STEVAL-SPIN3201 schematic diagram

Key components and labels:

- VDD, VM, VREG power rails
- U5 — STSPIN32F0 (48-pin package)
- L1 22uH SRN3015-220M
- D1 STPS1L60A
- JP1 OPEN
- C2 22UF EEEFK1J220P
- C3 220NF
- C4 10UF 25V
- C5 100NF
- C1 100NF
- C6 3.3NF
- C7 100NF
- C8 100NF
- C9 100NF
- C10 47UF
- C11 100NF
- C12 1NF
- C13 1NF
- C14 4.7NF
- R1 39K
- R2 100R
- R3 330R
- R4 120R
- R5 120R
- R6 100K BOURNS 3386G-1-104LF
- R7 100R
- R8 100R
- SW1 RESET 430483025816
- SW2 USER1 430483025816
- SW3 USER2 430483025816
- DL1 RED
- DL3 YELLOW
- DL4 YELLOW
- TP1 S1751-46R, TP2 S1751-46R, TP3 S1751-46R, TP4 S1751-46R, TP12 S1751-46R
- Test points / signals: NRST, RESET, SPEED, PA6, PF0, PF1, PA7_3FG, LSU, OUTU, HSU, LSV, OUTV, HSV, LSW, OUTW, HSW

STSPIN32F0 pin labels:
- Top: VDD, OP3O, OP3N, OP3P, GND, OP2O, OP2N, OP2P, PB7, PB6, PA14, PA13 (pins 48–37)
- Left: OP4P (1), OP4N (2), OP4O (3), PF0 (4), PF1 (5), VREG12 (6), NRST (7), VM (8), SW (9), VDDA (10), PA0 (11), PA1 (12)
- Bottom: PA2 (13), PA3 (14), PA4 (15), PA5 (16), PA6 (17), PA7_3FG (18), PB1 (19), TESTMODE (20), OP1O (21), OP1N (22), OP1P (23), OCCOMP (24), EPAD
- Right: LSU (36), VBOOTU (35), OUTU (34), HSU (33), LSV (32), VBOOTV (31), OUTV (30), HSV (29), LSW (28), VBOOTW (27), OUTW (26), HSW (25)
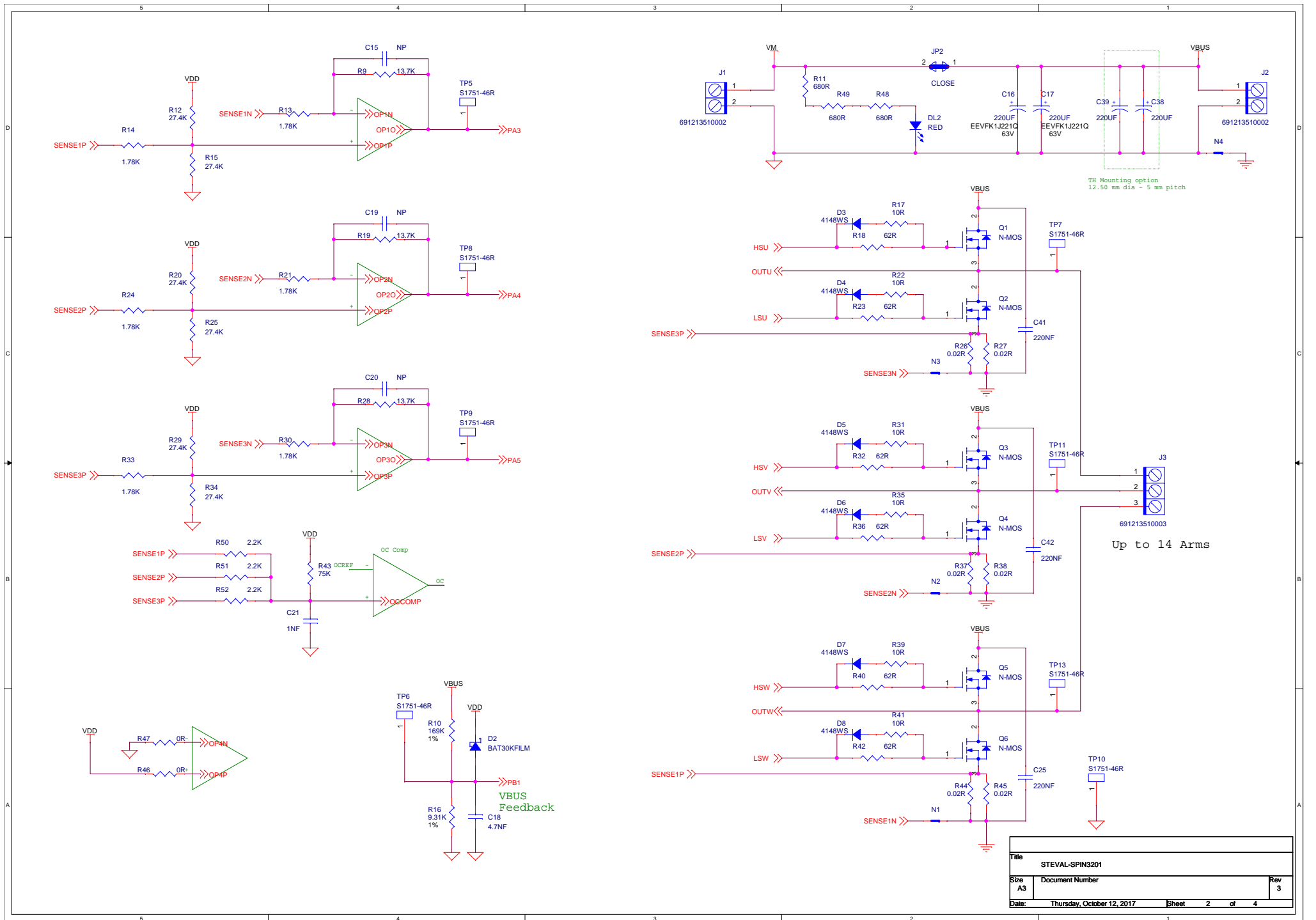
Title block:
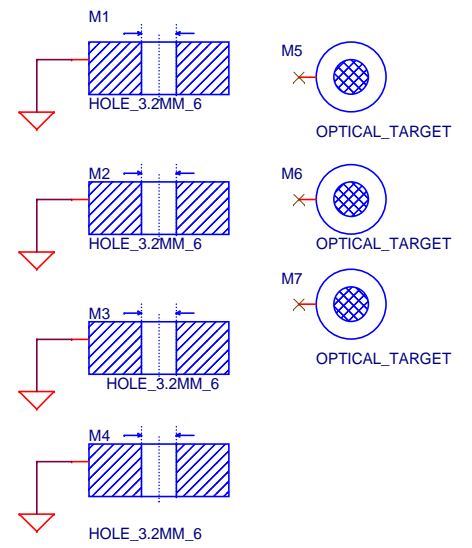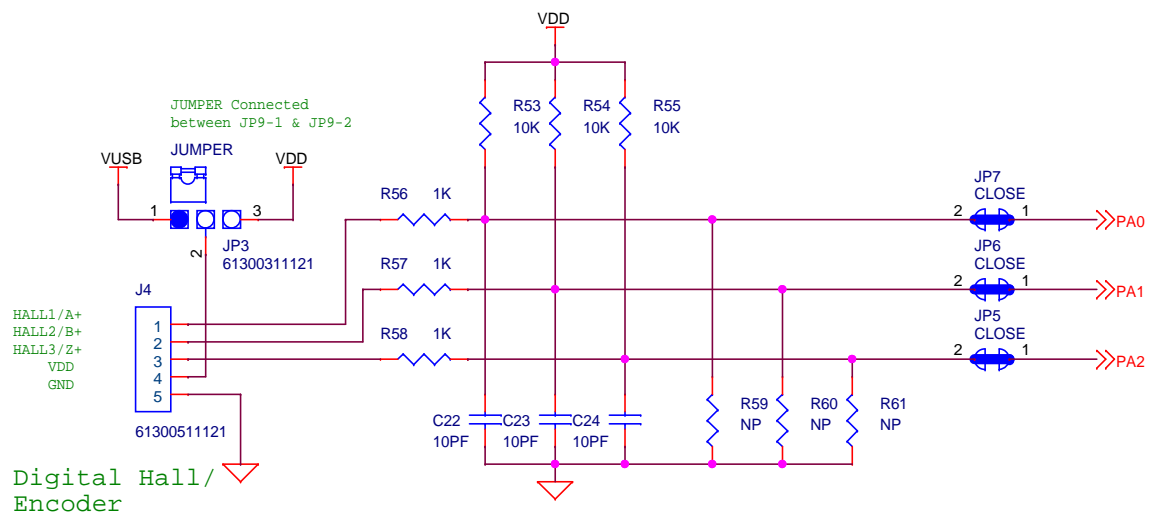Title: STEVAL-SPIN3201
Size: A4
Document Number:
Rev: 3
Date: Thursday, October 12, 2017
Sheet 1 of 4

