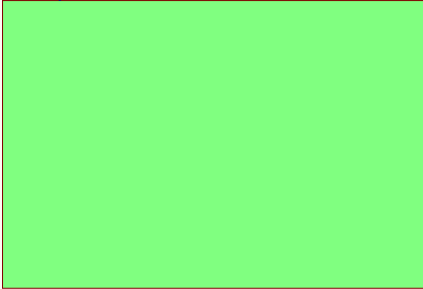


Curiosity Nano Base for Click boards

S1
Curiosity_Nano_Base_for_Clicks.SchDoc



E1



E3



E2



E4



PCBADO C1



A12-1357

TESTDO C1



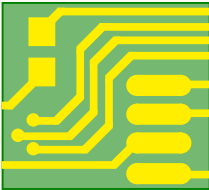
A12-1360

TEST1

\$ > _

A11-0432

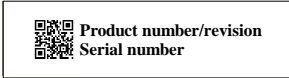
PCB1



A08-2941

CNANO-BASE4CLICK kit PCB documentation

LABEL1



Label PCBA

Drawn By:

T.Frostad

Engineer:

T.Frostad



MICROCHIP

Project Title

Curiosity Nano Base for Click boards

Sheet Title

Top Level

Size A3

PCB Assembly Number: A09-3206

PCBA Revision: 7

PCB Number: A08-2941

PCB Revision: 4

File: Curiosity_Nano_Base_for_Clicks_TopLevel.SchDoc

Designed with

Altium

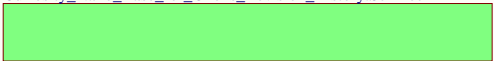
Altium.com

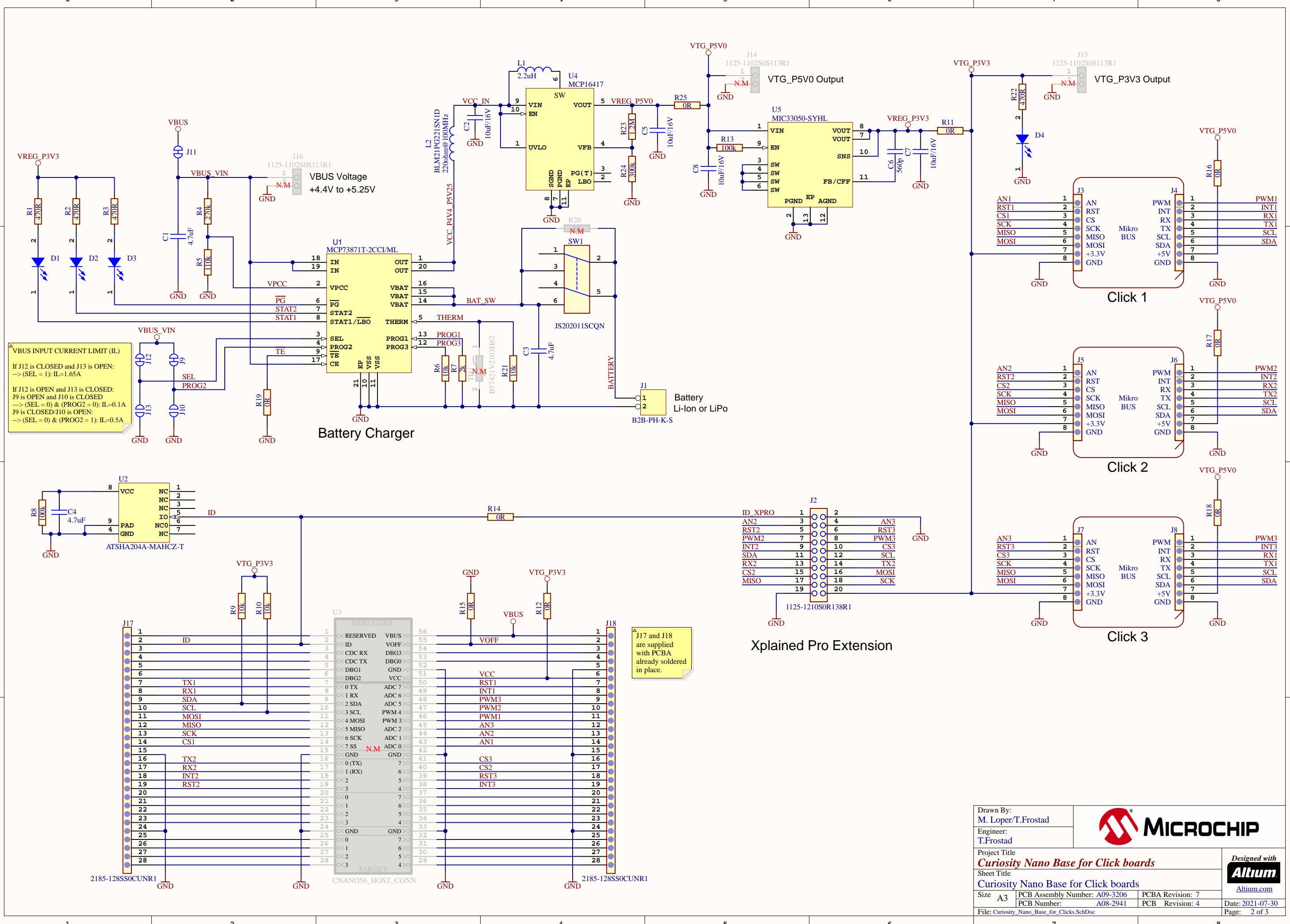
Date: 2021-07-30

Page: 1 of 3

S2

Curiosity_Nano_Base_for_Clicks_Revision_History.SchDoc





Drawn By:
M. Loper/T.Frostad
Engineer:
T.Frostad



Project Title
Curiosity Nano Base for Click boards
Sheet Title

Designed with
Altium
Altium.com

Curiosity Nano Base for Click boards

Size A3	PCB Assembly Number: A09-3206	PCBA Revision: 7
PCB Number: A08-2941	PCB Revision: 4	Date: 2021-07-30
File: Curiosity_Nano_Base_for_Clicks.SchDoc		Page: 2 of 3

Revision History

PCB Assembly Rev 1:

▲

Design Changes:

Initial Design

PCB:

PCB revision 1

PCB Assembly Rev 2:

▲

Design Changes:

Redesigned power supply for VTG_P5V0/VTG_P3V3.

