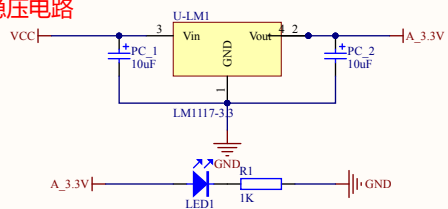
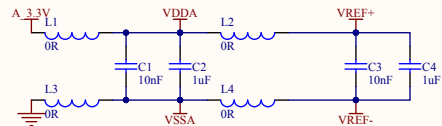


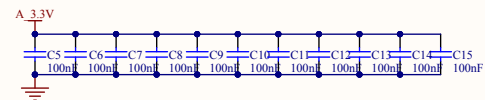
## 稳压电路



## 模拟量比较参考电压电路



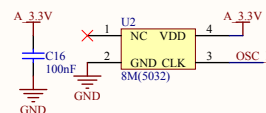
## 退偶/滤波电容



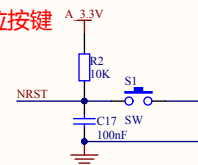
## STM32F103ZET6

|            |      |     |  |   |   |     |        |
|------------|------|-----|--|---|---|-----|--------|
| 0103E16    |      | U1  |  | PA0-WKUP/USART2_CTS/ADC123_IN0TIM5_CH1/TIM2_CH1_ETR/TIM8_ETR_NC |   | 106 |        |
|            | PA0  | 34  |  |   |   |     |        |
|            | PA1  | 35  |  | PA1/USART2_RTS/ADC123_IN1TIM5_CH2/TIM2_CH2                      |   |     |        |
|            | PA2  | 36  |  | PA2/USART2_TX/TIM5_CH3/ADC123_IN2TIM2_CH3                       | PE0/TIM4_ETR/FSMC_NBL0  | 141 | PE0    |
|            | PA3  | 37  |  | PA3/USART2_RX/TIM5_CH4/ADC123_IN2TIM2_CH4                       | PE1/FSMC_NBL1   | 142 | PE1    |
|            | PA4  | 40  |  | PA4/SPI1_NSS/DAC_OUT1/USART2_CK/ADC12_IN4                       | PE2/TRACECK/FSMC_A23  | 2   | PE2    |
|            | PA5  | 41  |  | PA5/SPI1_SCK/DAC_OUT2/ADC12_IN5                                 | PE3/TRACED0/FSMC_A19  | 3   | PE4    |
|            | PA6  | 42  |  | PA6/SPI1_MISO/TIM8_BKIN/ADC12_IN6TIM3_CH1                       | PE4/TRACED1/FSMC_A20  | 4   | PE5    |
|            | PA7  | 43  |  | PA7/SPI1_MOSI/TIM8_CH1N/ADC12_IN7TIM5_CH2                       | PE5/TRACED2/FSMC_A21  | 5   | PE6    |
|            | PA8  | 100 |  | PA8/USART1_CK/TIM1_CH1/MCO                                      | PE6/TRACED3/FSMC_A22  | 58  | PE7    |
|            | PA9  | 101 |  | PA9/USART1_TX/TIM1_CH2/TIM1_CH2                                 | PE7/FSMC_A23  | 59  | PE8    |
|            | PA10 | 102 |  | PA10/USART1_RX/TIM1_CH3   | PE8/FSMC_D5   | 60  | PE9    |
|            | PA11 | 103 |  | PA11/USART1_CTS/CANRX/TIM1_CH4/USBDP                            | PE9/FSMC_D6   | 63  | PE10   |
| SWDIO      | PA12 | 104 |  | PA12/USART1_RTS/CANTX/TIM1_ETR/USBDP                            | PE10/FSMC_D7  | 64  | PE11   |
| SWCLK      | PA13 | 105 |  | PA13/TMS/SWCLK  | PE11/FSMC_D8  | 65  | PE12   |
|            | PA14 | 109 |  | PA14/TMS-SWCLK  | PE12/FSMC_D9  | 66  | PE13   |
|            | PA15 | 110 |  | PA15/JTDI/SP15_NSS/12S3_WS                                      | PE13/FSMC_D10   | 67  | PE14   |
|            |      |     |  |   | PE14/FSMC_D11   | 68  | PE15   |
