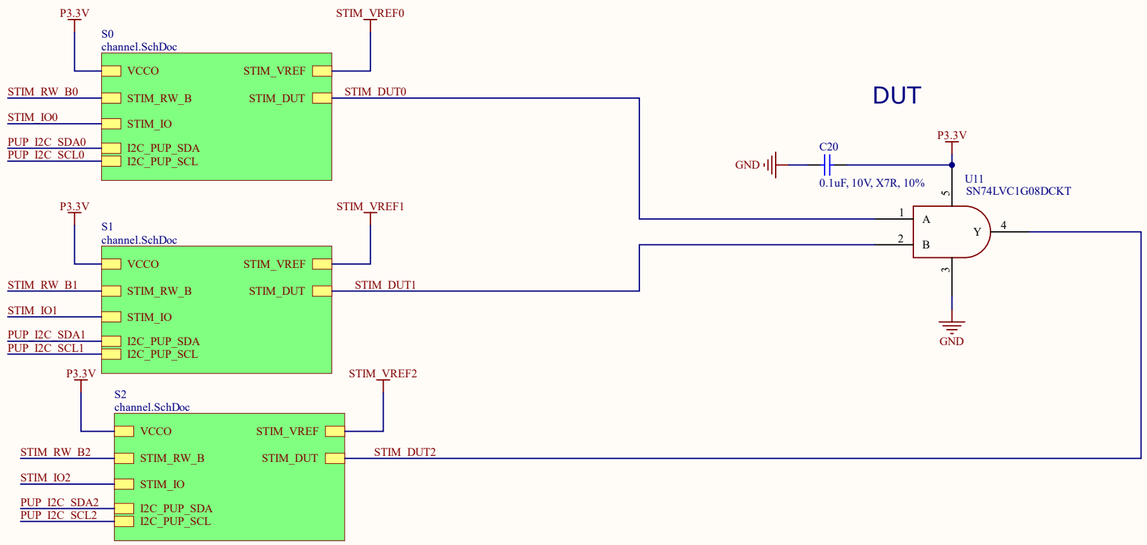
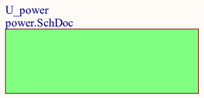
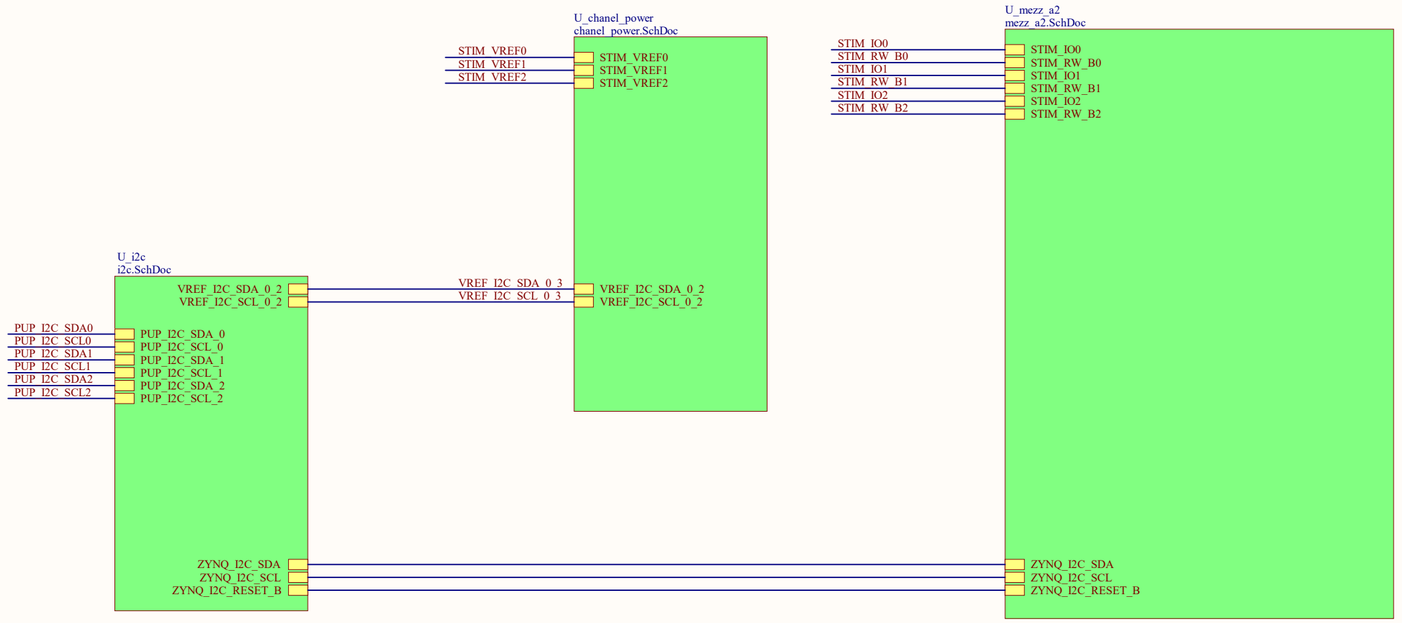
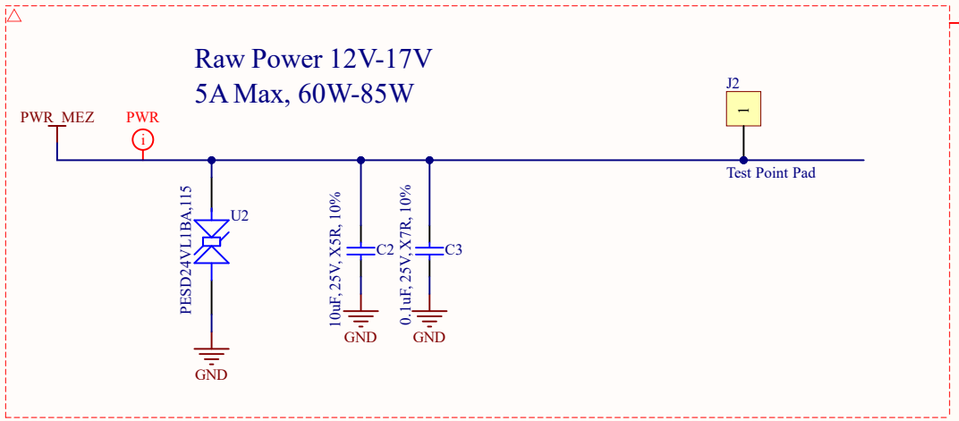
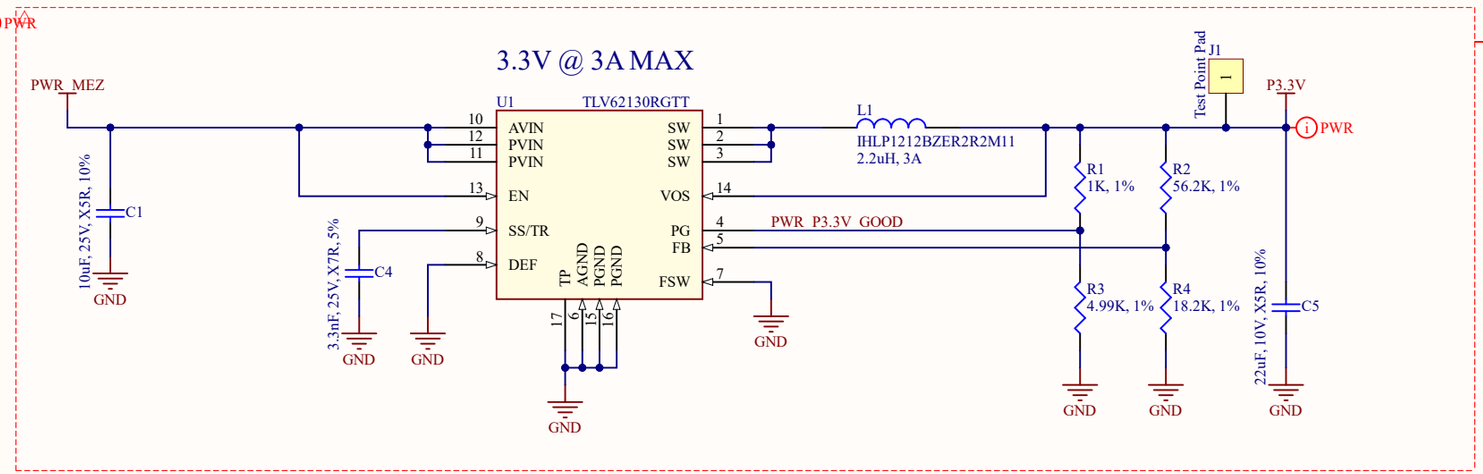


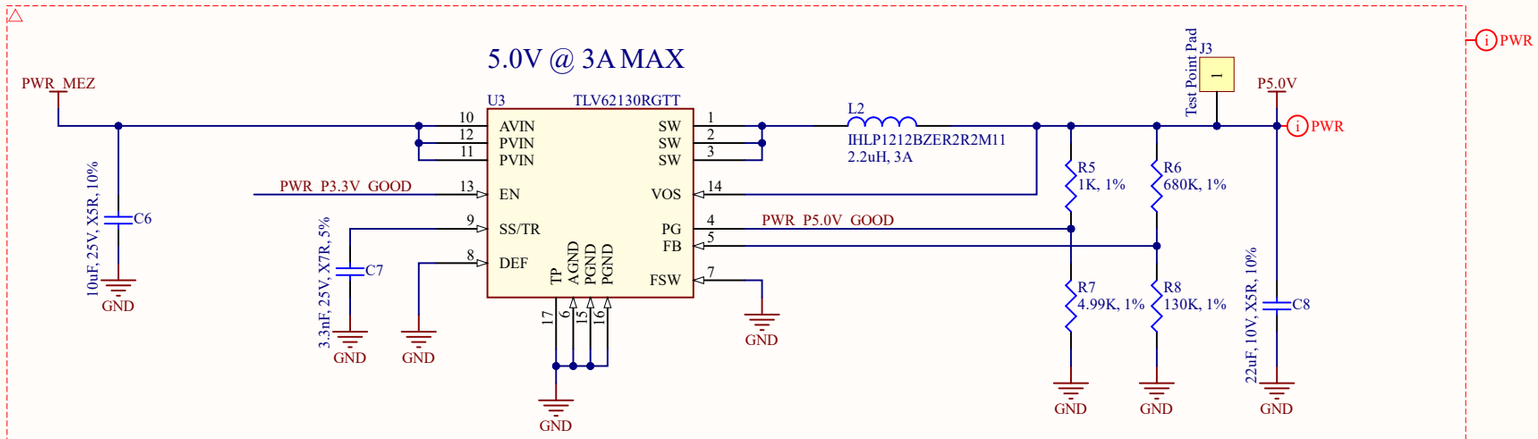


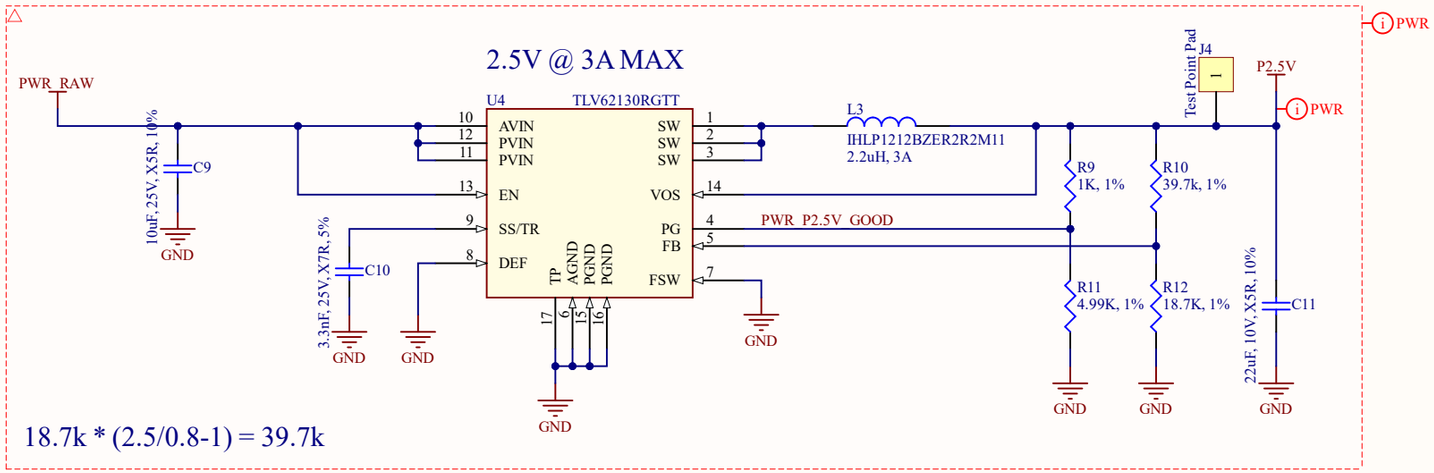


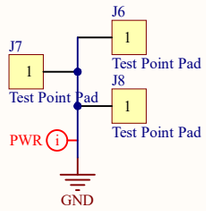
GEMINI	Gemini Complex Corporation © 2018	
Size: C	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 1 of 6
File: channels.SchDoc		







