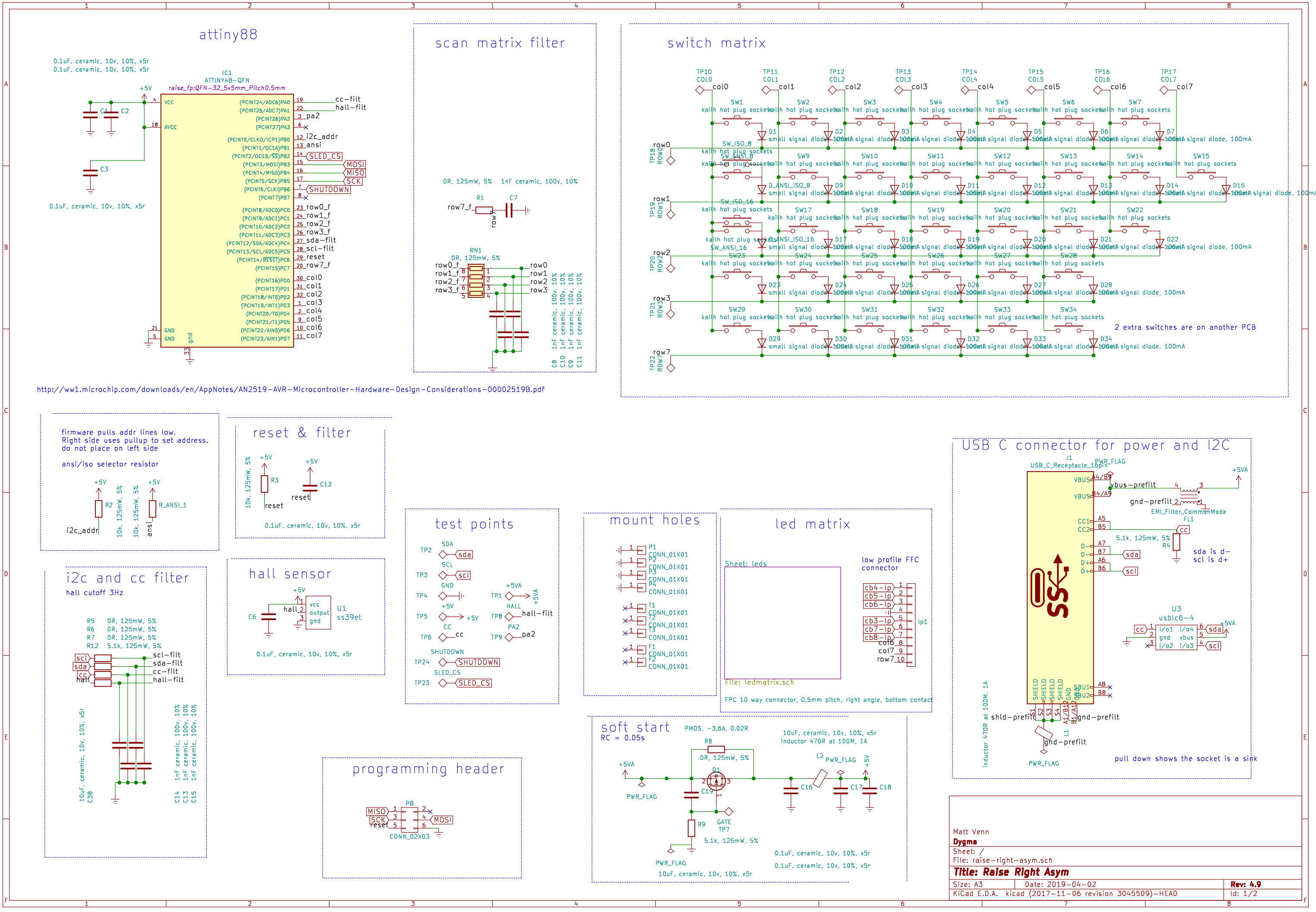
