

Analog portion of the SWR analyzer.

C1, C2, C4, C5, C6, C9, C11, C13, C14-- 0.1 μF *

C3--0.22 μF *

C7, C8--56 pF*

C10, C12--0.01 μF *

D1, D2--AA143 germanium. Substitute: 1N60

J9--SMA male PCB-mount connector, straight or right-angle*

L1--0.220 μH , 8 turns of 26 AWG insulated magnet wire on a T25-2 core.

www.kitsandparts.com/toroids.php.

R9, R10--1000 Ω ++

R11--39 Ω

R12, R18--51 Ω

R13, R16--200 Ω

R14, R17--620 Ω

R15--100 Ω

R19, R24, R25--50 Ω , 1%, 1/4W

R20, R26--10k Ω , 1%, 1/4W

R21, R28--100k Ω , 1%, 1/4W

R22, R27--648 Ω , 1%, 1/4W

R23, R29--5k Ω , 1%, 1/4W

SO1, SO2--8-pin DIP socket, low profile*

U3--Linear Technology LT1253 op amp, 8-pin DIP. Digikey: LT1253CN8#PBF-ND.

U4--Microchip Technology MCT6002 op amp, 8-pin DIP. Digikey: MCP6002-I/P-ND

W1--1 ft 26 AWG insulated magnet wire.

* stock item, available from many sources

++unless noted otherwise, all resistors are 5%, 1/4W

For PCB information, see Notes.

Digital and power-source portion of the SWR analyzer.

C15--0.1 μF * capacitor

C16--22 μF , 16V, tantalum*

DSP1--2.2-in. TFT LCD display with SPI interface, 240x320 ILI9341 51/AVR/STM32/ARM/PIC. Available at: <http://www.ebay.com/itm/191816725599> or <http://www.ebay.com/itm/191816725599>

ENC1--Rotary encoder, with switch, Digikey: PEC11L-4115F-S0020-ND

J1--3-position male header with latch, 0.10 in. pitch. Digikey: A19470-ND

J2--9-position female header, single-row, 0.10 in. pitch. Digikey: S7042-ND*

J3, J4--10-position female header, single row, 0.10 in. pitch. Digikey: S7043-ND*

J5, J6--12-position female header, single row, 0.10 in. pitch. Digikey: S7045-ND*

Substitute: 24-pin IC socket, 0.60 in. width.*

P1--3-position female rectangular header, 0.10-in. pitch. Digikey: WM2012-ND

PS1--Power source, battery or plug in, single DC output between 6 and 16 V.*

R1--2.7k Ω *++

R2, R3, R4, R5--4.7k Ω *

R6, R7, R8--10k Ω *

SW1--Slide switch, SPDT, PCB mount. Digikey: EG2585-ND

SW2--Push button, N.O., PCB. Digikey: EG4791-ND

U1--Arduino Mini Pro microcontroller module, ATMEGA328P MCU, 5V operation at 16 MHz. Digikey: 1568-1055-ND, or <http://www.ebay.com/itm/191679508570>.

U2--AD9850 DDS Signal Generator Module, Sine or Square Wave 0-40 MHz

<http://www.ebay.com/itm/191847094502>

U5--Low-dropout voltage regulator, SOT223 SMT package. Digikey: 576-1276-ND

Misc: FTDI Basic Breakout USB-TTL 6 PIN 3.3/5V

<http://www.ebay.com/itm/320907184616>

2@ rectangular connector contacts. Digikey: WM1114-ND

* stock item, available from many sources

++unless noted otherwise, all resistors are 5%, 1/4W