C5,L2,C1: EMI filter

Note 1: http://www.digikey.com/es/articles/techzone/2012/oct/ntc-thermistors-protect-led-lighting-systems-from-overheating

Note 2: Dimming and On/Off Control Input:
• Drive to voltage below 0.4V to turn off output current
• Drive with DC voltage (0.5V < VCTRL < 2.5V) to adjust output current from 20% to 100% of IOUTnom

VCC
WIREPADSMD2,54-5,08

D2
BA340A

L2
68uH

C5
4.7uF

C1
4.7uF

GND   GND

D3
TVSSMC

R3
680

GND

GND

R4
124

Z1
5.6v

GND

Install R7 when Pot is not installed.

DIM2
WIREPADSMD1,27-254

R5
13.3k

CTRL

Each CTRL pin's input resistance is only 50K and note there are two in parallel.

WIREPADSMD1,27-254   LEDB+

WIREPADSMD1,27-254   LEDA+

R7
510k

RNTC1
100k

DIM1
WIREPADSMD1,27-254

1k
R6

GND

Wiper and one other terminal of a log pot, 500k +/- 10%
may be connected at terminals DIM1 & DIM2 such that its resistance increases with clockwise turn.
Otherwise R7 should be installed.

U2
3 CTRL VIN 5

C3B
10nF

C1B
2.2uF

R1B
0.15

GND

SET

C2B
1.0uF

LED1B
LED2B
WIREPADSMD1,27-254

D1B
BAT20JFILM

LED1BTH

GND

LED2BTH

GND

GND

GND

L1B
33uH

2 GND SW 1

AL8805WS

GND

LEDB-
WIREPADSMD1,27-254

U1
3 CTRL VIN 5

C3A
10nF

C1A
2.2uF

R1A
0.15

GND

SET

C2A
1.0uF

LED1A
LED2A
WIREPADSMD1,27-254

D1A
BAT20JFILM

LED1ATH

GND

LED2ATH

GND

GND

L1A
33uH

2 GND SW 1

AL8805WS

GND

LEDA-
WIREPADSMD1,27-254

GND
WIREPADSMD2,54-5,08

GND

Layout constraints: C1 close to Vin. R1 close to Vin and SET. D1 anode, SW pin, inductor close.

Traxda Brightzilla v.1

Liam D. Gray Labs, for Traxda

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