

ARES_R30_Power

V0.1

- V0.10_00p_01_ARESR기반 회로도 생성

V0.10_00p_02_Capacitor 파라미터에 F표시
- V0.10_01p_01_connector변경(53253-0270/Molex)

V0.10_01p_02_보호회로변경

V0.10_01p_03_FG 회로 변경

V0.10_01p_04_제어전원 분리

V0.10_01p_05_B2B 커넥터 변경(1.27mm)

V0.10_01p_06_CN02추가

V0.10_01p_07_bolt 홀 2개 삭제

V0.10_01p_08_TVS DIODE 추가-zujo.20.07.14

P-MOSFET 변경(SCD50P08-25L)

FUSE 변경(0463 025)

FUSE 변경(0448.01.5)

Reverse Protection 회로 변경

PGND, AGND, DGND 분리 저항 변경(Beed)

Safly board 용 전원 점퍼 추가(V24S_Bar)

제어전원 커넥터 변경(501331-0207)

SMD PEM 너트(Main board 지지용)
- V0.10_02p_01_converter 파트 변경(MAXIM17575)

V0.10_02p_02_converter 주변 회로 변경
- V0.10_04p_01_MOSFET 변경

V0.10_04p_02_MOSFET 변경(BSC026N08S5)-zujo 200714

V0.2

- V0.20_01p_01 C103,104,113,114 CAP 변경

C121,122,123,124 변경 및 추가

FUSE 추가(F102)

P-MOSFET 변경(SMP3003)

D101 변경(UDZVFHT18B)

R451, 452, Net(V48P) 삭제
- V0.20_01p_02 CN1 커넥터 및 핀맵 변경, MOT 핀맵 변경

V0.20_02p_03_NET 변경

V0.20_03p_01_Sigma Delta#1,2 NET 변경

V0.20_05p_01_HALL_CT 추가
- V0.20_02p_03_FB211 추가(lib.3216)

V0.21

- V0.21_01p_01_CN01 파트 원복(22pin -> 20pin)

V0.21_01p_02_NET 삭제 :CURR_U, CURR_V

V0.21_01p_03_CN02 삭제

V0.21_01p_04_MOT 핀맵 원복

V0.21_02p_01_NET 원복
- V0.21_03p_01_Sigma Delta#1,2 NET 원복

V0.21_05p_01_HALL_CT Page 삭제(U501, 502)

V0.22

- V0.22_01p_01_부품 이동(F101,102, D102)

부품 이동(F111,D104)

제어전원 PIN MAP 변경

CN02 8,10,12 PIN 변경

BRK Connector변경(DF1B-2P-2.5DSA/HRS)

TP NAME 변경
- V0.22_01p_02_P_MOSFET(Q101) 삭제

V0.22_02p_01_U220 삭제

TP 삭제(V5U, V5V)
- V0.22_03p_01_전류센서 변경(U301, 311, 331)

DCLink LED 변경 RED->BLUE LED

INA240 Vref 전압 생성 회로 추가
- V0.22_04p_01_MOSFET 변경(IPT012N08N5)

MOSFET 저항 변경(180->100[R], 18->10[R])

AL CAP 추가

V0.23

- V0.23_01p_Power LCL 필터(L101, C101,102) 삭제

Control LCL 필터(L111, C111, 112) 삭제

V0.23_04p_01_CAP(C453,454,455,456) 변경(10uF->68uF)
- V0.23_03P U341 Vref_C 전압 생성 회로 삭제

