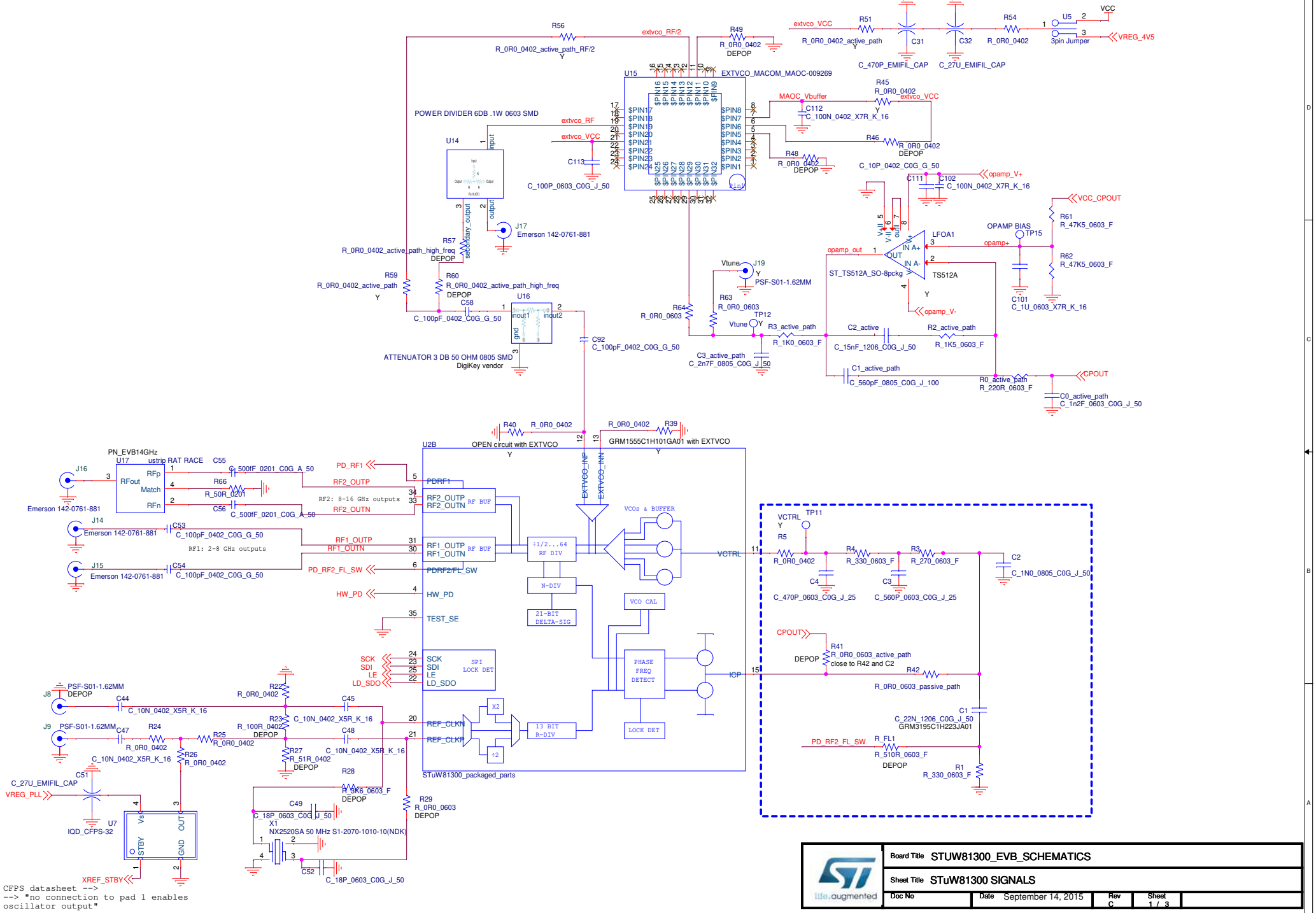
R56
R_0R0_0402_active_path_RF/2
extvco_RF/2
R49
R_0R0_0402
DEPOP
extvco_VCC
R51
R_0R0_0402_active_path
C31
C32
R54
R_0R0_0402
U5
3pin Jumper
VCC
VREG_4V5
C_470P_EMIFIL_CAP
C_27U_EMIFIL_CAP
U15
EXTVCO_MACOM_MAOC-009269
POWER DIVIDER 6DB .1W 0603 SMD
extvco_RF
extvco_VCC
C113
C_100P_0603_C0G_J_50
MAOC_Vbuffer
R45
R_0R0_0402
C112
C_100N_0402_X7R_K_16
R46
R_0R0_0402
DEPOP
R48
R_0R0_0402
DEPOP
C_10P_0402_C0G_G_50
C111
C102
C_100N_0402_X7R_K_16
opamp_V+
VCC_CPOUT
U14
input
output
secondary_output
J17
Emerson 142-0761-881
R57
R_0R0_0402_active_path_high_freq
DEPOP
R59
R_0R0_0402_active_path
R60
R_0R0_0402_active_path_high_freq
DEPOP
C58
C_100pF_0402_C0G_G_50
U16
inout1
inout2
gnd
ATTENUATOR 3 DB 50 OHM 0805 SMD
DigiKey vendor
C92
C_100pF_0402_C0G_G_50
Vtune
J19
PSF-S01-1.62MM
R64
R_0R0_0603
R63
R_0R0_0603
TP12
Vtune
R3_active_path
R_1K0_0603_F
C3_active_path
C_2n7F_0805_C0G_J_50
opamp_out
LFOA1
IN A+
IN A-
OUT
ST_TS512A_SO-8pckg
TS512A
opamp+
opamp_V-
OPAMP BIAS
TP15
R61
