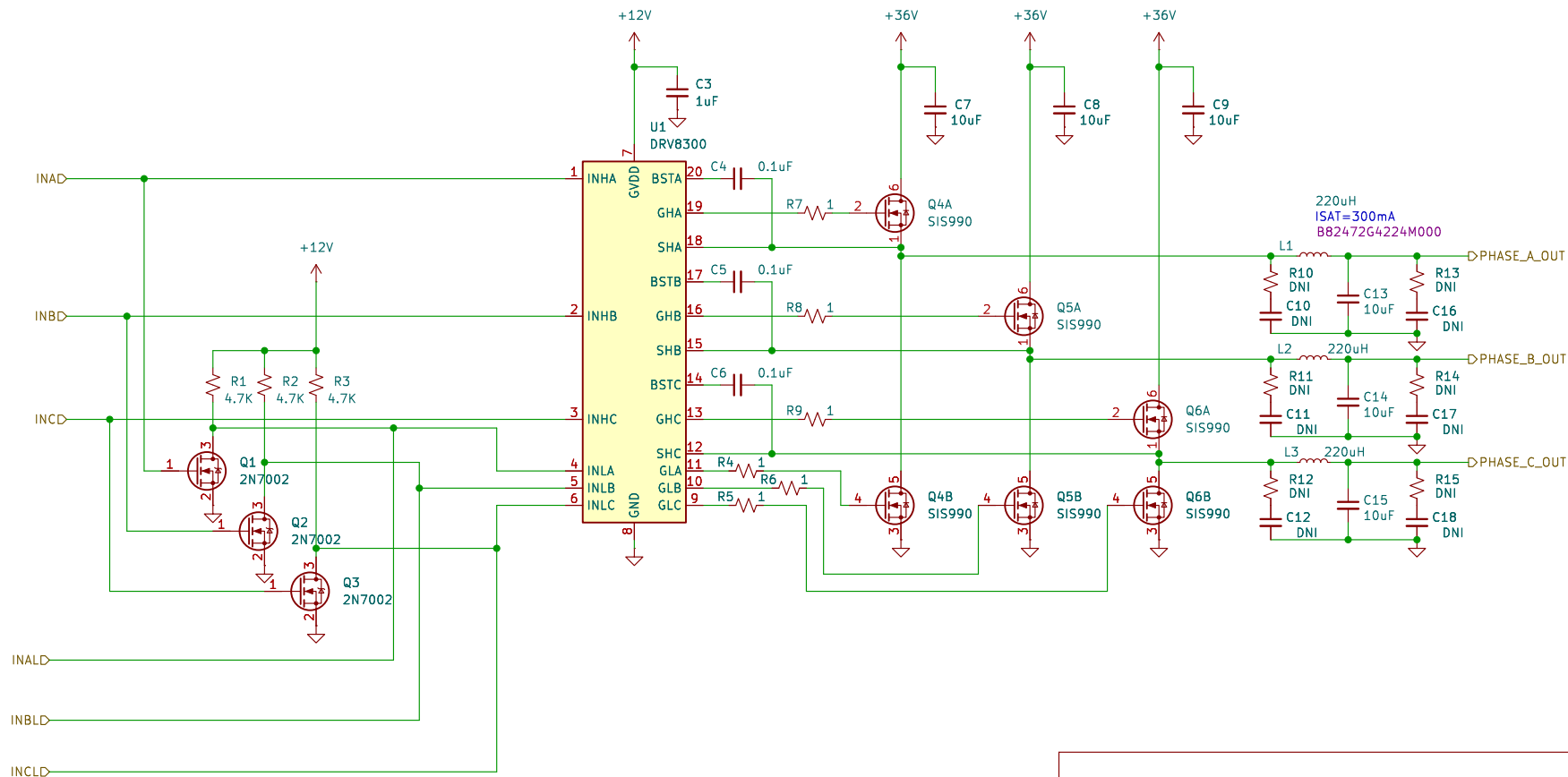


VREF is 2.6 VAC.  
 FDAI CT winding: 11.8VAC, is 152 mH and 62 ohms. Current is up to 28 mA, depending on the shaft position.  
 If you want to drive a synchro directly, I measure about 25 mA if the shaft is spinning freely. If you hold the synchro shaft so it's generating maximum torque, the current goes up to 600 mA.

$DV\_BSTX = VGDD - VB00TD - VBSTUV$   
 $VGDD = 12V$   
 $VB00TD = 0.85V$  (DRV8300)  
 $VBSTUV = 4.5V$  (DRV8300)  
 $DV\_BSTX = 6.65V$   
 $Qg = 8nC$  (SIS990)  
 $fSW = 60KHz$   
 $ILBS\_TRAN = 220uA$  (DRV8300)  
 $Q_{tot} = Qg + ILBS\_TRAN / fSW = 8nC + 3.7nC = 11.7nC$   
 $C_{bst\_min} = Q_{tot} / DV\_BSTX = 1.76nF$



Sheet: /SingleSynchroDriver/  
 File: SingleSynchroDriver.kicad\_sch

# **Title:**

Size: A4

Date:

KiCad E.D.A. 9.0.1

**Rev:**

Id: 2/2