

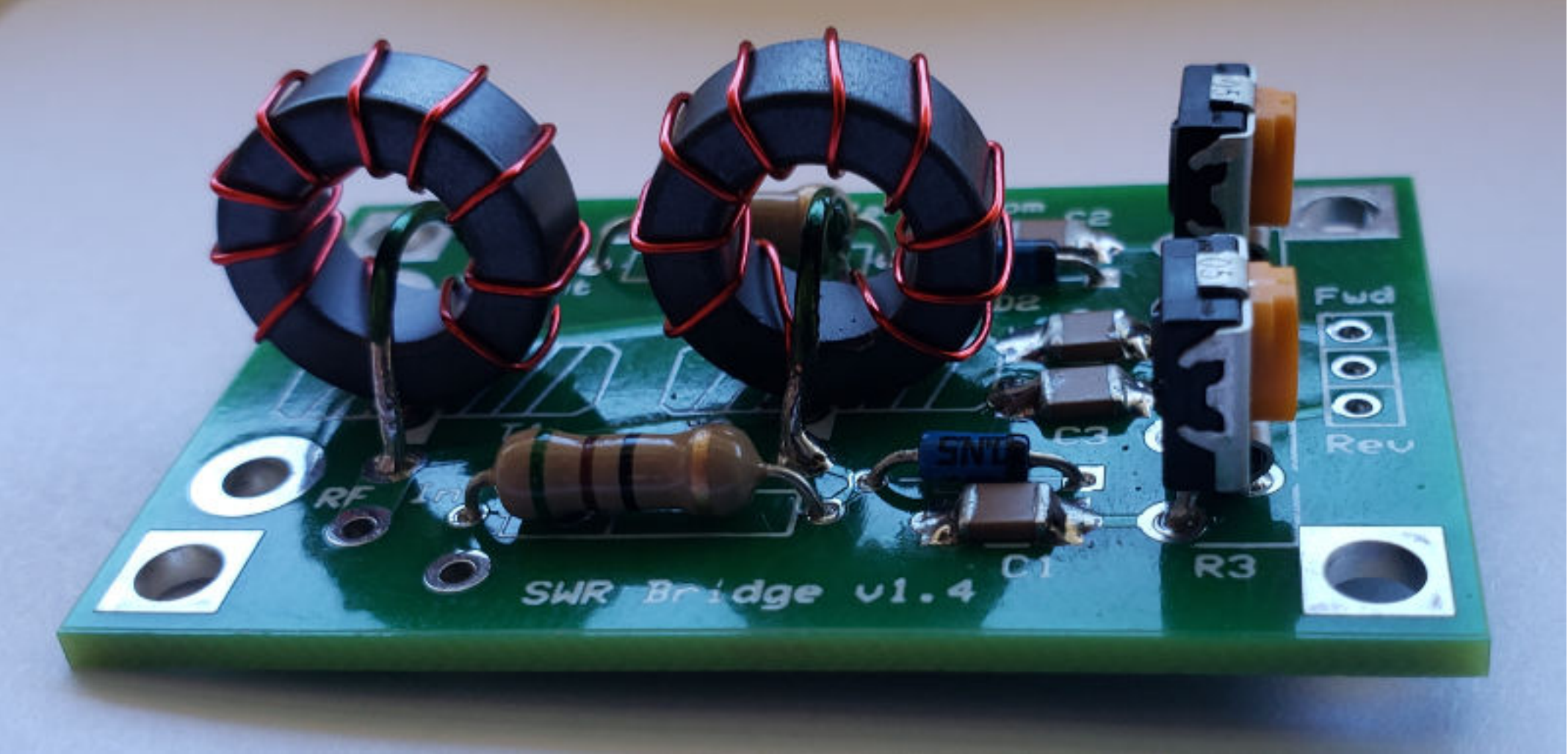
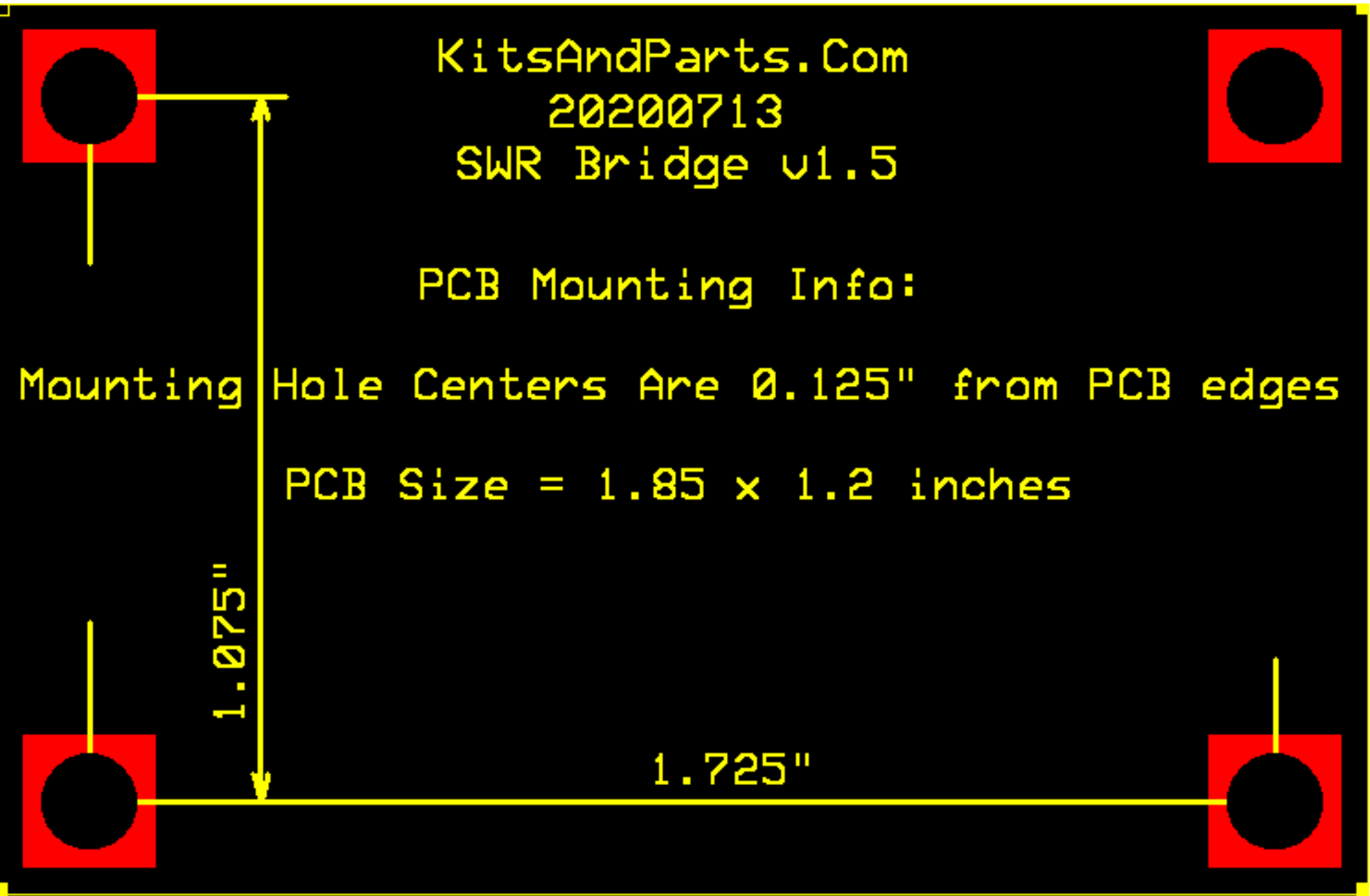
