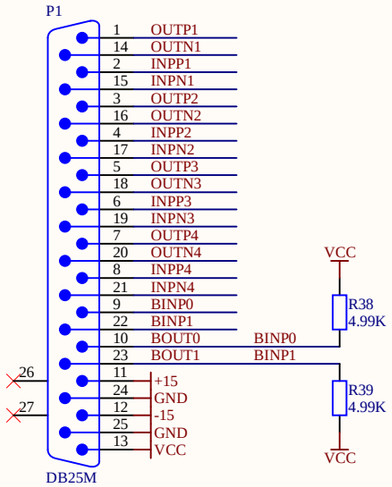
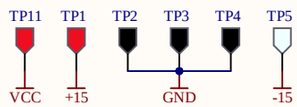
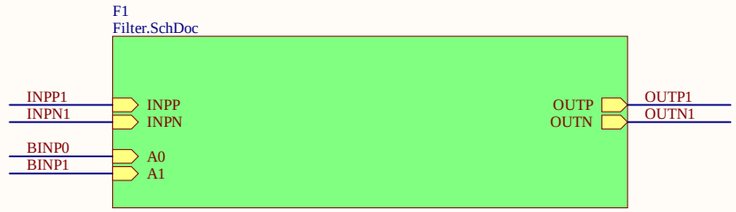
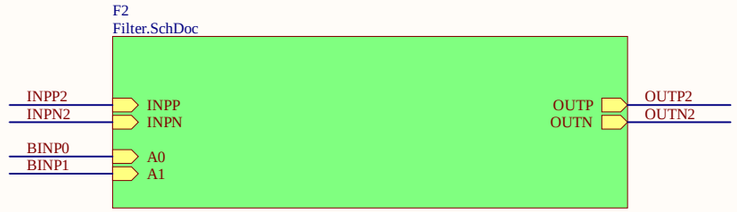
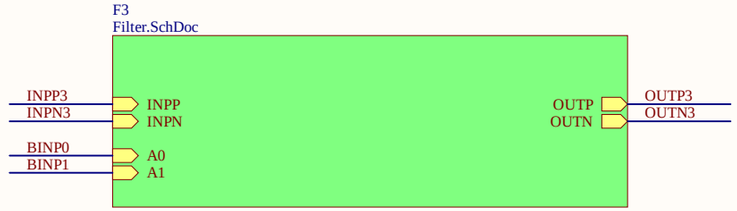
To/From Filter Interface

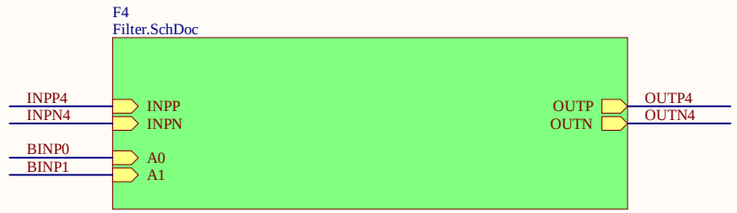












Variant: AC-coupling

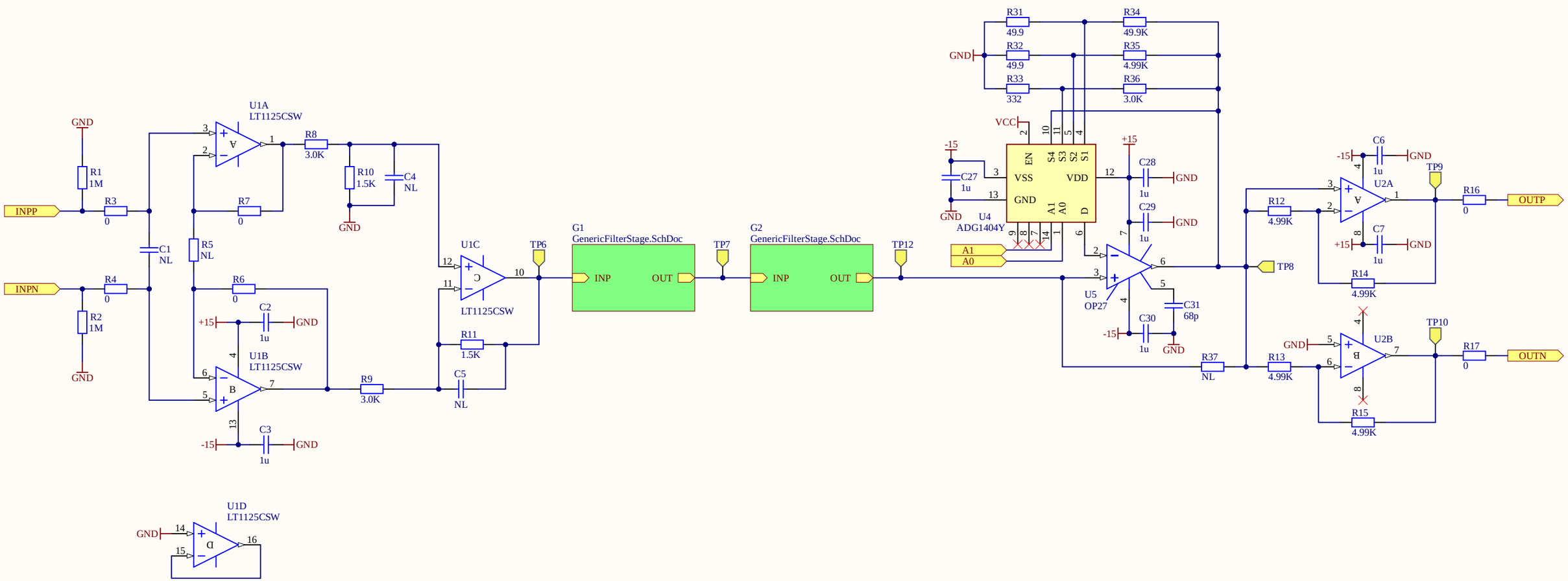
Title: **Filter Board Template: Top**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 1of 3
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

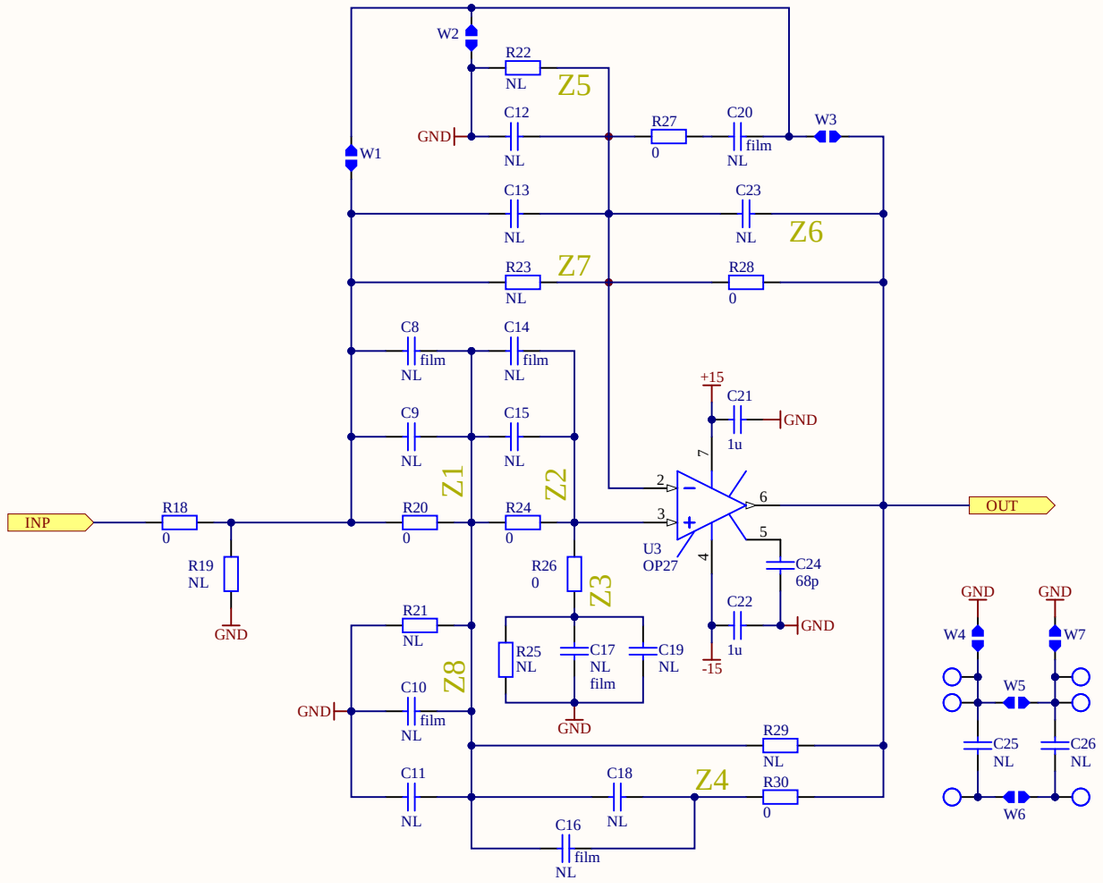
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: AC-coupling

Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

Filter Board Template

REV: 1

D2500203

S/N

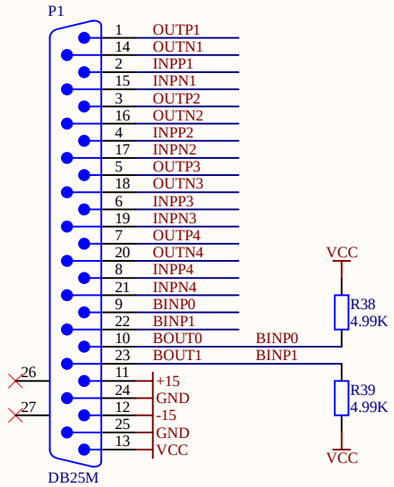
F4

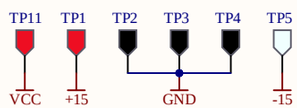
F3

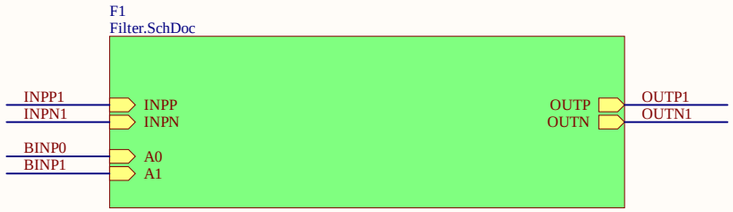
F2

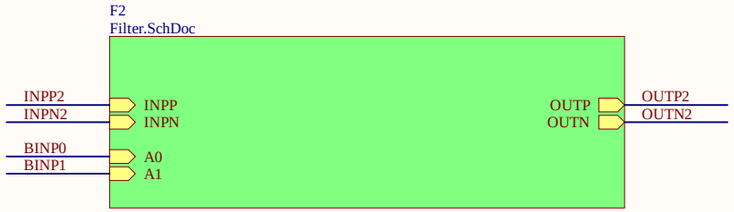
F1

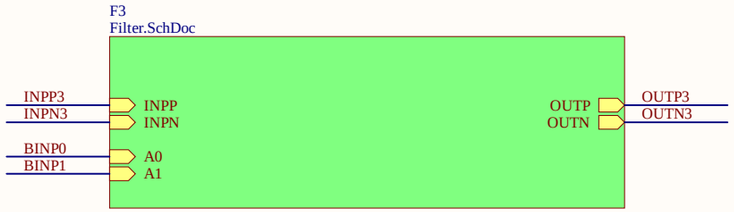
To/From Filter Interface

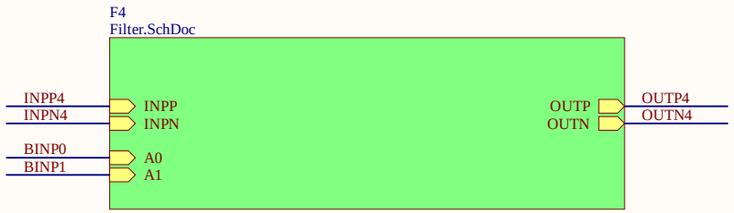












Variant: Gain1

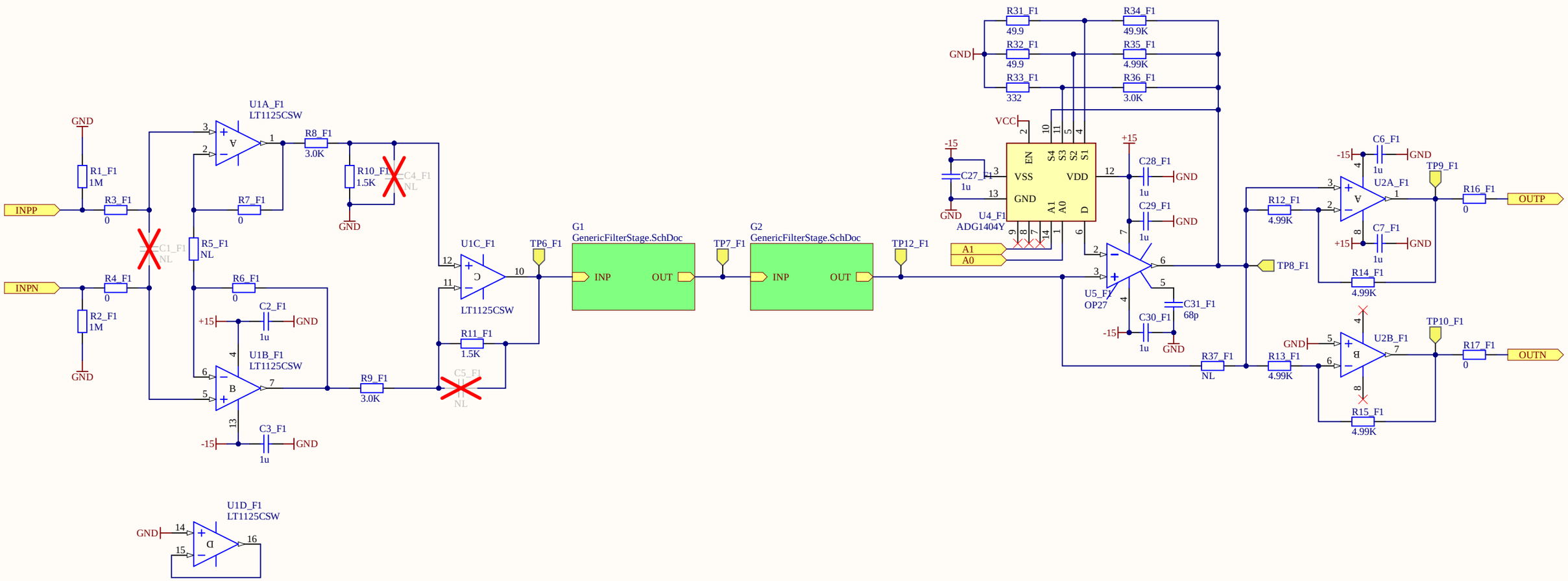
Title: **Filter Board Template: Top**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 1of 3
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: Gain1

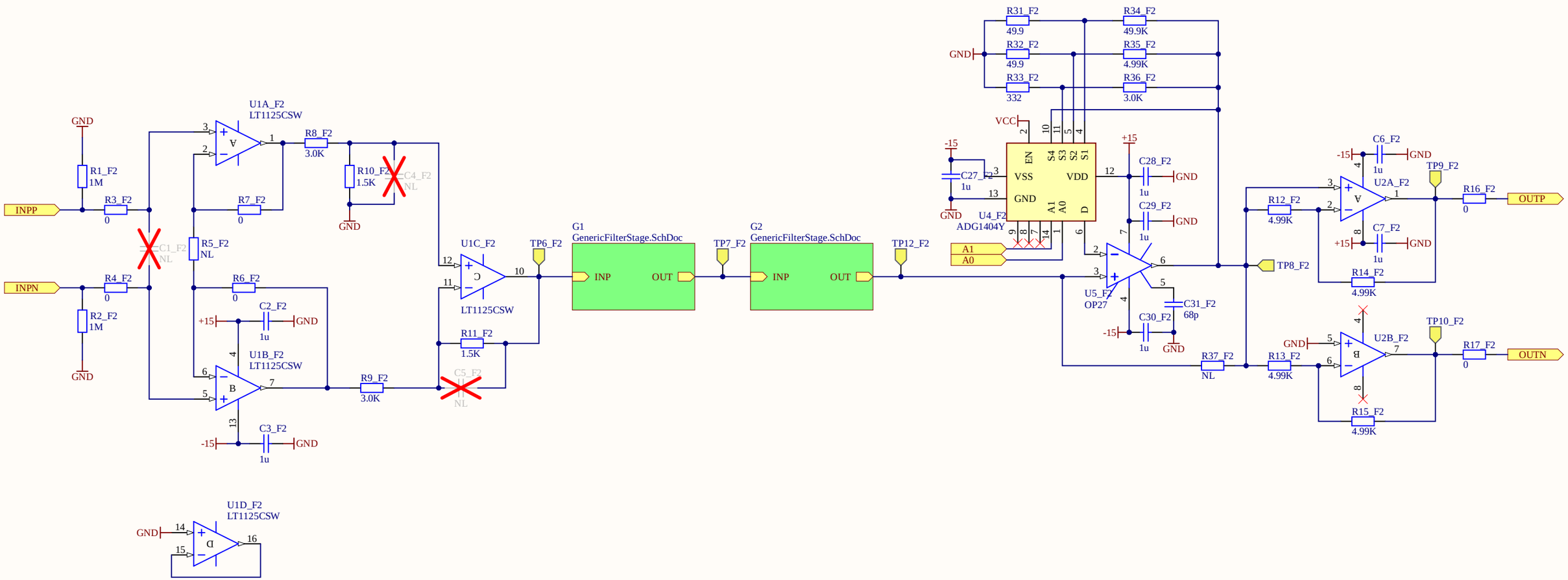
Title		
Filter Channel		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 2 of 3
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: Gain1

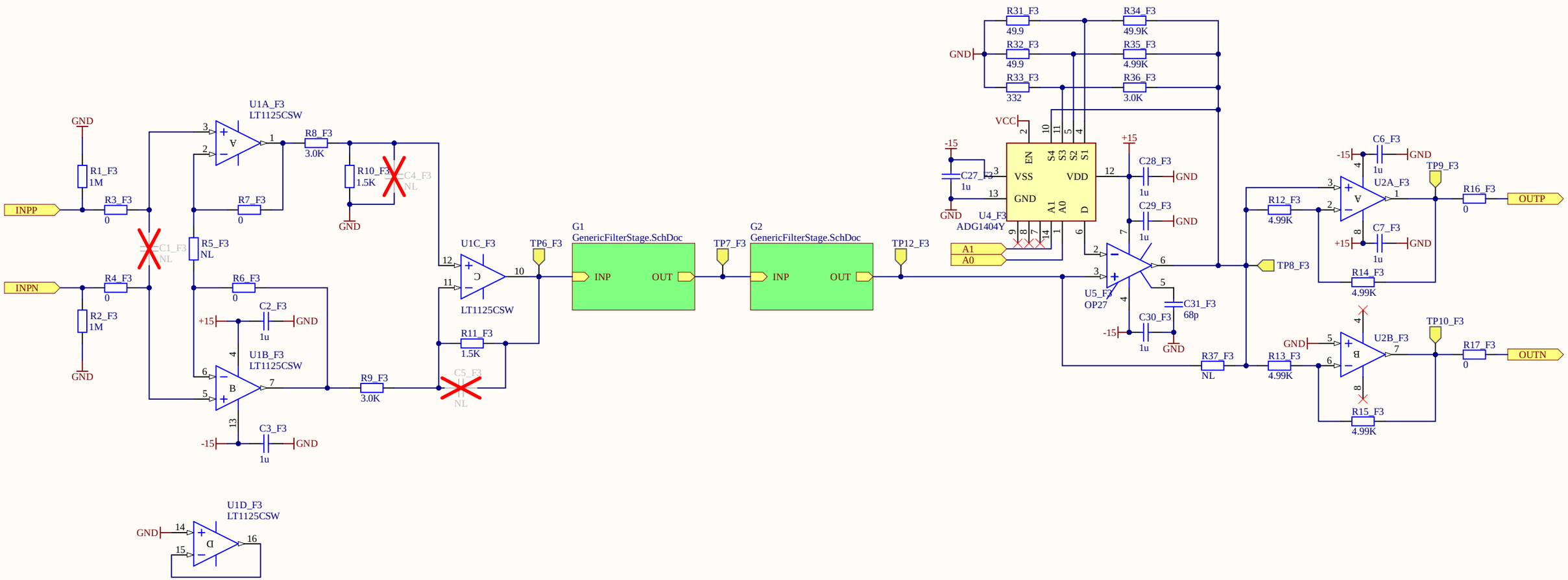
Title		
Filter Channel		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 2 of 3
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: Gain1

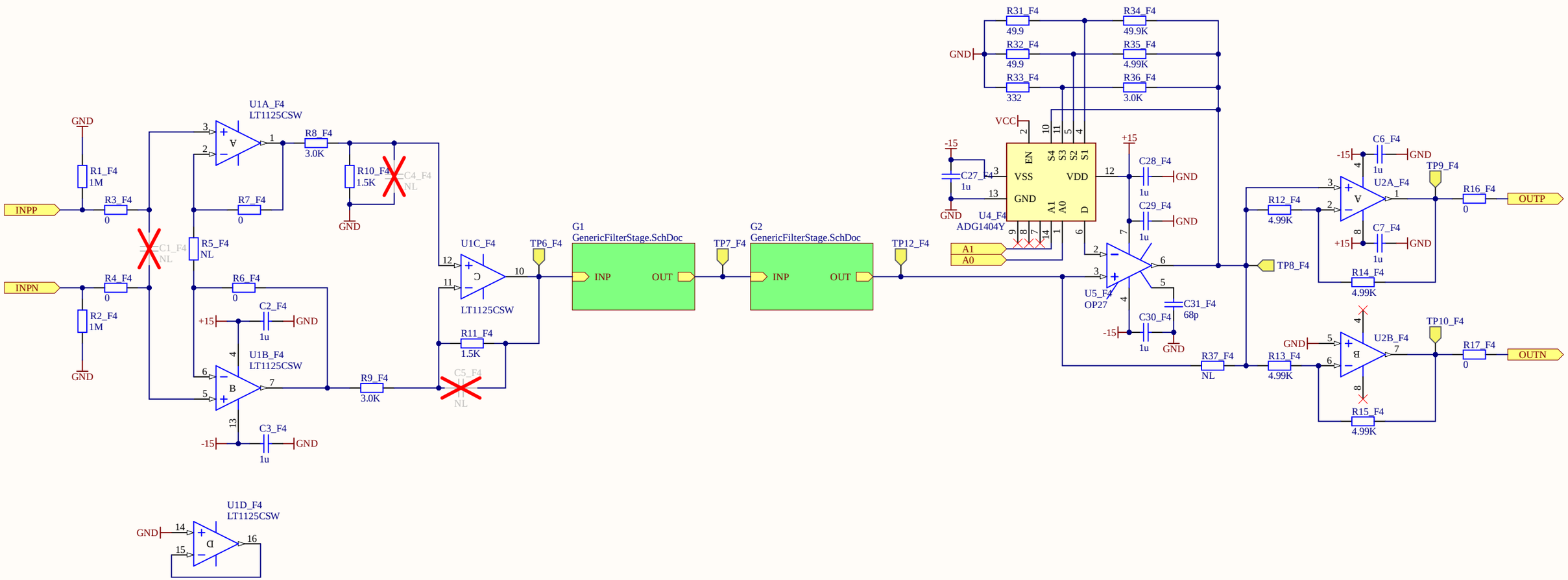
Title		
Filter Channel		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 2 of 3
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

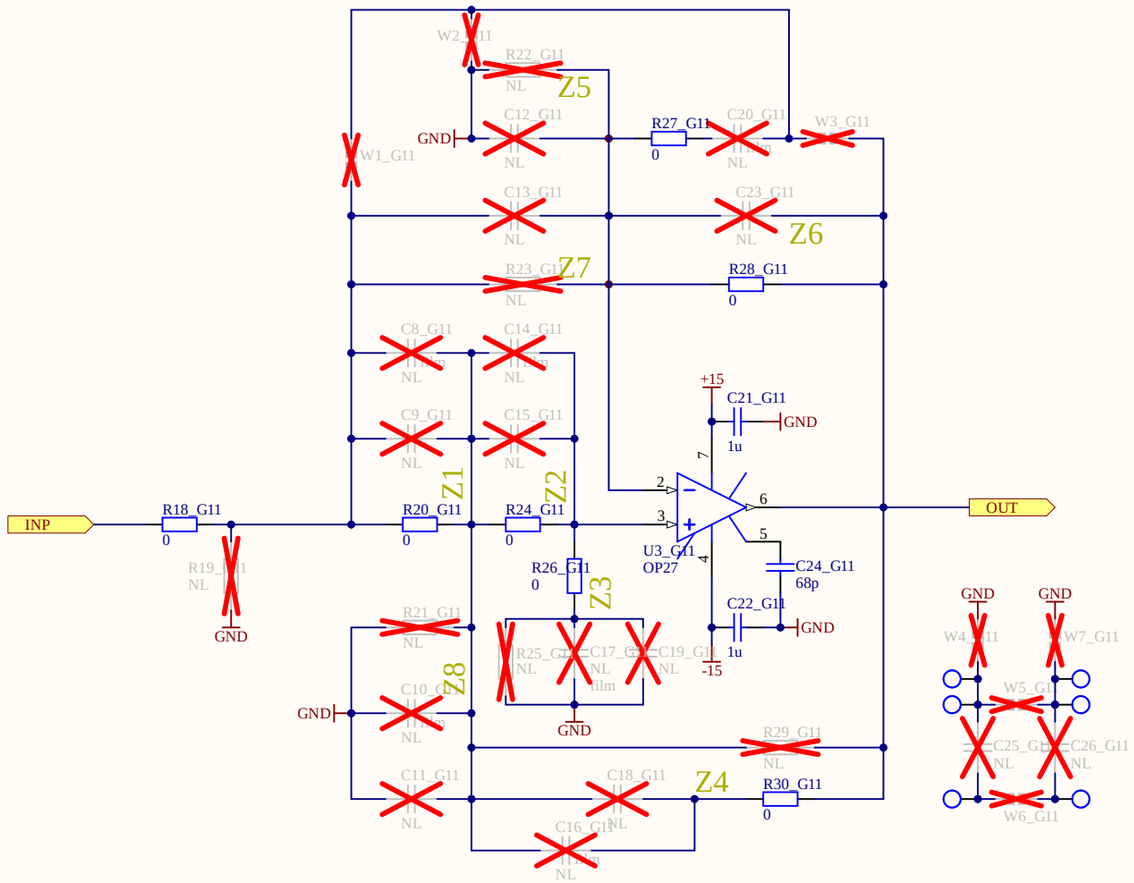
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: Gain1