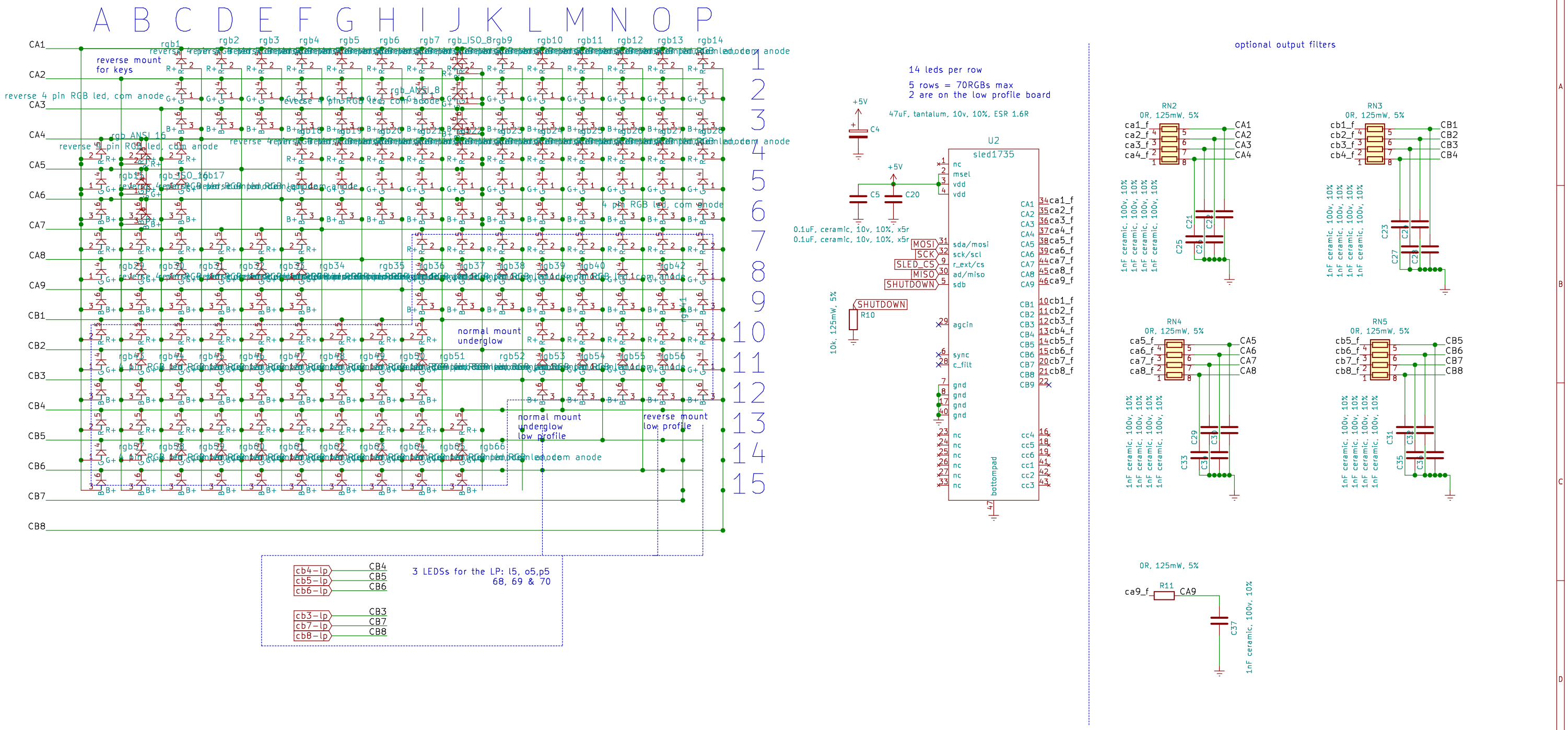