V0.23_03P Vref_C = +5V 연결

V0.24

- V0.24_01p_01_C131, R131 값 변경

F102 삭제 및 F101 변경

FG 병렬저항(R131A, C131A) 삭제

C116 추가
- V0.24_03P_01_R333, 343 제거 -> SIZE & 값 변경

C332, 342 제거, C331,341, R335, 345 값변경

R334, 344 SIZE & 값 변경
- V0.24_04p_01_C404 추가

PGND, DGND 정리 삭제

C402, 405 추가 및 변경

D453 변경 B560C -> US1M

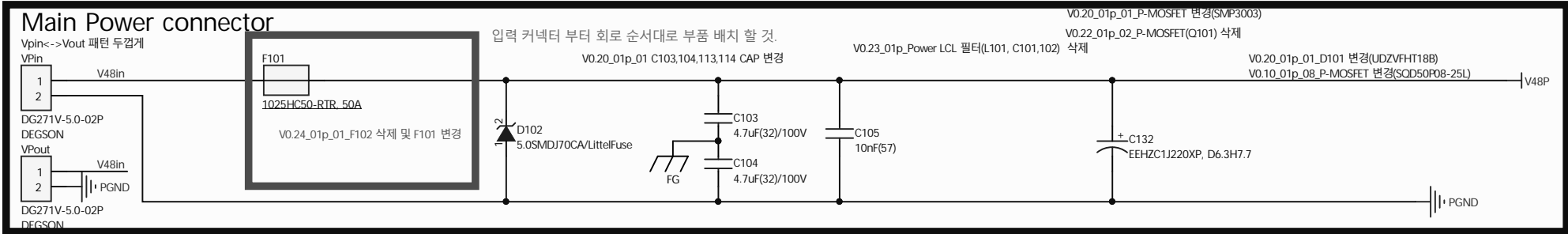
-	UNIT	mm	SCALE	N/S	TITLE	ARES_R30_Power	
DWG.	DESIGNED	CHECKED		APPROVED			
-	212084				SUBJECT	00.ChangeLog.SchDoc	0 5
HIGEN		Related DWG. No.			DWG. No.		Ver.
							V0.21

V0.10_01p_02_보호회로변경

V0.22_01p_01_부품 이동(F101,102, D102)

V0.10_01p_08_TVS DIODE 추가

V0.20_01p_01_FUSE 추가(F102)
V0.10_01p_08_FUSE 변경(0463 025)



V0.10_01p_08_제어전원 커넥터 변경(501331-0207)

V0.10_01p_04_제어전원 분리

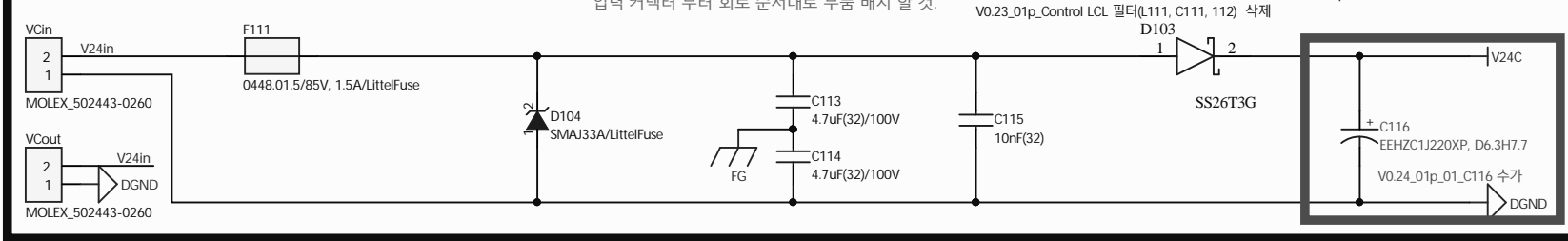
V0.22_01p_01_부품 이동(F111,D104)

V0.10_01p_08_Safety board 용 전원 점퍼 추가(V24S_Bar)

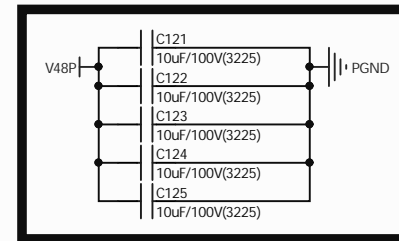
V0.10_01p_08_FUSE 변경(0448.01.5)

V0.20_01p_01 C121,122,123,124 변경 및 추가

Control Power connector



DC-Link CAP



V0.10_01p_01_connector변경(53253-0270/Molex)

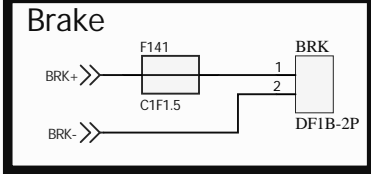
V0.10_01p_05_B2B 커넥터 변경(1.27mm)

V0.10_01p_06_CN02추가

V0.21_01p_01_파트 왼쪽(22pin-> 20pin)

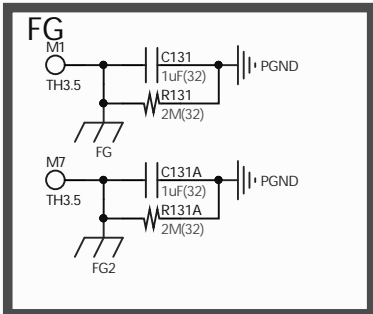
V0.21_01p_04 MOT 핀맵 원복

V0.10_01p_08_PGND, AGND, DGND 분리 저장 변경(Beed)

