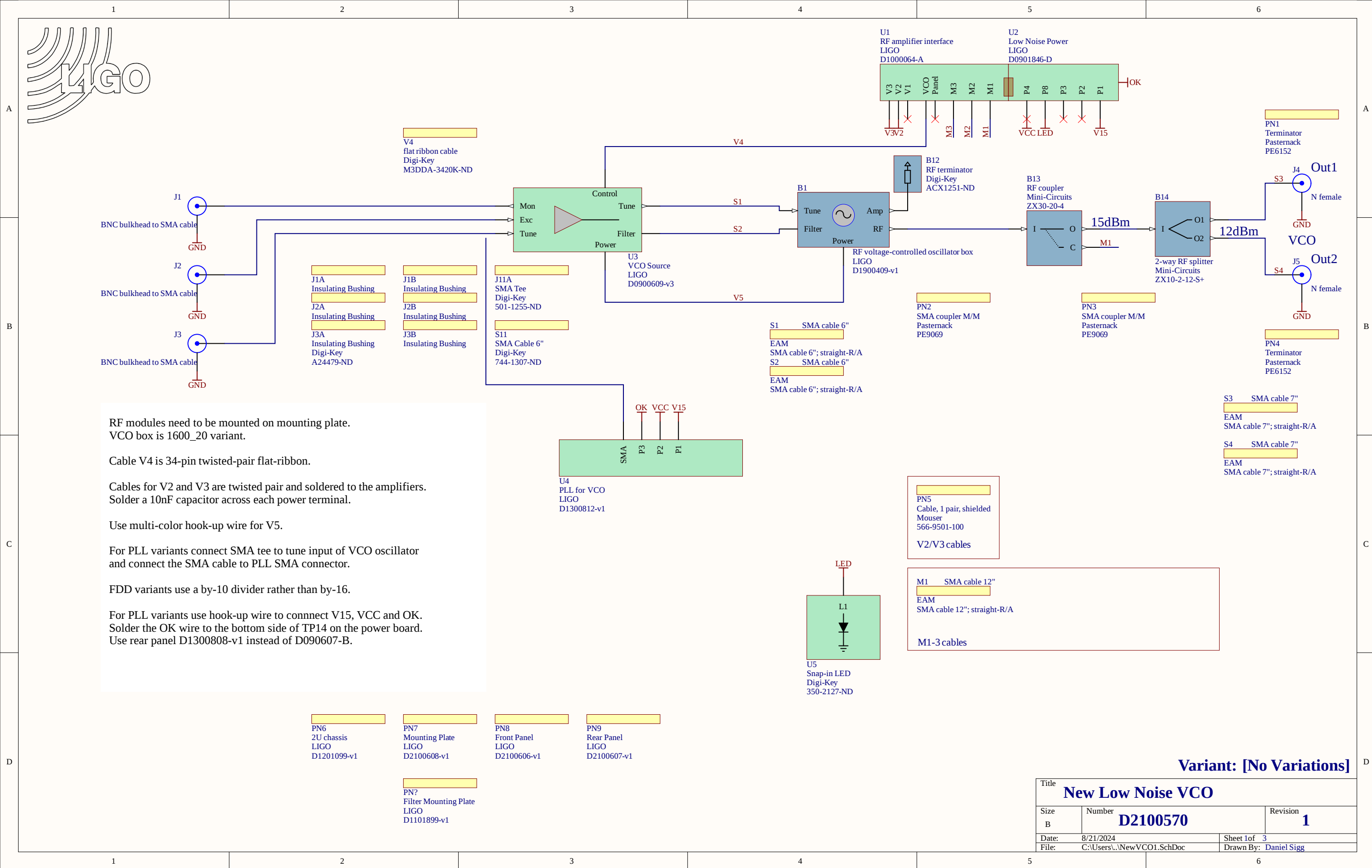
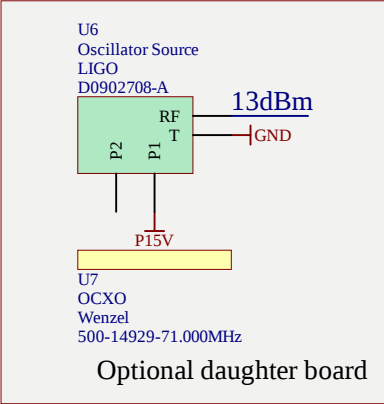
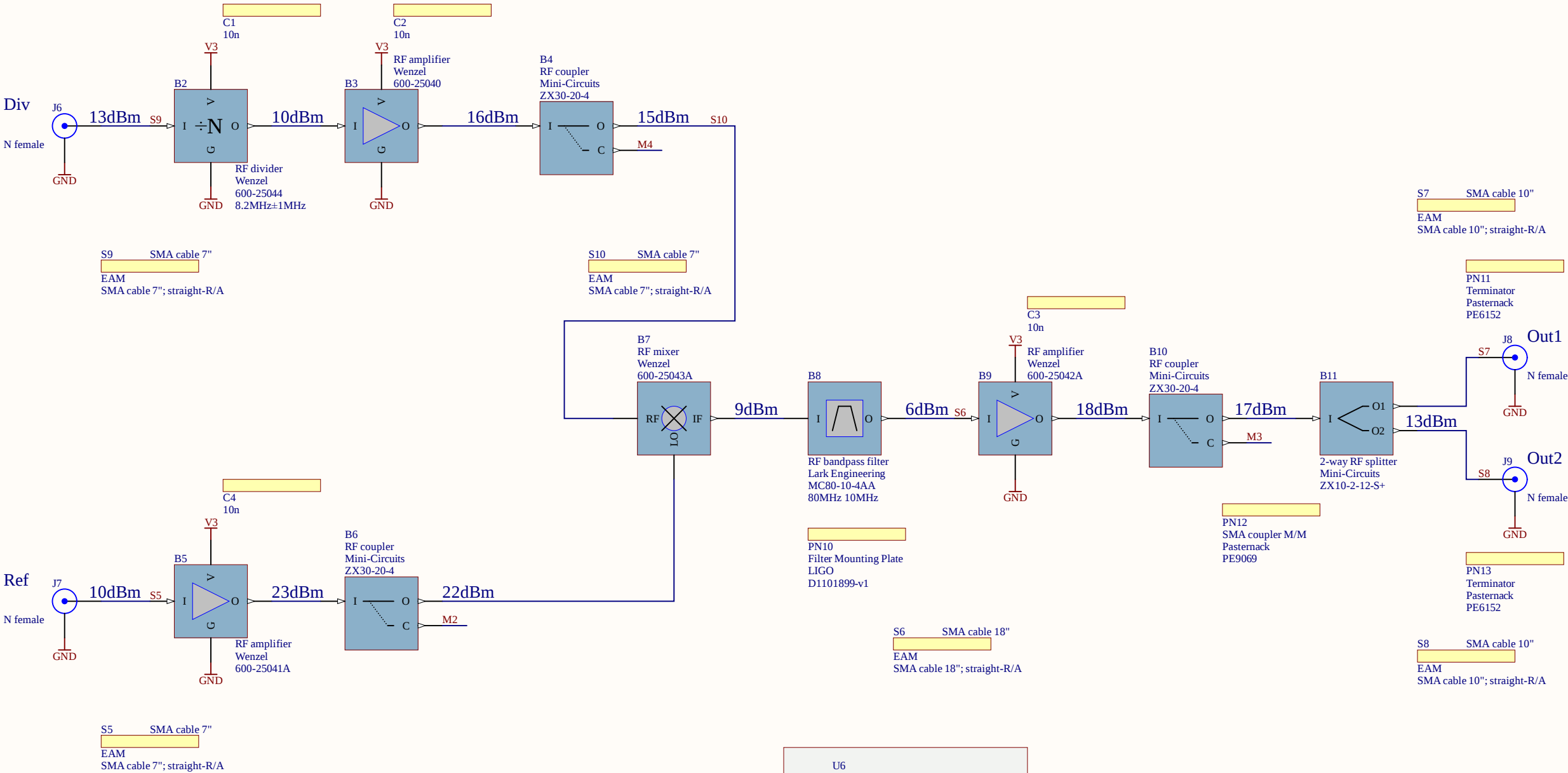


