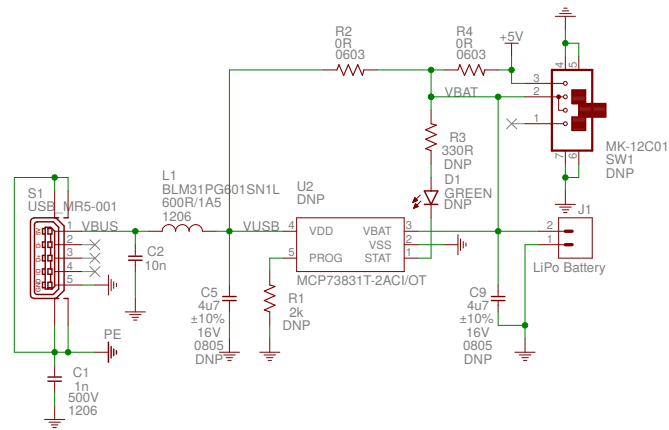
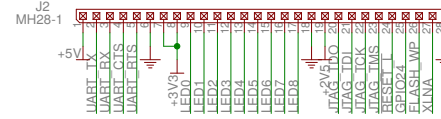


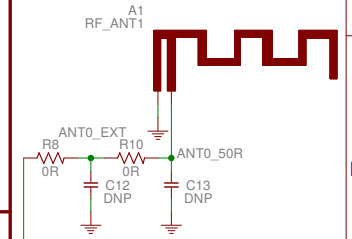
LiPo Battery Charger



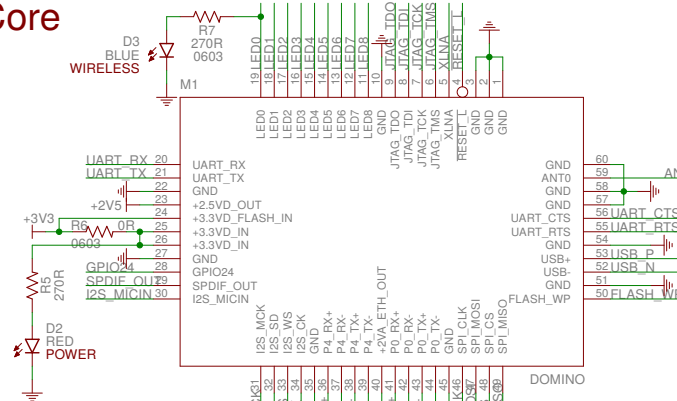
North Connector



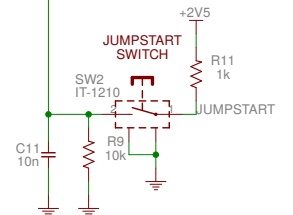
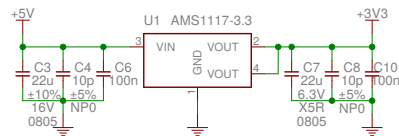
Antenna



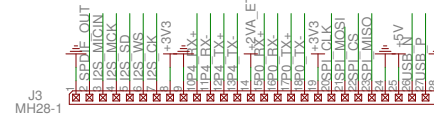
Core



Power Supply



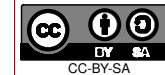
South Connector



Resistors are 5% 1/16W 0402 unless otherwise specified
Ceramic capacitors are $\pm 10\%$ 50V X7R dielectric 0402 unless otherwise specified