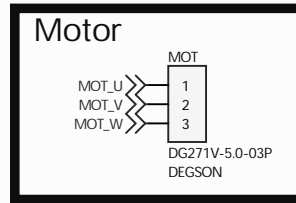
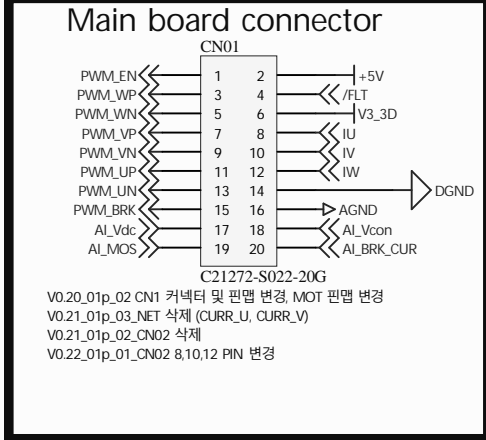


V0.10_01p_03_FG 회로 변경

V0.10_01p_07_bolt 홀 2개 삭제



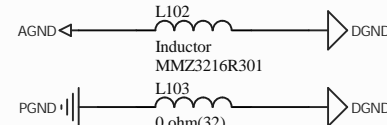
V0.24_01p_01_C131, R131 값 변경



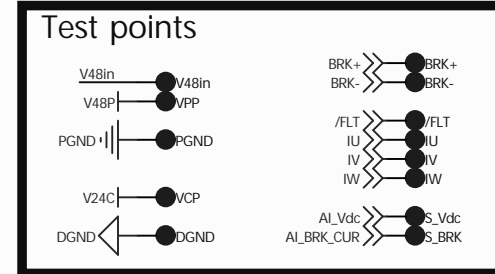
V0.10_01p_08_SMD PEM 너트(Main board 지사용)

M3
SMTSOB-M3-2ET, PEM(BOTTOM)
M4
SMTSOB-M3-2ET, PEM(BOTTOM)

M5
NTH4.1
M8
NTH4.1



V0.22_01p_01_TP NAME 변경

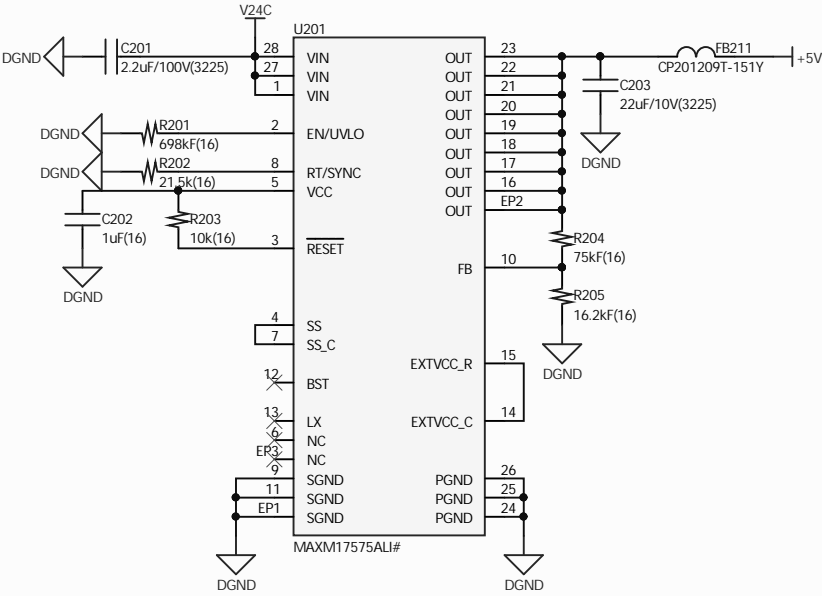


-	UNIT	mm	SCALE	N/S	TITLE	ARES_R30_Power	
DWG.	DESIGNED	CHECKED		APPROVED			
-	212084				SUBJECT	01.Connector.SchDoc	<div>15</div>
HIGEN		Related DWG. No.			DWG. No.		Ver.
							V0.21