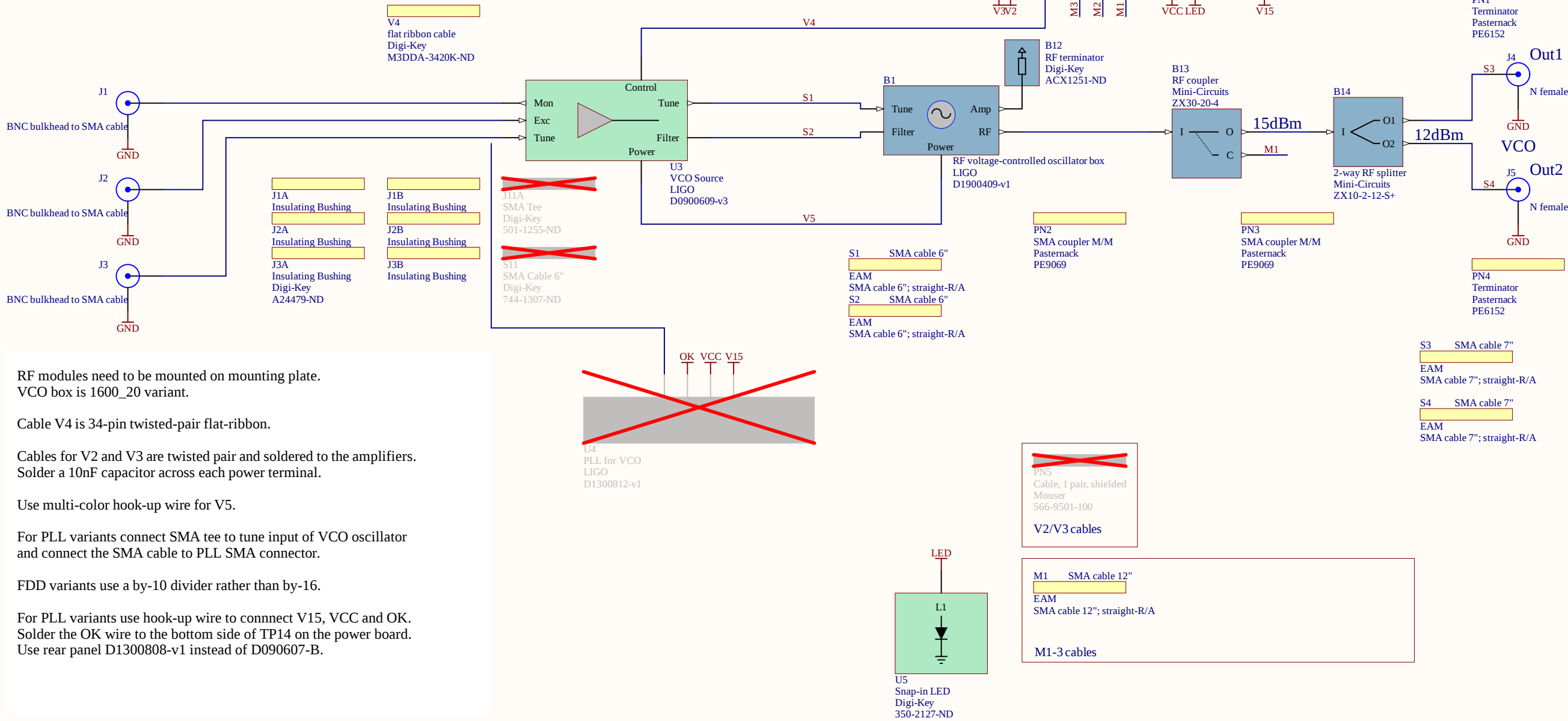




- E1 standoff, 1", f/m
- E2 standoff, 1", f/m
- E3 standoff, 1", f/m
- E4 standoff, 1", f/m

Variant: [No Variations]		
Frequency Difference Divider		
Size	Number	Revision
B	D2100570	1
Date:	8/21/2024	Sheet 2 of 3
File:	C:\Users\...\NewVCO2.SchDoc	Drawn By: Daniel Sigg

	1	2	3	4	5	6
A	H1Handle, 3" H2Handle, 3" Mouser 534-9109 H11Ferrule H12Ferrule H21Ferrule H30Ferrule Mouser 534-9121 H46#6-32 1/4" flat H55#6-32 1/4" flat H64#6-32 1/4" flat H73#6-32 1/4" flat H77#6-32 1/4" flat H80#6-32 1/4" flat McMaster-Carr 91099A205 H85#6-32 3/8" flat H88#6-32 3/8" flat H91#6-32 3/8" flat H94#6-32 3/8" flat McMaster-Carr 91099A215 Enclosure E5#4-40 3/16" flat E7#4-40 3/16" flat E9#4-40 3/16" flat E11#4-40 3/16" flat E13#4-40 3/16" flat E15#4-40 3/16" flat E17#4-40 3/16" flat E19#4-40 3/16" flat E21#4-40 3/16" flat E23#4-40 3/16" flat E25#4-40 3/16" flat E27#4-40 3/16" flat E29#4-40 3/16" flat E31#4-40 3/16" flat E33#4-40 3/16" flat E35#4-40 3/16" flat E37#4-40 3/16" flat E39#4-40 3/16" flat E41#4-40 3/16" flat E43#4-40 3/16" flat E45#4-40 3/16" flat E47#4-40 3/16" flat E6#4-40 3/16" flat E8#4-40 3/16" flat E10#4-40 3/16" flat E12#4-40 3/16" flat E14#4-40 3/16" flat E16#4-40 3/16" flat E18#4-40 3/16" flat E20#4-40 3/16" flat E22#4-40 3/16" flat E24#4-40 3/16" flat E26#4-40 3/16" flat E28#4-40 3/16" flat E30#4-40 3/16" flat E32#4-40 3/16" flat E34#4-40 3/16" flat E36#4-40 3/16" flat E38#4-40 3/16" flat E40#4-40 3/16" flat E42#4-40 3/16" flat E44#4-40 3/16" flat E46#4-40 3/16" flat E48#4-40 3/16" flat	H3#2-56 flat head, 3/8" McMaster-Carr 91771A105 H13#2-56 flat head, 3/8" H22#2-56 flat head, 3/8" H31#2-56 flat head, 3/8" H39#2-56 flat head, 3/8" H47#2-56 flat head, 3/8" H56#2-56 flat head, 3/8" H65#2-56 flat head, 3/8" H74#2-56 flat head, 3/8" H78#2-56 flat head, 3/8" H81#2-56 flat head, 3/8" H83#2-56 flat head, 3/8" H86#2-56 flat head, 3/8" H89#2-56 flat head, 3/8" H92#2-56 flat head, 3/8" H95#2-56 flat head, 3/8" Wenzel/Filter H4#2-56 pan head, 1/4" McMaster-Carr 90272A077 H14#2-56 pan head, 1/4" H23#2-56 pan head, 1/4" H32#2-56 pan head, 1/4" H40#2-56 pan head, 1/4" H48#2-56 pan head, 1/4" H57#2-56 pan head, 1/4" H66#2-56 pan head, 1/4" H5#0-80 flat head, 1/4" McMaster-Carr 91771A055 H15#0-80 flat head, 1/4" H24#0-80 flat head, 1/4" H33#0-80 flat head, 1/4" H49#2-56 pan head, 1/4" H58#2-56 pan head, 1/4" H67#2-56 pan head, 1/4" H75#2-56 pan head, 1/4"	H6M2.5 pan head, 8mm McMaster-Carr 92005A069 H16M2.5 pan head, 8mm H25M2.5 pan head, 8mm H34M2.5 pan head, 8mm H41M2.5 pan head, 8mm H50M2.5 pan head, 8mm H59M2.5 pan head, 8mm H68M2.5 pan head, 8mm Couplers/Splitter H7M2.5 washer McMaster-Carr 93475A196 H17M2.5 washer H26M2.5 washer H35M2.5 washer H42M2.5 washer H51M2.5 washer H60M2.5 washer H69M2.5 washer H76M2.5 washer H79M2.5 washer H82M2.5 washer H84M2.5 washer H87M2.5 washer H90M2.5 washer H93M2.5 washer H96M2.5 washer H8M2.5 lock washer McMaster-Carr 93925A220 H18M2.5 lock washer H27M2.5 lock washer H36M2.5 lock washer H43M2.5 lock washer H52M2.5 lock washer H61M2.5 lock washer H70M2.5 lock washer H9M2.5 nut McMaster-Carr 90591A113 H19M2.5 nut H28M2.5 nut H37M2.5 nut H44M2.5 nut H53M2.5 nut H62M2.5 nut H71M2.5 nut H10#4 washer, 62mil McMaster-Carr 98370A005 H20#4 washer, 62mil H29#4 washer, 62mil H38#4 washer, 62mil H45#4 washer, 62mil H54#4 washer, 62mil H63#4 washer, 62mil H72#4 washer, 62mil	H?#4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" Box	Variant: [No Variations] Mounting Hardware Size B Number D2100570 Revision 1 Date: 8/21/2024 File: C:\Users\...\NewVCO3.SchDoc Sheet 3 of 3 Drawn By: Daniel Sigg	D
	1	2	3	4	5	6



RF modules need to be mounted on mounting plate.
VCO box is 1600_20 variant.

Cable V4 is 34-pin twisted-pair flat-ribbon.

Cables for V2 and V3 are twisted pair and soldered to the amplifiers.
Solder a 10nF capacitor across each power terminal.

