UCC28070 PFC: FINAL REVIEW

Part Number: UCC28070

Parameters:

Vinmax = 120VacRMS,   fsw = 100KHz,   Pout = 5000 watts,   fline 47-63 Hertz,

Vout = 390 V,   Dmax = 60%,   tss = 50ms

IC VOLTAGE READING

Pin #1 = 3.08V,	Pin #2 = 3.04V,	Pin #3 5.04V,	Pin #4 = 1.12V,	Pin #5 = 1.22V,
Pin #6 = 2.38V,	Pin #7 = 1.16V,	Pin #8 = 228mv	Pin #9 = 224mV,	Pin #10 = 3.00V
Pin #11 = 6.08V,	Pin #12 = 6.08V,	Pin #13 = 6.08V,	Pin #14 = 10.2V,	Pin #15 = 12.2V
Pin #16 = -80mv,	Pin #17 = 10.2V,	Pin #18 = 6.08V,	Pin #119 = 3.04V,	Pin #20 = 3.04V

THIS TEST WAS PERFOMED WITHOUT DRIVERS OR SWITCHES JUST FOR THE SOLE PURPOSE OF ACQUIRING PROPER SIGNALS BEFORE TESTING WITH THE SWITCHES.

DIAGRAM A

PLEASE NOTE THE MODIFICATIONS TO PIN #4 & PIN #5 WHICH WERE MADE IN ORDER TO GET THE OUTPUT SIGNALS ON PIN #14 & #17.

Partial diagram from: Figure 24. Typical Application Diagram

REASON FOR THIS MODIFICATION: PIN #4 IS ALWAYS LOWER OR EQUAL TO PIN #5. ALL
OTHER COMPONENTS ARE AS THE TI EXCEL SPREAD SHEET.

PROJECT SCHEMATIC IS PER **Figure 24. Typical Application Diagram**

Question 1) *IS THE DIAGRAM ABOVE ACCEPTABLE IN REGARDS TO PIN #4 & PIN #5?*

Question 1a) IF THE ABOVE DIAGRAM IS NOT AN EXCEPTABEL METHOD, PLEASE
EXPAIN WHY.

Question 2a) IF NOT EXCEPTABE, PLEASE EXPLAIN HOW PIN #4 WILL BECOME HIGHER
THAN PIN #5 IF VINAC MONITORS THE VOLTAGE BEFORE THE INDUCTORS AND VSENSE
MONITORS THE OUTPUT SIGNAL WHICH INCLUDE A DIODE PER CHANNEL?

Question 3) PLEASE LOOK AT FIGURES 1 – 18 AND MAKE COMMENTS ON THE SIGALS
WHICH ARE QUESTIONABE MAKE COMMENTS AS TO WHY THEY ARE NOT
ACCEPTABLE.

Question 4) PLEASE LOOK AT FIGURE #15 OF THE OUTPUT SIGNALS AND LEAVE A
COMMENT WHETHER SIGNAL IS CORRECT OR NOT.

PLEASE PROVIDE DIRECTION ON HOW TO PROCEDE.

