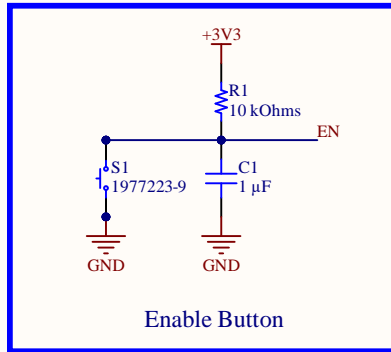
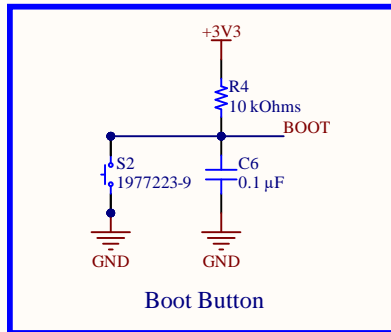


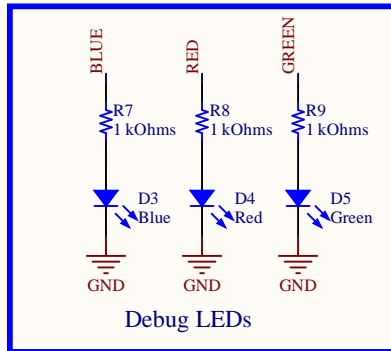
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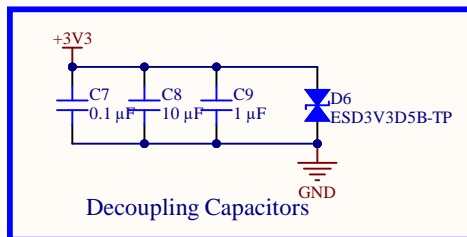
Enable Button