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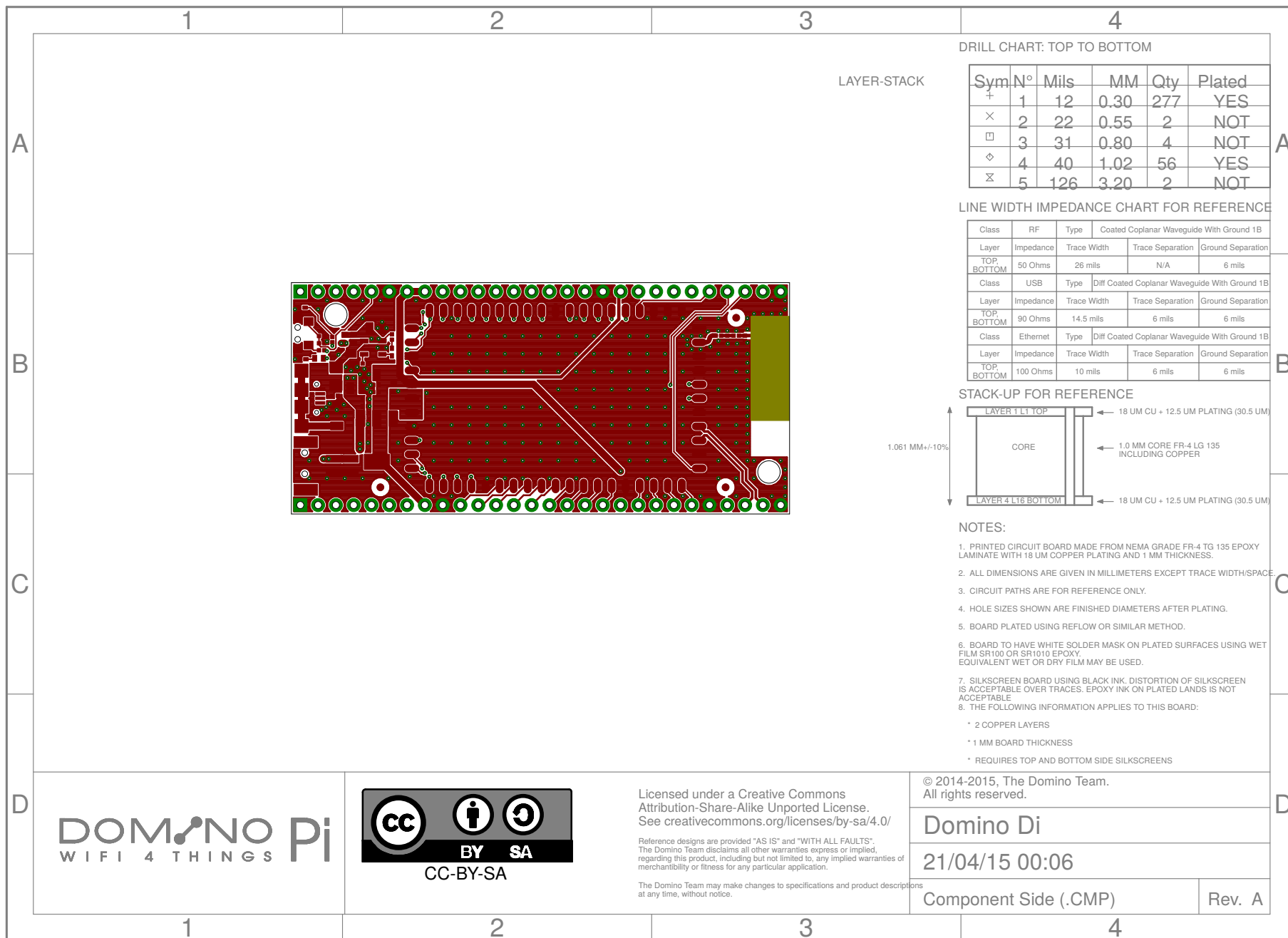
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