Title		
Filter Channel		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 2 of 3
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

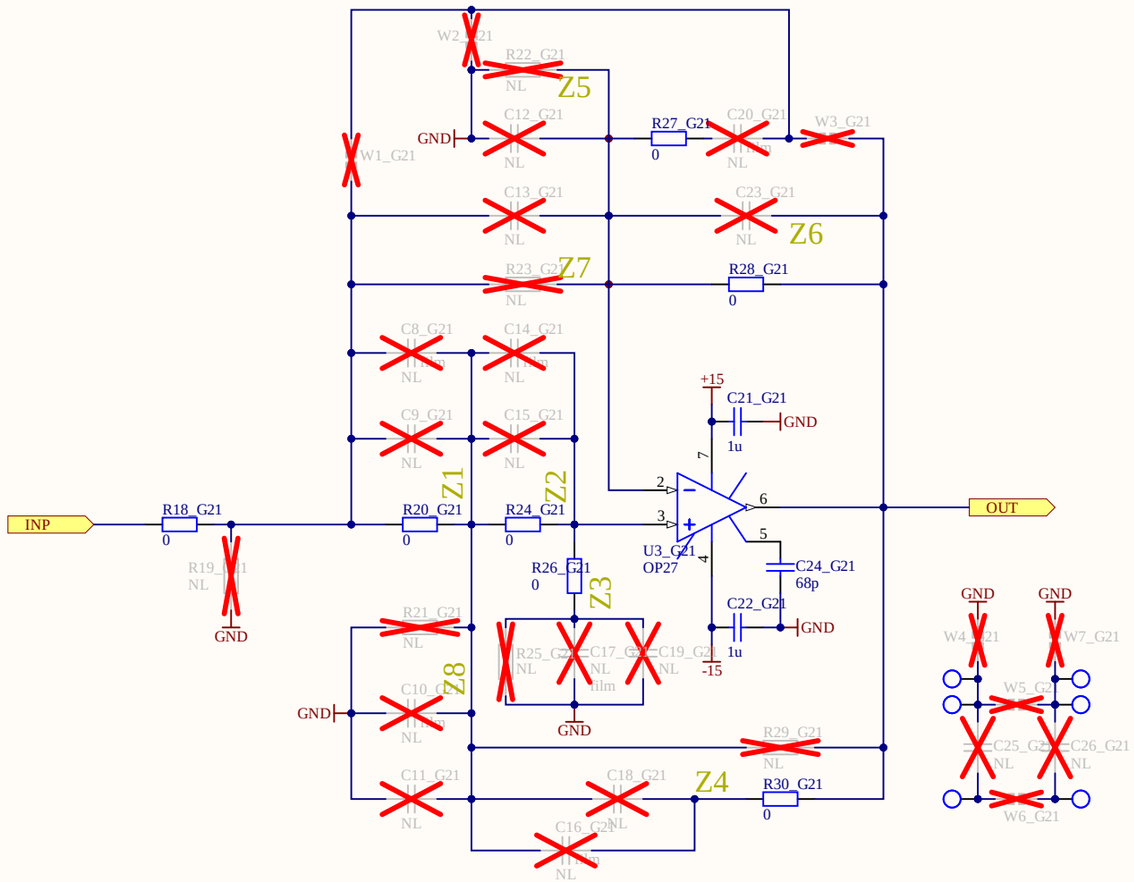
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

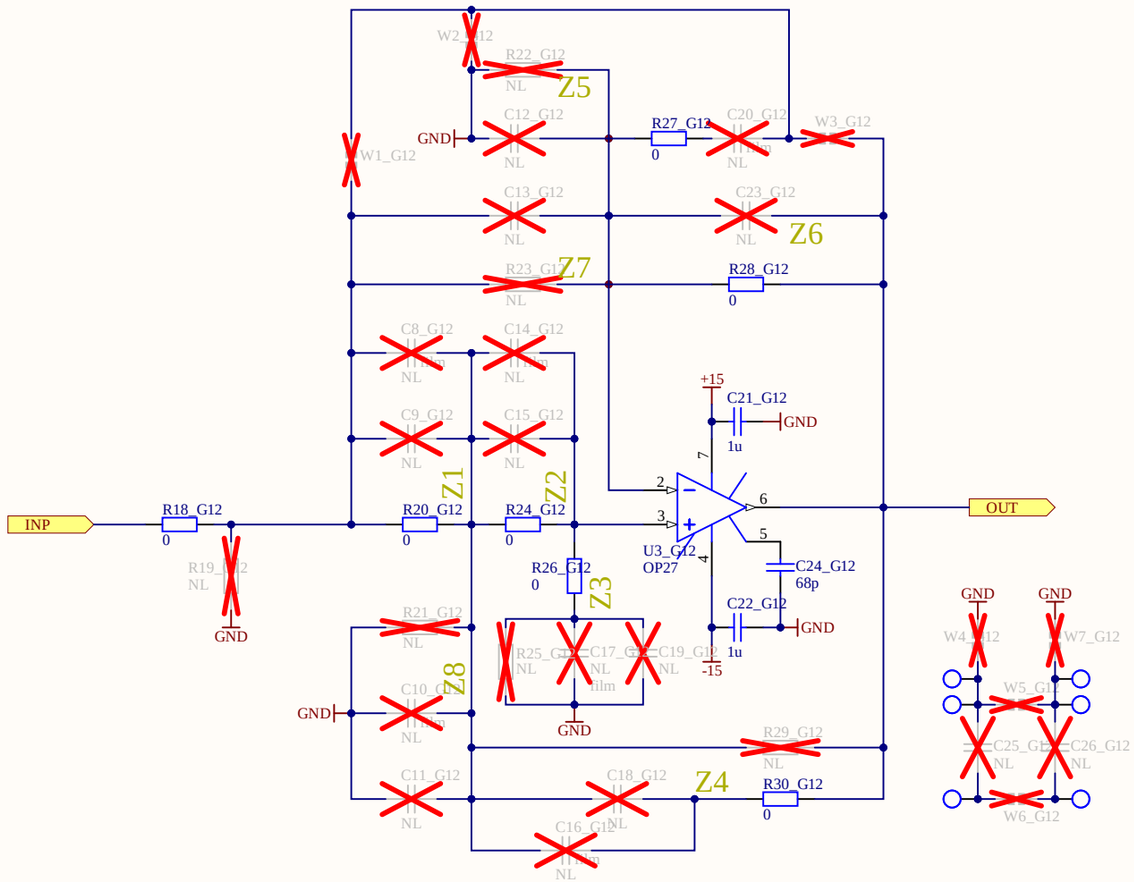
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

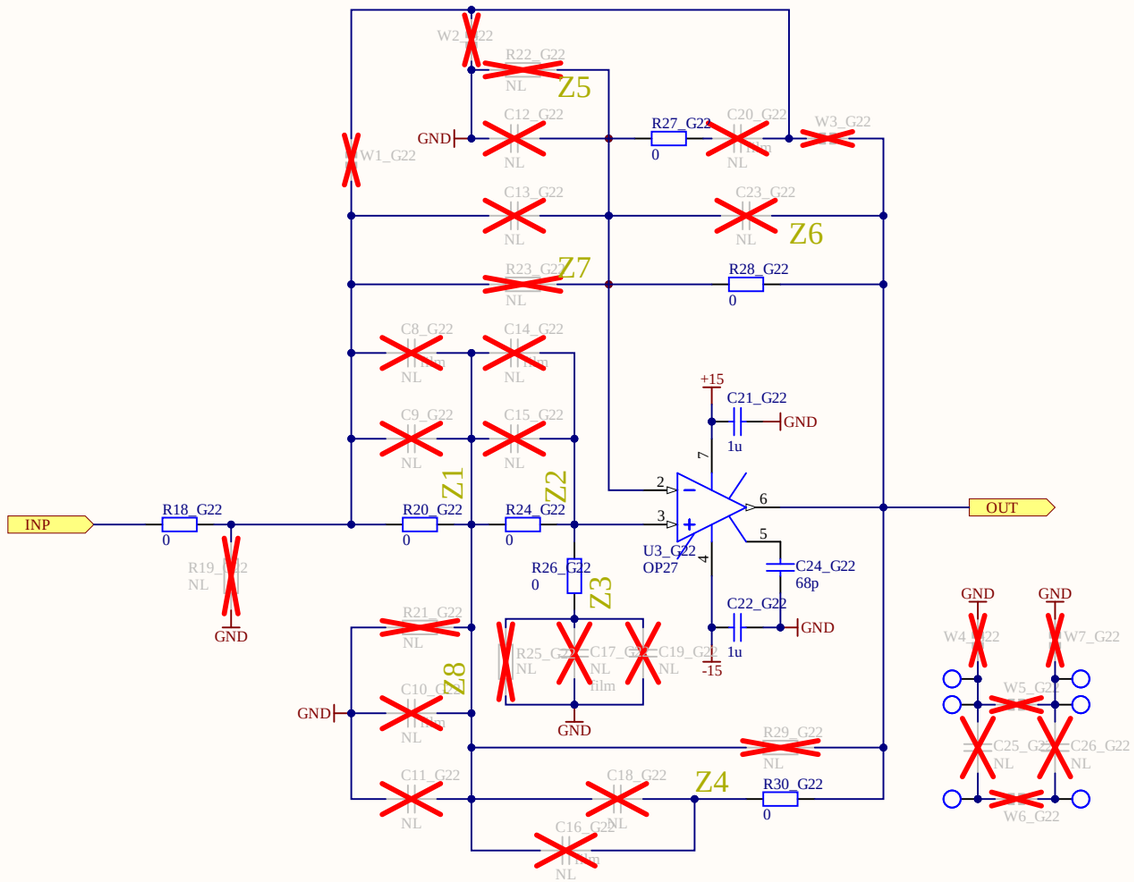
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

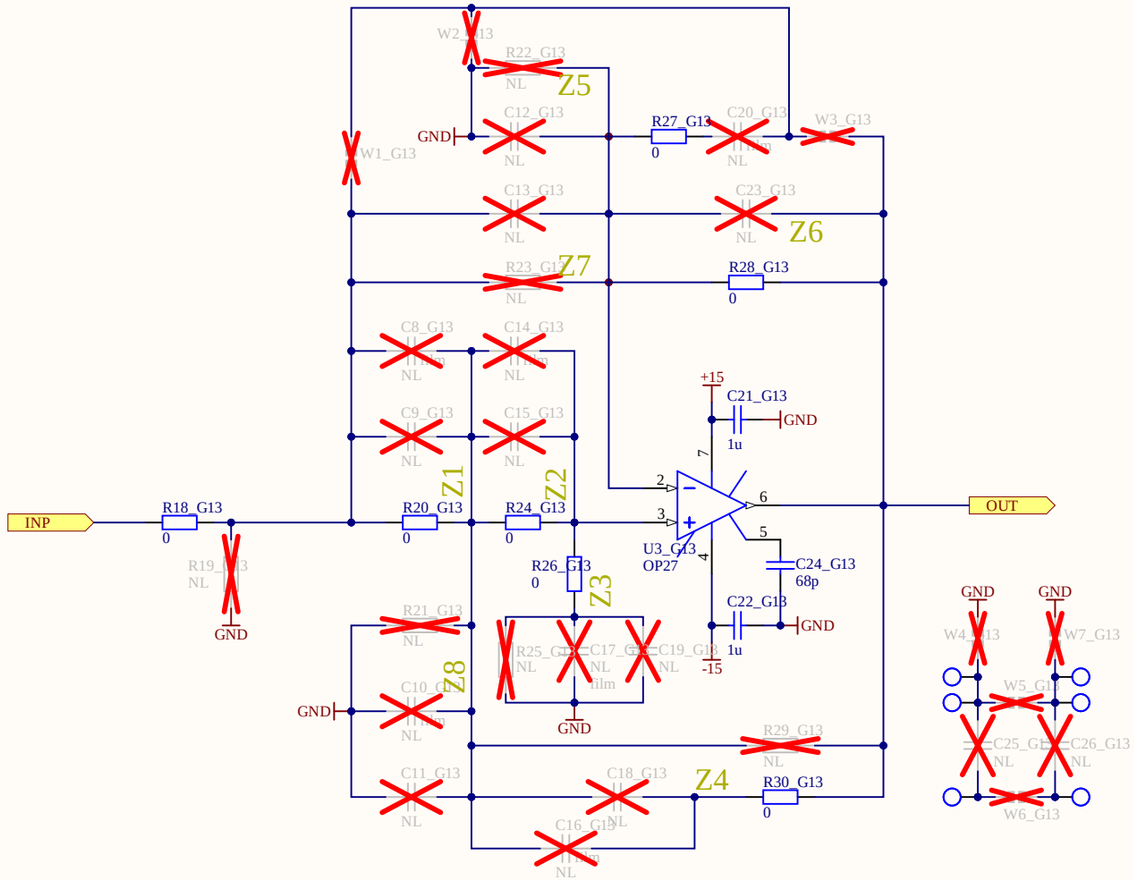
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

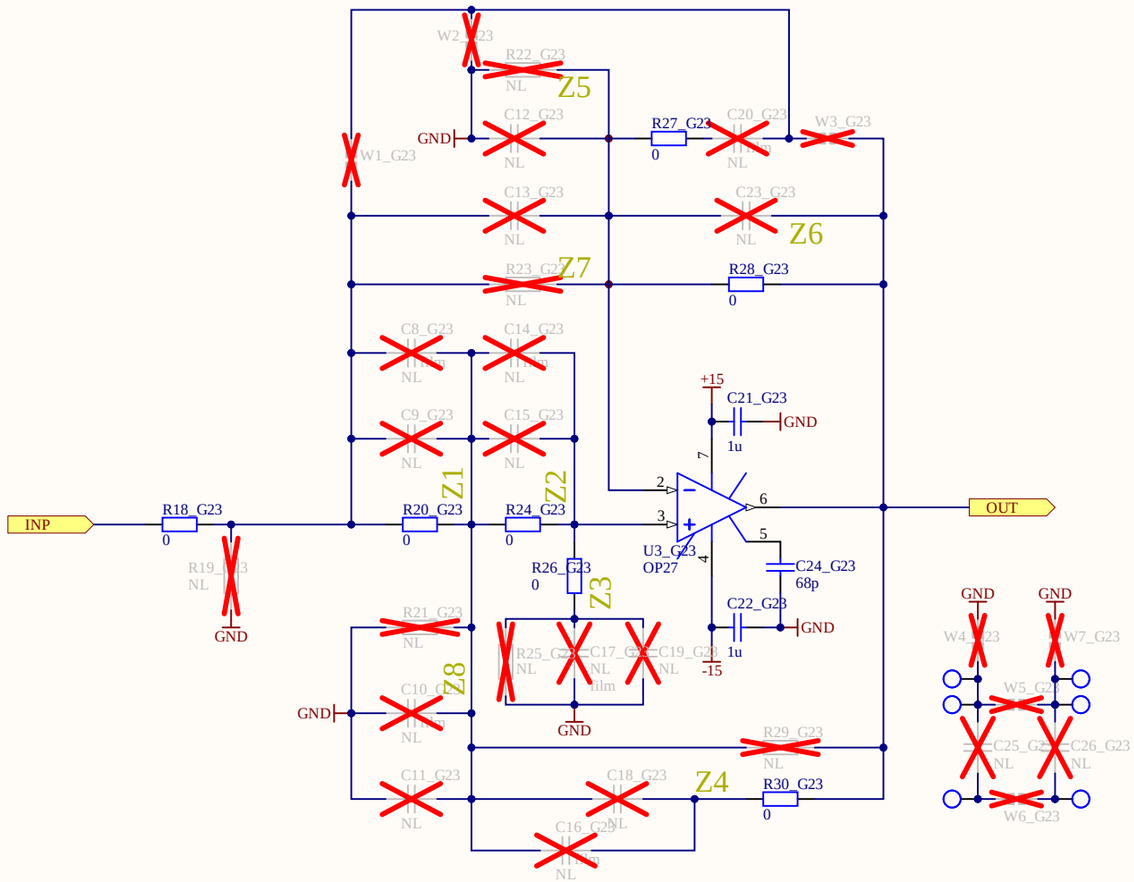
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

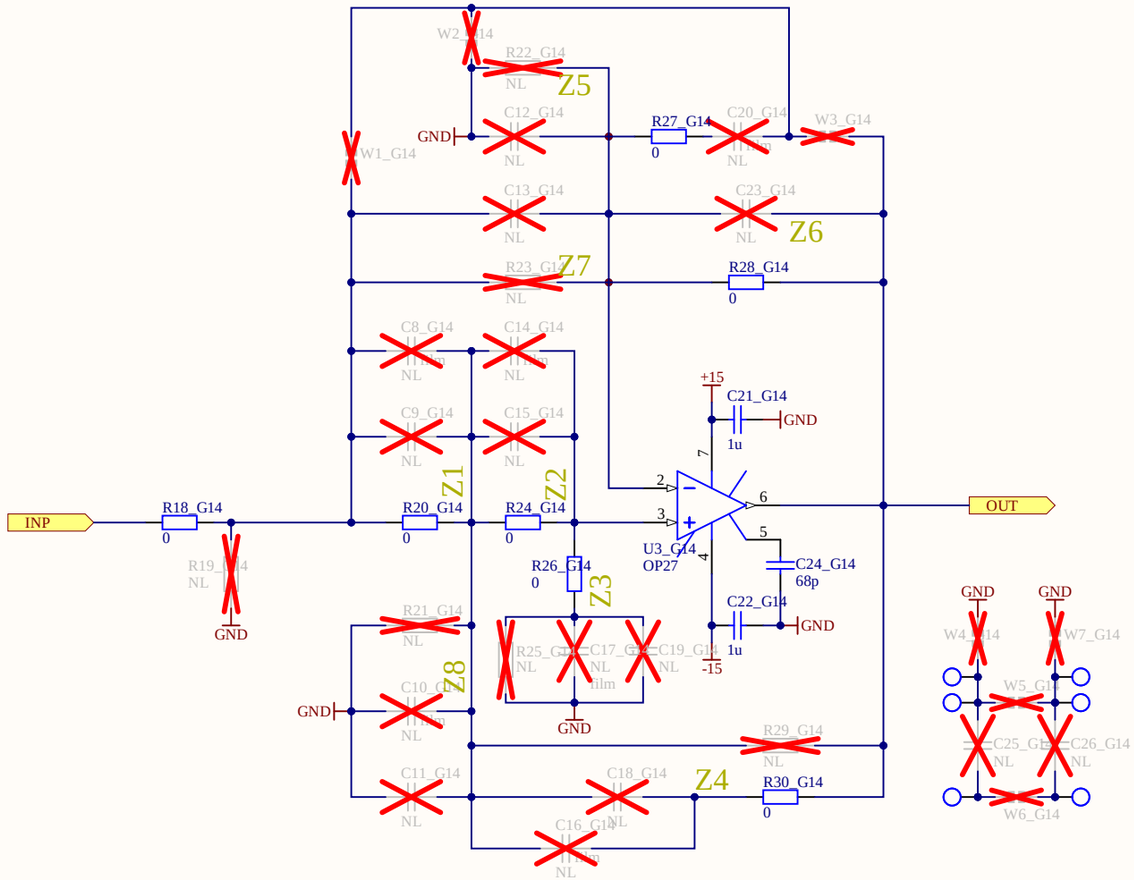
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

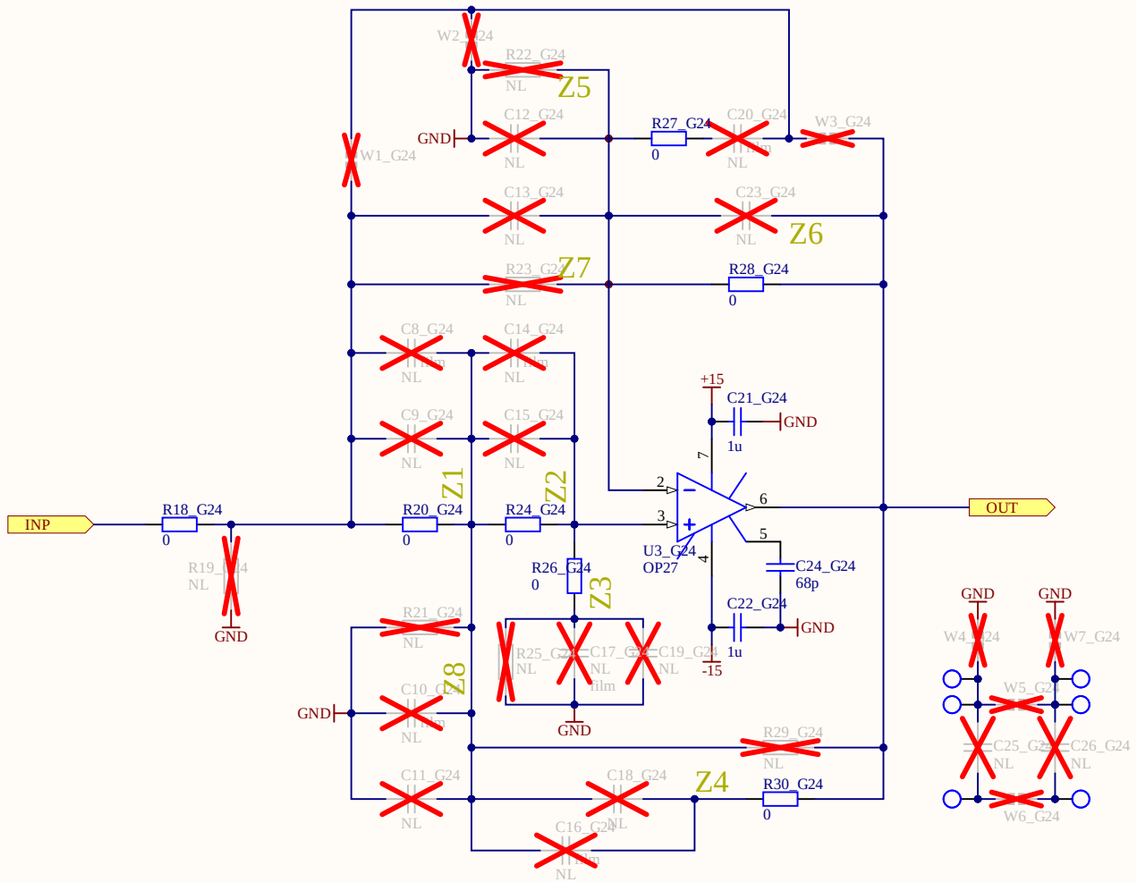
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: Gain1

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

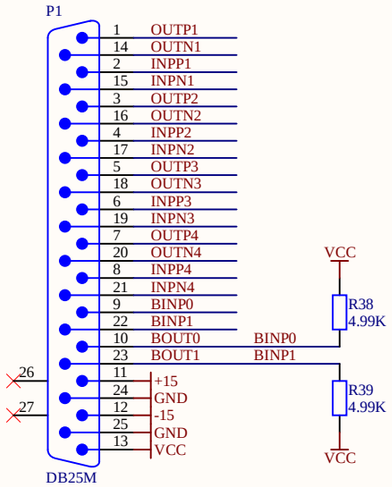
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

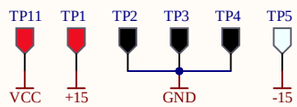
C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

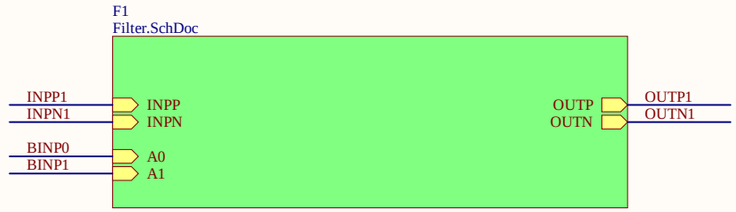
Variant: Gain1

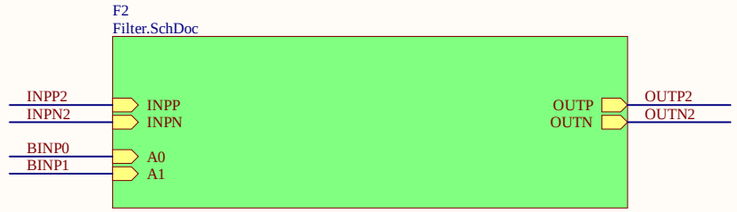
Title: **Filter Board Generic Filter**			
Size: B	Number: D2500203		Revision: 1
Date: 8/15/2025		Sheet 3of 3	
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg	