Boot Button

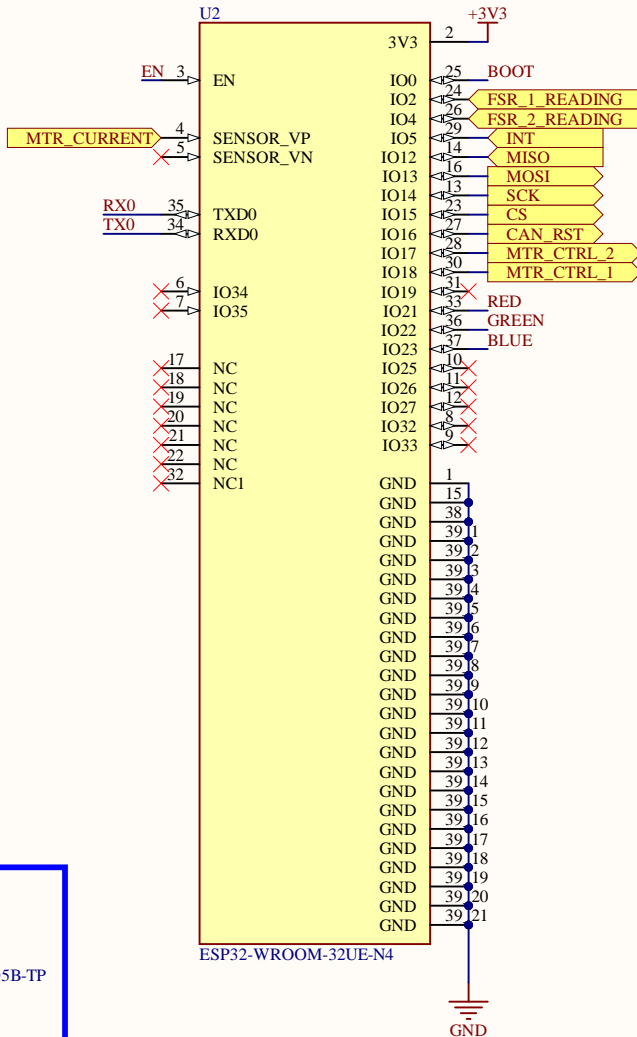


Debug LEDs

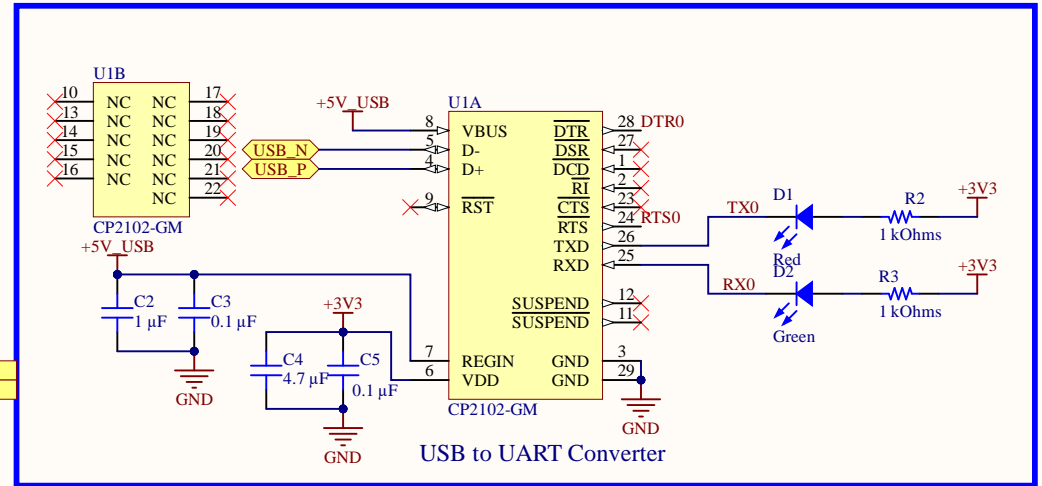


Decoupling Capacitors

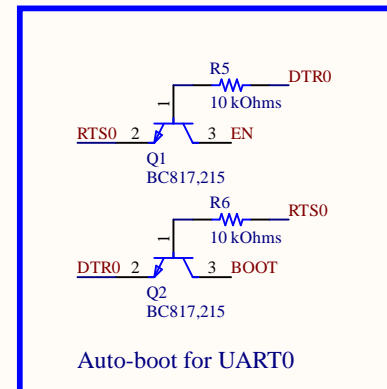
MTR CURRENT = ADC1_CH0
 SPI Pins = GPIO12-15
 FSR 1 READING = ADC2_CH2
 FSR 2 READING = ADC2_CH0



