

HV LV

2 Layer PCB
70μm Copper Layer

HV-Symbol



FTLogo_med

Logo

3V3 (3V)
U2 1.24V (1.4) 10mA
BAT54 0.5V
R3 1.56 V (1.1 V)
1.56 V / 10 mA = 156R (7.3 mA 3V)
E12 150 R Pmax. 15 mW

3V3 (3V)
LED 2V 1mA
BAT54 0.5 V
R1 0.8 V (0.5V)
0.8 V / 1mA = 800R (0.6 mA 3V)
E12 820R Pmax. 0.8 mW

ON - L (0...0.8 V or short)
OFF - H (4...30 V or open)

PWR_FLAG \diamond +VIN

PWR_FLAG \diamond -VIN

$2.5 \text{ V} * 96 = 240 \text{ V}$
 $675 \text{ W} / 240 \text{ V} = 2.81 \text{ A}$
bigger fuse for potential inrush current

HV_in1
Molex MircoFit 3p_h

HV+ HV -
battery side of AIRs
after main shunt, so overall
current monitoring is not affected

ON - L (0...0.8 V or short)
OFF - H (4...30 V or open)

4mm

normally open switch and
button cell on sidepanel

to master pcb

+3V3

3V_buttoncell J1
MN-Lok-2p_v

+3V3

MMNL-4p_v

current signal filter on master pcb
fg -3db = 21.16 Hz
R = 160
C = 47 μF

temp signal filter
on master pcb
fg -3db = 10.3 Hz
R = 330
C = 47 μF

NTC from baseplate

U2
140356145200

D2 LED 2V

U1

PH600A280-24

BasePlate

CNT

+Vout

+Vout

+S

TRM

-S

-Vout

-Vout

C3

470p 2kV Y Class

C2

470p 2kV Y Class

GND

baseplate is connected via screws
to coolingbracket
to pcb via threaded standoffs

U7
U6
U5
9775031360R

Sheet: /
File: TDK_DCDC_pcb.kicad_sch

Title: TS-DCDC

Size: A4 Date: 2024-12-12

KiCad E.D.A. 8.0.6

+3V3

PWR_FLAG \diamond Vout+

PWR_FLAG \diamond LV+

PWR_FLAG \diamond LV-

PWR_FLAG \diamond LV-

PWR_FLAG \diamond LV-

PWR_FLAG \diamond LV-

PWR_FLAG \diamond LV-

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