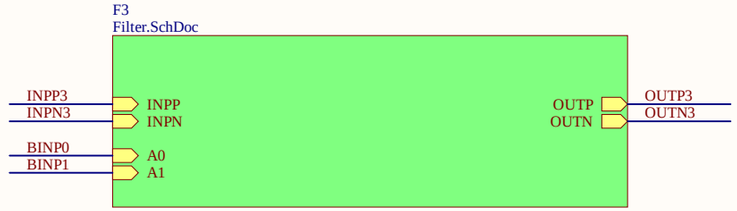
To/From Filter Interface

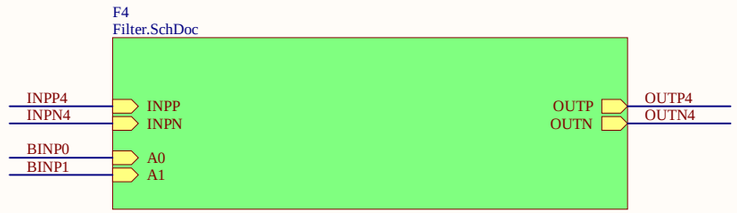












Variant: AC-coupling

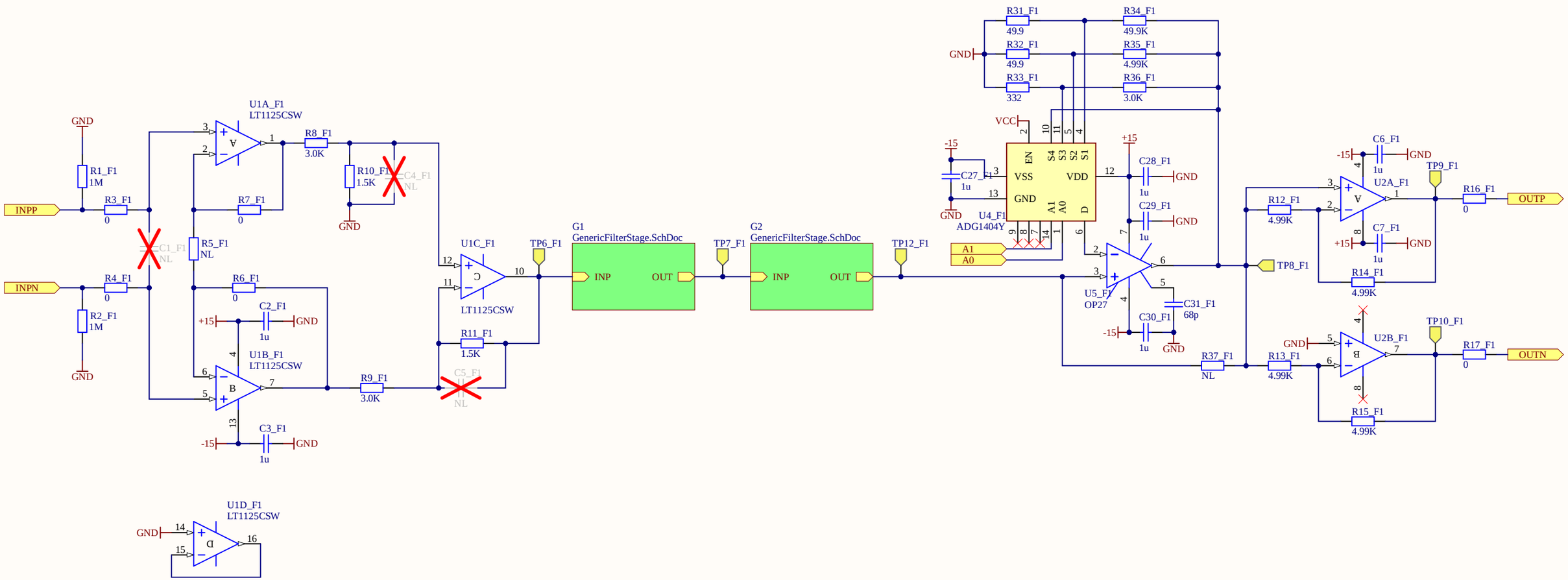
Title: **Filter Board Template: Top**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 1of 3
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: AC-coupling

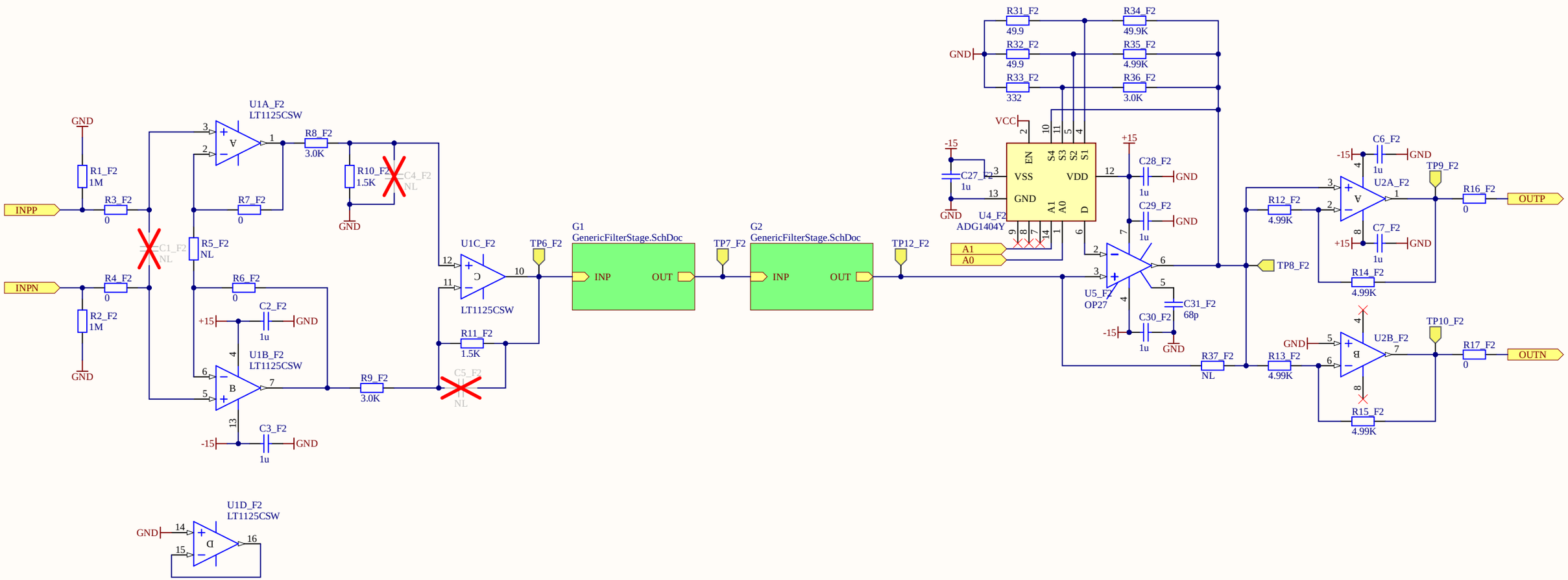
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: AC-coupling

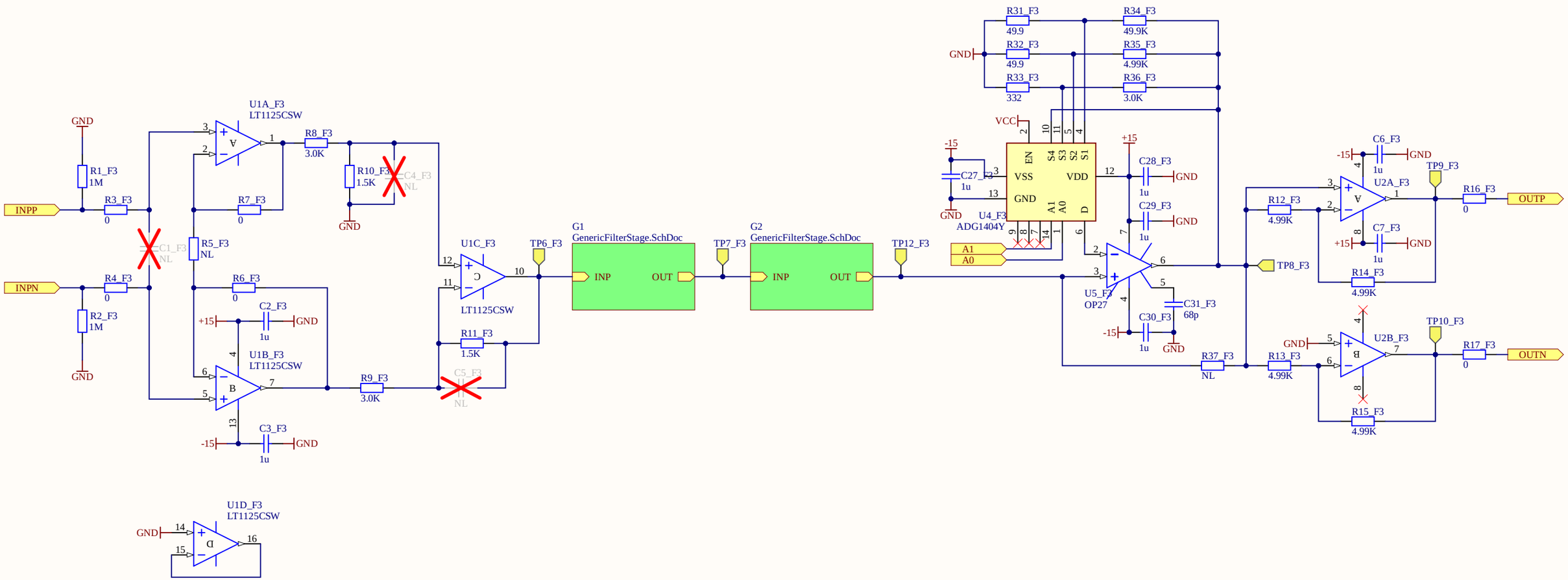
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: AC-coupling

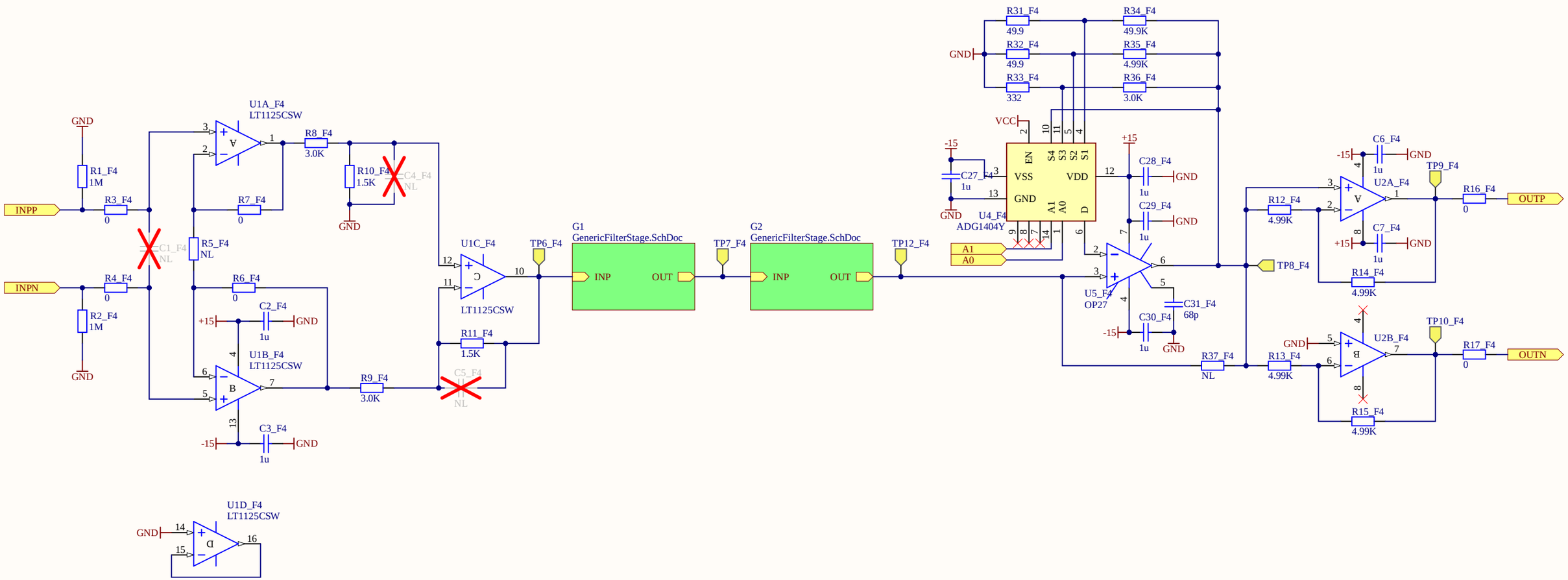
Title: **Filter Channel**			
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

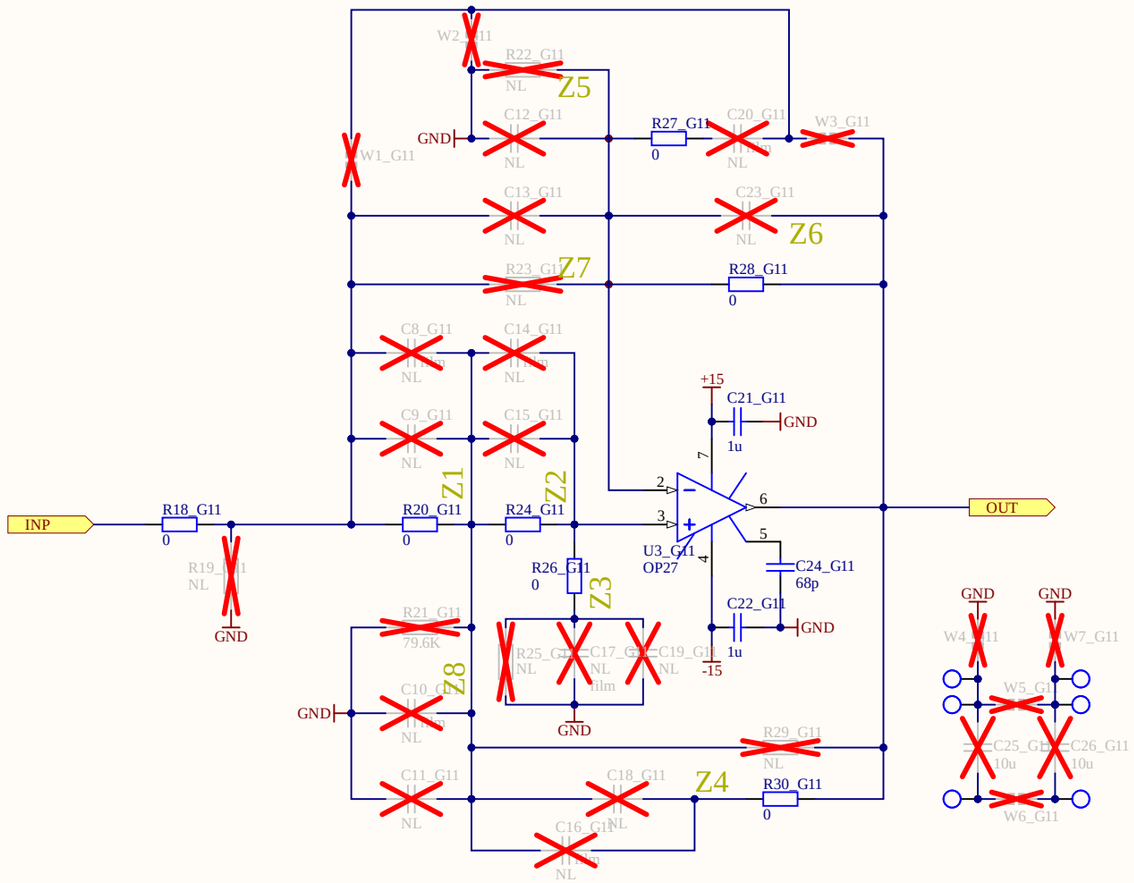
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: AC-coupling

Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

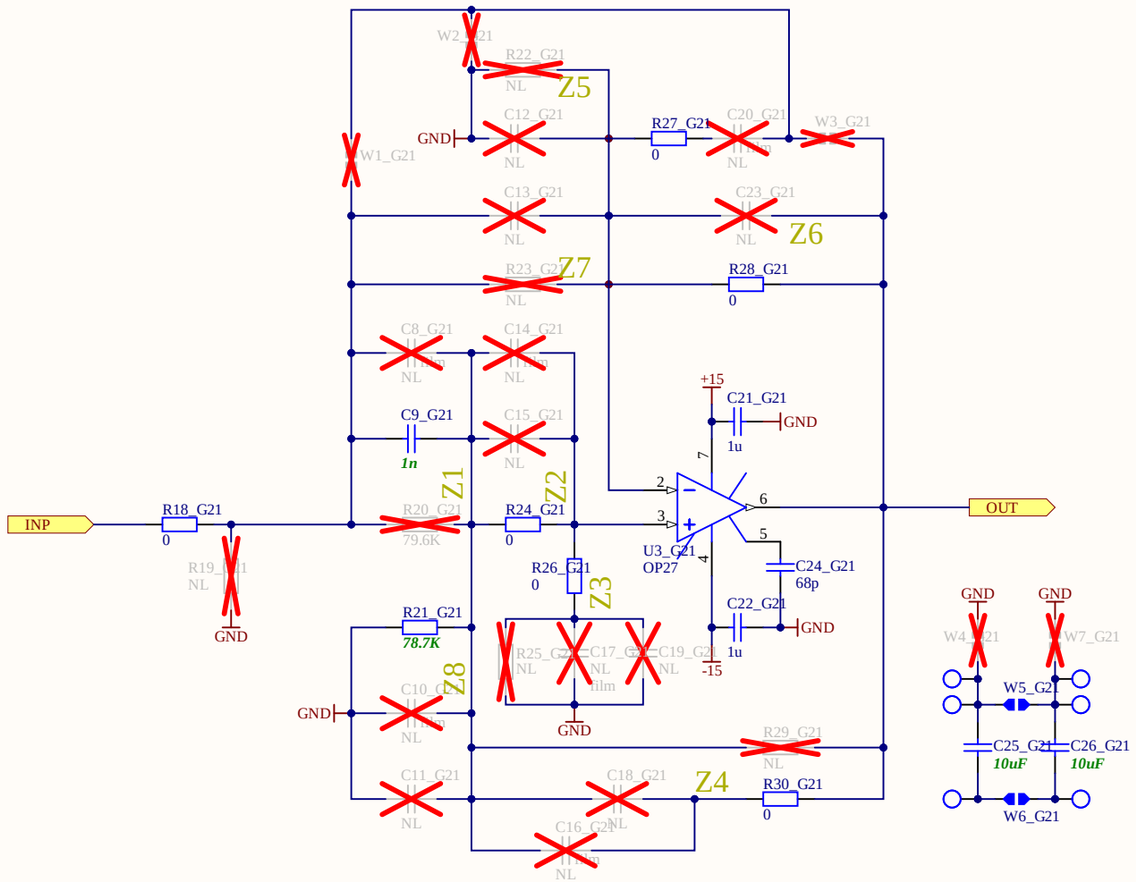
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

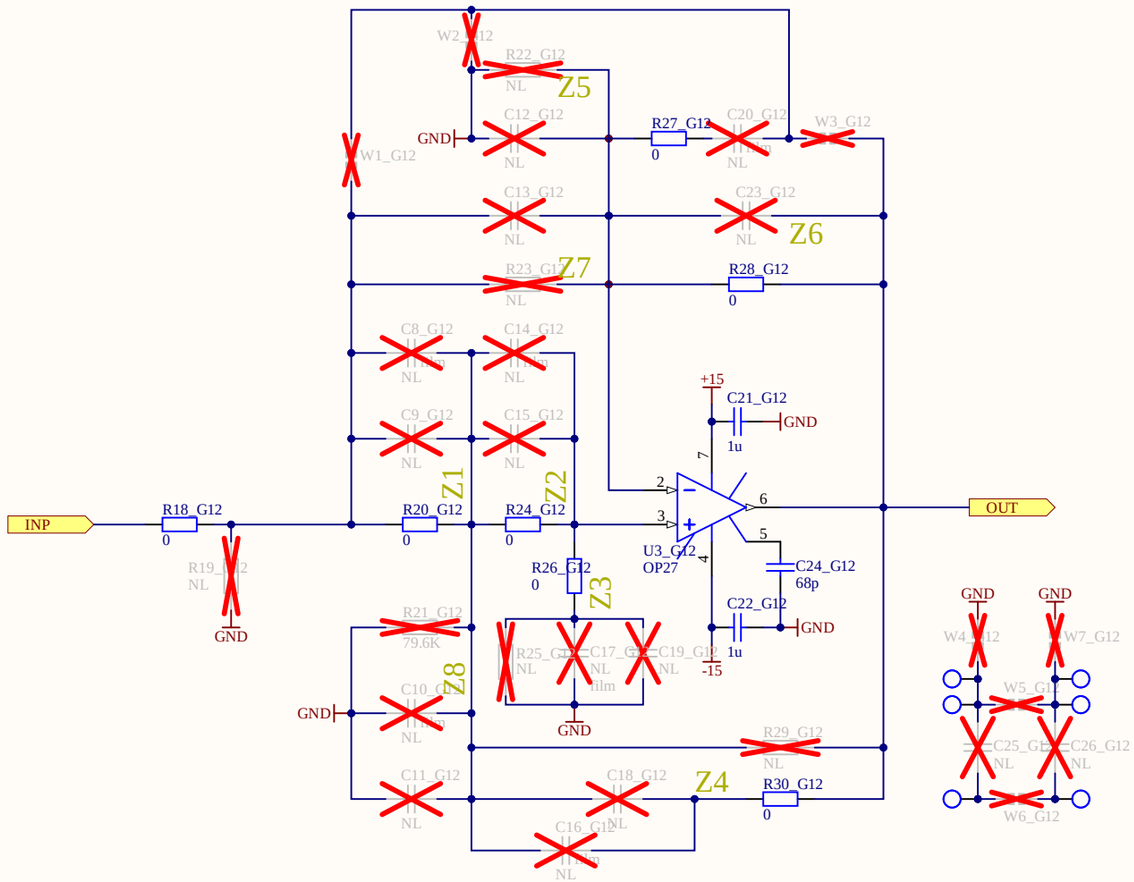
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

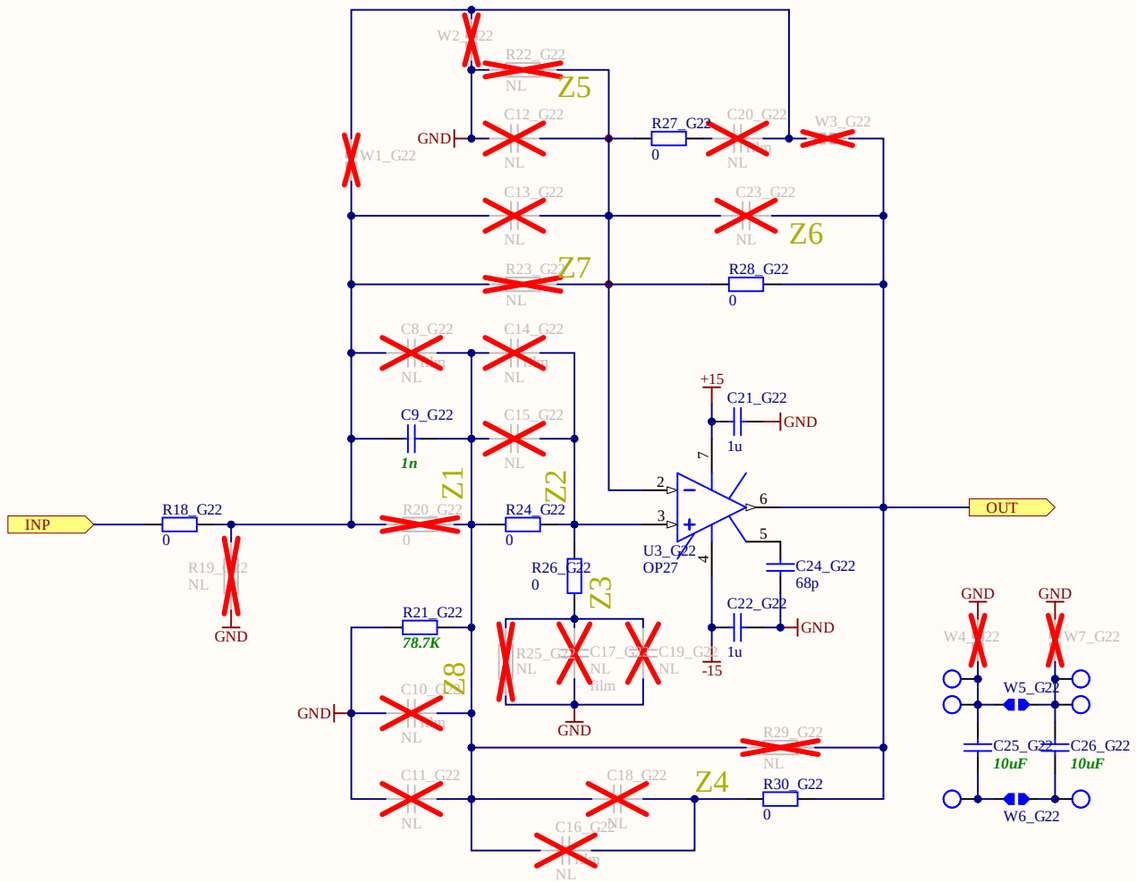
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

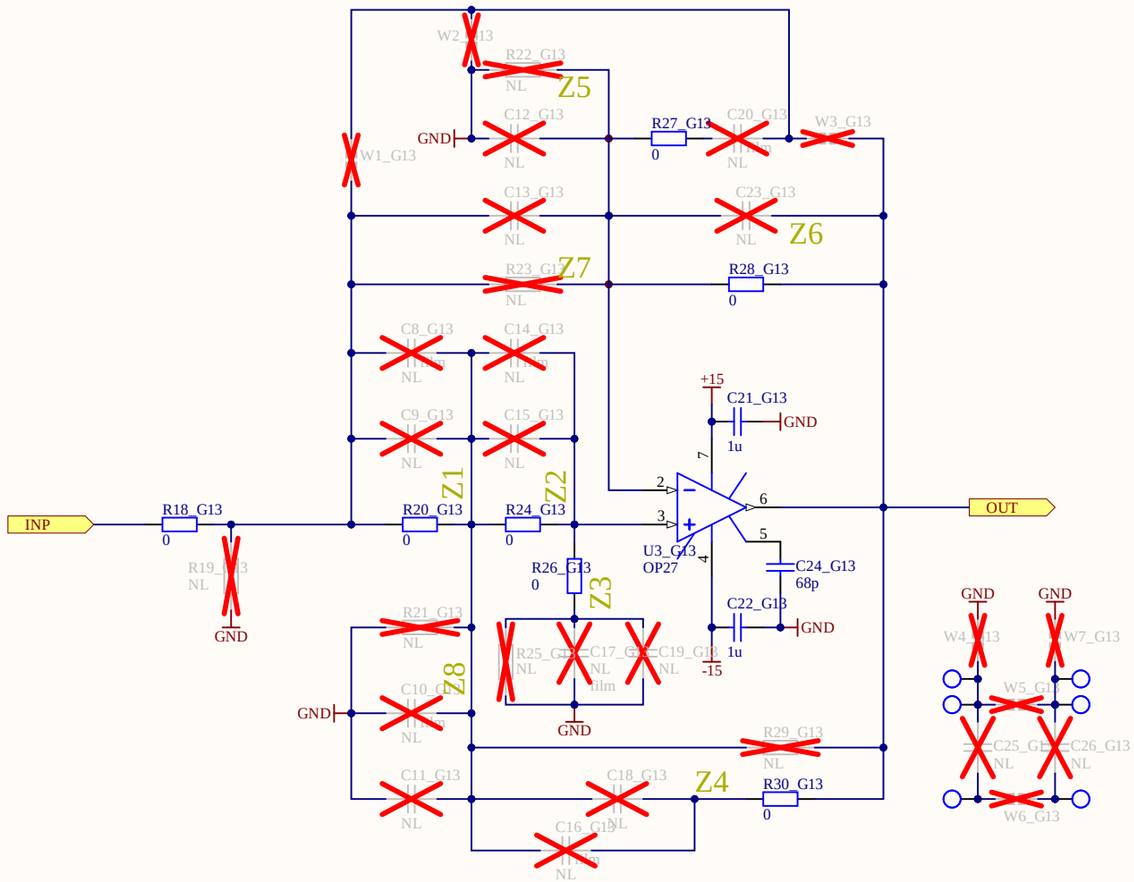
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