FIGURE #1 PIN #1 = 3.08V
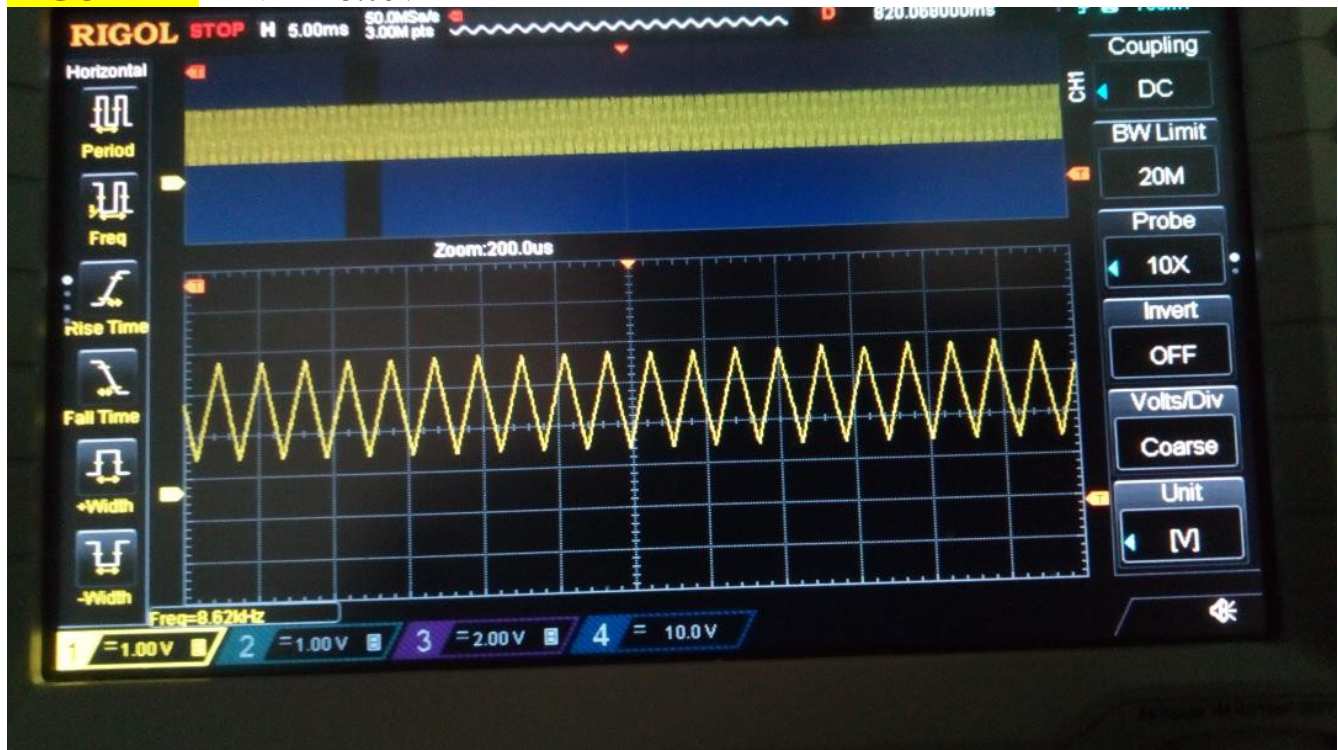
FIGURE #2 PIN #2 = 3.04V

