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Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.

Notes to generate the board layout.

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SB137/SB138 should be place to reduce stub on USB_DP/DMP link to PA11/PA12 connection to Morpho connector

SBxx should be place close to the MCU to avoid stub on CLK lines

With SOCKET, update C36 and C37 to 1.8pF

RED LED IS ON ARDUINO SHEET

GREEN LED IS ON ARDUINO SHEET

USER BUTTON

LEDs

EXTERNAL HSE CLK

EXTERNAL LSE CLK

With SOCKET, update C36 and C37 to 1.8pF
"CIN" and "COUT" should be as closed as possible to the LQFP associated pad. COUT 10µF should be place near L4. Or 1 couple of capacitors per pad (4.7µF / 100nF)

MCU PWR SUPPLIES
Operating range: 1V71<VDD<3V6
Operating range: 1V68<VDDD2<3V6 (only for IO G[15:2])
Operating range: 1V55<VBAT<3V6
Operating range: 1V62<VDDA<3V6 (depend of VDDA)
Operating range: 1V55<VDDUSB<3V6
Operating range: 1V71<VDD<3V6

Operating range: 1V08<VDDIO2<3V6 (only for IO G[15:2])

VDD_MCU
Ceramic capacitor (Low ESR, ESR<1ohm)
- PIC10301 PIC10401 PIC10501 PIC10601 PIC10701 PIC10801 PIC10901 PIC11001 PIC11101 PIC11201 PIC11301 PIC11401
- PIC10302 PIC10602 PIC10702 PIC10802 PIC11002 PIC11102 PIC11302 PIC11602 PIC11702 PIC11902
- PIC2901
- PIC2902
- COC103
- 4.7uF
- 10uF
- C29
- 100nF
- 4.7uF
- C28
- 100nF
- 4.7uF
- C26
- 100nF
- DNP
- 4.7uF
- C115
- 100nF
- 1uF
- C30
- 100nF
- 100nF
- C31
- 100nF
- 100nF
- C33
- 100nF
- 100nF
- C32
- 100nF
- 100nF
- C31
- 100nF
- 100nF
- C33
- 100nF
- 100nF
- C32

MCU DECAPS
Ceramic capacitor (Low ESR, ESR<1ohm)
5V_PWR_SELECTION
MAX CURRENT 500mA WHEN USING POWER INPUT 5V_STLK

5V_STLK
5V_VIN
5V_EXT
5V_USB_STLK

5V_EXT from Morpho connector
5V_USB_STLK used as Charger mode

VDD_MCU_SELECTION AND CURRENT MEASUREMENT

VDD_MCU table

<table>
<thead>
<tr>
<th>VDD_MCU</th>
<th>JP4</th>
</tr>
</thead>
<tbody>
<tr>
<td>VDD_MCU = VDD = 3V3</td>
<td>[1-2]</td>
</tr>
<tr>
<td>VDD_MCU = VDD_SMPS_1V8 = 1V8</td>
<td>[2-3]</td>
</tr>
</tbody>
</table>

ADP5301 MODE SELECTION
SYNC/MODE = 1 (SB114 Closed) = HYSTERESIS MODE 50mA
SYNC/MODE = 0 (SB116 Closed) = PWM MODE 500mA

VDD_MCU = 3V3

VDD_SMPS_1V8

VDD_MCU = VDD_SMPS_1V8 = 1V8

Shunt Fitted 1-2

VDD_MCU = 3V3

VDD_SMPS_IN

1V8 POWER SOURCE / 400mA

1V8 from SB114

1V8_SMPS_IN

5V_PWR_SELECTION
5V_POWER SOURCE / 500mA

5V

3V3 POWER SOURCE / 500mA

3V3_SMPS_IN

BOARD_PWR: VIN / 5V (output current depend of VIN range)
All the sheet are the CUTTABLE part on PCB