

The schematic diagram illustrates a 3V3/250mA LDO regulator circuit. The input is a +5V supply connected to the VIN pin of the MCP1703A-3302E/DB LDO (U3). The GND pin of U3 is connected to ground. The output of the LDO, VOUT, is connected to a 3V3/250mA output supply. The output is filtered by capacitor C32 (10uF/35V) and C33 (0.1uF/50V). A diode D31 (1N4148W-E3-08) is connected in parallel with the output. The circuit is powered by a +5V supply and ground.

The diagram shows a buck converter circuit. The input is 5V, connected to the VIN pin (pin 1) of the MCP1703A-3302E/DB. The MOSFET (U3) is connected to the VIN pin. The diode (D31, 1N4148W-E3-08) is connected to the VOUT pin (pin 3). The output is 3V3/250mA, connected to the VOUT pin. The capacitors C31 (10uF/35V), C32 (10uF/35V), and C33 (0.1uF/50V) are connected to the input, output, and ground respectively.

CONNECTOR

J1
Header_1x10

Pin	Signal
1	GND
2	VBAT
3	VBAT
4	GND
5	UART_RX
6	UART_TX
7	GND
8	+5V
9	+5V
10	GND

MOUNTING HOLES

3.2mm GND

3.2mm GND

3.2mm GND

STM32F042G6U6 Pinout

The pinout diagram shows the STM32F042G6U6 microcontroller with the following connections:

- VDD** (Pin 1): VDDA
- RCC_OSC_IN** (Pin 2): PFD0
- RCC_OSC_OUT** (Pin 3): PE10
- VDDA** (Pin 4): VDDA
- UV_LED_0** (Pin 5): PA0
- UV_LED_1** (Pin 6): PA1
- UV_LED_2** (Pin 7): PA2
- UV_LED_3** (Pin 8): PA3
- UV_LED_4** (Pin 9): PA4
- UV_LED_5** (Pin 10): PA5
- UV_LED_6** (Pin 11): PA6
- UV_LED_7** (Pin 12): PA7
- LED** (Pin 13): LED
- VSS** (Pin 14): VSS
- PA14** (Pin 15): PA14
- PA13** (Pin 16): PA13
- PA12** (Pin 17): PA12
- PA11** (Pin 18): PA11
- PA10** (Pin 19): PA10
- USART1_RX** (Pin 20): PA9
- USART1_TX** (Pin 21): PA8
- SWITCH** (Pin 22): PA5
- VDDI** (Pin 23): VDDI

UV LED Forward Voltage

Forward Voltage V_F (V)		Refer @350mA Typ.
Min.	Typ.	
3.10	3.70	4.35

REXT vs IOUT

The graph shows the relationship between the external resistor R_{EXT} (in Ω) and the output current I_{OUT} (in A). The curve is plotted for $V_{EXT} = 1.4V$ and $V_{EXT} = 5.4V$. The supply voltage $V_{DD} = 24V$ is indicated.

[illegible]

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