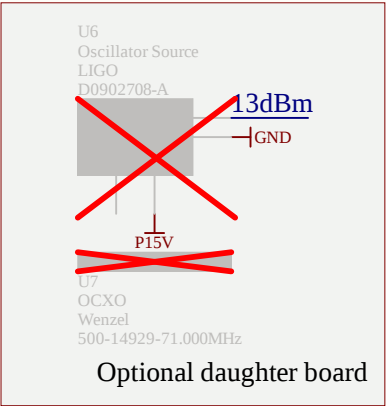
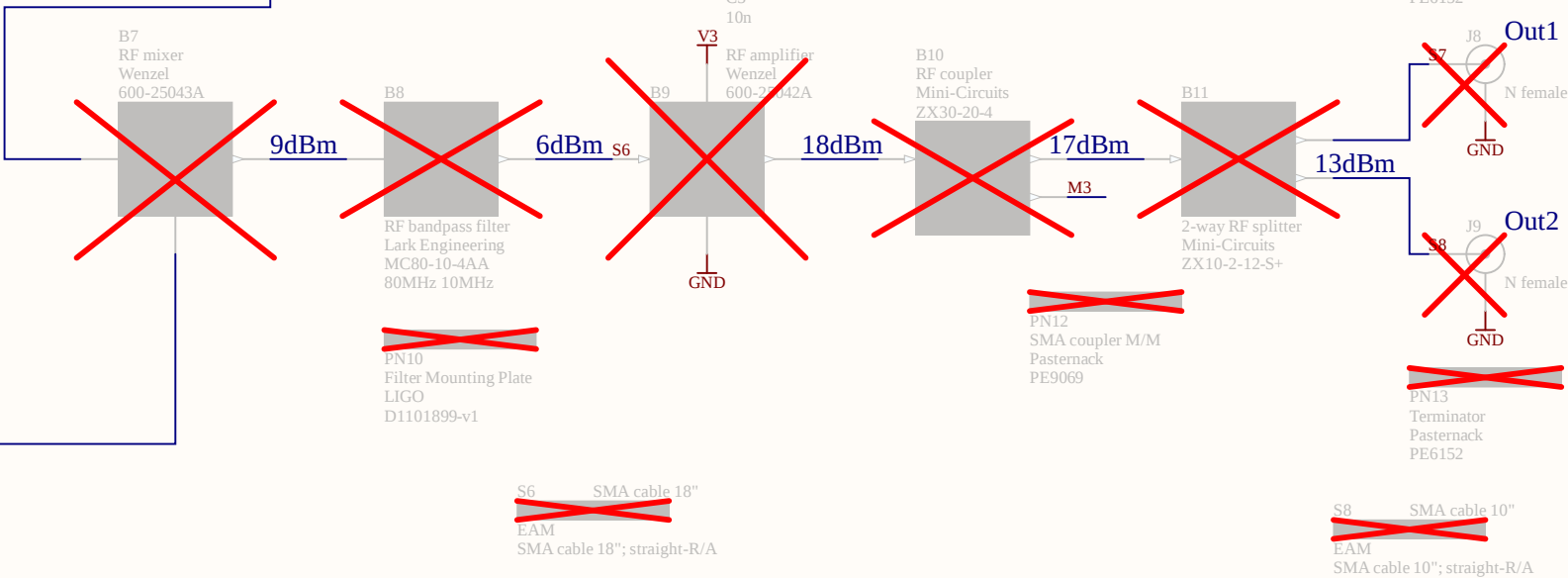
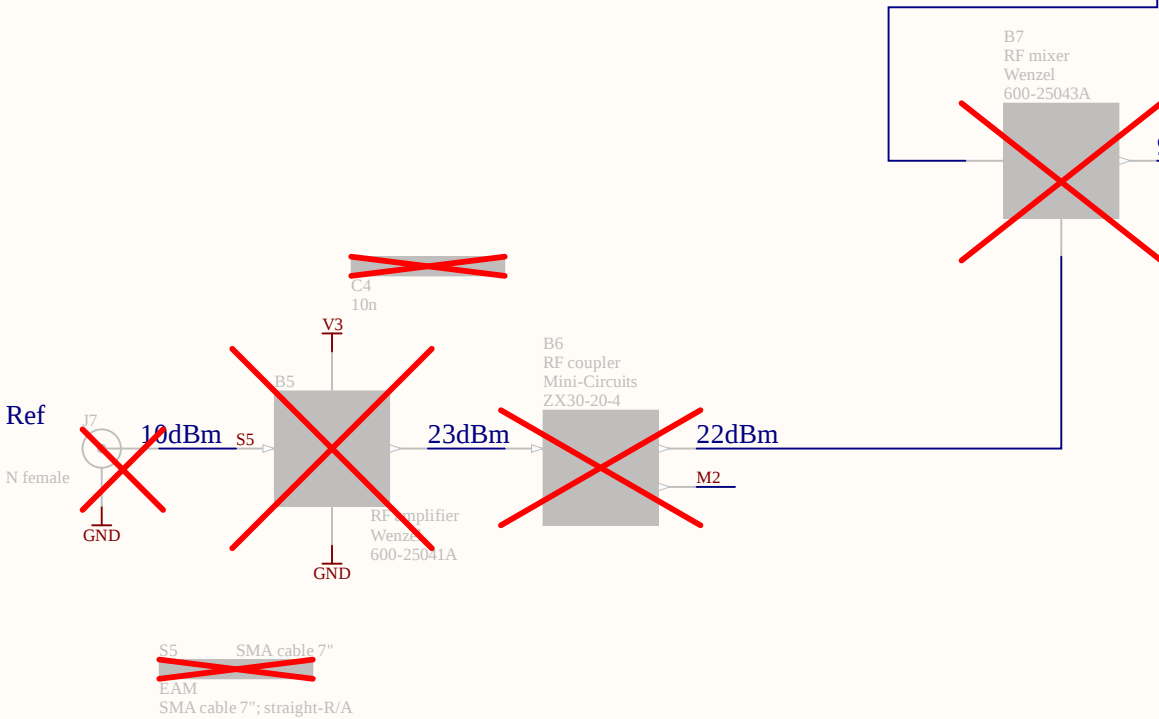
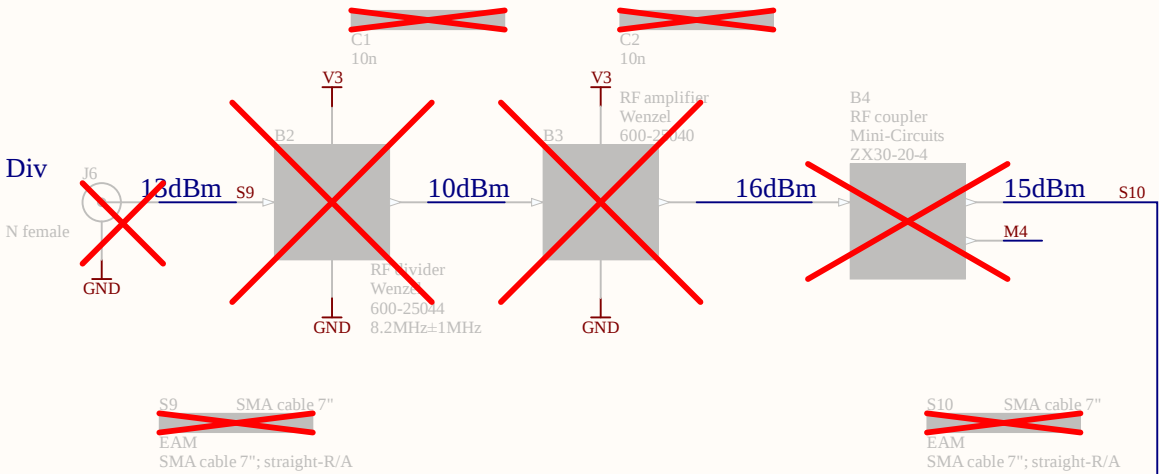
Use multi-color hook-up wire for V5.

For PLL variants connect SMA tee to tune input of VCO oscillator
and connect the SMA cable to PLL SMA connector.

FDD variants use a by-10 divider rather than by-16.

For PLL variants use hook-up wire to connnect V15, VCC and OK.
Solder the OK wire to the bottom side of TP14 on the power board.
Use rear panel D1300808-v1 instead of D090607-B.

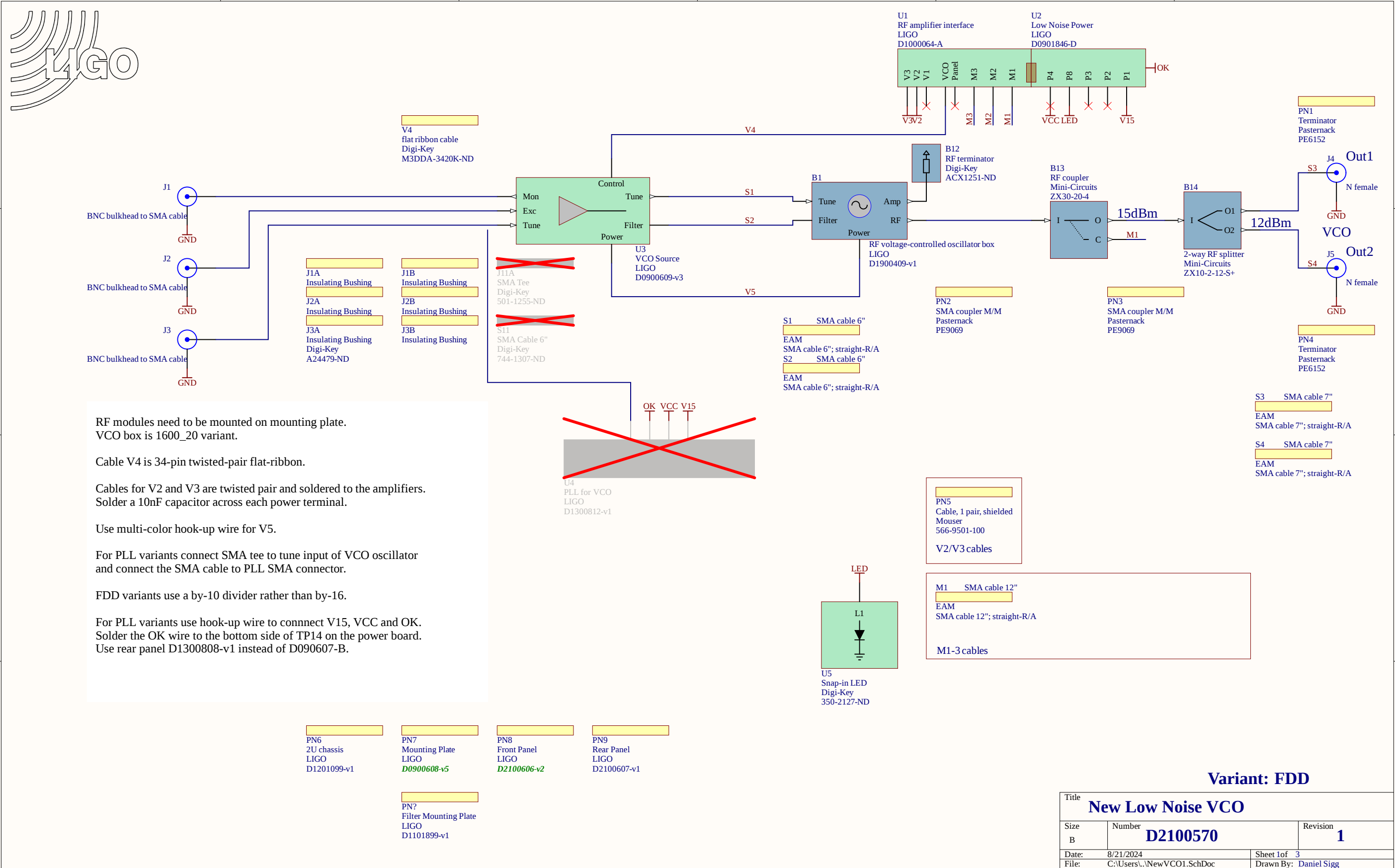
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Size B	Number D2100570	Revision 1
Date: 8/21/2024	Sheet 1 of 3	Drawn By: Daniel Sigg
File: C:\Users\...\NewVCO1.SchDoc		



Variant: Standard

Title		
Frequency Difference Divider		
Size B	Number D2100570	Revision 1
Date:	8/21/2024	Sheet 2 of 3
File:	C:\Users\...\NewVCO2.SchDoc	Drawn By: Daniel Sigg