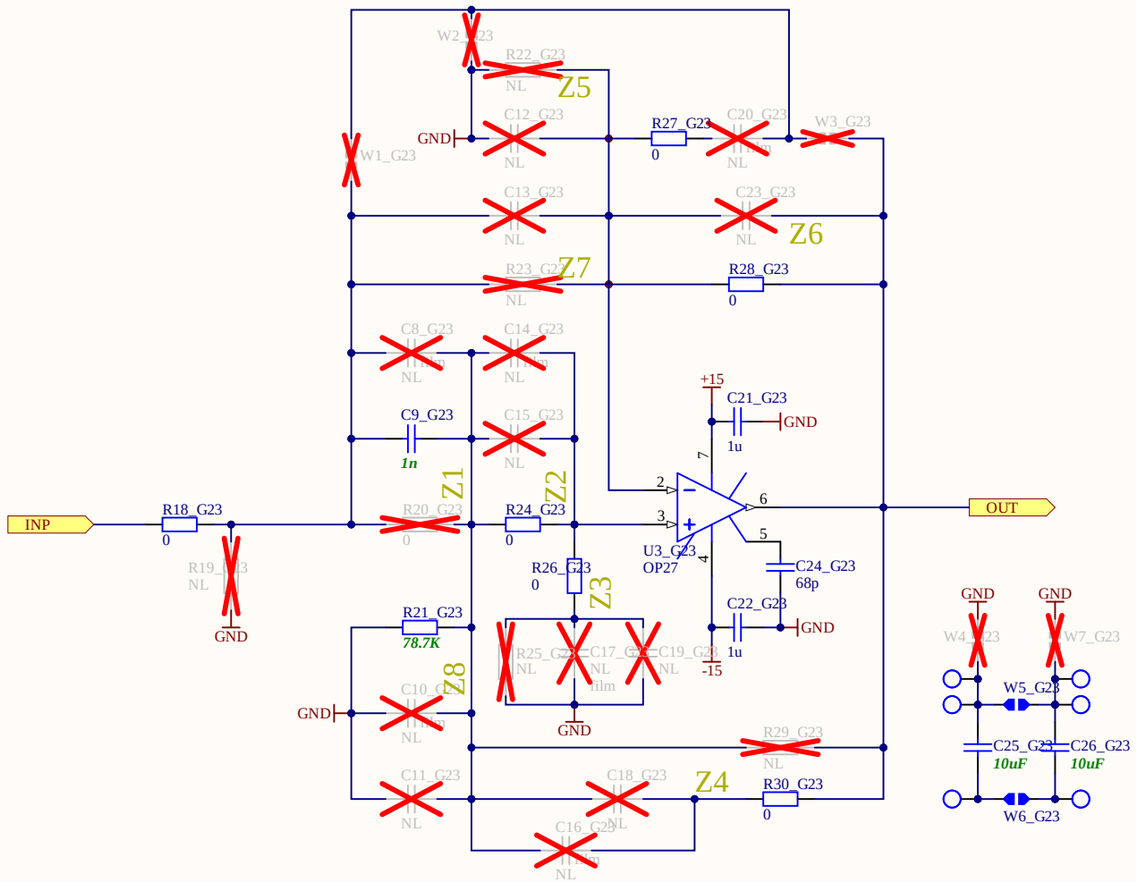
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

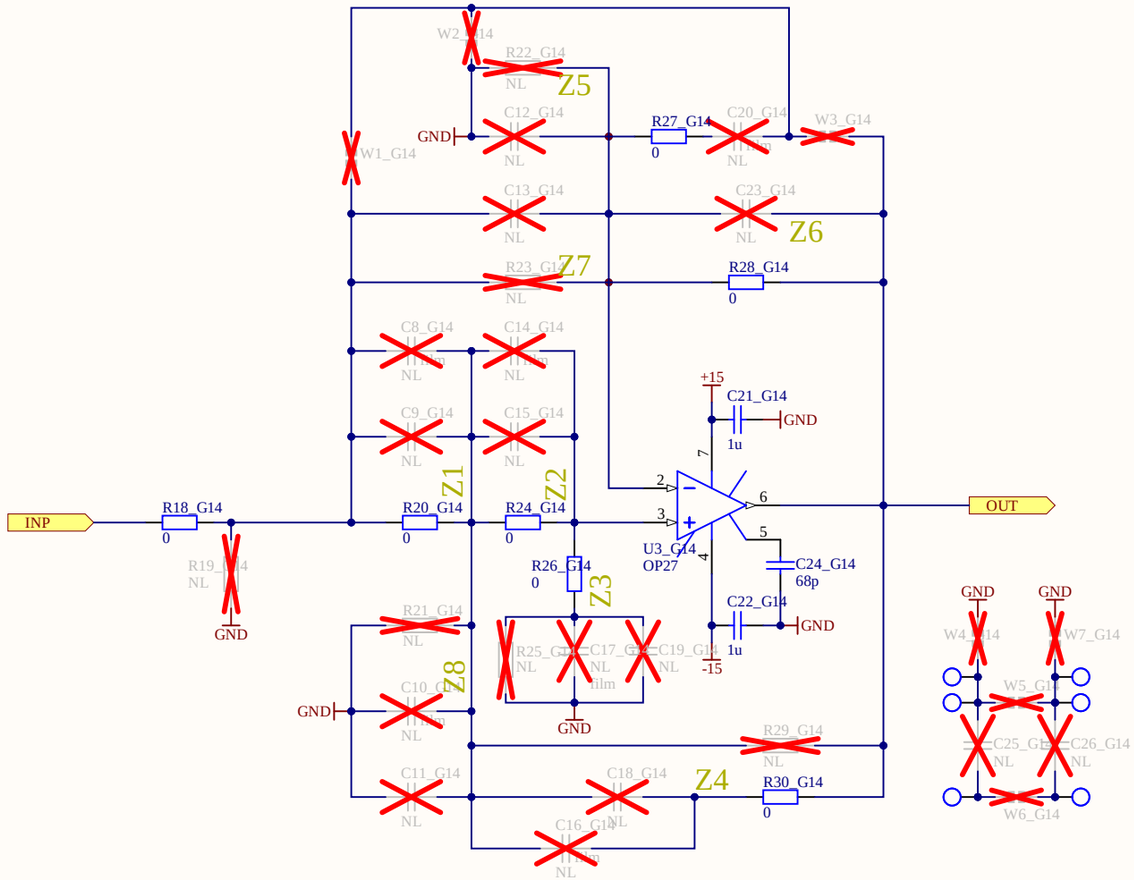
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

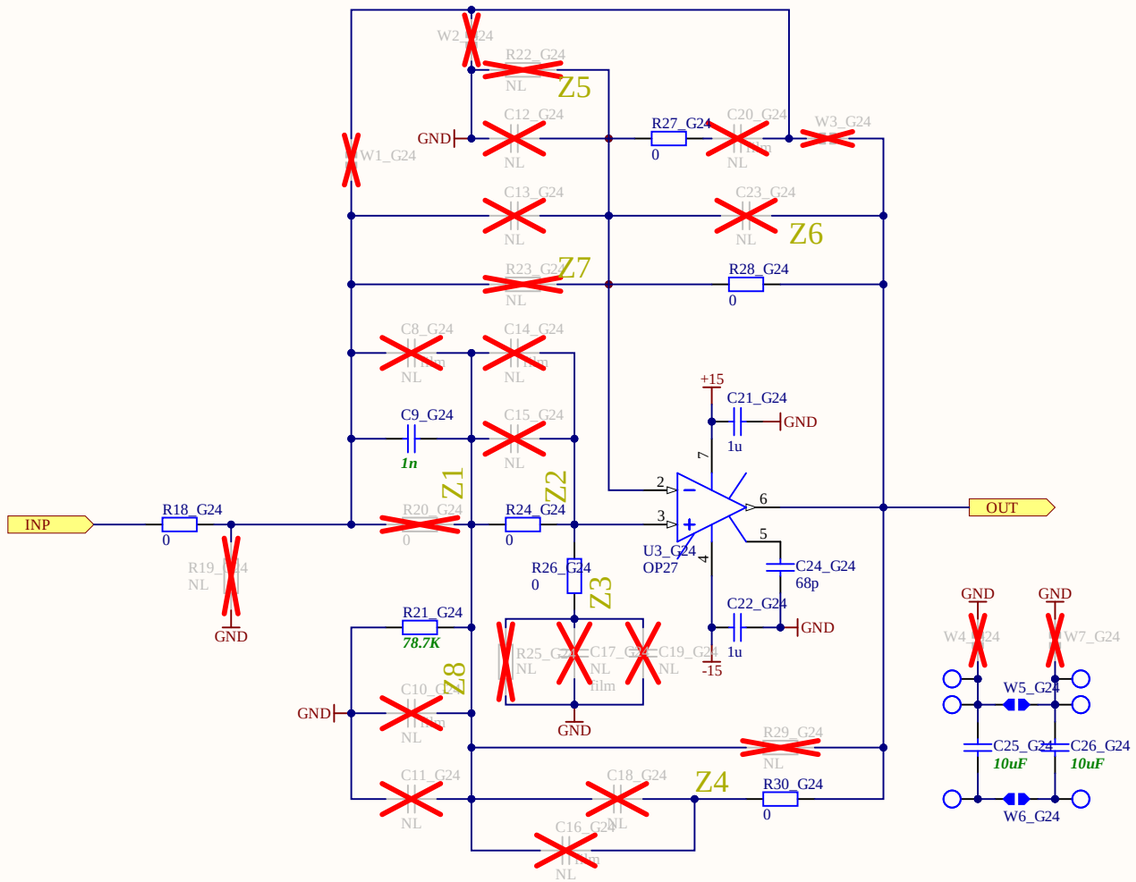
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: AC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

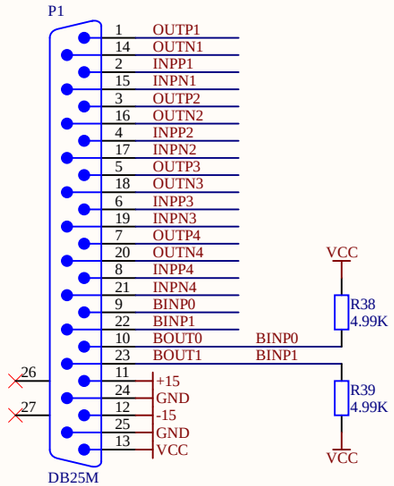
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

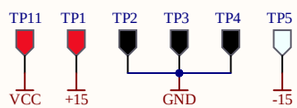
C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

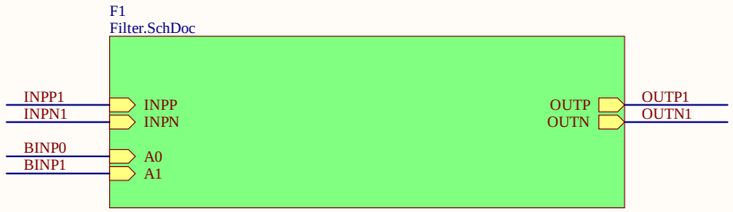
Variant: AC-coupling

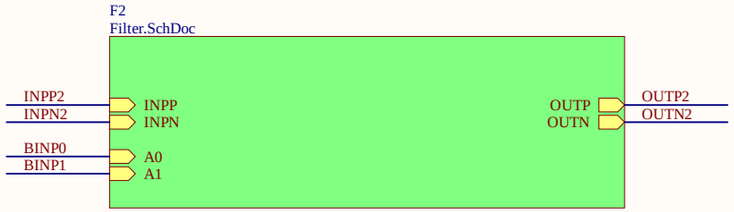
Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

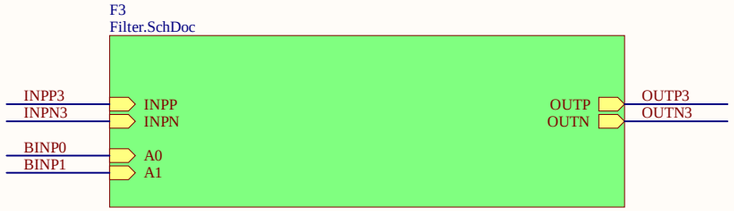
To/From Filter Interface

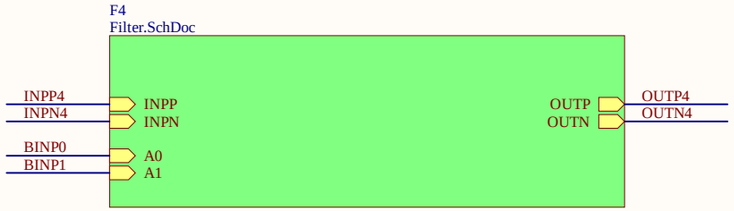












Variant: DC-coupling

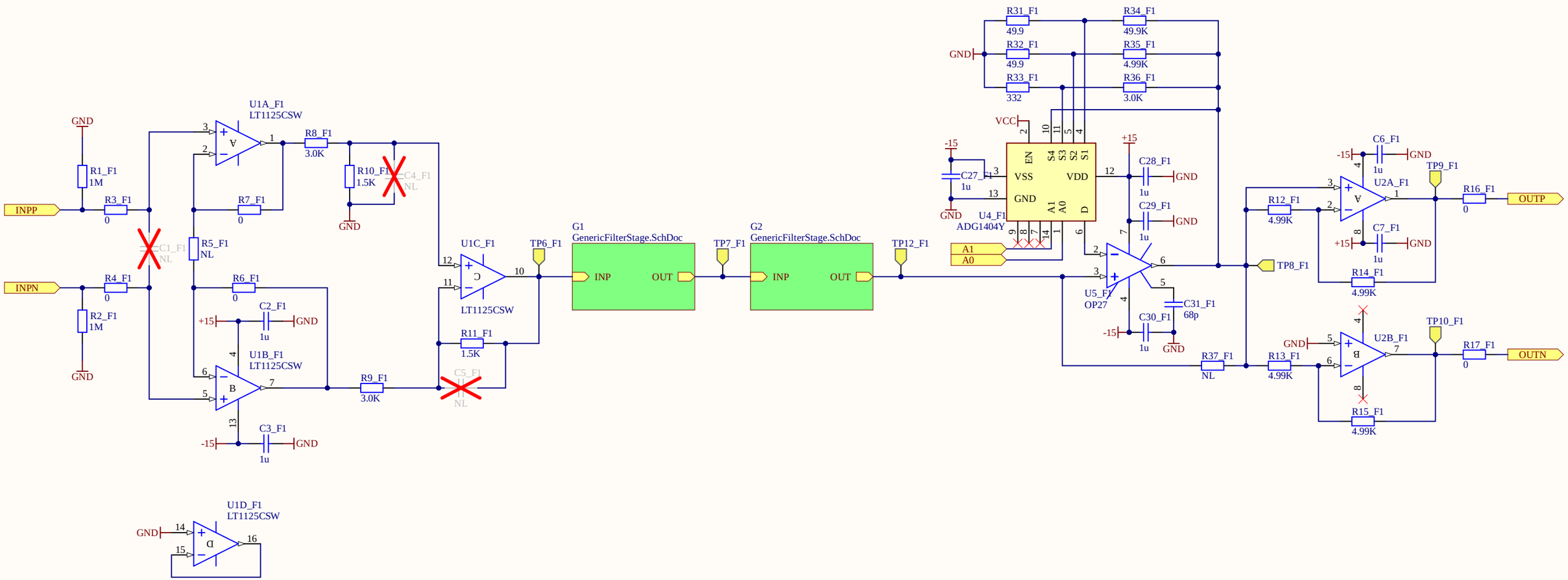
Title: **Filter Board Template: Top**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 1of 3
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: DC-coupling

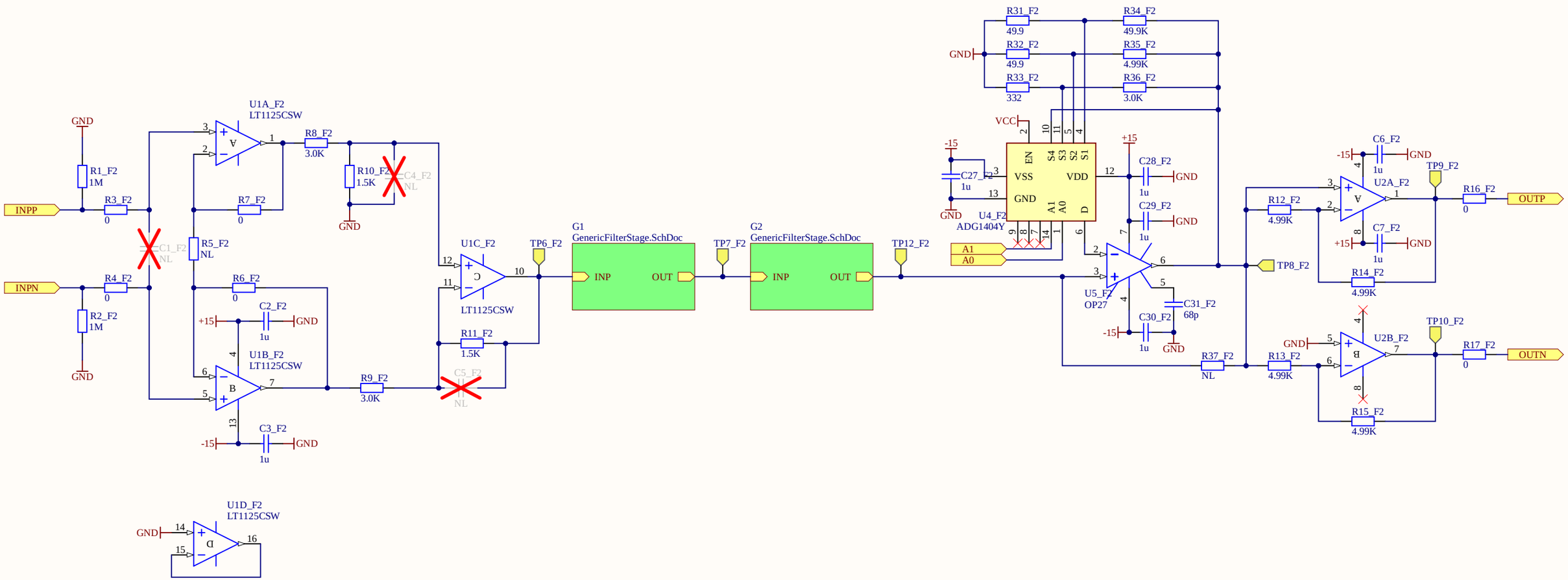
Title	**Filter Channel**		
Size B	Number D2500203	Revision 1	
Date: 8/15/2025		Sheet 2of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: DC-coupling

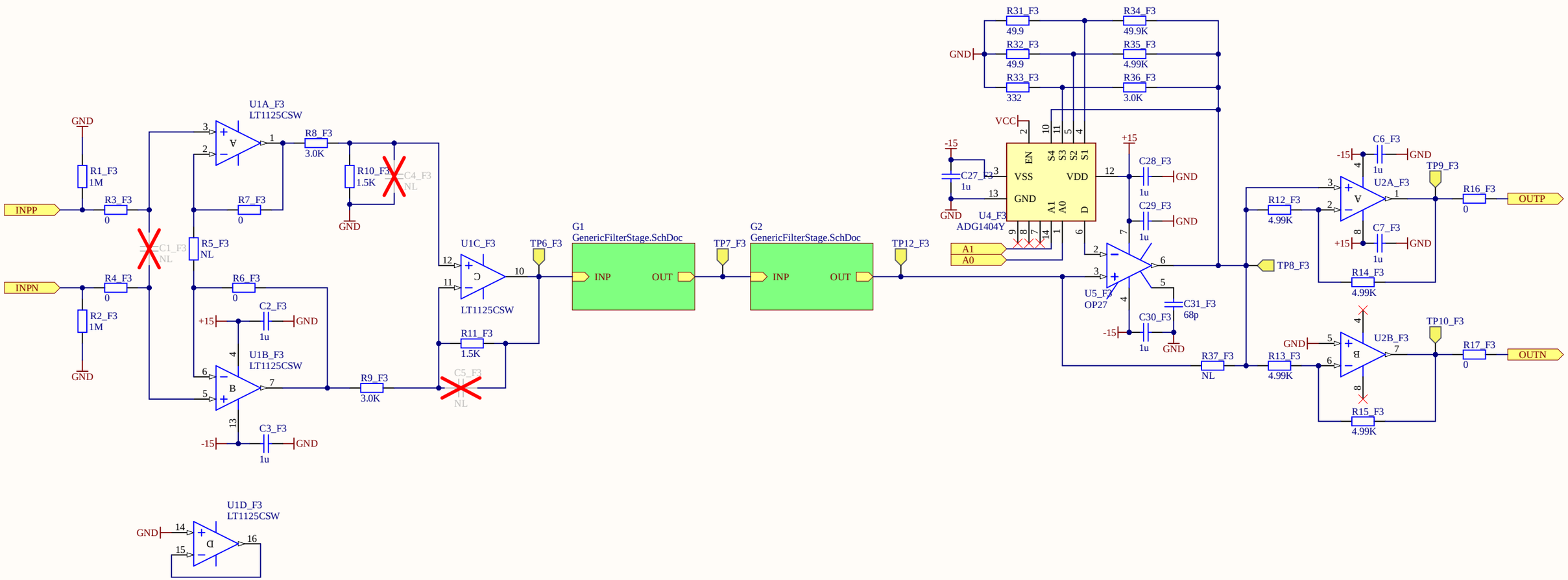
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: DC-coupling

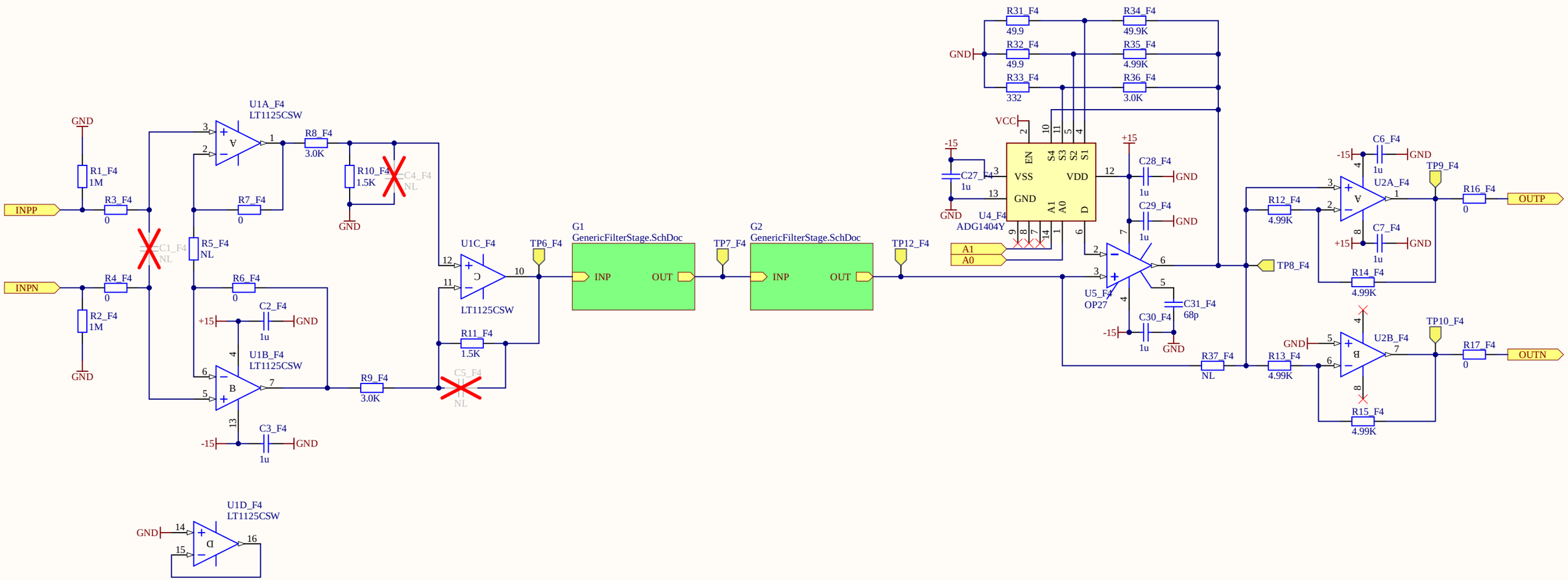
Title: **Filter Channel**			
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

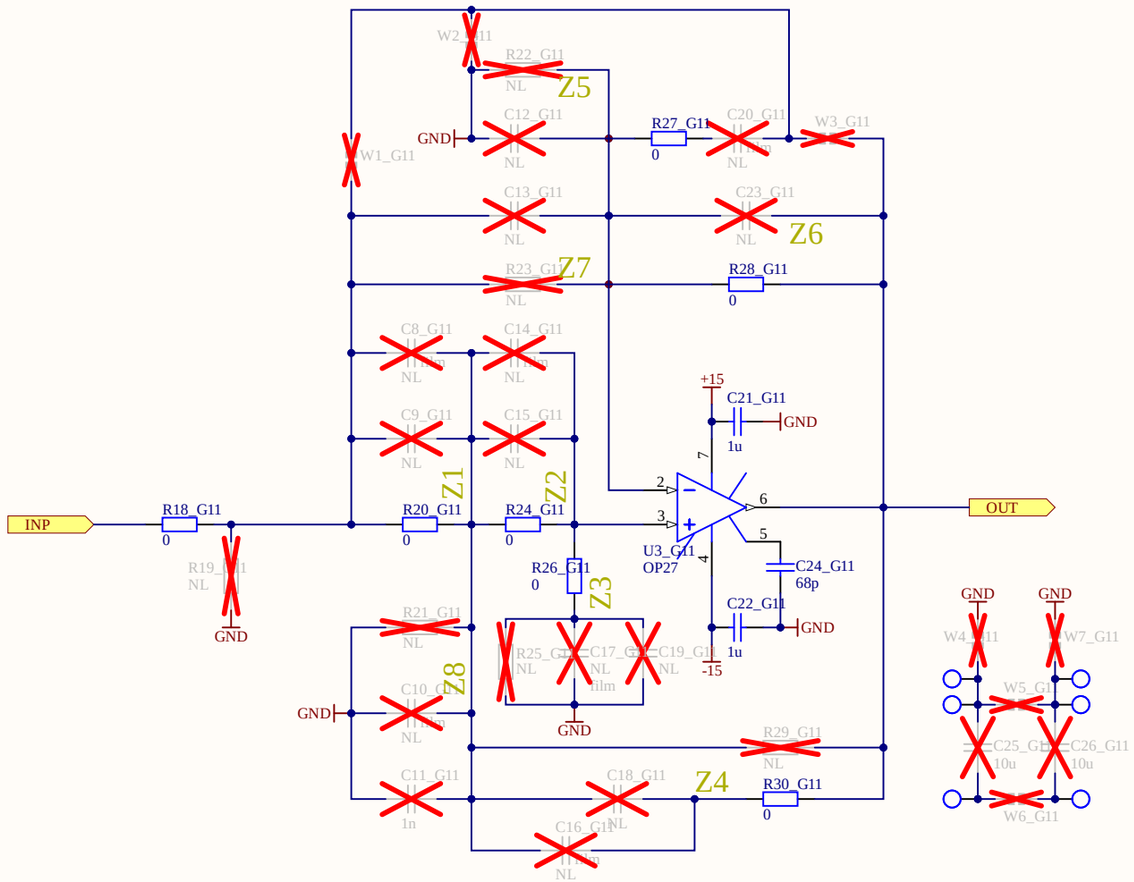
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: DC-coupling

Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

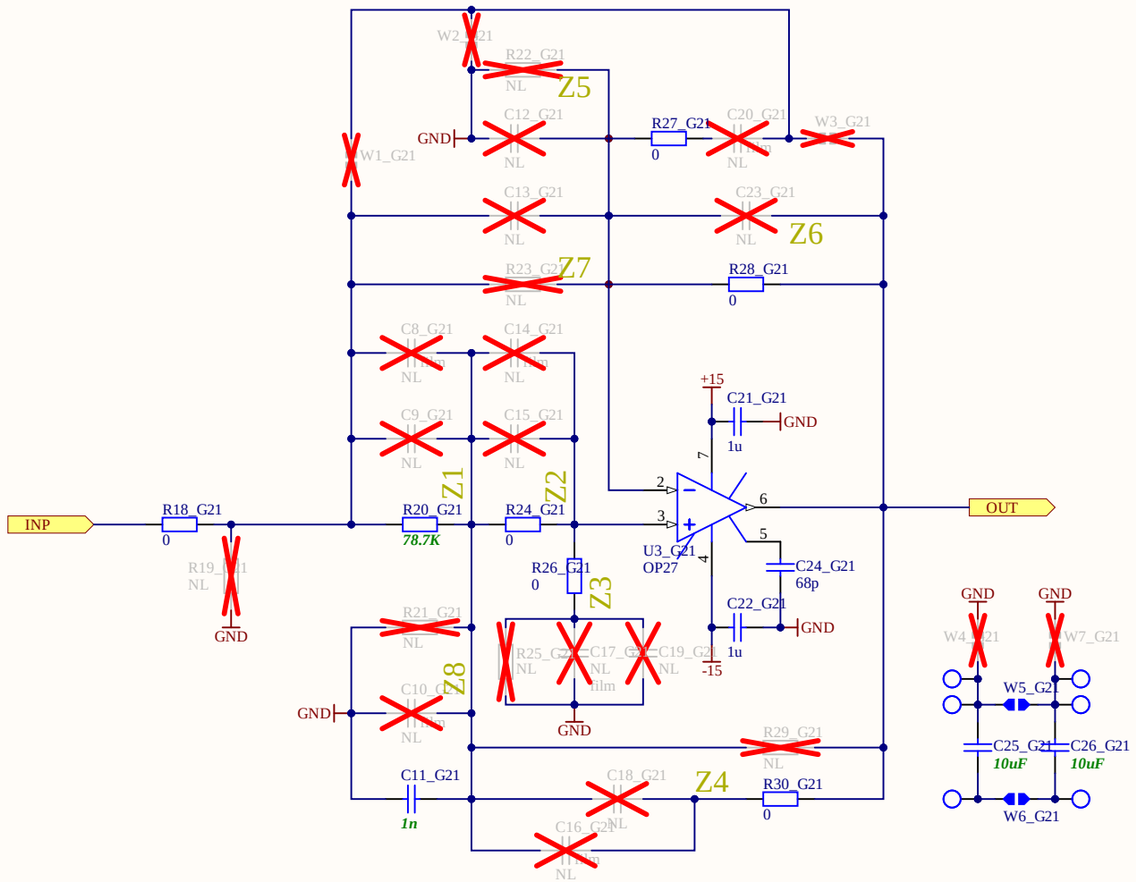
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

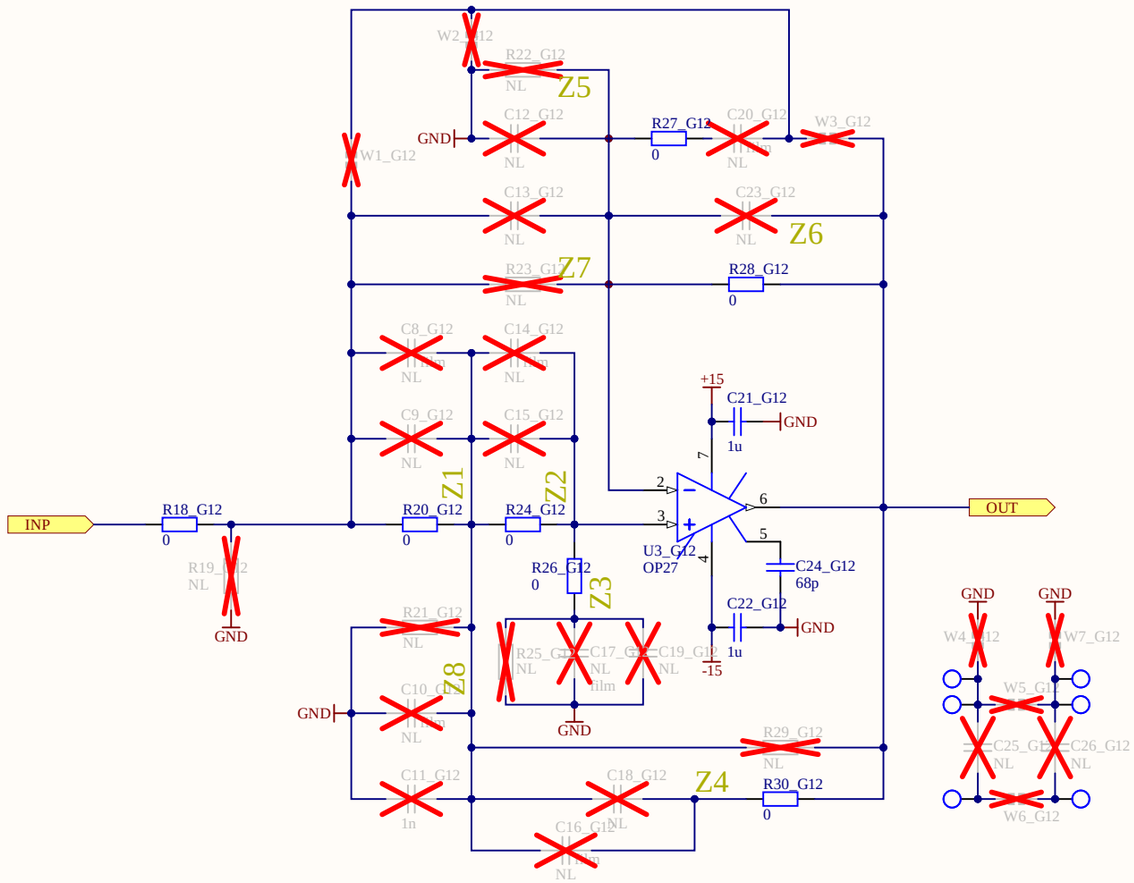
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

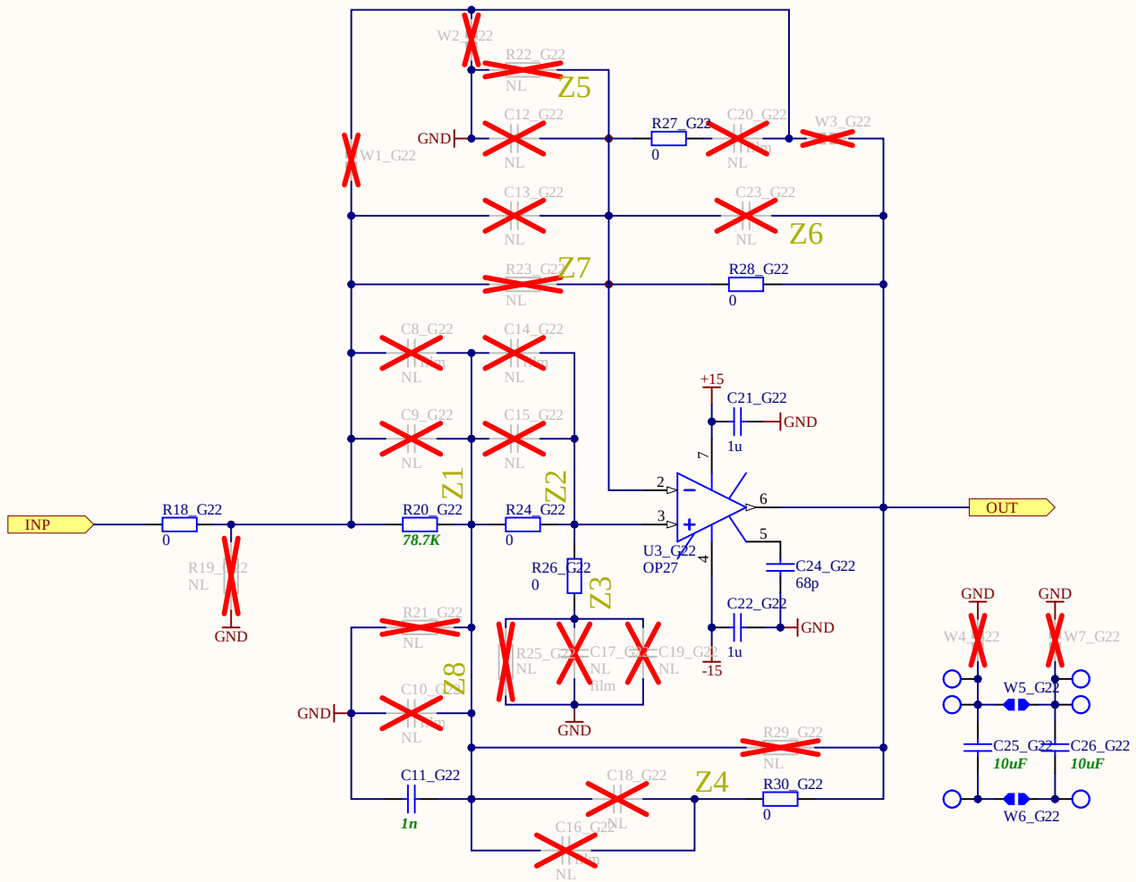
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

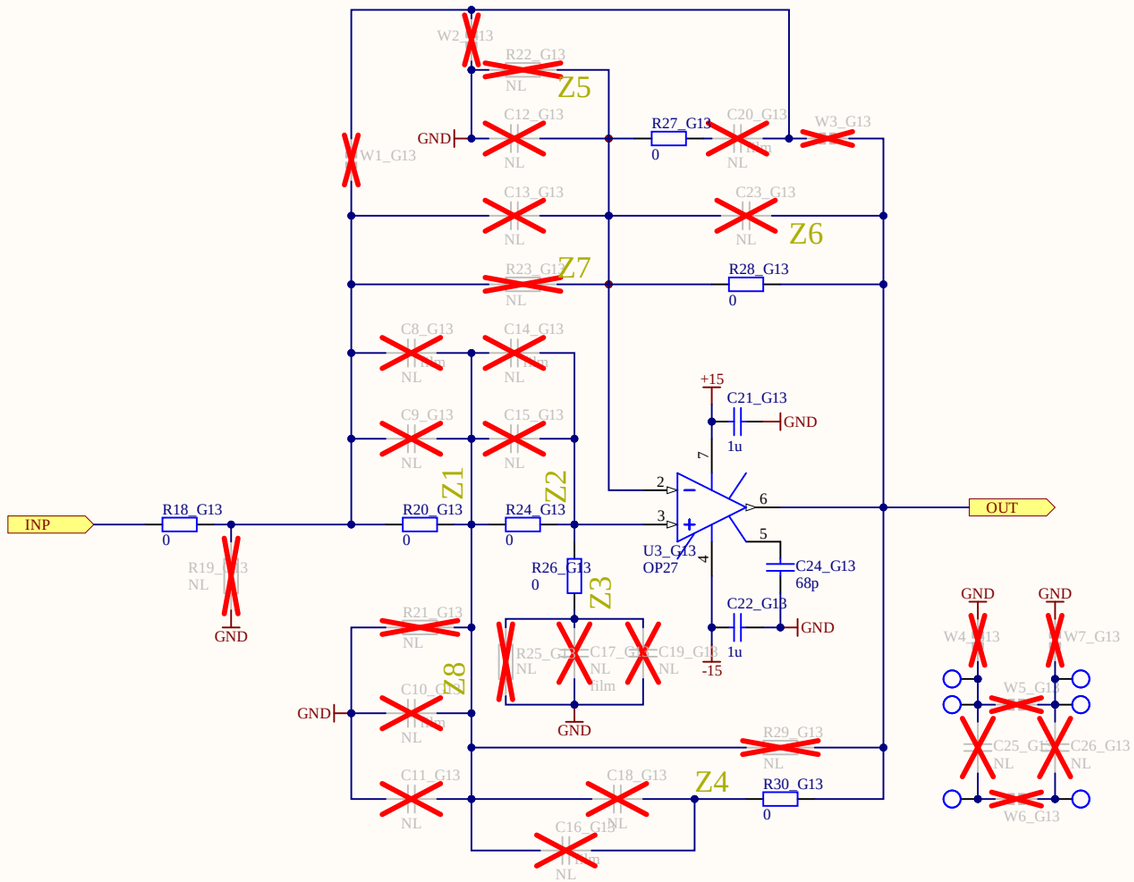
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

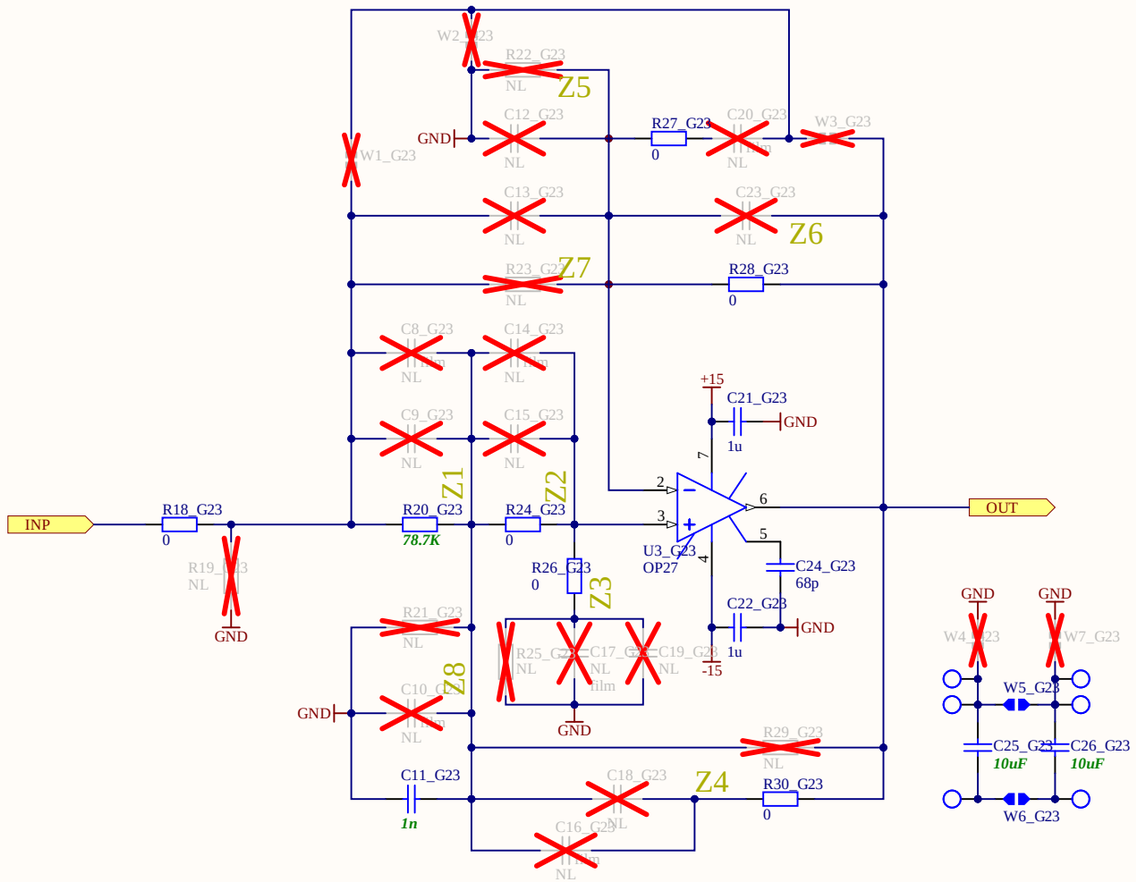
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

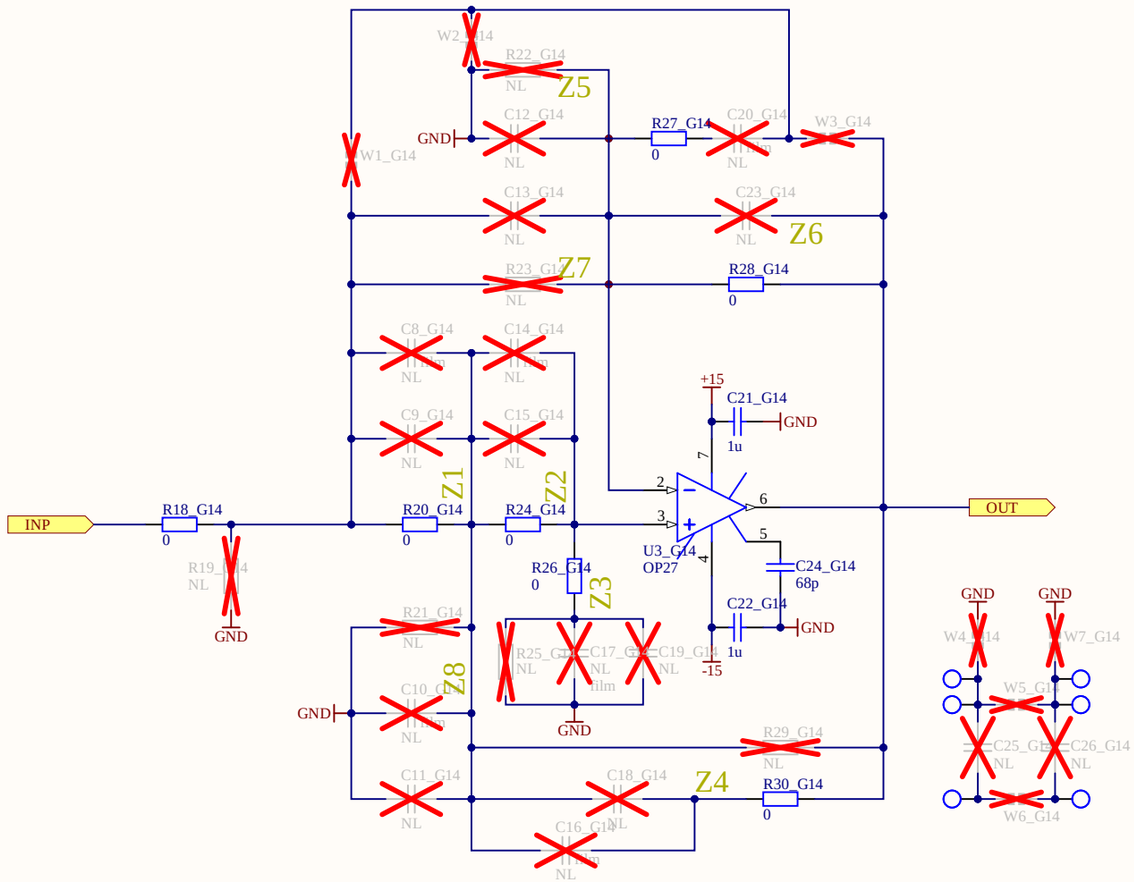
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

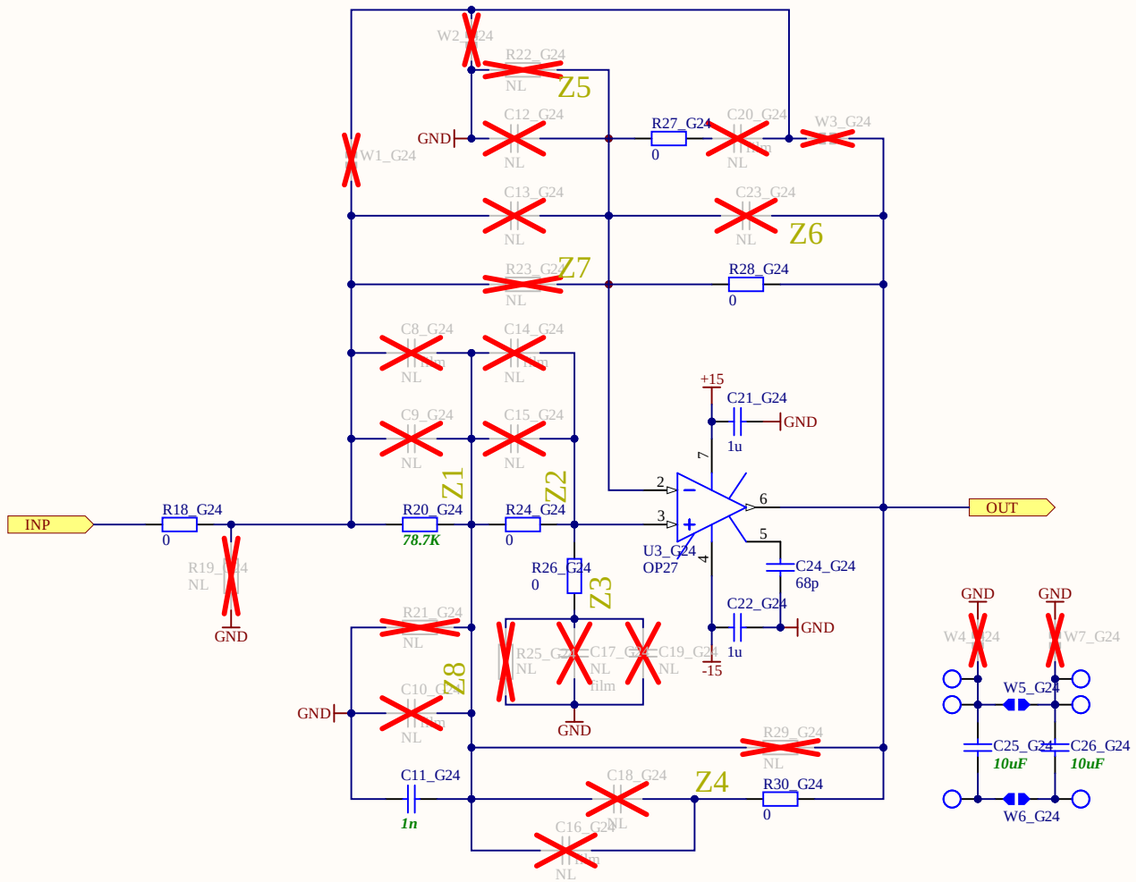
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: DC-coupling

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

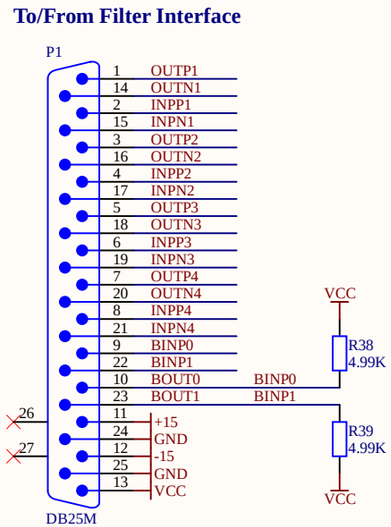
Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

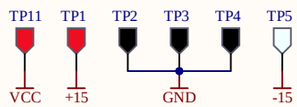
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

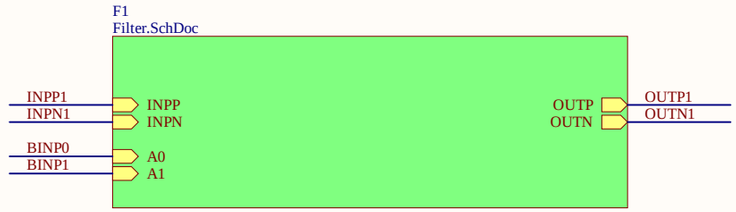
C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

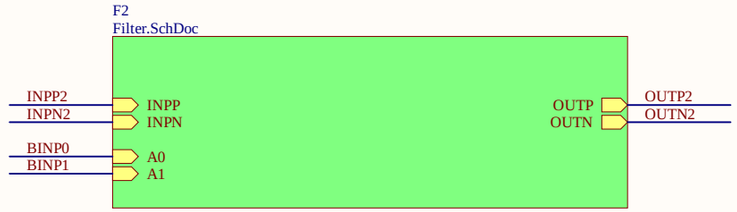
Variant: DC-coupling

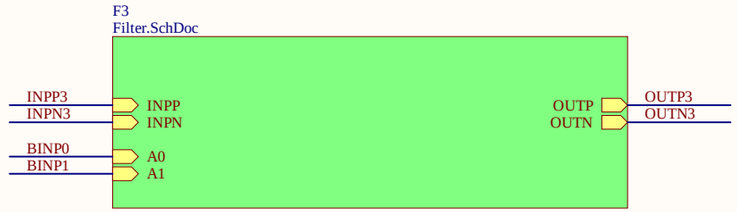
Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