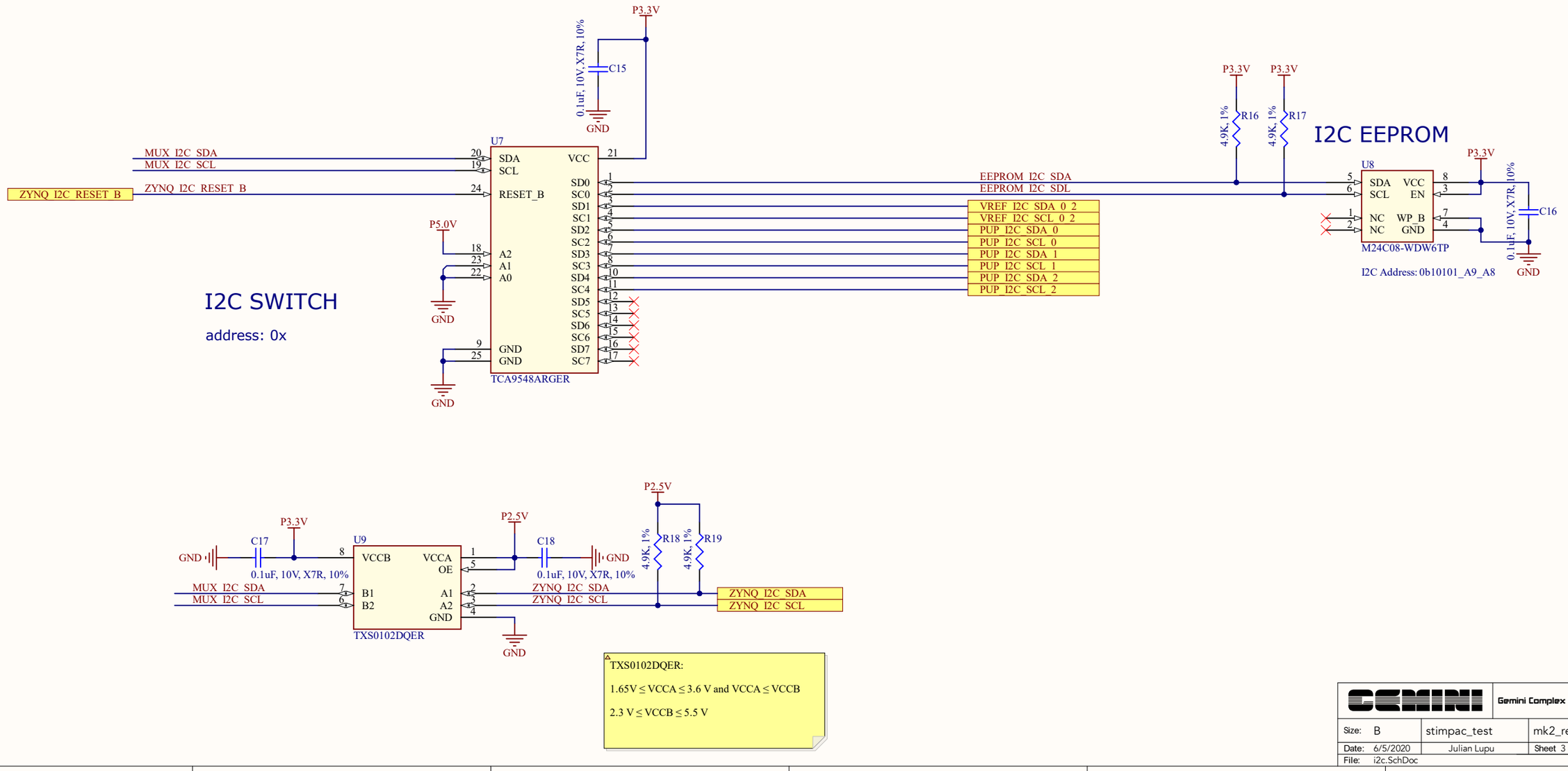




Gemini Complex Corporation © 2018		
Size: B	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 2 of 6
File: power.SchDoc		

Because we're only using A2 connector, it doesn't have access to the I2C lines so instead they'll go to the PL of the zynq which uses a 2.5V VCCO.

ZYNQ_RESET_B is a push-pull 3.3V sig from AND gate output.

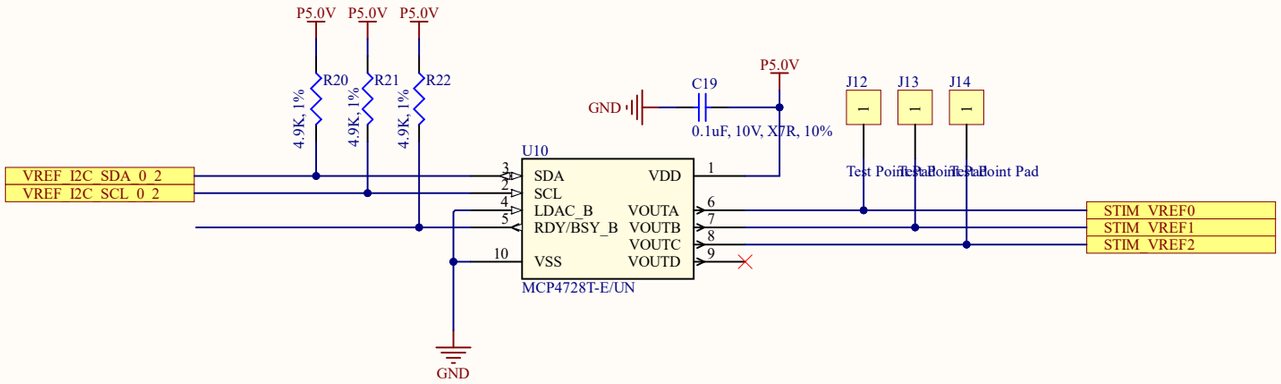


TXS0102DQER:

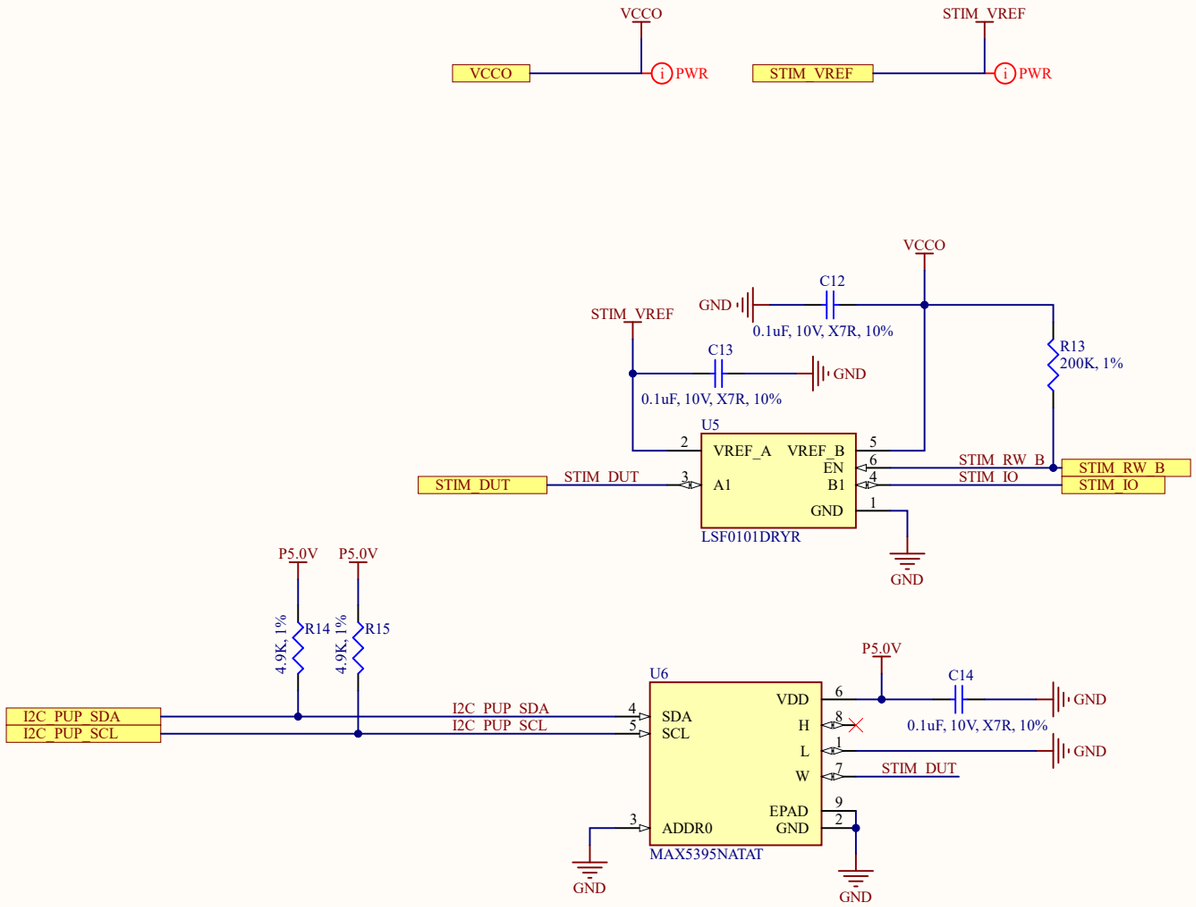
1.65V ≤ VCCA ≤ 3.6 V and VCCA ≤ VCCB

2.3 V ≤ VCCB ≤ 5.5 V

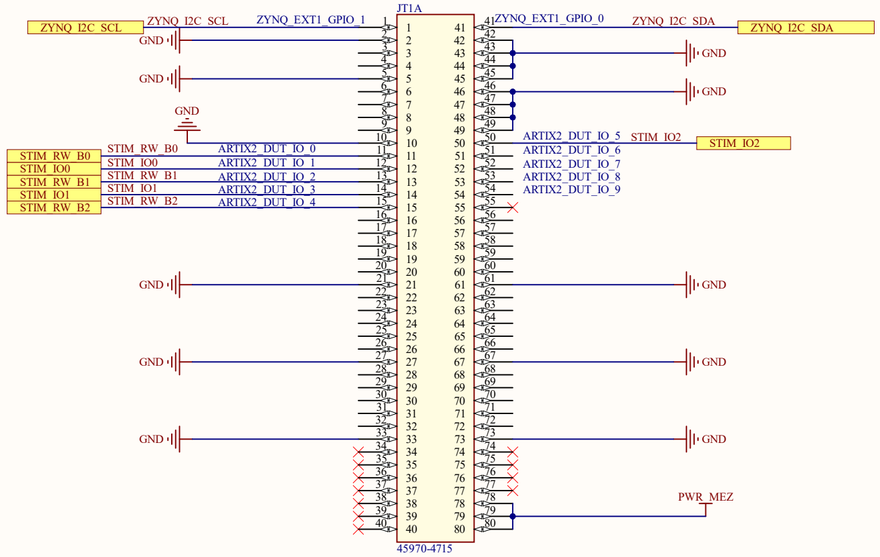
Gemini Complex Corporation © 2018		
Size: B	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 3 of 6
File: i2c.SchDoc		

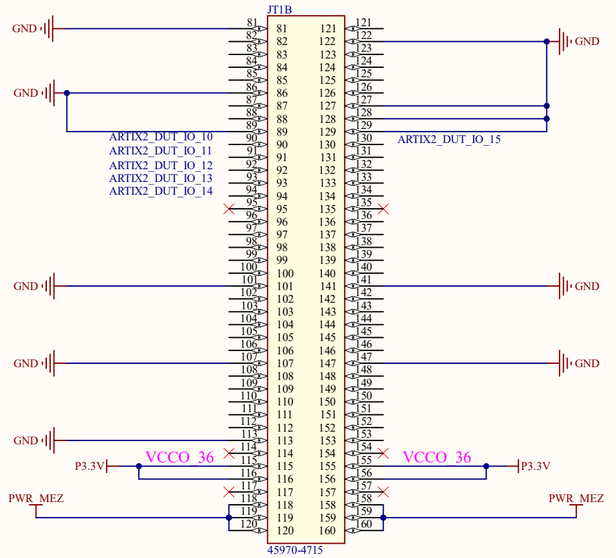


Gemini Complex Corporation © 2018		
Size: B	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 4 of 6
File: chanel_power.SchDoc		



