


MCU小板可更换成不同MCU系统
目前兼容AC7840x与AC7801x
MCU详细设计见MCU小板文档

MCU主控小板
与驱动板通过双排针连接
小板都是公座排针端子

下板(驱动板)都是母座排母端子

注意!!!

请务必确认电源关闭后，再进行MCU小板的插拔工作

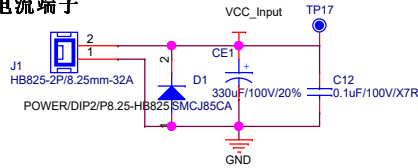
		AutoChips Inc. <i>AutoChips Confidential</i>	
Project Name: AC7840x-64Pin-Motor-Demo-V1.0			
Size: A4	Page Name: MCU_AC7840x	Designer: <i>xiaolong.lai</i>	Rev: <Re
		Checker: <i>xinghui.liu</i>	
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供电大于20V, JP6必须断开, 不然容易烧坏预驱芯片
用12V供电, 可选择接通JP6, 消除U2带来的电压降

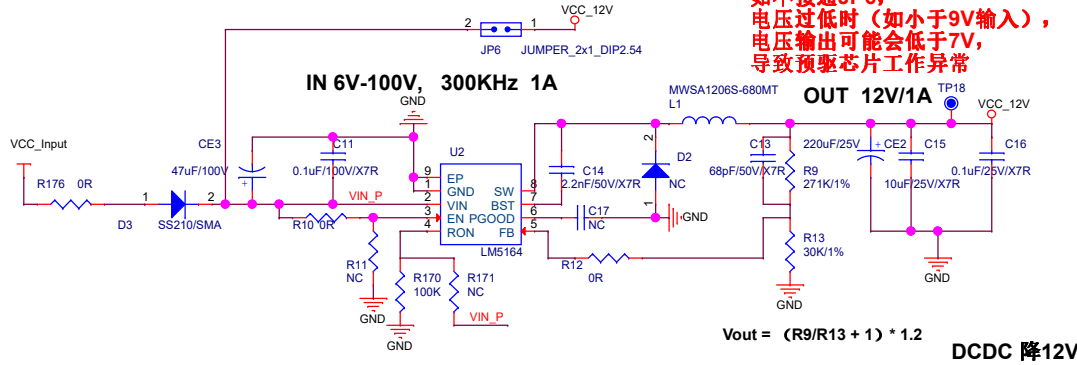
如供电为12V系统, 建议接通JP6

注意:
如不接通JP6,
电压过低时(如小于9V输入),
电压输出可能会低于7V,
导致预驱芯片工作异常

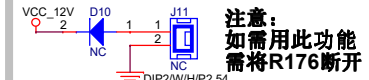
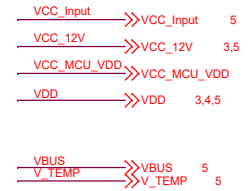
8.25mm大电流端子



电源输入 8-70V

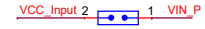


DCDC 降12V

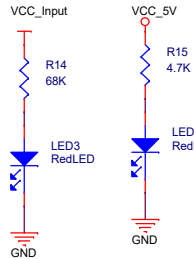
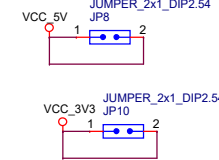


