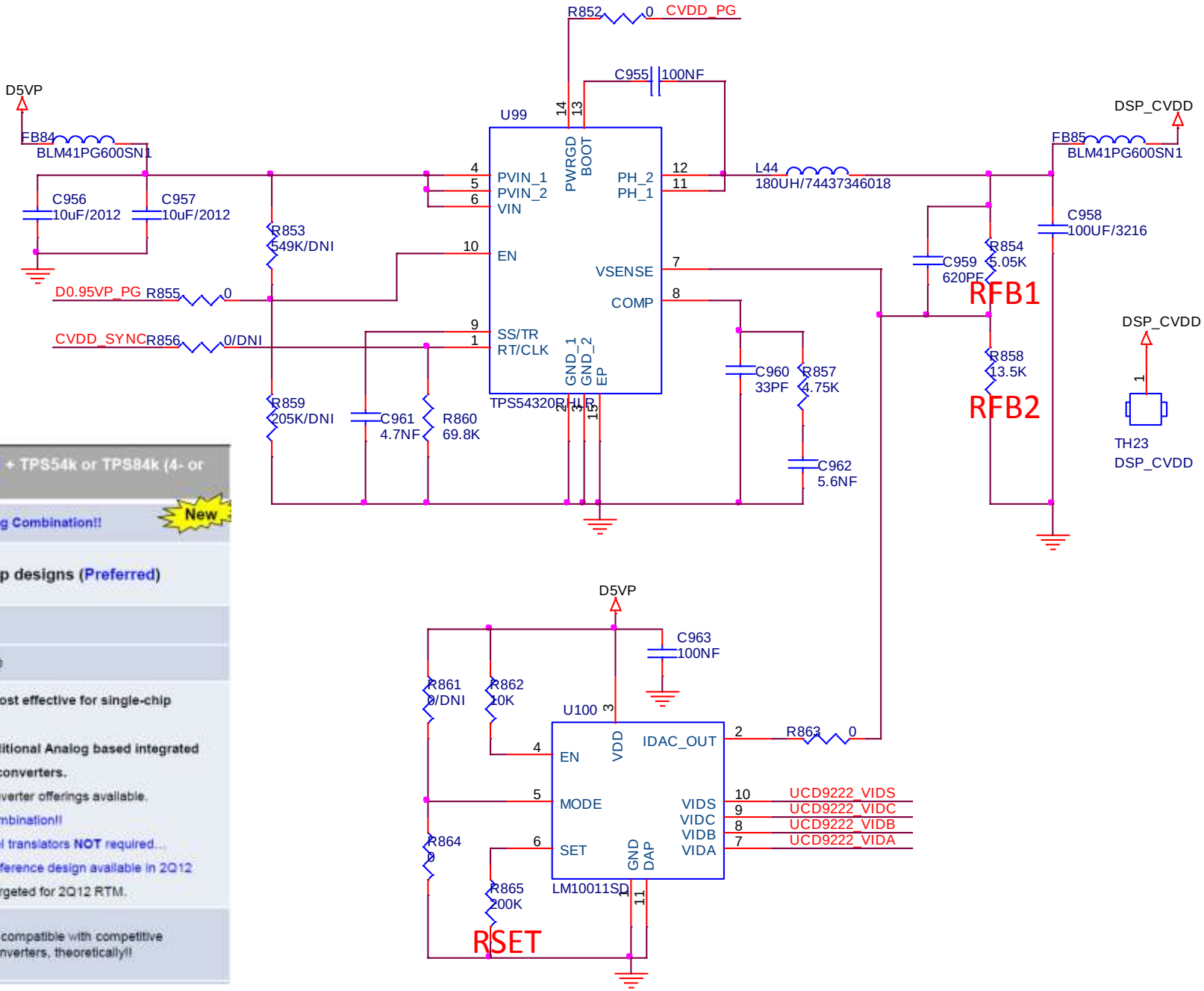
LM10011 + TPS54320



Calculating resistors

Parameter	value
Start voltage	1.1V
Output Voltage range	0.8~1.1V
mode	6bit
Vout_LSB	300mV/63 = 4.76mV
IDAC_LSB	59.2u/63 = 0.940uA

$$V_{OUT\_LSB} = LSB \times R_{FB1}$$ *LM10011 datasheet

→ RFB1 = 4.76mV / 0.940uA = 5.05k

$$V_{OUT} = V_{FB} \times \left(1+\frac{R_{FB1}}{R_{FB2}}\right) - IDAC\_OUT \times R_{FB1}$$ *TPS54320 VFB(VREF) = 0.8V

→ 1.1V=0.8V X (1+5.05K/RFB2)-0V, RFB2 = 13.5K

$$IDAC\_OUT = \frac{1}{R_{FB1}}\left(V_{FB} \times \left(1+\frac{R_{FB1}}{R_{FB2}}\right) - V_{OUT}\right)$$ *LM10011 datasheet

→ IDAC_OUT=(1/5.05K) X (0.8X(1+(5.05K/13.5K)-1.05) = 9.75uA

→ from table2 of LM10011 datasheet

→ Rset = 200K

TI WEBENCH design