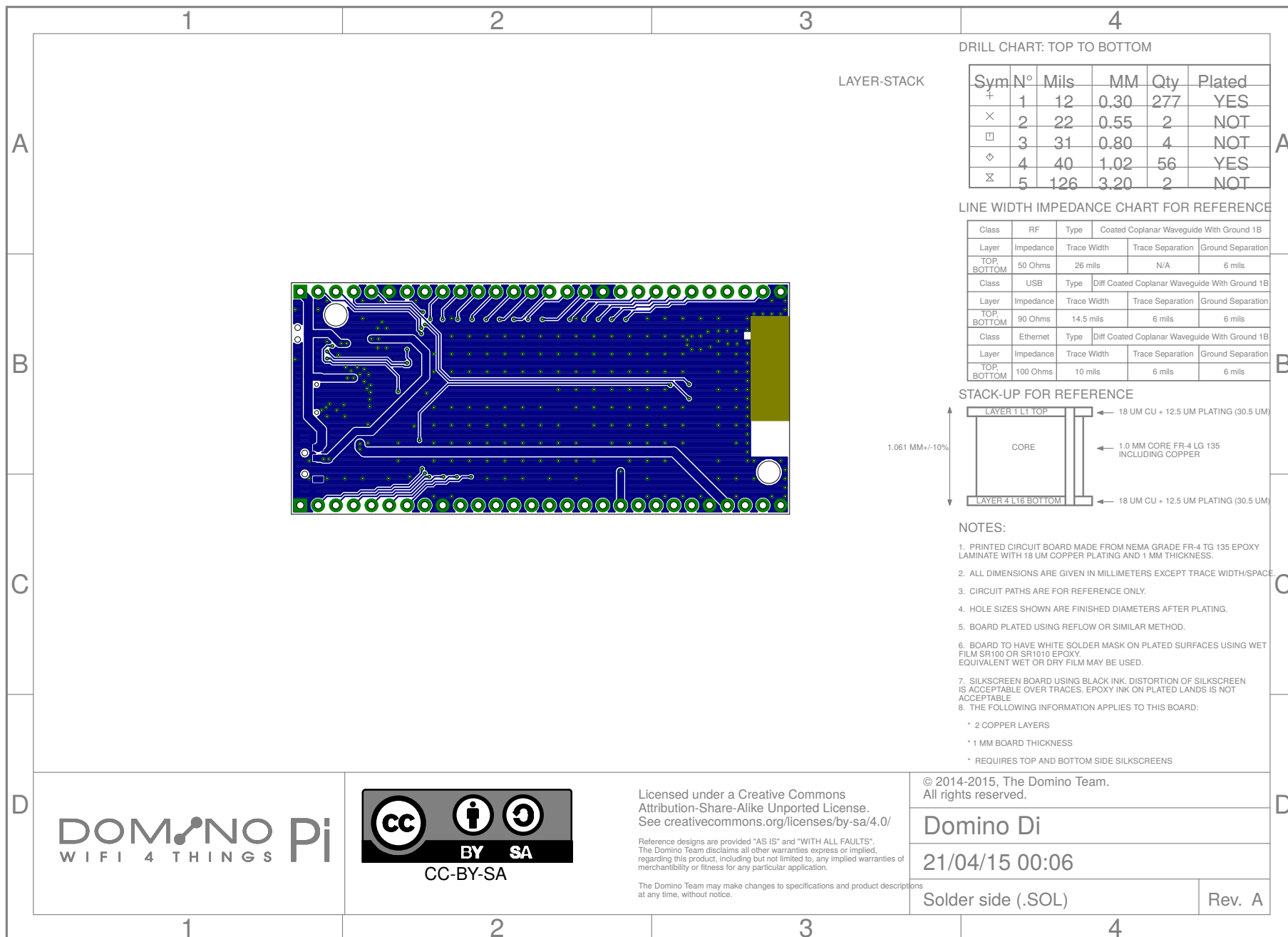
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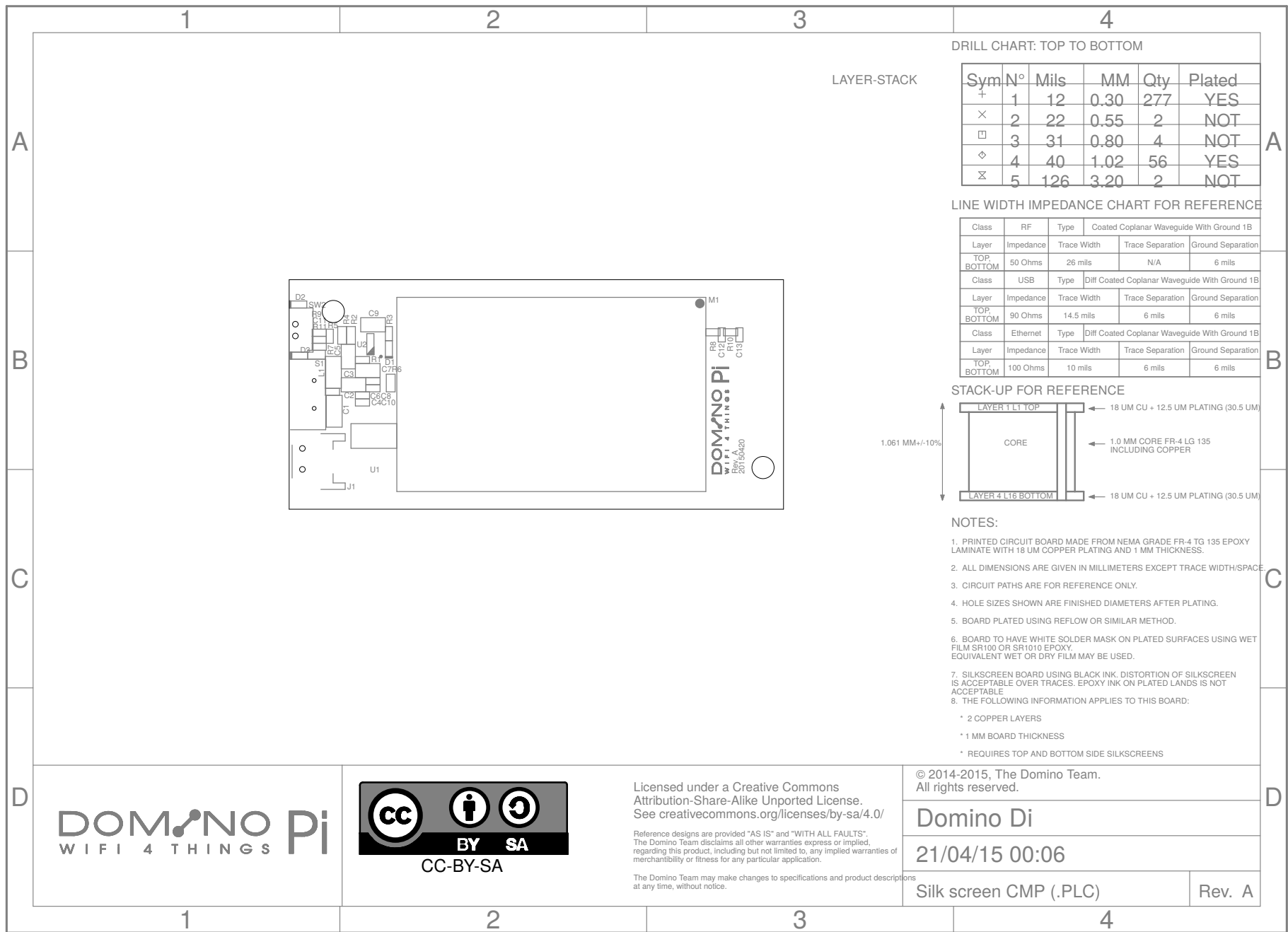
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