注意:
如需用此功能
需将R176断开

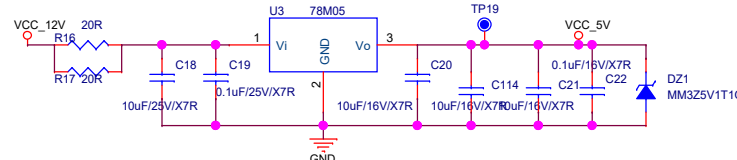
预留12V外部供电口



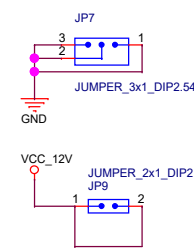
预留可切断二极管D3
消除管压降



电源指示灯

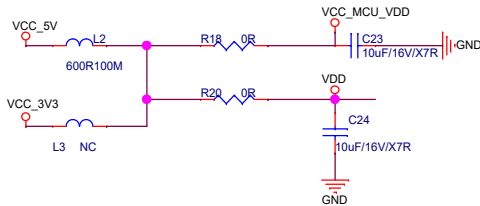


LDO 降5V



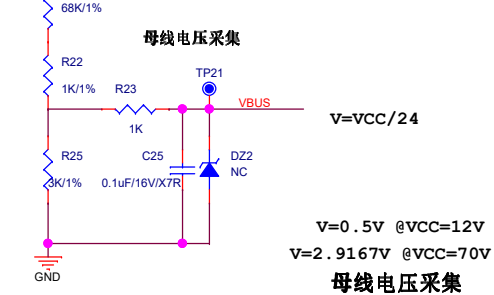
注意:
L2/L3只能焊接其中一个
正常情况只焊接L2, L3断开

如确实要用3.3V系统
请先将L2去掉, 再焊接L3

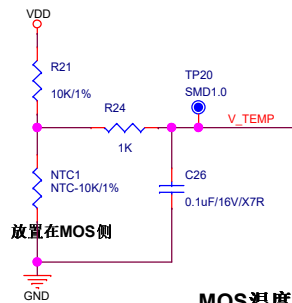


MCU/外接口供电选择

如后续只用12V系统, 且MCU供电为5V
可将分压比适当调整
让分压后的电压为1-4V左右为佳

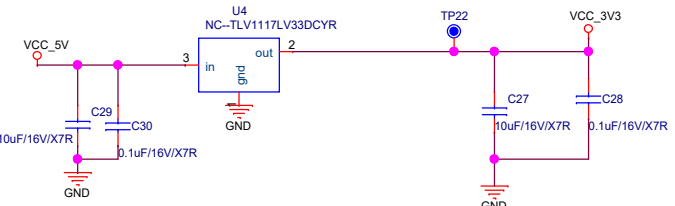


