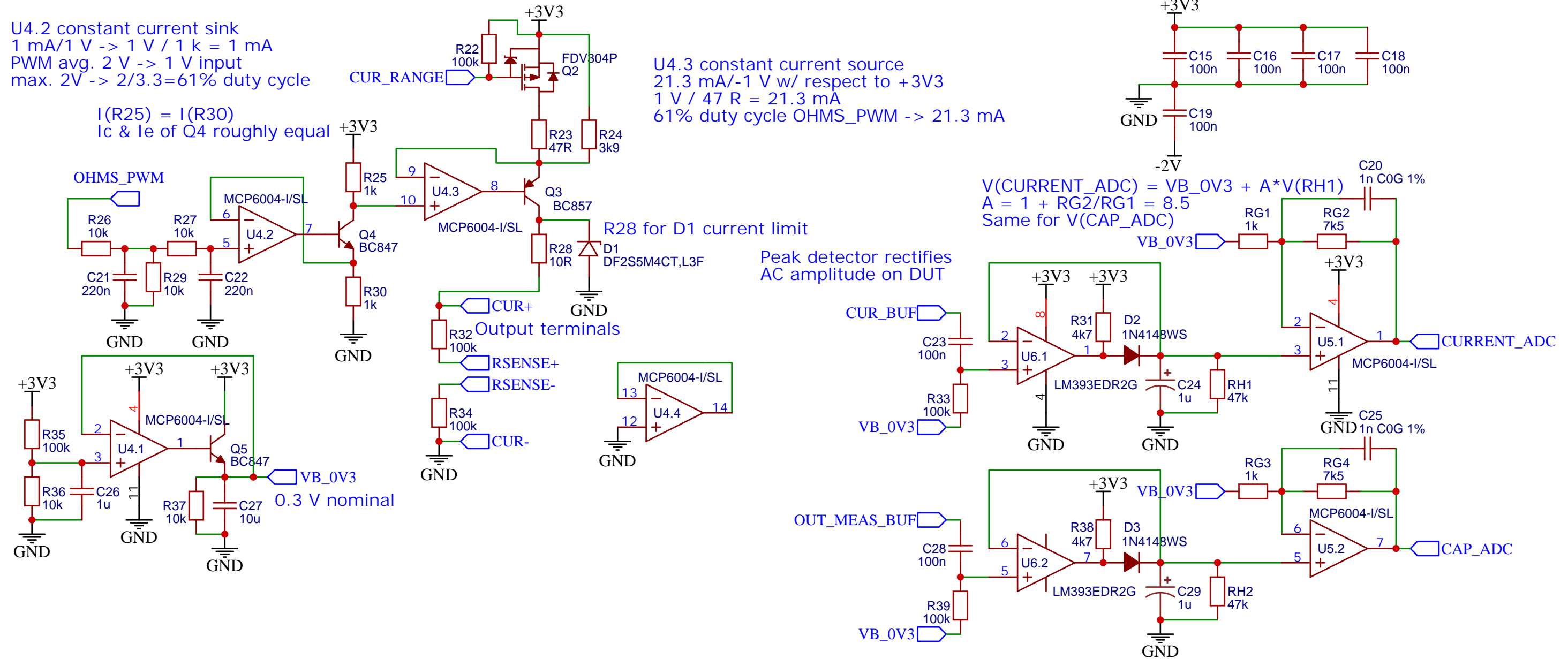


U4.2 constant current sink
 $1\text{ mA}/1\text{ V} \rightarrow 1\text{ V} / 1\text{ k} = 1\text{ mA}$
 PWM avg. $2\text{ V} \rightarrow 1\text{ V}$ input
 max. $2\text{ V} \rightarrow 2/3.3=61\%$ duty cycle

