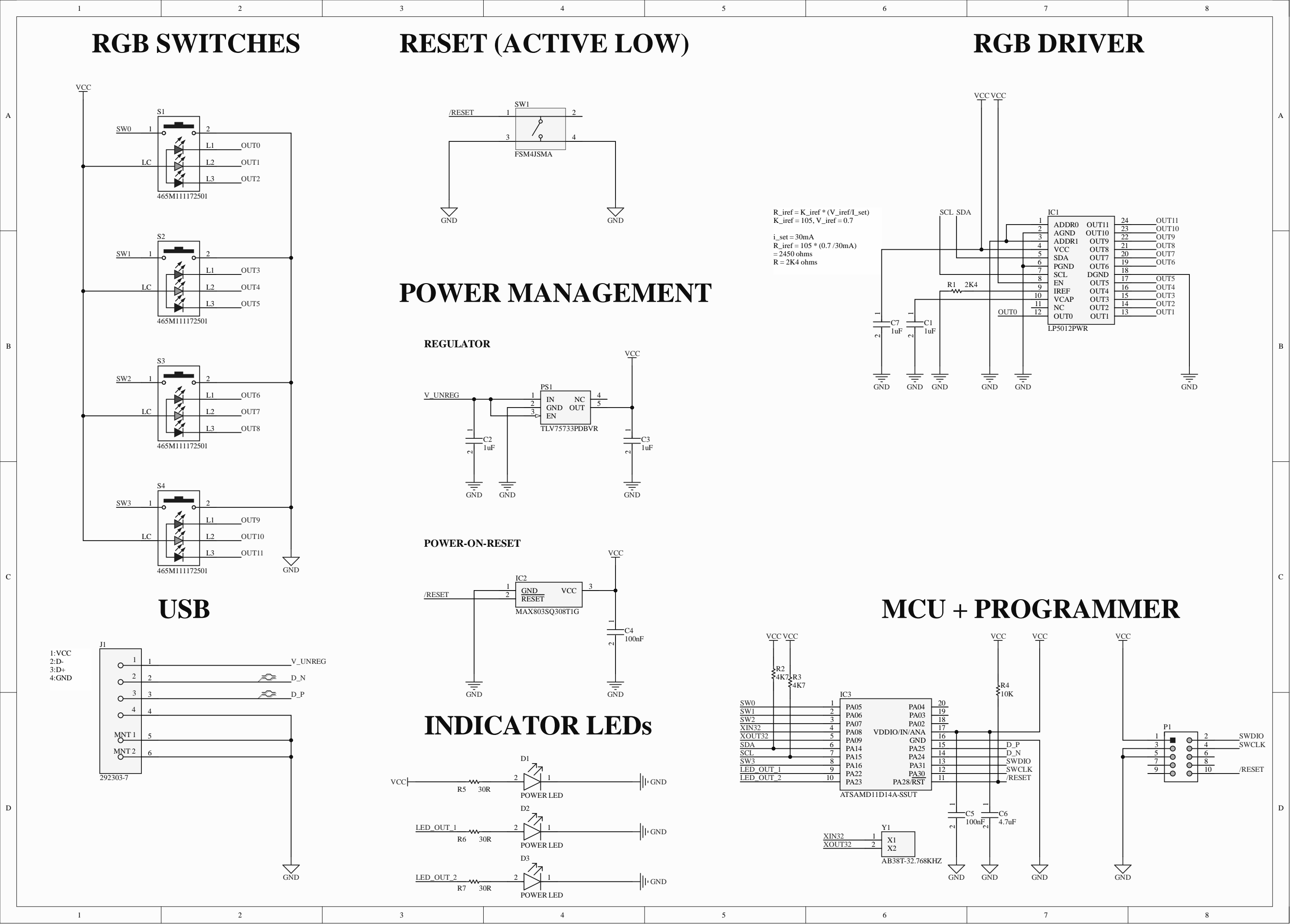


[illegible]

RGB SWITCHES

VCC

SW0 S1

L1 OUT0

L2 OUT1

L3 OUT2

465M111172501

LC

SW1 S2

L1 OUT3

L2 OUT4

L3 OUT5

465M111172501

LC

SW2 S3

L1 OUT6

L2 OUT7

L3 OUT8

465M111172501

LC

SW3 S4

L1 OUT9

L2 OUT10

L3 OUT11

465M111172501

LC

GND

RESET (ACTIVE LOW)

