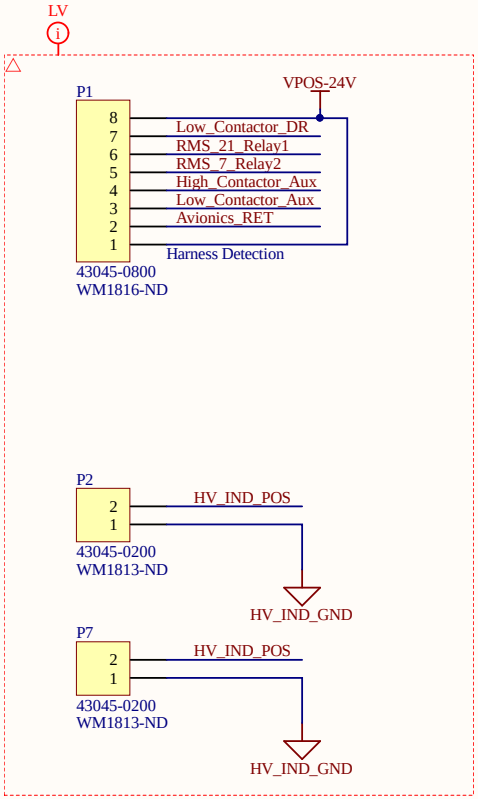
PRECHARGE

POD 5

REV 1

Title	***Precharge***		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706
Engineer:	Shelby Riggleman	Revision: 1	
Date: 3/6/2020	Time: 8:48:42 PM	Sheet 1 of	
File:	precharge.SchDoc		