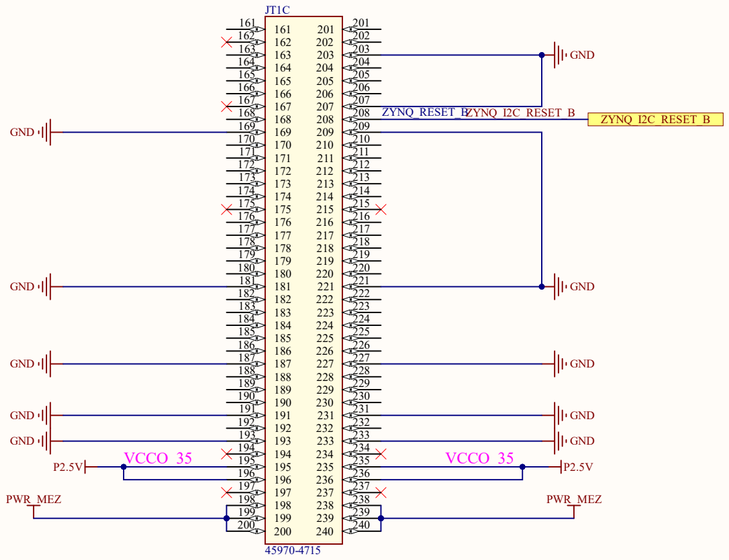
Gemini Complex Corporation © 2018		
Size: B	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 5 of 6
File: channel.SchDoc		

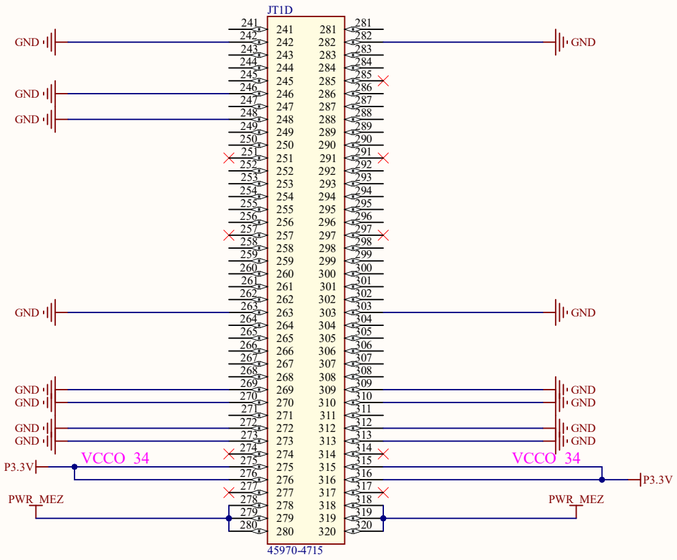


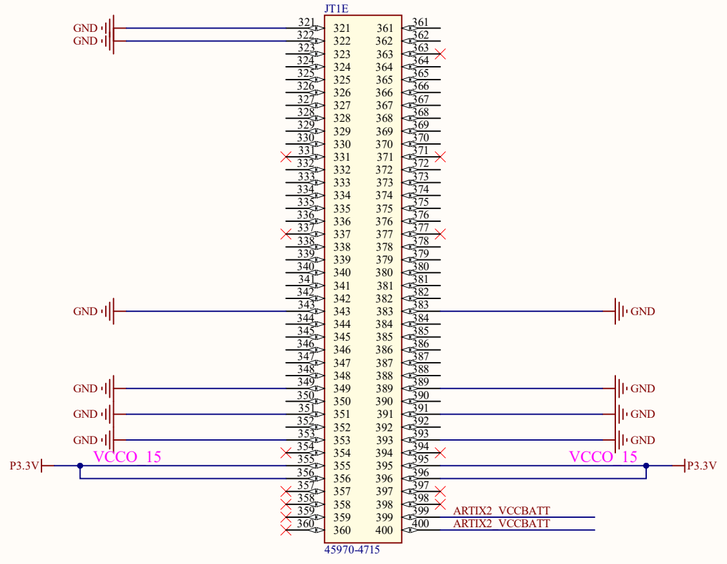


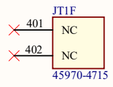
RESET NOTE:

If the EXT1 peripheral wants to reset it must assert EXT1_ZYNQ_SRST_B.
If it wants to check the state of reset, it should read ZYNQ_RESET_B, but never drive it.
Both are 3.3V signals.





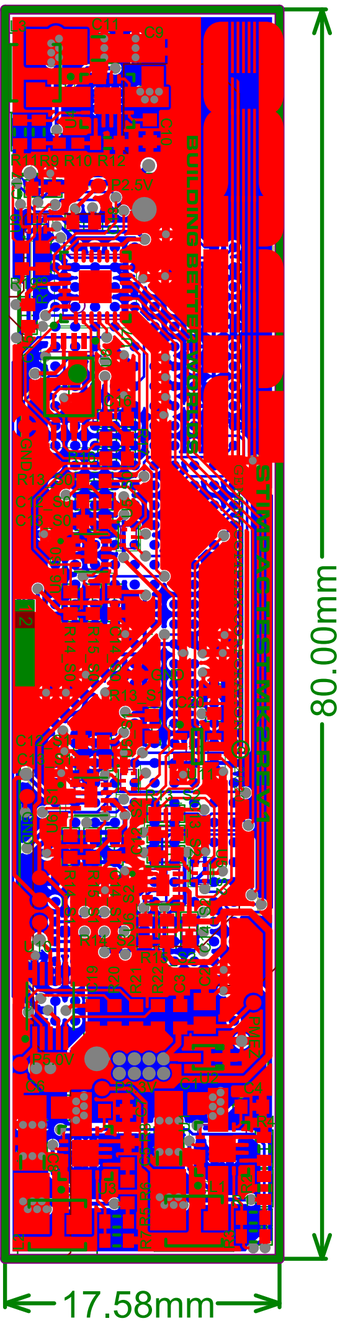




Gemini Complex Corporation © 2018		
Size: C	stimpac_test	mk2_rev1
Date: 6/5/2020	Julian Lupu	Sheet 6 of 6
File: mezz_a2.SchDoc		

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

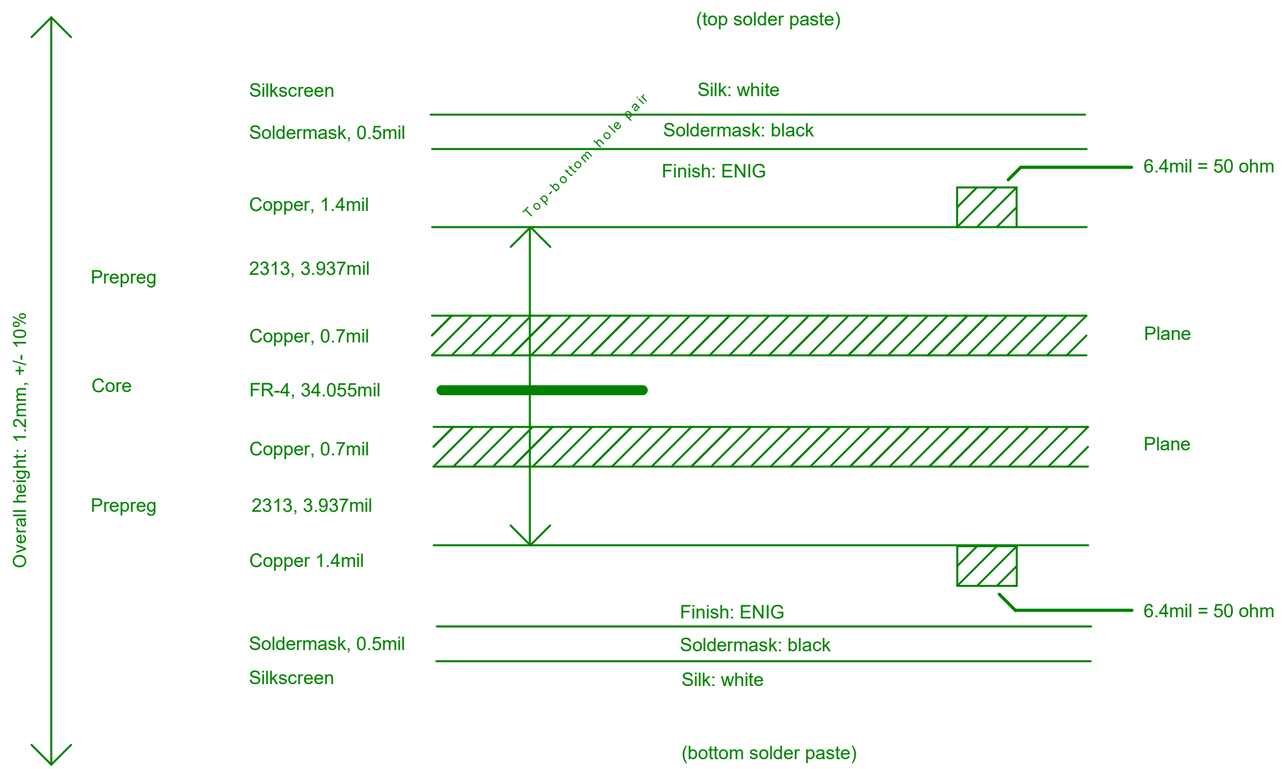
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness



Trace width and impedance

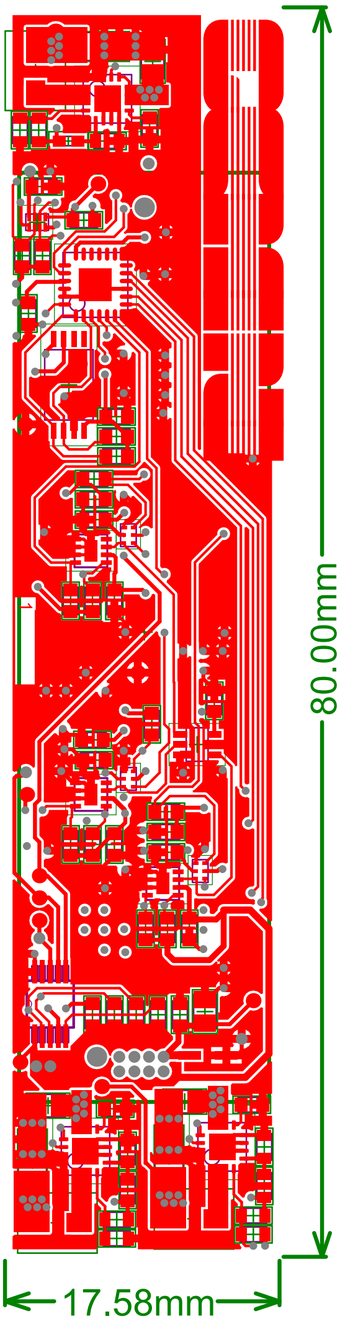
Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest



File name extensions:

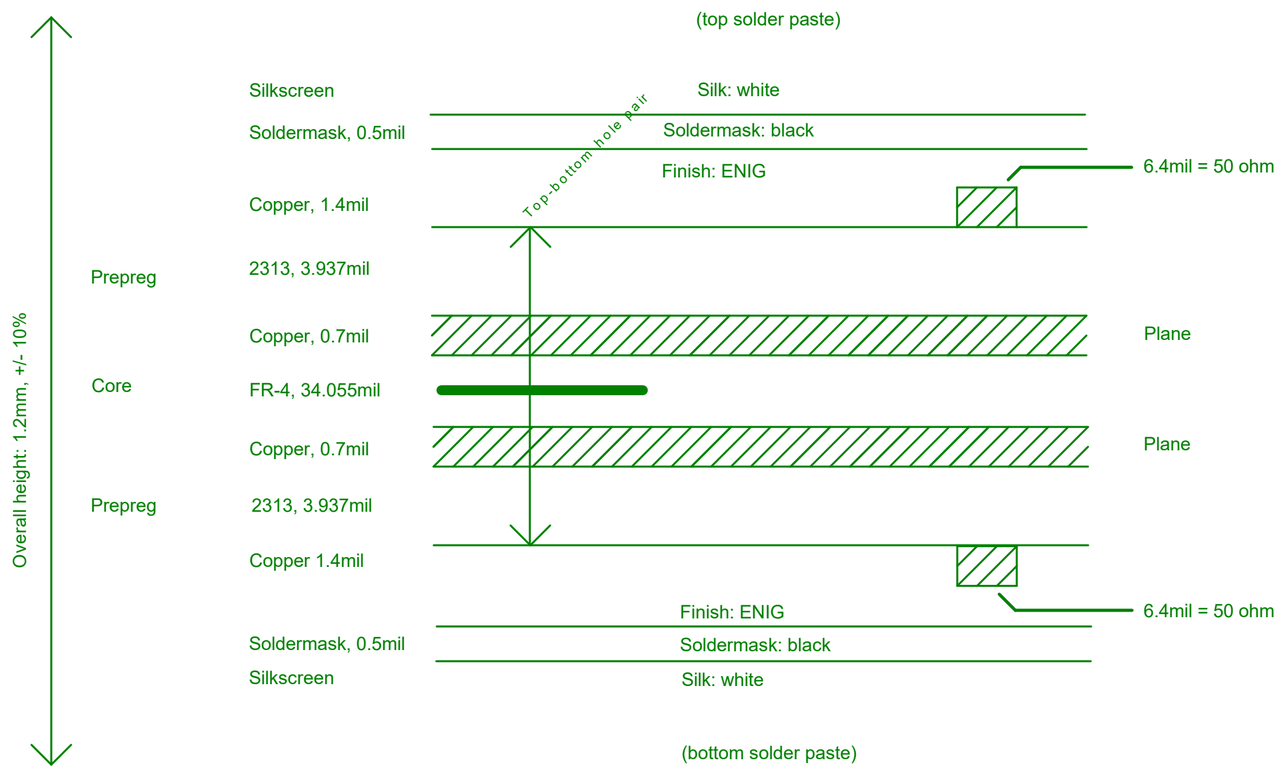
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