/RESET SW1

FMS4JSMA

GND

POWER MANAGEMENT

REGULATOR

V_UNREG PS1

IN NC

GND OUT

EN

TLV75733PDBVR

C2 1uF

C3 1uF

GND

POWER-ON-RESET

/RESET IC2

GND RESET VCC

MAX803SQ308T1G

C4 100nF

GND

INDICATOR LEDs

D1

R5 30R

POWER LED

D2

R6 30R

LED_OUT_1

POWER LED

D3

R7 30R

LED_OUT_2

POWER LED

RGB DRIVER

SCL SDA

R1 2K4

C7 1uF

C1 1uF

GND

IC1

ADDR0 OUT11

AGND OUT10

ADDR1 OUT9

VCC OUT8

SDA OUT7

PGND OUT6

SCL DGND

EN OUT5

IREF OUT4

VCAP OUT3

NC OUT2

OUT0 OUT1

LP5012PWR

OUT11

OUT10

OUT9

OUT8

OUT7

OUT6

OUT5

OUT4

OUT3

OUT2

OUT1

MCU + PROGRAMMER

VCC VCC

R2 4K7 R3 4K7

SW0 SW1 SW2 XIN32 XOUT32 SDA SCL SW3 LED_OUT_1 LED_OUT_2

PA05 PA06 PA07 PA08 PA09 PA14 PA15 PA16 PA22 PA23

PA04 PA03 PA02 PA25 PA24 PA31 PA30 PA28/RST

VDDIO/IN/ANA

GND

D_P

D_N

SWCLK

/RESET

Y1

X1 X2

AB38T-32.768KHZ

C5 100nF C6 4.7uF

GND

P1

SWDIO

SWCLK

/RESET

J1

1 VCC

2 D-

3 D+

4 GND

MNT_1

MNT_2

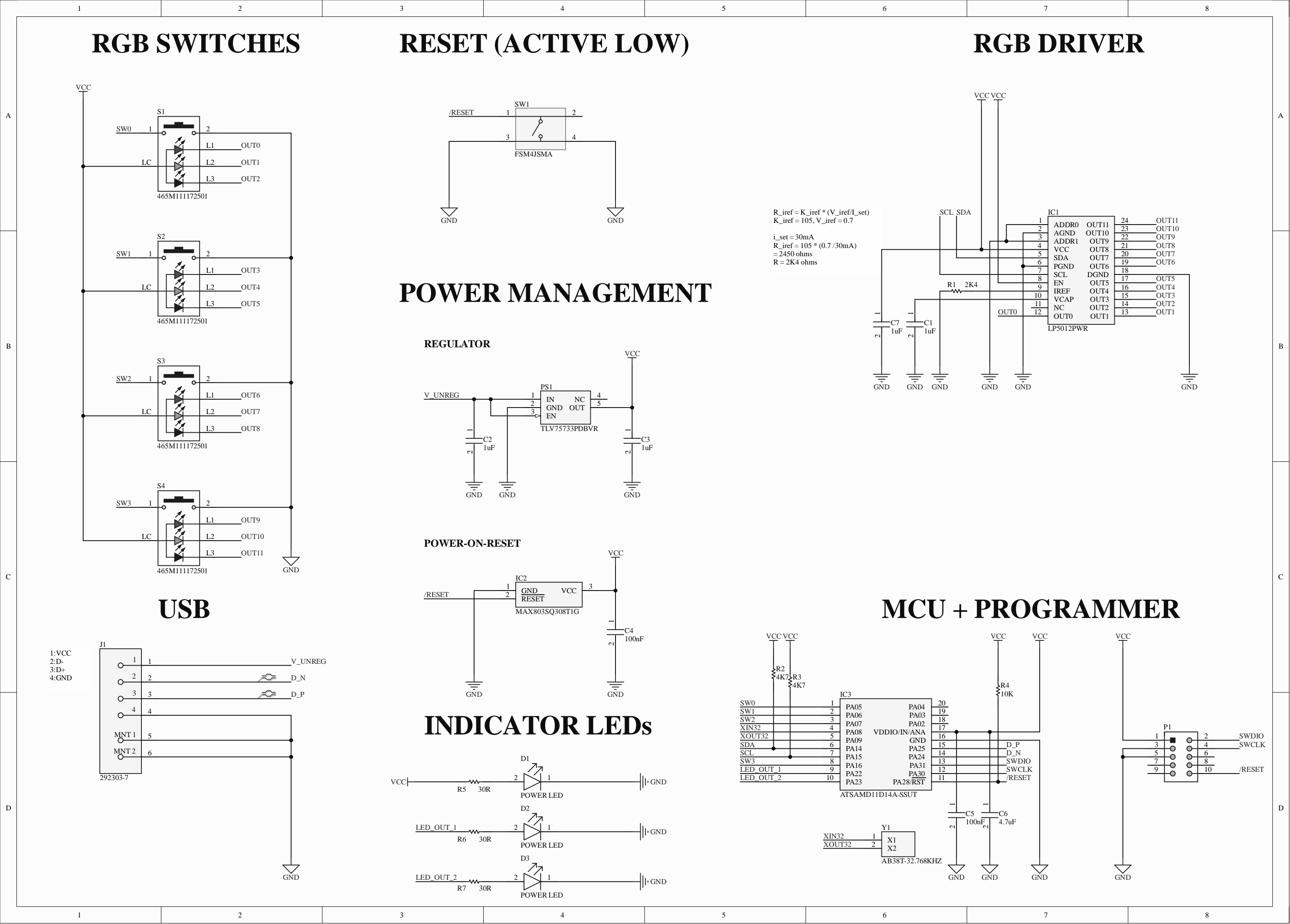
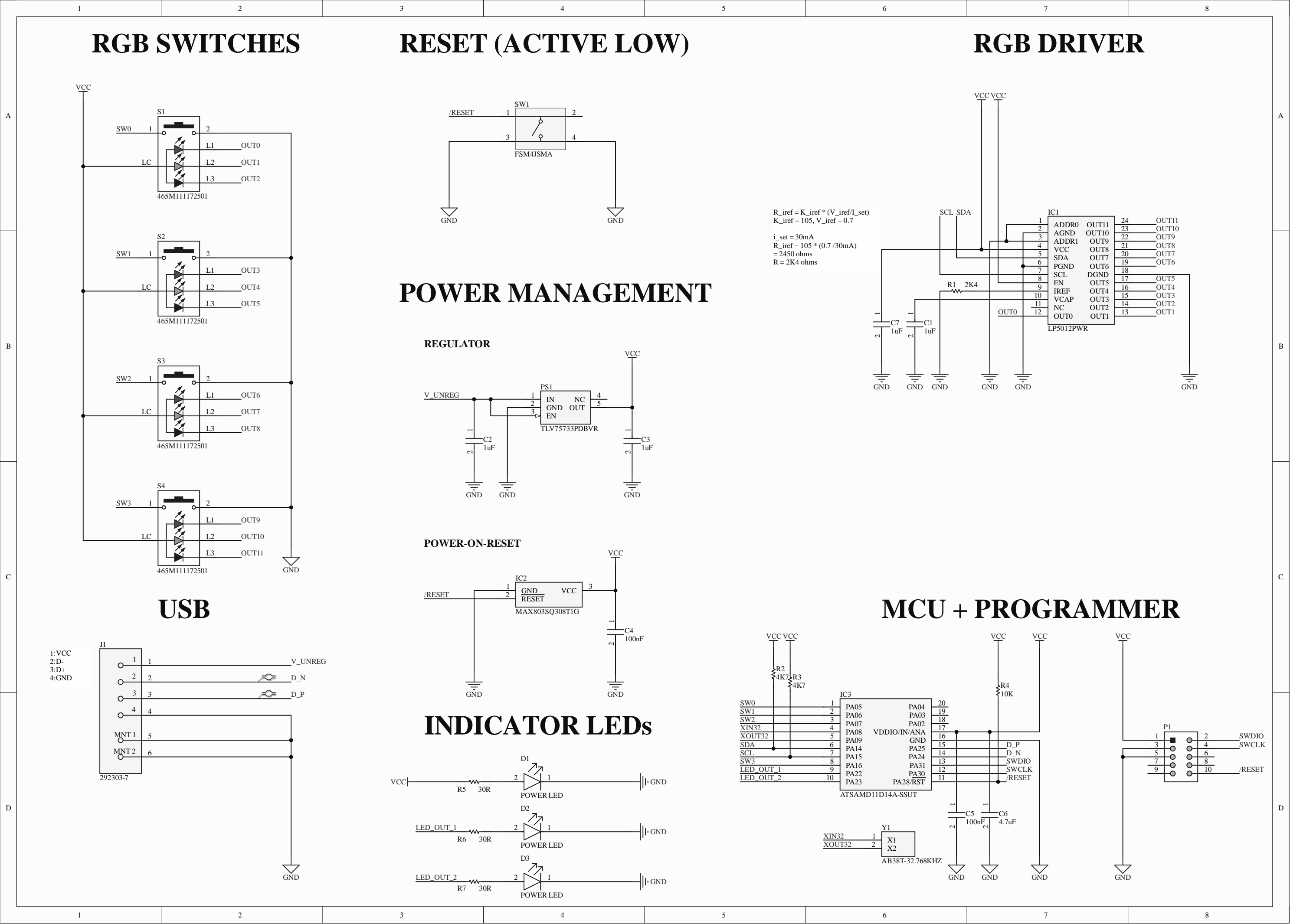
292303-7

