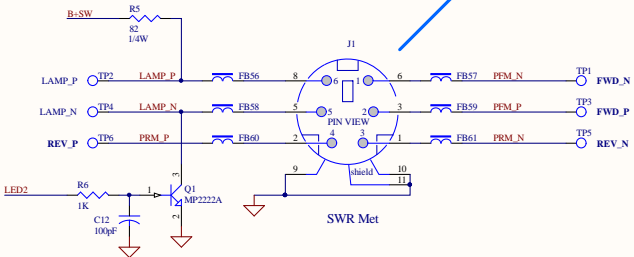
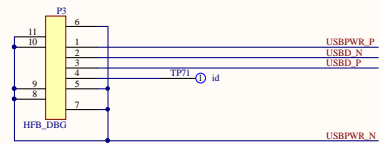
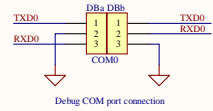
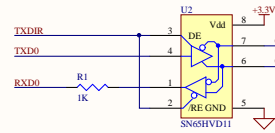
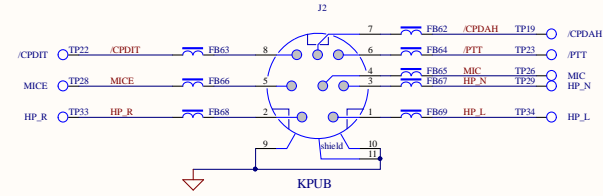


# System RS485 COM xcvr



SWR Met



- CCOM\_N
- CCOM\_P
- VID2\_N
- VID2\_P
- RCVH\_N
- RCVH\_P
- RCVB\_N
- RCVB\_P
- RCVA\_N
- RCVA\_P
- MOD\_N
- MOD\_P
- PRM\_N
- PRM\_P
- PFM\_N
- PFM\_P
- VID7K\_N
- VID7K\_P
- VIDPWR\_N
- VIDPWR\_P

- SHIELD
- USBD\_N
- USBD\_P
- CCOM\_N
- CCOM\_P
- VID2\_N
- VID2\_P
- USBPWR\_N
- USBPWR\_P
- TP13
- TP14
- TP15
- TP16
- TP17
- TP18
- TP19
- TP20
- TP21
- TP22
- TP23
- TP24
- TP25
- TP26
- TP27
- TP28
- TP29
- TP30
- TP31
- TP32
- TP33
- TP34
- TP35

- C1 100µF
- C2 100µF
- C17 100µF
- C18 100µF
- C4 100µF
- C5 100µF
- C13 100µF
- C6 100µF
- C7 100µF
- C14 100µF
- C8 100µF
- C15 100µF
- C9 100µF
- C16 100µF
- C10 100µF
- C21 100µF
- C11 100µF

- MANTB
- PDAB
- MANTA
- PDIT
- VID2UP
- MANON
- SPARE\_HFB
- GND
- B-SW

- TP36
- TP37
- TP38
- TP39
- TP40
- TP41
- TP42
- TP43

- C26 100µF
- C27 100µF
- C23 100µF
- C28 100µF
- C24 100µF
- C29 100µF
- C25 100µF

- SPARE\_6
- LDU\_RXD
- LDU\_TXD
- B-SW

- TP44
- TP45
- TP46
- TP47

- DASHLAMP
- ACC+
- VID7K\_N
- VID7K\_P
- VIDPWR\_N
- VIDPWR\_P

- TP48
- TP49
- TP50
- TP51
- TP52

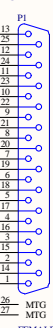
- C30 100µF
- C31 100µF
- C35 100µF
- C32 100µF
- C33 100µF
- C37 100µF
- C38 100µF
- C34 100µF

- KPU\_TXD
- KPU\_DIT
- KPU\_RXD
- KPU\_DAH
- KPU\_DGND
- MANON2
- SPARE\_7
- GND
- B-SW

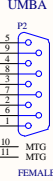
- TP53
- TP54
- TP55
- TP56
- TP57
- TP58
- TP59

- C43 100µF
- C39 100µF
- C44 100µF
- C40 100µF
- C41 100µF
- C45 100µF
- C42 100µF