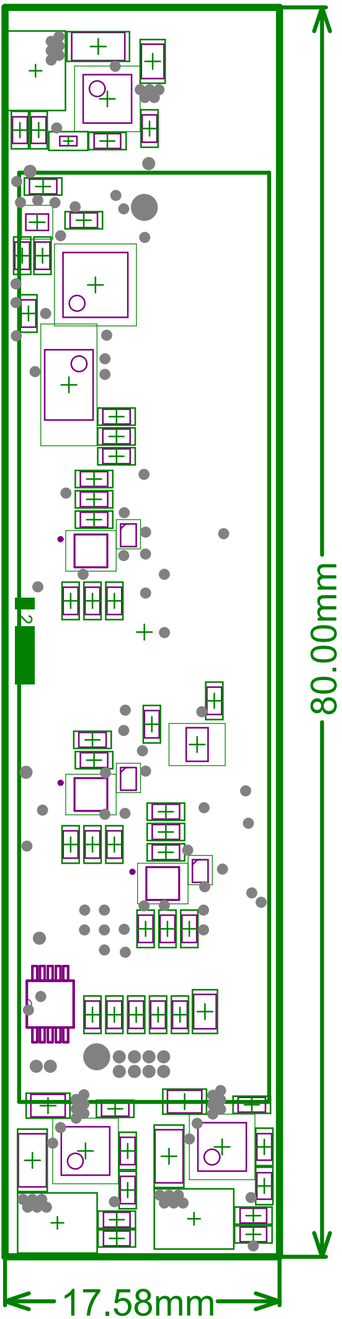


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



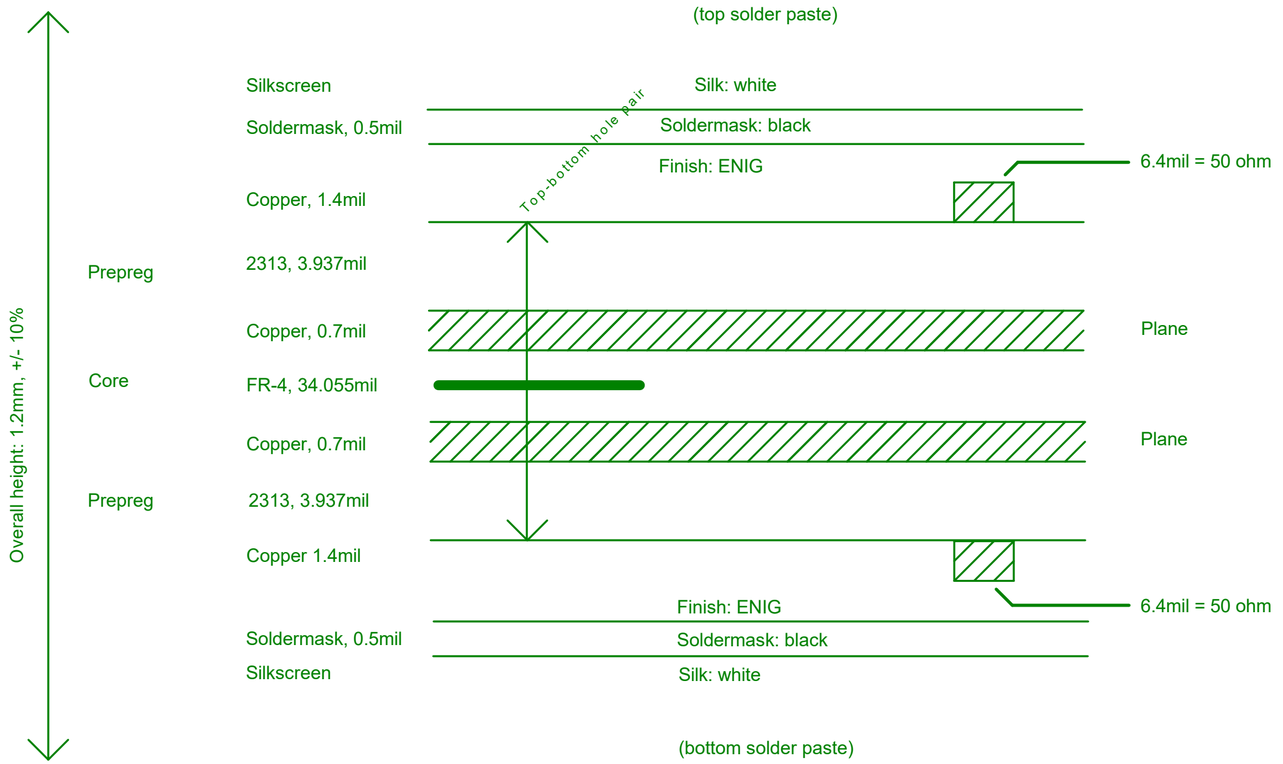
Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

.GTP
.GTO
.GTS
.GTL
.GP1
.GP2
.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

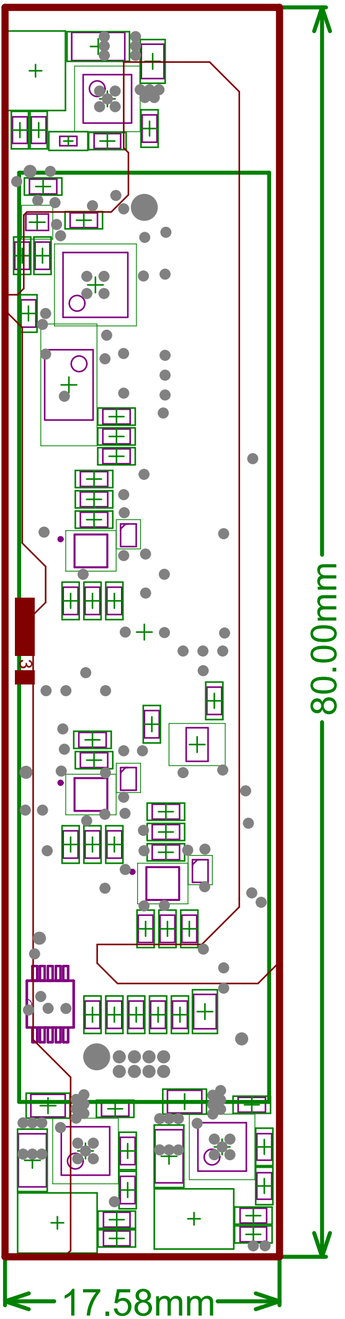


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

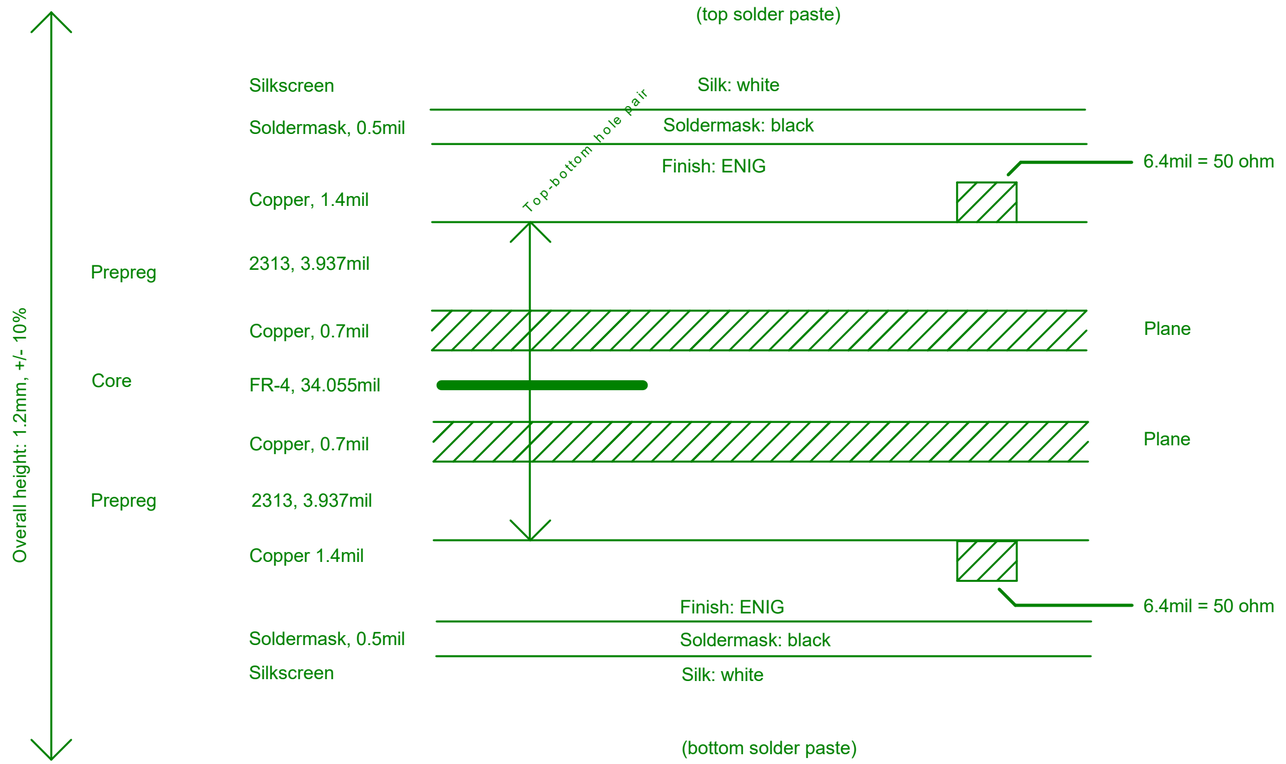
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