Precharge Board Connectors



MH1
4-40 Mount Hole

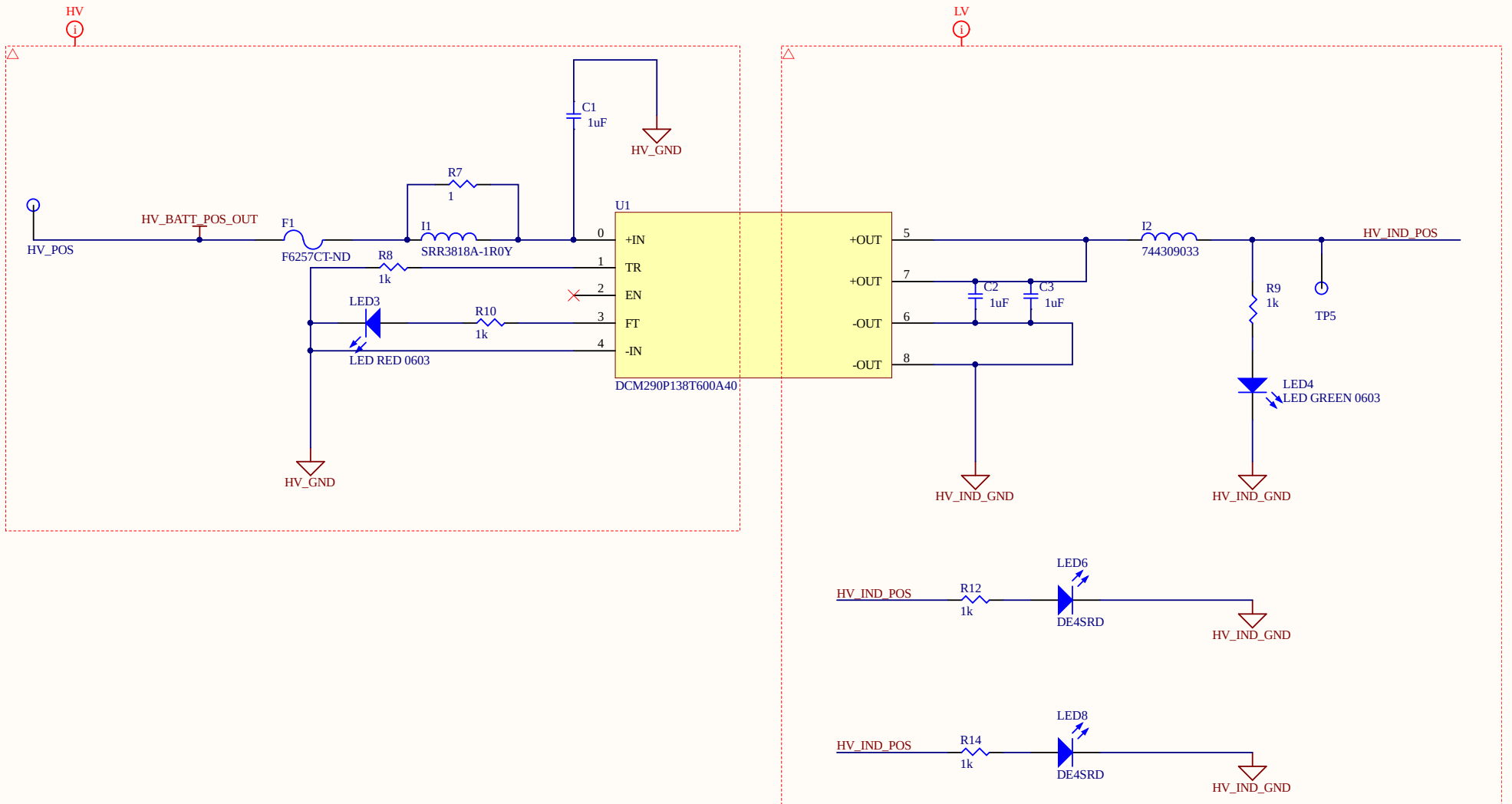
MH2
4-40 Mount Hole

MH3
4-40 Mount Hole

MH4
4-40 Mount Hole

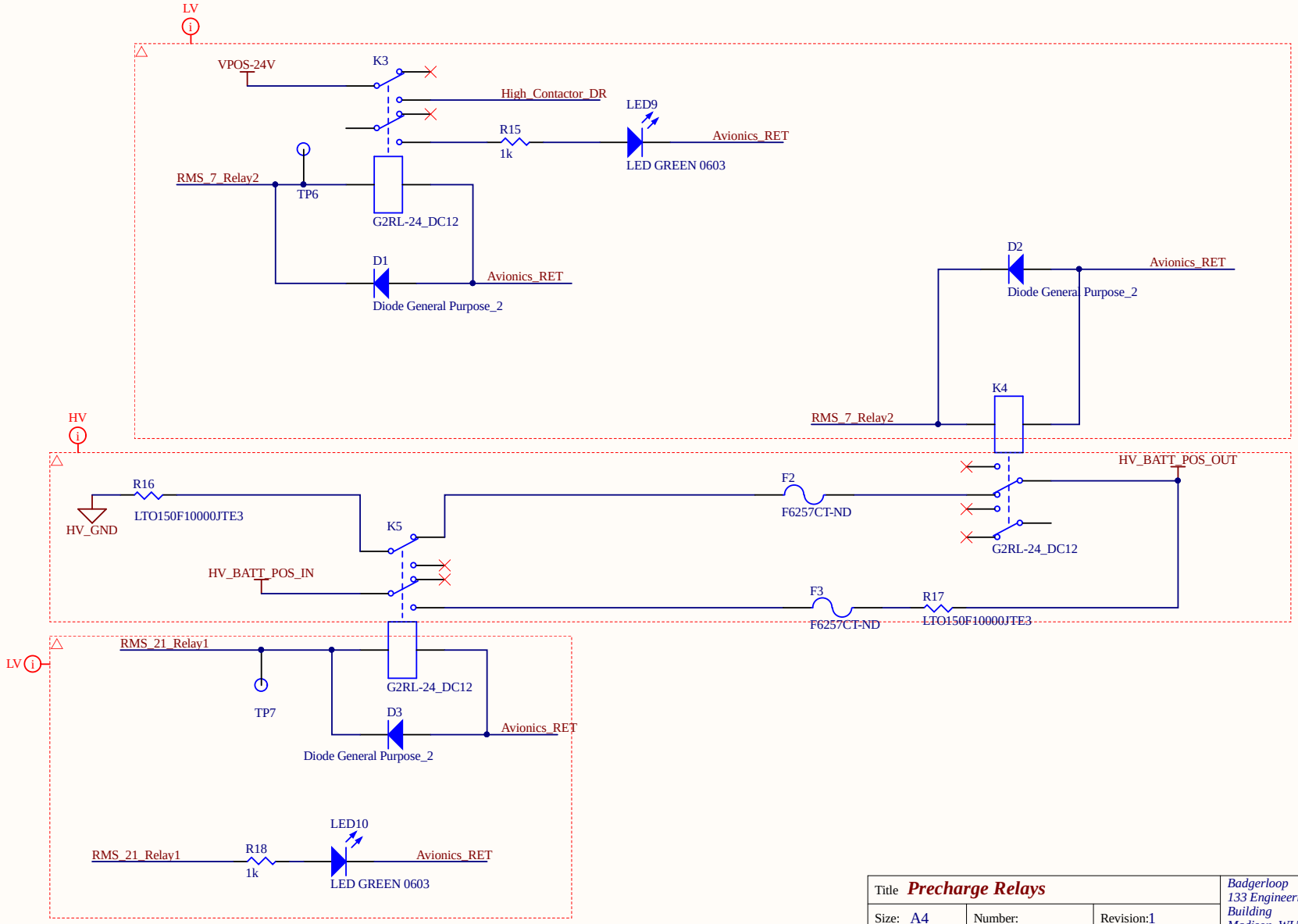
Title	***Connectors***	Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706
Engineer: Shelby Riggleman	Revision:1	
Date: 3/6/2020 Time: 8:48:42 PM	Sheet 2 of	
File: connectors.SchDoc		