UMBB



UMBA



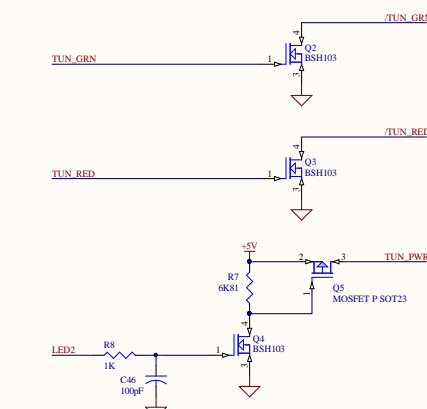
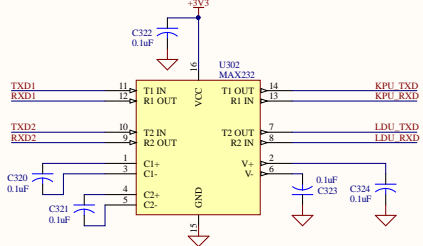
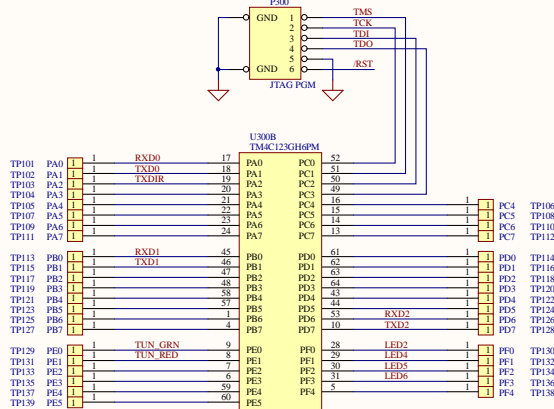
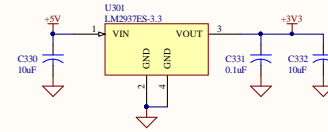
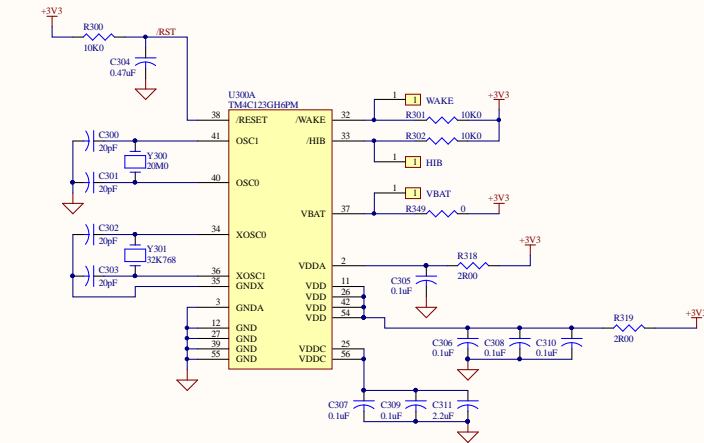
DU



KPUA



Title			
eACU Bread-Board			
Size	Number	Revision	
C	eACU - I/O Designed by Joe Haas, KE0FF	-	
Date:	06/12/2023	Sheet 1	of 3

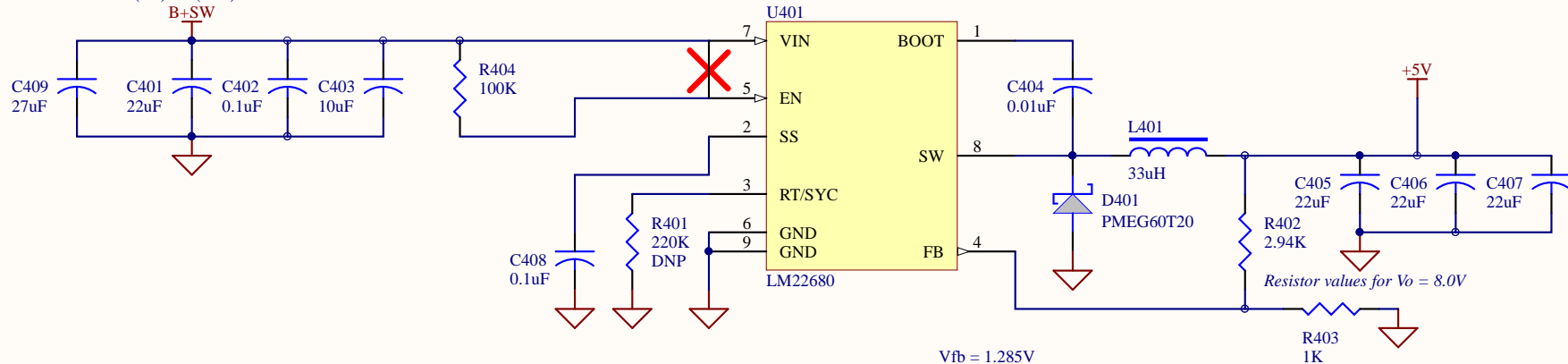


Title			
eACU Bread-Board			
Size	Number	Revision	
C	eACU - MCU	-	
Date:	06/12/2023	Designed by	Joe Haas, KEEFF
File:	C:\Users\joe\OneDrive\Documents\ACU MCU Schematic	Sheet	2 of 3
		Drawn By:	KEEFF

