

**805+**

**805**

**Capacitors**

**Resistor**

**Inductor**

**Transistor & Diodes**

**All parts can be found through a combination of: part type (cap, res, BJT, etc)., color marked on package, package type and qty of parts in kit.**

**See design document for part placement, including pin orientation where applicable.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Color | Qty | Package | |
| 100 Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF1000V+7+WW))  (Digikey [P100CCT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6ENF1000V/P100CCT-ND/118668)) | Orange/ Red | 2 | 805 | ERJ-6ENF1000V Panasonic Electronic Components | P100CCT-ND DigiKey Electronics |
| 75k Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF7502V+7+WW))  (Digikey [P75.0KCCT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6ENF7502V/P75.0KCCT-ND/119514)) | Purple | 2 | 805 | ERJ-6ENF1000V Panasonic Electronic Components | P100CCT-ND DigiKey Electronics |
| 50 Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF49R9V+7+WW))  (Digikey [P49.9CCT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6ENF49R9V/P49.9CCT-ND/118581)) | Red | 4 | 805 | ERJ-6ENF1000V Panasonic Electronic Components | P100CCT-ND DigiKey Electronics |
| 200 pF  ([805 SMD](http://search.murata.co.jp/Ceramy/image/img/A01X/G101/ENG/GRM2165C1H201JA01-01.pdf))  (Digikey [490-10741-1-ND](https://www.digikey.com/product-detail/en/murata-electronics-north-america/GRM2165C1H201JA01D/490-10741-1-ND/5251359)) | Green | 4 | 805 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| .1uF  ([805 SMD](http://www.yuden.co.jp/productdata/catalog/en/mlcc07_e.pdf))  (Digikey [587-1133-1-ND](https://www.digikey.com/product-detail/en/taiyo-yuden/LMK212SD104JG-T/587-1133-1-ND/930910)) | Blue | 3 | 805+ | LMK212SD104JG-T Taiyo Yuden | 587-1133-1-ND DigiKey Electronics |
| 100nH  ([805 SMD – wirewound](http://www.te.com/commerce/DocumentDelivery/DDEController?Action=srchrtrv&DocNm=1773163&DocType=DS&DocLang=English))  (Digkey [A103758CT-ND](https://www.digikey.com/product-detail/en/te-connectivity-amp-connectors/36502AR10JTDG/A103758CT-ND/2730089)) | Clear | 2 | 805 | 36502AR10JTDG TE Connectivity AMP Connectors | A103758CT-ND DigiKey Electronics |
| 1.5k Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF1000V+7+WW))  (Digkey [P1.50KCCT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6ENF1501V/P1.50KCCT-ND/119008)) |  | 2 | 805 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| 2.7k Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF1000V+7+WW))  (Digkey [2.7KACT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6GEYJ272V/P2.7KACT-ND/81772)) |  | 2 | 805 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| 220 Ohms  ([805 SMD](http://industrial.panasonic.com/www-cgi/jvcr13pz.cgi?E+PZ+3+AOA0002+ERJ6ENF1000V+7+WW))  (Digkey [P220ACT-ND](https://www.digikey.com/product-detail/en/panasonic-electronic-components/ERJ-6GEYJ221V/P220ACT-ND/90021)) |  | 2 | 805 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| 1 pF  ([603 SMD](https://www.johansondielectrics.com/downloads/jdi-x2y-2014-10.pdf))  (Digikey [709-1199-1-ND](https://www.digikey.com/product-detail/en/johanson-dielectrics-inc/101X14N1R0DV4T/709-1199-1-ND/2046925)) |  | 2 | 603 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| 3 pF  ([603 SMD](https://www.johansontechnology.com/downloads/JTI-CAT-MLCC-HighQ.pdf))  (Digikey [712-1347-1-ND](https://www.digikey.com/product-detail/en/johanson-technology-inc/251R14S3R0BV4T/712-1347-1-ND/1786809)) |  | 2 | 603 | GRM2165C1H201JA01D Murata Electronics North America | 490-10741-1-ND DigiKey Electronics |
| Diode  ([HSMS-2829-BLKG](http://www.mouser.com/ds/2/678/avagotechnologies_AV02-1320EN,0-908929.pdf))  (Mouser [630-HSMS-2829-BLKG](http://www.mouser.com/Search/m_ProductDetail.aspx?Broadcom-Avago%2fHSMS-2829-BLKG%2f&qs=sGAEpiMZZMtQ8nqTKtFS%2fAM%2fhxZYunzs4xYpPwlO5jc%3d)) | Black package w/blue tape | 2 | SOT143  “C9” Mark | Related image |
| BJT – 9 GHz  ([BFU550R](https://www.nxp.com/docs/en/data-sheet/BFU550.pdf))  (Digikey [568-11515-1-ND](https://www.digikey.com/product-detail/en/nxp-usa-inc/BFU550R/568-11515-1-ND/4895789)) | Black package | 2 | SOT143  “WTC”  Mark | Related image |
| Balun  (Minicircuits [TCM4-14+](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwjhxbfLkZPMAhWIYiYKHVSIDpsQFggdMAA&url=https%3A%2F%2Fwww.minicircuits.com%2Fpdfs%2FTCM4-14.pdf&usg=AFQjCNH3RujVqhL1n0ZJ11uWHdA7GFKRsg) ) | Black Package | 4 | https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcTIKQeK8k1oL-kpQSHUT0FRtemnHgGoGBKz2FAge0UqsyIq82iPU8xh | |
| 2in x2in PCB 1 oz. single sided  double sided ([MG Datasheet](http://www.mgchemicals.com/downloads/pdf/specsheets/500series.pdf))(Digikey [473-1006-ND](https://www.digikey.com/product-detail/en/mg-chemicals/550/473-1006-ND/559706)) |  | 2 | 550 MG Chemicals | 473-1006-ND DigiKey Electronics | |
| Mixer pre-fabbed PCB  (Obtain from rickettslab.org or instructor) |  | 2  ($2) |  | |
| Power Amplifier pre-fabbed PCB  (obtain from rickettslab.org or instructor) |  | 1  ($2) |  | |
| ½ SMA cable (connector and open end) |  | 1 | C:\Users\DAVIDR~1\AppData\Local\Temp\image005.png | |
| SMA connector  (Digikey [J502-ND](https://www.digikey.com/product-detail/en/cinch-connectivity-solutions-johnson/142-0701-801/J502-ND/35280) [Dimensions](http://cinchconnectivity.com/OA_MEDIA/drawings/dr-1420701801.pdf) or equivalent) |  | 15 | 142-0701-801 Cinch Connectivity Solutions Johnson | J502-ND DigiKey Electronics | |
| 9V Battery connector |  | 1 | Related image | |
| SMA-SMA connectors (for assembling radio) |  | 5  (provided) | Product Details | |
| 12x12 Venture Copper Foil Sheet Adhesive  (ebay or other retailer) |  | 2  Sheets | 12x12 Venture Copper Foil Sheet Adhesive for Stained Glass Overlay | |
| Foil tape |  | 30 cm | https://images-na.ssl-images-amazon.com/images/I/61JMYr2Os5L._SL1000_.jpg | |
| 12” x 12” White corrugated plastic sheet (4-8 mm, thickness not important)  Example from [Amazon](https://www.amazon.com/Corrugated-Plastic-White-Sign-Blanks/dp/B01IFKA8TY/ref=sr_1_8?s=office-products&ie=UTF8&qid=1521307209&sr=1-8&keywords=white+corrugated+boards). |  | 1 |  | |
| 9V Battery |  | 1 | Related image | |