3.2mOhm ESR at 500KHz
52% dc bias -> 0.48eff -> 19.2uF

J1
GSB1C4621DS1HR
V_USB
CC1
DP
DN
GND
SH1
SH2
SH3
SH4
VBUS_A
CC1
DP1
DN1
SBU1
GND_A
SHIELD
SHIELD__1
SHIELD__2
SHIELD__3
VBUS_B
SBU2
DN2
DP2
CC2
GND_B
B4_A9
B8
B7
B6
B5
B1_A12

DI025N06PT-AQ
Q5
DI025N06PT-AQ
Q1
15V
R37
10k
C3
10uF
R3
10
R7
100
IC1
AP33771CFBZ-13
R1
5m
V_USB
C1
10uF
D3
SMAJ15A
1uF
C104
R4
1k
D1
LED
R5
52k 1%
R6
52k 1%
39k 20V
52k 15V
66k 12V
66k 2A
52k 2.5A
39k 3A
26k 3.5A
52.52max
VOUT
PWR_EN
VCC
ISENP
GND_1
FLIP
LED
GND_2
V5V
DP
DN
CC1
CC2
ISEL
VSEL

C8
10uF
C10
10uF
IC2
TPP363082-T6TR
L1
15uH
R8
510k
R9
C9
100nF
R29
10.2k
R30
1.37k
C0 > 30uF
BST = 0.1uF
VIN
EN
GND
SW
VBST
VFB
5V
5.05V
TP7
TestPoint_2Pole
2mOhm ESR at 500KHz
5.182uF with dc bias -> 36.274uF

U8
TLV75733PDBVR
C142
10uF
C35
100nF
C62
100nF
C63
100nF
3.3V
IN
EN
OUT
GND

H1
MountingHole_Pad
H2
MountingHole_Pad
H3
MountingHole_Pad

J2
DIN-7
9VAC_OUT2
9VAC_OUT1
5V

C60
100nF
C46
10uF
C59
100nF
C47
100nF
C48
10uF
C49
100nF
C61
100nF
R23
200R
VDDA

C27
1uF
C30
1uF
TP2
TestPoint_2Pole
TP1
TestPoint_2Pole
U4
FAN3278
PWM_G1
PWM_G2
ENABLE_DRVA
ENABLE_DRVB
INA
INB
ENA
ENB
VDD
OUTA
OUTB
G2
G1
switched PWM G3/4 and G1/2 around, can be inverted again in software.

C31
10uF
C33
10uF
Q2
DI006H03SQ
PMOS!
f_sw: 50-100KHz
G3
G1
G4
G2
L2
47uH
L3
47uH
C19
10uF
C25
10uF
T1
Transformer_1P_1S
9VAC1
9VAC2
C23
10uF
TP6
TestPoint_2Pole
R2
20k
R28
20k
D2
SMAJ15CA

C36
1uF
C20
1uF
3.3V
D27
27k
R71
V_REF = 2.048 | 2.5 | 2.9
SD103AWS

C29
1uF
C28
1uF
TP3
TestPoint_2Pole
TP4
TestPoint_2Pole
U5
FAN3278
PWM_G3
PWM_G4

100nF
C24
10uF
C2
U1
INA180A2
2.5V @ 5A
shunt for peak current mode control
50mV @ 5A
R21
10m
Av=50
CURRENT_COMP_ADC

LM4041 reference
205
R26
1.225V
U7
LM4041CIM3X-1.2/NOPB
470
R25
R22
4k7
9VAC1
9VAC2
R24
4k7
C21
10uF
C22
100nF
9VAC_COMP_ADC
LM321
U3
470
R27

J3
Conn_ST_STDC14
NRST
JCLK/SWCLK
JTMS/SWDIO
JTDO/SWO
JTDI/NC
JRCLK/NC
VCP_RX
VCP_TX
GNDDetect
JTCLK
JTMS
JTDO
JTDI

U2
STM32G474CBTx
VREF+
PG10
PF0
PF1
PC13
PC14
PC15
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
PB10
PB11
PB12
PB13
PB14
PB15
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13
PA14
PA15
VBAT
VDD
VSS
VSSA
OSC_IN
OSC_OUT
BOOT0
C94
16pF
C97
16pF
Y2
40MHz 10pF

Sheet: /
File: c64psu.kicad_sch
Title:
Size: A3
Date:
Rev:
KiCad E.D.A. 9.0.1
Id: 1/1