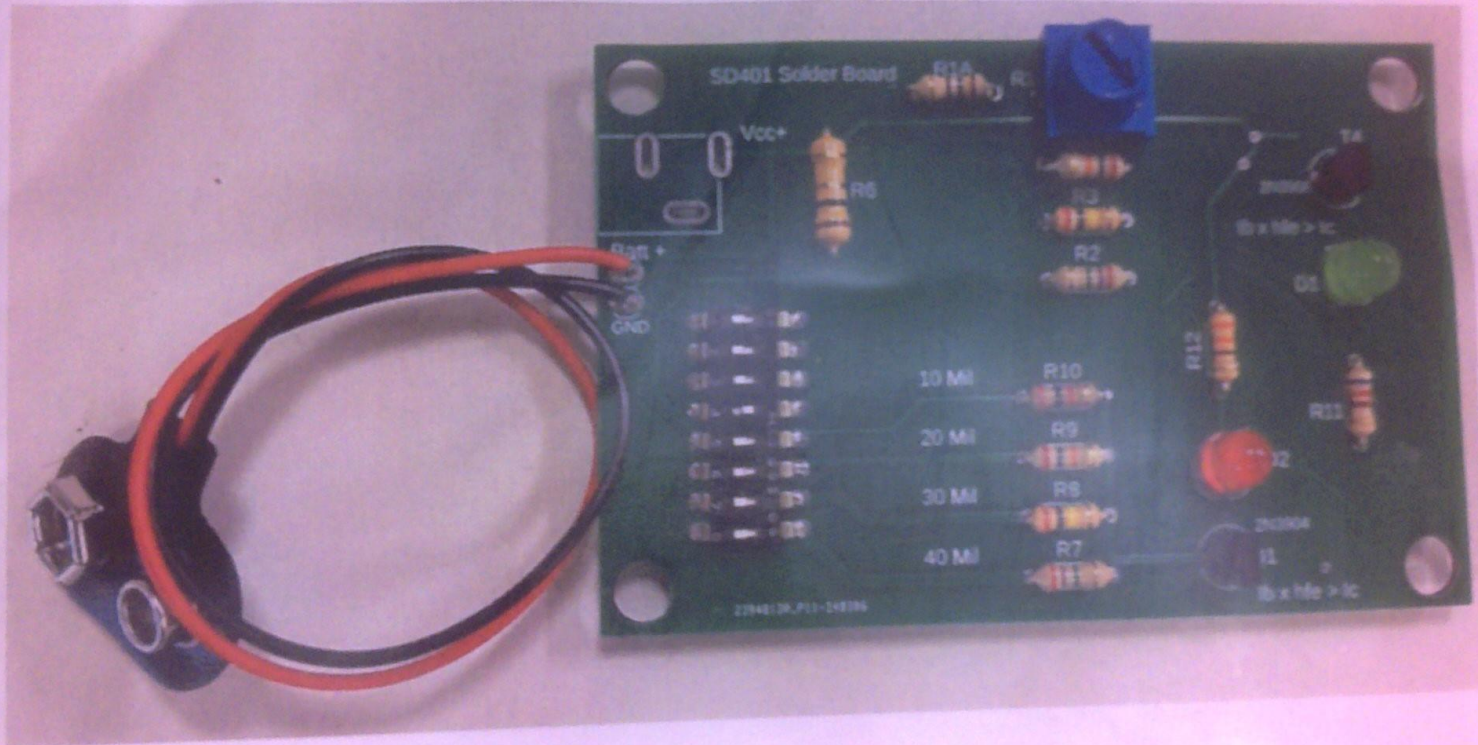


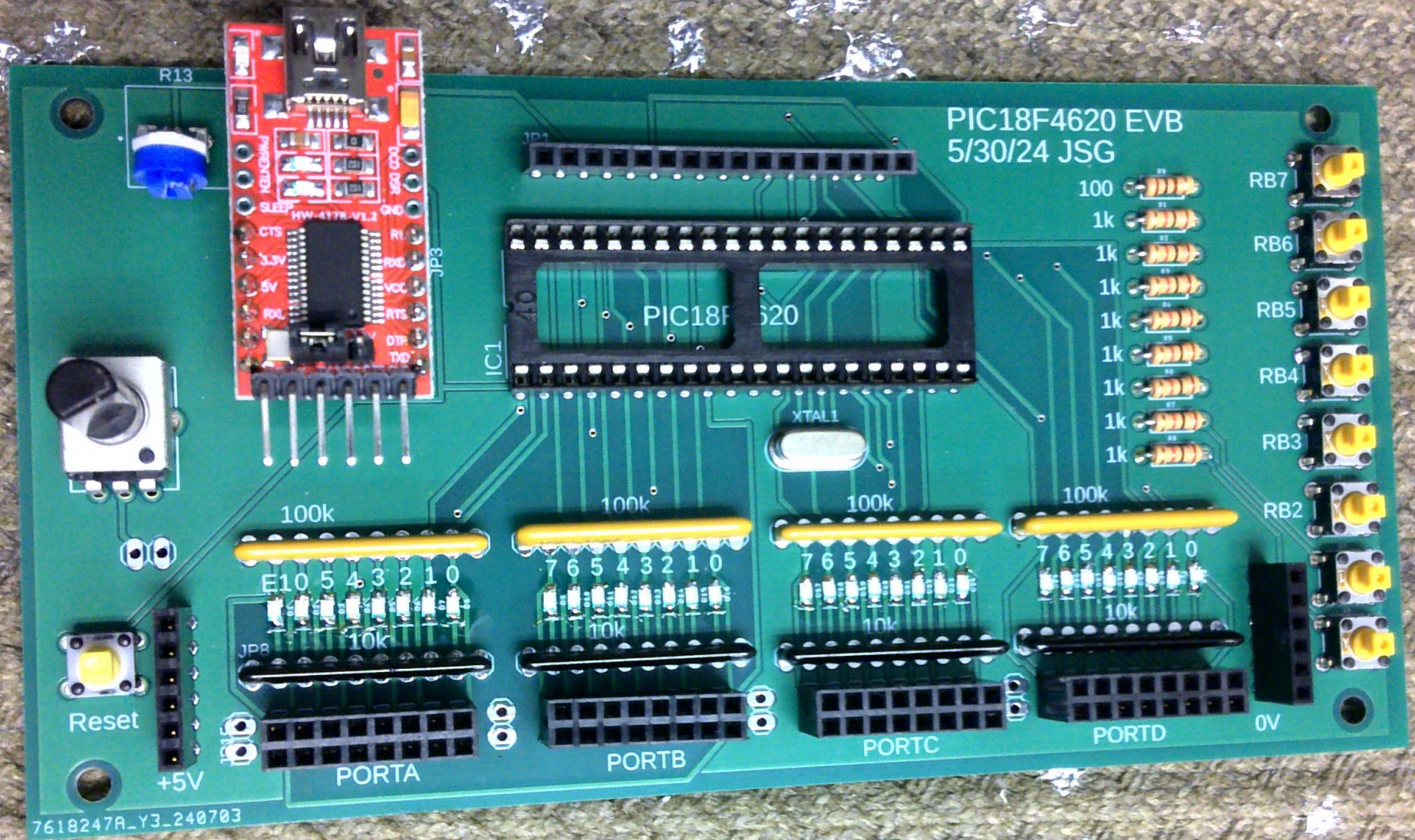
Soldering Basics using the SD401 soldering practice board