R_47K5_0603_F
R62
R_47K5_0603_F
C101
C_1U_0603_X7R_K_16
C2_active
C_15nF_1206_C0G_J_50
R2_active_path
R_1K5_0603_F
C1_active_path
C_560pF_0805_C0G_J_100
R0_active_path
R_220R_0603_F
CPOUT
C0_active_path
C_1n2F_0603_C0G_J_50
R40
R_0R0_0402
OPEN circuit with EXTVCO
R_0R0_0402
R39
GRM1555C1H101GA01 with EXTVCO
U2B
EXTVCO_INP
EXTVCO_INN
PN_EVB14GHz
U17
ustrip RAT RACE
RFp
RFout
Match
RFn
J16
Emerson 142-0761-881
C55
C_500fF_0201_C0G_A_50
R66
R_50R_0201
C56
C_500fF_0201_C0G_A_50
PD_RF1
RF2_OUTP
RF2_OUTN
RF2: 8-16 GHz outputs
PDRF1
RF2_OUTP
RF2_OUTN
RF BUF
J14
Emerson 142-0761-881
C53
C_100pF_0402_C0G_G_50
RF1: 2-8 GHz outputs
J15
Emerson 142-0761-881
C54
C_100pF_0402_C0G_G_50
RF1_OUTP
RF1_OUTN
PD_RF2_FL_SW
PDRF2/FL_SW
HW_PD
TEST_SE
÷1/2...64
RF DIV
N-DIV
21-BIT
DELTA-SIG
VCOs & BUFFER
VCO CAL
PHASE
FREQ
DETECT
LOCK DET
VCTRL
ICP
SCK
SDI
LE
LD_SDO
SPI
LOCK DET
REF_CLKN
REF_CLKP
X2
÷2
13 BIT
R-DIV
STuW81300_packaged_parts
VCTRL
TP11
R5
R_0R0_0402
R4
R_330_0603_F
R3
R_270_0603_F
C2
C_1N0_0805_C0G_J_50
C4
C_470P_0603_C0G_J_25