High Voltage Indicator Light



Title	***HV Indicator Light***		*Badgerloop* *133 Engineering Research Building* *Madison, WI 53715*
Size: A4	Number:	Revision:1	
Date: 3/6/2020	Time: 8:48:42 PM	Sheet 3 of	
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\indicator_light.SchDoc			

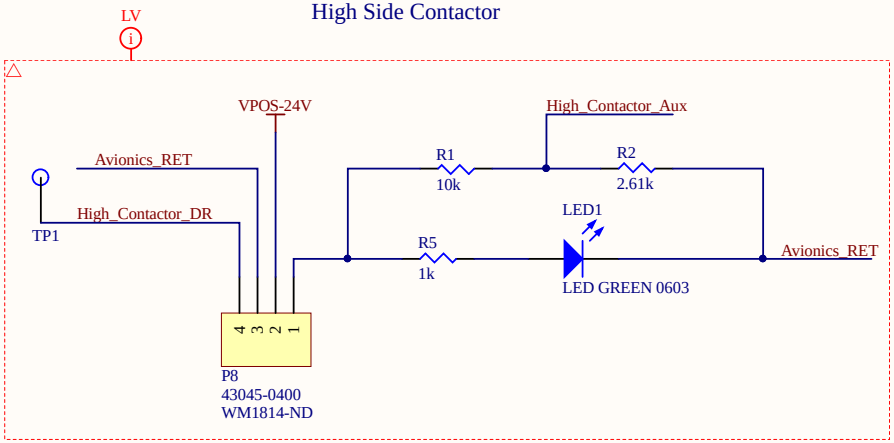
Precharge Relays

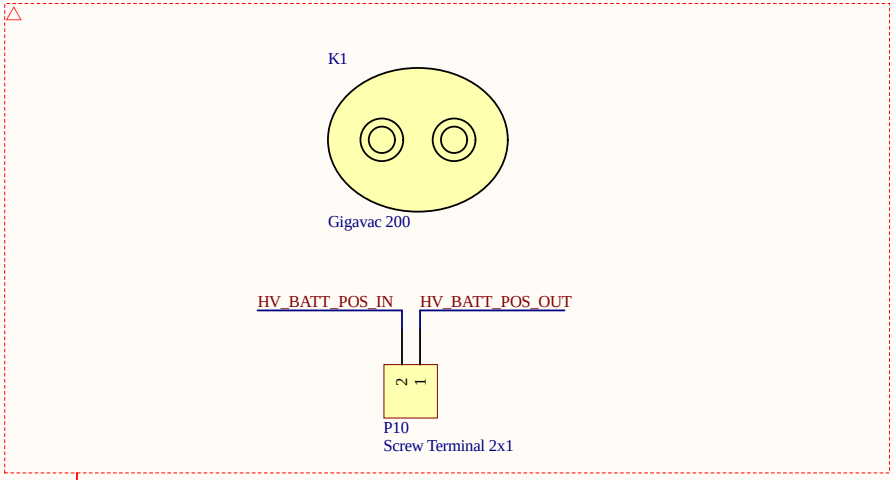


Title	***Precharge Relays***		*Badgerloop* *133 Engineering Research Building* *Madison, WI 53715*
Size: A4	Number:	Revision: 1	
Date: 3/6/2020	Time: 8:48:43 PM	Sheet 4 of	
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\precharge_relays.SchDoc			