NDSU Electrical & Computer Engineering

SD 401 Solder practice Board





PIC18F4620 EVB
5/30/24 JSG

PIC18F4620

IC1

XTAL1

R13

JP3

JP1

100k

100k

100k

100k

E10 5 4 3 2 1 0

7 6 5 4 3 2 1 0

7 6 5 4 3 2 1 0

7 6 5 4 3 2 1 0

JP8

10k

10k

10k

10k

Reset

+5V

PORTA

PORTB

PORTC

PORTD

0V

RB7

RB6

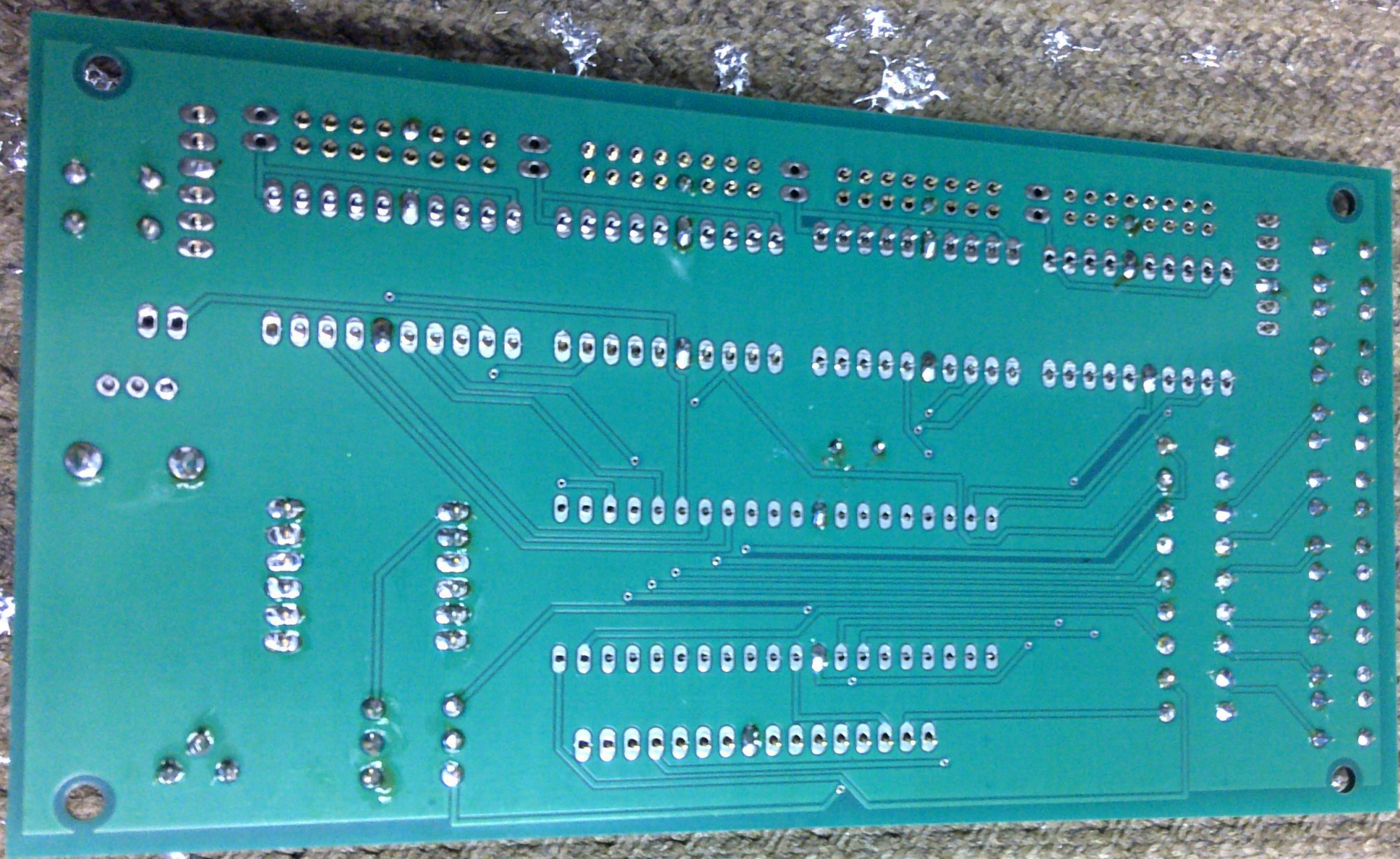
RB5

RB4

RB3

RB2

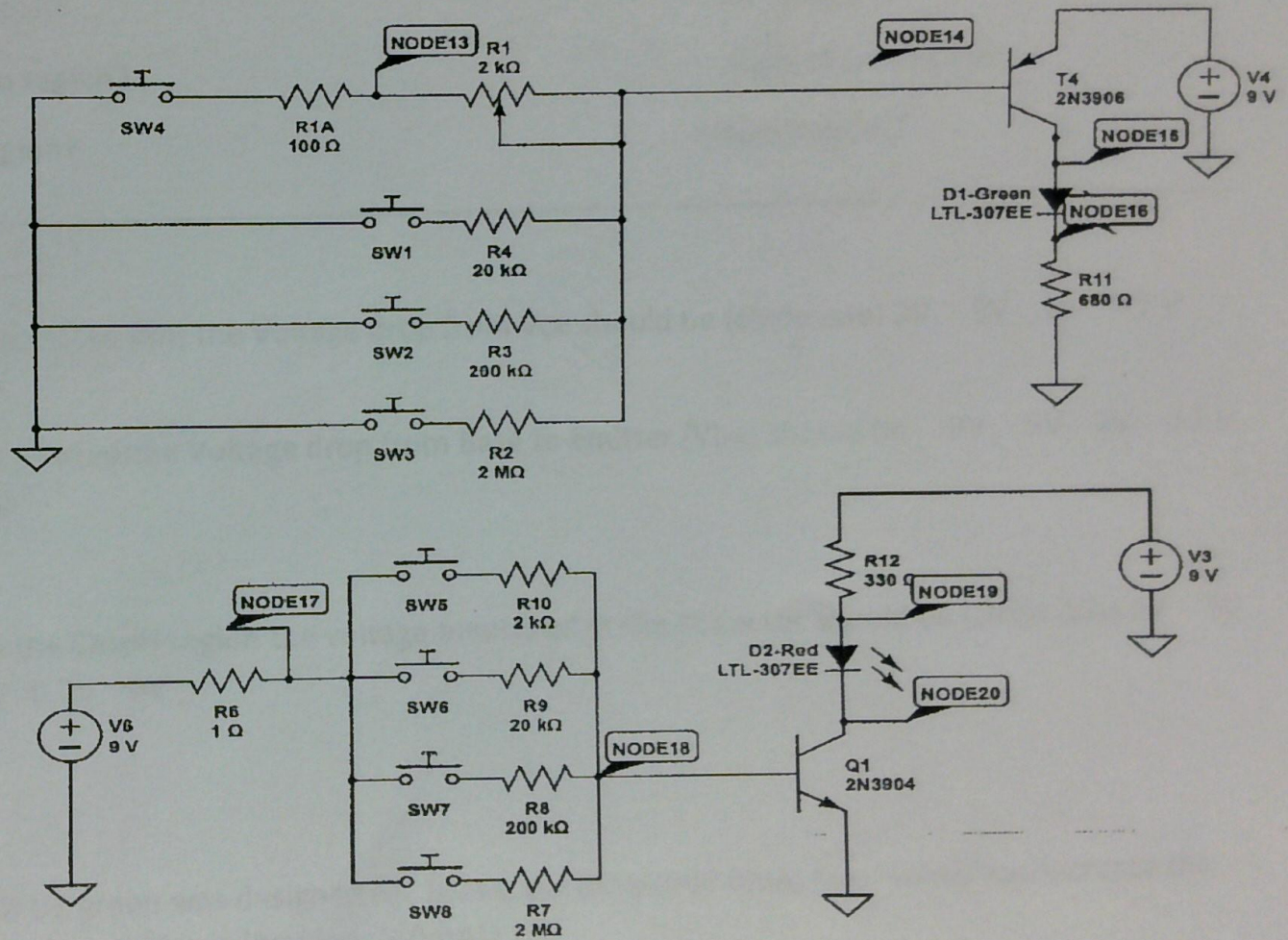
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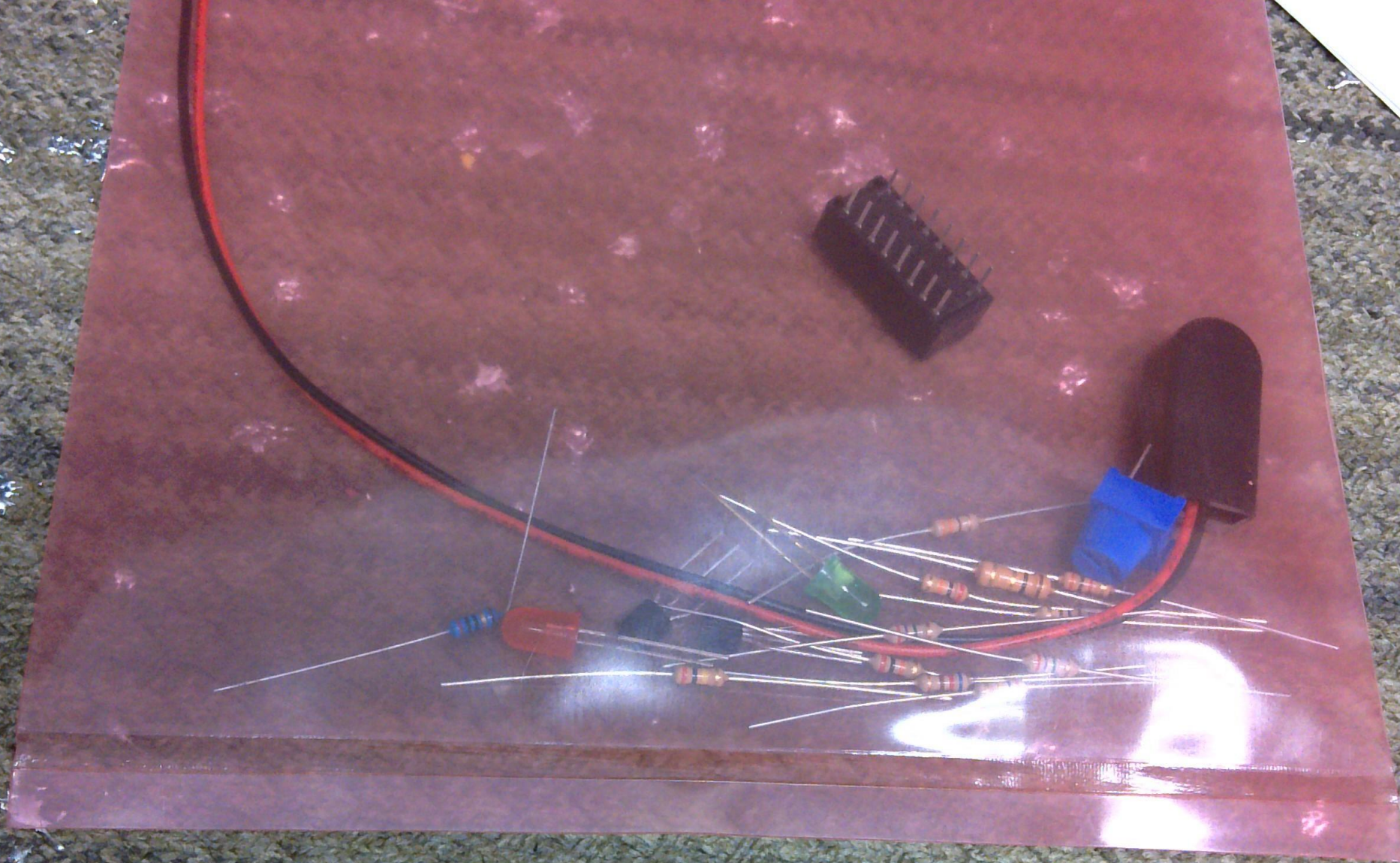


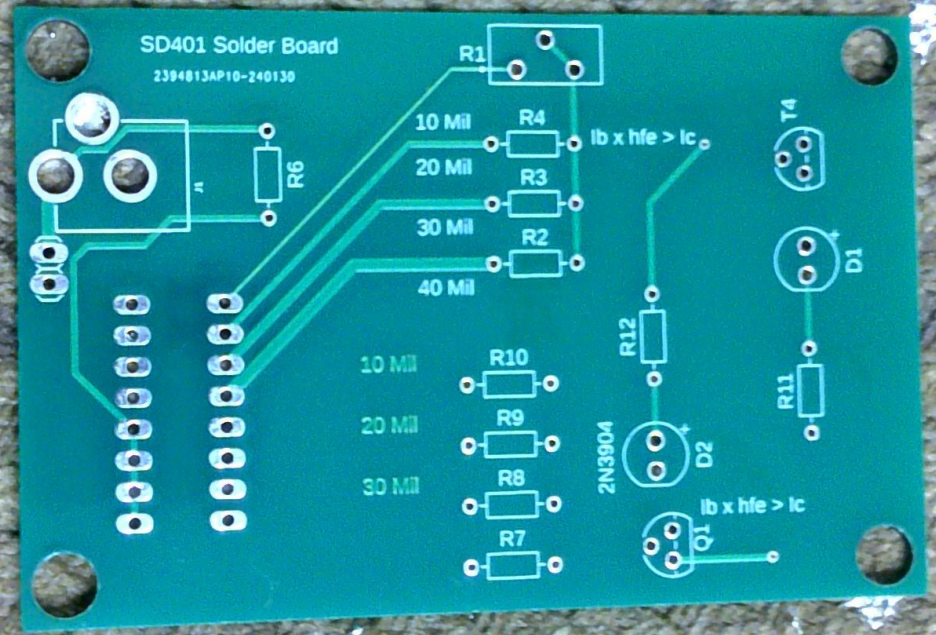
Soldering LAB Worksheet for SD401

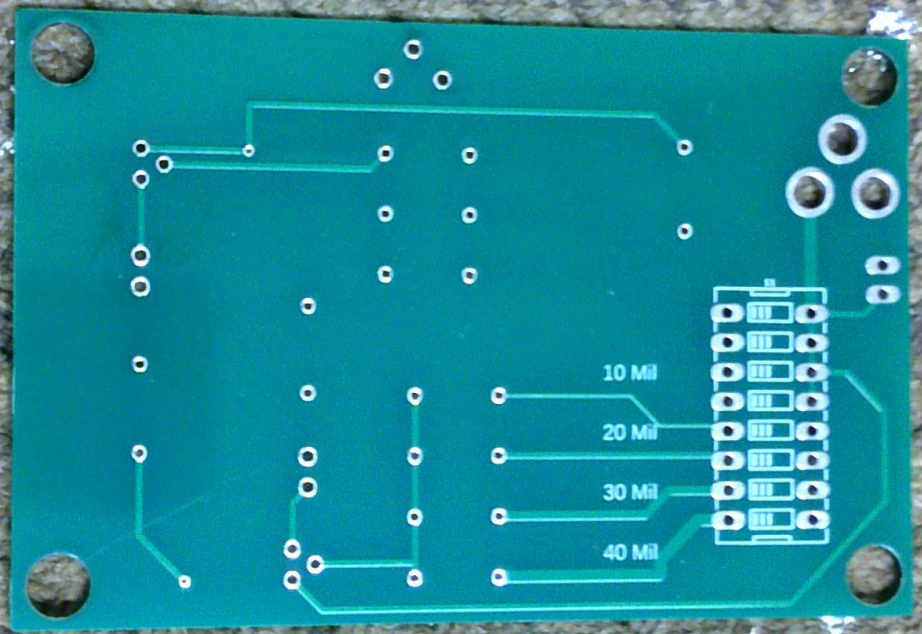
Using the Following Schematic, add the following through hole components and solder the board

using unleaded (60/40 or 63/37 rosin core solder).







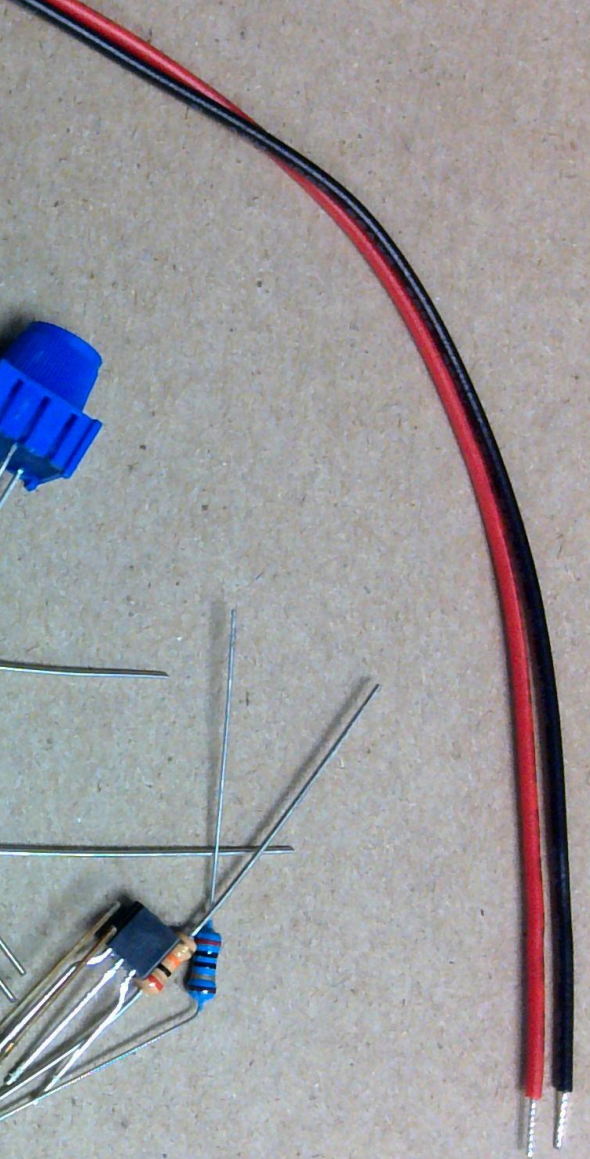
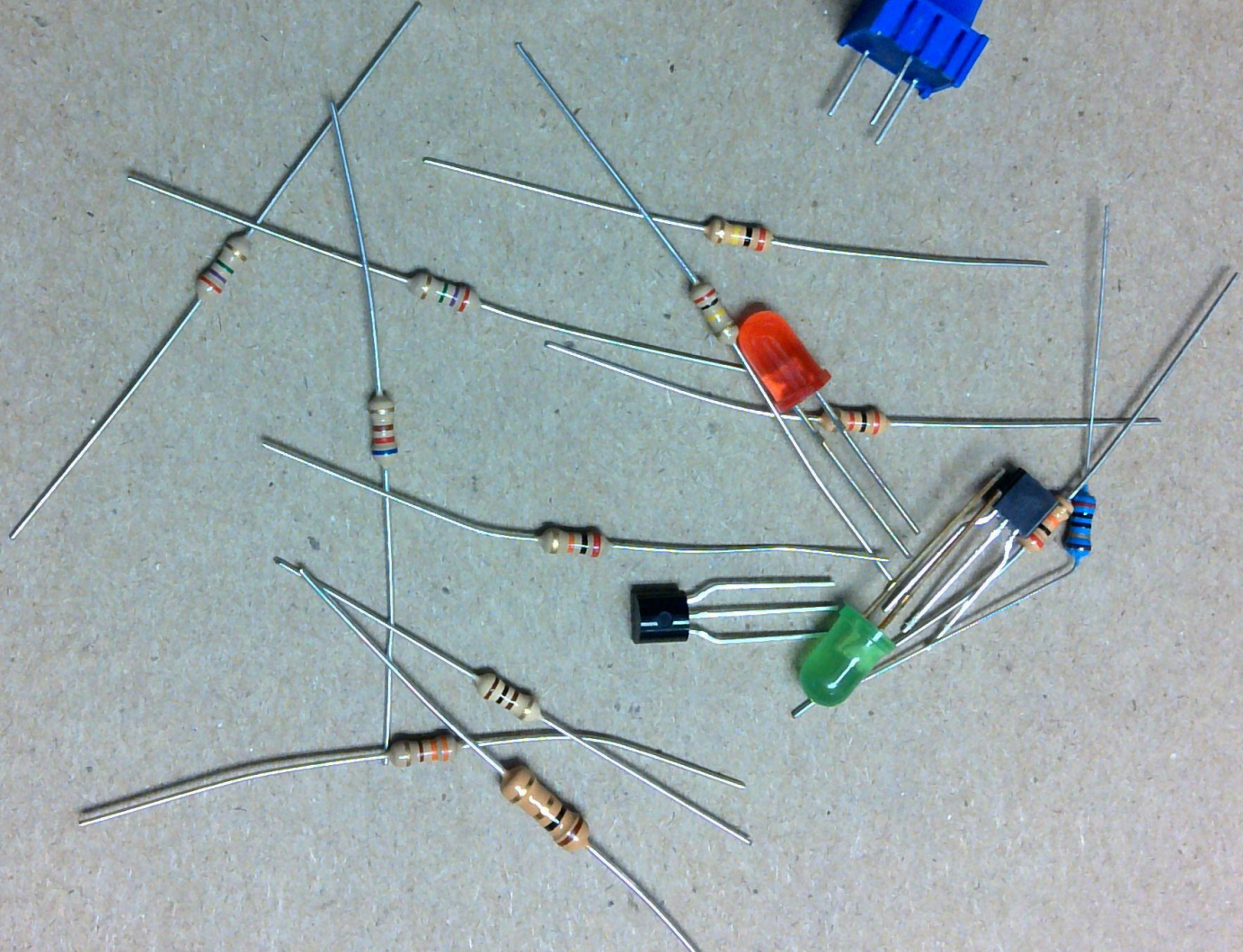