C3
C_560P_0603_C0G_J_25
CPOUT
R41
R_0R0_0603_active_path
close to R42 and C2
DEPOP
R42
R_0R0_0603_passive_path
C1
C_22N_1206_C0G_J_50
GRM3195C1H223JA01
PD_RF2_FL_SW
R_FL1
R_510R_0603_F
DEPOP
R1
R_330_0603_F
J8
PSF-S01-1.62MM
DEPOP
C44
C_10N_0402_X5R_K_16
R22
R_0R0_0402
C45
C_10N_0402_X5R_K_16
J9
PSF-S01-1.62MM
C47
R24
R_0R0_0402
R25
R_0R0_0402
C_10N_0402_X5R_K_16
R26
R_0R0_0402
R23
R_100R_0402
DEPOP
C48
C_10N_0402_X5R_K_16
R27
R_51R_0402
DEPOP
R28
R_5K6_0603_F
DEPOP
C49
C_18P_0603_C0G_J_50
X1
NX2520SA 50 MHz S1-2070-1010-10(NDK)
C52
C_18P_0603_C0G_J_50
R29
R_0R0_0603
DEPOP
C51
C_27U_EMIFIL_CAP
VREG_PLL
U7
IQD_CFPS-32
STBY
Vs
GND
OUT
XREF_STBY
CFPS datasheet -->
--> "no connection to pad 1 enables
oscillator output"
Board Title
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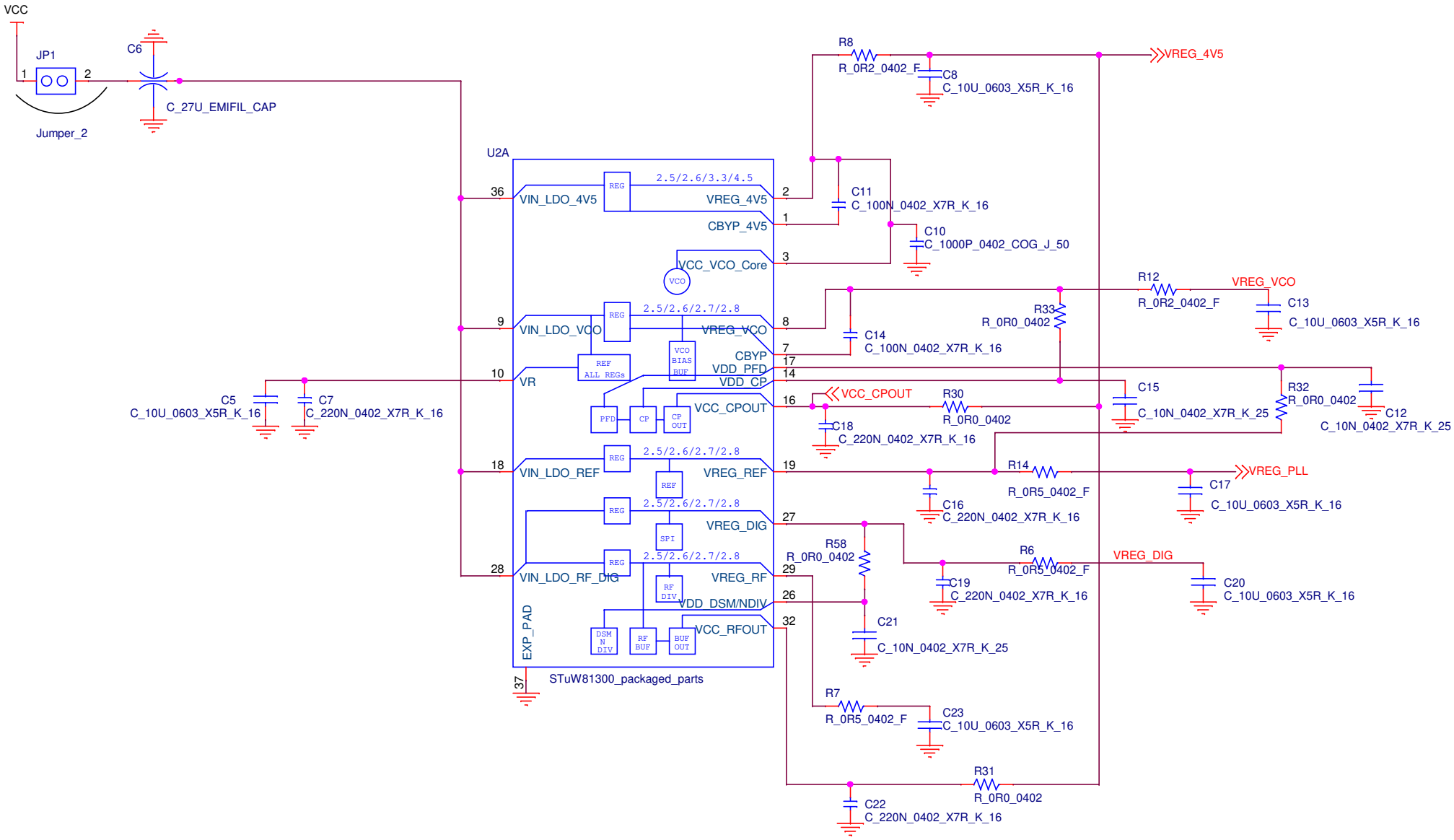
VCC
JP1
1
2
Jumper_2
C6
C_27U_EMIFIL_CAP
U2A
36
VIN_LDO_4V5
REG
2.5/2.6/3.3/4.5
VREG_4V5
2
CBYP_4V5
1
VCC_VCO_Core
3
VCO
9
VIN_LDO_VCO
2.5/2.6/2.7/2.8
VREG_VCO
8
CBYP
7
VDD_PFD
17
VDD_CP