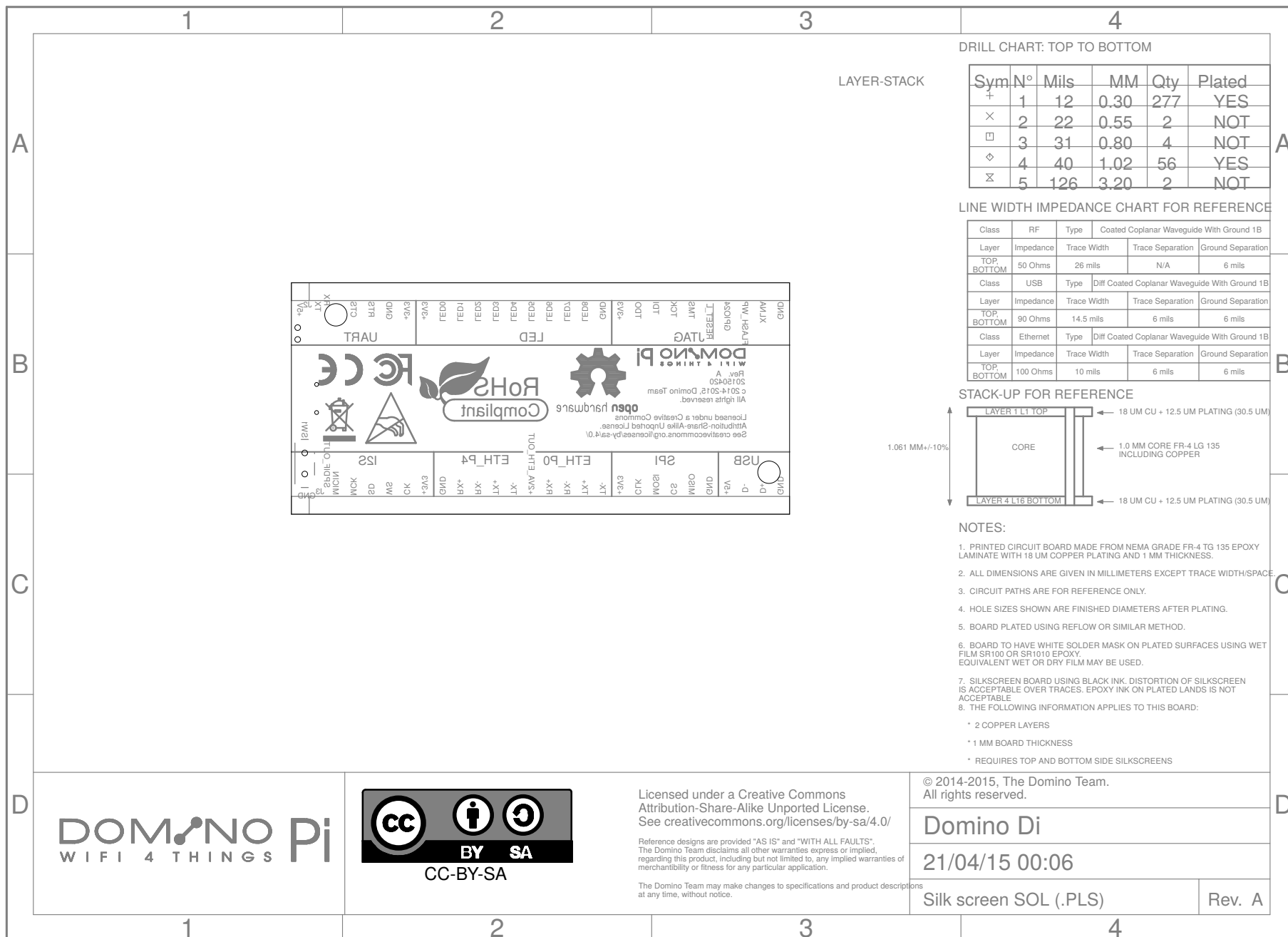
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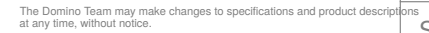
Rev. A