10 Mil

20 Mil

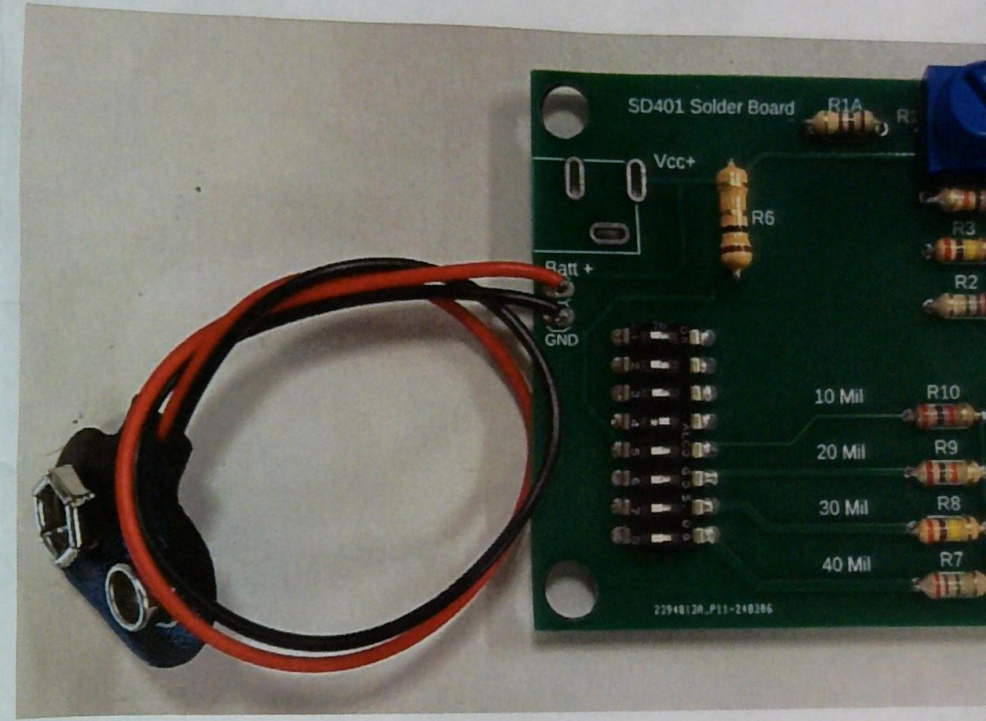
30 Mil

40 Mil



SD 401 Solder practice Board

R1	Variable Resistor (2k OHM)
R1A	100 OHM
R2	2M OHM Resistor
R3	200k OHM Resistor
R4	20k OHM Resistor
R6	1 OHM Resistor
R7	2M OHM Resistor
R8	200k OHM Resistor
R9	20k OHM Resistor
R10	2k OHM Resistor
R11	520 OHM
R12	330 OHM
D1	LED - Green
D2	LED - Red
Q1	Transistor 2N3906 (PNP)
T4	Transistor 2N3904 (NPN)
S1	8 position Dip single pole single throw (SPST) switch
	9V Battery connector (SNAP)









HONGWAY

USE SAFETY GLASSES
MAX.040"(1mm) DIA. COPPER WIRE







MG Chemicals®

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0.025" Diam.

23 Gauge

2.2% Flux

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Batch# 13 346

Sn60/Pb40

SOLDER

Cat. No. 4894-2276 (1/2 lb)