|            |      |     |  |   | PE15/FSMC_D12   |     |        |
|            | PB0  | 46  |  | PB0/ADC12_IN8/TIM3_CH3/TIM8_CH2N                                | PF0/FSMC_A0   | 10  | PF0    |
|            | PB1  | 47  |  | PB1/ADC12_IN9/TIM3_CH4/TIM8_CH3N                                | PF1/FSMC_A1   | 11  | PF1    |
| BOOT1      | PB2  | 48  |  | PB2/BOOT1   | PF2/FSMC_A2   | 12  | PF2    |
|            | PB3  | 133 |  | PB3/TDO/TRACESWO/SP13_SCK/12S3_CK                               | PF3/FSMC_A3   | 13  | PF3    |
|            | PB4  | 134 |  | PB4/JNTRST/SP13_MISO  | PF4/FSMC_A4   | 14  | PF4    |
|            | PB5  | 135 |  | PB5/I2C1_SMBAL/SP13_MOSI/12S3_SD                                | PF5/FSMC_A5   | 18  | PF6    |
|            | PB6  | 136 |  | PB6/I2C1_SCL/TIM4_CH1   | PF6/ADC3_IN4/FSMC_NBRD  | 19  | PF7    |
|            | PB7  | 137 |  | PB7/I2C1_SDA/FSMC_NADV/TIM4_CH2                                 | PF7/ADC3_IN5/FSMC_NBRG  | 20  | PF8    |
|            | PB8  | 139 |  | PB8/TIM4_CH3/SDIO_D4  | PF8/ADC3_IN6/FSMC_NIOWR   | 21  | PF9    |
|            | PB9  | 140 |  | PB9/TIM4_CH4/SDIO_D5  | PF9/ADC3_IN7/FSMC_CD  | 22  | PF10   |
|            | PB10 | 69  |  | PB10/I2C2_SCL/USART3_TX   | PF10/ADC3_IN8/FSMC_INTR   | 49  | PF11   |
|            | PB11 | 70  |  | PB11/I2C2_SDA/USART3_RX   | PF11/FSMC_NIOS16  | 50  | PF12   |
|            | PB12 | 73  |  | PB12/SPI2_NSS/I2S2_WS/I2C2_SMBAL/USART3_CK/TIM1_ETR/IOVDD3      | PF12/FSMC_A6  | 53  | PF13   |
|            | PB13 | 74  |  | PB13/SPI2_SCK/I2S2_CK/USART3_CTS/TIM1_CH1N                      | PF13/FSMC_A7  | 54  | PF14   |
|            | PB14 | 75  |  | PB14/SPI2_MISO/USART3_RTS/TIM1_CH2N                             | PF14/FSMC_A8  | 55  | PF15   |
|            | PB15 | 76  |  | PB15/SPI2_MOSI/I2S2_SD/TIM1_CH3N                                | PF15/FSMC_A9  |     |        |
|            |      |     |  |   |   |     |        |
|            | PC0  | 26  |  | PC0/ADC123_IN10   | PG0/FSMC_A10  | 56  | PG0    |
|            | PC1  | 27  |  | PC1/ADC123_IN11   | PG1/FSMC_A11  | 57  | PG1    |
|            | PC2  | 28  |  | PC2/ADC123_IN12   | PG2/FSMC_A12  | 58  | PG3    |
|            | PC3  | 29  |  | PC3/ADC123_IN13   | PG3/FSMC_A13  | 89  | PG4    |
|            | PC4  | 44  |  | PC4/ADC12_IN14  | PG4/FSMC_A14  | 90  | PG5    |
|            | PC5  | 45  |  | PC5/ADC12_IN15  | PG5/FSMC_A15  | 91  | PG6    |
