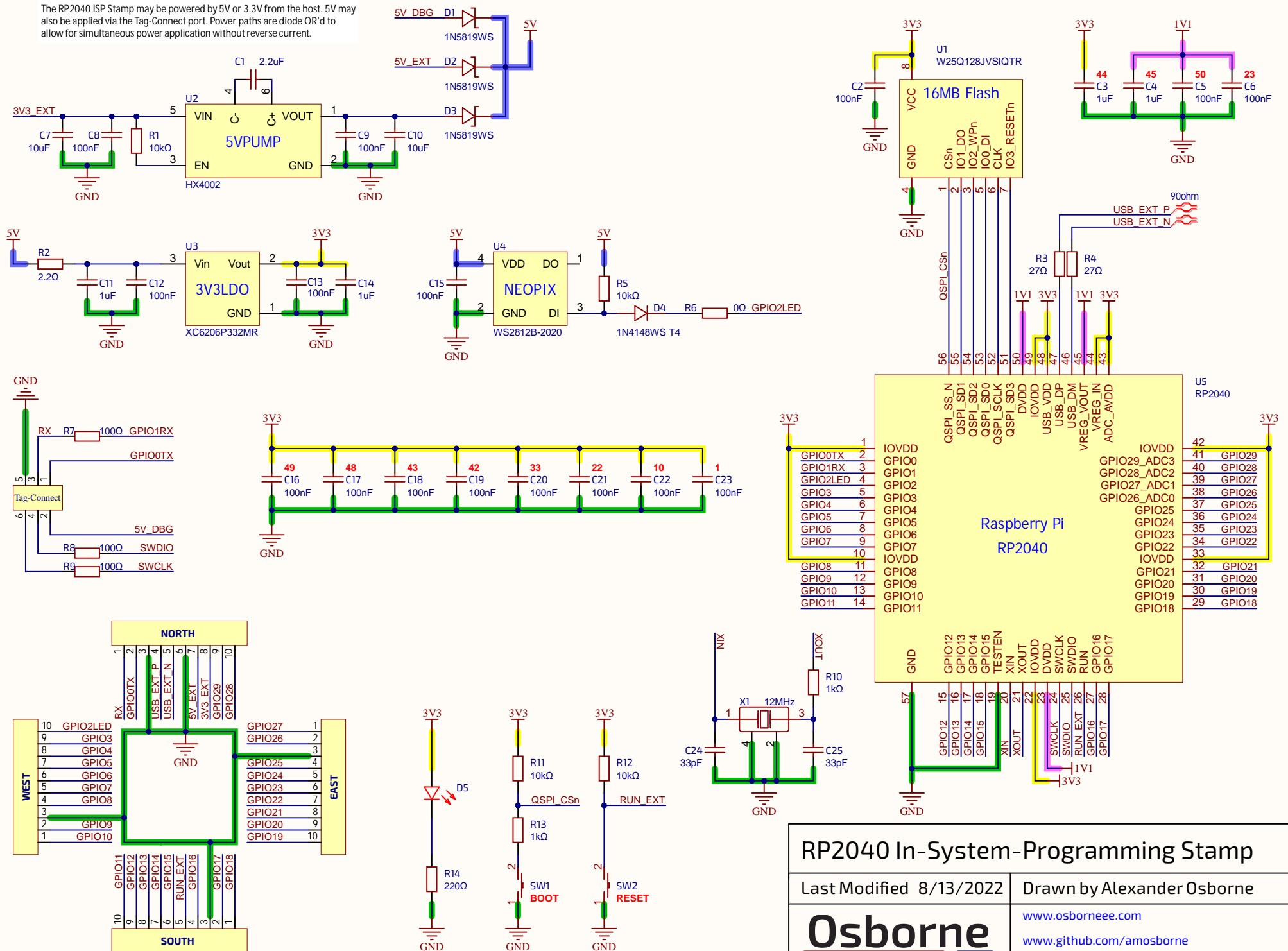


The RP2040 ISP Stamp may be powered by 5V or 3.3V from the host. 5V may also be applied via the Tag-Connect port. Power paths are diode OR'd to allow for simultaneous power application without reverse current.