FIGURE #3 PIN #3 = 5.04V
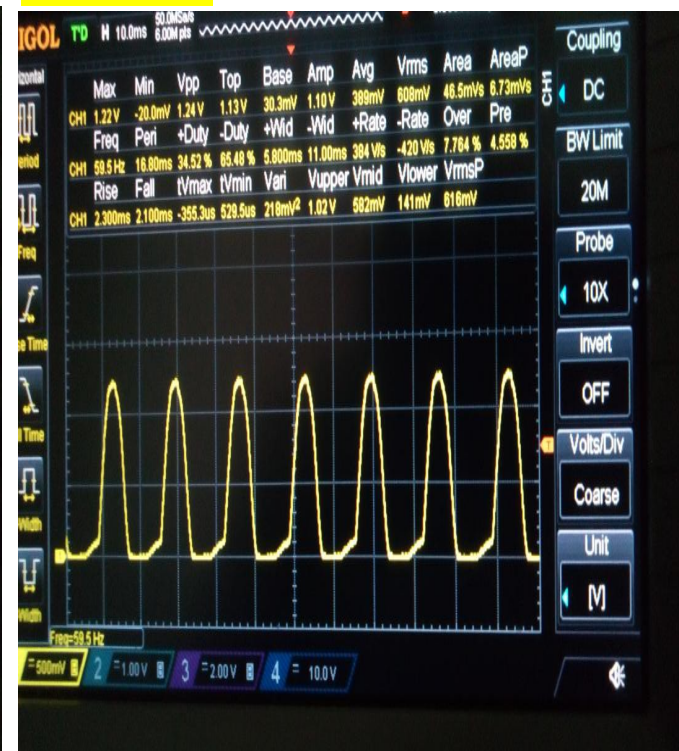

FIGURE #4 PIN 4 = 1.12V
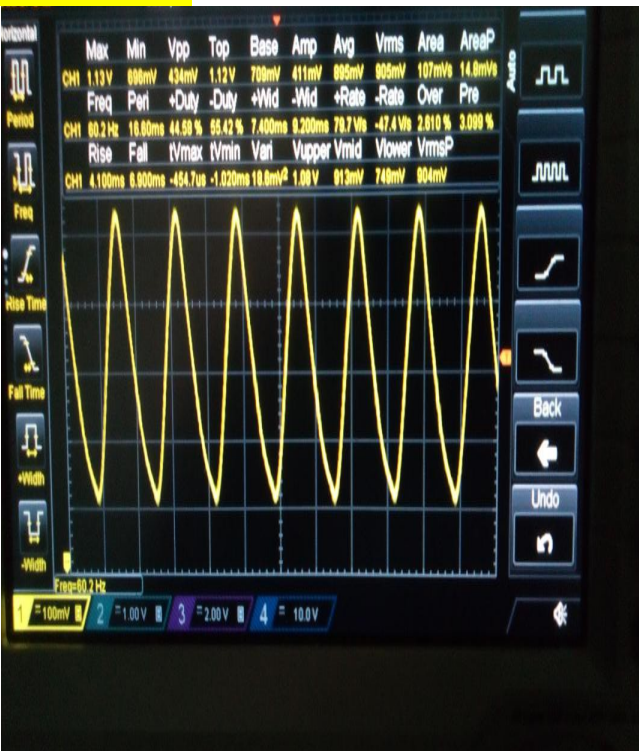
FIGURE #5 PIN #5 = 1.22V

