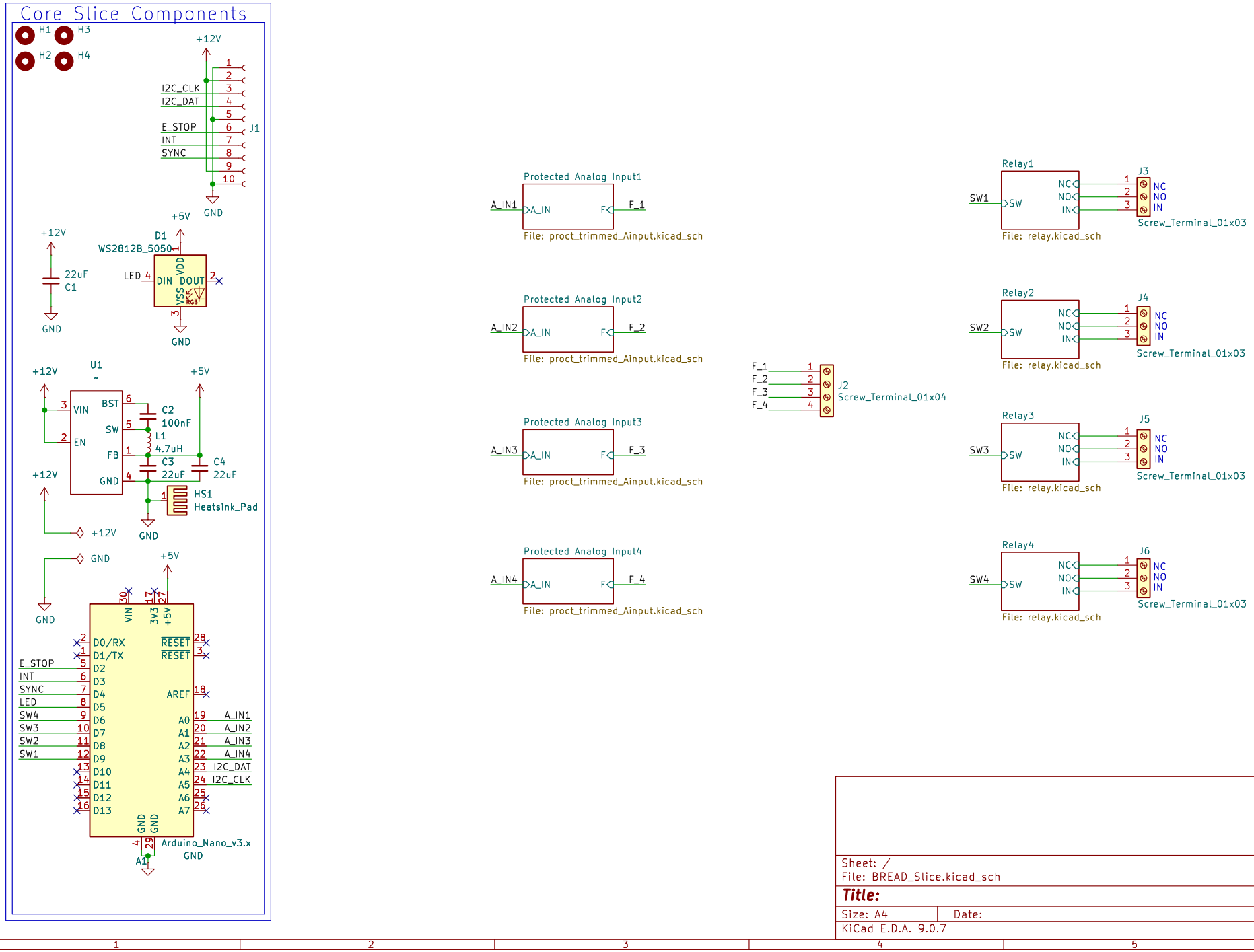
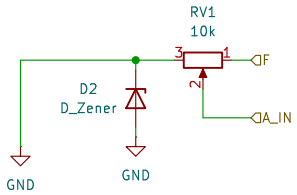

Core Slice Components
H1
H3
H2
H4
+12V
I2C_CLK
I2C_DAT
E_STOP
INT
SYNC
J1
GND
+5V
D1
WS2812B_5050
LED
DIN
DOUT
VDD
VSS
22uF
C1
U1
VIN
EN
BST
SW
FB
GND
C2
100nF
L1
4.7uH
C3
22uF
C4
22uF
HS1
Heatsink_Pad
3V3
D0/RX
D1/TX
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
RESET
AREF
A0
A1
A2
A3
A4
A5
A6
A7
A_IN1
A_IN2
A_IN3
A_IN4
I2C_DAT
I2C_CLK
Arduino_Nano_v3.x
Protected Analog Input1
Protected Analog Input2
Protected Analog Input3
Protected Analog Input4
A_IN
F
F_1
F_2
F_3
F_4
File: proct_trimmed_Ainput.kicad_sch
J2
Screw_Terminal_01x04
Relay1
Relay2
Relay3
Relay4
SW1
SW2
SW3
SW4
SW
NC
NO
IN
J3
J4
J5
J6
Screw_Terminal_01x03
File: relay.kicad_sch
Sheet: /
File: BREAD_Slice.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 9.0.7
Id: 1/9



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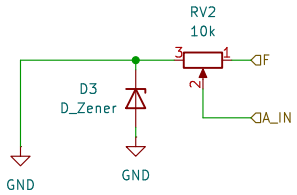
Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 2/9



