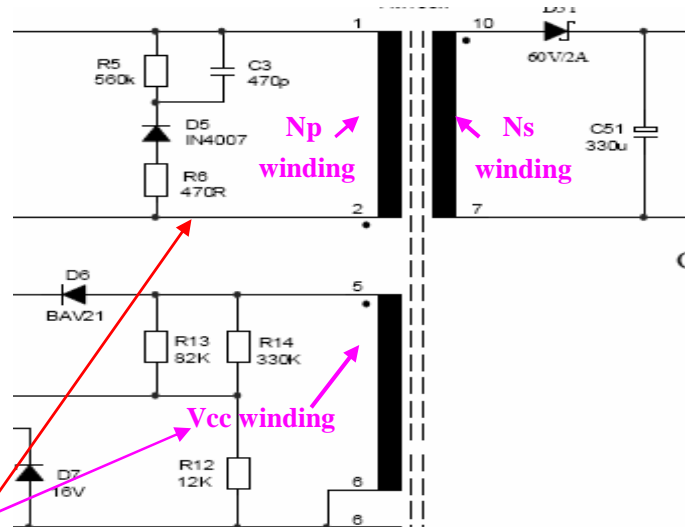
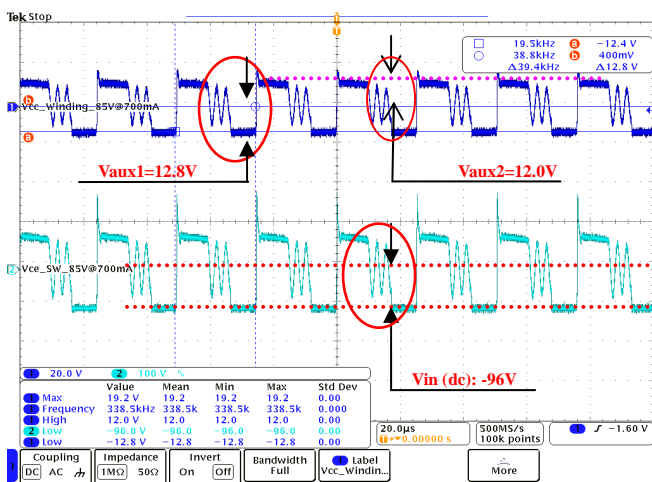


To verify waveforms' relationship between NP winding and NS winding, and effect on waveform for Aux winding.
(Take example of Heart III IN 150mW)

Input 85Vac/60Hz _700mA



Channel 1: Vcc_winding_measured from Vcc winding.

Channel 2: Vcc_SW_measured from Pin 2 of transformer.

FM1631 transformer turn ratio:

$N_p/N_{aux}=170/24$; $N_s/N_{aux}=13/24$

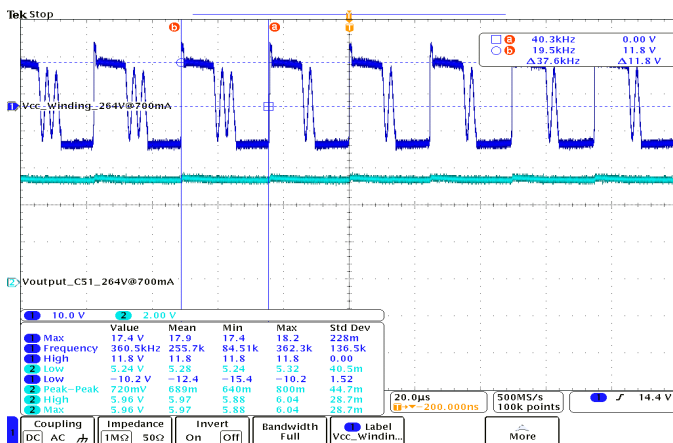
$V_{aux1}=(24/170)*96V=13.55V$; real measured $V_{aux1}=12.8V$

$V_{aux2}=(N_{aux}/N_s)*(V_o+V_f)$

Please refer to the below picture that Voutput is 5.96V@C51

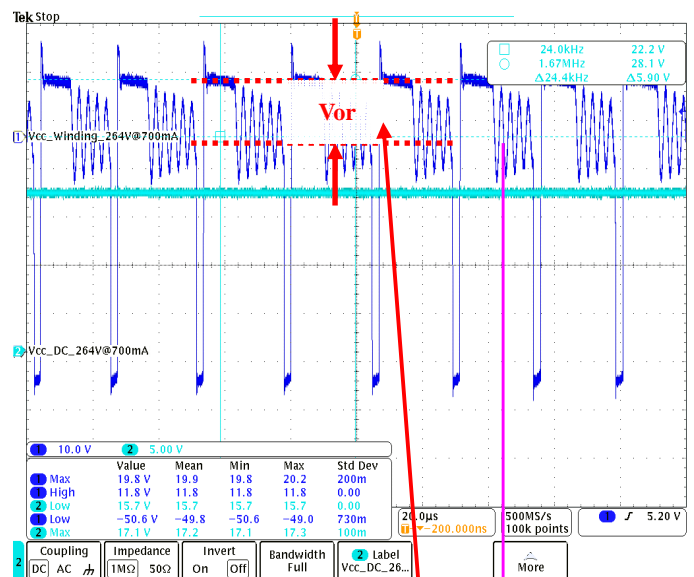
V_f is assumed 0.5V; then V_{aux2} can be calculated as below.

$V_{aux2}=(24/13)*(5.96V+0.5V)=11.926V$, which is almost same as the measured value 12.0V



On secondary side, the Voltage on first Ecip(C51) was measured 5.96V. It is assumed that V_f of secondary rectified diode is about 0.5V.

Please have a look at the below picture and answer the question.



Question:

As per above picture, for waveform on **Channel 1**, how do we calculate accurately the voltage effective value on Vcc Pin of IC after Vcc winding AC rectification? Only need making to "Integrate" for the waveform "**Vor**"??

Remark: Here Vor of Vcc_winding is reflected from Ns.