V=0.5V @VCC=12V
V=2.9167V @VCC=70V



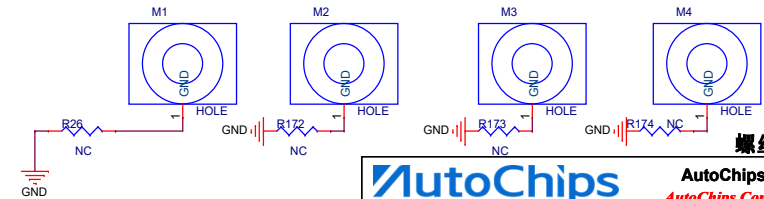
MOS温度采集

此处3.3v仅为备用
3.3V电源放置备用, 正常不焊接



LDO 降3.3V

未标注电阻精度:
默认为±5%



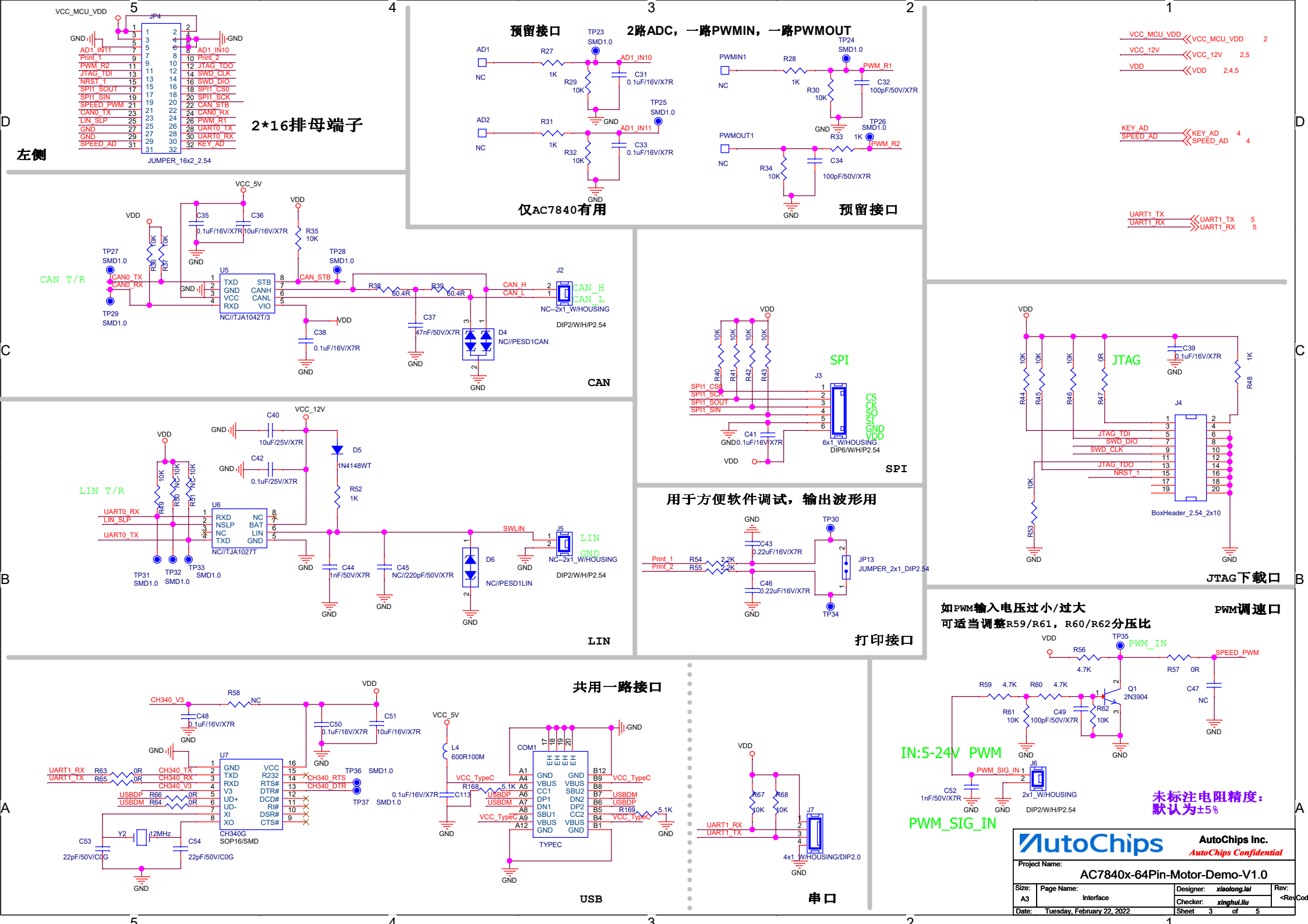
螺丝孔位

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正常采用5V给MCU供电

如必须用3.3V给MCU供电:

1. 母线电压检测/BEMF处的分压比要注意, 需保证分压后电压不超过3.3V
2. HALL/ENCODE的供电电压需注意, 需检查此HALL/ENCODE传感器的供电电压是否支持3.3V
3. 注意运放处的放大倍数, 能检测到的电流范围会相应缩小, 且硬件过流值也会相应变动