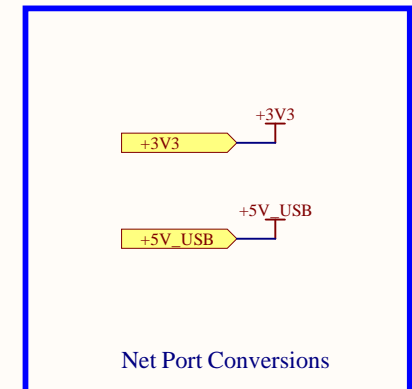
ESP32-WROOM-32UE-N4



USB to UART Converter

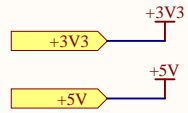


Auto-boot for UART0

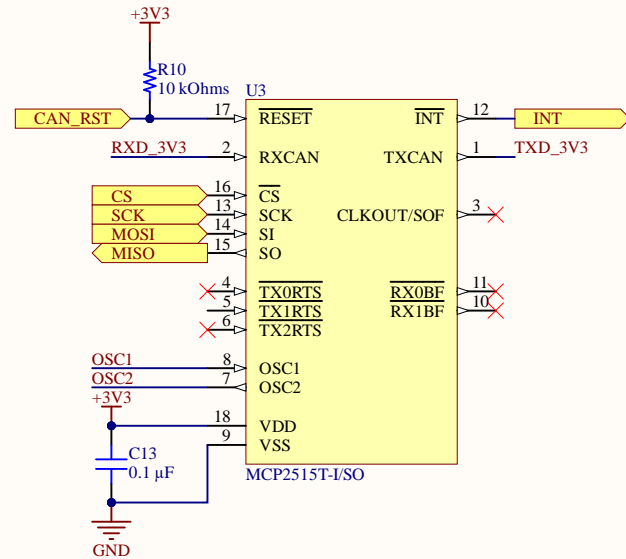


Net Port Conversions

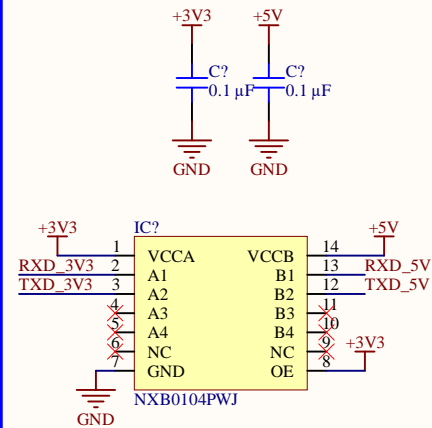
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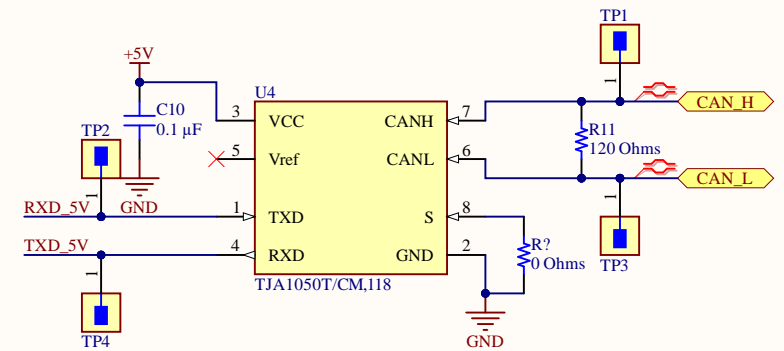
Net Port Conversions