14
10
VR
REF ALL REGs
VCO BIAS BUF
PFD
CP
CP OUT
VCC_CPOUT
16
18
VIN_LDO_REF
VREG_REF
19
REF
27
VREG_DIG
SPI
28
VIN_LDO_RF_DIG
VREG_RF
29
RF DIV
VDD_DSM/NDIV
26
32
VCC_RFOUT
DSM N DIV
RF BUF
BUF OUT
EXP_PAD
37
STuW81300_packaged_parts
R8
R_0R2_0402_F
C8
C_10U_0603_X5R_K_16
VREG_4V5
C11
C_100N_0402_X7R_K_16
C10
C_1000P_0402_COG_J_50
R12
R_0R2_0402_F
VREG_VCO
C13
C_10U_0603_X5R_K_16
R33
R_0R0_0402
C14
C_100N_0402_X7R_K_16
C5
C_10U_0603_X5R_K_16
C7
C_220N_0402_X7R_K_16
VCC_CPOUT
R30
R_0R0_0402
C15
C_10N_0402_X7R_K_25
R32
R_0R0_0402
C12
C_10N_0402_X7R_K_25
C18
C_220N_0402_X7R_K_16
R14
R_0R5_0402_F
VREG_PLL
C17
C_10U_0603_X5R_K_16
C16
C_220N_0402_X7R_K_16
R58
R_0R0_0402
R6
R_0R5_0402_F
VREG_DIG
C19
C_220N_0402_X7R_K_16
C20
C_10U_0603_X5R_K_16
C21
C_10N_0402_X7R_K_25
R7
R_0R5_0402_F
C23
C_10U_0603_X5R_K_16
R31
R_0R0_0402
C22
C_220N_0402_X7R_K_16
life.augmented
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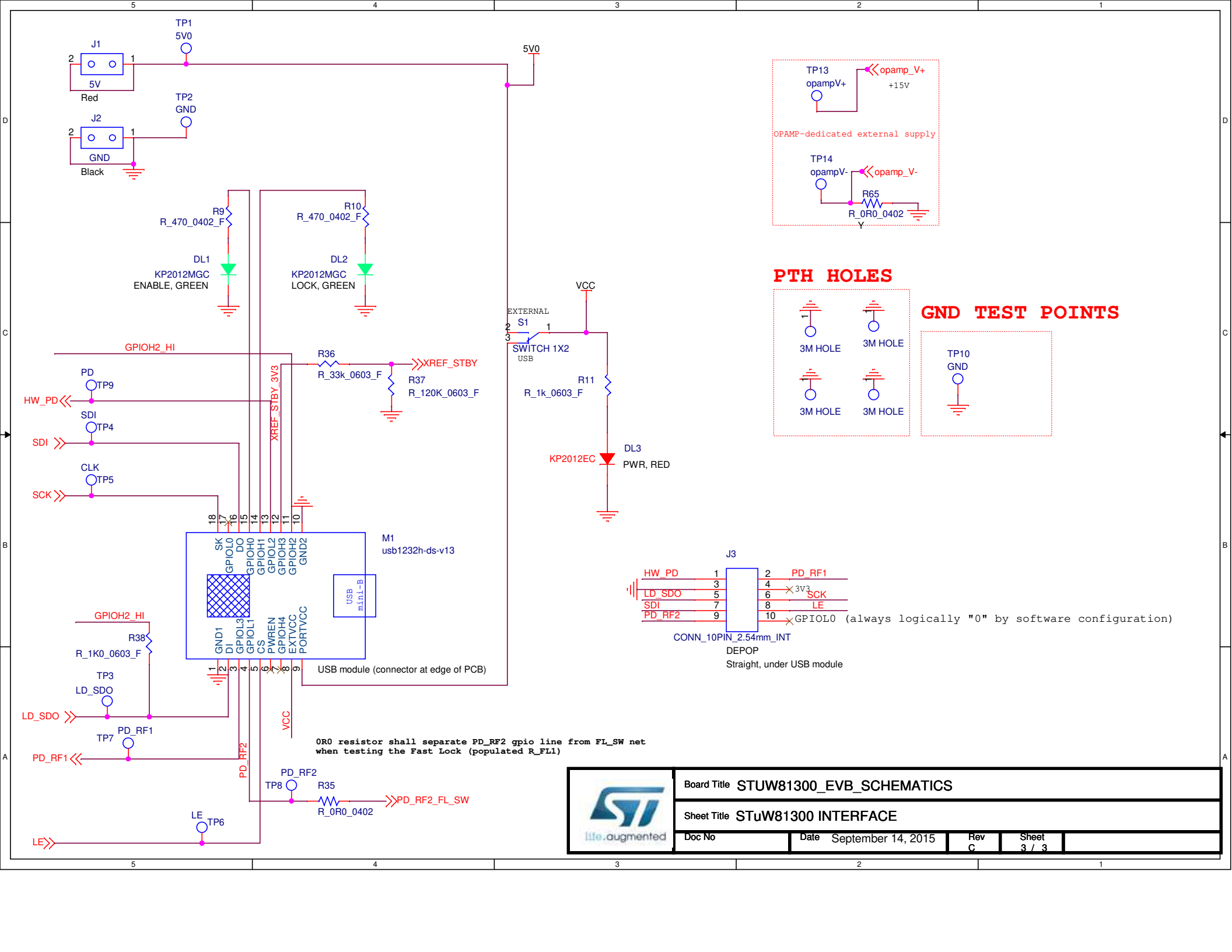
TP1
5V0
J1
5V
Red
TP2
GND
J2
GND
Black
5V0
TP13
opampV+