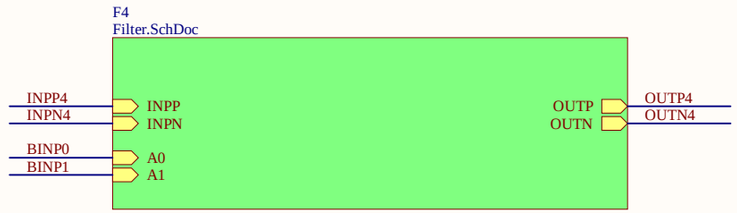












Variant: LP10Hz

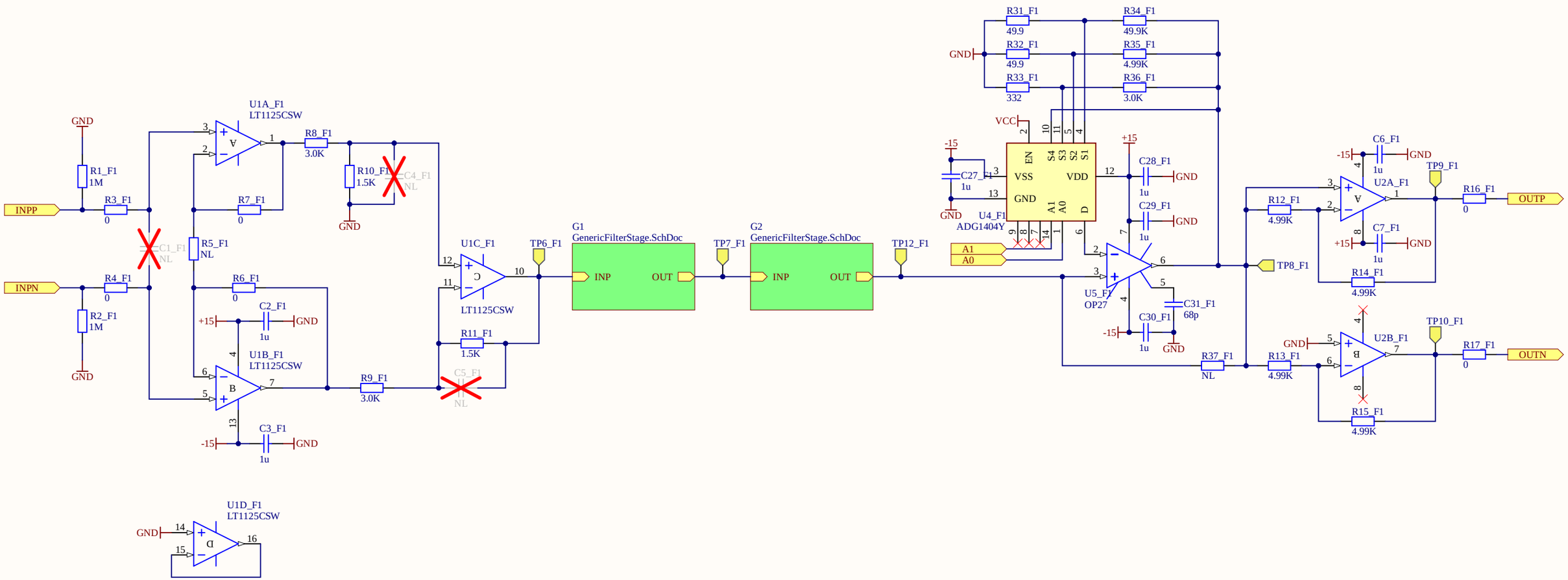
Title	**Filter Board Template: Top**		
Size: B	Number: D2500203		Revision: 1
Date: 8/15/2025		Sheet 1of 3	
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: LP10Hz

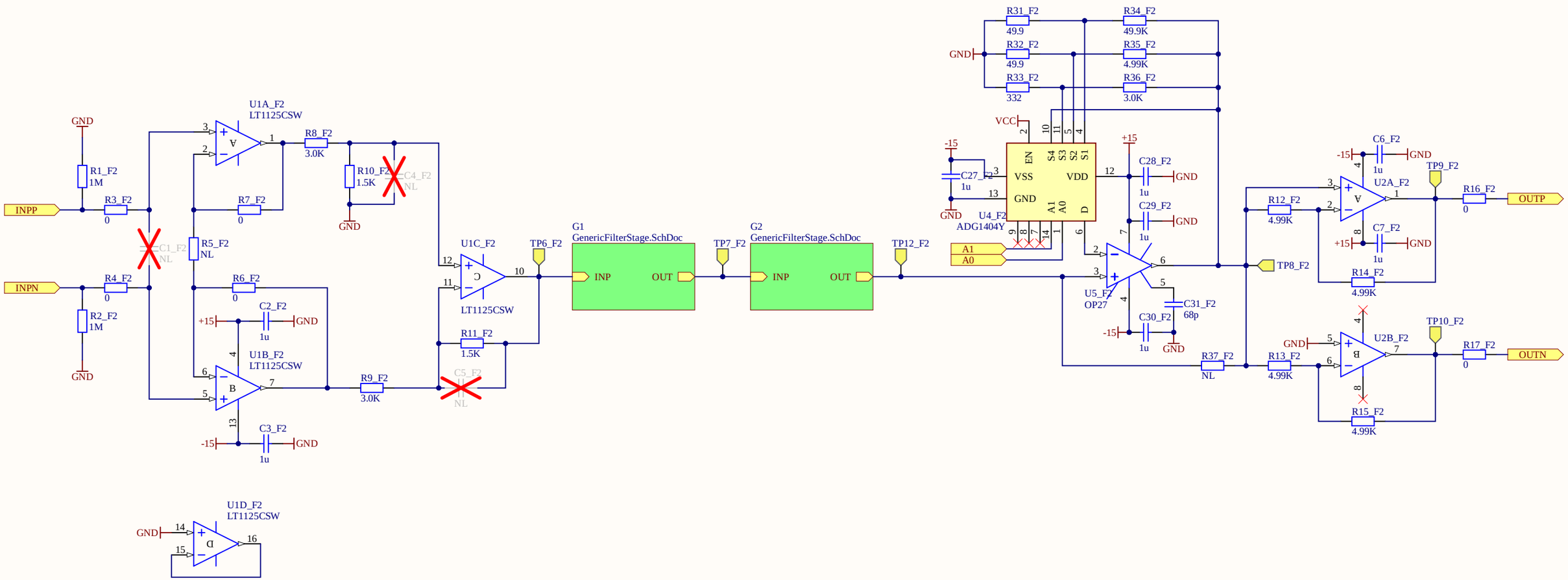
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: LP10Hz

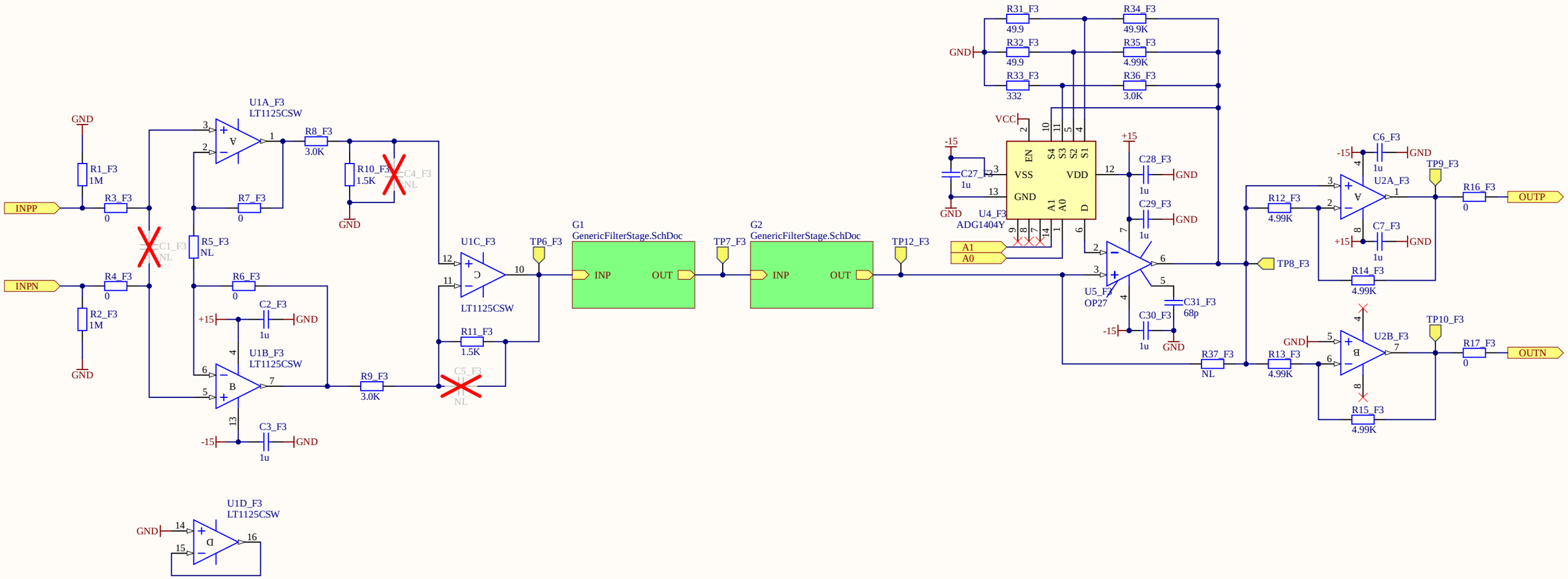
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: LP10Hz

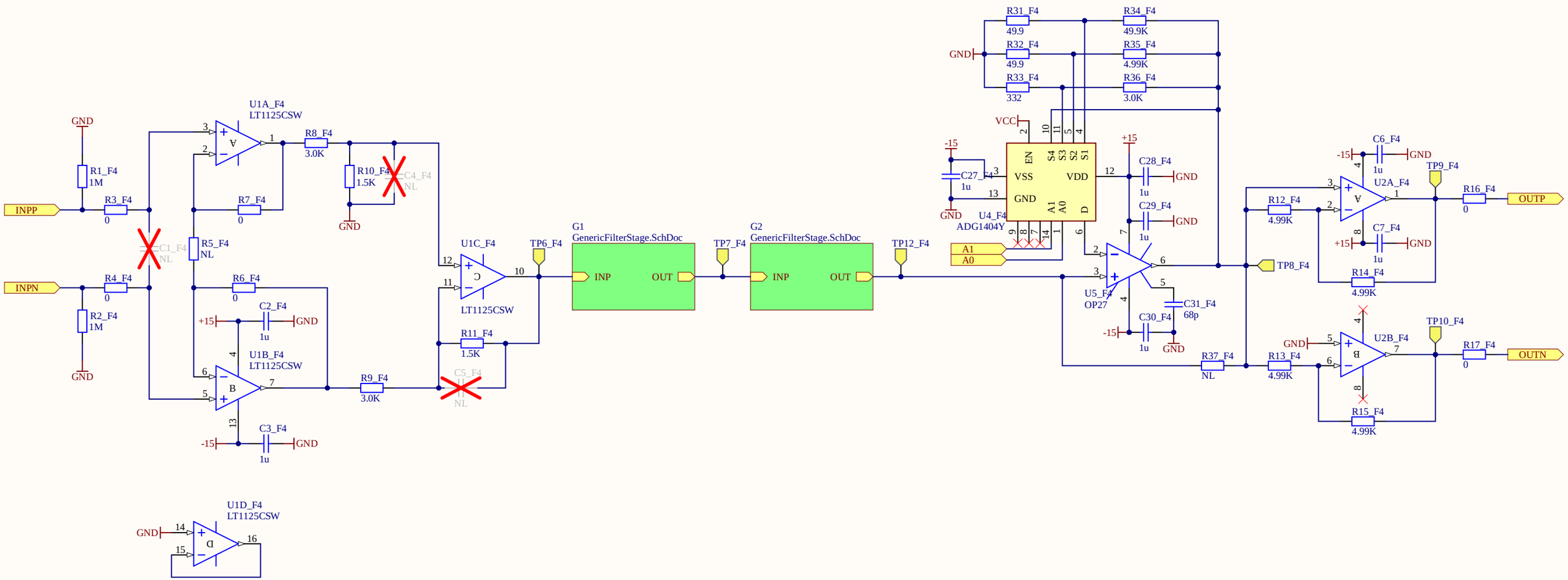
Title		
Filter Channel		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 2 of 3
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

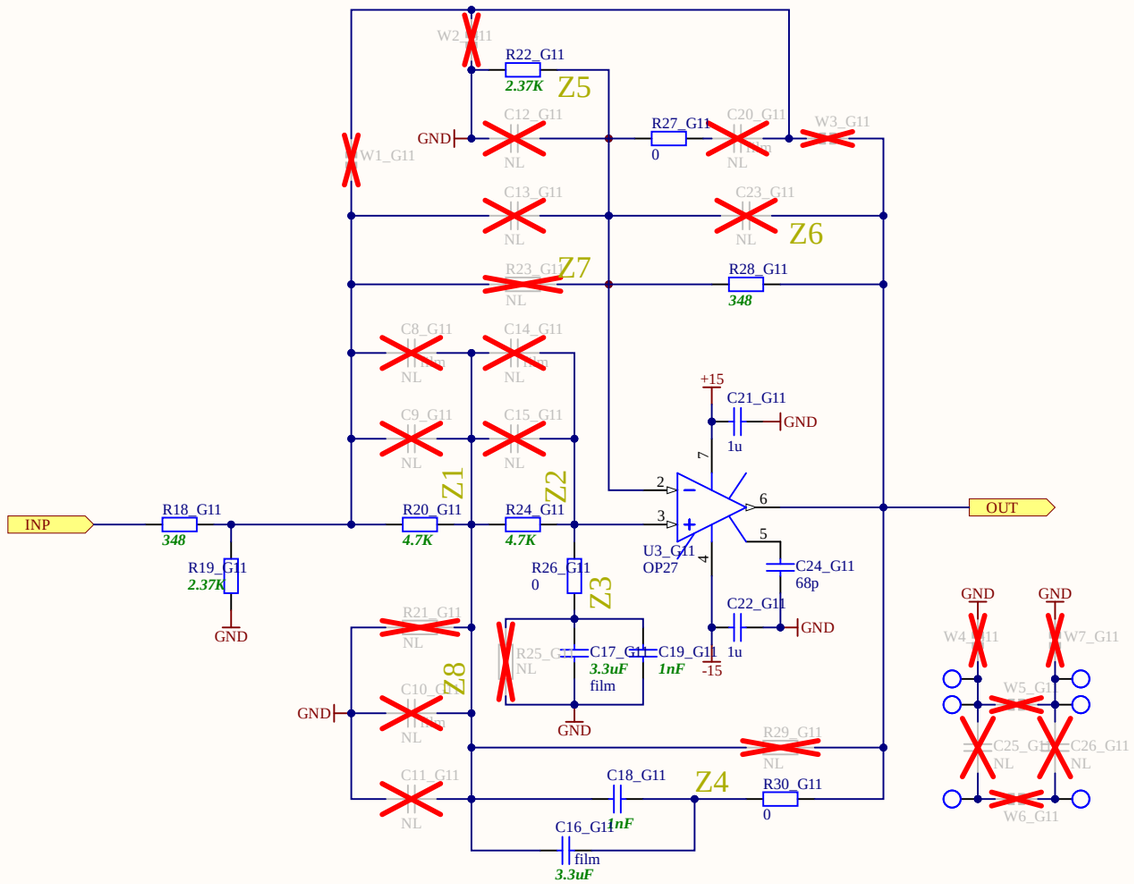
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: LP10Hz

Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

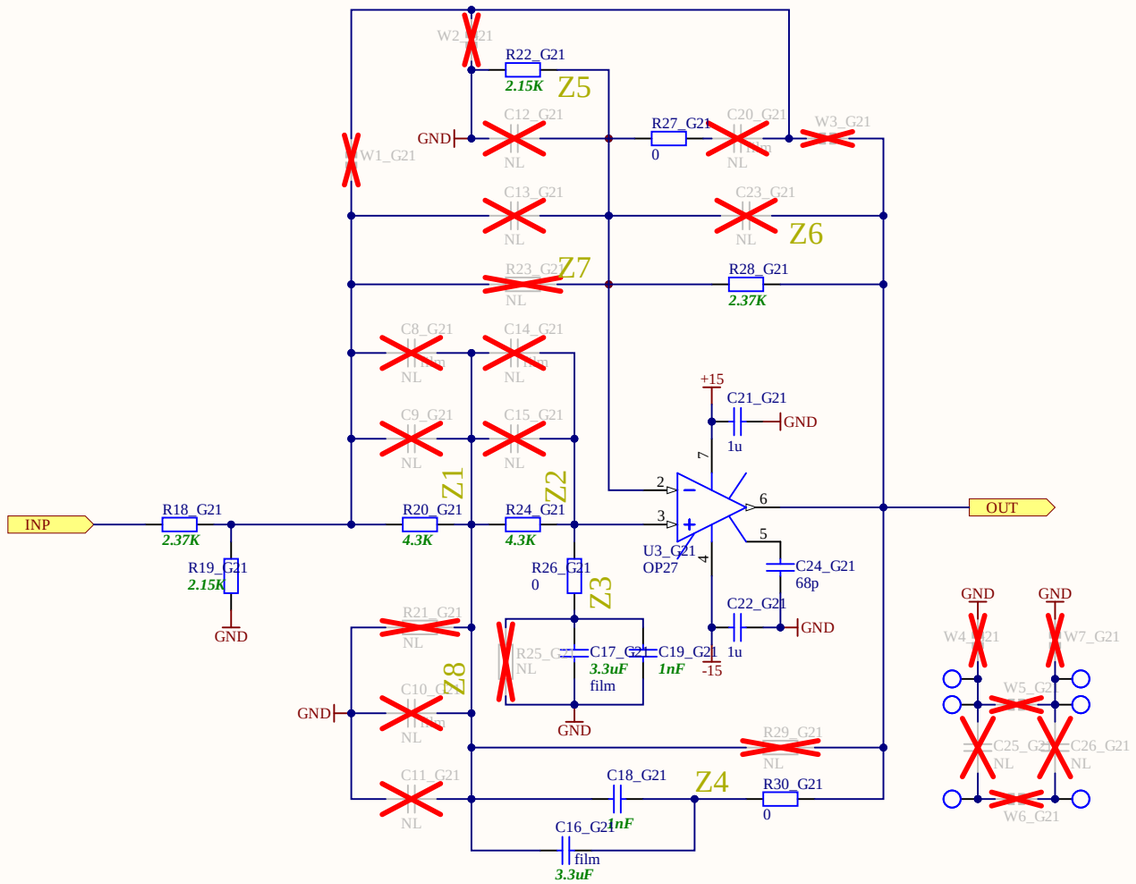
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

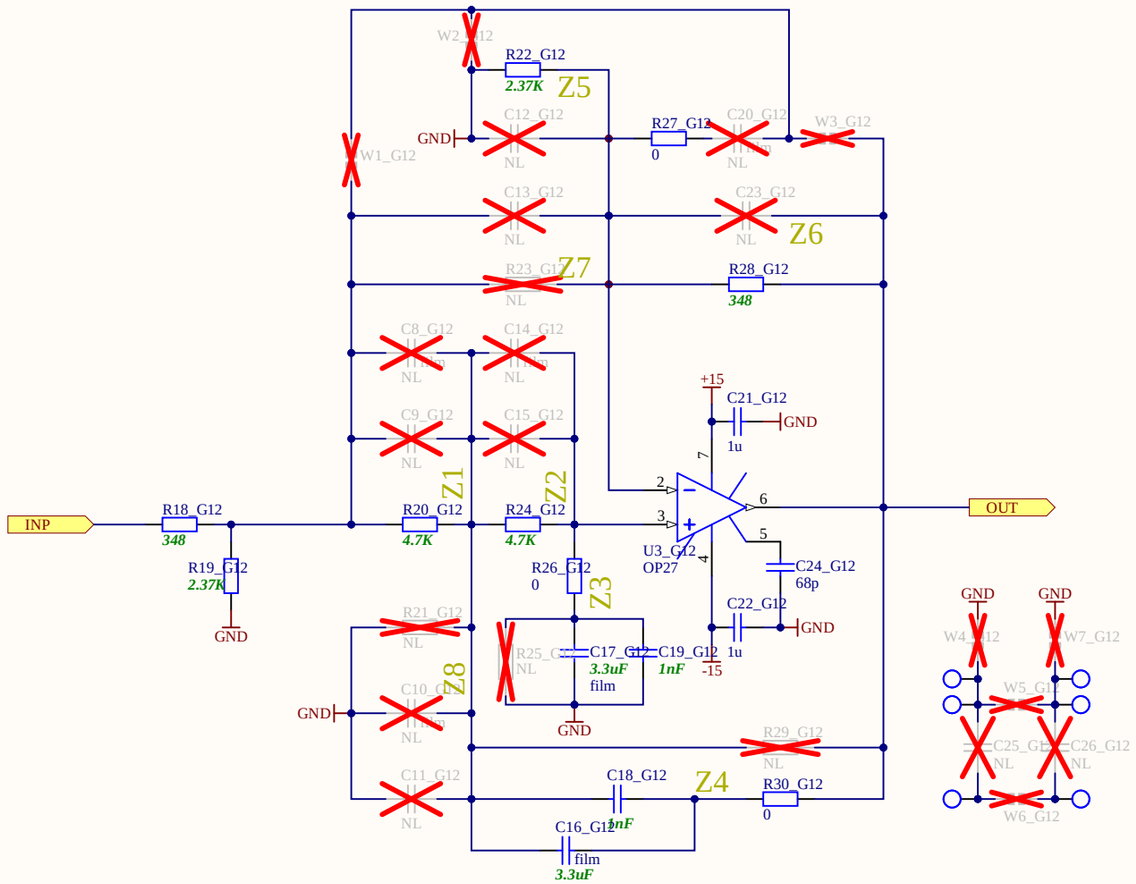
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

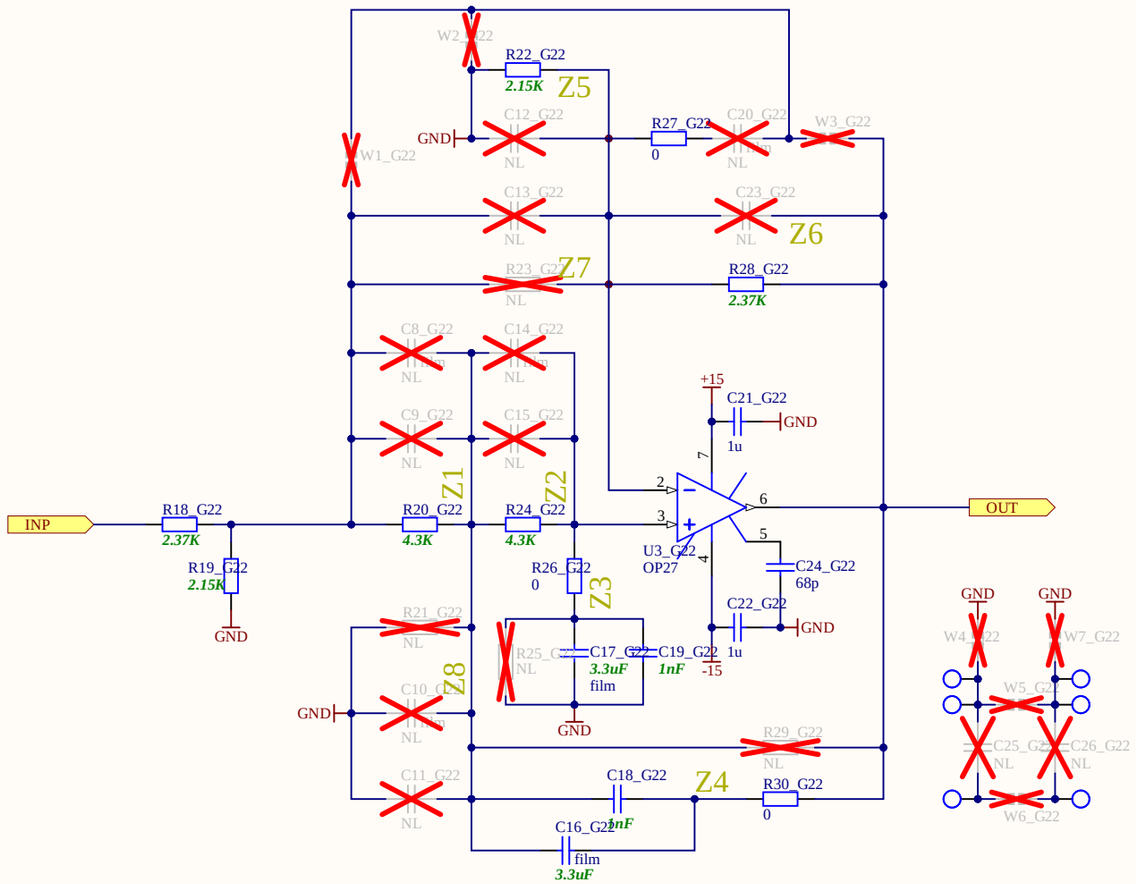
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

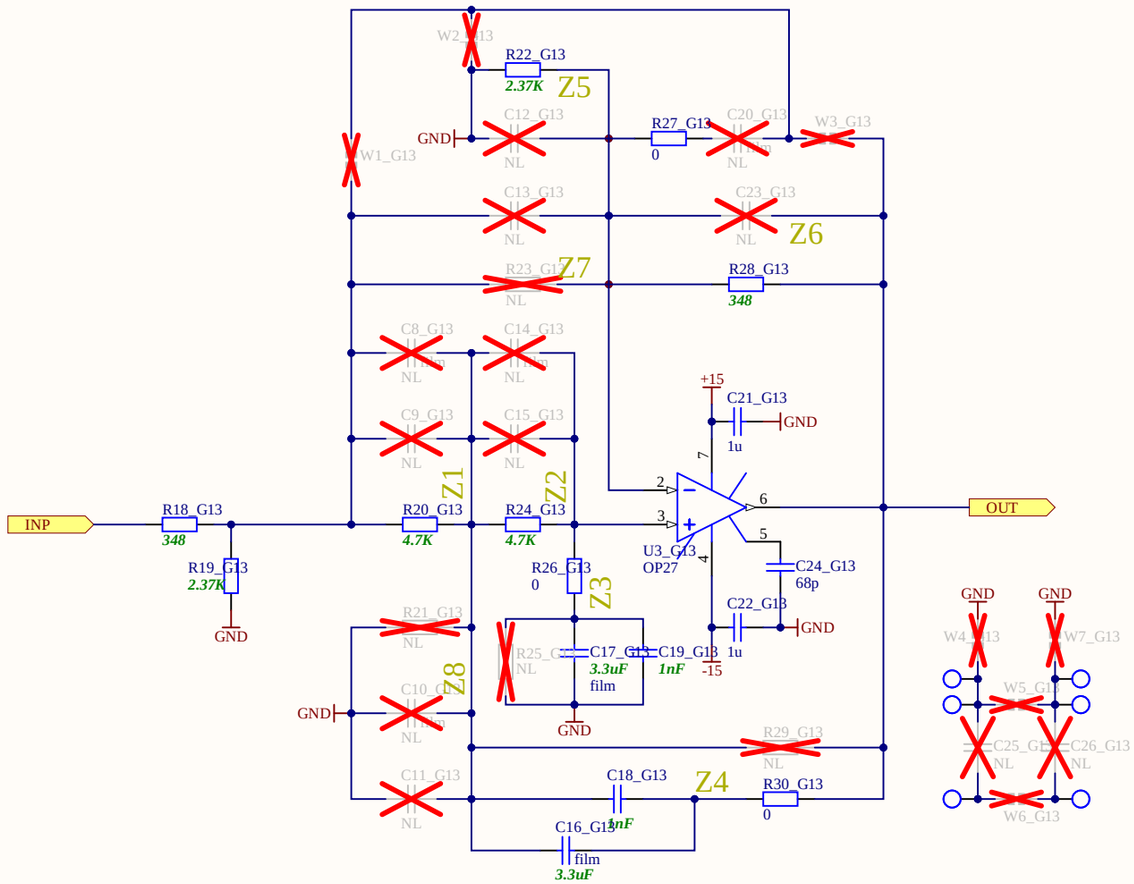
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title	**Filter Board Generic Filter**		
Size B	Number D2500203		Revision 1
Date: 8/15/2025		Sheet 3of 3	
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