Title: STEVAL-SPIN3201

Size: A3

Rev: 3

Date: Thursday, October 12, 2017

Sheet 2 of 4

M8

GW_REV3

VDD

R53 10K R54 10K R55 10K

JUMPER Connected
between JP9-1 & JP9-2

VUSB   JUMPER   VDD

JUMPER

1   3

2

JP3
61300311121

J4

HALL1/A+   1
HALL2/B+   2
HALL3/Z+   3
VDD   4
GND   5

61300511121

Digital Hall/
Encoder

R56 1K

R57 1K

R58 1K

JP7
CLOSE
2   1   PA0

JP6
CLOSE
2   1   PA1

JP5
CLOSE
2   1   PA2

C22   C23   C24
10PF   10PF   10PF

R59   R60   R61
NP   NP   NP

M1
HOLE_3.2MM_6

M2
HOLE_3.2MM_6

M3
HOLE_3.2MM_6

M4
HOLE_3.2MM_6

M5
OPTICAL_TARGET

M6
OPTICAL_TARGET

M7
OPTICAL_TARGET

Title
STEVAL-SPIN3201

Size   Document Number   Rev
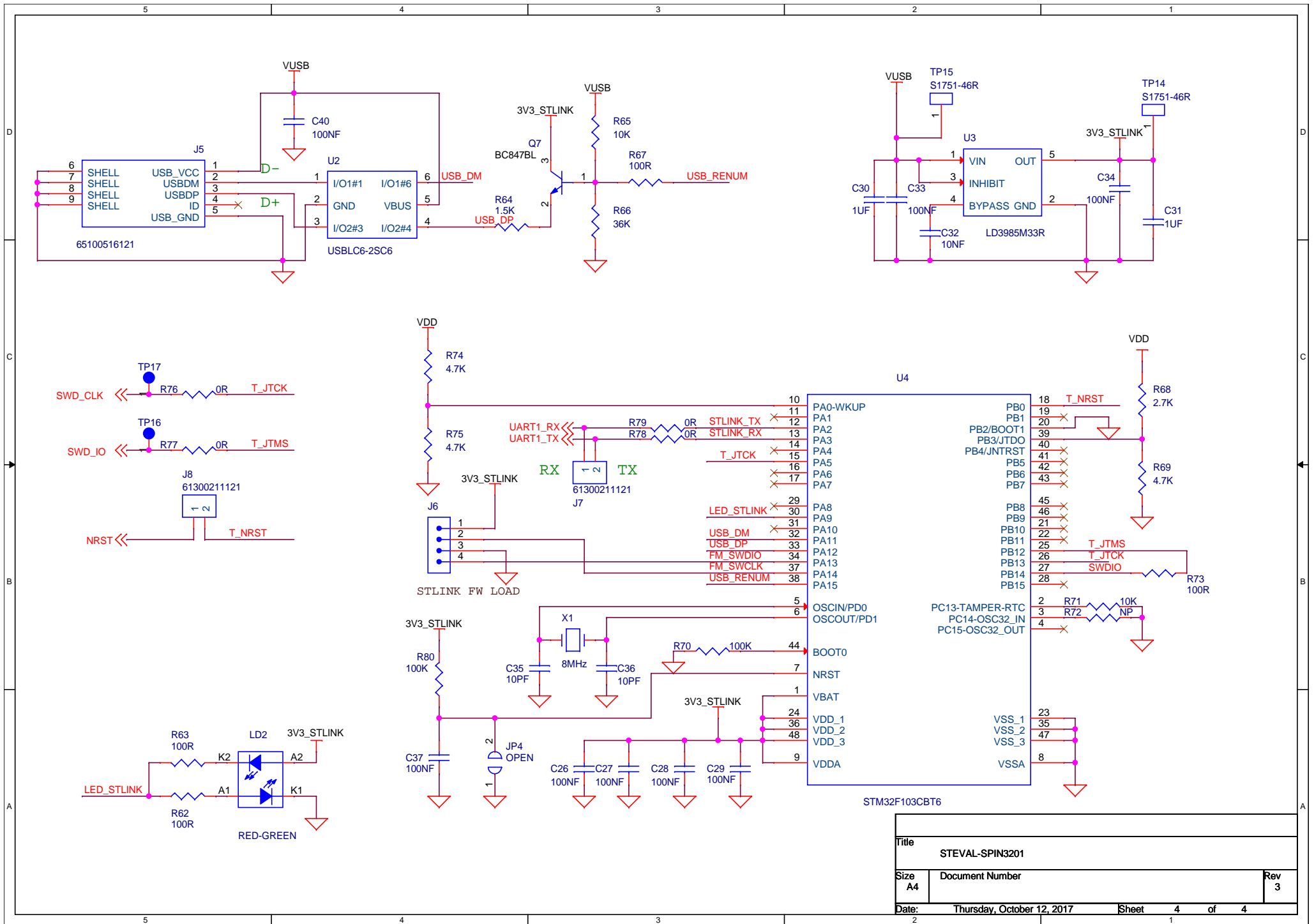A4   3

Date: Thursday, October 12, 2017   Sheet   3   of   4

VUSB

C40
100NF

J5
6 SHELL
7 SHELL
8 SHELL
9 SHELL

USB_VCC 1
USBDM 2
USBDP 3
ID 4
USB_GND 5

D –
D +

65100516121

U2
I/O1#1 1
GND 2
I/O2#3 3
I/O1#6
VBUS 5
I/O2#4

USBLC6-2SC6

USB_DM

USB_DP

3V3_STLINK

Q7
BC847BL

R64
1.5K

VUSB

R65
10K

R67
100R
USB_RENUM

R66
36K

VUSB TP15
S1751-46R

C30
1UF

C33
100NF

C32
10NF

U3
VIN 1
INHIBIT 3
BYPASS 4
OUT 5
GND 2

LD3985M33R

3V3_STLINK TP14
S1751-46R

C34
100NF

C31
1UF

VDD

R74