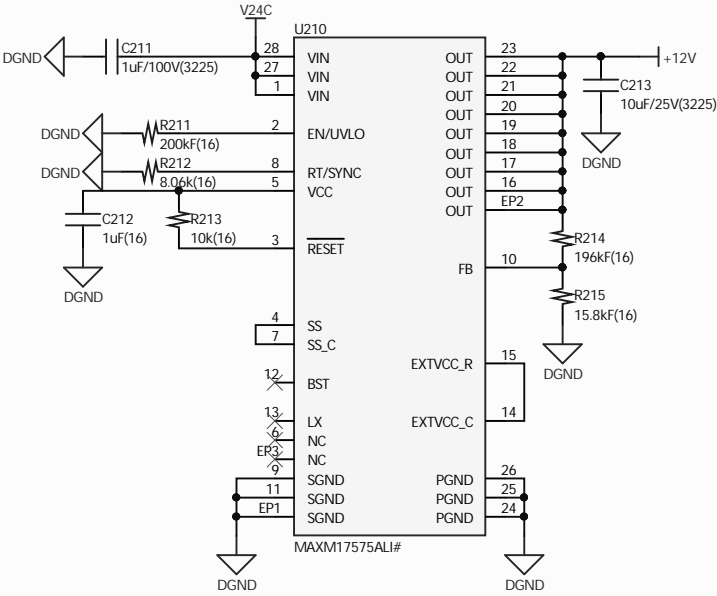
V0.10_02p_01_converter 파트 변경(MAXM17575)
V0.10_02p_02_converter 주변 회로 변경

V0.20_02p_03_FB211 추가(lib_3216)

5V Converter



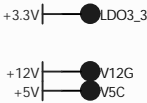
12V Converter



V0.10_02p_03_NET 변경
V0.21_02p_01_NET 원복

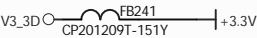
V0.22_02p_01_U220 삭제

Test Points



V0.22_02p_01_TP 삭제(V5U, V5V)

3.3V for Analog



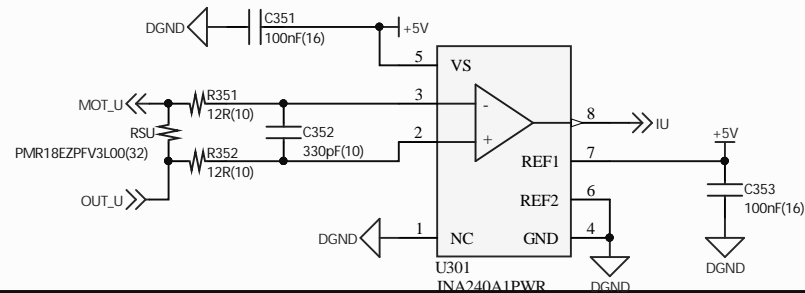
-	UNIT	mm	SCALE	N/S	TITLE	ARES_R30_Power		
DWG.	DESIGNED	CHECKED		APPROVED				
-	212084				SUBJECT	02.DC-DCConverter.SchDoc	2 5	
HIGEN		Related DWG. No.			DWG. No.		Ver.	
							V0.21	

V0.20_03p_01_Sigma Delta#1,2 NET 변경
V0.21_03p_01_Sigma Delta#1,2 NET 원복
V0.22_03p_01_전류센서 변경(U301, 311, 331)
V0.23_03P Vref_C = +5V

V0.23_03P U341 Vref_C 전압 생성 회로 삭제

Current_U

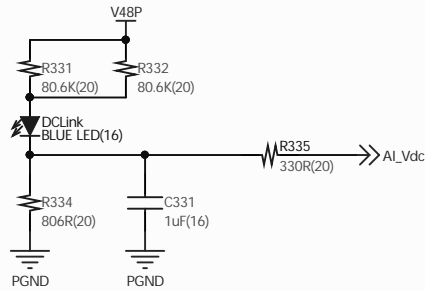
RSU와 INA240A1 배선 최대한 가깝게



메인보드에 가리지 않는 영역 배치 잘보이는곳

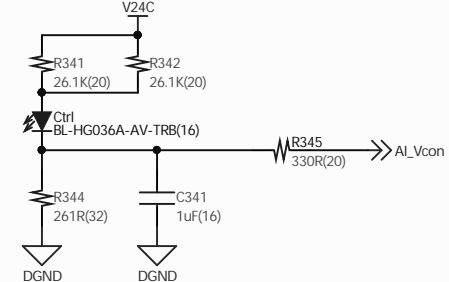
V0.22_03p_01_LED변경 RED->BLUE LED(DCLink LED)

