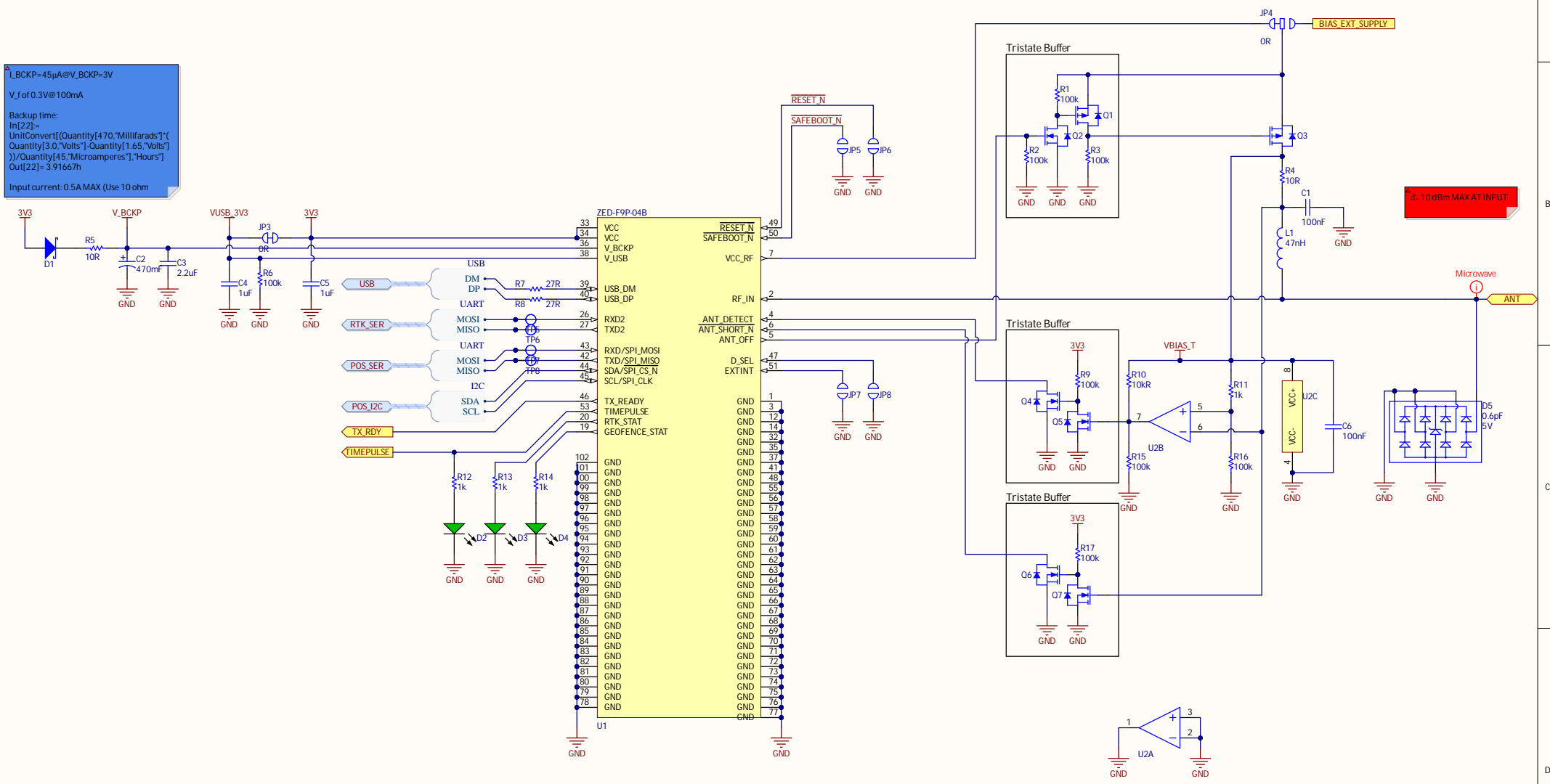
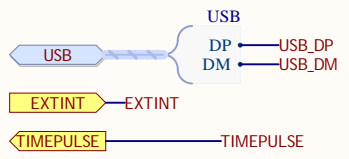
