LDO Regulator

R3 = (R2xVref) / Vout−Vref
= 100k x 28 / 5−24
= 13.3k approcimate standard resistor value

Capacitor rating should be more than 24V

L = Vout x (Vin(max) − Vout) / Vin(max) x Kind x Iout x fsw
ceramic capacitor

Input supply voltage − 4.5V − 28V
Output supply − 2A

VBUS from USB connector (nom. +5v) Min 22uF inp/outp caps

Decoupling capacitors

1 x 100nF per VDD pin

Power supply out

USB App note An4879

Load Capacitor C_l = 2 * (C_l − C_s) = 2 * (10−5)pF = 10pF
Assume C_s = 5pF

S pin in CAN Transceiver is used to disable transmission. Only possible to receive
It is prefered to keep the pull up resistors for I2C at the host side. Typical value 2.2Kohms

Motor driver − DRV8833PW − Dual H−Bridge (1.5A RMS, Max voltage: 10.8V) − Obsolete

DRV8844PWPR − Dual H Bridge (1.25A RMS, Max voltage: 36V)

Mounting holes

M3

CAN Transceiver

Magnetic encoder

Connectors

CAN BUS termination resistor

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