DC-Link



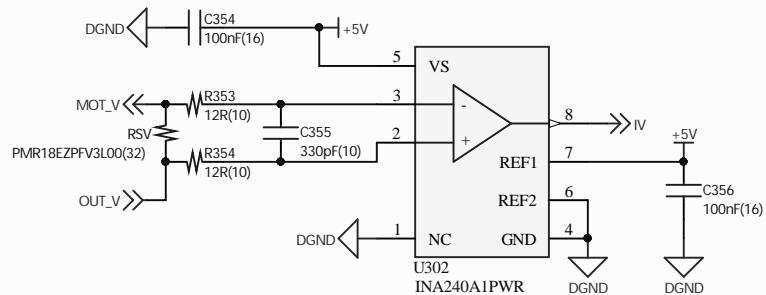
메인보드에 가리지 않는 영역 배치 잘보이는곳

Control voltage sense



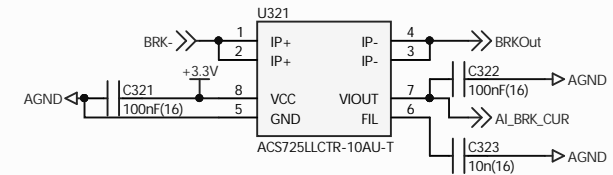
Current_V

RSV와 INA240A1 배선 최대한 가깝게



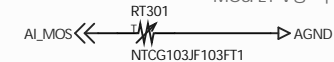
V0.24_03P_01_R333, 343 제거 -> SIZE & 값 변경
C332, 342 제거, C331, 341, R335, 345 값변경
R334, 344 SIZE & 값 변경