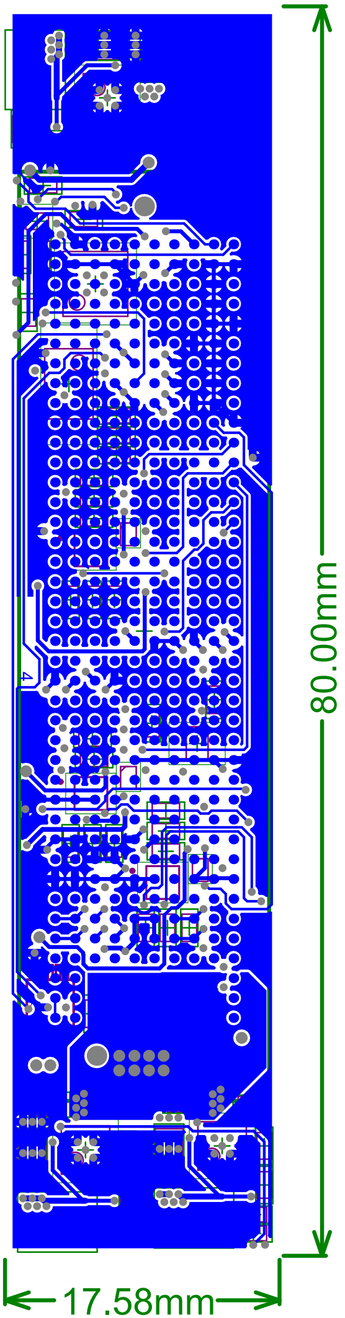


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



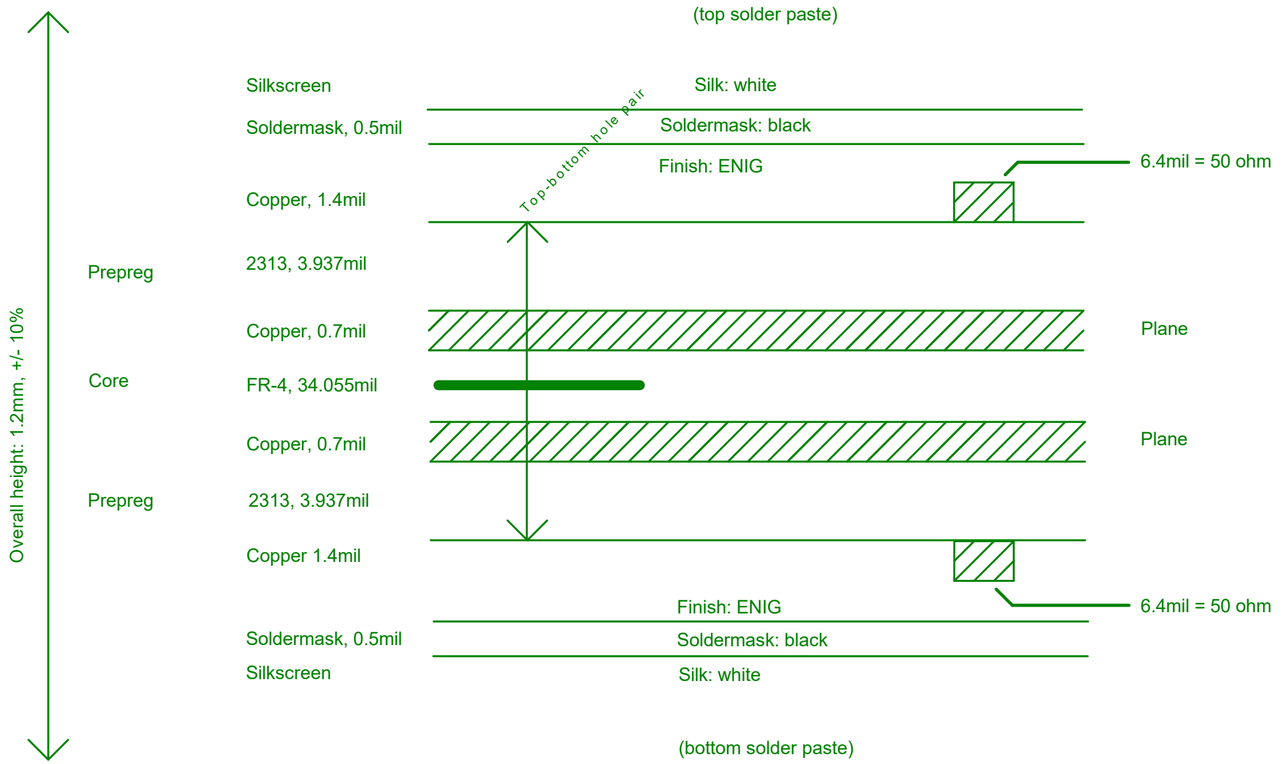
Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

.GTP
.GTO
.GTS
.GTL
.GP1
.GP2
.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness



Trace width and impedance

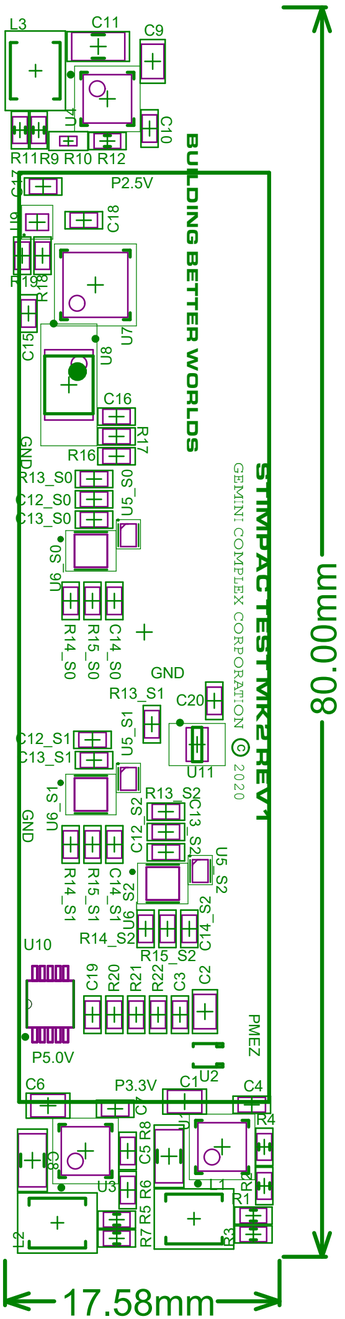
Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest



File name extensions:

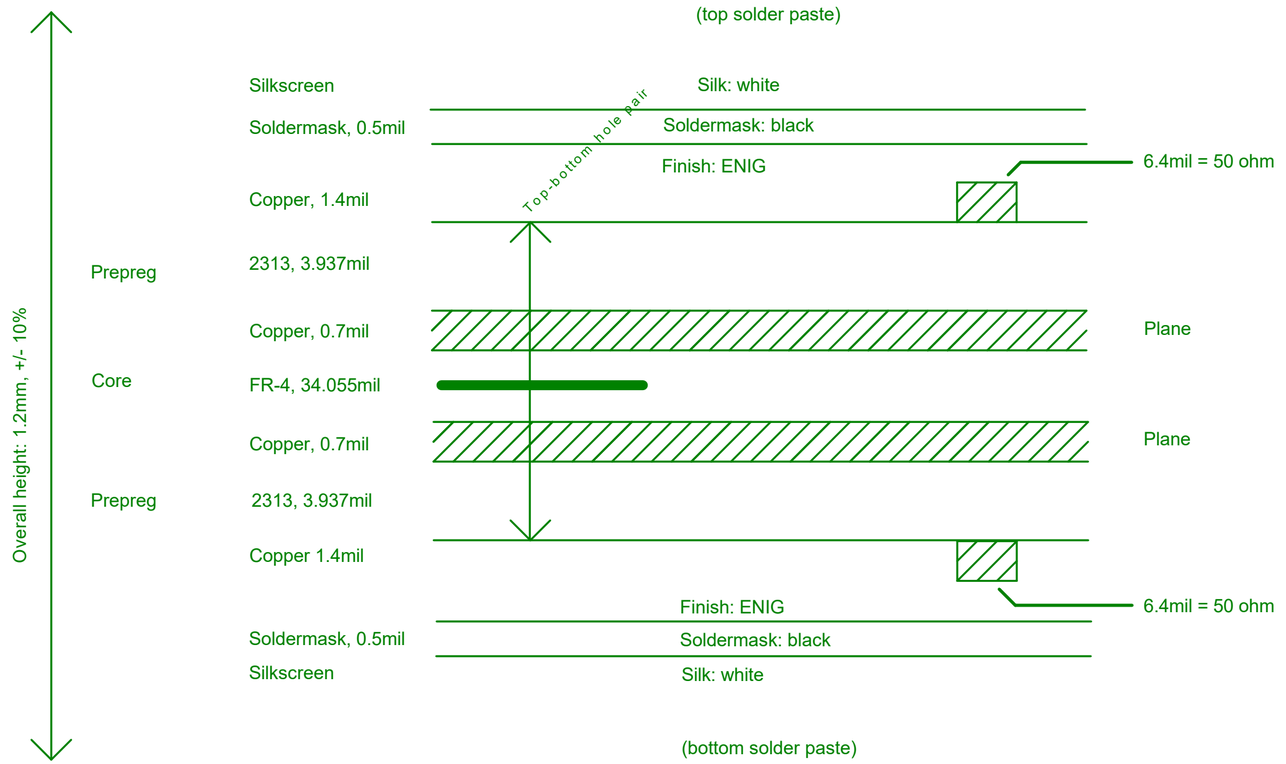
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

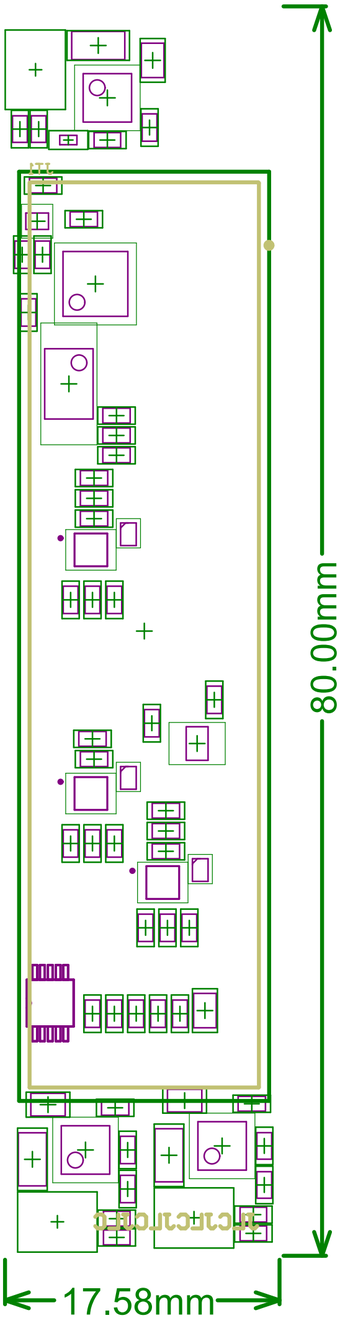


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



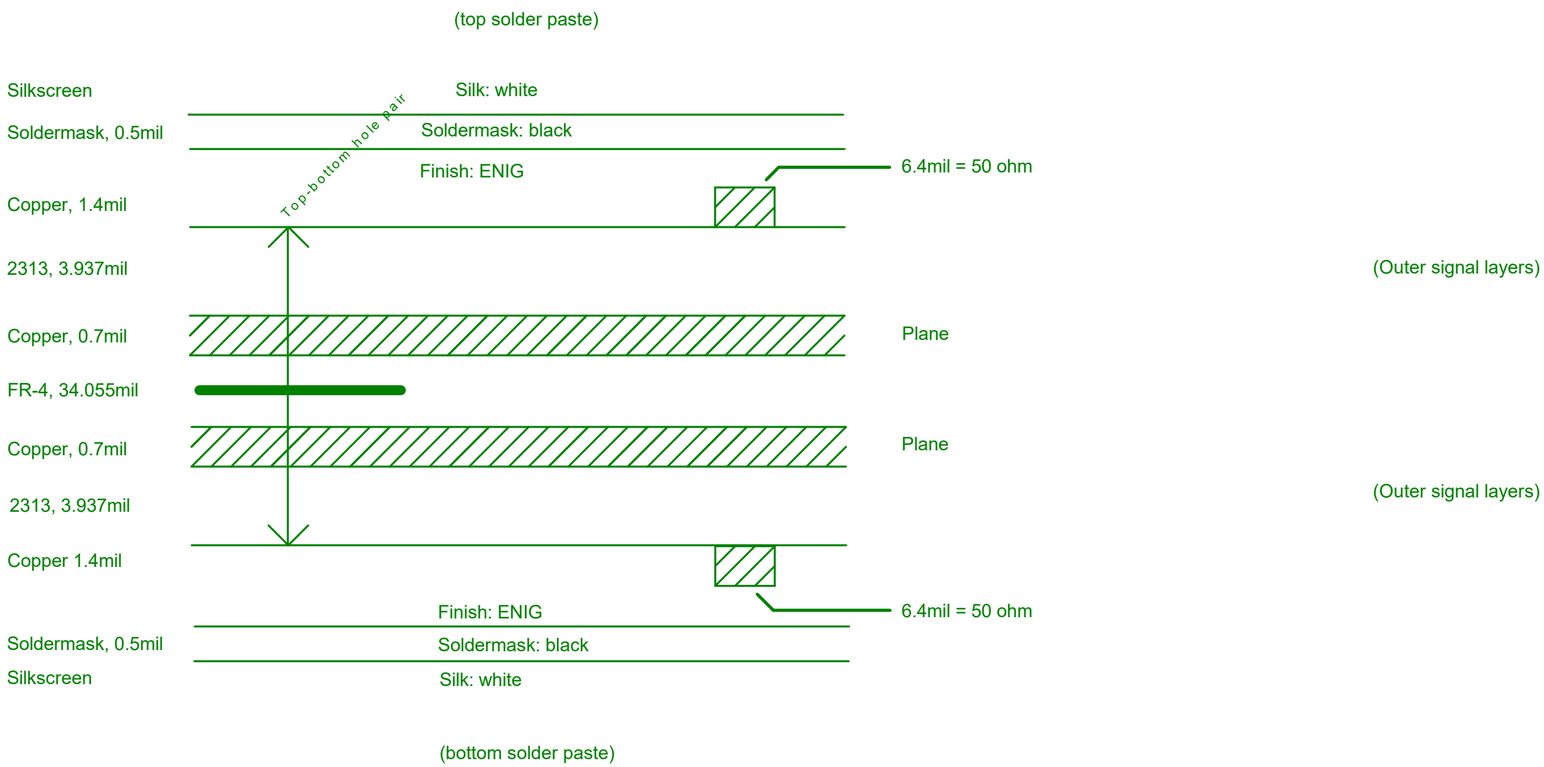
Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