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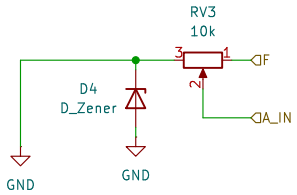
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 3/9



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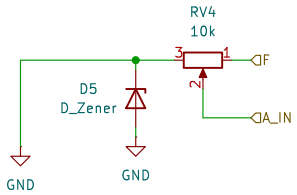
File: proct_trimmed_Ainput.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 4/9



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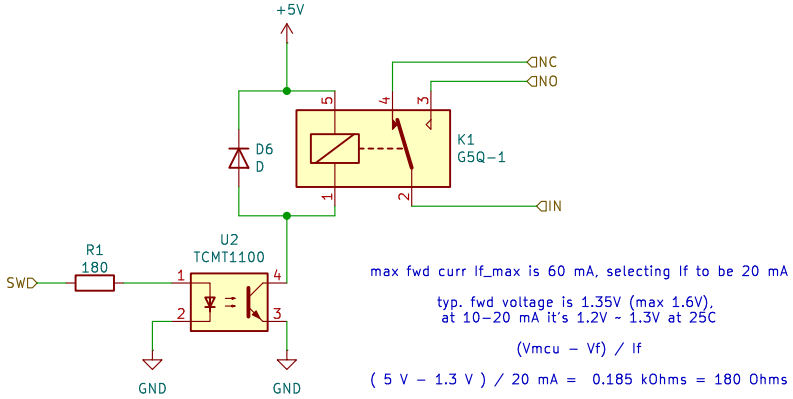
File: proct_trimmed_Ainput.kicad_sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 5/9



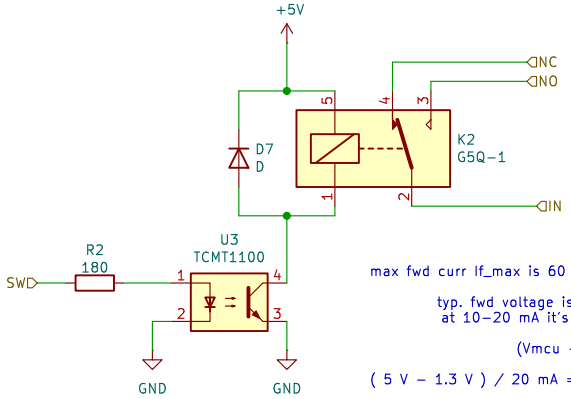
max fwd curr If_max is 60 mA, selecting If to be 20 mA

typ. fwd voltage is 1.35V (max 1.6V).
at 10-20 mA it's 1.2V ~ 1.3V at 25C

(Vmcu - Vf) / If

(5 V - 1.3 V) / 20 mA = 0.185 kOhms = 180 Ohms

Sheet: /Relay1/		
File: relay.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 6/9



max fwd curr If_max is 60 mA, selecting If to be 20 mA

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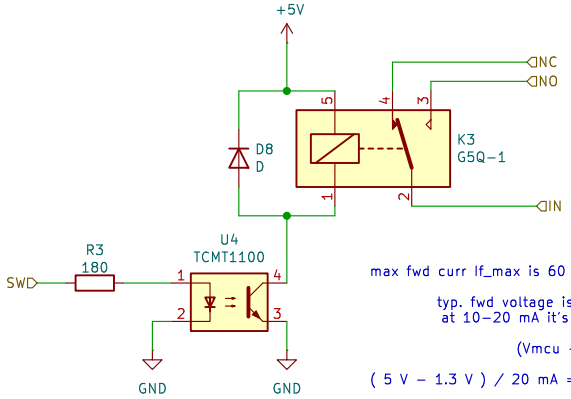
(Vmcu - Vf) / If

(5 V - 1.3 V) / 20 mA = 0.185 kOhms = 180 Ohms

Sheet: /Relay2/		
File: relay.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 7/9



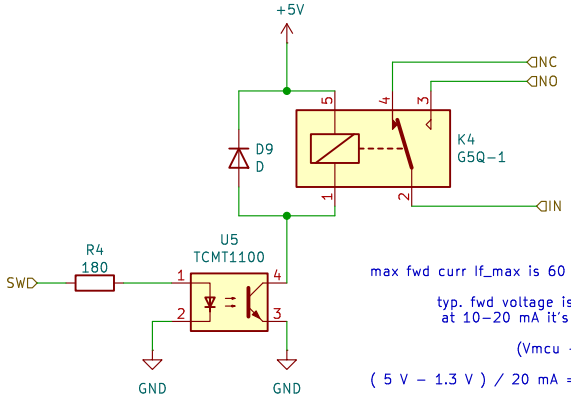
max fwd curr If_max is 60 mA, selecting If to be 20 mA

typ. fwd voltage is 1.35V (max 1.6V).
at 10–20 mA it's 1.2V ~ 1.3V at 25C

(Vmcu – Vf) / If

(5 V – 1.3 V) / 20 mA = 0.185 kOhms = 180 Ohms

Sheet: /Relay3/		
File: relay.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 8/9



max fwd curr If_max is 60 mA, selecting If to be 20 mA

typ. fwd voltage is 1.35V (max 1.6V).
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(Vmcu – Vf) / If

(5 V – 1.3 V) / 20 mA = 0.185 kOhms = 180 Ohms

Sheet: /Relay4/		
File: relay.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.7		Id: 9/9