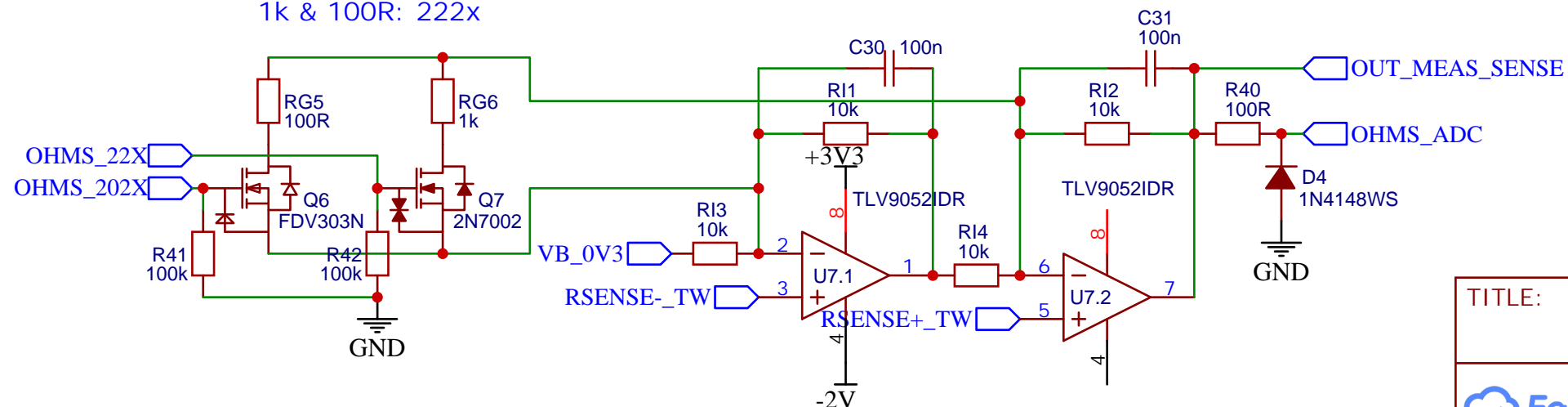
$I(R25) = I(R30)$
 $I_c \& I_e$ of Q4 roughly equal

U4.3 constant current source
 $21.3\text{ mA}/-1\text{ V}$ w/ respect to $+3\text{V3}$
 $1\text{ V} / 47\text{ R} = 21.3\text{ mA}$
 61% duty cycle OHMS_PWM $\rightarrow 21.3\text{ mA}$