FIGURE #6 PIN #6 = 2.38V

FIGURE #7 PIN #7 = 1.16V

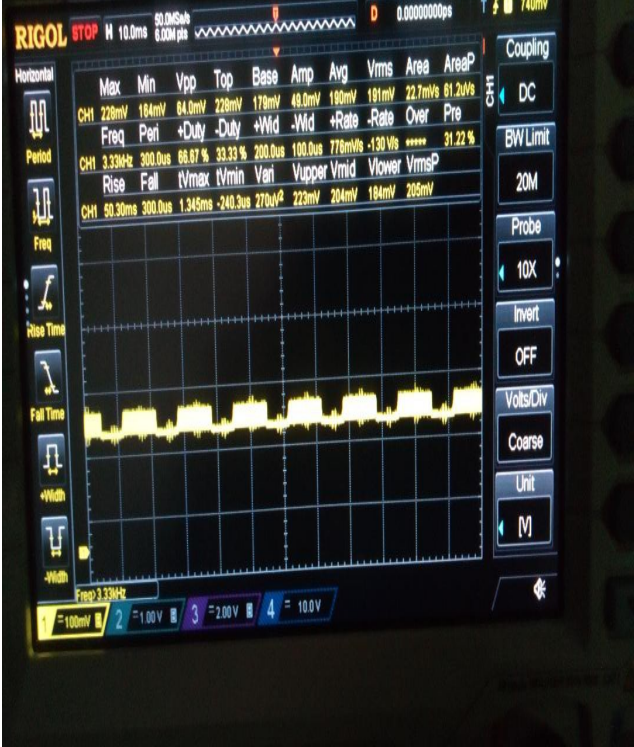**FIGURE #8** PIN #8 = 228mV

FIGURE #9 PIN #9 = 224mV

FIGURE #10 PIN #10 = 3.00V

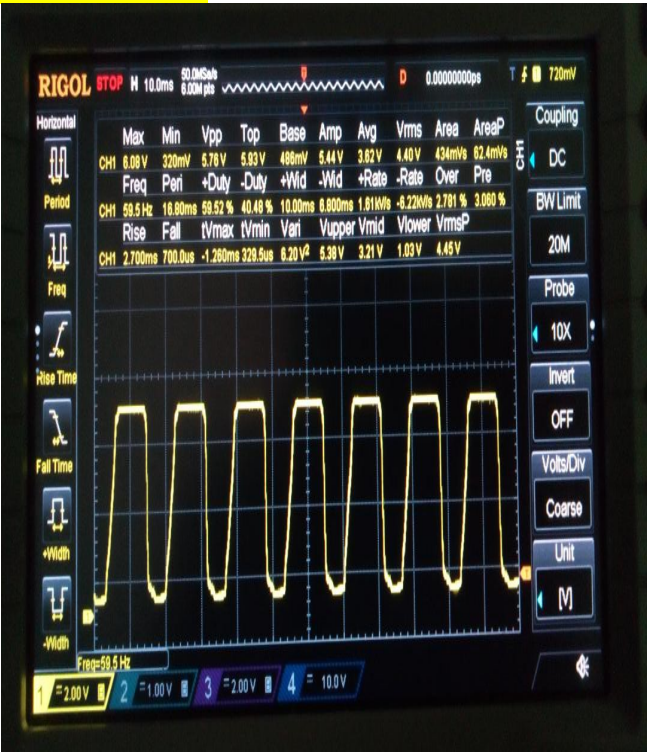