.GTP
.GTO
.GTS
.GTL
.GP1
.GP2
.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness



Trace width and impedance

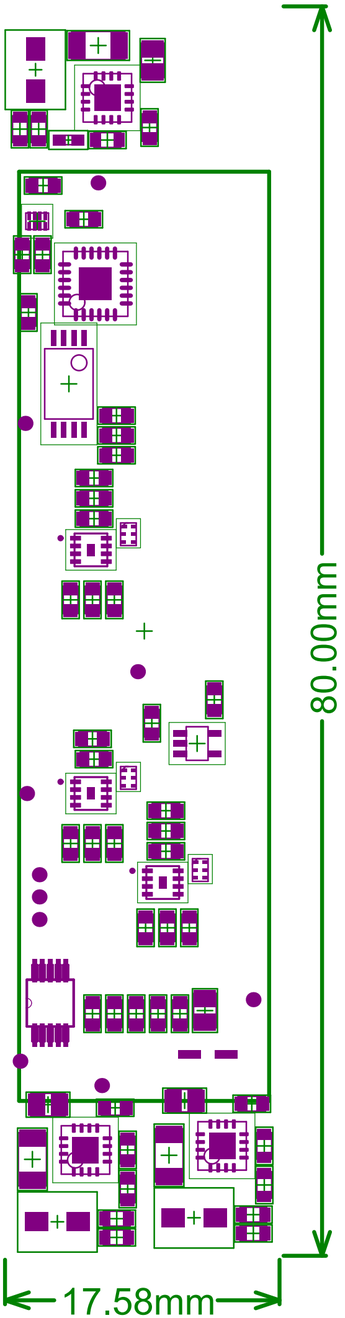
Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest



File name extensions:

.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Overall height: 1.2mm, +/- 10%

Prepreg

Core

Prepreg

Material and thickness

(top solder paste)

Silkscreen — Silk: white

Soldermask, 0.5mil — Soldermask: black

Finish: ENIG

Top-bottom hole pair

Copper, 1.4mil — 6.4mil = 50 ohm

2313, 3.937mil

(Outer signal layers)

Copper, 0.7mil — Plane

FR-4, 34.055mil

Copper, 0.7mil — Plane

2313, 3.937mil

(Outer signal layers)

Copper 1.4mil — 6.4mil = 50 ohm

Finish: ENIG

Soldermask, 0.5mil — Soldermask: black

Silkscreen — Silk: white

(bottom solder paste)

Trace width and impedance

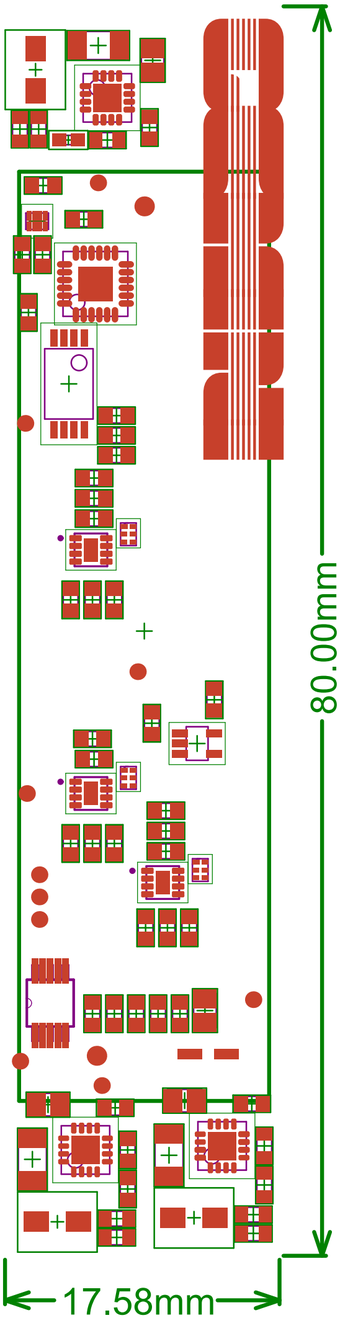
Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest



File name extensions:

.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Overall height: 1.2mm, +/- 10%

Material and thickness

(top solder paste)

Silkscreen — Silk: white

Soldermask, 0.5mil — Soldermask: black

Finish: ENIG — 6.4mil = 50 ohm

Top-bottom hole pair

Copper, 1.4mil

Prepreg — 2313, 3.937mil

(Outer signal layers)

Copper, 0.7mil — Plane

Core — FR-4, 34.055mil

Copper, 0.7mil — Plane

Prepreg — 2313, 3.937mil

(Outer signal layers)

Copper 1.4mil

Finish: ENIG — 6.4mil = 50 ohm

Soldermask, 0.5mil — Soldermask: black

Silkscreen — Silk: white

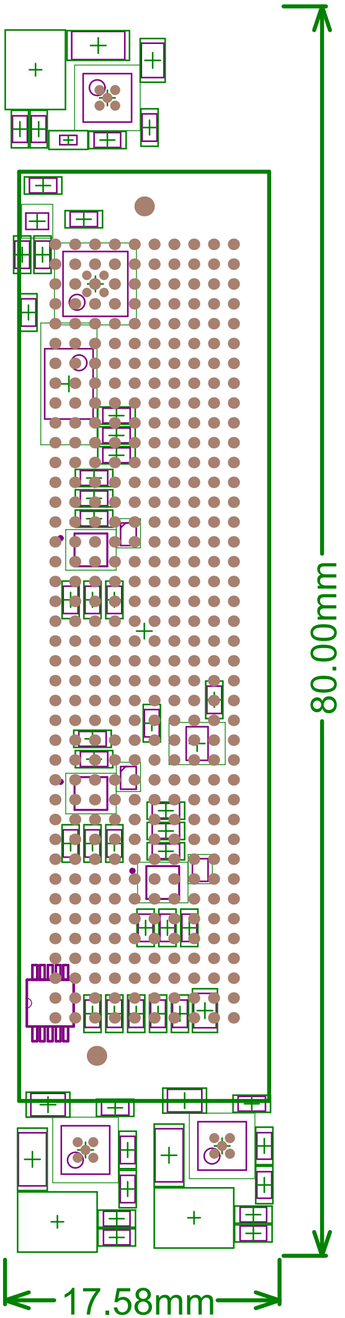
(bottom solder paste)

Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

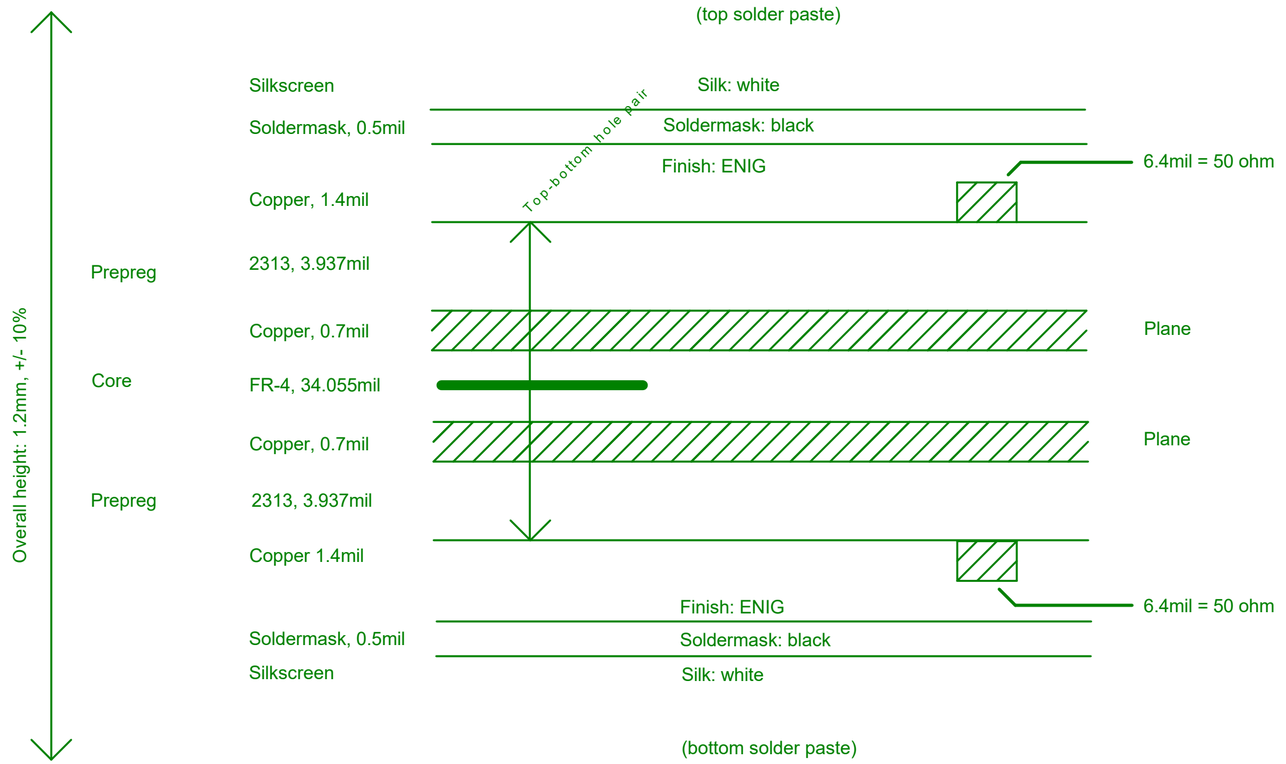
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

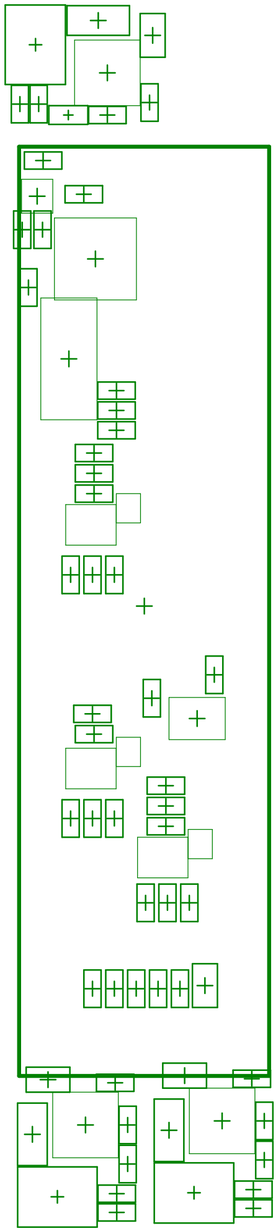
.GBL
.GBS
.GBO
.GBP
.GKO

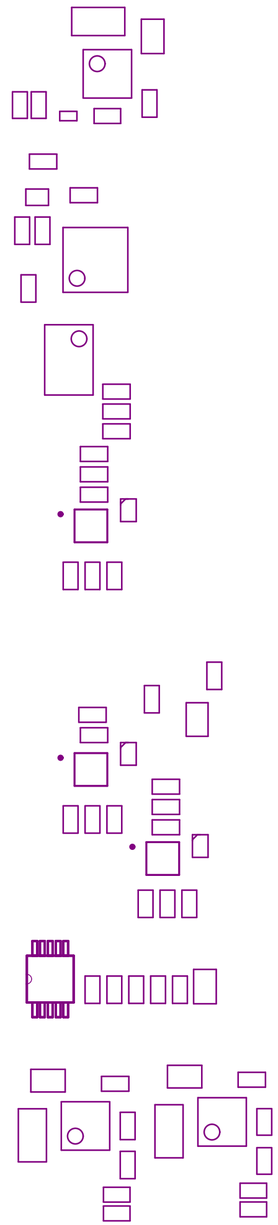
Material and thickness



Trace width and impedance

Overall tolerance: +/- 10% for impedance





Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

80.00mm

17.58mm

File name extensions:

.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Overall height: 1.2mm, +/- 10%

Prepreg

Core

Prepreg

Material and thickness

(top solder paste)

Silkscreen — Silk: white

Soldermask, 0.5mil — Soldermask: black

Finish: ENIG

Top-bottom hole pair

Copper, 1.4mil — 6.4mil = 50 ohm

2313, 3.937mil

(Outer signal layers)

Copper, 0.7mil — Plane

FR-4, 34.055mil

Copper, 0.7mil — Plane

2313, 3.937mil

(Outer signal layers)

Copper 1.4mil

Finish: ENIG — 6.4mil = 50 ohm

Soldermask, 0.5mil — Soldermask: black

Silkscreen — Silk: white

(bottom solder paste)