V_UNREG

D_N

D_P

GND

[illegible]

RGB SWITCHES

VCC

SW0

L1

L2

L3

OUT0

OUT1

OUT2

465M111172501

S1

LC

GND

SW1

L1

L2

L3

OUT3

OUT4

OUT5

465M111172501

S2

LC

GND

SW2

L1

L2

L3

OUT6

OUT7

OUT8

465M111172501

S3

LC

GND

SW3

L1

L2

L3

OUT9

OUT10

OUT11

465M111172501

S4

LC

GND

J1

1:VCC

2:D-

3:D+

4:GND

MNT 1

MNT 2

292303-7

V_UNREG

D_N

D_P

GND

RESET (ACTIVE LOW)

/RESET

SW1

FMS4JSMA

GND

POWER MANAGEMENT

REGULATOR

V_UNREG

C2

1uF

GND

PS1

IN

GND

EN

NC

OUT

TLV75733PDBVR

VCC

C3

1uF

GND

POWER-ON-RESET

/RESET

IC2

MAX803SQ308TIG

GND

VCC

C4

100nF

GND

INDICATOR LEDs

VCC

R5

30R

D1

POWER LED

GND

LED_OUT_1

R6

30R

D2

POWER LED

GND

LED_OUT_2

R7

30R

D3

POWER LED

GND

MCU + PROGRAMMER

VCC

VCC

R2

4K7

R3

4K7

SW0

SW1

SW2

XIN32

XOUT32

SDA

SCL

SW3

LED_OUT_1

LED_OUT_2

IC3