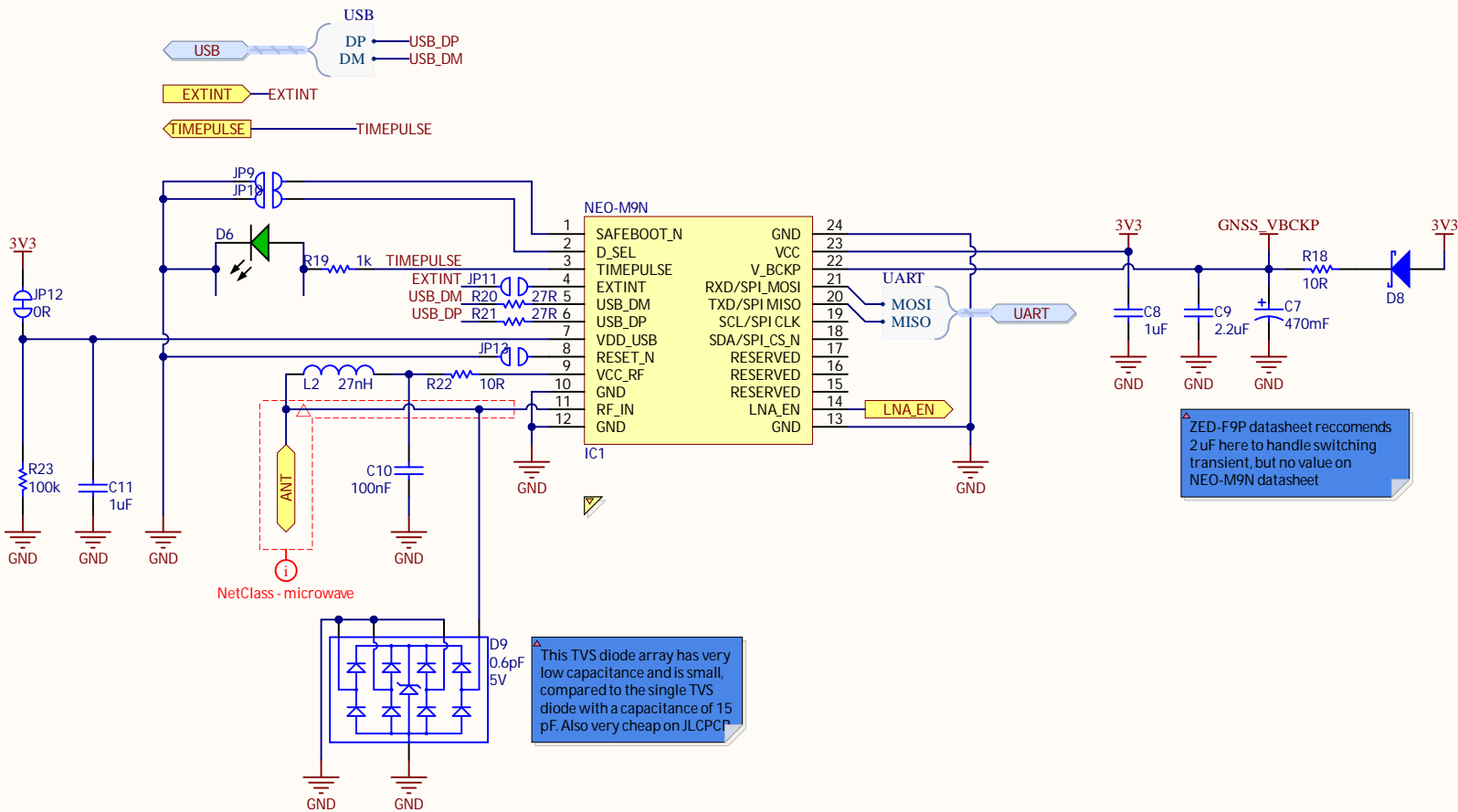