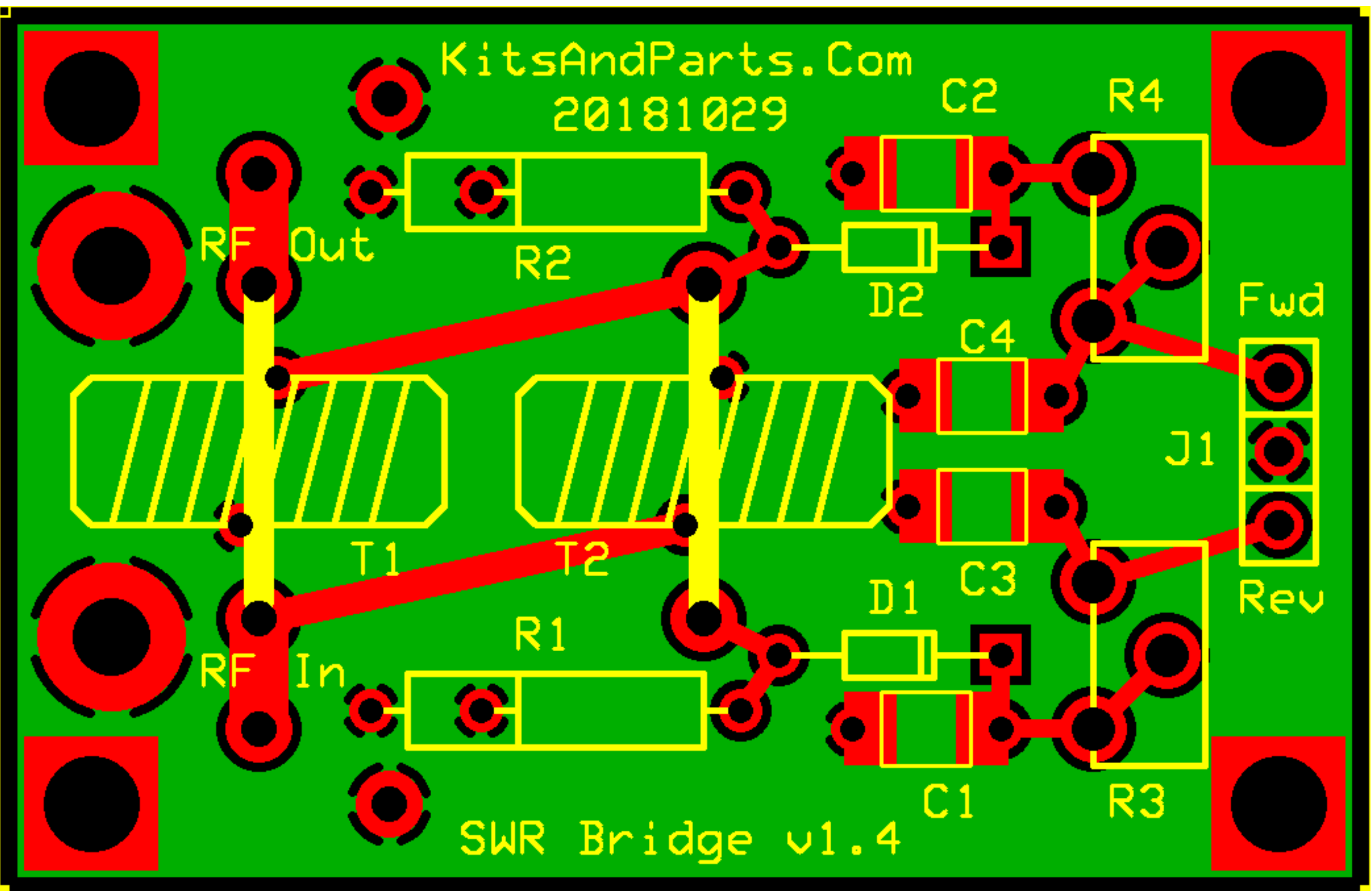
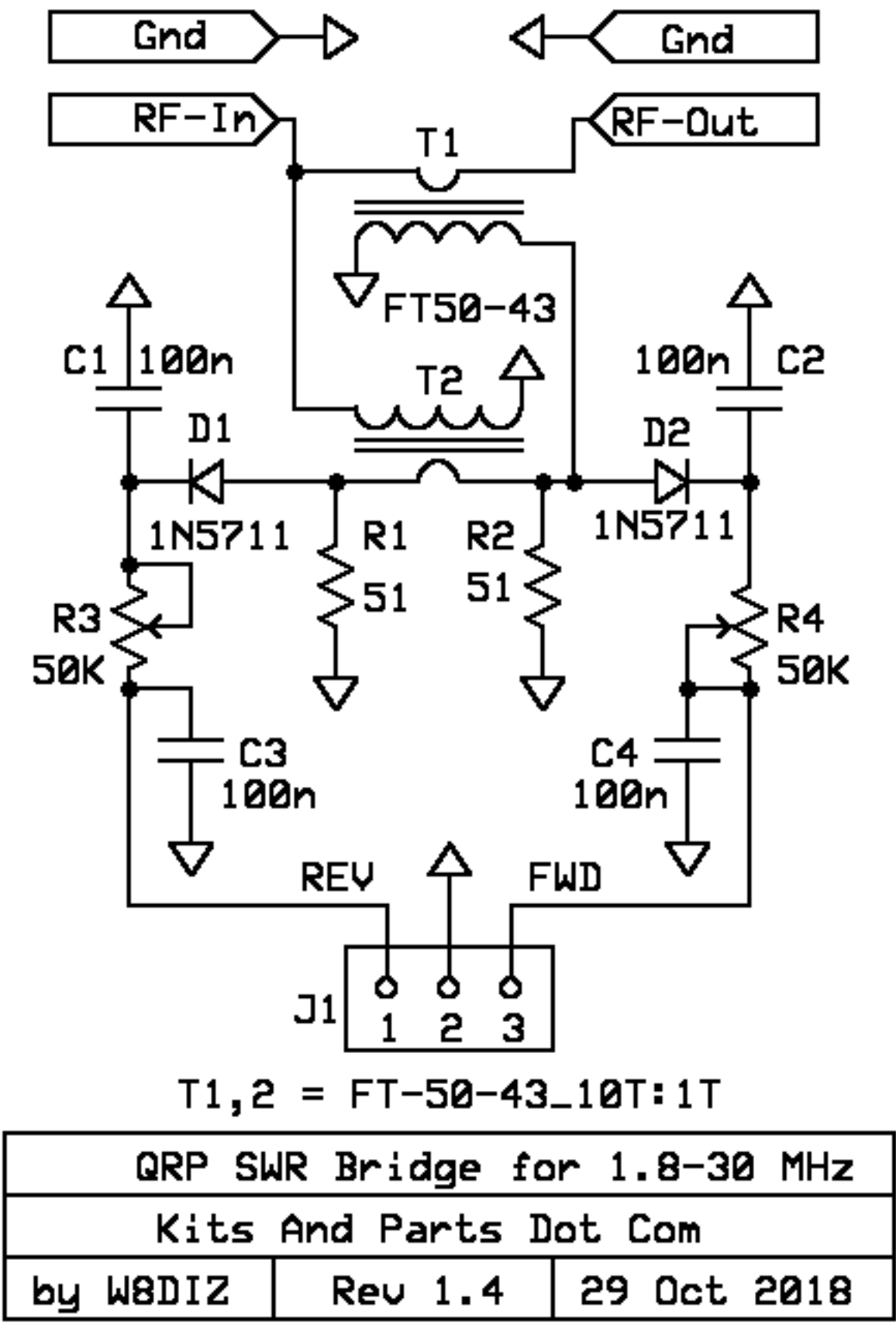
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Build this Universal SWR bridge V1.5
Note that there are many FAKE versions on Ebay.

