



Documentation



You can download this document by scanning the above squarecode on your phone or from the link below.

Link continuously updated.

<https://drive.google.com/file/d/1WYi3ejzvGE9VBU0UJKLAjNs-juKbflDv/view?usp=sharing>

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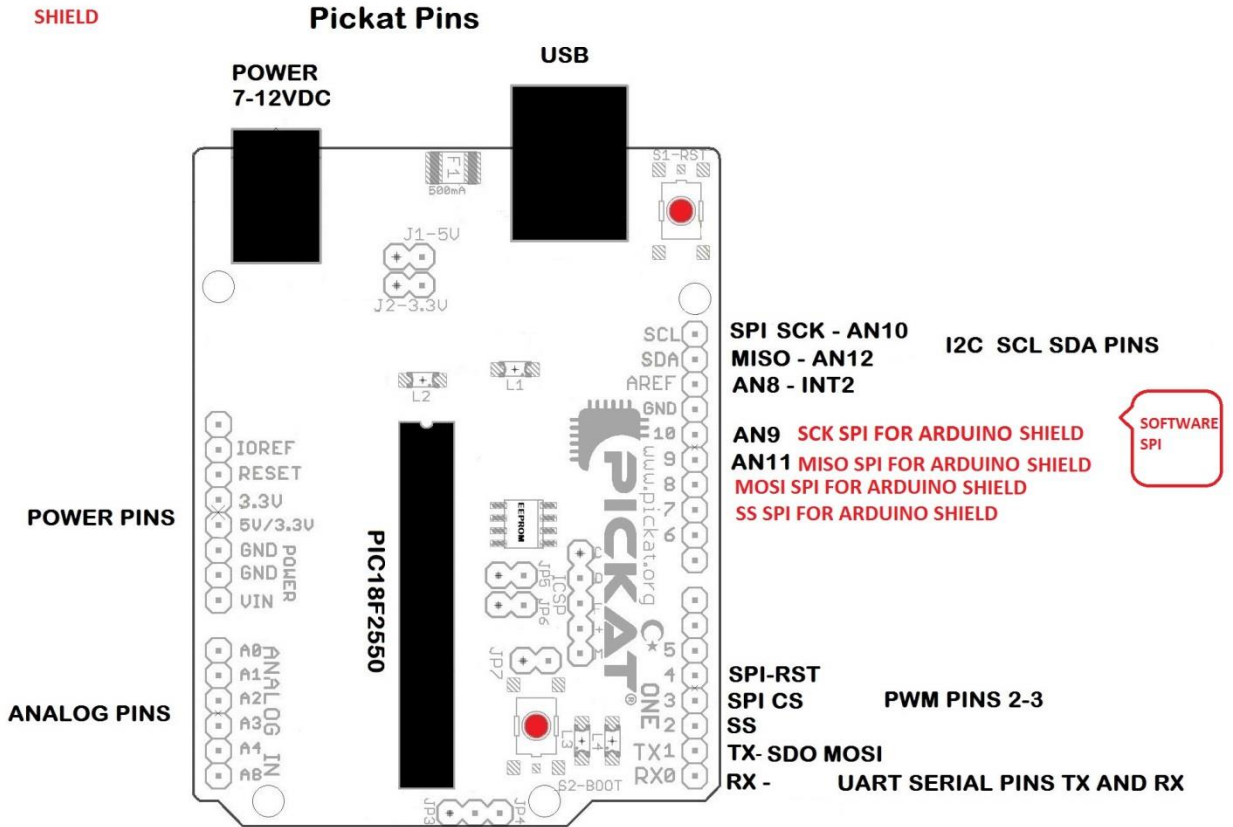
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**PCB EAGLE DRAWING CAN BE DOWNLOADED BY
SQUARECODE LINK.**

1- Pickat Pin Descriptions:



Descriptions:

JP1: If JP1 is jumpered, processor and accessory supplies are 5 VDC.
 JP2: If JP2 is jumpered, processor and accessory supplies are 3.3 VDC.
 JP3: If jumper is attached to JP3, it is usb hid bootloader mode. By default, Pickat 1 is sent this way.
 JP4: To hang the jumper JP4, Pickat 1 usb cdc mode can be used.
 JP5 and JP6: If you want to use EEPROM on the circuit, the jumper must be installed on JP5 and JP6. If EEPROM will not be used, these jumpers can be removed.
 JP7: If a jumper is installed here, the bootloader switch is on. If EEPROM will not be used, these jumpers can be removed.