PA05

PA06

PA07

PA08

PA09

PA14

PA15

PA16

PA22

PA23

PA04

PA03

PA02

VDDIO/IN/ANA

GND

PA25

PA24

PA31

PA30

PA28/RST

ATSAMd11D14A-SSUT

Y1

X1

X2

AB38T-32.768KHZ

R4

10K

VCC

VCC

C5

100nF

C6

4.7uF

GND

GND

GND

P1

1

2

3

4

5

6

7

8

9

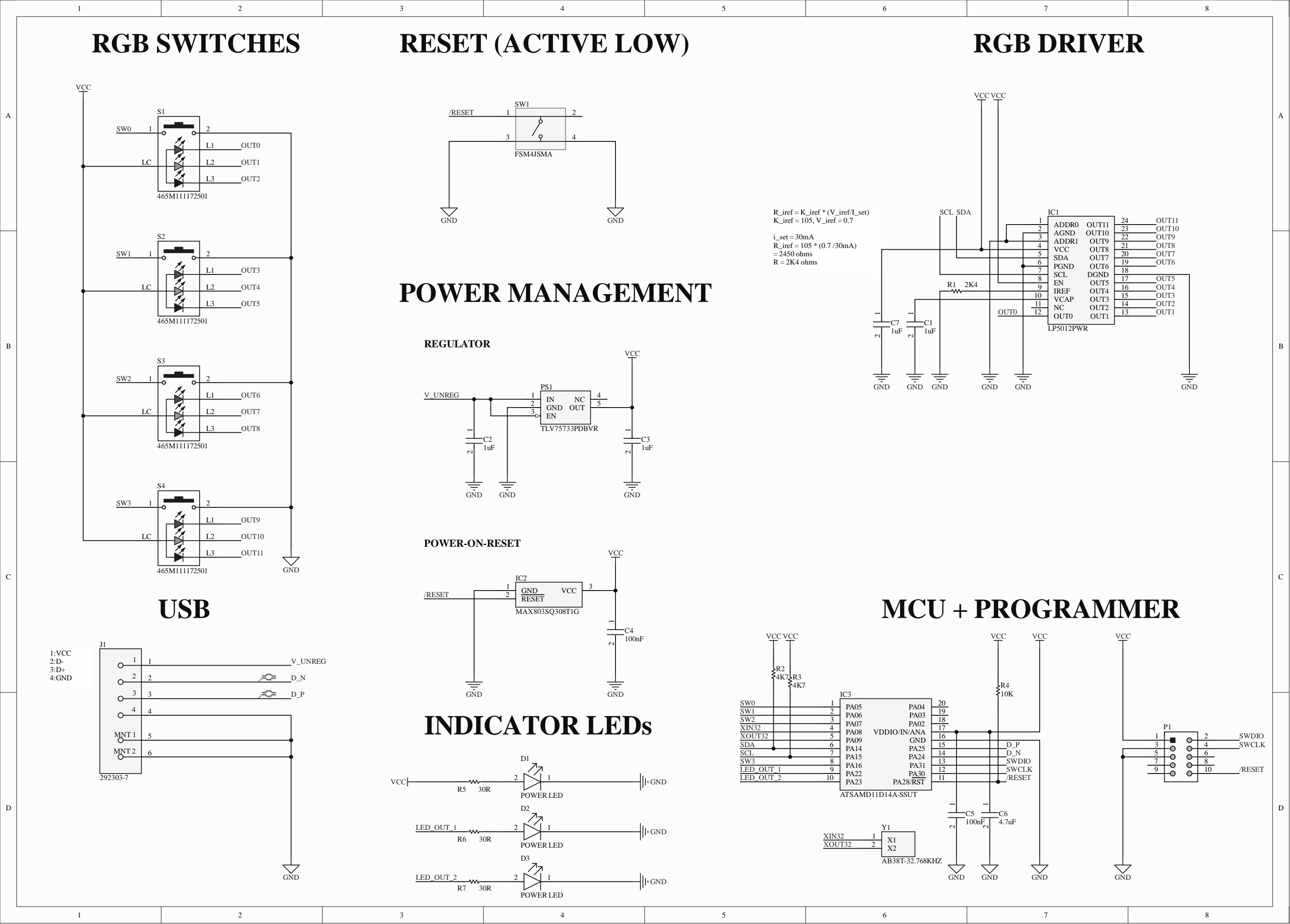
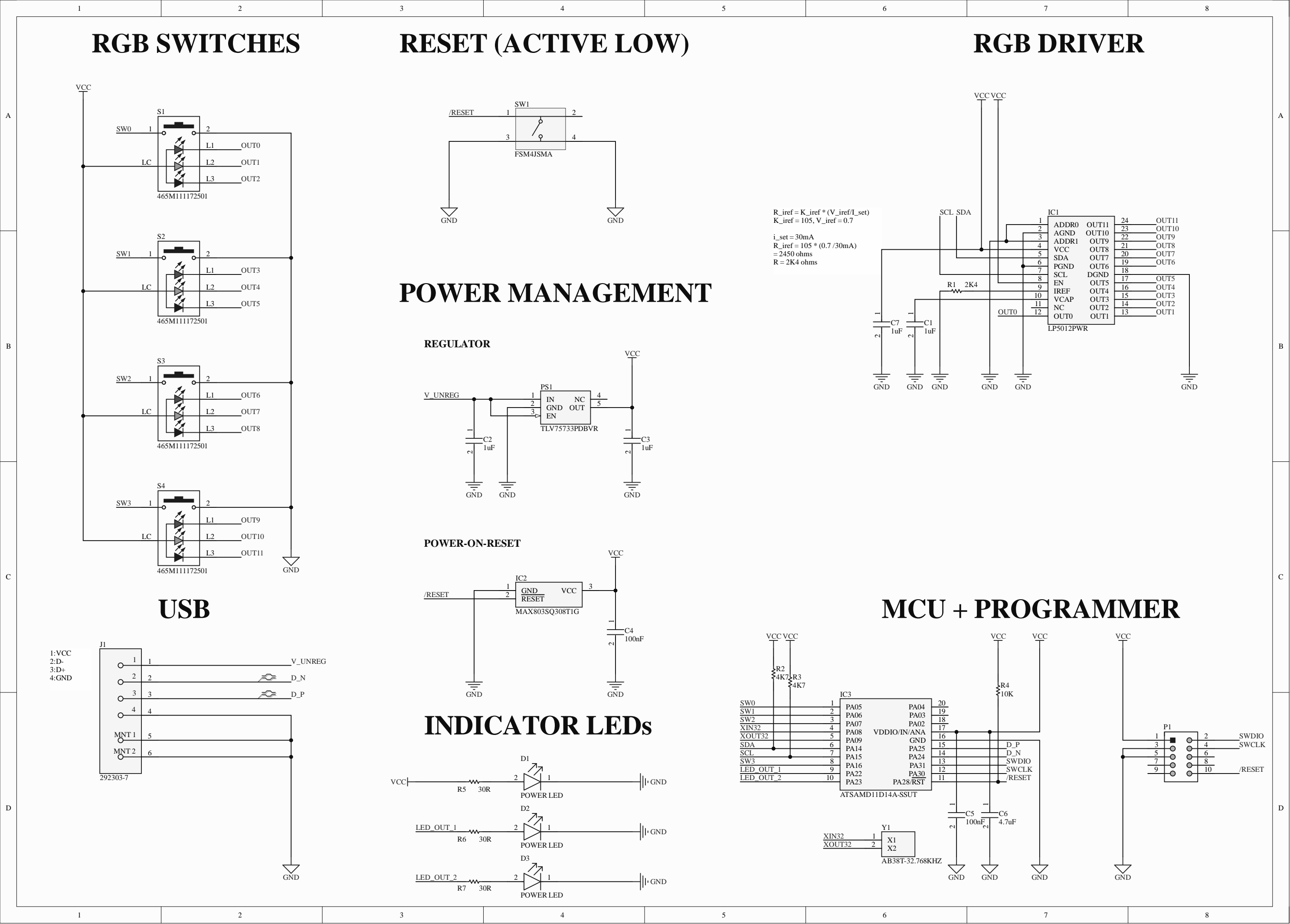
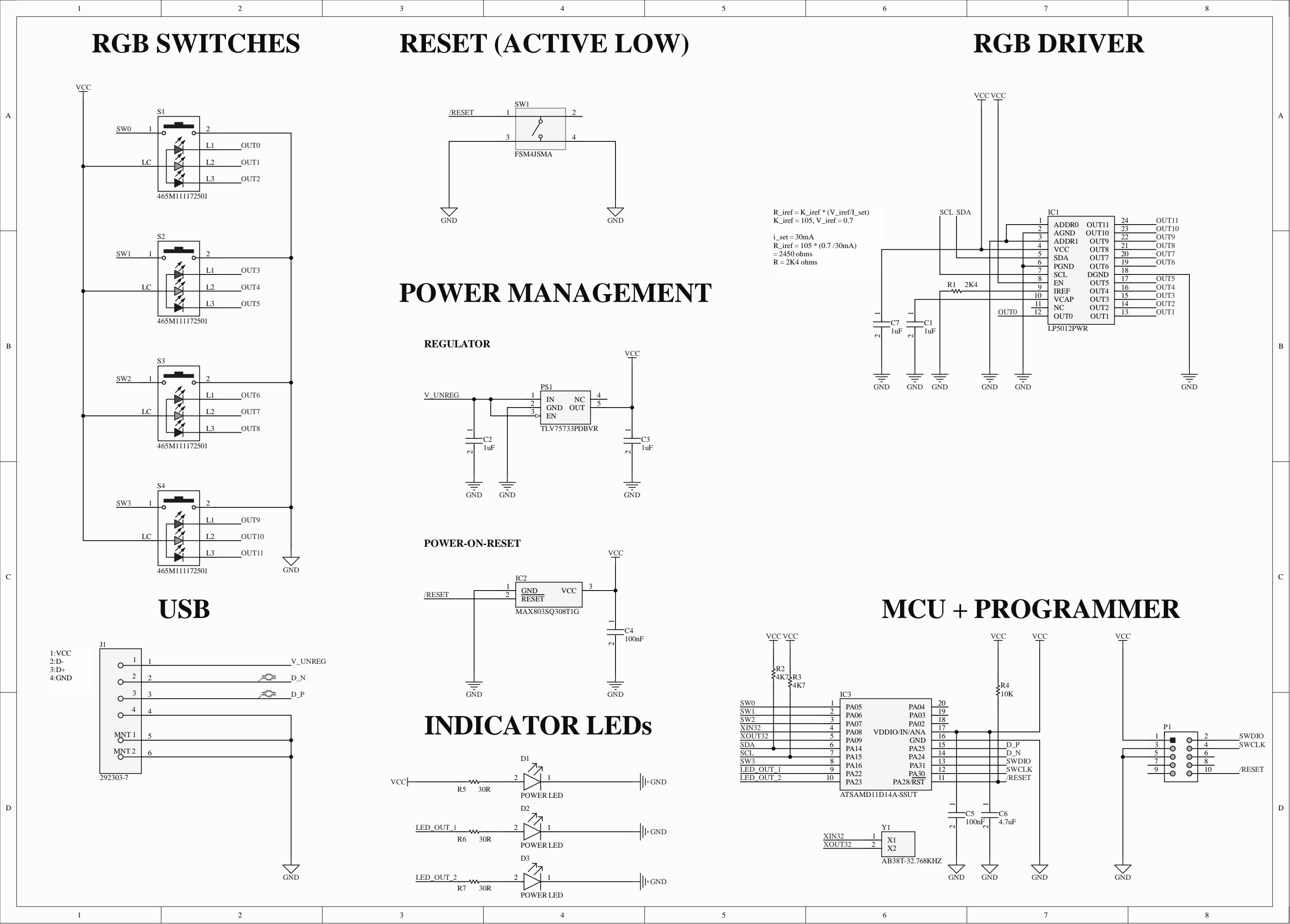
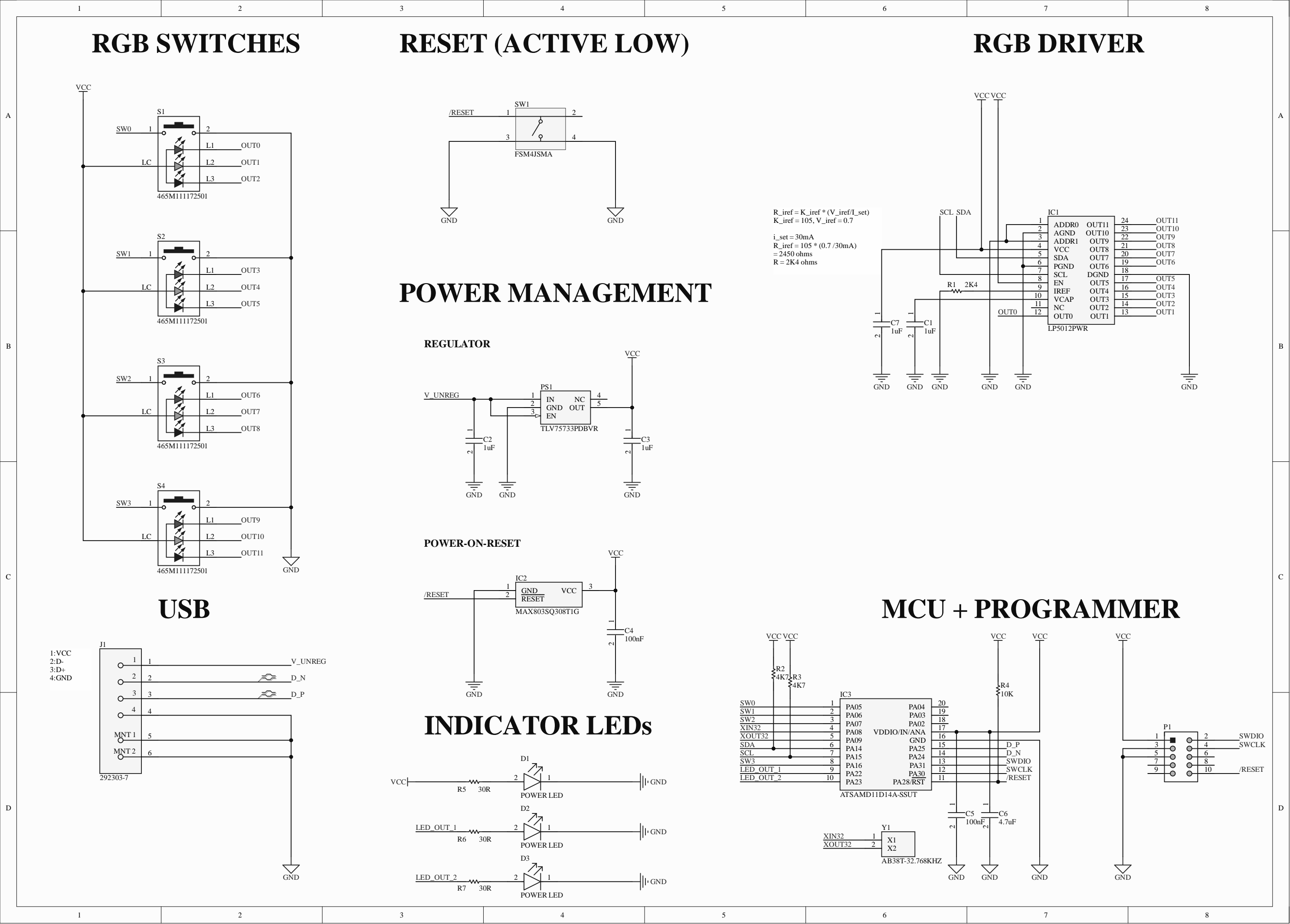
10