Title: Root		Revision: a6563641 [Refreshing...]	
Designer: Peter Tanner		Size: A4	Sheet: 1 / 6
Date: 2024-11-12			
35 Stirling Hwy, Perth WA 6009, Australia			

$I_{BCKP} = 45\mu A @ V_{BCKP} = 3V$
 $V_f \text{ of } 0.3V @ 100mA$
 Backup time:
 $In[22] :=$
 $UnitConvert[Quantity[470, "Millifarads"] ($
 $Quantity[3.0, "Volts"] - Quantity[1.65, "Volts"]$
 $)] / Quantity[45, "Microamperes"], "Hours"]$
 $Out[22] = 3.91667h$
 Input current: 0.5A MAX (Use 10 ohm)



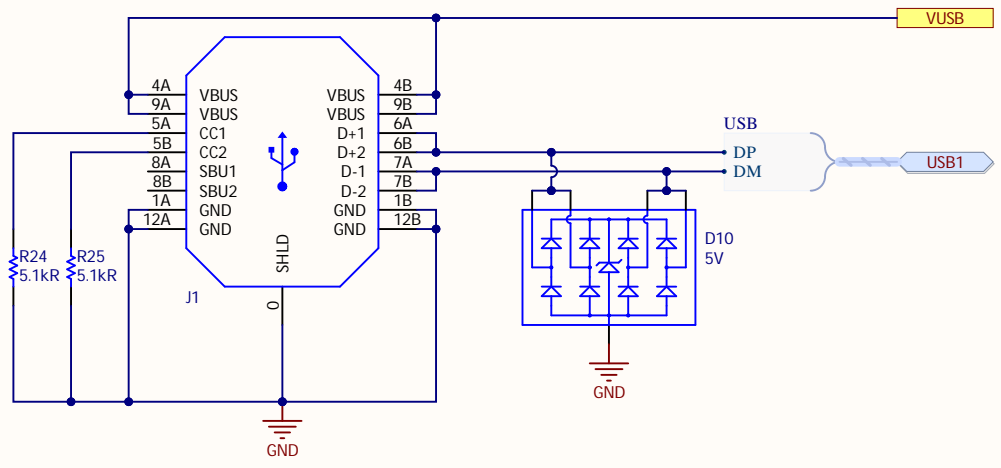
Title: DGNSS		Revision: a6563641	
Designer: Peter Tanner		[Refreshing...]	
Date: 2024-11-12		Size: A3	Sheet: 2 / 6
35 Stirling Hwy, Perth WA 6009, Australia			



^ ZED-F9P datasheet recommends 2uF here to handle switching transient, but no value on NEO-M9N datasheet

^ This TVS diode array has very low capacitance and is small, compared to the single TVS diode with a capacitance of 15 pF. Also very cheap on JLCPCB

Title: Standard GNSS		
Designer: Peter Tanner	Revision: a6563641 [Refreshing...]	
Date: 2024-11-12	Size: A4	Sheet: 3 / 6
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Title: USB		
Designer: Peter Tanner	Revision: 8eed0eb3 [Refreshing...]	
Date: 2024-11-12	Size: A4	Sheet: 4 / 6
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▲ Power consumption:
 DGNSS VCC_RF: 300mA MAX (0 mA used on this board with passive antenna)
 DGNSS I_PEAK: 130mA

 SGNSS I_PEAK: 100mA
 SGNSS VCC_RF: 200mA (0 mA used on passive board)

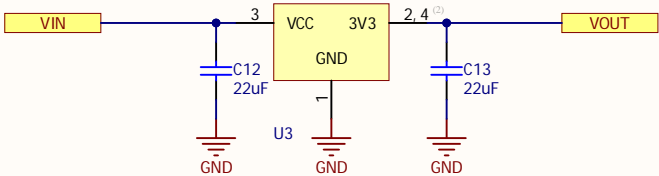
 MAX 0.73A

 Use LDO to eliminate LF noise
 NOTE: NO FERRITES ALLOWED:

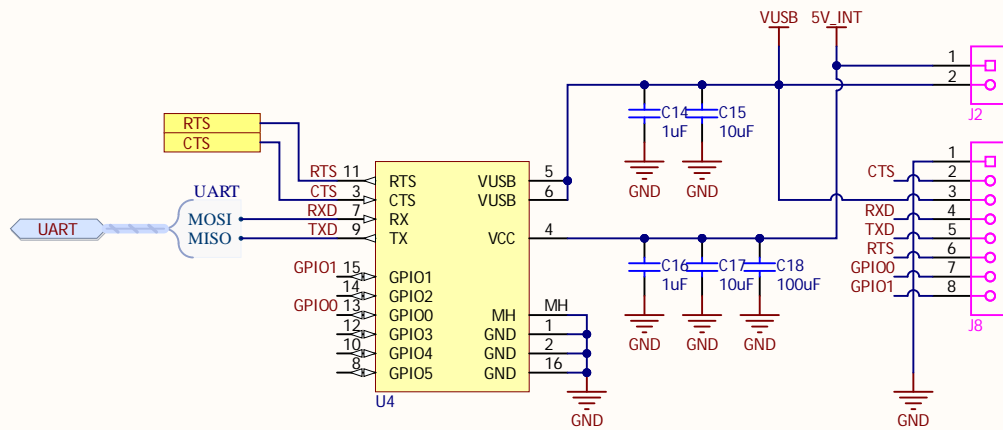
 The NEO-M9N standard precision GNSS receiver requires a low-noise, low-dropout voltage, very low source impedance power supply of 3.3 V typically. No inductors or ferrite beads should be used from

▲ 1N5819WS: 0.6V @ 1A
 DROPOUT VOLTAGE: 1.1V NOMINAL @ 0.8A

 (5 - 0.6 - 1.1)V = 3.3V @ 0.8A



Title: 3V3 regulator		
Designer: Peter Tanner	Revision: a6563641 [Refreshing...]	
Date: 2024-11-12	Size: A4	Sheet: 5 / 6
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Title: RFD900x	
Designer: Peter Tanner	Revision: 2a357acc [Refreshing...]
Date: 2024-11-12	Size: A4 Sheet: 6 / 6
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