1		2		3		4		5		6	
H1Handle, 3" H2Handle, 3" Mouser 534-9109 H11Ferrule H12Ferrule H21Ferrule H30Ferrule Mouser 534-9121 H46#6-32 1/4" flat H55#6-32 1/4" flat H64#6-32 1/4" flat H73#6-32 1/4" flat H77#6-32 1/4" flat H80#6-32 1/4" flat McMaster-Carr 91099A205 H85#6-32 3/8" flat H88#6-32 3/8" flat H91#6-32 3/8" flat H94#6-32 3/8" flat McMaster-Carr 91099A215 E5#4-40 3/16" flat E7#4-40 3/16" flat E9#4-40 3/16" flat E11#4-40 3/16" flat E13#4-40 3/16" flat E15#4-40 3/16" flat E17#4-40 3/16" flat E19#4-40 3/16" flat E21#4-40 3/16" flat E23#4-40 3/16" flat E25#4-40 3/16" flat E27#4-40 3/16" flat E29#4-40 3/16" flat E31#4-40 3/16" flat E33#4-40 3/16" flat E35#4-40 3/16" flat E37#4-40 3/16" flat E39#4-40 3/16" flat E41#4-40 3/16" flat E43#4-40 3/16" flat E45#4-40 3/16" flat E47#4-40 3/16" flat E6#4-40 3/16" flat E8#4-40 3/16" flat E10#4-40 3/16" flat E12#4-40 3/16" flat E14#4-40 3/16" flat E16#4-40 3/16" flat E18#4-40 3/16" flat E20#4-40 3/16" flat E22#4-40 3/16" flat E24#4-40 3/16" flat E26#4-40 3/16" flat E28#4-40 3/16" flat E30#4-40 3/16" flat E32#4-40 3/16" flat E34#4-40 3/16" flat E36#4-40 3/16" flat E38#4-40 3/16" flat E40#4-40 3/16" flat E42#4-40 3/16" flat E44#4-40 3/16" flat E46#4-40 3/16" flat E48#4-40 3/16" flat Enclosure H3#2-56 flat head, 3/8" McMaster-Carr 91771A105 H13#2-56 flat head, 3/8" H22#2-56 flat head, 3/8" H31#2-56 flat head, 3/8" H39#2-56 flat head, 3/8" H47#2-56 flat head, 3/8" H56#2-56 flat head, 3/8" H65#2-56 flat head, 3/8" H74#2-56 flat head, 3/8" H78#2-56 flat head, 3/8" H81#2-56 flat head, 3/8" H83#2-56 flat head, 3/8" H86#2-56 flat head, 3/8" H89#2-56 flat head, 3/8" H92#2-56 flat head, 3/8" H95#2-56 flat head, 3/8" H4#2-56 pan head, 1/4" McMaster-Carr 90272A077 H14#2-56 pan head, 1/4" H23#2-56 pan head, 1/4" H32#2-56 pan head, 1/4" H40#2-56 pan head, 1/4" H48#2-56 pan head, 1/4" H57#2-56 pan head, 1/4" H66#2-56 pan head, 1/4" H5#0-80 flat head, 1/4" McMaster-Carr 91771A055 H15#0-80 flat head, 1/4" H24#0-80 flat head, 1/4" H33#0-80 flat head, 1/4" H49#2-56 pan head, 1/4" H58#2-56 pan head, 1/4" H67#2-56 pan head, 1/4" H75#2-56 pan head, 1/4" Wenzel/Filter H6M2.5 pan head, 8mm McMaster-Carr 92005A069 H16M2.5 pan head, 8mm H25M2.5 pan head, 8mm H34M2.5 pan head, 8mm H41M2.5 pan head, 8mm H50M2.5 pan head, 8mm H59M2.5 pan head, 8mm H68M2.5 pan head, 8mm H7M2.5 washer McMaster-Carr 93475A196 H17M2.5 washer H26M2.5 washer H35M2.5 washer H42M2.5 washer H51M2.5 washer H60M2.5 washer H69M2.5 washer H76M2.5 washer H79M2.5 washer H82M2.5 washer H84M2.5 washer H87M2.5 washer H90M2.5 washer H93M2.5 washer H96M2.5 washer H8M2.5 lock washer McMaster-Carr 93925A220 H18M2.5 lock washer H27M2.5 lock washer H36M2.5 lock washer H43M2.5 lock washer H52M2.5 lock washer H61M2.5 lock washer H70M2.5 lock washer H9M2.5 nut McMaster-Carr 90591A113 H19M2.5 nut H28M2.5 nut H37M2.5 nut H44M2.5 nut H53M2.5 nut H62M2.5 nut H71M2.5 nut H10#4 washer, 62mil McMaster-Carr 98370A005 H20#4 washer, 62mil H29#4 washer, 62mil H38#4 washer, 62mil H45#4 washer, 62mil H54#4 washer, 62mil H63#4 washer, 62mil H72#4 washer, 62mil Couplers/Splitter H?#4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" Box H98#6-32 pan, lock washer, 5/16" McMaster-Carr 96909A445 H99#6-32 pan, lock, 5/16" H100#6-32 pan, lock, 5/16" H101#6-32 pan, lock, 5/16" H102#6-32 pan, lock, 5/16" H103#6-32 pan, lock, 5/16" H104#6-32 pan, lock, 5/16" H105#6-32 pan, lock, 5/16" H106#6-32 pan, lock, 5/16" H?board support Digi-Key 36-9042-ND H?board support E49#6-32 1/4" flat E52#6-32 1/4" flat E55#6-32 1/4" flat E58#6-32 1/4" flat E?#6-32 1/4" flat E64BNC lock washer E66BNC nut E67BNC lock washer E68BNC nut E69BNC lock washer E70BNC nut Base plate/PCBs H97#6-32 1/4" flat McMaster-Carr 91099A205 E50BNC lock washer E53BNC nut E56BNC lock washer E59BNC nut E61BNC lock washer E63BNC nut Digi-Key A97566-ND E51BNC lock washer E54BNC nut E57BNC lock washer E60BNC nut E62BNC lock washer Digi-Key A97567-ND E65BNC nut PLL Variant: Standard Title Size Date: File: Number 8/21/2024 C:\Users\...\NewVCO3.SchDoc Revision Sheet 3 of 3 Drawn By: Daniel Sigg Mounting Hardware D2100570 1											



RF modules need to be mounted on mounting plate.
VCO box is 1600_20 variant.

Cable V4 is 34-pin twisted-pair flat-ribbon.

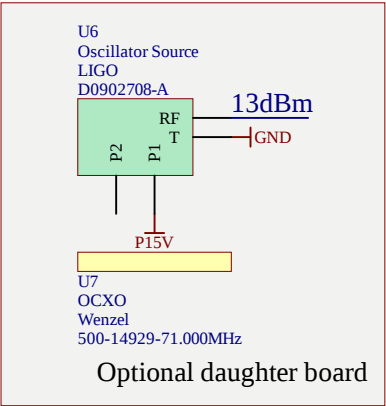
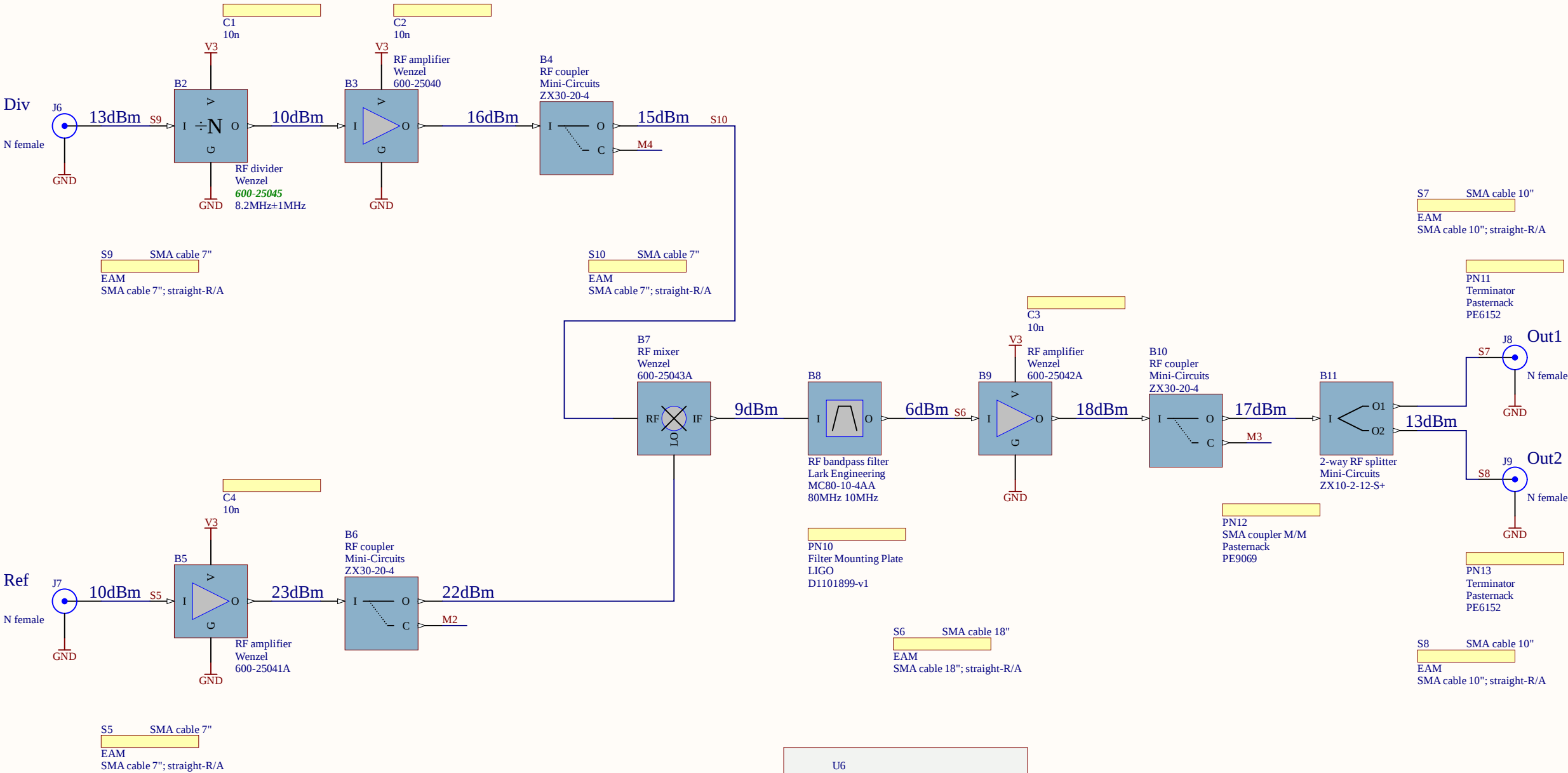
Cables for V2 and V3 are twisted pair and soldered to the amplifiers.
Solder a 10nF capacitor across each power terminal.