F1: 500ma Fuse for usb.
 S1: Processor reset button.
 S2: Processor bootloader button.
 EEPROM: Backup Memory
 ICSP: processor programming ICSP port.
 L1: Power Led
 L2: 5 volts led.
 L3-L4: Blinks test leds.

SPI PINS:

SCL = SPI SCK

SDA = SPI MISO

4 = SPI RST

3 = SPI CS

1 = SPI MOSI

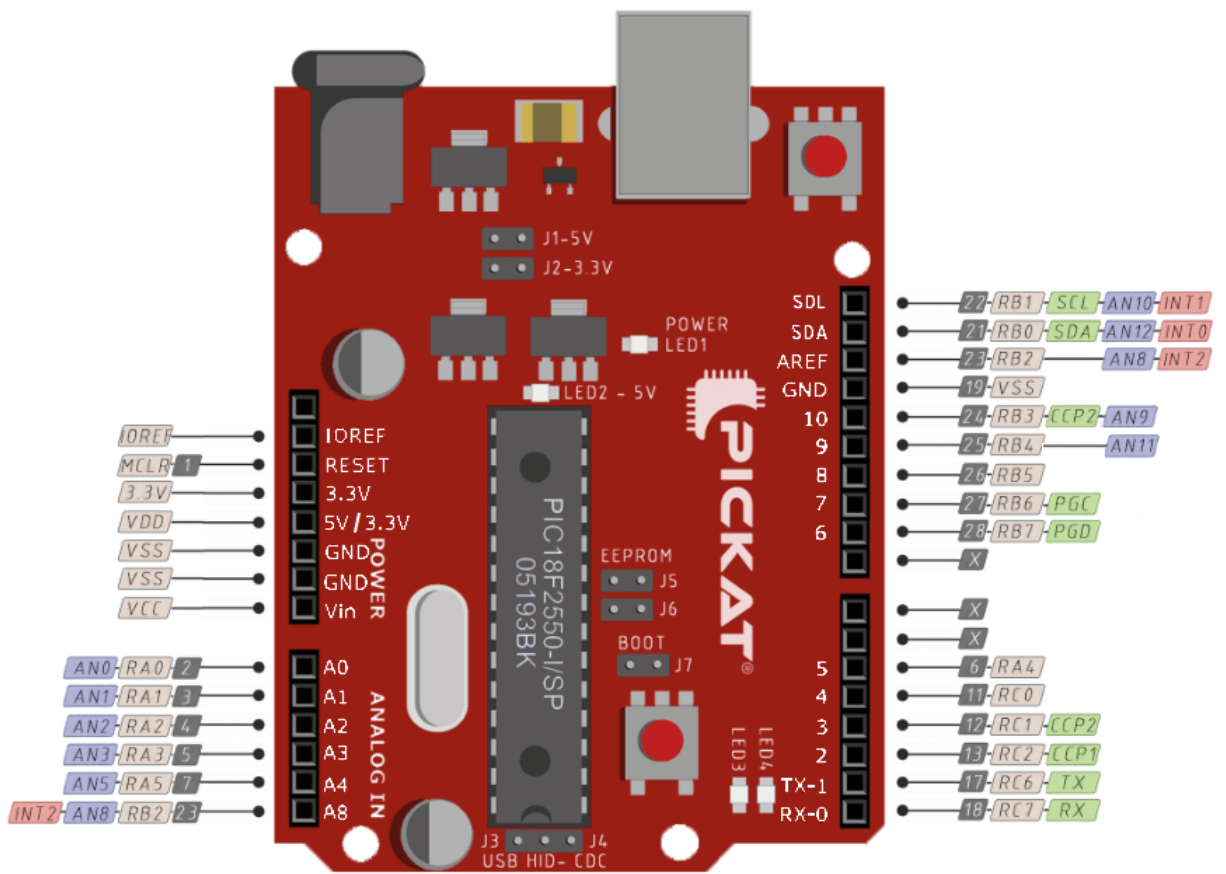
* INTERPRETATION OF PAGE 5 AND 6 FOR DETAILED INFORMATION.

Caution

3.3 VOLT SELECTION FOR SPI, I2C, SERIAL COMMUNICATIONS MUST BE CONNECTED.

ADC INPUT VOLTAGE MAY BE up to 5 VOLTS.

Pickat Processor can work with 3.3 VOLT 5 VOLT VOLTAGE. 5 VDC is for L2 LED. Do not forget to Check.



2- Pickat One Technical Specifications:

Microprocessor.	PIC18F2550
Operating Voltage	5 VDC or 3.3 Volt
Input Voltage	7 - 12 VDC
Input voltage (limits)	6 - 20 VDC
Digital I/O pinouts	19 Pins (2 EA PWM outputs, 10 ADC)
Analog Input Pins.	10
Current for Each I/O	20 mA
Current for 3.3 VDC	20 mA
Flash Memory	32 KB (PIC18f2550) up to 0.5 KB of bootloader
SRAM	2 KB (PIC18F2550)
EEPROM	1 KB (PIC18F2550)
External EEPROM	24C02 - 2 KB
Clock rate	Up to 48 MHz
USB Mode	HID or CDC
USB Protection	500 mA smd fuse
Program Download.	USB Bootloader or ICSP
Buttons	S1 Reset Bootloader and S2 input
Test Leds	2 Each
Notice Led (Blue)	System voltage 5VDC when it is lit
Ports per Array	USB, Uart (serial), Spi, I2c, (Can, additional modules)
Height	68.6 mm
Width	53.4 mm
Weight	30 gr

3- Descriptions:

- PIC18F2550 DIP processor and up to 48 MHz processor speed, 32 kb memory, Sram 2048 byte, eeprom 256 byte.
- External 24C02 EEPROM on the circuit (2048 bit, 256 byte memory)
- 10 each 10 bit ADC input.
- 2 each PWM input.
- Total 19 Each I/O
- Ports per Array USB, UART serial, Spi, I2C, CAN
- Programming port: External programming option with USB without programmer or Standard ICSP. (Such as Brenner, pickit2, pickit3, k149)
- Processor and eeprom 3.3 VDC or 5 VDC with the option to run with 3.3 volt modules to connect, sensor for voltage level circuit doesn't needs.
- The jumper and hid and cdc connection options in your usb applications.
- Option to program, prototype 28-pin processors such as PIC18F252, PIC16F876 with integrated socket on the circuit.
- It is open source, it can be repaired by maker, it can be produced for educational purposes. Pickat is a registered trademark, can be done with commercial registration.
- 7 to 12 volts DC supply voltage can be supplied by adapters Our recommendation is the 7.5 volt high quality adapter that is most common in the market.
- 3.3 volt 5 volt regulators for accessories to be installed.
- It has 500mA fuse for USB protection. Fuse can be changed.
- When you use the adapter, it does not use the USB feed.
- The blue warning LED illuminates when the system supply is set to 5 volts.
- Selection of pins with 3 jumper.
- Reset and bootloader buttons.
- Test codes for 2 blink led. PortC 0 and PortC 1
- Compatible with Arduino shields and arduino uno boxes. (Arduino uno with the same size port in the same sequence.)
- With all pic compilers, you can upload the pic18f2550 hex code to pickat via USB without programming.(proton basic, pic basic Pro, xc8, CCS c, micro pascal, microc such as)
- Pickat is designed with 20MHz crystal. But if you want 10MHz, 8 MHz Crystals can be inserted with the iron. SMD crystal is used to remove easily.
- DIP processor is used, you can remove it from the socket and insert the new one in case of malfunction in the processor.

4- Use Of Jumpers:

There are 7 jumper on Pickat 1. Their rules is as follows:

JP1: If JP1 is jumpered, processor and accessory supplies are 5 VDC.

JP2: If JP2 is jumpered, processor and accessory supplies are 3.3 VDC.

JP3: If jumper is attached to JP3, it is usb hid bootloader mode. By default, Pickat 1 is sent this way.

JP4: To hang the jumper JP4, Pickat 1 usb cdc mode can be used.

JP5 and JP6: If you want to use EEPROM on the circuit, the jumper must be installed on JP5 and JP6. If EEPROM will not be used, these jumpers can be removed.

JP7: If a jumper is installed here, the S2 input switch is on. If input S2 will not be used, these jumpers can be removed.

PICKAT PIN DESCRIPTIONS PAGE CAN BE VIEWED

5- Compilers:

With Pickat 1, You can use all pic compilers. You can use Basic C Pascal languages. The main ones are listed below. With the library and code examples, you can perform many projects. We plan to produce our own compiler for free in 2018. Microchip bootloader or microc bootloader programs are available for bootloader.

In April we will produce the pickat bootloader program.

[PICKAT BOOTLOADER DOWNLOAD](#)

[MICROCHIP BOOTLOADER DOWNLOAD](#)

[MIKROELEKTRONIKA BOOTLOADER DOWNLOAD](#)

1- MPLAB XC8 evolution:

It is a Microchip compiler. It can be downloaded from the link below:

<https://www.microchip.com/development-tools/downloads-archive>

2- CCS C:

CCS C INC. Developed by can be downloaded from the following link:

<http://www.ccsinfo.com/downloads.php>

3- MIKRO C:

It was developed by microelectronics. You can download it from the link below:

[:https://www.mikroe.com/mikroc-pic](https://www.mikroe.com/mikroc-pic)

4- MIKRO BASIC:

It was developed by Mikroelektronika . You can download it from the link below:

<https://www.mikroe.com/mikroc-pic>

5- PIC BASIC PRO:

It was developed by Melabs inc.. You can download it from the link below:

<http://pbp3.com/>

6- PROTON BASIC:

It was developed by Crownhill Associates Ltd. You can download it from the link below:

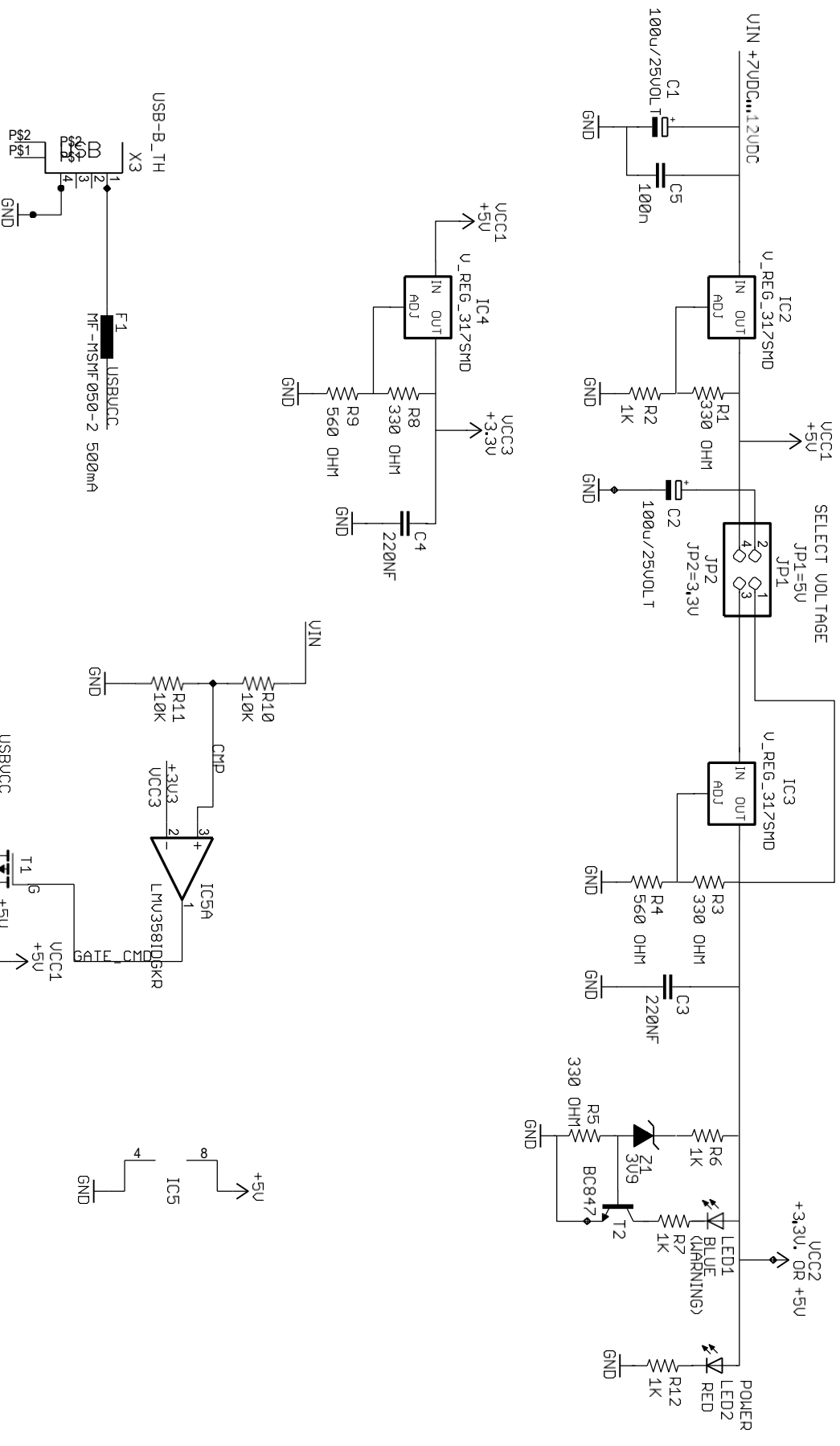
<http://www.protonbasic.co.uk/>

7- MIKRO PASCAL:

It was developed by Mikroelektronika . You can download it from the link below:

<https://www.mikroe.com/mikropascal-pic>

Pickat POWER SUPPLY CIRCUIT

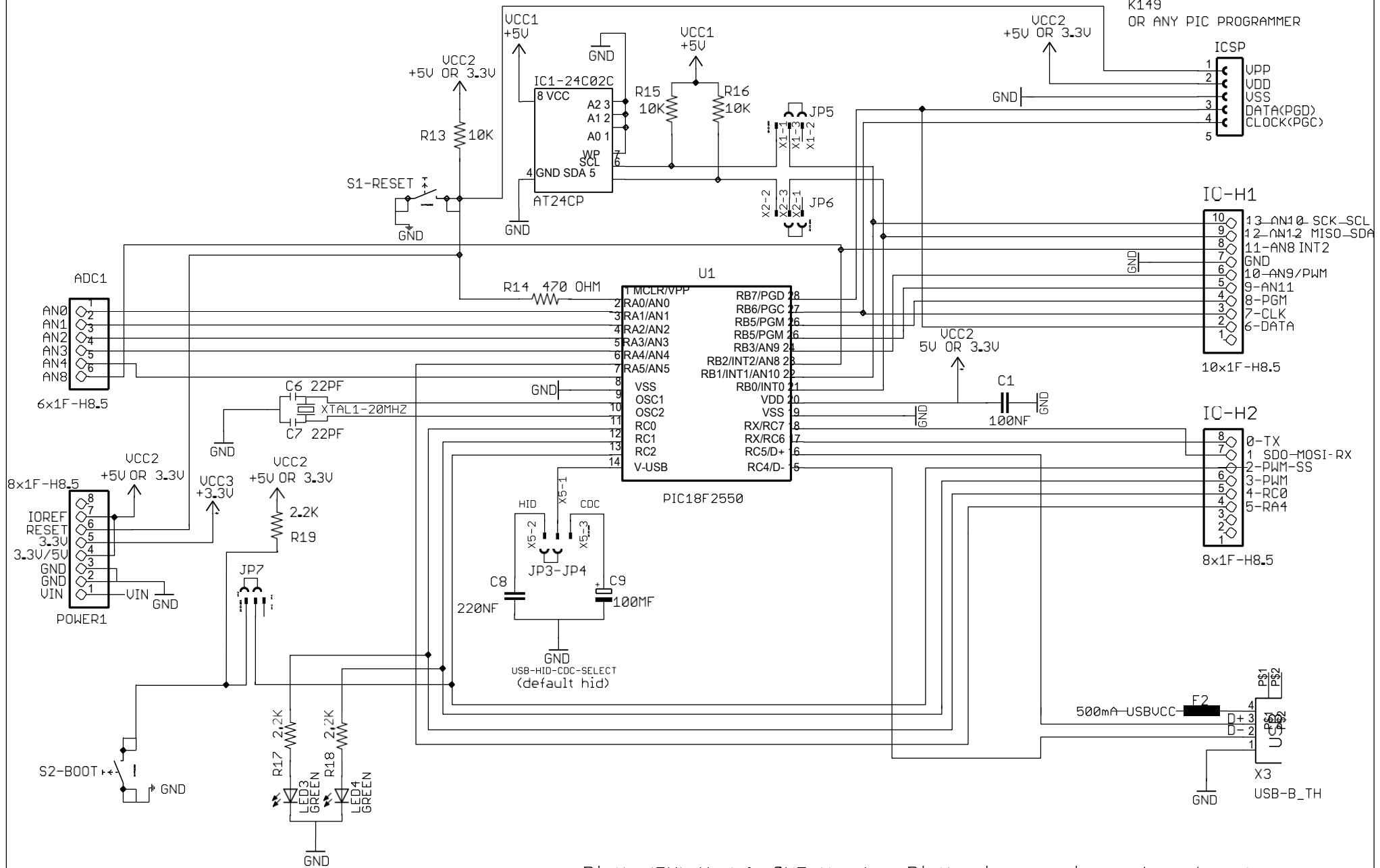


S12301 A1SHB 2.3A/2W SOT23 MOS P-Channel MOSFET SMD
 a1shb
 FDN340P
 USBUCC +5V
 USBUCC +5V

Pickat is a registered trademark.

PickKat MCU and IO Circuit

USE ICSP WITH PICKIT3
 PICKIT2
 BRENNER
 K149
 OR ANY PIC PROGRAMMER



NOTE: SEE POWER CIRCUIT FOR UCC1 UCC2 UCC3 USBVCC VIN

PickKat(TM) Model: ONE Ver.1 PicKat is a registered trademark.
 Use of the PickKat name must be compliant with <http://www.pickat.org>

8- OUR ROAD MAP:

Hello,

We wanted to explain our our aim to you with the happiness of sharing the first model of our Pickat project, which we started in the second month of 2018.

1. Quarter:

Pickat model 1 production and introduction. (PIC18F2550 MCU – 8 bit)

2. Quarter:

We want to produce our own bootloader program in April and to produce our own ide - compiler application in 2018. We can't give a complete date for the IDE, but we have plans to produce it in 2018.

Our promotional activities will continue in the month of April.

2. PIC18F4550 used in the quarter will produce 2 models. (8 bit mcu)

3. Quarter:

PIC24FJ256DA206 used 3 model will be produced. (16 bit mcu)

4. Quarter:

PIC32MX795F512L used 4 model will be produced. (32 bit mcu)

You can follow improvements on our website <https://www.pickat.org/>

Hope to see you...

Pickat TEAM