

图1:连接示意图

当Q1的PWM输入为高的时候,M1截止,Q1的PWM输入为低的时候,M1通过Q2导通

(datasheet: An active free-wheeling is automatically implemented when a half-bridge is activated in PWM mode to reduce the power dissipation of the free-wheeling (FW) MOSFET: If the active MOSFET is OFF, the opposite (freewheeling)MOSFET of the same half-bridge is actively turned on.)

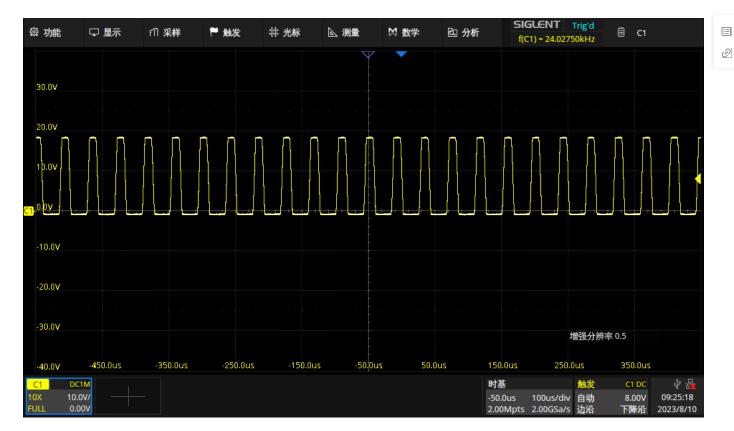


图2: Q1的S脚波形

当Q1的PWM输入为高M2导通,当Q1的输入PWM为低,M2截止,达到动态控制的目的。Q5的S脚波形如下所示

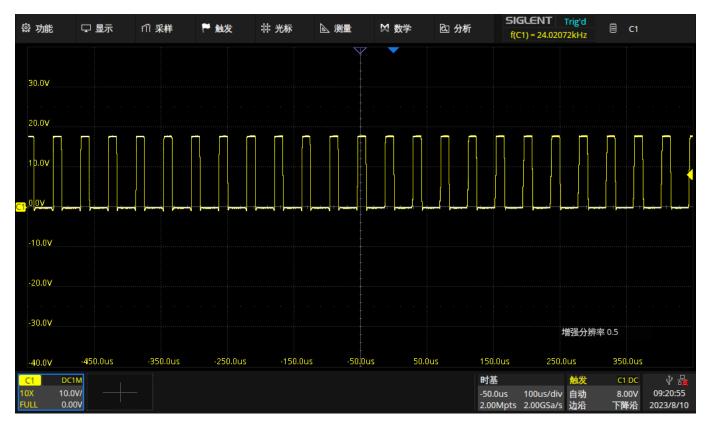


图3: Q5的S脚波形

当Q1的PWM输入为高M3截止,当Q1的输入PWM为低,M3截止,达到动态控制的目的。Q7的S脚波形如下所示

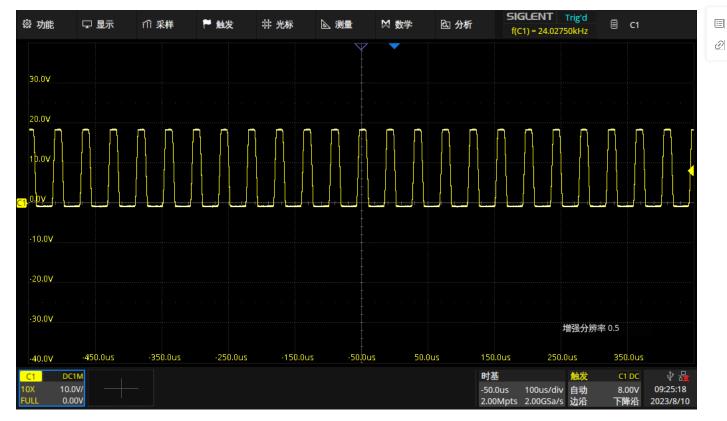


图4: Q7的S脚波形

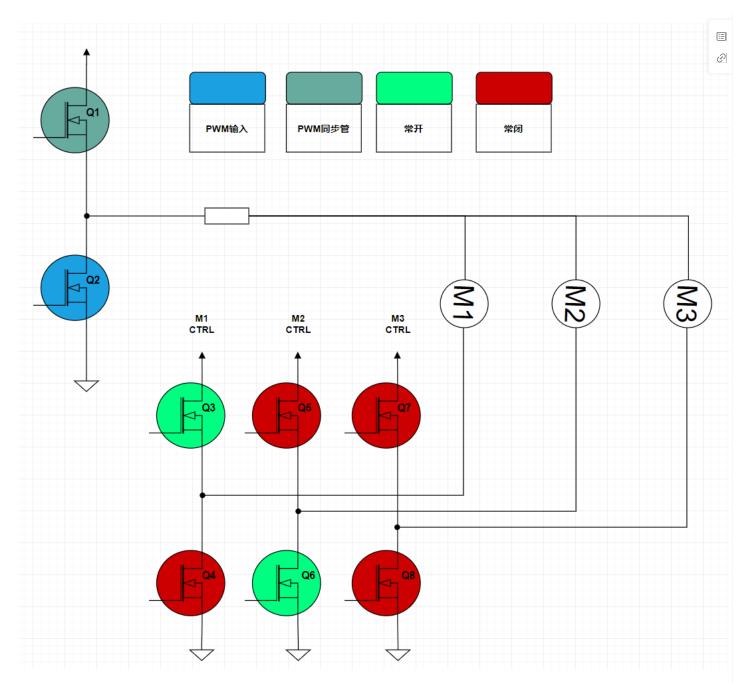


图5:连接示意图

当Q2的PWM输入为高的时候,M2截止,Q2的PWM输入为低的时候,M2通过Q1导通,

(datasheet: An active free-wheeling is automatically implemented when a half-bridge is activated in PWM mode to reduce the power dissipation of the free-wheeling (FW) MOSFET: If the active MOSFET is OFF, the opposite (freewheeling)MOSFET of the same half-bridge is activally turned on.)

多电机同步控制架构

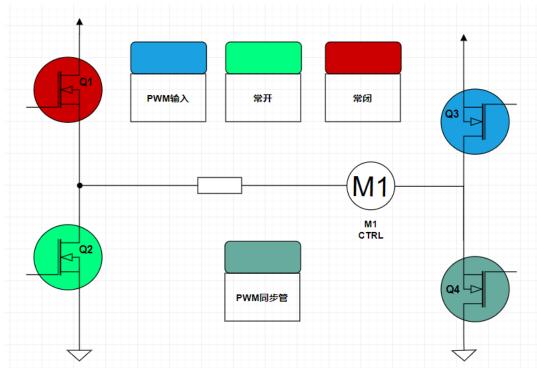