**Note: Depicted cap P/N selections rated for Vin or Vo (max) <= 20V**

(U1) Vin(min) = 4.5V

(U1) Vin(max) = 42V



$$V_{fb} = 1.285V$$

$$R2 = ((V_o/V_{fb}) - 1) * R3$$

$$V_o(\min) = 1.285V$$

$$(R2 + R3) \leq 10K$$

$$R3 = 1.00K$$

$$V_o = 3.3V, R2 = 1.62K$$

$$V_o = 5.0V, R2 = 2.94K$$

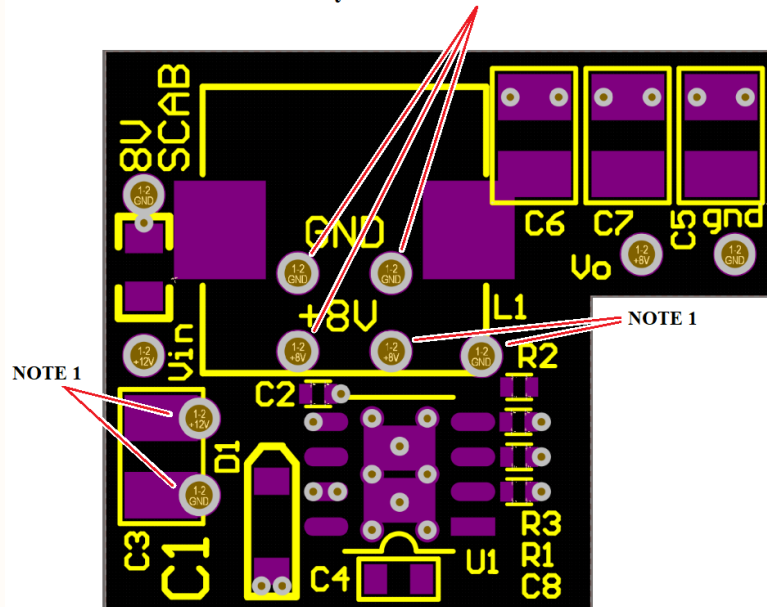
$$V_o = 6.8V, R2 = 4.32K$$

$$V_o = 8.0V, R2 = 5.36K$$

$$V_o = 12V, R2 = 8.45K$$

## RFCCA S.C.A.B. PCB Layout

NOTE 1



### ASSY Notes:

A1) Place and solder the following parts:

D1, C2, U1, C4, R2, R3, C8, C5, C6, C7

A2) Attach S.C.A.B. to RFCCA in the area of U8 per the install notes below

### Install Notes:

- 1) Apply a layer of Kapton tape to bottom side and expose via pads at "NOTE 1" locations (7 places)
- 2) Make sure the following components are removed from the RFCCA and the pads are clear of excess solder: R23, R25, C112, C129, C130, C132, U8
- 3) Align "NOTE 1" holes with pads on the RF CCA:
  - \* C1 via holes line up with C112 pads
  - \* "GND" and "+8V" via holes line up with C129 & C130 pads
  - \* Via hole near R2 lines up with bottom pad of C132
- 4) Solder S.C.A.B. at via-hole locations (7 places)
- 5) Place and solder L1, C1, and C3
- 6) Desolder and lift pin 5 of U1. Place a 100K resistor between lifted lead and pad (0201 package is best option). Alternately, place a 1206, 100K resistor between the lifted U1-5 and U1-7.

Title <b>DC-DC SW Regulator, 42Vin, 2A Io</b> <b>S.C.A.B. for the RFCCA 8V supply</b>			
Size A	Number <b>eACU - 5V reg</b> Designed by Joe Haas, KE0FF	Revision -	
Date:	06/12/2023	Sheet	3 of 3
File:	C:\Users\...\8V_SCAB.SchDoc	Drawn By:	KE0FF