attiny88
IC1
ATTINY48-QFN
raise_fp:QFN-32_5x5mm_Pitch0.5mm
0.1uF, ceramic, 10v, 10%, x5r
+5V
C1
C2
C3
VCC
AVCC
GND
cc-filt
hall-filt
pa2
i2c_addr
ansi
SLED_CS
MOSI
MISO
SCK
SHUTDOWN
row0_f
row1_f
row2_f
row3_f
sda-filt
scl-filt
reset
row7_f
col0
col1
col2
col3
col4
col5
col6
col7
http://ww1.microchip.com/downloads/en/AppNotes/AN2519-AVR-Microcontroller-Hardware-Design-Considerations-00002519B.pdf
scan matrix filter
0R, 125mW, 5%
1nF ceramic, 100v, 10%
R1
C7
RN1
0R, 125mW, 5%
C8 1nF ceramic, 100v, 10%
C10 1nF ceramic, 100v, 10%
C9 1nF ceramic, 100v, 10%
C11 1nF ceramic, 100v, 10%
switch matrix
TP10 COL0
TP11 COL1
TP12 COL2
TP13 COL3
TP14 COL4
TP15 COL5
TP16 COL6
TP17 COL7
TP18 ROW0
TP19 ROW1
TP20 ROW2
TP21 ROW3
TP22 ROW7
kailh hot plug sockets
small signal diode, 100mA
SW_ISO_8
SW_ANSI_8
D_ANSI_ISO_8
SW_ISO_16
SW_ANSI_16
D_ANSI_ISO_16
2 extra switches are on another PCB
firmware pulls addr lines low.
Right side uses pullup to set address.
do not place on left side
ansi/iso selector resistor
R2
R_ANSI_1
10k, 125mW, 5%
reset & filter
R3
C12
0.1uF, ceramic, 10v, 10%, x5r
i2c and cc filter
hall cutoff 3Hz
R5 0R, 125mW, 5%
R6 0R, 125mW, 5%
R7 0R, 125mW, 5%
R12 5.1k, 125mW, 5%
scl-filt
sda-filt
cc-filt
hall-filt
10uF, ceramic, 10v, 10%, x5r
C38
C14 1nF ceramic, 100v, 10%
C13 1nF ceramic, 100v, 10%
C15 1nF ceramic, 100v, 10%
hall sensor
U1
ss39et
C6
test points
SDA
SCL
GND
CC
SHUTDOWN
SLED_CS
+5VA
HALL
PA2
mount holes
P1
P2
P3
P4
T1
T2
T3
F1
F2
CONN_01X01
led matrix
Sheet: leds
File: ledmatrix.sch
low profile FFC connector
cb4-lp
cb5-lp
cb6-lp
cb3-lp
cb7-lp
cb8-lp
lp1
FPC 10 way connector, 0.5mm pitch, right angle, bottom contact
soft start
RC = 0.05s
PMOS, -3.6A, 0.02R
R8
0R, 125mW, 5%
Q1
C19
R9
5.1k, 125mW, 5%
GATE
TP7
PWR_FLAG
10uF, ceramic, 10v, 10%, x5r
0.1uF, ceramic, 10v, 10%, x5r
inductor 470R at 100M, 1A
L2
C16
C17
C18
programming header
P8
MISO
SCK
reset
MOSI
CONN_02X03
USB C connector for power and I2C
J1
USB_C_Receptacle_16pin
PWR_FLAG
vbus-prefilt
gnd-prefilt
EMI_Filter_CommonMode
FL1
R4
sda is d-
scl is d+
U3
usblc6-4
shld-prefilt
L1
pull down shows the socket is a sink
Matt Venn
Dygma
Sheet: /
File: raise-right-asym.sch
Title: Raise Right Asym
Size: A3
Date: 2019-04-02
Rev: 4.9
KiCad E.D.A. kicad (2017-11-06 revision 3045509)-HEAD
Id: 1/2

common anode type 3 matrix



Matt Venn
Dygma
Sheet: /leds/
File: ledmatrix.sch

Title: Raise Right Asym

Size: A3	Date: 2018-07-09	**Rev: 4.5**
KiCad E.D.A. kicad (2017-11-06 revision 3045509)-HEAD		Id: 2/2