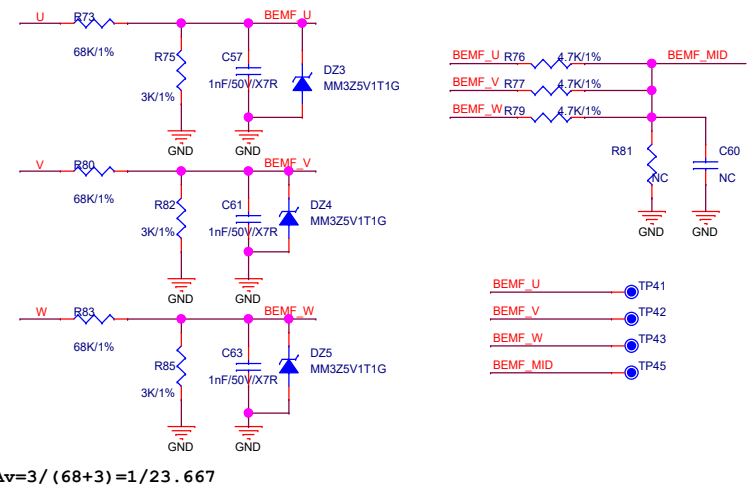
D

C

B

A

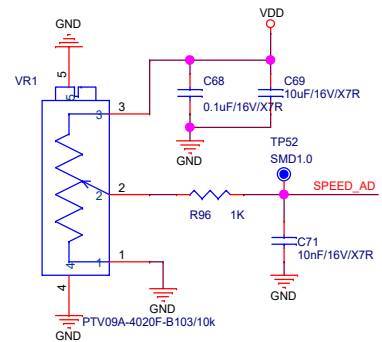
如后续只用12v系统，且MCU供电为5v，可将分压比适当调整，让分压后的电压为1-4v左右为佳



$$A_v = 3 / (68 + 3) = 1 / 23.667$$

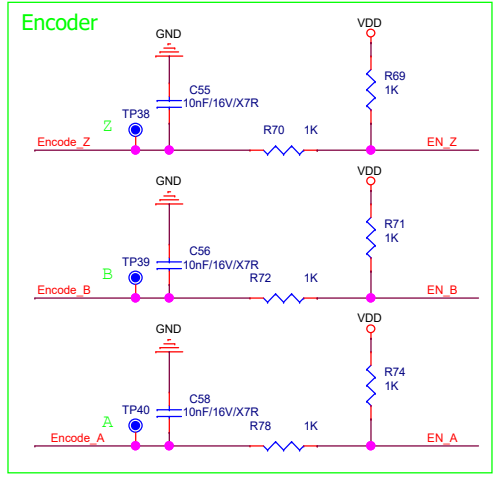
BEMF

电位器调速



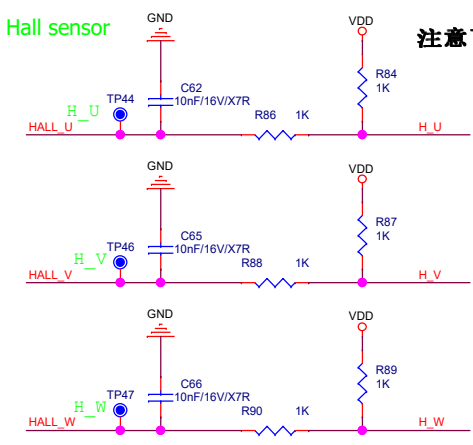
电位器调速

Encoder

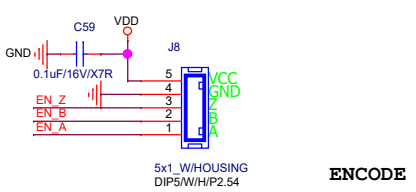


如用3.3v，注意此处供电VDD为3.3v
注意下HALL/ENCODE的供电用3.3v是否可用

Hall sensor



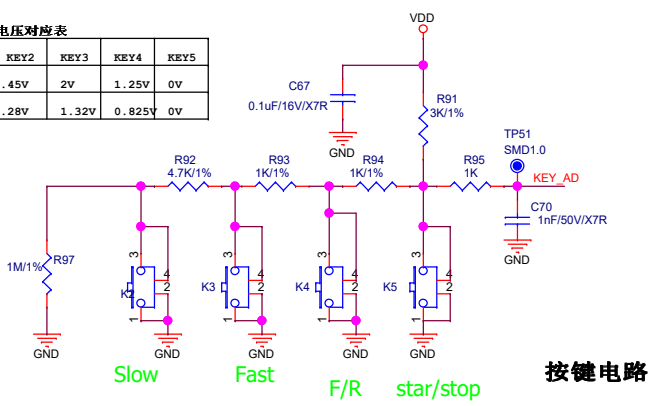
HALL



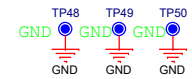
KEY:

按键电压对应表

供电电压	KEY2	KEY3	KEY4	KEY5
5V	3.45V	2V	1.25V	0V
3.3V	2.28V	1.32V	0.825V	0V



按键电路



未标注电阻精度：
默认为±5%