PCB:

PCB revision 2

PCB Assembly Rev 3:

▲

Design Changes:

Added jumper on VBUS. Added pinheaders for VBUS, VTG_P5V0, and VTG_P3V3. Added power LED to VTG_P3V3. Added jumpers to enable high-current (1.6A) on power MUX. Default is still 500mA.

PCB:

PCB revision 3

PCB Assembly Rev 4:

▲

Design Changes:

Mounted two 28 pin receptacles.

PCB:

PCB revision 3

PCB Assembly Rev 5:

▲

Design Changes:

Redesign of VTG_P5V0 power supply to get rid of noise problems. Set high-current (1.6A) mode as default. Renamed kit to "Curiosity Nano Base for Clicks".

PCB:

PCB revision 4

PCB Assembly Rev 6:

▲

Design Changes:

Change in capacitors

PCB:

PCB revision 4

PCB Assembly Rev 7:

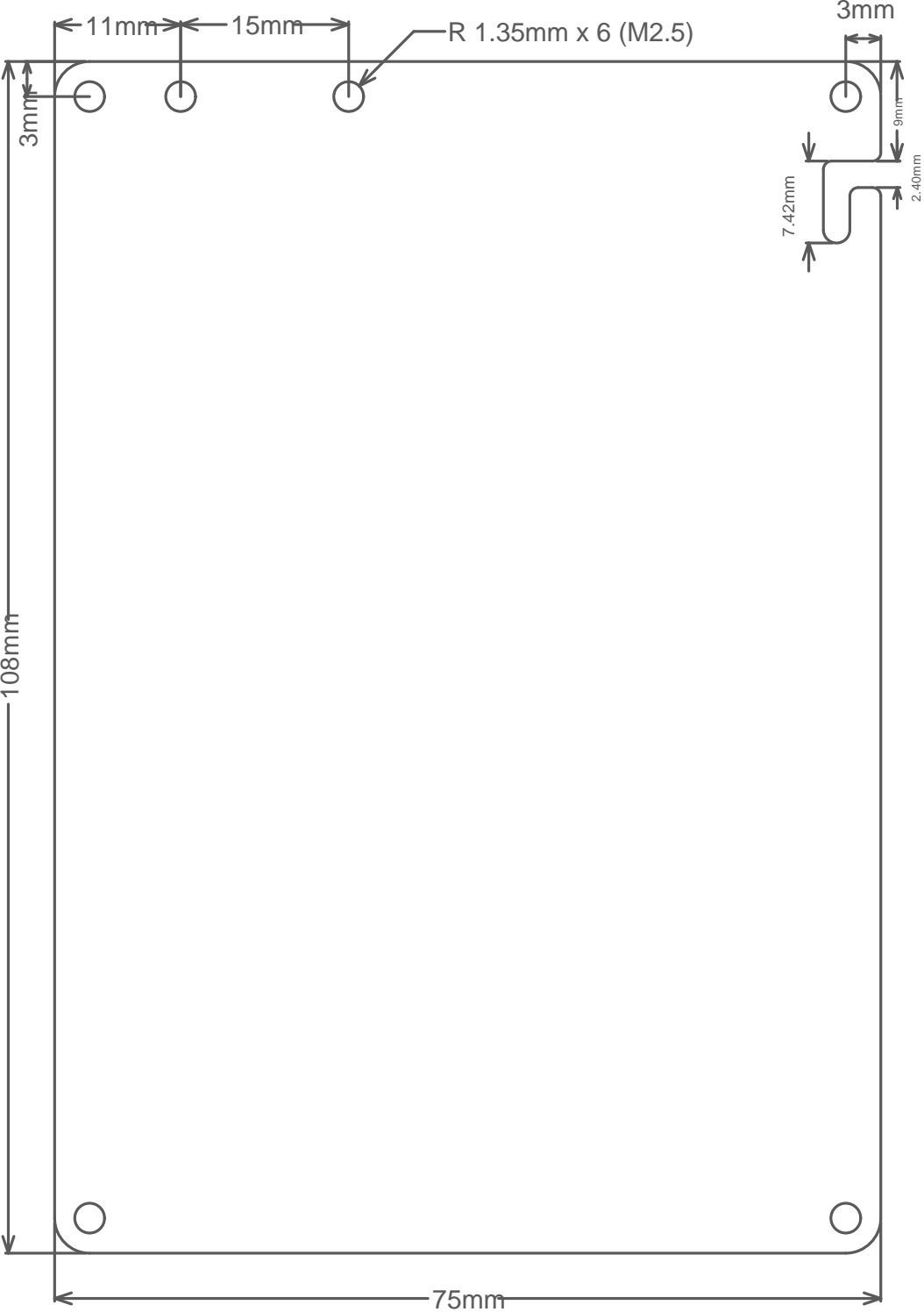
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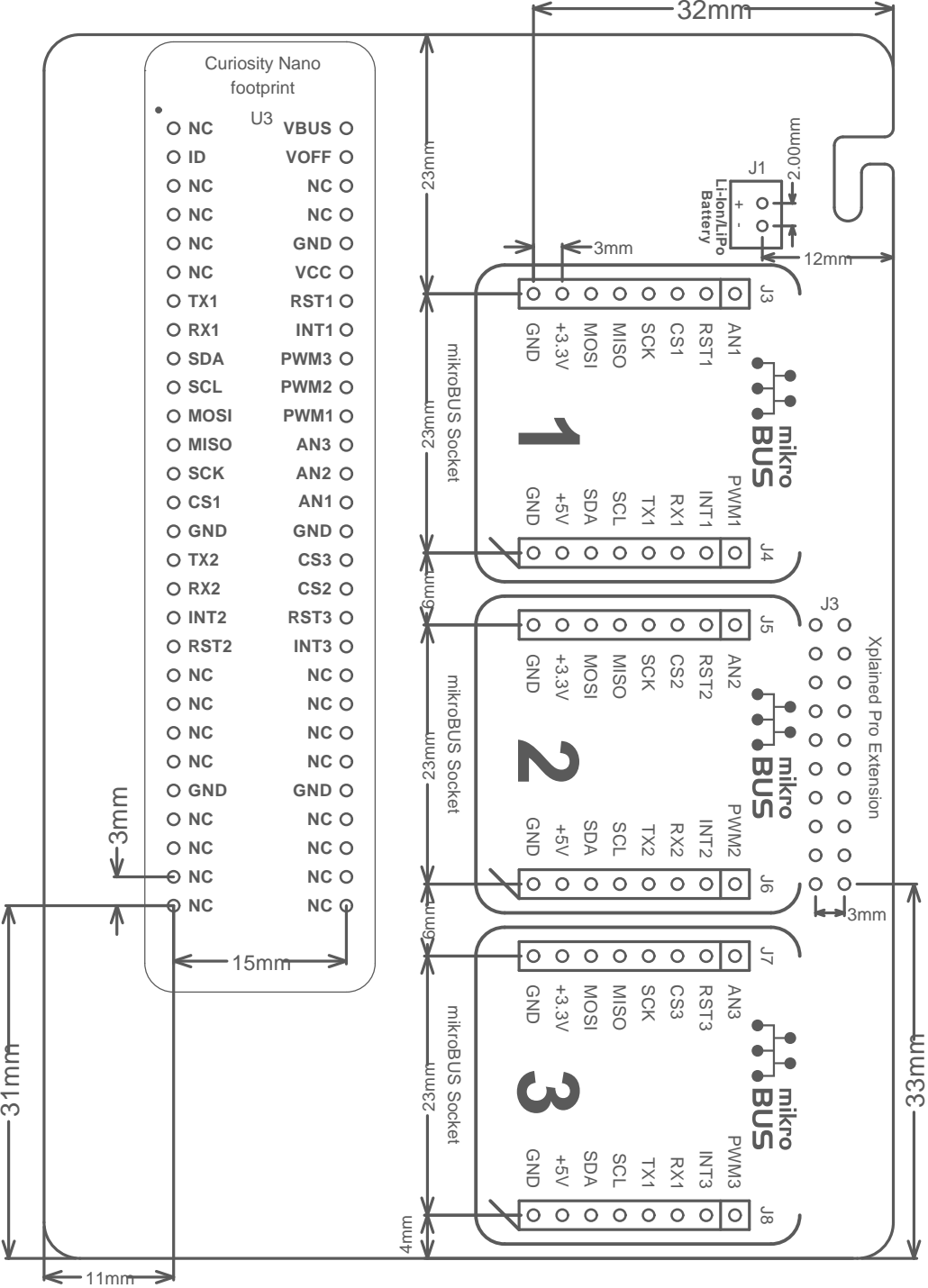
Design Changes:

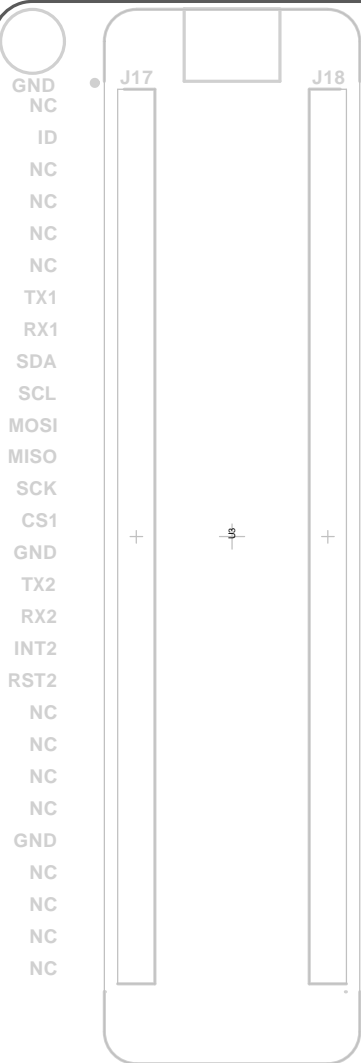
Adjusted feedback resistors of 5V regulator for slightly lower output voltage (4.85V). Ferrite bead L3 replaced with 0-Ohm resistor to for better noise performance.

PCB:

PCB revision 4








MICROCHIP

Curiosity Nano Base for Click boards™

GND

POWER

GND 3V3

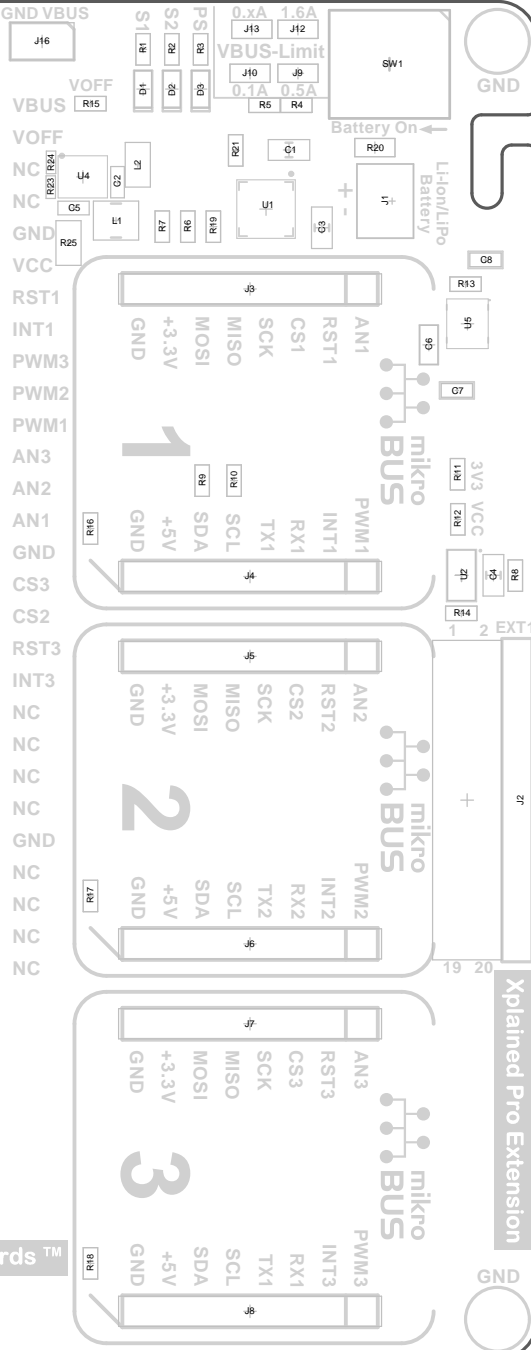
GND 5V0

J15

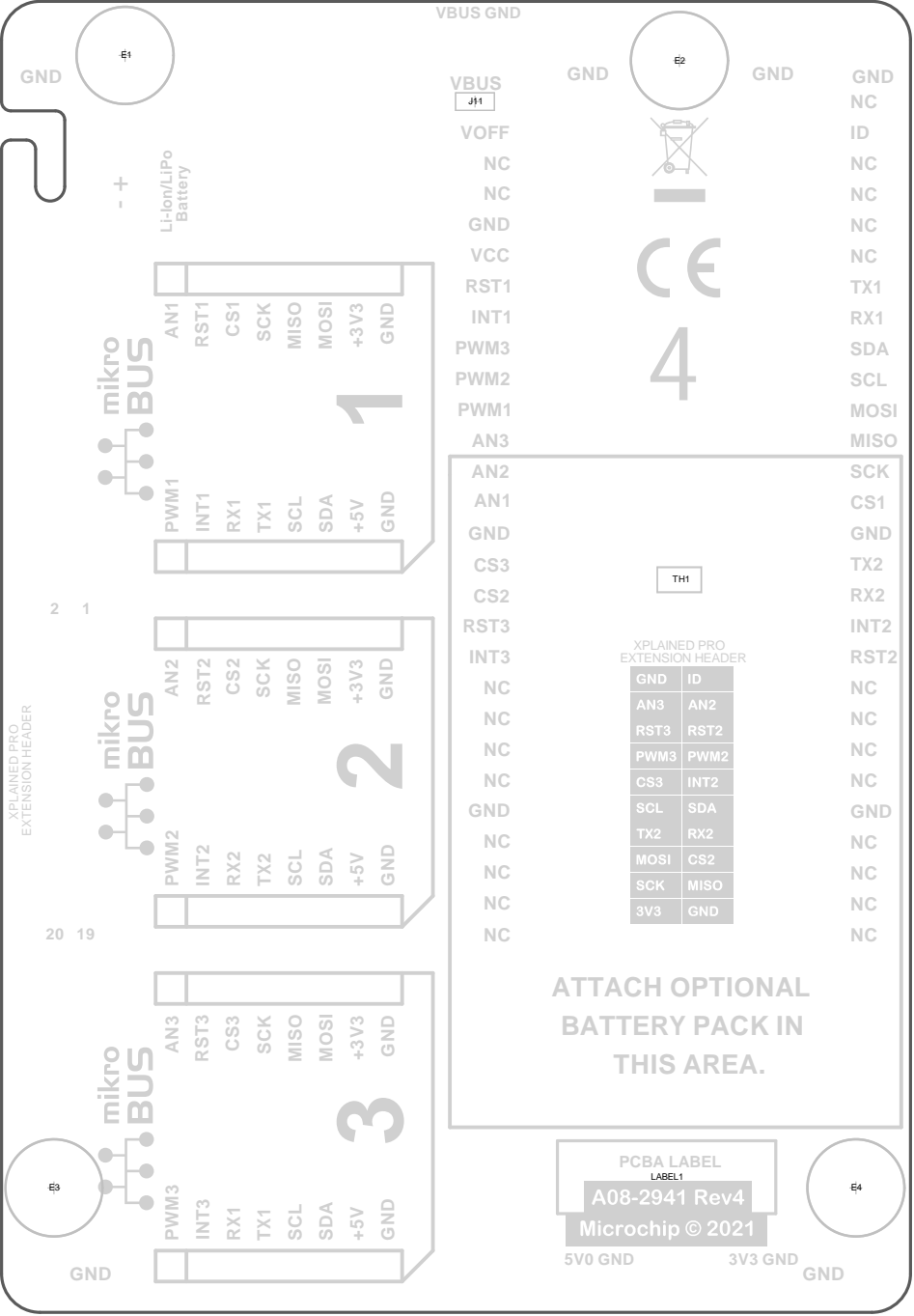
R22

D4

J14



Explained Pro Extension



VBUS GND

VBUS
J11

VOFF

NC

NC

GND

VCC

RST1

INT1

PWM3

PWM2

PWM1

AN3

AN2

AN1

GND

CS3

CS2

RST3

INT3

NC

NC

NC

NC

GND

NC

NC

NC

NC

GND

GND



XPLAINED PRO
EXTENSION HEADER

GND	ID
AN3	AN2
RST3	RST2
PWM3	PWM2
CS3	INT2
SCL	SDA
TX2	RX2
MOSI	CS2
SCK	MISO
3V3	GND

ATTACH OPTIONAL
BATTERY PACK IN
THIS AREA.