RP2040 In-System-Programming Stamp

Last Modified 8/13/2022

Drawn by Alexander Osborne

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| Designator | BOM_ILCPCB Part Class | BOM_Supplier Part | BOM_Manufacturer Part | Description | Quantity |
|---|-----------------------|-------------------|-----------------------|---|----------|
| C1 | Basic Part | C23630 | CL10A225K08NNNC | 16V 2.2uF X5R ±10% 0603 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS | 1 |
| C2, C5, C6, C8, C9, C12, C13, C15, C16, C17, C18, C19, C20, C21, C22, C23 | Basic Part | C1525 | CL05B104K05NNNC | 16V 100nF X7R ±10% 0402 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS | 16 |
| C3, C4, C11, C14 | Basic Part | C52923 | CL05A105KA5NQNC | 25V 1uF X5R ±10% 0402 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS | 4 |
| C7, C10 | Basic Part | C96446 | CL10A106MA8NRNC | X5R 25V ±20% 10uF 0603 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS | 2 |
| C24, C25 | Basic Part | C1562 | 0402CG330J500NT | 50V 33pF C0G ±5% 0402 Multilayer Ceramic Capacitors MLCC - SMD/SMT ROHS | 2 |
| D1, D2, D3 | Basic Part | C191023 | 1N5819WS | 40V 600mV@1A 1A SOD-323 Schottky Barrier Diodes (SBD) ROHS | 3 |
| D4 | Basic Part | C2128 | 1N4148WS T4 | 100V -150°C@(Tj) 200mW Single 1.25V@150mA 4ns 1µA@75V 150mA SOD-323 Switching Diode ROHS | 1 |
| D5 | Basic Part | C72043 | 19-217/GHC-YR1S2/3T | 20mA 285mcd 3.3V 518nm Colorless transparency - 40°C--85°C 520nm-535nm Emerald 120° 110mW 0603 Light Emitting Diodes (LED) ROHS | 1 |
| R1, R5, R11, R12 | Basic Part | C25744 | 0402WGF1002TCE | 1/16W Thick Film Resistors 50V ±1% ±100ppm/°C -55°C--155°C 10kΩ 0402 Chip Resistor - Surface Mount ROHS | 4 |
| R2 | Basic Part | C22939 | 0603WAF220KT5E | 1/10W Thick Film Resistors 75V ±1% ±400ppm/°C -55°C--155°C 2.2k 0603 Chip Resistor - Surface Mount ROHS | 1 |
| R3, R4 | Basic Part | C25190 | 0603WAF270JT5E | 1/10W Thick Film Resistors 75V ±1% ±200ppm/°C -55°C--155°C 27k 0603 Chip Resistor - Surface Mount ROHS | 2 |
| R6 | Basic Part | C17477 | 0805W8F0000T5E | 125mW Thick Film Resistors 150V ±1% ±800ppm/°C - 55°C--155°C 0mΩ 0805 Chip Resistor - Surface Mount ROHS | 1 |
| R7, R8, R9 | Basic Part | C25076 | 0402WGF1000TCE | 1/16W Thick Film Resistors 50V ±1% ±200ppm/°C -55°C--155°C 100k 0402 Chip Resistor - Surface Mount ROHS | 3 |
| R10, R13 | Basic Part | C11702 | 0402WGF1001TCE | 1/16W Thick Film Resistors 50V ±1% ±100ppm/°C -55°C--155°C 1kΩ 0402 Chip Resistor - Surface Mount ROHS | 2 |
| R14 | Basic Part | C25091 | 0402WGF2200TCE | 1/16W Thick Film Resistors 50V ±1% ±100ppm/°C -55°C--155°C 220k 0402 Chip Resistor - Surface Mount ROHS | 1 |
| U1 | Basic Part | C97521 | W25Q128JVSQTR | SOIC-8_208mil NOR FLASH ROHS | 1 |
| U3 | Basic Part | C5446 | XC6206P332MR | 200mA 680mV@(100mA) Fixed 3.3V-3.3V Positive 1.6V SOT-23- 3L Linear Voltage Regulators (LDO) ROHS | 1 |
| X1 | Basic Part | C9002 | X322512MSB4SI | 12MHz SMD Crystal Resonator 20pF ±10ppm ±30ppm - 40°C--85°C SMD3225-4P Crystals ROHS | 1 |
| SW1, SW2 | Extended Part | C231329 | B3U-1000P | 2.5mm 1.6mm Round Button 50mA Brick nogging 3mm SPST 12V SMD, 3x2.5x1.6mm Tactile Switches ROHS | 2 |
| U2 | Extended Part | C172354 | HX4002 | NO Charge pump 1.5V 2.7V-5.5V 250mA 1.2MHz SOT- 23-6 DC-DC Converters ROHS | 1 |
| U4 | Extended Part | C965555 | WS2812B-2020 | 5mA 5.3V -25°C--85°C RGB SMD, 2x2mm Light Emitting Diodes (LED) ROHS | 1 |
| U5 | Extended Part | C2040 | RP2040 | ARM Cortex-M0 1@x4ch/12bit USB Host/Device 2.264KB 2 133MHz 30 2 QFN-56(7x7) Microcontroller Units (MCUs/MPUs/SOCs) ROHS | 1 |