Trace width and impedance

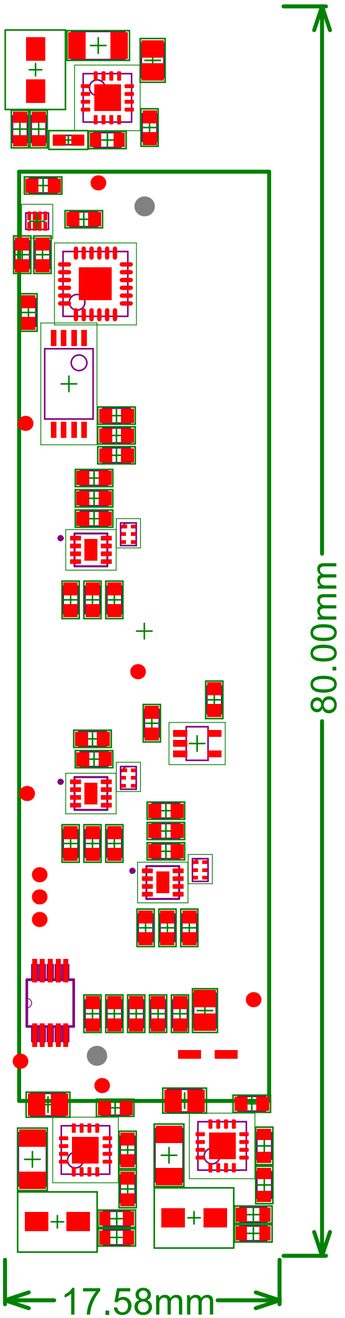
Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest



File name extensions:

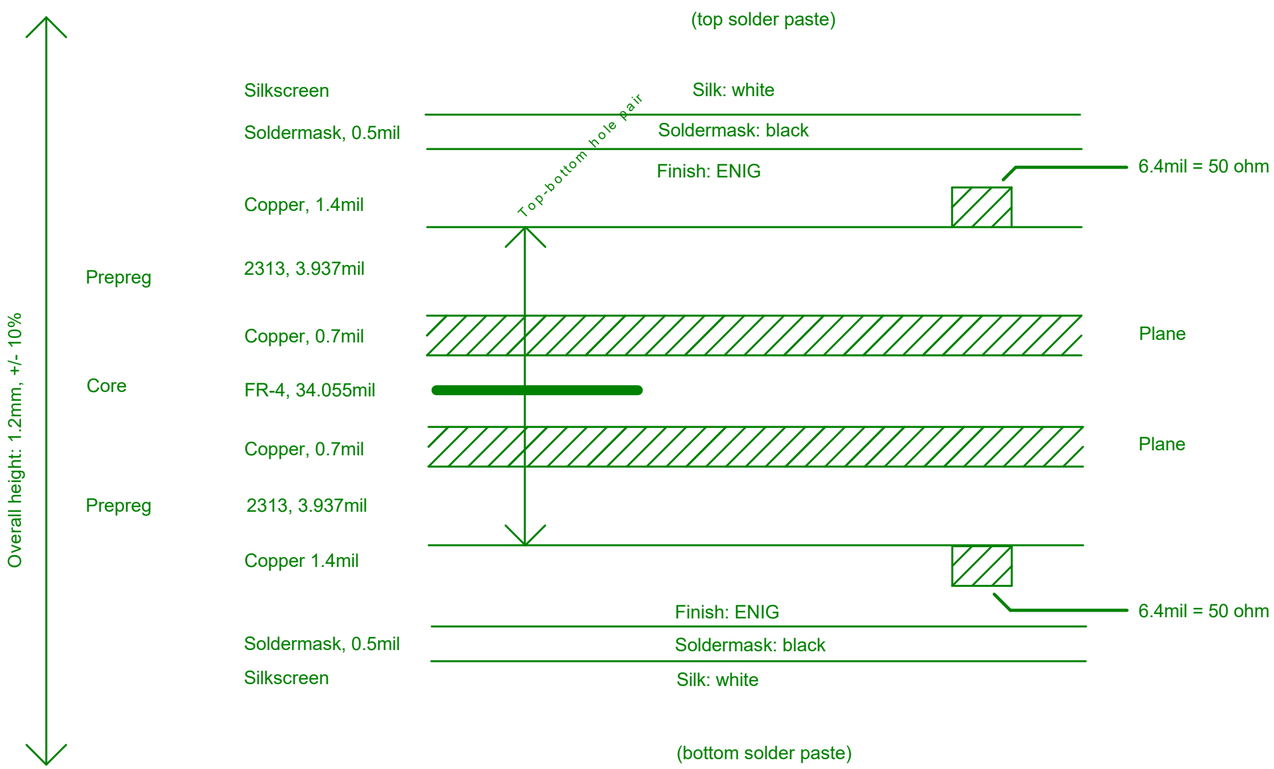
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

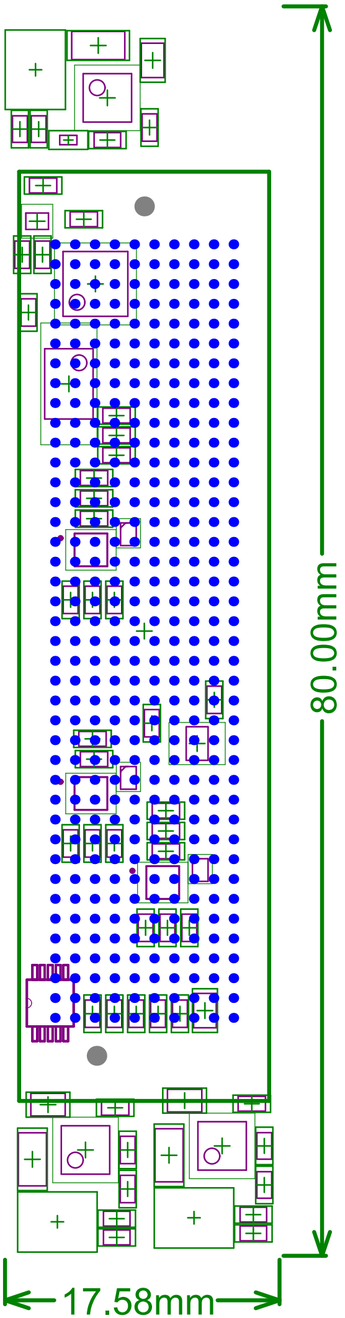


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



Mech via: 10 mil hole / 20 mil pad smallest

Route: 4mil width / 4mil clearance smallest

File name extensions:

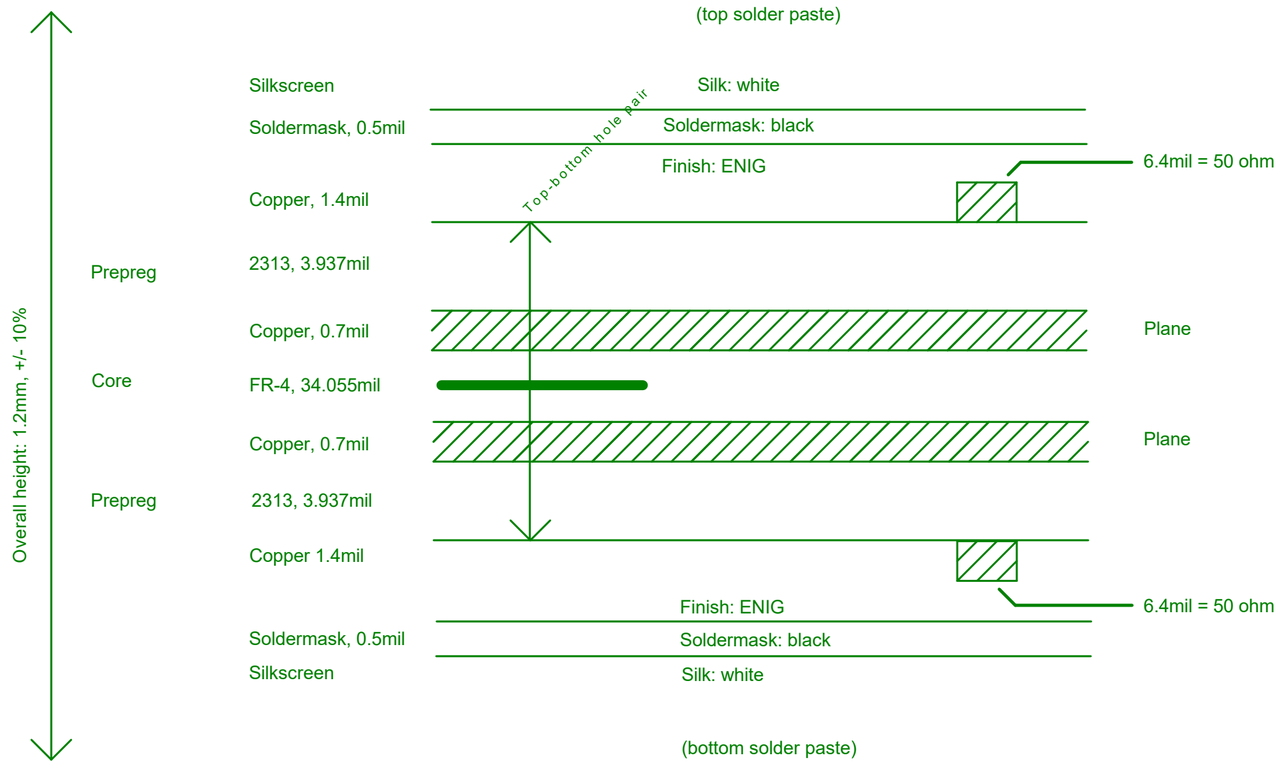
.GTP
.GTO
.GTS
.GTL

.GP1

.GP2

.GBL
.GBS
.GBO
.GBP
.GKO

Material and thickness

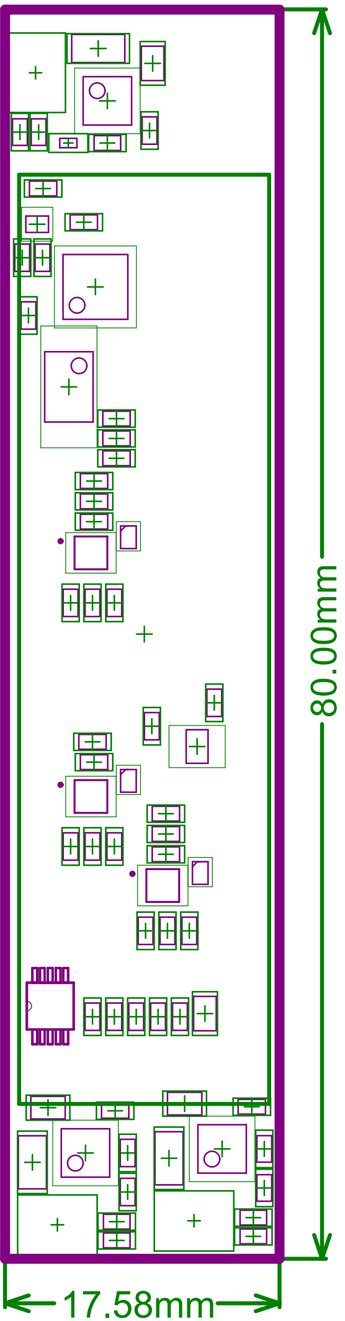


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com

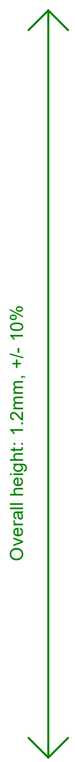


Mech via: 10 mil hole / 20 mil pad smallest

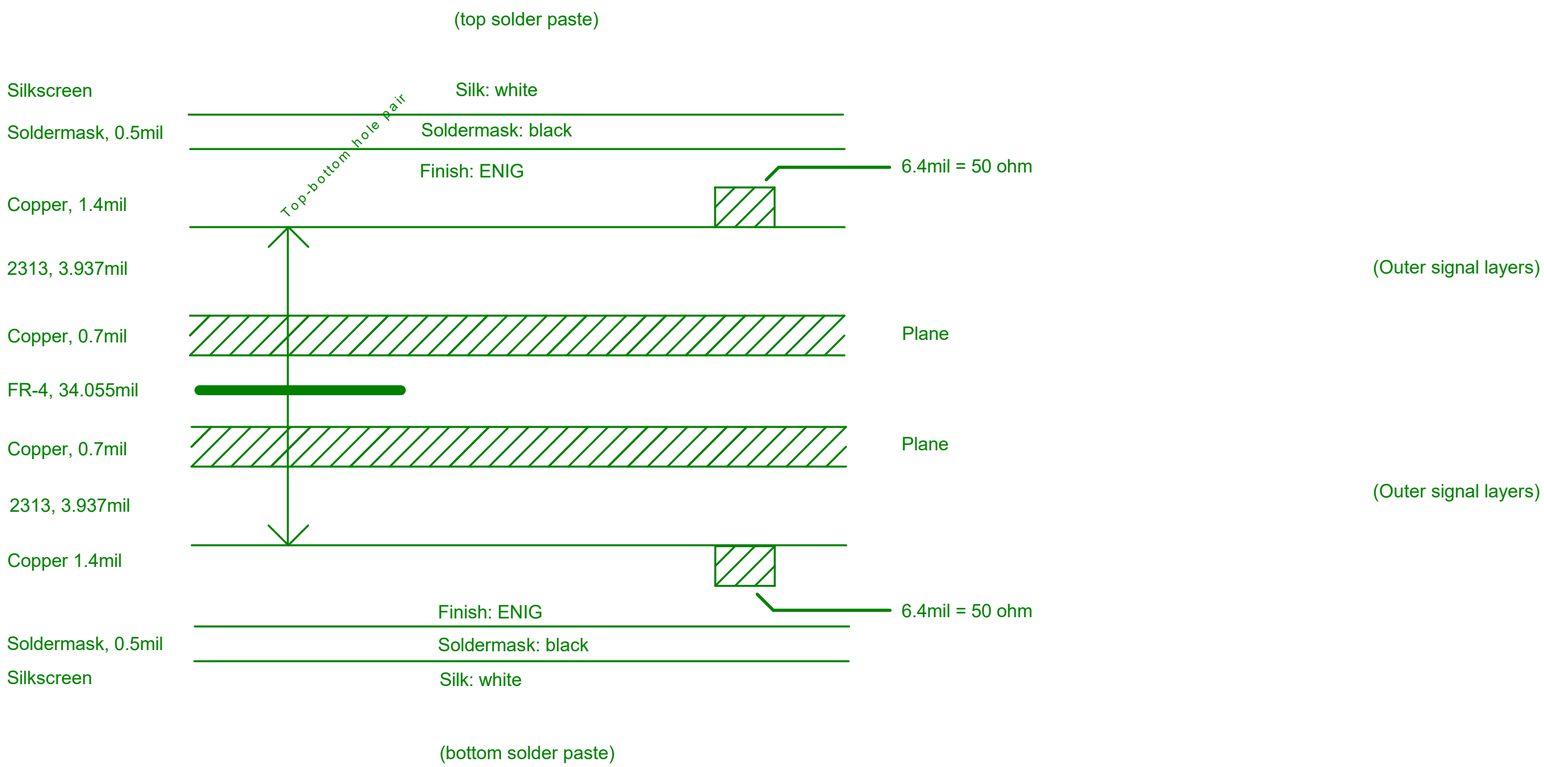
Route: 4mil width / 4mil clearance smallest

File name extensions:

.GTP
.GTO
.GTS
.GTL
.GP1
.GP2
.GBL
.GBS
.GBO
.GBP
.GKO



Material and thickness

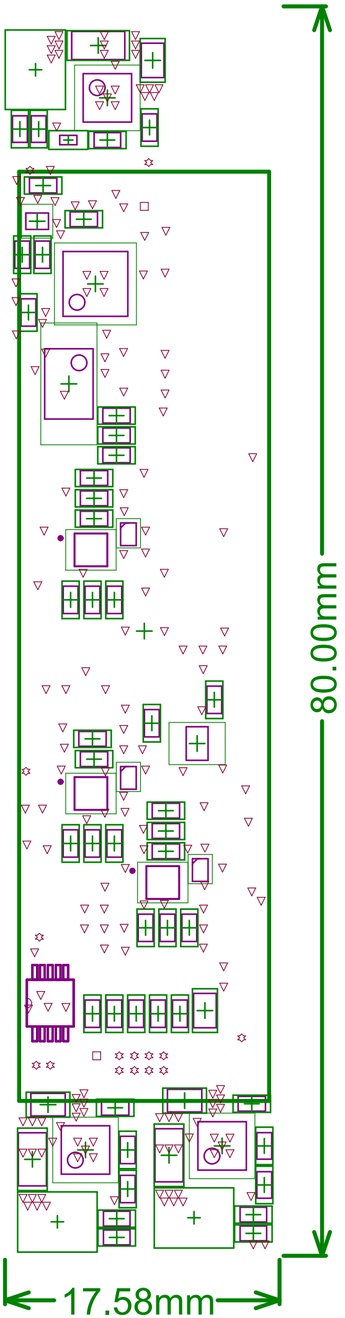


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



Mech via: 10 mil hole / 20 mil pad smallest

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File name extensions:

.GTP
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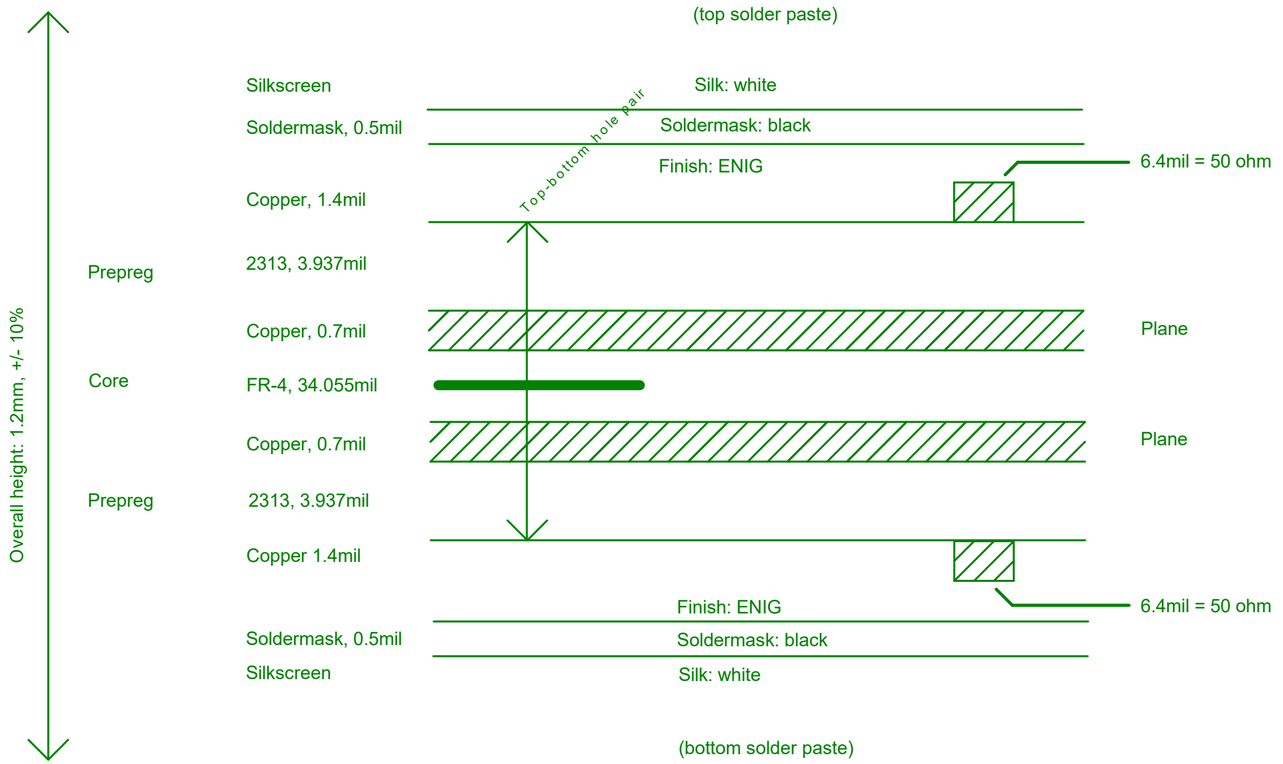
.GBO
.GBP
.GKO

Material and thickness

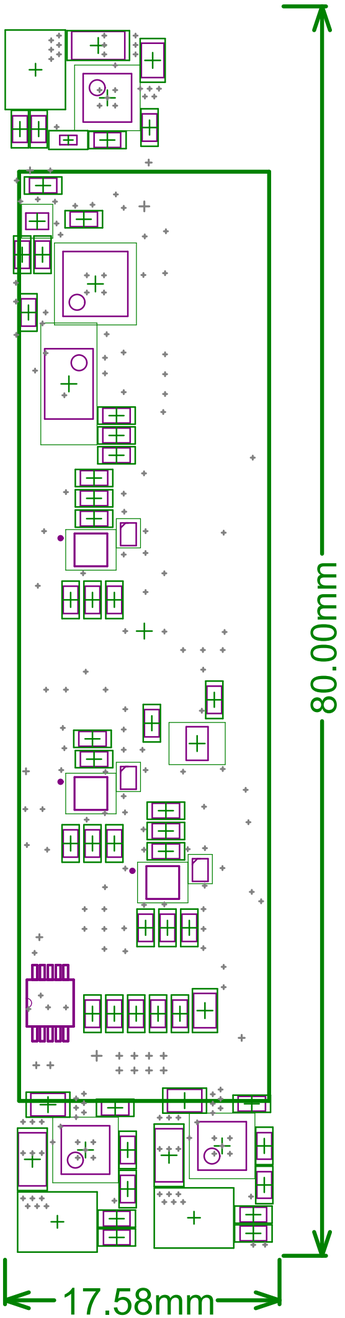


Trace width and impedance

Overall tolerance: +/- 10% for impedance

Board name: stimpac_test_mk2_rev1

Contact: julian@geminicomplex.com



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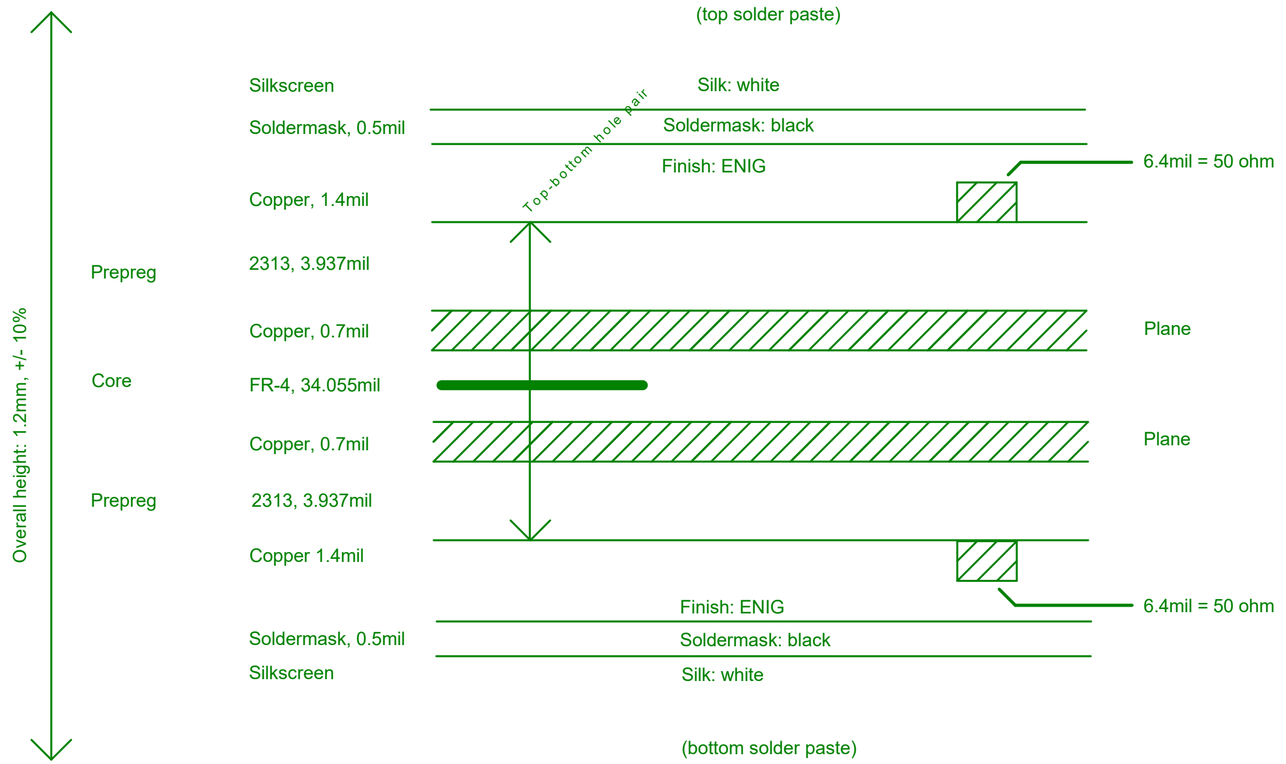
Material and thickness



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Overall tolerance: +/- 10% for impedance