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650

SENSATEMP®

ST 45

0.1" Short

Chemicals



SODR-TEK
by PACE

649

SENSATEMP

glower

ST 45

0.1" Short

Chemicals



SODR+TEK
by PACE

650

SENSATEMP®

glower

ST 45

700F

0.1" Shortl
Jamaica 199





SODR+TEK
by PACE

652

SENSATEMP

glower



ST 45

0.1" Shorti
Jerrico 19





SODR+TEK
by PACE

650

SENSATEMP

glower

ST 45

700F

0.1" Short



SODR+TEK
by PACE

556

ST 45

0.1" Shortl
Jeraco 19



SODR+TEK
by PACE
glower

700F
660

SENSATEMP®

ST 45

0.1" Shortl
January 19



glower
SODR+TEK
by PACE

660

SENSATEMP®

ST 45

0.1" Shorti
Jasco 19



SODR+TEK
by PACE
glower

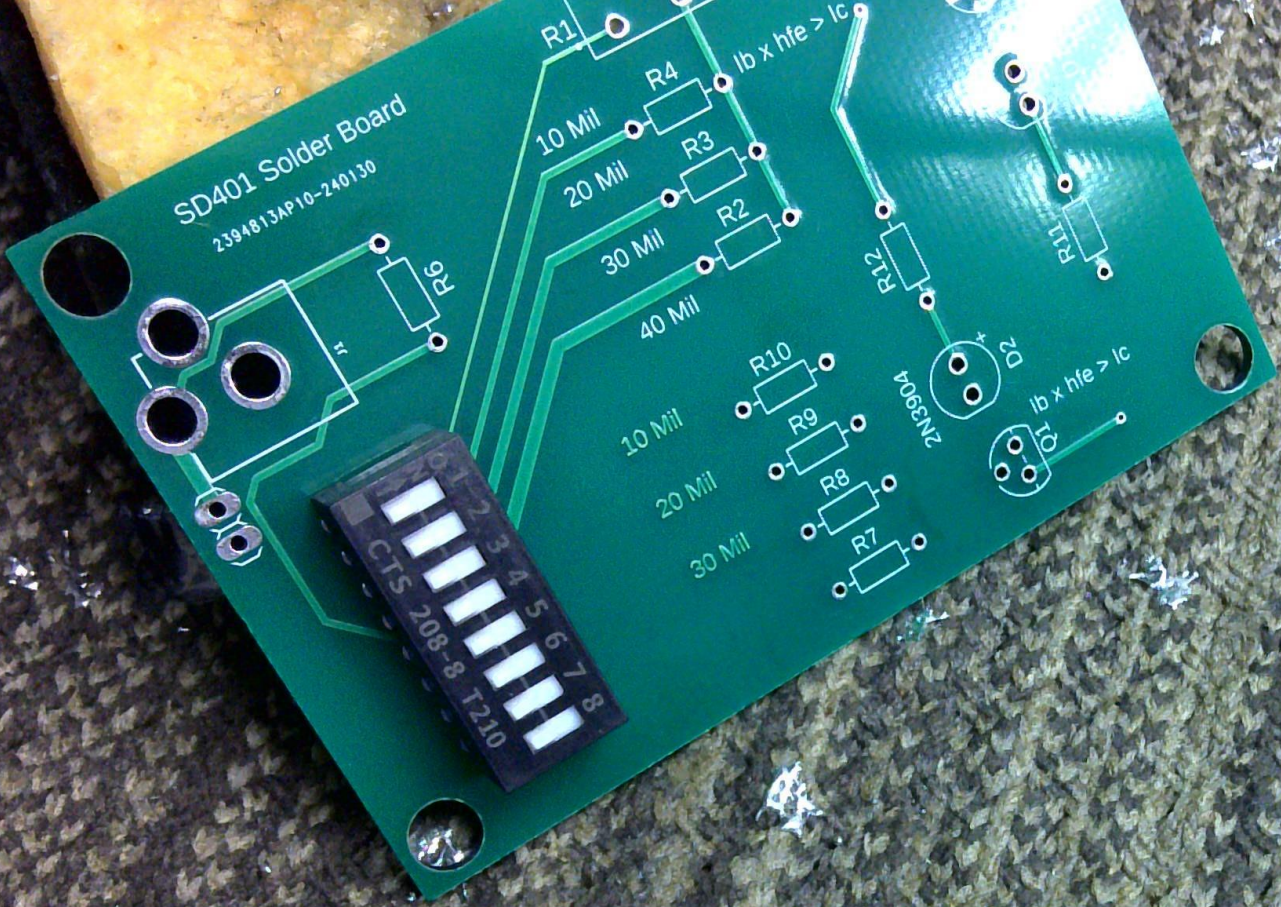
660

SENSATEMP®