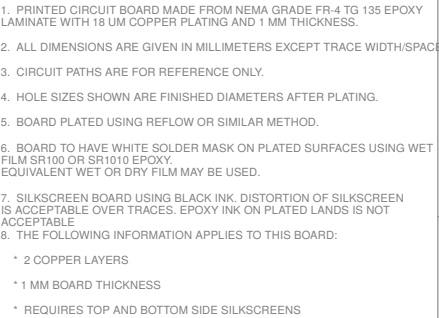


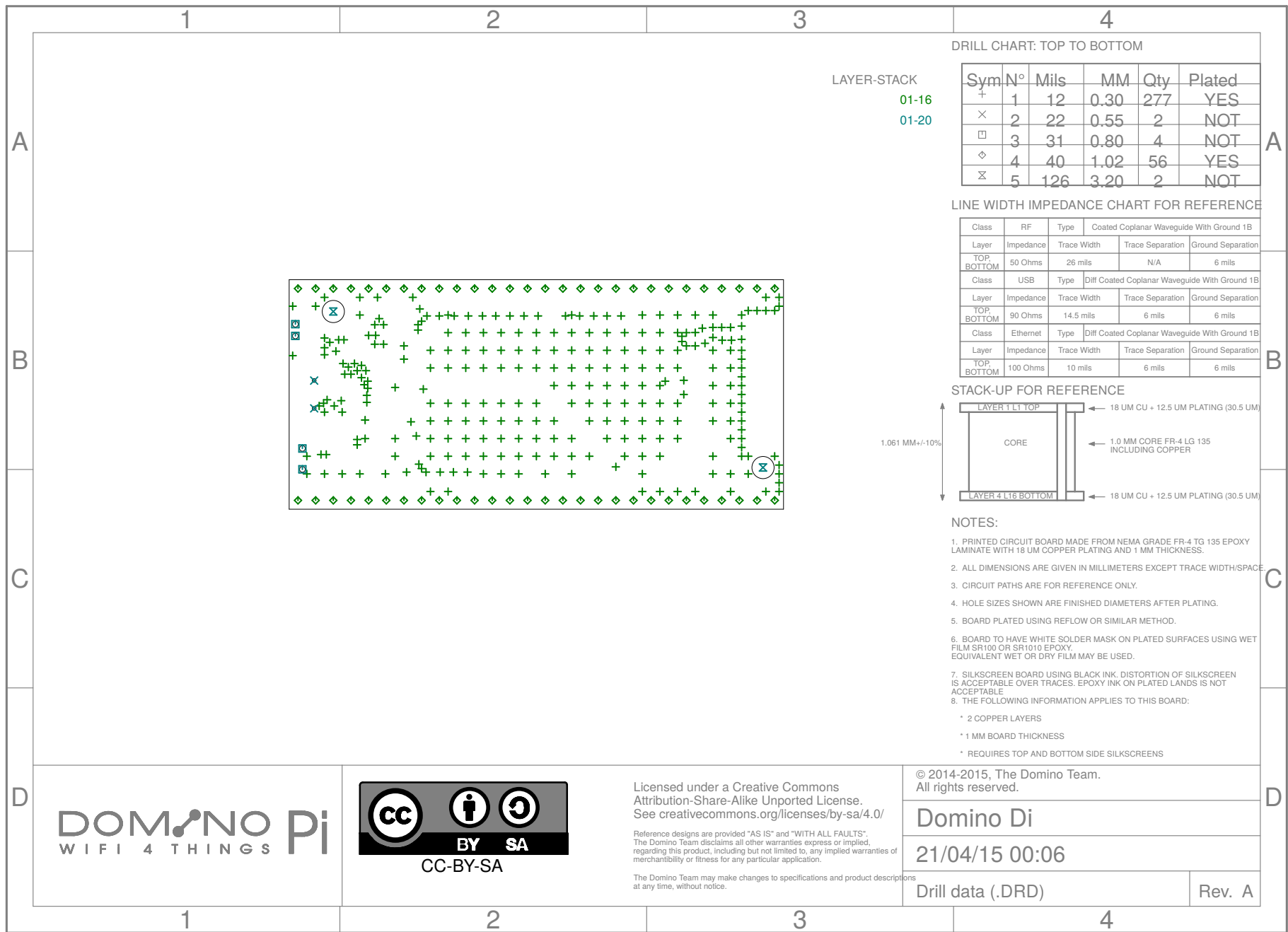






Rev. A







Sym	Nº	Mils	MM	Qty	Plated
+	1	12	0.30	277	YES
×	2	22	0.55	2	NOT
◇	3	31	0.80	4	NOT
◊	4	40	1.02	56	YES
⊗	5	126	3.20	2	NOT