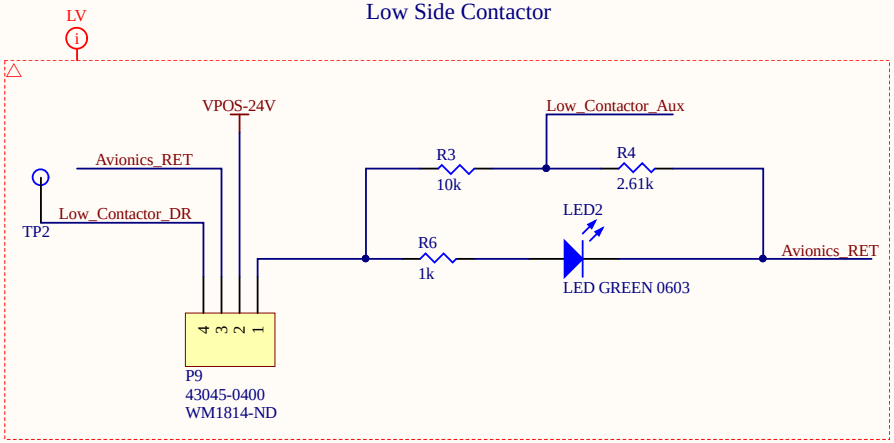
High Voltage Contactors

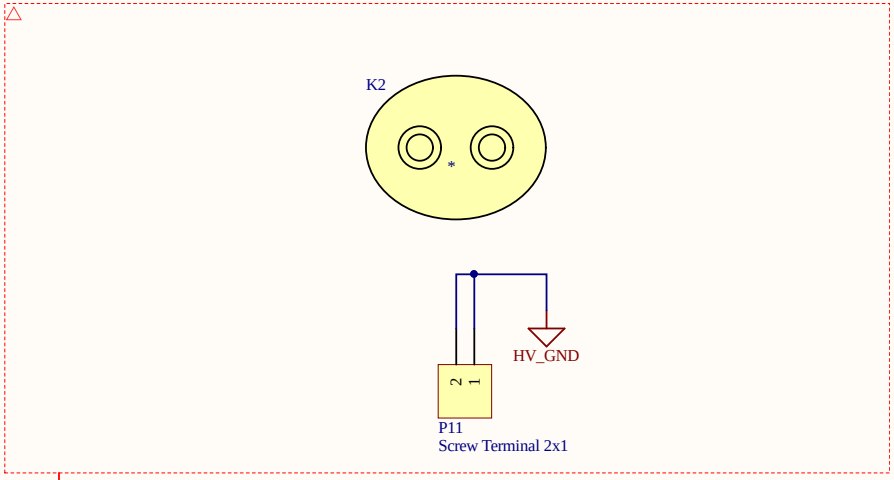
High Side Contactor





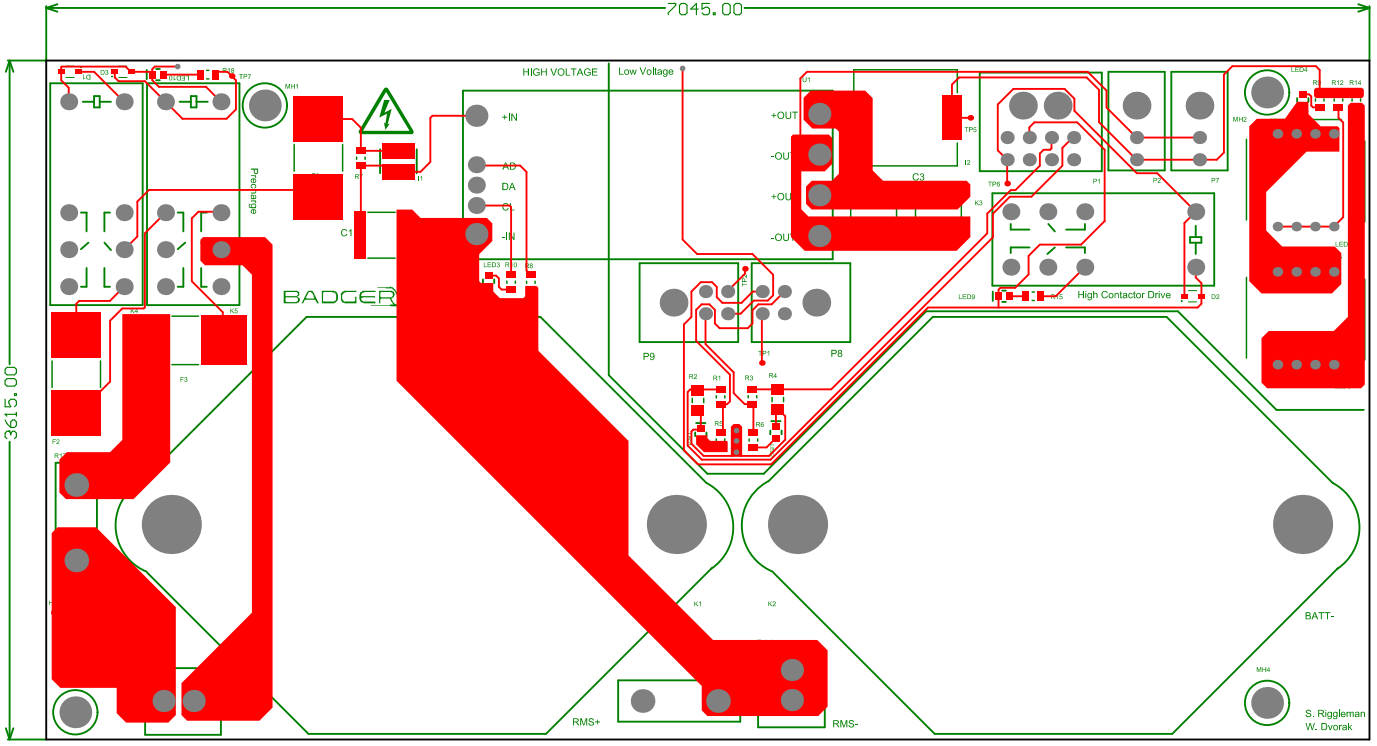
Low Side Contactor





Title	***HV Contactors***		*Badgerloop* *133 Engineering Research Building* *Madison, WI 53715*
Size: A4	Number:	Revision: 1	
Date: 3/6/2020	Time: 8:48:43 PM	Sheet 5 of	
File: C:\Users\Windows PC\Desktop\Badgerloop\git_repos\hardware\precharge\Contactors.SchDoc			