Hall IC



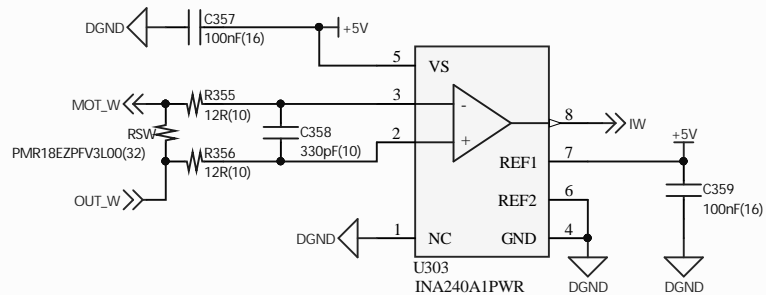
Temperature

MOSFET V상 가까이 배치



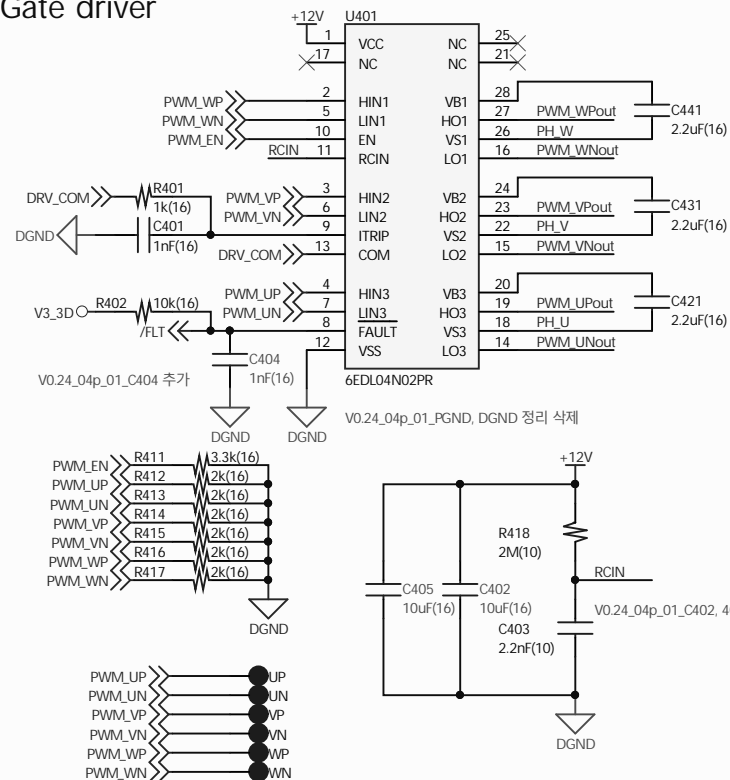
Current_W

RSW와 INA240A1 배선 최대한 가깝게

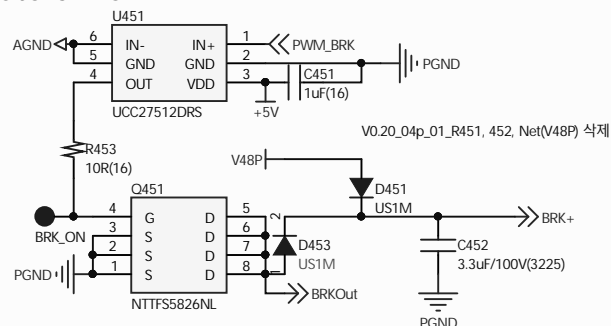


-	UNIT	mm	SCALE	N/S	TITLE	ARES_R30_Power		
DWG.	DESIGNED	CHECKED		APPROVED				
-	212084				SUBJECT	03.Sensing.SchDoc	<div>35</div>	
HIGEN		Related DWG. No.			DWG. No.			Ver.
								V0.21

Gate driver

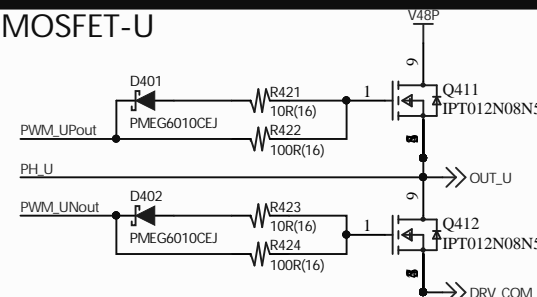


Gate driver

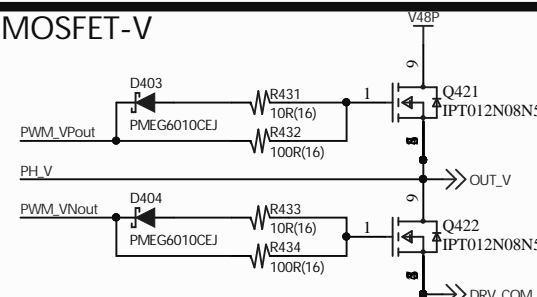


V0.10_04p_01_MOSFET 변경

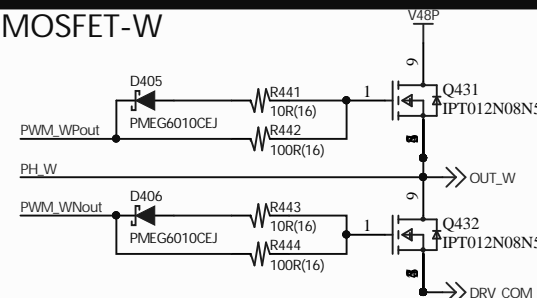
MOSFET-U



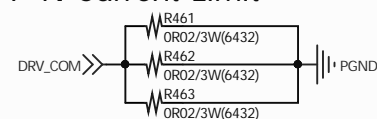
MOSFET-V



MOSFET-W

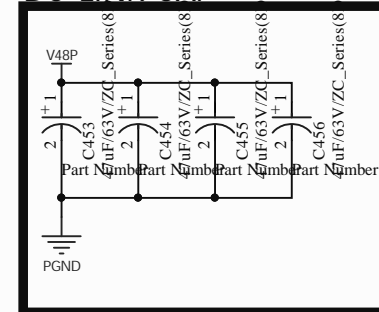


P-N Current Limit



V0.10_04p_02_MOSFET 변경(BSC026N08S5)
V0.22_04p_01_MOSFET 변경(IPT012N08N5)
V0.22_04p_01_MOSFET 저항 변경
V0.22_04p_01_AL CAP 추가

DC LINK CÁP



V0.23_04p_01_CAP(C453,454,455,456) 변경(10->47[uF])
수명특성 고려하여 ZC Series로 변경됨.

-	UNIT	mm	SCALE	N/S	TITLE	ARES_R30_Power	
DWG.	DESIGNED	CHECKED		APPROVED			
-	212084				SUBJECT	04.MOSFET.SchDoc	4 5
HIGEN		Related DWG. No.			DWG. No.		Ver.
							V0.21