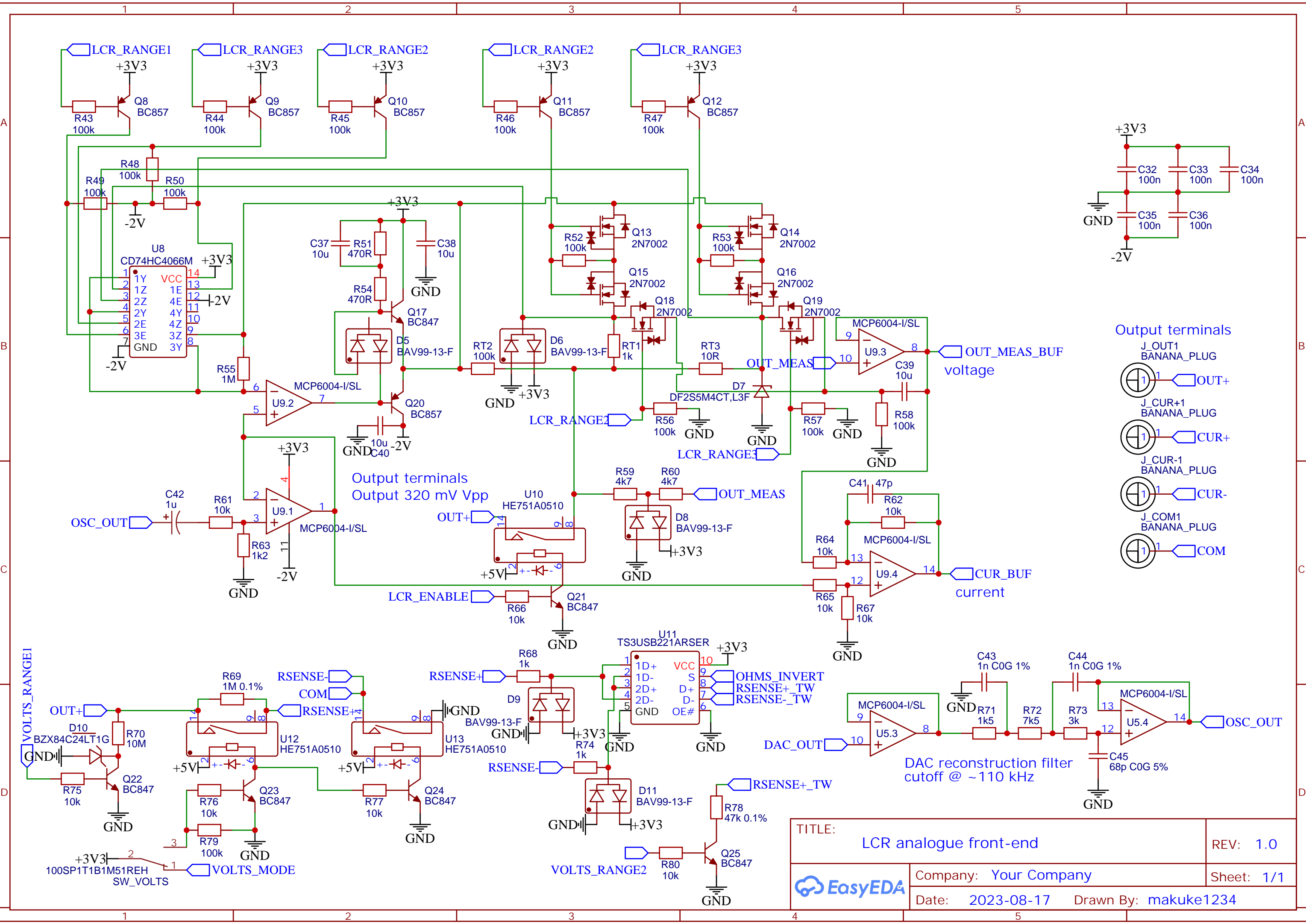


Gains with R_g as...
 open: $2x$
 1 k : $22x$
 100 R : $202x$
 $1\text{ k} \& 100\text{ R}$: $222x$

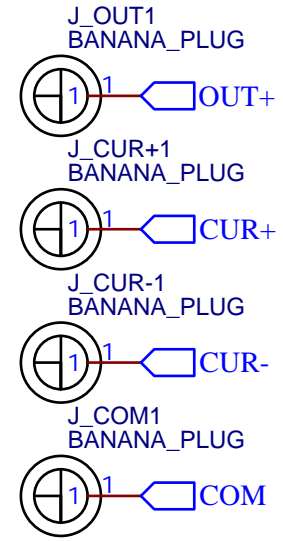
$V(\text{OHMS_ADC}) = \text{VB_OV3} + A * (V(\text{RSENSE+}) - V(\text{RSENSE-}))$
 where A is amplification factor
 when Q6 & Q7 open, $A = 1 + \text{RI3}/\text{RI1}$, $\text{RI4}/\text{RI2} = \text{RI1}/\text{RI3}$, $\text{RI4} = \text{RI1}$
 using gain resistor RG1 or RG2 as R_g :
 $A = 1 + \text{RI3}/\text{RI1} + 2 * \text{RI2}/R_g$