| ENCODER1_A | PC6  | 96  |  | PC6/I2S2_MCK/TIM8_CH1/SDIO_D6                                   | PG6/FSMC_INT2   | 92  | PG7    |
| ENCODER1_B | PC7  | 97  |  | PC7/I2S2_MCK/TIM8_CH2/SDIO_D7                                   | PG7/FSMC_INT3   | 93  | PG8    |
|            | PC8  | 98  |  | PC8/TIM8_CH3/SDIO_D0  | PG8   | 124 | PG9    |
|            | PC9  | 99  |  | PC9/TIM8_CH4/SDIO_D1  | PG10/FSMC_NCE4_1/FSMC_NE3   | 125 | PG10   |
| USART4_TX  | PC10 | 111 |  | PC10/USART4_TX/SDIO_D2  | PG11/FSMC_NCE4_2  | 126 | PG11   |
| USART4_RX  | PC11 | 112 |  | PC11/USART4_RX/SDIO_D3  | PG12/FSMC_NE4   | 127 | PG12   |
|            | PC12 | 113 |  | PC12/USART15_TX/SDIO_CK   | PG13/FSMC_A24   | 128 | PG13   |
|            | PC13 | 7   |  | PC13-TAMPER-RTC   | PG14/FSMC_A25   | 129 | PG14   |
|            | PC14 | 8   |  | PC14-OSC32_IN   | PG15  | 132 | PG15   |
|            | PC15 | 9   |  | PC15-OSC32_OUT  |   |     |        |
|            |      |     |  |   |   |     |        |
|            | PD0  | 114 |  | PD0/FSMC_D2   |   | 6   |        |
|            | PD1  | 115 |  | PD1/FSMC_D3   |   | 23  | OSC_IN |
|            | PD2  | 116 |  | PD2/TIM3_ETR/USART5_RX/SDIO_CMD                                 | VBAT  |     |        |
|            | PD3  | 117 |  | PD3/FSMC_CLK  |   |     |        |
|            | PD4  | 118 |  | PD4/FSMC_NOE  | OSC_IN  |     |        |
| USART2_TX  | PD5  | 119 |  | PD5/FSMC_NWE  |   |     |        |
| USART2_RX  | PD6  | 122 |  | PD6/FSMC_NWAIT  | OSC_OUT   | 24  |        |
|            | PD7  | 123 |  | PD7/FSMC_NE1/FSMC_NCE2  |   |     |        |
|            | PD8  | 77  |  | PD8/FSMC_D13  | NRST  | 25  | NRST   |
|            | PD9  | 78  |  | PD9/FSMC_D14  |   |     |        |
|            | PD10 | 79  |  | PD10/FSMC_D15   | Vref+   | 32  | VREF+  |
|            | PD11 | 80  |  | PD11/FSMC_A16   | Vref-   | 31  | VREF-  |
| ENCODER2_A | PD12 | 81  |  | PD12/FSMC_A17   |   |     |        |
| ENCODER2_B | PD13 | 82  |  | PD13/FSMC_A18   | VDDA  | 30  | VDDA   |
|            | PD14 | 85  |  | PD14/FSMC_D18   | VSSA  | 30  | VSSA   |
|            | PD15 | 86  |  | PD15/FSMC_D19   |   |     |        |
|            |      |     |  |   |   |     |        |
| BOOT0      | 138  |     |  | BOOT0   | Vss_V |     |        |

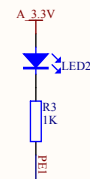
8M有源晶振



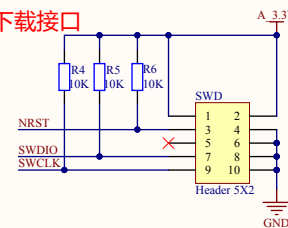
## 复位按键



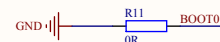
## 程控LED



## SWD下载接口



## BOOT选项



## 引出管脚