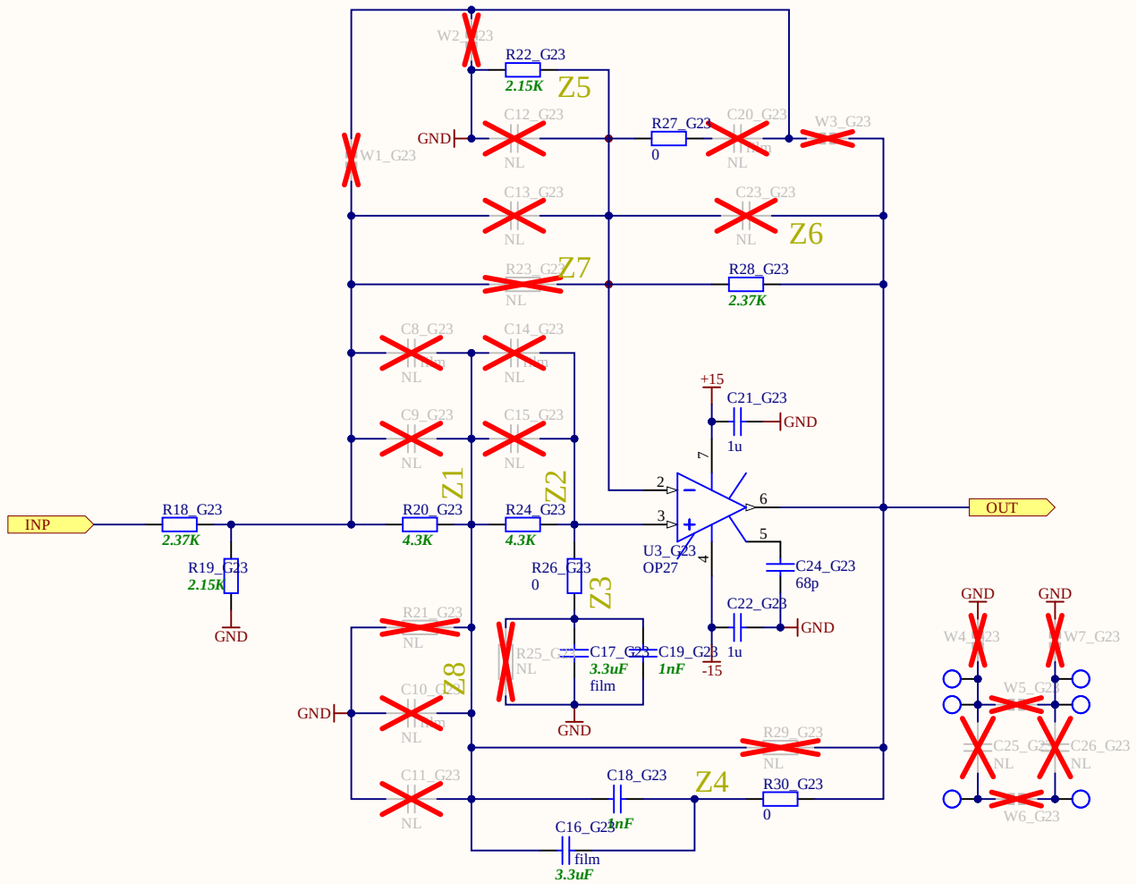
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

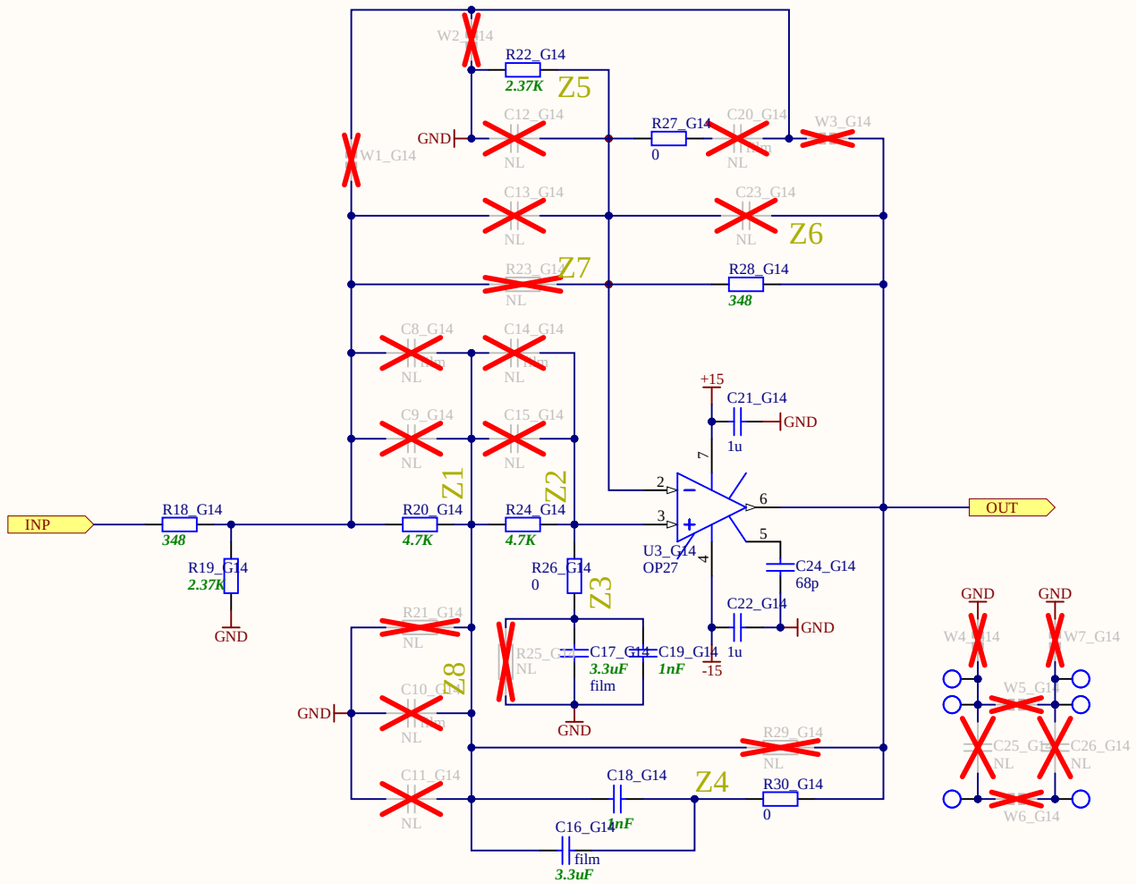
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title	**Filter Board Generic Filter**		
Size B	Number D2500203		Revision 1
Date: 8/15/2025		Sheet 3of 3	
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

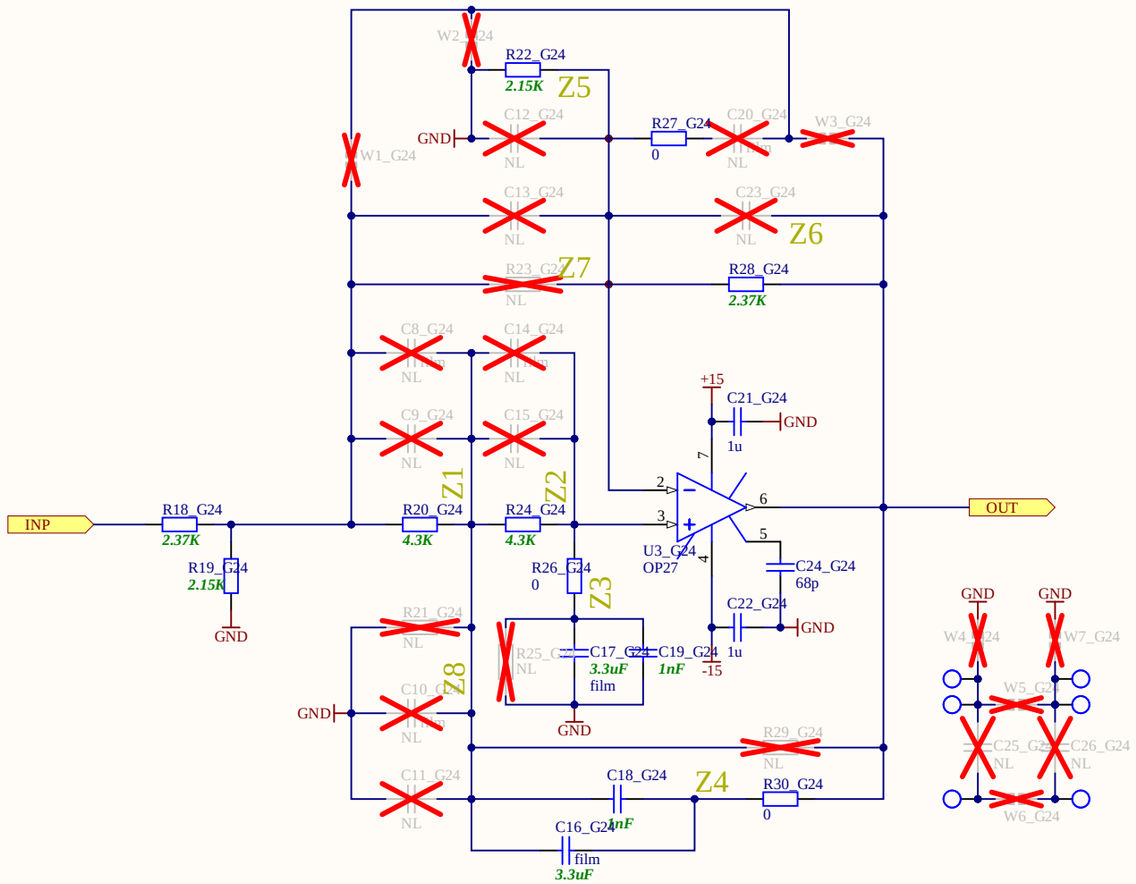
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: LP10Hz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

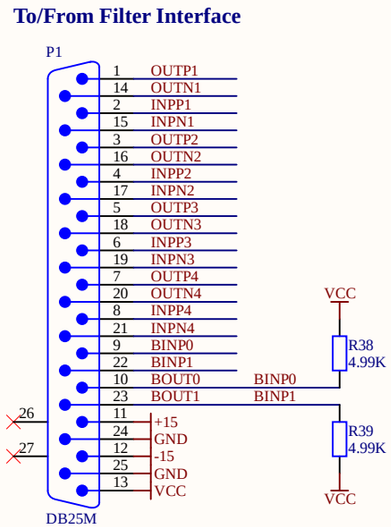
Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

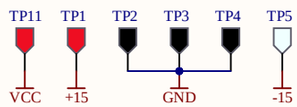
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

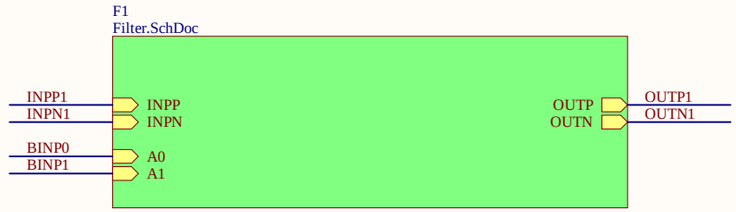
C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

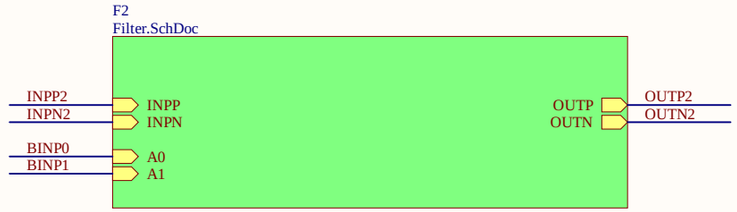
Variant: LP10Hz

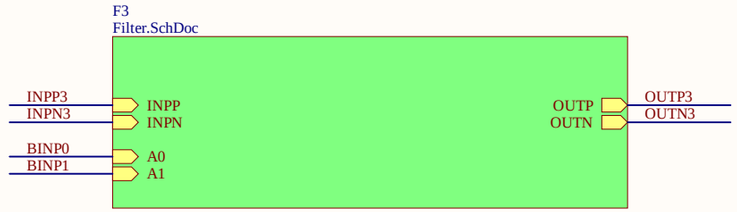
Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

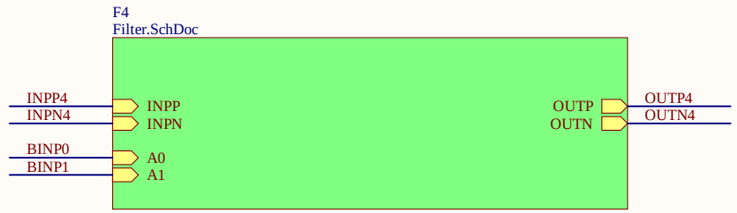












Variant: HP1kHz

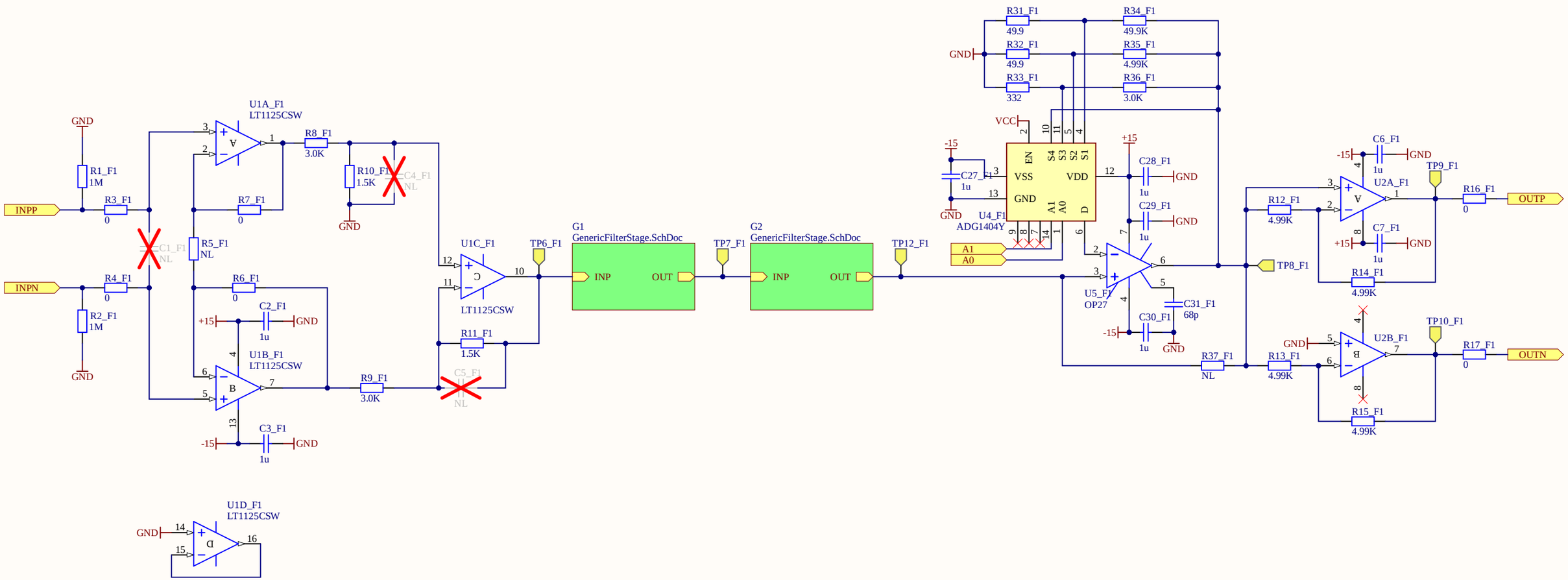
Title	**Filter Board Template: Top**		
Size: B	Number: D2500203		Revision: 1
Date: 8/15/2025		Sheet 1of 3	
File: C:\Users\..\FilterBoardTemplate1.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: HP1kHz

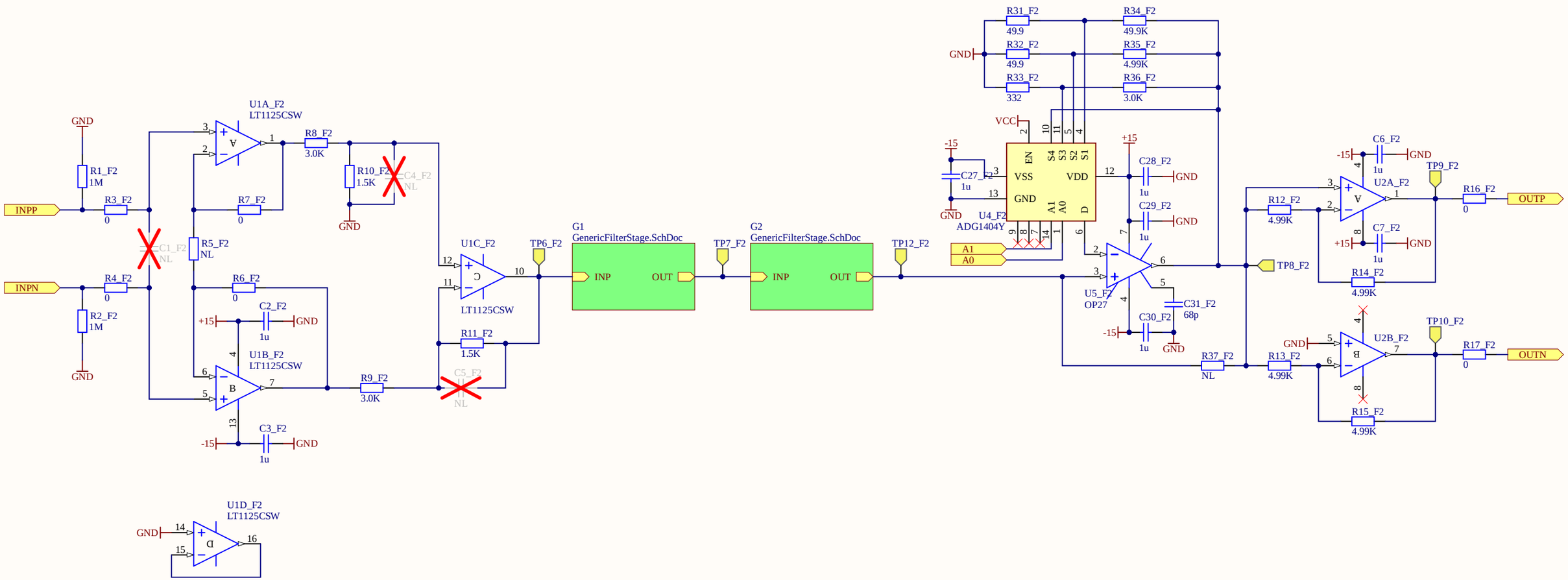
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: HP1kHz

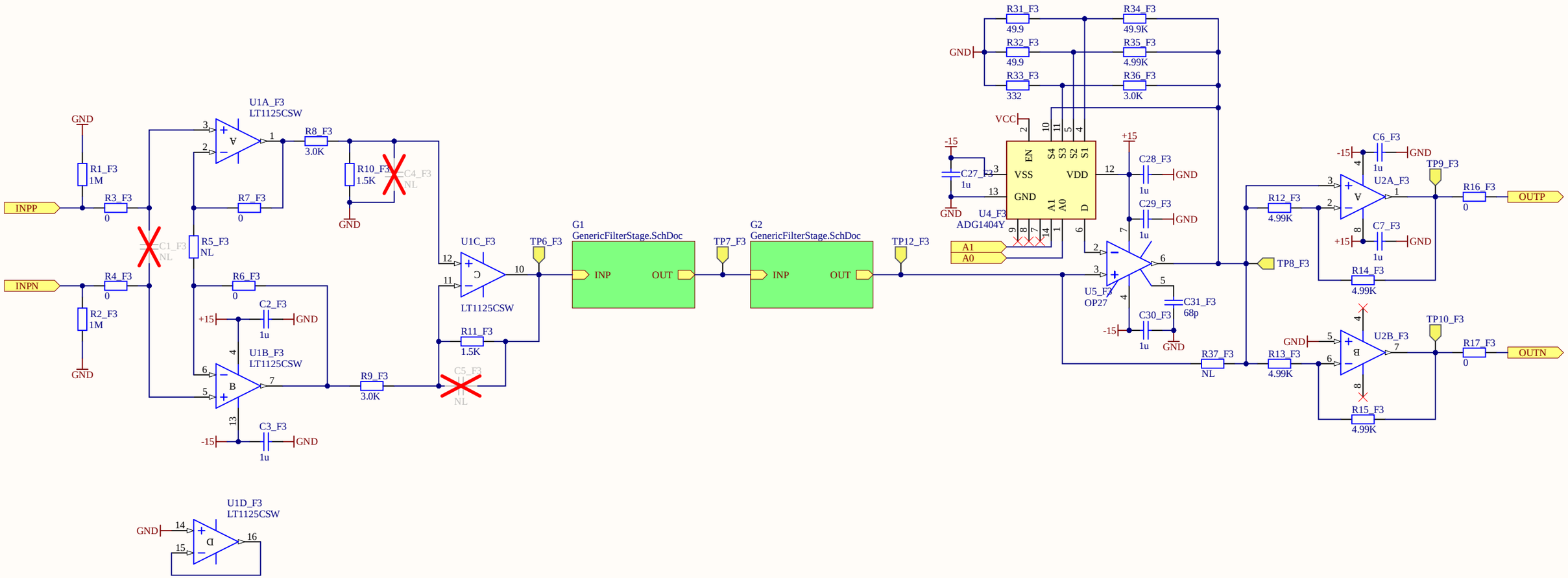
Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: HP1kHz

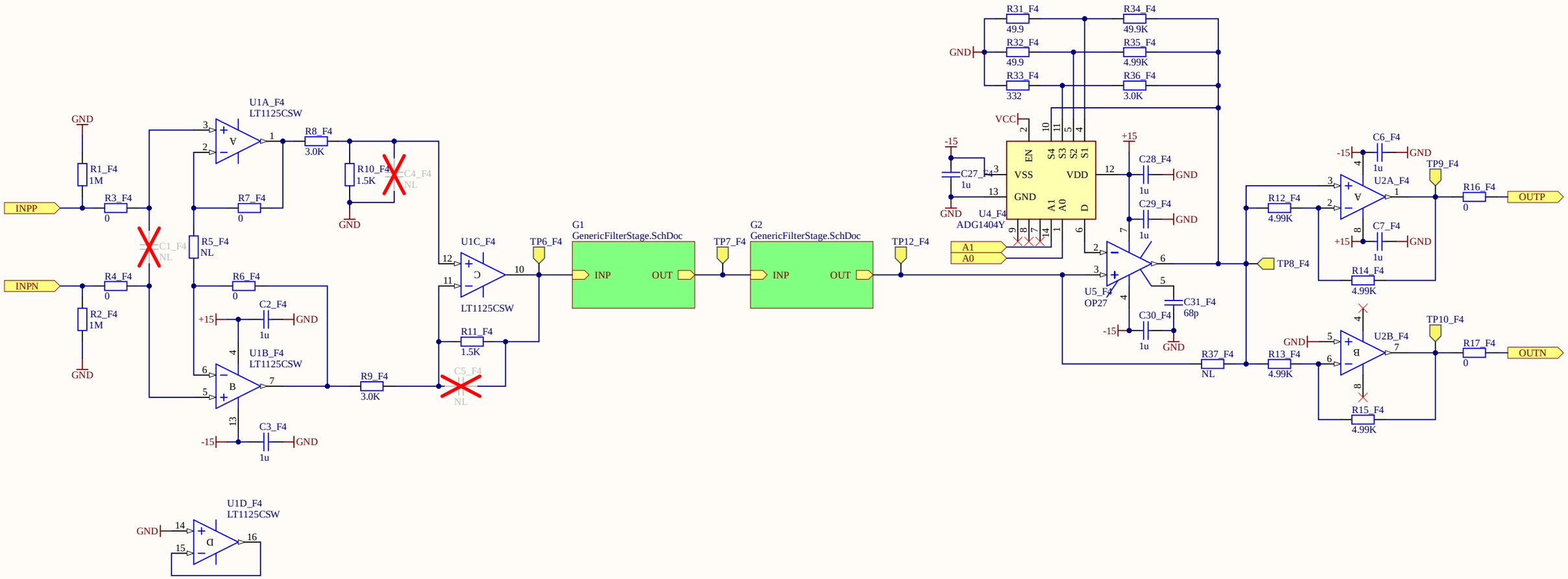
Title: **Filter Channel**			
Size: B	Number: D2500203		Revision: 1
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