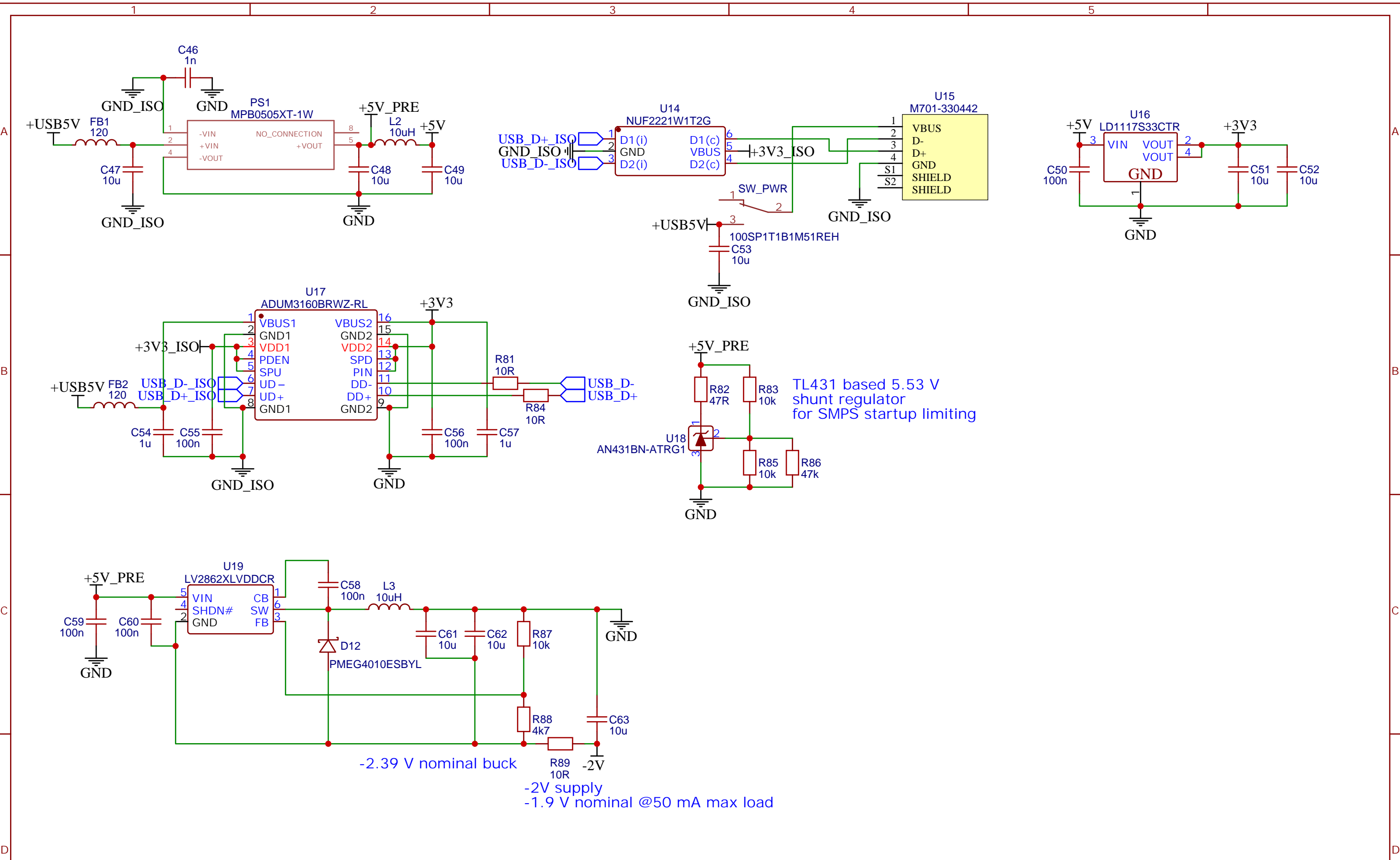
TITLE: Peak detector + 4-wire sense		REV: 1.0
EasyEDA	Company: Your Company	Sheet: 1/1
	Date: 2023-08-07	Drawn By: makuke1234