PCBA LABEL

LABEL1

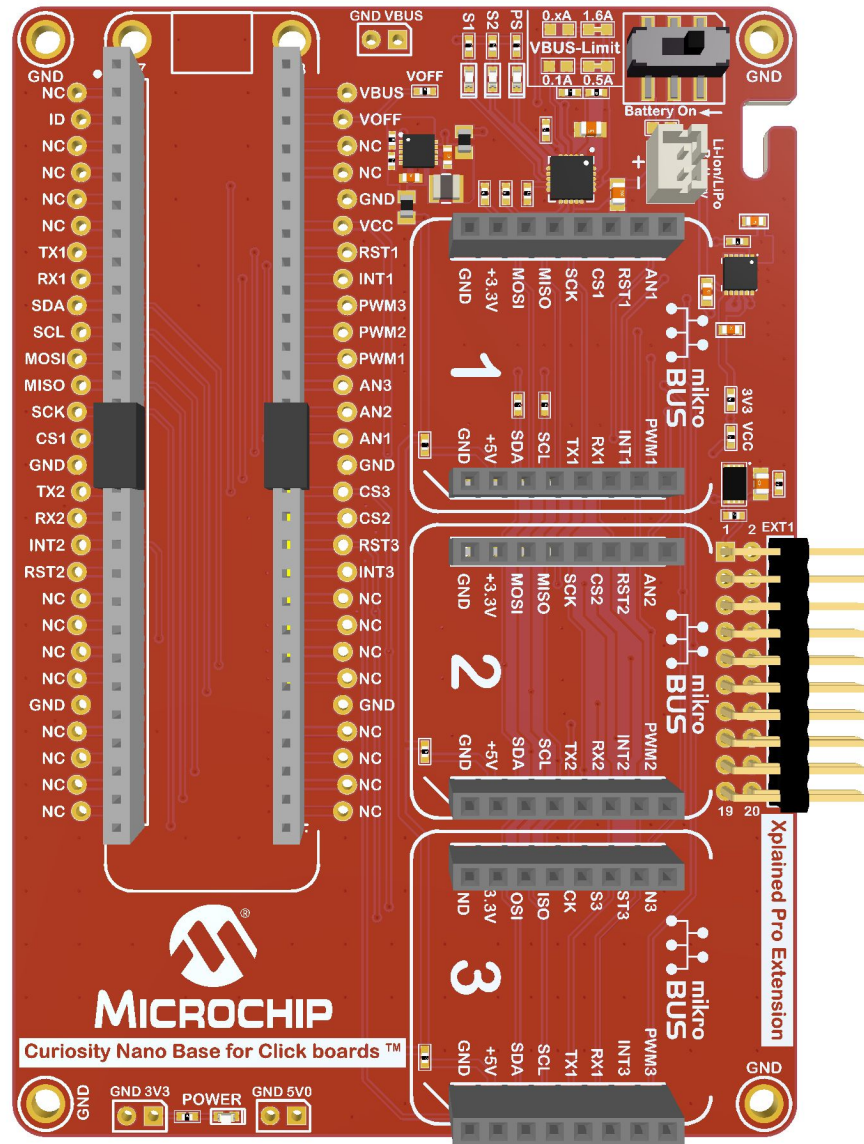
A08-2941 Rev4

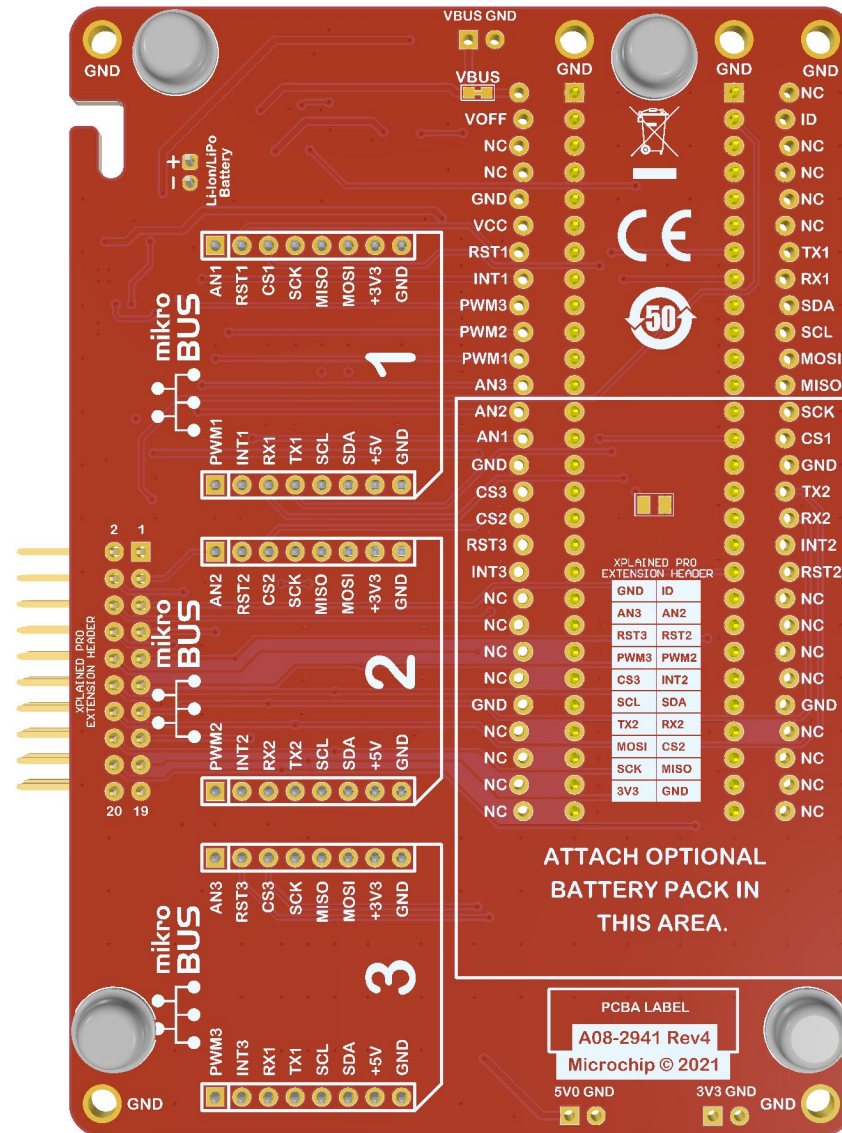
Microchip © 2021

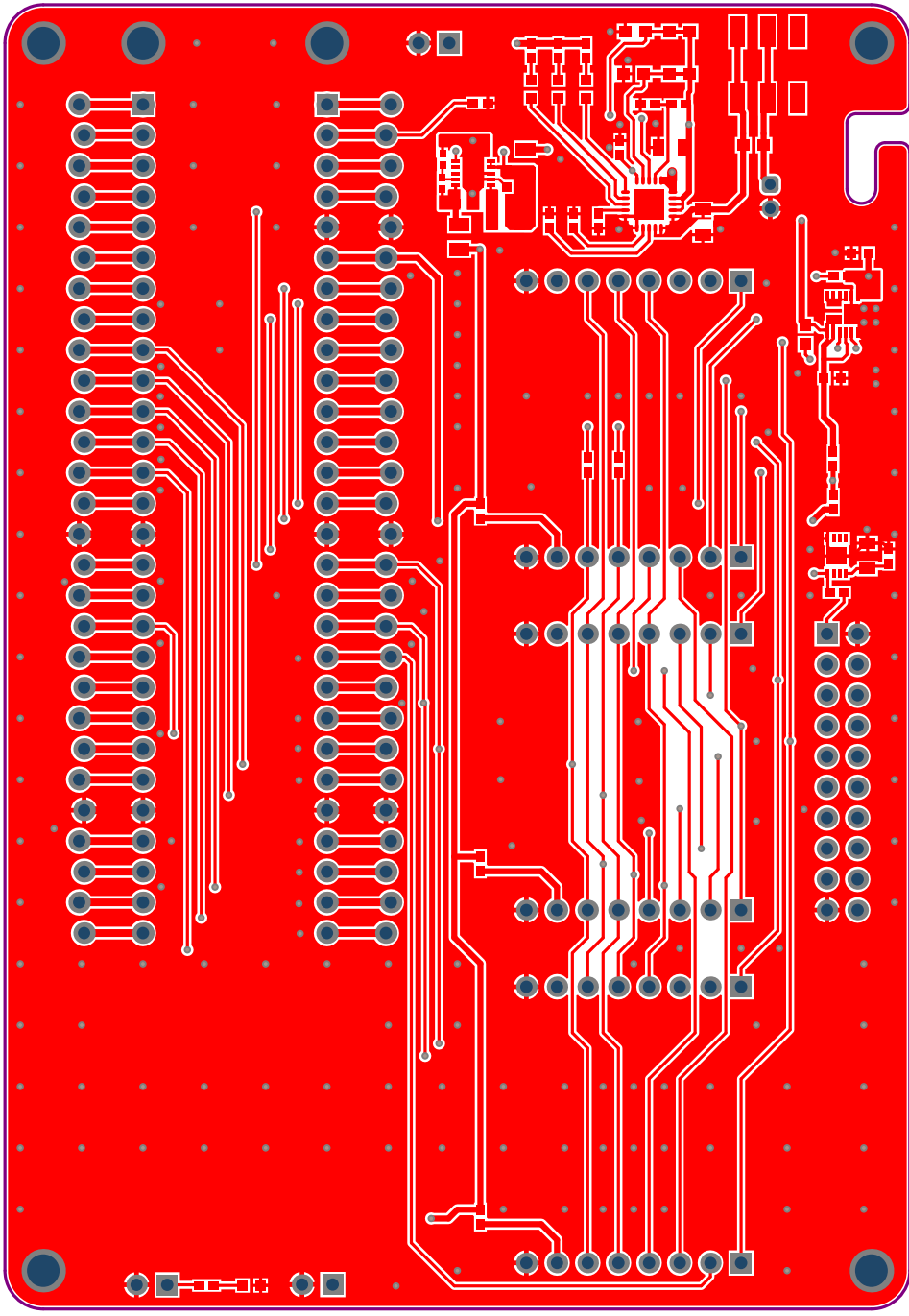