Overall Gain = 0.5 from INPP-INPN to TP6

Nominal Gain of 1 through Filters

Selectable Gain of 1, 10, 100, and 1000

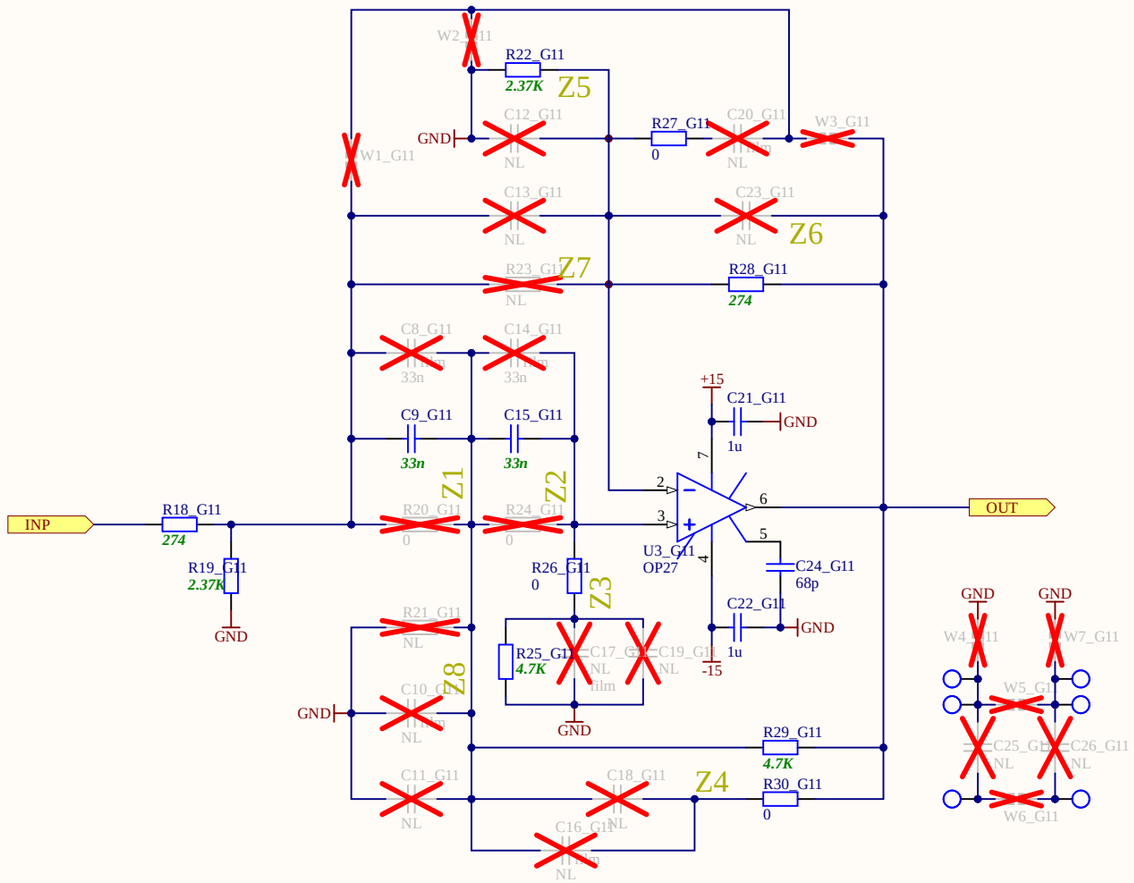
Overall Gain = 2 from TP8 to OUTP-OUTN



Variant: HP1kHz

Title	**Filter Channel**		
Size: B	Number: D2500203	Revision: 1	
Date: 8/15/2025		Sheet 2 of 3	
File: C:\Users\..\Filter.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

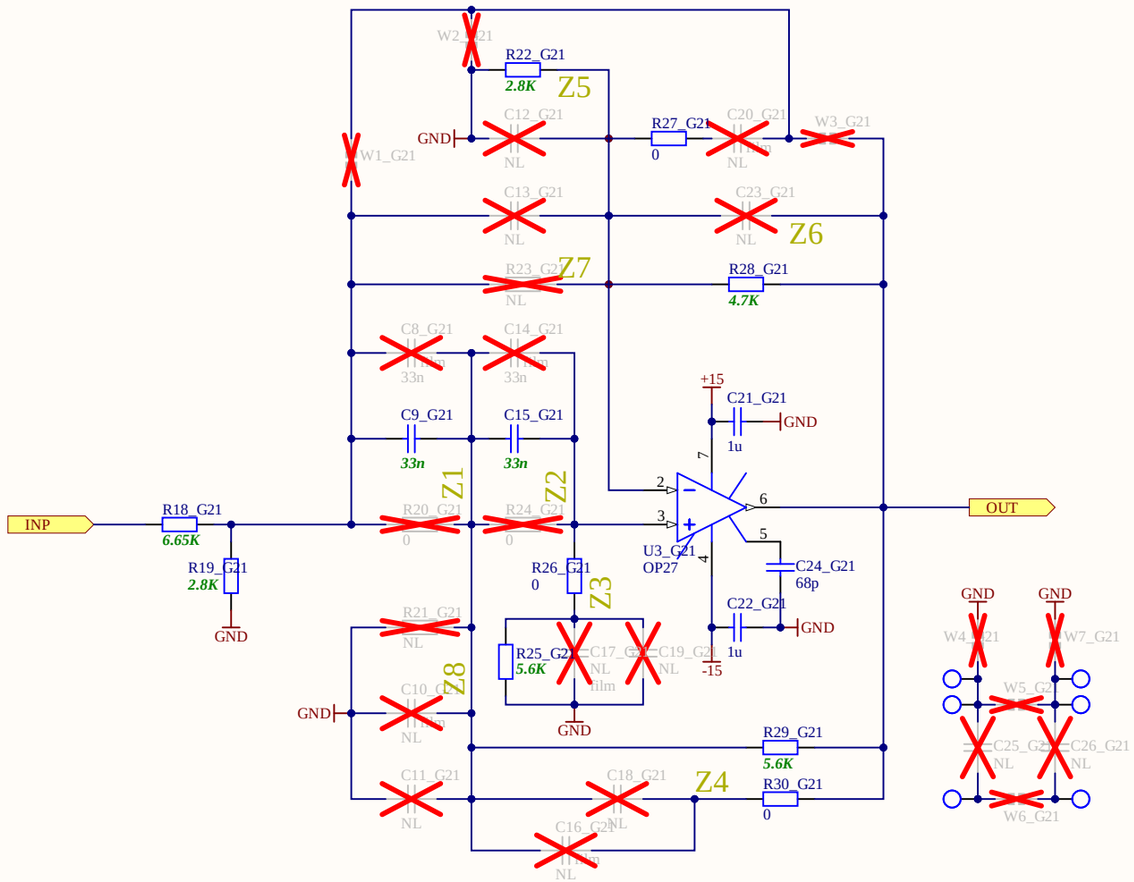
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title	**Filter Board Generic Filter**		
Size B	Number D2500203		Revision 1
Date: 8/15/2025		Sheet 3of 3	
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg	

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

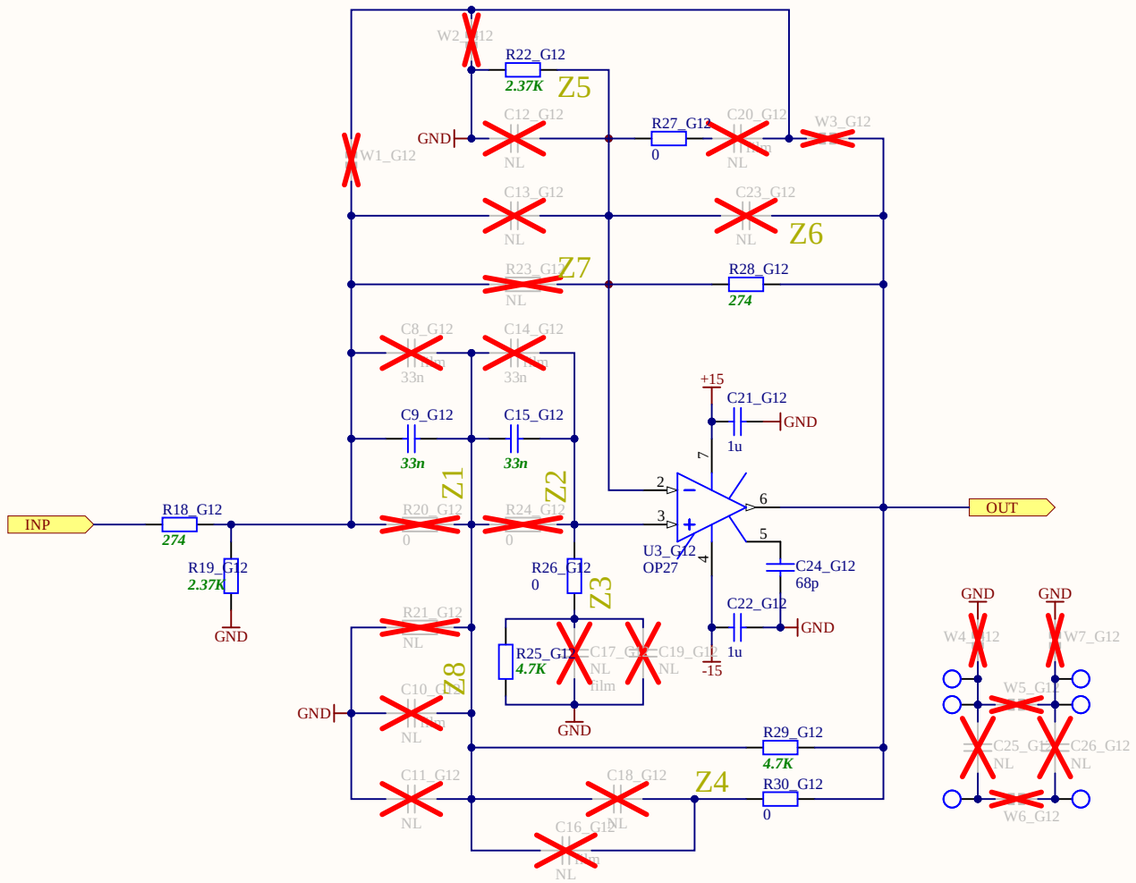
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

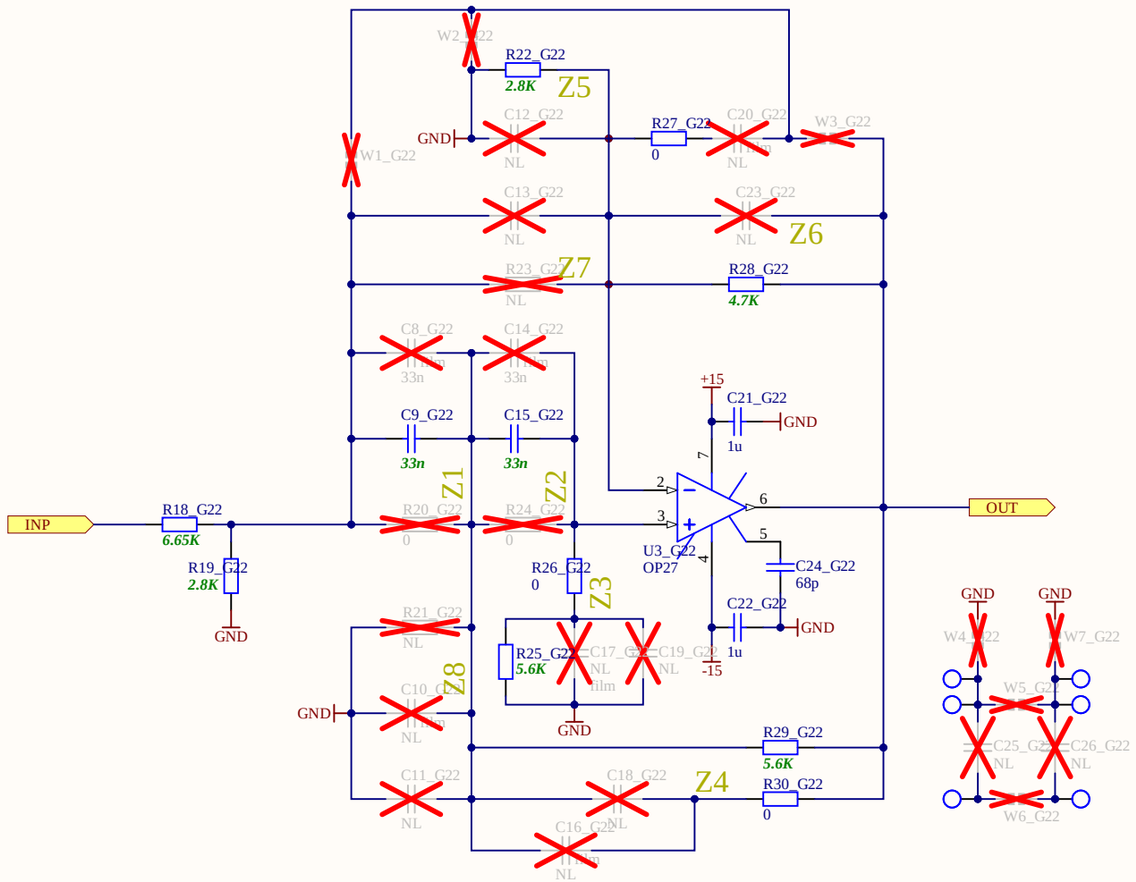
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

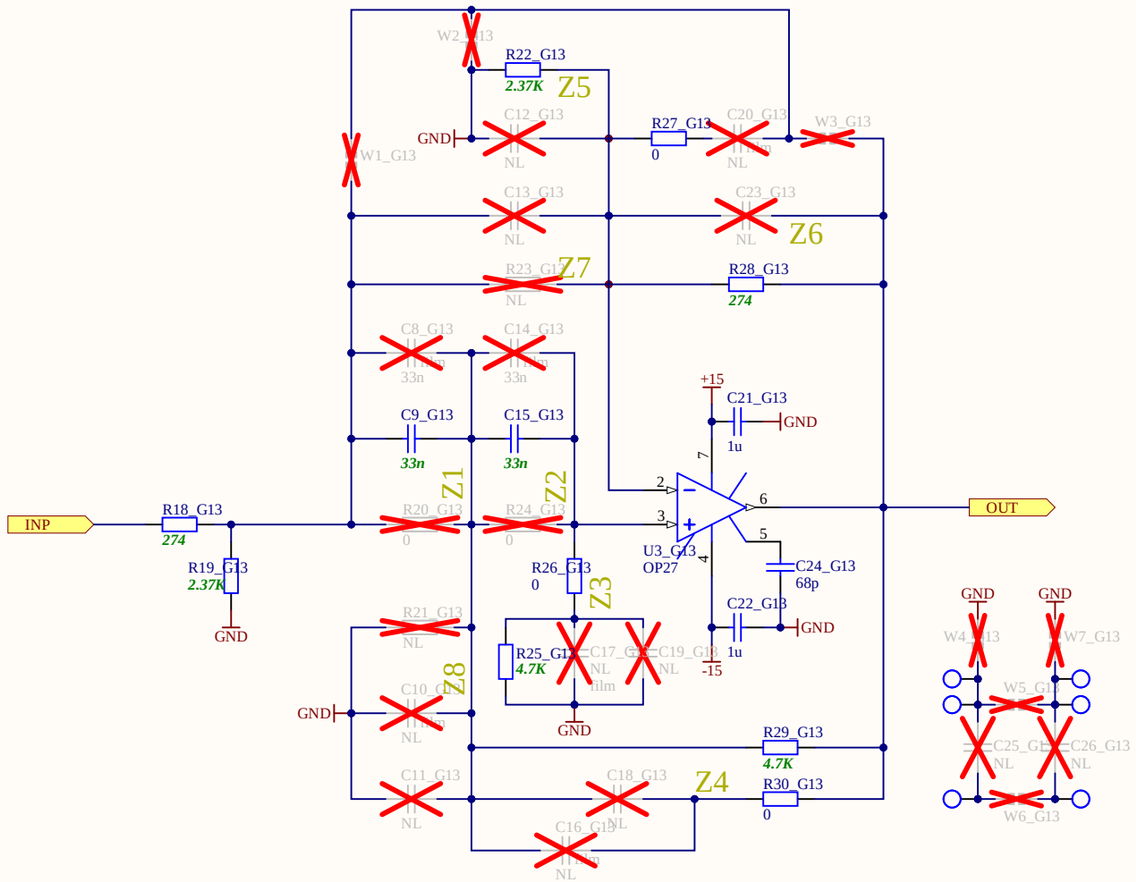
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

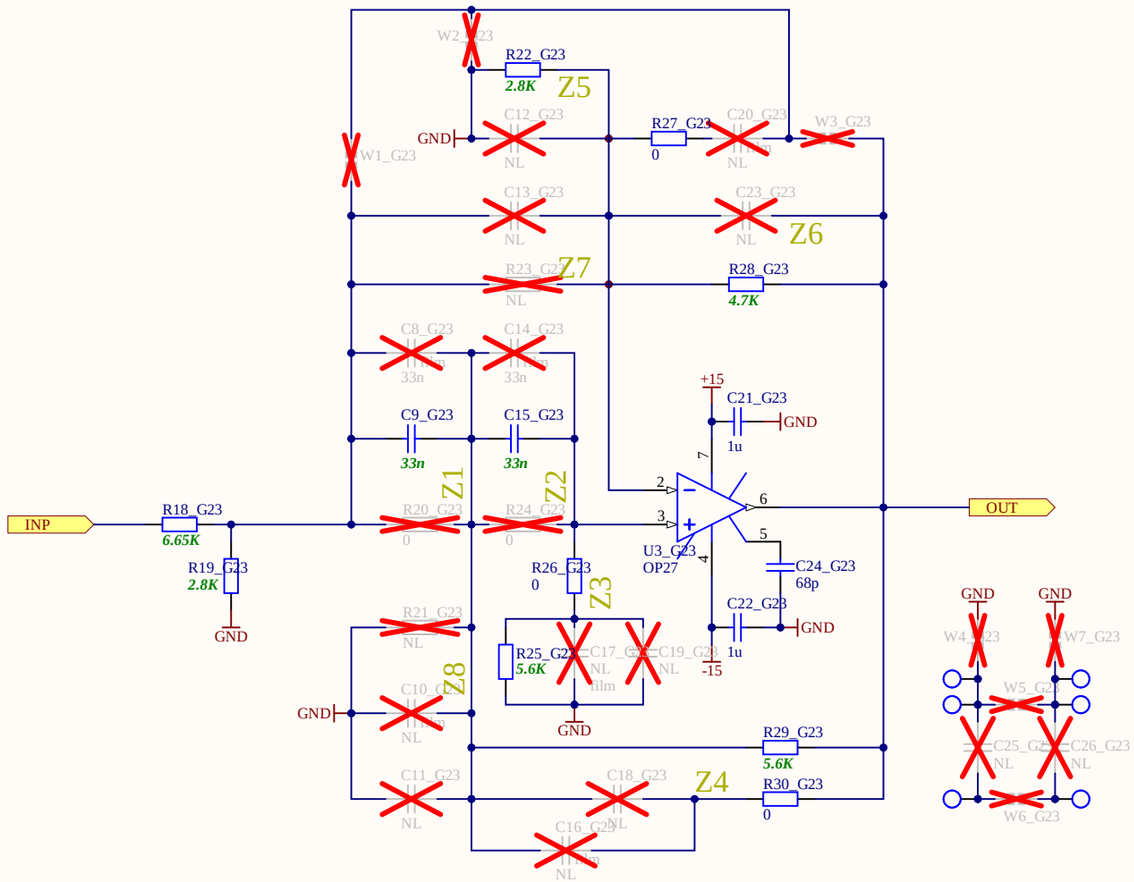
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

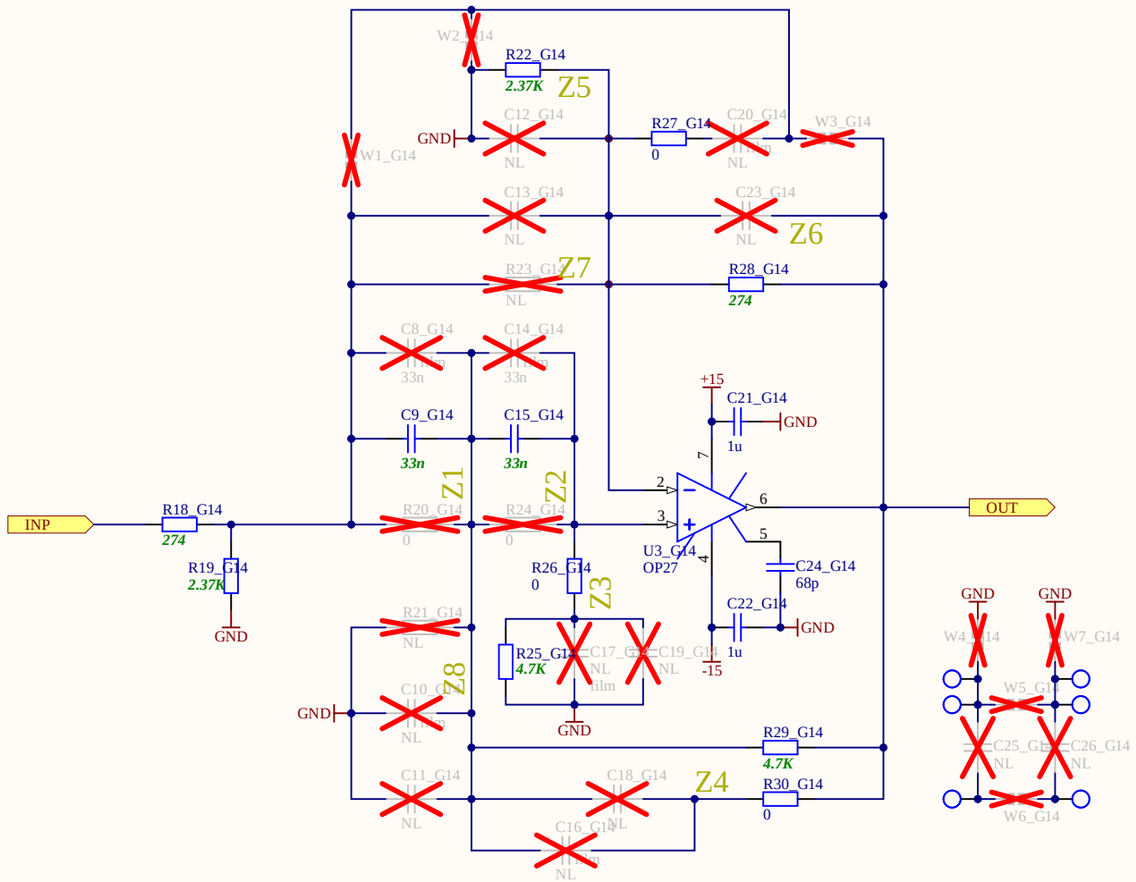
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

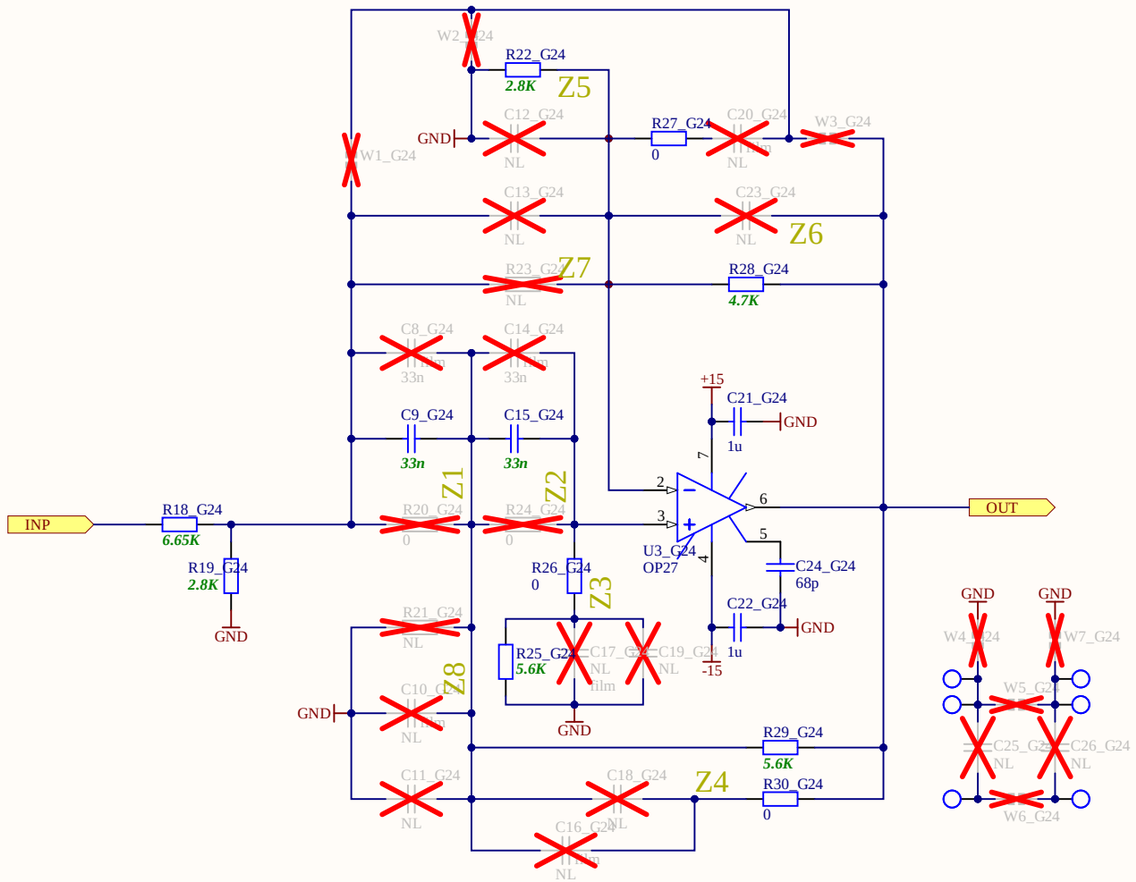
High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg

generic filter stage



AC coupling at 0.1Hz: Z1 = 20uF & Z8 = 78.7kΩ

DC coupling at 0.1Hz: Z1 = 78.7kΩ & Z8 = 20uF

Low pass at 10Hz (4th order Butterworth):
stage 1: Z1 = Z2 = 4.7kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.37kΩ,
Z6 = 348Ω, R18 = 348Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 4.3kΩ, Z3 = Z4 = 3.3uF, Z5 = 2.15kΩ,
Z6 = 2.37kΩ, R18 = 2.37kΩ & R19 = 2.15kΩ

High pass at 1kHz (4th order Butterworth):
stage 1: Z1 = Z2 = 33nF, Z3 = Z4 = 4.7kΩ, Z5 = 2.37kΩ,
Z6 = 274Ω, R18 = 274Ω & R19 = 2.37kΩ
stage 2: Z1 = Z2 = 33nF, Z3 = Z4 = 5.6kΩ, Z5 = 2.8kΩ,
Z6 = 4.7kΩ, R18 = 6.65kΩ & R19 = 2.8kΩ

C25 and C26 have large footprints for axial capacitors.
Use as needed instead of smaller footprint capacitors.

Variant: HP1kHz

Title: **Filter Board Generic Filter**		
Size: B	Number: D2500203	Revision: 1
Date: 8/15/2025		Sheet 3of 3
File: C:\Users\..\GenericFilterStage.SchDoc		Drawn By: Daniel Sigg