SWDIO

SWCLK

/RESET

GND

[illegible][illegible][illegible][illegible]

RGB SWITCHES

VCC

SW0 S1
1 2
LC L1 OUT0
L2 OUT1
L3 OUT2
465M111172501

SW1 S2
1 2
LC L1 OUT3
L2 OUT4
L3 OUT5
465M111172501

SW2 S3
1 2
LC L1 OUT6
L2 OUT7
L3 OUT8
465M111172501

SW3 S4
1 2
LC L1 OUT9
L2 OUT10
L3 OUT11
465M111172501

GND

RESET (ACTIVE LOW)

/RESET SW1
1 2
FSM4JSMA
3 4
GND GND

POWER MANAGEMENT

REGULATOR

V_UNREG PS1
IN NC
GND OUT
EN
TLV75733PDBVR
C2 1uF C3 1uF
GND GND GND

POWER-ON-RESET

/RESET IC2
1 2 3
GND RESET VCC
MAX803SQ308T1G
C4 100nF
GND

INDICATOR LEDs

VCC R5 30R D1
POWER LED
LED_OUT_1 R6 30R D2
POWER LED
LED_OUT_2 R7 30R D3
POWER LED
GND

RGB DRIVER

R_{iref} = K_{iref} * (V_{iref}/I_{set})
K_{iref} = 105, V_{iref} = 0.7

i_{set} = 30mA
R_{iref} = 105 * (0.7 / 30mA)
= 2450 ohms
R = 2K4 ohms

SCL SDA
C7 1uF C1 1uF
GND GND GND GND GND

IC1
ADDR0 OUT11
AGND OUT10
ADDR1 OUT9
VCC OUT8
SDA OUT7
PGND OUT6
SCL DGND
EN OUT5
IREF OUT4
VCAP OUT3
NC OUT2
OUT0 OUT1
LP5012PWR
OUT11 OUT10 OUT9 OUT8 OUT7 OUT6 OUT5 OUT4 OUT3 OUT2 OUT1