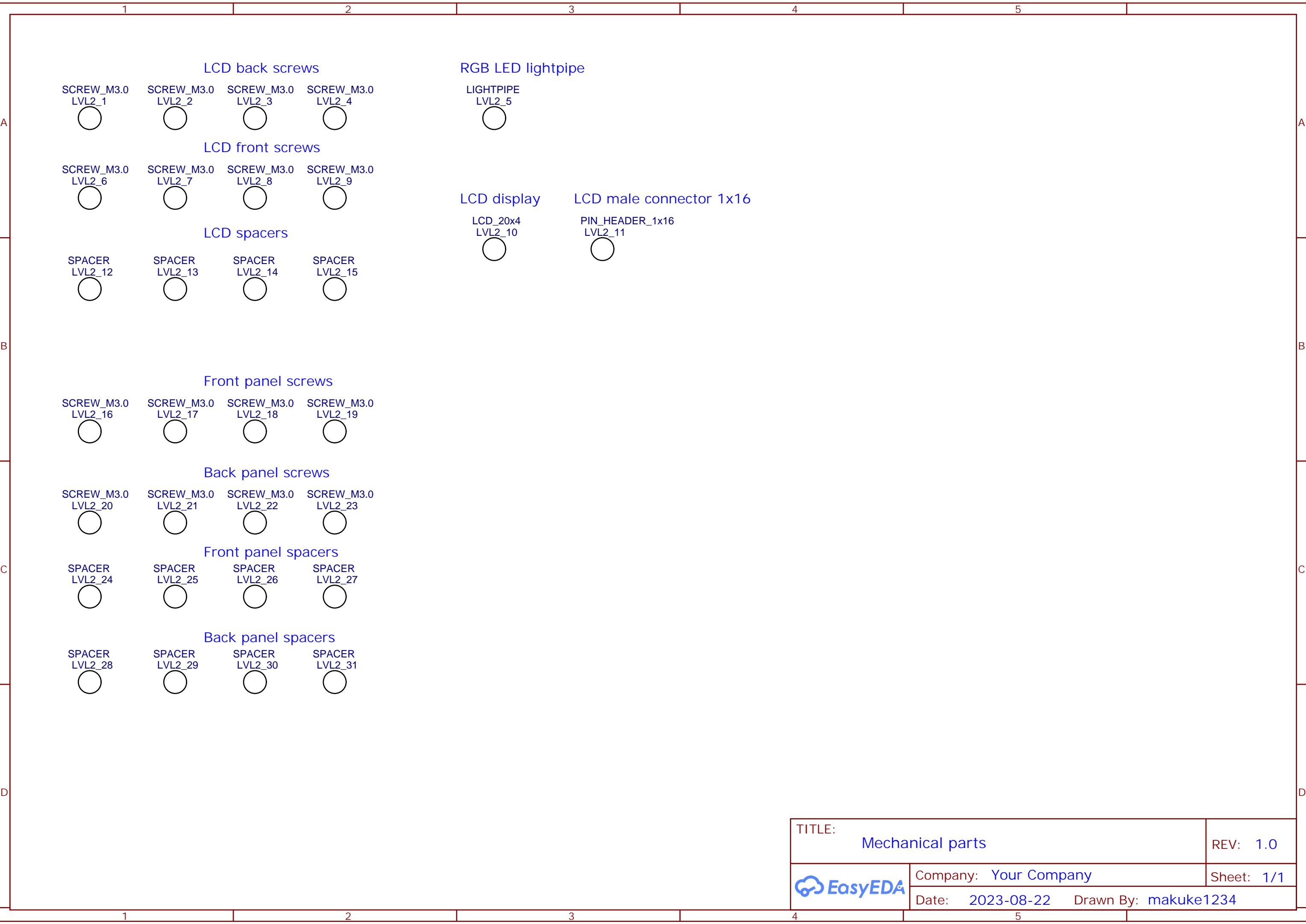


Output terminals



TITLE: LCR analogue front-end		REV: 1.0
EasyEDA	Company: Your Company	Sheet: 1/1
	Date: 2023-08-17	Drawn By: makuke1234





TITLE: Mechanical parts		REV: 1.0
EasyEDA	Company: Your Company	Sheet: 1/1
	Date: 2023-08-22 Drawn By: makuke1234	