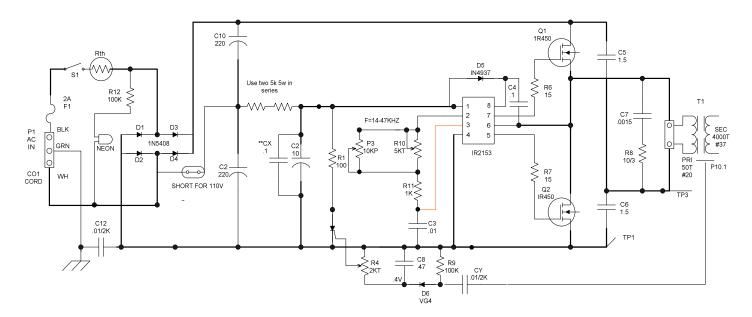
Simplified High Voltage Ferrite Transformer T1 Design for Half Bridge Circuit as Shown

- 1. Select switching frequency.. Usually around 25 kHz
- 2. Determine cross sectional area of core in square cm

Locate a suitable plastic tube to use as a winding form

- 3. Determine operating DC voltage...usually 1.4 x 115=160 vdc or 320 vdc if you voltage doubler
- 4. Determine number of primary turns required to support 80 or 160 VDC....1/2 of DC voltage. Use formula N=(E x t x 10e8)/(B x A) Set B flux to 2000 as this is the approximate value of these cores.
- 5. Locate a suitable plastic tube to use as a winding form. This should snuggly fit around the core halves
- 6. These are the turns for the primary and should be #20-22 wire
- 7. Wind secondary with turns required for your open circuit voltage. Use appropriate size wire for secondary current and use high voltage winding techniques dependent on your voltage level.
- 8. Air cap cores starting with one layer of scotch tape. Add layers as need to final adjust frequency and output
- 9. Sample schematic is for 10,000 volt plasma driver and has is shown wired for 360 VDC rail to rail

PVM400 115 vac basic 709



Information Unlimited www.amazing1.com