

# Power Budget

Team Number:	204
Project Name:	ClapSense
Team Member Names:	Aaron Kiem, Roshan Roy, Caleb Yuen, and Quinn Maness
Version:	1.0

All Major Components	Component Name	Part Number	yVoltageRan	#	aximumCurre
	10k Potentiometer	P160KN2-0QA25	+0 - 200Vac	1	20
	Window Comparator	TLV6700DDCR	+1.8 - 18V	1	40
	Active Band-Pass Filter	BA3835F-E2	+4.5 - 6.5V	1	13
	Microcontoller	PIC18F57Q43	+1.8 - 5.5V	1	500

+5V Power Rail	Component Name	Part Number	yVoltageRan	#	aximumCurre
	10k Potentiometer	P160KN2-0QA25	+0 - 200Vac	1	20
	Window Comparator	TLV6700DDCR	+1.8 - 18V	1	40
	Active Band-Pass Filter	BA3835F-E2	+4.5 - 6.5V	1	13
	Microcontoller	PIC18F57Q43	+1.8 - 5.5V	1	500

*Subtotal*

*Safety Margin*

*Total Current Required on +5V Rail*

Regulator Choice	+5V Regulator	LM7805	+0 - 35V	1	1000
<i>Total Remaining Current Available on +5V Rail</i>					

External Power Source	Component Name	Part Number	yVoltageRan	Output	aximumCurre
Power Source Selection	Plug-in Wall Supply	none	110VAC	+24V	5000

Power Rails Connected to External Power Source	+5V Regulator	LM7805	+0 - 35V	1	1000
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*Total Remaining Current Available on External Power Source*

alCurrent(mA)	Unit
20	mA
40	mA
13	mA
500	mA

alCurrent(mA)	Unit
20	mA
40	mA
13	mA
500	mA
573	mA
25%	
716.25	mA
1000	mA
283.75	mA

alCurrent(mA)	Unit
5000	mA
1000	mA
4000	mA