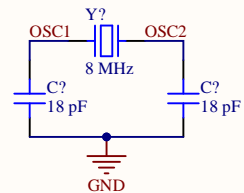
CAN Controller



3V3 <-> 5V Bidirectional Level Shifter



CAN Transceiver



CAN Controller Oscillator

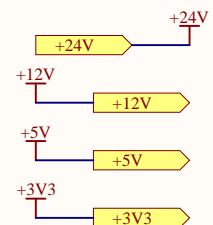
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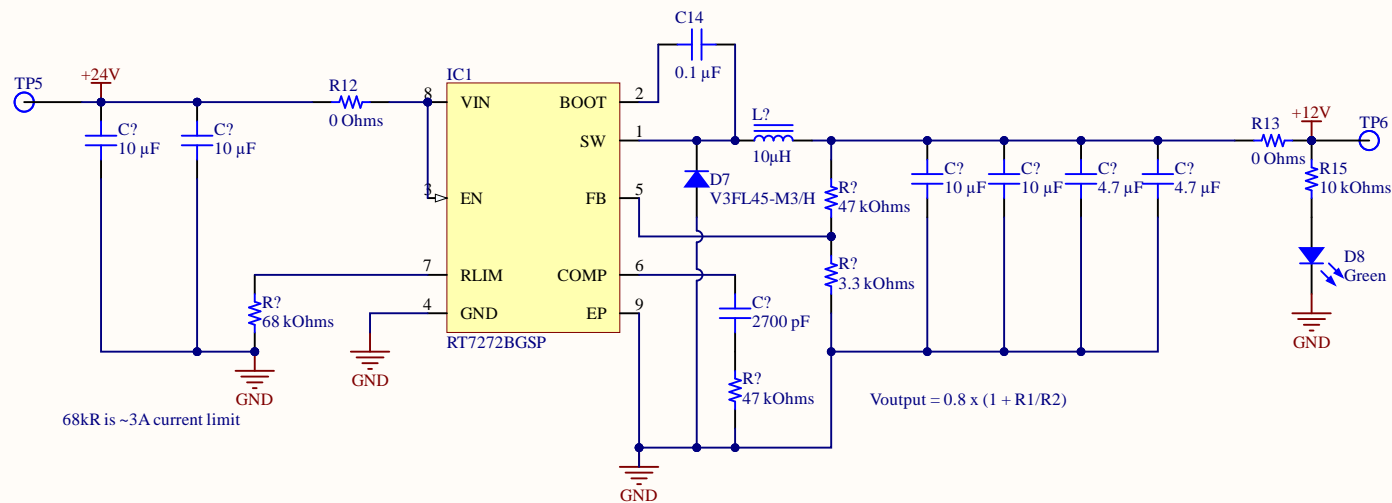
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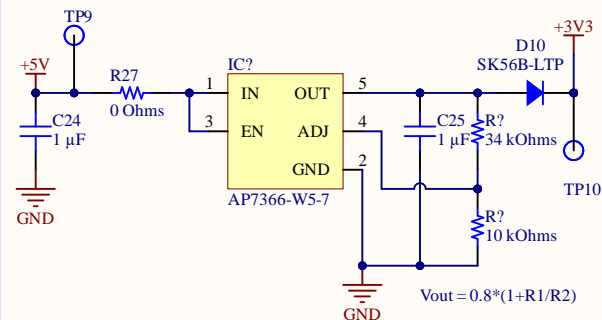
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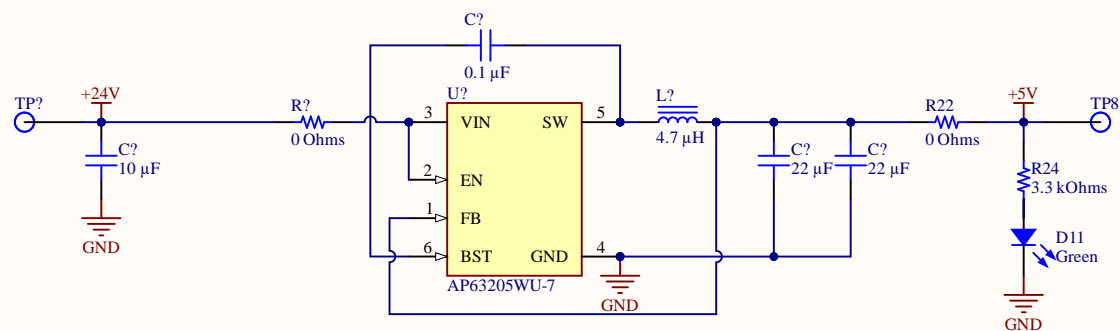
Net Port Conversions