ST 45

0.1" Shortl
Janeco 199





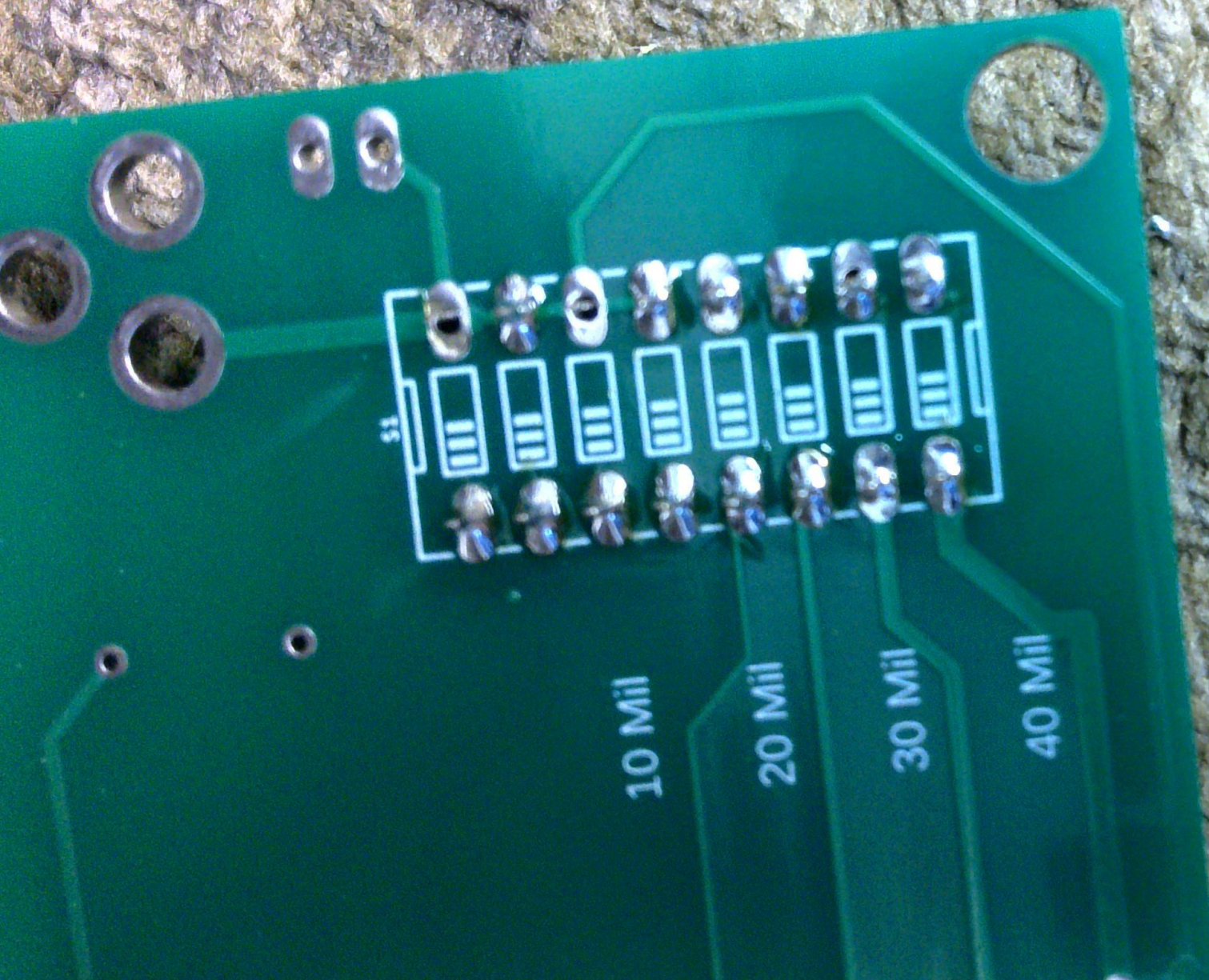


40 Mil

30 Mil

20 Mil

10 Mil

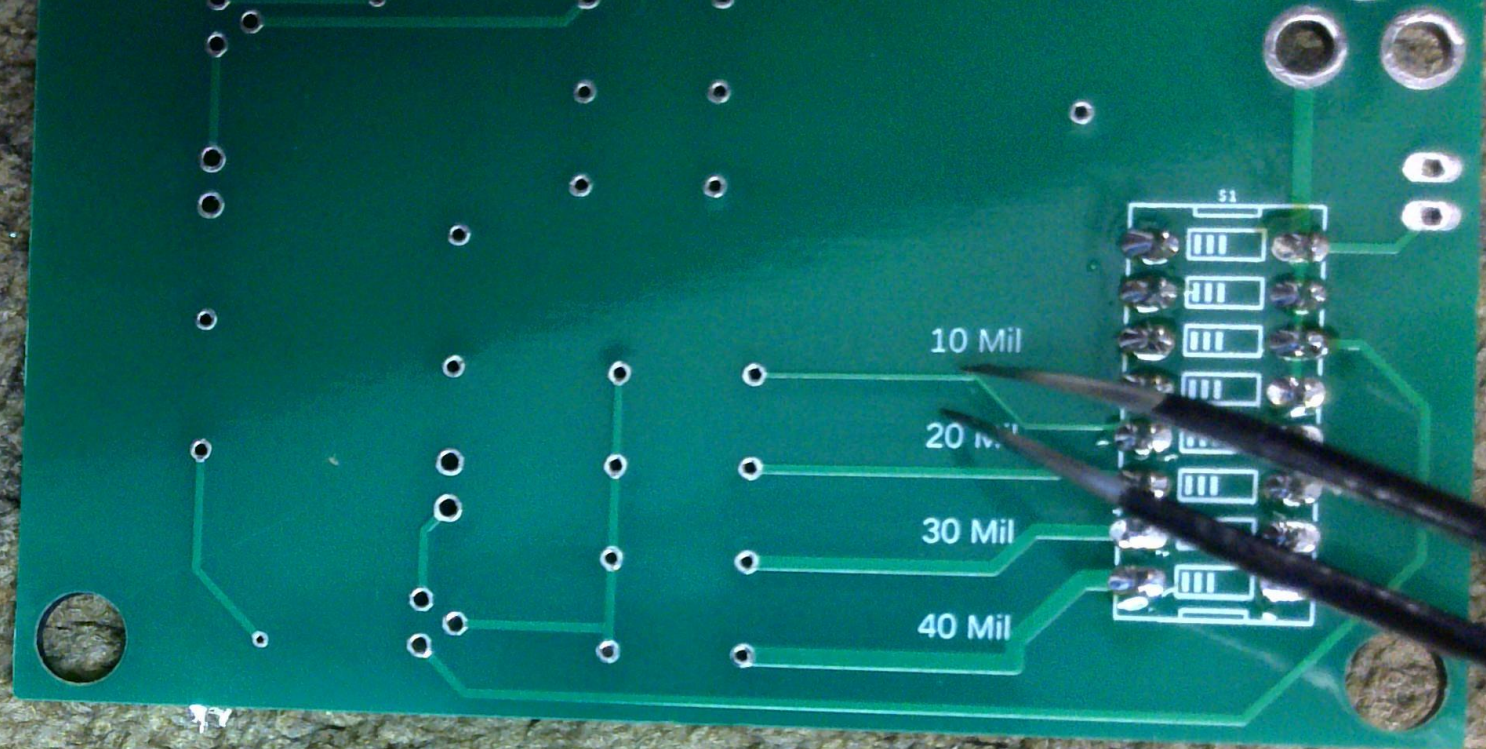


10 Mil

20 Mil

30 Mil

40 Mil



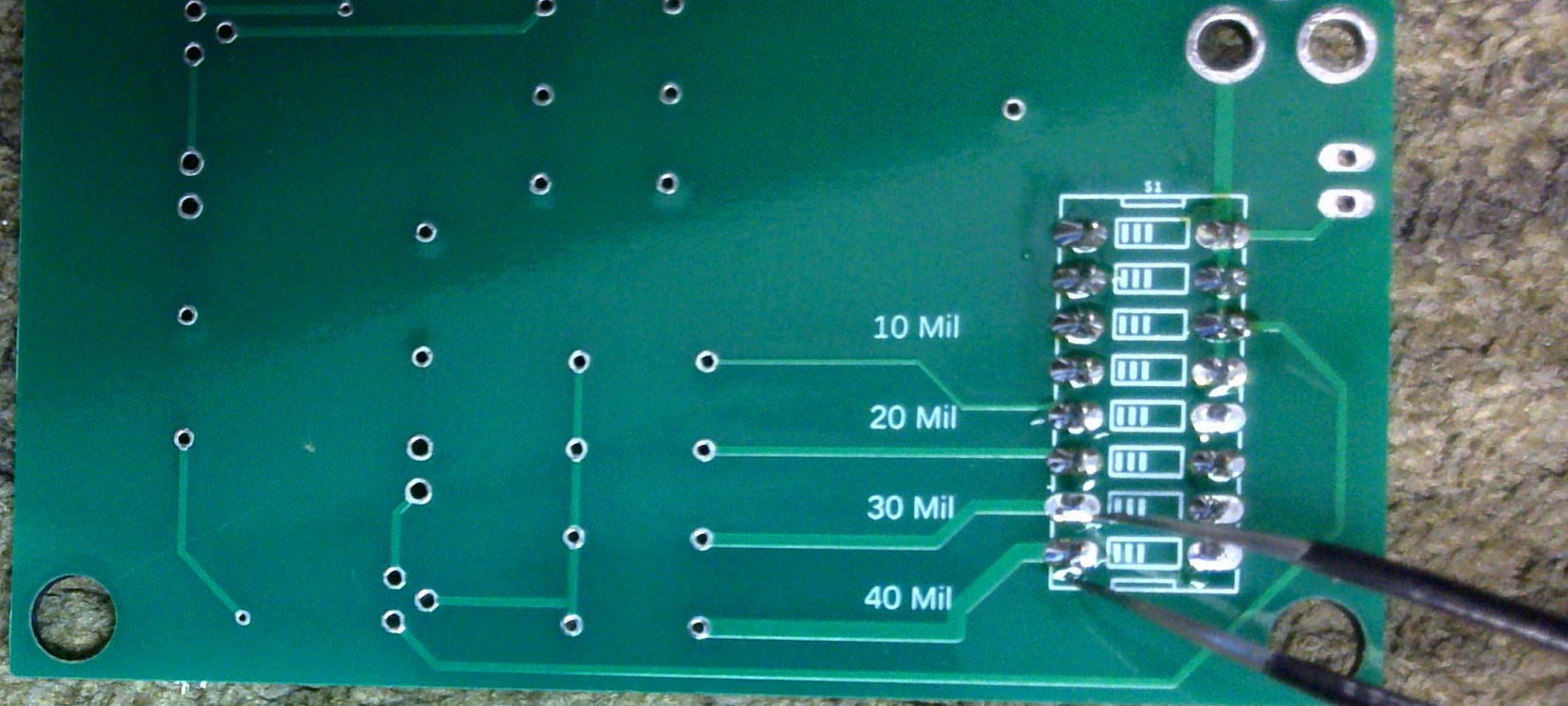
10 Mil

20 Mil

30 Mil

40 Mil

51



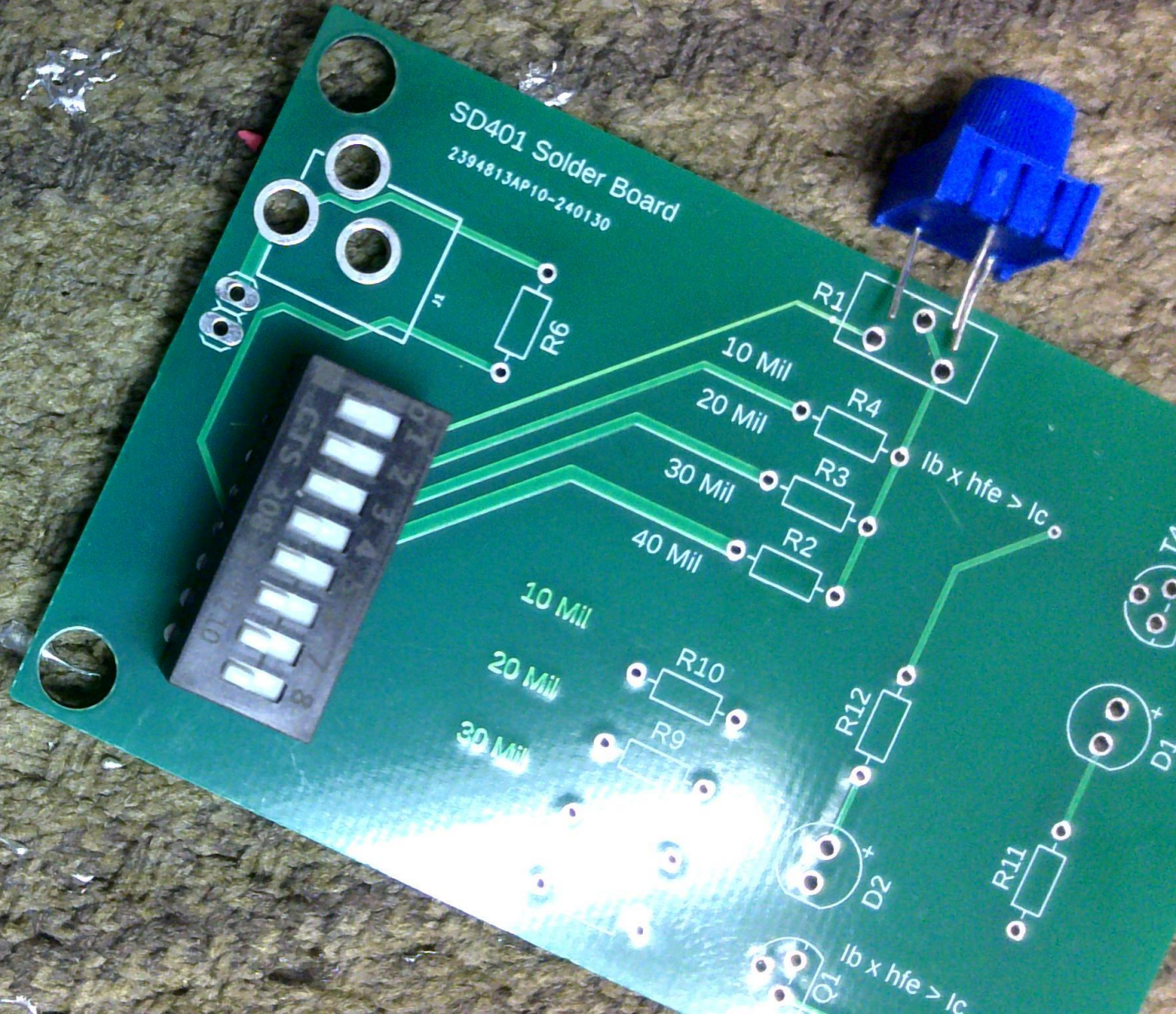
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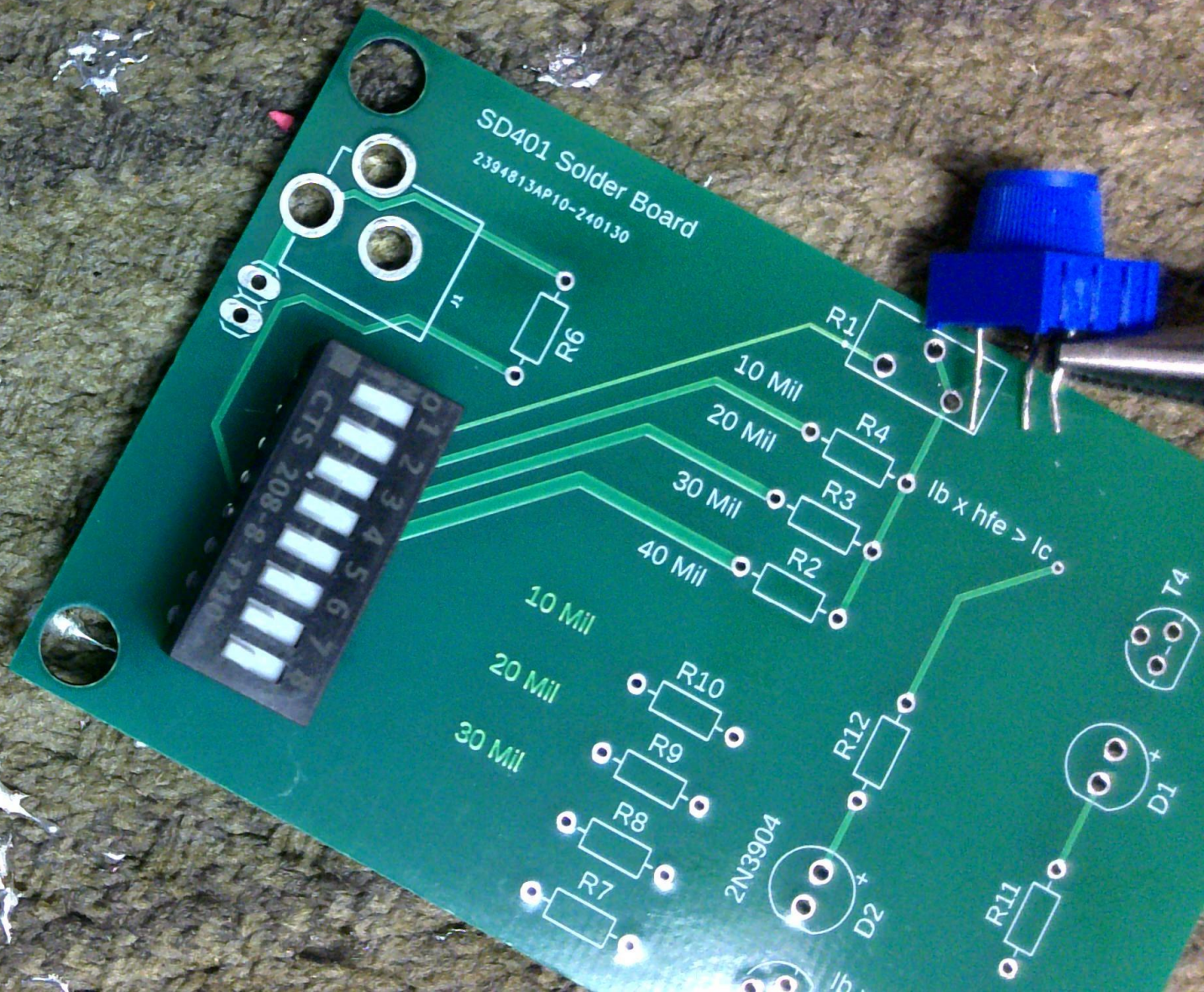
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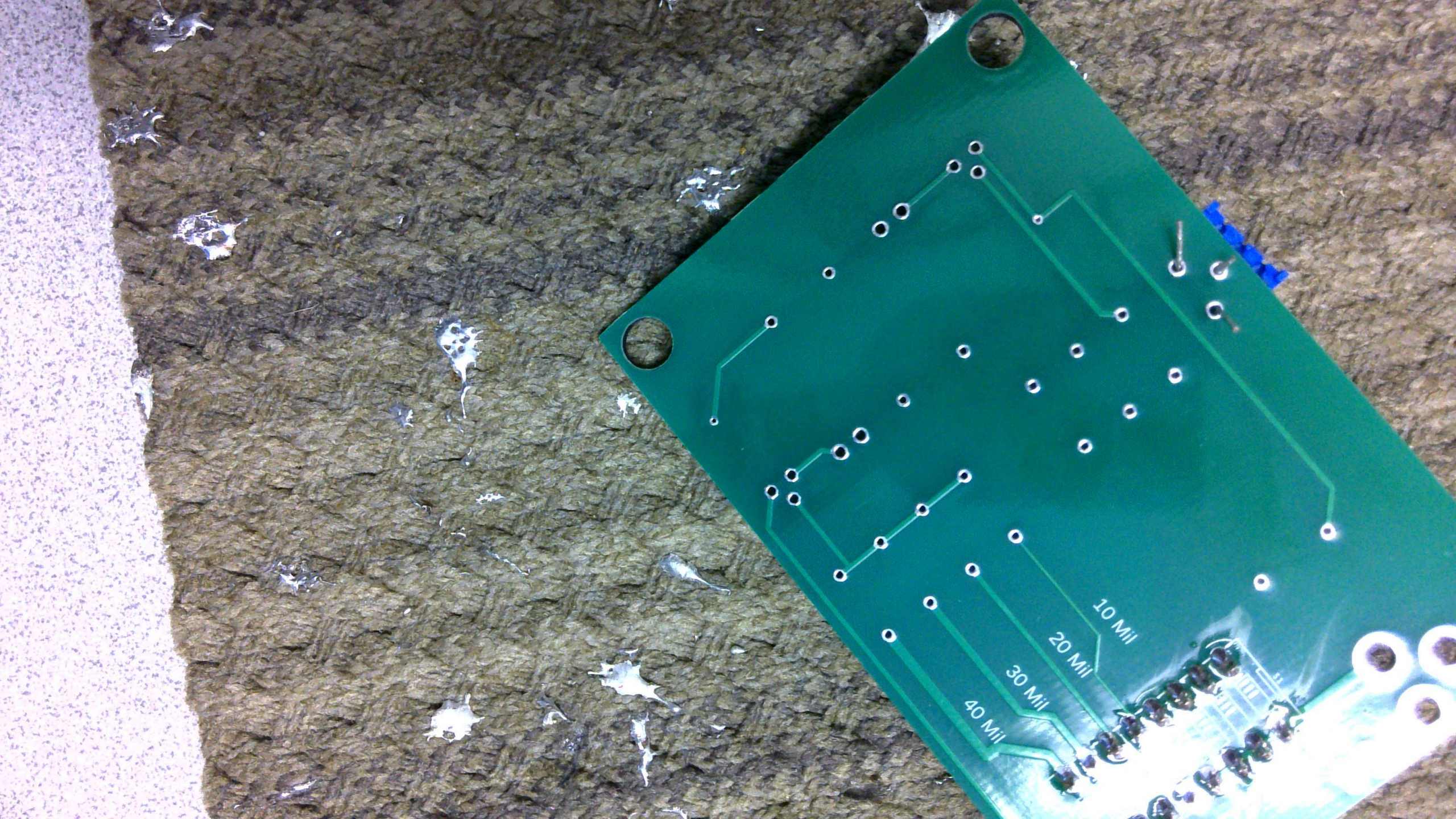
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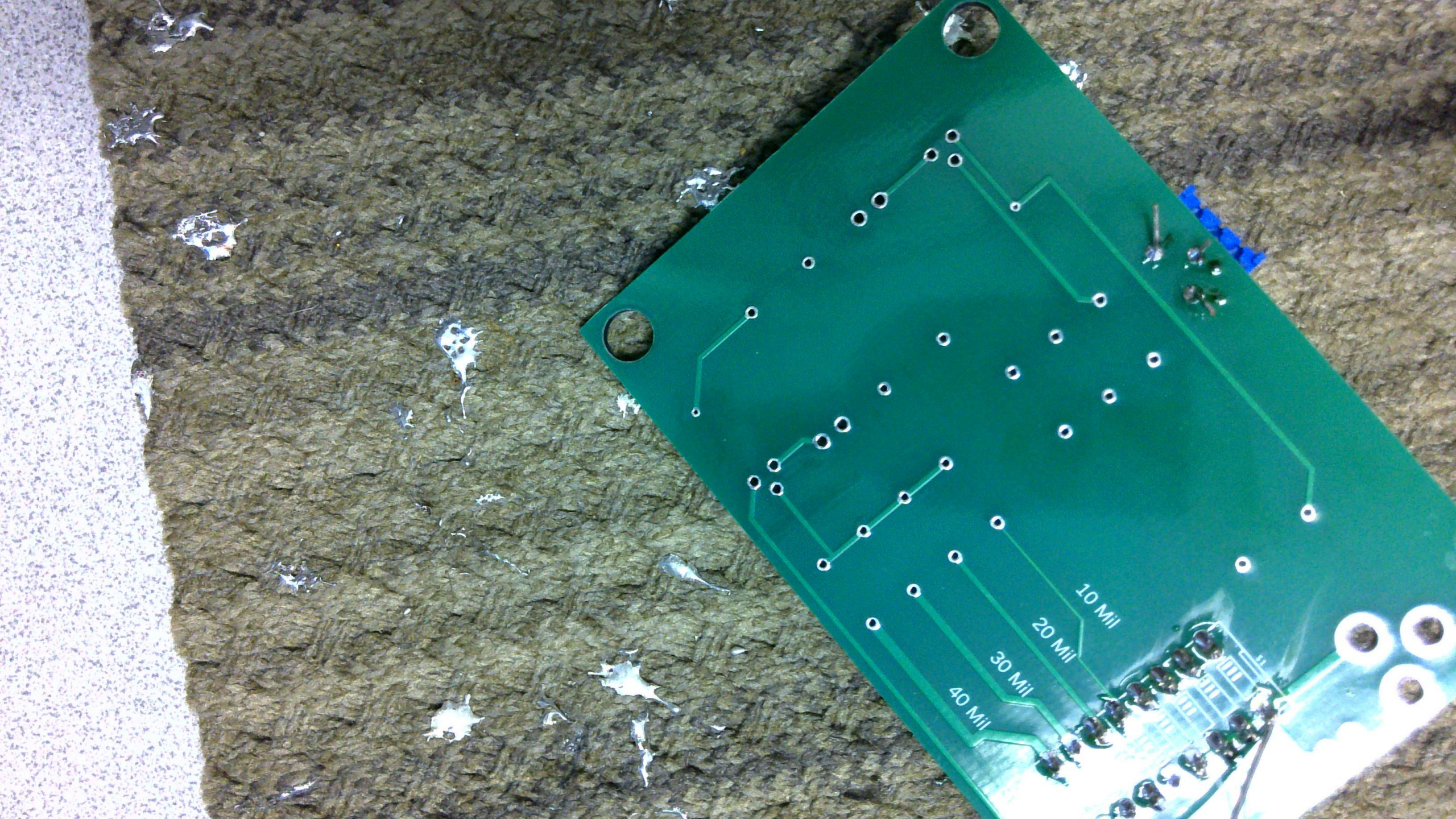
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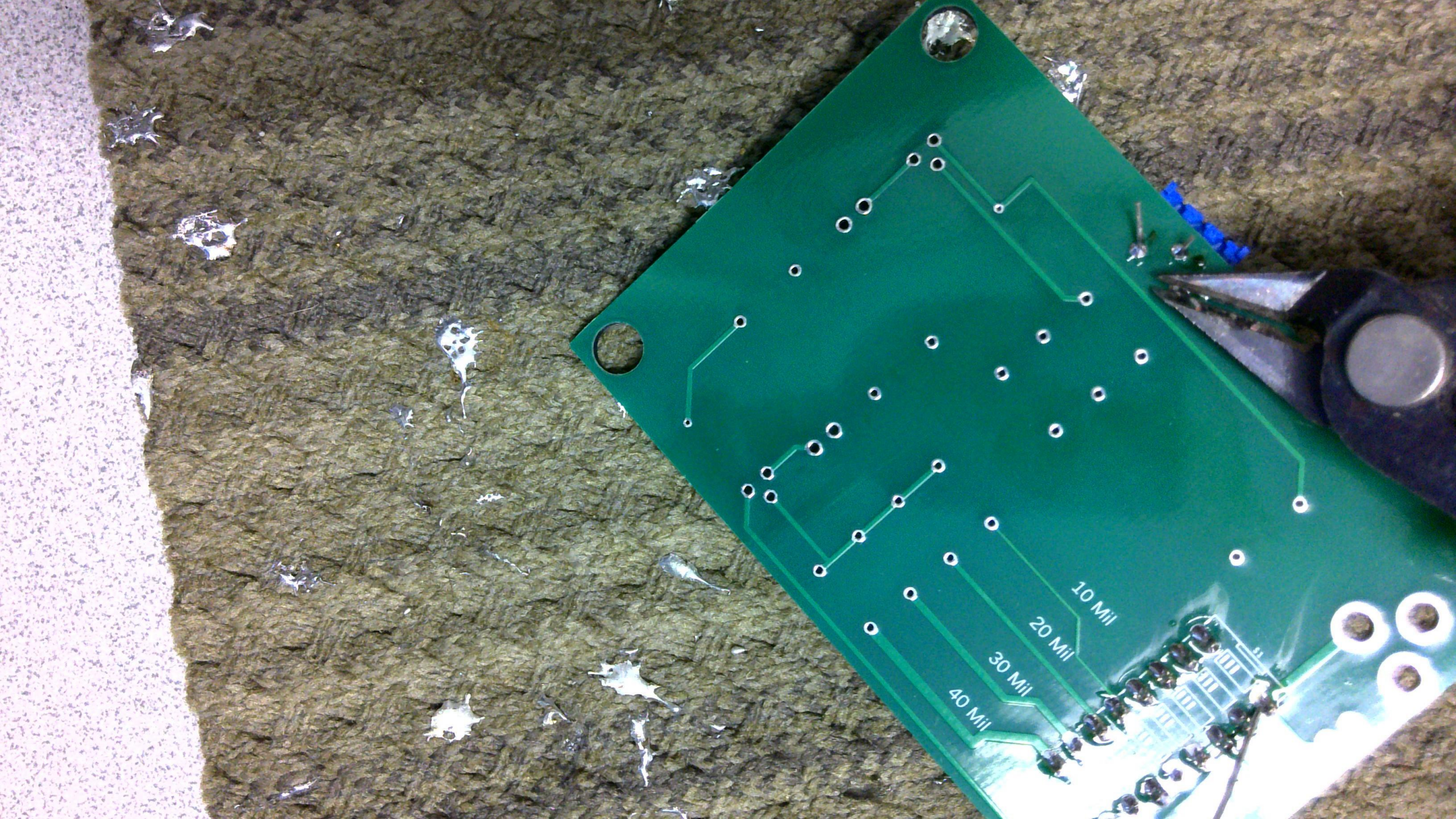
S1