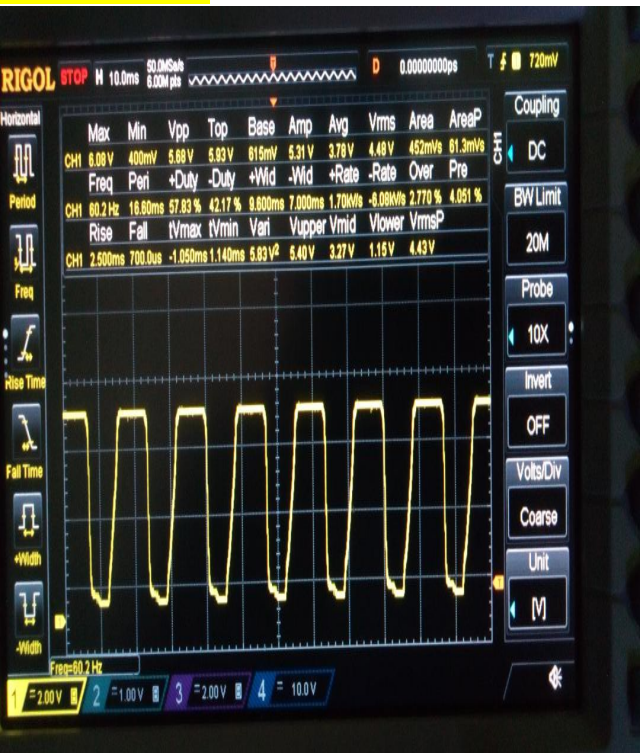**FIGURE #11** PIN #11 = 6.08V

FIGURE #12 PIN #12 = 6.08V
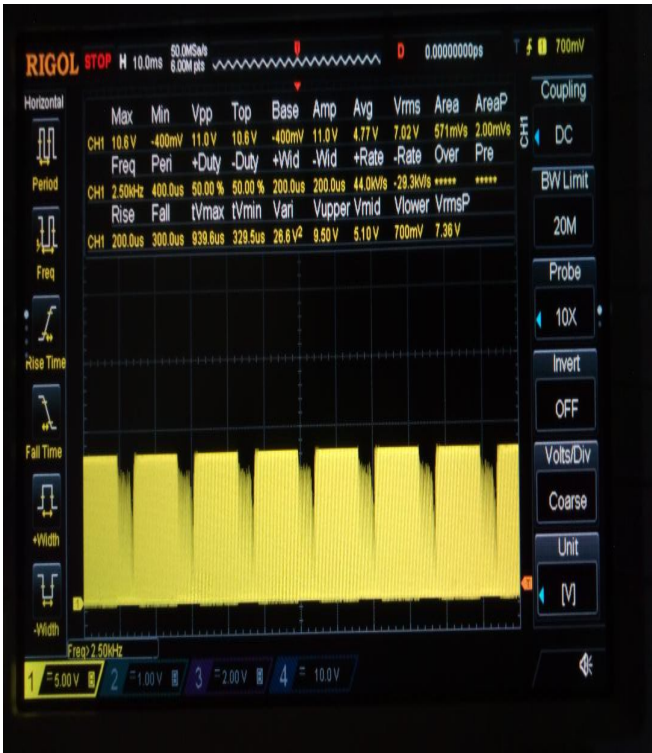
FIGURE #13 PIN #14 = 10.6V
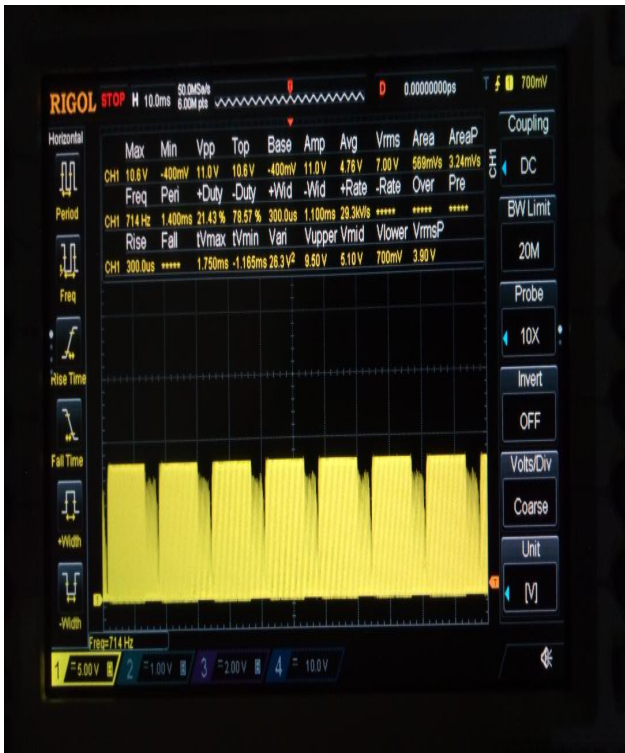