图6: 多电机同时正反转

可以配置为H桥,一共16个桥臂,相连通道组成H桥配置如下,拷贝保存到CSV即可

HB1-HIGH	HB1-LOW	HB5-HIGH	HB5-LOW	MOTOR
开	关	关	PWM	正转
关	开	PWM	关	反转

配置完H桥后可以将PWM1/2/3的输入连接至一起即可实现同步正转或者反转,如果电机转动方向不同启动时候正向是最小占空比启动,反向则是最大占空比启动可能会过流,如果始终是反向的建议将PWM输入使用反向去控制反向转动的电机。

寄存器配置如下:

Register Name	Address	Value
GENCTRL1	0x00	0x27
GENCTRL2	0x01	0x80
VDS1	0x02	0xFF
VDS2	0x03	0xFF
CCP_BLK1	0x04	0x00
CCP_BLK2_ACT	0x05	0x24
CCP_BLK2_FW	0x05	0x24
HBMODE	0x06	0x29
PWMSET	0x07	0x31
TPRECHG	0x08	0x00
HBIDIAG	0x09	0x00
ST_ICHG	0x0A	0x44
PWM_PCHG_INIT	0x0A	0xC6

PWM_ICHG_ACT	0x0B	0xC6
PWM_ICHG_FW	0x0B	0xC6
PWM_IDCHG_ACT	0x0C	0xE7
PWM_PDCHG_INIT	0x0C	0x8C
PWM_ICHGMAX_CC P_BLK3_ACT	0x0D	0x00
PWM_ICHGMAX_CC P_BLK3_FW	0x0D	0x00
TDON_OFF1	0x0E	0x0A
TDON_OFF2	0x0F	0x0A
TDON_OFF3	0x10	0x0A
GENSTAT	0x11	0x00
DSOV	0x12	0x00
HBVOUT_PWMERR	0x13	0x00
EFF_TDON_OFF1	0x14	0x12
EFF_TDON_OFF2	0x15	0x12
EFF_TDON_OFF3	0x16	0x00
TRISE_FALL1	0x17	0x04
TRISE_FALL2	0x18	0x04
TRISE_FALL3	0x19	0x00
DEVID	0x1F	0x01
DRV_LPWR_EN	0x1C	0x00
CSA_OC_SH	0x1D	0x00
MISC	0x1E	0x00
GDF	0x1A	0x00