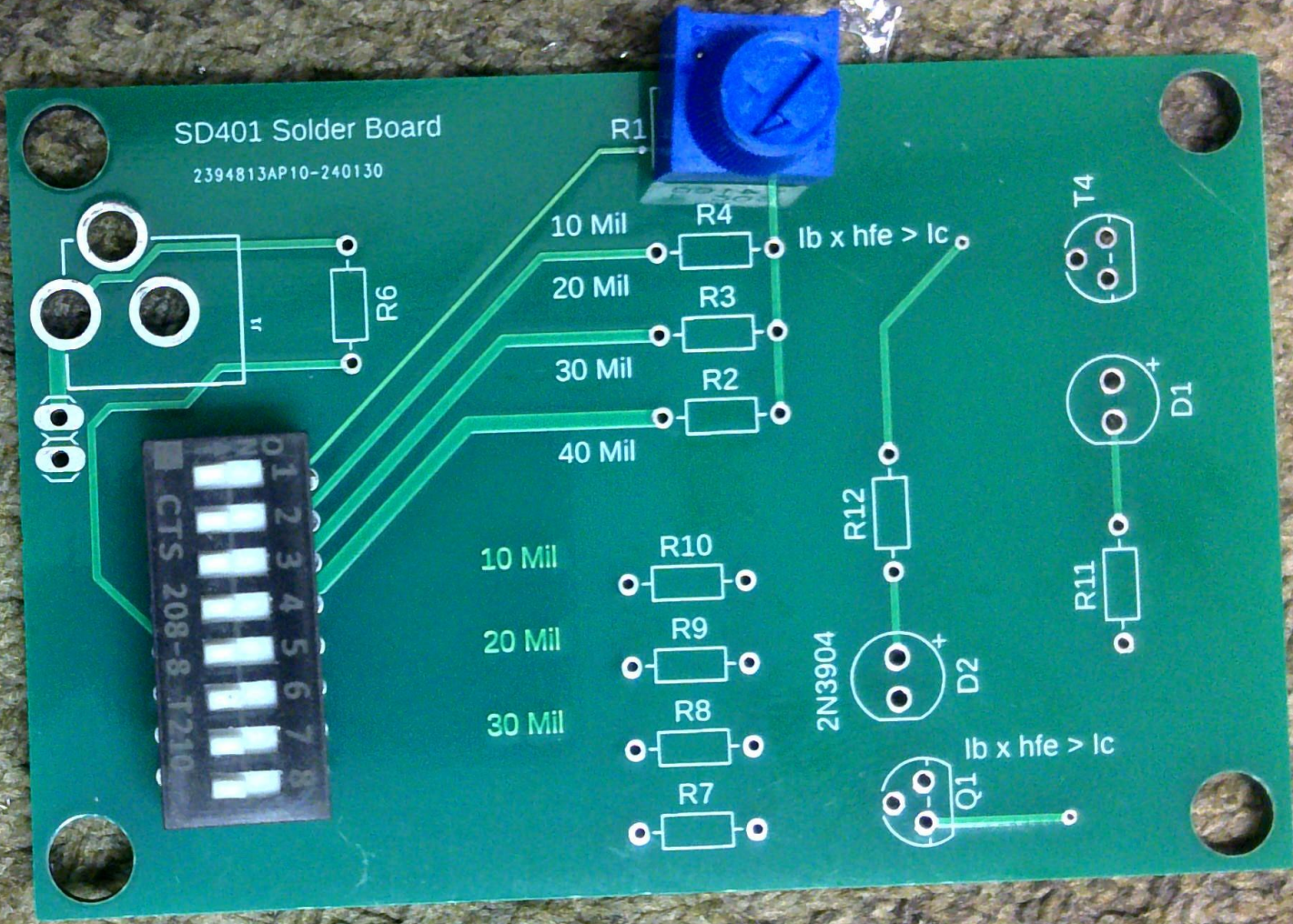




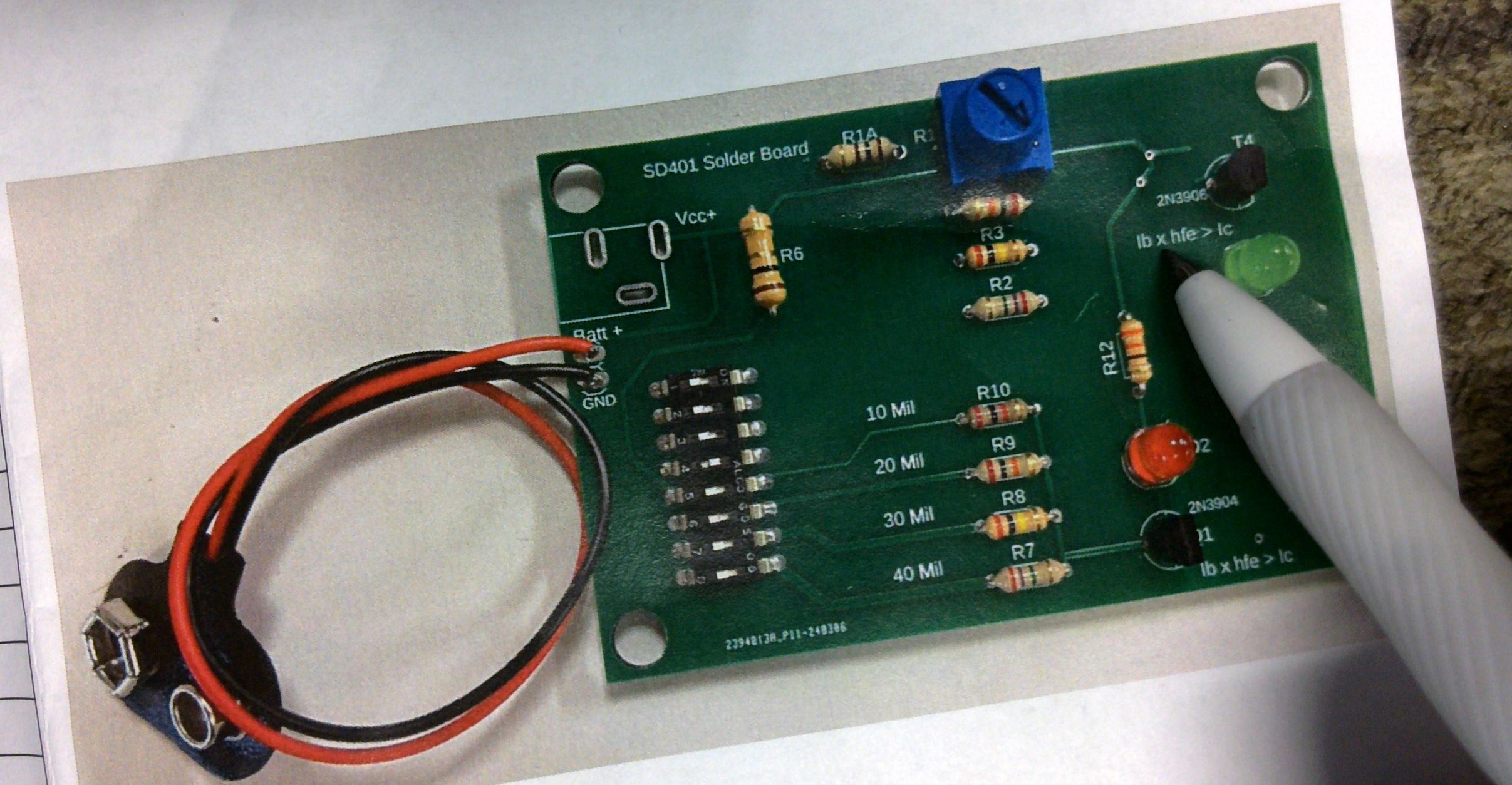


SD401 Solder Board

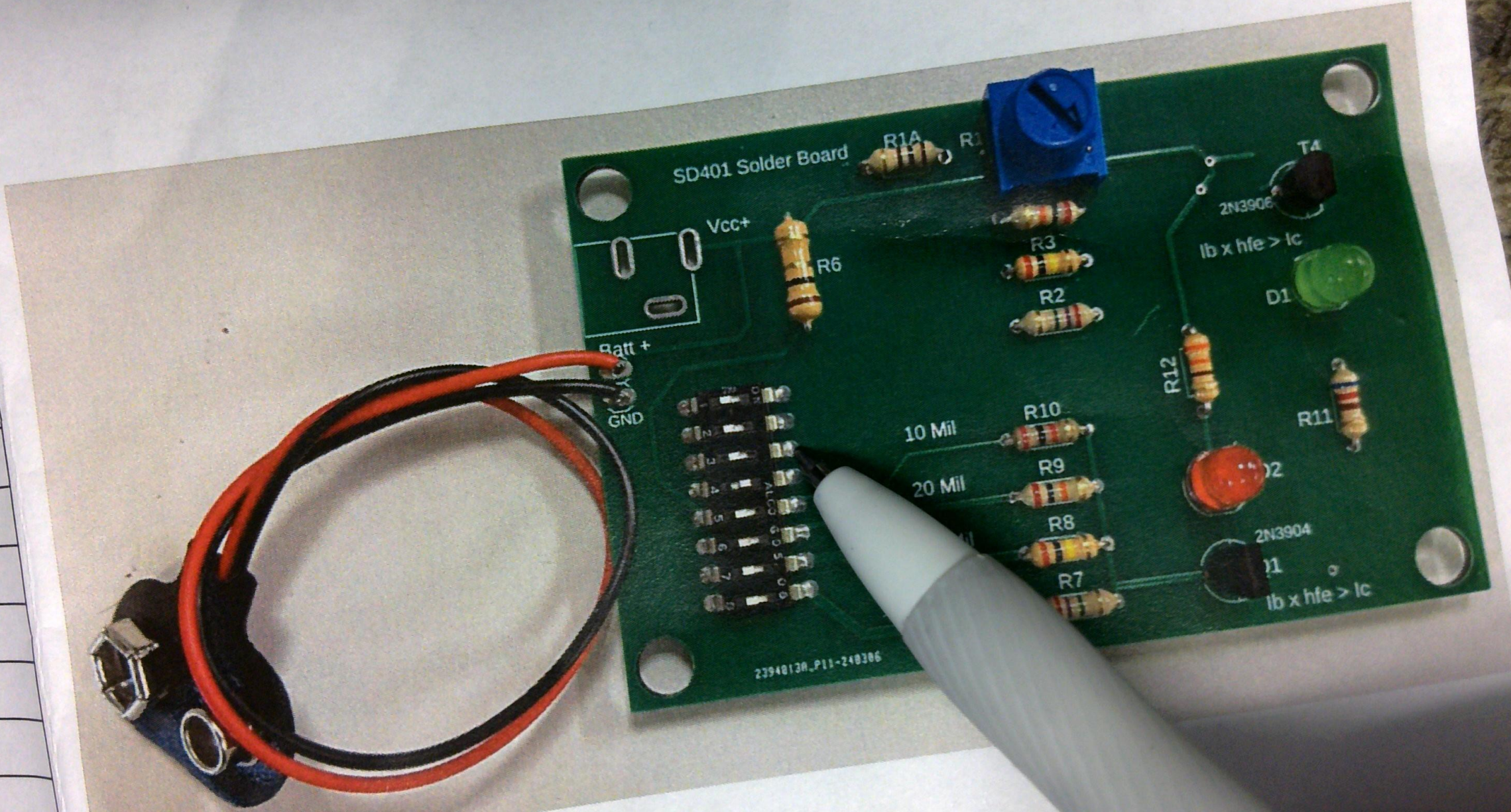
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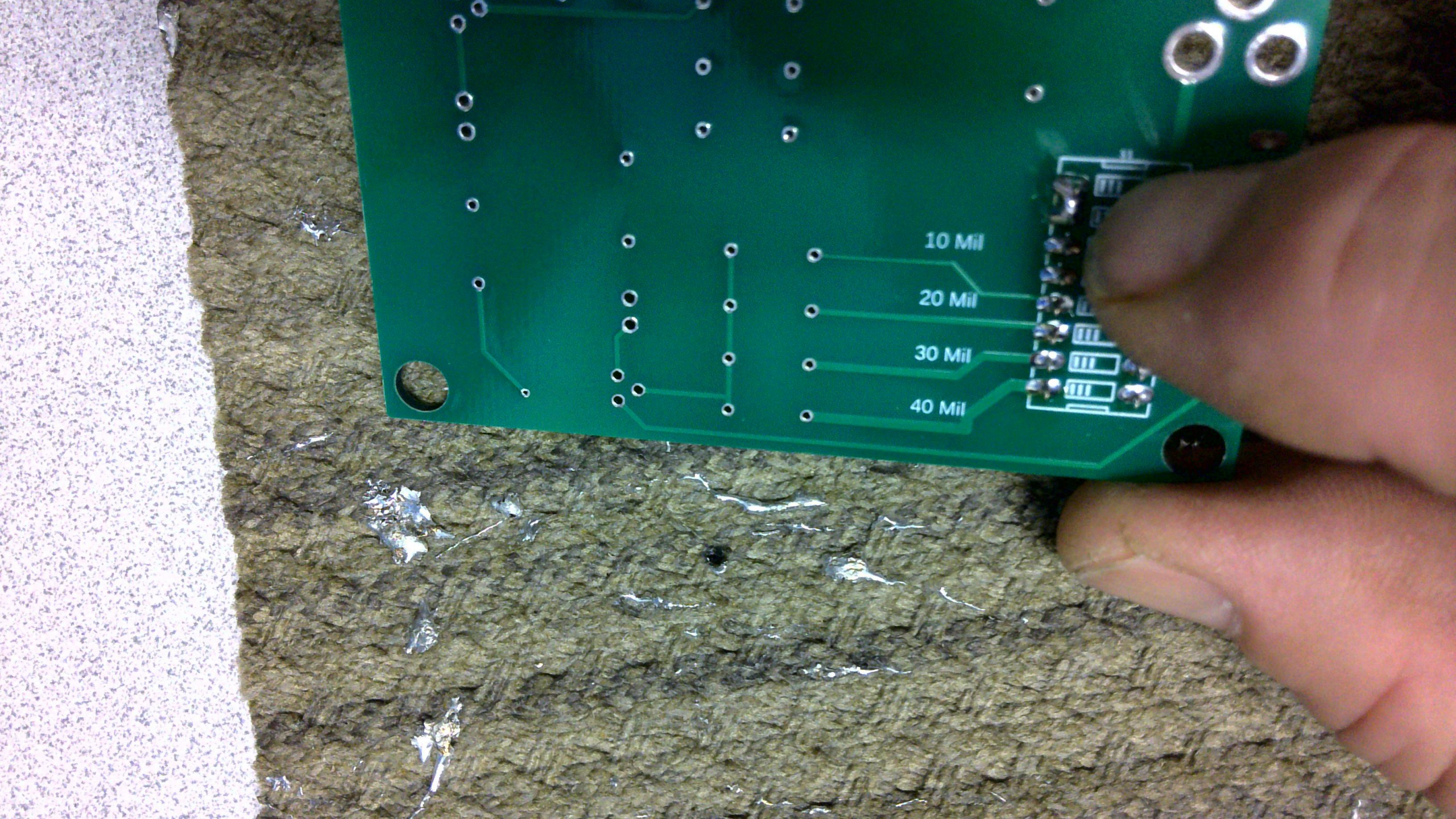