Use multi-color hook-up wire for V5.

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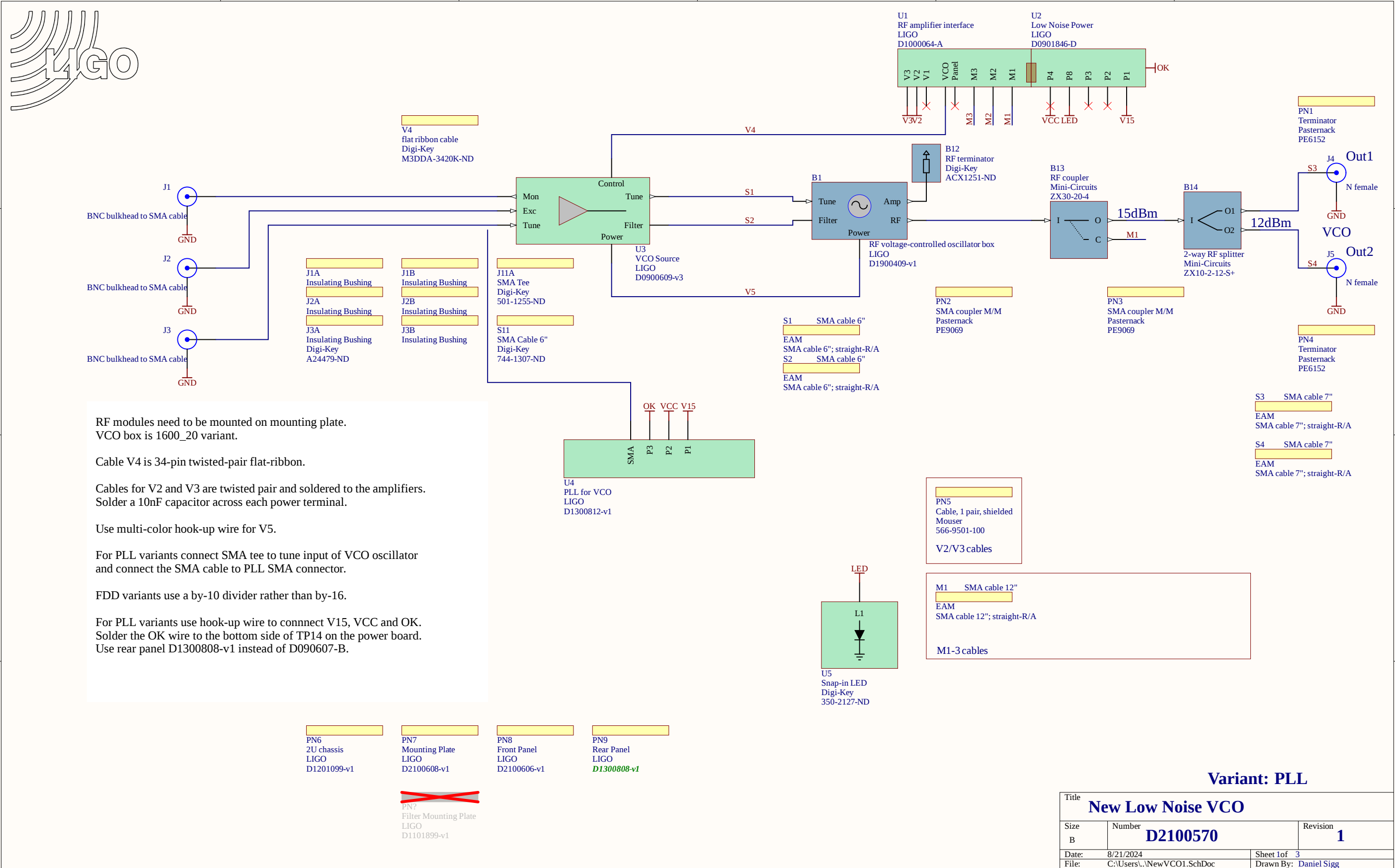


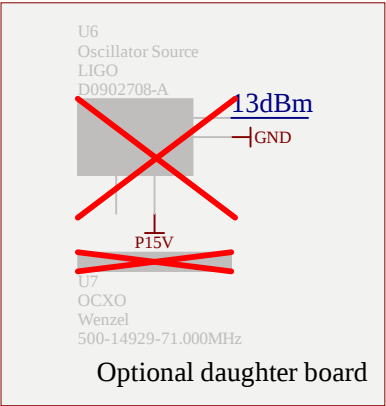
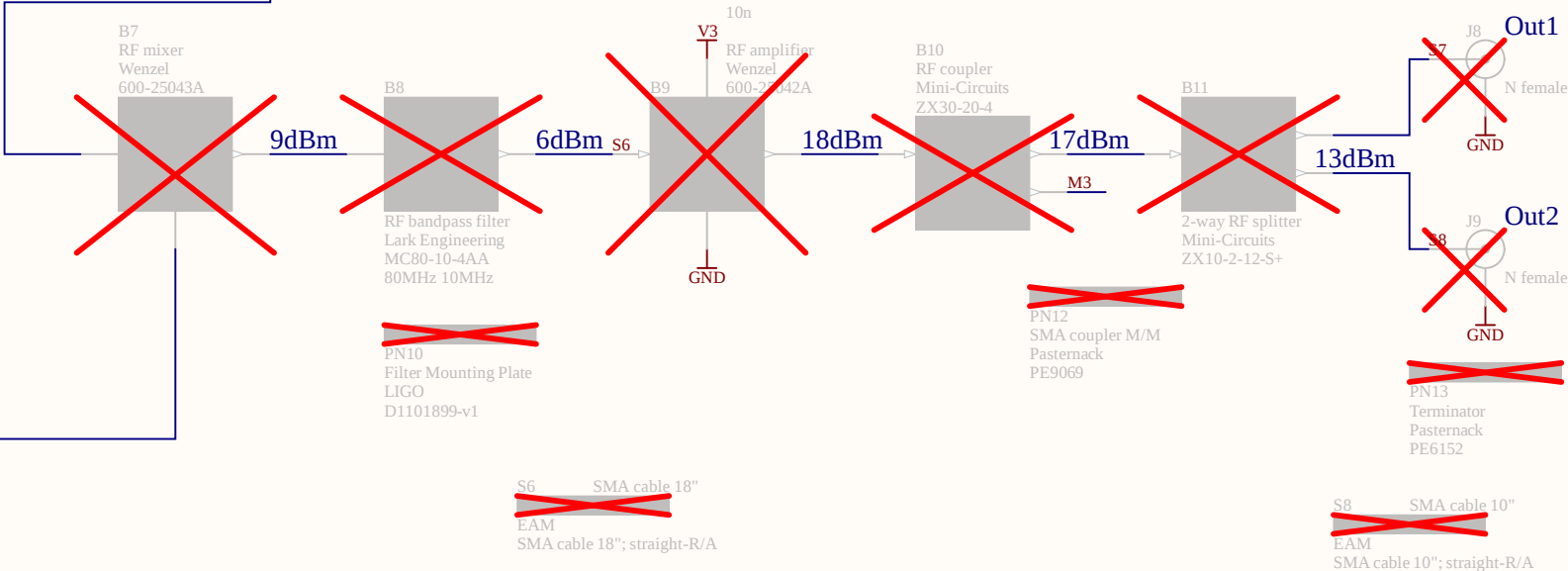
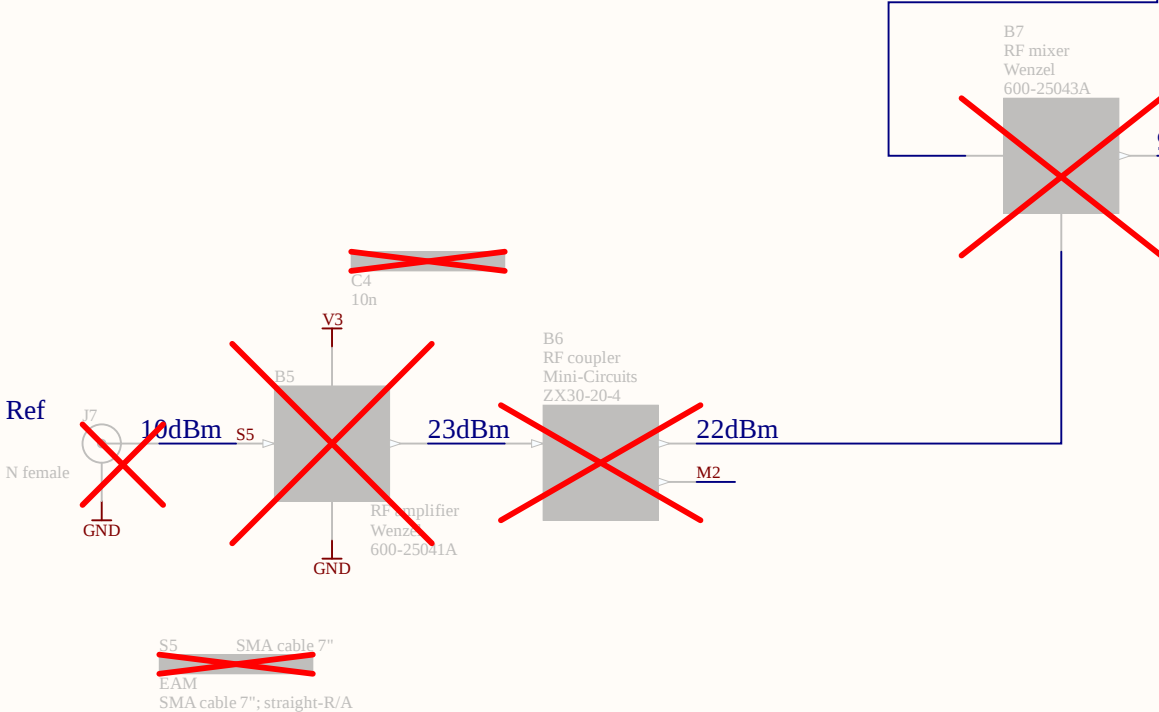
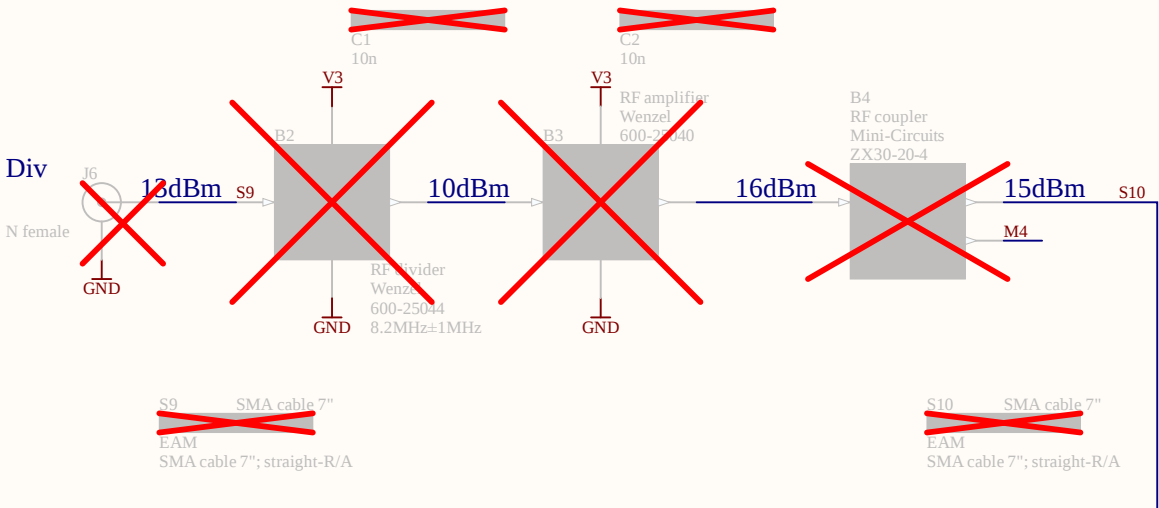
- E1 standoff, 1", f/m
- E2 standoff, 1", f/m
- E3 standoff, 1", f/m
- E4 standoff, 1", f/m