opamp_V+
+15V
OPAMP-dedicated external supply
TP14
opampV-
opamp_V-
R65
R_0R0_0402
Y
R9
R_470_0402_F
R10
R_470_0402_F
DL1
KP2012MGC
ENABLE, GREEN
DL2
KP2012MGC
LOCK, GREEN
PTH HOLES
3M HOLE
3M HOLE
3M HOLE
3M HOLE
GND TEST POINTS
TP10
GND
VCC
EXTERNAL
S1
SWITCH 1X2
USB
R11
R_1k_0603_F
DL3
KP2012EC
PWR, RED
GPIOH2_HI
R36
R_33k_0603_F
XREF_STBY
R37
R_120K_0603_F
PD
TP9
HW_PD
SDI
TP4
SDI
CLK
TP5
SCK
XREF_STBY_3V3
M1
usb1232h-ds-v13
SK
GPIOL0
DO
GPIOH0
GPIOH1
GPIOL2
GPIOH3
GPIOH2
GND2
GND1
DI
GPIOL3
GPIOL1
CS
PWREN
GPIOH4
EXTVCC
PORTVCC
USB mini-B
USB module (connector at edge of PCB)
J3
HW_PD
LD_SDO
SDI
PD_RF2
PD_RF1
3V3
SCK
LE
GPIOL0 (always logically "0" by software configuration)
CONN_10PIN_2.54mm_INT
DEPOP
Straight, under USB module
GPIOH2_HI
R38
R_1K0_0603_F
TP3
LD_SDO
LD_SDO
TP7
PD_RF1
PD_RF1
PD_RF2
VCC
0R0 resistor shall separate PD_RF2 gpio line from FL_SW net
when testing the Fast Lock (populated R_FL1)
PD_RF2
TP8
R35
R_0R0_0402
PD_RF2_FL_SW
LE
TP6
LE
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