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				

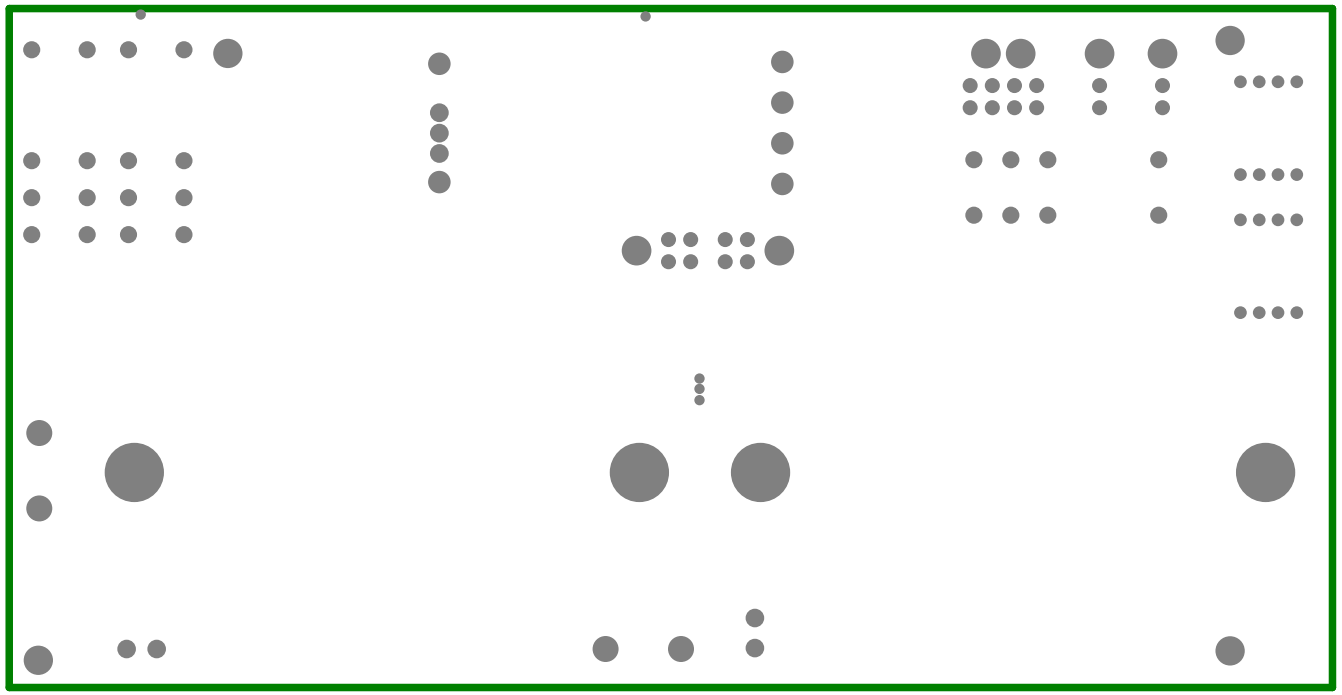


BADGER LOOP

Badgerloop
ERB Room 133
1400 Engineering Drive
Madison, WI 53706

ENGINEER: SRiggleman, WDvorak	TITLE: precharge.PcbDoc	
PCB DESIGNER: SRiggleman, WDvorak		
DATE: 3/6/2020	PART NO.: Precharge HV Board	REV: A
FILE NAME: precharge.PcbDoc	DWG NO:	SCALE: 1:1

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



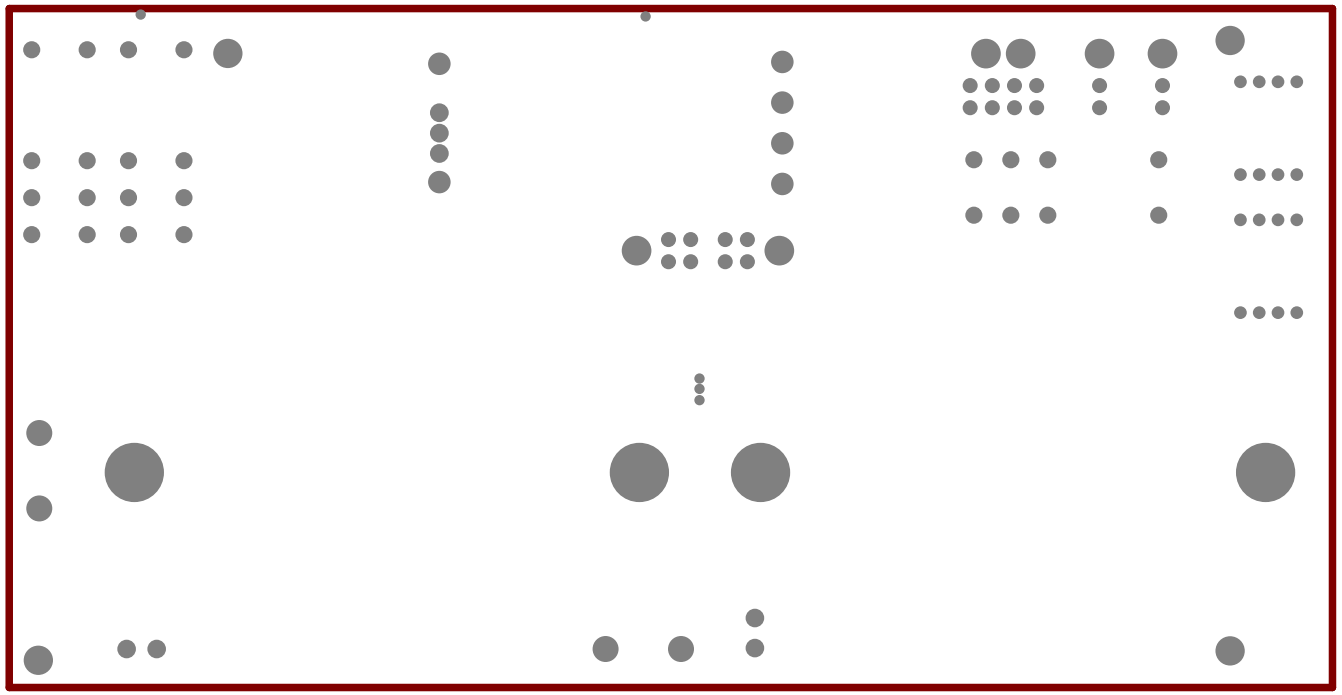
Internal Plane 1

BADGER LOOP

Badgerloop
ERB Room 133
1400 Engineering Drive
Madison, WI 53706

ENGINEER: SRiggleman, WDvorak	TITLE: precharge.PcbDoc	
PCB DESIGNER: SRiggleman, WDvorak		
DATE: 3/6/2020	PART NO.: Precharge HV Board	REV: A
FILE NAME: precharge.PcbDoc	DWG NO:	SCALE: 1:1

