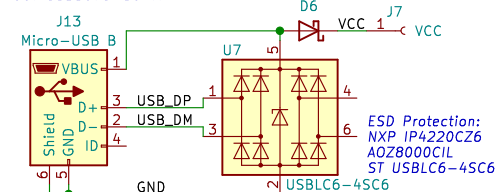


Socket Micro-USB B:
Amphenol 10103594-0001LF
Molex 105017-0001
GCT USB3076-30-A

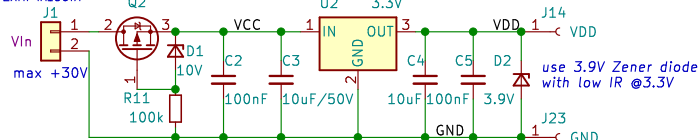


High-voltage (>30V) SOT-223-3 LDO:

-MIC5239-3.3YS
-MIC5233-3.3YS (36V)
-LT1129CST-3.3
-SPX2954M3-1-3-3
-NCV4274AST33T3G (40V)
-NCV4264-2CST33T3G (45V)
-MCP1790-3302E
-MCP1799-3302H (45V)
U2 3.3V

reverse current protection

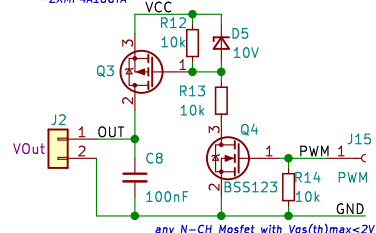
any P-CH SOT-223-3 Mosfet with $V_{GS(th)max} < 2V$,
 $V_{DS} > 30V$, $I_D > 5A$, low $R_{DS(on)}$
-ZXMP4A16GTA



fixed terminal blocks:
CUI TB002-500-02BE
TE 1776244-2, 1776266-2, 1776504-2, 1776269-2
Degson DG301-5.0

Rohm:PTZTFTE253.9B

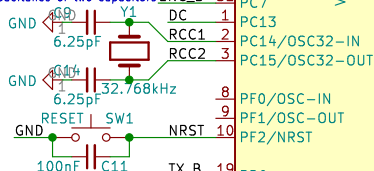
any P-CH SOT-223-3 Mosfet with $V_{GS(th)max} < 2V$,
 $V_{DS} > 30V$, $I_D > 5A$, low $R_{DS(on)}$
-ZXMP4A16GTA



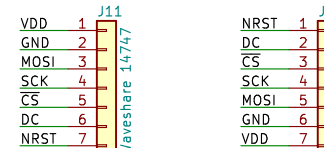
alternative, pin-compatible MPUs, min 64k flash, 44-10:

STM32G031C8T×/Ux
STM32G041C8T×/Ux
STM32G051C8T×/Ux
STM32G061C8T×/Ux
STM32G071C8T×/Ux
STM32G071C8T×/Ux (128k)
STM32G081C8T×/Ux (128k)
STM32G081C8T×/Ux (128k)
STM32G081CCT×/Ux (256k)
STM32G081CET×/Ux (512k)

Note: the required crystal capacitance is combined capacitance of two capacitors

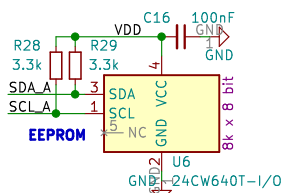


13992 - mono 128x128 1.5" same dimensions as 14747 but 8-pin :/
13892 - 1.8" color LCD



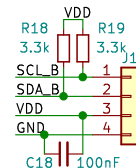
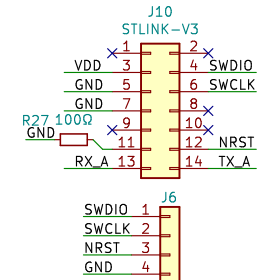
https://www.waveshare.com/SKU:14747*

https://www.waveshare.com/SKU:18179*

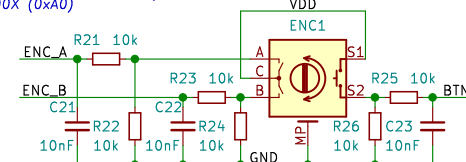


Note: 24Cwxx EEPROM comes with preconfigured lower 3 bit address, '0' in p/n indicates address 1010_000X (0xA0)

for Segger J-Link mini use pins 3-12

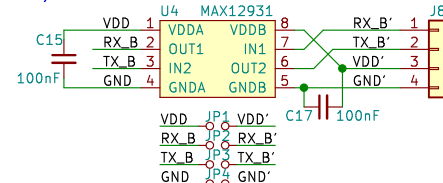


Bourns PEC12R-4xxxK-Sxxxx
Bourns PEC12R-4xxxK-Sxxxx
Bourns PEC11R-4xxxK-Sxxxx
Bourns PEC11R-4xxxK-Sxxxx
or any popular single-channel Alps EC11E, G, M, N
EC12E, EC111 encoder

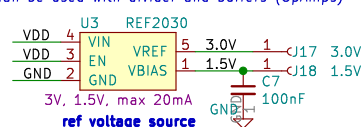


Note: Bourns encoders are preferred. Unlike most ALPS encodes (besides EC12D), Bourns encoders have dent stability position between signal edges.

optoisolators: MAX12931, MAX22246, Si8422/26, ADuM1281/86, ISO7021, ISO6720?, ISO7720, iLE612-3E, ADuM1201AR



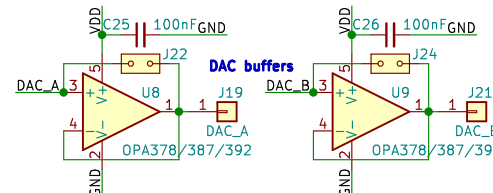
Instead of REF2030 internal MPU 2.5V VREFBUF can be used with divider and buffers (OpAmps)



ref voltage source

low-offset (<0.1mV) OpAmp with low output swing headroom to negative supply (<10mV):

- OPA387 (SOT23-5, VSSOP-8 double, TSOP-14 quad)
- OPA378 (SOT23-5, SC70-5, SOT23-8 double)
- OPA391, 396 (SC70-5 only)
- OPA320
- OPA392 (SOT23-5, SC70-5, higher swing headroom to negative supply (-20mV))



recommended: INA118, 333, *823* (best option)
optional: INA122, 126 (two op-amp architecture, limited common-mode voltage range)

Wheatstone Bridge Amplifier
R1-R10 high grade 0.1% resistors

22.65-53Ω 20-450°C (37.5 avg)

for WSP80 use socket Amphenol T 3437 0030



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Sheet: /
File: APPMC.sch

Title: All-purpose Power Micro Controller, Copyright © 2022 Tomasz Jastrzębski

Size: A4 Date: Rev: 3
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