Class	RF	Type	Coated Coplanar Waveguide With Ground 1		
Layer	Impedance	Trace Width		Trace Separation	Ground Separation
TOP, BOTTOM	50 Ohms	26 mils		N/A	6 mils
Class	USB	Type	Diff Coated Coplanar Waveguide With Ground		
Layer	Impedance	Trace Width		Trace Separation	Ground Separation
TOP, BOTTOM	90 Ohms	14.5 mils		6 mils	6 mils
Class	Ethernet	Type	Diff Coated Coplanar Waveguide With Ground		
Layer	Impedance	Trace Width		Trace Separation	Ground Separation
TOP, BOTTOM	100 Ohms	10 mils		6 mils	6 mils

1.061 MM +/-10%

LAYER 1 LT6 TOP

18 UM CU + 12.5 UM PLATING (30.5 UM)


CORE

1.0 MM CORE FR-4 LG 135 INCLUDING COPPER

LAYER 4 LT6 BOTTOM

18 UM CU + 12.5 UM PLATING (30.5 UM)

1. PRINTED CIRCUIT BOARD MADE FROM NEMA GRADE FR-4 TO 135 EPOXY LAMINATE WITH 18 UM COPPER PLATING AND 1 MM THICKNESS.
2. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS EXCEPT TRACE WIDTH/SPACE.
3. CIRCUIT PATHS ARE FOR REFERENCE ONLY.
4. HOLE SIZES SHOWN ARE FINISHED DIAMETERS AFTER PLATING.
5. BOARD PLATED USING REFLOW OR SIMILAR METHOD.
6. BOARD TO HAVE WHITE SOLDER MASK ON PLATED SURFACES USING WET FILM SR100 OR SR1010 EPOXY.
EQUIVALENT WET OR DRY FILM MAY BE USED.
7. SILKSCREEN BOARD USING BLACK INK. DISTORTION OF SILKSCREEN IS ACCEPTABLE OVER TRACES. EPOXY INK ON PLATED LANDS IS NOT ACCEPTABLE
8. THE FOLLOWING INFORMATION APPLIES TO THIS BOARD:
 - * 2 COPPER LAYERS
 - * 1 MM BOARD THICKNESS
 - * REQUIRES TOP AND BOTTOM SIDE SILKSCREENS



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Component Assembly CMP (.ASC) Rev. A

1234

A

B

C

D

1

2

3

4

1

2

3

4

LAYER-STACK

DRILL CHART: TOP TO BOTTOM

Sym	N°	Mils	MM	Qty	Plated
+	1	12	0.30	277	YES
×	2	22	0.55	2	NOT
□	3	31	0.80	4	NOT
◇	4	40	1.02	56	YES
⊗	5	126	3.20	2	NOT

LINE WIDTH IMPEDANCE CHART FOR REFERENCE

Class	RF	Type	Coated Coplanar Waveguide With Ground 1B	
Layer	Impedance	Trace Width	Trace Separation	Ground Separation
TOP, BOTTOM	50 Ohms	26 mils	N/A	6 mils
Class	USB	Type	Diff Coated Coplanar Waveguide With Ground 1B	
Layer	Impedance	Trace Width	Trace Separation	Ground Separation
TOP, BOTTOM	90 Ohms	14.5 mils	6 mils	6 mils
Class	Ethernet	Type	Diff Coated Coplanar Waveguide With Ground 1B	
Layer	Impedance	Trace Width	Trace Separation	Ground Separation
TOP, BOTTOM	100 Ohms	10 mils	6 mils	6 mils

STACK-UP FOR REFERENCE

1.061 MM +/- 10%

LAYER 1 LT TOP

CORE

LAYER 4 LT6 BOTTOM

← 18 UM CU + 12.5 UM PLATING (30.5 UM)

← 1.0 MM CORE FR-4 LG 135 INCLUDING COPPER

← 18 UM CU + 12.5 UM PLATING (30.5 UM)

NOTES:

1. PRINTED CIRCUIT BOARD MADE FROM NEMA GRADE FR-4 TG 135 EPOXY LAMINATE WITH 18 UM COPPER PLATING AND 1 MM THICKNESS.

2. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS EXCEPT TRACE WIDTH/SPACE.