24V -> 12V 2.5A Buck Converter



5V -> 3V3 600mA LDO



24V -> 5V 2A Buck Converter

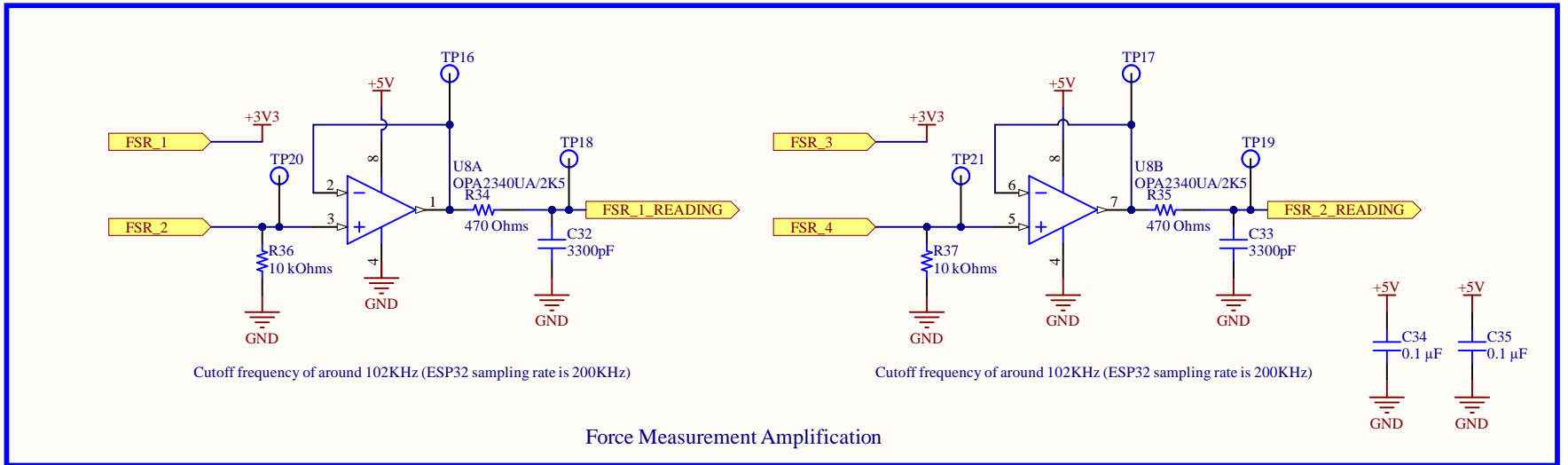
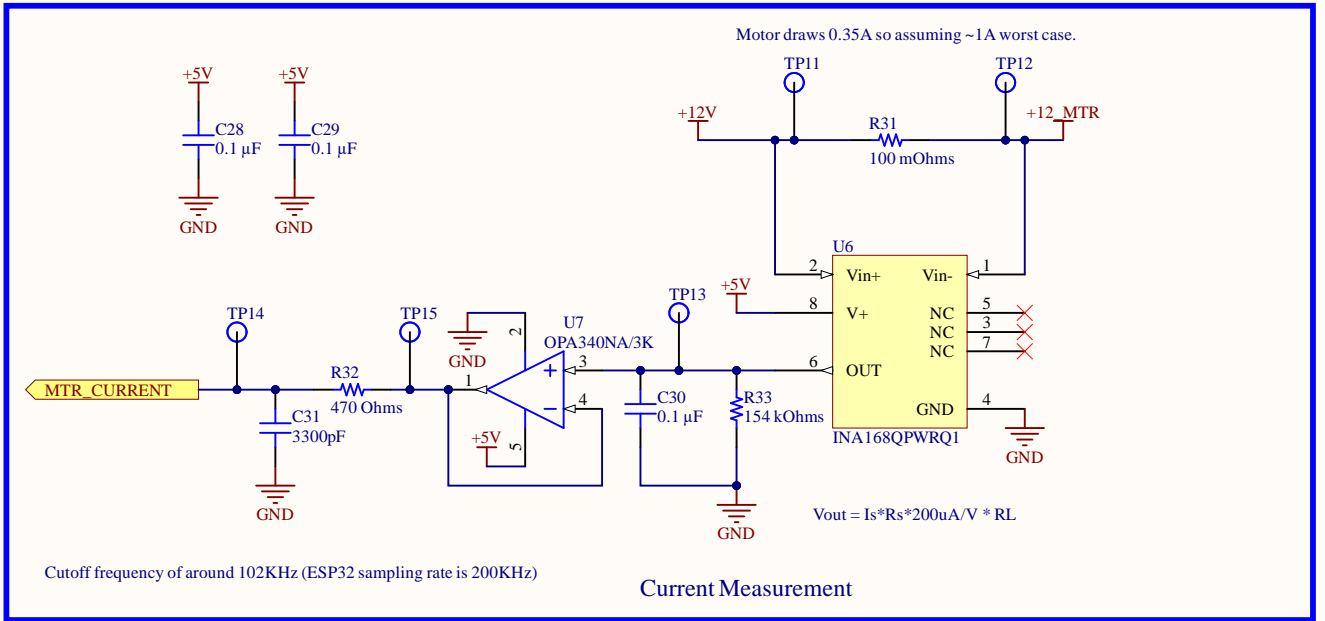
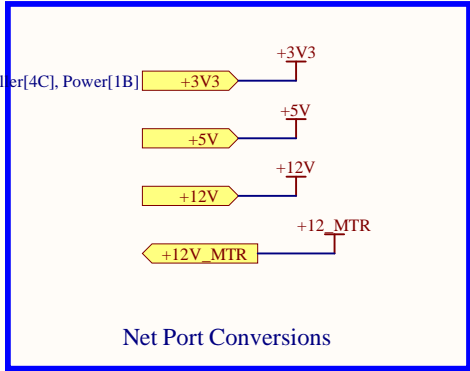
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Title		
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A