Variant: FDD		
Title		
Frequency Difference Divider		
Size	Number	Revision
B	D2100570	1
Date:	8/21/2024	Sheet 2 of 3
File:	C:\Users\...\NewVCO2.SchDoc	Drawn By: Daniel Sigg

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H1 Handle, 3" H2 Handle, 3" Mouser 534-9109 H11 Ferrule H12 Ferrule H21 Ferrule H30 Ferrule Mouser 534-9121 H46 #6-32 1/4" flat H55 #6-32 1/4" flat H64 #6-32 1/4" flat H73 #6-32 1/4" flat H77 #6-32 1/4" flat H80 #6-32 1/4" flat McMaster-Carr 91099A205 H85 #6-32 3/8" flat H88 #6-32 3/8" flat H91 #6-32 3/8" flat H94 #6-32 3/8" flat McMaster-Carr 91099A215 E5 #4-40 3/16" flat E7 #4-40 3/16" flat E9 #4-40 3/16" flat E11 #4-40 3/16" flat E13 #4-40 3/16" flat E15 #4-40 3/16" flat E17 #4-40 3/16" flat E19 #4-40 3/16" flat E21 #4-40 3/16" flat E23 #4-40 3/16" flat E25 #4-40 3/16" flat E27 #4-40 3/16" flat E29 #4-40 3/16" flat E31 #4-40 3/16" flat E33 #4-40 3/16" flat E35 #4-40 3/16" flat E37 #4-40 3/16" flat E39 #4-40 3/16" flat E41 #4-40 3/16" flat E43 #4-40 3/16" flat E45 #4-40 3/16" flat E47 #4-40 3/16" flat E6 #4-40 3/16" flat E8 #4-40 3/16" flat E10 #4-40 3/16" flat E12 #4-40 3/16" flat E14 #4-40 3/16" flat E16 #4-40 3/16" flat E18 #4-40 3/16" flat E20 #4-40 3/16" flat E22 #4-40 3/16" flat E24 #4-40 3/16" flat E26 #4-40 3/16" flat E28 #4-40 3/16" flat E30 #4-40 3/16" flat E32 #4-40 3/16" flat E34 #4-40 3/16" flat E36 #4-40 3/16" flat E38 #4-40 3/16" flat E40 #4-40 3/16" flat E42 #4-40 3/16" flat E44 #4-40 3/16" flat E46 #4-40 3/16" flat E48 #4-40 3/16" flat Enclosure H3 #2-56 flat head, 3/8" McMaster-Carr 91771A105 H4 #2-56 pan head, 1/4" McMaster-Carr 90272A077 H5 #0-80 flat head, 1/4" McMaster-Carr 91771A055 H13 #2-56 flat head, 3/8" H22 #2-56 flat head, 3/8" H31 #2-56 flat head, 3/8" H39 #2-56 flat head, 3/8" H47 #2-56 flat head, 3/8" H56 #2-56 flat head, 3/8" H65 #2-56 flat head, 3/8" H74 #2-56 flat head, 3/8" H78 #2-56 flat head, 3/8" H81 #2-56 flat head, 3/8" H83 #2-56 flat head, 3/8" H86 #2-56 flat head, 3/8" H89 #2-56 flat head, 3/8" H92 #2-56 flat head, 3/8" H95 #2-56 flat head, 3/8" H14 #2-56 pan head, 1/4" H23 #2-56 pan head, 1/4" H32 #2-56 pan head, 1/4" H40 #2-56 pan head, 1/4" H48 #2-56 pan head, 1/4" H57 #2-56 pan head, 1/4" H66 #2-56 pan head, 1/4" Wenzel/Filter H6 M2.5 pan head, 8mm McMaster-Carr 92005A069 H7 M2.5 washer McMaster-Carr 93475A196 H8 M2.5 lock washer McMaster-Carr 93925A220 H9 M2.5 nut McMaster-Carr 90591A113 H10 #4 washer, 62mil McMaster-Carr 98370A005 H16 M2.5 pan head, 8mm H25 M2.5 pan head, 8mm H34 M2.5 pan head, 8mm H41 M2.5 pan head, 8mm H50 M2.5 pan head, 8mm H59 M2.5 pan head, 8mm H68 M2.5 pan head, 8mm H17 M2.5 washer H26 M2.5 washer H35 M2.5 washer H42 M2.5 washer H51 M2.5 washer H60 M2.5 washer H69 M2.5 washer H76 M2.5 washer H79 M2.5 washer H82 M2.5 washer H84 M2.5 washer H87 M2.5 washer H90 M2.5 washer H93 M2.5 washer H96 M2.5 washer H18 M2.5 lock washer H27 M2.5 lock washer H36 M2.5 lock washer H43 M2.5 lock washer H52 M2.5 lock washer H61 M2.5 lock washer H70 M2.5 lock washer H19 M2.5 nut H28 M2.5 nut H37 M2.5 nut H44 M2.5 nut H53 M2.5 nut H62 M2.5 nut H71 M2.5 nut H20 #4 washer, 62mil H29 #4 washer, 62mil H38 #4 washer, 62mil H45 #4 washer, 62mil H54 #4 washer, 62mil H63 #4 washer, 62mil H72 #4 washer, 62mil Couplers/Splitter H? #4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" Box E49 #6-32 1/4" flat E52 #6-32 1/4" flat E55 #6-32 1/4" flat E58 #6-32 1/4" flat E? #6-32 1/4" flat H? board support Digi-Key 36-9042-ND H? board support H97 #6-32 1/4" flat McMaster-Carr 91099A205 E50 BNC lock washer E53 BNC nut E56 BNC lock washer E59 BNC nut E61 BNC lock washer E63 BNC nut E64 BNC lock washer E66 BNC nut E67 BNC lock washer E68 BNC nut E69 BNC lock washer E70 BNC nut Base plate/PCBs H97 #6-32 1/4" flat McMaster-Carr 91099A205 E50 BNC lock washer E53 BNC nut E56 BNC lock washer E59 BNC nut E61 BNC lock washer E63 BNC nut E64 BNC lock washer E66 BNC nut E67 BNC lock washer E68 BNC nut E69 BNC lock washer E70 BNC nut PLL H? #4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" Box Variant: FDD Title Mounting Hardware Size B Number D2100570 Revision 1 Date: 8/21/2024 Sheet 3 of 3 File: C:\Users\...\NewV\CO3.SchDoc Drawn By: Daniel Sigg											