3. CIRCUIT PATHS ARE FOR REFERENCE ONLY.

4. HOLE SIZES SHOWN ARE FINISHED DIAMETERS AFTER PLATING.

5. BOARD PLATED USING REFLOW OR SIMILAR METHOD.

6. BOARD TO HAVE WHITE SOLDER MASK ON PLATED SURFACES USING WET FILM SR100 OR SR1010 EPOXY. EQUIVALENT WET OR DRY FILM MAY BE USED.

7. SILKSCREEN BOARD USING BLACK INK. DISTORTION OF SILKSCREEN IS ACCEPTABLE OVER TRACES. EPOXY INK ON PLATED LANDS IS NOT ACCEPTABLE

8. THE FOLLOWING INFORMATION APPLIES TO THIS BOARD:

* 2 COPPER LAYERS

* 1 MM BOARD THICKNESS

* REQUIRES TOP AND BOTTOM SIDE SILKSCREENS

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Component Assembly SOL (.ASS)

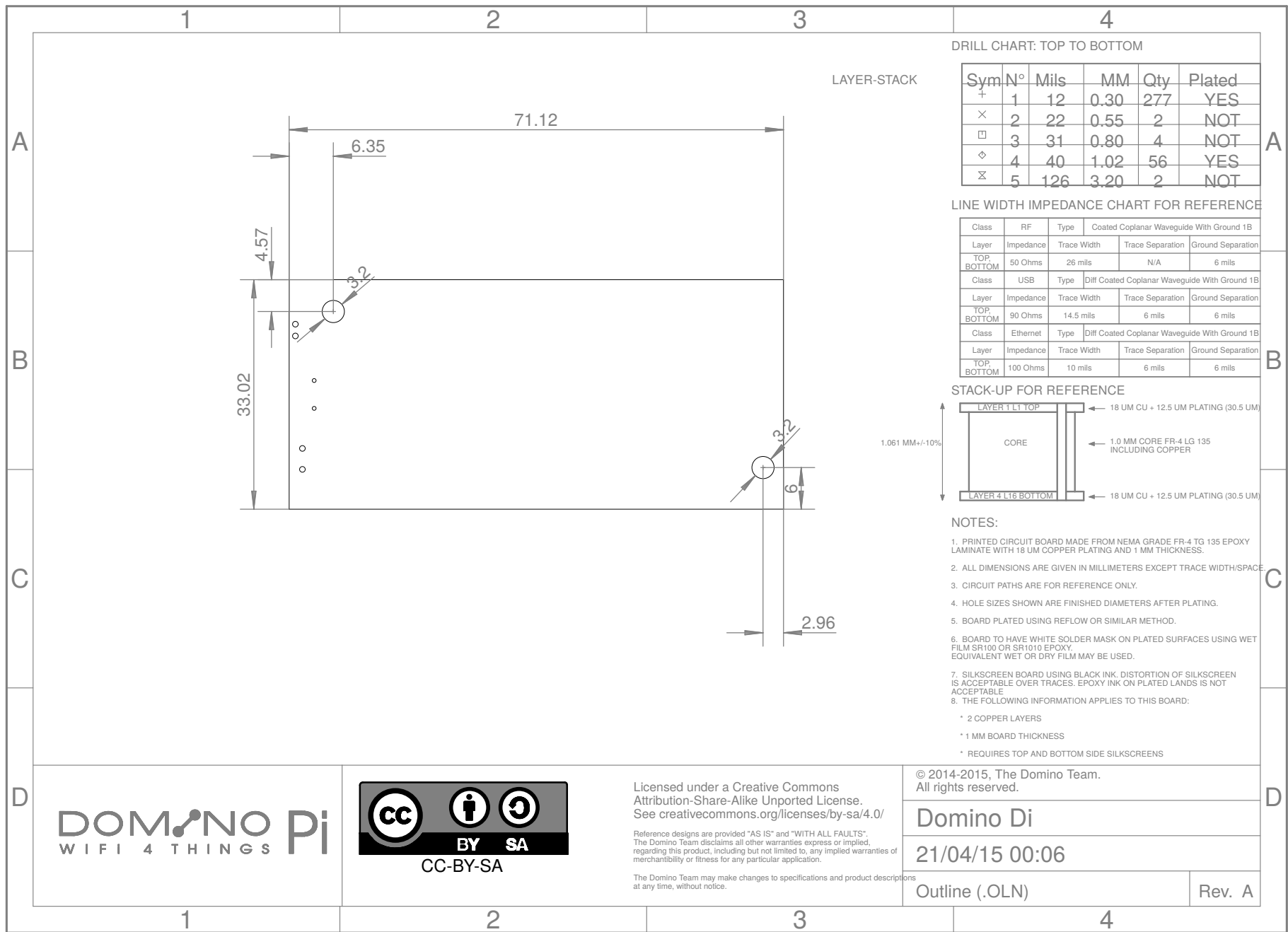
Rev. A

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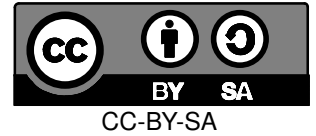
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3