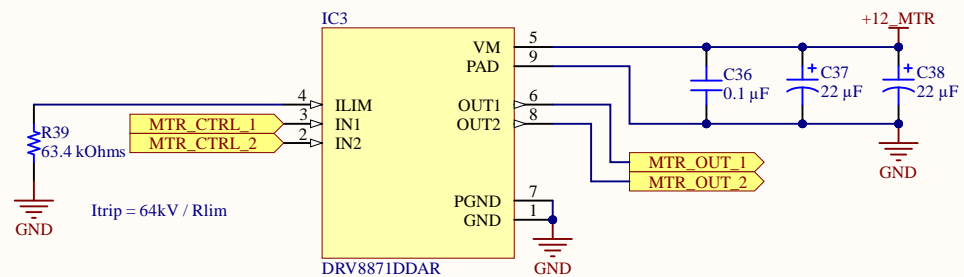
A



Net Port Conversions

B

B



Motor being driven draws around 0.35A from testing. Peak current draw unkown. Missing datasheet as well

Integrated Full Bridge Driver

C

C

D

D

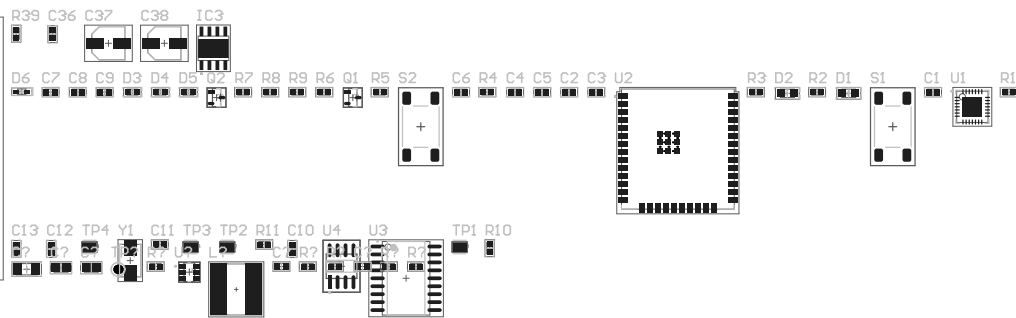
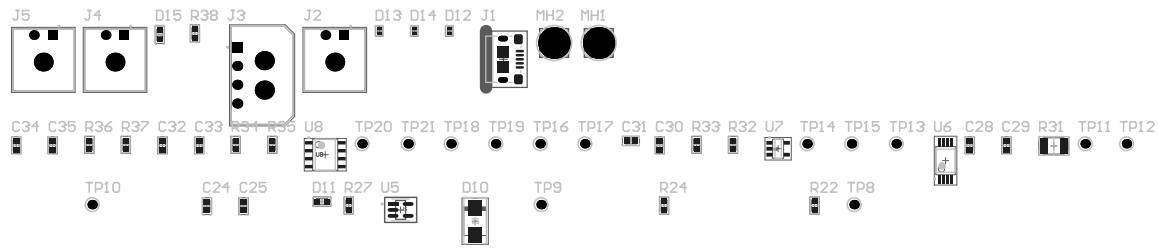
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1