Enclosure

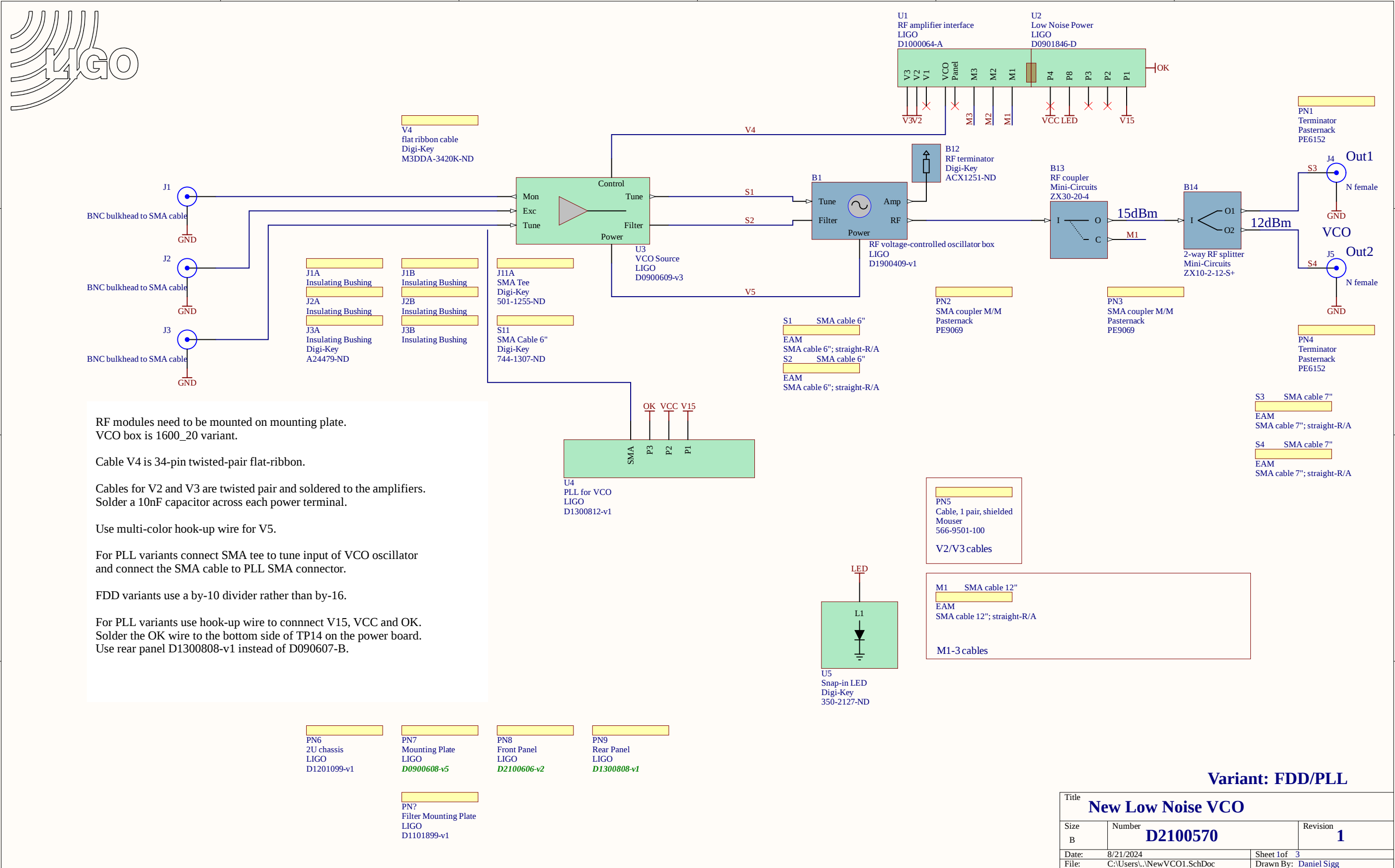


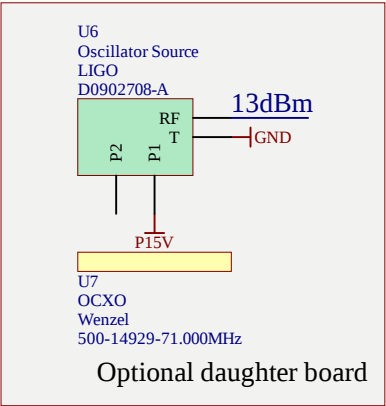
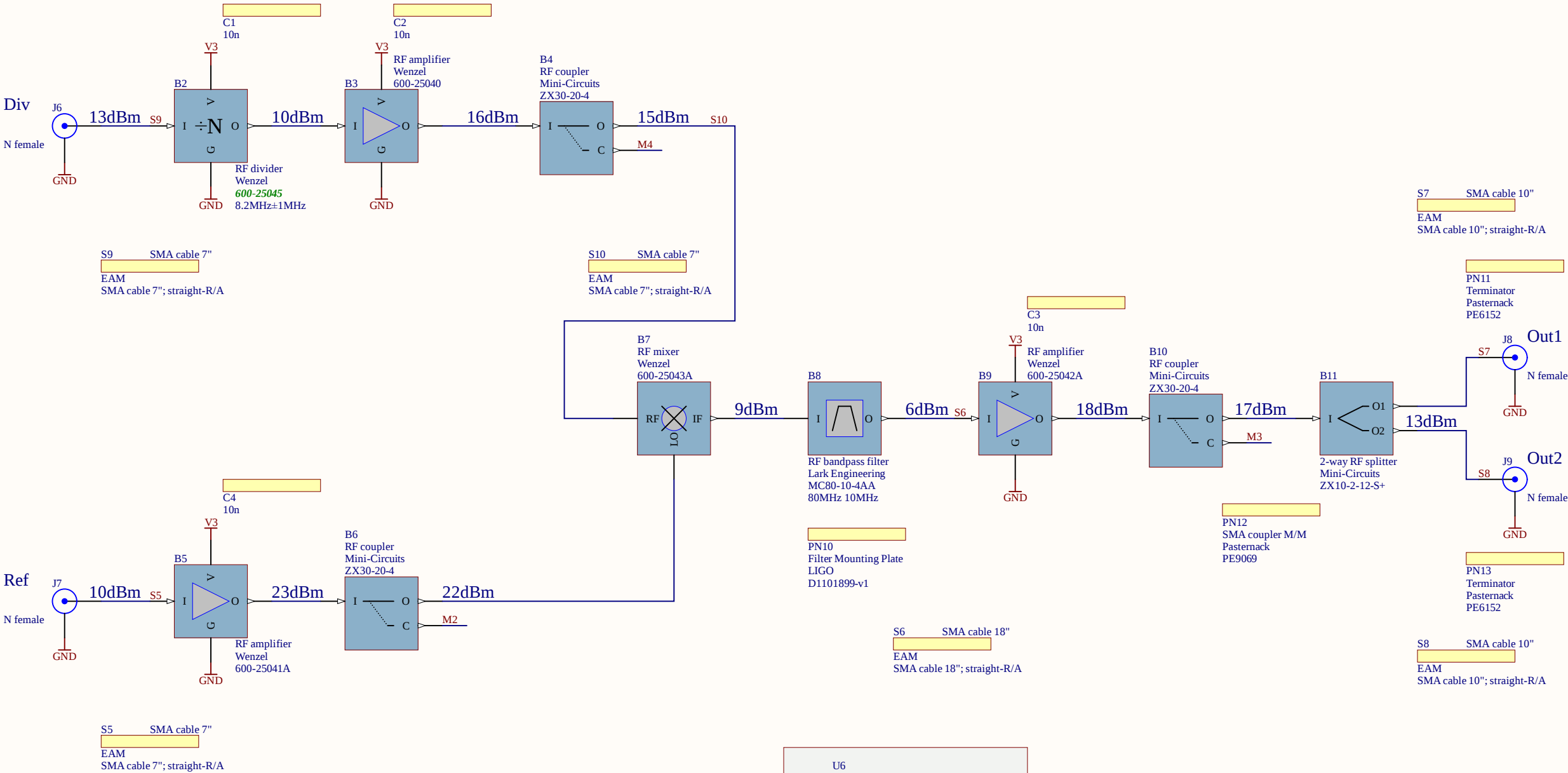


Variant: PLL

Title		
Frequency Difference Divider		
Size B	Number D2100570	Revision 1
Date:	8/21/2024	Sheet 2 of 3
File:	C:\Users\...\NewVCO2.SchDoc	Drawn By: Daniel Sigg

