

Power Budget

Team Number:	204
Project Name:	ClapSense
Team Member Names:	Aaron Kiem, Roshan Roy, Caleb Yuen, and Quinn Maness
Version:	1.2

All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	10k Potentiometer	P160KN2-0QA25	0 - 200VAC	1	20	20	mA
	Window Comparator	TLV6700DDCR	+1.8 - 18V	1	40	0.000053	mA
	Active Band-Pass Filter	BA3835F-E2	+4.5 - 6.5V	1	13	13	mA
	Microcontoller	PIC18F57Q43	+1.8 - 5.5V	1	500	500	mA
+5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	10k Potentiometer	P160KN2-0QA25	0 - 200VAC	1	20	20	mA
	Window Comparator	TLV6700DDCR	+1.8 - 18V	1	40	0.000053	mA
	Active Band-Pass Filter	BA3835F-E2	+4.5 - 6.5V	1	13	13	mA
	Microcontoller	PIC18F57Q43	+1.8 - 5.5V	1	500	500	mA
					Subtotal	533.000053	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	666.2500663	mA
Regulator Choice	+5V Regulator	LM7805	+0 - 35V	1	1000	1000	mA
					Total Remaining Current Available on +5V Rail	333.7499338	mA
External Power Source	Component Name	Part Number	SupplyVoltageRange	Outpu	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source Selection	Plug-in Wall Supply	none	110VAC	+24V	5000	5000	mA
Power Rails Connected to External Power Source	+5V Regulator	LM7805	+0 - 35V	1	1000	1000	mA
					Total Remaining Current Available on External Power Source	4000	mA