2

3

4



Comment	Description	Designator	Footprint	Ref	Quantity
1 µf	CAP CER 10K 10K X7R 80V, CAP CER 10K 10K X7R 80V, CAP 10K 10K X7R 80V	C1, C2, C3, C24, C25	CAP0401_140B	CAP0401_140B	4
0.1 µf	CAP CER 0.1UF 25V 50V X7R 50V X7R 50V	C3, C5, C6, C7, C10, C11, C14, C16, C19, C20, C18, C15, C17, C13, C12, C14, C16, C19, C20, C18, C15, C17	CAP0401_140B	CAP0401_140B	14
4.7 µf	CAP CER 4.7UF 25V 50V X7R 50V	C4	CAP0401_140B	CAP0401_140B	1
10 µf	CAP CER 10UF 10V 50V X7R 50V	C8	CAP0401_140B	CAP0401_140B	1
100µf	CAP CER 100UF 50V X7R 50V	C11, C12, C13	CAP0401_140B	CAP0401_140B	3
20 µf	CAP ALUM 20UF 20V 50V X7R 50V	C17, C18	CAP ALUM 20V 50V X7R 50V	CAP ALUM 20V 50V X7R 50V	2
4.7 µf	CAP CER 4.7UF 25V 50V X7R 50V	C7	CAP0401_140B	CAP0401_140B	1
10 µf	CAP CER 10UF 10V 50V X7R 50V	C7	CAP 1210_10V - 10µF	CAP 1210_10V - 10µF	1
10 µf	CAP CER 10UF 10V 50V X7R 50V	C7	CAP0401_140B	CAP0401_140B	2
20 µf	CAP CER 20UF 20V 50V X7R 50V	C7	CAP 1206_20V - 20µF	CAP 1206_20V - 20µF	2
100µf	CAP CER 100UF 50V X7R 50V	C7	CAP0401_140B	CAP0401_140B	1
Red	LED RED CLEAR CHIP 5mm	C61	LED0805_2012 RED	LED0805_2012 RED	1
Green	LED GREEN CLEAR CHIP 5mm	C62	LED0805_2012 GREEN	LED0805_2012 GREEN	1
Blue	LED BLUE CLEAR CHIP 5mm	C63	LED0402_140B BLUE	LED0402_140B BLUE	1
Red	LED RED CLEAR CHIP 5mm	C64	LED0402_140B RED	LED0402_140B RED	1
Green	LED GREEN CLEAR CHIP 5mm	C65, D16, D11, D15	LED0402_140B GREEN	LED0402_140B GREEN	4
ESD3V3505B-TP	ESD3V3505B-TP	C66	ESD3V3505B-TP	ESD3V3505B-TP	1
V3F145-MCH-TP	V3F145-MCH-TP	C67	V3F145-MCH-TP	V3F145-MCH-TP	1
ESD3V3505B-TP	ESD3V3505B-TP	C68	ESD3V3505B-TP	ESD3V3505B-TP	1
TPD1E1080ACDPW02	TPD1E1080ACDPW02	C69	TPD1E1080ACDPW02	TPD1E1080ACDPW02	1
ESD3V3505B-TP	ESD3V3505B-TP	C70, D14	ESD3V3505B-TP	ESD3V3505B-TP	2
RT722Z8GSP	RT722Z8GSP	C71	RT722Z8GSP	RT722Z8GSP	1
APV736T50EUA	APV736T50EUA	C72	APV736T50EUA	APV736T50EUA	1
AP7366-V5-7	AP7366-V5-7	C73	AP7366-V5-7	AP7366-V5-7	1
90807040P02	90807040P02	C74	90807040P02	90807040P02	1
90118193-0001U7	90118193-0001U7	C75	90118193-0001U7	90118193-0001U7	1
4360D-0200	4360D-0200	C76, J4, J5	4360D-0200	4360D-0200	2
4360D-0400	4360D-0400	C77	4360D-0400	4360D-0400	1
4.7 µf	4.7 µf	C78	4.7 µf	4.7 µf	1
10µf	10µf	C79	10µf	10µf	1
Revised Mounting	Revised Mounting	C80, C81	Revised Mounting	Revised Mounting	2
90217-215	90217-215	C82	90217-215	90217-215	1
10 kOhms	10 kOhms	C83, C84, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37, R38, R39, R40, R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, 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