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Outline (.OLN)

Rev. A



Domino Di Rev. A

2	0 DNP	NONE	C0402_DNP	C0402	C12(DNP), C13(DNP)	CAP DNP 0402
3	2 10n	ANY	C0402_10n_X7R_10%_CER_50V	C0402	C2, C11	CAP CER 10000PF 50V 10% X7R 0402
4	222u	ANY	C0805_22u_X5R_20%_CER_6V3	C0805	C3, C7	CAP CER 22UF 6.3V 20% X5R 0805
5	2 10p	ANY	C0402_10p_NP0_5%_CER_50V	C0402	C4, C8	CAP CER 10PF 50V 5% NP0 0402
6	0 4u7	ANY	C0805_4u7_X5R_10%_CER_16V	C0805	C5(DNP), C9(DNP)	CAP CER 4.7UF 16V 10% X5R 0805
7	2 100n	ANY	C0402_100n_X7R_10%_CER_50V	C0402	C6, C10	CAP CER 0.1UF 50V 10% X7R 0402
8	0 GREEN	ANY	LED0402-GREEN	LED0402	D1(DNP)	LED GREEN CLEAR 0402 SMD
9	1 RED	ANY	LED0402-RED	LED0402	D2	LED RED CLEAR 0402 SMD
10	1 BLUE	ANY	LED0402-BLUE	LED0402	D3	LED BLUE CLEAR 0402 SMD
11	1 LiPo Battery	JST	S2B-PH-SM4-TB	S2B-PH-SM4-TB	J1	CONN HEADER PH SIDE 2POS 2MM SMD
12	2 MH28-1	ANY	MH28-1-0.1	MH28-1-0.1	J2, J3	CONN HEADER VERT .100 1ROW 28POS 10.5 TAIL 8.5 BODY 15AU
13	1 BLM31PG601SN1L	MURATA	BLM31PG601SN1L	FB1206	L1	FERRITE CHIP 600 OHM 1500MA 1206
14	1 DOMINO	GL-CONNECT	DOMINO-CORE	DOMINO	M1	MOD AR9331 WIFI
15	0 2k	ANY	R0402_2k_5%_62.5mW	R0402	R1(DNP)	RES 2K OHM 1/16W 5% 0402 SMD
16	1 1k	ANY	R0402_1k_5%_62.5mW	R0402	R11	RES 1K OHM 1/16W 5% 0402 SMD
17	3 0R	ANY	R0603_0R_5%_125mW	R0603	R2, R4, R6	RES 0.0 OHM 1/8W JUMP SMD 0603
18	0 330R	ANY	R0402_330R_5%_62.5mW	R0402	R3(DNP)	RES 330 OHM 1/16W 5% 0402 SMD
19	1 270R	ANY	R0402_270R_5%_62.5mW	R0402	R5	RES 270 OHM 1/16W 5% 0402 SMD
20	1 270R	ANY	R0603_270R_5%_125mW	R0603	R7	RES 270 OHM 1/8W 5% 0603 SMD
21	2 0R	ANY	R0402_0R_5%_62.5mW	R0402	R8, R10	RES 0.0 OHM 1/16W JUMP 0402 SMD
22	1 10k	ANY	R0402_10k_5%_62.5mW	R0402	R9	RES 10K OHM 1/16W 5% 0402 SMD
23	1 USB_MR5-001	SZJUSTWELL ELECTRONICS	USB MR5-001	USB-MR5-001	S1	CONN USB MICRO B RECPT SMT R/A
24	0 MK-12C01	SZJUSTWELL ELECTRONICS	MK-12C01	MK-12C01	SW1(DNP)	SLIDE SWITCH 1P2T 6V DC 0.3A
25	1 IT-1210	SZJUSTWELL ELECTRONICS	IT-1210	IT-1210	SW2	SWITCH TACTILE SPST-NO 0.05A 12V
26	1 AMS1117-3.3	ADVANCED MONOLITHIC SYSTEMS	AMS1117-3.3	SOT223	U1	IC REG LDO 3.3V 0.8A SOT223
27	0 MCP73831T-2ACI/OT	MICROCHIP	MCP73831T-2ACI/OT	SOT23-5	U2(DNP)	IC CONTROLLER LI-ION 4.2V SOT23-5