

A

A

B

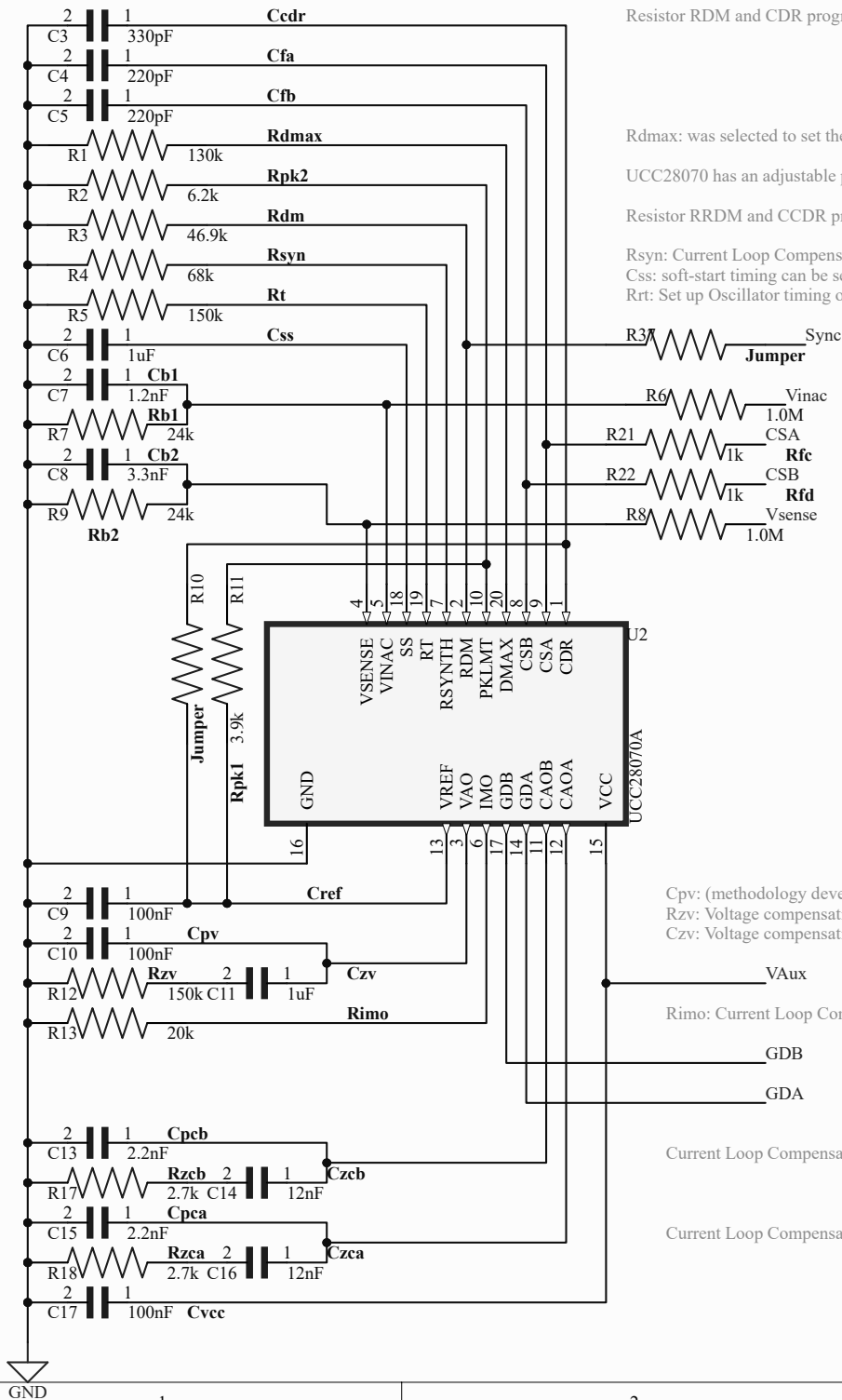
B

C

C

D

D



Resistor RDM and CDR program the frequency dithering magnitude and rate.

Rdmax: was selected to set the maximum duty cycle clamp (DMAX) to 0.97

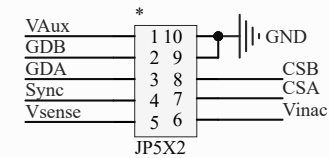
UCC28070 has an adjustable peak current limit comparator that can be set up by selecting RPK1 and calculating the required RPK2.

Resistor RRDM and CCDR program the frequency dithering magnitude and rate.

Rsyn: Current Loop Compensation (Setting up the current synthesizer

Css: soft-start timing can be set with timing capacitor CSS

Rrt: Set up Oscillator timing of converter w.r.t switching frequency.



Cpv: (methodology developed by Lloyd Dixon)CPV is sized to attenuate low frequency ripple to less than 3% of the voltage amplifier output range.

Rzv: Voltage compensation resistor RZV is then sized to put a pole at the converter's voltage loop crossover frequency.

Czv: Voltage compensation capacitor CZV is used to increase the dc gain of the voltage loop and gives some added phase margin before crossover

VAux

Rimo: Current Loop Compensation

GDB

GDA

Current Loop Compensation

Current Loop Compensation

Title **1 KW Interleaved Boost PFC using UCC28070A Controller**

PEMD Lab
Aaqib Sheikh Muhammad

Size

Number

Revision

Date: 9/15/2023

Sheet of

File: E:\PFC\Boost D.SchDoc

Drawn By: