

Active PFC multiphase output question

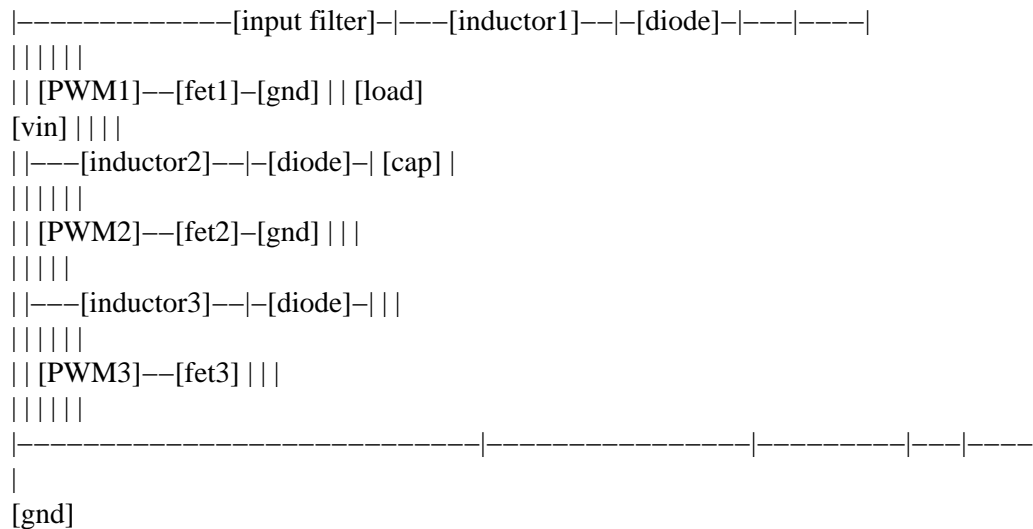
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I am looking at a multiple boost converter active power factor correction circuit like below:

$$v_{in} = 160 * |\sin(2\pi * 60 * t)|$$

input filter is a LC lowpass, with cutoff somewhere between 60Hz and F_{PWM}



My question is about the PWM controllers. My sampling rate is 100kHz so I make my adjustments to the duty cycle at 100kHz.

should I run the PWMs separately and possibly have overlap so in the 10us period:
PWM1 can be on from 0 to 5us
PWM2 can be on from 2.5us to 7.5us
PWM3 can be on from 5us to 10us
(each PWM has the same duty %)

or

A single multiplexed 300kHz PWM so that with no overlap in the 10us period:
PWM1 can be on from 0 to 3.333us
PWM2 can be on from 3.333us to 6.666us
PWM3 can be on from 6.666us to 10us

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(each PWM has the same duty%)

Scott

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