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



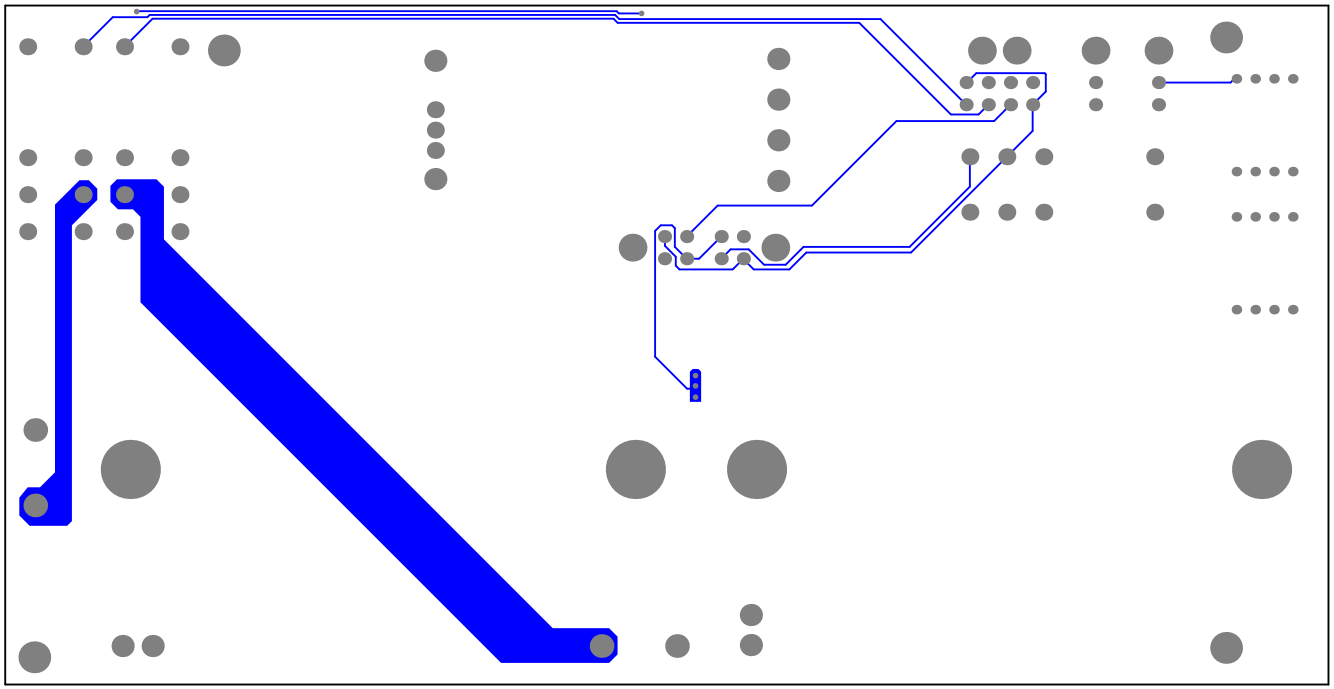
Internal Plane 2

BADGER LOOP

Badgerloop
ERB Room 133
1400 Engineering Drive
Madison, WI 53706

ENGINEER: SRiggleman, WDvorak	TITLE: precharge.PcbDoc	
PCB DESIGNER: SRiggleman, WDvorak		
DATE: 3/6/2020	PART NO.: Precharge HV Board	REV: A
FILE NAME: precharge.PcbDoc	DWG NO:	SCALE: 1:1

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



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Badgerloop
ERB Room 133
1400 Engineering Drive
Madison, WI 53706

ENGINEER: SRiggleman, WDvorak

PCB DESIGNER: SRiggleman, WDvorak

TITLE: precharge.PcbDoc

DATE: 3/6/2020

PART NO.: Precharge HV Board

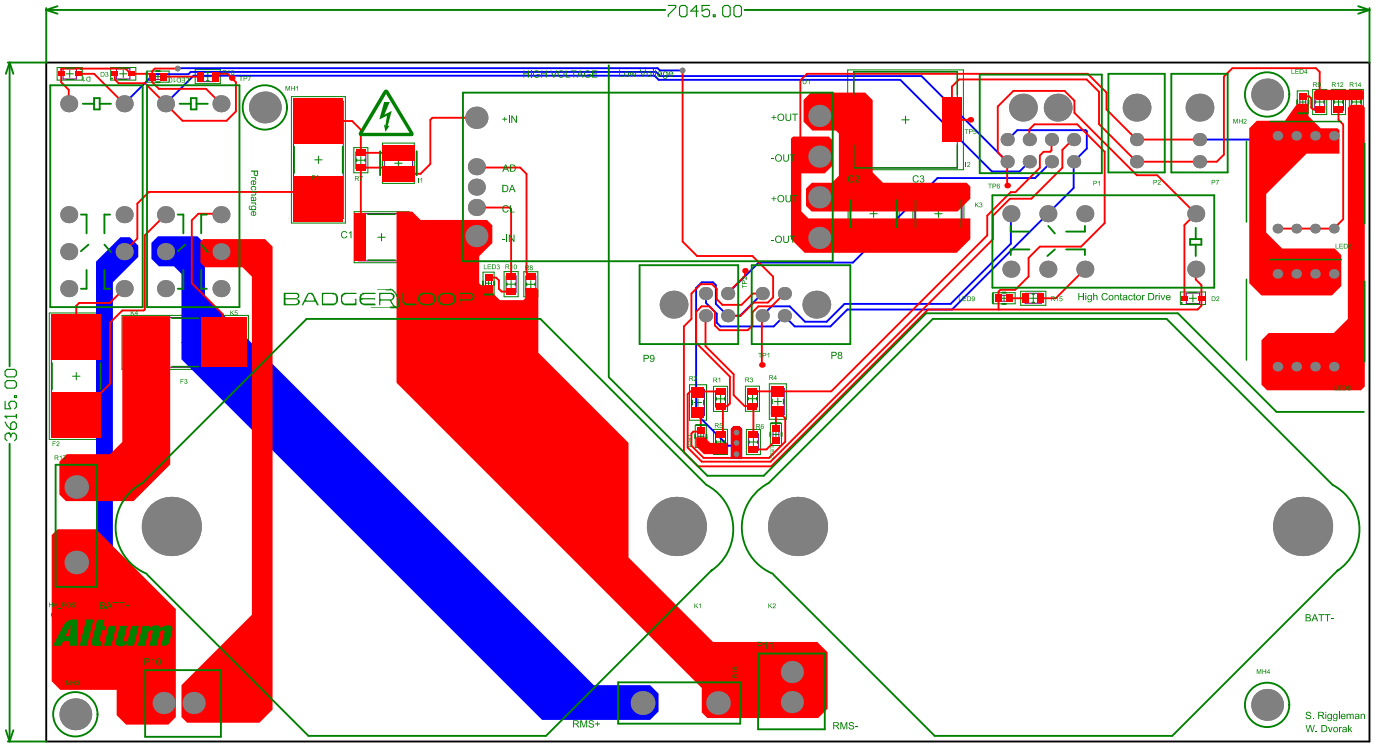
REV: A

FILE NAME: precharge.PcbDoc

DWG NO:

SCALE: 1:1

Layer	Name	Material	Thickness	Constant	Board Layer Stack
1	Top Overlay				
2	Top Solder	Solder Resist	0.40mil	3.5	
3	Top Layer	Copper	1.40mil		
4	Dielectric 1	FR-4	12.60mil	4.8	
5	Internal Plane 1	Copper	1.40mil		
6	Dielectric2	FR-4	12.60mil	4.8	
7	Internal Plane 2	Copper	1.40mil		
8	Dielectric3	FR-4	12.60mil	4.8	
9	Bottom Layer	Copper	1.40mil		
10	Bottom Solder	Solder Resist	0.40mil	3.5	
11	Bottom Overlay				



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ENGINEER: SRiggleman, WDvorak	TITLE: precharge.PcbDoc	
PCB DESIGNER: SRiggleman, WDvorak		
DATE: 3/6/2020	PART NO.: Precharge HV Board	REV: A
FILE NAME: precharge.PcbDoc	DWG NO:	SCALE: 1:1