4.7K

R75
4.7K

3V3_STLINK

J6
1
2
3
4

STLINK FW LOAD

UART1_RX
UART1_TX

RX
1 2
TX

61300211121
J7

R79 0R STLINK_TX
R78 0R STLINK_RX

U4

PA0-WKUP 10
PA1 11
PA2 12
PA3 13
PA4 14
PA5 15
PA6 16
PA7 17
PA8 29
PA9 30
PA10 31
PA11 32
PA12 33
PA13 34
PA14 37
PA15 38

T_JTCK

LED_STLINK

USB_DM
USB_DP
FM_SWDIO
FM_SWCLK
USB_RENUM

OSCIN/PD0 5
OSCOUT/PD1 6

X1
8MHz

C35
10PF

C36
10PF

R70 100K
BOOT0 44

NRST 7

3V3_STLINK

VBAT 1
VDD_1 24
VDD_2 36
VDD_3 48
VDDA 9

JP4
OPEN

C26
100NF
C27
100NF
C28
100NF
C29
100NF

R80
100K

C37
100NF

PB0 18
PB1 19
PB2/BOOT1 20
PB3/JTDO 39
PB4/JNTRST 40
PB5 41
PB6 42
PB7 43
PB8 45
PB9 46
PB10 21
PB11 22
PB12 25
PB13 26
PB14 27
PB15 28

T_NRST

VDD

R68
2.7K

R69
4.7K

T_JTMS
T_JTCK
SWDIO

R73
100R

PC13-TAMPER-RTC 2
PC14-OSC32_IN 3
PC15-OSC32_OUT 4

R71 10K
R72 NP

VSS_1 23
VSS_2 35
VSS_3 47
VSSA 8

STM32F103CBT6

TP17
SWD_CLK R76 0R T_JTCK

TP16
SWD_IO R77 0R T_JTMS

J8
61300211121
1 2

NRST T_NRST

R63
100R
LD2
K2 A2 3V3_STLINK

LED_STLINK

R62
100R
A1 K1

RED-GREEN

Revision history: November 2017
Changed value of:
R9, R12, R13, R14, R15, R19, R20, R21, R24, R25, R28 R29, R30, R33, R34
C15, C19, C20
For more detail refer to STEVAL-SPIN3201 user manual