5V0 GND

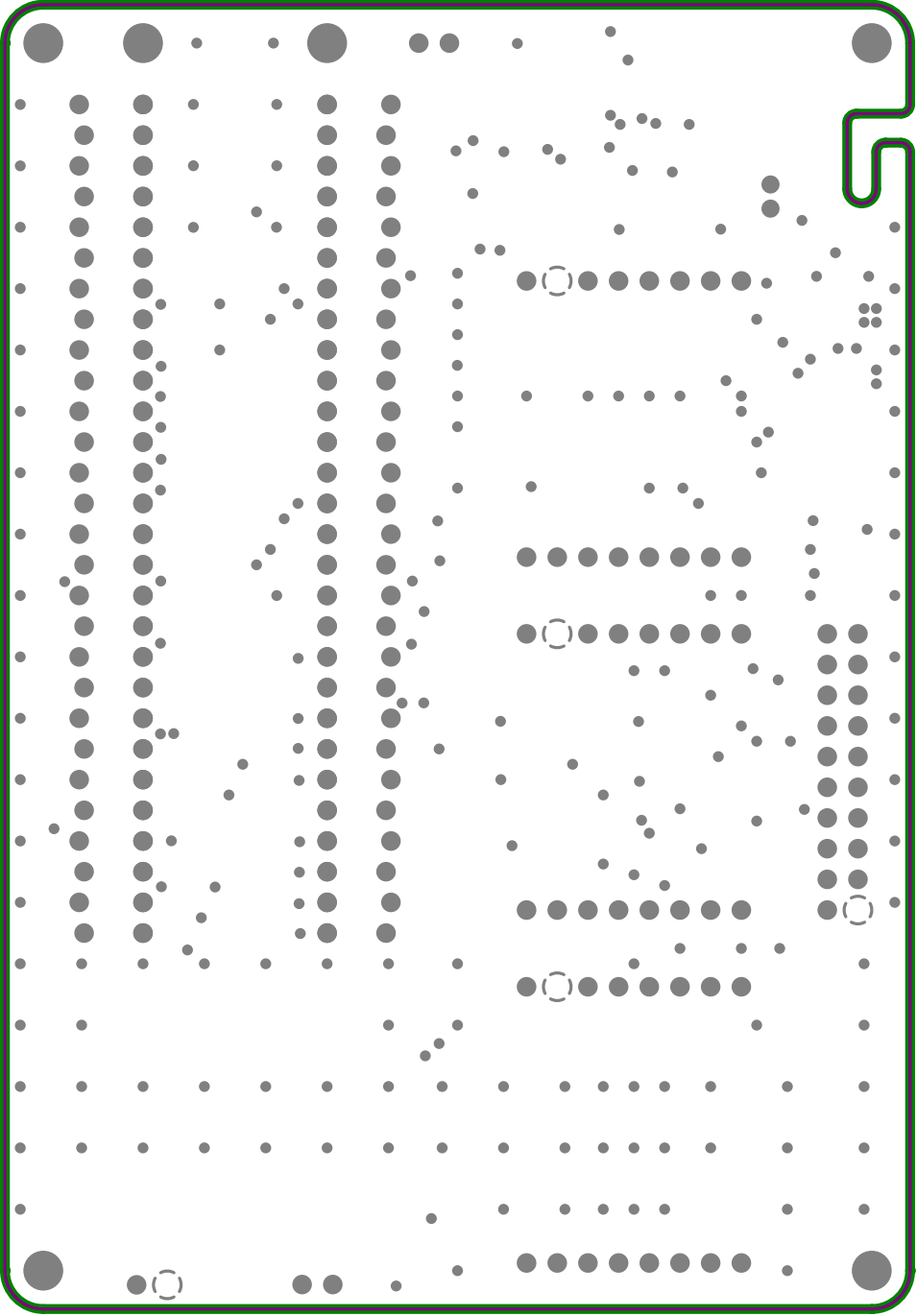
3V3 GND

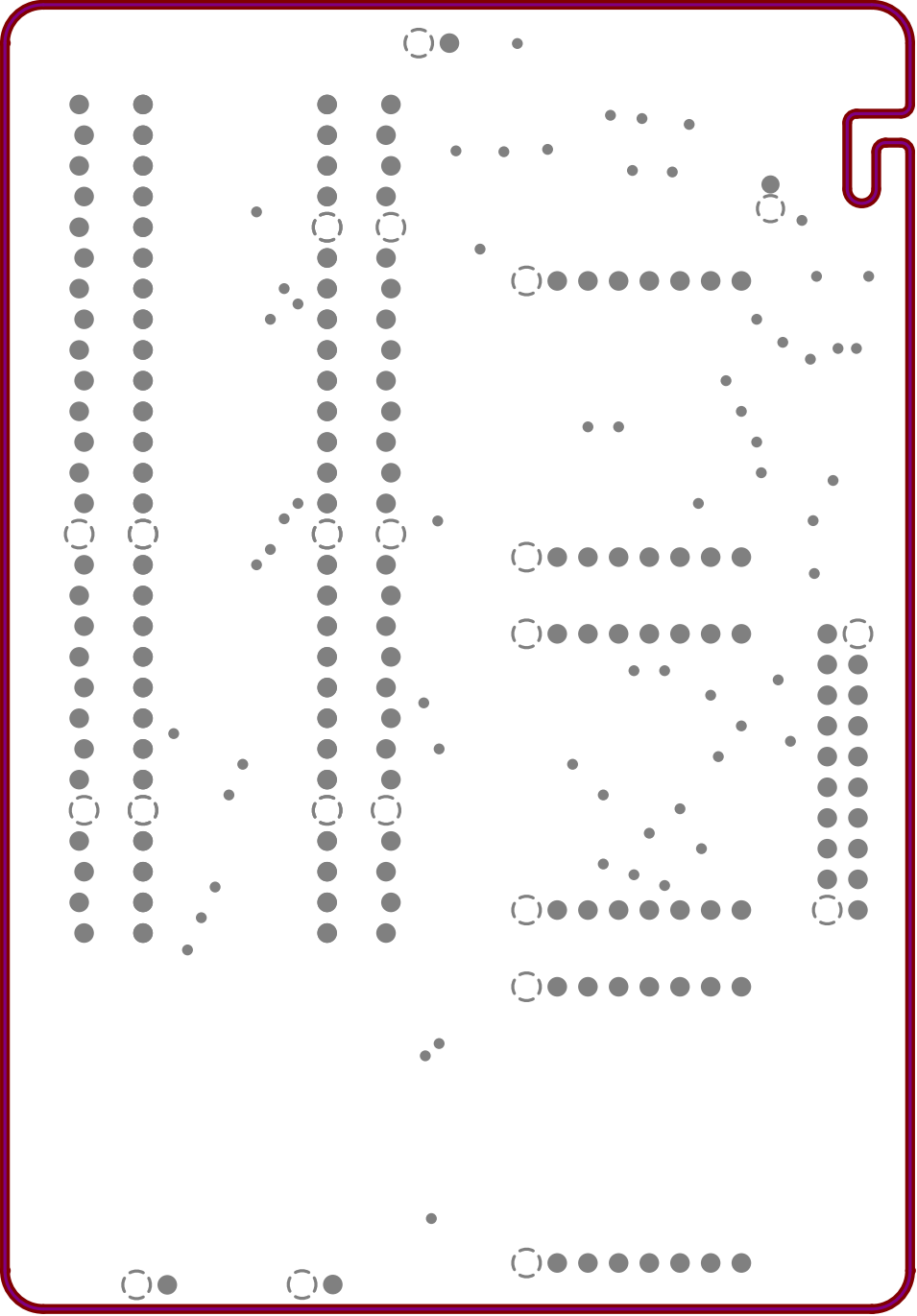
GND

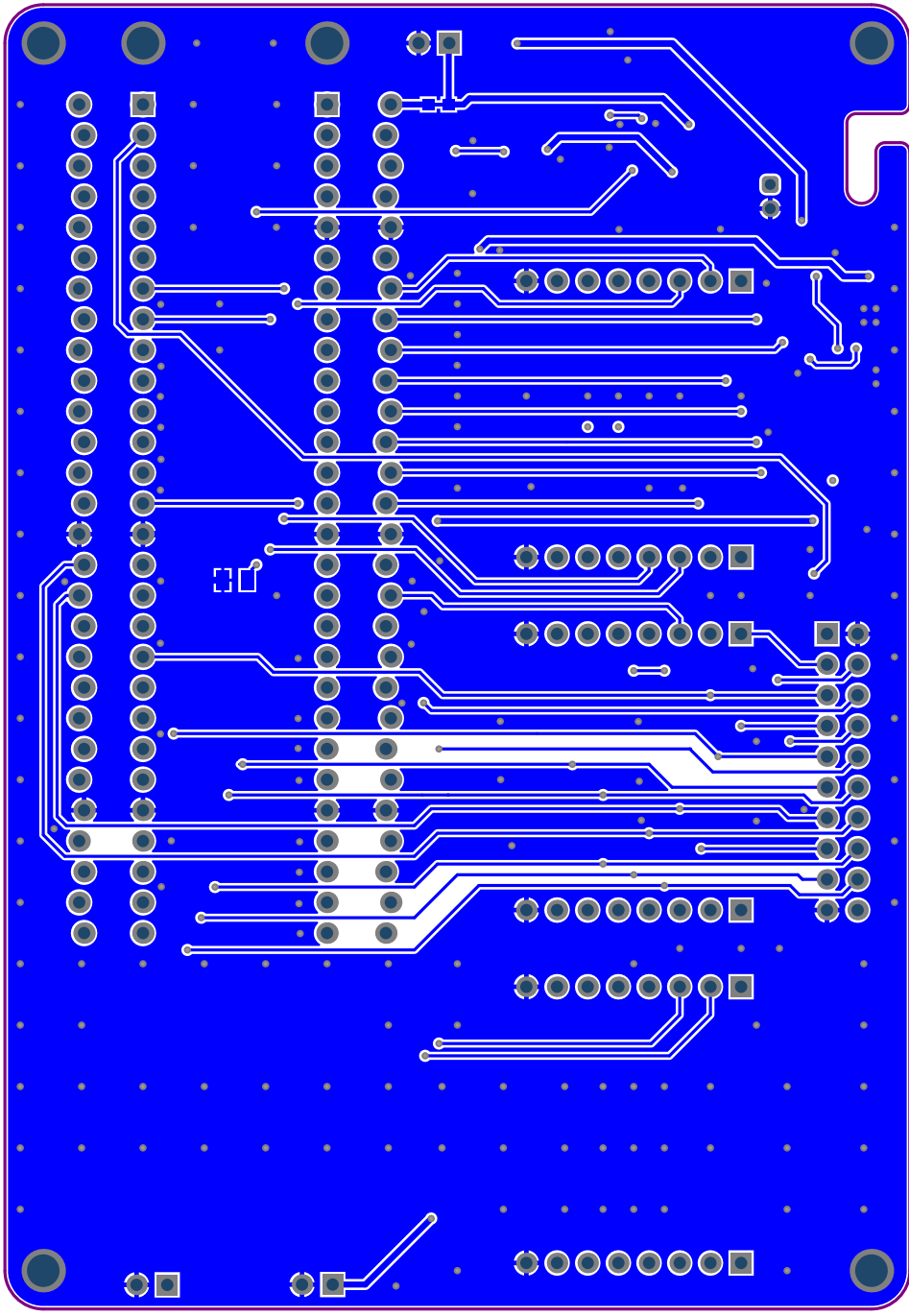












Component list

Bill of Materials Fitted for Variant [Default Assembly] of Project [Curiosity_Nano_Base_for_Clicks.PrjPcb] (No PCB Document Selected)