[PDF Instructions in Spanish](#) submitted of Jon, EA2SN



Building Instructions:

- Inventory all Parts
- Install all Resistors.

___R1,2: 51 (1/2 Watt) **Green-Brown-Black-Gold**
Note: R3,4 controls the output of the SWR bridge.
___R3,4: 50K ohm pot

- Install all capacitors.

___C1,2,3,4: SMT or 100n brown labeled 104 or green 104
We highly recommend installing the SMT caps vs the thru hole types
The SMT caps provide better RF shunting to ground

- Install the detector Diodes.
___D1,2: 1N5711 - install flush against PCB per parts markings
Do not overheat when soldering.

- Wind and install the RF coupling transformers.

___T1 & T2: Wind 10/12 turns of 26 ga red or green wire on both FT50-43 ferrite toroids.
For 3.5 - 30 MHz, use 10 turns (more sensitive at low power)
For 1.8 - 30 MHz, use 12 turns (less sensitive at low power)
Cut the 20 inches of red magnet wire in half.
Wind the wires (10" each) on the toroids **clockwise**.
Trim the wires of T1 & T2 to a half inch.
Strip the insulation off the wires using a very hot solder pencil and solder.
Install the wound toroids on the PCB and trim leads from the PCB.



Cut the 2 inches of #20 green magnet wire in half.
Earlier versions of the SWR kit use surplus resistor leads.
Strip the insulation off of 0.25 inches (6.3 mm) on all 4 ends of the wires
Bend the wires in a "U" shape using a standard size pencil.
Install the leads thru T1 & T2 with the wire going thru the center of the toroid
Solder the leads on the bottom of the PCB.

- Connections.
Connect the bridge to a 5W RF source(in) and a 50 ohm dummy load(out).
Connect two mechanical meters to J1 or one meter with a SPDT switch.
Suggest using 50 uA, up to 2 mA mechanical meters.
Note: Meters are NOT supplied in the kit.
Adjust both R3 & R4 to mid-range.
Apply 5 Watts and adjust R4 for a full scale reading.
Reverse the RF connections so that the dummy load is at the input.
Apply 5 Watts and adjust R3 for a full scale reading.
The SWR Meter is now ready to use (5 watts full scale).
Designed for a maximum of 100 Watts (intermittent).