VBUS VBUS VBUS TP1 VBUS
TP_BST

J1
Screw_Terminal_01x02
1
2
C8
100uF
+
R3
1k
D1
LED
GND
GND
GND

R8
5.1
D6
SK53AFL-TP
C4
0.1uF
R11
5.1
Q1
Q_NMOS_GDS
1 3 2

U1
ADP3110AKRZ-RL
4 VCC BST 1
DRVH 8
SWN 7
3 OD DRVL 5
2 IN PGND 6

PHASEA

VCC VCC
J2
Screw_Terminal_01x02
1
2
C7
0.1uF
R4
1k
D2
LED
GND
GND
GND

OD_A
IN_A
R5
1k
C1
1uF
D3
LED
GND
GND

R12
5.1
Q2
Q_NMOS_GDS
1 3 2
GND

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PHASEA 3
PHASEB 2
PHASEC 1
Screw_Terminal_01x03
J4

J3
Screw_Terminal_01x06
1 OD_A
2 IN_A
3 OD_B
4 IN_B
5 OD_C
6 IN_C

VBUS VBUS VBUS TP2
TP_BST

R9
5.1
D7
SK53AFL-TP
C5
0.1uF
R13
5.1
Q3
Q_NMOS_GDS
1 3 2

U2
ADP3110AKRZ-RL
4 VCC BST 1
DRVH 8
SWN 7
3 OD DRVL 5
2 IN PGND 6

PHASEB

OD_B
IN_B
R6
1k
C2
1uF
D4
LED
GND
GND

R14
5.1
Q4
Q_NMOS_GDS
1 3 2
GND
GND

ZCROSS_A 1
ZCROSS_B 2
ZCROSS_C 3
4
J5
Screw_Terminal_01x04

NEUT

VBUS VBUS VBUS TP3
TP_BST

R10
5.1
D8
SK53AFL-TP
C6
0.1uF
R15
5.1
Q5
Q_NMOS_GDS
1 3 2

U3
ADP3110AKRZ-RL
4 VCC BST 1
DRVH 8
SWN 7
3 OD DRVL 5
2 IN PGND 6

PHASEC

OD_C
IN_C
R7
1k
C3
1uF
D5
LED
GND
GND

R16
5.1
Q6
Q_NMOS_GDS
1 3 2
GND
GND

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Rev:
Id: 1/2

PHASEA

R17
33k

BEMFA

R23
33k

PHASEB

R18
33k

BEMFB

R24
33k

PHASEC

R19
33k

BEMFC

R25
33k

NEUT

R20
10k

R21
10k

R22
10k

GND GND GND

VCC

U4E
LM339

3 V+   V− 12

GND

TP4
TestPoint
BEMFA

C9
1nF

GND

U4A
LM339

5 +

4 −

2

VCC

R26
10k

ZCROSS_A

TP5
TestPoint
BEMFB

C10
1nF

GND

U4B
LM339

7 +

6 −

1

VCC

R27
10k

ZCROSS_B

TP6
TestPoint
BEMFC

C11
1nF

GND

U4C
LM339

11 +

10 −

13

VCC

R28
10k

ZCROSS_C

U4D
LM339

9 +

8 −

14

NEUT GND

Title:

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Id: 2/2