FIGURE #14 PIN #17 = 10.6V

FIGURE #15 PIN #14, #17

NOTE: AFTER ABOUT ALMOST THREE MINUTES OF ADJUSTING THE TRIGGER I WAS ABLE TO AQUIRE THE ABOVE SIGNAL.
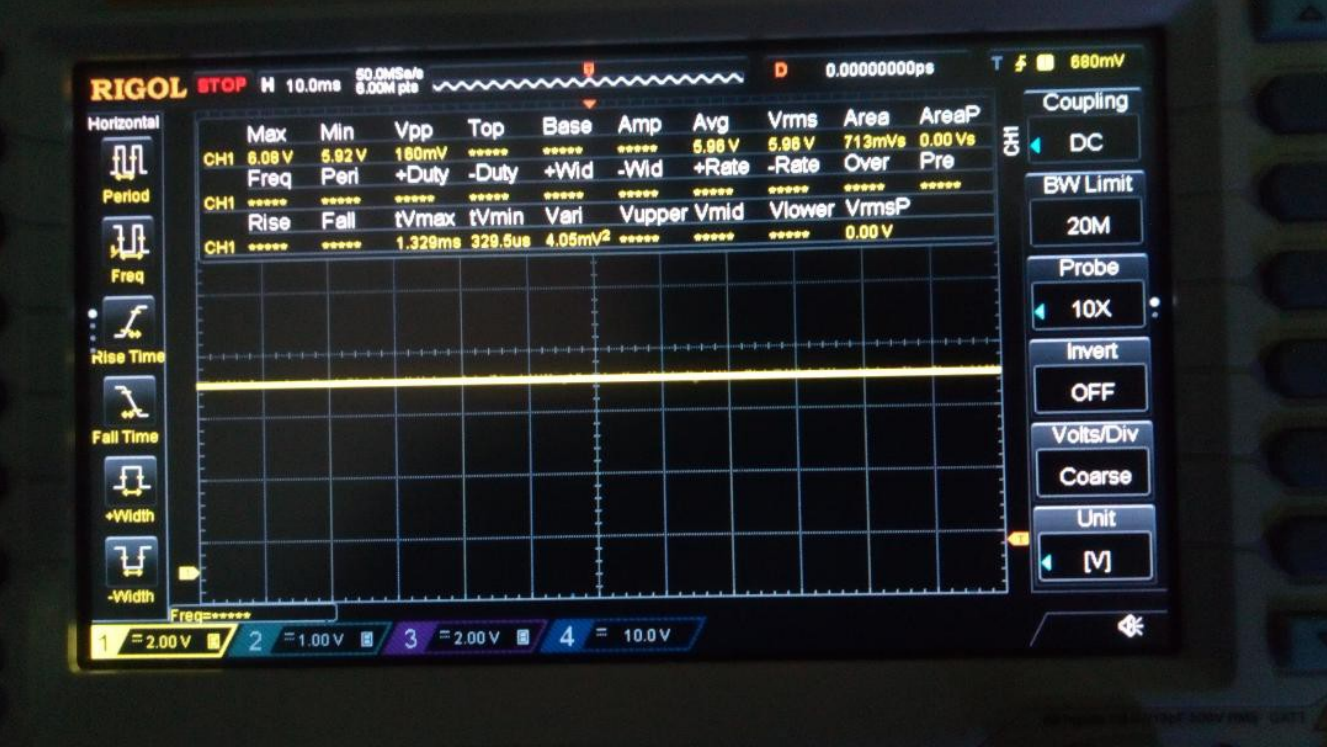
FIGURE #16 PIN #18 = 6.08V
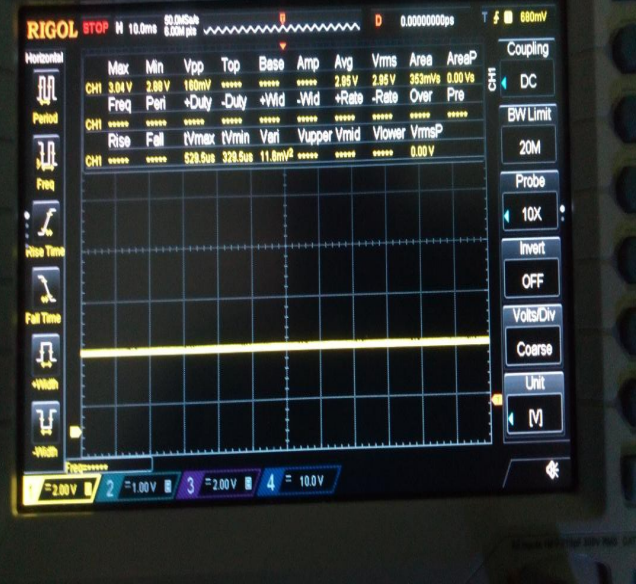

FIGURE #17 PIN #19 = 3.04V

FIGURE #18 PIN #20 = 3.04V