1		2		3		4		5		6																																					
H1 Handle, 3" H2 Handle, 3" Mouser 534-9109 H11 Ferrule H12 Ferrule H21 Ferrule H30 Ferrule Mouser 534-9121 H46 #6-32 1/4" flat H55 #6-32 1/4" flat H64 #6-32 1/4" flat H73 #6-32 1/4" flat H77 #6-32 1/4" flat H80 #6-32 1/4" flat McMaster-Carr 91099A205 H85 #6-32 3/8" flat H88 #6-32 3/8" flat H91 #6-32 3/8" flat H94 #6-32 3/8" flat McMaster-Carr 91099A215 E5 #4-40 3/16" flat E7 #4-40 3/16" flat E9 #4-40 3/16" flat E11 #4-40 3/16" flat E13 #4-40 3/16" flat E15 #4-40 3/16" flat E17 #4-40 3/16" flat E19 #4-40 3/16" flat E21 #4-40 3/16" flat E23 #4-40 3/16" flat E25 #4-40 3/16" flat E27 #4-40 3/16" flat E29 #4-40 3/16" flat E31 #4-40 3/16" flat E33 #4-40 3/16" flat E35 #4-40 3/16" flat E37 #4-40 3/16" flat E39 #4-40 3/16" flat E41 #4-40 3/16" flat E43 #4-40 3/16" flat E45 #4-40 3/16" flat E47 #4-40 3/16" flat E6 #4-40 3/16" flat E8 #4-40 3/16" flat E10 #4-40 3/16" flat E12 #4-40 3/16" flat E14 #4-40 3/16" flat E16 #4-40 3/16" flat E18 #4-40 3/16" flat E20 #4-40 3/16" flat E22 #4-40 3/16" flat E24 #4-40 3/16" flat E26 #4-40 3/16" flat E28 #4-40 3/16" flat E30 #4-40 3/16" flat E32 #4-40 3/16" flat E34 #4-40 3/16" flat E36 #4-40 3/16" flat E38 #4-40 3/16" flat E40 #4-40 3/16" flat E42 #4-40 3/16" flat E44 #4-40 3/16" flat E46 #4-40 3/16" flat E48 #4-40 3/16" flat Enclosure												H3 #2-56 flat head, 3/8" McMaster-Carr 91771A105 H13 #2-56 flat head, 3/8" H22 #2-56 flat head, 3/8" H31 #2-56 flat head, 3/8" H39 #2-56 flat head, 3/8" H47 #2-56 flat head, 3/8" H56 #2-56 flat head, 3/8" H65 #2-56 flat head, 3/8" H74 #2-56 flat head, 3/8" H78 #2-56 flat head, 3/8" H81 #2-56 flat head, 3/8" H83 #2-56 flat head, 3/8" H86 #2-56 flat head, 3/8" H89 #2-56 flat head, 3/8" H92 #2-56 flat head, 3/8" H95 #2-56 flat head, 3/8" H4 #2-56 pan head, 1/4" McMaster-Carr 90272A077 H14 #2-56 pan head, 1/4" H23 #2-56 pan head, 1/4" H32 #2-56 pan head, 1/4" H40 #2-56 pan head, 1/4" H48 #2-56 pan head, 1/4" H57 #2-56 pan head, 1/4" H66 #2-56 pan head, 1/4" H5 #0-80 flat head, 1/4" McMaster-Carr 91771A055 H15 #0-80 flat head, 1/4" H24 #0-80 flat head, 1/4" H33 #0-80 flat head, 1/4" H49 #2-56 pan head, 1/4" H58 #2-56 pan head, 1/4" H67 #2-56 pan head, 1/4" H75 #2-56 pan head, 1/4" Wenzel/Filter												H6 M2.5 pan head, 8mm McMaster-Carr 92005A069 H16 M2.5 pan head, 8mm H25 M2.5 pan head, 8mm H34 M2.5 pan head, 8mm H41 M2.5 pan head, 8mm H50 M2.5 pan head, 8mm H59 M2.5 pan head, 8mm H68 M2.5 pan head, 8mm H7 M2.5 washer McMaster-Carr 93475A196 H17 M2.5 washer H26 M2.5 washer H35 M2.5 washer H42 M2.5 washer H51 M2.5 washer H60 M2.5 washer H69 M2.5 washer H76 M2.5 washer H79 M2.5 washer H82 M2.5 washer H84 M2.5 washer H87 M2.5 washer H90 M2.5 washer H93 M2.5 washer H96 M2.5 washer H8 M2.5 lock washer McMaster-Carr 93925A220 H18 M2.5 lock washer H27 M2.5 lock washer H36 M2.5 lock washer H43 M2.5 lock washer H52 M2.5 lock washer H61 M2.5 lock washer H70 M2.5 lock washer H9 M2.5 nut McMaster-Carr 90591A113 H19 M2.5 nut H28 M2.5 nut H37 M2.5 nut H44 M2.5 nut H53 M2.5 nut H62 M2.5 nut H71 M2.5 nut H10 #4 washer, 62mil McMaster-Carr 98370A005 H20 #4 washer, 62mil H29 #4 washer, 62mil H38 #4 washer, 62mil H45 #4 washer, 62mil H54 #4 washer, 62mil H63 #4 washer, 62mil H72 #4 washer, 62mil Couplers/Splitter												H? #4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" H? #4-40 SHCS, 1-1/4" Box											
H98 #6-32 pan, lock washer, 5/16" McMaster-Carr 96909A445 H99 #6-32 pan, lock, 5/16" H100 #6-32 pan, lock, 5/16" H101 #6-32 pan, lock, 5/16" H102 #6-32 pan, lock, 5/16" H103 #6-32 pan, lock, 5/16" H104 #6-32 pan, lock, 5/16" H105 #6-32 pan, lock, 5/16" H106 #6-32 pan, lock, 5/16" H? board support Digi-Key 36-9042-ND H? board support E49 #6-32 1/4" flat E52 #6-32 1/4" flat E55 #6-32 1/4" flat E58 #6-32 1/4" flat E? #6-32 1/4" flat E64 BNC lock washer E66 BNC nut E67 BNC lock washer E68 BNC nut E69 BNC lock washer E70 BNC nut Base plate/PCBs												H97 #6-32 1/4" flat McMaster-Carr 91099A205 E50 BNC lock washer E53 BNC nut E56 BNC lock washer E59 BNC nut E61 BNC lock washer E63 BNC nut Digi-Key A97566-ND E51 BNC lock washer E54 BNC nut E57 BNC lock washer E60 BNC nut E62 BNC lock washer Digi-Key A97567-ND E65 BNC nut PLL																																			
Variant: PLL																																															
Title Mounting Hardware Size B Number D2100570 Revision 1 Date: 8/21/2024 File: C:\Users\...\NewVCO3.SchDoc Sheet 3 of 3 3 Drawn By: Daniel Sigg																																															
1		2		3		4		5		6																																					





Variant: FDD/PLL		
Title Frequency Difference Divider		
Size B	Number D2100570	Revision 1
Date:	8/21/2024	Sheet 2 of 3
File:	C:\Users\...\NewVCO2.SchDoc	Drawn By: Daniel Sigg

	1	2	3	4	5	6
A	H1Handle, 3" H2Handle, 3" Mouser 534-9109 H11Ferrule H12Ferrule H21Ferrule H30Ferrule Mouser 534-9121 H46#6-32 1/4" flat H55#6-32 1/4" flat H64#6-32 1/4" flat H73#6-32 1/4" flat H77#6-32 1/4" flat H80#6-32 1/4" flat McMaster-Carr 91099A205 H85#6-32 3/8" flat H88#6-32 3/8" flat H91#6-32 3/8" flat H94#6-32 3/8" flat McMaster-Carr 91099A215 Enclosure E5#4-40 3/16" flat E7#4-40 3/16" flat E9#4-40 3/16" flat E11#4-40 3/16" flat E13#4-40 3/16" flat E15#4-40 3/16" flat E17#4-40 3/16" flat E19#4-40 3/16" flat E21#4-40 3/16" flat E23#4-40 3/16" flat E25#4-40 3/16" flat E27#4-40 3/16" flat E29#4-40 3/16" flat E31#4-40 3/16" flat E33#4-40 3/16" flat E35#4-40 3/16" flat E37#4-40 3/16" flat E39#4-40 3/16" flat E41#4-40 3/16" flat E43#4-40 3/16" flat E45#4-40 3/16" flat E47#4-40 3/16" flat E6#4-40 3/16" flat E8#4-40 3/16" flat E10#4-40 3/16" flat E12#4-40 3/16" flat E14#4-40 3/16" flat E16#4-40 3/16" flat E18#4-40 3/16" flat E20#4-40 3/16" flat E22#4-40 3/16" flat E24#4-40 3/16" flat E26#4-40 3/16" flat E28#4-40 3/16" flat E30#4-40 3/16" flat E32#4-40 3/16" flat E34#4-40 3/16" flat E36#4-40 3/16" flat E38#4-40 3/16" flat E40#4-40 3/16" flat E42#4-40 3/16" flat E44#4-40 3/16" flat E46#4-40 3/16" flat E48#4-40 3/16" flat	H3#2-56 flat head, 3/8" McMaster-Carr 91771A105 H13#2-56 flat head, 3/8" H22#2-56 flat head, 3/8" H31#2-56 flat head, 3/8" H39#2-56 flat head, 3/8" H47#2-56 flat head, 3/8" H56#2-56 flat head, 3/8" H65#2-56 flat head, 3/8" H74#2-56 flat head, 3/8" H78#2-56 flat head, 3/8" H81#2-56 flat head, 3/8" H83#2-56 flat head, 3/8" H86#2-56 flat head, 3/8" H89#2-56 flat head, 3/8" H92#2-56 flat head, 3/8" H95#2-56 flat head, 3/8" Wenzel/Filter H4#2-56 pan head, 1/4" McMaster-Carr 90272A077 H14#2-56 pan head, 1/4" H23#2-56 pan head, 1/4" H32#2-56 pan head, 1/4" H40#2-56 pan head, 1/4" H48#2-56 pan head, 1/4" H57#2-56 pan head, 1/4" H66#2-56 pan head, 1/4" H5#0-80 flat head, 1/4" McMaster-Carr 91771A055 H15#0-80 flat head, 1/4" H24#0-80 flat head, 1/4" H33#0-80 flat head, 1/4" H49#2-56 pan head, 1/4" H58#2-56 pan head, 1/4" H67#2-56 pan head, 1/4" H75#2-56 pan head, 1/4"	H6M2.5 pan head, 8mm McMaster-Carr 92005A069 H16M2.5 pan head, 8mm H25M2.5 pan head, 8mm H34M2.5 pan head, 8mm H41M2.5 pan head, 8mm H50M2.5 pan head, 8mm H59M2.5 pan head, 8mm H68M2.5 pan head, 8mm Couplers/Splitter H7M2.5 washer McMaster-Carr 93475A196 H17M2.5 washer H26M2.5 washer H35M2.5 washer H42M2.5 washer H51M2.5 washer H60M2.5 washer H69M2.5 washer H76M2.5 washer H79M2.5 washer H82M2.5 washer H84M2.5 washer H87M2.5 washer H90M2.5 washer H93M2.5 washer H96M2.5 washer H8M2.5 lock washer McMaster-Carr 93925A220 H18M2.5 lock washer H27M2.5 lock washer H36M2.5 lock washer H43M2.5 lock washer H52M2.5 lock washer H61M2.5 lock washer H70M2.5 lock washer H9M2.5 nut McMaster-Carr 90591A113 H19M2.5 nut H28M2.5 nut H37M2.5 nut H44M2.5 nut H53M2.5 nut H62M2.5 nut H71M2.5 nut H10#4 washer, 62mil McMaster-Carr 98370A005 H20#4 washer, 62mil H29#4 washer, 62mil H38#4 washer, 62mil H45#4 washer, 62mil H54#4 washer, 62mil H63#4 washer, 62mil H72#4 washer, 62mil	H?#4-40 SHCS, 1-1/4" McMaster-Carr 92196A032 H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" H?#4-40 SHCS, 1-1/4" Box	Variant: FDD/PLL Mounting Hardware Size B Number D2100570 Revision 1 Date: 8/21/2024 File: C:\Users\...\NewVCO3.SchDoc Sheet 3 of 3 Drawn By: Daniel Sigg	
B						
C						
D	H98#6-32 pan, lock washer, 5/16" McMaster-Carr 96909A445 H99#6-32 pan, lock, 5/16" H100#6-32 pan, lock, 5/16" H101#6-32 pan, lock, 5/16" H102#6-32 pan, lock, 5/16" H103#6-32 pan, lock, 5/16" H104#6-32 pan, lock, 5/16" H105#6-32 pan, lock, 5/16" H106#6-32 pan, lock, 5/16" Base plate/PCBs H?board support Digi-Key 36-9042-ND H?board support E49#6-32 1/4" flat E52#6-32 1/4" flat E55#6-32 1/4" flat E58#6-32 1/4" flat E?#6-32 1/4" flat E64BNC lock washer E66BNC nut E67BNC lock washer E68BNC nut E69BNC lock washer E70BNC nut					