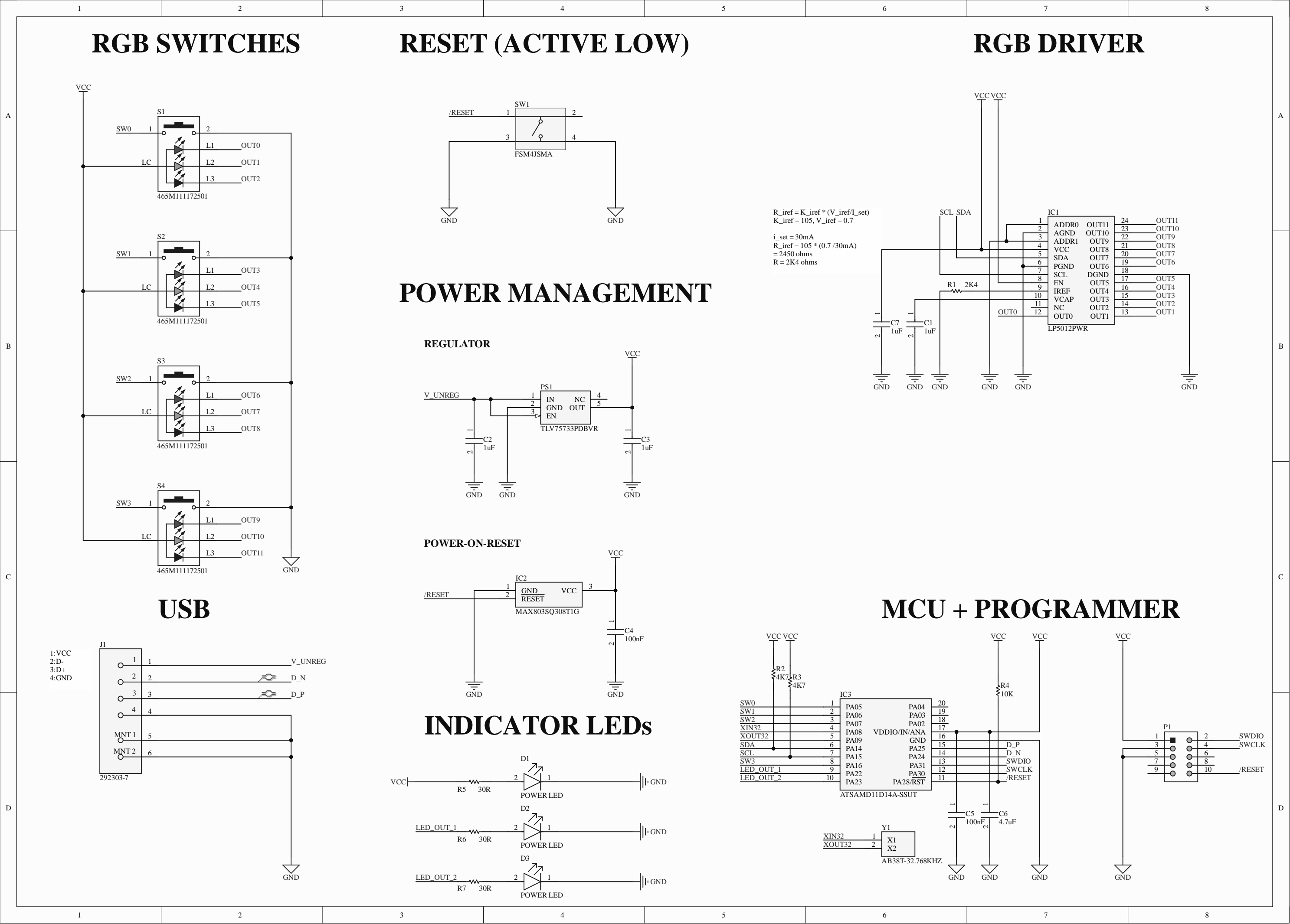
MCU + PROGRAMMER

VCC VCC R2 4K7 R3 4K7
SW0 SW1 SW2 XIN32 XOUT32 SDA SCL SW3 LED_OUT_1 LED_OUT_2
PA05 PA06 PA07 PA08 PA09 PA14 PA15 PA16 PA22 PA23
VDDIO/IN/ANA GND PA25 PA24 PA31 PA30 PA28/RST
ATSAMd11D14A-SSUT
XIN32 XOUT32 Y1 X1 X2
AB38T-32.768KHZ
C5 100nF C6 4.7uF
GND GND GND

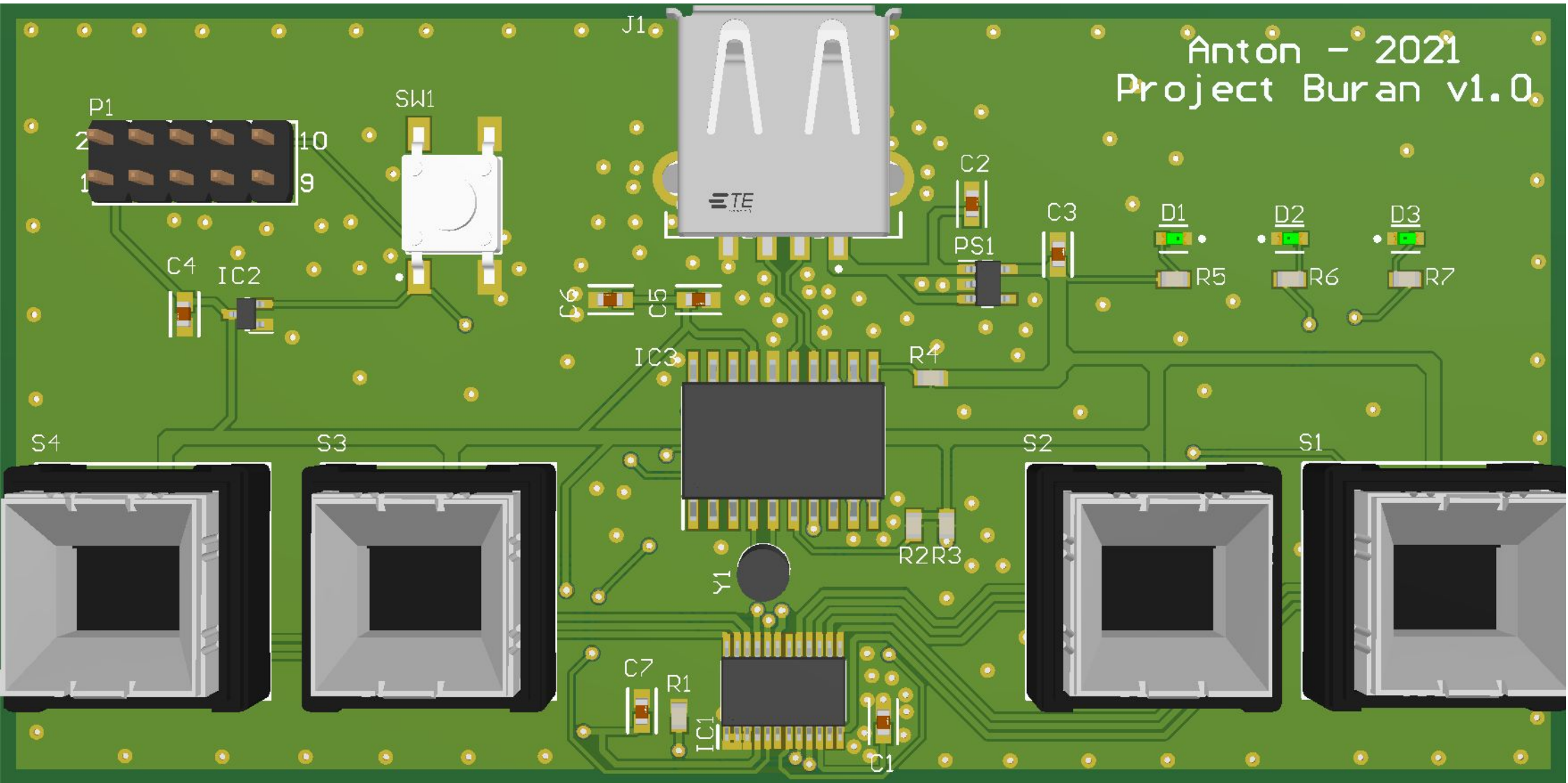
P1
1 2 3 4 5 6 7 8 9 10
SWDIO SWCLK /RESET
GND

USB

J1
1 2 3 4 5 6
V_UNREG D_N D_P MNT_1 MNT_2
292303-7
GND



Anton - 2021 Project Buran v1.0



Anton - 2021

Project Buran v1.0

