## **KNOWN PARAMETERS**

FSW -- 105KHZ MIN/MAX DUTY CYCLE -- 5% - 46%

Q1, Q2 -- IKW15N120H3 (IGBT) HV SOURCE -- 60VDC

PIN #7 (VDD) -- 16.2VDC SH, SL -- FQPF13N06L (IGBT)

PIN #13, PIN #11 -- Min 12.4, Max 16.4

I HAVE SENT SEVERAL INQUIRES TO TEXAS INSTRUMENTS REGARDING THE UCC27714 IC CHIP AND HAVE ALWAYS RECEIVED VERY EXPLANATORY ANSWERS AND I THANK ALL AT TI FOR YOUR HELP AND IN DELIVERING ANSWERS BACK FASTER THAN AMAZON.

WITH YOUR HELP I HAVE BEEN ABLE TO MOVE FORWARD ON THIS PROJECT TO WHAT I BELIEVE IS 95% COMPLETE. AS THE OLD SAYING GOES, "ANYONE CAN START A PROJECT, BUT FEW CAN FINISH THE PROJECT." I AM ONE OF THE FEW THAT FINISHES THE PROJECTS I START. MOVING FORWARD.

FIG. A -- UCC27714 TWO-SWITCH FLYBACK CONVERTER COMPRISES THE WIRING CIRCUIT AND COMPONENTS USED. LISTED ABOVE ARE THE MEASUREMENTS THAT WERE ACQUIRED USING A DIGITAL OSSILOSCOPE.

MY PROBLEM, WHICH I AM LOOKING TO TI TO HELP ME RESOLVE, IS WHEN THE SYSTEM IS TURED ON, I SEE SIGNALS ON Q1 & Q2 GATES, THE LOAD SWITCHE Q1 (HIGH SIDE) GETS HOT, THEN Q1 BECOMES NON-OPERATIONAL.

QUESTION 1: STARTING WITH THE KNOWN PARAMETERS LISTED ABOVE, ARE THEY GOOD NUMBERS? FROM WHAT I GATHERED FROM THE DATASHEET THEY AREREALLY CLOSE.

I NOTICED THAT THE VOLTAGE AT THE LOAD (FLYBACK TRANSFORMER PTIMARY) IS ABOUT 25% OF APPLIED HV (60VDC). THIS TELLSW ME THAT THE Q1/Q2 LOAD SWITCHES ARE NOT CLOSING ALL THE WAY.

QUESTION 2 -- WHERE AM I GOING WRONG ON DRIVING THE IGBT'S CLOSED? I HAVE GOOD SIGNALS AND THE POWER SUPPLY IS 18VDC WITH 5.5 AMPS DRIVING THE OUTPUT.

QUESTION 3 -- DO YOU HAVE ANY ADVICE, SUGGESTIONS, POSSIBLE SOLLUTIONS THAT WILL HELP ME FINIS PROJECT?

## FIG. A -- UCC27714 TWO-SWITCH FLYBACK CONVERTER

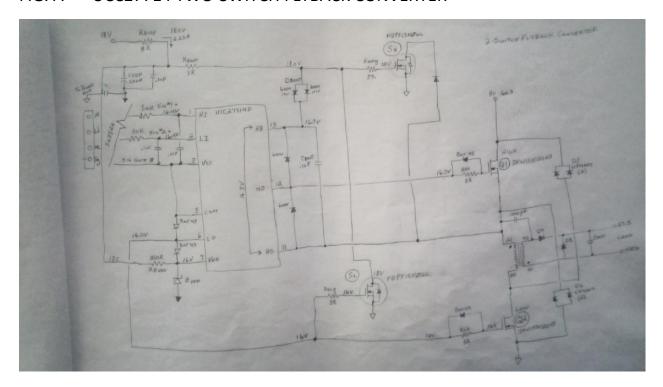


FIG. B -- PIN #13, #11 Cboot