Source Data From:

Project:

Variant:

Curiosity_Nano_Base_for_Clicks.PrjPcb

Curiosity_Nano_Base_for_Clicks.PrjPcb

Default Assembly



MICROCHIP

Report Date: 2021-07-30

15:17

Print Date: 2021-07-30

15:13:37

Fitted	Designator	Quantity	Value	Manufacturer	MPN	Description
Fitted	C1, C3, C4	3	4.7uF	Yageo	CC0805KKX7R7BB475	Ceramic capacitor, SMD 0805, X7R, 16V, 10%,
Fitted	C2, C5, C7, C8	4	10uF/16V	Taiyo Yuden	EMK107BBJ106MA-T	Ceramic capacitor, SMD 0603, X5R, 16V, 10UF ± 20% (High Density)
Fitted	C6	1	560p			Ceramic capacitor, SMD 0603, X7R, 50V, ±10 %
Fitted	D1	1	RED LED	ROHM	SML-D12U1WT86	LED, SMD 0603, Red, Wave length=620nm, 63mcd @ (20mA, 2.2Vf) rohm
Fitted	D2, D3, D4	3	SML-310MTT86N	ROHM	SML-310MTT86N	LED, Green, 570nm, SMD 0603
Fitted	E1, E2, E3, E4	4	SJ-5076	3M	SJ-5076	2.8mm adhesive feet,diam 8.0mm
Fitted	J1	1	B2B-PH-K-S	J.S.T. Mfg. Co. Ltd.	B2B-PH-K-S	Pin Header 1x2, 2mm THM, top entry, 100V AC/DC, 2A AC/DC (AWG #24)
Fitted	J2	1	1125-1210S0R138R1	WCON	1125-1210S0R138CR01	Pin header, 2x10, Right Angle, 2.54mm, THM, Pin In Paste
Fitted	J3, J4, J5, J6, J7, J8	6	2185-108SS0CYNP1	WCON	2185-108SS0CYNP1	1x8 receptacle pin header, 2.54mm pitch THM, PIP
Fitted	J17, J18	2	2185-128SS0CUNR1	WCON	2185-128SS0CUNR1	1X28 Receptacle Pin Socket 2.54mm pitch THM with pick and place TAB
Fitted	L1	1	2.2uH	Murata	DFE252012P-2R2M-P2	2.2uH, 2.6A shielded SMD power inductor
Fitted	L2	1	220ohm@100MHz	Murata	BLM21PG221SN1D	FerriteBead,220ohm@100MHz,2000mA,0.045ohm
Fitted	LABEL1	1	Label PCBA	ACT Logimark AS	505462	PCBA identification label PP Top White Gloss
Fitted	PCB1	1	CNANO-BASE4CLICK kit PCB documentation			CNANO-BASE4CLICK kit PCB documentation
Fitted	PCBA DOC1	1	A09-3206 PCBA Files			Curiosity Nano BASE4CLICK PCBA documentation
Fitted	R1, R2, R3, R22	4	470R	ASJ Holdings	CR10-4700-FK	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R4	1	270k	Yageo	RC0402FR07270KL	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R5	1	110k	Yageo	RC0402FR-07110KL	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R6, R9, R10, R21	4	10k	vishay	CRCW040210K0FKED	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R7	1	2k	Yageo	RC0402FR072KL	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R8, R13	2	100k	Yageo	RC0402FR-07100KP	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R11, R12, R14, R15, R16, R17, R18, R19	8	0R	Stackpole Electronics Inc	RMCF0402ZT0R00	RES 0.0 OHM 1/16W 0402 SMD
Fitted	R23	1	1.2M	Yageo	RC0402FR-071M2L	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R24	1	300k	Yageo	RC0402FR-07300KL	Thick film resistor, SMD 0402, 1/16W, 1%
Fitted	R25	1	0R	Yageo	RC0805FR-070RL	Chip Resistor 0R,0805,1% 1/8W
Fitted	SILK1, SILK2, SILK3	3	MikroBUS_socket_silkscreen_full			Full standard silkscreen for MikroBUS socket. Derived from component files distributed by MikroElektronika. Can be deviated from in case of space requirements, etc. If so, refer to spec.
Fitted	SW1	1	JS202011SCQN	C&K Components	JS202011SCQN	Slide Switch, C&K, 2 Pos 2 Pol, SMD
Fitted	TEST1	1	Curiosity Nano BASE4CLICK test			Fixture test for Curiosity Nano Base for Click Boards
Fitted	TESTDOC1	1	CNANO-BASE4CLICK test instructions			Test instructions for the Curiosity Nano Base for Click Boards
Fitted	U1	1	MCP73871	Microchip	MCP73871T-2CCI/ML	Load Sharing and Li-Ion/Li-Polymer Battery Charge Management Controller
Fitted	U2	1	ATSHA204A SWI UDFN8	Microchip	ATSHA204A-MAHCZ-T	ATSHA204A with 1-wire interface and UDFN8 package
Fitted	U4	1	MCP16417	Microchip	MCP16417T-IMN	Low Iq boost converter with programmable low battery, UVLO, and automatic input-to-output bypass operation
Fitted	U5	1	MIC33050-SYHL	Microchip	MIC33050-SYHL-TR	3.3V Fixed, 4MHz, 600mA, Buck regulator with internal inductor with HyperLight Load
Not Fitted	J14, J15, J16	0	1125-1102S0S113R1	WCON	1125-1102S0S113R1	1x2 pin header, 2.54mm pitch, Pin-in-Paste THM
Not Fitted	R20	0	0R	Panasonic	ERJ-3GEY0R00V	Thick film resistor, SMD 0603, 1/10W, 1%
Not Fitted	TH1	0	NTC- B57421V2103H62	EPCOS	B57421V2103H62	THERMISTOR NTC 10K OHM 3% 0805

65

Approved

Notes