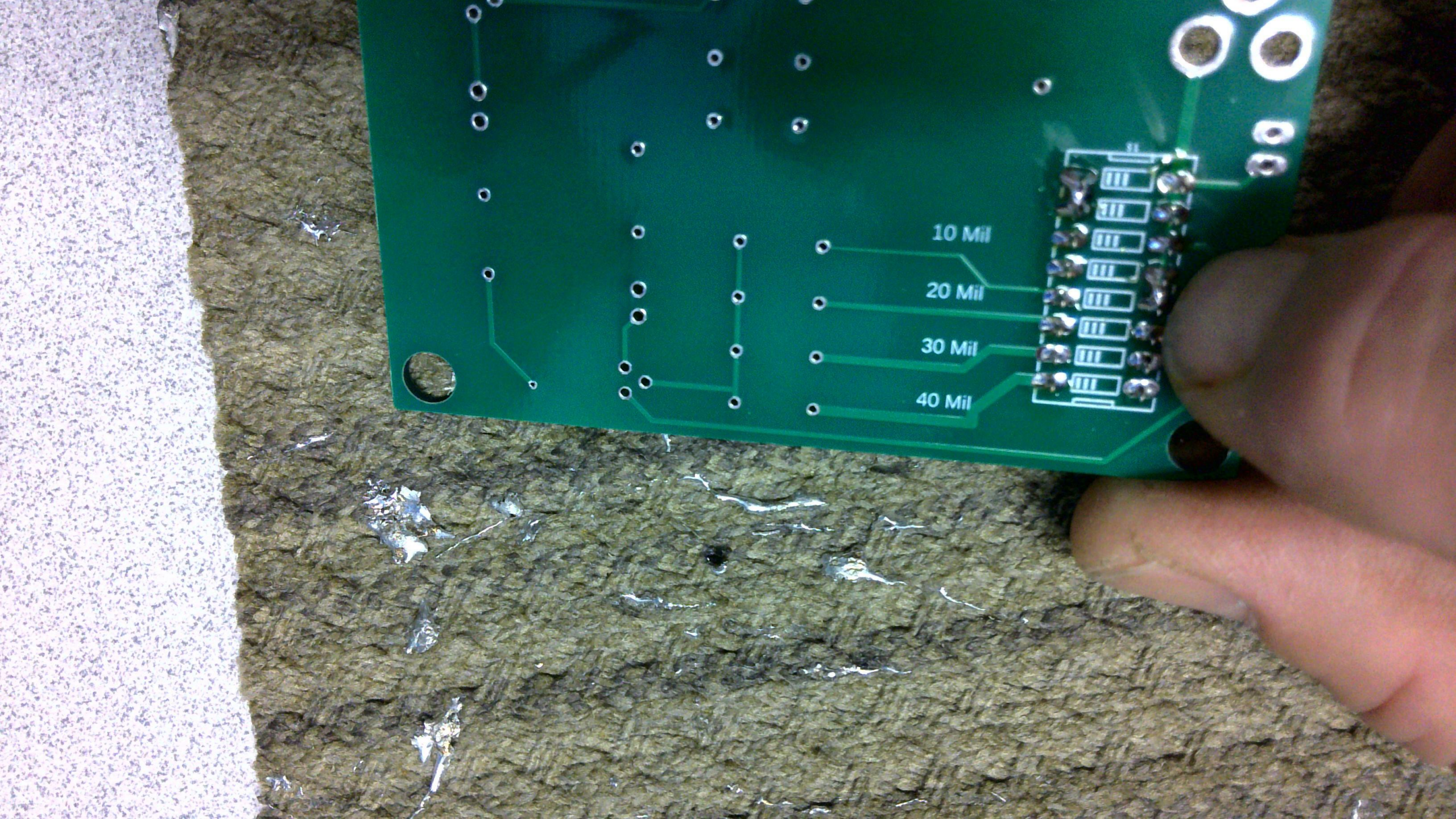
SD 401 Solder practice



SD 401 Solder practice







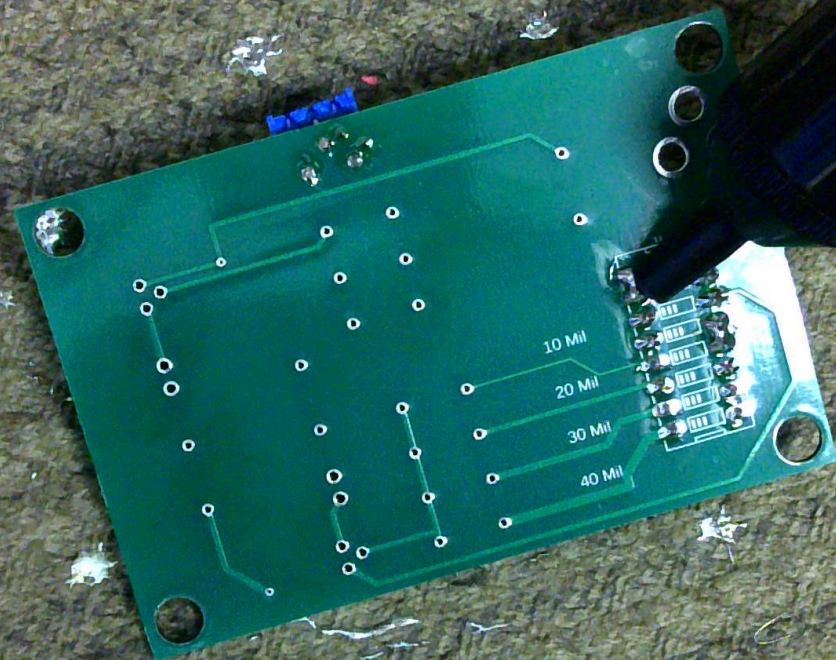
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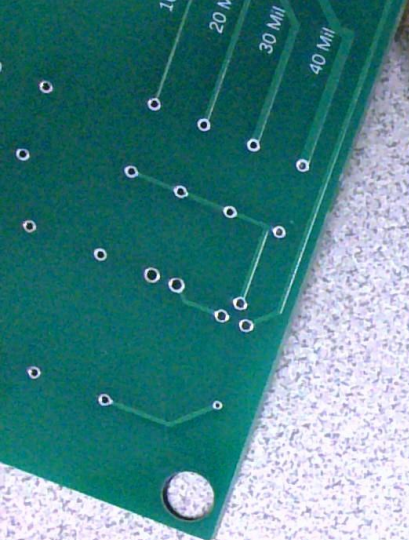
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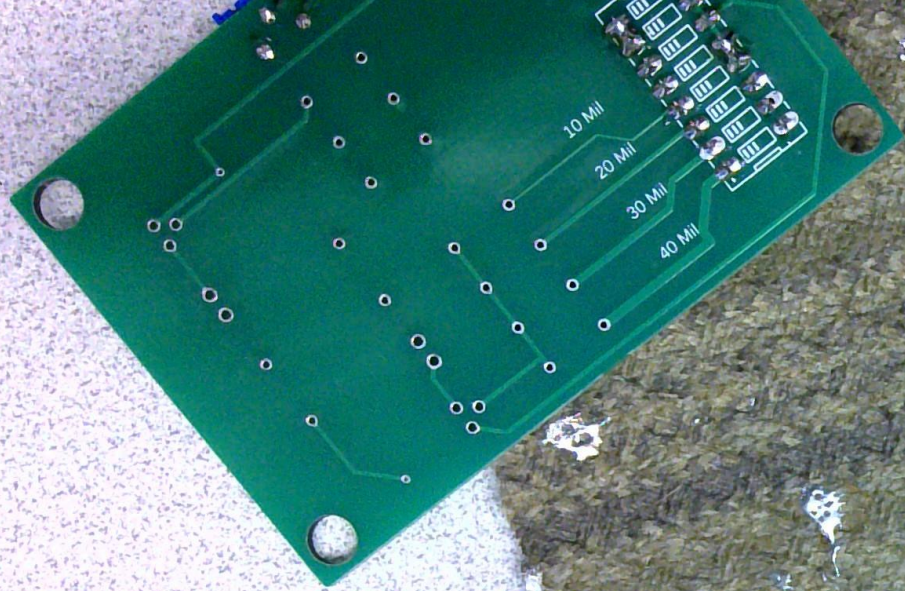
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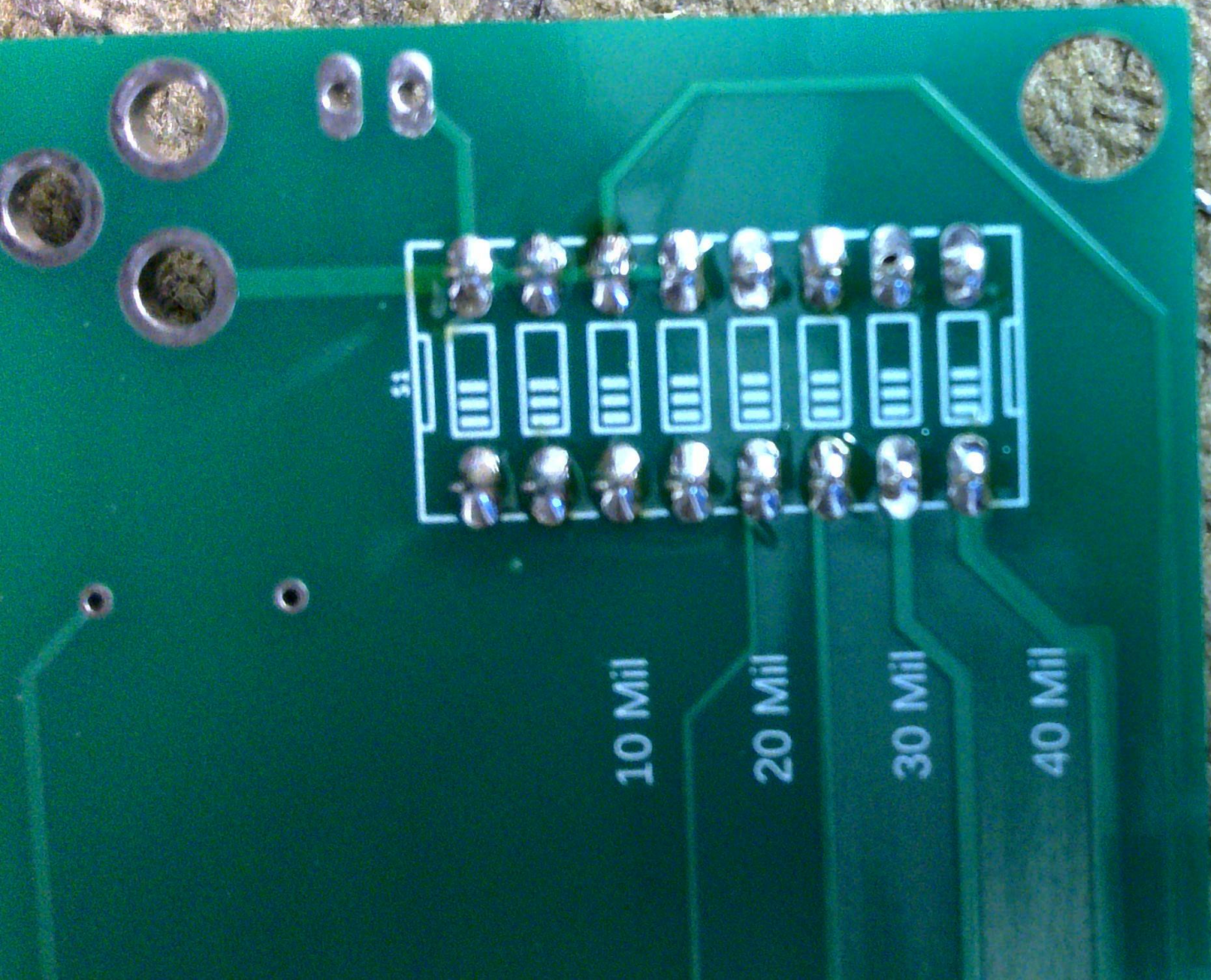
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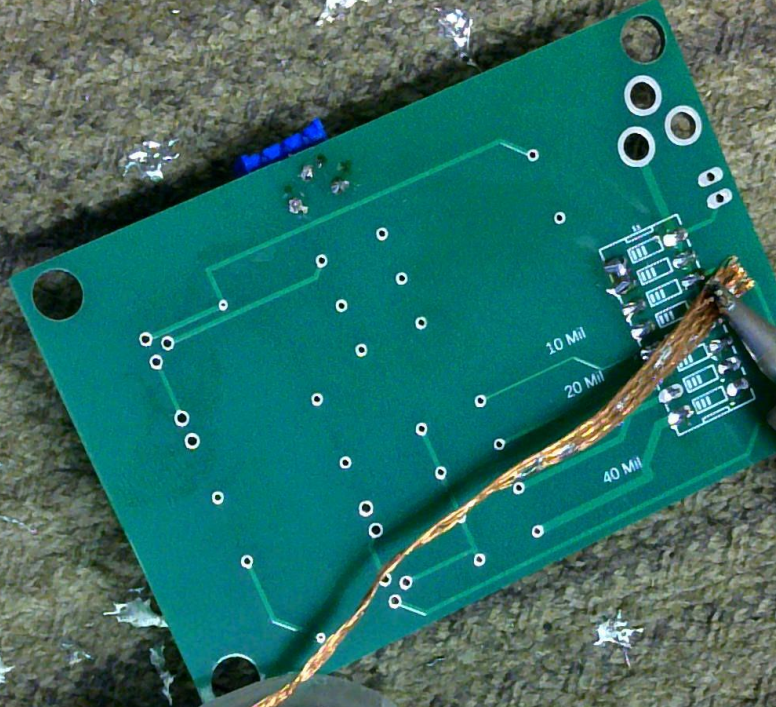
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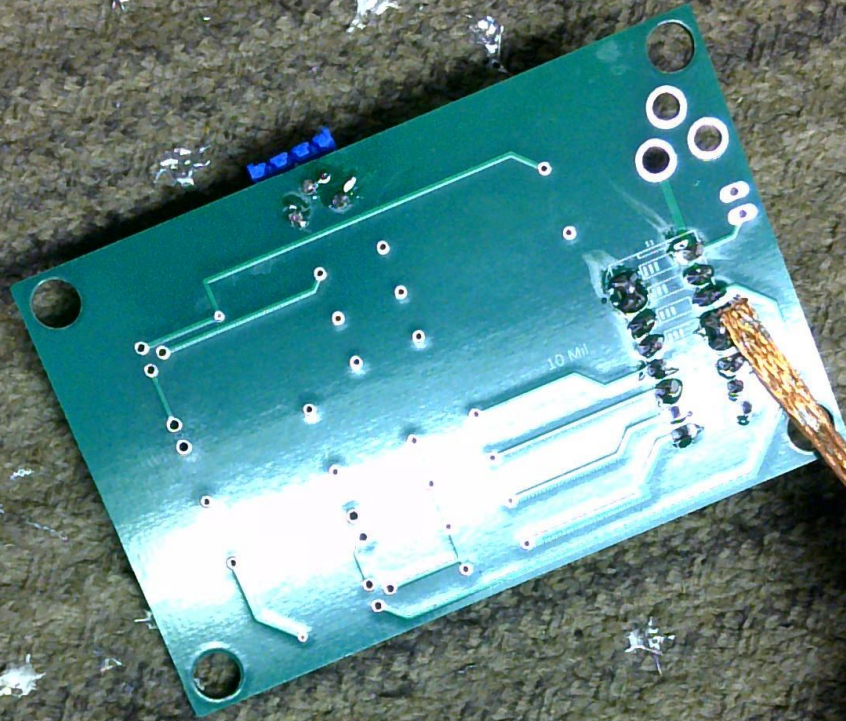
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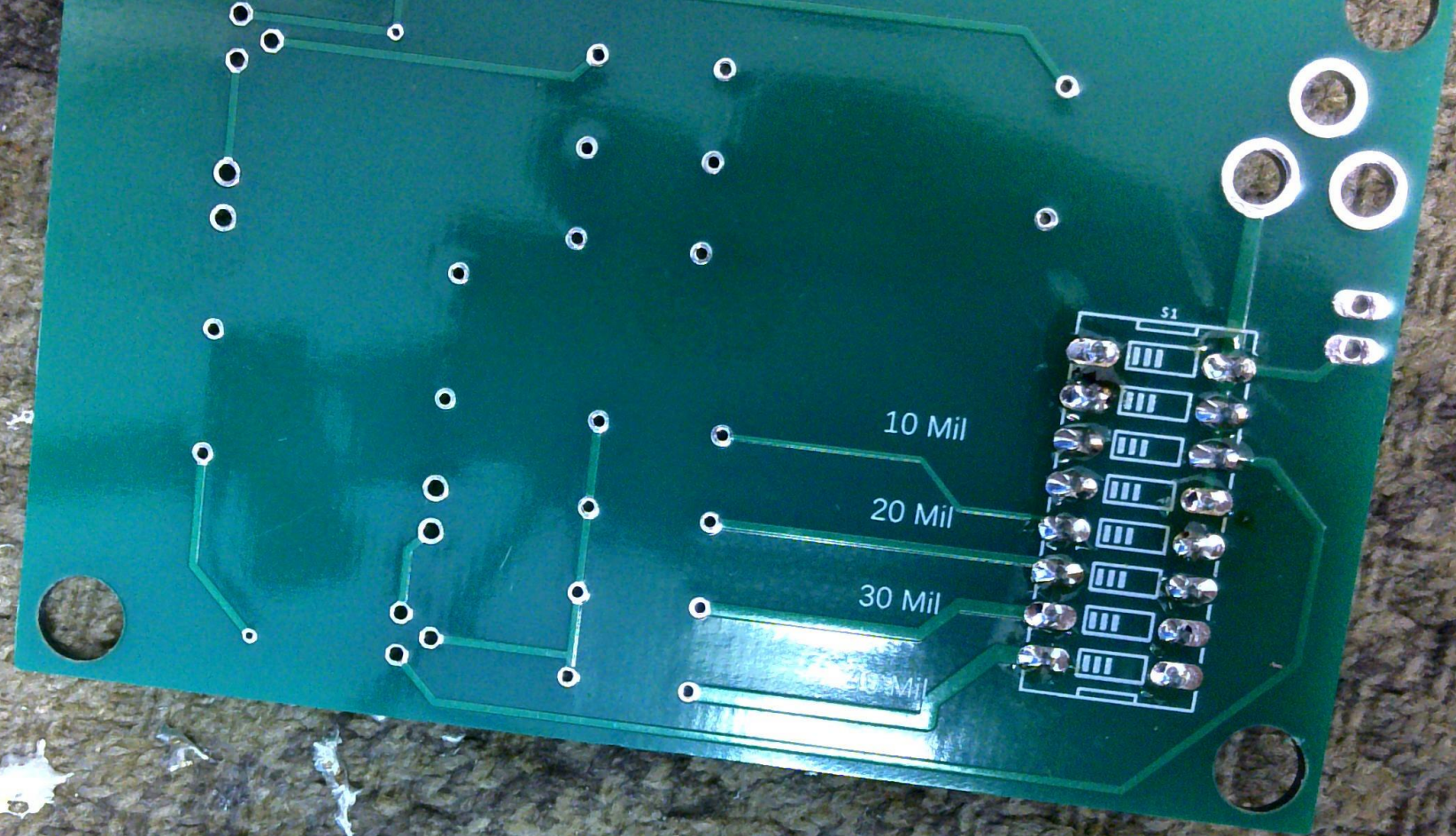
30 Mil

40 Mil

S1

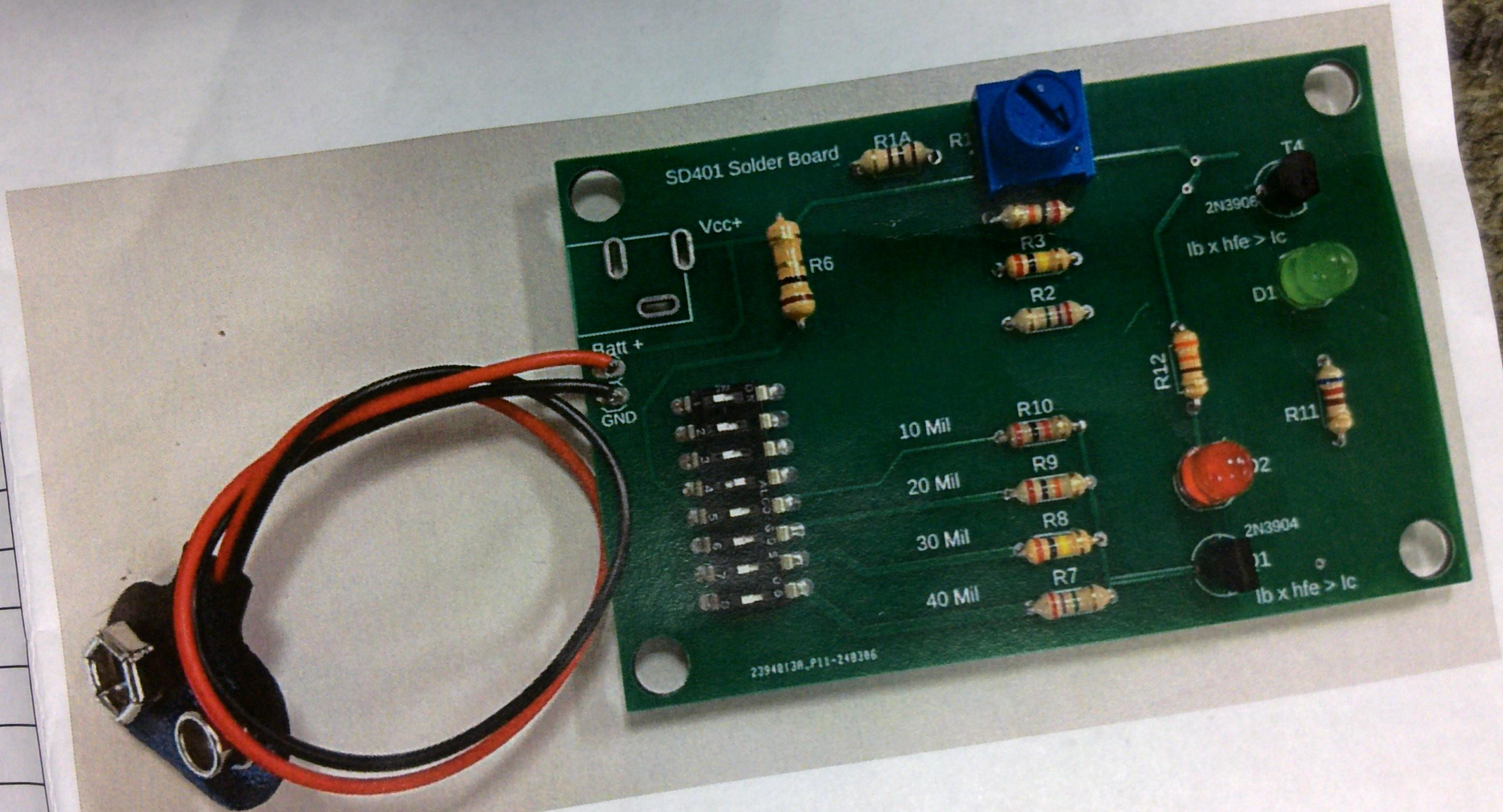








SD 401 Solder practice



HWK7 Practice PCB with Worksheet

Soldering LAB Worksheet for SD401

Name _____

Group# _____

Date _____

Use the Digi-key.com website to answer the following questions using Datasheets

LED's

On your Soldering Board are two LEDs, assuming a Red LED was used and the manufacturer's part# is WP7113SRD, the device and 20mA of forward current is being used as a reference.

What is the typical V_f of this device? _____

What is the Typical Luminous Intensity of the LED in mcd? _____

What is the Max DC Forward current this device is rated for? _____

What is the Dominant Wavelength of this device? _____

What is the cost to purchase this LED in 1 lot vs 10 lot pricing?

Price of LED's x 1 lot = \$ _____ Price of LED's x 10 lot = \$ _____ Cost

differential of the total = \$ _____ (how much to save buying in quantity)